An attractive country to invest in E&P activities
Spotlight on the Camisea Project at 10: Reflections and the Outlook for Peru’s historic natural gas Project and the country’s hydrocarbon sector

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Chairman of the Board

May, 2014
1. Camisea Project and License Contracts Blocks 88 and 56.

2. Consumption of Natural Gas in several sectors.

3. Reserves and investment in Camisea.

4. Environmental Aspects

5. Exploration Projects in Camisea and Surrounding Areas.

1. Camisea Project and License Contracts Blocks 88 and 56.
The Camisea gas project is one of the largest energy projects in Peru and is most important to the country’s economy.

¿Where is Camisea?

Region : Cusco  
Province : La Convención  
District : Echarate  
Area : Bajo Urubamba

The Camisea natural gas and condensates fields were discovered by Shell as follows:  
San Martin (1984),  
Cashirirari (1986),  
Mipaya (1987) and  
Pagoreni (1998)
<table>
<thead>
<tr>
<th>LICENSE CONTRACT</th>
<th>BLOCK 88</th>
<th>BLOCK 56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Signature</td>
<td>December 2000</td>
<td>September 2004</td>
</tr>
<tr>
<td>Area</td>
<td>1435 km²</td>
<td>585 km²</td>
</tr>
<tr>
<td>Region</td>
<td>Peruvian Jungle</td>
<td>Peruvian Jungle</td>
</tr>
<tr>
<td>Operator / Partners</td>
<td>Pluspetrol / See (I)</td>
<td>Pluspetrol / See (II)</td>
</tr>
<tr>
<td>Royalties NG / NGL</td>
<td>37.24% / 37.24 %</td>
<td>38% / 40%, approx</td>
</tr>
<tr>
<td>Start of Production</td>
<td>June 2004</td>
<td>September 2008</td>
</tr>
<tr>
<td>NG Market</td>
<td>Local</td>
<td>Export</td>
</tr>
</tbody>
</table>

**Diagram (I)**
- TECPETROL: 10%
- SONATRACH: 10%
- SK: 18%
- HUNT OIL: 25%
- REPSOL: 10%
- PLUSPETROL: 27%

**Diagram (II)**
- TECPETROL: 10%
- SONATRACH: 10%
- SK: 18%
- HUNT OIL: 25%
- REPSOL: 10%
- PLUSPETROL: 27%
## DEVELOPMENT PROGRAM
### BLOCKS 88 AND 56

<table>
<thead>
<tr>
<th>DEVELOPMENT PROGRAM IN CONTRACT</th>
<th>BLOCK 88</th>
<th>BLOCK 56</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seismic</strong></td>
<td>748 km² (3D)</td>
<td>511 km² (3D) / 33 (2D)</td>
</tr>
<tr>
<td><strong>Drilling</strong></td>
<td>San Martin: 6 wells / 2 workovers</td>
<td>Pagoreni: 7 wells</td>
</tr>
<tr>
<td></td>
<td>Cashiriari: 8 wells / 2 workovers</td>
<td>Mipaya: 3 wells</td>
</tr>
<tr>
<td><strong>Natural Gas Processing Plant (Malvinas)</strong></td>
<td>Cryogenic trains: #1 (250 MMCFD) #2 (250 MMCFD) #5 (540 MMCFD) and facilities.</td>
<td>Cryogenic trains: #3 (400 MMCFD) #4 (400 MMCFD) and facilities</td>
</tr>
<tr>
<td>1840 MMCFD</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NGL Fractionation Plant (Pisco)</strong></td>
<td>Fractionation Units: #1 (50,000 BD) #3 (35,000 BD) and facilities.</td>
<td>Fractionation Units: #2 (35,000 BD) and facilities.</td>
</tr>
<tr>
<td>120,000 BD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PRODUCTION SCHEME OF BLOCKS 88 AND 56

- **CUSCO**
- **PISCO**
- **MELCHORITA**
- **MALVINAS**

**NATURAL GAS LIQUEFACTION PLANT** (MELCHORITA) 620 MMCFD

**NATURAL GAS PROCESSING PLANT** (MALVINAS) 1840 MMCFD

**FLOWLINES, CLUSTERS AND WELLS**
- BLOCK 56: 10 wells
- BLOCK 88: 18 wells

**NG PIPELINE (EXPORTING)**

**NG PIPELINE (NATIONAL MARKET)**

**NGL PIPELINE**
PRODUCTION – NATURAL GAS

NATURAL GAS (1994 -2013)  BCF
CAMISEA ( BLOCKS 88 & 56)  1772
PERU  2123
LIQUID HYDROCARBON (1994-2013)  MMB
CAMISEA ( BLOCKS 88 & 56)  207
PERU  885
2. Consumption of Natural Gas in several sectors.
CONSUMPTION OF NATURAL GAS - CAMISEA

Source: OSINERGMIN - PERU
3. Reserves and Investment in Camisea
## RESERVES IN CAMISEA

<table>
<thead>
<tr>
<th>RESERVES (2P)</th>
<th>NATURAL GAS (TCF)</th>
<th>NATURAL GAS LIQUIDS (MMB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOCK 88</td>
<td>11.96</td>
<td>614.7</td>
</tr>
<tr>
<td>BLOCK 56</td>
<td>3.97</td>
<td>293.4</td>
</tr>
<tr>
<td>CAMISEA</td>
<td>15.93</td>
<td>908.1</td>
</tr>
</tbody>
</table>

Source: Reserves Book  MINEM – PERU - 2012
## INVESTMENT IN CAMISEA

<table>
<thead>
<tr>
<th>YEAR</th>
<th>STAGE</th>
<th>BLOCK</th>
<th>ACTIVITIES</th>
<th>MMUSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 - 2004</td>
<td>1. SAN MARTÍN</td>
<td>88</td>
<td>Seismic Drilling Pipes Malvinas/ Pisco Plants</td>
<td>703</td>
</tr>
<tr>
<td>2004 - 2008</td>
<td>2. PAGORENI</td>
<td>56</td>
<td>Seismic Drilling Pipes Malvinas / Pisco Expansion</td>
<td>846</td>
</tr>
<tr>
<td>2006 - 2012</td>
<td>3. CASHIRIARI</td>
<td>88</td>
<td>Drilling Pipes</td>
<td>647</td>
</tr>
<tr>
<td>2008 - 2014</td>
<td>4. SECOND EXPANSION</td>
<td>88</td>
<td>Malvinas and Pisco Plants</td>
<td>543</td>
</tr>
<tr>
<td>2008 - 2014</td>
<td>5. EXPLORATION &amp; DEVELOPMENT</td>
<td>88/56</td>
<td>Work, structures: Drilling, Pipes</td>
<td>745</td>
</tr>
</tbody>
</table>

**TOTAL** | **3,484**
4. Environmental Aspects
The development of Camisea Project was planned based on a highly sensitive area identification.

Cohabit harmoniously with the native communities, showing respect for their cultural and ancestral values.

High environment protection standards and the current law are met, which guarantees an adequate management of the environment.
ACTIONS CARRIED OUT

- Control plan for Erosion and Reforestation
- Pipes specific design
- Reinjection of drilling cuts
- Directional drilling
- Use of preexisting facilities
- Ecologic path (seismic)
• Independent Scientific Program through a set of methodologies to detect changes in biodiversity size. Further recommendations are generated to incorporate the management of the operation.

• PMB’s team consists of researchers and scientists recognized from academic institutions, which work together with people from native communities (native co-researchers).

• Two seasons of monitoring are performed annually (in dry weather and rain)

Important information:

☑ Monitoring held since 2005 (9 years of work)
☑ 32 monitoring campaigns conducted
☑ 17 Matsiguengas families involved
☑ 250 native co-researchers
IMPORTANT CONTRIBUTIONS

- Identification of 400 species of interest for native communities.
- Over 100 species with some conservation status
- 700 names of species in Machiguenga language
- 280 new species for Bajo Urubamba
- 25 new species for science
5. Exploration Projects in Camisea and Surrounding Areas.
In 13 years of management, significant results have been accomplished:

- 227 gas stations NGV (December 2013)
- More than 170,000 vehicles converted to CNG (December 2013)
- More than 185,000 homes and shops using natural gas (as of March 2014)
- 485 natural gas industries (March 2014)

Gas consumption in the local market: approx. 600 MMCFD

Power generation:
- 66% (approximately 45% of the total power generated in the country.)
- Distribution: 26%
- Industrial: 8%
**EXPLORATION PROJECTS**

**BLOCK 57**  
(Repsol & Petrobras)  
- Prospective Resources*: 2 TCF  
- Next Project: 150 km (2D) and 2 wells

**BLOCK 56**  
- Prospective Resources*: Under evaluation

**BLOCK 58**  
(Petrobras)  
- Contingent Resources*: 3 TCF  
- Prospective Resources*: 2.9 TCF  
- Next Project: 362 km² (3D)

**BLOCK 88**  
- Prospective Resources*: 8.3 TCF  
- Next Project: 197 km (2D), 1 well, 298 km² (3D), 1 well

**BLOCK 76**  
(Hunt Oil / Repsol / Pluspetrol)  
- 3 prospects identified.  
- Next Project: 1 well

(\*) P50
6. Government Projects:
“Gasoducto Sur Peruano” and “Nodo Energético”. 
“GASODUCTO SUR PERUANO”

Investment amount

3,722 US$ millions, approximately

Granting Entity

Ministerio de Energía y Minas – MINEM - PERU

Supervising Entity of the Concession

Organismo Supervisor de la Inversión en Energía y Minas – OSINERGMIN - PERU

Process Status

Consulting Basis

Date of contract award: II Trim 2014

Source: PROINVERSION - PERU
Thank you very much