# Geopressure 2021: Managing uncertainty in geopressure by integrating geoscience and engineering

23-25 March 2021  
Virtual Conference, Zoom, GMT

## CONFERENCE PROGRAMME

### Day One

<table>
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<tr>
<th>Time</th>
<th>Session One: GeoPressure history and challenges</th>
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| 10.10  | Tracing the history of geopressure and its prediction  
Richard Swarbrick, *Swarbrick GeoPressure Consultancy Limited* |
| 10.30  | Origin of Overpressure in Offshore Suriname and Implications for Pore Pressure Prediction  
Mark Tingay, *Petronas* |
| 10.50  | Calculating loading and unloading contributions to overpressure by applying effective stress-velocity relation: the case study of Pekawai area, southern edge of Kutai Basin  
Agus M. Ramdhan, *Department of Geology, Institut Teknologi Bandung, Indonesia* |

| 11.10  | Discussion |
| 11.20  | BREAK |

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<th>Time</th>
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| 11.30  | Integrated coupled workflow for drilling mechanics derived pore pressure and geomechanical predictions  
W.A.H. Lekens, *Geoprovider AS* |
| 11.50  | 3D PP and Geomechanics: Work Smarter and Faster Integrating Geoscience with Machine Learning  
Sam Green, *Ikon Science* |

| 12.10  | Pore Pressure Prediction as an Integrated Cross Discipline Approach in Green Field Exploration: 1) Assessing all Scenarios  
Yury Gorbunov, *Shell*  
Pore Pressure Prediction as an Integrated Cross Discipline Approach in Green Field Exploration: 2) Rock Property Modelling for Pore Pressure Prediction and Basin Modelling  
Ruarri J. Day-Stirrat, *Shell* |
| 12.40  | Discussion |
| 12.50  | BREAK |

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<tr>
<td>14.30</td>
<td>Dealing with pore pressure in complex stress regimes</td>
<td>Federica Ferrari, Eni</td>
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<td>14.50</td>
<td>The Value of Downhole Temperature Response for the Early Kick and Thief Zones Detection in HPHT Naturally Fractured Carbonates Reservoirs</td>
<td>Juan Almeida, Baker Hughes</td>
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<td>15.10</td>
<td>Getting more value &amp; understanding from mud hydrostatic pressures for well execution</td>
<td>Toby Harrold, Repsol</td>
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<td>15.30</td>
<td>Jasmine: The challenges of unlocking infill wells in a variably depleted HPHT field</td>
<td>Brian MacLeod, Chrysao</td>
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**Day Two**

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<td>10.10</td>
<td>Evidence of pre-salt pressure recharge from fluid escape features</td>
<td>Christopher Kirkham, University of Oxford</td>
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<td>10.30</td>
<td>Overpressure in The Baram Delta Requires Practical Solutions for Well Design and Drilling</td>
<td>Ismatul Hani Shada Bt. Idris, Geomechanics and Pore Pressure Group, EGRS, PETRONAS Upstream</td>
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<td>10.50</td>
<td>Impact of tectonic uplift-erosion on geopressures: an example from Andaman sea</td>
<td>Oliver Chai, Total</td>
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<td>Session Four: Energy Transition</td>
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<td>11.30</td>
<td>TBC - CCS and Net Zero at Teesside</td>
<td>Louise Duffy</td>
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<td>Primary and secondary overpressure generation mechanisms in the North Alpine Foreland Basin, SE Germany</td>
<td>Michael C. Drews, Technical University Munich</td>
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<td>TBC - United Downs Geothermal</td>
<td>Lucy Cotton</td>
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<td>Session Five: Uncertainty</td>
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<td>Overpressure development and uncertainty analysis on Western Mediterranean evaporites</td>
<td>Michael Stanley Dale, National Oceanographic Centre</td>
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13.20  Flash Talks & Discussion

14.20  BREAK  
Session Six: Case Studies 2

14.30  Sub-salt Pore Pressure Modeling from Basin-Scale Plumbing and Sealing Elements  
Matt Legg, Shell

14.50  Mechanisms generating fluid overpressure at the trench of subduction zones  
M.A. Nikolinakou, The University of Texas at Austin

15.10  Case study on the Tubular Bells -Kodiak basin Miocene sediments with learnings from  
the recently drilled Esox and Oldfield wells  
Matthew Reilly, Hess

15.30  Pressure Prediction in Unloaded (Unconventional) Basins. Case Study: Delaware Basin  
Landon Lockhart, The University of Texas at Austin

15.50  Discussion

End of day Two

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Day Three

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| 10.10 | Session Seven: Reservoir quality and pressure | Reservoir Quality in Overpressured Submarine Fan Systems of NW Borneo Deepwater Fold-Thrust Belt  
Sudirman Dawing, Durham University |
| 10.30 | Session Eight: Operations | Influence of Pore Pressure and Effective Stress on Quartz Cementation in Sandstones: Evidence from North Sea Fulmar and Gulf of Mexico Wilcox Sandstones  
Olakunle J. Oye, Durham University |
| 10.50 | Session Eight: Operations | Managing Pressure Uncertainty – Effect on Well Planning, Design and Drilling  
Folake Odesanya, Woodside |
| 11.10 | Session Eight: Operations continued | Discussion |
| 11.20 | BREAK | Session Eight: Operations continued |
| 11.30 | Session Eight: Operations continued | Gas Response and Overpressure Magnitude in Tight Formations: Elgin-Franklin Experience  
Gareth S. Yardley, Total  
Overburden Pressure Data Interpretation of the Elgin-Franklin Cluster, Central North Sea  
Leon Baren, Total |
| 12.00 | Session Eight: Operations continued | Geomechanics Challenges and Lessons from Planning and Drilling High Angle Wells  
Alexandre R. Saré, BP |
| 12.20 | Session Eight: Operations continued | Pore and Fracture Pressure Results of High Pressure Drilling Campaign in Niger Delta  
Raghu K. Chanduru, Shell |

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| 14.30  | A Discussion of Accuracy and Uncertainty in Pore Pressure, In Situ Stress and Fracture Gradient Estimation during Exploration and Production  
Tony Addis, Addis & Yassir FZ LLC |
| 14.50  | Compaction and Pore Pressure Prediction in Different Tectonic Environments  
Peter Flemings, The Jackson School of Geosciences at the University of Texas |
| 15.10  | Overpressure at the Macondo Well and its impact on the Deepwater Horizon blowout  
F. William M. Pinkton (Peter Flemings presenting), University of Texas at Austin |
| 15.30  | Discussion                                                              |
|        | End of conference                                                      |

**Flash talks**

- **Case study exploration well with steep pressure ramp/narrow operating MW-window: RT-PP interpretation, verify pre-drill model with observations from execution phase**  
Oliver Knoop, OMV E&P

- **Is it useful to estimate hydrocarbon column heights from seal capacity?**  
Richard Swarbrick, University of Durham and Swarbrick GeoPressure

- **Detection of overpressure in Tertiary sediments of Panna, western India – Study from offshore exploratory wells**  
Souvik Sen, Geologix Limited, Mumbai

- **Reducing Uncertainty in Overpressure Prediction in the Norwegian Barents Sea**  
Guy Markham, Markham Geopressure Services

- **Enhanced pore pressure prediction**  
Glyn Richards, Rockfield

- **Managing uncertainty in pore pressure prediction**  
Giulia Gallino, Eni

- **The effect of an unpredicted high pore pressure ramp on wellbore instability of an appraisal well. A case study from offshore Niger Delta.**  
Nader Fardin, PetroVision Energy Services

- **Pliocene-Pleistocene depressurization in North West Fold Belt, Papua Basin, implications to pore pressure compartmentalization and hydrocarbon accumulations**  
Binh Nguyen, JX Nippon

- **Recognising the importance of quantifying and correcting for Total Organic Carbon (TOC) to reduce uncertainty in pore pressure prediction**  
Sam Green, Ikon Science

- **An approach to understand seismic amplitude response to overpressure in deeper plays using end-member shale property substitution at shallow targets: A case study**  
Ogagarue, Difference Odeyovwi, Federal University of Petroleum Resources Effurun, Nigeria

- **Analysis of the California oil and gas idle well database**
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<tr>
<td>David H. Shimabukuro, California State University</td>
<td><strong>A Review of Industry Best Practice in Real-Time Pore Pressure Analysis</strong></td>
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<td>Mark Tingay, Petronas</td>
<td><strong>Integration of Basin Modelling, Drilling Events Based Interpretations, Well-Logging, and direct reservoir measurements for Analysis of overpressure and its generating mechanisms; A Case Study from the Gulf of Suez Basin</strong></td>
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<tr>
<td>Radwan, A. E., Gulf of Suez Petroleum Company</td>
<td><strong>Know More about the Unknowns by Integrating Pore Pressure Inputs for Exploration Derisking</strong></td>
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<tr>
<td>Sanjeev Bordoloi, Baker Hughes</td>
<td><strong>Integrated Pore Pressure Prediction in Complex Geological Settings</strong></td>
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<td>Ittikhar Ahmed Satti, University of Azad Jammu and Kashmir, Muzaffarabad, Pakistan</td>
<td><strong>Capillary capacity estimation of mudrocks in exploration: Empirical workflow and validation using a case study</strong></td>
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<td>Sara Martinez, Repsol</td>
<td><strong>The Contribution of Thermophysical Parameter as an Agent for Determine the Accurate Overpressure Mechanism. Case Study: West Baram Delta and Malay Basin Malaysia</strong></td>
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<td>Kurniawan Adha, Universiti Teknologi Petronas</td>
<td><strong>Coupling Seismic Pore Pressure Prediction with Geomechanical Modeling</strong></td>
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<tr>
<td>Maria A. Nikolinakou, The University of Texas at Austin</td>
<td><strong>The Effect of Stress and Lithology on Mudrock Compaction and Lateral Stress Ratio</strong></td>
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<td>Mark Zablocki, Tufts University, UT GeoFluids</td>
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