



Course Description:

The course will cover fundamentals of geological principles employed to find, develop and produce oil and gas reservoirs, the type of data required to build a model of the subsurface, and the different methods used to display information. Furthermore, this course will demystify the language used by geoscientists and help participants understand the relevance of petroleum geology within the overall framework of the upstream oil and gas industry.

Objectives:

- Recognizing the components of the structure of the Earth
- Identifying the main rock types, their origins and their roles in petroleum generation and entrapment
- Understanding how drilling, completing and reworking a well affects its ability to produce
- Understanding what can be done within open-hole and cased wells, as a part of reservoir management
- Understanding how drilling practices can damage or stimulate producing wells

Who should attend?

- Petroleum engineers
- Technical/reservoir engineers
- Drilling engineers
- Processing engineers
- Commercial analysts
- Decision makers/ investors in oil and gas sector

Course Schedule:

Day 1

- Overall drilling practices
- Language of drilling
- Reservoir rock and fluid properties
- Rigs & rig equipment
- Drilling string components & design
- Bits
- Fluids & hydraulics
- Rig operation
- MWD

Day 2

- Well control
- Hole problems & stuck pipe
- Drilling risks
- Cores and coring
- Casing design & installation
- Primary cementing
- Directional, horizontal, multilateral & under-balanced drilling

Day 3

- Wellhead & trees
- Zonal isolation
- Tubing, packers & completion equipment
- Safety & flow control devices
- Open hole completions
- Basic completion types
- Perforating

Day 4

- Open & cased hole logging
- Formation damage & treatment
- Completion fluids
- Multiple completions
- Stimulation application: surfactants, solvents, acidizing, fracturing & deep perforating
- Formation & sand control: screens, chemical consolidation, gravel packing, frac-pack, new & novel techniques
- Scale & corrosion

Day 5

- Paraffin & asphaltenes
- Recompletions
- Reworks
- Sidetracking
- Deepening
- Coiled tubing