



FINAL PROJECT STATUS REPORT FORM

Project Number: CLM-06-12	Task Force: Coal Mining												
Title of Project: Integrated Coal Production and Methane Extraction													
Lead Partner Country: Australia													
Participating Partner Countries and Organizations: CSIRO Exploration and Mining (Australia), Huainan Coal Mining Group Co Ltd (China)													
Project Location: China, Anhui, Huainan													
Project Manager Information <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; padding: 2px 5px;">Name: Dr Hua Guo</td> <td style="width: 50%; padding: 2px 5px;">Phone: + 61 (0)7 3327 4608</td> </tr> <tr> <td style="padding: 2px 5px;">Theme Leader – Coal Production</td> <td style="padding: 2px 5px;">Fax: + 61 (0)7 3327 4666</td> </tr> <tr> <td style="padding: 2px 5px;">Organization: CSIRO Technology</td> <td style="padding: 2px 5px;">Email: Hua.Guo@csiro.au</td> </tr> <tr> <td style="padding: 2px 5px;">Address: Post Office Box 883</td> <td style="padding: 2px 5px;"></td> </tr> <tr> <td style="padding: 2px 5px;">Kenmore Qld 4069</td> <td style="padding: 2px 5px;"></td> </tr> <tr> <td style="padding: 2px 5px;">Australia</td> <td style="padding: 2px 5px;"></td> </tr> </table>		Name: Dr Hua Guo	Phone: + 61 (0)7 3327 4608	Theme Leader – Coal Production	Fax: + 61 (0)7 3327 4666	Organization: CSIRO Technology	Email: Hua.Guo@csiro.au	Address: Post Office Box 883		Kenmore Qld 4069		Australia	
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Project Start Date: February 2008	Date of Project Status Update: February 2011												
Activity undertaken <p>The Project is to develop and demonstrate technologies that promote integrated coal production and methane capture to reduce fugitive GHG emissions. Activities have been successfully undertaken to date in the following areas:</p> <ul style="list-style-type: none"> • Investigation into mine conditions at the project host mine site at Huainan in China with comprehensive mine geological and gas data collation and review, and 3D modelling of mine geology • Installation of continuous and real time mine gas monitoring systems; evaluation of mine gas efficiency and performance; numerical modelling of mining induced strata caving behaviour and gas flow dynamics at the mine • Development of an approach that integrates the planning of mining and methane capture, and specific measures to improve the performance of coal mining, methane capture and utilisation at the mine • Successful implementation of new measures at the mine to date include: <ul style="list-style-type: none"> ○ Enhanced pre-drainage of adjacent coal seams by taking advantage of mining induced gas pressure reduction and permeability increase ○ New gas drainage borehole sealing techniques to improve drainage methane concentration ○ Separation of high concentration methane from low concentration methane in the mine gas transportation system to prevent methane dilution ○ Joint gas supply networks with an adjacent mine to maximise methane utilisation. 													



Outputs delivered by the project

Outputs delivered can be found in Progress Reports submitted to Department of Resources, Energy and Tourism, Australian Government, and Presentations delivered in APP CMTF meetings in Hunter Valley Australia (March 2010) and Whistler Canada (September 2010). Key project outputs to date include:

- New strategy and specific measures developed for integrated coal mining and methane capture at the host site, based on a detailed investigation into the mine and gas conditions, monitoring and measurement of mine gas capture performance, modelling of mining induced strata and gas condition changes, and gas flow dynamics.
- New multi-seam gas capture systems led to an increase in the total methane captured from 25.35Mm³ in 2007 to 35.78Mm³ in 2008, and to 41.21Mm³ in 2009 at the host mine.
- New mine gas transportation systems, together with improved gas capture techniques played a key role that resulted in an increased portion of high concentration methane (>30%) in the total captured gas from 30% in 2007 to 52% in 2009.
- Gas utilisation rate increased from 19.5% in 2007 to 30.9% in 2009 due to the above improvements and new integrated gas supply networks between adjacent mines.
- New underground gas capture borehole sealing technique demonstrated recently, showed an increase in methane concentration of drainage gas from 10-20% to over 30%.
- New large diameter high capacity surface methane capture well being drilled and constructed for a trial in late 2011 to improve both methane concentration and flow rate of the surface techniques.

Milestones Reached Over Lifetime of Project: please list the major milestones attained with timing (month/year)

- Project mine site selected at Huainan, China, initial mine condition assessment carried out, collaborative work agreement with the host mine site finalised in July 2008, and Progress Report 1 submitted in September 2008.
- Modelling and analyses for design and optimisation of coal production together with mine methane capture at the host mine site carried out. Overall strategy, methodology and specific measures finalised to introduce and demonstrate advanced technologies. Progress Report 2 submitted in 31 December 2009.
- Significant part of filed activities completed for implementation of new methane capture technologies as described above.

Proposed Project End Date: May 2012

Project Already Complete: Yes No



Please provide url address for where activity can currently be found along with new name and/or identification number of project (if applicable).

Will continue as a bilateral collaborative project between Australia and China. The project name remains the same: **Integrated Coal Production and Methane Extraction.**

New Contact Information: (If different from above) Please provide point of contact to find more information.

Other Information:

Please attach any supplemental project information to this form.