

RECOMMENDED PROCEDURE

- 1) MIRU workover rig & pipe racks. Deliver and unload ~ 13,000' of 2 7/8", 6.5 lbs./ft., N-80, EUE 8 rd. tbg. PU 4 3/4" bit & casing scraper for 5 1/2", 20.0# casing & TIH to 13,000'. Displace fluid in well with 300 bbls. 2% KCL water treated with annulus inhibitor and surfactant. POH and stand tbg. string.
- 2) MIRU cased hole wireline equipment. Run CBL / GR / CCL from PBTD to 100' above TOC (~ 9,000'). Evaluate CBL prior to perforating. GIH w/ TCP assembly and 5 1/2" production packer w/ on/off tool. Space out guns to perforate Atoka (12,572' - 12,592' dens./neutron) and to set packer @ ~ 12,530'. ND BOPE. NU 2 9/16" 5M tree. Test packer, tubing, and wellhead assembly.
- 3) RU Pro Well Testing choke manifold and flow lines from wellhead to reserve pit. Test surface equip. to 6,000 psi. Perforate & flow well to pit until clean. Evaluate flow and determine if stimulation is required or proceed with further well testing as instructed.
- 4) If stimulation is required: Load tbg. w/ treated 2% KCL water. ND tree & POH w/ packer & TCP assembly. Remove 7 1/16" 5M tbg. head & install FMC rental 7 1/16" 10M tbg. head and 2 ea. 7 1/16" 10M gate valves. MIRU frac equipment. Tie pump lines into 7 1/16" 10M flange and test lines to 8,000 psi. Acidize with 1,000 gals. 7 1/2% HCL diverted with 60 ea. 7/8" 1.3 sg balls and displace with 50 quality CO2 foam. Final 10 bbls. of displacement to be treated KCL water only. Pump acid @ 12 - 15 bpm not to exceed 7,000 psi. Record ISIP and calculate BHTP & frac gradient. Surge balls and allow to fall into rathole.

Frac down 5 1/2" casing @ 20 BPM with 70 Quality CO2 foam and ~ 78,000 lbs. 20/40 intermediate strength proppant. Frac design to include ~ 40% pad volume, 1 - 4 ppg prop concentrations, and 20% methanol in aqueous phase.

Record ISIP, 5, 10, & 15 minute SIPs. Shut in wellhead and RDMO frac equipment.
- 5) RU flowlines and choke manifold to flow back frac. Flow well to pit 24 hrs./day until clean. Shut in well as instructed. Install 5,000 psi gauge on wellhead and monitor pressures.
- 6) MIRU wireline unit, ~ 25' of 6" lubricator w/ 7 1/16" 10M flange, grease injector. Lubricate 5 1/2", 20 lbs./ft. Baker WL Wireline Set Retrievable 10M packer with blanking plug set in Baker L-10 Seal Nipple above packer. Bottom of packer to include WL entry guide. Set packer @ ~ 12,500' depending on CCL results. POH with setting tools. Bleed casing to zero psi through choke assembly as instructed. RDMO wireline equipment.
- 7) NU 7 1/16 10 M BOPE. GIH with L-10 on/off tool assembly and 2 7/8" tubing. Space out tubing with pup joints as required. Circulate 2 % KCL treated with annulus inhibitor (300 bbls.). Latch on/off tool. RD BOPE & rental frac valves & tubing head. NU 7 1/16" 5M tubing head & 2 9/16" 5M tree. Test tree to 5,000 psi. Lay production gathering line and install production equipment.
- 8) MIRU slick line unit and pull blanking plug. Produce well as instructed.

