

Reservoir Modeling with Geostatistics

1.6 CEUs (Continuing Education Units) awarded for this 2-day course.

Instructor

Clayton Deutsch, University of Alberta

Intended Audience

This course is intended for production geologists, geophysicists, and reservoir engineers interested in numerical modeling of rock properties in the interwell region. The course is designed for professionals with an interest in geostatistical techniques for geological reservoir modeling and preparing input arrays of lithofacies, porosity, and permeability for flow simulation.

Description

The objective of this course is to introduce geostatistical techniques for reservoir modeling. Upon completion of the course, each participant should be able to (1) describe situations where the application of geostatistical techniques could assist with reservoir management; (2) prepare data for use with the GSLIB software; (3) conduct an exploratory data analysis study for input to geostatistical modeling; (4) quantify the connectivity of reservoir lithofacies, porosity, and permeability using geostatistical tools such as the variogram; (5) construct heterogeneous reservoir models constrained to well and seismic data; and (6) describe the limitations of the resulting numerical models and model-building tools.

Topics Covered

- ◆ Geostatistical Tools
- ◆ Variograms
- ◆ Kriging
- ◆ Stochastic Simulation
- ◆ Uncertainty

About the Instructor

Clayton V. Deutsch teaches geostatistics and reservoir modeling at the University of Alberta in Canada. He co-directed the Stanford Center for Reservoir Forecasting, and has worked as a research specialist for Exxon Production Research Company. He is the primary author of the GSLIB software, and has published more than 100 papers on geostatistical modeling