



11 June: CONFERENCE DAY 1 (Field Trips and Arrival)

- 12.00 to 17.00** Exhibitors set up
- 14.00 to 18.30** Registration and key collection (Agnes Blackadder Hall - formerly 'New Hall')
- 19.00 to 20.30** Icebreaker Reception (Museum of the University of St. Andrews (MUSA))
- 20.30** Icebreaker close: *Dinner venues available in St. Andrews (see Map ... and EIG website for list of restaurants)*
- 21.00** Doors close on Icebreaker venue

12 June: CONFERENCE DAY 2 - Morning

- 07.30** Breakfast
- 07.00 to 08.00** Exhibitors set up
- 08.00 to 09.00** Registration and key collection (Foyer near entrance to Medical & Biological Science (MBS) Building (adjacent to main auditorium))
- 08.15 to 08.45** Presenters briefing and presentation check

MAIN (MBS) AUDITORIUM

- 9.00** **Welcome and Introduction: Clive Mitchell, 2014 Conference Chairman**
- 9.05 **Opening Address:**
Adrian Finch, University of St. Andrews
- 9.15 **The EIG 2014 Keynote 'Ansel Dunham' Lecture**
Title: Plus ça Change ...
Presenter: Duncan Wardrop
- 9.55 **Session 1 : Various Highlights**
Chair: **Tom Newman**
- 9.55 **Title: An Overview of the Geology and Mineral Resources of Scotland**
Presenter: Ruth Robinson & Graham Smith
- 10.15 **Title: Back to the Future: Coal mining using an adapted room and pillar method**
Presenter: Toby White

10.35 to 11.25 Tea/coffee - In MBS Exhibition Area - *with opportunity to view trade stands and posters*

MAIN (MBS) AUDITORIUM

- 11.30** **Session 2 : Mineral Resources and Exploration**
Chair: **Colin Comberbach**
- 11.30 **Title: Mineral Resource and Reserve Classification—Looking Backward and Forward**
Presenter: David Abbott
- 11.50 **Title: The Responsible Reporting of Mineral Assets**
Presenter: Eddie Bailey
- 12.10 **Title: Industrial Mineral Exploration on a Crowded Island**
Presenter: Scott Abraham & Jeremy Elvins
- 12.30 **Title: Thinking Big- Defining Resources for Major Coastal Defence Projects**
Presenter: Tom Bide

PHYSICS LECTURE THEATRE B

- Session 3 : Fracking & Frac Sands**
Chair: **Ann Hagni**
- 11.30 **Title: Groundwater and Shale Gas - An Overview**
Presenter: Rachel Bell
- 11.50 **Title: Hydrogeological risk screening for unconventional oil and gas development**
Presenter: Barnaby Harding
- 12.10 **Title: UK Frac Sand Resources**
Presenter: Clive Mitchell
- 12.30 **Title: Understanding Shale Gas Plays through the use of Inorganic Geochemistry**
Presenter: Alex Finlay & John Martin

12.50 to 13.55 Lunch - In MBS Exhibition Area - *with opportunity to view trade stands and posters*

See Programme Sheet 2 for afternoon sessions



18th EIG Conference Programme: Sheet 2

UNIVERSITY OF ST. ANDREWS: 11th - 13th June 2014

12th June: CONFERENCE DAY 2 - (continued)	
12.50 to 13.55 Lunch - In MBS Exhibition Area - - with opportunity to view trade stands and posters	
MAIN (MBS) AUDITORIUM	PHYSICS LECTURE THEATRE B
<p>14.00 Session 2 (continued) and Session 4 (Geotechnics and Ground Control) Chair: Geoff Walton</p> <p>14.00 Title Geoelectrical Imaging for Natural Ornamental Stone Exploration <i>Presenter Jon Chambers et al</i></p> <p>14.20 Title Modelling and Assessing the Uncertainty of Mineral Resources in Three Dimensions <i>Presenter Ben Marchant, Katy Mee & Jo Mankelov</i></p> <p>14.40 Title Application of Pre-Split Blasting to Final Faces in Hard Rock Quarries <i>Presenter Sophie Cook & Brian Duthie</i></p> <p>15.00 Title Milwr Tunnel – the Investigation and Remediation of a Major Mine Drainage Adit <i>Presenter Martin Downing</i></p>	<p>Session 5 (Industrial Minerals) Chair: Peter Scott</p> <p>14.00 Title The Role of Carbonatite Deposits in the Industrial Minerals Industry <i>Presenter Prof. Richard Hagni</i></p> <p>14.20 Title A bit about Andalusite and the Bushfeld Complex <i>Presenter David Crouse</i></p> <p>14.40 Title Mineral and Chemical Characteristics of High-Whiteness Calcite Marbles, Northern Norway <i>Presenter Agnes Raaness & Are Korneliussen</i></p> <p>15.00 Title Petrological and Chemical Characterisation of High-Purity Quartz Deposits with Examples from Norway <i>Presenter Axel Müller, J.E. Wanvik and P.M. Ihlen</i></p>
15.20 to 16.00 Tea/coffee - In MBS Exhibition Area - with opportunity to view trade stands and posters	
<p>16.05 Session 4 (Continued) Chair: Craig Arditto</p> <p>16.05 Title Ground Control Instrumentation for the Extraction Industry <i>Presenter Keith MacAndrew, L Sneath, & J Toplis</i></p> <p>16.25 Title Use of LiDAR and Unmanned Aerial Vehicles (UAVs) for remote geological surveying <i>Presenter Adrian Charters</i></p> <p>16.45 Title Geotechnical Challenges in Quarry Development in Steep-Sided Mogote Hills <i>Presenter David Jameson & Mark Pritchard</i></p> <p>17.05 Title Rockfall Protection to Dudley Ward Tunnel, Northern Approach, Gibraltar <i>Presenter Stewart Lightbody</i></p>	<p>Session 5 (continued) and Session 6 : Applied Mineralogy Chair: Clive Mitchell</p> <p>16.05 Title Titanium Deposits in Norway <i>Presenter Are Korneliussen</i></p> <p>16.25 Title Crushed Rock Aggregates: their Mineralogy and Textures using Automated Scanning Electron Microscopy (QEMSCAN®) <i>Presenter Peter Scott & Gavyn Rollinson</i></p> <p>16.45 Title Particle Shape Evaluation: a New Objective Approach using Dynamic Image Analysis applied to the Frac Sand Industry <i>Presenter Koen Vos et al.</i></p> <p>17.05 Title Investigation to Understand the Geological Factors Controlling Iron Oxide Distribution in Granae Mill. Limestone Quarrv, Derbyshire <i>Presenter Andrew Smith</i></p>
17.30 to 17.50 EIG Annual General Meeting - all invited	
18.45 to 19.45 Pre-Dinner Drinks Reception (Lower College Hall)	
20.00 to 11.30 EIG Conference Dinner (Lower College Hall - followed by pay bar and Ceilidh until midnight in Upper College Hall ... i.e. the floor above)	



13th June: CONFERENCE DAY 3	
07.30 to 09.00 Breakfast	
08.00 to 09.00 Registration (Foyer near entrance to Medical & Biological Science (MBS) Building (adjacent to main auditorium))	
MAIN (MBS) AUDITORIUM	
9.00	Session 7 : More highlights
	Chair: Alan Thompson
9.00	Title The Tellus Projects of UK and Ireland – a Stimulus for New Exploration and Sustainable Use of Natural Capital Assets <i>Presenter Andy Howard, M. Young & M. Cowan</i>
9.30	Title The Minerals Sector contribution to Stabilisation and Development in Afghanistan <i>Presenter Drew Craig</i>
9.50	Title Indiana Limestone - The Gold (well, buff) Standard of U.S. Dimension Stone <i>Presenter Nelson Schaffer</i>
10.10	Title Palaeo-landscapes and Early Human Activity (c. 200-300 ka BP) in the Southern North Sea: a Case Study in Best Practice as Evidenced in Marine Aggregate Dredging in the Anglian Block <i>Presenter Nigel Griffiths</i>
10.30	Title The Role and Benefits of Quarries in Alleviating Flooding – Planning Opportunities and Technical Issues <i>Presenter Clive Carpenter</i>
10.50 to 11.30 Tea/coffee - In MBS Exhibition Area - with opportunity to view trade stands and posters	
MAIN (MBS) AUDITORIUM	
11.35	Session 8 : Quarrying and the Water Environment
	Chair: Lee Clarke
11.35	Title The Potential Applications and Benefits of Digital Data Collection in Quarries <i>Presenter Chris Leake</i>
11.55	Title Design of Schemes of Water Monitoring to Save Money and Regulatory Time <i>Presenter James Dodds</i>
12.15	Title The Use of Modern Data Management Systems in the CEMEX UK Aggregate Business <i>Presenter Kevin Wilson</i>
12.35	Title Analysis of Aquifer Pumping Tests within Glacial Sand and Gravel using Function.xls <i>Presenter Campbell Ogilvie</i>
PHYSICS LECTURE THEATRE B	
	Session 9 : Building Stone
	Chair: Graham Smith
11.35	Title How do we Re-invigorate the UK Dimension Stone Industry? An Example from the Orkney Islands <i>Presenter Martin Gillespie</i>
11.55	Title Designing for Underground Extraction: a Dimension Stone Room-and-Pillar Mine. <i>Presenter Naomi Lee</i>
12.15	Title Salt Weathering of the Waddington Fell Sandstone by Sodium Sulphate - Forceful Growth of Crystal Fibres <i>Presenter Kieran Blacker</i>
12.35	Title Playing With Aggregates <i>Presenter Bobbie Millar</i>
12.55 to 14.00 Lunch - In MBS Exhibition Area - with opportunity to view trade stands and posters	
14.05	Session 10 : World Case Studies
	Chair: Adrian Charters
14.05	Title From Empire to Enterprise: 100 years of history through mineral extraction statistics <i>Presenter Teresa Brown</i>
14.30	Title Logistics and the Economics of Iron Ore Mining in West Africa <i>Presenter Stephen Hobbs</i>
14.55	Title Mineral Policy (or lack of) issues in the European Union <i>Presenter Gunter Tiess & John Cowley</i>
15.20	Title Advantaged by Location <i>Presenter David Boyd</i>
Session 11 : Planning and Environment	
	Chair: Duncan Wardrop
14.05	Title Strategic Planning for Future Aggregates Provision in Wales <i>Presenter Alan Thompson</i>
14.30	Title The Use of Multi-Criteria Analysis in Evaluating Quarry Closure Options <i>Presenter Richard Lansley & Gareth Digges La Touche</i>
14.55	Title True Community Engagement: A new model for mineral development <i>Presenter Bill Birch</i>
15.20	Title Planning for Sustainable Aggregate Production in Illinois, USA <i>Presenter Zak Lasemi; John Henriksen; Matthew Hansel; and Mark Krumenacher,</i>
MAIN (MBS) AUDITORIUM	
15.50	Summing up <i>Presenter Clive Mitchell, EIG 2014 Chairman</i>
16.00 to 17.00 Tea & Coffee available - In MBS Exhibition Area	
17.00 Trade stands cleared and venue closed.	
14 June: CONFERENCE DAY 4 (Field Trips)	
07.30 to 09.00 Breakfast	
09.00	Field Trips : see your field trip itinerary for timings