

PROBE RESPONSES FOR OPEN AND CASED BOREHOLES

Probes	Log Measurement	Resulting Data				
		Open Hole		Metal Cased	Plastic Cased	
		Dry	Fluid Filled		Unperforated	Perforated
Common to/optional on many probes	Natural Gamma	Calibrated	Calibrated Δ	Qualitative Φ	Qualitative Φ	Qualitative Φ
	CCL	Not Valid	Not Valid	Calibrated *Φ	Not Valid	Not Valid
	Temperature	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
3-Arm Caliper	3-Arm Caliper	Calibrated	Calibrated Δ	Calibrated *Φ	Calibrated *Φ	Calibrated *Φ
Borehole Geometry	X-Y Caliper	Calibrated	Calibrated Δ	Calibrated *Φ	Calibrated *Φ	Calibrated *Φ
	Inclination	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
	Azimuth	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
Verticality	Inclination	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
	Azimuth	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
Gyro	Inclination	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
	Azimuth	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
Electric Log	16" Normal Resistivity	Not Valid	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
	64" Normal Resistivity	Not Valid	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
	Single Point Resistance	Not Valid	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
	Self Potential	Not Valid	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
Focussed Electric (Guardlog)	Focussed Resistivity	Not Valid	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
Dual Focussed Induction	Deep Formation Conductivity	Calibrated	Calibrated Δ	Not Valid	Calibrated Δ	Calibrated Δ
	Shallow Formation Conductivity	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
Magnetic Susceptibility	Magnetic Susceptibility	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
Induced Polarisation	Chargeability	Calibrated	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
	Formation Resistance	Calibrated	Calibrated Δ	Not Valid	Not Valid	Qualitative Δ
Temperature Conductivity	Temperature	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
	Conductivity	Not Valid	Calibrated Δ	Calibrated Δ	Calibrated Δ	Calibrated Δ
Impellor Flowmeter	Flow	Not Valid	Qualitative †	Qualitative *†	Qualitative *†	Qualitative †
	Cable Velocity	Calibrated	Calibrated	Calibrated Φ	Calibrated Φ	Calibrated Φ
Heat-Pulse Flowmeter	Flow	Not Valid	Qualitative †	Qualitative *†	Qualitative *†	Qualitative †
High Resolution Acoustic Televiewer (HRAT)	Amplitude Image	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated *Δ	Calibrated *Δ
	Travel-Time Image	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated *Δ	Calibrated *Δ
	Inclination	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
	Azimuth	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
High Resolution Optical Televiewer (Hi-OPTV)	Borehole Image	Calibrated	Calibrated †	Calibrated *†	Calibrated *†	Calibrated *†
	Inclination	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
	Azimuth	Calibrated	Calibrated Δ	Not Valid	Calibrated Φ	Calibrated Φ
PS Logger	P-Wave Waveform	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Qualitative Δ
	S-Wave Waveform (left & right)	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Not Valid
	P-Wave Velocity	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Qualitative Δ
	S-Wave Velocity	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Not Valid

KEY:

* CASING INFORMATION ONLY

† CASING MUST BE GROUTED

‡ WATER FILLED NOT MUD

Δ WATER OR MUD FILLED

Φ DRY, WATER OR MUD FILLED

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Probes	Log Measurement	Resulting Data				
		Open Hole		Metal Cased	Plastic Cased	
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Full Waveform Sonic	Waveforms (Near Far)	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Qualitative Δ
	P-Wave Velocity	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Qualitative Δ
	S-Wave Velocity (if S-wave exists)	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Not Valid
	Cement Bond Log	Not Valid	Not Valid	Calibrated ††Δ	Qualitative ††Δ	Not Valid
Full Waveform Triple Sonic	Waveforms (Near Mid Far)	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Qualitative Δ
	P-Wave Velocity	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Qualitative Δ
	S-Wave Velocity (if S-wave exists)	Not Valid	Calibrated Δ	Calibrated *Δ	Calibrated †Δ	Not Valid
Formation Density	Formation Density	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	High Resolution Density HRD	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	Bed Resolution Density BRD	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
Dual Neutron	Compensated Porosity	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	Raw Long Spaced Neutron	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	Raw Short Spaced Neutron	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	Count Ratio	Qualitative	Calibrated Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
Density Gamma	Long Spacing Density LSD	Qualitative	Qualitative Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	High-Resolution Density HRD	Qualitative	Qualitative Δ	Qualitative Δ	Qualitative Δ	Qualitative Δ
	Inclination	Calibrated	Calibrated Δ	Calibrated Φ	Calibrated Φ	Calibrated Φ
Spectral Gamma	Uranium	Calibrated	Calibrated Δ	Qualitative Φ	Calibrated Φ	Calibrated Φ
	Thorium	Calibrated	Calibrated Δ	Qualitative Φ	Calibrated Φ	Calibrated Φ
	Potassium	Calibrated	Calibrated Δ	Qualitative Φ	Calibrated Φ	Calibrated Φ
	Gross Gamma	Calibrated	Calibrated Δ	Qualitative Φ	Calibrated Φ	Calibrated Φ
	Channel Count Rates	Calibrated	Calibrated Δ	Qualitative Φ	Calibrated Φ	Calibrated Φ

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