

#### 4.) Proposed Casing and Cementing Program:

Hole Size	Casing Data				Measured Depth	Cement	Expected Top of Cement
	Size	Wt.	Grade	Thread			
17 1/2"	13 3/8"	48#/ft	H-40	ST&C	550 ft.	600 sx Class "C" w/2% CaCl <sub>2</sub> + 1/4 lb/sx celloflake	Surface
11"	8 5/8"	32#/ft.	J-55	LT&C	3900 ft.	Lead: 1200 sx Class "C" 35:65 POZ + 6% Gel + 5 lb/sx salt + 1/4 lb/sx celloflake tail-in: 300 sx Class "C"	Surface
7 7/8"	5 1/2"	15.50#/ft	J-55	LT&C	0-6500 ft.	Lead: 380 sx Class "H" + 10 % + 5% salt	3600 ft.
	5 1/2"	17#/ft.	J-55	LT&C	6500 ft.-7700 ft.		
	5 1/2"	17#/ft.	J-55	HDL	7700 ft.-8100 ft	Tail: 120 sx Class "H" +0.3% fluid loss additive	
	3 1/2"	9.3#/ft	J-55	HDL	7700 ft.-9485 ft.	None Liner to be Pre-slotted	N/A

The surface and intermediate casing strings will be tested to 1000 psi. The 5 1/2" casing will be tested to 2000 psi.

All casing will be new.

#### 5.) Pressure Control Equipment:

Pressure control equipment will include a 3000 psi WP blowout preventer stack, sour trim, with both pipe rams and blind rams. Above BOP stack will be an annular BOP, 3000 psi WP with sour trim. Below the double BOP stack will be an adapter spool, 3000 psi WP. On one side of the adapter spool will be a kill line with a check valve and a ball valve. The other side will be a choke manifold with a bleed off line. Hydraulic BOP controls will be operated daily.