



# **Terra Energy Partners, LLC**

## **SURFACE POST JOB REPORT**

FEDERAL PA 414-23 05-045-24305  
S:26 T:6S R:95W Garfield CO

CallSheet #: 75096  
Proposal #: 50219



**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

## Table of Contents

1 Job Details & Summary .....	3
Geometry .....	3
Equipment / People .....	3
Timing .....	3
General Job Information .....	3
Well Fluid Details .....	3
Job Details .....	3
Job Details (cont.) .....	3
Circulation .....	4
Job Execution Information .....	4
Job Fluid Details .....	4
2 Job Logs .....	5
3 Water Analysis .....	5
4 Pump Diagrams .....	6

# 1 Job Details & Summary

## Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Top (ft)	Bottom (ft)	Excess (%)
Open Hole	Outer		13.5		0	500	16
Open Hole	Outer		13.5		500	1134	16
Casing	Inner	9.625	8.921	36	0	1127.53	0

## Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-340	TRB-425	Gonzales, Ivan	39
Cement Pump	CPF-058	TRH-1140	Mcneal, Lawrence	39
Light Duty Trailers	LDV-5429		Castillo, Francisco	39

## Timing

Event	Date/Time
Call Out	10/2/2020 18:00
Depart Facility	10/2/2020 18:50
On Location	10/2/2020 19:15
Rig Up Iron	10/2/2020 20:00
Job Started	10/2/2020 22:35
Job Completed	10/2/2020 23:14
Rig Down Iron	10/2/2020 23:30
Depart Location	10/3/2020 00:00

## General Job Information

Metrics	Value
Well Fluid Density	9.7 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	300 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	84 bbls
Actual Displacement	84 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	29 bbls
Well Topped Out	No
Top Out Volume	0 bbls

## Well Fluid Details

Metrics	Value
Plastic Viscosity	15
Yield Point	12
10 sec. SGS	4
10 min. SGS	12
30 min. SGS	36
Filtrate	N/A
Flow Line Temp.	93

## 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	9.7 lb/gal
Well Fluid Density Out of Well	9.7 lb/gal

## Job Details (cont.)

Metrics	Value
BHCT	81 °F
BHST	98 °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		173.00	63.98	500
1	4	Water	DisplacementFinal	8.34			42.00		84.00	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	10/2/2020	18:00					ON LOCATION AT 20:00 HRS
2	LEAVE YARD	10/2/2020	18:50					LEAVE THE YARD
3	ON LOCATION	10/2/2020	19:15					ON LOCATION, RIG RUNNING CASING
4	RIG UP	10/2/2020	20:00					RIG UP MEETING, RIG UP
5	SAFETY MEETING	10/2/2020	22:15					PRE-JOB SAFETY MEETING
6	PRESSURE TEST	10/2/2020	22:33				3500	PRESSURE TEST LINES
7	PUMP SPACER	10/2/2020	22:35	8.34	5.5	20	205	WATER SPACER
8	LEAD CEMENT	10/2/2020	22:42	12.3	7.8	50.5	605	122 SKS / 50.5 BBLS AT 12.3 PPG
9	TAIL CEMENT	10/2/2020	22:50	12.8	7.8	64	645	173 SKS / 64 BBLS AT 12.8 PPG
10	SHUTDOWN	10/2/2020	23:01					SHUTDOWN, DROP PLUG
11	DISPLACEMENT	10/2/2020	23:02	8.34	9.5	74	793	PUMP DISPLACEMENT
12	DISPLACEMENT	10/2/2020	23:11	8.34	3	10	305	SLOW RATE LAST 10 BBLS
13	LAND PLUG	10/2/2020	23:14				985	LAND PLUG, CIRC 29 BBLS CMT TO SURFACE
14	CHECK FLOATS	10/2/2020	23:16					FLOATS HELD, 0.5 BBL FLOW BACK
15	RIG DOWN	10/2/2020	23:30					RIG DOWN MEETING, RIG DOWN
16	LEAVE LOCATION	10/3/2020	00:00					JM MEETING, LEAVE LOCATION

## 3 Water Analysis

Metrics	Value	Recommended
Water Source		
Temperature	67 °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	250 mg/L	0-500 mg/L
Carbonates	200 mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	250 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

## 4 Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 75096  
Customer: TERRA  
Well Name: PA 414-23

