

## HSR-Davenport 15-16

Existing Features	
KB	10

Surface csg shoe at	574
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Bottom of Foxhills (FHM)	747
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TOC (CBL)	3730
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Sussex Top	3954
Not producing Sussex w/in 1 mile	
Sussex Bottom	4198

Perf Top (Squeezed)	4508
Perf Bottom (Squeezed)	4528
Shannon Base	4561
Not producing Shannon w/in 1 mile	

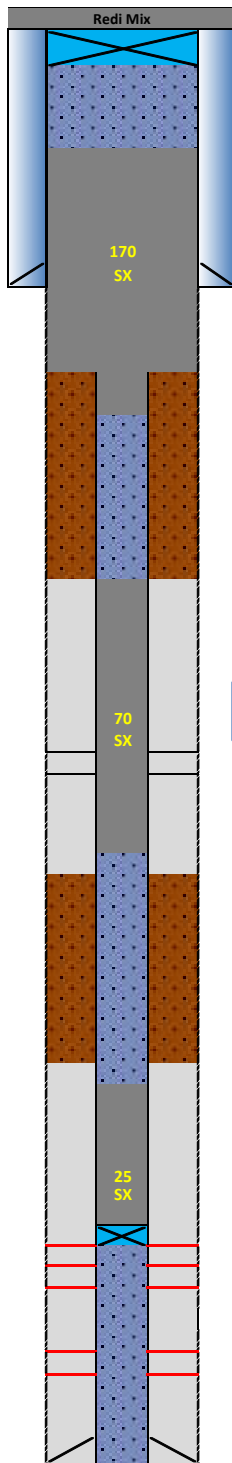
BOC (CBL)	4900
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TOC (CBL)	6180
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Niobrara Top	6797
Perf Top	6797
Perf Bottom	6941

Codell Top	7049
Perf Top	7049
Perf Bottom	7070

PBMD	7140
4 1/2" 11.6# CSG	7198



### Proposed Additions for P&A

80	CIBP 8 5/8" 24#
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474	TOC
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Cement Blend: Type III w/ cello flake and CaCl<sub>2</sub> as necessary, mixed at 14.8 ppg and 1.33 cuft/sk yield.

850	Casing Stub
950	BOC

3750	TOC
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Cement Blend: "G" w/ 0.4% CD-32, 0.4% ASA-301, mixed at 15.8 ppg and 1.15 cuft/sk yield.

4650	BOC
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6330	TOC
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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 yield.

6730	CIBP 4 1/2" 11.6#
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API#	05-123-16088			
WINS:	74099			
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft <sup>3</sup> /ft
Surface Casing	8 5/8" (24#)	574	0.0637	0.3576
Production Casing	4 1/2" (11.6#)	7198	0.0155	0.0873
Production Tubing	2 3/8" (4.7#)	7031	0.0039	0.0217
Hole Size (TOP)	9	N/A	0.0787	0.4418
Hole Size (SU/SH)	N/A	N/A	N/A	N/A
Hole Size (NB)	N/A	N/A	N/A	N/A

Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	
Open Hole	146.32	110.01	20%	Foxhills Plug 9 in. hole
Surface Casing	35.76	26.89		
Production Casing	8.73	6.56		
FX Total	182.08	143.47	170	
OH X CSG Annulus				
Production Casing	78.57	68.32174		
SU Total	78.57	68.32174	70	
OH X CSG Annulus				
Production Casing	34.92	25.30		
NB/CD Total	34.92	25.30	25	

Cement Yield	1.33	1.15	1.38
FX		SX/SH	NB

Legend	
	Existing cement with CBL
	New cement
	Assumed cement w/ no CBL
	Cast Iron Cement Retainer
	Cast Iron Bridge Plug
	Mud
	Water + Biocide