

## Step Rate Test

### Equipment:

- Wireline w/ crane, bottom hole pressure gauges
- Digital rate and pressure devices
- Treating van
- Chart recorder

### Procedure

- Shut in well 48 priors to test.
- Record and report the annulus and surface casing pressures prior to job – continue to monitor during the step rate test.
- Break down lines and rig up measurement devices, pump truck, and treating van.
- Monitor backside casing pressure during job – if pressure rapidly increases, stop job immediately.
- Stick to 30 minute time segments per step, no more or no less.
- Begin pumping job as follows. Please stick to the rates outlined in each step. Surface pressure will likely differ from what is shown in this table.
- Record the initial shut-in pressure
- Please have results emailed to [garret@faenergyus.com](mailto:garret@faenergyus.com), [david@faenergyus.com](mailto:david@faenergyus.com) and [james@faenergyus.com](mailto:james@faenergyus.com)

*\*The job will be pumped down 2.375" 4.7# J-55 with an internal plastic coating\**

WEU  
525

Perfs **3789-3898**  
Depth **3789**  
0.63341251

Time	Gradient	Expected Surface Treating Pressure	Target Rate (bpm)	Volume( BBLs)	Gals
30	0.224334	850	0.5	15	630
30	0.259963	985	0.75	22.5	945
30	0.295593	1120	1	30	1260
30	0.331222	1255	1.25	37.5	1575
30	0.366851	1390	1.5	45	1890
30	0.402481	1525	2	60	2520
30	0.43811	1660	2.5	75	3150
30	0.47374	1795	3	90	3780
30	0.509369	1930	3.5	105	4410
30	0.544999	2065	4	120	5040
30	0.580628	2200	4.5	135	5670
30	0.616258	2335	5	150	6300
30	0.651887	2470	5.5	165	6930
30	0.687516	2605	5	150	6300
30	0.723146	2740	5.5	165	6930