

### HISTORY

An Oil & Gas company in South-Central Alberta had performed some stimulation treatments on production wells within a water injection field. In order to realize the full potential of the treatments they needed to increase the water injection rate of the field. The water injection wells were at the maximum injection rate allowable due to formation pressure rating.

### PROPOSAL

Samples of production oil and injection water from the surrounding area wells were tested for compatibility with Enviro-Syn® HCR 2000 acid with no issues.

Recommended to treat the formation with Enviro-Syn® HCR 2000 with perforation soak stages to remove any near wellbore scale, and enhance injection volumes.

### OPERATIONS

Concentrated Enviro-Syn® HCR 2000 was delivered to site and blended with the existing injection water on location using a pressure pumping unit. The HCR acid treatment was then pumped downhole and allowed to soak in stages followed by an overflush of injection fluids. Well was shut in overnight and injection commenced the following morning.

### RESULTS

An instantaneous increase of injection volume was seen over the following week from  $\pm 230 \text{ m}^3/\text{day}$  to  $\pm 350 \text{ m}^3/\text{day}$  (>50% increase) at maximum allowable pressures. Volumes continue to remain well above previous levels two months post-treatment ( $\pm 320 \text{ m}^3/\text{day}$  average).

### VALUE

The operator was able to utilize localized pressure pumping equipment, make-up water directly from location, and significantly reduced product delivery logistics.

The ability to utilize a product that is non-hazardous and 100% biodegradable was seen as an “excellent, cost-effective alternative while providing peace of mind with respect to HSE concerns”.



