



TECHNICAL SHEET

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| BOREHOLE IMAGING | MICRORESISTIVITY | DIPM4 |
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Generalities

Principle

The probe consists of a microresistivity section and a detachable verticality module that can also operate as a standalone logging tool. The microresistivity data are acquired by four high-resolution, button electrodes mounted on motorised caliper arms and maintained in contact with the borehole walls. Opposite caliper arms are mechanically linked and adjacent arms lie at 90° to each other. Any planar formation feature that does not lie perpendicular to the borehole axis is detected by each electrode at a different apparent depth.

Results

The four-arm dipmeter measures microresistivity and tool orientation data.

Interest

Structural analysis (identification of faults and folding), correlation between wells, bed-boundary / bed-thickness measurement, well volume and borehole break-out for stress analysis.

Option

Magnetometric trajectometry, natural gamma measurement.

Constraints / borehole

| | | | |
|--------------------|---|---|--|
| filing up | : <input checked="" type="checkbox"/> water | : <input checked="" type="checkbox"/> mud | : <input checked="" type="checkbox"/> dry |
| casing | : <input type="checkbox"/> PVC | : <input type="checkbox"/> steel | : <input checked="" type="checkbox"/> open |
| borehole | : <input checked="" type="checkbox"/> cored | : <input checked="" type="checkbox"/> destructive | |
| max depth | : 2000 m | | |
| effective diameter | : 65 mm – 200 mm | | |
| temperature | : 0°C – 70°C | | |
| max pressure | : 20 MPa | | |

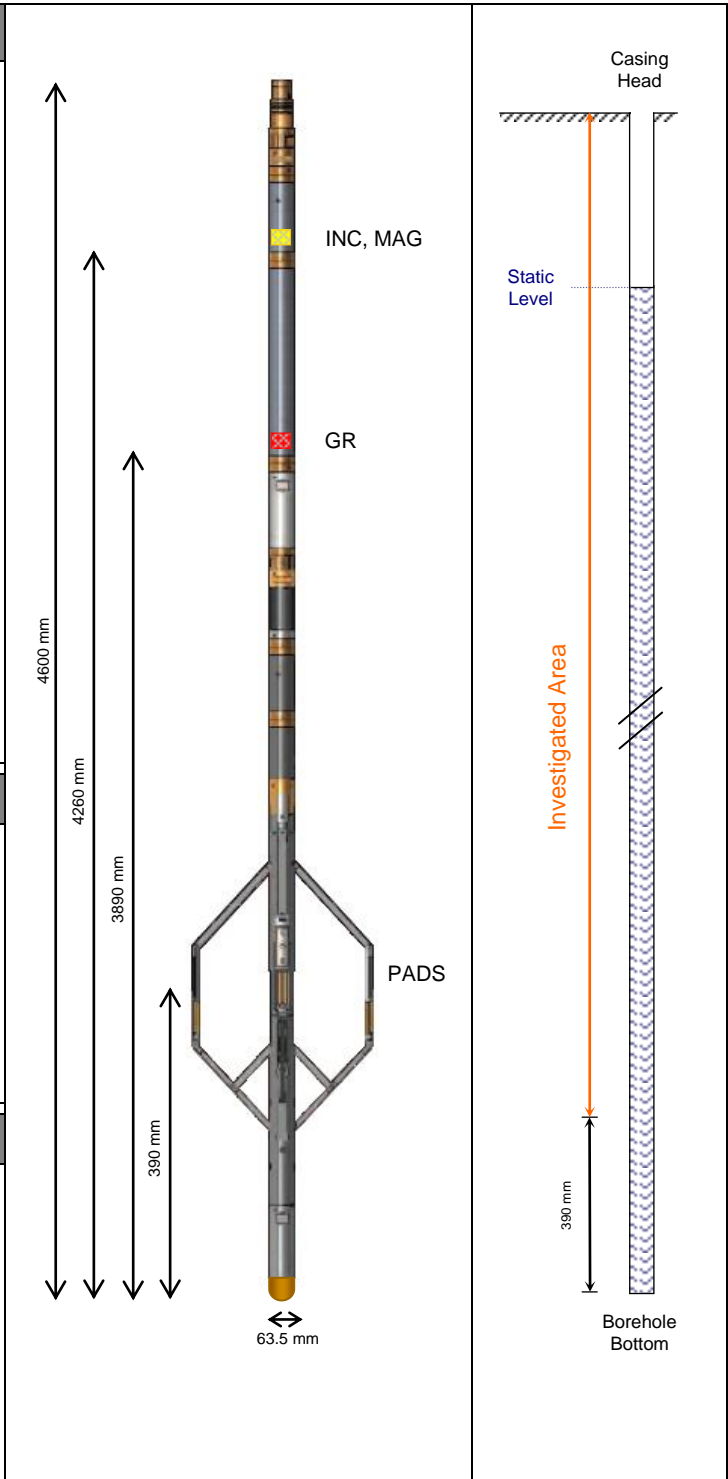
Instrument characteristics

Dimensions

- length : 4600 mm
- diameter : 63.5 mm
- weight : 60 Kg

Elements

- 1 gamma ray sensor : GR
- 1 magnetometer 3 axis (x,y,z) : MAG
- 1 accelerometer 2 axis (x,y) : INC
- 4 microresistivity pads and calipers : PADS



Recording / Measurements

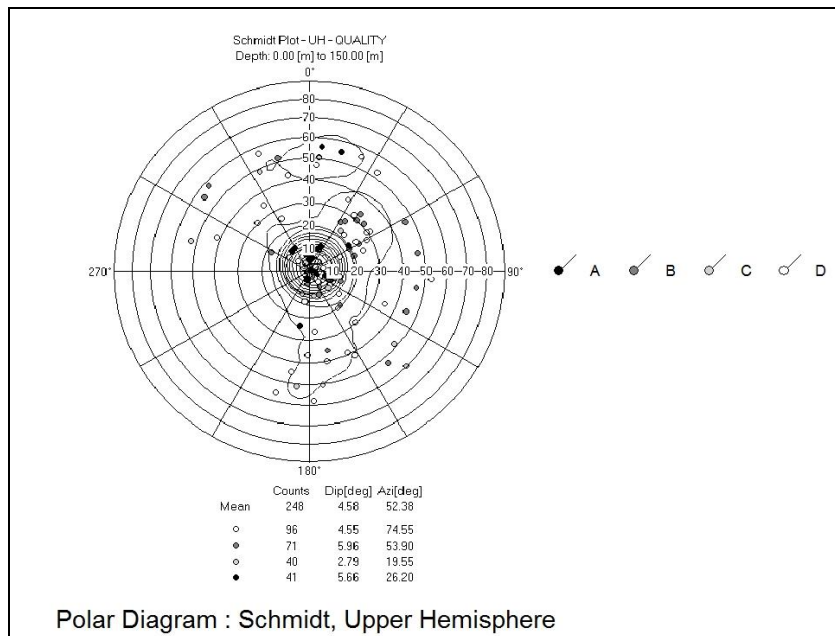
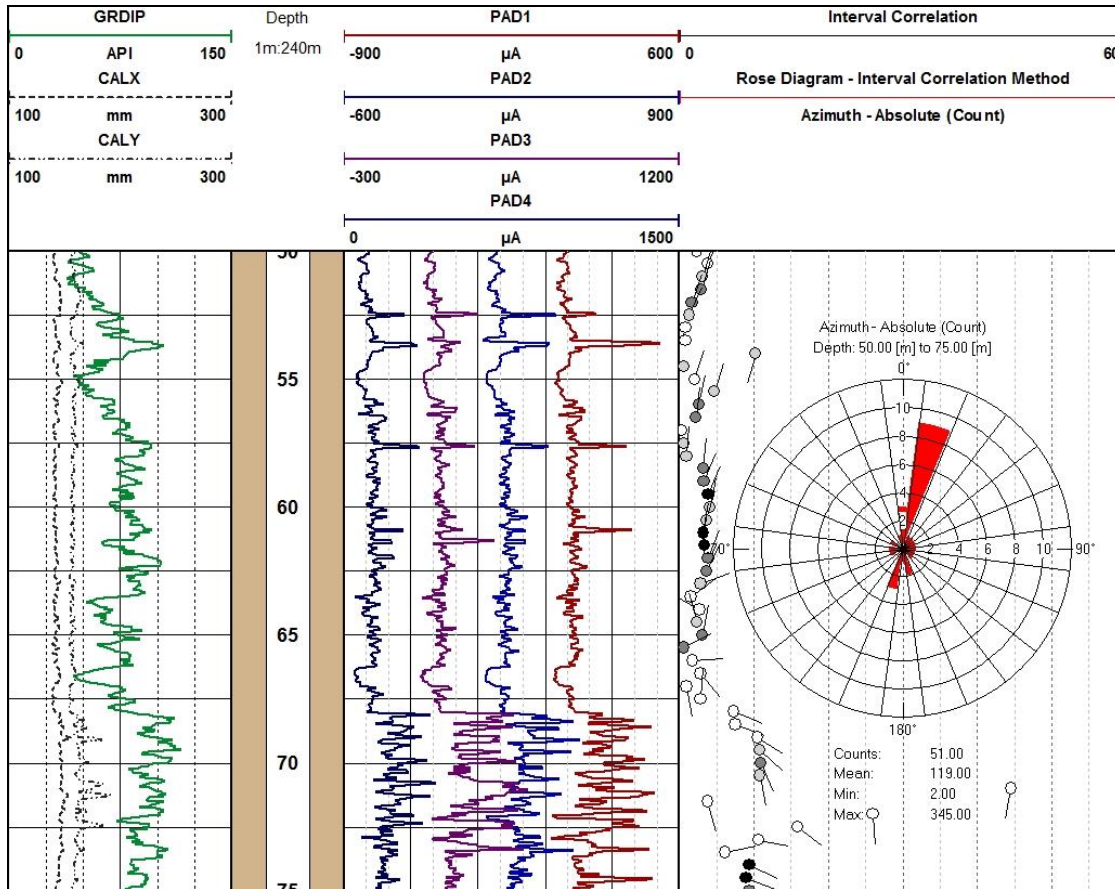
Recording

- Instrument : centered off-centered
- Measure : down up
- Rec. speed : 3 m/min

Measurements

- Resistivity range : 1 to 10 000 Ohm.m
- Caliper range : 65 to 380 mm
- Inclination : 0.1 °

Examples



The four microresistivity measurements are correlated and combined with the verticality data using RG-DIP software to calculate the dip and dip direction relative to the probe axis.