



Terra Energy Partners, LLC

SURFACE POST JOB REPORT

FEDERAL PA 334-23 05-045-24307
Garfield CO

CallSheet #: 75055
Proposal #: 50048



SURFACE 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)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Open Hole	Outer	n/a	13.5	n/a	n/a	0	500	16
Open Hole	Outer	n/a	13.5	n/a	n/a	500	1133	16
Casing	Inner	9.625	8.921	36	n/a	0	1123	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-161	TRB-425	Jacob Kirchenwitz	24
Cement Pump	CPF-058	TRH-1140	Mark Aden	24
Light Duty Pickups	LDV-5263		Douglas Diaz	24

Timing

Event	Date/Time
Call Out	9/25/2020 01:00
Depart Facility	9/25/2020 02:15
On Location	9/25/2020 02:38
Rig Up Iron	9/25/2020 03:11
Job Started	9/25/2020 04:49
Job Completed	9/25/2020 05:32
Rig Down Iron	9/25/2020 05:36
Depart Location	9/25/2020 06:25

General Job Information

Metrics	Value
Well Fluid Density	9.6 lb/gal
Well Fluid Type	Water
Rig Circulation Vol	472.5 bbls
Rig Circulation Time	0.45 hours
Calculated Displacement	84 bbls
Actual Displacement	84 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	12 bbls
Well Topped Out	No

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	9.6 lb/gal
Well Fluid Density Out of Well	9.6 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	81 °F
BHST	98 °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		20.00	0
1	2	Lead Cement	Lead	12.30	2.34	13.43		122.00	50.83	0
1	3	Tail Cement	Tail	12.80	2.08	11.47		173.00	63.99	500
1	4	Water	DisplacementFinal	8.34			42.00		84.00	0

Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Lead	Lead Cement	ASTM TYPE III	Cement	100.00	%
1	2	Lead	Lead Cement	A-10	Accelerator	5.00	%BWOB
1	2	Lead	Lead Cement	A-2	Accelerator	2.00	lb/sk
1	2	Lead	Lead Cement	A-7P	Accelerator	2.00	lb/sk
1	2	Lead	Lead Cement	FP-25	Defoamer	0.30	%BWOB
1	2	Lead	Lead Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
1	3	Tail	Tail Cement	ASTM TYPE III	Cement	100.00	%
1	3	Tail	Tail Cement	A-10	Accelerator	5.00	%BWOB
1	3	Tail	Tail Cement	A-2	Accelerator	2.00	lb/sk
1	3	Tail	Tail Cement	A-7P	Accelerator	2.00	lb/sk
1	3	Tail	Tail Cement	FP-25	Defoamer	0.30	%BWOB
1	3	Tail	Tail Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk

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	9/25/2020	01:00					Yard call 0100 on location 0400
2	Depart for location	9/25/2020	02:15					Leave Rifle yard for location
3	Arrive On Location	9/25/2020	02:38					Arrive on location rig running casing
4	Spot Equipment	9/25/2020	02:38					Spot in all equipment
5	Rig Up Iron	9/25/2020	03:11					Pre rig up safety meeting, rig in all lines and equipment to stand pipe
6	Waiting	9/25/2020	03:45					Waiting on rig to finish casing and circulate
7	Safety Meeting	9/25/2020	04:35					Pre job safety meeting with company man and rig crew
8	Other	9/25/2020	04:40					Rig ended circulation, circulated 45 mins @ 10.5 BBLs/min. Total of 472.5 BBLs
9	Waiting	9/25/2020	04:40					Rig laying down CRT
10	Rig Up Iron	9/25/2020	04:43					Rigging up cement head and lines on the floor
11	Fill Lines	9/25/2020	04:49	8.34	5	10	282	Load lines, Returns

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
12	Pressure Test Lines	9/25/2020	04:53				3000	Pressure test
13	Pump Spacer	9/25/2020	05:01	8.34	8	10	470	Pumping fresh water spacer
14	Pump Lead Cement	9/25/2020	05:03	12.3	8	0	684	Pumping lead cement
15	Pump Lead Cement	9/25/2020	05:09	12.3	8	51	685	Pumping lead cement
16	Pump Tail Cement	9/25/2020	05:09	12.8	8	0	685	Pumping tail cement
17	Pump Tail Cement	9/25/2020	05:17	12.8	8	64	708	Pumping tail cement
18	Drop Top Plug	9/25/2020	05:17					Dropped top plug, verified by company man
19	Pump Displacement	9/25/2020	05:19	8.34	8	0	461	Pumping fresh water displacement
20	Pump Displacement	9/25/2020	05:26	8.34	10	50	770	Pumping fresh water displacement
21	Pump Displacement	9/25/2020	05:32	8.34	3	84	335	Pumping fresh water displacement, Cement to surface @ 72 BBLs. 12 BBLs cement to surface
22	Land Plug	9/25/2020	05:32				987	Land plug, FCP 335 PSI bumped to 987 PSI
23	Check Floats	9/25/2020	05:36					Bled pressure, floats held .5 BBL bled back
24	Rig Down Iron	9/25/2020	05:36					Pre rig down safety meeting, rig down cement head and lines on the floor
25	Clean Pumps and Lines	9/25/2020	05:40					Wash pump and lines to pit
26	Rig Down Iron	9/25/2020	06:00					Rig down all lines and equipment
27	Depart Location	9/25/2020	06:25					Leave location for Rifle yard

3 Water Analysis

Metrics	Value	Recommended
Water Source	Frac Tank	
Temperature	65 °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	0 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

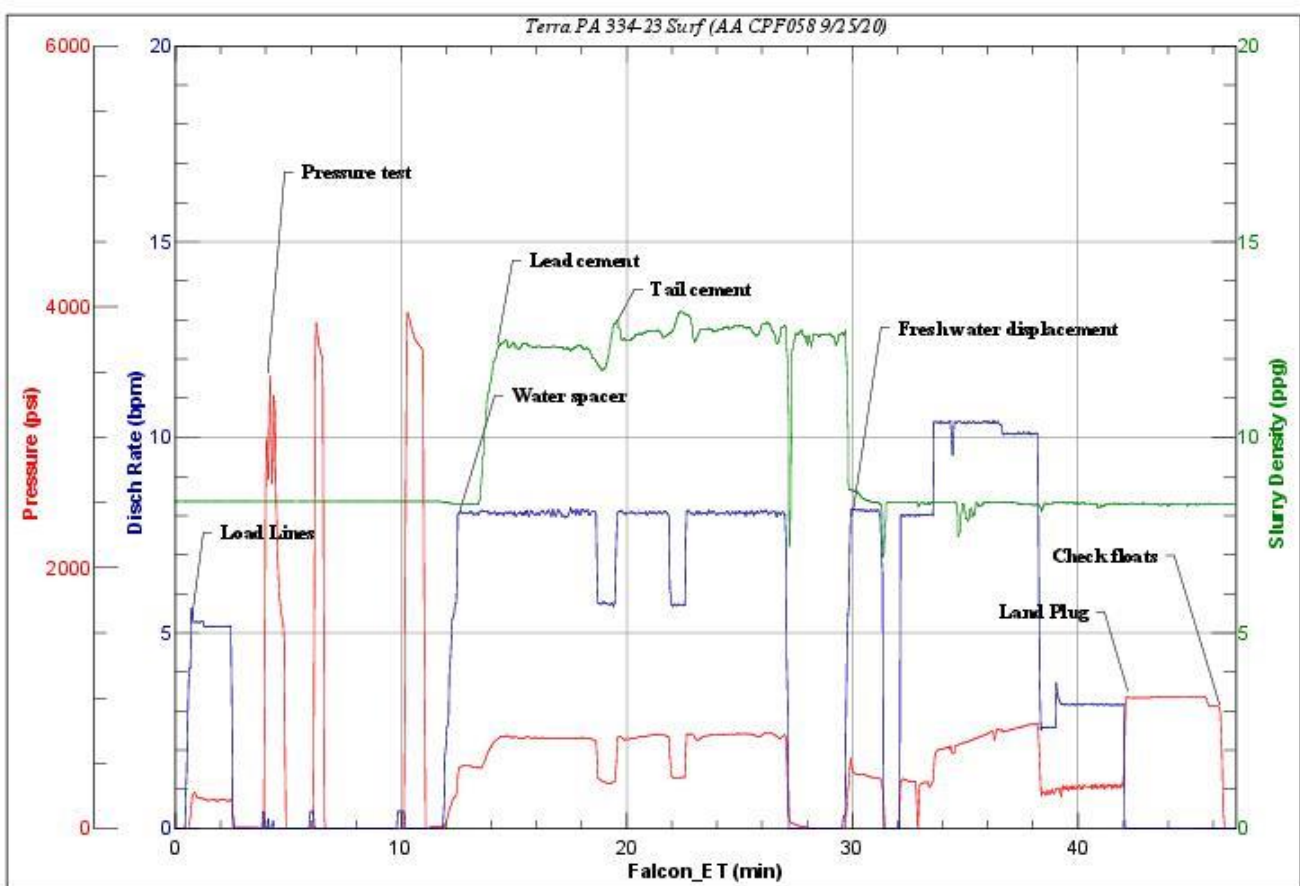


JobMaster Program Version 5.01C 1

Job Number: 75055

Customer: Terra

Well Name: PA 334-23



BJ Services

Job Start: Friday, September 25, 2020