

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 #	300469-D
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Requested Operator Guidance:

Well Name & Number	Lease	Hen	Well No.	16N
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Well API Number	05-123-51793
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Job Date	6/22/23	Time on	12:00	6/22/23	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	77	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	726	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	207.9	BBLs slurry
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h) Additives used	1.50% CaCl2	3.00% Bentonite
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Total Water Used	304.8	BBLs H2O
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i) Displacement Fluid Vol	127.9	BBLs H2O
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j) Method of Placement	
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k) Set Depth	1,694	feet (ft)
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l) Stage tool depth	n/a
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m) Float Collar Depth	1,654	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 @	1,604	psi	Final Lift Pressure @	300	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	15:28	24 hr time
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b) Floats held	<input checked="" type="radio"/> Y / <input type="radio"/> N	6/22/23
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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	40.0	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

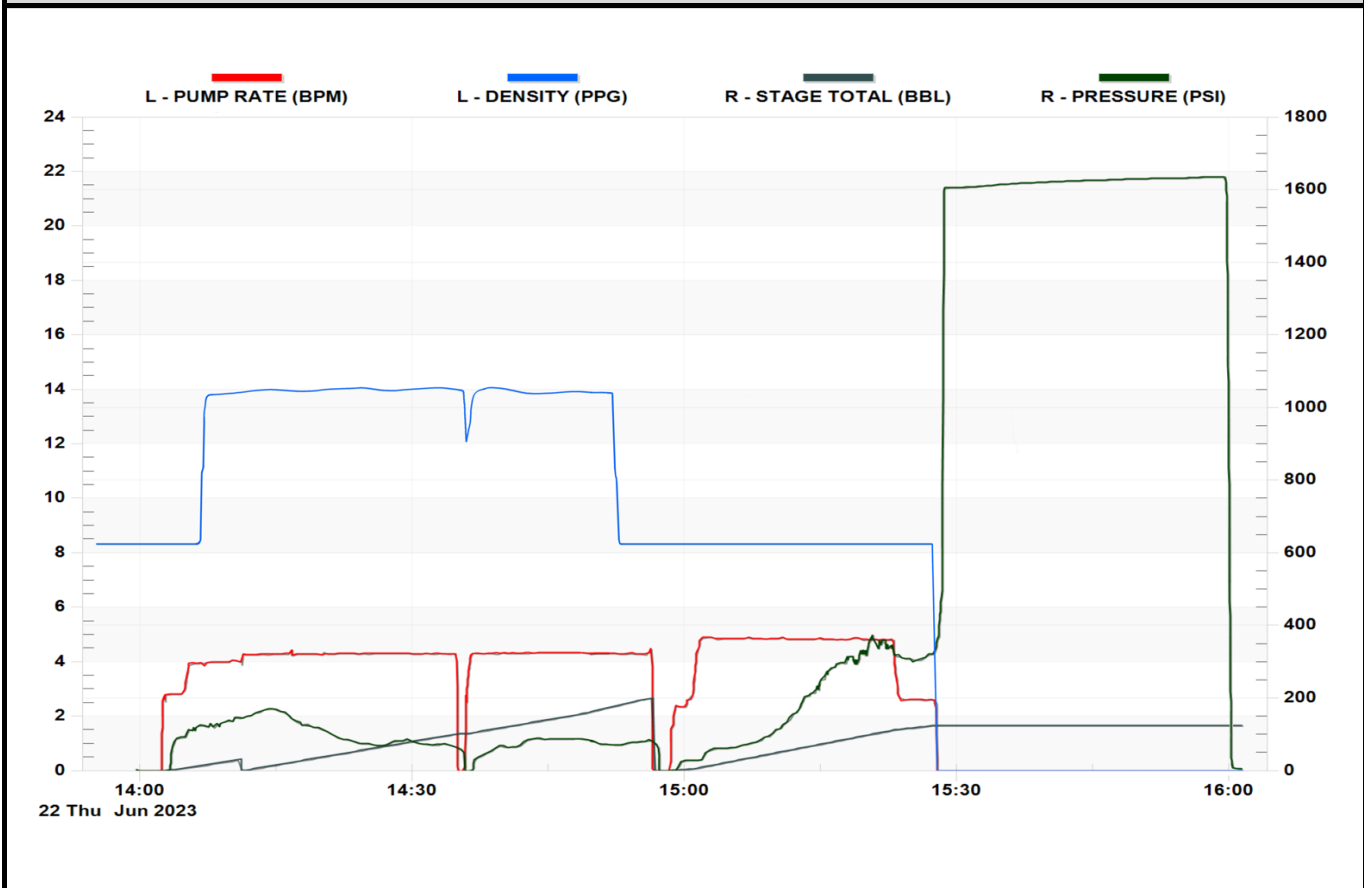
Date	6/22/23	API #	05-123-51793	Well No.	16N
County	Weld	State	CO	Lease	Hen

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

JOB DETAILS

TIME ON	12:00	6/22/23	Depth	1,704	ft.	Pressure Test @	1,604	psi
START TIME	14:00	6/22/23	Bottom of Surface	1,694	ft.	10 min	1,621	psi
END TIME	16:02	6/22/23	Plug Landed @	1,654	ft.	20 min	1,629	psi
			Plug Landed @	15:28	24 hr	30 min	1,634	psi

SUMMARY GRAPH





Centralizer Depths

Well Name: Hen 16N

Surface, Set Depth: 1,714.7ftKB

API 05123517930000		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 9/16/2023 22:30	Rig Release Date 9/19/2023 14:00	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	40.42	Yes		LT&C	1,672.8	41.87
4	2	Casing joints	9 5/8	36.00	J-55	Yes	40.92	Yes		LT&C	1,630.6	84.10
5	3	Casing joints	9 5/8	36.00	J-55	Yes	40.78	Yes		LT&C	1,589.8	124.88
9	7	Casing joints	9 5/8	36.00	J-55	Yes	40.55	Yes		LT&C	1,426.2	288.47
13	11	Casing joints	9 5/8	36.00	J-55	Yes	41.08	Yes		LT&C	1,263.8	450.86
17	15	Casing joints	9 5/8	36.00	J-55	Yes	40.51	Yes		LT&C	1,100.9	613.78
21	19	Casing joints	9 5/8	36.00	J-55	Yes	40.26	Yes		LT&C	937.6	777.13
25	23	Casing joints	9 5/8	36.00	J-55	Yes	40.92	Yes		LT&C	773.5	941.25
29	27	Casing joints	9 5/8	36.00	J-55	Yes	41.24	Yes		LT&C	608.9	1,105.80
33	31	Casing joints	9 5/8	36.00	J-55	Yes	41.13	Yes		LT&C	444.9	1,269.76
37	35	Casing joints	9 5/8	36.00	J-55	Yes	40.54	Yes		LT&C	281.7	1,433.01
41	39	Casing joints	9 5/8	36.00	J-55	Yes	41.12	Yes		LT&C	117.5	1,597.21
42	40	Casing joints	9 5/8	36.00	J-55	Yes	41.05	Yes		LT&C	76.4	1,638.26