

Pore Pressure Prediction at the Wellbore



Geoscience Insights in 30 Days

Paradigm® is committed to providing oil and gas companies with high-quality geoscience services, to help them gain deeper insight into the subsurface and maximize the value of their assets. As part of our offering, we are happy to announce the availability of “Quick Turn” services, for specialized projects where qualified, on-time delivery is critical.

Pore pressure predictions that make use of wellbore data can have a huge impact on drilling safety and the economics of drilling program design and well construction. Pore pressure models derived from the integration of wireline logs and wellbore measurements such as leak-off tests provide information needed to make critical pre-drill stress and overpressure predictions. Accurate pore pressure prediction can help prevent a variety of wellbore stability problems, including wellbore collapse, lost circulation, stuck pipe, and even complete loss of the wellbore.

Assessing pore pressure using conventional well logs provides critical input to geomechanical studies aimed at enhancing drilling program design, both for safety and for regulatory compliance. Wellbore-derived pore pressure models are often used to calibrate seismic velocity data in order to understand the regional distribution of subsurface pressures. Basin-scale pore pressure

volumes are used in hydrocarbon migration modeling, seal recognition, and drilling hazard identification.

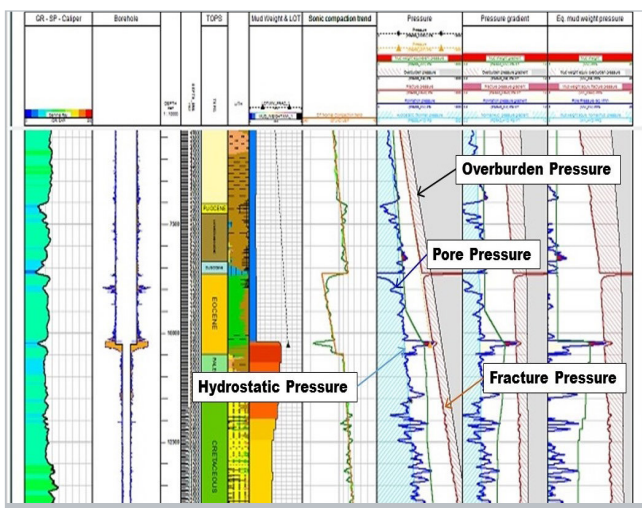
The Paradigm Geosciences Services group uses an integrated approach that applies industry-standard pore pressure methods and algorithms to well log data in order to derive overburden pressure, pore pressure, and fracture pressure. This information allows the design of casing and mud programs to optimize safety and minimize costs during drilling.

Paradigm Pore Pressure Prediction Solutions Advantages

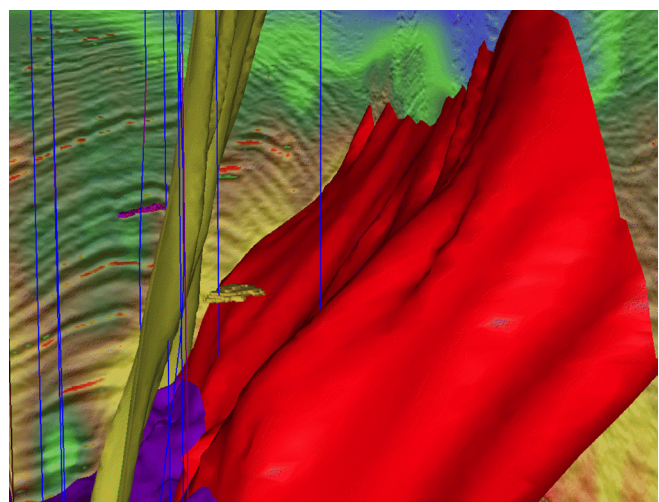
- An integrated workflow combining conventional logs, core data, and related wellbore measurements.
- Provides information on regional stresses for input to detailed geomechanics modeling.

This “Quick Turn” Service provides added value to:

- Drilling engineers responsible for developing safe well drilling programs
- Geologists working to understand reservoir connectivity and seal potential
- Geophysicists developing basin-scale pore pressure models based on seismic velocities



▲ Wellbore-based pore pressure prediction results.



▲ Predicted pore pressure co-rendered with seismic and interpretation data. Higher pore pressures are rendered with warmer colors.