

Case study: Marat formation, West Kuwait

MPC tool performed multiple cuts under compression in a single operation, saved 24 hours rig time

An operator with a 30-year-old well in the Marat formation in West Kuwait wanted to recover as much tubing as possible in order to have the lowest kickoff point for sidetracking a producing formation. The operator tried to set a whipstock at 13,300 ft (4054 m), but it failed because the string was stuck and the completion assembly couldn't be pulled out. The completion string was completely stuck due to the accumulation of barite in the annulus between the tubing and the coal seam gas.

The backup plan was to cut the tubing 10 ft (3 m) above the packer assembly, but that also failed because the string was stuck significantly above the seal assembly. Additionally, there were pull limitations with the stuck tubing, which™ was very old, and there was a high potential for breakage due to compressional force from the weight.

Baker Hughes was contacted to perform multiple 3½-in. tubing cuts as quickly as possible to restore operations. Utilizing the 2¼-in.

Mechanical Pipe Cutter™ (MPC™) pipe recovery service, six successful cuts were made 300 ft (91 m) apart in just four trips within 23 hours. In one of the trips, the electromechanical pipe-cutting tool performed three cuts, despite tension pull limits from the tubing condition.

The MPC tool helped the operator save 24 hours of rig time by performing multiple cuts in a single operation—no other service company was able to provide this solution. The operator was very pleased with the results, resuming operations ahead of schedule.

Challenges

- 30-year-old well with stuck completion assembly
- Tension pull limits from the tubing condition
- High potential for breakage due to compressional force

Results

- Saved 24 hours in rig time
- Performed multiple cuts in a single operation

