

# APPLICATION TO DRILL

POGO PRODUCING COMPANY  
PATTON "18" FEDERAL # 1  
UNIT "B" SECTION 18  
T24S-R31E EDDY CO. NM

## 9. CASING CEMENTING & SETTING DEPTH:

|         |                  |  |
|---------|------------------|--|
| 20"     | Conductor        | Set 40' of 20" conductor and cement to surface with Redi-mix.  |
| 13 3/8" | Surface          | Set 850' of 13 3/8" 48# H-40 ST&C casing. Cement with 1000 Sx. of Class "C" cement + additives circulate cement to surface.  |
| 8 5/8"  | Intermediate     | Set 4250' of 8 5/8" 32# J-55 ST&C casing. Cement with 1500 Sx. of Class "C" cement + additives, circulate cement to surface.   |
| 5 1/2"  | 2nd Intermediate | Set 12,500' of 5 1/2" 17# P-110 LT&C casing. Cement with 1500 Sx. in 3 stages: 1st stage cement with 650 Sx. of Class "H" + additives, 2nd stage cement with 500 Sx. of Class "C" cement + additives, 3rd stage cement with 350 Sx. of Class "C" cement + additives. |
| 2 7/8"  | Production       | Set 13,900' of 2 7/8" 7.9# L-80 8-R EUE tubing. Cement with 150 Sx. of Class "H" Premium Plus cement + additives.  |

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 1500 Series 5000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams and bottom pipe rams. The B.O.P. will be nipped up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each 24 hour period and the blind rams will be operated when drill pipe is out of hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a hydraulically operated closing unit and a 2" 5000 PSI choke manifold with dual adjustable chokes. No abnormal pressures or temperatures are expected.

## 11. PROPOSED MUD CIRCULATING SYSTEM:

| DEPTH         | MUD WT.   | VISC. | FLUID LOSS                  | TYPE MUD SYSTEM   |
|---------------|-----------|-------|-----------------------------|---|
| 40-850'       | 8.4-8.7   | 29-34 | NC                          | Fresh water Spud mud use paper to control seepage   |
| 850-4250'     | 10.1-10.2 | 29-38 | NC                          | Brine water use paper to control seepage and high viscosity sweeps to clean hole.                           |
| 4250'-12,500' | 8.4-8.7   | 29-38 | NC                          | Fresh water mud system use Gel for viscosity control using high viscosity sweeps to clean hole.             |
| 12,500-13,900 | 8.4-8.7   | 32-40 | 10 cc or less where desired | Same as above using a using a Polymer system to control water loss and high viscosity sweeps to clean hole. |

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing viscosity and/or water loss may have to be adjusted to meet these needs.