

# HALLIBURTON

iCem® Service

## **CIVITAS RESOURCES-EBUS**

Ft. Lupton District, Colorado

**For: Manny Parras**

Date: Thursday, October 31, 2024

**BIJOU 3-65 21-22-23 2BH**

Job Date: Thursday, October 31, 2024

Sincerely,

**Brandon Beutler**

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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 **BIJOU 3-65 21-22-23 2BH PRODUCTION JOB**. 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 Cemen t100 %, While Pumping Displacement 100 %**
- **Final Circulating Pressure and Pump Rate / 2,850 PSI and 4 BPM**
- **Returns to Surface / 120 bbls Spacer / 54 bbls Cement**
- **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 #:	05-001-10589
City, County:	
SO#:	909666716

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	10/31/2024	05:00
Called Out Time:	10/30/2024	22:00
Arrived On Location:	10/31/2024	03:30
Job Started:	10/31/2024	09:30
Job Completed:	10/31/2024	13:19
Departed Location:	10/31/2024	15:10

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	38
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	OBM
4	Casing set depth (shoe)	ft	24,275
5	TVD	ft	7,788
6	Float collar depth	ft	24,272
7	Length of rate hole	ft	11
8	Previous casing shoe depth	ft	3,520
9	Pre-job mud circulation time	hh:mm	02:25
10	Pre-job mud circulation rate	bpm	11

11	Pre-job mud circulation volume	bbls	1,595
12	Mud circulation pressure at start of cement	psi	950
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	538.8
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	120 / 54
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2,850 @ 4
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	
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	75	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	<120	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)
Spacer Fluid	11.5	120	2.57	16.2	212.62	4,247
Cap Cement	13	213.05	1.65	8.03	725	5,822
Lead Cement	13	180.09	1.58	7.38	640	4,723
Tail Cement	13.2	676.67	1.57	7.5	2,420	18,150
Top Plug	1					
Displacement Fluid	8.33	538				22,596

## Stage 2

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid						
Cap Cement						
Lead Cement						
Tail Cement						
Top Plug						
Displacement Fluid						

List of materials returned to yard:



2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Dwnhol e Density (ppg)	Cmb Pump Rate (bbl/mi n)	Pump A Pressur e (psi)	Cmb Stg Total (bbl)	Comments
Event	1	Call Out	Call Out	10/30/2024	22:00:00	USER					CIVITAS RESOURCES BIJOU 3-65 21-22-23 2BH 5.5" PRODUCTION CASING JOB - On location 10/31/2024 @ 05:00 AM
Event	2	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	10/31/2024	01:30:00	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	10/31/2024	01:40:00	USER					Depart From Yard

Event	4	Arrive At Loc	Arrive At Loc	10/31/2024	03:30:00	USER	Talk To Company Man (Josh) : TD = 24,286', TP = 24,275', ST = 3', OH = 8.5", CSG = 5.5" 20#, Previous Casing 9 5/8" Set @ 3,520', WF = OBM @ 9.2#, Test Water = pH – 7, Chlorides - < 120 ppm, 75 F.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	10/31/2024	03:50:00	USER	Spot Equipment
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/31/2024	04:00:00	USER	Review JSA With Crew Members
Event	7	Rig-Up Equipment	Rig-Up Equipment	10/31/2024	04:10:00	USER	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.
Event	8	Rig-Up Completed	Rig-Up Completed	10/31/2024	06:00:00	USER	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.

Event	9	Rig-Up Completed	Rig-Up Plug Container	10/31/2024	07:00:00	USER						Rig Up Plug Container And Rig Floor To Circulate With Rig Pumps. Rig Circulated From 07:00 AM To 09:25 AM At 460 GPM (11 BPM) With 1,230 psi, Good Returns.
Event	10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	10/31/2024	09:00:00	USER	8.03	0.00	13.24	6.26		Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
Event	11	Start Job	Start Job	10/31/2024	09:30:30	NONE	7.97	0.00	7.79	0.00		Start Recording Data
Event	12	Drop Bottom Plug	Drop Bottom Plug	10/31/2024	09:30:36	NONE	8.06	0.00	7.52	0.00		Drop Bottom Plug / Verified by Company Representative
Event	13	Pressure Test	Pressure Test	10/31/2024	09:32:51	USER	8.11	0.00	216.83	3.15		Pressure Test Lines to 6,550 PSI
Event	14	Pump Spacer 1	Pump Spacer 1	10/31/2024	09:37:26	NONE	8.05	0.00	81.77	0.00		Pump 120 bbls of Tuned Prime Spacer @ 11.5 PPG ( 2.57 ft3, 16.2 Gal/sk ). Total gallons 4,247. Pump Rate 7.7 BPM with 790 PSI. TOS=0'

Event	15	Pump Cap Cement	Pump Cap Cement	10/31/2024	09:53:31	NONE	11.31	7.80	295.86	0.13	Pump 213.05 bbls of ElastiCem @ 13 PPG ( 725 sk, 1.65 ft3, 8.03 Gal/sk ). Total gallons 5,822. Pump Rate 9 BPM with 970 PSI. TOCC=0'
Event	16	Pump Lead Cement	Pump Lead Cement	10/31/2024	10:17:17	NONE	12.90	9.29	953.08	0.08	Pump 180.09 bbls of IsoBond @ 13 PPG ( 640 sk, 1.57 ft3, 7.38 Gal/sk ). Total gallons 4,723. Pump Rate 9 BPM with 1,150 PSI. TOLC=3,313'
Event	17	Pump Tail Cement	Pump Tail Cement	10/31/2024	10:37:39	NONE	13.03	8.90	1176.05	0.15	Pump 676.67 bbls of ElastiCem @ 13.2 PPG ( 2,420 sk, 1.57 ft3, 7.5 Gal/sk ). Total gallons 18,150. Pump Rate 9 BPM with 900 PSI. TOTC=7,692'
Event	18	Shutdown	Shutdown	10/31/2024	12:00:12	USER	13.87	0.00	27.75	721.10	Shutdown Pumping Cement
Event	19	Clean Lines	Clean Lines	10/31/2024	12:04:50	USER	13.64	1.71	75.92	721.43	Clean Pump and Lines
Event	20	Drop Top Plug	Drop Top Plug	10/31/2024	12:09:34	NONE	8.26	0.00	11.89	740.57	Drop Top Plug / Verified by Company Representative

Event	21	Pump Displacement	Pump Displacement	10/31/2024	12:09:38	NONE	8.26	0.00	11.79	0.00	Pump 538 bbls of Fresh Water Displacement. First 20 bbls with MMCR. The Rest of Displacement with Company Provided Biocide. Total gallons 22,596. 54 bbls Cement to Surface
Event	22	Bump Plug	Bump Plug	10/31/2024	13:17:40	NONE	8.38	0.00	3359.54	537.41	Bump Plug / FCP is 2,850 PSI and Took Up To 3,350 PSI
Event	23	Bleed Casing	Bleed Casing	10/31/2024	13:18:00	USER	8.38	0.00	3367.62	537.41	Bled Pressure Back To Zero And Got 5.5 bbls Back
Event	24	Check Floats	Check Floats	10/31/2024	13:19:00	USER	8.13	0.00	139.20	537.41	Floats Held Good.
Event	25	End Job	End Job	10/31/2024	13:19:46	NONE	8.14	0.00	-1.03	537.41	Stop Recording Data
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/31/2024	13:40:00	USER					Review JSA With HES Crew Members
Event	27	Rig-Down Equipment	Rig-Down Equipment	10/31/2024	13:50:00	USER					Rig Down Iron, Plug Container, And Hoses Used On Job
Event	28	Rig-Down Completed	Rig-Down Completed	10/31/2024	14:40:00	USER					All Equipment Rigged Down With No Issues Or Incidents

Event	29	Safety Meeting - Departing Location	Safety Meeting - Departing Location	10/31/2024	15:00:00	USER	Review Journey Management And Route With Crew Members
Event	30	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	10/31/2024	15:10:00	USER	Depart location

3.0 Attachments

3.1 Real Time Job Chart

