

Carnahan Com #1
Pictured Cliff Recompletion Procedure

Prepared By: George F. Sharpe

Date: 1-10-94

- 1.) Move in one-400 Bbl tank. Load with 2% KCL water.
- 2.) MIRU. Hot water treat tbg. POOH w/rods and tbg.
- 3.) Pick up CIBP. RIH and set at \pm 3725'. Pressure test csg to 1500 psi.
- 4.) Swab Fluid level down to 1800'. POOH w/tbg.
- 5.) RU Wireline. 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. Breakdown perms with 250 gal 15% HCL plus balls. Swab back load. Pump 30,000# pipeline frac down casing as follows:
 - a.) Pump 7000 gal 30# Xlink gel pad w/clay control, biocide and surfactant.
 - b.) Pump 5000 gal 60 quality foam w/1 ppg sand.
 - c.) Pump 5000 gal 65 quality foam w/2 ppg sand.
 - d.) Pump 5000 gal 70 quality foam w/3 ppg sand.
 - e.) Flush to top perf w/1000 gal 70 quality foam.

Total Fluid Volume = 338 Bbls w/out N₂

Total Sand Volume = 30,000#

- 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 _____