

DRILLING PROGRAM

Smith & Marrs, Inc.
Wills Federal No. 17
1090' FNL & 990' FEL, Unit A
Section 34, T26S, R37E
Lea County, New Mexico

In connection with Form 3160-3, Application for Permit to Drill subject well, Smith & Marrs, Inc. submits the following items of pertinent information in accordance with BLM requirements:

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'	None
Top of Salt	1350'	None
Base of Salt	2400'	None
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 Cement 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'	600'	8 5/8"	24# J-55 LTC New
7 7/8"	0'	TD	5 1/2"	17# J-55 LTC New

All used casing will be drifted and hydrostatically tested to at least 90% of new pipe rating. Minimum Design Factors: Collapse 1.125, Burst 1.1, Tension 1.7.

8 5/8" Surface Casing Set at 600'

Centralize the bottom 3 joints. Cement to surface with 485 sx of Class C with 4% gel, 5% salt, 1/4# FC (12.8 ppg, 1.94 ft³/sx).