

**AAPG Annual Meeting
March 10-13, 2002
Houston, Texas**

Katharine Lee Avary¹, Douglas G Patchen¹ (1) WV Geological & Economic Survey, Morgantown, WV

New Life in an Old Basin: The Upper Ordovician Trenton-Black River Limestone, Appalachian Basin, USA

Recent gas discoveries in the Upper Ordovician Trenton and Black River limestones in New York and West Virginia have generated new interest in the resource potential of the Appalachian Basin. Trenton - Black River strata have been known to be productive since the 1800's in eastern Kentucky, New York, and Ohio. Both comprise widespread, shallow marine carbonates deposited throughout the Appalachian Basin during a Late Ordovician transgression. Late Ordovician, organic-rich, black shale source rocks immediately overlie the carbonates and are interbedded with limestones near the top of the Trenton.

The discovery of gas in the Trenton - Black River in western New York in the mid-1980's wasn't pursued seriously until the late 1990's when Columbia Natural Resources (CNR) initiated an exploratory drilling program. Encouraged by the NY results, CNR drilled a discovery well in Roane County, WV in spring, 1999 and has followed this with more than a dozen successful wells in the 10,000 foot depth range. In NY, the reservoir is highly fractured, dolomitized limestone; in WV, the reservoir is highly fractured limestone. Narrow grabens related to basement structures form the traps in both states. Modern seismic data are valuable in defining these traps. Production of more than 10 Bcfg from the Trenton - Black River in both states from 1999 to 2000 makes this play a significant new discovery in an old basin.