

GEOPHYSICAL LOGGING PROBES

Dual Density Trisonde (Side Loading Source)

DGGD

MEASUREMENT PRINCIPLE

The dual density trisonde probe uses either a Cs¹³⁷ or Co⁶⁰ radioactive source, as a source of gamma radiation, to energise the formation depending upon the geological environment. The slim design allows the use of the probe within RC drill rods. Resulting back scatter in the formation is detected at both scintillation detectors allowing compensation of the density data. The amount of back scattered gamma radiation is inversely proportional to the apparent electron density of the formation. Data processing allows identification of formation versus caving behind the drill rods.

Logging inside the drill rods provides a safer environment for the radioactive source compared to the open-hole and allows coverage where the drill has collapsed.

Ideally suited for:

Inrod density logging.

Operations & Calibration:

Minimum drill rod diameter of 50mm.

Typically recorded in an uphole logging direction at logging speeds of 3 – 5 m/min.

The side loading radioactive source design allows for probe “stacking” below the source, giving the possible acquisition of gyro and gamma data in a single logging run.

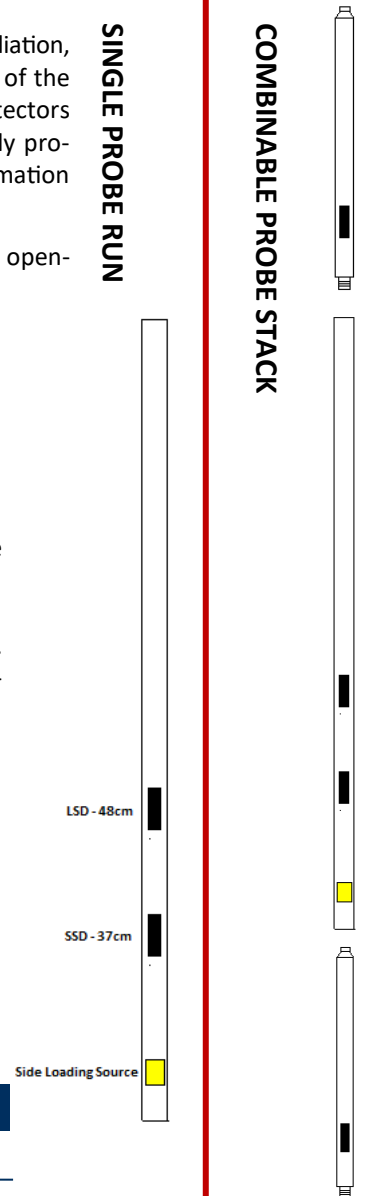
Final curve units can be counts per second, grams per cubic centimetre with density compensation. Calibration via Adelaide Models – AM8 and AM11, and specific project borehole when density assay data is available.

Probes can be stacked above and below the probe. Typical combinations are:

Gamma, dual density and North Seeking Gyro.

SINGLE PROBE RUN

COMBINABLE PROBE STACK



PHYSICAL SPECIFICATIONS

Weight	10.0kg
Length	1.42m
Diameter	42mm
Density Detectors	LSD (48cm), SSD (37cm)
Source	Co ⁶⁰ or Cs ¹³⁷
Maximum Pressure	20 MPa
Maximum Temperature	80°C



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