

LATIN AMERICA | STUCK PIPE

Challenge

A major service company wanted to minimize the risk of stuck pipe events for their clients in Latin America and around the world.

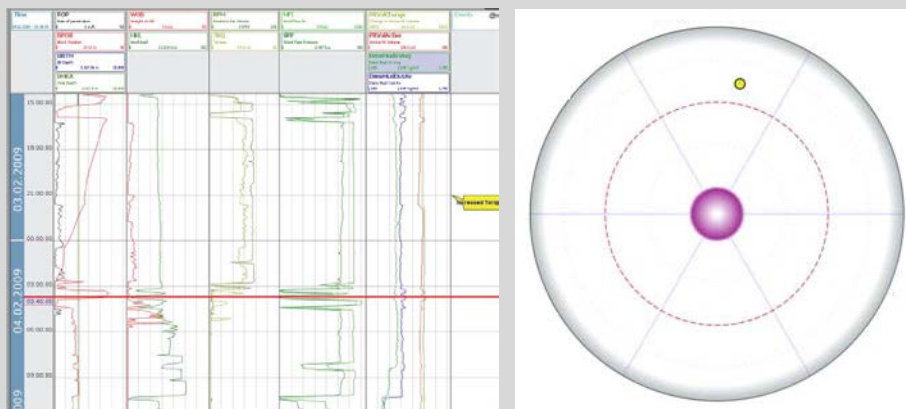
Solution

Evaluate DrillEdge case-based reasoning (CBR) technology and its ability to identify stuck pipe precursors and provide remedial actions based on company best practices.

A project was launched to evaluate the potential of DrillEdge technology to recognize the stuck pipe problems. Time and depth-based data from several prior land drilling operations in Latin America were employed in a rigorous testing routine. Overpull events, erratic torque and pack-offs were thought to be key contributors to the stuck pipe scenarios.

Cases were built in DrillEdge and these cases were associated with other data, such as BHA, trajectory, mud properties and the formation. Well drilling data was then streamed while DrillEdge technology monitored it for precursor events.

Tests were highly successful with the DrillEdge technology consistently predicting stuck pipe incidents 6 to 8 hours prior to the event's occurrence. While drilling, this window was deemed sufficient to proactively address a stuck pipe risk. The success of this project set the stage for further testing in live field trials from real-time centers.



As current drilling parameters correlate with past sticking experience, cases enter from the perimeter of the screen. With increased correlation the case moves towards the center, providing a clear indicator of increasing risk far in advance of a stuck pipe event.

