

CHALLENGE

Well had initially been a producer for 8 years and then was converted to an injector. After just over 1 year of injecting, the injection rates suddenly dropped by 80% and the injection pressure tripled. The client did not want to pull the downhole equipment to try to clear the blockages in the injection interval.

HIGHLIGHTS

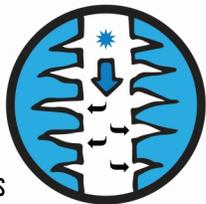
Conventional oil field
Vertically drilled
Perforated and hydraulically fractured completion

LOCATION

Southern Alberta, Canada

CONDITIONS

Depth: 1,000m (3,300ft)
Glauconite sandstone
15 - 18% porosity
1 - 10 mD permeability



Injection Wells

OUTCOME

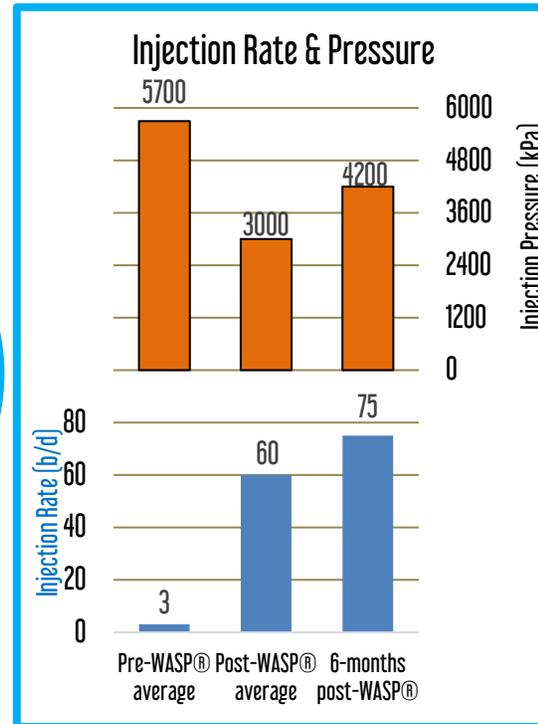
"We had an injector at 103/8-36-23-14W4 in Southern Alberta that had pressured up. Pressure had climbed to our maximum allowable injection pressure of 5700 kPa and injection rate had decreased to 3 b/d. We stimulated this well through tubing with the Blue Spark tool. We saw an immediate increase in injection rate with reduced pressures.

We then attempted to perform an acid stim on the well but it gave no further break down in pressure. The well came back on at approx. 60 b/d injection at 3000 kPa injection pressure. Today (6 months later) this well injects between 60 to 90 b/d and pressure is at 4200 kPa. I was impressed with how the tool performed and am pleased with being able to stimulate the wells without the expense of a service rig."

Richard Tracy, Sr. Production Engineer, Journey Energy Inc.

**OVER 20X INCREASE
IN INJECTION RATE**

**45% REDUCTION IN
INJECTION PRESSURE**



SOLUTION

Improve connectivity to the reservoir by clearing out blockages using electro-hydraulic stimulation technology

- Sandstone reservoir was treated through tubing with the Blue Spark WASP® 212 (Wireline Applied Stimulation Pulsing) to improve injectivity
- No special tools or equipment were required on location to complete the remediation operation, other than third-party E-Line
- Approximately 6.5 m (21 ft) of perforated interval were treated in less than 5 hours with our wireline conveyed tool
- Injection rates and pressures were both monitored for comparison to pretreatment values

