Well Completion and Workover

Course Duration : 5 days

Date : 30-Sep-2024 to 04-Oct-2024

Type of Participant : This training is designed for Well Engineers, Drilling Supervisors, Reservoir Engineers, Geologists, Production and Completion Engineers needing a practical understanding and an appreciation of well completion design and operation, well stimulation and intervention.

Summary:

This course is designed to provide participants with an up-to-date overview of the well completion and operations and workover technology.

This 5-day course is aimed at petroleum, production, and operation engineers who wish to gain an insight into some of the more advanced aspects of completion design. It will be run on a workshop-style basis where the attendees will have the opportunity to select from the subjects listed below.

The course presumes a general engineering or scientific background. It requires some basic knowledge of completion and production technology. It combines a review of the fundamental concepts of the subjects covered together with their practical application.

Objective:

Upon completion of this course, participants will be able to:-

- Understand the well performance inflow & outflow, coiled tubing, and

downhole oil/water separation
- Perform the selection of Artificial Lift Techniques
- Familiarize in gas lift and formation damage
- Deal with Acidising Matrix Acidising Treatments and conformance control
- Deal with optimization of hydraulic fracturing

Contents:

ourse Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

Welcome & Introduction

Pre Test

Well Performance

- Refresher
- Inflow & Outflow Performance
- Completions Inflow Performance
- Computerised Well Performance Prediction Computer Program
- Well Performance Sensitivities
- Perforating & Advanced Perforating
- Smart Wells: Applications and Case Histories
- Coiled Tubing Completion Strings
- Downhole Oil/Water Separation: Technology & Economic Modelling

Day 2

- Selection of Artificial Lift Techniques
- Rod Pump
- Basic equipment design
- Operating practices
- Electrical Submersible PumpsBasic equipment design
- Components
- Operating Practices
- New applications
- Hydraulic Pumps
- Basic equipment design
- Progressive Cavity Pumps
- Basic equipment design

Day 3

Gas Lift

- Introduction
- Application
- Design Objectives
- The Unloading Process
- Side Pocket Mandrels
- Gas Lift Valve Mechanics
- Gas Lift Design
- Operational Problems
- Gas Lifted Field Optimisation
- Intermittent Gas Lift
- New Technology

Formation Damage

- Concept of Skin
- Sources of Skin
- The many Formation Damage Sources and the technique used to reduce its

impact on well impairment
- Formation Damage during Workovers
- Prevention

Day 4

- Matrix Acidising Treatments
- Well stimulation Economics
- Well Candidate Selection
- Design of Matrix Stimulation treatment parameters
- Acid Formulations, Volumes, Rates, Additives, Treatment type, Diversion, etc.
- Matrix Stimulation Campaign Case Histories
- Stimulation of Carbonate Formations
- Acidising Special Well Types
- Coiled Tubing Jetting
- Coiled Tubing Stimulations
- Conformance Control
- Sources of "bad" water
- Matrix and Fracture shut-off treatments

Day 5

- Hydraulic Fracturing
- Candidate Selection Guidelines
- Fractured Well Inflow Performance
- The Propped Hydraulic Fracturing treatment
- Rock Mechanical Issues important to Hydraulic Fracturing
- Fracture Fluid & Proppant Selection
- Optimization of Hydraulic Fracture Dimensions
- Tip Screen out Fracturing
- Unstable Formations and Sand Control
- Types of Sand Production
- Fill Removal with Coiled Tubing
- Prediction of Sand Failure

- Cost of Sand Control
- Sand Exclusion Techniques
- A detailed description of Gravel Packing Technology
- Chemical Sand Control
- Sand Control Installation using Coiled Tubing
- New Technology
- Coiled Tubing
- Technology
- Well Unloading and kick-off
- Drilling
- Cementing
- Electric Line Applications

Course Conclusion

POST-TEST

Presentation of Course Certificates of Course

Daily Program:

Program Schedule

0730 - 08:00	Registration & Coffee
08:00 – 0815	Welcome & Introduction
0815 – 0830	**PRE-TEST**
1040 -1100	Refreshments & Networking Break

1230 – 1300 Lunch

1315 Afternoon Session begins

1530 -1550 Recap

1600 Course Ends

(breaks are mutually agreed on timings, without compromising course duration)