

# Petroleum Engineering for Non-Specialists

## INTRODUCTION

- The significance of petroleum engineering becomes an important element in oil industry. It provides the required technology to keep the daily supply of crude oil and natural gas. Petroleum engineering includes a combination of technical and non-technical activities. Non-technical staff will be more productive if they gain a full understanding for the fundamentals of the industry.
- Highly participative training course aims to provide the non-technical staff involved in oil industry with an extensive overview on petroleum engineering concepts and features. The training course adopts an integral approach for clarification starting from the initial oil exploration and up to the adopted methods to increase oil production and ultimate recovery. Furthermore, the training seminar covers the overall oil field life cycle and basics of petroleum economics. This training course include some special observations on the current and future challenges in oil industry.

Participants on the Petroleum Engineering for Non-Specialists training course will develop their knowledge on the following key features:

- Petroleum Engineering Features
- Importance of Petroleum Engineering in Oil Industry
- Petroleum Engineering Main Elements
- Petroleum Geology and Drilling aspects
- Fundamentals of Reservoir Engineering,
- Initial Hydrocarbon in Place and Recovery Methods
- Reservoir Life Cycle
- Production Optimization Process
- Basics of Petroleum Economics
- Current and Future Oil Industry Challenges

## **PROGRAMME OBJECTIVES**

Attendance to the Petroleum Engineering for Non-Specialists training course will enable the participants to:

- Be aware of the role of petroleum engineer in oil industry
- Understand the importance of petroleum engineering
- Gain more knowledge on overall petroleum engineering elements
- Get an overview on the overall oil field life cycle
- Raise knowledge on the current and future challenges in oil industry

## **WHO SHOULD ATTEND?**

- Non-Technical Staff involved in Oil Industry
- Team Leaders / Managers involved in Oil Industry
- New Hiring Staff in Oil Industry
- Junior Petroleum Engineers
- Field / Production Engineers
- Facilities / Process Engineers
- Junior Development / Exploitation Engineers
- Geoscientists / Petrophysicists
- Technologists
- Those who want to have more knowledge on petroleum engineering

## **TRAINING METHODOLOGY**

- The Petroleum Engineering for Non-Specialists training seminar will combine technical presentations, extensive discussion and different actual examples supported by video materials to ensure that all participants will be ready to use their new knowledge.

## **PROGRAMME SUMMARY**

- The Petroleum Engineering for Non-Specialists training course adopts a flexible approach to clarify the overall concepts and aspects in petroleum engineering in addition to valuable notes on the current and future challenges in the oil industry.

## **PROGRAM OUTLINE**

### Overview of Petroleum Engineering

- What is Petroleum?
- Oil and Gas Fields Locations
- What is Petroleum Engineering?
- Role of Petroleum Engineer
- Aspects of Petroleum Engineering

## Petroleum Engineering Elements

- Importance of Petroleum Geology
- Oil Trapping
- Rock Properties
- Fluid Properties
- Drilling Engineering Aspects
- Role of Drilling
- How to drill a well?
- Well Completion

## Reservoir Engineering

- What is the reservoir?
- Importance of Reservoir Engineering
- Reservoir Types
- Reservoir Life Cycle
- Reservoir Simulation Concepts
- Field Development Plan

## Oil Recovery Methods

- Initial Oil in Place
- Recovery factors
- Primary Recovery
- Secondary Recovery
- Enhanced Oil Recovery

## Production Optimization

- Overall Well Performance
- Nodal Analysis Approach
- Artificial Lift Technology
- Oil Economics Concepts
- Current and Future Oil Challenges