



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED 22B-26-496 05-045-24458
S:26 T:4S R:96W Garfield CO

CallSheet #: 82658
Proposal #: 61861



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	130	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
AS Cement Trailer Float	CTF-7145	TRC(TRB)-201	Kirchenwitz, Jacob
AS Cement Trailer Float	CTF-9309	TRC(TRB)-201	Kirchenwitz, Jacob
Field Storage Silo	FSS(CTS)-469		
Field Storage Silo	FSS(CTS)-468		
Cement Trailer Float	CTF-280	TRC(TRB)-053	Morales, Adrian
Light Duty Vehicles	LDV-061		Aden, Mark
Cement Pump Float	CPF-058	TRH-959	Hale, Jason

Timing

Event	Date/Time
Call Out	7/28/2022 21:30
Depart Facility	7/29/2022 06:00
On Location	7/29/2022 07:44
Rig Up Iron	7/29/2022 08:00
Job Started	7/29/2022 10:58
Job Completed	7/29/2022 17:28
Rig Down Iron	7/29/2022 18:10
Depart Location	7/29/2022 19:00

General Job Information

Metrics	Value
Well Fluid Density	9.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	471 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	228, 70 bbls
Actual Displacement	228, 70 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	60 bbls
Well Topped Out	No

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	9.6 lb/gal
Well Fluid Density Out of Well	9.6 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	68.3 °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	1	0

Circulation Details

1st Stage: Returns during water spacer, No returns when swapped to cement. Re-gained returns 60 bbls into tail through remainder of 1st stage.
2nd Stage: Gained returns 6 bbls into water. Maintained until plug landed.

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

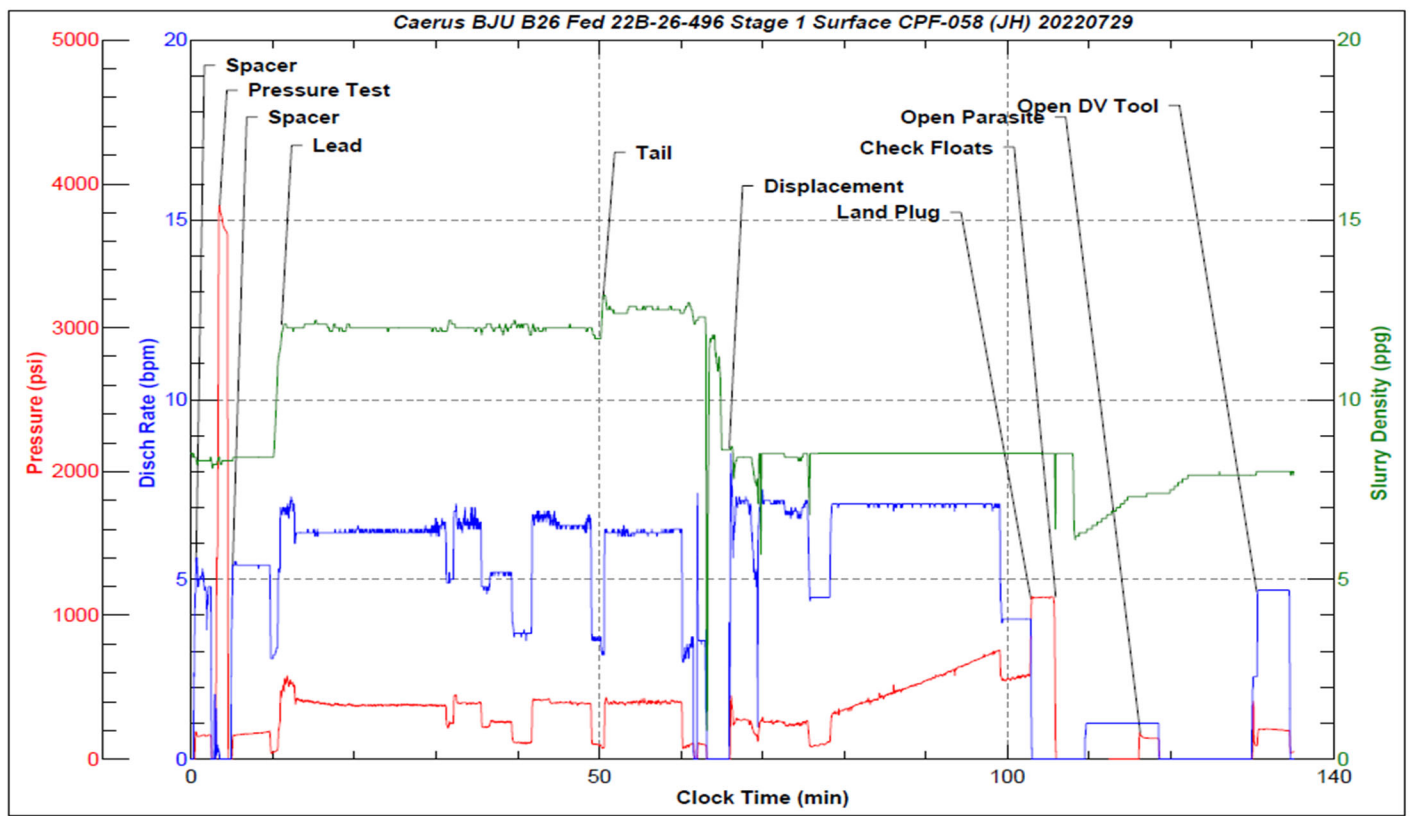
Line	Event	Date (MM/DD/Y Y)	Time (HH:M M)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	7/28/2022	21:30					Yard call 0430 on location 0730 07/29/2022
2	Depart For Location	7/29/2022	06:00					Leave Rifle shop for location
3	Arrive On Location	7/29/2022	07:44					Arrive on location, rig running casing
4	Spot Equipment	7/29/2022	07:45					Spot in all equipment
5	Rig Up Iron	7/29/2022	08:00					Pre rig up safety meeting, rig in all lines and equipment to the cellar
6	Waiting	7/29/2022	08:50					Waiting on rig to finish casing and circulate
7	Safety Meeting	7/29/2022	10:35					Safety meeting with company man and rig crew
8	End Circulation	7/29/2022	10:55					Rig ended circulation, circulated 1.5 hrs; 471 bbls: Returns
9	Rig Up Iron	7/29/2022	10:56					Rig up cement head and lines in the cellar
10	Pump Spacer	7/29/2022	10:59	8.34	5.5	10	180	1st Stage: Pumping fresh water spacer, Returns
11	Pressure Test Lines	7/29/2022	11:01				3000	Pressure test lines
12	Pump Spacer	7/29/2022	11:03	8.34	5.5	30	170	Pumping fresh water spacer, Returns
13	Pump Lead Cement	7/29/2022	11:04	12	5.5	0	252	Pumping lead cement, No returns
14	Pump Lead Cement	7/29/2022	11:18	12	6.5	50	388	Pumping lead cement
15	Pump Lead Cement	7/29/2022	11:25	12	6.5	100	403	Pumping lead cement
16	Pump Lead Cement	7/29/2022	11:34	12	6.5	150	411	Pumping lead cement
17	Pump Lead Cement	7/29/2022	11:42	12	6.5	200	404	Pumping lead cement
18	Pump Lead Cement	7/29/2022	11:48	12	3	235	79	Pumping lead cement
19	Pump Tail Cement	7/29/2022	11:49	12.5	6.5	0	417	Pumping tail cement, No returns
20	Pump Tail Cement	7/29/2022	11:57	12.5	6.5	50	421	Pumping tail cement, Returns at 60 bbls
21	Pump Tail Cement	7/29/2022	12:01	12.5	3	64	110	Pumping tail cement
22	Drop Top Plug	7/29/2022	12:05					Dropped top plug, verified by company man and tool hand
23	Pump Displacement	7/29/2022	12:05	8.34	6	0	230	Pumping fresh water displacement, Returns
24	Pump Displacement	7/29/2022	12:13	8.34	7	50	250	Pumping fresh water displacement
25	Pump Displacement	7/29/2022	12:21	8.34	7	100	400	Pumping fresh water displacement
26	Pump Displacement	7/29/2022	12:29	8.34	7	150	550	Pumping fresh water displacement
27	Pump Displacement	7/29/2022	12:36	8.34	7	200	730	Pumping fresh water displacement
28	Pump Displacement	7/29/2022	12:41	8.34	4	228	582	Pumping fresh water displacement
29	Land Plug	7/29/2022	12:41				1170	Land plug, FCP 340 PSI bumped to 1170 PSI
30	Check Floats	7/29/2022	12:45					Bled pressure, floats held, 1 BBL bled back

Line	Event	Date (MM/DD/Y Y)	Time (HH:M M)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
31	Open parasite	7/29/2022	13:08	8.34	1	10	190	Pumping sugar water down parasite line. Pressure broke over @ 190 PSI
32	Drop Opening Plug	7/29/2022	12:59					Drop DV Tool opening plug
33	Waiting	7/29/2022	12:59					Waiting for Plug to fall
34	Other	7/29/2022	13:08	8.34	2		450	Pumping against tool to open. Shifted open @ 450 PSI. Returns at 8.5 bbls
35	Pump Spacer	7/29/2022	13:09	8.34	5	20		Pumping fresh water spacer
36	Circulate Well	7/29/2022	13:16					Turned over to rig to circulate. No cement returned.
37	Pump Spacer	7/29/2022	16:25	8.34	5	40	170	2nd Stage: Pumping fresh water spacer. Returns 6 bbls in. CPF-058 lost slurry pump at 14:06, 1.5 bbls into spacer. CPF-053 sent up from Rifle yard, arrived at 16:00.
38	Pump Cement	7/29/2022	16:33	12	5	0	350	Pumping Cement
39	Pump Cement	7/29/2022	16:42	12	5	50	300	Pumping Cement
40	Pump Cement	7/29/2022	16:52	12	5	100	303	Pumping Cement
41	Pump Cement	7/29/2022	17:06	12	4	150	207	Pumping Cement
42	Pump Cement	7/29/2022	17:07	12	3.5	157	200	Pumping Cement
43	Drop Top Plug	7/29/2022	17:09					Drop top plug verified by company man and tool hand
44	Pump Displacement	7/29/2022	17:10	8.34	5	0	230	Pumping fresh water displacement, Cement to surface at 10 bbls. 60 bbls returned.
45	Pump Displacement	7/29/2022	17:20	8.34	5	50	340	Pumping fresh water displacement
46	Pump Displacement	7/29/2022	17:23	8.34	4	70	290	Pumping fresh water displacement
47	Land Plug	7/29/2022	17:23				1960	Land plug, FCP 290 PSI bumped to 1960 PSI
48	Check Floats	7/29/2022	17:28					Bled pressure, floats held; .5 BBL bled back
49	Rig Down	7/29/2022	18:10					Rig down iron
50	Depart location	7/29/2022	19:00					Depart location for Rifle yard

Pump Diagrams



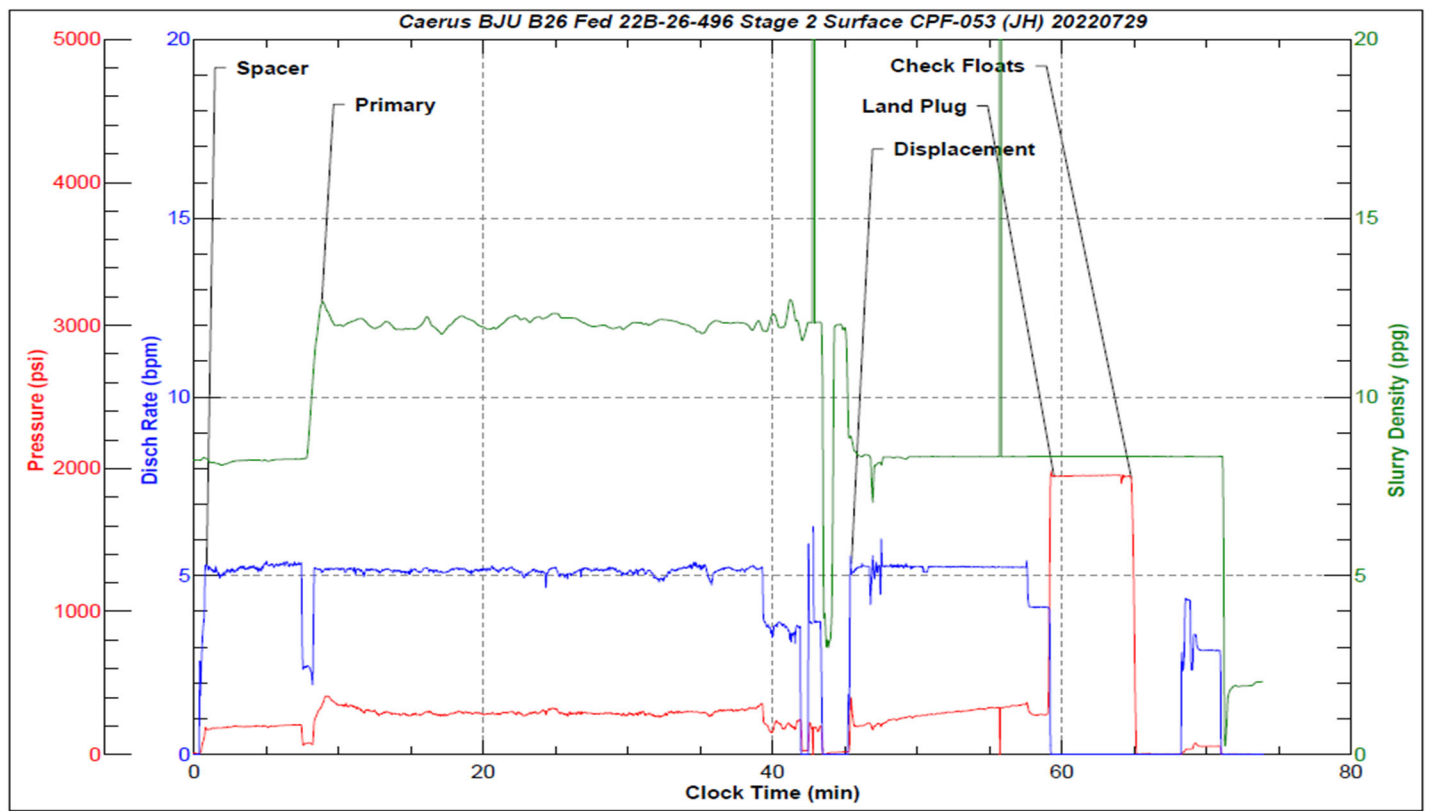
JobMaster Program Version 5.01C1
Job Number: 82658
Customer: Caerus
Well Name: BJU B26 Fed 22B-26-496



Job Start: Monday, August 01, 2022



JobMaster Program Version 5.01C1
Job Number: 82658
Customer: Caerus
Well Name: BJU B26 Fed 22B-26-496



Job Start: Friday, July 29, 2022