CASE STUDY

HALLIBURTON

Middle East

50% efficiency gain in live well interventions using SafeGrip® hydraulic workover technology

Customized solution enables extended-reach plug milling in sour gas wells

CHALLENGE

- Complex sour gas wells
- 7,000-ft horizontal laterals
- 4,500 psi surface pressure
- 49 plugs per well
- Multi-well pad coordination

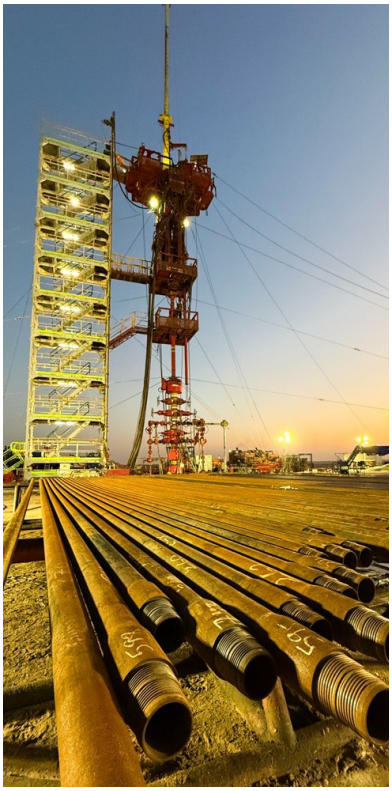
SOLUTION

- Engineered milling program with IWI™ software
- Deployed SafeGrip® 225K HWO unit
- Applied rotary capability for lateral access
- Used BaraLube® friction reducer

RESULT

- Delivered safe live-well intervention
- Removed all plugs in single run
- Increased efficiency by 50%
- Reduced downtime
- Enabled longer laterals

Overview



As unconventional wells extend beyond 7,000 ft, coiled-tubing technology approaches its physical limits due to equipment size and depth constraints. Halliburton introduced SafeGrip® hydraulic workover (HWO) technology to help address these limitations and deliver efficient live well interventions. For a Middle East operator, Halliburton engineered a customized solution to mill 49 dissolvable plugs under 4,500 psi surface pressure in sour gas conditions, which helped achieve safer operations and paved the way for longer laterals.

Challenge

The operator faced increasing lateral lengths in sour gas wells, pushing coiled-tubing technology to its technical limit. The project required live well intervention under 4,500 psi surface pressure and the removal of 49 plugs from the 7,000-ft horizontal sections. Torque management and continuous circulation were critical for success. The team maintained strict hydrogen sulfide (H_2S) safety standards while executing the operation on a four-well pad with integrated service coordination.

Removed all plugs in a single run and increased operational efficiency by 50%

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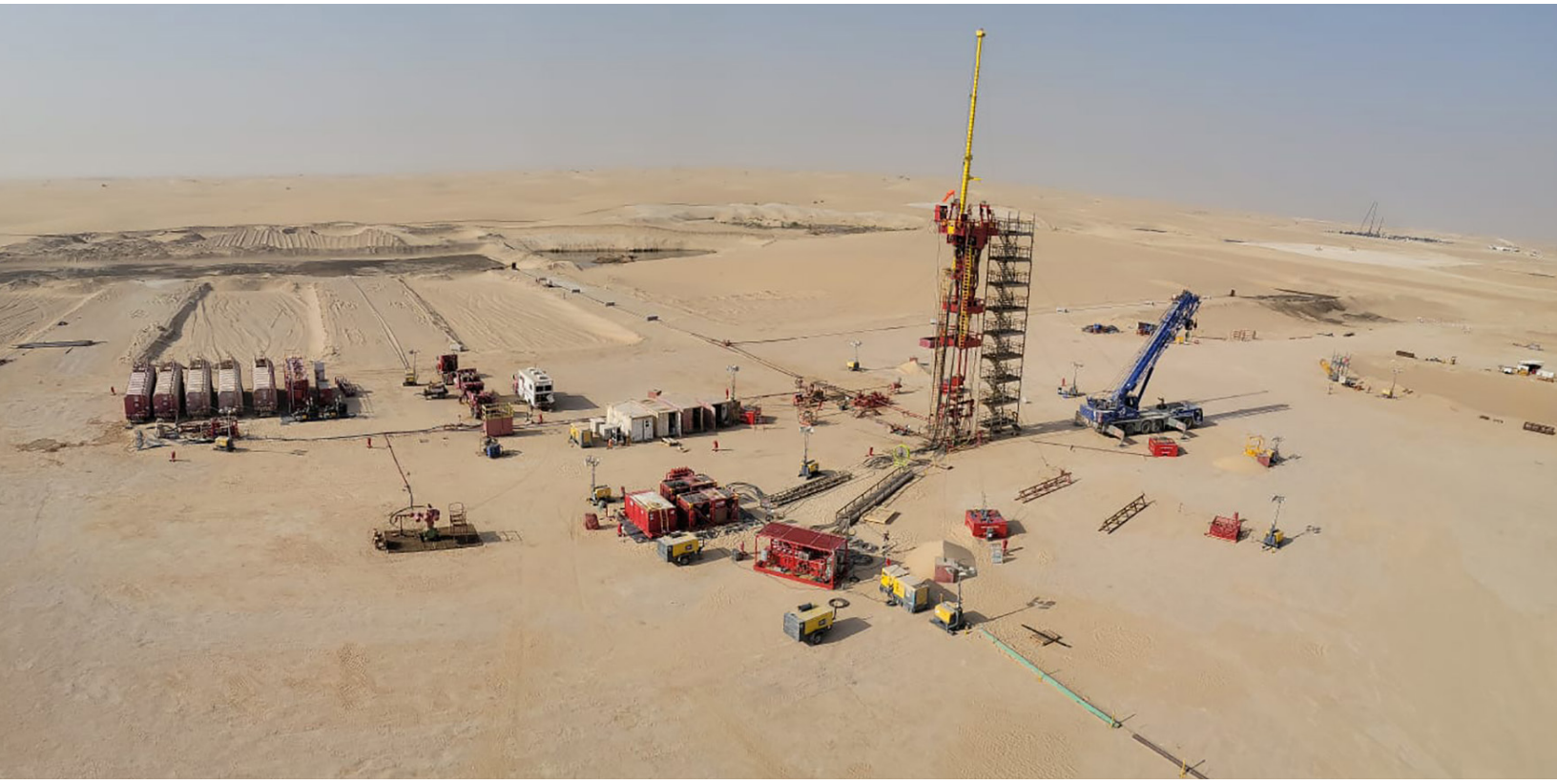

Solution

Halliburton deployed a customized plug milling solution with HWO technology. Halliburton engineered the milling program using InSite® for Well Intervention (IWI™) software to model torque, drag, and fluid dynamics for optimal work string and bottomhole assembly design. A tubing work string combined with a metal-to-metal downhole motor delivered the required torque at the bit.

The SafeGrip® 225k HWO unit provided rotary capability to help reduce lock-up risk and ensure full lateral access. To improve efficiency, Halliburton applied BaraLube® friction reducer additive and achieved an estimated 20% drag reduction. The patented hydraulic safety interlock system in the SafeGrip® HWO unit helped ensure secure pipe handling under live well conditions.

Result

Halliburton successfully executed plug milling operations across all four wells, washing through and drilling out all plugs in a single run per well. Operational efficiency improved by 50% from the first to the final well through structured continuous improvement. The solution reduced downtime, maintained the highest HSE standards, and allowed the operator to plan for even longer laterals exceeding 10,000 ft. These improvements strengthened the customer's ability to meet field development targets while adhering to strict HSE requirements.

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

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