

STICKING POINT: OIL AND GAS RESERVES

A landman and a philosopher sit at a bar and talk about Mexico

SUMMARY

The upstream oil industry by its language, leases, and regulations, has created a conceptual framework and vocabulary to explain how it conducts its industrial and commercial operations; but it is speechless in the face of misunderstandings about its relationship to the mineral estate, as when the regulator says, “the nation owns your reserves.” The untangling of this misunderstanding requires philosophical and linguistic analysis outside the framework of the industry and begins with the discernment that “reserves” in the oil and mining industries is a non-countable noun, like snow, time and history.

This essay, written in the tradition of a Platonic dialogue, identifies logical missteps, citing the work of Alfred North Whitehead, who a century ago identified fallacies in scientific reasoning. The report shows how these fallacies have distorted public policy, and the contracts offered to oil and mining companies.

- **During their conversation, they will come to understand why the Mexican government offers investors in the mining and oil industries the least attractive form of a mineral contract.**

PART ONE: The idea of an oil reserve

- **TWO RETIREMENT-AGE MEN SIT ON BAR STOOLS AT A PUB**, having ordered two pints of Texas Blonde®.

Landman: So, dude, what’s on your mind?

Philosopher: I want to run a couple of ideas by you, also I'd like to get a few things off my chest.

Landman: Go for it.

Philosopher: We’re here on a visit to Ft. Worth, where my wife’s from. After many years in Mexico’s oil patch, I come back with some ideas about what’s not going right in the upstream.

Landman: I’d like to hear about them.

Philosopher: How much have you been following Mexico’s oil policies during the past twenty-five years?

Landman: I don't work in Mexico, as they don’t seem to need the skillset of American landmen, so they’re no opportunities for my profession; but I heard a story about a Texas operator that signed for a block with co-ordinates that don't exist. Is that really true?

Philosopher: I’m surprised that you heard that story. In the contract signed on September 4, 2015, between the leasing agency, called the National Hydrocarbon Commission (CNH), and the consortium of private investors, had the labels for the coordinates reversed. The latitude of the block was 105 degrees— in hyperspace, I suppose, but definitely not on the planet Earth.

Landman: The best lawyers in Mexico City and Houston reviewed that contract? But they missed the detail that the block coordinates had been reversed? Amazing.

UNSPOKEN UNDERSTANDINGS

LANGUAGE AND LOGIC

Philosopher: I'd like to start our conversation by calling our attention to the difference between the words "fewer" and "less." In any large grocery store, you see signs above a cash register that reads "15 items or fewer," while, in another store, the same information reads "15 items or less." which is correct?

Landman: They both mean the same to me.

Philosopher: There's no doubt as to the meaning; but there is a semantic difference. The word "fewer" is correct, as it refers to things that can be counted while "less" does not. You could say that you like this Ft. Worth-brewed beer "more or less," but you would not be able to use "fewer" to express your degree of approval.

Landman: I get it.

Philosopher: Nouns are either countable or non-countable. Most nouns are countable, but some are not. Examples are air, water, honey, snow, and equipment. There are no plural forms.

Landman: But we refer to "federal waters" in the Gulf of Mexico and can say that someone is putting on "airs"—some philosophers, for example.

Philosopher: "Federal waters" refers to the distinct offshore areas where there is federal jurisdiction, but the water itself is the same. "Putting on airs" is an idiom. We could not say someone is putting on two, three or five airs. So long as we're speaking about language, there's a rhetorical device that we employ every day but the name of which is familiar to few: "synecdoche."

Landman: Say again?

Philosopher: It's pronounced /sə 'nek də kē/, in four syllables, with the stress on the second syllable. I admit that the spelling and pronunciation have an unpleasant medical look and sound, but the idea itself is great. It is the use of a part to refer to the whole. We do it all the time. It's to name one thing that stands for many, a collective noun. "Give me a hand," refers to your whole body and goodwill. When Lord Nelson commanded 27 sail at the Battle of Trafalgar, he was commanding the warships not just their sails.

Landman: OK, but, like, where are you going with all this?

Philosopher: Philosophers and logicians identify logical errors in thought and speech. I want to call your attention to one that is called "fallacy of misplaced concreteness."

Landman "Never heard of it. It sounds like a line from a joke about a blotched well completion.

Philosopher: No. It's an error of treating an idea or concept as a thing. There's even a word for it: "reification." The word derives from the Latin *res* (thing) and *facere* (to make), combining *to make a thing*.

Landman: That's a new one for me.

Philosopher: We usefully *reify* many nouns and verbal nouns in everyday speech: we refer to the "economy" and "the environment," for example, loosely imagining them as having physical existence

when, if we were to pause and think about it, we would admit that the words allude to diverse, uncounted, features of the world around us.

In a spiritual teaching that my wife follows, the verbal noun “being” is reified. People are believed to have different “levels of being.”

Landman: ‘Not sure what that last one means.

RESERVES. WHAT ARE THEY?

Philosopher: Let’s turn to oil and gas reserves. When we speak of oil and gas reserves, the word “reserves” is a collective, non-countable (or uncountable) noun.

Landman: Hmm. But reserves always have numbers that go with them.

Philosopher: Yes, but they were all calculated and not counted. Wellbore-logged data and core samples are for the measurement of porosity, permeability, resistivity, and other attributes of rocks in a petroleum system. Their values, applied over the estimated volume of the reservoir, its depth and extension of the pay sands, allows for an estimate of the oil and gas in place. Other calculations are needed to tell the operator and mineral owner about how much of that oil in place is likely to be economically recoverable.

A reserve number “600 million barrels” does not refer to anything that has been, or could be, counted. It is like a synecdoche: the last bit of information that is spit out from a complex, multiphase analysis of geophysical and economic conditions and their associated risks. The number sits on top of that analytical process; it has no separate existence or meaning.

A reserve number is unique to the party that does the calculations. The costs and market assumptions of one reserve calculation may be very different between the operator of a project, or their partners in the project, or those who lease an adjoining property. The number “600” is valid only *for the day* it was calculated. Next day, the value could go up or down, depending on changes in technology, market conditions, including taxes, the interest rate, oilfield service and insurance rates, and steel and oil prices. As a lot of work and expense is associated with the calculation of reserves, an operator is likely to conduct the exercise only once a year, if that often.

*There is no science
of fairness*

Landman: ‘Sounds right.

Philosopher: You can see how we *reify* “reserves,” supposing that the word refers to hydrocarbons in the subsurface that are the property of the mineral owner. The temptation to do so is reinforced by their status under the law as *real property*, that is, a feature of the land, including intangible rights and obligations (easements, for example).

Landman: Yeah. If oil and gas reserves are features of your real property, it would be hard *not* to think of them as “in the ground.”

Philosopher: You would have to know “reserves” refer to geophysical calculations based on sample data, plus what you learn from your crystal ball about market conditions. Let’s pivot to royalty rates.

Landman: OK. Landmen have a lot of expertise in this subject.

ROYALTY RATES (THEIR ECONOMIC DRIVERS)

Philosopher: There's no science of fairness regarding the economic rewards that should be shared between the mineral owner and the investor-developer of the minerals.

Landman: I've had uncounted conversations with ranchers and farmers about this subject. They start out by supposing that since they own the minerals, they should at least get half of the value of the hydrocarbons produced. I tell them that they must compensate the oil company not only for the deployment of its human, technological, and financial resources but also for the risks assumed. Still, mineral owners are often disappointed to learn that the market's understanding of "fairness" is 1/8th.

Philosopher: A country or other public jurisdiction that is the mineral owner may set a fixed or adjustable rate, according to the size of the reservoir, the risk assumed by the investor, or the regulator's interest in promoting the development of marginal fields.¹ In 2019, BOEM set royalty rates for oil and gas leases in federal waters at 12.5%, or 1/8th, for shallow-water leases, and 18.75, or 3/16th, for leases in water depths of 200 meters or greater. The rules allow an operator to apply for certain types of royalty relief when the standard royalty would not give a sufficient rate of return.

A jurisdiction could also have a sliding scale for royalties. If too high a royalty is set, smaller reservoirs will not be developed. The mineral owner, public or private, must be incentivized to bring resources to market; so, insisting on a royalty rate deemed uneconomic by the operator will leave hydrocarbons in the ground, serving neither their owner nor the market.

Landman: That's what I tell mineral owners in Texas and Oklahoma.

Philosopher: Let's wheel our conversation around to Mexico.

Landman: OK. I was beginning to wonder.

¹ [BOEM Economic Assumptions for BSEE Discretionary Royalty Relief Applications](#)

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PART TWO: How Mexico's oil narrative has it wrong

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MEXICO

OIL AND GAS RESERVES: THE STICKING POINT

Philosopher: Mexico's oil regime illustrates the fallacy of misplaced concreteness. The country's laws, regulations, and contracts with oil companies would have us believe that the nation is the owner of subsurface resources, including reserves, *down to their molecular level*.

Landman: Just as on federal waters, the United States is the mineral owner, so too on the other side of the maritime boundary, the Republic of Mexico is the mineral owner.

Philosopher: Exactly. You have to ask, what is it that the mineral owner legally owns? The U.S. has one answer, Mexico, another.

Landman: Really? How so?

Philosopher: In a U.S. federal oil lease, who owns the hydrocarbons at the wellhead?

Landman: The leaseholder.

Philosopher: Exactly. We must work backwards to discern the logic of the lease. The U.S.A., as mineral owner on federal lands, transfers commercial rights to the winning bidder (one company or a group of companies) who bids a lump-sum bonus amount in addition to the other obligations to explore and, if successful, pay appropriate royalties. The Government will review and evaluate the bids from each bidder and accept or reject if they determine that the bonus amount is insufficient.

At the time of issuing the lease, neither the government nor the leaseholder can be certain that economic accumulations exist in the block.

Landman: OK.

In Mexico, it's different. At the wellhead, it is the nation that owns the hydrocarbons. And can you guess why?

Landman: Nope.

Philosopher: Mexicans believe that, as they own the hydrocarbon molecules in the ground, before they were extracted, the ownership continues when oil and gas reaches the wellhead. For that reason, Mexico's oil lease auctions offered a risk-service contract, where the "services" were of exploration and extraction. [See insert.]



Landman: If the license holder doesn't own hydrocarbons at the wellhead, how does he get compensated for his costs and risk?

Philosopher: As a percentage, in volume or revenue, of the government's marketed production.

Landman: So, the oil company doesn't market its own production?

Philosopher: Nope. It's not his to sell.

Landman: Unbelievable! How does it work?

Philosopher: Not very well. Where, on the U.S. side, it is implicitly understood that the scope of mineral ownership refers to the exclusive right to explore and self-develop the resources or lease commercial rights to a third party in exchange for a royalty, Mexico takes the idea of mineral ownership one step further by including the molecules themselves.

Landman: If I'm following you, attaching ownership of the molecules to the idea of mineral ownership is an instance of—what was it? The fallacy of misplaced concreteness.

Philosopher: You got it. This logical error self-propagates throughout the state industry. If the nation owns the hydrocarbon minerals, guess how many oil and gas reserves Pemex has posted to its own account.

Landman: As Pemex is owned by the government, and the nation is the mineral owner, I suppose that Pemex posts as many oil reserves as it has discovered.

Philosopher: *Sí, pero no*. It would be logical to think that way, but in Mexico, only the nation has reserves, not even Pemex.

Landman: Hmm. So, Pemex is a major oil producer without oil and gas reserves?

Philosopher: It's completely logical, but still weird. Not only is Pemex not permitted to post reserves, but neither are the private oil companies. In short, only the nation holds reserves.

Landman: I'm not seeing how the government benefits from this accounting protocol.

Philosopher: You are in good company. Regarding reserves, what counts for an oil company is the sub-category "proven reserves," which are deemed to have a 90% probability of success. The booking of proven reserves allows the market to value the company, its technical talent, and management team. With certified proven reserves, a company can get bank and investor financing for development.

*Economic value is created
by booked reserves*

The prohibition of the posting of reserves by an oil company prevents the potential bounce in the value of its shares in the stock market, thus depriving the company of the additional resources that it will need to build out the production and marketing systems.

Land man: Who gains by this arrangement?

Philosopher: it creates a national narrative in which the Mexican people collectively serve as the fictive operator of all Mexico's oil fields, including those not yet in production.

Landman: There can be no such thing as a "fictive operator." It's the operator who is the one making billion-dollar decisions about the development of the resource, not the mineral owner.

Philosopher: The Mexican oil narrative wants it both ways. The state appropriates—shoplifts—the reserve estimate made by the operator and reports it as its own. It wants to ring-fence subsurface resources with the State as the sole beneficiary in volume and revenue.

Interest groups gain by this narrative: So long as the molecules belong to the people, it makes sense to have a people's oil company owned by the people to exploit those minerals; and, as the executives of the national oil company are appointed by the president of Mexico [since 1938], it is the president and his appointees who create networks of privilege via Pemex contracts for supplies, equipment, and services.

The "Pemex-Contractor Complex," as a Mexican political observer puts it, has grown in membership and economic power since 2018, when the government of President López Obrador erected a wall of opacity around government procurement for his megaprojects.

Landman: Opacity?

Philosopher: The president assigned the Energy Ministry to take charge of the construction of a greenfield refinery, the initial cost estimate for which was \$8 billion; but actual disbursements have been reported in the Mexican press to exceed \$20 billion. There were no international tenders, as required by Mexico's formal adherence to trade and investment agreements with commercial partners in North America and Europe. Meanwhile, the Defense Ministry was given responsibility for upgrading a military airport and building a regional train system in the Yucatan along with hotels. There is no public registry of the contractors for any of these billion-dollar white elephants, and I have seen no report on the penetration of federal procurement by front companies of drug cartels.

Aspirants for high public office in Mexico benefit by this arrangement by their campaign promise to "never to privatize Pemex." Once in office, the oil card is held ready to play at a moment's notice: The "oil card" is the national rags-to-riches narrative by which Mexican oil workers rescued Pemex after the oil companies were thrown out of Mexico in 1938.

Populists insist that, as oil molecules belong to the people, they can't be claimed by private parties.

So, you ask, who benefits by the narrative of Mexico owing the molecules of silver, hydrocarbons, and lithium?

Landman: 'Sounds like a lot of people benefit, especially those who stand to gain in proportion to the lack of transparency.

Philosopher: Politicians, oil union leaders, and Pemex suppliers and contractors want Mexicans to believe that the nation's identity, and grandeur derives from country's oil endowment and paladin of an oil company. Their story more or less hangs together so long as it is the nation that owns the oil molecules and the reserves.

Landman: As every landman knows, however, the posting of reserves refers to commercial rights, not to mineral ownership. From what you say, Mexican politicians believe that the posting of reserves is equivalent to privatization, that is, the *transfer of mineral ownership*—which it is clearly not. If, by contract, commercial rights have been assigned to oil companies, the government can't simultaneously claim to own the reserves.

***Reserves are about
commercial rights, not
about mineral ownership***

Philosopher: I ask myself: How the economists who were running the government in 2012-14 could have signed off on something that was a lose-lose deal for both the nation and the investor?

In the contracts issued between 2015 and 2018, oil companies were allowed only to report to the SEC a forecasted income stream from their contracts, an irregular and poor substitute for booking volumes of proven reserves. The companies were being cheated out of market recognition for their success. It's a wonder to me that the SEC allowed—or was instructed to allow—such a departure from market expectations, and it's an equal wonder as to why, for that reason alone, any oil company would have considered participating in the oil lease sales that took place in Mexico in 2015 and afterward.

I know of only one company, Marathon Oil, for whose managers the contractual prohibition on booking reserves was a contributing factor, but not the sole reason, in their decision not to participate in Mexico's hid rounds.

Landman: What would you suppose might have been other reasons?

Philosopher: Many oil companies, especially the bigger ones, are willing to participate in early offers for positioning's sake and with a hope that things will change for the better in the future. Often the little guy, even the size of Marathon Oil, cannot play this wait-and-see game.

It took the bigger companies only a few years to discern that things would change, but not for the better. The Mexican state would never move away from a risk-service contract with the president of Mexico as the effective counterparty of an oil company investor.

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PART THREE: MEXICO'S LEASE AUCTIONS, 2015-18

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LEASE AUCTIONS (2015-18)

Royalty Rates

Philosopher: For the first oil leases ever to be to be auctioned by the government, *royalty rate* was set as the principal biddable variable. I recall hearing the chairman of CNH, the government's leasing agency, gleefully remind prospective bidders, "*It's the market that sets the royalty rate!*" As if this high-risk, biddable variable were evidence of the government's pro-market credentials.

Landman: And what happened?

Philosopher: Nothing you'll want to hear about without a box of Kleenex at your side.

Landman: Try me.

Philosopher: Bidders went crazy. Some of them offered royalties approaching 70%. Having won their respective auctions, dozens of leaseholders would surrender their leases when they woke up to the reality that it was uneconomic to develop the minerals at those high royalty rates.

Landman: I can believe it.

Philosopher: A second inconvenience was that the royalty rate on one property would likely be significantly different from that on an adjoining property, thus confounding the economics of development were there a shared pool.

Contract Areas

Philosopher: The corporate landman of an American oil company attended meetings in Mexico City on multiple occasions over several years leading up to the Energy Reform in 2014. In the meetings there were officials from the Finance and Energy Ministries, also lawyers from Pemex. He told me that he had urged them repeatedly to adopt a grid system for blocks in the Gulf of Mexico.

Landman: Let me guess.

Philosopher: You guessed right. Instead of a grid system, the government offered lease areas in any-which-way configuration. Some were in squares, but many were in weird polygons, some of them, in the lease round for acreage in the offshore area known as "Mexican Ridges," had more than forty sides. One block near the maritime border was in two noncontiguous sections, north and south.

In a meeting in the Energy Ministry in the first week of December 2018, I asked the officials (there were four or five) about the irregular shapes. “We were following geological contour lines,” one of them explained. I also asked how the eastern lease line of Area 7 had been drawn so close to where the Zama reservoir had been discovered. “Pure geographical happenstance,” one of them assured me.

Contract Terms

Philosopher: The contract terms had fixed limits, fifty years, max.

Landman: A fixed limit goes completely against American practice, where the lease goes as long as the operator can continue making money and paying the mineral owner a royalty. Let’s remember that the Bakersfield reservoir began producing in 1906 and continues today, upwards of two billion barrels later.

Philosopher: There was another shortcoming. Subleases, that is, farmouts, were not permitted., thus limiting the potential area for active exploration.

Landman: I seem to recall hearing that Pemex had a farmout with BHP a few years back. Am I remembering it wrong?

Philosopher: Yes and no. In 2016, CNH held an auction for a 60% share of Pemex’s lease in a deepwater discovery named Trion. The government called it a “farmout,” but that kind of agreement concerns hydrocarbons that have yet to be discovered; if the *farmee*-subcontractor makes a discovery, the *farmor*-leaseholder transfers its commercial rights with an overriding interest. If there is no discovery, the agreement goes away.

You mentioned the oil properties at Bakersfield, the surface and mineral estate of which are now owned Chevron. As its production targets are deeper, the company has farmed out the depth to 10,000 to a third party, thus getting full value for its properties. Because it is the owner of the surface estate, the company does not pay rentals.

In Mexico, in contrast, no such subleasing is allowed. Areas without immediate interest to the leaseholder would have to be “relinquished” to the State.

Landman: I see where you’re going. And who benefits from the relinquished acreage? No one.

Zama

A controversy arose in relation to the award of an offshore block in 2015 that has issues that you, as a landman, would weigh in on. Following Brazil’s example, the government held a “Round Zero” in which oil and gas properties were assigned to the national oil company, only that the coordinates of the assigned properties were never made public.

In 2017, a few months after the biggest oil discovery in Mexico in a generation, the reservoir, baptized Zama, Pemex announced that 30% of the reservoir extended into its block.

Landman: I assume that Pemex’s estimate was based on data from the offset well that Pemex had drilled.

Philosopher: That’s the rub. Pemex’s director-general in December 2018 announced that the company would drill the well, named Asab-1, but later walked back the commitment. Things started to go south

for the investors.² In mid-2022, without an offset well, the government assigned Pemex 50.4% equity and the role of operator.

Landman: It smells like expropriation-by-regulation, a bad hit for the investors. How well is the project going under Pemex operatorship?

Philosopher: The public doesn't know much, but, as an FID [Final Investment Decision] has not yet been announced by any of the parties, it's not going as well as any of the parties had hoped.

Rumors circulate that Pemex may temporarily take the role of "nameplate operator," and designate a partner to run the development phase and the first 5 or 10 years of production. The partners would finance Pemex's share of the development cost, repayable in kind with interest.

Landman: How do you see this possibility?

Philosopher: Pemex would need to give up some of its equity upfront for a carried interest in Zama. Redetermination also needs to be on the table. But the optics would be awkward: The government, equating Pemex market power with sovereignty, would be reluctant to diminish Pemex's equity in Zama, however much it is undeserved.

In tennis language, regarding Zama, today's score for Pemex, the home team, is 15-40. But this could change, as the Mexican government has recently changed the way the game's umpires are to be chosen.

Landman: How so?

Philosopher: Mexicans are about to elect judges (as we do in Harris County) but at the federal level.

The staffing of judges in federal courts, including the Supreme Court, will be by popular election, not by professional merit and seniority. So judicial impartiality in a subsequent investor-state dispute regarding Zama would be problematic.

Landman: I see. The People's Court may not know, or choose to respect, the rules of the game.

Philosopher: Many foreign investors and their governments are worried about how this change will play out.

² *Houston Chronicle*, August 7, 2020. "Talos Energy in the Crosshairs: How systemic bias hurts private oil companies in Mexico."

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PART FOUR : YELLOW FLAGS

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Yellow Flags?

Landman: Let me ask a different question: When you were on the Mexican oil pitch, so to say, did you throw any yellow or red flags on the field?

Philosopher: Periodically, I threw down yellow flags, some before the promulgation of the energy reform legislation on August 11, 2014, while many others came later. I yellow-flagged the opaque vocabulary, undefined neologisms, and interest-conflicted regulatory architecture. I spent weeks building a database of some 2,500 terms that had appeared in the new laws, regulations, and contracts. The database, however, in five quick years, would become obsolete as the administrations in Mexico after 2018 would change the meaning, if not eliminate, many of terms in the dictionary. Further, the source documents (the laws and regulations) to which the terms were linked have been superseded by new legal provisions.

I also faulted the design and execution of lease auctions. I remarked early on that the government was “doing too much, too fast—but also, “too little, too fast.” But at no time did I throw down a red flag to alert players that the game should be suspended or canceled.

Landman: Hmm. I sense that you feel bad about that.

Philosopher: I do. I didn’t discern—until it was too late—that the upstream regime was a hyped-up version of the public-works contract based on the Petroleum Law of 1940. Nothing the governance of Pemex was improved to create credible distance from the president of Mexico, who would still freely appoint and remove the directors-general and have the final say in decisions about oil policy and business decisions. (It was President López Obrador, not Pemex, who decided to buy out Shell’s interest in the Deer Park refinery and build a greenfield refinery in a wetlands region of his home state of Tabasco.)

In the upstream, “market opening” was an illusion, wishful thinking on my part and on the part of investors in the oil lease rounds. I don’t know if public officials understood this illusory character of the reforms. Consider: Mexico had never held an “oil lease auction” before, so it was a big deal. The fact that any oil company actually bid on any of the properties could have been taken—mistakenly—as a sign (a synecdoche, if you wish) of the overall wisdom of the market design. But officials should have been alarmed on July 15, 2015, that something was not right when, in the first lease auction that day of 14 blocks, there were only two awards, and 9 or 10 of the blocks had no bidders at all. Someone should have asked: *How is it possible that with years to prepare for this one event, we should misjudge investor expectations so badly? Who’s responsible for this huge embarrassment?*

Landman: I gather from your tone of voice that those questions were never asked, in public, at least.

Philosopher: You got that one right.

Landman: Hmm. 'Not sure what to say to you about what you regard as a failure of discernment.

Philosopher: The government of Claudia Sheinbaum has issued new hydrocarbon legislation, so it will be important to see if any of the many imperfections of the previous regime have been addressed.

Of the 107 contracts that were awarded to private oil companies, only 57 remain active. Major oil companies, Chevron, ExxonMobil, and Shell, have left the country entirely, paying millions in early-termination penalties. Pemex's oil production has been down by 25% since 2018, and it has maxed out its access to capital markets.

LOOKING AHEAD

Landman: So, what's Mexico's way out of this mess regarding exploration and development?

Philosopher: Mexican lawmakers have a lot of work to do. The Lower House is sponsoring a national workshop July 9-10, one of the purposes of which is to "propose public policies that strengthen the development of the mining sector" [see insert]. I hope, regarding policy proposals, that the oil sector is included.

There are two laws in article 27 of Mexico's constitution that are yet undefined: "direct domain" and "property." Regarding subsurface resources, "property" should be defined in the law as the set of exclusive rights to explore, develop, and commercialize minerals and hydrocarbons or lease those rights to third parties. The public would have to understand that the leasing of mineral rights to an oil company is neither a relinquishment of sovereignty nor a transfer of ownership of the mineral estate.



Landman: But I've heard that Mexicans believe that oil is "the property of all Mexicans." How do you get around that?

Philosopher: Not very easily. The public would have to come to understand that what belongs to all Mexicans is *the revenue from rentals and royalties* that the state receives from the commercialization of minerals and hydrocarbons, not the minerals and hydrocarbons themselves. This new understanding might require a generation to get traction.

*What belongs to all
Mexicans is the revenue
from oil rentals and
royalties, not the molecules*

Landman: What's the chance of that happening? Didn't you say that they have been talking this way since 1917—that's a lot of time for a belief to set in, lithify.

Philosopher: Hmm. Two very different things come to mind. There is a secret agenda in the idea that oil belongs to all Mexicans. The vox populi since the Revolution of 1911 wants Mexico's mineral wealth to be appropriated neither by foreign mining and oil companies nor by the upper class of Mexico. For this reason, there is concern today that Mexico's richest businessperson has become the largest private investor in the biggest recent oil discovery. No one knows if there are parties in the public sector who stand to benefit from their participation in an informal, private equity group.

In parallel, "oil is ours" is a mantra that is promoted in public education and in the public square as a rhetorical talisman, an assurance of the wealth and sovereignty of the Mexican national community.

Landman: A collective good luck charm, a national amulet?

Philosopher: You could put it that way. Mexico's resource endowment is a charm, but also a jinx. Economists call it the "resource curse," referring to a country rich in natural resources but with high levels of poverty, malnutrition, disease, and educational failures.

Landman: Hmm. A landman never thinks of it that way. We see mineral ownership as a source of potential wealth for the owner and the developer.

Philosopher: Regarding the ownership of mineral and hydrocarbon reserves, any modification of the Mexican worldview—*cosmovisión* is a great synonym in Spanish—is a BIG ASK. It is one that should have been attempted by the pro-business administrations that governed Mexico for the three decades prior to the big energy reforms of 2013-14. The negotiation of NAFTA, which came into place on January 1, 1994, could have been an opportunity for the government to have changed the public's oil narrative. But the government was afraid that any such change that permitted private investment in the oil sector—however beneficial it might be for the Mexico's economy—would be perceived by the public that Mexico had given into pressure from the Gringos.

And, on the American side, public officials and trade associations are afraid of Mexican resource nationalism. On July 20, 2022, the USTR formally requested consultations with its Mexican counterparty in the Economy Ministry, requesting a consultation concerning presumed violations of the 2020 USMCA trade and investment agreement in the oil and power sectors. Guess which market segment (where irregularities were plentiful) was not mentioned. Similar complaints have been issued by API in the past few years. Guess which market segment receives no mention.

Landman: The upstream?

Philosopher: Yep. U.S. public authorities and trade association executives are afraid of the ability of public authorities in Mexico to whip up anti-American sentiment, with repercussions on investors with assets in Mexico. 'Better not to poke the bear.

Landman: What measures do you discern as feasible that would upgrade Mexico's petroleum regime?

Philosopher: I see three promising measures: The first, that federal Congress amend the hydrocarbon legislation to make it clear that a mineral lease of commercial rights does not constitute a transfer of ownership or a diminution of sovereignty, and the granting of such a lease is allowable under constitutional article 27 as currently written.

Second, the present or future government negotiate directly, without the theater of lease auctions, mineral leases with selected major oil companies for the development of deep-water prospects and shale plays. Currently, Mexico has 13 billion barrels of oil equivalent in shale resources, but none of that is being developed. There's a big opportunity ahead for Mexico, but not under the present oil regime. A leased must convey full commercial rights in exchange for fair a royalty. The risk-service contract needs to be buried.

Third, the government creates a second national oil company, one with majority state ownership, professional management, and market capitalization. The new company could be the joint-venture partner

in some of the leases that the government would negotiate with major oil companies. An appropriate name would be Petromex, after the eponymous 50/50 public/private oil company that operated between 1934-38.

The new government of President Sheinbaum, in office since last year, has so far ruled out new oil lease rounds. Instead, she double-speaks about joint ventures with Pemex; but companies should know by now how that story will end. But there are positive signs, she has reinstated professional talent in Pemex and the energy ministry, and she has ordered Pemex to start looking for Permian basin operators who might *want to come help under “mixed contracts” to develop the unconventional of the Tampico- Misantla basin.*

Landman: A lot would depend on what’s in the “mixed contract.”

Philosopher: I would make it a two-step process: 1) Establish, staff, and finance Petromex (assigning Pemex’s interest in Trion and Zama to the new company as its capital contribution), then 2) seek partners with Permian basin players. For its part, the government must be willing to offer a mineral lease with full commercial rights, including the posting of reserves.

Landman: OK! So, cheer up! And let’s toast to these ideas, and to the leadership team in Mexico that will give life to these ideas and others of their own. Who knows? Perhaps the day is not far off when I’ll be given a chance to work in Mexico.