Eumont "21" Federal #1 Page 2

4. PROPOSED CASING AND CEMENTING PROGRAM:

Casing Program: Α. Condition Depth <u>Cplg.</u> Csg. OD Wt/Ft. Grade 0 - 400' + / -J-55 STC New 8 5/8" 24# 0 - 3,850' + / -4 1/2" Used 9.5# J - 55STC * 5 1/2" 0 - 3,850' + / -J-55 STC Used 14.0# * (Final production casing size will be determined from MOC inventory at the time well is drilled. Either design will meet casing design specs. listed below.

Minimum Casing Design Factors: Collapse 1.125; Burst 1.0; Tensile Strength 1.8 (See Schedule #1 and #1A)

> B. CEMENTING PROGRAM: <u>Surface Casing:</u> 300 sacks of Class "C" Neet containing 3% CaCl₂.

<u>Production Casing:</u> 300 sacks of Class "C" Lite containing .5#/sack cellophane flakes + 2% CaCl₂ + 5#/sack gilsonite followed by 200 sacks of Class "C" neet containing .5% fluid loss additive + .2% friction reducer additive + 5#/sack compressive strength enhancer + 5% NaCl.

5. MUD PROGRAM:

Interval	Туре	Weight	Viscosity	Fluid Loss
0-400'	FW gel	8.4 - 8.7	28 - 45	NC
400'-3850'	Cut Brin	e 9.2 - 9.8	28 - 35	NC

Sufficient mud materials to maintain mud properties, control loss circulation and contain any abnormal pressure that may be encountered; will be available at the well site during drilling operations. Mud will be checked daily by mud company personnel.

