

Development Geology and Reservoir Characterization

Instructor: John S. Sneider

WHO SHOULD ATTEND

This school is aimed at geologists, geophysicists, engineers, and supervisors who are involved with field development, reservoir characterization and reservoir management and have from 3 to 10 years experience.

OBJECTIVES AND CONTENT

This course consists of four interrelated parts: (1) Context and Fundamentals for Development, (2) Appraisal Drilling Phase. (3) Development Drilling Phase and (4) Field Review and Reservoir Management Practices. Many practical exercises and case studies are discussed to provide practical insight and experience. Stochastic modeling techniques are reviewed and the associated problems of upscaling for reservoir simulation are discussed.

The objective of this course is to provide a working knowledge of the controls on reservoir pore space distribution and of the procedures used to appraise, develop, characterize and manage reservoirs for the purpose of optimizing recovery. When the course work has been completed, delegates will be able to:

When the course is completed participants will be able to:

1. Assist in the completion of a development plan for a specific field.
2. Carry out field and office tasks associated with field operations
3. Select samples for core analysis tests.

4. Apply structural style and facies concepts for drill sites
5. Recognize the need to modify development and to implement corrections
6. Identify new areas and pay zones for hydrocarbon recovery.
7. Define key components necessary for reservoir characterization
8. Make deterministic geologic reservoir models
9. Provide geological information needed for stochastic/geostatistical analysis

Exercises consist of:

1. Correlation and Distribution of Reservoir Units
2. Pore-Space Properties and Controls on Fluid Distribution
3. Reserves Estimation During Appraisal
4. Mapping Reservoir Thickness
5. Mapping Gross Pore-Space Variations
6. Determining Pay Continuity and the Distribution of Barriers to Flow