Terraplus
empowering discovery

your source for geophysical instruments

QL40-HM Magnetic Susceptibility Probe

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

Terraplus Inc.
120 West Beaver Creek Rd, Unit #15
Richmond Hill, ON, Canada, L4B 1L2

terraplus.ca
1.905.764.5505
sales@terraplus.ca

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.	70°C	158°F
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/ 10°C

Zero Drift: Extended – < 1.10-4 SI units/ 10°C

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

Terraplus Inc.
120 West Beaver Creek Rd, Unit #15
Richmond Hill, ON, Canada, L4B 1L2

terraplus.ca
1.905.764.5505
sales@terraplus.ca