



WORKSHOP

SPE Workshop

TECHNICAL PROGRAM

21-23 August 2012 | Hyatt Regency Hill Country Resort, San Antonio, Texas, USA

Eagle Ford Shale

Technical Program Committee

Chairperson**Jim Venditto**

Trican Well

Services

Brian Driskill

Shell

Ray Ellis

Statoil

Michael Lattibeaudiere

Rosetta Resources

Terry Palisch

CARBO Ceramics

Lucas Bazan

Bazan Consulting Inc.

Lloyd Hetrick

Newfield Exploration

Company

Steve Sinclair

Matador Resources

Company

Craig Cipolla

Hess

Stephen Ingram

Halliburton

Buddy Woodroof

ProTechnics

The Eagle Ford shale of southeast Texas, one of the most active shale plays in the United States, is a complex reservoir. It is emerging as a major gas, condensate, and oil resource with about 165 rigs now working in the area. Given the large geographical extent, about 400 miles across south Texas in a 50-mile-wide band, a wide variety of reservoir types are encountered each requiring a different approach in exploitation and completion optimization. The scope of this workshop encompasses technical coverage of all active Eagle Ford shale development.

CORPORATE SPONSOR



SPONSORS

**HALLIBURTON****Schlumberger**

General Information:

Accessibility

Our events and functions are accessible to all attendees with wheelchairs. If you require special arrangements, please contact our staff at the registration desk.

Alcohol Policy

SPE recognizes the legitimate serving of alcoholic beverages in the process of conducting business and social activities. We also recognize that the use and consumption of alcohol carries with it the requirement for all attendees to consume those beverages responsibly.

Commercialism

In remaining consistent with workshop objectives and SPE guidelines, commercialism in presentations will not be permitted. Company logos should be used only to indicate the affiliation of the presenter(s).

Continuing Education Units

Attendees will receive 2.0 CEUs.

One CEU equals 10 contact hours of participation. CEUs will be awarded through SPE Professional Development for participation and completion of SPE workshop. A permanent record of a participant's involvement and awarding of CEUs will be maintained by SPE.

Documentation

Following the workshop, a URL containing released copies of the workshop presentations will be available to attendees.

Guest/Spouse

Only registered guests are permitted to attend the receptions.

Electronic Devices

As a courtesy to the speakers and your fellow registrants, please turn off all electronic devices during presentations.

Name Badges

Please wear your badge at all times. It is a courtesy to your fellow registrants, speakers and sponsors.

Photography Policy

SPE reserves the exclusive rights to all recording or reproductions of the workshop. Unauthorized recording is expressly prohibited, whether by video, still or digital camera, mobile phone, or any other means or form of reproduction.

Any person attending may be photographed or videotaped, and by your attendance, you give permission to use your image in possible future marketing publications including print, online, and video.

Workshop Format

Workshops maximize the exchange of ideas among attendees and presenters through brief technical presentations followed by extended Q&A periods. Focused topics attract an informed audience eager to discuss issues critical to advancing both technology and best practices.

Many of the presentations are in the form of case studies, highlighting engineering achievements and lessons learned. In order to stimulate frank discussion, no proceedings are published and members of the press are not invited to attend.

Schedule at a Glance:

Monday, 20 August

1730-1900

Welcome Reception*Courtyard Deck*

Tuesday, 21 August

All technical sessions are located in the Fredericksburg Ballroom.

0700-0745

Registration and Continental Breakfast*Fred Foyer*

0800-0815

Chairperson's Welcome

0815-0945

Session I: Reservoir Characterization I – What Controls Production?

0945-1015

Coffee Break*Fred Foyer*

1015-1145

Session II: Reservoir Characterization II – What Controls Production?

1145-1330

Lunch*Charlies Long Bar*

1330-1500

Session III: Field Development

1500-1530

Coffee Break*Fred Foyer*

1530-1700

Session IV: Lateral Construction

1700-1830

Reception*Luckenbach Pavilion*

Wednesday, 22 August

0700-0800

Continental Breakfast*Fred Foyer*

0800-0930

Session V: Completion Optimization

0930-1000

Coffee Break*Fred Foyer*

1000-1130

Session VI: Hydraulic Fracture Design

1130-1300

Lunch*Charlies Long Bar*

1300-1430

Session VII: Production Operations

1430-1500

Coffee Break*Fred Foyer*

1500-1630

Session VIII: Production Evaluation and Well Performance

Thursday, 23 August

0700-0800

Continental Breakfast*Fred Foyer*

0800-0830

Keynote Presentation

0830-1000

Session IX: Water Management, One Size Does Not Fit All

1000-1030

Coffee Break*Fred Foyer*

1030-1200

Session X: Vertical Integration Panel

Thank you to our Corporate Sponsor:



Monday, 20 August

1730-1900 Welcome Reception



Tuesday, 21 August

0700-0800 Registration

Materials sponsored by:



Continental Breakfast

Audio/Visual sponsored by:



0800-0815 Chairperson's Welcome
Chairman: Jim Venditto, Trican Well Services

PRODUCTION ENHANCEMENT



"Seen side by side, there's no doubt which will be the superior producer."

The only service of its kind, the Halliburton AccessFrac™ stimulation service reliably delivers maximized propped fracture volume for improved long-term production. To do it, the AccessFrac service provides full access to complex fracture networks in unconventional formations—significantly increasing your reservoir contact. Indeed, better proppant distribution can reduce the amount of proppant required and improve efficiency. In addition, the customizable conductivity of the AccessFrac service—made possible by unique pumping and diversion technology—allows for maximum oil and gas flow to the wellbore.

What's *your* fracturing challenge?

For solutions, go to halliburton.com/accessfrac.

Solving challenges.™

HALLIBURTON

0815-0945 **Session I: Reservoir Characterization I – What Controls Production?**

Chairs: *Brian Driskill, Shell*

Steve Sinclair, Matador Resources Company

Presentation 1: Integration of Seismic, Microseismic, and Engineering Data Provides Insight into Well Prospectivity and Productivity – Examples from the Eagle Ford

Ross Pebbles, Global Geophysical Services

Presentation 2: Nuclear Magnetic Resonance (NMR) T2 Distributions in the Eagle Ford Shale – Reflections on Pore Size

Erik Rylander, Schlumberger

Presentation 3: Eagle Ford Reservoir Potential from a Geological Perspective, Maverick Basin, Texas

Nathan Suurmeyer, Shell

0945-1015 **Coffee Break**

Sponsored by: **HALLIBURTON**

1015-1145 **Session II: Reservoir Characterization II – What Controls Production?**

Chairs: *Brian Driskill, Shell*

Steve Sinclair, Matador Resources Company

Presentation 1: Petrophysical Evaluation in the Eagle Ford Shale – What's the Value Added?

Sandeep Ramakrishna, Halliburton

Presentation 2: Production Sweet Spot Mapping in the Eagle Ford – Using Reservoir Analytics

Murray Roth, Transform Solutions

Breakthrough frac technology
increases production

HiWAY

FLOW-CHANNEL HYDRAULIC FRACTURING SERVICE

To improve horizontal multistage production and estimated ultimate recovery (EUR) in the Eagle Ford shale, Petrohawk applied HiWAY* flow-channel hydraulic fracturing. This increased stimulated reservoir volume by creating stable channels and limitless fracture conductivity.

The results were outstanding:

- Initial gas production increased 37%
- Oil production increased 32%
- EUR projected by Petrohawk to increase 25% compared with offset wells completed with conventional fracturing techniques.

"Petrohawk has converted 100% of frac services provided by Schlumberger in the Eagle Ford to HiWAY. Currently, Petrohawk is utilizing all available capacity in this solution."

Dick Stoneburner,
COO and President, Petrohawk

Schlumberger

Presentation 3: Confirming Complex Fracture Reactivations with Microseismic Monitoring and Source Mechanism Analysis

Sherilyn Williams-Stroud, Micro Seismic Inc.

1145-1330 **Lunch**

1330-1500 **Session III: Field Development**

Chairs: *Lloyd Hetrick, Newfield Exploration Company*

Ray Ellis, Statoil

Presentation 1: How a Private Equity Company Develops an Unconventional Resource

Jim Flowers, Laredo Energy

Presentation 2: It's Not Luck

Keith Seanard, Swift Energy

Presentation 3: Eagle Ford Development from the Perspective of a New Operator – The First Two Hundred Days

Dale Kokoski, Marathon Oil

1500-1530 **Coffee Break**

Sponsored by: **HALLIBURTON**

1530-1700 **Session IV: Lateral Construction**

Chairs: *Marty Paulk, Halliburton*

Terry Palisch, CARBO Ceramics



Providing a reliable
energy supply
to meet today's global needs

Statoil is an international energy company with operations in 36 countries. Building on 40 years of experience from oil and gas production on the Norwegian continental shelf, we are committed to accommodating the world's energy needs in a responsible manner, applying technology and creating innovative business solutions. Statoil is headquartered in Norway with 21,000 employees worldwide, and is listed on the New York and Oslo stock exchanges.

More information on www.statoil.com



Statoil

Presentation 1: Short-Term Strategies for Spacing Laterals and Fracture Initiation Points Prior to Rigorous Simulation

Doug Walser, Pinnacle, a Halliburton Service

Presentation 2: Use of Chemostratigraphy for Optimal Lateral Placement and Completion Design

Rick Tompkins, EF Energy

Presentation 3: Warped Casing Offers New Completion Technique

Richard Catlett, Marathon Oil

1700-1830 **Reception**

Sponsored by: **Schlumberger**

Wednesday, 22 August

0700-0800 **Continental Breakfast**

0800-0930 **Session V: Completion Optimization**

Chairs: Craig Cipolla, Hess

Jim Venditto, Trican Well Services

Presentation 1: Improving Completion and Stimulation Effectiveness in the Eagle Ford Shale

Charles Pope, Complete Shale

Presentation 2: Eagle Ford Completions – What Leads to BIG SUCCESS?

Mark Reid, Hess



MISSION

WELL SERVICES



“Quality People, Quality Service”

Mission Well Services is a full service Hydraulic Fracturing and Coiled Tubing service company based out of San Antonio, TX and headquartered in The Woodlands, TX. Our experienced crews work daily to provide a higher level of attention to each individual customer’s needs and requirements. Though focused initially on supporting pressure pumping activity in South Texas area and the Eagle Ford Shale, our service offerings and support areas are expanding daily.

For More information contact our sales department @:

Office: 713-335-8905

Email: larry.kniejski@missionws.com

Web: www.missionws.com

© 2012 Mission Well Services, LLC



Presentation 3: Eagle Ford Completion Optimization – An Operator’s Approach
Omkar Jaripatke, Pioneer Natural Resources

0930-1000 **Coffee Break**

Sponsored by: **HALLIBURTON**

1000-1130 **Session VI: Hydraulic Fracture Design**

Chairs: Lucas Bazan, Bazan Consulting Inc
Michael Lattibeaudiere, Rosetta Resources

Presentation 1: Fracture Optimization – Is There a Forest Behind Those Trees?
Stephen Schubarth, Schubarth Inc

Presentation 2: Eagle Ford Current Stimulation Design and Lessons
Matthew Guidry, Shell

Presentation 3: Let’s Talk About Channel Fracturing
Craig Cipolla, Hess

1130-1300 **Lunch**

1300-1430 **Session VII: Production Operations**

Chairs: Ray Ellis, Statoil
Marty Paulk, Halliburton

Presentation 1: Why Drill It if You Can’t Produce It?
Mark Garrett, Marathon Oil

Presentation 2: “Slowback” Isn’t the Whole Story – Drawdown, Shut-ins, and Interfacial Tension (IFT) Tell More
James Crafton, Performance Sciences Inc

Presentation 3: Frac Surfactant Selection Process – Effectively Mobilizing Oil For Improved Production
Liang Xu, MultiChem

1430-1500 **Coffee Break**

Sponsored by: **HALLIBURTON**

1500-1630 **Session VIII: Production Evaluation and Well Performance**

Chairs: Buddy Woodroof, ProTechnics
Craig Cipolla, Hess

Presentation 1: Considerations to Design, Evaluate, and Optimize Horizontal Completions in the Eagle Ford Shale
John Thompson, Schlumberger

Presentation 2: Conducting and Analyzing Field Trials in Unconventional Reservoirs
Mike Conway, Core Lab

Presentation 3: The Role of Data Mining in Eagle Ford Exploitation
Robert Shelley, StrataGen

Thursday, 23 August

0700-0800 **Continental Breakfast**

0800-0830 **Keynote Presentation**

Presenter: Gil Bujano, Texas Railroad Commission

0830-1000 Session IX: Water Management, One Size Does Not Fit All

Chairs: *Lloyd Hetrick, Newfield Exploration Company*

Jim Venditto, Trican Well Services

Presentation 1: Got Gas? Real Life Case Studies

Steve Batchelor, GasFrac

Presentation 2: Water Management Issues Critical to Development of the Eagle Ford Shale

Dan Arthur, ALL Consulting

Presentation 3: Eagle Ford Water Sourcing and Produced Water Reuse – Lessons Learned but Challenges Remain

Matt Mantell, Chesapeake Energy Corporation

1000-1030 Coffee Break

Sponsored by: **HALLIBURTON**

1030-1200 Session X: Vertical Integration Panel

Chairs: *Terry Palisch, CARBO Ceramics*

Michael Lattibeaudiere, Rosetta Resources

Panelists:

Jeff Tillery, Tudor Pickering Holt

Scott McCarthy, Lewis Energy

Daniel Calnan, Rosetta Resources

Chris Leypoldt, Pioneer Natural Resources Pumping Services

Jason Rall, Performance Technologies LLC, Chesapeake Energy

CARBO®

unconventional
innovation

Your comprehensive resource for unconventional reservoir stimulation.

When it comes to unconventional oil and gas development, the CARBO companies offer an unparalleled portfolio of stimulation technology and expertise to optimize reservoir performance. From our superior proppants and modeling software to frac design, analysis and evaluation, we are the proven resource for your unconventional stimulation needs.

CARBO®
CERAMICS

StrataGen®
ENGINEERING

FRACPRO®

CARBOCeramics.com/unconventional

Eagle Ford Shale

Notes:

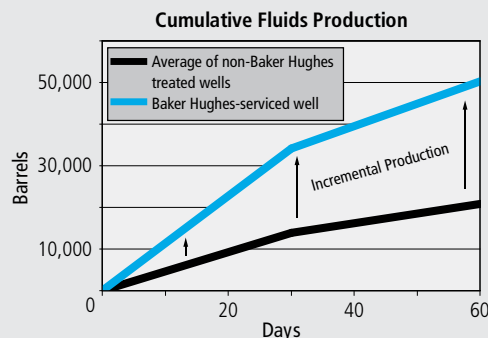
North America Meetings

10-12 September 2012	Lost Circulation and Wellbore Strengthening Workshop	Dallas, Texas, USA
12-14 September 2012	SPE/SEG Injection Induced Seismicity Workshop	Broomfield, Colorado, USA
24-25 September 2012	SPE Hydrocarbon Economics and Evaluation Symposium	Calgary, Alberta, Canada
21-26 October 2012	Water Management: Is an Ounce of Prevention Worth a Pound of Cure? Forum	Carlsbad, California, USA
4-9 November 2012	Novel Techniques for Reservoir Modeling Forum	Santa Fe, New Mexico, USA
5-7 November 2012	Complex Reservoir Fluids Workshop	Houston, Texas, USA
26-27 November 2012	Thermal Well Integrity Workshop	Banff, Alberta, Canada
5-6 February 2013	Final Commissioning and Initial Startup Workshop	San Antonio, Texas, USA
27 February-1 March 2013	Early Production Loss in Oil and Gas Shale Reservoirs Workshop	Santa Fe, New Mexico, USA
April 2013	Subsea Standardization Workshop	Texas, USA

Poor production rates. Environmental concerns.



A producer needed to improve post-frac production. Our integrated stimulation and treatment program increased initial recovery by more than 140% relative to offsets.



 bakerhughes.com

Get maximum performance with environmental assurance.

Our big-picture approach to maximizing your asset's performance starts with detailed analysis from our reservoir consultants and running proprietary fracturing simulations. Then, we design a customized stimulation program that we expertly apply at your wellsite to increase both efficiency and ultimate recovery.

But performance isn't our only concern. We engineer these programs using environmentally responsible products and systems—reducing risk without sacrificing critical performance.

