

EMSU #286  
Eunice Monument Grayburg / San Andres Field  
Lea County, New Mexico  
March 11, 1996

Workover Procedure - Acidize Stimulate

1. MIRU PU. POH w/ rods & pump. Install BOP. GIH, tag for fill & POH w/ prod. tbg.
  2. If significant fill is indicated on TD check (i.e., above 3940 +/-), RU Rev Unit. GIH w/ bit, DC's, etc. on tbg. C/O to +/- 3990'. **(Catch samples and analyze for composition)** RD Rev Unit. POH w/ tbg, DC's & bit.
  3. GIH w/ seating nipple, trtg pkr & tubing unloader on tbg. Set pkr @ 3710' +/- . Drop standing valve and seat in SN. RU BJ Services. Pick up on tubing to set tbg unloader in circ. position. Pickle tubing with 300 gals 15% NEA acid\*\*. Flush to bottom of tbg w/ water. Pump pickle acid at approximately 1/2 BPM. Load backside and circulate pickle acid out of tbg (at 1/2 BPM when catch pressure on backside). Repickle tubing if iron counts are above +/- 2000 ppm on "last in" acid. Slack off on tbg to set tbg unloader in closed position. Fish standing valve. Acidize interval (3760' - 3990') w/ 6000 gal Resisol II+ [viscosified aromatic solvent (20% by vol.) and acid (80% by vol.)] in 5 stages at rate of 2-3 BPM and max. trtg press of 1250 psig STP, while monitoring backside, as follows:
    - A. Pump 1200 gal Resisol II+\*.
    - B. Drop 400# Trimix salt in 10 bbls. gelled Brine water
    - C. Repeat step A & B three times. Vary block size depending on response encountered in previous salt block.
    - D. Pump 1200 gal Resisol II+\*.
    - E. Flush to top perf / open hole with water.
  4. RD Trtg Co. Shut well in a minimum of 2 - 3 hours after treatment.
  5. Flow/swab back acid residue until well cleans up. POH w/ pkr & tbg.
  6. GIH w/ prod tbg. ND BOP. GIH w/ pump & rods. Hang well on. RD PU.
  7. Test well & report results to Midland office.
- \* BJ's Resisol II+ system to contain the following:
- 200 gal / 1000 gal Tolulene
  - 800 gal / 1000 15% HCL
  - 20 gal / 1000 Emulsifier BXXAE660
  - 3 gal / 1000 FERROTROL-270 (anti-sludge iron control to 5000 ppm)
  - 1 gal / 1000 FERROTROL-271 (iron control activator)
  - 0.75 gal / 1000 Inflo-150 Surface Tension Reducer
  - 1 gal / 1000 CI-23 Corrosion Inhibitor

\*\* Pickle acid to contain: 1 gal / 1000 gallons CI-23 Corrosion Inhibitor & 300 gallons 15% HCL

Prepared by: Jimmy Dolan Petroleum Engineer