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**Play Analysis of the Cane Creek Shale, Pennsylvanian Paradox Formation, Paradox Basin,
Southeast Utah**

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The Cane Creek shale is a transgressive-regressive sequence in the lower portion of the Pennsylvanian Paradox Formation, Paradox Basin, southeast Utah. The Cane Creek is tens of feet to nearly 200 feet thick, over- and underlain by beds of salt, and divided into A, B, and C intervals (in descending order). The B interval is the primary hydrocarbon source rock and productive zone consisting of black organic-rich shale, dolomite, dolomitic siltstone, and some anhydrite. Significant porosity (up to 15%) is found in the dolomite and dolomitic siltstone, but permeability is generally low (~0.1 mD); naturally occurring fractures are necessary for economic production. The A and C intervals, mostly dolomite and anhydrite, are the seals for the B interval, helping prevent fracture communication with the adjacent salt beds.

Oil production was first established from the Cane Creek shale in the 1960s. Horizontal drilling renewed the play in the 1990s, but development is slow due to difficult terrain, as well as complex stratigraphy and structure. Six fields have produced over 3.8 million barrels of oil, only a small fraction of the U.S. Geological Survey's estimated undiscovered recoverable oil reserves in the Cane Creek and other Paradox Formation shale beds.

The Utah Geological Survey is conducting a multi-year, U.S. Department of Energy-funded study of the shale oil potential of the Cane Creek. In support of our study, operators have provided core and extensive core analyses which we will display, along with regional play mapping and evaluation.