

Mud Logging
Field Surveillance
Well Intervention



FLAIR™ SERVICE APPLICATIONS

▶ As an Exploration Tool

It gives an early assessment of the composition of potential pay zones while drilling.

▶ In Deepwater Settings

Despite the low mud temperature, FLAIR can detect and help characterise the formation fluid.

▶ As a Field Development Tool

It can be used on development fields to partially replace traditional downhole analysis.

▶ For Deeply Buried Reservoirs

Being a surface measurement, it can also be used for logging fluids in HT/HP environments, where conventional tools cannot be used.

▶ For Extended Reach - Horizontal Drilling

It can assist in geo-steering through distinguishing between poor formations and rich zones.

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FLAIR™ Service Fluid Logging & Analysis In Real time

FLAIR™ is a premium gas service focused on fluid facies characterisation and early information on reservoir fluid composition, which includes a quantitative composition of C₁-C₅ and a qualitative monitoring of C₆-C₈ components plus aromatics. The Extraction Efficiency Calibration (EEC) procedure of the FLAIR™ service makes the C₁-C₅ fluid composition analogous to the composition of the downhole reservoir fluid, and can therefore be used as a reliable subsurface log.

Advantages of the FLAIR™ Service

FLAIR provides quantitative fluid composition in real-time and on a continuous basis. The availability of the information at an early stage, together with the interpretation and the analysis, contributes to preliminary assessment of formation fluid composition, which allows for quicker decision making.

FLAIR gives information on fluid similarities/dissimilarities, reservoir compartmentalisation, compositional grading, and specific markers based on C₅+ components. The monitoring of C₆-C₈ components plus aromatics can help identify zones of interest where conventional gas levels are low.

FLAIR provides an early quantitative fluid content measurement for improved reservoir characterisation. Because FLAIR data are insensitive to environmental factors which can affect e-logs like mud salinity, pure water, mudcake thickness, rugosity of the hole, etc., their combination and integration with e-log is particularly advantageous to complement or to replace any doubtful log measurements. The combination of FLAIR data with other logs/data, results in an integrated approach for effective reservoir management.

By contributing to an optimisation of the sampling process, FLAIR helps reduce operational risks. It also helps reduce rig time, which leads to important cost reductions. As fluid logging is also possible under difficult drilling conditions, it can sometimes be the only method for getting direct hydrocarbon composition in certain wells.

Advantages of the Remote Service Delivery

Each FLAIR job is supported by a worldwide network of Remote Service Delivery (RSD) centres, which ensures a continuous follow-up and provides technical support at any stage of the job from the preliminary contact with the client to presentation of the final results. The RSD Engineers are a direct link with our clients and make sure the right information is delivered within the client's organisation in due time.

The RSD centres are supported by the Geoservices Expertise Centre (GEC) which ensures the overall quality of the FLAIR service and gathers Geoservices' knowledge and expertise in formation evaluation. GEC Specialists can be involved in specific projects for data interpretation.