Chapter 4
The GIS Project for the Petroleum Systems and Assessment of the U.S. Portion of the Michigan Basin

By Christopher P. Anderson

Geologic Assessment of Undiscovered Oil and Gas Resources of the U.S. Portion of the Michigan Basin

By U.S. Geological Survey Michigan Basin Province Assessment Team

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A geographic information system (GIS) focusing on the Michigan Basin was developed as a visual-analysis tool for the U.S. Geological Survey’s 2005 assessment of the undiscovered, technically recoverable oil and gas resources in the U.S. portion of the Michigan Basin. The Central Energy Resources Science Center of the U.S. Geological Survey has also developed an Internet Map Service to deliver the GIS data to the public. This mapping tool utilizes information from a database about the oil and natural gas endowment of the United States—including physical locations of geologic and geographic data—and converts the data into visual layers. Portrayal and analysis of geologic features on an interactive map provide an excellent tool for understanding domestic oil and gas resources for strategic planning, formulating economic and energy policies, evaluating lands under the purview of the Federal Government, and developing sound environmental policies. Assessment results can be viewed and analyzed or downloaded from the Internet Web site. Other data that are also available in the interactive map include the following:

- Cities
- Roads
- Geologic provinces
- Total petroleum system
- States
- Counties
- Streams and water bodies
- Federal surface ownership

Click on the map below to access the Michigan Basin assessment data.

Figure 1. Michigan Basin; boundary is shown in black.

Most of the base cartographic data layers used in the GIS project were obtained from the U.S. Department of the Interior National Map Web site, http://viewer.nationalmap.gov/viewer/.