

IV. Casing and Cementing Program

A. Casing Program

<u>Depth</u>	<u>Hole Size</u>	<u>Csg. Size</u>	<u>Wt</u>	<u>Grade</u>	<u>Coupling</u>	<u>Type</u>
0 - 650'	17-1/2"	13-3/8"	48#	H-40	STC	Surf.
0 - 2100'	11"	8-5/8"	24#	K-55	STC	Int.
2100-3000'	11"	8-5/8"	24#	S-80	STC	Int.
0 - 5300'	7-7/8"	5-1/2"	17#	K-55	LTC	Prod.
5300-8350'	7-7/8"	5-1/2"	17#	L-80	LTC	Prod.

B. Cementing Program

<u>Casing</u>	<u>Top of Cement</u>	<u>Cement Type</u>	<u>Sacks</u>
Surf.	Surface	Class C w/2% CaCl ₂	610
Int.	Surface	Lead: Lite w/10% salt	515
		Tail: Class C Neat	390
Prod.	Surface	Lead: 50/50 Poz H w/2% Gel	630
		Tail: Class H w/3% KCl	429

V. Drilling Fluids Program

A.

<u>Depth</u>	<u>Hole Size</u>	<u>MW ppg</u>	<u>VIS sec</u>	<u>WL cc/30 min</u>	<u>Comments</u>
0 - 500'	17-1/2"	8.5-9.2	35-45	NC	Fresh wtr. spud mud
500-3000'	11"	9.8-10.2	30-32	NC	Brine w/salt gel
3000-7000'	7-7/8"	8.8-9.4	28-30	NC	Cut brine, lime
7000-8350'	7-7/8"	9.0-9.4	30-32	15-20	Cut brine w/salt gel and starch

- B. The mud system volume will be approximately 800 barrels.
- C. No weighting material should be necessary, but barite will be kept on site.
- D. The level of the mud pits will be monitored visually, and a flow rate indicator will be installed.
- E. Chemicals kept on site to control a possible H₂S influx are sodium and calcium hydroxide to raise the pH and zinc carbonate as a scavenger.