

PHILLIPS PETROLEUM COMPANY

DRILLING PROGNOSIS

1. Location of Proposed Well: 660' FNL and 2480' FWL, Sec. 19, T-17-S, R-30-E, Eddy County, NM
2. Unprepared Ground Elevation: 3634.0.
3. The geologic name of the surface formation is Typic Torripsamment.
4. Type of drilling tools will be Rotary.
5. Proposed drilling depth is 11200.
6. The estimated tops of important geologic markers are as follows:

Rustler	200'	Abo	6375'
Salt	500'	Wolfcamp	7615'
Tansill	1000'	Cisco	8740'
Yates	1130'	Canyon	9350'
Queen	2040'	Strawn	10215'
San Andres	2725'	Atoka	10390'
Paddock	4250'	Morrow	10640'
		Misc. Unconformity	11130'

7. The estimated depths at which anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Water:	Fresh water - None
	Salt water - 1989'
	Grayburg - 2350'
	San Andres - 2725'
	Abo - 6375'

8. The proposed casing program is as follows:

Surface String 13-3/8" 54.5# K @ 400'
Intermediate Casing 8-5/8" 24-32# K @ 3500'
Production String 5-1/2" 15.5 K - 17# N @ 11200'

9. Cement Program:

Surface String = Circulate to surface with 500 sx Class C + 2% CaCL₂. (Slurry weight 14.8 ppg. Slurry yield 1.32 cu ft/sk w/6.3 gal/sk.) WOC 18 hrs. Test casing to 1000 psi for 30 min.

Intermediate String = Circulate to surface using fluid caliper plus 20% excess lead w/1600 sx Class C w/4% Bentonite and 5% salt. (Slurry weight 13.6 ppg, yield 1.7 ft³/sk, w/8.9 gal/sk, 3.7#/sk salt.) Tail w/200 sx Class C neat (slurry weight 14.8 ppg. Slurry yield 1.32 ft³/sk w/6.3 gal/sk.) WOC 18 hrs. Test casing to 1000 psi for 30 min.