



Laramie Energy

SURFACE POST JOB REPORT

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

CallSheet #: 84086
Proposal #: 64233



SURFACE Post Job Report

Attention: Mr. Aaron Duncan | (406) 498-4526 | aduncan@laramie-energy.com
Laramie Energy
1700 Lincoln Street, Suite 3950 | Denver, CO 80203

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

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	80	0
Open Hole	Outer	n/a	14.75	n/a	n/a	80	2100	35
Open Hole	Outer	n/a	14.75	n/a	n/a	2100	2608	30
Casing	Inner	9.625	8.921	36	LTC	0	2593	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
AS Cement Trailer Float	CTF-9898	TRC-249	Richey, Steven
AS Cement Trailer Float	CTF-048	TRC-053	Balint, Daniel
Cement Trailer Float	CTF-161		Dragon, Shane
Field Storage Silo	FSS-478		
Field Storage Silo	FSS-473		
AS Cement Trailer Float	CTF-148	TRC-115	Hutchinson, Michael
Cement Pump Float	CPF-058	TRH-959	Gonzales, Ivan
Light Duty Vehicles	LDV-083		Putnam, Gage

Timing

Event	Date/Time
Call Out	10/20/2022 20:00
Depart Facility	10/20/2022 23:00
On Location	10/21/2022 01:00
Rig Up Iron	10/21/2022 01:15
Job Started	10/21/2022 04:08
Job Completed	10/21/2022 14:31
Rig Down Iron	10/21/2022 14:50
Depart Location	10/21/2022 16:45

General Job Information

Metrics	Value
Well Fluid Density	9.1 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	210 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	196.9 bbls
Actual Displacement	196.9 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	2.5 bbls
Well Topped Out	Yes
Top Out Volume	102.4 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	9.1 lb/gal
Well Fluid Density Out of Well	9.1 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	84 °F
BHST	116 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	45 °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	0

Circulation Details

No circulation prior to job. No circulation during job until 100 bbls into displacement. Full circulation until 180 bbls displacement and then partial for remainder of primary 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	Water	Flush	8.34			42.00		20.00	0
2	A-3L Flush	Flush	10.01			21.00		20.00	0
3	Water	Flush	8.34			42.00		20.00	0
4	Lead	Lead	12.30	2.37	13.36		838.00	353.88	0
5	Tail	Tail	12.80	2.10	11.34		220.00	82.17	2100
6	Displacement	DisplacementFinal	8.34			42.00		196.90	0
7	Top Out	Topout	15.80	1.15	5.00		500.00	102.40	0

Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Flush	A-3L Flush	A-3L	Accelerator	21.00	gal/bbl
4	Lead	Lead	ASTM TYPE I/II	Cement	100.00	%
4	Lead	Lead	A-10	Accelerator	5.00	%BWOB
4	Lead	Lead	A-2	Accelerator	2.50	lb/sk
4	Lead	Lead	A-7P	Accelerator	2.00	lb/sk
4	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
4	Lead	Lead	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
4	Lead	Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
4	Lead	Lead	STATIC FREE	Other	0.01	lb/sk
5	Tail	Tail	ASTM TYPE I/II	Cement	100.00	%
5	Tail	Tail	A-10	Accelerator	5.00	%BWOB
5	Tail	Tail	A-2	Accelerator	2.00	lb/sk
5	Tail	Tail	A-7P	Accelerator	2.00	lb/sk
5	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
5	Tail	Tail	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
5	Tail	Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
5	Tail	Tail	STATIC FREE	Other	0.01	lb/sk
7	Topout	Top Out	CLASS G	Cement	100.00	%

Job Logs

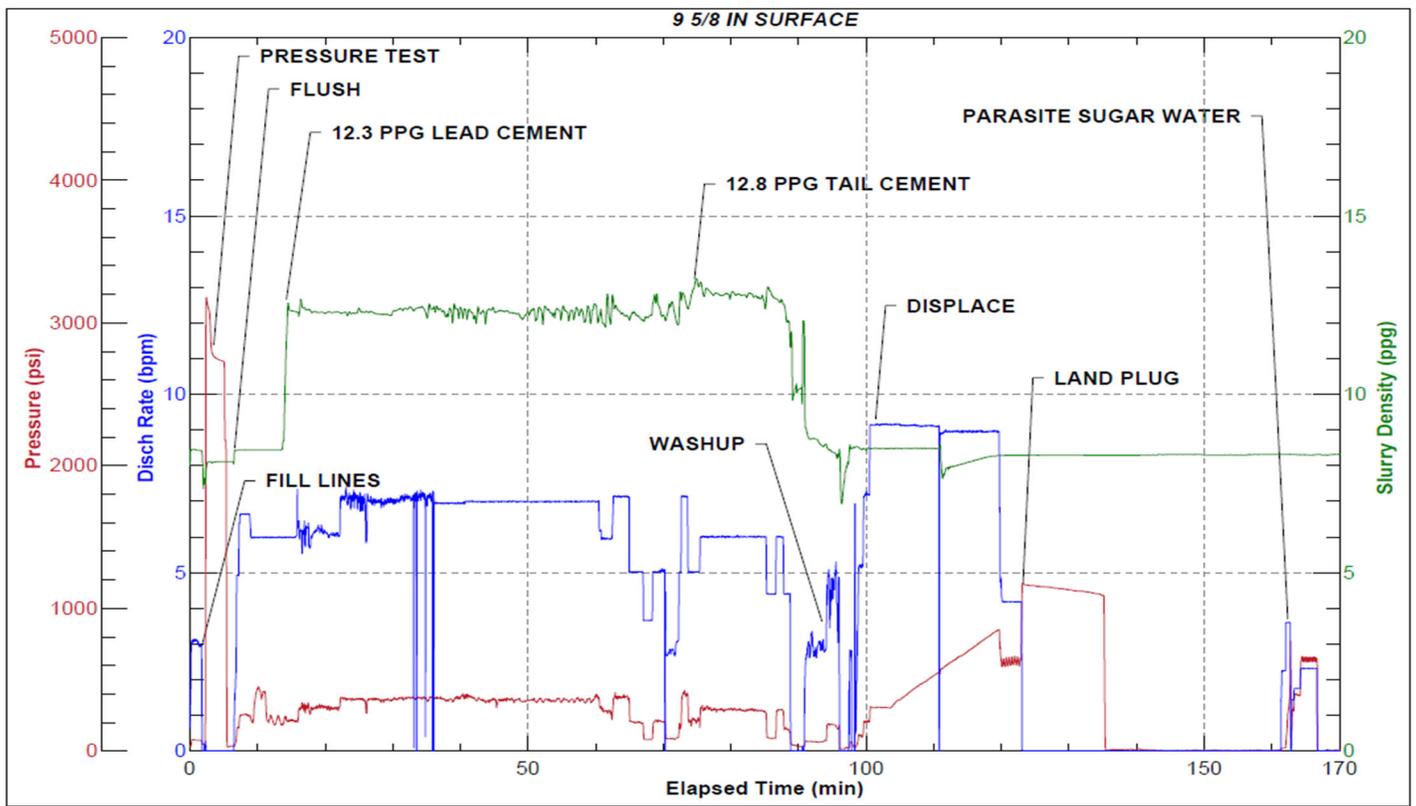
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	10/20/2022	20:00					CREW CALLED OUT FOR ON LOCATION TIME OF 02:30 10/21/22
2	Depart Location	10/20/2022	23:00					CREW DEPARTS STAGING AREA FOR RIG LOCATION
3	Arrive On Location	10/21/2022	01:00					CREW ARRIVES ON LOCATION
4	Rig Up Iron	10/21/2022	01:15					RIG UP IRON AND HOSES
5	Safety Meeting	10/21/2022	04:08					JSA SAFETY MEETING WITH AC, RIG CREW, AND CUSTOMER REP
6	Fill Lines	10/21/2022	04:20	8.34	2	5	80	FILL LINES WITH 5 BBLs FRESH WATER, NO RETURNS
7	Pressure Test Lines	10/21/2022	04:22				3000	PRESSURE TEST PUMP AND LINES TO 3000 PSI
8	Other	10/21/2022	04:26	8.34	5	15	170	PUMP 15 BBLs FRESH WATER FLUSH
9	Other	10/21/2022	04:29	10	5	20	280	PUMP 20 BBLs 50/50 SODIUM SILICATE
10	Other	10/21/2022	04:33	8.34	6	20	184	PUMP 20 BBLs FRESH WATER FLUSH
11	Pump Lead Cement	10/21/2022	04:36	12.3	6	0	300	BEGIN PUMPING 12.3 PPG LEAD CEMENT, DENSITY VERIFIED BY MUD SCALE.
12	Pump Lead Cement	10/21/2022	04:44	12.3	7	50	350	50 BBLs LEAD CEMENT PUMPED
13	Pump Lead Cement	10/21/2022	04:51	12.3	7	50	370	100 BBLs LEAD CEMENT PUMPED
14	Pump Lead Cement	10/21/2022	05:00	12.3	7	50	360	150 BBLs LEAD CEMENT PUMPED
15	Pump Lead Cement	10/21/2022	05:06	12.3	7	50	350	200 BBLs LEAD CEMENT PUMPED
16	Pump Lead Cement	10/21/2022	05:14	12.3	7	50	350	250 BBLs LEAD CEMENT PUMPED
17	Pump Lead Cement	10/21/2022	05:20	12.3	6	50	300	300 BBLs LEAD CEMENT PUMPED
18	Pump Lead Cement	10/21/2022	05:33	12.3	3	53.9	180	353.9 BBLs LEAD CEMENT PUMPED
19	Pump Tail Cement	10/21/2022	05:33	12.8	7	0	390	BEGIN PUMPING 12.8 PPG TAIL CEMENT, DENSITY VERIFIED BY MUD SCALE
20	Pump Tail Cement	10/21/2022	05:41	12.8	6	50	300	50 BBLs TAIL CEMENT PUMPED
21	Pump Tail Cement	10/21/2022	05:49	12.8	4	32.2	153	82.2 BBLs TAIL CEMENT PUMPED
22	Clean Pumps and Lines	10/21/2022	05:49					WASH UP PUMP AND LINES
23	Drop Top Plug	10/21/2022	05:58	8.34	5	0	108	DROP PLUG, WITNESSED BY CUSTOMER REP. BEGIN DISPLACEMENT, NO RETURNS
24	Pump Displacement	10/21/2022	06:05	8.34	9	50	360	50 BBLs FRESH WATER DISPLACEMENT PUMPED
25	Pump Displacement	10/21/2022	06:11	8.34	9	50	530	100 BBLs FRESH WATER DISPLACEMENT PUMPED, REGAIN CIRCULATION
26	Pump Displacement	10/21/2022	06:17	8.34	9	50	740	150 BBLs FRESH WATER DISPLACEMENT PUMPED
27	Pump Displacement	10/21/2022	06:24	8.34	4	46.9	650	196.8 BBLs FRESH WATER DISPLACEMENT PUMPED, PARTIAL RETURNS AFTER 180 BBLs DISPLACEMENT
28	Land Plug	10/21/2022	06:24				1158	PLUG LANDED. FCP - 650 PSI, BUMPED TO 1158 PSI, NO CEMENT TO SURFACE

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
29	Test Casing	10/21/2022	06:24				1158	10 MIN CASING TEST. PRESSURE HELD
30	Check Floats	10/21/2022	06:37					CHECK FLOATS, FLOATS HELD, 1 BBL BACK
31	Rig Up Iron	10/21/2022	06:40					RIG UP TO PUMP ON PARASITE LINE
32	Other	10/21/2022	07:03	8.34	1.5	12	800	PUMP 12 BBLS SUGAR WATER DOWN PARASITE LINE, DISC BURST AT 4 BBLS AWAY
33	Shutdown	10/21/2022	07:08					SHUT DOWN PUMPING
34	Rig Up Iron	10/21/2022	07:10					RIG UP FOR TOP OUT
35	Pump Cement	10/21/2022	07:22	15.8	2	82	110	82 BBLS (400 SKS) TOP OUT CEMENT PUMPED. NO CEMENT TO SURFACE.
36	Waiting	10/21/2022	08:02					SHUT DOWN, WASH UP. WAITING ON MORE CEMENT TO ARRIVE ON LOCATION
37	Other	10/21/2022	12:30					BULK TRUCK ARRIVES ON LOCATION
38	Other	10/21/2022	12:30					FILLING HYDRAULIC TANK ON PUMP
39	Rig Up Iron	10/21/2022	13:45					RIG UP FOR TOP OUT
40	Pump Cement	10/21/2022	14:09	15.8	2	20.5	149	PUMP 20.5 BBLS (100 SKS) TOP OUT CEMENT, CEMENT TO SURFACE AT 18 BBLS PUMPED, 2.5 BBLS CEMENT TO SURFACE
41	Shutdown	10/21/2022	14:28					SHUTDOWN PUMPING
42	Clean Pumps and Lines	10/21/2022	14:31					WASH UP PUMP AND LINES
43	Rig Down Iron	10/21/2022	14:50					RIG DOWN IRON AND HOSES
44	Depart Location	10/21/2022	16:45					AC CREW DEPARTS LOCATION

Pump Diagrams



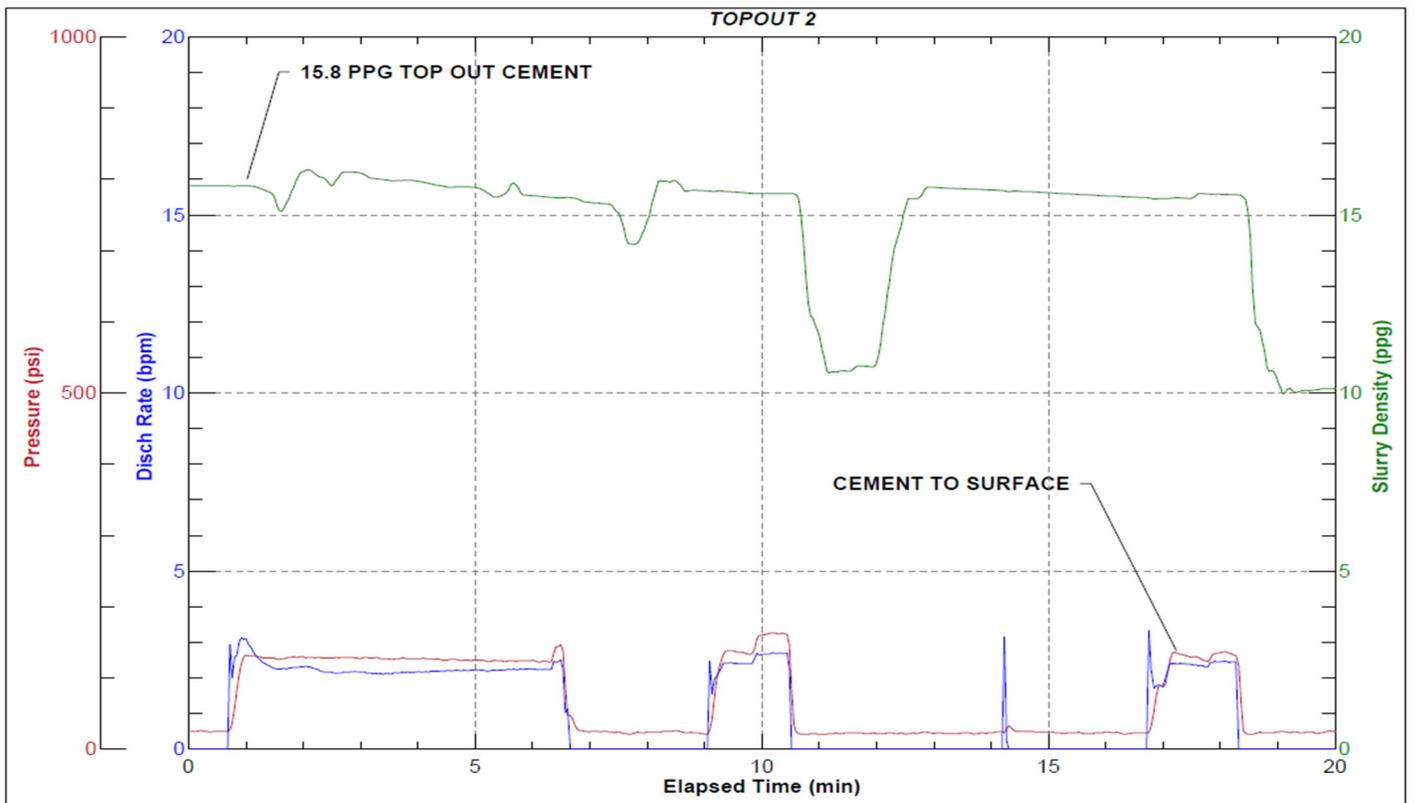
JobMaster Program Version 5.01C1
Job Number: 84086
Customer: Laramie
Well Name: CC 0697-09-01E



Job Start: Friday, October 21, 2022



JobMaster Program Version 5.01C1
Job Number: 84086
Customer: Laramie
Well Name: CC 0697-09-01E



Job Start: Friday, October 21, 2022