

HSR-B/R D 8-20

Existing Features	
KB	10

8-5/8" 24# Surface csg shoe	613
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Bottom of Foxhills (FHM)	692
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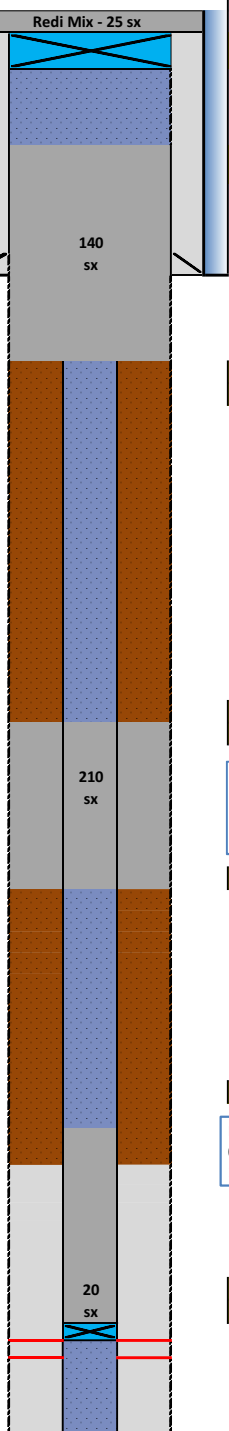
Sussex	Top	4081
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SX is non productive within 1 mile
SH is non productive within 1 mile

TOC Primary existing (CBL)	6330
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Nibrara	Top	6842
Nio	Perf Top	6908
	Perf Bottom	6911
Codell	Perf Top	7075
	Perf Bottom	7082

PBMD	7166
2-7/8" CSG 6.5#	7197



Proposed Additions for P&A

80	CIBP (8-5/8")
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513	TOC
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Cement Blend: Type III w/ cello flake and CaCl₂, mixed at 14.8 ppg and 1.33 cuft/sk. with 20%

800	Csg Stub
800	Bottom of Cement

3880	TOC in csg
3880	TOC in annulus

Sussex 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, with 20% excess and 9.5" hole size.

4290	BOC
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6000	TOC in csg
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NB 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

6850	BOC in csg
6850	CIBP

API# 05-123-18321				
Well: HSR-B/R D 8-20				
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft ³ /ft
Surface Casina	8 5/8" 24#	613	0.0637	0.3576
Production Casina	2 7/8" (6.5#)	7197	0.00579	0.0325
Tubing Size				
Bit Size	7 7/8		0.0602	0.3382
Hole Size	8		0.0622	0.3491
Hole Size	9.5		0.0877	0.4922
Hole Size	12		0.1399	0.7854

Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	Top Plug
8-5/8" csg	71.52	53.77		9.5"
OH	110.46	83.05	20%	
2-7/8" csg	0.00	0.00		
Total Top Plug	181.98	136.83	140	

186.2 cu-ft

				SX/ SH Plug 9.5"
annulus	219.92	191.24	20%	Caliper
Casing	13.33	11.59		
Total	233.25	202.82	210	

241.5 cu-ft

NB/CD Csg	Volume	Cement	Excess	NB/CD Plug
	27.63	20.02		20
Total	27.63	20.02		

27.6

Cement Yield	Volume	Cement	Excess	
	1.33	1.15	1.71	1.38
Top Plug	SX/SH	NB/Cd Squeeze	NB/Cd in pipe	

Legend	
	New cement
	Existing cement with CBL
	assumed cement w/ no CBL
	cast iron cement retainer
	cast iron bridge plug
	mud
	2% KCL Water