



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL WMC 532-20 05-045-24489
S:17 T:7S R:93W Garfield CO

CallSheet #: 84389
Proposal #: 64763



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	1135	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1135	9180	60
Open Hole	Outer	n/a	8.75	n/a	n/a	9180	11467	50
Casing	Inner	4.5	4	11.6	n/a	0	11477	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Field Storage Silo	FSS-470		
Field Storage Silo	FSS-438		
AS Cement Trailer Float	CTF-9299	TRC-195	Schweitzer, Casey
AS Cement Trailer Float	CTF-9898	TRC-244	Bonin, Matthew
Cement Trailer Float	CTF-555	TRC-059	Gonzales, Ivan
Cement Pump Float	CPF-136	TRH-082	Morales, Adrian
Light Duty Vehicles	LDV-082		Kelsey, John
Cement Trailer Float	CTF-263	TRC-244	Bonin, Matthew

Timing

Event	Date/Time
Call Out	11/12/2022 16:00
Depart Facility	11/12/2022 19:00
On Location	11/12/2022 23:00
Rig Up Iron	11/12/2022 23:30
Job Started	11/13/2022 11:53
Job Completed	11/13/2022 14:27
Rig Down Iron	11/13/2022 14:40
Depart Location	11/13/2022 15:30

General Job Information

Metrics	Value
Well Fluid Density	8.5 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	600 bbls
Rig Circulation Time	1 hours
Calculated Displacement	177 bbls
Actual Displacement	177 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 Prior to Job	0 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	8.5 lb/gal
Well Fluid Density Out of Well	8.5 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	206 °F
BHST	270 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	65 °F	50-80 °F
pH Level	6	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

no returns throughout job

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	6365
2	Mud Flush	Flush	8.45			40.86		20.00	6479
3	Water	Flush	8.34			42.00		10.00	6708
4	Lead Cement	Lead	12.70	2.00	10.99		579.00	206.49	6822
5	Tail Cement	Tail	13.50	1.85	8.97		589.00	193.58	9180
6	Displacement	DisplacementFinal	8.34			42.00		179.00	0

Job Fluid Details

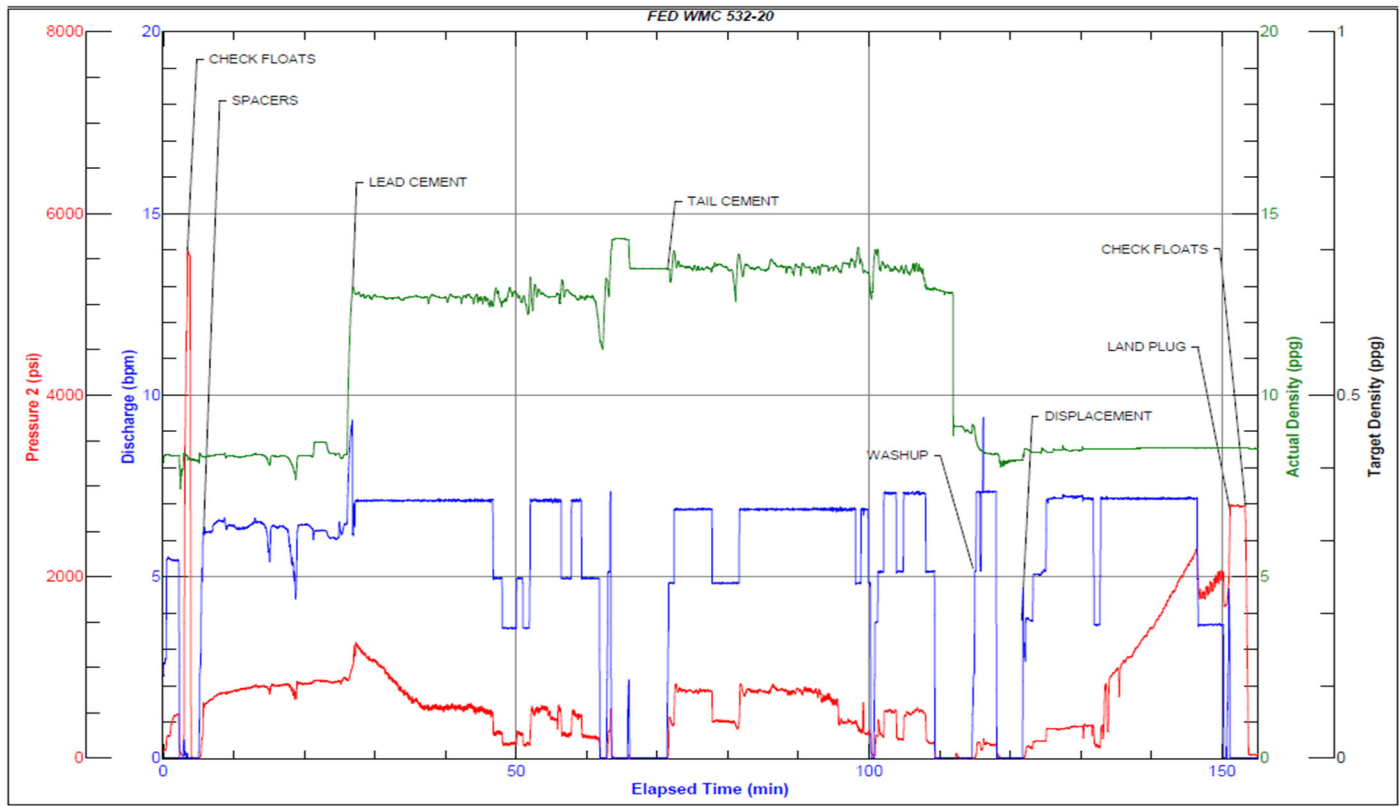
Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Flush	Mud Flush	SAPP	Surfactant	10.00	lb/bbl
2	Flush	Mud Flush	SS-201	Surfactant	0.50	gal/bbl
4	Lead	Lead Cement	ASTM TYPE I/II	Cement	100.00	%
4	Lead	Lead Cement	BA-90	BondEnhancer	3.00	lb/sk
4	Lead	Lead Cement	FL-66	FluidLoss	0.50	%BWOB
4	Lead	Lead Cement	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	StrengthRetrogression	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)	Annular Pressure (psi)	Comment
1	CALL OUT	11/12/2022	16:00						CREW CALLED TO YARD TO PREPARE FOR A 4.5" PRODUCTION JOB. RTS IS 23:00
2	SAFETY MEETING	11/12/2022	18:45						JOURNEY MANAGEMENT MEETING
3	DEPART YARD	11/12/2022	19:00						CREW DEPARTS RIFLE, CO YARD FOR LOCATION
4	ARRIVE ON LOCATION	11/12/2022	23:00						ARRIVE ON LOCATION AND VERIFY JOB PROCEDURES AND ALL PROPER EQUIPMENT AND PRODUCTS WITH THE CUSTOMER
5	SAFETY MEETING	11/12/2022	23:10						RIG UP MEETING
6	SPOT UNITS	11/12/2022	23:20						SPOT ALL EQUIPMENT FOR RIG UP
7	RIG UP	11/12/2022	23:30						RIG UP ALL EQUIPMENT
8	STANDBY	11/13/2022	00:00						CREW ON STANDBY WHILE RIG RUNS CASING AND CIRCULATES THE WELL
9	SAFETY MEETING	11/13/2022	11:00						PRE-JOB MEETING WITH ALL CREWS INVOLVED
10	LOAD LINES	11/13/2022	11:53	8.34	2.5	3	103		LOAD PUMP AND LINES TO CEMENT HEAD FOR A PRESSURE TEST
11	PRESSURE TEST	11/13/2022	11:56	8.34	1	1	5565		PRESSURE TEST PUMP AND LINES TO CEMENT HEAD
12	CIRCULATE WELL	11/13/2022	11:58	8.34	6	100	828		100 BBLS FRESH WATER FLUSH AS PER CUSTOMER TO VERIFY GOOD INJECTION
13	MUD FLUSH	11/13/2022	12:15	8.4	6	20	856		20 BBLS MUD FLUSH
14	FRESH FLUSH	11/13/2022	12:18	8.34	6	10	900		10 BBLS FRESH WATER FLUSH
15	LEAD CEMENT	11/13/2022	12:20	12.7	7	10	1070		207.6 BBLS Lead CMT – 12.7 # 2.0 Y 11 MW 582 sks (152 H2O) 10 BBLS AWAY
16	LEAD CEMENT	11/13/2022	12:27	12.7	7	40	650		50 BBLS AWAY
17	LEAD CEMENT	11/13/2022	12:34	12.7	7	50	550		100 BBLS AWAY
18	LEAD CEMENT	11/13/2022	12:41	12.7	5	50	290		150 BBLS AWAY
19	LEAD CEMENT	11/13/2022	12:55	12.7	7	57.6	545		207.6 BBLS AWAY SWAP TO TAIL CEMENT
20	TAIL CEMENT	11/13/2022	12:56	13.5	7	10	700		192 BBLS Tail CMT – 13.5 # 1.85 Y 9.0 MW 584 sks (126 H2O) 10 BBLS AWAY
21	TAIL CEMENT	11/13/2022	13:08	13.5	5	40	410		50 BBLS AWAY
22	TAIL CEMENT	11/13/2022	13:13	13.5	7	50	750		100 BBLS AWAY
23	TAIL CEMENT	11/13/2022	13:21	13.5	7	50	650		150 BBLS AWAY
24	TAIL CEMENT	11/13/2022	13:28	13.5	7	42	530		192 BBLS AWAY SHUTDOWN
25	WASHUP	11/13/2022	13:43						WASHUP PUMP AND LINES TO PIT, DROP PLUG
26	DISPLACEMENT	11/13/2022	13:55	8.34	4	10	200		SEND PLUG AND BEGIN DISPLACEMENT 10 BBLS AWAY
27	DISPLACEMENT	11/13/2022	14:04	8.34	7	40	354		50 BBLS AWAY
28	DISPLACEMENT	11/13/2022	14:11	8.34	7	50	1100		100 BBLS AWAY
29	DISPLACEMENT	11/13/2022	14:19	8.34	7	50	2080		150 BBLS AWAY

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Annular Pressure (psi)	Comment
30	DISPLACEMENT	11/13/2022	14:25	8.34	7	20	1754		170 BBLS AWAY
31	LAND PLUG	11/13/2022	14:26	8.34	3.7	3.7	1850		173.7 BBLS AWAY LAND PLUG TO 2780 PSI
32	CHECK FLOATS	11/13/2022	14:27						CHECK FLOATS, FLOATS HELD WITH 2 BBLS BACK, NO RETURNS THROUGHOUT JOB
33	SAFETY MEETING	11/13/2022	14:30						RIG DOWN MEETING
34	RIG DOWN	11/13/2022	14:40						RIG DOWN ALL EQUIPMENT
35	SAFETY MEETING	11/13/2022	15:20						JOURNEY MANAGEMENT MEETING
36	DEPART LOCATION	11/13/2022	15:30						CREW DEPARTS LOCATION

Pump Diagrams


JobMaster Program Version 5.01C1
Job Number: 84389
Customer: Terra
Well Name: WMC 532-20

Job Start: Sunday, November 13, 2022