



Spotlight – Ultra-large volumes

Using ultra large volume datasets

Use Permedia Viewers to visualize ultra-large volume data by converting volumes to OpenInventor VolumeViz LDM format; this allows interactive, 3D visualization of very large volume data sets, even on low-end hardware.

VolumeViz LDM works by storing volumes in a hierarchical “bricked” format, which allows data to be loaded as required by the scene, rather than loading the entire volume into memory. LDM volumes can be created from any volume format supported by Permedia, including SEG Y, VoxelGeo, Gocad, EarthVision, SEP, JavaSEIS, and more.

Creating LDM volumes

To view large volumes, first convert the volumes to the LDM format:

1. In the main window, right-click the volume and choose Convert to LDM.
2. Set the output file name and click Save.

The LDM volume is written to the project directory.

Viewing LDM volumes

Permedia treats LDM volumes like any other volume. To view an LDM file:

- In the main window, right-click the volume and choose Open In 3D Viewer.

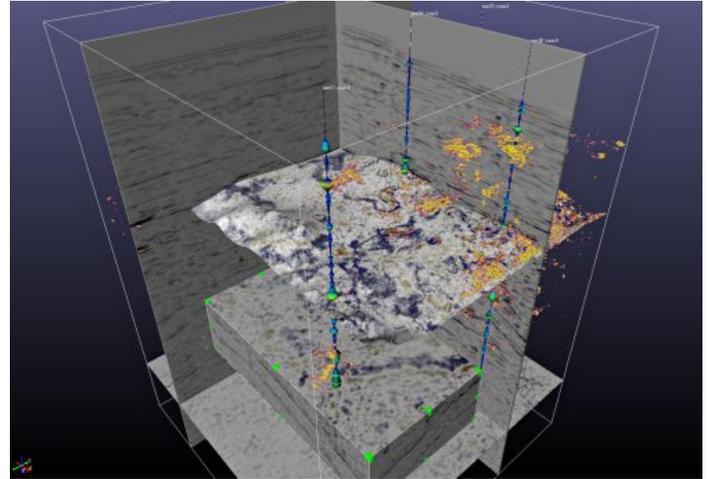
You can also drag and drop the volume into a 3D Viewer scene.

Other things to try

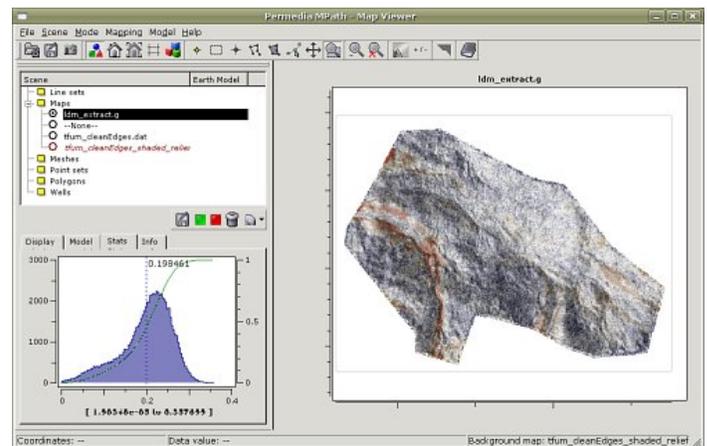
LDM volumes can be used with Permedia's data tools to perform map and well extracts. For example:

- Right-click the LDM file and choose Extract Property at Map to extract the volume data coincident with a mapped horizon. The results are saved as a map.
- Right-click the LDM file and choose Extract Property at Well to extract the volume data coincident with a well trajectory. The results are saved in a new well.

LDM files can also be used as input volumes to any of Permedia's simulators where volumes are used. For example, you can use an LDM volume in Pressure and Tracers, or in Static Migration to perform a reservoir filling simulation.



Large 3D seismic volume in 3D Viewer, with fences through the volume, sculpted volume rendering, a sub-volume probe, and extracted volume data for both maps and wells



LDM files can be used as standard volumes; here, LDM volume data is extracted and displayed on a mapped horizon