



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED #11D-26-496 05-045-24459
S:26 T:4S R:96W Garfield CO

CallSheet #: 83061
Proposal #: 62633



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	100	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	3035	0
Casing	Inner	9.625	8.921	36	n/a	0	3035	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
AS Cement Trailer Float	CTF-7145	TRC(TRB)-090	Mendoza, Victor	
AS Cement Trailer Float	CTF-9898	TRC(TRB)-053	Dragon, Shane	
Field Storage Silo	FSS(CTS)-469			
Field Storage Silo	FSS(CTS)-468			
Cement Trailer Float	CTF-286		Burton, Devin	Schweitzer, Casey
Cement Pump Float	CPF-136	TRH-1140	Woronovitch, Collin	
Light Duty Vehicles	LDV-061		Aden, Mark	

Timing

Event	Date/Time
Call Out	8/21/2022 20:20
Depart Facility	8/22/2022 00:40
On Location	8/22/2022 02:28
Rig Up Iron	8/22/2022 02:50
Job Started	8/22/2022 05:20
Job Completed	8/22/2022 12:43
Rig Down Iron	8/22/2022 13:10
Depart Location	8/22/2022 14:00

General Job Information

Metrics	Value
Well Fluid Density	9.5 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	350 bbls
Rig Circulation Time	0.58 hours
Calculated Displacement	228 bbls
Actual Displacement	228 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	82 bbls
Well Topped Out	Yes
Top Out Volume	17 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	9.5 lb/gal
Well Fluid Density Out of Well	9.5 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	64.5 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	240	0-1000
Total Hardness	425 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	177	0

Circulation Details

Stage 1: Gained returns at 8 bbls into water, Partial returns at 177 bbls into lead cement, No returns at 198 bbls into lead cement, Regained returns at 210 bbls into lead cement, Returns at 15 bbls into displacement. Stage 2: Full returns.

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	12.50	2.23	12.56		161.00	63.94	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-7P	Accelerator	2.00	lb/sk
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

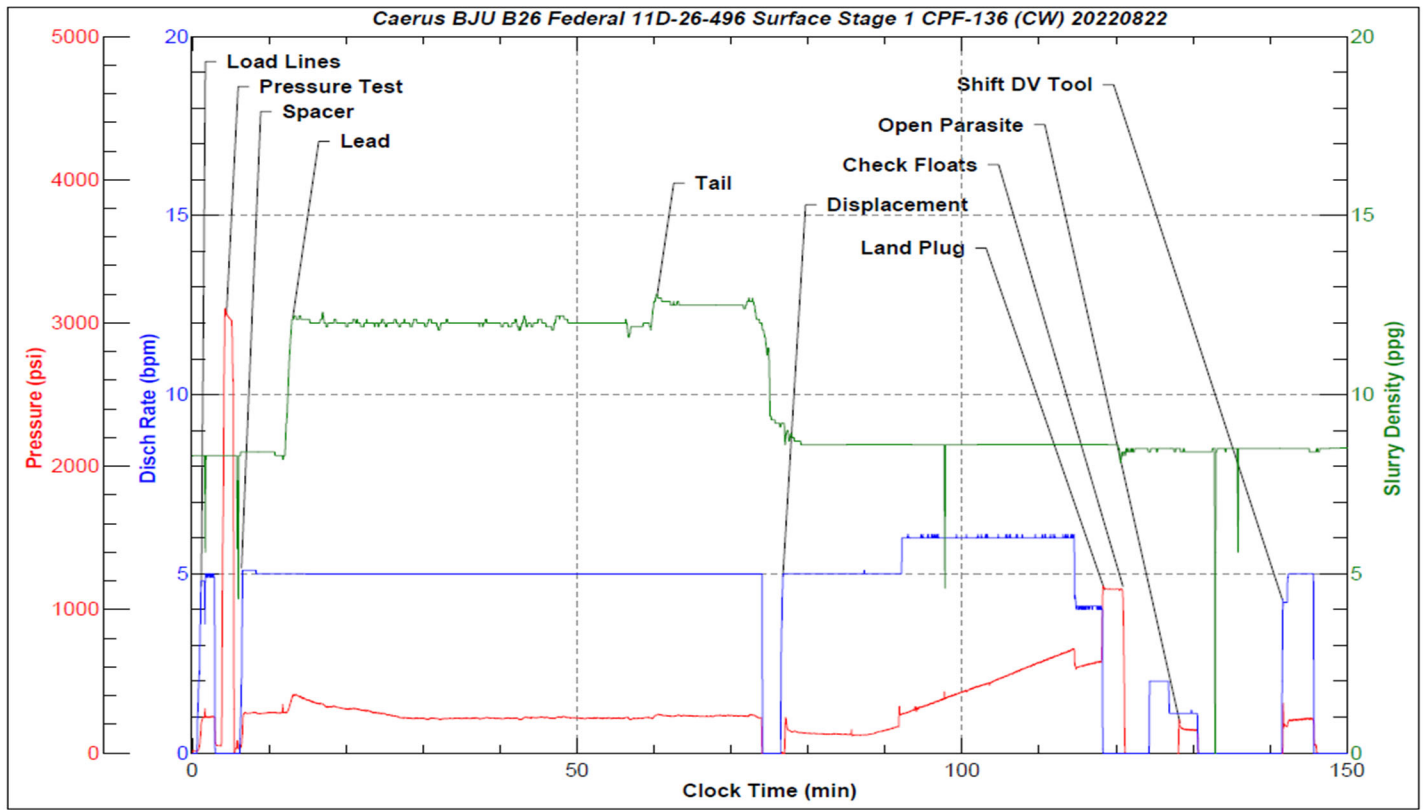
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Annular Pressure (psi)	Comment
1	Callout	8/21/2022	20:20						Yard call 23:00 on location 02:00 08/22/2022
2	Depart For Location	8/22/2022	00:40						Leave Rifle shop for location
3	Arrive On Location	8/22/2022	02:28						Arrive on location, rig running casing
4	Spot Equipment	8/22/2022	02:30						Spot in all equipment
5	Rig Up Iron	8/22/2022	02:50						Pre rig up safety meeting, rig in all lines and equipment to the cellar
6	Waiting	8/22/2022	03:37						Waiting on rig to finish casing and circulate
7	Safety Meeting	8/22/2022	05:00						Safety meeting with company man and rig crew
8	End Circulation	8/22/2022	05:19						Rig ended circulation, circulated .58 hrs; 350 bbls
9	Rig Up Iron	8/22/2022	05:20						Rig up cement head and lines in the cellar
10	Pump Spacer	8/22/2022	05:20	8.34	5	10	296		1st Stage: Pumping fresh water spacer, No returns
11	Pressure Test Lines	8/22/2022	05:24				3000		Pressure test lines
12	Pump Spacer	8/22/2022	05:26	8.34	5	30	350		Pumping fresh water spacer, Returns
13	Pump Lead Cement	8/22/2022	05:33	12	5	0	437		Pumping lead cement, Returns
14	Pump Lead Cement	8/22/2022	05:43	12	5	50	333		Pumping lead cement
15	Pump Lead Cement	8/22/2022	05:53	12	5	100	280		Pumping lead cement
16	Pump Lead Cement	8/22/2022	06:04	12	5	150	290		Pumping lead cement; Partial returns at 177 bbls, Lost returns at 198 bbls.
17	Pump Lead Cement	8/22/2022	06:12	12	5	200	278		Pumping lead cement; Returns at 210 bbls.
18	Pump Lead Cement	8/22/2022	06:19	12	5	235	277		Pumping lead cement
19	Pump Tail Cement	8/22/2022	06:20	12.5	5	0	300		Pumping tail cement, Returns.
20	Pump Tail Cement	8/22/2022	06:29	12.5	5	50	300		Pumping tail cement
21	Pump Tail Cement	8/22/2022	06:33	12.5	5	64	282		Pumping tail cement
22	Drop Top Plug	8/22/2022	06:37						Dropped top plug, verified by company man and tool hand
23	Pump Displacement	8/22/2022	06:37	8.34	5	0	217		Pumping fresh water displacement, Returns at 15 bbls.
24	Pump Displacement	8/22/2022	06:47	8.34	5	50	169		Pumping fresh water displacement
25	Pump Displacement	8/22/2022	06:56	8.34	6	100	396		Pumping fresh water displacement
26	Pump Displacement	8/22/2022	07:04	8.34	6	150	560		Pumping fresh water displacement

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Annular Pressure (psi)	Comment
27	Pump Displacement	8/22/2022	07:13	8.34	6	200	721		Pumping fresh water displacement
28	Pump Displacement	8/22/2022	07:18	8.34	4	228	689		Pumping fresh water displacement
29	Land Plug	8/22/2022	07:18				1216		Land plug, FCP 689 PSI bumped to 1216 PSI
30	Check Floats	8/22/2022	07:22						Bled pressure, floats held, 1 BBL bled back
31	Open parasite	8/22/2022	07:28	8.34	1.5	10	307		Pumping sugar water down parasite line. Pressure broke over @ 307 PSI
32	Drop Opening Plug	8/22/2022	07:32						Drop DV Tool opening plug
33	Waiting	8/22/2022	07:32						Waiting for Plug to fall
34	Other	8/22/2022	07:41	8.34	1.5		420		Pumping against tool to open. Shifted open @ 420 PSI. No returns
35	Pump Spacer	8/22/2022	07:41	8.34	5	20	183		Pumping fresh water spacer
36	Circulate Well	8/22/2022	07:46						Turned over to rig to circulate. 82 bbls cement circulated off of tool.
37	Pump Spacer	8/22/2022	08:48	8.34	5	20	160		2nd Stage: Pumping fresh water spacer. Returns
38	Pump Cement	8/22/2022	08:58	12	5	0	200		Pumping Cement
39	Pump Cement	8/22/2022	09:10	12	5	50	285		Pumping Cement
40	Pump Cement	8/22/2022	09:21	12	5	100	284		Pumping Cement
41	Pump Cement	8/22/2022	09:31	12	4	150	205		Pumping Cement
42	Pump Cement	8/22/2022	09:34	12	4	157	200		Pumping Cement
43	Drop Top Plug	8/22/2022	09:36						Drop top plug verified by company man and tool hand
44	Pump Displacement	8/22/2022	09:37	8.34	5	0	274		Pumping fresh water displacement, Cement to surface at 0 bbls. 69 bbls returned.
45	Pump Displacement	8/22/2022	09:48	8.34	5	50	308		Pumping fresh water displacement
46	Pump Displacement	8/22/2022	09:51	8.34	4	69	281		Pumping fresh water displacement
47	Land Plug	8/22/2022	09:51				2165		Land plug, FCP 281 PSI bumped to 2165 PSI
48	Check Floats	8/22/2022	09:53						Bled pressure, floats held; .5 BBL bled back
49	Pump Top Out	5/8/2022	12:21	15.8		17			Top Out well at 15.8 lb/g; Cement to surface at 17 bbls.
50	Rig Down	8/22/2022	13:10						Rig down iron
51	Depart location	8/22/2022	14:00						Depart location for Rifle yard

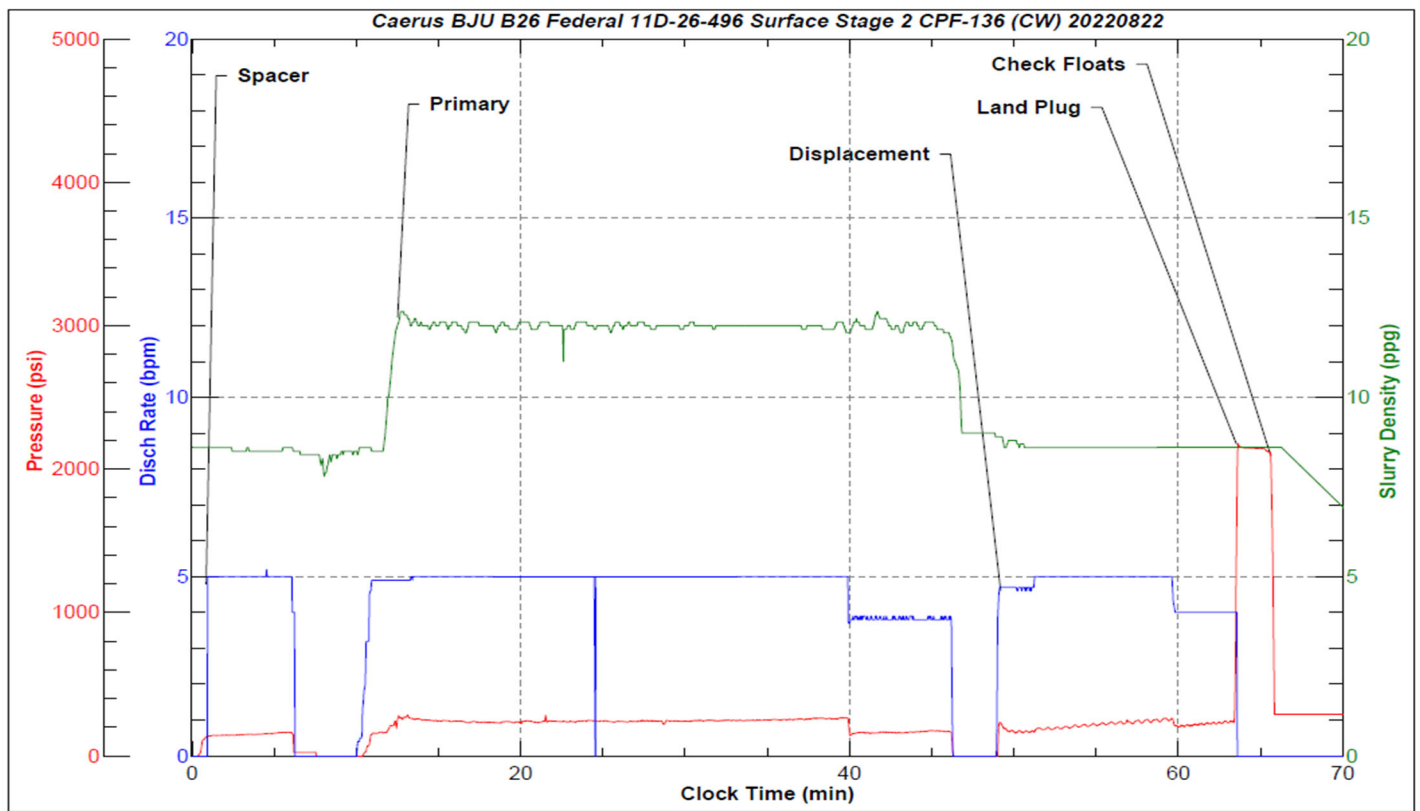
Pump Diagrams



JobMaster Program Version 5.01C1
Job Number: 83061
Customer: Caerus
Well Name: BJU B26 Federal 11D-26-496



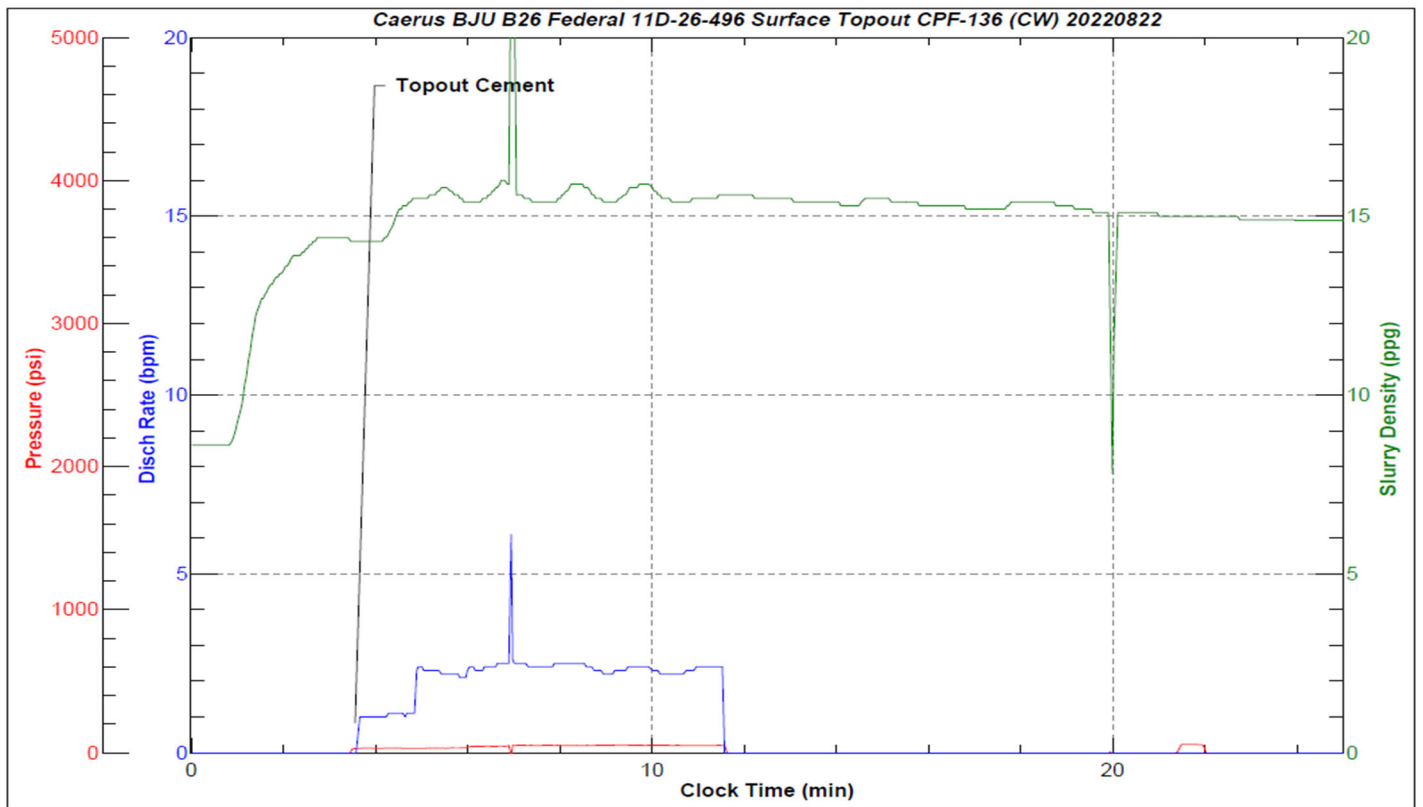
Job Start: Wednesday, August 24, 2022



Job Start: Wednesday, August 24, 2022



JobMaster Program Version 5.01C1
Job Number: 83061
Customer: Caerus
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Job Start: Wednesday, August 24, 2022