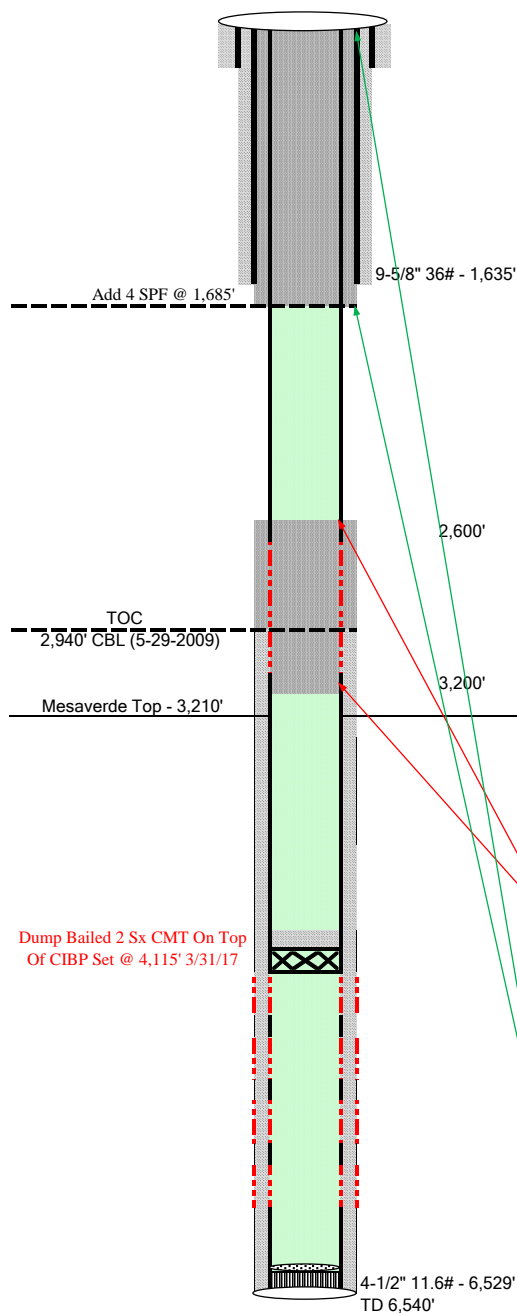


Exploration and Production

Proposed Wellbore



Well Name **PA 21-4**
 Location **NENE 4-7S-95W**
 Field **South Parachute**
 County **Garfield, CO**
 API **05-045-07455**
 KB **5,118' KB 5,104' GL**

Spud 3/31/2000

Casing	1,635'	9-5/8" 36# in 13-1/2" hole	
Cement	705 sx		
Casing	6,529'	4-1/2" 11.6#	0.08726 ft ³ /Lnft
Cement	820 sx	4-1/2" 11.6# in 7-7/8" hole	0.22779 ft ³ /Lnft
		4-1/2" 11.6# in 9-5/8" CSG	0.39482 ft ³ /Lnft

Tubing

Formation Tops

MV	3,210'
Cameo	5,870'

TOC - Bond Log

Completed Intervals

	Shallow	Deep
MV 3	4,165'	4,667'
MV 2	4,807'	5,159'
MV 1	5,312'	5,678'
Cameo/MV	5,849'	6,129'

P&A Calculations

Primary cement, balanced plug from	Shallow	Deep
22.6876 ft ³	2,940'	3,200'
1.15 ft ³ /sk yield	between desired plug depths	
15.8 lb/gal cmt		
19.73 sx for 260' plug inside 4.5" CSG		
110% excess		
21.70 sx Total		
77.4486 ft ³	2,600'	2,940'
1.15 ft ³ /sk yield	between desired plug depths	
15.8 lb/gal cmt		
67.35 sx for 340' plug in/around 4.5" CSG inside 7.875" hole		
110% excess		
74.08 sx		
95.78 sx Total		
Surface cement, plug from	1,635'	1,685'
11.3895 ft ³	between desired plug depths	
1.15 ft ³ /sk yield	15.8 lb/gal cmt	
9.90 sx for 50' plug in/around 4.5" CSG inside 7.875" hole		
110% excess		
10.89 sx		
645.5307 ft ³	0'	1,635'
1.15 ft ³ /sk yield	between desired plug depths	
15.8 lb/gal cmt		
561.33 sx for 1,635' plug in/around 4.5" CSG inside 9.625" CSG		
110% excess		
617.46 sx		
628.36 sx Total		

Revision Date:
4/4/2017

Engineer:
Will Greathouse