JERRY BUTTS Owner-Engineer

box 263 artesia, new mexico 88210

phone 24 hours 505-748x2560x 746-2907

Helotes drilling mud

PROPOSED MUD PROGRAM for HONDO DRILLING COMPANY Proposed Morrow Test 11,500* Sec.30 - T18s - R290 Eddy County, New Mexico

SURFACE:

Drill with Spud Mud of Gel and Lime having 40 sec/1000 Viscosity.

INTERMEDIATE:

Drill with Brine water to prevent washout in the Salt stringers. For Drag on connections add Salt Gel to flush hole or raise viscosity. For lost circulation, drill to casing point blind; at casing point spot 200 barrels 40 vis mud in hole to insure a clean hole for running pipe.

PRODUCTION:

Drill with fresh water to 8500°. Add Lime for pH @ 10 plus Sodium BiChromate for corrosion control of the drill string. Paper to control seepage.

3 8500' begin adding Brine to incrase weight of fluid to 9.5 #/gal. before drilling into the Wolfcamp. Continue drilling through the Atoka with fluid as suggested. If no high pressures encountered before mud up 3 11,000', I suggest reducing weight of fluid to 9.3 - 9.4#/gal.

@ 11,000' Mud Up with Drispac for Water Loss @ 5 - 7cc, Caustic Soda for pH @ 10, Potash for KCL @ 2 %. This should have a viscosity @ 33 - 36 sec/1000. For sloughing shales, 1 suggest increasing the mud weight with additions of Salt to control the shales. A weight of 9.6 - 9.8 was sufficient on the Wright Federal.#1 and it should be sufficient for this well also.

Estimated mud cost for this well, No abnormal pressures, no lost circulation, and no shale problems should not exceed \$15,000.00.

Prepared by Jerry D. Butts ADOBE DRILLING MUD