HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

State Pikes 4-65 36-31-32 3BH Production
Job Date: Sunday, April 07, 2024

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 **State Pikes 4-65 36-31-32 3BH - 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 40 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 #:	05-005-07561-00
City, County:	AURORA, ARAPAHOE
SO#:	909265017

Job Times		
	Date (mm/dd/yyyy)	**Time (hh:mm)**
Requested Time On Location:	4/8/24	18:00
Called Out Time:	4/8/24	12:00
Arrived On Location:	4/8/24	16:15
Job Started:	4/8/24	22:45
Job Completed:	4/9/24	0:41
Departed Location:	4/9/24	2:00

	Description	**Units**	**Value**
1	Surface temperature at the time of the job	degree F	45
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.7
4	Casing set depth (shoe)	ft	19973
5	TVD	ft	8015
6	Float collar depth	ft	19968
7	Length of rate hole	ft	2
8	Previous casing shoe depth	ft	3460
9	Pre-job mud circulation time	hh:mm	1:30
10	Pre-job mud circulation rate	bpm	12

11	Pre-job mud circulation volume	bbls	1080
12	Mud circulation pressure at start of cement	psi	1350
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	443
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	CMT,40 BBLS
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2800 @ 4
20	Number of Centralizers	-	
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	2
23	Add hours? If Yes, put #	Y/N and hours	N
24	NPT? If Yes, put #	Y/N and hours	N

1.3 Water Field Test

	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
pH	6		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	55	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

Stage 1

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Spacer Fluid	11.5	120	2.57	16.2	262	4242
Cap Cement	13	211.5	1.65	8.07	720	5796
Lead Cement	13	179	1.58	7.42	635	4704
Tail Cement	13.2	500.5	1.57	7.53	1790	13482
Top Plug						
Displacement Fluid	8.4	443				18606

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	Comments
1	Summit Crew Notified Date/Time	4/7/2024	12:00:02	Crew called out for CIVITAS Production
2	Pre-Convoy Safety Meeting	4/7/2024	14:45:01	Discussed route and possible hazards
3	Depart Location for Service Center or Other Site	4/7/2024	15:00:04	Depart yard w/ 1 pump, 660, 1 tractor, 1 pickup and 4 personnel.
4	Arrive at Location from Service Center	4/7/2024	16:15:05	Requested on location @ 1800
5	Safety Meeting - Assessment of Location	4/7/2024	16:25:06	Discussed location and possible hazards. Water test: Temp - 55, Chlorides - 0, PH - 6, Sulfates - <200. 8 1/2 TD @ 19975'. Production casing set @ 19973'. 5.5" 20# P110, ST - 5' .0222 bbl/ft. CSG/OH - .0408 bbl/ft. CSG/CSG - .0479 bbl/ft. 9 5/8" 36# J55 set @ 3460'. Mud Weight - 9.7ppg
6	Safety Meeting - Pre Rig-Up	4/7/2024	16:35:11	Discussed rig up and possible hazards.
7	Rig-up Lines	4/7/2024	16:45:12	Rig up equipment
8	Casing on Bottom	4/7/2024	19:05:55	
9	Circulate Well	4/7/2024	19:30:56	Rig circulating well 12 bpm @ 1350 psi
10	Safety Meeting - Pre Job	4/7/2024	20:30:57	Discussed job and possible hazards with everyone on location.
11	Pump Spacer 1	4/7/2024	20:57:58	Pumped 3 bbls of FW
12	Drop Bottom Plug	4/7/2024	20:58:04	
13	Start Job	4/7/2024	20:58:32	

14	Pressure Test	4/7/2024	21:00:03	Test lines to 6500 psi
15	Pump Spacer 1	4/7/2024	21:06:09	Pumped 120 bbls of 11.5 ppg of Tuned Spacer. 2.57 cuft/sk and 16.2 gal/sk. Verified weight with pressurized mud scales.
16	Check Weight	4/7/2024	21:20:20	
17	Pump Lead Cement	4/7/2024	21:28:00	Pumped 211.5 bbls of 13 ppg Elasticem. 720 sks, 1.65 cuft/sk, and 8.07 gal/sk. Verified weight with pressurized mud scales.
18	Check Weight	4/7/2024	21:31:17	
19	Check Weight	4/7/2024	21:39:11	
20	Pump Lead Cement	4/7/2024	21:57:25	Pumped 179 bbls of 13 ppg Isobond cmt. 635 sks, 1.58 cuft/sk, and 7.42 gal/sk. Verifed weight with pressurized mud scales. Estimated TOC @ 3355.17'
21	Check Weight	4/7/2024	22:00:50	
22	Pump Tail Cement	4/7/2024	22:22:49	Pumped 500.5 bbls of 13.2 ppg Elasticem. 1790 sks, 1.57 cuft/sk, and 7.53 gal/sk. Verified weight with pressurized mud scales. Estimated TOC @ 7726.29'
23	Check Weight	4/7/2024	23:03:30	
24	Shutdown	4/7/2024	23:35:02	
25	Drop Top Plug	4/7/2024	23:44:03	3rd party plug
26	Pump Displacement	4/7/2024	23:45:04	Pumped 443 bbls of displacement. 1st 20 bbls FW w/ MMCR FW w/ Chemicals
27	Bump Plug	4/8/2024	00:36:35	Bump plug 2800 - 3280 psi
28	Check Floats	4/8/2024	00:39:41	Floats are good. Got 5 bbls back.
29	End Job	4/8/2024	00:41:06	Got 40 bbls of cement back to surface.
30	Pre-Rig Down Safety Meeting	4/8/2024	00:50:14	
31	Rig-Down Equipment	4/8/2024	01:00:20	

32	Depart Location Safety Meeting	4/8/2024	01:55:26	
33	Depart Location	4/8/2024	02:00:34	Thank you for using Halliburton cement. Andrew Glover and crew.

3.0 Attachments

3.1 Real Time iCem Job Chart