



Society of Petroleum Engineers

**Early Registration Deadline
16 March 2012**

WORKSHOP

www.spe.org/meetings

23-25 April 2012 | Omni La Mansion del Rio, San Antonio, TX, USA

Committee Members

Chairpersons

Syed Ali
Schlumberger

Rick McCurdy
Chesapeake Energy

David Alleman
ALL Consulting

Francois Auzeais
Schlumberger

Jim Bruton
M-I SWACO

Cal Cooper
Apache

Dwyann Dalrymple
Nalco

Dan Daulton
Baker Hughes

Richard Downey
EOG Resources

Jim Edwards
Cabot Oil and Gas

Thomas Geehan
M-I SWACO

Michael Greaves
Marathon Oil

Leonard Kalfayan
Hess Corporation

Joe Lima
Schlumberger

Matt Mantell
Chesapeake Energy

Peter McDonald
Devon Energy

JoAnn McMahon
Baker Hughes

Keith Minnich
Talisman Energy

Pam Sbar
Talisman Energy

Ann Smith
GSI Environmental

Denise Tuck
Halliburton Energy Services

Reducing Environmental Impact of Unconventional Resource Development

This workshop will focus on the discussion of innovative technologies for water sourcing, reuse and reclamation, “green” fracturing chemistries and best practices that can mitigate the current environmental risks associated with shale gas development. Attendees to this workshop will be expected to challenge the status quo and engage on discussions and ideas exchange regarding ongoing applications and issues surrounding hydraulic fracturing chemistries, environmental impact of hydraulic fracturing and the different positions surrounding regulations and legislation that are currently having an impact on our industry.

Who Should Attend?

Participants to this workshop will include representatives from academia, consultants, the service industry and the operators in order to generate fruitful discussion during the workshop.

- Drilling and Completion Engineers
- Service Companies
- Consultants
- Operating Companies
- Industry Experts
- State Regulators

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Reducing Environmental Impact of Unconventional Resource Development

Early Registration Deadline – 16 March 2012

Schedule at a Glance:

Sunday, 22 April

1730-1900 **Welcome Reception**

Monday, 23 April

0700-0800 **Registration**

Continental Breakfast

0800-0815 **Chairpersons Opening Remarks**

0815-0930 **Session I: Regulations and Permitting in the Shale Gas World – Where We Are Today and Where We Are Going**

0930-1000 **Coffee Break**

1000-1130 **Session II: Surface Impact – Perception, Reality and Misunderstanding**

1130-1300 **Lunch / Keynote Speaker – George King, Apache**

1300-1430 **Session III: Air Quality**

1430-1500 **Coffee Break**

1500-1630 **Session IV: Best Practices in Wellbore Integrity**

1700-1830 **Reception**

Tuesday, 24 April

0700-0800 **Continental Breakfast**

0800-0930 **Session V: Hydraulic Fracture Placement and Monitoring**

0930-1000 **Coffee Break**

1000-1130 **Session VI: What Defines “Green” Chemistry?**

1130-1300 **Lunch / Keynote Speaker – Steve Holditch, Texas A&M University**

1300-1430 **Session VII: Applying Greener Chemistries**

1430-1500 **Coffee Break**

1500-1630 **Session VIII: Alternative Fluid Sources**

Wednesday, 25 April

0700-0800 **Continental Breakfast**

0800-0930 **Session IX: Water Reuse and Recycling – Real-World, Real-Time Challenges, Constraints, and Solutions**

0930-1000 **Coffee Break**

1000-1130 **Session X: Community Outreach/Public Relations**

1130-1200 **Wrap Up and Adjourn**

Sponsorships

Workshops offer sponsors unique access to a focused group of key decision makers in the oil and gas industry.

While SPE prohibits any type of commercialism within the workshop itself, it recognizes that sponsoring companies offer valuable information to attendees.

Sponsorships help offset the cost of producing workshops and allow SPE to keep the workshop fee as low as possible for the target audience.

Benefits

- Company logo visibility
- Website recognition with link to company's URL
- Recognition in all workshop printed materials
- Onsite signage

Based on the sponsorship selected, sponsoring companies could also receive:

- Attendee giveaways with company logo
- Half-page, full-color ad in workshop technical program
- 1–2 complimentary workshop registrations

Categories

Sponsorships are offered on a first come basis. Please contact SPE to verify the availability of a particular sponsorship.

- Corporate
- Audio/Visual
- Materials
- Contributing Event
- Breakfast
- Coffee Break
- Lunch
- Reception

For More Information

For a detailed list of available sponsorships, including benefits and pricing, contact Susan Wooten at swooten@spe.org.

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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.

Documentation

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

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 (CEUs)

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.

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Corporate Sponsor



Sunday, 22 April

1730-1900 **Welcome Reception**

Sponsored by:

Monday, 23 April

0700-0800 **Registration**

Continental Breakfast

0800-0815 **Chairpersons Opening Remarks**

0815-0930 **Session I: Regulations and Permitting in the Shale Gas World – Where We Are Today and Where We Are Going**

*Chairs: Ann Smith, GSI Environmental
Pam Sbar, Talisman Energy*

As the shale gas revolution continues across the United States, regulators are reviewing, revising and promulgating regulations at the state and federal levels to address all aspects of shale development from well pad location to well casing design to minimization of environmental impact. This session will review where regulations and permitting requirements are today and where we may be in the future from regulatory and industry perspectives.

0930-1000 **Coffee Break**

Sponsored by:

1000-1130 **Session II: Surface Impact – Perception, Reality, and Misunderstanding**

*Chairs: David Alleman, ALL Consulting
Jim Edwards, Cabot Oil & Gas*

The current real time activities that are benefiting stakeholders and minimizing the impact in unconventional resource development across the US. Topics to include hydraulic fracturing footprint, multiwell pads, pre-drill pad site selection, water transfer and storage innovations as well as logistics by rail, pipe, road, and barge.

1130-1300 **Lunch**

Sponsored by:

Keynote Speaker - George King, Apache

1300-1430 **Session III: Air Quality**

*Chairs: Cal Cooper, Apache
Peter McDonald, Devon Energy*

This session will have speakers from industry, regulatory and academia discussing the current and proposed air quality regulations on the natural gas industry. Common misperceptions of the industry, ozone compliance, and a regulatory perspective of improvements needed from the industry will be summarized and implementation issues will be discussed.

1430-1500 **Coffee Break**

Sponsored by:

Reducing Environmental Impact of Unconventional Resource Development

1500-1630 **Session IV: Best Practices in Wellbore Integrity**

Chairs: Joe Lima, Schlumberger

Rich Downey, EOG Resources

It is widely believed that the primary pathway for potential contamination of water sources comes from poor wellbore isolation. The key to reducing the risk of contamination is via the construction of a wellbore that can withstand the effects of well stimulation and production. Well integrity encompasses three primary phases; well planning and design, well construction and long-term monitoring. This session explores the best practices from each of these three phases.

1700-1830 **Reception**

Sponsored by:  **CorsiTech**

Tuesday, 24 April

0700-0800 **Continental Breakfast**

Sponsored by:  **CorsiTech**

0800-0930 **Session V: Hydraulic Fracture Placement and Monitoring**

Chairs: Tom Geehan, M-I SWACO

Francois Auzerais, Schlumberger

Where does all the water and proppant go? What type of fracture is formed, where is it formed, which way does it grow? This session attempts to answer these questions and identify the monitoring techniques which confirm that the more efficient is the placement, the more productive is the well.

0930-1000 **Coffee Break**

Sponsored by:  **BENCHMARK**

1000-1130 **Session VI: What Defines “Green” Chemistry?**

Chairs: Leonard Kalfayan, Hess Corporation

Jim Bruton, M-I SWACO

There is a strong industry direction toward full utilization of environmentally friendly or so-called “green” chemistries in drilling, completion, and stimulation of unconventional wells, especially including in shale plays. This session includes discussion on what constitutes “green” chemistry, or how that should be defined, and what is being done to elevate the environmental compatibilities of chemicals required in unconventional well completions.

1130-1300 **Lunch**

Sponsored by: **Schlumberger**

Keynote Speaker - Steve Holditch, Texas A&M University

1300-1430 **Session VII: Applying Greener Chemistries**

Chairs: Matt Mantell, Chesapeake Energy

Dan Daulton, Baker Hughes

Is your company applying greener chemistry to hydraulic fracturing? This session provides workshop attendees the opportunity to understand what can be applied, how greener chemistry is being applied and its acceptance as an alternative to traditional oil and gas hydraulic fracturing chemistries.

1430-1500 **Coffee Break**

Sponsored by:  **BENCHMARK**

1500-1630 **Session VIII: Alternative Fluid Sources**

Chairs: Dwyann Dalrymple, Nalco

Keith Minnich, Talisman Energy

Alternative water sources offer the potential to reduce fresh water requirements for hydraulic fracturing. The chemistry

Reducing Environmental Impact of Unconventional Resource Development

of these alternate waters, regulatory issues, and logistics provide obstacles which must be considered. This session will discuss the benefits and issues associated with the use of alternatives to fresh water.

Wednesday, 25 April

0700-0800 **Continental Breakfast**

0800-0930 **Session IX: Water Reuse and Recycling – Real-World, Real-Time Challenges, Constraints, and Solutions**

Chairs: Ann Smith, GSI Environmental

Michael Greaves, Marathon Oil

The development of shale gas poses a number of challenging technical and management issues related to water, including fresh water demand, frac water composition, management of flowback water, and effective recycling. This session will focus on real-world, real-time challenges and solutions associated with cost effective reuse and recycling of water.

0930-1000 **Coffee Break**

1000-1130 **Session X: Community Outreach/Public Relations**

Chairs: Denise Tuck, Halliburton

JoAnn McMahon, Baker Hughes

As global demands for energy resources increase – controversy continues over the environmental and socio-economic impact of development/production through unconventional technologies. These concerns illustrate the need for open and thoughtful dialogue with industry, property owners and the general public. This session will explore ways for finding common ground and resolution through understanding the needs of the stakeholders, interaction with local communities and education.

1130-1200 **Wrap Up and Adjourn**

Syed Ali, Schlumberger

Rick McCurdy, Chesapeake Energy

