

ADCO Reduces Invisible Lost Time and Saves 2 Days Versus AFE with OptiWell Service, UAE

Combining drilling systems and services improves connection practices to drill four sections shoe to shoe and increase ROP with zero NPT in an onshore pilot well

CHALLENGE

Overcome hole cleaning and stuck pipe risks while achieving target ROP, drilling all sections shoe to shoe, and minimizing connection time in an onshore pilot well.

SOLUTION

Introduce a new workflow comprising

- OptiWell* well construction performance service to optimize operations and real-time decision making
- SENSU* rig operations surveillance and instrumentation system for high-frequency digital rigsite data aggregation
- CLEAR* hole cleaning and wellbore risk reduction service for real-time measurement of cuttings recovery from the borehole.

RESULTS

Increased on-bottom ROP and drilled shoe to shoe in all runs while avoiding stuck pipe incidents; reduced total connection time 30%; identified five unnecessary cleanup cycles for future invisible lost time (ILT) improvement.



“Many thanks for the excellent achievements we made by implementing the OptiWell service in our wells. It enhanced connection time by more than 35% and ROP by 25%.”

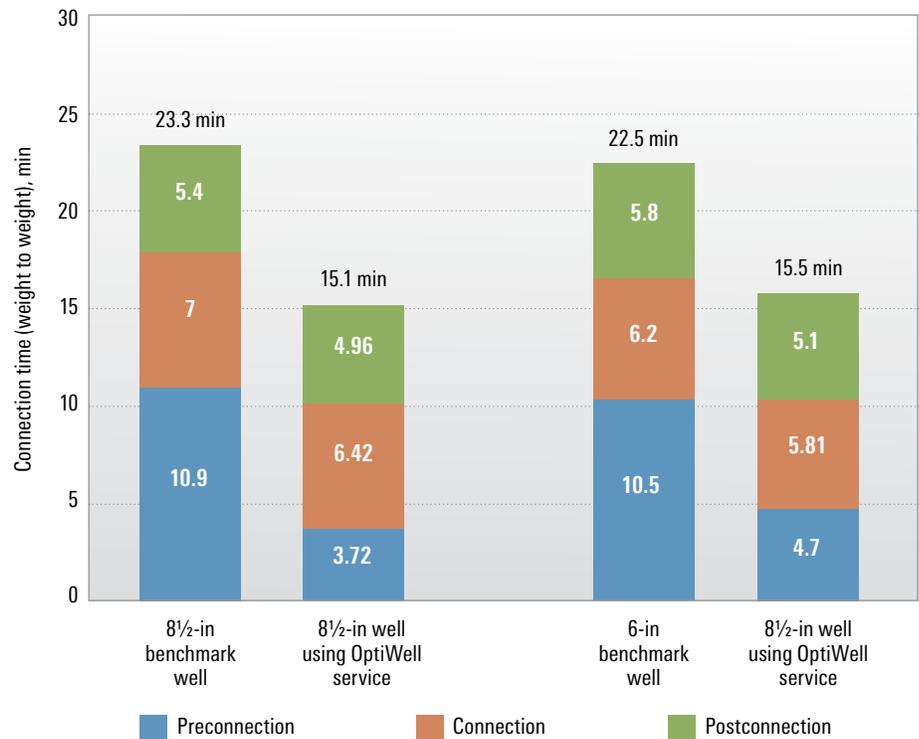
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Team Leader Drilling Operations
ADCO

Mitigate hole cleaning and stuck pipe challenges

In a multiwell campaign, Abu Dhabi Company for Onshore Petroleum Operations Ltd. (ADCO) was facing ILT challenges related to poor hole cleaning and potential stuck pipe risk. When preparing to drill a pilot well—a highly deviated oil producer—the operator planned a design with four sections: 16-in vertical, 12¼-in deviated, 8½-in landing, and 6-in horizontal. The 12¼-in section presented the most challenges in terms of hole cleaning and stuck pipe risk given its profile—a build-and-hold 52° sail angle—and the planned use of a motor BHA. With these considerations, ADCO’s main objectives were to drill each section shoe to shoe, maximize on-bottom ROP, and reduce connection time.

Deploy new workflow to improve connection efficiency

ADCO and Schlumberger decided to implement a new workflow through the OptiWell service to detect and reduce ILT while maximizing on-bottom ROP. The SENSU system positions high-frequency digital sensors throughout the rig, providing full awareness of rig data and activity. A cuttings flowmeter, part of the CLEAR service, is used to acquire advanced cutting recovery measurements while drilling. Lastly, closing the loop of the wellbore surveillance operation, experienced performance analysts are deployed as part of the OptiWell service to further optimize drilling and eliminate flat time.



In the 6-in section, ADCO reduced connection time from 22.5 to 15.5 min/stand and improved on-bottom ROP from 63 to 71 ft/h compared with a benchmark well.

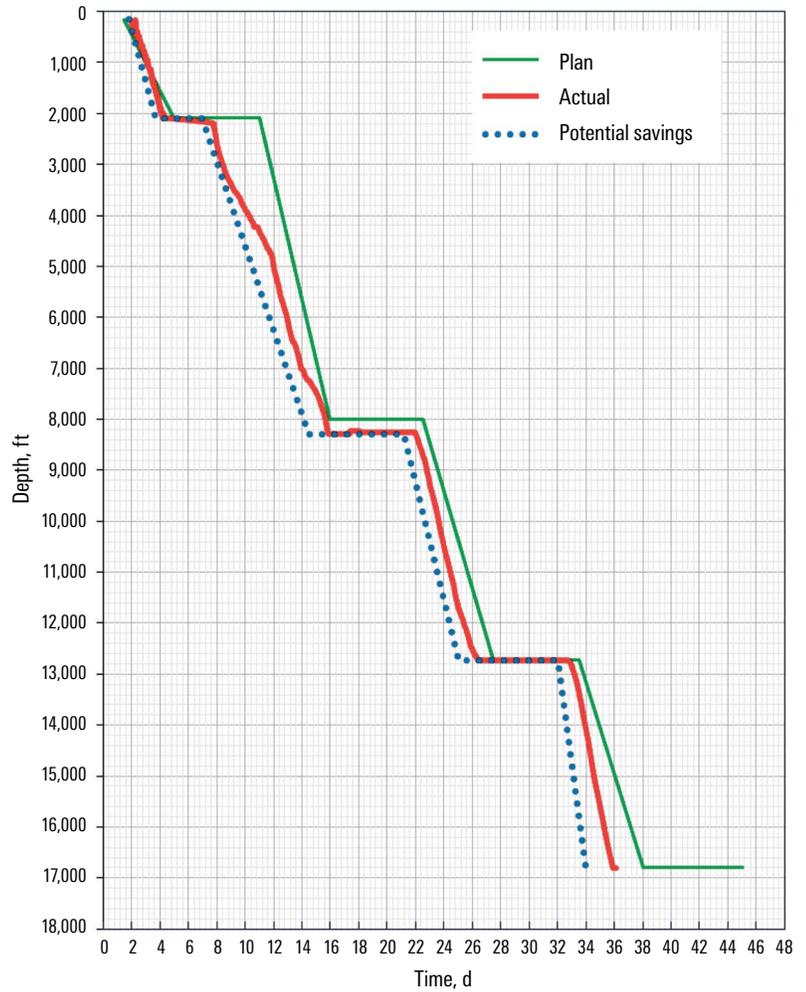
CASE STUDY: ADCO reduces invisible lost time and saves 2 days versus AFE with OptiWell service, UAE

Set new operational benchmarks while achieving objectives

By using the OptiWell service, ADCO was able to complete the well in 36 days — 2 days ahead of AFE — with no NPT and zero stuck pipe incidents. Specifically, in the challenging 12¼-in section, early detection and action taken upon signs of wellbore instability effectively prevented a stuck pipe incident in that section.

Throughout the operation, cuttings recovery and hole cleaning were both improved by changing drilling parameters. ADCO was able to reduce total connection time 35% (23 to 15 min/stand) in the 8½-in section and 31% (22.5 to 15.5 min/stand) in the 6-in section. The operator also increased on-bottom ROP 18% (53 ft/h to 63 ft/h) in the 8½-in section and 13% (63 ft/h to 71 ft/h) in the 6-in section.

These combined improvements in stuck pipe prevention, connection time, and hole cleaning circulation yielded an estimated cost savings of USD 564,600 for ADCO.



The pilot well was completed 2 days ahead of AFE, and further time-saving opportunities around the cleanup cycle process were identified.

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