

# A Flawless Reservoir Test was Conducted with Wireless Telemetry at 17,000 ft and Above 355 degF in Sour Well

Rated to 392 degF, Muzic Aeon premium-performance wireless telemetry validated tool operation and measured reservoir response in deep carbonate well

**Muzic Aeon\* premium-performance wireless telemetry delivered measurement resolution and accuracy comparable with that of memory gauges to provide a Middle East operator with reliable real-time data throughout the reservoir test, withstanding 14 days at temperatures above 340 degF and peaking above 355 degF.**

## Operator's reservoir testing challenges

As an operator identifies new resources in successively deeper reservoirs in the Middle East, higher formation temperatures come into play. At these high temperatures, the drillstem testing (DST) required to definitively assess reservoir quality and deliverability is out of the range of conventional wireless telemetry systems. The operator sought real-time access to the downhole data, which has proved to be critical for optimizing test sequences and confirming that reliable, accurate data has been acquired. Without real-time data, development decisions are marked by uncertainty.

## What they tried first

Attempts to test at high temperatures by locating wireless-enabled tools at shallower depths within their temperature qualifications did not provide sufficient information for unambiguous quicklook interpretation.

## What Schlumberger recommended

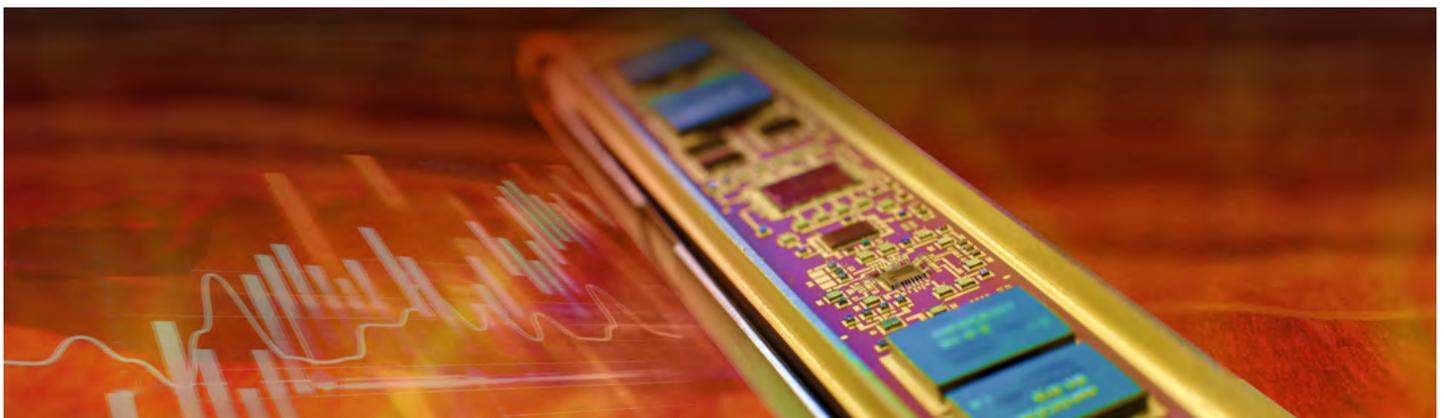
By incorporating all-ceramic multichip module (MCM) technology from the aerospace industry, Muzic Aeon premium-performance wireless telemetry provides reliable bidirectional wireless communication in real time across challenging environments. Testing strings united by Muzic Aeon telemetry deliver downhole data in real time and implement tool operational commands in harsh conditions where standard telemetry cannot function.

## What the operator achieved

This first deployment of Muzic Aeon wireless telemetry was designed in collaboration between the operator and Schlumberger, uniting a comprehensive DST string including

a CERTIS\* high-integrity reservoir test isolation system, IRDV\* intelligent remote dual valve, SCAR\* inline independent reservoir fluid sampling, and multiple gauge carriers both above and below the packer. Automated data acquisition delivered data in real time at the rig and for transmission via InterACT\* global connectivity, collaboration, and information service. With everyone having the same data access, the rig personnel, well test engineers, and subsurface teams were able to efficiently monitor operations and make decisions informed by the Testing Manager\* well testing real-time data monitoring and collaboration software.

The test string was in the well for 17 days, 14 of which were at temperatures above 340 degF. The maximum temperature was above 355 degF. Despite the harsh sour conditions, Muzic Aeon telemetry performed impeccably, with no degradation of resolution or accuracy in comparison with conventional memory gauge performance.



*Muzic Aeon wireless telemetry was successfully remotely deployed to provide bidirectional wireless communication for testing in the high-temperature reservoir.*