



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED #13D-26-496 05-045-24450
S:26 T:4S R:96W Garfield CO

CallSheet #: 85100
Proposal #: 65802



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,

Krystal Schell

Field Engineer I | (719) 992-1830 | krystal.schell@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	3018	0
Casing	Inner	9.625	8.921	36	n/a	0	3010.3	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Cement Trailer Float	CTF-182	TRC-112	Ridgeway, Danny	
Field Storage Silo	FSS-469			
Field Storage Silo	FSS-468			
Light Duty Vehicles	LDV-061		Woronovitch, Collin	Morales, Adrian
Cement Pump Float	CPF-058	TRH-959	Beacon, Keith	
Tractors	TRC-202		Balint, Daniel	

Timing

Event	Date/Time
Call Out	12/21/2022 19:00
Depart Facility	12/22/2022 06:15
On Location	12/22/2022 09:30
Rig Up Iron	12/22/2022 09:45
Job Started	12/22/2022 15:00
Job Completed	12/23/2022 00:30
Rig Down Iron	12/23/2022 00:45
Depart Location	12/23/2022 02:30

General Job Information

Metrics	Value
Well Fluid Density	9.3 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	600 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	227/70 bbls
Actual Displacement	227/70 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	13 bbls
Well Topped Out	Yes
Top Out Volume	48 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	9.3 lb/gal
Well Fluid Density Out of Well	9.3 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	55 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	450 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	80 mg/L	0-500 mg/L
Carbonates	NA mg/L	0-100 mg/L
Sulfates	180 mg/L	0-1500 mg/L
Potassium	200 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

NO RETURNS DURING STAGE 1 OR STAGE 2. NO RETURNS WHEN RIG CIRCULATED OFF DV TOOL. HAD TO TOP OUT

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		227.00	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		70.00	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



Fluid	Type	Fluid	Product	Function	Conc.	Uom
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

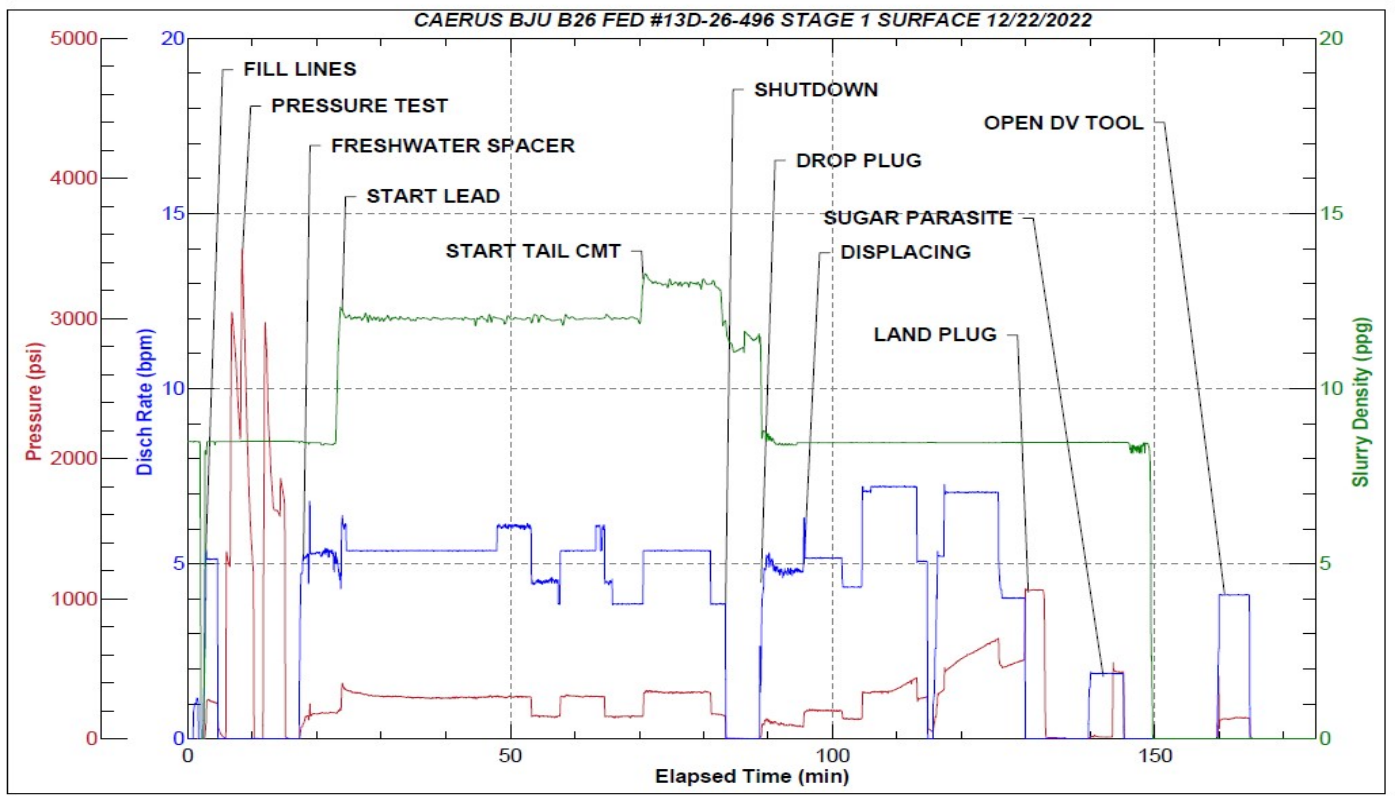
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	12/21/2022	19:00					CREW CALLED OUT FOR ON LOCATION TIME OF 8:00 12/22
2	Depart Location	12/22/2022	06:15					CREW DEPARTS RIFLE, CO, AND HEADS TO RIG LOCATION
3	Arrive On Location	12/22/2022	09:30					CREW AND EQUIPMENT ARRIVE ON RIG LOCATION
4	Rig Up Iron	12/22/2022	09:45					PRE-RIG UP SAFETY MEETING, RIG UP ALL IRON, HOSES, AND EQUIPMENT
5	Waiting	12/22/2022	11:30					IRON RIG UP IS COMPLETE WAITING ON RIG TO FINISH RUNNING CASING
6	Other	12/22/2022	13:00					CASING ON BOTTOM, RIG CIRCULATING. FINISH RIGGING UP HEAD AND LINES
7	Safety Meeting	12/22/2022	15:00					PRE JOB-SAFETY MEETING WITH COMPANY MAN AND RIG CREW
8	Fill Lines	12/22/2022	15:31	8.34	5.1	10	290	FILL LINES WITH 10 BBLs FRESHWATER, NO RETURNS
9	Pressure Test Lines	12/22/2022	15:34	8.34			3300	PRESSURE TEST LINES AND EQUIPMENT TO 3000 PSI
10	Pump Spacer	12/22/2022	15:44	8.34	5	30	197	FINISH PUMPING 40 BBL FRESHWATER SPACER, NO RETURNS
11	Pump Lead Cement	12/22/2022	15:52	12	6	0	360	BEGIN PUMPING 12.0 PPG LEAD CEMENT. WEIGHT VERIFIED BY MUD SCALE
12	Pump Lead Cement	12/22/2022	16:01	12	5.2	50	350	50 BBLs LEAD CEMENT PUMPED. NO RETURNS
13	Pump Lead Cement	12/22/2022	16:10	12	5.4	50	304	100 BBLs LEAD CEMENT PUMPED
14	Pump Lead Cement	12/22/2022	16:20	12	6	50	301	150 BBLs LEAD CEMENT PUMPED
15	Pump Lead Cement	12/22/2022	16:29	12	5.4	50	300	200 BBLs LEAD CEMENT PUMPED
16	Pump Lead Cement	12/22/2022	16:39	12	3.9	35	170	235 BBLs (524 SKS) LEAD CEMENT PUMPED. NO RETURNS
17	Pump Tail Cement	12/22/2022	16:39	13	5.4	0	336	BEGIN PUMPING 13.0 PPG TAIL CEMENT. WEIGHT VERIFIED BY MUD SCALE
18	Pump Tail Cement	12/22/2022	16:45	13	5.4	30	335	30 BBLs TAIL CEMENT PUMPED
19	Pump Tail Cement	12/22/2022	16:52	13	3.9	34	175	64 BBLs (175 SKS) TAIL CEMENT PUMPED. NO RETURNS
20	Drop Top Plug	12/22/2022	16:58					DROPPED TOP PLUG, VERIFIED WITH CUSTOMER AND TOOL HAND
21	Pump Displacement	12/22/2022	16:58	8.34	4.9	0	137	BEGIN PUMPING FRESHWATER DISPLACEMENT
22	Pump Displacement	12/22/2022	17:09	8.34	5.2	50	197	50 BBLs DISPLACEMENT PUMPED. NO RETURNS
23	Pump Displacement	12/22/2022	17:17	8.34	7	50	349	100 BBLs DISPLACEMENT PUMPED
24	Pump Displacement	12/22/2022	17:27	8.34	7	50	495	150 BBLs DISPLACEMENT PUMPED
25	Pump Displacement	12/22/2022	17:33	8.34	7	50	690	200 BBLs DISPLACEMENT PUMPED.
26	Pump Displacement	12/22/2022	17:39	8.34	4	27	600	227 BBLs CALCULATED DISPLACEMENT PUMPED, MAX LIFT PRESSURE 720 PSI @ 210 BBLs DISPLACED

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbbls)	Pipe Pressure (psi)	Comment
27	Land Plug	12/22/2022	17:39				1060	PLUG LANDED; FCP-600 PSI BUMPED TO 1060 PSI
28	Check Floats	12/22/2022	17:42					BLEED PRESSURE OFF. FLOATS HELD 1 BBL BACK
29	Open Parasite	12/22/2022	17:49	8.34	2	10	605	PUMPING SUGAR WATER DOWN PARASITE LINE. PRESSURE BROKE OVER @ 605 PSI 7 BBLS PUMPED
30	Drop Opening Plug	12/22/2022	17:58					DROP DV TOOL OPENING PLUG
31	Waiting	12/22/2022	17:59					WAITING FOR PLUG TO FALL
32	Other	12/22/2022	18:09	8.34	4	20	737	PUMPING AGAINST TOOL TO OPEN, SHIFTED OPEN @ 737PSI, 20 BBLS TOTAL PUMPED. HANDED OVER TO RIG TO CIRCULATE. RIG CIRCULATED 130 BBLS NO RETURNS
33	Pump Spacer	12/22/2022	18:51	8.34	5	20	240	STAGE 2. PUMP 20 BBL FRESHWATER SPACER. NO RETURNS
34	Pump Cement	12/22/2022	18:56	12	5	0	250	BEGIN PUMPING 12.0 PPG PRIMARY CEMENT. WEIGHT VERIFIED BY MUD SCALE
35	Pump Cement	12/22/2022	19:05	12	5.2	50	270	50 BBLS PRIMARY CEMENT PUMPED
36	Pump Cement	12/22/2022	19:14	12	5.2	50	295	100 BBLS PRIMARY CEMENT PUMPED
37	Pump Cement	12/22/2022	19:27	12	2.4	57	79	157 BBLS (346 SKS) PRIMARY CEMENT PUMPED.
38	Drop Top Plug	12/22/2022	19:39					DROPPED TOP PLUG, VERIFIED WITH CUSTOMER AND TOOL HAND
39	Pump Displacement	12/22/2022	19:39	8.34	4	0	139	BEGIN PUMPING FRESH WATER DISPLACEMENT
40	Pump Displacement	12/22/2022	19:45	8.34	5	30	210	30 BBLS DISPLACEMENT PUMPED. NO RETURNS
41	Pump Displacement	12/22/2022	19:53	8.34	4	40	250	70 BBLS DISPLACEMENT PUMPED
42	Land Plug	12/22/2022	19:53				1825	PLUG LANDED FCP-250 PSI BUMPED TO 1825 PSI
43	Check Floats	12/22/2022	19:56					BLEED PRESSURE OFF. FLOATS HELD .5 BBL BACK
44	Waiting	12/22/2022	19:57					CREW IS WAITING TO TOP OUT WELL
45	Pump Top Out Cement	12/23/2022	00:00	15.8	2	48	100	BEGIN PUMPING 15.8# TOP OUT CEMENT. TOTAL TOP OUT CEMENT PUMPED 48 BBLS (234 SKS) WITH 13 BBL TO SURFACE SHUT DOWN @ 00:30
46	Safety Meeting	12/23/2022	00:40					PRE RIG DOWN SAFTEY MEETING
47	Rig Down Iron	12/23/2022	00:45					CREW RIGS DOWN ALL IRON, HOSES, AND EQUIPMENT
48	Depart Location	12/23/2022	02:30					CREW DEPARTS RIG LOCATION FOR RCO YARD

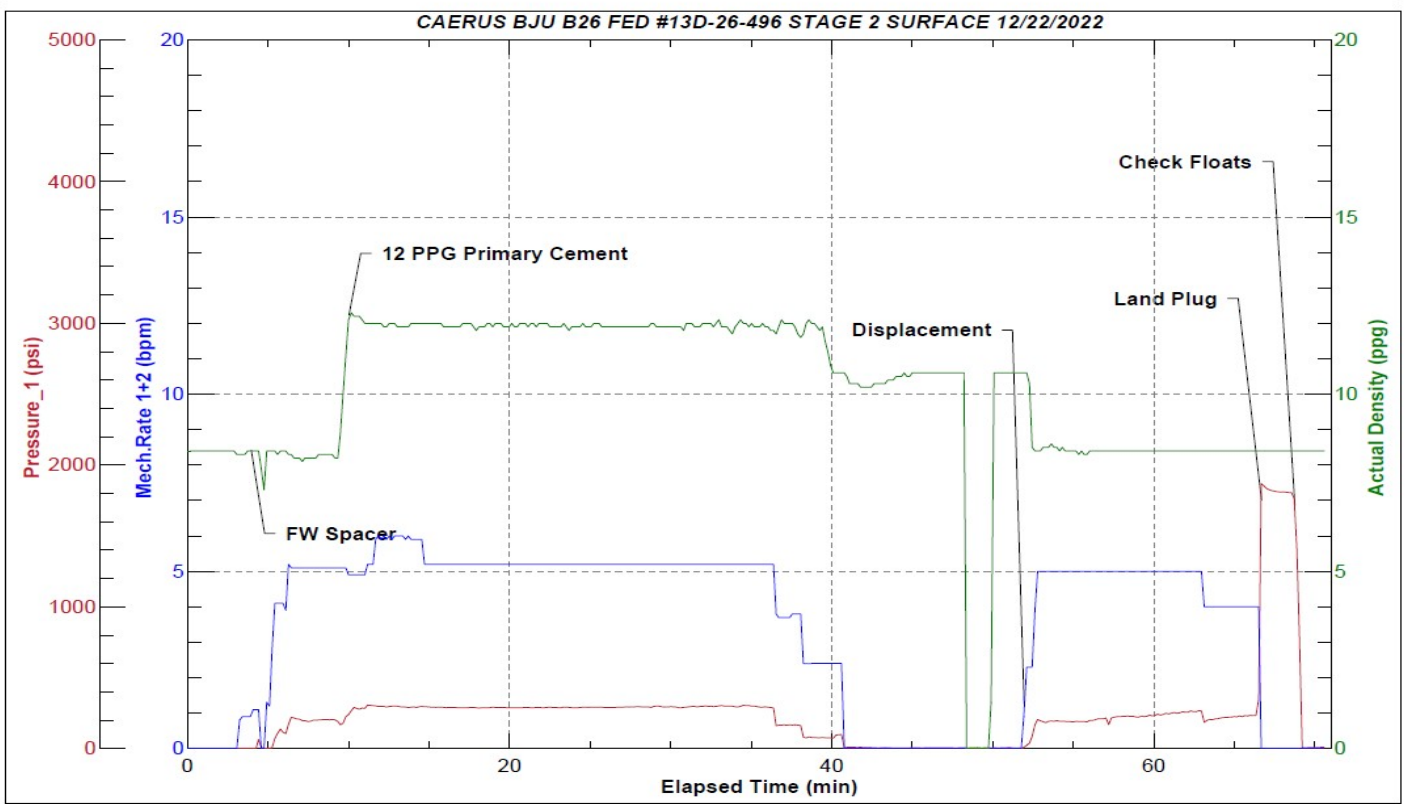
Pump Diagrams



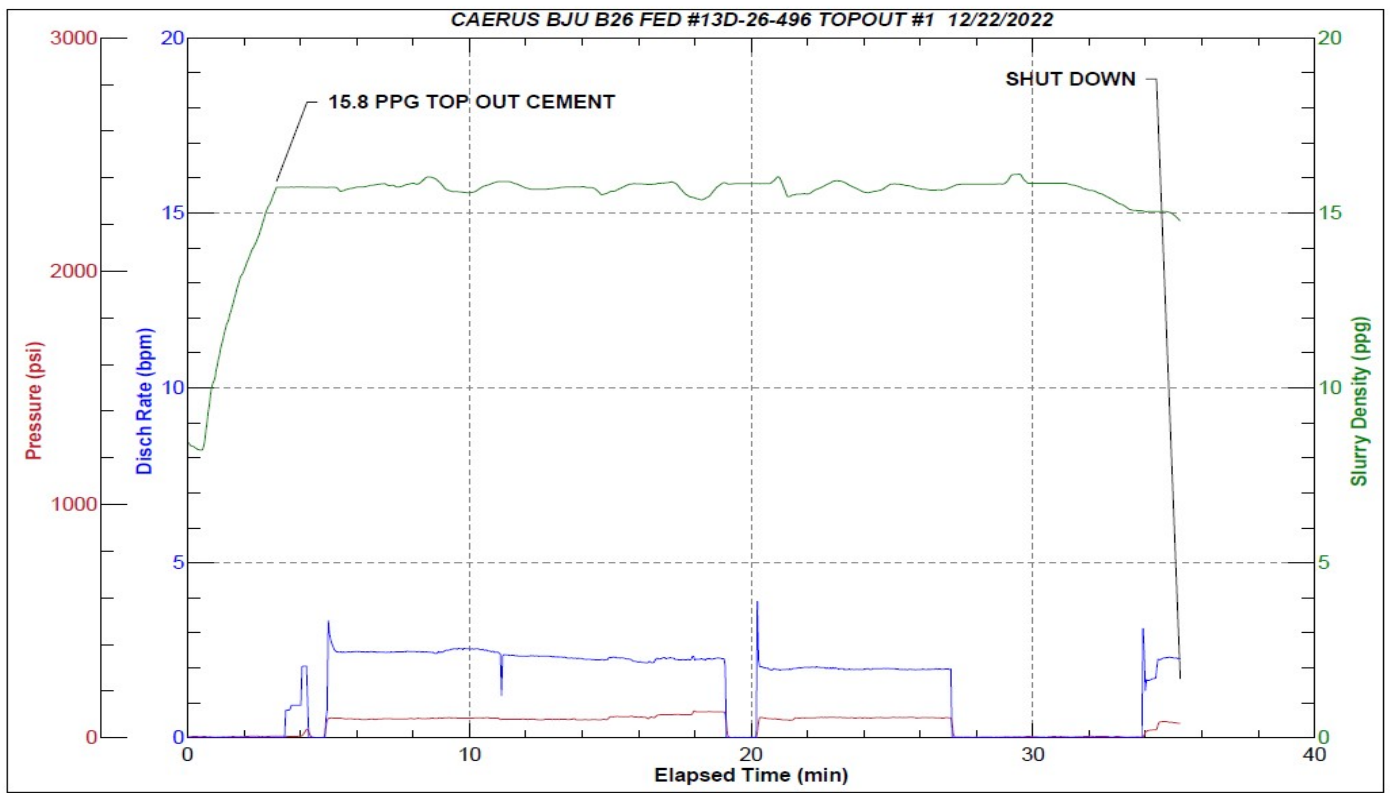
JobMaster Program Version 5.01C1
Job Number: 85100
Customer: CAERUS
Well Name: BJU B26 FED #13D-26-496



Job Start: Thursday, December 22, 2022



Job Start: Tuesday, December 27, 2022



Job Start: Thursday, December 22, 2022