BLACKBIRD FOR TRAINING

Enhanced Oil Recovery (EOR) Technologies & Applications



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Introduction

Enhanced Oil Recovery EOR is among the most advanced strategies in petroleum production, designed to maximize oil extraction after primary and secondary recovery methods have been exhausted.
This course provides a comprehensive overview of cutting-edge EOR technologies and their real-world applications, enabling participants to understand the scientific principles, select the right method, evaluate economic feasibility, and ensure operational efficiency.
It is tailored for engineers, supervisors, field managers, and production planners who aim to improve operational performance and achieve maximum value from oil reserves.

Course Objectives

- Understand the core principles of Enhanced Oil Recovery.
- Differentiate between the main types and techniques of EOR.
- Analyze geological and geophysical data to select the right recovery method.
- Apply strategies to optimize production within safety and quality standards.
- Evaluate the economic viability of EOR projects.
- Address operational challenges and mitigate risks.
- Review real-world case studies of EOR implementation.
- Enhance technical and strategic decision-making skills.

Course Outlines

Day 1: Fundamentals and EOR Concepts

- Introduction to oil recovery methods.
- Distinctions between primary, secondary, and enhanced recovery.
- Physical and chemical principles of EOR.
- Factors influencing technology selection.
- Key indicators for initiating EOR projects.
- Practical exercise: analyzing preliminary oil field data.



Day 2: Thermal EOR Techniques

- Steam flooding.
- In-situ combustion.
- Electrical heating and innovative methods.
- Impact of heat on oil viscosity and productivity.
- Safety requirements for thermal injection operations.
- Case study: steam flooding project.

Day 3: Chemical EOR Techniques

- Polymer flooding.
- Surfactant flooding.
- Alkaline flooding.
- Effects of chemicals on oil displacement and mobility.
- Managing and monitoring chemical injection operations.
- Practical exercise: designing a chemical injection plan.

Day 4: Gas EOR Techniques

- CO_2 injection.
- Nitrogen and hydrocarbon gas injection.
- Advantages and limitations of each gas type.
- Environmental considerations and emission reduction.
- Calculating injection ratios and optimal reservoir pressure.
- Case study: CO_2 flooding project.

Day 5: Practical Applications and Economic Analysis

- Integrating multiple EOR techniques for higher efficiency.
- Key performance indicators for EOR projects.
- Economic evaluation of EOR investments.
- Operational challenges and risk mitigation.
- Preparing performance reports and recommendations.
- Final exercise: designing an integrated EOR project.



Why Attend this Course: Wins & Losses!

- Gain specialized knowledge of advanced EOR technologies.
- Learn how to assess and select the right technique for each reservoir.
- Understand the impact of each method on productivity and project economics.
- Apply theoretical knowledge to real-world scenarios.
- Improve technical and strategic decision-making skills.
- Stay updated with the latest EOR innovations.
- Enhance operational efficiency while minimizing risks.
- Receive a recognized certificate to strengthen your professional profile.

Conclusion

The Enhanced Oil Recovery EOR Technologies & Applications course equips participants with both theoretical insights and practical tools to design, implement, and manage EOR projects effectively.By combining in-depth knowledge with real-world case studies, participants will be prepared to optimize oil field performance and ensure sustainable production outcomes.

This course is an essential step toward excellence in the petroleum sector, helping professionals deliver measurable and lasting results.

