

# 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 #	210194
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## Requested Operator Guidance:

1) Well Name & Number	Lease	Chalk	Well No.	09N
2) Well API Number	05-123-48613			
3) Job Date	10/18/20	Time on	17:30	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	580	sks (94# equiv)		
f) Cement Volume (dry)	580	cuft (ft^3)		
g) Mix Fluid Type				
Water / Cement	8.5	Gal / sk		
h) Slurry mixed	166.2	BBLs slurry		
i) Additives used	1.50%	CaCl2		
	3.00%	Bentonite		
j) Displacement Fluid Vol	136.1	BBLs H2O		
k) Method of Placement				
l) Set Depth	1,800	feet (ft)		
m) Stage tool depth	n/a			
n) Float Collar Depth	1,761	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) @	13.9	PPG		
9) Job notes				
a) Plug down	Y/N	Time	19:45	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 09N Centralizer Depths				
Length	Centralized?	Cum Length	Top Depth	
40.95	Yes	1,455.51	344.7	
40.98	Yes	1,252.25	548.0	
39.44	Yes	1,054.88	745.3	
38.82	Yes	859.35	940.9	
38.30	Yes	663.12	1,137.1	
38.54	Yes	470.40	1,329.8	
39.45	Yes	276.41	1,523.8	
39.33	Yes	41.18	1,759.0	