

HALLIBURTON

iCem® Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, CO

For: Ashley Belvin

Date: Tuesday, June 18, 2024

SPEED GOAT

WELD

VERDAD Speed Goat 3432-09H

Job Date: Tuesday, June 18, 2024

SO#909402530

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 3432-09H 5.5 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 1900 and Pump Rate 4BPM**
- **Returns to Surface - 40BBLs 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 #:	
City, County:	New Raymer, WELD
SO#:	909402530

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	6/18/24	0400
Called Out Time:	6/17/24	2200
Arrived On Location:	6/18/24	0300
Job Started:	6/18/24	0848
Job Completed:	6/18/24	1219
Departed Location:	6/18/24	1400

	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
4	Casing set depth (shoe)	ft	20,765
5	TVD	ft	5763
6	Float collar depth	ft	20717
7	Length of rate hole	ft	35
8	Previous casing shoe depth	ft	1600
9	Pre-job mud circulation time	hh:mm	2:00
10	Pre-job mud circulation rate	bpm	10

11	Pre-job mud circulation volume	bbls	850
12	Mud circulation pressure at start of cement	psi	500
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	459
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	95
18	Fluid returns to surface	Spacer/Cement, bbls	40CMT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	1900
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	65	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	800	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	355.113	1.57	7.78	1270	9880
Tail Cement	13.2	575.352	1.82	8.81	1775	15637
Top Plug	1					
Displacement Fluid	8.33	459				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	6/17/2024	22:00:00	Call out
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/18/2024	00:30:00	Pre-Convoy Safety Meeting
3	Crew Leave Yard	Crew Leave Yard	6/18/2024	01:00:00	Crew Leave Yard
4	Arrive at Location from Service Center	Arrive at Location from Service Center	6/18/2024	03:00:00	Arrive at Location from Service Center
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/18/2024	03:10:00	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	6/18/2024	03:15:00	Rig Up equipment as far as possible, Rig running casing
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	6/18/2024	08:25:00	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	6/18/2024	08:47:30	Start of job. Begin recording.

9	Test Lines	Test Lines	6/18/2024	08:50:23	Filled and Pressure tested HES lines to 5000PSI.
10	Pump Spacer 1	Pump Spacer 1	6/18/2024	08:55:12	Pumped 100BBLs of 11.5PPG Tuned Prime Spacer. Pumped at a rate of 6BPM with a pressure of 500PSI.
11	Drop Bottom Plug	Drop Bottom Plug	6/18/2024	09:13:41	Dropped bottom plug with Tim and driller.
12	Pump Lead Cement	Pump Lead Cement	6/18/2024	09:13:49	Pumped 1270s / 355.113BBLs of 13.2PPG Elasticem Lead cement. Pumped at a rate of 8BPM with a pressure of 400PSI. Pre job calculated 71.8BBLs of lead cement to surface.
13	Pump Tail Cement	Pump Tail Cement	6/18/2024	09:58:59	Pumped 1775s / 575.352BBLs of 13.2 Neocem Tail cement. Pumped at a rate of 8.2BPM with a pressure of 900PSI. Pre job calculated TOT cement was at 6,663.236ft
14	Shutdown	Shutdown	6/18/2024	11:13:31	Shutdown to wash pumps and lines.
15	Clean Lines	Clean Lines	6/18/2024	11:14:27	Washed pumps and lines with 15BBLs.
16	Drop Top Plug	Drop Top Plug	6/18/2024	11:21:40	Dropped plug with driller and Tim.
17	Pump Displacement	Pump Displacement	6/18/2024	11:21:42	Pumped 459.9BBLs of fresh water displacement. First 40BBLs with MMCR. Remaining displacement with BE-9 and MCMX.
18	Bump Plug	Bump Plug	6/18/2024	12:13:12	BUMP PLUG. FCP - 1900PSI. BUMP - 2670PSI. 40BBLs of cement to surface.
19	End Job	End Job	6/18/2024	12:19:44	END OF JOB.
20	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/18/2024	12:30:00	Pre-Rig Down Safety Meeting
21	Rig-Down Equipment	Rig-Down Equipment	6/18/2024	12:35:00	Rig-Down Equipment
22	Depart Location Safety Meeting	Depart Location Safety Meeting	6/18/2024	13:30:00	Depart Location Safety Meeting, Verify all equipment has been thoroughly pre-tripped. All safety and quality issues should be resolved before proceeding.
23	Crew Leave Location	Crew Leave Location	6/18/2024	13:45:00	Crew leave loaction

3.0 Attachments

3.1 Real Time Graphs

