Carl Engwall #1 Fletcher-Federal
1,650' FS & 660' FWL section 27, T-20-S, R-34-E, Lea Co., NM
Information to comply with NTL-6

1. The surface formation is Quaternary.

2. The Red Beds are encountered within 20 feet below the surface. The base of the Rustler and top of Salado Anhydrite is at about 1,600 feet. The top of the Yates is about 3,500 feet and the top of the Seven Rivers about 3,700 feet.

3. Fresh water may be encountered down to about 250 feet with brackish water and/or salt water possible in zones to about 1,600 feet. Salt and accompanying Potash will be between 1,700 and 3,300 feet. Oil and Gas might be encountered from 3,350 to 3,750 feet.

4. 8 5/8" K-55 used 24# casing proposed to be set and cemented at about 350'. If production is indicated 4 1/2" K-55 new 9.5# casing will be set and cemented at total depth of about 3,750'.

5. Minimum pressure of 3,000# for pressure control equipment which will be functionally tested every 24 hours, attachment.

6. Will drill with fresh native mud with a mud seal addetive to prevent seepage to 350'. Drill out below surface casing with 10#/gallon brine water using lime for PH control of 10-11 and salt gel if needed, maintaining 32-33 Sec/1000 cc viscosity. From 3,300 to 3,550' increase addition of salt gel to bring mud weight to 10.2-10.4#/gallon, viscosity to 33-36 sec/1000 cc and water loss to 12-15 cc.

7. All safety and auxiliary equipment such as Kelly Cocks, mud level monitoring, sub with full opening valve for drill pipe without Kelly, etc. will be available and used.

8. A 100' core might be taken in the Yates sandstone section between 3,600 and 3,700'. If core results and/or sample analysis are favorable a drill stem test could be taken between 3,600 and 3,750'. Electric logs will be run from surface to total deoth. If stratigraphic position or the formation examination do not warrent no cores or drill stem tests will be taken.

9. No abnormal conditions expected.

10. Starting date of March 15, 1977 and 7 days to complete the operations is anticipated.