HALLIBURTON

iCem® Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, CO

For: Ashley Belvin
Date: Sunday, July 28, 2024

Speed Goat FED
WELD
VERDAD Speed Goat FED 3432-01H
Job Date: Sunday, July 28, 2024
SO# 909490550

Sincerely,
Georgii Kamenskii

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Speed Goat FED / 3432-01H 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 80%**
- **Final Circulating Pressure 2111PSI and Pump Rate – 4BPM**
- **Returns to Surface 10BBLs spacer**

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 #:	05-123-52496
City, County:	New Raymer, WELD
SO#:	909490550

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	7/28/24	0100
Called Out Time:	7/27/24	1730
Arrived On Location:	7/27/24	2300
Job Started:	7/28/24	0406
Job Completed:	7/28/24	0733
Departed Location:	7/28/24	0900

	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	10.2
4	Casing set depth (shoe)	ft	19,076.22
5	TVD	ft	5,785
6	Float collar depth	ft	19,005.60
7	Length of rate hole	ft	30
8	Previous casing shoe depth	ft	1,578
9	Pre-job mud circulation time	hh:mm	2:00
10	Pre-job mud circulation rate	bpm	9.5

11	Pre-job mud circulation volume	bbls	600
12	Mud circulation pressure at start of cement	psi	1100
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	421
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	90
18	Fluid returns to surface	Spacer/Cement, bbls	10 Spacer
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2111
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	NO
24	NPT? If Yes, put #	Y/N and hours	NO

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 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						
Lead Cement	13.2	279.6	1.57	7.53	1000	7530
Tail Cement	13.2	569.5	1.98	9.51	1615	15358
Top Plug	1					
Displacement Fluid	8.33	421				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	7/27/2024	17:30:00	Call out
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/27/2024	21:20:00	Pre-Convoy Safety Meeting
3	Crew Leave Yard	Crew Leave Yard	7/27/2024	21:30:00	Crew Leave Yard
4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/27/2024	23:00:00	Arrive at Location from Service Center
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/27/2024	23:45:00	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
6	Rig-Up Equipment	Rig-Up Equipment	7/27/2024	23:50:00	Rig Up equipment as far as possible, Rig running casing
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/28/2024	03:20:00	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
8	Start Job	Start Job	7/28/2024	04:06:03	Start of job. Begin recording.

9	Test Lines	Test Lines	7/28/2024	04:07:55	Tested HES lines to 5500PSI.
10	Pump Spacer 1	Pump Spacer 1	7/28/2024	04:17:19	Pumped 100BBLs of 11.5PPG Tuned Prime Spacer. Pumped at a rate of 6BPM with a pressure of 480PSI.
11	Shutdown	Shutdown	7/28/2024	04:34:55	Shutdown at the end of 100BBLs of spacer. Built tub of 13.2PPG lead cement.
12	Drop Bottom Plug	Drop Bottom Plug	7/28/2024	04:35:01	Dropped Bottom plug with Joe and Driller.
13	Pump Lead Cement	Pump Lead Cement	7/28/2024	04:37:16	Pumped 1000s / 279.6BBLs of Elasticem Lead cement. Pumped at a rate of 8BPM with a pressure of 520PSI. Pre job calculated 59.6BBLs of lead cement to surface.
14	Pump Tail Cement	Pump Tail Cement	7/28/2024	05:16:00	Pumped 1615s / 569.5BBLs of 13.2PPG Neocem Tail cement. Pumped at a rate of 8.2BPM with a pressure of 890PSI. Pre job calculated TOT cement was at 5117.642FT.
15	Shutdown	Shutdown	7/28/2024	06:32:47	Shut down to wash up.
16	Clean Lines	Clean Lines	7/28/2024	06:33:27	Washed pumps and lines with 15BBLs of fresh water.
17	Shutdown	Shutdown	7/28/2024	06:41:14	Shutdown to Displace.
18	Drop Top Plug	Drop Top Plug	7/28/2024	06:41:20	Dropped Top Plug with driller and Steve.
19	Pump Displacement	Pump Displacement	7/28/2024	06:41:22	Pumped 421BBls of fresh water displacement. Poured MMCR the first 40BBLs. Poured MCMX corrosion inhibitor and BE-9 throughout remaining displacement.
20	Bump Plug	Bump Plug	7/28/2024	07:25:56	BUMP PLUG. FCP - 2111PSI BMP - 2670PSI. 10BBLs spacer to surface.
21	End Job	End Job	7/28/2024	07:32:37	Job Completed.
22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/28/2024	07:40:00	Pre-Rig Down Safety Meeting
23	Rig-Down Equipment	Rig-Down Equipment	7/28/2024	07:50:00	Rig-Down Equipment

24	Depart Location Safety Meeting	Depart Location Safety Meeting	7/28/2024	08:30:00	Depart Location Safety Meeting, Verify all equipment has been thoroughly pre-tripped. All safety and quality issues should be resolved before proceeding.
25	Crew Leave Location	Crew Leave Location	7/28/2024	09:00:00	Crew leave location

3.0 Attachments

3.1 Real Time Graphs