



# **Caerus Operating LLC**

## **TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT**

**BJU B26 FED 24A-26-496 05-045-24436**  
**S:26 T:4S R:96W Garfield CO**

CallSheet #: 84595  
Proposal #: 65067



**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

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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,

**Scott Pollard**

Senior Account Manager | (303) 249-6761 | scott.pollard@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	3020	0
Casing	Inner	9.625	8.921	36	n/a	0	3020	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Cement Trailer Float	CTF-182	TRC-425	Jackson, Duewayne	
AS Cement Trailer Float	CTF-558	TRC-249	Richey, Steven	Fleck, Jameson
AS Cement Trailer Float	CTF-138	TRC-180	Bradbrook, Jeremy	
Field Storage Silo	FSS-469			
Field Storage Silo	FSS-468			
Cement Pump Float	CPF-091	TRH-082	Carraso, Joel	
Light Duty Vehicles	LDV-083	LDV-083	Kelsey, John	

### Timing

Event	Date/Time
Call Out	11/19/2022 22:30
Depart Facility	11/20/2022 03:30
On Location	11/20/2022 04:30
Rig Up Iron	11/20/2022 05:00
Job Started	11/20/2022 16:00
Job Completed	11/21/2022 00:15
Rig Down Iron	11/21/2022 00:50
Depart Location	11/21/2022 02:00

### General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	600 bbls
Rig Circulation Time	1 hours
Calculated Displacement	226/69.3 bbls
Actual Displacement	226/69.3 bbls
Total Spacer to Surface	40 bbls
Total CMT to Surface	211 bbls
Well Topped Out	YES
Top Out Volume	7 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	Flat Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	100	0-1000
Total Hardness	420 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

NO RETURNS TO START, GAINED RETURNS AT 14 AWAY LEAD CEMENT 1ST STAGE, LOST RETURNS 174 AWAY LEAD CEMENT 1ST STAGE, GAINED RETURNS 140 AWAY DISPLACEMENT 1ST STAGE, GAINED RETURNS 17 AWAY 2ND STAGE SPACER, ESTIMATED 211 BBLs TOTAL CEMENT TO SURFACE ON 2ND STAGE.

### Job Execution Information

Fluid	Product	Function	Density (lb/gal)	Yield (ft <sup>3</sup> /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

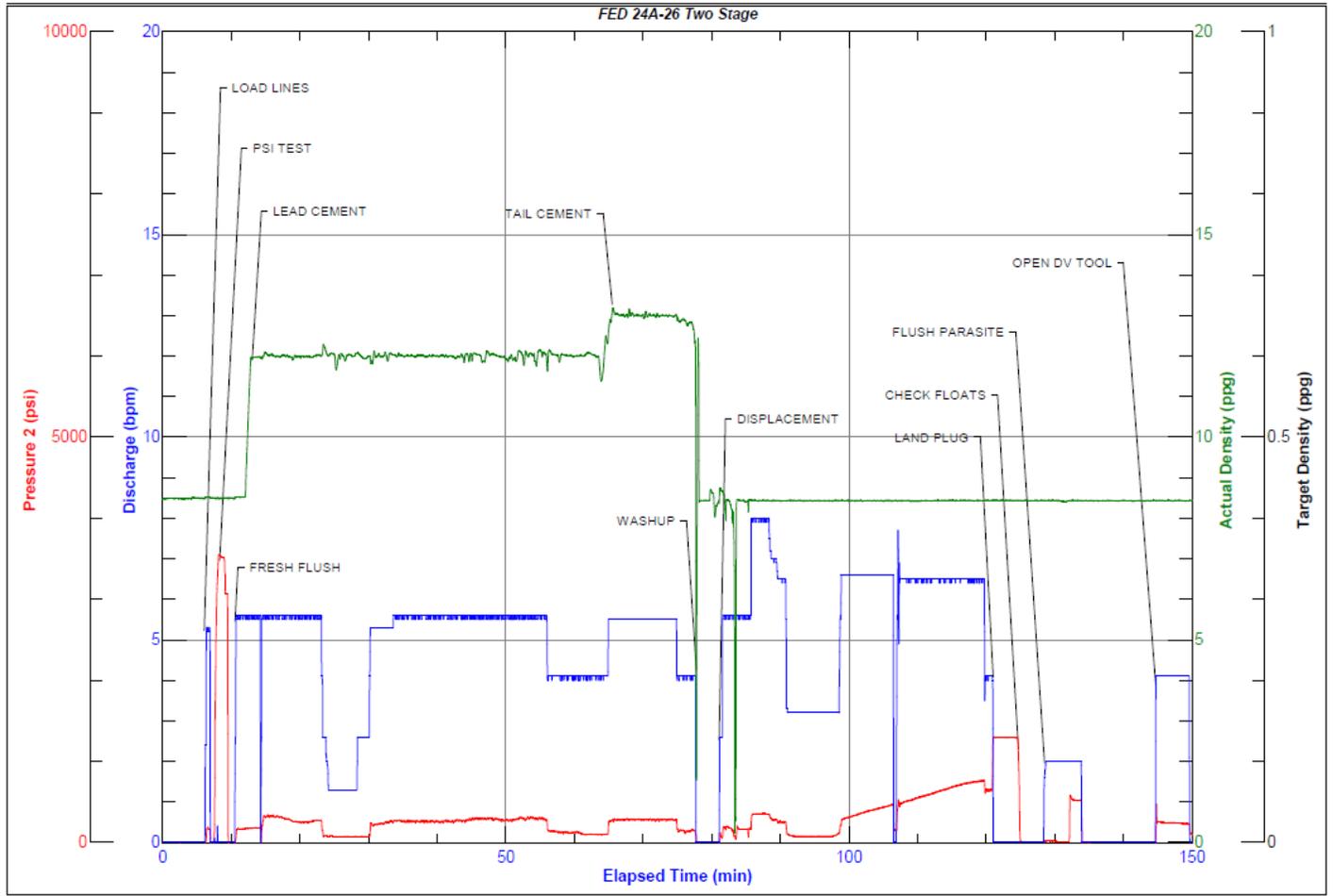
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	CALLOUT	11/19/2022	22:30					CREW CALLED TO PREPARE FOR A 2 STAGE SURFACE CEMENT JOB. RTS IS 11:00
2	SAFETY MEETING	11/20/2022	03:00					JOURNEY MANAGEMENT MEETING
3	DEPART YARD	11/20/2022	03:30					CREW DEPARTS RIFLE, CO YARD FOR LOCATION
4	ARRIVE ON LOCATION	11/20/2022	04:30					CREW ARRIVES ON LOCATION, VERIFY ALL PROPER EQUIPMENT, PRODUCTS AND JOB PROCEDURES WITH CUSTOMER
5	SAFETY MEETING	11/20/2022	04:40					RIG UP MEETING
6	SPOT UNITS	11/20/2022	04:50					SPOT ALL EQUIPMENT FOR RIG UP
7	RIG UP	11/20/2022	05:00					RIG UP ALL EQUIPMENT
8	STANDBY	11/20/2022	06:00					CREW ON STANDBY WHILE RIG RUNS CASING
9	SAFETY MEETING	11/20/2022	16:00					PRE JOB MEETING WITH ALL CREWS INVOLVED
10	LOAD LINES	11/20/2022	16:28	8.34	5.5	3	153	LOAD LINES WITH 3 BBLs FRESH
11	PRESSURE TEST	11/20/2022	16:30	8.34	1	1	3603	PRESSURE TEST PUMP AND LINES TO CEMENT HEAD
12	SPACER	11/20/2022	16:33	8.34	5.5	20	158	20 BBLs FRESH SPACER
13	LEAD CEMENT	11/20/2022	16:36	12	5.5	10	150	235 BBLs Lead CMT – 12 # 2.52 Y 14.8 MW 524 sks 10 BBLs AWAY AND RECEIVED RETURNS AT 14 BBLs AWAY
14	LEAD CEMENT	11/20/2022	16:45	12	2.5	40	78	50 BBLs AWAY SLOW RATE TO 1 BPM DUE TO CELLAR PUMP ISSUES AND PICK RATE BACK UP TO 5 BPM AT 60 AWAY
15	LEAD CEMENT	11/20/2022	17:00	12	5.5	50	256	100 BBLs AWAY
16	LEAD CEMENT	11/20/2022	17:09	12	5.5	50	292	150 BBLs AWAY LOST RETURNS AT 174 AWAY
17	LEAD CEMENT	11/20/2022	17:18	12	5.5	50	297	200 BBLs AWAY
18	LEAD CEMENT	11/20/2022	17:25	12	4	35	77	235 BBLs AWAY SWAP TO TAIL CEMENT
19	TAIL CEMENT	11/20/2022	17:26	12.5	5.5	10	258	64 BBLs Tail CMT – 12.5 # 2.06 Y 11.2 MW 175 sks 10 BBLs AWAY
20	TAIL CEMENT	11/20/2022	17:39	12.5	5.5	54	280	64 BBLs AWAY SHUTDOWN FOR WASHUP AND LOAD PLUG
21	WASHUP	11/20/2022	17:40					WASHUP PUMP MIX SYSTEM
22	DISPLACEMENT	11/20/2022	17:43	8.34	5.5	10	138	SEND PLUG AND BEGIN DISPLACEMENT 10 BBLs AWAY
23	DISPLACEMENT	11/20/2022	17:52	8.34	6.5	40	254	50 BBLs AWAY
24	DISPLACEMENT	11/20/2022	18:04	8.34	6.5	50	359	100 BBLs AWAY, RECEIVED RETURNS AT 140 BBLs AWAY
25	DISPLACEMENT	11/20/2022	18:12	8.34	6.5	50	514	150 BBLs AWAY
26	DISPLACEMENT	11/20/2022	18:20	8.34	6.5	50	550	200 BBLs AWAY LOST RETURNS AT 212 AWAY
27	LAND PLUG	11/20/2022	18:25	8.34	4	26	650	226 BBLs AWAY LAND PLUG UP TO 1307 PSI
28	CHECK FLOATS	11/20/2022	18:26					CHECK FLOATS, FLOATS HELD WITH .5 BBLs BACK

29	PARASITE	11/20/2022	18:30	8.34	2	10	18	PUMP 10 BBLS SUGAR WATER DOWN PARASITE LINE BROKE OVER AT 7 BBLS AWAY WITH 635 PSI
30	DROP DV PLUG	11/20/2022	18:36					DROP DV PLUG AND WAIT 10 MINS
31	OPEN DV	11/20/2022	18:47	8.34	4	20	454	OPEN DV TOOL AND CIRCULATE WELL Gained returns at 10 away WE PUMMPED 20 BBLS THEN TURN OVER TO RIG TO PUMP ANOTHER 125 BBLS.
32	Begin Stage 2	11/20/2022	19:28					BEGIN PUMPING STAGE 2
33	SPACER	11/20/2022	19:29	8.34	4	20	264	BEGIN PUMPING STAGE 2 SPACER 20 BBLS FRESH RECEIVED RETURNS AT 17 AWAY
34	CEMENT	11/20/2022	19:33	12	4	10	387	157 BBLS Primary CMT – 12 # 2.55 Y 14.9 MW 346 sks 10 BBLS AWAY. RECEIVED PARTIAL CEMENT RETURNS 15 AWAY.
35	CEMENT	11/20/2022	19:45	12	4	40	81	50 BBLS AWAY SLOW RATE TO 1 BPM DUE TO CELLAR PUMP ISSUES AND SHUTDOWN AT 58 AWAY FOR 5 MINS TO GET CELLAR PUMP WORKING PROPERLY, THEN STEP RATE BACK UP
36	CEMENT	11/20/2022	20:06	12	4	50	94	100 BBLS AWAY Lost returns at 105 away
37	CEMENT	11/20/2022	20:22	12	3.7	57	100	157 BBLS AWAY
38	WASHUP	11/20/2022	20:23					WASHUP PUMP MIX SYSTEM
39	DISPLACEMENT	11/20/2022	20:29	8.34	4	10	220	SEND PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY
40	DISPLACEMENT	11/20/2022	20:36	8.34	5	20	300	30 BBLS AWAY
41	LAND PLUG	11/20/2022	20:45	8.34	4	39.3	377	69.3 BBLS AWAY LAND PLUG UP TO 1908 PSI. 211 BBLS OF CEMENT TO SURFACE.
42	CHECK FLOATS	11/20/2022	20:49					CHECK FLOATS, FLOATS HELD WITH .5 BBLS BACK
43	STANDBY	11/20/2022	21:00					CREW ON STANDBY FOR TOP OUT JOB WHILE RIG NIPPLES UP
44	TOPOUT CEMENT	11/20/2022	23:58	15.8	2	7	100	PUMP 7 BBLS TOPOUT CEMENT AT 15.8#
45	WASHUP	11/21/2022	00:20					WASH PUMP AND LINES AND PICKLE
46	SAFETY MEETING	11/21/2022	00:45					RIG DOWN MEETING
47	RIG DOWN	11/21/2022	00:50					RIG DOWN ALL EQUIPMENT
48	SAFETY MEETING	11/21/2022	01:45					JOURNEY MANAGEMENT MEETING
49	DEPART LOCATION	11/21/2022	02:00					CREW DEPARTS LOCATION

# Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 84595  
Customer: Caerus  
Well Name: FED 24A-26



Job Start: Sunday, November 20, 2022

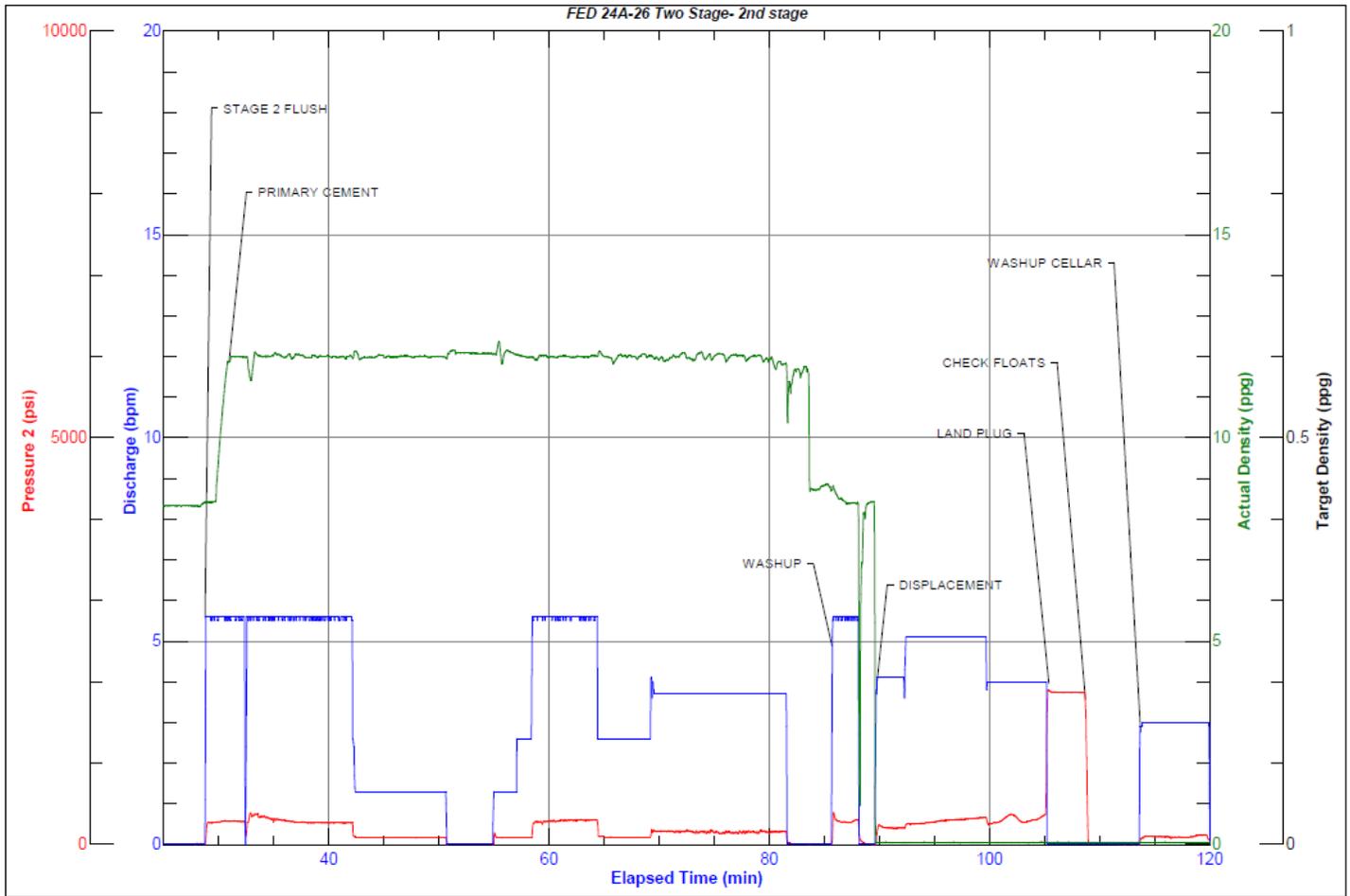


JobMaster Program Version 5.01C1

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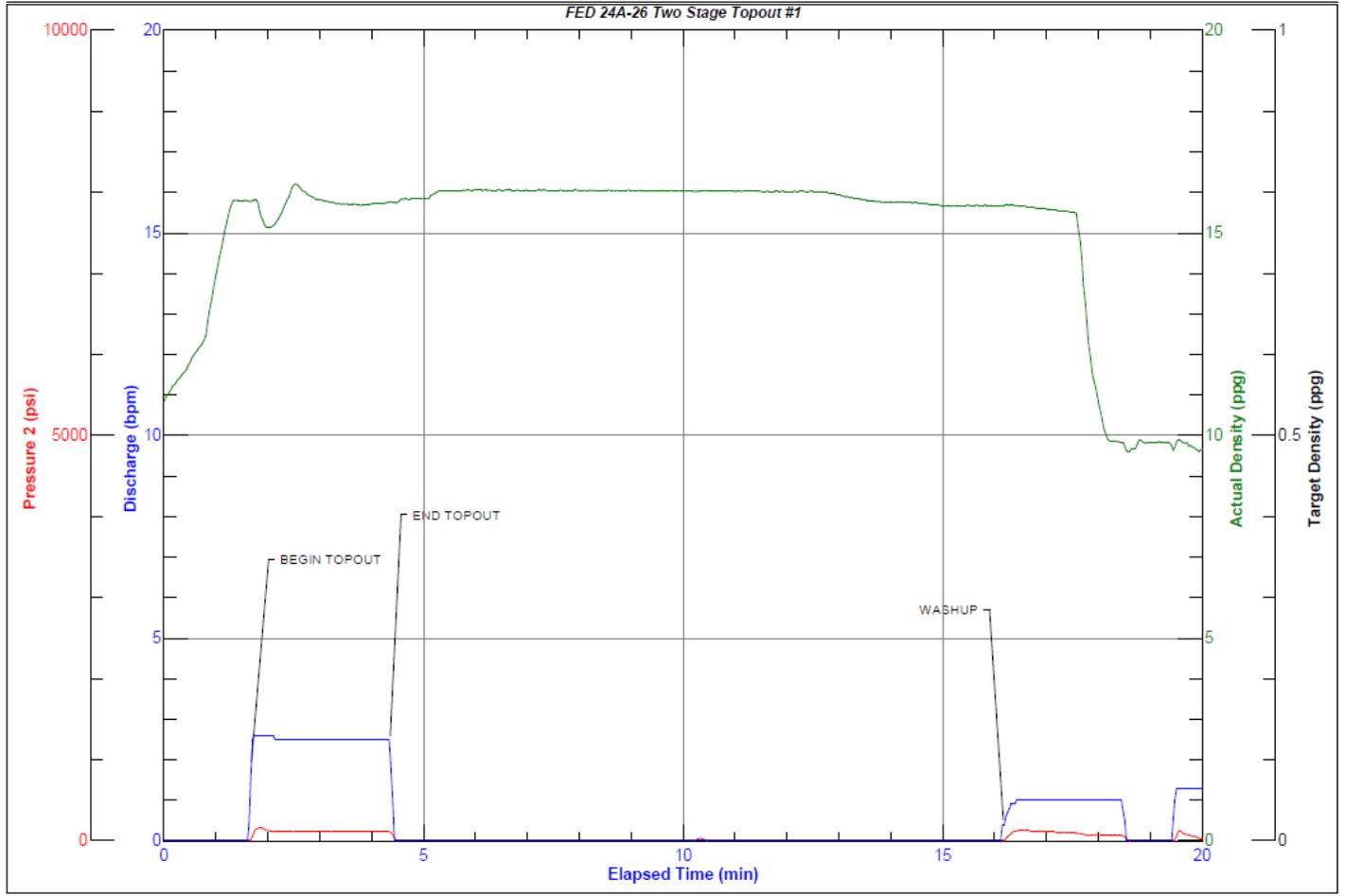
Customer: Caerus

Well Name: FED 24A-26



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