



International Production & Processing

Plenary Session: Highlighting Gas Star Partners & Endorsers

The 2005 Natural Gas Star Annual Implementation Workshop

Krish "Ravi" Ravishankar

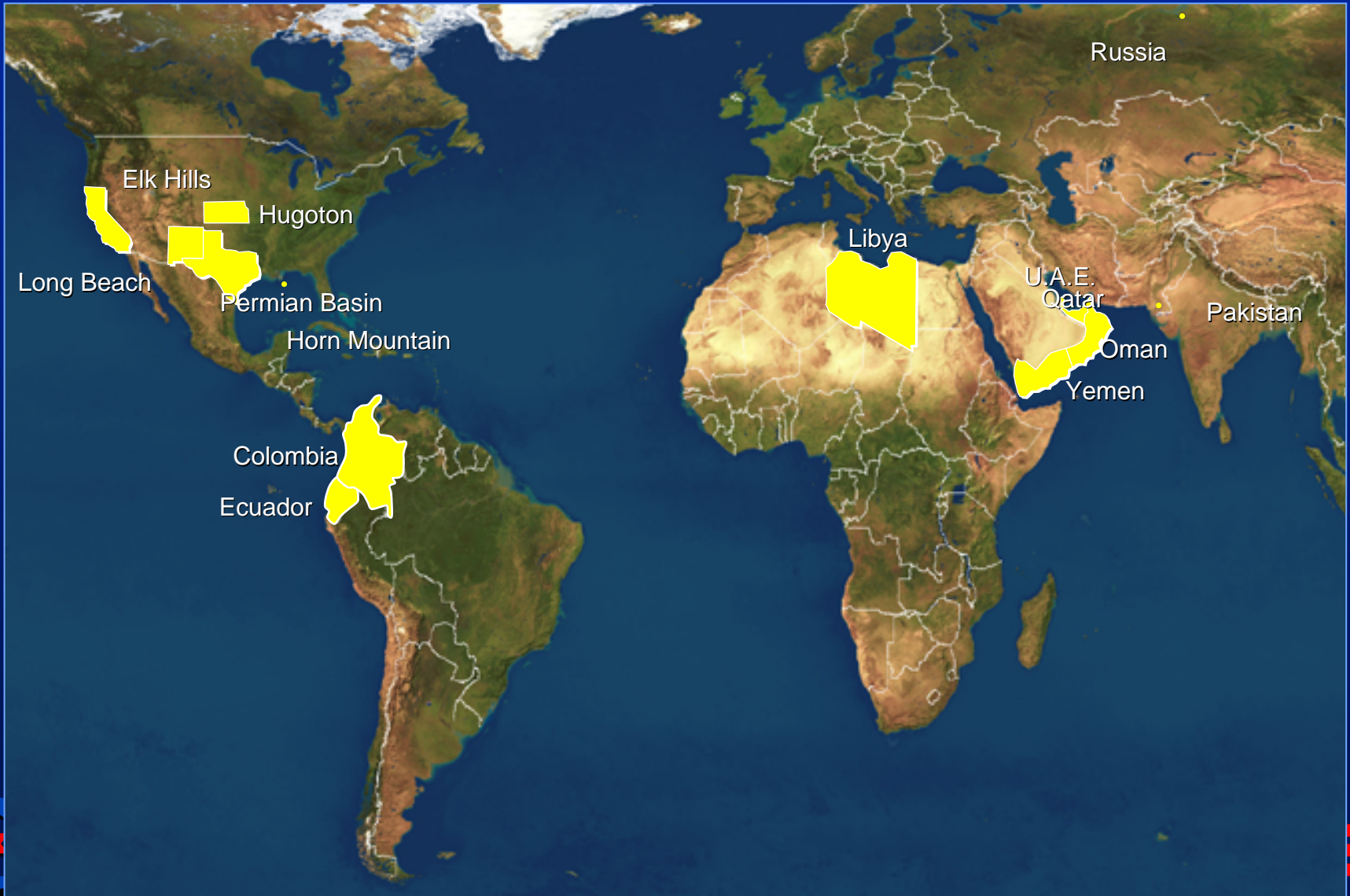
Worldwide Environmental Manager

October 25, 2005



Occidental Oil & Gas Corporation – HESS Department

Worldwide Operations





Methane to Markets Partnership Background

- **Started as White House Initiative**
- **Initial terms include:**
 - **Five year plan**
 - **U\$ 53 million U.S. Government committed funds**
 - **U.S. EPA lead with DOE and U.S. AID participation**
 - **Additional funding from other developed countries**
- **Ministerial Meeting November 15 -17, 2004 to finalize terms**





Methane to Market Member Countries

Founding Partner Countries

Australia

Japan

United States

Brazil

Mexico

Canada

Nigeria

China

South Africa

Colombia

Russia

India

Ukraine

Italy

United Kingdom





Oxy's Methane to Markets Initiative

- Oxy de Colombia and OOGC Management Support
- Colombian Ministries Endorsement and desire to conduct Training/Workshop
- Technical Advisory Committee Involvement:
 - Ministry of Mines & Energy
 - Ministry of Environment, Housing, and Territorial Development
 - ECOPETROL
 - U.S. EPA
 - Colombian Natural Gas Association
 - U.S. Embassy
 - Oxy de Colombia and OOGC





Impetus to Methane to Markets Partnership

- The 1st international workshop for oil & gas sector
- Very successful workshop:
 - 150 Participants
 - 16 countries represented
 - Participation and support of industry/
ministries/ regulatory agencies/
vendors/ consultants/ international
agencies /associations
- The workshop exemplified successful
partnership of government agencies and
industry





Impetus to Methane to Markets Initiative

- **Ministries Commitment to the M2M Program:**
 - Drafting guidelines for the industry participation.
 - Establishing a Steering and Advisory Committee of stakeholders—industry groups, associations, government ministries, NGOs will be formed to recommend the implementation approach and strategies.
 - Providing economic and fiscal incentives to industry for participation and demonstration of effective methane emission reductions.
 - Establishing a strong link between the M2M initiative and the Climate Change Convention ratified by Law 164 of 1994.
 - Establishing the connection to the Kyoto Protocol, which was accepted by Colombia by Law 629 of December 2001.
 - Developing guidelines that will fit into the overall scheme of Greenhouse programs.





Oxy's Next Step: Methane to Markets Initiative

- Oxy de Colombia's commitment to M2M program:
 - Conduct a comprehensive survey and inventory of methane emitting sources
 - Conduct a detailed emission estimation for methane from our operations using standardized tools and methodologies
 - Evaluate methane reduction opportunities and projects
 - Perform a detailed cost effective analysis of the opportunities and projects
 - Implement strategies for methane reduction. Strategies would include a combination of administrative and technical solutions.
 - As part of the technical solutions, Oxy will evaluate technologies and engineering methods
 - As part of the administrative solution, Oxy will implement programs consisting of employee incentives for project ideas and suggestions, formulation of teams integrated with HES functions of the organization
 - At our asset we will look at proven, new, innovative, cost-effective approaches.





Oxy's Next Steps: Methane to Markets Initiative

- Work in partnership with U.S. EPA and Colombian Ministries:
 - Identify projects
 - Conduct Technical feasibility studies
 - Conduct Training programs
 - Explore options on funds for demonstration projects
- Oxy Colombia is committed to sharing the knowledge, expertise, and experience with the industry group and government agencies
- Explore options and feasibility to expand the M2M program to other regions/assets

