

# probe specificiation

## 1" SLIMLINE FOCUSED INDUCTION PROBE

The 1" slimline focussed induction probe produces accurate formation conductivity logs even in dry or plastic-lined boreholes. The probe coil spacings are optimised to achieve high vertical resolution and a deep radius of investigation, with minimal borehole influence when logging in conductive-fluid-filled holes.

### PRINCIPLE OF MEASUREMENT:

An oscillating high-frequency magnetic field from a transmitter coil in the probe induces an alternating electrical current within the surrounding formation proportional to its electrical conductivity. This current, in turn, induces voltages within the receiver coils. These are phase discriminated and measured. These voltages are proportional to the formation conductivity. Additional focussing coils minimise the contribution of the borehole signal.

### FEATURES

- Formation conductivity measurement in wet/dry boreholes or through plastic casing
- Focussed measurements almost eliminates borehole signal
- PSD (phase-sensitive detector) discriminates between magnetic susceptibility and conductivity signals
- Highly stable measurement is almost independent of temperature
- Option of natural gamma for correlation

### MEASUREMENTS

- Formation conductivity
- Natural gamma

### APPLICATIONS

- Water**
  - Indicator of permeable zones and porosity
  - Formation-water salinity
  - Long-term well monitoring
- Mineral/Engineering**
  - Ore identification and quality
  - Correlation
- Other**
  - Indication of hydrocarbons

### OPERATING CONDITIONS

- Borehole type:** open/ plastic or grp cased, air/water filled
- Fin stand-off recommended

### SPECIFICATIONS

- Diameter:** 25.4mm
- Length:** 1.95m
- Weight:** 9kg
- Max. temperature:** 70°C (extended ranges available)
- Max. Pressure:** 20MPa (extended ranges available)
- Number of coils:** 4
- Operating frequency:** 39kHz
- Effective TX-RX spacing:** 50cm (20in)
- Resolution:** 1mS/m
- Accuracy:** 3% of reading over whole temperature range
- Conductivity range:** 2 to 3000 mS/m
- Natural-gamma detector:** 12.7mm x 50mm NaI(Tl) scintillation crystal (larger sizes available)

### SALES INFORMATION

- Probe:**
  - 25 061 100 1" Slimline focussed Induction probe with calibration ring
  - 25 061 200 -includes natural gamma
- Accessories:**
  - 23 001 000 Fin stand-off
  - 20 070 000 Natural-gamma API calibrator without source
  - 30 010 000 3.7MBq <sup>137</sup>Cs source for natural-gamma calibrator

