

6th EAGE Borehole Geology Workshop

Montpellier, France
21-24 September 2025

ISBN: 979-8-3313-3806-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2025) by the European Association of Geoscientists & Engineers (EAGE)
All rights reserved.

Printed with permission by Curran Associates, Inc. (2026)

For permission requests, please contact by the European Association of Geoscientists & Engineers (EAGE)
at the address below.

European Association of Geoscientists & Engineers (EAGE)
PO Box 59
3990 DB Houten
The Netherlands

Phone: +31 88 995 5055
Fax: +31 30 634 3524

eage@eage.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Hydrocarbon Prospectivity Within the Interval “A” of the Villeta Formation in the Putumayo Foreland Basin.....	1
<i>M. Alaimo</i>	
Topology-Based Hydraulic Connectivity & Fracture Permeability by using Borehole Image Logs.....	4
<i>A. Petrik, C. Vahle, I. P. Gianotten, L. I. Trøan, L. Roho, K. Galbraith</i>	
Application of Image-Logs to Tidal Ridges in the Offshore Cook Formation (E. Jurassic) North Sea.	7
<i>A. Folkestad, Z. Veselovsky</i>	
Integrated 3D Petrographic and Petrophysical Insights into the Permian Amb Formation, Pakistan.	10
<i>M. Ghani, I. U. Jan</i>	
Integration of Borehole Images and Core for Depositional Environment and Sequence Stratigraphy: Case-Study from Southern Iraq	14
<i>W. An, F. Yongjun, X. Nie, G. Sultan, A. El Araby, A. Selmy, A. Shabeeb, W. Elward</i>	
Utilizing Borehole Images for High-Resolution Static Modeling of Thin-Layered Reservoirs. In North Western Desert, Egypt.....	20
<i>M. Ghanim, A. El Araby, H. Salah</i>	
Geomechanics Study and Laboratory Testing for Time-Dependent Borehole Analysis in Cisubuh Formation, Well ABC-025, Indonesia	23
<i>R. W. Nurcahyo, A. Restyanto, D. A. Wahyudi, B. Biondi, A. Endartyanto</i>	
Sedimentology of a Visean Fluvio-Deltaic System Through Integration of BHI and Core, Dnipro-Donetsk Basin.....	28
<i>S. Burns, J. Cater, M. Looser, S. Iareshchenko, I. Solodkyi</i>	
Integration of Advanced Logging Evaluation Techniques Proves Additional Reserves from Thin Bed, Low Resistivity Pay Formations	31
<i>M. Rashaid</i>	
Borehole-Based Seismic Attenuation Analysis in Carbonate Reservoirs	34
<i>F. Bouchaala, M. Ali, J. Matsushima</i>	
An Integrated Approach to the Characterization of Complex Fault Zones in Fractured Siliciclastic Reservoirs.....	37
<i>R. Berto, M. T. Galli, F. La Valle, A. Fasto, V. Napolitano, F. Chinellato, A. Guglielmelli</i>	
Holistic Image-Based Approach to Overcome Data Limitations in Building Robust Petrophysical Models of Low Contrast Pays	42
<i>M. T. Galli, R. Berto, M. G. Grandis</i>	
Leveraging Large Language Models to Extract Lithostratigraphic Properties from Well Reports.....	47
<i>S. Ouzineb, S. Włodarczyk, H. Beurdouche, S. Salimath, Z. Zhou, P. Malige, X. Chang</i>	
Petrophysical Characterization of Heterogeneous Carbonate Reservoirs for Geological Modeling – The Case of Buzios Field, Brazil.....	50
<i>W. Bohn, J. P. Da Fonseca, V. Dutra, A. R. Alves, F. A. Brazil, L. De Souza, G. Fernandes, J. Guerrero, S. Pedrinha</i>	

Assessing the Impact of Parameter Interdependence on Wellbore Stability Analysis and Strategic Decisions	53
<i>M. Al-Sharea</i>	
Machine Learning Powered Approach for Sonic Slowness Extraction and Interpretation	58
<i>N. Mukherjee, D. Konwar, R. Patro, C. Chatterjee</i>	
Adaptive Multidimensional and Multiresolution Inversion of Borehole Ultra-Deep Azimuthal Resistivity Measurements for 3D Imaging and Geosteering	62
<i>N. Jahani, W. Saputra, C. Torres-Verdin, E. R. Fjeldberg</i>	
Automated Mineralogy and Effective Diffusivity Prediction from Drill Core Images using Computer Vision and Deep Learning	67
<i>R. Boiger, S. V. Churakov, G. Kosakowski, R. Wüst, N. I. Prasianakis</i>	
Time Dependent Three-Dimensional Break Out Morphology Development using Multi-Physics BHI Data, Breidablikk Field F. Bender	71
<i>F. Bender, A. S. Adedamola, B. I. Torgersen, M. Horstmann, C. Shrivastava</i>	
Loss Zone Characterization Based on Fracture Aperture Modelling using High Resolution BHI Data, Grane Field	74
<i>N. Ritzmann, F. Bender, S. R. Nunez, B. I. Torgersen</i>	
Enhancing ML-Based Reservoir Characterisation with Large Language Models: A Multi-Agent RAG Workflow for Improved Sedimentological Prediction	77
<i>M. A. Seksaf, D. Clay, B. Kostic, R. Smith, D. Charlaftis</i>	
Enhancement of Wellbore Modelling using High-Resolution Images.....	81
<i>C. Chatterjee, I. Basu</i>	
Comprehensive Geophysical Evaluation of Geothermal Potential in the Sandstone Reservoir, Netherlands.....	85
<i>I. Wu, S. Parashar, H. Mora, A. Janszen, M. Kowloski</i>	
A Semi-Supervised Approach for Borehole Image Log Structures Segmentation for Small Labeled Datasets	88
<i>A. Í. Da Cunha, G. B. Dos Anjos, R. Nascimento, C. M. De Jesus, J. J. H. Jauregui</i>	
The Future of LWD Borehole Imaging: High-Resolution Ultrasonic Images in Real Time	93
<i>D. M. C. Barrios, P. Caldas, S. Carrilero, S. Ahmad, J. A. Herrera</i>	
Computer Vision and Digital Processing Techniques for the Concurrent Removal of Artifacts in Acoustic Image Logs.....	96
<i>D. Medeiros, G. De Medeiros, M. Jacinto, T. Rodrigues, L. Montalvão, R. V. De Almeida</i>	
Fossil Ferricrete Making a Reservoir Invisible	99
<i>O. Tjugen</i>	
Use of Density Caliper Image to Improve Swellpacker Placement and Assessment.....	103
<i>O. Tjugen</i>	
Enhancing Permeability Evaluation in Laterally Heterogeneous Carbonate Reservoirs using Logging-While-Drilling Laterolog Resistivity Tool	107
<i>S. Al Sawafi</i>	

Validity of Depositional Interpretation from Borehole Image Without Integration of Core: A Case Study from Kuwait	110
<i>N. Foote, B. Kostic, M. Bertouche, L. Hayat, M. Helmy</i>	
Feasibility Analysis and Formation Evaluation for Converting Depleted Hydrocarbon Fields to Geothermal Energy Production	113
<i>J. Bynum, C. Wethington</i>	
Leveraging Geosteering and Dipole Sonic to Maximize Production of Horizontal Well Fracturing.	116
<i>K. Adisornsupawat</i>	
One Man's Noise is Another Man's Signal: Semblance Monitoring for Safe Drilling and Drilling Risk Detectionbe	120
<i>P. Nivlet, R. M. Elde, Y. Bityaltseva</i>	
Assessment of LWD Ultrasonic Images for Sedimentary Interpretation: Opportunities and Limitations.....	123
<i>H. Manchanda, C. Shrivastava, S. Bhadra, S. Das</i>	
Predicting Fluid Production Rates in Tight Carbonates: How Ensemble Learning Links Static and Dynamic Data.....	126
<i>E. Lauria, M. Pirrone, R. Berto, M. Pelorosso</i>	
Using Downhole Logging Data and Core Physical Properties to Characterise the Chicxulub Impact Craterbe	131
<i>E. Le Ber, J. Lofi, G. Lods, D. Loggia, L. Brun, G. Henry</i>	
Initial Results of Unique At-Bit Imaging Technology Examples from Middle East Carbonates	134
<i>R. Berto, D. Reolon, M. Pelorosso, C. Shrivastava</i>	
Leveraging Regeneration Learning for Improved Acoustic Image Log Quality Assessment.....	139
<i>R. A. Frota, C. M. De Jesus, G. A. Barreto, M. M. B. R. Vellasco</i>	
Insights from Streamline Flow Simulation of a Faulted Region	144
<i>M. K. Qureshi, S. S. Ali, M. M. Al-Fahmi, E. A. Cerda</i>	
Assessment of Directional Drilling Artefacts with Ultrasonic Images While Drilling	147
<i>J. Mather, F. Van Vliet, J. Domenc, W. Chow, V. Li, Q. Li, C. Shrivastava</i>	
Expanding Borehole Image Interpretation Beyond the Wellbore: Examples of Integration Between Wells and with Other Data.....	153
<i>B. Callaghan</i>	
An Overview of Géosciences Montpellier's Wireline Logging Capabilities.....	156
<i>E. Le Ber, J. Lofi, G. Lods, G. Henry, L. Brun, S. Barry, P. Pezard</i>	
Integrated True Color Borehole Image: Finding Formation Property Changes Within the Image	159
<i>C. Morelli, S. Di Santo, K. Moe, Y. Yamada, C. Shrivastava</i>	
Enabling Geosteering Process Automation for Accurate and Efficient Well Placement	164
<i>M. Fouda, A. Taher, E. Bikchandaev</i>	
Deciphering Structural Controls in Complex Clastic Reservoirs in Real-Time with Time-Lapse Multi-Physics Borehole Imaging While Drilling a Horizontal Well.....	169
<i>D. Halverson, R. Ansari, J. Bergeron, E. Soza, C. Shrivastava, A. Elekwachi, S. Das, J. Seitz</i>	

Addressing the Challenge of Low UCS Core Acquisition using Novel PSWC Technology and Digital Rock Physics	174
<i>D. Saucier, D. Lakshtanov, Y. Zapata, J. Cook, R. Eve, N. Lane, G. Gettemy, K. Sincock, I. Draper, T. Gill</i>	
Integrated Borehole Image and Rotary Sidewall Core Characterisation of the Palaeocene-Eocene Deepwater Sele Formation, Capercaillie Field.....	178
<i>M. Bertouche, A. James, D. Payne, M. Bertouche, M. Ashton, N. Van Den Beukel, D. Storer</i>	
Uncovering the Unseen: Integrating Deformation Detection Technologies	181
<i>M. Mergany, Y. I. Ramadhan, M. Alfahmi</i>	

Author Index