



Caerus Operating LLC

TWO-STAGE/MULTI-STAGE CEMENT POST JOB REPORT

BJU B26 FED #23B-26-496 05-045-24461
S:26 T:4S R:96W Garfield CO

CallSheet #: 84274
Proposal #: 64576



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	3026	0
Casing	Inner	9.625	8.921	36	n/a	0	3014.9	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-468		
Field Storage Silo	FSS-469		
AS Cement Trailer Float	CTF-9898	TRC-249	Hansen, James
AS Cement Trailer Float	CTF-048	TRC-249	Hansen, James
Cement Trailer Float	CTF-385	TRB-421	Dragon, Shane
Cement Pump Float	CPF-091	TRH-082	Carrasco, Joel
Light Duty Vehicles	LDV-082		Kelsey, John

Timing

Event	Date/Time
Call Out	11/1/2022 07:30
Depart Facility	11/1/2022 12:30
On Location	11/1/2022 14:55
Rig Up Iron	11/1/2022 15:20
Job Started	11/1/2022 19:59
Job Completed	11/2/2022 11:21
Rig Down Iron	11/2/2022 11:50
Depart Location	11/2/2022 14:30

General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	400 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	227.4/69 bbls
Actual Displacement	227.4/69 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	Yes
Top Out Volume	120 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	9.35 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	87 °F
BHST	123 °F

Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	40 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	450 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 throughout first and second stage but you could see fluid 30 feet down towards end of displacement on second stage.

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		20.00	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		227.40	0
1	Water	Flush	8.34			42.00		20.00	0
2	Stage-2 Primary	Primary	12.00	2.55	14.95		346.00	157.14	0
3	Water	DisplacementFinal	8.34			42.00		69.00	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

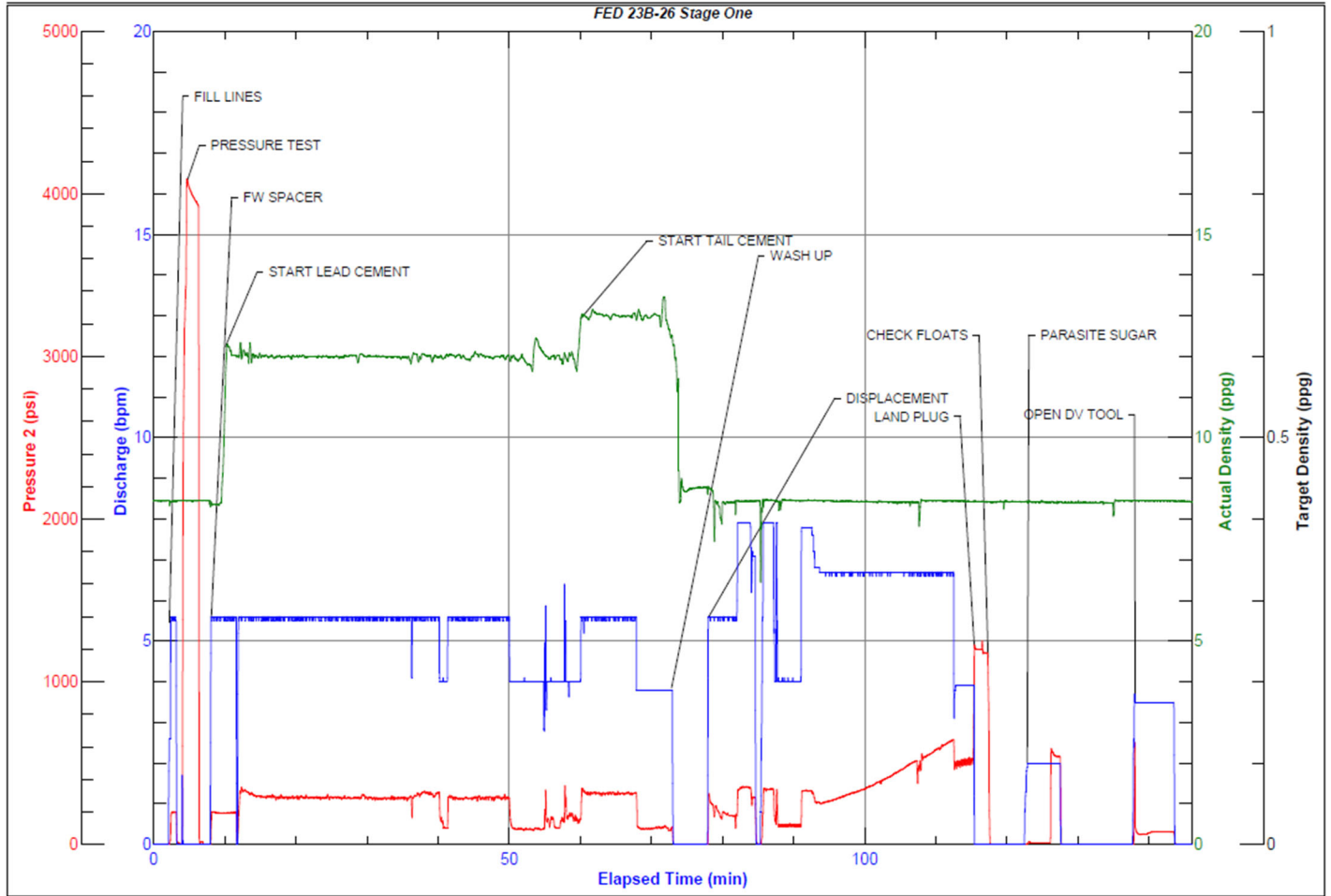
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	CALLOUT	11/1/2022	07:30					CREW CALLED TO PREPARE FOR A 2 STAGE SURFACE CEMENT JOB. RTS IS 17:00
2	SAFETY MEETING	11/1/2022	12:00					JOURNEY MANAGEMENT MEETING
3	DEPART YARD	11/1/2022	12:30					CREW DEPARTS RIFLE, CO YARD FOR LOCATION
4	ARRIVE ON LOCATION	11/1/2022	14:55					CREW ARRIVES ON LOCATION, VERIFY ALL PROPER EQUIPMENT, PRODUCTS AND JOB PROCEDURES WITH CUSTOMER
5	SAFETY MEETING	11/1/2022	15:00					RIG UP MEETING
6	SPOT UNITS	11/1/2022	15:10					SPOT ALL EQUIPMENT FOR RIG UP
7	RIG UP	11/1/2022	15:20					RIG UP ALL EQUIPMENT
8	STANDBY	11/1/2022	17:00					CREW ON STANDBY WHILE RIG RUNS CASING
9	SAFETY MEETING	11/1/2022	19:30					PRE JOB-MEETING WITH ALL CREWS INVOLVED
10	LOAD LINES	11/1/2022	19:59	8.34	5	3	153	LOAD LINES WITH 3 BBLS FRESH
11	PRESSURE TEST	11/1/2022	20:01	8.34		1	4120	PRESSURE TEST PUMP AND LINES TO CEMENT HEAD
12	SPACER	11/1/2022	20:08	8.34	5.5	20	180	20 BBLS FRESH SPACER NO RETURNS
13	LEAD CEMENT	11/1/2022	20:09	12	5.5	10	208	235 BBLS Lead CMT – 12 # 2.52 Y 14.8 MW 524 sks 10 BBLS AWAY
14	LEAD CEMENT	11/1/2022	20:18	12	5.6	40	288	50 BBLS AWAY
15	LEAD CEMENT	11/1/2022	20:27	12	5.5	50	284	100 BBLS AWAY
16	LEAD CEMENT	11/1/2022	20:36	12	5.5	50	316	150 BBLS AWAY
17	LEAD CEMENT	11/1/2022	20:45	12	5.5	50	292	200 BBLS AWAY
18	LEAD CEMENT	11/1/2022	20:56	12	4	35	157	235 BBLS AWAY SWAP TO TAIL CEMENT
19	TAIL CEMENT	11/1/2022	20:57	13	5.5	10	323	64 BBLS Tail CMT – 13 # 2.06 Y 11.2 MW 175 sks 10 BBLS AWAY
20	TAIL CEMENT	11/1/2022	21:09	13	4	54	97	64 BBLS AWAY SHUTDOWN FOR WASHUP AND LOAD PLUG
21	WASHUP	11/1/2022	21:10					WASHUP PUMP MIX SYSTEM
22	DISPLACEMENT	11/1/2022	21:16	8.34	5.5	10	173	SEND PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY NO RETURNS
23	DISPLACEMENT	11/1/2022	21:23	8.34	8	40	341	50 BBLS AWAY
24	DISPLACEMENT	11/1/2022	21:32	8.34	6.7	50	274	100 BBLS AWAY CAUGHT PRESSURE @ 140 BBLS
25	DISPLACEMENT	11/1/2022	21:39	8.34	6.7	50	410	150 BBLS AWAY
26	DISPLACEMENT	11/1/2022	21:47	8.34	6.7	50	610	200 BBLS AWAY
27	LAND PLUG	11/1/2022	21:52	8.34	4	27.4	529	227.4 BBLS AWAY LAND PLUG UP TO 1200 PSI
28	CHECK FLOATS	11/1/2022	21:54					CHECK FLOATS, FLOATS HELD WITH 0.5 BBLS BACK
29	PARASITE	11/1/2022	21:59	8.34	2	10	535	PUMP 10 BBLS SUGAR WATER DOWN PARASITE LINE BROKE OVER AT 7 BBLS AWAY MAX PSI 618
30	DROP DV PLUG	11/1/2022	22:05					DROP DV PLUG AND WAIT 10 MINS
31	OPEN DV	11/1/2022	20:20	8.34	3.5	20	78	OPEN DV TOOL AND CIRCULATE WELL OPENING 675 PSI, RIG CIRCULATED 200 BBLS
32	Begin Stage 2	11/1/2022	23:22					BEGIN PUMPING STAGE 2
33	SPACER	11/1/2022	23:27	8.34	5.5	20	208	BEGIN PUMPING STAGE 2 SPACER 20 BBLS FRESH

34	CEMENT	11/1/2022	23:28	12	5.6	10	270	157 BBLS Primary CMT – 12 # 2.55 Y 14.9 MW 346 sks 10 BBLS AWAY
35	CEMENT	11/1/2022	23:37	12	5.6	40	268	50 BBLS AWAY
36	CEMENT	11/1/2022	23:45	12	5.6	50	283	100 BBLS AWAY NO RETURNS
37	CEMENT	11/1/2022	23:59	12	4	57	164	157 BBLS AWAY
38	WASHUP	11/2/2022	00:00					WASHUP PUMP MIX SYSTEM
39	DISPLACEMENT	11/2/2022	00:05	8.34	4.5	10	141	SEND PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY
40	DISPLACEMENT	11/2/2022	00:09	8.34	8	20	400	30 BBLS AWAY
41	LAND PLUG	11/2/2022	00:16	8.34	4	39	225	69 BBLS AWAY LAND PLUG UP TO 1870 PSI
42	CHECK FLOATS	11/2/2022	00:18					CHECK FLOATS, FLOATS HELD WITH 0.5 BBLS BACK
43	STANDBY	11/2/2022	00:20					CREW ON STANDBY FOR TOPOUT JOB WHILE RIG NIPPLES UP
44	TOPOUT CEMENT	11/2/2022	02:47	15.6	3	70	70	FIRST TOPOUT CEMENT JOB: 70 BBLS 333 SKS PUMPED, NO CEMENT TO SURFACE 15.6# 1.18Y 5.2 MW
45	WASHUP	11/2/2022	03:19					WASHUP PUMP AND MIX SYSTEM
46	STANDBY	11/2/2022	03:30					CREW ON STANDBY FOR 2ND TOPOUT JOB
47	TOPOUT CEMENT	11/2/2022	07:53	15.6	2	30	96	SECOND TOPOUT CEMENT JOB: 30 BBLS 143 SKS PUMPED, NO CEMENT TO SURFACE 15.6# 1.18Y 5.2MW
48	WASHUP	11/2/2022	08:09					WASHUP PUMP AND MIX SYSTEM
49	STANDBY	11/2/2022	08:20					CREW ON STANDBY FOR THIRD TOPOUT JOB
50	TOPOUT CEMENT	11/2/2022	10:52	15.6	2	20	107	THIRD TOPOUT CEMENT JOB: 20 BBLS 95 SKS PUMPED CEMENT TO SURFACE 15.6# 1.18Y 5.2 MW, TOTAL TOPOUT 120 BBLS 571 SKS 3 BBLS TO SURFACE
51	WASHUP	11/2/2022	11:21					WASHUP PUMP AND MIX SYSTEM, PICKLE PUMP BLOW DOWN IRON
52	SAFTEY MEETING	11/2/2022	11:45					PRE-RIG DOWN SAFTEY MEETING
53	RIG DOWN	11/2/2022	11:50					CREW STARTS RIG DOWN
54	SAFTEY MEETING	11/2/2022	14:20					JOURNEY MANAGEMENT MEETING
55	DEPART LOCATION	11/2/2022	15:00					CREW LEAVES LOCATIO AND HEADS TO YARD MAINTNENCE ON SILOS POST JOB

Pump Diagrams

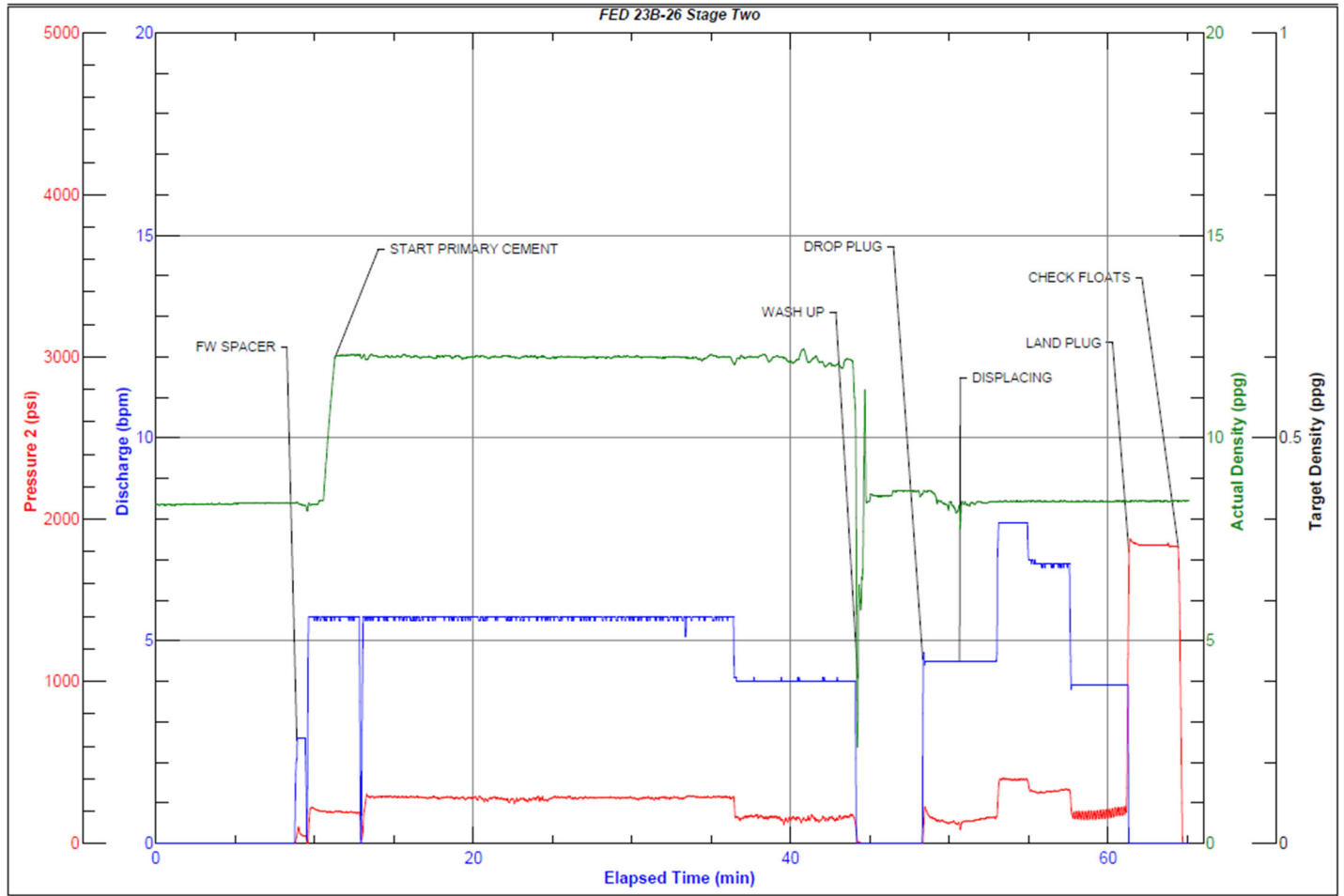


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Customer: Cearus
Well Name: FED 23B-26



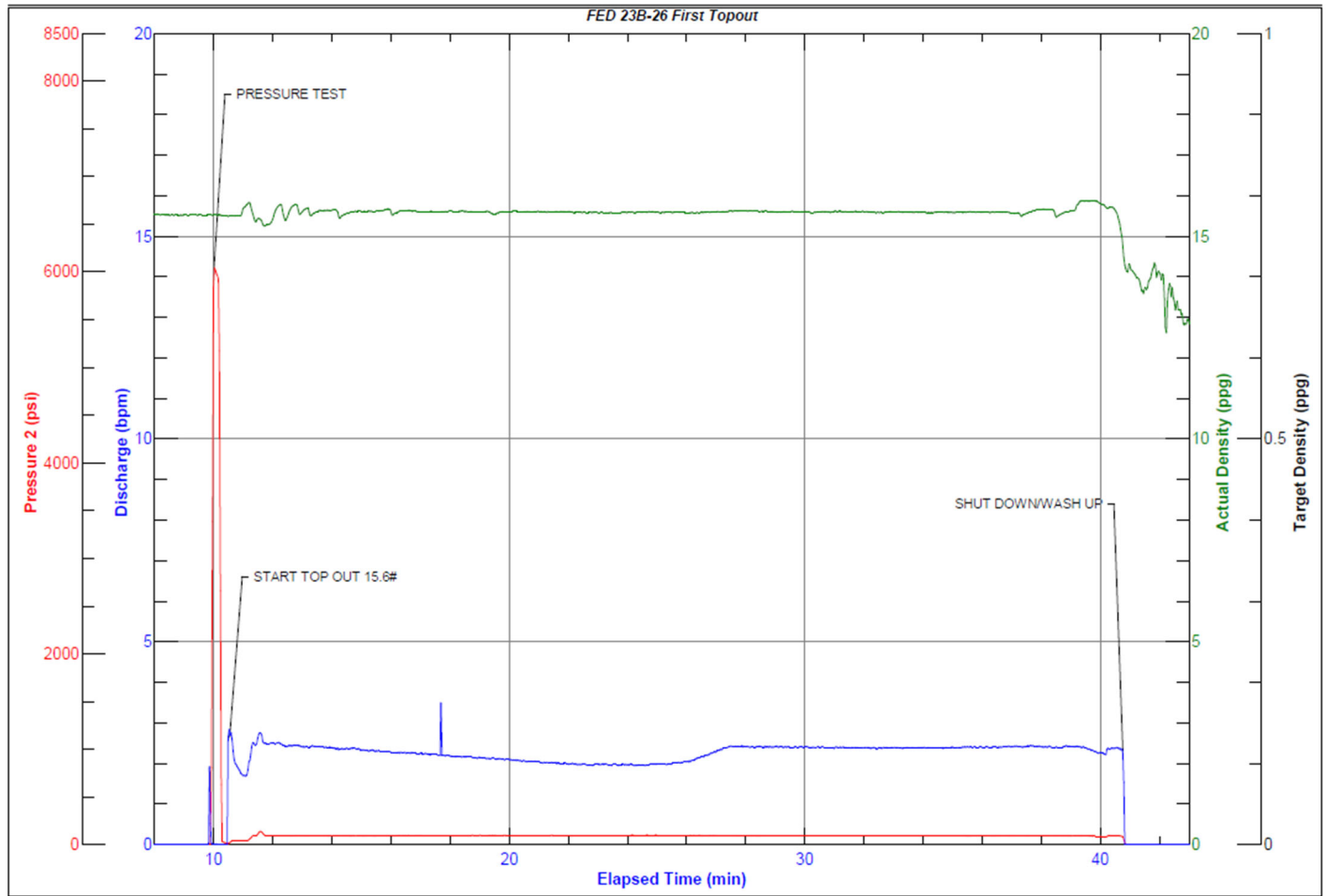
Job Start: Tuesday, November 01, 2022

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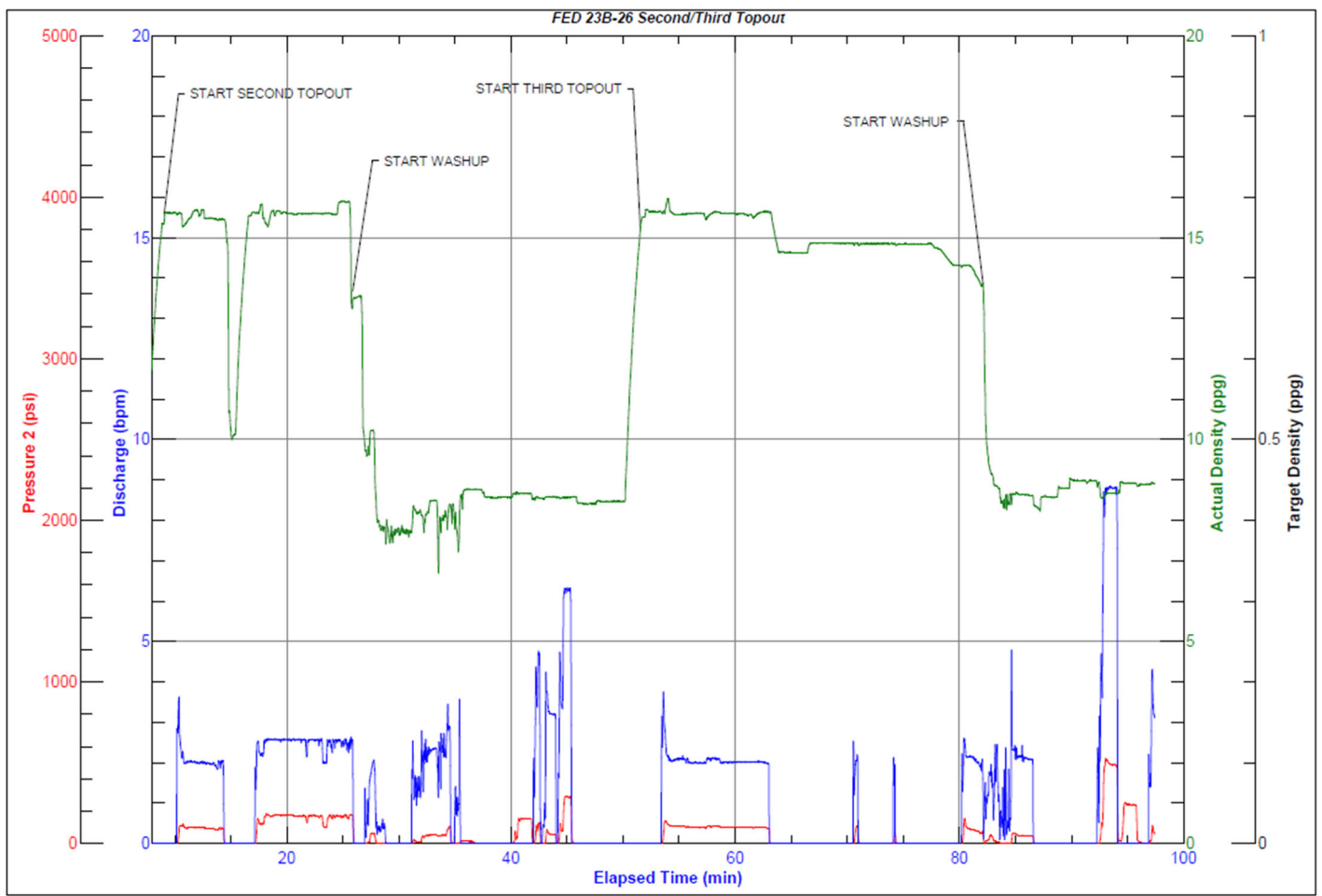
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Job Number: 84274
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Job Start: Wednesday, November 02, 2022



JobMaster Program Version 5.01C1
Job Number: 84274
Customer: Cearus
Well Name: FED 23B-26



Job Start: Wednesday, November 02, 2022