



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

CHEVRON GM 532-19 05-045-24358
S:20 T:6S R:96W Garfield CO

CallSheet #: 75868
Proposal #: 50960



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) 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 (%)	New	Burst	Collapse
Casing	Outer	9.625	8.921	36	n/a	0	1000	0			
Open Hole	Outer	n/a	8.75	n/a	n/a	1000	7745	45			
Casing	Inner	4.5	4	11.6	n/a	0	7735	0			

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Silo	Silo #25			
Bulk Trailer	CTF-182	TRB-115	Kirchenwitz, Jacob	56
Cement Pump	CPF-011	TRH-957	Aden, Mark	56
Light Duty Trailers	LDV-3106		Diaz, Douglas	56

Timing

Event	Date/Time
Call Out	1/14/2021 15:30
Depart Facility	1/14/2021 16:46
On Location	1/14/2021 17:30
Rig Up Iron	1/14/2021 17:46
Job Started	1/14/2021 20:19
Job Completed	1/14/2021 21:50
Rig Down Iron	1/14/2021 21:50
Depart Location	1/14/2021 22:45

General Job Information

Metrics	Value
Well Fluid Density	10.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	880 bbls
Rig Circulation Time	1.25 hours
Calculated Displacement	120 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	No
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	10.8 lb/gal
Well Fluid Density Out of Well	10.8 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 ³ /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	2277
1	2	Mud Flush	Flush	8.45			40.86		20.00	2460
1	3	Water	Flush	8.34			42.00		10.00	2826
1	4	Lead Cement	Lead	12.50	2.16	12.18		229.00	88.14	3009
1	5	Tail Cement	Tail	13.00	1.99	10.08		483.00	171.00	4618
1	6	Displacement	DisplacementFinal	8.34			42.00		120.00	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	StrengthRetrogression	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	1/14/2021	15:30					Yard call 1530 on location 1830, Crew temps D. Diaz 96.9,M. Aden 96.4, J. Kirchenwitz 96.6
2	Depart For Location	1/14/2021	16:46					Leave Rifle Shop for location
3	Arrive On Location	1/14/2021	17:30					Arrive on location rig running casing
4	Spot Equipment	1/14/2021	17:30					Spot in all equipment
5	Rig Up Iron	1/14/2021	17:46					Pre rig up safety meeting, rig in all equipment and lines to the stand pipe
6	Waiting	1/14/2021	18:30					Waiting on rig to finish casing and circulating
7	Safety Meeting	1/14/2021	19:15					Pre job safety meeting with company man and rig crew
8	Rig Ends Circulation	1/14/2021	19:50					Rig circulated 80 mins @ 11 BBLs/min, total of 880 BBLs
9	Waiting	1/14/2021	19:50					Waiting on rig to lay down CRT and blow down
10	Rig Up Iron	1/14/2021	20:10					Rig in cement head and lines on the floor
11	Pump Spacer	1/14/2021	20:19	8.34	4	10	710	Pumping fresh water spacer, Returns
12	Pressure Test Lines	1/14/2021	20:22				5000	Pressure test lines
13	Pump Spacer	1/14/2021	20:33	8.34	5	20	668	Pumping mud flush spacer
14	Pump Spacer	1/14/2021	20:39	8.34	5	10	798	Pumping fresh water spacer
15	Pump Lead Cement	1/14/2021	20:41	12.5	5	0	845	Pumping lead cement
16	Pump Lead Cement	1/14/2021	20:48	12.5	8	50	1728	Pumping lead cement
17	Pump Lead Cement	1/14/2021	20:53	12.5	6	88	945	Pumping lead cement
18	Pump Tail Cement	1/14/2021	20:53	13	6	0	945	Pumping tail cement
19	Pump Tail Cement	1/14/2021	21:01	13	6	50	862	Pumping tail cement
20	Pump Tail Cement	1/14/2021	21:09	13	6	100	855	Pumping tail cement
21	Pump Tail Cement	1/14/2021	21:18	13	6	150	865	Pumping tail cement
22	Pump Tail Cement	1/14/2021	21:23	13	5	171	662	Pumping tail cement
23	Clean Pumps and Lines	1/14/2021	21:23					Clean pump and lines to high wall tank
24	Drop Top Plug	1/14/2021	21:32					Dropped top plug verified by company man
25	Pump Displacement	1/14/2021	21:32	8.34	10	0	893	Pumping KCL displacement
26	Pump Displacement	1/14/2021	21:38	8.34	10	50	1909	Pumping KCL displacement
27	Pump Displacement	1/14/2021	21:43	8.34	10	100	2690	Pumping KCL displacement
28	Pump Displacement	1/14/2021	21:47	8.34	4	121	2010	Pumping KCL displacement
29	Land Plug	1/14/2021	21:47				3006	Land plug, FCP 2010 PSI bumped to 3006 PSI
30	Check Floats	1/14/2021	21:50					Bled pressure floats held, 1 BBL bled back
31	Rig Down Iron	1/14/2021	21:50					Pre rig down safety meeting, rig down cement head and lines on the floor
32	Clean Pumps and Lines	1/14/2021	22:00					Wash and winterize pump and lines to high wall tank
33	Rig Down Iron	1/14/2021	22:20					Rig down lines and equipment
34	Depart Location	1/14/2021	22:45					Leave location for Rifle shop

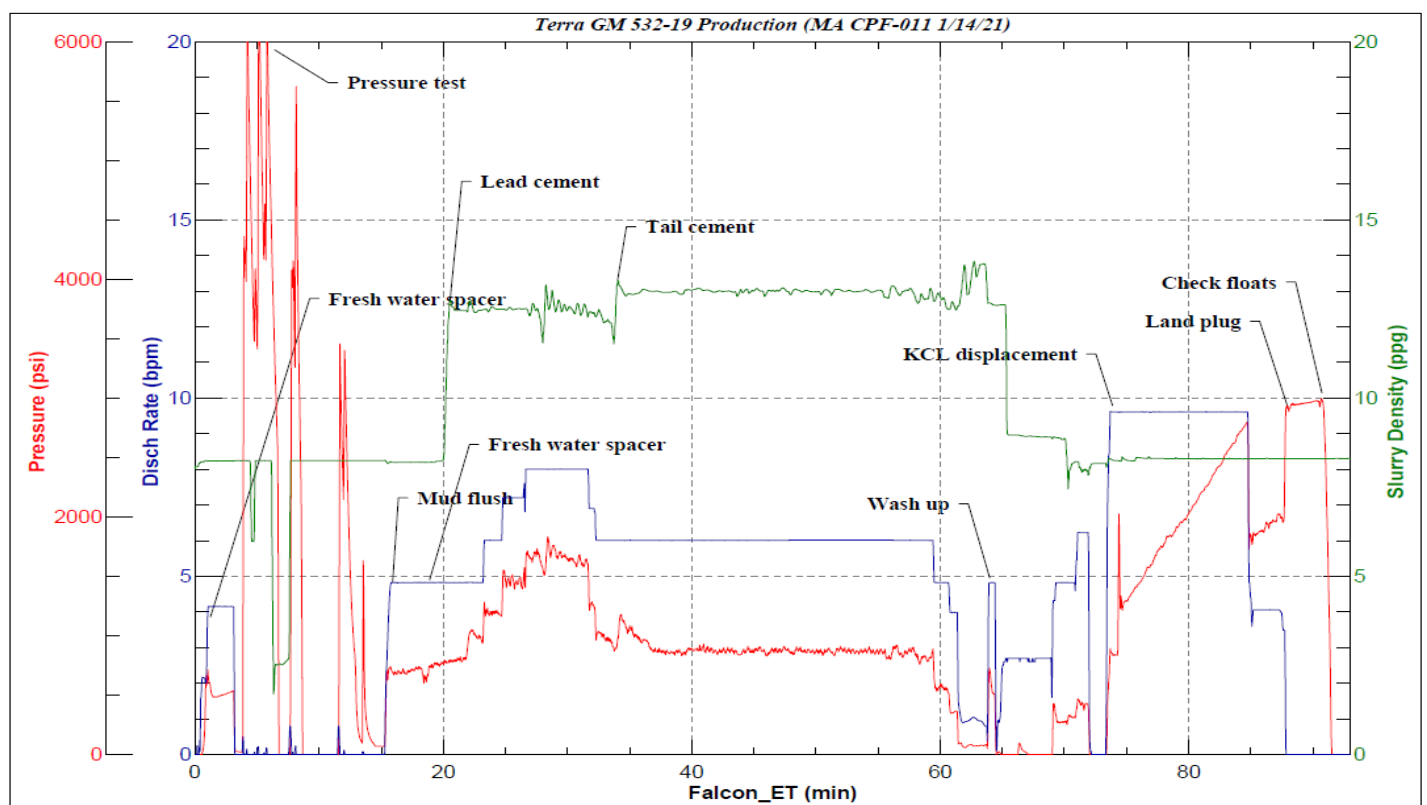
3 Water Analysis

Metrics	Value	Recommended
Water Source	Frac Tank	
Temperature	64 °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: 75868
Customer: Terra
Well Name: GM 532-19



BJ Services

Job Start: Thursday, January 14, 2021