Schlumberger

# Kuwait Oil Company Saves 47 Rig Days Using Casing-While-Drilling Service

## Comprehensive risk analysis conducted by Allegro XCD-Pro service enables drilling to TD in a single run

**Kuwait Oil Company (KOC) used the Allegro XCD-Pro* casing-while-drilling expert service to customize the drillbit design, optimize drilling parameters, and strengthen the wellbore, reaching TD in one run and saving 47 rig days as compared with an offset well.**

### KOC's concerns

Conventional drilling through the sloughing shale and fractured limestone of the Shuaiba Formation caused challenges in an offset well, including total losses, inefficient hole cleaning, wellbore instability, and stuck pipe with lost-in-hole BHAs. Such conditions increased NPT due to additional trips and remedial treatments with cement plugs to stabilize the wellbore, increasing the overall AFE.

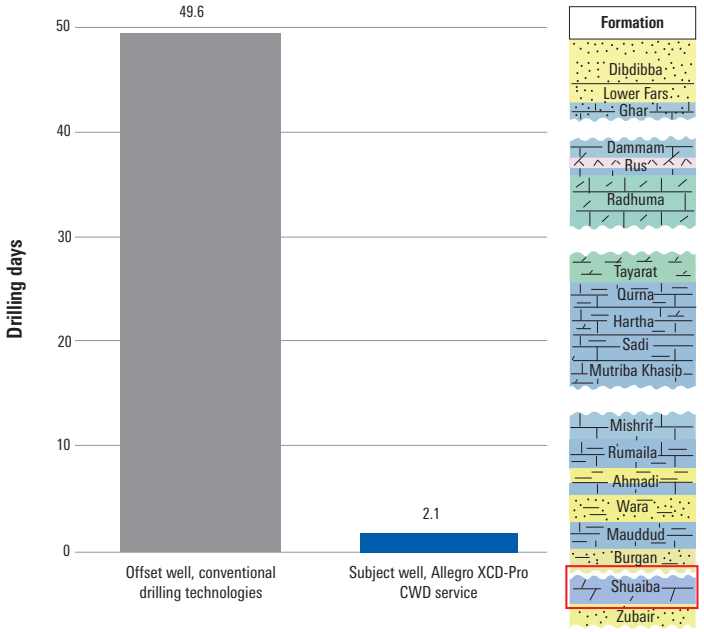
### What Schlumberger recommended

The Allegro XCD-Pro service leverages a suite a software simulation solutions that help mitigate drilling risks before the BHA is run in hole. Using the DBOS* drillbit optimization system, Schlumberger engineers analyzed the formation strength of this specific application to design a customized XCD* casing-while-drilling alloy casing bit with a unique cutting structure that could drill the required footage in one run.

After a custom bit was designed, the i-DRILL* integrated dynamic system analysis service was used to optimize a centralizer placement and generate a drilling roadmap to better control the directional profile of the well once the casing-while-drilling operation began. By drilling and casing the well at the same time, the Allegro* casing- and liner-while-drilling services create a plastering effect that smears cuttings into the borehole wall, enhancing wellbore stability and drilling efficiency.

### What KOC achieved

A 12¼-in section with 9⅝-in casing was drilled to TD in one run without any lost-in-hole BHAs, multiple cement plugs to stabilize the wellbore, or other hole complications. As compared with the offset well, the operation reduced flat time and saved 47 rig days.




*Compared with conventional drilling technologies, the Allegro XCD-Pro casing while-drilling (CWD) service saved 47 rig days when drilling through the lower Burgan Formation to the upper Zubair Formation, reducing flat time and AFE cost.*