

CENTURY GEOPHYSICAL LLC. PRODUCT DESCRIPTION

9144 Series E Logging Tool

Background Information

The Multi-Parameter E-Log tool is a multi-parameter resistivity tool primarily used for water well logging and monitoring wells. The tool records ten different parameters simultaneously in one pass of the borehole. The ten parameters are the following: natural gamma, spontaneous potential, single point resistance, 16 in. normal resistivity, 64 in. normal resistivity, 48 in. lateral resistivity, fluid resistivity, temperature, delta temperature, slant angle (tilt) and azimuth (bearing). Slant angle, bearing, and natural gamma are optional.

Features		
Properties Measured (see diagram)	Tool Specifications	
1. Natural Gamma: (optional) 2.5 x 10.2 cm (1.0 x 4.0 in.) NAI Scintillation Offset: 198.1cm (78.0 in.) 2. 64 in. Normal Resistivity: Offset: 119.1 cm (42.96 in.) 3. 16 in. Normal Resistivity: Offset: 170.1 cm (66.96 in.) 4. Fluid Resistivity: Offset: 228.6 cm (90.0 in.) 5. Lateral Resistivity 48 in. Offset: 139.6 cm (54.96 in.)	6. Spontaneous Potential: Offset: 27.7 cm (10.9 in.) 7. Single Point Resistance: Offset: 190.5 cm (75.0 in.) 8. Temperature & Delta Temperature: 0.074 C (0.007 F) resolution Offset: 236.2 cm (93.0 in.) 9. Slant Angle & Bearing: (optional) 3-axis magnetometer and 2-axis inclinometer Offset: 200.6 cm (78.964 in.)	Length: 234.3 cm (92.25in.) Temperature: 70 C (158 F) Diameter: 53 mm (2.1 in.) Pressure: 176 kg/cm ² (2500 PSI) Weight: 15 kg (33 lb.) Logging Speed: 9 m/min. (30 ft./min.) Tool Voltage Required: 36 VDC

Sensor Response Ranges		
Sensor	Response Limits	Accuracy
Natural Gamma (NG)	0-400,000 API units	+/-5%
16 in. (16N) & 64 in. Normal (64N) & Lateral Resistivity (LR)	0-2,000 ohm/meters	+/-5%
Spontaneous Potential (SP)	-400 - +400 mv	+/-5%
Temperature (TEMP)	0 C- 70 C (32 - 160 F)	+/-5%
Single Point Resistance (SPR)	0-2,000 ohms	+/-5%
Fluid Resistivity (FR)	0-100 ohm meters	+/-5%
X - Y Inclination (XYI)	0-45 degrees	+/-0.5 degrees
Azimuth (AZ)	0-360 degrees	+/-2 degrees

Tool Information		
Item	Model #	Part #
Tool with 16N, 64N, LR, TEMP, SPR, FR (No Natural Gamma)	7144	336700A
Tool with NG, 16N, 64N, LR, TEMP, SPR, FR	8144	336700B
Magnetic Deviation Option and Same Parameters as 8044	9144	336700C
Deviation Calibration Test Stand		317430
SP/Resistivity Calibration Box		335230

