XRF Element Logging Instrument

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Overview

- It can be used to obtain information on element composition (component, content, and distribution rules) from rock cuttings powder obtained while drilling through the X-ray fluorescence analysis technology, identify the lithology and determine and divide the stratum through element combination characteristics, and further carry out in-depth data analysis and processing to find laws related to reservoir physical properties and oil and gas properties, thereby achieving the purpose of reservoir evaluation.

Features

- Providing multiple element curves in real time, as well as quantitative data and curves for field stratigraphic correlation and division;
- The content data of elements can truthfully reflect the material basis of rocks, which is helpful for understanding rocks and strata in essence;
- In the case of logging failure due to complex well conditions, quantitative curves are required for profile recovery and stratigraphic division. Identification of special acid lithology, such as interpretation of carbonate rocks and igneous rocks.

Technical Indicators

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Element analysis range	sodium (Na) - uranium (U)
Content analysis range	1PPM-99.99% (the ranges is different for different element contents)
Measurement time	30-200 seconds
Detector	electrically cooled Fast-SDD semiconductor detector
Instrument resolution	(127±5)eV
Multichannel analyzer	2048 channels
Input voltage	AC 220V ± 10%, 50HZ ambient humidity: 30% - 80%
Pulse forming	triangular pulse forming, pulse forming time ⩽2μS. Free exchange of pulse mode and spectral line mode
High definition CCD	5 million pixels
Rated power of vacuum pump	550W
Circular sample vacuum chamber	240×83mm
Differential nonlinearity ＜0.1%, integral nonlinearity ＜0.01%	
Program controlled gain control, 1-65535 level micro adjustable	
The vacuum degree can reach 10-2pa in 10 seconds (high-vacuum area: 10-5pa)	