

MEXICO'S UPSTREAM BUSINESS MODEL

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ABSTRACT. A fundamental question concerning the upstream business model that is incorporated into the 2014 Energy Reform in Mexico concerns the intended evolution of the energy policy framework in which it appears. The situation of “before,” as alluded to in President Peña’s remarks on March 18, 2015, was one in which Pemex served as the iconic state monopoly, and through which, by virtue of Article 6 of the now-abrogated Petroleum Law of 1958, all contracting was required to take place under restrictive terms that excluded the business model of an oil company. The government is now offering a mineral contract that approximates the business model of a mineral lease as understood diverse jurisdictions, including the U.S. and Mexico. There are important differences, however, ones that represent for the State and the prospective operator and layers of uncertainty and regulatory discretionality. As for the broader benefits for the country that the new involvement of oil companies might bring, there are a priori reasons for concern: the government seeks to sharply restrict the reporting of statistical data on the operations and discoveries of the oil companies, including Pemex. All such data are to be funneled through and managed by a single government agency (CNH), redolent of the way that Pemex has traditionally reported data. A decade will be needed to recast the national oil narrative in a way that allows for an evolution of the upstream regime in 2026 in which a mineral lease will be offered to oil companies.

KEY WORDS: Energy Reform of 2014, Round 1, upstream regime, National Hydrocarbon Commission (CNH), Pemex, biddable variables, Petroleum Law of 1958, Lázaro Cárdenas del Río, Mexico’s petroleum narrative, Energy Reform of 2026.

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RESUMEN. *El autor estima que la Reforma Energética de 2014 representa un planteamiento transicional para otra reforma que tomará una década más para redimensionar la figura de Lázaro Cárdenas y para incorporar los conceptos pertinentes de la nueva legislación en un nuevo marco de la Ley Minera. La próxima reforma abrazará los valores de un mercado abierto, tanto en productos como en el comercio de información sobre el subsuelo. Se ve que la legislación de 2014 contempla un ajuste técnico para crear un espacio restringido para que el capital privado pueda invertir en los procesos de explorar y extraer hidrocarburos, y así revertir la producción declinante de la última década. El Estado seguirá siendo la operadora ficticia. Así, se denomina la operadora que gane una licitación en una ronda “contratista.” Estima que no es el propósito del nuevo marco cambiar la narrativa tradicional, en la cual seguirá girando alrededor de Pemex como la figura icónica de la gestión pública en material petrolera. Se ve que en el contrato contemplado por el nuevo marco, el contratista recibirá compensación bajo un régimen de tarifa (o precio) por pieza energética, a diferencia de la condición de la operadora por los conceptos de la Ley Minera: para él, se establece por el contrato que toda la producción es de su propiedad. El autor identifica conceptos problemáticos como la limitación del contrato a un máximo de 35 años y reserva como propiedad del Estado; ofrece su visión del sector petrolero en una reforma energética de 2026.*

PALABRAS CLAVE: *Reforma energética de 2014, Ronda 1, régimen upstream, Comisión Nacional de Hidrocarburos (CNH), Petróleos Mexicanos, variables de adjudicación, Ley Petrolera de 1958, Lázaro Cárdenas del Río, narrativa petrolera mexicana, reforma energética de 2026.*

TABLE OF CONTENTS

I. INTRODUCTION.....	123
1. Scope of Discussion.....	123
2. The 1992 Mining Law in Mexico.....	125
II. GENERAL DISCUSSION.....	126
1. Title to Hydrocarbons	128
2. Posting Reserves.....	129
III. MEXICAN MINERAL CONTRACT.....	129
1. Legal Personality of the Commercial Actor.....	129
2. Consequences of a Dual Regime	131
IV. LOOKING AHEAD TO THE ENERGY REFORM OF 2026.....	131
1. Unitary Minerals Regime	132
2. Revisionist Critique of the National Oil Narrative	133
V. OBSERVATIONS	134
VI. CONCLUSIONS.....	136

I. INTRODUCTION

Among his remarks at the 77th commemoration of the Oil Expropriation on March 18, 2015, President Enrique Peña boasted that Mexico now has the “vanguard model” for the development of the hydrocarbon patrimony of Mexico. He characterized the energy reform as the most important development for Pemex and the country in over fifty years.

From the standpoint of legal scholarship as well as for commercial understandings, it will be useful to seek clarity about both the prior and current models; and it is not too soon to look ahead to a future point when the Energy Reform of 2014, which went beyond the reach of the Energy Reform of 2008, will itself need to be succeeded by a third reform.

This way of framing the subject suggests an outline in which the salient features of the past, present and future legal and commercial frameworks are described. A convenient, preliminary starting point is consideration of the legal concepts that apply, in general, to the ownership and extraction of minerals.

1. *Scope of Discussion*

We shall first examine the nature of a mineral lease as it is understood in the lower 48 states of the American Union (as the U.S. is sometimes referred to in Mexico) and then turn to similarities and differences in the concept of concession in the Mining Law and the concept of mineral contract in the Hydrocarbon Law.

We shall describe some of the salient features of the business model that emerges from the choice to create a constitutional and legal regime for hydrocarbons that is separate from those that apply to other minerals.

In the final section, we shall look ahead to a future energy reform which, at the soonest, will take place in 2026.

Before entering into those topics, however, we shall examine the evolution of the mineral regimes in Mexico, and the emergence of the oil sector as a contiguous, but separate, domain of law. We shall look carefully at Mexico's Mining Code of 1884 and the first Petroleum Law of 1901. Moving forward, we give attention to the Mining Law that was promulgated June 26, 1992, and which was amended on August 11, 2014, as one of the pieces of the energy reform legislation.

The oil regime put in place by the Energy Reform of 2014 is best understood as a moment in the evolution of legal theory regarding the mining of minerals in Spanish America. For more than four centuries, in the Spanish empire minerals *in situ* of whatever nature belonged to the Crown; their extraction would be carried out by concession with close public oversight regarding the payment of royalties. After independence from Spain, min-

ing as a topic of jurisprudence did not appear in any constitution in Mexico prior to that of 1917. In its Article 27, it was established as a principle that only Mexicans by birth or naturalization could obtain concessions; but the same treatment could be extended to foreigners under the condition that they would agree to be regulated and protected exclusively by Mexican law.¹

In between the Spanish regime and the Mexican regime of 1917 there was a period of 33 years (1884-1917) in which a completely different regime was in place. The *Mining Code of 1884*, in its Article 4, granted mineral rights to private parties for an unlimited period (*tiempo ilimitado*), provided that the activities of exploitation were continued in accordance with regulations in force. By Article 6, foreigners could acquire mining rights on the condition of accepting treatment under Mexican law. By Article 7, titles to mining properties could be transferred freely, “like any other real estate.” By Article 10, the surface owner of a property, without prior official adjudication, could carry out activities of exploration and extraction.

The Mining Law of 1892, in Art. 4, established that the surface owner may exploit, without the need of a special concession “combustible minerals,” including oils and “mineral waters.” In Art. 13, “any inhabitant of the Republic could freely carry out exploration conducive to the discovery of mineral deposits.”

The Petroleum Act of 1901 established a regime in which, in its first article, permits would be issued for the purpose of exploration, but, by Article 2, only for one year, and in relation to which a tax of five cents/hectare² would be payable with fiscal stamps. Patents for commercial exploitation would be issued, but only for ten years (Art. 3). Property owners would continue to enjoy privileges of exploration and extraction of petroleum resources (per Art. 4 of the Mining Code) with certain safeguards of public policy.

It was during this period that international investment, led by British and American entrepreneurs, built the foundations of the Mexican oil industry. Starting from zero, by 1921 Mexico was the second-highest oil exporter in the world —after the United States.

It would be Article 27 of the Constitution of 1917 that brought an end to this open-market regime, not only in relation to petroleum but in relation to the entire mining sector: henceforth, all subsurface minerals would belong to the Nation, a fictive legal entity that stood above, or behind, the State as public authority. In the Petroleum Law of 1925, it would be concession-holders, not property-owners, who would have the right to explore

¹ Foreigners would not have recourse to production of the governments of their respective nationalities, a principle known as the Calvo Doctrine, named after Argentine legal scholar Carlos Calvo.

² Equivalent to Ms\$5/km² (not adjusted for inflation). The concept of an exploration fee based on the area of property reappears in the 2014 Hydrocarbon Revenue Act where (in Art. 23) a tax of Mx\$1,150/km² is applicable for the initial 60 months, and, beyond 60 months, \$2,750/ km².

and extract petroleum (Art. 4). The entire petroleum value chain became the subject of federal jurisdiction. The surface property owner who was not the concession-holder would receive a minimum of 5% of gross production as compensation (Art. 8).

At the level of legal theory, it would be the Federal Executive that authorizes the activities required by the petroleum industry (Art. 2). This legal construction differs sharply from the one that would be put forward 33 years later in 1958 when it would be the Nation as a fictive entity that carried out those activities through the agency of *Petróleos Mexicanos* (Art. 2). This new framework would continue in force for the next 55 years, and be preserved in the Hydrocarbon Act of 2014 (Art. 3).

2. *The 1992 Mining Law in Mexico*

The basic terms in the Mining Law³ are cognate to those in the Hydrocarbon Law⁴ in the sense that prospective acreage (called a “mineral lot” in the Mining Law, and measured in hectares, not square kilometers) may be assigned to a state agency or awarded, by public tender, to a private party. In both cases, real estate to which a state agency has a legal right is an *asignación*.

The similarities largely end at this point: In the Mining Law, the work of exploration and the determination of commerciality are assigned to the Mexican Geological Service (SGM),⁵ which is given 6 years in which to make a recommendation to the Economy Ministry about the suitability of a lot for commercial development. The period of a concession is much longer than in the Hydrocarbon Law: In first instance, 50 years (with the possibility of extending it for an equal period), but in the second instance, just 25 years with two optional five-year extensions.

An auction for the commercial rights to a lot is called a *concurso*, not a *licitación*, as in the Hydrocarbon Law. The rights are granted as a matter of eminent domain, as in the Hydrocarbon Law. There are mineral taxes (*derechos sobre minería*). By Article 13-bis (III), the biddable variables are 1) the payment that the concession-holder is willing to make to the government (*contraprestación económica*) and 2) the bonus payable upon a commercial discovery (*prima por descubrimiento*). The nature of the payment is to be defined, in each case, in the terms and conditions of the bidding guidelines (*bases del concurso*). For a given auction of a lot, the Economy Ministry may establish a minimal royalty (*regalía mínima*) for the discovery bonus, payable to the SGM. Article 32 of the

³ Ley Minera [L.M.] [Mining Law] *as amended*, Diario Oficial de la Federación [D.O.], 11 de Agosto de 2014 (Mex.).

⁴ Ley Hidrocarburos [L.H.] [Hydrocarbons Law] *as amended*, Diario Oficial de la Federación [D.O.], 11 de Agosto de 2014 (Mex.).

⁵ Servicio Geológico Mexicano, <http://www.sgm.gob.mx> (last visited Dec. 15, 2014)

Regulations (*Reglamento*) of the Mining Law provides that a discovery bonus may be a fixed or variable percentage.

Neither the law nor its regulations specify the commercial rights of the concession-holder. Article 19 states that “Mineral concessions confer the right to: ...dispose of the mineral products that are obtained in the said mineral lots ...during the period of the concession.” By Roman law, “to dispose” includes the *sale* of production in national or international markets; also, given that the concession-holder has paid a lease for a commercial discovery, the size of the discovery is in the public record. In theory, the concession-holder’s reserves (in metric tonnes) are publicly posted, but, in practice, they are not.

Tellingly, the term “*Nación*” appears only twice in the Mining Law and not at all in its regulations. Although all minerals are, by law, property under the jurisdiction of the State, there is no specification of the delivery point at which title is conveyed to the concession-holder.

II. GENERAL DISCUSSION

In this section we shall first try to make clear the nature of a mineral lease as understood in U.S. and Mexican jurisdictions. We shall argue that the business model as embedded in the 2014 Energy Reform is not a mineral lease but a mineral contract.

We seek clarity about how the Mexican figure of *mineral concession* matches with the U.S. *mineral lease*, and how the figure of *contractor* in the Hydrocarbon Law differs from both a Mexican mineral *concession-holder* and a U.S. mineral *lease-holder*.

In order to have an adult conversation about a mineral lease in Mexico or anywhere else, a small number of basic concepts need to be put in the table for discussion (Table 1).

Table 1. COMMON TERMS IN U.S. MINERAL LEASES

Term in USA usage	<i>Translation per 2014 Reform</i>
Access (to lease area)	Servidumbre legal
Contractor (of oilfield services)	Tercero (contratado por el contratista)
Exploitation (commercial)	Explotación
Landman	Asignatario o contratista
Lease	Concesión
Lessee	Concesionario
Liability	Responsabilidad (jurídica)
Mineral estate	Patrimonio (sobre recursos naturales)
Period (of lease)	Período

Royalty	Regalía
Severance	Extracción
Severance tax	Derecho (sobre extracción)
Signing bonus	Bono a la firma
Surface damage	Afectación superficial
Surface owner	Superficiario
Title conveyance (hydrocarbons)	Transmisión onerosa

We say that these topics *are for discussion*, not for definition, as their precise definitions will vary from one commercial agreement or another, and from one legal regime (or jurisdiction) to another (as between civil- or Roman-law and common-law jurisdictions).

The starting point for a discussion of the topic of mineral lease is the presumption that the minerals are the property of someone. Such a conversation cannot (yet) take place about leases for minerals that are known to exist on the Moon or beyond the 200-mile limit of the exclusive economic zone of a country that borders an ocean. On land, the condition that minerals are the property of someone does not, however, establish that the surface owner of the real property is the owner of the associated mineral estate. It may turn out that the mineral rights have been severed in the conveyance of title to the surface owner.

It is the mineral owner (be the party the surface owner or a third party party) who enters into a mineral lease for the exploration and commercial exploitation of a specific mineral (such as silver or oil and gas). In negotiating a lease, the mineral owner obtains, on an exclusive basis, the right to explore and extract specific minerals for the commercial benefit of the lessee and the financial benefit of the mineral owner.

Payments and taxes under the terms of a lease take one form or another, but, minimally, they include a royalty on commercial production (volumes net of water and impurities).

The lease provides that the lessee will bear all costs of exploration, extraction and abandonment, and assume liability for environmental damages or injuries.

The lease will be granted for a specific period, such as 25 years, but with the provision that the period of the lease will extended provided mineral production continues in paying quantities (meaning, in commercial volumes). When a leased area is deemed to have no further commercial production (given the cost structure of the operator), mineral rights revert to the mineral owner.⁶

An entirely different, but no less important, topic for discussion concerns the access to the surface property to which the mineral lease pertains. Wichita

⁶ It routinely happens in open-market jurisdictions that the same property will be re-leased to an operator with a lower cost structure and for whom the field still has commercial life.

oilman Ronald D. Smith tells the story of the situation in Wyoming where the U.S. federal government granted free land to settlers but with mineral rights to their properties severed. “The government kept 70% of the mineral rights in Wyoming”.⁷ When the Bureau of Land Management (BLM) issued oil and gas leases to operating companies, ranchers objected in court that they would suffer damages to their properties and were providing a service but without receiving compensation either from a signing bonus or as a royalty.

The situation of the rancher in Wyoming is analogous to that of any landowner in Mexico, except that the severance of mineral rights from those of the surface owner is nationwide. It is in anticipation of conflicts between the surface owner and the oil-and-gas lessee that the Hydrocarbon Law gives so much attention (all of Chapter IV, Articles 100-118) to ways to reach an amicable agreement short of court-ordered expropriation.⁸

1. *Title to Hydrocarbons*

The matter of conveyance of title to production is handled in different ways around the world and it is common for an oil-and-gas title attorney to be engaged in the negotiation of a lease. Several related concepts get easily confused, so it's worthwhile trying to sort them out. The basic idea is that the ownership of the mineral estate always stays with the mineral owner. The relationship of the lessee to the mineral estate by the terms of the contract is not one of ownership; it is rather, a relationship analogous to a lien on a property, where the enforceability of the lien is contingent on the lessee's having complied with all the terms and conditions of the lease.⁹

This topic routinely gets confused in Mexico: the Government, representing the Public Interest, is the *de facto* mineral owner. Any leases of mineral rights to a state-owned oil company (Pemex) or to other oil companies does not change the basic fact of public ownership of the mineral estate (that is, hydrocarbons *in situ*). A lease creates an exclusive right to their commercial exploitation by an oil company (Pemex or otherwise) for a given period. Article 6 (b) of the Hydrocarbon Revenue Act provides that title conveyance to the contractor of hydrocarbons takes place once they are extracted (that is, no longer are *in situ*). The law does not state, but it is understood, that the delivery point where title transfer takes place is at an outgoing metering point (that is, on net, commercial production).

⁷ Telephone Interview with Ronald D Smith, oil business development manager, Houston (Dec. 5, 2014).

⁸ It is a contentious, and yet-unresolved, topic as to how (if at all) the surface owner will be compensated from commercial production on his property.

⁹ Lien is used not as a precise legal equivalent but to indicate that the lessee's interests are litigable.

2. *Posting Reserves*

Where the matter of the relationship of the lessee to the mineral estate gets most confusing is in relation to the understanding of the concept of reserve: A reserve is a *numerical estimate* of recoverable volumes. Said differently, reserves exist in the Mind, not in the Earth, and, as mental events, the concept of real property right does not apply.

A lessee who reports reserves in a lease does not thereby take ownership of the minerals *in situ* in the volumes reported. The reported volume is about his expectations of future benefits under the lease, expressed as barrels of liquids and cubic feet or meters of gas. The Hydrocarbon Law (Art. 45) affirms the right of an oil company to report, for accounting and legal purposes, the “expected benefits” that are associated with a given contract; but the term “expected benefit” is ambiguous, as is may be interpreted in a restricted sense to refer only to net present dollars, not reserves by volume.

III. MEXICAN MINERAL CONTRACT

To make the comparison with the regime of concession clear, we shall use “mineral contract” where, to be precise, we should use “hydrocarbon contract.”

1. *Legal Personality of the Commercial Actor*

The mineral contract differs from the mining concession in an important philosophical sense: in a concession, it is the concession-holder (*titular de la concesión*) who is the developer; that is, the legal and operational agent who is responsible for mineral production; whereas, in the mineral contract, it is the “Nation” that is deemed the legal actor that carries out both exploration and production. For a private oil company, what this requirement means is much less clear than *what it doesn't mean*: what it doesn't mean is that an oil company will be in an analogous position to that of a mining concession-holder on the Mexican side or to a lessee or licensee on the U.S. side.

In U.S. jurisdictions and in Mexico's Mining Law it is the lease- (or concession-) holder who is simultaneously the operator as well as the principal commercial actor. All other parties are contractors or sub-contractors to the lease- (or concession-) holder.

In the legislation of the 2014 Energy Reform (on both the oil and power sides), it is the State that is the fictive operator. The logic would seem to be that, on the oil side, as hydrocarbon resources *in situ* belong to the Nation, it follows that the State is the automatic, fiduciary lease-holder responsible for their stewardship, including exploration and extraction.

The State, in turn, looks to contractors and state-owned agencies to carry out the tasks of exploration and extraction. Thus, the 8th paragraph of Constitutional Article 27 reads, in part,

The Nation will carry out the activities of exploration and extraction of petroleum and other hydrocarbons by means of allotments to [Pemex] or by means of contracts with private parties by the terms of [enabling legislation].

This requirement arises from the prohibition, carried forward since the constitutional amendment of Art. 27 of Jan. 20, 1960, against granting concessions in relation to hydrocarbon deposits.¹⁰ The practical and legal consequence of prohibiting hydrocarbon concession was to force the emergence of two parallel regimes: in the one, the operator is the lease-holder and the commercial actor; in the other, it is the State that is the fictive operator and lease-holder. The legal and commercial consequences of creating this bipolar mining universe have been profound.

The important point for this discussion is that this dual framework is preserved in the 2014 Energy Reform.

The government, representing the State (and the Public Interest, or Nation), continues as the exclusive owner of Mexico's mineral estate, onshore and offshore. The National Hydrocarbon Commission (CNH) has a legal faculty analogous to a power of attorney to act on behalf of the State in the award of mineral contracts. Thus, as we have seen, the State is not offering to lease its mineral rights to a state-owned enterprise or to a private oil company. Instead, it is asking for both conditions to be true:

The state enterprise or oil company carries out the investments and assumes risks and liabilities of a block to which he has been awarded a contract; but

It is the State that is the producer-of-record who aggregates production and reserve estimates on behalf of the owner of the mineral estate (the Nation).

Said differently, in the Peña regime the government is offering a lease-like arrangement by which the winning consortium of a public tender will be compensated for its investment and operating costs by obtaining title to production (all or a share), at a delivery point near the wellhead (as in a standard U.S. lease); but with the difference that entitlement of production will not be defined in the lease. What will be defined is a mechanism for the contractor to be paid from production, on a barrel-by-barrel basis.

But for how long? Of particular concern to prospective bidders is the arbitrary limitation on the period of the contract to 25 years with two 5-year, contingent extensions. In other jurisdictions (as in the United States), there are oil fields that have been in production for over a century (as in Kern River, Calif.). Just as the abandonment of the field could have been expected, a new

¹⁰ Antorcha.net, *Párrafos de la reforma promovida por el Lic. Adolfo López Mateos en cuanto titular del Poder Ejecutivo al artículo 27 constitucional el 20 de enero de 1960*, available at http://www.antorcha.net/biblioteca_virtual/derecho/legislacion_petroleo/10.html

technology appeared that justified a new cycle of investment—but only on the premise that the operator would have uninterrupted rights to production for the commercial life of the field.

2. *Consequences of a Dual Regime*

By this logical and judicial reasoning, the government's lexical choice, "contractor," best fits the proposed legal framework: the contractor is an at-will agent of the State, which represents the Mexican public interest. Since it is the State that is the producer of record, the contractor cannot post reserves in the fashion of the concession-holder in the mining regime.¹¹

The government's proposed regime for hydrocarbons provides that the investor-operator, as contractor, will have the right to production (or a percentage thereof, if a production-sharing agreement) once the minerals are produced and delivered to the outgoing metering point, provided that taxes to the government and royalties to the Oil Fund are current. These legal contingencies are not found in Mexico's mining concession, as all production in an official mineral lot is automatically deemed to be the property of the concession-holder to "dispose of" (quoting Article 19 of the Mining Law)¹² as he pleases.¹³

IV. LOOKING AHEAD TO THE ENERGY REFORM OF 2026

The upstream business model proposed in 2014, in which the Nation is deemed to be the fictive developer of Mexico's petroleum estate, may be regarded as a transitional regime that will last, at most, two presidential terms. A third energy reform will take then take place; it will be a mixed-market regime in which the legal figure of concession will be restored for the oil sector (Table 2).

¹¹ This right is implicit, given that he will make a payment for a commercial discovery, the amount of which will be indexed to volume.

¹² Energy lawyer Raúl Necedal observes that in civil (or Roman) code, property entails the right to use, enjoy and dispose of something (*ius utendi, fruendi et abutendi*), where "dispose" includes commercial exploitation.

¹³ The legal and commercial role that a CNH-contracted crude oil marketer might have is yet to be clearly defined.

Table 2
 Evolution of Mexico's Mining and Oil Regimes
The Energy Reform of 2014 is seen as a transitional regime

Period	Dates	Legal disposition	M	Regime		O	operator (of record)
				Minerals	Oil		
Hapsburg	1519-1700	Alexandrine Bulls Royal decrees		Concession	n/a		Concessionee
Bourbon	1700-1821	Ordennanzas de Minería (1783)	C	concession	n/a		
Independence	1821-1884		C	concession	n/a		
Porfirian	1884-1917	Mining Code (1884) Petroleum L (1901)	C	concession O	Surface owner		Surface owner oil company
Constitutional	1917-1958	1917 Const. Art. 27 Petroleum Law (1925) Petroleum Law (1940) Petroleum Law (1941) Pemex Law (1938)		Concession C	concessionee		Oil company under contract with Pemex
Fictive Agency	1958-2003	1917 Constitution Arts. 27, 28 y 25 Petroleum Law (1958) Public Works Law Public Procurement Law Pemex Law (1971; 1992)	C	concession P	Pemex entitlement		} La Nación
	2003-2013	Public Works Law Pemex Law (2008) CNH Law (2008) Disp. Admin. de contratación (2010)	C	concession P	Pemex entitlement	Farm-in service companies as contractors	
	2014-2026	Hydrocarbon L (2014) Pemex Law (2014) Hydrocarbon Revenue Law (2014) Hydrocarbon Regulator Law (2014)	C	concession P e	Pemex entitlements farm-outs	contracts to companies	
Mixed Market	2026-2038	1917 Const. Art. 27 Allows oil concessions offshore; wildcatting onshore	M C	Concession Mineral lease	concession C Mineral lease	concessionee Lease-holder	

Source: Hart: Mexico Energy Intelligence®

1. Unitary Minerals Regime

The next reform will feature a unitary minerals regime, one that absorbs the pertinent concepts of the 2014 Hydrocarbon Law and Hydrocarbon Revenue Act into the Mining Code. The legal and constitutional distinction between hydrocarbons and all other minerals would be eliminated. The argument might be made along the lines of “One country, one mineral law,” meaning that the precepts of the Mining Law would also apply to hydrocarbons as minerals. A lease-holder who complies with regulations and who

offers a reasonable investment program would be given the option to extend the period of his lease to the commercial life of a field.

The charter of the SGM would be amended to remove its present role in exploration and the State would no longer seek to have a legal monopoly over subsurface data. Lease holders would be free to post reserves. Some way (perhaps in the fashion of the Petroleum Law of 1925), will need to be found to reward the surface landowner from commercial production on his property.

Pemex would be chartered as a stock-issuing company with a portion of its shares placed on a major stock exchange and with a mandate to operate also outside of Mexico. Pemex and CFE employees would be categorized into a separate personnel system that would not be subject to the Public Servant Accountability Act (LFRSP). The energy and finance ministers would be removed from Pemex's corporate board on the grounds of irreconcilable conflicts of interest.

Global hiring of managerial and professional staff would replace the current system by which executive appointment of the directors general of Pemex and CFE are automatic presidential prerogatives from a labor pool of Mexican candidates.¹⁴ In the same spirit, the president of Mexico would maintain a healthy distance from the oil and power sectors, and he or she would desist from attending the March 18th commemoration of the 1938 oil expropriation.

Toward the goal of establishing a market-driven understanding of regional geology in relation to a given mineral, the State would no longer seek a legal monopoly over subsurface data obtained from drilling and seismic studies. Instead, the state would promote a role for reservoir engineering firms who offer data products that describe geological trends from the results of multiple contractors.

The management of award criteria would be transferred from the Finance Ministry (SHCP) to an inter-agency commission chaired by the president-commissioner of the Hydrocarbon Commission (CNH). Award criteria would consider the total value potential of a bid, not simply raw numbers as at present in the Hydrocarbon Revenue Act of 2014.

While the future mixed-market regime will be an improvement over that of 2014, it also will not last beyond two presidential terms.

2. Revisionist Critique of the National Oil Narrative

For any of the features of the imagined Energy Reform of 2026 to take place, Mexico's national oil narrative will need to be revised, starting with a

¹⁴ With Pemex seeking production in deepwater reservoirs, nothing could be clearer than the immediate need to hire an executive vice president for deepwater operations who has global experience.

down-sizing of the importance of Lázaro Cárdenas and the oil expropriation of 1938. Revisionist economic and constitutional histories by Mexican historians and legal scholars will be needed.¹⁵

Legal scholars will need to reassess the constitutionality of Art. 6 of the Petroleum Law that was promulgated on the last working day of the presidency of Adolfo Ruiz Cortines (1952-58) and which radically restricted the upstream business model to one in which only Pemex could be the operator of an oilfield. They will also need to rethink the significance of the constitutional changes of Art. 27 in 1960 during the presidency of Adolfo López Mateos (1958-64) which created, out of political convenience, a separate legal regime for hydrocarbons, eliminating the contractual figure of a minerals contract. Reconsideration will also need to be made of the amendments of Constitutional Art. 28 in the presidency of Miguel de la Madrid (1982-88), ones which further isolated Mexico from global practices in the oil and power sectors.

Economic historians will need to assess the economic and environmental opportunity costs to the country of a half-century of isolation from the global oil industry, considering the period as a failed experiment in public policy in which Pemex as a state agency would acquire new technology only second-hand through global oilfield service companies. Such costs would include the energy poverty of the southern half of the country, the lack of resource development and infrastructure in refining, pipelines, power and storage.

Econometricians will need to model the value destruction caused by a procurement regime of lowest price and by a system of administered prices for all energy products.

For such changes and scholarship to take place, at least a decade will be needed.

V. OBSERVATIONS

In the Transboundary Hydrocarbon Agreement of 2012 the administration of Felipe Calderón of the National Action Party (PAN) invented the term “*licenciatario*” as a euphonious counterpart to the American “licensee” (see extract). The administration of Enrique Peña of the Labor Party (PRI) rejected this term in favor of “*contratista*,” for reasons, as we have seen, that go beyond a matter of lexical choice. The intent of the change was to emphasize that the investor-operating company would not have the benefit of a mineral lease.

Had the PAN won the presidential elections in 2012, and had the new government the political will to offer a new, market-driven design for the energy sector, then the constitutional changes promulgated on Dec. 20, 2013, might have been such to have made the term *licenciatario* the equivalent of *licensee*.

¹⁵ Reformas Constitucionales por Periodo Presidencial, http://www.diputados.gob.mx/LeyesBiblio/ref/cpeum_per.htm (last visited June 29, 2014). A useful chronological guide to constitutional changes, by presidential period.

The Energy Reform of 2014 preserves Mexico's populist, bipolar minerals regime: one legal framework for hydrocarbons (excluding coal), a second framework for all other minerals. It is "populist" in that it consciously follows the contours of the government's petroleum narrative that has circulated since 1938, which is that a dimension of Mexico's national identity is associated with the exclusivity of the ownership of the country's hydrocarbon endowment.

Why do oil companies insist on reporting reserves in volumetric terms? Answer: it is the most transparent, reliable way for investors and the general public to evaluate the management performance and the potential worth of the company. While it is true that a barrel of light oil that is replaced by a new barrel of heavy oil is an imperfect commercial equivalent, it is still a better measure than any other metric devised thus far in the oil industry.

The definition of "Hydrocarbons in the subsurface" in Article 3 (XXI) of the Hydrocarbon Law lacks, in addition to a legal foundation, commercial or practical sense. An *estimate* of recoverable hydrocarbons (that is, a reserve) cannot be in the subsurface and cannot be owned by anyone other than the oil company or reservoir engineer who produced it. Such a definition, however, *does make ideological sense*, as it serves to underscore the contractor's arms-length relationship to the mineral estate. Such a definition is also consistent with the provision that in a contract in which the contractor takes physical possession of all or a portion of production, title conveyance is always contingent on a contractor's full compliance with tax and royalty obligations. Finally, the definition serves to remind all parties that, cosmetically, it is the State that is the producer-of-record, not the contractor. From this, it follows naturally that it is the State, not the contractor, who posts reserves in volumetric units.

The Mining Law is silent regarding the indemnity that might be owed the concession-holder for the expropriation of his discoveries in the case of the cancellation or revocation of his concession; since he paid a tax on the volume of the discovery, it could be argued that in making the payment he acquired an asset in the form of a commercial interest in that volume of minerals. It could be argued that this asset is not voided by the cancellation or revocation of his concession. This is not the situation of the contractor: if his contract is rescinded administratively, he has no residual assets in his contract area.

The clarity of the hydrocarbon laws is impaired by an ideologically-informed lexicon in which "Nation" refers to a fictive developer of petroleum resources, while a "contractor" is an oil company, and its contractors are "third parties." As if with the intent to conceal the meaning from the general public, the conveyance of title of hydrocarbons is described as the "*transmisión onerosa de los Hidrocarburos*".¹⁶

¹⁶ Ley de Ingresos sobre Hidrocarburos [L.I.S.H.] [Hydrocarbon Revenue Act] *as amended*, Diario Oficial de la Federación [D.O.], 11 de agosto de 2014 (Mex.). A favor del contratista, la transmisión onerosa de los hidrocarburos una vez extraídos del subsuelo, siempre que, conforme a los términos del contrato, se cubran las contraprestaciones señaladas en el apartado A anterior.

We find “public interest” to be the best translation of “*La Nación*” in the text where public policy is concerned. There is a new, undefined meaning implied in the use of “*Nación*” where it reads “all property ... within the national territory corresponds originally to the Nation” (and ignoring the opacity of “originally” and the redundancy in the use of “national” and “Nation”).

The use of formal terms from Roman law to describe the aims of commerce is technically correct; but, at the same time, their use for the benefit of upstream investors and operators who are mainly from common-law jurisdictions creates impediments to commercial understandings. Avoidance, on principle, of terms for “to sell” and “title conveyance” makes lucrative work for lawyers, but the reliance on the terminology of Roman law blurs the impression that the government is serious about creating mindsets in which market conditions and competition matter.

VI. CONCLUSIONS

Insofar as it was contractually possible, the upstream the government’s business model maintained the logic and spirit of the Public Works Law (LOPSRM). Compensation to the contractor is to be strictly controlled by means of an R-factor and other mechanisms that limit the upside to what the government determines to be a reasonable return on investment. The compensation model approximates that of a fee/barrel where the upper and lower limits of the fee are set by formulas informed by market prices.

Regarding the biddable variables, where, in the LOPSRM the conventional viable is (lowest) price, in the new regime the variables are (highest) price, expressed as the percentage of government take, and the amount of capital to be committed. The use of these seemingly objective variables is understandable, given that public officials are subject to the Public Servant Accountability Act (LFRSP); their use protects them from suspicion by future auditors, but the public interest is thereby questionably served.

Meanwhile, the Energy Reform of 2014 was lexically designed, consciously or otherwise, to echo terms found in other Western countries, giving a false sense of familiarity.¹⁷ The grammar of the present, transitional oil regime, however, is pure Latin: *Caveat emptor*.

¹⁷ EDITH GROSSMAN, *WHY TRANSLATION MATTERS* (Yale University Press 2002).

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