Training - Quantitative Well Log Analysis

LOGADV-EN-P | Face-to-face only | 5 days

This course provides participants with some experience in qualitative log interpretation

Level
Skilled

Public
Geoscientists and technicians having an experience in qualitative log interpretation and willing to perform quantitative reservoir evaluation

Objectives
Attendees will be able to implement the following skills:

- Perform sound quality-control and environmental correction of logs, determine Rt, Rxo, Di
- Evaluate shale content of reservoirs, apply shale and hydrocarbon corrections
- Perform quantitative log interpretation in case of water and oil based mud, determine porosity, permeability, net sand, net reservoir and net pay characteristics

Pedagogical & technical resources
Hand computations followed by petrophysical software sessions

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites
No prerequisites are necessary to follow this course

Responsable
IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

PREPARATION FOR QUANTITATIVE LOG ANALYSIS — 1 day

Petrophysical concepts and relationships.
Quality control of the data.
Determination of geological formations and reservoirs - Zonations.
Environmental corrections of logs. Determination of Rt, Rxo, Di.
Case studies (water and oil based muds).

INTERPRETATION OF CLEAN FORMATIONS — 1 day

Determination of fluid contacts (WOC, GOC).

Determination of matrix and fluid parameters, Rw (SP, Ratio, Rwa).
Determination of lithology, porosity, fluid type, water and hydrocarbon saturations.
Cross plots techniques: N-D-S, Pe-RHOB, K-Th, etc.
Case studies.

QUANTITATIVE LOG INTERPRETATION OF SHALY FORMATIONS (DETERMINISTIC APPROACH) — 2.5 days

Influence of shale on logging tool response. Introduction to complex lithology - D-N cross-plot.
Determination of shale parameters, shale content Vsh and effective porosity.
Hydrocarbon effects on logs and hydrocarbon correction.
Determination of water and hydrocarbon saturations (various equations).
Comparison of porosity and permeability results to core data (PHI-K relationship and SCAL).
Determination of net sand, net reservoir and net pay thicknesses and associated characteristics (Vsh, H, Phie, So).
Case studies: integration & interpretation of pressure tests and NMR data, if available.
Cross-section between wells and comparison of interpretation results.

OTHER INTERPRETATION METHODS — 0.5 day

Introduction to the multi-mineral model and general optimization method.
Case study.

Sessions

Rueil-Malmaison - From 11/23/2026 to 11/27/2026 — **3650 €/HT**

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com