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### **Bedrock Geology and Bedrock Topography GIS for Ohio**

The Ohio Division of Geological Survey is now releasing a number of statewide data sets in geographic information systems (GIS) format. These GIS data sets of Ohio include: 1) a digital-elevation model; 2) the original land subdivisions; 3) the bedrock topography; 4) and the bedrock geology. The most geologically significant are the bedrock-geology and bedrock-topography GIS data sets. The bedrock-geology and bedrock-topography maps and GIS data sets are the culmination of a project to remap the bedrock geology of Ohio, and represent the first major update since 1920. This new mapping has resulted in the production of bedrock-geology and bedrock-topography maps and GIS data sets at 1:24,000 scale, and a new state-bedrock map and GIS data set at 1:500,000 scale. As part of an effort to make the data user-friendly, GIS applications have been created that will allow the 1:24,000-scale bedrock-topography and bedrock-geology maps and GIS data layers to be extracted for stand-alone use and printing. The multidimensional utility of the bedrock-geology and bedrock-topography data sets will facilitate future oil-and-gas exploration in Ohio. The bedrock-topography data set is especially useful for identifying potential lineaments, fracture zones, faults, pre-glacial drainage patterns, and other geomorphic anomalies. A number of relationships can be shown between the bedrock geology and oil-and-gas fields. These GIS data sets, as well as additional GIS data sets to be developed by the Ohio Division of Geological Survey in the near future, will allow unprecedented analytical capabilities for exploration and research of the state's geology.