

APPLICATION TO DRILL
 POGO PRODUCING COMPANY
 FEDERAL 27 #3
 990' FNL & 1980' FWL SEC.27
 T22S-R32E LEA CO. NM

9. Cementing and Setting Depth:

| | | |
|---------|--------------|--|
| 20" | Conductor | Set 40' of 20" conductor cement to surface with Redi-Mix. |
| 10 3/4" | Surface | Set 800' of 10 3/4" casing, cement with 600 Sx. Class "C" + additives, circulate to surface. |
| 7 5/8" | Intermediate | Set 4650' of 7 5/8" casing, cement with 800 Sx. Halco Light + additives, tail in with 500 Sx. Premium cement + additives circulate to surface. |
| 4 1/2" | Production | Set 9000' of 4 1/2" casing, cement with 600 Sx. Halco Light + additives, tail in with 500 Sx. Premium Plus + additives, top cement 3600'. |

- 10. Pressure Control Equipment:** Exhibit "E". A Blow-out Preventer (no less than 900 series 3000 psi working pressure) consisting of double ram type preventer with annular type preventer all units will be hydraulically operated. Exhibit "E-1" Choke Manifold and Closing Unit. Blind rams on top, pipe rams on bottom to correspond with size of drill pipe in use. BOP will be nipped up on 10 3/4" casing and remain on well until casing is run and cemented. BOP will be tested as well as choke manifold. BOP will be worked at least once each day while drilling and blind ram will be worked on trips when no drill pipe is in hole. Flow sensor PVT, full opening stabbing valve and upper kelley cock will be utilized.

11. Proposed Mud Circulating System:

| <u>Depth</u> | <u>Mud Wt.</u> | <u>Mud Visc.</u> | <u>Fluid Loss</u> | <u>Type Mud</u> |
|--------------|----------------|------------------|-------------------|--|
| 40-800' | 8.4-8.6 | 29-36 | NC | Fresh water Spud mud add paper for seepage control. |
| 800-4650' | 10.-10.5 | 29-30 | NC | Brine water add paper for seepage control and lime for pH control. |
| 4650'-9000' | 8.4-8.6 | 29-36 | NC | Fresh water use Gel for viscosity and paper for seepage control. |

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirements will be kept at the well site at all times. In order to log well and run casing the viscosity may have to be raised and the water loss lowered.