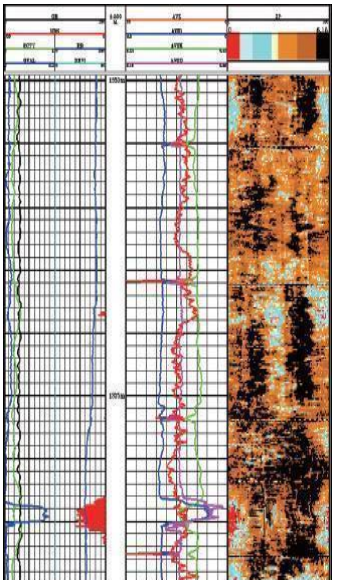
Ultrasonic Scan Imaging Tool-V

USI-V

Description

The USI-V, provides a wealth of information about your well in both open and cased holes. In open hole, the USI-V provides complete borehole imaging for accurate, precise formation evaluation. In cased hole, ultrasonic pipe inspection and cement evaluation can now be obtained simultaneously. 0perating over a wide range of downhole environments, the USI-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.



Applications

- Casing Inspection (both thickness and diameter).
- Ultrasonic Cement Evaluation/Imaging.
- Openhole Borehole Imaging.
- Fracture Detection.

Specifications

Mechanical	
Max. Operating temperature	350 °F (177 °C)
Max. Operating pressure	20,000 psi (140 MPa)
Length	17.9 ft (5.45 m)
Weight	316 lbs (143 kg)
Diameter	3 5/8 in. (9.2 cm)
Electronics assembly	122.15 in. (3.1 m)
Directional sub assembly	36.5 in. (0.93 m)
Scanner assembly	56.1 in. (1.43 m)
Electrical	
Power requirements	120±18 Vac, 60 Hz, 250 mA, 150 Vcd, 1,5 A
Full load requirements	30 Wac, 225 Wdc
Measurement	
Imaging Mode	
Sensor type	Piezoelectric on rotating head
Firing rate (shots/scan)	200
Vertical scan rate	40 scans/ft at 21 ft/min
Principle	Ultrasonic Pulse Echo
Azimuthal sampling	1.8°
Vertical sampling (software)	0.2 in.
Logging speed	21 ft/min
Primary curves	Reflected amplitude and travel time
Secondary curves	Radius, azimuth, relative bearing, deviation and fluid transit time
Minimum diameter hole	4.5 in. (11.4 cm)
Maximum diameter hole	12.50 in. (31.75 cm)
Cased hole Mode	
Sensor type	Piezoelectric on rotating head
Firing rate (shots/scan)	100
Vertical scan rate	40 scans/ft at 30 ft/min
Principle	Ultrasonic Pulse Echo
Azimuthal sampling	3.6°
Vertical sampling	6.0, 3.0, or 1.0 in.
Logging speed	60, 30, or 10 ft/min
Primary curves	Reflected amplitude, radius acoustic impedance and casing wall thickness
Secondary curves	Relative bearing, deviation, fluid transit time compressive strength and mud impedance
Minimum diameter hole	5.5 in. (12.7 cm)
Maximum diameter hole	13.375 in. (33.97 cm)

P.O. Box 9449 Ahmadi 61003 Tel +965 3989993 Fax +965 3989994 www.easternutd.com email info@easternutd.com