HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

Ft. Lupton District, COLORADO

Shelton 25W-25-02 Production

Job Date: Friday, February 10, 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-25-02- 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 50 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 #:	05-123-51883
City, County:	LASALLE, WELD

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	2-10-23	0:00
Called Out Time:	2-9-23	12:00
Arrived On Location:	2-9-23	21:00
Job Started:	2-10-23	02:33
Job Completed:	2-10-23	06:02
Departed Location:	2-10-23	08:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	14
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.2
4	Casing set depth (shoe)	ft	20935
5	TVD	ft	7107
6	Float collar depth	ft	90930
7	Length of rate hole	ft	10
8	Previous casing shoe depth	ft	1916
9	Pre-job mud circulation time	hh:mm	1:30
10	Pre-job mud circulation rate	bpm	11
11	Pre-job mud circulation volume	bbls	840

12	Mud circulation pressure at start of cement	psi	600
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	464
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	50/50
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2650
20	Number of Centralizers	-	327
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	63	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	0	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	73	1771
Cap Cement	13	136	1.66	8.32	460	3827
Lead Cement	13	233	1.55	7.16	845	6050
Tail Cement	13.2	542	1.59	7.78	1915	14899
Top Plug						
Displacement Fluid	8.33	464				19515

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	Comments
1	Call Out	2/9/2023	12:00:00	CREW CALLED OUT, REQUESTED ON LOCATION @ 00:00
2	Depart Yard Safety Meeting	2/9/2023	19:45:00	PRE JOURNEY SAFETY MEETING WITH ALL HES PERSONNEL, DISCUSS ROUTE AND HAZARDS ASSOCIATED WITH THE JOURNEY
3	Crew Leave Yard	2/9/2023	20:00:00	ALL HES EMPLOYEES IN ROUTE TO LOCATION
4	Arrive at Location from Service Center	2/9/2023	21:00:00	CREW ON LOCATION, RECIEVED NUMBERS FROM CO REP, TD 220937, TP 20935, SJ 5, CSG 5.5 20#, PREV CSG 9 5/8 36#, HOLE 8.5, MUD 9.2, TVD 7107, 327 CENTRALIZERS, WATER TEST, TEMP 70, PH 7, CHLORIDES 0
5	Assessment Of Location Safety Meeting	2/9/2023	21:15:00	ASSESSMENT OF LOCATION SAFETY MEETING WITH ALL HES EE'S TO DISCUSS SITE SPECIFIC HAZARDS
6	Safety Meeting - Pre Rig-Up	2/9/2023	21:30:00	PRE RIG UP SAFETY MEETING WITH ALL HES EE'S TO DISCUSS HAZARDS BEFORE RIGGING UP
7	Safety Meeting - Pre Job	2/10/2023	01:00:00	PRE JOB SAFETY MEETING WITH ALL HES EE'S, RIG HANDS AND CO REP TO DISCUSS HAZARDS DURING JOB
8	Start Job	2/10/2023	02:33:46	START RECORDING DATA
9	Drop Bottom Plug	2/10/2023	02:34:22	LAUNCH BOTTOM PLUG
10	Test Lines	2/10/2023	02:36:12	TEST LINES TO 6100 PSI
11	Pump Spacer 1	2/10/2023	02:43:03	PUMP 50 BBLS TUNED PRIME SPACER 11.5 PPG, 7 BPM 800 PSI

12	Pump Cap Cement	2/10/2023	02:55:47	MIX AND PUMP 460 SKS 136 BBLS CAP CEMENT 13 PPG, 1.66 FT3/SK, 8.32 GAL/SK, 8 BPM 500 PSI, CALCULATED TOCC SURFACE
13	Pump Lead Cement	2/10/2023	03:15:07	MIX AND PUMP 845 SKS 233.3 BBLS LEAD CEMENT 13 PPG, 1.55 FT3/SK, 7.16 GAL/SK, 8 BPM 650 PSI, CALCULATED TOLC 1941
14	Pump Tail Cement	2/10/2023	03:48:49	MIX AND PUMP 1915 SKS 542.3 BBLS TAIL CEMENT 13.2 PPG, 1.59 FT3/SK, 7.78 GAL/SK, 9 BPM 650 PSI, CALCULATED TOTC 7651
15	Shutdown	2/10/2023	04:55:02	SHUTDOWN, WASH PUMPS AND LINES TO TANK
16	Drop Top Plug	2/10/2023	05:02:56	LAUNCH TOP PLUG
17	Pump Displacement	2/10/2023	05:03:01	PUMP 464 BBLS FRESH WATER DISPLACEMENT, FIRST 20 BBLS W/MMCR, 10 BPM 3220 PSI, RECEIVED 50 BBLS TUNED PRIME SPACER AND 50 BBLS CEMENT TO SURFACE, FULL RETURNS THROUGHOUT JOB
18	Bump Plug	2/10/2023	05:58:45	BUMP PLUG AT 2650 PSI TOOK TO 3470 PSI
19	Check Floats	2/10/2023	06:00:42	CHECK FLOATS, TOOK 5.5 BBLS BACK
20	End Job	2/10/2023	06:02:14	STOP RECORDING DATA, USED 1097 BBLS FRESH WATER FOR JOB
21	Safety Meeting - Pre Rig-Down	2/10/2023	06:05:00	PRE RIG DOWN SAFETY MEETING WITH ALL HES EE'S TO DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN
22	Depart Location Safety Meeting	2/10/2023	07:30:00	PRE DEPARTURE SAFETY MEETING WITH ALL HES EE'S TO DISCUSS ROUTES AND HAZARDS ASSOCIATED WITH THE JOURNEY
23	Crew Leave Location	2/10/2023	08:00:00	THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW.

3.0 Attachments

3.1 Real Time iCem Job Chart