



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED #12D-26-496 05-045-24456
S:26 T:4S R:96W Garfield CO

CallSheet #: 83922
Proposal #: 64016



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	3000	0
Casing	Inner	9.625	8.921	36	n/a	0	3000	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-469		
Field Storage Silo	FSS-468		
AS Cement Trailer Float	CTF-9299	TRC-188	Carrasco, Joel
AS Cement Trailer Float	CTF-901	TRB-421	Jackson, Duewayne
Cement Trailer Float	CTF-242	TRB-421	Jackson, Duewayne
Light Duty Vehicles	LDV-062		Lancaster, Stephen
Cement Pump Float	CPF-011	TRH-957	Carrasco, Joel
Cement Pump Float	CPF-136	TRH-1137	Woronovitch, Collin

Timing

Event	Date/Time
Call Out	10/9/2022 09:00
Depart Facility	10/9/2022 14:00
On Location	10/9/2022 15:11
Rig Up Iron	10/9/2022 15:15
Job Started	10/9/2022 16:50
Job Completed	10/10/2022 02:45
Rig Down Iron	10/10/2022 03:30
Depart Location	10/10/2022 04:55

General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	682 bbls
Rig Circulation Time	1 hours
Calculated Displacement	226 / 68 bbls
Actual Displacement	226 / 68 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	70 bbls
Well Topped Out	Yes
Top Out Volume	20 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	9.4 lb/gal
Well Fluid Density Out of Well	9.4 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	61 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	72 mg/L	0-3000 mg/L
Total Alkalinity	110	0-1000
Total Hardness	70 mg/L	0-500 mg/L
Carbonates	NA mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

Circulation

Lost Circulation Experienced

No

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

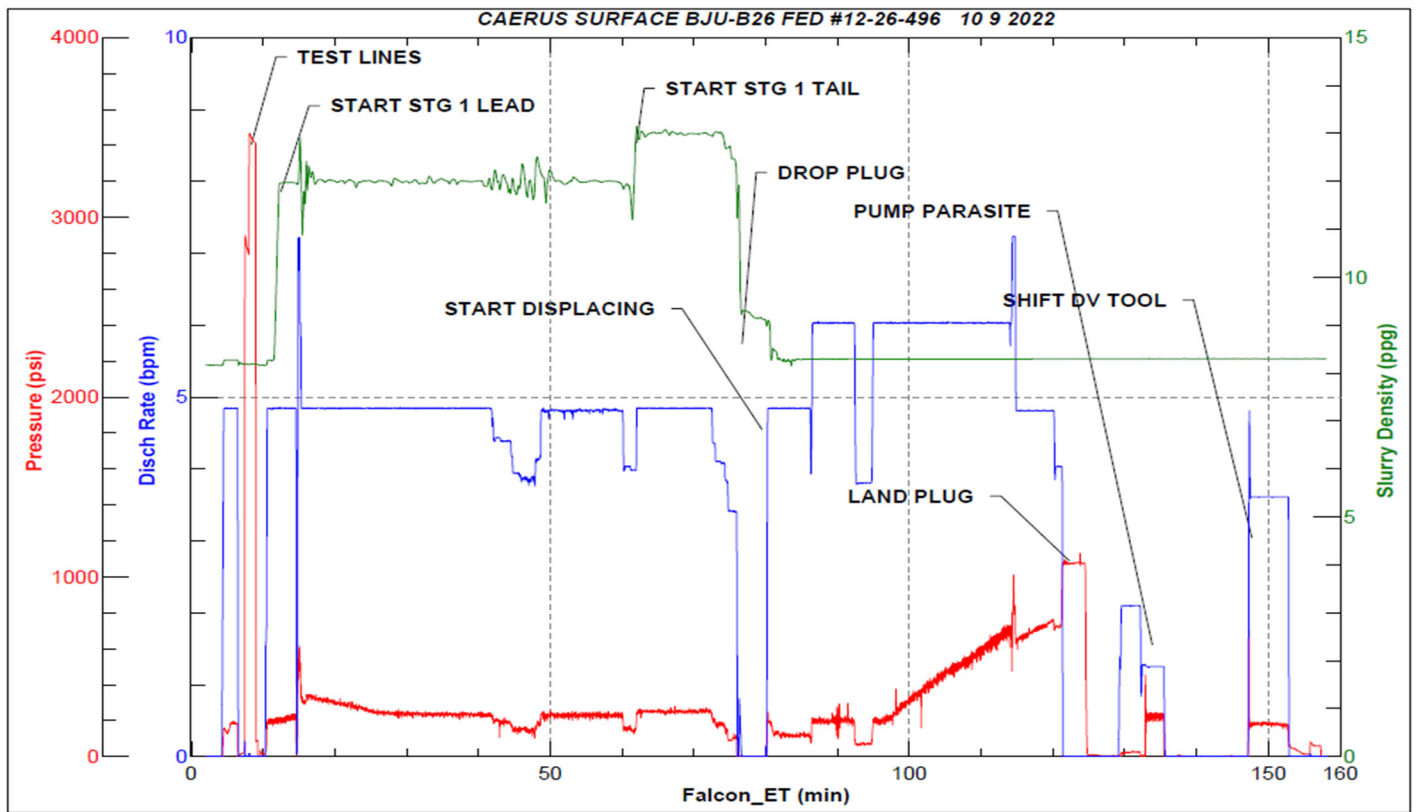
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	10/9/2022	09:00					CREW CALLED OUT FOR AN ON-LOCATION TIME OF 14:00 10/9/2022
2	Leave for location	10/9/2022	14:00					AC CREW DEPART RCO YARD FOR LOCATION
3	Arrive On Location	10/9/2022	15:11					AC CREW ARRIVES AT LOCATION
4	Rig Up Iron	10/9/2022	15:15					RIG UP ALL IRON AND HOSES
5		10/9/2022	00:00					
6	Safety Meeting	10/9/2022	16:50					JSA PRE JOB SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
7	Fill Lines	10/9/2022	17:06	8.34	2.5	5	54	BEGIN STAGE 1. FILL LINES WITH 5 BBLS FRESH WATER
8	Pressure Test Lines	10/9/2022	17:08				3200	PRESSURE TEST LINES TO 3000 PSI
9	Water spacer	10/9/2022	17:11	8.34	5	35	232	PUMP 20 BBLS FRESH WATER SPACER
10	Pump Lead Cement	10/9/2022	17:18	12	5	2	210	BEGIN PUMPING LEAD CEMENT. DENSITY VERIFIED WITH PRESSURIZED MUD SCALE
11	Pump Lead Cement	10/9/2022	17:28	12	5	50	227	50 BBLS LEAD CEMENT PUMPED (got returns @ 30 bbls of lead pump 17:24)
12	Pump Lead Cement	10/9/2022	17:38	12	5	100	239	100 BBLS LEAD CEMENT PUMPED (lost returns @ 95 bbls of lead pumped 17:40)
13	Pump Lead Cement	10/9/2022	17:50	12	4	150	133	150 BBLS LEAD CEMENT PUMPED
14	Pump Lead Cement	10/9/2022	17:59	12	5	200	232	200 BBLS LEAD CEMENT PUMPED
15	Pump Lead Cement	10/9/2022	18:06	12	5	235	224	235 BBLS LEAD CEMENT PUMPED
16	Pump Tail Cement	10/9/2022	18:07	13	5	2	256	BEGIN PUMPING TAIL CEMENT. DENSITY VERIFIED WITH PRESSURIZED MUD SCALE
17	Pump Tail Cement	10/9/2022	18:14	13	5	50	263	50 BBLS TAIL CEMENT PUMPED (no returns)
18	Pump Tail Cement	10/9/2022	18:18	13	5	64	271	64 BBLS TAIL CEMENT PUMPED
19	Shutdown	10/9/2022	18:18					SHUT DOWN, WASHUP PUMP, LOAD PLUG
20	Drop Top Plug	10/9/2022	18:22	8.34	5	5	200	DROP PLUG, WITNESSED BY CUSTOMER REP. BEGIN FRESH WATER DISPLACEMENT, WASHED UP ON TOP OF PLUG
21	Pump Displacement	10/9/2022	18:33	8.34	6	50	214	50 BBLS FRESH WATER DISPLACEMENT PUMPED
22	Pump Displacement	10/9/2022	18:42	8.34	6	100	324	100 BBLS FRESH WATER DISPLACEMENT PUMPED
23	Pump Displacement	10/9/2022	18:51	8.34	6	150	558	150 BBLS FRESH WATER DISPLACEMENT PUMPED (got returns @ 130 bbls pumped)
24	Pump Displacement	10/9/2022	19:01	8.34	4.8	200	716	200 BBLS FRESH WATER DISPLACEMENT PUMPED,
25	Pump Displacement	10/9/2022	19:06	8.34	4.2	226	527	226 BBLS FRESH WATER DISPLACEMENT PUMPED
26	Land Plug	10/9/2022	19:06	8.34	4	226	1016	LAND PLUG, FCP - 715 PSI, BUMPED TO 1077 PSI
27	Check Floats	10/9/2022	19:08					CHECK FLOATS, FLOATS HELD. 1 BBLS BACK
28	Other	10/9/2022	19:12	8.34	2	10	18	PUMP 10 BBLS SUGAR WATER DOWN PARASITE LINE, BROKE OVER AT 7 BBLS

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
29	Drop Opening Plug	10/9/2022	19:21	8.34	0		0	DROP DV TOOL OPENING BOMB.
30	Circulate Well	10/9/2022	19:30	8.34	4	10	746	SHIFT DV TOOL, BEGIN CIRCULATING OFF DV TOOL, OPENED W/ 746 PIS
31	Circulate Well	10/9/2022	19:36	8.34	4	20	110	CIRCULATE 20 BBLS THROUGH DV TOOL, (no returns)
32	Waiting	10/9/2022	19:37					SHUT DOWN. WAIT WHILE RIG CIRCULATES ABOVE DV TOOL. (46 bbls cement to surface)
33	Other	10/9/2022	20:21	8.34	5	20	200	BEGIN STAGE 2, PUMP 20 BBLS FRESH WATER
34	Pump Cement	10/9/2022	20:24	12	5.6	5	240	BEGIN PUMPING PRIMARY CEMENT, DENSITY VERIFIED WITH PRESSURIZED MUD SCALE
35	Pump Cement	10/9/2022	20:32	12	5.6	50	255	50 BBLS PRIMARY CEMENT PUMPED
36	Pump Cement	10/9/2022	20:41	12	5.6	100	256	100 BBLS PRIMARY CEMENT PUMPED
37	Pump Cement	10/9/2022	20:55	12	5.6	157	250	157.1 BBLS PRIMARY CEMENT PUMPED,
38	SHUTDOWN	10/9/2022	20:55	8.34				SHUT DOWN, WASHUP PUMP
39	Drop Top Plug	10/9/2022	20:57	8.34	5.5	5	114	DROP PLUG, WITNESSED BY CUSTOMER REP. BEGIN FRESH WATER DISPLACEMENT, WASHED UP ON TOP OF PLUG
40	Pump Displacement	10/9/2022	21:06	8.34	5.5	50	285	50 BBLS FRESH WATER DISPLACEMENT PUMPED
41	Pump Displacement	10/9/2022	21:11	8.34	4	68	265	66 BBLS FRESH WATER DISPLACEMENT PUMPED
42	Land Plug	10/9/2022	21:11	8.34	3.3	68	1895	LAND PLUG, FCP - 265 PSI, BUMPED TO 1895 PSI (70 bbls cement to surface)
43	Bleed pressure	10/9/2022	21:13					BLEED OFF PRESSURE, TOOL CLOSED, 0.5 BBLS BACK
44	Waiting to top out	10/9/2022	21:20					Waiting to top out
45	Pump Topout #1	10/9/2022	23:18	15.8	2	27	95	PUMPED 27 BBLS (132 sks) OF TOPOUT AND GOT CEMENT TO SURFACE ,, (shut down @ 23:39) Wait 2 hours for 2nd TO
46	Pump Topout #2	10/10/2022	02:23	15.8	2	20	78	PUMPED 20 BBLS (98 SKS) OF TOPOUT GOT 5 BBLS CEMENT TO SURFACE , (shut down @ 2:34,)
47	Cement in place	10/10/2022	02:45					CEMENT IN PLACE , JOB COMPLETE
48	Wash truck to cellar	10/10/2022	02:50					Wash truck and lines
49	Rig Down Iron	10/10/2022	03:30					Rig down iron and hoses
50	Depart Location	10/10/2022	04:55					Depart location for RCO

Pump Diagrams



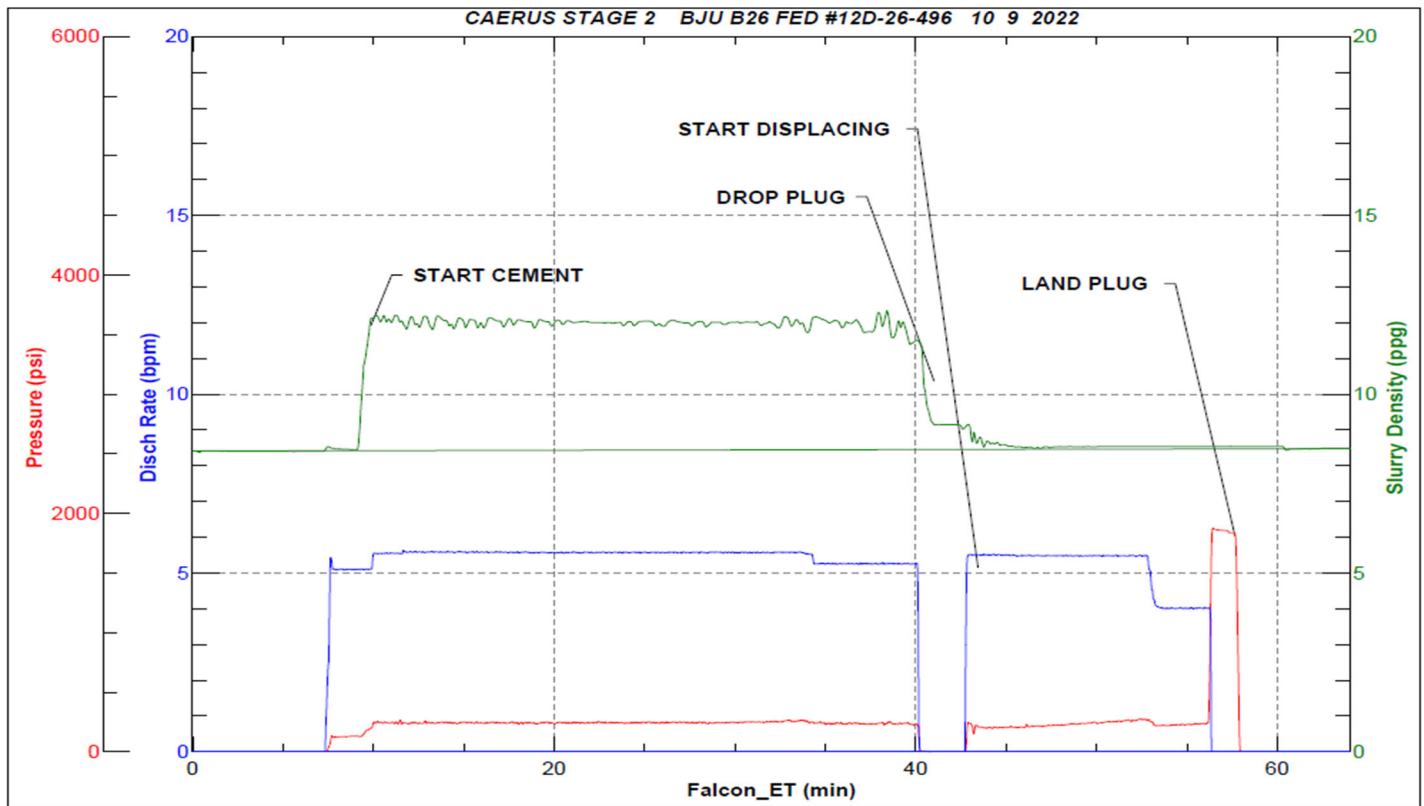
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Customer: CAERUS
Well Name: BJU B26 FED #12D-26-496



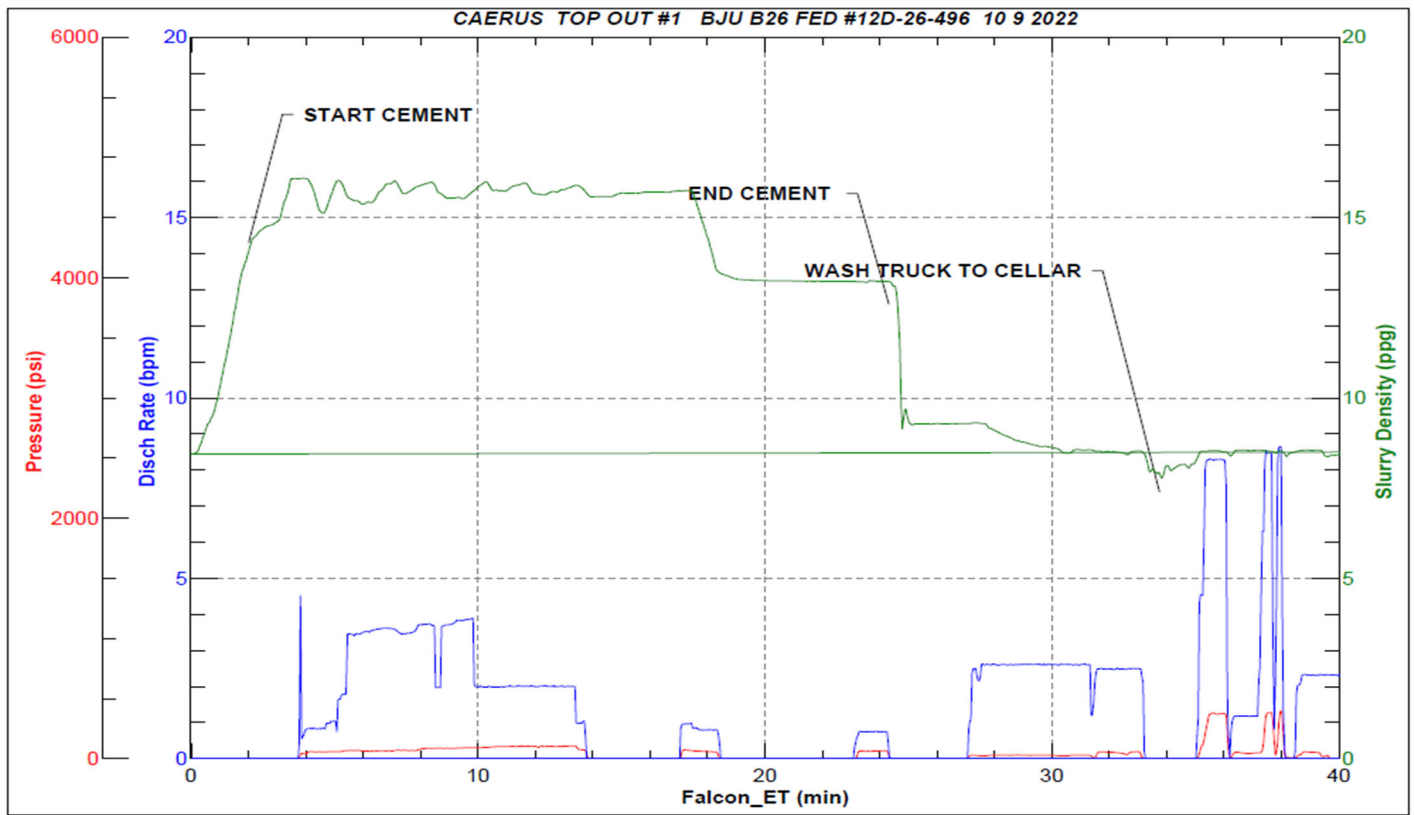
Job Start: Sunday, October 09, 2022



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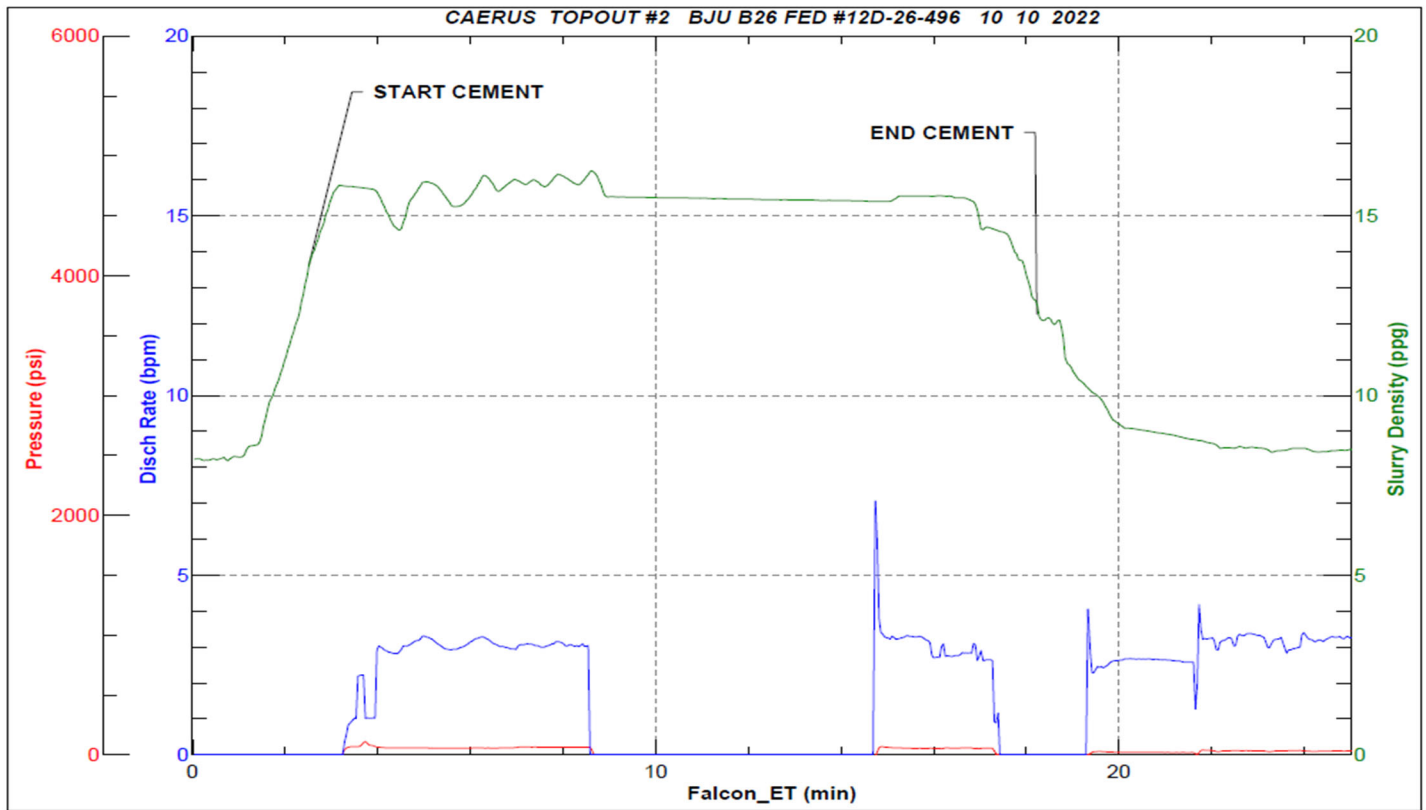
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Job Start: Monday, October 10, 2022