CASE STUDY

HALLIBURTON

Iraq

Well construction time reduced by 7 days with digital solutions

LOGIX™ automation and remote operations enables new levels of performance

CHALLENGE

- Deliver automation and remote operations to improve well construction performance in complex big bore wells in Iraq

SOLUTION

- Deploy LOGIX™ automation and remote operations to integrate analytics and KPIs through remote drilling automation to improve performance in a reliable and consistent manner
- Combine with Nabors SmartROS® rig operating system to enable drilling automation and consistent, repeatable drilling performance

RESULT

- Reduced well construction time by seven days

Overview

Effective mitigation of drilling challenges and performance optimization is vital to success in the competitive lump sum turnkey (LSTK) market. Halliburton deployed LOGIX™ automation and remote operations to integrate real-time engineering optimization solutions, surface and subsurface analytics, and key performance indicators (KPIs) with Nabors SmartROS® rig operating system. This reduced well construction time by seven days.

Challenge

Drilling complex big bore wells in Iraq is a challenge due to vibration and stick/slip issues from interbedded formations and lost circulation. These difficulties complicate the implementation of optimal drilling parameters and connection procedures. This can lead to increased operational costs, extended project times, and potential safety risks.

Solution

Halliburton deployed LOGIX automation and remote operations to deliver integrated automation of surface and subsurface operations with real-time drilling performance analytics.

LOGIX automation and remote operations is an integrated drilling automation solution used to drill wells with accurate well placement and superior drilling performance. The solution orchestrates real-time engineering models and analytics with the Nabors SmartROS® rig operating system. This integration provides a closed-loop system for the mitigation of drilling dysfunctions and maximization of the rate of penetration with reliability and consistency.

Remote operations are integrated with the system and provide interventions, alerts, analytics, and lessons learned to reduce operational risk and uncertainty, and facilitate continuous improvement.

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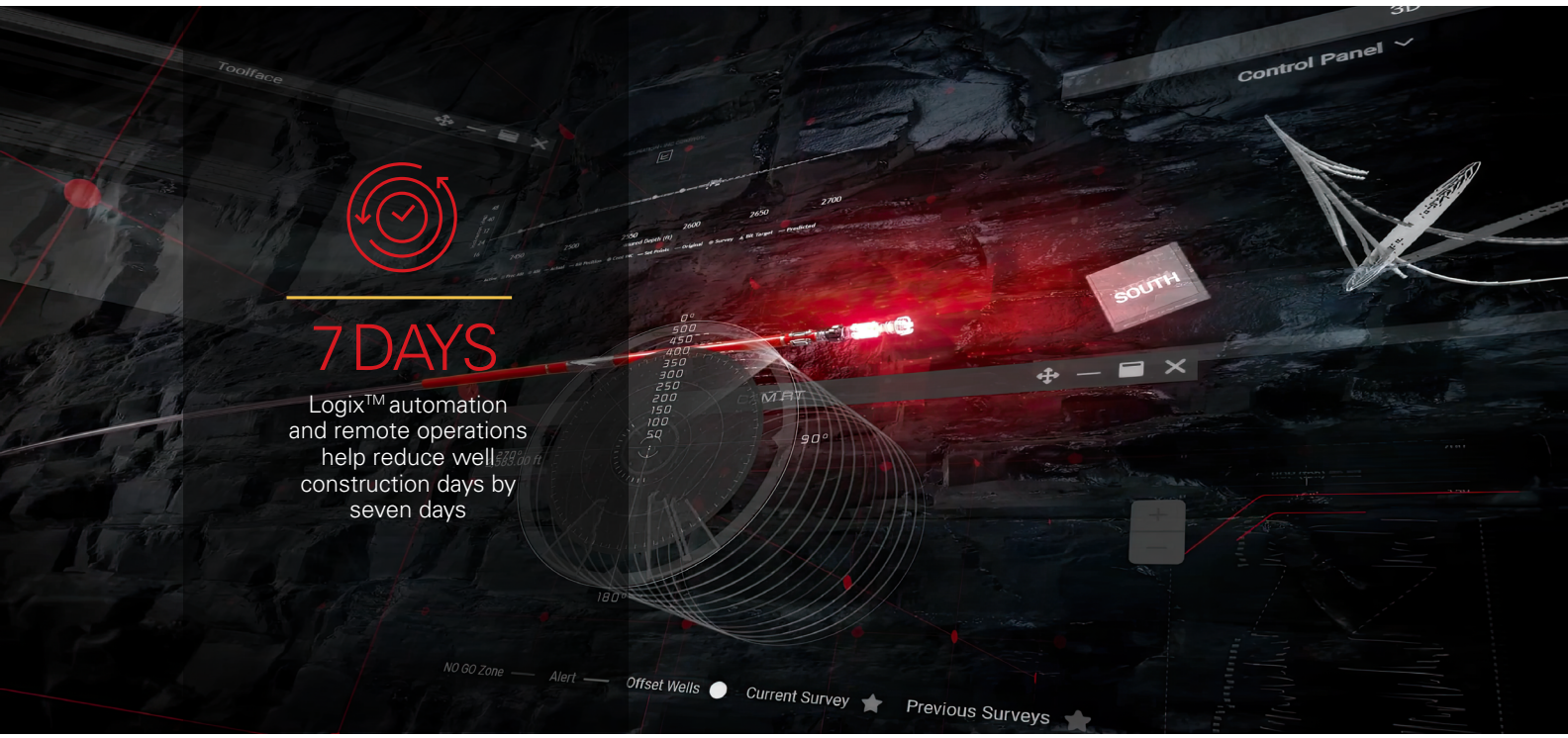
LOGIX™ drilling analytics were used to benchmark performance ahead of drilling and then monitor operations in real-time to improve performance and safety. This can reduce nonproductive time (NPT) and invisible lost time (ILT), and allow the operator to address drilling issues before they occur.

Automation of the surface rig equipment and subsurface operations was delivered with the integration of LOGIX automation and remote operations with Nabors SmartROS® rig operating system. This application enabled consistent, repeatable performance.

Result

LOGIX automation and remote operations helped reduce well construction time by seven days. The solution reduced drilling time by 3.5 days with the automation of optimized drilling setpoints, enhanced tubular running speeds, mitigation of vibration and stick/slip, and automation of connection procedures. An additional 3.5 days were saved from reduced time to complete the well.



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