

HALLIBURTON

iCem[®] Service

ANADARKO PETROLEUM CORP-EBUS

Ft. Lupton District, Colorado

For: Dustin Davis

Date: Thursday, April 10, 2025

Oxy 13.375" Surface Glade East

Weld, Platteville

Sincerely,

Thomas Haas and Crew

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Table of Contents

Cementing Job Summary	4
Executive Summary.....	4
Job Overview	Error! Bookmark not defined.
Water Field Test.....	Error! Bookmark not defined.
Actual Pump Schedule	Error! Bookmark not defined.
Real-Time Job Summary	8
Job Event Log.....	8
Attachments.....	14
Job Chart.png.....	14

1.0 Cementing Job Summary

1.1 Executive Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Glade East 13.375" Surface**. 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.

This space is provided to enter in a brief summary of the job. Below are some important items to discuss:

- **100% circulation during job.**
- **Final Circulating Pressure 660 psi 3 bbl/min**
- **160 bbls of cement to surface.**
- **Pumped job as planned.**

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

1.1 Job Overview

Job Details	
API #:	05-123-52916
City, County:	Platteville, Weld
SO#:	909997710

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	4/9/25	16:00
Called Out Time:	4/9/25	11:00
Arrived On Location:	4/9/25	15:30
Job Started:	4/9/25	20:50
Job Completed:	4/9/25	23:51
Departed Location:	4/10/25	01:00

	Description	Units	Value
1	Surface temperature at the time of the job	Degrees	56
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.6
4	Casing set depth (shoe)	ft	2178
5	TVD	ft	2178
6	Float collar depth	ft	2132
7	Length of rate hole	ft	11

8	Previous casing shoe depth	ft	80
9	Pre-job mud circulation time	hh:mm	1:00
10	Pre-job mud circulation rate	bpm	12
11	Pre-job mud circulation volume	bbls	544
12	Mud circulation pressure at start of cement	psi	143
13	Annual flow before the start of job	Y/N	y
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	329.4
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	100
18	Fluid returns to surface	Spacer/Cement, bbls	160 bbl Cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	660 psi, 3bbl/min
20	Number of Centralizers	-	15
21	Number of bottom plugs	-	1
22	Number of trucks used preparing/during job	-	3
23	Add hours? If Yes, put #	Y/N and hours	n
24	NPT? If Yes, put #	Y/N and hours	n

Water Field Test

	Recorded Value	Unit	Acceptable Limit	Potential Problems if Values Exceed the Limit
pH	7.0		6.0 - 8.0	Chemicals in water can cause severe retardation
Temperature	60	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	<300	ppm	3000 ppm	Can shorten thickening time

1.2 Actual Pump Schedule

Stage 1

	Density (ppg)	Volume (bbls)	Yield (ft3/sk)	Water Requirement (gal/sk)	Bulk Sacks (sks)	Total Water (gals)
Fresh Water	8.33	40				1680
Spacer SA-1015	8.35	20				840
Bottom Plug	1					
Cement	13.5	441.1	1.33	6.87	1875	12881
Top Plug	1					
Displacement Fluid	H2O	329.4				

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq No.	Activity	Graph Label	Date	Time	Source	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/mi n)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
Event	1	Call Out	Call Out	4/9/2025	11:00:00	USER					CREW CALLED OUT FOR FOR JOB.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/9/2025	14:15:00	USER					PRE-CONVOY SAFETY MEETING AT HES LOCATON TO DISCUSS ROUTE AND DRIVING HAZARDS.
Event	3	Crew Leave Yard	Crew Leave Yard	4/9/2025	14:30:00	USER					CREW DEPARTS HALLIBURTON FACILITIES FOR LOCATION.
Event	4	Arrive At Loc	Arrive At Loc	4/9/2025	15:30:00	USER					CREW ARRIVES ON LOCATION. MET WITH CO MAN TO DISCUSS JOB. TD-2189' 17.5" OH, TP-2178' 13.375" 54.5# L80, FC-2132', PC-80' 20", TVD-2178', 8.6 PPG WBM. 1 BTM PLUG, 1 TOP PLUG. WATER 60* 7.0 PH, <300 CHLORIDES.

Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/9/2025	17:00:00	USER					PRE-RIG UP SAFTEY MEETING WITH ALL HES EMPLOYEES TO DISCUSS HAZARDS OF LOCATION AND DISCUSS RIG UP SEQUENCE.
Event	6	Rig-up Lines	Rig-up Lines	4/9/2025	17:10:00	USER					RIG UP PUMPS AND LINES.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/9/2025	20:00:00	USER	8.47	0.00	8.96	0.00	SAFTEY NMEETING WITH HES, COMPANY MAN, AND RIG HANDS.
Event	8	Start Job	Start Job	4/9/2025	20:50:06	NONE	0.08	0.00	1.31	0.00	START JOB DATA RECORDING.
Event	9	Load Casing	Fill Lines	4/9/2025	20:50:22	USER	0.06	2.42	1.99	0.08	FILL LINES WITH 3 BBL OF FRESH WATER.
Event	10	Pressure Test	Pressure Test	4/9/2025	20:52:45	USER	8.33	0.00	8.12	4.31	PRESSURE TESTED LINES TO 4300PSI, 500 EKO TEST AT 600PSI, 5TH GEAR STALL AT 2400PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	4/9/2025	20:56:49	NONE	8.32	0.00	10.62	0.00	PUMP 40 BBL OF FRESH WATER WITH 1LB OF GREEN DYE.
Event	12	Pump Spacer 2	Pump Spacer 2	4/9/2025	21:05:18	NONE	8.33	5.15	124.74	0.09	PUMP 20 BBL OF FRESH WATER WITH 50LBS SA-1015.

Event	13	Drop Bottom Plug	Drop Bottom Plug	4/9/2025	21:14:29	NONE	8.46	0.00	24.92	23.03	BOTTOM PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	14	Pump Cement	Pump Cement	4/9/2025	21:14:32	NONE	8.46	0.00	24.87	0.00	PUMPED 444.1 BBLs, 1875 SKS OF 13.5 PPG VARICEM 1.33 CUFT/SK AND 6.87 GAL/SK VERIFIED WEIGHT WITH PRSSURIZED MUD SCALES.
Event	15	Check Weight	Check Weight	4/9/2025	21:26:45	USER	13.92	9.14	388.31	94.48	SLURRY WEIGHT VERIFIED BY PRESSURIZED SCALES. 13.5 PPG.
Event	16	Other	Loss Of Returns	4/9/2025	21:50:51	USER	13.46	3.73	298.11	301.46	SLOWED RATE AS WE LOST RETURNS TO CELLAR.
Event	17	Other	Resume Rate	4/9/2025	22:11:27	USER	13.51	4.17	212.56	394.78	RATE WAS RESUMED AFTER IT WAS AGREED UPON THAT THE LOSS WAS DUE TO FREE FALL, RETURNS TO CELLAR RETURNED 10 BBL AFTER PICKING RATE BACK UP. 22 LBS OF WELL LIFE 1094 WAS ADDED DURING THIS TIME.

Event	18	Shutdown	Shutdown	4/9/2025	22:25:58	NONE	14.10	0.00	120.54	497.35	SHUTDOWN TO CLEAN PUMPS AND LINES.
Event	19	Clean Lines	Clean Lines	4/9/2025	22:26:06	NONE	14.10	0.00	59.76	497.35	CLEAN PUMPS AND LINES.
Event	20	Drop Top Plug	Drop Top Plug	4/9/2025	22:34:26	NONE	8.16	0.00	16.81	13.45	TOP PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	21	Pump Displacement	Pump Displacement	4/9/2025	22:34:30	NONE	8.16	0.00	13.62	0.00	BEGIN PUMPING 329.4 BBL OF FRESH WATER DISPLACEMENT.
Event	22	Shutdown	Shutdown	4/9/2025	23:11:56	NONE	8.20	0.00	658.55	312.36	SHUT DOWN 300 BBL INTO DISPLACEMENT FOR 5 MIN TO HESITATE. PUMPED 5 BBL AFTER 5 MIN. REPEATED AT 305 BBL AWAY. AT 310 BBL AWAY HESITATED FOR 10 MIN.
Event	23	Other	Resume Displacement	4/9/2025	23:19:23	NONE	8.22	3.24	609.36	313.14	DISPLACEMENT WAS RESUMED AFTER NO LOSSES IN CELLAR WAS OBSERVED.

Event	24	Bump Plug	Bump Plug	4/9/2025	23:44:30	NONE	8.27	0.00	1115.91	343.98	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATION PRESSURE OF 660 PSI AT 3 BBL/MIN. 160 BBL OF CEMENT TO SURFACE.
Event	25	Other	Casing Test	4/9/2025	23:45:02	USER	8.27	0.00	1255.45	343.98	HELD CASING TEST AT 1260 PSI FOR 5 MIN.
Event	26	Check Floats	Check Floats	4/9/2025	23:50:01	USER	8.27	0.00	1267.88	343.98	RELEASED PRESSURE BACK TO THE TRUCK TO CHECK FLOATS, FLOATS HELD, 2 BBL BACK TO THE TRUCK.
Event	27	End Job	End Job	4/9/2025	23:50:57	USER	8.18	0.00	25.29	0.00	END JOB DATA RECORDING.
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/9/2025	23:55:00	USER	8.19	7.72	137.38	13.93	PRE-RIG DOWN SAFTEY MEETING TO DISCUSS HAZRDS OF LOCATION AND SEQUENCE OF RIG DOWN.
Event	29	Rig Down Lines	Rig Down Lines	4/10/2025	00:00:00	USER	8.18	0.00	13.54	20.68	RIG DOWN PUMPS AND LINES.
Event	30	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/10/2025	00:45:00	USER					PRE-CONVOY SAFETY MEETING ON LOCATON TO DISCUSS ROUTE AND DRIVING HAZARDS.

Event	31	Crew Leave Location	Crew Leave Location	4/10/202 5	01:00:00	USER
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CREW DEPARTS
LOCATION, THANK
YOU FOR CHOOSING
HES. THOMAS HAAS
AND CREW.

3.0 Attachments

3.1 Job Chart.png

