

DRILLING PROGRAM

Attached to Form 3160-3

MR Drilling Company

Wills Federal No. 4
1650' FNL & 1650' FEL
Unit Letter G, SW/E/2
Section 34, T26S, R37E
Lea County, New Mexico

1. Geologic Name of Surface Formation: Permian
2. Estimated Tops of Important Geologic Markers and
3. Estimated Depths of Fresh Water, Oil, and Gas:

<u>Formation</u>	<u>Depth</u>	<u>Fluid Content</u>
Permian	Surface	Fresh water at +250'
Anhydrite	500'	-----
Top of Salt	1350'	-----
Base of Salt	2400'	-----
Queen Sand	3920'	Oil
Total Depth	4000'	

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 1300' into the anhydrite and circulating cement to surface. 5-1/2" production casing will be set at TD.

The pore pressure gradient is normal (+8.4 ppg) down through the Queens. No abnormal pressures are anticipated.

4. Casing and Cementing Program

<u>Hole Size</u>	<u>Casing</u>		<u>Casing OD</u>	<u>Weight, Grade, Coupling, Cond.</u>
	<u>From</u>	<u>To</u>		
12 1/4"	0'	1,300'	8-5/8"	24# J55 LTC new
7-7/8"	0	4,000'	5-1/2"	17# J55 LTC new

All used casing will be drifted and hydrostatically tested to at least 90% of new pipe rating.

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