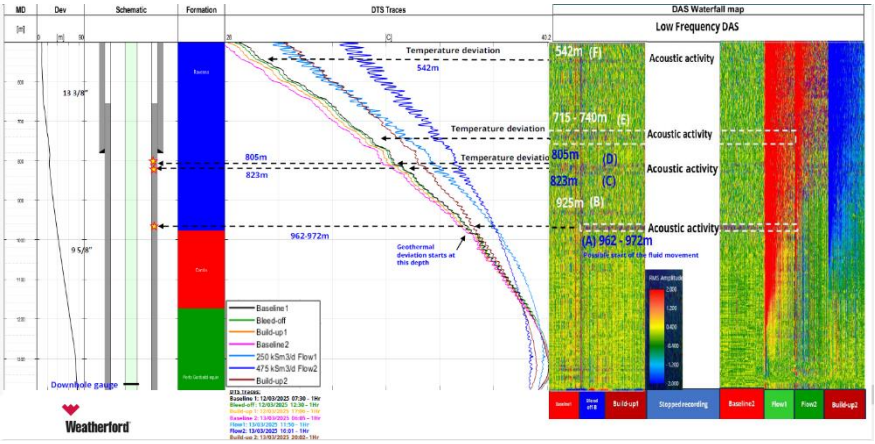
Stay Ahead of Risk

Fiber Optic Monitoring Pinpoints Well Leaks Without Operational Disruption



The well integrity results: DTS traces the plot for the full acquisition period/low frequency DAS waterfall plot in the lower section, 1,640 ft (500 m) EOF.

Objectives

- Acquire temperature anomalies and acoustic activities along the wellbore to detect potential leaks in the B annulus using distributed temperature sensing (DTS) and distributed acoustic sensing (DAS) technologies.

Our Approach

- The B annulus was showing pressure increasing over the time and, since the fiber was already installed (October 2022), Weatherford experts recommended applying the DTS and DAS technology.
- This non-intrusive solution required no additional wireline tools or site preparation and would not incur any downtime.

Value to Customer

- The comprehensive insights delivered both qualitative and quantitative data on fluid dynamics, enabling accurate characterization of failure patterns in the well completion.
- The analysis clearly located the well-integrity issue and confirmed flow behind the casing.
- This approach not only resolved the immediate concern but also demonstrated the long-term value of permanent fiber optic installations for proactive well surveillance.

LOCATION
Italy

WELL TYPE
Gas storage

FORMATION
Turbiditic sandy levels

CASING SIZE
13-3/8 in. up to 2,559 ft (780 m)
9-5/8 in. up to 4,977 ft (1,517 m)

TEMPERATURE
104°F (40°C)

DEPTH
4,520 ft (1,378 m)

PRODUCTS/SERVICES
- Completions
- Reservoir monitoring
- Optical sensing systems

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