Well Production Enhancement

Course Price

£3250

Course Description

This course concentrates on solving performance Optimization of the technologies that increase Oil and Gas, Well inflow and Outflow Performance, Well Production Optimization (NODAL) Well prediction, including Artificial Lift, Acid Stimulation and Hydraulic Fracturing, Well Intervention, Workovers, Problems Diagnosis, Sand Control and Management, Perforating Technology, Water production/Injection and Water control Shut-off Methods & productivity effects, Flow Assurance: Paraffins and Asphaltene: Diagrams, theory, Problems and Solutions, Scale deposition: Diagrams, Control, and new Technologies, Emulsion problems and Corrosion.

Course Objectives

- Study and discussion on Reservoir types and Productivity.
- Analysis and study of Well Productivity impairment.
- Study in details Well Inflow and Outflow Performance
- Work on Total Well Optimization Systems
- Review of Production Logging applications & Techniques
- Discussion and practice of Water production/control & Productivity effects
- Discussion and practice of Formation damage during drilling,
- Study Productivity and effect of Matrix Stimulation (Acidizing)
- Study and discussion of Productivity and the effect Hydraulic Fracturing Technology
- Review and practice of Candidate Selection & Stimulation
- Study and Practice of Productivity Enhancement through Artificial Lift
  - Electrical Submersible Pumps (ESP) System
  - Progressive Cavity Pump Artificial Lift System
  - Sucker Rod Pumping Artificial Lift System
  - and Other Systems
- Review and Practice Productivity enhancement with Through-Tubing Techniques
- Study and Practice of Sand Production Control Design and Productivity Effects.
Who Should Attend

Reservoir and Production Engineers, Chemical Engineers, Mechanical Engineers, Geologists, Field operations and Technical personnel.

Course Content

I. TOTAL OPTIMIZATION WELL PRODUCTION ENHANCEMENT

- Well Performance & Productivity Description
- Reservoir types and performance
- Perforating Technology and effect on Well Productivity
- Perforating Design and effect on Well Production Enhancement
- Well Productivity due to Impairment
- Analysis of Well Inflow & Outflow performance
- Design, Problems diagnosis and solving Performance Optimization
- Total Well (NODAL) System analysis
- Exercises, problems and Solutions

II. WATER CONTOL SHUT-OFF, PERFORATION DESIGN AND FORMATION DAMAGE EVALUTION AND MITIGATION

- Production Logging applications & Techniques,
- Sources and causes of Productivity Impairment
- Formation damage during drilling,
- Completion and Production phases,
- Introduction to Water production/Injection control Shut-off Methods and Conformance Technologies & productivity effects
- Examples, Problems and Solutions

III. WELL INTERVENTION FOR PRODUCTIVITY ENHANCEMENT THROUGH MATRIX STIMULATION, HYDRAULIC FRACTURING

- Well Intervention for Productivity Enhancement
- Productivity and effect of Matrix Stimulation (Acidizing)
- Productivity and the effect Hydraulic Fracturing Technology
- Candidate Selection & Stimulation
- Candidate Selection Exercise

IV. PRODUCTIVITY ENHANCEMENT WITH WORKOVER, SAND CONTROL, DESIGN AND FLOW ASSURANCE

- Well Intervention for Productivity Enhancement
- Productivity enhancement with Workovers
- Productivity enhancement with Through-Tubing techniques
• Sand Production Control Design and Productivity effects.
• Examples, Problems and Solutions

V. WELL PRODUCTION ENHANCEMENT BY USING ARTIFICIAL LIFTS

• Productivity Enhancement through Artificial Lift
• Electrical Submersible Pumps (ESP) System
• Progressive Cavity Pump Artificial Lift System
• Sucker Rod Pumping Artificial Lift System and Other Systems
• Presentation of the ESP and PCP systems
• Exercises, Problems and Solutions

CPD Unit

Continuing Professional Development

35 HOURS CPD