

### GeoKimika Oil & Gas in Action

Real-time results provide metrics for chemical performance and identify improvement opportunities.

#### Challenge

A Permian Based Operator was starting up a produced water recycling program for their hydraulic fracturing operations and treating with an oxidizer on the fly. The operator did not have current information on the composition of their frac water or the compatibility of their chemical package. This resulted in a worst-case scenario fluid design, utilizing a high-brine tolerant friction reducer and a high oxidizer treatment set-point.

#### Results

GeoKimika personnel were asked to perform a process audit and on-site testing during hydraulic fracturing operations. Process audit identified gaps in oxidizer treatment program between frac stages, that resulted in high bacteria presence and iron sulfide in the frac tanks. GeoKimika's on-site consultants worked with service provider to improve treatment program, significantly reducing bacteria and eliminating iron sulfide. Additionally, on-site flow loop test results suggested the high-brine tolerant friction reducer could be replaced with a lower brine tolerant product for a portion of the job. This resulted in a 30% cost-savings on chemical to the Operator.

Frac Tank Water prior to GeoKimika Testing



Frac Tank Water after GeoKimika



#### Benefits of On-Site Testing

- Real-time monitoring allows for changes during operations
- Optimized product recommendations result in cost savings
- 3<sup>rd</sup> party verification of chemical performance
- Identify opportunities for improvement in both operations and chemicals



Our on-site services can be tailored to any oilfield operation.  
Learn more at [www.geokimika.com](http://www.geokimika.com) or contact us at 432-242-3192