

Chevron Completes Well Test Using Wireless Telemetry During Noisy Downhole Jet Pump Operation

Signature quartz gauges enabled by Muzic wireless telemetry successfully transmit downhole gauge data to surface despite noisy downhole environment, onshore Iraq

CHALLENGE

Obtain real-time wireless pressure data in a noisy environment during pumping operations, and transmit the data from the remote site to a real-time processing facility.

SOLUTION

Capture real-time data using Signature* quartz gauges enabled by Muzic* wireless telemetry by filtering out the noise generated by the pumping operations.

RESULTS

Achieved test objectives with successful real-time data transmission during the entire test despite the noisy environment.



Conduct downhole testing operation in noisy downhole environment

After successful results from conventional drillstem testing operations of the ROVI-2 well in the Kurdistan Region of Iraq, Chevron sought continuous, real-time downhole pressure and temperature data verification using wireless telemetry despite the presence of a jet pump which creates a noisy environment.

Use Signature gauges enabled by Muzic wireless telemetry

Signature Quartz gauges are designed to deliver the best pressure data in any environment, even the most hostile downhole conditions for the entire test. Enabled by Muzic wireless telemetry, Signature gauges obtain real-time pressure measurements while monitoring and controlling the downhole reservoir test. This solution worked in this environment by filtering out the noise generated from the jet pump.

For simultaneous data transmission, the InterACT* service was also recommended to enable communications between the wellsite engineer and remote locations that could be easily accessed through a desktop or mobile device.

Verified data quality achieving testing operation success

Following the completion of the tests, the temperature and pressure derivative of real-time and memory gauge data were compared. Despite the noisy environment, Muzic wireless telemetry successfully transmitted the data in real-time for the entire test duration, helping Chevron achieve its test objectives. This operation proved that the performance of Music telemetry is not affected by noisy downhole conditions and can be used confidently in presence of a downhole jet pump.



Signature quartz gauges enabled by Muzic wireless telemetry.