



Geochemistry applied to the characterization of Woodford Shale generated petroleum within Mississippian Low-Transmissibility Reservoirs

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Summary

In a commodity-pricing environment favorable to liquid hydrocarbon production, higher economic value is generated from the ability to predict reservoir fluid phases, forecast liquid hydrocarbon yields and anticipate the required production management practice ahead of the drill bit.

The hydrocarbon fluids, the primary component of any economic reservoir will be reviewed; including definitions and contrasts between a Source-Rock Reservoir and a Low-Transmissibility Reservoir. The characterizing of migrated hydrocarbons based on application of geochemistry techniques, particularly the use of gas isotopes will be demonstrated.

The benefits of collecting rock and fluid samples during construction of horizontal wells for analysis of both the Devonian age Woodford Shale source rock and the overlying low-transmissibility reservoirs within Mississippian age strata will be presented.