

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: Great Western Operating	Cementor's FIELD TICKET #	400129-D
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Requested Operator Guidance:

Well Name & Number	Lease	Kortum LD	Well No.	09 - 379HN
Well API Number	05-001-10479			
Job Date	9/22/21	Time on	20:00	24 hr time
Job Type	New Well Surface			
Cementing Company	Cementor's Well Service, Inc	Contact	Nate Kvamme - 303-324-4296	
Ambient conditions	clear / rain / snow / other	55	temp deg F	
Slurry Description				
a) Purpose	Surface - 9 5/8" 40# CSG, 13 1/2" hole			
b) Cement Class	Type I / II			
c) Cement Yield	1.61	cuft / sk		
d) Cement Density	13.9	PPG		
e) Number of sks	936	sks (94# equiv)		
f) Mix Fluid Type				
Water / Cement	8.5	Gal / sk		
g) Slurry mixed	268.3	BBLs slurry		
h) Additives used	1.50% CaCl2	3.00%	Bentonite	
Total Water Used	364.8	BBLs H2O		
i) Displacement Fluid Vol	155.5	BBLs H2O		
j) Method of Placement				
k) Set Depth	2,054	feet (ft)		
l) Stage tool depth	n/a			
m) Float Collar Depth	2,010	feet (ft)		
n) Designed Top of Cement	n/a	to surface		
o) Centralizer depths	19 Centralizers: 39.72, 81.07, 201.62, 325.74, 449.76, 566.58, 690.67, 814.77, 938.84, 1062.92, 1186.64, 1310.64, 1434.72, 1558.86, 1682.98, 1807.07, 1931.16, 1972.51, 2037.74 feet (ft)			

Charts - (pressure, density, pump rate)

Landed Plug @ 1660 psi Final Lift Pressure @ 400 psi
Cement Density (as weighed during job) @ 13.9 PPG

Job notes

a) Plug down	Y / N	Time	23:24	24 hr time
b) Floats held	Y / N		9/22/21	
c) Full Returns	Y / N	Lost Circulation	Y / N	
d) Cement to surface	Y / N	8.0	BBLs to surface	
e) If no returns, top off	n/a	BBLs		
f) Top off detail				

Cementer's Well Service, Inc.

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Great Western Operating Company, LLC

Surface Cement Job Graph

COMPANY DETAILS

Date	9/22/21	API #	05-001-10479	Well No.	09 - 379HN
County	Weld	State	CO	Lease	Kortum LD

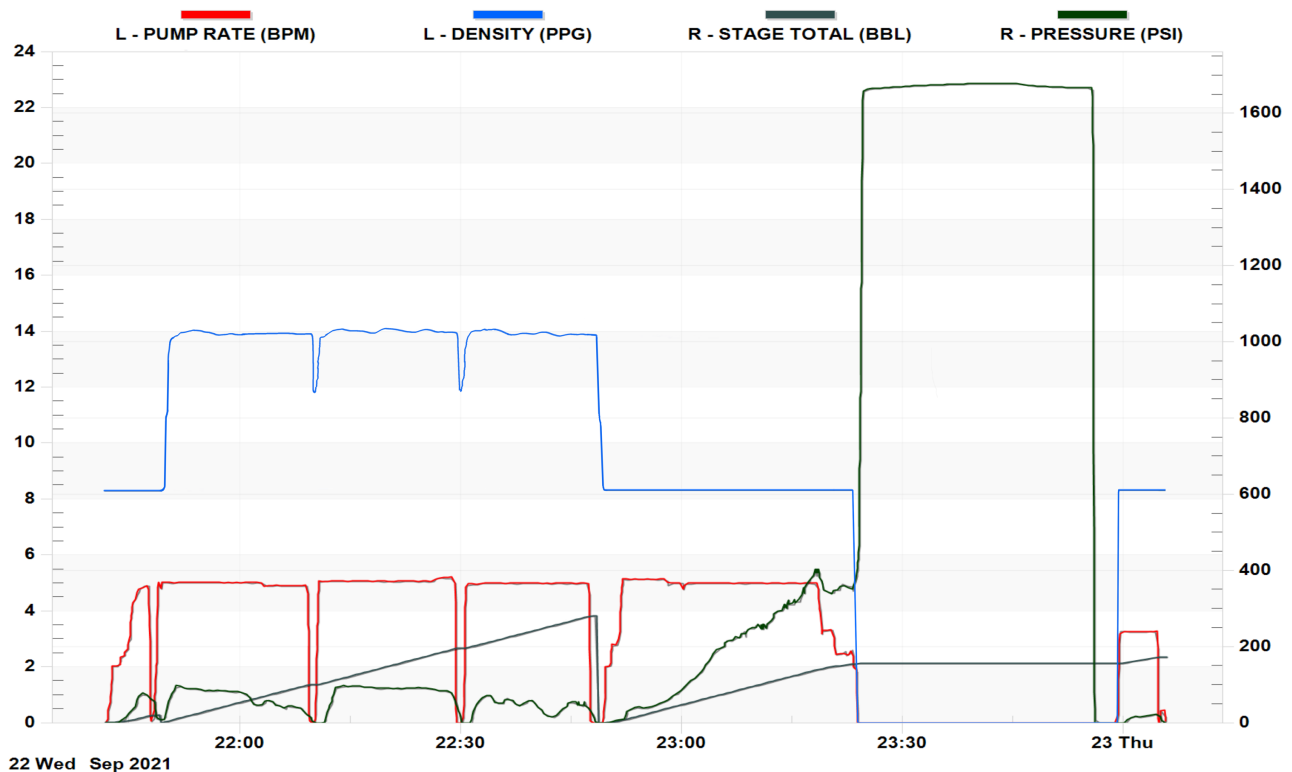
Client Great Western Operating Company, LLC

Contact / email

JOB DETAILS

TIME ON	20:00	24 hr	Depth	2,054	ft.	Pressure Test @	1,660	psi
START TIME	21:41	9/22/21	Bottom of Surface	2,054	ft.	10 min	1,675	psi
END TIME	0:06	9/23/21	Plug Landed @	2,011	ft.	20 min	1,675	psi
			Plug Landed @	23:24	24 hr	30 min	1,668	psi

SUMMARY GRAPH



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Lease: Kortum LD

Well: 09 - 379HN

API# 05-001-10479



Date & Time On	9/22/21 20:00
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Item		Event	Date	Time (24 hr)	Density (PPG)	Pump Rate (BPM)	Incremental (Line Item) Volume (BBLs)	Cumulative Volume (BBLs)	Pressure (PSI)	Comment		
Pre-job	1	Call Out	9/22/21	16:00						Great Western Call out w/ 4 hr notice		
	2	Leave Yard	9/22/21	19:15						Cementer's leaves yard to travel to location		
On Location: Pre-job	3	Arrive On Location	9/22/21	20:00						Arrive on location		
	4	Spot Trucks	9/22/21	20:05						Spot trucks on location		
	5	Rig Up	9/22/21	20:07						Rig up water & Cementer's Bulk Truck, prep pump and mixing operation		
	6	Safety Meeting	9/22/21	20:12						Pre-job safety meeting with IKON12 rig crew, GWO company man & Cementer's crew		
	7	Rig Up	9/22/21	20:17						Rig up cement head w/plug		
	8	Fill Lines	9/22/21	20:19	8.34	2.00				Fill lines with up to 5 bbls of fresh water		
Initial Job Start	9	Pressure Test	9/22/21	0:00	8.34	-			-	Pressure test pumps and lines		
	10	Pump Spacer	9/22/21	21:41	8.34	4.00	20	20	-	Pump dye fresh water @	20	BBLs
Cementing	11	Pump Cement	9/22/21	21:46	13.90	4.00	268.34	288.34	45	Pump Cement @	936	SKS
										Type I/II cement with 1.5% CaCl2 & 3.0% Bentonite @ 1.61 cuft/sk & 13.9 PPG	268.34	BBLs slurry
Displacement	12	Drop Plug	9/22/21	22:48			n/a			Shut down cementing operation & release top plug		
	13	Initial Displacement	9/22/21	22:50	8.34	2.00	4.00	292.34	-	Send plug with 4.0 BBLs H2O @ 2.0 BPM		
	14	Plug Drop Verification	9/22/21	22:54			n/a			Visual verification plug released from head		
	15	Displacement	9/22/21	22:56	8.34	5.00	133.45	421.79	80-450	Continued Displacement with total fresh water @	155.45	BBLs H2O
	16	Spacer To Surface	9/22/21	23:14	8.34	5.00	137.45	425.79	385	Identified Spacer, looking for Cement / green water		
	17	Cement To Surface	9/22/21	23:17	8.34	5.00	147.45	435.79	390	Identify Cement to surface w/	8	BBLs back
	18	Drop Rate	9/22/21	23:22	8.34	2.50	145.45	433.79	400	Drop rate to 2.5 BPM for last 10 BBLs of Displacement to land plug		
	19	Land Plug	9/22/21	23:24	8.34	2.50	155.45	443.79	1,660	Land Plug @	1,660	PSI
Casing Test	20	Casing Test	9/22/21	23:24	n/a	0	0	0	1,660	Start 30 min casing test w/ pressure @	1,660	PSI
	21		9/22/21	23:34	n/a	0	0	0	1,675	10 min into casing test, pressure @	1,675	PSI
	22		9/22/21	23:44	n/a	0	0	0	1,675	20 min into casing test, pressure @	1,675	PSI
	23		9/22/21	23:54	n/a	0	0	0	1,668	30 min into casing test, pressure @	1,668	PSI
Post Job & Testing	24	Check Floats	9/22/21	23:55	n/a	0	0	0	1	BBLs back (.25-1BBL expected)		
	25	End Job	9/22/21	23:57						Bleed off pressure, job complete		
	26	Safety Meeting	9/22/21	23:59						Pre-rig down safety meeting, wash up equipment		
	27	Rig Down	9/23/21	0:02						Rig down Cementer's Equipment, leave location		