



Next HEDG presentation:  
Tuesday 13th March 2012  
Customs House, Newcastle

***'Coal Seam Gas: In theory and in practice'***

**Ricky Mantaring**

**(Manager – Petroleum Geoscience, Resources and Energy NSW)**

**and**

**Chris Holmes**

**(Senior Geologist, AGL Energy Limited)**

**About the talks:**

Coal seam gas (CSG) is natural gas, primarily methane, that occurs in coal seams. Historically CSG posed a danger to open cut and underground coal operations, but the application of oilfield technology has led to the development of the CSG industry in NSW. Although the industry is exploiting a naturally abundant and cleaner energy resource, exploration and extraction methods have recently attracted controversy, resulting in a haze of information and misinformation. The purpose of the technical talks tonight is to examine the theory behind CSG extraction, look at current and potential projects in NSW, and hear from AGL about their Hunter Gas Project.

Ricky will discuss the theoretical exploration and extraction of CSG. CSG is held within coal seams by water pressure. By removing water, the pressure in the coal seam can be reduced sufficiently to allow the gas to flow and be extracted. All wells require the application of a completion method to allow commercial volumes of gas to flow, the main methods being horizontal drilling, fracture stimulation ('fracking') and under-reaming. Ricky will outline these practices. Ricky will also comment on current and potential CSG projects in NSW, illustrating the potential abundance of resources in NSW.

Chris will present an overview of AGL's Hunter Gas Project. The project covers two petroleum exploration licences over much of the Hunter Valley, from the outskirts of Newcastle through to Scone and Merriwa. Exploration to date has included drilling of core and stratigraphic holes, seismic surveys and pilot production tests. The project achieved first commercial reserves in October 2010 with exploration continuing to appraise and evaluate the quantity and quality of CSG through the project area.

**About the speakers:**

Ricky Mantaring is the Manager - Petroleum Geoscience Unit in the Division of Resources and Energy, NSW Department of Trade and Investment, Regional Infrastructure and Services. He has a BSc (Hons) in geology from the University of the Philippines and 25 years experience in the petroleum exploration industry. He has worked in field surveys, well-drilling, new ventures and promotions for a number of international oil companies and was involved in several major basin analysis and resource evaluation studies. He is an active member of PESA and AAPG.

Chris Holmes is a Senior Geologist with AGL Energy Limited. He holds a BSc in Geology from the University of Wollongong and has 8 years experience in the mining and petroleum exploration industry. Currently, his roles at AGL are the technical lead and project manager for the Hunter Gas Project, part of the Cooper Basin oil and gas exploration project team, and technical resource for the new ventures and business development team. He is an active member of PESA.

*Drinks and nibbles at the downstairs bar from 6.00pm. Presentation upstairs at 6.30pm.  
Please RSVP by COB Monday 12th March to [phil.gilmore@industry.nsw.gov.au](mailto:phil.gilmore@industry.nsw.gov.au)*



**Resources  
& Energy**

HEDG is sponsored by the  
Geological Survey of NSW  
(Resources & Energy NSW) and the  
Geological Society of Australia, Hunter Valley Branch



## About HEDG

HEDG formed in 2008 with the aim to increase the interaction between geoscientists in the Lower Hunter, promote geoscience, provide a platform to learn about current research, and provide an opportunity for student and professional networking.

# HEDG

HUNTER EARTH SCIENCES DISCUSSION GROUP

## 2012 HEDG program (all Tuesday evenings)

<b>13th March</b>	‘Coal Seam Gas: In theory and in practice’ Ricky Mantaring (Resources and Energy) and Chris Holmes (AGL Energy Ltd)
<b>15th May</b>	TBA
<b>3rd July</b>	TBA
<b>14th August</b>	National Science Week - 2012 Theme ‘Energy Evolution’
<b>16th October</b>	Earth Science Week - 2012 Theme ‘Discovering careers in the Earth Sciences’
<b>11th December</b>	TBA

## HEDG field trips

HEDG will be running a half-day field trip on the 9th May to the Mount View area of the Lower Hunter Valley as part of the 38th Sydney Basin Symposium. The trip will look at the geology of the Late Carboniferous–Early Permian sequence in the area, including some of the earliest sedimentary deposits into the Sydney Basin, as well as soils of the Pokolbin area and their relevance to local viticulture. Of course, some fine Hunter Valley wines will also be sampled! Profits from the field trip will be used to support students at the university. The field trip is open to registrants for the symposium.

### Links to other (local) geoscience resources:

Geological Survey of NSW:

<http://www.dpi.nsw.gov.au/minerals/geological>

NSW Trade and Investment, Mineral Resources & Energy: <http://www.industry.nsw.gov.au/>

<http://www.dpi.nsw.gov.au/minerals>

Sydney Mineral Exploration Discussion Group  
SMEDG: <http://www.smedg.org.au>

Amateur Geological Society of the Hunter  
Valley: <http://agshv.com>

AusIMM – Hunter Region Branch:  
<http://www.ausimm.com.au/content/default.aspx?ID=213>

### Geological Society of Australia (GSA), Hunter Valley Branch



GSA provides an opportunity to keep in touch with scientific developments, present the results of work, and contribute to discussions on vocational and scientific topics. See: <http://www.gsa.org.au>

Chair John Greenfield

Dep. Chair John Watkins

Secretary Phil Gilmore

Treasurer Phil Seccombe

Committee Simone Meakin, Peter Downes, Glen Phillips, Emma Johnson, Rob Barnes, Chris Woodfull, Mark Eastlake