Enron Oil & Gas Company
ETHEL "19" MUR FEDERAL No. 1
400' FSL & 1950' FWL
Sec. 19, T25S, R34E
Lea County, New Mexico

4. Casing Program:

Hole Size	Interval	OD csg	Weight Grade Jt. Cond. Type
14-3/4	0- 650'	11-3/4	42# H-40 A ST&C
11	0- 5200'	8-5/8	32# J-55 ST&C
7-7/8	0- 6500'	5-1/2	17# P-110 LT&C
7-7/8	6500' - 12900'	5-1/2	17# S-95 LT&C

Cementing Program:

11-3/4" Surface casing: Cement to surface with 200 sacks of Class C + 3% Econolight & 2% CaCl + 1/4# Flocele, followed by 150 sacks of Class C + 2% CaCl.

8-5/8" Intermediate: Cement to surface with 950 sacks of Class C 50/50 poz + 10% gel + 8#/sx salt + 1/4#/sx Flocele, followed by 250 sacks of Class C + 2% CaCl.

5-1/2" Prod casing: Cement with 1200 sx Class H + 3% Econolight, 5#/sx salt, followed by 200 sakcs of Class H 50/50 poz + 0.5% Halad-322 + 2% gel + 3#/sx KCl.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000 psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. All will be installed on the 11-3/4" surface casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 600 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000 psi and the annular to 70% of rated working pressure (3500 psi).

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 4" 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 5000 psi WP rating.