

## Overview

Isolation failure from poor cementation is a common problem faced by the industry. It can happen at various points during the life cycle of a well - from an initial poor primary cement placement through to gradual failure due to temperature and/or pressure fluctuations. Workover and intervention of poor cement is a costly and timely activity, but such problems can be avoided by using swellable packers in conjunction with the cemented sections.

## Challenge

A Middle East operator was drilling and completing a pilot well to better understand the sealing layer of formation between two potentially productive reservoirs. The confirmation of the integrity of this barrier was critical to the creation of an accurate field development plan.

The primary completion design called for a cemented liner straddling all three layers. Within this, a dual completion string with pressure and temperature gauges above and below a production packer would allow post perforation monitoring of flow, if any, between the layers.

However, the integrity of the cemented barrier was critical to the success and validation of the data gathered. To aid this, a swellable packer was required to run as part of the outer cemented liner to provide a secondary, failsafe barrier which would activate in the event of a cement failure.

The packer therefore could not impede the primary cement application, and had to be of sufficient length to overlap all three layers and allow for any unforeseen off depth placement.

**Region** : MENA  
**Date** : November 2015  
**Key Outcomes** : First installation of its kind for client  
: Critical multi-formation seal  
: Tight operational deadline



**Reflex® HP**  
**Swellable Isolation Packer**



## Reaction

Reactive worked to design a packer which was compatible with the unique requirements of the application and the operator. To ensure there would be no impact on the primary cement placement, the diameter of packer was controlled by analysing the fluid train that would be seen during operations.

Reviewing the individual rheology at each stage allowed Reactive to confirm that the packer would offer a slow swell during deployment and cementation – which ensured that cement circulation was maintained - but would still swell rapidly should hydrocarbon breakthrough occur.

This combination safeguards the primary cement placement, whilst still allowing difficulties to be contained efficiently should they occur.

As Reactive's manufacturing facility has the ability to handle large casing joints of up to 46ft in length and 30" in diameter, it allowed for the manufacture of a packer which was far larger than an average size to simultaneously straddle all three formation layers.



## Result

This type of installation was the first of its kind for the operator, and Reactive. By working locally with the technical team, Reactive was able to offer sound expertise and support to aid in the correct solution, building on the previous 24,000 packers Reactive has installed worldwide, and reaffirming its abilities at the forefront of swellable technologies.

For further information please visit  
[www.reactivetools.com](http://www.reactivetools.com)