Revised 15 September 2006

Annotated Workshop Agenda: CMM Development in the Asia-Pacific Region: Perspectives and Potential

Presented under the auspices of the Methane to Markets Partnership And the Asia-Pacific Partnership on Clean Development and Climate

Brisbane, Australia 4-5 October 2006 Sponsored by Australia, Japan, and USA

Workshop Goals

• The workshop will address opportunities and impediments to coal mine methane project development by focusing on case studies and experiences in Australia, the US, and internationally.

DAY 1: WEDNESDAY 4 OCTOBER 2006

8:00 – 8:30 – Registration / coffee and tea

<u>8:30</u> AM Welcome Address: The Role of Coal Mine Methane Abatement in Global Greenhouse Gas Emission Mitigation

<u>Confirmed speaker:</u> Honorable Bob Baldwin, Parliamentary Secretary to the Minister for Industry, Tourism and Resources

Introduced by John Karas, Australia Department of Industry, Tourism, and Resources (DITR)

<u>9:00 AM Opening Remarks:</u> Methane to Markets and the Asia Pacific Partnership - Integrating and Leveraging Coal Mine Methane Development Opportunities

- John Karas, Australia Department of Industry, Tourism, and Resources
- Pamela Franklin, US Environmental Protection Agency (US EPA)
- Hideo Shindo, Japan New Energy and Industrial Technology Development Organization (NEDO)

Session 1: Coal Mine Methane Upstream: Gas Capture and Gas Processing

Session provides updates on advanced / state of the art technologies for gas drainage, including advanced (pre-mine) surface drainage, directional drilling, etc., featuring drilling companies from Australia and USA

Session moderator: Damian Dwyer, Australian Petroleum Production & Exploration Assocation

- **9:30 AM** Confirmed speakers: Steve Johnson and Hilmar von Shoenfeld, CDX (USA) Topic (notional): Directional drilling systems and experience
- **10:00 AM** Confirmed speaker: Jim McGowen, Halliburton (AUS)

10:30 – 10:45 Morning Break

10:45 AM Confirmed speakers: Frank Hungerford, Valley Longwall (AUS)

Topic (notional): In-Seam Drilling Technology Issues and Experience

China

in

- **11:15 AMConfirmed Speaker:** Nathan Mitchell, Mitchell Drilling (AUS)
Talk subject: State of the Art in in-Seam Directional Drilling
- 11:45 PM
 Confirmed speaker: Greg Hall, BCCK (USA)

 Talk subject: Gas processing systems: Nitech Nitrogen removal technology
- 12:15 1.30 PM Lunch

1:30 PM Buses to depart hotel for QCAT facility

Session 2: Emerging Technologies - CMM Emission Abatement Research and Development at CSIRO

Session to be held at the Queensland Centre of Advanced Technology and will include a survey of coal mine methane technology development at CSIRO and status / availability:

- Methane Concentrator
- Catalytic Lean-burn Gas Turbine
- Hybrid Waste Coal/Methane Combustor
- Catalytic Monolith Reactor

Session moderator: Greg Rowan

- 5:00 PM Buses to depart QCAT to return to hotel
- 6:30 8:00 PM Evening reception, Queen Elizabeth Room, Marriott Hotel, Sponsored by Australia DITR

DAY 2: THURSDAY, 5 OCTOBER 2006

Session 3: An Integrated Approach to CMM Gas Drainage and Mine Operations (Case Studies)

This session will focus on how methane gas drainage systems are used to complement coal mining operations, with case studies of integrated operations from the US and Germany.

Session moderator: Cassandra McCarthy, Australian Coal Association

- 8:30 AM Confirmed speaker: Mike Onifer, Vice President, CNX Gas (USA) Topic (notional): Case study - Integrated gas collection operations at US coal mine
- **9:00 AM Confirmed speaker:** John Zachwieja, Vice President, CONSOL Energy (USA) Topic (notional): Case study - Integrated gas collection operations at US coal mine
- **9:30 AM** Invited speaker: Charles Willis, Black Warrior Methane Topic: Case study – Integrated gas collection operations at a US Coal Mine
- 10:00 10.30 AM Morning break
- **10:30 AM Confirmed speaker:** Ralph Schleuter, DMT (Germany) Topic: Case study: CBM and CMM experience in Germany
- **11:00 AM Confirmed speaker:** Liu Wenge, China Coal Information Institute Topic: Coal Mine Methane Projects in China
- **11:30 AM** Invited speaker: Mr. Peter Lau, Manager, Asia Pacific Power Systems, Caterpillar, Inc. (Singapore) Topic (notional): Case study of CMM project in China
- **12:00 NOON Confirmed speaker:** Jim Sandford, Xstrata Coal (AUS) Topic: Methane capture project at Bulga Mine
- 12: 30 1:30 PM Lunch sponsored by MEGTEC Systems

Session 4: International Coal Mine Methane Projects and Ventilation Air Methane Recovery

Session moderator: Jeremy Barlow, Barlow Jonker Pty Ltd.

- **1:30 PM Confirmed speaker:** Richard Mattus, MEGTEC Systems (Sweden) Topic: Ventilation Air Methane Power Plant Startup (WestVAMP)
- **2:00 PM Confirmed speaker:** Nicolas Duplessis, Biothermica (Canada) Topic (notional): Innovative technology for utilizing ventilation air methane
- 2:30 PM Confirmed speaker: Trevor Stay, Anglo Coal (AUS) Topic (notional): Grasstree Project
- **3:00 PM** Confirmed speaker: Dave Matthew CH4 (AUS)

Topic (notional): Moranbah Gas Project

- **3:30 PM Confirmed speaker:** David Eccleston, Clarke Energy Topic: Case study - CMM power generation project in Australia
- 4:00 4:15 PM Afternoon Break

<u>Session 5: Regulatory Issues and Finance for CMM/VAM Project Development</u> This session will present options for coal mine methane project financing including carbon financing.

- 4:15PM Confirmed Speaker: Malcolm Cremer, Queensland Department of Natural Resources, Mines & Water Topic (notional): Regulatory issues
- **4:45 PM Confirmed Speaker:** Kentaro Yabe, World Bank Topic (notional): Financing coal mine methane projects
- **5:15 PM Confirmed speaker:** Marc Stuart, EcoSecurities (USA) Topic: Developing and financing CMM projects

5:45 PM Workshop Summary and Conclusion

6:00 PM Adjourn