Advanced and Emerging Technologies of Enhanced Oil Recovery (EOR) Processes

05 - 09 Dec 2016   Trinidad and Tobago
17 - 21 Sep 2017   Dubai
WHY CHOOSE THIS TRAINING COURSE?

The increasing demand of oil by the global industry develops very good opportunity for more applications of current and advanced enhanced oil techniques in mature oil fields. This course is designed to provide attendants with comprehensive understanding of different design aspects, types, screening criteria, and field application of current, advanced, and emerging techniques of Enhanced oil Recovery (EOR) processes.

The goal of this five-day course is to present basics, problems, advanced solutions, field applications of chemical, miscible, and thermal EOR methods, and emerging technologies of different EOR processes with actual field cases. Today, it is better to apply EOR in a secondary mode. Detailed advanced EOR methods of steam assisted gravity drainage (SAGD), Low Salinity (LSW), Vapor Extraction (VAPEX), microbial and enzyme, microwave, electric, and hybrid chemical-thermal-miscible methods will be discussed. All of these techniques suffer from several problems of accurate reservoir characterization, difficult screening actual severe heterogeneous reservoir, pilot design, and field implementations. The course is designed as an interactive learning environment of lecturing, industry videos, and solved field cases.

This course will feature:

- Rock and fluid properties for better reservoir characterization
- Classify and screen different EOR methods for current producing reservoirs
- Screen actual reservoir(s) to select the best EOR method for your reservoir
- Maximize oil recovery using chemical, miscible, and thermal EOR methods
- Know newly-developed EOR methods of chemical, thermal, miscible, hybrid EOR methods
- Understand Microbial, Low Salinity Water, SAGD, VAPEX, THAI, microwave, electric methods
- Understand different problems and proposed solutions of different EOR processes

WHAT ARE THE GOALS?

By the end of this course, participants will be able to:

- Describe different chemical, miscible, and thermal EOR processes
- Maximize oil recovery using Mobility Ratio and Capillary Number
- Apply reservoir characterization and screening actual fields for EOR
- Understand chemical, miscible, thermal, and hybrid EOR techniques
- Understand newly-developed EOR methods and compare with current ones

WHO IS THIS TRAINING COURSE FOR?

This course is suitable to a wide range of professionals but will greatly benefit:

- Petroleum, Production & Reservoir Engineers
- Processing engineers & other discipline engineers
- Engineers who are new to the profession
- Other individuals who need to know about EOR technologies

HOW WILL THIS TRAINING COURSE BE PRESENTED?

This course will utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. The course is designed as a blended environment of presentation, class exercises, field application/ analysis and several industry videos showing all processes.

QUALITY CERTIFICATIONS

www.PetroKnowledge.com
#### Daily Topics

##### DAY ONE
**Different EOR Processes and Screening Criteria**
- Different enhanced oil recovery (EOR) methods
- Reservoir concepts, rock and fluid properties for EOR
- Screening criteria and mechanisms of different EOR methods
- Maximize oil recovery using Mobility Ratio and Capillary Number
- Limitations, challenges and problems of different EOR methods

##### DAY TWO
**Reservoir Fluid Properties and Reservoir Characterization**
- Reservoir concepts, main rock and fluid properties for EOR
- Advanced reservoir characterization techniques for EOR methods
- Water flooding: design requirement, limitations, and displacement theory
- Polymer flooding: polymer types, properties, and types of degradation
- Polymer flooding: mobility ratio ($M$), slug design, and field application

##### DAY THREE
**Current Chemical and Miscible EOR Techniques**
- Alkaline/polymer and ASP flooding: process and limitations
- Two actual field results: Daqing (China) and Kentucky (USA)
- Miscible gas EOR: CO2, HC, and Nitrogen injection methods
- Lab and numerical determination of minimum miscibility pressure
- Carbon dioxide miscible and immiscible flooding processes

##### DAY FOUR
**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-CO2 hybrid EOR technique and field application

##### DAY FIVE
**Other Advanced EOR Processes**
- Microbial (MEOR) and Enzymes (EEOR) processes
- Low Salinity Water (LSW) and pulsed water processes
- Seismic, Electric, and Electromagnetic heating EOR methods
- Hybrid EOR applications; CO2-thermal and chemical-thermal methods

**EXERCISES INCLUDE:**
- Lab and field identifications of different types of reservoir fluids
- Calculation of Capillary Number ($N_c$) and Mobility Ratio ($M$)
- Maximization approaches of oil recovery using EOR concepts
- Screening five-actual field cases worldwide
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Please use BLOCK CAPITALS to fill in this form. It is important that you read carefully through all information before starting to complete the form.

REGISTRATION DETAILS

Family Name

First Name (Mr./Ms.)

Position

Company

Mailing Address

Telephone  

Mobile

Fax  

Email

AUTHORISATION

Authorised by

Position

Mailing Address

Telephone  

Mobile

Fax  

Email

HOTEL ACCOMMODATION

Hotel accommodation is not included in the Registration Fee. A reduced corporate rate and a limited number of rooms are available for attendees wishing to stay at the hotel venue.

Please make your request for accommodation at least 3 weeks prior to the commencement of the course.

CERTIFICATION

A Certificate of Completion will only be awarded to those delegates who attend the entire course

CANCELLATIONS & SUBSTITUTIONS

You must notify the Registrar of cancellations at least 2 weeks before a scheduled seminar in order to be eligible for a credit. If you cannot attend, you may send a replacement from your organisation at no charge. There is a $250 handling charge for all cancellations or rescheduling. We reserve the right to cancel a seminar due to low enrolment. All registrants will be notified in advance and a full refund will be provided upon request.

DISCLAIMER

Circumstances beyond the control of PetroKnowledge may necessitate postponement, change of venue or substitution of the instructor. As such, PetroKnowledge reserves the right to implement such amendments.