

- B. Pump 6000 gals 50 quality foamed 15% HCL acid spacing 45 ball sealers to attempt ball out.
- C. Flush w/ 750 gals 50 quality foamed 2% KCL water.

* 3000 gals of 15% HCL acid to contain:

3 gals. I-10B inhibitor

18 gals. Frac Foam I

3 gals. Aqua Flow

80,000 SCF N₂ Total Volume = 6000 gals. 50 quality foamed 15% HC

- 11. Shut well in for 15 minutes, then flow back. Swab back if well dies. Report results to Midland office.
- 12. If instructed by Midland office, NOWSCO and Western frac well w/ 19,500 gals. 70% quality frac fluid w/ 40,000 lbs. 20/40 sand. Frac fluid should contain 5850 gals 2% KCL water and 289,224 SCF N₂. The total pump rate should be 16 BPM with an estimated surface treating pressure of 3250 psi. Frac as follows:

- A. Hold 1000 psi pressure on annulus.
- B. Pump 6000 gal. 80 quality foam pad
- C. Pump 2500 gal. 70 quality foam w/ ½ ppg 20/40 sd.
- D. Pump 4000 gal. 70 quality foam w/ 1 ppg 20/40 sd.
- E. Pump 5000 gal. 70 quality foam w/ 1½ ppg 20/40 sd.
- F. Pump 8000 gal. 70 quality foam w/ 2 ppg 20/40 sd.
- G. Flush w/ 650 gal. 70 quality foam.

Shut in well 45 minutes following frac job.

Flow well thru adjustable choke and monitor returns for sand. If sand is found, shut-in about 15 minutes before attempting flow back.

* Fluid specification: Pad
6000 gals 80% quality foam consisting of:
1200 gals. 2% KCL water.
2 gals. FS-2/1000 gals. 2% KCL
6 gals. AdoFoam/1000 gals. 2% KCL
15 Lbs. J-10/1000 gals. 2% KCL
101,520 SCF N₂.

Frac Fluid
19,500 gals. 70 quality foam consisting of:
5850 gals. 2% KCL water
2 gals. FS-2/1000 gals. 2% KCL
6 gals. AdoFoam/1000 gals. 2% KCL
15 lbs. J-10/1000 gals. 2% KCL
289,224 SCF N₂.

Flush
+ 650 gals. 70% quality foam consist of:
195 gals 2% KCL water
15 lbs. J-10/1000 gals 2% KCL
2 gals. FS-2/1000 gals. 2% KCL
5 gals. AdoFoam/1000 gals 2%KCL
9888 SCF N₂

RATES

Pad - 2% KCL at 3.2 BPM
Nitrogen at 11, 280 SCF/Min (11.2 BPM)
Total rate - 16 BPM
Frac- 2% KCL at 4.8 BPM
and Nitrogen at 9888 SCF/Min (11.2 BPM)
flush Total rate - 16 BPM

(cont..)

13. Flow well to clean up. Swab if necessary.
14. Run sinker bar on slick line and tag bottom. Clean out if sand covers perms.
15. Set plug in "N" nipple w/ Otis w/ reline. Unlatch from seal assembly and POOH w/ 2-7/8" tbg. and overshot.
16. GIH w/ overshot on 2-3/8" tbg to 30' above pkr. Circulate and load backside w/ pkr fluid - Tretolite KW-79 (10 gal/100 BW).
17. Latch onto seal assembly w/ overshot. Retrieve plug on wireline. Test well.