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# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

Leverich WMC 414-18-793 05-045-24562  
S:13 T:7S R:94W Garfield CO

CallSheet #: 88680  
Proposal #: 71595



**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,

**Lyndon Chandarjit**

Field Engineer II | (281) 690-3840 | lyndon.chandarjit@americacementing.com

**Field Office**      28730 US-6, Rifle, CO 81650  
Phone: (970) 657-1187

## 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	1132	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1132	7123	85
Open Hole	Outer	n/a	8.75	n/a	n/a	7123	10336	50
Casing	Inner	4.5	4	11.6	n/a	0	10336	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Cement Trailer Float	CTF-555	TRC-115	Lynn Wall
Field Storage Silo	FSS-438		
Light Duty Vehicles	LDV-092		Collin Woronovitch
Cement Pump Float	CPF-052	TRH-957	Jeremy Bradbrook

### Timing

Event	Date/Time
ERTS	10/06/2023 00:00
Call Out	10/6/2023 03:30
Depart Facility	10/6/2023 09:00
On Location	10/6/2023 10:00
Rig Up Iron	10/6/2023 10:15
Job Started	10/6/2023 14:50
Job Completed	10/6/2023 17:41
Rig Down Iron	10/6/2023 18:15
Depart Location	10/6/2023 20:00

### General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	500 bbls
Rig Circulation Time	2.5 hours
Calculated Displacement	159.5 bbls
Actual Displacement	159.5 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	No

### Job Details

Metrics	Value
Well Full Prior to Job	Yes
Well Fluid Density Into Well	9 lb/gal
Well Fluid Density Out of Well	0 lb/gal

### Job Details (cont.)

Metrics	Value
BHCT	173 °F
BHST	230 °F

### Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	57 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	140 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	300 mg/L	0-500 mg/L
Carbonates	N/A mg/L	0-100 mg/L
Sulfates	100 mg/L	0-1500 mg/L
Potassium	40 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
Yes	0	0	0

### Circulation Details

NO RETURNS DURING JOB. NO RETURNS BEFORE JOB.

### 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	5384
2	Mud Flush	Flush	8.45			40.86		20.00	5483
3	Water	Flush	8.34			42.00		10.00	5681
4	Lead	Lead	12.50	2.21	12.30		346.00	136.06	5780
5	Tail	Tail	13.00	2.05	10.26		786.00	286.69	7123
6	Displacement	DisplacementFinal	8.34			42.00		159.50	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 IL	Cement	100.00	%
4	Lead	Lead	A-2	Accelerator	0.20	%BWOB
4	Lead	Lead	FL-66	FluidLoss	0.30	%BWOB
4	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
4	Lead	Lead	GW-86	Viscosifier	0.10	%BWOB
4	Lead	Lead	R-3	Retarder	0.50	%BWOB
4	Lead	Lead	R-7C	Retarder	0.10	%BWOB
4	Lead	Lead	STATIC FREE	Other	0.01	lb/sk
4	Lead	Lead	XCem-1009	Extender	10.00	lb/sk
5	Tail	Tail	CLASS G	Cement	50.00	%
5	Tail	Tail	FLY ASH (POZZOLAN)	Extender	50.00	%
5	Tail	Tail	BENTONITE	Viscosifier	6.00	%BWOB
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 PHENO	LostCirculation	0.50	lb/sk
5	Tail	Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
5	Tail	Tail	S-8	StrengthRetgression	20.00	%BWOB
5	Tail	Tail	XCem-1009	Extender	6.00	lb/sk
5	Tail	Tail	XCem-916	Retarder	0.40	%BWOB

## Job Logs

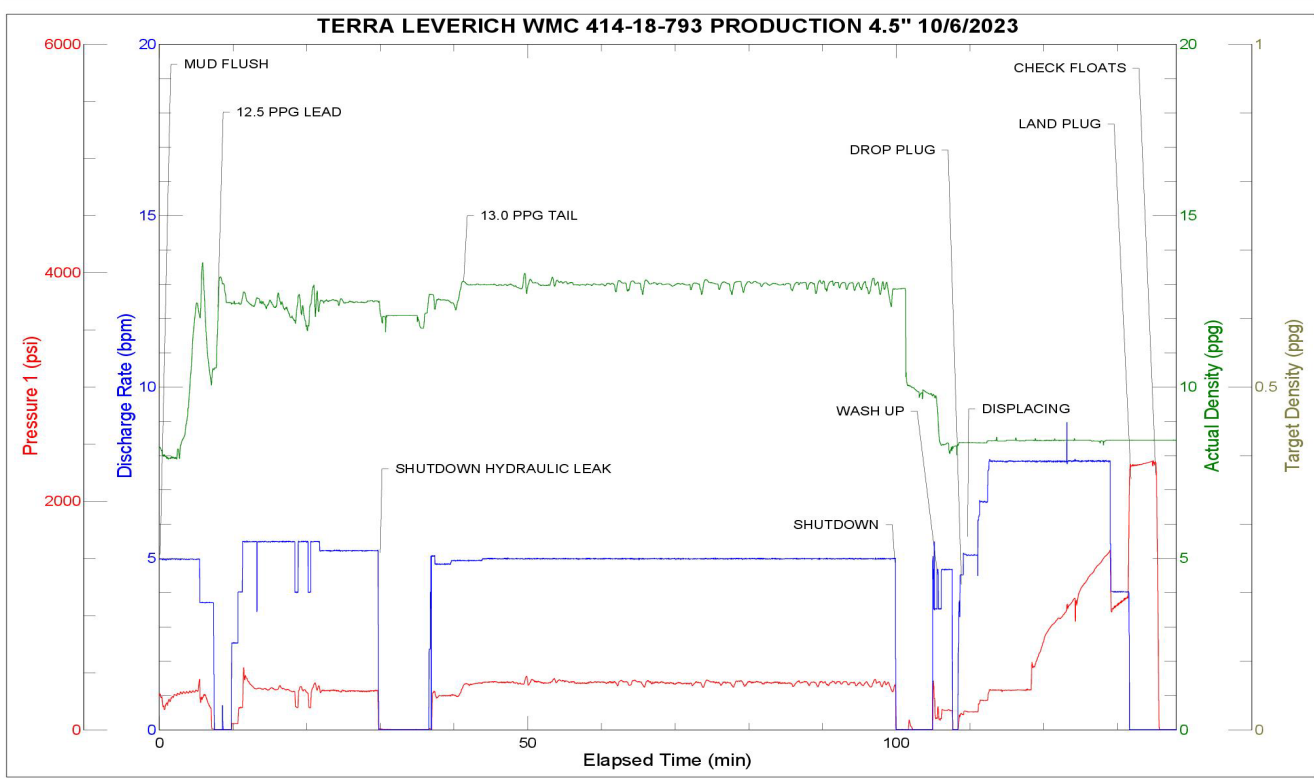
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	10/6/2023	03:30					CREW CALLED OUT FOR ON LOCATION OF 11:00 ON 10/6/23
2	Depart Location	10/6/2023	09:00					DEPART RCO YARD FOR LOCATION
3	Arrive On Location	10/6/2023	10:00					ARRIVE ON LOCATION. RIG RUNNING CASING.
4	Safety Meeting	10/6/2023	10:10					PRE RIG UP JSA. SPOT EQUIPMENT
5	Rig Up Iron	10/6/2023	10:15					RIG UP ALL IRON, HOSES, AND EQUIPMENT
6	Other	10/6/2023	11:30					ON STANDBY WAITING ON RIG TO FINISH RUNNING CASING. RIG LANDED CASING @ 20:00. RIG CIRCULATED FOR 2.5 HOURS. TOTAL VOLUME 500 BBLs.
7	Safety Meeting	10/6/2023	14:50					PRE JOB SAFETY MEETING WITH RIG CREW AND COMPANY MAN. FINISH RIGGING UP FLOOR AFTER MEETING
8	Fill Lines	10/6/2023	15:17	8.34	5	10	350	FILL LINES WITH 10 BBLs OF FRESHWATER. NO RETURNS
9	Pressure Test Lines	10/6/2023	15:20	8.34	1	1	5019	PRESSURE TEST PUMP AND IRON TO HEAD.
10	Pump Spacer	10/6/2023	15:23	8.45	5	0	249	BEGIN PUMPING MUD FLUSH + SURFACTANT.
11	Pump Spacer	10/6/2023	15:27	8.45	5	20	290	PUMP 20 BBLs MUD FLUSH + SURFACTANT PUMPED. NO RETURNS
12	Pump Spacer	10/6/2023	15:27	8.34	5	0	306	START PUMPING 10 BBLs FRESHWATER FLUSH
13	Pump Spacer	10/6/2023	15:29	8.34	5	10	310	10 BBLs FRESHWATER AWAY SWAP TO LEAD
14	Pump Lead Cement	10/6/2023	15:32	12.5	3.7	0	325	BEGIN PUMPING 12.5 PPG LEAD CEMENT, WEIGHT VERIFIED BY MUD SCALE
15	Pump Lead Cement	10/6/2023	15:44	12.5	5.5	50	340	50 BBLs LEAD CEMENT PUMPED
16	Pump Lead Cement	10/6/2023	15:54	12.5	5.5	50	349	100 BBLs LEAD CEMENT PUMPED. NO RETURNS. HAD TO GO TO BATCH DUE TO A HYDRAULIC LEAK AT 110 BBLs OF LEAD PUMPED. WE HAD TO CAP A HYDRAULIC PORT. REPAIR TOOK 6 MINUTES.
17	Pump Lead Cement	10/6/2023	16:07	12.5	5	36	355	136 BBLs (346 SKS) TOTAL LEAD CEMENT PUMPED.
18	Pump Tail Cement	10/6/2023	16:07	13	5	0	416	BEGIN PUMPING 13.0 PPG TAIL CEMENT. WEIGHT VERIFIED BY MUD SCALE.
19	Pump Tail Cement	10/6/2023	16:17	13	5	50	440	50 BBLs TAIL CEMENT PUMPED
20	Pump Tail Cement	10/6/2023	16:27	13	5	50	431	100 BBLs TAIL CEMENT PUMPED
21	Pump Tail Cement	10/6/2023	16:37	13	5	50	425	150 BBLs TAIL CEMENT PUMPED. NO RETURNS
22	Pump Tail Cement	10/6/2023	16:47	13	5	50	441	200 BBLs TAIL CEMENT PUMPED
23	Pump Tail Cement	10/6/2023	16:57	13	5	50	411	250 BBLs TAIL CEMENT PUMPED
24	Pump Tail Cement	10/6/2023	17:05	13	5	37	363	287 BBLs (786 SKS) TOTAL TAIL CEMENT PUMPED.
25	Clean Pumps and Lines	10/6/2023	17:06					BLOW RIG AIR TO CLEAR LINES, VALVE MANIFOLD TO WASH UP PUMP AND LINES TO PIT.



26	Drop Top Plug	10/6/2023	17:15	8.34	4.5	0	162	DROP PLUG, WITNESSED BY DRILLER AND COMPANY MAN BEGIN KCL DISPLACEMENT.
27	Pump Displacement	10/6/2023	17:22	8.34	8	50	386	50 BBLS DISPLACEMENT PUMPED. CAUGHT PRESSURE @ 65 BBLS DISPLACED. NO RETURNS.
28	Pump Displacement	10/6/2023	17:29	8.34	8	50	1050	100 BBLS DISPLACEMENT PUMPED. NO RETURNS.
29	Pump Displacement	10/6/2023	17:36	8.34	8	50	1578	150 BBLS DISPLACEMENT PUMPED. MAX LIFT- 1578 PSI @ 8 BPM BEFORE SLOW DOWN @ 150 BBLS DISPLACED
30	Pump Displacement	10/6/2023	17:38	8.34	4	9.5	1185	159.5 BBLS (CALCULATED) DISPLACEMENT PUMPED
31	Land Plug	10/6/2023	17:38				2325	PLUG LANDED FCP-1185 PSI BUMPED TO 2325 PSI
32	Check Floats	10/6/2023	17:41					BLEED PRESSURE OFF AND CHECK FLOATS, FLOATS HELD 1.5 BBLS BACK
33	Rig Down Iron	10/6/2023	18:15					PRE RIG DOWN SAFETY MEETING. RIG DOWN EQUIPMENT, IRON AND HOSES
34	Depart Location	10/6/2023	20:00					CREW DEPARTS LOCATION

# Pump Diagrams

JobMaster Program Version 5.01C1  
Job Number: 88680  
Customer: TERRA  
Well Name: LEVERICH WMC 414-18-793



Job Start: Friday, October 06, 2023