



## Pore Pressure Measurement and Prediction

### MODULE

#### About the Skill Module

Pore pressure is a critical parameter for geomechanical modeling, and its proper characterization has a great importance as will be discussed in this skill module.

#### Target Audience

Geoscientists, petrophysicists, completion and drilling engineers or anyone involved in unconventional reservoir development

#### You Will Learn

Participants will learn how to:

- Identify the significance of pore pressure in subsurface operations such as drilling, completion, production, etc.
- Define pore pressure in porous rock and describe the mechanical interaction between the rock matrix and fluid and explain the concept of effective stresses
- List different pore pressure regimes and explain their differences
- Recognize and explain different mechanisms that result in overpressure regimes including stress-induced, uplift, buoyancy and pressure difference, and fluid generation and fluid expansion mechanisms
- Identify and describe natural and artificial mechanisms that result in underpressure regimes
- List different methods used for pressure detection and prediction including pre-drilling, while-drilling and after-drilling methods
- Describe the fundamentals of pore pressure measurement using well testing
- Recognize the influence of pore pressure on different rock properties, petrophysical logs and seismic attributes that can be implemented for identifying overpressuring
- Explain the influence of high pore pressure on different rock properties such as porosity, density, wave velocities, and resistivity
- Explain basic equivalent depth and ratio methods to estimate overpressuring from petrophysical logs
- Explain how drilling indicators (e.g., kicks, tight spots, gas shows, etc.), rock cavings and drilling rate are used for estimation of pore pressure
- Explain the challenges of pore pressure prediction in unconventional plays

#### Product Details

Categories: Upstream

Disciplines: Petrophysics Unconventional Resources

Levels: Basic

Product Type: Individual Skill Module

Format: On-Demand

Duration: 3.5 hours (approx.)

**\$395.00**