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# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**FEDERAL NR 344-36 05-045-24482**  
**S:3 T:6S R:94W Garfield CO**

CallSheet #: 82607  
Proposal #: 61800



**LONG STRING Post Job Report**

**Attention:** Mr. 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 Mr. 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,

**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	9.625	8.921	36	n/a	0	1144	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1144	8590	45
Open Hole	Outer	n/a	8.75	n/a	n/a	8590	11464	45
Casing	Inner	4.5	4	11.6	n/a	0	11464	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Field Storage Silo	FSS(CTS)-470			
Field Storage Silo	FSS(CTS)-438			
Cement Trailer Float	CTF-249	TRH(TRB)-769	Schweitzer, Casey	
AS Cement Trailer Float	CTF-019	TRC(TRB)-090	Dragon, Shane	Bonin, Matthew
AS Cement Trailer Float	CTF-9309	TRC(TRB)-090	Dragon, Shane	Bonin, Matthew
AS Cement Trailer Float	CTF-9299	TRC(TRB)-115	Wall, Lynn	
Cement Pump Float	CPF-012	TRH-964	Gonzales, Ivan	
Light Duty Vehicles	LDV-083		Putnam, Gage	Corona, Antonio

### Timing

Event	Date/Time
Call Out	7/29/2022 05:00
Depart Facility	7/29/2022 11:40
On Location	7/29/2022 13:00
Rig Up Iron	7/29/2022 13:30
Job Started	7/29/2022 15:57
Job Completed	7/29/2022 18:09
Rig Down Iron	7/29/2022 18:30
Depart Location	7/29/2022 19:15

### General Job Information

Metrics	Value
Well Fluid Density	11.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	945 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	177 bbls
Actual Displacement	177 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	600 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	11.4 lb/gal
Well Fluid Density Out of Well	11.4 lb/gal

## Job Details (cont.)

Metrics	Value
BHCT	192 °F
BHST	253 °F

## Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	84 °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
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	6188
2	Mud Flush	Flush	8.45			40.86		20.00	6314
3	Water	Flush	8.34			42.00		10.00	6566
4	12.7 Lead	Lead	12.70	2.00	10.99		423.00	150.85	6692
5	14.2 Tail	Tail	14.20	1.72	8.09		761.00	233.30	8590
6	Displacement	DisplacementFinal	8.34			42.00		177.00	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	12.7 Lead	ASTM TYPE I/II	Cement	100.00	%
4	Lead	12.7 Lead	BA-90	BondEnhancer	3.00	lb/sk
4	Lead	12.7 Lead	FL-66	FluidLoss	0.50	%BWOB
4	Lead	12.7 Lead	FP-24	Defoamer	0.30	%BWOB
4	Lead	12.7 Lead	GW-86	Viscosifier	0.10	%BWOB
4	Lead	12.7 Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
4	Lead	12.7 Lead	R-3	Retarder	0.45	%BWOB
4	Lead	12.7 Lead	STATIC FREE	Other	0.01	lb/sk
5	Tail	14.2 Tail	CLASS G	Cement	80.00	%
5	Tail	14.2 Tail	FLY ASH (POZZOLAN)	Extender	20.00	%
5	Tail	14.2 Tail	FL-66	FluidLoss	0.40	%BWOB
5	Tail	14.2 Tail	FP-24	Defoamer	0.30	%BWOB
5	Tail	14.2 Tail	GW-86	Viscosifier	0.10	%BWOB
5	Tail	14.2 Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
5	Tail	14.2 Tail	R-3	Retarder	0.15	%BWOB
5	Tail	14.2 Tail	S-8	StrengthRetrogression	27.00	%BWOB

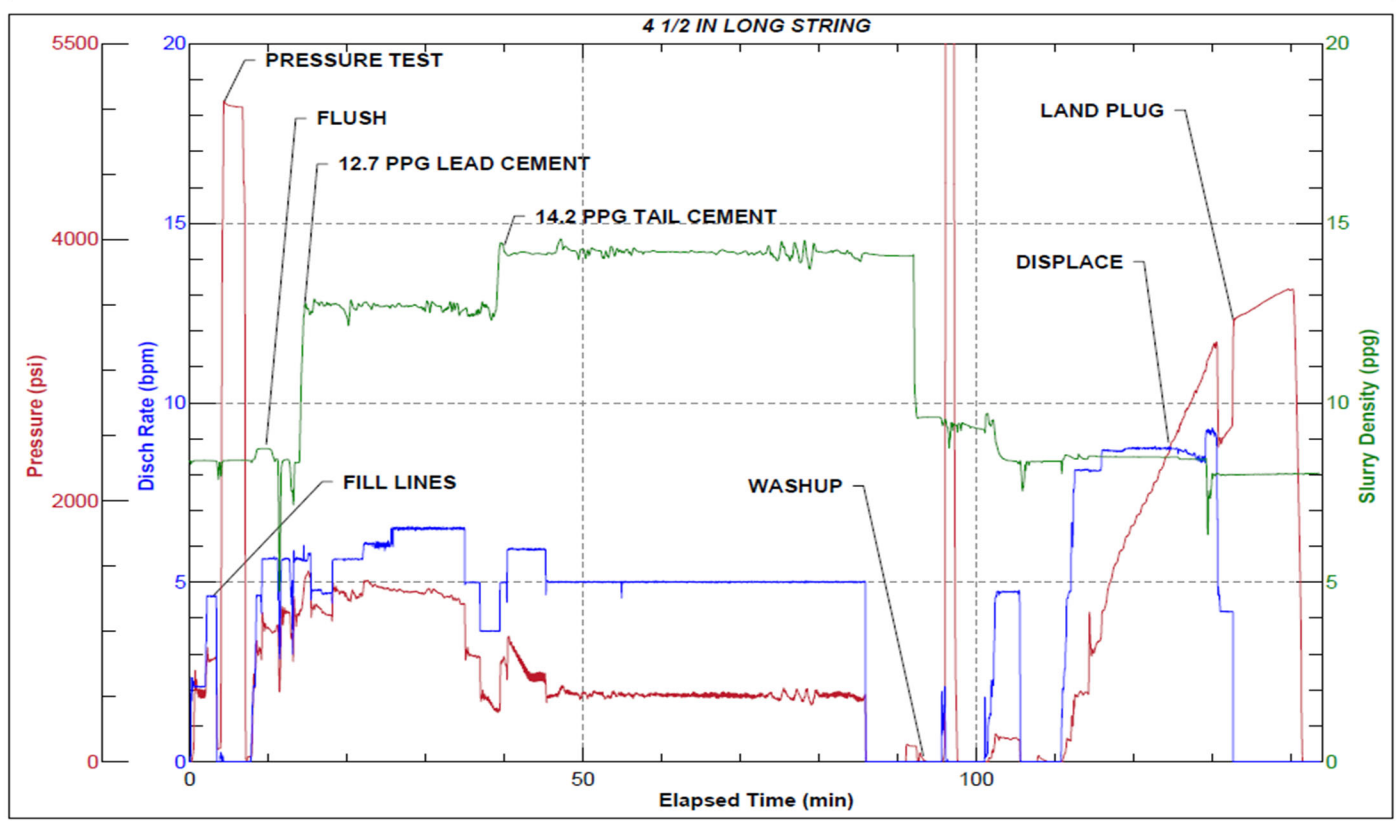
## Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	7/29/2022	05:00					CREW CALLED OUT FOR ON LOCATION TIME OF 14:00 7/29/22
2	Depart Location	7/29/2022	11:40					DEPART RCO YARD FOR LOCATION
3	Arrive On Location	7/29/2022	13:00					ARRIVE ON CUSTOMER SITE
4	Rig Up Iron	7/29/2022	13:30					RIG UP IRON AND HOSES
5	Waiting	7/29/2022	14:00					WAITING ON RIG TO RUN CASING
6	Safety Meeting	7/29/2022	15:25					JSA SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
7	Fill Lines	7/29/2022	15:57	8.34	4.5	10	894	FILL LINES WITH FRESH WATER
8	Pressure Test Lines	7/29/2022	16:00	8.34			5020	PRESSURE TEST PUMP AND LINES TO 5000 PSI
9	Other	7/29/2022	16:04	8.45	5.5	20	1140	PUMP MUD FLUSH + SURFACTANT
10	Other	7/29/2022	16:08	8.34	5.6	10	1094	PUMP FRESH WATER FLUSH
11	Pump Lead Cement	7/29/2022	16:10	12.7	5.6	0	1229	BEGIN PUMPING LEAD CEMENT. DENSITY VERIFIED WITH MUD SCALE
12	Pump Lead Cement	7/29/2022	16:19	12.7	6	50	1340	50 BBLS LEAD CEMENT PUMPED
13	Pump Lead Cement	7/29/2022	16:27	12.7	6.5	50	1320	100 BBLS LEAD CEMENT PUMPED
14	Pump Lead Cement	7/29/2022	16:35	12.7	3.6	50.9	620	150.9 BBLS LEAD CEMENT PUMPED
15	Pump Tail Cement	7/29/2022	16:35	14.2	5	0	772	BEGIN PUMPING TAIL CEMENT. DENSITY VERIFIED WITH MUD SCALE
16	Pump Tail Cement	7/29/2022	16:45	14.2	5	50	528	50 BBLS TAIL CEMENT PUMPED
17	Pump Tail Cement	7/29/2022	16:55	14.2	5	50	520	100 BBLS TAIL CEMENT PUMPED
18	Pump Tail Cement	7/29/2022	17:04	14.2	5	50	523	150 BBLS TAIL CEMENT PUMPED
19	Pump Tail Cement	7/29/2022	17:14	14.2	5	50	565	200 BBLS TAIL CEMENT PUMPED
20	Pump Tail Cement	7/29/2022	17:22	14.2	5	33.3	540	233.3 BBLS TAIL CEMENT PUMPED
21	Clean Pumps and Lines	7/29/2022	17:22					BLOW DOWN STANDPIPE, WASH UP PUMP AND LINES
22	Drop Top Plug	7/29/2022	17:47	8.34	5	0	179	DROP PLUG, VERIFIED BY CUSTOMER REP. BEGIN KCL DISPLACEMENT
23	Pump Displacement	7/29/2022	17:53	8.34	8.7	50	1516	50 BBLS KCL DISPLACEMENT PUMPED
24	Pump Displacement	7/29/2022	17:59	8.34	8.7	50	2238	100 BBLS KCL DISPLACEMENT PUMPED
25	Pump Displacement	7/29/2022	18:04	8.34	8.9	50	3040	150 BBLS KCL DISPLACEMENT PUMPED
26	Pump Displacement	7/29/2022	18:09	8.34	8.9	27	2550	177 BBLS KCL DISPLACEMENT PUMPED, SLOWED RATE LAST 10 BBLS TO 4 BPM
27	Land Plug	7/29/2022	18:09				3365	LAND PLUG. FCP - 2550 PSI, BUMPED TO 3365 PSI
28	Check Floats	7/29/2022	18:16					CHECK FLOATS. FLOATS HELD, 2 BBLS BACK
29	Rig Down Iron	7/29/2022	18:30					RIG DOWN IRON AND HOSES
30	Depart Location	7/29/2022	19:15					DEPART LOCATION FOR RCO YARD

## Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 82607  
Customer: Terra  
Well Name: Federal NR 344-36



Job Start: Friday, July 29, 2022