



Caerus Operating LLC

LONG STRING POST JOB REPORT

BJU B26 FED #14D-26-496 05-045-24434
S:26 T:4S R:96W Garfield CO

CallSheet #: 85039
Proposal #: 65728



LONG STRING 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	9.625	8.921	36	n/a	0	2981	0
Open Hole	Outer	n/a	8.75	n/a	n/a	2981	6902	25
Open Hole	Outer	n/a	8.75	n/a	n/a	6902	12200	0
Casing	Inner	4.5	4	11.6	n/a	0	12172.9	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-469		
Field Storage Silo	FSS-468		
Cement Trailer Float	CTF-242	TRC-059	Richey, Steven
Light Duty Vehicles	LDV-083		Putnam, Gage
Cement Pump Float	CPF-052	TRH-957	Kirchenwitz, Jacob

Timing

Event	Date/Time
Call Out	12/19/2022 16:00
Depart Facility	12/19/2022 19:30
On Location	12/19/2022 20:48
Rig Up Iron	12/20/2022 03:00
Job Started	12/20/2022 07:15
Job Completed	12/20/2022 10:55
Rig Down Iron	12/20/2022 11:15
Depart Location	12/20/2022 13:00

General Job Information

Metrics	Value
Well Fluid Density	10.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1015 bbls
Rig Circulation Time	2.5 hours
Calculated Displacement	187.3 bbls
Actual Displacement	187.3 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	10.8 lb/gal
Well Fluid Density Out of Well	10.8 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	215 °F
BHST	283 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	72 mg/L	0-3000 mg/L
Total Alkalinity	80	0-1000
Total Hardness	250 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	Losses into Spacer	Losses into Cement	Losses into Displacement
Yes	0	0	150

Circulation Details

Gained circulation at 22 bbls into scavenger. Full returns until parasite air shut off at 150 bbls of tail pumped, then no circulation for remainder of job.

Job Execution Information

Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sk)	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		748.00	266.91	3000
4	Tail	Tail	13.50	2.00	9.66		817.00	290.66	6902
5	Water + KCL Sub	DisplacementFinal	8.34			42.00		187.30	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	STATIC FREE	Other	0.01	lb/sk
3	Lead	Lead	XCem-916	Retarder	0.50	%BWOB
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
4	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
4	Tail	Tail	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
4	Tail	Tail	S-8	StrengthRetgression	25.00	%BWOB
4	Tail	Tail	XCem-916	Retarder	0.40	%BWOB

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	12/19/2022	16:00					CREW CALLED OUT FOR ON LOCATION TIME OF 00:00 12/20/22
2	Depart Location	12/19/2022	19:30					CREW DEPARTS RCO YARD FOR LOCATION
3	Arrive On Location	12/19/2022	20:48					FIELD LEADER AND PUMP OPERATOR ARRIVE ON LOCATION
4	Waiting	12/19/2022	21:30					WAITING FOR RIG TO GET FURTHER INTO CASING BEFORE RIGGING UP AND BLOCKING RIG ACCESS
5	Rig Up Iron	12/20/2022	03:00					RIG UP IRON AND HOSES
6	Safety Meeting	12/20/2022	06:30					JSA SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
7	Fill Lines	12/20/2022	07:15	8.34	3.5	5	65	FILL LINES WITH 5 BBLS FRESH WATER
8	Pressure Test Lines	12/20/2022	07:18				5500	PRESSURE TEST LINES TO 5000 PSI
9	Pump Spacer	12/20/2022	07:21	8.45	5	20	258	PUMP MUD FLUSH WITH SURFACTANT. RIG BEGINS PUMPING 1000 CFM DOWN PARASITE LINE. NO RETURNS.
10	Pump Scavenger	12/20/2022	07:27	11.5	5	0	355	BEGIN PUMPING 11.5 PPG SCAVENGER SLURRY, DENSITY VERIFIED WITH MUD SCALE
11	Pump Scavenger	12/20/2022	07:36	11.5	5	50	299	50 BBLS SCAVENGER PUMPED, GAIN CIRCULATION AT 22 BBLS PUMPED
12	Pump Scavenger	12/20/2022	07:46	11.5	5	50	305	100 BBLS SCAVENGER PUMPED
13	Pump Scavenger	12/20/2022	07:52	11.5	5	15.5	300	115.5 BBLS SCAVENGER PUMPED
14	Pump Lead Cement	12/20/2022	07:52	12.7	5	0	330	BEGIN PUMPING 12.7 PPG LEAD CEMENT, DENSITY VERIFIED WITH MUD SCALE
15	Pump Lead Cement	12/20/2022	08:02	12.7	5	50	360	50 BBLS LEAD CEMENT PUMPED
16	Pump Lead Cement	12/20/2022	08:12	12.7	5	50	350	100 BBLS LEAD CEMENT PUMPED
17	Pump Lead Cement	12/20/2022	08:21	12.7	5	50	364	150 BBLS LEAD CEMENT PUMPED
18	Pump Lead Cement	12/20/2022	08:30	12.7	5	50	380	200 BBLS LEAD CEMENT PUMPED
19	Pump Lead Cement	12/20/2022	08:48	12.7	5	66.9	370	266.9 BBLS LEAD CEMENT PUMPED
20	Pump Tail Cement	12/20/2022	08:48	13.5	5	0	516	BEGIN PUMPING TAIL AT 13.5 PPG, DENSITY VERIFIED WITH MUD SCALE
21	Pump Tail Cement	12/20/2022	08:57	13.5	5	50	595	50 BBLS TAIL CEMENT PUMPED
22	Pump Tail Cement	12/20/2022	09:07	13.5	5	50	570	100 BBLS TAIL CEMENT PUMPED
23	Pump Tail Cement	12/20/2022	09:17	13.5	5	50	556	150 BBLS TAIL CEMENT PUMPED, PARASITE AIR BYPASSED, LOST RETURNS
24	Pump Tail Cement	12/20/2022	09:26	13.5	5	50	555	200 BBLS TAIL CEMENT PUMPED
25	Pump Tail Cement	12/20/2022	09:36	13.5	5	50	566	250 BBLS TAIL CEMENT PUMPED
26	Pump Tail Cement	12/20/2022	09:49	13.5	5	40.7	563	290.7 BBLS TAIL CEMENT PUMPED
27	Clean Pumps and Lines	12/20/2022	09:49					SHUT DOWN, WASH PUMP AND LINES
28	Other	12/20/2022	09:51					WASHUP LINE STANDPIPE FULL OF ICE. MELT ICE AND FINISH WASHUP

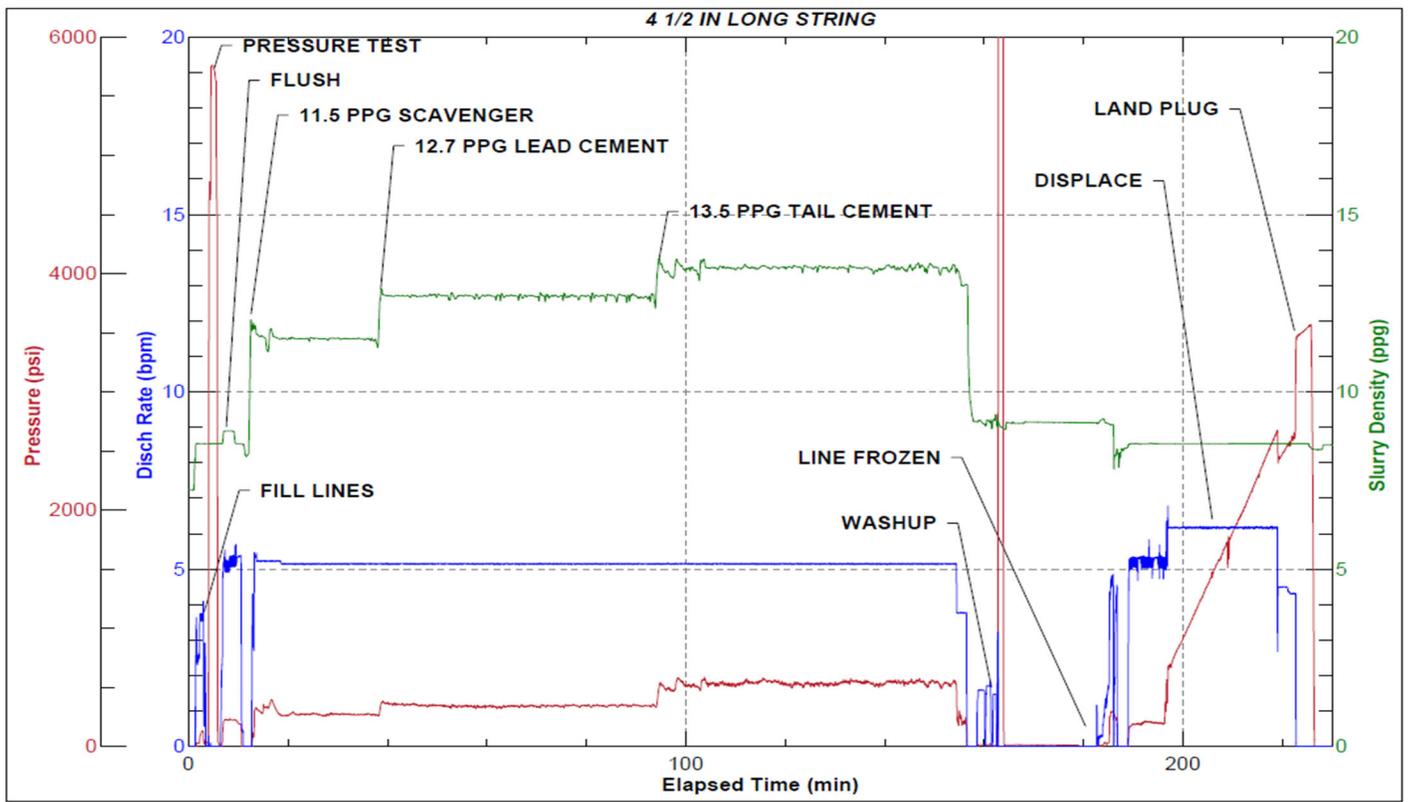


Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
29	Drop Top Plug	12/20/2022	10:22	8.34	5	0	222	DROP TOP PLUG, WITNESSED BY CUSTOMER REP. BEGIN DISPLACEMENT
30	Pump Displacement	12/20/2022	10:31	8.34	6	50	828	50 BBLS DISPLACEMENT PUMPED
31	Pump Displacement	12/20/2022	10:40	8.34	6	50	1575	100 BBLS DISPLACEMENT PUMPED
32	Pump Displacement	12/20/2022	10:48	8.34	6	50	2310	150 BBLS DISPLACEMENT PUMPED
33	Pump Displacement	12/20/2022	10:55	8.34	4	37.3	2660	187.3 BBLS DISPLACEMENT PUMPED, SLOWED RATE LAST 10 BBLS TO 4 BPM TO LAND PLUG
34	Land Plug	12/20/2022	10:55				3500	LAND PLUG, FCP - 2660 PSI, BUMPED TO 3500 PSI. 620 BBLS OF MUD RETURNED DURING CEMENT JOB
35	Check Floats	12/20/2022	10:58					CHECK FLOATS, FLOATS HELD, 2.5 BBLS BACK
36	Rig Down Iron	12/20/2022	11:15					RIG DOWN IRON AND HOSES
37	Depart Location	12/20/2022	13:00					AC CREW DEPARTS LOCATION

Pump Diagrams



JobMaster Program Version 5.01C1
Job Number: 85039
Customer: Caerus
Well Name: BJU B26 FED 14D-26-496



Job Start: Tuesday, December 20, 2022