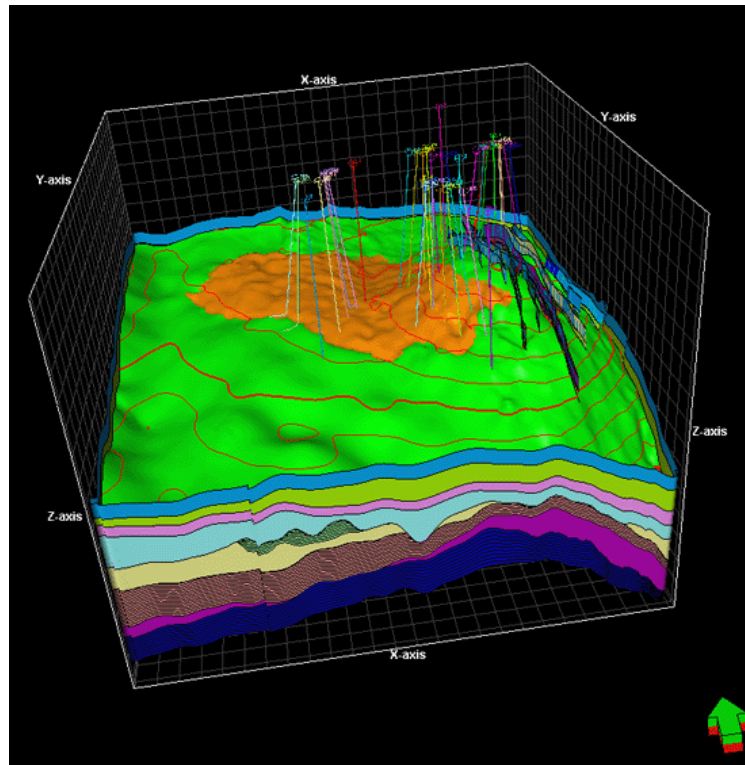




DE099

Applied Reservoir Engineering

Course Introduction:

The course aims to provide a better knowledge on the different aspects applied in Reservoir Engineering to improve the ultimate hydrocarbon recovery. The course addresses main Reservoir Engineering topics starting from the primary recovery and up to enhanced oil recovery. Both Conventional Reservoir Engineering and Modeling approaches are included. The course will extend to include special topics such as coning control with smart horizontal wells and enhanced oil recovery modeling.

Course Objectives:

Upon successful completion of this course, the delegates will be able to:

- ✓ Understand the main aspects applied in Reservoir Engineering
- ✓ Raise their knowledge on reservoir fluid characterization and fluid-rock properties
- ✓ Be aware how to calculate the original hydrocarbon in place
- ✓ Gain sufficient knowledge on Conventional Reservoir Engineering
- ✓ Understand Reservoir Surveillance and Well Test Analysis
- ✓ Gain better knowledge on water/gas coning effect and control
- ✓ Understand production optimization and Nodal Analysis Approach
- ✓ Get better knowledge Gas/Condensate Reservoir performance
- ✓ Gain sufficient knowledge on reservoir simulation modeling applications

Who Should Attend?

This course is intended for junior and experience reservoir and petroleum engineers in addition to other geoscientists who seeks to have more knowledge on Reservoir Engineering aspects.

Course Outline:

Day 1:

- Introduction
- Getting to Understand Your Reservoir
- Reservoir Drive Mechanisms
- Original Hydrocarbon in Place
- Reservoir Life Cycle
- Reservoir Rock Properties
- Reservoir Fluid Properties

- Reservoir Performance
- Oil Recovery Methods

Day 2:

- Hydrocarbon Originally in Place Determination
 - Volumetric Methods
 - Material Balance Approach
 - Decline Curve Analysis
 - Examples
- Conventional RE for new infill Opportunities

Day 3:

- Reservoir Surveillance
- Well Testing Analysis
 - Well Test Objectives
 - Types of Well Tests
 - Derivative Analysis

Day 4:

- Water and Gas Coning
 - Coning Concept
 - Critical Rate Calculation
 - Coning Control
 - Smart Horizontal Wells
- Production Optimization (Nodal Analysis Approach)
 - Production System Pressure Losses
 - Inflow/Outflow Curves
 - Nodal Analysis Applications

Day 5:

- Gas Reservoir Performance
- Gas-Condensate Reservoirs
- Introduction to Reservoir Simulation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Fees:

To be advised as per the course location. This rate includes participant's manual, Hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Prayer Break & Lunch)
13:30 - 15:00	Last Session