Well Log Interpretation Principles and Applications

Course Price

£2850

Course Description

This course is designed for engineers and geoscientists that have some interest to learn more about petrophysics. Participants will gain the ability to read and understand a set of oil well logs and briefly produce quantitative interpretations, and be able to perform some calculations based on local knowledge about Gulf of Mexico Formation (based on industry standards).

Course Objectives

This short course is intended to cover most of the tools, principles, rock modeling parameters, review the main logging suites, interpretation principles, quantitative interpretations and overview of the different scenarios: Shaly sand formations and carbonates. Recent techniques used on unconventional reservoirs.

Who Should Attend

Course Content

Introduction of well logging operations

Fundamentals of rock modeling and general parameters: porosity, resistivity permeability, temperature and pressure, along with water saturation calculations.

Understanding logs: Log presentations, scales, typical curves

Basic tools: spontaneous potential, gamma ray, natural gamma ray spectral logs, calipers and logging techniques for both wire-line and MWD/LWD operations.


Porosity logs: Neutron and Density logs, principles of operation for log tools and techniques to drive porosities from neutron, and density logs, and discussion of “Borehole Effects”.
Acoustics: sonic logs, porosity derived from sonic logs, Wyllie time average equation, introduction to compressional and shear wave logging, basic rock mechanics principles.

Interpretation principles, Archie equation, cross plots Density Neutron, M-N, picket plots, Rw (water resistivity) and salinity determination, and lithology identification.

Log quality control

Geological logs: Old dipmeter log and formation imager logs. Basic geological interpretation.

Modern logging tools: Nuclear Magnetic Resonance & Dielectric tools.

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**CPD Unit**

**Continuing Professional Development**

**28 HOURS CPD**