Cementing Program

13 3/8" Surface Casing:	Cement to surface -- with 321 sx Pozmix (35% Poz, 65% Class C) with 6% Bentonite, 2% $CaCl_2$, 1/4 lb/sx Cello Flakes + 250 sx Class C with 2% $CaCl_2$, 1/4 lb/sx Cello Flakes.
8 5/8" Intermediate Casing:	Cement to surface – with 1310 sx Pozmix (35% Poz, 65% Class C) with 6% Bentonite, 5% $NaCl_2$, 1/4 lb/sx Cello Flakes + 614 sx Pozmix (60% Poz, 40% Class C) with 5% $NaCl_2$, 4% MPA-1, 1/4 lb/sx Cello Flakes.
5 1/2" Production Casing:	Cement to ±6500' – with 524 sx Pozmix (15% Poz, 61% Class C, 11% BA-90) with 2% KCl_2, 2 lb/sx EC-2, 0.3% CD-32, 5 lb/sx LCM-1, 0.6% FL-25, 0.6% FL-52, 1/4 lbs/sx Cello Flakes + 200 sx Class H with 15% R-3, 3% KCL_2, 1% FL-25.

The cement volumes for the 5 1/2" casing will be revised pending the caliper measurement from the open hole logs.

5. Minimum Specifications for Pressure Control

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000 psi WP) preventer and a bag-type (Hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both BOP's will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. As per Bureau of Land Management Drilling Operations Order #2, prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be function tested.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having 3000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System

The well will be drilled to total depth using brine with starch mud systems. Depths of systems are as follows.

Depth	Type	Weight (ppg)	Viscosity (1/sec)	Water Loss (cc)
0' - ~~650~~' 1050'	Fresh Water			
1050'~~650~~' - 4600'	Brine Water	10	28 – 30	No control
4600' - 9100'	Cut Brine	8.8	28 – 30	No control
9100' - TD	Starch	9.8	28 – 38	4 – 8

The necessary mud products for weight addition and fluid loss control will be on location at all times.