CASE STUDY

HALLIBURTON

Middle East

Integrated remote operations help improve well delivery time by 2.64 days for an operator in the Middle East

LOGIX™ automation and remote operations achieve new efficiencies

CHALLENGE

- Significant flat-time operations due to inconsistent performance tracking and a need for more efficient drilling in the lateral section

SOLUTION

- Used IRO specialized teams for well construction optimization and execution
- Deployed LOGIX™ auto steer platform and iCruise® rotary steerable system to remotely steer critical well section
- Deployed LOGIX™ rig state engine for micro-KPI analytics and reduced tripping/connection times

RESULT

- Delivered well 2.64 days ahead of schedule
- Increased lateral section ROP by 10%
- Reduced drilling connection time by 30%, run-in hole (RIH) time by 10%, pull-out of hole (POOH) time by 15.7%
- Improved lateral section RIH time by 27%
- Achieved zero Non-Productive Time (NPT)

Overview

Halliburton delivered remote operations for an operator in the Middle East that resulted in significant improvements in well time. This initiative was part of a new integrated remote operations (IRO) strategy to help transition from traditional monitoring and reporting to performance optimization and risk mitigation, enabled by advanced digital tools. The IRO strategy involved a multidisciplinary team of domain experts and engineers, governed by integrated workflows, to improve performance, increase the certainty of execution, and sustain knowledge capture.

Challenge

Flat-time operations made up a significant portion of the total well time for this project, but were not fully optimized due to inconsistent performance tracking. In addition, the drilling team desired more efficient drilling in the lateral section.

Solution

Halliburton deployed an IRO multidisciplinary team of two specialized groups — optimization and execution — to support the entire well construction lifecycle. The team implemented workflows that fostered collaboration and used expansive infrastructure and a digital toolkit for real-time, data-driven decision-making. The remote execution team used LOGIX™ auto steer to navigate a critical section of the well and push the drilling parameters to their allowable limits. The optimization team remotely tracked performance with LOGIX™ rig state engine, provided critical event alerts, identified trends, defined improvement areas, and sent recommendations.

0%

NPT

RELIABILITY

30%

Improvement in connection times

CONSISTENCY

2.64

Days ahead of planned time

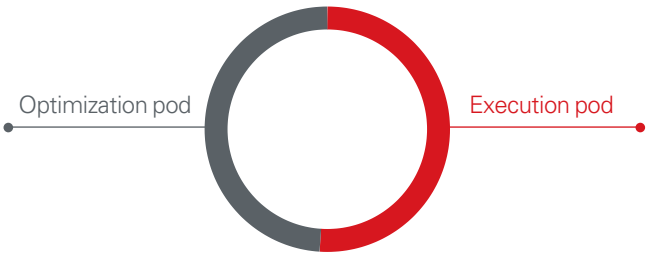
EFFICIENCY

Result

The well was delivered 2.64 days ahead of schedule. IRO played a pivotal role through early event detection, risk mitigation interventions, timely micro-KPI analytics, and recommendations to push the drilling envelope. The lateral section was steered remotely and efficiently.

The IRO execution team used the LOGIX™ auto steer platform and the iCruise® rotary steerable system to improve the rate of penetration (ROP) by 10% in the lateral section. The IRO optimization team used the LOGIX™ rig state engine application to deliver micro-KPI analytics and interventions to reduce drilling connection time by 30%, overall run-in hole (RIH) time by 10%, and pull-out of hole (POOH) time by 15.7%. The lateral section RIH time was improved by approximately 27%. Service quality was maintained throughout the operation with zero nonproductive time (NPT).

Integrated remote operations



- Multidisciplinary team
- Domain expertise
- Custom digital enablers
- Integrated workflows and protocols
- Integral part of engineering team
- Entire well construction lifecycle

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com