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New York's Utica Group Shales: The Next Fractured Shale Play?

In 1821, a shallow well drilled in the Dunkirk shale ushered in a new era for the United States when natural gas was produced, transported and sold to local establishments in the town of Fredonia, New York. In spite of this early success, the shales have not been a major producer in New York. With new technology, however, all shales are getting another look. In eastern and central New York, the Ordovician Utica Group shales were deposited in the foreland basin as the Taconic Orogeny continued to the east. They drape over the shallow platform carbonates of the Trenton formation and reach a thickness of over 1,000 ft. The group goes from outcrop in the Mohawk Valley to nearly 10,000 feet at the Pennsylvania border. These black shales have significant fracturing and abundant pyrite. They are sub-bituminous and fresh samples may ignite. If a fresh sample is submerged in water, "an oily sheen rises to the water's surface." Though data is sparse, TOC's have been measured at over 3% by weight in eastern New York and Quebec. Gas shows have been encountered in wells in eastern and central New York. Current shale plays such as the Barnett and Antrim show that every shale play is somewhat unique, each with its own characteristics and problems. It is clear that the fractured Utica Group shales of New York offer the potential to be an economic play. More research is needed that addresses the geologic and reservoir properties of the shale.