RELAY™ Digital Slickline System

INTELLIGENT SLICKLINE CONVEYANCE FOR WELL INTERVENTION

OVERVIEW
RELAY™ Digital Slickline system combines the versatility and efficiency of traditional slickline with the real-time data streaming capability of electric line.

PART OF OUR COMPREHENSIVE APPROACH
Halliburton offers a comprehensive strategy of Diagnose, Design, and Deliver to help operators realize maximum value from their existing wells.

Diagnose
We gather information about the well, the field, and our customers’ unique objectives to create a complete understanding of the challenge.

Design
Using information gathered during the Diagnose phase, with existing data, we collaborate with our customers to design a solution that uses the ideal tools and equipment to effectively and economically improve well performance.

Deliver
Our team of multiskilled experts executes the risk-assessed program to ensure that it aligns with our customers’ objectives.

This three-step approach is the key to using well intervention services to bring more value to our clients.

<table>
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<tr>
<th>DIAGNOSE</th>
<th>DESIGN</th>
<th>DELIVER</th>
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<tbody>
<tr>
<td>CHALLENGES</td>
<td>Cased Hole</td>
<td>Slickline</td>
</tr>
<tr>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 2</td>
</tr>
<tr>
<td>WIRELINE INTERVENTION</td>
<td>Slickline</td>
<td>Slickline</td>
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<tr>
<td>Well Integrity</td>
<td>Flow Assurance</td>
<td>Reservoir Understanding</td>
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<tr>
<td>Real-Time Logging</td>
<td>Memory Mode</td>
<td>Real-Time Data &amp; Control</td>
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BENEFITS
» Versatile operations – Adds onto any current slickline package for mechanical, diagnostic, perforating, plug setting, and pipe recovery operations

» Simplified logistics – Less smaller lifts reduce costs and logistical challenges

» Reduced HSE exposure – Minimizes HSE risks by reducing personnel, rig ups, PCE, and lifts

» Improved efficiency – One rig up covers all slickline and electric line services with real-time slickline depth control and downhole assurance feedback

» Small footprint – Unit size allows placement in tight spaces to perform services on and off the critical path

FEATURES
» Streaming data to and from downhole tools – Command signals travel through the RELAY system, allowing operators to communicate with downhole tools in real time. Slick, small-diameter conveyance wire for efficient pressure control

» Mechanical strength comparable to traditional slickline – The RELAY system wire is built to be rugged and strong enough to provide activation for mechanical tools and fishing operations for stuck equipment in the well

» Reduced footprint and versatility – The RELAY system unit is comparable in size to a traditional slickline unit – perfect for tight spaces like offshore platforms

» Certified for hazardous zone operations – This system is designed to be used in all kinds of environments, including hazardous zones
RELAY™ Digital Slickline System

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Diameter</td>
<td>0.160 in. (4.064 mm)</td>
</tr>
<tr>
<td>Working Pressure</td>
<td>15,000 psi (103,421 KPa)</td>
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<tr>
<td>Working Temperature</td>
<td>-40°F to 350°F (-40°C to 176°C)</td>
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<tr>
<td>Service Environment</td>
<td>H₂S, CO₂, CH₄, Brine, Methanol</td>
</tr>
<tr>
<td>Cycle Fatigue Life</td>
<td>Comparable to Stainless Steel Slickline</td>
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CUSTOMIZED SOLUTIONS

Halliburton is the leader in integrated cased-hole solutions, offering a wide array of services that are fully compatible with the RELAY™ system.

» The Elite DPU® Downhole Power Unit produces a reliable force for setting wellbore tools on command

» Command MaxFire® SL system can enable safe and consistent explosive trigger deployment on command

» Reservoir Monitor Tool 3-Detector (RMT-3D™) pulsed-neutron tool can provide three independent measurements to evaluate saturations, porosity, and flow behind pipe

» Acoustic Conformance Xaminer® (ACX™) service is part of a new-generation acoustic tool that uses hydrophone array technology to locate and describe communication paths and flow areas – vertically and radially in the wellbore area – and can create a 2D flow map of the leak

» Electromagnetic Pipe Xaminer® (EPX™) service is the latest generation of corrosion monitoring tools that can analyze multiple strings of pipe in a single run

» Production Logging, Multifinger Caliper Inspection, Cement Evaluation, and Cased-Hole PVT Fluid Sampling (ARMADA® tool)

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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