Integrated Petroleum Reservoir Evaluation, Field Development & Production Optimization Techniques

PEP13

Petroconsult Energy Co. (UK) Ltd.

Oil & Gas Consultancy Services & Technical Training Providers

Enhancing business through knowledge

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Integrated Petroleum Reservoir Evaluation, Field Development & Production Optimization Techniques (PEP13)

Course Description:

This is an integrated program designed to achieve a comprehensive understanding of oil and gas reservoir management starting with the understanding of the rock properties/lithology, the Petrophysics and progressing into the PVT Analysis of the reservoir fluids and culminating in the detailed study of Vertical Lift Performance of the well bore in order to achieve optimized production.

The session includes detailed calculations required for effective reservoir modelling, with pressure draw down / pressure build up calculations inclusive.

The aim of this course is to assist attendees in the modelling and management of the reservoir asset without forcing unnecessary damage to the formation and without jeopardizing full exploitation of the reservoir potentials. This course will focus on the application of knowledge of reservoir characteristics to numerical modelling including single and full field models.

It is a ten-day program with loads of calculations and simulation exercises under various reservoir conditions. We will also consider the use of history matching in forecasting future reservoir performance.
Module 1

Course Contents:

1. Petrophysics:
   - Reservoir rock properties
   - Core analysis
   - Petrophysical tools and the scientific principles involved
   - Open and Cased-hole logging and log analysis
   - Use of log and core data in reservoir simulation and reservoir management
   - Shale and clay occurrence and well logs
   - Petrographic analysis of shaly sand formation
   - By-passed pay in shaly sands and the implications for reducibility

2. Reservoir Volume Estimation Methods:
   - Volumetric, Material Balance and Decline Curves
   - Suitability of Method to Reservoir Type/Production History
Module 2

1. PVT Analysis:
   - P-T Diagrams for Reservoir Fluid Types
   - Crude Oil and Gas Parameters including Correlations
   - Retrograde Gas
   - PVT Experiments & Representation of Aquifer

2. History Matching:
   - Use of Recurrent Data & Well Test History Matching in Reservoir Modelling & Performance Prediction
3. Vertical Lift Performance (VLP)
   - Single & Multi-Phase Flow
   - Well Bore Pressure System
   - Artificial Lift

4. Pressure Maintenance Operations (PMO)
   - PMO Designs
   - Gas & Water Injection
Who Should Attend?

- Geologists
- Geophysicists
- Well Log Geologists & Engineers
- Petroleum Engineering & Reservoir Asset Management Staff

Venue:
Venue and Date, open to discussion / change upon interest and commitment of 8 or more persons.

Tuition:
Module 1: £2,950 +VAT
Module 2: £2,950 +VAT
Module 1 & 2: £5,750 +VAT