

# **Second EAGE Workshop on Pore Pressure Prediction 2019**

Amsterdam, The Netherlands  
19 - 21 May 2019

ISBN: 978-1-5108-8667-4

**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© (2019) by the European Association of Geoscientists & Engineers (EAGE)  
All rights reserved.

Printed by Curran Associates, Inc. (2019)

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](mailto: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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## TABLE OF CONTENTS

<b>Pore Pressure Uncertainty, Practices and Pragmatism for Well Planning.....</b>	1
<i>P. Rouillé, T. Harrold, S. Martinez, G. Saceda, J.M. Jimenez</i>	
<b>Holistic Geomechanical Approach to Analyze Pressure State of Complex Salt-Anhydrite Sequence: Improving Drilling Operations &amp; Efficiency.....</b>	5
<i>A. Shinde, S. Perumalla, S. Bordoloi, A. Ghosh, S. Imtiaz, H. Singh, A. Ghadimipour, P. Chakrabarti, S. Benmamar, S. Saha, D. Upadhyay, T. Podder, S. Mitra</i>	
<b>Pore Pressure Predictions in Ultra-Deepwaters of Sergipe Sub-Basin, NE Brazil.....</b>	8
<i>C. Cuartas, A. Barbosa, H.E. Martínez Carvajal, A.F. Do Nascimento, F.L.D. Santana</i>	
<b>Overpressure Mechanisms and Lateral Fluid Flow in the Taranaki Basin, New Zealand.....</b>	13
<i>S. O'Neill, S. Jones, P. Kamp</i>	
<b>Geological Interpretations of Vertical Effective Stress-Compressional Sonic Transit Time Cross-plots for Pore Pressure Prediction.....</b>	18
<i>D. Tassone</i>	
<b>The Application of Double Normal Compaction Trend to Improve Overpressure Estimation in the East Java Basin .....</b>	22
<i>A. Ramdhani, T. Atarita, G. Titaley, A. Ardjuna, L. Hutsooit</i>	
<b>Pressure, Seals and Traps: the Bases for the Petroleum System to Work Efficiently.....</b>	26
<i>J. Biteau</i>	
<b>Challenges of Pore Pressure Prediction for Unconventional Reservoirs in Active Operational Settings.....</b>	29
<i>I. Eggenkamp, A. Summitt</i>	
<b>Impact of Geological Model Uncertainties on Pore Pressure Prediction: A GOM Case Study .....</b>	33
<i>A. Isiakpere, M.B. Skaug, L. Sirgue, B. Benazet, A. Chiappero</i>	
<b>Impact of Geologic Description on Pore Pressure and Well Design .....</b>	36
<i>J. Villinski</i>	
<b>Quantification of Uncertainties in Pore Pressure Prediction: Is there any one Best Practice?.....</b>	39
<i>S. Bordoloi</i>	
<b>Pore-pressure Prediction Using Multiresolution Analysis .....</b>	43
<i>H. Al Salmi</i>	
<b>Dealing with the Uncertainty in the Prediction of Fracture Gradient .....</b>	48
<i>K. Su, A. Onaisi</i>	
<b>Determination of the Fracture Pressure from CO<sub>2</sub> Injection History .....</b>	55
<i>B. Bohloli, L. Grande</i>	
<b>Reducing Uncertainty in Overpressure Prediction in the Norwegian Barents Sea .....</b>	59
<i>G. Markham, S. O'Connor, P. Milstead, H. Rasmussen</i>	
<b>Alternate Ways to Determine Pore Pressure Information: A Multi-Pronged Approach Enhances Conventional Real-Time Techniques .....</b>	64
<i>M. Blyth, N. Patel</i>	
<b>Managed Pressure Drilling for Pore Pressure Detection, Two Case Studies.....</b>	68
<i>J.M. Jimenez, T. Harrold, P. Rouillé, G. Saceda</i>	
<b>Managed Pressure Drilling (MPD) – A Help or Hindrance for Real-time Pressure Detection in Exploration Wells? .....</b>	72
<i>T. In 't Veld-Brown, S. Petmecky, B. Wagner</i>	
<b>PP Follow-up While Drilling: Seeking a Pressure Transition Zone in a Back Arc Basin.....</b>	74
<i>A. Isiakpere, M. Dougherty, B. Benazet</i>	
<b>Integrating Geomechanics and Geochemistry to Quickly Estimate Pore Pressure near Salt Diapirs .....</b>	78
<i>F. Ferrari, A. Consonni, E. Previde Massara, P. Tempone</i>	
<b>Evidence of Extreme Overpressure Generated by Source Rock Maturation: Case Study, Deep-Offshore GOM, USA .....</b>	82
<i>F. Poeymarie, T. Rives</i>	
<b>Pore Pressure at the Post-Salt Albion Carbonates in Santos and Campos Basins .....</b>	85
<i>J.G. Carvalho, M.G.D.S. Araujo, F.G.D. Silva, M.B. Silka, H.E.E. Perez, M.V.S. Tavares, N.K. Azambuja, R.D.S. Moura, J.R.B.D. Moura, J.T.R.D. Freitas, M. Domingues, A. Moraes</i>	
<b>Integrated Pore Pressure Prediction with 3D Basin Modeling .....</b>	90
<i>Z. Nagy, M.K. Baracza, N.P. Szabo</i>	
<b>Pore Pressure Prediction in HPHT Wells.....</b>	95
<i>Y. Gorbunov</i>	

<b>Minimum Stress Trends in Stacked Mass Transport Deposits, Deepwater Guyana .....</b>	99
<i>T. Fitts, S. Hoffmann, S. Karner, M. Sundberg</i>	
<b>PPFG Prediction in Complex Tectonic Settings: The North Alpine Thrust Front and Foreland Basin, SE Germany .....</b>	104
<i>M. Drews, H. Stollhofen</i>	
<b>Identification of Two Loading Trends in Offshore Nile Delta, and the Implication on Pore Pressure Risking.....</b>	109
<i>T. Sinclair</i>	
<b>FES Pressure Prediction Workflow Coupling Velocities with Geomechanical Modeling .....</b>	113
<i>M. Nikolinakou, M. Heidari, P. Flemings, A. Bere, J. Kato</i>	
<b>From Well to Basin Scale Pore Pressure Prediction - Using the Full Potential of Seismic Velocities.....</b>	117
<i>A. Isiakpere, M. Juilla, L. Sirgue, B. Benazet</i>	
<b>3D Pore Pressure and Geomechanics: Work Smarter and Faster Integrating Geoscience with Machine Learning.....</b>	122
<i>S. Green, E. Zabihi Naeini</i>	
<b>2D vs 3D Geomechanical Modelling Comparison to Influence Pore Pressure and Fracture Gradient Analysis.....</b>	127
<i>J.J. Van der Linden d'Hooghvorst Rodríguez, T.W.D. Harrold, M.A. Nikolinakou, O. Fernández Bellón, P. Hernández Jiménez, A. Marcuello Pascual</i>	
<b>RhoVe T Method Empirical Velocity-Density-Temperature-Effective Stress Transform .....</b>	131
<i>M. Czerniak</i>	
<b>Uncertainty Modelling of Minimum Horizontal Stresses and Porepressures in Deeply Buried Grabens. What's Next in Modelling? .....</b>	136
<i>A.E. Lothe, A. Grover, O. Roli, G. Leirdal, T. Golder Kristiansen</i>	
<b>Author Index</b>	