



# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**FEDERAL NR 542-3 05-045-24464**  
**S:3 T:6S R:94W Garfield CO**

CallSheet #: 80694  
Proposal #: 58202



**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,

**Michael Harold**

Field Engineer II | (970) 773-3636 | michael.harold@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	1126	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1126	8090	45
Open Hole	Outer	n/a	8.75	n/a	n/a	8090	10833	45
Casing	Inner	4.5	4	11.6	n/a	0	10833	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS(CTS)-438		
Field Storage Silo	FSS(CTS)-470		
AS Cement Trailer	CTF-048	TRC(TRB)-201	
AS Cement Trailer	CTF-019	TRC(TRB)-425	
AS Cement Trailer	CTF(FTF)-148	TRC(TRB)-090	
Cement Trailer	CTF-263	TRC(TRB)-112	Kirchenwitz, Jacob
Light Duty Vehicles	LDV-083		Putnam, Gage
Cement Pump	CPF-053	TRH-855	Kelsey, John

### Timing

Event	Date/Time
Call Out	3/24/2022 08:00
Depart Facility	3/24/2022 11:30
On Location	3/24/2022 13:00
Rig Up Iron	3/24/2022 13:15
Job Started	3/24/2022 18:14
Job Completed	3/24/2022 20:22
Rig Down Iron	3/24/2022 20:30
Depart Location	3/24/2022 21:30

### General Job Information

Metrics	Value
Well Fluid Density	10.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	900 bbls
Rig Circulation Time	2 hours
Calculated Displacement	167.2 bbls
Actual Displacement	167.2 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	10.8 lb/gal
Well Fluid Density Out of Well	10.8 lb/gal

### Job Details (cont.)

Metrics	Value
BHCT	192 °F
BHST	253 °F

### Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	64 °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
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	5493
2	Mud Flush	Flush	8.45			40.86		20.00	5619
3	Water	Flush	8.34			42.00		10.00	5871
4	Lead	Lead	12.70	2.00	10.99		466.00	166.19	5997
5	Tail	Tail	14.20	1.72	8.09		722.00	221.35	8090
6	Displacement	DisplacementFinal	8.34			42.00		167.00	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	ASTM TYPE I/II	Cement	100.00	%
4	Lead	Lead	BA-90	BondEnhancer	3.00	lb/sk
4	Lead	Lead	FL-66	FluidLoss	0.50	%BWOB
4	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
4	Lead	Lead	GW-86	Viscosifier	0.10	%BWOB
4	Lead	Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
4	Lead	Lead	R-3	Retarder	0.45	%BWOB
4	Lead	Lead	STATIC FREE	Other	0.01	lb/sk
5	Tail	Tail	CLASS G	Cement	80.00	%
5	Tail	Tail	FLY ASH (POZZOLAN)	Extender	20.00	%
5	Tail	Tail	FL-66	FluidLoss	0.40	%BWOB
5	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
5	Tail	Tail	GW-86	Viscosifier	0.10	%BWOB
5	Tail	Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
5	Tail	Tail	R-3	Retarder	0.15	%BWOB
5	Tail	Tail	S-8	StrengthRetgression	27.00	%BWOB

## Job Logs

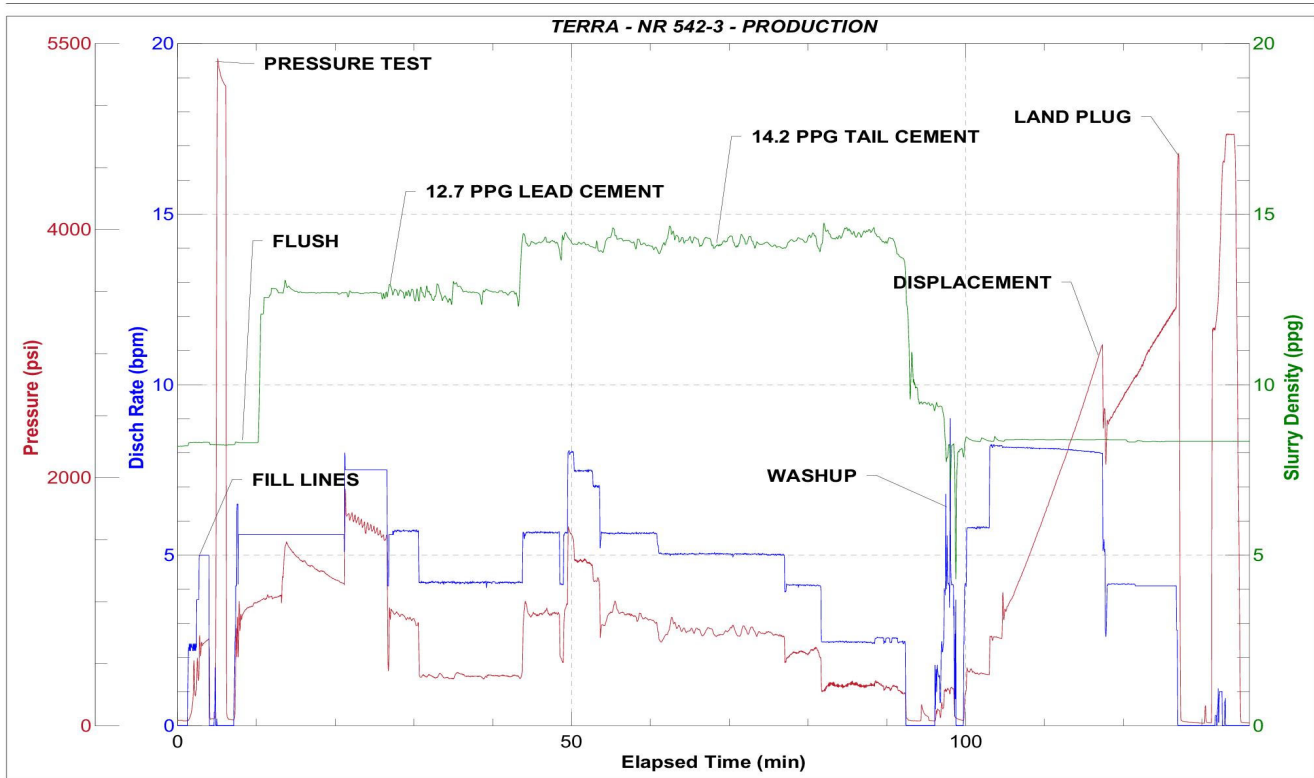
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	3/24/2022	08:00					CREW CALLED OUT FOR ON LOCATION TIME OF 14:00 3/24/22
2	Depart Location	3/24/2022	12:00					DEPART RCO YARD FOR LOCATION
3	Arrive On Location	3/24/2022	13:00					ARRIVE ON TERRA STAGING LOCATION
4	Rig Up Iron	3/24/2022	13:15					RIG UP IRON AND HOSES
5	Safety Meeting	3/24/2022	17:35					JSA SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
6	Fill Lines	3/24/2022	18:14	8.34	5	10	600	FILL LINES WITH FRESH WATER
7	Pressure Test Lines	3/24/2022	18:18	8.34			5350	PRESSURE TEST PUMP AND LINES TO 5000 PSI
8	Other	3/24/2022	18:20	8.45	5.5	20	800	PUMP MUD FLUSH + SURFACTANT
9	Other	3/24/2022	18:24	8.34	5.5	10	1054	PUMP FRESH WATER FLUSH
10	Pump Lead Cement	3/24/2022	18:27	12.7	5.5	0	485	BEGIN PUMPING LEAD CEMENT. DENSITY VERIFIED WITH MUD SCALE
11	Pump Lead Cement	3/24/2022	18:30	12.7	7.5	50	1228	50 BBLS LEAD CEMENT PUMPED
12	Pump Lead Cement	3/24/2022	18:44	12.7	5.5	50	831	100 BBLS LEAD CEMENT PUMPED
13	Pump Lead Cement	3/24/2022	18:56	12.7	4.5	66.2	277	166.2 BBLS LEAD CEMENT PUMPED
14	Pump Tail Cement	3/24/2022	18:56	14.2	4.5	0	292	BEGIN PUMPING TAIL CEMENT. DENSITY VERIFIED WITH MUD SCALE
15	Pump Tail Cement	3/24/2022	19:05	14.2	7.5	50	977	50 BBLS TAIL CEMENT PUMPED
16	Pump Tail Cement	3/24/2022	19:13	14.2	5.5	50	627	100 BBLS TAIL CEMENT PUMPED
17	Pump Tail Cement	3/24/2022	19:24	14.2	5	50	525	150 BBLS TAIL CEMENT PUMPED
18	Pump Tail Cement	3/24/2022	19:33	14.2	4	50	416	200 BBLS TAIL CEMENT PUMPED
19	Pump Tail Cement	3/24/2022	19:45	14.2	2.5	21.4	210	221.4 BBLS TAIL CEMENT PUMPED
20	Clean Pumps and Lines	3/24/2022	19:45					SHUT DOWN, BLOW DOWN LINE, WASH UP PUMP AND LINES
21	Drop Top Plug	3/24/2022	19:52	8.34	5.5	0	300	DROP PLUG, VERIFIED BY CUSTOMER REP. BEGIN KCL DISPLACEMENT
22	Pump Displacement	3/24/2022	20:00	8.34	8	50	948	50 BBLS KCL DISPLACEMENT PUMPED
23	Pump Displacement	3/24/2022	20:06	8.34	8	50	1776	100 BBLS KCL DISPLACEMENT PUMPED
24	Pump Displacement	3/24/2022	20:15	8.34	4	50	2200	150 BBLS KCL DISPLACEMENT PUMPED
25	Pump Displacement	3/24/2022	20:22	8.34	4	17.2	2370	167.2 BBLS KCL DISPLACEMENT PUMPED, SLOWED RATE LAST 10 BBLS TO 4 BPM
26	Land Plug	3/24/2022	20:22				3560	LAND PLUG. FCP - 2370 PSI, BUMPED TO 3560 PSI
27	Other	3/24/2022	20:22				3560	PRESSURE BLED OFF, TIGHTENED IRON UNION, PRESSURED BACK UP, PRESSURE HELD
28	Check Floats	3/24/2022	20:26					CHECK FLOATS. FLOATS HELD, 2 BBLS BACK

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
29	Rig Down Iron	3/24/2022	20:30					RIG DOWN IRON AND HOSES
30	Depart Location	3/24/2022	21:30					DEPART LOCATION FOR RCO YARD

## Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 80694  
Customer: Terra  
Well Name: NR 542-3



BJ Services

Job Start: Thursday, March 24, 2022