Fundamentals and Applications of Petrophysics - Traditional and Reservoir Techniques Course

Venue Information

Venue: London UK

Place:

Start Date: 2026-12-08

End Date: 2026-12-12

Course Details

Net Fee: £4750.00

Duration: 1 Week

Category ID: OAGTC

Course Code: OAGTC-30

Syllabus

Course Syllabus

Introduction:

This course provides a comprehensive introduction to Petrophysics, focusing on its critical role in the oil and gas industry. Participants will explore fundamental petrophysical properties, learn core analysis and well log interpretation techniques, and understand how to integrate this data for effective reservoir characterization.

The course also covers advanced methods and emerging trends, preparing attendees to apply Petrophysical concepts in both conventional and unconventional reservoirs. Through practical examples and case studies, participants will gain the skills needed to enhance reservoir evaluation and optimize field development strategies.

- Learn core analysis methods and their significance in Petrophysics.
- Compare core data with log data for comprehensive analysis.
- Master well log interpretation for reservoir evaluation.
- Integrate petrophysical data for reservoir characterization.
- Apply advanced petrophysical techniques in unconventional reservoirs.
- Analyze case studies for practical applications of Petrophysics.

Course Outlines :

Day 1: Introduction to Petrophysics

- Definition and Scope of Petrophysics
- Importance of Petrophysics in the Oil and Gas Industry
- Overview of Petrophysical Properties
- Introduction to Rocks and Fluids
- Rock-Fluid Interactions
- Porosity and Permeability Fundamentals
- Overview of Petrophysical Tools and Methods

Day 2: Traditional Petrophysics Core Analysis

- Importance of Core Analysis in Petrophysics
- Core Sampling Methods
- Core vs. Log Data
- Porosity and Permeability from Core Analysis
- Saturation Measurements
- Capillary Pressure and Wettability

Day 3: Traditional Petrophysics Well Log Analysis

- Role of Well Logs in Petrophysical Analysis
- Types of Well Logs
- Electrical Logs (SP, Resistivity)
- Nuclear Logs (Gamma Ray, Neutron, Density)
- Acoustic Logs (Sonic Logs)
- Log-Log Crossplots for Petrophysical Analysis

Day 4: Reservoir Petrophysics Reservoir Characterisation

- Integrating Petrophysical Data for Reservoir Characterisation
- Importance of Reservoir Petrophysics in Field Development
- Petrophysical Interpretation Models
- Volumetric Analysis (Porosity, Saturation, Net Pay)
- Reservoir Mapping and Zonation
- Fluid Typing and Contact Analysis

Day 5: Advanced Topics in Reservoir Petrophysics

- Advanced Petrophysical Techniques for Enhanced Reservoir Understanding
- Emerging Trends in Petrophysics