

APPLICATION TO DRILL

CONCHO RESOURCES, INC.
 BLACKBIRD "8" FEDERAL COM. # 2
 UNIT "J" SECTION 8
 T16S-R28E EDDY 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 400' of 13 3/8" 48# H-40 ST&C casing and cement with 450 Sx. of class "C" cement + 2% CaCl circulate cement to surface.
8 5/8"	Intermediate	Set 1800' of 8 5/8" 24# J-55 ST&C casing. Cement with 1050 Sx. of Class "C" cement + 2% CaCl and other additives, circulate cement to surface.
4 1/2"	Production	Set 9600' of 4 1/2" 11.6# N-80 LT&C casing. Cement in two stages, set DV tool at 4500'±, cement first stage with 600 Sx. of Class "H" 50/50 POZ + additives, cement second stage with 500 Sx. of 50/50 POZ + additives, estimate top of cement 1200'.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E". A Series 900 3000 PSI working pressure B.O.P. consting of a double ram type preventor with a bag type annular preventor. The B.O.P. unit will be hydraulically operated. Exhibit "E-1". Choke manifold and closing unit. The B.O.P. will be nipped up on 13 3/8" casing and will be operated at least once each 24 hour period while drilling and blind rams will be operated when out of hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. No abnormal pressure or temperature is expected while drilling.

11. PROPOSED MUD CIRCULATING SYSTEM:

Depth	Mud Wt.	Visc.	Fluid Loss	Type Mud System
40-400'	8.8-8.9	29-32	NC	Fresh water spud mud add paper to control seepage.
400-1800'	8.7-8.9	29-36	NC	Fresh water adding fresh water Gel for viscosity to clean hole add paper to control seepage.
1800-8500'	10.2-10.5	29-34	NC	Brine water add paper for seepage control and Lime for pH control.
8500-9600'	10.2-10.5	32-40	10 cc or less	Brine water add salt water Gel for viscosity, starch for water loss control & soda ash for pH.

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 the viscosity and/or water loss may have to be adjusted to meet these needs.