



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED 13A-26-496 05-045-24432
S:26 T:4S R:96W Garfield CO

CallSheet #: 84076
Proposal #: 64212



TWO-STAGE/MULTI-STAGE CEMENT Post Job Report

Attention: Mr. Cole Walton | (720) 880-6325 | cwalton@caerusoilandgas.com

Caerus Operating LLC

1001 17TH STREET | DENVER, CO 80202

Dear Mr. Cole Walton,

Thank you for the opportunity to provide cementing services on this well. American Cementing strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact American Cementing at any time.

Sincerely,

Holly Mbugua

Field Engineer II | (720) 505-1300 | holly.mbugua@americacementing.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 657-1157

Job Details & Summary

Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Casing	Outer	20	19.5	53	n/a	0	130	0
Open Hole	Outer	n/a	14.75	n/a	n/a	100	2500	25
Open Hole	Outer	n/a	14.75	n/a	n/a	2500	3012	0
Casing	Inner	9.625	8.921	36	n/a	0	2996	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
AS Cement Trailer Float	CTF-148	TRC-188	Kirchenwitz, Jacob
AS Cement Trailer Float	CTF-9299	TRC-053	Burton, Devin
Cement Trailer Float	CTF-263	TRC-424	Balint, Daniel
Field Storage Silo	FSS-469		
Field Storage Silo	FSS-468		
Cement Pump Float	CPF-058	TRH-959	Hale, Jason
Light Duty Vehicles	LDV-082		Kelsey, John

Timing

Event	Date/Time
Call Out	10/16/2022 19:24
Depart Facility	10/16/2022 22:43
On Location	10/17/2022 00:03
Rig Up Iron	10/17/2022 00:30
Job Started	10/17/2022 09:00
Job Completed	10/17/2022 16:40
Rig Down Iron	10/17/2022 16:50
Depart Location	10/17/2022 18:00

General Job Information

Metrics	Value
Well Fluid Density	9.7 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	300 bbls
Rig Circulation Time	1 hours
Calculated Displacement	226-71 bbls
Actual Displacement	226-71 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	69-55-5 bbls
Well Topped Out	5
Top Out Volume	10 bbls

Job Details

Metrics	Value
Flare Prior to Job	No
Flare Prior to Job	0 units
Flare During Job	No
Flare During Job	0 units
Flare at End of Job	No
Flare at End of Job	0 units
Well Full Prior to Job	Yes
Well Fluid Density Into Well	9.7 lb/gal
Well Fluid Density Out of Well	9.7 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	68 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	450 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	0 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

Circulation

Lost Circulation Experienced	Losses into Spacer	Losses into Cement	Losses into Displacement
Yes	0	0	0

Circulation Details

had no returnss during job until 27 bbls into tail cement during first stage then had returns the rest of the job

Job Execution Information

Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sks)	Volume (bbl)	Designed Top (ft)
1	Water	Flush	8.34			42.00		40.00	686
2	Stage-1 Lead	Lead	12.00	2.52	14.80		524.00	235.42	950
3	Stage-1 Tail	Tail	13.00	2.06	11.21		175.00	64.08	2500
4	Water	DisplacementFinal	8.34			42.00		229.00	0
1	Water	Flush	8.34			42.00		40.00	0
2	Stage-2 Primary	Primary	12.00	2.55	14.95		346.00	157.14	0
3	Water	DisplacementFinal	8.34			42.00		74.00	0

Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Lead	Stage-1 Lead	ASTM TYPE I/II	Cement	100.00	%
2	Lead	Stage-1 Lead	A-10	Accelerator	5.00	%BWOB
2	Lead	Stage-1 Lead	A-2	Accelerator	3.00	lb/sk
2	Lead	Stage-1 Lead	FP-24	Defoamer	0.30	%BWOB
2	Lead	Stage-1 Lead	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
2	Lead	Stage-1 Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
2	Lead	Stage-1 Lead	R-7C	Retarder	0.30	%BWOB
2	Lead	Stage-1 Lead	STATIC FREE	Other	0.01	lb/sk
3	Tail	Stage-1 Tail	ASTM TYPE I/II	Cement	100.00	%
3	Tail	Stage-1 Tail	A-10	Accelerator	5.00	%BWOB
3	Tail	Stage-1 Tail	A-2	Accelerator	2.00	lb/sk
3	Tail	Stage-1 Tail	A-5	Accelerator	5.00	%BWOW
3	Tail	Stage-1 Tail	FP-24	Defoamer	0.30	%BWOB
3	Tail	Stage-1 Tail	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
3	Tail	Stage-1 Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
3	Tail	Stage-1 Tail	STATIC FREE	Other	0.01	lb/sk
2	Primary	Stage-2 Primary	ASTM TYPE I/II	Cement	100.00	%
2	Primary	Stage-2 Primary	A-10	Accelerator	5.00	%BWOB
2	Primary	Stage-2 Primary	A-2	Accelerator	3.00	lb/sk
2	Primary	Stage-2 Primary	A-7P	Accelerator	2.00	lb/sk
2	Primary	Stage-2 Primary	FP-24	Defoamer	0.30	%BWOB
2	Primary	Stage-2 Primary	IntegraSeal POLI	LostCirculation	0.25	lb/sk
2	Primary	Stage-2 Primary	STATIC FREE	Other	0.01	lb/sk

Job Logs

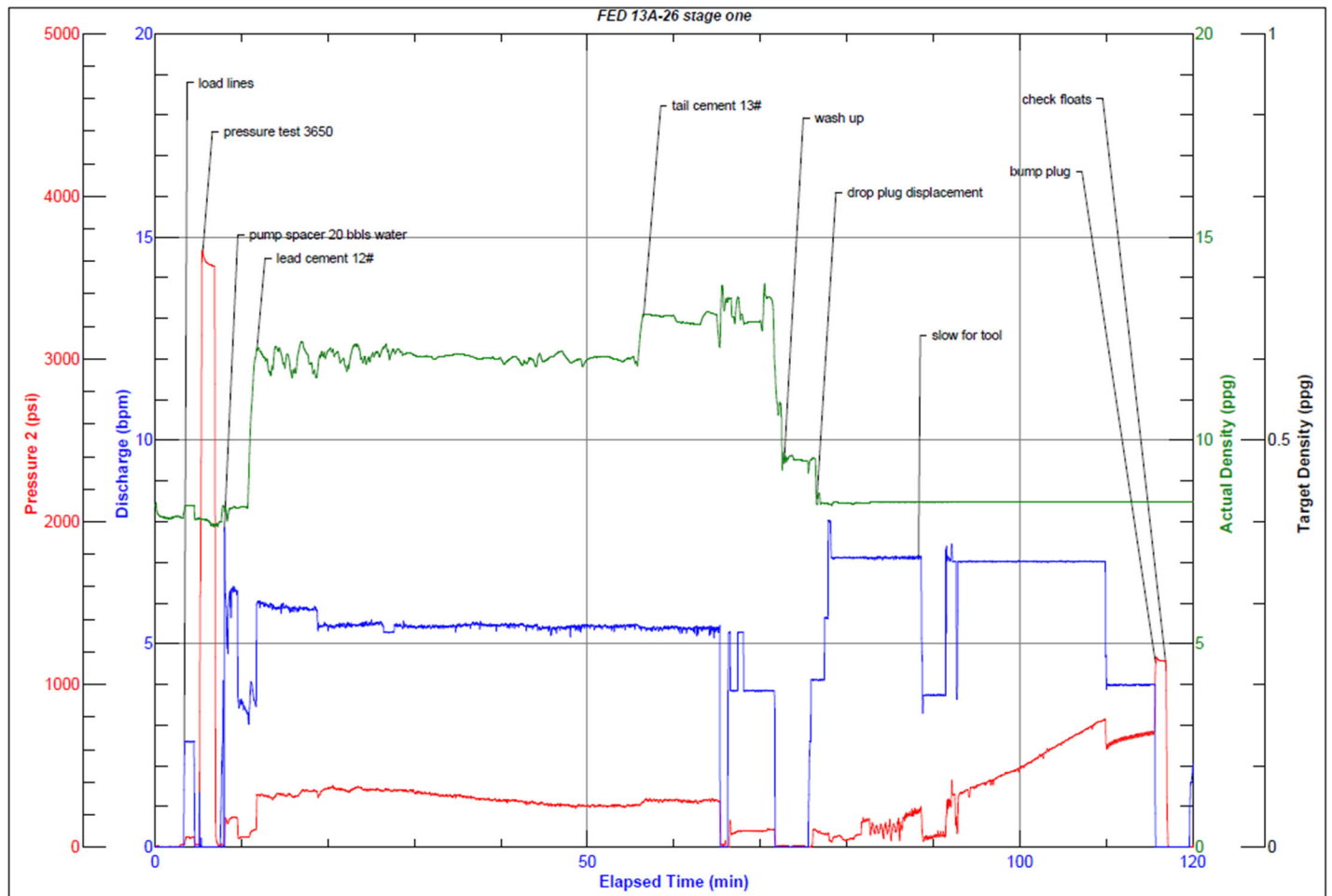
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	10/16/2022	19:24					Crew called out for job; RTS 0600
2	safety meeting	10/16/2022	22:00					Journey management meeting
3	left yard	10/16/2022	22:43					Left yard
4	arrive on location	10/17/2022	00:03					Arrive on location
5	Safety Meeting	10/17/2022	00:15					Rig up meeting
6	Rig Up Iron	10/17/2022	00:30					Rig up
7	standby	10/17/2022	01:00					Waiting on rig
8	Safety Meeting	10/17/2022	09:00					Meeting
9	load lines	10/17/2022	09:10					Load lines
10	pressure test	10/17/2022	09:13					Pressure test 3650 psi
11	spacer	10/17/2022	09:15	8.34	5.4	20	150	Pump spacer 20 fresh water no returns
12	lead cement	10/17/2022	09:17	12	5.4	50	366	235 BBLS Lead CMT – 12 # 2.52 Y 14.8 MW 524 sks
13	lead cement	10/17/2022	09:27	12	5.4	50	330	100 bbls away
14	lead cement	10/17/2022	09:37	12	5.4	50	330	150 bbls away
15	lead cement	10/17/2022	09:45	12	5.4	50	280	200 bbls away
16	lead cement	10/17/2022	09:54	12	5.4	35	340	235 bbls away
17	Tail cement	10/17/2022	10:04	13	5.4	50	340	64 BBLS Tail CMT – 13 # 2.06 Y 11.2 MW 176 sks, 27 bbls into tail, no returns
18	Tail cement	10/17/2022	10:16	13	3.8	14	100	64 bbls away
19	shut down	10/17/2022	10:22					Wash up load and drop plug
20	displacement	10/17/2022	10:23	8.34	7	10	100	Start displacement 50 bbls
21	displacement	10/17/2022	10:33	8.34	7	40	100	50 bbls away
22	displacement	10/17/2022	10:36	8.34	7	10	100	60 bbls away
23	displacement	10/17/2022	10:36	8.34	3.8	15	40	60 bbls to 75 bbls away, slow to pass through tool
24	displacement	10/17/2022	10:39	8.34	7	25	280	100 bbls away
25	displacement	10/17/2022	10:50	8.34	7	50	400	150 bbls away
26	displacement	10/17/2022	10:54	8.34	7	50	620	200 bbls away
27	displacement	10/17/2022	10:54	8.34	4	10	714	210 bbls away slow to bump plug
28	displacement	10/17/2022	11:00	8.34	4	15	714	225 bbls away, bump plug: 714 psi to 1150psi
29	check floats	10/17/2022	11:04	8.34	0	0	1150	Check floats held 1 bbl back
30	flush parasite	10/17/2022	11:07	8.45	2	6	20	Pump sugar water down parasite
31	Flush Parasite	10/17/2022	11:10	8.45	1	4	600	Pump sugar water down parasite pressure up to 600psi
32	shut down	10/17/2022	11:11	8.34	0	0	0	Shut down to drop bomb
33	drop bomb	10/17/2022	11:13	8.34	0	0	0	Drop bomb, load plug for second stage
34	shift tool	10/17/2022	11:25	8.34	2	2	464	Open dv tool, opened at 464psi
35	circulate well	10/17/2022	11:26	8.34	5	18	260	Pump 20 bbls of water through dv tool
36	Circulate Well	10/17/2022	11:31	9.7				Turned well over to rig to circulate out, 69 bbls of cement
37	standby	10/17/2022	12:10	8.34				Rig shut down, turned well back to American Cementing
38	spacer	10/17/2022	12:12	8.34	5.4	20	120	Pump 20 bbls water spacer
39	primary cement	10/17/2022	12:16	12	5.4	10	220	Start 12 PPG Primary Cement
40	primary cement	10/17/2022	12:25	12	5.4	40	220	50 bbls of lead cement pumped
41	primary cement	10/17/2022	12:35	12	5.4	50	240	100 bbls of lead cement pumped
42	primary cement	10/17/2022	12:35	12	5.4	50	240	150 bbls of lead cement pumped
43	primary cement	10/17/2022	12:40	12	3.8	7	150	Slowed last 7 bbls of lead cement to get product out of silo
44	Washup	10/17/2022	12:45	12	0	0	0	Shut down to drop plug; wash up

45	Displacement	10/17/2022	12:47	8.34	5.4	10	170	Start displacement
46	displacement	10/17/2022	12:49	8.34	5.4	5	170	Cement back 15 bbls into displacement, 56 bbls cement back
47	displacement	10/17/2022	12:58	8.34	5.4	35	240	50 bbls of displacement pumped
48	displacement	10/17/2022	13:00	8.34	4	21	190	Slowed to bump plug, last 21 bbls
49	Land Plug	10/17/2022	13:03	8.34	0	0	260	Bumped plug 260psi to 2010psi
50	check floats	10/17/2022	13:05	8.34	0	0	0	Bleed off check floats; floats held 1 bbl back
51	rig down	10/17/2022	13:06					Rig down cement head
52	standby	10/17/2022	13:10					WOC, then Top Out
53	batch up	10/17/2022	15:00	15.8	0	0	0	Batch up top out cement
54	Pump Topout	10/17/2022	15:20	15.8	3	10	0	Pump Top Out cement, 48.8 sks
55	Washup	10/17/2022	15:30	8.34	3	15	0	Pump 15 bbls water to clean pump and cellar
56	standby	10/17/2022	15:50					Standby
57	released	10/17/2022	16:40					Released Crew
58	safety meeting	10/17/2022	16:45					Rig down meeting
59	rig down	10/17/2022	16:50					Rig down
60	safety meeting	10/17/2022	17:00					Journey management meeting
61	leave location	10/17/2022	18:00					Leave location

Pump Diagrams



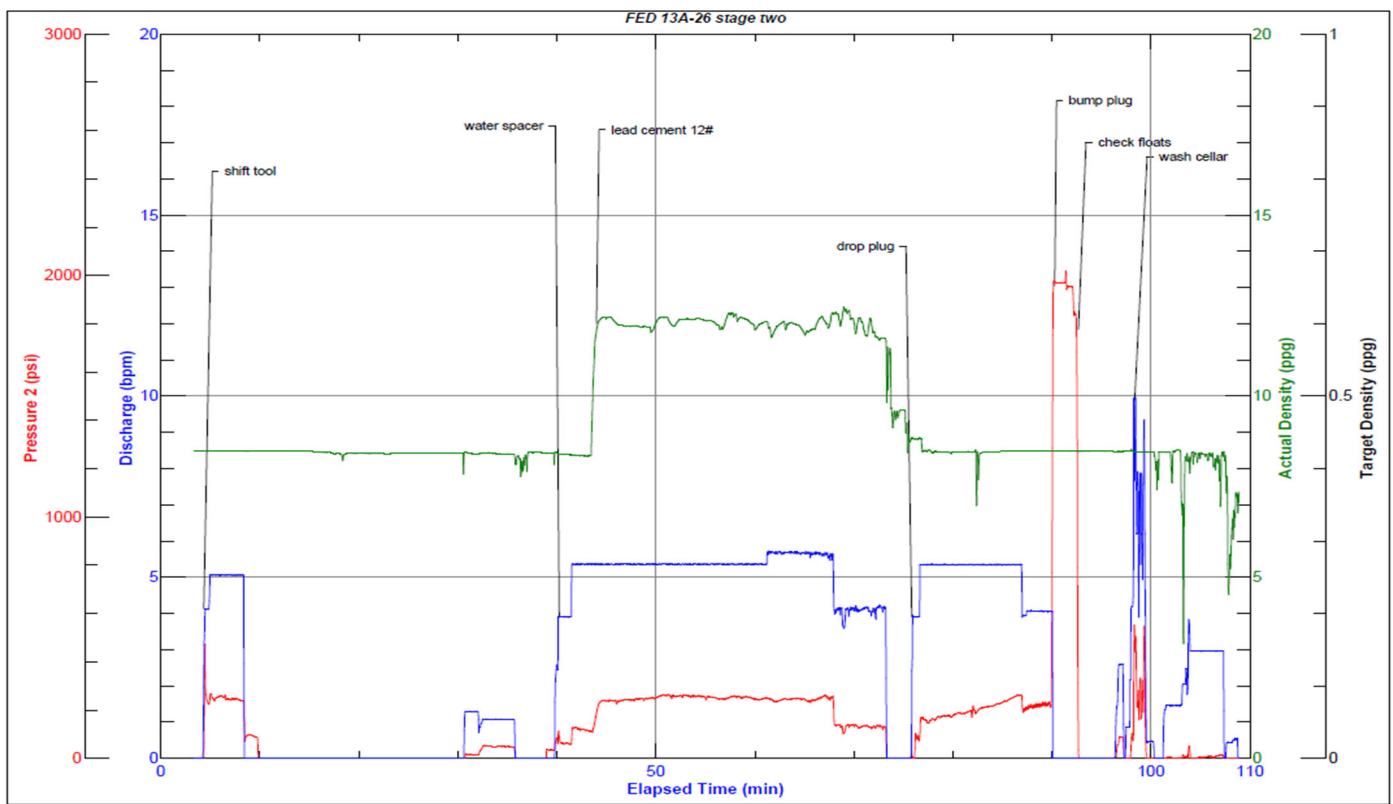
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Job Number: 84026
Customer: Cearus
Well Name: FED 13A-26



Job Start: Monday, October 17, 2022

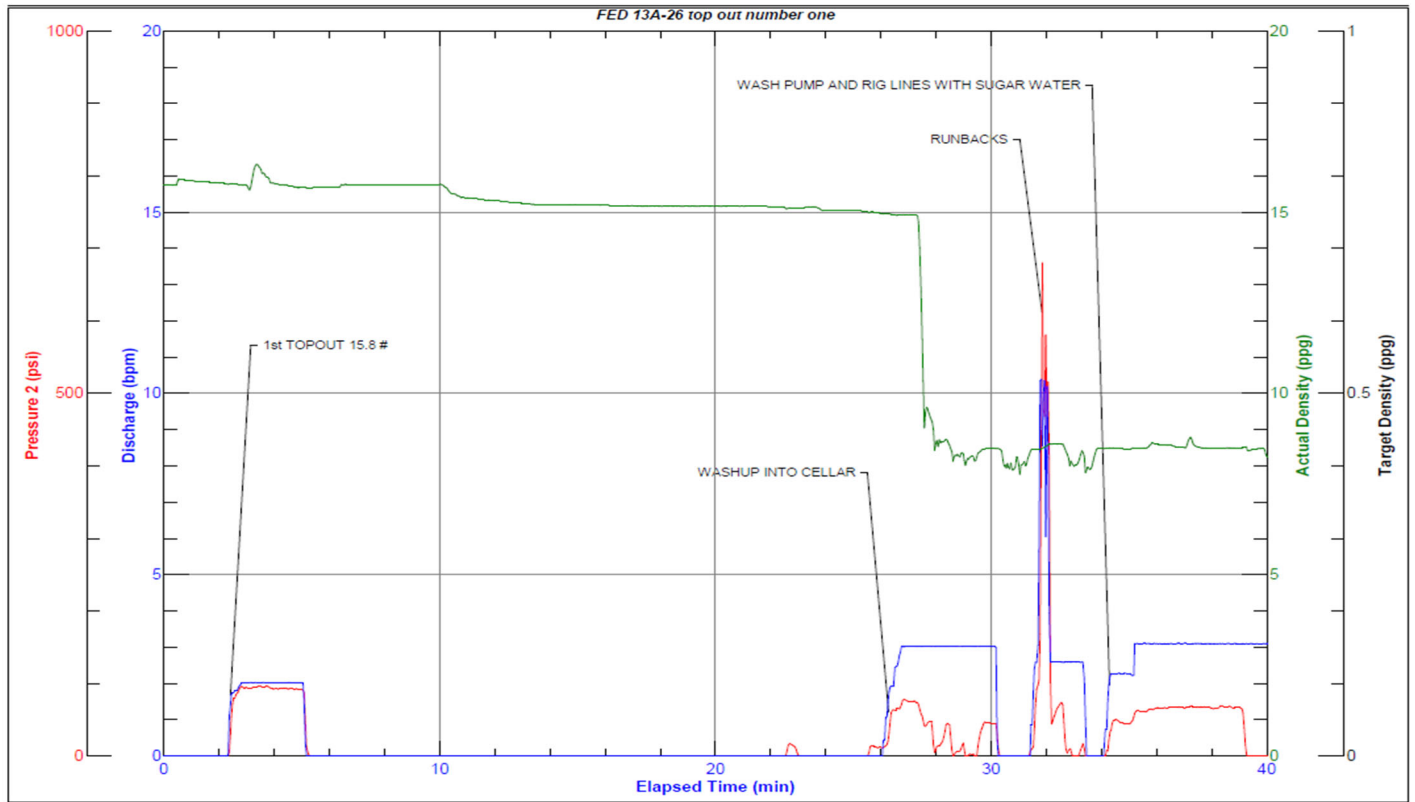


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