

4. Casing and Cementing Program

<u>Hole Size</u>	<u>Casing</u>		<u>Casing OD</u>	<u>Weight, Grade, Coupling, Cond.</u>
	<u>From</u>	<u>To</u>		
14-3/4"	0'	650'	10-3/4"	32.75# H-40 STC used
9-7/8"	0'	4,250'	7-5/8"	26.40# J-55 LTC used
6-3/4"	0	8,350'	4-1/2"	11.60# J-55,N-80 LTC new

All used casing will be drifted and hydrostatically tested to at least 90% of new pipe rating.

Minimum Design Factors: Collapse 1.125, Burst 1.1, Tension 1.7

10-3/4" surface casing set at 650'

The surface casing will be set into the Rustler anhydrite to protect all fresh water formations.  
 Centralize the bottom 3 joints and every 4th joint to surface.  
 Cement to surface with 550 sx of Class C cement.

7-5/8" intermediate casing set at 4250'

The intermediate casing will be set within 150' of the top of the Delaware to isolate all salt stringers.  
 Centralize the bottom 3 joints.  
 Cement to surface with 1000 sx of Class C cement.

4-1/2" production casing set at TD'

Centralize bottom 6 jts., plus all potential producing intervals.  
 Top of cement to be at  $\pm 1900'$ .  
 A 2-stage cement job will be required with a DV tool at  $\pm 5500'$ .

Stage 1: 350sx Class H

Stage 2: 650 sx Class H.