

**CASING AND CEMENT PROGRAM:**

The casing and cementing programs are detailed on Form 3160-3. All casing will be new.

**Centralizer Program:**

Surface Casing - Centralize the bottom 3 joints and every 4th to surface.

Intermediate Casing - Centralize the bottom 3 joints.

Production Casing - Centralize the bottom 500', every other cplg.

**MUD PROGRAM:**

<u>Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>
0'-550'	Fresh Water	8.4	28
550'-4500'	Brine Water	10.0	29
4500'-9850'	Fresh Water Gel	8.4-8.8	45

Bottom Hole Pressure at T.D. estimated to be 8.4 PPG EMW.

**LOGGING, TESTING:**

GR-CAL-DSN-SDL and GR-CAL-DISFL surveys will be run.

A two-man Mud Logging Unit will be used from 4400' to 9850'.

No drill stem tests will be conducted.

No cores will be taken.