

## HISTORICAL CALCITE BUILDUP IS ELIMINATED IN A WATER INJECTION WELL

**LOCATION:** Alberta, Canada

**APPLICATION:** EOR – Water injection well



### BEFORE CLEARWELL™

In central Alberta, a water injection well producing from the Ellerslie and Glauconite formations was experiencing calcium carbonate scale buildup within the wellbore, particularly across the perforations. The well had experienced continuing scaling over a period of several years, and chemical acid stimulations had been employed around every 90 days to keep the well flowing.

The annual cost to the operator not only included around CDN \$12,000 for the chemicals, but also the more significant intervention operation costs and associated loss of production in offset oil producing wells.

### AFTER CLEARWELL™

Since installing a ClearWELL™ system, twelve months prior to this report, the well has not required any other scale treatment or related intervention. The well has maintained optimum injection rates and pressures with no interruption due to scaling and the offset oil producing wells have witnessed continuous production rates at peak performance.

ClearWELL™ performance is continually monitored by a

satellite enabled communication system and our technicians perform routine on-site checks every 90 days to ensure optimal unit calibration.

The operator is a long-standing, repeat customer and has benefitted from installing ClearWELL™ devices on numerous wells over the last nine years. The company plans to continue rolling out the technology to protect more of their wells in the future.

### QUICK FACTS

- Continuous calcite scaling in the well over several years.
- Quarterly acid stimulations had previously been employed.
- Once installed, ClearWELL™ technology eliminated scaling and any further requirement for chemical treatment.
- The operator saved approximately CDN \$20,000 per annum in OPEX and also gained the previously lost production revenue.
- The operator is a long-standing, repeat customer after experiencing ClearWELL's benefits first-hand.

### 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 supplied as a certified Class 1, Zone 1. The AC signal system is corrosion neutral, no reported gauge signal interference.