



Terra Energy Partners, LLC

SURFACE POST JOB REPORT

FEDERAL WMC 431-20 05-045-24499
S:17 T:7S R:93W Garfield CO

CallSheet #: 85016
Proposal #: 65671



SURFACE 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@americancementing.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	20	19.5	53	n/a	0	90	0
Open Hole	Outer	n/a	13.5	n/a	n/a	115	500	16
Open Hole	Outer	n/a	13.5	n/a	n/a	500	1142	16
Casing	Inner	9.625	8.921	36	n/a	0	1132	0

Equipment / People

Unit Type	Unit	Power Unit	Employee #1
Cement Trailer Float	CTF-246	TRC-244	Bonin, Matthew
Light Duty Vehicles	LDV-063		Castillo, Francisco
Cement Pump Float	CPF-091	TRH-082	Carrasco, Joel

Timing

Event	Date/Time
Call Out	12/14/2022 12:00
Depart Facility	12/14/2022 15:00
On Location	12/14/2022 16:00
Rig Up Iron	12/14/2022 20:30
Job Started	12/14/2022 22:53
Job Completed	12/14/2022 23:45
Rig Down Iron	12/15/2022 00:30
Depart Location	12/15/2022 01:30

General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	1080 bbls
Rig Circulation Time	2 hours
Calculated Displacement	84 bbls
Actual Displacement	84 bbls
Total Spacer to Surface	20 bbls
Total CMT to Surface	34 bbls
Well Topped Out	No

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	9 lb/gal
Well Fluid Density Out of Well	9 lb/gal

Job Details (cont.)

Metrics	Value
BHCT	81 °F
BHST	99 °F

Water Analysis

Metrics	Value	Recommended
Water Source	None	
Temperature	60 °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

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		20.00	0
2	Lead	Lead	12.30	2.21	12.72		165.00	65.04	0
3	Tail	Tail	12.80	1.97	10.87		187.00	65.45	500
4	Water	DisplacementFinal	8.34			42.00		84.00	0

Job Fluid Details

Fluid	Type	Fluid	Product	Function	Conc.	Uom
2	Lead	Lead	ASTM TYPE I/II	Cement	100.00	%
2	Lead	Lead	A-7P	Accelerator	2.00	lb/sk
2	Lead	Lead	ATHX-1102	Thixotropic	1.00	lb/sk
2	Lead	Lead	FP-24	Defoamer	0.30	%BWOB
2	Lead	Lead	IntegraSeal POLI	LostCirculation	0.25	lb/sk
2	Lead	Lead	STATIC FREE	Other	0.01	lb/sk
3	Tail	Tail	ASTM TYPE I/II	Cement	100.00	%
3	Tail	Tail	A-7P	Accelerator	2.00	lb/sk
3	Tail	Tail	ATHX-1102	Thixotropic	1.00	lb/sk
3	Tail	Tail	FP-24	Defoamer	0.30	%BWOB
3	Tail	Tail	IntegraSeal POLI	LostCirculation	0.25	lb/sk
3	Tail	Tail	STATIC FREE	Other	0.01	lb/sk

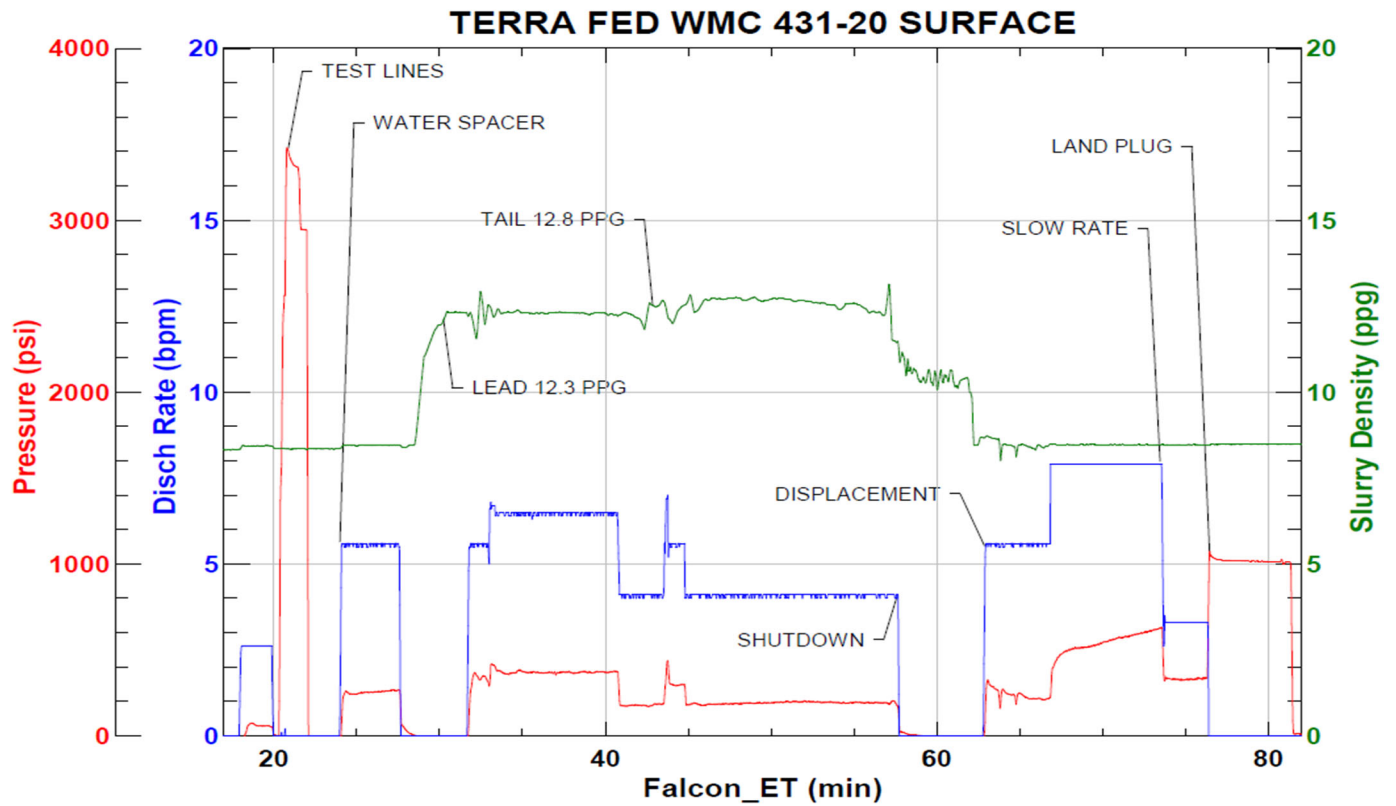
Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	CALLOUT	12/14/2022	12:00					ON LOCATION AT 19:30 HRS
2	LEAVE THE YARD	12/14/2022	15:00					CREW LEAVE THE YARD
3	ON STAGING PAD	12/14/2022	16:00					ARRIVE ON STAGING PAD
4	ON LOCATION	12/14/2022	18:50					PUMP ON LOCATION, PUMP GOT STUCK
5	UN-STUCK	12/14/2022	20:00					UN-STUCK AND AREA CLEARED, SPOT PUMP AND BULK TRUCK
6	RIG UP	12/14/2022	20:30					RIG UP EQUIPMENT, HAD A HARD TIME STARTING PUMP ENGINES DUE TO COLD WEATHER
7	SAFETY MEETING	12/14/2022	22:10					PRE-JOB SAFETY MEETING
8	PRESSURE TEST	12/14/2022	22:49				3421	PRESSURE TEST LINES
9	WATER SPACER	12/14/2022	22:53	8.34	5.5	20	267	WATER SPACER
10	LEAD CEMENT	12/14/2022	23:01	12.3	6.5	65	375	LEAD 165 SKS/65 BBLS AT 12.3 PPG
11	TAIL CEMENT	12/14/2022	23:12	12.8	4	65	197	TAIL 187 SKS/65 BBLS AT 12.8 PPG
12	SHUTDOWN	12/14/2022	23:27					SHUTDOWN, DROP PLUG
13	DISPLACEMENT	12/14/2022	23:32	8.34	8	74	547	DISPLACEMENT WATER
14	SLOW RATE	12/14/2022	23:43	8.34	3	10	321	SLOW RATE
15	LAND PLUG	12/14/2022	23:45				1041	LAND PLUG, 34 BBL CMT TO SURFACE
16	CHECK FLOATS	12/14/2022	23:50					FLOATS HELD, 0.5 BBL FLOW BACK
17	RIG DOWN	12/15/2022	00:30					RIG DOWN EQUIPMENT
18	LEAVE LOCATION	12/15/2022	01:30					CREW LEAVE LOCATION

Pump Diagrams



JobMaster Program Version 5.01C1
Job Number: 85016
Customer: TERRA
Well Name: FED WMC 431-20



Job Start: Wednesday, December 14, 2022