



Oil & Gas Wireline Operations and  
Techniques Training



# Oil & Gas Wireline Operations and Techniques Training

## Introduction:

Many of today's essential oilfield operations hinge on wireline oil and gas operations, which use a strong, thin wire cable mounted on a powered reel. Field operators who function as wireline operators perform crucial tasks such as running diagnostics, troubleshooting, and handling completion and production maintenance using wireline equipment.

This oil and gas wireline operations and techniques course includes firing perforating charges at precisely determined downhole locations, backing off a string of stuck pipes, retrieving objects, or manipulating complex subsurface well pressure and flow controls.

The training in oil and gas wireline operations and techniques dives deep into what a wireline operator is, the evolution of oil and gas wireline operations, and the diverse range of operations performed using wireline equipment.

## Understanding the Wireline Operator Role:

A wireline operator in the oil and gas industry undertakes key on-site responsibilities, including managing wireline operations, ensuring the deployment and retrieval of equipment downhole, and conducting maintenance and troubleshooting as needed.

In this oil and gas wireline operations and techniques course, participants will learn wireline operator duties and emphasize the importance of having trained professionals. Wireline operator training is designed to equip individuals with the necessary competencies to safely and effectively conduct wireline operations in various oilfield environments.

## Targeted Competencies:

At the end of this oil and gas wireline operations and techniques training, participants' competencies will:

- Define what is meant by wireline operations.
- Identify the circumstances in which wireline operations are carried out.
- Describe the key steps involved in wireline operations.
- Explain the importance of pressure control during wireline operations.
- Identify the hazards posed by wireline operations.
- Describe the mitigation measures that can be used to control the risks posed by wireline operations.
- Explain the actions to take in an emergency.

## Training Objectives:

At the end of this oil and gas wireline operations and techniques course, participants will:

- Recognize and explain the function of slick line and wireline equipment.
- Recognize and explain the function of the Pressure Control Equipment and Bottom-hole assemblies for slick line and wireline interventions.
- Identify typical applications for slick line and wireline interventions.
- Assess the pros and cons of each intervention and evaluate which intervention type is utilized for various job problems.
- Identify and describe critical job design considerations that should be present in a contractor proposal.
- Discuss risks associated with each type of intervention and the corresponding mitigation controls.
- Enhance rigless intervention safety, efficiency, and success by applying industry best practices and lessons learned.
- Apply up-to-date knowledge of wireline equipment, techniques, and operations during oil and gas well completion, servicing, workovers, and production.

## Targeted Groups:

- Wireline Operation Engineers.
- Wireline Engineers.
- Subsurface Engineers.
- Production Engineers.
- Field Support Staff.
- Petroleum Engineers.
- Production Technologists.
- Geoscience Engineers.
- Facility/Process Engineers.

## Course Content:

### Unit 1: Well Completion Introduction:

- Introduction to the Petroleum Industry.
- Oil and Gas Well Completion.
- Detailed insight into completion equipment components and their functions.
- Basic Calculations and Conversions.

### Unit 2: Overview of Wireline:

- Exploration of wireline types and wireline operation in oil and gas.
- Wireline Application in different scenarios.
- Critical components of a wireline unit.
- Understanding Well Barriers and Well Control.
- Surface Pressure control equipment and its importance.

### **Unit 3: Slick Line & Braided Line Tools & Applications:**

- In-depth study of the slick line unit and pressure control equipment.
- Braided Line and Pressure equipment functionalities.
- Tools string components and their relevance.
- Running and pulling tools and the associated processes.
- Locks, Standing Valves, Landing Nipples, and Flow control equipment.
- Procedure for Running, Setting, Equalizing, and Pulling.
- Shifting tools and their usage.
- Service and remedial tools overview.
- Practical approach to Changing Gas Lift Mandrels demonstration.
- Protocols for running in the oil and gas well.

### **Unit 4: Slick Line and Braided Line Fishing:**

- Manage wireline challenges, such as a wire broken at the surface.
- Techniques for when the wire remains visible.
- Response to wire broken downhole or blown up the hole.
- Wire finder and wire grab applications.
- Fishing Clamps and their use
- Methodologies for the retrieval of fish.
- Fishing for tools.
- Detailed fishing procedure.

### **Unit 5: Electrical Line Operations:**

- A closer look at electric line features and its equipment.
- Electric line operations logging, perforations, PLT.
- Overcoming wireline challenges.
- Examination of case histories.
- Round table discussion for knowledge sharing and troubleshooting.