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Para: Cofemer Cofemer
CC: Claudia Veronica Lopez Sotelo; 'Oscar Lugo'
Asunto: Comentarios adicionales sobre los lineamientos propuestos por la SENER sobre unitización
Datos adjuntos: G Baker Unitization and the Rule of Capture in Mexico (COFEMER).pdf

Houston, November 18, 2017

Mtro. Marco Emilio Gutiérrez Caballero
COFEMER

Dear Mtro. Gutiérrez:

Here are additional comments for your consideration regarding the guidelines for unitization as proposed by SENER and as posted on the COFEMER web portal (mirs/43548).

Respectfully,

George Baker
Publisher
Mexico Energy Intelligence

cc. Lic. Claudia López
Mtro. Oscar Lugo (UANL – Fac. de Derecho y Criminología)

"AÑO DEL CENTENARIO DE LA PROMULGACIÓN DE LA CONSTITUCIÓN POLÍTICA DE LOS ESTADOS UNIDOS MEXICANOS" "La información de este correo así como la contenida en los documentos que se adjuntan, puede ser objeto de solicitudes de acceso a la información"

Unitization and the Rule of Capture in Mexico

Comments on the Energy Ministry's proposed guidelines on unitization

INTRODUCTION

Contents

ON OCTOBER 12, 2017, Mexico's Regulatory Review Commission (COFEMER, by its acronym in Spanish) posted online the document file related to the guidelines proposed by the Energy Ministry for the unitization of hydrocarbon leases that corresponded to a single reservoir. The documentation included the text, in English and Spanish, of the proposed guidelines, also the Ministry's responses to standard questions which included references to three annexes which were also included.[1]

The public was given an opportunity to post comments, and, as of November 12, there were ten postings by a half-dozen economic actors, regulators and policy analysts, including Pemex, the Hydrocarbon Commission (CNH) and a trade association (AMEXHI). Most of the comments addressed matters of language and regulation. An existential question of a different character was raised by Mexico City-based **Covar Energy Consulting**: Is there sufficient constitutional and legal support for the regulatory figure of a unitized lease?

In the Ministry's replies to questions and in the supplementary documentation, there are several arresting details. One of these is the Ministry's explanation of the purpose of the guidelines: the doctrine known as the "Rule of Capture" has no place in Mexico, for which reason regulations are needed to protect all parties against the exploitation by one party of hydrocarbons that are found within the lease area of another party.

In Annex I, the Ministry provides an estimate of the unit and total compliance cost of the "process of unitization." The total cost turns out to be 180 times the unit cost, suggesting that the Ministry has in mind 180 fields that would require eventual unitization. In Annex II, the Ministry provides a list of some 1,300 blocks, nearly 500 of which are earmarked for unitization (Fig. 1).[2] The blocks so earmarked cover petroleum basins in most of the

Table 1

Basins and fields with possible unitizations

Basin	# fields	%
Tampico-Misantla	186	39.7%
SE Basin (onshore)	120	25.6%
Burgos	111	23.7%
SE Basin (shallow water)	48	10.3%
Chiapas Fold Belt	2	0.4%
Sabinas-Burro-Pichachos	1	0.2%
Total	468	100.0%

Data: SENER, Annex II

Table: MEI

[1] http://cofemersimir.gob.mx/mirs/43548

[2] The topic of unitization does not appear in the Ministry's five-year program of lease auctions.

known basins with the exception of the Perdido Basin and the area known as "Mexican Ridges," both located in deep waters.

BACKGROUND

THE SUBJECTS OF RULE OF UNITIZATION AND THE RULE OF CAPTURE have been topics of discussion in Mexico since the late 1990s. In the discussions that led up to the treaty known as the Western Gap Boundary Treaty, Mexican negotiators insisted on a ten-year moratorium on drilling activity within 1.4 nautical miles on each side of the boundary line (Art. IV), but it would not be until a dozen years later that the subject of cross-border reservoirs would be addressed directly in the Transboundary Hydrocarbon Agreement of 2012 (Table 2).

The Rule of Capture and its Complement

The doctrine of Rule of Capture dates from English law from the Middle Ages: The hare that was seen leaving the woods of one estate but was captured in the woods of a neighbor belongs to the neighbor. The doctrine, by analogy, meant that the oil and gas that is produced in a well is the property of the well-owner, regardless of the possibility the source was beneath the property of a neighbor.

For more than a half-century following the drilling of the first commercial oil well in the United States in 1859, property rights of oil drillers were governed by the rule of capture. Local authorities in Ohio and Texas (among other states) would eventually devise conservation rules that would protect the pressure integrity of a reservoir by establishing rules for pooling (of mineral rights) and well spacing that would reduce unnecessary drilling.

In parallel, the rule of capture would be self-correcting: by a doctrine known as "correlative rights," a mineral interest-owner would be able to "capture" a portion of the production of a party on an adjacent property that was believed to be exploiting resources that lay within its property or lease-area. In evaluating the economic significance of a cross-boundary reservoir, the party making the claim would need to show that its area is separately commercial, that is, could be developed independently of the other party. If so, independent development activities would hurt the economics of both sides and result in unnecessary spending and a lower ultimate recovery from the reservoirs—just the outcomes that the State, acting on behalf of society, wants to avoid.

In this situation, the parties should negotiate about the terms of a unitization agreement—and here, the State would have a legitimate oversight interest in encouraging and approving the agreed-upon terms. Such an agreement would entail a joint operating agreement, the naming of an operator, and the allocation of working interest adjusted for perceived risk by the parties. The situation could arise that the property of mineral interest-owner contained 20% of the hydrocarbons of a reservoir, but the interest-owner, out of considerations of portfolio risk and capital availability, is willing (or able) to commit to only 10% of the required capital budget for development. In this situation, working interest is negotiated at 90/10, even though the minority interest-owner provides 20% of the hydrocarbons.

Negotiations could take months or even years to reach an agreement, and sometimes require the mediation of an expert arbiter who is chosen by the parties. Once an agreement is reached regarding

working interest, operations and operatorship, it is submitted to the regulator for evaluation and approval.

How to force unitization

On U.S. federal lands and waters, if the regulator is not satisfied with the pace of negotiations or the terms of the agreement, it has the authority to order the suspension of all operations—an option that has been shown to have a strong motivational effect on the parties to reach an agreement that is satisfactory to themselves and the regulator.

DISCUSSION

The Proposed Guidelines

THE PROPOSED GUIDELINES fill in a blank space in the regulatory framework of the Energy Reform of 2013-15. Prior to 2014, such guidelines were unnecessary, as Pemex was the only operator and was the mineral interest-holder of all leases issued to it by the Ministry.

The premise of the guidelines is that in relation to the equitable distribution of resources, the State can accomplish through regulation what competition and the Rule of Capture cannot.

If adopted as written, the guidelines would require all parties to promptly report to the regulator geological information that might indicate the existence of a cross-boundary reservoir. Such information about a reservoir that crosses lease boundaries would automatically cause the creation of a case file and start the clock on follow-up steps to be performed by the parties and the regulator.

Parties are required to provide full information about the characteristics of the reservoir in order to provide the Ministry the basis to impose terms on the parties should they not come to an agreement in a timely manner (defined as 15 months).

It is also anticipated that in time, with more data about the characteristics of the reservoir, it might turn out that the original allocation working interest had underestimated the contribution (%) of one of the parties to the total reservoir. In such a situation, the guidelines advise a "redetermination" of the working interests, which would entail a recalculation of the obligations to the parties to contribute to costs and the benefits that each would receive.

What is right with this picture?

Society is served by increasing the supply of domestic oil and gas and, in parallel, increasing the ultimate economic recovery of reservoirs while reducing risk to the environment. Regulations should simultaneously promote cooperation and competition in a framework of environmental stewardship.

The Ministry is right to seek a regulatory framework that protects the economic interests of parties on both sides of a lease boundary as concerns a possible common reservoir. A mere glance at a photograph from the Spindletop field in Texas from 1901 provides a convincing basis for regulations such as well spacing that conserve well pressure and ultimate recovery.

What's wrong with this picture?

Some features of this picture go beyond COFEMER's mandate to comment. One such feature that is inherently problematic is the lack of a clean, institutional line between policy and regulation. The activities of the Ministry are found on both sides of that imaginary line: it seeks not only a policymaking role but also a transactional one. It is the Ministry that for a given lease auction selects and configures the lease blocks, chooses the contract model and sets bidder qualifications. These are activities that in other jurisdictions would be carried out by the regulator or established by law.

The Ministry's proposed framework for unitization is consistent with its hands-on philosophy all along the hydrocarbon value-chain.

Major deficiency

The major deficiency of the proposed guidelines is that it does not address the matter of the division of lease areas in either economic or legal terms. On May 27, 2016, COFEMER posted on its website the proposed regulations that had been submitted by CNH regarding "alliances and associations" that could occur between Pemex and third parties.[3] The guidelines considered only situations where Pemex might wish to have a partner for the development of a lease-block. Missing from the discussion was the possibility that either Pemex or a CNH contractor might wish to have a partner for a portion of a lease-block.

This missing element from the regulations appears again in the proposed guidelines for unitization. In Article 11, the possibility is recognized that a reservoir might extend "partially" into an unleased area, but there is no required response by the Ministry or CNH. The possibility that a reservoir might extend partially into another leased area is deemed cause for unitization.

But unitization of what? The regulations to not contemplate these situations:

1) the area that extends partially into another block is independently non-commercial;
2) the area that extends partially into another block is peripheral to the interests of the lease-holders of one or both adjacent blocks;
3) lease-holders[4] would be willing to carve out a production block for just the area of the cross-boundary reservoir;
4) but would not be willing to unitize in their entirety their respective leases.

To allow a carve-out of areas in two leases would require, at the minimum, an updating of the *Regulations of the Hydrocarbon Act of 2014* (if not of the Act itself).

To create a legal figure of carve-out would (or should) allow a lease-holder to carve out a portion inside its lease (that is, without crossing a lease-boundary). This carve-out could be treated in the standard form of a farmout that is negotiated by the lease-holder with another party (a farmee).

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[3] http://www.cofemersimir.gob.mx/mirs/41565

[4] We use "lease-holder" as a generic term to include both Pemex and CNH contractors.

At present, an unattractive element in the economic framework for present and prospective investors is their inability to divide (or carve out) an area or vertical depth for development by another party (the farmee) on a contingency basis.

The proposed Guidelines could make a significant improvement in the upstream regime by allowing production units (and carve-outs by existing lease-holders), but it is strangely silent on both matters. Absent the figure of "production unit," the parties in the situation of a cross-border reservoir would have to unitize the entirely of their respective leases with the risk of major disruptions in their investment plans.

We may visualize the situation where, in each of two adjacent blocks, there are separate commercial opportunities for which investment programs, budgets and staffing has been allocated. It could arise that, in addition, a cross-reservoir reservoir could exist that would be outside the interest of either lease-holder to define or develop.

By the Ministry's guidelines, however, both sides would be pushed into a compliance regime that could lead to forced unitization.

COFEMER should deny approval of the proposed guidelines on account of their lack of a proposed mechanism to create carve-outs for cross-boundary reservoirs (and, by extension, farmouts within a block).

Other deficiencies

1) The regulatory process could get started by "fake news," that is, information of questionable authenticity. The guidelines do not require the regulator to verify the information received.

2) The Rule of Capture is self-correcting. It will be sufficient for the regulator to provide a forum where parties may present proposals for unitization. Neighboring lease-owners will rightfully seek to "capture" a working interest in a neighboring lease if their legitimate rights are affected. Legitimacy is established by demonstrating the commerciality for the lease-holder of the portion of a reservoir that intrudes into its lease, not by the geology of the reservoir itself. A lease-holder with a non-commercial portion of a reservoir should not be allowed participation in the commercial portion that lies outside its lease boundaries.

3) Regarding redetermination, COFEMER should advise SENER that any subsequent reevaluation of working interests should only be in relation to the allocation of future revenue and costs; cost and revenue equalization for prior years should be avoided.

4) In the U.S. Gulf of Mexico, unitization agreements are likely to occur in one or two of 100 leases. To judge by the data provided in Annex II, the Ministry anticipates that unitization may be required in some 30% of leases. Such a high percentage could be regarded as a development strategy in itself. The configuration of the lease areas in the shape of complex polygons, some with upwards of 25 sides, could be seen as conducive of future claims for cross-boundary unitization.

5) The guidelines thrust the regulator prematurely into discussions between the parties. It is sufficient that the regulator be notified of a possible cross-boundary reservoir, but the parties

need not be required to divert resources to define the reservoir unless their commercial interests so dictate. There is no risk of unfairness, provided that, in case of disagreement, the parties have the right to seek arbitration by a third-party expert whose opinion would be respected by the parties and the regulator.

6) Unitization on a large scale as an objective of energy policy would alter the risk calculus of prospective investors. The Ministry estimated the compliance cost for operators, but did not consider the social cost of a regime that would be widely regarded as regulatory over-reach.

CONCLUSIONS

How should COFEMER respond?

MEXICO'S REGULATORY REVIEW COMMISSION (COFEMER) faces a decision with far-reaching consequences: either allow or disallow the Ministry's regulations that are explicitly intended to neutralize the Rule of Capture by operators in Mexico.

Howsoever it rules, COFEMER should ask the Ministry to clarify its intentions regarding future unitizations, and explain the purpose behind earmarking (in Annex II) several hundred blocks as suitable for unitization. The Commission should also ask the Ministry to explain the use of complex polygons in the geographical definition of lease blocks, and ask if such configurations increase the likelihood of encountering cross-boundary reservoirs.

Allow

The Commission recommends that the guidelines be adopted and officially published but with edits suggested by parties that made public comments as well as those suggested by its own staff.

The suggestions and criticism by the parties that would be affected by the Ministry's approach propose edits to definitions, compliance periods and procedures, but stopped short of recommending that the approach be disapproved. Their views did not reflect a complete reading of the documentation file; they limited their remarks to the text of the regulations but without consideration of the 15-page response of the Ministry to the standard questions posed by the Commission or the three annexes that were cited to support the Ministry's conclusion that the benefits of the regulation exceeded its compliance cost.

Disallow

The Commission returns the Ministry's draft regulations for reconsideration and to advise against their official promulgation, even were the suggested edits that had been submitted by the main affected parties, namely, **CNH, Pemex** and the members of **AMEXHI,** to be adopted.

Instead, the Ministry would be asked to reframe the twofold nature of the regulatory challenge:

a) providing a mechanism by which parties with legitimate commercial claims are given a fair hearing by the regulator. Legitimacy depends, first, on the commerciality of the to-be-unitized portion of the reservoir, a dimension that is currently ignored in the present guidelines.

b) providing a mechanism to carve out (or ring fence) the area of a reservoir of two adjacent blocks to be operated independently of other opportunities that lease-holders have in those blocks. This legal figure is currently missing both from the guidelines as well as in the regulations for alliances and associations.

Redetermination would be allowed only once (and only when a material misallocation has been shown). It should govern only the future allocation of costs and benefits. Industry experience has shown that a requirement for retrospective cost equalization is infeasible.

Where a cross-boundary reservoir extends to an unleased area, the Ministry or regulator should automatically extend the original lease to include the new area where the reservoir extends under the same fiscal terms.

COFEMER would explicitly disallow the Ministry from having the faculty to impose terms of unitization, as any award that one party might regard as unfair could become the subject of international litigation as an instance of virtual expropriation. The Ministry should, however, be authorized to order the suspension of all oilfield activities in the leases under discussion as a strong incentive for the parties to come to an acceptable agreement.

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November 18, 2017

Table 2

Unitization in Mexican law and policy

Mexican concerns about the rule of capture date to the late 1990s

2000

JUN 09, 2000

Western Gap Treaty

Art. V. 1 (b). The Parties shall seek to reach an agreement for the efficient an equitable exploitation of such transboundary resources. [The term "unitization" does not appear in the treaty.]

2012

FEB 20, 2012

Transboundary Hydrocarbon Agreement

Recognizing that this framework is intended to encourage the establishment of cooperative arrangements based primarily on principles of unitization, ...

2014

AUG 11, 2014

Hydrocarbon Law (Article 42.II)

II. To instruct the unification of fields or reservoirs based on the opinion issued by the National Hydrocarbons Commission. The above for national reservoirs and, in terms of international treaties, for cross-border ones, ... [The term "unificación" is not defined.]

OCT 31, 2014

Regulations of the Hydrocarbon Law (Arts. 62-64)

Article 63.- Once the notice referred to in the previous article has been received, the Secretariat, based on the information received, as well as on the opinion of the Commission, will determine the possible existence of a shared field or field, in which case will instruct the unification of the extraction fields or reservoirs. [The term "Unificación" is not defined.]

Article 64. In the event that the Assignees or Contractors do not reach an agreement or it is necessary to modify the agreement tjat is proposed, the Secretariat will determine the terms under which unification will be carried out.

2015

NOV 13, 2015

CNH guidelines for presentation of exploration and development proposals

"Unificación" - Actions regarding a Field, Reservoir or installation shared or susceptible to share, instructed by the Secretariat, after the Commission's Opinion, to make the Exploration and Extraction processes more efficient, being distributed among the participating Oil Operators, in the corresponding proportion, the disbursements made and the benefits obtained.

2016

JUN 10, 2016

CNH draft regulations on alliances and associations

COFEMER's preliminary response to CNH's proposed guidelines for alliances and associations (Oficio No. COFEME/16/2436). Neither unitization nor ring-fencing is mentioned.

Table 2

Unitization in Mexican law and policy

Mexican concerns about the rule of capture date to the late 1990s

2017

MAR 01, 2017

SENER publises a Guide (Guia) regarding unitization (7 pages)

"Unificación": The process by which the Secretariat, following the opinion of the Commission, determines the possible existence of a Shared Field or Reservoir, in order to make the Exploration and Extraction activities more efficient through a Unification Agreement, ... [A guide is not binding.]

OCT 11, 2017

Lineamientos Acuerdo de Unificación: MIR Estimación de costos de regulación / Beneficios

"Unitización de campos." It is a process whereby the natural resources that extend between several assignees or contractors can be exploited as a single hydrocarbon unit in order to guarantee their conservation and better use.

MIR de Impacto Moderado - Folio 43548

A 15-page document posted online containing standard questions posed by the Regulatory Review Commission (COFEMER) and responses by Mexico's Energy Ministry regarding its proposed unitization policy guidelines.

OCT 12, 2017

SENER draft guidelines posted online by COFEMER for public comment (46 pages)

Art. 2.XXVI. "Unificación": The instruction issued by the Secretariat to the Assignees and / or Contractors, following the opinion of the Commission, and when the existence of a Shared Reservoir has been determined in their Areas of Assignment or Contractual Areas.

Report titles related to unitization

Year	Topic	File #	Pages	Chart
2017				
May 24, 17	**Why Mexico needs a 2nd national oil company** At a Mexico panel at the Offshore Technology Conference (OTC) on May 4, speakers worried that the pace of exploration in deep-water areas is too slow to build the needed "E&P Village." During the Q&A, the status of Pemex as a government agency was raised as a problematic issue, as Mexico had not followed the route of other countries like Norway in creating a mixed-equity national oil company (NOC). This report identifies the benefits to be obtained from a market-based NOC and lists the legal and practical steps needed to create a Pemex-B that would be focused on finding partners for offshore exploration blocks.	10046	19	2
2015				
Aug 10, 15	**Grid System for Mexico's E&P Blocks** This report, prepared and distributed as a public-interest discussion paper, looks ahead to the need for a grid system for Mexico's petroleum blocks, both those of Pemex and those administered by the Hydrocarbon Commission (CNH). Presently, while some blocks are rectangular, there is no standard size; while most blocks are polygons. Such irregular shapes cause inefficiencies in relation to seismic studies and in the design of drilling programs and related infrastructure. Fig. 1 imagines a grid system in which data regarding regular and irregular shaped blocks may be captured in a database.	10034	3	3
2012				
Apr 24, 12	**US-Mexico Transboundary Hydrocarbon Agreement (Part II)** This report examines problematic aspects of the Transboundary Agreement, paying particular attention to the objections and concerns of the minority of senators who voted against immediate approval (69 in favor, 21 against). Sen. Pablo Gómez (PRD), who was the principal voice of the opposition, asked about why the CNH had not been designated at the executive agency that would represent the Mexican government in the administration of the Agreement. Another question concerned the omission from the agreement of the first 9 miles that the US said were under Texas jurisdiction. An outline of the debate is Exhibit C.	100124	8	5

Report titles related to unitization

Year	Topic	File #	Pages	Chart
Mar 19, 12	**US-Mexico Transboundary Hydrocarbon Agreement: A New Face for Pemex's Incentive Contract?** Until 2012, neither Mexico or the U.S. had signed a cross-border agreement related to petroleum. Lease auctions of blocks continuous with Mexico on the U.S. side received no bids. The agreement provides a scaffolding of public oversight for the unitization of cross-border fields and for the eventual formation of a joint operating agreement between "licensees" on both sides. At this stage, the agreement is limited to sharing information, not risk.	100121	9	0