CENTURY GEOPHYSICAL LLC.
PRODUCT DESCRIPTION

9702 Natural Gamma/Deviation Logging Tool

Background Information
Used when natural gamma log and deviation data is required. The natural gamma sensor is located near the bottom of the tool to permit data acquisition near the total depth of the borehole. The deviation device uses two inclinometers and three magnetometers to determine precise borehole path and direction. The small diameter (41mm/1.625in) of the tool allows logging in 2.0 ID PVC casing, non-metalic metal casings, or open holes. The deviation test stand is recommend for both calibration of the device and routine tool checks for accuracy.

Features		
Properties Measured (see diagram)	**Tool Specifications**	
1. Natural Gamma: 2.2 x 10.2 cm (0.875 x 4.0 in.) NAI Scintillation Offset: 14.63 cm (5.76 in.) **2. Inclination & Azimuth:** 2-axis Inclinometer and 3-axis Magnetometer. Offset: 149.86 cm (59 in.)	**Length:** 154.4 cm (60.0 in.) **Temperature:** 85 C (185 F) **Diameter:** 41 mm (1.625 in.) **Pressure:** 281 kg/cm^2 (4000 PSI) **Weight:** 7.46 kg (20 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%
X-Y Inclination (XYI)	0 - 45 Degrees	+/-0.5 Deg.
Azimuth (AZ)	0 - 360 Degrees	+/-2.0 Deg.

Tool Information		
Item	**Model #**	**Part #**
Tool with DEV.	7702	318350
Tool with NG/DEV.	9702	318350
Deviation Test Stand		317420