

Analyzing Petroleum Data in the Gulf of Mexico Using GOM3

Course Length: 1 day

ArcGIS Version: 10.x

App: ArcMap, GOM3, GOMsmart

Overview

GOM³ is the industry-standard GIS for the Gulf of Mexico. It includes GOM Data, a set of standard maps, standard charts and a set of tools for analyzing the data in ArcGIS Desktop. This course is a hands-on workshop, allowing users to spend a full day solving problems with the GOM³ data and tools.

Audience

This course is for those who are already comfortable with the basics of ArcGIS and want to learn more about using the tools provided in the GOM³ software extension.

Topics Covered

- **Introducing GOMsmart:** Use ESA's GOMsmart web application to explore GOM data, viewing charts of monthly lease production, and field reserve history reports. Explore leases by bid amount and by existing well data. Open an interactive web map of a fields and view weekly activity.
- **Using the GOMsmart Map:** Open a map of a field and explore lease and well data. Review GOM reports, generate monthly lease production charts, view well logs and create a printed map of your analysis, all from the GOMsmart web map.
- **Building Your First Map:** Using ArcGIS and GOM³ to create a map of producing fields in the Gulf of Mexico, symbolized by field type. Work with changing the symbology of layers in ArcMap.
- **Company Lease Analysis:** Use GOM³ and ArcGIS for lease analysis in the GOM by comparing the proximity of new discoveries and prospects to a company's existing leases. Work with labels and text and make final presentations (Layouts) of your analysis.
- **Explore Wells Using the GOM³ Hotlink Tool:** Look at directional surveys, generating bottom hole pressure reports, and montly production charts. Show completions on the directional surveys, view well logs, and create completion reports that can be exported to Excel®. Chart velocity data for a well.
- **Finding Unproduced Reserves:** Analyze well test data, field production statistics, lease, and pipeline data to discover wells that had hydrocarbon shows that were not economically feasible but might now be of interest because of new infrastructure developments in the area.

- **GOM³ for ArcView – 3D:** View a field in 3D using GOM³ and ArcGIS ArcScene. Show producing fields, boreholes and completions in 3D. Generate well summary reports. Create gridded paleo surfaces from BOEM fossil data.
- **Integrating Data for Analysis:** Use GOM³ and ArcGIS Spatial Analyst tools to analyze a play by generating a formation thickness grid from fossil observations. Generate graphs of Estimated Ultimate Recovery by thickness and export the data to Excel®.

Prerequisites and Recommendations

Students should have knowledge of Microsoft Windows® and be familiar with the basic use of ArcGIS, including the topics covered in either the **Fundamentals of ArcGIS** or **ArcGIS Desktop I** classes.