



Well Intervention and WorkOver Operations

Course Duration : 5 Days

Date : 04-Nov-2024 to 08-Nov-2024

Location : Bangkok

Type of Participant : This training is designed for Well Engineers, Drilling Engineers, 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.

The course uses a holistic, multi-disciplinary and integrated management approach to explain the concepts behind the process of well integrity management and its implementation throughout the lifecycle of the well.

Primarily in this training course, we are concerned with problems associated with the completion string. Problems associated with the reservoir can be investigated and evaluated using production logging and well test techniques. In general,



problems associated with the completion string can be classified into problems which arise in the tubing bore and which can be corrected through tubing operations and problems which necessitate the retrieval of the completion string from the well.

This course will contain in-depth information on the impact of workovers and completion design in maximizing field production and increasing recoverable reserves. It also emphasizes the importance of well interventions methods (slickline, Electrical line and Coiled tubing) during lifetime of the well to keep well productivity under optimum conditions.

Objective:

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

- Introduction to the variable nature of well interventions.
- Describe the inherent risks and need for careful diagnostics, planning and supervision.
- Describe the economic implications of a workover in terms of the need to protect the well production or injection capacity.
- List and describe the equipment and operational concepts involved in coiled tubing and hydraulic workover units.
- Identify, evaluate and recommend functional capability of completion strings for a variety of situations.
- know the well control barrier principles
- Design & monitor a high-level work over / completion strategy for wells in a variety of situations including recommendations for appropriate intervention strategy/equipment.
- Analyze the Selection of tubing, packers, and completion flow control equipment for horizontal, multilateral, HPHT wells, etc. & plan for complex events.
- Implement key features/applicability of the main sand control, fracpack and well stimulation options.
- Recommend suitable measures to mitigate concerns for formation damage/



skin removal.

- Review of specialized fishing techniques involved in completion/workover jobs including slim hole fishing, coil tubing fishing etc.

Daily Program:

Day 1

- Well Integrity
- Well Completion Design Considerations
- Reservoir Considerations
- Mechanical Considerations
- Classification of Completions
- Lower and upper completion string components and selection consideration
- Cement Slurry calculations
- Cement Squeezing

Day 2

- Evaluating and Restoring the Cement Job
- Perforating
- Treating the Pay Zone
- General Configuration of Flowing Well Equipment
- The Production Wellhead
- The Production String or Tubing
- Packers
- Down hole Equipment
- Subsurface Safety Valves
- Running Procedure
- Choosing an Artificial Lift Process
- Main Types of Well Servicing and Workover
- Servicing & work over operations on killed wells
- Servicing & Workover Special Cases
- Well Stimulation



Day 3

- Drilling and casing the pay zone
- Evaluating and restoring the cement job
- Perforating
- The production wellhead
- The production string or tubing
- Main types of well servicing and workover
- Light well servicing and workover operations on live wells
- Heavy servicing and workover operations on live wells
- Servicing & workover fluids
- Well stimulation

Day 4

- Wellbore flow mechanics & Outflow performance analysis and well deliverability
- The improving oil well productivity
- Estimating and calculation the formation damage – skin factor
- Reservoir stimulation methods
- Acidizing
- Fracturing acid
- Hydraulic fracturing
- N2 kick-off
- Solvent stimulation
- Re-perforation
- Coiled tubing completion / work-over

Day 5

- Horizontal well completion / work over
- Deviated wells completion / work over
- Setting gas lift system
- Setting ESP system
- Completion economics



- HSE issues related to work-over & completion