

The top half of the image features a landscape with reddish-brown soil and several large, light-colored rock outcrops. In the background, there is a body of water reflecting the sky. A green geometric pattern of lines and dots is overlaid on the right side of the image. In the top left corner, there is a green rectangular box containing the EAGE logo and its full name.

EAGE

EUROPEAN
ASSOCIATION OF
GEOSCIENTISTS &
ENGINEERS

Sixth EAGE Shale Workshop

29 APRIL - 2 MAY 2019 • BORDEAUX, FRANCE

- **Final Announcement & Programme**

WWW.EAGE.ORG

TECHNICAL COMMITTEE

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Luca Duranti	Chevron ETC
Alessio Ferrari	EPFL
Michael Kendall	University of Bristol
Martin Kennedy	Macquarie University

*Chair

OVERVIEW

The Sixth EAGE Shale Workshop will be held in the picturesque and historic city of Bordeaux from 29 April to 2 May 2019. The event is very much a multi-disciplinary and multi-industry affair, attracting representatives from academia, research institutes and the nuclear, petroleum and water industries.

Multiple industries are impacted by the presence and properties of shales, including the petroleum industry evaluating top seals, wellbore stability and shale reservoirs, as well as the nuclear, water and CO₂ storage industries for barrier sealing, flow and diffusion properties. Understanding how such rocks tick involves a complex multi-disciplinary interplay reaching from the original sedimentary and depositional environment, through compaction, diagenesis and uplift and the impact of these processes on the current properties of a given shale. Such processes govern the initial microstructure of the sediment and how that microstructure evolves in response to changing chemical environments, tectonic and burial stresses. In turn, small scale properties feed into the development of larger scale features such as faults and fractures, damage zones around tunnel excavations, wellbore instability problems while drilling and the development of high subsurface fluid pressures. Evaluating, quantifying and modelling shales thus requires the linking of multiple disciplines including geology, sedimentology, geochemistry, petrology, geophysics, civil engineering, soil mechanics, petrophysics and reservoir engineering just to name a few.

WORKSHOP SPACES

Technical Programme: Paramount/Gaumont Room (1st floor)
Coffee Breaks/Poster Sessions: Pathé/UGC Room (1st floor)
Lunch Break: Kfé Lounge Restaurant (2nd floor)
Networking Reception: Pathé/UGC Room (1st floor)

TECHNICAL PROGRAMME

Sponsored by



Oral Presentations | Monday 29 April 2019

08:00	Registrations & Welcome Coffee
PARAMOUNT/GAUMONT ROOM	
Sedimentology, Deposition and Diagenesis of Shales I	
K. Taylor (University of Manchester), K. Milliken (University of Texas)	
08:30	Keynote Lecture 1 - Large Scale Climate Teleconnections Driving Marine Black Shale Formation Across the Jurassic Boreal Seaway (KFC): A Geochemistry-Modelling Perspective - T. Wagner ^{1*} , E. Atar ² , A. Aplin ² , O. Dellwig ³ , V. Lamoureux-Var ⁴ , T.L. Leith ⁵ , D. Lunt ⁶ , C. März ⁷ , B. Schnetger ⁸ ¹ Heriot-Watt University, ² Durham University, ³ Leibniz-Institute for Baltic Sea Research, ⁴ IFP Energies nouvelles, ⁵ Equinor ASA, ⁶ University of Bristol, ⁷ University of Leeds, ⁸ University of Oldenburg
09:05	Mo SW 01 - Dominance of Wind Blown Minerals in Black Shales, Connecting Continental Climate, Fe Fertilization and Mineral Ballasting - M. Kennedy ^{1*} , L. Mayer ² ¹ Macquarie University, ² Darling Marine Center
09:30	Mo SW 02 - Claystone Porosity and Mechanical Behavior vs. Geologic Burial Stress - R. Ewy ^{1*} ¹ Chevron ETC
09:55	Mo SW 03 - Outcrop to Core Comparison of Natural Fractures in the Vaca Muerta Formation, Argentina - E. Ukar ^{1*} , R.G. Lopez ² , J.F.W. Gale ¹ , R. Manceda ² ¹ The University of Texas at Austin, ² YPF
10:20	Coffee Break / Poster Session 1
Sedimentology, Deposition and Diagenesis of Shales II	
M. Kennedy (Macquarie University), D. Dewhurst (CSIRO)	
10:50	Mo SW 04 - Characterization of Quartz in Wufeng-Longmaxi Shale: Implications for Sedimentology and Shale Gas Exploration - L. Ke ¹ , L. Ganzer ^{1*} , C. Sattler ¹ , W. Xuan ¹ ¹ Technical University of Clausthal
11:15	Mo SW 05 - Early & Late Diagenetic Mineral Development within the Upper Jurassic Haynesville-Bossier Shale, U.S.A. - P. Dowe ^{1*} , K. Taylor ¹ ¹ University of Manchester
11:40	Mo SW 06 - Mineral Diagenetic Control On Hydrocarbon Expulsion in Organic-Rich Mudrocks, Bakken Formation, North Dakota, U.S.A. - K. Milliken ^{1*} , T. Zhang ¹ ¹ Bureau of Economic Geology, University Of Texas
12:05	Discussion
12:30	Lunch Break





Poster Presentations | Monday 29 April 2019

The posters for 29 April will be displayed throughout the day and presented during coffee breaks.

PATHÉ/UGC ROOM

Poster Session 1

Mo P01 - Secular Change in Mineral Composition of A Mesoproterozoic Black Shale Predating the Advent of Terrestrial Life and Soil-Formed Clay Minerals - M. Rafiei^{1*}, M. Kennedy¹
¹Macquarie University

Mo P02 - Cap Rock Evaluation of Central North Sea Shales, Through Log-Derived Poisson's Ratio and Young's Modulus - J.A. Hansen^{1*}, J.R. Johnson¹, N.H. Mondol^{1,2}
¹University of Oslo, ²Norwegian Geotechnical Institute (NGI)

Mo P03 - Silica Diagenesis in the Marcellus Shale: A Trace Element and Hyperspectral Cathodoluminescence Study - C. Delle Piane^{1*}, C. MacRae², N. Wilson², A. Torpy², D. Dewhurst¹
¹CSIRO Energy, ²CSIRO Mineral Resources

Mo P04 - Volcanic and Hydrothermal Signs in the Rocks of Black Shale Formations - A. Gavrilov^{1*}, M. Tugarova¹
¹Gazpromneft NTC Ltd

Mo P05 - Geomechanical Analysis of Maturation for the Draupne Shale, Offshore Norway - J. Johnson^{1*}, J. Hansen¹, F. Renard¹, N. Mondol^{1,2}
¹University of Oslo, ²Norwegian Geotechnical Institute (NGI)

Mo P06 - Detailed Characterization of Namurian Shale in the Campine and Wallonian Basin, Belgium - W. Wei^{1*}, R. Swennen¹
¹KU Leuven

Mo P07 - Characterisation of the Bowland Shale Porosity Using N₂ and CO₂ Adsorption - H. Ansari^{1*}, M. Trusler¹, G. Maitland¹, C. Delle Piane², R. Pini¹
¹Imperial College London, ²CSIRO

Mo P08 - Compaction Trends of Elastic Properties and Permeability in Shales - R. Beloborodov^{1*}, M. Pervukhina², M. Lebedev³
¹CSIRO Deep Earth Imaging Future Science Platform, ²CSIRO Energy, ³Curtin University

Mo P09 - Microstructural Investigation of Mudrock Seals Using Nanometer-Scale Resolution Techniques - A. Rezaeyan^{1*}, V. Pipich², P. Bertier³, T. Seemann⁴, L. Leu⁵, N. Kampman⁶, A. Feoktystov², L. Barnsley², A. Busch¹
¹Heriot-watt University, ²Jülich Centre for Neutron Science, ³RWTH Aachen University, ⁴Ghent University and Belgian Nuclear Research Centre (SCK-CEN), ⁵Imperial College London, ⁶Shell Global Solutions International B.V

Mo P10 - Engineering Parameters of Draupne Shale - Fracture Characterization and Integration with Mechanical Data - H. Smith^{1*}, B. Bohloli², E. Skurtveit^{1,2}, N.H. Mondol^{1,2}
¹University of Oslo, ²Norwegian Geotechnical Institute

Mo P11 - Impact of Mineralogical Composition on Geotechnical Properties of Opalinus Clay - E. Crisci^{1*}, A. Ferrari¹, S. Giger², L. Laloui¹
¹Swiss Federal Institute of Technology, EPFL, ²National Cooperative for the Disposal of Radioactive Waste, Nagra

Mo P13 - Impact of the Degree of Saturation on the Mechanical Behaviour of the Whitby Mudstone - L. Douma^{1*}, J. Dautriat², J. Sarout², D. Dewhurst², A. Barnhoorn¹
¹Delft University of Technology, ²CSIRO Energy

Mo P14 - Geomechanical Characterisation of Posidonia Shale Using Nanomechanical Testing - M. Goodarzi¹, M. Rouainia^{1*}, A. Aplin², P. Cubillas²
¹Newcastle University, ²Durham University

Mo P15 - Integration of Multi-Scale 3D Imaging of Porosity in Shales - K. Taylor^{1*}, L. Ma¹, P. Dowe¹, P. Lee²
¹University of Manchester, ²University College London

Shale Multiphysics I	
C. Delle Piane (CSIRO), R. Ewy (Chevron)	
13:30	Keynote Lecture 2 - Benchmark Study of Undrained Triaxial Testing of Opalinus Clay: Results and Implications for Robust Testing - S.B. Giger ^{1*} , A. Minardi ² , A. Ferrari ² , L. Laloui ² , R.T. Ewy ³ , R. Stankovic ⁴ , J. Stenebråten ⁵ , M. Soldal ⁶ , E. Pimentel ⁷ , H. Baumgartner ⁸ ¹ Nagra, ² Swiss Federal Institute of Technology, EPFL, ³ Chevron Energy Technology Co., ⁴ RSTD Co., ⁵ Sintef Industry, ⁶ Norwegian Geotechnical Institute, ⁷ ETH Institute of Geotechnics, ⁸ Gesteinslabor Dr. Eberhard Jahns
14:05	Mo SW 07 - The Elastic Anisotropy of the Whitby Mudstone Formation at Varying Water Saturations - L. Douma ^{1*} , J. Dautriat ² , J. Sarout ² , D. Dewhurst ² , A. Barnhoorn ¹ ¹ Delft University of Technology, ² CSIRO Energy
14:30	Mo SW 08 - Experimental Assessment of the Impact of Partial Saturation On the Mechanical Properties of Gas Shales - A. Minardi ^{1*} , A. Ferrari ¹ , R. Ewy ² , L. Laloui ¹ ¹ Swiss Federal Institute of Technology EPFL, ² Chevron ETC
14:55	Mo SW 09 - Mineralogy and Mechanical Properties of Mudrocks Before and After Stepwise Ageing in sCO₂ - D. Dewhurst ^{1*} , M. Raven ² , S. Salwani Bt Md Shah ³ , S. Syareena Bt Md Ali ³ , A. Giwelli ¹ , S. Firms ¹ ¹ CSIRO Energy, ² CSIRO Land and Water, ³ Petronas Research Sdn Bhd
15:20	Coffee Break / Poster Session 1
Shale Multiphysics II	
L. Douma (Delft University of Technology), A. Minardi (Swiss Federal Institute of Technology)	
15:40	Mo SW 10 - Measuring the Anisotropic Dynamic and Static Moduli of the Duvernay Shale - L. Shen ¹ , D.R. Schmitt ^{2*} , W. Li ³ , X. Chen ¹ ¹ University of Alberta, ² Purdue University, ³ Southwest Petroleum University
16:05	Mo SW 11 - Assessment of Stress Dependent Elastic and Permeability Anisotropy Using Small Cubic Shale Samples - J. Dautriat ^{1*} , M. Cauchefert ² , Y. Kovalyshen ¹ , J. Sarout ¹ , A. Giwelli ¹ , D. Dewhurst ¹ ¹ CSIRO, ² Curtin University
16:30	Mo SW 12 - Chemo-Mechanical Coupling in Fine-Grained Soils and Sedimentary Rocks - I. Bourg ^{1*} , F. Carrillo ¹ , X. Shen ¹ , T. Underwood ¹ ¹ Princeton University
16:55	Mo SW 13 - Determination of Thermal Conductivity Variations within Oil Shale Reservoirs Using Integration of Thermal Core Logging and Standard Well Logging Data - A. Shakirov ¹ , E. Chekhonin ¹ , E. Popov ¹ , R. Romushkevich ¹ , Y. Popov ^{1*} ¹ Skolkovo Institute of Science and Technology
17:20	Discussion
17:45	Networking Reception
19:30	End of Day 1

Oral Presentations | Tuesday 30 April 2019

PARAMOUNT/GAUMONT ROOM	
Shale Multiphysics III M. Gutierrez (Colorado School of Mines), M. Rouainia (Newcastle University)	
08:30	Tu SW 01 - Estimation of Unconventional Reservoir Matrix Permeability and Pore Volume Using Rate-Transient Analysis Techniques: Method Refinements - C. Clarkson ^{1*} , A. Vahedian ¹ , A. Ghanizadeh ¹ , C. Song ¹ ¹ University of Calgary
08:55	Tu SW 02 - Laboratory Simulation and Numerical Modeling of Hydraulic Fracturing in Shale Gas Reservoirs - I.H. Musa ^{1*} , K.G.E. Teng ¹ , N.M.F. Nik Kamaruddin ¹ , C.P. Tan ¹ , M.F. Che Yusoff ¹ ¹ PETRONAS
09:20	Tu SW 03 - Laboratory- and Simulation-Based CO₂ Storage Resource Estimates for the Bakken Unconventional Tight Oil Formation - J. Sorensen ^{1*} , S. Hawthorne ¹ , N. Azzolina ¹ , B. Kurz ¹ , V. Herdegen ² ¹ Energy & Environmental Research Center, ² Technische Universität Bergakademie Freiberg
09:45	Tu SW 04 - Detailed Profiling Organic Carbon Content of Oil Shales with Thermal Core Logging Technique - E. Popov ¹ , Y. Popov ^{1*} , R. Romushkevich ¹ , M. Spasennykh ¹ , E. Kozlova ¹ ¹ Skolkovo Institute of Science and Technology
10:10	Coffee Break / Poster Session 2
Shale Multiphysics IV J. Harrington (British Geological Survey), I. Bourg (Princeton University)	
10:40	Tu SW 05 - Breakout Stabilization in Shales - Evidence and Imaging from Large Scale Laboratory Simulation - K.G.E. Teng ^{1*} , N.M.F. Nik Kamaruddin ¹ , I.H. Musa ¹ , C.P. Tan ¹ , A. Mohamad Hussein ² , Q. Ni ² , M.M.M.T. Feroz Sultan ¹ ¹ PETRONAS, ² Schlumberger
11:05	Tu SW 06 - Fluid Flow Pathways in Shales: Damage Induced Permeability Change - M. Houben ^{1*} , J. van Eeden ¹ , S. Hangx ¹ ¹ Utrecht University
11:30	Tu SW 07 - Organic Hosted Porosity in the Wufeng-Longmaxi Shale: A Combined Electron Microscopy and Neutron Scattering Approach - C. Delle Piane ^{1*} , H. Ansari ² , W. Rickard ³ , M. Saunders ⁴ , J. Mata ⁵ , D. Dewhurst ¹ ¹ CSIRO Energy, ² Imperial College, ³ Curtin University, ⁴ The University of Western Australia, ⁵ Australian Centre for Neutron Scattering
11:55	Discussion
12:20	Lunch Break
Pore and Microstructure M. Houben (Utrecht University), L. Duranti (Chevron ETC)	
13:20	Tu SW 08 - Quantitative Analysis of the Pore Structure of Premature-To-Postmature Organic Rich Mudrocks Using Small Angle Neutron Scattering - A. Rezaeyan ^{1*} , V. Pipich ² , P. Bertier ³ , T. Seemann ⁴ , L. Leu ⁵ , N. Kampman ⁶ , A. Feoktystov ² , L. Barnsley ² , A. Busch ¹ ¹ Heriot-watt University, ² Jülich Centre for Neutron Science, ³ RWTH Aachen University, ⁴ Ghent University and Belgian Nuclear Research Centre (SCK-CEN), ⁵ Imperial College London, ⁶ Shell Global Solutions International B.V.
13:45	Tu SW 09 - Resolving the Pore Structure and Sorption Properties of Methane in Mudrocks - A Small Angle Neutron Scattering Study - T. Seemann ^{1,2*} , P. Bertier ³ , N. Maes ¹ , A. Rezaeyan ⁴ , V. Pipich ⁵ , L. Barnsley ⁶ , A. Busch ⁴ , V. Cnudde ² ¹ Belgian Nuclear Research Centre (SCK-CEN), ² Ghent University, ³ RWTH-Aachen, ⁴ Heriot-Watt University, ⁵ Jülich Centre for Neutron Science
14:10	Tu SW 10 - SAXS and WAXS Microscopy Applied to Mudrocks: A New Method for Systematic Multiscale Studies of Porosity, Pore Orientation and Mineralogy - L. Leu ^{1,2*} , P. Bertier ³ , A. Georgiadis ^{3,4} , A. Busch ⁵ , A. Diaz ⁷ , J. Klaver ⁸ , J. Schmatz ⁹ , V. Lutz-Bueno ⁷ , J. Ihl ⁷ , H. Ott ⁹ , M. Blunt ⁴ ¹ Stanford University, ² SLAC National Accelerator Laboratory, ³ Shell Global Solutions International B.V., ⁴ Imperial College London, ⁵ RWTH Aachen, ⁶ Heriot-Watt University, ⁷ Paul Scherrer Institut, ⁸ Minerals and Pores GmbH, ⁹ Montanuniversität Leoben

14:35	Tu SW 11 - Improved Visualization of Heterogeneity within Shales: Colour Contoured Maps Constructed from Large Area High-Resolution SEM Montages - J. Buckman ^{1*} ¹ Heriot-Watt University
15:00	Coffee Break / Poster Session 2
Geophysics S. Narongsirikul (ConocoPhillips Norge), M. Kendall (University of Bristol)	
15:20	Keynote Lecture 3 - Ekofisk Time-Lapse Seismic Monitoring of Injection in Shale - S. Narongsirikul ^{1*} ¹ ConocoPhillips Norge
15:55	Tu SW 12 - On the Evidence of Multiscale Anisotropy of Shales - L. Duranti ^{1*} ¹ Chevron
16:20	Tu SW 13 - Insights into Fractures and Fabric of Shales from Microseismicity - A.F. Baird ^{1*} ¹ University of Bristol
16:45	Tu SW 14 - Rapid Workflow for Quantitative Interpretation of Shale Mineralogical Composition From Seismic Data - R. Beloborodov ^{1*} , M. Pervukhina ¹ , J. Hauser ¹ , M. Josh ¹ , V. Shulakova ¹ , D. Chagalov ² , M.B. Clennell ¹ , G. Ward ³ , M. Waugh ³ ¹ CSIRO, ² ExxonMobil, ³ Chevron Australia Pty Ltd
17:10	Discussion
19:00	Workshop Dinner
22:00	End of Day 2

Poster Presentations | Tuesday 30 April 2019

The posters for 30 April will be displayed throughout the day and presented during coffee breaks.

PATHÉ/UGC ROOM	
Poster Session 2	
Tu P01 - Imaging Vaca Muerta Shales in Argentina with Multicomponent High-Density Wide-Azimuth Survey - T. Galikeev ^{1*} , D. Curia ² , T. Davis ³ , I. Korotkov ⁴ ¹ Unified Geosystems LLC, ² Wintershall, ³ Colorado School of Mines, ⁴ Geophysical Data Systems Ltd	
Tu P02 - Improving Anisotropic Velocity Model Calibration in Microseismic Data From the Woodford Shale - P.J. Usher ^{1*} , J. Huang ¹ ¹ ITASCA Consulting Ltd	
Tu P03 - Analysis of Cretaceous Shales in the Rovuma Basin, Offshore Mozambique - O. Nhabanga ^{1*} , P. Ringrose ¹ , R. Holt ¹ ¹ NTNU	
Tu P04 - Characterization of Shale-Gas Reservoir Based on An Anisotropic AVO Inversion and Quantitative Seismic Interpretation - F. Zhang ^{1*} , L. Wang ¹ , X. Li ¹ ¹ China University of Petroleum (Beijing)	
Tu P05 - Time-Lapse Analysis on Repeated Well Logs: A Focus on Shales - A. Jaramillo ^{1*} , M.D. Mangriotis ¹ , C. MacBeth ¹ ¹ Heriot-Watt University	
Tu P06 - AVO Modelling Considering Various Caprock and Reservoir Scenarios for Potential CO₂ Storage in Smeaheie Area, Northern North Sea - M. Fawad ^{1*} , N.H. Mondo ^{1,2} ¹ University of Oslo (UiO), ² Norwegian Geotechnical Institute (NGI)	
Tu P07 - Phase and Group Velocities in TI and ORT Media - A. Stovas ^{1*} ¹ Norwegian University of Science & Technology	
Tu P08 - Synergy to Enhance Stratigraphic Position and Drilling Performance in Vaca Muerta Formation - M. Castello ^{1*} , M. Ribeiro Granato Vieira ¹ , L.B. Torres ¹ ¹ YPF	

Oral Presentations | Wednesday 1 May 2019

PARAMOUNT/GAUMONT ROOM	
Modelling Shales I A. Bauer (AkerBP), C. Clarkson (University of Calgary)	
08:30	Keynote Lecture 4 - Modelling Advective Gas Flow in a Compact Clay: Application and Assessment of Different Numerical Approaches - J. Harrington ^{1*} , E. Tamayo-Mas ¹ , H. Shao ¹ , E.E. Dagher ¹ , J. Lee ¹ , K. Kim ¹ , S.H. Lai ¹ , N. Chittenden ¹ , Y. Wang ¹ , I.P. Damians ¹ , S. Olivella ¹ ¹ British Geological Survey
09:05	We SW 01 - Marine Mudstone Attributes at Core, Well Log and Seismic Scales: Implications for Characterizing Fluid Flow in Thick Subsurface Shale Successions - R. Jonk ^{1*} ¹ ExxonMobil Upstream Research Company
09:30	We SW 02 - Coupled Geomechanics-Fluid Mechanics Phenomena During Injection and Flowback and their Impact on Hydraulic Fracture Conductivity in Shales - A. Osipov ^{1*} , S. Boronin ¹ , I. Garagash ^{1,2} , K. Tolmacheva ¹ ¹ Skoltech, ² Institute of Earth Physics
09:55	We SW 03 - On the Definition of an Effective Stress for Shales - A. Tuttolomondo ^{1*} , A. Ferrari ¹ , L. Laloui ¹ ¹ Swiss Federal Institute of Technology Lausanne (EPFL)
10:20	Coffee Break / Poster Session 3
Modelling Shales II S. Giger (Nagra), A. Ferrari (Swiss Federal Institute of Technology)	
10:50	We SW 04 - Strain-Rate Dependent Pre-Failure, Failure and Post-Failure Behavior of Shale: Experiments and Modeling - M. Gutierrez ^{1*} , Z. Hou ² ¹ Colorado School of Mines, ² Guangzhou Institute of Building Science
11:15	We SW 05 - Novel Finite Element Approach on Evolution and Stabilization of Breakout in Shales - N.M.F. Nik Kamaruddin ^{1*} , K.G.E. Teng ¹ , I.H. Musa ¹ , C.P. Tan ¹ , A. Mohamad Hussein ² , Q. Ni ² , M.M.M.T. Feroz Sultan ¹ ¹ PETRONAS, ² Schlumberger
11:40	We SW 06 - Heating Induced Shale Barriers - A. Bauer ^{1*} , X. Xie ³ , J.F. Stenebråten ² , S. Bakheim ² , A. Lavrov ² , E. Fjær ² , T.G. Kristiansen ¹ ¹ AkerBP, ² SINTEF, ³ NTNU
12:05	Discussion
12:20	Lunch Break
Shale Chemistry A. Busch (Heriot-Watt University), P. Bertier (Aachen University)	
13:30	We SW 07 - Hydration State and Interlayer Cation Type (Ca²⁺, Na⁺) Control CO₂ Sorption Behavior of SWy-2 Montmorillonite - R. Fink ^{1*} , P. Bertier ¹ , B. Krooss ¹ , P. Weniger ³ ¹ RWTH Aachen University, ² Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)
14:20	We SW 09 - Organic Matter of Bazhenov Formation: Chemical and Isotope Composition, Microstructure, Thermal Maturation, Generation Potential and the Effect on Rock Properties - M. Spasennykh ^{1*} , A. Voropaev ² , E. Kozlova ¹ , E. Leushina ¹ , V. Polyakov ³ , A. Vasiliev ⁴ , N. Bogdanovich ¹ , Y. Popov ¹ , A. Maximov ⁵ ¹ Skolkovo Institute of Science and Technology (Skoltech), ² HYDROISOTOP GmbH, ³ Institute of Experimental Mineralogy, Russian Academy of Sciences, ⁴ National Research Center "Kurchatov Institute", ⁵ A.V. Topchiev Institute of Petrochemical Synthesis, Russian Academy of Sciences
14:45	We SW 10 - Is the Uranium Content in Black Shale a Suitable Parameter to Assess the Alteration of Organic Matter and Petroleum Potential? - H. Schulz ^{1*} ¹ GFZ German Research Centre for Geosciences
15:10	We SW 11 - Origins of Shale Gases Based on Revised Gas Genetic Diagrams - A.V. Milkov ^{1*} , G. Etiope ² ¹ Colorado School of Mines, ² Istituto Nazionale di Geofisica e Vulcanologia
15:35	Coffee Break / Poster Session 3

15:55	Discussion
Keynote Session D. Dewhurst (CSIRO), L. Duranti (Chevron ETC)	
16:05	Keynote Lecture 5 - Borehole Imaging of Natural Fractures and Stress Indicators in the Jurassic Carbonate Shale Plays, Eastern Saudi Arabia - M.S. Ameen ^{1*} ¹ Saudi Aramco
16:40	Keynote Lecture 6 - Polygonal Faults and Seal Integrity - J. Cartwright ^{1*} ¹ University of Oxford
17:15	Closing address
17:25	End of Workshop

Poster Presentations | Wednesday 1 May 2019

The posters for 1 May will be displayed throughout the day and presented during coffee breaks.

PATHÉ/UGC ROOM	
Poster Session 3	
We P01 - Effect of the Orientation of Beddings on the Distribution of Stress around the Borehole in Anisotropic Shale Formation - W. Li ^{1*} , D. Schmitt ² ¹ Southwest Petroleum University, ² Purdue University	
We P02 - Forward Modeling of Evolution of Shale Properties in Geological Time - I. Bekkevold ^{1*} , T. Petersen ¹ ¹ DTU Civil Engineering	
We P03 - From Outcrop to Reservoir, a Comprehensive Description to Lower Silurian Longmaxi Shale in Sichuan Basin, China - C. Jia ^{1*} , J. Guo ¹ , D. He ¹ , H. Tang ¹ ¹ Petrochina Research Institute of Petroleum Exploration & Development	
We P04 - Domanik of the Russian Timan-Pechora Province - Structure and Development Prospects - E. Grokhov ^{1*} , O. Prischepa ^{1,2} ¹ All-Russia Petroleum Research Exploration Institute (VNIIGRI), ² Saint Petersburg Mining University	
We P05 - Shale Characteristics in Sibuti and Setup Formations, Sarawak Basin, Malaysia - A. Suwannathong ^{1*} , D. Stow ¹ , J. Ma ¹ ¹ Heriot-Watt University	
We P07 - Characterization of the Organic Matter in the Bazhenov Formation Deposits From Northern and Central Parts of Western Siberia - E. Leushina ^{1*} , E. Kozlova ¹ , A. Voropaev ² , A. Yurchenko ^{1,3} , N. Bogdanovich ¹ , M. Spasennykh ¹ ¹ Skolkovo Institute of Science and Technology (Skoltech), ² HYDROISOTOP GmbH, ³ Lomonosov Moscow State University	
We P08 - Novel Method for SHmax Estimation in Naturally Fractured Formations with Application in Montney Shale Gas - J. Leem ^{1*} , S.S. M Ali ¹ , C.P. Tan ¹ , B.P. Kantaatmadja ¹ , M.F. Che Yusoff ¹ , Z.M. Zain ¹ ¹ Petronas Research Sdn. Bhd.	

REGISTRATION FEES

REGISTERED AND PAID	UNTIL 22 APRIL	FROM 23 APRIL - ON-SITE
EAGE member	€ 695	€ 795
Non-member	€ 795	€ 895
EAGE student member	€ 395	€ 395
Student non-member	€ 420	€ 420

- All fees are in EUR(€). One Euro of your total registration fee is donated to the EAGE Green Fund.
- All Fees includes the Full Workshop package with Networking Reception and Workshop Dinner.
- EAGE Members: To qualify for the EAGE member registration fee, your EAGE membership fees for 2019 must have been paid and confirmed. The processing time for membership applications or renewals is 10 working days. EAGE membership runs from January through December. Membership applications or renewals received in October, November and December will automatically be considered for the next calendar year and activated (or reactivated) on 1 January.
- EAGE Non Members: The non-member fee includes EAGE membership for 2019.
- EAGE Students: To qualify for the reduced student registration fee:
 - Students must be enrolled in a full time study programme at a recognized university or institute.
 - The registration must be accompanied by a copy of a student ID card and/or official proof of enrolment.
 - Please note: Student non-members cannot be older than 34 years of age (when registering).

FIELD TRIP

Geology & Bordeaux Wines

Where: AOC Margaux and Saint Estèphe

When: 2 May 2019 - 7:30 - 19:00

Maximum of 50 participants

Registration deadline: 31 March 2019

EAGE offers you the opportunity to see the impact of geology on the character of the wine while you experience wine-tastings in two different Châteaux in France (Château des Gravieres in Margaux and Château Phélan Ségur in Saint-Estèphe).

This field trip includes the travel by coach, lunch and wine tastings. To register for this one-day field trip please send us an email after registering to the Shale Workshop. For more information visit the event website via events.eage.org.

IMPORTANT DATES

Late Registration Deadline	22 April 2019
Networking Reception	29 April 2019
Workshop Dinner	30 April 2019
Sixth EAGE Shale Workshop	29 April – 1 May 2019
One-day field trip	2 May 2019

VENUE

Mercure Bordeaux Centre Hotel

5 rue Robert Lateulade

33000 Bordeaux

France

SPONSORING

The Sixth EAGE Shale Workshop offers excellent sponsoring opportunities to create high visibility. For more information about sponsoring, please refer to the sponsor guide that is available on the event website or contact us at corporaterelations@eage.org

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CONTACT

The Sixth EAGE Shale Workshop is organized by the EAGE Europe Office. For enquiries please contact the EAGE Europe office at +31 889955055 or email eage.events@eage.org

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