

CVE Thermal Plus™

CONSTANT VOLUME AND CONSTANT TEMPERATURE GAS EXTRACTOR

OVERVIEW

The CVE Thermal Plus™ system provides automated advanced gas extraction services enabling consistent and reliable gas analysis. Automated and remote features for constant volume, constant temperature (CVCT) gas-in-mud extraction enable high-quality and accurate measurements. This facilitates hydrocarbon characterization and enables real-time reservoir evaluation and understanding.

ACCURATE AND CONSISTENT RESULTS

The CVE Thermal Plus system provides high-quality, consistent gas samples by heating the volume of extracted drilling fluid under controlled conditions to a consistent temperature, eliminating temperature variations. The hermetically sealed degassing chamber prevents atmospheric gas contamination. Controlled nitrogen-gas injection displaces any atmospheric contaminants to obtain a true gas-in-mud sample stream. The automated impellor speed control ensures consistent degassing of the drilling fluid. A remotely controlled valving system allows remote filling and extraction of drilling fluid to and from the extraction efficiency correction (EEC) vessels. Automated flushing and cleaning capabilities provide consistent and efficient system performance.

MODULAR, SCALABLE GAS EXTRACTION SYSTEM

The system is the novel addition to the CVE family. The service provides constant volume extraction with CVE, mud density measurements with CVE Plus, and now constant temperature with CVE Thermal Plus. The dynamic CVE family allows operators a flexible, modular configuration to fit any rig layout.

GAS EXTRACTION DIRECT FROM FLOWLINE

The CVE Thermal Plus system limits the loss of light hydrocarbons by mounting the drilling fluid suction tube using a flange at an accessible point in the flowline. The suction tube is placed as close to the bell nipple as possible to provide a more accurate ratio analysis and hydrocarbon characterization.



BENEFITS

- » Overcomes inconsistencies of legacy gas extraction systems
- » Provides high quality, consistent gas sampling
- » Delivers accurate results in all environments, including cool drilling fluid returns
- » Eases shipping, rig up, maintenance, upgrading, and troubleshooting with modular components
- » Optimizes layout in tight spaces with modular components
- » Enables greater accuracy of hydrocarbon characterization and reservoir evaluation
- » Allows the comparison of gas data and analysis across multiple wells/fields

FEATURES

- » Consistent gas samples at constant volume and constant temperature conditions directly from the flowline
- » Single or dual heater configuration
- » Heats drilling fluid to 90°C in oil-based mud, and 70°C in water-based mud
- » Nitrogen-purged gas trap eliminates atmospheric contaminants
- » Extraction probe design to eliminate cuttings blockages
- » Drilling fluid returned to mud stream after processing
- » Remote control valving system to fill and extract EEC vessels of drilling fluid
- » Automated flushing and cleaning
- » Full software control and monitoring of all system parameters