



INTERNATIONAL
GEOMECHANICS
SYMPOSIUM

INTERNATIONAL GEOMECHANICS SYMPOSIUM

7-10 NOVEMBER 2022
ABU DHABI, UAE

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INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 1
IGSEVENT.ORG

6 NOVEMBER 2022, SUNDAY

FIELD TRIP

7:00 - 8:30	DEPART AT SOFITEL ABU DHABI CORNICHE
8:30 - 15:30	JEBEL HAFEET FIELD TRIP
15:30 - 17:00	RETURN TO SOFITEL ABU DHABI CORNICHE

CORE VISIT

7:30 - 8:15	DEPART AT SOFITEL ABU DHABI CORNICHE
8:15 - 15:15	CORE VISIT/SCHLUMBERGER LAB VISIT
15:15 - 16:00	RETURN TO SOFITEL ABU DHABI CORNICHE

7 NOVEMBER 2022, MONDAY

7:00 - 8:00	ONSITE REGISTRATION
8:00 - 8:05	HOTEL SAFETY BRIEFING
8:05 - 8:15	WELCOME BY EXECUTIVE COMMITTEE - ABDELWAHAB NOUFAL, ADNOC
8:15 - 8:30	KEYNOTE ADDRESS BY MOHAMED AL MARZOUQI, ADNOC

8:30 - 10:30	TRAINING 1: MARK ZOBACK, STANFORD UNIVERSITY OPTIMIZING PRODUCTION FROM UNCONVENTIONAL RESERVOIRS
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10:30 - 10:50	COFFEE BREAK - 20 MIN
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10:50 - 12:50	TRAINING 2: HERBERT EINSTEIN, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) ENERGY STORAGE IN THE GEOLOGIC ENVIRONMENT
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12:50 - 13:50	LUNCH - 1 HR
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13:50 - 15:50	TRAINING 3: JOHN MCLENNAN, UNIVERSITY OF UTAH DRILLING, RESERVOIR CHARACTERIZATION, AND FRACTURING IN GEOTHERMAL SETTINGS
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15:50 - 16:10	COFFEE BREAK - 20 MIN
16:15 - 20:00	WELCOME DINNER



INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 2
IGSEVENT.ORG

8 NOVEMBER 2022, TUESDAY

6:30 - 7:00 **ONSITE REGISTRATION**
7:00 - 7:10 **WELCOME BY COMMITTEE CHAIR**
7:10 - 7:25 **KEYNOTE ADDRESS BY KHALED FALEH, SAUDI ARAMCO**

7:25 - 9:25 **SESSION 1: DRILLING GEOMECHANICS IN NATURALLY FRACTURED RESERVOIRS**
Session Chairs : Abdulla Shehab, ADNOC & Boussad Beldjenna, ENAGEO/SONATRACH

Jian Huang, Total

Benchmark Analyses of Fracture and Fault Deformation within Porous Media

Xupeng He, KAUST

Fully Coupled Hydromechanical Modeling in Fractured Rocks Using Darcy-Brinkman-Biot Approach

Reynaldi Mikhael Chrislianto, Baker Hughes

New Drilling Insights from Well-Centric Geomechanical Analyses in Active-Collision Margin, Banggai Basin, Indonesia

Hussain AlBahrani, Saudi Aramco

Dynamic Wellbore Stability Management at the Junction of Numerical Geomechanics, Rig Hydraulics and Mud Rheology

Alexei Tchistiakov, Skolkovo Institute of Science and Technology

Application of Geomechanical Modelling for Wellbore Stability Analysis in Organic-Rich Shale Formations

Hana Almak, University of Khartoum

Impact of Damage Mechanics on Sand Production and Reservoir Formation Damage

9:25 - 9:35 **COMMITTEE AND SPONSOR RECOGNITION**
9:35 - 9:45 **GROUP PHOTO**
9:45 - 10:05 **COFFEE BREAK - 20 MIN**
10:05 - 10:50 **PRESIDENTS PANEL**



INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 2
IGSEVENT.ORG

8 NOVEMBER 2022, TUESDAY

10:50 - 12:50

SESSION 2: ROCK AND IN-SITU STRESS CHARACTERISATION

Session Chairs : Wes Martin, Schlumberger & Munir Aldin, MetaRock

Osman Hamid, Saudi Aramco

Assessment of Pore Collapse and Pore Throat Damage Mechanics During a Series of Loading and Unloading using Micro-CT Scan and Rock Mechanics Testing

Hamda Alshehhi, ADNOC

Stress Changes Impact on Reservoir Properties: Assessment of Stress Orientation and Twisting

Adam Bere, Rockfield

Geomechanical Modelling of Borehole Breakouts and Compaction Bands in High-porosity Sandstones

Peter Bautmans, Equinor

Shale Stability – A Discussion on Lab Strength Testing and Wellbore Stability Predictions

Marc C. Loken, RESPEC

Methodology for Determination of Anisotropic In Situ Stress and Principal Orthotropic Directions from Field Testing

Daniel Cabrera Sotelo, Universidad Nacional Autónoma de México

Geomechanics Scaling for Gas and Condensate Relative Permeabilities in Fractured Porous Rocks: High Pressure and Temperature Experimental Design

12:50 - 13:50

LUNCH - 1 HR

13:50 - 15:50

SESSION 3: 3D RESERVOIR GEOMECHANICS FOR FIELD DEVELOPMENT

Session Chairs : Israa Abu Mahfouz, KFUPM & Ankush Singh, ResFrac

Kan Wu, Texas A&M University

Geomechanical Modelling of Strain Responses Induced by Hydraulic Fracturing: Insights for Data Interpretation of Distributed Fibre Optic Strain Sensing Measurements

Safeya Alkatheeri, ADNOC

Stress Changes Impact on Reservoir Properties - Assessment of the Effective Fracture Permeability

Karsten Fischer, Schlumberger

Uncertainty Quantification from Full-Physics 3D Geomechanics Models

Michał Kępiński, AGH University of Science and Technology

3D Modelling Approach to Investigate Zechstein Stress Transition Zone – Case Study from Fore-Sudetic Monocline (Poland)

Ahmed Merzoug, University of North Dakota

Sensitivity Analysis of Well Placement Scenarios in the Bakken Petroleum System, Case Study: non-net pay reservoir

Ruqaiya Al Zadjali, Petroleum Development Oman

Geomechanical Integration Maximizes the Value for Polymer Full Field Decision for Clastic Reservoir Field in South of Oman

15:50 - 16:10

COFFEE BREAK - 20 MIN



INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 2
IGSEVENT.ORG

8 NOVEMBER 2022, TUESDAY

16:10 - 16:40

POSTER SESSION 1: NEW TECHNOLOGY

Session Chairs : Khalid Al Ramadan, KFUPM

STREAM 1

Billel Sennaoui, University of North Dakota

Reservoir Simulation Study and Optimizations of CO₂ Huff-n-Puff Mechanisms in Bakken Shale

Hany Gamal, Weatherford

Machine Learning Applications for Petroleum Geomechanics: An Overview for Achievements and Future Opportunities

Jose Maria Segura, REPSOL

Fracture Assessment from Well-Centred and Reservoir Scale Coupled Geomechanical Models

INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 3
IGSEVENT.ORG

9 NOVEMBER 2022, WEDNESDAY

SESSIONS 4 & 5 (CONCURRENT)

7:00 - 9:00

SESSION 4: DRILLING GEOMECHANICS

Session Chairs : Hussain Albahrani, Saudi Aramco & Marc Hetteema, EBN The Netherlands

Mohsen Talebkeikhah, Ecole Polytechnique

Experimental Investigation of Hydraulic Fracture Closure in a Porous Sandstone

Daria Ponomareva, Schlumberger

Superior Well Bore Quality Delivery Based on Geomechanics Analysis and Integrated Drilling Approach in Long Lateral Deep Gas Wells Across Heterogeneous Carbonate Multilayer Reservoir in One of the Most Challenging Geological Environment in Middle East

Abdulla Shehab, ADNOC

Stress Changes Impact on Reservoir Properties: Assessment of Rock Mechanics

Ahmed Baghdadi, Baker Hughes

Delivering Challenging Wells with Reduced NPT using Real-Time Geomechanics: A Middle Eastern Perspective

Jose Julian Guerra Aristizabal, Schlumberger

Assessing Failure Criteria in Carbonate Reservoirs Through Geomechanics Modeling of Underbalance Drilling

Franciscus Mulders, Lloyd's Register

Going Full Cycle in a Wellbore Stability Case Study: From Pre-Drill Analysis to Post-Drill Evaluation

9:00 - 9:20

COFFEE BREAK - 20 MIN

9:20 - 9:50

KEYNOTE ADDRESS BY ADAM DONALD, SCHLUMBERGER

7:00 - 9:00

SESSION 5: ENERGY STORAGE

Session Chairs : Kun Su, Totals Energies & Ausama Giwelli, CSIRO

Benoit Brouard, Brouard Consulting

Numerical Modeling of the Complex Behavior of Salt Caverns

Hippolyte Djizanne, Parc Technologique

Mechanical Stability of a Salt Cavern used for Hydrogen Storage

Adam Bere, Rockfield

Geomechanical Modelling of Salt Caverns under Operational Loading from Hydrogen Storage

Amer Alanazi, KAUST

Hydrogen Wettability of Basaltic Rocks for Underground Hydrogen Storage

Anna M. Stroisz, SINTEF Industry

Impact of Hydrogen on Rock Strength and Ultrasonic Velocity

Amer Alanazi, KAUST

Capillary Sealing Efficiency of Caprock: Implications for Hydrogen and Carbon-Dioxide Geo-Storage

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7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 3
IGSEVENT.ORG

9 NOVEMBER 2022, WEDNESDAY

SESSIONS 6 & 7 (CONCURRENT)

9:55 - 11:55

SESSION 6: STRUCTURAL GEOMECHANICS AND TECTONICS

Session Chairs : Michal Kępiński, PGNIG & Francis L. Elisabeth, Saudi Aramco

STREAM 1

Sam Green, Ikon Science Ltd

Compaction and Subsidence Geomechanics: A Case Study from the North Sea

Anindita Dash, KAUST

The Present-Day Stress Pattern in the Arabian Plate: Compilation of Additional Data to Augment the World Stress Map Database

KC See Toh, Occidental Petroleum Corporation

Sand Failure Analysis in Steam Flood Project

Sameeh Batarseh, Saudi Aramco

The Effect of Thermal Gradients on Formation Stability Due to Heterogeneity

Mark B. Gordon, Independent

Cenozoic Brittle Deformation In the Central Arabian Plate: Implications for the Tectonics of the Middle East

Mary G. Jubb, Occidental Petroleum Corporation

Structural Evolution of S-SE Abu Dhabi: Implications for Exploration and Development

9:55 - 11:55

SESSION 7: ARTIFICIAL INTELLIGENCE AND DATA SCIENCE IN GEOMECHANICS

Session Chairs : Mostafa Mobasher, NYU & Murtadha J. AlTammar, Saudi Aramco

STREAM 2

Mounir Belouahchia, AIQ

CNN Based Approach for Borehole Images Mechanical Interpretation

Matthew Blyth, Schlumberger

Geomechanical Feature Classification with a New Logging-While-Drilling Dual Ultrasonic Tool

Kun Su, TotalEnergies

Prediction of Log of Reservoir Rock Mechanical Properties using Machine Learning Approaches from Lab Tests on Cores and Well Logs

Mobarakeh Mohammadpour, Monash University

The use of Ultrasonic Data for Shear Wave Sonic Log Prediction Based on the Machine Learning Technique

Hany Gamal, Weatherford

Introducing Machine Learning Ensembled Model for Rock Strength Prediction of Complex Drilled Formations in Real Time

Rima Taqi Alfaraj, Saudi Aramco

Innovative Maximum Hole Diameter Prediction in Oil and Gas wells using Logging While Drilling data through Machine Learning



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7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 3
IGSEVENT.ORG

9 NOVEMBER 2022, WEDNESDAY

POSTER SESSION 2 & 3 (CONCURRENT)

12:00 - 12:30

**POSTER SESSION 2: PRODUCTION, DEPLETION AND COMPLETION
GEOMECHANICS PART 1**

STREAM 1

Session Chairs : Abbas Khasar, Baker Hughes

Murtadha Tammar, Saudi Aramco

Well Log Prediction using Deep Sequence Learning

Ahmed Elsayed Ahmed Abdelaal, KAUST

High-Density Geopolymer System for Oil Well Cementing

Jian Yang, China University of Petroleum

Third-order Padé Thermoelastic Constants of Solid Rocks

12:30 13:40

LUNCH - 1 HR 10 MIN

12:00 - 12:30

**POSTER SESSION 3: PRODUCTION, DEPLETION AND COMPLETION
GEOMECHANICS PART 2**

STREAM 2

Session Chairs : Mohammad H. Alqam, Saudi Aramco

Jose Julian Guerra Aristizabal, Schlumberger

Using Geomechanics Modelling and Rock Mechanical Testing for Sand Failure
Prediction in the Absence of Field Observations

Kevin Bisdom, Shell

Data-driven Early Warning System for Seal Integrity Loss Analysis: A Case Study

Osman Hamid, Saudi Aramco

Wellbore Stability Analysis using Elastoplastic and Thermo-elastoplastic Approaches



INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 3
IGSEVENT.ORG

9 NOVEMBER 2022, WEDNESDAY

SESSIONS 8 & 9 (CONCURRENT)

13:40 - 15:40

SESSION 8: IN-SITU STRESS ESTIMATE AND MODELLING

Session Chairs : Imene Ferhat, GOWell International & Yaser Zayer, Saudi Aramco

STREAM 1

Francis L. Elisabeth, Saudi Aramco

Pore Pressure Prediction and Optimum Mud Weight Selection in an Overpressure Complex Lithology - A case study

Saleh Al Hadarem, ADNOC

Changes Impact on Reservoir Properties- Assessment of Fault Seal and Caprock Integrity

Amir Ghadimipour, Baker Hughes

Advanced GeoMechanical Characterization and Downhole Stress Measurements to Evaluate the Accessibility of a Tight Shale Prospect: A North African Perspective

Seyed Mousa Mousavi Mirkalaei, Computer Modelling Group Ltd.

A New Approach for Stress Computation during Loading and Unloading in Modified Cam Clay Model

Redha Hasan Al Lawati, Schlumberger

Natural Fracture Characterization in Carbonate Reservoirs Using Borehole Images and 3d Sonic Imaging for Water Shutoff Operations

Jijun Miao, SimTech LLC

3D Hydraulic and Natural Fracture Characterization and Simulation

15:40 - 16:00

COFFEE BREAK - 20 MIN

13:40 - 15:40

SESSION 9: DRILLING GEOMECHANICS IN NATURALLY FRACTURED RESERVOIRS

Session Chairs : Safeya Tariq Alkatheeri, ADNOC & Murtada Aljawad, Saudi Aramco

STREAM 2

Christian Koller, TDE Digital GmbH

Determination of Geomechanical Rock Properties from Cuttings

Hernán Buijs, Wintershall Dea AG

Implementation of Physics-Based Hydraulic Fracturing Optimization Workflows as a Game-Changer Strategy to Unlock Tight Gas Reserves: A Deep Gas Abu Dhabi Case Study

Kaiming Xia, Saudi Aramco

A New Perforation Strategy for Fracturing Deep and Tight Gas Reservoirs

Yousif Al-Asadi, Schlumberger

Definition of Mud Weight Window Using 3D Numerical Models for Drilling Through Shaley Formations in Rumaila Field – Southern Iraq

Arpita P. Bathija, Aramco Americas

Advanced Performance Evaluation of Cement at Reservoir Conditions

Matteo Cusini, Lawrence Livermore National Laboratory

Poromechanical Simulation of Faulted and Fractured Natural Formations

INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 3
IGSEVENT.ORG

9 NOVEMBER 2022, WEDNESDAY

POSTER SESSION 4 & 5 (CONCURRENT)

16:00 - 17:10

POSTER SESSION 4: WELLBORE INSTABILITY

Session Chairs : Juan Chavez Florez, ProdEnhance

STREAM 1

Ammar Qatari, Saudi Aramco

A Workflow to Estimate Critical Drawdown Pressure Utilizing 1-D Geomechanics modelling

Juan Chavez, ProdEnhance

Understanding Casing Deformation After Fracturing: A Holistic Data Analysis in Oman

Eman Abdullah Alabdulmuhsin, Baker Hughes

Impact of Geology on Geomechanical Modelling Applications in Carbonate Reservoirs

Hamda Alshehhi, ADNOC

Avoiding Losses and Wellbore Instability for a Giant Carbonate Field in UAE – Geomechanical Modelling to Reduce NPT

Sameeh Batarseh, Saudi Aramco

The Effect of Heat on Formation Stability

Dheeraj Upreti, Baker Hughes

Managing Wellbore Stability in Challenging Environment of Extended Reach Drilling in Kuwait – Mitigations and Lessons Learnt

Subrata Chakraborty, ADNOC

Integrated Natural Fracture Characterization Techniques to Develop a 3D Fracture Model for a Thamama Reservoir in a Giant Onshore Field In UAE.

16:00 - 16:40

POSTER SESSION 5: SANDING AND DEBRIS PRODUCTION

Session Chairs : Danyah Alghmgham, NESR

STREAM 2

Abbas Khaksar, Baker Hughes

Time to “Auto-Pack”, The Use of Geomechanical Sand Volume Quantification in Sand Screen Selection

Abbas Khaksar, Baker Hughes

In Search of Reliable Simple Cut-Offs for Sanding Assessment and Sand Control Decisions

Osman Hamid, Saudi Aramco

The Critical Roles of Geomechanical Analysis During Exploration Phase

INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 4
IGSEVENT.ORG

10 NOVEMBER 2022, THURSDAY

SESSIONS 10 & 11 (CONCURRENT)

7:00 - 9:00

SESSION 10: SHEAR PHYSICS AND FRICTIONAL DYNAMICS

Session Chairs: Yossef Hatzor, BGU & Tegwyn Perkins, SPWLA

Satya Perumalla, Baker Hughes

A New Method of Integrating Rock Physics and Geomechanics for Simulating Deformable and Permeable Behaviour of Tight Carbonate for Optimised Reservoir Development

Giulio Di Toro, University of Padua

Rock Friction during Earthquakes: Disputes and Future Trends

Wei Wu, Nanyang Technological University

Characterization of Interseismic Creep of Granite Fractures During Fluid Injection

Yossef H. Hatzor, Ben-Gurion University of the Negev

Discontinuity Roughness and Sliding Instability: Field and Laboratory Observations

Yuting Yang, China University of Petroleum

Experimental Study of the Influence of the Degree of Hydration on Microstructure and Ultrasonic Experimental Analysis in Shale

Giovanni Grasselli, University of Toronto

Mapping Fracture Network Complexity in Hydraulically Fractured Shale Rock

9:00 - 9:20

COFFEE BREAK - 20 MIN

9:20 - 9:50

KEYNOTE ADDRESS BY MAZEN AL OMARI, NESR

7:00 - 9:00

SESSION 11: HYDRAULIC FRACTURING

Session Chairs: Hamda Ahmed Alshehhi, ADNOC & Igor Faoro, Stratum Reservoir

Mostafa Mobasher, NYU Abu Dhabi

Quantitative Analysis of Energy Dissipation Mechanisms in Fluid Driven Fracturing

Damian San Roman Alerigi, Saudi Aramco

Modeling the Geomechanics of High-power Laser Perforation

Gallyam Aidagulov, Schlumberger

Theoretical and Experimental Comparison Study of Weak Point Shape Effect on Openhole Fracturing Pressure

Gehad Mahmoud Hegazy, The American University in Cairo

Improving Fracturing Efficiencies Throughout U Well New Applications

Murtadha Tammar, Saudi Aramco

Estimating Maximum Horizontal Stress Magnitude Based on Borehole Breakout Geometry – A Semi-analytical Poroelastic Model

Raphael Altman, Schlumberger

Analytical and Numerical Geomechanical Modeling of Stimulation and Production from Tight Naturally Fractured Reservoirs

INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 4
IGSEVENT.ORG

10 NOVEMBER 2022, THURSDAY

SESSIONS 12 & 13 (CONCURRENT)

9:55 - 11:55

SESSION 12: ARTIFICIAL INTELLIGENCE AND DATA SCIENCE IN GEOMECHANICS

Session Chairs: Osman Hamid, Saudi Aramco & Ahmed Ibrahim, KFUPM

Zainab Ibrahim, Saudi Aramco

High Resolution Mechanical Stratigraphy of Siliciclastic Reservoirs: Non-Destructive Testing and Machine Learning Approach

Murtadha J. AlTammar, Saudi Aramco

Prediction of Borehole Caliper Log Using Machine Learning for Multi-Stage Frac Completions

Ahmed Elsayed Ahmed Abdelaal, KAUST

Drilling Data-based approach for Pressure Gradient Estimation using Random Forest

Damian San Roman Alerigi, Saudi Aramco

Predicting Multiphysics Rock Properties from Hyperspectral Measurements using Machine Learning

Ahmed Gowida, KFUPM

Determination of Safe Mud Window Using Machine Learning

Rima Taqi Alfaraj, Saudi Aramco

Application of Machine Learning for Real-Time Prediction of Sonic and Density Well Logs Using Surface Drilling Parameters and Gamma Ray

STREAM 1

9:55 - 11:55

SESSION 13: CO2 SEQUESTRATION AND UTILIZATION

Session Chairs: Elsa Maalouf, AUB & Jose Maria Segura Serra, REPSOL

Kamel Bennaceur, SPE President

Opportunities and Challenges Related to CCUS in the Energy Transition

Santiago Pena Clavijo, KAUST

Reaction-Assisted Fracture Propagation: A Coupled Phase-Field and Reactive-Transport Approach

Seyedbehzad Hosseinzadehsadati, Technical University of Denmark

Thermo-mechanical Simulation of CO2 Injection in a North Sea Depleted Gas Condensate Reservoir

Mohammad Reza Hajiabadi, Technical University of Denmark

Strain-free CO2 Injection in Highly Deformable Formations

Kevin Bisdom, Shell

Geomechanical Fault Integrity Screening for CO2 Sequestration

Saleh A. Bawazeer, Umm Al-Qura University

Toward Understanding Capillary Residual Entrapment of H2 and CO2 in Reservoir Rock

STREAM 2



INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 4
IGSEVENT.ORG

10 NOVEMBER 2022, THURSDAY

POSTER SESSION 6 & 7 (CONCURRENT)

12:00 - 12:30 **POSTER SESSION 6: DIGITAL ROCK AND ROCK PHYSICS PART 1**

Session Chairs: Julian Guerra, Schlumberger

STREAM 1

Xiyang Xie, SINTEF Industry

Wave Travel Time Governed by the Lab-Quantified Anisotropic Third-Order-Elastic Model

Mahmoud Mowafi, KAUST

The Behaviour of Pore Size Distribution under Reservoir Confining Stress of Mercury Intrusion Capillary Pressure

Haidi Yang, China University of Petroleum

Acoustoelastic FD Simulation of Elastic Wave Propagation in Prestressed Media

12:30 - 13:30 **LUNCH - 1 HR**

12:00 - 12:30 **POSTER SESSION 7: DIGITAL ROCK AND ROCK PHYSICS PART 2**

Session Chairs: Dee Moronkeji, ApacheCorp

STREAM 2

Rafał Skupio, Oil and Gas Institute - National Research Institute

Geomechanical and X-Ray Tomography Tests of Coal Samples

Peter Schutjens, Shell

The Contribution of Rock Physics and Geomechanics to Reservoir Stimulation by Water Injection: An Example from a North Kuwait Carbonate Reservoir

Eudes S. Muniz, Schlumberger

New Laboratory Workflow to Evaluate Shale Time-Dependent Wellbore Instabilities

INTERNATIONAL GEOMECHANICS SYMPOSIUM

7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 4
IGSEVENT.ORG

10 NOVEMBER 2022, THURSDAY

SESSIONS 14 & 15 (CONCURRENT)

13:30 - 15:30

SESSION 14: CO2 SEQUESTRATION AND UTILIZATION

Session Chairs: Nihal Darraj, Imperial College & Ahmed Bahgat, EXLOG

Peter Shotton, TotalEnergies

Aramis CO2 Storage Case Study – A Geomechanical Assessment of Containment

Ankush Singh, ResFrac Corporation

Understanding the True Injection Capacity and Technical Risks of Potential CO2 Storage Sites Through Fully Coupled Multiphase Fluid Flow, Geomechanics and Hydraulic Fracture Simulations

Frédéric Amour, Technical University of Denmark

Characterising the Seal and Reservoir Properties to Assess CO2 Containment in a Depleted Chalk Reservoir in the Danish North Sea

Billel Sennaoui, University of North Dakota

Pore-Scale and Core-Scale Laboratory Investigations to Understand the Mechanisms of Supercritical Cyclic Gases (CO2, C2, C3) EOR under Immiscible and Miscible Conditions in Unconventional Reservoirs (Three Forks Formations)

Ausama Giwelli, CSIRO Energy

Montney Shale Stimulation with Supercritical CO2: Ultrasonic Monitoring of Fracture Propagation in the Laboratory

Mohammad S Badghaish, The Pennsylvania State University

Impact of Solubility on Reservoir Properties at the Gas/Brine Interface of Geologic Carbon Sequestration Projects using Flue Gas Injections

15:30 - 15:50

COFFEE BREAK - 20 MIN

13:30 - 15:30

SESSION 15: INDUCED SEISMICITY/FAULTS HYDROMECHANICAL BEHAVIOUR

Session Chairs: Hamid Pourpak, TotalEnergies & Wael Ziadat, Weatherford

Frédéric Bourgeois, TotalEnergies

A Casing String Integrity Study and Fault Slippage

Rafael Deptulski, TotalEnergies

Numerical Investigation of the Effect of Fault Geometry and Fluid Injection Location on Induced Seismicity

Jose Maria Segura, Repsol

Induced Seismicity Evaluation in Geothermal Projects Exploration

Amade Pouya, Ecole des Ponts Paris Tech

Geomechanical Approach of Induced Seismicity using Cohesive Zone Elements

Alissar Yehya, American University of Beirut

Effect of Fault Properties on the Risk of Induced Seismicity Caused by Hydraulic Fracturing

John Omovie, Maverick Resources

An Investigation of Drained/Undrained Mechanical Properties for Unconventional Low Permeability Reservoirs

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7–10 NOVEMBER 2022 | ABU DHABI, UAE (SOFITEL HOTEL)

DAY 4
IGSEVENT.ORG

10 NOVEMBER 2022, THURSDAY

POSTER SESSION 8 & 9 (CONCURRENT)

15:50 - 16:50

POSTER SESSION 8: 3D RESERVOIR GEOMECHANICS FOR FIELD DEVELOPMENT

Session Chairs: Murtada Aljawad, KFUPM

Mohammad H. Alqam, Saudi Aramco

Development of A Novel Procedure to Identify Organic-Rich Shale in Unconventional Formations.

Rimsha Rais, SPWLA IGUP Student Chapter Pakistan

Seismic Interpretation and Petrophysical Analysis of JABO-01 and JABO-05 Well, Badin Block, Lower Indus Basin, Pakistan

Elsa Maalouf, American University of Beirut

Effect of Temperature on the Mechanical and Petrophysical Properties of Rocks from Southern Lebanon

Sara Makki, American University of Beirut

The Fate of Hydraulic Fracturing Fluid in the Subsurface

Yaser Alzayer, Saudi Aramco

Reducing Uncertainty in Fault Interpretation Using Forward Geomechanical Modelling

16:55 - 17:15

WRAP UP BY EXECUTIVE COMMITTEE CO-CHAIRS - 20 MIN

15:50 - 16:50

POSTER SESSION 9: ROCK MEASUREMENT AND CHARACTERIZATION

Session Chairs: Aurifullah Vantala, ADNOC

Eziulo Ibe, Baker Hughes

Comparative Assessment of the Mechanical Properties of Rocks for Construction and Foundations

Qasim Sahu, Saudi Aramco

Thermal Impact on Sandstone's Physical and Mechanical Properties

Andreas Nicolas Berntsen, SINTEF Industry

Scale Dependency of Wormholes in Matrix Acidizing

Ximena Rodríguez Flórez, Federal University of Pernambuco

Natural Fracture Flow – Mechanical and Chemical Degradation Effects on Carbonates

Nanthakumar Rajaiah, Schlumberger

Reducing Geomechanical Model Uncertainty through Multiple Trajectory Stability Analysis using Vertical and Highly Deviated Wells

Regina Lakusheva, KAUST

Understanding the Mechanical Property Heterogeneity of Immature Source Rocks