PHILLIPS PETROLEUM COMPANY
PERMIAN PROFIT CENTER
DRILLING PROGRAM

WELL: Prairie Fire State #1 **FIELD:** Osudo West

LOCATION: 1650' FEL & 1980' FNL, Sec. 2, T-21-S, R-34-E, Lea County, NM.

TOTAL DEPTH: 13,500' RKB

SURFACE HOLE: 660' RKB; 17-1/2" Bit

A. **Mud:** Drill the surface hole with fresh water/fresh gel flocculated lime. Use paper to control seepage and mud rings and caustic to keep a 9 – 9.5 pH. Add yellow starch @ TD to stabilize hole for running casing. (See attached Mud Program for details)

B. **Potential Problems:** Drilling paper additions should be sufficient to control minor seepage losses. A couple wells in the area had difficulty running casing. If excessive torque & drag is present lower the API water loss below 30cc prior to running casing.

C. **Casing:** 13-3/8", 54.5 lb/ft, J-55, ST&C set at 660'.

Make-up Torque, ft-lbs:	
Optimum	5140
Minimum	3860
Maximum	6430

D. **Cement:** Pump 20 bbls of fresh water ahead of lead slurry.

Lead: 710 sx of Halliburton light premium plus + .25 lb/sx flocele

Slurry Weight:	12.4 lb/gal
Slurry Yield:	1.97 ft^3/sk
Water Requirement:	10.92 gals/sx

Tail: 340 sx premium plus + 2% Calcium Chloride mixed w/ fresh water

Slurry Weight:	14.8 ppg
Slurry Yield:	1.34 ft^3/sx
Water Requirement:	6.31 gals/sx

E. **Notes:**

1. Surface casing must be cemented to surface.
2. Base cement volumes on 100% excess of open hole.
3. Sandblast the bottom 2 joints of casing. Tack weld bottom 2 collars. Use thread lock compound on bottom 2 joints.
4. Run centralizers on shoe joint and every 4th joint to surface.
5. Circulate a minimum of one casing volume before cementing.
6. After bumping plug wait on cement a minimum of 6 hours prior to nippling up BOP stack, and at least 18 hours prior to drilling out the shoe.
7. Install 13-3/8" Bradenhead 3000psi
8. NU 5M BOP stack.
9. Test casing to 2500 psi for 30 minutes prior to drilling out cement.
10. RU "Low Risk" H_2S equipment (100 ppm ROE < 3000') before drilling.

INTERMEDIATE HOLE: 5850' RKB, 12- 1/4" Bit