Butcher Butte Project, an Overpressured Oil Resource Play in the Green River Formation of the Uinta Basin, Utah

Abstract:

The Butcher Butte Project is an unconventional oil resource play being developed within the Eocene Green River Formation in the Northcentral part of the Uinta Basin, Utah. Within the project area up to 2,000 feet of oil prone source rock is thermally mature and overpressured. Porosity is dominated within the organic rich source rock with only minor amounts of matrix porosity resulting in a true unconventional oil resource play. Vertical stacking of offshore lacustrine source rock facies within Paleocene/Eocene Lake Uinta provide the source, reservoir and seal for this unique accumulation. Regional correlations and mapping of lake facies distribution during the history of Lake Uinta resulted in the identification of a region of thick vertical stacking of favorable source rock within the deep thermally mature portion of the Uinta Basin. Due to the low permeability of these source facies, excessive overpressuring greater than 0.80 psi/ft. is present within the project area with extensive tectonic and generative fractures as well. Current drilling and development with two-mile horizontal laterals is taking place to delineate the resource and prove the seven target intervals within this unconventional oil resource play.