



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL PA 44-23 05-045-24310
S:26 T:6S R:95W Garfield CO

CallSheet #: 75134
Proposal #: 50220



LONG STRING Post Job Report

Attention: Mr. Lynn Cass | (970) 263-2716 | lcass@terraep.com
Terra Energy Partners, LLC
4828 Loop Central Dr., Suite 900 | Houston, TX 77081

Dear Mr. Lynn Cass,

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

Field Engineer | (307) 757-7178 | zen.keith@americancementing.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 305-4888

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1 Job Details & Summary

Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Top (ft)	Bottom (ft)	Excess (%)
Casing	Outer	9.625	8.921	36	0	1124	0
Open Hole	Outer		8.75		1124	9012	45
Casing	Inner	4.5	4	11.6	0	9002	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Silo	Silo #25			
Bulk Trailer	CTF-407	TRB-421	Espinoza Galindo, Aldo	28
Light Duty Pickups	LDV-3104		Diaz, Douglas	56
Cement Pump	CPF-058	TRH-1140	Beutler, Brandon	28

Timing

Event	Date/Time
Call Out	10/9/2020 19:00
Depart Facility	10/9/2020 19:30
On Location	10/9/2020 20:00
Rig Up Iron	10/9/2020 21:50
Job Started	10/10/2020 02:24
Job Completed	10/10/2020 04:35
Rig Down Iron	10/10/2020 04:35
Depart Location	10/10/2020 06:30

General Job Information

Metrics	Value
Well Fluid Density	12.7 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	660 bbls
Rig Circulation Time	1 hours
Calculated Displacement	139 bbls
Actual Displacement	139 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 During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	12.7 lb/gal
Well Fluid Density Out of Well	12.7 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	155 °F
BHST	225 °F

Circulation

Lost Circulation Experienced
No

Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sks)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.34			42.00		10.00	3712
1	2	Mud Flush	Flush	8.45			40.86		20.00	3838
1	3	Water	Flush	8.34			42.00		10.00	4090
1	4	Primary Cement	Primary	14.20	1.72	8.08		1252.00	383.00	4216
1	5	Displacement	DisplacementFinal	8.34			42.00		139.00	0

Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
1	2	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
1	4	Primary	Primary Cement	CLASS G	Cement	80.00	%
1	4	Primary	Primary Cement	FLY ASH (POZZOLAN)	Extender	20.00	%
1	4	Primary	Primary Cement	FL-66	FluidLoss	0.40	%BWOB
1	4	Primary	Primary Cement	FP-24	Defoamer	0.30	%BWOB
1	4	Primary	Primary Cement	GW-86	Viscosifier	0.10	%BWOB
1	4	Primary	Primary Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
1	4	Primary	Primary Cement	R-3	Retarder	0.30	%BWOB
1	4	Primary	Primary Cement	S-8	StrengthRetrogression	27.00	%BWOB

2 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	10/9/2020	19:00					Yard call 1900 on location 2100
2	Depart For Location	10/9/2020	19:30					Leave Rifle yard for location
3	Arrive On Location	10/9/2020	20:00					Arrive on location, rig starting casing run
4	Waiting	10/9/2020	20:00					Waiting on trucks to leave location to spot
5	Spot in units	10/9/2020	20:21					Spot in all equipment
6	Rig Up Iron	10/9/2020	21:50					Pre rig up safety meeting, rig in all lines and equipment to the stand pipe
7	Waiting	10/9/2020	22:32					Waiting on rig to finish casing and circulate
8	Safety Meeting	10/10/2020	01:54					Pre job safety meeting with company man and rig crew
9	Waiting	10/10/2020	02:00					Waiting on rig to finish circulation
10	Waiting	10/10/2020	02:12					Rig ended circulation, circulated 60 mins @ 11 BBLs/min total of 660 BBLs
11	Waiting	10/10/2020	02:12					Rig rigging down CRT
12	Rig Up Iron	10/10/2020	02:14					Rigging up cement head and lines on the floor
13	Pump Spacer	10/10/2020	02:24	8.34	5.5	10	760	Pumping fresh water spacer, returns

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
14	Pressure Test Lines	10/10/2020	02:29				5000	Pressure test
15	Pump Spacer	10/10/2020	02:35	8.34	8	20	1300	Pumping mud flush spacer
16	Shutdown	10/10/2020	02:43					Cross over leaking, teflon tape fixed leak
17	Pump Spacer	10/10/2020	02:49	8.34	8	15	1500	Pumping fresh water spacer
18	Pump Lead Cement	10/10/2020	02:52	14.2	5.5	0	1600	Pumping lead cement
19	Pump Lead Cement	10/10/2020	03:05	14.2	5.5	50	1565	Pumping lead cement
20	Pump Lead Cement	10/10/2020	03:15	14.2	6	100	1204	Pumping lead cement
21	Pump Lead Cement	10/10/2020	03:23	14.2	8	150	1212	Pumping lead cement
22	Pump Lead Cement	10/10/2020	03:28	14.2	8	200	1180	Pumping lead cement
23	Pump Lead Cement	10/10/2020	03:35	14.2	8	250	1229	Pumping lead cement
24	Pump Lead Cement	10/10/2020	03:40	14.2	8	300	1213	Pumping lead cement
25	Pump Lead Cement	10/10/2020	03:48	14.2	8	350	1265	Pumping lead cement
26	Pump Lead Cement	10/10/2020	03:57	14.2	5.5	383	605	Pumping lead cement
27	Clean Pumps and Lines	10/10/2020	03:57					Wash pump and lines to the pit
28	Drop Top Plug	10/10/2020	04:13					Dropped top plug verified by company man
29	Pump Displacement	10/10/2020	04:14	2.5	8.34	0	80	Pumping KCL displacement
30	Pump Displacement	10/10/2020	04:21	10	8.34	50	1862	Pumping KCL displacement
31	Pump Displacement	10/10/2020	04:26	10	8.34	100	2523	Pumping KCL displacement
32	Pump Displacement	10/10/2020	04:33	4	8.34	139	2340	Pumping KCL displacement
33	Land Plug	10/10/2020	04:33				3411	Land plug, FCP 2340 PSI bumped to 3411 PSI
34	Check Floats	10/10/2020	04:35					Bled pressure, floats held 1.5 BBL bled back
35	Rig Down Iron	10/10/2020	04:35					Pre rig down safety meeting, rig down all lines and equipment
36	Leave location	10/10/2020	06:30					Leave location for Rifle Shop

3 Water Analysis

Metrics	Value	Recommended
Water Source	Frac Tank	
Temperature	62 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	240	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

4 Pump Diagrams

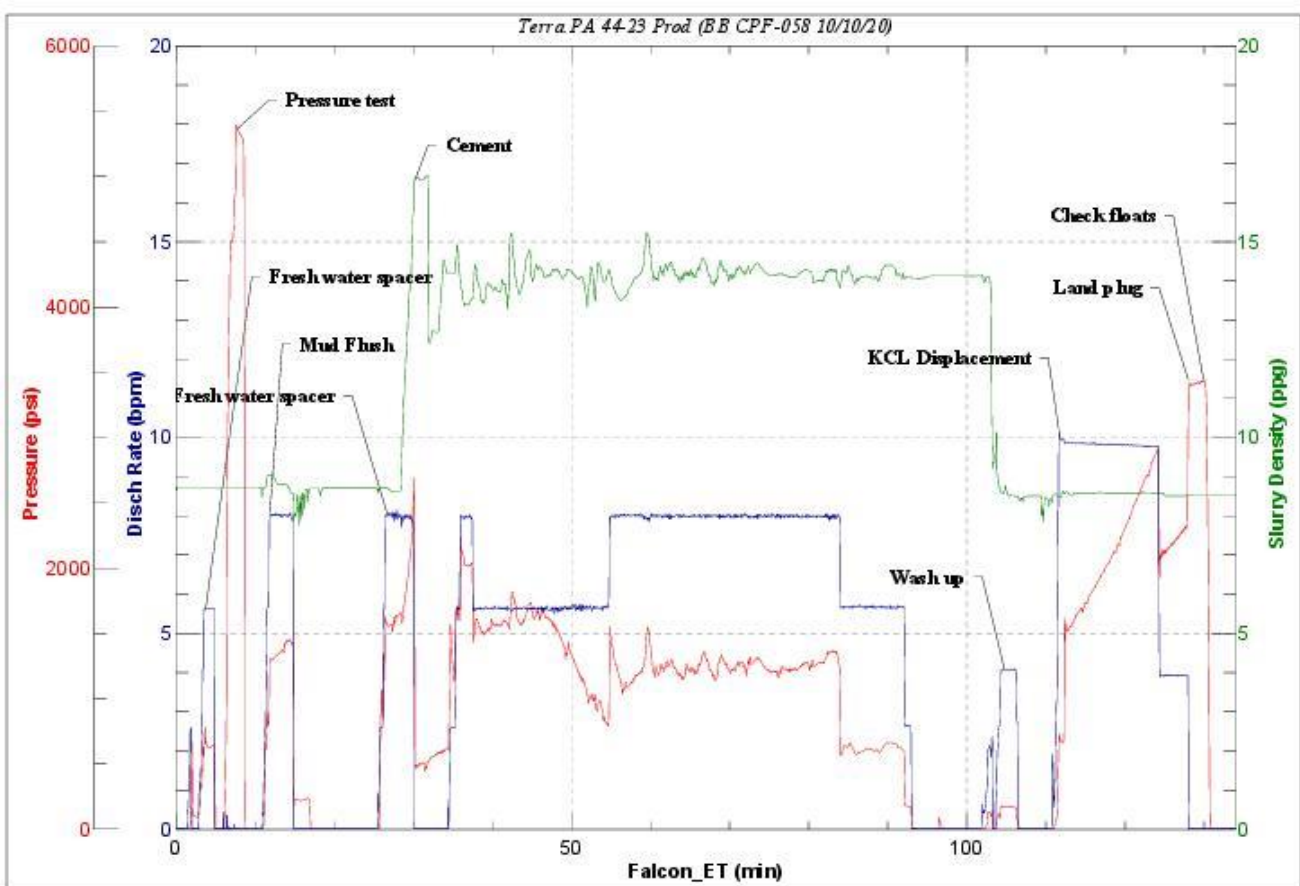


JobMaster Program Version 5.01C 1

Job Number: 75134

Customer: Terra

Well Name: PA 44-23



BJ Services

Job Start: Saturday, October 10, 2020