

Natural Gamma Probe

Natural gamma probes measure gamma radiation that is emitted by geological units, the intensity of which depends on the concentration of different radioactive isotopes therein. Geovista has options to meet varying deployment requirements, including filtered sonde for filtering out lower energy gamma and GM probes for high count rates.

Natural gamma measurements are an incredibly popular option across a wide variety of different sectors because of their utility in stratigraphic correlation and as a proxy for lithology. The isotopes most commonly responsible for natural gamma emissions in geological strata are ^{40}K , ^{238}U , ^{232}Th , and the radionuclides in the decay chains of these isotopes. The relative concentrations of these radionuclides in strata can provide key information on the lithology; for example, mudrocks with high clay content will contain higher U and Th concentrations than sandstones or carbonate rocks. Similarly, K-rich rocks will also exhibit higher gamma ray counts.

Geovista's standard Natural Gamma Probe includes a sensitive crystal which counts the ionizing events over time. For high count rate environments, a Geiger-Müller based instrument is available. Finally, a shielded (filtered) version is also available which filters out lower energy gamma rays for use in e.g., uranium exploration.

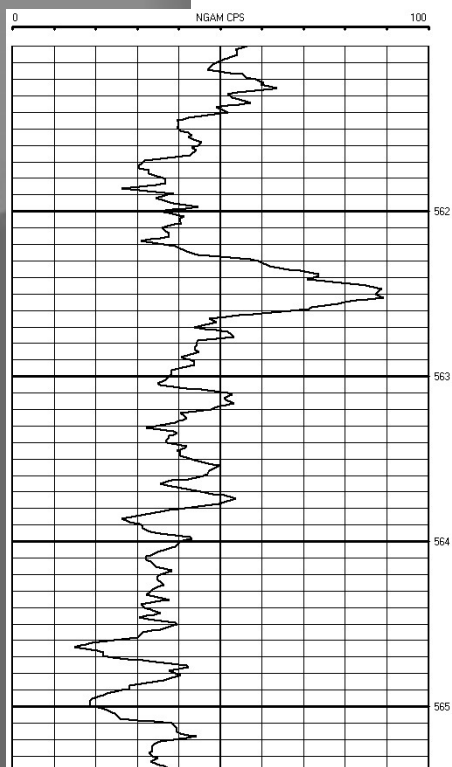
All sondes provide automatic dead time correction.

KEY FEATURES

- Fully combinable, digital probes
- Range of detectors and sondes to suit various applications

APPLICATIONS

- Depth correlation
- Stratigraphic correlation
- Shale/clay content
- Ore resource evaluation
- Geochemistry
- R.A. tracer detection
- Uranium exploration
- Nuclear geological storage



SPECIFICATIONS

	Natural GR (NaI)	Natural GR (GM)	Natural GR (NaI /Filtered)
Weight (kg)	3.5	6.3	4.5
Length (m)	0.7	0.95	0.7
Diameter (mm)	38	28	42
Other diam. options:	28	38	-
Detector D x L (mm)	NaI 25 x 50	GMT (8&15 mm)	NaI 20 x 50
Other:	NaI 20 x 75		
Max. Pressure (MPa)	20	20	20
HP version (MPa)	35	-	-
Max. Temperature	80°C	80°C	80°C
HT version	125°C	-	-
Borehole Condition	Any	Any	Any

Accessories: Verification blanket