

Case Study:

Encapsulated O-Rings seal the deal for injection well in the Netherlands

Encapsulated O-Rings prove to be the ultimate sealing solution during gas injection for dutch operator.

Well Data

Location: Netherlands

Well Type: Salt Cavern

Installation Date: December 2014

Injection Sleeves: 8.125" & 8.250"

O-Rings: Encapsulated



In December 2014, Dutch operator Gasunie carried out gas injection for debrining in well A7B of the AGB Zuidwending field in the Netherlands. Slickline intervention was used to run and retrieve injection sleeves. They also required extra sealing to ensure there would be no leakage during the gas injection process, as this had been seen extensively previously.

TAQA's Encapsulated O-Rings were fitted around the sleeves at sizes of 8.125" and 8.250" to prevent leakage during and after gas injection in the well. The Encapsulated O-Ring design was proposed in favour of the Swellable version as it would provide extra strength and protection, ensuring the sleeve would be fully protected at all times, before, during, and after the injection process.

Gas injection commenced by displacing the gas column with brine. Debrining occurred at a rate of 325m³/hr, with gas breakthrough evident after 3 hours. After the debrining process, water was then flushed into the well.

TAQA Solution

Throughout gas injection in Well A7B, TAQA's Encapsulated O-Rings successfully sealed the injection sleeves which showed no signs of leakage. The sleeves were later retrieved from the well through slickline intervention where they were cleaned and evidently showed that the O-Rings were still intact.

Project Results

Over a period of 32 days, the project was successfully completed with no incidents reported. With an initial producible brine rate of 244.600m³ culminating in a gas breakthrough depth of 1484.2m, the Encapsulated O-Rings provided the strength and durability to ensure maximum reliability and cost effectiveness in the well, also assisting with delivering the project on time and within budget.



Injection sleeve retrieved from well with Encapsulated O-Rings still intact.



Injection sleeve and Encapsulated O-Rings cleaned after retrieval from the well.