



shaleUK

Presenting the geoscience of shale gas exploration, production and environmental management in the UK

04-05 March 2014, Millennium Gloucester Hotel, London

www.shaleuk.com

Draft programme as at 31/01/2014

Shale UK is a two-day conference to present an authoritative state-of-the-art view of geoscience relevant to shale gas exploration, production and environmental management in the UK. It aims to bring together the leading experts in relevant areas of geology, from the UK, US and elsewhere, with decision-makers, potential investors, others in the hydrocarbons and energy supply chain, and other stakeholders with an interest in shale gas.

DAY 1

07:00 – 09:00: **Registration and breakfast**

Session Introduction: *More effective decision-making about shale gas, both political and commercial, and better informed public debate about the issues will depend fundamentally on an understanding of the relevant geology. Geoscientists play an essential role in locating, characterising and quantifying the extent of shale gas resources, managing uncertainty about these resources, extracting them safely and economically, and understanding and managing environmental impacts of this activity. The first two sessions of the conference will provide an introduction to the geology of shale gas, and a state-of-the-art view of what geologists know about the UK's shale gas resources.*

09:00 – 10:40: **Session One – Shale gas: a geological perspective**

Session Chair -

Introductory comments

- What part might shale gas play in the UK's energy mix? A geologist's view – **Lord Oxburgh of Liverpool**, Former Chairman of Shell, Member, House of Lords Select Committee on Science and Technology



- Introduction to the geology of shale gas - **Prof Joe Cartwright**, University of Oxford
- What do we know about shale gas – and what don't we know? - **Richard Davies**, Advisor to Department of Energy & Climate Change and Project Leader of Researching Fracking in Europe

10:40 – 11:00: **Coffee break**

11:00 – 13:00: **Session Two – The shale gas resources of the UK**

Session Chair – **Ian Roche**, Managing Director, Aurora Petroleum

- The geology of UK shale gas - **Professor Al Fraser**, former Geologist & Exploration Manager at BP, & Dep't of Earth Science and Engineering, Imperial College
- UK shale gas resources - **Ed Hough**, British Geological Survey
- From UK resources to reserves – what is required? - **Professor Andy Aplin**, Former BP Advisor and Professor of Unconventional Petroleum in the Dep't of Earth Sciences, Durham University
- Lessons from the Bowland Shale - **Huw Clarke**, Senior Geoscientist, Cuadrilla Resources

13:00 – 14:00: **Lunch**

Session Introduction: *In the US, the 'shale gas revolution' has transformed energy markets, and has made the US the leading source of expertise in shale gas exploration and production. It has also attracted controversy over potential environmental impacts and regulation, and stimulated research into these impacts. It is widely recognised that the US experience will not simply be replicated elsewhere – but what can the UK and other countries learn from the US experience of shale gas exploration and production, and its environmental management and regulation?*

14:00 – 16:00: **Session Three – The US shale gas revolution – resources**

Session Chair – **Dr Robin Mann**, Partner, Deloitte tbc

- The story of US shale gas - **Chris Faulkner**, President & CEO, Breitling Energy
- The story of Bakken / Woodford Shale – **Jack Stark**, Senior VP Exploration, Continental Resources tbc
- Eagle Ford Shale – **Art Donovan**, BP Exploration Excellence Team tbc
- Reducing risk and uncertainty in unconventional play development: lessons from the US – **Chris Hughes**, NuTech Energy Alliance
- Shale gas production in the US - **Ian Walton**, Energy and Geoscience Institute, Utah

16:00 – 16:30: **Coffee break**

16:30 – 17:30: **Session Four – The US shale gas revolution – environmental impacts and management**

Session Chair –

- Hydraulic fracturing and drinking water contamination in the US - **Rob Jackson**, Duke University tbc
- Baseline surveying of methane in groundwater in the US - **Jerad Bales**, Associate Director for Water, US Geological Survey

20:00 – 22:00 **Gala Dinner** – including after dinner speaker

DAY 2

Day 2 Introduction: *On Day 1, having considered the geology and likely extent of UK resources, we reviewed what lessons can be learned from the US shale gas experience, including the management of environmental impacts and risks. But the US experience will not translate directly to the very different UK regulatory, commercial and social environment. **How would environmental management of shale gas exploration and production be carried out in the UK, and can public concerns about potential impacts be met?***

09:00 – 09:45: **Session Five – The UK and European regulatory context**

Session Chair -

- Environmental impacts and regulation of shale gas E&P - **Tony Grayling**, Head of Environmental Policy, Environment Agency
- Regulations from Brussels and the effect on potential shale activity in the UK – **Elizabeth Shepherd**, Partner, Eversheds

09:45 – 11:15: **Session Six – Faults, fractures and seismicity**

Session Chair – **Richard Davies**, Advisor to Department of Energy & Climate Change and Project Leader of Researching Fracking in Europe

- Faults, fractures and permeability - **Zoe Shipton**, University of Strathclyde
- Use of Real Time Monitoring of the Fracturing Process for the risk management of fracture locations? - **Lars Sørum**, Director Unconventional Gas, DNV
- Induced seismicity - **Professor Peter Styles**, Past-President of Geological Society and Professor of Applied and Environmental Geophysics, University of Keele

11:15 – 11:30: **Coffee break**

Hydrogeologists have a vital role to play in any shale gas exploration and production programme. They can identify and characterise the hydrogeological risk, which sets the conditions which must be met by engineering and mitigation measures. Dialogue between hydrogeologists and petroleum geologists, engineering geologists and well engineers is essential.

11:30 – 13:00: **Session Seven – Groundwater contamination and risk management**

Session Chair – **James Dodds**, Director, Envireau Water

- Contamination of drinking water aquifers - **Jonathan Foster**, Managing Director, Petroleum Safety Services Ltd
Richard Sands, Moorhouse Petroleum



- Managing water contamination (including NORMs) - **Sarah Scott**, Senior Technical Specialist Hydrogeology, Environment Agency
- Case study: Groundwater risk management – lessons for shale gas from the Crossrail project - **Natalyn Ala**, Technical Director, Water and Environment, Atkins

13:00 – 14:00: **Lunch**

14:00 – 15:00 **Session Eight – Water demand and water management**

Session Chair -

- Meeting the water requirements of a future UK shale gas industry - BGS Speaker tbc
- Strategies for managing return water – can it be safely returned to the ground? **James Dodds**, Director, Envireau Water

15:00 – 15:30: **Coffee break**

Session Introduction: *UK Government is placing increasing emphasis on the role of shale gas in meeting our future energy needs. The UK's shale gas resources are also attracting increasing commercial interest, with significant investments made by Centrica in June 2013 and by Total in January 2014. How do geological considerations inform political and commercial decision-making?*

15:30 – 17:00 **Session Nine – How does the geoscience of shale gas inform decision-making, investment and financing?**

Session Chair –

- The future of UK shale gas policy - Department of Energy and Climate Change speaker - tbc
- Shale gas resource assessment - **Adam Law**, Geoscience Director ERC Equipoise
- Shale gas investment - Speaker from Total - TBC

17:30: **Summary and close of conference**

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