

# OFFICIAL PROGRAM



## UNCONVENTIONAL<sup>®</sup> RESOURCES TECHNOLOGY CONFERENCE

FUELED BY SPE • AAPG • SEG URTeC.org

1-3 AUGUST 2016

HENRY B. GONZALEZ CONVENTION CENTER » SAN ANTONIO, TEXAS



Program Book Sponsored By:

أرامكو السعودية  
saudi aramco



The integrated event for unconventional resource teams  
3 days · 11 disciplines · 1 focus

Sponsoring Organizations:



Supporting Organizations:

AICHE



ASCE  
AMERICAN SOCIETY  
OF CIVIL ENGINEERS



# PIONEER

NATURAL RESOURCES

The image shows an oil pumpjack and a drilling rig in a field. The pumpjack is on the left, and the drilling rig is on the right. The background is a cloudy sky. The foreground is filled with tall grass. The entire image has a green tint.

Pioneer is proud to support  
the Unconventional Resources  
Technology Conference.

# SPONSORS

## DIAMOND

أرامكو السعودية  
saudi aramco



Program Book, Conference Proceedings

## EMERALD



Registration

## RUBY



Directional Signage, ePapers



Smartphone/Mobile Application,  
ePapers, Wi-Fi Hot Spot



Notepads

## SAPPHIRE



Conference Proceedings



Core Exhibits



Conference Amenity



Pocket Guide



Badge Cords/Lanyards



Aisle Signage,  
Directional Signage



Conference Amenity

## TOPAZ



Opening Reception Bar  
(Monday)



General Fund



General Fund

## MEDIA/SUPPORTING ORGANIZATIONS



# WELCOME TO URTEC

Dear Colleague:

On behalf of the Unconventional Resources Technology Conference (URTEC), its Sponsoring and Supporting Organizations and Technical Program Committee, we welcome you to the fourth edition of URTEC, the preeminent global event in unconventional resources. This year's offering has a high number of papers (601) as well as several plenary and special sessions to highlight recent and emerging technologies in unconventional resources. 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 current economic climate has greatly affected the exploration and exploitation of unconventional resources, but the potential contribution of these resources has never been higher. The technologies developed today to explore and exploit unconventional resources will define the hydrocarbon extraction industry of tomorrow.

This year, we have expanded our collaborations with the addition of several Supporting Organizations including 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) and the Minerals, Metals and Materials Society (TMS). These important professional groups bring both depth and breadth to the technical base of URTEC and we welcome their collaboration and contributions for 2016 and beyond.

For URTEC 2016 we have the following program and event components:

## Technical Program

- Technical Presentations and ePapers
- Plenary Sessions
- Special Sessions
- Short Courses
- Operator's Forum

## Events and Networking

- Opening/Network Receptions
- Exhibition Marketplace
- Topical Breakfast and Luncheon Speakers
- The Core Exhibits
- Product and Service Demonstrations

The Opening Plenary Session is typically the keynote event of the URTEC program, and 2016 is no exception. This year the panelists include:

- **Scott D. Sheffield**, Chairman and Chief Executive Officer, Pioneer Natural Resources
- **Dan O. Dinges**, Chairman, President and Chief Executive Officer, Cabot Oil and Gas Corporation
- **Gary N. Ross**, Executive Chairman and Head of Global Oil, PIRA Energy Group, Inc.

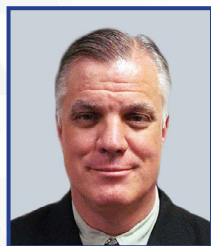
The "State of the Industry" theme from the Opening Plenary will be followed by a discussion among three additional panelists regarding the mosaic of independent variables that control both the utilization and pricing of global energy. These three subject matter experts will present distinct points of view on supply and demand, new technology, changing perspectives on environmental policy and the role of producers in North America as marginal suppliers to the global market. This panel includes:

- **Roger Aines**, Fuel Cycle Innovations Program Leader, Lawrence Livermore National Laboratory
- **Michelle Foss**, Chief Energy Economist and Program Manager, Bureau of Economic Geology, The University of Texas at Austin
- **Mike Lynch**, President, Strategic Energy and Economic Research, Inc.

On behalf of the sponsoring and supporting organizations and the Technical Program Committee; we are pleased to have you attend and participate in URTEC 2016.

Sincerely,

Technical Program Co-Chairs



**Tom Blasingame**  
Texas A&M University



**Skip Rhodes**  
Pioneer Natural Resources



**Gene Sparkman**  
Lumina Technologies Inc.

# TABLE OF CONTENTS

Sponsorship.....	3	Convention Center Floor Plans .....	38
Welcome Letter.....	4	Exhibitor Listing.....	40
Technical Program Committee .....	5	Exhibition Floor Plan .....	41
URTeC at a Glance .....	6	Exhibitor Directory.....	42
Technical Program at a Glance.....	8	Exhibition Highlights .....	51
Monday Technical Program .....	10	Networking Opportunities.....	52
Tuesday Technical Program.....	15	Career Building Sessions.....	52
Wednesday Technical Program.....	22	General Information.....	53
Presenter Cross Reference .....	28	Safety and Security .....	53
Short Courses.....	37	About San Antonio.....	54



## TECHNICAL PROGRAM COMMITTEE

**Tom Blasingame**  
Texas A&M University

### Technical Program Co-Chairs

**Skip Rhodes**  
Pioneer Natural Resources

**Gene Sparkman**  
Lumina Technologies Inc.

### Technical Program Committee

**Mike Abrams**, Consultant  
**Usman Ahmed**, Unconventional Energy Resources International  
**Johannes Alvarez**, Texas A&M University  
**Isaac Aviles**, Schlumberger  
**Mohammed Badri**, Schlumberger  
**Luis Baez**, BG Group  
**Lucas Bazan**, Bazan Consulting Inc.  
**Jyoti Behura**, Seismic Science LLC  
**Jennifer Bell**, Elements Offshore  
**Phillip Charlez**, Total  
**Doreen Chin**, Shell Exploration & Production Company  
**Craig Cipolla**, Hess Corporation  
**Sue Cluff**, Discovery Group  
**Margaret Cording**, Pioneer Natural Resources  
**David Craig**, Reservoir Development Corporation  
**John Curtis**, Colorado School of Mines  
**Deepak Devegowda**, University of Oklahoma  
**George Dozier**, Marathon Oil  
**Brian Driskill**, Shell Exploration & Production Company  
**Jim Erdle**, Computer Modelling Group Ltd.  
**Mark Falk**, Chesapeake Energy  
**Joe Frantz**, Range Resources  
**Mickey Friedrich**, Pioneer Natural Resources  
**Josh Froelich**, Southwestern Energy Company  
**David Fulford**, Apache Corporation  
**Rob Fulks**, Weatherford

**Lee Geiser**, Petrolink  
**Daniel Georgi**, Aramco Services Company  
**Jennifer Gujral**, Shell Exploration & Production Company  
**Mariano Gurfunkel**, Hess Corporation  
**Arthur Hale**, Aramco Services Company  
**Barbara Hill**, Schlumberger  
**Matt Honarpour**, BHP Billiton Petroleum  
**Hosein Kalaei**, ConocoPhillips  
**David Hume**, Core Lab  
**Dilhan Ilk**, DelGolyer and MacNaughton  
**Henry Jacot**, H-Frac Consulting Services LLC  
**Creties Jenkins**, Rose and Associates  
**Betty Jinks**, EnCana Oil & Gas (USA)  
**Valerie Jochen**, Schlumberger  
**Raymond Johnson**, Unconventional Reservoir Solutions  
**Michael Kendricks**, Devon Energy Corporation  
**George Koperna**, Advanced Resources International, Inc.  
**Matt Laughland**, Pioneer Natural Resources  
**Phillipe Legrand**, ALS Oil & Gas  
**Shawn Maxwell**, IMAGE  
**Jeff Moss**, ExxonMobil  
**Shauna Noonan**, Oxy  
**Sam Noynaert**, Texas A&M University  
**Terri Olson**, FEI  
**Chet Ozgen**, Nitec LLC  
**Erdal Ozkan**, Colorado School of Mines

**Javad Paktinat**, Anadarko Petroleum Corporation  
**Robin Pearson**, Anadarko Petroleum Corporation  
**Kent Perry**, RPSEA  
**Randall Pharis**, XTO Energy  
**Bobby Poe**, Schlumberger  
**Thaimar Ramirez**, Oxy  
**Raul Rebak**, GE Global Research  
**Kyle Richter**, Oxy  
**Randy Roadifer**, Consultant  
**Ross Rucker**, Aramco Services Company  
**Jay Rushing**, Llano Estacado Oil & Gas Resources LLC  
**Sathish Sankaran**, Anadarko Petroleum Corporation  
**Steve Sonnenberg**, Colorado School of Mines  
**Mel Sorrell**, Covey Park Energy LLC  
**Jay Stratton**, American Energy Partners  
**John Thompson**, NCS Multistage  
**Mark Tobey**, EnCana Oil & Gas (USA)  
**Doug Valleau**, Hess Corporation  
**Rick Walker**, BHP Billiton Petroleum  
**Curtis Whitson**, NTNU  
**Daniel Xia**, Consultant  
**Katerina Yared**, QEP Resources  
**Jeff Yarus**, Halliburton  
**David Yaw**, Noble Energy

SATURDAY	
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 1: Integrating Data from Nano- to Macro-Scale: Improving Characterizations of Unconventional Plays (AAPG)
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 3 (Day One): Understanding and Adapting Rockphysics Principles for Mudrock (Shale) Reservoirs (SEG)
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 4 (Day One): Discovery and Recovery Thinking in Shales (SPE)
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 5 (Day One): Forecasting Well Production Data in Unconventional Resources (SPE)
12:00 p.m.–5:00 p.m.	Registration
SUNDAY	
7:30 a.m.–5:30 p.m.	Registration
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 3 (Day Two): Understanding and Adapting Rockphysics Principles for Mudrock (Shale) Reservoirs (SEG)
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 4 (Day Two): Discovery and Recovery Thinking in Shales (SPE)
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 5 (Day Two): Forecasting Well Production Data in Unconventional Resources (SPE)
8:00 a.m.–5:00 p.m.	Pre-Conference Short Course 7: Unconventional Reservoir Assessment – An Integrated Approach (AAPG)
MONDAY	
7:00 a.m.–6:00 p.m.	Registration
8:30 a.m.–10:00 a.m.	Opening Plenary Session: The U.S. Returns to Pre-OPEC Dominance
10:00 a.m.–11:00 a.m.	Breakfast Bites with Exhibitors
10:00 a.m.–7:00 p.m.	Exhibition
10:00 a.m.–7:00 p.m.	Core Exhibits
10:40 a.m.–12:00 p.m.	Plenary Session: Technology, Regulation, and the Future of Oil and Gas and Alternatives
12:05 p.m.–1:15 p.m.	Topical Luncheon: Earning Trust – Operating in a Distrusting World*
12:05 p.m.–1:15 p.m.	Topical Luncheon: Cognitive Bias, the “Elephant in the Living Room” of Science and Professionalism*
1:45 p.m.–5:00 p.m.	Technical Presentations
1:45 p.m.–3:05 p.m.	Interactive Panel: Unconventional Research and Education – Where Are We Now?
1:45 p.m.–3:05 p.m.	Panel: Reservoir to Reserves
1:50 p.m.–5:10 p.m.	ePapers
2:00 p.m.–3:30 p.m.	Career Building Session: How to Be an Independent or Consultant: Build Your Own Opportunities
3:05 p.m.–3:45 p.m.	Refreshment Break in the Exhibition Hall
5:00 p.m.–7:00 p.m.	Opening Reception in the Exhibition Hall



## No-Electronic Capturing Policy

Capturing or photographing contents of Technical or ePaper Presentations or exhibition booths via any electronic device or media is strictly prohibited at URTeC.

TUESDAY	
6:30 a.m.–5:30 p.m.	Registration
7:00 a.m.–8:15 a.m.	Topical Breakfast: Highlights from SPEE Monograph 4: Estimating Developed Reserves in Selected Low-Permeability Unconventional Reservoirs*
7:00 a.m.–8:15 a.m.	Topical Breakfast: The Outlook for Energy: A View to 2040*
8:25 a.m.–11:40 a.m.	Technical Presentations
9:00 a.m.–6:00 p.m.	Exhibition
9:00 a.m.–6:00 p.m.	Core Exhibits
10:10 a.m.–10:50 a.m.	Refreshment Break in the Exhibition Hall
10:20 a.m.–12:00 p.m.	ePapers
12:05 p.m.–1:15 p.m.	Topical Luncheon: The Clues in the Crumbs: A Geostatistician’s Fascination with the Data That Challenges Our Beliefs About Climate Change*
12:05 p.m.–1:15 p.m.	Topical Luncheon: A Review of Induced Seismicity Issues in Oklahoma and Lessons Learned*
1:45 p.m.–5:00 p.m.	Technical Presentations
1:45 p.m.–3:05 p.m.	Special Session: Technology Integration: Today’s Tools and Tomorrows Technology
1:50 p.m.–5:10 p.m.	ePapers
2:00 p.m.–3:30 p.m.	Career Building Session: Young Professional Focus “How to Build Your Own Business Opportunities”
3:05 p.m.–3:45 p.m.	Refreshment Break in the Exhibition Hall
5:00 p.m.–6:00 p.m.	Networking Reception in the Exhibition Hall
WEDNESDAY	
6:30 a.m.–1:00 p.m.	Registration
7:00 a.m.–8:15 a.m.	Topical Breakfast: Banning Proven Technologies on Possibilities Rather Than Probabilities: A Closer Look at the New York Fracking Ban*
7:00 a.m.–8:15 a.m.	Topical Breakfast: The Permian Basin Renaissance
8:25 a.m.–11:40 a.m.	Technical Presentations
9:00 a.m.–1:00 p.m.	Exhibition
9:00 a.m.–1:00 p.m.	Core Exhibits
9:30 a.m.–12:00 p.m.	ePapers
10:10 a.m.–10:50 a.m.	Refreshment Break in the Exhibition Hall
1:45 p.m.–3:05 p.m.	Special Session: Progress, Practices and Pitfalls in Unconventional Core Analysis
1:45 p.m.–4:30 p.m.	Technical Presentations



# TECHNICAL PROGRAM AT A GLANCE

\*Cancellations and changes in the program will occur. For the most up-to-date Technical Program visit [URTeC.org](http://URTeC.org)

Plenaries, Panels & Special Sessions			
Opening Plenary Session: The U.S. Returns to Pre-OPEC Dominance	Monday	a.m.	Plenary
Plenary Session: Plenary Session: Technology, Regulation, and the Future of Oil and Gas and Alternatives	Monday	a.m.	Plenary
Panel: Unconventional Research and Education: Where Are We Now?	Monday	p.m.	Panel
Panel: Reservoirs to Reserves	Monday	p.m.	Panel
Special Session: Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study	Tuesday	p.m.	Special Session
Special Session: Technology Integration: Today's Tools and Tomorrow's Technology	Tuesday	p.m.	Special Session
Special Session: ASME Hydraulic Fracturing	Wednesday	a.m.	Special Session
Special Session: ASCE Infrastructure Issues Within Unconventional Resource Development I	Wednesday	a.m.	Special Session
Special Session: ASCE Infrastructure Issues Within Unconventional Resource Development II	Wednesday	p.m.	Special Session
Panel: Progress, Practices and Pitfalls in Unconventional Core Analysis	Wednesday	p.m.	Panel
The Operators Speak – A Forum Dedicated to Integrated Team Presentations and Case Studies			
Operator's Forum I	Tuesday	a.m.	Technical
Operator's Forum II	Tuesday	a.m.	Technical
Operator's Forum III – International	Tuesday	p.m.	Technical
Operator's Forum IV	Wednesday	p.m.	Technical
Geological and Geophysical Characterization of Unconventional Resources			
Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy and Diagenesis	Monday	p.m.	ePaper
Aligning Geoscience and Engineering Workflows by Reservoir Traps	Monday	p.m.	Technical
Seismic Attributes	Monday	p.m.	Technical
Horizontal Targeting Strategies and Challenges	Tuesday	a.m.	Technical
Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy and Diagenesis	Tuesday	a.m.	Technical
Geological and Geophysical Characterization of Unconventional Reservoirs	Tuesday	a.m.	ePaper
Multi-Discipline Data Integration	Tuesday	a.m.	ePaper
Geological and Geophysical Characterization of Unconventional Reservoirs	Tuesday	p.m.	ePaper
Seismic Attributes	Tuesday	p.m.	ePaper
Multi-Discipline Data Integration I	Tuesday	p.m.	Technical
Microseismic Fracture Map	Wednesday	a.m.	Technical
Multi-Discipline Data Integration II	Wednesday	p.m.	Technical
Petrophysical Characterization Unconventional Reservoirs			
Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs	Monday	p.m.	Technical
Unraveling Unconventional Properties With Log Integration	Tuesday	a.m.	Technical
Core Measurements for Improved Characterization of Unconventional Reservoirs	Tuesday	p.m.	Technical
Logging Technologies Applied to Unconventional Reservoirs	Tuesday	p.m.	ePaper
Evolving Understanding of Permeability and Saturation Through Modeling	Wednesday	a.m.	Technical
Petrophysical Characterization Unconventional Reservoirs	Wednesday	a.m.	ePaper
Application of Core Technologies to Unconventional Reservoirs	Wednesday	a.m.	ePaper
Various Approaches to Microstructure in Unconventional Reservoirs	Wednesday	p.m.	Technical





# TECHNICAL PROGRAM AT A GLANCE

\*Cancellations and changes in the program will occur. For the most up-to-date Technical Program visit [URTeC.org](http://URTeC.org)

Understanding and Applying Geomechanics and Mechanical Stratigraphy to Unconventional Reservoir Development			
Geomechanics I	Monday	p.m.	Technical
Geomechanics	Monday	p.m.	ePaper
Geomechanics II	Tuesday	a.m.	Technical
Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons			
Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons	Monday	p.m.	ePaper
Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons I	Tuesday	a.m.	Technical
Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons II	Tuesday	p.m.	Technical
Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons III	Wednesday	a.m.	Technical
Analytics and the Digital Oilfield			
Data Analytics	Tuesday	a.m.	ePaper
Production Performance of Tight Oil and Gas Reservoirs			
Integrated Reservoir Modeling	Monday	p.m.	Technical
Production Performance of Tight Oil and Gas Reservoirs	Monday	p.m.	ePaper
Understanding Mechanisms for Improving Recovery	Tuesday	a.m.	Technical
Production Performance of Tight Oil and Gas Reservoirs	Tuesday	p.m.	ePaper
Flow Behavior From Nanopores to Reservoir Scale	Tuesday	p.m.	ePaper
Advances in Rate/Pressure Transient Analysis Methodologies	Wednesday	a.m.	Technical
Flow Behavior From Nanopores to Reservoir Scale	Wednesday	p.m.	Technical
Stake Holder Management and Social Performance (HSSE)			
HSSE Practices and Operations	Monday	p.m.	ePaper
HSSE Practices and Operations	Tuesday	p.m.	Technical
Reserves Estimation and Forecasting			
Surviving in Low Price Environment	Monday	p.m.	Technical
EUR and Performance Prediction	Tuesday	a.m.	Technical
Production Diagnostics/Analysis Methods and Well Spacing	Tuesday	p.m.	Technical
Reserves Estimation and Forecasting	Wednesday	a.m.	ePaper
Well Construction Practices			
Well Construction	Monday	p.m.	Technical
Well Construction	Tuesday	a.m.	ePaper
Well Completion and Stimulation Practices			
Case Histories Innovative Stimulations	Monday	p.m.	ePaper
Case Histories Innovative Stimulations	Tuesday	a.m.	Technical
Case Histories Innovative Stimulations, Integrating Data to Optimize	Tuesday	p.m.	Technical
Case Histories Innovative Stimulations, Integrating Data to Optimize	Wednesday	a.m.	ePaper
Emerging Unconventional Plays			
Emerging Global in Emerging Plays	Wednesday	p.m.	Technical
Emerging Insights in Unconventional Plays	Wednesday	a.m.	Technical
Emerging Plays in Unconventionals	Monday	p.m.	ePaper
Mid-Stream Integration			
Surface - Facilities, Operations and Performance	Wednesday	p.m.	Technical

## Opening Plenary Session

### The U.S. Returns to Pre-OPEC Dominance

**Time:** 8:30 a.m.–10:00 a.m.  
**Location:** Stars at Night Ballroom 1  
**Fee:** Included with registration

Scott Sheffield and Dan Dinges both lead U.S. independents that produce hydrocarbons from the Permian and Appalachian basins which host two of the largest petroleum provinces in the hemisphere and are among some of the largest in the world. The oil and gas production stream from these and similar unconventional resources contributed to the shale revolution/insurgency and helped catapult the U.S. into a seat at the global petrostate table. Mr. Sheffield and Mr. Dinges will each speak about the emergence of the U.S. independent as a driver for joining the global petroleum exporting community and Dr. Ross from PIRA will review some of the lessons learned from this success and outline views of the future that arise from the globalization of our own domestic industry.



Scott D. Sheffield



Dan O. Dinges



Gary N. Ross

#### Panelists:

- **Scott D. Sheffield**, Chairman and Chief Executive Officer, Pioneer Natural Resources
- **Dan O. Dinges**, Chairman, President and Chief Executive Officer, Cabot Oil and Gas Corporation
- **Gary N. Ross**, Executive Chairman and Head of Global Oil, PIRA Energy Group Inc.

## Plenary Session

### Technology, Regulation, and the Future of Oil and Gas and Alternatives

**Time:** 10:40 a.m.–12:00 p.m.  
**Location:** Stars at Night Ballroom 1  
**Fee:** Included with registration  
**Moderator:** **Mariano Gurfinkel**, Senior Advisor, Hess Corporation

The last 20 years have seen the rapid rise and faster fall of oil and gas prices. Depressed natural gas prices have been the norm in North America for nearly eight years. Continued growth in supply from the development of unconventional resources coupled with slow growth or even decline in demand in OECD countries have conspired to keep oil prices low while OPEC once again is showing its inability to act as an effective cartel. Will "lower for longer" be the scenario for oil?

With consideration to the spectrum of independent variables that control both the utilization and pricing of global energy, this follow-on session will present distinct points of view on supply and demand, new technology, changing perspectives on environmental policy and the

role of producers in North America as marginal suppliers to the global market.



Roger Aines



Michelle Foss



Mike Lynch

- 10:40 Introductory Remarks  
 10:45 **Roger Aines**, Fuel Cycle Innovations Program Leader, Lawrence Livermore National Laboratory  
 10:55 **Michelle Foss**, Chief Energy Economist and Program Manager, Bureau of Economic Geology's Center for Energy Economics, The University of Texas at Austin  
 11:05 **Mike Lynch**, President, Strategic Energy and Economic Research Inc.  
 11:15 Moderated Panel  
 11:45 Audience Q&A

## Topical Luncheons

### Earning Trust – Operating in a Distrusting World

**Time:** 12:05 p.m.–1:15 p.m.  
**Location:** Room 217 A-B  
**Fee:** \$50 per person  
**Speaker:** **Janeen Judah**, 2017 Society of Petroleum Engineers (SPE) President



Janeen Judah

Reputations are earned. The public demands perfection in our operations, but we work in an unpredictable and imperfect world. Sustainability and environmental awareness require small development footprints and controlled production streams. As engineers, we often try to present logic and facts, when emotions and media buzz are what really drives the conversation when it comes to sustainability and environmental awareness. It's not "news" to present the good we do – but it is news to show the latest oil spill or some hydraulic fracturing pollution claim.

In the oil and gas industry, we all pay for the mistakes of sloppy operators and that will only worsen with increasing financial pressures. How do we preserve our license to operate in a world that distrusts us? This presentation provides perspectives and lessons learned in dealing with sustainability and environmental awareness as part of one's job description. The goal of this presentation is to enlighten, inform and guide the conversation of earning trust and building one's reputation in the sustainability/environmental awareness domain.



### No-Electronic Capturing Policy

Capturing or photographing contents of Technical or ePaper Presentations or exhibition booths via any electronic device or media is strictly prohibited at URTeC.

## Cognitive Bias, the “Elephant in the Living Room” of Science and Professionalism

**Time:** 12:05 p.m.–1:15 p.m.  
**Location:** Room 217 C-D  
**Fee:** \$50 per person  
**Speaker:** **Peter R. Rose**, Senior Associate, Rose and Associates



Peter R. Rose

Cognitive Bias (CB), in its many manifestations, is the major cause of geotechnical overestimation and faulty probability forecasts in petroleum geoscience. Companies that routinely utilize disciplined methods of Risk Analysis reduce CB and tend to deliver on their E&P promises.

Nobel laureate Daniel Kahneman and others have made scientists much more aware of the dangers that CB pose for the practice of objective, reliable science. However, CB remains a problem in public-sector science because routine E&P organizational and economic pressures are less active within academic/governmental organizations. Nobel laureate Richard Feynman recognized (1974) the danger of CB: “the first principle is that you must not fool yourself – and you are the easiest person to fool.” Feynman knew that dedicated practice of the Scientific Method is the key to elimination of CB.

## Special Session

### Unconventional Research and Education – Where Are We Now?

**Time:** 1:45 p.m.–3:05 p.m.  
**Location:** Room 301  
**Fee:** Included with registration  
**Moderator:** **Doug Valleau**, Chief Geologist and Director, Unconventional Technology, Hess Corporation

The rise of unconventional oil and gas has spurred the largest growth in global oil supply in the history of the industry. In the United States alone, production has risen to over nine million barrels equivalent per day, the highest level in 40 years. Along the way, university enrollment in petroleum-related sciences nearly doubled between 2010 and 2014 and investments in sponsored research followed suit. Unfortunately, increased production and geopolitical dynamics have caused a dramatic lowering of the commodity price prompting many companies to reduce their costs and investments. In this session, the panel will debate how to sustain research and programs to support engineering and geoscience education in spite of the current landscape.



Erdal Ozkan



Mark Northam



John McLennan



Dirk McDermott

- 1:45 Introductory Remarks
- 1:50 **Erdal Ozkan**, F.H. “Mick” Merelli/Cimarex Energy Distinguished Department Head Chair in Petroleum Engineering – Colorado School of Mines
- 2:00 **Mark Northam**, Director, School of Energy Resources - University of Wyoming
- 2:10 **John McLennan**, Associate Professor of Chemical Engineering, Energy & Geoscience Institute at the University of Utah - University of Utah
- 2:20 **Dirk McDermott**, Managing Partner, Altira Group LLC
- 2:30 Panel Discussion
- 2:50 Audience Q&A

## Panel

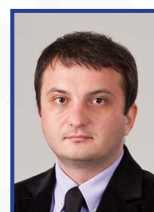
### Reservoir to Reserves

**Time:** 1:45 p.m.–3:05 p.m.  
**Location:** Room 225 A-B  
**Fee:** Included with registration  
**Moderator:** **Tom Blasingame**, Professor, Texas A&M University

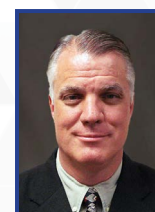
This special session presents the results of the first SPE Summit on “Reservoir Meets Reserves” held in August of 2015. The Summit was the primary outcome of the “Unconventional Reserves Taskforce,” a multi-society initiative of SPE, SPEE, AAPG, SEG, SPWLA and WPC. The Summit addressed questions related to the differences in reservoir engineering analysis, interpretation, and modeling compared to simplified reserves analysis methods used to estimate reserves. Numerous survey questions were posed on the effectiveness of the relationship between reservoir engineering methods and reserves analysis and the results of these surveys were incorporated in the summary, conclusions, and recommendations of this study.



John Ritter



Dilhan Ilk



Tom Blasingame

- 1:45 Introductory Remarks
- 1:50 **John Ritter**, Senior Vice President Reserves, Oil & Gas, Occidental Petroleum
- 2:00 **Dilhan Ilk**, Vice President, DeGolyer and MacNaughton
- 2:10 **Tom Blasingame**, Professor, Texas A&M University
- 2:20 Panel Discussion
- 2:50 Audience Q&A



Please watch for team presentations which are given additional time to display integrated approaches to unconventional plays. Each team consists of no more than three members with different technical backgrounds (geoscience, petrophysics, engineering, operations, etc.)

## Monday Afternoon Technical Presentations

### Geomechanics I

Room 303

**Co-Chairs:** M. Friedrich and C. Ozgen

- 1:45 **Introductory Remarks**
- 1:50 **Fracture Properties Characterization of Shale Rocks:** Z. Ye, A. Ghassemi, S. Riley
- 2:15 **Brittleness Index: A Parameter to Embrace or Avoid?:** E. J. Mathia, K. Ratcliffe, M. Wright
- 2:40 **Integrated Interpretation of Microseismic and Petroleum Engineering Data for Comparison of Gas Production in Two Interfering Adjacent Wellpads in the Horn River Basin, Canada:** A. Yousefzadeh, Q. Li, C. J. Virues, R. Aguilera
- 3:05 **Refreshment Break**
- 3:45 **Experimental Study of Hydraulic Fracture/Natural Fracture Interaction on a Tight Sandstone Formation:** X. Yang, J. Burghardt, H. Zhang, Y. Zhang, F. Zhang, J. Pei\*, C. Qi
- 4:10 **Geomechanics of Fault Activation and Induced Seismicity During Multi-Stage Hydraulic Fracturing:** M. Grob, S. Maxwell\*
- 4:35 **Geomechanical Characterization of the Upper and Lower Bakken Shale and the Pronghorn Member in the Williston Basin:** J. Xu, D. Nandy, S. Sonnenberg
- 5:00 **Geomechanical Implications on Unconventional Reservoir Fracturing in Saudi Arabi:** S. M. Khan, M. Oparin, A. Sadykov, A. Momin, S. Kahn, D. Bentley

### Surviving in Low Price Environment

Room 225 A-B

**Co-Chairs:** G. Koperna and J. Ritter

- 1:45 **Introductory Remarks**
- 1:50 **Improving IRR and Safety Through Operational Efficiency:** M. J. Lochmann, W. Jackson, R. Bal
- 2:15 **Blinking Out: The Bakken Without Capital for Fracking and Drilling:** H. A. Kuzma, D. Purvis
- 2:40 **Resilience of the U.S. Shale Production to the Collapse of Oil & Gas Prices:** P. Charlez, P. Delfiner

### Well Construction

Room 225 C-D

**Co-Chairs:** J. Moss and M. Sorrell

- 1:45 **Introductory Remarks**
- 1:50 **Effects of Toe-Up vs. Toe-Down Wellbore Trajectories on Production Performance in the Cana Woodford:** S. G. Browning, R. Jayakumar
- 2:15 **Impact of Coal Mine Water on Modern Gas Well Cements:** J. Gardiner, B. Kutcho, J. Fazio, R. Spaulding, A. Hakala
- 2:40 **Improved Tools and Procedures Enable More Effective Downhole Slurry Placement When Planning and Executing Section or Hole Abandonments in Unconventional Wells:** H. Rogers, Z. Casias
- 3:05 **Refreshment Break**
- 3:45 **Enhancing the Annular Barrier With a Low-Portland Alternative:** T. J. Pisklak, R. G. Morgan, J. R. Benkley

- 4:10 **Overcoming Liner Installation Challenges in Extended Reach Laterals With Burst Disk Float Collar:** M. Miller, P. Mogenhan, K. Hale, C. Mullen
- 4:35 **Centralizer Selection and Placement Basis for Overcoming Liner Running Challenges in Extended-Reach Horizontal Bakken Shale Completions:** J. Long, T. Abshire, D. Dall'Acqua
- 5:00 **What I Wish My Geologist Knew About Life and Drilling: Geosteering From a Drilling Engineer's Perspective:** S. Noynaert

### Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs

Room 302 A-B

**Co-Chairs:** S. Kelly and K. Yared

- 1:45 **Introductory Remarks**
- 1:50 **Understanding Organic Matter Structural Changes With Increasing Thermal Maturity From Oil Shale Plays Through SEM Imaging:** L. Alcantar-Lopez
- 2:15 **Pore Systems of the Cline Shale, Midland Basin, West Texas:** R. M. Reed, R. Rousch
- 2:40 **Characterizing Porosity in Distal Lower Shoreface Sands Within the Montney Formation, Alberta: Digital Rock Analysis for Reservoir Characterization:** G. MacDonald, V. Ravlo, B. Hosegood, T. Olson
- 3:05 **Refreshment Break**
- 3:45 **Techniques for Using Core CT Data for Facies Identification and Analysis:** B. Hall, A. Govert
- 4:10 **3-D Multiscale Imaging of the Distribution of Pores, Organic Matter and Oil in Place in Vaca Muerta Shale Samples:** S. Sommacal, A. Fogden, B. Young, E. Goergen, D. Marchal, A. Perez Mazas, C. Naides, G. Kohler, M. Cagnolati
- 4:35 **Understanding Wettability Heterogeneity at the Micro- and Nano-Scale in Unconventional Light Oil Reservoirs:** C. Debuhr, H. Deglint\*, C. Clarkson, F. Krause
- 5:00 **Effects of Nanoscale Pore Confinement on CO2 Immiscible and Miscible Processes:** K. Zhang, Z. Chen, N. Chen

### Seismic Attributes

Room 304 A-B

**Co-Chairs:** R. Pharis and G. Sparkman

- 1:45 **Introductory Remarks**
- 1:50 **Calibration of PS Shear Wave Anisotropy in a Mississippi Lime Play, North-Central Oklahoma:** S. Singleton, S. Chi, L. Sanford, P. Constance
- 2:15 **Understanding Azimuthal P-Wave Anisotropy Through Multiple Vendor and Attribute Comparisons:** J. Rich, M. Rauche-Davies, B. Kennedy
- 2:40 **Geomechanical and Geophysical Analysis Through Wavefield Re-Datuming and Inversion of a Wattenberg Field:** J. Behura, P. Smith, O. Quezada
- 3:05 **Refreshment Break**
- 3:45 **Extracting Meaningful Estimates of Rock Properties From 3-D Anisotropic Velocity Models Derived from Borehole Microseismic:** S. M. Taylor, J. King

- 4:10 **Azimuthal Velocity Analysis of 3-D Pre-Stack Seismic Data for Fracture-Induced Anisotropy in the Altamont-Bluebell Field:** K. Al Dulaijan, G. Margrave
- 4:35 **Interpolating High-Resolution Well Log Volume Using Seismic Dip Vectors and Control Grid:** Y. Yu
- 5:00 **Prestack Seismic Data Inversion for Shale Gas Reservoir Characterization in China:** G. Yu, Y. Zhang, X. Wang, X. Liang

## Aligning Geoscience and Engineering Workflows by Reservoir Traps

Room 304 C

**Co-Chairs:** L. Baez and M. Falk

- 1:45 **Introductory Remarks**
- 1:50 **Determining Maximum Horizontal Stress with Microseismic Focal Mechanisms – Sase Studies in the Marcellus, Eagleford, Folcamp:** A. Agharazi, O. Teran
- 2:15 **Horizontal Pressure Disequilibrium and Its Indication on Fluid Continuity in Shale Plays:** D. Xia
- 2:40 **Correlation of Acoustic Velocity, Stress, Rock Composition, Organic Matter and Rock Lamination in Organic-Rich Shale:** A. A. Alqahtani, A. N. Tutuncu
- 3:05 **Refreshment Break**
- 3:45 **Risk Reduction for Effectively Increasing Drilling Efficiency in the Thin Reservoirs of the Three Forks of the Williston Basin: A Case Study Employing a Geostatistical Seismically Constrained Subsurface Geomodel:** I. Tsybulkina, F. Brito, C. Marin\*, K. Chesser, S. M. Mogensen, S. D. Fluckiger
- 4:10 **Quantifying Natural Fracture Spatial Organization in Horizontal Image Logs: Application in Unconventional Reservoirs:** J. Z. Li, J. F. Gale, R. A. Marrett, S. E. Laubach
- 4:35 **Fault and Fracture Detection in Unconventional Reservoirs: A Utica Shale Study:** H. Refayee, S. Adcock, H. Jaglan

## Integrated Reservoir Modeling

Room 302 C

**Co-Chairs:** G. Dozier and C. Santa Cruz

- 1:45 **Introductory Remarks**
- 1:50 **Semi-Analytical Model for Matching Flowback Through Long-Term Production of Multi-Fractured Tight Oil Wells:** C. Clarkson, F. Qanbari, J. Williams-Kovacs
- 2:15 **Quantifying Changes in Hydraulic Fracture Properties Using a Multi-Well Integrated Discrete Fracture Network (DFN) and Reservoir Simulation Model in an Unconventional Wolfcamp Fm., Midland Basin, West Texas:** A. Ajayi, B. Schmitt, R. Cox, B. Elliott
- 2:40 **History Matching and Prediction Algorithm for Unconventional Production Surveillance:** X. Jia, A. Filippov, T. McNealy
- 3:05 **Refreshment Break**
- 3:45 **Integrated Subsurface Modeling for Unconventional Assets: A Bakken Application:** Y. Dong, J. Tollefsrud, S. Hernandez-Cordon, B. Hart, T. Schroeder, T. O. Sygnabere, E. Radjef
- 4:10 **Combining Hydraulic Fracturing Considerations and Well Spacing Optimization for Pad Development in the Vaca Muerta Shale:** M. Suarez, S. Pichon

- 4:35 **Canva Woodford: Seismic to Simulation Reservoir Characterization:** M. Almasoodi, R. Jayakumar, P. Nguyen
- 5:00 **How to Model and Improve Our Understanding of Liquid-Rich Shale Reservoirs With Complex Organic/Inorganic Pore Network:** M. Khoshghadam, A. Khanal, W. Lee, N. Rabinejadganji

## Monday Afternoon ePapers

### Understanding Petroleum System Chemistry From Source Rocks to Produced Hydrocarbons

ePaper Station A 1:45 p.m. – 4:45 p.m.

**Chair:** M. Laughland

- 1:45 **Introductory Remarks**
- 1:50 **Reducing Ambiguity in Source Rock Analyses:** S. T. Dang, C. Sondergeld, C. Rai
- 2:15 **Investigation of Gas-Water Distribution Characteristics in Kerogen Pores: A View of Intermolecular Surface Force:** D. Feng
- 2:40 **Iron Content of Organogenic Dolomite as a Reflection of Chemical Reactions Within the Zone of Sulfate Reduction: A Potential Tool for Depositional Studies of Organic-Rich Mudstones:** H. Howe, S. Chipera, L. Alcontar-Lopez



Setting the pace in providing energy for the world

while staying committed to our values.

ConocoPhillips is proud to be an industry leader in liquids-rich unconventional reservoir plays. We have significant acreage holdings in the three largest liquids-rich plays in North America — the Eagle Ford, Bakken and Permian Basin — in addition to considerable acreage in several of Canada's leading plays. We develop these assets and other emerging opportunities in line with our SPIRIT Values—Safety, People, Integrity, Responsibility, Innovation and Teamwork.

**ConocoPhillips**

© ConocoPhillips Company, 2016. All rights reserved.

www.conocophillips.com

# MONDAY TECHNICAL PROGRAM

- 3:05 **Geochemical Analysis of Parasequences Within the Productive Middle Member of the Eagle Ford Formation at Lozier Canyon Near Del Rio, Texas:** T. Shane
- 3:30 **An Oil-Source Rock Correlation Examining the Potential of the Chattanooga Shale as a Source Rock for Oil Within the Spivey-Grabs-Basil Field, Kingman and Harper Counties, Kansas:** M. A. Wall, M. Totten
- 3:55 **Quantification of Retained Hydrocarbon in Source Rocks and Its Application in Shale Oil and Gas Assessment:** J. Li, J. Shi, Y. Wang, W. Ma, D. Wang, C. Ma, Z. Li
- 4:20 **Trapped Fluid Analysis of 58 Wells From the SCOOP and STACK Plays, Oklahoma:** D. Hall, C. Welker, R. Lishansky, W. Phiukhao, R. Moore

## Geomechanics

*ePaper Station A 5:00 p.m. –5:30 p.m.*

**Co-Chairs:** M. Friedrich and C. Ozgen

- 5:00 **Introductory Remarks**
- 5:05 **Stress-Dependent Permeability and Dynamic Elastic Moduli of Reservoir and Seal Shales:** D. Katsuki, A. Padin Deben, O. Adekunle, A. J. Rixon, A. N. Tutuncu
- 5:30 **Combining the Stochastic Earth Model with Geomechanical Modeling to Quantify Well Performance - Application to the Mississippian, Barnett Shale:** Y. E. Aimene, J. Yarus, R. Dusterhoft, C. Davila

## Case Histories Innovative Stimulations

*ePaper Station B 1:45 p.m. –3:55 p.m.*

**Co-Chairs:** I. Aviles and C. Cipolla

- 1:45 **Introductory Remarks**
- 1:50 **How Low Can You Go: Quality vs. Cost:** E. Schnoor, J. Maxey, A. Russell
- 2:15 **A Geomechanical Study of Refracturing Based on Microseismic Observations-Case Study of Haynesville and Eagleford Wells:** A. Agharazi, S. Kashikar
- 2:40 **Accelerating Refracturing Success in the Eagle Ford via Collaboration:** R. Malpani, L. Charry, B. Clark, A. Acock
- 3:05 **Completion Optimization Using Vertical and Horizontal Measurements, an Eagle Ford Shale Case Study:** W. Kreimeier, M. Panjaitan\*, K. Fisher, J. Xu, D. McMillan

## Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy and Diagenesis

*ePaper Station B 4:05 p.m. –5:50 p.m.*

**Co-Chairs:** R. Dobliger and B. Driskill

- 4:05 **Introductory Remarks**
- 4:10 **Correlation of Eagle Ford South Texas Eaglebine East Texas and Tuscaloosa Louisiana-Mississippi Using High Resolution Biostratigraphy, TOC/%CO<sub>3</sub> and Maximum Flooding Surface Sequence Stratigraphic Analysis:** W. Wornardt
- 4:35 **Could Diagenesis in Carbonate Source Rock Predefine Its Fracturing Behavior?:** M. Hussain, N. Minhas, G. Agrawal

- 5:00 **Integrated Numerical Simulation Stress Field and Seismic Attribute to Predict Shale Fracture Distribution:** S. Wang, M. Guo
- 5:25 **Outcrop-Subsurface Geological Characterization of La Luna Formation as an Unconventional Resource in the Northwest Lago de Maracaibo Basin and North Andean Flank, Venezuela:** A. Liborius-Parada, R. M. Slatt

## Logging Technologies Applied to Unconventional Reservoirs

*ePaper Station C 1:45p.m. –4:20 p.m.*

**Co-Chairs:** K. Yared and J. Gustavson

- 1:45 **Introductory Remarks**
- 1:50 **Joint Petrophysical Interpretation of Multi-Frequency Electromagnetic Measurements in Clay and Conductive-Mineral-Rich Mudrocks:** S. Misra, Y. Han
- 2:15 **Determination of Natural Fracture Porosity Using NMR:** D. Green, M. Dick
- 2:40 **TOC Content Distribution Features in Utica-Point Pleasant Formations, Appalachian Basin:** G. Wang
- 3:05 **Fracture, Fault and Reservoir Fluid Characterization From Advanced Surface Logging Technologies in the Organic Tight Rock Formation, Arkansas:** K. Gawankar, C. Pate, I. Easow, N. Cameron
- 3:30 **Validation of Core-Based Mineralogy is Necessary for the Accurate Evaluation of Mineralogy Derived From Elemental Spectroscopy Logs:** A. Siddiqui, J. Longo, M. Manning
- 3:55 **Integration of Whole Core, Drill Cuttings and Well Log Data for Improved Characterization in the Wolfcamp Formation:** J. Walls, A. Morcote, B. Guzman, M. Everts, D. Buller

## HSSE Practices and Operations

*ePaper Station C 4:35 p.m. –5:30 p.m.*

**Co-Chairs:** J. Bell and P. Towango

- 4:35 **Introductory Remarks**
- 4:40 **Simple, Environmentally Friendly and Economical Treatment Methods Which Maximize the Reuse of Produced Waters for Frac Operations:** B. Donaldson, M. Dodd, Y. Harvey
- 5:05 **Leading Safety Performance Indicator Framework for Unconventional Hydraulic Fracturing Operation:** H. Hamedifar, R. E. Green, P. Fanailoo



Please watch for team presentations which are given additional time to display integrated approaches to unconventional plays. Each team consists of no more than three members with different technical backgrounds (geoscience, petrophysics, engineering, operations, etc.)

# TUESDAY TECHNICAL PROGRAM

## Topical Breakfasts

### Highlights from SPEE Monograph 4: Estimating Developed Reserves in Selected Low-Permeability Unconventional Reservoirs

**Time:** 7:00 a.m.–8:15 a.m.

**Location:** Room 217 A-B

**Fee:** \$35 per person

**Speaker:** **Creties Jenkins**, Partner, Rose and Associates



Creties Jenkins

The Society of Petroleum Evaluation Engineers (SPEE) has recently published Monograph 4, providing guidance to forecast production and estimate developed reserves in low permeability reservoirs including shales, carbonates and sandstones. This talk will highlight key aspects of the Monograph, beginning with the impacts of geoscience, drilling, completions and operations. The focus then turns to conventional and alternative decline curve analysis, rate-transient analysis and numerical simulation techniques for forecasting well performance. The talk will close with a discussion of methods for quantifying uncertainty and a review of the worked example problems at the end of the Monograph.

### The Outlook for Energy: A View to 2040

**Time:** 7:00 a.m.–8:15 a.m.

**Location:** Room 217 C-D

**Fee:** \$35 per person

**Speaker:** **Ken Golden**, Commercial Advisor, ExxonMobil Exploration Company



Ken Golden

Forecasting long-term energy trends begins with a simple fact: people need energy. Over the next few decades, population and income growth are expected to create new demands for energy. As people's needs and modern technologies continue to evolve, so too will the energy landscape.

The scale and nature of this challenge is readily apparent in ExxonMobil's Outlook for Energy: A View to 2040, a long-term global forecast of energy demand and supply trends. Understanding the factors and choices that drive the world's energy needs is the mission of The Outlook. By sharing The Outlook, ExxonMobil hopes to broaden the understanding among individuals, businesses and governments.

## Tuesday Morning Technical Presentations

### Operator's Forum I

Room 301

**Chair:** S. Rhodes

8:25 **Introductory Remarks**

8:30 **Geological and Geomechanics Modeling of the Haynesville Shale:** S. Bayer\*, M. Wunderle, R. Alcalde, E. Araujo, C. Yao, F. Suhy, T. Jo, F. Bases, A. Sani, Y. Ma, A. Bansal, R. Goudge

9:20 **Low Cost Field Application of Pressure Transient Communication for Rapid Determination of the Upper Limit of Horizontal Well Spacing:** W. K. Rucker, J. Bobich

### Operator's Forum II

Room 301

**Chair:** S. Rhodes

10:40 **Introductory Remarks**

10:45 **The Updip Ordovician Pt. Pleasant Shale, Eastern Ohio, Appalachian Basin, USA:** T. P. Bulling, J. J. Melick, J. Koch, S. Thomas, F. Davison, T. E. Diehr

11:35 **A Novel Tight Gas Evaluation Workflow for Targeting and Optimizing the Emerging Horizontal Lower Cotton Valley Play in North Louisiana:** D. Buller, J. Truax, B. Cottingham, S. Persac, R. Medina, N. Garrison

### Geomechanics II

Room 303

**Co-Chairs:** M. Friedrich and C. Ozgen

8:25 **Introductory Remarks**

8:30 **Evaluation of In-Situ Stress Environment in the Utica Play and Implications on Completion Design and Well Performance:** A. Bertonecello, F. Brigaud

8:55 **Experimental Investigation of Permeability Hysteresis in Low-Permeability Formations:** T. Teklu, H. Abass

9:20 **Shale Elastic Property Relationships as a Function of Total Organic Carbon Content Using Synthetic Samples:** Y. K. Altowairqi, R. Rezaee, B. Evans, M. Urosecic

9:45 **The Role of Natural Fractures (Joints) in the Marcellus Shale During Hydraulic Fracture Stimulation Using Full 3-D Modeling:** L. Cruz, P. Fu, G. Izadi, D. Moos, J. Sheridan, R. Settgaat

10:10 **Refreshment Break**

10:50 **Coupling Geomechanics and Petrophysical Measurements for Production Enhancement in Organic-Rich Shales:** A. N. Tutuncu

11:15 **Stress Inversion via Borehole Image Log and Fracturing Data: Integrated Approach:** M. Pordel Shahri, H. Chok, I. Arbelaez

11:40 **An Approach for Generating Spatially and Physically Correlated Natural Fracture Network Properties for Unconventional Reservoirs:** Y. N. Pandey, J. Yarus, G. Shi, V. Liceras

### EUR and Performance Prediction

Room 225 A-B

**Co-Chairs:** P. Charlez and Rod Sidle

8:25 **Introductory Remarks**

8:30 **Understanding Wolfcamp Well Performance - A Workflow to Describe the Relationship Between Well Spacing and EUR:** J. Pettegrew, J. Qiu, A. Girardi, R. Li

8:55 **New Models for Time-Cumulative Behavior of Unconventional Reservoirs—Diagnostic Relations, Production Forecasting and EUR Methods:** W. Yousuf, T. Blasingame

9:20 **EUR Assessment of Unconventional Assets Using Parallelized History Matching Workflow Together With RML Method:** C. Chen, R. Li\*, G. Gao, J. Vink

9:45 **New Production Performance and Prediction Tool for Unconventional Reservoirs:** P. Panja, R. Velasco, M. Deo

- 10:10 **Refreshment Break**  
 10:50 **Accurate Forecasting of Liquid Rich Gas Condensate Reservoirs With Multiphase Flow:** A. Khanal, M. Khoshghadam, W. Lee  
 11:15 **Improved Workflow for EUR Prediction in Unconventional Reservoirs:** A. Sharma, W. Lee  
 11:40 **Production Forecasting in Shale Volatile Oil Reservoirs Using Reservoir Simulation, Empirical and Analytical Methods:** I. Makinde, W. Lee

## Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I

Room 225 C-D

Chair: M. Laughland

- 8:25 **Introductory Remarks**  
 8:30 **Mexico's Tithonian Pimienta Shale: Potential for Unconventional Production:** D. M. Jarvie, A. Maende  
 8:55 **Using Geochemical Data to Show a Gas-Shale Well Is Producing Crude Oil – Not Retrograde Condensate:** A. S. Kornacki, M. A. Sutcliffe, D. B. Eddins  
 9:20 **Geochemistry of Cretaceous Oils and Source Rocks in the Powder River Basin:** M. W. Rahman, R. K. Olson, C. W. Symcox, S. P. Bingham  
 9:45 **Migration Happens: Geochemical Evidence for Movement of Hydrocarbons in Unconventional Petroleum Systems:** J. E. Zumberge, J. B. Curtis\*, J. D. Reed, M. Brown  
 10:10 **Refreshment Break**  
 10:50 **Gas Isotope Analysis: A Cost Effective Option to Improve Understanding of Vertical Drainage in the Delaware Basin:** M. Goldsmith, M. Abrams  
 11:15 **Applying Oil Fingerprinting to Unconventional Reservoirs in the Permian Basin for Characterization of Frac Height and Quantification of the Contribution of Multiple Formations to Commingled Production:** M. A. McCaffrey, D. K. Baskin  
 11:40 **Observations on the Geochemistry and Origins of Gases Occurring Along the Lower Cretaceous Shelf Margin, South Texas:** H. A. Illich, L. Waite, B. Tinnin, E. Covarrubias

## Case Histories Innovative Stimulations

Room 302 A-B

Co-Chairs: I. Aviles and C. Cipolla

- 8:25 **Introductory Remarks**  
 8:30 **Coiled Tubing Frac Sleeve Application in the Eagle Ford Shale – An Optimization of Shale Completions:** S. D. Cadwallader, J. Wendte, I. Gil, H. Sebastian  
 8:55 **Eagle Ford Case History: Evaluation of Diversion Techniques to Increase Stimulation Effectiveness:** S. Evans, E. Holley, K. Dawson, N. Garrison, M. Montes, G. Preston, S. Hudson  
 9:20 **Insights and Observations Into Limited Entry Perforation Dynamics From Fiber-Optic Diagnostics:** K. Somanchi, C. O'Brien, P. Huckabee, G. Ugueto  
 9:45 **Coiled Tubing Deployed Fiber Optics Utilized in Observing Cross-Well Communication During Stimulation:** N. Sahdev, P. Cook  
 10:10 **Refreshment Break**

- 10:50 **A Technical Comparison of Downhole Methods Through Fiber-Optic VSP in the Eagle Ford Formation:** J. Teff, K. Silver, D. Langton, J. Borrell, A. Chivera  
 11:15 **Maximizing Productive Stimulated Reservoir Volume in the Eagle Ford – An Infill Case Study:** D. M. Anderson, J. M. Thompson\*, S. D. Cadwallader, H. Sebastian, I. Gil, P. Lee  
 11:40 **Using Machine Learning to Identify the Highest Wet Gas Producing Mix of Hydraulic Fracture Classes and Technology Improvements in the Marcellus Shale:** R. N. Anderson, A. Kressner, L. Wu, B. Xie, P. Carragher, M. McLane

## Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy and Diagenesis

Room 304 A-B

Co-Chairs: R. Doblner and B. Driskill

- 8:25 **Introductory Remarks**  
 8:30 **Depositional Facies and Organic Content of Upper Wolfcamp Fm (Permian) Delaware Basin and Implications for Sequence Stratigraphy and Hydrocarbon Source:** E. Kvale, M. W. Rahman  
 8:55 **Stratigraphic Architecture of the Niobrara Formation, Wattenberg Field Area, Colorado:** S. Sonnenberg  
 9:20 **The Lack of Authigenic Carbonate Concretions in the Middle-Upper Ordovician Utica Shale; Perhaps a Result of Steady State Depositional Conditions:** S. Saboda, G. Lash  
 9:45 **Quantitative Facies Characterization of the Wolfcamp Shale, Midland Basin Using Anisotropy of Magnetic Susceptibility and Hand-Held X-Ray Fluoresce:** G. Heij, B. Turner, A. K. Wickard, D. Elmore  
 10:10 **Refreshment Break**  
 10:50 **A Diagenetic Study of the Wolfcamp Shale, Midland Basin, West Texas:** A. K. Wickard, D. Elmore, G. Heij  
 11:15 **How (and Why) to Recognize Sequences in Basinal Shales:** S. R. Schutter  
 11:40 **Depositional Patterns and Paleo-Environments of the Marcellus Resource Interval in the Appalachian Foreland Basin, Northeast Pennsylvania, USA:** C. W. Harris, K. Gawankar

## Unraveling Unconventional Properties With Log Integration

Room 304 C

Co-Chairs: J. Gustavson and K. Yared

- 8:25 **Introductory Remarks**  
 8:30 **Source Rock Characterization Utilizing Triple Combo Logs and Extended Data Sets in the Permian Basin:** J. Douglas, B. Burinda  
 8:55 **Shale Oil Wettability: An Experimental Study and Well-Log Data Analysis:** H. Dehghanpour, M. Yassin, M. Begum  
 9:20 **Fluid Typing and Maturity Index From Logs: A New Framework for Petrophysical Evaluation of Organic-Rich Mudrocks:** L. E. Mosse, E. Rylander, P. Craddock, A. Ortiz, C. Bernhardt  
 9:45 **Application of High-Resolution Microresistivity Measurement in Petrophysical Characterization of Challenging Wellbores:** A. Moherek, S. Mukherjee\*, N. Garrison, A. Caraway, R. Medina, B. Sarmah  
 10:10 **Refreshment Break**



- 10:50 **Towards a Simplified Petrophysical and Geomechanical Model for the Vaca Muerta Formation:** S. A. Cuervo, L. Ezequiel, L. E. Mosse, C. Luisa, V. Dolores
- 11:15 **Characterization of the Three Forks Formation Using Core, Well Logs and Seismic Data to Determine Lithological Trends and Assess Reservoir Quality:** S. Hernandez-Cordon, B. Garcia-Fresca, L. Wensaas

## Understanding Mechanisms for Improving Recovery

Room 302 C

**Co-Chairs:** J. Alvarez and K. Perry

- 8:25 **Introductory Remarks**
- 8:30 **Refracturing vs. Infill Drilling – A Cost Effective Approach to Enhancing Recovery in Shale Reservoirs:** R. Aguilera, K. Selvan, D. Orozco, E. Urban, A. Fragoso
- 8:55 **A Systematic Investigation of Gas-Based Improved Oil Recovery Technologies for the Bakken Tight Oil Formation:** L. Jin, S. Hawthorne, J. Sorensen\*, B. Kurz, L. Pekot, N. Bosshart, S. Smith, M. Burton-Kelly, C. Gorecki
- 9:20 **Insights Into Recovery Mechanisms in Shales Through Digital Rock Technology:** S. I. Geetan, R. MacDonald, D. Klemin

## Horizontal Targeting Strategies and Challenges

Room 302 C

**Co-Chairs:** J. Behura and C. Santa Cruz

- 10:40 **Introductory Remarks**
- 10:45 **Down-Hole Reservoir Raman Spectrometer (DRRS): A Novel New Technology for the Rapid Appraisal of Shale Gas Resource Potential:** L. T. Bryndzia, N. R. Braunsorf, R. Hofmann, R. Morgan, P. Christian, J. M. Pope
- 11:10 **Why Do We Have to Care About Detailed Reservoir Characterization? We Will Break it All. Do We?:** F. González Tomassini, L. Smith, G. Sagasti

## Tuesday Morning ePapers

### Well Construction

ePaper Station A 9:20 a.m. – 10:40 a.m.

**Co-Chairs:** J. Moss and M. Sorrell

- 9:20 **Introductory Remarks**
- 9:25 **Web-Based Technologies for Real-Time Directional Survey Quality Improvement:** J. S. DeVerse, S. Maus
- 9:50 **Simulation of Recovery Losses Due to Positional Errors in Wellbore Placement:** S. Maus, J. S. DeVerse
- 10:40 **The Central Argument: Can a Centralizer Really be a Solution to Reducing Casing Drag and Achieving Zonal Isolation?:** D. E. Howard

### Multi-Discipline Data Integration

ePaper Station B 9:20 a.m. – 11:55 a.m.

**Chair:** M. Kendrick

- 9:20 **Introductory Remarks**
- 9:25 **A Synergistic Approach for Generating Basement Reservoir Fracture Model: A Case Study From Mumbai High Basement Reservoir:** S. K. Mukherjee

- 9:50 **Oil and Gas Shale from Radioactive Late Silurian Organic-Rich Shales Fegaguira Formation, Chotts Basin Southern Tunisia:** A. Belhaj Mohamed, M. Saidi, M. Soussi, A. Ayadi, A. BenSalem
- 10:15 **Estimation of TOC and Brittleness Volumes and Correlation With Reservoir Production:** S. Verma, T. Zhao, K. J. Marfurt, D. Devegowda, D. Grana
- 10:40 **Sierras Blancas Multi-Well Pad Appraisal: Support for a Two-Layer Vaca Muerta Development:** B. Williams, J. Kato, O. Davogusto Cataldo, J. Chavarria, R. Salas Porras, V. Dieckmann, M. A. Thomas\*
- 11:05 **Petrographic and Geochemical Characterization of the Upper Bakken Shale, Williston Basin:** D. Nandy, S. Sonnenberg
- 11:30 **Fault Facies Identification to Determine Optimum Coal Cleat Occurrence as Coal Bed Methane Reservoir Potential, Case Studies: Warukin Coal Bearing Formation (WCBF), Barito Basin, South Kalimantan, Indonesia:** R. R. Putra, D. Larasati, S. Ardi, D. Widarto, A. Guntoro, A. Usman

## Geological and Geophysical Characterization of Unconventional Reservoirs

ePaper Station C 9:20 a.m. – 11:30 a.m.

**Co-Chairs:** R. Pearson and Holly Moore

- 9:20 **Introductory Remarks**
- 9:25 **Microseismic Quality Control Using Synthetic Seismograms:** M. Smith, S. Goodfellow, S. Maxwell\*
- 9:50 **Understanding and Quantifying Variable Drainage Volume for Unconventional Wells:** A. Rahimi Zeynal, S. Kashikar
- 10:15 **Utilizing Hybrid Array to Distinguish Between Hydraulically Connected (Wet) and Stress Induced (Dry) Microseismic Events:** N. Verkhovtseva, T. Mukhtarov
- 10:40 **Using Fluid-Induced Microseismics to Image Permeability:** A. R. King
- 11:05 **Impact of Seismic Attenuation on Downhole Microseismic Moment Tensor Inversion:** D. Pei, N. Verkhovtseva, J. Doucette, P. Stark
- 11:30 **Pre-Drill Reservoir Evaluation Using Passive Seismic Imaging:** C. J. Sicking, J. Vermilye



Please watch for team presentations which are given additional time to display integrated approaches to unconventional plays. Each team consists of no more than three members with different technical backgrounds (geoscience, petrophysics, engineering, operations, etc.)

## Topical Luncheons

### A Review of Induced Seismicity Issues in Oklahoma and Lessons Learned

**Time:** 12:05 p.m.–1:15 p.m.  
**Location:** Room 217 A-B  
**Fee:** \$50 per person  
**Speaker:** **G. Randy Keller**, Professor Emeritus, Former Director Oklahoma Geological Survey



G. Randy Keller

To say the least, the drastic increase in seismicity in Oklahoma over the past five years has been a major issue scientifically, in the media and with the public. In response to this issue, the Oklahoma Geological Survey (OGS) has been able to significantly expand its seismic network that was established in 1978 and its staff. The OGS, industry, regulators, other state agencies and the U.S. Geological Survey have worked cooperatively

to study the increase in seismicity for several years hoping to gain an understanding of the processes at work and how to mitigate the situation. However, by early 2015 the number of earthquakes in populated areas had increased to an alarming level and the job of balancing regulations, industry interests and public safety is a work in progress.

### The Clues in the Crumbs: A Geostatistician's Fascination with the Data That Challenges Our Beliefs About Climate Change

**Time:** 12:05 p.m.–1:15 p.m.  
**Location:** Room 217 C-D  
**Fee:** \$50 per person  
**Speaker:** **R. Mohan Srivastava**, Consultant, Canada



R. Mohan Srivastava

Few modern public policy discussions need sound and thoughtful scientific input as much as the debate on climate change does. Unfortunately, the passions inspired by this debate run so high that objective analysis takes a back seat ... the way back ... in a war of words where each side focuses its rhetorical excesses on vilifying the other. At some point in the not-too-distant future, we will no longer need to pour our

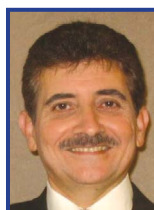
passions into debates about future possibilities; nature will eventually speak clearly and loudly. But until that day arrives, earth scientists have an important role to play in helping society make wise decisions in the face of scientific uncertainty.

This talk will explore several aspects of the complicated problem of quantifying changes in climate and of forecasting future changes: i) the difficulties of doing the good data analysis required for reliable predictions, ii) the challenge of coping with the tsunami of data from an ever-increasing number of monitoring instruments, iii) common cultural misunderstandings about what statistics can reveal and what they can't reveal and iv) the possibility that the past might not predict the future.

## Special Session

### Technology Integration: Today's Tools and Tomorrow's Technology

**Time:** 1:45 p.m.–3:05 p.m.  
**Location:** Room 301  
**Fee:** Included with registration  
**Moderator:** **Jeff Yarus**, Technology Fellow Earth and Reservoir Modeling Geoscience and Reservoir Technologies Landmark Software and Services, Halliburton



Mike Bittar



George Djorgovski

1:45 Introductory Remarks  
 1:50 **Mike Bittar**, Senior Director Technology, Halliburton: A Technological Look-Ahead in Oil and Gas  
 2:15 **George Djorgovski**, Professor of Astronomy; Director, Center for Data Driven Discovery

## Tuesday Afternoon Technical Presentations

### Operator's Forum III

Room 301

**Chair:** S. Rhodes

3:40 **Introductory Remarks**  
 3:45 **Assessment of Rock Types Properties in a South American Unconventional Shale Play:** J. Mathieu, J. Leduc, J. Pelletier, S. Vidal-Gilbert, K. Su, Y. Sanz-Perl, M. F. Raverta  
 4:35 **'Co-opetition': A Game-Changing Synergy Among Operators: A Case Delivering a Rosetta Stone for the Vaca Muerta Stratigraphy (Argentina):** F. González Tomassini, F. Sattler, I. Lanusse Noguera, R. F. Dominguez, J. Simo, D. Kietzmann, G. Depine, G. González, V. Dolores, L. Gomez Rivarola, D. Minisini, P. Desjardins, M. Fantin

### Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study

Room 303

**Chair:** S. Tinker

1:45 **Introductory Remarks**  
 1:50 **Regional Assessment of the Eagle Ford Formation: Insights From Lithology, Water Saturation, Organic Richness and Productivity Correlations:** S. A. Ikonnikova, U. Hammes\*, R. L. Eastwood, K. Smye  
 2:15 **Assessment of the Hydrocarbons-in-Place and Recovery Factors in the Eagle Ford Shale Play:** A. Gherabati, U. Hammes, F. Male, J. Browning, S. A. Ikonnikova, G. McDaid

- 2:40 **Production Decline Analysis in the Eagle Ford:** F. Male, M. P. Marder, J. Browning, A. Gherabati, S. A. Ikonnikova
- 3:05 **Refreshment Break**
- 3:45 **Analyzing Shale Gas and Oil Well Productivity: A Statistical Study of Eagle Ford Shale Oil Play:** E. R. Vankov, S. A. Ikonnikova, G. Gulen, K. B. Medlock
- 4:10 **Well Economics and Production Outlook of the Eagle Ford Shale Play:** S. A. Ikonnikova, G. Gulen, J. Browning, K. B. Medlock
- 4:35 **Eagle Ford Production Outlook Sensitivity and Uncertainty Analysis:** G. Gulen, S. A. Ikonnikova, J. Browning, S. W. Tinker
- 5:00 **Summary and Conclusions From Field Wide Study of Eagle Ford Shale:** J. Browning, S. W. Tinker, S. A. Ikonnikova

## Production Diagnostics/Analysis Methods and Well Spacing

Room 225 A-B

Co-Chairs: D. Ilk and R. Walker

- 1:45 **Introductory Remarks**
- 1:50 **A Diagnostic Framework for “Bashed” Wells in Unconventional Reservoirs: A Numerical Simulation and Model Selection Theory Approach:** Z. Liu, R. Younis, L. Thompson
- 2:15 **Managed Pressure Flowback in Unconventional Reservoirs: A Permian Case Study:** D. Tompkins, R. Sieker, D. Koseluk, H. Cartaya
- 2:40 **Improving Stage Spacing Effectiveness Based on Microseismicity:** E. Von Lunen, J. Budge, C. J. Virues, A. Baig, T. Urbancic
- 3:05 **Refreshment Break**
- 3:45 **Optimizing Wellbore Spacing and Completion Design in Unconventional Reservoirs Through an Integrated Reservoir Characterization and Simulation Approach:** H. Shojaei, C. Lipp, A. Rahimi Zeynal
- 4:10 **Benchmarking Recovery Factors of Individual Wells Using a Probabilistic Model of Original Gas in Place to Pinpoint the Good, Bad and Ugly Producers:** J. D. Richardson, W. Yu, R. Weijermars
- 4:35 **Optimization of Well Spacing Based on Physical Models for Inter-Well Interference in Shale Reservoirs:** W. Yu, R. Weijermars, K. Wu
- 5:00 **Composition Variation Study for Improving Recovery in Gas-Condensate Reservoirs:** H. X. Vo, R. N. Horne

## Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II

Room 225 C-D

Chair: M. Laughland

- 1:45 **Introductory Remarks**
- 1:50 **How Hot Was It?: Comparing Maturity Characterizations From Raman Spectroscopy and Organic Petrographic Methods From Wells Drilled in Highly Mature Marcellus, Pennsylvania, USA:** J. Madren, L. Fidler, M. Wright, B. Alexander, D. Wray
- 2:15 **Early Delineation of Productive Areas in Unconventional Plays Using Uplift Intensity - A Utica Example:** A. Bertoncello, A. Singh, F. Brigaud

- 2:40 **Differential Maturation, Generation and Expulsion of Petroleum: Causes and Effects on Jurassic Unconventional Resources in Saudi Arabia:** M. Al Duhailan, A. M. Hakami, A. Ahmed, I. Leyva Poveda
- 3:05 **Refreshment Break**
- 3:45 **Geochemical Analysis of Returned Treatment Waters (RTW) associated with shale gas production in the Appalachian Basin (USA) and Deep Basin (Canada): Potential use of Total Dissolved Solids (TDS) and Oxygen isotope data for assessing Water:Rock ratios and Stimulated Rock Volume (SRV):** L. T. Bryndzia, M. C. Fay\*
- 4:10 **Coupled Kinetic and Fluid Dynamic Models to Understand H<sub>2</sub>S Occurrence in Unconventional Petroleum Reservoirs:** D. Xia, G. S. Ellis
- 4:35 **Understanding Depositional Environments of the Shublik Formation of Arctic Alaska Using XRF Chemostratigraphy:** I. Yurchenko, S. Graham, A. Hosford Scheirer, M. Al Ibrahim
- 5:00 **Simulation Experiments and Characteristics of Secondary Migration Driving Force of Tight Oil: A Case Study of Jurassic in Middle Sichuan:** Z. Pang, S. Tao, B. Zhang, S. Wu, J. Yang, R. Chen

## Case Histories Innovative Stimulations, Integrating Data to Optimize

Room 302 A-B

Co-Chairs: R. Fulks and J. Paktinat

- 1:45 **Introductory Remarks**
- 1:50 **Optimizing Well Placement and Completion Strategies in the Piceance Niobrara Shales:** A. Childers, N. Li\*, R. White, M. Mayerhofer, B. Weitzel, E. Lolon, H. Melcher
- 2:15 **Optimizing Lateral Landing Depth for Improved Well Production:** R. Suarez-Rivera, W. D. Von Gonten, J. Graham, A. Safdar, J. Degenhardt, A. Jegadeesan
- 2:40 **Coupling Geoscience and Reservoir Engineering Perspectives in Optimization of Completions and Well Spacing: A Case Study From an Unconventional Jurassic Play in Saudi Arabia:** A. M. Hakami, C. Kurison, I. Leyva Poveda
- 3:05 **Refreshment Break**
- 3:45 **Engineered Approach for Multiwell Pad Development in Eagle Ford Shale:** K. Gakhar, E. Ejofodomi, Y. Rodionov, R. Malpani
- 4:10 **Optimizing Well Performance in Challenging Times:** R. Papandrea, L. Boyer, E. Garner, M. Daigle, R. Papandrea
- 4:35 **Microseismic Geomechanical Optimization of Hydraulic Fracturing in the Horn River Basin:** M. Mack, S. Maxwell, B. Lee
- 5:00 **Breakthrough in Hydraulic Fracture and Proppant Mapping: Achieving Increased Precision With Lower Cost:** M. Dawson, G. Kampfer, H. Li

## Multi-Discipline Data Integration I

Room 304 A-B

Co-Chairs: M. Kendrick and C. Santa Cruz


- 1:45 **Introductory Remarks**
- 1:50 **Optimizing the Development of a Stacked Continuous Resource Play in the Midland Basin:** J. Courtier, J. J. Wicker, P. J. Curth

2:15 **Multidisciplinary Characterization of the Vaca Muerta Resource Play: Data Driven De-Risking of a World-Class Resource Play:** O. Davogusto Cataldo, M. A. Thomas, P. Desjardins, R. Notta, B. Williams, J. Chavarria, V. Dieckmann

3:05 **Refreshment Break**

3:45 **Integrated Analysis of Abnormal Pressures in Source Rocks: Theory and Implications for Jurassic Unconventional Resource Exploration in Saudi Arabia:** M. Al Duhailan, M. Boudjatit, N. Yeh, I. Leyva Poveda, A. Rios Alvarez

4:10 **Discrete Fracture Network Model Developed From a High Resolution Lidar Outcrop Survey of a Naturally Fractured Unconventional Niobrara Reservoir:** A. Grechishnikova

 4:35 **Using Mud Weights, DST and DFIT Data to Generate a Regional Pore Pressure Model for the Delaware Basin, New Mexico and Texas:** S. Rittenhouse, R. Blumstein, J. Currie

## Core Measurements for Improved Characterization of Unconventional Reservoirs

Room 304 C

Co-Chairs: B. Hill and S. Perry

1:45 **Introductory Remarks**

1:50 **Improved Petrophysical Interpretation of Laboratory Pressure-Step-Decay Measurements on Ultra-Tight Rock Samples:** Y. Dadmohammadi, S. Misra, C. Sondergeld, C. Rai

2:15 **Characterizing Light Versus Bound Hydrocarbon in a Shale Reservoir by Integrating New Two-Dimensional NMR and Advanced Spectroscopy Measurements:** M. R. Ali, V. Anand, A. Abubakar, R. Grover, I. Pirie, O. Neto

2:40 **Direct Determination of Surface Relaxivity in Isolated Kerogen by Pulsed-Field Gradient NMR:** B. Zhang, H. Daigle

3:05 **Refreshment Break**

3:45 **Combination of Lattice Density Functional Theory and a Multi-Scale Network Model for Adsorption Isotherm Study in Tight Formations:** R. Xu, A. Qajar, A. Mehmani, M. Prodanovic, H. Daigle, S. Nguyen

4:10 **Quantifying the Impact of Thermal Maturity on Dielectric Properties of Kerogen and Organic-Rich Mudrocks:** H. Chen, A. Posenato Garcia, Z. Heidari\*

4:35 **Using Core Data, Digital Rocks and Geochemistry to Reduce Hydrocarbon Storage Uncertainty in Unconventional Reservoirs: Application to South Texas Eagle Ford:** J. Capsan, J. Sanchez-Ramirez\*

5:00 **Integration of Thermal and Solvent Extraction Methods for Improved Characterization of Hydrocarbon in Place and Producibility:** R. Suarez-Rivera, W. D. Von Gonten, K. Vaughn, R. Zak, E. Carter, A. Kurup, N. Nelson, D. Hajek, M. Shaw

## HSSE Practices and Operations

Room 302 C

Co-Chairs: J. Bell and P. Towango

1:45 **Introductory Remarks**

1:50 **Geomechanical Tools to Bolster Social License: Quantifying the Mechanical Effects of Faults on Induced Seismicity Potential:** N. M. Umholtz, A. Ouenes

2:15 **Technology's Role in Improving Recovery Rates, Reducing Costs and Addressing Environmental Risks in the Development of Unconventional Natural Gas Resources:** P. Doucette

2:40 **Removal of Hydraulic Fracturing Fluids from Petroleum Wastewater Using Sorption Techniques:** D. Alalade

3:05 **Refreshment Break**

3:45 **Taking Efficiency in Unconventionals to the Next Level Using Bayesian Networks:** P. Fanailoo, J. Clemens

4:10 **Bakken Flare Mitigation Field Trial - Case Study:** C. C. Ruffer, S. Ravindran, L. Sneary

4:35 **Comparing WTI Index Price Effects on Stimulation Fluid Design, Water Utilization and Resulting Production for Completions in Texas and North Dakota:** C. Mann

5:00 **Examination of Water Management Challenges and Solutions in Shale Resource Development - Could Waterless Fracturing Technologies Technically, Environmentally and Economically Work?:** I. Oraki Kohshour, T. Leshchyshyn, J. Meaghan, C. Yorro, A. T. Adejumo, U. Ahmed, R. Barati, I. Kugler, M. Reynolds, M. Cullen, J. Mcandrew, D. Wedel

## Tuesday Afternoon ePapers

### Seismic Attributes

ePaper Station A 1:45 p.m. - 3:30 p.m.

Chair: R. Pharis

1:45 **Introductory Remarks**

1:50 **Integrated Study of Dolomitization in an Evaporite Platform Evidenced by 3-D Seismic Data and Rock Analysis: Middle Triassic Leikoupo Formation in Longgang Area, Sichuan Basin, China:** Z. Xu, S. Hu, H. Zeng, Q. Fu, L. Wang

2:15 **HHT Based Sedimentary Cycle Division for Unconventional Facies Analysis:** F. Li, T. Zhao, J. Zhang, Y. Zhang, K. J. Marfurt

2:40 **Joint Anisotropic Parameter Inversion Based on Nonhyperbolic Moveout and Azimuthal Amplitude Variance:** F. Li, J. Qi, B. Lyu, K. J. Marfurt

### Flow Behavior From Nanopores to Reservoir Scale

ePaper Station A 3:35 p.m. - 4:55 p.m.

Chair: P. Charlez

3:30 **Introductory Remarks**

3:35 **Phase Equilibria of Multicomponent Hydrocarbons in Organic Nanopores Using PC-SAFT EOS:** X. Dong, Z. Chen

4:00 **Investigation of Adsorption Effects on Nanopores in Shale Gas Reservoir by Simplified Local-Density Model:** Y. Pang, M. Soliman, J. Sheng

4:25 **New Correction for Rate Dependence of Bilinear Flow in Shale Gas Wells:** M. S. Kanfar, C. Clarkson

### Production Performance of Tight Oil and Gas Reservoirs

ePaper Station B 1:45 p.m. - 4:45 p.m.

Co-Chairs: J. Alvarez and K. Perry

1:45 **Introductory Remarks**

1:50 **An Efficient Semi-Analytical Model for Productivity Evaluation of Coalbed Methane Wells With Complex Fracture Networks:** R. Yang, W. Yu, H. Lashgari, K. Sepehrnoori, Z. Huang, G. Li

- 2:10 **Multiscale Modeling of Gas Transport in Organic-Rich Shale: From Molecular Scale to Reservoir Grid Scale:** M. Kazemi, A. Tabbiri Borujeni
- 2:40 **The Impact of Water Salinity and Surfactant on Wettability Alteration for Unconventional IOR:** X. Li, T. Teklu
- 3:05 **Enhanced Recovery in Shales: Molecular Investigation of CO<sub>2</sub> Energized Fluid for Re-Fracturing Shale Formations:** M. Pathak, P. Panja, H. Huang, M. Deo
- 3:30 **Extension of the Multiple Interacting Continua Method to Discrete Fracture Models for Unconventional Low Permeability Reservoir Simulations:** N. Farah, D. Ding, M. Delorme
- 3:55 **An Experimental Study on Supercritical CO<sub>2</sub> Injection in Fractured Tight Reservoir to Enhance Oil Recovery:** G. Tang, B. Aminzadeh Goharrizi, D. Zhou, M. Zhang, D. Lowry, A. Inouye, I. Li
- 4:20 **The Elusive SRV: Can Microseismics be Used to Definitively Establish Production Volumes:** E. Von Lunen, T. Urbancic, C. J. Virues, A. Baig, J. Budge

## Geological and Geophysical Characterization of Unconventional Reservoirs

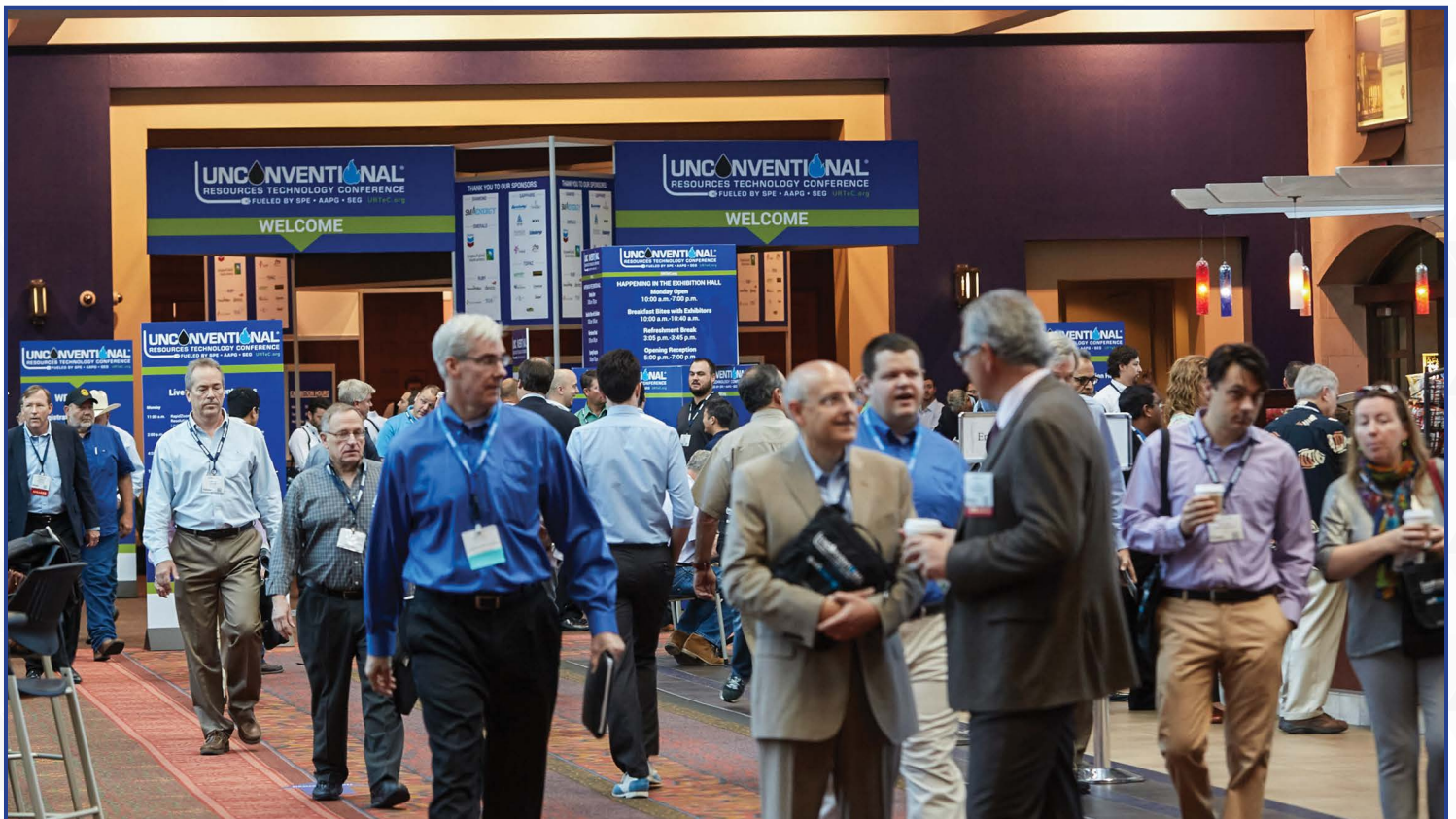
ePaper Station C 1:45 p.m.–4:45 p.m.

**Chair:** G. Sparkman

- 1:45 **Introductory Remarks**
- 1:50 **Stress State Derived From Microseismicity Induced by Hydraulic Fracturing: Downhole and Surface Monitoring:** Z. Jechumtálová, F. Staněk, L. Eisner, G. Keller\*
- 2:15 **Surface Seismic Monitoring of Hydraulic Fracturing Activity in Pennsylvania and West Virginia:** A. Kumar, E. Zorn, R. Hammack, W. Harbert
- 2:40 **Mapping of Rock Property Changes in Space and Time Using Microseismic Data Through Full-Waveform Inversion:** J. Behura
- 3:05 **Development of Limited Discrete Fracture Network Using Surface Microseismic Event Detection Testing in Canadian Horn River Basin:** C. J. Virues, P. Mamer
- 3:30 **The Impact of a 3-D Anisotropic Velocity Model and Adaptive Signal Processing for Localization of Single and Dual Phase Microseismic Data:** S. M. Taylor, J. E. Gumble, J. King
- 3:55 **Geological Considerations During Microseismic Monitoring, Processing and Interpretation of Hydraulic Fracture Treatment:** J. Le Calvez, S. Hanson-Hedgecock, P. Primiero, T. Al-Wadhahi, O. Harrasi



Please watch for team presentations which are given additional time to display integrated approaches to unconventional plays. Each team consists of no more than three members with different technical backgrounds (geoscience, petrophysics, engineering, operations, etc.)



## Topical Breakfasts

### Banning Proven Technologies on Possibilities Rather Than Probabilities: A Closer Look at the New York Fracking Ban

**Time:** 7:00 a.m.–8:15 a.m.

**Location:** Room 217 A-B

**Fee:** \$35 per person

**Speaker:** **Fay C. Fitzsimons**, Senior Consultant, FTI Consulting



Fay C. Fitzsimons

On 17 December 2014, New York Governor Andrew Cuomo announced a ban on so called high volume hydraulic fracturing activities in the state of New York. The unprecedented decision overturned two earlier findings from New York state environmental regulators that hydraulic fracturing technology could be applied safely and should be allowed to proceed under stringent regulation. The decision was at odds with

broad agreement among scientists, engineers and regulators from state and federal environmental agencies that hydraulic fracturing has been executed safely for decades. The “ban fracking” agenda, endorsed by the Cuomo administration, has also been rejected by senior environmental officials in the Obama administration as simply too extreme. So, how was Governor Cuomo able to construct a justification for a decision that falls so far outside the mainstream? Energy in Depth, a project of the Independent Petroleum Association of America, examines the echo chamber that was built to drown out the facts in the debate over hydraulic fracturing and Marcellus Shale development in New York.

### The Permian Basin Renaissance

**Time:** 7:00 a.m.–8:15 a.m.

**Location:** Room 217 C-D

**Fee:** \$35 per person

**Speaker:** **Ashley Meerdo**, Shell Exploration and Production Company, Development Planner Petrophysical Engineer Permian Asset



Ashley Meerdo

After decades of declining production and focus, the Permian Basin is going through a renaissance period with renewed interest and is now the most active oil and gas basin in North America. The basin is a key focus area for the E&P industry and the primary target of Private Equity investment, with some of the richest deal metrics and leasing costs in the unconventional’s business. The basin is also proving to be resilient in the

face of the current commodity price environment as industry adjusts to a ‘lower for longer’ world. What are the characteristics and conditions that are feeding the obsession with the Permian Basin and what are the opportunities and challenges that lie ahead?



### No-Electronic Capturing Policy

Capturing or photographing contents of Technical or ePaper Presentations or exhibition booths via any electronic device or media is strictly prohibited at URTeC.

## Wednesday Morning Technical Presentations

### ASME Hydraulic Fracturing

Room 301

**Co-Chairs:** K. Richter and P. Fanailoo

8:25 **Introductory Remarks**

8:30 **Fracturing Material, Logistics and Delivery Solutions:**

B. R. Smith

8:55 **Technology Solutions for Multi-stage Horizontal Wells:** R. Mody

9:20 **Pump/Mixing for Fracturing:** R. Gusek

### ASCE Infrastructure Issues within Unconventional Resource Development I

Room 303

**Chair:** J. Anpach

8:25 **Introductory Remarks**

8:30 **Effects of Resource Development on Highways:** C. Quiroga

8:55 **Addressing Uncertainty in Pipelines Through ASCE Standards:**

J. Anpach

9:20 **Geohazard Identification and Monitoring of Critical Assets With a Case Study in West Virginia:** M. Derby

### Emerging Insights in Unconventional Plays

Room 225 A-B

**Co-Chairs:** C. Jenkins and R. Roadifer

8:25 **Introductory Remarks**

8:30 **Lessons Learned in the Eagle Ford Play and Applicability to Mexico:** E. J. Meneses-Scherrer

8:55 **Seismic Diffraction Imaging of Lithology and Hydrocarbon Sweet Spots in Fault Zones Within the Austin Chalk and Eagle Ford Shale, Maverick Basin, South Texas:** O. C. Ogiesoba, A. Klokov

9:20 **Predicting Realistic Natural Fracture Distributions Using Structural Modeling – Best Practice Workflows for Evaluating Prospects and Targeting Sweet Spots in Unconventional Reservoirs:** E. Macaulay, H. Anderson, H. Broichhausen, A. Vaughan, R. Muir, C. Dunlop

9:45 **Anticosti Island, Quebec: Updated Review of a Major Shale Play in North Eastern America:** P. K. Dorrins, J. Marcil, J. Lavoie, N. Mechti

10:10 **Refreshment Break**

10:50 **Codell Sandstone, A Review of the Northern DJ Basin Oil Resource Play, Laramie County, Wyoming and Weld County, Colorado:** R. Sterling

11:15 **A Case Study in The Pennsylvanian Cleveland Sandstone on the Nemaha Ridge: Leveraging High Resolution 3-D Seismic and Stratigraphic Analysis to Create the Conditions for Repeatable Drilling Opportunities in Complexly Distributed Reservoirs:** T. P. Lupo

11:40 **A Geostatistical Perspective on Production Screening Using Vintage Data Within the Niobrara Formation, Southern Powder River Basin, Wyoming:** M. M. Morton

## Advances in Rate/Pressure Transient Analysis Methodologies

Room 225 C-D

**Co-Chairs:** E. Ozkan and J. Thompson

- 8:25 **Introductory Remarks**
- 8:30 **Analytical Pressure and Rate Transient Models for Analysis of Complex Fracture Networks in Tight Reservoirs:** J. A. Acuna
- 8:55 **Reservoir and Fracture Flow Characterization Using a Novel  $w(\tau)$  Formulation:** M. J. King, X. Xue, C. Yang, A. Datta-Gupta
- 9:20 **Deciphering Dynamic Fracture Systems Through Multiple Monitoring Wells With Permanent Downhole Gauges in the Midland Basin:** Y. Tang, B. Liang
- 9:45 **A New Method for Production Data Analysis and Well Testing Using Superposition-Rate:** P. Liang, R. Aguilar, L. Mattar
- 10:10 **Refreshment Break**
- 10:50 **Dimensionless Productivity Index and Its Derivative – A New Approach for Analyzing Unconventional Reservoirs:** S. Kaul, E. Gildin
- 11:15 **Nitrogen Fracture-Injection/Falloff Testing and Analysis in Underpressured Reservoirs:** D. Tompkins, D. Koseluk, D. Craig, J. Birdwell
- 11:40 **Transitions in Multi-Fractured Horizontal Well:** S. S. Apte, W. Lee

## Evolving Understanding of Permeability and Saturation Through Modeling

Room 302 A-B

**Co-Chairs:** T. Ramirez and A. Rostami

- 8:25 **Introductory Remarks**
- 8:30 **Langmuir Slip-Langmuir Sorption Stochastic Permeability Model of Shale:** M. Elahi Naraghi, F. Javadpour
- 8:55 **Derivation of Relative Permeability Curves From Capillary Pressure Curves for Tight Sandstone Reservoir Based on Fractal Theory:** X. Wang, J. Wang, S. Yang, X. Wang
- 9:20 **Upscaling in Numerical Simulation of Shale Transport Properties by Coupling Molecular Dynamics Simulation With Lattice Boltzmann Method:** Y. Ning, S. He, G. Qin
- 9:45 **Predicting Permeability Anisotropy from Resistivity Anisotropy:** T. Hagiwara
- 10:10 **Refreshment Break**
- 10:50 **The Development and Application of a New Semi-Analytical Model to Estimate Permeability From Mercury Injection Capillary Pressure:** S. Apisaksirikul, T. Blasingame
- 11:15 **A Generalized Methodology for Estimating Stress-Dependent Properties in Tight Petroleum Reservoirs and Its Application to Drill Cuttings Data:** J. Piedrahita, B. Lopez, R. Aguilar
- 11:40 **Integrated Workflow for Advanced Petrophysical Evaluation of Organic-Rich Shale Reservoirs Using Dielectric Dispersion, NMR and Geochemical Logging:** L. Mohsin, Y. Al Rashdi, A. Al-Yaarubi, K. H. Sassi\*, R. E. Lewis, J. Horkowitz

## Microseismic Fracture Map

Room 304 A-B

**Co-Chairs:** R. Pearson and D. Valleau

- 8:25 **Introductory Remarks**
- 8:30 **Using Depletion-Zone Microseismicity to Understand Producing Volumes:** J. P. McKenna, M. Greal, M. Blaz, N. Toohey
- 8:55 **Discrete Fracture Network Generation Using Microseismic Data From a Single Monitoring Well:** X. Yu, J. Rutledge, S. Leaney, C. Chapman
- 9:20 **Joint Downhole and Surface Microseismic Processing Using 3-C Template Relative Migration:** T. Bardainne, L. Delmas, N. Belayouni\*, D. Katz, P. Roux
- 9:45 **Microseismic Activity: What Does It Really Say? Insights From Coulomb Failure Function Analysis:** P. Roux
- 10:10 **Refreshment Break**
- 10:50 **Eagle Ford Microseismic Acquisition Geometry Benchmark:** D. Kahn, J. Teff, K. Silver, D. Langton, J. DeLaughter, D. Moore, B. Troxell, A. Bridge
- 11:15 **Integrating Horizontal Borehole Imagery and Cluster Analysis With Microseismic Data for Niobrara Reservoir Characterization, Wattenberg Field, Colorado, USA:** C. Dudley
- 11:40 **Identifying Re-Stimulation Effectiveness by Utilizing Micro-Seismic Attributes:** M. Preiksaitis, A. Baig, S. Bowman, T. Urbancic

## Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons III

Room 304 C

**Co-Chairs:** M. Laughland and D. Xia

- 10:45 **Introductory Remarks**
- 10:50 **Rapid, Economic Microbial Monitoring Methodologies for Determining Treated Water Stability:** A. R. Robertson, J. Fichter, L. Rogers
- 11:40 **Understanding Source Rock Maturation From Generation and Microstructure Viewpoints:** S. T. Dang, C. Sondergeld, C. Rai

## Data Analytics

Room 302 C

**Co-Chairs:** D. Fulford and S. Sankaran

- 8:25 **Introductory Remarks**
- 8:30 **Petroleum Analytics Learning Machine to Forecast Production in the Marcellus Shale:** R. N. Anderson, A. Kressner, L. Wu, B. Xie
- 8:55 **Multivariate Analytics of Seismic Inversion Products to Predict Horizontal Production in the Wolfcamp Formation of the Midland Basin:** J. J. Wicker, J. Courtier, P. J. Curth
- 9:20 **Fact-Based Re-Frac Candidate Selection and Design in Shale – A Case Study in Application of Data Analytics:** S. D. Mohaghegh
- 9:45 **Innovative New Production Logging Methodology to Identify Refracturing Candidate Stages:** B. Samaroo
- 10:10 **Refreshment Break**



Please watch for team presentations which are given additional time to display integrated approaches to unconventional plays. Each team consists of no more than three members with different technical backgrounds (geoscience, petrophysics, engineering, operations, etc.)

- 10:50 **Improving Unconventional Reservoir Factory-Model Development by an Integrated Workflow With Earth Model, Hydraulic Fracturing, Reservoir Simulation and Uncertainty Analysis:** B. Liang, S. Puspita, S. Khan, E. Blair, C. Picornell, T. Tran, S. Du, A. Hameed
- 11:15 **Methodology for Identifying Reservoir Production Potential, Its Role in the Digital Oil Field and How It Enables Strategic Field Development Optimization:** J. Viamontes, J. Bayless
- 11:40 **Using Data Analytics to Determine Completion Effectiveness in the Eagle Ford:** C. Walters

## Wednesday Morning ePapers

### Petrophysical Characterization Unconventional Reservoirs

*ePaper Station A 9:20 a.m. – 1:10 p.m.*

**Co-Chairs:** A. Rostami and K. Yared

- 9:20 **Introductory Remarks**
- 9:25 **Understanding Heterogeneous Carbonate Gas Reservoirs From Horizontal and Vertical Wells, Cambrian Longwangmiao Formation, Central Sichuan Basin, China:** D. Wang, B. Xie
- 9:50 **Control and Import of Sedimentary Microfacies on Tight Oil Occurrence in the Chang 7-3 Member of the Triassic Yanchang Formation, Ordos Basin of China:** D. Wang, Y. Hou
- 10:15 **LWD Resistivity Imaging in Invert Emulsion Oil-Based Drilling Fluid:** J. Yang, J. Szabo, R. Ettehadi Osgouei, R. Swartwout, J. Arensdorf, A. Hartmann, S. Morris
- 10:40 **A New Slim Full Bore Electrical Micro-Imaging Tool Conveyed Through the Drill String and Bit for Geological and Reservoir Characterization of Unconventional Reservoirs:** S. Bammi, P. Wells, M. Fredette, J. Toniolo, A. Mallick, B. Li, J. Kherroubi, R. Laronga
- 11:05 **Multi-Scale Rock Imaging for Reservoir Characterization: A Wolfcamp Case Study:** A. Morcote, R. Sungkorn, G. Carpio, M. McGroarty, M. Everts
- 11:30 **Proppant Embedment and Propped Fracture Permeability Evaluation: A Rigorous Core-Analysis/Imaging Methodology:** A. Ghanizadeh, C. Clarkson, H. Deglint, S. Aquino, A. Vahedian
- 11:55 **Evaluation of Rock Damage and Fracture Propagation on MicroCracks Development and Stimulation Quality of Tight Formations: Quantitative and Statistical Characterization:** I. El-Monier
- 12:20 **Determination of Petrophysical Properties of Tight Sandstone by 2-D and 3-D Imaging at Multiple Scales:** Y. Zhou, C. Liu, T. Xu, D. Xia

### Reserves Estimation and Forecasting

*ePaper Station B 9:20 a.m. – 11:05 a.m.*

**Chair:** TBA

- 9:20 **Introductory Remarks**
- 9:25 **Handling Risk and Uncertainty in Corporate Production Forecasting:** D. P. Allen
- 9:50 **Managing Characterization and Modeling Uncertainties Impact in EUR Assessment of Unconventional Plays:** M. F. Raverta, O. Osadiya, F. Brigaud, A. Rostagno

- 10:15 **Fast, Accurate, Easy – Pick 3: Using Monthly Production Ensembles for EUR Estimation:** A. Lindsey, J. Thorson, K. Robertson
- 10:40 **A Robust Semi-Analytical Approach for Production Simulation of Multiple Horizontal Wells With Complex Fracture Networks in Shale Gas Reservoirs:** R. Yang, H. Lashgari, W. Yu, K. Sepehrnoori, Z. Huang, G. Li, S. Han

### Application of Core Technologies to Unconventional Reservoirs

*ePaper Station B 11:10 a.m. – 12:55 p.m.*

**Chair:** TBA

- 11:10 **Introductory Remarks**
- 11:15 **Effects of Pore Pressure and Organic Contents on the Brittle-Ductile Transition in Shale Rock Using Geophysical Method:** Q. Yasin, Q. Du, A. Ismail, G. Sohail
- 11:40 **NMR Response of Methane in Gas Shale:** Z. Gu, W. Liu, D. Sun, W. Sun, Z. Hu
- 12:05 **Water and Oil Relative Permeability of Middle Bakken Formation: Experiments and Numerical Modeling:** Y. Cho, I. Eker, E. Eker, H. Kazemi, X. Yin
- 12:30 **Porosity Evolution of Lacustrine Organic-Matter-Rich Shales in China:** L. Su, S. Wu\*, X. Zhai

### Case Histories Innovative Stimulations, Integrating Data to Optimize

*ePaper Station C 9:20 a.m. – 11:30 a.m.*

**Chair:** R. Fulks

- 9:20 **Introductory Remarks**
- 9:25 **Utilizing Measured Drilling Parameters to Optimize Completions Design:** M. D. Skinner, M. Van Domelen, B. Grieser
- 9:50 **Maximizing Efficiency in Haynesville Restimulations: A Case Study in Improving Lateral Coverage to Maximize Incremental Gas Recovery:** A. Whitsett, B. Surles, J. Holmedal
- 10:15 **Rapid Refracturing Candidate Selection in Shale Reservoirs Using Drainage Volume and Instantaneous Recovery Ratio:** A. Datta-Gupta, C. Yang, X. Xue, J. Huang, M. J. King
- 10:40 **Refracs: Empirical Results in the Bakken Formation:** W. O. Ruhle
- 11:05 **Wellbore Placement in the Middle Bakken Formation Using an Azimuthal Gamma Ray Measurement:** S. Gutierrez Carrilero, T. Parker, E. Shearer, D. Carson

### Production Performance of Tight Oil and Gas Reservoirs

*ePaper Station C 11:35 a.m. – 12:55 p.m.*

**Co-Chairs:** E. Ozkan and J. Thompson

- 11:35 **Introductory Remarks**
- 11:40 **Unconventional Performance Metrics Validated Using Eagle Ford Field Data:** B. Lowry, S. Panta, S. Podhoretz, D. Chakravarthy
- 12:05 **Optimization of Well and Stage Spacing for Tight/Shale Gas Reservoirs:** H. Balan, A. Gupta
- 12:30 **Horizontal Well Spacing and Hydraulic Fracturing Design Optimization - A Case Study on Utica-Point Pleasant Shale Play:** A. Shahkarami, G. Wang, H. Belyadi



# WEDNESDAY TECHNICAL PROGRAM

\*Denotes presenter other than first author

## Panel

### Progress, Practices and Pitfalls in Unconventional Core Analysis

**Time:** 1:45 p.m. – 3:05 p.m.

**Location:** Room 302 A-B

**Fee:** Included with registration

**Moderator:** Creties Jenkins, Partner, Rose and Associates

This session focuses on the latest innovations in unconventional core analysis, how these data are being integrated with other information to qualify key reservoir properties, and the challenges in providing reliable measurements that are consistent among laboratories.



Randall S. Miller



Belgin Baser



Chad Hartman



Carl H. Sondergeld

1:45 **Introductory Remarks**

1:50 **Randall S. Miller**, Integrated Reservoir Solutions, Core Laboratories

2:00 **Belgin Baser**, Schlumberger

2:10 **Chad Hartman**, Weatherford

2:20 **Carl H. Sondergeld**, University of Oklahoma

2:30 Panel Discussion with Audience Questions

## Wednesday Afternoon Technical Presentations

### Operator's Forum IV

Room 301

**Chair:** S. Rhodes

1:45 **Introductory Remarks**

1:50 **Geomechanical Modeling of Flowback Scenarios to Establish Best Practices in the Midland Basin Horizontal Program:**

K. Wilson, I. Ahmed, K. MacIvor

1:50 **Quantifying Shale Oil Production Mechanisms by Integrating a Delaware Basin Well Data From Fracturing to Production:** H. Sun, D. Zhou, A. Chawathe

2:40 **Role of Multivariate Analysis to Define the Key Driver's Governing the Well Productivity in Marcellus Shale Play:**

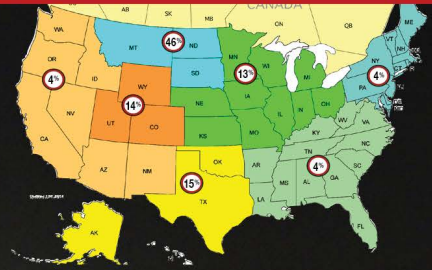
A. Shrivastava, M. Gupta, P. Jain, M. Srivastava, B. Deka



Please watch for team presentations which are given additional time to display integrated approaches to unconventional plays. Each team consists of no more than three members with different technical backgrounds (geoscience, petrophysics, engineering, operations, etc.)

WE ARE THE BAKKEN and **BEYOND!** Mailed Nationwide.

- ✓ Mailed Nationwide -- Seen by over 15,900 Industry Folks
- ✓ Emailed direct to OVER 6,000 Oil & Gas Industry Inboxes
- ✓ **BONUS REACH:** Distributed to Industry Professionals at TOP Oil & Gas Shows. [bakkenoilbiz.com/bakken-shows](http://bakkenoilbiz.com/bakken-shows)
- ✓ Keep your name out there!



**\*BONUS DISTRIBUTION\***  
at top Regional O&G Shows

"My experience advertising in the BOBJ was that those \$\$ invested were some of the best that I ever spent and those investments kept me in the "winner column".  
-- Troy Selland



**Bakken Oil**  
**BUSINESS JOURNAL**

office@bakkenoilbiz.com | OFFICE: 406-333-2148 | bakkenoilbiz.com



Hand delivered at 9 shows in 2015

*Working for you!*

## Flow Behavior From Nanopores to Reservoir Scale

Room 303

**Co-Chairs:** U. Ahmed and D. Devegowda

- 1:45 **Introductory Remarks**
- 1:50 **Phase Behavior of Hydrocarbon Mixtures in the Organic Nanopores of Unconventional Gas Condensate Reservoirs:** X. Dong, Z. Chen
- 2:15 **Producing Gas-Oil Ratio Behavior of Tight Oil Reservoirs:** R. S. Jones
- 2:40 **Wettability Characterization of the Most Important Unconventional Liquid Reservoirs in the United States and Its Impact in Oil Recovery:** J. O. Alvarez, D. S. Schechter
- 3:05 **Effect of Adsorption in Flow of Gases in Organic Nanopores: A Molecular Dynamics Study:** M. Kazemi, A. Takbiri Borujeni
- 3:30 **Refreshment Break**
- 3:40 **Water Sorption and Distribution Characteristics Inside Shale Nano-Capillaries and Nano-Channels: Effect of Surface Force Interactions:** J. Li, X. Li, R. Wang, Z. Khang, K. Wu, J. Shi, J. Xia, Y. Xing
- 4:05 **Impact of Pore Topology on Gas Diffusion and Productivity in Barnett and Haynesville Shale Plays:** D. Davudov, R. G. Moghanloo
- 4:30 **Adsorption and Capillary Condensation in Heterogeneous Nanoporous Shales:** Y. Ma, J. Chen, A. Jamili



## Emerging Global Plays

Room 225 A-B

**Chair:** R. Roadifer

- 1:45 **Introductory Remarks**
- 1:50 **Mexican Unconventional Plays: Geoscience, Endowment and Economic Considerations:** R. Aguilera, M. Cruz, E. Urban, R. F. Aguilera
- 2:15 **A Geological Evaluation of Jurassic Shale Oil Plays in Southern England:** C. O. Iwobi, S. More, J. Major, I. Verhagen, S. Brindle, R. Reboul, D. O'Connor
- 2:40 **Phosphoria Carbonate Resource Potential in the Big Horn and Wind River Basins of Western Wyoming:** R. D. Fritz
- 3:05 **Understanding Depositional Environments of the Shublik Formation of Arctic Alaska using XRF Chemostratigraphy:** I. Yurchenko, S. Graham, A. Hosford Scheirer, M. Al Ibrahim
- 3:30 **Refreshment Break**
- 3:40 **Applying Digital Rock Characterization to a New Anadarko Basin Shale Play:** T. Hintzman, A. Morcote, J. Walls
- 4:05 **Productive Potential of Upper Ordovician and Lower Silurian Shale Gas Plays in the Sichuan Basin:** X. Li
- 4:30 **Dawn of a New Gas Play in North Carolina: The Walnut Cove and Cow Branch Shales:** J. C. Reid, K. B. Taylor

## Surface - Facilities, Operations and Performance

Room 225 C-D

**Co-Chairs:** K. Richter and P. Fanailoo

- 1:45 **Introductory Remarks**
- 1:50 **Bakken Flare Mitigation Field Trial:** C. C. Ruffer, S. Ravindran\*, L. Sneary
- 2:15 **Regional Saltwater Disposal Facility Planning Utilizing Data Analytic Methods:** C. E. Kronkosky, A. Etehadtavakkol
- 2:40 **Unconventional Gas Sources and Carbon Sequestration Interplay in Mui Basin, Kitui County, Kenya:** A. D. Obwocha
- 3:05 **Real Time Coaxial Cable Casing Imager for CO<sub>2</sub> Leakage Risk Detection:** Y. Li, R. Nygaard, W. Zhu, H. Xiao
- 3:30 **Refreshment Break**
- 3:40 **ESP Real Time Data Enables Well Testing With High Frequency, High Resolution and High Repeatability in an Unconventional Well:** L. Camilleri, M. El Gindy, A. Rusakov
- 4:05 **Using Advanced Workflows to Track KPIs and Minimize Invisible Lost Time from the Rig Floor to the Head Office:** D. Johnson, R. Trujillo
- 4:30 **Shale Gas & Oil Development and Water Management Issues in Tunisia:** A. Gaaya

## Various Approaches to Microstructure in Unconventional Reservoirs

Room 302 C

**Co-Chairs:** K. Yared and S. Perry

- 1:45 **Introductory Remarks**
- 1:50 **Textural and Mineralogical Control on Tensile Strength of Laminated Organic-Rich Shale:** J. Zhang, H. Liu, B. Lai, H. Li, D. Georgi



### No-Electronic Capturing Policy

Capturing or photographing contents of Technical or ePaper Presentations or exhibition booths via any electronic device or media is strictly prohibited at URTeC.

# WEDNESDAY TECHNICAL PROGRAM

\*Denotes presenter other than first author

- 2:15 **Multiscale Shale Pore Network Characterization:** C. Verba, D. Crandall, J. Moore
- 2:40 **The Use of Advanced Analytical Techniques to Characterize Micro- and Nanoscale Pores and Fractures in the Bakken:** J. Sorensen, B. Kurz, S. Smith, M. Foster, B. Aylsworth, J. Walls, A. Morcote
- 3:05 **Fracture Characterization Using AFM (Atomic Force Microscopy):** K. Liu, M. Ostadhassan, V. Rasouli

## Multi-Discipline Data Integration II

Room 304 A-B

**Co-Chairs:** G. Sparkman and D. Valleau

- 1:45 **Introductory Remarks**
- 1:50 **Unraveling the Reservoir Heterogeneity of a Complex Hybrid Play by Integrating Results From Core, Outcrops and Well Logs: A Case Study From the Bakken Formation in Williams and McKenzie Co., Williston Basin:** S. Edwards, A. Phelps, M. H. Hofmann, S. D. Fluckiger
- 2:15 **Organic-Rich Stratigraphic Units in the Vaca Muerta Formation and Their Distribution and Characterization in the Gas Window of the Neuquén Basin (Argentina):** R. F. Dominguez, M. J. Continanzia, K. Mykietiuik, C. Ponce, R. R. Guerello, G. J. Perez, O. Catuneanu, E. Cristallini

- 2:40 **Rock Mechanical Behavior at the Inch Scale in a Thinly Laminated Unconventional Formation:** S. Zeroug, B. Sinha, T. Lei, J. Jeffers
- 3:05 **Integration of GR Spectroscopy, Geological Core Description, Acoustic Logging and Geomechanics for Improved Characterization of Mudstone Reservoirs:** C. M. Achong, P. Desjardins
- 3:30 **Refreshment Break**
- 3:40 **Reservoir Quality and Stratigraphy of the Frontier to Dakota Interval of the Powder River Basin, A Core-Log-Seismic Exercise:** C. Davies, R. Kenny\*, S. Purvis, J. Fenton, R. Trevino, K. Geesaman, V. Pandey, S. Bose, R. Lu
- 4:05 **Integrated Multidisciplinary Reservoir Characterization of the Three Forks Formation in the Williston Basin, Divide County, North Dakota:** S. M. Mogensen, S. D. Fluckiger, R. Brinkerhoff, M. H. Hofmann, I. Tsybulkina, V. Bansal, C. Marin, S. Randazzo

## ASCE Infrastructure Issues Within Unconventional Resource Development II

Room 304 C

**Chair:** J. Anpach

- 1:45 **Introductory Remarks**
- 1:50 **Big Data Analytics for Civil Engineering Applications: IDEA:** L. Friedel
- 3:05 **Water and Waste Water Lines in the DOT ROW:** C. Quiroga



A global industry  
requires a global  
publication

Subscribe online at:  
[www.oilfieldtechnology.com/subscribe](http://www.oilfieldtechnology.com/subscribe)

**OILFIELD  
TECHNOLOGY**  
EXPLORATION | DRILLING | PRODUCTION

# PRESENTER CROSS REFERENCE

Achong, Christon	Wed.	3:05 p.m.	Technical	304 A-B	Theme 2: Multi-Discipline Data Integration II
Acuna, Jorge	Wed.	8:30 a.m.	Technical	225 C-D	Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies
Agharazi, Alireza	Mon.	2:15 p.m.	ePaper	ePaper Station B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Agharazi, Alireza	Mon.	1:50 p.m.	Technical	304 C	Theme 2: Aligning Geoscience and Engineering Workflows by Reservoir Traps
Aguilera, Roberto	Tue.	8:30 a.m.	Technical	302 C	Theme 7: Understanding Mechanisms for Improving Recovery
Aguilera, Roberto	Wed.	1:50 p.m.	Technical	225 A-B	Theme 12: Emerging Global in Emerging Plays
Aimene, Yamaina	Mon.	5:30 p.m.	ePaper	ePaper Station A	Theme 4: Geomechanics
Aines, Roger	Mon.	10:45 a.m.	Technical	Stars at Night Ballroom 1	Plenary Session - Technology, Regulation, and the Future of Oil and Gas and Alternatives
Ajayi, Arashi	Mon.	2:15 p.m.	Technical	302 C	Theme 7: Integrated Reservoir Modeling
Al Duhailan, Mohammed	Tue.	2:40 p.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II
Al Duhailan, Mohammed	Tue.	3:45 p.m.	Technical	304 A-B	Theme 2: Multi-Discipline Data Integration I
Al Dulaijan, Khaled	Mon.	4:10 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Alalade, Damy	Tue.	2:40 p.m.	Technical	302 C	Theme 8: HSSE Practices and Operations
Alcantar-Lopez, Leo	Mon.	1:50 p.m.	Technical	302 A-B	Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs
Ali, Mansoor	Tue.	2:15 p.m.	Technical	304 C	Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs
Allen, David	Wed.	9:25 a.m.	ePaper	ePaper Station B	Theme 9: Reserves Estimation and Forecasting
Almasoodi, Mouin	Mon.	4:35 p.m.	Technical	302 C	Theme 7: Integrated Reservoir Modeling
Alqahtani, Adel	Mon.	2:40 p.m.	Technical	304 C	Theme 2: Aligning Geoscience and Engineering Workflows by Reservoir Traps
Altowairqi, Yazeed	Tue.	9:20 a.m.	Technical	303	Theme 4: Geomechanics II
Alvarez, Johannes	Wed.	2:40 p.m.	Technical	303	Theme 7: Flow Behavior From Nanopores to Reservoir Scale
Anderson, Roger	Tue.	11:40 a.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations , Integrating Data to Optimize
Anderson, Roger	Wed.	8:30 a.m.	Technical	302 C	Theme 6: Data Analytics
Anspach, James	Wed.	8:55 a.m.	Technical	303	ASCE Infrastructure Issues within Unconventional Resource Development I
Apisaksirikul, Sarin	Wed.	10:50 a.m.	Technical	302 A-B	Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling
Apte, Shail	Wed.	11:40 a.m.	Technical	225 C-D	Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies
Balan, Huseyin Onur	Wed.	12:05 p.m.	ePaper	ePaper Station C	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Bammi, Sachin	Wed.	10:40 a.m.	ePaper	ePaper Station A	Theme 3: Petrophysical Characterization Unconventional Reservoirs
Baser, Belgin	Wed.	2:00 p.m.	Technical	302 A-B	Panel: Progress, Practices, and Pitfalls in Unconventional Core Analysis
Bayer, Sebastian	Tue.	8:30 a.m.	Technical	301	Operator's Forum II
Behura, Jyoti	Mon.	2:40 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Behura, Jyoti	Tue.	2:40 p.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
Belayouni, Nidhal	Wed.	9:20 a.m.	Technical	304 A-B	Theme 2: Microseismic Fracture Map
Belhaj Mohamed, Anis	Tue.	9:50 a.m.	ePaper	ePaper Station B	Theme 2: Multi-Discipline Data Integration
Bertoncello, Antoine	Tue.	2:15 p.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II
Bertoncello, Antoine	Tue.	8:30 a.m.	Technical	303	Theme 4: Geomechanics II
Bittars, Mike	Tue.	1:50 p.m.	Technical	301	Technology Integration: Today's Tools and Tomorrow's Technology
Blasingame, Tom	Mon.	2:10 p.m.	Technical	225 A-B	Panel: Reservoir to Reserves
Browning, Samuel	Mon.	1:50 p.m.	Technical	225 C-D	Theme 10: Well Construction
Browning, John	Tue.	5:00 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Buller, Dan	Tue.	11:35 a.m.	Technical	301	Operator's Forum III
Bulling, Thomas	Tue.	10:45 a.m.	Technical	301	Operator's Forum III
Cadwallader, Stephan	Tue.	8:30 a.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations , Integrating Data to Optimize

# PRESENTER CROSS REFERENCE

Camilleri, Lawrence	Wed.	3:40 p.m.	Technical	225 C-D	Theme 13: Surface - Facilities, Operations and Performance Theme 9: Surviving in Low Price Environment Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize Theme 3: Application of Core Technologies to Unconventional Reservoirs Theme 7: Integrated Reservoir Modeling Theme 2: Multi-Discipline Data Integration I Technology Integration: Today's Tools and Tomorrow's Technology Theme 4: Geomechanics II Theme 3: Unraveling Unconventional Properties With Log Integration Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons III Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize Theme 2: Multi-Discipline Data Integration I Theme 7: Flow Behavior From Nanopores to Reservoir Scale Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs Theme 3: Unraveling Unconventional Properties With Log Integration ASCE Infrastructure Issues within Unconventional Resource Development I Theme 10: Well Construction Plenary: The U.S. Returns to Pre-OPEC Dominance Theme 2: Multi-Discipline Data Integration II Theme 8: HSSE Practices and Operations Theme 7: Integrated Reservoir Modeling Theme 7: Flow Behavior From Nanopores to Reservoir Scale Theme 7: Flow Behavior From Nanopores to Reservoir Scale Theme 12: Emerging Insights in Unconventional Plays Theme 8: HSSE Practices and Operations Theme 3: Unraveling Unconventional Properties With Log Integration Theme 2: Microseismic Fracture Map Theme 2: Multi-Discipline Data Integration II Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling Theme 3: Petrophysical Characterization Unconventional Reservoirs Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize Theme 8: HSSE Practices and Operations Theme 7: Production Performance of Tight Oil and Gas Reservoirs Theme 2: Horizontal Targeting Strategies and Challenges Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons Plenary Session: Technology, Regulation, and the Future of Oil and Gas and Alternatives ASCE Infrastructure Issues within Unconventional Resource Development II Theme 12: Emerging Global in Emerging Plays Theme 13: Surface - Facilities, Operations and Performance
Charlez, Philippe	Mon.	2:40 p.m.	Technical	225 A-B	
Charry, Lina	Mon.	2:40 p.m.	ePaper	ePaper Station B	
Cho, Younki	Wed.	12:05 p.m.	ePaper	ePaper Station B	
Clarkson, Christopher	Mon.	1:50 p.m.	Technical	302 C	
Courtier, James	Tue.	1:50 p.m.	Technical	304 A-B	
Crichton, Daniel	Tue.	2:15 p.m.	Technical	301	
Cruz, Leonardo	Tue.	9:45 a.m.	Technical	303	
Cuervo, Sergio	Tue.	10:50 a.m.	Technical	304 C	
Curtis, John	Tue.	9:45 a.m.	Technical	225 C-D	
Dadmohammadi, Younas	Tue.	1:50 p.m.	Technical	304 C	
Dang, Son	Mon.	1:50 p.m.	ePaper	ePaper Station A	
Dang, Son	Wed.	11:40 a.m.	Technical	304 C	
Datta-Gupta, Akhil	Wed.	10:15 a.m.	ePaper	ePaper Station C	
Davogustto Cataldo, Oswaldo	Tue.	2:15 p.m.	Technical	304 A-B	
Davudov, Davud	Wed.	4:05 p.m.	Technical	303	
Dawson, Matthew	Tue.	5:00 p.m.	Technical	302 A-B	
Deglint, Hanford	Mon.	4:35 p.m.	Technical	302 A-B	
Dehghanpour, Hassan	Tue.	8:55 a.m.	Technical	304 C	
Derby, Martin	Wed.	9:20 a.m.	Technical	303	
DeVerse, Jarrod	Tue.	9:25 a.m.	ePaper	ePaper Station A	
Dinges, Dan O.	Mon.	8:45 a.m.	Technical	Stars at Night Ballroom 1	
Dominguez, Ricardo	Wed.	2:15 p.m.	Technical	304 A-B	
Donaldson, Barry	Mon.	4:40 p.m.	ePaper	ePaper Station C	
Dong, Yannong	Mon.	3:45 p.m.	Technical	302 C	
Dong, Xiaohu	Tue.	3:35 p.m.	ePaper	ePaper Station A	
Dong, Xiaohu	Wed.	1:50 p.m.	Technical	303	
Dorrins, Peter	Wed.	9:45 a.m.	Technical	225 A-B	
Doucette, Paul	Tue.	2:15 p.m.	Technical	302 C	
Douglas, Jack	Tue.	8:30 a.m.	Technical	304 C	
Dudley, Colton	Wed.	11:15 a.m.	Technical	304 A-B	
Edwards, Sarah	Wed.	1:50 p.m.	Technical	304 A-B	
Elahi Naraghi, Morteza	Wed.	8:30 a.m.	Technical	302 A-B	
El-Monier, Ilham	Wed.	11:55 a.m.	ePaper	ePaper Station A	
Evans, Shea	Tue.	8:55 a.m.	Technical	302 A-B	
Fanailoo, Pedram	Tue.	3:45 p.m.	Technical	302 C	
Farah, Nioclas	Tue.	3:30 p.m.	ePaper	ePaper Station B	
Fay, Matthew	Tue.	10:45 a.m.	Technical	302 C	
Fay, Matthew	Tue.	3:45 p.m.	Technical	225 C-D	
Feng, Dong	Mon.	2:15 p.m.	ePaper	ePaper Station A	
Foss, Michelle	Mon.	10:55 a.m.	Technical	Stars at Night Ballroom 1	
Friedel, Layne	Wed.	1:45 p.m.	Technical	304 C	
Fritz, Richard	Wed.	2:40 p.m.	Technical	225 A-B	
Gaaya, Ali	Wed.	4:30 p.m.	Technical	225 C-D	

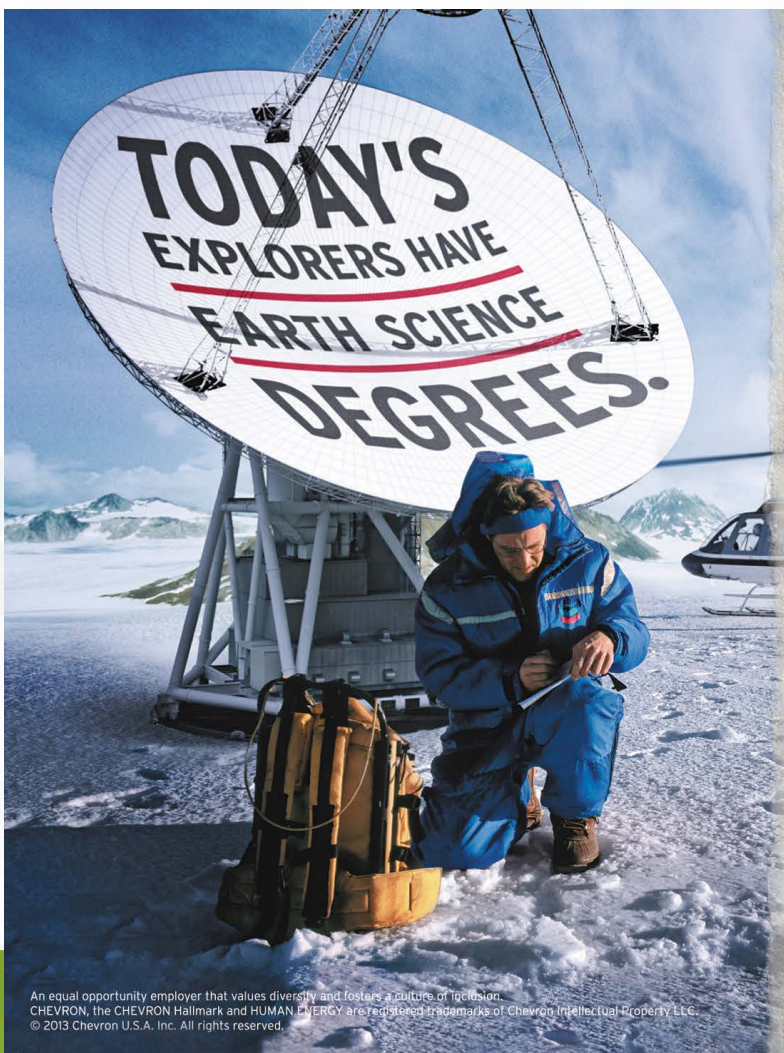
# PRESENTER CROSS REFERENCE

Gakhar, Kush	Tue.	3:45 p.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Gardiner, James	Mon.	2:15 p.m.	Technical	225 C-D	Theme 10: Well Construction
Gawankar, Kiran	Mon.	3:05 p.m.	ePaper	ePaper Station C	Theme 3: Logging Technologies Applied to Unconventional Reservoirs
Geetan, Steve	Tue.	9:20 a.m.	Technical	302 C	Theme 7: Understanding Mechanisms for Improving Recovery
Ghanizadeh, Amin	Wed.	11:30 a.m.	ePaper	ePaper Station A	Theme 3: Petrophysical Characterization Unconventional Reservoirs
Gherabati, Amin	Tue.	2:15 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Goldsmith, Mindy	Tue.	10:50 a.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I
González Tomassini, Federico	Tue.	11:10 a.m.	Technical	302 C	Theme 2: Horizontal Targeting Strategies and Challenges
González Tomassini, Federico	Tue.	4:35 p.m.	Technical	301	Operator's Forum IV - International
Grechishnikova, Alena	Tue.	4:10 p.m.	Technical	304 A-B	Theme 2: Multi-Discipline Data Integration I
Green, Derrick	Mon.	2:15 p.m.	ePaper	ePaper Station C	Theme 3: Logging Technologies Applied to Unconventional Reservoirs
Gu, Zhaobin	Wed.	11:40 a.m.	ePaper	ePaper Station B	Theme 3: Application of Core Technologies to Unconventional Reservoirs
Gulen, Gürcan	Tue.	4:35 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Gusek, Ron	Wed.	9:20 a.m.	Technical	301	ASME Hydraulic Fracturing
Gutierrez Carrilero, Susana	Wed.	11:05 a.m.	ePaper	ePaper Station C	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
H. Sassi, Khaled	Wed.	11:40 a.m.	Technical	302 A-B	Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling
Hagiwara, Teruhiko	Wed.	9:45 a.m.	Technical	302 A-B	Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling
Hakami, Ahmed	Tue.	2:40 p.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Hall, Don	Mon.	4:20 p.m.	ePaper	ePaper Station A	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons
Hall, Brendon	Mon.	3:45 p.m.	Technical	302 A-B	Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs
Hamedifar, Hamed	Mon.	5:05 p.m.	ePaper	ePaper Station C	Theme 8: HSSE Practices and Operations
Hammes, Ursula Hammes	Tue.	1:50 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Harris, Charles	Tue.	11:40 a.m.	Technical	304 A-B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Hartman, Chad	Wed.	2:10 p.m.	Technical	302 A-B	Panel: Progress, Practices, and Pitfalls in Unconventional Core Analysis
Heidari, Zoya	Tue.	4:10 p.m.	Technical	304 C	Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs
Heij, Gerhard	Tue.	9:45 a.m.	Technical	304 A-B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Hernandez-Cordon, Sonia	Tue.	11:15 a.m.	Technical	304 C	Theme 3: Unraveling Unconventional Properties With Log Integration
Hintzman, Tiffany	Wed.	3:40 p.m.	Technical	225 A-B	Theme 12: Emerging Global in Emerging Plays
Howard, Daniel	Tue.	10:15 a.m.	ePaper	ePaper Station A	Theme 10: Well Construction
Howe, Haleigh	Mon.	2:40 p.m.	ePaper	ePaper Station A	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons
Hussain, Maaruf	Mon.	4:35 p.m.	ePaper	ePaper Station B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Ikonnikova, Svetlana	Tue.	4:10 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Ilk, Dilhan	Mon.	2:00 p.m.	Technical	225 A-B	Panel: Reservoir to Reserves
Illich, Harold	Tue.	11:40 a.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I
Iwobi, Christopher	Wed.	2:15 p.m.	Technical	225 A-B	Theme 12: Emerging Global in Emerging Plays
Jarvie, Daniel	Tue.	8:30 a.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I
Jia, Xinli	Mon.	2:40 p.m.	Technical	302 C	Theme 7: Integrated Reservoir Modeling
Johnson, David	Wed.	4:05 p.m.	Technical	225 C-D	Theme 13: Surface - Facilities, Operations and Performance
Jones, R.	Wed.	2:15 p.m.	Technical	303	Theme 7: Flow Behavior From Nanopores to Reservoir Scale

# PRESENTER CROSS REFERENCE

Kahn, Daniel	Wed.	10:50 a.m.	Technical	304 A-B
Kanfar, Mohammed	Tue.	4:25 p.m.	ePaper	ePaper Station A
Katsuki, Daisuke	Mon.	5:05 p.m.	ePaper	ePaper Station A
Kaul, Sandeep	Wed.	10:50 a.m.	Technical	225 C-D
Kazemi, Mohammad	Tue.	2:15 p.m.	ePaper	ePaper Station B
Kazemi, Mohammad	Wed.	3:05 p.m.	Technical	303
Keller, G. Randy	Tue.	1:50 p.m.	ePaper	ePaper Station C
Kenny, Ron	Wed.	3:40 p.m.	Technical	304 A-B
Khan, Safdar	Mon.	5:00 p.m.	Technical	303
Khanal, Aaditya	Tue.	10:50 a.m.	Technical	225 A-B
Khoshghadam, Mohammad	Mon.	5:00 p.m.	Technical	302 C
King, Andrew	Tue.	10:40 a.m.	ePaper	ePaper Station C
King, Michael	Wed.	8:55 a.m.	Technical	225 C-D
Kornacki, Alan	Tue.	8:55 a.m.	Technical	225 C-D
Kronkosky, Chad	Wed.	2:15 p.m.	Technical	225 C-D
Kumar, Abhash	Tue.	2:15 p.m.	ePaper	ePaper Station C
Kuzma, Heidi	Mon.	2:15 p.m.	Technical	225 A-B
Kvale, Erik	Tue.	8:30 a.m.	Technical	304 A-B
Le Calvez, Joel	Tue.	3:55 p.m.	ePaper	ePaper Station C
Li, Fangyu	Tue.	2:15 p.m.	ePaper	ePaper Station A
Li, Fangyu	Tue.	2:40 p.m.	ePaper	ePaper Station A

Theme 2: Microseismic Fracture Map  
 Theme 7: Flow Behavior From Nanopores to Reservoir Scale  
 Theme 4: Geomechanics  
 Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies  
 Theme 7: Production Performance of Tight Oil and Gas Reservoirs  
 Theme 7: Flow Behavior From Nanopores to Reservoir Scale  
 Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs  
 Theme 2: Multi-Discipline Data Integration II  
 Theme 4: Geomechanics I  
 Theme 9: EUR and Performance Prediction  
 Theme 7: Integrated Reservoir Modeling  
 Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs  
 Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies  
 Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I  
 Theme 13: Surface - Facilities, Operations and Performance  
 Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs  
 Theme 9: Surviving in Low Price Environment  
 Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis  
 Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs  
 Theme 2: Seismic Attributes  
 Theme 2: Seismic Attributes



At Chevron, you'll join a team with the technology to take on big challenges, the integrity to do it responsibly, and the drive to keep the world moving forward. Are you up to the job?

**Chevron is seeking qualified applicants for geoscience positions in the U.S. and around the world.**

To learn more about specific positions and locations, please visit us online at [chevron.com/careers](http://chevron.com/careers)

**JOIN THE CHALLENGE.**



Human Energy®

# PRESENTER CROSS REFERENCE

Li, Jian	Mon.	3:55 p.m.	ePaper	ePaper Station A	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons
Li, Jing	Wed.	3:40 p.m.	Technical	303	Theme 7: Flow Behavior From Nanopores to Reservoir Scale
Li, John	Mon.	4:10 p.m.	Technical	304 C	Theme 2: Aligning Geoscience and Engineering Workflows by Reservoir Traps
Li, Ningning	Tue.	1:50 p.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Li, Ruijian	Tue.	9:20 a.m.	Technical	225 A-B	Theme 9: EUR and Performance Prediction
Li, Xiaopeng	Tue.	2:40 p.m.	ePaper	ePaper Station B	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Li, Xinjing	Wed.	4:05 p.m.	Technical	225 A-B	Theme 12: Emerging Global in Emerging Plays
Li, Yurong	Wed.	3:05 p.m.	Technical	225 C-D	Theme 13: Surface - Facilities, Operations and Performance
Liang, Baosheng	Wed.	10:50 a.m.	Technical	302 C	Theme 6: Data Analytics
Liang, Peter	Wed.	9:45 a.m.	Technical	225 C-D	Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies
Liborius-Parada, Andreina	Mon.	5:25 p.m.	ePaper	ePaper Station B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Lindsey, Alan	Wed.	10:15 a.m.	ePaper	ePaper Station B	Theme 9: Reserves Estimation and Forecasting
Liu, Zhe	Tue.	1:50 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Liu, Kouqi	Wed.	3:05 p.m.	Technical	302 C	Theme 3: Various Approaches to Microstructure in Unconventional Reservoirs
Lochmann, Mark	Mon.	1:50 p.m.	Technical	225 A-B	Theme 9: Surviving in Low Price Environment
Long, Jordan	Mon.	4:35 p.m.	Technical	225 C-D	Theme 10: Well Construction
Lowry, Bradley	Wed.	11:40 a.m.	ePaper	ePaper Station C	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Lupo, Tony	Wed.	11:15 a.m.	Technical	225 A-B	Theme 12: Emerging Insights in Unconventional Plays
Lynch, Mike	Mon.	11:05 a.m.	Technical	Stars at Night Ballroom 1	Plenary Session - Technology, Regulation, and the Future of Oil and Gas and Alternatives
Ma, Yixin	Wed.	4:30 p.m.	Technical	303	Theme 7: Flow Behavior From Nanopores to Reservoir Scale
Macaulay, Euan	Wed.	9:20 a.m.	Technical	225 A-B	Theme 12: Emerging Insights in Unconventional Plays
MacDonald, Geoff	Mon.	2:40 p.m.	Technical	302 A-B	Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs
Mack, Mark	Tue.	4:35 p.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Madren, Jonathan	Tue.	1:50 p.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II
Makinde, Ibukun	Tue.	11:40 a.m.	Technical	225 A-B	Theme 9: EUR and Performance Prediction
Male, Frank	Tue.	2:40 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Mann, Caitlin	Tue.	4:35 p.m.	Technical	302 C	Theme 8: HSSE Practices and Operations
Marin, Cesar	Mon.	3:45 p.m.	Technical	304 C	Theme 2: Aligning Geoscience and Engineering Workflows by Reservoir Traps
Mathia, Eliza	Mon.	2:15 p.m.	Technical	303	Theme 4: Geomechanics I
Mathieu, Jean-Philippe	Tue.	3:45 p.m.	Technical	301	Operator's Forum IV - International
Maus, Stefan	Tue.	9:50 a.m.	ePaper	ePaper Station A	Theme 10: Well Construction
Maxwell, Shawn	Mon.	4:10 p.m.	Technical	303	Theme 4: Geomechanics I
Maxwell, Shawn	Tue.	9:25 a.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
McCaffrey, Mark	Tue.	11:15 a.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I
McDermott, Dirk	Mon.	2:20 p.m.	Technical	301	Panel: Unconventional Research and Education: Where Are We Now?
McKenna, Jonathan	Wed.	8:30 a.m.	Technical	304 A-B	Theme 2: Microseismic Fracture Map
McLennan, John	Mon.	2:10 p.m.	Technical	301	Panel: Unconventional Research and Education: Where Are We Now?
Meneses-Scherrer, Eduardo	Wed.	8:30 a.m.	Technical	225 A-B	Theme 12: Emerging Insights in Unconventional Plays
Miller, Matthew	Mon.	4:10 p.m.	Technical	225 C-D	Theme 10: Well Construction
Miller, Randall S.	Wed.	1:50 p.m.	Technical	302 A-B	Panel: Progress, Practices, and Pitfalls in Unconventional Core Analysis
Misra, Siddharth	Mon.	1:50 p.m.	ePaper	ePaper Station C	Theme 3: Logging Technologies Applied to Unconventional Reservoirs
Mody, Rustom	Wed.	8:55 a.m.	Technical	301	ASME Hydraulic Fracturing
Mogensen, Shane	Wed.	4:05 p.m.	Technical	304 A-B	Theme 2: Multi-Discipline Data Integration II



# PRESENTER CROSS REFERENCE

Mohaghegh, Shahab	Wed.	9:20 a.m.	Technical	302 C
Morcote, Anyela	Wed.	11:05 a.m.	ePaper	ePaper Station A
Morton, Matthew	Wed.	11:40 a.m.	Technical	225 A-B
Mosse, Laurent	Tue.	9:20 a.m.	Technical	304 C
Mukherjee, Sanjoy	Tue.	9:25 a.m.	ePaper	ePaper Station B
Mukherjee, Sandeep	Tue.	9:45 a.m.	Technical	304 C
Nandy, Dipanwita	Tue.	11:05 a.m.	ePaper	ePaper Station B
Ning, Yang	Wed.	9:20 a.m.	Technical	302 A-B
Northam, Mark	Mon.	2:00 p.m.	Technical	301
Noynaert, Sam	Mon.	5:00 p.m.	Technical	225 C-D
Obwocha, Achoki	Wed.	2:40 p.m.	Technical	225 C-D
Ogiesoba, Osareni	Wed.	8:55 a.m.	Technical	225 A-B
Oraki Kohshour, Iman	Tue.	5:00 p.m.	Technical	302 C
Ozkan, Erdal	Mon.	1:50 p.m.	Technical	301
Pandey, Yogendra	Tue.	11:40 a.m.	Technical	303
Pang, Yu	Tue.	4:00 p.m.	ePaper	ePaper Station A
Pang, Zhenglian	Tue.	4:35 p.m.	Technical	225 C-D
Panja, Palash	Tue.	9:45 a.m.	Technical	225 A-B
Panjaitan, Maraden	Mon.	3:05 p.m.	ePaper	ePaper Station B
Papandrea, Ruthie	Tue.	4:10 p.m.	Technical	302 A-B
Pathak, Manas	Tue.	3:05 p.m.	ePaper	ePaper Station B
Pei, Jianyong	Mon.	3:45 p.m.	Technical	303
Pei, Donghong	Tue.	11:05 a.m.	ePaper	ePaper Station C
Pettegrew, Jared	Tue.	8:30 a.m.	Technical	225 A-B
Piedrahita, Jaime	Wed.	11:15 a.m.	Technical	302 A-B
Pisklak, Thomas	Mon.	3:45 p.m.	Technical	225 C-D
Pordel Shahri, Mojtaba	Tue.	11:15 a.m.	Technical	303
Preiksaitis, Mike	Wed.	11:40 a.m.	Technical	304 A-B
Putra, Rieza	Tue.	11:30 a.m.	ePaper	ePaper Station B
Quiroga, Cesar	Wed.	3:05 p.m.	Technical	304 C
Quiroga, Cesar	Wed.	8:30 a.m.	Technical	303

Theme 6: Data Analytics  
 Theme 3: Petrophysical Characterization Unconventional Reservoirs  
 Theme 12: Emerging Insights in Unconventional Plays  
 Theme 3: Unraveling Unconventional Properties With Log Integration  
 Theme 2: Multi-Discipline Data Integration  
 Theme 3: Unraveling Unconventional Properties With Log Integration  
 Theme 2: Multi-Discipline Data Integration  
 Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling  
 Panel: Unconventional Research and Education: Where Are We Now?  
 Theme 10: Well Construction  
 Theme 13: Surface - Facilities, Operations and Performance  
 Theme 12: Emerging Insights in Unconventional Plays  
 Theme 8: HSSE Practices and Operations  
 Panel - Unconventional Research and Education: Where Are We Now?  
 Theme 4: Geomechanics II  
 Theme 7: Flow Behavior From Nanopores to Reservoir Scale  
 Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II  
 Theme 9: EUR and Performance Prediction  
 Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize  
 Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize  
 Theme 7: Production Performance of Tight Oil and Gas Reservoirs  
 Theme 4: Geomechanics I  
 Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs  
 Theme 9: EUR and Performance Prediction  
 Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling  
 Theme 10: Well Construction  
 Theme 4: Geomechanics II  
 Theme 2: Microseismic Fracture Map  
 Theme 2: Multi-Discipline Data Integration  
 ASCE Infrastructure Issues within Unconventional Resource Development II  
 ASCE Infrastructure Issues within Unconventional Resource Development I



# PRESENTER CROSS REFERENCE

Rahimi Zeynal, Asal	Tue.	9:50 a.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
Rahman, Mohammad	Tue.	9:20 a.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons I
Raverta, Mariano	Wed.	9:50 a.m.	ePaper	ePaper Station B	Theme 9: Reserves Estimation and Forecasting
Ravindran, Satish	Wed.	1:50 p.m.	Technical	225 C-D	Theme 13: Surface - Facilities, Operations and Performance
Reed, Robert	Mon.	2:15 p.m.	Technical	302 A-B	Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs
Refayee, Hesham	Mon.	4:35 p.m.	Technical	304 C	Theme 2: Aligning Geoscience and Engineering Workflows by Reservoir Traps
Reid, Jeffrey	Wed.	4:30 p.m.	Technical	225 A-B	Theme 12: Emerging Global in Emerging Plays
Rich, Jamie	Mon.	2:15 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Richardson, John	Tue.	4:10 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Rittenhouse, Sarah	Tue.	4:35 p.m.	Technical	304 A-B	Theme 2: Multi-Discipline Data Integration I
Ritter, John	Mon.	1:50 p.m.	Technical	225 A-B	Panel: Reservoir to Reserves
Robertson, Allana	Wed.	10:50 a.m.	Technical	304 C	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons III
Rogers, Hank	Mon.	2:40 p.m.	Technical	225 C-D	Theme 10: Well Construction
Ross, Gary N.	Mon.	8:55 a.m.	Technical	Stars at Night Ballroom 1	Plenary: The U.S. Returns to Pre-OPEC Dominance
Roux, Pierre	Wed.	9:45 a.m.	Technical	304 A-B	Theme 2: Microseismic Fracture Map
Rucker, William	Tue.	9:20 a.m.	Technical	301	Operator's Forum II
Ruffer, Christopher	Tue.	4:10 p.m.	Technical	302 C	Theme 8: HSSE Practices and Operations
Ruhle, William	Wed.	10:40 a.m.	ePaper	ePaper Station C	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Saboda, Steve	Tue.	9:20 a.m.	Technical	304 A-B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Sahdev, Neha	Tue.	9:45 a.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations , Integrating Data to Optimize
Samaroo, Brian	Wed.	9:45 a.m.	Technical	302 C	Theme 6: Data Analytics
Sanchez-Ramirez, Jorge	Tue.	4:35 p.m.	Technical	304 C	Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs
Schnoor, Eli	Mon.	1:50 p.m.	ePaper	ePaper Station B	Theme 11: Case Histories Innovative Stimulations , Integrating Data to Optimize
Schutter, Stephen	Tue.	11:15 a.m.	Technical	304 A-B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Shahkarami, Alireza	Wed.	12:30 p.m.	ePaper	ePaper Station C	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Shane, Tim	Mon.	3:05 p.m.	ePaper	ePaper Station A	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons
Sharma, Akash	Tue.	11:15 a.m.	Technical	225 A-B	Theme 9: EUR and Performance Prediction
Sheffield, Scott D.	Mon.	8:35 a.m.	Technical	Star at Night Ballroom 1	Plenary: The U.S. Returns to Pre-OPEC Dominance
Shojaei, Hasan	Tue.	3:45 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Shrivastava, Akhil	Wed.	2:40 p.m.	Technical	301	Operator's Forum V
Sicking, Charles	Tue.	11:30 a.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
Siddiqui, Aamir	Mon.	3:30 p.m.	ePaper	ePaper Station C	Theme 3: Logging Technologies Applied to Unconventional Reservoirs
Singleton, Scott	Mon.	1:50 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Skinner, Matthew	Wed.	9:25 a.m.	ePaper	ePaper Station C	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Smith, Bill	Wed.	8:30 a.m.	Technical	301	ASME Hydraulic Fracturing
Somanchi, Kiran	Tue.	9:20 a.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize

# PRESENTER CROSS REFERENCE

Sommacal, Silvano	Mon.	4:10 p.m.	Technical	302 A-B	Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs
Sondergeld, Carl H.	Wed.	2:20 p.m.	Technical	302 A-B	Panel: Progress, Practices, and Pitfalls in Unconventional Core Analysis
Sonnenberg, Steve	Tue.	8:55 a.m.	Technical	304 A-B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Sorensen, James	Tue.	8:55 a.m.	Technical	302 C	Theme 7: Understanding Mechanisms for Improving Recovery
Sorensen, James	Wed.	2:40 p.m.	Technical	302 C	Theme 3: Various Approaches to Microstructure in Unconventional Reservoirs
Sterling, Robert	Wed.	10:50 a.m.	Technical	225 A-B	Theme 12: Emerging Insights in Unconventional Plays
Suarez, Mariano	Mon.	4:10 p.m.	Technical	302 C	Theme 7: Integrated Reservoir Modeling
Suarez-Rivera, Roberto	Tue.	2:15 p.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Suarez-Rivera, Roberto	Tue.	5:00 p.m.	Technical	304 C	Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs
Sun, Hao	Wed.	1:50 p.m.	Technical	301	Operator's Forum V
Tang, Guoqing	Tue.	3:55 p.m.	ePaper	ePaper Station B	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Tang, Yula	Wed.	9:20 a.m.	Technical	225 C-D	Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies
Taylor, Scott	Mon.	3:45 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Taylor, Scott	Tue.	3:30 p.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
Teff, Joe	Tue.	10:50 a.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Teklu, Tadesse Weldu	Tue.	8:55 a.m.	Technical	303	Theme 4: Geomechanics II
Thomas, Mark	Tue.	10:40 a.m.	ePaper	ePaper Station B	Theme 2: Multi-Discipline Data Integration
Thompson, John	Tue.	11:15 a.m.	Technical	302 A-B	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Tompkins, Darryl	Tue.	2:15 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Tompkins, Darryl	Wed.	11:15 a.m.	Technical	225 C-D	Theme 7: Advances in Rate/Pressure Transient Analysis Methodologies
Tutuncu, Azra	Tue.	10:50 a.m.	Technical	303	Theme 4: Geomechanics II
Umholtz, Nicholas	Tue.	1:50 p.m.	Technical	302 C	Theme 8: HSSE Practices and Operations
Vankov, Emilian	Tue.	3:45 p.m.	Technical	303	Production and Reserve Scenarios for the Eagle Ford Shale: A Multidisciplinary Study
Verba, Circe	Wed.	2:15 p.m.	Technical	302 C	Theme 3: Various Approaches to Microstructure in Unconventional Reservoirs
Verkhovtseva, Natalia	Tue.	10:15 a.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
Verma, Sumit	Tue.	10:15 a.m.	ePaper	ePaper Station B	Theme 2: Multi-Discipline Data Integration
Viamontes, Jorge	Wed.	11:15 a.m.	Technical	302 C	Theme 6: Data Analytics
Virues, Claudio	Tue.	3:05 p.m.	ePaper	ePaper Station C	Theme 2: Geological and Geophysical Characterization of Unconventional Reservoirs
Vo, Hai	Tue.	5:00 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Von Lunen, Eric	Tue.	4:20 p.m.	ePaper	ePaper Station B	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Von Lunen, Eric	Tue.	2:40 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Wall, Meagan	Mon.	3:30 p.m.	ePaper	ePaper Station A	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons
Walls, Joel	Mon.	3:55 p.m.	ePaper	ePaper Station C	Theme 3: Logging Technologies Applied to Unconventional Reservoirs
Walters, Connor	Wed.	11:40 a.m.	Technical	302 C	Theme 6: Data Analytics
Wang, Guochang	Mon.	2:40 p.m.	ePaper	ePaper Station C	Theme 3: Logging Technologies Applied to Unconventional Reservoirs
Wang, Shize	Mon.	5:00 p.m.	ePaper	ePaper Station B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Wang, Da Li	Wed.	9:25 a.m.	ePaper	ePaper Station A	Theme 3: Petrophysical Characterization Unconventional Reservoirs
Wang, Da Li	Wed.	9:50 a.m.	ePaper	ePaper Station A	Theme 3: Petrophysical Characterization Unconventional Reservoirs
Wang, Xiuyu	Wed.	8:55 a.m.	Technical	302 A-B	Theme 3: Evolving Understanding of Permeability and Saturation Through Modeling

# PRESENTER CROSS REFERENCE

Whitsett, Andrew	Wed.	9:50 a.m.	ePaper	ePaper Station C	Theme 11: Case Histories Innovative Stimulations, Integrating Data to Optimize
Wickard, Alyssa	Tue.	10:50 a.m.	Technical	304 A-B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Wicker, Joe	Wed.	8:55 a.m.	Technical	302 C	Theme 6: Data Analytics
Wilson, Kurt	Wed.	1:50 p.m.	Technical	301	Operator's Forum V
Wornardt, Walter	Mon.	4:10 p.m.	ePaper	ePaper Station B	Theme 2: Geology of Mudrocks; Depositional Processes, Facies, Sequence Stratigraphy, and Diagenesis
Wu, Songtao	Wed.	12:30 p.m.	ePaper	ePaper Station B	Theme 3: Application of Core Technologies to Unconventional Reservoirs
Xia, Daniel	Mon.	2:15 p.m.	Technical	304 C	Theme 2: Aligning Geoscience and Engineering Workflows by Reservoir Traps
Xia, Daniel	Tue.	4:10 p.m.	Technical	225 C-D	Theme 5: Understanding Petroleum System Chemistry from Source Rocks to Produced Hydrocarbons II
Xu, Jingqi	Mon.	4:35 p.m.	Technical	303	Theme 4: Geomechanics I
Xu, Zhaohui	Tue.	1:50 p.m.	ePaper	ePaper Station A	Theme 2: Seismic Attributes
Xu, Rui	Tue.	3:45 p.m.	Technical	304 C	Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs
Yang, Ruiyue	Tue.	1:50 p.m.	ePaper	ePaper Station B	Theme 7: Production Performance of Tight Oil and Gas Reservoirs
Yang, Jianzhong	Wed.	10:15 a.m.	ePaper	ePaper Station A	Theme 3: Petrophysical Characterization Unconventional Reservoirs
Yang, Ruiyue	Wed.	10:40 a.m.	ePaper	ePaper Station B	Theme 9: Reserves Estimation and Forecasting
Yasin, Qamar	Wed.	11:15 a.m.	ePaper	ePaper Station B	Theme 3: Application of Core Technologies to Unconventional Reservoirs
Ye, Zhi	Mon.	1:50 p.m.	Technical	303	Theme 4: Geomechanics I
Yousefzadeh, Abdolnaser	Mon.	2:40 p.m.	Technical	303	Theme 4: Geomechanics I
Yousuf, Wajid	Tue.	8:55 a.m.	Technical	225 A-B	Theme 9: EUR and Performance Prediction
Yu, Yingwei	Mon.	4:35 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Yu, Gang	Mon.	5:00 p.m.	Technical	304 A-B	Theme 2: Seismic Attributes
Yu, Wei	Tue.	4:35 p.m.	Technical	225 A-B	Theme 9: Production Diagnostics/Analysis Methods and Well Spacing
Yu, Xin	Wed.	8:55 a.m.	Technical	304 A-B	Theme 2: Microseismic Fracture Map
Yurchenko, Inessa	Wed.	3:05 p.m.	Technical	225 A-B	Theme 12: Emerging Global in Emerging Plays
Zeroug, Smaine	Wed.	2:40 p.m.	Technical	304 A-B	Theme 2: Multi-Discipline Data Integration II
Zhang, Kai	Mon.	5:00 p.m.	Technical	302 A-B	Theme 3: Meso-, Micro-, and Nano-Scale Imaging of Unconventional Reservoirs
Zhang, Boyang	Tue.	2:40 p.m.	Technical	304 C	Theme 3: Core Measurements for Improved Characterization of Unconventional Reservoirs
Zhang, Jilin	Wed.	1:50 p.m.	Technical	302 C	Theme 3: Various Approaches to Microstructure in Unconventional Reservoirs
Zhou, Yu	Wed.	12:20 p.m.	ePaper	ePaper Station A	Theme 3: Petrophysical Characterization Unconventional Reservoirs

# SHORT COURSES

Visit [URTeC.org](http://URTeC.org) for detailed information.

Pre-Conference	Title	Instructor(s)	Days/Times	Fees	Locations
1	Integrating Data from Nano- to Macro-Scale: Improving Characterizations of Unconventional Plays (AAPG)	Allison Cornett (Schlumberger, Salt Lake City, Utah), Rick Lewis (Schlumberger, Denver, Colorado) and Stacy Lynn Reeder (Schlumberger, Boston, Massachusetts)	Saturday 8:00 a.m.–5:00 p.m.	Professionals \$895 Students \$115	Room 216 A
2 <b>CANCELLED</b>	Source-Rock Kinetics: New Methods of Determining Them and Novel Applications to Hydrocarbon Exploration (AAPG)	Douglas Waples (Sirius Exploration Geochemistry, Evergreen, Colorado)	Saturday 8:00 a.m.–5:00 p.m.	Professionals \$895 Students \$115	N/A
3	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 216 B
4	Discovery and Recovery Thinking in Shales (SPE)	Cretis Jenkins (Rose and Associates, Houston, Texas)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	Member \$1,400 Nonmember \$1,800	Room 221 D
5	Forecasting Well Production Data in Unconventional Resources (SPE)	Dilhan Ilk (DeGolyer and MacNaughton, Dallas, Texas)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	Member \$1,400 Nonmember \$1,800	Room 221C
6 <b>CANCELLED</b>	PVT in Modeling Horizontal Multi-Fractured Wells in Ultra-Tight Rock (SPE)	Curtis Hays Whitson (Norwegian University of Science and Technology)	Saturday–Sunday 8:00 a.m.–5:00 p.m.	Member \$1,400 Nonmember \$1,800	N/A
7	Unconventional Reservoir Assessment – An Integrated Approach (AAPG)	Chad Hartman (Weatherford Labs, Golden, Colorado)	Sunday 8:00 a.m.–5:00 p.m.	Professionals \$895 Students \$115	Room 216 A



**ONE COMPANY.  
UNLOCKING THOUSANDS  
OF OPPORTUNITIES.**

A top producer in the oil and gas industry, Devon's focus has always been getting the best results through integrity, innovation and teamwork. It's the way we've done business for more than 45 years.

[in](#) | [@DevonEnergy](#)

Commitment Runs Deep

**devon**

# CONVENTION CENTER FLOOR PLANS

ALAMO STREET



TOWER OF THE AMERICAS WAY



# CONVENTION CENTER FLOOR PLANS



## MEETING LEVEL

Technical Sessions

225 A/B

225 C/D

224

222

223

MAIN LOBBY BELOW

Press Room

221D

221C

221B

221A

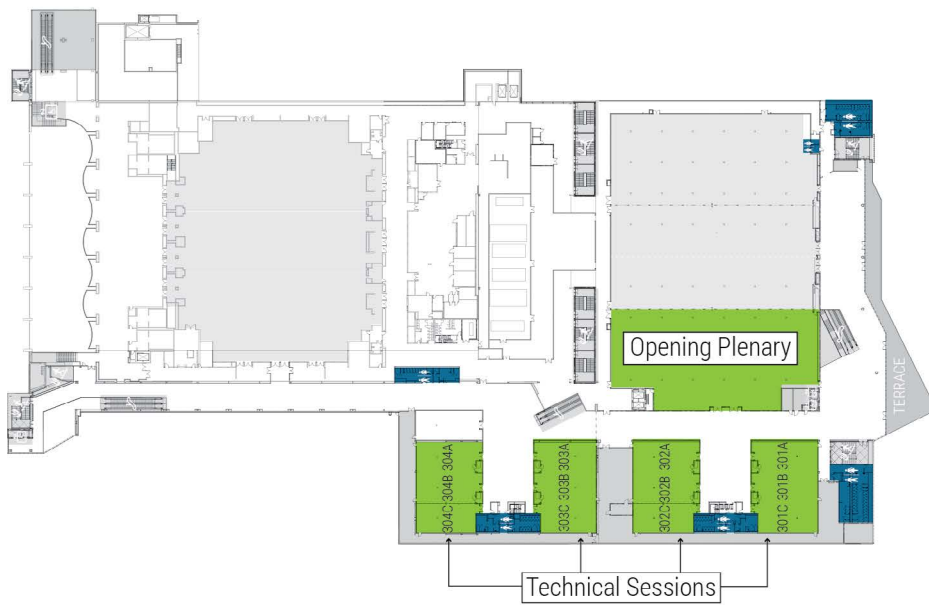
220

Career Building Sessions

URTeC Service Center

HALL 1 BELOW

## BALLROOM LEVEL



# EXHIBITOR LISTING

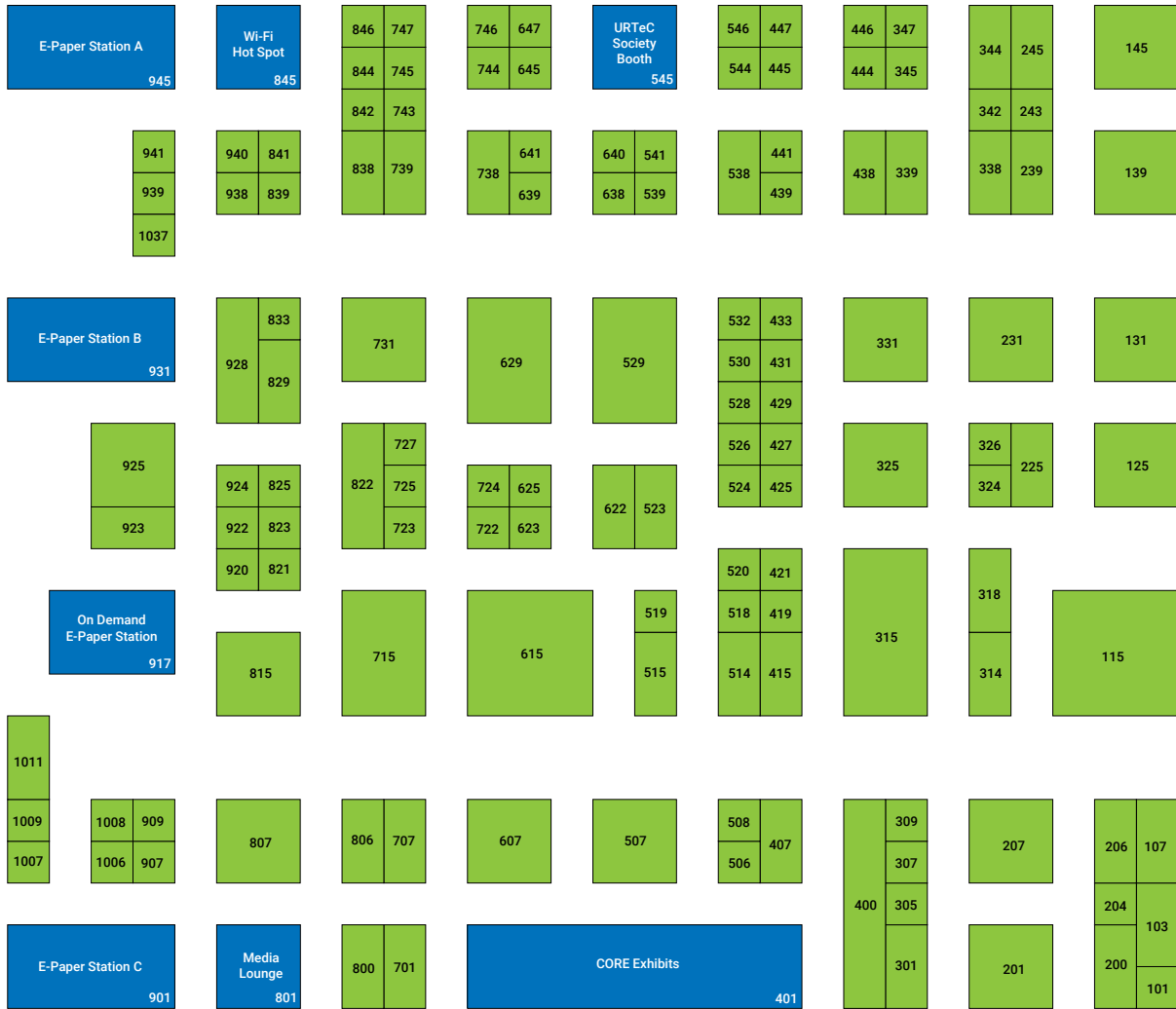
Aegis Solutions.....	508	GeoMark Research , Ltd.....	707	Riley Geological Consultants, Inc .....	823
ALS Oil & Gas.....	529	GeoMechanics Technologies .....	427	Rock Flow Dynamics .....	538
Altira Group, LLC.....	344	Geophysical Society of Houston.....	342	Rock Microscopy, LLC.....	506
American Society of Petroleum Geologists (AAPG) .....	545	Golder Associates.....	438	Rogii Inc.....	723
American Society of Mechanical Engineers (ASME) .....	546	Graphical Reservoir Modeling Corp. ....	938	Rose & Associates, LLP .....	625
ASD Inc., a PANalytical Company .....	441	Green Imaging Technologies .....	326	Safoco Inc.....	139
Association for Iron & Steel Technology (AIST) .....	641	Halliburton Energy Services Inc.....	207	Saudi Aramco .....	815
Battelle .....	842	Hart Energy.....	314	Schlumberger .....	315
BetaZi LLC .....	639	Horizon Well Logging an Excellence Logging Company .....	309	Schlumberger–Infinity System Trailer.....	928
BHL Boresight Inc.....	345	Hydrocarbon Data Systems .....	439	Seismos Inc .....	520
Biota Technology .....	922	IKON Mining & Exploration .....	622	Seitel Inc.....	206
Bruker Corporation .....	822	Ikcon Science .....	318	Selman & Associates .....	638
C & J Energy Services.....	731	IMaGE .....	103	SGS Canada Inc. ....	425
Canamera Coring USA Ltd. ....	1037	Impac Exploration Services .....	324	Silixa LLC .....	920
Carl Zeiss Microscopy, LLC .....	514	Impact Selector International .....	743	Smart4D Consulting Geosteering Application .....	445
Chemostrat.....	519	Ingrain, Inc.....	433	Society of Exploration Geophysicists (SEG) .....	545
Chinook Consulting.....	722	inTech Trailers .....	807	Society of Petroleum Engineers (SPE) .....	545
Choice Completion Systems.....	725	Interfaces SA .....	909	Society of Petroleum Evaluation Engineers (SPEE) .....	647
ClampOn, Inc.....	101	Interra Energy Services Ltd. ....	825	Society of Petrophysicists & Well Log Analysts (SPWLA) .....	544
Computer Modelling Group Ltd.....	225	Isotech Laboratories, Inc. ....	623	South Texas Geological Society (STGS) ....	645
Cordax Evaluation Technologies Inc. ....	307	KAPPA North America Inc.....	339	Spectro Analytical Instruments .....	727
Core Laboratories .....	400	King Canyon Buffalo Inc .....	301	Spectrum Tracer Services, LLC.....	331
D&L Oil Tools .....	131	Linde.....	431	TerraCore International Corporation .....	701
Dawson Geophysical Company.....	607	LWP Technologies.....	524	Terves Inc. ....	833
Digital Formation, Inc. / NITEC .....	507	Magnum Oil Tools .....	532	TETRA Technologies, Inc. ....	629
Digital H2O .....	839	MicroSeismic Inc .....	325	TIW Corporation.....	204
Drillinginfo.....	115	Midland Valley Exploration .....	415	Tracerco.....	739
Dynamic Graphics, Inc. ....	407	Mycometer.....	821	TRICON Geophysics.....	243
Enercat USA.....	429	Nanometrics .....	419	Unconventional Resources Technology Conference (URTeC).....	545
EGI - Energy & Geoscience Institute .....	107	Natural Creations.....	800	United Oil & Gas Consulting.....	445
Energy Fishing and Rental, Inc .....	744	NavPort .....	200	University of Kansas Department of Geology.....	541
Energy Navigator Software.....	239	NCS Multistage, LLC .....	231	University of Tulsa – CESE .....	640
Entero Corporation .....	305	Neuralog .....	829	Weatherford Laboratories.....	615
Enthought.....	1011	NITEC LLC .....	507	WellDog .....	738
ESG Solutions.....	715	NuTech Energy.....	806	Wildcat Technologies, LLC.....	924
Field Geo Services .....	523	Optasense, Inc .....	145	Willowstick Technologies .....	528
FlexGen.....	344	OSIsoft.....	447	World Oil/Gulf Publishing .....	539
FRACGEO .....	125	Performance Technologies, LLC .....	530		
Fracture ID, Inc .....	245	PetroSkills .....	421		
Geo-Link, Inc.....	838	PML Exploration Services LLC/Edge Systems .....	338		
Geolog Americas .....	923	Protex Systems .....	526		
geoLOGIC Systems Ltd .....	201	Research Partnership to Secure Energy for America (RPSEA).....	518		
GeolsoChem .....	724	Reservoir Data Systems .....	515		





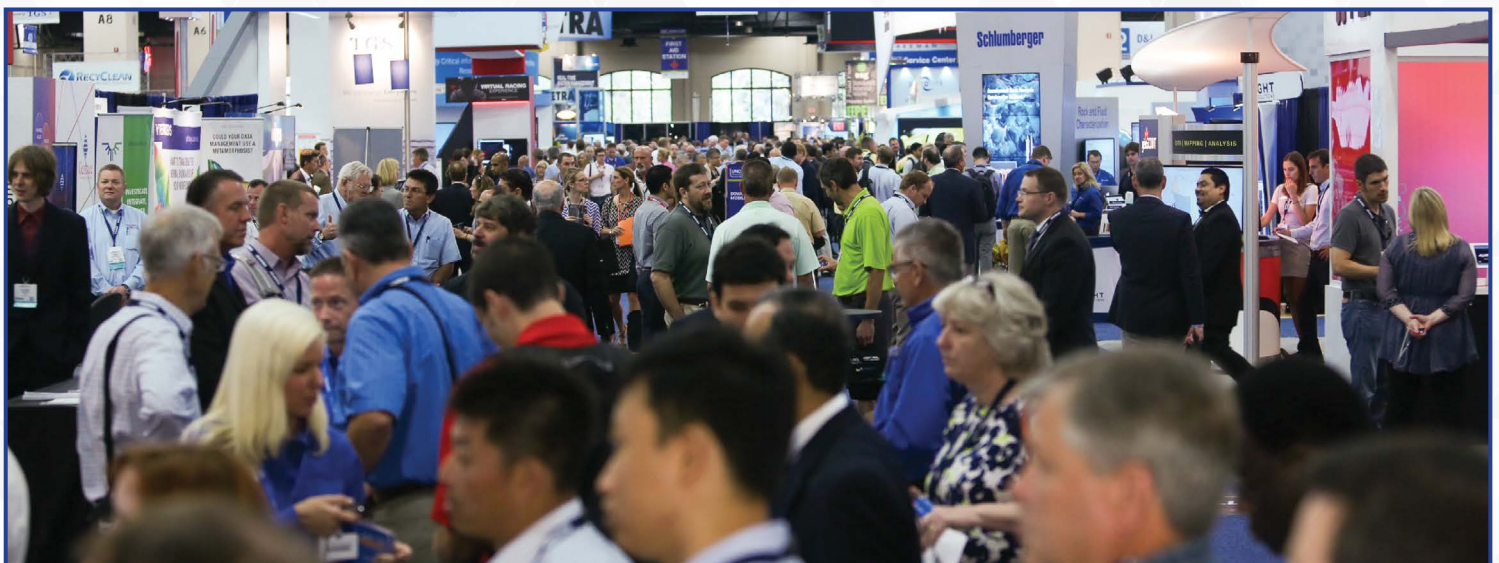
# EXHIBITION FLOOR PLAN

## First Aid



ENTRANCE

ENTRANCE



# EXHIBITOR DIRECTORY

Aegis Solutions.....508  
 2703-1111 10th St. SW  
 Calgary AB T2R 1E3  
 Canada  
 Phone: +1 587 582 2316  
 Email: info@aegissols.com  
 Website: www.aegissols.com  
 Contact: Tatyana Plaksina

ALS Oil & Gas.....529  
 6510 Guhn Road  
 Houston, Texas 77040  
 United States  
 Phone: +1 713 466 7400  
 Email: alsog.marketing@alsglobal.com  
 Website: www.alsglobal.com  
 Contact: Morgan Stallings  
 ALS Oil & Gas is the new international leader in the niche oilfield activities of reservoir sampling, analysis and evaluation, well monitoring, specialist well services and premium drilling services.

Altira Group, LLC.....344  
 1675 Broadway Ste 2400  
 Denver, CO 80202  
 United States  
 Phone: +1 303 592 5500  
 Email: dmcdermott@altiragroup.com  
 Website: www.altiragroup.com  
 Contact: Dirk McDermott  
 Altira Group invests in tech-advantaged service companies through a unique partnership with US Super Independents with whom Altira is able to accelerate adoption of its portfolio companies.



**American Association of Petroleum Geologists (AAPG)..... 545**  
 P.O. Box 949  
 Tulsa, OK 74101-0979  
 United States  
 Phone: +1 800 364 2274  
 Fax: +1 918 560 2665  
 Website: www.aapg.org  
 AAPG is the premier global organization for petroleum explorationists with over 42,500 members in 129 countries. The purpose of AAPG is to foster scientific research, to advance the science of geology, to promote technology and to inspire high professional conduct.

American Society of Mechanical Engineers (ASME).....546  
 11757 Katy Freeway Ste 380  
 Houston, TX 77079  
 United States  
 Phone: +1 281 382 4816  
 Email: micelik@asme.org  
 Website: www.asme.org  
 Contact: Kim Miceli

ASD Inc., a PANalytical Company ..... 441  
 2555 55th St. STE 100  
 Boulder, CO 80301  
 United States  
 Phone: +1 720 399 1881  
 Email: tom.ulrich@panalytical.com  
 Website: www.asdi.com  
 Contact: Tom Ulrich

Association for Iron & Steel Technology (AIST) ..... 641  
 186 Thorn Hill Rd.  
 Warrendale, PA 15086  
 United States  
 Phone: +1 724 814 3038  
 Email: kedwards@aist.org  
 Website: www.aist.org  
 Contact: Kurt Edwards

Battelle ..... 842  
 1204 Technology Drive  
 Aberdeen, MD 21001  
 United States  
 Phone: +1 410 306 8680  
 Email: mrozinski@battelle.org  
 Website: www.battelle.org

BetaZi LLC ..... 639  
 11209 Brockway Rd Suite 302  
 Truckee, CA 96161  
 Phone: +1 530 587 3858  
 Email: jconradson@betazi.com  
 Website: www.betazi.com  
 Contact: Janette Conradson  
 BetaZi LLC creates state-of-the-art production forecasting solutions for the oil and gas industry using physics-based™ predictive analytics. BetaZi's proprietary algorithms are the new standard for production forecasting. The model is fast, too. Just 30 seconds per well for accurate results!

BHL Boresight Inc.....345  
 4550 Kinsey Drive  
 Tyler, TX 75703  
 United States  
 Phone: +1 903 597 4893  
 Email: dorotha@bhlboresight.com  
 Website: www.boresightsoftware.com

Biota Technology ..... 922  
 11555 Sorrento Valley Rd.  
 San Diego, CA 92121  
 United States  
 Phone: +1 832 917 2353  
 Email: mjk@biota.com  
 Website: www.biota.com  
 Contact Moji Karimi  
 Biota applies DNA sequencing and data science to help operators maximize reservoir production. Some of the Subsurface DNA Diagnostics applications are production profiling, sweet spot identification, frac height estimation, and reservoir connectivity.

Bruker Corporation ..... 822  
 5465 East Cheryl Parkway  
 Madison, WI 53711  
 United States  
 Phone: +1 608 276 3087  
 Email: stephanie.myers@bruker.com  
 Website: www.bruker.com

C & J Energy Services.....731  
 3990 Rogerdale  
 Houston, TX 77042  
 United States  
 Phone: +1 713 325 6000  
 Email: jswift@cjenergy.com  
 Website: www.cjenergy.com  
 Contact: John Swift  
 C&J Energy Services is a leading provider of well construction, well completions and well services to the oil and gas industry. See more at www.cjenergy.com.

Canamera Coring USA Ltd. .... 1037  
 1125 Beach Airport Rd.  
 Conroe, TX 77301  
 United States  
 Phone: +1 936 521 3617  
 Email: howardw@canameracoring.com  
 Contact: Howard Wood



# EXHIBITOR DIRECTORY

Carl Zeiss Microscopy, LLC ..... 514  
One Zeiss Drive  
Thornwood, NY 10594-1939  
United States  
Phone: +1 800 233 2343  
Email: [info.microscopy.us@zeiss.com](mailto:info.microscopy.us@zeiss.com)  
Website: [www.zeiss.com/microscopy](http://www.zeiss.com/microscopy)  
Contact: Brenda Ropoulos  
As the world's only manufacturer of light, X-ray and electron/ion microscopes, ZEISS offers tailor-made microscope systems for industry, materials, research and academia.

Chemostrat ..... 519  
1414 Lumpkin Rd  
Houston, TX 77043  
United States  
Phone: +1 713 956 2838  
Email: [masmith@ellingtongelologic.com](mailto:masmith@ellingtongelologic.com)  
Website: [www.chemostrat.com](http://www.chemostrat.com)

Chinook Consulting ..... 722  
742 Memorial Dr NW  
Calgary, Alberta T2N 3C7  
Canada  
Phone: +1 403 242 1522  
Email: [office@chinookconsulting.ca](mailto:office@chinookconsulting.ca)  
Website: [www.chinookconsulting.ca](http://www.chinookconsulting.ca)  
Contact: Calin Dragoie  
Chinook Consulting specializes in geoscience studies, geosteering and well-site geology. We offer the services of well trained petroleum consultants with extensive experience with a large variety of applications in oil and gas geoscience, drilling and completions.



**CHOICE**  
COMPLETION SYSTEMS

**Choice Completion Systems ..... 725**  
7211 Gessner Dr  
Houston, TX 77094  
Phone: +1 281 414 8654  
Email:  
[Russell.robinson@choicecompletions.com](mailto:Russell.robinson@choicecompletions.com)  
Website: [www.choicecompletions.com](http://www.choicecompletions.com)  
Contact Person: Russell Robinson  
Choice provides tools used to complete conventional and unconventional wells. Current tools are: toe actuator sleeves, frac sleeves, composite frac plugs, and packers. Headquartered in Houston, with service facilities in West, South and East, Texas.

ClampOn, Inc. .... 101  
15720 Park Row, Ste. 300  
Houston, Texas 77084  
United States  
Phone: +1 281 492 9805  
Email: [infoinc@clampon.com](mailto:infoinc@clampon.com)  
Website: [www.clampon.com](http://www.clampon.com)  
Contact: Caleb Roquemore  
Uncomplicated technology, modular design, easy installation and little or no calibration are keywords describing our range of instruments. This range includes sand monitors, PIG detectors, vibration monitors, leak monitors, condition monitors, well collision detectors and corrosion-erosion monitors.

Computer Modelling Group Ltd. .... 225  
200-1824 Crowchild Tr. NW  
Calgary, AB T2M 3Y7  
Canada  
Phone: +1 403 531 1300  
Email: [sara.shields@cmgl.ca](mailto:sara.shields@cmgl.ca)  
Website: [www.cmgl.ca](http://www.cmgl.ca)  
Contact: Sara Shields  
CMG's market-leading reservoir simulation software is recognized worldwide as the standard for advanced recovery processes. Products include conventional, compositional, thermal reservoir simulators, assisted history matching and optimization.

Cordax Evaluation Technologies Inc. .... 307  
10707 50th Street SE  
Calgary, AB T2C 3E5  
United States  
Phone: +1 403 479 5203  
Email: [tyler.longeau@cordax.com](mailto:tyler.longeau@cordax.com)  
Website: [www.cordax.com](http://www.cordax.com)  
Contact: Tyler Longeau  
Cordax LWT helps clients optimize the producibility of their wells. Open hole formation evaluation is economically acquired and integrated with well information using Cordax's proprietary ZoneGrader software. Completion and fracking strategies are optimized, improving well producibility.

Core Laboratories ..... 400  
6323 Windfern  
Houston, TX 77040  
United States  
Phone: +1 713 328 2674  
Email: [preston.haygood@corelab.com](mailto:preston.haygood@corelab.com)  
Website: [www.corelab.com](http://www.corelab.com)

D&L Oil Tools ..... 131  
PO Box 52220  
Tulsa, Oklahoma 74152  
United States  
Phone: +1 918 587 3504  
Email: [stacey.schmidt@dloitools.com](mailto:stacey.schmidt@dloitools.com)  
Website: [www.dloitools.com](http://www.dloitools.com)  
Contact: Stacey Schmidt  
D&L Oil Tools designs and manufactures downhole equipment for customers worldwide; mechanical set packers, hydraulic set packers, permanent packers, service tools, tool accessories and additional tools; offers other elastomers, metallics, and premium threads, as well as electroless nickel-plating.

Dawson Geophysical Company ..... 607  
508 West Wall, Suite 800  
Midland, Texas 79701  
United States  
Phone: +1 432 684 3000  
Email: [info@dawson3d.com](mailto:info@dawson3d.com)  
Website: [www.dawson3d.com](http://www.dawson3d.com)  
Dawson Geophysical Company provides onshore seismic data acquisition services in North America. The company acquires and processes 2-D, 3-D and multi-component seismic data for various clients.

Digital Formation, Inc. / NITEC ..... 507  
999 18th St.  
Denver, Colorado 80202  
United States  
Phone: +1 303 770 4235  
Email: [info@digitalformation.com](mailto:info@digitalformation.com)  
Website: [www.digitalformation.com](http://www.digitalformation.com)  
Contact: Michael Holmes  
Digital Formation provides consulting and technical services for geological and petrophysical activities, as well as analysis and presentation software. Our software has revolutionized the area of data graphical presentation, setting the industry standard.

Digital H2O ..... 839  
18 S Michigan Ave, Floor 12  
Chicago, IL 60603  
Phone: +1 351 201 9504  
Email: [alake@genscape.com](mailto:alake@genscape.com)

# EXHIBITOR DIRECTORY

Drillinginfo ..... 115

2901 Via Fortuna, Suite 200  
Austin, TX 78746

United States

Phone: +1 512 477 9200

Email: [info@drillinginfo.com](mailto:info@drillinginfo.com)

Website: [www.drillinginfo.com](http://www.drillinginfo.com)

Contact: Patricia Olvera

Drillinginfo is the premier Saas-based decision support technology platform for the global Oil & Gas industry. Drillinginfo services over 3,000 companies from its Austin, Texas-based headquarters with 600 employees world-wide.

Dynamic Graphics, Inc. .... 407

1015 Atlantic Ave.  
Alameda, California 94501

United States

Phone: +1 510 522 0700

Email: [info@dgi.com](mailto:info@dgi.com)

Website: [www.dgi.com](http://www.dgi.com)

DGI features CoViz4D and WellArchitect software with innovative 3D covisualization and 3D/4D analytics uniquely suited for development planning and look-back analysis of unconventional reservoirs.

Enercat USA..... 429

27888 Meadow Drive  
Evergreen, CO 80439

United States

Phone: +1 303 808 3799

Email: [zack.mitchell@revelant.com](mailto:zack.mitchell@revelant.com)

Website: [www.enercat.us](http://www.enercat.us)

EGI - Energy & Geoscience Institute ..... 107

(EGI) University of Utah  
423 Wakara Way, Suite 300

Salt Lake City, UT 84108

United States

Phone: +1 801 585 9137

Email: [emckenna@egi.utah.edu](mailto:emckenna@egi.utah.edu)

Website: [www.egi.utah.edu](http://www.egi.utah.edu)

## ENERGY

### FISHING & RENTAL SERVICES

Energy Fishing and Rental, Inc. .... 744

10235 West Little York Suite 400  
Houston, Texas 77040

United States

Phone: +1 281 598 3870

Email: [jdegeare@energyfrs.com](mailto:jdegeare@energyfrs.com)

Website: [www.energyfrs.com](http://www.energyfrs.com)

Contact: Joe DeGeare

**EFRS introduce two new products. The Speed Squeeze is a hyd. system that offers improved wellbore straddle operations. The Gator Perforator is a repeatable hyd-mechanical multi-use perforating system.**

Energy Navigator Software ..... 239

2000 W. Sam Houston Pkwy South Suite 1475  
Houston, TX 77042

United States

Phone: +1 281 493 5300

Email: [sales@energynavigator.com](mailto:sales@energynavigator.com)

Website: [www.energynavigator.com](http://www.energynavigator.com)

Contact: Bill Agee

Energy Navigator's software is used by over 400 E&P companies. Val Nav delivers efficient, reliable forecasting, economic evaluations and reserves management in one integrated solution. AFE Nav is a secure, mobile-friendly AFE system that lets you optimize your AFE processes and control capital.

Entero Corporation ..... 305

500, 1040 - 7 Ave SW  
Calgary, AB T2P 3G9

Canada

Phone: +1 403 538 5946

Email: [noon.gias@entero.com](mailto:noon.gias@entero.com)

Website: [www.entero.com](http://www.entero.com)

Enthought ..... 1011

515 Congress, Suite 2100  
Austin, TX 78701

United States

Phone: +1 512 731 3990

Email: [cgodshall@enthought.com](mailto:cgodshall@enthought.com)

ESG Solutions..... 715

10815 Woodedge Drive  
Houston, TX 77070

United States

Phone: +1 800 813 4406

Email: [houstonales@esgsolutions.com](mailto:houstonales@esgsolutions.com)

Website: [www.esgsolutions.com](http://www.esgsolutions.com)

Contact: Jennifer Sadler

ESG is a pioneer in microseismic. Our approach uses geophysical, geological and engineering analysis to provide a more complete understanding of fracture-effectiveness. ESG offers acquisition, processing and advanced analysis.

Field Geo Services ..... 523

533 Bogart Lane Unit A  
Grand Junction, CO 81505

United States

Phone: +1 970 270 5162

Email: [scott.field@fieldgeoservices.com](mailto:scott.field@fieldgeoservices.com)

Website: [www.fieldgeoservices.com](http://www.fieldgeoservices.com)

FlexGen..... 344

5353 West Sam Houston Parkway North Ste 160

Houston, TX 77041

United States

Phone: +1 804 201 5174

Email: [sjones@flexgen.com](mailto:sjones@flexgen.com)

Website: [www.flexgen.com](http://www.flexgen.com)

Contact: Steven Jones

Backed by Altira Group, GE and Caterpillar, FlexGen delivers hybrid power systems for O&G markets including drilling, artificial lift, offshore, pressure pumping, and pipeline. Its products reduce downtime, maintenance, fuel costs, and emissions, while improving performance and reliability.

FRACGEO..... 125

719 Sawdust Road, #103  
The Woodlands, TX 77380

United States

Phone: +1 720 323 9618

Email: [sbiri@fracgeo.com](mailto:sbiri@fracgeo.com)

Website: [www.fracgeo.com](http://www.fracgeo.com)



# EXHIBITOR DIRECTORY

- Fracture ID, Inc** ..... 245  
777 Grant St.  
Denver, CO 80203  
Phone: +1 832 628 7168  
Email: josh.ulla@fractureid.com  
Website: www.fractureid.com  
Contact: Josh Ulla  
Fracture ID's proprietary and patent-pending drill-bit geomechanics technology analyzes vibration data to quantitatively measure in situ reservoir rock properties. Operators use these elastic parameters and identified fractures to optimize completions and improve reservoir characterization.
- Geo-Link, Inc.**..... 838  
401 South Broadway  
P.O. Box 1764  
Red Lodge, Montana 59068  
United States  
Phone: +1 406 446 3654  
Email: j\_adams@geo-link.net  
Website: www.geo-link.net  
Contact: Jed Adams  
The source to fulfill all of your geological consulting/geosteering/mudlogging needs.
- Geolog Americas** ..... 923  
1052 Hercules Ave.  
Houston, TX 77058  
Phone: +1 281 984 7078  
Email: a.matheson@geolog.com  
Website: www.geolog.com  
Contact: Andres Matheson  
GEOLOG is the world's largest independent surface logging service provider to the oil and gas industry. We offer a wide range of highly advanced source rock and reservoir evaluation services along with drilling optimization services to improve safety, reservoir characterization and reduce NPT.
- geoLOGIC Systems Ltd** ..... 201  
900, 703 6th Ave SW  
Calgary, AB T2P 0TP  
Canada  
Phone: +1 403 262 1992  
Email: lparker@geologic.com  
Website: www.geologic.com  
Contact: Lauren Parker  
For three decades, geoLogic has provided industry professionals with the superior data and integrated software solutions needed to make better decisions, every step of the way.
- GeolsoChem** ..... 724  
210 Park Avenue, Suite 2700  
Oklahoma City, OK 73102  
United States  
Phone: +1 405 308 3726  
Email: jerad.dudley@pslogging.com  
Website: www.paladingeo.com  
GeolsoChem (GIC) specializes in both on site and laboratory geochemistry. GIC utilizes proprietary instrumentation to be the leader of geochemical exploration tools. Patent pending methodologies and interpretation processes, we provide innovative solutions for a variety of petroleum geochemistry applications.
- GeoMark Research, Ltd.**..... 707  
9748 Whithorn Drive  
Houston, TX 77095  
United States  
Phone: +1 281 856 9333  
Email: ggetz@geomarkresearch.com  
Website: www.geomarkresearch.com  
Contact: Greg Getz  
GeoMark is a petroleum service laboratory specializing in the application of geochemical technology. GeoMark offers geochemical analysis: Source Rock, Oil, Gas, PVT along with Regional Geochemical Interpretive Studies and Subscription Geochemical Databases.
- GeoMechanics Technologies** ..... 427  
103 East Lemon Avenue Suite 200  
Monrovia, CA 91016  
United States  
Phone: +1 626 305 8460  
Email: jtyoung@geomechanicstech.com  
Website: www.geomechanicstech.com
- Geophysical Society of Houston**..... 342  
14811 St. Mary's Lane, Suite 204  
Houston, TX 77079  
United States  
Phone: +1 281 741 1624  
Email: kathys@gshtx.org  
Website: www.gshtx.org  
Contact: Kathy Sanvido  
Non profit professional society. Largest section of the ESG in the world.
- Golder Associates**..... 438  
300 Friberg Pkwy  
Westborough, MA 01581  
United States  
Phone: +1 508 366 5385  
Email: carly\_schaerfer@golder.com  
Website: www.golder.com
- Graphical Reservoir Modeling Corp.** ..... 938  
PO Box 848  
Granbury, Texas 76048  
United States  
Phone: +1 303 570 6382  
Email: info@grm-daedalus.com  
Website: www.daedalusmodel.com  
Contact: Dick Barden  
Rapid reservoir simulation software, including shale zone/well modeling and consulting services. Developers of SWARM technology.
- Green Imaging Technologies** ..... 326  
520 B. Brookside Drive  
Fredericton, NB E3A 8V2  
Canada  
Phone: +1 506 458 9992  
Email: mark.mackenzie@greenimaging.com  
Website: www.greenimaging.com  
Contact: Mark MacKenzie  
Green Imaging Technologies is a world leader in NMR rock core analysis offering a full suite of services, software, and hardware related to lab based NMR technologies. Come see what is new in this innovative field. Think about your reservoir differently.
- Halliburton Energy Services Inc.**..... 207  
3000 N Sam Houston Pkwy E  
Houston, TX 77032  
United States  
Phone: +1 281 871 7034  
Website: www.halliburton.com  
Contact: Tatyana Ganina  
Founded in 1919, with over 55,000 employees, representing 140 nationalities and operations in approximately 70 countries. Halliburton serves the upstream oil and gas industry throughout the lifecycle of the reservoir.

# EXHIBITOR DIRECTORY

- Hart Energy**.....314  
1616 South Voss Suite 1000  
Houston, Texas 77057  
United States  
Phone: +1 713 260 6400  
Email: [bmiller@hartenergy.com](mailto:bmiller@hartenergy.com)  
Website: [www.epmag.com](http://www.epmag.com)  
Contact: Bill Miller  
Hart Energy provides energy news in print, E&P magazine, online and via "live" events, with in-depth unconventional resource information from its DUG conferences, regional Playbooks, Techbooks, Yearbook and maps.
- Horizon Well Logging an Excellence Logging Company**.....309  
7136 S Yale Ave Ste 414  
Tulsa OK 74136  
United States  
Phone: +1 918 925 9739  
Email: [dkellar@exlog.com](mailto:dkellar@exlog.com)  
Website: [www.hzmud.com](http://www.hzmud.com)  
Contact: Drew Kellar  
Horizon Well Logging is the leading independent geological services firm in the oil and gas industry. We're committed to providing expertise and guidance throughout planning, implementation, and monitoring of the drilling process.
- Hydrocarbon Data Systems**.....439  
P.O. Box 41508  
Houston, Texas 77241  
United States  
Phone: +1 713 690 0556  
Email: [billmanley@hds-log.com](mailto:billmanley@hds-log.com)  
Website: [www.hds-log.com](http://www.hds-log.com)  
Contact: Bill Manley  
Interactive Petrophysical Software: Single & Multiple Well Applications; Complete Data Editing Toolkit, Interpretation - Open Hole, Cased Hole & Unconventional; Core Data Toolkit; Pay Reports; Custom Log Plots; Xplots/Regressions
- IKON Mining & Exploration** .....622  
P. O. Box 2620  
Fallbrook, California 92088  
United States  
Phone: +1 760 723 3484  
Email: [ikonmining@gmail.com](mailto:ikonmining@gmail.com)  
Contact: Mary Fong Walker  
IKON Mining offers Fine Mineral & Fossil specimens and Meteorites, Artifacts & Jewelry. There are treasures appropriate for kids as well as sophisticated collectors. Executive gifts are our specialty.
- Ikon Science** .....318  
12140 Wickchester Lane, Suite 400  
Houston, Texas 77079  
United States  
Phone: +1 713 598 3824  
Email: [info@ikonscience.com](mailto:info@ikonscience.com)  
Website: [www.ikonscience.com](http://www.ikonscience.com)  
Contact: Matt Bell  
30 words will not explain how to combine reservoir characterization, geomechanics, and geopressure for successful drilling programs, but a visit to Ikon at booth #1744, certainly will.
- IMaGE** .....103  
10701 Corporate Dr., Suite 310  
Stafford, TX 77477  
Phone: +1 832 532 7025  
Email: [mark.tobin@itasca-image.com](mailto:mark.tobin@itasca-image.com)  
Website: [www.itasca-image.com](http://www.itasca-image.com)
- Impac Exploration Services** .....324  
1501 Lera Drive Ste 3  
Weatherford, OK 73096  
United States  
Phone: +1 580 772 3117  
Email: [micah.banks@impacxs.com](mailto:micah.banks@impacxs.com)  
Website: [www.gpwelllogging.com](http://www.gpwelllogging.com)
- Impact Selector International** .....743  
9933 Regal Row  
Houston, TX 77040  
Phone: +1 832 508 2995  
Email: [cpeavy@impactselector.com](mailto:cpeavy@impactselector.com)  
Website: [www.impactselector.com](http://www.impactselector.com)
- Ingrain, Inc.**.....433  
3733 Westheimer, Ste 300  
Houston, TX 77027  
United States  
Phone: +1 713 993 9795  
Email: [angel@ingrainrocks.com](mailto:angel@ingrainrocks.com)  
Website: [www.ingrainrocks.com](http://www.ingrainrocks.com)  
Contact: Carolina Angel  
Ingrain is a leading provider of digital rock characterization services for the oil and gas industry. With specialized expertise in complex rock formations, our advanced technology services determine a full suite of petrophysical and pore system properties to provide unique reservoir insight.
- inTech Trailers** .....807  
1940 W. Market Street  
Nappanee, IN 46550  
United States  
Phone: +1 574 773 9536  
Email: [nvilamaa@intechtrailers.com](mailto:nvilamaa@intechtrailers.com)  
Website: [www.intechtrailers.com](http://www.intechtrailers.com)
- Interfaces SA** .....909  
San Martín 793 Piso 2 "A"  
Buenos Aires, Caba 1004  
Argentina  
Phone: +1 713 292 4223  
Email: [ncelesia@interfaces.com.ar](mailto:ncelesia@interfaces.com.ar)  
Website: [www.interfaces.com.ar](http://www.interfaces.com.ar)  
Contact: Nicolas Celesia  
Sahara, the most comprehensive oilfield and reservoir management software, now integrates unconventional resource analysis to its set of tools!
- Interra Energy Services Ltd.** .....825  
1111 North Loop West Suite 700  
Houston, TX 77008  
United States  
Phone: +1 832 477 2720  
Email: [will.gardner@interraenergy.com](mailto:will.gardner@interraenergy.com)  
Website: [www.interraenergy.com](http://www.interraenergy.com)  
Contact: Will Gardner  
Interra Energy is a Global Leader in the next generation of well completions. More efficient fracking drives the development of all Interra Tools. With a solution for every well environment, stop by and see how you can save.
- Isotech Laboratories, Inc.** .....623  
1308 Parkland Court  
Champaign, Illinois 61821  
United States  
Phone: +1 217 398 3490  
Website: [www.isotechlabs.com](http://www.isotechlabs.com)  
Isotech offers superior geochemical services and expert staff. Known for high precision isotope analysis of mudgases, produced gases, and dissolved gases, plus innovative sampling containers such as the IsoTube, IsoJar, IsoTrap and IsoFlask.
- KAPPA North America Inc.**.....339  
117 Katy Freeway, Ste 500  
Houston, TX 77079  
United States  
Phone: +1 713 772 5694  
Email: [nara@kappaeng.com](mailto:nara@kappaeng.com)



# EXHIBITOR DIRECTORY

- King Canyon Buffalo Inc .....301  
109 East 17th Street Ste 4159  
Cheyenne, WY 82001  
United States  
Phone: +1 303 868 7032  
Email: kymley.parker@kingcanyonbuffalo.com
- Linde.....431  
575 Mountain Avenue  
New Providence, NJ 07974  
United States  
Phone: +1 908 771 1491  
Email: amy.ficon@linde.com  
Website: www.lindeoilandgas.com
- LWP Technologies.....524  
Suite 29, LV 54, 111 Eagle Street  
Brisbane, Queensland 4000  
Australia  
Phone: +61 7 3122 2233  
Email: j.thompson@lwptech.com
- Magnum Oil Tools .....532  
5655 Bear Lane Suite 100  
Corpus Christi, TX 78405  
United States  
Phone: +1 361 299 6333  
Email: ctringali@magnumoiltools.com  
Website: www.magnumoiltools.com
- MicroSeismic Inc .....325  
1300 W Sam Houston Pkwy S., Ste 200  
Houston, TX 77042  
United States  
Phone: +1 713 781 2323  
Email: mvrana@microseismic.com  
Website: www.microseismic.com
- Midland Valley Exploration .....415  
2 West Regent Street  
Glasgow, Scotland, G2 1RW  
UK  
Phone: +44 141 332 2681  
Email: cara@mve.com  
Website: www.mve.com
- Mycometer.....821  
5002 South MacDill Avenue  
Tampa, FL 33611  
United States  
Phone: +1 813 434 6998  
Email: lrogers@mycometer.com  
Website: www.mycometer.com
- Nanometrics .....419  
250 Herzberg Road  
Kanata, Ontario K2K 2A1  
Canada  
Phone: +1 613 592 6776  
Email: dianamartinez@nanometrics.ca  
Website: www.microseismicmonitoring.com  
Contact: Mairi Miller  
Nanometrics has been trusted for over 30 years to provide industry-leading instrumentation, to collect and analyze critical, real-time data and to deliver world-class network design and installation.
- Natural Creations.....800  
24972 Sausalito St  
Laguna Hills, CA 92653  
United States  
Phone: +1 949 683 3394  
Email: lindonbourassa@hotmail.com  
Website: www.rindasrocks.net
- NavPort ..... 200  
4000 Chemical Road Ste 420  
Plymouth Meeting, Pennsylvania 19642  
United States  
Phone: +1 208 371 9064  
Email: info@navport.com  
Website: www.navport.com/analytics  
Contact: Ashley Estilette  
NavPort provides web-based data & analytics on a cutting-edge platform. We deliver unmatched completion and production data, with concierge-style engineering and analyst support. Aggregated from 118+ sources daily, NavPort's system is customizable and "analytics-ready."
- NCS Multistage, LLC .....231  
19450 State Hwy 249 Ste 200  
Houston, Texas 77070  
United States  
Phone: +1 281 453 2222  
Email: wwilliford@ncsmultistage.com  
Website: www.ncsmultistage.com  
Contact: Warren Williford  
NCS Multistage is the world leader in coiled-tubing-deployed, frac-isolation technology for multistage completions in shale and unconventional formations. The Multistage Unlimited® system delivers predictable, verifiable frac spacing and propped volume, making optimized frac networks possible.
- Neuralog .....829  
4800 Sugar Grove Boulevard Suite 200  
Stafford, TX 77477  
United States  
Phone: +1 281 240 2525  
Email: twauhob@neuralog.com  
Website: www.neuralog.com
- NITEC LLC .....507  
475 17th Street, Suite 1400  
Denver, Colorado 80202  
United States  
Phone: +1 303-292-9595  
Email: solutions@NitecLLC.com  
Website: www.NITECLLC.com  
Contact: Bill Savage
- NuTech Energy.....806  
7702 FM 1960 E Suite 300  
Houston, Texas 77346  
United States  
Phone: +1 281 812 4030  
Email: dlampis@nutechenergy.com  
Website: www.nutechenergy.com  
Contact: Damon Lampis  
NUTECH is an upstream reservoir solutions company specializing in creating strategies to value, manage, and act on assets in all phases of the reservoir lifecycle. Our technologies include petrophysics, completion engineering, core analysis, geological modeling, and reservoir engineering.
- Optasense, Inc .....145  
12079 Haynes Road  
Houston, TX 77066  
Phone: +1 713 439 0438  
Email: marketing@optasense.com  
Contact: Shanna Sambol-Koseoglu  
OptaSense DAS technology delivers the reservoir intelligence to power cost-efficiency and ultimate recovery. Services include borehole seismic acquisition and processing, fracture profiling and production monitoring.
- OSIsoft.....447  
14701 St. Mary's Lane  
Houston, TX 77079  
Phone: +1 510 297 5800  
Email: wkdiemidio@osisoft.com  
Website: www.osisoft.com
- Performance Technologies, LLC .....530  
777 NW 63rd Street  
Oklahoma City, OK 73116  
Phone: +1 405 431 8569  
Email: jason.rall@77ncg.com

# EXHIBITOR DIRECTORY

- PetroSkills** .....421  
2930 South Yale Ave.  
Tulsa, OK 74114-6252  
United States  
Phone: +1 918 828 2500  
Email: training@petroskills.com  
Website: www.petroskills.com  
PetroSkills is the leading learning and development provider in the oil and gas industry, with training courses and solutions that span the value chain and the globe.
- PML Exploration Services LLC/Edge Systems** .....338  
33502 SH 249 Suite 103  
Pinehurst, TX 77362  
United States  
Phone: +1 281 787 4278  
Email: jparsons@pmlglog.com  
Website: www.edgelog.com
- Protek Systems** .....526  
752 Port America Place #150  
Grapevine, TX 76051  
United States  
Phone: +1 303 997 5600  
Email: paul@protek-systems.com  
Website: www.protek-systems.com  
Contact: Paul Marino  
Protek System, LLC is introducing our new disintegrating technologies for frac balls and downhole components.
- Research Partnership to Secure Energy for America (RPSEA)** .....518  
1650 Highway 6, Suite 325  
Sugar Land, Texas 77478  
United States  
Phone: +1 281 313 9555  
Email: sbeach@rpsea.org  
Website: www.rpsea.org  
Contact: Steve Beach  
RPSEA provides a stewardship role in ensuring the research, development and deployment of safe and environmentally sensitive technology can deliver hydrocarbons from domestic resources to US citizens.
- Reservoir Data Systems** .....515  
PO Box 660  
Katy, TX 77492  
Phone: +1 281 665 1200  
Email: tjanik@reservoirdata.com  
Website: www.reservoirdata.com
- Riley Geological Consultants, Inc** .....823  
12208 CR 3100  
Slaton, TX 79364  
United States  
Phone: +1 806 828 3855  
Email: wade@rileygeo.com  
Website: www.rileygeo.com  
Contact: Wade Losee  
Riley Geological Consultants is a well established mudlogging company with offices in Lubbock and Midland Counties.
- Rock Flow Dynamics** .....538  
1980 Post Oak Boulevard #2050  
Houston, TX 77056  
United States  
Phone: +1 713 337 4450  
Email: tom.robinson@rfdyn.com  
Website: www.rfdyn.com
- Rock Microscopy, LLC**.....506  
3880 Greenhouse Road, Suite 316  
Houston, TX 77084  
Phone: +1 713 489 9951  
Email: patrick.gathogo@gmail.com
- Rogii Inc.**.....723  
3050 Post Oak Blvd, Ste 550  
Houston, TX 77007  
Phone: +1 281 866 1390  
Email: business@rogii.com  
Website: www.rogii.com  
Contact: Oliver Hansen  
Rogii is a leading geosteering company that offers comprehensive solutions through StarSteer, a geosteering software designed to revolutionize the well drilling.
- Rose & Associates, LLP** .....625  
7660 Woodway Drive, Suite 590  
Houston, TX 77063  
United States  
Phone: +1 713 528 8422  
Email: lisaward@roseassoc.com  
Website: www.roseassoc.com
- Safoco Inc.**.....139  
11421 Todd Road  
Houston, TX 77055  
Phone: +1 713 956 1595  
Email: jpinto@safoco.com
- Saudi Aramco** .....815  
9009 West Loop South  
Houston, TX 77096  
United States  
Phone: +1 713 432 4000  
Email: michelle.flores@aramcoservices.com  
Website: www.aramco.com/en/home.html
- Schlumberger–Infinity Dissolvable Plug-and-Perf System Trailer**.....928  
5444 Westheimer Rd Ste 900  
Houston, TX 77056-5306  
United States  
Phone: +1 713 350 4571  
Email: paguas2@slb.com
- Schlumberger** .....315  
225 Schlumberger Dr.  
Sugar Land, TX 77478  
United States  
Phone: +1 713 689 7037  
Email: sfontaine1@slb.com  
Website: www.slb.com  
Through a network of technology centers worldwide, Schlumberger maintains the service industry's longest commitment to technology and innovation. Designed, built, and tested to exacting standards, our advanced tools and products are used around the world in a wide range of applications.
- Seismos Inc** .....520  
3925 West Braker Lane  
Austin, TX 78759  
Phone: +1 281 636 7804  
Email: dana.harmon@sesimos.com  
Website: www.seismos.com
- Seitel Inc.**.....206  
10811 S. Westview Circle Dr. Bldg C Ste 100  
Houston, TX 77077  
United States  
Phone: +1 713 881 2894  
Email: lyellott@seitel.com  
Website: www.seitel.com





# EXHIBITOR DIRECTORY



**Selman & Associates..... 638**

PO Box 61150

Midland, Texas 79711

United States

Phone: +1 800 578 1006

Email: [tselman@selmanlog.com](mailto:tselman@selmanlog.com)

Website: [www.selmanlog.com](http://www.selmanlog.com)

Contact: Tom Selman

We have 33 years of proven wellsite experience. We are your choice for AFFORDABLE manned/unmanned mudlogging, mass spectrometry, geosteering, and certified advanced gas detection.

ROCKIES-MID CON-NE

SGS Canada Inc. .... 425

5100, 150 6th Ave SW

Calgary, AB T2P 3Y7

Canada

Phone: +1 403 539 5099

Email: [cecile.duboeuf@sgs.com](mailto:cecile.duboeuf@sgs.com)

Website: [www.sgs.com](http://www.sgs.com)

Silixa LLC ..... 920

16203 Park Row, Suite 185

Houston, TX 77084

Phone: +1 832 772 3333

Email: [joe.greer@silixa.com](mailto:joe.greer@silixa.com)

Smart4D Consulting

Geosteering Application ..... 445

#910, 396-11 Ave SW

Calgary, AB T2R 0C5

Canada

Phone: +1 403 265 0111

Email: [rockym@uogc.com](mailto:rockym@uogc.com)

Website: [www.uogc.com](http://www.uogc.com)



**Society of Exploration Geophysicists (SEG)..... 545**

8801 S. Yale Ave. Ste 500

Tulsa OK 74137

United States

Phone: +1 918 497 5500

Email: [meetings@seg.org](mailto:meetings@seg.org)

Website: [www.seg.org](http://www.seg.org)

Founded in 1930, the Society of Exploration Geophysicists is a not-for-profit organization committed to providing high-quality educational, networking, and professional development resources to 30,000+ members in 138 countries. Visit [www.seg.org](http://www.seg.org).



**Society of Petroleum Engineers (SPE)..... 545**

222 Palisades Creek Dr.

Richardson, TX 75080

United States

Phone: +1 800 456 6863

Email: [service@spe.org](mailto:service@spe.org)

Website: [www.spe.org](http://www.spe.org)

Contact: Bonnie Holmen

The Society of Petroleum Engineers (SPE) is a not-for-profit professional association for members engaging in oil and gas E&P, providing resources for technical knowledge at [www.spe.org](http://www.spe.org).

Society of Petroleum Evaluation Engineers (SPEE) ..... 647

215 W. Bandera Rd Ste 114-108

Boerne, TX 78006

United States

Phone: +1 210 748 2563

Email: [gary@cgpetroleum.com](mailto:gary@cgpetroleum.com)

Society of Petrophysicists & Well Log Analysts (SPWLA)..... 544

8866 Gulf Frwy Ste 320

Houston, TX 77017

United States

Phone: +1 713 947 8727

Email: [sharon@spwla.org](mailto:sharon@spwla.org)

Website: [www.spwla.org](http://www.spwla.org)

Contact: Sharon Johnson

South Texas Geological Society (STGS)..... 645

PO Box 2942

Bandera TX 78003

United States

Phone: +1 830 796 0032

Email: [flanigante@gmail.com](mailto:flanigante@gmail.com)

Website: [www.stgs.org](http://www.stgs.org)

Spectro Analytical Instruments ..... 727

91 McKee Drive

Mahwah, NJ 07430

United States

Phone: +1 201 642 3000

Email: [info.spectro@ametec.com](mailto:info.spectro@ametec.com)

Website: [www.spectro.com](http://www.spectro.com)

Contact: Tom Bloomer

SPECTRO is a global leader in elemental analysis featuring ED-XRF, ICP, ICP-MS, and OES technologies for a variety of markets including petrochemical, geological, academia, chemical, mining, environmental and many more. The new SPECTROSCOUT portable XRF analyzer is ideal for field analysis.

Spectrum Tracer Services, LLC ..... 331

9111 East Pine Street, Suite 104

Tulsa, Oklahoma 74115

United States

Phone: +1 918 933 5653

Email: [sfaurot2@spectrumtracer.com](mailto:sfaurot2@spectrumtracer.com)

Website: [www.spectrumtracer.com](http://www.spectrumtracer.com)

Contact: Shelley Faurot

Spectrum provides tracing & logging services. Our tracer products include RA, water, oil & gas. We continue increasing the number of tracers within each product line offering clients more uniqueness.

TerraCore International Corporation ..... 701

9480 Gateway Dr Ste 100

Reno, Nevada 89521-3956

United States

Phone: +1 775 432 6807

Website: [www.terracoregeo.com](http://www.terracoregeo.com)

TerraCore strives to deliver knowledge and insight to its clientele by building and applying global expertise in the application of hyperspectral imaging. We also assist in the interpretation of spectral, and resultant mineralogical image data, focusing primarily on geological applications.

# EXHIBITOR DIRECTORY

Terves Inc. ....833  
 24112 Rockwell Drive  
 Euclid, OH 44117  
 Phone: +1 216 404 0053  
 Email: aghildyal@tervesinc.com



**TETRA**  
 TETRA Technologies, Inc. .... 629  
 24955 Interstate 45 North  
 The Woodlands, Texas 77380  
 United States  
 Phone: +1 281 367 1983  
 Email: cfrey@tetrathec.com  
 Website: www.tetrathec.com  
 Contact: Cheryl Frey  
 TETRA Technologies, Inc. delivers innovative completion fluids, water management, frac flowback, production well testing, compression, and offshore service solutions to the oil/gas industry.

TIW Corporation.....204  
 12300 South Main St.  
 Houston, TX 77035  
 Phone: +1 713 729 2110  
 Email: brian.falcon@tiwoiltools.com  
 Website: www.tiwoiltools.com  
 Contact: Brian Falcon  
 TIW Corporation provides custom-engineered liner hangers, expandable liners systems, completion packers, safety & kelly valves, window cutting products and specialty service tools for the global oil & gas industry.

Tracerco.....739  
 4106 New West Dr.  
 Pasadena, TX 77507  
 United States  
 Phone: +1 281 291 7769  
 Email: nicki.poullard@tracerco.com

TRICON Geophysics.....243  
 10111 Richmond Ave, Suite 230  
 Houston, Texas 77042  
 United States  
 Phone: +1 713 532 5006  
 Email: dave.williams@tricongeophysics.com  
 Website: www.tricongeophysics.com  
 Contact: Dave Williams  
 Seismic Imaging, Reservoir Services, Petrophysics



**Unconventional Resources Technology Conference (URTeC) ..... 545**

**1444 South Boulder Avenue  
 Tulsa, Oklahoma 74119  
 United States**

**Phone: +1 918 630 5672  
 Email: mtaylor@urtec.org  
 Website: www.urtec.org  
 Contact: Mike Taylor**

**URTeC is the industry's leading unconventional event that cuts horizontally across the technologies, emerging trends and best business practices across the disciplines to bridge the information gap and facilitate successful field development. 3 days \* 11 disciplines \* 1 focus**

United Oil & Gas Consulting.....445  
 #910, 396-11 Ave SW  
 Calgary, AB T2R 0C5  
 Canada  
 Phone: +1 403 265 0111  
 Email: rockym@uogc.com  
 Website: www.uogc.com

University of Kansas  
 Department of Geology.....541  
 1530 W. 15th St. Room #4131  
 Lawrence, KS 66045  
 United States  
 Phone: +1 785 864 7396  
 Email: jviscomi@ku.edu  
 Website: www.torp.ku.edu  
 Contact: Jeremy Viscomi

University of Kansas Department of Geology conducts research that evaluates the full potential of the oil recovery process. TORP has a thriving technology transfer program which interacts with the petroleum industry to provide technical assistance on field tests and demonstration projects.

**University of Tulsa – CESE..... 640  
 800 S Tucker Drive Henneke Bldg.  
 Tulsa, Oklahoma 74104  
 United States**

**Phone: +1 918 631 3088  
 Email: cese@utulsa.edu  
 Website: www.cese.utulsa.edu  
 Providing innovative, educational non-credit training experiences for working professionals for over 35 years. Stop by our booth to discuss how we can meet your training needs.**

Weatherford Laboratories.....615  
 5200 N. Sam Houston Pkwy West Suite 500  
 Houston, Texas 77086  
 United States

Phone: +1 832 375 6800  
 Website: www.weatherfordlabs.com  
 Weatherford Laboratories combines an unsurpassed global team of geoscientists, engineers, technicians and researchers with the industry's most comprehensive, integrated laboratory services worldwide.

WellDog .....738  
 1482 Commerce Drive, Unit S  
 Laramie, WY 82070  
 Phone: +1 307 760 4693  
 Email: nnicholas@welldog.com

Wildcat Technologies, LLC.....924  
 218 Higgins Street  
 Humble, Texas 77338  
 United States  
 Phone: +1 281 540 3208  
 Email: juliejones@wildcattechnologies.com  
 Website: www.wildcattechnologies.com  
 Contact: Julie Jones  
 Manufacturer of the HAWK Pyrolysis & TOC Instrument and HAWK-Eye software. Stop by and find out more about HAWK Petroleum Assessment Method (H-PAM) utilizing multi-ramps in 5 zones.

Willowstick Technologies .....528  
 132 E. 13065 S., Ste 100  
 Draper, UT 84020  
 United States  
 Phone: +1 801 984 9875  
 Email: kwall@willowstick.com  
 Website: www.willowstick.com  
 Contact: Keith Wall  
 Willowstick is a Technology company that maps, models, and predicts groundwater paths and patterns. By directly energizing the water of interest with the Willowstick Technology we provide 3D models that chart the groundwater flows in complex environments, at significant depths, and over large areas.

World Oil/Gulf Publishing .....539  
 2 Greenway Plaza Ste 1020  
 Houston, TX 77046  
 United States  
 Phone: +1 713 525 4658  
 Email: tranessa.hunt@gulfpub.com  
 Website: www.worldoil.com



# EXHIBITION HIGHLIGHTS

## Exhibition Location

Exhibit Hall 1

## 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 the Exhibitors..... 10:00 a.m.–11:00 a.m.

Afternoon Refreshment Break ..... 3:05 p.m.–3:45 p.m.

Opening Reception..... 5:00 p.m.–7:00 p.m.

### Tuesday

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

Afternoon Refreshment Break ..... 3:05 p.m.–3:45 p.m.

Networking Reception..... 5:00 p.m.–6:00 p.m.

### Wednesday

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

## ePapers

In addition to the technical session talks, URTeC features ePapers which are an electronic version of the traditional Poster Presentation. ePaper presenters are invited to present by PowerPoint in a smaller audience setting inside the Exhibition during the conference. You can listen to a LIVE ePaper presentation or view it at your convenience or at the On-Demand Station also located inside the Exhibition.

## LIVE ePaper Presentation Hours

Monday..... 1:50 p.m.–6:00 p.m.

Tuesday ..... 10:20 a.m.–12:00 p.m. & 1:50 p.m.–6:00 p.m.

Wednesday..... 9:30 a.m.–1:00 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.

## Wi-Fi Hot Spot

Visit booth #845 and take a moment to use the complimentary internet available inside this lounge area.

## URTeC Society Booth

Stop by booth #545 to visit with the three Sponsoring Organizations (SPE, AAPG and SEG).

# THE CORE EXHIBITS

Visit the Core Exhibits in the Exhibition Hall 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:

- Haynesville
- Bossier
- Eagle Ford
- Marcellus
- Utica
- Woodford
- Niobrara
- Tuscaloosa
- Bakken
- Barnett



**Our Work, Your World.**  
*Look Beyond the Obvious.*



# NETWORKING OPPORTUNITIES

## Breakfast Bites With Exhibitors

Come grab a quick breakfast snack and cup of coffee after the Opening Plenary.

**Date:** Monday  
**Time:** 10:00 a.m.–11:00 a.m.  
**Location:** Exhibit Hall 1

## Opening Reception

Enjoy cocktails and hors d'oeuvres while networking with Exhibitors during the Opening Reception.

**Date:** Monday  
**Time:** 5:00 p.m.–7:00 p.m.  
**Location:** Exhibit Hall 1

## Refreshment Breaks

Schedule time in-between technical sessions each day to meet with Exhibitors and get a cup of coffee or tea.

**Dates:** 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:** Exhibit Hall 1

## Networking Reception

Before you head out for dinner, visit the Exhibit Hall for a quick cocktail and light snack with Exhibitors.

**Date:** Tuesday  
**Time:** 5:00 p.m.–6:00 p.m.  
**Location:** Exhibit Hall 1

# CAREER BUILDING SESSIONS

## How to Be an Independent or Consultant: Build Your Own Opportunities

**Day:** Monday  
**Time:** 2:00 p.m.–3:30 p.m.  
**Location:** Room 221 D  
**Fee:** Included with registration

This session focuses on strategies for becoming a consultant or independent geoscientist in today's industry conditions. The presentations offer practical guidance for implementing the business and the types of technical services that are most in demand. The presentations also include where to find sources of free and low-cost oil and gas leasing, drilling, completion, and production data, as well as repositories of digital well logs. In addition, sources of low-cost and open source software will be presented. Presenters will share their personal experiences.

- Introduction
- How to Be an Independent - Deborah Sacrey
- Build Your Own Business Opportunities in the Oil Business: Practical Steps - Susan Nash
- Setting Up Your Practice as a Consultant - Robert Pledger
- Overview of the AAPG Publication, *Becoming an Independent Geologist: Thriving in Good Times and Bad* by James A. Gibbs
- Resources for Getting Started
- Q&A / Discussion

## Young Professional Focus “How to Build Your Own Business Opportunities”

**Day:** Tuesday  
**Time:** 2:00 p.m.–3:30 p.m.  
**Location:** Room 221 D  
**Fee:** Included with registration

Join us for presentations and a lively discussion on how young professionals (YPs) can keep their careers alive and take advantage of unique opportunities and skill sets during a protracted downturn, and a time of paradigm shifts in the industry.

### Topics:

- Impact on YPs of the downturn / attitudes of the industry & profession toward YPs
- Kinds of business opportunities available right now
- Skill sets unique to YPs which can leverage into unique opportunities
- Has the work environment changed?
- Has gender been a factor in the workplace?
- Needs ... now and the future
- AAPG events, networking, training

# GENERAL INFORMATION

## On-Site Registration Hours

**Location:** Main Lobby - Hall 1 Registration North  
Saturday ..... 12:00 p.m. – 5:00 p.m.  
Sunday ..... 7:30 a.m. – 5:30 p.m.  
Monday ..... 7:00 a.m. – 6:00 p.m.  
Tuesday ..... 6:30 a.m. – 5:30 p.m.  
Wednesday ..... 6:30 a.m. – 1:00 p.m.

## URTeC Service Center

**Location:** Room 221 A  
This year the Speaker Service Center and the Conference Office are combined into one Service Center.  
Saturday ..... 10:00 a.m. – 5:00 p.m.  
Sunday ..... 8:00 a.m. – 6:00 p.m.  
Monday-Tuesday ..... 7:30 a.m. – 5:30 p.m.  
Wednesday ..... 7:30 a.m. – 5:00 p.m.

## Business Center

The UPS Store  
200 E. Market Street, Suite 215 (near main entrance of Convention Center)  
Phone: +1 210 258 8950  
Fax: +1 210 258 8951  
E-mail: store4180@theupsstore.com  
Web Site: <http://www.theupsstorelocal.com/4180/>

**Hours:** Monday-Friday ..... 8:00 a.m. – 6:30 p.m.  
Saturday ..... 9:00 a.m. – 5:00 p.m.

## Lost and Found

**Location:** Registration – Main Lobby outside Exhibit Hall 1 Entrance  
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:** Outside Exhibit Hall 1 second entrance into Exhibition of Main Lobby  
Wednesday ..... 6:30 a.m. – 4:30 p.m.  
Items checked will be at a \$3.00 per item fee.

## No-Electronic Capturing Policy



Capturing or photographing contents of Exhibit Displays, Technical Sessions or ePaper Presentations is strictly prohibited.

## No Smoking Policy

Smoking is prohibited in the Henry B. Gonzalez Convention Center.

## Press Office

**Location:** Room 222  
The Press Office is a working area for editorial personnel covering the conference.

## Social Media

Connect with us for the latest updates on what's happening during the event.



## Download the URTeC 2016 App Now!

Available for both iOS (iTunes) and Android (Google Play) devices, the URTeC 2016 App can be downloaded for free.

# SAFETY AND SECURITY

## First Aid

**Location:** Exhibit Hall 1 (near ePaper Station A)  
Saturday-Sunday ..... 8:00 a.m. – 5:00 p.m.  
Monday ..... 9:00 a.m. – 7:00 p.m.  
Tuesday-Wednesday ..... 8:00 a.m. – 6:00 p.m.

## 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.

# ABOUT SAN ANTONIO

## Transportation

### Airport

San Antonio International Airport (SAT)  
 9800 Airport Blvd.  
 San Antonio, TX 78216  
 Phone: +1 210 207 3433  
<http://www.sanantonio.gov/sat>

### Public Transportation

VIA Metropolitan Transit is San Antonio's public transportation agency offering service throughout the city including streetcar service within the downtown area. Once in the downtown area, VIA's streetcar service offers stops to or/near most hotels, restaurants, the convention center and many visitors' hot spots. For added convenience, VIA offers \$4 Day Pass for purchase online and in advance of your trip. A Day Pass is good for unlimited rides on all regular bus and streetcar services for the one day indicated on the pass. The Day Pass will be activated the first time boarding the bus or streetcar. For more details, visit [www.viainfo.net](http://www.viainfo.net).

### Parking

The City of San Antonio recently announced the launch of a new downtown parking locator app provided by Pango Mobile Parking! The FREE parking locator app helps motorists find a parking space using their Smartphone's location. The app includes parking rate data and current availability capacity for all downtown parking locations. The app is available for iPhone and Android and is free and secure. Download it now.

### Bowie & Market Streets

Flat rate: \$9.00 for up to 3 hours, \$6 every additional hour and \$27 maximum (per day).  
 Closest parking to Convention Center and Lila Cockrell Theatre

### Marina Garage (210 207 8266)

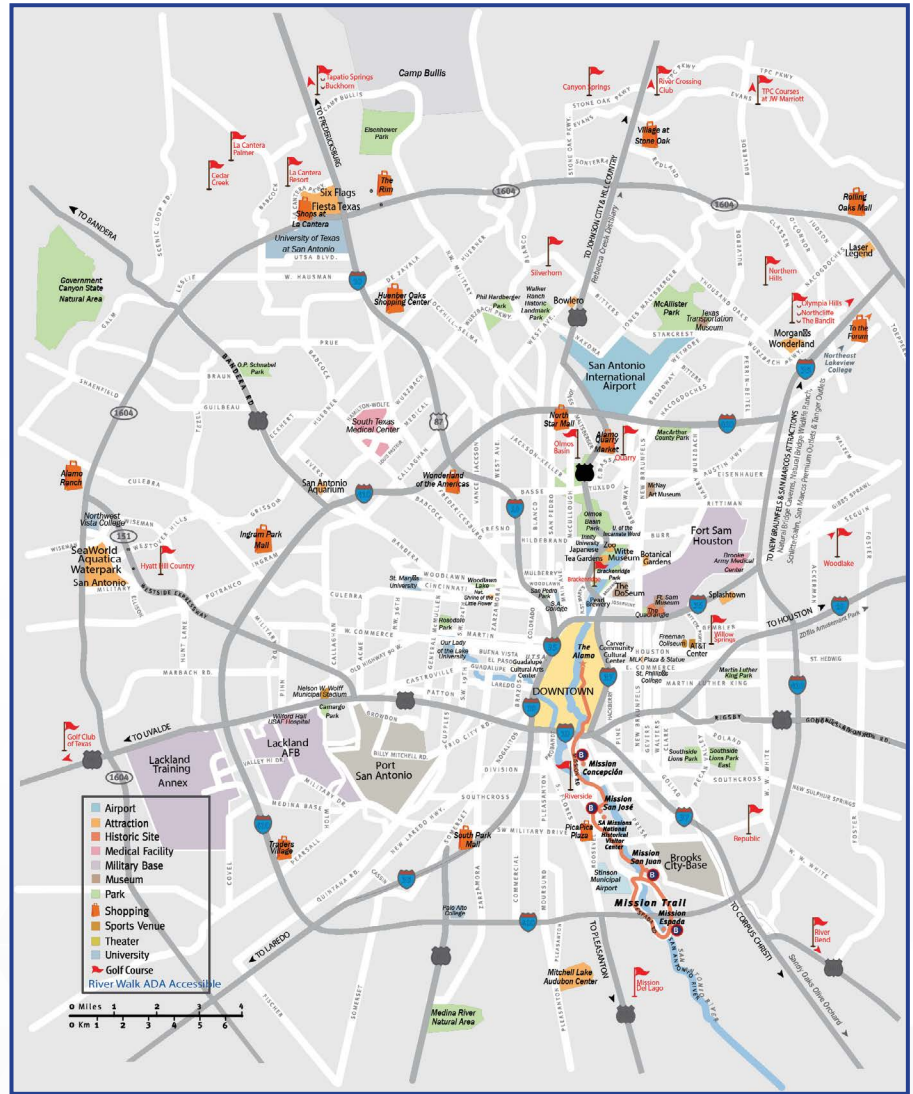
Bowie & Commerce Streets  
 Daily flat rate: \$9.00  
 Event flat rate: \$11.00  
 Across street from main entrance to Convention Center and Lila Cockrell Theatre

### Riverbend Garage (877 717 0004)

Alamo & Market Streets  
 Daily rates: 0-2hrs - \$10.00; 2-4hrs - \$12.00;  
 4-24hrs - \$15.00  
 Overnight rate: \$15.00

### Tower of the Americas Parking (210 223 3101)

801 Cesar Chavez Blvd.  
 Daily flat rate: \$8.00  
*(Parking rates are subject to change)*



## Hotels

Hotel #	Hotel Name	Address	Telephone Number
1	Grand Hyatt	600 E. Market Street San Antonio, TX 78205	+1 210 224 1234
2	Hilton Palacio del Rio	200 S. Alamo Street San Antonio, TX 78205	+1 210 222 1400
3	Hyatt Regency Riverwalk	123 Losoya Street San Antonio, TX 78205	+1 210 222 1234
4	La Quinta Riverwalk	303 Blum Street San Antonio, TX 78205	+1 210 222 9181



# SUBSCRIBE TODAY

## FREE PRINT + DIGITAL ISSUE

For Commercial Manufacturers and Operators

# UAS

## MAGAZINE

FREE PRINT + DIGITAL ISSUE

SUBSCRIBE NOW AT

[www.UASmagazine.com](http://www.UASmagazine.com)

## UAS Magazine IS THE

# PREMIER

# SOURCE

OF NEWS AND INFORMATION ABOUT  
UNMANNED AERIAL SYSTEMS

### DISTRIBUTED TO:

- UAV Manufacturers
- UAV Distributors
- Precision Agriculture
- Disaster and Emergency Response
- Energy Monitoring
- Scientific Research
- Media and Movie Production
- Security and Border Patrol
- Data Storage
- Software
- UAS Test Site Managers, Affiliated Companies



[www.UASmagazine.com](http://www.UASmagazine.com)

Follow Us



# people powered

أرامكو السعودية  
saudi aramco



The power of our resources means nothing without the energy of our people. Their focus and expertise make our energy more dependable, more sustainable, and more useful.

We are looking for experienced Unconventionals professionals to join our team.

Apply now.

[www.aramco.jobs/URTeC](http://www.aramco.jobs/URTeC)



where energy is opportunity™