

Using High Resolution Chemostratigraphy to Determine Well-Bore Pathways in Multilateral Drilling Campaigns: an Example from the Horn River Formation, British Columbia, Canada

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Abstract

Shale resource plays have risen to the forefront of hydrocarbon exploration over the last decade. However, the fine grained, macro-scale homogeneity of most shale plays negates some of the more traditional approaches to reservoir characterization and stratigraphic correlation, resulting in the search for new methodologies that enable better understanding of shale reservoirs. In particular, one of the key challenges to shale resource development is accurately and repeatedly placing highly deviated or “horizontal” wells in a multi-lateral drilling campaign into a predefined stratigraphic framework and ensuring as much of the well-bore as possible is within the “sweet spot”.

This presentation will demonstrate how inorganic whole rock geochemical data can be used to characterize and correlate the relatively homogenous shale sequences, against which data from horizontal wells are then compared in order to precisely locate the lateral well-bore relative to the pilot hole.