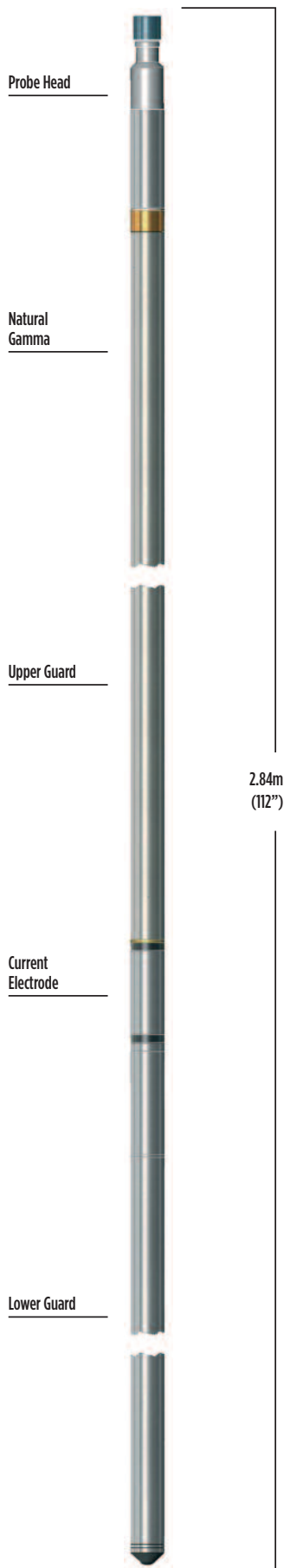


Focussed Electric (Guardlog)



The focussed resistivity (LL3) measurement provides excellent vertical resolution and a reasonable depth of investigation.

The Guardlog replaces the classic Electric Log in conditions of low mud resistivity and high formation resistivity.

Principle of Measurement:

The probe includes a central current-source electrode between two guard electrodes, maintained at the same potential by internal electronics. Current from the centre electrode is constrained to a thin disk by the presence of the guards and returns to the cable armour above a 10m insulated section. The potential of the central electrode with respect to a surface voltage-reference stake and the measured current are combined by a down-hole microprocessor to calculate apparent formation resistivity.

SPECIFICATION:

Features

- Good depth of penetration with excellent bed-boundary resolution
- Down-hole calibration check using internal resistor
- Digital down-hole measurement avoids errors due to cable effects in deeper boreholes
- Constant-power down-hole current source give 4 decades of measurement without range switching

Measurements

- Focussed resistivity
- Natural Gamma

Applications

Water

- Determination of water quality
- Indication of permeable zones and porosity

Minerals/Engineering

- Strata correlation between boreholes
- Indication of fractures and permeable zones
- Bed-boundary and thickness measurements
- Moisture determination in coal

Operating Conditions

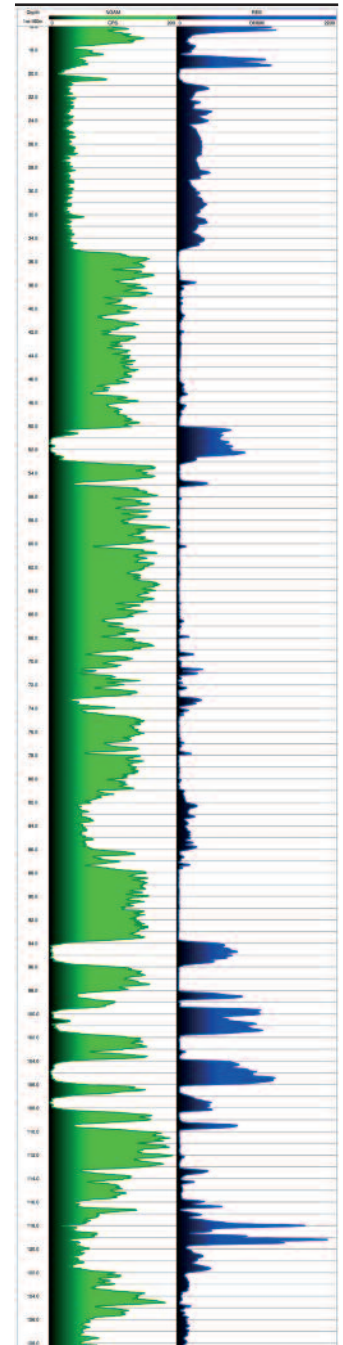
- Borehole type: open-hole, water-filled
- Centralisation: standoff recommended. The logging cable armour should be insulated for 10m above probe head
- Recommended Logging Speed: 4m/min

Specifications

- Diameter: 38mm
- Length: 2.84m
- Weight: 9.5kg
- Temperature: 0-70°C (extended ranges available)
- Max. pressure: 20MPa
- Resistivity range: 1 to 10,000 ohm-m

Part Numbers

- 1002078 Focussed Electric (Guardlog) probe includes natural gamma



Example of logging data

Focussed Electric (Guardlog) Probe

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