



16-17 February 2009
Hyatt Regency Hill Country
Resort
San Antonio, Texas

SPE/AAPG/SEG Pore Pressure Prediction, Monitoring, and Wellbore Stability

Technical Program Committee

Chairmen:

Philip Heppard
ConocoPhillips

Gopal Amruthapuri
Chevron

Mark Alberty
BP

Andrew Aplin
University of Newcastle

Glenn Bowers
Applied Mechanics
Technologies

Dan Ebrum
StatoilHydro

Tina Fitts
ExxonMobil

Peter Flemings
University of Texas

Alfred Liaw
Anadarko

Colin Sayers
Schlumberger

Richard Swarbrick
GeoPressure Technology

This second joint workshop organized by SPE, AAPG and SEG will focus on overpressure prediction, real-time monitoring, and wellbore stability.

Interest in this subject continues to grow as the industry explores and develops oil and gas in HPHT environments, and in mature and rank wildcat environments around the globe. The program will include prediction and drilling case studies, presentations on real-time pressure detection, and an exploration of the uncertainties of pressure prediction in drilling. In addition, speakers will address stresses in the earth that affect rock properties, including logging values, seismic velocities and stress, sub-salt prediction, well bore stability, and wellbore strengthening. The cross-discipline committee includes global representation from operating companies, the service sector, and academia.

SPONSORS:

Materials



Audio/Visual



Monday Breakfast



Tuesday Breakfast



WORKSHOP FORMAT

The strength of the workshop is its interactivity and thus depends on audience participation. We ask that the speakers keep their remarks brief and that all attendees actively participate by asking questions, airing comments, and sharing their observations. Open discussion of critical issues and exploitation of new methods will ensure this workshop has a lasting positive effect on our understanding of Pore Pressure Prediction, Monitoring, and Wellbore Stability. In remaining consistent with workshop objectives and SPE guidelines, excessive commercialism in presentations is not permitted.

DOCUMENTATION

Proceedings from the workshop will not be published; therefore, formal papers and handouts are not requested of speakers or panel members. A URL containing released copies of the workshop presentations will be available to attendees following the workshop.

CONTINUING EDUCATION UNITS

Continuing Education Units (CEU) will be awarded through the SPE Professional Development for participation and completion of SPE workshops. One CEU equals 10 contact hours of participation. A permanent record of a participant's involvement and awarding of CEU will be maintained by SPE.

Attendees will receive 1.6 Continuing Education Credits.

Sunday, 15 February 2009


6:00 -7:30 pm Welcome Reception

Monday, 16 February 2009

7:00-8:00 a.m. Registration

Materials Sponsored by:  ConocoPhillips

Continental Breakfast

Sponsored by:  bp

8:00-8:15 a.m. Opening Remarks

Chairmen: Gopal Amruthapuri, Chevron
Philip Heppard, ConocoPhillips

8:15 -9:45 a.m.

SESSION I: PORE PRESSURE AND FRACTURE GRADIENT ESTIMATION: THE ROCK PHYSICS BASIS

Session Chairs: Andrew Aplin, University of Newcastle
Colin Sayers, Schlumberger

Presentation 1: Velocities in Shales: Pore Pressure and Stress Dependencies

Andreas Bauer and Frans Kets, Shell International E&P

Presentation 2: Smectite-Illite Transformation and Unloading

Keith Katahara, Devon Energy

Presentation 3: Anisotropy and the Impact on Fracturing

Tom Bratton, Schlumberger

9:45-10:15 a.m.

Coffee Break

10:15-11:45 a.m.

SESSION II: PORE PRESSURE IN ATYPICAL ENVIROMENTS AND HPHT

Session Chairs: Peter Flemings, University of Texas
Alfred Liaw, Anadarko

Presentation 1: Monitoring Pore Pressure While Drilling in an HPHT Enviroment

Ray Wydrinski, BP America

Presentation 2: Pore Pressure Prediction in Tectonic Settings

Chris Ward, GeoMechanical International

Presentation 3: Multiple Pore Pressure Prediction Techniques to Mitigate Risk in Carbonate

Roger Young, eSeis

11:45 a.m.-1:15 p.m.

Lunch

1:15-2:45 p.m.

SESSION III: GEOMECHANICS AND WELLBORE STABILITY

Session Chairs: Richard Plumb, Schlumberger
Stephen Wilson, BP

Presentation 1: Populating and Calibrating Mechanical Earth Models for Wellbore Stability Prediction

Peng Ray, Chevron

Presentation 2: When is Linear Elasticity Alone Not Enough?

Ahmad Ghassemi, Texas A&M University

Presentation 3: Insights into Wellbore Stability from 4D Geomechanics Modeling

Nick Koutsabeloulis and Jose Adachi, Schlumberger

2:45-3:15 p.m.

Coffee Break

3:15-4:45 p.m.

SESSION IV: LEAK-OFF-TESTING AND INTERPRETATION

Session Chairs: Glenn Bowers, Applied Mechanics Technologies
Dan Postler, Devon Energy

Presentation 1: Wellbore Fracturing Fundamentals - What's Going on Down There?

Glenn Bowers, Applied Mechanics Technologies

Presentation 2: Improving the Interpretation of Formation Strength Tests

Eric van Oort, Shell E&P Americas

Presentation 3: Review of Wellbore Strengthening Possibilities

Stephen Wilson, BP

5:00-7:00 p.m.

Reception

Tuesday, February 17

7:00-8:00 a.m.

Registration

Materials Sponsored by:

 ConocoPhillips

Continental Breakfast

Sponsored by:



8:00-9:30 a.m.

SESSION V: WELL DESIGN IN CHALLENGING ENVIRONMENTS

Session Chairs: Tina Fitts, ExxonMobil
David Beardmore, ConocoPhillips

Presentation 1: Subsalt Exits

Terry Prater, Devon Energy

Presentation 2: Borehole Fracture Gradient Modeling

George Armistead, Chevron

Presentation 3: Wellbore Strengthening - Case Histories

Dave Beardmore, ConocoPhillips

9:30-10:00 a.m.

Coffee Break

10:00-11:30 a.m.

SESSION VI: REAL-TIME MONITORING OF PORE PRESSURE AND WELLBORE STABILITY

Session Chairs: Mark Alberty, BP

Gopal Amruthapuri, Chevron

Presentation 1: Use of Real-Time Measurements for Wellbore Stability and Pore Pressure

Andy Hawthorn, Schlumberger

Presentation 2: Real-Time Collaboration: Facts vs Fiction

Amit Mehta, Mobilize

Presentation 3: Lessons Learned on Real-Time Recalibration of Pore Fracture Pressure Models

Jim Wieseneck, Shell

11:30 a.m.-1:00 p.m.

Lunch

1:00-2:30 p.m.

SESSION VII: GLOBAL SALT: ROCK MECHANICS, WELLBORE STABILITY AND PORE PRESSURE

Session Chairs: Richard Swarbrick, GeoPressure Technology

Dan Ebrom, StatoilHydro

Rick Lahann, Geopressure Technology

Presentation 1: Subsalt Pressure Prediction: Gulf of Mexico, Red Sea and North Sea Pressure Predictions

Rick Lahann and Richard Swarbrick, Geopressure Technology

Presentation 2: Subsalt Wellbore Stability

Martin Brudy, GeoMechanics International

Presentation 3: Numerical and Analogue Approaches to Modeling the Near Salt In-Situ Stress State

Jozina Dirkzwager and Peter Connolly, Chevron

2:30-3:00 p.m.

Coffee Break

3:00-4:00 p.m.

SESSION VIII: UNCERTAINTY OF THE SCIENCE AND WORKSHOP SUMMARY

Session Chairs: Gopal Amruthapuri, Chevron
Philip Heppard, ConocoPhillips

Presentation 1: Scenario Based Pressure Prediction to Address Uncertainty and Risk

Phil Heppard, ConocoPhillips

Presentation 2: Uncertainties of Velocity, Basin Modeling, and Well Control

Martin Albertin and Dave Greely, BP America

4:00-5:00 p.m.

SESSION IX: OPEN FORUM AND WORKSHOP REVIEW

Panel Discussion

POSTERS:

1. *Differing Centroid Depths in Hydrostatically Connected Sands, Typhoon Minibasin, Gulf of Mexico*
Matt Croy and Kenneth Williams, Halliburton
2. *Pressure Stratigraphic Sequences for Basin Analysis*
Kenneth Williams, Joel Gevirtz and Matt Croy, Halliburton
3. *Introduction to the Geopressure Management Network; A Knowledge Sharing Industry Group*
Geopressure Management Network, OTM
4. *Determination of Rock Strength for Wellbore Stability Analysis Using Advanced Sonic Logging*
Colin Sayers, Schlumberger
5. *New Method for Quick Stress Inversion and Stability Prediction*
Bernd Ruehlicke, Eriksfiord
6. *Forward Modeling Pore Pressure Evolution in the Ursa Basin, Offshore Louisiana, Gulf of Mexico*
P. Flemings, Y. You, D. Sawyer, J. Schneider, University of Texas
7. *Deep Pore Pressures and Seafloor Venting in the Auger Basin, Gulf of Mexico*
M. Reilly, P. Flemings, University of Texas
8. *Porosity vs. Permeability Behavior of Shallow Mudstones in the Ursa Basin, Deepwater Gulf of Mexico*
J. Schneider, P. Flemings, B. Dugan, H. Long, J. Germaine, D. Saffer, University of Texas
9. *Gas in Real-Time Pore Pressure Estimation, A Mud Logging Approach*
Bertrand Bocquet, Geoservices
10. *Real-Time Pore Pressure Updating for Reduced Uncertainty While Drilling*
Sheila Noeth, Schlumberger



2009

16-17 Feb	SPE/AAPG/SEG Joint Workshop: Pore Pressure Prediction, Monitoring and Wellbore Stability	Hyatt Regency Hill Country Resort San Antonio, TX
23-24 Feb	SPE/AIChE Joint Workshop: Carbon Capture and Sequestration	The Fairmont Sonoma Mission Inn Sonoma, CA
31 Mar- 1 Apr	Water Management	Otesaga Hotel Cooperstown, NY
19-20 May	Technology Toolbox	Hyatt Regency Hill Country Resort San Antonio, TX
June	SPE/AAPG/SEG Joint Workshop: Rock Physics and Petrophysics of Tight Gas Sand Reservoirs	Colorado
August	Distributive Temperature	Location TBD