



the **ENERGY** lab

PROGRAM FACTS

Strategic Center for
Natural Gas & Oil

Knowledge Management Database

The goal of this project is to develop a Knowledge Management Database (KMD), a central repository for results and products related to research and development (R&D) under Title IX, Subtitle J, Section 999 of the Energy Policy Act (EPAAct) of 2005. The KMD is being developed as a website portal within the larger NETL website. The portal will provide a single place where users can quickly locate all the results and products of the R&D Program. The website will be simple and easy to understand, easily navigable, quick to use, and comprehensive.

Background

The EPAAct 2005 Subtitle J, Section 999A-999H established an Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources Research and Development Program. The legislation identified three program elements to be administered by a Consortium under contract to the U.S. Department of Energy. Complementary research performed by NETL's Office of Research and Development (ORD) is a fourth program element of this cost-shared program. NETL was also tasked with managing the Consortium—Research Partnership to Secure Energy for America (RPSEA). In addition to archiving the results of the R&D Program, this repository will also include other related research products that have been generated by the traditional oil and gas research program at NETL's Strategic Center for Natural Gas and Oil (SCNGO).

The KMD will make available EPAAct research results to the general public in the form of project summaries and reports, raw and analyzed data, and maps; and provide access to project result databases, project GIS databases, and expert systems. The KMD will also improve communication and collaboration within the EPAAct R&D program community, serving as a central repository of project reports, personnel, and data, as well as web forums for researchers.

The proposed features of the KMD portal include an interactive map display capability and a feature that permits zooming in on high-resolution images. Also, at least two "expert system" interactive, problem-solving features will be integrated into this portal. One of these, the Produced Water Information System, has already been added to the NETL website. The other, a self-teaching expert system for the analysis and prediction of gas production from fractured shales, will be developed by Lawrence Berkeley National Lab under one of the selected R&D projects administered by the Consortium.

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*Access the Knowledge
Management Database (KMD)
website portal at:*

www.netl.doe.gov/kmd

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Website: www.netl.doe.gov

Customer Service: 1-800-553-7681



U.S. DEPARTMENT OF
ENERGY

KMD Accomplishments

- The KMD Document Search feature went online to the public on September 30, 2009. The website allows users to search and download 18,000 documents related to DOE-NETL oil and gas exploration and production research. New documents are being added to the website periodically.
- The KMD was introduced to the industry at the Society of Petroleum Engineers' Annual Technical Conference and Exhibition, held in New Orleans, La., October 4–7, 2009.
- GIS (Mapping) Applications are ready to be activated within the KMD website. These interactive mapping web applications will allow the user to pan, zoom, add and subtract map layers. The applications include:
 - **Gulf of Mexico (GOM) Deepwater Oil and Gas Production.** This application includes data related to leases (e.g. 5- and 10-year lease lines, active leases, coastline, state boundaries, and leases by water depth), infrastructure including platforms and gas pipelines (see Figure 1). The application also includes bathymetry data (water depth).

– **Oil and Gas Resources of the United States.** This application includes data from the Energy Policy and Conservation Act (EPCA) Phase III assessment of onshore oil and gas resources and restrictions/impediments to their development. The application illustrates total oil density and total gas density within various regional boundaries (see Figure 2).

– **Allegheny National Forest Environmental Impact from Gas Production.** This application provides locations of gas wells, lease boundaries, development roads, streams, contour lines, stream gauges, etc. within the Allegheny National Forest. Real time data from U.S. Geological Survey stream measurement stations will be added.

- NETL is developing a Sharepoint 2007 site which will serve as a collaboration tool for the EPact R&D community. This site will allow users to share files, contact information, and project information. The site will also allow users to collaborate on research topics through various forums.

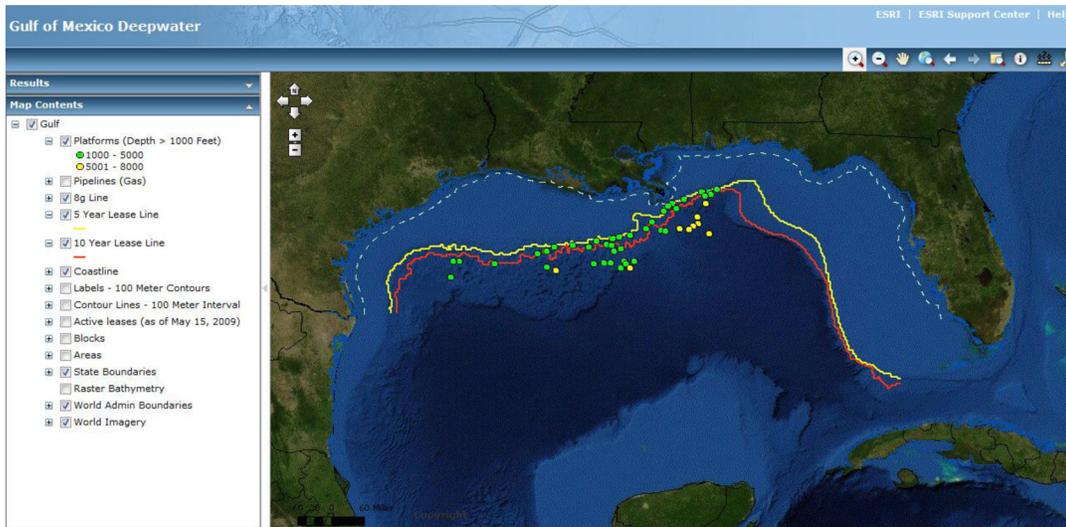


Figure 1. Interactive GIS (mapping) application showing Gulf of Mexico (GOM) Deepwater Oil and Gas Production.

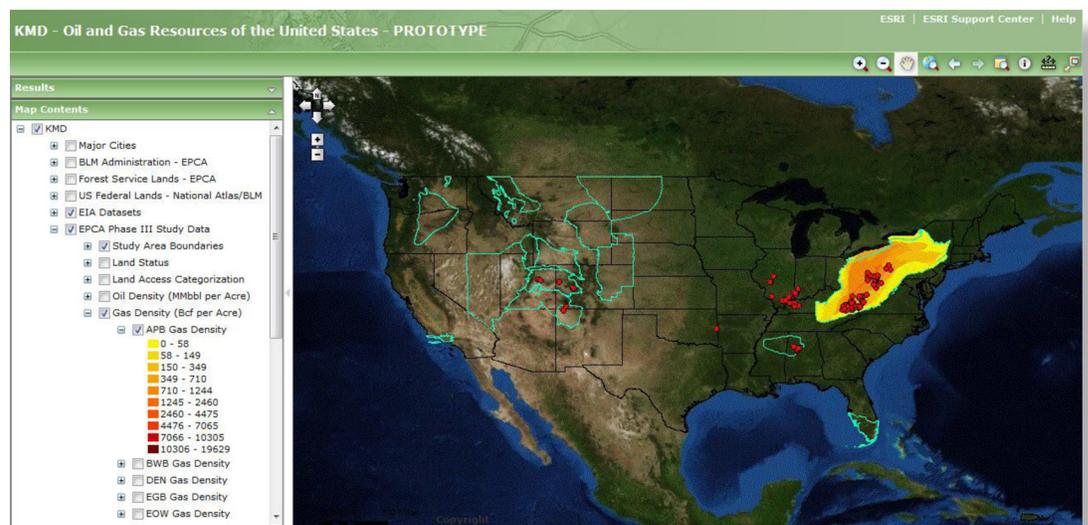


Figure 2. Example of GIS onshore resource application.