

HALLIBURTON

iCem[®] Service

BONANZA CREEK ENERGY-EBUS

Ft. Lupton District, COLORADO

State North Platte F-36 Fed 25N-20-07 Production

Job Date: Sunday, April 21, 2024

Sincerely,

Meghan Van Zyl

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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 North Platte F-36 Fed 25N-20-07 - 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 20 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 #:	05-123-52467
City, County:	KERSEY, WELD
SO#:	0909291416

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	4/21/2024	10:30
Called Out Time:	4/21/2024	03:00
Arrived On Location:	4/21/2024	10:00
Job Started:	4/21/2024	15:11
Job Completed:	4/21/2024	18:53
Departed Location:	4/21/2024	20:30

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	50
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.2
4	Casing set depth (shoe)	ft	17,450
5	TVD	ft	6,471
6	Float collar depth	ft	17,449
7	Length of rate hole	ft	6
8	Previous casing shoe depth	ft	1,842
9	Pre-job mud circulation time	hh:mm	13:00
10	Pre-job mud circulation rate	bpm	12

11	Pre-job mud circulation volume	bbls	1,440
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	387.4
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	120 / 20
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2,220
20	Number of Centralizers	-	270
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	10
23	Add hours? If Yes, put #	Y/N and hours	1
24	NPT? If Yes, put #	Y/N and hours	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	50	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	290	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	120	2.57	16.2	262	4,244.4
Cap Cement	13	165	1.64	8.1	565	4,576.5
Lead Cement	13	197	1.58	7.48	700	5,236
Tail Cement	13.2	414	1.56	7.59	1,490	11,309
Top Plug						
Displacement Fluid	8.4	387.4				16,271

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Date	Time	Comments
1	Call Out	4/21/2024	03:00:00	CIVITAS RESOURCES STATE N PLATTE F-36 FED #25N20-07 5 1/2" PRODUCTION CASING JOB - On location 04/21/24 @ 10:30 AM
2	Safety Meeting - Service Center or other Site	4/21/2024	05:45:00	Review Journey Management And Route With Crew Members
3	Depart from Service Center or Other Site	4/21/2024	06:00:00	Depart From Yard
4	Arrive At Loc	4/21/2024	10:00:00	Talk To Company Man () : TD = 17,456, TP = 17,450', ST = 1', OH = 8 1/2", CSG = 5 1/2" 20#, Previous Casing 9 5/8" 36# Set @ 1,842', WF = OBM @ 9.2#, Test Water = pH - 7, Chlorides - < 290 ppm, 50 F
5	Safety Meeting - Assessment of Location	4/21/2024	10:10:00	Spot Equipment
6	Safety Meeting - Pre Rig-Up	4/21/2024	10:20:00	Review JSA With Crew Members
7	Rig-Up Equipment	4/21/2024	10:30:00	Rig Up Iron And Hoses Needed For Job
8	Rig-Up Completed	4/21/2024	12:00:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.
9	Rig-Up Equipment	4/21/2024	13:10:00	Rigged Up Plug Container And Rig Floor So Rig Can Circulate Well With Rig Pimps, Rig Circulated Well From 13:10 To 14:30 @10 BPM With 1200 psi.
10	Safety Meeting - Pre Job	4/21/2024	14:29:58	Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
11	Start Job	4/21/2024	15:11:34	Start Job

12	Test Lines	4/21/2024	15:15:30	Performed A Pressure Kick Out Test To 500 psi On Both Pumps Then Tested Lines To 6,500 psi, Good Test
13	Pump Spacer 1	4/21/2024	15:23:18	Pumped 120 bbls Of Tuned Prime Spacer @ 11.5 PPG @ 6 BPM With 385 psi, Good Returns.
14	Check Weight	4/21/2024	15:28:19	Performed A Weight Check With A Pressurized Mud Scale 11.5 ppg.
15	Pump Cap Cement	4/21/2024	15:47:13	Pumped 165 bbls Cap Cmt 565 Sacks @ 13 PPG Yield 1.64 And A Water Requirement Of 8.1 Gal/Sks. 8 BPM With 480 psi, HEIGHT OF CAP CMT 3,479' TOP OF CAP CMT 0', Good Returns.
16	Check Weight	4/21/2024	15:50:09	Performed A Weight Check With A Pressurized Mud Scale 13 ppg.
17	Pump Lead Cement	4/21/2024	16:13:40	Pumped 197 bbls Lead Cmt 700 Sacks @ 13 PPG Yield 1.58 And A Water Requirement Of 7.48 Gal/Sks. 8 BPM With 508 psi, HOLC 4,828' TOLC 2,448', Good Returns.
18	Check Weight	4/21/2024	16:19:53	Performed A Weight Check With A Pressurized Mud Scale 13 ppg.
19	Pump Tail Cement	4/21/2024	16:43:19	Pumped 414 bbls Tail Cmt 1,490 Sacks @ 13.2 PPG Yield 1.56 And A Water Requirement Of 7.59 Gal/Sks. 8 BPM With 532 psi, HOTC 10,174' TOTC 7,276', Good Returns.
20	Check Weight	4/21/2024	16:47:53	Performed A Weight Check With A Pressurized Mud Scale 13.2 ppg.
21	Clean Lines	4/21/2024	17:46:40	
22	Drop Top Plug	4/21/2024	17:57:00	Dropped Top Plug
23	Pump Displacement	4/21/2024	17:57:36	Pump Displacement 387.4 Total bbls First 20 MMCR Followed By 367.4 Of Treated Biocide Water
24	Pump Displacement	4/21/2024	18:09:44	100 BBLs Pumped Into Displacement,9 BPM With 1,900 psi, Good Returns
25	Pump Displacement	4/21/2024	18:20:40	200 BBLs Pumped Into Displacement,9 BPM With 2,700 psi, Good Returns
26	Cement Returns to Surface	4/21/2024	18:25:21	At 247 bbls Into Displacement We Got Spacer To Surface, We Got A Total Of 120 bbls Of Spacer And 20 bbls Of Cap Cement.
27	Pump Displacement	4/21/2024	18:32:56	300 BBLs Pumped Into Displacement,7 BPM With 2,480 psi, Good Returns
28	Bump Plug	4/21/2024	18:48:06	Bumped Plug With Calculated Displacement And Went 600 psi Over final Circulating psi, Pressure Climbed From 2,220 to 2,680 psi.

29	Bleed Casing	4/21/2024	18:52:23	Bled Pressure Back To Zero And Got 3.5 bbls Back
30	Check Floats	4/21/2024	18:52:44	Floats Held Good.
31	End Job	4/21/2024	18:53:57	
32	Safety Meeting - Pre Rig-Down	4/21/2024	19:10:00	Review JSA With HES Crew Members
33	Rig-Down Equipment	4/21/2024	19:20:00	Rig Down Iron, Plug Container, And Hoses Used On Job
34	Rig-Down Completed	4/21/2024	20:20:00	All Equipment Rigged Down With No Issues Or Incidents
35	Safety Meeting - Departing Location	4/21/2024	20:25:00	Review Journey Management And Route With Crew Members
36	Depart Location	4/21/2024	20:30:00	Depart location

3.0 Attachments

3.1 Real Time iCem Job Chart

