

Global

CHALLENGES

- The traditional method of plotting traveling cylinder diagrams on paper introduces human error and consumes valuable man hours.
- Aggregation of data from multiple sources is necessary to determine safe drilling intervals and avoid well collision.

SOLUTION

- Deploy a proactive anticollision alert system and informative web-based 3D display accessible remotely with an internet connection
- Replace rigsite paper plotting with real-time display of traveling cylinder plot(s)
- Create 3D plot of planned and offset wellbores to visualize trajectories and boundaries

RESULTS

- Identified erroneous well plan error-model application
- Automatic notifications allowed operator to proactively identify and address potential collision risk in the North Sea
- Issues remedied with minimal downtime and no impact to personnel safety, equipment, or the environment

Proactive Anticollision Alert System Reduces Collision Risk and Improves Safety

LOGIX® Platform Collision Alert 3D improves safety and reduces costs at the Rigsite

Overview

The LOGIX® autonomous drilling platform collision alert 3D service significantly impacts the drilling industry with respect to improved safety, cost savings, and reduced collision risk. A collision event in a production well can cause a sudden influx of hydrocarbon into the well and result in a well control situation with the risk of blowout and potential for health, safety, and environmental (HSE) incidents. The proactive anticollision alert system, customizable 3D display of the wellbore, and automatic notifications of this platform allow operators to proactively identify and address potential collision risks, which can help reduce the potential HSE disasters and help ensure the safety of personnel, equipment, and the environment.

Challenges

Established drilling assets require meticulous attention to anticollision processes and planning to help prevent HSE disasters. During real-time operations, this requires the well planner and directional driller to aggregate data from multiple sources to determine a safe drilling interval to avoid well collision. The traditional practice to plot traveling cylinder diagrams on paper at the rig can introduce human error and requires valuable man hours.

Solution

To address these challenges, the LOGIX platform collision alert 3D fully automated service offers a proactive anticollision alert system and an informative web-based 3D display accessible remotely from any location with an internet connection. The service replaces the rigsite paper plot method with a real-time traveling cylinder plot display that indicates current and projected survey points. This is paired with a manipulatable 3D plot of planned and offset wellbores to visualize trajectories and boundaries. The real-time display from the LOGIX platform collision alert 3D service informs key stakeholders of the current state of critical well placement scenarios.



Results

This anticollision alert system allowed an operator in the North Sea to identify an erroneous well plan on an offset well. Unexpected automatic notifications prompted further analysis of the well in question, and it was observed that incorrect IPMs (Instrument Performance Models) were applied to the well plan. The LOGIX platform collision alert 3D identified the human-error component, allowed remediation of the issue with minimal downtime, and helped improve the safety of personnel, equipment, and the environment.

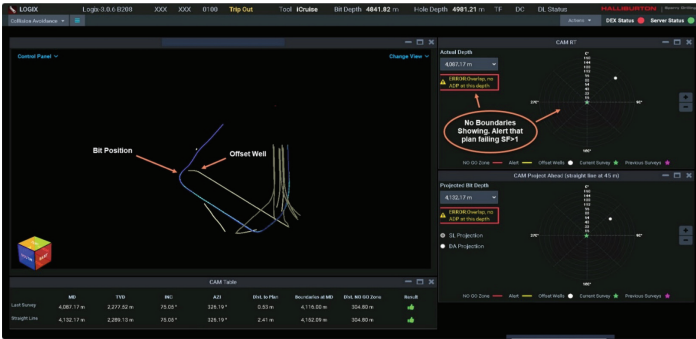


Figure 1: LOGIX Platform Collision Alert 3D Display showing the non-conformant plan

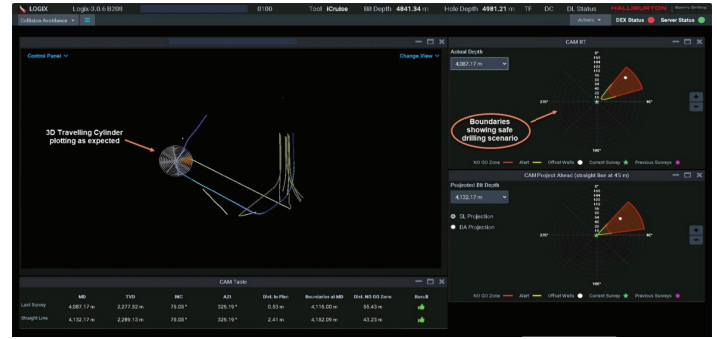


Figure 2: LOGIX Platform Collision Alert 3D Display showing the remedied well plan

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

H014676 04/24 © 2024 Halliburton. All Rights Reserved.