4.) **Proposed Casing Program:**

Interval	Depths	Hole Size	Casing Specified (New)
Conductor	0-40'	~ 24"	20" Structural – only if required
Surface	0-400'	17 1/2"	13 3/8", 48 lbs./ft., H-40, ST&C
Salt Protection	0-3,100'	12 1/4"	9 5/8", 36 lbs./ft., K-55, ST&C
Intermediate/Production	0-10,550'	8 3/4"	7", 26 lbs./ft., P-110, LT&C
Production Liner	10,150'-14,100'	6 1/8"	4 1/2", 13.5 lbs./ft., P-110, LT&C

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5.) **Proposed Cementing Program:**

Surface Casing: 400' of 13 3/8" casing in 17 1/2" hole with 100% excess. Cement to be circulated to surface.

500 sacks Class C + 2% $CaCl_2$

1.34 $ft.^3/sk.$
14.8 lbs./gal.
6.36 gals./sk.

Salt Protection: 3,100' of 9 5/8" in 12 1/4" hole with 150% excess in open hole. Cement to be circulated to surface.

Lead cement - 1,000 sacks light cement + 5% salt + lost circulation material as required.

12.5 lbs./gal.
2.03 $ft.^3/sk.$
11.0 gals./sk.

Tail cement - 200 sacks Class C + 1% $CaCl_2$

14.8 lbs./gal.
1.34 $ft.^3/sk.$
6.36 gals./sk.

Intermediate/Production: 10,550' of 7" in 8 3/4" hole.
Volume calculated for 2,000' of fill (assuming no hydrocarbons above casing seat) with 100% excess.

510 sacks Class H + fluid loss additives and lost circulation material as required.

15.6 lbs./gal.
1.18 $ft.^3/sk.$
5.2 gals./sk.

Note: Top of Cement will depend on geology and hydrocarbon potential evaluated during drilling operations. A 2-stage primary cement job will be performed if upper strata of interval appear productive.

Production Liner: Approximately 3,550' of 4 1/2" in 6 1/8" hole. Liner hanger set at ~ 10,150'. Cement volume calculated with 50% excess.

435 sacks Class H + dispersant + fluid loss additives + retarder/accelerator as required for acceptable thickening time tests.

15.2 lbs./gal.
1.26 $ft.^3/sk.$
5.68 gals./sk.