Temco, Inc.

Design Excellence in Core Analysis Instrumentation

Total & Spectral Gamma Logger

TGL-890 & SGL-891

Temco offers both a Total and a Spectral Gamma-Ray logger for the evaluation of core samples. The Total Gamma-Ray measurement is equal to the sum total of the natural radiation emitted from a test core sample. The Spectral Gamma-Ray Logger measures the radiation and determines the relative quantities of Potassium, Uranium, and Thorium. The radiation emitted from the core samples will vary with the lithology of the test sample. The radiation comes from the radioactive decay of Potassium, Uranium, and Thorium, which are present as trace elements in the core sample. Generally, a Gamma-Ray Well Log is a recording of the natural gamma radiation of the formation around the well bore and is run in conjunction with other well logs. The gamma ray log does not change with the well treatment or production, so the logs generated using the core gamma logger can be used to correlate the depths of the other well logs and for confirming the depth of the core sample within each sample box.

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The Gamma Logger is provided with a conveyor belt for the scanning of test samples and a computer and data acquisition system for the data collection and analysis of the measurements. The test core samples are loaded on to the conveyor belt for testing. As the core passes through the measurement tunnel, radiation levels are recorded. The radiation data is recorded on the same vertical or depth scale as the well log so that the well log and the Core Gamma-Log can be overlain. As the core approaches the end of the table, the core is removed and new test core is placed on to the measurement conveyor belt. In this manner, long lengths of core samples can be easily measured. The relative quantity of gamma radiation from the core is proportional to the radiation measured in the well bore. For the Spectral measurements, the belt speed is generally reduced in order to obtain accurate measurements.

Specifications

- Sodium Iodine Detector: 3" by 3"
- Preamplifier, Amplifier, Discriminator, and High Voltage Bias supply
- Lead Shield around measurement area: 450 lbs (204 kg)
- API Standard provided with logger
- Encoder for belt position measurement
- Conveyor Belt Speed: 0.25 to 6 ft/minute (0.08 to 2 meters/minute)
- Conveyor belt width: 6" (15.24 cm)
- Conveyor belt length: 7' 6" (2.3 meters)
- Computer, Printer, Control Software
- Electrical: 220-240 VAC 50/60 Hz 1 Phase

Ordering Information

Model No. TGL--890	Total Gamma Ray Logger
Model No. SGL--891	Spectral Gamma Ray Logger