

HALLIBURTON

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CIVITAS RESOURCES-EBUS

Ft. Lupton District, CO

For: Civitas Resources

Date: Friday, August 9, 2024

Grimm Motocross 4-65 24 2A3AUH- 5.5in Production Casing

Job Date: Thursday, August 1, 2024

Sincerely,

William Mix & Juan H Martinez

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Grimm Motocross / 2A3AUH 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 2600PSI and Pump Rate 4BPM**
- **Returns to Surface 40BBLS 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 #:	005-07570
City, County:	Watkins, Arapahoe
SO#:	909492375

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	8/1/24	14:00
Called Out Time:	8/1/24	08:00
Arrived On Location:	8/1/24	11:00
Job Started:	8/1/24	18:45
Job Completed:	8/1/24	21:56
Departed Location:	8/1/24	23:45

	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	9.4
4	Casing set depth (shoe)	ft	16,228
5	TVD	ft	7,783
6	Float collar depth	ft	16,223
7	Length of rate hole	ft	25FT
8	Previous casing shoe depth	ft	3,319
9	Pre-job mud circulation time	hh:mm	2:00
10	Pre-job mud circulation rate	bpm	9.7

11	Pre-job mud circulation volume	bbls	700
12	Mud circulation pressure at start of cement	psi	450
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	360
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	95
18	Fluid returns to surface	Spacer/Cement, bbls	40CMT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2600PSI
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	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	65	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	500	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	201.2	1.65	8.02	685	5493
Lead Cement	13	184.3	1.58	7.38	655	4833
Tail Cement	13.2	363.9	1.56	7.5	1310	9825
Top Plug	1					
Displacement Fluid	8.33					

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	8/1/2024	08:00:00	USER					Call out
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/1/2024	11:00:00	USER					Pre-Convoy Safety Meeting
Event	3	Crew Leave Yard	Crew Leave Yard	8/1/2024	11:30:00	USER					Crew Leave Yard
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/1/2024	12:30:00	USER					Arrive at Location from Service Center
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/1/2024	12:40:00	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	8/1/2024	13:00:00	USER					Rig Up equipment as far as possible, Rig running casing
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	8/1/2024	18:15:00	USER	18.90	9.22	0.00	10.03	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	8/1/2024	18:44:28	NONE	0.88	9.19	0.00	10.03	Beginning of job. Start Recording.
Event	9	Drop Bottom Plug	Drop Bottom Plug	8/1/2024	18:45:07	NONE	106.38	8.28	2.18	0.56	Dropped bottom plug with Josh and Driller.
Event	10	Test Lines	Test Lines	8/1/2024	18:46:25	NONE	164.35	8.34	0.00	2.98	Filled lines with 3BBLs of fresh water and

											Pressure tested HES lines to 6500PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	8/1/2024	18:51:06	NONE	1.17	8.60	0.00	0.00	Pumped 120BBLs of 11.5PPG Tuned Prime Spacer. Pumped at a rate of 6BPM with a pressure of 450PSI.
Event	12	Pump Cap Cement	Pump Cap Cement	8/1/2024	19:14:11	NONE	136.88	12.70	3.92	0.03	Pumped 685s / 201.297BBLs of 13PPG Elasticem Cap Cement. Pumped at a rate of 8BPM with a pressure of 55PSI. Pre job calculated 63.91BBLs of cap cement to surface.
Event	13	Pump Lead Cement	Pump Lead Cement	8/1/2024	19:41:17	NONE	460.35	12.60	7.77	0.13	Pumped 655s / 184.3BBLs of 13PPG Isobond Lead cement. Pumped at a rate of 8BPM with a pressure of 525PSI. Pre job calculated TOL cement was at 2,789.766FT.
Event	14	Pump Tail Cement	Pump Tail Cement	8/1/2024	20:07:36	NONE	562.23	12.62	7.86	0.07	Pumped 1310s / 363.9BBLs of 13.2PPG Elasticem Tail cement. Pumped at a rate of 8BPM with a pressure of 600PSI. Pre job calculated TOT

											cement was at 7307.290FT.
Event	15	Shutdown	Shutdown	8/1/2024	20:58:57	NONE	190.58	13.74	0.00	389.61	Shutdown to wash pumps and lines.
Event	16	Drop Top Plug	Drop Top Plug	8/1/2024	21:08:11	NONE	15.16	7.56	0.00	13.77	Dropped Top plug with Josh and driller.
Event	17	Pump Displacement	Pump Displacement	8/1/2024	21:08:13	NONE	14.79	7.56	0.00	0.00	Pumped 360BBLs of fresh water displacement. First 20BBLs had MMCR.
Event	18	Bump Plug	Bump Plug	8/1/2024	21:53:08	NONE	3073.13	8.30	0.00	354.21	BUMP PLUG. FCP - 2600PSI. BMP p- 3200PSI. 40BBLs of cement to surface. Held pressure for 5Mins. Bled off pressure and got 4BBLs back to truck from floats.
Event	19	End Job	End Job	8/1/2024	21:56:08	NONE	40.34	8.25	0.00	354.21	End of recording. Job complete.
Event	20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/1/2024	22:30:00	USER					Pre-Rig Down Safety Meeting
Event	21	Rig-Down Equipment	Rig-Down Equipment	8/1/2024	22:45:00	USER					Rig-Down Equipment

Event	22	Depart Location Safety Meeting	Depart Location Safety Meeting	8/1/2024	23:10:00	USER	Depart Location Safety Meeting, Verify all equipment has been thoroughly pre-tripped. All safety and quality issues should be resolved before proceeding.
Event	23	Crew Leave Location	Crew Leave Location	8/2/2024	00:00:00	USER	Crew leave location

3.0 Attachments

3.1 CIVITAS – Patterson 572 - Grimm Motocross 2A3AUH – 5.5in Production Casing – Job Summary



