Third EAGE/SBGF Workshop 2016

Quantitative Seismic Interpretation of Lacustrine Carbonates
Interdisciplinary lessons, challenges and perspectives of pre-salt reservoirs

6-7 April 2016
Rio de Janeiro, Brazil
Workshop Overview

After the very successful workshops in 2013 and 2014, EAGE and SBGF (the Brazilian Geophysical Society) are joining forces again, and would like to invite you to the third joint workshop which will take place from 6-7 April 2016 in Rio de Janeiro, Brazil.

The workshop will focus on Quantitative Seismic Interpretation of Lacustrine Carbonates. Carbonate rocks are generally considered to be complex, highly heterogeneous, and as a result difficult to predict from subsurface studies, drill, and produce. This is particularly true of lacustrine carbonates due to the highly variable nature of their initial depositional facies and the complex overprint of diageneis on reservoir quality. In the pre-salt context, the burial depth and overburden complexity further test our technologies, from remote sensing to drilling, from early exploration to production. This challenges our ability to conceive and implement integrated and multidisciplinary approaches combining geological concepts, seismic, drilling and production information.

The objective of the workshop is to promote a forum to discuss learnings and best industry practices, and to propose pragmatic solutions able to unlock the scientific and technical challenges of pre-salt carbonate reservoirs.

Technical Committee

Alvaro Arouca Petrobras
Luiz Braga SBGF
Christian Deplante Total
Wences P. Gouveia Shell
Marcos Grochau Petrobras
Matthieu Pellerin Total

Technical Programme

Wednesday 6 April 2016

Conference Room

OPENING SESSION

09:00 Welcome & Setting the Scene - M. Pellerin (Total), A. Arouca (Petrobras), C. Deplante (Total), W. Gouveia (Shell), M. Grochau (Petrobras) & L. Braga (Invision Geophysics)

SEISMIC IMAGING FOR QUANTITATIVE INTERPRETATION

09:30 Keynote Presentation 1 - Geobody Architecture and Reservoir Characteristics of Several Large Continental Carbonate Reservoir Analogues - The Balıklı Case Study (SW Turkey) - R. Swennen* (Katholieke Universiteit Leuven), M. Özkul (Pamukkale University), J. Soete (Katholieke Universiteit Leuven), H. Claes (Katholieke Universiteit Leuven), M. Erthal (Katholieke Universiteit Leuven), B. Lopez (Katholieke Universiteit Leuven), C. Aratman (Katholieke Universiteit Leuven & Pamukkale University) & S. Claes (Katholieke Universiteit Leuven)

10:15 We A01 - A Reliable Analysis of Azimuthal Related Information for Fracture Detection - A. Canning (Paradigm), A. Malkin (Paradigm) & Y. Weiss* (Paradigm)

POSTER PRESENTATIONS

11:05 We P01 - Proposed Workflow to Incorporate Stratification within Salt Section Using Velocity and Seismic Attributes - M. González* (Paradigm), F. Gobatto (Petrobras), A. Maul (Petrobras), L. Falcão (Petrobras), G. González (Paradigm), L.C. Oliveira (Petrobras), T. Meneguin (Petrobras) & P.J. Amaral (Petrobras)

11:25 Coffee break & poster session

SEISMIC IMAGING FOR QUANTITATIVE INTERPRETATION (CONTINUED)

12:00 We A03 - Reliable Seismic Amplitudes in Sub-salt Imaging Through Wave Equation Inversion - S. Brandsberg-Dahl* (PGS)

12:25 We A04 - Effects of Post Stack Seismic Data Conditioning on Impedance Inversion for Reservoir, Brazilian Pre-Salt, Santos Basin - T.B.M. Talles Barsanti Meneguin* (Petrobras), T.P. Thomas Proença (Geoteric), C.E.L.P. Carlos Eduardo Lourenço Pereira (Petrobras), M.P.A. Mário Paes de Almeida Junior (Petrobras) & E.B.S. Eliane Born da Silva (Petrobras)

12:50 Lunch break

CARBONATE ROCK PHYSICS

14:30 Keynote Presentation 2 - G. Eberli* (University of Miami)

15:15 We B01 - Impact of Geodynamics on Diagenetic By-products - An Input to Petro-acoustic Modelling of Pre-salt Carbonates - A. Virgone* (Total), M. Masini (Total), E. Gaucher (Total), G. Massonnat (Total) & M. Pellerin (Total)

15:40 We B02 - Rock Physics Modelling of Diagenetic Processes of Pre-salt Carbonates - J.M. Codo (Total) & F. Fournier* (CEREGE)

16:05 Coffee break & poster session

16:30 We B03 - Dispersion and Attenuation Measurements on a Bimodal-porosity-solitic Limestone - J.V.M. Borgomano* (Ecole Normale Supérieure de Paris), L. Pimenta (Ecole Normale Supérieure de Paris), J. Fortin (Ecole Normale Supérieure de Paris), L. Pimienta (Ecole Normale Supérieure de Paris), J.V.M. Borgomano* (Ecole Normale Supérieure de Paris), L. Pimenta (Ecole Normale Supérieure de Paris), J. Fortin (Ecole Normale Supérieure de Paris), L. Pimienta (Ecole Normale Supérieure de Paris)

16:55 We B04 - 3D Modelling of Carbonate Rock Porous Media and Estimation of Petrophysical Parameters - T.-M.G. Silva* (Federal University of Rio de Janeiro), W.G.A.L. Silva (Federal University of Rio de Janeiro), P. Couto (Federal University of Rio de Janeiro), J.A.D. Silva (Federal University of Rio de Janeiro)

17:20 Debate

Thursday 7 April 2016

Conference Room

DIGITAL ROCK PHYSICS

09:00 Keynote Presentation 3 - Digital Rock - Multiscale Models for Improved Characterization of Carbonates - C.P. Fernandes* (Federal University of Santa Catarina)
**POSTER PRESENTATIONS**

10:35


**Th P02 - Petrography Study from the Silica-rich Travertines from Itaborai Basin** - B.S. Valente* (UERJ), E.C. Oliveira (UNIFESP), G.C.R. Pereira (UERJ) & S.B. Bergamaschi (UERJ)

**Th P03 - Pre-salt Carbonate Characterisation Using 2D Dual-Sensor Data and Rock Physics - Kwanza Basin Case Study** - N. Pernin (PGS), C. Reiser* (PGS), T. Bird (PGS) & Y. Balabekov (PGS)

10:55 Coffee break & poster session

**DIGITAL ROCK PHYSICS (CONTINUED)**

11:25

**Keynote Presentation 4 - Modelling Diagenetic Pathways in Carbonates Interlocking Diagenesis and Rock Physics - From Thin Section to Seismic Scale** - F. Fournier* (University of Provence at Marseille)

12:10

**Th C03 - Coupling Forward Stratigraphic and Diagenetical Modelling as Input to Seismic Simulations of the Presalt Play** - G. Massonnat (Total), M. Pellerin* (Total) & C. Planteblat (Euroengeneering)

12:35


13:00 Lunch break

**QUANTITATIVE SEISMIC INTERPRETATION WORKFLOWS**

14:30

**Th D01 - Lessons Learned From Examples of Reservoir Seismic Characterization in Pre-salt Context** - G. San Miguel* (Total), P.E. Barrallon (Total), G. Villeneuve (Total), T. Teillet (Total), L. Dubois (Total) & J.M. Kluska (Total)

14:55

**Th D02 - Integration of Lithological Data for Advanced Seismic Inversion** - M.A.C. Kemper (Ikon Science), M. Abel (Informatics Institute - UFRGS), L.F. De Ros (Geosciences Institute - UFRGS) & J. Hansforst* (Ikon Science)

15:20

**Th D03 - Diagenetic Considerations and Geophysical Pore-type Characterization in T3 Carbonate Reservoirs** - Fredy Villaorduna Artola (Schlumberger), J.H.V. Hernandez Villalobos (Schlumberger), J.M. Mathewson* (Schlumberger), F.A. Alvarez (Schlumberger), C.S.M. Silva (Schlumberger), R.V. Camacho (Pemex), F.O.V. Olarte (Pemex) & L.J.A.G. Alpirez (Pemex)

15:45 Coffee break & poster session

16:15

**Th D04 - Quantification of 4D Seismic Response in Pre-salt Carbonates via Time Shift Analysis** - M.M. Costa* (Petrobras), E.P. Silva (Petrobras), M.S. Santos (Petrobras) & G.F. Vasquez (Petrobras)

16:40 Debate

17:15 Wrap up

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**Social Programme**

**Welcome Reception**

Wednesday 6 April 2016, 18:30 – 20:00 hrs

The first workshop day will finish with a Welcome Reception. This is the perfect opportunity to meet the other workshop participants in an informal setting.

**Venue and Accommodation**

The workshop will take place at the Golden Tulip Regente Hotel.

Ave. Atlântica, 3716
Copacabana
Rio de Janeiro

Discounted accommodation rates have been offered by the Golden Tulip Regente Hotel. Please check the workshop website for more information.
Registration

Overview of registration fees

<table>
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<th>Registered and paid</th>
<th>Until 01/02/2016</th>
<th>02/02/2016 - on-site</th>
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<tr>
<td>Workshop¹</td>
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<td>EAGE/SBGF member¹</td>
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<td>EAGE/SBGF student member¹,5</td>
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<td>Non-member²</td>
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<td>Full time student non-member¹,5</td>
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1. EAGE Members please note: To qualify for the member registration fee, your EAGE membership dues for 2016 must have been paid and confirmed. The processing time for membership applications or renewals is 10 working days.
2. The Non-member fee includes EAGE membership for the remainder of 2016.
3. The Full time student non-member fee does not include EAGE membership. If you are interested to become a member of the EAGE, you could apply for it online.
4. Please note that the EAGE & SBGF reserve the right to cancel the workshop due to low participation. In this case, payment will be refunded in full.
5. Please note that the student registration has a limit of 20 people. Thus, this registration is based on first registered and paid, first come basis.

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).

How to register

We recommend that you register via the online registration form on the workshop website (www.eage.org/event/eage-sbgf-2016). However, a downloadable registration form, which should be completed and returned to the EAGE Europe Office or the SBGF Office, is also available on the workshop website.

Sponsor information

The workshop offers excellent sponsoring opportunities to create high visibility. For more information about sponsoring, please refer to the ‘Sponsor Guide’ available on the workshop website or contact us at sponsoring@eage.org / eventos@sbgf.org.br.

Sponsors

Contact

For more information and updates, please check our websites regularly (www.eage.org/event/eage-sbgf-2016 and www.sbgf.org.br).

Alternatively, feel free to contact us with any questions via e-mail at conferences@eage.org or eventos@sbgf.org.br.

We look forward to welcoming you to Rio de Janeiro!