

Cementing Program

420' 8-5/8" Surface Casing: Cement to surface: 150 sxs Class C containing 4% Gel, 2% Calcium Chloride followed by 100 sxs Class C containing 2% Calcium Chloride.

5000' 5 1/2" Production Casing

Lead Slurry: Cement Lead to cover from 1500' up to surface using 35:65 Poz C w/6% gel, 5 pps salt, and 0.25 pps celloflake.

Tail Slurry: Cement tail to cover from TD up to 1500' using 50:50 Poz C with 2% Gel, 0.3% FLAC, 0.2% TIC, 0.25 pps Cello-Flake, 1% B28.

5. Minimum Specifications for Pressure Control

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000# WP) preventor. This unit will be hydraulically operated. The BOP 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 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 function tests will be documented on the daily driller's log. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having a 3000# WP rating.

6. Types and Characteristics of Proposed Mud System

This well will be drilled to total depth with fresh water, cut brine and starch mud systems. Depths are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity</u>	<u>Water Loss</u>
0' - 420'	Fresh water	8.3 - 8.8	28 - 36	No control
420' - 2200'	Brine	10.0 - 10.2	28 - 30	No control
2200' - TD	Salt Gel & Starch	10.0-10.3	30 - 34	< 20 cc