

# HALLIBURTON

iCem<sup>®</sup> Service

## **CRESTONE PEAK RESOURCES-EBUS**

Ft. Lupton District, Colorado

**For: Josh Johnson**

Date: Friday, March 24, 2023

## **COSSLETT EAST**

Weld County

COSSLETT EAST 1M-22H-H168 9.625 SURFACE

Job Date: Friday, March 24, 2023

Sincerely,

**Cody Haley**

## Legal Notice

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### Disclaimer:

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the COSSLETT EAST 1M-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 16 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 #:	05-123-51943
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:	03/24/2023	05:30
Called Out Time:	03/23/2023	21:30
Arrived On Location:	03/24/2023	04:00
Job Started:	03/24/2023	09:15
Job Completed:	03/24/2023	10:43
Departed Location:	03/24/2023	12:30

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	32
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.6
4	Casing set depth (shoe)	ft	2780
5	TVD	ft	2790
6	Float collar depth	ft	2736
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	619

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	200
12	Mud circulation pressure at start of cement	psi	290
13	Annual flow before the start of job	Y/N	Yes
14	Pipe movement during cement job	Y/N	No
15	Calculated displacement	bbls	211.0
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	10/16
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	890
20	Number of Centralizers	-	
21	Number of bottom plugs	-	0

### 1.3 Water Field Test

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	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
<b>pH</b>	7		6.0 - 8.0	Chemicals in water can cause severe retardation
<b>Temperature</b>	60	F	60 - 80 F	Can can pre-mature setting of cement
<b>Chlorides</b>	200	ppm	3000 ppm	Can shorten thickening time

### 1.4 Actual Pump Schedule

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	Density (ppg)	Volume (bbls)	Yield (ft <sup>3</sup> /sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
<b>Spacer Fluid</b>	8.33	10				
<b>Cement</b>	14.2	176	1.15	5.74	860	4936
<b>Lead Cement</b>						
<b>Tail Cement</b>						
<b>Top Plug</b>	1					
<b>Displacement Fluid</b>	8.33	211				

## 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	3/23/2023	21:30:00	USER					Crew called out at 2130 on 3/23/2023 for a requested-on location time of 0530 on 3/23/2023.
Event	2	Safety Meeting	Safety Meeting	3/24/2023	03:15:00	USER					Pre convoy safety meeting discussed route to location and hazards of driving during fog storm.
Event	3	Crew Leave Yard	Crew Leave Yard	3/24/2023	03:30:00	USER					Crew Leaves yard in convoy at 1400 hrs.
Event	4	Arrive At Loc	Arrive At Loc	3/24/2023	04:00:00	USER					Crew arrived on location at 0400 hrs. Meet with costumer TD 2790', 12.25 OH, TP 2780 9.625' 36#, FC 2736', TVD 2790', P/C 619' 13.375 54.5#, WBM WEIGHT 9.2 PPG.

Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	3/24/2023	07:45:00	USER	-1.15	0.00	-31.47	0.00	Discuss hazards around rig up area.
Event	6	Rig-Up Completed	Rig-Up Completed	3/24/2023	08:30:00	USER	-1.16	0.00	-31.03	0.00	Rig up completed.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/24/2023	09:00:00	USER	8.30	0.00	-1.82	0.00	Pre job safety meeting discussed all hazards prior to job and reviewed job procedure.
Event	8	Start Job	Start Job	3/24/2023	09:16:04	NONE	8.28	0.00	0.47	0.00	Start recording data.
Event	9	Pump Spacer 1	Pump Spacer 1	3/24/2023	09:25:24	NONE	8.45	0.00	3.27	0.00	Pumped 10 bbls of green dye spacer.
Event	10	Pump Cement	Pump Cement	3/24/2023	09:28:17	NONE	8.62	4.03	149.83	0.07	Pumped 176.00 bbls (860 sks) of SwiftCem cement @14.2ppg, 1.15ft3, 5.74 gal/sack. Pre calculated mix gallons was 4,936 gal. Average rate was 7 bpm with 560 psi on the line.
Event	11	Shutdown	Shutdown	3/24/2023	09:56:44	NONE	18.31	0.00	144.29	184.59	Shutdown to drop top plug.
Event	12	Drop Top Plug	Drop Top Plug	3/24/2023	09:57:40	USER	17.72	0.00	20.54	184.59	Top plug verified by DSR.

Event	13	Pump Displacement	Pump Displacement	3/24/2023	09:57:48	NONE	17.58	0.00	20.10	0.00	Pumped 211 bbls of freshwater displacement. Average rate was 7 bpm with 400 psi on the line.
Event	14	Bump Plug	Bump Plug	3/24/2023	10:41:35	NONE	8.46	0.00	1429.99	209.26	FCP @3bpm was 890 psi bumped up to 1450 psi.
Event	15	Check Floats	Other	3/24/2023	10:42:48	NONE	8.45	0.00	1584.95	209.26	2 bbls back to pump truck floats holding.
Event	16	End Job	End Job	3/24/2023	10:44:30	NONE	8.33	0.00	9.12	209.26	Stop recording data.
Event	17	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/24/2023	11:00:00	USER					Discuss blow down and any new hazards that could have come up during job.
Event	18	Rig-Down Completed	Rig-Down Completed	3/24/2023	12:15:00	USER					Rig down completed.
Event	19	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/24/2023	12:20:00	USER					Fit for duty check and check road conditions.
Event	20	Crew Leave Location	Crew Leave Location	3/24/2023	12:30:00	USER					Crew departs location. Thank you for using Halliburton.

3.0 Attachments

3.1 COSSLETT EAST 1M-22H-H168 9.625 SURFACE-Custom Results (2).png

