

Well-Klean[®] Case Study



Name/Location of Well: Cochise County – Southeastern AZ

Description/Well Dynamics: Irrigation Well

Build Date: 2010
Casing Diameter: 16"
Well Depth: 1158'
Static Water Level: 444'

Type of Casing, Slots and Intervals: Steel casing, vertical slotted from 295' to 1150'.

Reason for Treatment: Well was pumping 1000 GPM new in 2010. Capacity decreased over 4 years to 300 GPM, and drawdown levels were reaching the pump intake. A downhole video revealed 80 – 100% of the slots plugged due to mineral scale and iron bacteria build-up, as well as floating bio-mass.

Assessment/Recommendations: Well-Klean[®] Pre-blend at 20% of well water volume with hydrogen peroxide biocide at 200 ppm - blended with Well-Klean Concentrate at 10% by volume of HP – Passivation and neutralization with soda water.

Hydrogen Peroxide: 20 gallons
Well-Klean Pre-Blend: 1,925 gallons
Sodium Bicarbonate: 450 pounds

Actions Taken: Applied 50% of Hydrogen Peroxide/ Well-Klean Pre-Blend at 10% by volume of HP, using a tremie method placing the product at the top of the perforated interval. The well was brushed thoroughly taking 30 minutes for each 10' section of perforation. Bailed and air-lifted debris from bottom of well. Applied 275 gallons Well-Klean Pre-Blend, and remaining Hydrogen Peroxide by tremie method to top of perforations, and swabbed in acid blend in 20' intervals for 160'. Repeated this process moving down the well, thereby placing acid blend at swabbing zones as they proceeded. Contractor then let acid blend soak in well for 26 hours. Mixed Soda water blend above ground, and applied to well in same manner as Well-Klean, swabbing the soda water mixture in as vigorously as the acid blend. The well then remained off-line for 1 month, before the new pump was installed. The well was gradually re-developed by surging for 3-4 hours. Pump then was placed back on-line. (see Results)

Project Duration: Start Monday September 29, 2014 – End Friday October 3, 2014

Results: Restored to 1000 GPM @ 1360 RPM. Drawdown restored to minimum. Static Water Level was increased.

Photos:



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