EL PASO NATURAL GAS COMPANY
ROCKY ARROYO C #1

SUGGESTED MUD PROGRAM BY CASING INTERVAL

Surface 0' - 200'

Because of the severe loss of circulation problem, on the surface hole, we suggest drilling this interval with air. This practice has been successful and we feel it is the most economical approach.

When reaching surface casing depth, we suggest spotting an IMCO-Gel/lime slurry on bottom to insure casing operations.

Intermediate 200' - 2,000'

Loss of circulation through the intermediate section has also been a problem in the area. Again, we would recommend the use of air. Water may be encountered, but can normally be handled by misting operations.

When reaching casing point, spot 400-500 barrels of high viscosity gel mud containing 10-12 ppb of loss circulation material.

Open Hole 2,000' - 9,500'

In the interest of penetration rate and to minimize problems of mudding up an air drilled hole, we suggest drilling from under the intermediate casing with 9.0-9.5 ppg brackish water with 4% KCl. Use this procedure to an approximate depth of 6,000'.

At an approximate depth of 6,000' or prior to drilling into the Wolfcamp, we suggest the addition of starch to achieve the following properties:

Weight	9.0 - 9.5 ppg
Viscosity	29 - 30 sec
Fluid Loss	10 - 15 ml

A fluid with the above properties should be adequate for drilling to total depth and insure logging and casing operations.

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STOCKPOINT: Levington, New Mexico, 505 - 396-3663

DISTRIBUTOR: Runnels Mud Company

ESTIMATED COST: $8,000.00 - 10,000.00