Remote wireline operation enabled precise pipe cut in real time to save producing well

An operator in Latin America needed to cut a pipe in order to retrieve a packer bore receptacle. Previous attempts to cut the 4-½-in. tubing were unsuccessful and the operator would be forced to prematurely abandon a producing well if the pipe could not be cut.

Baker Hughes was called to perform the operation following four failed attempts by competitors that had tried a chemical cutter and radial cutting torch tools. The Baker Hughes team recommended its Mechanical Pipe Cutter (MPC™) due to its accurate cutting ability and quick deployability. The MPC does not use ballistics or hazardous chemicals, making it safe for transportation by helicopter. However, the leading Baker Hughes MPC expert was in Louisiana, USA, not anywhere close to the well location. Instead, Baker Hughes deployed its Sabio™ Log from Anywhere Service to enable real-time control of the MPC by the expert using the internet.

The tubing to be cut was 4-½-in., 15.2 lb/ft grade: P-110 CR113. The chromium steel tubing was under compression, adding to the difficulty of the cut. The well was deviated at 28°, and the receptacle was located between the depths of 14,510 ft (4,422.6 m) and 14,516 ft (4,424.4 m). The Baker Hughes expert in the USA communicated to the Baker Hughes staff at the wellsite using a VSAT portable satellite from his office and controlled the MPC with the Sabio Log from Anywhere Service.

This was the first use of the Sabio Log from Anywhere Service or the MPC in this region. The MPC made a precise cut at the correct depth and the receptacle was recovered with an overshot in one trip. The perfect cut eliminated the need for an additional trip to mill the top of the pipe, saving time and costs. The operator was able to save the well and resume production quickly.

Challenges
• Packer bore receptacle retrieval in a deep well with deviation of 28°
• Chromium steel tubing under compression
• Four previous unsuccessful pipe cutting attempts by competitors using two types of tools
• Limited time frame due to stopped production on well

Results
• Precisely controlled real-time pipe cutting operation in Latin America from USA
• Retrieved receptacle to enable operator to resume production
• Saved rig time and associated costs due to one-run solution
The first image shows the failed pipe cut attempted by another wireline company; the second image shows the precise cut made by the Baker Hughes MPC