

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>Csg OD</u>	<u>Weight, Grade, Type</u>
17-1/2"	0-40'	14"	Conductor, 0.30" wall
12-1/4"	0-450'	8-5/8"	24#, J-55 ERW, FBN ST&C R-3
7-7/8"	0-TD	5-1/2"	15.5# J-55, ST&C seamless

Casing Cementing Program:

14" Conductor Casing:

Cemented with redimix to surface.

8 5/8" Surface Casing:

Cemented to surface with 125 sxs Lite cmt + 6% Gel + 2% CaCl + 1/4 lb/sx Cellophane Flakes and 200 sxs Class C + 2% CaCl + 1/4 lb/sx Cellophane Flakes.

5 1/2" Production Casing:

Cemented to surface with 550 sxs Lite + 6% Gel + 5% NaCl + 1/4 lb/sx Cellophane Flakes and 425 sxs Class "H" + 10% Gypsum + 1/4 lb/sx Cellophane Flakes.

The above cement volumes are subject to revision pending the caliper measurement from the open hole logs. The top of cement is designed to reach surface.

5. Minimum Specifications for Pressure Control:

A 2000 psi blowout prevention system (BOP), as shown in Exhibit #1, will be utilized. The BOP equipment will consist of a double ram type preventor and/or a bag-type (Hydri) preventor. Both units will be hydraulically operated and the ram type preventor 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 head(2000 psi WP) and utilized continuously until total depth is reached. As per BLM Operations Order #2, prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydri 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.

Additional accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having a minimum 2000 psi WP rating. The BOP equipment to be utilized is illustrated in Exhibit #1 and #1-A. As the Exhibits reflect, 3000 psig BOP equipment will be utilized during drilling operations. This equipment will be utilized as it is the more readily available BOP equipment; however, the BOP systems maximum pressure will be limited to 2000 psig, which is, the maximum working pressure of the 8 5/8" casing head.