

Attached to Form 3160-3
Mack Energy Corporation
Barbary 17 Com #1
660 FNL & 1980 FWL
NE/4 NW/4, Sec 17 T16S R28E
Eddy County, NM

5. Cement Program:

13 3/8" Surface Casing: Circulate to Surface with Class C w/2% CaCl₂.

9 5/8" Intermediate Casing: Circulate to Surface with Class C W/2% CaCl₂.

5 1/2" Production Casing: Cement Casing with Class C w/6# Salt & 2/10 of 1% CFR-3 per sack. We will run a hole caliper and run sufficient cement to tie back to 9 5/8" Casing.

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (3000 psi or higher WP) preventer. This unit will be hydraulically operated with one annular preventer and two ram type preventers and will be equipped with blind rams on top of 4 1/2" drill pipe rams on bottom. Before drilling below the 13 3/8" surface casing, the BOP will be nipped up on the 13 3/8" surface casing and used continuously until TD to set intermediate casing is reached. Before drilling out intermediate casing, the BOP will be nipped up on the 9 5/8" intermediate casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of intermediate casing. Before drilling out of intermediate casing, the ram type BOP and accessory equipment will be tested to 3000 psi. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with 3000 psi or higher WP rating.

7. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-400 500'	Fresh Water	8.5	28	N.C.
400-1800 500'	Brine	10	30	N.C.
1800-TD	Cut Brine	9.1	29	N.C.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

8. Auxiliary Well Control and Monitoring Equipment:

A. Kelly cock will be kept in the drill string at all times.