

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 #	209665
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Requested Operator Guidance:

1) Well Name & Number	Lease	Pharaoh	Well No.	2C
2) Well API Number	05-123-48833			
3) Job Date	10/22/20	Time on	16:45	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	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	283.9	BBLs H2O		
j) Displacement Fluid Vol	124.6	BBLs H2O		
k) Method of Placement				
l) Set Depth	1,668	feet (ft)		
m) Stage tool depth	n/a			
n) Float Collar Depth	1,612	feet (ft)		
o) Designed Top of Cement	n/a	to surface		
p) Centralizer depths				feet (ft)
8) Charts - (pressure, density, pump rate)				
Landed Plug @		700	psi	Final Lift Pressure @ - psi
Cement Density (as weighed during job) @		13.9	PPG	
9) Job notes				
a) Plug down	<input checked="" type="radio"/> Y / <input type="radio"/> N	Time	20:45	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	Green Water	BBLs to surface	
e) If no returns, top off	10	BBLs		
f) Top off detail	green water, limited cement returns so topped off with 10 additional BBLs slurry			



Centralizer Depths

Well Name: Pharaoh 2C

Surface, Set Depth: 1,667.6ftKB

API 05123488330000		Surface Legal Location NESE 36 5N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal					
Ground Elevation (ft) 4,593.00		Original KB Elevation (ft) 4,621.00		KB-Ground Distance (ft) 28.00		Spud Date 1/5/2021 00:45		Rig Release Date 1/9/2021 19:30		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	40.20	Yes		LT&C	1,625.6	42.05
8		Casing Joints	9 5/8	36.00	J-55	Yes	40.98	Yes		LT&C	1,387.8	279.83
13		Casing Joints	9 5/8	36.00	J-55	Yes	39.64	Yes		LT&C	1,189.3	478.30
18		Casing Joints	9 5/8	36.00	J-55	Yes	41.42	Yes		LT&C	989.8	677.85
23		Casing Joints	9 5/8	36.00	J-55	Yes	39.13	Yes		LT&C	788.2	879.39
28		Casing Joints	9 5/8	36.00	J-55	Yes	38.86	Yes		LT&C	590.1	1,077.52
33		Casing Joints	9 5/8	36.00	J-55	Yes	41.08	Yes		LT&C	390.5	1,277.14
38		Casing Joints	9 5/8	36.00	J-55	Yes	39.98	Yes		LT&C	192.1	1,475.48