



Custom SWD Well Controls

Application Sheet #35

CUSTOMER VALUE

SITUATION

- The North Dakota department of health (DOH) mandated strict annular differential pressure control to ensure a disposal wells integrity. Any pressure differential, between annulus and wellbore, over 100 psi was to be corrected within 15 minutes; otherwise, the incident had to be reported, and shutdown of the well commenced.
- To stay within DOH protocol, a regular visit from a pressure truck, along with a company representative, was required to regulate and monitor pressure in the casing annulus.
- This process required an average of 10 site visits per week at a cost of \$8,000 per week.

SOLUTION

- A Sirius AC Gemini chemical injection system was installed, along with a differential pressure transmitter to measure the differential pressure between wellbore and casing annulus.
- The control system regulates both injection and back pressure relief.
- The pump controller was connected through SCADA to allow the customer to remotely monitor annulus pressure.

Autonomous local control and remote monitoring led to cost savings of **\$400,000** annually.

RESULTS

- Pressure trucks are no longer required on location to maintain annular pressure.
- On-site manpower is no longer required to shut in the well or monitor pressure.
- The risk of annular pressure non-compliance, and resulting well shut-in for inspection, has been mitigated.
- Operational savings of \$400,000 per year, in addition to increased injection efficiency.



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