



Caerus Operating LLC

LONG STRING POST JOB REPORT

BJU B26 FED #21C-27-496 05-045-24451
S:26 T:4S R:96W Garfield CO

CallSheet #: 83520
Proposal #: 63396



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,

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	3032	0
Open Hole	Outer	n/a	8.75	n/a	n/a	3032	7095	25
Open Hole	Outer	n/a	8.75	n/a	n/a	7095	12663	0
Casing	Inner	4.5	4	11.6	n/a	0	12647.8	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-469		
Field Storage Silo	FSS-468		
AS Cement Trailer Float	CTF-901	TRC-201	Dragon, Shane
AS Cement Trailer Float	CTF-048	TRC-201	Hutchinson, Michael
AS Cement Trailer Float	CTF-7145	TRC-188	Dragon, Shane
AS Cement Trailer Float	CTF-9299	TRC-188	Hutchinson, Michael
Cement Trailer Float	CTF-249	TRC-115	Wall, Lynn
Light Duty Vehicles	LDV-083		Putnam, Gage
Cement Pump Float	CPF-136	TRH-1137	Gonzales, Ivan
Cement Pump Float	CPF-011	TRH-957	Kirchenwitz, Jacob

Timing

Event	Date/Time
Call Out	9/21/2022 08:30
Depart Facility	9/21/2022 12:45
On Location	9/21/2022 14:40
Rig Up Iron	9/21/2022 14:45
Job Started	9/21/2022 19:24
Job Completed	9/21/2022 22:57
Rig Down Iron	9/21/2022 23:15
Depart Location	9/22/2022 00:30

General Job Information

Metrics	Value
Well Fluid Density	10.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1450 bbls
Rig Circulation Time	2 hours
Calculated Displacement	194.6 bbls
Actual Displacement	194.6 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	10.6 lb/gal
Well Fluid Density Out of Well	10.6 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	214 °F
BHST	282 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Flat Tank	
Temperature	62 °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	551.8 BBLS	0

Circulation Details

Began to get circulation at 19 bbls of scavenger pumped. Had full returns until 140 bbls into tail cement, then lost returns for the remainder of the job. 665 bbls mud recovered during the cement job.

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	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		831.00	296.31	3000
4	Tail	Tail	13.50	2.00	9.66		818.00	290.89	7392
5	Water + KCL Sub	DisplacementFinal	8.34			42.00		194.60	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

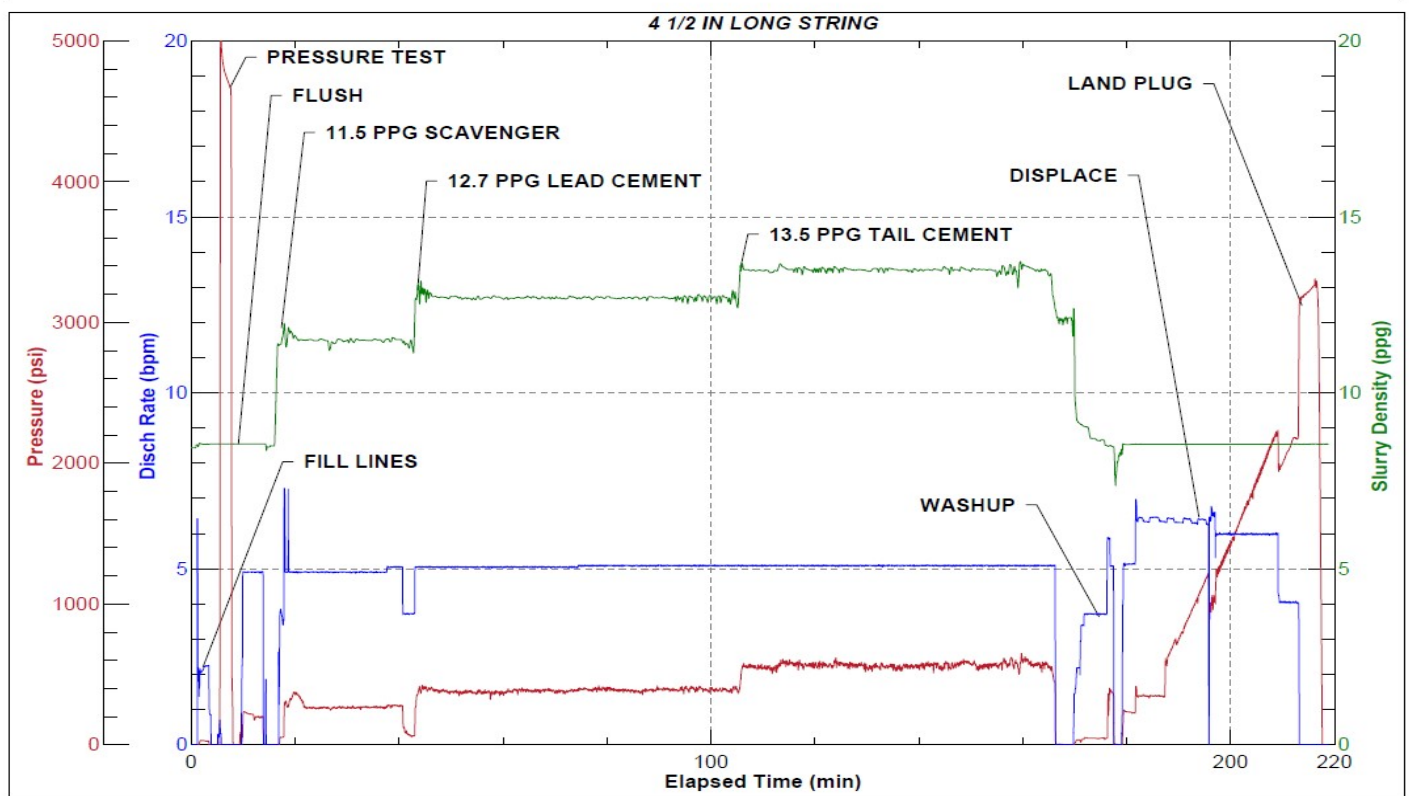
Fluid	Type	Fluid	Product	Function	Conc.	Uom
4	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
4	Tail	Tail	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
4	Tail	Tail	R-3	Retarder	0.25	%BWOB
4	Tail	Tail	S-8	StrengthRetrogression	25.00	%BWOB

Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	9/21/2022	08:30					CREW CALLED OUT FOR ON LOCATION TIME OF 15:00 9/21/22
2	Depart Location	9/21/2022	12:45					CREW DEPARTS RCO YARD FOR LOCATION
3	Arrive On Location	9/21/2022	14:40					FULL CREW ARRIVES ON LOCATION
4	Rig Up Iron	9/21/2022	14:45					RIG UP IRON AND HOSES
5	Waiting	9/21/2022	15:30					WAITING FOR RIG TO RUN CASING AND CIRCULATE
6	Safety Meeting	9/21/2022	19:00					JSA SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
7	Fill Lines	9/21/2022	19:24	8.34	2	5	65	FILL LINES WITH 5 BBLS FRESH WATER
8	Pressure Test Lines	9/21/2022	19:28				5000	PRESSURE TEST LINES TO 5000 PSI
9	Pump Spacer	9/21/2022	19:32	8.45	5	20	259	PUMP MUD FLUSH WITH SURFACTANT. RIG BEGINS PUMPING 1400 CFM DOWN PARASITE LINE. NO RETURNS.
10	Pump Scavenger	9/21/2022	19:40	11.5	5	0	334	BEGIN PUMPING 11.5 PPG SCAVENGER SLURRY, DENSITY VERIFIED WITH MUD SCALE
11	Pump Scavenger	9/21/2022	19:50	11.5	5	50	295	50 BBLS SCAVENGER PUMPED. BEGIN GETTING RETURNS AT 19 BBLS SCAVENGER PUMPED
12	Pump Scavenger	9/21/2022	20:00	11.5	5	50	304	100 BBLS SCAVENGER PUMPED
13	Pump Scavenger	9/21/2022	20:04	11.5	5	15.5	429	115.5 BBLS SCAVENGER PUMPED
14	Pump Lead Cement	9/21/2022	20:04	12.7	5	0	432	BEGIN PUMPING 12.7 PPG LEAD CEMENT, DENSITY VERIFIED WITH MUD SCALE
15	Pump Lead Cement	9/21/2022	20:17	12.7	5	50	395	50 BBLS LEAD CEMENT PUMPED
16	Pump Lead Cement	9/21/2022	20:27	12.7	5	50	422	100 BBLS LEAD CEMENT PUMPED
17	Pump Lead Cement	9/21/2022	20:37	12.7	5	50	426	150 BBLS LEAD CEMENT PUMPED
18	Pump Lead Cement	9/21/2022	20:47	12.7	5	50	422	200 BBLS LEAD CEMENT PUMPED
19	Pump Lead Cement	9/21/2022	20:57	12.7	5	50	426	250 BBLS LEAD CEMENT PUMPED, AIR LOWERED TO 800 CFM
20	Pump Lead Cement	9/21/2022	21:09	12.7	5	46.3	411	296.3 BBLS LEAD CEMENT PUMPED
21	Pump Tail Cement	9/21/2022	21:09	13.5	5	0	576	BEGIN PUMPING TAIL AT 13.5 PPG, DENSITY VERIFIED WITH MUD SCALE
22	Pump Tail Cement	9/21/2022	21:19	13.5	5	50	580	50 BBLS TAIL CEMENT PUMPED
23	Pump Tail Cement	9/21/2022	21:29	13.5	5	50	581	100 BBLS TAIL CEMENT PUMPED, PARASITE AIR BYPASSED
24	Pump Tail Cement	9/21/2022	21:39	13.5	5	50	566	150 BBLS TAIL CEMENT PUMPED, LOST RETURNS AT 140 BBLS TAIL PUMPED
25	Pump Tail Cement	9/21/2022	21:49	13.5	5	50	615	200 BBLS TAIL CEMENT PUMPED
26	Pump Tail Cement	9/21/2022	21:58	13.5	5	50	595	250 BBLS TAIL CEMENT PUMPED
27	Pump Tail Cement	9/21/2022	22:10	13.5	5	40.9	598	290.9 BBLS TAIL CEMENT PUMPED
28	Clean Pumps and Lines	9/21/2022	22:10					SHUT DOWN, WASH PUMP AND LINES

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	9/21/2022	22:23	8.34	5	0	255	DROP TOP PLUG, WITNESSED BY CUSTOMER REP. BEGIN DISPLACEMENT
30	Pump Displacement	9/21/2022	22:31	8.34	6.5	50	355	50 BBLs DISPLACEMENT PUMPED
31	Pump Displacement	9/21/2022	22:39	8.34	6.5	50	1199	100 BBLs DISPLACEMENT PUMPED, CAUGHT CEMENT AT 55 BBLs PUMPED
32	Pump Displacement	9/21/2022	22:48	8.34	6	50	1798	150 BBLs DISPLACEMENT PUMPED
33	Pump Displacement	9/21/2022	22:57	8.34	4	44.6	2215	194.6 BBLs DISPLACEMENT PUMPED, SLOWED RATE LAST 10 BBLs TO 4 BPM TO LAND PLUG
34	Land Plug	9/21/2022	22:57				3240	LAND PLUG, FCP - 2215 PSI, BUMPED TO 3240 PSI. 665 BBLs OF MUD RETURNED DURING CEMENT JOB
35	Check Floats	9/21/2022	23:02					CHECK FLOATS, FLOATS HELD, 2.25 BBLs BACK
36	Rig Down Iron	9/21/2022	23:15					RIG DOWN IRON AND HOSES
37	Depart Location	9/22/2022	00:30					AC CREW DEPARTS LOCATION

Pump Diagrams


JobMaster Program Version 5.01C1
Job Number: 83520
Customer: Caerus
Well Name: BJU B26 Fed 21C-27-496


Job Start: Wednesday, September 21, 2022