

## APPLICATION TO DRILL

CONCHO RESOURCES, INC.  
 BLACK JACK "1" FEDERAL # 2  
 UNIT "P" SECTION 1  
 T24S-R30E EDDY CO. NM

9. Cementing and Setting Depth:

20"	Conductor	Set 40' of 20" conductor and cement to surface with Redi-mix.
17½"	Surface	Set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 500 Sx. of Class "C" cement + 2% CaCl + ¼# Flocele/Sx. circulate cement to surface.
11"	Intermediate	Set 4000' of 8 5/8" 32# K-55 ST&C casing. Cement with 1000 Sx. of Class "C" Light cement + 2% CaCl + ¼# Flocele/Sx. , tail in with 200 Sx. of Class "C" cement + 2% CaCl, circulate cement to surface.
7 7/8"	Production	Set 8200' of 5½" 17# N-80 LT&C casing. Cement with 500 Sx. of Class "H" Light cement + additives, tail in with 300 Sx. of Class "H" Premium Plus cement + additives. , Estimate top of cement 3600'.

10. Pressure Control Equipment: Exhibit "E". A 900 Series 3000 PSI working pressure B.O.P. consisting of a double ram type preventor with a bag type annular preventor. BOP unit will be hydraulically operated. Exhibit "E-1". Choke manifold and closing unit. BOP will be nipped up on 13 3/8" casing and will be operated at least once each 24 Hr. period while drilling and blind rams will be operated when out of hole during trips. Flow sensor, PVT, 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
40- <del>5000</del> 680'	8.4-8.8	29-34	NC	Fresh water spud mud use paper to control seepage.
680' <del>500</del> -4000'	10.1-10.3	29-36	NC	Brine water use paper to control seepage and high viscosity sweeps to clean hole.
4000-7000'	8.4-8.6	29-38	NC	Fresh water use paper to control seepage, Gel for viscosity and high viscosity sweeps to clean hole.
7000-8200	"	"	10cc or less	Same as above use Polymer to control water loss.

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirements will be kept at 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 in order to do so.