

**Federal MA No. 4
South Corbin (Wolfcamp) Field
T18S, R33E, Sec. 21
Lea County, New Mexico**

Recommended Completion Procedure

Project Engineer: D. J. Chapman

**Office: 915/688-6987
Residence: 915/694-5232**

1. MIRU pulling unit. RU H₂S monitoring equipment. POOH with rods and pump.
2. ND wellhead. NU BOP. Release TAC and POOH with 2 7/8", 6.5# production tubing. MIRU wireline company. NU packoff on top of BOP. RIH with CIBP for 5 1/2", 17#. Set CIBP at ±10,900'. Dump bail 35' class "C" cement on top of CIBP. POOH. Test casing to 3850 psi (1989 drill well).

3. RIH with 4" slick guns and perforate the following interval loaded at 4 SPF, 180° phasing:

7375'-7388' 54 Holes

POOH. RD wireline company.

Note: Correlate perforations back to attached Schlumberger "CNL" log dated 6/7/89.

4. PU treating packer for 5 1/2", 15.5# casing on 2 7/8", 6.5# production tubing. RIH to bottom perforation at 7388'. NU stimulation valve.
5. MIRU stimulation company. Test all surface lines to 5000 psi. Pump 500 gallons of 7 1/2 % HCl down tubing to pickle. Reverse out with 2 % KCl. Spot 100 gallons of 7 1/2% HCL across perforations. PU 75' above perforations and set packer. Test backside to 1000 psi and monitor throughout job. Acidize perforated interval with 1500 gallons of 7 1/2% HCl evenly distributing 110 (7/8", 1.3 S.G.) RCNBS throughout the job.

Anticipated Rate: 4-6 BPM

Anticipated Pressure: 2800 psi

Maximum Pressure: 3850 psi

RDMO stimulation company. Record ISIP, 5, 10 and 15 minute shut-in pressures.

5. ND stimulation valve. Release packer and RIH past bottom perforation to knock off RCNBS. PUH to 7350' and set packer. Swab back spent acid. Continue swabbing until rates stabilize. Report fluid volumes and level to Production Engineer for decision to frac.

6. Release packer and POOH. MIRU stimulation company. Prepare to frac the Bone Spring (Tresnor) Sand down 5 1/2" casing. ND BOP. NU wellhead. RU two stimulation valves with a choke and bleed off line between for flow back. Frac the Tresnor sand with 25000 gallons of 35# crosslinked gel and 70000# of 20/40 Ottawa sand. See attached pumping schedule.

Anticipated Rate: 30 BPM
Anticipated Pressure: 3500 psi
Maximum Pressure: 3850 psi

7. Force close fracture by flowing back at 1/2 BPM until closure is obtained. RDMO stimulation company. Continue flowing well back to allow clean-up. Increase choke periodically to maintain flow back. Flow back over night.
8. MIRU slickline unit. RIH with slickline and tag bottom to check for sand fill. Consult with Production Engineer for decision to clean out fill.
9. RIH with the following equipment (from bottom up):
- 1 jt 2 7/8", tubing (OPMA)
 - 1 - 2 7/8" perforated sub (4'-6')
 - 1 - 2 7/8" SN (ID 2.25") @ 7500'
 - 5 jts 2 7/8", 6.5#, N-80 tubing
 - 1 - 5 1/2", 15.5# TAC @ 7350'
 - ±7350' of 2 7/8", 6.5#, N-80 tubing
10. Set TAC at 7350'. ND BOP. NU wellhead. RIH with pump and rods. See attached rod design. Space out well. NU pumping tee. RDMO pulling unit. Report production volumes to Midland Office.

Approved: _____
H. A. Lee

Date: _____