

## APPLICATION FOR DRILLING

### MANZANO OIL CORPORATION

Appaloosa Federal, Well No. 1  
1980' FSL & 1980' FEL, Sec. 35-T7S-R37E  
Roosevelt County, New Mexico  
Lease No.: NM-97160  
Exploratory Well

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Manzano Oil Corporation submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Rustler	2100'	Wolfcamp	7900'
Yates	2530'	Penn	8250'
San Andres	3700'	Devonian	8700'
Glorieta	5000'	T.D.	9200'
Abo	6900'		

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 300'.  
Oil: Possible below 7900' in the Wolfcamp.  
Gas: Possible in the Devonian below 9000'.

4. Proposed Casing Program: See Form 3160-3.
5. Proposed Control Equipment: See Form 3160-3 and Exhibit "E".
6. Mud Program: See Form 3160-3.
7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.
- T. Testing, Logging, and Coring Program:

Drill Stem Tests: None.  
Logging: G/R Neutron: Surface casing to T.D.  
Porosity Log and Resistivity log: Below 8 5/8" to T.D.  
Coring: None.

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated: BHP = 2000-3600 psi, BH temp. = 152°.
10. H<sub>2</sub>S: None expected based on previously drilled wells in the general area..
11. Anticipated starting date: August 10, 1998.  
Anticipated completion of drilling operations: Approx. 3-4 weeks.

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