



Rigless Well Intervention in Oil & Gas



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Introduction:

A rigless well intervention in oil and gas is any operation performed on an oil or gas well throughout its productive life that affects the well's condition, offers diagnostics, or regulates the well's output. We are primarily concerned with completion string issues in this rigless well intervention in the oil and gas training course. Production logging and oil and gas well test procedures can be used to examine and assess reservoir problems.

In general, the completion string may be divided into two categories: those that occur in the tubing bore and can be addressed by tubing operations and those that demand recovery of the completion string from the well. This rigless well intervention in the oil and gas course will provide detailed knowledge on the role of workovers and completion design in increasing field productivity.

What is the Rigless Well Intervention in Oil & Gas Course?

This rigless well intervention in oil and gas course is an essential professional education program that thoroughly examines the discipline of rigless well intervention within the oil and gas industry. Participants will gain in-depth knowledge of various rigless intervention methods, such as wireline, coiled tubing, and slackline operations, that are fundamental to the maintenance, diagnosis, and rectification of oil and gas well issues, maximizing the performance of oil and gas wells, and ensuring their productive longevity without the need for a full drilling rig set-up.

Why is the Rigless Well Intervention in Oil & Gas Course Important?

Oil well intervention professionals must undergo training in rigless well intervention, as it provides them with crucial skills and knowledge to enhance oil and gas production effectively and safely. The principles and practices covered in this training are vital for those seeking to understand the intricacies of oil well intervention tools and techniques. Thus, they are pivotal in reducing operational costs and downtime while improving recovery rates and ensuring safety and environmental regulations compliance.

Targeted Groups:

- Petroleum Engineers.
- Production Technologists.
- Production supervisors and engineers.
- Completion supervisors and engineers.
- Drilling supervisors and engineers.
- Workover and oil and gas well service supervisors.

Course Objectives:

At the end of this rigless well intervention in oil and gas course, the participants will be able to:

- The varying character of well interventions is introduced.
- Describe the inherent dangers and the importance of thorough diagnosis, planning, and oversight.
- Describe the economic consequences of a workover in preserving well output or injection capacity.
- List and discuss the coiled tubing and hydraulic workover unit equipment and operational ideas.
- Identify, analyze, and recommend completion string functional capacity for various contexts to understand the concepts of well-controlled barriers.
- Methodology for identifying three impediments during a good intervention.
- Understand the classification of well control barriers for various well intervention methods.
- Explain the mechanisms of a smooth wireline operation.
- List and explain the downhole wireline equipment and tools that are regularly utilized.
- The necessary surface wireline equipment specifications should be listed and explained.
- Explain the well pressure control and wireline safety issues.
- Explain how depth, hole angle, and dogleg severity affect effective wireline operation.
- Learn about wireline, coiled tubing, and workover processes and equipment.

Targeted Competencies:

Upon the end of this rigless well intervention in oil and gas training, the participant's competencies will:

- Understanding of Rigless Intervention Techniques.
- Knowledge of Well Access Methods.
- Proficiency in Coiled Tubing Operations.
- Mastery of Wireline and Slickline Services.
- Expertise in Wellbore Cleaning and Stimulation.
- Skills in Subsea Well Intervention.
- Familiarity with Downhole Tools and Equipment.
- Capability in Well Integrity Management.
- Competence in Safety and Risk Management.
- Analytical Skills for oil and gas Well Performance Evaluation.
- Experience with Intervention Planning and Execution.
- Awareness of Environmental and Regulatory Compliance.

Course Content:

Unit 1: Fundamental Well Completion Design, Practices, and Strategies:

- Design Considerations for Well Completion
- Considerations for Reservoirs
- Considerations for the Mechanical
- Completion Classification
- Lower and higher completion string components, as well as selection criteria.

Unit 2: Containment and Barriers:

- Terminology for barriers.
- Obstacles and confinement devices.
- Envelope barrier.
- Testing for barrier integrity.
- Flow-controlling devices mechanical barriers.
- Killing techniques and principles.

Unit 3: Wire Line Types, Tools, and Applications:

- An Overview of Wireline.
- Wireline Types.
- Fundamental tool strings.
- An Overview of Wireline Fishing.
- Stuffing container.
- The wireline valve bop.
- Typical braided line rigging.
- Wireline applications and operational issues.

Unit 4: Coiled Tubing Equipment and Applications:

- Surface and subsurface components of coiled tubing.
- Applications for Coiled Tubing.
- CT cleaning operations.
- Backflow of a well nitrogen lift.

Unit 5: Well Control Devices and Procedures:

- Wireline and Coiled Tubing Pressure Control Equipment.
- Wireline and Coiled Tubing Barrier Elements.
- All barrier components were subjected to pressure testing.
- Wireline operation emergency wire cut on surface or downhole, tools stuck, etc.
- Coiled Tubing Emergency Pin hole in CT surface or downhole, CT stuck, CT crack, etc..