

The FASTCAST™ Fast Circumferential Acoustic Scanning Tool

The FASTCAST™ tool provides the same industry leading measurements and products for cement evaluation or pipe inspection as the CAST-V™ tool but at speeds up to five times faster.

The FASTCAST tool data acquisition system is versatile and programmable at the wellsite, fully optimized for speed, based on the customer's requirements and on the characteristics of the borehole.

With a resolution improved by at the most a factor of 12 in pipe inspection mode, the FASTCAST tool can provide 100% coverage of casings up to 20-in. in diameter.

The FASTCAST tool provides true measured full coverage unavailable by most other acoustic, electric, or mechanical devices.

The factors that influence the logging speed are:

- Horizontal coverage
- Borehole size – smaller holes are logged faster because they require less shots / scan for the same amount of horizontal coverage
- Vertical resolutions – lower resolution implying higher speed

In open hole, the FASTCAST tool provides complete borehole imaging for accurate, precise, formation evaluation.

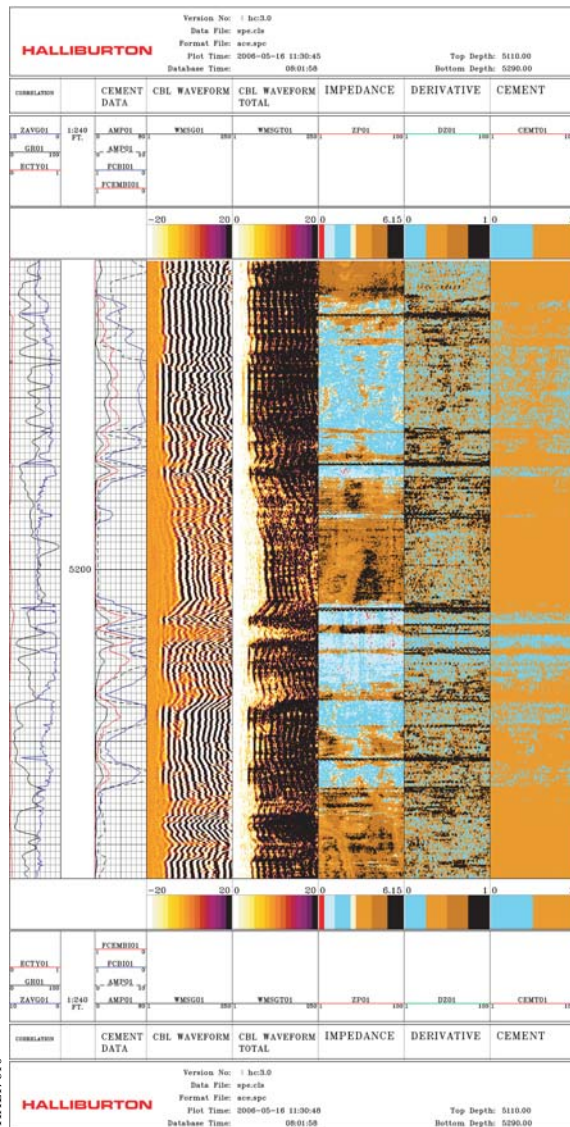
In cased-hole, ultrasonic pipe inspection and cement evaluation can be obtained simultaneously.

The FASTCAST tool in cement evaluation mode is used primarily to determine cement bonding and image channels in cement directly behind casing, but it can also be used to measure casing characteristics such as thickness and internal and external diameters. Images can be oriented to either tool body or the high side of the hole in any operating mode. When combined with a CBL tool, the cement evaluation log can be acquired at 60 ft/min or twice as fast as previous generation tools, yet providing the same quality product as the CAST-V tool for all cement types, including foam, through the Halliburton proprietary ACE™ processing. This increased logging speed results in a significant reduction in operating cost to the operator through minimized unproductive rig time.

The FASTCAST tool in pipe inspection mode is optimized to provide the hole coverage suited to the application. The

vertical resolution can be the traditional 3 in. but can be refined down to 0.1 in. Similarly, the number of waveforms per scan can be adjusted to provide full horizontal coverage down to the beam footprint of 0.25 in. The optimum coverage being identified, the job planner allows the engineer to acquire the data at the maximum logging speed suited for the application.

Other features that open a wide range of new possibilities for looking at details further away from the casing / cement interface are the user-configurable waveform length and sampling interval.



The FASTCAST™ Tool Specifications

Casing Data		CAST-V™	The FASTCAST™ Tool Logging Speed (ft/min)		
Casing OD in.	Casing Weight lb / ft	With or Without CBL, 100 shots / scan, 4 spf	Standalone, Full Horizontal Coverage (4 spf)	With CBL and Full Horizontal Coverage (4 spf)	Standalone, Full Horizontal and Vertical Coverage (12 spf)
5.500	17	32	123	60	41
6.000	20	32	123	60	41
7.000	29	30	103	60	34
9.625	43	24	82	60	27
13.375	68	15	55	43	18
18.625	106	9	45	45	15

Temperature °F (°C)	Pressure psi (kPa)	Tool OD in. (mm)	Length in. (m)	Weight lb (kg)	Min Hole ID in. (mm)	Max Hole ID* in. (mm)	Vertical sampling in.	Logging speed ft/min
350 (175)	20,000 (137 900)	3.625 (92)	215 (5.46)	316 (143)	4.25 (108)	22.00 (559)	0.1 to 3.0	60 typical

*With interchangeable transducer head