3rd EAGE/SPE Geosteering Workshop

2-4 NOVEMBER 2021 • ONLINE

- **Technical Programme**

TECHNICAL COMMITTEE

Jean-Michel Denichou (Co-chair)	Schlumberger
Mohammad Sarraj (Co-chair)	Saudi Aramco
Jamal AlAli (Co-chair)	ADNOC–Offshore
Monica Vik	Constable Equinor
Erich Suter	NORCE
Nigel Clegg	Halliburton
Arve Thorsen	Baker Hughes
Maurizio Mele	Eni S.p.A.

WORKSHOP OVERVIEW

For its third edition of the Geosteering workshop, the EAGE is collaborating again with the Society of Petroleum Engineers (SPE) to organize a world-class event aiming at facilitating knowledge sharing, education and networking for a growing technical population involved and/or interested in operational deployment and applications of geosteering discipline.

Optimizing oil recovery and access to new oil and gas resources are motivating the industry to improve efficiency and accuracy in all aspects of the well construction process; with significant developments in the geosteering and well placement discipline. This three-day online workshop will provide the opportunity to share knowledge, case studies, techniques and workflows pertaining to the understanding of the subsurface in real time while drilling.

But the primary goal of this third edition of the joint workshop is to propose a new focus on industry's advances. Emerging geosteering workflows that are shaping the future of the discipline; innovative uses and deployment of latest LWD technologies that could revolutionize the outcomes of drilling and development phases will be studied. Those are some of the topics that will be discussed to help each and all to envision the potential contribution of the digital 4.0 revolution to support geosteering and well placement discipline through advanced data analytics (Machine Learning and Artificial Intelligence).

The event will include four main sessions:
- Industry case studies focused on best practices and strategies for well placement and geosteering applications in various reservoir types.
- Discussions focused on efficient workflows and technologies for data integration and modelling during real-time geosteering.
- Advancement in data analytics methods; to assist in geosteering and well placement.
- Vision for well placement and geosteering – where is the industry going?

PROGRAMME

Oral Presentations | 2 November 2021

11:00	**Session 1: Industry case studies focused on best practices and strategies for well placement and geosteering applications in various reservoir types** Session Chairs: Jean- Micheal Denichou, Schlumberger & Mohammad Sarraj, Saudi Aramco
11:05	**Finding the needle in a haystack: Multi-solution integration for multiple challenges, a case study from UAE -** J. Maalouf[1]*, S.M. Lyonga, S. Suleiman, W. Siddiqui, C. Shrivastava, M. Ashraf, H. Khemissa, Y. Goraya [1]Schlumberger
11:30	**Mapping of Water Slumping using Ultra-Deep EM Logging While Drilling Technology in carbonate Reservoirs Onshore-Abu Dhabi -** W. Fares[1]*, M. Singh[2], M. Al Manssori[2], V. Pandey[2], I. Seddik[2], S. Al Arfi[2], D. Boyd[2], N. Clegg[1], A. Aki[1] [1]Halliburton Worldwide Limited; [2]ADNOC Onshore
11:55	**Mapping Reservoir in Complex Fluvial Channel Sand with 3-D Mapping Reservoir Mapping While Drilling -** I. Pasaribu[1], T.M. Gezeeri[2]*, S.H. Al Sabea[2], M. Al Hadad[2], Y.A. Halawah[2], M. Al Rashidi[2], D. Salim[1], C. Jyoti Keot[1], S.N. Osman[1], S.M. Abdelbaset[1] [1]Schlumberger; [2]Kuwait Oil Company
12:20	**Break**
12:30	**Mapping the OWC with extra-deep resistivity in the Lower Burgan reservoir, Kuwait -** T. El-Gezeery[1], Y. Halawah[1], M. Al Rashidi[1], S. Al Sabea[1], P. Sudiro[2]*, E. Sitinjak[3] [1]Kuwait Oil Company; [2]Baker Hughes; [3]Baker Hughes
12:55	**Real Time Navigation in Complex Deltaic Scenario: The Role of Multiscale Approach for Geosteering Optimisation -** A. Leone[1]* [1]Eni S.p.A. E&P
13:20	**Real-Time 3D Imaging of a North Sea Turbidite Reservoir -** S. Sinha[1]*, K. Riofrío[1], A. Walmsley[2], N. Clegg[2], S. Sviland-Østre[2], N. Gueze[2] [1]Halliburton; [2]Halliburton; [3]Aker BP
13:45	**Break**
13:55	**Remotely navigating thin reservoirs in ERD wells. North Slope Alaska -** P. Sudiro[1]*, K. Hoffmeister[2], M. Howell[3], A. Small[3], I. Says[4] [1]Baker Hughes; [2]ConocoPhillips; [3]Baker Hughes; [4]Baker Hughes
14:20	**Retrofit Multilateral application - Innovative solution to unlock reservoir potential and increase recovery. Goliat experience -** C. Musca[1]*, G. Tosi[1], S. Ragaglia[1], L.L. Napoleone[1] [1]Var Energi AS
14:45	**Ultra-Deep EM LWD Mapping tool provided efficient geos-topping solution to eliminate need for pilot holes Offshore-UAE -** A. Al Felasi[1], K. Honda[1], O. Al Mutwali[1], H. Khemissa[1], B. Al Dhafari[1], M. Ashraf[1], S. Al Hajeri[1], Y. Goraya[1], A. AlKhoori[1], W. Fares[2]*, A. Aki[2], N. Clegg[2] [1]ADNOC Offshore; [2]Halliburton
15:10	**Closing Address**
15:15	**End of Day**

Oral Presentations | 3 November 2021

11:00	**Session 2: Advancement in data analytics methods; to assist in geosteering and well placement** Session Chairs: Monica Vik Constable, Equinor & Nigel Clegg, Halliburton
11:05	**Wellbore Trajectory Optimization Using Geological Inputs -** M. Abughaban[1]*, A. Alali[1] [1]Saudi Aramco
11:30	**Similar geology, same stochastic inversion, different azimuthal resistivity tools - lessons learned from well placement experience -** D. Nemuschenko[1]*, P. Shpakov[2], P. Bybin[2], K. Ronzhin[1], M. Sviridov[1] [1]Rogii; [2]Novatek
11:55	**Automated Geosteering Platform Using Machine Learning and Optimization Methods -** A. Timonov, R. Khabibullin[1]*, N. Gurbatov[2] [1]Moscow Gubkin Oil And Gas University; [2]Deeplight
12:20	**Uncertainty Quantification on the Inversion of Geosteering Measurements using Deep Learning -** J.A. Rivera[3,4], J.A. Rivera[1,2]*, D. Pardo[1,2,5], J. Omella[1], C. Torres-Verdín[6] [1]University of the Basque Country (UPV/EHU); [2]Basque Center for Applied Mathematics (BCAM); [3]Software Competence Center Hagenberg (SCCH); [4]Euskampus Fundazioa; [5]Ikerbasque (Basque Foundation for Sciences); [6]The University of Texas at Austin
12:45	**Break**
12:55	**Azimuthal geosteering technique -** T. Popov[1]*, D. Leontyev[2], I. Evdokimova[2], Y. Selivanov[2], V. Kim[1] [1]Schlumberger; [2]Schlumberger
13:20	**2D Inversion for Structure with Angular Unconformity on Example of Troll Field -** A. Astrakova[1]*, E. Konobriy[1], D. Kushnir[1], N. Velker[1], G. Dyatlov[1] [1]Baker Hughes
13:45	**Reducing 3D uncertainty by an ensemble-based geosteering workflow: an example from the Goliat field -** K. Fossum[1]*, S. Alyaev[1], E. Suter[1], G. Tossi[2], M. Mele[3] [1]NORCE Norwegian Research Centre AS; [2]Vår Energi; [3]Eni S.p.A.
14:10	**Novel GTS for realistic geosteering training and optimization of well placement strategies -** B.E. Danielsen[1]*, F. Antonsen[3], M.V. Constable[2], M.E.T. De Oliveira[3], K. Hermanrud[3], S.A. Petersen[2] [1]Equinor; [2]Equinor; [3]Equinor
14:35	**Break**
14:45	**Session 3 Part I: Discussions focused on efficient workflows and technologies for data integration and modelling during real-time geosteering** Session Chairs: Erich Suter, NORCE & Maurizio Mele, Eni S.p.A.
14:50	**Accurate reservoir description and well placement using distance data, zone logs and depth to fluid contact -** P. Dahle[1]*, A. Almendral Vazquez[1], A. Sektnan[1] [1]Norwegian Computing Center

15:15	**Integrating time-indexed archives of past drilling data improves the reliability of geosteering and monitoring activities -** P. Neri[1], R. Philo[1]* [1]Energistics
15:40	**Closing Address**
15:45	**End of Day**

Oral Presentations | 4 November 2021

11:00	**Session 3 Part II: Discussions focused on efficient workflows and technologies for data integration and modelling during real-time geosteering** Session Chairs: Erich Suter, NORCE & Maurizio Mele, Eni S.p.A.
11:05	**Integration of Seismic and 3D Ultra-Deep Azimuthal Resistivity LWD -** M. Alexander[1]*, D. Salim[2], M. Etchebes[3], T. Akindipe[4] [1]Schlumberger; [2]Schlumberger; [3]Schlumberger; [4]ConocoPhillips
11:30	**Practicalities of 3D Well Placement -** N. Clegg[1]*, A. Walmsely[1] [1]Halliburton
11:55	**Technical and intra-organizational implementations for improved geosteering and reservoir characterization -** K. Hermanrud[1]*, F. Antonsen[1], M. Vik Constable[1], B. Ensted Danielsen[1], M.E. Teixeira De Oliveira[1] [1]Equinor ASA
12:20	**Enhancing the Understanding of a Mature Giant Oil Field from the Wellbore to Reservoir Scale -** M. VIANDANTE[1]*, L. Pontarelli[1], S. Leveque[3], C. Longis[2], S. Finlay[2], S. Sen[2], D. Cross[2], D. Hartney[2], A. Azeem[2], O. Onyia[2] [1]Schlumberger Overseas; [2]North Oil Company; [3]Schlumberger BGC
12:45	**Break**
12:55	**Pod Posters Discussion Session** (Pod Posters will be made available on all three days)
13:00	**Coal Seam Miming: a new frontier for advanced real-time modeling with deep azimuthal resistivity -** A. Martins Vianna Neto[1]*, K. Boyce, M. Ramsay [1]Baker Hughes
13:05	**Prototype Concept of Reservoir-Profile-Update-Rate to Quantitatively Evaluate Efficiency of Reservoir Description with Different Services While Drilling -** B. Chang[1]*, C. Wang[1] [1]Schlumberger
13:10	**Jurassic gas. Geosteering with reservoir mapping technology in Jurassic deposits of Zapadno-Yurkharovskoe field in Russia -** V. Sayfitdinova[1]*, R. Khabibullin[1], E. Skorikova[1], T. Berdnikova[1], A. Shakunov[2] [1]Schlumberger; [2]NOVATEK-YURKHAROVNEFTEGAZ
13:20	**Pod Posters Discussion Closing**

13:20	**Session 4: Vision for well placement and geosteering – where is the industry going? How will new technology, big computing resources, and integrated workflows open new possibilities in the future?** Session Chair: Arve Thorsen, Baker Hughes
13:25	**Probabilistic forecasting for geosteering in fluvial successions using a generative adversarial network -** S. Alyaev[1]*, J. Tveranger[1], K. Fossum[1], A.H. Elsheikh[2] [1]NORCE Norwegian Research Centre; [2]Heriot-Watt University
13:50	**Using a real-time 3D-reservoir-mapping tool to image a complex deep-water reservoir in a producing oil field -** D. Baker[1], V. Cutten[1], H. Wang[2]* [1]Woodside Energy Ltd; [2]Schlumberger Australia Pty Ltd
14:15	**Break**
14:25	**A multi-physic methodology for 3D structural delineation and geosteering in real-time using cloud computing -** M. Bower[1]*, D. Salim[2], M. Etchebes[3], V. Wibowo[2] [1]Schlumberger; [2]Schlumberger; [3]Schlumberger
14:50	**The Use of High Performance and Cloud Computing in Well Placement Operations -** V. Usaitis[2]*, V. Kiselev[2], J. Combs[2], N. Clegg[1] [1]Halliburton; [2]Halliburton
15:15	**New multiscale measurement approach for geosteering in low resistivity and low contrast reservoirs: Cygnus field. -** M. Dupouy[1]*, K. Simpkin[1], M. Covill[1], M. Bower[2] [1]Neptune Energy; [2]Schlumberger
15:40	**Closing Address**
15:45	**End of Day**

REGISTRATION

REGISTERED AND PAID	**Early** From: 20 June 2021 Until: 20 August 2021	**Regular** From: 21 August 2021 Until: 1 November 2021
EAGE/SPE Member	€ 300	€ 350
Non-Member	€ 350	€ 400
EAGE/SPE Student Member	€ 150	€ 175
Full time Student Non-Member	€ 175	€ 200

If you are a student or currently unemployed, you can apply for the EAGE Economic Hardship Programme using this link or via email to membership@eage.org.

- Memberships are provided for Non-Member registrations and the activation will only take place after the event, between 2-3 weeks.
- All fees are in Euros (€). One Euro of your total registration fee is donated to the EAGE Green Fund. Please note that all fees are subject to 5% VAT as per UAE regulations.
- To register for the event, please visit the underlined event website.

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