HALLIBURTON

iCem® Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, COLORADO

For: Ashley Belvin <ABelvin@VerdadResources.com>
Date: Monday, June 24, 2024

SPEED GOAT FED
WELD
VERDAD RESOURCES SPEED GOAT FED #3432-08H PRODUCTION
Job Date: Monday, June 24, 2024

Sincerely,
Georgii Kamenskii

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Table of Contents

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **SPEED GOAT FED #3432-08H 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.

- **Returns to Surface – 50 bbls of 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 #:	05-123-52504
City, County:	NEW RAYMER, WELD
SO#:	0909407135

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	06/24/2024	11:00
Called Out Time:	06/24/2024	04:00
Arrived On Location:	06/24/2024	10:00
Job Started:	06/24/2024	18:10
Job Completed:	06/24/2024	22:00
Departed Location:	06/24/2024	23:00

	Description	**Units**	**Value**
1	Surface temperature at the time of the job	degree F	80
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.9
4	Casing set depth (shoe)	ft	20,745
5	TVD	ft	5823
6	Float collar depth	ft	20,696
7	Length of rate hole	ft	37
8	Previous casing shoe depth	ft	1,580
9	Pre-job mud circulation time	hh:mm	1620

10	Pre-job mud circulation rate	bpm	9.5
11	Pre-job mud circulation volume	bbls	950
12	Mud circulation pressure at start of cement	psi	1,290
13	Annual flow before the start of job	Y/N	YES
14	Pipe movement during cement job	Y/N	NO
15	Calculated displacement	bbls	459.5
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	100 BBLS SPACER 50 BBLS CEMENT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2,080 @4 BPM
20	Number of Centralizers	-	215
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	4
24	NPT? If Yes, put #	Y/N and hours	0

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	290	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	218	1,620
Cap Cement	N/A	N/A	N/A	N/A	N/A	N/A
Lead Cement	13.2	349.5	1.57	7.78	1,250	9,725
Tail Cement	13.2	570.5	1.82	8.81	1,760	15,506
Top Plug	N/A	N/A	N/A	N/A	N/A	N/A
Displacement Fluid	8.4	459.5	N/A	N/A	N/A	19,278

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	6/24/2024	04:00:00	VERDAD RESOURCES SPEED GOAT FED #3234-08H 5 1/2" PRODUCTION CASING JOB - On location 06/24/2024 @ 11:00 AM
2	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	6/24/2024	06:45:00	Review Journey Management And Route With Crew Members
3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/24/2024	07:00:00	Depart From Yard
4	Arrive At Loc	Arrive At Loc	6/24/2024	10:30:00	Talk To Company Man () : TD =20,782', TP = 20,745.73', ST = 49.58', OH = 8 1/2", CSG = 5 1/2" 20#, Previous Casing 9 5/8" 36# Set @1,580', WF = OBM @ 9.9#, Test Water = pH – 7, Chlorides - < 290 ppm, 70 F
5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	6/24/2024	10:40:00	Spot Equipment
6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	6/24/2024	10:50:00	Review JSA With Crew Members
7	Rig-Up Equipment	Rig-Up Equipment	6/24/2024	11:00:00	Rig Up Iron And Hoses Needed For Job
8	Rig-Up Completed	Rig-Up Completed	6/24/2024	12:00:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.

9	Rig-Up Equipment	Rig-Up Plug Container	6/24/2024	15:45:00	Rig Up Plug Container And Rig Floor To Circulate Well, Rig Circulated Well From 16:00 To 18:00 @ 10 BPM With 1050 psi.
10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	6/24/2024	18:00:00	Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
11	Start Job	Start Job	6/24/2024	18:15:25	Start Job.
12	Test Lines	Test Lines	6/24/2024	18:17:58	Performed A Kickout Pressure Test On Both Pumps To 500 psi Then Tested Lines To 7000 psi, Good Test.
13	Pump Spacer 1	Pump Spacer 1	6/24/2024	18:24:33	Pumped Spacer 100 bbls Of Tunes Prime @ 11.5 PPG @6 BPM With 255 psi, Good Returns. HOS=2,086' TOS=0'.
14	Check Weight	Check Weight	6/24/2024	18:30:04	Performed A Weight Check With Pressurized Mud Scale, 11.5 ppg.
15	Drop Bottom Plug	Drop Bottom Plug	6/24/2024	18:41:54	Dropped Bottom Plug
16	Pump Lead Cement	Pump Lead Cement	6/24/2024	18:41:58	Pumped 349.5 bbls Of Lead Cement 1,250 Sacks With A Yield Of 1.57 And A Water Requirement Of 7.78 Gals/Sack. 8 BPM With 380 psi, Good Returns. HOLC 8,067' TOLC=0'.
17	Check Weight	Check Weight	6/24/2024	18:54:32	Performed A Weight Check With Pressurized Mud Scale, 13.2 ppg.
18	Pump Tail Cement	Pump Tail Cement	6/24/2024	19:27:48	Pumped 570.5 bbls Of Tail Cement 1,760 Sacks With A Yield Of 1.82 And A Water Requirement Of 8.81 Gals/Sack. 8 BPM With 541 psi, Good Returns. HOTC=13,956' TOTC=6,789'.
19	Check Weight	Check Weight	6/24/2024	19:43:22	Performed A Weight Check With Pressurized Mud Scale, 13.2 ppg.
20	Check Weight	Check Weight	6/24/2024	20:14:32	
21	Shutdown	Shutdown	6/24/2024	20:48:10	Shutdown After Cement
22	Clean Lines	Clean Lines	6/24/2024	20:50:32	Wash Both Pumps And Lines To Open Top Tank
23	Drop Top Plug	Drop Top Plug	6/24/2024	20:54:04	Dropped Top Plug

24	Pump Displacement	Pump Displacement	6/24/2024	20:54:58	Pump Displacement 459.5 bbls Of Treated Water, First 40 bbls Of MMCR Followed By 419.5 bbls Of Biocide Treated Water
25	Pump Displacement	100 bbls Pumped Into Displacement	6/24/2024	21:05:43	100 bbls Away Into Displacement 9.5 BPM With 1,949 psi, Good Returns
26	Pump Displacement	200 bbls Pumped Into Displacement	6/24/2024	21:16:28	200 bbls Away Into Displacement 9.5 BPM With 2,701 psi, Good Returns
27	Pump Displacement	300 bbls Pumped Into Displacement	6/24/2024	21:27:56	300 bbls Away Into Displacement 8.5 BPM With 2,701 psi, Good Returns
28	Spacer Returns to Surface	Spacer Returns to Surface	6/24/2024	21:30:58	At 310 bbls Into Displacement We Got Spacer To Surface, We Got A Total Of 100 bbls Of Spacer And 50 bbls Of Lead Cement Back To Surface.
29	Pump Displacement	400 bbls Pumped Into Displacement	6/24/2024	21:40:02	400 bbls Away Into Displacement 8.5 BPM With 2,691 psi, Good Returns
30	Bump Plug	Bump Plug	6/24/2024	21:53:17	Bumped Plug With Calculated Displacement And Put 500 psi Over Final Circulating Pressure. Pressure Climbed From 2,080 To 2,640 psi.
31	Bleed Casing	Bleed Casing	6/24/2024	21:58:14	Bled Pressure Back To Zero And Got 4 bbls Back
32	Check Floats	Check Floats	6/24/2024	21:59:27	Floats Held Good.
33	End Job	End Job	6/24/2024	22:00:35	End Job.
34	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	6/24/2024	22:05:00	Review JSA With HES Crew Members
35	Rig-Down Equipment	Rig-Down Equipment	6/24/2024	22:10:00	Rig Down Iron, Plug Container, And Hoses Used On Job
36	Rig-Down Completed	Rig-Down Complete	6/24/2024	22:50:00	All Equipment Rigged Down With No Issues Or Incidents

37	Safety Meeting - Departing Location	Safety Meeting - Departing Location	6/24/2024	22:55:00	Review Journey Management And Route With Crew Members
38	Depart Location	Depart Location	6/24/2024	23:00:00	Depart location

3.0 Attachments

3.1 Real Time Graphs