

# Cement Verification Report - Cementer's Well Service, Inc.

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COGCC Operator Guidance

RULE #308.A.B(2)A.ii



CLIENT: PDC - Petroleum Development Corp	Cementer's FIELD TICKET #	210080
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## Requested Operator Guidance:

1) Well Name & Number	Lease	Chalk	Well No.	12N
2) Well API Number	05-123-48614			
3) Job Date	10/20/20	Time on	18:00	24 hr time
4) Job Type	New Well Surface			
5) Cementing Company	Cementer's Well Service, Inc	Contact	Nate Kvamme - 303-324-4296	
6) Ambient conditions	clear / rain / snow / other		temp deg F	
7) Slurry Description				
a) Purpose	Surface - 9 5/8" CSG, 12 1/4" hole			
b) Cement Class	Type I / II			
c) Cement Yield	1.61	cuft / sk		
d) Cement Density	13.9	PPG		
e) Number of sks	600	sks (94# equiv)		
f) Cement Volume (dry)	600	cuft (ft^3)		
g) Mix Fluid Type				
Water / Cement	8.5	Gal / sk		
h) Slurry mixed	172	BBLs slurry		
i) Additives used	1.50%	CaCl2		
	3.00%	Bentonite		
j) Displacement Fluid Vol	141.4	BBLs H2O		
k) Method of Placement				
l) Set Depth	1,867	feet (ft)		
m) Stage tool depth	n/a			
n) Float Collar Depth	1,830	feet (ft)		
o) Designed Top of Cement	n/a	to surface		
p) Centralizer depths				feet (ft)
8) Charts - (pressure, density, pump rate)				
Landed Plug @	750	psi	Final Lift Pressure @	520 psi
Cement Density (as weighed during job) @	13.8	PPG		
9) Job notes				
a) Plug down	Y/N	Time	20:10	24 hr time
b) Floats held	Y/N			
c) Full Returns	Y/N	Lost Circulation	Y/N	
d) Cement to surface	Y/N	20.0	BBLs to surface	
e) If no returns, top off	BBLs			
f) Top off detail				

Chalk 12N Centralizer Depths					
Length	Centralized?	Cum Length	Top Depth		
38.75	Yes	1,487.63	379.8		
40.95	Yes	1,287.58	579.8		
40.35	Yes	1,083.73	783.7		
40.99	Yes	880.25	987.2		
40.95	Yes	678.49	1,188.9		
41.01	Yes	479.39	1,388.0		
41.55	Yes	279.72	1,587.7		
37.50	Yes	39.35	1,828.1		