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# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**FEDERAL RWF 422-8 05-045-24316**  
**S:8 T:6S R:94W Garfield CO**

CallSheet #: 75200  
Proposal #: 50408



**LONG STRING Post Job Report**

**Attention:** Mr. Lynn Cass | (970) 263-2716 | lcass@terraep.com

Terra Energy Partners, LLC

4828 Loop Central Dr., Suite 900 | Houston, TX 77081

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Dear Mr. Lynn Cass,

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**

Field Engineer | (307) 757-7178 | zen.keith@americancementing.com

**Field Office**      28730 US-6, Rifle, CO 81650  
Phone: (970) 305-4888

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# 1 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		0	1151	0
Open Hole	Outer		8.75			1000	9525	45
Casing	Inner	4.5	4	11.6		0	9515	0

## Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-280	TRB-424	Rivas, Saul	27
Silo	Silo \$25			
Cement Pump	CPF-058	TRH-1140	Castillo, Francisco	27
Light Duty Trailers	LDV-3106		Diaz, Douglas	27

## Timing

Event	Date/Time
Call Out	10/24/2020 13:30
Depart Facility	10/24/2020 14:45
On Location	10/24/2020 15:15
Rig Up Iron	10/24/2020 15:34
Job Started	10/24/2020 18:13
Job Completed	10/24/2020 19:56
Rig Down Iron	10/24/2020 19:59
Depart Location	10/24/2020 20:40

## General Job Information

Metrics	Value
Well Fluid Density	11.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	840 bbls
Rig Circulation Time	1 hours
Calculated Displacement	147 bbls
Actual Displacement	147 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 During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	11.8 lb/gal
Well Fluid Density Out of Well	11.8 lb/gal

## Job Details (cont.)

Metrics	Value
BHCT	164 °F
BHST	234 °F

## Circulation

Lost Circulation Experienced
No

### Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sk)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.34			42.00		10.00	4286
1	2	Mud Flush	Flush	8.45			40.86		20.00	4412
1	3	Water	Flush	8.34			42.00		10.00	4664
1	4	Primary Cement	Primary	14.20	1.72	8.08		1237.00	379.43	4790
1	5	Displacement	DisplacementFinal	8.34			42.00		147.00	0

### Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
1	2	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
1	4	Primary	Primary Cement	CLASS G	Cement	80.00	%
1	4	Primary	Primary Cement	FLY ASH (POZZOLAN)	Extender	20.00	%
1	4	Primary	Primary Cement	FL-66	FluidLoss	0.40	%BWOB
1	4	Primary	Primary Cement	FP-24	Defoamer	0.30	%BWOB
1	4	Primary	Primary Cement	GW-86	Viscosifier	0.10	%BWOB
1	4	Primary	Primary Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
1	4	Primary	Primary Cement	R-3	Retarder	0.30	%BWOB
1	4	Primary	Primary Cement	S-8	StrengthRetrogression	27.00	%BWOB

## 2 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	10/24/2020	13:30					Yard call 1330 on location 1630
2	Depart For Location	10/24/2020	14:45					Leave Rifle shop for location
3	Arrive On Location	10/24/2020	15:15					Arrived on location, rig running casing
4	Spot Equipment	10/24/2020	15:15					Spot in all equipment
5	Rig Up Iron	10/24/2020	15:34					Pre rig up safety meeting, rig in all equipment and lines to the stand pipe
6	Waiting	10/24/2020	16:24					Waiting on rig to finish casing and circulate
7	Safety Meeting	10/24/2020	17:55					Pre job safety meeting with rig crew and company man
8	Waiting	10/24/2020	18:04					Rig ended circulating, circulated 80 mins @ 10.5 BBLs/min, total of 840 BBLs
9	Waiting	10/24/2020	18:04					Waiting on rig to lay down CRT
10	Rig Up Iron	10/24/2020	18:06					Rig up cement head and lines on the floor
11	Pump Spacer	10/24/2020	18:13	8.34	6	10	711	Pumping Fresh water spacer, returns
12	Pressure Test Lines	10/24/2020	18:16				5000	Pressure test lines
13	Pump Spacer	10/24/2020	18:18	8.34	6	20	893	Pumping mud flush spacer
14	Pump Spacer	10/24/2020	18:22	8.34	6	10	958	Pumping Fresh water spacer
15	Pump Cement	10/24/2020	18:24	14.2	6	0	1375	Pumping Cement
16	Pump Cement	10/24/2020	18:34	14.2	5	50	970	Pumping Cement
17	Pump Cement	10/24/2020	18:44	14.2	6	100	824	Pumping Cement
18	Pump Cement	10/24/2020	18:52	14.2	7	150	1047	Pumping Cement
19	Pump Cement	10/24/2020	18:58	14.2	7.5	200	872	Pumping Cement
20	Pump Cement	10/24/2020	19:04	14.2	8	250	1139	Pumping Cement
21	Pump Cement	10/24/2020	19:11	14.2	7.5	300	1122	Pumping Cement
22	Pump Cement	10/24/2020	19:17	14.2	6	350	704	Pumping Cement
23	Pump Cement	10/24/2020	19:27	14.2	5	379	455	Pumping Cement
24	Clean Pumps and Lines	10/24/2020	19:27					Wash pump and lines to cellar
25	Drop Top Plug	10/24/2020	19:37					Drop top plug verified by company man
26	Pump Displacement	10/24/2020	19:38	8.34	10	0	625	Pumping KCL displacement
27	Pump Displacement	10/24/2020	19:43	8.34	9.5	50	1911	Pumping KCL displacement
28	Pump Displacement	10/24/2020	19:49	8.34	9	100	2511	Pumping KCL displacement
29	Pump Displacement	10/24/2020	19:56	8.34	4	147	2555	Pumping KCL displacement
30	Land Plug	10/24/2020	19:56				3390	Land plug, FCP 2555 PSI bumped to 3390PSI
31	Check Floats	10/24/2020	19:59					Bled pressure, floats held 1.5 BBL bled back
32	Rig Down Iron	10/24/2020	19:59					Pre rig down meeting, Rig down cement head and lines on the floor
33	Clean Pumps and Lines	10/24/2020	20:10					Wash and winterize pump and lines to celler
34	Rig Down Iron	10/24/2020	20:15					Rig down all lines and equipment
35	Depart Location	10/24/2020	20:40					Leave Location for Rifle shop

### 3 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	240	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

### 4 Pump Diagrams

