## 3. Estimated Depth of Anticipated Fresh Water, Oil or Gas:

Upper Permian Sands	0-300'	FreshWater	*
Delaware	5725'	oil	
1 <sup>st</sup> Bone Spring SS Mbr	9220'	oil	**
Middle Morrow Clastics	13100'	gas	
Lower Morrow	13380'	gas	

- \* Ground water will be protected by 13-3/8" surface casing with cement circulated to surface.
- \*\* Potentially productive horizons in the 7-7/8" hole section to be protected by the 5-1/2" casing with cement at least 500' above upper most zone.

## 4. Proposed Casing Program:

Hole Size	Interval	Casing OD	Description
26"	0-40'	20"	Conductor, if necessary
17-1/2"	0-425'	13-3/8"	48# H-40, ST&C New, R-3
11"	0-4000'	8-5/8"	32# J-55, ST&C, New, R-3
7-7/8"	0-10000'	5-1/2"	17# L-80, LT&C, New, R-3
7-7/8"	10000'-13700'	5-1/2"	17# HCP-110, LT&C, New, R-3

## Proposed Cementing Program:

20" Conductor: Ready-mix poured to surface.

13-3/8" Surface Casing: Cement w/160 sx Class "C" Light (12.5 ppg, 1.99

 $ft^3/sx$ ). Tail w/ 200 sx Class "C" + 2% CaCl2 (14.8)

ppg,  $1.32 \text{ ft}^3/\text{sx}$ ).

Float Equipment: Texas pattern shoe w/ insert float

valve above shoe joint, 3 centralizers.

8-5/8" Intermediate Casing: Cement w/ 650 sx Interfill "C" (11.5 ppg, 2.75

 $ft^3/sx$ ). Tail w/ 200 sx Class "C" +1% CaCl2 (14.8)

ppg,  $1.32 \text{ ft}^3/\text{sx}$ ).

Float Equipment: Float shoe w/float collar above

the shoe joint, 10 centralizers.