

APPLICATION TO DRILL  
 POGO PRODUCING COMPANY  
 WBR FEDERAL # 7  
 UNIT "K" SECTION 13  
 T22S-R32E LEA CO. NM

9. CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 1000' of 13 3/8" 48# H-40 ST&C casing. Cement with 1000 Sx. of Class "C" cement + additives circulate to surface.
8 5/8"	Intermediate	Set 4700' of 8 5/8" 32# J-55 ST&C casing. Cement with 1800 Sx. of Class "C" cement + 2% CaCl <sub>2</sub> + 1/4# Floccle/Sx. circulate cement to surface.
5 1/2"	Production	Set 10,200' of 5 1/2" casing as follows: 3200' of 5 1/2" 17# N-80 LT&C, 5000' of 5 1/2" 17# J-55 LT&C, 2000' of 5 1/2" 17# N-80 LT&C. Cement in two stages, DV Tool at 7000'±, cement with 1200 Sx. of Class "H" Premium Plus cement + additives, estimate top of cement 3000' from surface.

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
40-1000'	8.4-8.7	29-38	NC	Fresh water mud add paper to control seepage and use high viscosity sweeps to clean hole.
1000-4700'	10.2-10.3	29-38	NC	Brine water using high viscosity sweeps to clean hole.
4700-10,200'	8.4-8.8	29-39	NC	Fresh water using high viscosity sweeps to clean hole. water loss may be needed to run logs and/or casing, if needed use a polymer system to accomplish this

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.