Acquisition and Interpretation of Open Hole Logs Training

Course Price

£3050

Course Description

The course covers the fundamentals of the acquisition and interpretation of open hole log data up to intermediate level. It presents the principles underlying the measurement of various properties of rock sequences penetrated in boreholes and covers both the qualitative and quantitative interpretation of the data obtained. It also discusses the recent advances in log data acquisition technology.

Acquisition and interpretation of dipmeter and formation image log data are also covered.

Course Objectives

Who Should Attend

Geoscientists and petroleum engineers with little or no experience of petrophysics. It serves also as an update for more mature operators in this field.

Prerequisites

A basic understanding of geological and some engineering aspects of oil and gas reservoirs.

Course Content

Day 1

• Introduction and course objectives

• Invasion effects and matrix concept

• Acquisition and recording of log data, types of logs and the associated nomenclature

• Electric logging tools and the qualitative interpretation of electric log data

• Recent advances in electric logging
Day 2

• Acoustic logging tools and the applications of acoustic log data

• Radioactive logging devices and the applications of the radioactive log data

• The Electromagnetic Propagation Tool (EPT)
  – The new Dielectric Log
  – Applications of EPT and new Dielectric Log data

Day 3

• The Nuclear Magnetic Resonance log and its applications

• Platform Express (PEX): a recent advance in log data acquisition technology and its advantages

• Qualitative interpretation
  – Cross plots
  – Lithology and porosity determination
  – Gas detection

Day 4

• Quantitative interpretation
  – Introduction and objectives
  – Shale volume determination
  – Determination of unininvaded zone parameters: Rt, Rw and Sw
  – Determination of invaded zone water saturation, Sxo
  – Determination of qualitative and quantitative indices of hydrocarbon moveability

Day 5

• Introduction to shaly formation interpretation
  – Review of the effects of shale on open hole log responses
  – Determination of Sw in shaly reservoirs by the Indonesia and Simandoux models

• Introduction to dipmeter and formation imaging tools
• Practical workshops

• Course summary and conclusion

CPD Unit

Continuing Professional Development

35 HOURS CPD