

# HALLIBURTON

iCem<sup>®</sup> Service

## **CIVITAS RESOURCES-EBUS**

Ft. Lupton District, CO

**For: Josh Johnson**

Date: Tuesday, June 11, 2024

**Florida 3-65 27-26 2AH**

Case 1

Sincerely,

**Mike Loughran**

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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 **Florida 3-65 27-26 2AH 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.

- Quality of circulation – Prejob 100%, While pumping Cement 100%, While Pumping Displacement 100%
- Final Circulating Pressure and Pump Rate: 2,740 psi / 4 bpm
- Returns to Surface: 120 bbl of spacer and 56 bbl of cement.
- Any deviation from plan: N
- Abnormalities on job chart: N

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 #:	05-001-10560
City, County:	Aurora, Adams
SO#:	909391583

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	6/11/2024	09:00
Called Out Time:	6/11/2024	03:00
Arrived On Location:	6/11/2024	08:00
Job Started:	6/11/2024	12:33
Job Completed:	6/11/2024	16:18
Departed Location:	6/11/2024	18:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	85
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.2
4	Casing set depth (shoe)	ft	18,317'
5	TVD	ft	7,891'
6	Float collar depth	ft	18,306'
7	Length of rate hole	ft	6'
8	Previous casing shoe depth	ft	3,349'
9	Pre-job mud circulation time	hh:mm	1:30
10	Pre-job mud circulation rate	bpm	10.8

11	Pre-job mud circulation volume	bbls	770
12	Mud circulation pressure at start of cement	psi	981
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	404.6
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	120 Spacer /56 Cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2,740 @ 4
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	1
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>	7		6.0 - 8.0	Chemicals in water can cause severe retardation
<b>Temperature</b>	69	F	60 - 80 F	Can pre-mature setting of cement
<b>Chlorides</b>	Less 200	ppm	3000 ppm	Can shorten thickening time

### 1.4 Actual Pump Schedule

#### Stage 1

	Density (ppg)	Volume (bbl)	Yield (ft <sup>3</sup> /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gal)
<b>Spacer Fluid</b>	11.5	120	2.57	16.2		4248
<b>Cap Cement</b>	13	205.7	1.65	8.07	700	5649
<b>Lead Cement</b>	13	174.47	1.58	7.42	620	4601
<b>Tail Cement</b>	13.2	447.39	1.57	7.54	1,600	12064
<b>Top Plug</b>	1					
<b>Displacement Fluid</b>	8.33	404.6				

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	6/11/2024	03:00:00	CREW CALLED OUT 6/11/2024 03:00 H. REQUESTED ON LOCATION 6/11/2024 09:00 H.
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/11/2024	05:00:00	DISCUSS ROUTE AND HAZARDS OF DRIVING
3	Crew Leave Yard	Crew Leave Yard	6/11/2024	06:00:00	CREW LEAVES YARD
4	Arrive At Loc	Arrive At Loc	6/11/2024	08:00:00	ARRIVE AT LOCATION. MEET WITH CUSTOMER
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/11/2024	08:15:00	DISCUSS RIG-UP AND ANY HAZARDS THAT MAY EXIST
6	Rig-Up Equipment	Rig-Up Equipment	6/11/2024	08:20:00	RIG-UP EQUIPMENT
7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/11/2024	12:20:00	DISCUSS JOB PROCEDURES AND HAZARDS OF JOB, PRESSURE AND HAZARDS OF HES EQUIPMENT
8	Start Job	Start Job	6/11/2024	12:33:19	BEGIN RECORDING DATA
9	Drop Bottom Plug	Drop Bottom Plug	6/11/2024	12:33:34	CITADEL BOTTOM PLUG BY JOSH
10	Pressure Test	Pressure Test	6/11/2024	12:33:41	TEST HES LINES 4800 PSI
11	Pump Spacer 1	Pump Spacer 1	6/11/2024	12:40:52	120 BBL TUNED PRIME SPACER. 11.5 PPG, MIX D-AIR ON FLY. 50 GALLONS D-AIR TOTAL JOB
12	Pump Cap Cement	Pump Cap Cement	6/11/2024	13:04:50	700 SACKS ELASTICEM CAP CEMENT. 205.37 BBL. 13 PPG. TOCC=0'

13	Pump Lead Cement	Pump Lead Cement	6/11/2024	13:33:06	620 SACKS ISOBOND LEAD CEMENT. 174.30 BBL. 13 PPG. ESTIMATED TOLC=3113'
14	Shutdown	Shutdown	6/11/2024	13:39:44	SHUTDOWN TO FIX LEAK ON IRON STANDPIPE
15	Resume Pumping	Resume Pumping	6/11/2024	13:42:57	RESUME PUMPING
16	Pump Tail Cement	Pump Tail Cement	6/11/2024	14:05:50	1600 SACKS ELASTICEM TAIL CEMENT. 446.24 BBL. 13.2 PPG. ESTIMATED TOTC=7348'
17	Shutdown	Shutdown	6/11/2024	15:13:23	SHUTDOWN
18	Clean Lines	Clean Lines	6/11/2024	15:15:39	CLEAN PUMPS AND LINES 18 BBL
19	Shutdown	Shutdown	6/11/2024	15:23:05	SHUTDOWN
20	Drop Top Plug	Drop Top Plug	6/11/2024	15:23:32	CITADEL TOP PLUG BY JOSH
21	Pump Displacement	Pump Displacement	6/11/2024	15:23:34	406.4 BBL FRESH WATER DISPLACEMENT. 1ST 20 BBL HAS 10 GALLONS MICRO MATRIX CEMENT RETARDER. REMAINING DISPLACEMENT HAS 10 GALLONS RIG PROVIDED BIOCID
22	Bump Plug	Bump Plug	6/11/2024	16:16:09	FCP 2,740 PSI@4 BPM. BUMP PRESSURE 3,300 PSI. 120 BBL SPACER AND 56 BBL CAP CEMENT TO SURFACE
23	Check Floats	Check Floats	6/11/2024	16:17:09	FLOATS HOLD, 4.5 BBL BACK TO PUMP TRUCK
24	End Job	End Job	6/11/2024	16:18:18	STOP RECORDING DATA. FLUSH RIG STACK W/20 BBL AND 100 LB SUGAR
25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/11/2024	16:30:00	DISCUSS HAZARDS OF RIG-DOWN AND ANY OTHER HAZARDS THAT MAY EXIST
26	Rig-Down Equipment	Rig-Down Equipment	6/11/2024	16:35:00	RIG-DOWN EQUIPMENT
27	Rig-Down Completed	Rig-Down Completed	6/11/2024	17:30:00	RIG-DOWN COMPLETED
28	Crew Leave Location	Crew Leave Location	6/11/2024	18:00:00	CREW DEPARTS LOCATION. THANK YOU FOR CHOOSING HALLIBURTON.

3.0 Attachments

3.1 Real time job chart

