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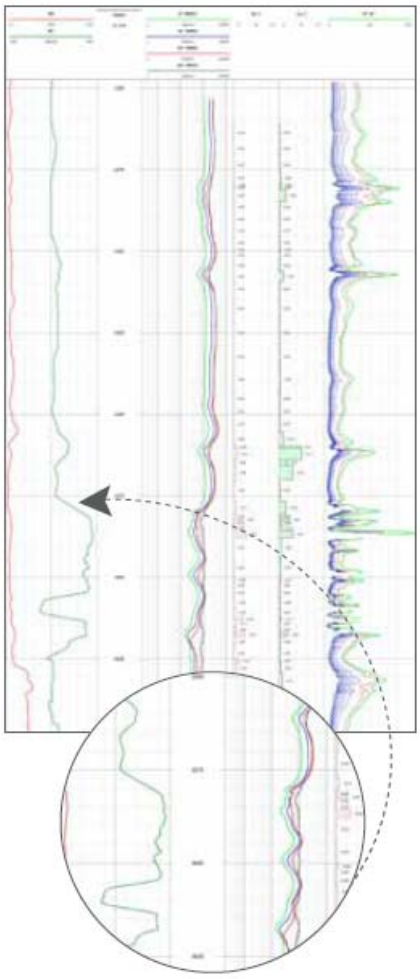
# QL40.ELOG multipoint resistivity

This digital probe measures simultaneously 8, 16, 32 and 64 inch normal resistivity, single point resistance (SPR) and spontaneous potential (SP).Using one injection electrode and four sense electrodes users can log resistivity profiles with different depths of investigation and gain information about permeability, porosity, water quality and geological formation properties.

Four resistivity measurements are recorded compared to two offered by most other manufacturers.

The QL40 ELOG is an in line sub. It can be combined with other logging tools of the QL (Quick Link) product line or operated as a standalone tool.

It is possible to extend the application of the QL40 ELOG to a QL40 IP induced polarization probe through a simple firmware upgrade. The QL40 IP configuration allows to record in addition the chargeability of the formations.



## Application

- Bed boundary analysis
- Facies changes
- Quantitative geological formation properties
- Identification of hydrostratigraphic units
- Aquifer thickness
- Water quality
- Identification of hydrocarbon intervals
- Detection of ore body zones

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## Principle of measurement

An electric current is injected into the formation from the source electrode. Potentials due to this current flow are measured on various sense electrodes on the probe with respect to a voltage-reference electrode located at the top of the isolation bridle. The spacing between the source and individual sense electrode determines the depth of investigation of the measurement. The voltage measurements are proportional to resistivity of the formation.

## Measurement/Features

- 8", 16", 32" and 64" Normal Resistivity in [Ohm-m]
- SP in [mV]
- SPR in [Ohm]

## Operating conditions

- Open borehole
- Water filled
- Centralization not necessary
- Isolating bridle required

## Technical Specifications

- Diameter : 43mm. (1.7")w/insulating sleeve
- Length : 1.9m (74.8")
- Weight : 9 kg (19.8 lbs)
- Maximum Temperature: 70°C. (158 °F)
- Maximum Pressure: 200bar (2900psi)

### Normal Resistivity SP & SPR

- Sensor : stainless steel electrode
- Resistivity range: 0,1 to 100.000 Ohm.m
- Resistivity accuracy: depends on measurement range
  *Below 1% of measured value from 1 to 5000 Ohm-m*
  *Below 5% of measured value from 5000 to 50.000 Ohm-m*
- Resistivity resolution : below 0.04% of measured value
- SPR range : 0,1 to 100.000 Ohm
- SP range : ±18V
- SP accuracy : ±2,5mV
- SP Resolution : 0,5mV

*Specifications subject to change without notice*

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