Assure™ Conveyance Solution

Deploys memory-capable openhole logging tools with on-demand communication

Applications

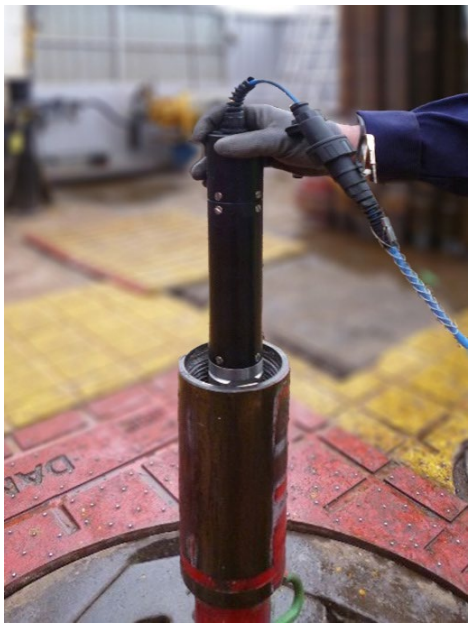
- High-angle and horizontal wells
- Difficult hole conditions that preclude conventional conveyance options
- High-dogleg-severity wells
- Logging operations that require continuous circulation, pipe rotation, and full well control during logging
- Logging long intervals in one pass without the need for multiple latches
- Small footprint operations with no space for a wireline unit

Features and Benefits

- Drillpipe conveyance enables faster, safer, and more reliable delivery of logging tools, reducing risk in problematic hole conditions.
- Two-way communications and advanced downhole autonomy deliver reliable information about the tool status.
- Ability to log more services in a single run, even in extended-reach and deeper wells, without the requirement of latches, reducing nonproductive time (NPT) and avoiding a 'no log' situation.
- Improved shock absorber system enables deployment of large toolstrings in low-angle or vertical wells.
- Stackable batteries deliver energy capacity for a large suite of measurements, even in extended-reach, horizontal wells.
- Powerful downhole software with a high data sampling rate minimizes trip times, and autonomous recovery strategies improves reliability.
- Increased flow areas and improved debris tolerance enables deployment with multiple mud systems and a wide range of well conditions.

Description

The Assure conveyance solution advances autonomy and communication in openhole logging to improve operational outcomes. The solution combines Weatherford's Compact™ Well Shuttle and Drop-off Systems into a single platform, enabling effortless shifting from one option to another without the need for additional tools. The Assure conveyance solution includes two-way communications and advanced downhole autonomy to deliver reliable information about the job's status.



The tools power up and function checks are completed at the surface via an inductive coupling interface.

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Description (continued)

In the Well Shuttle method, the logging tools are housed inside the bottomhole assembly (BHA), protecting them while running in the hole. The tools are released near total depth (TD) into the open hole, landing in a no-go arrangement, and acquire data in memory mode. The Drop-Off method, using much of the same equipment, allows the drillstring to be worked to TD and then for a memory toolstring to be run through drillpipe to the no-go landing ring. This method enables the tools to safely pass through bad hole conditions and high-angle sections. In both methods, as the drillpipe is pulled to the surface, data are recorded against time, which is subsequently time-depth matched to create conventional depth logs.

The Assure conveyance solution is also a hybrid between memory logging and real-time wireline. An engineer can take full control of the toolstring when latched, enabling thorough tool checks and before-calibrations at the rig floor and while dropping/retrieving tools in the Drop-Off mode.

Specifications

Measurement

Temperature	302°F (150°C)
Pressure	15,000 psi (103 MPa)
Thread type	3-1/2 in. IF
Recommended makeup torque	7,200 ft.lb (7,960 N m)
Maximum flow rate	10 bbl/min (1.6 m^3/min)
Maximum rotation rate (Shuttle)	60 rpm latched / 30 rpm landed

Note: Wash pipe extensions are required for larger OD tools.