



# **Terra Energy Partners, LLC**

## **SURFACE POST JOB REPORT**

**FEDERAL RWF 522-8 05-045-24321**  
**S:8 T:6S R:94W Garfield CO**

CallSheet #: 75170  
Proposal #: 50283



**SURFACE 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@americacementing.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 (%)
Open Hole	Outer		13.5			0	500	16
Open Hole	Outer		13.5			500	1000	16
Casing	Inner	9.625	8.921	36		0	1000	0

## Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2	Mileage
Bulk Trailer	CTF-263	TRB-421	Richey, Steven		21
Cement Pump	CPF-058	TRH-1140	Gonzales, Ivan		21
Light Duty Pickups	LDV-3104		Linn, Paul	Brennecke, Dirk	21

## Timing

Event	Date/Time
Call Out	10/14/2020 22:30
Depart Facility	10/15/2020 00:18
On Location	10/15/2020 00:57
Rig Up Iron	10/15/2020 01:33
Job Started	10/15/2020 07:08
Job Completed	10/15/2020 07:48
Rig Down Iron	10/15/2020 08:13
Depart Location	10/15/2020 09:01

## General Job Information

Metrics	Value
Well Fluid Density	9.3 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	450 bbls
Rig Circulation Time	1 hours
Calculated Displacement	76.95 bbls
Actual Displacement	77 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	17 bbls
Well Topped Out	No

## 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	9.3 lb/gal
Well Fluid Density Out of Well	9.3 lb/gal

## Job Details (cont.)

Metrics	Value
BHCT	80 °F
BHST	97 °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 (sks)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.34			42.00		20.00	0
1	2	Lead Cement	Lead	12.30	2.34	13.42		122.00	50.82	0
1	3	Tail Cement	Tail	12.80	2.08	11.46		146.00	53.99	500
1	4	Water	DisplacementFinal	8.34			42.00		74.00	0

### Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Lead	Lead Cement	ASTM TYPE III	Cement	100.00	%
1	2	Lead	Lead Cement	A-10	Accelerator	5.00	%BWOB
1	2	Lead	Lead Cement	A-2	Accelerator	2.00	lb/sk
1	2	Lead	Lead Cement	A-7P	Accelerator	2.00	lb/sk
1	2	Lead	Lead Cement	FP-24	Defoamer	0.30	%BWOB
1	2	Lead	Lead Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
1	3	Tail	Tail Cement	ASTM TYPE III	Cement	100.00	%
1	3	Tail	Tail Cement	A-10	Accelerator	5.00	%BWOB
1	3	Tail	Tail Cement	A-2	Accelerator	2.00	lb/sk
1	3	Tail	Tail Cement	A-7P	Accelerator	2.00	lb/sk
1	3	Tail	Tail Cement	FP-24	Defoamer	0.30	%BWOB
1	3	Tail	Tail Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk

## 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	10/14/2020	22:30					Callout, on location time of 03:00 10/15/20
2	Safety Meeting	10/14/2020	23:51					Pre-Convoy Safety meeting
3	Depart Location	10/15/2020	00:18					Depart from Rifle yard for H&P 318
4	Arrive On Location	10/15/2020	00:57					Arrive on location, rig was still drilling
5	Safety Meeting	10/15/2020	01:15					Pre-Rig Up Safety meeting
6	Rig Up Iron	10/15/2020	01:33					Rig up all equipment
7	Safety Meeting	10/15/2020	06:28					Pre-Job Safety meeting with company man, rig crew, and American Cementing
8	Rig Up Iron	10/15/2020	06:50					Load plug in plug container (verified by company man), stab plug container, hook up lines
9	Fill Lines	10/15/2020	07:08	8.4	2	5	261	Fill lines with 5 bbls of fresh water
10	Pressure Test Lines	10/15/2020	07:10				2948	Pressure test to 2948 psi
11	Pump Spacer	10/15/2020	07:13	8.4	5	20	291	Pump Water spacer
12	Pump Lead Cement	10/15/2020	07:18	12.3	8	5	754	Pump Lead Cement @ 12.3 ppg
13	Pump Lead Cement	10/15/2020	07:23	12.3	8	45	684	Pump Lead Cement
14	Pump Lead Cement	10/15/2020	07:24	12.3	6	52	506	Finished pumping Lead Cement with 52 bbls away
15	Pump Tail Cement	10/15/2020	07:25	12.8	8	5	809	Pump Tail Cement @ 12.8 ppg
16	Pump Tail Cement	10/15/2020	07:30	12.8	8	47	744	Pump Tail Cement
17	Pump Tail Cement	10/15/2020	07:31	12.8	5	55	334	Pump Tail Cement
18	Shutdown	10/15/2020	07:32					Shutdown with 55 bbls of Tail Cement away
19	Drop Top Plug	10/15/2020	07:33					Drop Plug verified by company man
20	Pump Displacement	10/15/2020	07:35	8.4	10	10	577	Pump Fresh Water Displacement
21	Pump Displacement	10/15/2020	07:39	8.4	10	50	795	Pump Fresh Water Displacement
22	Pump Displacement	10/15/2020	07:40	8.4	10	66	886	Pump Fresh Water Displacement
23	Pump Displacement	10/15/2020	07:46	8.4	2	76	278	Pump Fresh Water Displacement
24	Cement Back to Surface	10/15/2020	07:40					17 bbls of cement to surface
25	Land Plug	10/15/2020	07:46				922	Landed the plug @ 278 psi took to 922 psi
26	Check Floats	10/15/2020	07:48					Check floats, floats held 1/2 bbl back
27	Safety Meeting	10/15/2020	07:52					Pre-Rig Down Safety meeting with rig
28	Rig Down Iron	10/15/2020	07:59					Rig Down rig floor
29	Safety Meeting	10/15/2020	08:08					Pre-Rig down Safety meeting with American Cementing crew
30	Rig Down Iron	10/15/2020	08:13					Rig down all equipment
31	Safety Meeting	10/15/2020	08:48					Pre-Convoy Safety meeting
32	Depart Location	10/15/2020	09:01					Depart from location for Rifle yard. Thank you for using American Cementing, Andrew Linn, and crew

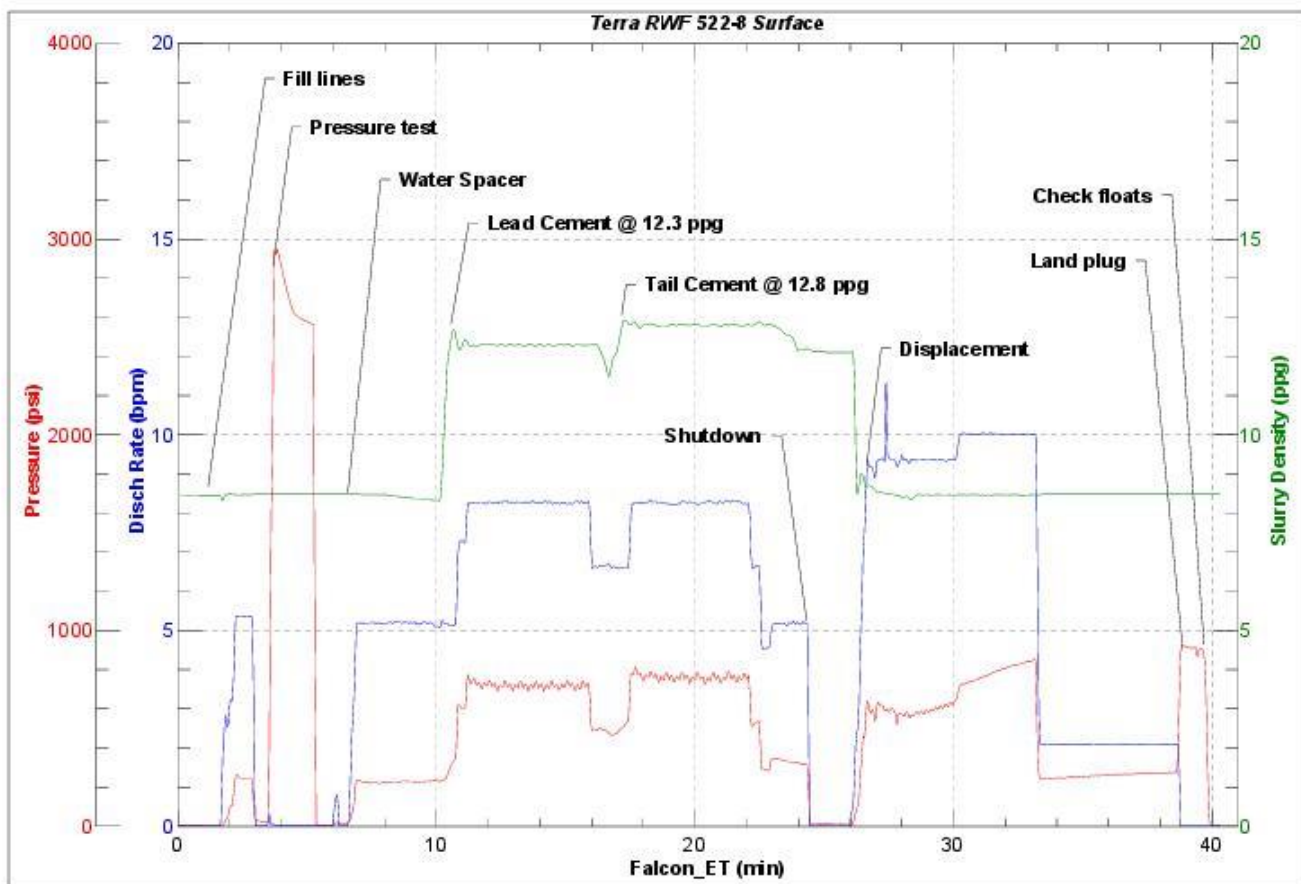
### 3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	64.3 °F	50-80 °F
pH Level	6.5	5.5-8.5
Chlorides	<295 mg/L	0-3000 mg/L
Total Alkalinity	185	0-1000
Total Hardness	<125 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	<400 mg/L	0-1500 mg/L
Potassium	320 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

### 4 Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number:  
Customer:  
Well Name:



BJ Services

Job Start: Thursday, October 15, 2020