

Understanding the Complexity of the Bakken Oil Play

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The Bakken has gained sharp focus in the last couple of years—due to rising oil prices—on both sides of the USA/Canadian border. Questions about resource assessment, best completion practices, connate water resistivity and its effect on saturation calculations, connectivity with Lodgepole water, and effective permeability of the various middle Bakken units have become more relevant because of this new interest. In addition, operators have started to investigate the geomechanical properties of the upper and lower Bakken to determine the quality of the fracture barriers in attempts to expand the working limits. This presentation provides some perspective on these concerns in light of petrophysical measurements and models. Where satisfactory answers to Bakken-specific challenges have not yet been found, a workflow to obtain the necessary information is proposed.

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