

Integrated Characterization and Potential of the Utica Shale in New York State: Is it the Next Big Thing??

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The Ordovician Utica Shale may provide another major opportunity for shale gas production in New York. Recent announced discoveries in Quebec to the north strongly suggest that the Utica may also be an economic shale gas reservoir in New York and points south. Utica Energy has announced plans to drill four vertical Utica wells and a one horizontal well in New York this year. From top to base, the Utica Shale is composed of the Indian Castle Shale, the Dolgeville Limestone and the Flat Creek Shale Members. The Flat Creek and Dolgeville Members in the east are time-equivalent to the uppermost Trenton Limestone in the west. The highest TOC values are in the basal Flat Creek Member (2-3%), moderate TOC values occur in the Dolgeville (1-2%) and the Indian Castle Member has relatively low TOC values of less than 1%. Synthetic TOC logs were constructed using density logs (lower density = higher TOC) and calibrated with actual TOC measurements. Zones of higher TOC appear to correlate regionally in the Dolgeville and Flat Creek Members. XRD analysis is underway will be presented at the meeting. The TOC data, thermal maturation data, and other Rock Eval analysis and geologic mapping have helped to delineate a fairway for possible shale gas exploration which roughly coincides with the presence of the Flat Creek and Dolgeville Members of the Utica. This NE-SW trending fairway extends from the Eastern Finger Lakes to the Catskill Mountains and from the Mohawk Valley to the Pennsylvania border.