HALLIBURTON

WELL INTERVENTION

High-expansion cement bridge plug solution

Unsurpassed performance for conformance and plugback recompletions

FEATURES

- The self-centralizing slips and anchors provide a large support force and differential pressure rating
- Run in/run out of hole line speed modeled to minimize swab or surge effects on the dumped cement prior to setting
- The HECBP design allows for rapid scaling up or down for additional or custom casing sizes
- Prepackaged cement kits contain all required additives for a wide variety of temperature applications

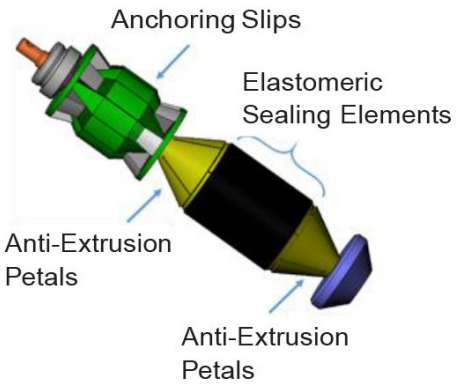
BENEFITS

- Provides total rigless recompletion solution
- Increased safety through nonexplosive plug setting and subsequent dump bailer cement operations
- Record of setting force and stroke length provides positive assurance of plug setting

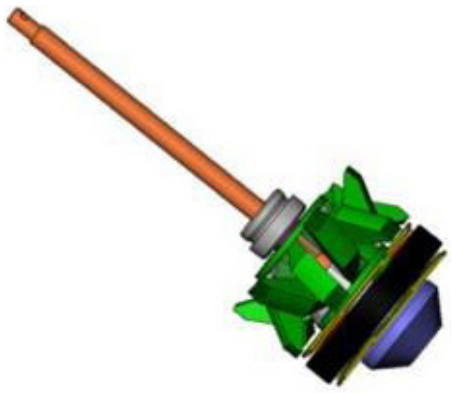
Overview

The Halliburton High-Expansion Cement Bridge Plug (HECBP) solution offers unsurpassed performance for conformance and plugback recompletions. The recompletion solution comprises the following components:

- High-expansion elastomeric seal
- Downhole Power Unit (DPU®) nonexplosive electromechanical setting tool
- Nonexplosive positive displacement dump bailer (PDDB)
- Engineered cement mix and system
- 3½-in. run-in diameter systems
- Conveyance options on slickline, E-line, or RELAY™ digital slickline



Run in Hole



Set Plug

The slip assemblies located at the top of the plug support a bidirectional force of up to 45,000 lbf (200 kN) and provide the stable base for the required cement plug. To obtain the 45,000 lbf of bidirectional support, the slip assemblies are designed to operate in a specific casing size and weight range. Therefore, a family of HECBP is available for commonly used casing sizes.

The sealing elements are designed to provide an effective seal from ambient room temperature up to temperatures as high as 300°F (148°C) and ensure long-term seal integrity. The anchoring slips and the integral centralizers support the tool in highly deviated well conditions. The set plug length is the shortest in the industry and is the base for subsequent cement placement.

The long-stroke DPU setting tool records in real time the stroke length, setting force, and load profile at which the DPU tool detaches from the plug. Recording of the setting event provides quality assurance of the setting operation. The DPU setting tool does not use explosive materials and can be used to set a full range of wellbore plugging devices.

The cement plug barrier is designed to be dumped rather than pumped. The cement is formulated to have a high-bind strength, which provides the sealing and adhesion properties of the set cement to the inside of the casing. Accurate temperature at the plug-setting depth is needed for selection of the required cement additives, which can be obtained by running a temperature sensor with the gauge run.

The cement is placed on top of the HECBP with a PDDB, which minimizes the contamination of the cement slurry with borehole fluids and ensures plugging integrity.

Halliburton 3½ -in. High-expansion cement elastomeric bridge plugs

P/N	CASING OD IN.	CASING LB/FT	CASING ID IN.	RIH OD	STROKE TO SET	SET LG*	DIFF PRESSURE**
102948163	7	23-29	6.366-6.184	3.5 in. (8.89 cm)	9.5 in. (24.13 cm)	7.2 in. (18.29 cm)	1,500 psi (103.4 bar)

"*Theseal material lengthisapproximately 0.9-in. long when plug is fully set

**Pressure differential hold force of slips without cement; cement placed on plug is required for desired differential

Halliburton 2½ -in. slickline DPU® tool

P/N	TOOL OD IN.	PRESSURE RATING	TEMP RATING	MaXForce®* OUTPUT	STROKE LENGTH	STROKE RATE	TOOL LENGTH
101038257	2½ in. (54 mm)	15,000 psi (1043 bar)	300°F (149°C)	30,000 lbf (133.4 kN)	9.5 in. (24.13 cm)	0.5 in./min (1.3 cm/min)	47.64 in. (121 cm)

* The seal material length is approximately 0.9-in. long when plug is fully set

**Pressure differential hold force of slips without cement; cement placed on plug is required for desired differential

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