


Multi-Sensor Core Logger Natural Gamma System (MSCL-NG)

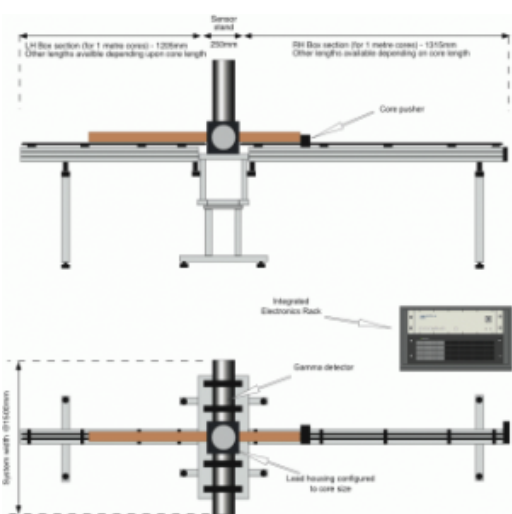


Attention:

Please note that the system can only be operated upon request. Operations with the MSCL-NG requires experienced scientific staff on board. The system is not operated by the ship's crew. Announce operations with the MSCL-NG to AWI-Logistics prior to the cruise and clarify the data transfer after the cruise.

Summary

Multi-Sensor Core Logger - Natural Gamma System is a stand-alone natural gamma system designed to obtain both total and full spectral natural gamma data. For high resolution and quality spectral data from sedimentary rocks the system is configured with three NaI(Tl) detectors.



Manufacturer	Geotek Ltd.
Model	MSCL-NG
Serial No	n/a
Type	Multi-Sensor Core Logger-Natural Gamma System

Contacts

Role	Name
Principal Investigator	Frank Niessen
Data Scientist	Catalina Gebhardt
Engineer in Charge	Dietmar Penshorn

Components

The sensor comprises three 3"x3" NaI(Tl) detectors housed in 6" diameter lead shields. Each detector uses a NaI(Tl) crystal optically coupled to a photomultiplier tube and a Multi-Channel Analyser (MCA). The detectors make measurements over 1024 channels calibrated to correspond to 0-3 MeV energy range. The complete system is controlled through custom-designed Geotek MSCL software, which enables either multi-channel spectral measurements or simply total counts to be recorded. The software gives the user full control of sampling positions and intervals down the core and control of count times. All the electronics are supplied in a single integrated 19" rack unit that contains of all the necessary external electronics including the motor control unit, the microprocessor and rack mounted PC.

Sensor Type	MSCL-NG Natural Gamma System
Manufacturer	Geotek Ltd.

Components	three 3"x3" NaI(Tl) detectors with photomultiplier tube and Multi-Channel Analyser (MCA) detector housings: 6" diameter lead shields interface and electronics supplied in integrated 19" rack unit
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Data logging, storage and archiving

Logged parameters

total and full spectral natural gamma data

Rawdata storage on board

Local storage on MSCL-NG electronic. Operator is in charge of data backup.

Documentation

- [Natural_Gamma.pdf](#)