

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 Energy	Cementer's FIELD TICKET #	300473-D
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Requested Operator Guidance:

Well Name & Number	Lease	Hen	Well No.	21N
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Well API Number	05-123-51798
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Job Date	6/25/23	Time on	13:15	6/25/23	24 hr time
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Job Type	New Well Surface
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Cementing Company	Cementer's Well Service, Inc	Contact	Nate Kvamme - 303-324-4296
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Ambient conditions	clear	83	temp deg F
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Slurry Description	
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a) Purpose	Surface - 9 5/8" 36# CSG, 13 1/2" hole
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b) Cement Class	Type I / II
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c) Cement Yield	1.61	cuft / sk
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d) Cement Density	13.9	PPG
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e) Number of sks	706	sks (94# equiv)
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f) Mix Fluid Type	
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Water / Cement	8.5	Gal / sk
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g) Slurry mixed	202.3	BBLs slurry
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h) Additives used	1.50% CaCl2	3.00% Bentonite
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Total Water Used	301.7	BBLs H2O
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i) Displacement Fluid Vol	128.9	BBLs H2O
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j) Method of Placement	
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k) Set Depth	1,709	feet (ft)
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l) Stage tool depth	n/a
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m) Float Collar Depth	1,667	feet (ft)
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n) Designed Top of Cement	n/a	to surface
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o) Centralizer depths	-	feet (ft)
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Charts - (pressure, density, pump rate)

Landed Plug @	1,568	psi	Final Lift Pressure @	400	psi
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Cement Density (as weighed during job) @	13.9	PPG
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Job notes

a) Plug down	<input checked="" type="radio"/> Y / <input type="radio"/> N	Time	16:30	24 hr time
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b) Floats held	<input checked="" type="radio"/> Y / <input type="radio"/> N		6/25/23
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c) Full Returns	<input checked="" type="radio"/> Y / <input type="radio"/> N	Lost Circulation	<input checked="" type="radio"/> Y / <input type="radio"/> N
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d) Cement to surface	<input checked="" type="radio"/> Y / <input type="radio"/> N	30.0	BBLs to surface
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e) If no returns, top off	n/a	BBLs
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f) Top off detail	
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g) Additional Detail	0
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PDC Energy

Surface Casing Pressure Test - Cement Job Graph

COMPANY DETAILS

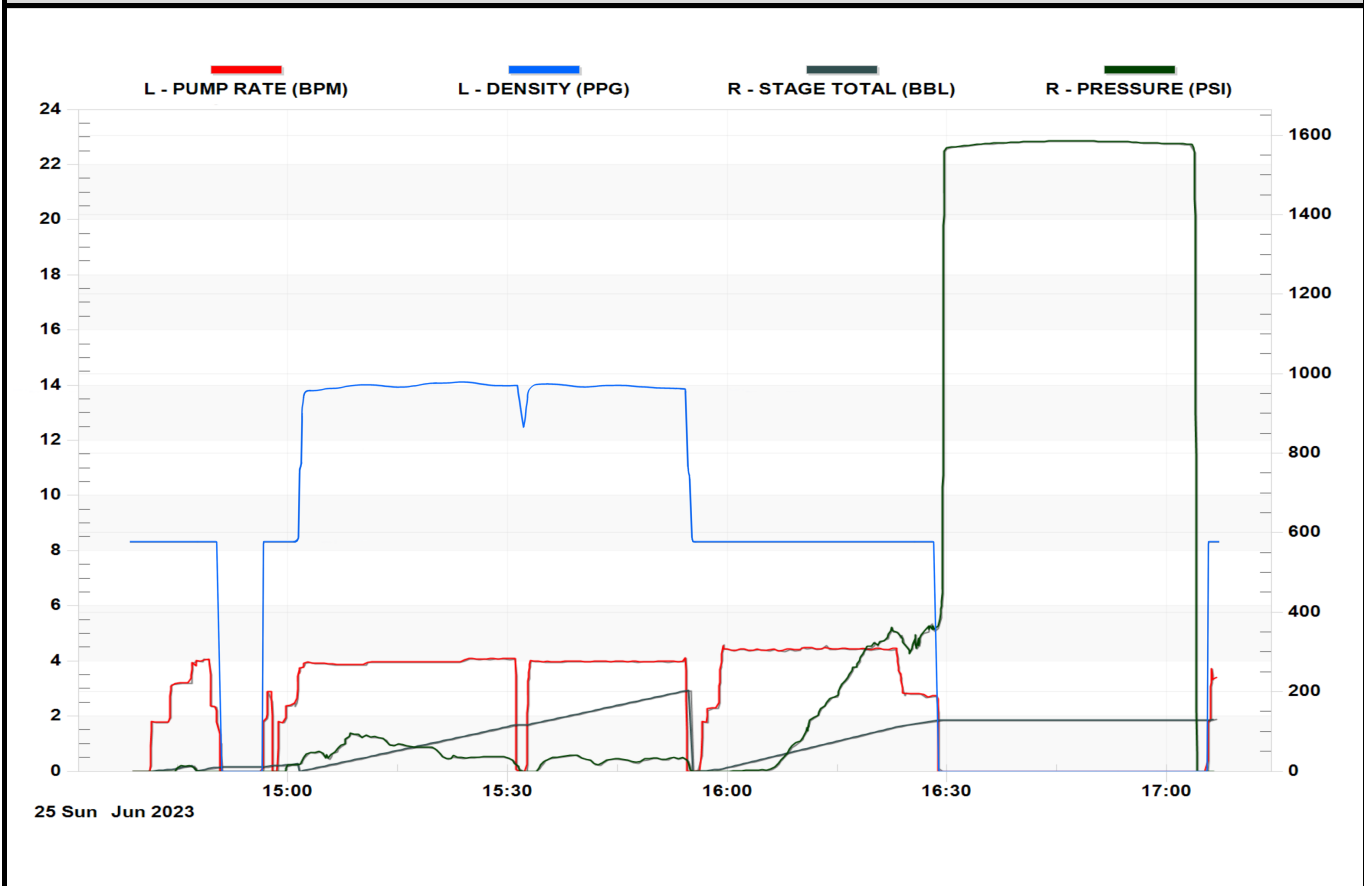
Date	6/25/23	API #	05-123-51798	Well No.	21N
County	Weld	State	CO	Lease	Hen

Client PDC Energy
 Contact / email DJ.Drillrig3@pdce.com

JOB DETAILS

TIME ON	13:15	6/25/23	Depth	1,719	ft.	Pressure Test @	1,568	psi
START TIME	14:38	6/25/23	Bottom of Surface	1,709	ft.	10 min	1,577	psi
END TIME	17:06	6/25/23	Plug Landed @	1,667	ft.	20 min	1,581	psi
			Plug Landed @	16:30	24 hr	30 min	1,578	psi

SUMMARY GRAPH





Centralizer Depths

Well Name: Hen 21N

Surface, Set Depth: 1,723.6ftKB

API 05123517980000		Surface Legal Location SWNE 8 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal	
Ground Elevation (ft) 4,779.00	Original KB Elevation (ft) 4,807.50	KB-Ground Distance (ft) 28.50	Spud Date 9/30/2023 06:15	Rig Release Date 10/4/2023 03:00	On Production Date	Abandon Date			

Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jw/ry	Connections	Top (ftKB)	Cum Len (ft)
2	1	Casing joints	9 5/8	36.00	J-55	Yes	41.86	Yes		LT&C	1,680.3	43.31
4	2	Casing joints	9 5/8	36.00	J-55	Yes	42.20	Yes		LT&C	1,636.8	86.82
5	3	Casing joints	9 5/8	36.00	J-55	Yes	42.20	Yes		LT&C	1,594.6	129.02
9	7	Casing joints	9 5/8	36.00	J-55	Yes	41.80	Yes		LT&C	1,426.1	297.48
13	11	Casing joints	9 5/8	36.00	J-55	Yes	41.78	Yes		LT&C	1,257.7	465.92
17	15	Casing joints	9 5/8	36.00	J-55	Yes	42.30	Yes		LT&C	1,088.7	634.86
21	19	Casing joints	9 5/8	36.00	J-55	Yes	42.20	Yes		LT&C	919.9	803.71
25	23	Casing joints	9 5/8	36.00	J-55	Yes	42.20	Yes		LT&C	751.0	972.57
29	27	Casing joints	9 5/8	36.00	J-55	Yes	42.22	Yes		LT&C	582.2	1,141.43
33	31	Casing joints	9 5/8	36.00	J-55	Yes	42.24	Yes		LT&C	413.7	1,309.87
37	35	Casing joints	9 5/8	36.00	J-55	Yes	42.31	Yes		LT&C	244.8	1,478.79
41	39	Casing joints	9 5/8	36.00	J-55	Yes	42.22	Yes		LT&C	76.4	1,647.22