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# **Terra Energy Partners, LLC**

## **SURFACE POST JOB REPORT**

**CHEVRON GM 531-19 05-045-24352**  
**S:20 T:6S R:96W Garfield CO**

CallSheet #: 75642  
Proposal #: 50961



**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

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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@americancementing.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 (%)
Open Hole	Outer		13.5			0	500	16
Open Hole	Outer		13.5			500	1039	16
Casing	Inner	9.625	8.921	36		0	1029	0

### Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-555	TRB-424	Kirchenwitz, Jacob	56
Cement Pump	CPF-012	TRH-1140	Aden, Mark	
Light Duty Trailers	LDV-3106		Diaz, Douglas	56

### Timing

Event	Date/Time
Call Out	12/15/2020 17:00
Depart Facility	12/15/2020 17:38
On Location	12/15/2020 16:32
Rig Up Iron	12/15/2020 16:39
Job Started	12/16/2020 02:35
Job Completed	12/16/2020 03:18
Rig Down Iron	12/16/2020 03:18
Depart Location	12/16/2020 04:00

### General Job Information

Metrics	Value
Well Fluid Density	9.6 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	330 bbls
Rig Circulation Time	30 hours
Calculated Displacement	74 bbls
Actual Displacement	74 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	11 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	80 °F
BHST	97 °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 (sk)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.34			42.00		20.00	0
1	2	Lead Cement	Lead	12.30	2.34	13.42		122.00	50.82	0
1	3	Tail Cement	Tail	12.80	2.08	11.46		146.00	53.99	448
1	4	Water	DisplacementFinal	8.34			42.00		74.00	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-24	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-24	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	12/15/2020	17:00					Yard call 1700 on location 1900. Crew Temps D. Diaz 95.0, M. Aden 95.1, J. Kirchenwitz 95.3
2	Depart For Location	12/15/2020	17:38					Leave Rifle yard for location
3	Arrive On Location	12/15/2020	16:32					Arrive on location, rig pulling drill pipe
4	Spot Equipment	12/15/2020	16:32					Spot in all equipment
5	Rig Up Iron	12/15/2020	16:39					Pre rig up safety meeting, ring in all equipment and lines to the cellar
6	Waiting	12/15/2020	19:03					Waiting on rig to run casing and circulate
7	Safety Meeting	12/16/2020	01:55					Pre job safety meeting with company man
8	End Circulation	12/16/2020	02:03					Rig ended circulation, circulated 30 mins @ 11 BBLS/min total of 330 BBLs
9	Waiting	12/16/2020	02:03					Waiting on rig to lay down landing joint
10	Rig Up Iron	12/16/2020	02:12					Rig up lines in the cellar
11	Pump Spacer	12/16/2020	02:35	8.34	7.5	15	368	Pumping fresh water spacer, returns
12	Pressure Test Lines	12/16/2020	02:38				3000	Pressure test
13	Pump Spacer	12/16/2020	02:42	8.34	5	5	235	Pumping fresh water spacer, returns
14	Pump Lead Cement	12/16/2020	02:45	12.3	7	0	499	Pumping lead cement
15	Pump Lead Cement	12/16/2020	02:51	12.3	7	51	450	Pumping lead cement
16	Pump Tail Cement	12/16/2020	02:51	12.8	7	0	450	Pumping tail cement
17	Pump Tail Cement	12/16/2020	02:57	12.8	7	54	488	Pumping tail cement
18	Drop Top Plug	12/16/2020	02:57					Dropped top plug verified by company man
19	Pump Displacement	12/16/2020	03:03	8.34	5	0	240	Pumping fresh water displacement
20	Pump Displacement	12/16/2020	03:10	8.34	9.5	50	732	Pumping fresh water displacement
21	Cement Back to Surface	12/16/2020	03:11					Cement to surface @ 63 BBLS pumped, 11 BBLS cement to surface
22	Pump Displacement	12/16/2020	03:15	8.34	3	74	355	Pumping fresh water displacement
23	Land Plug	12/16/2020	03:15				1184	Land plug, FCP 355 PSI bumped to 1184 PSI
24	Check Floats	12/16/2020	03:18					Bled pressure, floats held .5 BBL bled back
25	Rig Down Iron	12/16/2020	03:18					Pre rig down safety meeting, rig down lines in the cellar
26	Clean Pumps and Lines	12/16/2020	03:22					Wash and winterize pump and lines to cellar
27	Rig Down Iron	12/16/2020	03:35					Rig down all lines and equipment
28	Depart Location	12/16/2020	04:00					Leave location for Rifle shop

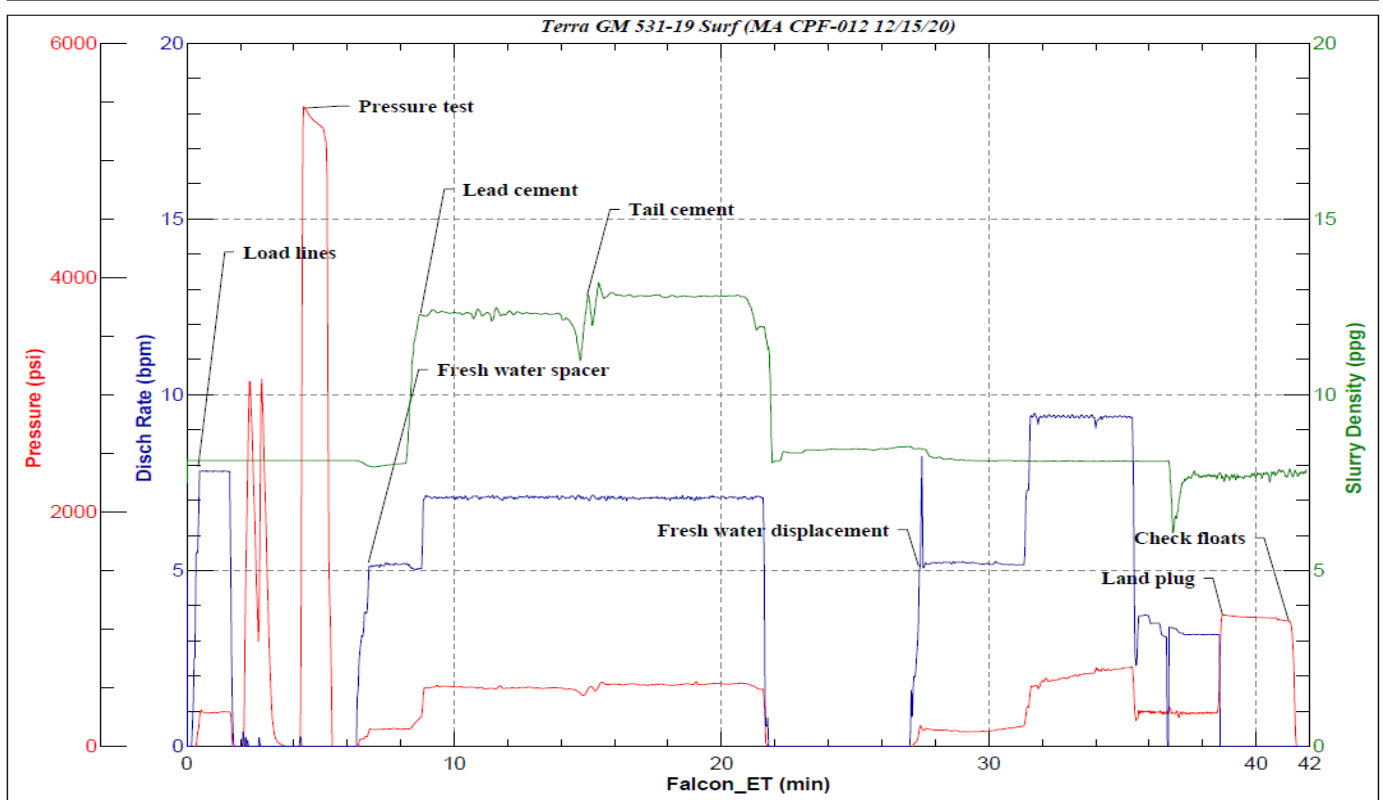
### 3 Water Analysis

Metrics	Value	Recommended
Water Source	Frac Tank	
Temperature	58 °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 5.01C1**  
Job Number: 75642  
Customer: Terra  
Well Name: GM 531-19



BJ Services

Job Start: Wednesday, December 16, 2020