

## **Prevent Water Injection Well From Fouling With Best Practice Filtration**

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### **Abstract**

Fluid cleanliness plays an important role in a plant's reliability and performance. Many operational challenges experienced by production and processing plants operators relate to the presence of contaminants. Fluid contamination, if left un-controlled, can impact the operation of equipment or units that are critical to production, all of which may result in reduced reliability, poor performance, unscheduled shutdown, and production loss.

Water injection wells are no exception. Depending on the actual rock porosity, fine particulates can foul the wellbore. This can result in reduced injectivity, reduced waterflood performance, and costly stimulation jobs. Solid particles contribute to well fouling and it is important to eliminate them efficiently and consistently. Normal practice includes a particulate filter, to capture particles of a given size, according to the rock characteristics. However, field experience shows that filters do not always meet the performance requirements.

This paper will discuss the design features of filter technologies, that enable operators to specify their filtration needs. The difference between cartridge filter technologies will be illustrated through a case study developed around formation water injection filtration at a gas storage facility in Germany, where well fouling issues were solved by optimizing the existing cartridge filter.