

HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

Ft. Lupton District, Colorado

For: Josh Kliesen

Date: Monday, March 27, 2023

COSSLETT EAST

Weld County

COSSLETT EAST 1H-22H-H168 9.625 SURFACE

Job Date: Monday, March 27, 2023

Sincerely,
Cody Haley

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 COSSLETT EAST 1H-22H-H168 9.625 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 25 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 #:	05-123-51942
City, County:	Erie, Weld
Field:	WATTENBERG
Legal Description:	SENE S22 T1N R68W

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	03/27/2023	4:00
Called Out Time:	03/26/2023	22:00
Arrived On Location:	03/27/2023	3:00
Job Started:	03/27/2023	6:02
Job Completed:	03/27/2023	7:18
Departed Location:	03/27/2023	9:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	22
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.6
4	Casing set depth (shoe)	ft	2629
5	TVD	ft	2639
6	Float collar depth	ft	2586
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	598

9	Pre-job mud circulation time	hh:mm	00:15
10	Pre-job mud circulation rate	bpm	10
11	Pre-job mud circulation volume	bbls	150
12	Mud circulation pressure at start of cement	psi	270
13	Annual flow before the start of job	Y/N	Yes
14	Pipe movement during cement job	Y/N	No
15	Calculated displacement	bbls	199
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	10/25
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	880
20	Number of Centralizers	-	
21	Number of bottom plugs	-	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	60	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	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	10				
Cement	14.2	176	1.15	5.74	860	4936
Lead Cement						
Tail Cement						
Top Plug	1					
Displacement Fluid	8.33	199				

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump B Pressure (psi)	Cmb Stg Total (bbl)	Comments
Event	1	Call Out	Call Out	3/26/2023	22:00:00	USER					Crew called out at 2200 on 3/26/2023 for a requested-on location time of 0400 on 3/27/2023.
Event	2	Safety Meeting	Safety Meeting	3/27/2023	02:15:00	USER					Pre convoy safety meeting discussed route to location and hazards of driving during snowstorm.
Event	3	Crew Leave Yard	Crew Leave Yard	3/27/2023	02:30:00	USER					Crew Leaves yard in convoy at 0230 hrs.
Event	4	Arrive At Loc	Arrive At Loc	3/27/2023	03:00:00	USER					Crew arrived on location at 0300 hrs. Meet with costumer TD 2639', 12.25 OH, TP 2629 9.625' 36#, FC 2586', TVD 2639', P/C 598' 13.375 54.5#, WBM WEIGHT 8.6 PPG.

Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	3/27/2023	04:30:00	USER	-1.14	0.00	-31.10	0.00	Discuss hazards around rig up area.
Event	6	Rig-Up Completed	Rig-Up Completed	3/27/2023	05:00:00	USER	-1.15	0.00	-33.44	0.00	Rig up completed.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/27/2023	05:30:00	USER	-1.15	0.00	-32.93	0.00	Pre job safety meeting discussed all hazards prior to job and reviewed job procedure.
Event	8	Start Job	Start Job	3/27/2023	06:04:08	NONE	8.31	0.00	0.63	0.00	Start recording data.
Event	9	Test Lines	Test Lines	3/27/2023	06:06:05	NONE	8.28	0.00	29.06	2.71	Pressure tested HES lines to 2500 psi. Electronic kick outs working.
Event	10	Pump Spacer 1	Pump Spacer 1	3/27/2023	06:08:50	NONE	8.17	0.00	-0.89	0.00	Pumped 10 bbls of green dye spacer.
Event	11	Pump Cement	Pump Cement	3/27/2023	06:12:48	NONE	8.33	2.99	106.93	0.05	Pumped 176 bbls (860 sks) of SwiftCem cement @14.2ppg,1.15ft3,5.7 4gal/sack. Pre calculated mix gallons was 4,936 gal. Average rate of 7 bpm with 400 Psi on the pressure. Estimated 25 bbls of cement to surface.
Event	12	Shutdown	Shutdown	3/27/2023	06:39:14	NONE	17.99	0.00	101.50	176.25	Shutdown to drop top plug.

Event	13	Drop Top Plug	Drop Top Plug	3/27/2023	06:41:08	NONE	16.23	0.00	-8.42	176.25	Top Plug verified by DSR.
Event	14	Pump Displacement	Pump Displacement	3/27/2023	06:41:12	NONE	16.20	0.00	-8.64	0.00	Pumped 199 bbls of freshwater displacement @7bpm, slowed down to 3 bpm 20 bbls from bumping.
Event	15	Bump Plug	Bump Plug	3/27/2023	07:17:05	NONE	7.37	0.00	1645.92	197.05	FCP @3bpm was 860 psi bumped up to 1480 psi.
Event	16	Check Floats	Check floats	3/27/2023	07:17:18	NONE	7.37	0.00	1705.18	197.05	1.5 bbls back to pump truck floats are holding.
Event	17	End Job	End Job	3/27/2023	07:18:53	NONE	7.20	0.00	-19.04	197.05	Stop recording data.
Event	18	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/27/2023	07:30:00	USER					Discuss blow down and any new hazards that could have come up during job.
Event	19	Rig-Down Completed	Rig-Down Completed	3/27/2023	08:30:00	USER					Rig down completed.
Event	20	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/27/2023	08:45:00	USER					Fit for duty check and check road conditions.
Event	21	Crew Leave Location	Crew Leave Location	3/27/2023	09:00:00	USER					Crew departs location. Thank you for using Halliburton.

3.0 Attachments

3.1 COSSLETT EAST 1H-22H-H168 9.625 SURFACE-Custom Results (1).png

