Marcos y Asociados

CENTER FOR ENERGY ECONOMICS

“THINK DAY ON MEXICO ENERGY”

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INTRODUCTION

CURRENT CONDITIONS IN MEXICO

ECONOMIC:

- Macro - stability: inflation rate lower than U.S.
- Foreign exchange reserves of almost $70 billion dollars, an increase of $40 billion since 2000; strength of the Mexican peso: less than 3% depreciation in any given year.
- Low country risk: between 75 and 80 basis points for 5 year bonds; although mediocre economic growth: 2.3% on average.
- Two main sources of potential problems: Excessive fiscal dependence on PEMEX fiscal contribution: over 40% of total government revenues this year; and very high correlation to U.S. economic cycle.

POLITICAL:

- President Elect Felipe Calderón has perhaps the weakest mandate in México’s modern history.
- López Obrador has put in the forefront the terrible gap that divides Mexico’s prosperous few from a majority of poor. His political speech was not about poverty, but against privilege.
- PRD is now the second largest force in Congress. But López Obrador’s extremist position is having a high toll on his party.
- Very pessimistic outlook?
- Governability at risk?
INTRODUCTION

Not necessarily:

1. Radicalization by the PRD has promoted alliances among political parties that would not have been viable otherwise.
   - New government is actively working towards a political alliance with the PRI to ensure governability and to support a common legislative agenda.
   - Smaller parties with significant representation in Congress (PVEM, Alternativa and Nueva Alianza) might join PAN in a “coalition”.
   - Paradoxically, political conditions are favorable to modernization initiatives.

2. President elect Felipe Calderón is a very different politician compared with President Fox.
   - Understands legislative politics. Has committed to concentrate negotiations in Congress.
   - Strong in high party politics; his negotiating skills and some arm-twisting ability will be put to the test during the first few months.
   - Has vowed to diffuse popular discontent by “Outflanking López Obrador from the left”. This means social agenda will have priority over structural reforms.

3. In the oil industry, status quo is not an option. Under current arrangement, oil production has peaked and reserves to production ratios (R/P) have reached critical levels.
I. RELEVANCE OF ENERGY FOR MEXICO.

- Energy is strategic for Mexico: foundation of the economy; important factor in relation with a globalized economy; and with the capacity to become a driver for future development.

- In 2000-2006, exogenous factors (oil prices, interest rates, remittances from Mexican migrants and growth of the U.S. economy) generated incremental foreign exchange revenues of over $300 billion US dollars, as compared with President Zedillo’s administration.

- During the Fox administration, PEMEX has generated accumulated fiscal revenues of $250 billion dollars, which represent 5.6% of GDP in the same period.

- Production maximization policy is evident.

- Natural decline of Cantarell. In 2005, still represented 60% of national production.

- Best case scenario for Cantarell is 1.4 MMBD for 2008 compared to 2.2 MMBD in 2004.

- Extremely difficult to compensate this reduction with production from other fields.
## II. RESERVES AND PRODUCTION OF HYDROCARBONS

<table>
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<tr>
<th>Reserves</th>
<th>Reserves 01/01/2000</th>
<th>New Discoveries</th>
<th>Develop. And Delimitation</th>
<th>Revisions</th>
<th>Production</th>
<th>Reserves 01/01/2006</th>
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<td></td>
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II. RESERVES AND PRODUCTION OF HYDROCARBONS

- Total proven hydrocarbon reserves dropped 51.7% in the period 2000-2005, from 34.1 to 16.5 BBOE. Revisions and reclassifications represent 50% of this reduction.

- R/P for proven reserves (1P) declined from 22.2 to 10.3 years. R/P for crude oil only is less than 10 years.

- Probable reserves registered a 30% increase, from 12.5 to 15.8 BBOE, derived from reclassification of proven reserves. But 2P reserves had a decreased of 30.2%.

- Even more critical: reserve replacement ratio was only 18% on average for the last 6 years.
III. MORE RECENT TRENDS

- Supply of natural gas has become a national security issue. One-third of natural gas sold in Mexico is imported by pipeline from the US. Daily volumes have exceeded 1 BCF, pushing existing interconnection capacity. Imports of gasoline and diesel in excess of 100,000 B/D and growing.

- Crude export volumes reached their peak two years ago, in 2004. If we take into account the trade balance including oil products, net exports of liquid hydrocarbons began to descend since 2003.

- This trend seems irreversible. If Mexico decided to build additional refining capacity to substitute current imports of oil products and basic petrochemicals, an additional 500,000 B/D of exports would have to be processed internally to satisfy domestic demand.

- Some analysts have described this scenario as “the perfect storm”.

- Initial discussions in Congress about the need to establish a yearly crude export platform, based on an evaluation of the sufficiency of the average life of proven reserves (R/P).
IV. MAIN CHALLENGES

PEMEX will require to focus on 5 basic programs:

1.- Optimize the operation of Cantarell to moderate its natural decline: drilling of new wells; workover of existing wells; improve pneumatic pumping; upgrading of some infrastructure; application of “new” technologies such as “sub-sea tie-backs”.

2.- Successfully conclude ongoing projects to partially compensate for Cantarell’s decline: Ku-Maloob-Zaap and Litoral Tabasco, for crude oil; and Burgos, Macuspana and Cuenca de Veracruz, for gas.

3.- Develop in full scale the paleoncanal of Chicontepec. It accumulates one-third of total oil (2P) reserves and almost 50% of those of gas. PEMEX has faced enormous difficulties to design and execute a development program for this province. Production in 2005 was only 24,000 B/D of crude oil and 27 MMCFD of gas.

4.- Invest substantial resources to rejuvenate old provinces, increase the recoverable factors of these reserves and boost marginal volumes of production. PEMEX is actively looking for new contractual arrangements to incorporate new technologies and improve the management of these mature provinces; and

5.- Systematically explore new horizons, including deep water locations in the Golf of Mexico that have been identified with high potential. The future of the oil industry in Mexico depends on this strategic program.
V. POTENTIAL REFORMS

1. MOST RELEVANT. Allow PEMEX to enter into Strategic Alliances with international oil companies for exploration and production of oil and gas.

   - All presidential candidates, except López Obrador, expressed support for the concept. (First presidential debate in May)
   - Requires a constitutional amendment and additional legislation to regulate production sharing contracts.
   - Would allow PEMEX, and strategic partners, to book reserves.
   - PEMEX requires not only new technologies for deep water projects, for example, but also project management abilities and technical skills to develop large and complex projects, inland and offshore.
   - This reform would require, as an indispensable complement, the design of a new regulatory framework for the energy sector.
   - Access of new participants would demand that the Energy Regulatory Commission (CRE) be reinforced and a new autonomous Petroleum Directorate be created for the sound management of oil and gas reserves.
   - Additionally, a fiscal reform is a pre-requisite for a competitive tax regime designed for the oil industry.
V. POTENTIAL REFORMS (continued)

2. **MOST PROBABLE**: Liberalization of the oil-products downstream market. The stringency of fiscal resources and the increasing requirements for additional investments in the upstream ($20 billion US dollars per year for the next 6 years) do not allow additional budget appropriations for the downstream.

- Short of a constitutional reform that could open refining activities to private investment, the next administration is likely to push for liberalization of transportation, storage and distribution of oil products.

- This reform is parallel to the one passed by Congress in 1995 for the storage, transportation and distribution of natural gas.

- If and when this reform becomes law, PEMEX would no longer be allowed to invest in additional capacity for downstream activities, as has been the case for natural gas.
V. POTENTIAL REFORMS (continued)

3. - **LONGEST UNDER DISCUSSION**: Restructuring of the Electric Sector, based on 3 basic principles:

- Creation of a competitive electric power generation market, to lower costs.

- Maintenance of state control through the national transmission network, and

- Promotion of regulated competition in the distribution and commercialization segments of the value chain.
V. POTENTIAL REFORMS (continued)

4. **DEEPEST ROOTED:** Transform PEMEX from a government entity into a public company, with the mandate to maximize the economic value of Mexico’s hydrocarbon reserves. A portion of the equity of PEMEX could be distributed among all Mexicans, as the authentic owners of Mexico’s oil wealth (democratization).

- A new organic law should grant PEMEX autonomy of operation from the government, through a core of professional, independent directors and sound corporate governance practices.

- Most effective public scrutiny mechanism.

- PEMEX could operate in international markets.

- Renegotiation with the labor union for a more flexible contract.