

MUDGE LS 16
NE/4 SEC 10 T31N R11W

STEP RATE TEST PROCEDURE (A)

1. With a representative from the NMOCD present, perform a mechanical integrity test by holding 300 psig on the casing/tubing annulus for a duration of 30 minutes.
2. Rig up slickline and RTH with two downhole pressure bombs and set in seating nipple. Bombs should be capable of measuring pressures for at least 96 hours, at a bottom hole temperature of 120 deg. F. One bomb should be accurate up to 4000 psia, and the other to 8000 psia.
3. Keep well shut in for an additional 24 hours.
4. With a representative from the NMOCD present, perform the step rate test as follows:

STEP	INJECTION RATE	DURATION
1	1/4 BPM	1 HR
2	1/2 BPM	1 HR
3	3/4 BPM	1 HR
4	1 BPM	1 HR
5	1 1/4 BPM	1 HR
6	1 1/2 BPM	1 HR
7	1 3/4 BPM	1 HR
8	2 BPM	1 HR

reduce to 5 min

NOTE:

Continuously monitor surface pressure and rate and keep a detailed log; use a strip chart pressure recorder.

Surface pressure limit is based on the wellhead pressure rating, which is believed to be 3000 psi. Verify before performing SRT.

1 hour time steps are critical. Inconsistency such as shorter or longer time intervals are unacceptable.

Once an injection rate is established at or near the desired rate every effort must be made to keep the rate constant.

Use produced Fruitland Coal water.

Not based on our experience