

RECORDED BENEFITS

- Significantly reduced downtime
- €800,000 cost saving per year due to reduced downtime
- 70% reduction in chemical cost
- 100% safe procedure with no impact on workers' health
- Improved system efficiency

Geothermal Power Plant Reduces Downtime and Cleaning Costs with Novel Cleaning Program

GeoSol™ Online Well Cleaning Program

Customer Challenge

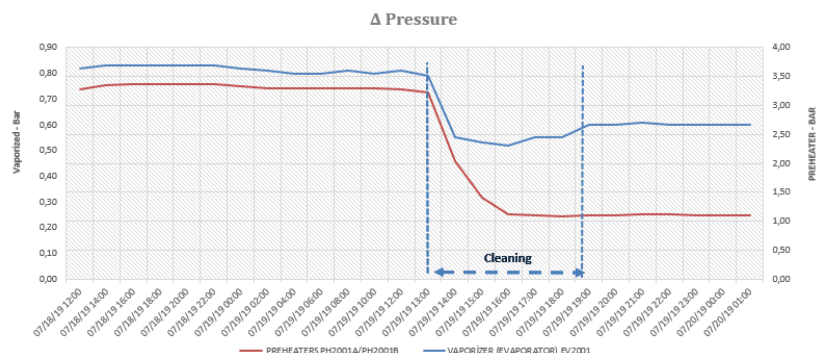
A binary geothermal power plant located in Turkey was experiencing deposition in its preheater exchangers and vaporizer due to the presence of stibnite (antimony sulfide) in the brine. The stibnite deposition significantly impacted the profitability of the plant as two- to three-day shutdowns were required three to four times a year to carry out offline cleaning using strong caustic solutions or hydrofluoric acid. In some cases, the plant had to employ mechanical cleaning after chemical cleaning. As stibnite is carcinogenic, any spills during mechanical cleaning posed health risks to plant personnel and the local community.

Recommended Solution

After evaluating the plant's operation, Solenis recommended its GeoSol online well cleaning program to address the stibnite deposition. The program called for the use of a scale remover and a caustic solution during production for a period of one to three hours. The cleaning solution would be removed along with the brine.

Results Achieved

After just two hours, the online well cleaning program significantly improved the Delta pressure of the plant's preheater exchangers and vaporizer (see chart below). Ultimately, the cleaning program enabled the plant to quickly return to optimal production, reduce its downtime for cleaning, decrease its chemical costs, and eliminate health risks related to mechanical cleaning.



Delta pressure drops after the GeoSol online well cleaning program was performed.

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