

CHALLENGE

A 5 year old disposal well was experiencing reduced injection rates and increased injection pressure. Over a 2 year period 20 stimulations were conducted, averaging one treatment every 33 days. The client was looking for a cost effective treatment that would:

- improve the injection rate
- decrease the injection pressure
- reduce stimulation frequency

LOCATION

- NE Alberta
- Field: Kirby

CONDITIONS

McMurray Sandstone
Depth 500 m (1600 ft)

SOLUTION

- The Blue Spark WASP® 212 tool was deployed through tubing on third-party E-Line and completed in 8 hours
- Post WASP® customer chemical treatment conducted
- 5 X more effective than historical stimulation average

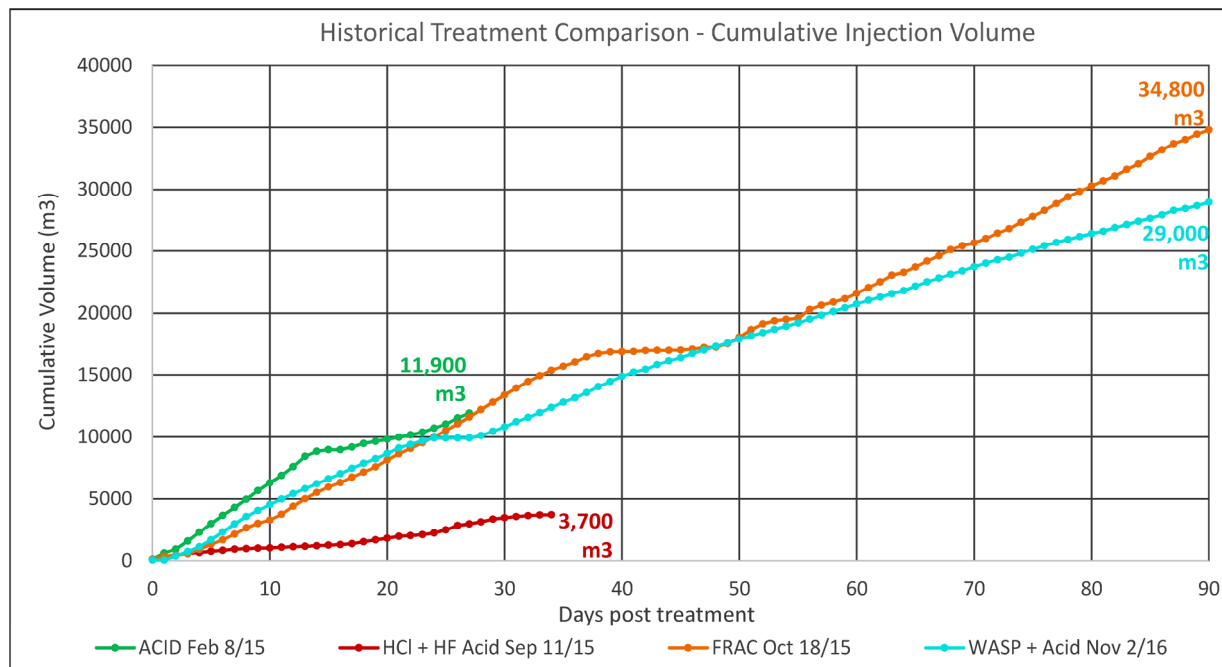


Injection Well



Chemical Treatment

OUTCOME



Stimulation	Longevity of Treatment (days)	30 Day Post Treatment Average		90 Day Post Treatment Average	
		Injection Rate (m³ /day)	Injection Pressure (kPa)	Injection Rate (m³ /day)	Injection Pressure (kPa)
Acid - Feb 2015	27	466	2809	New stim required - no data	
Acid - Sep 2015	34	114	3858	New stim required - no data	
Frac - Oct 2015	191	449	3568	400	2947
WASP + Acid - Nov 2016	170 +	421	2868	339	3063

Longevity of treatment determined by the operational well performance: injection pressure and injection rate