

# HALLIBURTON

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## **CIVITAS RESOURCES-EBUS**

Ft. Lupton District, CO

**For: Civitas Resources**

Date: Wednesday, September 4, 2024

**Grimm Motocross 4-65 24-23 1AH**

**API: 05-005-07567-00**

Job Date: Thursday, August 22, 2024

SO 909540319

Sincerely,

**William Mix & Juan H Martinez**

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Grimm Motocross / 24-23 1AH 5.5 CMT Production**. 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 2515 and Pump Rate 4BPM**
- **Returns to Surface 62BBLs 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 #:	05-005-07567-00
City, County:	Watkins, WELD
SO#:	909540319

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	8/22/24	0600
Called Out Time:	8/21/24	2300
Arrived On Location:	8/22/24	0530
Job Started:	8/22/24	0912
Job Completed:	8/22/24	1231
Departed Location:	8/22/24	1430

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	65
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.5
4	Casing set depth (shoe)	ft	17,983
5	TVD	ft	7,844
6	Float collar depth	ft	17,978
7	Length of rate hole	ft	41
8	Previous casing shoe depth	ft	3,335
9	Pre-job mud circulation time	hh:mm	2:00
10	Pre-job mud circulation rate	bpm	10

11	Pre-job mud circulation volume	bbls	750
12	Mud circulation pressure at start of cement	psi	800
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	399.1
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	95
18	Fluid returns to surface	Spacer/Cement, bbls	62 CMT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2515
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	11
23	Add hours? If Yes, put #	Y/N and hours	N
24	NPT? If Yes, put #	Y/N and hours	N

### 1.3 Water Field Test

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	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
<b>pH</b>	7		6.0 - 8.0	Chemicals in water can cause severe retardation
<b>Temperature</b>	65	F	60 - 80 F	Can can pre-mature setting of cement
<b>Chlorides</b>	500	ppm	3000 ppm	Can shorten thickening time

### 1.4 Actual Pump Schedule

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#### Stage 1

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
<b>Spacer Fluid</b>	11.5	120	2.57	16.2		4247
<b>Cap Cement</b>	13	202.7	1.65	8.02	690	5533
<b>Lead Cement</b>	13	177.2	1.58	7.38	630	4649
<b>Tail Cement</b>	13.2	429.2	1.56	7.5	1545	11587
<b>Top Plug</b>	1					
<b>Displacement Fluid</b>	8.33	399.1				16,762

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2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Pump A Pressure <i>(psi)</i>	Dwnhole Density <i>(ppg)</i>	Cmb Pump Rate <i>(bbl/min)</i>	Cmb Stg Total <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	8/21/2024	23:00:00	USER					Call out
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/22/2024	02:45:00	USER					Pre-Convoy Safety Meeting
Event	3	Crew Leave Yard	Crew Leave Yard	8/22/2024	03:00:00	USER					Crew Leave Yard
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/22/2024	05:30:00	USER					Arrive at Location from Service Center
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/22/2024	05:55:00	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	8/22/2024	06:00:00	USER					Rig Up equipment as far as possible, Rig running casing
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	8/22/2024	08:50:06	USER	1.89	8.94	0.00	11.67	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	8/22/2024	09:11:11	NONE	0.14	7.61	0.00	0.00	Start of cement job. Begin recording.
Event	9	Drop Bottom Plug	Drop Bottom Plug	8/22/2024	09:11:26	NONE	-4.72	9.38	0.00	0.00	Dropped Bottom plug with Josh and driller.
Event	10	Test Lines	Test Lines	8/22/2024	09:12:55	NONE	527.74	8.36	0.00	2.74	Filled lines with 3BBLs and Pressure tested HES lines to 6500PSI.

Event	11	Pump Spacer 1	Pump Spacer 1	8/22/2024	09:19:16	NONE	25.06	8.41	0.00	0.00	Pumped 120BBLs of 11.5PPG Tuned Prime spacer. Pumped at a rate of 6BPM with a pressure 800PSI.
Event	12	Pump Cap Cement	Pump Cap Cement	8/22/2024	09:37:22	NONE	213.07	12.06	5.21	0.09	Pumped 690s / 202.7BBLs of 13PPG Elasticem Cap cement. Pumped at a rate of 7BPM with a pressure of 500PSI. Pre job calculated 61.7BBLs of cap to surface.
Event	13	Pump Lead Cement	Pump Lead Cement	8/22/2024	10:04:04	NONE	506.30	12.97	8.46	0.07	Pumped 630s / 177.2BBLs of 13PPG Isobond LEad cement. Pumped at a rate of 8BPM with a pressure of 600PSI. Pre job calculated TOL cement was at 3,119.922ft.
Event	14	Pump Tail Cement	Pump Tail Cement	8/22/2024	10:27:30	NONE	615.56	12.86	8.44	0.14	Pumped 1545s / 429.2BBLs of 13.2PPG Elasticem Tail cement. Pumped at a rate of 8BPM with a pressure of 600PSI. PRE job calculated TOT cement was at 7,465.02ft.

Event	15	Shutdown	Shutdown	8/22/2024	11:28:12	NONE	100.50	13.42	0.00	500.15	Shutdown to wash pumps and lines.
Event	16	Clean Lines	Clean Lines	8/22/2024	11:28:17	NONE	53.19	16.22	0.00	500.15	Cleaned pumps and lines with 15 BBLs of fresh water.
Event	17	Shutdown	Shutdown	8/22/2024	11:35:07	NONE	23.74	7.97	0.00	15.11	Shutdown to load plug.
Event	18	Drop Top Plug	Drop Top Plug	8/22/2024	11:35:53	NONE	-16.61	7.97	0.00	15.11	Dropped top plug with Josh and driller.
Event	19	Pump Displacement	Pump Displacement	8/22/2024	11:35:56	NONE	-16.23	7.97	0.00	0.00	Pumped 399BBLs of Fresh water displacment. MMCR in the first 20BBLs. Biocide and the Remaining displacement.
Event	20	Bump Plug	Bump Plug	8/22/2024	12:28:46	NONE	3055.86	8.37	0.00	400.61	BUMPED PLUG. FCP - 2515PSI. BMP - 3050PSI. Held PSI for 5 minutes. Floats - 4BBLs 62BBLs of cement to surface.
Event	21	End Job	End Job	8/22/2024	12:30:44	NONE	36.87	8.38	0.00	400.61	END OF JOB.
Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/22/2024	13:00:00	USER					Pre-Rig Down Safety Meeting
Event	23	Rig-Down Equipment	Rig-Down Equipment	8/22/2024	13:10:00	USER					Rig-Down Equipment

Event	24	Depart Location Safety Meeting	Depart Location Safety Meeting	8/22/2024	14:10:00	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	8/22/2024	14:30:00	USER	Crew leave location

3.0 Attachments

3.1 CIVITAS Grimm Motocross 24-23 1AH-5.5in Production Casing

