

Intermediate casing -- 8 5/8" at 2,000'.

2,000' - 6,500': Drill out with fresh water. Treat with Ben-Ex to reduce solids buildup and treat with lime for a pH of 10.5 to help reduce corrosion. Use HY-SEAL for seepage loss of fluid. At 5,000' add 3% KCl and maintain in system. Possible mud up for DST at 5,400'± depending on hole conditions.

6,500' - 8,800': Mud up at 6,500' or prior to drilling into the lower Wolfcamp porosity. Increase KCl content to 5%. Use soda ash to reduce the hardness below 200 ppm, DEXTRID/DRISPAC to reduce the filter loss at 25cc±, FLOSAL to increase the viscosity to 32-34 seconds and add 45 PPB of salt (NaCl) or brine water to help stabilize shale and increase the mud weight to 9.0-9.1 ppg. Maintain these properties to 8,800' unless hole conditions warrant a change. Use HY-SEAL for seepage loss of fluid.

8,800' - 9,600': To the existing mud, lower the fluid loss to below 10 cc with DEXTRID/DRISPAC and add 5% KCl to help prevent damage to the Morrow formation. Maintain viscosity 34-36 seconds and mud weight 9.1-9.2 ppg. Use TORQ-TRIM for defoamer and to reduce torque.

This program is designed for maximum hole stability, formation protection, geological data recovery, and penetration.

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