

MAGNETIC DEVIATION

M DEV TECHNICAL SPECIFICATIONS

Geoscience runs a variety of magnetic deviation probes, Some as stand alone others integrated with other surveys

System requirement	GAA logger20 / ALT
Diameter	from 40mm to 50mm
Length	- From 1.2m to 2.8m
Weight	- 9kg to 15kg
Logging speed	6m/min or on station
Max: Temperature	70°C
Max: Pressure-	3000psi
Power Supply -	tool dependant
Azimuth Range	0 to 360° +/- 1°
Inclination Range	up to 0 to 360° +/- 0.5°

LOG PARAMETERS

Depth (M or ft)
Inclination (°)
Azimuth (°)

APPLICATIONS

Directional surveys can be used for several different reasons;

- in water wells they are normally run to insure that the production pumping equipment will be properly aligned.
- Boreholes drilled in harder fractured material can be quite deviated depending on the dip and strike of the formations.
- In mining and mineral exploration borings may intentionally be drilled at some angle to intersect the pay zone at right angles for accurate ore analysis.
- Oil and gas wells may be highly angled from a multiple completion site such as an offshore platform and whipstocked out in a known direction and angle to intersect from the well head.

All of these industries use and benefit from the use of accurate directional survey results.

There are two distinct types of directional survey equipment, Gyroscopic and Magnetic. Each will give the same results but are used in different conditions. Each of these two types can be either recorded on photographic film or surface readout equipment. The object is to record for further analysis the measured depth, the direction the bottom of the tool is in relation to the top of the tool and the angle or inclination of the hole. The raw survey data is used to compute the borehole path from the top of the well to the bottom. After computation the survey data sheet contains the three dimensional data to be plotted and recorded as digital data.

The **magnetic deviation probe** is good for non magnetic strata in either open or PVC cased wells these probes offer economic hassle free accurate deviation data. Inclination only can be guaranteed in wells with high magnetic content (iron ore, drill strings, metal casing etc).

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