

# CASE STUDY

**ClearWELL**  
Oilfield Solutions  
Continuous Scale Control

## CLEARWELL™ PREVENTS SCALE WITHIN SURFACE PROCESSING EQUIPMENT

**LOCATION:** Alberta, Canada

**APPLICATION:** Surface Processing

**FORMATION:** Glauconite

### BEFORE CLEARWELL™

Calcium carbonate scale was persistently forming within surface processing equipment at a site in Alberta. The affected equipment comprised vessels, tanks and a water injection system running from the inlet separator to the injection wells. The surface equipment handled a flow rate of 600m<sup>3</sup> per day but even with continuous chemical injection treatment, scale would still accumulate and result in clean out operations every 12 months. The annual chemical costs for the operator were approximately \$39,000.00 and the annual workover costs were approximately \$33,000.00 with around three days downtime.

### AFTER CLEARWELL™

With chemical treatment proving to be ineffective, the operator decided to install ClearWELL technology for a trial period and cease all chemical injection treatment.

The ClearWELL system was externally connected to the inlet separator, requiring no downtime to install. Following its installation, the unit was left in place for 12 months. The operator then performed an inspection turnaround which found no scale formation in any of the protected equipment. Four more ClearWELL units were then progressively added to protect additional processing equipment for the rest of the field and routine inspections were reduced to once every 2-3 years.

The original ClearWELL™ unit was installed in 2014 and is still operating successfully, having provided continuous protection with no scale formation evident, or associated intervention required, since it was installed. The operator continues to save in the region of \$70,000 per annum in chemical and cleanout costs with no scale related downtime.



### QUICK FACTS

- Calcium carbonate scale was forming within vessels, tanks and a water injection system
- Chemical scale inhibitor was ineffective long-term
- Cleanout operations were required every 12 months, with 3 days downtime
- Installation of ClearWELL™ continuously controlled scale
- ClearWELL™ eliminated the need for chemicals and cleanout operations
- The annual cost saving to the customer is in the region of \$70,000 plus zero downtime
- ClearWELL™ has performed consistently, delivering cost savings since 2014

### THE PROCESS

- The ClearWELL™ unit is connected to production equipment at the surface wellhead – no intervention required, no loss of production.
- The unit transmits a pulsed radio frequency signal down into the wellbore or along flowlines and equipment. The pulsed signal delivers energy to the scaling ions, controlling precipitation, keeping the liquid below saturation and minimising scale growth on production equipment.
- ClearWELL use satellite monitoring to ensure optimum unit performance. Where required, personnel perform regular non-intrusive equipment checks.
- ClearWELL™ systems are low power consumption and certified Class 1, Zone 1. The AC signal system is corrosion neutral.

[www.clearwelloilfield.com](http://www.clearwelloilfield.com) [sales@clearwelloilfield.com](mailto:sales@clearwelloilfield.com)

**Tel (UK):** +44 23 8017 3238 **Tel (US):** +1 832 321 5991 **Tel (Canada):** +1 403 269 1361 **Tel (Middle East):** +44 23 8017 3238