CASE STUDY

HALLIBURTON

Middle East

Plug setting disconnect tool cuts operational time, helps achieve successful barrier in P&A

Trial with BHKA™ plug setting disconnect tool demonstrates benefits of cement plug placement during P&A and saves days of rig time

CHALLENGE

- Place 500-ft long competent cement plug to abandon open hole in single run

SOLUTION

- Deploy BHKA™ tool during trial P&A operation for later inclusion into operator's catalog

RESULT

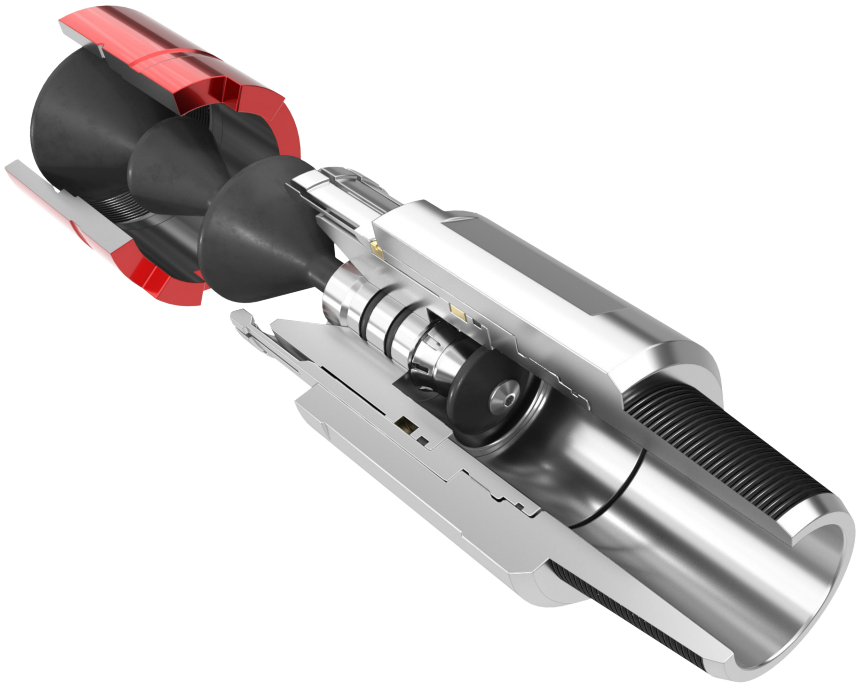
- Safely RIH to 16,000 ft MD
- Placed 500-ft long cement plug in single run with clear surface indication of tailpipe disconnection
- Saved an estimated one to two days of rig time

Overview

Plug and abandonment (P&A) programs are regularly performed in complex conditions wherein successful placement of a competent cement plug as a barrier on the first attempt is uncommon. Reattempts to place plugs add significant cost and time to abandonment operations.

Challenge

An operator was challenged with the effective abandonment of a 5 7/8-in. open hole at 16,000 ft MD. The slim hole design and total depth complicated the cement fluid design and competent cement plug placement. These operations often lead to remedial actions, which increase operational time and costs.



Solution

Halliburton proposed a trial deployment of the BHKA™ plug setting disconnect tool with an aluminum sacrificial tailpipe to successfully place the 500-ft long cement plug in a single run and achieve the required barrier. The BHKA tool enables unlimited cement plug length through safe disconnection of the work string from the tailpipe, reduces the risk of stuck string, improves the capability to tailor cement fluids, and eliminates the need for multiple plugs and associated WOC time.

Result

Halliburton RIH the string to the planned depth of 16,000 ft MD with the sacrificial tailpipe and BHKA tool and placed the 500-ft cement plug in a single operation. This was confirmed via surface indication of proper separation of the returned workstring from the sacrificial tailpipe. Successful separation eliminated the need to retrieve pipe from within the cement plug, which allowed it to develop gel and compressive strength without disturbance. The operator saved an estimated one to two days of rig time with this successful trial deployment of the BHKA tool. Because of this success, the operator plans to use the BHKA tool solution in future wells.