

DRILLING PROCEDURE  
JAMES RANCH NO. 13  
EDDY COUNTY, NEW MEXICO

Location:

Surface location 860' FWL & 1440' FNL, Sec. 6 , T23S, R31E. Approximate bottom hole location 1787' FSL & 860' FWL, Sec. 31, T24S, R31E, Eddy County, New Mexico. The New Mexico Conservation Commission Order approves any bottom hole location that is at least 660' inside the south half of Sec. 31.

This well will have a TMD of 15,358'± and a TVD of 14,600'± at TD. Total displacement will be approximately 3280'±. The KOP will be at 7500'±. Angle will be built at a rate of 1-1/2° per 100'± to a maximum angle of 28° at a TMD of 9371'± (TVD 9297').

Conductor Pipe:

20" conductor casing should be set at 40'± with a rathole machine and cemented to surface with ready-mix.

Surface Hole:

A 17-1/2" open hole will be drilled to 500'± (T/Rustler Anhy.) with a fresh water spud mud 40-50 vis., 8.4-8.8 ppq, 9.5-10 pH.

Cement casing with approximately 400 sx class "C" plus 2% CaCl<sub>2</sub> (14.8 ppq, 1.32 ft<sup>3</sup>/sk) 100% excess. Use top and bottom wooden plugs. The USGS must be notified in sufficient time to witness this cement operation.

Nipple Up 13-3/8" Casing:

Total WOC time for this string is twelve hours, but nipping up procedures can begin after 4 hours. Cut off the 13-3/8" csg and 20" conductor and weld on a 13-3/8" SW 3000# x 12" 3000# RJT casinghead with two 2" thread outlets. Test this weld with a grease gun before proceeding with the nipping up procedure. To this casinghead, install a set of dual hydraulic rams as per BEPCO Drawing III (attached).

Test stack (blind rams and pipe rams) to 1000 psi with the mud pump.

Intermediate Hole:

A 12-1/4" hole will be drilled to 3750'± (T/Lamar Lm) with a 10#/gal brine water system circulating the reserve pit (3000'± salt).

The intermediate casing string will consist of one segment of 9-5/8" OD, 36# K-55, ST&C casing.