



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

Leverich SR 323-13 05-045-24564
S:13 T:7S R:94W Garfield CO

CallSheet #: 87939
Proposal #: 70426



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,

Zen Keith

SME North | (307) 757-7178 | zen.keith@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	1175	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1175	7422	85
Open Hole	Outer	n/a	8.75	n/a	n/a	7422	10638	50
Casing	Inner	4.5	4	11.6	n/a	0	10648	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Cement Trailer Float	CTF-576	TRC-249	Richey, Steven
Field Storage Silo	FSS-470		
Cement Pump Float	CPF-136	TRH-855	Carrasco, Joel
Light Duty Vehicles	LDV-061		Woronovitch, Collin
Tractors	TRC-112		Ridgeway, Danny

Timing

Event	Date/Time
Call Out	7/29/2023 02:00
Depart Facility	7/29/2023 23:30
On Location	7/30/2023 00:15
Rig Up Iron	7/30/2023 10:00
Job Started	7/30/2023 13:05
Job Completed	7/30/2023 16:16
Rig Down Iron	7/30/2023 16:30
Depart Location	7/30/2023 18:00

General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	215 bbls
Rig Circulation Time	0.5 hours
Calculated Displacement	164 bbls
Actual Displacement	164 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	9.4 lb/gal
Well Fluid Density Out of Well	9.4 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	172 °F
BHST	229 °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	300 mg/L	0-3000 mg/L
Total Alkalinity	200	0-1000
Total Hardness	180 mg/L	0-500 mg/L
Carbonates	N/A 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 DURING PRE JOB CIRCULATION. NO RETURNS DURING JOB. NO RETURNS DURING DISPLACEMENT

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	5663
2	Mud Flush	Flush	8.45			40.86		20.00	5762
3	Water	Flush	8.34			42.00		10.00	5960
4	Lead	Lead	12.50	2.21	12.30		351.00	138.03	6059
5	Tail	Tail	13.00	2.05	10.26		785.00	286.33	7422
6	Displacement	DisplacementFinal	8.34			42.00		164.00	0

Job Fluid Details

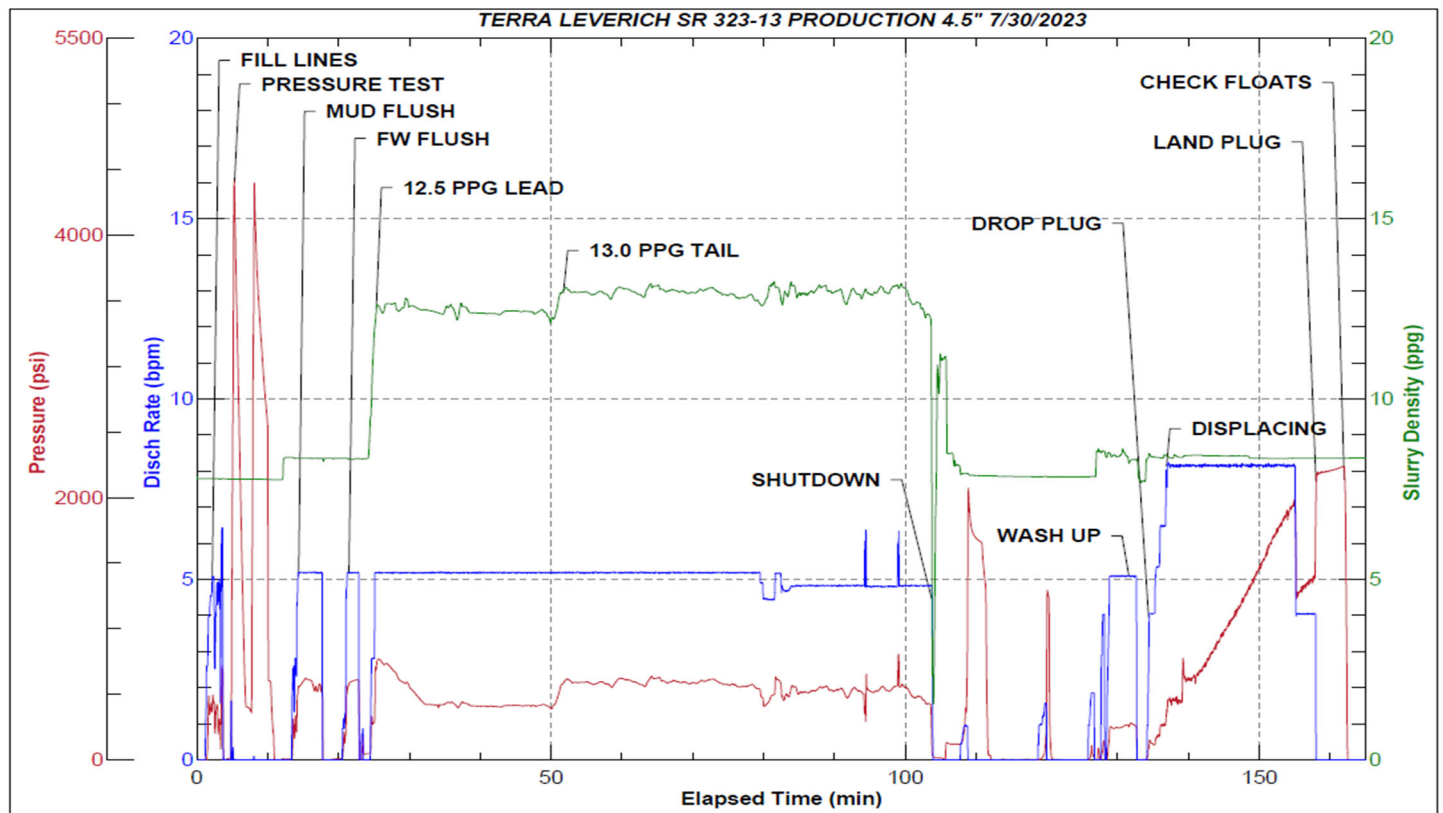
Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
2	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
4	Lead	Lead	ASTM TYPE IL	Cement	100.00	%
4	Lead	Lead	A-2	Accelerator	0.20	%BWOB
4	Lead	Lead	FL-66	FluidLoss	0.30	%BWOB
4	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
4	Lead	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	StrengthRetrogression	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	7/29/2023	02:00					CREW CALLED OUT FOR ON LOCATION OF 12:00 7/30 CREW ALREADY STAGED ON LOCATION
2	Depart Location	7/29/2023	23:30					DEPART RCO YARD FOR LOCATION
3	Arrive On Location	7/30/2023	00:15					ARRIVE ON LOCATION. RIG ALMOST OUT OF HOLE WITH DRILL PIPE.
4	Safety Meeting	7/30/2023	09:45					PRE RIG UP JSA. SPOT EQUIPMENT
5	Rig Up Iron	7/30/2023	10:00					RIG UP ALL IRON, HOSES, AND EQUIPMENT
6	Standby	7/30/2023	11:00					WAITING ON RIG TO FINISH RUNNING CASING AND CIRCULATE. RIG LANDED CASING @ 12:30. RIG CIRCULATED FOR .5 HOUR. TOTAL VOLUME 215 BBLs. FINISH RIGGING UP HEAD AND FLOOR.
7	Safety Meeting	7/30/2023	13:05					PRE JOB SAFETY MEETING WITH RIG CREW AND COMPANY MAN.
8	Fill Lines	7/30/2023	13:35	8.34	5	10	458	FILL LINES WITH 10 BBLs OF FRESHWATER. NO RETURNS
9	Pressure Test Lines	7/30/2023	13:38	8.34	1	1	4523	PRESSURE TEST PUMP AND IRON TO 4500 PSI
10	Pump Spacer	7/30/2023	13:46	8.45	5	0	558	BEGIN PUMPING MUD FLUSH + SURFACTANT.
11	Pump Spacer	7/30/2023	13:50	8.45	5	20	495	PUMP 20 BBLs MUD FLUSH + SURFACTANT PUMPED. NO RETURNS
12	Pump Spacer	7/30/2023	13:52	8.34	5	0	436	PUMP 10 BBLs FRESHWATER FLUSH
13	Pump Spacer	7/30/2023	13:54	8.34	5	10	410	10 BBLs FRESHWATER AWAY SWAP TO LEAD
14	Pump Lead Cement	7/30/2023	13:58	12.5	5.2	0	712	BEGIN PUMPING 12.5 PPG LEAD CEMENT, WEIGHT VERIFIED BY MUD SCALE
15	Pump Lead Cement	7/30/2023	14:08	12.5	5.2	50	421	50 BBLs LEAD CEMENT PUMPED
16	Pump Lead Cement	7/30/2023	14:17	12.5	5.2	50	415	100 BBLs LEAD CEMENT PUMPED. NO RETURNS
17	Pump Lead Cement	7/30/2023	14:24	12.5	5.2	38	401	138 BBLs (351 SKS) TOTAL LEAD CEMENT PUMPED.
18	Pump Tail Cement	7/30/2023	14:24	13	5.2	0	466	BEGIN PUMPING 13 PPG TAIL CEMENT. WEIGHT VERIFIED BY MUD SCALE.
19	Pump Tail Cement	7/30/2023	14:33	13	5.2	50	617	50 BBLs TAIL CEMENT PUMPED
20	Pump Tail Cement	7/30/2023	14:43	13	5.2	50	587	100 BBLs TAIL CEMENT PUMPED
21	Pump Tail Cement	7/30/2023	14:53	13	5.2	50	582	150 BBLs TAIL CEMENT PUMPED. NO RETURNS
22	Pump Tail Cement	7/30/2023	15:03	13	4.8	50	534	200 BBLs TAIL CEMENT PUMPED
23	Pump Tail Cement	7/30/2023	15:13	13	4.8	50	555	250 BBLs TAIL CEMENT PUMPED
24	Pump Tail Cement	7/30/2023	15:19	13	4.8	32	428	286 BBLs (785 SKS) TOTAL TAIL CEMENT PUMPED.
25	Clean Pumps and Lines	7/30/2023	15:20					BLOW RIG AIR TO CLEAR LINES, VALVE MANIFOLD TO WASH UP PUMP AND LINES TO PIT. HAD DELAY DUE TO CEMENTED UP KELLY HOSE.
26	Drop Top Plug	7/30/2023	15:47	8.34	4	0	165	DROP PLUG, WITNESSED BY DRILLER AND COMPANY MAN BEGIN KCL DISPLACEMENT.

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
27	Pump Displacement	7/30/2023	15:55	8.34	8	50	704	50 BBLS DISPLACEMENT PUMPED. CAUGHT PRESSURE @ 30 BBLS DISPLACED. NO RETURNS.
28	Pump Displacement	7/30/2023	16:02	8.34	8	50	1301	100 BBLS DISPLACEMENT PUMPED
29	Pump Displacement	7/30/2023	16:08	8.34	8	50	1975	150 BBLS DISPLACEMENT PUMPED. MAX LIFT-1975 PSI @ 8 BPM BEFORE SLOW DOWN @ 150 BBLS DISPLACED
30	Pump Displacement	7/30/2023	16:12	8.34	4	14	1513	164 BBLS (CALCULATED) DISPLACEMENT PUMPED
31	Land Plug	7/30/2023	16:12				2240	PLUG LANDED FCP-1513 PSI BUMPED TO 2240 PSI
32	Check Floats	7/30/2023	16:16					BLEED PRESSURE OFF AND CHECK FLOATS, FLOATS HELD 1.5 BBLS BACK
33	Rig Down Iron	7/30/2023	16:30					PRE RIG DOWN SAFETY MEETING. RIG DOWN EQUIPMENT, IRON AND HOSES
34	Depart Location	7/30/2023	18:00					CREW DEPARTS LOCATION

Pump Diagrams


JobMaster Program Version 5.01C1
Job Number: 87939
Customer: TERRA
Well Name: LEVERICH SR 323-13


Job Start: Sunday, July 30, 2023