

COMMENTS ON THE PROPOSED HYDROCARBON REVENUE LAW FOR MEXICO

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SUMMARY AND CONCLUSIONS

The passing of the Constitutional amendments in Mexico was a very positive development which has significant potential to induce large scale investments in the country, increase petroleum production and create significant revenues for government, business opportunities and employment over the coming decades.

However, the proposed Hydrocarbon Revenue Law significantly reduces the benefits that Mexico could obtain from the Constitutional change, despite attractive features in terms of fiscal structure, royalty rates and tax depreciation rates included in the proposed law.

In its present form the proposed law:

- **Does not create a viable framework for the maximization of the hydrocarbon revenues for Mexico,**
- **Is overly complex to administer and requires therefore a very large unnecessary bureaucracy,**
- **Leaves far too many issues to be decided in the Contracts, thereby creating significant possibilities for conflicts and a chaotic administration,**
- **Is unclear about what part of the hydrocarbon sector is actually subject to this law,**
- **Leaves significant loopholes for contractors to achieve unwarranted profits,**
- **Introduces an excessive system of ring-fencing and establishes disincentives which will reduce investor interest for no particular benefit to Mexico,**
- **Creates significant unnecessary fiscal risks for investors,**
- **Could lead to considerable gold plating, and**
- **Inhibits the participation by private Mexican investors in the petroleum industry.**

A large number of amendments in the proposed Hydrocarbon Revenue Law and the Hydrocarbon Law will be required to transform these laws in a suitable framework to fully achieve the goals that were anticipated with the Constitutional change.

INTRODUCTION

The purpose of these comments is to enhance the benefits that Mexico will receive from the petroleum production, by making the fiscal provisions easier to administer, less subject to dispute with investors and by creating a framework within which Mexico can enhance and ensure the maximization of fiscal and commercial benefits from its hydrocarbon resources.

The comments will be limited to the fiscal structure as would be applicable to new contracts, not to assignments.

The comments will be made following the numbering of the various articles.

OVERALL PROPOSED CONTRACTUAL STRUCTURE

Article 2. The overall contractual structure as outlined in Article 2 contemplates:

- (a) Specific hydrocarbon related payments to be made by the contractor, and
- (b) The payment of corporate income tax and any other taxes, levies and duties that are applicable to the contractor.

This is a widely accepted international structure which has proven to be beneficial to many governments. The structure permits a wide variety of fiscal concepts in order to maximize the benefits for the wide variety of resources that exist in Mexico, such as deep water, shallow water and onshore conventional oil and gas, the Chicontepec petroleum resources, shale gas and shale oil and other resources in Mexico.

This structure also ensures that a significant share of the government take is collected with fiscal mechanisms that are present in the current tax structure. This means corporate income tax, capital gains tax, withholding taxes, import duties, port charges, property taxes and any other taxes, levies or duties that apply to the Contractor will be collected.

The Hydrocarbon Revenue Law does not restrict or qualify the type of taxes, levies or duties that may apply to the Contractor. This means that possible future taxes, such as carbon taxes, or surtaxes to the corporate income tax, will apply to the Contractors once they are introduced.

Therefore, the proposed law is not offering complete fiscal stability.

The proposed law does not seem to permit the Secretary to agree to fiscal stability on these taxes in the contract. It can certainly not be recommended to make such contractual provisions.

Therefore, if economic or technical conditions change fundamentally and unexpectedly, creating more profitable conditions for the contractors, Mexico has an ability to extract the additional related resource wealth. This is a very important point and beneficial to the nation. It is a practice that is now widely accepted in Latin America and the United States, Canada and Europe. However, in the case of Mexico this is a mechanism that should only be used in exceptional cases.

Investors would like to see the maximum degree of fiscal stability. This is particularly an issue in Mexico, where opposition against foreign petroleum company involvement is still strong. Future governments may wish to reverse the actions of the current government. It is important to give investors the confidence that a reasonable level of stability would be adhered to.

There is a trade-off between fiscal stability and government take. The government could seek a higher level of government take by offering more fiscal stability.

Assuming that Mexico establishes a reasonable framework through significant amendments to the Hydrocarbon Revenues Law and Hydrocarbon Law, and competitive commercial and fiscal conditions during the first few bidding rounds, it is likely that Mexico will see considerable investments. Assuming the first few bidding rounds are successfully completed, the issue of fiscal stability will gradually decline in importance and Mexico will benefit from the flexibility of the system established in this Article.

HYDROCARBON LAW

The proposed Hydrocarbon Revenue Law is linked to the proposed Hydrocarbon Law. The problem is that the proposed Hydrocarbon Law seems largely a copy of laws as existed in Latin America about 50 years ago, when laws were largely oriented to the development of onshore crude oil. Gas was unimportant in those days. For instance, the definition of “Treatment” in the proposed Hydrocarbon Law only relates to crude oil, not to gas.

Because, there is little attention to natural gas in this law, the definition of Extraction is unclear. It seems from the definition that even the essential process of separating oil and gas in the production operations may not be part of “Extraction”.

Mexico has the largest shale gas resource outside the United States and China. The shale gas revolution is in full swing in the United States and Canada. Yet, it is remarkable that the concepts of shale gas and shale oil are not even mentioned in the Hydrocarbon Law.

This in turn raises a wide variety of issues related to shale gas and shale oil development. It should be noted that unconventional resources require a rather different regulatory framework than conventional oil and gas. Without such framework, interest in investing in these resources, will be less.

Since it is unclear what “Extraction” and what “Treatment” is, there is no clear definition of what the Hydrocarbon Revenue Law actually applies to. This creates the significant potential for confusion.

DEFINITIONS

Article 4. This article of the Hydrocarbon Revenue Law deals with the definitions. It incorporates by reference the definitions under the Hydrocarbon Law. Therefore, some comments will actually relate to the definitions under the Hydrocarbon Law.

Exploration, Extraction and Treatment (Hydrocarbon Law)

It is absolutely necessary to overhaul the definitions of Exploration, Extraction and Treatment in such a way that it is clarified what the Hydrocarbon Revenue Law actually applies to.

In this process the Hydrocarbon Law should make specific references to shale oil and shale gas.

A number of recommendations can be made:

- Treatment should include treatment downstream of the measurement points of oil and condensates prior to refining or exports and natural gas prior to gas processing or transport to markets. The definition of “Treatment” of gas should include removal of carbon dioxide, nitrogen and hydrogen sulfide from the gas.
- It should be clarified that “Exploration” should be for the purpose of defining commercial discoveries of conventional oil and gas and commercial projects of coal bed methane, shale oil and shale gas. This means that appraisal drilling should be part of exploration. Also pilot test of unconventional projects prior to the start of commercial production should be “exploration”.
- It should be clarified that “Extraction” includes separation of oil, gas and condensates; removal of water and sediments; any conditioning required in order to produce oil, gas and condensates that has the specifications for safe transport to Treatment facilities, refineries, gas processing or to markets; fixed or floating storage of oil, condensates or gas prior to transport from the contract area and all other operations upstream of the measurement points.

Exploration and Extraction Contract, Contractor and Moral Person (Hydrocarbon Law)

The definition of Exploration and Exploitation Contract indicates that such a contract will be signed with a single Contractor. The international practice is that the Contractor could consist of a variety of contracting parties which conclude among themselves a Joint Operating Agreement (“JOA”) or other type of joint venture. Without the possibility of such JOA’s it would be difficult to attract investment to the petroleum sector in Mexico.

Nevertheless, the definition of Contractor seems to refer to a single entity. In other words only a single Moral Person can sign a contract. This will significantly reduce the investor interest in Mexico, for no corresponding benefit to Mexico whatsoever.

It can therefore be suggested to amend this definition in such a manner that it is clear that joint ventures of various contractor parties, including various Moral Persons, can be jointly a Contractor.

At the same time the definition of Moral Person seems to enhance the impression that a participation association (a joint venture ?) would also be a Moral Person. This seems to indicate that the only way for companies to associate in a joint venture would be to incorporate a new Moral Person as an incorporated joint venture. In other words Joint Operating Agreements are not permitted. This would have a very negative impact on investment, since JOA’s are strongly preferred mechanisms in the petroleum industry to share risks and benefits. As will be discussed later the prohibition of JOA’s and requirement of an extreme level of ring fencing will be very detrimental to Mexico.

In Latin America, Venezuela insists on such incorporated joint ventures. This is an important reason why Venezuela has been unable to attract major new investments to its upstream petroleum industry.

Mexico and Venezuela would be the only nations insisting on such an unfavorable manner of carrying out petroleum operations.

Associated and Non Associated Natural Gas.

As will be discussed in more detail under the Royalty section, it can be recommended to delete these two definitions from the Hydrocarbon Revenue Law.

Adjustment Mechanism

It is very common to have such adjustment mechanisms in production sharing contracts. Most contracts will include sliding scales based on volume, price, costs or profitability. Therefore it is logical to have such a provision in the proposed Hydrocarbon Revenue Law.

Nevertheless, the definition of Adjustment Mechanism raised two serious issues.

Firstly, the proposed Hydrocarbon Revenue Law opts for an adjustment mechanism that is established in the Contract and therefore ring fenced to the contract. As will be explained in more detail later under Article 31, ring fencing is not beneficial to Mexico. It is important to leave the option open in the Hydrocarbon Revenue Law for a profit sharing mechanism that can be consolidated across contracts.

It can therefore be recommended to be less specific about the need for a ring-fenced mechanism and state that the Secretary may establish such a mechanism in a contract, so the possibility of a consolidated profit structure is kept an option for Mexico.

Secondly, the adjustment mechanism refers solely to variation in profitability. Most profitability based sliding scales applied in this world result in serious gold-plating issues. Companies can lower the profitability and thereby the profit or production share by simply incurring more costs. Therefore, most profit based adjustment mechanisms are counter-productive in achieving the capture of extra-ordinary profits. In order to avoid gold-plating it is better to use other parameters to change the percentage profits, such as the daily production or price, or to use these parameters in combination with a profit based sliding scale.

It is therefore recommended to state that the adjustment mechanism may be based on volume, price or a profitability indicator or any combination of these factors.

Period.

Royalties, production shares, profit shares, service fees and similar features are in many countries determined on a monthly basis. There is therefore no need to create uncertainty in the Hydrocarbon Revenue Law in this respect and leave these matters for the various contracts. One would create chaos if in some contracts, price sensitive royalties would be determined monthly, in others quarterly and yet in others yearly. It would make the administration of royalties and production shares complex for no reason.

It can be recommended to delete this definition of “Period” and establish under all regular fiscal payments to government and to the contractor, that these payments have to be made monthly.

Percentage Cost Recovery

As currently defined in this definition and in conjunctions with the provisions of Article 19, this provision seems to indicate that the cost limit is a matter to be decided by the Secretary from time to time and would be applicable to all contracts. In other words the cost limit is not stipulated in the contract.

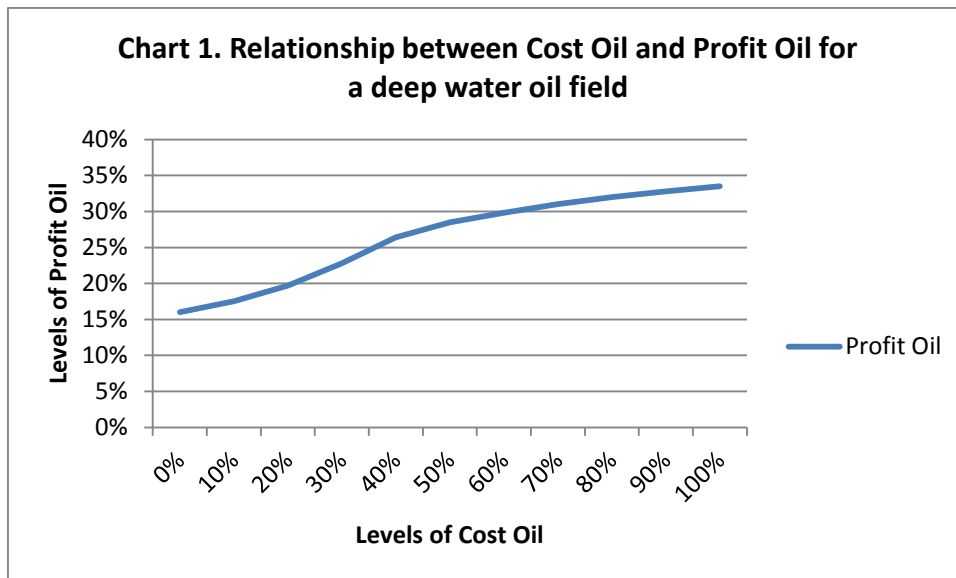
To begin with, it would absolutely not make any sense to establish the same cost limit for **all contracts**.

The various resources of Mexico have very different cost/price structures. It is unlikely that much of the shale gas would be developed under current price conditions if any cost limit and profit gas would be applied in addition to the proposed minimum terms, because the relationship between the high cost of drilling and fracking and the low gas price in North America is unfavorable. On the other hand some shallow water fields may indeed turn out to be low in costs. Therefore, establishing retro-actively an average cost limit for all contracts as soon as some low cost fields have been developed would immediately result in excluding a significant share of the resource base in Mexico from development. This would be an absurd policy.

Another misconception embedded in the definition of the cost percentage is that the cost limit could be of assistance in controlling and auditing costs. In the very first production sharing contracts in the 1960's and in certain developing countries with very low administrative capacity this may indeed be the objective. However, to use this policy in Mexico could result in large revenue losses. Some oil fields may be rather low cost per barrel, well below a cost limit. Permitting, costs up to the cost limit would result in significant losses. Therefore thorough cost control and audit procedures need to be developed. Assuming these procedures are developed satisfactorily, the cost limit does not play a relevant role in cost control.

The only function of the cost limit in modern production sharing contracts is to create the desired balance between early and later revenues to government. Given the fact that the emerging economy of Mexico is in relatively good shape, there is no need for excessive front end loading of the revenue streams through low cost limits.

Chart 1 illustrates the relationship between the achievable profit oil for varying levels of cost oil for a deep water field, at \$ 35 costs per barrel and an oil price of \$ 80 per barrel. The chart is based on the proposed rentals and royalties and the current tax system. For simplicity a fixed profit oil share is being used. The cost oil-profit oil combinations all result in a real IRR of 13%. As can be easily understood, the lower the level of cost oil, the lower the level of profit oil has to be in order to create acceptable economic conditions. A low cost limit therefore seriously impedes the maximization of the government revenues. The profit oil share in case of no cost limit can be double that of the profit share if the cost limit would be 0%.



Given the fact that the Government of Mexico has insisted with PEMEX on extremely low cost limits, the continuation of such policies would be a severe impediment in attracting foreign investment and maximizing revenues for Mexico.

It can therefore be recommended that the definition be significantly amended to clarify that if cost limits are being used, such limits have to be established in each production and profit sharing contract as part of the bid criteria. In order to protect the ability to maximize the national revenue benefits from the hydrocarbon resources it can also be recommended that such cost limit should not be less than 70% for conventional resources and that such cost limit should not be applied at all to unconventional resources.

Contract Prices for Oil, Gas and Condensates

It can be recommended to delete these definitions.

The gross revenue value on which royalties, profit shares or production shares are based **should be the fair market value**, not some price defined in the contract. It should be noted that contracts may last 30 – 40 years. It is likely that oil and gas markets will undergo significant change during this period. Therefore, valuation procedures established in contracts may become outdated, or may no longer reflect the fair market value. Also subsequent bidding rounds may result in modifications to the model contracts. It creates a chaotic administrative framework if the value of oil and gas would be different depending on the various contracts.

Also it creates possible loop holes for very significant windfalls on the part of the contractors. For instance, the contract may state that gas prices have to be based on Henry Hub less transport, gas processing and gas treatment costs.

However, in effect the gas may be sold under an LNG project for a much higher value. In this case, much of the resource wealth could disappear in offshore tax havens. Contracts cannot contemplate in advance all gas marketing opportunities that may emerge over the next decades.

Mexico should be guaranteed that at all times the revenues are based on the fair market value of the oil, condensates and gas. Article 25 of the proposed Hydrocarbon Revenue Law establishes some links to markets, but this is a counterproductive way to a proper valuation.

It can be recommended to establish in the law that the gross value of oil, natural gas and condensates for the purpose of determining royalties, production shares or profit shares will be established based on the fair market value in accordance with regulations.

This means that it can be recommended to include a definition of fair market value in the law. This definition would apply to the revenue side of the transactions as well as the cost side. The cost side is important under profit and production sharing arrangements in order to avoid overcharging of costs. There are many definitions available for “fair market value”. So, it will be easy to develop the required definition. For instance, the following definition could be an example:

Fair Market Value: The price at which crude oil, natural gas, condensates, natural gas liquids, petroleum products, commodities, assets, properties, equipment, materials, rights, obligations, information or services of similar quality could be supplied on similar terms and at similar times by unrelated and independent parties under no compulsion to buy or sell and whereby none of the parties is in a position to exert significant influence on any of the other parties, having regard of all relevant factors.

Contract Value for Oil, Gas and Condensates

The definitions of Contract Value for Oil, Gas and Condensates can be deleted or greatly simplified. No reference should be made to “Contract”. The Fair Market Value, the determination of the Measurement Point and the volume measurement practices should all be the subject of regulations. These should not be contractual provisions.

As a consequence, for instance, the Value of Oil, should simply be “*the multiplication of the Fair Market Value with the volume of oil determined at the Measurement Point pursuant to regulations*”. Similar definitions could be used for natural gas and condensates.

It can be recommended to provide a clear definition of the Measurement Point in the law. This location completely determines the value to be used. From an investor perspective it is more favorable to determine royalties close to the wellhead. This lowers the value of oil and gas.

In fact, in the United States, where the royalties are determined at the wellhead, the deductions to arrive at the value for gas at the wellhead are so severe that Federal royalty regulations define that the value at the well head cannot be less than 50% of the market value.

Therefore, it is in the interest of Mexico to define the value at the point where the oil, gas and condensates are actually fully extracted and ready for transport from the contract area and not permit that these valuation provisions are being eroded by possible contractual provisions.

Assuming the definitions of “Extraction” and “Treatment” are adjusted as discussed above, it is possible to make a definition of the Measurement Point as provided in the following example:

Measurement Point(s): Are the locations where the volumes of oil, natural gas and condensates are being measured for fiscal purposes immediately prior to transportation from the Contract Area and where the oil, natural gas and condensates have the specifications that permit safe transportation to Treatment, refining or gas processing facilities or directly to markets, provided, however, that the National Hydrocarbon Commission may approve a different location as Measurement Point and different measurement procedures where logistical or economic conditions so justify pursuant to regulations.

As can be seen from this definition, the location of the Measurement Point will typically be in the Contract Area. However, for instance, in offshore areas it is occurring regularly that small fields are being tied in to already existing platforms of bigger fields. In this case, the Measurement Point could be on such platform outside the contract area and special measurement adjustments are necessary to allocate the hydrocarbons to the various fields.

CONTRACT PAYMENTS

Payments defined in Contract

Article 5. This article suggests that the surface fee, royalty, gross revenue sharing, profit sharing and production sharing terms and conditions are actually written in each contract.

This has two major implications:

- This will make such payments subject to whatever stability is agreed under the contract, and
- It creates the likelihood of differences among all contracts as a result of successive bidding rounds, changes in model contracts and changes in the Hydrocarbon Revenue Law.

It should be noted that Mexico may have within 20 years 500 contracts or more. Initially large contract areas may be issued.

However, the Hydrocarbon Law provides for relinquishments. Under typical exploration and extraction contracts for conventional oil and gas, only the producing fields will remain in the contract area once the exploration period is finalized.

The relinquished portions often become subject to new contracts. As a result, gradually a very large number of contracts consisting of relatively small blocks will emerge.

Creating a fiscal system whereby the fiscal terms and conditions, accounting procedures, calculation methods and other fiscal provisions are in principle be different for all these contracts will create the need for a massive bureaucracy and it will create a chaotic system with significant possibilities for conflicts between government and investors.

The Secretariat may require a special division with 500 - 1000 professionals to administer, control and audit all these contracts individually, in particular in view of the ringfenced nature of the tax provisions, which is also being proposed.

There is absolutely no need for such a gigantic bureaucracy and it can be recommended to make amendments to the proposed Hydrocarbon Revenue Law to significantly simplify the fiscal terms.

It can be recommended to split Article 5 in two parts.

The first part would set out the payments which will be defined by general legislation and regulations. This should consist of:

- **The surface rentals**
- **The royalties**
- **The profit share under License Contracts,**
- **The gross revenue share under License Contracts.**

The contract would simply state that the contractor is obligated to make these payments in accordance the law and regulations. This means that all these payments can be simply administered based on the same rules and criteria.

As discussed, it is likely that Mexico will face initially considerable concern on the part of investors with respect to the stability of the petroleum policies in Mexico. A completely open system where royalty and profit share payments can be changed at any time, will create concern on the part of investors and this would necessitate a lower government take than would be possible with more stability.

This can be dealt with by Mexico by the adoption of a so-called “vintage” system. Under this system the contract would stipulate that surface rentals, royalties, profit shares under License Contracts and gross revenue shares under License Contracts would be determined on the basis of the laws and regulations as existing at the time of the signing of the contract.

This means that if laws or regulations with respect to these payments would change, the existing contracts would be “grand fathered”, which means the terms would remain stable. New regulatory provisions would only apply to new contracts. From an administrative point of view this is much easier than having to deal with differences in each contract.

The second part of Article 5 would set out the payments that would be contract specific. These would consist of:

- **The signature bonus**
- **Profit Sharing arrangements under Profit Sharing Contracts**
- **Production Sharing arrangements under Production Sharing Contracts, and**
- **Service fees under Service Contracts.**

As recommended earlier, the determination of the Fair Market Value of the hydrocarbons and the Measurement Point would also be a matter of general regulations.

Value Added Tax

An issue that seems unclear from the overall fiscal legislation is the role of Value Added Tax when payments are being made to the Mexico Petroleum Fund. It is not clear whether such payments would attract input Value Added Tax. It would not be sensible to have to pay Value Added Tax on the payments to be made to the Mexico Petroleum Fund.

It can be recommend to establish in the Hydrocarbon Revenue Law that all payments made to the Mexico Petroleum Fund are zero rated for Value Added Tax purposes.

Signature Bonus

Article 7. It is widely recognized that signature bonuses are an inefficient way to maximize the capture of economic rent. Therefore, it can be advised to be modest with respect to signature bonuses.

Frequency of payments

Article 8. There is no need to state anything in the contracts about frequency of the payments.

The Hydrocarbon Revenue Law should establish that the frequency of all payments should be monthly.

The payment procedures should be determined in regulations.

Capturing wind fall profits.

Article 10. As discussed under Definitions – Adjustment Mechanism. A ring-fenced profit based adjustment mechanism is difficult to administer and is likely not going to achieve the goal of capturing windfall profits as is the basis of Article 10. A simple bid based on the percentage of gross revenues, such as the Colombian participation, without adjustment mechanism, combined with a consolidated profit share may be a more effective way to achieve this goal in a manner that is considerably easier from an administrative point of view. The law should therefore keep these options open.

It can be recommended that Article 10 be modified to state that the adjustment mechanism may be applied or not.

Non deductibility of costs

Article 13. This article deals with a list of non-deductibility of costs. Most of these items are rather standard in profit sharing formulas or production sharing contracts. However, three recommendations can be made.

A very serious omission from the list is that it should be stated that costs in excess of their Fair Market Value should not be deductible to the extent of such excess. It is recommended to include this provision.

The main concern about administering and auditing a profit based system, is that contractors may claim excessive costs and thereby artificially lowering the profit share to be paid to government. Therefore, such practices should not be permitted. Of course, the provisions of Article 30 will help somewhat in this matter, but a stronger provision in this regard can be recommended.

Another serious omission is that this article should also include a list of items that should be credited against costs. It is recommended to include such credits.

For instance, a way in which sometimes unwarranted profits are being created by contractors is to claim expenses for goods or facilities, but not credit the value of such assets when goods or facilities are transferred. For instance, a floating FPSO could initially result in a significant capital cost deduction. However, after a certain period, the FPSO may be transferred to another operation. In this case the remaining value of the FPSO should be credited back against the costs.

Other important credits are payments received by the contractor for services provided, such as permitting the processing of crude oil and natural gas from another contractor on the platform of the contractor.

It can be recommended to delete paragraph XIII. It is completely counter-productive to deny the deductibility of rental and royalties if the objective is to the achievement of the highest possible government take as will be more fully explained under Article 31.

Surface Rentals during the Exploratory Phase

Article 23. The amount of the surface rentals is an order of magnitude higher than most surface rentals in the world. **Nevertheless, it can be recommended to retain such high levels.**

The reason is that the most important function of these surface rentals is to encourage voluntary relinquishment of acreage. It can be anticipated that Mexico in order to attract investment may have to initially offer relatively large contract areas. High surface rentals, creating an incentive to relinquish acreage, are therefore in the interest of Mexico.

It makes sense to have these rentals only during the Exploration Phase. However, it should be noted that “Exploration Phase” does not seem to be a defined term. **It can be recommended to define Exploration Phase in the Hydrocarbon Law.**

Royalties

Article 24. **The concept introduced in the proposed Hydrocarbon Revenue Law of making the royalty a function of price, is attractive to Mexico.** It means that the royalty would automatically increase in percentage when the oil or gas prices increase. This is a beneficial in capturing additional resource wealth benefits for governments.

The level of royalties proposed permits the economic development of a wide range of hydrocarbon resources. The levels are modest compared to many royalties in other countries. Nevertheless, this is essential if Mexico wants to strongly develop expensive shale gas under low gas price conditions.

The main improvement that can be suggested is to eliminate the formula for non-associated gas and apply the associated gas royalty formula to all gas production.

By the time royalties are 5% or less, the impact on economics is very modest. Therefore, there is little economic difference between the 5% and the 0% royalty proposed for prices below \$ 5 per MMBtu for non-associated gas.

It should be noted that fields may contain non-associated gas reservoirs as well as oil reservoirs with associated gas. At the fiscal measurement point non-associated and associated gas are not usually measured separately, since these gas streams are likely already comingled before the measurement point. Therefore, the determination of the amounts of associated and non-associated gas in a field would have to rely on other measurements. It is unlikely that the Secretariat will develop the petroleum engineering expertise to make such determinations.

For these reasons the administration of the gas royalty can be greatly simplified by used the associated gas formula for all gas royalties.

Article 25. It can be recommended to delete the second paragraph of Article 25. As was discussed earlier it can be recommended to develop generally applicable royalty regulations which take all the matters contained in the second paragraph of Article 25 into account. This should be a regulatory matter, not a contractual matter.

For instance, quality adjustments to the value of crude oil should not be a matter to be defined in a contract. It should be based on a general procedure that is applied in the same manner to all contracts in all of Mexico under the royalty regulations.

Fiscal conditions in a contract and for bidding

Article 26. It seems from Article 26 that between the Hydrocarbon Law and the Hydrocarbon Revenue Law it is determined that the bid criteria would always be financial. This is not necessarily in the interest of Mexico. It would have been better to include in the legislation also the option of work program bids, What Mexico needs initially is substantive activity to increase production.

The third paragraph in Article 26 indicates that the Secretary can mix and match fiscal payments in any contract. This is certainly a useful statement, since it creates maximum flexibility.

Limitation of companies which can participate in a Contract

Article 31. This article limits participation of companies only to one company per contract, presumably an incorporated joint venture specifically created for the contract, as is the practice in Venezuela. Group taxation is not permitted. In other words taxation is completely ring-fenced per contract area.

In the explanation of the law it is explained that this is a common practice to avoid erosion of the fiscal base through the deduction of costs from one contract area from the deduction of profits from another.

In other words it is perceived that unless the tax calculation is ring-fenced the revenues of the government will be less. From a tax auditor point of view this may make sense. However, from a fiscal design point of view this view is completely erroneous. The more ring-fencing and disincentives are introduced, the lower the government take has to be to attract investment. **In other words ring-fencing is not “free” to a government. In fact, it is very costly to government.**

It is therefore certainly not an adequate policy to achieve a maximum share of the economic rent for Mexico. It in fact inhibits Mexico to achieve the best balance between investor interest and government take.

This can be best analyzed with a graph showing the relationship between government take and the internal rate of return.

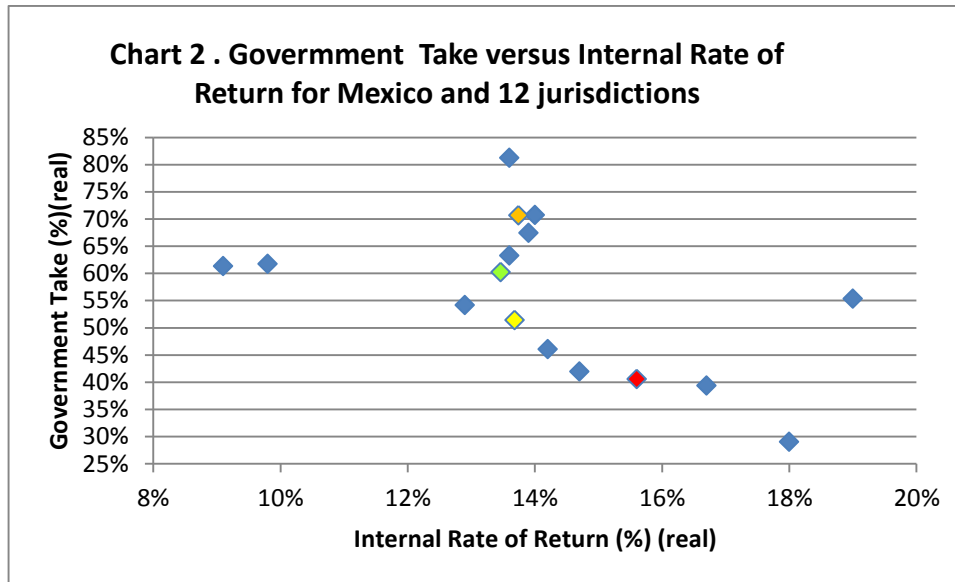
Chart 2 provides this plot for possible investments in shale gas developments in Mexico and for 12 competing jurisdictions. Table 1 provides the details of the jurisdictions, fiscal structures and the results.

It is assumed that the gas price at the well head is \$ 6 per MMBtu and an oil price would be \$ 100 per barrel. This would be optimistic assumptions for Mexico, but in many competing jurisdictions the gas prices would be higher. It is assumed that the shale gas is produced with “Marcellus style” gas wells with considerable liquids in the gas. Costs are assumed to be \$ 3.65 per Mcf equivalent. The project would cover a large contract area and total cumulative gas production would be 1.5 Tcf and liquids production 44 million bbls.

Chart 2 illustrates four cases for Mexico:

- The minimum fiscal terms as announced in the Hydrocarbon Revenue Law including the applicable tax system (red dot),
- The minimum fiscal system with a production sharing provision with profit gas/oil share based on an R-factor ranging from 8% to 25% (designed in such a manner as not to create gold plating) and a cost limit of 50% (yellow dot).
- The minimum fiscal terms, but with fully nationwide consolidated corporate income tax, and a PSC in which the disincentive of not deducting royalties is removed, cost limit increased to 70% and a profit gas/oil share based on an R-factor ranging from 20% to 45% (green dot).
- The minimum fiscal terms, with a fully consolidated tax and a License Contract with a profit share in the form of a Norwegian style consolidated hydrocarbon tax of 40% (in addition to the tax rate of 30%) and an uplift of 15% on all capital costs (brown dot)

These cases are compared with 12 other jurisdictions as listed in Table 1 (blue dots). (As can be seen from this table the IRR results for the UK and South Africa were adjusted to make the Chart more readable).



	Consolidated		Consolidated		Fiscal		
	CIT	Royalty	Profit Share	Participation	Incentives	IRR	GTO
UK	yes	no	yes	no	yes	55.9%	55.3%
South Africa	yes	yes	n/a	yes	yes	28.6%	29.0%
Poland	yes	yes	no	no	no	16.7%	39.3%
Turkey	yes	yes	n/a	no	no	14.7%	41.9%
West-Australia	yes	yes	n/a	no	no	14.2%	46.0%
China	yes	yes	no	yes	no	14.0%	70.7%
India	yes	yes	no	no	no	13.9%	67.4%
Algeria	yes	yes	no	yes	no	13.6%	81.2%
Indonesia	no	no	no	yes	no	13.6%	63.2%
British Columbia	yes	yes	no	no	no	12.9%	54.1%
Brazil	yes	yes	no	no	no	9.8%	61.7%
Argentina	yes	yes	n/a	no	disincentives	9.1%	61.3%
Mexico-Minimum	no	yes	no	no	disincentives	15.6%	40.6%
Mexico-PSC	no	yes	no	no	disincentives	13.7%	51.4%
Mexico-PSC2	yes	yes	no	no	no	13.5%	60.3%
Mexico-LC	yes	yes	yes	no	yes	13.7%	70.7%

The chart illustrates that if Mexico would only apply the minimum terms to the shale gas project the IRR would be 15.6% and the government take would be 40.6% (red dot). The IRR would be acceptable to investors, but the government take would be well below what other jurisdictions would achieve under the same economic circumstances.

If Mexico would add production sharing to the fiscal terms, while maintaining ring-fenced taxation, in a manner that would make Mexico competitive with the other jurisdictions, the government take can increase to about 51.4% (yellow dot).

If Mexico would consolidate the tax, remove the PSC disincentives (non deductibility of rentals and royalties) and increase the cost limit, the terms of the PSC can be increased to a 60.3% government take.

This means that the cost of the ring-fencing of the corporate income tax and the disincentives is 8.9% government take in this example.

Norway is given as an example in the explanations to the law as a nation with an attractive high government take. Therefore, is it interesting that the Government decided not to follow the Norwegian example at all. If Mexico would actually follow the Norwegian example, the government take can be further increased to 70.7% in this example.

This means that in this example the cost of ring-fencing the profit share is 10.4%.

In total the loss of ring-fencing both corporate income tax and the profit sharing in this example would be equal to a government take of about 20%.

Based on analysis with other profitability indicators and taking into account the government discount rate, the actual losses will be less than calculated in these examples.

Also during the period of initial investment in exploration and development facilities, foreign investors will be in a loss carry forward situation and during this time the difference between ring-fenced economics and consolidated economics is not as significant.

Nevertheless, over time the losses in potential government income associated with the policy of extreme ring-fencing will be very large and probably in the order to tens of billions of dollars.

The proposed Hydrocarbon Revenue Law therefore does not create a valid framework to achieve the maximization of the resource revenues that it claimed in the explanatory documentation. It can therefore recommended to delete the ring fencing for corporate income tax purposes and leave the option open for consolidation of the profit sharing under License Contracts.

It should be noted, of course, that this analysis was based on a very favorable gas price of \$ 6 per MMBtu. Under gas prices of \$ 4.00 per MMBtu the only fiscal terms that can be levied are the minimum terms. Additional PSC provisions would not be economic for shale gas.

In the same context it can also be recommended to delete the prohibition of group taxation contained in Article 31.

It is precisely group taxation that will permit Mexican investors to participate actively as private owners of petroleum companies in the development of the Mexican resources. Mexican private ownership of working interests in Exploration and Extraction contracts should be promoted, not inhibited.

Depreciation for Tax purposes

Article 31. Article 31 in conjunction with Article 12 establishes the tax depreciation provisions.

The levels of depreciation proposed are attractive to investors and will be a contributing factor in optimizing the level of government take.

However, there is lack of clarity as to when the depreciation for certain types of investments can start. With respect to investments it is very important whether assets can be depreciated:

- (1) when the costs are incurred, or
- (2) from the moment the asset starts to produce income (is in production)

In order to promote active exploration, appraisal and development of oil and gas fields it is crucial that exploration, appraisal and development well expenditures, including the fracking expenditures, can be deducted when the costs are incurred. This is of particular importance for the development of shale gas resources. Also marginal fields typically require more wells and therefore such tax treatment will help in the development of such fields.

It can be recommended to clarify that all expenditures for wells can be depreciated for tax purposes when the costs are incurred.

Functions of the Secretary

Article 36. This article stipulates that Contracts will stipulate the functions of the Secretary.

It cannot be recommended that the functions of the Secretary be written in Contracts. The functions of the Secretary should be established in the law and regulations.

Also in view of earlier comments, some of these functions would have to be adjusted.

Note: Dr. Pedro van Meurs is President of Van Meurs Corporation. He has advised more than 90 governments during the last 40 years on fiscal terms of oil and gas. Van Meurs Corporation publishes each year a comparative analysis of fiscal systems from 156 countries and has an online service to do fiscal analysis on essentially any fiscal system in the world.