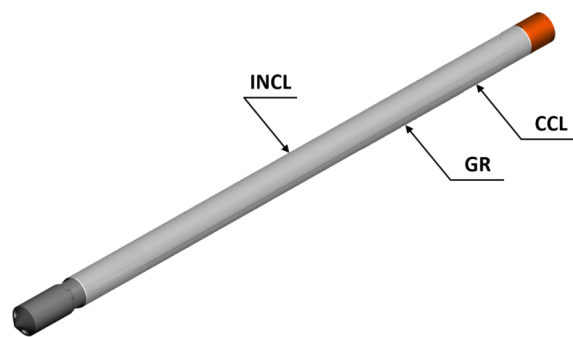


INCL (Inclinometer Logging Tool)

Deployment	Borehole
Log Name	DEV, AZIM
Measured Property	Deviation angles from the true vertical depth trajectory
Sensor Type	Accelerometer
Units	
SI	° (degree)
Oil Metric	° (degree)
Oil Field	° (degree)



Applications

- Assess tool orientation in 3D space
- Depth Matching between cased-hole logs and well schematic based on location of tubing/casing collars
- Correct pressure gradient for well deviation to assess fluid density and fluid friction model

Tool Schematic

[blocked URL](#)

Mathematical Model

$$\cos \theta(l) = \frac{dz}{dl}, \quad \tan \phi(l) = \frac{dy^*}{dx^*}$$

where

$$l = \int \sqrt{dx^2 + dy^2 + dz^2} \text{ – along-hole measured depth}$$

θ – is deviation from true vertical depth

ϕ – azimuth in tangent plane.

