

HSR-Barach 8-16

Existing Features	
KB	11

Surface csg shoe at	578
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Bottom of Foxhills (FHM)	680
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Sussex Top	3935
Not producing Sussex w/in 1 mile	
Sussex Bottom	4201

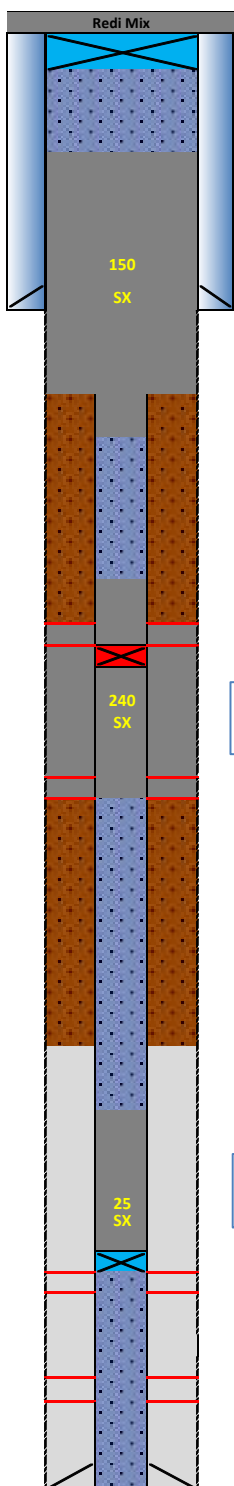
Shannon Base	4568
Not producing Shannon w/in 1 mile	

TOC (CBL)	6008
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Niobrara Top	6802
Perf Top	6824
Perf Bottom	6965

Codell Top	7082
Perf Top	7082
Perf Bottom	7100

PBMD	7170
4 1/2" 11.6# CSG	7210



Proposed Additions for P&A

80	CIBP 8 5/8" 24#
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478	TOC
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Cement Blend: Type III w/cello flake and CaCl₂ as necessary, mixed at 14.8 ppg and 1.33 cuft/sk yield.

800	Casing Stub
900	BOC

3530	TOC
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3730	Top Squeeze Holes
3760	CICR 4 1/2" 11.6#

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 yield.

4250	BOC/Bottom Squeeze Holes
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6370	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.

6770	CIBP 4 1/2" 11.6#
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API#	05-123-15981			
WINS:	74094			
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft ³ /ft
Surface Casing	8 5/8" (24#)	578	0.0637	0.3576
Production Casing	4 1/2" (11.6#)	7210	0.0155	0.0873
Production Tubing	2 3/8" (4.7#)	7057	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	117.69	88.49	20%	Foxhills Plug 9 in. hole
Surface Casing	35.76	26.89		
Production Casing	8.73	6.56		
FX Total	153.45	121.94	150	
OH X CSG Annulus	206.73	179.7663	20%	Sussex Squeeze 9 in. hole
Production Casing	62.856	54.65739		
SU Total	269.59	234.4237	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	NB

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