

5. Cementing Program:

Conductor Pipe: 13 3/8" casing will be set at approximately 40' and cemented with approximately 2 cu. yds. of redi-mix to bring cement to the surface.

Surface Casing: 8 5/8" casing will be set at approximately 1030' and cemented with approximately 600 sacks of Premium Plus cement with 2% CaCl<sub>2</sub> and additives per sack. The amount may be adjusted depending upon the fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.

Production Casing: If appropriate, 5 1/2" casing will be set at Total Depth. Armstrong proposes to utilize cement in sufficient quantities to circulate cement to surface. The production casing will be cemented with approximately 650 sacks 50/50 Poz "C" with 5 #/sx. salt and additives per sack.

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown on Exhibit "A" will consist of a double ram-type (3000 psi WP) preventer. The BOP unit 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. The BOP will be nipped up on the 8 5/8" surface casing and used continuously until TD is reached. The BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 2" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 2000 psi WP rating.

7. Types and Characteristics of the Proposed Mud System:

0' to 1030' Fresh water with lime and gel with paper and fiber for seepage will be used for drilling purposes.

1030' to 2500' Saturated brine water purchased from commercial sources with paper and fiber for seepage will be utilized.

2500' to TD Saturated brine water, caustic for PH control and paper for seepage with starch will be utilized. Anticipated mud properties are as follows: MW 10.5, WL 10 cc, PH 9, Vis 30, CL 180,000.