

Current Wellbore Diagram: Government 298-33-1

Last Updated: 9/17/2018

Well	Pad	EU	API
Government 298-33-1	Government 298-33-1 Pad	62387071	05-103-05094
Land Owner	First Sales	Location	Initial Cleanout
Federal	12/1/1973	SESW 32 2S98W 6 PM	
Top Perf	Bottom Perf	Current EOT	EOT %
3,612	4,259	4,130	
Bottom Cond Csg	Bottom Surf Csg	Bottom Prod Csg	
	172	4,303	
Average Inc	Float Collar	TOC	

ANNULAR CALCULATIONS: (OH*2-ODcsg*2)/1029.4

8 5/8" csg in 12 1/4" Open hole ; Should have cement to surface	0.0735 bbl/ft 100sks pumped	0.074 bbl/ft 20.48 bbls 278.7 ft of cement
5.5" csg in 7 7/8" hole ; should have cement to surface	0.0309bbl/ft 200sks cement pumped	0.031 bbl/ft 40.96 bbls 1060.5 ft of cement
		3,242 Calculated TOC

NOTE: No CBL in well files, calculated theoretical TOC with 20%variance. No hole size known either, assumed to be 7 7/8" hole

P&A calculations

#1 cement plug calculations (5 1/2" csg)			
100.0	plug length (ft)		
2.3	Total bbls of cement		
11.3	Total number of sacks		
#2 cement balance plug calculations, 5 1/2" csg (30% excess for possible leakoff, and 50' above highest hole and 50' deeper than deepest hole in csg)			
198.0	plug length (ft)		
5.5	Total bbls of cement (+30% excess)		
26.9	Total number of sacks		
#3 cement balance plug calculations, (100' @ 5 1/2" csg) + (50' @ 5 1/2" in 7 7/8" hole w/ 30% excess) + (50' 5 1/2" csg in 8 5/8" surf csg)			
100.0	plug length (ft) 100' 5 1/2"		
2.3	Total bbls of cement		
11.3	Total number of sacks		
50.0	plug length (ft) 5 1/2" csg in 7 7/8" hole		
2.0	Total bbls of cement (+30% excess)		
9.8	Total number of sacks		
50.0	plug length (ft) 5 1/2" csg 8 5/8" csg	#3	
1.7	Total bbls of cement	Tot bbls pumped	6.0
8.4	Total number of sacks	tot sks pumped	29.5
#4 cement balance plug calculations, (50' @ 5 1/2" csg) + (50' @ 5 1/2" in 8 5/8")			
50.0	plug length (ft) 50' 5 1/2"		
1.2	Total bbls of cement		
5.7	Total number of sacks		
50.0	plug length (ft) 50' 5 1/2" & 8 5/8" annulus		
1.7	Total bbls of cement	Tot bbls pumped	2.9
8.4	Total number of sacks	tot sks pumped	14.0

TOTAL BBLS CEMENT NEEDED

16.8
81.8

Assumptions:

5 1/2" csg 17# csg capacity = 0.0232bbl/ft	0.0232
#sks*yield*0.1781 = #bbls	0.1781
Hole size 7 7/8"	
5 1/2" capacity in 7 7/8" hole .0309 bbl/ft	0.0309
Annular between 5 1/2" csg and 8 5/8" 24# 0.0343bbl/ft	0.0343

