



# High Resolution Dual Laterolog (HRDL)

## General Tool Description

The High Resolution Dual Laterolog (HRDL) provides reliable means of measuring formation resistivity in conductive borehole fluids under harsh downhole conditions. The HRDL tool provides the measurements of four resistivity curves, traditional LLD, LLS and high resolution HRLD, HRLS in one single log run. The high resolution resistivity curves (HRLD and HRLS) have a vertical resolution equal to 8 in., in an 8 in. diameter hole. Like the DLL, the HRDL is an 'LL9' type device, focused by bucking currents, with a monitoring condition of equipotential monitoring electrodes.

A computed focusing scheme is used to implement the focusing conditions. This eliminates the monitoring loop found traditionally in laterologs and increases accuracy.

The HRDL tool is combinable with a MSFL (Micro Spherically Focused Log) or a MLL (Micro Laterolog).

## SPECIFICATIONS:

Diameter:	3.5 in. (8.9 cm.)
Length (Total)	171.6 in. ( 4.36 m.)
Length (Electronics Section only)	59 in. (1.5 m.)
Length (Sonde Section only)	112.6 in. (2.86 m.)
Weight (Total)	289 lb.(130 Kg.)
Weight (Electronics Section only)	111 lb. (50 Kg.)
Weight (Sonde Section only)	178 lb. (80 Kg.)
Operating Voltage Option	100VDC 200mA OR 250VAC 60Hz 100mA 180VAC 60Hz 100mA

## MEASUREMENT RANGE:

Deep Resistivity Measurement	0.2 to 40,000 ohm-meter
Shallow Resistivity Measurement	0.2 to 40,000 ohm-meter
Vertical Resolution, traditional LLD, LLS	24 in. (61.0 cm)
high resolution HRLD, HRLS	8 in. (20 cm)
Depth of Investigation, (Deep Resistivity)	60 - 84 in. (154cm - 213cm)
Depth of Investigation, (Shallow Resistivity)	24 - 36 in. (61.0 -91.4 cm)

## LIMITATIONS:

Maximum Operating Temperature:	350° F (177° C)
Maximum Operating Pressure:	15,000 PSI