

HSR-FRED MAYER 3-15

Existing Features	
KB	10
Surface csg shoe at	626
Bottom of Foxhills (FHM)	748

Sussex Top	4160
Sussex Base	4263

Shannon Base	4644
Not producing Shannon w/in 1 mile	

TOC (CBL)	6106
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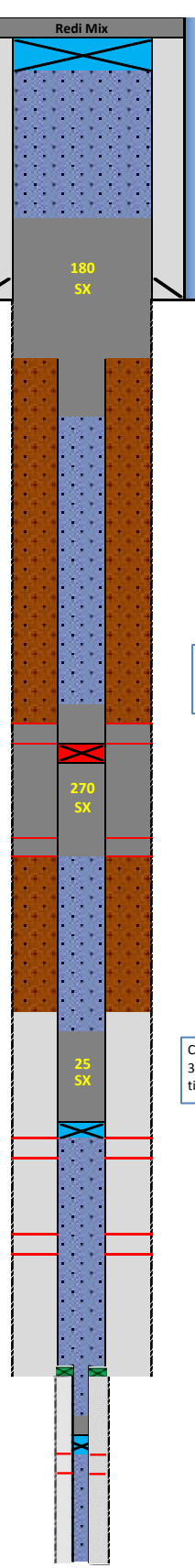
Niobrara Top	6863
Perf Top	6913
Perf Bottom	6915

Codell Top	7103
Perf Top	7109
Perf Bottom	7119

4 1/2" 11.6# CSG	7240
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J Sand Top	7537
Perf Top	7548
Perf Bottom	7584

PBMD	7820
2 7/8" 6.5# LINER	7829



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

525	TOC
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850	Casing Stub
950	BOC

3900	TOC
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3930	CICR 4 1/2" 11.6#
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4400	Squeeze perf
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6420	TOC
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6820	CIBP 4 1/2" 11.6#
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7470	CIBP 2 7/8" 6.5#
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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.

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.

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.

API#	05-123-17926			
Wins:	74109			
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft ³ /ft
Surface Casing	8 5/8" 24#	626	0.0636	0.3575
Production Casing	4 1/2" (11.6#)	7405	0.0155	0.0873
Production Liner	2 7/8" (6.5#)	7820	0.0058	0.0325
Tubing Size #1	2 3/8" (4.7)	7144	0.003870	0.02171
Tubing Size #2	1 1/4" (2.1)	7502	0.001930	0.01084
Hole Size (TOP)	10	N/A	0.0971	0.5454
Hole Size (SU/SH)	10	N/A	0.0775	0.4350
Hole Size (NB)	N/A	N/A	N/A	N/A

Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	
Open Hole	146.61	110.23	20%	Foxhills Plug 10 in. hole
Surface casing	36.11	27.15		
Production casing	8.73	6.56		
FX Total	182.72	143.94	180	
Open Hole	260.97	226.9338	20%	10 in. hole
Production casing	43.65	37.95652		
SU Total	304.62	264.8903	270	
Open Hole				
Production	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
	Liner Top
	Mud
	Water + Biocide