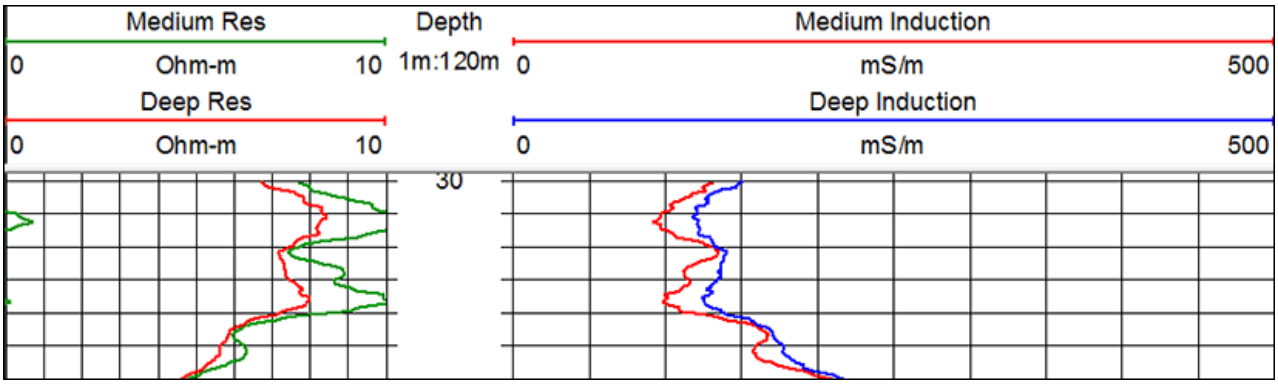
QL40-IND – Dual Induction

mountsopris.com/ql40-ind-dual-induction

August 22, 2014



Description

The QL40-IND Dual Focused Induction probe provides two simultaneous conductivity logs, corresponding to “Medium” and “Deep” radii of investigation into the borehole. 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 mineralized, water-soaked sands. In contrast to electrical tools, this induction tool can be used in dry and non-metallic cased holes.

The QL40-IND tool is stackable within the Quick Link (QL) product line or it can be run as a standalone tool.

Applications

- Indicator of permeable zones and porosity
- Formation water salinity
- Long term well monitoring
- Ore Identification and quality correlation
- Indication of Hydrocarbons

Operating Conditions

Borehole Fluid
[X] Water
[X] Mud
[X] Dry

Casing
[X] Uncased
[X] PVC Borehole
[_] Steel

Centralization
[_] Required
[X] Not Necessary

Features & Benefits

- Two depths of investigation for detailed formation characterization
- More temperature stabilization than other tools on the market
- Easy to calibrate for specific borehole conductivity ranges
- Operates on any standard wireline (Mono, 4, 7 conductor, or Coax)
- Slim, 45 mm diameter. One-person operation.

- Can be combined with other logging tools of the QL product line or operated as a standalone tool.

Specifications – Metric/English

Specification	Metric	Imperial
Diameter	45 mm	1.77″
Length	1.925 m	75.78″
Weight	7 Kg	15.4 lbs.
Max. Temp.	70ºC	158ºF
Max. Pressure	200 bar	2900 psi

Intercoil Spacing: 50 cm and 80 cm
Operating Frequency: ~100 kHz
Accuracy: < 3% F.S.
Stability: < 0.5 mS/ 10 ºC
Conductivity Range: 1-3000 mS/m

QL Stack Possibilities

- **QL40IND** + QL40GR (Gamma): Lithology tool in Dry and Non-Magnetic cased holes
- **QL40IND** + QL40IP (Induced Polarization) : Hydrothermal Vein location, Graphite location
- **QL40IND** + QL40IP (Induced Polarization) + QL40GR (Gamma): Uranium Exploration
- **QL40IND** + QL40IP (Induced Polarization) + QL40MGS (Mag. Sus.): Mining Exploration Tool, Mineral and Ore body Identification

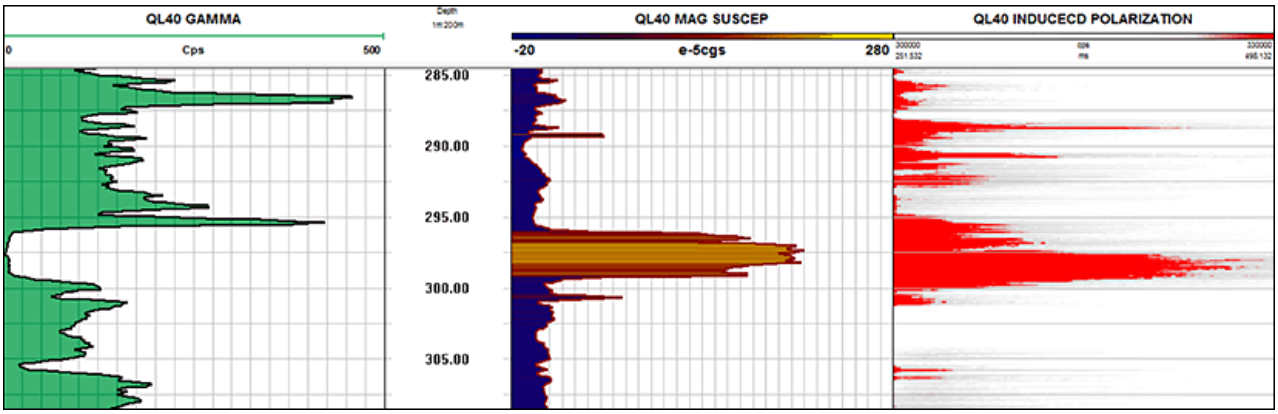
Documentation

Data Sheet
User Guide

QL40-HM – Magnetic Susceptibility

mountsopris.com/ql40-hm-magnetic-susceptibility

August 21, 2014



Description

The QL40-HM borehole magnetic susceptibility tool is typically used in mining, geotechnical, and lithology applications. All electronic circuitry resides in a high strength non-magnetic enclosure. The operating frequency is chosen to be sufficiently low to avoid interference from rock conductivities and the circuitry is temperature compensated to minimize thermally induced drift. The QL40-HM is offered with one or two measuring ranges and will resolve strata down to 25 mm. Probe response is practically instantaneous (<0.5s).

The extended range is designed for measurements in complex igneous or metamorphic rocks up to high magnetite rocks. This extended range has been chosen so as to identify layers containing magnetite (0.005 – 100%). The main use of the probe is for prospection on deposits of Fe minerals – magnetite, pyrite and hematite. These data are to be used for quantitative interpretation of the magnetic components in the rocks and estimation of the thickness of layers. In this way, the QL40-HM can directly be used for economic evaluation of the deposit.

The QL40-HM tool is offered in standard range, extended range, dual range magnetic susceptibility, and as a combination tool with induction. All of these options are stackable within the Quick Link (QL) product line or can be run as a standalone tools.

Applications

- Delineation of kimberlite deposits
- Economic evaluation of deposits
- Mineral exploration and characterization
- Lithology studies
- Extended range used in complex igneous or metamorphic rocks up to high magnetite rocks
- Ore Identification and quality correlation

Operating Conditions

Borehole Fluid
[X] Water
[X] Mud
[X] Dry

Casing
[X] Uncased
[X] PVC Borehole
[_] Steel

Centralization
[_] Required
[X] Non-Required

Features & Benefits

- Two depths of investigation for detailed formation characterization
- Less temperature drift than other tools on the market
- Easy to calibrate for specific borehole magnetic susceptibility ranges
- Operates on any standard wireline (Mono, 4, 7 conductor, or Coax)
- Slim, 45 mm diameter. One-person operation.
- Can be combined with other logging tools of the QL product line or operated as a standalone tool.

Specifications – Metric/English

Specification	Metric	Imperial
Diameter	45 mm	1.77″
Length	1.5 m	59″
Weight	7 Kg	15 lbs.
Max. Temp.	70ºC	158ºF
Max. Pressure	200 bar	2900 psi

Sensor: Two coil system
Intercoil Spacing: Standard – 25 cm
Intercoil Spacing: Extended – 30 cm
Range: Standard – 10-5 to 0.5 SI units
Range: Extended – 10-4 to 2 SI units
Operating Frequency: ~2 kHz
Accuracy: < 3% F.S.
Zero Drift: Standard – < 2.10-5 SI units/ 10ºC
Zero Drift: Extended – < 1.10-4 SI units/ 10ºC

QL Stack Possibilities

- **QL40-HM** + QL40-GR (Gamma): Lithology tool, Glacial till characterization
- **QL40-HM** + QL40-IP (Induced Polarization) : Clay Typing, Geotech
- **QL40-HM** + QL40-IP (Induced Polarization) + QL40-GR (Gamma): Mining Exploration tool
- **QL40-HM**+ QL40-IP (Induced Polarization) + QL40-IND (Induction): Mineral and Ore body Identification

Documentation