Chapter 4
The GIS Project for the Geologic Assessment of Undiscovered Hydrocarbon Resources of the Western Oregon and Washington Province

By GIS Spatial Data Team

Chapter 4 of 4
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By U.S. Geological Survey Western Oregon and Washington Province Assessment Team

Figure

1. Map showing Western Oregon and Washington Province .................................................. 1
The GIS Project for the Geologic Assessment of Undiscovered Oil and Gas Resources of the Western Oregon and Washington Province

By GIS Spatial Data Team

A geographic information system (GIS) focusing on the Western Oregon and Washington Province was developed as a visual-analysis tool for the U.S. Geological Survey 2009 assessment of undiscovered, technically recoverable oil and natural gas resources in the Western Oregon and Washington Province. The Central Energy Resources Science Center of the U.S. Geological Survey 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.

Hydrocarbon assessment unit boundaries include the assessment results as attributes. Specialized maps referred to as “cell maps” illustrate the degree of exploration and the type and distribution of production for each assessment unit. Other data also available from the interactive map include the following:

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

Figure 1. Western Oregon and Washington Province; boundary is shown in black.

The spatial data that formed the basis of the GIS for the Western Oregon and Washington Province are provided online at the USGS National Oil and Gas Assessment Web site (NOGA Online: http://energy.cr.usgs.gov/oilgas/noga/) and are also contained on this CD-ROM in the Spatial folder. The Doc folder contains metadata documentation in HTML format that is also incorporated in each shapefile in XML format. Most of the base cartographic data layers used in the GIS project were obtained from the U.S. Department of the Interior National Atlas Web site at www.nationalatlas.gov.