CONCEPT

Wireline and LWD Operations: Slickline, Electric Line, Pressure Control and Field Log QC

21 – 25 November 2027
Dammam - Eastern Province five-star



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Ref: 249_15377 **Date:** 21 – 25 November 2027 **Location:** Dammam - Eastern Province five-star **Fees:** 19500 SAR

Introduction:

Wireline and LWD operations put expensive tools into live wells on cable or drill string, and a poorly planned run costs rig time, risks a stuck toolstring and delivers data that cannot be trusted. This Core Concept course trains field staff to choose between slickline, braided line, electric line and LWD conveyance, rig up pressure control, make up toolstrings, control depth, manage stuck-tool and fishing risk, and check every log at the wellsite before it leaves the unit. Participants finish by producing a Logging Job Plan and Field Log QC Pack for one well.

Course Objectives:

- Select slickline, braided line, electric line or LWD conveyance for a well task based on hole angle, pressure, power and data needs
- Rig up and pressure test a wireline surface stack of lubricator, wireline valve, grease head and stuffing box to a written procedure
- Make up and check a toolstring with cable head, weak point, jars, centralisers and tool traps for the planned run
- Control and correlate logging depth using measuring wheel, cable stretch corrections, tie-in logs and casing collar locators
- Assess stuck-tool, cable-damage and fishing risks and apply contingency steps during wireline and LWD jobs
- Apply field log quality control checks and deliver a documented data package to the interpretation team

Target Audience:

- Wireline and logging field engineers who run open-hole and cased-hole jobs from the logging unit
- Wellsite and operations geologists who witness logging runs and accept the delivered data
- Drilling and completion supervisors who schedule logging, approve rig-up and manage rig time during runs
- Well services and slickline crews who carry out gauge, valve and plug work under well pressure
- Logging contract and data coordinators who specify services and track data delivery

Course Outline:

Day 1: Wireline and LWD Conveyance Methods and Job Scope

- Slickline, Braided Line and Electric Line Cable Construction and Load Limits
- Open-Hole Versus Cased-Hole Wireline Runs and Their Field Objectives
- MWD Versus LWD: Bottom Hole Assembly Sensors and Directional Surveys
- Conveyance Selection Matrix: Hole Angle, Well Pressure, Power and Data Rate
- Logging Unit, Winch, Depth Panel and Acquisition System Walkround

Day 2: Surface Equipment, Pressure Control and Toolstring Make-Up

- Wireline Pressure Control Stack: Lubricator, Wireline Valve Rams and Riser
- Grease Head Flow Tubes and Stuffing Box Pack-Off Sealing on the Cable
- Lubricator Pressure Test Procedure and Rig-Up Acceptance Checklist
- Cable Head, Weak Point Rating and Maximum Safe Pull Calculation
- Toolstring Components: Stem, Jars, Knuckle Joints, Centralisers and Tool Traps

Day 3: Depth Control, Job Execution and LWD Real-Time Operations

- Measuring Wheel Depth, Magnetic Marks and Cable Stretch and Temperature Corrections
- Tie-In Logs, Casing Collar Locator and Gamma Ray Correlation for On-Depth Runs
- Logging Speed, Tension Monitoring and Tool Sequencing in the Logging Programme
- Mud Pulse, Electromagnetic and Wired Drill Pipe Telemetry for LWD Data
- LWD Real-Time Data Versus Memory Data Download and Geosteering Support

Day 4: Job Risk, Stuck Tools, Fishing and Service Tools

- Logging Job Risk Assessment: Differential Sticking, Key-Seating and Hole Condition
- Stuck Toolstring Decision Tree: Pull Limits, Cut-and-Thread and Fishing Options
- Wireline Fishing Tools: Overshots, Spears, Wire Finders and Grabs
- Perforating Guns and Explosive Handling Controls at Overview
- Plug and Packer Setting Tools and Slickline Gauge and Valve Operations

Day 5: Field Log Quality Control and Data Handover Case Work

- Pre-Job and Post-Job Tool Calibrations and Verification Records
- Log Header Completeness, Repeat Pass Comparison and Tension Curve Review
- LAS Digital Data Export, Run Summary and Remarks Section Standards
- Case Study: Troubleshooting a Failed Run from Field Records
- Logging Job Plan and Field Log QC Pack Presentation and Peer Review

Skills You Will Gain:

- Wireline Conveyance Selection
- Pressure Control Rig-Up
- Toolstring Configuration
- Logging Depth Correlation
- LWD Telemetry Monitoring
- Stuck Tool Contingency Planning
- Field Log Data Verification
- Logging Data Handover

Why Attend This Course:

- Return with a Logging Job Plan and Field Log QC Pack you can apply to your next wireline or LWD run
- Know when to pull, when to stop and when to fish before a stuck toolstring turns into lost rig days
- Spot an off-depth run, a missing calibration or a poor repeat pass before the logging unit leaves location
- Compare rig-up and data delivery practice with field staff from different operators and service companies

Conclusion:

Good wireline and LWD data starts with the right conveyance, a tested pressure control stack and a toolstring built for the hole it will enter. The week moves from cable types and job scope through surface equipment, depth control and LWD telemetry to stuck-tool risk, fishing and service tools, then applies field quality control checks to real run records. Participants leave with a Logging Job Plan and Field Log QC Pack ready for their next well.