Reservoir Characterization for Enhancing Production
1–3 April 2019 | Cairo, Egypt

EVENT PROGRAMME

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**TECHNICAL COMMITTEE CO-CHAIRS**

**COMMITTEE CHAIRMAN: Moataz Kamel, BP**
Moataz Kamel is Exploration Manager at BP Egypt. He received a BSc in Geophysics in 1991 and a MSc in Geophysics in 1993, both from Cairo University (Egypt). Moataz worked at Gupco, Amoco, BP in Cairo and UK across different world class basins. He was an Exploration Geophysicist and then Seismic Delivery Manager.

**COMMITTEE CO-CHAIRMAN: Ahmed El Banbi, American University Cairo**
Ahmed El Banbi is currently a professor of Petroleum Engineering and chair of the department at the American University in Cairo (AUC). He has more than 25 years of diversified international experience in reservoir and petroleum engineering. He worked as an engineer, trainer, and a technology developer. Ahmed spent 12 years with Schlumberger where he held a variety of technical and managerial positions in 5 countries. He has considerable experience in managing multi-disciplinary teams and performing integrated reservoir studies. Ahmed holds a BSc and a MSc from Cairo University (Egypt), and a MSc and PhD from Texas A&M University (USA), all in petroleum engineering.

**Ahmed El-Barkooky, Cairo University**
Ahmed El-Barkooky is a Professor of Applied Sedimentary Geology at Cairo University. He has also been working as a geological consultant for multinational oil companies for 30 years. His main fields of interest are Basin Analysis and Petroleum Systems, Sequence Stratigraphy, Tectonics and Sedimentation. He is affiliated with the Egyptian Geological Society, AAPG, GSA and EPEX.

**Ahmed Helmi, Shell**
Ahmed Helmi is the Quantitative Interpretation team lead at Shell Egypt, and certified Geophysicist Technical Assurer. He is a geophysicist with over 20 years of experience with various Shell operating companies. He started his career at WesternGeco before joining Shell in 1995; since then he has assignments in The Netherlands, Oman, UK and Malaysia. He has experience in reservoir geophysics, seismic processing, attribute analysis, seismic inversion, seismic interpretation, and production seismology. Ahmed has a BSc in Geophysics from Cairo University (Egypt) and a MPh in Geophysics from Uppsala University (Sweden). Ahmed is an active member in SEG and EAGE.

**Ahmed Salah, Consultant at EGAS**
Ahmed Salah is a Consultant at EGAS (Egyptian Natural Gas Holding Company), Ministry of Petroleum, Egypt. He graduated with a BSc in Geology in 1980 and a PhD in Petrophysics in 2009, both from Ain Shams University (Egypt). He was Core Analysis Labs Manager at Core Lab International, and Assistant Researcher and Labs Manager at EPRI (Egyptian Petroleum Research Institute). He also worked at Belayim Petroleum Company (ENI subsidiary in Egypt), as Exploration General Manager.

**Emad Busbait, Saudi Aramco**
Emad Busbait graduated with a BSc in Geology in 2000 from Wichita State University – WSU (USA). The same year; he joined the Reservoir Characterization Department at Saudi Aramco as an Operation Geologist. The following year; he moved to the Area Exploration Department as a Wellsite Geologist. Emad participated in two major development Increments. In 2010, he achieved his MSc in Geology from KFUPM (Saudi Arabia). In 2018, he completed his Executive Master of Business Administration degree at KFUPM (Saudi Arabia). Emad assigned in different leadership roles and currently, he has been assigned as Chief Geologist in Northern Area Reservoir Characterization Department.

**Mohamed Said, Baker Hughes**
Mohamed Said has 29 years of experience in the oil field with Baker Hughes, a GE company. He worked in different product lines within Baker Hughes and performed different tasks and responsibilities in formation evaluation, training, operation, sales and management. Mohamed supported the growth in the LWD business in Egypt market, managed the RT advisory services in North Africa and currently is the Geoscience and Petroleum Engineering Manager for Egypt and Sudan. Mohamed got his MSc on Structural Geology from Ain Shams University.

**Mohamed Abdel Azim, Ganope**
Mohamed Abdel Azim is Chairman of South Valley Egyptian Petroleum Holding Company. He graduated with a BSc of Engineering, Petroleum department in 1985. He was Chairman of Sukari Gold Mine Company, then Chairman and MD of Petrosilah Petroleum Company, then Chairman of Khalda Petroleum Company, then Vice Chairman of EGAS for production and field development. He is a Board Member of the Egyptian Engineers Syndicate and Energy committee Chairman, as well as a Board Member of SPE.
Mohamed Samir, Sahara Oil & Gas
Mohamed Samir has more than 25 years of experience in the oil industry and is currently working at Sahara Oil & Gas as Operations General Manager. He previously worked for Sonitran and Petrobel in Egypt, and also at ADCO in Abu Dhabi (UAE). Samir holds a BSc in Petroleum Engineering from Suez Canal University and an MSc and a PhD from Cairo University (Egypt). He is a member of Egyptian Engineers Syndicate and SPE. He has published more than 25 papers for the EOR and reservoir management.

Mohsen Abdel Fatah, Halliburton
Mohsen Abdel Fatah is a staff member in Geology Department, Cairo University (Egypt). He is currently Principal Geoscience Advisor for Halliburton. He holds a BSc (1983) and MSc (1987) in Geology from Cairo University (Egypt), and a PhD (1994) in Geology from Federico II University (Italy). Mohsen has more than 30 years of academic and industry experience, specialized in sedimentological and sequence stratigraphic studies. His expertise spans advanced image interpretation; core sedimentology; clastics and carbonates reservoir characterization; and reservoir geology. He is an active member of AAPG, SPE and SPWLA, as well as several other societies. Mohsen is a frequent technical paper author and coauthor.

Olivier Colnard, CGG
Olivier Colnard graduated as a Geophysicist from the IFP School (France) in 2000. He currently is Regional Manager for Seismic Reservoir Consulting Services for Europe, Middle East and Africa at CGG. The Seismic Reservoir Consulting group is composed of Petrophysicists and Reservoir Geophysicists delivering quantitative interpretation projects. Olivier has worked for CGG in various locations and positions: Europe, Africa, America and South East Asia; in Seismic processing and Quantitative interpretation.

Samir Abdelmoaty, Rockhopper
Samir Abdelmoaty is Country Manager of Rockhopper Exploration in Egypt. He received a BSc in Physics and Geology from Cairo University (Egypt) in 1971, and a MSc in Geophysics from Al Azhar University (Egypt). He attended The Management Program at Rice University and the International Management Program at Texas A&M University (USA). He worked for Gupco, PGS, BP and TPS. Samir served as SEG board member, received SEG Life Member and the Honorary Membership awards, and presented the SEG Africa and Middle East Honorary Lecture in 2009. He is currently Chairman of EGS, board member of EPEX, member of AAPG, SPE and AMPS, as well as board member of the National Institute of Geophysics and Astronomy and a member of the council of Faculty of Science, ASU. He is a visiting lecturer at Alexandria and Ain Shams Universities, and the founder of Al Amal program.

Tarek Nafie, WesternGeco
Tarek Nafie has about 35 years of industry experience in Seismic Reservoir Characterization covering wide spectra of technical aspects such as wavelet extraction, Deterministic Zero Phasing, seismic inversion (Post and Pre-Stack Simultaneous Inversion), rock physics, 4D-Seismic, Pore Pressure Predication and Fracture Characterization.

Moustafa Braby, American University Cairo
Moustafa Braby has more than 25 years of experience as Chief Geophysicist at Shell in Egypt. He holds a BSc in Geology from Cairo University (Egypt), a MSc in Geophysics from Al Azhar University (Egypt). He is a member of SPE Egypt, as well as several other societies. He is a frequent technical paper author and coauthor.

SESSION 2 DATA ANALYTICS I

08:40 - 08:45
Welcome Address by SPE

08:45 - 09:05
Opening Address by Eng. Mohamed Moones Shahat, Minister’s Advisor for Gas Affairs, Ministry of Petroleum

09:05 - 09:30
Keynote Address by Mustafa Oraby, Shell

09:30 - 09:55
Keynote Address by Ahmed Salah, Consultant at EGAS | The potential of Gas in Egypt: Future Opportunities

09:55 - 10:15
COFFEE BREAK – 20 min – Ballroom Foyer

10:15 - 10:35
Abdulrahman Darwish, CGG
Seismic Data Processing – What Happened Over the Past Few Years?

10:35 - 10:55
Abdallah Ibrahim Abouelela, Schlumberger
FWI High-Resolution Velocity Models: Frequencies Needed for Integration Into Broadband Seismic Data for Elastic Properties Generation

11:15 - 11:35
De-blending of Continuous Recording Data Towards a Quantum Leap in Seismic Imaging and Resolution in Western Desert of Egypt

11:35 - 12:05
Moderated Discussion – 30 min

12:05 - 13:05
LUNCH – 1 hr – Lakeside Ballroom A

SESSION 3 PETROPHYSICS AND GEOMECHANICS

15:05 - 15:25
Mohsen Abdel Fatah, Halliburton
Carbonate Reservoir Characterization Challenges

15:25 - 15:45
Mohsen Abdel Fatah, Halliburton
Integrated 3D Geomechanical Characterization for Multi-Stage Full-physics Hydraulic Fracturing Simulation in Complex Tight Gas Reservoirs

15:45 - 16:05
Javier Franquet, Baker Hughes
Using Electro-Facies Module to Assess the Facies Distribution and Reservoir Characterization of Abu Roash “G” Oil Bearing Reservoir – A Case Study from BEV18 Field, Abu Gharbia Basin, Western Desert, Egypt

16:05 - 16:35
Moderated Discussion – 30 min

MONDAY, 1 APRIL 2019

07:30 - 08:25
Registration Check-in

08:25 - 08:30
Coffee, tea, juices and morning refreshments available

08:30 - 08:35
Welcome Address by SEG

08:35 - 08:40
Welcome Address by SPE

08:40 - 08:45
Welcome Address by Committee Co-Chairs: Mustaz Kamel, BP and Ahmed El Banbi, American University Cairo

08:45 - 09:05
Opening Address by Eng. Mohamed Moones Shahat, Minister’s Advisor and Former First Undersecretary for Gas Affairs, Ministry of Petroleum

09:05 - 09:30
Keynote Address by Mustaz Kamel, Shell

09:30 - 09:55
Keynote Address by Ahmed Salah, Consultant at EGAS | The potential of Gas in Egypt: Future Opportunities

09:55 - 10:15
COFFEE BREAK – 20 min – Ballroom Foyer
All technical sessions take place at Dusit Thani Lakeview, Cairo, Egypt.

**TUESDAY, 2 APRIL 2019**

**SESSION 4  ROCK PHYSICS AND SEISMIC INVERSION I**  
Session Chairs: Ahmed Helmi & Tarek Nafie  
08:30 - 08:50  
Feasibility and Application of AVO for the Characterisation of Oligocene Reservoirs in the East Nile Delta  
John McGarrity, BP  
08:50 - 09:10  
Seismic Inversion of Multidimensional Data  
Olivier Cunard, CGG  
09:10 - 09:30  
Rock Physics Templates as a Tool for Rock Properties Identification of Channel Deposits, Mediterranean Sea, Egypt  
Ali Mahmoud Mahdy, Ain Shams University  
09:30 - 10:00  
Moderated Discussion – 30 min  
10:00 - 10:30 POSTER SESSION with COFFEE BREAK – 30 min – Ballroom Foyer

**SESSION 5  SEISMIC DATA ACQUISITION AND BOREHOLE SEISMIC**  
Session Chairs: Ahmed Saleh & Abdallah Ibrahim Abouelela  
10:30 - 10:50  
More Data Faster to Maximize Recovery – hDVS Technology  
Pierre Bettinelli, Schlumberger  
10:50 - 11:10  
Broadband Vibroseis Survey  
Wei Tie, BGP  
11:10 - 11:30  
Data Acquisition Breakthrough – Formation Testing While Tripping  
Magdy Samir Osman, Schlumberger  
11:30 - 11:50  
Application of Microseismic Monitoring Technology in Carboneous Reservoir – A Case Study in Western Yingshui Area of Qaidam Basin  
Feng Heng, BGP  
11:50 - 12:20  
Moderated Discussion – 30 min  
12:20 - 13:20 LUNCH – 1 hr – Lakeview Ballroom A

**SESSION 6  PRODUCTION ENHANCEMENT**  
Session Chairs: Mohamed Abdel Azim & Ahmed Salah  
13:20 - 13:40  
Improving the Operation Performance Along with Production Profiles in Ultra-low Permeability of Conglomerate Rock with Granitic Facies for Developing Heavy Black Oil Reservoir  
Mostafa Mahmoud Kortam, Petrobel  
13:40 - 14:00  
A Novel Technical to Improve Well Productivity in Western Desert  
Mohamed Samir, Sahara Oil & Gas  
14:00 - 14:20  
Addressing the Challenges of Hydraulic Fracturing Vertical Wells in Differential Depleted Tight Gas Accumulations in Oman  
Khalid Mubarak Al Bahri, Petroleum Development Oman  
14:20 - 14:50  
Moderated Discussion – 30 min  
14:50 - 15:10 POSTER SESSION with COFFEE BREAK – 20 min – Ballroom Foyer

**SESSION 7  MULTIDIMENSIONAL TECHNOLOGIES AND INTERPRETATION**  
Session Chairs: Mohamed Abdel Fattah & Samir Abdelmoaty  
15:10 - 15:30  
Advances in Simulation of Time-Lapse Seismic Signal  
Meinaysay, Schlumberger  
15:30 - 16:10  
Managing the Edward Grieg Reservoir in the North Sea Using 4D Repeat OBC – Initial Results of the First 4D Survey  
Per Eivind Dhelie, Lundin Petroleum Norway  
15:50 - 16:10  
Imaging through 2D and 3D Pre-Stack Depth Migration – A Case Study from Ras Ghariib, Eastern Desert, Egypt  
Tamer Saleh, Schlumberger  
16:10 - 16:40  
Moderated Discussion – 30 min

**WEDNESDAY, 3 APRIL 2019**

**SESSION 8  ROCK PHYSICS AND SEISMIC INVERSION II**  
Session Chairs: Magdy Fahim & Ahmed Helmi  
08:30 - 08:50  
Reservoir Characterization for Enhancing Production  
Mohamed Magdy A Helmi, Halliburton  
08:50 - 09:10  
Understanding a Complex Reservoir – A Novel Approach for Optimizing Seismic and Rockphysics Inversion Results – A case study from Offshore Nile Delta, Egypt  
Tarek Nafie, Schlumberger  
09:10 - 09:30  
Determination of Reservoir Properties of the Semliki Basin Using Rock Physics Templates  
Ioan Nakaigou, Makere University  
09:30 - 10:00  
Moderated Discussion – 30 min  
10:00 - 10:30 POSTER SESSION with COFFEE BREAK – 30 min – Ballroom Foyer

**SESSION 9  INTEGRATED RESERVOIR MODELLING**  
Session Chairs: Ahmed El-Barkooky & Mohamed Samir  
10:30 - 10:50  
Seismically Constrained Deepwater Reservoir Modelling, an Innovative Uncertainty Analysis Workflow  
Waleed Gaber, Shell  
10:50 - 11:10  
From Outcrop to Reservoir, a Comprehensive Description to Lower Silurian Longmaxi Shale in Sichuan Basin, China  
Jia Chengye, PetroChina  
11:10 - 11:30  
Permeability Modelling in Complex Carbonate Reservoir, Using Inversion Approach – A Case Study  
Maqsi Hasani, Dalie Petroleum  
11:30 - 12:00  
Moderated Discussion – 30 min  
12:00 - 13:00 LUNCH – 1 hr – Lakeview Ballroom A

**SESSION 10  DATA ANALYTICS II**  
Session Chairs: Ahmed El Banbi & Dawlat Hashem  
13:00 - 13:20  
Data Quality and Conditioning Techniques  
Tarek Nafie, Schlumberger  
13:20 - 13:40  
Learning from Data – A Case Study of Data-Analytics to Guide Field Development Strategies  
Luis Alfredo Figuera Lozada, Mubadala Petroleum  
13:40 - 14:00  
Digital Rock Physics Combined with Machine Learning for Rock Mechanical Properties Characterization  
Javier Frentz, Baker Hughes  
14:00 - 14:40  
Moderated Discussion – 40 min  
14:40 - 15:00 Wrap-up by Session Chairs – 20 min
Eng. Mohamed Mounes, Minister’s Advisor and Former First Undersecretary for Gas Affairs, Ministry of Petroleum

Eng. Mohamed Mounes is currently the Minister’s Advisor for Gas Affairs. He held many prestigious positions during his journey with the Egyptian Oil & Gas sector. He was the first Undersecretary for Gas Affairs in April 2016. He previously was the Executive Vice President for the Egyptian General Petroleum Corporation (EGPC), and a former Chairperson for Qarun Petroleum Company.

Moataz Darwish, Shell Egypt

Currently the Deputy Country Chair for Shell Egypt, Moataz Darwish has spent the last 11 years with Royal Dutch Shell. Prior to his current role, Moataz was based in the Netherlands where he was Commercial Manager for the UK Southern North Sea Joint Venture between Shell and ExxonMobil. Earlier, based in Cairo, he was the Country Commercial Manager and Management Team Member for Shell Egypt and a Non-Executive Board Director for the NATGAS and Nubinya companies. He has more than 20 years of experience in commercial negotiations, deal making and economics. He is pursuing a doctoral degree in Business at the UK’s Bradford School of Management, holder of a MBA and MRes degrees and is also a MBA lecturer at the American University in Cairo and the Europe-based Energy Delta Institute. Moataz is dedicated to negotiation and business management excellence. In recent years he participated in a variety of executive programs in the leadership, negotiation and commercial areas from INSEAD and Harvard business schools and Shell’s Commercial Academy.

Ahmed Salah, Consultant at EGAS

Ahmed Salah is a Consultant at EGAS (Egyptian Natural Gas Holding Company), Ministry of Petroleum, Egypt. He graduated with a BSc in Geology in 1980 and a PhD in Petrophysics in 2009, both from Ain Shams University (Egypt). He was Core Analysis Labs Manager at Core Lab International, and Assistant Researcher and Labs Manager at EPRI (Egyptian Petroleum Research Institute). He also worked at Belayim Petroleum Company (ENI subsidiary in Egypt), as Exploration General Manager.

**SAVE the DATE**

**SEG MIDDLE EAST - UPCOMING EVENTS 2019**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Location</th>
<th>Activity</th>
<th>Status</th>
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<tbody>
<tr>
<td>SEG</td>
<td>DGS Challenge Bowl Competition and Field Trip</td>
<td>14 Apr '19</td>
<td>Muscat, Oman</td>
<td>Student Event</td>
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<td>New Advances in Seismic Interpretation</td>
<td>15 - 17 Apr '19</td>
<td>Muscat, Oman</td>
<td>Workshop</td>
<td>Registration Open</td>
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<tr>
<td>Deep Gas Exploration and Future Development Workshop</td>
<td>7 - 9 Oct '19</td>
<td>Abu Dhabi, UAE</td>
<td>Workshop</td>
<td>Call for Abstracts closes 24 Apr '19</td>
</tr>
<tr>
<td>5th International Conference on Engineering Geophysics</td>
<td>21 – 24 Oct '19</td>
<td>Al Ain, UAE</td>
<td>Conference</td>
<td>Call for Abstracts closes 22 Apr '19</td>
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<tr>
<td>DISC 2019: Manika Prasad - Physics and Mechanics of Rocks: A Practical Approach</td>
<td>Nov '19</td>
<td>GCC Region</td>
<td>Professional Development</td>
<td>Save the Date</td>
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<tr>
<td>New Advances in Land Seismic Acquisition Technologies</td>
<td>5 - 7 Nov '19</td>
<td>Muscat, Oman</td>
<td>Workshop</td>
<td>Call for Abstracts closes 19 Jun '19</td>
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<tr>
<td>2nd Edition - Seismic Multiples – Are they signal or noise?</td>
<td>3 - 5 Dec '19</td>
<td>Kuwait</td>
<td>Workshop</td>
<td>Save the Date</td>
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</table>
CALL FOR CONTRIBUTIONS
SUBMISSION DEADLINE: 22 APRIL 2019

TECHNICAL TOPICS INCLUDE:
- Engineering Geophysical Methods
- Near-Surface Geophysics to Improve Exploration Geophysics (e.g., Characterising Dunes)
- Time-Lapse Monitoring
- Unmanned Geophysical Survey (robotic/UAV)
- Advanced Geophysical Tomographic Methods
- Anomaly Deformation and Classification

INNOVATION AWARD
This award focuses on innovative contributions that substantially advance the application of geophysics to near-surface problems. The top three winners of the competition will receive cash prizes of US$10,000, US$7,000, and US$5,000.

CALL FOR ABSTRACTS
Deep Gas Exploration and Future Development Workshop
7–9 October 2019 | Abu Dhabi, UAE

This workshop will build on the results and feedback of the successful 2014 ‘Exploiting Deep Gas Resources through Advanced Geophysical Technology’ workshop. It will focus on the hydrocarbon systems of deep reservoirs, primarily gas bearing. We will discuss exploration objectives, approaches and strategy, and examine the challenges related to imaging and characterization.

ABSTRACT SUBJECTS | Submission deadline: 24 April 2019 | Registration opens 5 May
- Acquisition requirements for deep exploration
- Processing requirements for deep exploration
- Non-seismic requirements for deep imaging
- Reservoir characterization/fractures
- Hydrocarbon system
- Basin centered gas
- Interpretation challenges for deep plays
- Case studies and lessons learned for finding new plays
- Deep unconventional plays
- Role of geomechanics on deep exploration
- Drilling challenges and technologies
- Development strategies for deep targets
- Effective exploration to development cycle

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