

Well-Klean® Case Study



Name/Location of Well: Yavapai County – Near Oak Creek, AZ

Description/Well Dynamics: Irrigation

Build Date: N/A
Casing Diameter: 8”
Well Depth: 828’
Static Water Level: 389’

Type of Casing, Slots and Intervals: Steel casing, vertical slotted from 677’ to 828’.

Reason for Treatment: Well provides water to pond for golf course irrigation. Capacity for well had declined enough that irrigation from pond was not possible. Removed pump and downhole video revealed 75%-80% blockage of perforations by mineral scale, iron bacteria and some bio-films

Assessment/Recommendations: Well-Klean® Pre-blend at 10% of well water volume with hydrogen peroxide biocide at 3,000 ppm - blended with Well-Klean Concentrate at 10% by volume of HP – Passivation and neutralization with soda water.

Hydrogen Peroxide: 10 gallons
Well-Klean Pre-Blend: 55 gallons
Sodium Bicarbonate: 26 pounds

Actions Taken: Applied 50% of the Hydrogen Peroxide/Well-Klean® Pre-blend to the well followed by 30 minutes of brushing of each 10’ of the perforated casing. Bailed all 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 Well-Klean & biocide, 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. Let the chemical soak in the well for 18 hours. Above ground, blended Sodium Bicarbonate powder with water, applied the soda water solution to the well and swabbed each 10’ of the perforated casing vigorously for 15 minutes. Well was left for 2 days to settle before a post video was done. Pump was installed 2 days later. Well was re-developed for 2-3 hours by surging and continual pumping to the pond. The well was returned back to service.

Project Duration: Start Monday March 23, 2015 – End Friday March 27, 2015

Results: After treatment, post-video discovered previously hidden slots 100’ above the slots in well that were brushed. All slots were free and 100% open with no brushing. Well is producing more than adequate volume again.

Photos:



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