

**CCOP – Norway Program Program for Enhancing Public Petroleum Management of the CCOP Member Countries (EPPM)**

**EPPM P2W2: Workshop on natural gas field development with high CO<sub>2</sub> and H<sub>2</sub>S – a case study on the Puguang Gas Field in Sichuan Basin, China**  
15-18 September 2009

**Summary Report:**

The workshop is the second activity under *Project 2 (P2), Natural Gas Field Development and Environmental Issues* of the EPPM Program. The workshop is organized with the cooperation of PETRAD (Norway) and SINOPEC & China Geological Survey (China) and is about development of natural gas resources with high CO<sub>2</sub> and H<sub>2</sub>S content using the Puguang basin of Sichuan Province, China as a case study.



A total of 48 participants, mostly senior management & technical personnel from the CCOP oil and gas regulatory, research agencies and national oil companies of the Member Countries, participated in the workshop. The presentations and group discussions centered on developing gas field with high CO<sub>2</sub> and H<sub>2</sub>S, the latest technology for the capture and disposal of such toxic gas, monitoring practices, HSE best practices with actual cases as examples and the roles of government/private sectors.

Resource persons from TNO-Netherlands, SINTEF-Norway, and Schlumberger updated the workshop participants on the new technologies & on-going research related to the development of high CO<sub>2</sub>/H<sub>2</sub>S natural gas. The Member Countries presented their current activities related to natural gas development and utilization. An interesting presentation was delivered by JOSMEC-Japan, that included “Anti-corrosion Technology in sour environment” and “Non-conventional Hydrocarbon Exploitation- Methane hydrates” that attracted lots of interest from the participants.

A topic on methane hydrates would be covered in the 3<sup>rd</sup> workshop (P2W3) and would invite again a representative of JOGMEC for an updated presentation.

The conclusions of the workshop are as follows:

1. While gas resources are important source of clean energy, this should be developed and extracted from the subsurface with “impact to the climate change” in mind. Use of available technology and best practices to capture the CO<sub>2</sub>, H<sub>2</sub>S and other toxic gases learned from other Member Countries and from outside, should be given due consideration for possible application.
2. There is also a need to protect the people working in the gas field as well as the environs- communities that will mostly be affected during gas escape emergencies & other emergency situations that may occur.
3. The Member Countries as well the Cooperating Countries of CCOP will continue to share information & knowledge about gas developments and HSE practices, including research programs and regulatory frameworks to help each other.
4. The CCOP Technical Secretariat, together with its partner networks, will help facilitate the exchange of information, knowledge and other complimentary future actions recommended by the workshop participants.



China, through SINOPEC, organized a 1 –day field trip to the dinosaur & other geologic museums including the centuries-old salt well located in the vicinities of Sichuan province.