METHANE TO MARKETS
PARTNERSHIP MEETING

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Monterrey, N.L., January 28, 2009
The atmospheric concentration of CO$_2$ and CH$_4$ in 2005 exceeds by far the natural range of the last 650,000 years.
Climate Change

- Mitigation actions insert Mexico in a global movement of greenhouse gas (GHG) emissions reduction.
- The country carries out its main emissions mitigation activities as part of specific national policies, as in the case of the coalbed methane.
- Due to its higher energy potential, methane’s global warming effects are 21 times higher than those coming from CO₂ releases.
- Methane is a significant problem for mining due to its toxicity and explosion hazard, while being a low cost energy source.
- It can be used as an energy resource to bring extra wealth to certain regions of Mexico.
2002 Mexico GHG Inventory Emissions

643.2 million CO2e t
Actions to improve the Mexican Legal Framework

Amendments to the Mining Law and to the Regulatory Law of Article 27 of the Mexican Constitution concerning the oil industry.

Rules for obtaining permits and authorizations that grant the use and recovery of coal mine gas.

2006

2008
Sabinas and Saltillo Sub-basins

• The most important coal seams for methane recovery with high proven methane content are found in the late cretaceous sedimentary sequence at the Sabinas Basin.

• The Sabinas Basin consists of several sub-basins covering an area of approximately 10,000 km².

• The average quality of the Sabinas coal seams is considered as bituminous, with low to medium volatility coking coal.
About 67% of the Sabinas- Monclova region has remained unexplored particularly the deepest layers, where presumably there is an important amount of concentrated gas. This represents a great potential for recovery and use of methane.
Estimates for methane releases in Coahuila coal mining activities 1997-2003

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
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<tbody>
<tr>
<td>Underground mining</td>
<td>63.1</td>
<td>62.7</td>
<td>66.2</td>
<td>74.5</td>
<td>63.0</td>
<td>59.5</td>
<td>58.2</td>
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<td>Surface mining</td>
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<td>3.0</td>
<td>3.4</td>
<td>3.2</td>
<td>2.8</td>
<td>2.5</td>
<td>2.6</td>
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<tr>
<td>Underground Post-mining</td>
<td>3.9</td>
<td>4.2</td>
<td>4.2</td>
<td>4.6</td>
<td>4.6</td>
<td>4.4</td>
<td>3.9</td>
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<tr>
<td>Total</td>
<td>70.2</td>
<td>69.9</td>
<td>73.8</td>
<td>82.3</td>
<td>70.4</td>
<td>66.4</td>
<td>64.8</td>
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</table>

National Institute of Ecology, GHG Inventory 2005
Benefits of the recovery and use of methane:

- Compliance with global strategies and policies to address climate change
- Economic incentives for recovery
- Make a good use of an energy resource that otherwise is to be wasted
- Access to Carbon Bonds
Conclusions

• The uncontrolled emissions of methane implies the loss of an energy resource
• The Mexican Government promotes the rational use of coal mine gas
• There are some barriers that must be addressed to attract investment
• Mexico recognizes the need to change and improve the regulatory, financial, institutional and technological framework
• Coal mine methane recovery and use is considered an emerging market in Mexico
Conclusions

• The Mexican Government expects to include new players and initiatives by building capacities for measuring GHG directed to emission reduction projects.

• It is certain that whatever we do to improve environmental quality in Mexico will have a direct impact in the world environment.

• There is no question that Mexican participation in the Methane to Markets Partnership will provide domestic coal companies information to identify developers and/or financial agents for the recovery and use of methane.