HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

Ft. Lupton District, Colorado

Shelton 25W-25-06 Production
Job Date: Tuesday, February 28, 2023

Sincerely,
Meghan Van Zyl

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 **Shelton 25W-25-06 - Production**. 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 49 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 #:	05-123-51882
City, County:	Keensburg, Weld Co

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	02/27/2023	18:00
Called Out Time:	02/27/2023	11:00
Arrived On Location:	02/27/2023	16:30
Job Started:	02/27/2023	22:00
Job Completed:	02/28/2023	01:50
Departed Location:	02/28/2023	02:45

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	35
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.2
4	Casing set depth (shoe)	ft	20633
5	TVD	ft	7068
6	Float collar depth	ft	20628
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	1917
9	Pre-job mud circulation time	hh:mm	02:30
10	Pre-job mud circulation rate	bpm	10
11	Pre-job mud circulation volume	bbls	1000

12	Mud circulation pressure at start of cement	psi	1200
13	Annual flow before the start of job	Y/N	Yes
14	Pipe movement during cement job	Y/N	No
15	Calculated displacement	bbls	455.8
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	50/49 cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2500
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1

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	75	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	11.5	50	3.83	24.17		1771
Cap Cement	13	165.5	1.66	8.32	560	4659
Lead Cement	13	208	1.55	7.16	755	5405
Tail Cement	13	532	1.59	7.78	1880	14626
Top Plug	1					
Displacement Fluid	8.33	455				

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	Comments
1	Call Out	2/27/2023	11:00:00	Crew called out at 1100 on 2/27/2023 for a requested-on location time of 1800 on 2/27/2023.
2	Safety Meeting	2/27/2023	14:55:00	Pre convoy safety meeting discussed route to location and hazards of driving during heavy traffic time.
3	Crew Leave Yard	2/27/2023	15:00:00	Crew Leaves yard in convoy at 1500 hrs.
4	Arrive At Loc	2/27/2023	16:30:00	Crew arrived on location at 1630 hrs. Meet with costumer TD 20642', 8.5 OH, TP 20633 5.5' 20#, FC 20628', TVD 7068', P/C 1917' 9.625 36#, OBM WEIGHT 9.2 PPG.
5	Safety Meeting - Pre Rig-Up	2/27/2023	18:00:00	Discuss hazards around rig up area.
6	Rig-Up Completed	2/27/2023	19:30:00	Rig up completed.
7	Safety Meeting - Pre Job	2/27/2023	21:45:00	Pre job safety meeting discussed all hazards prior to job and reviewed job procedure.
8	Start Job	2/27/2023	22:00:39	Start recording data.
9	Drop Bottom Plug	2/27/2023	22:00:43	Bottom plug verified by DSR.
10	Pump Spacer 1	2/27/2023	22:23:19	Pumped 50 bbls of Tuned Prime spacer @11.5 ppg, 3.83ft3, 24.17 gal/sack. Pre calculated mix gallons was 1,771.
11	Check Weight	2/27/2023	22:26:22	Weight verified by Mud scales.
12	Check Weight	2/27/2023	22:29:10	Weight verified by mud scales.

13	Pump Cap Cement	2/27/2023	22:37:52	Pumped 165.5 bbls (560 sk) of ElastiCem cap cement @ 13ppg, 1.66ft3, 8.32 gal/sack. Pre calculated Mix gallons was 4,659 gal. Estimated 49 bbls of cement to surface.
14	Check Weight	2/27/2023	22:39:54	Weight verified by Mud scales.
15	Check Weight	2/27/2023	22:42:41	Weight verified by mud scales.
16	Pump Lead Cement	2/27/2023	23:02:40	Pumped 208 bbls (755 sk) of IsoBond Lead cement @ 13ppg, 1.55ft3, 7.16 gal/sack. Pre calculated mix gallons were 5,405 gal. HOLC=7,602', TOLC= 2,504.75'.
17	Check Weight	2/27/2023	23:06:34	Weight verified by mud scales.
18	Check Weight	2/27/2023	23:11:43	Weight verified by mud scales.
19	Check Weight	2/27/2023	23:23:55	Weight verified by mud scales.
20	Pump Tail Cement	2/27/2023	23:31:44	Pumped 532 bbls (1880 sk) of ElastiCem tail cement @ 13.2 ppg, 1.59 ft3, 7.78 gal/sack. Pre calculated mix gallons was 14,626 gal. HOTC=13,039.21', TOTC=7,602.78'.
21	Check Weight	2/27/2023	23:34:17	Weight verified by mud Scales.
22	Check Weight	2/28/2023	00:00:05	Weight verified with mud scales.
23	Check Weight	2/28/2023	00:06:29	Weight verified by mud scales.
24	Shutdown	2/28/2023	00:43:28	Shutdown swap to wash up pit.
25	Clean Lines	2/28/2023	00:45:26	Washed pumps and lines till clean with 25 bbls of water.
26	Drop Top Plug	2/28/2023	00:54:25	Top plug verified by DSR.
27	Pump Displacement	2/28/2023	00:54:28	Pumped 455 bbls of freshwater displacement. first 300 bbls with 80 gal of MMCR & 10 gal of Biocide provided by rig.
28	Bump Plug	2/28/2023	01:46:09	Fcp @4bpm was 2500 psi. bumped up to 3040 psi.
29	Other	2/28/2023	01:48:13	5 bbls back to pump truck floats holding.
30	End Job	2/28/2023	01:50:35	Stop recording data Flushed rig stack with 30 bbls of water & 100 lbs of sugar.

31	Safety Meeting - Pre Rig-Down	2/28/2023	02:00:00	Discuss blow down and any new hazards that could have come up during job.
32	Rig-Down Completed	2/28/2023	02:30:00	Rig down completed.
33	Pre-Convoy Safety Meeting	2/28/2023	02:40:00	Fit for duty check and check road conditions.
34	Crew Leave Location	2/28/2023	02:45:00	Crew departs location. Thank you for using Halliburton.

3.0 Attachments

3.1 Real Time iCem Job Chart