

**HSR- Bohling Federal 10-7A**

Existing Features	
KB	14

8-5/8" Surface csg shoe at	822
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Bottom of Foxhills (FHM)	1111
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TOC (CBL)	3870
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Sussex	Top	4352
Sussex	Base	4562

Shannon	Bottom	N/A

Stage Tool	4935
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Primary TOC	6510
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Niobrara Geologic Top	7104
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Geologic Top		
J Sand	Perf Top	7813
	Perf Bottom	7844

PBMD	7939
4-1/2" 15.1# CSG	7951

[illegible]

80	CIBP (8-5/8")
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620	TOC
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Cement Blend: Type III w/ cello flake and CaCl<sub>2</sub>, mixed at 14.8 ppg and 1.33 cuft/sk. with 40%

1210	Casing Stub
1310	Bottom of cement

4150	Top of cement (tag)
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Cement Blend: "G" w/ 0.4% CD-32, 0.4% ASA - 301, mixed at 15.8 ppg and 1.15 cuft/sk

5050	Bottom of cement
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6700	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

7720	CIBP
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API#		0512320434		
Well:	HSR- Bohling Federal 10-7A			
<u>Equipment</u>	<u>Specs.</u>	<u>Depth</u>	<u>Capacity (bbl/ft)</u>	<u>Capacity ft<sup>3</sup>/ft</u>
Surface Casing	8-5/8" 24#	822	0.0636	0.3575
Production Casing	4.50 (11.6#)	7939	0.0155	0.0872
Tubing Size				
Bit Size	7 7/8		0.0602	0.3382
Hole Size	8.5		0.0702	0.3941
Hole Size	9.5		0.0877	0.4922
Hole Size	11.5		0.1285	0.7213







Cement Calculations				
Section	Volume cu-ft	Cement Sacks	Excess	Top Plug  8.5" Caliper to 3200'
S/C hole	72.22	54.30		
Open Hole	214.05	160.94	40%	
P/C	8.72	6.56		
Total Top Plug	294.99	221.80	230	
305.9		cu-ft		

In Hole				SX/ SH Plug
In pipe	78.48	68.24		
Total	78.48	68.24	70	

80.5 cu-ft

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

NB csg	88.94	64.45		NB/CD Plug
Total	88.94	64.45	70	

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