



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

WMC 533-19-793 05-045-24551
S:19 T:7S R:93W Garfield CO

CallSheet #: 85902
Proposal #: 67043



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

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,

Krystal Schell

Field Engineer I | (719) 992-1830 | krystal.schell@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	1142	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1142	7828	85
Open Hole	Outer	n/a	8.75	n/a	n/a	7828	11060	50
Casing	Inner	4.5	4	11.6	n/a	0	11060	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Cement Trailer Float	CTF-161	TRC-424	Hansen, James
Field Storage Silo	FSS-470		
Cement Pump Float	CPF-136	TRH-855	Kirchenwitz, Jacob
Light Duty Vehicles	LDV-061		Woronovitch, Collin

Timing

Event	Date/Time
ERTS	00/23/2023 00:00
Call Out	2/23/2023 07:07
Depart Facility	2/23/2023 10:00
On Location	2/23/2023 12:00
Rig Up Iron	2/23/2023 12:15
Job Started	2/23/2023 16:45
Job Completed	2/23/2023 19:48
Rig Down Iron	2/23/2023 20:00
Depart Location	2/23/2023 21:45

General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	172 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	171 bbls
Actual Displacement	171 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	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	178 °F
BHST	236 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	70 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	400 mg/L	0-3000 mg/L
Total Alkalinity	120	0-1000
Total Hardness	100 mg/L	0-500 mg/L
Carbonates	NA mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	240 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 THROUGH ENTIRE JOB

Job Execution Information

Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /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	6151
2	Mud Flush	Flush	8.45			40.86		20.00	6250
3	Water	Flush	8.34			42.00		10.00	6448
4	Lead	Lead	12.50	2.26	12.59		323.00	129.82	6547
5	Tail	Tail	13.00	2.05	10.26		784.00	285.96	7828
6	Displacement	DisplacementFinal	8.34			42.00		171.00	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	Lead	Lead	ASTM TYPE I/II	Cement	100.00	%
4	Lead	Lead	ATHX-1102	Thixotropic	0.10	%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	IntegraSeal PHENO	LostCirculation	0.50	lb/sk
4	Lead	Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
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
4	Lead	Lead	XCem-916	Retarder	0.45	%BWOB
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

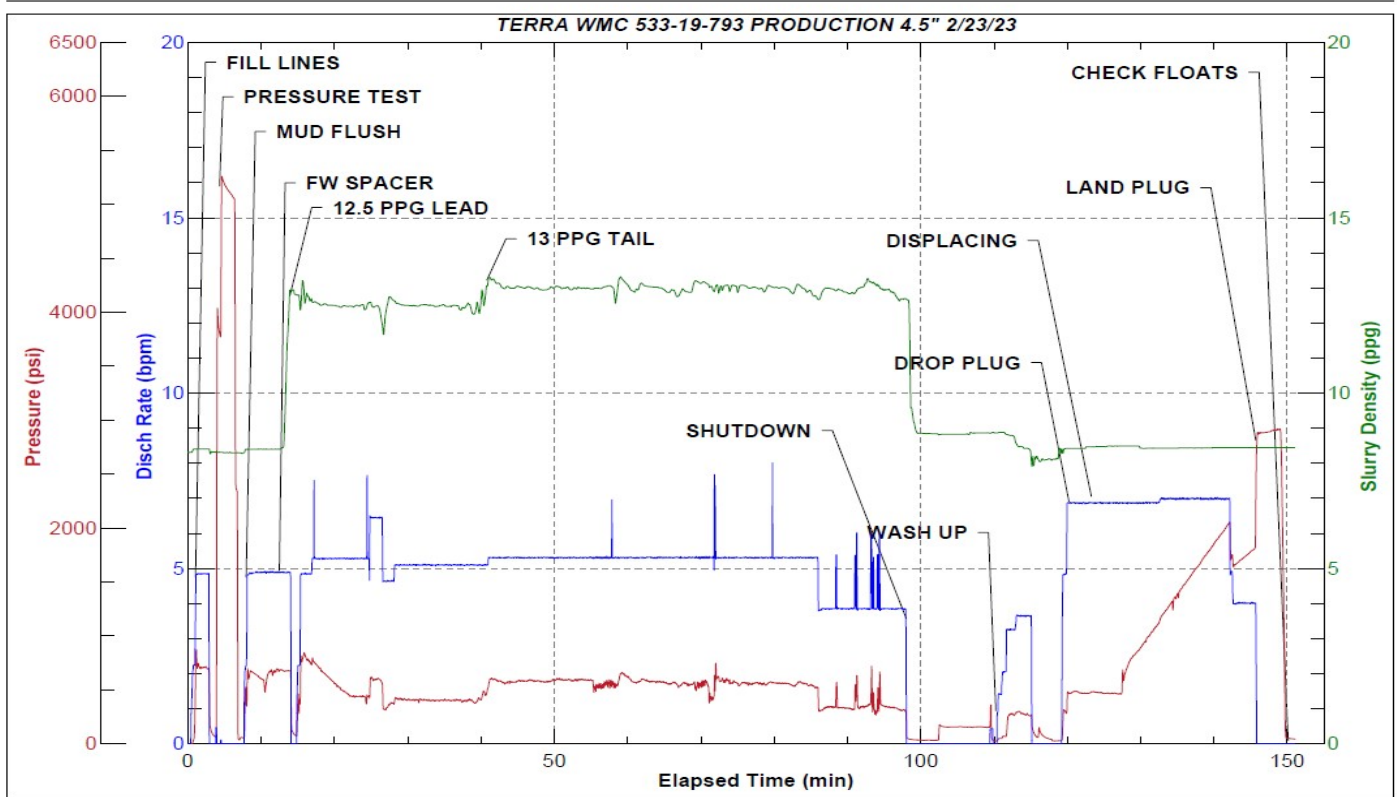
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	2/23/2023	07:07					CREW CALLED OUT FOR ON LOCATION TIME OF 14:00
2	Depart Location	2/23/2023	10:00					CREW DEPARTS RCO YARD FOR RIG LOCATION
3	Arrive On Location	2/23/2023	12:00					CREW AND EQUIPMENT ARRIVES ON LOCATION. RIG STILL RUNNING CASING
4	Safety Meeting	2/23/2023	12:05					PRE RIG UP SAFETY MEETING
5	Rig Up Iron	2/23/2023	12:15					RIG UP IRON HOSES AND EQUIPMENT
6	Other	2/23/2023	13:00					RIG LANDED CASING @ 15:30. RIG CIRCULATED FOR .5 HOURS. TOTAL VOLUME 172 BBLS.
7	Safety Meeting	2/23/2023	16:45					PRE JOB SAFETY MEETING WITH RIG CREW AND COMPANY MAN.
8	Fill Lines	2/23/2023	17:17	8.34	5	10	909	FILL LINES WITH 10 BBLS OF FRESHWATER. NO RETURNS
9	Pressure Test Lines	2/23/2023	17:21	8.34			5335	PRESSURE TEST PUMP AND IRON TO 5000 PSI
10	Pump Spacer	2/23/2023	17:24	8.45	5	0	680	BEGIN PUMPING MUD FLUSH + SURFACTANT.
11	Pump Spacer	2/23/2023	17:29	8.45	5	20	676	PUMP 20 BBLS MUD FLUSH + SURFACTANT PUMPED. NO RETURNS
12	Pump Spacer	2/23/2023	17:29	8.34	5	10	646	PUMP 10 BBLS FRESHWATER FLUSH
13	Shutdown	2/23/2023	17:31					SHUTDOWN AND BATCH UP LEAD CEMENT
14	Pump Lead Cement	2/23/2023	17:33	12.5	4.9	0	864	BEGIN PUMPING 12.5 PPG LEAD CEMENT, WEIGHT VERIFIED BY MUD SCALE
15	Pump Lead Cement	2/23/2023	17:41	12.5	6.3	50	605	50 BBLS LEAD CEMENT PUMPED
16	Pump Lead Cement	2/23/2023	17:51	12.5	5	50	409	100 BBLS LEAD CEMENT PUMPED.NO RETURNS
17	Pump Lead Cement	2/23/2023	17:56	12.5	5	30	391	130 BBLS (323 SKS) TOTAL LEAD CEMENT PUMPED.
18	Pump Tail Cement	2/23/2023	17:57	13	5	0	430	BEGIN PUMPING 13 PPG TAIL CEMENT. WEIGHT VERIFIED BY MUD SCALE.
19	Pump Tail Cement	2/23/2023	18:07	13	5	50	575	50 BBLS TAIL CEMENT PUMPED
20	Pump Tail Cement	2/23/2023	18:16	13	5	50	664	100 BBLS TAIL CEMENT PUMPED
21	Pump Tail Cement	2/23/2023	18:25	13	5.5	50	569	150 BBLS TAIL CEMENT PUMPED. NO RETURNS
22	Pump Tail Cement	2/23/2023	18:35	13	5.3	50	552	200 BBLS TAIL CEMENT PUMPED
23	Pump Tail Cement	2/23/2023	18:44	13	4	50	342	250 BBLS TAIL CEMENT PUMPED
24	Pump Tail Cement	2/23/2023	18:57	13	3.5	36	308	286 BBLS (784 SKS) TOTAL TAIL CEMENT PUMPED.
25	Clean Pumps and Lines	2/23/2023	18:57					BLOW RIG AIR TO CLEAR LINES, VALVE MANIFOLD TO WASH UP PUMP AND LINES TO PIT
26	Drop Top Plug	2/23/2023	19:15	8.34	7	2	478	DROP PLUG, WITNESSED BY CUSTOMER REP. BEGIN KCL DISPLACEMENT.
27	Pump Displacement	2/23/2023	19:24	8.34	7	50	465	50 BBLS DISPLACEMENT PUMPED. CAUGHT PRESSURE @ 55 BBLS DISPLACED. NO RETURNS.

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
28	Pump Displacement	2/23/2023	19:32	8.34	7	50	1309	100 BBLS DISPLACEMENT PUMPED
29	Pump Displacement	2/23/2023	19:39	8.34	7	50	2000	150 BBLS DISPLACEMENT PUMPED. FCP-2000 PSI @ 7 BPM BEFORE SLOW DOWN.
30	Pump Displacement	2/23/2023	19:44	8.34	4	21	1800	171 BBLS (CALCULATED) DISPLACEMENT PUMPED
31	Land Plug	2/23/2023	19:44				2860	PLUG LANDED FCP-1800 PSI BUMPED TO 2860 PSI
32	Check Floats	2/23/2023	19:48					BLEED PRESSURE OFF AND CHECK FLOATS. FLOATS HELD 2 BBLS BACK
33	Rig Down Iron	2/23/2023	20:00					PRE RIG DOWN SAFETY MEETING. PICKLE/ BLOW DOWN IRON, RIG DOWN EQUIPMENT, IRON AND HOSES
34	Depart Location	2/23/2023	21:45					CREW DEPARTS LOCATION

Pump Diagrams



JobMaster Program Version 5.01C1
Job Number: 85902
Customer: TERRA
Well Name: WMC 533-19-793



Job Start: Thursday, February 23, 2023