3 1/8” Radial Bond Tool

The Radial Bond Tool (RBT) facilitates a detailed, qualitative analysis of the zonal isolation achieved by cementing services.

Effective hydraulic isolation from water-bearing formations is crucial to maximise the productivity of hydrocarbon-bearing reservoirs. Poor cementing allows unwanted fluid transfers between zones resulting in the potential for lost or unwanted production.

The RBT allows for the detection of poor cement conditions before perforating, enabling productive measures to be taken. Its size, rigid isolator and powerful transmitter allow robust operations. In addition to the traditional 3ft amplitude and 5ft VDL, the RBT has a radially segmented, calibrated amplitude measurement. This focuses the transmitted sonic pulse circumferentially allowing the differentiation of small axial channels as opposed to poor or contaminated cement.

Applications

- Evaluation of cement bond behind casing
- Evaluation of cement to formation bond
- Determination of zonal isolation
- Identification of cement top
- Micro-annulus detection
- Channel identification from cement map

Features and benefits

- Single transmitter, 3ft (near) and 5ft (far) receivers
- 8-segmented radial receiver array for radial imaging
- Variable sampling rates to maximise data acquisition
- Interchangeable telemetry cartridge
- Slotted sleeve design for improved rigidity, strength and acoustic isolation
- Fully combinable with other UltraWire and Ultra Memory tools
- Memory/Surface Read Out (SRO) capable

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Technical specifications		
Temperature	177 Deg C	350 Deg F
Pressure	138 MPa	20000 psi
Tool diameter	79.4 mm	3 1/8 in
Tool length (make-up)	2.89 m	9.48 ft
Tool length (transport)	3.08 m	10.09 ft
Tool weight	63.5 kg	140 lbs
Supply voltage	18 VDC	
Power/current	50 mA	
Receivers	Piezoelectric crystal	
Signal output	3 ft amplitude, 5 ft VDL and a cement quality map generated by the calibrated 8-segment receiver array	
Measure point **3-ft Amp** **5-ft VDL**	 156.5 cm 126.0 cm	 61.6 in 49.6 in
Logging speed **@50 Kbps** **@100 Kbps**	 21 m/min 30 m/min	 70 ft/min 100 ft/min
Borehole environment	Fluid media (ie.,brine, oil, fresh water, drilling mud	
Maximum casing/tubing ID	34 cm (13.4 in)	

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