HALLIBURTON

iCem® Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, COLORAD0

For: Ashley Belvin

Date: Sunday, July 14, 2024

SPEED GOAT FED

WELD

VERDAD SPEED GOAT FED #3432-04H PRODUCTION

Job Date: Sunday, July 14, 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 #3432-04H 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 – 50bbls of Lead Cement**

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 #:	05-123-52494-00
City, County:	NEW RAYMER, WELD
SO#:	0909459209

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	7/14/2024	05:00
Called Out Time:	7/14/2024	05:00
Arrived On Location:	7/14/2024	09:00
Job Started:	7/14/2024	11:06
Job Completed:	7/14/2024	14:44
Departed Location:	7/14/2024	16:00

	Description	**Units**	**Value**
1	Surface temperature at the time of the job	degree F	85
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.6
4	Casing set depth (shoe)	ft	19,487
5	TVD	ft	5,837
6	Float collar depth	ft	19,419
7	Length of rate hole	ft	16
8	Previous casing shoe depth	ft	1,580
9	Pre-job mud circulation time	hh:mm	05:00

10	Pre-job mud circulation rate	bpm	9.5
11	Pre-job mud circulation volume	bbls	05:00
12	Mud circulation pressure at start of cement	psi	1,025
13	Annual flow before the start of job	Y/N	YES
14	Pipe movement during cement job	Y/N	NO
15	Calculated displacement	bbls	431
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	100 BBLS OF SPACER 50 BBLS OF LEAD CMT
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	4/2,160
20	Number of Centralizers	-	208
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	0
24	NPT? If Yes, put #	Y/N and hours	YES

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	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	219	1,620
Cap Cement	N/A	N/A	N/A	N/A	N/A	N/A
Lead Cement	13.2	295.9	1.56	7.78	1065	8,285.7
Tail Cement	13.2	570.5	1.82	8.81	1760	15,5056
Top Plug	N/A	N/A	N/A	N/A	N/A	N/A
Displacement Fluid	8.4	431	N/A	N/A	N/A	18,102

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	7/14/2024	05:00:00	VERDAD RESOURCES SPEED GOAT FED # 3432-04H 5 1/2" PRODUCTION CASING JOB - Got Called Out At 07/14/24 @ 05:00 AM To Be On location 07/14/24 @ 05:00 AM
2	Circulate Well	Circulate Well	7/14/2024	05:00:01	Rig Circulated Well From 05:00 To 10:00 @ 9.5 BPM With 1025 psi.
3	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	7/14/2024	06:45:00	Review Journey Management And Route With Crew Members
4	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/14/2024	07:00:00	Depart From Yard
5	Arrive At Loc	Arrive At Loc	7/14/2024	09:00:00	Talk To Company Man () : TD = 19,503', TP = 19487', ST = 48', OH = 8 1/2", CSG = 5 1/2" 20#, Previous Casing 9 5/8" 36# Set @ 1,580', WF = OBM @ 9.6#, Test Water = pH – 7, Chlorides - < 290 ppm, 75 F
6	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	7/14/2024	09:10:00	Spot Equipment
7	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/14/2024	09:20:00	Review JSA With Crew Members
8	Rig-Up Equipment	Rig-Up Equipment	7/14/2024	09:30:00	Rig Up Iron And Hoses Needed For Job
9	Rig-Up Completed	Rig-Up Completed	7/14/2024	09:50:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.

10	Safety Meeting - Pre Job	Safety Meeting - Pre Job	7/14/2024	10:00:00	Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
11	Rig-up Lines	Rig-up Plug Contaier On Rig Floor	7/14/2024	10:15:00	While Rigging Up Plug Container We Had A Hard Time Tightening It Up So After Messing With It For A While, I Removed It And Washed The Face Seal And Noticed Some How It Got Pinched. We Tried Removing It To Install A New One But Had No Successes. I Called Coordinator For A New Plug Container For Back Up And As Per Customer We Ran The Job With Swage.
12	Start Job	Start Job	7/14/2024	11:06:51	Start Job.
13	Test Lines	Test Lines	7/14/2024	11:09:25	Performed A Kickout Pressure Test On Both Pumps To 500 psi Then Tested Lines To 6500 psi, Good Test.
14	Pump Spacer 1	Pump Spacer 1	7/14/2024	11:12:55	Pumped Spacer 100 bbls Of Tunes Prime @ 11.5 PPG @6 BPM With 255 psi, Good Returns. HOS=2,086' TOS=0'.
15	Check Weight	Check Weight	7/14/2024	11:16:21	Performed A Weight Check With Pressurized Mud Scale, 11.5 ppg.
16	Pump Lead Cement	Pump Lead Cement	7/14/2024	11:35:36	Pumped 295.9 bbls Of Lead Cement 1,065 Sacks With A Yield Of 1.56 And A Water Requirement Of 7.78 Gals/Sack. 8 BPM With 380 psi, Good Returns. HOLC 6,763' TOLC=0'.
17	Check Weight	Check Weight	7/14/2024	11:40:14	Performed A Weight Check With Pressurized Mud Scale, 13.2 ppg.
18	Pump Tail Cement	Pump Tail Cement	7/14/2024	12:17:12	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 1,041 psi, Good Returns. HOTC=13,956' TOTC=5,531'.
19	Check Weight	Check Weight	7/14/2024	12:34:52	Performed A Weight Check With Pressurized Mud Scale, 13.2 ppg.
20	Clean Lines	Clean Lines	7/14/2024	13:36:05	Wash Both Pumps And Lines To Open Top Tank
21	Drop Top Plug	Drop Top Plug	7/14/2024	13:41:19	Dropped Top Plug
22	Pump Displacement	Pump Displacement	7/14/2024	13:42:29	Pump Displacement 431 bbls Of Treated Water, First 40 bbls Of MMCR Followed By 391 bbls Of Biocide Treated Water

23	Resume	100 bbls Pumped Into Displacement	7/14/2024	13:54:00	100 bbls Away Into Displacement 8 BPM With 1,500 psi, Good Returns
24	Resume	200 bbls Pumped Into Displacement	7/14/2024	14:07:00	200 bbls Away Into Displacement 8 BPM With 2,580 psi, Good Returns
25	Cement Returns to Surface	Cement Returns to Surface	7/14/2024	14:11:15	At 280 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.
26	Resume	300 bbls Pumped Into Displacement	7/14/2024	14:14:00	300 bbls Away Into Displacement 8 BPM With 2,840 psi, Good Returns
27	Resume	400 bbls Pumped Into Displacement	7/14/2024	14:30:00	400 bbls Away Into Displacement 8 BPM With 2,700 psi, Good Returns
28	Bump Plug	Bump Plug	7/14/2024	14:33:36	Bumped Plug With Calculated Displacement And Put 500 psi Over Final Circulating Pressure. Pressure Climbed From 2,160 To 2,700 psi.
29	Bleed Casing	Bleed Casing	7/14/2024	14:36:00	Bled Pressure Back To Zero And Got 4 bbls Back
30	Check Floats	Check Floats	7/14/2024	14:40:00	Floats Held Good.
31	End Job	End Job	7/14/2024	14:44:18	End Job
32	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	7/14/2024	14:55:00	Review JSA With HES Crew Members
33	Rig-Down Equipment	Rig-Down Equipment	7/14/2024	15:00:00	Rig Down Iron, Plug Container, And Hoses Used On Job
34	Rig-Down Completed	Rig-Down Complete	7/14/2024	15:45:00	All Equipment Rigged Down With No Issues Or Incidents
35	Safety Meeting - Departing Location	Safety Meeting - Departing Location	7/14/2024	15:55:00	Review Journey Management And Route With Crew Members
36	Depart Location	Depart Location	7/14/2024	16:00:00	Depart location

3.0 Attachments

3.1 Real Time Graphs