

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

P.O. BOX 336220 • GREELEY, CO 80633 • (970) 353-7299 • FAX (970) 353-7712

COGCC Operator Guidance

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



CLIENT: PDC - Petroleum Development Corp	Cementor's FIELD TICKET #	300140-D
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Requested Operator Guidance:

1) Well Name & Number	Lease	Sanford	Well No.	11N
2) Well API Number	05-123-49934			
3) Job Date	2/17/21	Time on	6:15	24 hr time
4) Job Type	New Well Surface			
5) Cementing Company	Cementor's Well Service, Inc	Contact	Nate Kvamme - 303-324-4296	
6) Ambient conditions	clear / rain / snow / other	-3	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	560	sks (94# equiv)		
f) Cement Volume (dry)	560	cuft (ft^3)		
g) Mix Fluid Type				
Water / Cement	8.5	Gal / sk		
h) Slurry mixed	160.6	BBLs slurry		
i) Additives used	1.50% CaCl2	3.00%	Bentonite	
Total Water Used				
j) Displacement Fluid Vol	139.6	BBLs H2O		
k) Method of Placement				
l) Set Depth	1,859	feet (ft)		
m) Stage tool depth	n/a			
n) Float Collar Depth	1,806	feet (ft)		
o) Designed Top of Cement	n/a	to surface		
p) Centralizer depths	1837, 1795, 1671, 1547, 1379, 1211, 1042, 874, 707, 539, 372, 207, 41 feet (ft)			
8) Charts - (pressure, density, pump rate)				
Landed Plug @	900	psi	Final Lift Pressure @	525 psi
Cement Density (as weighed during job) @	13.9	PPG		
9) Job notes				
a) Plug down	Y/N	Time	8:15	24 hr time
b) Floats held	Y/N			
c) Full Returns	Y/N	Lost Circulation	Y/N	
d) Cement to surface	Y/N	25.0	BBLs to surface	
e) If no returns, top off	BBLs			
f) Top off detail				



Centralizer Depths

Well Name: SANFORD 11N

Surface, Set Depth: 1,858.8ftKB

API 05123499340000		Surface Legal Location NENW 29-5N-66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal	
Ground Elevation (ft) 4,905.00	Original KB Elevation (ft) 4,918.00	KB-Ground Distance (ft) 13.00		Spud Date	Rig Release Date	On Production Date		Abandon Date	

Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwlry	Connections	Top (ftKB)	Cum Len (ft)
2		Casing Joints	9 5/8	36.00	J-55	Yes	40.89	Yes		LT&C	1,816.1	42.74
6		Casing Joints	9 5/8	36.00	J-55	Yes	41.39	Yes		LT&C	1,650.5	208.32
10		Casing Joints	9 5/8	36.00	J-55	Yes	41.37	Yes		LT&C	1,484.9	373.88
14		Casing Joints	9 5/8	36.00	J-55	Yes	41.39	Yes		LT&C	1,317.9	540.88
18		Casing Joints	9 5/8	36.00	J-55	Yes	42.12	Yes		LT&C	1,149.4	709.36
22		Casing Joints	9 5/8	36.00	J-55	Yes	41.40	Yes		LT&C	982.7	876.14
26		Casing Joints	9 5/8	36.00	J-55	Yes	42.13	Yes		LT&C	814.3	1,044.52
30		Casing Joints	9 5/8	36.00	J-55	Yes	42.14	Yes		LT&C	645.8	1,213.04
34		Casing Joints	9 5/8	36.00	J-55	Yes	42.12	Yes		LT&C	477.3	1,381.54
38		Casing Joints	9 5/8	36.00	J-55	Yes	42.13	Yes		LT&C	309.5	1,549.30
41		Casing Joints	9 5/8	36.00	J-55	Yes	41.41	Yes		LT&C	185.3	1,673.48
44		Casing Joints	9 5/8	36.00	J-55	Yes	41.39	Yes		LT&C	61.1	1,797.67