

Geogard™ SX

reduces silica for a hot injection system, reducing cost by 80%



Geogard SX in action

Geogard SX eliminates scaling in geothermal production wells with 90% deposition rate reduction while reducing costs by 80%.

Over 10 years
operational data

Sustained flow
output

Longer productive
periods

No unplanned outages
due to silica scale

Challenge

Major scaling issues in production wellbores, pipe systems and injectors were causing outages at a 20MW geothermal power plant facility in the Philippines. Freshwater dilution was not adequate to help maintain silica concentrations at acceptable operation levels in this hot injection system (1650C) thus resulting in expensive manual clean outs and the loss of revenue during the clean up down time.

Results

Introduction of 8 ppm Geogard SX at the reinjection well in place of freshwater dilution was able to inhibit the deposition of the silica even at concentrations of 1,000 to 1,300 ppm. This resulted in operational efficiencies between 64 to 98% for more than 10 years at various check points. There was a 90% reduction in deposition with an 80% improvement in cost savings.



Untreated line with silica scale



After 5 months treatment with Geogard SX

System Conditions

Geogard SX Dosage (ppm)	8
Water Flow (kg/s)	10.8
Hot Injection Temp (0C)	165
Silica Concentration (ppm)	1000 - 1300
Duration test (days)	150
Reynolds' number	4.3×10^6

Our wide selection of biocide chemistry can be tailored for any treatment scenario.

Learn more at www.wateradditives.com

Geogard™

Geogard is the premier line of scale inhibitors for high temperature applications such as geothermal wells, steam assisted gravity drainage and cyclic steam stimulation operations. Silica and calcium carbonate, the most common forms of scale, can form at critical juncture points on valuable equipment. Geogard provides a thermodynamically stable product, effective at low dosages to inhibit many forms of scale. Geogard products eliminate dangerous and expensive manual clean outs in a cost effective and safe manner.

	Geogard SX	Geogard CA
Application	Silica	Calcium
Thermal Stability	> 250°C	> 200°C
Typical Dosage	2–8 ppm	5–10 ppm



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