

# Circumferential Acoustic Scanning Tool-Visualization (CAST-V™)

## Higher Resolution, Precise Digital Information, and Simultaneous Measurements Provide Complete Acoustic Visualization

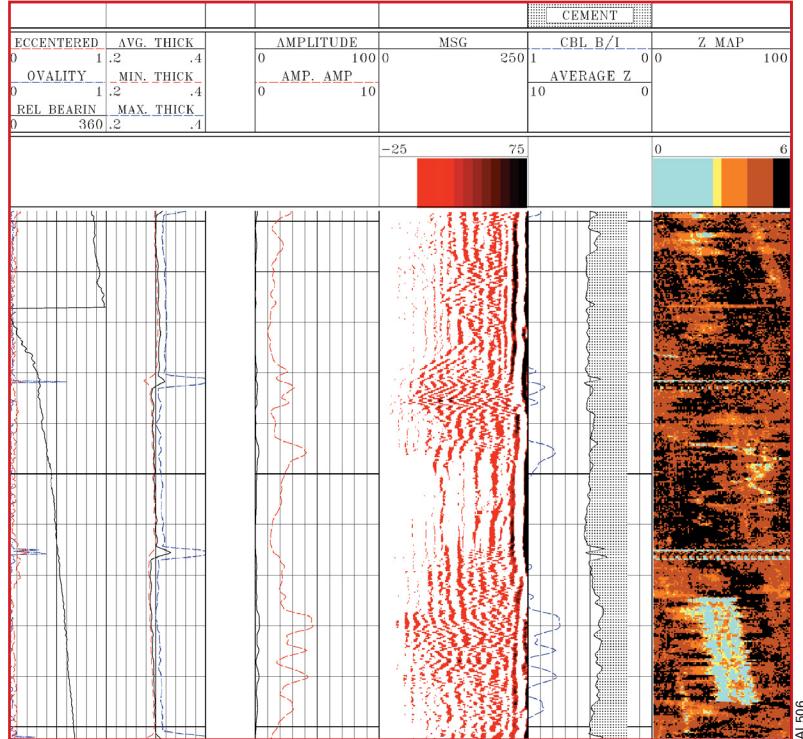
The Circumferential Acoustic Scanning Tool, the CAST-V™, provides a wealth of information about your well in both open and cased holes. In open hole, the CAST-V provides complete borehole imaging for accurate, precise formation evaluation. In cased hole, ultrasonic pipe inspection and cement evaluation can now be obtained simultaneously. Operating over a wide range of downhole environments, the CAST-V offers a full 360° profile of the borehole that can be presented in a variety of two- and three-dimensional formats. Powerful, yet userfriendly imaging analysis software is available to process images, histograms, and curve-type data from this advanced logging device.

### Primary applications include:

- Casing Inspection (both Thickness and Diameter)
- Ultrasonic Cement Evaluation/ Imaging
- Openhole Borehole Imaging
- Fracture Detection

### Features of the new system include:

- 100 shots per depth frame measurement provides complete circumferential coverage in casedhole cement evaluation and pipe inspection
- Simultaneous cement evaluation and casing inspection capability
- Combinable with digital full wave sonic bond log tool for reduced rigtime
- Real-time evaluation of complex and lightweight cements with SVP™ (Statistical Variation Plot) processing



This real-time plot from a casedhole log displays eccentricity, ovality, and relative bearing in Track 1, casing thickness in Track 2, and regular and amplified amplitude in Track 3. The Micro-Seismogram® display is shown in Track 4. The cement bond index and average impedance are shown in Track 5 while the impedance map is displayed in Track 6. A cement channel (void) is indicated by the blue shading in the impedance map from X125 to X145 ft.

- Real-time fluid cell measures both borehole fluid transit time and fluid impedance for measured data correction
- Real-time impedance maps, compressive strength maps, and variance maps



### Cast-V Specifications

Temperature Rating	350°F	175°C
Pressure Rating	20,000 psi	138 900 kPa
Outside Diameter	3.625 in.	92 mm
Length	215 in.	5.46 m
Weight	316 lb	143 kg

### Casedhole Operation

Recommended Range of Casing Sizes*	5 1/2 to 13 3/8 in.	139 to 340 mm
Azimuthal Resolution		3.6°
Vertical Sample Rate		6 in. / 3 in. / 1 in.
Logging Speed		60 ft/min / 30 ft/min 10 ft/min

### Openhole Operation

Recommended Range of Borehole Sizes*	5 to 12 1/2 in.	127 to 318 mm
Azimuthal Resolution		1.8°
Vertical Sample Rate		0.3 in.
Logging Speed		20 ft/min

\*With Interchangeable transducer heads



*3D Profile of  
Openhole Log Example*