

## Recommended Procedure

State "36" No. 1 \_\_\_\_\_ A.F.E. No. \_\_\_\_\_ Atoka Penn Field  
Eddy County, N.M.

1. Drill 36" hole to 80' with rat hole machine and set 30" conductor complete with 3 - 1" tubing strings welded to outside of 30". Cement with 275 sx Class "C" w/2%  $\text{CaCl}_2$  (s.w. 14.8 ppg, yield 1.32 cuft/sx) via 1" tubing strings.
2. Drill 26" hole to 120' (Lime Marker). Set and cement 20" casing with 275 sx Class "C" cement with 2%  $\text{CaCl}_2$  (s.w. 14.8 ppg, yield 1.32 cuft/sx).
3. Drill 12-1/4" hole to 1350' with mud.
  - Lost circulation may be encountered in gravel bed at approximately 200'-350'. If circulation cannot be regained, ream hole diameter to 17-1/2". Set 13-3/8" casing at 350' and cement to surface (Estimate 400 sx Class "C" with 2%  $\text{CaCl}_2$ , s.w. 14.8 ppg, yield 1.32 ft<sup>3</sup>/sx).
4. Set and cement 8-5/8" casing at 1350', cement to surface and install 11" x 3000 psi casinghead (Estimate 400 sx Class "C" with 4% gel and 2%  $\text{CaCl}_2$ , s.w. 12.7 ppg, yield 1.84 ft<sup>3</sup>/sx, plus 200 sx Class "C" with 2%  $\text{CaCl}_2$ ; s.w. 14.8 ppg, yield 1.32 ft<sup>3</sup>/sx).
5. WOC 18 hours.
6. NU B.O.P.'s, hydril stack and choke manifold. Pressure test BOP stack to 1500 psi with rig pump.
7. Upon first bit trip or before Wolfcamp, hydrostatically test 200' of 8-5/8" casing to 2300 psig, casing spool, BOP's, and choke manifold to 3000 psig, and hydril to 1500 psig. Install flowline sensor.
8. Drill 7-7/8" hole to total depth of 9200' using fresh water to 5500', 4% KCl water to 8600'. Mud up at 8600' with polymer starch mud system and maintain 38-42 sec. viscosity, 8.7 ppg and 10 cc water loss to total depth.
9. DST all shows.
10. Log well with CNL-LDT high res., Phasor Induction-SFL, GR and caliper.
11. Set and cement 4-1/2" production casing (resin coated and centralized through pay zones) with 10 bfw + 500 gallons Superflush 102 + 10 bfw followed by 800 sx HLW "H" with 3% KCl and 0.3% Halad-322 (s.w. 12.7 ppg, yield 1.84 ft<sup>3</sup>/sx) plus 400 sx Class "H" 50/50 Poz with 3% KCl, 0.3% Halad-322 and 0.4% Halad-344 and 2% gel (s.w. 14.5 ppg, yield 1.21 ft<sup>3</sup>/sx). Displace plug with 3% KCl water.
12. Set slips, nipple down BOP's and run temperature survey to locate cement top.
13. Install 11"-3000 psi x 7-1/16"-3000 psi tubinghead and flow tree.
14. Rig down and move out rotary tools.
15. Level location, set mast anchors, move in and rig up completion unit.
16. Install BOP, RIW with packer, T.O.S.S.D. with "F" profile nipple and 2-3/8" tubing. Displace tubing-casing annulus with 3% KCl water containing oxygen scavenger and corrosion inhibitor.
17. Set packer, install flow tree, swab down tubing and perforate pay interval.