



**GEOPHYSICAL LOGGING PROBES**

# Fluid Temperature Fluid Conductivity

TCME

**MEASUREMENT PRINCIPLE**

The probe measures the temperature and conductivity of the fluid in the borehole. The fluid temperature and conductivity detectors are mounted in an open chamber at the base of the probe, thus allowing free fluid flow through the detectors during downhole logging.

Fluid conductivity is measured by a multi-electrode array which compensates for changes in electrode contact resistivity.

Fluid temperature is measured using a high precision platinum resistance thermistor. The thermistor has a rapid response time to minimise the effects of logging speed.

**Ideally suited for:**

Groundwater investigations.

**Operations & Calibration:**

Minimum borehole diameter of 50mm.  
Fluid filled open borehole conditions.

Typically recorded in a downhole logging direction at logging speeds of 5 – 7 m/min.  
Downhole logging is preferred to obtain as fresh a sample as possible.

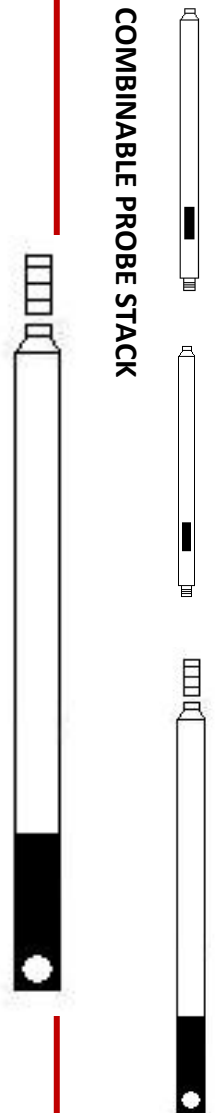
Final curve units can be degrees Celsius and micro-siemens per centimetre

Calibration from manufacturer or a series of laboratory solutions.

Probes can be stacked to the top of the probe. Typical combinations are:  
Gamma, gamma and caliper, magnetic deviation.

SINGLE PROBE

COMBINABLE PROBE STACK



**PHYSICAL SPECIFICATIONS**

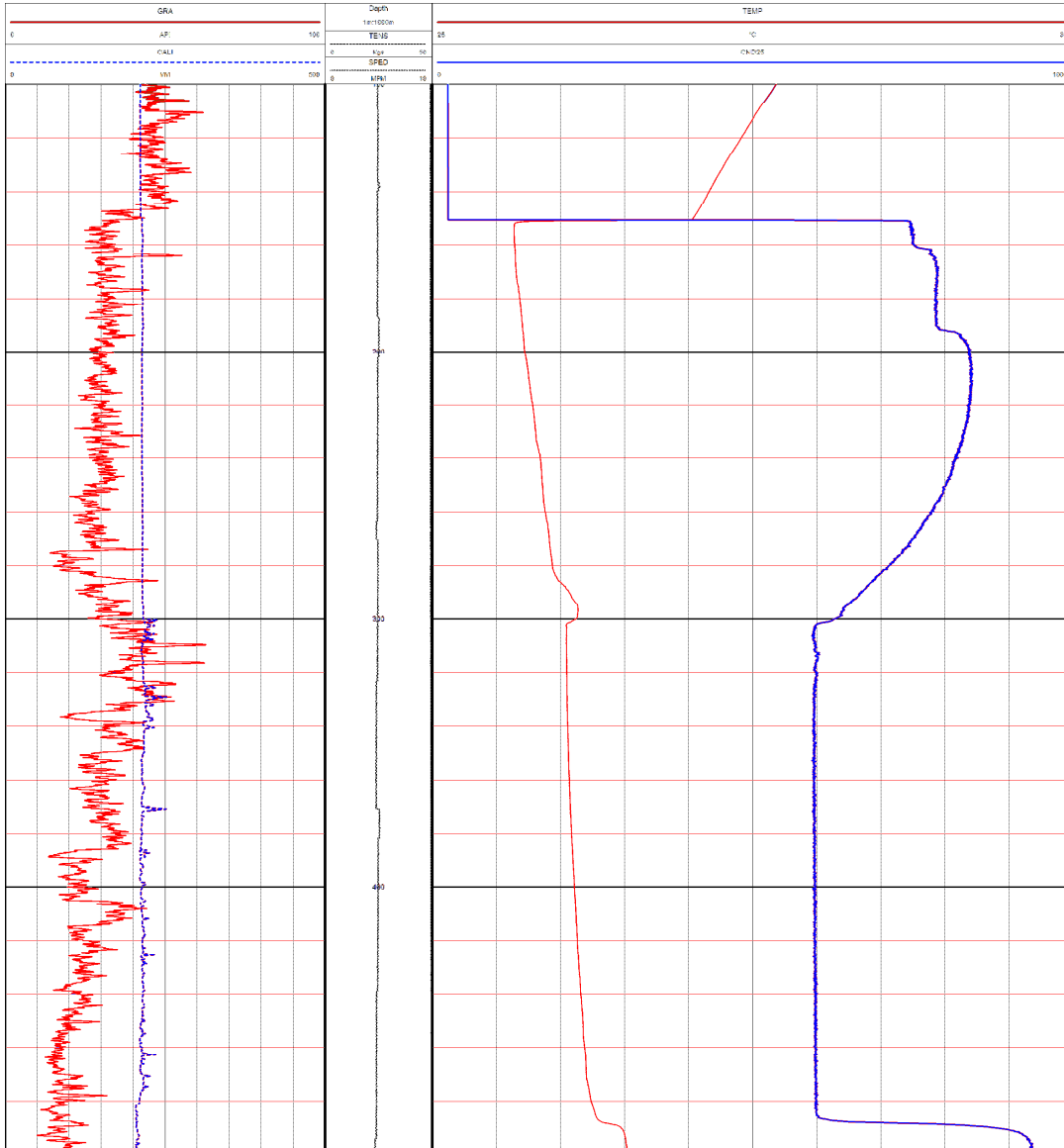
|                       | TEMP                        | COND                |
|-----------------------|-----------------------------|---------------------|
| Weight                | 2.6kg                       |                     |
| Length                | 0.70m                       |                     |
| Diameter              | 38mm                        |                     |
| Detector              | PT100 (platinum thermistor) | Multiple electrodes |
| Range                 | 0—80°C                      | 0—50000 µS/cm       |
| Accuracy & Resolution | +/- 0.3°C & 0.01°C          | 1% at 1000 µS/cm    |
| Maximum Pressure      | 20 MPa                      |                     |
| Maximum Temperature   | 80°C                        |                     |



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