

## Well Logging Interpretation

**Course Duration** : 5 days

**Date** : December 01 - 05, 2025

**Location** : Istanbul

**Type of Participant** : This training course is designed for and will greatly benefit Geoscientists, Petro physicists, and engineers who are involved in logging operations and/or interpretations and need to understand the principals and interpretation of logging tools and techniques.

### Summary:

The most universal, comprehensive, and concise descriptive documents on oil and gas wells are logs. They impact the work of almost every oilfield group from geologists to roustabouts to bankers. Familiarity with the purposes and optimum applications of well logs is, therefore, essential for people forging their careers in the oil business. The instructor uses a novel approach to help participants develop a good grounding in understanding and applying well logging techniques. General principles of physics are presented to explain the functioning of modern logging tools. Wherever possible, the physics of logging measurements are related to everyday tools and applications.

Participants develop an appreciation for the constraints and limitations of operating in the borehole environment. A number of actual log examples are related to basic principles in the description of reservoir properties such as porosity, mineralogy, formation factor, saturation, and hydrocarbon type for essentially clean reservoirs. Cross-plotting and reconnaissance techniques quickly and efficiently discriminate between water, oil, and gas. Participants gain realistic experience by working in teams on a comprehensive log interpretation exercise.

### Objective:



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Upon completion of the course, participants will be able to:

- Identify reservoirs
- Determine mineralogy, porosity, and saturation in various lithologies
- Recognize the importance of electrical properties of earth materials
- Highlight oil mobility
- Interpret pressure profiles
- Understand optimum tools and logging programs
- Apply quick-look methods of formation evaluation

## Contents:

### Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

#### Day 1

- Welcome & Introduction
- **PRE-TEST**
- Logging objectives
- Invasion profile
- Challenge of borehole geophysics
- Passive electrical properties of earth materials
- Resistivity measuring tools, normal, induction, laterolog

#### Day 2

- Reservoir/non-reservoir discrimination
- Matrix-sensitivity logs, GR, SGR, Pe
- Depth measurements and control
- Borehole calipers



- Porosity-mineralogy logs, density, neutron, sonic
- Porosity determination in clean formations

### Day 3

- Formation resistivity factor
- Conductivity of shales
- Porosity log crossplots and mineralogy identification
- Partially saturated rock properties and Archie Equation
- Linear movable oil plot

### Day 4

- Reconnaissance techniques, Rwa, FR/FP, logarithmic scaler
- Porosity-resistivity crossplots
- Permeability relationships
- Nuclear magnetic resonance
- Use of pressure measurements

### Day 5

- Computerized log evaluation
- Sidewall coring
- Recommended logging programs
- Course Conclusion
- **POST-TEST**
- Presentation of Course Certificates
- Lunch & End of Course

## Training Methodology:

### Training Methodology

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-



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- 30% Lectures
- 20% Workshops & Work Presentations
- 20% Case Studies & Practical Exercises
- 30% Videos, Software & Simulators
- Pre-Test and Post-Test
- Group Work
- Discussion
- Presentation

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

### Daily Program:

#### Program Schedule

|              |                                 |
|--------------|---------------------------------|
| 0730 - 08:00 | Registration & Coffee           |
| 08:00 – 0815 | Welcome & Introduction          |
| 0815 – 0830  | <b>PRE-TEST</b>                 |
| 1040 -1100   | Refreshments & Networking Break |
| 1230 – 1300  | Lunch                           |
| 1315         | Afternoon Session begins        |
| 1530 -1550   | Recap                           |
| 1600         | Course Ends                     |

*(breaks are mutually agreed on timings, without compromising course duration)*

