



Fluids content

Geomechanical properties

Petrophysical properties

Volatiles Analysis Service (VAS)

Obtain petroleum system insights from cuttings or core plugs

The **Volatiles Analysis Service (VAS)** from Baker Hughes, a GE company (BHGE), is a unique lab-based measurement and advisory service that evaluates fluid, petrophysical, and geomechanical properties of the formation using drilled cuttings or core plugs. Information gathered helps operators optimize drilling and completion decisions for enhanced reservoir production.

Reservoir fluid analysis is critical for understanding oil migration occurrences and variable reservoir characteristics when designing a field development plan. VAS can distinguish productive and less-productive zones, as well as provide a qualitative assessment of water saturation. The service also provides estimates for ultimate recovery (EUR). VAS measurements deliver valuable insights about the hydrocarbon migration history that are used to map present vs. historical hydrocarbon accumulation and oil-water contacts,

identify compartmentalization, and detect a well's proximity to a pay zone.

Specific properties identified by VAS include:

- C1-C10 content gas
- Relative fracturability
- Formation permeability
- Presence of acetic and formic acid
- Fluid saturations
- Compositional variations, such as Toluene/Benzene, GOR, and heavies/lights, paraffins, naphthenes, and aromatics

VAS identifies landing zones from pilot hole cuttings and characterizes the lateral to aid efficient completion strategies. Core extractions can be used to conduct the same analysis. To help our customers further optimize fracturing stage placement and cluster intensity, VAS can differentiate faults from rubble zones and water-filled

Applications

- Wells with complex hydrocarbon systems
- Lateral characterization
- Fracture and fault detection
- Pay zone identification

Benefits

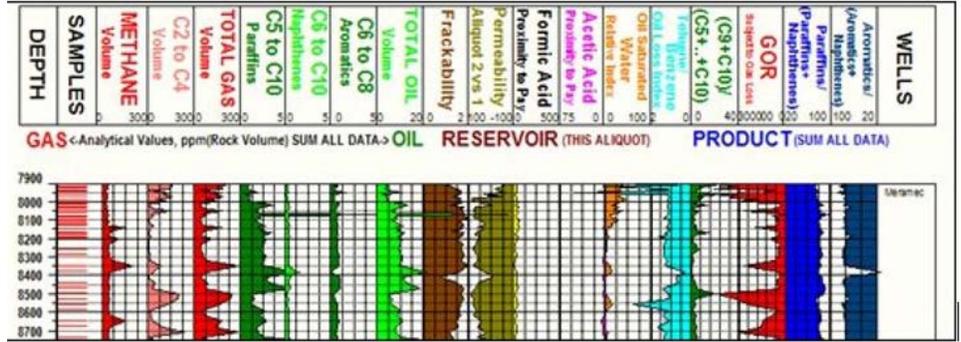
- Facilitates informed reservoir development decisions by analyzing cuttings
- Identifies optimal landing zones and missed pay zones
- Distinguishes between productive and unproductive intervals
- Provides evaluation results quickly
- Reduces risks and costs

from oil-filled fractures when combined with a high-resolution borehole image.

A cost-effective supplement to conventional formation evaluation (FE) methods, VAS is also effective in extreme well conditions, such as high-pressure/high-temperature (HP/HT) or where downhole technologies are limited or have failed and conventional methods cannot be used.

The BHGE team will integrate all available FE data and ensure the VAS interpretation is completed within days of extraction—facilitating fast, informed decision-making for your reservoir development program.

Contact your BHGE representative to learn more about how the BHGE Volatiles Analysis Service can supplement your reservoir characterization or visit bhge.com.



VAS output illustrating depth-dependent fluids content, rock mechanical and petrophysical indices

bhge.com

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