

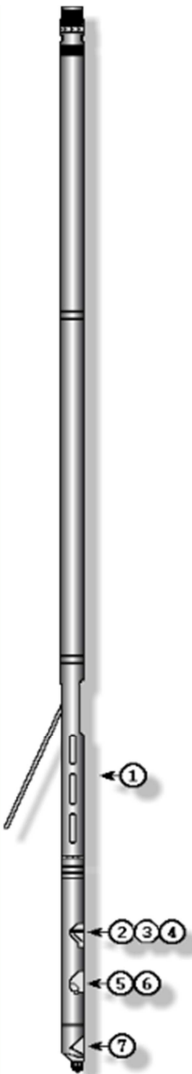
# CENTURY GEOPHYSICAL LLC.

## PRODUCT DESCRIPTION

### 4239 (ILD) Express Stack™ In-Line Litho Density Tool

#### Background Information

The Series 4239 In-Line Litho-Density Tool sub uses two focused density detectors to computer borehole compensated density real time while logging. This tool also measures the amplitude of the returning gamma pulses using a photoelectric reader in order to determine lithology directly. It can distinguish between sandstone, limestone, dolomite, shale, and other rocks in the form of an additional logging curve. Additionally, the tool also records caliper readings. It requires the use of the 4000 Stack Gamma Ray Tool Sub, which provides the needed telemetry, and is compatible with all other Express Stack™ Tools except for the 4841(DIL).



Features		
Properties Measured (see diagram)		Tool Specifications
<p><b>1. Caliper:</b> Motorized, uphole actuated 33.02cm (13 in.) Offset(measured from top of Gamma Ray Tool Sub) 589.79(232.2 in.)</p> <p><b>2. Far Density:</b> x 10.16cm(0.875 x 4.0 in) 35.8cm(14.1 in.) spacing Offset:630.43cm (248.2 in.)</p> <p><b>3. Compensated Density:</b> Cdl (compensated density log) Offset: 630.43cm (248.2 in.)</p>	<p><b>4. Compensation:</b> Comp(compensation) Offset: 630.43 cm(248.2 in.)</p> <p><b>5. Near Density</b> 2.2 x 3.2 cm(0.875 x 1.25 in.) 20cm(7.9 in.) spacing Offset: 638.25cm(251.28in.)</p> <p><b>6. Photoelectric</b> x 3.2cm(0.875 x 1.25 in.) 20cm (7.9 in.) spacing Offset: 638.25cm(251.28 in.)</p> <p><b>7. Density Source</b></p>	<p><b>Length:</b> 348.13cm (137.06 in.)</p> <p><b>Temperature:</b> 125c (257F)</p> <p><b>Diameter:</b> 6.35cm (2.5 in)</p> <p><b>Pressure:</b> 350kg/cm<sup>2</sup> (5000 psi)</p> <p><b>Weight:</b> 58 kg (128 lbs.)</p> <p><b>Logging Speed:</b> 9m/min. (30ft/min.)</p>

Sensor Response Ranges		
Sensor	Response Limits	Accuracy
Photoelectric (PE)	0-10 barns/electron	+/-5%
Caliper(CAL)	0-35.6cm (14 in.)	+/- 0.635cm (0.25 in.)
Near Density (ND)	0.5 to 3.5 g/cc (0.02 to 0.13 lbs./ci)	+/- 0.002 g/cc (0.001 lbs./ci)
Far Density (FD)	0.5 to 3.5 g/cc (0.02 to 0.13 lbs./ci)	+/- 0.002 g/cc (0.001 lbs./ci)
Compensated Density	0.5 to 3.5 g/cc (0.02 to 0.13 lbs./ci)	+/- 0.002 g/cc (0.001 lbs./ci)