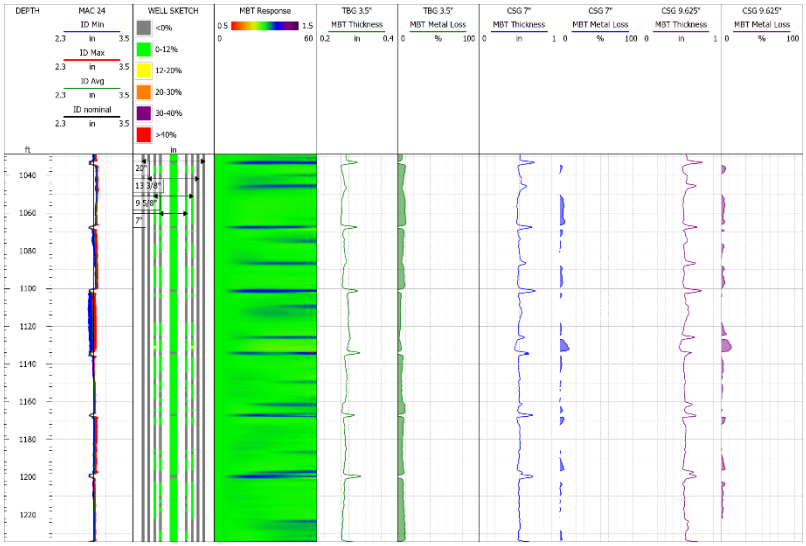
Thru-Tubing Measurement Services Provide Essential Data on Multiple Barriers in Deep Wells, Save $83,000 in Rigless Operation



The MultiView tool's thru-tubing evaluation log view showing results for the three concentric barriers: tubing, production casing, and surface casing.

Objectives

- Deliver a cost-effective yet robust and reliable downhole measurement suite to evaluate the condition of multiple concentric barriers and to obtain missing information on the downhole completion. The two remotely located deep wells (each over 12,200 ft deep) had been out of service for several decades and presented accessibility challenges prior to the intervention.
- Limit the operational footprint and not mobilize a logging unit to location.

Our Approach

- To minimize the footprint at the well site, Weatherford experts recommended the MultiView™ multibarrier corrosion logging tool and the ProMAC™ 24-arm caliber tool in memory mode, taking advantage of the slickline unit already on location to drift the well and tag total depth (TD) to carry out the data acquisition.
- Prior to downhole logging, Weatherford field personnel performed a wellbore cleanout during which numerous obstacles and restrictions were encountered.
- Upon confirming wellbore accessibility, the fully autonomous, compact-design electromagnetic multi-barrier inspection tool and multi-arm caliper were deployed on slickline to perform the downhole multi-barrier inspection.

LOCATION
Louisiana, United States

WELL TYPE
Producer

TEMPERATURE
285°F (140°C)

DEPTH
12,260 ft (3,737 m)

PRODUCTS/SERVICES
- MultiView multibarrier corrosion logging tool
- ProMAC 24-arm caliper tool (memory mode)
- Thru-tubing services

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Our Approach (continued)

- The integrity and metal loss condition of the production tubing and casing strings were evaluated.
- Downhole completion components, such as the downhole safety valve (DHSV) and landing nipples, for which information was previously unavailable, were identified and characterized.
- The geometry and physical condition of the tubing (specifically, deformation and ovality) were assessed using multi-arm caliper measurements.
- For each well, only a single run was required, with both tools deployed simultaneously at logging speeds faster than similar services offered by other oilfield service companies.
- Despite the pre-logging wellbore cleanout, the presence of some deposits was still indicated by the tools. The tool deployment, however, was successful in obtaining good-quality log data over a 12,260-ft (3,737-m) interval.

Value to Customer

- The combined thru-tubing measurement services of Weatherford successfully verified and updated the wells' completion records.
- Notably, Weatherford quantitatively assessed the condition of the production casing in a rigless operation and without pulling the completion string.
- The cost-efficient slickline logging operation enabled the operator to obtain essential downhole information to justify the remedial action plan and allocate budget for further plug and abandonment (P&A) activities in deep wells.
- For the total operation, Weatherford saved 5 to 6 days and approximately $83,000.