

Rusch 43-15

Existing Features	
KB	12

Surface csg shoe at	509
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Bottom of Foxhills (FHM)	814
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Sussex Top	4059
Not producing Sussex w/in 1 mile	
Sussex Bottom	4333

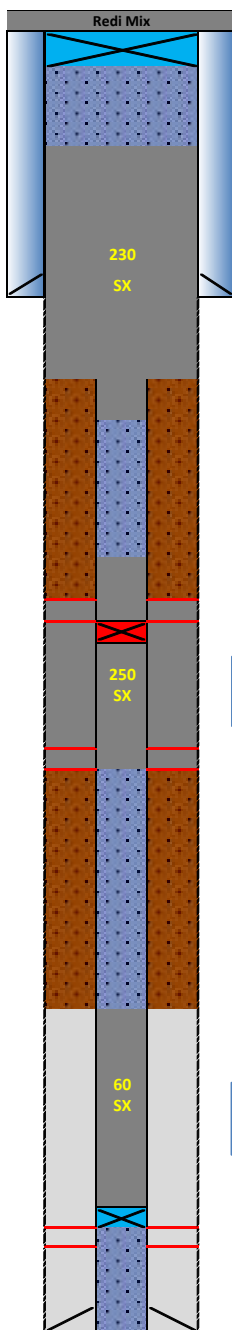
Shannon Base	4672
Not producing Shannon w/in 1 mile	

TOC (CBL)	6436
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Niobrara Top	6852
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J Sand Top	7557
Perf Top	7557
Perf Bottom	7610

PBMD	7739
4 1/2" 11.6# CSG	7776



Proposed Additions for P&A

80	CIBP 8 5/8" 24#
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409	TOC
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Cement Blend: Type III w/ 0.25 pps cello flake, 0.3% CFL-3, 0.3% CFR-2, and CaCl₂ as necessary, mixed at 14.8 ppg and 1.33 cuft/sk yield.

920	Casing Stub
1020	BOC

3650	TOC
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3850	Top Squeeze Holes
3880	CICR 4 1/2" 11.6#

Cement Blend: 0:1:0 'G' w/ 0.25 pps cello flake, 0.5% CFR-2, 0.2% FMC, 0.5% LWA, mixed at 15.8 ppg and 1.15 cuft/sk yield.

4390	BOC/Bottom Squeeze Holes
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6450	TOC
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Cement Blend: Thermal 35 w/ 0.5% CFR-2 and 0.25% FMC, mixed at 15.6 ppg and 1.51 cuft/sk yield.

7480	CIBP 4 1/2" 11.6#
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API#	05-123-21817			
WINS:	88787			
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft ³ /ft
Surface Casing	8 5/8" (24#)	509	0.0637	0.3576
Production Casing	4 1/2" (11.6#)	7776	0.0155	0.0873
Production Tubing	2 3/8" (4.7#)	7551	0.0039	0.0217
Hole Size (TOP)	9	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	217.89	163.83	20%	Foxhills Plug 9 in. hole
Surface Casing	35.76	26.89		
Production Casing	8.73	6.56		
FX Total	253.65	197.28	230	
OH X CSG Annulus	214.70	186.6975	20%	Sussex Squeeze 9 in. hole
Production Casing	64.602	56.17565		
SU Total	279.30	242.8732	250	
OH X CSG Annulus				
Production Casing	89.92	59.55		
NB/CD Total	89.92	59.55	60	

Cement Yield	1.33	1.15	1.51
	FX	SX/SH	NB

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