

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 13-3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 1400 psi before drilling out the 13-3/8" casing shoe (70% of 54.5# K-55 casing). Prior to drilling out the 8-5/8" casing shoe, the BOP's and Hydril will be function tested as per BLM Drilling Operations Order #2.

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. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having 3000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to total depth using brine, cut brine and polymer mud systems. Depths of systems are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (1/sec)</u>	<u>Waterloss (cc)</u>
0-850'	Fresh Water	8.8	34-36	No Control
850-4400'	Brine Water	10.0	28	No Control
4400-TD	Fresh Water Polymer	8.8	32-36	10-20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- A. A kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- C. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13-3/8" casing shoe until the 8-5/8" casing is cemented. Breathing equipment will be on location upon drilling the 13-3/8" shoe until total depth is reached.