



# **Terra Energy Partners, LLC**

## **SURFACE POST JOB REPORT**

**FEDERAL WMC 32-20 05-045-24497**  
**S:17 T:7S R:93W Garfield CO**

CallSheet #: 84429  
Proposal #: 64820



**SURFACE 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	20	19.5	53	n/a	0	90	0
Open Hole	Outer	n/a	13.5	n/a	n/a	80	500	16
Open Hole	Outer	n/a	13.5	n/a	n/a	500	1138.04	16
Casing	Inner	9.625	8.921	36	n/a	0	1134	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Cement Trailer Float	CTF-263	TRC-244	Bonin, Matthew	
Cement Pump Float	CPF-136	TRH-082	Morales, Adrian	
Light Duty Vehicles	LDV-061		Aden, Mark	Hale, Jason

### Timing

Event	Date/Time
Call Out	11/14/2022 22:00
Depart Facility	11/14/2022 23:00
On Location	11/15/2022 00:29
Rig Up Iron	11/15/2022 01:03
Job Started	11/15/2022 02:50
Job Completed	11/15/2022 03:52
Rig Down Iron	11/15/2022 04:10
Depart Location	11/15/2022 05:00

### General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	450 bbls
Rig Circulation Time	0.75 hours
Calculated Displacement	84 bbls
Actual Displacement	84 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	34 bbls
Well Topped Out	No

### 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	9 lb/gal
Well Fluid Density Out of Well	9 lb/gal

### Job Details (cont.)

Metrics	Value
BHCT	80 °F
BHST	98 °F

### Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	72.4 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	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

### 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		20.00	0
2	Lead	Lead	12.30	2.21	12.72		165.00	65.04	0
3	Tail	Tail	12.80	1.97	10.87		188.00	65.80	500
4	Water	DisplacementFinal	8.34			42.00		83.00	0

### Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Lead	Lead	ASTM TYPE I/II	Cement	100.00	%
2	Lead	Lead	A-7P	Accelerator	2.00	lb/sk
2	Lead	Lead	ATHX-1102	Thixotropic	1.00	lb/sk
2	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
2	Lead	Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
2	Lead	Lead	STATIC FREE	Other	0.01	lb/sk
3	Tail	Tail	ASTM TYPE I/II	Cement	100.00	%
3	Tail	Tail	A-7P	Accelerator	2.00	lb/sk
3	Tail	Tail	ATHX-1102	Thixotropic	1.00	lb/sk
3	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
3	Tail	Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
3	Tail	Tail	STATIC FREE	Other	0.01	lb/sk

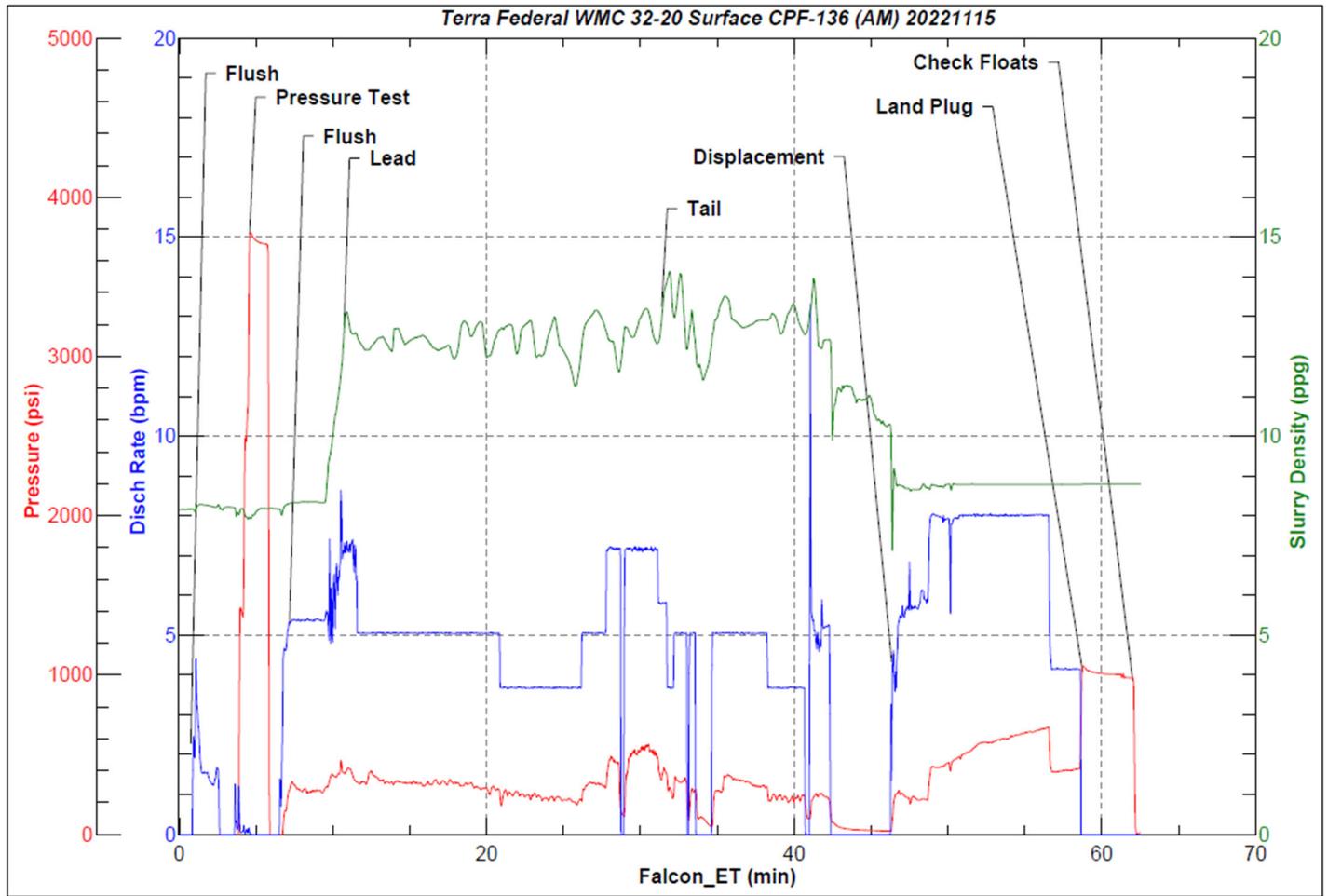
## Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	11/14/2022	22:00					Leave Rifle Yard at 23:00 20221114; On location 01:30 20221115
2	Depart For Location	11/14/2022	23:00					Leave Rifle yard for location
3	Arrive On Location	11/15/2022	00:29					Arrive on location, rig preparing to land casing
4	Spot Equipment	11/15/2022	00:40					Spot in all equipment
5	Rig Up Iron	11/15/2022	00:45					Pre rig up safety meeting, rig in all equipment and lines to the standpipe
6	Safety Meeting	11/15/2022	02:20					Pre job safety meeting with company man
7	End Circulation	11/15/2022	02:30					Rig ended circulation, circulated .75 hr @ 10 BBLs/min total of 450 BBLs
8	Pump Spacer	11/15/2022	02:50	8.34	3	5	103	Pumping freshwater spacer, returns
9	Pressure Test Lines	11/15/2022	02:53				3000	Pressure test
10	Pump Spacer	11/15/2022	02:55	8.34	5	15	390	Pumping freshwater spacer, returns
11	Pump Lead Cement	11/15/2022	02:59	12.3	7	0	381	Pumping lead cement, returns
12	Pump Lead Cement	11/15/2022	03:08	12.3	5	50	375	Pumping lead cement
13	Pump Lead Cement	11/15/2022	03:15	12.3	4	65	297	Pumping lead cement
14	Pump Tail Cement	11/15/2022	03:16	12.8	5	0	351	Pumping tail cement, returns
15	Pump Tail Cement	11/15/2022	03:26	12.8	5	50	374	Pumping tail cement
16	Pump Tail Cement	11/15/2022	03:33	12.8	4	66	250	Pumping tail cement
17	Drop Top Plug	11/15/2022	03:34					Dropped top plug verified by company man
18	Pump Displacement	11/15/2022	03:36	8.34	4.5	0	250	Pumping freshwater displacement, returns. Cement to surface at 50 bbls; 34 bbls to surface.
19	Pump Displacement	11/15/2022	03:44	8.34	8	50	629	Pumping freshwater displacement
20	Pump Displacement	11/15/2022	03:49	8.34	4	84	422	Pumping freshwater displacement
21	Land Plug	11/15/2022	03:49				1036	Land plug, FCP 422 PSI bumped to 1036 PSI
22	Check Floats	11/15/2022	03:52					Bled pressure, floats held .5 BBL bled back
23	Rig Down Iron	11/15/2022	04:10					Pre rig down safety meeting, rig down lines
24	Depart Location	11/15/2022	05:00					Leave location for Rifle shop

# Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 84429  
Customer: Terra  
Well Name: Federal WMC 32-20



Job Start: Tuesday, November 15, 2022