

The Integrated Event
for Unconventional
Resource Teams



UNCONVENTIONAL RESOURCES TECHNOLOGY CONFERENCE

URTeC
FUELED BY SPE • AAPG • SEG

Sponsoring
Organizations:



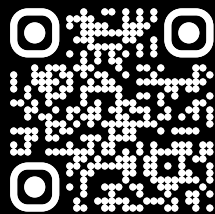
AAPG



Endorsing
Organizations:



Conference Announcement



Register Now
Save \$130 by 22 May

22-24 June 2026
Houston, Texas

URTeC.org



Sponsors (as of 1 April)

Diamond



Emerald



Sapphire



Opal



Topaz



Media/Supporting Organizations



Table of Contents

Monday Highlights

⊗ Opening Plenary Session 7
 Panels and Special Sessions 8-9

Tuesday Highlights

Special Sessions 10

Wednesday Highlights

Special Sessions 11

Topical Luncheons 12-13

Networking Opportunities 14

Short Course 14

New Technology Showcase 15-16

Technical Program

Technical Program at a Glance 17-18
 Monday 19-22
 Tuesday 23-27
 Wednesday 28-30
 Posters 31
 Alternates 32-35

Exhibition

Exhibition Highlights 36
 Exhibitors 37
 Exhibition Floor Plan 38

Register and Travel

Registration Information 39-40
 Accommodations 41
 Travel and Transportation 42





You're Invited – Letter from the Chairs

Dear Friends,

We extend a warm welcome to you to URTeC 2026, where we showcase how the energy industry is driving innovation in unconventional reservoirs and expanding its global influence. These advancements are not only enhancing resource development but are also being adapted to support emerging energies both in the United States and internationally. The expertise gained through oil and gas exploration is now shaping a dynamic environment in which new energy solutions can thrive.

This year's program is exceptionally diverse and compelling, reflecting the industry's evolving landscape. With over 300 oral presentations, alternate papers, and student poster presentations the focus remains on fostering collaboration and integration across subsurface G&G disciplines, geomechanics, formation evaluation, wellhead design, completion design, enhanced recovery, production forecasting, and crucial environmental, social, and corporate governance factors.

The conference will open with the Plenary Session, a key highlight that will explore how shale is entering a pivotal new phase shaped by advancing technology, evolving strategies, and the next chapter in unconventional. Speakers will reflect on past achievements, evaluate the current state of the industry, and envision its future trajectory. This year we will again have a dedicated theme on emerging clean technologies, highlighting how unconventional reservoirs are contributing to and benefiting from the evolving landscape of next generation energy solutions. Attendees may choose from 7 special sessions, 7 panel sessions, and 4 topical lunch presentations.

In the exhibition hall, companies, organizations, and educational institutions will present groundbreaking research and technologies. The New Technology Showcase (formerly "U-Pitch") will explore the latest innovations driving efficiency and environmental sustainability across the field.

As we continue to build a strong foundation for energy transformation, we recognize the industry's resilience and adaptability. Looking ahead, the opportunities for progress and innovation are greater than ever. This year's program will reflect our ongoing commitment to achieving greater efficiency and unlocking untapped resource potential.

URTeC remains the premier platform where professionals in unconventional resources from around the world come together to broaden perspectives through innovative approaches and technologies. This collaborative environment not only supports the development of effective, synergistic teams but also strengthens long-term corporate success, ultimately leading to better outcomes.

We are enthusiastic about the opportunities that lie ahead and are confident that URTeC 2026 will offer valuable insights and meaningful connections. We hope the conference inspires you and reinforces your commitment to the future of energy.

Sincerely,
Technical Program Co-Chairs



Isaac Aviles
SPE Program Chair
SLB



Katerina Yared
AAPG Program Chair
3M



Andrew Lewis
SEG Program Chair
Fairfield
Geotechnologies



Ali Sloan
AAPG Program Chair Elect
Four J Resources

Technical Program Committee

Theme Chairs

- **Matthew Poole**, Shell
- **Luis Baez**, TACHYUS
- **Nuny Rincones**, ConocoPhillips
- **Craig Cipolla**, ResFrac Corporation
- **Alejandro Lerza**, Chevron
- **Scott Birkhead**, Petrobrane Petrophysical Consulting
- **Haijing Wang**, Chevron
- **Yulia Faulkner**, SM Energy
- **Jose Delgado**, ConocoPhillips
- **Orlando Teran**, ConocoPhillips
- **Dave Hume**, University of Houston
- **Marianne Rauch**, Lumina Geophysical
- **Andrew Keene**, SM Energy
- **Ruiting Wu**, Chevron
- **Fatick Nath**, Texas A&M International University
- **Qin Ji**, Oxy
- **Abdul Muqtadir Khan**, SLB
- **Jennifer Adams**, Patina Energy
- **Wei Wang**, ConocoPhillips
- **Jason Jweda**, ConocoPhillips
- **Sebastien Matringe**, Chevron
- **Bin Yuan**, China University of Petroleum
- **Utkarsh Sinha**, Xecta Digital Labs
- **Yongshe Liu**, ConocoPhillips
- **Hosein Kalaei**, ConocoPhillips
- **Vence Sie**, SLB
- **Deniz Paker**, Texas A&M University
- **Alexsandra Martinez**, DeGolyer and MacNaughton
- **Susan Howes**, Subsurface Consultants & Associates, LLC
- **Yuguang Chen**, Chevron
- **Autumn Shannon**, Chord Energy
- **Birol Dindoruk**, Texas A&M University
- **Denise Benoit**, XGS Energy
- **Rosa Aguilar**, Repsol
- **Wahid Rahman**, Geoscience and Petroleum Research, Inc.
- **Baosheng Liang**, Diamondback Energy
- **Nuny Rincones**, ConocoPhillips
- **Sama Morsy**, ResFrac Corporation
- **Hao Sun**, Chevron

Plenary Session Chairs

- **Jay Stratton**, Retired
- **Doug Valleau**, Strategia Innovation and Technology Advisors, LLC
- **Skip Rhodes**, Emergent Solutions
- **Ali Sloan**, Four J Resources
- **Amit Singh**, Chevron

Panel Sessions, Special Sessions, Topical Luncheons Chairs

- **Susan Nash**, AAPG
- **Denise Benoit**, XGS Energy
- **Hosein Kalaei**, ConocoPhillips
- **Matthew Poole**, Shell
- **Fatick Nath**, Texas A&M International University
- **Selin Erzeybek Balan**, Novi Labs
- **Jiehao Wang**, Chevron
- **Utkarsh Sinha**, Xecta Digital Labs
- **Deepak Devegowda**, University of Oklahoma

New Technology Showcase Chairs

- **Susan Nash**, AAPG
- **David Hume**, University of Houston

Awards Chairs

- **Haijing Wang**, Chevron
- **Deniz Paker**, Texas A&M University
- **Fatick Nath**, Texas A&M International University

Posters-Student Sessions

- **Katerina Yared**, 3M
- **Hosein Kalaei**, ConocoPhillips
- **Dave Hume**, University of Houston



Conference at a Glance

Sunday, 21 June

8:00 am–5:00 pm

Short Course 01: Theory and Value of Geophysics in CCUS, and Energy Exploration and Development (SEG)
 Registration

9:00 am–5:00 pm

Monday, 22 June

6:30 am–5:30 pm

8:15 am–10:00 am

Registration

Opening Plenary Session: Shale at the Crossroads: Technology, Strategy, and the Next Chapter for Unconventionals

10:00 am–11:00 am

Refreshment Break

10:00 am–6:00 pm

Exhibition

10:00 am–6:00 pm

Core Exhibits

10:45 am–12:05 pm

Technical Sessions

10:45 am–12:05 pm

Panel Session: Physics-Informed Machine Learning (PIML) — Bridging Physics, Data, and Digital Adoption in Unconventional Reservoirs
Topical Luncheon: Discovering and Commercializing Unconventional Reservoir Plays Larger and More Prolific than the Permian Basin and Marcellus Shale—The Promise of International Unconventionals

12:15 pm–1:20 pm

Topical Luncheon: Tracking Ancient Groundwater on Mars: The Curiosity Rover's Exploration of Decameter-Scale Boxwork Patterns

1:30 pm–4:40 pm

Technical Sessions

1:30 pm–2:50 pm

Special Session: Collaboration Success Stories: How Collaborations Build Technology That Shape Our Industry

1:30 pm–2:50 pm

Panel Session: Theme 9: Lithium and Critical Mineral Extraction: Where is it Heading?

2:00 pm–2:30 pm

New Technology Showcase

Panel: From Pilot to Profit: Navigating the Tech Adoption Gauntlet

2:30 pm–3:00 pm

New Technology Showcase
Panel: The Edge of Innovation: The Women Driving Energy Tech's Next Wave

2:50 pm–3:30 pm

Refreshment Break

3:00 pm–5:00 pm

New Technology Showcase: Individual Presentations

3:20 pm–4:40 pm

Panel Session: Inventory and Capital Allocation

4:40 pm–6:00 pm

Opening Reception

Tuesday, 23 June

7:00 am–5:30 pm

8:30 am–6:00 pm

8:30 am–6:00 pm

8:50 am–12:05 pm

8:50 am–10:10 am

Registration

Exhibition

Core Exhibits

Technical Sessions

Special Session: Engineering the Future of UAE Unconventionals: Lessons from ADNOC's Dyab Journey

Refreshment Break

10:00 am–11:00 am

Special Session: Beyond Assumed Fracture Geometry: Insights from Fracture Surveillance

10:45 am–12:05 pm

Topical Luncheon: From Wells to Workflows: Agentic AI as the Next Operating Partner

12:15 pm–1:20 pm

Topical Luncheon: Evolving Issues in Produced Water Management in Texas

12:15 pm–1:20 pm

Technical Sessions

1:30 pm–4:40 pm

Special Session: Best of SPWLA
New Technology Showcase
Panel: The Pilot Bridge: Strategic Onramps to Commercial Adoption

1:30 pm–2:50 pm

2:00 pm–2:30 pm

New Technology Showcase
Panel: Foundation First: Building the Data Architecture That Actually Powers AI

2:30 pm–3:00 pm

Refreshment Break

2:50 pm–3:30 pm

New Technology Showcase: Individual Presentations

3:00 pm–5:00 pm

3:20 pm–4:40 pm

Special Session: Best of IOR
 Networking Reception

4:40 pm–6:00 pm

Wednesday, 24 June

7:00 am–12:00 pm

8:30 am–1:30 pm

8:30 am–1:30 pm

8:50 am–12:30 pm

8:50 am–10:10 am

Registration

Core Exhibits

Exhibition

Technical Sessions

Special Session: EOR for Shale Plays

10:00 am–11:00 am

Refreshment Break

10:45 am–12:30 pm

Special Session: Agents in the Trenches: Real-World Lessons from Autonomous Subsurface Workflows

Opening Plenary Session

Shale at the Crossroads: Technology, Strategy, and the Next Chapter for Unconventionals

Date: Monday, 22 June
Time: 8:15 am–10:00 am
Location: George R. Brown Convention Center
Moderator: TBD
Fee: Included with Registration

Global energy demand is surging, driven by both modernizing economies to overcome energy poverty and the exponential rise of AI, with its vast data center power needs. For industry leaders, the question is no longer if the shale revolution continues, but how will it adapt, scale, and thrive to meet the demands of a rapidly shifting marketplace. In this dynamic opening plenary, industry leaders from technology, operations, and finance will share insights on unlocking new potential, extending reserve life, and delivering lasting value to shareholders and stakeholders alike. This conversation will set the tone for the conference, showing how innovation, collaboration, and bold vision can ensure tight oil and shale gas remain at the forefront of energy security, economic growth, and global progress.



Bob Fryklund

Vice President and Chief Strategist, Upstream Energy Group at S&P Global Commodity Insights



Khaled Abdul Monem Al Kindi

Senior Vice President, Drilling and Wells Services, ADNOC - Upstream



Bob Brackett

Managing Director and Senior Research Analyst, Bernstein
(AB/AllianceBernstein)





Monday Highlights

Panel Session: Physics-Informed Machine Learning (PIML) – Bridging Physics, Data, and Digital Adoption in Unconventional Reservoirs

Date: Monday, 22 June
Time: 10:45 am– 12:05 pm
Location: George R. Brown Convention Center
Moderator: Utkarsh Sinha, Senior Research Engineer, Xecta Digital Labs
Fee: Included with registration

Physics-Informed Machine Learning (PIML) represents one of the most transformative developments in the upstream digital ecosystem—enabling the integration of governing physics with data-driven models through hybrid modeling frameworks, physics-constrained learning, and approaches such as PINNs and operator-learning methods. This panel session brings together thought leaders from academia, digital technology providers, and major operating companies to explore how these hybrid physics-based AI models are redefining reservoir analysis, production optimization, and decision-making in unconventional assets.

Speakers:

- **Yuxing Ben**, ML Lead, Oxy Applied AI Center of Excellence
- **Bo Hu**, Director of Data Science and AI, ConocoPhillips
- **Sanjay Paranj**i, Chief Executive Officer, Xecta Digital Labs
- **Yuguang Chen**, Principal Reservoir Engineer, Chevron

Special Session: Collaboration Success Stories: How Collaborations Build Technology That Shape Our Industry

Date: Monday, 22 June
Time: 1:30 pm–2:50 pm
Location: George R. Brown Convention Center
Moderator(s): Deepak Devegowda, Professor and Mewbourne Chair of Petroleum Engineering, University of Oklahoma
Fee: Included with registration

Breakthrough technologies rarely emerge in isolation. This session brings together leaders from industry and academia to share real-world success stories where collaboration accelerated innovation and impact. The panel will explore how partnerships were formed, the process of delivering fundamental research, and how it all aligns with successful field application. Attendees will gain insight into what makes collaborations work, lessons learned from joint projects, and how cross-sector teamwork continues to shape the future of our industry.

Speakers:

- **Kent Newsham**, Retired Fellow, Oxy
- **Son Dang**, Assistant Professor, University of Oklahoma
- **Zoya Heidari**, Professor, University of Texas
- **Chris Clarkson**, Professor, University of Calgary

Monday Highlights

Panel Session: Theme 9: Lithium and Critical Mineral Extraction: Where is it Heading?

Date: Monday, 22 June
Time: 1:30 pm–2:50 pm
Location: George R. Brown Convention Center
Moderator: Selin Erzeybek Balan, Customer Success Advisor, Novi Labs
Fee: Included with registration

Lithium and critical mineral extraction from unconventional resources is gaining increasing attention across the energy industry. This panel will bring together experts from industry and research to discuss the current status of lithium and critical mineral extraction, emerging technologies, and future growth opportunities. The discussion will also highlight key technical and economic challenges and explore potential solutions for advancing lithium and critical mineral recovery.

Speakers:

- **Wambui Mutoru**, Asset Manager - Southwest Arkansas Lithium, Equinor
- **Keju Yan**, R&D Fellow and Geochemist, Pacific Northwest National Lab
- **Hermann Lebit**, Principal, Alma Energy

Panel Session: Inventory and Capital Allocation

Date: Monday, 22 June
Time: 3:20 pm–4:40 pm
Location: George R. Brown Convention Center
Moderator: Sean Kimiagar, Director of Technical Advisory, Energy Domain
Fee: Included with registration

As unconventional plays mature, remaining Tier 1 inventory and subsurface risk are increasingly shaping capital allocation and asset valuations. This panel will explore how operators, investors, and bankers evaluate inventory depth, technical risk, and basin opportunities when making drilling and M&A decisions.

Speakers:

- **Melissa Folz**, Managing Director, Chord Energy
- **Richard Mercer**, Vice President, Houlihan Lokey
- **Harris Cander**, Former Vice President, Marathon Oil





Tuesday Highlights

Special Session: Engineering the Future of UAE Unconventionals: Lessons from ADNOC's Dyab Journey

Date: Tuesday, 23 June
Time: 8:50 am–10:10 am
Location: George R. Brown Convention Center
Moderator: Matthew Poole, Senior Exploration Geoscientist, Shell
Fee: Included with registration

A focused look at ADNOC's journey in developing the Dyab unconventional play, highlighting key learnings, the adoption of proven industry best practices, and the performance gains guiding the future of UAE unconventional development.

Speakers:

- **Abdulla Al Blooshi**, Vice President, Unconventional Subsurface, ADNOC
- **Tarik Itibrouit**, Vice President Frac and Completions, ADNOC
- **Felipe Silva**, Vice President UC Production and Development, ADNOC

Special Session: Beyond Assumed Fracture Geometry: Insights from Fracture Surveillance

Date: Tuesday, 23 June
Time: 10:45 am–12:05 pm
Location: George R. Brown Convention Center
Moderator: Jiehao Wang, Geomechanics Specialist, Chevron
Fee: Included with registration

Increasingly, fracture surveillance reveals subsurface behavior that is far more complex than we often anticipate, forcing a reexamination of how hydraulic fracturing actually behaves. This special session brings together three integrated case studies that leverage advanced fracture surveillance—spanning slant-well cores, fiber-optic measurements, and tracer-based analysis—to directly reveal fracture growth, proppant placement, and flow pathways. These presentations offer data-driven insights into fracture complexity and connectivity, with important implications for stimulation design, interpretation, and development strategy.

Speakers:

- **Lijun Mu**, Chief Technical Expert, CNPC Changqing Oilfield Company
- **Wei Yu**, Chief Technology Officer, SimTech
- **Ge Jin**, Associate Professor, Colorado School of Mines
- **Chris Fredd**, President and Co-Founder, Ignovis

Special Session: Best of SPWLA

Date: Tuesday, 23 June
Time: 1:30 pm–2:50 pm
Location: George R. Brown Convention Center
Moderator: Katerina Yared, Global Portfolio Leader; Oil and Gas, Geothermal and Carbon Capture, 3M
Fee: Included with registration

The Society of Petrophysicists and Well Log Analysts (SPWLA) is a non-profit organization dedicated to the advancement of petrophysics, formation evaluation, and log and core measurements for hydrocarbon, mineral, water, and geothermal resources, alongside Carbon Capture, Utilization, and Storage (CCUS). SPWLA is proud to showcase a selection of top-rated papers from its 67th Annual Symposium (Conroe, TX, 2026). These presentations highlight emerging technologies and techniques tailored to the unique challenges operators encounter in unconventional resources, from tight oil and shale formations.

Speaker:

- **Vanessa Simões**, Senior Data Scientist, SLB
- **Sheng Peng**, Research Associate Professor, The University of Texas at Austin
- **Max Triana**, PhD Candidate, Rice University

Wednesday Highlights

Special Session: EOR for Shale Plays

Date: Wednesday, 24 June
Time: 8:50 am–10:10 am
Location: George R. Brown Convention Center
Moderator: Doug Valleau, President, Strategia Innovation and Technology Advisors, LLC
Fee: Included with registration

Recovery factors in shale reservoirs remain low, creating strong incentives to develop enhanced oil recovery (EOR) techniques tailored to ultra-low permeability systems. This session examines emerging EOR strategies for unconventional plays, including CO₂ huff-and-puff and cyclic gas injection, surfactant-assisted recovery, and wettability alteration approaches designed to improve imbibition and oil mobility in nanoporous rock. Presentations will highlight field pilots and case studies from major shale basins, laboratory investigations of key chemical mechanisms, and modeling of multiphase flow in fractured shale systems. The session will also explore hybrid approaches combining CO₂ and chemical EOR, with attention to operational, economic, and CCUS integration opportunities.

Speakers:

- **Tongwei Zhang**, Research Scientist, Bureau of Economic Geology
- **Johannes Alvarez**, Enhanced Oil Recovery Manager Applied Technology Solutions, Shale & Tight Business, Chevron
- **Xueying Xie**, Principal and Director of Unconventional Technology Simulation and Recovery Process Design, Oxy

Special Session: Agents in the Trenches: Real-World Lessons from Autonomous Subsurface Workflows

Date: Wednesday, 24 June
Time: 10:45 am–12:30 pm
Location: George R. Brown Convention Center
Moderator(s): Susan Nash, Director of Innovation and Emerging Science and Technology, AAPG
Fee: Included with registration

This session moves beyond the general “AI hype” to discuss the specific, high-stakes realities of Agentic AI in the oilfield. Featuring leaders from i2k Connect, Boundary RSS, Petrabytes, and SLB, the panel will provide a direct look at how autonomous agents are currently being used to solve the “data chaos” problem—from SLB’s Tela assistant and i2k’s automated extraction of buried knowledge to Petrabytes’ cloud-to-edge data governance and Boundary RSS’s AI-enhanced 3D subsurface models. The discussion will bypass generic clichés to focus on the technical “must-haves”: the specific sensor data, real-time integrity checks, and specialized data mesh required to transition from simple chatbots to agents that can geosteer a well or optimize a reservoir. Join us to learn where these autonomous workflows are delivering massive cost savings today and where the industry still needs to proceed with caution.

Speakers:

- **John Boden**, Chief Executive Officer, i2K Connect
- **Holden Nash**, Founder, Boundary RSS
- **Amir Hermes**, New Energy Business Development Manager, SLB
- **Sashi Gunturu**, Chief Executive Officer, Petrabytes



Topical Luncheons

Tracking Ancient Groundwater on Mars: The Curiosity Rover's Exploration of Decameter-Scale Boxwork Patterns

Date: Monday, 22 June
Time: 12:15 pm–1:20 pm
Location: George R. Brown Convention Center
Moderator: Fatick Nath, Assistant Professor of Petroleum Engineering, Texas A&M International University
Fee: \$80



Speaker:
Kirsten Siebach
 Associate Professor,
 Rice University

After over 14 years on Mars, the Curiosity rover has climbed ~1000 meters of sedimentary deposits in Gale Crater to the elevation of a striking boxwork pattern that helped motivate the Gale Crater landing site. In this interval, wide, road-like linear ridges with dark central lines intersect at right angles around wind-eroded, sand-filled depressions ~10 meters across. Before landing, we interpreted the ridges as fracture haloes, implying a sequence of formation steps: (1) deposition, (2) lithification, (3) fracturing of the host rock, which may have been contemporaneous with (4) fluid flow through the fractures under sufficient pressure to cause the fluid to percolate into ~2-3 meters of rock on either side, creating a cementation or alteration zone around the fracture, and (5) preferential eolian erosion of weaker zones in the rock. Now, after eight months on the ground exploring these features, we stand by the general interpretation of the ridges as fracture alteration zones but also have more detailed questions! I will share the images from Mars, showing fracture hardening, fracture alteration zones, and evidence for groundwater flow.

Discovering and Commercializing Unconventional Reservoir Plays Larger and More Prolific than the Permian Basin and Marcellus Shale – The Promise of International Unconventionals

Date: Monday, 22 June
Time: 12:15 pm–1:20 pm
Location: George R. Brown Convention Center
Moderator: Denise Benoit, Chemist, Geothermal Fluid Design Manager, XGS Energy
Fee: \$80



Speaker:
Greg Leveille
 Chief Executive
 Officer, Tidal Wave
 Technologies



Speaker:
Doug Valleau
 President, Strategia
 Innovation and
 Technology
 Advisors, LLC

Today, unconventional reservoirs in the Permian Basin produce more than five million barrels of oil per day, while the Marcellus Shale delivers over twenty-five billion cubic feet of natural gas. These production volumes are so large that it is difficult to imagine bigger plays ever being discovered. Yet, as this talk will demonstrate, the history of our industry suggests that much larger and more prolific unconventional plays will almost certainly be found outside the United States. Larger hydrocarbon accumulations. Sweeter sweet spots. Thicker pay sections. In theory, international unconventional opportunities should represent an explorer's best possible scenario. In practice however, unconventional exploration outside the United States has struggled to gain traction except in a few countries because of numerous mostly above-ground challenges. This however is about to change since unconventional reservoir technologies such as four-mile long laterals, methods for optimizing proppant placement, use of hydraulic completion units, and the ability to drill more than 21,000 feet of section in 48 hours have evolved to a point that technology advancements can economically overcome most above ground challenges, especially when used to develop reservoirs as good or better than the best Tier 1 acreage in the United States. Now is therefore the time for international unconventionals to fulfill their promise. The time when acreage in the most prolific sweet spots will be captured. The time when plays larger than the Permian Basin and Marcellus Shale will be discovered. The time when an explorer's dream will become reality. Attend this talk to learn more about the promise of international unconventionals and join the discussion during the Q&A period if you have insights to share.

Topical Luncheons

Evolving Issues in Produced Water Management in Texas

Date: Tuesday, 23 June
Time: 12:15 pm–1:20 pm
Location: George R. Brown Convention Center
Moderator: Susan Nash, Director of Innovation and Emerging Science and Technology, AAPG
Fee: \$80



Speaker:
Danny Kingham,
PG, Principal
Hydrogeologist, GSI
Environmental Inc.

Produced water management has become an increasingly important regulatory and environmental issue in Texas oil and gas operations. Rising production volumes have expanded reliance on Underground Injection Control (UIC) Class II disposal wells, drawing greater attention to well integrity, subsurface fluid migration, and induced seismicity risks. At the same time, advances in recycling, beneficial reuse, and emerging critical mineral extraction technologies are reshaping how produced water is managed, introducing new legal, regulatory, and contractual considerations for operators, landowners, and regulators across the state.

From Wells to Workflows: Agentic AI as the Next Operating Partner

Date: Tuesday, 23 June
Time: 12:15 pm–1:20 pm
Location: George R. Brown Convention Center
Moderator: Denise Benoit, Chemist, Geothermal Fluid Design Manager, XGS Energy
Fee: \$80



Speaker:
Akash Sharma
Vice President of Product
Management – AI Product
Portfolio, Enverus

The energy industry is beginning to use a new class of systems often described as agentic AI. These systems are designed to handle multi-step technical work, check assumptions, apply domain rules, and coordinate information across different datasets. The goal is not to replace engineering or land expertise, but to provide a reliable digital partner that can reduce manual effort and support faster, more consistent decisions. This session explains how these agent-style systems can support a wide range of upstream and midstream workflows. Examples include early screening of opportunities, interpretation of operational context, generation of structured technical summaries, and coordination of reservoir or commercial evaluations. These are only a few of the areas where operators are experimenting with this approach. The talk focuses on practical design principles rather than hype. Topics include how to structure agent workflows, how to connect them with proprietary and physics-based models, and how to build controls that keep output traceable and defensible. Attendees will gain a clear, realistic view of how agentic systems can improve performance, safety, and decision quality in daily operations.



Networking Opportunities

Opening Reception

Date: Monday, 22 June
Time: 4:40 pm–6:00 pm
Location: George R. Brown Convention Center

End your first day at URTeC and unwind with a drink and light hors d'oeuvres as you network with exhibitors and industry colleagues in the Exhibit Hall.

Refreshment Breaks

Dates: Monday, 22 June–Wednesday, 24 June
Times: 10:00 am–11:00 am (Monday, Tuesday, and Wednesday)
 2:50 pm–3:30 pm (Monday and Tuesday)
Location: George R. Brown Convention Center

Grab a cup of coffee or tea in-between sessions and check out some of the exhibitor presentations to learn about the latest products and services.

Networking Reception

Date: Tuesday, 23 June
Time: 4:40 pm–6:00 pm
Location: George R. Brown Convention Center

Finish up day two at URTeC with a drink while networking with exhibitors and other colleagues.

Short Course

	Title:	Instructor(s)	Date and Time	Fees
SC 01	Theory and Value of Geophysics in CCUS, and Energy Exploration and Development (SEG)	Nancy House Principal Scientist, Integrated Geophysical Interpretation	Sunday, 21 June 8:00 am–5:00 pm	\$500 Member \$650 Nonmember \$250 Student

New Technology Showcase

Dates: Monday, 22 June–Tuesday, 23 June
Times: 2:00 pm–5:00 pm
Location: George R. Brown Convention Center
Fee: Included with registration

We invite you to apply to participate in a focused, content-rich New Technology Showcase designed for upstream professionals looking to stay at the forefront of innovation.

The structured sessions include:

- Panel discussions focusing on technology development, women in technology, and new directions in AI
- Presentations by emerging technology developers and service providers

Topics covered include:

- Advanced Visualization Techniques
- Co-production of critical minerals, geothermal, lithium, and helium
- Bitcoin mining and other uses for low-volume natural gas
- Reservoir Fluids Modeling
- Reservoir Characterization
- Wellsite communications technologies
- Advanced Analytics
- Generative AI and Large Language Models for Subsurface Energy
- Refracturing (Refracs)
- Microgrids
- Drilling Innovations
- Real-Time Monitoring & Sensor Technologies
- Completion Techniques
- Drilling Fluids
- Geothermal Co-Production

These advancements are driving down costs, improving asset recovery, and improving asset optimization.

If you are an operator, technology scout, engineer, or innovator, this is your opportunity to engage directly with the technologies reshaping the upstream sector.

To learn more and apply for speaking opportunities, contact Susan Nash at snash@aapg.org.





New Technology Showcase Panels

Panel: From Pilot to Profit: Navigating the Tech Adoption Gauntlet

Date: Monday, 22 June
Time: 2:00 pm–2:30 pm

This fast-paced, 30-minute session brings together a high-impact panel of technology scouts, early adopters, and incubator experts to dissect the DNA of a successful subsurface innovation. Moving beyond the hype, our panelists will share “war stories” from the field, highlighting the critical ingredients that separate scalable solutions from forgotten prototypes. Whether you are developing, field-testing, or marketing new tools, you will gain essential insights into the most common pitfalls to avoid during the redesign and deployment phases. Join us to learn how to align engineering ambition with operational reality and ensure your technology doesn’t just work—it delivers.

Panel: The Edge of Innovation: The Women Driving Energy Tech’s Next Wave

Date: Monday, 22 June
Time: 2:30 pm–3:00 pm

This 30-minute session explores how the unique perspectives of women in energy technology are reshaping the industry’s approach to complex problem-solving. Our panel of leaders will move beyond the traditional DEI narrative to discuss the tangible business advantages of diverse leadership, specifically how a focus on collaborative team-building and strategic alliance-forging can accelerate the pace of innovation. From navigating the technical hurdles of subsurface engineering to fostering unconventional partnerships across the energy value chain, these experts will share how their distinct approaches to communication and risk-sharing lead to more resilient technologies and faster commercial adoption.

Panel: The Pilot Bridge: Strategic Onramps to Commercial Adoption

Date: Tuesday, 23 June
Time: 2:00 pm–2:30 pm

This 30-minute session tackles the two most critical transitions in the technology lifecycle: securing the initial “yes” and bridging the gap to long-term usage. Our panel of industry veterans will discuss how to identify the right internal champions—beyond just the technical scouts—who have the operational mandate to greenlight proof-of-concept (POC) trials. Once the data is in, the conversation shifts to the art of the “post-pilot” pivot: how to effectively demonstrate value-add and technical reliability to ensure the solution becomes a recurring part of the operator’s toolkit. Join us to learn how to align your innovation with the operational realities and strategic priorities that drive sustained industry adoption.

Panel: Foundation First: Building the Data Architecture That Actually Powers AI

Date: Tuesday, 23 June
Time: 2:30 pm–3:00 pm

This 30-minute session brings together tech scouts, investors, and energy adopters to move past the buzzwords and address the structural realities of the subsurface data landscape. Rather than focusing solely on the “brain” of the AI, our panelists will dissect the “nervous system”—the critical management, harmonization, and integrity protocols required to make machine learning functional in a physical world. The discussion will explore the practical challenges of transforming disparate, multi-generational data into a cohesive asset that supports reliable decision-making. Join us to learn how industry leaders evaluate a company’s data readiness and why a disciplined approach to data governance is the most important predictor of long-term success for any digital initiative.

Monday Morning	Opening Plenary Session: Shale at the Crossroads: Technology, Strategy, and the Next Chapter for Unconventionals	Student Posters- Fracture Mechanics, Modeling and Propagation	Theme 7: Beyond Traditional Surfactants - Novel Chemical EOR Concepts	Theme 10: Gas Injection EOR	Theme 8: Performance Prediction Methods: Physics-Based Models and Data-Driven Forecasting Approaches I
	Student Posters: Proppant Dynamics and Conductivity Optimization	Panel Session: New Technology Showcase - From Pilot to Profit: Navigating the Tech Adoption Gauntlet	Theme 3: Emerging Geological Evaluations: Integrated Workflows for Prospectivity Assessment and Development Efficiencies I	Panel Session: Theme 9: Lithium and Critical Mineral Extraction: Where is it Heading?	Theme 4: Diagnostics and Monitoring in Hydraulic Fracturing with Geomechanical Models I
Monday Afternoon	Panel Session: New Technology Showcase - The Edge of Innovation: The Women Driving Energy Tech's Next Wave		Theme 3: Geophysical Methods for Reservoir Characterization: Pore Pressure Prediction, Seismic Inversion, and Fracture Characterization	Theme 6: AI-Driven Hybrid Modeling for Intelligent Drilling, Cementing Operations, and Failure Diagnostics	Theme 4: Geomechanics in Production Simulation, Forecasting, and Optimization
	New Technology Showcase: Monday Individual Presentations				
	Student Posters: Sustainability, CO ₂ Sequestration, and Advanced Stimulation		Theme 3: International and Emerging Challenges of Unconventional Resources	Theme 4: Geomechanics in Well Design, Construction, and Drilling	Theme 9: Technology Transfer from the Oil and Gas Industry for CCUS Applications
Tuesday Morning	Theme 2: Emerging Unconventional Plays and Case Studies	Theme 3: What's in Your Rock: Geological and Geophysical Integration that Impact Business Decisions and Capital Efficiency	Theme 7: When Classical PVT No Longer Applies - Confined Fluid Phase Behavior		
	Panel Session: New Technology Showcase - The Pilot Bridge: Strategic Onramps to Commercial Adoption	Theme 2: Geomechanical Integration and Application of AI/ML	Theme 10: New Ideas to Maximize Field Value	Theme 7: CO ₂ Huff-and-Puff and Cyclic Gas Injection Mechanisms	
Tuesday Afternoon	Panel Session: New Technology Showcase - Foundation First: Building the Data Architecture That Actually Powers AI	Theme 9: Engineering the Next Generation of Geothermal Projects: Models, Methods, and Insights	Theme 6: Reservoir and Production Forecasting II	Theme 7: Flow Dynamics at the Pore Scale in Unconventional Reservoirs	
	New Technology Showcase: Tuesday Individual Presentations				
	Theme 2: Integrated Petrophysical Interpretation	Theme 9: Multiphysics Controls Characterization for CCUS Reliability	Theme 7: Foam, Mobility Control, and Conformance Management		
Wednesday Morning	Theme 7: Surfactant Design, Chemistry, and Transport in Unconventionals	Theme 6: Data-Driven Prediction of Well Fracturing and Production Performance	Theme 9: Sustainable Water Strategies in Unconventionals		

Technical Program at a Glance

Monday Morning	Theme 9: Subsurface Chemistry of Critical Minerals	Theme 1: OXY Special Session: Data-Driven Development Strategies to Maximize Value in the Delaware Basin	Panel Session: Physics-Informed Machine Learning (PIML) — Bridging Physics, Data, and Digital Adoption in Unconventional Reservoirs	Theme 2: Advances in Core Analysis and Rock-Fluid Interaction I	Theme 6: Subsurface Characterization, Applied Case Studies, and Business Implementation I
	Theme 2: Developments in NMR Logging, Interpretation, and Core Analysis I	Theme 1: Decision-Grade Insights for Unconventional Development: Models and Metrics that Scale	Special Session: Collaboration Success Stories: How Collaborations Build Technology That Shape Our Industry	Theme 7: From Design to Performance: Gas Injection Field Case Studies	Theme 5: Examples of Geochemical Monitoring Integration with Multi-Disciplinary Datasets
Monday Afternoon	Theme 7: From Molecules to Unconventional Field Simulation	Theme 1: Scaling Unconventional Success: Global Case Studies in Appraisal and Early Development	Panel Session: Inventory and Capital Allocation	Theme 5: Fluid Geochemical Impacts on Production Performance and Hydrocarbon Recovery	Theme 9: Current and Forward Opportunities De-Risking for Hydrogen Storage and Production
	Theme 2: Developments in NMR Logging, Interpretation, and Core Analysis II	Theme 1: Lowering Operational Uncertainty: Diagnostics and Integration that Improve Completion Outcomes	Special Session: Engineering the Future of UAE Unconventionals: Lessons from ADNOC's Dyab Journey	Theme 7: Production Analysis in Unconventional Reservoirs	Theme 6: AI-Enhanced Well Planning, and Completion Design and Optimization
Tuesday Morning	Theme 6: Data-Driven Optimization and Decision Practices in Oilfields	Theme 1: Scaling Performance at Pace: Digital Workflows, Factory Learnings, and Completion Effectiveness	Special Session: Beyond Assumed Fracture Geometry: Insights from Fracture Surveillance	Theme 8: Connecting Forecasting with Reservoir Management Decisions	Theme 9: CCUS Opportunities and Strategies
	Theme 4: Rock and Hydraulic Fracture Modeling	Theme 9: Applications Oriented Technologies for Emission Reduction	Special Session: Best of SPWLA	Theme 9: Subsurface Measurement and Control Technologies for Geothermal Efficiency	Theme 6: Reservoir and Production Forecasting I
Tuesday Afternoon	Theme 8: Diagnostics and Integrated Insights	Theme 1: Improving Returns Through Smarter Development Strategy	Special Session: Best of IOR	Theme 10: Laboratory Advancement of New Approaches	Theme 2: Innovative Logging Measurements and Interpretation Methods
	Theme 3: Emerging Geological Evaluations: Integrated Workflows for Prospectivity Assessment and Development Efficiencies II	Theme 4: Diagnostics and Monitoring in Hydraulic Fracturing with Geomechanical Models II	Special Session: EOR for Shale Plays	Theme 6: Subsurface Characterization, Applied Case Studies, and Business Implementation II	Theme 8: Performance Prediction Methods: Physics-Based Models and Data-Driven Forecasting Approaches II
Wednesday Afternoon	Theme 10: Refrac Stimulation	Theme 1: Chevron Special Session: Operational Excellence at Scale	Special Session: Agents in the Trenches: Real-World Lessons from Autonomous Subsurface Workflows	Theme 2: Advances in Core Analysis and Rock-Fluid Interaction II	Theme 5: Emerging Geochemical-Based Applications

Monday

Opening Plenary Session: Shale at the Crossroads: Technology, Strategy, and the Next Chapter for Unconventionals

8:15 am–10:00 am

Panelists:

Bob Fryklund, Upstream Energy Group at S&P Global Commodity Insights

Bob Brackett, Bernstein (AB/AllianceBernstein)

Khaled Abdul Monem Al Kindi, ADNOC - Upstream

Theme 7: Beyond Traditional Surfactants - Novel Chemical EOR Concepts

Chair(s): *Nabila Lazreg, Han Young Park*

10:45 **Introductory Remarks**

10:50 **The Effects and Importance of Chlorine Dioxide (ClO₂) Concentration and Diversion on ClO₂ EOR and Restimulation Treatments:** P. Dalamarinis* (DG Petro Oil and Gas)

11:15 **Butanone as a Low-Cost Wettability Modifier for Shale Well Treatments:** S. Ko*, R. Okuno (The University of Texas at Austin)

11:40 **Chelation-Driven Silicate Disruption as a New EOR Mechanism for Tight Shale Reservoirs:** E. Herrera* (Maverick X)

Theme 10: Gas Injection EOR

Chair(s): *Michael Cronin, George Herman*

10:45 **Introductory Remarks**

10:50 **Advancing Gas EOR in Shale: Lessons from a Chevron-Led Permian Basin Pilot:** D. Kumar*, J. Alvarez, P. Takulhoon, K. Krezinski, A. Rey, M. Srivastava, T. Malik (Chevron)

11:40 **Unlocking Tight Oil Potential: Numerical Validation of Magnesium-Doped Fly Ash Nanoparticle-Enhanced in Supercritical CO₂ (scCO₂) Foam for Huff-n-Puff EOR in the Middle Bakken:** R. Noel-Berje* (University of North Dakota)

Theme 8: Performance Prediction Methods: Physics-Based Models and Data-Driven Forecasting Approaches I

Chair(s): *Alvaro Betancourt, Susan Howes, Johan Antonio Daal*

10:45 **Introductory Remarks**

10:50 **Linking PD-SRV to Production: Using Pump-Down Analysis to Forecast Well Performance:** G. Caruso Carter, D. Le, M. Han*, H. Sufi Karimi, R. Tang, M. Khodabakhshi (Occidental Oil and Gas)

11:15 **Physics-Based RTA Interpretation: Simulation Diagnostics and History-Match Guidelines:** M. Dunseith⁶, M. Babazadeh³, M. Almasoodi², A. Baldwin², A. Tucker⁴, M. Paryani⁴, C. Cipolla¹, M. McKimmy⁵, J. Lassek⁵, M. McClure¹, S. Morsy¹, A. Benson Lamidi*¹ (1. ResFrac Corporation; 2. Devon Energy; 3. ConocoPhillips; 4. Apache Corporation; 5. Hess Corporation; 6. Continental Resources (CLR))

11:40 **Rapid Multi-Resolution Simulation of Coalbed Methane (CBM) and Enhanced CBM (ECBM) Recovery Processes Using Fast Marching Method:** K. Nakano*, C. Chan, A. Datta-Gupta (Texas A&M University)

Theme 9: Subsurface Chemistry of Critical Minerals

Chair(s): *Autumn Shannon, Hadi Nasrabadi*

10:45 **Introductory Remarks**

10:50 **Quantitative Method to Determine Lithium Concentration in Geological Brines Using Nuclear Magnetic Resonance Spectroscopy (NMR):** N. Vuong*, N. Truong, T. Vo, C. Rai, S. T. Dang (University of Oklahoma)

11:15 **Review of Critical Minerals for Subsurface Energy Applications:** B. Hascakir* (Texas A&M University)

11:40 **Comparing Geochemistry and Microbial Ecology of Samples Collected from Separators vs. Paired Well-heads in the Permian Basin:** S. W. Flett*^{1,2}, K. Tinker^{1,2}, D. Gulliver¹ (1. National Energy Technology Laboratory; 2. LEIDOS)

Theme 1: OXY Special Session: DataDriven Development Strategies to Maximize Value in the Delaware Basin

Chair(s): *Han (Jake) Li, Nuny D. Rincones*

10:45 **Introductory Remarks**

10:50 **An Integrated Development Optimization Study in the Delaware Basin for Thin Sand Reservoirs with Interbedded Carbonates:** J. Yin*, T. Boullis, H. Li, F. Adekoya, C. Polgar, J. P. Keevan, S. Noonan, S. Esmaili, O. Raba, X. Xie, S. Liu (Occidental Petroleum)

11:15 **Sequencing with Consequences: Measuring Inter-Bench Parent-Child Interference in the Delaware Basin:** A. Li*, Y. Ben, S. Brazell, S. Esmaili (Occidental Petroleum)

11:40 **Delaware Case Studies to Understand the Impact of Stage Spacing on Fracture Geometry and Well Performance:** Q. Ji*, J. Han, Y. Askabe, J. Dubuisson, V. Muralidharan, A. Haines, R. Vaidya (Occidental Petroleum)

Panel Session: Physics-Informed Machine Learning (PIML) – Bridging Physics, Data, and Digital Adoption in Unconventional Reservoirs

10:45 pm–12:05 pm

Moderator: *Utkarsh Sinha*

Panelists:

Yuguang Chen, Chevron

Yuxing Ben, Oxy Applied AI Center of Excellence

Bo Hu, ConocoPhillips

Sanjay Paranjhi, Xecta Digital Labs

Theme 2: Advances in Core Analysis and Rock-Fluid Interaction I*Chair(s): Parag Bandyopadhyay, Abhijit Mitra*

- 10:45 **Introductory Remarks**
- 10:50 **Workflow for the Integrated Approach to Rapid Clay Mineral Speciation from the Combined Bulk XRD and CEC Measurements: Matching Large-Scale and Fine-Scale Data:** A. Derkowski*^{1,2}, M. Santiago², D. McCarty² (1. Institute of Geological Sciences Polish Academy of Sciences; 2. CoreSpec Alliance LLC)
- 11:15 **Evaluating Capillary Displacement Effects in Gas Geostorage and EOR: A Reservoir-Scale Sensitivity Analysis Benchmarked with Experiments:** N. Truong*, C. Rai, D. Devegowda, S. T. Dang (University of Oklahoma)
- 11:40 **Wettability Alteration During Prolonged Exposure of Tight Sandstones to Boron Crosslinked Hydraulic Fracturing Fluid:** S. Garcia¹, H. J. Khan*¹, M. Murtaza¹, R. A. Kalgaonkar², M. S. Kamal¹, M. S. Aljawad¹ (1. College of Petroleum & Geosciences, King Fahd University of Petroleum & Minerals; 2. EXPEC-ARC Saudi Aramco)

Theme 6: Subsurface Characterization, Applied Case Studies, and Business Implementation I*Chair(s): Antonio Lazo, Yongshe Liu*

- 10:45 **Introductory Remarks**
- 10:50 **Scalable Machine Learning Deployment for Automated Well Correlation and Model Building in the Permian Basin:** H. Tang*, J. Cassanelli, T. Watkins, J. Senison, H. Behzadi, X. Xie, T. Akpulat (Oxy)
- 11:15 **Well Spacing Impacts on Water Production in the Permian Basin:** F. Male*^{1,4}, R. Dommissé², K. Sathaye³ (1. Penn State University; 2. Bureau of Economic Geology, University of Texas at Austin; 3. Novi Labs; 4. Center for Subsurface Energy and the Environment, University of Texas at Austin)
- 11:40 **Deciphering Organic Matter Accumulation in Lacustrine Shale Systems: Insight From Interpretable Machine Learning Approach:** E. Wang*^{1,2}, M. Li^{1,2}, X. Ma^{1,2}, M. Qian^{1,2}, T. Cao^{1,2}, Z. Li^{1,2}, T. Li², X. Guo^{1,2} (1. State Key Laboratory of Shale Oil and Gas Enrichment Mechanisms and Efficient Development; 2. Petroleum Exploration and Production Research Institute, SINOPEC)

Theme 3: Emerging Geological Evaluations: Integrated Workflows for Prospectivity Assessment and Development Efficiencies I*Chair(s): Jose Delgado, Aravind Nangarla*

- 1:30 **Introductory Remarks**
- 1:35 **Integration of Geologic Mapping and Regional Geochemical Drainage Data for Successful Uinta Basin Development Planning:** H. Lipman*¹, K. Whitaker², R. Newton², F. Liu¹, Y. Liu¹, J. Wu¹, J. Bachleda¹ (1. RevoChem; 2. Berry Corporation)
- 2:00 **Building a Permian Basin Regional Petrophysical Geomodel:** R. Dommissé*¹, C. Kerans¹, F. Male^{2,1}, X. Janson¹, C. Zahm¹ (1. University of Texas at Austin; 2. Penn State University)
- 2:25 **Comparative Geological Analysis of Mississippian Oil and Gas Resources of the Anadarko Basin (STACK and SCOOP Areas) and the Delaware Basin (Tobosa Sub-Basin):** B. Sartika*, M. R. Becker, J. Laya, F. Marcantonio (Texas A&M University)

Panel Session: Theme 9: Lithium and Critical Mineral Extraction:**Where is it Heading?**

1:30 pm–2:50 pm

*Moderator: Selin Erzeybek Balan***Panelists:**

Wambui Mutoru, Equinor
Keju Yan, Pacific Northwest National Lab
Hermann Lebit, Alma Energy

Theme 4: Diagnostics and Monitoring in Hydraulic Fracturing with Geomechanical Models I*Chair(s): Abdul Muqtadir Khan, Lili Xu*

- 1:30 **Introductory Remarks**
- 1:35 **Completion Best Practices: Fracture Diagnostics in Unconventional Resource (UCR) Fracturing - Capabilities, Insights, and Best Practices:** C. Cipolla*¹, P. Huckabee³, K. E. Olson² (1. ResFrac Corporation; 2. Olson Turner Enterprises LLC; 3. AquaSmart Oil & Gas)
- 2:00 **Low-Frequency DAS for Cement Quality Monitoring in Horizontal Wells:** S. Jin*, G. Jin (Colorado School of Mines)
- 2:25 **Characterization of Shearing Deformation from Cross-Well Fiber Strain Measurements: Insights for Casing Deformation:** M. Han*¹, K. Wu¹, G. Jin² (1. Texas A&M University; 2. Colorado School of Mines)

Theme 2: Developments in NMR Logging, Interpretation, and Core Analysis I*Chair(s): Yulia Faulkner, Kanay Jerath*

- 1:30 **Introductory Remarks**
- 1:35 **2D NMR and Pyrolysis to Determine the Residual Fluid Type in Unconventional Source Rock Reservoirs:** S. Althaus*¹, J. Chen¹, J. Broyles¹, J. Gaytan¹, Q. Sun¹, M. Boudjatit² (1. Aramco Americas; 2. Saudi Aramco)
- 2:00 **The Magnetic Resonance T₂ Distribution Can Be More Than a Proxy for the Pore Size Distribution. It Can Be a Direct Measure of the Pore Size Distribution:** P. Yan², M. J. Dick*¹, D. Veselinovic¹, D. Green¹, B. J. Balcom² (1. Green Imaging; 2. UNB MRI Centre)
- 2:25 **A Novel NMR-Based Framework for Quantifying Gas Transport and Oil Recovery During Ethane and Nitrogen Huff-n-Puff in Organic-Rich Shale Formations:** A. A. Oshaish*, K. Mohanty, Z. Heidari (The University of Texas at Austin)

Theme 1: DecisionGrade Insights for Unconventional Development: Models and Metrics that Scale*Chair(s): Gonzalo Garcia, Thomas Johnston*

- 1:30 **Introductory Remarks**
- 1:35 **Quantifying Parent-Child Depletion Interference Using a Calibrated Full-Physics Simulation Workflow:** M. Paryani* (Apache Corporation)
- 2:00 **Correlation of Acoustically Derived Perforation Efficiency to Early-Time Oil Production Using High-Resolution Surface Pressure Analysis:** M. Schult*¹, A. Majer¹, S. Gabel², M. Khan², M. Mullett², J. Klostermann², H. Davari² (1. Diamondback Energy; 2. Seismos Inc.)



Special Session: Collaboration Success Stories: How Collaborations Build Technology That Shape Our Industry

1:30 pm–2:50 pm

Moderator: Deepak Devegowda

Speakers:

K. Newsham, Oxy

S. Dang, University of Oklahoma

Z. Heidari, University of Texas

C. Clarkson, University of Calgary

Theme 7: From Design to Performance: Gas Injection Field Case Studies

Chair(s): Ali Habibi, Hosein Kalaei

1:30 **Introductory Remarks**

1:35 **Maximizing Value in a Miscible Gas Huff n Puff Enhanced Oil Recovery Pilot – A Case Study:** J. Zaghoul*¹, S. Thomas¹, D. Ratcliff¹, S. Perry¹, C. Talley¹, L. Evans¹, D. Tarar¹, M. McClure² (1. Continental Resources; 2. ResFrac Corporation)

2:00 **Integrated Field–Laboratory Evaluation of a Natural Gas Liquids Injection EOR Pilot in the Bakken Formation:** N. Badrouchi*¹, L. Jin¹, A. Buck², R. McGuigan², S. Smith¹, B. Kurz¹, M. Kurz¹, J. Sorensen¹ (1. Energy and Environmental Research Center–University of North Dakota; 2. Chord Energy)

2:25 **Field Evaluation of Natural Gas Liquid (NGL) Injection for Enhanced Oil Recovery in The Bakken Formation:** L. Jin*¹, N. Badrouchi¹, J. Sorensen¹, A. Buck², R. McGuigan², X. Wan¹, D. Schmidt¹, M. Warmack¹, A. Assady¹, M. Kurz¹, M. Hillix¹ (1. Energy & Environmental Research Center; 2. Chord Energy)

Theme 5: Examples of Geochemical Monitoring Integration with Multi-Disciplinary Datasets

Chair(s): Jason Jweda, Shawn Wright

1:30 **Introductory Remarks**

1:35 **Cost-Effective Mud-Gas and Cuttings Geochemistry Workflow for Reservoir Connectivity, Geosteering, and Production Allocation:** H. Carvajal-Ortiz* (GEOLOG Americas)

2:00 **Making the Most of Your Gas Data in Unconventional Plays: Case Studies of Quantitative, Semi-Quantitative Allocation, and Time Lapse Programs:** C. D. Barrie*, E. Straughan, E. Michael (Applied Petroleum Technology (APT))

2:25 **Overcoming the “Survivorship Bias” of Surfactant Use in New Wells’ Completions: An Engineered Optimization Application of Nano-Surfactant Use Integrating Reservoir Geochemical Properties:** P. Dalamarinis*, S. Fusselman (DG Petro Oil and Gas)

Panel Session: New Technology Showcase - From Pilot to Profit: Navigating the Tech Adoption Gauntlet

Chair(s): TBD

Speakers: TBD

Panel Session: New Technology Showcase - The Edge of Innovation: The Women Driving Energy Tech’s Next Wave

Chair(s): TBD

Speakers: TBD

New Technology Showcase: Monday Individual Presentations

Chair(s): TBD

Speakers: TBD

Theme 3: Geophysical Methods for Reservoir Characterization: Pore Pressure Prediction, Seismic Inversion, and Fracture Characterization

Chair(s): Emily Guidry, Tomasz Ochmanski

3:20 **Introductory Remarks**

3:25 **Estimation of Reservoir Properties from Elastic Properties Using Empirical Equations:** F. J. Ruiz*¹, M. Yang², G. Deng², Z. Liu³, J. Yu¹, Y. Chen³ (1. Sinopec Tech Houston; 2. Sinopec Northwest Oilfield Branch; 3. Sinopec Petroleum Exploration & Production Research Institute)

3:50 **Fracture Geometry Estimation Using Cross-Well LF-DAS Measurements in Faulted Formations:** M. Almoagal*¹, M. Han¹, G. Jin², K. Wu¹ (1. Texas A&M University; 2. Colorado School of Mines)

4:15 **Higher Mode Amplitude Variation with Azimuth as a Fracture Fluid Indicator: A Pannonian Basin Geothermal Case Study:** S. Cook*¹, C. Sayers², M. Chapman³ (1. Tricon Geophysics, Inc.; 2. University of Houston; 3. University of Edinburgh)

Theme 6: AI-Driven Hybrid Modeling for Intelligent Drilling, Cementing Operations, and Failure Diagnostics

Chair(s): Zhuoran Li, Dave Symmons

3:20 **Introductory Remarks**

3:25 **CFD-Machine Learning Hybrid Modeling for Horizontal Wellbore Temperature Prediction Considering Drillstring Eccentricity:** T. Gou*, Z. Xu, Z. Yuan (China University of Geosciences)

3:50 **Leveraging Generative AI for integrated Deep Learning Models in Drilling Hazard Prediction:** E. Moncayo¹, I. H. Wang*^{1,2}, F. Cardona¹, M. Castrillon¹, C. Coletta¹, J. Courtier¹, C. Sierra¹ (1. Ecopetrol Permian; 2. University of Houston)

4:15 **Transforming UAE Unconventional Drilling: AI-Enabled Automation Sets a New Standard:** A. Abdalla* (ADNOC Onshore)

Theme 4: Geomechanics in Production Simulation, Forecasting, and Optimization*Chair(s): Jonathan Ortiz, Jiehao Wang*

- 3:20 **Introductory Remarks**
- 3:25 **Impact of Stress Creep on Well Performance:** R. Vaidya*¹, H. Li¹, S. M. Elkholy¹, K. Patel², V. Muralidharan¹ (1. Occidental; 2. CMG LTD)
- 3:50 **Early-Time Flowback Diagnostics: Linking Cleanup Efficiency to Well Productivity:** T. Moussa*, H. Dehghanpour (University of Alberta)
- 4:15 **Integrated Geomechanics for Optimized Drilling and Completion Design in High-Risk Tier 3 Williston Basin:** T. Do*¹, A. Chakhmakhchev², M. Madison³ (1. InDZone Consulting LLC; 2. SBC Global; 3. Green Mountain Exploration)

Theme 7: From Molecules to Unconventional Field Simulation*Chair(s): Vincent Artus, Selin Erzeybek Balan, Haiwen Zhu*

- 3:20 **Introductory Remarks**
- 3:25 **Enabling Capillary-Corrected Phase Behavior in Commercial K-Value Compositional Simulators:** B. Deng, H. Amer, R. Okuno* (The University of Texas at Austin)
- 3:50 **Application of a Dissipation-Based Continuation Nonlinear Solver for Unconventional Reservoir Simulation:** Z. Li*¹, R. Hasanzade², J. Natvig¹, P. Tomin², D. Bakkejord¹, A. Kozlova¹, D. Dias¹ (1. SLB; 2. Chevron)
- 4:15 **Reconciling the Performance Differences During Primary Production and Enhanced Oil Recovery for Two Collocated Wells Using a Coupled Reservoir Simulator – A Case Study:** D. Ratcliff*¹, C. Abbott¹, S. Perry¹, J. Zaghloul¹, S. Thomas¹, M. McClure² (1. Continental Resources; 2. ResFrac Corporation)

Theme 1: Scaling Unconventional Success: Global Case Studies in Appraisal and Early Development*Chair(s): Matthew Adams, Matthew Poole*

- 3:20 **Introductory Remarks**
- 3:25 **Pioneering Integrated Fracture Diagnostics to Derisk the First Multi-Well Pad Unconventional Development in the UAE Shilaif Formation.:** O. A. Alvarado Sosa*¹, O. Bustos¹, T. Itibrou¹, F. Silva¹, S. A. Elazab¹, S. Kelkar², J. Mason², R. Alhameli³, N. A. Alharbi³, B. Hunziker⁴, Y. Wu⁴, P. Lynch⁵ (1. ADNOC Onshore; 2. ADNOC Upstream; 3. ADNOC Drilling; 4. SILIXA; 5. Well-SENSE)
- 3:50 **Evaluation of a New Unconventional Play in the Northern Flank of the Golfo San Jorge Basin, Argentina:** F. Agustino*, A. Vega, M. Zubiri, M. Cohen (Pan American Energy)

**Panel Session: Inventory and Capital Allocation**

3:20 pm–4:40 pm

*Moderator: Sean Kimiagar***Panelists:****Melissa Folz**, Chord Energy**Richard Mercer**, Houlihan Lokey**Harris Cander**, Marathon Oil (Former)**Theme 5: Fluid Geochemical Impacts on Production Performance and Hydrocarbon Recovery***Chair(s): Alexandra Hakala, Wei Wang*

- 3:20 **Introductory Remarks**
- 3:25 **Allocation of Eagle Ford Oil and Y-Grade NGL Mixtures Collected During an EOR Huff-n-Puff Pilot Project:** A. Kornacki* (Stratum Reservoir)
- 3:50 **Subsurface Investigation of Permian Ba/Sr Anomalies by Water Geochemistry Surveillance:** H. Lu*, W. Wei, M. Ferrero, C. Yan, D. G. Leach, A. Elkady (Chevron U.S.A. Inc.)
- 4:15 **Coupled Geochemical–Geomechanical Simulation of Fracture Conductivity Degradation in Unconventional Reservoirs: A tNavigator-Based Workflow:** L. Sekar*¹, L. A. Gracian^{1,2}, E. Evans² (1. Texas A&M University; 2. Rock Flow Dynamics Inc.)

Theme 9: Current and Forward Opportunities**De-Risking for Hydrogen Storage and Production***Chair(s): Sandrabh Gautam, Juliette Pearson*

- 3:20 **Introductory Remarks**
- 3:25 **Transforming Depleted Unconventional Wells into Distributed Subsurface Hydrogen Storage Vessels:** R. T. Alfaraj*, M. J. Altammar (Saudi Aramco)
- 3:50 **Field-Scale Evaluation of Operational Strategies for Hydrogen Storage in a Heterogeneous Deep Saline Aquifer: Impacts of Cushion Gas, Well Configuration, and Cyclic Operation:** A. Baru*¹, S. I. Eytayo¹, C. Okere², M. Watson¹ (1. Texas Tech University; 2. Cullen College of Engineering, Department of Petroleum Engineering, University of Houston)
- 4:15 **A Study of the Underground Hydrogen Storage Potential of the Temblor Formation in San Joaquin Basin, California:** G. Hasanov*, S. T. Dang, D. Devegoda, C. Rai (University of Oklahoma)

Tuesday

Theme 3: International and Emerging Challenges of Unconventional Resources

Chair(s): *Yitian Xiao, Andrew Keene*

- 8:50 **Introductory Remarks**
- 8:55 **Real-Time Acoustic Measurements for Design Evaluation and Optimization in the Vaca Muerta Basin:** J. De La Garza*¹, M. D. Pellicer², J. Baratcaba², M. Khan¹, R. Holland¹ (1. Seismos; 2. Pan American Energy)
- 9:20 **Delineation of the High Production Potential Areas from Regional to the Well Pad Scale in Unconventional Gas Play in UAE:** S. Mykhaylenko, C. F. Burgess, C. Wells, O. Nielsen, A. Alharthi, T. Brooks, I. Sukhodoev, A. Al Blooshi, M. Al Braiki* (ADNOC)
- 9:45 **Geological Insights into Lacustrine Shale Oil and Gas Enrichment and Prospect Evaluation: The Lianggaoshan Formation in Northeastern Sichuan Basin, China:** Q. Wang*, Z. Hu, D. Feng, S. Xu (Petroleum Exploration and Production Research Institute)

Theme 4: Geomechanics in Well Design, Construction, and Drilling

Chair(s): *Dharmendra Kumar, Yuanbo Lin, Fatick Nath*

- 8:50 **Introductory Remarks**
- 8:55 **Stress Profiling Minimum and Maximum Horizontal Stress in Emerging Tight Gas Horizontal Plays: A Uinta Basin Case Study:** A. Morales*¹, E. M. Kias², M. Mohiuddin³ (1. Enbridge Inc; 2. WD Von Gonten Engineering LLC; 3. K&M Technology Group)
- 9:20 **Geomechanics Meets Machine Learning: Drilling Risk Prediction for Challenging Infill Wells in Mature Unconventional Play:** J. P. Castagnoli², T. Tomberlin*¹, P. Shukla², A. Rodriguez-Herrera², S. Rivera Barraza¹, A. F. Cadena¹, H. Loa¹, J. Wong¹ (1. Murphy Oil Corporation; 2. SLB)
- 9:45 **A Hydromechanical and Strength-Informed Mechanical Specific Energy Model for Real-Time Drilling Optimization:** A. Ahmed*, K. Sepehrnoori (The University of Texas at Austin)

Theme 9: Technology Transfer from the Oil and Gas Industry for CCUS Applications

Chair(s): *Pouria Mousavi, Scott Singleton*

- 8:50 **Introductory Remarks**
- 8:55 **Study of Simultaneous Hydrogen Gas Stream Purification and CO₂ Sequestration in Deep Coal Seams Using the RTAPK Method Applied to an Artificial Coal Plug:** C. Song*, C. Clarkson (University of Calgary)
- 9:20 **Induced Seismicity from CO₂ Storage: Occurrence, Prediction, and Mitigation Measures:** K. Qiu* (SLB)
- 9:45 **Hydro-Mechanical Coupling During CO₂ Injection in Entrada Sandstone: Linking Pore-Pressure Diffusion, Fault Dilation, and Acoustic Emission Energy Release:** G. Akpabli*, H. Rahnema (New Mexico Institute of Mining and Technology)

Theme 2: Developments in NMR Logging, Interpretation, and Core Analysis II

Chair(s): *Jose Dugarte, Giselle Garcia Ferrer*

- 8:50 **Introductory Remarks**
- 8:55 **Shale Characterization Using Magnetic Resonance T₁-T₂* Relaxation Correlation Method:** M. Zamiri², M. J. Dick*¹, D. Veselinovic¹, D. Green¹, B. J. Balcom² (1. Green Imaging; 2. UNB MRI Research Centre)
- 9:20 **NMR Evaluation of Tight Oil Mobility by Supercritical Carbon Dioxide Displacement:** F. Zhu* (Sinopec Petroleum Exploration and Production Research Institute)
- 9:45 **Teaching NMR to Think: AI-Driven Prediction Of NMR T₂ Cutoff Values:** N. Vaisblat³, A. Ganesh², M. J. Dick*¹, D. Veselinovic¹, D. Green¹, D. Heagle³ (1. Green Imaging Technologies; 2. University of Alberta; 3. CanmetEnergy Natural Resources Canada)

Theme 1: Lowering Operational Uncertainty: Diagnostics and Integration that Improve Completion Outcomes

Chair(s): *Craig L. Cipolla, Annie Shen*

- 8:50 **Introductory Remarks**
- 8:55 **A Comparison of Near Field and Far Field Uniformity Metrics in the Alberta Montney:** J. Van Dijken*, S. Genoway, B. Gaffney, B. Hepburn (Whitecap Resources Inc.)
- 9:20 **Emerging Visean Unconventional Play within the Dnieper Donets Basin, Eastern Ukraine: Multidisciplinary Approach from Exploration to Pilot Testing:** S. Levoniuk*, S. Orynychak (Ukrigasvydobuvannya)



Special Session: Engineering the Future of UAE Unconventionals: Lessons from ADNOC's Dyab Journey

8:50 am–10:10 am

Moderator: *Matthew Poole*

Speakers:

- A. Al Blooshi**, ADNOC
T. Itibrout, ADNOC
F. Silva, ADNOC

Theme 7: Production Analysis in Unconventional Reservoirs

Chair(s): *Leopoldo Matias Ruiz Maraggi, Zhenzhen Wang*

- 8:50 **Introductory Remarks**
- 8:55 **Three-Phase Flowback RTA for Gas Condensate Shale: Quantifying Fracture Skin from Damage:** C. Yang*, H. Emami-Meybodi (Penn State)
- 9:20 **A Novel Multiphase Flowback Rate Transient Analysis Method for CO₂ Fractured Wells in Tight Oil Reservoirs:** J. Yao* (China University of Petroleum)
- 9:45 **A Simple and Accurate Density-Based Method for Analysis of Production and Bottomhole Pressure Data from Multistage Hydraulically Fractured Horizontal Dry Gas Reservoirs:** S. Tanveer, M. Onur* (The University of Tulsa)

Theme 6: AI-Enhanced Well Planning, and Completion Design and Optimization

Chair(s): Peyman Moradi, Prithvi Chauhan

- 8:50 **Introductory Remarks**
- 8:55 **From Data to Design: MVA Modeling for Smarter Well Planning in Delaware Basin:** A. Li*, X. Zhao, A. Brehm, P. H. Nguyen, E. A. Kinzler, S. Esmaili, R. Gordillo (Occidental Petroleum Corporation)
- 9:20 **High-Resolution Time-Series Machine Learning for Pressure-Based Fracture Diagnostics and Adaptive Completion Design:** T. de Boer*^{1,3}, T. Szilagyi¹, I. Zaghmoot², H. Merry¹ (1. ShearFRAC; 2. Arrington Oil & Gas; 3. University of Toronto)
- 9:45 **AI-Driven Fluid and Proppant Optimization for Unconventional Reservoir:** K. Katterbauer, A. W. Alsmail* (Saudi Aramco)

Theme 2: Emerging Unconventional Plays and Case Studies

Chair(s): Yalda Barzin, Haijing Wang

- 10:45 **Introductory Remarks**
- 10:50 **Is the Western Haynesville a New Emerging Natural Gas Play in Texas?:** O. Popova* (EIA DOE)
- 11:15 **Application of Multiple DFIT-FBA Tests to Evaluate Inter-Bench Stress Contrasts, Reservoir Properties and Communication Risk Between Wells:** S. Haqparast*, C. Clarkson (University of Calgary)
- 11:40 **Unveil Gas Potential in Abnormally Low Resistivity Shales by NMR T1-T2 Measurements, Contributing to China's Shale Gas Production Record:** K. Li* (SLB)

Theme 3: What's in Your Rock: Geological and Geophysical Integration that Impact Business Decisions and Capital Efficiency

Chair(s): Marianne Rauch, Liwei Cheng

- 10:45 **Introductory Remarks**
- 10:50 **Impact of Geologic Facies Variability on Completion Performance in Unconventional Reservoirs: A Review of Published Field and Petrophysical Studies:** K. Rios* (Independent Contractor)
- 11:15 **Investigating Casing Integrity Challenges in UC Wells Induced by Sub-Seismic Geological Features:** S. A. Elazab*, T. Itibrou (ADNOC Onshore)
- 11:40 **Identification of Perforation Locations and Estimation of Production Profile in Multistage Hydraulically Fractured Horizontal Wells Using Distributed Temperature Sensing Data:** Y. Yang, M. Onur* (The University of Tulsa)

Theme 7: When Classical PVT No Longer Applies - Confined Fluid Phase Behavior

Chair(s): Sardar Asadov and Jiajun He

- 10:45 **Introductory Remarks**
- 10:50 **Molecular Diffusion as a Fundamental Mechanism for Gas/Light Hydrocarbon Enhanced Oil Recovery in Unconventional Shale Reservoirs:** K. Amini*, H. Kazemi, B. Mindygaliyeva (Colorado School of Mines)
- 11:15 **Molecular Insights into the Miscible Behavior and Displacement Mechanisms between CO₂-CH₄/C₂H₆/C₃H₈ Gas Mixture and Tight Oil in Nanoslits:** S. Guo*^{1,2}, K. Wu¹, Z. Jin², J. Xu², D. Feng³, T. Wang¹, L. Peng¹, Y. Huang¹ (1. China University of Petroleum; 2. University of Alberta; 3. China University of Geosciences)
- 11:40 **Uncovering Confined Fluid Phase Behavior of Unconventional Reservoirs Through Novel Gravimetric Adsorption Experiments:** N. Giasi*, X. Li (University of Kansas)

Theme 6: Data-Driven Optimization and Decision Practices in Oilfields

Chair(s): Yuxing Ben, Judy Zhu

- 10:45 **Introductory Remarks**
- 10:50 **A Data-Driven Framework Using Feature Space Optimization with Advanced Machine Learning and Explainable AI Methods for Performance Prediction in Multi-Stage Hydraulically Fractured Horizontal Wells:** X. He, M. Onur* (University of Tulsa)
- 11:15 **Automated Geosteering in Shales: Can AI Take Over Real-Time Decisions?:** R. E. Aguilar*, I. Kuvaev (ROGII Inc.)
- 11:40 **Driving Consistency and Capital Efficiency in Hydraulic Fracturing Through an Automated Real-Time Guided Decision Framework:** P. Dharwadkar¹, J. Iriarte¹, B. Williams², M. Watson², R. Schick¹, J. Rafiee¹, E. R. Davis², M. L. Gosnell² (1. Corva; 2. ConocoPhillips)

Theme 1: Scaling Performance at Pace: Digital Workflows, Factory Learnings, and Completion Effectiveness

Chair(s): Luis Baez, Amr Ramadan

- 10:45 **Introductory Remarks**
- 10:50 **Automating DSU Analysis with Interactive Geo GBV Visualizations for Faster Planning Cycles:** C. Gao*, R. Simms, D. Sutton, V. Muralidharan, Y. Askabe (Occidental Petroleum)
- 11:15 **Building on Factory-Mode Learnings to Appraise Southern Fortín de Piedra: Integrated Geological Modeling and Pilot Results:** A. Bande*, P. Biscayart, E. Valeff, A. Laurora, P. Junco, D. Garcia Acebal, S. Olmos, L. A. Pons (Tecpetrol SA)
- 11:40 **Where's the Proppant? Plug Isolation Impacts on Treatment Uniformity and Implications for Production Performance:** M. R. Jones*, H. Li, T. Conner, J. Wang, I. Krane (Occidental Petroleum)

Special Session: Beyond Assumed Fracture Geometry: Insights from Fracture Surveillance

10:45 am–12:05 pm

Moderator: Jiehao Wang

- **Integrated Design, Implementation, and Key Insights from the Qincheng Shale Oil Hydraulic Fracturing Test Field:** L. Mu, CNPC Changqing Oilfield Company and W. Yu, SimTech
- **Large-Scale Bedding Plane Slippage and Its Impact on Hydraulic Fracturing: Integrated Analysis from Field Observations in the Eagle Ford and Austin Chalk Formations:** G. Jin, Colorado School of Mines
- **Decoding the Fracture Flow Puzzle: Tracer-Based Insights from Utah FORGE Reveal Complex Flow-Path Behavior in Hydraulically Fractured System:** C. Fredd, Ignovis

Theme 8: Connecting Forecasting with Reservoir Management Decisions

Chair(s): Hector Barrios, Eric Bryan, Autumn Shannon

- 10:45 **Introductory Remarks**
- 10:50 **Produced Water Management in the Permian Basin to Accommodate the Arid West Texas Region: Historical Production, Forecast, and Water Composition:** E. Bechara*, M. Watson, T. Gamadi, H. Emadibaladehi, E. Hajiyev, A. Tiam (Texas Tech University)
- 11:15 **Making an Impact: Machine-Learning-Ready Metrics for Ultra-Tight Infill Development:** B. Davis*¹, A. Qualls², K. Sathaye¹ (1. Novi Labs; 2. Devon Energy)
- 11:40 **Optimization of Multi-Well Productivity Through Production Sharing and Fracture-Driven Interactions: A Numerical Assessment:** M. Alhajjaj*, E. Ozkan (Colorado School of Mines)

Theme 9: CCUS Opportunities and Strategies

Chair(s): Xiaolong Liu, Maria Lozano

- 10:45 **Introductory Remarks**
- 10:50 **2025 CCUS Play Fundamentals: Gigatonne Dreams, Market Realities:** G. Bain* (Enverus)
- 11:15 **Integration of CO₂-EOR and Carbon Storage for Sustainable Development of Nigeria's Unconventional Reservoirs:** B. G. Mahe*^{1,2} (1. International University of East Africa (IUEA); 2. OPA ENERGY)
- 11:40 **Field-Level Evaluation of U.S. Underground Natural Gas Storage Sites for CO₂-Based Cushion Gas Replacement: CO₂ Sequestration, Cushion Gas Recovery, and Expanded Working Gas Space:** A. Mirzaei Paiaman* (University of Texas at Austin)

Theme 2: Geomechanical Integration and Application of AI/ML

Chair(s): Didi Ooi, Mehrnoosh Saneifar

- 1:30 **Introductory Remarks**
- 1:35 **Geomechanical Behavior of Oil Shales from Northeastern Brazil:** J. A. Soares*¹, F. Ferreira², A. G. Sobrinho¹, J. C. Amorim¹, M. S. Dutra¹ (1. UFCG; 2. PETROBRAS)
- 2:00 **Integrated Methodology to Reduce Uncertainties in Selection of Frac Zones in Source Rocks:** R. Tawfik* (CANGEO)
- 2:25 **Comparative Study of Drill-Bit Images with LWD Hi-Resolution Resistivity Images for Optimal Solutions in U.S. Land Operations:** C. Shrivastava* (SLB)

Theme 10: New Ideas to Maximize Field Value

Chair(s): Anil Ramkhelawan, Robin Singh

- 1:30 **Introductory Remarks**
- 1:35 **Revitalizing Mature Shale Basins: Evaluating Behind-the-Meter Power Generation, Geothermal Conversion, Energy Storage, and Produced Water Valorization Pathways:** S. Nash* (AAPG)
- 2:00 **OCTG Torque vs Tension: A Growing Concern for Well Integrity:** W. Ott* (Fermata Connections)
- 2:25 **Fracturing Sleeve System Striving for Excellence in Unconventional Resource Plays: Present and Future:** E. Lolon*, T. Reynolds, M. Hollaway, M. Mikitin, F. Urbano (Liberty Energy)

Theme 7: CO₂ Huff-and-Puff and Cyclic Gas Injection Mechanisms

Chair(s): Deniz Paker, Rohan Vijapurapu

- 1:30 **Introductory Remarks**
- 1:35 **Enhanced Oil Recovery Effects of Adding Non-Ionic Surfactants During CO₂ Huff-and-Puff:** M. P. Grindle*¹, D. Tapriyal¹, L. Burrows¹, R. Enick², A. Goodman¹ (1. National Energy Technology Laboratory; 2. University of Pittsburgh)
- 2:00 **Linking Wettability to CO₂ Huff-and-Puff Efficiency: Insights from Facies-Controlled Experiments on Tight Reservoir Cores:** M. K. Aljishi, B. A. Mohamed*, N. Truong, S. T. Dang, C. Rai (University of Oklahoma)
- 2:25 **Chemical-Assisted CO₂-Oil Miscibility Pressure Reduction for Diffusion-Driven Processes in Shales:** T. Liu¹, N. Tai¹, Y. Guo³, Y. Shi*¹, K. Mohanty² (1. China University of Geosciences; 2. University of Texas at Austin; 3. Research Institute of Petroleum Exploration and Development)

Theme 4: Rock and Hydraulic Fracture Modeling

Chair(s): *Ruiting Wu, Jichao Yin*

- 1:30 **Introductory Remarks**
- 1:35 **Stress Space-Driven Completions: An Integrated Geomechanical Framework:** A. Gandomkar*, A. Dalir, O. Mora, E. R. Davis, D. Cramer (ConocoPhillips)
- 2:00 **In-Situ Geomechanical Properties and Stress Characterization Using a High-Precision Pressuremeter in a Deep Well:** M. A. Nagel*, A. Luferova, C. Fehr (Integrity Institute)
- 2:25 **Pioneering Numerical Framework for Simulating Horizontal Hydraulic Fracture Propagation in Shallow Coal Mine Environments:** C. Liu*¹, R. Cong², Y. Feng², S. Cheng², P. Lin², X. Shang², K. Zhao², C. Liu*¹ (1. SimTech LLC; 2. CCTEG Coal Mining Research Institute)

Theme 9: Applications Oriented Technologies for Emission Reduction

Chair(s): *Jonathan Ortiz, Nadia Mouedden*

- 1:30 **Introductory Remark**
- 1:35 **Toward Net-Zero Frac Fleets Using Nanoparticle Based Pulsed-Power Plasma Stimulation:** M. A. Gabry*, S. Nguyen, M. Y. Soliman (University of Houston)
- 2:00 **Turning Flared Gas in the Permian Basin into Reserves: Quantifying Associated Gas Losses and Salado Formation Subsurface Storage Potential:** L. Ruiz Maraggi*, L. Ko, E. Rodriguez Calzado, L. Moscardelli (Bureau of Economic Geology, The University of Texas at Austin)
- 2:25 **Oilless Compression to Capture Gas and Eliminate Flaring:** D. Schmidt* (EERC)

Special Session: Best of SPWLA

1:30 pm–2:50 pm

Moderator: *Katerina Yared*

Speakers:

- **Automating Geological Formation and Marker Propagation Using Self-Supervised Deep Learning: Application to the Powder River Basin:** V. Simões, SLB
- **Automating Geological Formation and Marker Propagation Using Self-Supervised Deep Learning: Application to the Powder River Basin:** M. Triana, Rice University
- **Laboratory Measurement of Effective Permeability for Movable Oil and Water in Shale:** S. Peng, University of Texas at Austin

Theme 9: Subsurface Measurement and Control Technologies for Geothermal Efficiency

Chair(s): *Saeid Khorsandi, Tianjia Huang*

- 1:30 **Introductory Remarks**
- 1:35 **Analytical Solution for Heat Recovery in Enhanced Geothermal Systems (EGS) Including Complex Fracture Geometry:** J. A. Acuna* (J Acuna Consulting, LLC)
- 2:00 **Application of Autonomous Flow Control Devices in Geothermal Systems to Optimise Heat Efficiency:** J. Abbott¹, C. Fredd², M. Moradi*¹ (1. TAQA; 2. Blue Angel Energy)



Theme 6: Reservoir and Production Forecasting I

Chair(s): *Rong Lu, Sebastien Matrigne*

- 1:30 **Introductory Remarks**
- 1:30 **Efficient Unconventional Reservoir Simulation via Physics-Informed Fourier Neural Operators:** K. Mukundakrishnan², J. Leines*¹, J. Miao¹ (1. SimTech LLC; 2. Stone Ridge Technology)
- 1:55 **A Novel Model Integrating Physics-Guided Multimodal and Transfer Learning Model for Shale Gas Well EUR Prediction:** C. Li*, J. Fu, L. Zhang, W. Yan (Chongqing University of Science and Technology)
- 2:20 **Assessing the Impact of Prior Depletion on Future Inventory in the Delaware Basin:** K. Sathaye*, A. Toure, D. Niederhut (Novi Labs)

Panel Session: New Technology Showcase - The Pilot Bridge: Strategic Onramps to Commercial Adoption

Chair(s): *TBD*

Moderator: *TBD*

Panel Session: New Technology Showcase - Foundation First: Building the Data Architecture That Actually Powers AI

Chair(s): *TBD*

Moderator: *TBD*

New Technology Showcase: Tuesday Individual Presentations

Chair(s): *TBD*

Moderator: *TBD*

Theme 9: Engineering the Next Generation of Geothermal Projects: Models, Methods, and Insights

Chair(s): *Denise Benoit, Kristina Holan*

- 3:20 **Introductory Remarks**
- 3:25 **Scoping Engineering and Economic Study of a Geothermal Project:** L. A. Gracian*^{1,2}, I. R. Diyashev¹, T. A. Blasingame¹, A. Orangi³, E. Evans² (1. Texas A&M University; 2. Rock Flow Dynamics; 3. Murphy Oil Company)
- 3:50 **Physics Guided Surrogate Model Framework for Thermal Extraction Prediction in Enhanced Geothermal Systems Under Variable Injection Scenarios:** V. Kesireddy*, D. Voulanas (Texas A&M University)
- 4:15 **Investigation of Hydraulic Fracture Properties for Geothermal Heat Extraction from Shale Gas Reservoirs Using Embedded Discrete Fracture Modeling:** K. Mawa*¹, S. Bhattacharya², M. Delshad¹, K. Sepehrnoori¹ (1. The University of Texas at Austin; 2. Bureau of Economic Geology)

Theme 6: Reservoir and Production Forecasting II

Chair(s): Vishal Bang, Yuanbo Lin

- 3:20 **Introductory Remarks**
- 3:25 **Artificial Intelligence-Assisted Production Forecasting in Unconventional Reservoirs: A Review of Machine-Learning Methods, Decline Frameworks, and Data-Quality Requirements:** A. Bigdeli*¹, C. Temizel² (1. Universidade Estadual de Campinas; 2. TerraPacific)
- 3:50 **Designing Depletion Features for Parent-Child Modeling: Comparing Time, Distance, and Volume-Distance Formulations in Machine-Learning Workflows:** B. Davis*¹, A. Qualls², K. Sathaye¹ (1. Novi Labs; 2. Devon Energy)
- 4:15 **Hybrid Data-Driven and Physics Approach for Dynamic BHP Estimation and Well-Performance Tracking in Coal Seam Gas (CSG) Fields:** U. Sinha*¹, H. Zhu, P. S. Chauhan, H. Zalavadia (Xecta Digital Labs)

Theme 7: Flow Dynamics at the Pore Scale in Unconventional Reservoirs

Chair(s): Jichao Han, Yula Tang

- 3:20 **Introductory Remarks**
- 3:25 **Pore-Scale Evaluation of Condensate Dropout Impact on Gas Permeability:** A. W. Alsmail*¹, A. Alrehaily, M. W. Alsaffar (Saudi Aramco)
- 3:50 **Microfluidic Visualization and Phase-Behavior Simulation Study on Gas Injection Displacement Mechanisms in Shale Oil:** H. Zhang*¹, W. Zhang, B. Yuan, J. Gao, R. Xie (China University of Petroleum)
- 4:15 **Multiphase Flow and Oil Mobilization Mechanisms During CO₂ Fracturing Flowback in Tight Oil Reservoirs Revealed by MRI and NMR Experiments:** X. Li* (China University of Petroleum)


Theme 8: Diagnostics and Integrated Insights

Chair(s): Robert Archer, Yuguang Chen, DT Vo

- 3:20 **Introductory Remarks**
- 3:25 **Multi-Stage Hydraulic Fracture Modeling with Rate Transient Analysis (RTA) and Time-Lapse Geochemistry (TLG) Utilization:** P. Shilkova* (Colorado School of Mines)
- 3:50 **Evaluating Depletion Influence Using Analog Surveillance Data, RTA, and Multi-Pad, Multi-Bench Depletion Modeling:** S. Khorsandi*¹, A. Vissotski, X. Liu, Y. Tang, Y. Cai, Y. Chen, K. Ramsaran, Y. Tan, J. Fleck, H. Park (Chevron)
- 4:15 **Quantifying Key Drivers of Well Performance and Economics in the Haynesville Shale:** Y. He³, F. Kong², Z. Li², C. Xu², W. Yu*¹ (1. Simtech; 2. CNPC USA; 3. Syracuse University)

Theme 1: Improving Returns Through Smarter Development Strategy

Chair(s): David Haddad, Anup Viswanathan

- 3:20 **Introductory Remarks**
- 3:25 **TripleFrac: Scaling Multifrac Hydraulic Fracturing for Operational Efficiency and Cost Reduction:** M. Rodriguez*¹, T. Stom (Chevron)
-  4:15 **Using Drilling-Derived Mechanical Specific Energy to Map Pore-Pressure Contrasts Across Faulted Eagle Ford Blocks:** J. Roberts¹, P. Chapman¹, K. Wutherich*² (1. Devon Energy Corporation; 2. Drill2Frac)

Special Session: Best of IOR

3:30 pm–4:40pm

Moderator: Hosein Kalaei

Speakers: TBD

Theme 10: Laboratory Advancement of New Approaches

Chair(s): Deepak Devegowda, Sama Morsy

- 3:20 **Introductory Remarks**
- 3:25 **Experimental Study of CO₂ Huff-n-Puff for Enhanced Oil Recovery in Shale Reservoirs: Mechanistic Insights from Fractures and the Viability of CO₂ Energized Huff-n-Puff:** M. Yang*¹, S. Fang, Y. He, C. Dai (Sinopec Petroleum Exploration and Production Research Institute)
- 3:50 **Stabilizing In-Situ Combustion in Bakken Shale Using Hydroxide Additives: Evidence of Reduced Oxygen Demand and Enhanced Combustion Uniformity:** M. Hajiyev, B. Hascakir* (Texas A&M University)
- 4:15 **Unraveling the Complex Interactions Between Biocides and Friction Reducers to Preserve Functionality:** D. R. Dreyer*¹, D. Garza, P. Kurian (Finoric LLC)

Theme 2: Innovative Logging Measurements and Interpretation Methods

Chair(s): Sebastian Ramiro-Ramirez, Edgar Ignacio Velez Arteaga

- 3:20 **Introductory Remarks**
- 3:25 **A Case Study Utilizing Advanced Wireline Formation Testing Technology to Characterize Reservoir Fluids in the Permian Basin:** P. Guo*¹, J. Miller, A. K. T. Longbottom, J. Hinojosa (ExxonMobil)
- 3:50 **Wireline Microfracture Test Implementation and Analysis Using the DFIT-FBA Procedure:** C. Clarkson*¹, S. Haqqarast¹, X. Xie², K. Newsham², B. Gomez², S. Naone², I. Uzun², R. Naveena-Chandran³, C. Batzer³, R. Medina³, E. Lopez³, G. Hashmi³, J. Hemsing³, J. Mata³, M. Hernandez³, P. Lowrey³, S. Torgerson³ (1. University of Calgary; 2. Occidental; 3. Halliburton)
- 4:15 **Automated Basin-Wide Mineralogy Estimation Using Deep Learning Integration of Core, Spectroscopy, and Basic Log Data:** V. Simoes*¹, C. Sena Santiago, P. Irgens (SLB)

Wednesday

Theme 2: Integrated Petrophysical Interpretation

Chair(s): Hasan Khan, Rishikesh Shetty

- 8:50 **Introductory Remarks**
- 8:55 **From Characterized Sweet Spot to Stage Optimization: An Enhanced Integrated Workflow Applied to Major Shale Plays Across Diverse Geological Settings in the Americas, Case Studies:** D. Betancourt*^{1,2,3}, A. M. Quaglia², R. D. Panesso², J. C. Porras², E. Solorzano³ (1. Universidad Central de Venezuela; 2. InterRock; 3. University of Oriente)
- 9:20 **Integrated Formation Evaluation at a Drilling Qualification Facility Using Core and Downhole Sensors:** R. Balliet* (Halliburton Energy Services Inc)
- 9:45 **Updated Non-Electrical Solutions for Unlocking Gas Potential In Ultradeep Tight Reservoirs:** L. Cai* (SLB)

Theme 9: Multiphysics Controls Characterization for CCUS Reliability

Chair(s): Graham Bain, Katrina Ostrowicki

- 8:50 **Introductory Remarks**
- 8:55 **Multi-Decadal Evolution of a CO₂-Driven Reaction Interface in Wellbore Cement: Insights from Field-Retrieved Cores:** S. Ahmed Banu¹, M. Meng², S. Abedi*¹ (1. Texas A&M University; 2. Los Alamos National Lab)
- 9:20 **NMR Spectroscopy to Quantify Oil Recovery and Image Saturation Profiles During Cyclic CO₂ Gas Injection on Carbonate Source Rocks:** A. Mathur*¹, S. Althaus², A. Gupta², R. Vaidya², R. Mesdour³ (1. WDVG Engineering; 2. Aramco Americas; 3. Aramco)
- 9:45 **Prioritizing Multiphysics (HMTC) Controls on CO₂ Injection Behavior Using a Fully Coupled Simulator:** M. Mura*, M. M. Sharma (The University of Texas at Austin)

Theme 7: Foam, Mobility Control, and Conformance Management

Chair(s): Kaveh Ahmadi, Amit Katiyar

- 8:50 **Introductory Remarks**
- 8:55 **Impact of Nanobubble Generation Pressure on Enhanced Oil Recovery:** T. Lawal*¹, H. Wang¹, R. Okuno¹, Z. Li², N. Zhou², L. Zhang², M. Lu² (1. The University of Texas at Austin; 2. CNPC USA Corporation)
- 9:20 **Diverter Stabilized Foams for Temporary Flow Restriction in Parent-Child Fracture Geometries in Unconventional Shale Reservoirs: A Microfluidic Assessment:** K. Sivaraman¹, L. Houchin*², N. Koster³, J. Trivedi¹ (1. University of Alberta; 2. Production Improvement Chemicals; 3. Diverter Plus)
- 9:45 **Foam-Based Mobility Control for Cyclic Gas Injection in High-Temperature, High-Salinity Shale Reservoirs:** R. Singh*, A. Katiyar, P. Akhade, C. Clark, S. Camacho, J. Hutchens (The Dow Chemical Company)

Theme 3: Emerging Geological Evaluations: Integrated Workflows for Prospectivity Assessment and Development Efficiencies II

Chair(s): David Hume, Devon Verellen

- 8:50 **Introductory Remarks**
- 8:55 **Characterizing the Karst Features of the Rustler Formation and the Ochoan Evaporites in Southeast Eddy County, New Mexico:** T. Mackay*¹, A. Fernandez², A. Lewis¹ (1. Fairfield Geotechnologies; 2. Ellis Inc.)
- 9:20 **The Wattenberg Temperature Anomaly, Denver Basin, CO:** S. A. Sonnenberg* (Colorado School of Mines)
- 9:45 **Core-Based Electrofacies – Integrating Rock-Log Data for Mixed System Shelf-to-Basin Reservoir Characterization:** A. Eljalafi*^{2,13}, A. Bonilla-Rodriguez⁴, C. Cross², R. Holman², J. Bellian⁵ (1. University of Texas; 2. Ovitiv; 3. Colorado School of Mines; 4. ExxonMobil; 5. Koloma)

Theme 4: Diagnostics and Monitoring in Hydraulic Fracturing with Geomechanical Models II

Chair(s): Qin Ji, Xinghui Liu

- 8:50 **Introductory Remarks**
- 8:55 **Well Integrity Challenges and Cement Damage Mechanisms in Hydraulic Fracturing Operations:** A. Ahmed*, K. Sepehrnoori (The University of Texas at Austin)
- 9:20 **Proppant Distribution Effect on Pressure Transient Behavior in Fractured Production Wells: A Combination of Forward Simulation and Inversed Method Analysis:** Y. Li*, J. Hu, Y. Ou, M. M. Sharma (The University of Texas at Austin)
- 9:45 **An Alternative Approach for Estimating Reservoir Pressure from the Flowback Period of DFIT-FBA:** C. Clarkson*¹, S. Haqparast¹, D. Zeinabady² (1. University of Calgary; 2. ResFrac Corporation)

Special Session: EOR for Shale Plays

8:50 am–10:10 am

Moderator: Doug Valleau

Speakers:

- T. Zhang**, Bureau of Economic Geology
- J. Alvarez**, Chevron
- X. Xie**, Oxy

Theme 6: Subsurface Characterization, Applied Case Studies, and Business Implementation II

Chair(s): Lucy Luo, Hardik Zalavadia

- 8:50 **Introductory Remarks**
- 8:55 **Regional Data-Driven Model Based on Interference Metrics and Their Relationship to Parent-Child Well Productivity: A Case Study in the Vaca Muerta Basin Using Multivariate Analysis:** J. Llanes* (YPF S.A.)
- 9:20 **Transformers -Based Induced Earthquake Prediction in the Permian Basin and Its Impact on SWD Injection and CO₂ Storage Site Evaluation:** S. Sen*^{1,2}, B. Dindoruk¹, G. Bozkurt² (1. Texas A&M University; 2. ShaleCode Company)
- 9:45 **Fault Prediction Over a Densley Fractured, Low Offset Permian Basin Acreage: A 3D Convolutional Neural Network Case Study:** G. Espinosa*, H. M. Garcia (Geoteric)

Theme 8: Performance Prediction Methods: Physics-Based Models and Data-Driven Forecasting Approaches II

Chair(s): *Xiao Jin, Frank Male, Alessandra Martinez*

- 8:50 **Introductory Remarks**
- 8:55 **Relationship Between the Stretched-Exponential Decline Model and Analytical Solutions for Fractal Reservoirs:** A. R. Valdes-Perez*^{1,2}, T. A. Blasingame³ (1. Kappa Engineering; 2. Johns Hopkins University; 3. Texas A&M University)
- 9:20 **Automated Well Performance Prediction in the Delaware Basin: Integrating Diffusive Time of Flight with Machine Learning:** A. Li*, E. A. Kinzler, S. Esmaili (Occidental Petroleum Corporation)
- 9:45 **Some Pitfalls of Mass Flowing Material Balance for Fluid-In-Place Estimation:** H. Hamdi*, C. Clarkson, M. Parvazdavani (University of Calgary)

Theme 7: Surfactant Design, Chemistry, and Transport in Unconventionals

Chair(s): *Chao-yu (Vence) Sie, Shunxiang Xia*

- 10:45 **Introductory Remarks**
- 10:50 **A Surfactant Case Study in the Delaware Basin: Correlating Field Data with Laboratory Performance:** A. J. Menke*, R. Madigan, A. Graham, E. Acosta, C. Hall (Integrity Biochem)
- 11:15 **Experimental and Numerical Study of Surfactant Huff-and-Puff in Shale Reservoirs:** A. K. Aboahmed*, K. Mohanty (The University of Texas at Austin)
- 11:40 **Micelle Behavior of Surfactants in High-Salinity, High-Hardness Brines, and Its Implications for Transport and Stability in Unconventional Reservoirs:** G. Herman*¹, H. Au Yong¹, C. Bittner² (1. BASF; 2. BASF SE)
- 12:05 **Development and Screening of Surfactant-Nanoparticle Package for Unconventional Bakken Reservoirs at 150 °C and ~30% Salinity: Comparison Between Blends of Conventional (Anionic, Nonionic, and Amphoteric), Bio-Based and Bio-Surfactants (Rhamnolipids And Sophorolipids) with Nanoparticles:** R. Ma¹, J. Trivedi*¹, L. Houchin² (1. University of Alberta; 2. Production Improvement Chemicals)

Theme 6: Data-Driven Prediction of Well Fracturing and Production Performance

Chair(s): *Laura Santos, Yue Li, Utkarsh Sinha*

- 10:45 **Introductory Remarks**
- 10:50 **A Data Driven Approach for Early Frac Hit Detection in ESP Wells Within Unconventional Reservoirs:** R. K. Singh*¹, J. Kaus², B. J. Spivey³ (1. ExxonMobil Services & Technology Pvt Ltd; 2. ExxonMobil Upstream Integrated Solutions Company; 3. ExxonMobil Upstream Company)
- 11:15 **Predicting RTA Parameters for Delaware Basin Unconventional Wells Using Supervised Machine Learning:** S. M. Elkholy*, Y. Ben, Y. Askabe, R. Vaidya, V. Muralidharan (Occidental Petroleum)
- 11:40 **Physics Informed Machine Learning Frameworks for Improved Prediction of Hydraulic Fracturing Treatment Pressure:** J. Wagner*^{1,2}, M. Sinkey¹ (1. ShearFrac; 2. University of Toronto)
- 12:05 **A Hybrid Physics and Machine-Learning Approach to Parent-Child Well Degradation:** E. Moncayo*, D. Chakravarthy, J. Courtier, D. Galvis, M. Shokry, I. Wang (Ecopetrol Permian)

Theme 9: Sustainable Water Strategies in Unconventionals

Chair(s): *Qinmin Luo, Swati Sagar*

- 10:45 **Introductory Remarks**
- 10:50 **Innovative Water Management in UAE Unconventional Resource Development: Advancing Closed-Loop Systems and Cutting-Edge Treatment Technologies:** A. A. Al Hassani, F. M. Al Hosani*, F. Silva, A. Alharthi, K. H. Al Dhaheri, Y. F. Pangestu (ADNOC Onshore)
-  11:40 **From Disposal to Resource: Field Deployment of a Produced Water Reuse System for Fracturing in the Middle East:** C. A. Brown¹, E. Lagarrigue*², A. Ryan¹, W. Tilban¹, R. Wargo¹ (1. Turnwell; 2. ADNOC)
- 12:05 **Sustainable Unconventional Reservoirs Development in the UAE: A Water Management Case Study:** S. A. Elazab*, T. Itibrout, O. Bustos, E. Lagarrigue (ADNOC Onshore)


Theme 10: Refrac Stimulation

Chair(s): Jonathan Ortiz, Reza Safarifaroshani

- 10:45 **Introductory Remarks**
- 10:50 **Physics-Based Refrac Sensitivity and Optimization Using Calibrated Models in the Bakken:** S. Morsy*¹, C. Cipolla^{3,1}, M. McKimmy^{3,2}, A. Baldwin⁴, M. Babazadeh⁵, C. Abbott⁶, J. Zaghoul⁶, M. Almasoodi⁴, J. Lassek³, A. Tucker⁷, M. Paryani⁷, R. Safarifaroshani⁵, A. Gandomkar⁵, A. Garbino¹, M. McClure¹ (1. ResFrac; 2. Chevron; 3. Hess; 4. Devon; 5. ConocoPhillips; 6. Continental Resources; 7. Apache Corporation)
- 11:15 **Permian Basin Refrac Candidate Selection and Design with Numerical Modeling:** A. Garbino*¹, B. Gilmore², G. Gauthier², J. Ndungu³, A. Tucker⁴, M. Paryani⁴, M. Almasoodi⁵, D. Armistead⁵, M. McClure¹, S. Morsy¹, C. Ponnors¹ (1. ResFrac; 2. ExxonMobil Upstream Oil and Gas; 3. formerly ExxonMobil Upstream Oil and Gas; 4. Apache Corporation; 5. Devon Energy)
- 11:40 **Mature Well Re-Fracturing Enabled by Pre-Frac Array Electromagnetic Diagnosis and Well Re-Construction Using Expandable Tubular:** Z. Tong*, R. Wei, H. Liu (Research Institute of Petroleum Exploration and Development, PetroChina)
- 12:05 **Downhole Pulse-Based Hydraulic Re-Stimulation for Revitalizing Mature Unconventional Wells:** I. Allahar* (Wellbore Consultants)

Theme 1: Chevron Special Session: Operational Excellence at Scale

Chair(s): Alejandro Lerza, Yanli Pei

- 10:45 **Introductory Remarks**
- 10:50 **From Surveillance to Strategy: Calibrated Modeling and Sensitivities Unlock Optimum DJ Basin Development:** L. Xu*, R. Wu, J. Junca-Laplace, J. Dunn, B. Velardo (Chevron)
-  11:40 **Field Validation of Cross-Flow Ceramic Membrane Pilot for Produced Water Reuse in Completion Operations:** J. Cunningham¹, D. G. Leach*¹, G. Padilla¹, M. Hefta², M. Bentancur², W. Wei¹, T. Barnes² (1. Chevron Technical Center, a division of Chevron USA, Inc.; 2. Chevron North America E&P Company, a division of Chevron USA, Inc.)

Special Session: Agents in the Trenches: Real-World Lessons from Autonomous Subsurface Workflows

10:45 am– 12:30 pm

Moderator: Susan Nash

Speakers:

J. Boden, i2K Connect

H. Nash, Boundary RSS

A. Hermes, SLB

S. Gunturu, Petrabytes Corporation

Theme 2: Advances in Core Analysis and Rock-Fluid Interaction II

Chair(s): Sabyasachi Dash, Sandeep Mukherjee

- 10:45 **Introductory Remarks**
- 10:50 **Cation Exchange Capacity In Tight Rocks:** T. Vo*, N. Vuong, C. Rai, S. T. Dang (The University of Oklahoma)
- 11:15 **Machine Learning for Water Saturation Prediction: Beyond Archie's Model:** E. Gyimah², S. Kelley², A. Amosu³, M. Metwally¹, D. Bui³, G. Akpabli^{1*} (1. New Mexico Institute of Mining and Technology 2. New Mexico Bureau of Geology and Minerals Resources 3. Petroleum Recovery Research Center)
- 11:40 **Evaluating NMR Sensitivity in Tight Reservoir Cores: Impacts of Calibration Volume, Tool Frequency, and Porosity Regime:** B. A. Mohamed*¹, M. K. Aljishi¹, N. Truong¹, S. Mamoudou², S. T. Dang¹, C. Rai¹ (1. University of Oklahoma; 2. Stratum Reservoir)
- 12:05 **A Study on Shale Mechanical Parameters Based on Nanoindentation Experiments: A Case Study from the Chang 7 Shale in the Ordos Basin:** F. Wang*^{1,2}, X. Wang^{1,2}, X. Zhang^{1,2}, Z. Gu^{1,2}, H. Ma^{1,2}, H. LV^{1,2}, X. LV^{1,2}, X. Wang^{1,2} (1. Oil & Gas Technology Research Institute, Changqing Oilfield Company; 2. National Engineering Laboratory for Exploration and Development of Low-Permeability Oil & Gas Fields)

Theme 5: Emerging Geochemical-Based Applications

Chair(s): Jennifer Adams, Ahmed Alsmail, Jagos Radovic

- 10:45 **Introductory Remarks**
- 10:50 **Relationship Between Chemofacies and Mechanical Property: A Permian Basin Example:** A. Mitra*, A. Ahmed (Premier Corex)
- 11:15 **Pressure-Dependent Chemo-Mechanical Pathways in Mancos Shale Exposed to CO₂-Rich Brine:** S. Mahgoub, S. Ahmed Banu, S. Abedi* (Texas A&M University)
- 11:40 **Different Kerogens in the Kitchen - Thermal Maturity Trends of the Mowry Shale Across Southwest Wyoming:** S. Hudson*¹, B. Taylor¹, B. Greenhalgh², A. Toner¹ (1. Brigham Young University; 2. Wexpro)
- 12:05 **Pyrolysis Tmax Suppression as a Robust Indicator for Rapid Identification of Lacustrine Shale Oil "Sweet Spots":** M. Li*^{2,1}, X. Ma^{2,1}, M. Qian^{2,1}, E. Wang^{2,1}, T. Cao^{2,1}, X. Guo^{2,1} (1. Sinopec Petroleum Exploration & Production Research Institute; 2. State Key Laboratory of Shale Oil and Gas Enrichment Mechanisms and Efficient Development)

Student Posters- Fracture Mechanics, Modeling and Propagation

Chair(s): David Hume, Hosein Kalaei, Katerina Yared

- **Efficient Simulation of Heterogeneous Hydraulic Fracture Closure Using a Fast Multipole Accelerated Iterative Scheme:** G. Yuan*¹, M. Chen¹, T. Guo¹, D. Weng², Y. Liu¹ (1. China University of Petroleum; 2. Research Institute of Petroleum Exploration & Development)
- **An Efficient Nonlinear Inversion Method for Hydraulic Fracture Geometric Parameters Based on an Analytical Strain Model: Theory and Field Applications:** X. Hu*¹, M. Chen¹, T. Guo¹, Z. Hu¹, D. Weng², Y. Liu¹ (1. China University of Petroleum; 2. Research Institute of Petroleum Exploration & Development)
- **Mechanisms of Hydraulic Fracture Growth in Highly Laminated Shale Under Multi-layer Development:** G. Pan*, S. Wang (China University of Petroleum)
- **Comparative Experimental Study of Fracture Propagation in Coal and Tight Sandstone Reservoirs – Implications for Hydraulic Fracturing Design:** L. Li* (China University of Petroleum)
- **Modeling of Self-Supported Fracture Permeability Enhancement and Dominant Factors in Shale Gas Hydraulic Fracturing:** W. Rui* (China University of Petroleum)
- **Mechanisms of Advection-Dominated Tracer Transport in Coupled Hydraulic and Natural Fracture Networks:** Q. Liu* (University of Texas at Austin)
- **Development of a 1D Mechanical Earth Model and Fracture Analysis at the HFTS-1 Site, Midland Basin:** B. Sasmaz* (University of Houston)
- **Physics-Informed Cascade Machine Learning for Geomechanical Property Prediction Using Mineralogy Data: A Case Study in Mississippian Formations:** C. Xu*^{1,2} (1. University of Oklahoma; 2. Impac Exploration Services)

Student Posters: Sustainability, CO₂ Sequestration, and Advanced Stimulation

Chair(s): David Hume, Hosein Kalaei, Katerina Yared

- **A Study on CO₂ Miscible Displacement Mechanisms and Injection Optimization in Ultra-Low Permeability Reservoirs Using Integrated Core Flooding Experiments and Numerical Simulation:** J. Sun*^{1,2}, L. Li^{1,2}, X. Wang^{3,4}, Q. Liu^{1,2}, X. Bian^{1,2}, Z. Chen^{1,2}, Y. Chen^{1,2} (1. State Key Laboratory of Deep Oil and Gas, China University of Petroleum; 2. School of Petroleum Engineering, China University of Petroleum; 3. National Key Laboratory of Petroleum Resources and Engineering, China University of Petroleum; 4. Institute of Unconventional Oil and Gas Science and Technology, China University of Petroleum)
- **CO₂-Foam and Nanofluid Hydraulic Fracturing for Sustainable Unconventional Reservoir Production:** A. Kumar* (Rajiv Gandhi Institute of Petroleum Technology)
- **1D Geomechanical Modeling for HPHT Onshore Wells Near a Salt Structure: Impacts on Stress Prediction and Drilling Optimization:** J. E. Sanchez Zuniga*¹, O. Castillo Castillo³, L. Sanchez Guillen¹, H. J. Sanchez² (1. Universidad Nacional Autonoma de Mexico; 2. SLB; 3. Pemex)

- **Water-Avoidance Stimulation Design in Ultra-Deep Fractured Tight Sandstone Reservoirs – Integration of Water-Control Proppant Experiments and Fracture Simulation:** J. Wang* (China University of Petroleum)

Student Posters: Proppant Dynamics and Conductivity Optimization

Chair(s): David Hume, Katerina Yared

- **Experimental Investigation and Predictive Modeling of Conductivity in Discretely Propped Fractures:** W. Rui* (China University of Petroleum)
- **Optimization of Proppant Size Combination Considering Fracture Conductivity and Fluid Distribution During Re-Fracturing of Shale Oil Reservoirs:** L. Li* (China University of Petroleum)
- **Mechanistic and Experimental Evaluation of Proppant Entry Efficiency in Ultra-Deep Fractured Tight Sandstone Reservoirs – Implications for Conductivity Retention and Formation Damage Control:** F. Ye* (CUP)
- **Impact of Proppant Placement Morphology on Fracture Conductivity and Flow Capacity – Experimental and Modeling Insights for Non-Ideal Proppant Distribution:** F. Ye* (CUP)
- **Optimization of Proppant Size Combination Considering Fracture Conductivity and Fluid Distribution in Shale Oil Reservoirs:** B. Ma* (China University of Petroleum)
- **Linking 3D Fracture-Surface Morphology to Conductivity Retention – An Upscaling Approach with Implications for Damage Evaluation:** B. Ma* (China University of Petroleum)
- **Interwell Interference Identification for Multi-Layer Shale Development Using Multi-Source Data and LSTM-Based Dynamic Indices:** G. Pan*, S. Wang (China University of Petroleum)
- **Hydraulic-Fracturing Parameter Optimization in Ultra-Deep Tight Sandstone Reservoirs Based on Coupled Understanding of Fracture-Controlled Reservoirs:** J. Wang* (China University of Petroleum)
- **Re-Fracturing Parameter Optimization in Ultra-Deep Tight Sandstone Reservoirs Based on Coupled Understanding of Fracture-Controlled Reservoirs:** J. Wang* (China University of Petroleum)

Theme 1: Alternates

Chair(s): Luis Baez, Alejandro Lerza, Matthew Poole, Ali Sloan

- **Optimizing Frac Performance on 32 Permian Wells by Utilizing a Combination of Micellar Surfactant and Nanoparticles:** J. Coronado², J. Trivedi*¹, L. Houchin², J. Pratt⁴ (1. University of Alberta; 2. Double Eagle Central Operating; 3. Production Improvement Chemicals; 4. Nitro-Lift Technologies)
- **Common Equation of State Based Compositional Simulation to Quantify Uncertainty for Multi-Bench Faulted Reservoirs in the Permian Basin:** T. Gang*¹, C. Chen¹, H. Tang¹, H. Behzadi¹ (1. Occidental Petroleum; 2. Ecopetrol-Permian)
- **Enabling Successful Hydraulic Fracturing in the UAE Through an Optimized Post-Fracturing Plug Millout Workflow:** Z. Hamidon*¹, A. Ryan¹, S. A. Elazab², S. Elhanbouly², Y. Faizov², M. El Taher³ (1. Turnwell; 2. ADNOC; 3. SLB)
- **Transforming Completion Practices: UAE's First Integrated Deployment in Shilaif Unconventional Oil Reservoir:** O. A. Alvarado Sosa², T. Ittibout², K. H. Al Dhaheri², M. Al Mazrouei¹, P. Hanna¹, A. Cuessy Vazquez*¹, A. Alam¹, A. Singh¹, B. N. Broca¹, T. Ao¹, E. N. Kaul¹, D. N. Cippitelli¹, M. N. Khan¹, A. N. Alhosani¹, M. Y. Al-Ali¹ (1. ADNOC Drilling; 2. ADNOC Onshore)
- **Changing Maturity Paradigms: Derisking Hybrid Tight Gas and Shale Exploration in the Frontier Paraguayan Chaco Basin:** J. A. Angulo*, G. Franco, I. De Barros Barreto (Zeus Energy)
- **Drilling Mud Loss Mitigation Through Rapid Depletion Forecasting:** J. Yin*, J. W. Clark, T. Gang, M. Razavi, J. Han, H. Behzadi, O. Raba, V. Muralidharan, X. Xie, C. M. Sirois (Occidental Petroleum)
- **Tripling Drilling Efficiency – Record-Setting ROP Transformation in UAE Onshore Unconventional Wells:** R. Bayov*¹, G. Arbadov¹, M. Ahmed¹, M. Anwar¹, A. Alajami¹, E. Elshamisi¹, A. Ruzhnikov², N. Akhmetov¹ (1. ADNOC Onshore; 2. Turnwell)
- **Integrated Geoscience-Completions Workflow to Mitigate Casing Deformation and Screen-Out Risk in the Austin Chalk and Structurally Complex Plays:** J. Holt², J. McKinney², R. Stocking*¹ (1. Ubiterra Corporation; 2. Black Mountain Oil & Gas)



Theme 2: Alternates

Chair(s): Scott Birkhead, Yulia Faulkner, Haijing Wang

- **PVT Correlations for Initial Formation Volume Factor Estimation: A Case Study in Delaware Basin:** S. Moonesan*¹, S. Tavassoli¹, K. Patel² (1. University of Texas; 2. Marathon Oil Company)
- **Enhanced SNGD Technology: Bridging the Gap Between Precision and Sustainability in Formation Evaluation:** L. Y. Mei* (SLB)
- **Finite Element Simulation of Elastodynamic Properties of Oil Shales:** J. T. Batista, J. A. Soares*, G. F. Viana de Lima (UFCG)

- **Thermal Maturity Controls on Pore-Network Wettability: Opposing Behaviors in Oil and Gas Wells:** M. Zubair*, H. Dehghanpour (University of Alberta)
- **Source-Reservoir Coupling Characteristics and Their Impact on Gas Storage of Lime-Mud Limestone from Permian Maokou Formation in the Sichuan Basin, China:** Z. Hu*, L. Yu, L. Zhang, F. Bao (Sinopec Petroleum Exploration and Production Research Institute)

Theme 3: Alternates

Chair(s): Jose Delgado, Andrew Keene, Marianne Rauch, Liwei Cheng, Tomasz Ochmanski

- **Geological Settings and Organic Geochemical Characterization of Viséan Unconventional Formations within the Dnieper-Donets Basin, Eastern Ukraine: Implication for Hydrocarbon-Generating Potential and Sweet Spot Tracing:** S. Levoniuk*, S. Srynchak (Ukrigasvydobuvannya)
- **Fracture Modeling and Enhanced Oil Recovery, in the Chinguetti Offshore Reservoir: Mauritanian Coastal Basin:** D. M. Bah*¹²³ (1. Boumerdes University; 2. Nouakchott University (Faculty of Sciences and Technology); 3. School of Mining -Oil & Gas)
- **Intelligent Fault Recognition Driven by Structural-Style Knowledge and Real Data Integration:** M. Li, T. Duan* (SINOPEC)
- **Fracture-Driven Interactions (FDIs) in Unconventional Wells: A Review of Mechanisms, Monitoring Tools, and Mitigation Concepts:** A. Bigdeli*¹, C. Temizel² (1. Universidade Estadual de Campinas; 2. TerraPacific)
- **Geological Insights into Continental Shale Reservoirs: The Dongyemiao Member in the Fuxing Area of the Sichuan Basin, China:** D. Feng*, Q. Wang, Z. Hu, S. Xu, W. Du (Petroleum Exploration and Production Research Institute)
- **Preliminary Study on the Main Controlling Factors of Deep Coalbed Methane Enrichment in the Slope Zone of the Ordos Basin in China:** Z. Liu*, B. Shen, S. Zhao (Sinopec Petroleum Exploration and Production Research Institute)

Theme 4: Alternates

Chair(s): Jaewoo An, Meng Cao, Qin Ji, Abdul Muqtadir Khan, Fatick Nath, Ruiting Wu

- **Integrated Simulation of Hydraulic and Natural Fracture Interactions for Improved Bakken Well Performance:** X. Wan*, A. Abes, M. Saeed, C. Wu, L. Jin, C. Dalkhaa, J. Sorensen (Energy & Environmental Research Center)
- **An Integrated Physics-Guided Neural Network Framework for Joint Prediction of In-Situ Stress and Pore Pressure:** P. Lian¹², T. Nguyen*¹, B. Das¹, Z. Fan¹, J. Zhang¹ (1. Sinopec Tech Houston LLC; 2. Sinopec Petroleum Exploration and Production Research Institute)
- **A Novel Method for Identifying Critical Wellbore Failure Regions Induced by Poroelastic Response:** Y. Han* (Aramco Americas)

- **Impact of Well Trajectory on Fiber Slippage: A Framework for Selecting the Optimal Observation Well for Single-Use Fiber Deployment:** X. Song*¹, G. Jin², K. Wu¹ (1. Texas A&M University; 2. Colorado School of Mines)
- **Integrating Surface Pumping with Subsurface Diagnostics to Improve Fracture Performance:** J. Conaway*, M. Khan, R. Holland (Seismos)
- **Indirect Hydraulic Fracturing in Coalbed Methane and Coal Mine Methane Applications: Not All Parent-Child Well Interactions Have Negative Consequences!:** R. Johnson Jr. *^{1,2}, H. Ramanandraibe² (1. Novus Fuels; 2. The University of Queensland)
- **High Viscosity Friction Reducers Enhance Proppant Transport and Productivity in Bakken Wells: An Integrated Field Perspective:** U. Khand*, K. Ling (University of North Dakota)

Theme 5: Alternates

Chair(s): Jennifer Adams, Craig Barrie, Jason Jweda, Wei Wang

- **Explaining Poor Production in an Eagle Ford Lateral Using a Hydrocarbon Drainage Index:** R. Schrynemeekers* (Amplified Geochemical Imaging LLC)
- **Proposing Productivity Index for Vaca Muerta Unconventional Reservoir Based in Geochemical Properties:** D. Betancourt*¹, R. D. Panesso², C. Rabe³, E. Solorzano⁴, E. Sardelli⁴, E. J. Betancourt¹ (1. Universidad Central de Venezuela; 2. InterRock; 3. Baker Hughes; 4. University of Oriente)
- **Unique Properties of Low Gas to Oil Ratio (GOR) Black Shale Oil:** S. Wu*¹, H. Ostersa², A. Sneddon³ (1. Power Energy and Environmental Research Institute; 2. University of Buenos Aires; 3. Midcon Well Logging (MCWL))
- **Reactive Transport Modeling of the Dissolution Front in Siliciclastic Mudrocks During the Post-Fracturing Shut-In Period:** H. J. Khan* (College of Petroleum & Geosciences, King Fahd University of Petroleum & Minerals)
- **Marine Shale Diagenetic System and its Impact on Reservoir Porosity: A Case Study of Permian Shale in the Sichuan Basin, China:** G. Wang*^{2,1}, Z. Hu^{2,1}, W. Du^{2,1}, D. Feng^{2,1}, P. Wang^{2,1}, R. Wang^{2,1} (1. Petroleum Exploration and Production Research Institute; 2. State Key Laboratory of Shale Oil and Gas Enrichment Mechanisms and Efficient Development)
- **Carbonate Replacement of Siliceous Shale in the Dalong Formation of the Sichuan Basin and Its Impact on the Development of Shale Reservoirs:** L. Lu* (Sinopec Petroleum Exploration and Production Research Institute)

Theme 6: Alternates

Chair(s): Deep Joshi, Sebastien Matringe, Utkarsh Sinha, Nanzhe Wang, Wendong Wang, Judy Zhu, Ping Puyang

- **Machine Learning-Based Imputation of Missing Lithofacies for Enhanced Clastic and Carbonate Reservoir Characterization:** W. J. Al-Mudhafar* (Basrah Oil Company)
- **AI-Assisted Reservoir Quality Prediction in Shale Plays: A Review of Machine-Learning Practices, Training Data Constraints, and Published Field Applications:** J. Saldana*, C. Temizel (Terra Altai)
- **AI in Downhole Image Interpretation for Unconventional Reservoirs: A Review of Machine-Learning Applications, Image-Processing Techniques, and Field Examples:** Y. Pamukcu* (Middle East Technical University)
- **Well Spacing Optimization in the Delaware Basin Wolfcamp Formations:** A. Alzahabi*, A. Kamel, J. King, L. Gamez (University of Texas Permian Basin)
- **Machine Learning Insights Into Lateral Length and Well Productivity: A Framework for Optimizing Unconventional Development:** J. Riley*, A. Alzahabi (UTPB)
- **Intelligent Machine-Learning System for Automated Oil Well Performance Optimization and Economic Evaluation:** E. Agyei* (New Mexico Institute of Mining and Technology)
- **A Physics-Informed Data Driven Solution to Fractional Diffusion Equations:** T. Liang*¹, Q. Sun¹, M. Zhang², X. Li³ (1. China University of Geosciences; 2. China University of Petroleum; 3. The Research Institute of Petroleum Exploration and Development, CNPC)
- **Harnessing Automation and AI in Directional Drilling: Key Insights From Arrow Exploration's Horizontal Campaign in Colombia's Llanos Basin:** R. Perdomo*¹, A. Neumann², A. Nino², O. Diaz³, H. Rueda³, C. Guerrero¹, O. Vargas¹, H. Borja¹, (1. Halliburton; 2. Arrow Exploration; 3. Drill + Solutions)
- **Quantitative Assessment of Micro-Annulus with Distributed Acoustic Sensing:** Z. Huang*, R. Zheng, Y. Li (CNPC Engineering Technology R & D Company Limited)
- **A Big-Data View of Drilling and Geology from 80,000 Texas Horizontal Wells:** I. Kuvaev*, D. Gibson², (1. ROGI; 2. Gibson Reports)
- **Completion Optimization on Data-Driven Production Forecasts Improves Tight Oil Well Performance:** Z. Ren*, F. Male, L. F. Ayala (Penn State University)
- **A Data-Driven Framework for Evaluating and Predicting Frac-Hit Critical Injection Volumes in Deep Shale Gas Reservoirs:** Z. Cheng, W. Yan, W. Wang, Y. Su, Y. Deng*, (China University of Petroleum)
- **Big-Data Hydraulic Fracture Modeling: A Scalable Workflow for Hydraulic Fracture Characterization Across Hundreds of Shale Gas Wells:** J. Leines*, J. Rodgerson (SimTech LLC)
- **Development and Field Implementation of a Real-Time Hydraulic Fracturing Simulation and Optimization Platform:** H. Huang², W. Yu*¹, (1. SimTech; 2. Petrochina Southwest Oil & Gas Field Company)
- **A Meta-Learning Framework for Assessing Key Drivers of Shale Oil Production with Few Shot Samples Across Multiple Basins in China:** Y. Ni*, T. Ye, (Sinopec Petroleum Exploration and Production Research Institute)

Theme 7: Alternates

Chair[s]: Russell Giesbrecht, Hosein Kalaei, Darren McDuff, Deniz Paker, Chao-yu (Vence) Sie, Shunxiang Xia, Sarkis Kakadjian

- **When to Inject? Molecular Insights into Optimal Pressure Timing for Surfactant EOR in Organic-Rich Shale:** W. Zhao, H. Nasrabadi* (Texas A&M University)
- **A Critical Review of Confined-Fluid Phase Behavior in Unconventional Reservoirs: Insights, Challenges, and Future Directions:** N. Giasi*, X. Li (University of Kansas)
- **When Lower Fracture Conductivity Wins: A Paradox Explained:** H. Behmanesh*¹, K. Patel², R. Vaidya³, S. Esmaili³, M. Carlsen¹, M. Majzoub Dahouk¹, C. H. Whitson¹ (1. Whitson; 2. CMG Ltd.; 3. Occidental Petroleum) Petrochina Southwest Oil & Gas Field Company)
- **Effect of Variable-Scale Pore Systems on Gas Injection Enhanced Oil Recovery (EOR) in Tight Oil Reservoirs:** M. Kwakye-Tannor*, D. K. Reichhardt (Montana Technological University)
- **Smart Gas Lift Optimization: Solving the Constrained Compression Challenge in the Permian Basin:** M. Stanko*¹, M. Majzoub Dahouk¹, M. Carlsen¹, G. Helfrick¹, D. Ferreira¹, K. Lucas², J. Pratt² (1. Whitson; 2. Devon)
- **Evaluating a Multi-Well Huff-and-Puff Program in the Eagle Ford Using Integrated Field and Modeling Analysis:** C. Karacaer¹, D. Bennett*², E. Agartan¹, C. Ozgen¹, P. Chapman², J. Tenpenny² (1. Nitec LLC; 2. Devon Energy)
- **Review of Gas-Injection EOR in Shale Reservoirs: Mechanisms, Published Pilot Outcomes, and Technical Challenges:** H. Moubarak*¹²³ (1. SEG; 2. Tech Sync Energy LLC; 3. INENSYS)
- **Mechanism of CO₂ Miscible Water-Alternating-Gas Flooding and Optimization of Injection Parameters in Tight Oil Reservoirs:** J. Sun*¹², L. Li¹², X. Wang³⁴, Q. Liu¹², X. Bian¹², Z. Chen¹², Y. Chen¹² (1. State Key Laboratory of Deep Oil and Gas, China University of Petroleum; 2. School of Petroleum Engineering, China University of Petroleum; 3. National Key Laboratory of Petroleum Resources and Engineering, China University of Petroleum; 4. Institute of Unconventional Oil and Gas Science and Technology of China University of Petroleum)
- **A Carbonated Produced Water Alternating CO₂ Gas (CPWAG) Strategy for Improved Oil Recovery (IOR) in Unconventional Reservoirs:** R. Maddirala*¹, R. Jain¹, H. Kakati¹, R. Shukla²³ (1. Indian Institute of Petroleum and Energy; 2. Homi Bhabha National Institute; 3. Pulsed Power and Electro-Magnetics Division, Bhabha Atomic Research Centre Facility)
- **A Novel Ester-Based Surfactant to Improve Oil Recovery in Tight Oil Reservoirs:** C. Alys*, J. Deligny, P. Struelens (Oleon)
- **Development and Evaluation of a Novel Bio-Based Displacement Agent Compatible with Produced Water for Enhanced Oil Recovery in the Ordos Basin:** Y. Zhang* (Oil & Gas Technology Research Institute, PetroChina Changqing Oilfield Company)
- **A Numerical Simulation Study on the Mechanisms of Enhanced Oil Recovery by Nanobubble Water Flooding:** Y. Yao* (Petroleum Exploration and Production Research Institute)

Theme 8: Alternates

Chair[s]: Yuguang Chen, Susan Howes, Annie Shen, Junjie Yang, Gizem Yildirim

- **Mitigating Parent-Child Interference in the Haynesville Basin Through Fracture Geometry Control:** T. Do*¹, S. Horigan², C. Widell², P. Valora² (1. InDZone Consulting LLC; 2. Sponte Operating)
- **Understanding Well Performance of Unconventional Extended Laterals in Eagle Ford, TX:** J. Zhu*, X. Li, W. Liu (CNOOC International)
- **A Few-Shot AI Framework for Reliable Early-Time Production Forecasting in the Permian Basin:** K. Katterbauer*, A. W. Alsmail (Saudi Arabian Oil Co)
- **Physics-Informed Neural Networks for Enhanced EUR Prediction in Multi-Stage Fractured Horizontal Wells: Addressing Global Reserve Uncertainty:** O. T. Omokhoa* (University of Nigeria Nsukka)
- **First-Ever Cloud and GPU-Based Reservoir Simulation Framework for Real-Time Post-Frac Production Prediction:** C. Chang², C. Liu*¹, W. Yu¹ (1. SimTech LLC; 2. PetroChina Southwest Oil & Gas Field Company)

Theme 9: Alternates

Chair(s): Rosa Aguilar, Denise Benoit, Maria Lozano, Abouzar Mirzaei Paiaman, Pouriya Mousavi, Katrina Ostrowicki, I Wayan Rakananda Saputra, Scott Singleton, Deepak Devegowda, Nadia Mouedden

- **Application of CO₂-Responsive Gel for Carbon Sequestration in Shale Oil Reservoirs: Advancing CCUS Strategies for GHG Emission Mitigation in the Ordos Basin:** Y. Zhang*^{1,2} (1. Oil & Gas Technology Research Institute, PetroChina Changqing Oilfield Company; 2. University of Calgary)
- **Contrasting Carbonation Behavior of CaOH, MgOH, and NaOH with Ultramafic Rocks: Evidence of Selective Enhancement of CO₂ Capture:** B. Hascakir* (Texas A&M University)
- **Characterization of Deep Paleozoic Unconventional Formations for CO₂ Storage in the Delaware Basin:** T. Khan*, F. J. Angel, M. Myers, L. A. Hathon (University of Houston)
- **Feasibility of Downhole Water Sink-assisted CO₂ Sequestration: A Scalable Data-Driven Framework:** W. J. Al-Mudhafar* (Basrah Oil Company)
- **Multiscale Characterization of Tight Oil Shale: Insights into Mineralogical, Organic, and Pore Properties with Implications for Energy Storage and Adsorption Behavior:** A. Alanazi*, H. Hoteit (King Abdullah University for Science and Technology)
- **Electrifying Large-scale Drilling and Hydraulic Fracturing in Unconventional Oilfields: A Scalable Technical Solution, Field Validation, And Standardized Pathway:** Y. Peng* (Shenzhen New Energy Research Institute, PetroChina)
- **Pad Power: A Clean-Energy Drilling System for High-Efficiency Unconventional Development in UAE:** A. H. Abdelkawy*, A. Alajami, M. Anwar, E. Elshamisi (ADNOC Onshore)
- **Evaluating Greenhouse Gas Emission Reductions through Non-Condensable Gas Co-Injection in SAGD Operations Using Modified Well Configurations:** Y. Zhang*^{1,2} (1. Oil & Gas Technology Research Institute, PetroChina Changing Oilfield Company; 2. University of Calgary)
- **Subsurface Risk Assessment for Gas Storage: Coupled Effects of Mineralogy, TOC, Wettability, and Gas Diffusivity on Shale Containment Efficiency:** A. Alanazi*, H. Hoteit (King Abdullah University for Science and Technology)
- **Pore-Throat Gradient Controlled Two-Phase Flow in Porous Media: Investigation of Wettability-Geometry Coupling for Subsurface Engineering:** T. Zhou*^{1,2} (1. University of Manchester; 2. Soft Matter Sciences and Engineering, ESPCI Paris, PSL University, CNRS, Sorbonne Université)
- **Examining the Effect of Hydrogen Exposure on Geochemical-Mechanical Properties of Unconventional-Oil-Formation Rock, Oil and Brine: Experimental Work to Help Evaluate Hydrogen Storage in the Wolfcamp and Bakken Shale:** E. Bechara*, M. Watson, T. Gamadi, H. Emadibaladehi, I. Ispas, S. Thiyagarajan (Texas Tech University)
- **Determination of Geothermal Gradient in North Cambay Basin, Gujarat, India:** S. Saikia* (ONGC)
- **Machine Learning-Driven Optimization of Infill Well Spacing for Geothermal Coproduction in Mature Hydrocarbon Fields.:** E. Agyei* (New Mexico Institute of Mining and Technology)

- **Enhancing Microwave-Driven Hydrogen Generation Through Engineered Calcite–CaO Mineral Transformations:** A. B. Demir, B. Hascakir* (Texas A&M University)
- **Salt-Tolerant Fracturing Fluid Prepared Directly from High-Salinity Produced Water: Technology and Field Application:** H. Bai*, F. Zhou, Z. Ding, S. Zhang, E. Yao (China University of Petroleum)
- **Acoustically Derived Perforation Efficiency and Near Field Conductivity Using High-Resolution Surface Pressure Analysis in Geothermal Applications:** S. Gabel*, M. Khan, J. Klostermann, S. Rahimi-Aghdam, B. Emborsky (Seismos, Inc.)
- **Integrated Pressure–Tracer Diagnostics for Engineered Geothermal and Unconventional Reservoirs Using a Dual-Porosity-Dual-Permeability Framework:** B. Mindyaliyeva*, H. Kazemi (Colorado School of Mines)



Theme 10: Alternates

Chair(s): Giselle Garcia Ferrer, Xiao Jin, Baosheng Liang, Sama Morsy, Reza Safariroshani

- **Mechanistic Understanding of Potential Formation Dechan in Shale Oil Reservoirs — Insights from Integrated Laboratory Evaluation:** X. Yu* (China University of Petroleum)
- **Real-Time Pressure Pattern Recognition for Predicting and Mitigating Permian Basin Frac Hits:** K. Katterbauer*, A. W. Alsmail (Saudi Arabian Oil Company)
- **Effective Remediation of Polymer Gel Damage in Shale Reservoirs: A Case Study from the Woodford Shale:** G. Djijoto* (Flex-Chem)
- **From Simulation to Field Trial: A Full-Cycle Approach to Optimizing Energized-Induced Steering Refracturing in Tight Oil:** J. Zhang*, H. Qu, F. Zhou (China University of Petroleum)
- **Maximizing Permian Basin Shale Oil Recovery While Lowering the Cost of Production:** R. Downey* (Shale Ingenuity LLC)
- **Optimizing Drawdown Strategies Using Streamlined Workflow: Insights from Midland and Delaware Basins:** Y. Gonzalez*, J. Courtier, E. Moncayo, I. Wang, A. Jacquet, C. Garces, M. Shokry, H. Sun (Ecopetrol Permian)
- **Analyzing Stage Zone Placement Impact on Fracture Pressure and Frac Success: A Montney Case Study:** R. Gravel* (GeoLOGIC Systems LTD)
- **Integrated Drilling-Derived Rock Strength and Real-Time Fracture Diagnostics for Completion Optimization in the Powder River Basin:** T. Szilagyi¹, M. Sinkey*¹, K. Wutherich², B. Bundy², S. Van Delinder², T. Hewett², J. Kegel² (1. ShearFRAC; 2. Ballard Petroleum; 3. Drill2Frac)

Exhibition Highlights

Plan time to visit the Exhibit Hall, which provides engaging networking opportunities and events designed to turn initial introductions into long term business relationships as well as providing the latest technologies and product launches in the market.

Location: Exhibit Hall E

Monday, 22 June

10:00 am–6:00 pm

- Refreshment Breaks at 10:00 am and 2:30 pm
- Exhibition Hall Technical Presentations (#201 and #903)
- Student Poster Session 10:00 am and 2:30 pm (#221)
- Opening Reception at 4:40 pm
- Core Exhibits (#334)

Tuesday, 23 June

8:30 am–6:00 pm

- Refreshment Breaks at 10:00 am and 2:30 pm
- Exhibit Hall Technical Presentations (#201 and #903)
- Student Poster Session 10:00 am (#221)
- Networking Reception at 4:40 pm
- Core Exhibits (#334)

Wednesday, 24 June

8:30 am–1:30 pm

- Refreshment Break at 10:00 am
- Exhibit Hall Technical Presentations (#201 and #903)
- Core Exhibits (#334)

Book Your Exhibit Space

Book your space now to be part of the most relevant, multidisciplinary event for unconventional resource development. URTeC is where you can showcase your company's products and service to thousands of attendees, reaching scientists and executives seeking solutions and new ideas.

For questions or additional information, please contact:

Tracy Thompson

Exhibit/Sponsor Sales

+1 918 560 2614

tthompson@urtec.org

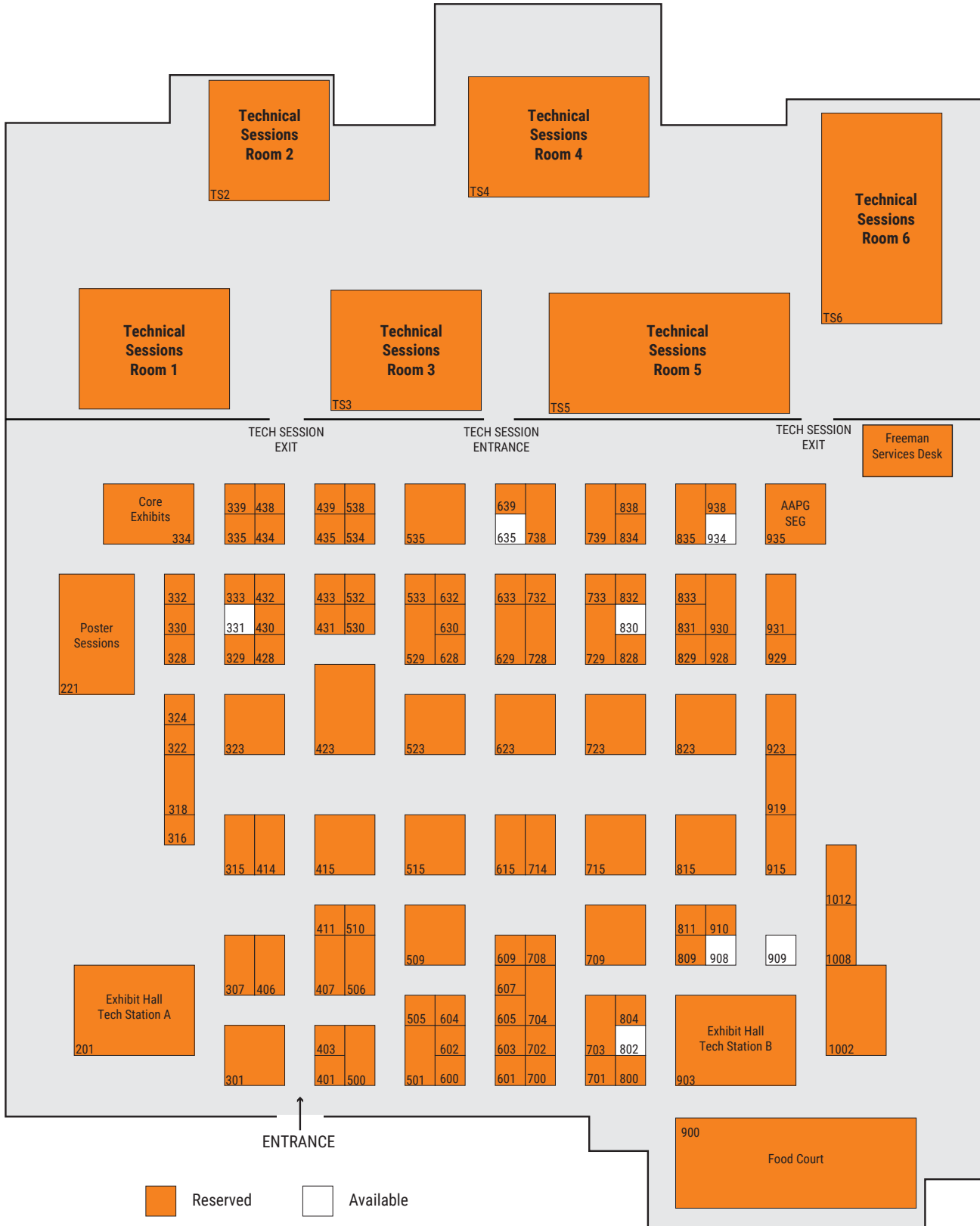


Exhibitors *as of 3/26/2026*

Actenum Corporation.....	811	Fairfield Geotechnologies	515	PetroSkills	603
Advertas	703	FEBUS Optics.....	804	Petrostrat	434
AI Driller.....	835	Five Star Downhole Service	800	POSTER SESSIONS	221
Aliquot, Ltd.	438	Flex-Chem	833	Premier Corex.....	629
AAPG.....	935	FOOD COURT	900	PrePad.....	534
AGAT Laboratories.....	335	Freeman Services Desk.....	1043	QuantumPro, Inc.	728
American Jereh International Corp.....	628	Gain.Energy, Inc.....	339	ResFrac Corporation.....	329
BASF Oilfield Chemicals	938	GEO EXPRO Magazine.....	430	RevoChem	533
BasinIQ / SynMax LLC	704	GeoMark Research.....	739	RevSolz	315
Bruker	605	Geophysical Society of Houston.....	702	Ridgeway Kite	714
Cegal LLC.....	431	GVERSE GeoGraphix.....	501	Rock Flow Dynamics	323
ClampOn, Inc.	733	Houston Geological Society.....	330	ROGII.....	423
CMG Group.....	535	Ikon Science.....	407	RohmTek	532
Columbine Corporation	530	Integrity Biochem.....	307	SAExploration	829
ComboCurve	823	ITASCA.....	332	Seismos.....	523
Conduit Resources.....	928	Interfaces	632	ShearFRAC Group, LLC.....	630
Core Exhibits	334	J-W Power Company.....	729	Show Office.....	1012
Core Laboratories	509	KAPPA	623	SPE Gulf Coast Section	930
Danomics.....	600	KICE3/University of Kansas	328	SPECTRO Analytical Instruments.....	701
DarkVision	715	Kureha Energy Solutions LLC	506	Stage Completions.....	708
DataLog + GeoVision.....	505	Leistritz.....	809	Stratum Reservoir.....	828
DiverterPlus	318	Media Lounge	931	Subsurface Consultants & Associates, LLC (SCA)	322
Dolan Integration Group, LLC	838	MetaRock Laboratories.....	700	Terra Guidance LLC.....	834
DUG	439	MicroSeismic, Inc.....	738	Texas A&M University Petroleum Engineering.....	435
Drill2Frac.....	529	Midnight Marketing.....	832	TGT Diagnostics	538
DrillPlus Coring Solutions LLC.....	432	NCS Multistage.....	301	Thru Tubing Solutions.....	415
Duxaoil Texas LLC	316	Neuralog	604	Tracerco.....	602
Dynamic Green Solutions, LLC.....	609	NITEC LLC	723	Tubel Energy	428
EDGE Systems	406	NOV	414	Ubiterra Corporation.....	403
Ellington Geological Services	633	Novi Labs	923	WellDrive	915
Enviro Resources.....	601	NuTech	324	Welltec.....	815
EOR ETC.....	607	Oil Field Packaging	831	Whitson USA LLC.....	401
Exhibit Hall Tech Station A.....	201	Oiltool Testing Services, Inc.....	333	Wildcat Technologies	732
Exhibit Hall Tech Station B.....	903	Oliasoft.....	433	Xecta Digital Labs.....	615
Exhibition Sales Office	1002	Paragon Geophysical Services, Inc.	500	Zeeospheres Ceramics LLC.....	633
Exhibitor Lounge	1008	PE Ltd.....	709		
Expro.....	411	PetroAI.....	510		
Exprodat.....	929				



Exhibition Floor Plan



Registration Information

Register Online

Advance registration is recommended and registering online allows you to know immediately which events are available. If an event is not available, it will not appear on the screen or it will indicate “sold out.”

Three-Day Conference & Exhibition Registration		
Registration Type	On or before 22 May Midnight EDT	After 22 May Midnight EDT
Member*	\$855	\$985
Nonmember	\$985	\$1,115
Student Member*	\$100	\$115
Student Nonmember	\$135	\$160
Senior Rate* *	\$430	

Includes: Access to the opening plenary, panel sessions, special sessions, session room technical sessions, exhibit hall technical sessions, exhibition, New Technology Showcase (Third Level), refreshment breaks and receptions, as well as access to the digital conference proceedings.

One-Day Conference & Exhibition Registration		
Registration Type	On or before 22 May Midnight EDT	After 22 May Midnight EDT
Member*	\$430	\$560
Nonmember	\$560	\$690

Registration Day(s): Monday, Tuesday, or Wednesday

Includes: Access to specific day’s events including panel, special, and technical sessions, exhibit hall technical sessions, exhibition, New Technology Showcase (Third Level), refreshment breaks and reception, as well as access to the digital conference proceedings.

One-Day Exhibition Only Registration		
Registration Type	On or before 22 May Midnight EDT	After 22 May Midnight EDT
Exhibition Only Pass	\$100	

Includes: Access to specific day’s events in the exhibition, including exhibit hall technical sessions, New Technology Showcase (Third Level), refreshment breaks and reception. (Please plan to pick up your badge on the day for which you registered.)

Non-Conference Registration		
Registration Type	On or before 22 May Midnight EDT	After 22 May Midnight EDT
Member* / Nonmember	\$40 + Cost of Course	

Includes: Access only to the short course(s) for which you register. If you do not register for the conference in addition to the short course(s) you will not receive access to any activities or events during the conference.



Registration Information

* Member rates apply to members of the following societies:

- AAPG (American Association of Petroleum Geologists)
- ARMA (American Rock Mechanics Association)
- SEG (Society of Exploration Geophysicists)
- SPE (Society of Petroleum Engineers)
- SPEE (Society of Petroleum Evaluation Engineers)
- SPWLA (Society of Petrophysicists and Well Log Analysts)

** Senior Rate

A discount of 50% off the early member rate is extended to those over age 65. Contact URTeC Registration at +1 918 584 2555 to receive this rate.

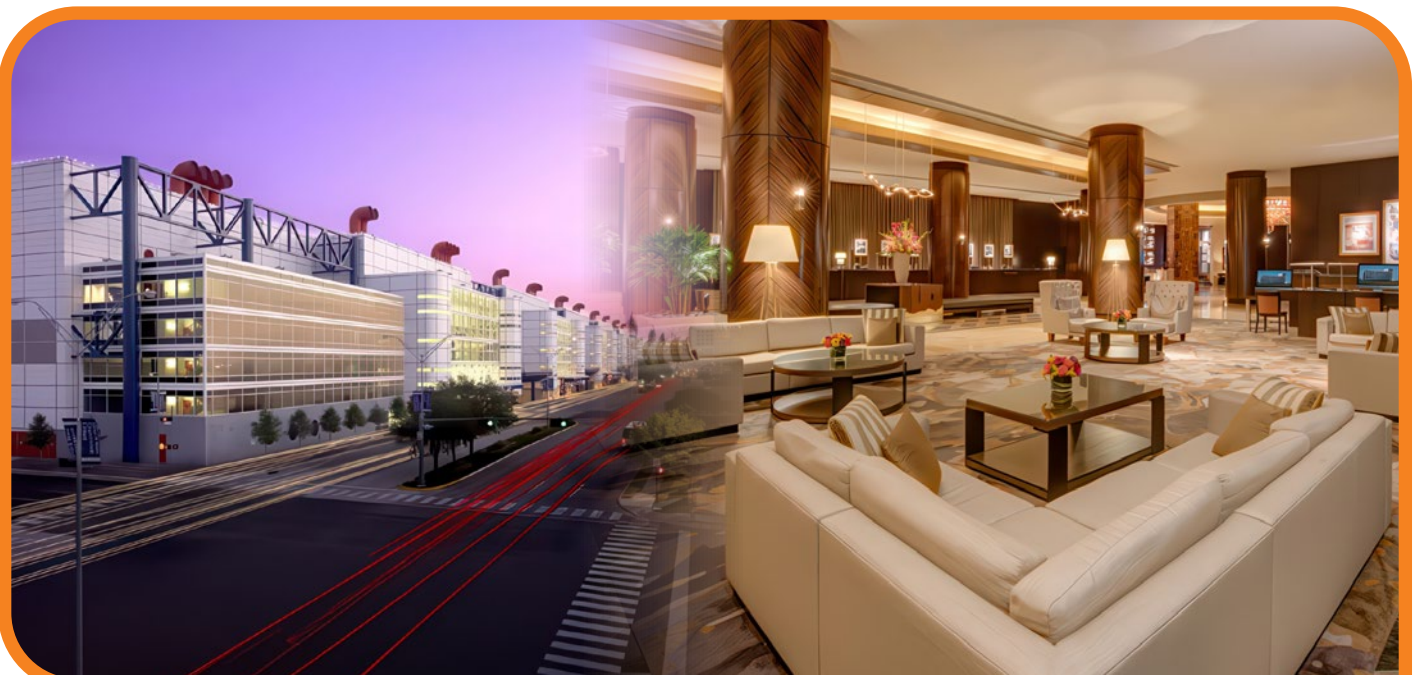
Corporate Registration Package

Share the benefits and save on registration fees with group packages. Corporate group registration provides a lower-than-member-rate cost for participants regardless of their membership status. \$770 per person groups of 10.

- \$7,700 for 10 persons
- \$11,550 for 15 persons
- \$15,400 for 20 persons
- \$19,250 for 25 persons

Cancellation Policy

- Cancellations can be made by contacting URTeC Registration by email (support@urtec.org) or telephone at +1 781 688 8000 by **8 June 2026**.
- Cancellations received on or before **8 June** will be fully refunded less a \$75 processing fee.
- Refunds will not be issued after **8 June** or for “no shows.”
- You may substitute one participant for another.
- Refunds for the core workshop and/or short courses can be made until **11 May**. No refunds for the core workshop and/or short courses can be made after this date.



Accommodations

Booking Online – Due to the high demand of rooms for FIFA during the week of URTeC, all hotel reservations must be made through a booking link provided on your paid in full URTeC registration confirmation page. Hotel reservations may be cancelled if your registration is cancelled. Hotel reservations must be booked by **28 May 2026**.

Hotel	Address	Single/Double	Extra Person Charge	In-Room Dining	Parking* (Daily)	Guest Room Internet
Tru	1540 Leeland Street Houston, TX 77010	\$269	\$20	No	\$58.00/ Valet Only	Complimentary Standard Guestroom Wireless Internet
Home2 Suites	1540 Leeland Street Houston, TX 77010	\$279	\$20	No	\$58.00/ Valet Only	Complimentary Standard Guestroom Wireless Internet
Hilton Americas-Houston	1600 Lamar Street Houston, TX 77010	\$299	\$25	Yes	\$65.00/ Valet Only	Complimentary Standard Guestroom Wireless Internet

Hotels are smoke-free and include restaurant, free WiFi, pool, and fitness center. Hotel parking rates are subject to change.

Booking Online

Due to the high demand of rooms for FIFA during the week of URTeC, all hotel reservations must be made through a booking link provided on your paid in full URTeC registration confirmation page. Hotel reservations may be cancelled if your registration is cancelled.

Deposits

All reservations will require a valid credit card, along with a first night's deposit, refundable up to two days in advance of arrival, to guarantee the reservation. Your credit card may be charged immediately for your first night's stay, including taxes. The hotel may cancel your room reservation without notification if the deposit cannot be processed with a valid credit card prior to your scheduled arrival.

Changes/Cancellations

Changes and cancellations to existing reservations may be made online or by contacting the Hotel. Any changes or cancellations after this date must be sent directly to the hotel without guarantee of refunds. At many hotels, any guaranteed room reservations not cancelled 72 hours prior to arrival and not used will subsequently be billed by the hotel to the credit card on file and any deposits will be forfeited.

Early Departure Fee

If a guest who requested a room within the room block checks out prior to the guest's reserved check out date, the Hotel will add an early departure fee to the guests individual account equal to one night's room and tax. Guests wishing to avoid the fee should notify the Hotel at or before check-in of any changes to the length of stay.



Travel and Transportation

Airport Information

William P. Hobby Airport (HOU)

7800 Airport Blvd.
 Houston, Texas 77061
 Phone: +1 713 640 3000
fly2houston.com

Distance from the convention center: 12 miles
 Drive time: 20 minutes
 Taxi: \$26-32*
 Uber/Lyft: \$15-25*
 Shuttle: \$23 one way*

George Bush Intercontinental Airport (IAH)

2800 North Terminal Road
 Houston, Texas 77032
 Phone: +1 281 230 3100
airport-houston.com

Distance from the convention center: 20 miles
 Drive time: 30 minutes
 Taxi: \$55-70*
 Uber/Lyft: \$25-30*
 Shuttle: \$25 one way*

Convention Center Information

George R. Brown Convention Center

1001 Avenida de las Americas
 Houston, Texas 77010
 Main Line: 713-853-8000
 Toll Free: 800-427-4697
 Fax: 713-853-8290
 Email: ccinfo@houstonfirst.com
 Website: www.grbhouston.com

Convention Center Parking

There are 1,425 parking spaces in the **South Avenida Garage** (Hilton Americas-Houston) parking garage connected by a Level 2 skywalk to the convention center for up to \$24 daily. Address: 1710 Polk Street.

There are 1,846 parking spaces in the **Avenida North Garage** (Partnership Tower) connected by a Level 2 skywalk to the convention center for up to \$24 daily. Address: 701 Avenida de las Americas.

There is an additional 663 parking spaces in **Avenida Central Garage** (Discovery Green underground parking facility) across the street from the George R. Brown Convention Center for \$18. Address: 1002 Avenida de las Americas.

Tundra Garage (by Toyota Center) is an additional 2,478 parking spaces that the cost ranges from \$5 to \$10 on non-game/ concert days. Address: 1506 Jackson Street.

The privately owned surface parking lots and garages. Rates vary from \$10 to \$30 in these privately own areas.

For more information on parking options and parking map visit URTeC.org.

Public Transportation

Taxis

\$6 Cab Fare Anywhere Downtown. The City of Houston has authorized a flat taxi fare of \$6 for all trips in the downtown area. This \$6 fare will apply anywhere within the Central Business District, bounded by Interstate 45, Interstate 10 and U.S. 59. No surcharges will apply to the fare, which can accommodate multiple riders under the \$6 total rate.

METRO Rail System

METRO Rail offers convenient and accessible service within the heart of the city between downtown Houston and several of Houston's top destinations and districts. You can purchase a day pass for use on METRO Rail and METRO buses for just \$3 a day. Visit ridemetro.org for more route and fare information.

METRO Bus System

METRO also offers bus service throughout Houston. Local service runs mostly on city streets, stopping at every other corner along its route. Oneway fare is \$1.25. Visit ridemetro.org for more route and fare information.



UNCONVENTIONAL RESOURCES TECHNOLOGY CONFERENCE

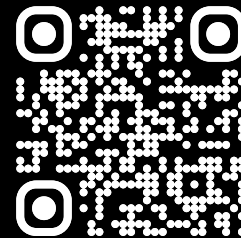
URTeC

FUELED BY SPE • AAPG • SEG

Register Now

Save \$130 by 22 May

URTeC.org



Sponsoring Organizations:



Endorsing Organizations:

