SCA
SUBSURFACE CONSULTANTS

Applied Subsurface Geological Mapping

Instructor: Sia Agah or Jim Brenneke or Robert 'Bob' Shoup

Discipline: Geoscience

Length: 5 Days (Classroom)

Students of our flagship course will learn the applied, hands-on knowledge required to generate sound subsurface geologic maps, the most important and widely used documents in petroleum exploration and development. Geoscientists and engineers are expected to understand and be able to efficiently and accurately generate many types of subsurface maps. Nevertheless, many geoscientists have not had sufficient formal training in the fundamental principles and methods that underlie accurately constructed subsurface maps, whether the data source is a seismic interpretation, well log correlation, or both

LEARNING OUTCOMES:

- Understand the application of different hand contouring methods and the pitfalls of selected computer contouring methods.
- Capable of integrating fault data from well logs and seismic data.
- Generate fault surface interpretations and maps.
- Understand the construction and application of various types of cross sections.
- Generate net pay isochore maps for both bottom and edge water reservoirs.

COURSE CONTENT:

- Philosophical doctrine, workflow, and methodology of mapping and contouring techniques.
- Applications of directionally drilled wells and directional surveys to mapping.
- Applications of log correlation techniques for vertical and deviated wells to mapping.
- Structure mapping and cross section construction for extensional, compressional, strike-slip, and diapiric tectonic settings.
- Fault surface mapping using well log/seismic data.
- Integration of geophysical data in subsurface mapping.
- Isochore map construction (bottom water and edge water reservoirs).
- Net sand and pay correction factors for directionally drilled wells.
- Structure vs porosity top mapping.
- Walking wells.
- Fault wedge mapping.
- Pitfalls of computer-generated maps.
- Volumetric calculations.

INSTRUCTORS:


Sia Agah


Jim Brenneke


Bob Shoup

Private sessions of this course may be scheduled according to instructor availability.
Please contact SCA's Training Department at (713)789-2444 or training@scacompanies.com.