

Case study: Haynesville shale play

SENTRYNET remote tank monitoring solution saved operator \$242,000 USD annually, prevented well shut-in

A major operator in the Haynesville Shale was struggling with high operating costs related to treatment and monitoring of more than 400 wells. These included significant personnel costs, increasing hydrogen sulfide (H₂S) levels and inefficient monitoring of onsite chemical delivery.

Baker Hughes **SENTRYNET™ remote tank monitoring solution** was employed in the system to help monitor treatment and better control inventory levels. Over 220 tank level monitors were installed at critical locations throughout the field with set up alarms for over/under-use and to monitor low chemical inventory levels.

In addition, a custom dashboard for data viewing and reporting was developed, aligned to the operator's key performance indicators (KPI). The operator was able to use the customized website to enter target injection rates. When any of the alerts were triggered on a tank, field personnel received an email or text. The notifications allowed for immediate, real-time response to issues.

Examples of cost-saving alerts provided by SENTRYNET remote tank monitoring solution:

- An alert was received after a water hauler extracted fresh chemical from a tank. Catching the mistake saved approximately \$18,540 USD worth of chemicals
- A pump's erroneous dosing rate caused excessive chemical usage. A technician was alerted by SENTRYNET to address the issue. This saved thousands of dollars in chemical overfeeding
- A treatment pump was increased to address a high H₂S incident, and was left at the same level for an extended period of time. The next day, a high-use alert prompted the operator to deliver additional chemicals which prevented the well from being shut in

SENTRYNET remote tank monitoring solution allowed the operator to increase labor efficiency, improve chemical delivery, and generate better and more accurate reporting data. The operator saved \$242,000 USD annually.

Challenges

- High operating costs associated with monitoring more than 400 wells
- High levels of H₂S reported
- Large amount of labor overhead
- Difficulty keeping up with daily chemical deliveries
- Inefficient operations and reporting

Results

- Saved \$242,000 USD annually from overtreating chemical
- Mitigated safety and oil quality concerns due to H₂S and prevented well shut-ins
- Reduced manpower utilization by 272 hours per month, lowering dedicated head count by 20%, and increasing field specialist efficiency by 60%
- Decreased monthly field personnel truck usage by 9,000 miles, and improved chemical delivery truck efficiency by 30%
- Lowered carbon foot print from driving – estimated savings of 42 Tonnes CO₂ per year
- Improved overall reporting and speed to respond by providing real time KPI-related data