



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL WMC 312-20 05-045-24486
S:17 T:7S R:93W Garfield CO

CallSheet #: 83856
Proposal #: 63877



LONG STRING Post Job Report

Attention: Mr. Dustin Childers | (936) 524-8828 | dchilders@terraep.com
Terra Energy Partners, LLC
4828 Loop Central Dr., Suite 900 | Houston, TX 77081

Dear Mr. Dustin Childers,

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,

Holly Mbugua

Field Engineer II | (720) 505-1300 | holly.mbugua@americacementing.com

Field Office 28730 US-6, Rifle, CO 81650
Phone: (970) 657-1157

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	1145	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1145	8946	60
Open Hole	Outer	n/a	8.75	n/a	n/a	8946	11258	50
Casing	Inner	4.5	4	11.6	n/a	0	11268	0

Timing

Event	Date/Time
Call Out	10/6/2022 15:00
Depart Facility	10/6/2022 21:30
On Location	10/6/2022 22:30
Rig Up Iron	10/6/2022 23:00
Job Started	10/7/2022 06:33
Job Completed	10/7/2022 09:13
Rig Down Iron	10/7/2022 09:30
Depart Location	10/7/2022 10:30

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
AS Cement Trailer Float	CTF-048	TRC-115	Wall, Lynn
AS Cement Trailer Float	CTF-9299	TRC-115	Wall, Lynn
Field Storage Silo	FSS-470		
Field Storage Silo	FSS-438		
Cement Trailer Float	CTF-161	TRB-421	Schweitzer, Casey
Cement Pump Float	CPF-091	TRH-082	Carrasco, Joel
Light Duty Vehicles	LDV-082		Kelsey, John

General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	800 bbls
Rig Circulation Time	1 hours
Calculated Displacement	174.5 bbls
Actual Displacement	174.5 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	45 units
Flare During Job	No
Flare During Job	0 units
Flare at End of Job	No
Flare at End of Job	0 units
Well Full Prior to Job	Yes
Well Fluid Density Into Well	9 lb/gal
Well Fluid Density Out of Well	9 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	206 °F
BHST	270 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	180	0-1000
Total Hardness	450 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

Circulation

Lost Circulation Experienced	Losses into Spacer	Losses into Cement	Losses into Displacement
yes	0	0	0

Circulation Details

After shutting down parasite while rig was circulating the well there were no returns

Job Execution Information

Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sks)	Volume (bbl)	Designed Top (ft)
1	Water	Flush	8.34			42.00		10.00	3379
2	Mud Flush	Flush	8.45			40.86		20.00	3561
3	Water	Flush	8.34			42.00		10.00	3826
4	Lead Cement	Lead	12.70	2.00	10.99		571.00	203.63	4009
5	Tail Cement	Tail	13.50	1.85	8.97		589.00	193.58	7731
6	Displacement	DisplacementFinal	8.34			42.00		175.00	0

Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
2	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
4	Lead	Lead Cement	ASTM TYPE I/II	Cement	100.00	%
4	Lead	Lead Cement	BA-90	BondEnhancer	3.00	lb/sk
4	Lead	Lead Cement	FL-66	FluidLoss	0.50	%BWOB
4	Lead	Lead Cement	FP-24	Defoamer	0.30	%BWOB
4	Lead	Lead Cement	GW-86	Viscosifier	0.10	%BWOB
4	Lead	Lead Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
4	Lead	Lead Cement	R-3	Retarder	0.45	%BWOB
4	Lead	Lead Cement	STATIC FREE	Other	0.01	lb/sk
5	Tail	Tail Cement	BA-90	BondEnhancer	10.00	%
5	Tail	Tail Cement	CLASS G	Cement	70.00	%
5	Tail	Tail Cement	FLY ASH (POZZOLAN)	Extender	20.00	%
5	Tail	Tail Cement	BENTONITE	Viscosifier	6.00	%BWOB
5	Tail	Tail Cement	FL-24	FluidLoss	0.40	%BWOB
5	Tail	Tail Cement	FP-24	Defoamer	0.30	%BWOB
5	Tail	Tail Cement	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
5	Tail	Tail Cement	R-3	Retarder	0.30	%BWOB
5	Tail	Tail Cement	S-8	StrengthRetgression	25.00	%BWOB

Job Logs

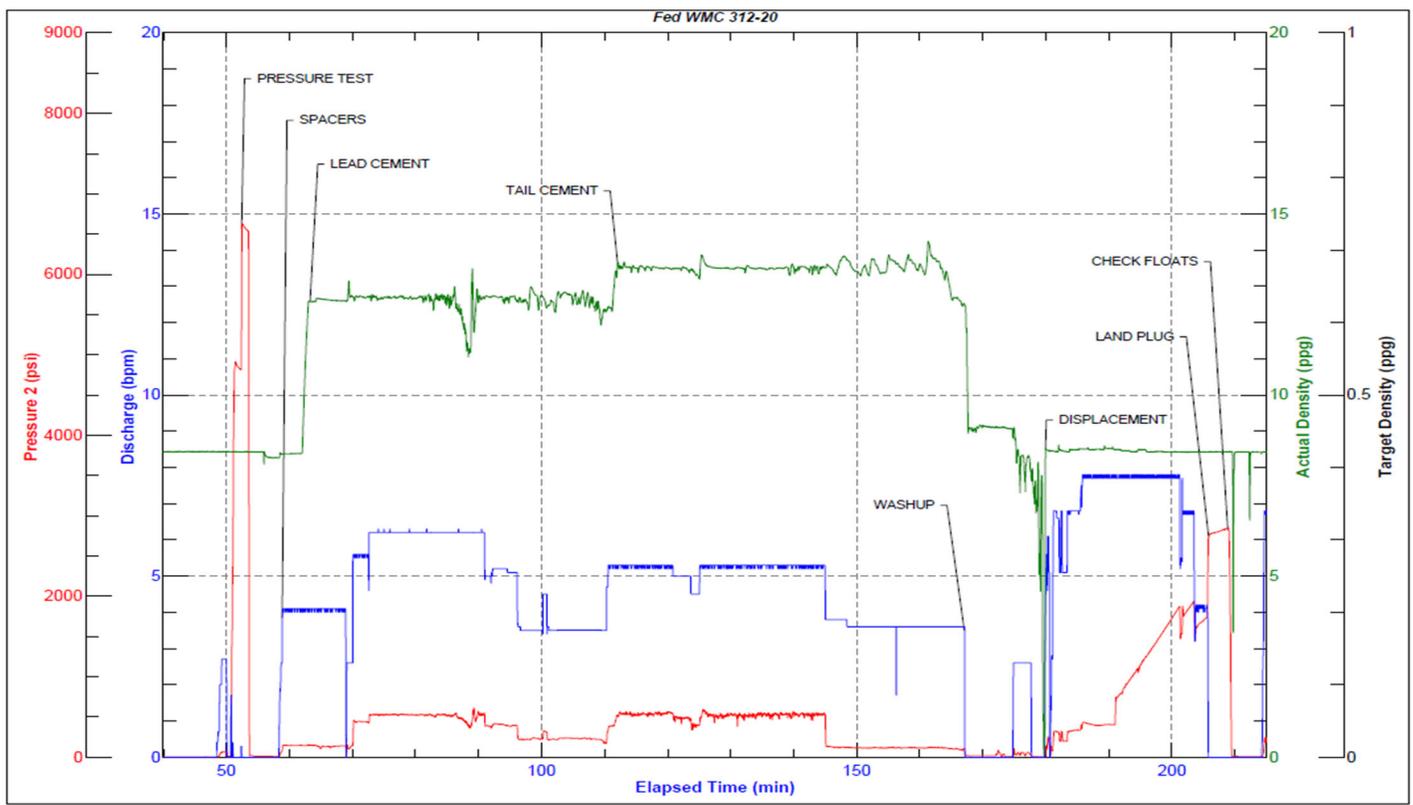
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	CALLOUT	10/6/2022	15:00					CREW CALLED TO PREPARE FOR A 4.5" PRODUCTION CEMENT JOB. RTS IS 03:00 ON 10-7-22
2	SAFETY MEETING	10/6/2022	21:15					JOURNEY MANAGEMENT MEETING
3	DEPART YARD	10/6/2022	21:30					CREW DEPARTS RIFLE, CO YARD FOR LOCATION
4	ARRIVE ON LOCATION	10/6/2022	22:30					CREW ARRIVES ON LOCATION, VERIFY ALL PROPER PRODUCTS, EQUIPMENT AND JOB PROCEDURES WITH THE CUSTOMER
5	SAFETY MEETING	10/6/2022	22:40					PRE-RIG UP MEETING
6	SPOT UNITS	10/6/2022	22:50					SPOT ALL EQUIPMENT FOR RIG UP
7	RIG UP	10/7/2022	23:00					RIG UP ALL EQUIPMENT
8	STANDBY	10/7/2022	00:00					CREW ON STANDBY WHILE RIG RUNS CASING
9	SAFETY MEETING	10/7/2022	04:00					PRE JOB-MEETING WITH ALL CREWS INVOLVED, RIG CIRCULATING WELL AT 7 BPM STAGED UP TO 12 BPM WITH 1200 CFM PARASITE AND RECEIVING RETURNS AND MINOR GAS FLOW, AFTER SHUTTING DOWN PARASITE RETURNS WERE LOST
10	LOAD LINES	10/7/2022	06:30	8.34	4	3	100	LOAD PUMP AND LINES FOR PRESSURE TEST
11	PRESSURE TEST	10/7/2022	06:40	8.34	1	1	6681	PRESSURE TEST PUMP AND LINES TO CEMENT HEAD
12	FRESH FLUSH	10/7/2022	06:43	8.34	4	10	134	10 BBLS FRESH SPACER
13	MUD FLUSH	10/7/2022	06:48	8.4	4	20	150	20 BBLS MUD FLUSH SPACER
14	FRESH FLUSH	10/7/2022	06:51	8.34	4	10	148	10 BBLS FRESH SPACER
15	LEAD CEMENT	10/7/2022	06:54	12.7	5.5	10	445	203.6 BBLS Lead CMT – 12.7 # 2.00 Y 11 MW 571 sks (BBLS H20) 10 BBLS AWAY
16	LEAD CEMENT	10/7/2022	07:03	12.7	6.2	40	530	50 BBLS AWAY
17	LEAD CEMENT	10/7/2022	07:10	12.7	6.3	50	538	100 BBLS AWAY
18	LEAD CEMENT	10/7/2022	07:20	12.7	5	50	390	150 BBLS AWAY
19	LEAD CEMENT	10/7/2022	07:33	12.7	3.5	53.6	231	203.6 BBLS AWAY SWAP TO TAIL CEMENT
20	TAIL CEMENT	10/7/2022	07:34	13.5	5.3	10	548	193.6 BBLS Tail CMT – 13.5 # 1.85 Y 9.0 MW 589 sks (24 BBLS H20) 10 BBLS AWAY
21	TAIL CEMENT	10/7/2022	07:45	13.5	5	40	557	50 BBLS AWAY
22	TAIL CEMENT	10/7/2022	07:54	13.5	5	50	499	100 BBLS AWAY
23	TAIL CEMENT	10/7/2022	08:03	13.5	5	50	500	150 BBLS AWAY
24	TAIL CEMENT	10/7/2022	08:29	13.5	3	43.6	118	193.6 BBLS AWAY SHUTDOWN FOR WASHUP
25	WASHUP	10/7/2022	08:30					WASH PUMP TO PIT
26	DISPLACEMENT	10/7/2022	08:46	8.34	7.7	10	43	DROP PLUG AND BEGIN FRESH WATER DISPLACEMENT 10 BBLS AWAY
27	DISPLACEMENT	10/7/2022	08:52	8.34	7.7	40	396	50 BBLS AWAY
28	DISPLACEMENT	10/7/2022	08:59	8.34	7.7	50	1201	100 BBLS AWAY
29	DISPLACEMENT	10/7/2022	09:06	8.34	7.7	50	1845	150 BBLS AWAY SLOW RATE FOR BUMP
30	LAND PLUG	10/7/2022	09:10	8.34	4	24.5	1608	174.5 BBLS AWAY LAND PLUG AND SHUTDOWN AT 2775 psi
31	CHECK FLOATS	10/7/2022	09:13					CHECK FLOATS, FLOATS HELD WITH 2 BBLS BACK
32	SAFETY MEETING	10/7/2022	09:15					RIG DOWN SAFETY MEETING
33	RIG DOWN	10/7/2022	09:30					RIG DOWN EQUIPMENT

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
34	SAFETY MEETING	10/7/2022	10:15					JOURNEY MANAGEMENT MEETING
35	DEPART LOCATION	10/7/2022	10:30					CREW DEPARTS LOCATION

Pump Diagrams



JobMaster Program Version 5.01C1
Job Number: 83856
Customer: Terra
Well Name: FED WMC 312-20



Job Start: Friday, October 07, 2022