

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, CO

For: Ashley Belvin

Date: Thursday, June 13, 2024

SPEED GOAT FED 3435-14H,WELD

Weld / New Raymer

Verdad - Precision 464 - Speed Goat Fed 3435-14H

Job Date: Thursday, June 13, 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 3435-14H - 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 100% , While pumping Cement 100%, While Pumping Displacement 100%**
- **Final Circulating Pressure and Pump Rate 2300 At 4 BPM**
- **Returns to Surface 53 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 #:	05-123-52497-00
City, County:	NEW RAYMER,
SO#:	0909394075

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	6/13/2024	14:30
Called Out Time:	6/13/2024	08:30
Arrived On Location:	6/13/2024	13:30
Job Started:	6/13/2024	17:15
Job Completed:	6/13/2024	20:30
Departed Location:	6/13/2024	21:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	95
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	Ppg	9.6
4	Casing set depth (shoe)	Ft	14518
5	TVD	Ft	5616
6	Float collar depth	Ft	14468
7	Length of rate hole	Ft	36
8	Previous casing shoe depth	Ft	1579
9	Pre-job mud circulation time	hh:mm	01:00
10	Pre-job mud circulation rate	bpm	10

11	Pre-job mud circulation volume	bbls	600
12	Mud circulation pressure at start of cement	psi	900
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	No
15	Calculated displacement	bbls	321.2
16	Job displaced by	Rig/HES	Hes
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	53 Bbls Cmt
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2300 @ 4
20	Number of Centralizers	-	154
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	4
23	Add hours? If Yes, put #	Y/N and hours	n
24	NPT? If Yes, put #	Y/N and hours	N

1.1 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	75	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	<300	ppm	3000 ppm	Can shorten thickening time

1.2 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	218.48	3539
Cap Cement						
Lead Cement	13.2	315.97	1.57	7.78	1130	8791
Tail Cement	13.2	341.97	1.82	8.81	1055	9295
Top Plug						
Displacement Fluid	8.33	321.2				13,490.4

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	6/13/2024	08:00:00	Verdad - Precision 464 - Speed Goat Fed 3435-14H Production Casing Job - On location 06/13/24 @ 14:30 PM
2	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	6/13/2024	11:20:00	Review Journey Management And Route With Crew Members
3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/13/2024	11:30:00	Depart From Yard
4	Arrive At Loc	Arrive At Loc	6/13/2024	14:00:00	Talk To Company Man (Tim Jones) : TD = 14554 TP = 14518', ST = 50', OH = 8.5", CSG = 5.5" 20#, Previous Casing 9&5/8" Set @ 1579 WF = OBM @ 9.6#, Test Water = pH - 7, Chlorides - < 200 ppm, 75F.
5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	6/13/2024	14:10:00	Spot Equipment
6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/13/2024	14:20:00	Review JSA With Crew Members
7	Rig-Up Equipment	Rig-Up Equipment	6/13/2024	15:30:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.
8	Rig-Up Completed	Rig-Up Completed	6/13/2024	15:40:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.
9	Rig-Up Completed	Rig-Up Plug Container	6/13/2024	15:50:00	Rig Up Plug Container And Rig Floor To Circulate With Rig Pumps. Rig Circulated From 16:00 PM To 17:00 PM At 420 GPM (10 BPM) With 900 psi, Good Returns.
10	Safety Meeting -	Safety Meeting - Pre	6/13/2024	17:00:00	Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members

	Pre Job	Job			
11	Start Job	Start Job	6/13/2024	17:14:43	Started Recording Data
12	Test Lines	Test Lines	6/13/2024	17:18:12	Tested 500 EKO Pressure Tested To 5400 PSI
13	Pump Spacer	Pump Spacer	6/13/2024	17:29:51	Pumped Tuned Prime Spacer 6 BPM With 600 Psi Avg 11.5 PPG 100 BBlS 2.57 Y 16.2 WR 218.48 SKS 3539 Mix Gallons
14	Drop Bottom Plug	Drop Bottom Plug	6/13/2024	17:48:09	Verified Plug Was Dropped With Company Rep
15	Pump Lead Cement	Pump Lead Cement	6/13/2024	17:48:14	Pumped ElastiCem Lead CMT 8 BPM 500 PSI Avg 13.2 PPG 315.97 Bbls 1.57 Y 7.78 WR 1130 SKS 8791 Mlx Gallons
16	Check Weight	Check Weight	6/13/2024	17:51:13	Verified Weight With Pressurized Scales
17	Check Weight	Check Weight	6/13/2024	17:56:26	Verified Wheight With Pressurized Scales
18	Pump Tail Cement	Pump Tail Cement	6/13/2024	18:28:10	Pumped NeoCem Tail @ 8 BPM With 1500 PSI Avg 13.2 PPG 341.97 BBlS 1.82 Y 8.81 WR 1055 SKS 9295 Mlx Gallons Top Of Cmt Set At 6163.59"
19	Check Weight	Check Weight	6/13/2024	18:36:04	Verified Weight With Pressurized Scales
20	Check Weight	Check Weight	6/13/2024	18:51:00	Verified Weight With Pressurized Scales
21	Clean Lines	Clean Lines	6/13/2024	19:20:19	Pumped 15 BBlS Of Fresh Water To Wash Up Tank
22	Drop Top Plug	Drop Top Plug	6/13/2024	19:29:08	Verified Top Plug Was Dropped With Company Rep
23	Pump Displacement	Pump Displacement	6/13/2024	19:29:17	Pumped Displacement At 9 Bpm Avg With 2500 Psi Avg First 40 BBlS MMCR Followed With Displacement Chems Through Out. Total of 321.2 BBlS Saw Spacer at 170 Bbls Saw Cmt At 270 BBlS Away. For 53 Bbls CMT Back To Surface.

24	Bump Plug	Bump Plug	6/13/2024	20:05:27	Final Circulating Pressure 2300 At 4 BPM Brought Pressure To 2800 Psi
25	Bleed Casing	Bleed Casing	6/13/2024	20:10:00	Bled Pressure Back To Zero And Got 3.5 bbls Back
26	Check Floats	Check Floats	6/13/2024	20:11:00	Floats Held Good.
27	End Job	End Job	6/13/2024	20:13:01	Stopped Recording All Data
28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/13/2024	20:21:00	Review JSA With HES Crew Members
29	Rig-Down Equipment	Rig-Down Equipment	6/13/2024	20:30:00	Rig Down Iron, Plug Container, And Hoses Used On Job
30	Rig-Down Completed	Rig-Down Completed	6/13/2024	21:00:00	All Equipment Rigged Down With No Issues Or Incidents
31	Safety Meeting - Departing Location	Safety Meeting - Departing Location	6/13/2024	21:30:00	Review Journey Management And Route With Crew Members
32	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	6/13/2024	21:00:00	Depart location

3.0 Attachments

3.1 Real Time Graphs

