SIX WAYS to Reduce Well Intervention Costs

slb.com/ACTive

Schlumberger
In turbulent times, optimizing the performance of existing wells is a practical choice that reduces the costs and risks associated with well intervention. Innovative coiled tubing (CT) technologies offer several key benefits, including reduced footprint, accurate measurement of bottomhole pressures and temperatures, proper depth correlation, and precise load measurements, in a unique, robust package for harsh environments and complex systems. This information enables operators to make educated decisions as the job progresses, respond immediately and adjust job parameters as conditions change, and eliminate guesswork.

**ACTive live downhole coiled tubing services**

ACTive services provide real-time measurements, including internal and external pressure, temperature, casing collar locator (CCL) depth correlation, and distributed temperature measurements, conveyed through fiber-optic telemetry. Resistant to acid and H₂S, these real-time CT services give you the opportunity to monitor and evaluate job progress in any well, to optimize treatment results, and to intervene with one trip in hole.
Use accurate well diagnostics to make decisions

Controlled stimulation requires accurate location and placement of downhole tools.
Real-time pressure, temperature, and casing collar locator measurements improve job efficiency and subsequent well performance.

New proprietary technology enables operators to design an entire treatment based on live monitoring of pressure, temperature, and injection rates. These real-time measurements—including pressure, temperature, casing collar locator, gamma ray, and tension and compression modules—enable operators to accurately determine the depth of the tool end, whether the weight applied on surface is transmitted to bottom, the reservoir response, and whether the pressure applied is adequate.

The ACTive PTC® live CT pressure, temperature, and casing collar locator tool delivers measurements to surface in real time.

**FEATURES**
- Ability to convert electrical to optical
- Onboard diagnostics
- Ability to combine real-time digital telemetry–based diagnostics with other measurements
- Real-time depth correlation with completion via casing collar locator
- Real-time internal and external CT pipe pressure and temperature
- Wireless surface communications
- Fast-rate telemetry
- Plug-and-play compatibility with the majority of CT downhole tools
- Innovative proprietary system to enable job-optimization decisions in real time on a single trip

**APPLICATIONS**
- Flow contribution and production diagnostics
- Stimulation and diversion effectiveness
- Water-injection profiles
- Multiple injection evaluation treatments
- Well kickoff
- Sand cleanouts
- Accurate bottomhole pressure management

**CASE STUDY**
CT stimulation service helps
Saudi Aramco double production
in water-wet wells

An operator needed to use CT to effectively stimulate wells with high water cut and eliminate the risk of increasing water cut due to acidizing. Using the ACTive PTC tool, the operator was able to monitor injection rates and downhole pressure and temperature. This monitoring enabled maximum fluid penetration and successful isolation and stimulation of the oil-producing zone, with a 30% decrease in water cut and 3,000 bbl/d of incremental oil production. The combination of the ACTive PTC tool with DTS allowed for precise monitoring of treatment evolution and on-the-spot job volumes and parameters modifications.

**BENEFITS**
- Improve decision-making with real-time downhole pressure
- Respond quickly to changes in temperature
- Achieve accurate depth correlation with casing collar locator measurements

**APPLICATIONS**
- Flow contribution and production diagnostics
- Stimulation and diversion effectiveness
- Water-injection profiles
- Multiple injection evaluation treatments
- Well kickoff
- Sand cleanouts
- Accurate bottomhole pressure management

**ACTive PTC**

**SPECIFICATIONS**
- Pressure: 12,500 psi (86,184 kPa)
- Temperature: 300 degF (149 degC)
- Outside diameter: 2.125 in (5.40 cm)
- Makeup length: 7.2 ft (2.19 m)

**Pressure (Microelectromechanical system [MEMS] gauge)**
- Accuracy: ±3 psi

**Temperature (MEMS gauge)**
- Accuracy: ±0.55 degC
- Resolution: 0.01 degC

**Casing collar locator**
- Resolution at 30 fps: ±1 ft/s

**ACTive PTC tool increases overall production while controlling water cut.**
Correlate against the formation
Retain pumpthrough capabilities while logging

The ACTive GR* live CT gamma ray logging tool detects gamma rays in the formation in real time while maintaining pumpthrough capabilities for CT interventions.

**APPLICATIONS**
- Accurate depth correlation
- Qualitative evaluation of lithology
- Radioactive tracer monitoring
- Perforating or abrasive jetting in a single run

**FEATURES**
- Ruggedized version for use during perforating operations
- Design that accommodates ball drop to enable activating tools below
- Plug-and-play combination with other services
- Pumpthrough capability for CT intervention and gamma ray log in same run
- Accurate gamma ray correlation for precise identification of downhole conditions

**CASE STUDY**
**Overcoming severe drilling damage**
While drilling a K-carbonate gas well in the Middle East, an operator encountered high fluid losses due to lost circulation material, which caused severe damage to the near-wellbore formation and had low solubility in acid.

To accurately perform abrasive jetting to place notches that extended through the damaged area, the ACTive GR tool was used to obtain gamma ray measurements in real time and identify the precise depth to perforate in every thin interval with high gas saturation. This information enabled the operator to save time compared with existing conventional methods of depth correlations, which require two separate runs.

This successful placement identified by the ACTive GR tool brought production online quickly to achieve the field’s highest postperforating gas flow.

**Read case study**

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Using gamma ray data is an effective and accurate way to evaluate a formation and conditions. Gamma ray tools record naturally occurring gamma rays in the formations adjacent to the wellbore to accurately measure the radioactive content of the formations. Effective in any environment, gamma ray tools are used to correlate logs from cased and open holes.

When combined with ACTive services, this technology enables correlation while maintaining pumpthrough capability for CT interventions. The measurements gathered during depth correlation can be used in conjunction with other CT services to further enhance an intervention’s effectiveness.

**ACTive GR**

**Real-time correlation**
Provides industry-standard measurements

**Pumpthrough capabilities**
Enables CT intervention and gamma ray log in one run

**No need for wireline unit**
Reduces footprint at the wellsite

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**DID YOU KNOW?**
The ACTive GR tool is similar to the wireline gamma ray tool but does not require additional components.

**Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>GRSM</th>
<th>GRNM</th>
</tr>
</thead>
<tbody>
<tr>
<td>OD, in (cm)</td>
<td>2.500 [6.35]</td>
<td>2.375 [6.03]</td>
</tr>
<tr>
<td>Makeup length, in [m]</td>
<td>39.88 [1.01]</td>
<td>37.52 [0.95]</td>
</tr>
<tr>
<td>Max. ball drop size, in [mm]</td>
<td>0.438 [11.11]</td>
<td>0.625 [15.875]</td>
</tr>
<tr>
<td>Flow path diameter, in [mm]</td>
<td>0.500 [12.7]</td>
<td>0.688 [17.48]</td>
</tr>
<tr>
<td>Max. flow rate, bbl/min</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Rated for perforation jobs</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**CONTACT US**
Effectively manipulate wellbore hardware
Detect even the smallest changes in weight downhole

When a remedial operation is necessary, efficiency is key. Reducing operational time during CT retrieval and fishing minimizes deferred production and the time and resources wasted while the operation is ongoing. With real-time downhole information, job parameters can be adjusted immediately throughout the intervention.

New tension-compression technology provides downhole load and torque measurements while also maintaining pumpthrough capability. The measurements are conveyed to surface on CT that is enabled by fiber-optic telemetry for faster evaluation and reduced errors.

The ACTive TC™ live CT tension and compression tool provides downhole load and torque measurements in real time through fiber-optic telemetry.

**APPLICATIONS**
- CT operations in deviated and horizontal wells
- Positive indication of latching or jar activation
- Confirmation of sliding sleeve activation
- Confirmation of completion hardware manipulation
- Positive indication of inflatable packer setting
- Indication of perforating guns firing

**FEATURES**
- Downhole load and torque measurements in real time
- Robust design for use during perforating and fishing operations
- Pumpthrough capability to allow CT intervention in the same run
- Ball-drop capability through the tool for activation of tools below
- Plug-and-play combinability with enhanced ACTive services

**SPECIFICATIONS**
- OD 2.125 in [5.40 cm]
- Total weight 38 lbm [17.2 kg]
- Max. torque 800 ft.lbf [1,085 N.m]

**MEASUREMENT SPECIFICATIONS**
- Pressure compensated measurements: Yes
- Axial load range: –10,000 – 45,000 lbf [–44,482 – 200,169 N]
- Axial load accuracy: Absolute: 500 lbf [2,224 N] +1% applied
- Localized: 2% applied
- Axial load resolution: 5 lbf [22.2 N]
- Torque range: 0 – 800 ft.lbf [0 – 1,085 N.m]
- Torque accuracy: ±5 ft.lbf [±6.8 N.m]
- Torque resolution: ±1 ft.lbf [±6.1 N.m]

**ACTive TC tool enables shifting of 10 ICDs in horizontal wells within 6 hours**
An operator needed to access inflow control devices (ICDs) in horizontal wells to confirm opening of sleeves and determine the status of the sliding sleeves during the operation, and wireline was unable to reach the depth of the ICDs. Using the ACTive TC tool, the depth of the CT was correlated to the position of ICDs using the casing collar locator feature. Once the dog collars were confirmed to be open, the ACTive TC tool was moved up and latched onto the ICD sleeve. A total of 10 ICDs were shifted within 6 hours versus more than 12 hours by using conventional toolstrings, and a DTS survey evaluated the opened sleeves.

**COMPARABLE TOOLS**
- Setting tool
- Shifting tool
- Packer
- Straddle packer

**COMPATIBLE TOOLS**
- Improved accuracy with real-time downhole measurements
- Greater efficiency and control
- Reduced risk of unsuccessful operations

**DID YOU KNOW?**
Using the ACTive TC tool, you can detect as little as a 5-lbf change in downhole forces.

**CASE STUDY**
ACTive TC tool provided the ability to apply the exact amount of force needed to shift 10 ICDs open within 6 hours compared with 12 hours using conventional methods.

**Contact Us**
Extend zonal isolation with robust multisetting

Overcome well and environmental challenges in real time

Difficult-to-access, chemically harsh, and high-temperature environments can still benefit from effective zonal isolation. Accurately placing treating fluids for acid stimulation, water control, gas shutoff, and chemical treatment in harsh environments is difficult and requires rugged, reliable technology.

With a robust multiset mechanism, these packers can perform repeated remedial operations without killing the well. The latest packers are also resistant to chemicals, enabling treatment in previously inaccessible wells.

The ACTive Straddle® CT real-time multiset inflatable packer extends critical through-tubing zonal isolation to previously inaccessible environments with a reliable multiset mechanism.

**FEATURES**
- Live well intervention capability
- No ball drop required for inflation and deflation
- Computer-engineered job design
- High-pressure isolation seal
- Straddle length configurable from 6 to 50 ft (1.8 m to 15.2 m)
- Chemical-resistant for selectively placing fluids required for treatment and stimulation

**APPLICATIONS**
- Water and gas conformance shutoff
- Matrix stimulation and chemical treatment
- Perforated cased hole completions
- Cased hole completions with sliding sleeves
- Completions with ICDs
- Multistage completions
- Sand consolidation treatment

**CASE STUDY**
ACTive Straddle inflatable packer cleanout doubles production in two wells
With more than 20 ICDs in each well, Kuwait Oil Company (KOC) needed to identify and selectively treat the problematic ICDs and restore production with minimal downtime.

Using ACTive Straddle packer in combination with the ACTive DTS Inversion* distributed temperature measurement analysis, KOC identified, isolated, and selectively treated the plugged ICDs in a single run in each well, saving more than one week of rig time, increasing production from Well A by 150%, increasing production from Well B by 171%, and producing 50,000 bbl of oil.

Read case study

**BENEFITS**
1. Improves reliability through multiple efficient, controlled settings of inflatable elements
2. Resists aggressive chemicals and harsh downhole environments
3. Provides accurate depth control and real-time pressure monitoring

**SPECIFICATIONS**
- Max. packer element differential
  - 2:1 expansion: 5,000 psi (34.5 MPa)
  - 3:1 expansion: 2,000 psi (13.8 MPa)
- Max. hole deviation: 90°
- Max. system temperature: 300 degF (149 degC)
- Max. dogleg severity: 10°/100 ft (30°/100 ft) operational, 30°/100 ft salvageable
- Max. 
  - H₂S levels†: 150-psi partial pressure
  - Set time: < 30 d at 300 degF (149 degC)
  - Set time: > 30 d at 250 degF (121 degC)
- Max. OD of element before expansion: 2.125 in (5.4 cm)
- Max. OD of element after expansion: 6.38-in (16.2-cm) ID, 7.63-in (19.4-cm) OD, 29.7-lbm/ft casing

†Values are operational limits.

**DO YOU KNOW?**
The packer provides robust, high-pressure isolation seals and can be configured in lengths ranging from 6 ft to 50 ft (1.8 m to 15.2 m) and up to 6.3-in (16-cm) ID.

Contact Us

Learn more at slb.com/ACTiveStraddle

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†Values are operational limits.
Perforate more efficiently and reduce risk
Avoid deferred production and killing the well when reperforating

Properly perforating or reperforating a well can make a dramatic difference in production. A successful perforating intervention enhances production in new or existing intervals. However, conventional methods for perforating with CT often require multiple runs, experience perforating head limitations, and lack confirmation of detonation.

Schlumberger has advanced CT perforating technology to selectively perforate up to 10 zones in a single run and provide real-time confirmation of detonation downhole. These improvements enable the system to enhance intervention safety, eliminate the need to pump fluid to detonate, and reduce perforating time.

The ACTive OptiFIRE* CT real-time selective perforating and activation system provides a safer, more economical, and more efficient method for perforating with CT.

**APPLICATIONS**
- Selective, underbalanced, and live well perforating
- Tubing punching
- Plug setting

**ACTive OptiFIRE**

**BENEFITS**
- Greater Safety and Certainty
  - Real-time detonation confirmation
  - Detonation without fluids or balls
- Accuracy
  - Casing collar locator and gamma ray correlation
- Flexibility
  - Selective perforating of multiple guns
- Efficiency
  - Lighter than conventional CT electric line reels, with better extended reach and ability to pump acid

**FEATURES**
- Ability to fire up to 10 zones in a single run
- Selective perforating capabilities
- Robust selective-firing multiple-gun system for single-run efficiency
- Capability of addressing pumping issues in subhydrostatic wells
- Improved safety from addressing each gun with advanced switches
- Reduced footprint
- Real-time pressure and temperature for optimized fluid placement and hydrostatic pressure control
- Fast-acquisition accelerometer for detonation confirmation

**CASE STUDY**
**Underbalanced perforating technology reduces deferred production and intervention time**
To prevent deferred production and remove formation damage, Pemex needed to perforate two new intervals and reperforate a critical zone on a live well in underbalanced conditions. Schlumberger deployed the ACTive OptiFIRE system, a first-of-its-kind coiled tubing technology that eliminates the need for a ball-drop or pressure-pulse system to activate shaped charges. Using advanced fiber-optic technology, Schlumberger accurately placed the perforating guns, activated the charges without a ball-drop or pressure-pulse system, and confirmed downhole detonation in real time.

**DID YOU KNOW?**
The ACTive OptiFIRE system provides all the advantages of perforating with CT and electric line without the need for a wireline unit.

**BENEFITS**
- 75% Reduction
- The ACTive OptiFIRE system successfully perforated all three intervals, increased production 18%, and reduced perforating gun detonation time by 75%.

**APPLICATIONS**
- Selective, underbalanced, and live well perforating
- Tubing punching
- Plug setting

**Locative Mexico**

**Specifications**
- Operating temperature range: -40 to 302 degF [-40 to 150 degC]
- Pressure rating: 12,500 psi [86 MPa]
- Flow rate†: 2 bbl/min [0.31 m³/min]
- Max. gun size: 3.375-in HSD* high-shot density perforating gun system
- Gun compatibility: Carrier guns only with addressable switches and Secure2® RF-safe electronic detonators
- Max. number of selective zones: 10
- Outside diameter: 2.125 in [5.40 cm]
- Pressure rating above the firing head limitation

**Location**

**Learn more at**
slb.com/ACTiveOptiFIRE

**Contact Us**
Integrate wireline production logging capabilities with CT

Acquire evaluation, design, diagnostics, and optimization data in just one trip to the wellsite.

The ACTive PS* live CT production logging service couples real-time fiber-optic telemetry with existing wireline production logging tools to acquire data in real time.

**APPLICATIONS**
- CT and extended-reach logging
- Wireline production logging operations using PS Platform* production services platform, Flow Scanner* horizontal and deviated well production logging system, and RSTPro* reservoir saturation tool
- Nitrogen kickoff
- Well stimulation
- Onsite evaluation
- Wellbores inaccessible by wireline

**FEATURES**
- Real-time fiber-optic telemetry
- Wireless data conveyance
- Self-contained technology
- Faster, higher-quality data
- Real-time data evaluation
- Simplified logistics
- Compatibility with PS Platform platform and DTS

**DID YOU KNOW?**
Operators can run ACTive PS service with a wireline reservoir saturation tool such as the RSTPro tool.

**CASE STUDY**
ACTive PS service reduces rig operational time by 10 days during plug setting and well cleanout
An operator needed to perform production logs and matrix stimulation operations, as well as shut off H2S and water-producing zones in extended-reach wells with major logistical constraints. The operations required a single piece of equipment to fit on the small platform and preventing swapping our units during the operation.

Using the ACTive PS service, the operator was able to perform production logging operations using PS Platform platform and Flow Scanner system. Alternating the use of ACTive PS service and ACTive PTC tool saved the operator multiple runs and equipment changes, including a total of 10 days in rig operations with a total of 16 runs performed in 7 wells within 2 months.

**APPLICATIONS**
- CT and extended-reach logging
- Wireline production logging operations using PS Platform* production services platform, Flow Scanner* horizontal and deviated well production logging system, and RSTPro* reservoir saturation tool
- Nitrogen kickoff
- Well stimulation
- Onsite evaluation
- Wellbores inaccessible by wireline
**ACTive PTC Tool Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>12,500 psi (86,184 kPa)</td>
</tr>
<tr>
<td>Temperature</td>
<td>300 degF [149 degC]</td>
</tr>
<tr>
<td>Outside diameter</td>
<td>2.125 in [5.40 cm]</td>
</tr>
<tr>
<td>Makeup length</td>
<td>7.2 ft [2.19 m]</td>
</tr>
</tbody>
</table>

**Pressure (Microelectromechanical system [MEMS] gauge)**

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Typical</td>
<td>±3 psi</td>
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<tr>
<td>Maximum</td>
<td>±5 psi</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.075 psi</td>
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</table>

**Temperature (MEMS gauge)**

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±1 degF [±0.55 degC]</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01 degF [0.005 degC]</td>
</tr>
</tbody>
</table>

**Casing collar locator**

| Resolution at 30 fps   | ±1 ft/s |

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**ACTive GR Tool Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>GRSM</th>
<th>GRNM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OD, in</td>
<td>2.500</td>
<td>2.375</td>
</tr>
<tr>
<td>Makeup length, in</td>
<td>39.88</td>
<td>37.52</td>
</tr>
<tr>
<td>Total weight, lbm</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Max ball drop size, in</td>
<td>7/16</td>
<td>7/8</td>
</tr>
<tr>
<td>Flow path diameter, in</td>
<td>0.300</td>
<td>0.168</td>
</tr>
<tr>
<td>Material</td>
<td>NACE compliant</td>
<td>NACE compliant</td>
</tr>
</tbody>
</table>

| Operating temperature, degF | 300   | 300   |
| Pressure rating, psi        | 12,500 (at max tensile rating) | 12,500 (at max tensile rating) |
| Tensile strength, lbf        | 45,000 (at max pressure rating) | 45,000 (at max pressure rating) |
| Max torque, lbf              | 800   | 800   |
| Max flow rate, bbl/min       | 1.5   | 2     |
| Fluid compatibility          | All common treating fluids including acid and H₂S | All common treating fluids including acid and H₂S |

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**ACTive Straddle Packer Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. packer element differential 2:1 expansion</td>
<td>5,000 psi [34.5 MPa]</td>
</tr>
<tr>
<td>Max. packer element differential 3:1 expansion</td>
<td>2,500 psi [17.8 MPa]</td>
</tr>
<tr>
<td>Max. hole deviation</td>
<td>10°/100 ft</td>
</tr>
<tr>
<td>Max. system temperature</td>
<td>300 degF [149 degC]</td>
</tr>
<tr>
<td>Max. H₂S levels†</td>
<td>Set time &lt; 30 d at 300 degF [149 degC]</td>
</tr>
<tr>
<td>Set time &gt; 30 d at 250 degF [121 degC]</td>
<td>50 psi partial pressure</td>
</tr>
<tr>
<td>Min. tubing requirements for packer setting</td>
<td>2.88 in [7.3-cm] OD, 2.32 in [5.9-cm] ID, 7.8-lbm/ft casing</td>
</tr>
<tr>
<td>Max. OD of element before expansion</td>
<td>2.125 in [5.4 cm]</td>
</tr>
<tr>
<td>Max. OD of element after expansion</td>
<td>2.125 in [5.4 cm]</td>
</tr>
<tr>
<td>Fluids</td>
<td>Stimulation fluids: HCL, mud acid</td>
</tr>
<tr>
<td></td>
<td>Chemical treatments: solvents</td>
</tr>
<tr>
<td></td>
<td>Water/gas shutoff: MARA-SEAL®, gelling agents</td>
</tr>
</tbody>
</table>

†Values in the table above are operational limits.
SIX WAYS to Reduce Well Intervention Costs

ACTive OptiFIRE System Specifications

- Operating temperature range: –40 to 302 degF (–40 to 150 degC)
- Pressure rating: 12,500 psi (86 MPa)
- Flow rate:, 2 bbl/min (0.31 m³/min)
- Max. gun size: 3.375-in HSD* high-shot density perforating gun system
- Gun compatibility: Carrier guns only
- Max. number of selective zones: 10
- Max. OD of element before expansion: 2.125 in (5.40 cm)
- Compressive strength: 10,000 lbf (44,480 N)
- Number of total guns: Depends on tensile strength
- Detonator type: Secure2 RF-safe electronic detonator

<table>
<thead>
<tr>
<th>2.125-in OD Tool with 1.69-in Adapter</th>
<th>2.125-in OD Tool with 3.38-in Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>2.125 to 1.69 in (5.40 to 4.30 cm)</td>
</tr>
<tr>
<td>Makeup length</td>
<td>114.3 in (291.8 cm)</td>
</tr>
<tr>
<td>Total weight</td>
<td>86.4 lbm (39.2 kg)</td>
</tr>
<tr>
<td></td>
<td>120.2 in (305.3 cm)</td>
</tr>
<tr>
<td>Total weight</td>
<td>102.4 lbm (46.4 kg)</td>
</tr>
</tbody>
</table>

†Pumping rate above the firing head limitation.

ACTive PS Service Specifications

- Surface (optical acquisition module mounted inside the CT reel)
  - Temperature rating: –13 to 131 degF (–25 to 55 degC)
  - Power requirement: 12 V DC
  - Data communication: Wireless

- Downhole
  - Total tool length: 12.5 ft (3.81 m)†
  - Diameter: 1 11/16 in (4.3 cm)
  - Pressure rating: 15,000 psi (103.4 MPa)
  - Operating time: At least 36 hours of logging time‡
  - Flow rate at CT head ports: 1 bbl/min (120 m³/min)
  - Material: NACE compliant
  - Compatible logging tools: Any battery-operated PS Platform service, Flow Scanner system, or RSTPro tool

†An additional 18 ft (5.5 m) are added to the tool length with the three-battery extended power module, and an additional 30 ft (9.1 m) are added to the tool with the six-battery extended power module. ‡Over 100 hours of additional operating time are added for the Flow Scanner system, or 26 hours of running the RSTPro tool with the extended power module.