

Surface 380' of 13-3/8" casing.

Spud with lime, bentonite and Flosal* mixed to a high viscosity to assure a clean hole for running of casing.

Intermediate Casing 5,500' of 8-5/8". Good Samples Required from 1,800' to T.D.

Drill out with fresh water while circulating through controlled section of the reserve pit. Maintain pH control with lime as needed. Prior to making trips, flush hole by mixing 5 or 6 sacks of Flosal rapidly in suction pit. In case of bad seepage or loss of returns, continue to dry drill. Prior to reaching casing point, raise viscosity to 34 to 36 sec. per quart out to assure a clean hole for running of casing. Use Flosal and salt water clay to raise viscosity.

Below Intermediate to 9,500'.

Drill out with fresh water and circulate through the reserve pit. Mix Flosal as needed for samples and to keep hole clean.

From 9,500' to 10,600'.

Displace hole with 10 lb. brine and maintain weight from 10.3 to 10.5 lbs. per gal. Mix Flosal as needed for good samples and to keep hole clean.

From 10,600' to 12,100' T.D.

Return to steel pits and treat out total hardness with soda ash. Then mix Flosal, Drispac*, and Soltex* as needed to maintain the following mud properties: Weight, 10.3 to 10.5 lbs. per gal.; viscosity, 34 to 38 sec.; and fluid loss, 20 cc's or less. These mud properties may be adjusted should hole conditions dictate. In case of loss, mix LCM as needed.

Special Production Practices.

Mud logging unit at 9,500'. Open hole logs at T.D.

Any deviations from this program must be approved by Phillips Area Superintendent and Drilling Specialties Company with a note advising the District Manager of any changes.

* A trademark

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