

INTEGRITY CASE STUDY SPECTRAL FLUID LOSSES [SPEC-FL*]

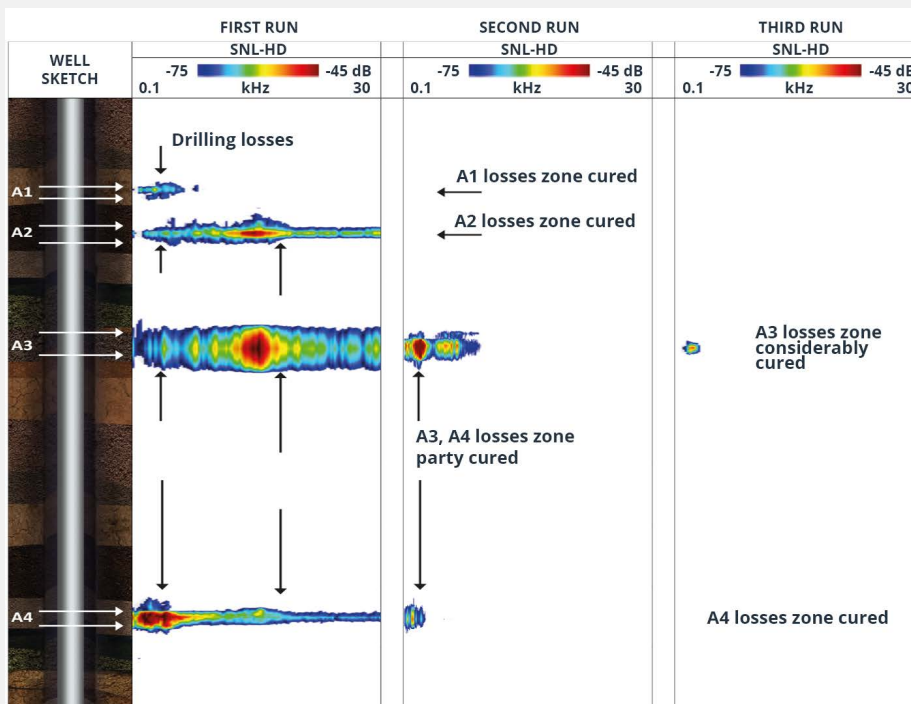
Challenge

Drilling fluid losses complicate well control, cementing and completion operations. A client wanted to find the cause of and to control sudden mud losses and gas kicks with a high hydrogen sulphide concentration in a well during drilling. All remediation attempts, including mud weight adjustment, had been unsuccessful; mud losses persisted for several weeks. This dramatically increased chemical, drilling fluid and rig time costs.

Solution

TGT was asked to perform a spectral fluid losses [SPEC-FL] survey to pinpoint lost circulation zones. This was conducted through the drilling string. The survey data showed that severe mud loss was occurring in four major intervals.

Spectral technology helps to pinpoint lost-circulation zones through drill pipe, enabling operations to continue safely and cost-effectively, minimising losses on all fronts.



TGT's spectral fluid losses service is based on the integrated analysis of high-precision temperature [HPT*] and high-definition spectral-noise [SNL-HD*] data. It can detect and locate lost circulation zones from inside the drillpipe, thereby minimising fluid loss related issues. In this example, SPEC-FL survey has indicated four lost circulation zones.

Outcome

After the SPEC-FL survey, lost circulation material was applied to the four main drilling fluid loss zones [A1–A4]. A post-treatment SPEC-FL survey showed that drilling fluid loss had been eliminated in zones A1 and A2, and considerably reduced in zones A3 and A4. Treatment using a different lost circulation material was applied to zones A3 and A4; the third post-treatment survey showed no drilling fluid loss in Zone A4 and only minor losses in Zone A3.