

# USGS Energy Geochemistry Laboratory



## Company:

U.S. Geological Survey (USGS)  
Energy Geochemistry Laboratory  
Denver, CO

<http://energy.cr.usgs.gov/gg/geochemlab/>



## Business Strategy:

The USGS Energy Geochemistry Laboratory methodology and instrumentation focuses on coal and petroleum systems geochemistry as it is applied to national and global energy resource assessment projects, geologic framework, and petroleum process studies. The Geochemistry Laboratory project supports petroleum processes research project, geochemistry of solid fuels, coal research assessment methodology project, and fossil fuel environmental issues including the evaluation of natural sources of greenhouse gases, prediction and monitoring of fossil-fuel quality and baseline studies of fossil fuel in the environment. The Laboratory will continue to be on the cutting edge of new methodology and method development to achieve these goals.

The Laboratory also has a large focus on data preservation and data management. A proactive approach to data management assures data quality and accuracy for the future.

## Organization Profile:

The Geochemistry Laboratory supports Energy Team needs for inorganic and organic analysis and maintains Sample Master<sup>®</sup> Laboratory Information Management System (LIMS) for geochemical data tracking and sample storage.

The Laboratory provides geochemical expertise and analytical support to Federal, State and County agencies, universities and foreign research organizations. The Laboratory is located in Building 20 of the Denver Federal Center in Lakewood, Colorado, and is administered by the Central Energy Team, Energy Resources Program.

## Sample Master<sup>®</sup> LIMS at the USGS Energy Geochemistry Laboratory:

The USGS Energy Geochemistry Laboratory's primary goal when searching for a LIMS was to be able to combine multiple geochemical databases with different formats and move the data to one database. Also, to find a LIMS that would allow the customization needed for the laboratory's unique data sets. The Geochemistry Laboratory chose ATL's Sample Master<sup>®</sup> LIMS because it allowed them to accomplish these goals.

Sample Master<sup>®</sup> LIMS is a laboratory database management system that allows the Geochemistry Laboratory to securely store all of their data in one robust, centralized database. ATL understands that every laboratory is not the same and will have unique needs and requirements. That is why the ATL product lines were designed to be flexible and user friendly. ATL's Sample Master<sup>®</sup> LIMS is user configurable and customizable and can be tailored to suit the laboratory's needs.

The Geochemistry Laboratory also utilizes Sample Master<sup>®</sup> Result Point<sup>™</sup>. Using the Intranet or Internet, Result Point<sup>™</sup> allows instant and real time access to Order and Result Status, Analytical Data and PDF Reports and other attached files anytime of the day from anywhere in the world that provides Internet access. Result Point<sup>™</sup> remote administration and enhanced access privileges for internal users facilitates ease of system configuration, user management and monitoring, and rapid internal review of orders. ATL also developed a number of parsers to help with some of Geochemistry Laboratory's more unique data outputs such as CDF's and XRD patterns from instrument output files, allowing scientists to view all the test data. In addition, ATL's engineers integrated the LIMS with the USGS GIS system allowing scientists to quickly visualize geographical locations of test data along with the ability to search geographical locations based on results above or below user defined values with the "Master Query" functionality of the LIMS.

***"Sample Master<sup>®</sup> LIMS along with Result Point<sup>™</sup> has made our data more accessible and the ability for customizations has allowed us to be more productive with less effort."***

Jamey McCord, Laboratory Manager  
USGS Energy Geochemical Laboratory

