APPLICATION TO DRILL

PENWELL ENERGY, INC.
DIAMOND TAIL "24" FEDERAL # 1
1980' FSL & 660' FWL SEC. 24
T23S-R32E LEA CO. NM

9. Casing cementing & setting depth:

20" Conductor	Set 40' of 20" conductor and cement to surface with Redimix.
13 3/8" Surface	Set 550' of 13 3/8" K-55 54.5# ST&C casing. Cement with 500 Sx Class "C" + additive, circulate cement to surface.
8 5/8" Intermediate	Set 4850' of 8 5/8" K-55 32 & 24# ST&C casing. Cement with 1000 Sx Class "C" Light + additives tail in with 250 Sx Class "C" Premium + additives circulate cement to surface.
5½" Production	Set 10350' of 5½" N-80 & K-55 17# LT&C casing. Cement with 400 Sx Class "H" Light + additives Tail in with 250 Sx Class "H" + additives, top cement estimated at 7500'

10. Pressure Control Equipment: Exhibit "E". A Blow-out Preventer (no less than 1500 Series 5000 PSI working pressure) consisting of double ram type preventer with bag type preventer. 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 nippled up on 13-3/8" 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 & 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. Anticipated BHP 4000 PSI and 185° BHT.

11. Proposed Mud Circulating System:

DEPTH	MUD. WT.	MUD VISC.	FLUID LOSS	TYPE MUD
40-550'	8.4 8.8	28-34	NC	Fresh water spud mud add Paper to control seepage.
550-4850'	10-10.8	28-30	NC	Brine water lime for pH control & paper for seepage
4850-9000'	9.4-10	28-32	NC	Cut Brine lime for pH control and paper for seepage
9000-10350'	9.4-9.8	32-38	10cc or less	Mud up with Drispac add starch for water loss

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