

Well-Klean[®] Case Study



Name/Location of Well: Maricopa County – East Valley, AZ

Description/Well Dynamics: Monitoring/Circulation Well

Build Date: N/A
Casing Diameter: 6"
Well Depth: 252'
Static Water Level: 2'

Type of Casing, Slots and Intervals: PVC casing, Sch. 40 PVC .010 from 160'-190'; 220'-230'; 240'-250'.

Reason for Treatment: Well circulation system could not operate correctly. Pump was pulled, and downhole video revealed slots were 80% plugged with mineral scale and iron bacteria.

Assessment/Recommendations: Well-Klean[®] Pre-blend at 15% of well water volume with hydrogen peroxide biocide at 1,900 ppm - blended with Well-Klean Concentrate at 10% by volume of HP – Passivation and neutralization with soda water.

Hydrogen Peroxide: 5 gallons
Well-Klean Pre-Blend: 57 gallons
Sodium Bicarbonate: 28 pounds

Actions Taken: Applied 50% of the Hydrogen Peroxide/Well-Klean[®] Pre-blend to the well followed by 30 minutes of brushing for each 10' of the PVC screen. Bailed debris, dead biomass and iron bacteria from the bottom of the well until retrieving a sample of clean gravel pack. Applied the remaining 50% of the biocide and cleaner, swabbing the perforated casing in an attempt to force the chemical through the vertical slots and into the gravel pack. Applied 30 minutes of swabbing for each 10' of the perforated casing. Then let the chemical soak in the well for 18 hours. Above ground, blended Sodium Bicarbonate powder with water, applied the soda water solution of the mixture to well and swabbed each 10' of the perforated casing vigorously for 15 minutes. Installed pump. Well produced a milky looking red residue for 10-15 minutes before clearing. Well was re-developed for another 2-3 hours by surging. Disinfectant was added and the well was returned back to service.

Project Duration: Start Monday February 2, 2015 – End Thursday February 5, 2015

Results: After treatment, well provided adequate water for well circulation system to successfully operate.

Photos:



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