LYNDSEE GAY and RICO GAZAL, Land Resources Department, Glenville State College, Glenville, WV. Extent and Spatial Distribution of Marcellus Wells in West Virginia

Marcellus shale is a fine-grained sedimentary rock that is part of the formation of a rock unit from the Devonian age. The Devonian age is roughly 390 million years old. This which shows a significant age for the Marcellus shale as well. The Marcellus shale was formed millions of years ago when the mud from the Devonian age sea hardened as it was deposited on the oxygen deprived sea floor. Because much of the United States was covered by oceans 390 million years ago, what is now West Virginia has a significant amount of Marcellus shale underneath its surface. Marcellus shale is very rich in organic materials and has been considered the major source of natural gas produced in the Appalachian Basin to this date.

The shale formation in West Virginia is around 6,000 feet deep and the various gas fields are believed to contain more than 50 trillion cubic feet of recoverable natural gas. The oil and gas business has boomed in this state over the years due to this excellent source of natural gas. Using spatial analysis in Geographic Information System, the location and extent of Marcellus wells will be determined. This study will use spatial data from WV Geological and Economic Survey, WV Department of Environmental Protection and WV GIS Technical Center. Maps of the entire state will be created to show the range of productive wells and the environmental factors that could possibly be affected as a result of constructing and maintaining the wells.