Reservoir Engineering for Non-Reservoir Engineers Master class

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Introduction:

Reservoir engineering is a combination of science, engineering and art by which you could define recoverable reserves and predict future reservoir performance. It is of a great importance to the technical and economic evaluation of the oil and gas reserves and the selection of the optimum method of recovery.

Without detailed evaluation of reservoir data, understanding reservoir behavior and applying good reservoir management techniques, significant quantities of oil and gas could be permanently lost beyond any recovery method.

This course is exceptionally useful if you want to develop a feel for hydrocarbon behavior in the reservoir and of various recovery methods. It will also provide you with specific ad direct application of the process used in reservoir engineering and will enhance your skills in solving reservoir engineering problems and maximizing recoverable reserves. The delegates will develop subsurface skills for integrated analysis of rocks, pore and fluids and to solve problems associated with identifying and exploiting reserves. They will understand various methods applied to predict reservoir performance and to enhance recovery.

Objectives:

By the end of this BTS training course, participants will be able to:

- Reservoir types, classification, properties, etc.
- Critical properties of reservoir rocks and fluids and PVT relationships
- The fundamentals of fluid flow in porous media
- How reservoirs are characterized by fluid type and drive mechanisms
- The basis for reservoir fluid distribution
- Oil and gas well performance and transient test analysis
- The basics of primary, secondary and enhanced oil recovery methods
- Methods to calculate oil and gas in place and hydrocarbons recovery
- Reservoir drive mechanisms for both oil and gas reservoirs
- Reservoir simulation techniques
- Forecasting production decline.
- A general feel for petroleum economics in reservoir development & risk analysis.

Who should attend?

Geologists, Geophysicists, Reservoir Engineers, Production Engineers, Petro physicists, Petroleum Engineers, Drilling Engineers, Field Development Engineers, Managers, Asset Managers, Oil & Gas Engineers, Reservoir Operators, Surveillance Engineers, Technicians, Engineering Trainees,

Technical Managers, Technical Assistants, Technicians, Chemists, Physicists, Technical Supervisors, Service Company Personnel responsible for improving the performance of petroleum reservoirs

Course Outline:

- Global energy statistics
- Oil & gas industry
- Exploration and its methodologies
- Seismic survey
- Drilling
- Well logging
- Development geology
- Reservoir engineering system

- Well completion
- Well stimulation
- The reservoir
- Rock properties
- Core analysis

- Fluid flow in porous media
- Reservoir fluids and their distribution
- Fluid properties
- PVT analysis
- Phase diagram
- Fluid distribution
- Well testing
- Pressure transient & reservoir damage
- Problem well analysis
- Reserves calculation
- Material balance calculation
- Relative permeability

- Decline curve analysis
- Driving mechanisms
- Recovery types
- Primary recovery
- Secondary recovery
- Fractional flow

- Enhanced oil recovery
- Reservoir simulation
- Reservoir management
- Economics of reservoir development