## **PROBES**

# **MAGNETIC SUSCEPTIBILITY**





The Magnetic Susceptibility probe is based on the industry-standard Bartington Instruments<sup>™</sup> product.

It is a low-frequency device and is specifically designed for mining applications. The probe has excellent stability against pressure and temperature variations.

#### **Principle of Measurement:**

An oscillating magnetic field in the probe produces a current within a toroidal zone in the surrounding formation. The oscillating current produces a secondary field that is detected by the receiver coils. The 'quadrature' signal is a measure of susceptibility.

## **SPECIFICATION:**

#### **Features**

Operates in dry or water-filled boreholes

Unaffected by plastic casing Ideal for use in small-diameter exploration boreholes Excellent thermal/pressure stability across specified operating range

### **Measurements**

Magnetic susceptibility

Natural Gamma

### **Applications**

The probe has particular use for detecting uranium where the log shows a negative correlation with uraniferous compounds. Susceptibility logs are highly sensitive to iron and show large contrasts according to its oxidation state. The frequent occurrence of iron with other redox-sensitive metals can provide a valuable indicator of the presence of other minerals.

### **Operating Conditions**

Borehole type:	open/cased (plastic), water/air-filled
Centralisation:	fin stand-off recommended
Recommended Logging Speed:	3m/min

Spe	ecifications

	Diameter:	43mm
	Length:	1.91m
	Weight:	5.5kg
	Temperature:	0-70°C (extended ranges available)
	Max. pressure:	20MPa
	Operating frequency:	1.439kHz
	Range:	10 <sup>-5</sup> to 10 <sup>-1</sup> cgs (Gaussian)

## **Part Numbers**

1002095	Magnetic Susceptibility probe with natural gamma



