



Terra Energy Partners, LLC

LONG STRING POST JOB REPORT

FEDERAL WMC 331-20 05-045-24500
S:17 T:7S R:93W Garfield CO

CallSheet #: 85109
Proposal #: 65813



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,

Krystal Schell

Field Engineer I | (719) 992-1830 | krystal.schell@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	1131	0
Open Hole	Outer	n/a	8.75	n/a	n/a	1112	8768	85
Open Hole	Outer	n/a	8.75	n/a	n/a	8768	11075	50
Casing	Inner	4.5	4	11.6	n/a	0	11075	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1	Employee #2
Field Storage Silo	FSS-470			
Field Storage Silo	FSS-438			
Cement Trailer Float	CTF-242	TRC-188	Burton, Michael	
Cement Pump Float	CPF-052	TRH-957	Brady, Shawn	
Cement Utility Float	CUF-164	LDV-088	Morales, Adrian	Lancaster, Stephen

Timing

Event	Date/Time
Call Out	12/26/2022 14:00
Depart Facility	12/26/2022 15:26
On Location	12/26/2022 18:00
Rig Up Iron	12/26/2022 18:54
Job Started	12/26/2022 20:20
Job Completed	12/26/2022 23:06
Rig Down Iron	12/26/2022 23:12
Depart Location	12/26/2022 23:57

General Job Information

Metrics	Value
Well Fluid Density	8.9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1520 bbls
Rig Circulation Time	2 hours
Calculated Displacement	171 bbls
Actual Displacement	171 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	8.9 lb/gal
Well Fluid Density Out of Well	8.9 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	197 °F
BHST	261 °F

Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	62 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	160	0-1000
Total Hardness	300 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

No

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	5573
2	Mud Flush	Flush	8.45			40.86		20.00	5672
3	Water	Flush	8.34			42.00		10.00	5870
4	Scavenger	Scavenger	11.00	3.08	18.84		92.00	50.39	5969
5	Lead Cement	Lead	12.70	2.00	10.99		655.00	233.59	6463
6	Tail Cement	Tail	13.50	1.85	8.97		589.00	193.61	8768
7	Displacement	DisplacementFinal	8.34			42.00		173.00	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	Scavenger	Scavenger	ASTM TYPE I/II	Cement	65.00	%
4	Scavenger	Scavenger	FLY ASH (POZZOLAN)	Extender	35.00	%
4	Scavenger	Scavenger	BENTONITE	Viscosifier	6.00	%BWOB
4	Scavenger	Scavenger	FP-24	Defoamer	0.30	%BWOB
4	Scavenger	Scavenger	GW-86	Viscosifier	0.10	%BWOB
4	Scavenger	Scavenger	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
4	Scavenger	Scavenger	XCem-916	Retarder	0.45	%BWOB
5	Lead	Lead Cement	ASTM TYPE I/II	Cement	100.00	%
5	Lead	Lead Cement	BA-90	BondEnhancer	3.00	lb/sk
5	Lead	Lead Cement	FL-66	FluidLoss	0.50	%BWOB
5	Lead	Lead Cement	FP-24	Defoamer	0.30	%BWOB
5	Lead	Lead Cement	GW-86	Viscosifier	0.10	%BWOB
5	Lead	Lead Cement	IntegraSeal POLI	LostCirculation	0.25	lb/sk
5	Lead	Lead Cement	STATIC FREE	Other	0.01	lb/sk
5	Lead	Lead Cement	XCem-916	Retarder	0.45	%BWOB
6	Tail	Tail Cement	BA-90	BondEnhancer	10.00	%
6	Tail	Tail Cement	CLASS G	Cement	70.00	%
6	Tail	Tail Cement	FLY ASH (POZZOLAN)	Extender	20.00	%
6	Tail	Tail Cement	BENTONITE	Viscosifier	6.00	%BWOB
6	Tail	Tail Cement	FL-24	FluidLoss	0.40	%BWOB
6	Tail	Tail Cement	FP-24	Defoamer	0.30	%BWOB
6	Tail	Tail Cement	IntegraSeal PHENO	LostCirculation	3.00	lb/sk
6	Tail	Tail Cement	S-8	StrengthRetrogression	25.00	%BWOB
6	Tail	Tail Cement	XCem-916	Retarder	0.35	%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	12/26/2022	14:00					CREW CALLED OUT FOR ON LOCATION TIME OF 12/26/2022 20:00
2	Depart Location	12/26/2022	15:26					DEPART RCO YARD FOR LOCATION
3	Arrive On Location	12/26/2022	18:00					ARRIVE ON LOCATION HAD TO BACK IN THE BULK TRUCK FROM THE FRONT TO THE BACK DUE TO NO ROOM FOR 2 TRUCKS SIDE BY SIDE, ALL EQUIP SPOTTED AT 18:54
4	Rig Up Iron	12/26/2022	18:54					RIG UP IRON AND HOSES
5	Finsh rig up	12/26/2022	20:00					
6	Safety Meeting	12/26/2022	20:20					JSA SAFETY MEETING WITH AC CREW, RIG HANDS, AND CUSTOMER REP
7	Fill Lines	12/26/2022	21:00	8.34	2	10	70	FILL LINES WITH FRESH WATER
8	Pressure Test Lines	12/26/2022	21:03	8.34			5000	PRESSURE TEST PUMP AND LINES TO 5000 PSI
9	Pump mudflush	12/26/2022	21:09	8.45	5	20	172	PUMP MUD FLUSH + SURFACTANT
10	Pump FW flush	12/26/2022	21:10	8.34	5	10	250	PUMP FRESH WATER FLUSH
11	Pump Scavenger	12/26/2022	21:12	11	6.7	50	568	BEGIN PUMPING SCAVENGER
12	Pump Lead Cement	12/26/2022	21:20	12.7	5	50	264	50 BBLS LEAD CEMENT PUMPED
13	Pump Lead Cement	12/26/2022	21:28	12.7	7	100	555	100 BBLS LEAD CEMENT PUMPED
14	Pump Lead Cement	12/26/2022	21:41	12.7	6.5	150	456	150 BBLS LEAD CEMENT PUMPED
15	Pump Lead Cement	12/26/2022	21:58	12.7	3.7	234	169	234 BBLS LEAD CEMENT PUMPED
16	Pump Tail Cement	12/26/2022	22:00	13.5	7.1	5	703	BEGIN PUMPING TAIL CEMENT. DENSITY VERIFIED WITH MUD SCALE
17	Pump Tail Cement	12/26/2022	22:06	13.5	6	50	490	50 BBLS TAIL CEMENT PUMPED
18	Pump Tail Cement	12/26/2022	22:15	13.5	6	100	491	100 BBLS TAIL CEMENT PUMPED
19	Pump Tail Cement	12/26/2022	22:23	13.5	6	150	511	150 BBLS TAIL CEMENT PUMPED
20	Pump Tail Cement	12/26/2022	22:30	13.5	4.4	190	310	190 BBLS TAIL CEMENT PUMPED
21	Pump Tail Cement	12/26/2022	22:31	13.5	4.4	193	311	193 BBLS TAIL CEMENT PUMPED
22	Clean Pumps and Lines	12/26/2022	22:32					BLOW DOWN STANDPIPE, WASH UP PUMP AND LINES
23	Drop Top Plug	12/26/2022	22:42	8.34	7.3	5	235	DROP PLUG, VERIFIED BY CUSTOMER REP. BEGIN KCL DISPLACEMENT
24	Pump Displacement	12/26/2022	22:49	8.34	7.3	50	290	50 BBLS KCL DISPLACEMENT PUMPED
25	Pump Displacement	12/26/2022	22:56	8.34	7.3	100	809	100 BBLS KCL DISPLACEMENT PUMPED, CAUGHT CEMENT AT 86 BBLS PUMPED
26	Pump Displacement	12/26/2022	23:02	8.34	7.3	150	1545	150 BBLS KCL DISPLACEMENT PUMPED
27	Pump Displacement	12/26/2022	23:05	8.34	4.4	170	1370	175 BBLS KCL DISPLACEMENT PUMPED

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
28	Land Plug	12/26/2022	23:06	8.34	4	171	1815	LAND PLUG. FCP - 1370 PSI, BUMPED TO 2685 PSI
29	Check Floats	12/26/2022	23:11					CHECK FLOATS. FLOATS HELD, 2 BBLs BACK
30	Rig Down Iron	12/26/2022	23:12					RIG DOWN IRON AND HOSES
31	Depart Location	12/26/2022	23:57					DEPART LOCATION

Pump Diagrams

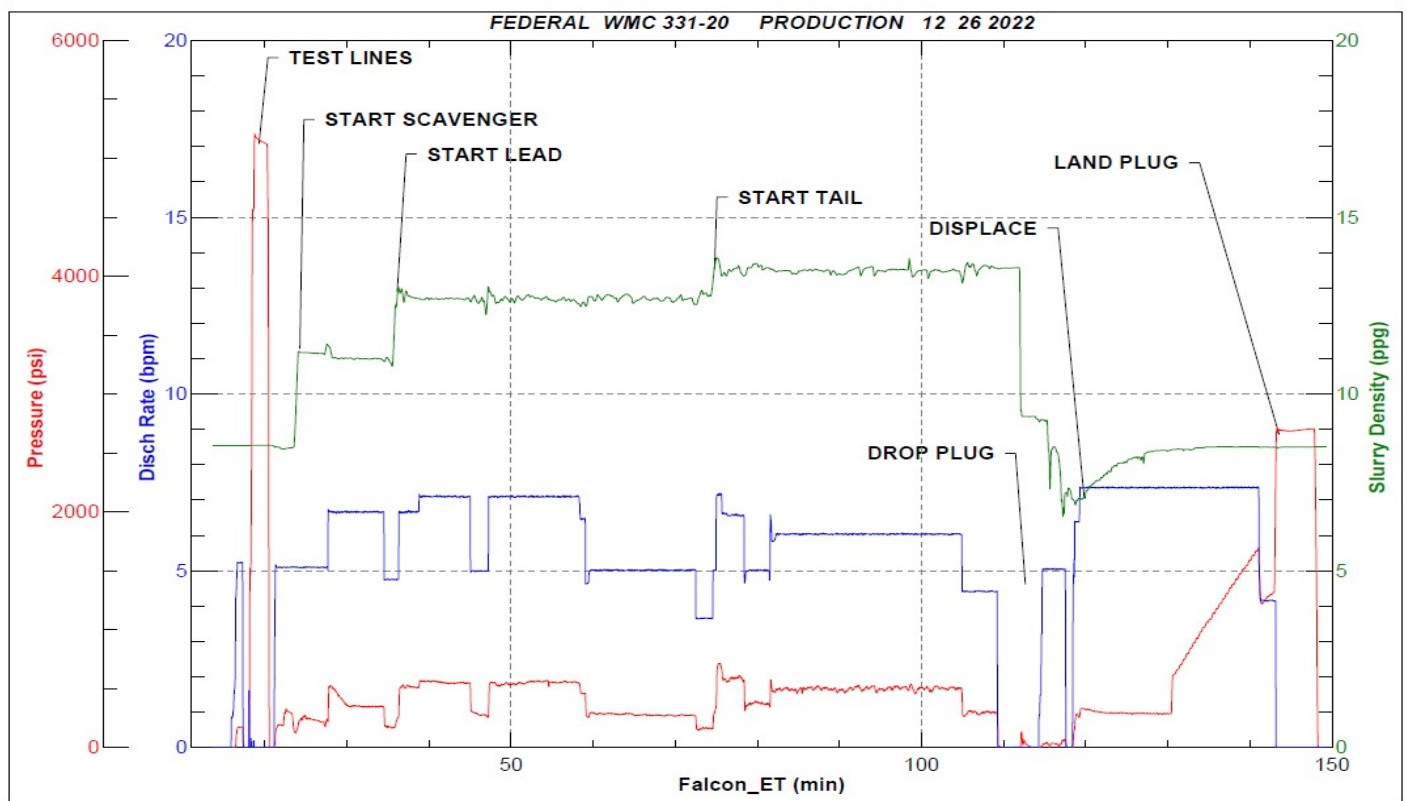


JobMaster Program Version 5.01C1

Job Number: 85109

Customer: TERRA

Well Name: FEDERAL WMC 331-20



Job Start: Monday, December 26, 2022