

Post-Conference Short Course

Rocks to Models: An Introduction to 3-D Reservoir Characterization and Modeling

Date: Wednesday, September 21, 8:00 A.M.-5:00 P.M.
Location: Radisson Waterfront Hotel and Conference Center, Morgantown, WV
Instructors: Matt Pranter (University of Colorado, Boulder, Colorado) and Neil Hurley (Colorado School of Mines, Golden, Colorado)
Fee: US\$75 (includes course notes, refreshments and lunch)
Limit: 45 persons

Who Should Attend

Geologists, geophysicists, and engineers involved in reservoir characterization and 3-D geologic modeling.

Course Content

This course provides an overview of 3-D reservoir characterization and modeling concepts and methods. The course addresses different types of petroleum reservoirs (carbonates, sandstones, fractures) and techniques to define or estimate reservoir architecture and reservoir properties within a sequence-stratigraphic and structural framework.

The material includes an overview of the objectives for reservoir characterization, analysis of porosity (pore types, porosity classifications) and permeability (matrix, fracture), and common methods used to identify reservoir flow units. We will review stratigraphically and structurally compartmentalized reservoirs. We will emphasize the role and significance of outcrop analogs for reservoir characterization and modeling using case studies.

The course covers common methods of constructing 3-D geologic models of petroleum reservoirs. This includes an overview of 3-D geologic modeling techniques, common cell-based (pixel-based) methods, object-based methods, and the use of 3-D seismic data for conditioning reservoir models.