HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

Ft. Lupton District, Colorado

For: Josh Johnson

Date: Monday, March 20, 2023

COSSLETT EAST

Weld County

COSSLETT EAST 1K-22H-H168 9.625 SURFACE

Job Date: Tuesday, March 21, 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 1K-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 22 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 #:	05-123-51946
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:	03/20/2023	1400
Called Out Time:	03/20/2023	0600
Arrived On Location:	03/20/2023	0600
Job Started:	03/20/2023	1815
Job Completed:	03/20/2023	1948
Departed Location:	03/20/2023	2200

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	40
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.6
4	Casing set depth (shoe)	ft	2706
5	TVD	ft	2716
6	Float collar depth	ft	2660
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	616

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	230
13	Annual flow before the start of job	Y/N	Yes
14	Pipe movement during cement job	Y/N	No
15	Calculated displacement	bbls	205
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	10/22
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	960
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	65	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 (ft3/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	205				

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	3/20/2023	06:00:00	USER					Crew called out at 0600 on 3/20/2023 for a requested-on location time of 1400 on 3/20/2023.
Event	2	Arrive At Loc	Arrive At Loc	3/20/2023	06:00:00	USER					Crew arrived on location at 0600 hrs. Meet with costumer TD 2716', 12.25 OH, TP 2706 9.625' 36#, FC 2660', TVD 2716', P/C 616' 13.375 54.5#, WBM WEIGHT 8.6 PPG.
Event	3	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	3/20/2023	09:55:00	USER					Discuss hazards around rig up area.
Event	4	Rig-Up Completed	Rig-Up Completed	3/20/2023	10:55:00	USER					Rig up completed.
Event	5	Safety Meeting - Pre Job	Safety Meeting - Pre Job	3/20/2023	18:00:00	USER	8.25				Pre job safety meeting discussed all hazards prior to job and

											reviewed job procedure.
Event	6	Start Job	Start Job	3/20/2023	18:15:37	USER	8.25	0.00	-2.59	0.00	Start recording data.
Event	7	Test Lines	Test Lines	3/20/2023	18:17:17	NONE	8.33	0.00	3.78	3.21	Pressure tested HES lines to 2500 psi. Electronic kick outs working.
Event	8	Pump Spacer 1	Pump Spacer 1	3/20/2023	18:20:52	NONE	8.36	0.00	2.72	0.00	Pumped 10 bbls of green dye spacer.
Event	9	Shutdown	Shutdown	3/20/2023	18:25:49	USER	8.30	0.04	16.75	10.05	Shutdown to batch up cement.
Event	10	Pump Cement	Pump Cement	3/20/2023	18:29:03	NONE	8.35	0.00	4.89	0.00	Pumped 176 bbls (860 sks) @14.2ppg, 1.15ft3, 5.74 gal/sack. Pre calculated mix gallons was 4,936 gal. Average rate 8 bpm with 560 psi on the line.
Event	11	Check Weight	Check Weight	3/20/2023	18:33:35	NONE	15.50	4.20	211.10	11.49	Weight verified by mud scales.
Event	12	Check Weight	Check Weight	3/20/2023	18:35:13	NONE	14.16	4.23	228.86	18.35	Weight verified by mud scales.
Event	13	Check Weight	Check Weight	3/20/2023	18:37:08	NONE	13.93	5.96	375.04	29.49	Weight verified by mud scales.
Event	14	Shutdown	Shutdown	3/20/2023	18:58:51	NONE	15.56	0.00	50.27	184.52	Shutdown to drop top plug.

Event	15	Pump Displacement	Pump Displacement	3/20/2023	18:59:53	USER	15.67	0.00	-3.02	184.52	Pumped 205 bbls of freshwater displacement. Average rate was 6 bpm threw out with pressure around 500 psi. 22 bbls of cement to surface.
Event	16	Drop Top Plug	Drop Top Plug	3/20/2023	18:59:58	NONE	15.65	0.00	-3.10	184.52	Top plug verified by DSR.
Event	17	Bump Plug	Bump Plug	3/20/2023	19:45:34	USER					FCP @3bpm was 960 psi bumped up to 1460 psi.
Event	18	Check Floats	Check Floats	3/20/2023	19:46:03	USER					1.5 bbls back, floats holding.
Event	19	End Job	End Job	3/20/2023	19:48:26	NONE	8.34	0.00	-7.50	0.00	Stop recording data.
Event	20	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/20/2023	20:30:00	USER					Discuss blow down and any new hazards that could have come up during job.
Event	21	Rig-Down Completed	Rig-Down Completed	3/20/2023	21:30:00	USER					Rig down completed.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/20/2023	21:45:00	USER					Fit for duty check and check road conditions.
Event	23	Crew Leave Location	Crew Leave Location	3/20/2023	22:00:00	USER					Crew departs location. Thank you for using Halliburton.

3.0 Attachments

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