

HALLIBURTON

iCem[®] Service

CIVITAS RESOURCES-EBUS

Ft. Lupton District, Colorado

For: Danny Herrera

Date: Friday, October 25, 2024

Civitas Production Bijou 3-65 20-19-24 1AH

Sincerely,

Thomas Haas and Crew

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the CIVITAS 5.5" Production Bijou 3-65 20-19-24 1AH. 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 – 100% THROUGHOUT JOB**
- **Final Circulating Pressure and Pump Rate 4BBL/MIN 2800 PSI**
- **Returns to Surface 53 BBL OF CEMENT**
- **Any deviation from plan- PUMPED AS PLANNED**
- **Abnormalities on job chart- NONE**

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

1.1 Job Overview

API #:	05-001-10596
City, County:	Aurora, Adams
SO#:	909653047

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	10/25/2024	11:30
Called Out Time:	10/25/2024	03:00
Arrived On Location:	10/25/2024	04:30
Job Started:	10/25/2024	15:53
Job Completed:	10/25/2024	19:37
Departed Location:	10/25/2024	20:45

	Description	Units	Value
1	Surface temperature at the time of the job	Degrees	66
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.3
4	Casing set depth (shoe)	ft	24101
5	TVD	ft	8038
6	Float collar depth	ft	24096
7	Length of rate hole	ft	16
8	Previous casing shoe depth	ft	3483
9	Pre-job mud circulation time	hh:mm	01:15
10	Pre-job mud circulation rate	bpm	12

11	Pre-job mud circulation volume	bbls	1050
12	Mud circulation pressure at start of cement	psi	1500
13	Annual flow before the start of job	Y/N	n
14	Pipe movement during cement job	Y/N	Y
15	Calculated displacement	bbls	532.9
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	53 Bbl cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2800 4bbl/min
20	Number of Centralizers	-	360
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	4
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	7.0		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	69	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	300	ppm	3000 ppm	Can shorten thickening time

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	297	4248
Cap Cement	13	208.6	1.65	8.03	710	5701
Lead Cement	13	188.5	1.58	7.38	670	4944
Tail Cement	13.2	664	1.56	7.5	2390	17925
Top Plug	1					
Displacement Fluid	H2O	534.4				22445

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Pump A Pressur e (psi)	Dwnhol e Density (ppg)	Cmb Pump Rate (bbl/mi n)	Cmb Stg Total (bbl)	Comments
Event	1	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/25/2024	02:45:00	USER					PRE-CONVOY SAFETY MEETING AT HES LOCATON TO DISCUSS ROUTE AND DRIVING HAZARDS.
Event	2	Crew Leave Yard	Crew Leave Yard	10/25/2024	03:00:00	USER					CREW DEPARTS HALLIBURTON FACILITIES FOR LOCATION.
Event	3	Call Out	Call Out	10/25/2024	03:00:00	USER					CREW CALLED OUT FOR FOR JOB.
Event	4	Arrive At Loc	Arrive At Loc	10/25/2024	04:30:00	USER					CREW ARRIVES ON LOCATION. MET WITH CO MAN TO DISCUSS JOB. TD-24117 8.5" OH, TP-24101' 5.5" 20# P-110, FC-24096', PC-3483' 9/58 36# J55, TVD-8038', 9.3 PPG OBM. 1 BTM PLUGS 1 TOP. WATER

69* 7.0 PH, 0 CHLORIDES.											
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/25/2024	11:00:00	USER					PRE-RIG UP SAFTEY MEETING WITH ALL HES EMPLOYEES TO DISCUSS HAZARDS OF LOCATION AND DISCUSS RIG UP SEQUENCE.
Event	6	Rig-up Lines	Rig-up Lines	10/25/2024	11:10:00	USER					RIG UP PUMPS AND LINES.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/25/2024	12:00:00	USER					SAFTEY NMEETING WITH HES, COMPANY MAN, AND RIG HANDS.
Event	8	Start Job	Start Job	10/25/2024	15:57:10	NONE	345.73	8.36	3.00	1.82	START JOB DATA RECORDING.
Event	9	Other	Fill Lines	10/25/2024	15:57:30	USER	297.81	8.39	0.00	1.99	FILL LINES WITH 3 BBL OF FRESH WATER.
Event	10	Test Lines	Test Lines	10/25/2024	15:58:35	NONE	288.58	8.46	0.00	2.07	PRESSURE TESTED LINES TO 6800PSI, 500 EKO TEST AT 500PSI, 5TH GEAR STALL AT 2400PSI.

Event	11	Drop Bottom Plug	Drop Bottom Plug	10/25/2024	16:00:48	NONE	11.12	8.50	0.00	2.10	BOTTOM PLUG WAS LOADED DIRECTLY INTO THE CASING, VERIFIED BY COMPANY MAN.
Event	12	Pump Spacer 1	Pump Spacer 1	10/25/2024	16:00:52	NONE	10.46	8.05	0.00	0.00	PUMPED 120 BBLS OF 11.5 PPG TUNED SPACER. 2.57 CUFT/SK AND 16.2GAL/SK VERIFIED WEIGHT WITH PRSSURIZED MUD SCALES.
Event	13	Pump Cap Cement	Pump Cap Cement	10/25/2024	16:20:31	NONE	249.33	11.57	7.71	0.13	PUMPED 208.6 BBLS OF 13 PPG ELASTI CEM 710 SKS 1.59 CUFT/SK, 8.03 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT SURFACE.
Event	14	Pump Lead Cement	Pump Lead Cement	10/25/2024	16:46:39	NONE	747.83	12.63	8.93	2.85	PUMPED 188.5 BBLS OF 13 PPG ISOBOND 670 SKS 1.58 CUFT/SK, 7.38 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT 3247'.

Event	15	Pump Tail Cement	Pump Tail Cement	10/25/2024	17:08:34	NONE	1048.75	12.94	9.05	0.15	PUMPED 664 BBLS OF 13.2 PPG ELASTICEM 2390 SKS 1.56 CUFT/SK, 7.5 GAL/SK. VERIFIED BY PRESSURISED MUD SCALES. TOC ESTIMATED AT 7826'.
Event	16	Shutdown	Shutdown	10/25/2024	18:30:30	NONE	188.13	13.59	0.00	696.72	SHUTDOWN TO CLEAN PUMPS AND LINES.
Event	17	Clean Lines	Clean Lines	10/25/2024	18:30:35	NONE	118.21	13.81	0.00	696.72	CLEAN PUMPS AND LINES.
Event	18	Drop Top Plug	Drop Top Plug	10/25/2024	18:37:20	NONE	-0.68	8.31	0.00	13.28	PLUG WAS LOADED DIRECTLY INTO CASING, VERIFIED BY COMPANY MAN.
Event	19	Pump Displacement	Pump Displacement	10/25/2024	18:37:22	NONE	-0.78	8.31	0.00	0.00	BEGIN PUMPING DISPLACEMENT, 534.4 BBLS FRESH WATER, FIRST 20 BBLS OF DISPLACEMENT WITH 10-GAL MMCR, 10 GAL OF BIOCIDES THROUGHOUT THE REST OF DISPLACEMENT.
Event	20	Bump Plug	Bump Plug	10/25/2024	19:38:23	NONE	2775.84	8.31	4.20	521.62	PLUG BUMPED AT CALCULATED

											DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 2800 PSI AT 4BBL/MIN. 53 BBL OF CEMENT TO SURFACE.
Event	21	Other	Casing Test	10/25/2024	19:38:42	USER	3175.59	8.35	0.19	522.82	HELD PRESSURE AT 3450 PSI FOR 3 MIN.
Event	22	Check Floats	Check Floats	10/25/2024	19:40:02	USER	3427.64	8.36	0.00	522.94	CHECK FLOATS, REALEASED PRESSURE BACK TO TRUCK, 6 BBL BACK.
Event	23	End Job	End Job	10/25/2024	19:41:27	NONE	6.51	8.07	0.00	522.94	END JOB DATA RECORDING.
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/25/2024	19:45:00	USER	-4.65	-0.14	0.00	0.00	PRE-RIG DOWN SAFTEY MEETING TO DISCUSS HAZRDS OF LOCATION AND SEQUENCE OF RIG DOWN.
Event	25	Rig Down Lines	Rig Down Lines	10/25/2024	19:50:00	USER	40.07	8.23	2.33	4.56	RIG DOWN PUMPS AND LINES.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/25/2024	20:30:00	USER					PRE-CONVOY SAFETY MEETING ON LOCATON TO DISCUSS ROUTE AND DRIVING HAZARDS.

Event	27	Crew Leave Location	Crew Leave Location	10/25/2024	20:45:00	USER
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CREW DEPARTS
LOCATION, THANK
YOU FOR CHOOSING
HES. THOMAS HAAS
AND CREW.

3.0 Attachments

3.1 Real Time Job Chart

