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Lifting Mexico's Oil & Gas Potential

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Topics

- A quick look at where we've been since 2003
- How Pemex (and Mexican oil professionals) are trapped by Mexico's national oil narrative
- Three wishes for the Mexican upstream
    1) Commercial framework for in-situ hydrocarbons
    2) Creation of a stock-issuing Pemex affiliate
    3) Positive ripple effects from IOC investments
- Choices ahead for lifting Mexico's O&G potential

Read this report

http://www.energia.com/an-indirect-critique-of-mexicos-energy-reform-proposals/

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How IOCs and Host Countries Create Wealth: An Indirect Critique of Mexico's Energy Reform Proposals

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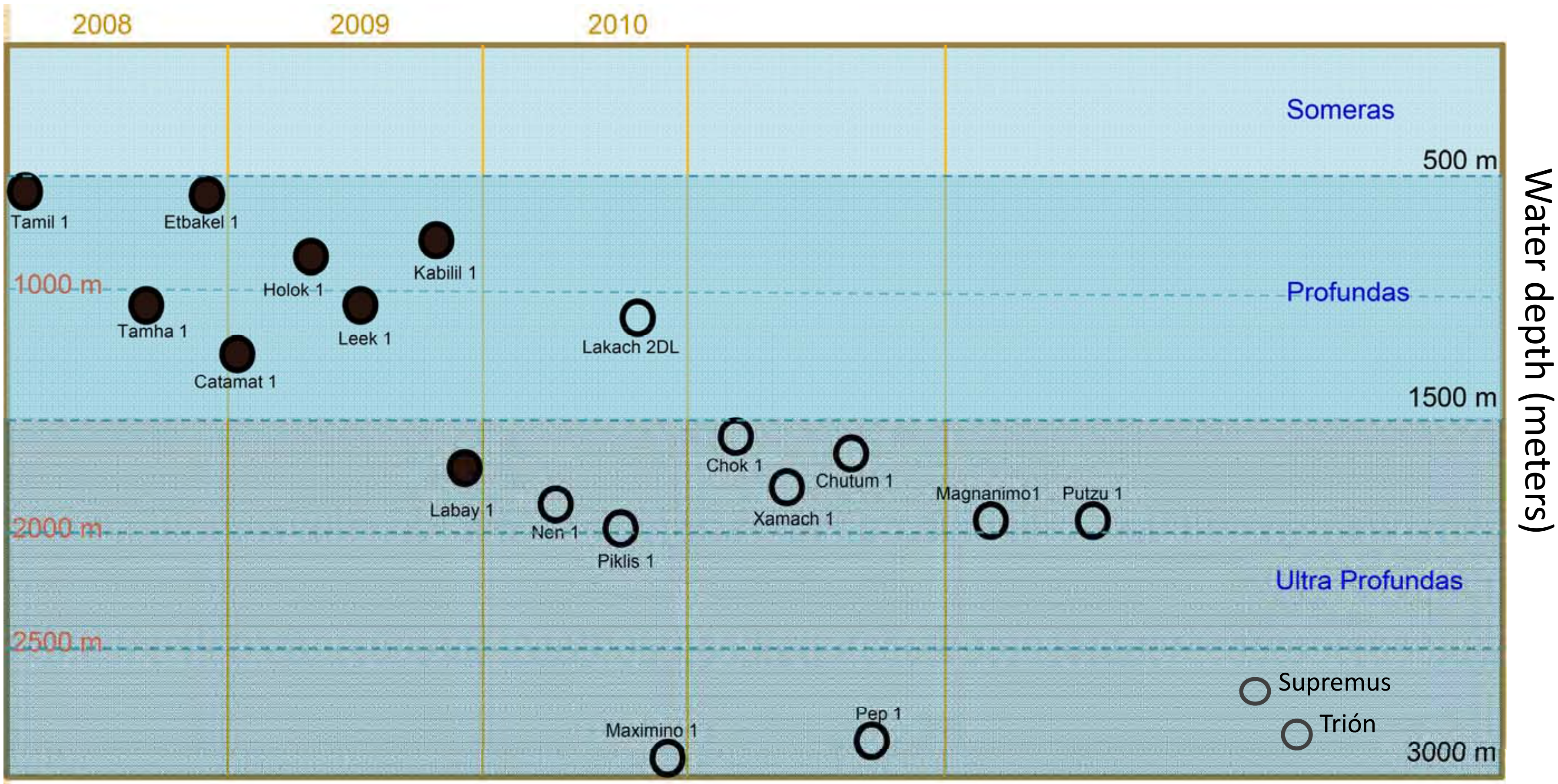
Pemex goes deeper on its own

Pemex is drilling for, and finding, oil in deepwater wells near the Perdido Area



What career should an oil professional expect?

- An oil professional is a global professional, one who is prepared to accept responsibilities worldwide—in an English-speaking workplace.
- A petroleum engineer with a graduate degree from Stanford or USC (for example) should expect a career that includes assignments in
  - U.S. Gulf of Mexico
  - North Sea
  - Texas, Colorado or Montana
  - JVs with 1st- and 2nd-tier IOCs
- But, if hired by Pemex in 2013, your entire career will only be in Mexican waters or in onshore in fields that were discovered 50 years ago.
- UNLESS, Mexico's energy reform adopts a global mindset and policy framework.

What hasn't changed--yet

PEMEX

Prisoner of a National Oil Narrative

A decade of Pemex farm-out contracts (2003-13)

Brings in new players and reinvents old ones

Energy reform of 2008

BEFORE

QUASI-RISK SERVICE CONTRACTS

Compensation based on payments in accordance with a Pemex price list for itemized services, but contingent on incremental production of **natural gas**

New players
- **Repsol**
- **Petrobras**
- **Lewis Energy**

AFTER

RISK-SERVICE CONTRACTS

Compensation based on payments for costs and profit but contingent on incremental production of **oil** & natural gas

New players
- **Petrofac**
- **Diavaz**
- **Sinopec**

Reinvented players
- **Schlumberger**
- **Halliburton**
- **Baker-Hughes**

How Mexico has minimized its engagement with the global oil industry

Each of these elements will be reassessed in 2013

- ✓ NO private oil mineral interest
- ✓ NO booking of reserves
- ✓ NO payment in kind to oil companies
- ✓ NO payment indexed to current market prices
- ✓ NO E&P licenses to stock-issuing companies

  See Art. 9 of Oil Law of 1940
- ✓ NO non-Pemex gasoline branding and retail distribution
- ✓ NO global hiring in technical, managerial or executive ranks
- ✓ NO independent upstream regulator
- ✓ NO retail pricing decisions by private parties
  - *A natural gas distributor may increase a tariff, but only by following a CRE formula*

Three Wishes for the Mexican upstream

- 1) Bring in-situ resources into commercial play for Pemex and for licensees
- 2) Create a Pemex 2.0 as Pemex EP, S.A. (PEPSA)
- 3) Design complementary institutions to bring about indirect and multiplier effects from IOC investment

First wish

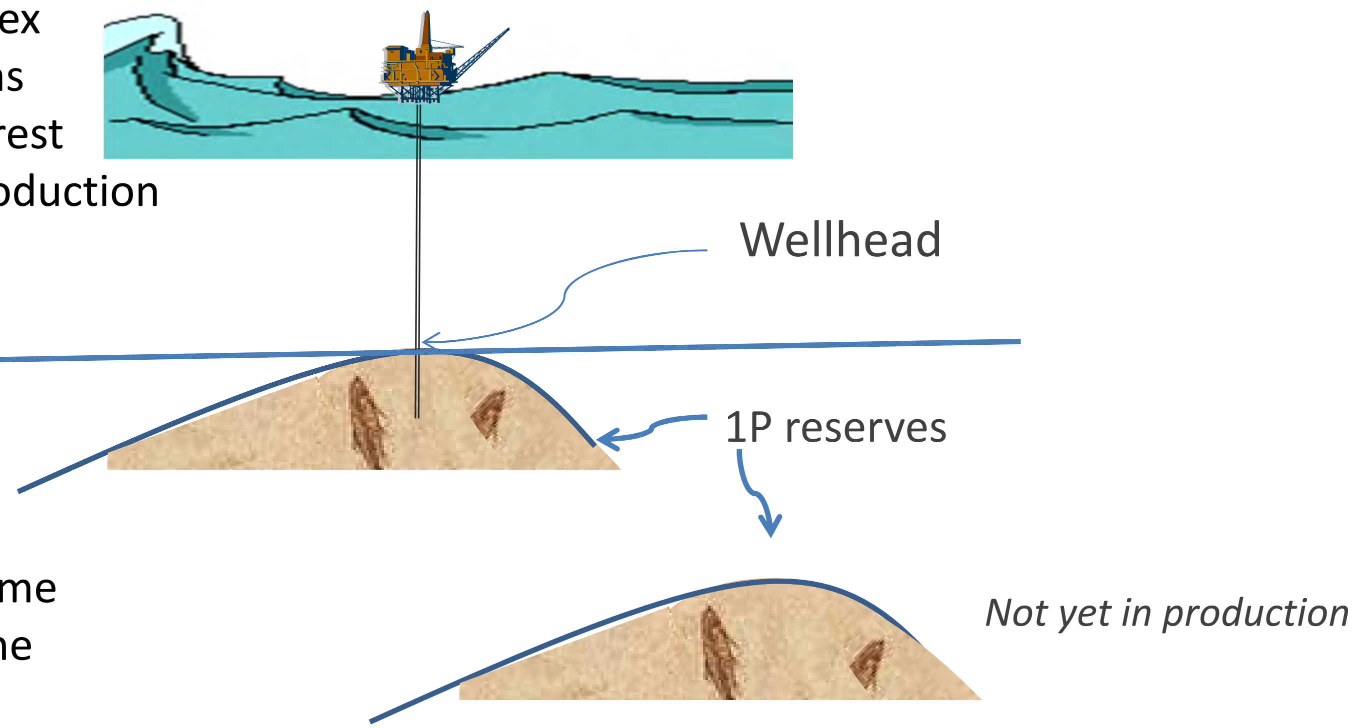
In-situ commercial framework

- 1) Bring in-situ resources into commercial play for Pemex and for licensees
  - In Mexico as in many other countries, commerce begins at the wellhead, not in the reservoir.
  - In Peru, the State owns the hydrocarbons but the IOCs can post reserves.
  - IOCs are obligated by SEC rules to balance investments against the discounted, future revenue from proved reserves
    - Reservoirs in production
    - Non-producing reservoirs

Main E&P challenge for a new oil regime

Devise a commercial framework below the wellhead

Today, a Pemex contractor has revenue interest in current production



The new regime must allow the contractor to recognize revenue from future production from proved reserves

Chart: MEI

September 7, 2013

Second wish

PEPSA

- Pemex EP, S.A. (PEPSA) would be a mercantile enterprise with a third of its common stock in a major exchange
- PEPSA's goal would be to qualify as an international operator outside of Mexico
- PEPSA, not Pemex EP, would complete for blocks in Mexico
- PEPSA, like other licensees, would be able to recognize future revenue from proved reserves in production as well as other discoveries.

The statist model of the Mexican energy sector

- There are some 50 electric rates, and 145 LPG pricing districts, the monthly rates of which are decided, not by competitive forces, but by dedicated public servants who seek the general welfare.
- Pemex and CFE, as a federal agencies, are hard-wired into institutions of government; it would take a decade to untangle them from the government and convert them to stock-issuing companies.
- Without market feedback, the only reality check is from the minds of those officials with graduate degrees (typically from private universities in Mexico, the U.S. and Europe).
    - Eh? (as Canadians say)

Third wish:
Make the oil reform go beyond oil

- Complementary institutions
  - CNH as a an autonomous regulator
    - Manages licenses
  - Safety regulator (Mexican BSEE)
  - National Oil Fund (proposed by PAN)
- Monetize the validation of the government's economic policies that an IOC investment would imply.
  - A major investment by an IOC would send the powerful message that there is judicial and economic stability
  - Attract investments in related areas
  - Lower borrowing costs for Mexican debt

Third Wish:
Ripple effects from IOC investments

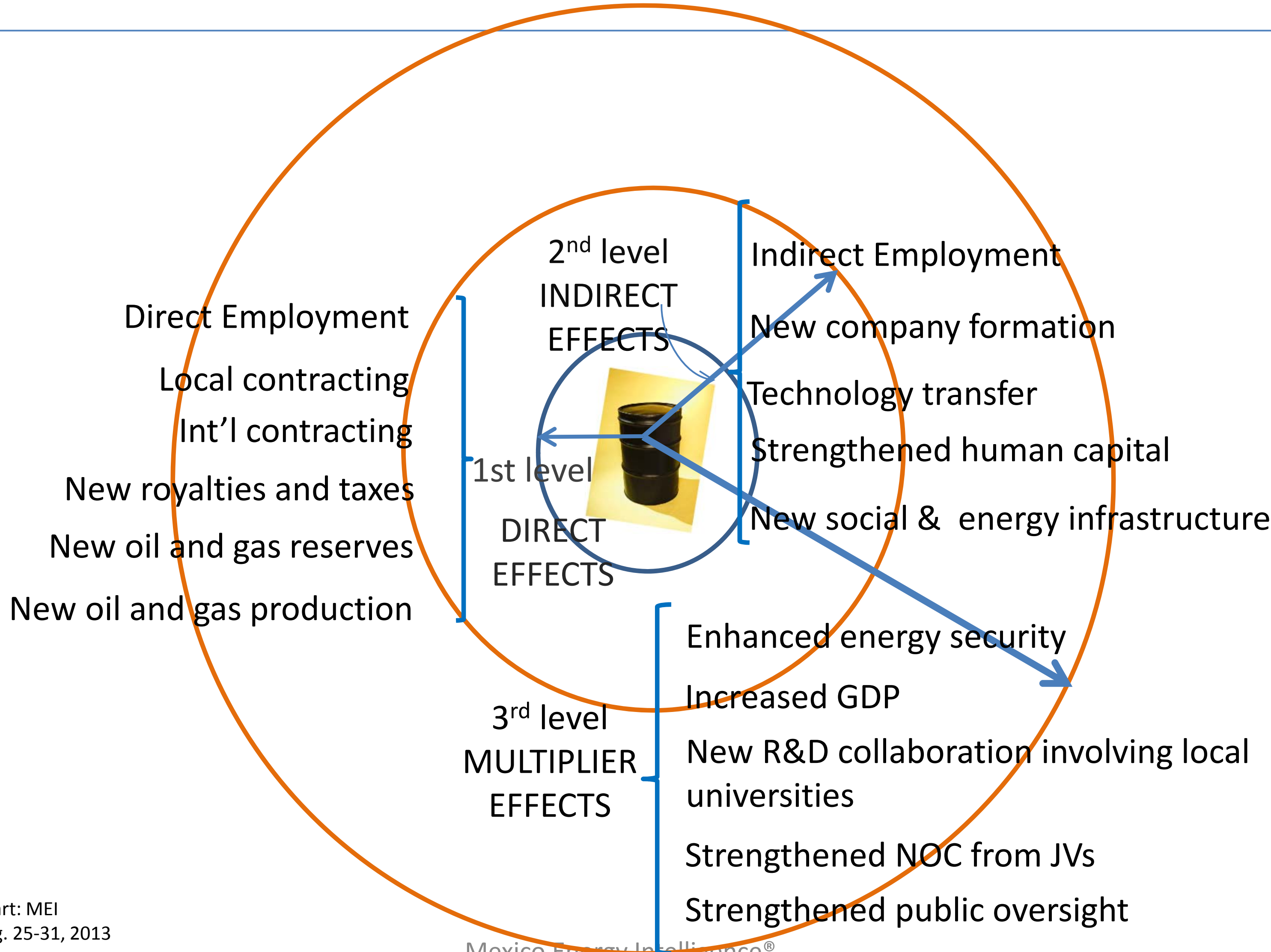


Chart: MEI
Aug. 25-31, 2013

To conclude

Two courses are ahead for the Mexican energy sector:

1) Más de lo mismo.

- ✓ Upgraded risk-service contracts that may or may not be attractive to major IOCs.
- ✓ Better algorithms that indicate optimal prices for energy products.
- ✓ New accounting models that show the environmental efficiency of carbon taxes.
- ✓ More government scholarships to study economics and public administration abroad in order to train the next generation of administrators of government prices for energy products.

To conclude (p. 2 of 2)

Two courses are ahead for the Mexican energy sector to create new sources of wealth for Pemex and Mexico:

2) Outside the box.

- ✓ Adopt a royalty oil regime. The State owns the hydrocarbons, but an IOC can book reserves
- ✓ Mexican waters divided into standard blocks
- ✓ Public auctions as in Peru: bidders offer a premium above minimum government royalty; legal and fiscal stabilization.
- ✓ Unfreeze commercial margin of LPG distributors and open market to international investment
- ✓ Risk trusting the market to set prices.

The ball is now in the court of the Mexican leadership. The score is 15-40 (EPN serving).

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