

## APPLICATION TO DRILL

Western Reserves Oil Company

Champlin Federal #1  
1980' FNL & 660' FEL  
Section 10, T-8-S, R-31-E  
Chaves County, New Mexico

The following answers are provided for your consideration in response to your outline under Section II of Bullentin NTL-6.

1. Location: 1980' FNL & 660' FEL, Section 34, T-7-S, R-31-E, Chaves County, New Mexico.
2. Elevation Above Sea Level: 4328.6'
3. Geologic Name of Surface Formation: Alluvium
4. Drilling Tools & Associated Equipment: Conventional rotary drilling rig using mud for the circulation medium.
5. Proposed Drilling Depth: 4150'±
6. Estimated Geological Marker Tops: Rustler Anhydrite @ 1455'; Salt @ 1520'; San Andres @ 3180'.
7. Mineral Bearing Formation: Water bearing - none.  
Oil bearing - San Andres @ 3920'±
8. Casing Program: (A) Surface Casing - 8 5/8" 24# K-55 new casing. (B) Production Casing - 4 1/2" 10.5# K-55 new casing.
9. Setting Depth of Casing for Same: (A) 8 5/8" casing set @ 1470'±. Cement will be circulated to surface using 400 sx of Halliburton light with 3# gilsonite/sx, 1/4# flocele/sx, 2% CaCl<sub>2</sub>. Followed by 200 sx Class "C" 2% CaCl<sub>2</sub>. (B) 4 1/2" casing set @ 4150'± and will be cemented with 300 sx Class "C", 50-50 pozmix; 8# salt/sx 1/4# flocele/sx.
10. Pressure Control Equipment: Blowout Preventers will be installed on the surface casing. They will be 10" API Series 900, Type B, blowout preventers with 4 1/2" pipe rams. The blowout preventers will be tested to 1000 psi after they are installed on the surface casing; prior to drilling out.

11. Proposed Circulation Medium: Mud will be used for the circulation medium for all depths in this well. The following mud properties will be maintained: Viscosity sufficient to clean hole; Weight 9.5 - 10 ppg. Viscosity through pay zone 35 - 40 for good samples.
12. Testing, Logging & Coring Programs:  
(A) Testing: All testing will be commenced after the well is drilled and casing has been set and cemented.  
(B) Logging: At total depth the following logs will be run: 0-4150'± Sidewall Neutron Porosity with gamma ray and caliper. Dual Laterolog, Micro-SFL.  
(C) No coring anticipated.
13. Potential Hazards: No abnormal pressure or temperature zones are anticipated. Hydrogen sulfide gas is not expected to be a problem; however, the drilling rig will be situated as to allow all gas vapors to be expelled away from personal gathering sites and engine exhausts.
14. Anticipated Starting Date & Duration of Operations:  
Commence drilling operations May 1, 1981. Three weeks to complete on May 22, 1981.
15. Other Facets of Operations: After running 4½" casing, cased hole gamma ray collar correlation logs will be run from total depth to 3500'±. The San Andres pay will be perforated and acidized. The well will then be swab tested and potentialized to produce the well.