

HALLIBURTON

iCem[®] Service

CRESTONE PEAK RESOURCES

Ft. Lupton District, CO

BLUE 3-65 33-32 2BH Surface

Job Date: Monday, July 17, 2023

Sincerely,

Rafael Giorgana

Legal Notice

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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 2BH Surface**. 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 62 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 #:	05-001-10552
City, County:	Aurora, Weld

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	7/17/2023	0500
Called Out Time:	7/16/2023	2300
Arrived On Location:	7/16/2023	2300
Job Started:	7/17/2023	0806
Job Completed:	7/17/2023	1020
Departed Location:	7/17/2023	1200

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	73
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	9.0
4	Casing set depth (shoe)	ft	3293
5	TVD	ft	3280
6	Float collar depth	ft	3258
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	100' / 16" 55#
9	Pre-job mud circulation time	hh:mm	00:25
10	Pre-job mud circulation rate	bpm	7
11	Pre-job mud circulation volume	bbls	250

12	Mud circulation pressure at start of cement	psi	430
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	252
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	?
18	Fluid returns to surface	Spacer/Cement, bbls	20/62
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	960
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 (ft ³ /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	8.33	20				
Cement	13.5	445.61	1.39	7.33	1800	13194
Top Plug	1					
Displacement Fluid	8.33	252				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Comments
1	Call Out	Call Out	7/16/2023	23:00:00	CREW CALLED OUT 7/16/2023 2300 HRS. REQUESTED ON LOCATION 7/17/2023 0500 HRS.
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/16/2023	23:01:00	CREW STAGED ON LOCATION
3	Crew Leave Yard	Crew Leave Yard	7/16/2023	23:02:00	CREW STAGED
4	Arrive At Loc	Arrive At Loc	7/16/2023	23:03:00	ARRIVE AT LOCATION. MEET WITH CUSTOMER
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/17/2023	06:00:00	DISCUSS RIG-UP AND ANY HAZARDS THAT MAY EXIST
6	Rig-Up Equipment	Rig-Up Equipment	7/17/2023	06:05:00	RIG-UP EQUIPMENT
7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/17/2023	07:30:00	DISCUSS JOB PROCEDURES AND HAZARDS OF JOB, PRESSURE AND HAZARDS OF HES EQUIPMENT
8	Start Job	Start Job	7/17/2023	08:06:36	BEGIN RECORDING DATA
9	Test Lines	Test Lines	7/17/2023	08:08:46	TEST HES LINES 3250 PSI

10	Pump Spacer 1	Pump Spacer 1	7/17/2023	08:11:47	20 BBLS FRESH WATER W/1LBS GREEN DYE
11	Pump Cement	Pump Cement	7/17/2023	08:19:34	1800 SACKS SWIFTCEM, 445.61 BBLS. 13.5 PPG. 62 BBLS CEMENT TO SURFACE. TOC=0'
12	Slow Rate	Slow Rate	7/17/2023	09:20:23	SLOW RATE
13	Shutdown	Shutdown	7/17/2023	09:25:44	
14	Drop Top Plug	Drop Top Plug	7/17/2023	09:26:21	CUSTOMER PROVIDED TOP PLUG BY JOSH
15	Pump Displacement	Pump Displacement	7/17/2023	09:26:52	252 BBLS FRESH WATER DISPLACEMENT
16	Bump Plug	Bump Plug	7/17/2023	10:16:44	FCP 060 PSI/3 BPM_ BUMP PRESSURE 1550 PSI.
17	Check Floats	Check Floats	7/17/2023	10:18:55	FLOATS HOLD_ 2 BBLS BACK
18	End Job	End Job	7/17/2023	10:20:11	STOP RECORDING DATA. USED APPROX 600 BBLS WATER FOR THE TOTAL JOB
19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/17/2023	10:30:00	DISCUSS HAZARDS OF RIG-DOWN AND ANY OTHER HAZARDS THAT MAY EXIST
20	Rig-Down Equipment	Rig-Down Equipment	7/17/2023	10:35:00	RIG-DOWN EQUIPMENT
21	Rig-Down Completed	Rig-Down Completed	7/17/2023	11:20:00	RIG-DOWN COMPLETED
22	Crew Leave Location	Crew Leave Location	7/17/2023	12:00:00	CREW STAGED ON LOCATION. THANK YOU FOR CHOOSING HALLIBURTON.

3.0 Attachments

3.1 Real Time Job Chart

