



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

CHEVRON GM 442-19 05-045-24359
S:20 T:6S R:96W Garfield CO

CallSheet #: 75876
Proposal #: 50958



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 (%)
Casing	Outer	9.625	8.921	36		0	1039	0
Open Hole	Outer		8.75			1000	7252	45
Casing	Inner	4.5	4	11.6		0	7242	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Field Storage Silo	CTS-471			
Bulk Trailer	CTF-286	TRB-421	Rivas, Saul	56
Cement Pump	CPF-011	TRH-957	Aden, Mark	56
Light Duty Trailers	LDV-3106		Diaz, Douglas	56

Timing

Event	Date/Time
Call Out	1/16/2021 22:00
Depart Facility	1/16/2021 23:20
On Location	1/17/2021 00:20
Rig Up Iron	1/17/2021 00:30
Job Started	1/17/2021 03:19
Job Completed	1/17/2021 04:45
Rig Down Iron	1/17/2021 04:45
Depart Location	1/17/2021 05:40

General Job Information

Metrics	Value
Well Fluid Density	10.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	660 bbls
Rig Circulation Time	1 hours
Calculated Displacement	112 bbls
Actual Displacement	112 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	1766
1	2	Mud Flush	Flush	8.45			40.86		20.00	1949
1	3	Water	Flush	8.34			42.00		10.00	2315
1	4	Lead Cement	Lead	12.50	2.16	12.18		228.00	87.75	2498
1	5	Tail Cement	Tail	13.00	1.99	10.08		486.00	172.00	4107
1	6	Displacement	DisplacementFinal	8.34			42.00		112.00	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	1/16/2021	22:00					Yard call 2200 on location 0100, Crew temps D. Diaz 97.3, M. Aden 96.5, S. Rivas 96
2	Depart For Location	1/16/2021	23:20					Leave Rifle Shop for location
3	Arrive On Location	1/17/2021	00:20					Arrive on location rig running casing
4	Spot Equipment	1/17/2021	00:20					Spot in all equipment
5	Rig Up Iron	1/17/2021	00:30					Pre rig up safety meeting, rig in all equipment and lines to the stand pipe
6	Waiting	1/17/2021	01:28					Waiting on rig to finish casing and circulating
7	Safety Meeting	1/17/2021	02:38					Pre job safety meeting with company man and rig crew
8	Rig Ends Circulation	1/17/2021	03:05					Rig circulated 60 mins @ 11 BBLs/min, total of 660 BBLs
9	Waiting	1/17/2021	03:05					Waiting on rig to lay down CRT and blow down
10	Rig Up Iron	1/17/2021	03:10					Rig in cement head and lines on the floor
11	Pump Spacer	1/17/2021	03:19	8.34	4	10	653	Pumping fresh water spacer, Returns
12	Pressure Test Lines	1/17/2021	03:23				5000	Pressure test lines
13	Pump Spacer	1/17/2021	03:25	8.34	5	20	710	Pumping mud flush spacer
14	Pump Spacer	1/17/2021	03:29	8.34	5	10	875	Pumping fresh water spacer
15	Pump Lead Cement	1/17/2021	03:32	12.5	6	0	1346	Pumping lead cement
16	Pump Lead Cement	1/17/2021	03:39	12.5	7	50	1397	Pumping lead cement
17	Pump Lead Cement	1/17/2021	03:44	12.5	7	88	1160	Pumping lead cement
18	Pump Tail Cement	1/17/2021	03:44	13	7	0	1160	Pumping tail cement
19	Pump Tail Cement	1/17/2021	03:52	13	6	50	890	Pumping tail cement
20	Pump Tail Cement	1/17/2021	04:02	13	4	100	510	Pumping tail cement
21	Pump Tail Cement	1/17/2021	04:14	13	4	150	425	Pumping tail cement
22	Pump Tail Cement	1/17/2021	04:20	13	4	172	405	Pumping tail cement
23	Clean Pumps and Lines	1/17/2021	04:20					Clean pump and lines to high wall tank
24	Drop Top Plug	1/17/2021	04:27					Dropped top plug verified by company man
25	Pump Displacement	1/17/2021	04:27	8.34	10	0	925	Pumping KCL displacement
26	Pump Displacement	1/17/2021	04:33	8.34	10	50	2035	Pumping KCL displacement
27	Pump Displacement	1/17/2021	04:38	8.34	5	100	1970	Pumping KCL displacement
28	Pump Displacement	1/17/2021	04:41	8.34	4	112	2074	Pumping KCL displacement
29	Land Plug	1/17/2021	04:41				3217	Land plug, FCP 2074 PSI bumped to 3217 PSI
30	Check Floats	1/17/2021	04:45					Bled pressure floats held, 1 BBL bled back
31	Rig Down Iron	1/17/2021	04:45					Pre rig down safety meeting, rig down cement head and lines on the floor
32	Clean Pumps and Lines	1/17/2021	04:52					Wash and winterize pump and lines to high wall tank
33	Rig Down Iron	1/17/2021	05:10					Rig down lines and equipment
34	Depart Location	1/17/2021	05:40					Leave location for Rifle shop

3 Water Analysis

Metrics	Value	Recommended
Water Source	Frac Tank	
Temperature	81 °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

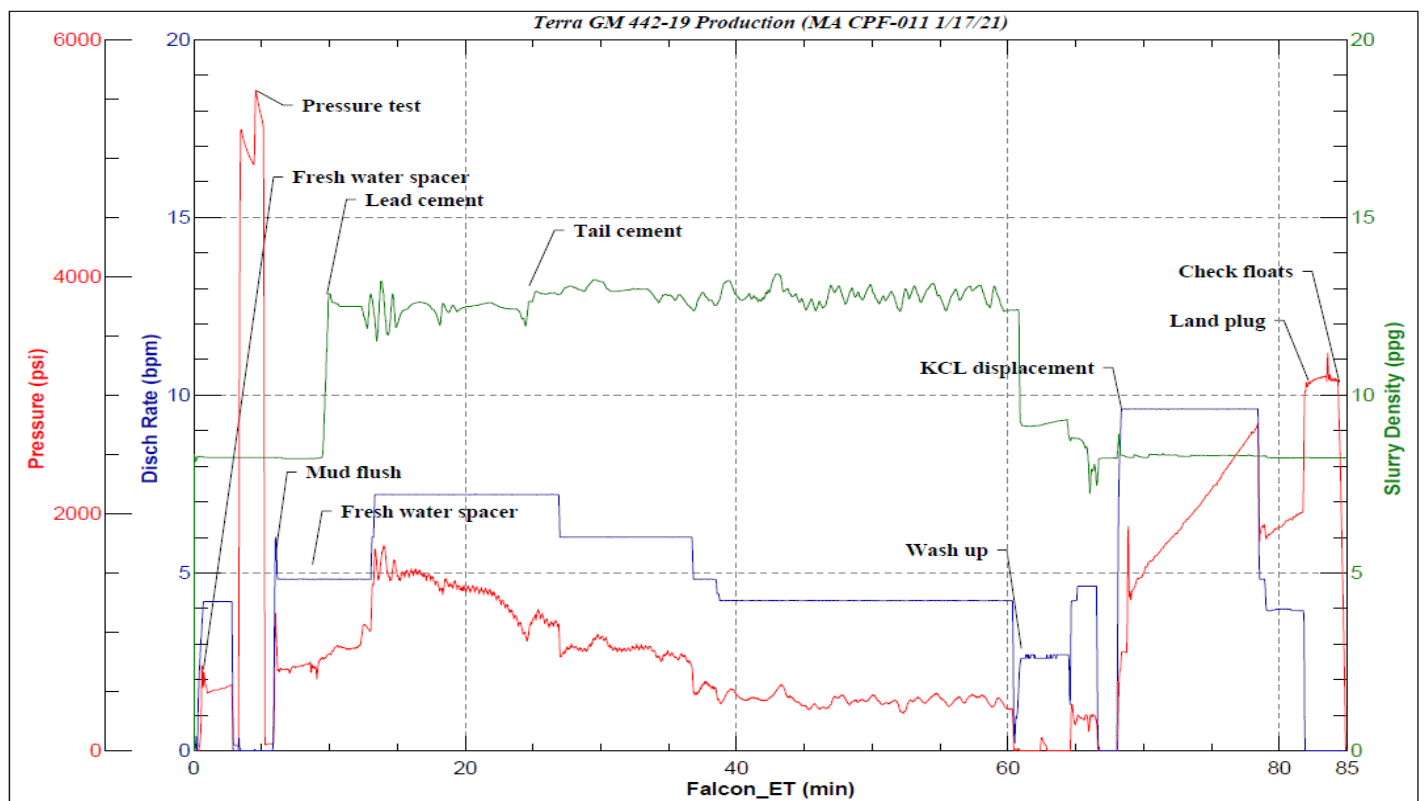


JobMaster Program Version 5.01C1

Job Number: 75876

Customer: Terra

Well Name: GM 442-19



BJ Services

Job Start: Sunday, January 17, 2021