



# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**GM 541-30 05-045-24363**  
**S:29 T:6S R:96W Garfield CO**

CallSheet #: 78673  
Proposal #: 55167



**LONG STRING Post Job Report**

**Attention:** Dustin Childers | (936) 524-8828 | dchilders@terraep.com  
Terra Energy Partners, LLC  
4828 Loop Central Dr., Suite 900 | Houston, TX 77081

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Dear Dustin Childers,

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,

**Zen Keith**

District Manager | (307) 757-7178 | zen.keith@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	9.001	32.3	n/a	0	1000	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1000	5204	45
Open Hole	Outer	n/a	8.75	n/a	n/a	5204	7553	45
Casing	Inner	4.5	4	11.6	n/a	0	7553	0

### Timing

Event	Date/Time
Call Out	10/13/2021 17:00
Depart Facility	10/13/2021 20:00
On Location	10/14/2021 00:08
Rig Up Iron	10/14/2021 02:45
Job Started	10/14/2021 14:54
Job Completed	10/14/2021 16:31
Rig Down Iron	10/14/2021 16:45
Depart Location	10/14/2021 17:30

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS(CTS)-438		
Cement Trailer	CTF-622	TRC(TRB)-202	Martin, Chuck
Light Duty Vehicles	LDV-062		Aden, Mark
Cement Pump	CPF-052	TRH-957	Woronovitch, Collin

### General Job Information

Metrics	Value
Well Fluid Density	10.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	6071 bbls
Rig Circulation Time	11.5 hours
Calculated Displacement	117 bbls
Actual Displacement	117 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	170 °F
BHST	230 °F

### Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	54 °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	425 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

No

## 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	3625
2	Mud Flush	Flush	8.45			40.86		20.00	3751
3	Water	Flush	8.34			42.00		10.00	4003
4	Lead Cement	Lead	12.50	2.16	12.18		222.00	85.45	4129
5	Tail Cement	Tail	13.00	1.99	10.08		527.00	187.16	5204
6	Displacement	DisplacementFinal	8.34			42.00		117.00	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 III	Cement	100.00	%
4	Lead	Lead Cement	BA-90	BondEnhancer	5.00	lb/sk
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 POLI	LostCirculation	0.25	lb/sk
4	Lead	Lead Cement	R-3	Retarder	0.60	%BWOB
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 POLI	LostCirculation	0.25	lb/sk
5	Tail	Tail Cement	R-3	Retarder	0.10	%BWOB
5	Tail	Tail Cement	S-8	StrengthRetgression	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	10/13/2021	20:00					Yard call 2000 on location 0000.
2	Depart For Location	10/13/2021	23:00					Leave Rifle yard for location
3	Arrive On Location	10/14/2021	00:08					Arrive on location rig running casing
4	Spot Equipment	10/14/2021	02:00					Spot in all Equipment
5	Rig Up Iron	10/14/2021	02:45					Pre rig up safety meeting, rig in all equipment and lines to stand pipes.
6	Safety Meeting	10/14/2021	03:30					Pre job safety meeting with company man and rig crew
7	End Circulation	10/14/2021	14:50					Delayed due to AC pump issues. Rig ended circulation, Circulated for 11.5 Hour, total of 6071 BBLS
8	Rig Up Iron	10/14/2021	14:51					Rig up Cement head and lines on the floor
9	Pump Spacer	10/14/2021	14:54	8.34	4	10	200	Pumping fresh water spacer to load lines, Full returns
10	Pressure Test Lines	10/14/2021	14:58				5000	Pressure test
11	Pump Mud Flush	10/14/2021	15:00	8.34	4	20	240	Pumping mud flush spacer
12	Pump Spacer	10/14/2021	15:06	8.34	4	10	377	Pumping fresh water spacer, Returns
13	Pump Lead Cement	10/14/2021	15:20	12.5	4	0	420	Pumping Lead Cement. Slurry temp 68 F
14	Pump Lead Cement	10/14/2021	15:29	12.5	8	50	750	Pumping lead cement
15	Pump Lead Cement	10/14/2021	15:31	12.5	6	85	497	Pumping lead cement
16	Pump Tail Cement	10/14/2021	15:31	13	6	0	502	Pumping tail cement, slurry temp 71 F
17	Pump Tail Cement	10/14/2021	15:40	13	6.5	50	450	Pumping lead cement
18	Pump Tail Cement	10/14/2021	15:47	13	7	100	548	Pumping lead cement
19	Pump Tail Cement	10/14/2021	15:53	13	7	150	504	Pumping tail cement
20	Pump Tail Cement	10/14/2021	16:03	13	2.5	187	92	Pumping tail cement
21	Clean Pumps and Lines	10/14/2021	16:08					Clean pump and lines to 3-sided tank
22	Drop Top Plug	10/14/2021	16:17					Drop top plug verified by company man
23	Pump Displacement	10/14/2021	16:17		10	0	110	Pumping KCL displacement
24	Pump Displacement	10/14/2021	16:23		10	50	1295	Pumping KCL displacement
25	Pump Displacement	10/14/2021	16:28		10	100	1778	Pumping KCL displacement
26	Pump Displacement	10/14/2021	16:31		4	117		Pumping KCL displacement
27	Land Plug	10/14/2021	16:31					Land plug. FCP 1424 PSI bumped to 2401 PSI
28	Check Floats	10/14/2021	16:34					Bled pressure, floats held. 1.5 BBL bled back.
29	Rig Down Iron	10/14/2021	16:45					Pre rig down safety meeting, rig down cement head and lines on the floor.
30	Depart Location	10/14/2021	17:30					Leave location for Rifle shop

# Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 78673  
Customer: Terra  
Well Name: GM 541-30

