

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) show in Exhibit "A" will consist of a 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 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 500 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 1000 psi and the hydril to 1000 psi.

7. Types and Characteristics of the Proposed Mud System:

0' to 600' Fresh water with lime, gel paper and fiber will be used for drilling purposes. Weight 8.4 – 8.6, Vis 29-36, PH > 8.

SEE ATTACHED 600' to 4700' Saturated brine water purchased from commercial sources
CONDITIONS OF APPROVAL with paper and fiber will be utilized. Weight 8.6-10.5, Vis 32-
FOR CHANGES TO MUD 34, Ph 10.
REQUIREMENTS,

4700' to 9000' Brine and fresh water purchased from commercial sources with gel and starch, 3% KCl, 20-50 PPM Nitrates, Cl 30-75,000, caustic for control and paper for seepage will be utilized. Weight 8.5 – 8.9, Vis 29-34, Ph 9-10, WL 20-50.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be available at the well site at all times.

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