

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, CO

For: Ashley Belvin

Date: Wednesday, July 24, 2024

Speed Goat FED

WELD

VERDAD Speed Goat FED 3432-02H

Job Date: Tuesday, July 23, 2024

SO# 909479925

Sincerely,

Georgii Kamenskii

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Table of Contents

1.0	Cementing Job Summary	4
1.1	Executive Summary	4
1.2	Job Overview	5
1.3	Water Field Test	7
1.4	Actual Pump Schedule.....	7
2.0	Real-Time Job Summary	8
2.1	Job Event Log.....	8
3.0	Attachments.....	11
3.1	Real Time Graphs.....	11

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Speed Goat FED / 3432-02H 5.5 CMT 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 – 2230PSI and Pump Rate 4BPM**
- **Returns to Surface- 61BBLs CMT**

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 #:	05-123-52501-00
City, County:	NEW RAYMER, WELD
SO#:	909479925

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	7/23/24	1400
Called Out Time:	7/23/24	0700
Arrived On Location:	7/23/24	1400
Job Started:	7/23/24	2036
Job Completed:	7/24/24	0011
Departed Location:	7/24/24	0130

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	65
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.7
4	Casing set depth (shoe)	ft	19,233
5	TVD	ft	5834
6	Float collar depth	ft	19,207
7	Length of rate hole	ft	35
8	Previous casing shoe depth	ft	1579
9	Pre-job mud circulation time	hh:mm	3:00
10	Pre-job mud circulation rate	bpm	12

11	Pre-job mud circulation volume	bbls	1000
12	Mud circulation pressure at start of cement	psi	400
13	Annual flow before the start of job	Y/N	YES
14	Pipe movement during cement job	Y/N	NO
15	Calculated displacement	bbls	426
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	95
18	Fluid returns to surface	Spacer/Cement, bbls	61 CMT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2230
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	10
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	70	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	1000	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	100	2.57	16.2		3539
Cap Cement	NA					
Lead Cement	13.2	285.2	1.57	7.78	1020	7935
Tail Cement	13.2	572.1	1.82	8.81	1765	15549
Top Plug	1					
Displacement Fluid	8.33	426				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Comments
1	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/23/2024	00:00:00	Safety Meeting-Pre job, Eyes on task Use impact gloves Have good communication to identify pinch points between steel hoses, iron and drill pipe and while making up the hammer unions. Identify points were hand/finger can get crushed
2	Call Out	Call Out	7/23/2024	07:00:00	Call out
3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/23/2024	13:15:00	Pre-Convoy Safety Meeting
4	Crew Leave Yard	Crew Leave Yard	7/23/2024	13:30:00	Crew Leave Yard
5	Arrive at Location from Service Center	Arrive at Location from Service Center	7/23/2024	14:00:00	Arrive at Location from Service Center
6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/23/2024	14:05:00	Pre-Rig Up Safety Meeting, Be aware of your surroundings, Use two spotters one in front and one in back of vehicle, Utilize hearing protection, Have good communication and make sure Line of Fire is clear before swinging hammer Identify points were hand/finger can get crushed
7	Rig-Up Equipment	Rig-Up Equipment	7/23/2024	14:45:00	Rig Up equipment as far as possible, Rig running casing

8	Start Job	Start Job	7/23/2024	20:36:45	Beginning of cement job. Begin recording chart.
9	Test Lines	Test Lines	7/23/2024	20:39:32	Filled lines with 3BBLs of fresh water and pressure tested HES lines to 5500PSI.
10	Pump Spacer 1	Pump Spacer 1	7/23/2024	20:46:13	Pumped 100BBLs of 11.5PPG Tuned Prime Spacer. Pumped at a rate of 6BPM with a pressure of 350PSI.
11	Drop Bottom Plug	Drop Bottom Plug	7/23/2024	21:09:59	Dropped Bottom plug with driller and Joe.
12	Pump Lead Cement	Pump Lead Cement	7/23/2024	21:10:03	Pumped 1020s / 285.2BBLs of 13.2PPG Elasticem Lead cement. Pumped at a rate of 8BPM with a pressure of 400PSI. Pre job calculated 61BBLs of lead to surface.
13	Pump Tail Cement	Pump Tail Cement	7/23/2024	21:50:05	Pumped 1765s / 572.1BBLs of 13.2PPG Neocem Tail cement. Pumped at a rate of 8BPM with a pressure of 600PSI. Pre job calculated TOT cement was at 5,210.697FT
14	Shutdown	Shutdown	7/23/2024	23:10:43	Shut down to wash up.
15	Clean Lines	Clean Lines	7/23/2024	23:11:36	Washed up pumps and lines with 20BBLs of fresh water.
16	Shutdown	Shutdown	7/23/2024	23:17:11	Shut down to ready plug and displace
17	Drop Top Plug	Drop Top Plug	7/23/2024	23:17:17	Dropped top plug with driller and Joe.
18	Pump Displacement	Pump Displacement	7/23/2024	23:17:19	Pumped 426BBLs of fresh water displacement. Added MC MX and B-9 Throughout. first 40BBLs with MMCR.
19	Bump Plug	Bump Plug	7/24/2024	00:03:10	BUMPED PLUG. FCP - 2230PSI BMP - 2800PSI. 61BBLs of cement to surface. Held pressure for 5 minutes then checked floats. 4BBLs back from floats.
20	End Job	End Job	7/24/2024	00:10:17	END OF JOB.
21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/24/2024	00:20:00	Pre-Rig Down Safety Meeting
22	Rig-Down Equipment	Rig-Down Equipment	7/24/2024	00:25:00	Rig-Down Equipment

23	Depart Location Safety Meeting	Depart Location Safety Meeting	7/24/2024	01:00:00	Depart Location Safety Meeting, Verify all equipment has been thoroughly pre-tripped. All safety and quality issues should be resolved before proceeding.
24	Crew Leave Location	Crew Leave Location	7/24/2024	01:30:00	Crew leave location

3.0 Attachments

3.1 Real Time Graphs

