



Terra Energy Partners, LLC

SURFACE POST JOB REPORT

FEDERAL PA 514-23 05-045-24309
Garfield CO

CallSheet #: 75060
Proposal #: 50140



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@americacementing.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		13.5			0	500	16
Open Hole	Outer		13.5			500	1100	16
Casing	Inner	9.625	8.921	36		0	1100	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Bulk Trailer	CTF-161	TRB-425	Rivas, Saul
Cement Pump	CPF-058	TRH-1140	Brennecke, Dirk
Light Duty Pickups	LDV-3104		Linn, Paul

Timing

Event	Date/Time
Call Out	9/28/2020 06:28
Depart Facility	9/29/2020 10:22
On Location	9/30/2020 11:07
Rig Up Iron	10/1/2020 11:51
Job Started	10/2/2020 16:27
Job Completed	10/3/2020 17:15
Rig Down Iron	10/4/2020 17:28
Depart Location	10/5/2020 18:02

General Job Information

Metrics	Value
Well Fluid Density	9.4 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	450 bbls
Rig Circulation Time	1 hours
Calculated Displacement	83.68 bbls
Actual Displacement	83.5 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	18 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	9.4 lb/gal
Well Fluid Density Out of Well	9.4 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		82.00	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	9/28/2020	06:28					Callout, on location time of noon 9/28/2020
2	Safety Meeting	9/28/2020	10:28					Pre-Convoy Safety meeting
3	Depart Location	9/28/2020	10:46					Depart from Rifle yard for H&P 318
4	Arrive On Location	9/28/2020	11:08					Arrive on location rig was still drilling
5	Safety Meeting	9/28/2020	11:22					Pre-Rig Up Safety meeting
6	Rig Up Iron	9/28/2020	11:39					Rig up all ground equipment
7	Safety Meeting	9/28/2020	15:55					Pre-Job Safety meeting with rig crew, company man, and all American Cementing crew
8	Rig Up Iron	9/28/2020	16:11					Load plug in plug container (verified by company man), stab plug container, hook up lines
9	Fill Lines	9/28/2020	16:27	8.4	2	5	58	Fill lines with 5 bbls of fresh water
10	Pressure Test Lines	9/28/2020	16:30				3918	Pressure test to 3918 psi
11	Pump Spacer	9/28/2020	16:33	8.4	5	20	175	Pump Water Spacer

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
12	Pump Lead Cement	9/28/2020	16:38	12.3	7	5	535	Pump Lead Cement @ 12.3 ppg 122 sks 2.34 cuft/sk 13.4 gals/sk. For a total of 50.84 bbls of Lead Cement requiring 38.92 bbls of mix water. Weight verified with mud scale
13	Pump Lead Cement	9/28/2020	16:46	12.3	5	54	276	Finished pumping Lead Cement with 54 bbls away
14	Pump Tail Cement	9/28/2020	16:47	12.8	7.5	5	615	Pump Tail Cement @ 12.8 ppg 173 sks 2.08 cuft/sk 11.5 gals/sk. For a total of 64.09 bbls of Tail Cement requiring 47.37 bbls of mix water. Weight verified with mud scale
15	Pump Tail Cement	9/28/2020	16:53	12.8	7.5	50	622	Pump Tail Cement
16	Pump Tail Cement	9/28/2020	16:56	12.8	4	67	189	Pump Tail Cement
17	Shutdown	9/28/2020	16:57					Shutdown with 67 bbls of Tail Cement away
18	Drop Top Plug	9/28/2020	16:59					Drop plug, verified by company man
19	Pump Displacement	9/28/2020	17:00	8.4	10	10	633	Pump Fresh water Displacement
20	Pump Displacement	9/28/2020	17:05	8.4	10	50	777	Pump Fresh water Displacement
21	Pump Displacement	9/28/2020	17:07	8.4	10	73	866	Pump Fresh water Displacement
22	Pump Displacement	9/28/2020	17:12	8.4	3	83.5	355	Pump Fresh water Displacement
23	Cement Back to Surface	9/28/2020	17:12					18 bbls of cement to surface
24	Land Plug	9/28/2020	17:12				1052	Landed the plug @ 355 psi took to 1052 psi
25	Check Floats	9/28/2020	17:14					Check floats, floats held 1/2 bbl back
26	Safety Meeting	9/28/2020	17:18					Pre-Rig Down safety meeting
27	Rig Down Iron	9/28/2020	17:23					Rig Down rig floor
28	Clean Pumps and Lines	9/28/2020	17:28					Wash pumps and lines to pit
29	Safety Meeting	9/28/2020	17:36					Pre-Rig Down safety meeting
30	Rig Down Iron	9/28/2020	17:42					Rig down all equipment
31	Safety Meeting	9/28/2020	18:06					Pre-Convoy Safety meeting
32	Depart Location	9/28/2020	18:12					Depart from location for Rifle yard. Thank you for using American Cementing, Andrew linn, and crew

3 Water Analysis

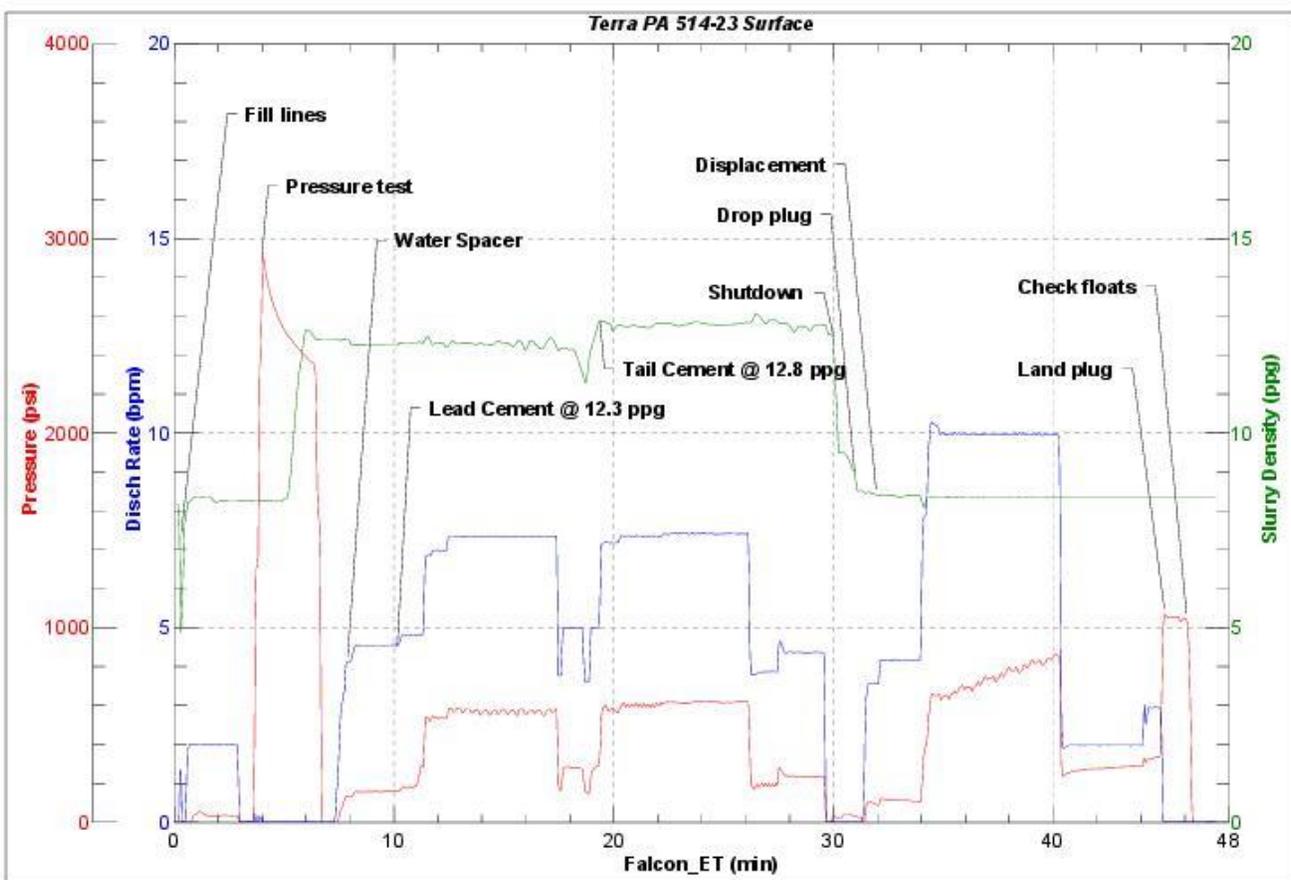
Metrics	Value	Recommended
Water Source	None	
Temperature	58.8 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	<295 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	>375 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams



JobMaster Program Version 5.01C1

Job Number:
Customer:
Well Name:



BJ Services

Job Start: Monday, September 28, 2020