

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	Cementers FIELD TICKET #	300009
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Requested Operator Guidance:

1) Well Name & Number	Lease	Erwin	Well No.	3N
2) Well API Number	05-123-49380 -			
3) Job Date	11/13/20	Time on	8:30	24 hr time
4) Job Type	New Well Surface			
5) Cementing Company	Cementers 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	540	sks (94# equiv)		
f) Cement Volume (dry)	540	cuft (ft^3)		
g) Mix Fluid Type				
Water / Cement	8.5	Gal / sk		
h) Slurry mixed	154.8	BBLs slurry		
i) Additives used	1.50%	CaCl2	3.00%	Bentonite
Total Water Used	286.1	BBLs H2O		
j) Displacement Fluid Vol	126.8	BBLs H2O		
k) Method of Placement				
l) Set Depth	1,697	feet (ft)		
m) Stage tool depth	n/a			
n) Float Collar Depth	1,641	feet (ft)		
o) Designed Top of Cement	n/a	to surface		
p) Centralizer depths	-			feet (ft)
8) Charts - (pressure, density, pump rate)				
Landed Plug @	900	psi	Final Lift Pressure @	570 psi
Cement Density (as weighed during job) @	13.8	PPG		
9) Job notes				
a) Plug down	<input checked="" type="radio"/> Y / <input type="radio"/> N	Time	10:30	24 hr time
b) Floats held	<input checked="" type="radio"/> Y / <input type="radio"/> N			
c) Full Returns	<input checked="" type="radio"/> Y / <input type="radio"/> N	Lost Circulation	<input checked="" type="radio"/> Y / <input type="radio"/> N	
d) Cement to surface	<input checked="" type="radio"/> Y / <input type="radio"/> N	20.0	BBLs to surface	
e) If no returns, top off	BBLs			
f) Top off detail				



Centralizer Depths

Well Name: Erwin 3N

Surface, Set Depth: 1,696.5ftKB

API 05123493800000		Surface Legal Location SWSE 27 5N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal					
Ground Elevation (ft) 4,639.00		Original KB Elevation (ft) 4,667.00		KB-Ground Distance (ft) 28.00		Spud Date 2/1/2021 22:30		Rig Release Date 2/5/2021 14:30		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	40.77	Yes		LT&C	1,653.9	42.62
7		Casing Joints	9 5/8	36.00	J-55	Yes	42.08	Yes		LT&C	1,448.9	247.58
12		Casing Joints	9 5/8	36.00	J-55	Yes	40.94	Yes		LT&C	1,248.8	447.72
17		Casing Joints	9 5/8	36.00	J-55	Yes	40.25	Yes		LT&C	1,046.7	649.85
22		Casing Joints	9 5/8	36.00	J-55	Yes	39.85	Yes		LT&C	846.1	850.41
27		Casing Joints	9 5/8	36.00	J-55	Yes	41.15	Yes		LT&C	642.1	1,054.37
32		Casing Joints	9 5/8	36.00	J-55	Yes	40.47	Yes		LT&C	439.2	1,257.27
37		Casing Joints	9 5/8	36.00	J-55	Yes	40.53	Yes		LT&C	238.6	1,457.93