4. Casing Program

Hole Size	Interval	Casing OD	Weight, ppf	Grade	Type
17 1/2"	0–~~650~~ 830'	13 3/8"	48#	H-40	ST&C
12 1/4"	0–4550'	8 5/8"	32#	J-55	LT&C
7 7/8"	0–12500'±	5 1/2"	17#	K-55 / N-80	LT&C

Cementing Program

13 3/8" Surface Casing:	Cement to surface -- with 321 sx Poz:Class C with 6% Bentonite, 2% $CaCl_2$, 1/4 lb/sx Cello Flake + 250 sx Class C with 2% $CaCl_2$, 1/4 lb/sx Cello Flake.
8 5/8" Intermediate Casing:	Cement to surface – with 1310 sx Poz:Class C with 6% Bentonite, 5% $NaCl_2$, 1/4 lb/sx Cello Flake + 504 sx Poz:Class C with 4% MPA-1, 5% $NaCl_2$, 1/4 lb/sx Cello Flake.
5 1/2" Production Casing:	Cement to 6500' – Stage 1 with 426 sx Poz:Class C CSE with 2% KCl_2, 0.6% FL-25, 0.6% FL-52, 0.3% CD-32, 2 lbs/sx EC-1, 5 lbs/sx LCM-1, 1/4 lb/sx Cello Flake + 200 sx Class H with 3% KCl_2, 1% FL-25, 0.15% R-3.

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 BLM Drilling Operations Order #2, prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be function tested.