

**Howell State Com. No. 1
Workover Procedure
AFE 565**

Fasken Oil & Ranch, Ltd. ----- Howell State Com. No. 1 ----- Cemetary (Morrow) Field

Surface Location: 1980' FSL & 660' FWL Sec 32, T20S, R25E, Eddy Co., NM

Objective: Recomplete to Wolfcamp

KB: 16' above GL

Completed: 7-18-76

TD: 9900'

PBTD: 9464' permanent packer w/blanking plug, 9600' CIBP (Jan. 2002)

Casing:

13-3/8" @ 261' w/200 sx, Circ 75sx to surf.

8-5/8" @ 3001' w/900 sx lite+200 sx "C"+3yds ready mix. TOC surf.

4-1/2" 11.6#/ft @ 9798' w/775sx "C", TOC 6800' by Temp.

Perfs: Original 2JSPF 9422-32' (20 holes by 1-11/16" OD carrier).

Mar 1990 perfed 9502'-08', 9512'-17', 9641'-9652' (2JSPF by 1-11/16" OD carrier).

Sep 1997 reperf 1JSPF 9422-32', 9502'-08', 9512'-17', 9641'-9652' (by 1-11/16" gun).

Packer: 4-1/2" Arrowdrill permanent packer and set @ 9460', 2-3/8" x 10' EUE 8rd N-80 sub, 1.781" "R" profile nipple (blanking plug in place), wireline entry guide.

Packer: Arrowset I 10k packer w/3.5" OD wireline entry guide @ 9358' w/TOSSD w/1.875" "F" frac hardened profile. Bottom string @ 9364.46'

Tubing: 2-3/8" EUE 2-3/8" Buttress X-over, 83 jts 2-3/8" Buttress N-80 W/AB cplgs, 2-3/8" Buttress 2-3/8" EUE x-over, 218 jts 2-3/8" EUE N-80 tubing.

Workover: Jan 2002, isolated and acidized 9502'-9517' and 9422'-9432', no success

1. RUPU. Kill well with 35 bbls 3% KCL water containing packer fluid and ½ gpt BJ's ClayMaster 5C.
2. ND x-mas tree, install BOP.
3. Release packer and POW w/2-3/8" 8rd EUE N-80 tubing and 4-1/2" X 2-3/8" Arrowset I 10K packer.
4. RU wireline lubricator. Run and set CIBP (4-1/2" 11.6#/ft csg) at 9375'. Spot 35' Class "H" cement on CIBP with dump bailer for PBTD 9340'. Run GR/CCL/CBL 8200'-6000' to verify TOC.
5. Test CIBP to 2000 psi using 3% KCL water containing packer fluid and ½ gpt BJ's ClayMaster 5C.
6. RIW w/ SN and 2-3/8" 8rd EUE N-80 tubing to 7082'. Spot 500 gal 15% NEFE triple inhibited HCL acid. POW w/tubing.
7. RU wireline company and 3000 psi lubricator. Perforate Wolfcamp with 3-1/8" casing gun 1 JSPF at 7066'-7082' (17 holes) by Schlumberger Compensated Neutron-Formation Density log dated 7-3-76. **Caution: the gas from this zone may contain H2S.**
8. RIW w/2-3/8" 8rd EUE N-80 tubing and 4-1/2" X 2-3/8" Arrowset I 10K packer, 1.781" "F" profile nipple and TOSSD to +/-6,950'.