

HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

Ft. Lupton District, Colorado

For: Sam M.

Date: Tuesday, March 14, 2023

Cosslett East 1B-22H-H168

Job Date: Tuesday, March 14, 2023

Sincerely,

Luke Kosakewich

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Cosslett East 1B-22H – Two Stage Conductor**. 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 26 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 #:	05-123-51944
County:	Weld
Field:	Wattenberg
Legal Discription:	SENE SEC 22 TOWN 1N RANGE 68W

Job Times		
	Date (mm/dd/yyyy)	Time (hh:mm)
Requested Time On Location:	03/13/2023	23:30
Called Out Time:	03/13/2023	19:30
Arrived On Location:	03/13/2023	23:00
Job Started:	03/14/2023	02:30
Job Completed:	03/14/2023	05:30
Departed Location:	03/14/2023	08:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	40
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.5
4	Casing set depth (shoe)	ft	594'
5	TVD	ft	594'
6	Float collar depth	ft	547.4'
7	Length of rate hole	ft	3
8	Previous casing shoe depth	ft	145'
9	Pre-job mud circulation time	hh:mm	30

10	Pre-job mud circulation rate	bpm	12
11	Pre-job mud circulation volume	bbls	
12	Mud circulation pressure at start of cement	psi	275
13	Annual flow before the start of job	Y/N	N
14	Pipe movement during cement job	Y/N	N
15	Calculated displacement	bbls	85/46
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	50%
18	Fluid returns to surface	Spacer/Cement, bbls	26 Cement
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	125/127
20	Number of Centralizers	-	13
21	Number of bottom plugs	-	0

1.3 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	49	F	60 - 80 F	Can can pre-mature setting of cement
Chlorides	7.0	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	8.33	20				
Stage 1 Cement	14.2	130.1	1.15	5.74	635	3,645
Stage 2 Cement	14.2	58.77	1.15	5.74	285	1,636
Top Plug	1					
Top Plug	1					
Displacement Fluid	8.33	85				
Displacement Fluid	8.33	46				

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/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Mix Wtr Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	3/13/2023	19:30:00	USER						CREW CALLED OUT AT 19:30, REQUESTED ON LOCATION 23:30. CREW PICKED UP CEMENT, 100 LBS OF SUGAR, 1 LB DYE, AND 30-GALS D-AIR, FROM FT. LUPTON, CO. ELITE 11323804, P/U 13685547 AND 12913560.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	3/13/2023	22:15:00	USER						CREW DISCUSSED ROUTES, HAZARDS AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	3/13/2023	22:30:00	USER						HEADED TO LOCATION.

Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	3/13/2023	23:00:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; TD-594', 17.5" OH, TP-594' 13.375" 54.50 LB/FT J-55, T.V.D-594'. WEATHERFORD ANNULAR PACKERS @ 530.7' AND 297.4', STAGE TOOL @ 294.8'. FRESH WATER DISPLACEMENT, 13 SUMMIT CENTRALIZERS. CASING LANDED @ 01:30.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/14/2023	00:30:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	3/14/2023	01:00:00	USER	CREW STAGED EQUIPMENT, RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Rig-Up Completed	Rig-Up Completed	3/14/2023	01:45:00	USER	WAITED ON RIG TO FINISH CIRCULATING.

Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/14/2023	02:15:00	USER	8.27	0.00	7.06	17.16	3.57	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	3/14/2023	02:22:26	NONE	8.26	0.00	1.12	0.00	0.00	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	3/14/2023	02:25:20	NONE	8.31	0.00	51.97	3.10	0.00	PRESSURE TESTED IRON TO 4,000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,200 PSI, 5TH GEAR STALL OUT @ 1,830 PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	3/14/2023	02:32:05	NONE	8.23	0.00	28.05	0.00	0.00	PUMP 20 BBLS FRESH WATER SPACER @ 8.33 LB/GAL. PUMP RATE 4 BBLS/MIN @ 40 PSI.

Event	12	Pump Cement	Pump Cement	3/14/20 23	02:37:5 6	NONE	8.31	0.00	43.93	0.00	0.00	PUMP 635 SKS OF SWIFTCEM 1L @ 14.2 LB/GAL, 1.15 FT3/SK, 5.74 GAL/SK, 130.1 BBL. HOC CALCULATED @ 594', TOC CALCULATED @ SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 5.5 BBL/MIN @ 140 PSI.
Event	13	Check Weight	Check Weight	3/14/20 23	02:38:0 5	NONE	8.36	0.00	34.35	0.00	0.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Check Weight	Check Weight	3/14/20 23	02:43:4 5	NONE	13.90	2.93	81.40	15.59	9.32	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	15	Check Weight	Check Weight	3/14/20 23	02:45:0 8	NONE	14.30	4.20	187.43	21.19	12.95	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	16	Check Weight	Check Weight	3/14/20 23	03:02:0 6	NONE	14.09	5.32	223.52	105.74	66.63	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	17	Shutdown	Shutdown	3/14/20 23	03:06:3 0	NONE	7.76	0.00	94.92	128.94	75.07	

Event	18	Drop Top Plug	Drop Top Plug	3/14/20 23	03:15:3 2	NONE	-1.33	0.00	23.94	0.00	10.99	DROP TOP PLUG VERIFIED BY COMPANY REP.
Event	19	Pump Displacement	Pump Displacement	3/14/20 23	03:17:4 1	NONE	-1.33	1.31	24.13	0.08	0.00	BEGIN CALCULATED DISPLACEMENT OF 85 BBLs WITH FRESH WATER. PUMP RATE 5.5 BBLs/MIN @ 80 PSI.
Event	20	Bump Plug	Bump Plug	3/14/20 23	03:37:1 0	NONE	8.37	0.00	768.61	84.86	84.69	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 750 PSI. FINAL CIRCULATING PRESSURE 125 PSI.
Event	21	Set Packer	Set Packer	3/14/20 23	03:42:3 1	USER	8.41	0.00	1251.53	0.26	0.00	SET LOWER PACKER. PRESSURED UP TO 1,250 PSI. TO INFALTE. PUMPED 0.3 BBLs.
Event	22	Test Annulus	Test Annulus	3/14/20 23	03:45:4 0	USER	8.40	0.00	1131.50	0.70	0.00	PRESSED UP TO 1,300 PSI. PUMPED 0.5 BBLs.
Event	23	Set Packer	Set Packer	3/14/20 23	03:52:3 9	USER	8.47	0.00	1917.62	0.60	0.00	INFALTED UPPER PACKER AT 1,917 PSI. PUMPED 0.6 BBLs.

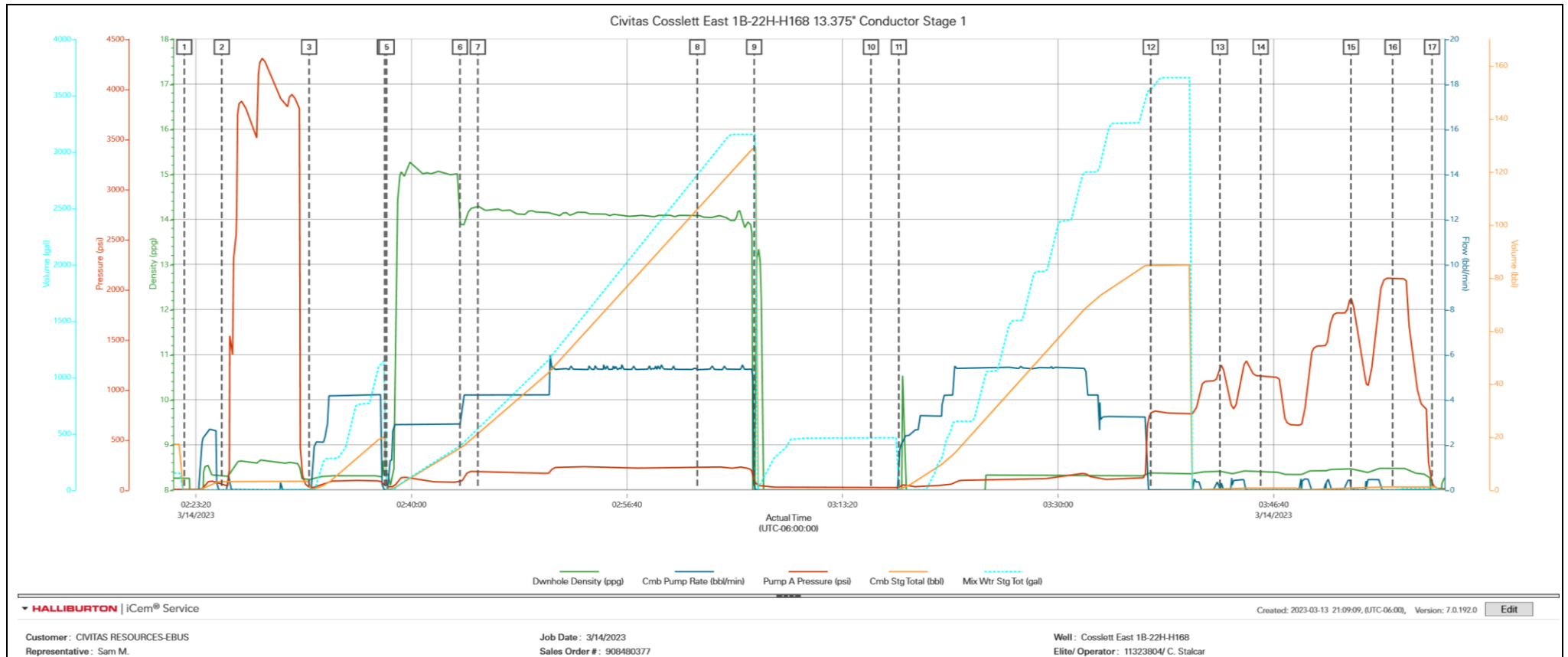
Event	24	Test Annulus	Test Annulus	3/14/20 23	03:55:5 2	USER	8.48	0.00	2112.33	1.10	0.00	PRESSUERED UP TO 2,200 PSI. PUMPED 0.5 BBLS.
Event	25	Check Floats	Check Floats	3/14/20 23	03:58:5 5	USER	5.63	0.00	74.49	1.10	0.29	BLED OF PRESSURE. GOT 1 BBL. BACK TO THE TRUCK.
Event	26	Drop Opening Device For Multiple Stage Cementer	Drop Opening Device For Multiple Stage Cementer	3/14/20 23	04:04:1 2	USER	8.27	0.00	4.64	0.00	0.00	DROPPED THE BOMB. WITNESSED BY CUSTOMER REPRESENTATIVE.
Event	27	Open Multiple Stage Cementer	Open Multiple Stage Cementer	3/14/20 23	04:18:5 2	USER	8.29	0.97	39.27	0.33	0.00	PRESSUERED UP TO 399 PSI TO OPEN THE STAGE TOOL.
Event	28	Circulate Well	Circulate Well	3/14/20 23	04:19:3 4	USER	8.29	2.11	44.61	1.03	0.00	CIRCULATED 101 BBLS. THROUGH STAGE TOOL.
Event	29	Pump Cement	Pump Cement	3/14/20 23	04:50:4 0	NONE	8.29	0.00	11.34	0.00	0.00	PUMP 285 SKS OF SWIFTCM 1L @ 14.2 LB/GAL, 1.15 FT3/SK, 5.74 GAL/SK, 58.37 BBLS. HOC CALCULATED @ 294.7', TOC CALCULATED @ SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 4 BBLS/MIN @ 160 PSI.

Event	30	Check Weight	Check Weight	3/14/20 23	04:53:4 5	NONE	8.28	0.00	14.74	0.00	1.40	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	31	Check Weight	Check Weight	3/14/20 23	04:59:1 6	NONE	14.08	4.19	162.41	16.08	10.81	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	32	Shutdown	Shutdown	3/14/20 23	05:10:1 4	NONE	15.74	0.00	74.30	61.71	37.99	
Event	33	Drop Top Plug	Drop Top Plug	3/14/20 23	05:15:1 1	NONE	14.91	0.00	18.14	0.00	2.09	DROP TOP PLUG VERIFIED BY COMPANY REP.
Event	34	Pump Displacement	Pump Displacement	3/14/20 23	05:15:1 4	NONE	14.91	0.00	18.03	0.00	0.00	BEGIN CALCULATED DISPLACEMENT OF 46 BBLS WITH FRESH WATER. PUMP RATE 4 BBLS/MIN @ 100 PSI.
Event	35	Bump Plug	Bump Plug	3/14/20 23	05:28:5 0	NONE	8.43	0.00	1340.43	45.97	42.31	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 1,350 PSI. FINAL CIRCULATING PRESSURE 127 PSI.
Event	36	Check Floats	Check Floats	3/14/20 23	05:30:1 7	USER	8.39	0.00	1080.08	45.97	42.31	bled off pressure. floats held. 0.5 bbbls. back to the truck.

Event	37	End Job	End Job	3/14/20 23	05:32:4 6	NONE	8.30	0.00	6.83	0.00	0.00	STOP RECORDING JOB DATA.
Event	38	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/14/20 23	05:45:0 0	USER	-1.02	0.00	4.00	0.00	0.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION SPECIFIC HAZARDS, PINCH POINTS RIGGING DOWN/RACKING UP IRON AND HOSES.
Event	39	Rig-Down Equipment	Rig-Down Equipment	3/14/20 23	06:00:0 0	USER						RIG DOWN BULK AND MIXING EQUIPMENT.
Event	40	Rig-Down Completed	Rig-Down Completed	3/14/20 23	07:15:0 0	USER						ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL AND LOCATION WAS CLEAN.
Event	41	Depart Location Safety Meeting	Depart Location Safety Meeting	3/14/20 23	07:30:0 0	USER						CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	42	Crew Leave Location	Crew Leave Location	3/14/20 23	08:00:0 0	USER						THANK YOU FOR USING HALLIBURTON – LUKE KOSAKEWICH AND CREW.

3.0 Attachments

3.1 Civitas Cosslett East 1B-22H-H168 13.375 Conductor Stage 1.png



3.2 Civitas Cosslett East 1B-22H-H168 13.375 Conductor Stage 2.png

