



CASCADE³

SUCCESS STORY

CASCADE³ SAVES CLIENT \$1MILLION AND INSURES AGAINST LOSS OF INJECTIVITY IN UNCONSOLIDATED SANDSTONE FORMATION

Sub-Saharan Africa

\$1M

SAVING FOR CLIENT

\$500k

SAVING PER WELL

5,000

BWPD

Cascade³ improves the long-term performance of water injection wells as the valve eliminates crossflow during shut-in, reduces screen erosion, and prevents backflow of reservoir fluids. Cascade³ reduces water hammer effects, improves injectivity and reservoir sweep and extends water injection life.

THE CHALLENGE

The operator had identified a high risk of sand ingress which a standalone screen solution could not address. Ultimately, this can lead to the loss of a well and possibly the requirement to workover or drill a new well.

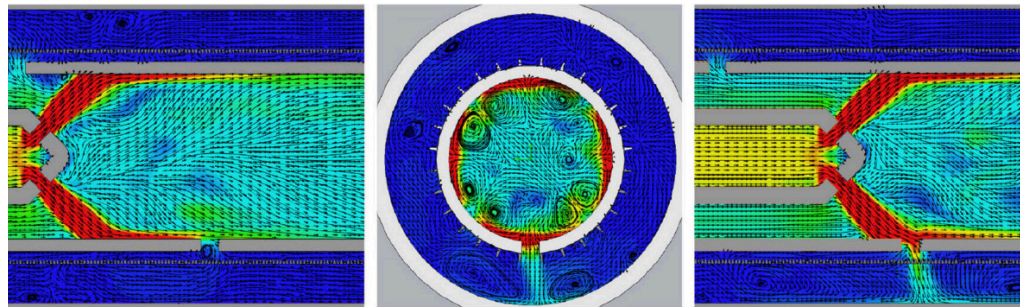


THE SOLUTION

TAQA's Cascade³ system was installed to provide a unique flow-checking mechanism at the sandface. The product mitigates the three main causes of water injection well failure, namely; crossflow, backflow and water hammer effects. Placing an array of non-return valves across the reservoir prevented fluid backflow from entering the well, ensuring that no fine particles enter the lower completion. The Cascade³ valves were protected by utilising TAQA's FloDirect wire wrap screen offering robust sand control.

THE RESULT

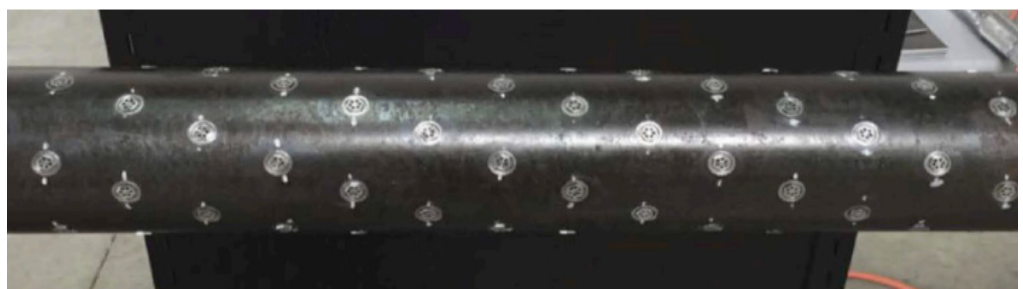
The Cascade³ screens were delivered to the site in a ready-to-run condition. The client has two Cascade³ wells injecting at a rate of 5,000bwpd at a wellhead pressure of 1,200psi. No sand issues have been encountered to date. The product provided further benefits over gravel packing mitigating equipment and personnel on location.



*CFD modeling evaluated how valve density affects the performance of the planned jetting tools designed for near-wellbore stimulation after completing the lower completion phase

WELL DATA

- Well Type: Water Injection
- Installation Date: February 19
- System Design Rates: 30,000-40,000bwpd



*Configuration on a joint of the screen.