

EMPIRE 16 STATE COM. NO. 1
EMPIRE SOUTH (MORROW) FIELD
EDDY COUNTY, NEW MEXICO

Project Engineer: K. L. Midkiff

Office (915)-686-5714
Residence (915)-686-8650

NOTE: Treated 2% KCl water consists of 5 qts/1000 gal of Tretolite OW5827 added to normal KCl water, or use treated KCl water provided by stimulation company.

1. Deliver 10630' plus pup joints of 2 3/8" 4.6# N-80 Hydril 563 tubing to location. While in rack have tubing hydroblast cleaned.
2. MIRU PU. Kill well with 2% KCl water containing Tretolite XT-39 non-ionic surfactant. ND wellhead, NU BOP. Release packer and POOH with tubing, packer, and Vann Gun assembly. Send packer in for redressing. Have packer recut for Hydril 563 threads. Also have wellhead recut to accept Hydril 563 threads.
3. RIH with casing scraper on 2 3/8" EUE tubing to +10925'. POOH. Lay down 2 3/8" EUE tubing. Send 2 3/8" EUE tubing to Odessa for inspection.
4. MIRU wireline company. Run GR/CCL log from 8720'-10900' for correlation. POOH with wireline. RIH with CIBP on wireline. Set CIBP at 10900'. Bail 35' of cement on CIBP with wireline. POOH with wireline.
5. RIH with permanent packer assembly (see diagram) on wireline. Set packer at 10630'. POOH with wireline.
6. Pick up 10630' of 2 3/8" n-80 Hydril 563 tubing. RIH with latch in seal assembly (see diagram), (torque pipe up to 2300 ft-lbs) and production (Hydril) tubing. Hydrotest tubing in hole to 6500 psi. Locate packer but do not latch in. Pump 190 bbl of packer fluid (packer fluid is 2% KCl water with 10 gallons/1000 gal. of Tretolite KW-170 added) down annulus allowing water to circulate up tubing. Latch in to packer.
7. Pressure test annulus to 1000 psi. Pressure test tubing to 6500 psi to test CIBP and seal assembly.
8. ND BOP, NU wellhead. Test wellhead and tubing to 5000 psi. Swab tubing down to 2500' from surface. RU 5000 psi wireline lubricator. Test lubricator to 5000 psi. RIH with 1 11/16" strip charge gun on wireline. Perforate Atoka with 2 JSPF from 10772'-10780' (16 shots), and 2 JSPF from 10734'-10748' (28 shots). POOH with wireline and release wireline company. If well will flow let it unload tubing volume.
9. RU stimulation company. NU treesaver (stimulation company will arrange for delivery). NU surface lines and test to 6500 psi. Load and hold 1000 psi on annulus. Breakdown perforations with 1000 gallons of 7 1/2% NEFe HCl acid. Space out 66 7/8" RCNBS (sp. gr.=1.1) throughout job. Flush with 42 bbl of treated 2% KCl water. RD and release stimulating company.
Treating rate= 4 BPM
Maximum pressure= 6500 psi