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# **Caerus Operating LLC**

## **LONG STRING POST JOB REPORT**

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

CallSheet #: 84351  
Proposal #: 64687



**LONG STRING 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,

**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	9.625	8.921	36	n/a	0	3015	0
Open Hole	Outer	n/a	8.75	n/a	n/a	3015	7207	25
Open Hole	Outer	n/a	8.75	n/a	n/a	7207	12500	0
Casing	Inner	4.5	4	11.6	n/a	0	12485.7	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Field Storage Silo	FSS-469			
Field Storage Silo	FSS-468			
AS Cement Trailer Float	CTF-9309	TRC-054	Hutchinson, Michael	Fleck, Jameson
AS Cement Trailer Float	CTF-901	TRC-054	Hutchinson, Michael	
AS Cement Trailer Float	CTF-048	TRC-115	Wall, Lynn	
AS Cement Trailer Float	CTF-9898	TRC-115	Wall, Lynn	
Cement Trailer Float	CTF-249	TRH-769	Burton, Devin	
Light Duty Vehicles	LDV-082		Kelsey, John	
Cement Pump Float	CPF-091	TRH-082	Carrasco, Joel	

### Timing

Event	Date/Time
Call Out	11/8/2022 01:00
Depart Facility	11/8/2022 03:30
On Location	11/8/2022 05:00
Rig Up Iron	11/8/2022 05:30
Job Started	11/8/2022 10:06
Job Completed	11/8/2022 13:12
Rig Down Iron	11/8/2022 13:30
Depart Location	11/8/2022 14:30

### General Job Information

Metrics	Value
Well Fluid Density	10.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	800 bbls
Rig Circulation Time	2 hours
Calculated Displacement	192.2 bbls
Actual Displacement	192.2 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	N/A

## 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	10.4 lb/gal
Well Fluid Density Out of Well	10.4 lb/gal

## Job Details (cont.)

Metrics	Value
BHCT	222 °F
BHST	290 °F

## Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	45 °F	50-80 °F
pH Level	7	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 to begin with, started 800 CFM Parasite air at 20 bbls away scavenger and received returns at 60 bbls away scavenger. Parasite air was then shut down at 150 bbls away on tail cement and returns were lost at 190 BBLS AWAY FOR A TOTAL OF 533 BBLS MUD RECOVERED

## 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	Mud Flush	Flush	8.45			40.86		20.00	653
2	Scavenger	Scavenger	11.50	2.76	16.68		235.00	115.48	1000
3	Lead	Lead	12.70	2.00	11.00		807.00	287.75	3000
4	Tail	Tail	13.50	2.00	9.66		818.00	290.89	7207
5	Water + KCL Sub	DisplacementFinal	8.34			42.00		192.20	0

## Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
1	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
2	Scavenger	Scavenger	ASTM TYPE I/II	Cement	100.00	%
2	Scavenger	Scavenger	BA-60	GasMigration	0.30	%BWOB
2	Scavenger	Scavenger	FP-24	Defoamer	0.30	%BWOB
2	Scavenger	Scavenger	GW-86	Viscosifier	0.20	%BWOB
2	Scavenger	Scavenger	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
2	Scavenger	Scavenger	R-3	Retarder	0.50	%BWOB
2	Scavenger	Scavenger	STATIC FREE	Other	0.01	lb/sk
3	Lead	Lead	ASTM TYPE I/II	Cement	100.00	%
3	Lead	Lead	BA-60	GasMigration	0.30	%BWOB
3	Lead	Lead	FL-66	FluidLoss	0.50	%BWOB
3	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
3	Lead	Lead	GW-86	Viscosifier	0.10	%BWOB
3	Lead	Lead	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
3	Lead	Lead	R-3	Retarder	0.30	%BWOB
3	Lead	Lead	STATIC FREE	Other	0.01	lb/sk
4	Tail	Tail	CLASS G	Cement	70.00	%
4	Tail	Tail	FLY ASH (POZZOLAN)	Extender	30.00	%
4	Tail	Tail	BA-60	GasMigration	0.20	%BWOB
4	Tail	Tail	BENTONITE	Viscosifier	8.00	%BWOB
4	Tail	Tail	FL-24	FluidLoss	0.40	%BWOB



Fluid	Type	Fluid	Product	Function	Conc.	Uom
4	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
4	Tail	Tail	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
4	Tail	Tail	R-3	Retarder	0.25	%BWOB
4	Tail	Tail	S-8	StrengthRetrogression	25.00	%BWOB

## Job Logs

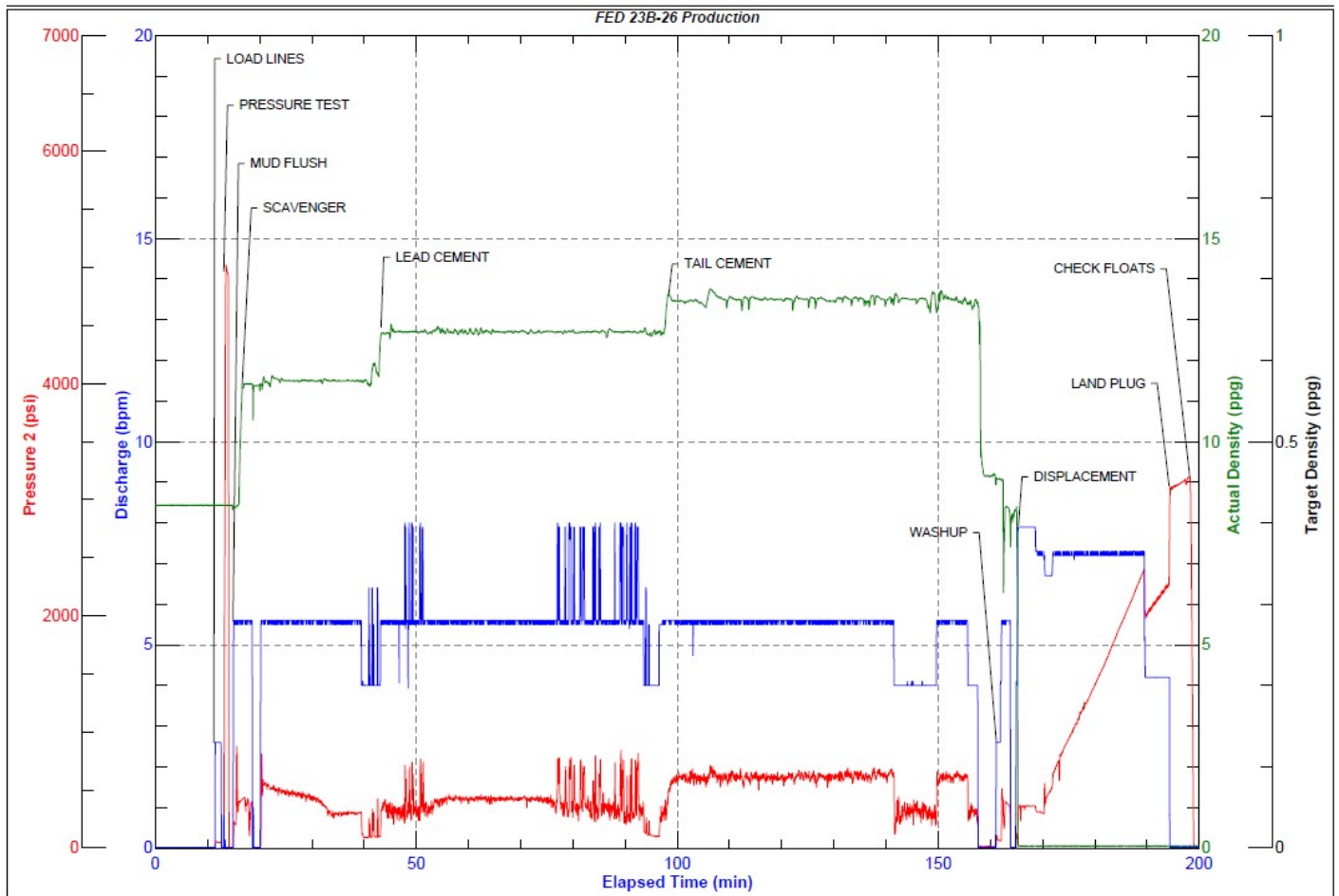
Line	Event	Date (MM/DD/Y Y)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	CALLOUT	11/8/2022	01:00					CREW CALLED TO PREPARE FOR A PRODUCTION CEMENT JOB. RTS IS 05:00
2	SAFETY MEETING	11/8/2022	03:00					JOURNEY MANAGEMENT MEETING
3	DEPART YARD	11/8/2022	03:30					CREW DEPARTS RIFLE, CO YARD FOR LOCATION
4	ARRIVE ON LOCATION	11/8/2022	05:00					ARRIVE ON LOCATION AND VERIFY ALL PROPER EQUIPMENT, PRODUCTS, AND JOB PROCEDURES WITH THE CUSTOMER
5	SAFETY MEETING	11/8/2022	05:10					RIG UP MEETING
6	SPOT UNITS	11/8/2022	05:20					SPOT ALL EQUIPMENT FOR RIG UP
7	RIG UP	11/8/2022	05:30					RIG UP ALL EQUIPMENT
8	STANDBY	11/8/2022	06:30					CREW ON STANDBY WHILE THE RIG RUNS CASING
9	SAFETY MEETING	11/8/2022	09:45					PRE JOB MEETING WITH ALL CREWS INVOLVED
10	LOAD LINES	11/8/2022	10:06	8.34	2.5	3	59	LOAD LINES FOR A PSI TEST
11	PRESSURE TEST	11/8/2022	10:08	8.34	1	1	5095	PRESSURE TEST PUMP AND LINES TO CEMENT HEAD
12	MUD FLUSH	11/8/2022	10:10	8.4	5.5	20	217	20 BBLS MUD FLUSH
13	SCAVENGER	11/8/2022	10:16	11.5	5.5	10	971	115.5 BBLS Scavenger – 11.5 # 2.76 Y 16.7 MW 235 sks (94 H2O) 10 BBLS AWAY BEGIN PARASITE AIR AT 20 BBLS AWAY AT 800 CFM
14	SCAVENGER	11/8/2022	10:24	11.5	5.5	40	456	50 BBLS AWAY
15	SCAVENGER	11/8/2022	10:38	11.5	5.5	65	300	115 BBLS AWAY
16	LEAD CEMENT	11/8/2022	10:39	12.7	5.5	10	316	287.8 BBLS Lead CMT – 12.7 # 2.0 Y 11 MW 807 sks (212 H2O) 10 BBLS AWAY
17	LEAD CEMENT	11/8/2022	10:46	12.7	5.5	40	350	50 BBLS AWAY
18	LEAD CEMENT	11/8/2022	10:56	12.7	5.5	50	427	100 BBLS AWAY
19	LEAD CEMENT	11/8/2022	11:05	12.7	5.5	50	426	150 BBLS AWAY
20	LEAD CEMENT	11/8/2022	11:14	12.7	5.5	50	377	200 BBLS AWAY
21	LEAD CEMENT	11/8/2022	11:22	12.7	5.5	50	382	250 BBLS AWAY
22	LEAD CEMENT	11/8/2022	11:32	12.7	4	37.8	120	287.8 BBLS AWAY SWAP TO TAIL CEMENT
23	TAIL CEMENT	11/8/2022	11:33	13.5	5.5	10	572	291 BBLS Tail CMT – 13.5 # 2.0 Y 9.7 MW 818 sks (189 H2O) 10 BBLS AWAY
24	TAIL CEMENT	11/8/2022	11:42	13.5	5.5	40	650	50 BBLS AWAY
25	TAIL CEMENT	11/8/2022	11:50	13.5	5.5	50	623	100 BBLS AWAY
26	TAIL CEMENT	11/8/2022	12:00	13.5	5.5	50	630	150 BBLS AWAY TURN PARASITE AIR OFF
27	TAIL CEMENT	11/8/2022	12:09	13.5	5.5	50	627	200 BBLS AWAY
28	TAIL CEMENT	11/8/2022	12:16	13.5	4	50	301	250 BBLS AWAY
29	TAIL CEMENT	11/8/2022	12:32	13.5	5.5	41	615	291 BBLS AWAY SHUTDOWN FOR WASHUP LOST RETURNS AT 290 AWAY FOR A TOTAL OF 533 BBLS MUD RECOVERED
30	WASHUP	11/8/2022	12:33					WASH PUMP AND LINES TO PIT
31	DISPLACEMENT	11/8/2022	12:39	8.34	8	10	363	DROP PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY ADD CHEMICALS THROUGHOUT DISPLACEMENT
32	DISPLACEMENT	11/8/2022	12:46	8.34	7	40	673	50 BBLS AWAY
33	DISPLACEMENT	11/8/2022	12:51	8.34	7	50	1380	100 BBLS AWAY
34	DISPLACEMENT	11/8/2022	13:01	8.34	7	50	2100	150 BBLS AWAY
35	DISPLACEMENT	11/8/2022	13:04	8.34	4	20	2063	170 BBLS AWAY SLOW RATE TO BUMP PLUG
36	LAND PLUG	11/8/2022	13:08	8.34	4	22.2	2387	LAND PLUG UP TO 3150 PSI

Line	Event	Date (MM/DD/Y Y)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
37	CHECK FLOATS	11/8/2022	13:12					CHECK FLOATS, FLOATS HELD WITH 2 BBLS BACK
38	SAFETY MEETING	11/8/2022	13:15					RIG DOWN MEETING
39	RIG DOWN	11/8/2022	13:30					PICKLE AND BLOW DOWN PUMP AND LINES. RIG DOWN ALL EQUIPMENT
40	SAFETY MEETING	11/8/2022	14:20					JOURNEY MANAGEMENT MEETING
41	DEPART LOCATION	11/8/2022	14:30					CREW DEPARTS LOCATION

## Pump Diagrams



JobMaster Program Version 5.01C1  
 Job Number: 84351  
 Customer: Caerus  
 Well Name: FED 23B-26-496



Job Start: Tuesday, November 08, 2022