

**CARNAHAN COM #1**  
**PICTURED CLIFF RECOMPLETION PROCEDURE**

**Prepared By:** George F. Sharpe

**Date:** 1-10-94

- 1.) Shoot Fluid Level. Move in one-400 Bbl tank. Load with 2% KCL water.
- 2.) MIRU. POOH w/rods. Swab MV perfs. POOH & tally tbg.
- 3.) Pick up additional tbg & RIH to 5730'. Spot 25 sx plug across Gallup top from 5730 to 5415'. Pull to 3830'. Spot 25 sx plug across MV perfs and top to 3515'. WOC. Tag cmt. Press test csg to 2000 psi.
- 4.) Swab Fluid level down to 1900'. POOH w/tbg.
- 5.) RU Wireline. Run GR- Bond Log. Perforate 2053'-2073' w/2 SPF at 120'. Flow briefly. SI overnight. Record surface pressure and fluid level. If not depleted, proceed w/frac.
- 6.) RU Frac Company. Load hole w/KCl water & pump in. Pump 58,000# pipeline frac down casing as follows:
  - a.) Pump 5000 gal 30# Xlink gel pad w/clay control, biocide and surfactant.
  - b.) Pump 3000 gal 60 quality foam w/1 ppg sand.
  - c.) Pump 3000 gal 65 quality foam w/2 ppg sand.
  - d.) Pump 3000 gal 70 quality foam w/3 ppg sand.
  - e.) Pump 10,000 gal 70 quality foam w/4 ppg sand. Ramp up tail end concentration to pack fracture.
  - f.) Flush to top perf w/1000 gal 70 quality foam.

Total Fluid Volume = 300 Bbls w/out N<sub>2</sub>  
Total Sand Volume = 58,000#
- 7.) Flow back and test.
- 8.) Laydown 2 3/8" tbg. Pick up and RIH w/1 1/4" production string. RDMOL.
- 9.) Have El Paso reinstall meter. Return to Production.

**Approved** \_\_\_\_\_

**Date** \_\_\_\_\_