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# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**FEDERAL RWF 431-9 05-045-24404**  
**S:9 T:6S R:94W Garfield CO**

CallSheet #: 80150  
Proposal #: 57481



**LONG STRING Post Job Report**

**Attention:** 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 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,

**Zen Keith**

SME | (720) 934-5850 | zen.keith@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	1117	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1117	9982	55
Casing	Inner	4.5	4	11.6	n/a	0	9982	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Cement Trailer Float	CTF-286	TRC(TRB)-090	Hansen, James
Field Storage Silo	FSS(CTS)-438		
Field Storage Silo	FSS(CTS)-470		
Cement Pump Float	CPF-053	TRH-959	Woronovitch, Collin
Light Duty Vehicles	LDV-062		Putnam, Gage

### Timing

Event	Date/Time
Call Out	2/10/2022 21:00
Depart Facility	2/11/2022 05:00
On Location	2/11/2022 05:30
Rig Up Iron	2/11/2022 06:45
Job Started	2/11/2022 09:53
Job Completed	2/11/2022 12:27
Rig Down Iron	2/11/2022 12:35
Depart Location	2/11/2022 14:00

### General Job Information

Metrics	Value
Well Fluid Density	11.2 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	800 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	154.2 bbls
Actual Displacement	154.2 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	Yes
Flare Prior to Job	1400 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	11.2 lb/gal
Well Fluid Density Out of Well	11.2 lb/gal

### Job Details (cont.)

Metrics	Value
BHCT	164 °F
BHST	234 °F

### Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	77 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 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	350 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	4336
2	Mud Flush	Flush	8.45			40.86		20.00	4454
3	Water	Flush	8.34			42.00		10.00	4690
4	Primary Cement	Primary	14.20	1.72	8.08		1435.00	440.17	4808
5	Displacement	DisplacementFinal	8.34			42.00		154.00	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	Primary	Primary Cement	CLASS G	Cement	80.00	%
4	Primary	Primary Cement	FLY ASH (POZZOLAN)	Extender	20.00	%
4	Primary	Primary Cement	FL-66	FluidLoss	0.40	%BWOB
4	Primary	Primary Cement	FP-24	Defoamer	0.30	%BWOB
4	Primary	Primary Cement	GW-86	Viscosifier	0.10	%BWOB
4	Primary	Primary Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
4	Primary	Primary Cement	R-3	Retarder	0.30	%BWOB
4	Primary	Primary Cement	S-8	StrengthRetrogression	27.00	%BWOB

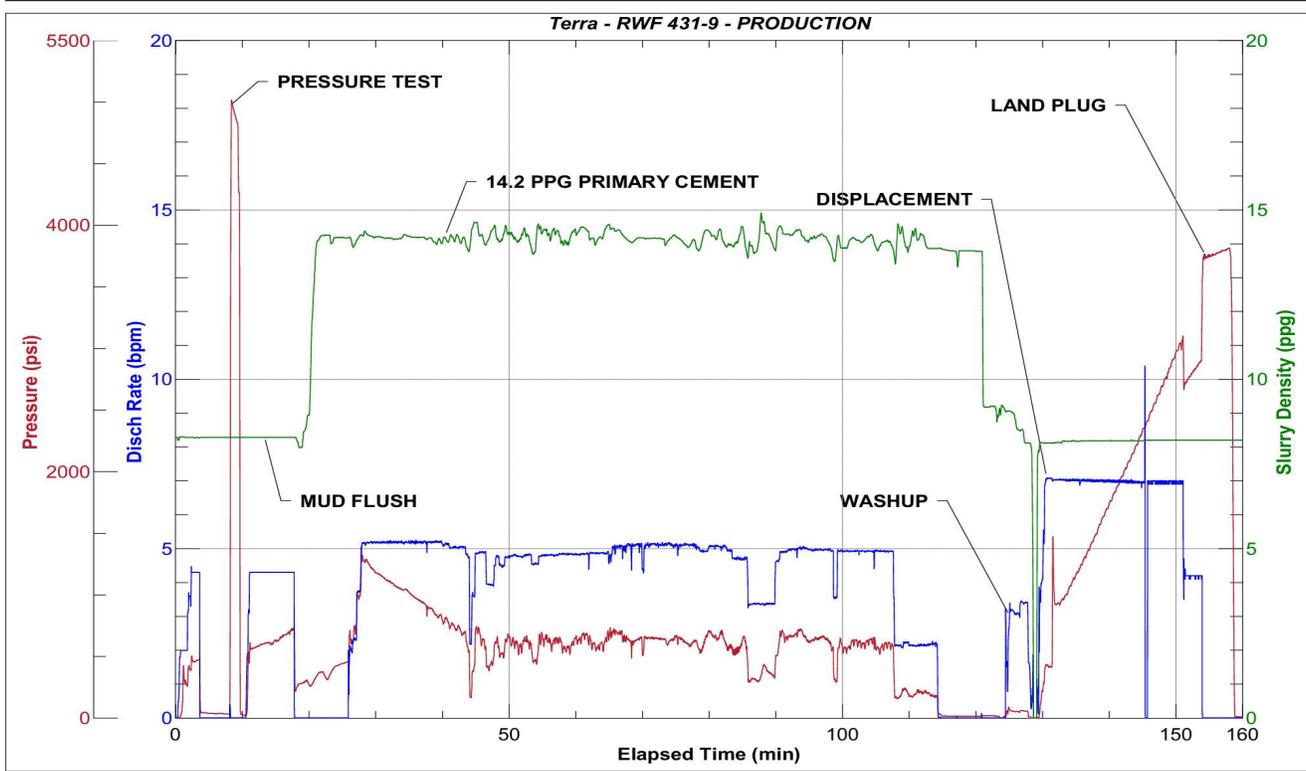
## Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	2/10/2022	21:00					CREW CALLED OUT FOR ON LOCATION TIME OF 7:00 2/11/22
2	Depart Location	2/11/2022	05:00					DEPART RCO YARD FOR LOCATION
3	Arrive On Location	2/11/2022	05:30					ARRIVE ON TERRA LOCATION
4	Rig Up Iron	2/11/2022	06:45					RIG UP IRON AND HOSES
5	Safety Meeting	2/11/2022	09:25					JSA SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
6	Fill Lines	2/11/2022	09:53	8.34	4	10	525	FILL LINES WITH FRESH WATER
7	Pressure Test Lines	2/11/2022	10:01	8.34			5000	PRESSURE TEST PUMP AND LINES TO 5000 PSI
8	Other	2/11/2022	10:04	8.45	4	20	528	PUMP MUD FLUSH + SURFACTANT
9	Other	2/11/2022	10:09	8.34	4	10	650	PUMP FRESH WATER FLUSH
10	Pump Cement	2/11/2022	10:12	14.2	5	0	652	BEGIN PUMPING PRIMARY CEMENT. DENSITY VERIFIED WITH MUD SCALE
11	Pump Cement	2/11/2022	10:30	14.2	5	50	953	50 BBLS PRIMARY CEMENT PUMPED
12	Pump Cement	2/11/2022	10:39	14.2	5	50	593	100 BBLS PRIMARY CEMENT PUMPED
13	Pump Cement	2/11/2022	10:50	14.2	5	50	638	150 BBLS PRIMARY CEMENT PUMPED
14	Pump Cement	2/11/2022	11:01	14.2	5	50	652	200 BBLS PRIMARY CEMENT PUMPED
15	Pump Cement	2/11/2022	11:11	14.2	5	50	619	250 BBLS PRIMARY CEMENT PUMPED SLOW RATE DUE TO DELIVERY ISSUES
16	Pump Cement	2/11/2022	11:22	14.2	3.5	50	376	300 BBLS PRIMARY CEMENT PUMPED, SLOW DOWN TO EMPTY SILOS
17	Pump Cement	2/11/2022	11:33	14.2	5	50	566	350 BBLS PRIMARY CEMENT PUMPED
18	Pump Cement	2/11/2022	11:44	14.2	3	50	191	400 BBLS PRIMARY CEMENT PUMPED
19	Pump Cement	2/11/2022	11:55	14.2	2	40	195	440 BBLS PRIMARY CEMENT PUMPED
20	Clean Pumps and Lines	2/11/2022	11:55					BLOW DOWN LINE, WASH UP PUMP AND LINES
21	Drop Top Plug	2/11/2022	12:02	8.34	4	0	150	DROP PLUG, VERIFIED BY CUSTOMER REP. BEGIN KCL DISPLACEMENT
22	Pump Displacement	2/11/2022	12:10	8.34	7	50	1414	50 BBLS KCL DISPLACEMENT PUMPED
23	Pump Displacement	2/11/2022	12:17	8.34	7	50	2336	100 BBLS KCL DISPLACEMENT PUMPED
24	Pump Displacement	2/11/2022	12:27	8.34	7	54	2883	154 BBLS KCL DISPLACEMENT PUMPED, SLOWED RATE LAST 10 BBLS TO 4 BPM
25	Land Plug	2/11/2022	12:27				3750	LAND PLUG. FCP - 2883 PSI, BUMPED TO 3750 PSI
26	Check Floats	2/11/2022	12:30					CHECK FLOATS. FLOATS HELD, 2 BBLS BACK
27	Rig Down Iron	2/11/2022	12:35					RIG DOWN IRON AND HOSES
28	Depart Location	2/11/2022	14:00					DEPART LOCATION FOR RCO YARD

# Pump Diagrams



JobMaster Program Version 5.01C1  
Job Number: 80150  
Customer: Terra  
Well Name: RWF 431-9



BJ Services

Job Start: Friday, February 11, 2022