

## CAST-M™

Mono-Conductor Electric Line Conveyed Simultaneous Ultrasonic Casing and Cement Evaluation

The Halliburton CAST-M™ tool provides the same simultaneous ultrasonic casing and cement evaluation capabilities as the 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 4-1/2-in. through 9-5/8-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 2-3/4-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.

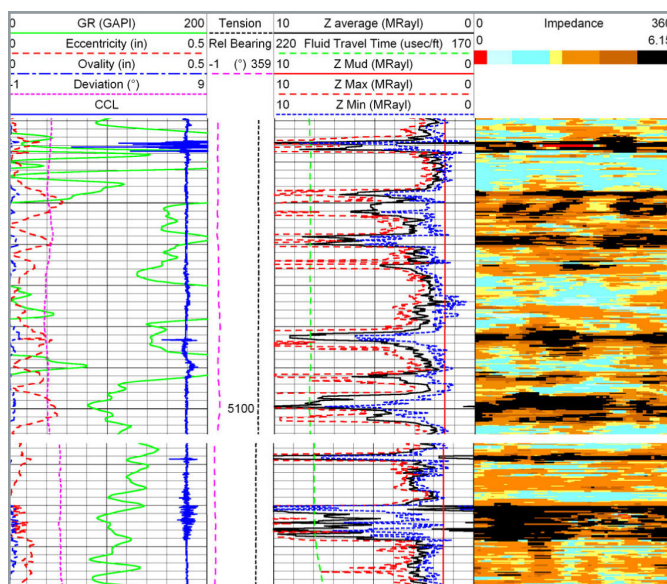
The CAST-M tool is fully programmable to optimize logging speeds up to 75 ft/min in 4-1/2-in. casing, and provides 100% casing wall coverage, reducing non-productive time (NPT) with efficient operation.

### Benefits

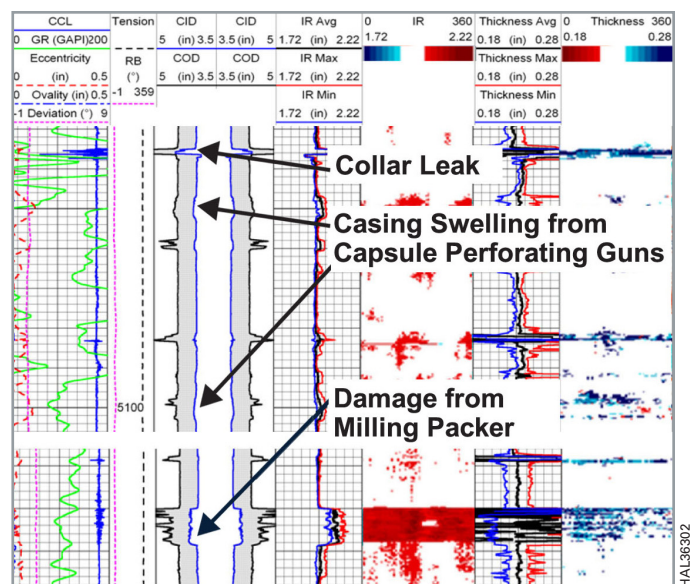
- Reveals bonding and image channels in the cement sheath directly outside the casing
- Measures casing properties such as thickness, internal, and external diameters
- Accurately evaluates foam cements and other lightweight complex cement slurries using Halliburton ACE™ processing
- Reduces NPT with fast logging speeds
- Combinable with 2-3/4-in.-OD cement bond tool
- Can be tractor or e-coil conveyed for high angle and horizontal well applications

### Features

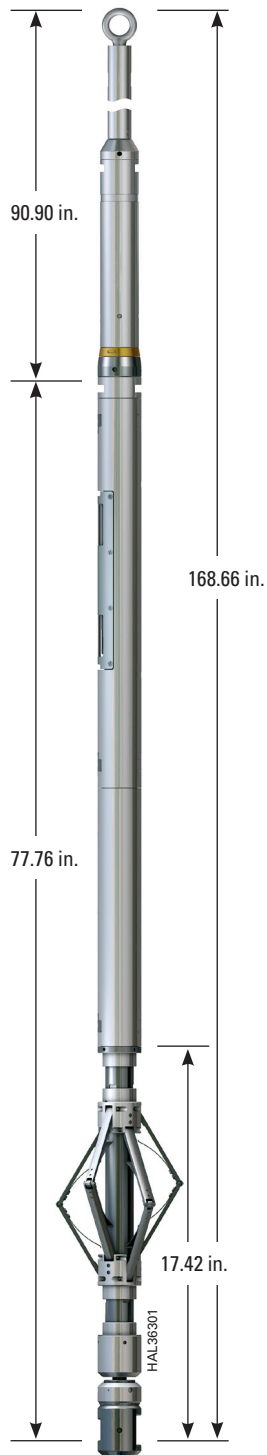
- Fully programmable to optimize logging speeds, with 100% casing wall coverage
- Integral in-line bottom roller centralizer improves centralization
- Continuous measurement of borehole fluid for accurate casing diameter
- Deploys on mono-conductor cable traditional cased hole units and rig-less operations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



CAST-M Wellsite 4-1/2-in. Cement Evaluation

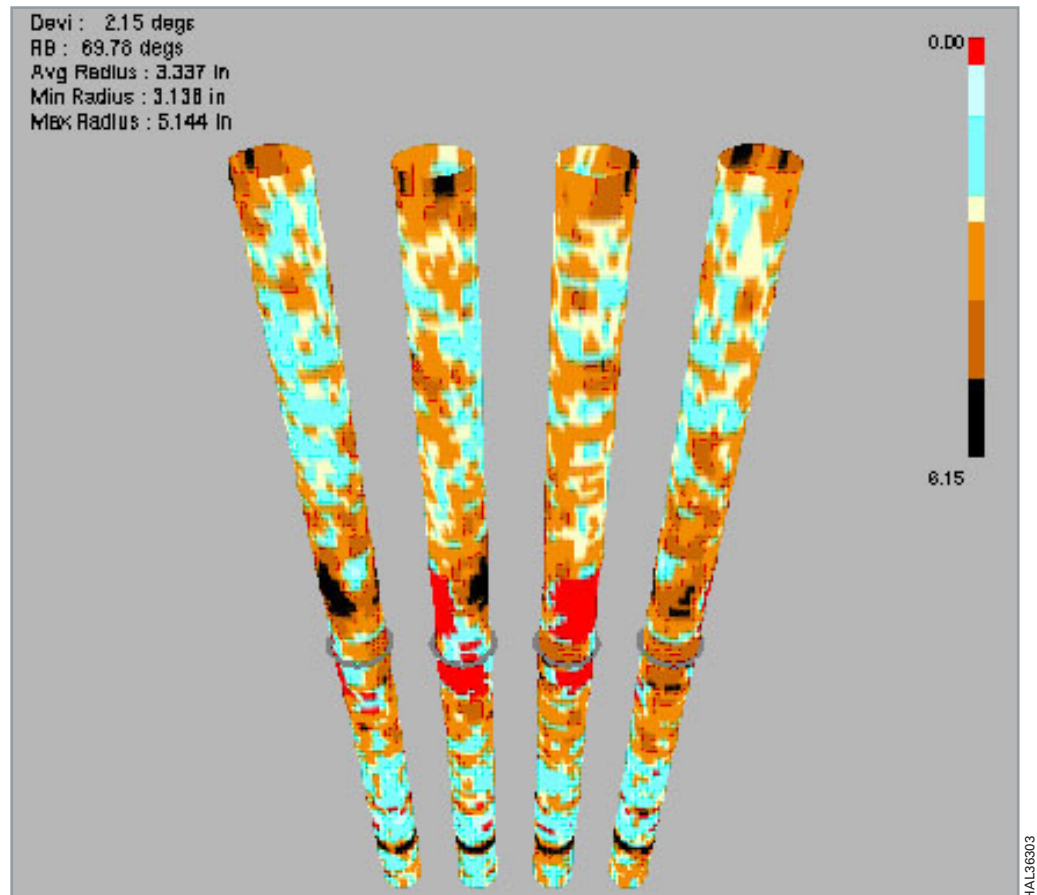


CAST-M Wellsite 4-1/2-in. Casing Inspection

**CAST-M Tool Specifications**

Feature	Imperial Units	Metric Units
Length	168.55 in.	428.1 cm
Maximum OD-built-in centralizer	9 in.	228.6 mm
Tool OD	2.75 in. tool body 3.125 in. at transducer	698 mm 794 mm
Minimum Casing ID	3.9 in.	99.1 mm
Maximum Casing ID	12.9 in.	32.77 cm
Maximum Pressure*	20,000 psi	1,379 bar
Temperature	350°F	177°C
Weight	182 lb	82.5 kg
Borehole Fluid	WBM/OBM/Brine/Water	WBM/OBM/Brine/Water
Logging Speed 4-1/2 in. casing	75 ft/min 4,500 ft/hr	23 m/min 1,372 m/hr
Logging Speed 9-5/8 in. casing	33 ft/min 1,980 ft/hr	10 m/min 600 m/hr

\*With TTTC-U telemetry pressure rating 15,000 psi, 1,032 bars



3D image of foam cement evaluation