



Stereonet of critical mud weight for wellbore stability based on hole deviation and azimuth

**February 10 - 11, 2021**

**“Geomechanics for Today’s Oil and Gas Industry” by Amy Fox, PhD**

***This workshop is conducted online with 3.5 - hr sessions over 2 days***

**This 2-session workshop will introduce basic elements of geomechanics, as well as data types and workflows to build a geomechanical model. Geomechanics should be proactively applied to exploration, drilling, completions and full field development. The workshop will also discuss some of the geomechanical risks associated with oil and gas activity, such as subsidence and induced seismicity.**

Petroleum geomechanics is a unique, multidisciplinary field that combines elements of rock mechanics, geology, geophysics and engineering. Although it has been around for several decades, addressing issues such as wellbore stability, fault seal/leakage and sand production, geomechanics started receiving increasing attention with the advent of unconventional resources, where the mechanical behavior of the reservoir is a key factor in successful development programs.

The course is focused on conveying an understanding of why an accurate geomechanical model is necessary and how it can inform decisions made by various stakeholders within an oil and gas organization. A wide range of data types and analyses are discussed and prioritized. Even though they are online, workshop sessions will be interactive and engaging for participants.



***Amy D. Fox, Ph.D.***

Amy Fox earned an undergraduate degree in Geology from the University of New Hampshire and a Masters and PhD in Geophysics from Stanford University. She started her consulting career in 1998 with GeoMechanics International (GMI) in Palo Alto, California. Between 2004 and 2007 she earned her doctorate, completing a thesis entitled “Characterization and Modeling of In Situ Stress Heterogeneity.” Immediately afterwards, GMI asked her to create a training program and career progression for their technical staff of 50+ people globally.

Baker Hughes bought GMI in 2008, and in 2009 Amy moved into a corporate training and development role. In 2011 she returned to operations and soon moved to Canada. She has authored or coauthored several articles for industry publications and enjoys giving lectures at luncheons and conferences.

Extremely dedicated to her field, her every effort is an attempt to promote the understanding and application of the geomechanics discipline.

**This workshop will adjust to participants experience level and interest as much as possible. Therefore, we will ask you beforehand to provide some information why you are taking this course, what your experience level is with the subject matter and the type of work you want to apply the learned content.**

**This course is available for single participants as well as small groups (multi-client) and large groups (inhouse) – see below.**

## Workshop Outline

### Session 1

#### Introduction

- Participant introductions
- Instructor background
- Discussion: What is geomechanics?

#### Basic Theory

- In situ stresses and pore pressure – definitions, controls, variability
- Rock mechanics – property definitions, misconceptions, what's important and what's not
- Borehole stresses and wellbore failure types

### Session 2

#### Developing a Geomechanical Model

- Determining stress magnitudes and directions
- Calculating and calibrating rock mechanical properties
- Verifying the model against area experience
- Current Topics in Geomechanics

Subjects may include drilling performance improvement, hydraulic fracturing, natural fractures, induced seismicity or other topics of interest to the participants.

## COURSE LOGISTICS AND REGISTRATION

- Time:** Wed, Feb 10 – Thu, Feb 11, 2021 at 1 – 4:30 pm Central Time US (Houston) or per agreed time
- Venue:** ZOOM Meeting Platform. If you require a different online meeting platform, we can arrange for that.
- Included:** Manual pdf, certificates on request follow-up support
- Price:** Single participant USD 425/375\*; Multi-client USD 1,400, Inhouse USD 1,700
- Register:** [Follow link to register](#)

**CONTACT TerraEx Group at [info@terraexgroup.com](mailto:info@terraexgroup.com) or ++ 303 319 3043**

*Single participant - regular price for 1 participant (public schedule)*

*Single participant - discount\* price for 1 participant unemployed, academics and > 1 course booked (public schedule)*

*Multi-client price for group up to 5 participants from the same company (public or custom schedule)*

*Inhouse price for group up to 25 participants from the same company (custom schedule)*