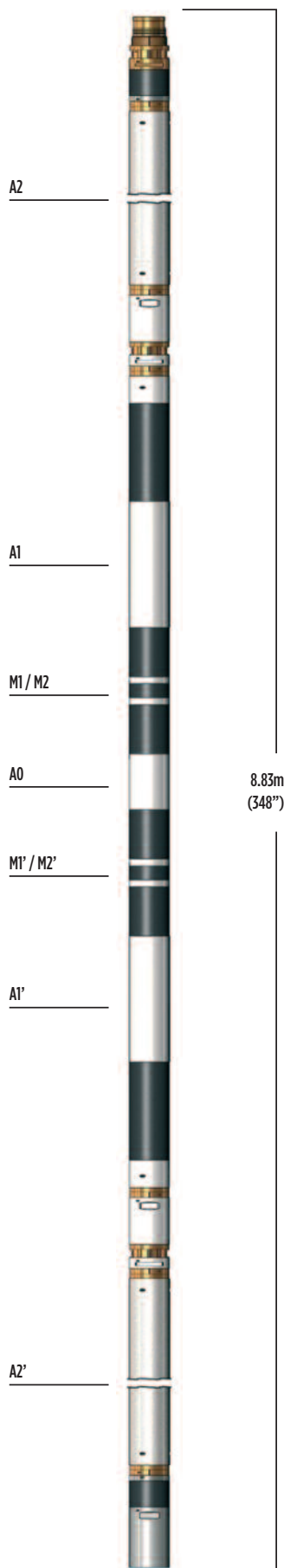


Dual Laterolog (GDL)



Dual Laterolog Module

The Dual Laterolog module provides deep and medium penetrating resistivity measurements using a classic laterolog-9 electrode configuration. It is the preferred alternative to the array induction probe in saline drilling muds.

The module is run below a solid insulated bridle that includes the SP, voltage-reference and Groningen measurement electrode. A specific isolator module is used with this module. This insulated section is positioned between the cable head and the DHT module (if used).

Principle of Measurement:

An alternating current from the central A0 electrode passes through the formation and returns to a surface fish (deep resistivity) or to electrodes A2 and A2' on the module (shallow resistivity). A bucking current flowing from the guard-electrode pair A1 and A1' is controlled to maintain the monitor electrode pairs M1M2 and M1'M2' at the same potential. These equipotential surfaces constrain the measure current path to a disc of thickness 2ft.

SPECIFICATION:

Features

- Down-hole digital control of current sequence for deep and shallow measurements
- Focused measurement gives high vertical resolution
- Constant power drive for wide dynamic range
- Voltage reference and SP measurement from electrode on rigid bridle
- Stackable with GeoKey® slim oilfield system

Measurements

- Deep focused resistivity (LLD)
- Shallow focused resistivity (LLS)
- SP
- Groningen effect

Applications

- Invasion profile
- Fluid Saturation
- Permeability indication

Operating Conditions

- Borehole type: open-hole, mud-filled 4" - 12"

Specifications

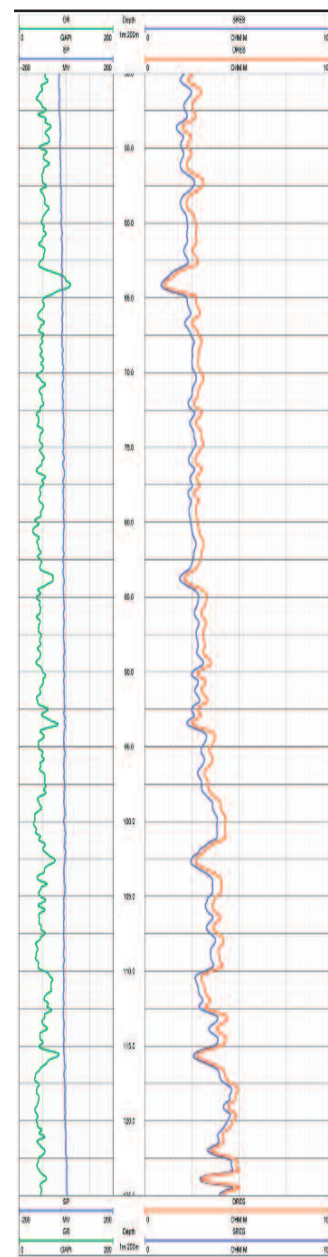
- Diameter: 63mm (2.5")
- Total length: 8.83m (348") combined
- Max section length: 3.37m (133")
- Weight: 113.5kg (250lb) (3 sections)
- Max. operating temperature: 125°C
- Max. operating pressure: 86MPa (12,500psi)
- Range: 0.1 to 40,000 ohm-m
- Accuracy: 5% at 1000 ohm-m
- Resolution: 1% measured value

Part Numbers

- I0013886 Dual Laterolog module

Accessories:

- I0015009 Solid bridle with reference electrode
- I0013888 Field test box with leads and clamps



Example of logging data