

DRILLING PROGRAM

Attached to Form 3160-3
Marbob Energy Corporation
Burch C Federal No. 51
1980' FSL 2615' FEL
NWSE, Sec. 23, T-17S, R-29E
Eddy County, New Mexico

1. Geologic Name of Surface Formation:

Permian

2. Estimated Tops of Important Geologic Markers:

Permian	Surface	Glorietta 3900'
Salt	360'	
Base of Salt	780'	
Yates	930'	
Seven Rivers	1145'	
Queen	1815'	
Grayburg	2140'	
San Andres	2510'	

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Upper Permian Sands	100'	Fresh Water
Yates	930'	Oil
Seven Rivers	1145'	Oil
Queen	1815'	Oil
Grayburg	2140'	Oil
San Andres	2510'	Oil
Glorietta	3900'	Oil

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No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 8 5/8 casing at 350' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across them by inserting a float shoe joint into the 5 1/2" production casing which will be run at TD.

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD csg</u>	<u>Weight, Grade, Jt. Cond. Type</u>				
12 1/4"	0 - 350'	8 5/8"	24#	J-55	LTC NEW	R-3	
7 7/8"	0 - TD	5 1/2"	17#	J-55	LTC NEW	R-3	

Cement Program:

8 5/8" Surface Casing: Cemented to surface with 300sx of Class C w/2% cc.

5 1/2" Production Casing: Cemented with 1100sx Class C. Will attempt to circulate to surface.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (3000 psi wp) preventer. This unit will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. This BOP will be nipped up on the 8 5/8" surface csg and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing.

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. A 2" kill line and a 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 3000 psi WP rating.

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6. Types and Characteristics of the Proposed Mud System:

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

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (sec)</u>	<u>Waterloss (cc)</u>
0 - 350'	Fresh Water (Spud)	8.5	28	N.C.
350' - 4600'	Brine	9.8 - 10.2	40 - 45	N.C.

7. Auxiliary Well Control and Monitoring Equipment:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

8. Logging, Testing, and Coring Program:

- (A) No Drillstem tests are anticipated.
- (B) The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csng Log, and Depth Control Log.
- (C) No conventional coring is anticipated.
- (D) Further testing procedures will be determined after the 5½" production casing has been cemented at TD based on drill shows, and log evaluation, and drill stem test results.

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9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 104' and estimated bottom hole pressure (BHP) is 2250 psig.

10. Anticipated Starting Date and Duration of Operations:

Location and road work will not begin until approval has been received from the BLM. The anticipated spud date is September, 1993. Once commenced, the drilling operation should be finished in approximately 21 days. If the well is productive, an additional 30 to 60 days will be required for completion and testing before a decision is made to install permanent facilities.