

Circumferential Acoustic Scanning Tool-Monocable (CAST-M™) Service

MONO-CONDUCTOR ELECTRIC LINE-CONVEYED SIMULTANEOUS ULTRASONIC CASING AND CEMENT EVALUATION

OVERVIEW

The Halliburton Circumferential Acoustic Scanning Tool-Monocable (CAST-M™) tool provides the same simultaneous ultrasonic casing and cement evaluation capabilities as the CAST-IT™ and CAST-F™ (FASTCAST™) service, but in a smaller diameter tool and on mono-conductor e-line. With the CAST-M tool, the industry-leading cement and casing evaluation service can now be acquired in 4½-in. through 22-in. casing, and deployed on light-duty cased-hole logging units.

The CAST-M tool provides high-resolution cement and casing evaluation images oriented with respect to high side-low side of the wellbore, enabling identification of both internal and external casing wear, erosion, corrosion, or mechanical damage. The CAST-M tool is also combinable with a 2¾-in.-OD cement bond tool.

The 2D and 3D image presentation provides accurate measure of casing properties, and helps determine bonding and image channels in the cement sheath directly outside the casing.

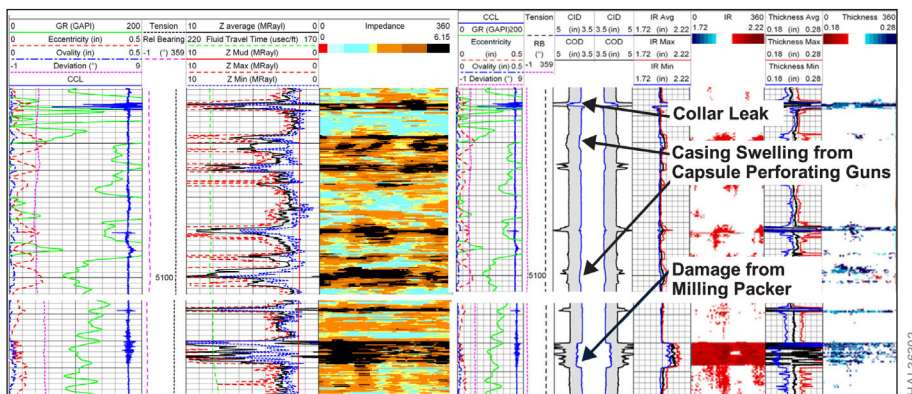
The CAST-M tool is fully programmable to optimize logging speeds up to 75 ft/min in 4½-in. casing, and provides 100% casing wall coverage, reducing nonproductive time (NPT) with efficient operation.

BENEFITS

- » Reveals bonding and image channels in the cement sheath directly outside the casing
- » Measures casing properties such as thickness, internal, and external diameters
- » Accurately evaluates foam cements and other lightweight complex cement slurries using Halliburton ACE™ processing
- » Reduces NPT with fast logging speeds
- » Combinable with 2¾-in.-OD Cement Bond Tool
- » Can be tractor or e-coil-conveyed for high-angle and horizontal well applications

FEATURES

- » Fully programmable to optimize logging speeds, with 100% casing wall coverage
- » Integral in-line bottom roller centralizer improves centralization
- » Continuous measurement of borehole fluid for accurate casing diameter
- » Deploys on mono-conductor cable traditional cased-hole units and rigless operations
- » Traditional cased-hole pressure-control equipment compared to 7-conductor cables



CAST-M™ Wellsite 4½-in. Cement Evaluation

CAST-M Wellsite 4½-in. Casing Inspection

CAST-M™ Dimensions and Environmental Specifications

Pressure Rating	20,000 psi	137,900 kPa
Temperature Rating†	350 °F	176 °C
Outside Diameter (OD)	3.125 in.	79.4 mm
Tool Length	14.2 ft	4.34 m
Tool Weight	182 lb.	82.6 kg
Minimum Casing Internal Diameter	3.9 in.	99 mm
Maximum Casing Internal Diameter	22 in.	559 mm
Casing Thickness	Up to 0.75 in.	Up to 19 mm
Borehole Fluid Density*	Up to 16 ppg	Up to 2.16 sg
Borehole Fluid Type	Brine / WBM / OBM / SBM	

† In memory mode temperature limit is 300 °F (149 °C).

* Contact Halliburton representative to model your logging job.

CAST-M™ Operational Specifications

Data Acquisition Modes*, ‡	Cement Inspection Pipe Inspection	
Horizontal Sampling Rate*	36 – 180 shots / scan	
Vertical Sampling Rate*	4-12 scans/ft	13-39 scans/m
Horizontal and Vertical Resolution	~ 0.3 in.	~7.6 mm
Acoustic Impedance Measurement Range	0 – 10 Mrayls	
Acoustic Impedance Measurement Accuracy	<3.3 Mrayl: ± 0.5 Mrayl, >3.3 Mrayl: ± 15%	
Pipe Thickness Measurement Range	0.2 – 0.75 in	8.9 - 19 mm
Pipe Thickness Measurement Accuracy	± 2%	
Max Logging Speed*	75 ft/min	22.9 m/min

‡ Cement Inspection and Pipe Inspection modes can be acquired simultaneously.

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

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