

## HSR-SAWDY 14-36

Existing Features	
KB	10
20 sx plug to be drilled out	

TOC Cement existing	340
100 sx plug to be drilled out	
Surface csg shoe at	468
BOC Cement existing (CBL)	512
Bottom of Foxhills (FHM)	1030

Casing Stub	4095
TOC Cement existing (CBL)	4150
CIBP 4-1/2" + 2 sx cmt	4250
Top	4742
Sussex Perf Top	4742
Perf Bottom	4856
CIBP 4-1/2" + 2 sx cmt	4910
BOC Cement existing (CBL)	5020

Shannon Bottom	5268
No shannon production w/in 1 mile radius	

CIBP 4-1/2"	5500
-------------	------

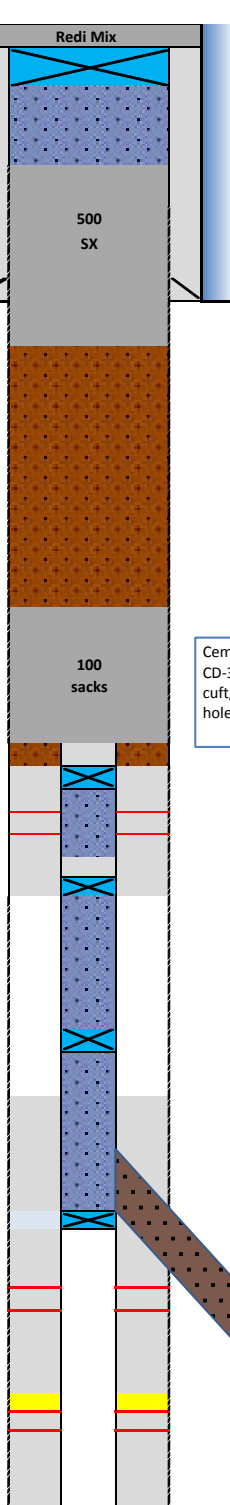
TOC Cement existing	6550
---------------------	------

Sidetrack window/ whipstock	6660
CIBP 4-1/2"	6670

Geologic Top	7015
Niobrara Perf Top	7016
Perf Bottom	7192

Geologic Top	7305
Codell Perf Top	7305
Perf Bottom	7320

PBMD	7439
4-1/2" CSG 11.6#	7470



Proposed Additions for P&A	
80	CIBP (8-5/8")

250	TOC
-----	-----

Cement Blend: Type III w/ cello flake and CaCl<sub>2</sub>, mixed at 14.8 ppg and 1.33 cuft/sk. with 20% excess and 10" hole size.

1230	Bottom of cement
------	------------------

3950	Top of cement
------	---------------

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 40% excess used and considering hole size of 10".

4095	Bottom of cement
------	------------------

7330 Sidetrack TD  
Hole was lost during sidetrack operations, watermelon mill and whipstock lost in the hole

API# 0512315439				
Well: HSR-SAWDY 14-36 (H8462)				
Equipment	Specs.	Depth	Capacity (bbl/ft)	Capacity ft <sup>3</sup> /ft
Surface Casing	8 5/8" 24#	486	0.0637	0.3576
Production Casing	4.50 (11.6#)	7470	0.0155	0.0873
Tubing Size				
Bit Size	7 7/8		0.060200	0.3382
Hole Size	9		0.0787	0.4418
Hole Size	10		0.0971	0.5454
Hole Size	12		0.1399	0.7854

Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	Top Plug
S/C hole	77.96	58.61		10" hole
Open Hole	581.83	437.47	40%	
P/C hole				
Total Top Plug	659.79	496.08	500	

665 cu-ft

In Hole	110.72	96.27	40%	SX/ SH Plug 10" HOLE
In pipe				
Total	110.72	96.27	100	

115 cu-ft

NB/CD Annular				NB/CD Plug
NB/CD Csg.	0.00	0.00		
Total		0.00		

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

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