5. **Isolate Existing Perforations**
RU perforating company with pack-off . RIH with junk basket/gauge ring to +/- 3400'. POOH. RIH with cast iron bridge plug (CIBP) and set top of CIBP at 3330' For depth control use Wedge GR/CCL log dated 12/3/94 short joint at 2819'-38'. Casing collars at 3344 and 3297. POOH with electric line.

6. Load hole with +/- 30 bbls of produced or brine water. Make sure production casing outlet is double-valve and that first valve and nipple are rated for 5000 psi WP. Close frac valve and pressure test 4-inch frac valve, side-outlet casing valve and 4-1/2" casing to 4300 psi for 5 minutes. Release pressure. *NOTE: Do not expose test pressure to 3000 psi WP BOPE.*

7. Rig line from production casing outlet to pit or test tank to conduct flow test after perforating.

8. RIH with tubing and no-go profile nipple (Model F or XN) and casing scraper (for 4-1/2" 11.6# casing) to CIBP.

9. Circulate casing clean with +/- 48 bbls of 2% KCl water (7.15 lbs KCl /bbl of fresh water).

10. Swab fluid level down to +/- 2500'. POOH standing-back tubing.

11. **Perforate Lower Interval**
RU perforating company with grease-head and lubricator. Close 4-inch frac valve and pressure test lubricator and grease-head to 1500 psi. Use 3-1/8" select-fire guns. The depth listed is the top perforation of each selection fired.

Perforate 2 SPF at each of the following depths: 3314, 3306, 3283, 3218, 3183, 3074, 3065, 3059, 3046, 3038 (10 selections – 1 gun run – 20 holes).

Perforate 3 SPF at each of the following depths: 3290, 3131, 3123, 3104, 3101, (5 selections – 1 gun run – 15 holes).

Depth control use Wedge gamma ray/CCL log dated 12/3/94. Short joint at 2819-38. Additional collars at 3297, 3253, 3206, 3159, 3113, 3070, 3023). RD electric line company *CAUTION: Pressure(up to 1500 psi) is expected on the casing during the perforating operation.*

12. **Test Lower Interval**
Flow test well to test separator or production facilities and report gas/water rates. Sample and analyze gas for BTU content. SI well over-night and report SITP next day.

13. **Acid Stimulation – Lower Interval**
If stimulation is requested, kill well with 2% KCl water. RIH with a PPI tool set on +/- 6 foot spacing. Tag CIBP at 3330' for depth control.

RU stimulation company with 1 transport of 2% KCl water, 1 transport of weighted 7-1/2% acid (80 bbls) and 1 pump truck (w/30 bbls) of 7-1/2% HCl acid. Acid should be inhibited for 4 hours at 100 deg F. Acid to contain foamer/surfactant and iron control additive. Acid in transport to be made in 10 ppg brine water to yield a high density acid for floating 1.1 specific gravity ball sealers. Acid on the pump truck should be non-weighted acid. Install ball injector loaded with 40 (1.1 Sp. Gr.) perforation ball sealers. Make sure ball sealers float in acid. If balls do not float, load injector with 70 ball sealers.

Test lines to 5000 psi. Do not exceed 4500 treating pressure during stimulation. Install pop-off valve on tubing/casing annulus set for 3000 psi. Do not allow casing pressure to exceed 3000 psi.

Pickle tubing by pumping 2 bbls of acid to end of tubing and reversing same out with 2% KCl water. Install standing valve, set packer and test tubing to 5000 psi. Install fluid control valve. Acid stimulate each selection interval (15 selection intervals)