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3-D GIS within GOM³

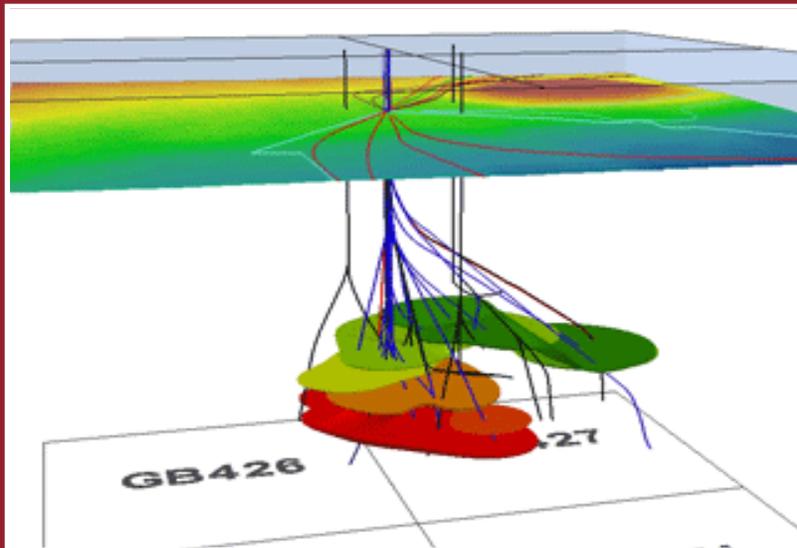
One of the powerful features of GOM³ that distinguishes it from other GIS packages and simple mapping systems, is its integration of 3-D GIS models for all ~1,000 producing fields in the Gulf of Mexico. GIS in 3-D is

more than raster visualization. It allows queries, restrictions, calibration and the establishment of spatial relations that cannot be done in visualization systems.

You can access the 3-D model for any field by clicking on the field outline in 2-D ArcMap with the the GOM³ Hot Link Tool. Pick "3d Field View" and press OK. This will automatically open ArcScene, an ArcGIS extension, and load the model for the chosen field.

By default, it will include the blocks in the area at sea level, the sea-floor bathymetry is hung as a grid below that (with pipelines draped on it). In the subsurface, you will see 3-D volume models of each of the sands (reservoirs) in the field and curved lines representing the directionally drilled wells. If you turn off the sands, or make them semi-transparent, you will also see 3-D symbols showing the completions along the well bore within the vertical boundaries of the sand.

Once in the 3-D model, it is possible to display either MMS or Paleo Data Inc. (PDI) paleontologic data along the wells.



A 3-D Field View of Auger (Garden Banks 426)

key marker horizons this way allows you to vertically divide the sands, completions and well penetrations by biostratigraphic interval.

We will introduce the capability to display 2-D seismic data in our 3-D GIS models with the release of ArcGIS 9.2. This will radically leverage the value of the data in GOM³ by allowing analysis against depth-section seismic data and interpretations. Other planned enhancements include 3-D models of surface and sea-floor facilities, as well as adding more data of our 3rd Party Partners into 3-D.

In addition to clicking on a field with our Hot Link Tool in ArcMap, you can also access the 3-D model for a field through ESA's Direct Report Access (DRA) module. Under the Fields tab, there is a red button at the bottom: "View Field in 3-D." Alternatively, within ArcMap, clicking the GOM³ tool bar -> Map Layers, at the bottom of that list is "3-D Field View," from which you can choose the field you want.

Moreover, by hitting the button on GOM³'s 3-D Tool Bar with the red bug on it, you can map the top of any paleo-defined horizon in the field. That surface will be automatically hung in the field model at its appropriate depth.

Mapping

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