QL40-IND

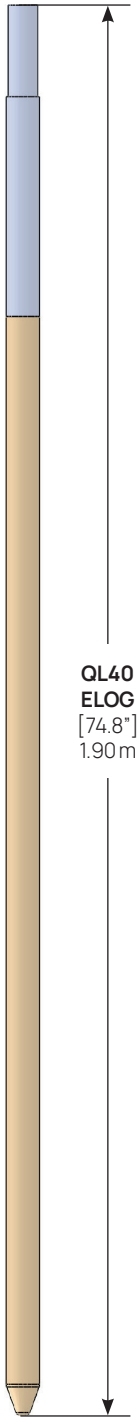
Dual Induction Probe

17.12.2025

The QL40-IND dual focussed induction probe provides two simultaneous conductivity logs, corresponding to “medium” and “deep” radii of investigation into the formation. The two depths of penetration are useful in porous, permeable formations where displacement of formation fluids by drilling mud creates an “invasion zone” with different electrical properties. High stability and exceptionally wide dynamic range allow the user to carry out precise measurements of conductivity in formations with sand-clay layers and mineralised water-soaked sands. The probe can be used in water filled, dry and plastic cased boreholes.
The QL40-IND is supplied as an bottom sub can be combined with other logging tools of the QL product line or can be operated as a standalone tool. It is compatible with ALT/MSI acquisition systems.

Application

- Indicator of permeable zones and porosity
- Formation water salinity
- Long-term well monitoring
- Correlation
- Ore identification and quality
- Indication of hydrocarbons



Tool

Diameter : 45mm (1.77”)
Length : 1.92m (75.78”)
Weight : 7kg (15.4lbs)
Max. Temp : 70°C (158°F)
Max. Pressure : 200bar (2900psi)

Sensor

Based on W&R design

Intercoil spacing : 50 & 80cm (20 & 31”)
Operating Frequency : 100kHz
Conductivity range : 1-3000 mS/m
Temperature stability : < 0.5 mS/m/10°C

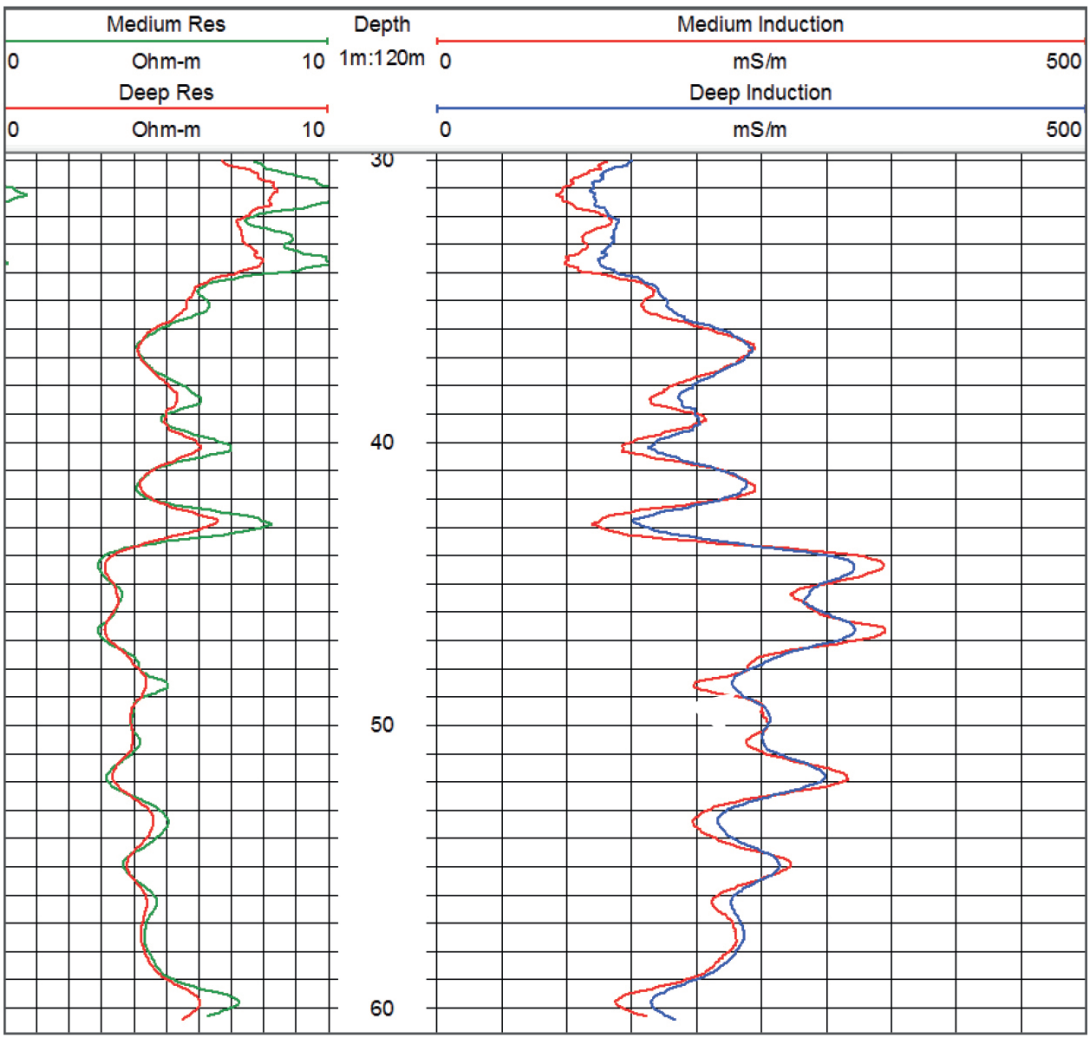
Operating conditions

Cable type : Mono, multi-conductor, coax
Compatibility :
Scout Pro / Opal (Scout / Bbox / Matrix)
Digital data transmission Telemetry :
Variable baudrate telemetry according to cable length/type & surface system
Logging speed : 5-6m/min recommended
Centralisation : Decentralized
Borehole conditions :
Dry or fluid-filled borehole
Open or plastic cased borehole

The specifications are not contractual and are subject to modification without notice.

Principle of measurement

An oscillating high-frequency magnetic field from a transmitter coil within the probe induces an alternating electrical current within the surrounding conductive formation. This current, in turn, induces voltages within receiver coils proportional to the formation conductivity. The transmitter receiver spacings determine the depth of investigation of the measurements.

Measurements features

- Deep Induction (mS/m)
- Medium Induction (mS/m)
- Deep resistivity (Ohm.m)
- Medium resistivity (Ohm.m)