

# HALLIBURTON

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## **CIVITAS RESOURCES-EBUS**

**For: Civitas Resources**

Date: Friday, August 9, 2024

**GRIMM MOTOCROSS 4-65 24 1B2BUH- 5.5in Production Casing**

**API:05-005-07564**

Job Date: Tuesday, August 6, 2024

Sincerely,

**ANDREW GLOVER & 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 4-65 24 1B2BUH 5.5in 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 100% , While pumping Cement 100%, While Pumping Displacement 100%**
- **Final Circulating Pressure and Pump Rate 2550 @ 4**
- **Returns to Surface 61 BBLs 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 #:	05-005-07564-00
City, County:	WATKINS,
SO#:	909509886

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	8/6/24	13:30
Called Out Time:	8/6/24	7:30
Arrived On Location:	8/6/24	11:45
Job Started:	8/6/24	15:30
Job Completed:	8/6/24	19:15
Departed Location:	8/6/24	20:45

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	100
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.5
4	Casing set depth (shoe)	ft	16870
5	TVD	ft	7808
6	Float collar depth	ft	16865
7	Length of rate hole	ft	8
8	Previous casing shoe depth	ft	3308
9	Pre-job mud circulation time	hh:mm	2:00
10	Pre-job mud circulation rate	bpm	11

11	Pre-job mud circulation volume	bbls	1320
12	Mud circulation pressure at start of cement	psi	960
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	374.4
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	CMT,61
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2550 @ 4
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	2
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

	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
<b>pH</b>	6		6.0 - 8.0	Chemicals in water can cause severe retardation
<b>Temperature</b>	70	F	60 - 80 F	Can can pre-mature setting of cement
<b>Chlorides</b>	0	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)
<b>Spacer Fluid</b>	11.5	120	2.57	16.2	262	4242
<b>Cap Cement</b>	13	200	1.65	8.02	680	5460
<b>Lead Cement</b>	13	184	1.58	7.38	655	4830
<b>Tail Cement</b>	13.2	389	1.57	7.5	1390	10416
<b>Top Plug</b>						
<b>Displacement Fluid</b>	8.4	374.4				15725

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)	Dwnhole Density (ppg)	Pump A Pressure (psi)	Comments
Event	1	Summit Crew Notified Date/Time	Crew Notified Date/Time	8/6/2024	07:30:53	USER					Crew called out for CIVITAS Production
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/6/2024	10:30:54	USER					Discussed route and possible hazards
Event	3	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	8/6/2024	10:45:56	USER					Depart yard w/ 1 pump, 660, 1 pickups and 4 personnel.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	8/6/2024	11:45:57	USER					Requested on location @ 1330
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	8/6/2024	11:55:17	USER					Discussed location and possible hazards. Water test: Temp - 70, Chlorides - 0, PH - 6, Sulfates - <200. 8 1/2 TD @ 16878'. Production casing set @ 16870'. 5.5" 20# P110, ST - 5' .0222 bbl/ft. CSG/OH - .0408 bbl/ft. CSG/CSG - .0479 bbl/ft. 9 5/8" 36# J55 set @ 3308'. TVD @ 7808'. Mud Weight - 9.5 ppg

Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	8/6/2024	12:05:23	USER						Discussed rig up and possible hazards.
Event	7	Rig-up Lines	Rig-up Lines	8/6/2024	12:15:26	USER						Rig up equipment
Event	8	Casing on Bottom	Casing on Bottom	8/6/2024	13:50:28	USER						
Event	9	Circulate Well	Circulate Well	8/6/2024	14:15:28	USER						Rig circulating well 13 bpm @ 1530 psi
Event	10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	8/6/2024	15:20:59	USER	0.00	0.00	8.26	-0.54		Discussed job and possible hazards with everyone on location.
Event	11	Start Job	Start Job	8/6/2024	15:42:43	NONE	0.00	0.00	8.27	3.51		
Event	12	Pump Spacer 1	Fill Lines	8/6/2024	15:43:04	USER	0.00	0.00	8.27	3.41		Pumped 3 bbls of FW
Event	13	Drop Bottom Plug	Drop Bottom Plug	8/6/2024	15:44:07	USER	1.32	0.07	0.84	5.75		
Event	14	Pressure Test	Pressure Test	8/6/2024	15:45:06	USER	3.01	2.92	8.14	460.47		Test lines to 6500 psi
Event	15	Pump Spacer 1	Pump Tuned Spacer	8/6/2024	15:49:08	USER	0.00	3.06	8.70	6808.29		Pumped 120 bbls of 11.5 ppg of Tuned Spacer. 2.57 cuft/sk and 16.2 gal/sk. Verified weight with pressurized mud scales.
Event	16	Check Weight	Check Weight	8/6/2024	15:57:30	NONE	5.93	26.35	11.41	543.04		
Event	17	Pump Lead Cement	Pump Cap Cement	8/6/2024	16:15:32	USER	4.22	122.44	11.69	90.65		Pumped 200 bbls of 13 ppg Elasticem. 680 sks, 1.65 cuft/sk, and 8.02 gal/sk. Verified weight with pressurized mud scales.
Event	18	Check Weight	Check Weight	8/6/2024	16:23:50	NONE	5.95	43.47	12.93	346.42		

Event	19	Pump Lead Cement	Pump Lead Cement	8/6/2024	16:49:16	USER	4.18	200.56	13.00	197.76	Pumped 184 bbls of 13 ppg Isobond cmt. 655 sks, 1.58 cuft/sk, and 7.38 gal/sk. Verified weight with pressurized mud scales. Estimated TOC @ 2890.46'
Event	20	Check Weight	Check Weight	8/6/2024	16:52:54	NONE	6.04	20.31	13.05	446.17	
Event	21	Pump Tail Cement	Pump Tail Cement	8/6/2024	17:16:58	USER	4.17	0.07	12.97	243.53	Pumped 389 bbls of 13.2 ppg Elasticem. 1390 sks, 1.57 cuft/sk, and 7.5 gal/sk. Verified weight with pressurized mud scales. Estimated TOC @ 7335.69'
Event	22	Check Weight	Check Weight	8/6/2024	17:25:04	NONE	5.94	49.17	13.17	367.07	
Event	23	Shutdown	Shutdown/Flush Lines	8/6/2024	18:25:39	USER	0.00	409.29	13.51	20.28	
Event	24	Drop Top Plug	Drop Top Plug	8/6/2024	18:34:02	USER	0.00	14.18	8.12	7.99	3rd party rupture plug
Event	25	Pump Displacement	Pump Displacement	8/6/2024	18:34:29	USER	0.00	0.00	0.00	1.93	Pumped 374.4 bbls of displacement. 1st 20 bbls FW w/ MMCR FW w/ Chemicals
Event	26	Bump Plug	Bump Plug	8/6/2024	19:17:12	USER	0.00	366.73	8.39	3042.63	Bump plug 2550 - 3050 psi
Event	27	Check Floats	Check Floats	8/6/2024	19:18:14	USER	0.00	366.73	8.39	3099.20	Floats are good. Got 4 bbls back.
Event	28	End Job	End Job	8/6/2024	19:19:38	NONE	0.00	0.00	8.17	-0.48	Got 61 bbls of cement back to surface.
Event	29	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/6/2024	19:30:20	USER	3.10	32.26	8.15	42.64	

Event	30	Rig-Down Equipment	Rig-Down Equipment	8/6/2024	19:40:21	USER
Event	31	Depart Location Safety Meeting	Depart Location Safety Meeting	8/6/2024	20:30:23	USER
Event	32	Depart Location	Depart Location	8/6/2024	20:45:24	USER

Thank you for using  
Halliburton cement. Andrew  
Glover and crew.

3.0 Attachments

Civitas - Patterson 572 - Grimm Motocross 4-65 24 1B2BUH- 5.5in Production Casing- Job Summary

