

HALLIBURTON

iCem[®] Service

CIVITAS RESOURCES-EBUS

Ft. Lupton District, CO

For: Danny Herrera

Date: Sunday, May 26, 2024

King 3-65 28-29 4AH

Case 1

Job Date: Sunday, May 26, 2024

Sincerely,

Tim Waggoner

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **King 3-65 28-29 4AH 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 95%, While pumping Cement 95%, While Pumping Displacement 95%
- Final Circulating Pressure and Pump Rate: 2,600 psi @ 4bpm.
- Returns to Surface: 120 bbl of spacer and 45 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 #:	05-001-10567-00
City, County:	Aurora, Adams
SO#:	909357107

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	5/26/24	05:00
Called Out Time:	5/25/24	23:00
Arrived On Location:	5/26/2024	04:00
Job Started:	5/26/2024	10:00
Job Completed:	5/26/2024	13:30
Departed Location:	5/26/2024	14:45

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	51
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.5
4	Casing set depth (shoe)	ft	18,207
5	TVD	ft	7,912
6	Float collar depth	ft	18,202
7	Length of rate hole	ft	11
8	Previous casing shoe depth	ft	3,305
9	Pre-job mud circulation time	hh:mm	1.5
10	Pre-job mud circulation rate	bpm	11

11	Pre-job mud circulation volume	bbls	760
12	Mud circulation pressure at start of cement	psi	280
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	404.08
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	95
18	Fluid returns to surface	Spacer/Cement, bbls	120 Spacer / 45Cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2,600@4bpm
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	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
pH	7		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	60	F	60 - 80 F	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 (ft ³ /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	11.5	120	2.57	16.21	262	4,249
Cap Cement	13	202	1.65	8.07	690	5,568
Lead Cement	13	189	1.58	7.42	675	5,008
Tail Cement	13.2	420	1.57	7.54	1505	11,347
Top Plug	1					
Displacement Fluid	8.33					

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	5/25/2024	23:00:00	CREW CALLED OUT 5/25/2024 2300 HRS. REQUESTED ON LOCATION 5/25/2024 0500 HRS.
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/26/2024	02:30:00	DISCUSS ROUTE AND HAZARDS OF DRIVING
3	Crew Leave Yard	Crew Leave Yard	5/26/2024	03:00:00	CREW LEAVES YARD
4	Arrive At Loc	Arrive At Loc	5/26/2024	04:00:00	ARRIVE AT LOCATION. MEET WITH CUSTOMER
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/26/2024	04:30:00	DISCUSS RIG-UP AND ANY HAZARDS THAT MAY EXIST
6	Rig-Up Equipment	Rig-Up Equipment	5/26/2024	04:45:00	RIG-UP EQUIPMENT
7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/26/2024	09:00:00	DISCUSS JOB PROCEDURES AND HAZARDS OF JOB, PRESSURE AND HAZARDS OF HES EQUIPMENT. RIG CIRCULATES BOTTOMS UP. 11 BPM/1100 PSI
8	Start Job	Start Job	5/26/2024	09:40:50	
9	Drop Bottom Plug	Drop Bottom Plug	5/26/2024	10:00:01	Citadel Bottom plug.
10	Pump Spacer 1	Pump Spacer 1	5/26/2024	10:01:09	Pump 120 bbl Tuned Prime Spacer @ 11.5ppg and 6 bpm
11	Pump Cap Cement	Pump Cap Cement	5/26/2024	10:28:31	Pump 690 sk / 202bbl Elasticem @ 13ppg and 8 bpm. Top @ 0'
12	Pump Lead Cement	Pump Lead Cement	5/26/2024	10:57:52	Pump 675 sk / 189 bbl of Isobond @ 13ppg and 8bpm. Top Of Lead @ 3281'
13	Pump Tail Cement	Pump Tail Cement	5/26/2024	11:24:02	Pump 1505 sk / 420bbl of Elasticem @13.2ppg and 8bpm. Top Of Tail at 7913'
14	Shutdown	Shutdown	5/26/2024	12:23:18	Wash Pumps and lines

15	Drop Top Plug	Drop Top Plug	5/26/2024	12:35:50	Citadel Top Plug
16	Pump Displacement	Pump Displacement	5/26/2024	12:36:43	Pump 404 bbl fresh water displacement. 1st 20 bbl containing 10gal MMCR. Remaining contains 10 gal Anhib (rig provided). 120 bbl tuned spacer to surface as well as 45 bbl cement.
17	Bump Plug	Bump Plug	5/26/2024	13:27:46	FCP 2,600-3,300psi
18	Check Floats	Check Floats	5/26/2024	13:30:24	Floats Held 5bbl back
19	End Job	End Job	5/26/2024	13:32:18	
20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/26/2024	13:45:00	DISCUSS HAZARDS OF RIG-DOWN AND ANY OTHER HAZARDS THAT MAY EXIST
21	Rig-Down Equipment	Rig-Down Equipment	5/26/2024	13:50:00	RIG-DOWN EQUIPMENT
22	Rig-Down Completed	Rig-Down Completed	5/26/2024	14:30:00	RIG-DOWN COMPLETED
23	Crew Leave Location	Crew Leave Location	5/26/2024	14:43:00	CREW DEPARTS LOCATION. THANK YOU FOR CHOOSING HALLIBURTON.

3.0 Attachments

3.1 Real Time Job Chart

