GC TRACER

GC TRACER Unit

GC TRACER Interior

The GC TRACER stands for Gas Chromatograph Tool for Real time Analysis, Characterization and Evaluation of Reservoirs. It enables the client to make knowledgeable, fast decisions by providing accurate petrophysical and geosteering data. The GC TRACER is the latest development in Datalog's quantitative gas detection product line using membrane technology. It represents a major advancement in surface gas detection and its application to formation fluid evaluation. Using Datalog's patented membrane based gas measurement technique, the GC TRACER has the ability to distinctly identify, quantify and analyze hydrocarbon components in any drilling fluid. The GC TRACER is the most flexible and accurate gas measurement device available at wellsite, allowing the user to choose casing points, formation tops and pay zones with remarkable precision.

Benefits

- Accurate reservoir fluid type identification.
- High-resolution fluid contact identification.
- Identification of formation boundaries and unconformities.
- Potential for cost reduction as an alternative to extensive wireline logging or RFT sampling.
- Real-time fluid characterization for the analysis of compartmentalization and source proximity data.

Advantages

- Closed flow system – no gas trap.
- Greater extraction efficiencies.
- Faster elution times.
- Truly quantifiable mud gas analysis.
- Sharper spatial and temporal resolution.
- Flexible Installation.

The GC TRACER extracts hydrocarbons and non-hydrocarbons by using a probe inserted directly into the drilling fluid. The probe houses a semi-permeable membrane, which extracts gases as a result of the difference in partial pressure across the membrane. This difference in pressure allows each gas component, whether free or dissolved, to permeate across the membrane.

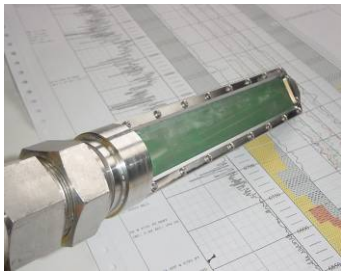
Compact ExP Design

- Gas Chromatograph and server located in ExP enclosure with accurately maintained ambient conditions.
- Enclosure situated 3m from probe providing shortest possible transit times, reducing lag and providing immediate response.
- Automated calibration procedure with built in calibration gas cylinders.

Fast & Accurate Gas Chromatographic Analysis

- Hydrocarbon Evaluation: C1 to C8 (70 secs) with C1 to C10 (135 secs).
- Analysis of Aromatics: Benzene, Toluene, Ethylbenzene and Xylene.
- Non Hydrocarbons and Sour Gases: CO_2, H_2S, N_2.

The Latest Development in Wellsite Mud Gas Analysis

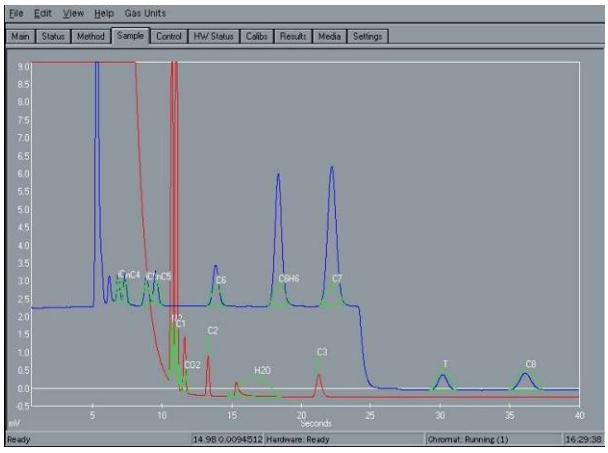


GC TRACER Probe

- Unique semi permeable membrane technology for gas extraction.
- Avoids all the problems associated with gas traps and mechanical agitation.
- Slim probe design, allowing greater ease of deployment in the flowline at the bell nipple.
- Heated sample lines from point of extraction to analysis, ensuring excellent resolution of heavier components.

The GC TRACER can be integrated with the majority of rig systems and 3rd party mud logging services. As a communication protocol GC TRACER uses WITS 0 over TCP/IP or RS422. The compact design also lends itself to ease of installation in even the most complex of surface flow systems.

The system and well are monitored 24 hours a day by an onsite GC TRACER engineer. Each engineer is a highly trained senior field specialist that is extensively knowledgeable on the GC TRACER and interpretation of the data captured. The GC TRACER provides detailed quantitative gas data, which is more involved than a Mud Logging chromatograph. The Datalog engineer has the expertise for proper interpretation for the following detailed analysis:



Gas Analysis Graph

- Choosing oil/water contacts in deep water wells when mud temperature is very low and gas traps are unable to extract hydrocarbon information.
- Determining Nitrogen content of gas producing formations.
- Identifying thin and fractured zones.
- Compartmentalization - determining whether flow units are in communication.