

HSR-B/R B 3-21

Existing Features	
KB	10

8-5/8" 24# Surface csg shoe	554
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Bottom of Foxhills (FHM)	705
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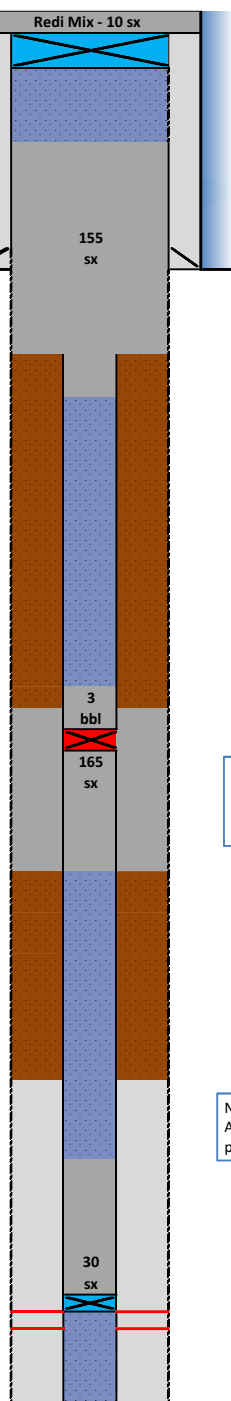
Sussex	Top	4122
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SX & SH non productive within 1 mile

TOC Primary existing (CBL)	5830
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Nibrara	Top	6783
Nio	Perf Top	6796
	Perf Bottom	6908
Codell	Perf Top	7048
	Perf Bottom	7068

PBMD	7138
4-1/2" CSG 11.6#	7181



Proposed Additions for P&A	
80	CIBP (8-5/8")

454	TOC
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Cement Blend: Type III w/ cello flake and CaCl₂, mixed at 14.8 ppg and 1.33 cuft/sk. with 20%

810	Csg Stub
910	Bottom of Cement

3750	TOC in csg
3920	TOC in annulus
3950	CICR

Sussex Cement Blend: "G" w/ 0.25 pps cello flake , 0.4% CD-32, 0.4% ASA - 301, mixed at 15.8 ppg and 1.15 cuft/sk, with 20% excess and 8.5" hole size.

4330	BOC
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6300	TOC in csg
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NB Cement Blend: "G" w/ 20% silica flour , 0.4% CD -32, 0.4% ASA -301 and R-3 to achieve 2:30 pump time mixed at 15.8 ppg and 1.38 cuft/sk

6730	BOC in csg
6730	CIBP

API# 05-123-18116				
Well: HSR-B/R B 3-21				
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft ³ /ft
Surface Casing	8 5/8"	554	0.0637	0.3576
Production Casing	24#	7181	0.0155	0.0872
Tubing Size	4.50 (11.6#)			
Bit Size	7 7/8		0.0602	0.3382
Hole Size	8		0.0622	0.3491
Hole Size	8.5		0.0702	0.3941
Hole Size	12		0.1399	0.7854

Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	Top Plug
8-5/8" csg	71.52	53.77		8.5"
OH	121.06	91.02	20%	
4-1/2" csg	8.72	6.56		
Total Top Plug	201.30	151.35	155	
206.15		cu-ft		

top CICR	17.44	15.17		SX/ SH Plug 8.5"
annulus	139.54	121.34	20%	
Casing	33.14	28.81		
Total	190.12	165.32	165	Caliper
189.75		cu-ft		

NB/CD Csg	37.50	27.17		NB/CD Plug
Total	37.50	27.17	30	

Cement Yield	1.33	1.15	1.71	1.38
Top Plug	SX/SH	NB/Cd Squeeze	NB/Cd in pipe	

Legend	
	New cement
	Existing cement with CBL
	assumed cement w/ no CBL
	cast iron cement retainer
	cast iron bridge plug
	mud
	2% KCL Water