Drilling Procedure
North Carlsbad Prospect #579
Eddy County, New Mexico

1. Set 20" X 40' long conductor pipe.

2. MIRU drilling rig and spud 17-1/2" hole w/ fresh water spud mud.

3. Casing point for 13-3/8" surface casing is approximately 300'. No major hole problems are anticipated but there will probably be some hole seepage and lost circulation. All lost circulation zones must be fully documented and reported to the OCD. Viscous pills with standard LCM materials should control this problem.

4. RU and run 300 feet of 13-3/8" 48# K-55 ST&C casing. Cement with 315 sx class C w/ 2% CaCl2 and 1/4 pps Cello Flake.

5. Drill out from under surface casing with 12-1/4" bit using fresh water.

6. Casing point for 8-5/8" intermediate casing is approximately 2800 feet. No major hole problems are anticipated but there can be hole seepage, lost circulation, and voids. All lost circulation zones must be fully documented and reported to the OCD. A representative of the OCD must be present during cementing operations on this intermediate casing.

7. RU and run 2800 feet of 8-5/8" 24# K-55 ST&C casing. Cement w/ 970 sx class C Lite + 5 pps salt + 1/4 pps Cello Flake followed by 200 sx class C + 1% CaCl2.

8. Drill out from under intermediate casing with 7-7/8" bit using fresh water.

9. Start mud-up in sufficient time to have adequate mud properties for running DST's at 5000 feet (vis 38-45, W.L. 15-20 c.c.). Possible DST's will be in the Penn at 6000 feet and the Devonian at 7600 feet.

10. Drill to projected TD of 8500 feet. Condition hole. RU and run logs.

11. If log evaluation substantiates productivity, run 5-1/2" 14# and 15.5# K-55 casing to TD. Cement in two stages as follows:

    First Stage:
    Lead: 290 sx Class H Lite + 5pps Salt + 1/4 pps Cello Flake
    Tail: 780 sx Class H + 0.8% FL-62 + 0.3% CD-32 + 0.2% Sodium Metasilicate

    Second Stage:
    Lead: 300 sx Class C Lite + 5pps Salt + 1/4 pps Cello Flake
    Tail: 200 sx Class C Neat

12. RD & MO drilling rig.