HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES

Ft. Lupton District, CO

BLUE 3-65 33-32-31-36 4BH - Surface

Job Date: Saturday, July 15, 2023

Sincerely,

Rafael Giorgana

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **BLUE 3-65 33-32-31-36 4BH.** 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.

Approximately 5 bbls of cement were returned to surface.

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 #:	05-001-10556
City, County:	AURORA, ADAMS

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	7/14/2023	2215
Called Out Time:	7/14/2023	1615
Arrived On Location:	7/14/2023	2035
Job Started:	7/15/2023	0234
Job Completed:	7/15/2023	0432
Departed Location:	7/15/2023	0700

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	73
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	WBM	WBM
3	Mud density	ppg	9.0
4	Casing set depth (shoe)	ft	3372
5	TVD	ft	3270
6	Float collar depth	ft	3338
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	100’/16” CONDUCTER
9	Pre-job mud circulation time	hh:mm	00:28
10	Pre-job mud circulation rate	bpm	10
11	Pre-job mud circulation volume	bbls	258

12	Mud circulation pressure at start of cement	psi	500
13	Annual flow before the start of job	Y/N	YES
14	Pipe movement during cement job	Y/N	NO
15	Calculated displacement	bbls	258
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	
18	Fluid returns to surface	Spacer/Cement, bbls	20/5
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	1020
20	Number of Centralizers	-	
21	Number of bottom plugs	-	

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	73	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	LESS 200	ppm	3000 ppm	Can shorten thickening time

1.4 Actual Pump Schedule

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	8.33	20				
Cement	13.5	346.58	1.39	7.33	1400	10262
Top Plug	1					
Displacement Fluid	8.33	258				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	7/14/2023	16:15:00	CREW CALLED OUT 7/14/2023 1615 HRS. REQUESTED ON LOCATION 7/14/2023 2215 HRS.
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/14/2023	18:30:00	DISCUSS ROUTE AND HAZARDS OF DRIVING
3	Crew Leave Yard	Crew Leave Yard	7/14/2023	19:00:00	CREW LEAVES YARD
4	Arrive At Loc	Arrive At Loc	7/14/2023	20:35:00	ARRIVE AT LOCATION. MEET WITH CUSTOMER
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/14/2023	20:50:00	DISCUSS RIG-UP AND ANY HAZARDS THAT MAY EXIST
6	Rig-Up Equipment	Rig-Up Equipment	7/14/2023	21:00:00	RIG-UP EQUIPMENT
7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/15/2023	02:14:42	DISCUSS JOB PROCEDURES AND HAZARDS OF JOB, PRESSURE AND HAZARDS OF HES EQUIPMENT
8	Start Job	Start Job	7/15/2023	02:34:28	BEGIN RECORDING DATA
9	Test Lines	Test Lines	7/15/2023	02:36:59	TEST HES LINES 3250 PSI
10	Pump Spacer 1	Pump Spacer 1	7/15/2023	02:49:58	20 BBLS FRESH WATER W/1 LB GREEN DYE
11	Pump Cement	Pump Cement	7/15/2023	02:57:45	1400 SACKS SWIFTCEM. 346.58 BBLS. PRESSURE WAS 500 PSI/8 BPM TOC=0'
12	Shutdown	Shutdown	7/15/2023	03:48:21	SHUTDOWN
13	Drop Top Plug	Drop Top Plug	7/15/2023	03:49:02	CUSTOMER PROVIDED TOP PLUG BY JOSH.

14	Pump Displacement	Pump Displacement	7/15/2023	03:49:39	258 BBLS FRESH WATER DISPLACEMENT
15	Bump Plug	Bump Plug	7/15/2023	04:29:13	FCP 1020 PSI/4 BPM, BUMP PRESSURE WAS 1400 PSI. APPROX 5 BBLS CEMENT TO SURFACE
16	Check Floats	Check Floats	7/15/2023	04:30:46	FLOATS HOLD. 1.5 BBL BACK
17	End Job	End Job	7/15/2023	04:32:10	STOP RECORDING DATA. USED 5 GALLONS D-AIR. USED 522 BBLS WATER TOTAL JOB
18	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/15/2023	05:00:00	DISCUSS HAZARDS OF RIG-DOWN AND ANY OTHER HAZARDS THAT MAY EXIST
19	Rig-Down Equipment	Rig-Down Equipment	7/15/2023	05:15:00	RIG-DOWN EQUIPMENT
20	Rig-Down Completed	Rig-Down Completed	7/15/2023	06:30:00	RIG-DOWN COMPLETED
21	Crew Leave Location	Crew Leave Location	7/15/2023	07:00:00	CREW DEPARTS LOCATION. THANK YOU FOR CHOOSING HALLIBURTON.

3.0 Attachments

3.1 Real Time Job Chart