



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL PA 414-23 05-045-24305
S:26 T:6S R:95W Garfield CO

CallSheet #: 75097
Proposal #: 50219



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@americacementing.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)	Top (ft)	Bottom (ft)	Excess (%)
Casing	Outer	9.625	8.921	36	0	1124	0
Open Hole	Outer		8.75		1124	9068	45
Casing	Inner	4.5	4	11.6	0	9058	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Mileage
Bulk Trailer	CTF-254	TRB-425	Richey, Steven	39
Silo	Silo #25			
Cement Pump	CPF-058	TRH-1140	Gonzales, Ivan	39
Light Duty Pickups	LDV-5429		Castillo, Francisco	39

Timing

Event	Date/Time
Call Out	10/5/2020 17:30
Depart Facility	10/5/2020 19:00
On Location	10/5/2020 19:30
Rig Up Iron	10/5/2020 21:00
Job Started	10/5/2020 23:27
Job Completed	10/6/2020 01:00
Rig Down Iron	10/6/2020 01:10
Depart Location	10/6/2020 01:45

General Job Information

Metrics	Value
Well Fluid Density	12.8 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	630 bbls
Rig Circulation Time	1 hours
Calculated Displacement	140 bbls
Actual Displacement	140 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	0 bbls
Well Topped Out	N/A

Well Fluid Details

Metrics	Value
Plastic Viscosity	20
Yield Point	15
10 sec. SGS	6
10 min. SGS	19
30 min. SGS	43
Filtrate	0
Flow Line Temp.	0

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	12.8 lb/gal
Well Fluid Density Out of Well	12.8 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	155 °F
BHST	225 °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	3760
1	2	Mud Flush	Flush	8.45			40.86		20.00	3886
1	3	Water	Flush	8.34			42.00		10.00	4138
1	4	Primary Cement	Primary	14.20	1.72	8.08		1255.00	384.95	4264
1	5	Displacement	DisplacementFinal	8.34			42.00		140.00	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	StrengthRetgression	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	10/5/2020	17:30					ON LOCATION AT 20:00 HRS
2	LEAVE YARD	10/5/2020	19:00					LEAVE THE YARD
3	ARRIVE ON LOCATION	10/5/2020	19:30					ON LOCATION, RIG RUNNING CASING
4	RIG UP	10/5/2020	21:00					RIG UP MEETING, RIG UP
5	SAFETY MEETING	10/5/2020	22:45					PRE-JOB SAFETY MEETING
6	PRESSURE TEST	10/5/2020	23:24				5000	PRESSURE TEST LINES
7	PUMP SPACER	10/5/2020	23:27	8.34	7.5	10	1030	WATER SPACER
8	PUMP SPACER	10/5/2020	23:29	8.4	7.5	20	1357	MUD FLUSH SPACER
9	PUMP SPACER	10/5/2020	23:31	8.34	5.5	10	1021	WATER SPACER
10	PUMP CEMENT	10/5/2020	23:33	14.2	7	50	1801	1255 SKS / 384 BBLs AT 14.2 PPG
11	PUMP CEMENT	10/5/2020	23:42	14.2	6	50	1549	100 BBLs CEMENT PUMPED
12	PUMP CEMENT	10/5/2020	23:49	14.2	7.5	50	1183	150 BBLs CEMENT PUMPED
13	PUMP CEMENT	10/5/2020	23:58	14.2	7.5	50	1215	200 BBLs CEMENT PUMPED
14	PUMP CEMENT	10/6/2020	00:04	14.2	7.5	50	1233	250 BBLs CEMENT PUMPED
15	PUMP CEMENT	10/6/2020	00:11	14.2	7.5	50	1267	300 BBLs CEMENT PUMPED
16	PUMP CEMENT	10/6/2020	00:18	14.2	7.5	84	1041	384 BBLs CEMENT PUMPED
17	SHUTDOWN	10/6/2020	00:32					WASH PUMP AND LINES
18	DISPLACEMENT	10/6/2020	00:43	8.4	10	50	2044	DISPLACEMENT KCL WATER
19	DISPLACEMENT	10/6/2020	00:49	8.4	10	80	3055	130 BBLs DISPLACEMENT PUMPED
20	DISPLACEMENT	10/6/2020	00:56	8.4	4	10	2253	SLOW RATE LAST 10 BBLs
21	LAND PLUG	10/6/2020	01:00				3337	LAND PLUG, FULL RETURNS
22	RIG DOWN	10/6/2020	01:10					RIG DOWN MEETING, RIG DOWN
23	LEAVE LOCATION	10/6/2020	01:45					JM MEETING, LEAVE LOCATION

3 Water Analysis

Metrics	Value	Recommended
Water Source		
Temperature	67 °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	250 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	200 mg/L	0-1500 mg/L
Potassium	250 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams



JobMaster Program Version 5.01C1
Job Number: 75097
Customer: TERRA
Well Name: PA 414-23

