

HALLIBURTON

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CIVITAS RESOURCES-EBUS

Ft. Lupton District, CO

For: Manny Parras

Date: Saturday, March 22, 2025

PH FENRIR

CIVITAS PH FENRIR 08N-20-03 PRODUCTION CASING 5.5

Job Date: Saturday, March 22, 2025

Sincerely,

David Womack

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **PH FENRIR 08N-20-03 – PRODUCTION CASING 5.5**. 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.

- **Quality of circulation – Prejob 100% , While pumping Cement 100%, While Pumping Displacement 100%**
- **Final Circulating Pressure and Pump Rate: 2500 PSI @ 4BPM**
- **Returns to Surface: 80 bbl Spacer / 52 BBL Cap**
- **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 #:	05-123-52777-00
City, County:	KERSEY
SO#:	909959870

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	3/22/2025	00:00
Called Out Time:	3/21/2025	18:00
Arrived On Location:	3/21/2025	22:00
Job Started:	3/22/2025	05:05
Job Completed:	3/22/2025	08:15
Departed Location:	3/22/2025	09:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	50
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.1
4	Casing set depth (shoe)	ft	16892'
5	TVD	ft	6239'
6	Float collar depth	ft	16886'

7	Length of rate hole	ft	25
8	Previous casing shoe depth	ft	1628'
9	Pre-job mud circulation time	hh:mm	01:00
10	Pre-job mud circulation rate	bpm	13
11	Pre-job mud circulation volume	bbls	780
12	Mud circulation pressure at start of cement	psi	1200
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	374.5 bbls
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	80 Spacer / 52 Cap
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2500 PSI@ 4 BPM
20	Number of Centralizers	-	250
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	13
23	Add hours? If Yes, put #	Y/N and hours	N
24	NPT? If Yes, put #	Y/N and hours	N

	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	50	F	60 - 80 F	
Chlorides	0	ppm	3000 ppm	Can shorten thickening time

1.1 Actual Pump Schedule

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	11.5	80	2.571	16.2	174.74	2,831
Cap Cement	13	164.04	1.645	8.03	560	4,497
Lead Cement	13	147.4	1.576	7.38	525	3,875
Tail Cement	13.2	441.41	1.564	7.5	1585	11,888
Top Plug	N/A	N/A	N/A	N/A	N/A	N/A
Displacement Fluid	8.33	374.5	N/A	N/A	N/A	15,729

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	3/21/2025	18:00:00	USER					Called out for Civitas 5.5" Production with an on location time of 00:00 3/22/2025.
Event	2	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	3/21/2025	19:55:00	USER					Review Journey Management And Route With Crew Members
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	3/21/2025	20:00:00	USER					Depart From Yard
Event	4	Arrive At Loc	Arrive At Loc	3/21/2025	22:00:00	USER					Talk To Company Man (Manny Parras) : TD = 16,917', TP = 16,892', ST = 6', OH = 8.5", CSG = 5 1/2" 20#, Previous Casing 9 5/8" 36# Set @ 1,628', WF = OBM @ 9.1#, Test Water = pH - 7, Chlorides - < 290 ppm, 50 F

Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	3/21/2025	22:05:00	USER						Spot Equipment
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/21/2025	22:10:00	USER						Review JSA With Crew Members
Event	7	Rig-Up Equipment	Rig-Up Equipment	3/21/2025	22:15:00	USER						Rig Up Iron And Hoses Needed For Job
Event	8	Circulate Well	Circulate Well	3/22/2025	04:00:00	USER						Rig Circulated Well From 04:00 To 05:00 @13 BPM With 1200 psi. Had 0 units of gas and no losses/ gains during circulation.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/22/2025	04:27:00	USER	-1.13	8.27	0.00	55.24		Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
Event	10	Rig-Up Completed	Rig-Up Completed	3/22/2025	04:27:01	USER	-1.21	8.27	0.00	55.24		Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents. 5.5 Modified Plug Container and Manifold with washup line to half round tank was rigged up as well.
Event	11	Start Job	Start Job	3/22/2025	05:05:00	USER	2.14	8.33	0.00	0.00		Rig shutdown pumps and gave well over to HES. All lines are

											confirmed tighten on plug container.
Event	12	Pump Water	Pump Water	3/22/2025	05:06:00	USER	0.84	8.39	0.00	0.00	Filled lines with 3bbls of Fresh Water.
Event	13	Drop Bottom Plug	Drop Bottom Plug	3/22/2025	05:06:30	USER	-0.19	8.37	0.60	0.03	Cap was removed from plug container to drop bottom plug. Customer verified bottom plug depart plug container by tattle tale.
Event	14	Pressure Test	Pressure Test	3/22/2025	05:08:00	USER	113.74	8.25	0.00	3.04	Low pressure kickout was done to 500 psi before performing 6500psi pressure test. Pressure held and climbed to 6900 psi. Kickouts were set at 3600psi for the job.
Event	15	Check Weight	Check Weight	3/22/2025	05:14:00	USER	6523.36	8.58	0.00	3.23	Weight from downhole was verified with Pressurized mud scales.
Event	16	Pump Spacer	Pump Spacer	3/22/2025	05:15:00	USER	6.61	8.18	0.00	3.23	Mixed and Pumped 80 bbls of Tuned Prime Spacer at 11.5lbs/gal, 2.571yld,16.2 gals/sk. 30 gals of D-air was used. Spacer was verified on

											pressurized mud scales.
Event	17	Pump Cap Cement	Pump Cap Cement	3/22/2025	05:27:00	USER	138.92	11.55	6.49	80.04	Mixed and pumped 560sacks (164 bbls) of ElastiCem Cap Cement at 13lb/gal, 1.645 yld, 8.03 Gals/sk. Weight was verified on pressurized mud 52 bbls to Surface. 10 gal of D-Air used.
Event	18	Check Weight	Check Weight	3/22/2025	05:28:00	USER	148.49	11.40	6.53	86.66	Weight from downhole was verified with Pressurized mud scales.
Event	19	Pump Lead Cement	Pump Lead Cement	3/22/2025	05:48:00	USER	620.50	13.00	8.44	174.47	Mixed and pumped 525sacks (147.4 bbls) of IsoBond Lead Cement at 13lb/gal, 1.576yld, 7.38 Gals/sk. Weight was verified on pressurized mud scales. Calculated top of lead cement-2,462'
Event	20	Check Weight	Check Weight	3/22/2025	05:49:00	USER	598.67	12.88	8.44	3.86	Weight from downhole was verified with Pressurized mud scales.
Event	21	Pump Tail Cement	Pump Tail Cement	3/22/2025	06:07:00	USER	745.68	12.99	8.47	1.41	Mixed and pumped 1,585sacks (441.5

												bbls) of ElastiCem Tail Cement at 13.2lb/gal, 1.564 yld, 7.5 Gals/sk. Weight was verified on pressurized mud scales. 5 gal of D-Air used. Calculated top of tail cement-6,074'
Event	22	Check Weight	Check Weight	3/22/2025	06:08:00	USER	668.65	13.08	8.43	9.84		Weight from downhole was verified with Pressurized mud scales.
Event	23	Shutdown	Shutdown	3/22/2025	07:04:00	USER	89.64	13.26	2.28	516.49		Shutdown and swap lines into washup tank.
Event	24	Clean Lines	Clean Lines	3/22/2025	07:05:00	USER	89.47	13.30	2.27	518.78		Wash mix tub, pumps, and lines to open top tank.
Event	25	Pump Displacement - Start	Pump Displacement	3/22/2025	07:15:00	USER	3.43	0.66	0.00	15.30		Started displacement with MMCR in first 20bbls. The rest of displacement was done with rig's chemicals.
Event	26	Drop Top Plug	Drop Top Plug	3/22/2025	07:15:30	USER	15.68	7.25	1.39	0.09		Cap was removed and plug was dropped by customer rep. He witnessed the plug leave by tattle tale.

Event	27	Cement Returns to Surface	Cement Returns to Surface	3/22/2025	07:37:00	USER	3055.82	8.37	8.93	219.25	At 242.5 bbls away we got Spacer to surface. 80 bbls of spacer and 52 bbls of Cap cement to surface. Held full returns through entire job.
Event	28	Slow Rate	Slow Rate	3/22/2025	07:54:00	USER	3065.87	8.38	8.99	370.10	Slowed rate for last 20bbls to 4bpm.
Event	29	Bump Plug	Bump Plug	3/22/2025	07:57:00	USER	2399.78	8.34	4.25	385.20	Final circulating pressure was 2500psi. Bumped pressure up to 3000psi.
Event	30	Check Floats	Check Floats	3/22/2025	07:58:00	USER	2890.66	8.37	0.00	388.36	Released pressure and received 4 bbls back to displacement tank.
Event	31	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	3/22/2025	08:00:00	USER	12.95	3.21	0.00	388.36	Review JSA With HES Crew Members. Crew washes up rig stack. 100 lbs of sugar used.
Event	32	End Job	End Job	3/22/2025	08:15:30	USER					End Job was sent.
Event	33	Rig-Down Equipment	Rig-Down Equipment	3/22/2025	08:16:00	USER					Rig Down Iron, Plug Container, And Hoses Used On Job
Event	34	Rig-Down Completed	Rig-Down Completed	3/22/2025	08:40:00	USER					All Equipment Rigged Down With No Issues Or Incidents

Event	35	Depart Location Safety Meeting	Depart Location Safety Meeting	3/22/2025	08:50:00	USER	Review Journey Management And Route With Crew Members
Event	36	Depart Location	Depart Location	3/22/2025	09:00:00	USER	Depart location

3.0 Attachments

3.1 CIVITAS PH FENRIR 08N-20-03 PRODUCTION CASING 5.5.png

