



The Geology of Fractured Reservoirs

24-25 October 2018
The Geological Society, London

Provisional Programme

Day One	
08.00	Registration
09.15	Introduction - The Geology of Fractured Reservoirs – Some General Principals
Session One: Fundamentals of Fractured Reservoirs	
09.30	Keynote: Fracture corridors and structural diagenesis Stephen Laubach, <i>Bureau of Economic Geology, The University of Texas at Austin</i>
10.00	Sampling biases in fracture logs from exploration wells: impact and mitigation E. Thompson, <i>Lundin Norway</i>
10.20	Controls on fracture geometry: What can we learn from geomechanically-based DFN models? Michael Welch, <i>Danish Hydrocarbon Research and Technology Centre</i>
10.40	Reducing uncertainty in fracture modelling: assessing the sensitivity of inputs from outcrop analogues Jonathan Long, <i>Geospatial Research Ltd</i>
11.00	Break
Session Two: Fractured Clastic Reservoirs	
11.20	Natural Fracture Systems in Mudrocks (Upper Cretaceous-Eocene), Jordan Israa Abu-Mahfouz, <i>University of Oxford</i>
11.40	Using U-Pb calcite geochronology to constrain the timing of fracturing and fluid-flow in Jurassic mudrocks of the Cleveland Basin Jack Lee, <i>Durham University</i>
12.00	Impact of mechanical damage on fluid flow in mudstones: matrix versus fracture permeability of deformed Whitby Mudstone (UK) Maartje Houben, <i>Utrecht University</i>
12.20	Fracture Corridors geometry: what can we learn from field analogues? Insights from Huamapampa sandstone in Bolivia (Icla Syncline) Juliette Lamarche, <i>Aix Marseille University</i>
12.40	Lunch
Session Three: Fractured Carbonate Reservoirs	
13.30	Keynote: Active Fracturing and Stresses in the Arabian Plate Basins: Patterns, Driving Factors, and Impact on Hydrocarbon Resources Mohammed S. Ameen, <i>Saudi Aramco</i>
14.00	Natural Fracture Systems in Carbonate Reservoirs Jo Garland, <i>Cambridge Carbonates Ltd</i>



14.20	Contrasting deformation mechanisms within porous and tight carbonate rocks: examples from an outcrop analogue and insights on reservoir properties Paolo Pace, <i>GE Plan</i>
14.40	Critical fractures in carbonates: how early embrittlement and structural diagenesis affect reservoir properties? V. La Bruna, <i>CEREGE-UMR</i>
15.00	Quantifying fracture aspect ratios in reservoir-scale fractured carbonates Richard Jones, <i>Geospatial Research Ltd</i>
15.20	Break
15.50	Upon the Representative Element of Natural Fracture Networks in Carbonate Reservoirs: Insights from Deterministic Discrete Fracture Network Models Thomas D. Seers, <i>Texas A&M University at Qatar</i>
16.10	Dynamic Calibration of the Shaikan Jurassic Full-Field Fractured Carbonate Reservoir Model Through Single-Well Drill Stem Test (DST) and Multi-Well Interference Discrete Fractured Network (DFN) Simulation Neil Price, <i>Gulf Keystone Petroleum Ltd</i>
16.30	Modeling dynamic behavior of fracture corridors from time lapse Electrical Resistivity Tomography (ERT) experiments. Application to the Calvisson Quarry (SE France) B. D. M. Gauthier, <i>Total EP</i>
16.50	Insights from a multi-disciplinary fracture study of the Zechstein of NW Europe Susie Daniels, <i>Geospatial Research Ltd</i>
17.10	Discussion
17.40	Finish
	Wine Reception

Day Two	
08.30	Registration
	Session Four: Fractured Basement Reservoirs
09.00	Keynote: Characterising the fracture properties of Lewisian Gneiss basement reservoirs Rona Ridge, West of Shetland Robert Trice, <i>Hurricane Energy</i>
09.30	Fault Void Fills: Internal architectures of near-surface faults and implications for hydrocarbon reservoirs Kit Hardman, <i>Durham University</i>
09.50	Where is the fresh water coming from? Carl Fredrik Gyllenhammar, <i>CaMa Geoscience</i>
10.10	It's a wee bit cracked: characterization of basement-hosted fracture systems, NW Scotland Ken McCaffrey, <i>Durham University</i>
10.30	Break
10.50	Characterization of a basement fracture system, Cheviot field, North Sea T. Needham, <i>Needham Geoscience Limited</i>



11.10	Understanding the dynamic behaviour of the Lancaster Field, West of Shetland Antony Harris, <i>Axis Well Technology</i>
11.30	Basement Fracture Characterisation on the Liverpool Land Basement High, Central East Greenland Graham Banks, <i>Geological Survey of Denmark and Greenland</i>
11.50	A Review of the Yemen Fractured Basement Play David M. Hall, <i>Sul Geology (Independent Consultant)</i>
12.10	Discussion
12.30	Lunch
Session Five: Fractured Reservoir Data Integration	
13.20	Keynote: Characterising Fractured Reservoirs: insight from the movie "Life is Beautiful" Raffaele Di Cuia, <i>Delta Energy Limited</i>
13.50	Fracture aperture in reservoir rocks: examples from the Shetland Chalk in the Gullfaks Field Ole-Petter Wennberg, <i>Equinor Bergen, Norway</i>
14.10	Fractured Reservoirs of Oman: Geological overview, challenges and opportunities for the development of hydrocarbon resources Loic Bazalgette, <i>Petroleum Development Oman</i>
14.30	North Kuwait Carbonate Fields: Calibrating fracture model permeability and porosity using core and pressure transient analysis data Pascal Richard, <i>Shell Global Solutions BV</i>
14.50	Break
15.20	Reservoir modelling challenges in naturally fractured tight carbonate reservoirs from the Potwar Basin, northern Pakistan S. Ali, <i>Ocean Pakistan Ltd</i>
15.40	An Integrated approach to develop a prospective sub-thrust model in the Sub-Andes, Bolivia, and comparison to analogues in Iraq and Italy Tina Lohr, <i>ERCE on behalf of Echo Energy & Pluspetrol</i>
16.00	Characterization of fractured networks in geothermal reservoirs: from field outcrops to laboratory measurements Catalina Sanchez-Roa, <i>University College London</i>
16.20	An application to field development of permeability conduits characterization and distribution using geological scenario calibrated with pressure transient analysis data - A Brazilian pre-Salt lacustrine carbonate field example Micheli Clavier, <i>Shell E&P</i>
16.40	Old oil discoveries in tight fractured carbonates with limited fracture information: how to build a Discrete Fracture Network Model to help the appraisal strategy Raffaele Di Cuia, <i>Delta Energy Limited</i>
17.00	Discussion
17.20	End of Conference



Poster Programme

The Detection, Classification and Impact of Stylolites and Associated Fractures in Carbonate Reservoirs Alexander Foote, <i>Badley Ashton</i>
High Resolution Mechanical Characterisation of Mudstones: A Comparative Atomic Force Microscopy Study Samuel P. Graham, <i>Newcastle University</i>
Subsurface Fracture Flow Evaluation - A Review Melissa Johansson, <i>Geode-Energy</i>
Storage and Fluid Flow Properties of Outcropping, Fractured Limestones of the Inner Apulian Platform, Southern Italy V. La Bruna, <i>CEREGE-UMR</i>
Practical experiments on modelling the connectivity of fracture networks Oscar Fernandez, <i>Independent Consultant</i>
3D model of a km-scale outcrop analogue of fractured hydrocarbon reservoirs: the Gozo Island Mattia Martinelli, <i>University of Milan</i>
Fracture attribute characterization in outcrop analogues by a combined field and multiscale photogrammetry approach: insights from platform carbonates folded in the Pag anticline, External Dinarides of Croatia Andrea Succo, <i>University of Parma</i>
The influence of structure, stratigraphy and observation-scale on fracture attributes: a case study from Swift Anticline, NW Montana Adam Cawood, <i>University of Aberdeen</i>
Fracture analysis of Qara Chauq outcrops as analogue to support Qara Chauq subsurface model, Zagros Fold and Thrust Belt, Kurdistan Region, Iraq Abdullah Awdal, <i>University of Kurdistan Hewlêr</i>

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