

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC-EBUS

For: Ashley Belvin

Date: Thursday, July 4, 2024

SPEED GOAT FED 3432

Verdad - Precision 464 - Speed Goat Fed 3432-06H Production

Job Date: Thursday, July 4, 2024

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 3432-06H 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 100% , While pumping Cement 100%, While Pumping Displacement 100%**
- **Final Circulating Pressure and Pump Rate 2000 PSI @ 4**
- **Returns to Surface 63 BBLs 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 #:	05-123-52503
City, County:	W RAYMER, WELD
SO#:	909438785

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	7/4/24	4:00
Called Out Time:	7/3/24	21:00
Arrived On Location:	7/4/24	3:10
Job Started:	7/4/24	9:30
Job Completed:	7/4/24	13:15
Departed Location:	7/4/24	15:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	70
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.6
4	Casing set depth (shoe)	ft	19960
5	TVD	ft	5845
6	Float collar depth	ft	19915
7	Length of rate hole	ft	40
8	Previous casing shoe depth	ft	1579
9	Pre-job mud circulation time	hh:mm	2:00

10	Pre-job mud circulation rate	bpm	9
11	Pre-job mud circulation volume	bbls	1080
12	Mud circulation pressure at start of cement	psi	1019
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	442
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	CMT,63 BBLS
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2000 @ 4
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	3
23	Add hours? If Yes, put #	Y/N and hours	Y/2
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	6		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	50	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	0	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	100	2.57	16.2	219	3549
Cap Cement						
Lead Cement	13.2	319	1.57	7.78	1142	8883
Tail Cement	13.2	570.5	1.82	8.81	1760	15498
Top Plug						
Displacement Fluid	8.4	442				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Summit Crew Notified Date/Time	Crew Notified Date/Time	7/3/2024	21:00:30	Crew called out for VERDAD Production
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/3/2024	23:45:32	Discussed route and possible hazards
3	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/4/2024	00:00:22	Depart yard w/ 1 pump, 2 660s, 1 pickup and 4 personnel.
4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/4/2024	03:10:00	Requested on location @ 0400
5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	7/4/2024	03:20:26	Discussed location and possible hazards. Water test: Temp - 50, Chlorides - 0, PH - 6, Sulfates - <200. 8 1/2 TD @ 19999.8'. Production casing set @ 19960'. 5.5" 20# P110 - ST - 45' .0222 bbl/ft. CSG/OH - .0408 bbl/ft. CSG/CSG - .0479 bbl/ft 9 5/8" 36# J55 set @ 1579'. Mud Weight - 9.6 ppg
6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/4/2024	03:30:33	Discussed rig up and possible hazards.
7	Rig-up Lines	Rig-up Lines	7/4/2024	03:40:48	Rig up equipment
8	Casing on Bottom	Casing on Bottom	7/4/2024	06:45:01	
9	Circulate Well	Circulate Well	7/4/2024	07:45:03	Rig circulating well 10 bpm @ 1254 psi

10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/4/2024	09:15:04	Discussed job and possible hazards with everyone on location.
11	Start Job	Start Job	7/4/2024	09:27:01	
12	Pump Spacer 1	Fill Lines	7/4/2024	09:28:11	Pumped 3 bbls of FW
13	Pressure Test	Pressure Test	7/4/2024	09:30:13	Test lines to 6500 psi
14	Pump Spacer 1	Pump Tuned Spacer	7/4/2024	09:39:19	Pumped 100 bbls of 11.5 ppg of Tuned Spacer. 2.57 cuft/sk and 16.2 gal/sk. Verified weight with pressurized mud scales.
15	Drop Bottom Plug	Drop Bottom Plug	7/4/2024	09:57:12	
16	Pump Lead Cement	Pump Lead Cement	7/4/2024	09:59:35	Pumped 319 bbls of 13.2 ppg Isobond cmt. 1142 sks, 1.57 cuft/sk, and 7.78 gal/sk. Verified weight with pressurized mud scales.
17	Pump Tail Cement	Pump Tail Cement	7/4/2024	10:42:16	Pumped 570.5 bbls of 13.2 ppg Neocem. 1760 sks, 1.82 cuft/sk, and 8.81 gal/sk. Verified weight with pressurized mud scales. Estimated TOC @ 6001.67'
18	Shutdown	Shutdown/Flush Lines	7/4/2024	12:04:32	
19	Drop Top Plug	Drop Top Plug	7/4/2024	12:14:01	3rd party rupture plug
20	Pump Displacement	Pump Displacement	7/4/2024	12:15:03	Pumped 442 bbls of displacement. First 40 bbl w/ MMCR and 402 bblsw/ MX 820-6 & BELLACIDE
21	Bump Plug	Bump Plug	7/4/2024	13:06:51	Bump plug from 2000 - 2550 psi
22	Check Floats	Check Floats	7/4/2024	13:11:53	Floats are good. Got 4 bbls back.
23	End Job	End Job	7/4/2024	13:12:58	Got 63 bbls of cement back to surface.
24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/4/2024	13:20:55	

25	Rig-Down Equipment	Rig-Down Equipment	7/4/2024	13:30:00	
26	Depart Location Safety Meeting	Depart Location Safety Meeting	7/4/2024	14:45:01	
27	Depart Location	Depart Location	7/4/2024	15:00:03	Thank you for using Halliburton cement. Andrew Glover and crew.

3.0 Attachments

3.1 Real Time Graphs

