CCOP – Norway EPPM Program
3rd Seminar
11-12 November 2010
Bangkok, Thailand

Department of Energy
Philippines

Outline

- Summary of Technical Activities
- Lessons Learned
  - P1 Petroleum Resource Management
  - P2 Natural Gas Field Development
  - P3 Metadata on Natural Gas Resources
- Program on Climate Change
- Post-EPPM Program Recommendation

Summary of Activities

- P1W2 - Workshop on North Sumatra- Mergui Basin Case Study: Basin Analysis & Technical Fieldwork: Medan and Parapat, Indonesia on 27-30 April 2010

- P1W3 - North Sumatra- Mergui Basin Case Study: Basin Modeling, Map Integration and Fractured Basement: Langkawi, Malaysia on 2-5 August 2010

Summary of Activities

•P2W4: Workshop on Regulatory Framework for Carbon Capture & Storage (CCS): with Focus on Storage into Geological Formations, HSE, CDM and Flaring, Phuket, Thailand, June 2010

• P2W5: Mapping of Carbon Capture and Storage Potential Reservoir and Selection Criteria, Bali, Indonesia, September 2010

Summary of Activities

- P3W3 – Metadata System Users Training and Workshop, 24-26 March 2010, Pattaya, Thailand

- P3W4 – Metadata Phase II Project, 20-22 July 2010, Shanghai, China

Lessons learned (P1)

- The workshops integrated geological data from the three case study countries and came up with a general working knowledge of the petroleum system of the North Sumatra-Mergui Basin.

- This was successfully brought about by workshops and fieldworks participated by the CCOP member countries.

- Workshops served as an effective avenue for sharing knowledge and expertise amongst themselves and provided valuable comments and inputs to the case study basin.

- It was a good medium to integrate data and what needs to be delivered by case study countries to further understand the North Sumatra-Mergui Basin.

Lessons learned (P1)

- The workshops and fieldworks proved beneficial as the participants are able to augment their technical knowledge of petroleum geoscience itself

- Lectures and exercises on relevant topics such as seismic stratigraphy, basin modeling, and basement fracture were incorporated into the activities that paved the way for integrated capacity building and knowledge and technology transfer.

- Knowledge and skills gained helps the new staffs in their work like technical evaluation.

Lessons Learned (P2)

CO2 for EOR/IOR:

- CO2 at present as an EOR/IOR method is not economically viable due to high cost (source, capture and transport);
- Lack of technical expertise;
- Lack of CO2 source;
- Well monitoring; and
- No regulations on CO2 management.

Lessons Learned (P2)

- CO2 capture and storage will play an essential role in the development of a more sustainable energy system for the future, in limiting CO2 emissions.
- It could also be a viable option if cost of CO2-emissions increases and the cost of capturing CO2 decreases.
- Injection of CO2 to enhance oil recovery in producing fields could contribute to moving this option forward.
- The geological potential for storing CO2 is huge worldwide. However, CO2 storage must be a safe and environmentally sound option

Lessons Learned (P2)

- Technological challenges in CCS can be achieved through broad international cooperation at all levels and between all stakeholders, i.e. governments, research institutions, the energy industry, international and national organizations.
- Not only advanced technology but equally important are Government policies, regulations and economic incentives.
- If CCS is to be adopted on a large scale, regulatory frameworks must be in place to manage issues such as health, environment, finance, and property risks and liabilities associated with CCS.
- Regulatory framework developed should encourage responsible operation and investments. Policies should consider the availability of geological data and public acceptance.

Lesson Learned (P2)

- Promoting development of gas hydrates must show the following solutions:
  a) Benefits of gas hydrates as an energy source;
  b) Clarification of environmental and climate issues related to gas hydrates;
  c) Combined solution for CO2 storage and energy supply; and
- d) Increasing international interests on gas hydrates with the emerging number of pilot plants operated worldwide.

Lessons Learned (P2)

- CCOP should serve as a consistent conduit for technology sharing in scientific issues related to CCS, CO2 for EOR/IOR, and development of gas hydrates.

- Collaborative studies among CCOP member countries are highly encouraged to address prevailing issues and challenges associated to these technologies.

Lessons Learned (P3)

- The software for the new metadata system developed by CGS was user-friendly, easy to understand and can be handled by any individual entity even when the system is still in the testing status .

- CGS must addressed the problem regarding the incompatibility with higher version Operating System.

Lessons Learned (P3)

- The site name is complicated and can be simplier (i.e. http.ccopmetadata.com).
- The software was more applicable to geologic maps & reports.
  - Recommendation: A new metadata software that will cater and focus on geological data specializing in seismic, wireline, logs, etc..
- Data encoding to the system is very time consuming
  - Recommendation: To develop a software that can convert all our existing data to a format which is compatible to the system

Lessons Learned (P3)

Metadata System Management Recommendation:

- Focal administrative personnel/s who will oversee the updating and maintenance of the system.
- There should also be a dialog box on the internet site where clients can give their suggestions for further improvement of the system.
- There should be a system that can monitor the clients or any individual who access the metadata.
- Continues trainings and updates of the system

Programs on Climate Change

Laws:

- **Biofuels Act**
- **Renewable Energy Act**
  - The transportation sector remains a major user of oil products and the bulk of which is imported. The Biofuels Act mandated the implementation of the 10% bioethanol blend which is now available nationwide. For biodiesel, we have increased it to 2% blend.
  - Our long term targets for biofuels are set at 20% by 2020 for bioethanol blend and 20% by 2030 for biodiesel.

Recommendations on how we can improve our networking

- Quarterly update for Member Countries on activities within the CCOP community.

- Another basin of focus would also ensure continuity of the project and increased interaction among all member countries.

Post-EPPM Program

Recommendations

- Promotion of the case study basin (North Sumatra-Mergui Basin)

- Continue technology evaluation for CCS use in EOR/IOR and focus on CCS would also ensure continuity of the project

- Upgrade and development of the metadata system for other geologic data including ease in encoding.

Thank you for your attention