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12 disciplines
1 focus

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URTeC APP

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Available for both iOS and Android devices, the URTeC 2017 App allows you access to all the conference information and details in the palm of your hand. Download for free today.

- View all the individual sessions, presentations, and events
- See the full exhibitor listing and schedule an appointment to meet
- Navigate the Exhibition with the interactive floor map
- Find general event information, times, and locations
- Set up your profile and chat with other attendees

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Welcome to URTeC 2017

Dear Colleague,

On behalf of the Unconventional Resources Technology Conference (URTeC), its Sponsoring and Supporting Organizations, and our Technical Program Committee, we welcome you to the fifth edition of URTeC, the preeminent global event in unconventional resources. The Opening Plenary will set the stage for the conference. With 300+ technical papers, this year's offering also includes several special sessions and panels to highlight recent and emerging technologies in unconventional resources as well as insights from top executives. Topics include geology, geophysics, geochemistry, petrophysics, drilling engineering, production engineering, well stimulation, reservoir engineering, HSE, and material science.

The Sponsoring Organizations — the Society of Petroleum Engineers (SPE), the American Association of Petroleum Geologists (AAPG), and the Society of Exploration Geophysicists (SEG) – recognize and appreciate that the economic climate over the past few years has greatly affected the exploration and exploitation of unconventional resources, but their potential contribution has never been higher. The technologies developed today to explore and exploit unconventional resources will define the hydrocarbon extraction industry of tomorrow.

In addition to the Sponsoring Organizations, we have expanded our collaborations with the inclusion of several Supporting Organizations — in particular, the American Institute of Chemical Engineers (AIChE), Association for Iron and Steel Technology (AIST), American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME), Society for Mining, Metallurgy and Exploration (SME), Society of Petroleum Evaluation Engineers (SPEE), Society of Petrophysicists and Well Log Analysts (SPWLA), the Minerals, Metals and Materials Society (TMS), and American Rock Mechanics Association (ARMA). We believe that these Supporting Organizations bring both depth and breadth to the technical base of URTeC and we welcome their collaboration and contributions for 2017 and beyond.

For URTeC 2017 we have the following program and event components:

Technical Program
- Technical Presentations (Oral and ePapers)
- Opening Plenary Session
- Special Sessions and Panels
- Operators' Forum Sessions

Events and Networking
- Opening/Network Receptions
- Exhibitor Access
- Topical Breakfast and Luncheon Speakers
- Short Courses

The Opening Plenary Session is typically the keynote event of the URTeC program, and 2017 is no exception — this year the panelists include:

- **Gene Beck**, Senior Vice President for U.S. Onshore, Statoil
- **Alex Archila**, President, North America Shale, BHP Billiton
- **Greg Guidry**, Executive Vice President, Unconventionals, Shell

The Opening Plenary Session is designed to provide a "State of the Industry" perspective with regard to unconventional resources, as well as provide visions about the role and significance of unconventional resources to the global oil and gas industry. Also not to be missed is our Executive Panel, where a cross-section of top executives will discuss the challenges and possibilities facing their organizations

On behalf of the organizing societies (SPE, AAPG, and SEG), our supporting organizations (AIChE, AIST, ARMA, ASCE, ASME, SME, SPEE, SPWLA, TMS), and the Technical Program Committee, we are pleased to have you attend and participate in URTeC 2017.

Sincerely,

Technical Program Co-Chairs

Tom Blasingame, Texas A&M University
Doug Valleau, Strategia Innovation and Technology Advisors
Shawn Maxwell, Itasca, Microseismic and Geomechanical Evaluation


Tom Blasingame


Doug Valleau


Shawn Maxwell

Technical Program Committee

Technical Program Co-Chairs

Tom Blasingame
Texas A&M University

Doug Valleau
Strategia Innovation and Technology Advisors

Shawn Maxwell
Itasca, Microseismic and Geomechanical Evaluation

Technical Program Committee

Andronikos Demarchos.....Global Energeia
Anne Herrin..... Hess Corporation
Autumn Shannon.....Marathon Oil
Baosheng Liang.....Chevron North America Exploration and Production
Barbara Hill..... Schlumberger
Bitao Lai..... Aramco Services Company
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Craig Cipolla..... Hess Corporation
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David Craig..... Reservoir Development Corporation
David Fulford..... Apache
David Hume.....Core Laboratories
David Jones..... Chesapeake Energy Corporation
Deepak Devegowda.....University of Oklahoma
Dilhan Ilk..... DeGolyer and MacNaughton
Erdal Ozkan.....Colorado School of Mines
Eric Michael.....ConocoPhillips
Gang Han..... Aramco Services Company
Gene Sparkman.....Lumina Solutions, Inc.
George Koperna.....Advanced Resources International, Inc.
Giewee Hammond..... Aramco Services Company
Hemali Patel.....BP
Henry Jacot..... H-Frac Consulting Services, LLC
Hosein Kalaei.....ConocoPhillips
Isaac Aviles..... Schlumberger
Jay Stratton.....Consultant
Jean Gavalda.....TOTAL
Jeff Moss..... ExxonMobil
Jeffrey M. Yarus..... Halliburton
Jennifer Gujral.....Shell Exploration and Production Company
Jennifer Miskimins.....Colorado School of Mines
Jim Hnat.....Shell Exploration and Production Company
Jobin Varghese.....Shell Exploration and Production Company
Joe Frantz Jr......Range Resources
Johan Daal.....Devon Energy Corporation
Johannes Alvarez.....Texas A&M University
John Ritter..... Occidental Petroleum Corporation
John Thompson..... NCS Multistage
Katerina Yared.....QEP Resources
Katy Keller.....Shell Exploration and Production Company
Kelly Hutchings.....Shell Exploration and Production Company
Kent Perry..... Gas Technology Institute
Kumar Ramurthy..... Halliburton
Kyle Richter..... Occidental Petroleum Corporation
Lee Geiser..... Petrolink
Leen Weijers.....Liberty Oilfield Services
Libby Ritz..... Research Square
Livia Sivila.....Bureau of Economic Geology (University of Texas)
Lucas Bazan.....Bazan Consulting Inc.
Luis Baez.....Shell
Margie Kloska..... Hess Corporation
Mariano Gurfinkel..... Hess Corporation
Mark Falk..... Chesapeake Energy Corporation
Mark Mack.....Consultant
Matías Fernandez-Badessich..... YPF
Matt Honarpour.....BHP
Matt Laughland.....Pioneer Natural Resources
Mehrnoosh Saneifar.....BHP
Mel Sorrell..... Covey Park Energy, LLC
Mike Kendrick.....Devon Energy Corporation
Mohammed Badri..... Schlumberger
Neil Fishman.....Consultant
Oddbjorn Skilbrei.....Shell Exploration and Production Company
Phillipe Charlez..... TOTAL
Randall (Randy) Pharis.....XTO Energy Inc.
Randy Roadifer.....Memorial Production Partners
Raul B. Rebak.....GE Global Research
Raven Goswick.....Permian Resources
Raymond Johnson.....Unconventional Reservoir Solutions
Rick Fritz..... Council Oak Resources, LLC
Rick Walker.....BHP
Rob Fulks..... Weatherford
Rob Hull.....Pioneer Natural Resources
Robert Hurt.....Pioneer Natural Resources
Robin Pearson..... Anadarko Petroleum Corporation
Rod Sidle..... Energy Navigator
Sam Goswick.....Devon Energy Corporation
Sam Noynaert.....Texas A&M University
Sathish Sankaran..... Anadarko Petroleum Corporation
Scott Reeves.....Devon Energy Corporation
Scott Singleton.....Independence Resources Management
Shauna Noonan..... Occidental Petroleum Corporation
Skip Rhodes.....Pioneer Natural Resources
Srikanta Mishra.....Battelle
Srimoyee Bhattacharya.....Shell Exploration and Production Company
Stephanie Perry..... Anadarko Petroleum Corporation
Sue Cluff..... Discovery Group
Thaimar Ramírez..... Occidental Petroleum Corporation
Theo Mallinson..... Aramco Services Company
Tom Layman..... Parsley Energy
Troy Beserra..... Anadarko Petroleum Corporation
Tuba Firincioglu.....NITEC LLC
Tyler Conner.....Devon Energy Corporation
Tyler Croft.....Shell Exploration and Production Company
Usman Ahmed..... WellDog
Vincent Artus.....KAPPA Engineering
Yogashri Pradhan.....Texas Oil and Gas Institute

Conference at a Glance

Subject to change. Download the URTeC 2017 App for updates.

*A ticket is required for admission.**

Saturday		
8:00 a.m.–5:00 p.m.	Short Course 2: Modern Production Data Analysis of Unconventional Reservoirs (SPE)	Room 14
8:00 a.m.–5:00 p.m.	Short Course 3: (Day One): Unconventional Reservoir Development (SPE)	Room 13 B
8:00 a.m.–5:00 p.m.	Short Course 4: (Day One): Mitigating Bias, Blindness, and Illusion in E&P Decision Making (SPE)	Room 13 A
8:00 a.m.–5:00 p.m.	Short Course 6: (Day One): Understanding and Adapting Rockphysics Principles for Mudrock (Shale) Reservoirs (SEG)	Room 15
12:00 p.m.–5:00 p.m.	Registration	Solar Atrium
Sunday		
8:00 a.m.–5:30 p.m.	Registration	Solar Atrium
8:00 a.m.–5:00 p.m.	Short Course 3: (Day Two): Unconventional Reservoir Development (SPE)	Room 13 B
8:00 a.m.–5:00 p.m.	Short Course 4: (Day Two): Mitigating Bias, Blindness, and Illusion in E&P Decision Making (SPE)	Room 13 A
8:00 a.m.–5:00 p.m.	Short Course 6: (Day Two): Understanding and Adapting Rockphysics Principles for Mudrock (Shale) Reservoirs (SEG)	Room 15
8:00 a.m.–5:00 p.m.	Short Course 7: Introduction to Unconventional Reservoir Characterization (AAPG)	Room 16
8:00 a.m.–5:00 p.m.	Short Course 8: Re-Fracturing – Candidate Selection and Design (SPE)	Room 14
Monday		
6:30 a.m.–5:30 p.m.	Registration	Solar Atrium
8:30 a.m.–10:00 a.m.	Opening Plenary Session: Defying World Expectation by Doing More With Less	Ballroom D
10:00 a.m.–7:00 p.m.	Exhibition	Exhibition Hall 4
10:00 a.m.–10:40 a.m.	Breakfast Bites with Exhibitors	Exhibition Hall 4
10:20 a.m.–12:00 p.m.	ePaper Presentations	Exhibition Hall 4
10:45 a.m.–12:00 p.m.	Special Session: ARMA: Theory and Practice	Room 14
10:45 a.m.–12:05 p.m.	Oral Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G
12:05 p.m.–1:15 p.m.	Topical Luncheon: Change Drivers: The Responsibility of the Unconventional Producers to Also Drive Corporate Social Responsibility and Community Consensus Going Forward	Room 18 CD
12:05 p.m.–1:15 p.m.	Topical Luncheon: SEC Hot Button Issues With Regards to Unconventional Reservoir Reserves	Room 19 AB
1:45 p.m.–5:25 p.m.	Oral Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G
1:50 p.m.–5:10 p.m.	ePaper Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G
1:45 p.m.–3:05 p.m.	Panel Session: Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have"	Exhibition Hall 4
3:05 p.m.–3:45 p.m.	Refreshment Break	Exhibition Hall 4
5:00 p.m.–7:00 p.m.	Opening Reception	Exhibition Hall 4
Tuesday		
6:30 a.m.–5:30 p.m.	Registration	Solar Atrium
7:00 a.m.–8:15 a.m.	Topical Breakfast: Organic Mudstone Petrophysics: A Novel Workflow to Estimate Storage and Flow Capacity	Room 19 AB

Conference at a Glance

Subject to change. Download the URTeC 2017 App for updates.

*A ticket is required for admission.**

7:00 a.m.–8:15 a.m.	Topical Breakfast: An Update on Activity and Technology in the Appalachian Basin	Room 18 CD
8:25 a.m.–10:10 a.m.	Panel Session: Injection Induced Seismicity: Operational Implications of Evolving Regulations	Ballroom E
8:25 a.m.–12:05 p.m.	Oral Presentations	Exhibition Hall 4
9:30 a.m.–12:00 p.m.	ePaper Presentations	Exhibition Hall 4
9:00 a.m.–6:00 p.m.	Exhibition	Exhibition Hall 4
10:00 a.m.–11:30 a.m.	TIGs & SIGs Meeting	Room 12 A
10:10 a.m.–10:50 a.m.	Refreshment Break	Exhibition Hall 4
10:20 a.m.–12:00 p.m.	ePaper Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G
12:05 p.m.–1:15 p.m.	Topical Luncheon: Shale Production Resilience and Flexibility Causes, Risks and Opportunities	Room 18 CD
12:05 p.m.–1:15 p.m.	Topical Luncheon: Unconventional Reservoirs – A Technology Driven Revolution of Enormous Scale	Room 19 AB
1:45 p.m.–5:25 p.m.	Oral Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G
1:50 p.m.–5:10 p.m.	ePaper Presentations	Exhibition Hall 4
3:05 p.m.–3:45 p.m.	Refreshment Break	Exhibition Hall 4
5:00 p.m.–6:00 p.m.	Networking Reception	Exhibition Hall 4
Wednesday		
6:30 a.m.–1:00 p.m.	Registration	Solar Atrium
7:00 a.m.–8:15 a.m.	Topical Breakfast: Type Well Construction: Alternative Way of Estimating Reserves for Unconventional Reservoirs	Room 19 AB
7:00 a.m.–8:15 a.m.	Topical Breakfast: Aramco Research in Support of Unconventionals	Room 18 CD
8:25 a.m.–10:10 a.m.	Panel Session: Shopping for New Ideas From Unconventional Sources	Ballroom F
8:25 a.m.–10:10 a.m.	Panel Session: Midland Basin: From Characterization to Collaboration, A View From Pioneer Natural Resources	Room 14
8:25 a.m.–12:05 p.m.	Oral Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G
9:30 a.m.–12:00 p.m.	ePaper Presentations	Exhibition Hall 4
9:00 a.m.–1:00 p.m.	Exhibition	Exhibition Hall 4
10:10 a.m.–10:50 a.m.	Refreshment Break	Exhibition Hall 4
10:45 a.m.–12:05 p.m.	Panel Session: Unconventional Research and Education – The Future is Bright	Ballroom F
12:05 p.m.–1:15 p.m.	Topical Luncheon: Holistic Approach for Unconventionals Improves Project Economics	Room 18 CD
12:05 p.m.–1:15 p.m.	Topical Luncheon: Two-Phase Fluid Flow in Source Rocks: Insights Gained From Nanofluidics	Room 19 AB
1:45 p.m.–3:00 p.m.	Special Session: ARMA: Simulations	Room 14
1:45 p.m.–3:30 p.m.	Oral Presentations	Rooms 14, 15, 16 AB, 17 AB, 18 AB, Ballrooms E, F, G

Oral Presentations at a Glance

**Cancellations and changes in the program will occur. Download the URTeC 2017 App for updates.*

- Theme 01: Petrophysical, Geological, and Geophysical Characterization
- Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
- Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons
- Theme 04: Analytics and the Digital Oilfield
- Theme 05: Reservoir Engineering Aspects of Unconventional Reservoir Systems
- Theme 06: Production Performance
- Theme 07: Stake Holder Management and Social Performance (HSSE)
- Theme 08: Reserves Estimation and Production Forecasting

	Ballroom E	Room 17 AB	Ballroom G	Room 16 AB
Monday a.m.				
	Delaware Basin Special Session I	Operators' Forum – Case Studies in Unconventional Reservoir Development I	Theme 01: Petrophysics and Formation Evaluation of Mudstones I	Theme 10: Well Completion Integration, Optimization, and Refracturing I
Monday p.m.	Delaware Basin Special Session II	Operators' Forum – Case Studies in Unconventional Reservoir Development II	Theme 01: Petrophysics and Formation Evaluation of Mudstones II	Theme 10: Well Completion and Stimulation Case Histories I
Tuesday a.m.	Panel: Induced Seismicity Induced Seismicity Special Session	Operators' Forum – Case Studies in Unconventional Reservoir Development III	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
Tuesday p.m.	Vaca Muerta Special Session I	Operators' Forum – Case Studies in Unconventional Reservoir Development IV	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
Wednesday a.m.	Theme 06: Production Performance I	Operators' Forum – Case Studies in Unconventional Reservoir Development V	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow and Microseismics
Wednesday p.m.	Theme 12: Emerging Unconventional Plays II	Operators' Forum – Case Studies in Unconventional Reservoir Development VI	Theme 11: Interactive Panel: Artificial Lift and Production Management Strategies	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks II

- Theme 09: Well Construction Practices
- Theme 10: Well Completion and Stimulation Practices
- Theme 11: Production Engineering – Operations and Facilities
- Theme 12: Emerging Unconventional Plays
- Theme 13: Operators' Forum – Case Studies in Unconventional Reservoir Development (Team Presentations) Impacts and Economics
- Special Sessions and Panels

Room 18 AB	Ballroom F	Room 15	Room 14
Opening Plenary			
Theme 12: Emerging Unconventional Plays I	Executive Panel: A View From the Top: Opportunities and Challenges in Unconventionals		ARMA: Theory and Practice
Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock	Theme 09: Well Construction Practices I Panel: Service Companies' View of Supply and Demand	Theme 08: Reservoir Management From Well Spacing to Wellbore	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
Theme 01: Petrophysics and Formation Evaluation of Mudstones III	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization	Theme 07: Stakeholder Management and Social Performance I	Berg-Hughes/Crisman Institute Special Session
Theme 05: Reservoir Engineering I: Saturation, Flow and Phase Behavior	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(Deposition, Facies, Sequence Stratigraphy and Diagenesis)	BEG Bakken Special Session	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
Theme 05: Reservoir Engineering II: Reservoir Modeling and Production	Unconventional Research and Education – The Future is Bright Shopping for New Ideas From Unconventional Sources	Theme 03: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I	Midland Basin Special Session
Theme 10: Well Completion Integration, Optimization and Refracturing II	Theme 01: Petrophysics and Formation Evaluation of Mudstones IV	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II	ARMA: Simulations

ePaper Presentations at a Glance

**Cancellations and changes in the program will occur. Download the URTeC 2017 App for updates.*

- Theme 01: Petrophysical, Geological, and Geophysical Characterization
- Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
- Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons
- Theme 04: Analytics and the Digital Oilfield
- Theme 05: Reservoir Engineering Aspects of Unconventional Reservoir Systems
- Theme 06: Production Performance
- Theme 07: Stake Holder Management and Social Performance (HSSE)
- Theme 08: Reserves Estimation and Production Forecasting

	ePaper Station A	
Monday a.m.		
	Production Performance and Artificial Lift Optimization	Theme 05: Reservoir
Monday p.m.	Theme 05: Reservoir Engineering III	Theme 02: Understar Mechanical Stratigra
Tuesday a.m.	Theme 05: Reservoir Engineering IV	Theme 10: Well Com Technologies
Tuesday p.m.	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I	Theme 10: Well Com
Wednesday a.m.	Theme 05: Reservoir Engineering V	Theme 01: Petrophys Unconventional Plays

- Theme 09: Well Construction Practices
- Theme 10: Well Completion and Stimulation Practices
- Theme 11: Production Engineering – Operations and Facilities
- Theme 12: Emerging Unconventional Plays
- Theme 13: Operators' Forum – Case Studies in Unconventional Reservoir Development (Team Presentations) Impacts and Economics
- Special Sessions and Panels

ePaper Station B	ePaper Station C
No ePapers	
Engineering V	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II
nding and Applying Geomechanics and phy	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons
pletion Diagnostics and Optimization	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales III
pletion and Stimulation Case Histories II	Theme 08: Reserves Estimation and Production Forecasting
sical and Geological Characterization of s II	Theme 10: Well Completion Integration, Optimization, and Refracturing III

Monday Technical Program

*Denotes presenter other than first author

Opening Plenary Session

Defying World Expectation by Doing More With Less

Time: 8:30 a.m.–10:00 a.m.
Location: Ballroom D
Fee: Included with registration
Moderator: Tom Blasingame


Gene Beck


Alex Archila


Greg Guidry

Production from unconventional plays catapulted the U.S. into a leading global supplier and threatened OPEC dominance. The Cartel's first reaction was unwillingness to cut oil production, which led directly to the collapse in oil price in late 2014. This was a calculated effort to stop the unconventional insurgency. Indeed, the lower-for-longer price environment has dramatically impacted our industry — but in a way OPEC did not foresee. U.S. unconventional players are true entrepreneurs using application of technology innovations and cost improvements to disrupt the expected demise of the unconventional industry.

Our distinguished plenary speakers will discuss how unconventional operators can quickly respond to dynamic price changes and are capable of drilling and producing profitably even when the price of oil is relatively low, thus defying world expectations by doing more with less. See Page 15 for session details.

- **Gene Beck**, Senior Vice President for U.S. Onshore, Statoil
- **Alex Archila**, President, North America Shale, BHP
- **Greg Guidry**, Executive Vice President, Unconventionals, Shell
- **Moderated Discussion with Audience Q&A**

Executive Panel

A View From the Top: Opportunities and Challenges in Unconventionals

Time: 10:45 a.m.–12:05 p.m.
Location: Ballroom F
Fee: Included with registration
Moderators: Tom Blasingame and Jeffrey Yarus

This executive panel is comprised of individuals who have been involved since the inception of unconventionals and who each have responsibility for a specific aspect of unconventional reservoir development in their organization. This panel will provide insight into the opportunities and challenges that unconventional reservoir development faces at present and the coming years — specifically the financial aspects, well completions and stimulations, well placement and targeting, production and facilities engineering challenges, water management, and the roles where technology can serve as a facilitator. While the focus is on the future, present conditions such as commodity prices, prices of goods and services, as well as other business drivers will be discussed. This panel will provide unique perspectives into the objectives and practices of diverse organizations, where the goal is to create an understanding of how companies view unconventional reservoir development in light of the present and future opportunities and challenges faced by our industry.


David Adams


Christopher Spies


Jay Stratton


Ken Tubman

Panelists:
- **David Adams**, Senior Vice President Completion and Production Division, Halliburton
- **Christopher Spies**, Vice President of Geoscience and Technology, Concho Resources
- **Jay Stratton**, Consultant
- **Ken Tubman**, Vice President, Subsurface, ConocoPhillips

Special Sessions

Delaware Basin I and II

Times: 10:45 a.m.–12:05 p.m. & 1:45 p.m.–5:25 p.m.
Location: Ballroom E
Fee: Included with registration
Co-Chairs: Tom Layman, Andrew Yarotsky, and Hope Liu

The Delaware Basin is the hottest and arguably the most economic basin in the United States in 2017 and URTeC has two Special Sessions dedicated to the Delaware Basin on Monday. Talks focus on the Permian age Avalon, Bone Spring, and Wolfcamp formations. Attendees will hear basin-wide perspectives on regional stress orientations, fractures, geopressure, and rock mechanics. At a finer scale, presentations will cover the integration of geology, geophysics, petrophysics and engineering for reservoir characterization, reservoir modeling, and the direct applications to reservoir development and geosteering of these largely tight oil unconventional reservoirs. See pages 15 and 17 for session details

ARMA: Theory and Practice

Time: 10:45 a.m.–12:05 p.m.
Location: Room 14
Fee: Included with registration
Chair: John McLennan

ARMA is the American Rock Mechanics Association. Membership enfranchises all forms of surface and subsurface rock engineering – from tunneling to mine design to hydraulic fracturing to subsidence and compaction assessment. Membership is international with one third of members from 37 nations. Participation in URTeC will be in two sessions. Six presentations will be provided by senior ARMA members.

The first session includes overviews by three senior practitioners. The theme of the session is application of rock mechanics principles in order to characterize reservoirs and inherent discontinuities; to comprehend and exploit interactions between formation response and hydraulic fracturing; and also, to use insight on reservoir mechanical properties, discontinuities, stresses and treatment parameters to improve recovery. See Page 16 for session details.

Monday Technical Program

*Denotes presenter other than first author

Panel Session

Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have."

Time: 3:45 p.m.–5:25 p.m.
Location: Ballroom F
Fee Included with registration
Moderator: David Baldwin

There have been many panel sessions, forums, and conferences dedicated to operators' views of how to thrive in today's price environment. This leaves the conversation unfinished since understanding how suppliers view their side of the market is critical to operators' decisions as well. The service side of the oil and gas industry is dealing with the same uncertainty. Yet, while the business model may be different from an operator, service company problems are everyone's problems: if the suppliers of products and services are not healthy, then the oil and gas industry will not be successful in the future.

The panel, intentionally bereft of operators, contains executives representing all aspects of the unconventional equipment and services supply chain. The panel will look at how the service side of our business expects to survive while delivering the technology and manpower needed for the industry to succeed in an uncertain price environment. See Page 18 for session details.

- **Richard Gonzalez**, Halliburton
- **John Schmitz**, Select Energy
- **David Reid**, NOV
- **Mike Holcomb**, Patterson/UTI
- **Panel Discussion and Q&A**

Monday Morning Oral Presentations

Opening Plenary Session: Defying World Expectation by Doing More With Less

Ballroom D
Moderator: Tom Blasingame
See Page 14 for full opening plenary summary.

8:30 **Introductory Remarks**
8:40 **Gene Beck,** Senior Vice President for U.S. Onshore, Statoil
8:50 **Alex Archila**, President, North America Shale, BHP Billiton
9:00 **Greg Guidry**, Executive Vice President, Unconventionals, Shell
9:10 **Moderated Discussion with Audience Audience Q&A**

Delaware Basin Special Session I

Ballroom E
Co-Chairs: T. Layman, H. Liu, and A. Yarotsky
See Page 14 for full session summary.

10:45 **Introductory Remarks**
10:50 **Integration and Impact of Varying Open Hole Wireline Nuclear Magnetic Resonance Acquisition Parameters and Quantification – A Case Study in the Wolfcamp Formation, Delaware Basin:** S. Perry (Anadarko) 2669009
11:15 **An Integrated Approach to Development of an Unconventional Play: Geosteering Operations in the Wolfcamp of the Southern Delaware Basin:** J. Hernandez, J. Sloan, J. Terwilliger* (Parsley Energy) 2670600
11:40 **Constraints on Natural Fracture and In-Situ Stress Trends of Unconventional Reservoirs in the Permian Basin, USA:** D. Forand, V. Heesakkers, K. Schwartz (Chevron USA) 2669208

Monday Technical Program

*Denotes presenter other than first author

Executive Panel – A View from the Top: Opportunities and Challenges in Unconventionals

Ballroom F

Moderators: Tom Blasingame and Jeffrey Yarus

See Page 14 for full panel summary.

The following panelists will participate in a moderated panel followed by a question and answer session.

- **Ken Tubman**, ConocoPhillips
- **Richard Gonzalez**, Halliburton
- **Jay Stratton**, Consultant
- **Chris Spies**, Concho Resources
- **Jeff Tanner**, Jones Energy

Theme 01: Petrophysics and Formation Evaluation of Mudstones I

Ballroom G

Co-Chairs: R. Hand and T. Ramirez

10:45 **Introductory Remarks**

10:50 **Quantification and Characterization of Oil-Filled Porosity in Shales Using Basic Programmed Pyrolysis, LECO-TOC, Archimedes Bulk Density, and Helium Pycnometry Measurements:** K. E. Gorynski, M. Tobey, D. Enriquez, T. Smagala, R. Newhart (Encana Oil & Gas) 2686515

11:15 **Impact of Solvent Extraction on Surface Area Measurements in Organic-Rich Shales Using Nitrogen Adsorption:** A. S. Sinha, S. Dang, C. H. Sondergeld, C. S. Rai (University of Oklahoma) 2668849

11:40 **Improving Shale Characterization Through Joint Elastic-Electrical Effective Medium Modeling:** K. Amalokwu[1], K. Spikes[1], K. Wolf[2] (1. University of Texas at Austin; 2. BP America) 2690184

Theme 12: Emerging Unconventional Plays I

Room 18 AB

Co-Chairs: D. Hume and S. Reeves

10:45 **Introductory Remarks**

10:50 **Perspectives on Emerging Domestic Unconventional Plays:** V. Kuuskraa (Advanced Resources International) 2724691

11:15 **The Emerging Piceance Basin Mancos Shale – Drilling and Completion Practices and Improvements:** R. A. Downey (Gunnison Energy LLC) 2691392

11:40 **Keys to Niobrara and Codell Production, East Pony/Redtail Area, Denver Basin, Colorado:** S. Sonnenberg (Colorado School of Mines) 2666237

Operators' Forum – Case Studies in Unconventional Reservoir Development I

Room 17 AB

Co-Chairs: D. Anderson and M. Sorrell

10:45 **Introductory Remarks**

10:50 **Subsurface Well Spacing Optimization in the Permian Basin:** B. Liang*, M. Du*, C. Goloway, R. Hammond, T. Tran, P. Paez Yanez, M. Richey (Chevron) 2671346

Theme 10: Well Completion Integration, Optimization, and Refracturing I

Room 16 AB

Co-Chairs: B. Elliott and R. Fulks

10:45 **Introductory Remarks**

10:50 **Protection Refrac: Analysis of Pore Pressure and Stress Change Due to Refracturing of Legacy Wells:** A. Rezaei[1], M. Rafiee[2], M. Soliman[1] (1. University of Houston; 2. StatOil) 2667433

11:15 **Quantitative Real-Time DAS Analysis for Plug-and-Perf Completion Operation:** Y. Shen, E. Holley, M. Jaaskelainen (Halliburton) 2668525

11:40 **A New Diagnostic Approach to Identify Fracture Geometries in Shale Gas Reservoirs Using a Semi-Analytical Model:** Z. Chen[1], X. Liao[2], W. Yu[3], K. Sepehrnoori[1] (1. The University of Texas at Austin; 2. China University of Petroleum at Beijing; 3. Texas A&M University) 2687204

ARMA: Theory and Practice

Room 14

Chair: J. McLennan

10:45 **Introductory Remarks**

10:50 **Some Thoughts on the Role of the Fracture Fluid on Hydraulic Fracture Propagation:** S. Green (American Rock Mechanics Association) 2768662

11:15 **The Challenge of Improving Recovery Factors From Unconventional Reservoirs:** M. Zoback (Stanford University) 2768674

11:40 **Rock Mass Characterization Approaches for Improved Reservoir Stimulation:** B. Dershowitz (Golder Associates) 2768676

Monday Morning ePaper Presentations

Production Performance and Artificial Lift Optimization

Exhibition Station A

Chair: J. Bell

10:15 **Introductory Remarks**

10:20 **Multiphase Flow Simulation of Horizontal Well Artificial Lift and Life-of-Well Field Case Histories: HEAL System Modeled in PipeFractionalFlow:** A. Nagoo[1], J. Saponja[2], M. Sharma[1] (1. The University of Texas at Austin; 2. Production Plus Energy Services Inc.) 2670789

10:45 **Effective Constraint of RTA Models Utilizing Microseismicity Derived Flow Attributes:** T. Urbancic[1], J. M. Thompson[2] (1. ESG Solutions; 2. ATRS) 2689356

11:10 **Accurate Estimation of Tubular Fluid Flow Friction Loss During Liquid-Supercritical CO_2 Fracturing and Transportation:** X. Li[1], G. Li[2], W. Yu[3], H. Wang[2], K. Sepehrnoori[1] (1. The University of Texas at Austin; 2. China University of Petroleum, Beijing; 3. Texas A&M University) 2687427

Theme 05: Reservoir Engineering V

Exhibition Station B

Co-Chairs: J. Alvarez and R. Roadifer

10:15 **Introductory Remarks**

10:20 **Optimization of Surfactant Flooding in Tight Oil Reservoirs:** M. Lotfollahi, M. Beygi, A. Abouie, K. Sepehrnoori, M. Wheeler, D. A. DiCarlo (The University of Texas at Austin) 2696038

10:45 **Unconventional EOR: A Capillary Based Improved Oil Recovery Case Study for Shale Oil Scenarios in the Vaca Muerta Resource Play:** F. R. Tuero[1], M. Crotti[2], I. Labayen[2], D. Leiguarda[3] (1. VYP Consultores SA; 2. INLAB SA; 3. Pan American Energy) 2659910

11:10 **Investigation of Production-Induced Stress Changes for Infill Well Stimulation in Eagle Ford Shale:** X. Guo, K. Wu, J. Killough (Texas A&M University) 2670745

11:35 **Hydraulic Fracturing Fluid Effect on Clay Swelling and Water Blockage in Stimulated Naturally Fractured Reservoirs:** A. Sanaei, M. Haddad*, K. Sepehrnoori (The University of Texas at Austin) 2697654

Monday Technical Program

*Denotes presenter other than first author

Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II

Exhibition Station C

Chair: K. Martindale

10:15 **Introductory Remarks**

10:20 **Integrating AVO Analysis With Poststack Seismic Approaches to Better Understand Complex Faulting/Fracturing in the Niobrara Formation:** J. K. Applegate[2], D. Paul[1], T. Brown[3], F. Soos[4] (1. SeisWare Inc.; 2. Applegate Exploration; 3. Travis Energy Group Inc.; 4. SeismicUtensils LLC) 2661121

10:45 **Classification/Corroboration of Facies Architecture in the Eagle Ford Group: A Case Study in Thin Bed Resolution:** P. Santogrossi (Geophysical Insights) 2696775

11:10 **Seismic Post-Stack and Pre-Stack Impedance Inversions in Depth, Examples From the Woodford Formation, Anadarko Basin:** M. Rauch-Davies, A. Lamb, K. Rohan (Devon Energy) 2691074

11:35 **A Quantitative Application of Seismic Inversion and Multi-Attribute Analysis Based on Rock Physics Linear Relationships to Identify High Total Organic Carbon Shale – A Case Study From the Perth Basin, Western Australia:** Y. K. Altowairqi[1], R. Rezaee[2], B. Evans[2] (1. Saudi Aramco; 2. Curtin University) 2671356

12:00 **Fracture Likelihood Analysis Using Seismic and Triple Combo Log Data in the Stacked Carbonate Play of Madison County:** C. Beck[1], A. Khadeeva[1], B. Sarmah[1], A. Whitsett[1], T. Kimbell[2] (1. Halliburton; 2. Burk Royalty Co) 2670552

Topical Luncheons

Change Drivers: The Responsibility of the Unconventional Producers to Also Drive Corporate Social Responsibility and Community Consensus Going Forward

Time: 12:05 p.m.–1:15 p.m.
Location: Room 18 CD
Fee: $55 per person

Darcy Spady, Managing Director of Broadview Asset Management, a subsidiary of Broadview Energy Ltd., and 2018 SPE President

In North America and globally, the extraction and storage of hydrocarbons has been going on for many decades. We know, as producers, that we provide one of the most efficient sources of energy to the planet, and demand is increasing even as the energy mix changes. Although improving the quality of life in many places and providing great economic benefit, we are viewed skeptically by many. We as Unconventional Producers created the recent increase in activity, and now we find ourselves often in adversarial territory. How do we move ahead? How do we "fix" our image? Should we bother?

SEC Hot Button Issues With Regards to Unconventional Reservoir Reserves

Time: 12:05 p.m.–1:15 p.m.
Location: Room 19 AB
Fee: $55 per person

Dan Olds, Vice President, Ryder-Scott

Comment letters to registrants provide a running commentary on hot button issues from the SEC. During the presentation, we'll review a sampling of comment letters that illustrate their concerns in areas of the five year rule & development plans, PUD offsets, management commitment and other timely topics.

Monday Afternoon Oral Presentations

Delaware Basin Special Session II

Ballroom E

Co-Chairs: T. Layman, H. Liu, and A. Yarotsky

See Page 14 for full session summary.

1:45 **Introductory Remarks**

1:50 **Basin-Scale Static Models for Unconventional Resource Plays, Example From Wolfberry in Midland Basin:** T. Gladczenko[1], R. Mays[2], J. Hardt[3], M. Houston[3] (1. Applied Geostats LLC; 2. Bird Ridge Petrophysics LLC; 3. Piedra Operating LLC) 2697625

2:15 **An Integrated Study of Geophysical, Petrophysical, and Geochemical Data to Define Optimal Reservoir Development of the Avalon Shale in the Salado Draw Field, Delaware Basin, Lea County, New Mexico:** K. Schwartz, M. Merino, M. Hoffnagle, J. Best, D. Sherlock (Chevron) 2668789

2:40 **Paleoenvironmental Reconstruction Through Core and Borehole Image Log Integration in the Bone Spring Formation, Delaware Basin, West Texas:** A. Blount[1], V. Vallega[2], L. Ma[1], E. Haddad[2], T. Croft[1], B. Driskill[1] (1. Shell; 2. Schlumberger) 2670287

3:05 **Refreshment Break**

3:45 **Integration of Core Data, Digital Rock Analysis, Magnetic Resonance, and Well Logs for Improved Unconventional Resource Characterization:** S. Perry[1], J. Walls[2], T. Rider[2] (1. Anadarko; 2. Ingrain) 2670001

4:10 **Integrated Modeling to Improve Well Performance in the Avalon Shale:** K. Wilson, E. Martinez, M. Du, P. Paez (Chevron) 2670740

Monday Technical Program

*Denotes presenter other than first author

4:35 **Inorganic Geochemical Characteristics of Lithofacies and Their Linkages to the Mechanical Stratigraphy of Upper Wolfcamp and Bone Spring Formations, Delaware Basin, Texas:** H. Rowe[1], A. Howard[1], S. Narasimhan[1], S. Ruppel[2], A. Morrell[1], N. Ganser[1] (1. Premier Oilfield Laboratories; 2. Bureau of Economic Geology) 2689141

5:00 **Methods for Reconstructing Subsurface Pressure Regimes in an Unconventional Play as an Indicator of Well Performance in the Delaware Basin:** E. Kelly, M. Laughland, M. Sarkar, D. Loughry (Pioneer Natural Resources) 2678304

Theme 09: Well Construction Practices I

Ballroom F

Co-Chairs: J. Moss and S. Noynaert

1:45 **Introductory Remarks**

1:50 **Field Application of a Real-Time Well-Site Drilling Advisory System in the Permian Basin:** D. Sanderson[1], G. S. Payette[2], B. J. Spivey[2], J. R. Bailey[2], M. Calvo[3], R. Kong[3], A. Eddy[3] (1. XTO Energy; 2. ExxonMobil Upstream Research Company; 3. Pason Systems) 2670861

2:15 **If It Is So Easy, Why Don't You Come Do It Yourself? A Response to "What I Wish My Geologist Knew About Drilling: A Drilling Engineer's View of Geosteering":** R. Woodward[2], S. Noynaert[1] (1. Texas A&M University; 2. BHL Boresight, Inc) 2697532

2:40 **A Novel Casing Antenna System for Crosswell Electromagnetic Telemetry in Pad Drilling:** S. Zeng[1], Q. Dong[2], J. Chen[1*] (1. University of Houston; 2. Weatherford) 2668280

Panel Session – Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have."

Ballroom F

Moderator: David Baldwin

3:45 **Introductory Remarks**

3:50 **Richard Gonzalez**, Halliburton

4:05 **John Schmitz**, Select Energy

4:20 **David Reid**, NOV

4:35 **Mike Holcomb**, Patterson/UTI

4:50 **Panel Discussion and Q&A**

Theme 01: Petrophysics and Formation Evaluation of Mudstones II

Ballroom G

Co-Chairs: M. Falk and M. Saneifar

1:45 **Introductory Remarks**

1:50 **A New Approach to Geosteering in New Underdeveloped Unconventional Plays:** P. Kowalchuk, S. Hashem (Halliburton) 2668838

2:15 **Gas Permeability Evolution During Production in the Marcellus and Eagle Ford Shales: Coupling Diffusion/Slip-Flow, Geomechanics, and Adsorption/Desorption:** B. Jia, J. Tsau (University of Kansas) 2695702

2:40 **Hyperspectral Imaging: Geological and Petrophysical Applications to Reservoir Characterization:** T. Kosanke[1], J. Chen[2] (1. ALS Oil & Gas; 2. Marathon Oil Company) 2670537

3:05 **Refreshment Break**

3:45 **Can Gas-Permeability of Fractured-Shale Be Determined Accurately by Testing of Core Plugs, Drill Cuttings, and Crushed Samples?:** F. Civan (University of Oklahoma) 2666389

4:10 **Reservoir Producibility Index [RPI] From NMR Logs and the Analysis of Tight Oil Reservoirs:** G. B. Asquith (Texas Tech University) 2673849

4:35 **Mixed Reservoir Wetting in Unconventional Reservoirs and Interpretation of Porosity/Resistivity Cross Plots, Derived From Triple-Combo Log Data:** M. Holmes, A. M. Holmes, D. I. Holmes (Digital Formation) 2668804

5:00 **Thickness Analysis of the Bound Water Film in the Longmaxi Shale Reservoir, Sichuan Basin:** Q. Zhang, W. Lin (Research Institute of Petroleum Exploration and Development) 2671633

Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock

Room 18 AB

Co-Chairs: T. Mallinson and Y. Pradhan

1:45 **Introductory Remarks**

1:50 **Key Performance Drivers in Shale/Tight Reservoirs: A Workflow for Proper Data Normalization:** S. Esmaili[1], B. Escovedo[2], R. Hand[1], T. Conner[1], R. Vaidya[1], R. Jayakumar[1] (1. Devon; 2. Vitruvian Exploration III) 2691372

2:15 **Prediction and Analysis of Geomechanical Properties of the Bakken Shale Using Artificial Intelligence and Data Mining:** G. K. Parapuram, M. Mokhtari, J. Ben Hmida (University of Louisiana at Lafayette) 2692746

2:40 **Predicting Sweet Spots in Shale Plays by DNA Fingerprinting and Machine Learning:** C. te Stroet, J. Zwaan*, G. de Jager (Biodentify) 2671117

3:05 **Refreshment Break**

3:45 **Mapping the Natural Fracture Network in Shale Using Artificial Intelligence:** S. D. Mohaghegh[1], R. Gaskari[2], M. Maysami[2] (1. West Virginia University; 2. Intelligent Solutions, Inc.) 2669739

4:10 **Finding the Nugget of Truth: Using Quantile Regression With Production Data for Comparison to Geological Controls and Completion Efficiency:** A. Lindsey, K. Robertson (PetroDE) 2682281

4:35 **Prospect of Water Recycling Facility Requirements for Marcellus: Application of Data Analytics:** A. Ettehadtavakkol, A. Jamali (Texas Tech University) 2671618

5:00 **The Rise of the Machines, Analytics, and the Digital Oilfield: Artificial Intelligence in the Age of Machine Learning and Cognitive Analytics:** K. Ball, J. Sneed, T. Arbus (Devon) 2668073

Operators' Forum – Case Studies in Unconventional Reservoir Development II

Room 17 AB

Co-Chairs: C. Cipolla and R. Roadifer

1:45 **Introductory Remarks**

1:50 **Best Practices in Designing and Executing a Comprehensive Hydraulic Fracturing Test Site in the Permian Basin:** J. Courtier*[1], J. Ciezobka*[2], K. Chandler[1], S. Martin[1], D. Gray[1], R. Thomas[1], J. Wicker*[1] (1. Laredo Petroleum; 2. Gas Technology Institute) 2697483

2:40 **Refreshment Break**

3:45 **Sampling a Stimulated Rock Volume: An Eagle Ford Example:** K. T. Raterman*, H. E. Farrell*, O. S. Mora, A. L. Janssen, G. A. Gomez, S. Busetti, J. McEwan, B. Roy, K. Friehauf, J. Rutherford (ConocoPhillips) 2670034

4:35 **The Unconventional Play in the Neuquén Basin, Argentina – Insights From the Outcrop for the Subsurface:** G. P. Eberli*[1], R. Weger*[1], M. Zeller[2], M. Tenaglia[1], L. Rueda[1], L. Rodriguez[1], D. McNeill[1], P. Swart[1] (1. University of Miami; 2. Statoil ASA) 2687581

Monday Technical Program

*Denotes presenter other than first author

Theme 10: Well Completion and Stimulation Case Histories I

Room 16 AB

Co-Chairs: J. Stratton and P. Tongwa

1:45 **Introductory Remarks**

1:50 **Optimization of Infill Well Development Using a Novel Far-Field Diversion Technique in the Eagle Ford Shale:** Y. Rodionov, C. Defeu, K. Gakhar, K. Mullen, J. T. Mayo, D. Shan, D. Oussoltsev, E. Ejofodomi (Schlumberger) 2670497

2:15 **Increasing Hydrocarbon Recovery From Shale Reservoirs Through Ballooned Hydraulic Fracturing:** A. Algarhy[1], M. Y. Soliman[2], L. Heinze[1], S. Gorell[1], S. Henderson[1], H. Nasr-El-Din[3] (1. Texas Tech University; 2. University of Houston ; 3. Texas A&M University) 2687030

2:40 **Refining Hydraulic Fracture Design in Tight Gas Reservoirs Using a New Generation of Slim Sonic Dipole Tools:** G. Gallardo Giozza[1], J. R. Zambrano[1], E. Velez*[1], F. Sorenson[2], L. Lamberghini[2] (1. Schlumberger; 2. Pan American Energy) 2695456

3:05 **Refreshment Break**

3:45 **Midland Basin Wolfcamp Shale: Completions Observations and Lateral Length Optimization:** K. Richter (Texas A&M University) 2665631

4:10 **Understanding Impact of Well Spacing and Interference on Production Performance in Unconventional Reservoirs, Permian Basin:** F. O. Ajisafe, E. Ejofodomi, M. Marongiu Porcu (Schlumberger) 2690466

4:35 **Overcoming the Impact of Reservoir Depletion to Achieve Effective Parent Well Re-Fracturing:** R. Manchanda[1], M. Sharma[1], M. Rafiee[2], L. Ribeiro[2] (1. The University of Texas at Austin; 2. Statoil) 2693373

5:00 **The Evolution of the Montney Completion Design: Completion-Driven Well Performance Compared to Lower 48 Plays:** M. A. Kwan (RS Energy Group) 2691110

Theme 08: Reservoir Management from Well Spacing to Wellbore

Room 15

Co-Chairs: D. Fulford and R. Walker

1:45 **Introductory Remarks**

1:50 **Well Interference and Optimum Well Spacing for Wolfcamp Development at Permian Basin:** R. Cao, R. Li, C. Chen, A. Girardi, N. Chowdhury (Shell) 2691962

2:15 **Modeling Well Interference and Optimal Well Spacing in Unconventional Reservoirs Using Fast Marching Method:** A. Datta-Gupta, J. Huang, M. J. King (Texas A&M University) 2688841

2:40 **Investigating Well Interference in a Multi-Well Pad by Combined Flowback and Tracer Analysis:** O. Ezulike[1], Y. Fu*[1], H. Dehghanpour[1], C. Virues[2] (1. University of Alberta; 2. Nexen Energy ULC) 2697593

3:05 **Refreshment Break**

3:45 **Application of Multi-Segment Well Modeling to Simulate Well Interference:** H. Tang, Z. Chai, B. Yan, J. Killough (Texas A&M University) 2668100

4:10 **Optimizing Vertical and Lateral Spacing of Horizontal Wells in Permian Basin Stacked Bench Developments:** D. Shin, D. Popovich (Occidental Petroleum) 2669025

4:35 **Investigating the Impact of Wellbore Liquid Drop-Outs on Recoverable Reserves in Utica:** O. Osadiya[1], N. Seilov[2], J. Danquigny[1], D. Foulon[1], M. F. Raverta (1. Total; 2. NCOC N.V) 2690210

5:00 **Trade-Offs and Implications of Two-Stage Versus One-Stage Unconventional Oil and Gas Exploration and Production Investment Strategies: A Case Study of the Barnett Play:** W. Jang, S. Ikonnikova (The University of Texas at Austin) 2670915

Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)

Room 14

Co-Chairs: N. Fishman and K. Perry

1:45 **Introductory Remarks**

1:50 **Marcellus Shale Energy and Environment Laboratory: Subsurface Reservoir Characterization and Engineered Completion:** T. R. Carr[1], B. Carney[3], J. Akin[2], R. Hammack[4], T. Wilson[1], S. Sharma[1], J. Hewitt[3], I. Costello[3], E. Jordan[3], D. Crandall[4], A. Kumar[4], E. V. Zorn[4], R. Vagnetti[4], O. Anifowoshe[2], P. Dickenson[2], A. Johansen[2], J. Lovell[2], K. MacPhail[2], A. Morales[2], N. Roman[2], M. Thomas[2], M. Yates[2] (1. West Virginia University; 2. Schlumberger; 3. Northeast Natural Energy LLC; 4. Department of Energy) 2670437

2:15 **Depositional Environment and Impact on Pore Structure and Gas Storage Potential of Middle Devonian Organic Rich Shale, Northeastern West Virginia, Appalachian Basin:** L. Song, T. Paronish, V. Agrawal, B. Hupp, S. Sharma, T. R. Carr (West Virginia University) 2667397

2:40 **Seismic Monitoring of Hydraulic Fracturing Activity at the Marcellus Shale Energy and Environment Laboratory (MSEEL) Site, West Virginia:** A. Kumar[1], E. V. Zorn[1], R. Hammack[1], W. Harbert[2] (1. National Energy Technology Laboratory; 2. University of Pittsburgh) 2670481

3:05 **Refreshment Break**

Monday Technical Program

*Denotes presenter other than first author

3:45 **Geomechanics of the Microseismic Response in Devonian Organic Shales at the Marcellus Shale Energy and Environment Laboratory (MSEEL) Site, West Virginia:** E. V. Zorn[1], W. Harbert[2], R. Hammack[1], A. Kumar[3] (1. US Department of Energy; 2. University of Pittsburgh; 3. AECOM) 2669946

4:10 **Application of Fiber-Optic Temperature Data Analysis in Hydraulic Fracturing Evaluation – A Case Study in Marcellus Shale:** S. Amini, T. R. Carr (West Virginia University) 2686732

4:35 **The Marcellus Shale Energy and Environmental Laboratory (MSEEL): Water and Solid Waste Findings – Year One:** P. F. Ziemkiewicz (West Virginia University) 2669914

5:00 **Laboratory-Scale Studies on Chemical Reactions Between Fracturing Fluid and Shale Core From the Marcellus Shale Energy and Environmental Laboratory (MSEEL) Site:** A. Hakala[1], D. Crandall[1], J. Moore[4], T. Phan[2], S. Sharma[3], C. Lopano[1] (1. National Energy Technology Laboratory; 2. Oak Ridge Institute for Science and Education; 3. West Virginia University; 4. AECOM) 2670856

Monday Afternoon ePaper Presentations

Theme 05: Reservoir Engineering III

Exhibition Station A

Co-Chairs: J. Alvarez and A. Shannon

1:45 **Introductory Remarks**

1:50 **Hydrocarbon Storage Mechanism in Shale Reservoirs and Impact on Hydrocarbon Production:** A. Tinni, C. H. Sondergeld, C. S. Rai (University of Oklahoma) 12697659

2:15 **Modeling and Simulation of Mass Transfer and Equilibrium in Tight Oil Formations:** M. Sherafati, K. Jessen (University of Southern California) 2665829

2:40 **Flow Simulation of Complex Fracture Systems With Unstructured Grids Using the Fast Marching Method:** C. Yang, X. Xue, M. J. King, A. Datta-Gupta (Texas A&M University) 2691393

3:05 **Flow Behavior Analysis of Multi-Well Communication Through Secondary Fractures in Tight Oil Reservoirs Using a Laplace Domain Hybrid Model: A Field Example From Western Canadian Sedimentary Basin:** P. Jia[2], C. Clarkson[1] (1. University of Calgary; 2. China University of Petroleum) 2671483

3:30 **Development of an Efficient Method for Modeling Dynamic Fracture Behaviors in Reservoir Simulation:** Y. Xu[2], W. Yu*[1], K. Sepehrnoori[2] (1. Texas A&M University; 2. The University of Texas at Austin) 2670513

3:55 **Refracturing of Closely-Spaced Horizontal Wells to Enhance Productivity of Unconventional Reservoirs:** D. Kumar, A. Ghassemi (The University of Oklahoma) 2697487

4:20 **A Fracture-Based Approach for Modeling Production in Stress-Sensitive Coals, Surat Basin, Australia:** S. Busetti[1], S. Ganpule[2], J. Sabogal Polania[2] (1. ConocoPhillips; 2. Origin Energy) 2670877

4:45 **Hydraulic Fracture Conductivity as a Function of Proppant Concentration Under Various Effective Stresses: From Partial Monolayer to Multilayer Proppants:** M. Fan[1], Y. Han*[3], J. McClure[1], C. Chen[1] (1. Virginia Tech; 3. Aramco Research Center) 2693347

Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy

Exhibition Station B

Co-Chairs: M. Sharma and S. Singleton

1:45 **Introductory Remarks**

1:50 **Constructing High Resolution, Inch Scale Continuous Logs via a Multi Domain Approach to Improve Hydraulic Fracturing by Capturing Thin Beds in Bone Spring, Delaware Basin, Reeves County, Texas:** S. Narasimhan, P. Mainali, H. Rowe, A. Morrell, W. Ingram, A. Benson, N. Ganser, S. Arrington (Premier Oilfield Laboratories) 2670758

2:15 **Geomechanical Facies Model for Wolfcamp Formation (Midland Basin):** V. Shelokov, M. Sarkar (Pioneer Natural Resources) 2694220

2:40 **A Single Core Test for Fracability, Breakdown Pressure and Conductivity:** Z. Zeng, A. Harouaka (University of Texas – Permian Basin) 2697595

3:05 **Study on the Effect of Mineralogy and Organic Matter on Micromechanical Properties of Bakken Formation:** H. Pu[1], J. Ge[1], X. Hou[1] H. Fu[1], Y. Li[2] (1. University of North Dakota; 2. InPetro Technologies Inc.) 2669986

3:30 **Quantifying the Nano-Mechanical Signature of Shale Oil Formations by Grid Nanoindentation:** K. Liu, M. Ostadhassan (University of North Dakota) 2683509

3:55 **Water Weakening: Case Study From Marcellus, and Woodford:** I. Gupta[1], C. H. Sondergeld[1], C. S. Rai[1], R. Hofmann[2] (1. University of Oklahoma; 2. Shell International Exploration and Production Inc.) 2669617

Theme 03: Geochemistry of Unconventional Resource Plays

Exhibition Station C

Co-Chairs: H. Jin and H. Rowe

1:45 **Introductory Remarks**

1:50 **Role of Organic Acids in Controlling Mineral Scale Formation During Hydraulic Fracturing at the Marcellus Shale Energy and Environmental Laboratory (MSEEL) Site:** A. Hakala[2], T. Phan[1], M. Stuckman[3], H. Edenborn[2], C. Lopano[2] (1. Oak Ridge Institute for Science and Education; 2. National Energy Technology Laboratory; 3. AECOM) 2670833

2:15 **Biogeochemical Characterization of Core, Fluids, and Gas at MSEEL Site:** S. Sharma[1], T. R. Carr[1], P. J. Mouser[2], K. Wrighton[2], D. Cole[2], M. Wilkins[2], T. Darrah[2], A. Hakala[3] (1. West Virginia University; 2. The Ohio State University; 3. National Energy Technology Laboratory) 2669965

2:40 **Interrogating Flowback Chemistry for Damage Markers in the Eagle Ford:** J. Farrell[1], S. Makarychev-Mikhailov[1], R. Williams[1], R. Prabhu[1], W. Kreimeier[2] (1. Schlumberger; 2. Lonestar Resources) 2674419

3:05 **Investigating the Organic Matter in Shales From the Canning and Perth Basins via Infrared and Raman Spectroscopy:** B. Pejcic, J. Bourdet, C. Delle Piane, C. Heath, M. Clennell*, Z. Li (CSIRO) 2692284

3:30 **Characterization of Sub-Log Scale Variability in Mudstones and the Effects of Variable Sampling Scales on High Resolution Models; Examples From Bone Spring Formation, West Texas:** A. Morrell, S. Narasimhan, H. Rowe, P. Mainali (Premier Oil Field Laboratories) 2695114

3:55 **GIS-Based Interpretation of Rock, Oil, Gas and PVT Data to Predict New Well Outcomes – Virtual Well Examples From the Eagle Ford and Second White Speckled Shale Formations of North America:** J. B. Curtis, S. W. Brown, J. E. Zumberge, K. A. Ferworn, M. M. White (GeoMark Research Ltd.) 2688128

Tuesday Technical Program

*Denotes presenter other than first author

Topical Breakfasts

Organic Mudstone Petrophysics: A Novel Workflow to Estimate Storage and Flow Capacity

Time: 7:00 a.m.–8:15 a.m.
Location: Room 19 AB
Fee: $35 per person

Kent E. Newsham, Chief Petrophysicist – Permian Resources, Occidental Petroleum Corporation

The emergence of shale and oil plays in North America has caused the industry to re-examine the methods which we use to quantify the resource and recoverable reserves in place. We present a novel workflow and methods for systematically modeling reservoirs with complex mineral distribution and fluid composition. The primary objectives are for consistent and improved accuracy of reservoir storage capacity estimate and to better identify mobile oil and water producing intervals. The workflow provides direct core to log calibration of static properties throughout the workflow. It also allows for calibration to dynamic properties such as pore pressure and fluid phase properties via PVT tests using correlations such as Standing and Vasquez and Beggs. The model is designed to use conventional triple combo log data. Results from the "constrained simultaneous inversion" calculations are compared against physical measurements from core and/or cuttings. Numerous examples will be presented.

An Update on Activity and Technology in the Appalachian Basin

Time: 7:00 a.m.–8:15 a.m.
Location: Room 18 CD
Fee: $35 per person

Joseph H. Frantz Jr., Vice President Engineering Technology, Range Resources Corporation

Activity levels in the Appalachian Basin decreased over the past few years due to reduced demand and pricing, heightened by an expanded basis differential. But additional infrastructure coming online and a recent rally in prices is leading to a slow increase in activity. As some look ahead at expanded activity, this is a good time to look back at some of the technological advancements that have led to improved efficiencies. This talk will review activity in the Appalachian Basin, with a focus on Range Resources' achievements in Pennsylvania.

Panel Session

Injection Induced Seismicity: Operational Implications of Evolving Regulations

Time: 8:25 a.m.–10:10 a.m.
Location: Ballroom E
Fee: Included with registration
Moderators: Shawn Maxwell, Hal Macartney, and Cody Comiskey

Invited technical presentations will highlight the latest research into the potential seismic hazard associated with water disposal activities and hydraulic fracturing. The latest regional regulations will also be reviewed. See page 22 for session details.

- **Mark Zoback**, Benjamin M. Page Professor of Earth Science and Professor of Geophysics, Stanford
- **Jeremy Boak**, Director, Oklahoma Geological Survey
- **Todd Shipman**, Landscape and Geohazards Manager, Alberta Energy Regulator
- **Jonathan Winsor**, Geophysicist, Shell Canada
- **Panel Discussion**
- **Q&A**

Special Sessions

Berg-Hughes/Crisman

Time: 8:25 a.m.–12:05 p.m.
Location: Room 14
Fee: Included with registration
Co-Chairs: Anne Herrin and Doug Valleau

The Texas A&M Berg-Hughes Center for Petroleum and Sedimentary Systems integrates geosciences, engineering, and other disciplines to maximize resource production and to collaborate with industry and others to advance research and education in petroleum studies.

This special session at URTeC showcases a series of linked papers highlighting the latest thinking in unconventional resource plays. See page 24 for session details.

Vaca Muerta

Time: 1:45 p.m.–5:25 p.m.
Location: Ballroom E
Fee: Included with registration
Co-Chairs: Barbara Hill and Sam Shiverick

The Vaca Muerta Formation has been in production for nearly a century, but has been recognized as a world class petroleum system only within the last decade as horizontal drilling and completions became active in the Neuquen Basin of Argentina and its true potential became apparent. This special session of the Vaca Muerta will highlight new insights into exploration and production, understanding

Tuesday Technical Program

*Denotes presenter other than first author

the Vaca Muerta petroleum system from peak oil to natural gas, the diagenesis of beef, and new methodologies being applied to geomechanical modeling, well completions, and reserve estimates. The session will also highlight current efforts in mitigating the carbon footprint associated with shale gas production, using the Vaca Muerta as an example. See page 25 for session details.

BEG Bakken

Time: 1:45 p.m.–5:25 p.m.
Location: Room 15
Co-Chairs: Craig Cipolla and Marie Kloska

The Bureau of Economic Geology (BEG) is pleased to present the latest research findings from the Bakken and Three Forks Formations in this half-day special session. Discussions will focus on EUR and performance prediction, reserve assessment and recovery, production diagnostic, and economics. See page 27 for session details.

Tuesday Morning Oral Presentations

Panel Session – Injection Induced Seismicity: Operational Implications of Evolving Regulations

Ballroom E
Moderators: Shawn Maxwell, Hal Macartney, and Cody Comiskey

8:25 **Introductory Remarks**
8:30 **Mark Zoback**, Benjamin M. Page Professor of Earth Science and Professor of Geophysics, Stanford
8:45 **Jeremy Boak**, Director, Oklahoma Geological Survey
9:00 **Todd Shipman**, Landscape and Geohazards Manager, Alberta Energy Regulator
9:15 **Jonathan Winsor**, Geophysicist, Shell Canada
9:30 **Panel Discussion**
9:45 **Q&A**

Induced Seismicity Special Session

Ballroom E
Co-Chairs: C. Comiskey, H. Macartney, and S. Maxwell

10:45 **Introductory Remarks**
10:50 **Protocols and Common Pitfalls in Data Handling for Induced Seismicity Geomodels:** C. R. Lemons, R. Dommisse, J. Nicot, P. H. Hennings (Bureau of Economic Geology) 2667788
11:15 **Intact and Shear Reactivation Strength of Eagle Ford and Woodford Shales From Multistage Triaxial Testing:** T. Henao, C. H. Sondergeld, C. S. Rai (The University of Oklahoma) 2670543
11:40 **Monitoring in a Western Canadian Shale Play With a Sparse Surface Network: Moment Tensor Analysis Implications:** K. Chambers[1], B. Batlai[2], B. Bialowas[2], J. Nieto[2], D. Baturan[1] (1. Nanometrics; 2. Canbriam Energy Inc.) 2670385

Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization

Ballroom F
Co-Chairs: D. Fulford and S. Sankaran

8:25 **Introductory Remarks**
8:30 **Using a Systematic, Bayesian Approach to Unlock the True Value of Public Data; Midland Basin Study:** S. Clifford, T. Torres (Apache Corporation) 2697318
8:55 **Using Data Analytics to Understand the Impact of Enhanced Completion Designs and Production Trends Within the Denver-Julesburg Basin, Colorado:** A. Reimchen, D. Gregoris, G. Scott, J. Lepore, K. Repchuk (RS Energy Group) 2691890
9:20 **Rock Typing in Eagle Ford, Barnett, and Woodford Formations:** I. Gupta, C. S. Rai, C. H. Sondergeld, D. Devegowda (University of Oklahoma) 2669624
9:45 **Improving Well Designs and Completion Strategies Utilizing Multivariate Analysis:** J. Wicker, J. Courtier, D. Gray, S. Trowbridge (Laredo Petroleum) 2693211
10:10 **Refreshment Break**
10:50 **Spatial Continuity and Surveillance Recommendations in the Permian Basin Tight Rock Wolfcamp: Autocorrelation and Variogram Analysis for Determining Extent of Reservoir Homogeneity:** S. J. Prochnow, H. Luk (Chevron) 2669992
11:15 **Application of Data Analytics for Production Optimization in Unconventional Reservoirs: A Critical Review:** S. Mishra (Battelle Memorial Institute) 2670157
11:40 **Predicting ESP Lifespans With Machine Learning:** J. Sneed (Devon) 2669988

Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I

Ballroom G
Co-Chairs: T. MacFarlane, R. Pearson, and S. Singleton

8:25 **Introductory Remarks**
8:30 **Application of Anisotropic Depth Imaging Onshore:** S. Sutherland, M. Rauch-Davies (Devon Energy) 2691958
8:55 **Integrated Evaluatrion of Roseneath-Epsilon-Murteree Formations, Cooper Basin, Australia to Develop an Optimal Approach for Sweet Spot Determination:** A. Repnik[2], A. Klokov*[1], V. Bochkarev[3], A. Bochkarev[4] (1. The University of Texas at Austin; 2. Exploration Technologies Service Group; 3. Lukoil International Upstream West Inc; 4. Gubkin Russian State University of Oil and Gas) 2670605
9:20 **Fault Detection From 3-D Seismic Data and Distribution of Conjugate Faults in the Bakken Formation:** I. Jahan, J. Castagna, M. Murphy (University of Houston) 2667987
9:45 **The Use of Time-Lapse Seismic Attributes for Characterizing Hydraulic Fractures in a Tight Siltstone Reservoir:** N. Riazi, C. Clarkson (University of Calgary) 2670158
10:10 **Refreshment Break**
10:50 **Detailed Oriented Seismic Processing Leads to More Accurate Elastic Attribute Results in the Delaware Basin:** M. Rauch-Davies, S. Smith, A. Bashkirtseva Hall (Devon Energy) 2691095
10:50 **Unconventional Reservoir Characterization Using Azimuthal Seismic Diffraction Imaging:** D. Merzlikin, S. Fomel, X. Wu, M. Phillips (UT Austin) 2695232
11:15 **Identification of Potential Lacustrine Stratigraphic Intervals in the Woodford Shale, Oklahoma, Using Multi-Attribute 3-D Seismic Displays and a Supervised Neural Network:** E. J. Torres[1], R. M. Slatt[1], K. J. Marfurt[1], L. E. Infante[1], L. A. Castillo[2] (1. The University of Oklahoma; 2. G&L Energy Co.) 2692737

Tuesday Technical Program

*Denotes presenter other than first author

Theme 01: Petrophysics and Formation Evaluation of Mudstones III

Room 18 AB

Co-Chairs: T. Ramirez and L. Sivila

8:25 **Introductory Remarks**

8:30 **Quantification of Fracture-Matrix Fluid Transport in Unconventional Rocks Using Two-Scale Microfluidic Chips:** A. Mehmani[1], S. Kelly[2], C. Torres-Verdin[1], M. Balhoff[1] (1. The University of Texas at Austin; 2. ConocoPhillips) 2669314

8:55 **"Sweet Spot" Identification in Tight Reservoirs: An Innovative Core-Analysis Workflow Integrating X-Ray Fluorescence (XRF), Mechanical Hardness and Profile Permeability Techniques:** A. Ghanizadeh, C. Clarkson, A. Vahedian, C. P. Vocke (University of Calgary) 2670893

9:20 **Rapid Quantification of Mineralogy, Organic Matter, and Thermal Maturity of Cuttings With Diffuse Reflectance Infrared Fourier Transform Spectroscopy, Permian Basin:** M. L. Loan[2], M. M. Herron[2], A. Matteson[2], A. Charsky[1], P. Craddock[2], R. Prioul[2], M. Prange[2] (1. Colorado School of Mines; 2. Schlumberger) 2671423

9:45 **A New Resistivity Model for Improved Water Saturation Assessment in Organic-Rich Mudrocks Honoring Rock Fabric:** A. Posenato Garcia, A. Jagadisan, Z. Heidari (The University of Texas at Austin) 2688838

10:10 **Refreshment Break**

10:50 **Shale Activity Test SAT Improving the Petrophysical Shale Oil Evaluation and Geomechanical Frackabillity Estimations:** K. Zamfes (University of Tashkent) 2695264

11:15 **Petrophysical Characterization at the Extremes and Across Three Continents: Contrasting Examples from Utica, Marcellus, Longmaxi and Roseneath-Murteree Resource Shales:** M. Clennell, M. Josh, L. Esteban, C. Delle Piane, D. Dewhurst (CSIRO) 2692318

11:40 **Fast and Reliable Estimates of Low Permeabilities by the Full-Immersion Pressure-Pulse Decay:** M. J. Hannon (The National Energy Technology Laboratory) 2669302

Operators' Forum – Case Studies in Unconventional Reservoir Development III

Room 17 AB

Co-Chairs: C. Cipolla and B. Poe

8:25 **Introductory Remarks**

8:30 **Influence of Stratigraphy on Barriers to Fracture Growth and Completion Optimization in the Meramec Stack Play, Anadarko Basin, Oklahoma:** B. Price*, K. Haustveit*, A. Lamb* (Devon) 2697585

9:20 **Exploration of Case Histories of DAS Fiber-Based Microseismic and Strain Data, Monitoring Horizontal Hydraulic Stimulations Using Various Tools to Highlight Physical Deformation Processes (Part A):** R. Hull[1], R. Meek[1], H. Bello[1], D. Miller[2] (1. Pioneer Natural Resources; 2. Silixa LTD) 2695282

9:45 **Time-Lapse Imaging of a Hydraulic Stimulation Using 4-D Vertical Seismic Profiles and Fiber Optics in the Midland Basin (Part B):** R. Meek, K. Woller, M. George, R. Hull, H. Bello, J. Wagner (Pioneer Natural Resources) 2695394

10:10 **Refreshment Break**

Tuesday Technical Program

*Denotes presenter other than first author

10:50 **Well Spacing Optimization in Eagle Ford Shale: An Operator's Experience:** M. Rafiee*, T. Grover* (Statoil) 2695433

Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness

Room 16 AB

Co-Chairs: R. Hurt, B. Lai, and A. Rodriguez-Herrera

8:25 **Introductory Remarks**

8:30 **Integrating Mineralogy, Process Sedimentology, and Geomechanics for Development of a Mechanical Stratigraphy Model of the Bakken Formation:** A. Charsky[1], D. Pyles[2], S. Sonnenberg[1] (1. Colorado School of Mines; 2. EOG Resources) 2690354

8:55 **Defining Linkages Between Chemofacies, Mechanical Stratigraphy, and Brittleness in the Austin Chalk: Implications for Geomechanics and Induced Fracture Simulations:** H. Rowe[1], S. Narasimhan[1], A. Benson[1], R. Loucks[2], A. Morrell[1], P. Mainali[1], A. Musgrove[1], J. Garza[1] (1. Premier Oilfield Laboratories; 2. University of Texas at Austin) 2668845

9:20 **Coupling Complex Resistivity, Geomechanical and Acoustic Properties and Permeability in Sandstone and Shale Reservoirs:** D. Katsuki, O. Adekunle, A. N. Tutuncu (Colorado School of Mines) 2671521

9:45 **Impact of Shale Mechanical Anisotropy on Drilling, Completion, and Hydraulic Fracturing Design:** M. Gu (West Virginia University) 2671454

10:10 **Refreshment Break**

10:50 **Experimental Measurement of Fracture Permeability at Reservoir Conditions in Utica and Marcellus Shale:** J. W. Carey, L. P. Frash (Los Alamos National Laboratory) 2666764

11:15 **Laboratory Investigation of Fluid Flow and Permeability Evolution Through Shale Fractures:** Z. Ye[1], A. Ghassemi[1], S. Riley[2] (1. The University of Oklahoma; 2. Devon) 2674846

11:40 **High Resolution Seismic Data Derived From Prestack Inversion and Machine Learning to Accurately Position Horizontal Wells in the Midland Basin, Texas:** R. Meek, B. Davis, H. Bello (Pioneer Natural Resources) 2695422

Theme 07: Stakeholder Management and Social Performance I

Room 15

Co-Chairs: R. Goswick and K. Perry

8:25 **Introductory Remarks**

8:30 **Wellbore Integrity R&D: Ensuring Well Control and Zonal Isolation in Unconventional Resource Plays:** E. Folio, O. Ogunsola, E. Melchert (Department of Energy) 2661412

8:55 **Well Test Workflow to Characterize Sustainable Water Sources for the Permian Basin Unconventional Development:** Y. Tang[1], B. Liang[1], L. Larsen[2], H. Luk*[1] (1. Chevron; 2. Kappa Engineering) 2671254

9:20 **Pre-Development Research to Understand Stakeholder Perceptions of Energy Development in Environmentally Sensitive Areas:** D. Burnett[1], M. Higgins*[2] (1. Texas A&M University; 2. CMGC Foundation) 2664562

9:45 **Bridging the Gap Between Produced Water and Source Water: Modeling Water Management Economics to Identify Cost Saving Potential for Operators:** T. F. Hussey, D. Burnett (Texas A&M University) 2673999

10:10 **Refreshment Break**

10:50 **Produced Water Microbial Control:** A. Shepstone, K. McLeroy, D. Burnett (Texas A&M University) 2667063

11:15 **Water Consumption and Proppant Transport Aspects of Foam Fracturing Fluids:** P. Cisternas, A. Pruvot, S. Tong, X. Kong, J. McAndrew (American Air Liquide Inc.) 2670102

Berg-Hughes/Crisman Institute Special Session

Room 14

Chair: D. Valleau

8:25 **Introductory Remarks**

8:30 **Developing Predictive Models for Shale Reservoirs:** S. A. Holditch (Texas A&M University) 2667781

8:55 **An Organofacies-Based Mudstone Classification for Unconventional Tight Rock & Source Rock Plays:** A. Donovan[1], J. Evenick[2], L. Banfield[2] (1. Texas A&M University; 2. BP) 2715154

9:20 **Shale Resource Assessment in Presence of Nanopore Confinement:** I. Akkutlu (Texas A&M University) 2670808

9:45 **Surface to Subsurface Correlation of Eagle Ford Equivalent Strata From West to South Texas:** M. Pope, M. Wehner, E. Peavey, R. Conte, M. Tice, A. Donovan (Texas A&M University) 2716442

10:10 **Refreshment Break**

10:50 **A Comparative Study of the Effects of Clay Content on the Fracture Conductivity of the Eagle Ford Shale and Marcellus Shale Formations:** J. Guerra, D. Zhu*, A. D. Hill (Texas A&M University) 2716913

11:15 **Multiscale Seismic Models of Complex Fracture Networks:** R. L. Gibson, Y. Efendiev, J. Chester, Y. Cho, E. Sotelo Gamboa (Texas A&M University) 2671351

11:40 **Advances in Simulation of Hydrocarbon Production From Shale Reservoirs:** M. Alfi, Z. Chai*, B. Yan, B. C. Stimpson, M. A. Barrufet, J. Killough (Texas A&M University) 2669950

Tuesday Morning ePaper Presentations

Theme 05: Reservoir Engineering IV

Exhibition Station A

Co-Chairs: D. Devegowda and B. Liang

9:25 **Introductory Remarks**

9:30 **What Happens to Permeability at the Nanoscale? A Molecular Dynamics Simulation Study:** R. Velasco[2], M. Pathak[1], P. Panja[2], M. Deo[1] (1. University of Utah; 2. Energy and Geoscience Institute) 2697415

9:55 **Gas Slippage in Tight Rocks With Sub-Irreducible Water Saturation:** J. Li, Z. Chen, K. Wu (University of Calgary) 2696639

10:20 **Dynamic Flow Behavior in Shales Described via Digital Rock Modeling Provides Insight Into Gas Injection:** R. M. MacDonald[1], S. I. Geetan[1], D. Klemin[2] (1. EP Energy Corp; 2. Schlumberger) 2671283

10:45 **Optimization of Unconventional Well-Pad Area Using Reservoir Simulation and Intelligent Sequential Sampling:** E. Robertson, N. Iyer, R. Klenner, G. Liu (GE Global Research) 2673695

11:10 **Early Time SRV Characterization Through Flowback Analysis: Application of Clarkson/Williams-Kovacs Technique to Vaca Muerta:** R. Cugnart[1], S. Rasoanaivo[1], C. Clarkson[2], J. Williams-Kovacs[2], M. F. Raverta[1](1. Total; 2. University of Calgary) 2689844

Theme 10: Well Completion Diagnostics and Optimization Technologies

Exhibition Station B

Chair: R. Johnson

9:25 **Introductory Remarks**

9:30 **Ceramic Proppant Transport and Placement in Heterogeneous Fracture Systems:** D. A. Kadhim, S. Dunn-Norman, A. Imqam (Missouri University and Science and Technology) 2697613

9:55 **How Diagnostic Fracture Injection Tests (DFITs) Show Horizontal Plane Tensile and Shear Fractures in Various Stress Settings:** A. K. Nicholson[1], R. C. Bachman[2], R. V. Hawkes[3] (1. Perpetual Energy Inc.; 2. CGG; 3. Trican Well Service) 2670018

Tuesday Technical Program

*Denotes presenter other than first author

10:20 **Hydraulic Fracture Diagnostics and Stress Interference Analysis by Water Hammer Signatures in Multi-Stage Pumping Data:** J. Hwang, M. J. Szabian, M. Sharma (The University of Texas at Austin) 2687423

10:45 **Simultaneous Inversion for Microseismic Event Location and Velocity Model in Vaca Muerta Formation:** Z. Zhang[1], J. Du[2], F. Gao[2] (1. University of California, Berkeley; 2. Total) 2652022

11:10 **Completion Optimization While Drilling – Geomechanical Steering Towards Fracable Rock Using Corrected Mechanical Specific Energy:** A. Ouenes, R. Dirksen, M. Bari, S. Rehman (FracGeo) 2693870

Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales III

Exhibition Station C

Co-Chairs: L. Hathon and D. Jacobi

9:25 **Introductory Remarks**

9:30 **Petrophysical Characterization of the Bakken Shale for Carbon Storage Investigation:** C. Verba, D. Crandall, M. Johnathan, C. Lopano (National Energy Technology Laboratory) 2668489

9:55 **Efficient, Low-Risk, Comprehensive Geological Characterization of Lateral Wells to Optimize Completion Performance:** E. Haddad, S. Bammi, A. Wray*, R. Reischman, E. Velez, R. Laronga (Schlumberger) 2690051

10:20 **NMR at Different Temperatures to Evaluate Shales:** M. Dick, D. Veselinovic*, D. Green (Green Imaging Technology) 2671166

10:45 **Petrophysical Properties of Shale From Different Source Rocks in the Middle East:** M. Dernaika, J. Walls*, S. Koronfol, O. Al Jallad, G. Sinclair (Ingrain) 2667079

Topical Luncheons

Shale Production Resilience and Flexibility Causes, Risks, and Opportunities

Time: 12:05 p.m.–1:15 p.m.
Location: Room 18 CD
Fee: $55 per person

Phillipe Charlez, Senior Technical Advisor, Total Exploration and Production

U.S. shale production has proved to be much more resilient than expected with a slow and delayed decline when compared to the dramatic reduction in drilling and fracturing activities. Thanks to the flexibility of means used (rapid mobilization and demobilization of rigs and fracturing fleets), the development can be resumed as soon as prices recover. This presentation aims at presenting first, the main causes of the resilience and will highlight why the tremendous progress made in recent years in terms of operational performances, completion, and fracturing technologies, as well as in the identification of development sweet areas, were key contributors. The session will also address how resilience and flexibility can represent an opportunity but also a risk of adopting a "stop and go" strategy.

Unconventional Reservoirs – A Technology Driven Revolution of Enormous Scale

Time: 12:05 p.m.–1:15 p.m.
Location: Room 19 AB
Fee: $55 per person

Greg Leveille, Chief Technology Officer, ConocoPhillips

The unconventional reservoir revolution disrupted the status quo that existed within the E&P industry at the start of the 21st century, creating considerable opportunity, but also significant challenges. The rapid pace of technology advancements and productivity improvements achieved since 2005 surprised even the best-informed industry analysts, causing the impact of the revolution on hydrocarbon supply and prices to be consistently underestimated. And while the revolution is moving in its second decade, there is little reason to believe that it has run its course, with what the future may bring with regards to further advancements being the focus for this talk.

Tuesday Afternoon Oral Presentations

Vaca Muerta Special Session

Ballroom E

Co-Chairs: B. Hill and S. Shiverick

1:45 **Introductory Remarks**

1:50 **Vertical Heterogeneity of Kerogen Compositions in the Vaca Muerta Unconventional Play (Neuquén Basin, Argentina) and Assessment of Producible Fluid Quality:** R. Elias, N. Mottet, O. Ruau, F. Gelin (Total) 2688044

2:15 **The Role of Porosity in the Development of Parallel Bedded Calcite Filled Fractures (or Beef) in the Vaca Muerta: An Integrated Analysis From High Resolution Core Data:** A. Lejay[1], S. Larmier[2], P. Rutman[3], F. Gelin[1] (1. Total; 2. Maine University; 3. UPMC Paris VI) 2668071

Tuesday Technical Program

*Denotes presenter other than first author

2:40 **Towards a Balance of Pore Size Distribution of Unconventional Hydrocarbons Reservoirs: Combination of Bulk Techniques Applied on Comparable Sub-Samples Localized by 3-D X-Ray µ-Tomography:** N. Matskova[1], D. Pret[1], S. Gaboreau[2], P. Cosenza[1], R. Brechon[1], I. Gener[1], C. Fialips[3], G. Dubes[3], F. Gelin[3] (1. University of Poitiers; 2. BRGM; 3. Total) 2689299

3:05 **Refreshment Break**

3:45 **Pore Pressure and Elastic Moduli Estimation Considerations for a Simplified Geomechanical Model of the Vaca Muerta Formation:** S. Cuervo, E. Lombardo (Chevron) 2688826

4:10 **Laboratory Investigation of Proppant-Pack Conductivity: Eagle Ford and Vaca Muerta Shale:** A. Mittal, C. S. Rai, C. H. Sondergeld (University of Oklahoma) 2670951

4:35 **Mitigating Shale Gas Developments Carbon Footprint: Evaluating & Implementing Solutions in Argentina:** C. Eygun, F. Pazos, J. Belgaroui*, Y. Wu (Total) 2687987

5:00 **Timely Understanding of Unconventional Reserves Through Rate Transient Analysis – A Vaca Muerta Case Study:** J. M. Thompson[1], D. Anderson[1], M. Fernandez-Badessich[2], C. T. Boulton[3] (1. Anderson Thompson Reservoir Strategies; 2. YPF; 3. McDaniel International Inc.) 2688694

Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) I

Ballroom F

Co-Chairs: L. Baez and L. Sivila

1:45 **Introductory Remarks**

1:50 **Facies Control on the Prospectivity of the Unconventional Mowry Formation, Southern Powder River Basin, Wyoming, USA:** S. Purvis, C. Iwobi, R. Kenny, J. P. Fenton, V. Pandey, C. Davies (CGG) 2688030

2:15 **The Influence of Sedimentation "Rate" and Depositional Processes on Organic-Richness of the Wolfcamp Formation, Midland Basin:** J. S. Mintz, B. Rich, J. P. Fenton, J. Koster, C. Davies, J. Harris, A. Perez (CGG) 2670441

2:40 **Integrated Multi-Scale Reservoir Characterization: Wolfcamp Formation – Midland Basin:** A. Morcote[1], J. Walls*[1], M. Ver Hoeve[2], M. Foster[1] (1. Ingrain; 2. Discovery Natural Resources) 2670796

Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) II

Ballroom F

Co-Chairs: B. Keel and A. Reynolds

3:40 **Introductory Remarks**

3:45 **Stratigraphic Variability of the Demoinesian Marmaton Group Across the Lips Fault System in the Texas Panhandle Granite Wash, Southern Anadarko Basin:** P. D. Jordan[1], J. J. Melick[2] (1. Mississippi State University; 2. BP Lower 48 US Onshore) 2671416

4:10 **Sequence Stratigraphic Architecture and Reservoir Characteristics of the Unconventional "Mississippian Limestone" Play, North-Central Oklahoma, USA:** G. Gao[1], Y. Wang*[2] (1. Tiptop Energy; 2. Oklahoma State University) 2670748

4:35 **Wellsite Chemostratigraphy in the Petroleum Province of Anadarko Basin: How Thermal Pulses, Deposition and Diagenesis Influence Hydrocarbon Accumulation:** A. Pozzi, I. Easow*, M. Ruggiero, N. Cameron (1. Geolog) 2697615

5:00 **STACKing It Up: An Economic and Geological Analysis of the STACK:** D. Yee, G. Johnston, S. Ahmed (RS Energy Group) 2690074

Theme 08: Forecasting Resource Production Potential From Regional to Well Scale

Ballroom G

Co-Chairs: R. Sidle and O. Skilbrei

1:45 **Introductory Remarks**

1:50 **Linear Post-Linear Flow Production Analysis:** T. Bone, J. Callard, D. Devegowda* (University of Oklahoma) 2697518

2:15 **Constructing Enhanced Type Wells Using Cluster-Weighted Modeling:** N. L. Chaudhary, W. Lee (Texas A&M University) 2697554

2:40 **Approximation of Multi-Fractured Horizontal Well Composite Reservoir Models Using Decline Curves:** D. Fulford (Apache) 2697557

3:05 **Refreshment Break**

3:45 **Modifications for Fracture Damage and Changing Pressure Drawdown to Improve Accuracy of Duong Decline Model:** H. S. Jha[1], W. Lee[2] (1. University of Houston; 2. Texas A&M University) 2697591

4:10 **Producing Gas-Oil Ratio Behavior of Unconventional Volatile-Oil Reservoirs, and Its Application in Production Diagnostics and Decline Curve Analysis:** M. Khoshghadam[1], A. Khanal[1], N. Rabinejadganji[2], W. Lee[3] (1. University of Houston; 2. New Dawn Energy; 3. Texas A&M) 2670925

4:35 **EIA's Monthly Coverage of Oil and Natural Gas Production Improves Energy Forecasts for the United States:** O. Popova, G. Long, J. Little, B. Mariner-Volpe, S. Grape (U.S. Department of Energy) 2668603

5:00 **Resource Estimation of Eighty-Two European Shale Formations:** M. Zijp[1], S. Nelskamp[1], N. Schovsbo[2], L. Tougaard[2], A. Bocin-Dumitriu[3] (1. TNO; 2. GEUS; 3. European Commission) 2686270

Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior

Room 18 AB

Co-Chairs: V. Artus and M. Honarpour

1:45 **Introductory Remarks**

1:50 **Extraction of Oil From Bakken Shale Formations With Supercritical CO_2:** L. Jin, S. Hawthorne, J. Sorensen, L. Pekot, B. Kurz, S. Smith, L. Heebink, N. Bosshart, J. Torres, C. Dalkhaa, C. Gorecki, E. Steadman, J. Harju (Energy & Environmental Research Center) 2671596

2:15 **Constructing Oil-Gas Capillary Pressure and Relative Permeability Curves From a Distribution of Pores in Shale Reservoirs:** B. C. Stimpson, M. A. Barrufet (Texas A&M University) 2670123

2:40 **Flow Dynamics in Unconventional Shale Reservoirs Incorporating Pore Scale Physics:** N. S. Alharthy[1], T. Teklu[2], H. Kazemi[2], R. Graves[2], S. Abd El-Gawad[1] (1. Shell; 2. Colorado School of Mines) 2698056

3:05 **Refreshment Break**

3:45 **Comprehensive Modeling of Nanopore Gas Storage and Transport Including Adsorption and Confinement Effects in Shale-Gas Reservoirs:** F. Civan (University of Oklahoma) 2666392

4:10 **Non-Darcy Flow Regimes Coupled With Pore Compaction in Shale Gas Formations:** D. Davudov, Y. Lan, R. Moghanloo (University of Oklahoma) 2693797

4:35 **Tests of Fracture Water and Gas Permeability on Vaca Muerta Gas Shale:** K. Su, J. Torres, Y. Sanz Perl, P. Barlet, A. Onaisi, S. Vidal-Gilbert (Total) 2671318

5:00 **Estimating Mudrock Oil-Water Relative Permeability Curves Using Digital Rock Physics:** C. J. Landry, M. Prodanovic, K. Mohanty, P. Eichhubl, R. M. Reed, S. Peng (The University of Texas at Austin) 2691701

Tuesday Technical Program

*Denotes presenter other than first author

Operators' Forum – Case Studies in Unconventional Reservoir Development IV

Room 17 AB

Co-Chairs: D. Anderson and K. Richter

1:45 **Introductory Remarks**

1:50 **Multi-Disciplinary Approach for a Landing Point Criteria in Vaca Muerta Formation:** I. Lanusse*[2], M. Fantin[1], P. A. Crespo*[1], L. Crousse[1], H. Reijenstein[1], R. Varela[2], A. Bonelli[1] (1. Chevron; 2. YPF) 2670565

2:40 **Refreshment Break**

3:45 **Resource Assessment in the Northern Midland Basin: Detailed Mapping of Late Pennsylvanian, Wolfcampian, and Early Leonardian Margins and Flooding Surfaces Using Well Logs and Seismic Data:** S. W. Sinclair*[1], L. Crespo[1], L. Waite*[1], K. Smith[1], C. Leslie[2] (1. Pioneer Natural Resources; 2.Baylor University) 2692102

4:35 **Delaware Basin Leonard Reservoir Characterization, New Mexico and Texas:** S. Rittenhouse*, Y. Li, K. Hughston-Kennedy, J. Fritz, J. Pritchard*, V. Baum, T. Mooney, L. Cassel, S. Liem* (Devon) 2668602

Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I

Room 16 AB

Co-Chairs: M. Falk, H. Patel, and R. Pearson

1:45 **Introductory Remarks**

1:50 **Application of Microseismic to Assess Hydraulic Fracture Behavior in Relation to Completion Design and Landing Zone:** S. Trowbridge, J. Courtier, J. Wicker, M. Smith (Laredo Petroleum) 2674376

2:15 **Imaging Three-Dimensional Complex Hydraulic Fracture Networks in Horizontal Wells Using Functionally-Graded Electromagnetic Contrasting Proppants:** X. Zhou, A. Dahi Taleghani* (Louisiana State University) 2697636

2:40 **DAS Microseismic Monitoring and Integration With Strain Measurements in Hydraulic Fracture Profiling:** M. Karrenbach[1], A. Ridge[1], S. Cole[1], K. Boone[1], D. Kahn[2], J. Rich[2], K. Silver[2], D. Langton[2] (1. OptaSense; 2. Devon Energy) 2670716

3:05 **Refreshment Break**

3:45 **Microseismic Response and Geomechanical Principles of Short Interval Reinjection Treatments:** A. Kent[1], S. Maxwell[2], D. Eaton [1] (1. University of Calgary; 2. IMaGE) 2697370

4:10 **Microseismic Without Dots – Probabilistic Interpretation and Integration of Microseismic Surveys:** U. Zimmer (Shell) 2668390

4:35 **The Plug Drum Effect, or Why Your Microseismic Events May Not be Where You Think They Are:** G. B. Bergery[1], Z. Zhang[2], J. Du[1], D. Diller[3], E. Shuck[3], B. Fish[3] (1. Total; 2. University of Berkeley; 3. Nanoseis) 2691531

5:00 **Recommendations From Error Analysis of Single Well Microseismic Data With Full-Wavefield Moment Tensor Inversion: A Case Study:** J. M. Lorenzo, T. L. Watkins, A. Dahi Taleghani (1. Louisiana State University) 2692030

BEG Bakken Special Session

Room 15

Co-Chairs: C. Cipolla and M. Kloska

See page 22 for session summary

1:45 **Introductory Remarks**

1:50 **Summary and Conclusions of Bakken and Three Forks Field Study:** J. R. Browning, S. Ikonnikova, F. Male, K. Smye (University of Texas) 2667925

2:15 **Geology and Petrophysics of the Bakken Unconventional Petroleum System:** S. Hamlin, K. Smye, R. Dommisse, R. Eastwood, C. R. Lemons, G. McDaid (University of Texas at Austin) 2670679

2:40 **Evaluating Hydrocarbon-in-Place and Recovery Factor in a Hybrid Petroleum System: Case of Bakken and Three Forks in North Dakota:** A. Gherabati, J. R. Browning, F. Male, K. Smye, S. Hamlin, M. Walsh, S. Ikonnikova, G. McDaid, C. R. Lemons (Bureau of Economic Geology) 2671498

3:05 **Refreshment Break**

3:45 **Well Economics and Production Outlook: Analysis of the Bakken Oil Play:** S. Ikonnikova, G. Gulen, J. R. Browning (University of Texas at Austin) 2671319

4:10 **Forecasting Production From Bakken and Three Forks Wells Using a Segregated Flow Model:** F. Male[1], A. Gherabati[1], M. Marder[2], J. R. Browning[1], S. Ikonnikova[1] (1. University of Texas; 2. University of Texas at Austin) 2666809

4:35 **Well Productivity Analysis of the Bakken Shale Play:** E. R. Vankov[1], S. Ikonnikova[2], G. Gulen[2], K. Medlock[1] (1. Rice University; 2. Bureau of Economic Geology) 2671321

5:00 **Bakken Production Outlook Sensitivity and Uncertainty Analysis:** S. Ikonnikova, G. Gulen*, J. R. Browning (The University of Texas at Austin) 2670156

Tuesday Technical Program

*Denotes presenter other than first author

Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I

Room 14

Co-Chairs: L. Hathon and L. Roe

1:45 **Introductory Remarks**

1:50 **Application of Integrated Core and 3-D Image Rock Physics to Characterize Niobrara Chalk Properties Including Relative Permeability With Bound Water Effect:** A. P. Byrnes[2], S. Zhang[1], L. Canter[2], M. Sonnenfeld[2] (1. DigiM Solution LLC; 2. Whiting Petroleum Corp.) 2670963

2:15 **Mechanical Index Testing of Unconventional Resource Core:** A. P. Rathbun, S. Carlson, R. T. Ewy (Chevron) 2697628

2:40 **Salt Precipitation in Ultra-Tight Hydrocarbon Reservoir Rocks: A Multi-Scale Experimental Study:** A. Alizadeh[1], M. Akbarabadi*[1], E. Barsotti[1], M. Piri[1], N. Fishman[2], N. Nagarajan[2] (1. University of Wyoming; 2. Hess Coproporation) 2688552

3:05 **Refreshment Break**

3:45 **3-D Imaging of the Distribution of Oil, Water and Gas From Plug to Micron Scales in Preserved Reservoir Shales:** A. Fogden, A. Arena, L. Salazar, E. Goergen (FEI) 2697705

4:10 **Determination of Local Diffusion Coefficients and Their Directional Anisotropy in Shale, and Relations to Local Mineralogy and Organic Matter Content, From Dynamic Micro-CT Imaging and Microscopy:** Y. Zhang[1], P. Mostaghimi[1], A. Fogdon[2], A. Arena[2], A. Sheppard[3], J. Middleton[3], R. T. Armstrong[1] (1. University of New South Wales; 2. FEI; 3. Australian National University) 2695407

4:35 **Characterizing Chemical Heterogeneity of Shale With Micro-FTIR Mapping:** Y. Chen[1], M. Mastalerz[2], C. Zou[1], S. Hu[1] (1. Research Institute of Petroleum Exploration & Development, PetroChina; 2. Indiana Geological Survey) 2693715

5:00 **Integration and Comparison of Multi-Scale Digital Rock Analysis With Bulk Rock Porosity and LECO TOC Within Multiple Appalachian Basin Formations:** J. Walls[1], G. Davalos[1], M. Weinreich[2] (1. Ingrain Inc; 2. Laurel Mountain Energy) 2697890

Tuesday Afternoon ePaper Presentations

Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I

Exhibition Station A

Co-Chairs: T. Croft and M. Saneifar

1:45 **Introductory Remarks**

1:50 **Alkenes Detection From Drill Bit Metamorphism and Real-Time Geochemical Elemental Analysis on Drill Cuttings Aids Drilling Optimization and Geo-Steering in Tight Unconventional Laterals:** E. Carcione, I. Easow, B. Chiniwala* (Geolog) 2697162

2:15 **Characterizing Connectivity of Multiscale Pore Structure in Unconventional Reservoirs by the Complex Network Theory:** B. Zhao[1], Y. Shang[1], L. Jin[2], Bao Jia*[3] (1. Institute of Geology and Geophysics; 2. Louisiana State University) 2665304

2:40 **Permeability Estimation of a Middle-East Tight Gas Sand With NMR Logs:** S. M. Althaus[1], J. Chen[1], A. Al-Shawaf[2], J. Zhang[1], M. Delshad[1], F. Almalki[1], Q. Sun[1] (1. Aramco Research Center – Houston; 2. Saudi Aramco) 2669857

3:05 **A Stochastic Permeability Model for Shale Formations Based on EDFM:** S. Xu, Q. Feng, S. Wang (China University of Petroleum) 2691224

3:30 **Applications of Nuclear Magnetic Resonance (NMR) Logs in Tight Gas Sandstone Reservoirs Pore Structure Evaluation:** H. Yu[1], Z. Wang[1], R. Rezaee[2], Y. Su[3], W. Tan[4], Y. Yuan[2], Y. Zhang[2], L. Xiao[5], X. Lu[1] (1. Northwest University, China; 2. Curtin University; 3. China University of Petroleum, Beijing; 4. Zhanjiang Branch, CNOOC; 5. China University of Geosciences 2663389

3:55 **Combining Petrophysical Properties and Ultrasonic Velocity for Improved Prediction of Tight Carbonate Reservoir:** A. Abdelkarim, O. Abdullatif (King Fahd University of Petroleum & Minerals) 2687468

Theme 10: Well Completion and Stimulation Case Histories II

Exhibition Station B

Co-Chairs: H. Sun and D. Zhou

1:45 **Introductory Remarks**

1:50 **Modeling Multi-Fractured Horizontal Well Completions – A Case For Planar Hydraulic Fractures:** R. Shelley, B. Davidson, K. Shah (StrataGen) 2670743

2:15 **3-D Reservoir Characterization and Integrated Completion Optimization for Understanding Horizontal Well Spacing and Frac Staging of the Niobrara Formation, DJ Basin:** M. Stephens, J. Tran, J. Wiener, M. Ramurthy, D. Kundert (Halliburton) 2668955

Tuesday Technical Program

*Denotes presenter other than first author

2:40 **Thermodynamic Behavior of Liquid-Supercritical CO_2 Fracturing in Shale:** X. Li[1], G. Li[2], W. Yu[3], H. Wang[2], K. Sepehrnoori[1], Z. Chen[1], H. Sun[1], S. Zhang[2] (1. The University of Texas at Austin; 2. China University of Petroleum, Beijing; 3. Texas A&M University) 2687198

3:05 **Monitoring Hydraulic Fracturing Fluid Movement Using Ground-Based Controlled-Source Electromagnetics (CSEM), With Applications to the Anadarko Basin and the Delaware Basin Northwest Shelf:** M. S. Hickey[1], S. Trevino[1], M. E. Everett[2] (1. Deep Imaging Technologies, Inc; 2. Texas A&M University) 2690022

3:30 **Can Moment Tensor Inversion Aid Engineering Decisions? A Delaware Basin Case Study:** M. Mack[1], S. M. Taylor[1], J. Rich[2], D. Kahn[2], J. King[1], B. Schaeffer[1], A. Reshetnikov[3], D. Langton[2], B. Elliott[2], A. Biholar[2] (1. Sigma Cubed Inc.; 2. Devon Energy; 3. Fracture Imaging LLC) 2693686

Theme 08: Reserves Estimation and Production Forecasting

Exhibition Station C

Co-Chairs: H. Kalaei and R. Walker

1:45 **Introductory Remarks**

1:50 **Problems With Application of Material Balance Time to Transient Flow Data in Diagnostic Plots:** H. S. Jha[1], W. Lee[2] (1. University of Houston; 2. Texas A&M University) 2697627

2:15 **Application of Statistical Methods to Predict Production From Liquid-Rich Shale Reservoirs:** P. Zhou, H. Sang, L. Jin, W. Lee (Texas A&M University, 3. University of Kansas) 2694668

2:40 **EUR Assessment of Unconventional Assets Using Machine Learning and Distributed Computing Techniques:** Z. Guo, C. Chen*, G. Gao, R. Cao, R. Li (Shell) 2659996

3:05 **Quantifying Organic Porosity and Predicting Estimated Ultimate Recovery (EUR) in the Eagle Ford Formation:** R. McLean[1], C. Miller[2], J. Walls[3], B. Guzman*[3] (1. Halcon Resources; 2. Juneau Exploration, L.P; 3. Ingrain) 2662352

3:30 **Generate Type Well Performance Curves by Combining Multi-Segment Decline Models and Calibrated Numerical Simulation Models for UR Wells in Permian Basin:** H. Xiong, H. Li (Texas Oil and Gas Institute) 2668394

3:55 **Quantification of Recovery Factors in Downspaced Shale Wells: Application of a Fully Coupled Geomechanical EOS Compositional Simulator:** S. Sinha, D. Devegowda*, B. Deka (University of Oklahoma) 2697500

4:20 **Section Development Optimization and Frac Hit Mitigation in the Wolfcamp Stacked Pay in the Midland Basin Through Data Monitoring and Integrated Modeling:** B. Liang, S. Khan, Y. Tang (Chevron) 2671336

4:45 **Delaware Basin: Seven Year Review of Activity and Performance:** K. M. Mire[1], J. Moomaw[2] (1. University of Louisiana; 2. Texas A&M University) 2697549

Wednesday Technical Program

*Denotes presenter other than first author

Topical Breakfasts

Type Well Construction: An Alternative Way of Estimating Reserves for Unconventional Reservoirs

Time: 7:00 a.m.–8:15 a.m.
Location: Room 19 AB
Fee: $35 per person

John Lee, Adams Professor in Petroleum Engineering, Texas A&M University

Typical Well Production Profiles or "Type Wells" (also known as "Type Curves") are commonly used in the industry to forecast production for undrilled wells or wells with limited production histories. These forecasts frequently provide the basis for economic evaluation of properties and are also used as the basis for the reserves operators disclose. We will review current practices in type well construction, many of which are erroneous (usually optimistic), and suggest practices leading to production profiles in which we can place more confidence.

Aramco Research in Support of Unconventionals

Time: 7:00 a.m.–8:15 a.m.
Location: Room 18 CD
Fee: $35 per person

Dan Georgi, Team Lead for Reservoir Technology, Houston Aramco Research Center

Unconventional Resources are seen as a key contributor to Saudi Arabia's domestic energy source for electricity generation and water desalination. The investment by Saudi Aramco in unconventional light hydrocarbon resources will reduce the Kingdom's reliance on liquid fuels and will provide petroleum feedstock for a growing petrochemical industry. Certainly, the unconventional work being done in the Kingdom is already benefiting from the experience gained by operators in North America; however, given the fact that there are many fewer well penetrations in Saudi Arabia than in North America, locating and optimizing production with the drill bit is not a viable option for development of unconventional source rock reservoirs. Considering these obstacles and considerable future opportunities, technology development and research support is being provided from both Saudi Aramco's domestic research organization and the Aramco Research Center in Houston. In Houston, a multi-disciplinary team consisting of reservoir engineers, geologists, geochemists, chemists and physicists are using a combination of high resolution imaging, NMR, vapor adsorption, geochemical analysis and core analysis to identify potential productive source rock reservoirs, quantify hydrocarbons in place, estimate flow rates using reservoir simulation, and predict EUR.

Panel Sessions

Shopping for New Ideas from Unconventional Sources

Time: 8:25 a.m.–10:10 a.m.
Location: Ballroom F
Fee: Included with registration
Moderator: Doug Valleau

Looking for new technology but traditional sources just don't inspire? How about looking in other industries outside of petroleum that have crossover potential? In this session, a panel of scientists from outside traditional petroleum will debate emerging technologies that may intrigue and inspire you. See page 32 for panel details.

- **Olga Koper**, Battelle
- **George Koperna**, Advanced Resource International
- **Anupam Singh**, SAEV
- **Yarom Polsky**, Oak Ridge National Lab
- **Leigh Cunningham**, Sandia National Lab
- **Interactive Panel Discussion**
- **Audience Q&A**

Unconventional Research and Education – The Future is Bright

Time: 10:45 a.m.–12:05 p.m.
Location: Ballroom F
Fee: Included with registration
Moderator: Doug Valleau

University enrollment in petroleum related sciences and investments in sponsored research nearly doubled between 2010 and 2014 in response to increasing oil price. The last two and a half year downturn in oil price resulted in operating companies and the service sector going into survival mode. This translated into pulling back funding for sponsored research and job prospects for graduates. Today oil and gas prices appear to be strengthening and confidence in the energy market is improving. In this session, the panel will explore the impact of these events on petroleum education and how Universities have sustained research programs and support for engineering and geoscience education. See page 32 for panel details.

- **Chris Clarkson**, University of Calgary
- **Mark Northam**, University of Wyoming
- **Ali Tura**, Colorado School of Mines
- **Panel Discussion**
- **Audience Q&A**

Midland Basin: From Characterization to Collaboration, A View From Pioneer Natural Resources

Time: 8:25 a.m.–12:50 p.m.
Location: Room 14
Fee: Included with registration
Moderators: Gervasio Barzola and Skip Rhodes

Discovering a resource potential of more than 75 billion barrels oil equivalent (BBOE) in the Spraberry/Wolfcamp shales has re-ignited industry activity in the Permian Basin. Production from the Midland Basin, located within the greater Permian Basin, has increased approximately 1 million barrels of oil equivalent per day (BOEPD) since 2009, and horizontal rigs now account for approximately 85 percent of all drilling rigs in the area. These findings make the Spraberry/Wolfcamp the largest U.S. oil field and one of the largest oil fields in the world.

Wednesday Technical Program

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Pioneer built its approximately 800,000-acre position in the Permian Basin's Spraberry oil field over decades through property acquisitions, mergers, and exploratory efforts. Pioneer continues to be the largest producer in the Spraberry/Wolfcamp with a resource potential of more than 10 BBOE and an inventory of more than 20,000 untapped horizontal drilling locations.

During 2017, Pioneer will operate 18 rigs in the Midland Basin and spend $2.4 billion. Total company production is predicted to grow 15-18 percent this year. In this session, members of Pioneer's Permian Asset Team will discuss their cross-disciplinary efforts to improve and to optimize Spraberry/Wolfcamp subsurface understanding and operational efficiency. See page 34 for panel details.

- **Permian Basin Wolfcamp Formation, Geologic Characterization, and Well Performance Drivers:** Donny Loughry*, Dan Lancaster*, Paul Clarke and Alex Torres
- **Field Development, Critical Data Acquisition, Integration, and Workflows:** Phil Lindner*, Kyle Scott*, Omkar Jaripatke, Hector Bello, and Weichun Chu
- **Refreshment Break**
- **Impact of Lateral Lengths on Well Performance:** Nimish Pandya*
- **Permian Operators Frac Schedule Exchange Consortia:** Brad Morrison*
- **Audience Q&A**

Theme 11: Panel: Artificial Lift and Production Management Strategies

Time: 1:45 p.m.–3:30 p.m.
Location: Ballroom G
Fee: Included with registration
Moderators: Shauna Noonan and Matt Honarpour

Shale plays in the Permian Basin lend themselves to a variety of development and production strategies. These choices depend on the quality of the reservoir, the goals of the operators and the existing market conditions. Many of these strategies revolve around the time to drawdown the well from initial reservoir pressure to a low flowing bottomhole pressure. Artificial lift selection, how it is operated and equipment reliability are all strongly influenced by this.

This session will feature three presenters offering three different perspectives on this topic. The session will conclude with a moderated panel that will engage the authors and audience in further discussion. See page 36 for panel details.

- **Determining the Optimal Artificial Lift Implementation Strategy in the Midland Basin:** Y. U. Pradhan, H. Xiong, T. Zhu, J. Forrest, A. Kianinejad, A. Cui, S. Gao
- **Efficient Stress Characterization for Real-Time Drawdown Management:** K. Wilson, R. R. Hanna Alla
- **The Evolution of Cost Effective Artificial Lift in Unconventional Wells (So Far):** T. Banken
- **Panel Discussion and Audience Q&A**

Wednesday Technical Program

*Denotes presenter other than first author

Special Session

ARMA: Simulations

Time: 1:45 p.m.–3:30 p.m.
Location: Room 14
Fee: Included with registration
Chair: John McLennan

ARMA is the American Rock Mechanics Association. Membership enfranchises all forms of surface and subsurface rock engineering – from tunneling to mine design to hydraulic fracturing to subsidence and compaction assessment. Membership is international. Participation in URTeC will be in two sessions. Six presentations will be provided by senior ARMA members. This second session includes overviews by three senior simulation specialists, who will highlight calculation methodologies but focus on applications for stimulation and production management.

The emphasis covers numerical techniques, effective use of subsurface information, and application to make decisions in the face of sparse data.
See page 36 for session details

- **Microseismic Monitoring:** Will Pettit, Itasca
- **Highlights from Hydraulic Fracturing Community, from Physics to Modeling:** Gang Han, Aramco Services Company
- **Geomechanical Reservoir Modeling:** Ahmad Ghassemi, University of Oklahoma

Wednesday Morning Oral Presentations

Theme 06: Production Performance

Ballroom E
Co-Chairs: D. Ilk, A. Shannon, and M. Sorrell

8:25 **Introductory Remarks**
8:30 **Source Rock Reservoir Characterization Using Geology, Geochemical and Drilling Data:** R. Shelley, A. Nejad, S. Sheludko (StrataGen) 2667653
8:55 **Impact of Re-Fracturing Techniques on Reserves: A Barnett Shale Example:** C. Williams, T. Stokes, J. Brady, P. Vajjha, R. Werline, K. Marsh, J. A. Daal (Devon) 2668825
9:20 **Characterization of Early-Time (Clean-Up) Performance for a Well With a Vertical Fracture Producing at Constant Pressure:** N. Wiewiorowski, A. Valdes-Peres, T. Blasingame (Texas A&M University) 2698457
9:45 **Determining Fracture Geometry in a Multifractured Horizontal Well Using DFIT Interpretation, Intrawell Fracture-to-Fracture Interference, and Production History Matching:** D. P. Craig (DFITpro/Reservoir Development) 2695331
10:10 **Refreshment Break**
10:50 **Reservoir and Completions Workflow Integration for Optimized Marcellus Field Development:** J. E. Chirinos, T. Budney (Repsol) 2668945
11:15 **Does Flowing Pressure Matter? A Statistical Study:** D. Lougheed[1], A. Chin[1], L. Mattar[1], D. Anderson[2] (1. IHS Markit (Fekete); 2. Anderson Thompson Reservoir Strategies) 2671558
11:40 **Double the Return With Only 21% More Investment – Long Lateral Wells in the Permian Asset:** H. Liu, R. Cao, A. Girardi, N. Chowdhury (Shell) 2697528

Panel: Shopping for New Ideas From Unconventional Sources

Ballroom F
Moderator: D. Valleau
See page 30 for panel summary

8:25 **Introductory Remarks**
8:30 **Olga Koper**, Battelle
8:40 **Anupam Singh**, Saudi Aramco Engineering Ventures
8:50 **George Koperna**, Advanced Resources International
9:00 **Yarom Polsky**, Oak Ridge National Lab
9:10 **Leigh Cunningham**, Sandia NL
9:20 **Moderated Discussion**
9:45 **Audience Q&A**

Panel: Unconventional Research and Education – The Future is Bright

Ballroom F
Moderator: D. Valleau
See page 30 for panel summary

10:45 **Introductory Remarks**
10:50 **Chris Clarkson**, University of Calgary
11:00 **Mark Northam**, University of Wyoming
11:10 **Ali Tura**, Colorado School of Mines
11:50 **Moderated Discussion**
Audience Q&A

Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II

Ballroom G
Co-Chairs: K. Jerath and J. Walls

8:25 **Introductory Remarks**
8:30 **Inter-Scaled Digital Core Analysis: From Core to Pore and Back:** C. Ly[1], J. S. Mintz[1], M. Andrew[2], S. Bhattiprolu[2] (1. CGG Services (U.S.) Inc.; 2. Carl Zeiss X-ray Microscopy) 2671200
8:55 **Investigating Microstructural Heterogeneity in Organic Shale via Large-Scale, High-Resolution SEM Imaging:** H. T. Tran, M. E. Curtis, J. Jernigen, C. H. Sondergeld, C. S. Rai (University of Oklahoma) 2647048
9:20 **Comparison of Micro- and Macro-Wettability Measurements for Unconventional Reservoirs: The Devil is in the Detail:** C. Clarkson[1], H. Deglint[1]*, C. DeBuhr[1], A. Ghanizadeh[1], J. Wood[2] (1. University of Calgary; 2. Encana) 2690338
9:45 **Evolution of Porosity and Pore Geometry With Increasing Thermal Maturation in the Potential Gas Shale of the Whitehill Formation (South Africa) by FE-SEM Image Analysis:** K. Chukwuma[1], A. Laurie[2], E. Bordy[1] (1. University of Cape Town; 2. Stellenbosch University) 2672855
10:10 **Refreshment Break**
10:50 **The Nature of Porosity in Organic-Rich Lower Bakken Member and Pronghorn Member, Bakken Formation, Williston Basin:** J. Xu, S. Sonnenberg (Colorado School of Mines) 2697215
11:15 **Multiscale Characterization of Spatial Heterogeneity of Petroleum Source Rocks via Near-Infrared Spectroscopy:** Y. Mehmani[1], A. K. Burnham[1], M. D. Vanden Berg[2], H. A. Tchelepi[1] (1. Stanford University; 2. Utah Geological Survey) 2690272
11:40 **Integration of MAPS and QEMSCAN Data for Justified Decision on Nano-Scale Pore-Space Characterization Sites, as a Part of Multiscale Digital Rock Modeling Workflow:** A. Kazak[1], S. Chugunov[1], V. Nachev[1], M. Spasennykh[1], A. Chashkov[2], E. Pichkur[3], M. Presniakov[3], A. Vasiliev[3] (1. Skolkovo Institute of Science and Technology; 2. NOVATEK; 3. National Research Center "Kurchatov Institute") 2697437

Wednesday Technical Program

*Denotes presenter other than first author

Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
Room 18 AB
Co-Chairs: V. Artus, H. Kalaei, and Y. Pradhan

8:25 **Introductory Remarks**

8:30 **Use of Drill Cuttings and Flowback Fluid Compositions to Constrain Connected Fracture Height Growth in Low-Permeability Reservoirs:** C. Clarkson, A. Ghaderi, M. Kanfar, S. Iwuoha (University of Calgary) 2691047

8:55 **Numerical Modeling of 1-D Anomalous Diffusion in Unconventional Wells Using a Non-Uniform Mesh:** R. Holy[1], E. Ozkan[2] (1. Schlumberger; 2. Colorado School of Mines) 2695593

9:20 **Stochastic-Based Coupling of Static and Dynamic Models: An Example From the Meremac Formation in the STACK Play:** M. Almasoodi, S. Esmaili, T. Ingle (Devon) 2689368

9:45 **Optimizing the Development of the Haynesville Shale — Lessons Learned from Well-to-Well Hydraulic Fracture Interference:** R. Esquivel[1], T. Blasingame[2] (1. BHP Billiton; 2. Texas A&M University) 2670079

10:10 **Refreshment Break**

10:50 **Systematic Visualization of Flow Interference Between Frac Clusters With Field Example From the Midland Basin (Wolfcamp Formation, Spraberry Trend Field): Implications for Hydraulic Fracture Design:** R. Weijermars, A. van Harmelen, L. Zuo, I. Alves Nascentes (Texas A&M University) 2670073

11:15 **Pressure and Rate Transient Analysis in Fracture Networks in Tight Reservoirs Using Characteristic Flow Volume:** J. A. Acuna (Chevron) 2667753

11:40 **Rapid Compositional Simulation and History Matching of Shale Oil Reservoirs Using the Fast Marching Method:** A. Datta-Gupta[1], A. Lino[1], A. Vyas[1], J. Huang[1], Y. Fujita[2], N. Bansal[3] (1. Texas A&M University; 2. JX Nippon Oil and Exploration Corporation; 3. Anadarko Petroleum Corporation) 2693139

Operators' Forum – Case Studies in Unconventional Reservoir Development V
Room 17 AB
Co-Chairs: R. Fulks and B. Poe

8:25 **Introductory Remarks**

8:30 **Continental Production Allocation and Analysis Through Big Data:** B. T. Rollins, A. Broussard, B. Cummins, A. Smiley, N. Dobbs, T. Eason (Devon) 2678296

9:20 **Understanding the Mechanism of Fracture Hits on Midland Basin Tight-Oil Production:** H. Sun*, D. Zhou*, A. Chawathe, B. Liang (Chevron) 2662893

10:10 **Refreshment Break**

10:50 **Performance Based Reservoir Characterization in a Tight Gas Reservoir System – Case Study From Lajas and Punta Rosada Formations in the Neuquén Basin, Argentina:** L. Lamberghini*[2], D. Parra[2], C. Espina*[2], E. Alonso[2], F. Sorenson[2], L. E. Viglione[1], D. Ilk*[1] (1. DeGolyer and MacNaughton; 2. Pan American Energy) 2697509

Wednesday Technical Program

*Denotes presenter other than first author

Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
Room 16 AB
Co-Chairs: G. Han and M. Mack

8:25 **Introductory Remarks**
8:30 **Using Fracture Stress Shadows to Drive Stage Spacing:** J. P. McKenna, M. Blaz, M. Grealy, O. J. Teran (Microseismic) 2670043
8:55 **Utilizing A Viscoplastic Stress Relaxation Model to Study Vertical Hydraulic Fracture Propagation in Permian Basin:** S. Xu, F. Rassouli, M. Zoback (Stanford University) 2669793
9:20 **Geomechanical Modeling of Time-Dependent Strain in the Bakken and Implications of Stress Shadow Interactions Between Hydraulic Fractures:** N. A. Peterson[1], M. Mehle[1], Y. Aimene[2] (1. Packers Plus Energy Services; 2. FracGeo LLC) 2688755
9:45 **Lithology-Controlled Stress Variations: A Case Study of the Woodford Shale, Oklahoma:** X. Ma, M. Zoback (Stanford University) 2689088
10:10 **Refreshment Break**
10:50 **An Experimental Method to Study the Impact of Fracturing Fluids on Fracture Conductivity in Heterogeneous Shales:** W. Wu, R. Russell, M. Sharma (The University of Texas at Austin) 2669936
11:15 **Geomechanical Investigation of Microseismic Mechanisms Associated With Slip on Bed Parallel Fractures:** S. Maxwell[1], R. Hull[2], P. Leonard[2] (1. IMaGE; 2. Pioneer Natural Resources) 2688667
11:40 **Integrating Microseismic and Geomechanics to Interpret Hydraulic Fracture Growth:** J. Roberts, J. Rich, D. Kahn* (Devon Energy) 2697445

Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
Room 15
Co-Chairs: M. Laughland and M. Rahman

8:25 **Introductory Remarks**
8:30 **Application of Organic Geochemistry on Assessment of Fluid Behavior and Oil Migration Within the Woodford Shale in the Anadarko Basin:** M. W. Rahman, D. Veach, R. Jayakumar, S. Esmaili (Devon) 2688342
8:55 **Thermal Maturity Differences in Oils Produced From Lower Permian Wolfcamp A, B, & C Laterals, Midland Basin:** J. Zumberge[1], J. Reed[2] (1. GeoMark Research; 2. Reed Geochemical Consulting) 2694313
9:20 **Applying HC Fingerprinting Technology to Determine the Amount of Oil Produced from Hydraulically-Fractured Wolfcamp Reservoirs Using Petroleum Samples Extracted From Conventional Core Plugs:** A. S. Kornacki[1], J. T. Westrich[1], C. Gong[2], L. Rodriguez[2], J. S. Etienne[2] (1. Weatherford Laboratories Inc.; 2. Apache Corporation) 2670968
9:45 **Determining Quantity and Quality of Retained Oil in Mature Marly Chalk and Marlstone of the Cretaceous Niobrara Formation by Low-Temperature Hydrous Pyrolysis:** M. D. Lewan[1], M. Sonnenfeld[2] (1. U.S. Geological Survey (Emeritus); 2. Whiting Petroleum Corporation) 2670700
10:10 **Refreshment Break**
10:50 **Time Lapse Geochemistry Application in Unconventional Reservoir Development:** G. Michael, F. Liu*, D. Brown, K. Johansen, J. Allwardt (ConocoPhillips) 2670186
11:15 **Optimizing Field Development Strategy Using Time-Lapse Geochemistry in Eagle Ford:** J. Jweda, G. Michael, O. A. Jokanola, H. J. Robert, V. A. Parisi (ConocoPhillips) 2671245
11:40 **Oil-Generation Kinetics for Oil-Prone Bakken Shales and Its Implication:** H. Jin[1], M. D. Lewan[2], S. Sonnenberg[1] (1. Colorado School of Mines; 2. United States Geological Survey) 2671492

Midland Basin: From Characterization to Collaboration, A View From Pioneer Natural Resources
Room 14
Co-Chairs: G. Barzola and S. Rhodes

8:25 **Introductory Remarks**
8:30 **Permian Basin Wolfcamp Formation, Geologic Characterization, and Well Performance Drivers:** D. Loughry, D. Lancaster, P. Clarke, A. Torres (Pioneer Natural Resources) 2718489
9:20 **Field Development, Critical Data Acquisition, Integration, and Workflows:** P. Lindner, K. Scott*, O. Jaripatke, H. Bello, W. Chu (Pioneer Natural Resources) 2718490
10:10 **Refreshment Break**
10:50 **Impact of Lateral Lengths on Well Performance:** N. Pandya (Pioneer Natural Resources) 2718493
11:15 **Permian Operators Frac Schedule Exchange Consortia:** B. Morrison (Pioneer Natural Resources) 2718495
11:40 **Q&A**

Wednesday Morning ePaper Presentations

Theme 07: Stakeholder Management and Social Performance II
Exhibition Station A
Chair: D. Riestenberg

9:25 **Introductory Remarks**
9:30 **Effective Utilization of Field Water Resources and Optimization of Water Cycle in Reservoir Operations and Petroleum Production by Proper Characterization and Processing:** F. Civan (University of Oklahoma) 2666379
9:55 **USGS Assessment of Water and Proppant Requirements and Water Production Associated With Undiscovered Petroleum in the Bakken and Three Forks Formations:** S. S. Haines, B. Varela, S. Hawkins, N. Gianoutsos, J. Thamke, M. Tennyson (United States Geological Survey) 2693359

Theme 01: Petrophysical and Geological Characterization of Unconventional Plays II
Exhibition Station B
Co-Chairs: A. McMullen and A. Reynolds

9:25 **Introductory Remarks**
9:30 **Horizontal Cased Hole Evaluation Using a New Pulsed Neutron Spectroscopy Tool and Dipole Sonic:** R. Reischman, E. Velez, A. Green (Schlumberger) 2689778
9:55 **Microstructures and Geochemical Characteristics of Bakken Shale Formations:** K. Liu, M. Ostadhassan (University of North Dakota) 2666834
10:20 **Effects of Cyclic Fracturing on Acoustic Events and Breakdown Pressure:** A. Agrawal, A. Sakhaee-Pour, C. H. Sondergeld, A. Damani (University of Oklahoma) 2669677
10:45 **Risks of Microseismic Fracture Mapping Mis-Interpretation: Source-Dependent Sensitivity Induced by Surface Arrays Observational Bias:** P. Roux, D. Katz* (Baker Hughes) 2670397
11:10 **Characterizing and Modeling Multi-Scale Natural Fractures in the Silurian Longmaxi Shale Formation in South Sichuan Basin:** C. Xian[1], J. Zhang[2], C. Zhao[1], G. Wang[2], L. Wang[1], X. Liang[2] (1. Schlumberger; 2. PetroChina) 2691208

Wednesday Technical Program

*Denotes presenter other than first author

Theme 10: Well Completion Integration, Optimization, and Refracturing III
Exhibition Station C
Chair: B. Liang

9:25 **Introductory Remarks**
9:30 **Combining Statistical Analysis With Simulation to Optimize Unconventional Completions – Upper and Lower Montney Formations, Canada:** O. Q. Mohammed[1], L. K. Britt[2], S. Dunn-Norman[3], R. Kassim[3] (1. North Oil Company; 2. NSI Fracturing LLC; 3. Missouri University of Science & Technology) 2669537
9:55 **An Experimental Method to Study the Impact of Fracturing Fluids on Fracture Conductivity in Heterogeneous Shales:** W. Wu, R. Russell, M. Sharma (The University of Texas at Austin) 2669936
10:20 **The Effect of Connectivity of Secondary Fractures on Proppant Placement:** S. Tong, K. Mohanty (The University of Texas at Austin) 2671549
10:45 **Unique Multidisciplinary Approach to Model and Optimize Pad Refracturing in the Haynesville Shale:** T. Xu, G. Lindsay (Schlumberger) 2697463

Topical Luncheons

Holistic Approach for Unconventionals Improves Project Economics

Time: 12:05 p.m.–1:15 p.m.
Location: Room 18 CD
Fee: $55 per person

Mo Cordes, President of Unconventional Resources, Schlumberger

Shale reservoirs can be complex and present a wide variety of challenges. Often an individual analytical approach to the different phases of a well can yield into undesired economic performance. Rather, a holistic approach must be taken towards unconventional completions, understanding how drilling impacts completions and how completions impact production. Identifying whether a given play has good reservoir quality and where the likely sweet spots are located requires a detailed understanding and interpretation of available geological, geophysical, geochemical, and engineering data, from core to seismic. It is through this better reservoir knowledge and increasingly sophisticated technologies that we make the production of unconventional resources economically viable and more efficient.

Two-Phase Fluid Flow in Source Rocks: Insights Gained From Nanofluidics

Time: 12:05 p.m.–1:15 p.m.
Location: Room 19 AB
Fee: $55 per person

Carlos Torres-Verdin, Professor, Department of Petroleum and Geosystems Engineering, The University of Texas at Austin

Co-Authors: Shaina Kelly, Matthew Balhoff, and Ayaz Mehmani

Source rocks exhibit two-phase fluid storage and flow behavior that significantly departs from that of conventional reservoirs because of nanometer-size throat confinements. It is important to quantify two-phase flow in source rocks because of its implications on drainage volume and recovery factors via primary or secondary means. The nanometer range of throat sizes present in source rocks causes two-phase flow to be dominated by throat-wall effects which include electrochemical forces and fluid polarity. This presentation describes how nanofluidics experiments have been used to gain quantitative insight to dominant two-phase flow mechanisms taking place in nano confinements.

Wednesday Afternoon Oral Presentations

Theme 12: Emerging Unconventional Plays II
Ballroom E
Co-Chairs: P. Fanailoo and D. Hume

1:45 **Introductory Remarks**
1:50 **Evaluating the Shublik Formation as an Unconventional Resource Play on the Alaska North Slope:** A. Hosford Scheirer[1], L. B. Magoon[1], K. J. Bird[2] (1. Stanford University; 2. United States Geological Survey, retired) 2697424
2:15 **The Montney Turbidite Complex of Northwest Alberta and Northeast British Columbia: Evolution of an Oil and Gas Play From Conventional to Unconventional:** R. Sereda (Leucrotta Exploration Inc) 2674327
2:40 **Unconventional Reservoir Potential From Trapped Fluid Analysis Onshore Canning Basin, Australia:** S. Feiner, R. Lishansky, W. Phiukhao, J. Chao, R. Moore, D. Hall (Schlumberger) 2670926
3:05 **Lessons Learned From the Vaca Muerta: An Exploration Model to Aid Sweet-Spot Prediction in the Frontier Hanifa Unconventional Resource Play in the Middle East:** A. D. Bromhead[1], K. Evans*[2] (1. Halliburton; 2. Landmark) 2670610

Wednesday Technical Program

*Denotes presenter other than first author

Theme 01: Petrophysics and Formation Evaluation of Mudstones IV

Ballroom F

Co-Chairs: A. McMullen and S. Perry

1:45 **Introductory Remarks**

1:50 **Pore-Scale Evaluation of Nuclear Magnetic Resonance Measurements in Organic-Rich Mudrocks Using Numerical Modeling:** S. Tandon, Z. Heidari (The University of Texas at Austin) 2674057

2:15 **Slim, High Resolution Laterolog Array Tool: First Field Experiences:** M. Luling, I. Ilyin, J. Donadille, R. Reischman*, T. Meszaros (Schlumberger) 2671192

2:40 **Different Flow Behaviors of Low-Pressure and High-Pressure CO_2 in Shales:** B. Jia, J. Tsau, R. Barati (The University of Kansas) 2690239

3:05 **Tackling the Challenges of Acquiring Good Core Data From Tight Oil Reservoirs – An Example From the Bakken/Three Forks in North Dakota:** N. Fishman, G. Simpson, S. Hari-Roy (Hess Corporation) 2694508

Theme 11: Panel: Artificial Lift and Production Management Strategies

Ballroom G

Chair: S. Noonan

See page 30 for panel details

1:45 **Introductory Remarks**

1:50 **Determining the Optimal Artificial Lift Implementation Strategy in the Midland Basin:** Y. U. Pradhan, H. Xiong, T. Zhu, J. Forrest, A. Kianinejad, A. Cui, S. Gao (Texas Oil and Gas Institute) 2668625

2:15 **Efficient Stress Characterization for Real-Time Drawdown Management:** K. Wilson, R. R. Hanna Alla (Chevron) 2721192

2:40 **The Evolution of Cost Effective Artificial Lift in Unconventional Wells (So Far):** T. Banken (Occidental Petroleum Corporation) 2754490

3:05 **Panel Discussion**

Theme 10: Well Completion Integration, Optimization, and Refracturing II

Room 18 AB

Co-Chairs: B. Elliott and R. Fulks

1:45 **Introductory Remarks**

1:50 **The Use of Pump-Down Pressure Responses to Diagnose Hydraulic Fracture Characteristics:** A. Roark[1], G. Waters[1], N. Ashley[2] (1. Schlumberger; 2. Devon) 2669994

2:15 **Expandable Diverting Agents to Improve Efficiency of Refracturing Treatments:** A. Dahi Taleghani, L. Santos (Louisiana State University) 2697493

2:40 **Refracturing in the Eagle Ford Shale: One Operator's Quest to Identify and Rank Candidates, Minimize Well Interference, and Understand Variability of Results:** K. Mullen[1], R. McFall[2], J. Baihly[1], G. Lindsay[1], J. Shin[1] (1. Schlumberger; 2. Sundance Energy) 2691375

3:05 **Introduction to Poroelastic Response Analysis – Quantifying Hydraulic Fracture Geometry and SRV Permeability from Offset-Well Pressure Data:** N. P. Roussel, S. Agrawal (ConocoPhillips) 2645414

Operators' Forum – Case Studies in Unconventional Reservoir Development VI

Room 17 AB

Co-Chairs: L. Baez and R. Roadifer

1:45 **Introductory Remarks**

1:50 **Using Seismic Inversion to Predict Geomechanical Well Behavior: A Case Study From the Permian Basin:** S. S. Payne*, J. Meyer* (Ikon Science) 2665754

2:40 **Petroleum Geochemistry and Mudstone Diagenesis of the Woodford Shale, Anadarko Basin, USA – An Integrated Approach:** C. D. Laughrey*, P. Purrazzella, K. Hooghan* (Weatherford Laboratories) 2691776

Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks II

Room 16 AB

Co-Chairs: C. Cipolla and R. Pharis

1:45 **Introductory Remarks**

1:50 **Characterizing Reservoir Behaviour With Cluster-Based Microseismic Analysis:** K. Bosman, T. Urbancic, A. M. Baig* (ESG Solutions) 2697672

2:15 **Mapping Unconventional Reservoir Stress Conditions: An Integrated Workflow Using Geological, Stimulation and Microseismic Data:** O. J. Teran (MicroSeismic Inc) 2671301

2:40 **Determining Bedding Slip Planes With Microseismic Processing:** N. Verkhovtseva (Halliburton) 2668912

3:05 **The Value of Microseismic Monitoring and Interpretation of Microseismic Event Hypocenters – Myths, Misconceptions, Realities, and Opportunities:** E. Ay[1], N. Payne[1], J. Le Calvez[2], H. Denaclara[2] (1. Shell Oil Company; 2. Schlumberger) 2671285

Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II

Room 15

Co-Chairs: T. Bryndzia and G. Michael

1:45 **Introductory Remarks**

1:50 **Applications and Limitations of Inorganic Geochemistry/ Chemostratigraphy Records From the Devonian Three Forks Formation and Associated Units, North Dakota, USA:** H. Rowe[1], E. Sivil[2], A. Morrell[1], A. Musgrove[1], J. Garza[1] (1. Premier Oilfield Laboratories; 2. University of Texas at Austin) 2689130

2:15 **Mineralogical and Porosity Alteration Following Fracture Fluid-Shale Reaction:** A. D. Jew[1], A. L. Harrison[1], M. K. Dustin[1], C. Joe-Wong[1], D. L. Thomas[1], K. Maher[1], G. E. Brown[1], D. Cercone[2], J. Bargar[3] (1. Stanford University; 2. National Energy Technology Laboratory; 3. SLAC National Acceleratory Laboratory) 2708858

2:40 **Re-Os Geochronology and Geochemistry of the Permian Brushy Canyon Formation: Investigating the Controls of Re and Os Abundances in Organic-Rich Shales and the Evolution of Permian Seawater:** S. Wright (Hess Corporation) 2670540

3:05 **Analysis of Artificially Matured Shales With Confocal Laser Scanning Raman Microscopy: Applications to Organic Matter Characterization:** G. A. Myers[1], K. Kehoe[1], P. Hackley[2] (1. WellDog Gas Sensing Technology Corp; 2. U.S. Geological Survey) 2671253

ARMA: Simulations

Room 14

Chair: J. McLennan

See page 32 for session details

1:45 **Introductory Remarks**

1:50 **Microseismic Monitoring:** W. Pettit (Itasca Consulting Company) 2768681

2:15 **Highlights From Hydraulic Fracturing Community: From Physics to Modeling:** G. Han (Aramco Services) 2768686

2:40 **Geomechanical Reservoir Modeling:** A. Ghassemi (University of Oklahoma) 2768690

Presenter Cross Reference

Name	Day	Time	a.m./p.m.	Type	Location	Session Title
A						
Abdelkarim, Abdallah	Tue	3:55	p.m.	ePaper	Exhibition Station A	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I
Acuna, Jorge	Wed	11:15	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
Adams, David	Mon	10:50	a.m.	Panel	Ballroom F	Executive Session – A View From the Top: Opportunities and Challenges in Unconventionals
Agrawal, Abhishek	Wed	10:20	a.m.	ePaper	Exhibition Station B	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays II
Ajisafe, Foluke	Mon	4:10	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
Akbarabadi, Morteza	Tue	2:40	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
Akkutlu, I. Yucel	Tue	9:20	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
Algarhy, Ahmed	Mon	2:15	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
Alharthy, Najeeb	Tue	2:40	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
Almasoodi, Mouin	Wed	9:20	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
Althaus, Stacey	Tue	2:40	p.m.	ePaper	Exhibition Station A	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I
Altowairqi, Yazeed	Mon	11:35	a.m.	ePaper	Exhibition Station C	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II
Amalokwu, Kelvin	Mon	11:40	a.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones I
Amini, Shohreh	Mon	4:10	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
Aniemena, Chigozie	Wed	9:55	a.m.	ePaper	Exhibition Station C	Theme 10: Well Completion Integration, Optimization, and Refracturing III
Applegate, James	Mon	10:20	a.m.	ePaper	Exhibition Station C	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II
Archila, Alex	Mon	8:50	a.m.	Opening Plenary	Ballroom D	Opening Plenary Session: Defying World Expectation by Doing More With Less
Asquith, George	Mon	4:10	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
Ay, Erkan	Wed	3:05	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks II
B						
Baig, Adam	Wed	1:50	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks II
Ball, Kathryn	Mon	5:00	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock
Banken, Terry	Wed	2:40	p.m.	Panel	Ballroom G	Theme 11: Panel: Artificial Lift and Production Management Strategies
Beck, Courtney	Mon	12:00	p.m.	ePaper	Exhibition Station C	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II
Beck, Gene	Mon	8:40	a.m.	Opening Plenary	Ballroom D	Opening Plenary Session: Defying World Expectation by Doing More With Less
Belgaroui, Jed	Tue	4:35	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
Bergery, Guillaume	Tue	4:35	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
Blount, Aidan	Mon	2:40	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
Boak, Jeremy	Tue	8:45	a.m.	Panel	Ballroom E	Panel Session – Injection Induced Seismicity: Operational Implications of Evolving Regulations
Browning, John	Tue	1:50	p.m.	Oral	Room 15	BEG Bakken Special Session
Busetti, Seth	Mon	4:20	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
Byrnes, Alan	Tue	1:50	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
C						
Cao, Richard	Mon	1:50	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
Carey, James	Tue	10:50	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
Carr, Timothy	Mon	1:50	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
Chai, Zhi	Tue	11:40	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
Chambers, Kit	Tue	11:40	a.m.	Oral	Ballroom E	Induced Seismicity Special Session
Charsky, Alyssa	Tue	8:30	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
Chaudhary, Nitinkumar	Tue	2:15	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
Chen, Chaohui	Tue	2:40	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
Chen, Jiefu	Mon	2:40	p.m.	Oral	Ballroom F	Theme 09: Well Construction Practices I
Chen, Yanyan	Tue	4:35	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
Chen, Zhiming	Mon	11:40	a.m.	Oral	Room 16 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing I
Chiniwala, Barzin	Tue	1:50	p.m.	ePaper	Exhibition Station A	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I
Chirinos, Jose	Wed	10:50	a.m.	Oral	Ballroom E	Theme 06: Production Performance
Chukwuma, Kenneth	Wed	9:45	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
Ciezobka, Jordan	Mon	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II
Cisternas, Pablo	Tue	11:15	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
Civan, Faruk	Mon	3:45	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
Civan, Faruk	Tue	3:45	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
Civan, Faruk	Wed	9:55	a.m.	ePaper	Exhibition Station A	Theme 07: Stakeholder Management and Social Performance II
Clarkson, Chris	Wed	10:50	a.m.	Panel	Ballroom F	Panel: Unconventional Research and Education – The Future is Bright
Clarkson, Christopher	Wed	8:30	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
Clennell, Michael	Mon	3:05	p.m.	ePaper	Exhibition Station C	Theme 03: Geochemistry of Unconventional Resource Plays
Clennell, Michael	Tue	11:15	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
Clifford, Sean	Tue	8:30	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
Courtier, James	Mon	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II

Presenter Cross Reference

	Craig, David	Wed	9:45	a.m.	Oral	Ballroom E	Theme 06: Production Performance
	Crespo, Pablo	Tue	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Cuervo, Sergio	Tue	3:45	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
	Cugnart, Romain	Tue	11:10	a.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering IV
	Cunningham, Leigh	Wed	9:10	a.m.	Panel	Ballroom F	Panel: Shopping for New Ideas From Unconventional Sources
	Curtis, John	Mon	3:45	p.m.	ePaper	Exhibition Station C	Theme 03: Geochemistry of Unconventional Resource Plays
D	Dahi Taleghani, Arash	Tue	2:15	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
	Dahi Taleghani, Arash	Wed	2:15	p.m.	Oral	Room 18 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing II
	Datta-Gupta, Akhil	Mon	2:15	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
	Datta-Gupta, Akhil	Wed	11:40	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
	Davudov, Davud	Tue	4:10	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
	Deglint, Hanford	Wed	9:20	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
	Dershowitz, Bill	Mon	11:40	a.m.	Oral	Room 14	ARMA: Theory and Practice
	Devegowda, Deepak	Tue	1:50	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
	Devegowda, Deepak	Tue	3:55	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
	Donovan, Art	Tue	8:55	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
	Downey, Robert	Mon	11:15	a.m.	Oral	Room 18 AB	Theme 12: Emerging Unconventional Plays I
	Du, Meilin	Mon	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development I
E	Easow, Isaac	Tue	4:35	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) II
	Eberli, Gregor	Mon	4:35	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II
	Elias, Rouven	Tue	1:50	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
	Esmaili, Soodabeh	Mon	1:50	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock
	Espina, Cristian	Wed	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development V
	Esquivel, Raul	Wed	9:45	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
	Ettehadtavakkol, Amin	Mon	4:35	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock
	Evans, Kate	Wed	3:05	p.m.	Oral	Ballroom E	Theme 12: Emerging Unconventional Plays II
F	Farrell, Helen	Mon	3:45	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II
	Farrell, Jesse	Mon	2:30	p.m.	ePaper	Exhibition Station C	Theme 03: Geochemistry of Unconventional Resource Plays
	Feiner, Sarah	Wed	2:40	p.m.	Oral	Ballroom E	Theme 12: Emerging Unconventional Plays II
	Fishman, Neil	Wed	3:05	p.m.	Oral	Ballroom F	Theme 01: Petrophysics and Formation Evaluation of Mudstones IV
	Fogden, Andrew	Tue	3:45	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
	Folio, Erica	Tue	8:30	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
	Forand, David	Mon	11:40	a.m.	Oral	Ballroom E	Delaware Basin Special Session I
	Fu, Yingkun	Mon	2:40	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
	Fulford, David	Tue	2:40	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
G	Ghanizadeh, Amin	Tue	8:55	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
	Ghassemi, Ahmad	Wed	2:40	p.m.	Oral	Room 14	ARMA: Simulations
	Gherabati, Amin	Tue	2:40	p.m.	Oral	Room 15	BEG Bakken Special Session
	Gibson, Richard	Tue	11:15	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
	Gladczenko, Tad	Mon	1:50	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
	Gonzalez, Richard	Mon	3:50	p.m.	Panel	Ballroom F	Panel Session – Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have."
	Gorynski, Kyle	Mon	10:50	a.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones I
	Green, Sid	Mon	10:50	a.m.	Oral	Room 14	ARMA: Theory and Practice
	Grover, Tarun	Tue	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Gu, Ming	Tue	9:45	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
	Guidry, Greg	Mon	9:00	a.m.	Opening Plenary	Ballroom D	Opening Plenary Session: Defying World Expectation by Doing More With Less
	Gulen, Gurcan	Tue	5:00	p.m.	Oral	Room 15	BEG Bakken Special Session
	Guo, Xuyang	Mon	11:10	a.m.	ePaper	Exhibition Station B	Theme 05: Reservoir Engineering V
	Gupta, Ishank	Mon	3:55	p.m.	ePaper	Exhibition Station B	Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
	Gupta, Ishank	Tue	9:20	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
	Guzman, Bryan	Tue	3:05	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
H	Haddad, Mahdi	Mon	11:35	a.m.	ePaper	Exhibition Station B	Theme 05: Reservoir Engineering V
	Haines, Seth	Wed	10:20	a.m.	ePaper	Exhibition Station A	Theme 07: Stakeholder Management and Social Performance II
	Hakala, Alexandra	Mon	5:00	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
	Hakala, Alexandra	Mon	1:50	p.m.	ePaper	Exhibition Station C	Theme 03: Geochemistry of Unconventional Resource Plays
	Hamlin, Scott	Tue	2:15	p.m.	Oral	Room 15	BEG Bakken Special Session
	Han, Gang	Wed	2:15	p.m.	Oral	Room 14	ARMA: Simulations
	Han, Yanhui	Mon	4:45	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III

Presenter Cross Reference

	Hannon, Michael	Tue	11:40	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
	Haustveit, Kyle	Tue	8:30	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Henao, Tito	Tue	11:15	a.m.	Oral	Ballroom E	Induced Seismicity Special Session
	Hickey, Mark	Tue	3:05	p.m.	ePaper	Exhibition Station B	Theme 10: Well Completion and Stimulation Case Histories II
	Higgins, Marian	Tue	9:20	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
	Holcomb, Mike	Mon	4:35	p.m.	Panel	Ballroom F	Panel Session – Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have."
	Holditch, Stephen	Tue	8:30	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
	Holmes, Michael	Mon	4:35	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
	Holy, Ralf	Wed	8:55	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
	Hooghan, Kultaransingh	Wed	2:40	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development VI
	Hosford Scheirer, Allegra	Wed	1:50	p.m.	Oral	Ballroom E	Theme 12: Emerging Unconventional Plays II
	Hull, Robert	Tue	9:20	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Hussey, Tyler	Tue	9:45	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
	Hwang, Jongsoo	Tue	10:20	a.m.	ePaper	Exhibition Station B	Theme 10: Well Completion Diagnostics and Optimization Technologies
I	Ikonnikova, Svetlana	Tue	3:45	p.m.	Oral	Room 15	BEG Bakken Special Session
	Ilk, Dilhan	Wed	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development V
J	Jahan, Ismot	Tue	9:20	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
	Jang, Wonjae	Mon	5:00	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
	Jew, Adam	Wed	2:15	p.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II
	Jha, Himanshu	Tue	3:45	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
	Jha, Himanshu	Tue	1:50	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
	Jia, Bao	Mon	2:15	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
	Jia, Bao	Wed	2:40	p.m.	Oral	Ballroom F	Theme 01: Petrophysics and Formation Evaluation of Mudstones IV
	Jia, Pin	Mon	3:05	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
	Jin, Hui	Wed	11:40	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
	Jin, Lu	Tue	1:50	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
	Jordan, Patrick	Tue	3:45	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) II
	Jweda, Jason	Wed	11:15	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
K	Kadhim, Dhurgham	Tue	9:30	a.m.	ePaper	Exhibition Station B	Theme 10: Well Completion Diagnostics and Optimization Technologies
	Kahn, Dan	Wed	11:40	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
	Karrenbach, Martin	Tue	2:40	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
	Katsuki, Daisuke	Tue	9:20	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
	Katz, David	Wed	10:45	a.m.	ePaper	Exhibition Station B	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays II
	Kazak, Andrey	Wed	11:40	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
	Kelly, Evan	Mon	5:00	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
	Kent, Alana	Tue	3:45	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
	Khoshghadam, Mohammad	Tue	4:10	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
	Klokov, Alexander	Tue	8:55	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
	Koper, Olga	Wed	8:30	a.m.	Panel	Ballroom F	Panel: Shopping for New Ideas From Unconventional Sources
	Koperna, George	Wed	8:50	a.m.	Panel	Ballroom F	Panel: Shopping for New Ideas From Unconventional Sources
	Kornacki, Alan	Wed	9:20	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
	Kosanke, Tobi	Mon	2:40	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
	Kowalchuk, Peter	Mon	1:50	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
	Kumar, Abhash	Mon	2:40	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
	Kumar, Dharmendra	Mon	3:55	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
	Kuuskraa, Vello	Mon	10:50	a.m.	Oral	Room 18 AB	Theme 12: Emerging Unconventional Plays I
	Kwan, Morgan	Mon	5:00	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
L	Lamb, Alex	Tue	8:30	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Landry, Christopher	Tue	5:00	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
	Lanusse, Ivan	Tue	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Laughrey, Christopher	Wed	2:40	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development VI
	Lejay, Alain	Tue	2:15	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
	Lemons, Casee	Tue	10:50	a.m.	Oral	Ballroom E	Induced Seismicity Special Session
	Lewan, Michael	Wed	9:45	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I

Presenter Cross Reference

	Lamberghini, Lucia	Wed	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development V
	Li, Jing	Tue	9:55	a.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering IV
	Li, Xiaojiang	Mon	11:10	a.m.	ePaper	Exhibition Station A	Production Performance and Artificial Lift Optimization
	Li, Xiaojiang	Tue	2:40	p.m.	ePaper	Exhibition Station B	Theme 10: Well Completion and Stimulation Case Histories II
	Liang, Baosheng	Tue	4:20	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
	Liang, Baosheng	Mon	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development I
	Liem, Sarah	Tue	4:35	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Lindsey, Alan	Mon	4:10	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock
	Liu, Faye	Wed	10:50	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
	Liu, Hope	Wed	11:40	a.m.	Oral	Ballroom E	Theme 06: Production Performance
	Liu, Kouqi	Mon	3:30	p.m.	ePaper	Exhibition Station B	Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
	Liu, Kouqi	Wed	9:55	a.m.	ePaper	Exhibition Station B	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays II
	Loan, MaryEllen	Tue	9:20	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
	Lorenzo, Juan	Tue	5:00	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
	Lotfollahi, Mohammad	Mon	10:20	a.m.	ePaper	Exhibition Station B	Theme 05: Reservoir Engineering V
	Lougheed, Dylan	Wed	11:15	a.m.	Oral	Ballroom E	Theme 06: Production Performance
	Loughry, Donny	Wed	8:30	a.m.	Panel	Room 14	Panel: Midland Basin: From Characterization to Collaboration, a View From Pioneer Natural Resources
	Luk, Hannah	Tue	8:55	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
	Ly, Chi	Wed	8:30	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
M	Ma, Xiaodong	Wed	9:45	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
	MacDonald, Richard	Tue	10:20	a.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering IV
	Mack, Mark	Tue	3:25	p.m.	ePaper	Exhibition Station B	Theme 10: Well Completion and Stimulation Case Histories II
	Male, Frank	Tue	4:10	p.m.	Oral	Room 15	BEG Bakken Special Session
	Manchanda, Ripudaman	Mon	4:35	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
	Matskova, Natalia	Tue	2:40	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
	Maxwell, Shawn	Wed	11:15	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
	McKenna, Jonathan	Wed	8:30	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
	Meek, Robert	Tue	9:45	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Meek, Robert	Tue	11:40	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
	Mehmani, Ayaz	Tue	8:30	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
	Mehmani, Yashar	Wed	11:15	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
	Merzlikin, Dmitrii	Tue	11:15	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
	Meyer, Jeremy	Wed	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development VI
	Mintz, Jason	Tue	2:15	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) I
	Mire, Kurt	Tue	4:45	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
	Mishra, Srikanta	Tue	11:15	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
	Mittal, Abhinav	Tue	4:10	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
	Mohaghegh, Shahab	Mon	3:45	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock
	Mohammed, Omar	Wed	9:30	a.m.	ePaper	Exhibition Station C	Theme 10: Well Completion Integration, Optimization, and Refracturing III
	Morrell, Austin	Mon	3:30	p.m.	ePaper	Exhibition Station C	Theme 03: Geochemistry of Unconventional Resource Plays
	Morrison, Brad	Wed	11:15	a.m.	Panel	Room 14	Panel: Midland Basin: From Characterization to Collaboration, a View From Pioneer Natural Resources
	Mullen, Kevin	Wed	2:40	p.m.	Oral	Room 18 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing II
	Myers, Grant	Wed	3:05	p.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II
N	Nagoo, Anand	Mon	11:35	a.m.	ePaper	Exhibition Station A	Production Performance and Artificial Lift Optimization
	Narasimhan, Santhosh	Mon	1:50	p.m.	ePaper	Exhibition Station B	Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
	Nicholson, Alan	Tue	9:55	a.m.	ePaper	Exhibition Station B	Theme 10: Well Completion Diagnostics and Optimization Technologies
	Northam, Mark	Wed	11:00	a.m.	Panel	Ballroom F	Panel: Unconventional Research and Education – The Future is Bright
O	Osadiya, Olusegun	Mon	4:35	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
	Ouenes, Ahmed	Tue	11:10	a.m.	ePaper	Exhibition Station B	Theme 10: Well Completion Diagnostics and Optimization Technologies
P	Pandya, Nimish	Wed	10:50	a.m.	Panel	Room 14	Panel: Midland Basin: From Characterization to Collaboration, A View From Pioneer Natural Resources
	Parapuram, George	Mon	2:15	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock
	Payne, Simon	Wed	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development VI
	Perry, Stephanie	Mon	10:50	a.m.	Oral	Ballroom E	Delaware Basin Special Session I
	Perry, Stephanie	Mon	3:45	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
	Peterson, Neil	Wed	9:20	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics

Presenter Cross Reference

	Pettit, Will	Wed	1:50	p.m.	Oral	Room 14	ARMA: Simulations
	Polsky, Yarom	Wed	9:00	a.m.	Panel	Ballroom F	Panel: Shopping for New Ideas From Unconventional Sources
	Pope, Michael	Tue	9:45	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
	Popova, Olga	Tue	4:35	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
	Posenato, Artur	Tue	9:45	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
	Pradhan, Yogashri	Wed	1:50	p.m.	Panel	Ballroom G	Theme 11: Panel: Artificial Lift and Production Management Strategies
	Price, Buddy	Tue	8:30	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Pritchard, Jess	Tue	4:35	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Prochnow, Shane	Tue	10:50	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
	Pu, Hui	Mon	3:05	p.m.	ePaper	Exhibition Station B	Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
	Purvis, Simon	Tue	1:50	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) I
R	Rafiee, Mehdi	Tue	10:50	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development III
	Rahman, Mohammad	Wed	8:30	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
	Raterman, Kevin	Mon	3:45	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II
	Rathbun, Andrew	Tue	2:15	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
	Rauch-Davies, Marianne	Mon	11:10	a.m.	ePaper	Exhibition Station C	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II
	Rauch-Davies, Marianne	Tue	10:50	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
	Reid, David	Mon	4:20	p.m.	Panel	Ballroom F	Panel Session – Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have."
	Reimchen, Aaron	Tue	8:55	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
	Reischman, Richard	Wed	9:30	a.m.	ePaper	Exhibition Station B	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays II
	Reischman, Richard	Wed	2:15	p.m.	Oral	Ballroom F	Theme 01: Petrophysics and Formation Evaluation of Mudstones IV
	Rezaei, Ali	Mon	10:50	a.m.	Oral	Room 16 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing I
	Riazi, Naimeh	Tue	9:45	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
	Richter, Kyle	Mon	3:45	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
	Rittenhouse, Sarah	Tue	4:35	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Roark, Abigail	Wed	1:50	p.m.	Oral	Room 18 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing II
	Robertson, Eric	Tue	10:45	a.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering IV
	Rodionov, Yuri	Mon	1:50	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
	Rollins, Beau	Wed	8:30	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development V
	Roussel, Nicolas	Wed	3:05	p.m.	Oral	Room 18 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing II
	Rowe, Harry	Mon	4:35	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
	Rowe, Harry	Tue	8:55	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
	Rowe, Harry	Wed	1:50	p.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II
S	Sanderson, Derek	Mon	1:50	p.m.	Oral	Ballroom F	Theme 09: Well Construction Practices I
	Santogrossi, Patricia	Mon	10:45	a.m.	ePaper	Exhibition Station C	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology II
	Schmitz, John	Mon	4:05	p.m.	Panel	Ballroom F	Panel Session – Service Companies' View of Supply and Demand: "I Know What You Think You Want, Here's What I Think You Can Have."
	Schwartz, Kenneth	Mon	2:15	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
	Scott, Kyle	Wed	9:20	a.m.	Panel	Room 14	Panel: Midland Basin: From Characterization to Collaboration, A View From Pioneer Natural Resources
	Sereda, Richard	Wed	2:15	p.m.	Oral	Ballroom E	Theme 12: Emerging Unconventional Plays II
	Sharma, Shikha	Mon	2:05	p.m.	ePaper	Exhibition Station C	Theme 03: Geochemistry of Unconventional Resource Plays
	Shelley, Robert	Wed	8:30	a.m.	Oral	Ballroom E	Theme 06: Production Performance
	Shelley, Robert	Tue	1:50	p.m.	ePaper	Exhibition Station B	Theme 10: Well Completion and Stimulation Case Histories II
	Shelokov, Valeri	Mon	2:15	p.m.	ePaper	Exhibition Station B	Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
	Shen, Yijie	Mon	11:15	a.m.	Oral	Room 16 AB	Theme 10: Well Completion Integration, Optimization, and Refracturing I
	Shepstone, Alan	Tue	10:50	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
	Sherafati, Marjan	Mon	2:15	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
	Shin, Do	Mon	4:10	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
	Shipman, Todd	Tue	9:00	a.m.	Panel	Ballroom E	Panel Session – Injection Induced Seismicity: Operational Implications of Evolving Regulations
	Sinclair, Steven	Tue	3:45	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Singh, Anupam	Wed	8:40	a.m.	Panel	Ballroom F	Panel: Shopping for New Ideas From Unconventional Sources
	Sinha, Ankita	Mon	11:15	a.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones I

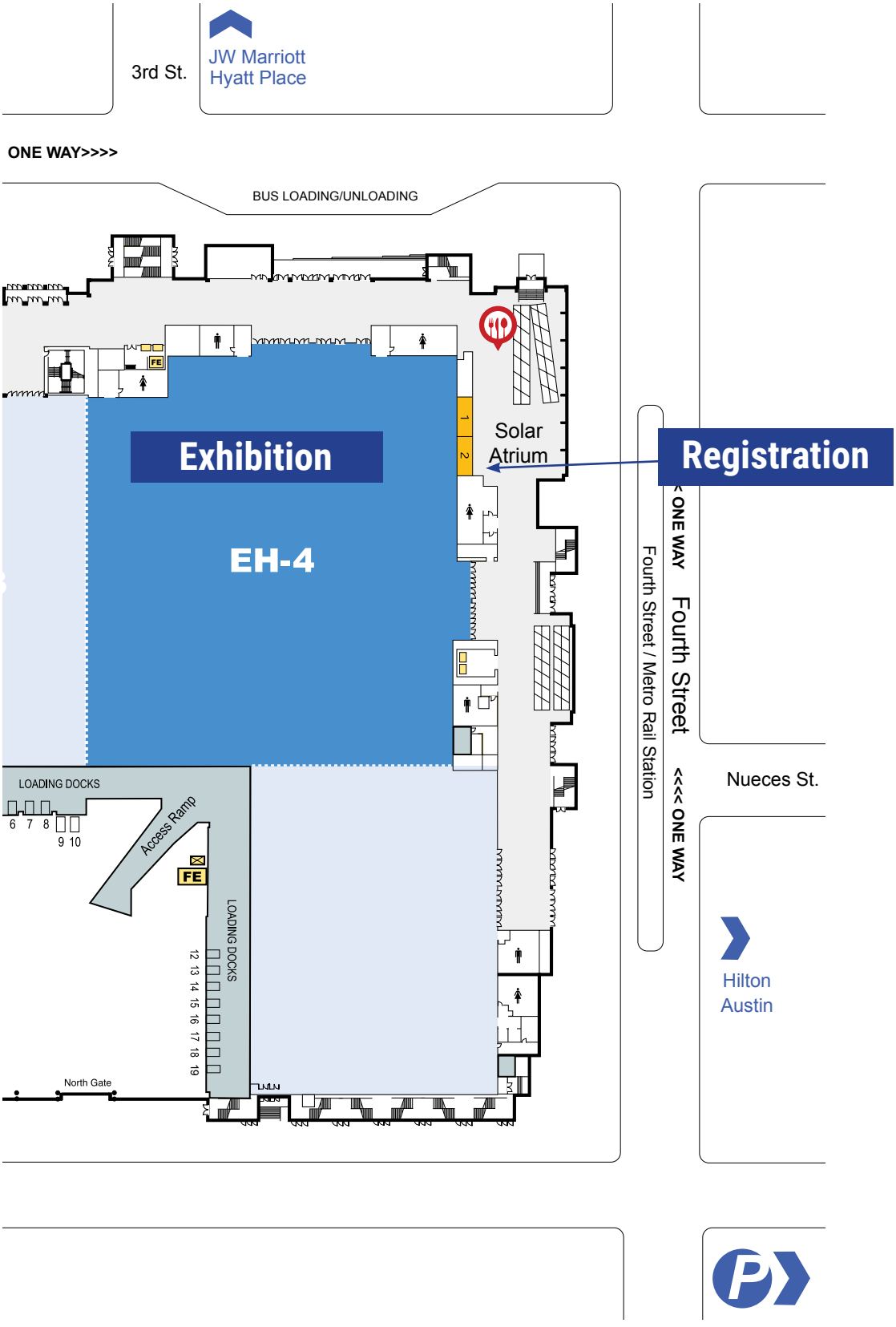
Presenter Cross Reference

	Sneed, Jessamyn	Tue	11:40	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
	Song, Liaosha	Mon	2:15	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
	Sonnenberg, Steve	Mon	11:40	a.m.	Oral	Room 18 AB	Theme 12: Emerging Unconventional Plays I
	Spies, Chris	Mon	10:50	a.m.	Panel	Ballroom F	Executive Session – A View From the Top: Opportunities and Challenges in Unconventionals
	Stephens, Meagan	Tue	2:15	p.m.	ePaper	Exhibition Station B	Theme 10: Well Completion and Stimulation Case Histories II
	Stimpson, Brian	Tue	2:15	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
	Stratton, Jay	Mon	10:50	a.m.	Panel	Ballroom F	Executive Session – A View From the Top: Opportunities and Challenges in Unconventionals
	Stuver, Susan	Tue	9:20	a.m.	Oral	Room 15	Theme 07: Stakeholder Management and Social Performance I
	Su, Kun	Tue	4:35	p.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering I: Saturation, Flow, and Phase Behavior
	Sun, Hao	Wed	9:20	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development V
	Sutherland, Scott	Tue	8:30	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
T	Tandon, Saurabh	Wed	1:50	p.m.	Oral	Ballroom F	Theme 01: Petrophysics and Formation Evaluation of Mudstones IV
	Tang, Hewei	Mon	3:45	p.m.	Oral	Room 15	Theme 08: Reservoir Management From Well Spacing to Wellbore
	Tanner, Jeff	Mon	11:30	a.m.	Panel	Ballroom F	Executive Session – A View From the Top: Opportunities and Challenges in Unconventionals
	Teran, Orlando	Wed	2:15	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks II
	Terwilliger, John	Mon	11:15	a.m.	Oral	Ballroom E	Delaware Basin Special Session I
	Thompson, John	Tue	5:00	p.m.	Oral	Ballroom E	Vaca Muerta Special Session
	Tinni, Ali	Mon	1:50	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
	Tong, Songyang	Wed	10:20	a.m.	ePaper	Exhibition Station C	Theme 10: Well Completion Integration, Optimization, and Refracturing III
	Torres, Emilio	Tue	11:40	a.m.	Oral	Ballroom G	Theme 01: Seismic Attributes for Characterizing Rock Properties and Reservoirs – How Geophysics Clarifies Geology I
	Tran, Hung	Wed	8:55	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
	Trowbridge, Stacy	Tue	1:50	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
	Tubman, Ken	Mon	10:50	a.m.	Panel	Ballroom F	Executive Session – A View From the Top: Opportunities and Challenges in Unconventionals
	Tuero, Fernando	Mon	10:45	a.m.	ePaper	Exhibition Station B	Theme 05: Reservoir Engineering V
	Tura, Ali	Wed	11:10	a.m.	Panel	Ballroom F	Panel: Unconventional Research and Education – The Future is Bright
U	Urbancic, Ted	Mon	10:45	a.m.	ePaper	Exhibition Station A	Production Performance and Artificial Lift Optimization
V	Vankov, Emilian	Tue	4:35	p.m.	Oral	Room 15	BEG Bakken Special Session
	Velasco, Raul	Tue	9:30	a.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering IV
	Velez, Edgar	Mon	2:40	p.m.	Oral	Room 16 AB	Theme 10: Well Completion and Stimulation Case Histories I
	Verba, Circe	Tue	9:30	a.m.	ePaper	Exhibition Station C	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales III
	Verkhovtseva, Natalia	Wed	2:40	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks II
	Veselinovic, Dragan	Tue	10:20	a.m.	ePaper	Exhibition Station C	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales III
W	Waite, Lowell	Tue	3:45	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development IV
	Walls, Joel	Tue	10:45	a.m.	ePaper	Exhibition Station C	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales III
	Walls, Joel	Tue	2:40	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) I
	Walls, Joel	Tue	5:00	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
	Wang, Yulun	Tue	4:10	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) II
	Weger, Ralf	Mon	4:35	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II
	Weijermars, Ruud	Wed	10:50	a.m.	Oral	Room 18 AB	Theme 05: Reservoir Engineering II: Reservoir Modeling and Production
	Wicker, Joe	Mon	1:50	p.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development II
	Wicker, Joe	Tue	9:45	a.m.	Oral	Ballroom F	Theme 04: Analytics and the Digital Oilfield II: Asset Monitoring, Performance Prediction and Optimization
	Wiewiorowski, Nicholas	Wed	9:20	a.m.	Oral	Ballroom E	Theme 06: Production Performance
	Williams, Chris	Wed	8:55	a.m.	Oral	Ballroom E	Theme 06: Production Performance
	Wilson, Kurt	Mon	4:10	p.m.	Oral	Ballroom E	Delaware Basin Special Session II
	Wilson, Kurt	Wed	2:15	p.m.	Panel	Ballroom G	Theme 11: Panel: Artificial Lift and Production Management Strategies
	Winsor, Jonathan	Tue	9:15	a.m.	Panel	Ballroom E	Panel Session – Injection Induced Seismicity: Operational Implications of Evolving Regulations
	Woodward, Raymond	Mon	2:15	p.m.	Oral	Ballroom F	Theme 09: Well Construction Practices I
	Wray, Andy	Tue	9:55	a.m.	ePaper	Exhibition Station C	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales III

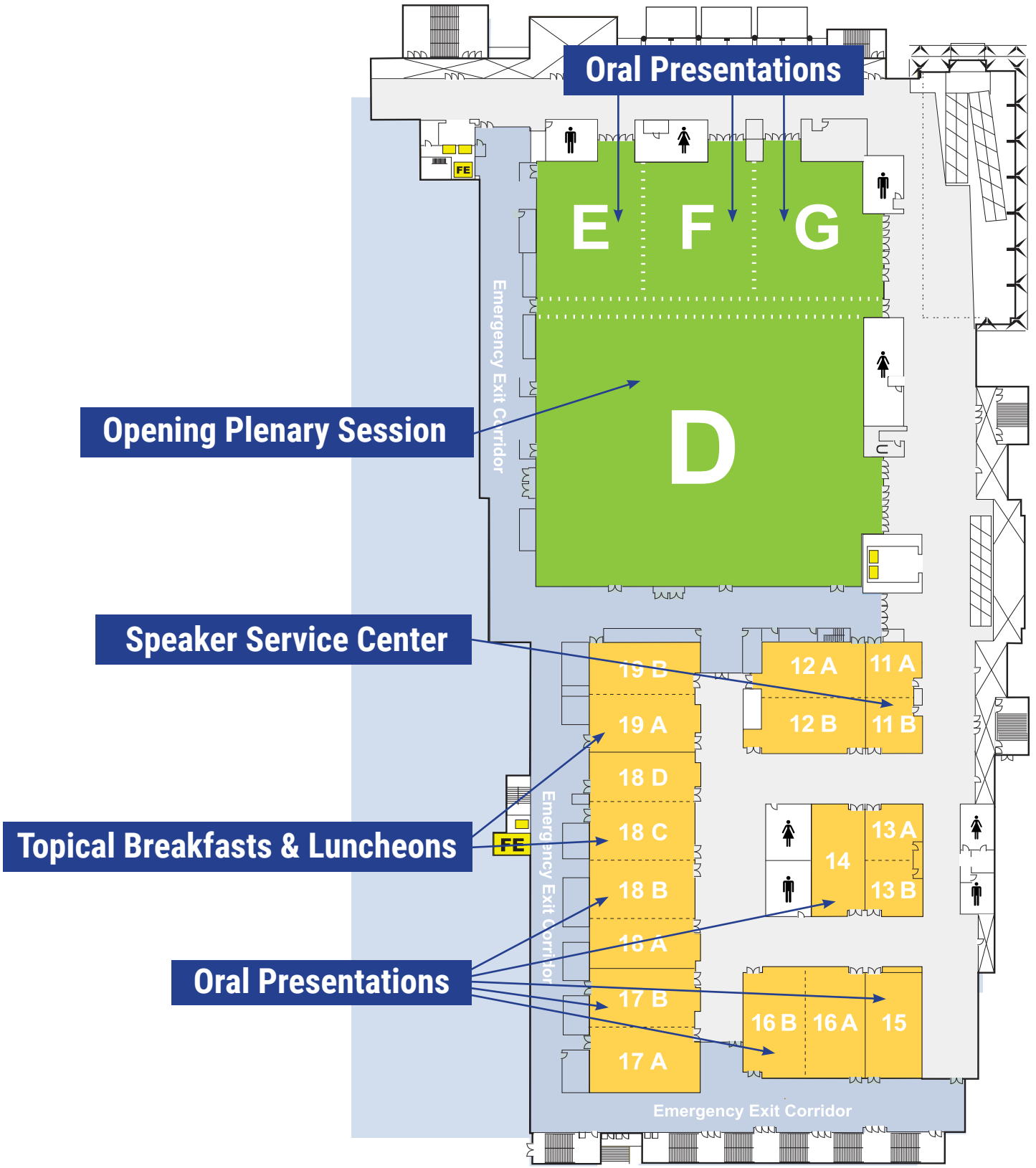
Presenter Cross Reference

	Wright, Shawn	Wed	2:40	p.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II
	Wu, Weiwei	Wed	10:50	a.m.	Oral	Room16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
X	Xian, Chenggang	Wed	11:10	a.m.	ePaper	Exhibition Station B	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays II
	Xiong, Hongjie	Tue	3:25	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
	Xu, Jingqi	Wed	10:50	a.m.	Oral	Ballroom G	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales II
	Xu, Shaochuan	Wed	8:55	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics II: In-Situ Stresses, Stress Shadow, and Microseismics
	Xu, Shiqian	Tue	3:05	p.m.	ePaper	Exhibition Station A	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I
	Xu, Tao	Wed	10:45	a.m.	ePaper	Exhibition Station C	Theme 10: Well Completion Integration, Optimization, and Refracturing III
Y	Yang, Changdong	Mon	2:40	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
	Ye, Zhi	Tue	11:15	a.m.	Oral	Room 16 AB	Theme 02: Geomechanics I: Rock Mechanical Properties: Beyond Young's Modulus and Brittleness
	Yee, Denise	Tue	5:00	p.m.	Oral	Ballroom F	Theme 01: Reservoir Quality in Low-Permeability Rocks = f(deposition, facies, sequence stratigraphy, and diagenesis) II
	Yu, Hongyan	Tue	3:30	p.m.	ePaper	Exhibition Station A	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I
	Yu, Wei	Mon	3:25	p.m.	ePaper	Exhibition Station A	Theme 05: Reservoir Engineering III
Z	Zamfes, Konstandinos	Tue	10:50	a.m.	Oral	Room 18 AB	Theme 01: Petrophysics and Formation Evaluation of Mudstones III
	Zeng, Zhengwen	Mon	2:40	p.m.	ePaper	Exhibition Station B	Theme 02: Understanding and Applying Geomechanics and Mechanical Stratigraphy
	Zhang, Qin	Mon	5:00	p.m.	Oral	Ballroom G	Theme 01: Petrophysics and Formation Evaluation of Mudstones II
	Zhang, Yulai	Tue	4:10	p.m.	Oral	Room 14	Theme 01: Imaging Unconventional Facies at the Macro-, Micro-, and Nano-Scales I
	Zhang, Zhishuai	Tue	10:45	a.m.	ePaper	Exhibition Station B	Theme 10: Well Completion Diagnostics and Optimization Technologies
	Zhao, Bin	Tue	2:15	p.m.	ePaper	Exhibition Station A	Theme 01: Petrophysical and Geological Characterization of Unconventional Plays I
	Zhou, Dengen	Wed	9:20	a.m.	Oral	Room 17 AB	Operators' Forum – Case Studies in Unconventional Reservoir Development V
	Zhou, Peng	Tue	2:15	p.m.	ePaper	Exhibition Station C	Theme 08: Reserves Estimation and Production Forecasting
	Zhu, Ding	Tue	10:50	a.m.	Oral	Room 14	Berg-Hughes/Crisman Institute Special Session
	Ziemkiewicz, P. F.	Mon	4:35	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
	Zijp, Mart	Tue	5:00	p.m.	Oral	Ballroom G	Theme 08: Forecasting Resource Production Potential From Regional to Well Scale
	Zimmer, Ulrich	Tue	4:10	p.m.	Oral	Room 16 AB	Theme 01: Microseismic Fracture Mapping and Building Discrete Fracture Networks I
	Zoback, Mark	Mon	11:15	a.m.	Oral	Room 14	ARMA: Theory and Practice
	Zoback, Mark	Tue	8:30	a.m.	Panel	Ballroom E	Panel Session – Injection Induced Seismicity: Operational Implications of Evolving Regulations
	Zorn, Erich	Mon	3:45	p.m.	Oral	Room 14	Insights From the Marcellus Shale Energy and Environment Laboratory (MSEEL)
	Zumberge, John	Wed	8:55	a.m.	Oral	Room 15	Theme 03: Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I
	Zwaan, Jonathan	Mon	2:40	p.m.	Oral	Room 18 AB	Theme 04: Analytics and the Digital Oilfield I: Data Mining the Rock

Convention Center Floor Plan: Level 1

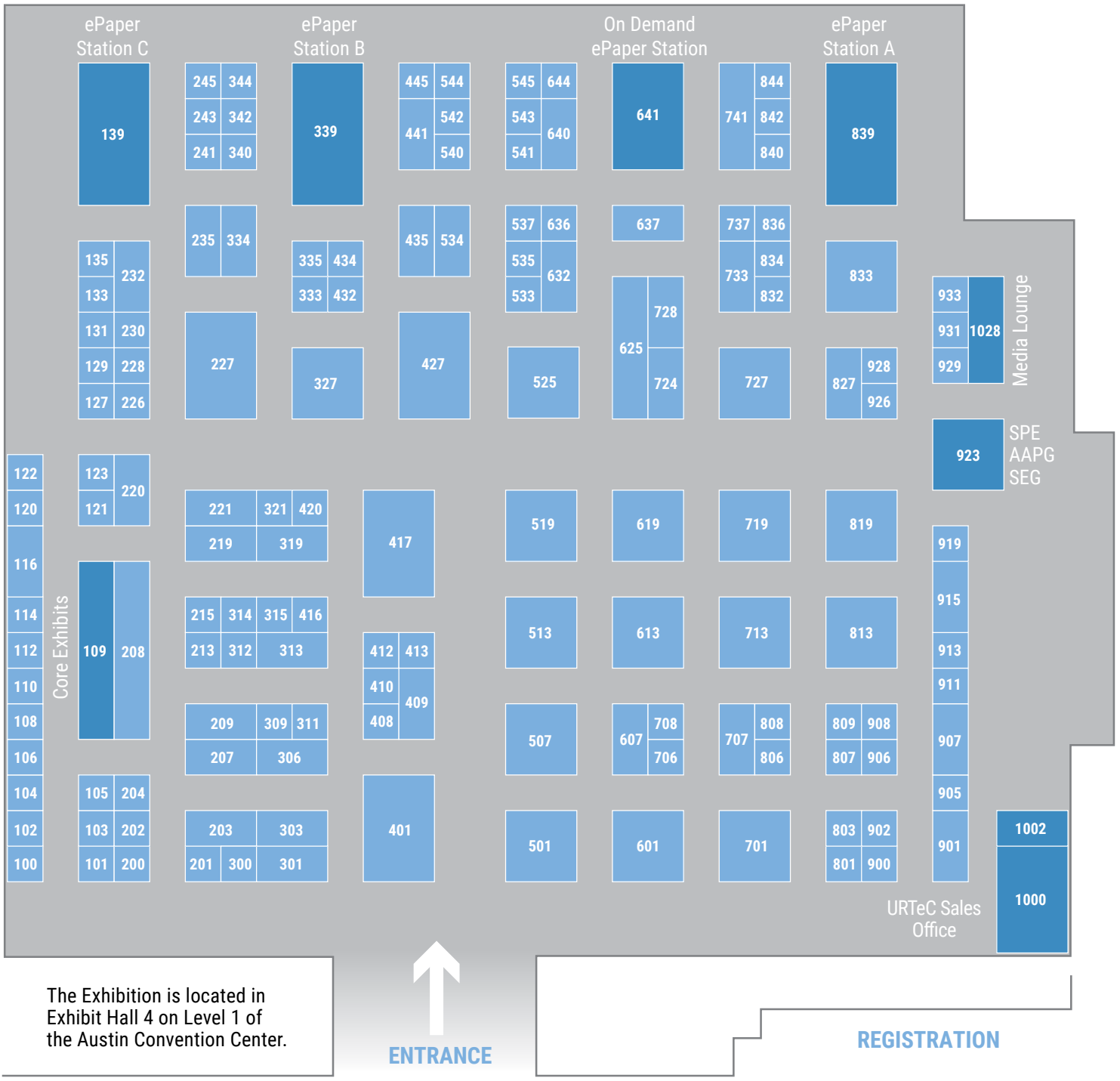


Convention Center Floor Plan: Level 4



Exhibitors

Exhibition Floor Plan



The Exhibition is located in Exhibit Hall 4 on Level 1 of the Austin Convention Center.

Exhibition Hours:

Monday
10:00 a.m.–7:00 p.m.

Tuesday
9:00 a.m.–6:00 p.m.

Wednesday
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Stacey Schmidt
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Email: allen.howard@premieroilfieldlabs.com
Website: www.premieroilfieldlabs.com
Premier Oilfield Laboratories integrates reservoir rock and fluid measurements across multiple disciplines to deliver Completions and Reservoir Solutions across all play types with focus on managing risk through targeted well placement and improved completion strategies.

Protek Systems.....300
752 Port America Place, Ste. 150
Grapevine, Texas 76051
United States
Paul Marino
Phone: +1 303 997 5600
Email: paul@protek-systems.com
Website: www.protek-system.com
Protek Systems offers Drillable and Dissolvable Components for Unconventional Completions.

ResEnTech, LLC.....410
8126 Spring Bluebonnet Dr.
Sugar Land, Texas 77479
United States
Tim Andrzejak
Phone: +1 281 725 3772
Email: info@resentech-llc.com
Website: www.resentech-llc.com
ResEnTech offers sustainable solutions to the oilfield industry, including WATERSAVR O&G – a proven chemistry-based product that saves costs by reducing evaporation from water storage ponds.

Reservoir Data Systems.....803
P.O. Box 660
Katy, Texas 77492
United States
Website: www.reservoirdata.com

Reveal Energy Services.....728
1500 Citywest Blvd., Ste. 741
Houston, Texas 77042
United States
Sudhendu Kashikar
Phone: +1 888 738 3250
Email: sudhendu.kashikar@reveal-energy.com
Website: www.reveal-energy.com
Reveal Energy Services provides fast, accurate, and cost-effective hydraulic fracture maps of unprecedented accuracy and quality at minimum operational risk and cost using only surface pressure measurements from observation wells.

Revelant, LLC.....230
27888 Meadow Dr. Ste. 100
Evergreen, Colorado 80439
United States
Zack Mitchell
Phone: +1 303 670 9845
Email: zack.mitchell@revelant.com
Website: www.revelant.com
Our industry has production optimization problems caused by paraffin, asphaltene, and scale deposition. Revelant's down hole Enercat tools are a preventative solution that increases profitability.

Ridgeway Kite 401
173 Curie Ave., Harwell Innovation Centre
Didcot, OXON OX10 9PT
United Kingdom
Tommy Miller
Phone: +44 123 5838 610
Email: tmiller@ridgewaykite.com
Website: www.ridgewaykite.com
Ridgeway Kite have developed a new reservoir simulator named 6X which is massively parallel and has unique functionality for modelling unconventional resources.

ROGII Inc.....334
16000 Park Ten Place, Ste. 202
Houston, Texas 77084
United States
Karen Payrazyan
Phone: +1 281 866 1390
Email: yulia@rogii.com
Website: www.rogii.com
Rogii was established in 2013 to develop geosteering technologies for Shale, Tight, Heavy oil, CBM and Conventional reservoirs. We offer comprehensive solutions through StarSteer, a product of extensive expertise in programming, geology and geophysics, designed to revolutionise well drilling.

Exhibitor Directory

RPS Group 232
1800 West Loop South, Ste. 1000
Houston, Texas 77027
United States
Andy Kirchin
Phone: +1 713 586 5950
Email: andy.kirchin@rpsgroup.com
Website: www.rpsgroup.com
RPS provides technical and commercial skills to help clients develop energy resources across the asset life cycle. Services include Training, Operations Support, Advisory Services, and Technical Studies.

RS Energy Group.....501
600 Travis St. Ste. 750
Houston, Texas 77002
United States
Phone: +1 713 965 4461
Email: info@rseg.com
Website: www.rseg.com
RS Energy Group (RSEG) provides technically-driven energy intelligence and is the premier, strategic partner to anyone operating, servicing or investing in the oil & gas market.

Safoco Inc. 417
11421 Todd Rd.
Houston, Texas 77055
United States
Phone: +1 713 956 1595
Website: www.safoco.com
Safoco is a leading provider of surface safety systems for the oil and gas industry worldwide. Having built its reputation on designing reliable and high quality actuators, Safoco continues developments in cutting edge wellhead control systems, integrated with satellite/remote communications.

Saudi Aramco 519
9009 West Loop South
Houston, Texas 77096
United States
Phone: +1 713 432 4000
Email: resumes@aramcoservices.com
Website: www.aramco.jobs
Saudi Aramco is a world leader in integrated energy and chemicals. We are driven by the core belief that energy is opportunity.

Saudi Geophysical Consulting Office.....807
Karawan Tower A, 2nd Fl.
Al Khobar, Eastern 31952
Saudi Arabia
Website: www.saudigeophysical.com

Schlumberger 625
4646 W. Sam Houston Pkwy. N.
Houston, Texas 77041
United States
Paula Aguas
Phone: +1 713 513 3300
Email: paguas2@slb.com
Website: www.slb.com
The newly updated Multistage Stimulation Marketing Trailer is a 28-ft-long mobile showroom demonstrating state-of-the-art multistage stimulation equipment from Schlumberger.

Schlumberger 507
4646 W. Sam Houston Pkwy N.
Houston, Texas 77041
United States
Website: www.slb.com

Schneider Electric Software 340
26561 Rancho Pkwy. S.
Lake Forest, California 92630
United States
Phone: +1 949 727 3200
Website: www.software.schneider-electric.com
As the global specialist in energy management and automation, Schneider Electric helps customers to better manage and improve processes in ways that are safe, reliable, efficient, and sustainable.

Seismos Inc. 813
3925 West Braker Ln.
Austin, Texas 78759
United States
Website: www.seismos.com

Seitel 534
10811 S. Westview Circle Dr. Bldg. C Ste. 100
Houston, Texas 77043
United States
Liza Yellott
Phone: +1 713 881 8900
Email: lyellott@seitel.com
Website: www.seitel.com
Seitel is a leading provider of high-quality 3-D and 2-D seismic data, covering some of the most active hydrocarbon plays in the US, Canada, and Mexico. We have built what is now the largest North American seismic data library available for licensing, and continue to invest in its growth.

Selman & Associates.....809
P.O. Box 61150
Midland, Texas 79711
United States
Tom Selman
Phone: +1 432 563 0084
Email: tselman@selmanlog.com
Website: www.selmanlog.com
Selman & Associates has been in business for 34 years! Come see us in Booth 809!

SGS 412
Suite 1450, 407 2nd St. SW.
Calgary, Alberta T2P 2Y3
Canada
Marc Enter
Phone: +1 587 393 2118
Email: marc.enter@sgs.com
Website: www.sgs.com
Specializing in the characterisation of drill cuttings, core and scales, SGS's Advanced Reservoir Quality Services (ARQS) provides mineralogical and elemental analytical solutions tailored to the requirements of the oil and gas industry.

Exhibitor Directory

SIGMA³ 204
4700 W. Sam Houston Pkwy. N., Ste. 150
Houston, Texas 77041
United States
Mitch Kniffin
Phone: +1 303 779 2520
Email: m.kniffin@sigmacubed.com
Website: www.sigmacubed.com
GeoEngineering™ enables better sweet spot targets and optimal frac/completion strategies. Lower costs by fracturing where most productive. Validate results using the most reliable microseismic acquisition/event detection/location/accuracy which delivers unprecedented integration and better production.

Silixa 104
16203 Park Row Ste. 185
Houston, Texas 77084
United States
Pete Richter
Phone: +1 832 772 3333
Email: Pete.Richter@silixa.com
Website: www.silixa.com
Silixa delivers distributed fibre optic monitoring on both new and existing cable installations. Applying the power of distributed acoustic (iDAS™ and Carina® Sensing System) and temperature sensing technologies (ULTIMA™ DTS, XT-DTS), Silixa delivers a range of products to the oil and gas sector.

SMART4D Geosteering/United Oil & Gas Consulting 432
#950, 396-11 Ave. SW.
Calgary, Alberta T2R 0C5
Canada
Rocky Mottahedeh
Phone: +1 403 265 0111
Email: rockym@uogc.com
Website: www.smart4d.com
Advanced 3-D Model-based Geosteering Software, Technology Advantage, Improved Results Providing a best-in-class software for Operations Geology Teams to collaborate and manage accurate well placement of horizontals while automating 3-D geo-modelling, data acquisition, reporting, and monitoring.

Society of Exploration Geophysicists (SEG).....923
8801 S. Yale Ave., Ste. 500
Tulsa, Oklahoma 74137
United States
Website: www.seg.org
Embracing a mission of connecting the world of applied geophysics, the Society of Exploration Geophysicists (SEG) is a not-for-profit organization supporting 27,000 members in 128 countries. Inspiring the geophysicists of today and tomorrow, SEG's long-standing tradition of excellence in education, professional development, books, new business generation, and engagement cultivates a unique community platform that encourages collaboration and thought leadership for the advancement of geophysical science around the world. Founded in 1930, headquartered in Tulsa, OK and with regional offices in Dubai, UAE and Beijing, China, SEG is a global society dedicated to enhancing the present and future of applied geophysics. SEG fosters the expert and ethical practice of geophysics in the exploration and development of natural resources, characterization of near surface, and mitigation of earth hazards. Find out more at seg.org.

Society of Petroleum Engineers (SPE)...923
222 Palisades Creek Dr.
Richardson, Texas 75080
United States
Phone: +1 972 952 9393
Email: service@spe.org
Website: www.spe.org
SPE is a not-for-profit professional association whose more than 164,000 members in 143 countries are engaged in oil and gas exploration and production. SPE is a key resource for technical knowledge providing publications, events, training courses, and online resources.

Sound QI Solutions Ltd. 213
1028 32nd Ave. SW.
Calgary, Alberta T2T 1V3
Canada
Laurie Weston Bellman
Phone: +1 403 830 7233
Email: laurie@soundqi.ca
Website: www.sound-qi.com
Quantitative Interpretation (QI) services and QI-Pro software for reservoir characterization. Decision-ready deliverables. Rigorous data methods. Proprietary in-house workflow. People you can work with.

SPECTRO Analytical Instruments 116
91 McKee Dr.
Mahwah, New Jersey 07430
United States
Tom Bloomer
Phone: +1 201 642 3000
Email: tom.bloomer@amtek.com
Website: www.spectro.com
A member of the AMETEK Materials Analysis Division, SPECTRO is a worldwide leading supplier of ICP, ICP-MS and X-ray fluorescence spectrometry, used for the elemental analysis of materials.

Tartan Energy Group.....114
4003 - 53 Ave.
Edmonton, Alberta T6B 3R5
Canada
Ryan McGillivray
Phone: +1 780 463 3366
Email: info@tartanenergygroup.com
Website: www.tartanenergygroup.com
Tartan Energy Group is a multifaceted energy services company that engineers and manufactures innovative, customized multistage stimulation solutions in Canada and the USA. Tartan follows the philosophy of engineering our products with simplicity, reliability, flexibility and performance in mind.

Exhibitor Directory

Task Fronterra Geoscience 413
2410 Portsmouth St., Ste. 280
Houston, Texas 77098
United States
Andy Duncan
Phone: +1 832 661 0709
Email: andy.duncan@taskfronterra.com
Website: www.taskfronterra.com
Task Fronterra Geoscience is the largest independent group specializing in borehole image log analysis and interpretation. We provide best-in-class borehole image log QC, processing and geological interpretation and integration with a variety of other geological services.

Terra Guidance 103
1298 O Rd.
Loma, Colorado 81524
United States
Scott Waggoner
Phone: +1 970 260 5408
Website: www.terraguidance.com
At Terra Guidance, we believe that a great business starts with treating your employees exceptionally. As a result, our clients experience a new standard of service. We focus our vision on providing a quality of life that most oilfield people only dream of.

Terves Incorporated 806
24112 Rockwell Dr.
Euclid, Ohio 44117
United States
Robert Juran
Phone: +1 216 956 5063
Email: rjuran@tervesinc.com
Website: www.tervesinc.com
Terves produces engineered response materials for downhole tools, creating value in the well completion process. Our market-leading TervAlloy dissolvable alloy is used in dissolvable tools and frac balls worldwide and is available in various formulations to meet specific regional well conditions.

TETRA Technologies, Inc. 327
24955 Interstate 45 N.
The Woodlands, Texas 77380
United States
Barry Donaldson
Phone: +1 281 367 1983
Email: bdonaldson@tetratec.com
Website: www.tetratec.com
TETRA's completion fluids, water management and treatment, and production testing expertise; pre-job planning; superior, automated equipment; unique deployment system; and engineering support deliver innovative technologies that set us apart.

TGS 420
10451 Clay Rd.
Houston, Texas 77041
United States
Phone: +1 832 667 4797
Email: marketing.events@tgs.com
Website: www.tgs.com
TGS is the worlds largest geoscience data company in the industry, known for its asset light – multi-client business model. Global multi-client data library covering frontier and mature basins.

The University of Tulsa 215
800 S. Tucker Dr., Helmerich Hall, Room 201
Tulsa, Oklahoma 74104
United States
Cristina Williams
Phone: +1 918 631 3625
Email: cristina@utulsa.edu
Website: https://business.utulsa.edu/departments-schools/energy-economics/
The University of Tulsa School of Energy Economics, Policy and Commerce delivers nationally-ranked graduate and undergraduate educational programs in energy business to support a dynamic and ever-changing global energy industry.

Tracerco 607
4106 New West Dr.
Pasadena, Texas 77507
United States
Jon Spencer
Phone: +1 281 291 7769
Email: jon.spencer@tracerco.com
Website: www.tracerco.com
Tracerco can provide information on the overall production contribution from each stage of a stimulation program. Visit booth 607 to learn how our chemical tracers can allow you to optimize your well strategy and maximize your full field potential, all at dramatically lower cost than a standard PLT.

TRC Consultants, LC 333
5806 Mesa Dr. Ste. 215
Austin, Texas 78731
United States
David Pacinda
Phone: +1 888 248 8062
Email: info@phdwin.com
Website: www.phdwin.com
TRC Consultants is the company behind PHDWin software. PHDWin is a full-featured, completely integrated economics and decline curve software written by petroleum engineers for the oil & gas industry.

TRICON Geophysics 122
10111 Richmond Ave. Ste. 230
Houston, Texas 77042
United States
Dave Williams
Phone: +1 713 532 5006
Email: dave.williams@tricongeophysics.com
Website: www.tricongeophysics.com
Seismic Imaging, Reservoir Services, Petrophysics.

Exhibitor Directory

Tubel Energy.....226
25907 Oak Ridge Dr.
The Woodlands, Texas 77380
United States
Paul Tubel
Phone: +1 713 504 3759
Email: paul.tubel@tubelenergy.com
Website: www.tubelenergy.com
Tubel Energy provides real time and short hop wireless gauges for downhole frac, production and artificial lift applications. Acoustic energy is used for real time data transmission through the tubing from downhole to the surface. The short hop gauge uses Bluetooth-style communications downhole.

University of Oklahoma.....311
100 E. Boyd St., Sarkeys Energy Center 1210
Norman, Oklahoma 73019
United States
Ahmad Ghassemi
Phone: +1 405 325 4347
Email: steved@ou.edu
Website: www.ou.edu/mcee/mpge
The Mewbourne School of Petroleum and Geological Engineering has a history of excellence through innovation, pioneering, and its graduates. Today, the tradition continues as the research and talent produced shapes the future of petroleum engineering and the oil and gas industry.

Water Lens, LLC 928
4265 San Felipe Ste. 1100
Houston, Texas 77027
United States
Keith Cole
Phone: +1 844 987 5367
Email: kcole@waterlensusa.com
Website: www.waterlensusa.com
Water Lens has developed a system for real-time chemical analysis of water and other fluids for a wide variety of industries. Results are obtained in under 10 minutes, and the system can be easily used by the average worker in any location.

WellDog 707
1525 Industry Dr.
Laramie, Wyoming 82070
United States
Nathan Nicholas
Phone: +1 307 742 6340
Email: marketing@welldog.com
Website: www.welldog.com
WellDog is a technical services company that provides practical technical and business solutions in a high volume, cost effective manner with a remarkable customer focus. The company's mission is to develop and deploy innovative technologies to produce resources faster, responsibly, and sustainably.

WellDrive.....127
P.O. Box 3107
Bellaire, Texas 77402
United States
Derek Garland
Phone: +1 855 704 8270
Email: derek@welldrive.com
Website: www.welldrive.com
WellDrive is a web-based well file system that eliminates the wasted time looking through email and shared folders to find your important files. The best part is that WellDrive works with your service companies to make sure that all of the data gets uploaded so you don't have to chase it down!

Wildcat Technologies, LLC 335
218 Higgins St.
Humble, Texas 77338
United States
Albert Maende
Phone: +1 281 540 3208
Email: info@wildcattechnologies.com
Website: www.wildcattechnologies.com
Identify reservoir intervals and source rocks with the HAWK Pyrolysis & TOC Instrument, HAWK-Eye software, and HAWK-PAM method that utilizes multi-ramps in 5 zones. API Gravity prediction on drill cuttings and cores.

Willowstick Technologies.....832
132 E. 13065 S., Ste 100
Draper, Utah 84020
United States
Keith Wall
Phone: +1 801 984 9850
Email: info@willowstick.com
Website: www.willowstick.com
Willowstick is a technology company that maps, models, and predicts groundwater paths, enabling our clients to target their remediation efforts. Learn more at Willowstick.com.

Ziebel 106
1704 Rankin Rd., Ste. 190
Houston, Texas 77073
United States
Matthew Lawrence
Phone: +1 713 742 5600
Email: matthew.lawrence@ziebel.com
Website: www.ziebel.com
Industry leader in carbon fiber technologies for dip-in fiber optic acquisition (DAS+DTS) in unconventional wells, with applications for stimulation, completion efficiency and well spacing evaluation.

ZEISS Microscopy 219
One Zeiss Drive
Thornwood, New York 10594
United States
Brenda Ropoulos
Phone: +1 800 233 2343
Email: microscopy@zeiss.com
Website: www.zeiss.com/oil-and-gas
Imaging and analysis tools for Oil & Gas applications allowing for complex pore scale geomechanics and multiphase flow processes to be examined directly at the pore scale under reservoir conditions.

Short Courses

	Title	Instructor(s)	Days/Times	Fees	Locations
1 **Cancelled**	Value of Quantitative Seismic Interpretation (QI) for Reservoir Characterization (AAPG)	Jeffrey Johnson (G&G Training & Technical Consultant, Tulsa, Oklahoma)	Saturday, 22 July 8:00 a.m.–5:00 p.m.	N/A	N/A
2	Modern Production Data Analysis of Unconventional Reservoirs (SPE)	Dave Anderson (Anderson Thompson Reservoir Strategies, Calgary, Alberta, Canada)	Saturday 8:00 a.m.–5:00 p.m.	Member $750 Nonmember $950	Room 14
3	Unconventional Reservoir Development (SPE)	Steve Hennings (Source Rock Engineering, Denver, Colorado)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	Member $1,400 Nonmember $1,800	Room 13 B
4	Mitigating Bias, Blindness, and Illusion in E&P Decision Making (SPE)	Creties Jenkins (Rose and Associates, Santa Barbara, California)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	Member $1,400 Nonmember $1,800	Room 13 A
5 **Cancelled**	Understanding Seismic Anisotropy in Exploration and Exploitation (SEG)	Leon Thomsen (University of Houston, Houston, Texas)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	N/A	N/A
6	Understanding and Adapting Rockphysics Principles for Mudrock (Shale) Reservoirs (SEG)	Manika Prasad (Colorado School of Mines, Golden, Colorado)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	Member $1,145 Nonmember $1,295 Student $300	Room 15
7	Introduction to Unconventional Reservoir Characterization (AAPG)	Mamdouh Shebi (Chevron, Katy, Texas)	Sunday 8:00 a.m.–5:00 p.m.	Professional $895 Student $115	Room 16
8	Re-Fracturing – Candidate Selection & Design (SPE)	Michael B. Smith (NSI Technologies, Tulsa, Oklahoma)	Sunday 8:00 a.m.–5:00 p.m.	Member $750 Nonmember $950	Room 14

Exhibition Highlights

Visit the exhibition to connect with companies, colleagues, and experts from all aspects of the unconventional market to learn about the latest technologies, trends, and solutions of optimization for unconventional plays.

- View more than 100 ePaper Presentations
- Visit the Core Exhibits to see samples from around the world
- Meet face-to-face with suppliers and sales representatives
- Learn about the latest innovations and emerging technologies
- Attend product and service demonstrations
- Network with colleagues and energy professionals

Exhibition Location

The Exhibition is located in Exhibit Hall 4 on Level 1 of the Austin Convention Center.

Exhibition Hours

Monday..... 10:00 a.m.–7:00 p.m.
Tuesday ..... 9:00 a.m.–6:00 p.m.
Wednesday ..... 9:00 a.m.–1:00 p.m.

Networking Inside the Exhibition

Monday

Breakfast Bites with Exhibitors..... 10:00 a.m.–10:40 a.m.
Refreshment Break ..... 3:05 p.m.–3:45 p.m.
Opening Reception ..... 5:00 p.m.–7:00 p.m.

Tuesday

Refreshment Breaks ..... 10:10 a.m.–10:50 a.m. & 3:05 p.m.–3:45 p.m.
Networking Reception..... 5:00 p.m.–6:00 p.m.

Wednesday

Refreshment Break ..... 10:10 a.m.–10:50 a.m.

ePapers

In addition to the traditional oral presentations, URTeC features ePaper presentations in a smaller audience setting inside the Exhibition during the conference. You can listen to a LIVE ePaper presentation at one of the three stations, or view the slides at your convenience at the On-Demand Station also located inside the Exhibition.

LIVE ePaper Presentation Hours

Monday..... 10:15 a.m.–12:25 p.m. & 1:45 p.m.–5:10 p.m.
Tuesday ..... 9:25 a.m.–11:35 a.m. & 1:45 p.m.–5:10 p.m.
Wednesday ..... 9:25 a.m.–12:00 p.m.

On-Demand ePaper Hours

Monday..... 10:00 a.m.–7:00 p.m.
Tuesday ..... 9:00 a.m.–6:00 p.m.
Wednesday ..... 9:00 a.m.–1:00 p.m.

URTeC Society Booth

Stop by booth #923 to visit with the three Sponsoring Organizations (SPE, AAPG, and SEG).

Media Lounge

Make your way over to booth #1028 to relax and grab a copy of your favorite industry publication at the Media Lounge.

The Core Exhibits

Visit the Core Exhibits in the Exhibition Hall, booth #109 during regular Exhibition hours, and see core samples from around the globe and discover the true variability of these tight reservoirs.

Core evaluation has undergone a rebirth thanks to unconventional plays both in North America and globally which has fostered and necessitated a back-to-the-rocks approach to reservoir analysis. It has become a fundamental piece during the exploration phase in terms of reservoir characterization and it continues to add value during the optimization phase of a development program.

Presentations and materials displaying the analytical methods and raw data will help provide a better understanding of the sedimentology, petrology, and reservoir characterization. Past core samples that have been on display included the following:

- Wolfcamp (Delaware and Midland)
- Woodford Permian
- Eagle Ford
- Avalon Shale
- Bone Spring
- Bakken
- Utica
- Marcellus
- Tuscaloosa Marine Shale
- Haynesville

Networking Opportunities

Breakfast Bites with Exhibitors
After the opening plenary join the official kickoff of URTeC 2017 with breakfast snacks and coffee in the Exhibition Hall.
Day: Monday
Time: 10:00 a.m.–10:40 a.m.
Location: Exhibition Hall 4

Opening Reception
End day one of URTeC in the Exhibition to network with exhibitors and mingle with colleagues over a drink and hors d'oeuvres.
Day: Monday
Time: 5:00 p.m.–7:00 p.m.
Location: Exhibition Hall 4

Refreshment Breaks
Take a break from the presentations to meet with exhibitors and grab a quick beverage.
Days: Monday–Wednesday
Times: 3:05 p.m.–3:45 p.m. (Monday and Tuesday)
10:10 a.m.–10:50 a.m. (Tuesday and Wednesday)
Location: Exhibition Hall 4

Networking Reception
Wrap up your day and relax with a drink and light snack while visiting with exhibitors.
Day: Tuesday
Time: 5:00 p.m.–6:00 p.m.
Location: Exhibition Hall 4

TIGs and SIGs Meeting
Career Power! Join us to learn about the doors you can open and the activities you can plan as a Technical Interest Group (TIG) or Special Interest Group (SIG). We will meet and discuss the new communication tool, the kinds of activities and events you can plan, and how AAPG can help you achieve your goals.
Day: Tuesday
Time: 10:00 a.m.–11:30 a.m.
Location: Room 12 A

About Austin

Austin Convention Center Information
Address: 500 E. Cesar Chavez St. Austin, Texas 78701
Phone: +1 512 404 4000
Website: www.austinconventioncenter.com

Convention Center Parking
The 201 East 2nd Street parking garage offers 10-stories, 1,000-spaces just two blocks west of the Austin Convention Center. Entrances are located off of Brazos and San Jacinto. Operational hours: Sunday–Thursday, 6:30 a.m.–9:30 p.m. and Friday–Saturday, 6:30 a.m.–2:00 a.m. Daily rates range from $18-$36.

The 601 East 5th Street parking garage offers 5-stories, 685-spaces just north of the Austin Convention Center. Entrance to the garage is located on 5th Street. Operational hours: Sunday–Thursday, 6:30 a.m.–9:30 p.m. and Friday–Saturday, 6:30 a.m.–2:00 a.m. Daily rates range from $18–$36.

Airport Information
Austin-Bergstrom International Airport (AUS)
Address: 3600 Presidential Blvd. Austin, Texas 78719
Phone: +1 512 530 2242
Website: www.austintexas.gov/airport

Transportation
CapMetro is Austin's public transportation agency offering service throughout the city. Whether you're traveling across town, or neighborhood-to-neighborhood, CapMetro makes it easy for you to view schedules and prices, and plan your trip accordingly. Single day fare passes range from $2-$7 depending on which service you choose. For more details, visit www.capmetro.org.

A number of ride-hailing companies operate out of the Austin area and are allowed for airport pick-up. **Uber and Lyft are back as of 29 May 2017 and are fully operational in Austin. Payment is automatic through the app and fares are evaluated based on local demand.**

Hotels

	Hotel Name	Address	Telephone Number
1.	Hilton Austin	500 East 4th Street, Austin, Texas 78701	+1 512 530 2242
2.	JW Marriott Austin	110 East 2nd Street, Austin, Texas 78701	+1 512 474 4777
3.	Hyatt Place Austin/Downtown	211 East 3rd Street, Austin, Texas 78701	+1 512 476 4440
4.	Hilton Garden Inn Austin Downtown/Convention Center	500 North Interstate 35, Austin, Texas 78701	+1 512 480 8181

General Information

On-site Registration Hours
Location: Registration is located in the Solar Atrium on level 1 of the Austin Convention Center.
Saturday ..... 12:00 p.m.–5:00 p.m.
Sunday..... 8:00 a.m.–5:30 p.m.
Monday..... 6:30 a.m.–5:30 p.m.
Tuesday ..... 6:30 a.m.–5:30 p.m.
Wednesday ..... 6:30 a.m.–1:00 p.m.

Speaker Service Center
Location: Level 4, Room 11
Sunday..... 10:00 a.m.–5:00 p.m.
Monday..... 7:30 a.m.–5:30 p.m.
Tuesday ..... 7:30 a.m.–5:30 p.m.
Wednesday ..... 7:30 a.m.–3:30 p.m.

Business Center
Location: Level 1, Next to Exhibit Hall 3
Monday..... 8:00 a.m.–5:00 p.m.
Tuesday ..... 8:00 a.m.–5:00 p.m.
Wednesday ..... 8:00 a.m.–5:00 p.m.
*For printing and copying only.

Fedex Office Print & Ship Center
Location: 110 E. 2nd Street | +1 512 391-1816
Saturday ..... 9:00 a.m.–5:00 p.m.
Sunday..... 9:00 a.m.–5:00 p.m.
Monday..... 7:00 a.m.–7:00 p.m.
Tuesday ..... 7:00 a.m.–7:00 p.m.
Wednesday ..... 7:00 a.m.–7:00 p.m.

Lost and Found
Items found during the conference should be turned in to URTeC Show Management staff personnel located in Registration. If your information has not been turned in, you can leave contact information at Registration.

Luggage Check
Location: Level 1, across from Exhibit Hall entrance under escalators.
Wednesday.....6:30 a.m.–3:30 p.m.

Items checked will be $1.50 per item (cash only).
No laptops or personal bags.

No-Electronic Capturing Policy
Capturing or photographing contents of Exhibits Displays, Oral Presentations or ePaper Presentations is strictly prohibited.

No Smoking Policy
Smoking is prohibited in the Austin Convention Center.

Social Media
Make sure to follow URTeC on Facebook, Twitter, LinkedIn, and YouTube to stay connected and to get the latest updates on what's happening during the event.

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Available for both iOS and Android devices, the URTeC 2017 App allows you access to all the conference information and details in the palm of your hand. Download for free today!

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Safety and Security

Security and Emergencies
Please report security issues or emergencies to any Security Officer located inside Registration and/or Exhibition entrance doors.

Badges
Badges must be worn at all times while attending the conference. For your safety, remove your name badge once you exit the convention center.

Hotels
You are encouraged to review the safety and security information provided at your hotel.

Unattended Items
For your safety, please do not leave items unattended. Items left unattended may be stolen, confiscated and/or destroyed. To report lost or stolen items, please visit with URTeC Show Management personnel located in Registration.

Local Hospital Information
Dell Seton Medical Center at the University of Texas
Addess: 1500 Red River Street, Austin, Texas 78701
Phone: +1 512 324 2233


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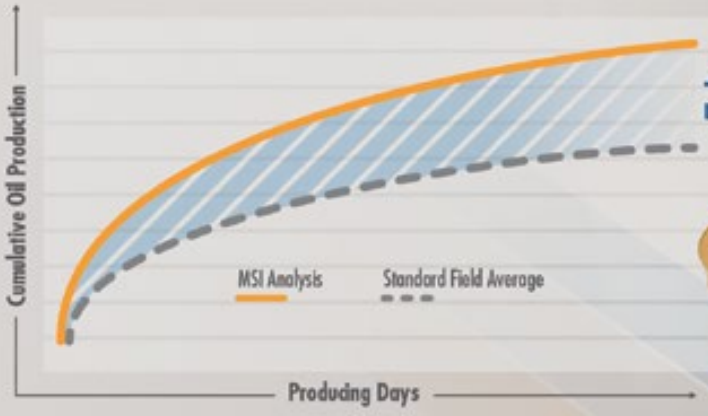

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