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# **Laramie Energy**

## **LONG STRING POST JOB REPORT**

CC 0697-09-01E 05-045-24508  
S:10 T:6S R:97W Garfield CO

CallSheet #: 84184  
Proposal #: 64426



**LONG STRING Post Job Report**

**Attention:** Mr. Aaron Duncan | (406) 498-4526 | [aduncan@laramie-energy.com](mailto:aduncan@laramie-energy.com)

Laramie Energy

1700 Lincoln Street, Suite 3950 | Denver, CO 80203

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Dear Mr. Aaron Duncan,

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](mailto: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	2593	0
Open Hole	Outer	n/a	8.75	n/a	n/a	2593	10006	25
Casing	Inner	4.5	4	11.6	Buttress	0	9996	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-471		
Field Storage Silo	FSS-478		
AS Cement Trailer Float	CTF-138	TRC-201	Balint, Daniel
AS Cement Trailer Float	CTF-7145	TRC-425	Wall, Lynn
AS Cement Trailer Float	CTF-048	TRC-115	Kirchenwitz, Jacob
Cement Trailer Float	CTF-007	TRH-769	Bonin, Matthew
Cement Pump Float	CPF-058	TRH-959	Gonzales, Ivan
Light Duty Vehicles	LDV-083		Putnam, Gage
Light Duty Vehicles	LDV-088		Dragon, Shane

### Timing

Event	Date/Time
Call Out	10/25/2022 22:20
Depart Facility	10/26/2022 02:30
On Location	10/26/2022 04:45
Rig Up Iron	10/26/2022 05:00
Job Started	10/26/2022 18:22
Job Completed	10/26/2022 21:52
Rig Down Iron	10/26/2022 21:58
Depart Location	10/26/2022 23:00

### General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1430 bbls
Rig Circulation Time	3 hours
Calculated Displacement	154.6 bbls
Actual Displacement	154.6 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	9 lb/gal
Well Fluid Density Out of Well	9 lb/gal

### Job Details (cont.)

Metrics	Value
BHCT	173 °F
BHST	243 °F

### Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	71 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	72 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	80 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	125

### Circulation Details

Had circulation on well until 125 bbls into displacement and then no circulation for the remainder of the job.

## 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		10.00	2025
2	Mud Flush	Flush	8.45			40.86		20.00	2198
3	Water	Flush	8.34			42.00		10.00	2545
4	Lead Cement	Lead	12.50	2.33	12.94		829.00	343.83	2700
5	Tail Cement	Tail	13.00	2.00	10.06		451.00	160.48	7725
6	Displacement	DisplacementFinal	8.34			42.00		154.60	0

## Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
2	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
4	Lead	Lead Cement	ASTM TYPE I/II	Cement	100.00	%
4	Lead	Lead Cement	BA-90	BondEnhancer	10.00	lb/sk
4	Lead	Lead Cement	BENTONITE	Viscosifier	4.00	%BWOB
4	Lead	Lead Cement	FL-66	FluidLoss	0.30	%BWOB
4	Lead	Lead Cement	FP-24	Defoamer	0.30	%BWOB
4	Lead	Lead Cement	GW-86	Viscosifier	0.10	%BWOB
4	Lead	Lead Cement	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
4	Lead	Lead Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
4	Lead	Lead Cement	R-3	Retarder	0.60	%BWOB
4	Lead	Lead Cement	R-7C	Retarder	0.10	%BWOB
4	Lead	Lead Cement	STATIC FREE	Other	0.01	lb/sk
5	Tail	Tail Cement	CLASS G	Cement	50.00	%
5	Tail	Tail Cement	FLY ASH (POZZOLAN)	Extender	50.00	%
5	Tail	Tail Cement	BA-90	BondEnhancer	3.00	lb/sk
5	Tail	Tail Cement	BENTONITE	Viscosifier	6.00	%BWOB
5	Tail	Tail Cement	FL-66	FluidLoss	0.40	%BWOB
5	Tail	Tail Cement	FP-24	Defoamer	0.30	%BWOB
5	Tail	Tail Cement	GW-86	Viscosifier	0.10	%BWOB
5	Tail	Tail Cement	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
5	Tail	Tail Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
5	Tail	Tail Cement	R-3	Retarder	0.20	%BWOB
5	Tail	Tail Cement	S-8	StrengthRetrogression	20.00	%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	10/25/2022	22:20					CREW CALLED OUT FOR ON LOCATION TIME OF 04:30 10/26/22
2	Depart Location	10/26/2022	02:30					CREW DEPARTS RCO YARD FOR RIG LOCATION
3	Arrive On Location	10/26/2022	04:45					CREW ARRIVES ON LOCATION
4	Rig Up Iron	10/26/2022	05:00					RIG UP IRON AND HOSES
5	Waiting	10/26/2022	06:00					WAITING ON RIG TO RUN CASING
6	Safety Meeting	10/26/2022	17:30					JSA SAFETY MEETING WITH AC, RIG CREW, AND CUSTOMER REP
7	Fill Lines	10/26/2022	18:22	8.34	5	10	169	FILL LINES WITH 10 BBLS FRESH WATER
8	Pressure Test Lines	10/26/2022	18:26				5000	PRESSURE TEST PUMP AND LINES TO 5000 PSI
9	Other	10/26/2022	18:29	8.45	6.5	20	224	PUMP 20 BBLS MUD FLUSH + SURFACTANT, 1200 CFM DOWN PARASITE LINE
10	Other	10/26/2022	18:32	8.34	7	20	260	PUMP 10 BBLS FRESH WATER FLUSH
11	Pump Lead Cement	10/26/2022	18:35	12.5	6.5	0	340	BEGIN PUMPING 12.5 PPG LEAD CEMENT, DENSITY VERIFIED BY MUD SCALE.
12	Pump Lead Cement	10/26/2022	18:41	12.5	7	50	400	50 BBLS LEAD CEMENT PUMPED
13	Pump Lead Cement	10/26/2022	18:49	12.5	7	50	400	100 BBLS LEAD CEMENT PUMPED
14	Pump Lead Cement	10/26/2022	18:56	12.5	7	50	385	150 BBLS LEAD CEMENT PUMPED
15	Pump Lead Cement	10/26/2022	19:04	12.5	7	50	365	200 BBLS LEAD CEMENT PUMPED
16	Pump Lead Cement	10/26/2022	19:13	12.5	6	50	345	250 BBLS LEAD CEMENT PUMPED
17	Pump Lead Cement	10/26/2022	19:22	12.5	6.5	50	363	300 BBLS LEAD CEMENT PUMPED
18	Pump Lead Cement	10/26/2022	19:35	12.5	5	43.8	220	343.8 BBLS (829 SKS) LEAD CEMENT PUMPED
19	Pump Tail Cement	10/26/2022	19:35	13	7	0	460	BEGIN PUMPING 13 PPG TAIL CEMENT, DENSITY VERIFIED BY MUD SCALE
20	Pump Tail Cement	10/26/2022	19:41	13	7	50	571	50 BBLS TAIL CEMENT PUMPED
21	Pump Tail Cement	10/26/2022	19:49	13	7	50	560	100 BBLS TAIL CEMENT PUMPED
22	Pump Tail Cement	10/26/2022	19:59	13	6	50	387	150 BBLS TAIL CEMENT PUMPED
23	Pump Tail Cement	10/26/2022	20:02	13	5	10.5	297	160.5 BBLS (451 SKS) TAIL CEMENT PUMPED
24	Clean Pumps and Lines	10/26/2022	20:02					WASH UP PUMP AND LINES
25	Drop Top Plug	10/26/2022	20:11	8.34	5.5	0	144	DROP PLUG, WITNESSED BY CUSTOMER REP. BEGIN FRESH WATER AND BIOCIDES DISPLACEMENT
26	Pump Displacement	10/26/2022	20:18	8.34	9	50	364	50 BBLS DISPLACEMENT PUMPED
27	Pump Displacement	10/26/2022	20:24	8.34	9	50	820	100 BBLS DISPLACEMENT PUMPED
28	Shutdown	10/26/2022	20:27	8.34	9	20	1010	SHUT DOWN AT 120 BBLS PUMPED BECAUSE WATER TANK LINE FROZEN, SWAP LINES AND CAME BACK ONLINE AT 20:32

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
29	Pump Displacement	10/26/2022	20:39	8.34	4	34.6	990	154.6 BBLS DISPLACEMENT PUMPED, LOST RETURNS AT 125 BBLS DISPLACEMENT PUMPED
30	Land Plug	10/26/2022	20:39				2020	PLUG LANDED. FCP - 990 PSI, BUMPED TO 2020 PSI, HOLD 10 MINUTES, PRESSURE HELD
31	Check Floats	10/26/2022	20:50					CHECK FLOATS, FLOATS HELD, BBLS BACK
32	Other	10/26/2022	21:35					RIG UP TO PARASITE LINE
33	Other	10/26/2022	21:50	15.8	3	6	88	PUMP 6 BBLS (30 SKS) 15.8 PPG CEMENT DOWN PARASITE LINE
34	Clean Pumps and Lines	10/26/2022	21:52					SHUT DOWN, CLEAN PUMP AND LINES
35	Rig Down Iron	10/26/2022	21:58					RIG DOWN ALL IRON AND HOSES
36	Depart Location	10/26/2022	23:00					AC CREW DEPARTS LOCATION FOR RCO YARD

## Pump Diagrams

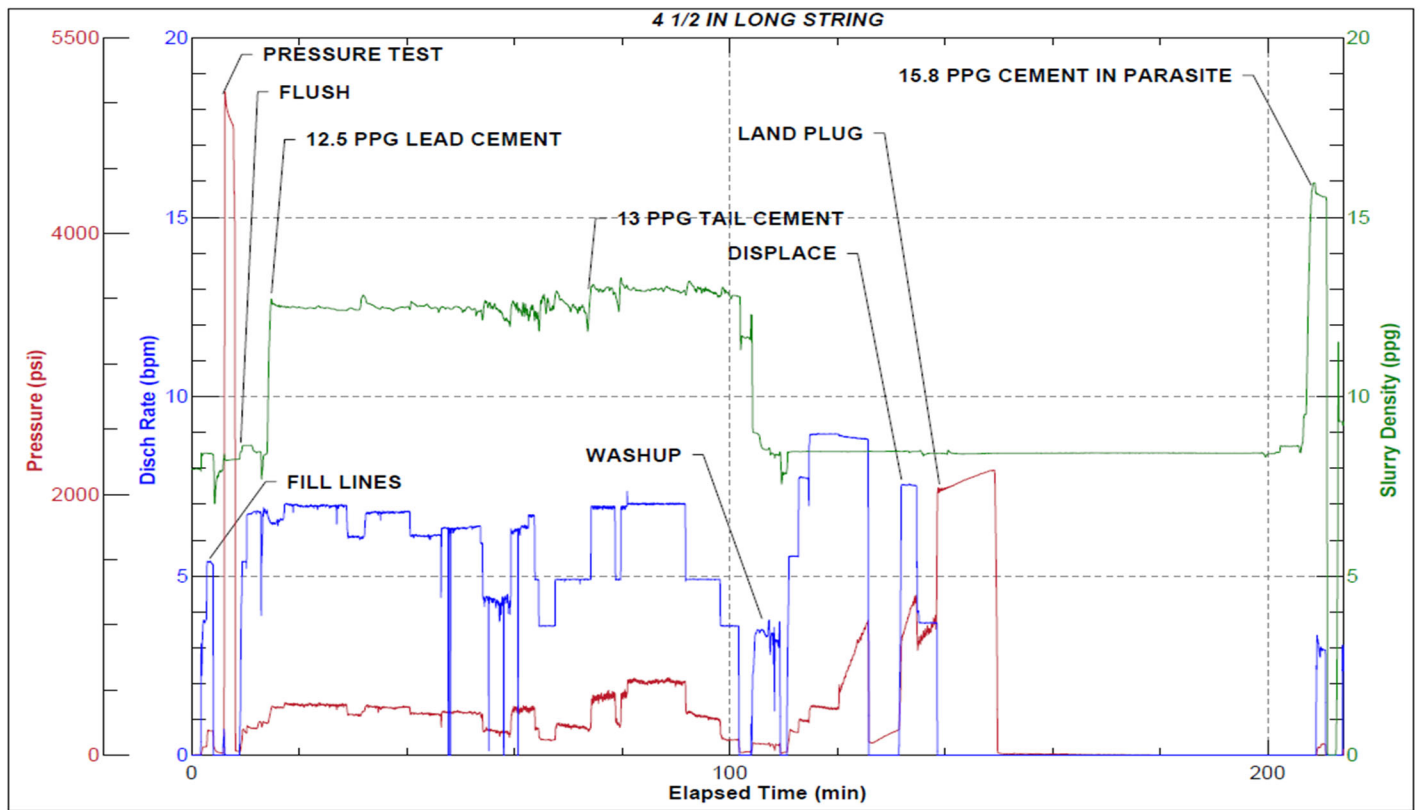


JobMaster Program Version 5.01C1

Job Number: 84184

Customer: Laramie

Well Name: CC 0697-09-01E



Job Start: Wednesday, October 26, 2022