



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL RWF 321-8 05-045-24318
S:8 T:6S R:94W Garfield CO

CallSheet #: 75437
Proposal #: 50731



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)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Casing	Outer	9.625	8.921	36	n/a	0	1000	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1000	10026	30
Casing	Inner	4.5	4	11.6	n/a	0	10026	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-407	TRB-424	Kirchenwitz, Jacob	62
Silo	Silo #25			
Cement Pump	CPF-011	TRH-957	Brennecke, Dirk	62
Light Duty Pickups	LDV-3104		Linn, Paul	62

Timing

Event	Date/Time
Call Out	11/24/2020 07:15
Depart Facility	11/24/2020 11:09
On Location	11/24/2020 11:57
Rig Up Iron	11/24/2020 12:12
Job Started	11/24/2020 16:50
Job Completed	11/24/2020 18:48
Rig Down Iron	11/24/2020 19:23
Depart Location	11/24/2020 20:22

General Job Information

Metrics	Value
Well Fluid Density	11.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	800 bbls
Rig Circulation Time	1.5 hours
Calculated Displacement	155.94 bbls
Actual Displacement	156 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	Yes
Flare Prior to Job	668 units
Flare During Job	Yes
Flare During Job	116 units
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	11.6 lb/gal
Well Fluid Density Out of Well	11.6 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	164 °F
BHST	234 °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 (sk)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.34			42.00		10.00	4555
1	2	Mud Flush	Flush	8.45			40.86		20.00	4696
1	3	Water	Flush	8.34			42.00		10.00	4977
1	4	Primary Cement	Primary	14.20	1.72	8.08		1141.00	349.99	5118
1	5	Displacement	DisplacementFinal	8.34			42.00		156.00	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	11/24/2020	07:15					Callout, on location time of 13:00 on 11/24/2020
2	Safety Meeting	11/24/2020	10:57					Pre-Convoy Safety meeting
3	Depart Location	11/24/2020	11:09					Depart from Rifle yard for H&P 318
4	Arrive On Location	11/24/2020	11:57					Arrive on location, rig was running casing
5	Safety Meeting	11/24/2020	12:02					Pre-Rig Up Safety meeting
6	Rig Up Iron	11/24/2020	12:12					Rig up all ground equipment
7	Safety Meeting	11/24/2020	16:22					Pre-Job Safety meeting with rig crew, company man, and American Cementing crew
8	Rig Up Iron	11/24/2020	16:38					Load plug in plug container (verified by company man), stab plug container, and hook up lines
9	Fill Lines	11/24/2020	16:50	8.4	2	5	806	Fill lines with 5 bbls of fresh water
10	Other	11/24/2020	16:57					2" union seal on pump truck leaking, replaced
11	Pressure Test Lines	11/24/2020	17:05				5208	Pressure tested to 5208 psi
12	Pump Spacer	11/24/2020	17:11	8.4	6	10	1222	Pump Water Spacer
13	Pump Spacer	11/24/2020	17:15	8.5	6	20	893	Pump Mud Flush Spacer
14	Pump Spacer	11/24/2020	17:20	8.4	6	10	918	Pump Water Spacer
15	Pump Tail Cement	11/24/2020	17:20	14.2	6	5	903	Pump Tail Cement @ 14.2 ppg
16	Pump Tail Cement	11/24/2020	17:33	14.2	8	50	2505	Pump Tail Cement
17	Pump Tail Cement	11/24/2020	17:39	14.2	8	100	2171	Pump Tail Cement
18	Pump Tail Cement	11/24/2020	17:45	14.2	8	150	1458	Pump Tail Cement
19	Pump Tail Cement	11/24/2020	17:53	14.2	7	200	1606	Pump Tail Cement

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
20	Pump Tail Cement	11/24/2020	18:00	14.2	7	250	1334	Pump Tail Cement
21	Pump Tail Cement	11/24/2020	18:06	14.2	7	300	1305	Pump Tail Cement
22	Pump Tail Cement	11/24/2020	18:11	14.2	5	335	628	Pump Tail Cement
23	Pump Tail Cement	11/24/2020	18:18	14.2	4.5	366	507	Pump Tail Cement
24	Shutdown	11/24/2020	18:18					Shutdown with 366 bbls of Tail Cement away
25	Clean Pumps and Lines	11/24/2020	18:20					Clean plumps & lines to cellar
26	Drop Top Plug	11/24/2020	18:24					Drop plug, verified by company man
27	Pump Displacement	11/24/2020	18:26	8.4	10	10	1003	Pump KCL Water Displacement
28	Pump Displacement	11/24/2020	18:31	8.4	10	50	2646	Pump KCL Water Displacement
29	Pump Displacement	11/24/2020	18:36	8.4	10	100	3442	Pump KCL Water Displacement
30	Pump Displacement	11/24/2020	18:39	8.4	10	145	3986	Pump KCL Water Displacement
31	Pump Displacement	11/24/2020	18:45	8.4	4.5	155	3348	Pump KCL Water Displacement
32	Land Plug	11/24/2020	18:45				4457	Land the plug @ 3348 psi took to 4457 psi
33	Check Floats	11/24/2020	18:48					Check floats floats held 1 1/2 bbls back
34	Safety Meeting	11/24/2020	18:56					Pre-Rig Down safety meeting with rig crew
35	Rig Down Iron	11/24/2020	19:06					Rig down rig floor
36	Safety Meeting	11/24/2020	19:19					Pre-Rig Down safety meeting with American Cementing crew
37	Rig Down Iron	11/24/2020	19:23					Rig down all equipment
38	Safety Meeting	11/24/2020	20:12					Pre-Convoy Safety meeting
39	Depart Location	11/24/2020	20:22					Depart from location for Rifle yard. Thank you for using American Cementing, Andrew Linn, and crew

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	71.3 °F	50-80 °F
pH Level	8	5.5-8.5
Chlorides	420 mg/L	0-3000 mg/L
Total Alkalinity	0	0-1000
Total Hardness	>250 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	100 mg/L	0-1500 mg/L
Potassium	350 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

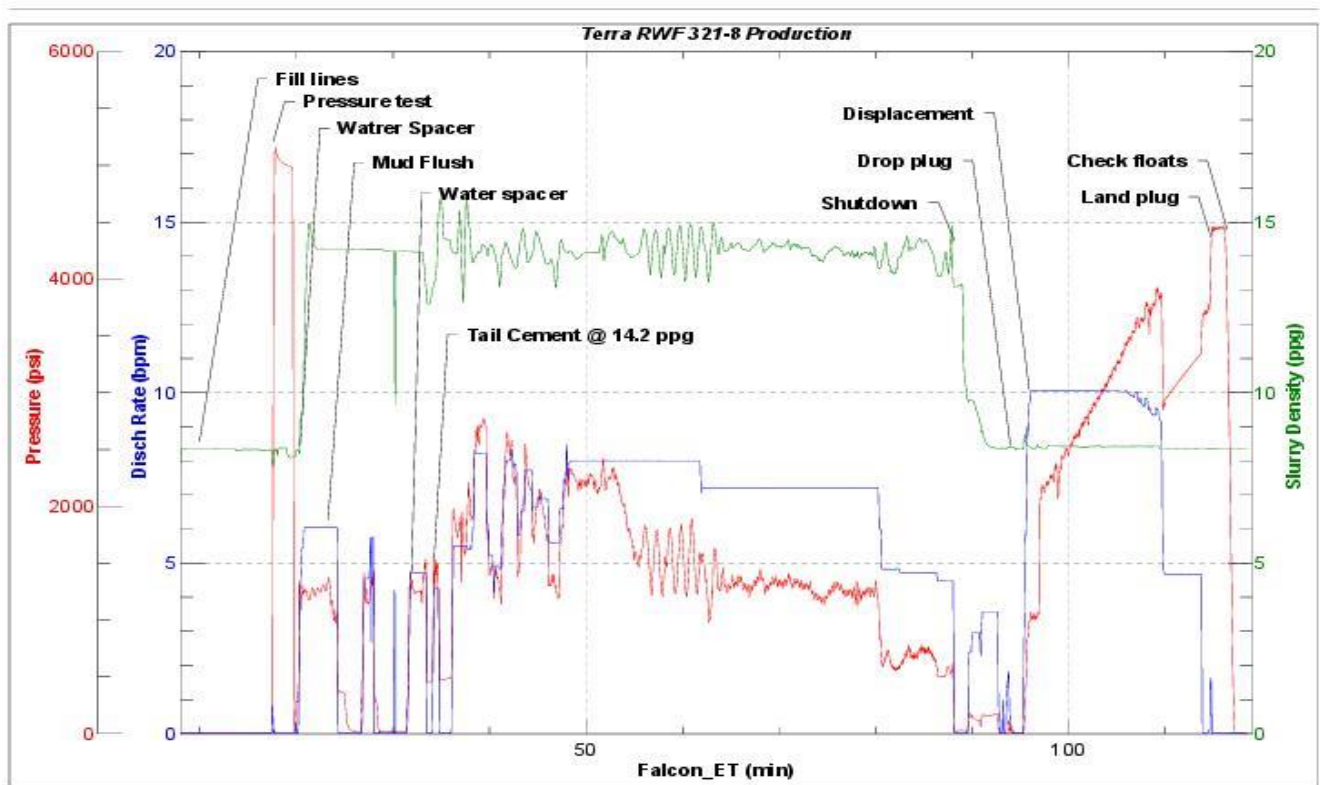


JobMaster Program Version 5.01C 1

Job Number:

Customer:

Well Name:



BJ Services

Job Start: Tuesday, November 24, 2020