Latin America New Realities
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Francisco Bello
Director of the Americas
Outline

• Challenges – Market Driven Politics
  • Race to capture the “Windfall”
  • Political Risk
  • E&P Activity
  • Competitive Landscape / Emergence of NOCs

• Latin American Opportunities
  • Venezuela, Colombia

• Summary
Tightening of Fiscal Terms – 2003-2006
Countries Providing Fiscal Incentives
Fiscal Terms Increase Eroding Rates of Return

State Take Escalation
6 countries
2005 = 55%
2007 = 75%
Latin America: 2006 A Year of Elections

Energy Sector Policies
- Market-leaning
- Hybrid
- State-leaning

Post-election Outlook
- No shift
- Change likely

Source: Cambridge Energy Research Associates.
Political Risk Ranking

Political Risk Ranking

Increasing Political

*Political Risk considers threats of war, civil unrest & violence, regime stability, ethnic tensions, socio-economic conditions and environmental activism.

## Latin America – Production-Reserve Statistics

Venezuela: Too prospective to ignore

<table>
<thead>
<tr>
<th>Country</th>
<th>Prod Boe/d</th>
<th>R/P ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venezuela</td>
<td>4,487,591</td>
<td>63</td>
</tr>
<tr>
<td>Mexico</td>
<td>4,252,418</td>
<td>20</td>
</tr>
<tr>
<td>Brazil</td>
<td>2,093,144</td>
<td>19</td>
</tr>
<tr>
<td>Argentina</td>
<td>1,560,291</td>
<td>13</td>
</tr>
<tr>
<td>Colombia</td>
<td>1,157,372</td>
<td>11</td>
</tr>
<tr>
<td>Trinidad</td>
<td>787,874</td>
<td>26</td>
</tr>
<tr>
<td>Ecuador</td>
<td>547,528</td>
<td>23</td>
</tr>
<tr>
<td>Bolivia</td>
<td>303,872</td>
<td>76</td>
</tr>
<tr>
<td>Peru</td>
<td>144,761</td>
<td>94</td>
</tr>
<tr>
<td>Cuba</td>
<td>74,500</td>
<td>11</td>
</tr>
<tr>
<td>Chile</td>
<td>41,167</td>
<td>46</td>
</tr>
<tr>
<td>Guatemala</td>
<td>16,414</td>
<td>8</td>
</tr>
<tr>
<td>Suriname</td>
<td>13,150</td>
<td>6</td>
</tr>
<tr>
<td>Belize</td>
<td>2,544</td>
<td>54</td>
</tr>
<tr>
<td>Barbados</td>
<td>1,200</td>
<td>2</td>
</tr>
</tbody>
</table>

P+P Reserves

78%
Latin America – Drilling Statistics

Note: Information for 2006 is based on running 12 months data period from 10/05 to 10/06.
NOC Acreage Holding - 1995

Legend
- China National Offshore Oil Corp (CNOOC)
- China National Petroleum Corp (CNPC)
- China Petroleum&Chemical Corp(Sinopec)
- Korea National Oil Corp
- Oil & Natural Gas Corp Ltd
- PT Pertamina
- PetroChina Co Ltd
- Petroleo Brasileiro SA (Petrobras)
- Petramian Nasional Bhd (Petronas)
Latin America – Number & Types of Companies

- **Large Independent**: 19
- **Major**: 14
- **Small Independent**: 22
- **NOCs LA**: 7
- **NOCs Foreign**: 

Total: 321
Latin America – Acreage Position of Companies

- **Large Independent**
- **Major**
- **Small Independent**
- **NOCs LA**
- **NOCs Foreign**

<table>
<thead>
<tr>
<th>Area sq km</th>
<th>Company Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>138,958</td>
<td>Large</td>
</tr>
<tr>
<td>358,052</td>
<td>Major</td>
</tr>
<tr>
<td>173,051</td>
<td>Small</td>
</tr>
<tr>
<td>1,192,118</td>
<td>NOCs LA</td>
</tr>
<tr>
<td>1,320,810</td>
<td>NOCs Foreign</td>
</tr>
</tbody>
</table>
Latin America – Reserves Position of Companies

Remaining 2P Reserves Bboe

- Large Independent
- Major
- Small Independent
- NOCs LA
- NOCs Foreign

170
Latin America Upstream Challenges and Risks

MEXICO
- Increasing decline rates
- Pemex investment limitations
- Legal restrictions on private sector investment

VENEZUELA
- Restrictive Hydrocarbon Law, new terms applied to pre-2001 contracts
- Nationalization ongoing

COLOMBIA
- Lack of significant discoveries
- Guerrilla activities

BRAZIL
- Deep and ultra-deep water developments
- Petrobras continues to dominate the market
- Important discoveries: Gas in Santos basin; Papa-Terra oil field in Campos basin

ECUADOR
- Environmental sensitivity, indigenous protests
- Legal definition of contracts ITT development/Marginal F.

BOLIVIA
- Increasing government take
- Nationalization ongoing

ARGENTINA
- Lack of significant discoveries
- Difficult to raise capital

Source: Cambridge Energy Research Associates.
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Opportunities - Venezuela - Colombia

**Venezuela**: Eastern Offshore Bid Round, Mature Fields, Heavy Crude

**Colombia**: Offshore Bid Round, Llanos
Current State of the Industry
Investment Scenario – March 2005

• Government willing to form “Joint Ventures”

• Good offshore exploration, Orinoco Oil Belt, mature fields and gas opportunities
  • 30% royalty/51 % state participation not attractive

• Unilateral increase of contractual royalty of heavy oil projects from 1% to 16.67%

• Review/renegotiation of operating agreements/budget cuts.

• Government approval was not granted for BP sale of its stake in two Operating Services Agreement blocks

• Offshore Corocoro oil field project has been put on hold

• Trend to toughen contract terms

• Indirect Nationalization / Renationalization of Venezuela's energy industry?
Fiscal Terms
1999 Gaseous Hydrocarbons Law

- 2005 Gas Licences
  - A royalty of up to 20% of gross revenue
  - Income tax at a rate of 34%
  - A dividend withholding tax at 34%
  - A biddable signature bonus
  - State participation between 1% and 35%
  - 1% of total investment contributed to a special fund (Local Content)
  - Gas for the Domestic Market
  - Introduction of a surface rent;
  - Investment of an amount equal to 1% of the value of the annual natural gas production or US$1 million, whichever is greater, in a special fund destined for social programmes
  - Establishment of a trust fund for abandonment costs

- 2003 Gas Licences
  - A royalty of up to 20% of gross revenue
  - Income tax at a rate of 34%
  - A dividend withholding tax at 34%
  - A biddable signature bonus
  - State participation between 1% and 35%
  - 1% of total investment contributed to a special fund (Local Content)

- 2001 Gas Licences
  - A royalty of up to 20% of gross revenue
  - Income tax at a rate of 34%
  - A dividend withholding tax at 34%
  - A special remuneration - a biddable additional royalty
Venezuela – Migration of the Association Agreements into Joint Ventures

• On 26 February 2007 the Venezuelan government published Decree No. 5,200 which sanctions the migration of the Association Agreements into Joint Ventures under the terms of the Organic Hydrocarbons Law, with a minimum 60% PDVSA participation.

• The private companies, currently parties to the Association Agreements have four months from the date of the publication of the decree to negotiate the terms and conditions of their possible participation in the new mixed companies. An additional two month period will be granted to submit the terms and conditions to the National Assembly in order to request the corresponding authorisations.

• If no agreement is reached within the prescribed four month period, PDVSA or any of its affiliates designated for such purpose, will take over the activities performed by the existing associations.

• The new terms will consist inter alia:
  • a royalty of 30%;
  • a 50% income tax rate;
  • a minimum 60% state participation;
  • dividend withholding tax;
  • exploration surface rental of 100 tax units per square kilometer to be increased annually by 2% during the first five years and 5% in subsequent years;
  • a 10% consumption tax, levied on hydrocarbons consumed as fuel in the conduct of petroleum operations;
  • an extraction tax based on 3.33% of the value of all liquid hydrocarbons; and
  • indigenous development (community social development) project investment equal to 1% of the pre-tax profits.
PDVSA “Mission Goals”

• No more illiteracy
• No more hunger
• No more poverty
• “PDVSA is assuming a broad new role in the administration's social agenda, a mission that must be understood and supported by companies wishing to work in Venezuela” (R.Ramirez)
Venezuela – Before & After

![Graph showing State Take, IRR, and NPV@12% for 3rd Round OSA, 2006 E&P - 60% Participation, and 2006 E&P - 80% Participation.]

- 3rd Round OSA: State Take + 11%, IRR - 3%
- 2006 E&P - 60% Participation: State Take, IRR, and NPV@12% shown.
- 2006 E&P - 80% Participation: State Take, IRR, and NPV@12% shown.

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Venezuela - Production Forecast

Venezuela Daily Average Production Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Average Production (Mbo/d)</td>
<td>3,659</td>
<td>2,783</td>
<td>3,142</td>
<td>3,216</td>
<td>3,217</td>
<td>3,330</td>
<td>3,432</td>
<td>3,389</td>
<td>3,618</td>
</tr>
</tbody>
</table>

PDVSA target for 2010:
4,618 Mbo/d
Resource Replacement
Fields with Recoverable Heavy & Extra-heavy Oil

- Extra-heavy* = 29 fields, 2.4 Bbbl
- Heavy* = 2,314 fields, 202.8 Bbbl

U.S. onshore
Heavy = 433 fields
19 Bbo

304 Bb
1.2 MMb/d

271 Bb
685 Mb/d
Venezuela
Orinoco Extra-heavy Oil Projects

Blocks Assigned: 3 Boyacá  4 Junín  3 Ayacucho  1 Carabobo

Petrobras & Lukoil spudded their first stratigraphic wells

Source: PDVSA
Future Mature Fields Bid Round

<table>
<thead>
<tr>
<th>Basin</th>
<th>Greater than 100 MMbo</th>
<th>Between 30 – 100 MMbo</th>
<th>Smaller than 30 MMbo</th>
<th>Total</th>
<th>Oil: Proven Reserves (MMbo)</th>
<th>Oil: Total Reserves (MMbo)</th>
<th>Gas: Proven Reserves (MMMcf)</th>
<th>Gas: Total Reserves (MMMcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>1,151</td>
<td>1,776</td>
<td>2,728</td>
<td>3,426</td>
</tr>
<tr>
<td>Maracaibo</td>
<td>1</td>
<td>3</td>
<td>-</td>
<td>4</td>
<td>412</td>
<td>876</td>
<td>2,008</td>
<td>4,190</td>
</tr>
<tr>
<td>Barinas</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>44</td>
<td>54</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>15</td>
<td>1,607</td>
<td>2,706</td>
<td>4,741</td>
<td>7,622</td>
</tr>
</tbody>
</table>

Participation is through invitation only

Source: MENPET
Venezuela - New Business opportunities
Mature Fields

• Possible General structure for Mix Company:
• Mix Company will pay a royalty of 33.3% on oil and natural gas production
• Mix Company will have an applicable income tax rate of 50%
• Mix Company will have a term of 20 - 30 years
• PDVSA partner will receive dividends from Mix Company in US dollars on a quarterly basis derived from its participation
• PDVSA participation is more than 51%
Opportunities – Venezuela - Trinidad

Venezuela Offshore Bid Rounds
- 3 blocks Blanquilla Este
  2,832 sq km
- Punta Pescador/Mariusa: 5 blocks offered – 3,703 sq km

Trinidad & Tobago Bid Rounds:
- 90 active contracts covering 16,502 sq km
- 11 blocks offered for PSC 10,370 sq km
- Ultra Deep Water: 8 blocks offered – 6,400 sq km
Opportunities Colombia
Conducting Business With Agencia Nacional de Hidrocarburos (ANH) / Ecopetrol

MINISTRY OF MINES
Policy

ANH
Administrator
Regulates (Decree 1760, 26 June 2003)
Promote exploration and subscribe/assign new E&P contracts
Reserves booking
Store, manage and distribute technical data
Define terms for new E&P contracts
Handle royalties

ECOPETROL
Operator
Integrated oil company, state funded
Exploration & Production, Downstream
Colombia
Reserves & Production

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserves</th>
<th>Production</th>
<th>Remaining &amp; Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1822.6</td>
<td>258.7</td>
<td>-477</td>
</tr>
<tr>
<td>2001</td>
<td>1842.6</td>
<td>219.6</td>
<td>28.8</td>
</tr>
<tr>
<td>2002</td>
<td>1832.6</td>
<td>211.6</td>
<td>12.6</td>
</tr>
<tr>
<td>2003</td>
<td>1562.6</td>
<td>193.4</td>
<td>12.4</td>
</tr>
<tr>
<td>2004</td>
<td>1428.8</td>
<td>185.8</td>
<td>18.1</td>
</tr>
<tr>
<td>2005</td>
<td>1552.8</td>
<td>187.4</td>
<td>18.8</td>
</tr>
</tbody>
</table>
Colombia – Before & After

20 MMBL @ $40/bbl

State Take  ROR  NPV@12%
Colombia – ANH – Bid Rounds

37 Block Caribe Round Ongoing. Large reserve potential structures, gas.

Heavy Oil Rounds.

Source: ANH
Summary

• Market driven politics to increase state takes. Latin America NOCs business plans include a strong social agenda – strong government influence.

• Many energy exporting countries renegotiating terms with IOC’s and increasing NOC’s presence.

• Colombia has most stable and favorable fiscal regime. ANH reserving the acreage.

• Geo-political risks – rise of resource nationalism - pose significant challenges to industry’s ability to balance oil supplies with demand.

• Venezuela is aggressively promoting state-to-state agreements as a way to promote oil investment and establish new diplomatic ties.

• Venezuela overshadows all other countries in term of size but can oil potential compensate for the risk?

• Best form of entrance in Latin America is via high level government-to-government negotiations or Play the game. Negotiations the new frontier?