



Composition of Crude Oil and Natural Gas Produced from 14 Wells in the Lower Silurian "Clinton" Sandstone and Medina Group, Northeastern Ohio and Northwestern Pennsylvania

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Introduction

The Lower Silurian regional oil and gas accumulation was named by Ryder and Zagorski (2003) for a 400-mi-long by 200-mi-wide hydrocarbon accumulation in the central Appalachian basin of the eastern United States and Ontario, Canada. The dominant reservoirs in this regional accumulation are the "Clinton" sandstone, Medina Group sandstones, and Tuscarora Sandstone of Early Silurian age. The basin-center gas (continuous) part of this regional Silurian accumulation contains an estimated 30 trillion cubic feet (TCF) of recoverable gas and covers an area that extends across western Pennsylvania, eastern Ohio, and western West Virginia (Gautier and others, 1995; Ryder, 1998). This part of the accumulation occurs in rocks of low permeability, usually 0.1 millidarcies (md) or less, downdip of more permeable, water-saturated rocks. A conventional part of the accumulation with hybrid features of a basin-center accumulation lies updip from the basin-center gas (Ryder, 1998; Ryder and Zagorski, 2003). This hybrid-conventional part of the regional accumulation follows a pre-1980s production trend that extends from Ontario, Canada, through western New York, northwestern Pennsylvania, and central Ohio.

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