

Helping to Understand Compartmentalization, Reservoir Segmentation and “Sweet Spots” Using Mass Spectrometer Mud Gas Analysis in the Permian Basin

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As the understanding of unconventional shale plays has grown, it has become clear that every well is usually not exactly like every other well. Lateral heterogeneity is proving to be a significant factor in the productivity of the horizontal reservoir and understanding the geologic attributes involved can be key to maximizing results. Mass Spectrometer Gas Analysis can be a very effective tool for describing some of these attributes. Because the analysis is linear and repeatable, “Sweet Spots” and compartmentalization of poro/perm segments can not only be delineated, the data can be used to inform a completion program, as well as map the geologic attributes identified.