Formation - EOR Concepts and Applications

EOR-EN-P | Présentiel | 5 jours

This course provides a detailed understanding of Enhanced Oil Recovery (EOR) methods and mechanisms together with information about EOR projects workflow and decision-making, especially screening criteria

Certificat IFP Training

Advanced Certificate

Niveau

Fondamentaux

Public

Reservoir engineers, petroleum engineers and assets managers involved in EOR projects

Objectifs

Attendees will be able to implement the following skills:

- Discuss recovery expectations from reservoirs under primary, secondary and EOR methods
- Discuss main Enhanced Oil Recovery (EOR) methods and corresponding mechanisms for improving recovery factor
- Apply screening criteria used for decision making on EOR projects
- Plan and apply main EOR methods using empirical, analytical and simulation tools

Pédagogie & ressources techniques

- Interactive lectures and exercises
- Field case studies
- Chemical and Miscible Gas EOR simulation using dedicated industrial software

Évaluation des acquis

- 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

Prérequis

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

Programme

FUNDAMENTALS OF OIL RESERVOIRS DRIVE MECHANISMS — 1 day

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Review of primary and secondary recovery drive mechanisms:

- Natural depletion of undersaturated oil reservoir.
- Solution gas drive.
- Natural water drive.
- Water and gas injection.

Principle and mechanisms of main EOR methods:

- Chemical flooding.
- Miscible gas injection.
- Thermal flooding.

EOR - CHEMICAL METHODS (SURFACTANT, POLYMER, ALKALINE) 1.5 days

Principles and mechanisms of chemical EOR.
Selection criteria.
Recovery targets and why they are seldom met.
Chemicals. Characteristics and properties.
Preformed Particle Gel (PPG).
Colloidal Dispersion Gels (CDG).
Design considerations.
Simulation of chemical flooding. Application to ASP flooding.
Case studies.

EOR - MISCIBLE GAS INJECTION METHODS (CO2, N2, HC) 1.5 days

Principles and mechanisms of miscible gas EOR.
Minimum Miscibility Pressure (MMP).
Hydrocarbon miscible displacement:

- First contact miscible process.
- Condensing gas drive.
- Vaporizing gas drive.

Selection criteria.
Laboratory experiments.
Simulation of miscible gas injection. Application to CO2 injection.
Case studies.

EOR - THERMAL METHODS (SAGD, H&P, IN-SITU COMBUSTION) 0.5 day

Principles and mechanisms of thermal EOR.
Selection criteria.
Steam flooding production prediction.
Case studies.

EOR IMPLEMENTATION 0.5 day

EOR project planning workflow.
Pilot design.
EOR monitoring.
Case studies.

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Pour vérifier l'accessibilité de cette formation à une personne en situation de handicap, contactez notre référent à l'adresse suivante : referent.handicap@ifptraining.com

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