





Geological Carbon Storage: Meeting the Global Challenge

A joint meeting with the Geological Society and American Association of Petroleum Geologists

14-15 April 2014

Programme

| Monday 14 April 2014 | | |
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| 09.00 | Registration & tea & coffee (Main foyer and Lower Library) | |
| The scale of the global challenge | | |
| 09.30 | The trillion tonne triangle: carbon in the 21 st century | |
| | Bryan Lovell (University of Cambridge) | |
| Basin scale propagation and trapping | | |
| 10.00 | Small-scale trapping constrains large-scale storage capacity | |
| | Chris MacMinn (University of Oxford) | |
| 10.30 | Practical models for large-scale CO ₂ injection, migration and trapping | |
| | Sarah Gasda (University of Bergen) | |
| 11.00 | Tea, coffee and refreshments (Lower Library) | |
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| 11.30 | The impact of reservoir conditions on multiphase flow and trapping in the CO_2- | |
| | brine-sandstone system | |
| | Sam Krevor (Imperial College London) | |
| 12.00 | Impact of capillary hysteresis and trapping on vertically integrated models for CO ₂ | |
| | storage | |
| 40.00 | Florian Doster (Heriott-Watt University) | |
| 12.30 | Fluid dynamics of CO ₂ dissolution Jerome Neufeld (University of Cambridge) | |
| 12.00 | | |
| 13.00 | Wrap up | |
| 13.20 | Lunch (Lower Library) | |
| Measurement techniques | | |
| 14.30 | An overview of measurement techniques Charles Jenkins (CO2CRC) | |

| 15.00 | Tracing the migration and fate of CO ₂ in natural and CO ₂ -EOR fields using noble gases and stable carbon isotopes Stuart Gilfillan (University of Edinburgh) | |
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| 15.30 | Tea, coffee and refreshments (Lower Library) | |
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| 16.00 | Less is good: Monitoring CO ₂ storage using passive seismic methods Mike Kendall (University of Bristol) | |
| 16.30 | Non-uniqueness, fluid mechanics and monitoring CO ₂ dispersal subsurface Andy Woods (University of Cambridge) | |
| 17.00 | Wine reception (Lower Library) | |
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| Tuesday 15 April 2014 | | |
| 09.15 | Registration, Tea & coffee (Main foyer and Lower Library) | |
| 00.45 | | |
| 09.45 | Welcome and introduction to day 2 | |
| 10.00 | Field trials – lessons learned | |
| 10.00 | Green River, Utah, a natural analogue for long-term CO ₂ storage Mike Bickle (University of Cambridge) | |
| 10.35 | Constraints on magnitude, mechanism, and rate of CO ₂ dissolution at Bravo Dome, NM | |
| 1 | Marc Hesse (University of Texas at Austin) | |
| 11.10 | Tea, coffee and refreshments (Lower Library) | |
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| 11.40 | Proved storage resources: what it takes to mature a project Owain Tucker (Shell) | |
| 12.15 | Verifying storage performance at Sleipner Andy Chadwick (British Geological Survey) | |
| 12.50 | Wrap up | |
| 13.10 | Lunch (Lower Library) | |
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| 14.10 | Nature and Consequences of Well Leakage and Blowouts in Natural Gas and CO ₂ Wells Ian Duncan (Bureau of Economic Geology, University of Texas at Austin) | |
| 14.45 | The CO2CRC Otway 2B residual gas saturation test: application and outcomes | |
| 17. 1 0 | Dirk Kirste (Simon Fraser University, British Columbia) | |
| 15.20 | Challenges and Successes Implementing MMV Technologies for the Saskatchewan Aquistore Project | |
| | Rick Chalaturnyk (University of Alberta) | |
| 15.55 | An overview and current status of Australia's flagship CCS projects Jim Underschultz (University of Queensland) | |
| 16.30 | Science discussion: highlights to report to policy session, and the future research | |
| | agenda Marc Hesse (University of Texas at Austin) | |
| | Jerome Neufeld (University of Cambridge) | |
| | Jim Underschultz (University of Queensland) | |
| 17.00 | Tea, coffee and refreshments (Lower Library) | |

| Prospects and challenges for implementing CCS (with invited policy audience) | | |
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| 17.30 | Summary of the science programme for new audience members Jerome Neufeld (University of Cambridge) | |
| 17.45 | Some challenges for scientists and policy-makers working on CCS David Reiner (Cambridge Judge Business School) | |
| 18.00 | Panel discussionChair: Bryan Lovell (University of Cambridge)Steve Cawley (BP)Alexandra Elson (Shell)Herbert Huppert (University of Cambridge)David Reiner (Cambridge Judge Business School) | |
| 19.00 | Wine reception (Lower Library) | |