

HALLIBURTON

iCem[®] Service

CIVITAS RESOURCES-EBUS

Ft. Lupton District, CO

For: Sam Mares

Date: Thursday, February 15, 2024

SO#909155453

STATE SEVENTY

WELD

CIVITAS State Seventy U-Y-10HNXRL

Job Date: Thursday, February 15, 2024

Sincerely,

William Mix

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **5.5 CMT PRODUCTION State Seventy / U-Y-10HNXRL**. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

This space is provided to enter in a brief summary of the job. Below are some important items to discuss:

- **Quality of circulation – Prejob 95% , While pumping Cement 95%, While Pumping Displacement 95%**
- **Final Circulating Pressure and Pump Rate FCP 2150PSI / 4BPM**
- **Returns to Surface 26BBLS CMT**
- **Any deviation from plan NO**
- **Abnormalities on job chart NO**

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton Rockies Cement Team

1.2 Job Overview

Job Details	
API #:	05-123-52192-00
City, County:	Roggen, WELD
SO#:	909155453

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	2/14/24	1700
Called Out Time:	2/14/24	1147
Arrived On Location:	2/14/24	1640
Job Started:	2/14/24	2025
Job Completed:	2/14/24	2347
Departed Location:	2/15/24	0100

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	68
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9
4	Casing set depth (shoe)	ft	16,800
5	TVD	ft	6,155
6	Float collar depth	ft	16,795
7	Length of rate hole	ft	10ft
8	Previous casing shoe depth	ft	1,605
9	Pre-job mud circulation time	hh:mm	1:00
10	Pre-job mud circulation rate	bpm	10

11	Pre-job mud circulation volume	bbls	400
12	Mud circulation pressure at start of cement	psi	300
13	Annual flow before the start of job	Y/N	y
14	Pipe movement during cement job	Y/N	n
15	Calculated displacement	bbls	372
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	95
18	Fluid returns to surface	Spacer/Cement, bbls	26 CMT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2150
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	9
23	Add hours? If Yes, put #	Y/N and hours	NO
24	NPT? If Yes, put #	Y/N and hours	NO

1.3 Water Field Test

	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
pH	7		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	68	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	7	ppm	3000 ppm	Can shorten thickening time

1.4 Actual Pump Schedule

Stage 1

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	11.5	120	2.57	16.2		4247
Cap Cement	13	121.953	1.65	8.07	415	3349
Lead Cement	13	287.025	1.58	7.42	1020	7568
Tail Cement	13.2	342.530	1.57	7.53	1225	9224
Top Plug	1					
Displacement Fluid	8.33	372				

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Pump A Pressure (psi)	Dnwhol e Density (ppg)	Cmb Pump Rate (bbl/mi n)	Cmb Stg Total (bbl)	Comments
Event	1	Call Out	Call Out	2/14/2024	11:47:00	USER					Call out
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/14/2024	14:00:00	USER					Pre-Convoy Safety Meeting
Event	3	Crew Leave Yard	Crew Leave Yard	2/14/2024	14:05:00	USER					Crew Leave Yard
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	2/14/2024	16:40:00	USER					Arrive at Location from Service Center
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/14/2024	17:00:00	USER					Pre-Rig Up Safety Meeting, Be aware of your surroundings, Use two spotters one in front and one in back of vehicle, Utilize hearing protection, Have good communication and make sure Line of Fire is clear before swinging hammer

											Identify points were hand/finger can get crushed
Event	6	Rig-Up Equipment	Rig-Up Equipment	2/14/2024	17:05:00	USER					Rig Up equipment as far as possible, Rig running casing
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	2/14/2024	19:45:00	USER	5.30	-1.20	0.04	2.69	Safety Meeting-Pre job, Eyes on task Use impact gloves Have good communication to identify pinch points between steel hoses, iron and drill pipe and while making up the hammer unions. Identify points were hand/finger can get crushed
Event	8	Start Job	Start Job	2/14/2024	20:24:32	NON E	2.64	8.30	0.00	0.01	Start Recording.
Event	9	Drop Bottom Plug	Drop Bottom Plug	2/14/2024	20:25:53	NON E	5.78	7.68	1.12	0.18	Dropped bottom plug with Sam.
Event	10	Test Lines	Test Lines	2/14/2024	20:27:54	NON E	188.52	8.25	0.00	3.33	Filled lines and pressure tested HES lines to 5500PSI.

Event	11	Pump Spacer 1	Pump Spacer 1	2/14/2024	20:31:38	NON E	14.84	8.17	0.00	0.00	Pumped 120BBLs of 11.5PPG Tuned Prime spacer. Pumped at a rate of 7BPM with a pressure of 400PSI.
Event	12	Check Weight	Check Weight	2/14/2024	20:37:33	NON E	453.93	11.18	5.39	20.00	Checked weight with pressurized mud scales.
Event	13	Pump Cap Cement	Pump Cap Cement	2/14/2024	20:56:31	NON E	18.31	11.52	1.32	0.01	Pumped 415SCKs / 121.953BBLs of 13PPG Elasticem Cap cement. Pumped at a rate of 8.2BPM with a pressure of 570PSI. Pre job calculated 54.673BBLs of cap cement to surface.
Event	14	Check Weight	Check Weight	2/14/2024	21:00:01	NON E	269.96	13.38	5.11	10.17	Checked weight with pressurized mud scales.
Event	15	Pump Lead Cement	Pump Lead Cement	2/14/2024	21:14:50	NON E	153.05	12.90	3.47	0.03	Pumped 1020SCKs / 287.025BBLs of 13PPG Isobond Lead Cement. Pumped at a rate of 8.2BPM with a pressure of 700PSI. Pre job calculated TOL cement was 1,369.731FT.

Event	16	Pump Tail Cement	Pump Tail Cement	2/14/2024	21:56:32	NON E	739.26	12.87	8.59	0.14	Pumped 1225SCKs / 342.530BBLs of 13.2PPG Elasticem Tail cement. Pumped at a rate of 8.2BPM with a pressure of 800PSI. Pre job calculated TOT cement was at 8,404.657FT
Event	17	Shutdown	Shutdown	2/14/2024	22:51:37	NON E	112.21	11.02	0.00	383.55	Shutdown to wash pumps and lines.
Event	18	Drop Top Plug	Drop Top Plug	2/14/2024	23:01:10	NON E	-1.55	7.46	0.00	16.75	Dropped Top plug with Sam.
Event	19	Pump Displacement	Pump Displacement	2/14/2024	23:01:13	NON E	-1.38	7.46	0.00	0.00	Pumped 372.8BBLs of fresh water displacement. Added 20 Gallons of MMCR to the first 20BBLs. Added Biocide to the remaining 350BBLs of displacement.
Event	20	Other	Other	2/14/2024	23:44:52	NON E	2795.02	8.68	0.00	374.04	BUMP PLUG FCP 2150PSI. BMP P - 2700PSI Checked floats.. 3.5BBLs back 26BBLs of cement to surface.
Event	21	End Job	End Job	2/14/2024	23:46:22	NON E	32.51	7.16	0.00	0.00	END JOB.

Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/15/2024	00:30:00	USER	Pre-Rig Down Safety Meeting
Event	23	Rig-Down Equipment	Rig-Down Equipment	2/15/2024	00:35:00	USER	Rig-Down Equipment
Event	24	Depart Location Safety Meeting	Depart Location Safety Meeting	2/15/2024	01:30:00	USER	Depart Location Safety Meeting, Verify all equipment has been thoroughly pre-tripped. All safety and quality issues should be resolved before proceeding.
Event	25	Crew Leave Location	Crew Leave Location	2/15/2024	01:35:00	USER	Crew leave location

3.0 Attachments

3.1 gc.png

