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Page #2

Recommended Drilling Mud Program - Continued

9800' - 10,000' Displace hole with 10 p.p.g. brine water for added density control. Use paper and fine mica for seepage control.

10,000' - 11,000' Increase fluid density with soda ash (if available) or barite from 10 - 10.5 p.p.g. as required. Use paper and fine mica to control any seepage loss. If well pressures dictate greater than 10.5 p.p.g. density fluid, increase mud weight with barite, and lower the fluid loss with drispac. Use flosal for viscosity and barite suspension, discontinue use of paper for loss control, use fiber and mica if necessary.

11,000' - T.D. Lower fluid loss of existing fluid with flosal and drispac to 5 cc's or less at top of the Morrow formation, and increase viscosity to 33 - 36.

Recommended Blow-Out Prevention Program:

It is recommended that a double stack 10" 5000 psi B.O.P., and 5000 psi Hydril be installed after setting the 9-5/8" intermediate casing. Also, a rotating-drilling head will be installed at this time. A remote accumulator of 80 gallon minimum capacity will be utilized. Accompanying the installation of B.O.P., Hydril, and rotating-drilling head, a flow manifold and 2-3/8" tubing kill line with valve will be laid to the end of the catwalk. Prior to drilling out the 9-5/8" intermediate casing shoe, Yellow-jacket pressure tests will be conducted to 3000 psi on the B.O.P., Hydril, Kellycock, kill line and manifold.

Operational tests of B.O.P.'s will be made before all DST's; blind rams will be tested each trip, and pipe rams are to be tested each tour.

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, will be installed and operative before drilling into the Wolfcamp formation, and used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- (1) A recording pit level indicator to determine pit volume gains and losses,
- (2) Mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips,
- (3) A flow sensor on the mud flow line to warn of any abnormal mud returns from the well.