Defining Your Resource

Borehole Wireline

GEOPHYSICAL LOGGING PROBES

North Seeking Gyroscopic Deviation Logging (Fibre Optical Method)

FOG-GYRO

MEASUREMENT PRINCIPLE

The fibre optic gyro (FOG) uses Sagnac interferometry theory to measure the probe's current position relative to the earth's rotational axis. The detector is very sensitive to rotational movement and hence ideal for bore-hole deviation surveys. Each survey point measures components of the earth's rotation around the probe's X, Y and Z axis. The calculated 3D vector of the survey point will be parallel to the earth's rotation, thus pointing North. This information together with accelerometer data and current latitude is used to calculate the probe's position relative to True North

The gyro probe continuously transmits data to the surface logging unit during the survey which is monitored by the operator for integrity, tool face direction and probe rotation. ***This is not a memory gyro system.***

Ideally suited for:

Borehole directional surveys within metal drill rods.
Borehole directional surveys within metallic formation (iron ore, magnetite).

Operations & Calibration:

Minimum borehole diameter of 40mm.
Air and/or fluid filled borehole.
Inside drill rods.

No surface preparation required (sighting, spinning up)
Typically recorded at multiple station intervals throughout the borehole.
No drift corrections required.

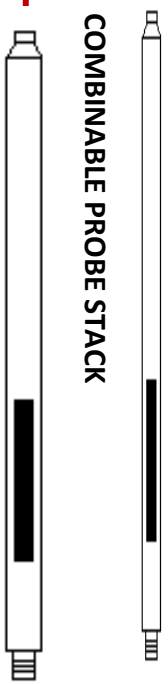
Final curve units can be degrees north for the direction and degrees from vertical for inclination.
Calibration is set by the manufacturer.

Probes can be stacked to the top of the probe. Typical combinations are:

Gamma, inrod density.

SINGLE PROBE RUN

COMBINABLE PROBE STACK



PHYSICAL SPECIFICATIONS	
Weight	5.2kg
Length	1.99m
Diameter	34mm
Gyroscope	Fibre Optic Gyro System
Direction Accuracy	+/- 2.0°
Inclination Acucracy	+/- 0.4°
Maximum Pressure	20 MPa
Maximum Temperature	80°C

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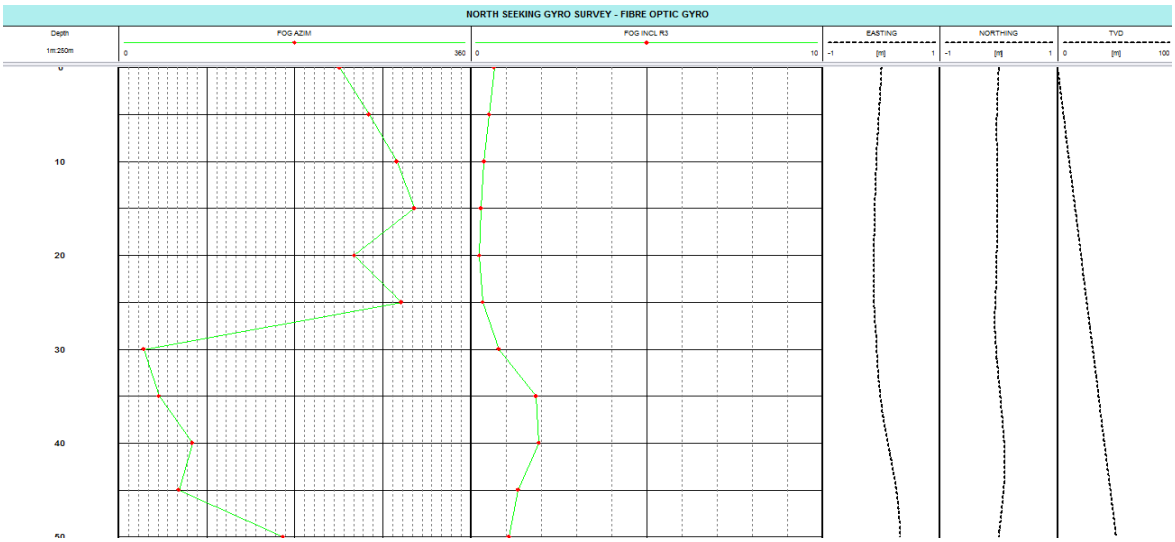
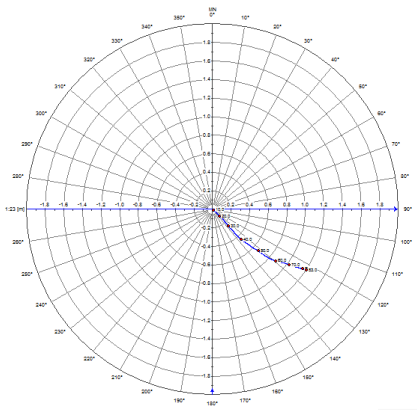
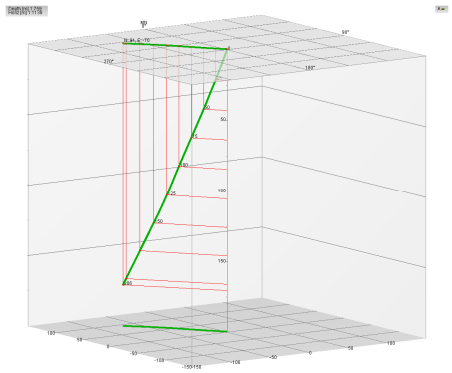
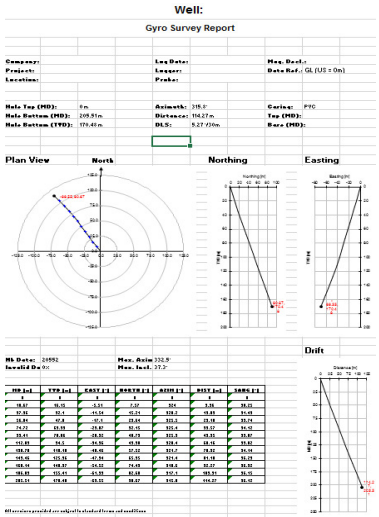
FOG GYRO

The final output of the FOG GYRO is the same bullseye, section or 3D plots as per magnetic or rate gyro surveys. The DEVREPORT format is used in the field.

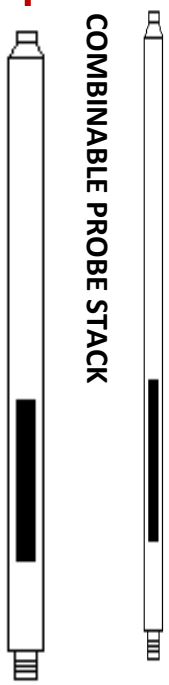


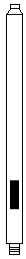






COMBINABLE PROBE STACK





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