



## Enhanced Oil Recovery EOR Course

12 - 20 May 2025  
Lisbon (Portugal)



# Enhanced Oil Recovery EOR Course

**Ref.:** 15282\_311572 **Date:** 12 - 20 May 2025 **Location:** Lisbon (Portugal) **Fees:** 5200 **Euro**

## Introduction

Enhanced oil recovery, additionally referred to as tertiary recovery, is the extraction of crude oil from an oil subject that can not be extracted otherwise. EOR can extract 30% to 60% or extra of a reservoir's oil, in comparison to 20% to 40% the use of number one and secondary recovery. According to US Department of Energy, carbon dioxide and water are injected along side one in all 3 EOR strategies: thermal injection, gas injection, and chemical injection. More advanced, speculative EOR strategies are every now and then referred to as quaternary recovery.

## Targeted Groups:

- Reservoir engineers
- Production engineers
- Petroleum engineers
- Petro physicists
- Geologists
- Geoscientists
- Whoever is interested in enhanced oil processes.

## Course Objectives

- Different classifications and mechanisms of different EOR methods
- How to screen actual field cases to select the suitable EOR method
- Different types and sub-types of current and advanced EOR processes
- Maximization of oil recovery using Mobility Ratio  $M$  and Capillary Number  $N_c$
- New EOR techniques of MEOR, Enzyme, Seismic, Electric, EM-EOR, chemical-thermal hybrid methods

## Unit 1: Oil formation theory

- Reservoir rock
- Cover rock
- Mother rock
- Trap concept and types
- Production system elements
- Reservoir properties
- Oil and gas properties
- Primary, secondary and tertiary production techniques

## **Unit 2: EOR**

- EOR definition
- Generic EOR workflow
- Main EOR types and related recovery mechanisms
- EOR concepts
- EOR limitations and challenges
- EOR selection
- EOR screening criteria for all EOR types
- Class exercises illustrating EOR screening for candidate fields
- Fundamental science and engineering behind EOR applications
- Participants will learn definition, generic workflow, recovery mechanisms, general concepts, limitations and challenges of commercial EOR types as well as their screening criteria developed over time. This will be followed by class exercises on EOR screening for candidate fields. Discussion of the fundamental science and engineering behind EOR applications.

## **Unit 3: EOR Processes**

- Fundamental of chemical EOR
- Fundamental of miscible EOR
- Fundamentals of thermal EOR and newly developed thermal methods
- Different types and sub-types of current and advanced EOR processes
- Maximization of oil recovery using Mobility Ratio M and Capillary Number Nc
- Fundamentals Chemical, Miscible and Thermal EOR processes.
- Case studies on newly developed thermal EOR will be covered as well.

## **Unit 4: New EOR techniques**

- MEOR method
- Enzyme method
- Seismic method
- Electric method
- EM-EOR method
- Chemical-thermal hybrid method

## **Unit 5: Current and advanced thermal EOR processes**

- Thermal processes: cyclic and continuous steam injection
- Steam-assisted-gravity-drainage SAGD
- In-situ combustion methods: forward and backward
- Toe-to-Heel air injection THAI and CAPRI processes
- Steam CO<sub>2</sub> hybrid EOR technique and field application



**Registration form on the :  
Enhanced Oil Recovery EOR Course**

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