



# **Terra Energy Partners, LLC**

## **LONG STRING POST JOB REPORT**

**CHEVRON GM 32-19 05-045-24360**  
**S:20 T:6S R:96W Garfield CO**

CallSheet #: 75751  
Proposal #: 50968



**LONG STRING Post Job Report**

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

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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](mailto:zen.keith@americacementing.com)

**Field Office**      28730 US-6, Rifle, CO 81650  
Phone: (970) 657-1187

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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	7783	45
Casing	Inner	4.5	4	11.6	n/a	0	7783	0

## Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-242	TRB-421	Doyle, Sheldon	54
Field Storage Silo	CTS-471			54
Cement Pump	CPF-058	TRH-677	Aden, Mark	54
Light Duty Pickups	LDV-3104		Linn, Paul	54

## Timing

Event	Date/Time
Call Out	12/25/2020 17:00
Depart Facility	12/25/2020 20:22
On Location	12/25/2020 21:40
Rig Up Iron	12/25/2020 22:02
Job Started	12/26/2020 01:31
Job Completed	12/26/2020 03:05
Rig Down Iron	12/26/2020 03:29
Depart Location	12/26/2020 04:33

## Casing Equipment

Type	Description	Qty
Top Plug	PLUG,CEMENT 4.5 TOP	1

## General Job Information

Metrics	Value
Well Fluid Density	10.5 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	600 bbls
Rig Circulation Time	1 hours
Calculated Displacement	120.16 bbls
Actual Displacement	120 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	602 units
Flare During Job	Yes
Flare During Job	208 units
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	10.5 lb/gal
Well Fluid Density Out of Well	10.5 lb/gal

## Job Details (cont.)

Metrics	Value
BHCT	170 °F
BHST	230 °F

## Circulation

Lost Circulation Experienced
No

### Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft <sup>3</sup> /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	3998
1	2	Mud Flush	Flush	8.45			40.86		20.00	4124
1	3	Water	Flush	8.34			42.00		10.00	4376
1	4	Lead Cement	Lead	12.50	2.16	12.18		229.00	88.14	4502
1	5	Tail Cement	Tail	13.00	1.99	10.08		506.00	179.70	5610
1	6	Displacement	DisplacementFinal	8.34			42.00		122.00	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	Lead	Lead Cement	ASTM TYPE III	Cement	100.00	%
1	4	Lead	Lead Cement	BA-90	BondEnhancer	5.00	lb/sk
1	4	Lead	Lead Cement	FL-66	FluidLoss	0.30	%BWOB
1	4	Lead	Lead Cement	FP-24	Defoamer	0.30	%BWOB
1	4	Lead	Lead Cement	GW-86	Viscosifier	0.10	%BWOB
1	4	Lead	Lead Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
1	4	Lead	Lead Cement	R-3	Retarder	0.60	%BWOB
1	5	Tail	Tail Cement	CLASS G	Cement	50.00	%
1	5	Tail	Tail Cement	FLY ASH (POZZOLAN)	Extender	50.00	%
1	5	Tail	Tail Cement	BA-90	BondEnhancer	3.00	lb/sk
1	5	Tail	Tail Cement	BENTONITE	Viscosifier	6.00	%BWOB
1	5	Tail	Tail Cement	FL-66	FluidLoss	0.40	%BWOB
1	5	Tail	Tail Cement	FP-24	Defoamer	0.30	%BWOB
1	5	Tail	Tail Cement	GW-86	Viscosifier	0.10	%BWOB
1	5	Tail	Tail Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
1	5	Tail	Tail Cement	R-3	Retarder	0.10	%BWOB
1	5	Tail	Tail Cement	S-8	StrengthRetgression	20.00	%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	12/25/2020	17:00					Callout, on location time of 22:00 on 12/25/2020
2	Safety Meeting	12/25/2020	19:45					Pre-Convoy Safety meeting
3	Depart Location	12/25/2020	20:22					Depart from Rifle yard for H&P 318
4	Arrive On Location	12/25/2020	21:40					Arrive on location, rig was running casing
5	Safety Meeting	12/25/2020	21:56					Pre-Rig Up Safety Meeting
6	Rig Up Iron	12/25/2020	22:02					Rig up all ground equipment
7	Safety Meeting	12/26/2020	00:00					Pre-Job Safety meeting with rig crew, company man, and all American Cementing crew
8	Rig Up Iron	12/26/2020	00:00					Load plug in plug container (verified by compnay man), stab plug container, hook up lines
9	Other	12/26/2020	01:07					Fill lines pressured up due to ice plug, swapped out line

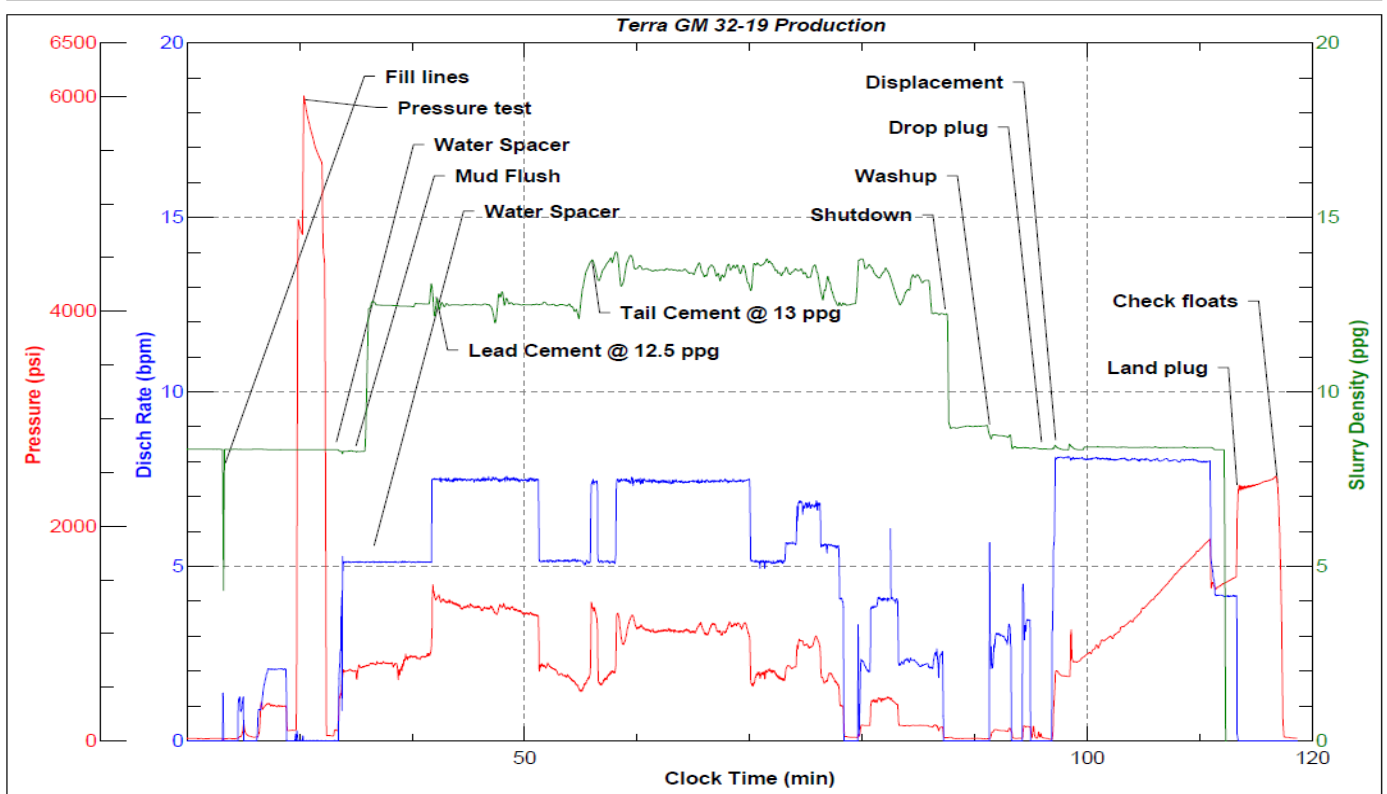
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
11	Pressure Test Lines	12/26/2020	01:36				5096	Pressure test to 5096 psi
12	Pump Spacer	12/26/2020	01:40	8.4	5	10	706	Pump Water Spacer
13	Pump Spacer	12/26/2020	01:46	8.5	5	20	744	Pump Mud Flush Spacer
14	Pump Spacer	12/26/2020	01:48	8.4	5	10	806	Pump Water Spacer
15	Pump Lead Cement	12/26/2020	01:49	12.5	7.5	5	1330	Pump Lead Cement @ 12.5 ppg
16	Pump Lead Cement	12/26/2020	01:55	12.5	7.5	50	1235	Pump Lead Cement
17	Pump Lead Cement	12/26/2020	01:58	12.5	7.5	75	1190	Pump Lead Cement
18	Pump Lead Cement	12/26/2020	02:02	12.5	5	93	426	Finished pumping Lead Cement with 93 bbls away
19	Pump Tail Cement	12/26/2020	02:03	13	7.5	5	1241	Pump Tail Cement @ 13 ppg
20	Pump Tail Cement	12/26/2020	02:09	13	7.5	50	1026	Pump Tail Cement
21	Pump Tail Cement	12/26/2020	02:17	13	7.5	100	1008	Pump Tail Cement
22	Pump Tail Cement	12/26/2020	02:25	13	5.5	150	633	Pump Tail Cement
23	Pump Tail Cement	12/26/2020	02:29	13	4	160	366	Pump Tail Cement
24	Pump Tail Cement	12/26/2020	02:34	13	2.5	178	154	Pump Tail Cement
25	Shutdown	12/26/2020	02:34					Shutdown with 178 bbls of tail away
26	Clean Pumps and Lines	12/26/2020	02:38					Clean pumps & lines into cellar
27	Drop Top Plug	12/26/2020	02:42					Drop plug, verified by company man
28	Pump Displacement	12/26/2020	02:44	8.5	8	10	653	Pump KCL water displacement
29	Pump Displacement	12/26/2020	02:50	8.5	8	50	1064	Pump KCL water displacement
30	Pump Displacement	12/26/2020	02:57	8.5	8	110	1874	Pump KCL water displacement
31	Pump Displacement	12/26/2020	03:00	8.5	4	120	1523	Pump KCL water displacement
32	Land Plug	12/26/2020	03:00				2380	Landed the plug @ 1523 psi took to 2380 psi
33	Check Floats	12/26/2020	03:05					Check floats, floats held 1 bbl back
34	Safety Meeting	12/26/2020	03:10					Pre-Rig Down Safety meeting with rig crew
35	Rig Down Iron	12/26/2020	03:16					Blow lines back to pump truck, and rig down rig floor
36	Safety Meeting	12/26/2020	03:21					Pre-Rig Down Safety meeting with American Cementing crew
37	Rig Down Iron	12/26/2020	03:29					Rig Down all equipment
38	Safety Meeting	12/26/2020	04:18					Pre-Convoy Safety meeting
39	Depart Location	12/26/2020	04:33					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	48.8 °F	50-80 °F
pH Level	8	5.5-8.5
Chlorides	450 mg/L	0-3000 mg/L
Total Alkalinity	100	0-1000
Total Hardness	0 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	250 mg/L	0-1500 mg/L
Potassium	300 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: Saturday, December 26, 2020