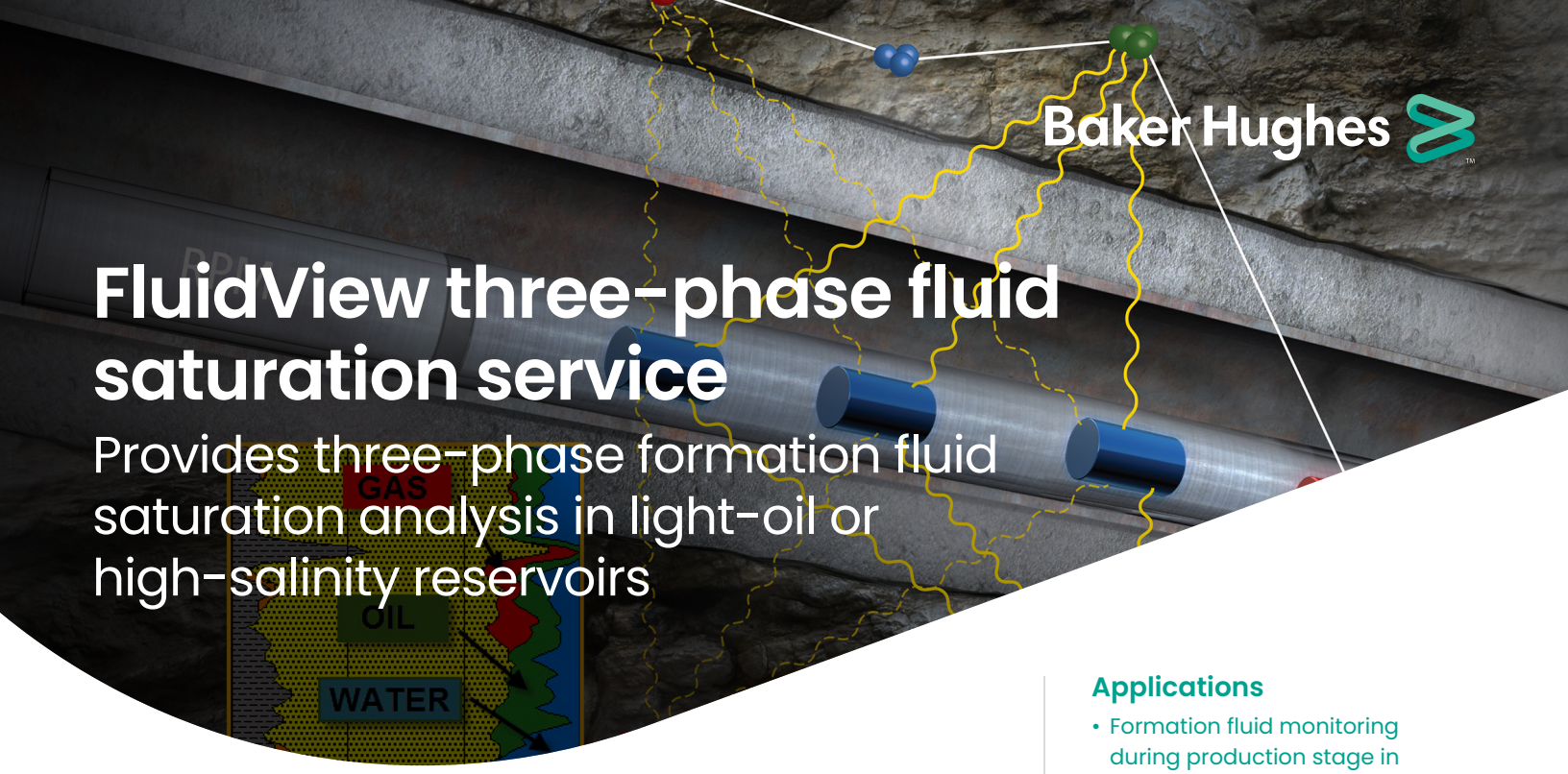


FluidView three-phase fluid saturation service

Provides three-phase formation fluid saturation analysis in light-oil or high-salinity reservoirs

The Baker Hughes **FluidView™ three-phase fluid saturation service** provides through-casing quantitative three-phase formation fluid saturation analysis in light-oil or high-salinity reservoirs, helping to resolve ambiguities in traditional cased-hole formation evaluation techniques. The FluidView service combines pulsed-neutron-induced, high-resolution gamma-ray data from the **Reservoir Performance Monitor™ (RPM™) service**, and comprehensive, forward-looking Monte Carlo N-Particle (MCNP) Transport Code modeling database to deliver a transparent quantitative three-phase fluid saturation analysis.

Quantitative saturation

The FluidView service has a highly versatile processing methodology, which uses MCNP modeling and different processing algorithms based on reservoir conditions. In low-salinity formation water and light-oil reservoirs, the FluidView service uses a combination of Inelastic and Capture ratios from multiple detectors; in high-salinity reservoirs, it uses Inelastic or Capture ratio and Sigma measurements to deliver a three-phase saturation solution.

	Standard RPM	Nautilus Ultra (HP/HT) RPM	Nautilus (HT) RPM
Diameter	1.7 in. (43.2 mm)	2.55 in. (64.8 mm)	2.55 in. (64.8 mm)
Minimum borehole	1.9 in. (48.3 mm)	3 in. (76.2 mm)	3 in. (76.2 mm)
Pressure	20,000 psi (138 MPa)	35,000 psi (241 MPa)	20,000 psi (138 MPa)
Temperature	350°F (177°C) for 8 hours	500°F (260°C) or 2 hours	500°F (260°C) for 8 hours
Length*	29 ft (8.8 m)	41.25 ft (12.6 m)	41.25 ft (12.6 m)

*Includes telemetry and gamma-ray instruments

Applications

- Formation fluid monitoring during production stage in light-oil or high-salinity three-phase reservoirs
- Gas cap buildup monitoring
- Identification of any bypassed pay zone
- Gasflood monitoring, including steam and CO_2 sequestration projects
- Reevaluation of marginal fields

Benefits

- Proprietary quantitative three-phase saturation measurement
  - Acquires data in a single pass
  - Acquires data efficiently
- Pre-job MCNP modeling
  - Provides forward-looking curve response analysis
  - Increases reliability of processed data
  - Delivers accurate quantitative fluid saturation solution
- Memory logging capability
  - Provides flexible deployment options
- **Nautilus Ultra™ RPM** service availability
  - Broadens scope to include high-pressure/high-temperature operations

Typically, in a low- or mixed-salinity formation water environment, the carbon/oxygen (C/O) logging mode of a pulsed-neutron instrument is used to obtain salinity-independent water and oil saturation. However, C/O logging cannot be used to determine gas saturation. Under similar formation-water salinity conditions, Sigma logging can deliver qualitative gas indications, using curve overlay techniques.

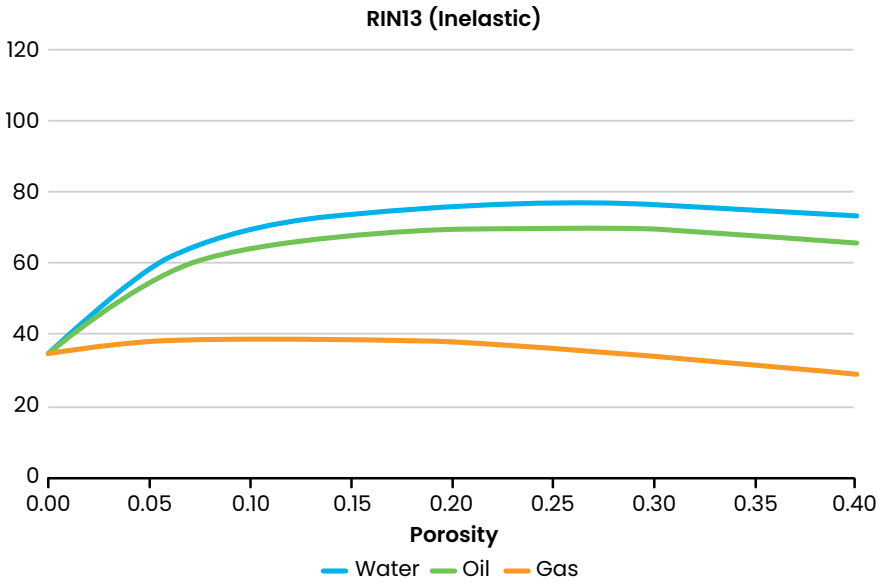
Transparent analysis

MCNP modeling provides the capability to generate forward-looking models to predict the response of the curves for varying combinations of mineralogy, formation fluid density, formation gas pressure and density, borehole holdup, and completion configurations. The dynamic curve response envelope algorithm takes into account the variations in porosity, mineralogy, and completions to increase reliability in the measured and processed data.

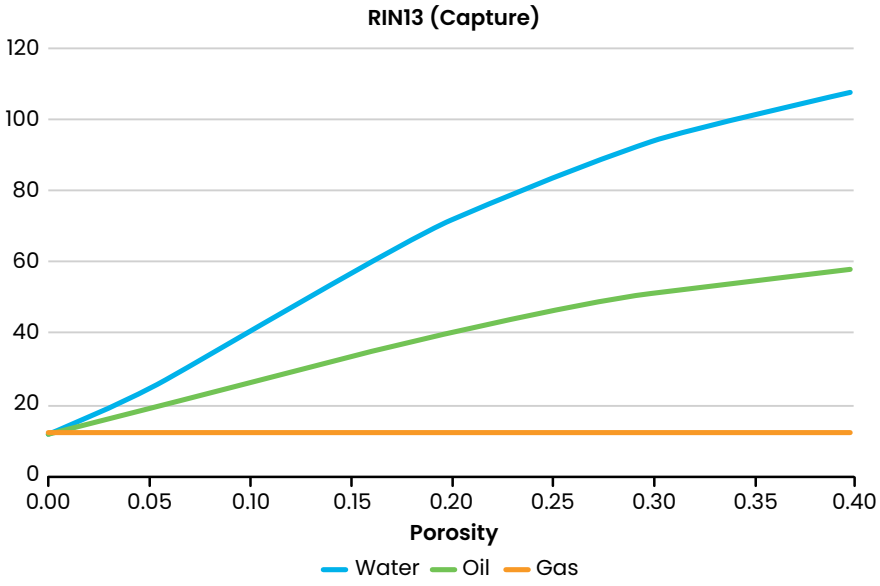
Efficient acquisition

Data from the following Baker Hughes services can be acquired with the RPM service in the same run: the **GasView™ salinity-independent quantitative gas saturation service**, the **OilView™ two-phase fluid saturation service** in light-oil reservoirs, the **NEO™ neutron-emulated openhole log service**, and the **RockView™ Slim basic lithology service**.

For more information on how the FluidView service can deliver three-phase fluid saturation analysis through casing in light-oil or high-salinity reservoirs, contact your Baker Hughes representative or visit bakerhughes.com.



RIN13 (Inelastic ratio) is sensitive to gas vs. liquid



RATO13 (Capture ratio) is sensitive to fluid density

Baker Hughes