Optimising Coal Seam Gas

Brian Lyne, Chief Inspector of Mines, Qld
Paradigms

• Traditional view
  – Coal production is the only interest and focus
  – Methane gas is a hazard that has to be diluted by large volumes of ventilation
  – Gas outbursts are serious production impediments
Paradigms cont

• New thinking
  – Coal seam gas (methane) is a valuable resource
  – Methane gas is a “greenhouse gas”
  – Carbon taxes/credits are on the horizon
  – Concept of “incidental” and “tame” gas
  – Methane gas is only a hazard when not under control
  – Gas outbursts are a sign of a failure in the safety management system
  – Potential for better economics for coal mines
What are some of the obstacles to improvement

1. Lack of appreciation of problems
2. Lack of infrastructure
3. Policy issues
4. Identification of possibilities
Problems

• Tame gas

• Incidental gas
Definitions

**Tame Gas**
Methane gas produced from a borehole and piped directly to its point of use or sale

**Incidental Gas** (sch 3 CMSHA)
- A necessary result of coal mining
- Necessary to ensure safe coal mining
- Necessary to minimise fugitive emission of methane during coal mining operations
Infrastructure

• **Tame gas**
  – Piping and compressor stations to AS

• **Incidental gas**
  – Escape to mine atmosphere during mining
  – Controlled release of gas to atmosphere
  – Direct flaring of methane gas
  – Gas in sealed areas underground
Policy issues

- Coal Seam Gas legislation in Petroleum and Gas Act
- Some overlapping ownership issues
- Electricity production for sale or private usage
- Future carbon taxes or trading
- Legislation requires a Principle Hazard Management Plan for gas monitoring and outburst but NOT for utilisation
Possibilities

• Economical gas drainage installations
• Methane utilisation part of mine design
• Proactive utilisation of gas
• Improved integration between energy producers and coal miners
• Gas recovery prioritised as part of the overall resource recovery strategy
Comments

• Mine operators and management need to be familiarised to terms of Q1, Q2 and Q3
• Promote potential for methane gas usage
• Promote benefits for mine safety
• Minimise fugitive and “incidental gas”
• Consider the need for a Recognised Standard for methane gas utilisation in coal mines
Conclusions

• Focussed work is needed to remove the traditional paradigms related to methane gas
• Gas outbursts are an example of poor gas management and utilisation practices
• High potential for gas utilisation at mines to have significant impact on mine viability
• Current methane gas discharge practices are not sustainable with public concern long term
• Now is the best time to promote the new paradigm of gas utilisation with coal mining