

## D) CEMENT

<u>INTERVAL</u>	<u>AMOUNT SX</u>	<u>FT OF</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
<u>SURFACE</u>		<u>FILL</u>				
Lead						
0' - 275'	210	275	Permian Basin Critical	10.30	12.80	1.89
(100% excess)			Zone + 1/8#/sx Pol-e-flake			
Tail						
275'-575'	340	300	Premium Plus + 2% CaCl <sub>2</sub>	6.32	14.80	1.34
(100% Excess)			+ 1/8#/sx Pol-e-flake			
<u>INTERMEDIATE</u>						
		<u>FT OF</u>				
<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
Lead						
0' - 3000'	720	3000	Interfill C + 1/8#/sx	14.10	11.90	2.45
(100% Excess)			Pol-e-flake			
Tail						
3000' - 3550'	290	550	Premium Plus + 2%	6.34	14.80	1.34
(100% Excess)			CaCl <sub>2</sub>			
<u>PRODUCTION</u> (Two stage w/DV tool @ 8000' and circulate cement to 3100')						
<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
1 <sup>st</sup> Stage						
LEAD						
8000'-10,700'	250	2700	Interfill H + 5pps Gilsomite	13.61	11.90	2.45
(50% excess)			+ 0.5% Haled 9 + 1/8 pps			
			Pol-e-flake			
TAIL						
10,700'-11,400'	100	700	Super H + 0.5% Haled 344	8.20	13.00	1.67
(50% excess)			+ 0.4% CFR3 + 5 pps Gilsomite			
			+ 1 pps Salt + 0.2% HRT			
2 <sup>nd</sup> Stage						
LEAD						
3000'-7,300'	400	4300	Interfill H + 1/8 pps	14.00	11.90	2.45
(50% excess)			Pol-e-flake + 0.5% Haled 9			
TAIL						
7,300'-8,000'	100	700	Super H + 0.5% Haled 344	8.20	13.00	1.67
(50% excess)			+ 0.4% CFR3 + 5 pps Gilsomite			
			+ 1 pps Salt + 0.2% HRT			
<u>PRODUCTION LINER</u>						
11,100'-14,500'	360	3100	Class H + 0.8% Haled 322	5.66	15.40	1.28
(25% excess 300' overlap)			+ 0.6% Haled 344 + 0.2%			
			HR-7 + 5pps Microbond M			

## E) DIRECTIONAL DRILLING

No directional services anticipated. A straight hole will be drilled to 14,500' TD.

## POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout the Delaware, Bone Spring & Wolfcamp sections. The Atoka Bank may be abnormally pressured with expected BHP of 9250 psi (max) or an equivalent mud weight of 13.8 ppg. The Morrow expected BHP is 7800 (max) or an equivalent mud weight of 10.5 ppg @ TD. Due to the tight nature of the reservoir rock (high pressure, low volume), the well will be drilled under balanced utilizing a rotating head. The expected BHT at TD is 230°F. No H<sub>2</sub>S is anticipated.