

# World's Deepest Remotely Operated Liner Shoe

**Successful run eliminated the need for intervention, saving costs and eliminating five days of rig time**

## Background

As wells continue to get deeper and more complex, well costs and overall expenditure is increasing along with the associated technical challenges to complete these complex wells. Conventional products available in the market are currently unable to fully address these challenges. Conventional methods to access the deepest sections of wells are insufficient and come with high risk and large investments. Conventional completion operations used to access the shoe, such as dropping darts or setting plugs, can be very challenging due to long horizontal sections and the limited reach of intervention tools. The need for an automatic closing shoe is required to save time, cost, and to mitigate operational risk.

## Solution

Remotely activated completion devices offer a flexible technology platform that can bring various solutions to help tackle many challenges in these complex, deep wells.

The ReAct™ electronic liner shoe (ELS) is a unique device installed at the toe of the lower completion. The ELS allows for auto-filling and circulation while running in hole (RIH). Once the completion reaches target depth, the ELS allows circulation to spot the filter cake breaker and displace the liner with the desired completion fluid. The ELS then closes automatically according to the programming parameters preset from the surface. The programming flexibility of the ELS provides the functionality to safely RIH while also offering a reliable, interventionless closing feature to isolate the shoe after reaching the target depth.

## Results

The ReAct ELS development and subsequent deployment with a long, complex lower completion enabled the customer to manage the risk of running the lower completion efficiently. The ELS helped the customer to significantly reduce the completion CAPEX versus conventional completion and intervention methods. The lower completion design resulted in five days of rig-time savings.

## Case study facts

**Location:** Abu Dhabi, UAE

### Products

- ReAct electronic liner shoe

### General well information

- Casing size: 4½ and 6¾ in.
- Installation depth: 40,359 ft MD

Further reading: SPE-197418-MS "Advanced ERD Lower Completion Technology Performance Update in a Giant Offshore Field UAE"

