

## APPLICATION TO DRILL

GREAT WESTERN DRILLING COMPANY  
 QUAIL FEDERAL # 10  
 UNIT "H" SECTION 23  
 T6S-R25E CHAVES CO. NM

9. CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor and cement to surface with Redi-mix.
9 5/8"	Surface	Set 900' of 9 5/8" 36# J-55 ST&C casing. Cement with 202 Sx. of Class "C" Light cement + additives, tail in with 141 Sx. if Class "C" + 2% CaCl + 1/4# Flocele/Sx. circulate cement to surface.
4 1/2"	Production	Set 4200' of 4 1/2" 11.6# J-55 ST&C casing. Cement with 435 Sx. of Class "C" cement + 2% CaCl, + 1/4# Flocele/Sx. bring cement top back to at least 500' above top of pay.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E" shows a 900 Series 3000 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 9 5/8" 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" 3000 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
40-900'	8.6-8.9	31-34	NC	Fresh water spud mud add paper to control seepage
900-3500'	8.8-9.2	28-29	NC	Cut brine system using paper to control seepage & high viscosity sweeps to clean hole.
3500-4200'	9.7-9.9	34-36	NC	Brine system with pH of 9.5-10.5.

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.