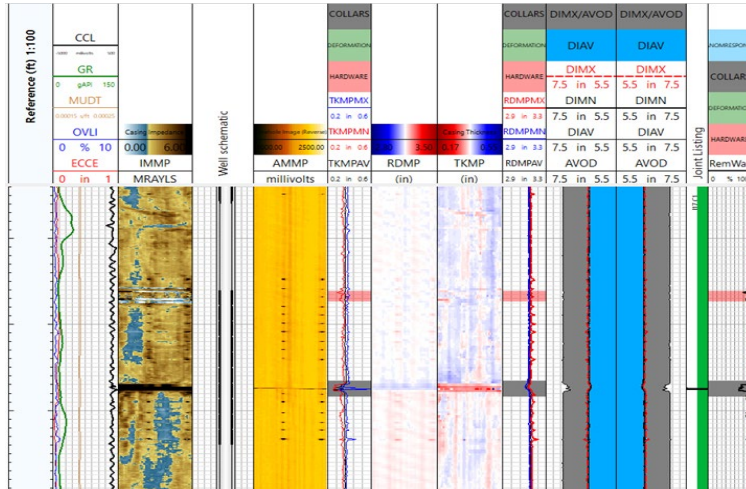


UltraView™ Tool Accurately Determined Effectiveness of New Perforations System in Deviated Injector Well



UltraView log with the following information obtained: amplitude map, thickness measurement, radius readings, and a calculation on the length and height of the connectivity points.

Objectives

- Provide a cement and corrosion service for a 7-in., 29 lb/ft casing.
- Identify and determine the aperture of the new holes in the casing that would connect with the formation for injection wells.
- Replace conventional perforating system with new hydromechanical connectivity system.

Our Approach

- Weatherford experts evaluated the customer's requirements and suggested the UltraView Tool. The tool provides high-resolution data for accurate evaluation of cement, casing wear, casing thickness, corrosion imaging, and fluid properties. The tool uses two ultrasonic transducers. The primary transducer is dedicated to casing and cement inspection and is located in the rotating scanning head. This feature provides 360° circumferential coverage by capturing 72 samples per revolution.
- The tool accurately identifies internal anomalies made by blades to open windows with a hydromechanical system. This type of technology can replace conventional perforating services in injection wells.
- Field personnel deployed the UltraView tool and logged 785 ft (239 m), identifying the new hydromechanics connectivity. This was the first well that was tested for its effectiveness to communicate the annular with the formation.
- The dimensions of the new window (length and height) were 1.6 x 0.7 in. (40.6 x 17.7 mm).

LOCATION
Meta, Colombia

WELL TYPE
Deviated

FORMATION
Sand, K2

HOLE SIZE AND ANGLE
8-1/2 in., 35°

CASING SIZE AND TYPE
7 in., 26 lb/ft

TEMPERATURE
180°F (82.2°C)

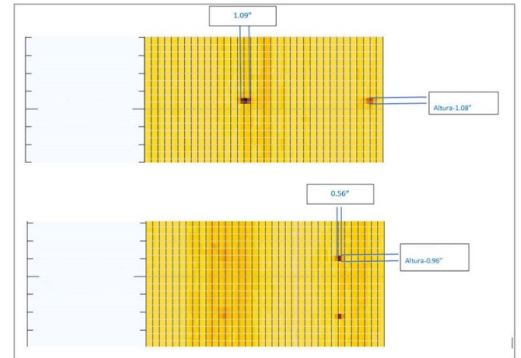
PRODUCTS/SERVICES
UltraView tool



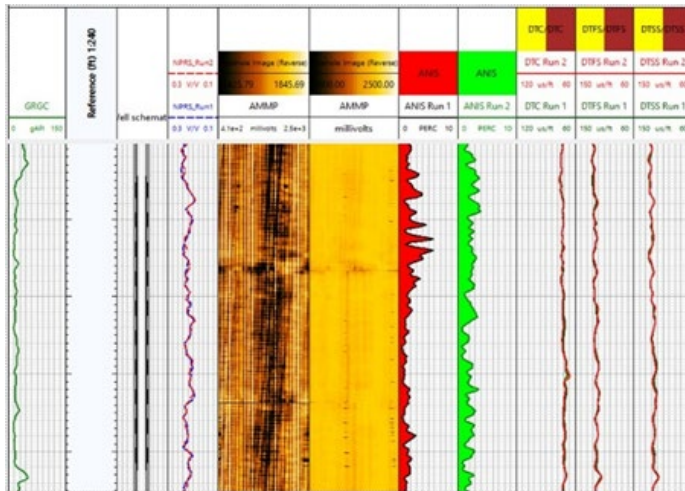
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Value to Customer

- The well integrity analysis identified that the hydromechanical connection left an internal mark at the desired depth.
- Tool thickness measurements showed that the casing was not open per the customer requirements. Additional integrity tests confirmed that the test of the technology wasn't working.
- Internal investigation by the customer was performed and part of the probes were the casing analysis and surface pressure test performed that didn't show any change.
- To complement the information and the analysis, it was essential to compare dipole sonic log (cross dipole) and neutron from before and after performing the hydromechanical operation.
- This was the first time the operator was trying this new technology and they trusted Weatherford to accurately identify the new perforation system.



Length and height of the internal marks left initially by the hydromechanical system.



Plot that shows the amplitude map from the UltraView tool where the windows form the hydromechanics system, and comparison amyotrophy and neutron reading.

