

5. Pressure Control Equipment:

The blowout preventer equipment (BOP) shown in Exhibits D & E will consist of a double ram-type (5000 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 nipped up on the 13-3/8" surface casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000 psi and the hydril to 70% of rated working pressure (2100 psi).

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 3" 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 5000 psi WP rating which is shown in Exhibit F.

6. Proposed Mud System:

The proposed mud system will be a combination of fresh water, brine, cut brine, and polymer gel. The depths and mud properties of the mud system are listed below.

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (sec)</u>	<u>Waterloss (cc)</u>	<u>ph</u>
0-400' ⁴²⁵	Fresh Water	8.3-8.8	28-30	Not Critical	9-10
400-5000'	Brine Water	8.8-10.2	28-30	Not Critical	9-10
5000-12,900'	Cut Brine	8.5-9.0	28-30	Not Critical	9-10
12,900-13,800	Polymer/Gel	9.0-9.8	30-32	<10	9-10

Sufficient mud materials to maintain the above mentioned mud properties and meet minimum lost circulation and weight increase requirements will be kept at the location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- A kelly cock will be kept in the drill string at all times.
- A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- A mud logging unit complete with H2S detector will be monitoring drilling penetration rate and hydrocarbon shows from 5000' to TD.