Water Optimization
Testing for the Right Parameters

GeoKimika Oil & Gas in Action
On-Site Mobile Lab testing and mobile friction loop allow for full fluid optimization from water source to wellbore.

Challenge
A major operator in the Permian Basin had on-going fracturing operations with a new source of recycled water. They were faced with higher friction pressures, limiting their ability to achieve rate, and target stages per day. It was believed that water treatment processes were affecting performance, however the water company’s result showed all KPI’s being met.

Findings
GeoKimika’s GK Mobile Lab was deployed to the field in order to evaluate the water quality and friction reducer performance. Water testing confirmed that the three target KPI ranges being monitored were with specification. GK Mobile Lab’s ability to test over 15 parameters, allowed for more extensive evaluation of the water composition. Results showed high ion concentrations that would require specialty friction reducers (high brine tolerant) to handle the higher concentrations. GK Mobile Loop testing confirmed the friction reducer currently in use had poor performance in the water.

Solutions
In collaboration with the frac company, alternate product samples were brought to location and tested same-day using the GK Mobile Loop. A new product option was identified and brought to location the next day. The frac was successfully completed with the new friction reducer. GeoKimika implemented a water and testing protocol and continues to support all recycled water fracs for this operator, ensuring the right friction reducer is used for the current water source.

Benefits
• In-depth testing capabilities
• Same-day results
• Reduced fluid related down-time
• Experience fluid chemists to understand impact of water quality

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