



Society of Petroleum Engineers

**Early Registration Deadline
14 July 2010**

WORKSHOP

4-6 August 2010 | Keystone Resort, Keystone, Colorado

Committee Members

Chairperson
Shah Kabir
Hess

Joseph Ayoub
Schlumberger

David Cramer
ConocoPhillips

Ali Daneshy
Daneshy Consultants Int'l.

Christopher Jablonowski
University of Texas
at Austin

Leonard Kalfayan
Hess

Randy LaFollette
BJ Services

Kimberly Mitchell
Marathon Oil

Mohamed Soliman
Halliburton Energy Services

Archie Taylor
Continental Resources

Peter Valko
Texas A&M University

Maximizing Tight Oil in the Bakken

Oil production from microdarcy formations presents significant challenges in all facets of completion, production, and reservoir engineering. This applied technology workshop is aimed at discussing current best practices and the evolving technologies addressing complex multidisciplinary issues. Specifically, we will explore how we design well spacing and stimulation to meet production performance and commensurate with economic objectives.

One of the focal points of this workshop will be performance monitoring with respect to multistage fracture design options, over the entire well, leading to forecasting long-term performance. Besides current best practices, we will address leading-edge technologies with regard to well architecture and stimulation, and maximizing recovery with both primary and enhanced recovery methods.

Sponsors



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Schedule at a Glance:

Tuesday, 3 August

1800-1930 Welcome Reception

Wednesday, 4 August

0700-0800 Registration and Continental Breakfast

0800-0930 Chairperson's Welcome

SESSION I: ESTABLISHING PRIMARY BUSINESS DRIVERS – OBTAINING HIGH INITIAL PRODUCTION (IP) AND ITS IMPACT ON ECONOMICS

0930-1000 Coffee Break

1000-1130 **SESSION II: ECONOMIC ASSESSMENTS – METHODS AND CASE STUDIES**

1130-1300 Lunch: Keynote Speaker

1300-1430 **SESSION III: OPTIMUM FRACTURING – COMMON OPTIONS AND CASE HISTORIES**

1430-1500 Coffee Break

1500-1630 **SESSION IV: OPTIMUM FRACTURING – TECHNOLOGY TRENDS**

1700-1900 Reception

Thursday, 5 August

0700-0800 Registration and Continental Breakfast

0800-0930 **SESSION V: DIAGNOSING LONG-TERM FRACTURE PERFORMANCE**

0930-1000 Coffee Break

1000-1130 **SESSION VI: FORECASTING RESERVOIR PERFORMANCE**

1130-1300 Lunch: Keynote Speaker

1300-1430 **SESSION VII: MONITORING RESERVOIR PERFORMANCE AND EVALUATION**

1430-1500 Coffee Break

1500-1700 **SESSION VIII: DEALING WITH FORMATION DAMAGE AND PRODUCTION CHEMISTRY ISSUES**

Friday, 6 August

0700-0800 Continental Breakfast

0800-0930 **SESSION IX: BEST PRACTICES/WAY FORWARD – DESIGNING WELL ARCHITECTURE AND STIMULATION TECHNOLOGY**

0930-1000 Coffee Break

1000-1130 **SESSION X: BEST PRACTICES/WAY FORWARD – MAXIMIZING OIL RECOVERY**

1130-1200 Wrap-Up Discussion and Closing Comments

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.

- Breakfast
- Coffee Break
- Lunch
- Reception
- Audio/Visual
- Materials

For More Information

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

Tuesday, 3 August

1800-1930

Welcome Reception

Wednesday, 4 August

0700-0800

Registration

sponsored by **HALLIBURTON**

Continental Breakfast

0800-0930

Chairperson's Welcome

SESSION I: ESTABLISHING PRIMARY BUSINESS DRIVERS OBTAINING HIGH INITIAL PRODUCTION (IP) AND ITS IMPACT ON ECONOMICS

Chairs: Kimberly Mitchell, Marathon Oil

Leonard Kalfayan, Hess

This session endeavors to set the stage for the workshop by establishing primary business drivers in the Bakken. Operator, service provider, and academic perspectives for the Bakken will be presented and discussed. As an example, obtaining high IP and its impact on economics is of particular importance and interest.

0930-1000

Coffee Break

1000-1130

SESSION II: ECONOMIC ASSESSMENTS – METHODS AND CASE STUDIES


Chairs: Christopher Jablonowski, University of Texas at Austin

Shah Kabir, Hess

In the planning stages of tight oil projects, operators assess economic feasibility, select initial depletion strategy, stage capital investments, and develop contingency plans. The analysis is often complicated by uncertainty in the input parameters. In this session, speakers will share their experiences regarding the economic and engineering analysis that takes place both prior to project sanction and during the production phase. Case studies will be the basis for discussion.

1130-1300

Lunch: Keynote Speaker

sponsored by 

1300-1430

SESSION III: OPTIMUM FRACTURING – COMMON OPTIONS AND CASE HISTORIES

Chairs: David Cramer, ConocoPhillips

Ali Daneshy, Daneshy Consultants Int'l.

Hydraulic fracturing of horizontal wells is now the standard practice for optimizing productivity in the Bakken. This session will review some of the fracturing systems in use and their features that are specific to Bakken completion and well stimulation. Discussion will also focus on case examples and results, and implications for future development.

1430-1500

Coffee Break

1500-1630

SESSION IV: OPTIMUM FRACTURING – TECHNOLOGY TRENDS


Chairs: Ali Daneshy, Daneshy Consulting Int'l

Joseph Ayoub, Schlumberger

The productive life of Bakken wells can be extended by practices, such as re-fracturing. These practices pose completion challenges requiring introduction of new technologies, including novel fracturing procedures and fluid systems with special properties for the unique conditions in the Bakken. These considerations and associated applications will be addressed.

1700-1900

Reception

sponsored by 

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. A summary report containing the highlights of the workshop sessions and discussions will also be made available. The copyright of the report will belong to SPE.

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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Thursday, 5 August

0700-0800

Registration

sponsored by **HALLIBURTON**

Continental Breakfast

0800-0930

SESSION V: DIAGNOSING LONG-TERM FRACTURE PERFORMANCE

Chairs: Peter Valko, Texas A&M University

Mohamed Soliman, Halliburton Energy Services

Various diagnostic tools are available before, during, and directly after well stimulation. This session will discuss well-established diagnostic techniques (mini-frac, pressure fall-off, microseismics, tiltmeters, tracers), as well as novel ideas addressing the issue of changes in the long-term production performance of the created fractures.

0930-1000

Coffee Break

1000-1130

SESSION VI: FORECASTING RESERVOIR PERFORMANCE

Chairs: Mohamed Soliman, Halliburton Energy Services

Archie Taylor, Continental Resources

Different techniques for forecasting reservoir performance with emphasis on the unique aspects of oil production from the Bakken shale will be the focus of this session. Both numerical and analytical techniques will be discussed. The suitability and aspects of different approaches are still being debated. Field cases including simulation studies will feature prominently.

1130-1300

Lunch: Keynote Speaker

1300-1430

SESSION VII: MONITORING RESERVOIR PERFORMANCE AND EVALUATION

Chairs: Peter Valko, Texas A&M University

Archie Taylor, Continental Resources

A pressing issue with monitoring reservoir performance is knowing the difference in production decline under ideal wellbore conditions and when wellbore restrictions or fracture damage has occurred. Unneeded wellbore cleanouts are expensive; so, identifying candidates for cleanout and/or re-stimulation is essential. Decline curve analysis is also crucial for reserves reporting. This session will discuss ways of analyzing production (and possible pressure) history.

1430-1500

Coffee Break

1500-1700

SESSION VIII: DEALING WITH FORMATION DAMAGE AND PRODUCTION CHEMISTRY ISSUES

Chairs: Leonard Kalfayan, Hess

Randy LaFollette, BJ Services

A key issue with Bakken wells is scaling. This session will focus on inorganic scale remediation and prevention, including traditional inhibitor delivery and fracturing proppant based methods. Lessons learned from water analysis studies in the Bakken will be discussed to address questions such as: What water chemistries that may be important to scaling potential are produced from different zones? What compatibility issues exist with available fracturing make-up water sources? What are the resulting scale types?

Friday, 6 August

0700-0800

Continental Breakfast

0800-0930

SESSION IX: BEST PRACTICES/WAY FORWARD—DESIGNING WELL ARCHITECTURE AND STIMULATION TECHNOLOGY

*Chairs: David Cramer, ConocoPhillips
Randy LaFollette, BJ Services*

The session is designed to provide an overview of well architecture, completion, and stimulation in current geographic areas of industry activity. Emphasis will be on technology: what works, what doesn't work, and why. The intent is also to relate production results to key reservoir properties and associated stratigraphic and geomechanical challenges. Changes in well architecture parameters will be compared to production results. Topics for presentation and discussion should include effects of well azimuth, length, and attitude (toe-up vs toe-down), liner type, staging methods, and hydraulic fracturing processes.

0930-1000

Coffee Break

1000-1130

SESSION X: BEST PRACTICES/WAY FORWARD—MAXIMIZING OIL RECOVERY

*Chairs: Joseph Ayoub, Schlumberger
Kimberly Mitchell, Marathon Oil*

Current best practices and potential future technologies that could maximize oil recovery from the Bakken and/or similar tight-oil formations will be discussed. Novel aspects of both primary and secondary recovery processes will be addressed. Come prepared to propose any wild or not-so-wild ideas you would like the group to discuss.

1130-1200

Wrap-Up Discussion and Closing Comments

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