

HSR-Cantwell 7-16

Existing Features	
KB	10

Surface csg shoe at	552
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Bottom of Foxhills (FHM)	680
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Sussex Top	3936
Not producing Sussex w/in 1 mile	
Sussex Base	4201

Shannon Base	4547
Not producing Shannon w/in 1 mile	

TOC (CBL)	5930
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Niobrara Top	6783
Perf Top	6783
Perf Bottom	6935

Codell Top	7047
Perf Top	7047
Perf Bottom	7063

4 1/2" 11.6# CSG	7183
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J Sand Top	7491
Perf Top	7491
Perf Bottom	7530

PBMD	7750
2 7/8" 6.5# LINER	7772

Proposed Additions for P&A	
80	CIBP 8 5/8" 24#

450	TOC
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Cement Blend: Type III w/ cello flake and CaCl_2 as necessary, mixed at 14.8 ppg and 1.33 cuft/sk.

800	Casing Stub
900	BOC

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.

3530	TOC
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3730	Top Squeeze Holes
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3760	CICR 4 1/2" 11.6#
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4250	Bottom Squeeze Holes
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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. Mix at 15.8 ppg and 1.38 cuft/sk.









6730	CIBP 4 1/2" 11.6#
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7420	CIBP 2 7/8" 6.5#
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API#	05-123-16048			
WINS:	74097			
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft ³ /ft
Surface Casina Production	8 5/8" (24#) 4 1/2"	552	0.0636	0.3575
Casina Production	(11.6#) 2 7/8" (6.5#)	7183	0.0155	0.0873
Liner	2 3/8" (4.7#)	7772	0.0058	0.0325
Tubing Size #1	1.66" (2.3#)	7064	0.0039	0.0217
Tubing Size #2	9	7456	0.0019	0.0104
Hole Size (TOP)	N/A	0.0787	0.4418	
Hole Size (SU/SH)	9	N/A	0.0787	0.4418
OH X CSG Annulus (SU/SH)	N/A	N/A	0.0590	0.3313

Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	
Open Hole	131.48	98.85	20%	Foxhills Plug 9 in. hole
Surface casing	36.47	27.42		
Production casing	8.73	6.56		
FX Total	167.94	132.84	160	
OH X CSG Annulus	206.75	179.7828	20%	Sussex Squeeze 9 in. hole
Production Casing	62.856	54.65739		
SU Total	269.61	234.4402	240	
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	NR

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