

HALLIBURTON

iCem[®] Service

BONANZA CREEK ENERGY-EBUS

Ft. Lupton District, Colorado

State North Platte F-36 Fed 25N-30-05 Production

Job Date: Monday, April 15, 2024

Sincerely,

Meghan Van Zyl

DISCLAIMER/LIMITATION OF LIABILITY

THERE ARE NO REPRESENTATIONS OR WARRANTIES BY HALLIBURTON, EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS REPORT OR THE SOFTWARE USED TO GENERATE IT. CUSTOMER ACKNOWLEDGES THAT IT IS ACCEPTING THE REPORT AND CONTENTS THEREOF "AS IS". IN NO EVENT WILL HALLIBURTON, ITS AFFILIATES OR SUPPLIERS, NOR THEIR RESPECTIVE OFFICERS, DIRECTORS OR EMPLOYEES BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF DATA, PROFITS, BUSINESS, PRODUCTION OR USE OF HARDWARE, OR SOFTWARE), FORESEEABLE OR NOT. CUSTOMER ACCEPTS FULL RESPONSIBILITY FOR ANY INVESTMENT MADE BASED ON RESULTS FROM THE SOFTWARE AND REPORT CONTENTS. ANY INTERPRETATIONS, ANALYSES OR MODELING OF ANY DATA, INCLUDING, BUT NOT LIMITED TO CUSTOMER DATA, AND ANY RECOMMENDATION OR DECISIONS BASED UPON SUCH INTERPRETATIONS, ANALYSES OR MODELING ARE OPINIONS BASED UPON INFERENCES FROM MEASUREMENTS AND EMPIRICAL RELATIONSHIPS AND ASSUMPTIONS, WHICH INFERENCES AND ASSUMPTIONS ARE NOT INFALLIBLE, AND WITH RESPECT TO WHICH PROFESSIONALS IN THE INDUSTRY MAY DIFFER. ACCORDINGLY, HALLIBURTON CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION, RECOMMENDATION, MODELING OR OTHER PRODUCTS OF THE SOFTWARE PRODUCT. AS SUCH, ANY INTERPRETATION, RECOMMENDATION, MODELING OR REPORT RESULTING FROM THE SOFTWARE FOR THE PURPOSE OF ANY DRILLING, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION WILL BE AT THE SOLE RISK OF CUSTOMER WITH NO RELIANCE BY ANY THIRD PARTY (REGARDLESS OF NEGLIGENCE, BREACH OF CONTRACT OR WARRANTY, OR ANY OTHER CAUSE). SIMULATION AND 3D DISPLACEMENT RESULTS ARE NOT INTENDED AS AND SHOULD NOT BE USED AS A REPLACEMENT FOR BOND LOGS IN DETERMINING TOP OF CEMENT. CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING USE OF THE REPORT AND RELATED SERVICES. UNDER NO CIRCUMSTANCES WILL HALLIBURTON, ITS AFFILIATES OR SUPPLIERS NOR THEIR RESPECTIVE OFFICERS, DIRECTORS OR EMPLOYEES BE LIABLE FOR ANY DAMAGES OR LOSS.

Table of Contents

Cementing Job Summary 4

 Executive Summary 4

 Job Overview 5

 Water Field Test 7

 Actual Pump Schedule 7

Real-Time Job Summary 8

 Job Event Log 8

Attachments 11

 Real Time iCem Job Chart 11

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-30-05 – 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 #:	05-123-52462
City, County:	Kersey, Weld
SO#:	909273532

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	04/14/2024	17:00
Called Out Time:	04/14/2024	12:00
Arrived On Location:	04/14/2024	18:00
Job Started:	04/14/2024	23:12
Job Completed:	04/15/2024	03:16
Departed Location:	04/15/2024	05:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	52
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	OBM
3	Mud density	ppg	9.2
4	Casing set depth (shoe)	ft	22194
5	TVD	ft	6373
6	Float collar depth	ft	22192
7	Length of rate hole	ft	14
8	Previous casing shoe depth	ft	1849
9	Pre-job mud circulation time	hh:mm	01:30
10	Pre-job mud circulation rate	bpm	14

11	Pre-job mud circulation volume	bbls	1260
12	Mud circulation pressure at start of cement	psi	500
13	Annual flow before the start of job	Y/N	Y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	492.7
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	120 / 50
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	2650 @ 4
20	Number of Centralizers	-	320
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	4
23	Add hours? If Yes, put #	Y/N and hours	Y / 1
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	7		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	62	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	120				4247
Cap Cement	13	165	1.64	8.1	565	4577
Lead Cement	13	171.7	1.58	7.48	610	4563
Tail Cement	13.2	623.1	1.56	7.59	2275	17267
Top Plug	1					
Displacement Fluid	8.33	492				20664

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Date	Time	Comments
1	Call Out	4/14/2024	12:00:00	CIVITAS RESOURCES STATE NORTH PLATTE F-36 FED 25N-30-05 5.5" PRODUCTION CASING JOB - On location 04/14/24 @ 18:00 PM
2	Safety Meeting - Service Center or other Site	4/14/2024	16:20:00	Review Journey Management And Route With Crew Members
3	Depart from Service Center or Other Site	4/14/2024	16:30:00	Depart From Yard
4	Arrive At Loc	4/14/2024	18:00:00	Talk To Company Man (Hans) : TD = 22,208', TP = 22,194', ST = 2', OH = 8.5", CSG = 5.5" 20#, Previous Casing 9 5/8" Set @ 1,849', WF = OBM @ 9.2#, Test Water = pH - 7, Chlorides - < 200 ppm, 62 F.
5	Safety Meeting - Assessment of Location	4/14/2024	18:10:00	Spot Equipment
6	Pre-Rig Up Safety Meeting	4/14/2024	18:20:00	Review JSA With Crew Members
7	Rig-Up Equipment	4/14/2024	18:30:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.
8	Rig-Up Completed	4/14/2024	20:00:00	Rigged Up All Iron And Hoses Needed For CMT Job With No Issues Or Incidents.
9	Rig-Up Completed	4/14/2024	21:15:00	Rig Up Plug Container And Rig Floor To Circulate With Rig Pumps. Rig Circulated From 21:30 PM To 23:00AM At 590 GPM (14 BPM) With 1,590 psi, Good Returns.
10	Safety Meeting - Pre Job	4/14/2024	22:45:00	Review Job Procedure And JSA With Rig Hands, Co. Man, And HES Members
11	Start Job	4/14/2024	23:12:00	Start Recording Data

12	Test Lines	4/14/2024	23:15:11	Pressure Test Lines to 6,787 PSI
13	Drop Bottom Plug	4/14/2024	23:20:59	Drop Bottom Plug / Verified by Company Representative
14	Check Weight	4/14/2024	23:24:20	Weight Verified by Mud Scales
15	Pump Spacer 1	4/14/2024	23:24:57	Pump 120 bbls of Tuned Prime Spacer @ 11.5 PPG (2.57 ft3, 16.2 Gal/sk). Total gallons 4,247. Pump Rate 6 BPM with 480 PSI. TOS=0'
16	Pump Cap Cement	4/14/2024	23:44:33	Pump 165 bbls of ElastiCem @ 13 PPG (565 sk, 1.64 ft3, 8.1 Gal/sk). Total gallons 4,577. Pump Rate 8 BPM with 500 PSI. TOCC=0'
17	Pump Lead Cement	4/15/2024	00:05:38	Pump 171.7 bbls of IsoBond @ 13 PPG (610 sk, 1.58 ft3, 7.48 Gal/sk). Total gallons 4,563. Pump Rate 8 BPM with 700 PSI. TOLC=2,496'
18	Check Weight	4/15/2024	00:09:30	Weight Verified by Mud Scales
19	Pump Tail Cement	4/15/2024	00:27:50	Pump 623 bbls of ElastiCem @ 13.2 PPG (2,275 sk, 1.56 ft3, 7.59 Gal/sk). Total gallons 17,267. Pump Rate 8 BPM with 550 PSI. TOTC=6,703'
20	Check Weight	4/15/2024	00:32:50	Weight Verified by Mud Scales
21	Check Weight	4/15/2024	00:46:41	Weight Verified by Mud Scales
22	Check Weight	4/15/2024	01:21:37	Weight Verified by Mud Scales
23	Shutdown	4/15/2024	01:56:23	Shutdown Pumping Cement
24	Clean Lines	4/15/2024	01:59:06	Clean Pump and Lines
25	Drop Top Plug	4/15/2024	02:05:07	Drop Top Plug / Verified by Company Representative
26	Pump Displacement	4/15/2024	02:05:48	Pump 492 bbls of Fresh Water Displacement. First 20 bbls with MMCR. The Rest of Displacement with Company Provided Biocide. Total gallons 20,664. 50 bbls Cement to Surface.
27	Bump Plug	4/15/2024	03:12:44	Bump Plug / FCP is 2,650 PSI and took up to 3,150 PSI
28	Bleed Casing	4/15/2024	03:14:00	Bled Pressure Back To Zero And Got 5.5 bbls Back
29	Check Floats	4/15/2024	03:15:00	Floats Held Good.

30	End Job	4/15/2024	03:16:51	Stop Recording Data
31	Pre-Rig Down Safety Meeting	4/15/2024	03:30:00	Review JSA With HES Crew Members
32	Rig-Down Equipment	4/15/2024	03:45:00	Rig Down Iron, Plug Container, And Hoses Used On Job
33	Rig-Down Completed	4/15/2024	04:40:00	All Equipment Rigged Down With No Issues Or Incidents
34	Safety Meeting - Departing Location	4/15/2024	04:50:00	Review Journey Management And Route With Crew Members
35	Depart Location for Service Center or Other Site	4/15/2024	05:00:00	Depart location

3.0 Attachments

3.1 Real Time iCem Job Chart

