

HALLIBURTON

iCem® Service

CRESTONE PEAK RESOURCES-EBUS

Ft. Lupton District, Colorado

For: Josh Kliesen

Date: Monday, March 13, 2023

Cosslett East FED 1A-22H-H168

Job Date: Monday, March 13, 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 FED 1A-22H-H168- 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 9 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 #:	05-123-51945
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	03:00
Called Out Time:	03/12/2023	21:00
Arrived On Location:	03/13/2023	02:45
Job Started:	03/13/2023	13:00
Job Completed:	03/13/2023	16:30
Departed Location:	03/13/2023	18:00

	Description	Units	Value
1	Surface temperature at the time of the job	degree F	43
2	Mud type (OBM, WBM, Synthetic, Water, Brine)	-	WBM
3	Mud density	ppg	8.4
4	Casing set depth (shoe)	ft	591'
5	TVD	ft	591'
6	Float collar depth	ft	549.4'
7	Length of rate hole	ft	3'
8	Previous casing shoe depth	ft	145'
9	Pre-job mud circulation time	hh:mm	2:00

10	Pre-job mud circulation rate	bpm	12 BBLS/MIN
11	Pre-job mud circulation volume	bbls	
12	Mud circulation pressure at start of cement	psi	70
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
16	Job displaced by	Rig/HES	HES
17	Estimated returns % during job	%	0%
18	Fluid returns to surface	Spacer/Cement, bbls	Cement 2 nd Stage 9 bbls
19	Final circulation pressure, rate prior to plug bump	psi @ bpm	75 @ 3 121 @ 3
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	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				840
Stage 1 Cement	14.2	57.97	1.55	7.83	210	1,644
Stage 2 Cement	14.2	67.63	1.55	7.83	245	1,919
Top Plug	1					
Top Plug	1					
Displacement Fluid Stage 1	8.33	85				3,570
Displacement Fluid Stage 2	8.33	46				1,932

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)	Cmb Stg Total (bbl)	Mix Wtr Stg Tot (bbl)	Pump B Pressure (psi)	Comments
Event	1	Call Out	Call Out	3/12/2023	21:00:00	USER						CREW CALLED OUT AT 21:00, REQUESTED ON LOCATION 03:00. CREW PICKED UP CEMENT, 100 LBS OF SUGAR, 1 LB DYE, AND 30-GALS D-AIR, FROM FT. LUPTON, CO. ELITE 12632040, P/U 13685547 AND 12913560.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	3/13/2023	02:00:00	USER						CREW DISCUSSED ROUTES, HAZARDS AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	3/13/2023	02:15:00	USER						CREW HEADED TO LOCATION.

Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	3/13/2023	02:45:00	USER	END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; TD-599', 17.5" OH, TP-596.1' 13.375" 54.50 LB/FT J-55, T.V.D-596'. WEATHERFORD ANNULAR PACKERS @ 532.7' AND 300.1', STAGE TOOL @ 297.5'. FRESH WATER DISPLACEMENT, 13 SUMMIT CENTRALIZERS. CASING LANDED @ 09:30.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/13/2023	08:00:00	USER	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	3/13/2023	08:15:00	USER	CREW STAGED EQUIPMENT, RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Rig-Up Completed	Rig-Up Completed	3/13/2023	09:30:00	USER	WAITED ON RIG TO FINISH CIRCULATING.

Event	8	Circulate Well	Circulate Well	3/13/20 23	10:00:0 0	USER							CIRCULATED 12 BBLs/MIN @ 275 PSI.
Event	9	Wait on HES Materials to Arrive - Start Time	Wait on HES Materials to Arrive - Start Time	3/13/20 23	11:00:0 0	USER							WAITING FOR BACKUP PUMP OR MECHANIC TO FIX TRANSMISSION ISSUES.
Event	10	Wait on HES Materials to Arrive - End Time	Wait on HES Materials to Arrive - End Time	3/13/20 23	12:00:0 0	USER							PUMP ARRIVED ON LOCATION.
Event	11	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/13/20 23	12:30:0 0	USER	8.35	0.00	11.36	24.26	7.07		MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	12	Start Job	Start Job	3/13/20 23	13:05:3 6	NONE	0.47	0.00	0.00	0.00	6.17		BEGIN RECORDING JOB DATA.
Event	13	Test Lines	Test Lines	3/13/20 23	13:10:3 2	NONE	8.36	0.00	3.04	0.00	12.49		PRESSURE TESTED IRON TO 3,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,200 PSI, 5TH GEAR STALL OUT @ 1,830 PSI.

Event	14	Pump Spacer 1	Pump Spacer 1	3/13/20 23	13:16:4 6	NONE	8.37	0.00	0.00	0.00	2.55	PUMP 20 BBLS FRESH WATER SPACER @ 8.33 LB/GAL. PUMP RATE 4 BBLS/MIN @ 40 PSI.
Event	15	Pump Cement	Pump Cement	3/13/20 23	13:26:3 8	NONE	8.35	0.00	0.03	1.38	13.15	PUMP 210 SKS OF SWIFTCEM TYPE G @ 14.2 LB/GAL, 1.55 FT3/SK, 7.83 GAL/SK, 57.97 BBLS. HOC CALCULATED @ 410.38', TOC CALCULATED @ 185.62'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 5.5 BBLS/MIN @ 200 PSI.
Event	16	Check Weight	Check Weight	3/13/20 23	13:28:4 8	NONE	14.35	2.68	5.56	4.61	77.01	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	17	Check Weight	Check Weight	3/13/20 23	13:30:0 3	NONE	14.45	3.28	9.65	7.26	106.74	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	18	Check Weight	Check Weight	3/13/20 23	13:33:1 0	NONE	14.20	5.62	24.90	17.01	237.05	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.

Event	19	Check Weight	Check Weight	3/13/20 23	13:37:2 1	NONE	14.18	5.63	48.26	32.49	261.77	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	20	Shutdown	Shutdown	3/13/20 23	13:39:5 3	NONE	14.37	0.00	60.57	35.20	63.26	SHUTDOWN TO LOAD TOP PLUG
Event	21	Drop Top Plug	Drop Top Plug	3/13/20 23	13:41:3 4	USER	14.33	0.00	0.00	0.00	16.80	LOAD TOP PLUG WITNESSED BY JOSH/MANNY.
Event	22	Pump Displacement	Pump Displacement	3/13/20 23	13:55:5 4	NONE	14.48	0.31	0.00	0.00	19.09	BEGIN CALCULATED DISPLACEMENT OF 85 BBLs WITH FRESH WATER. PUMP RATE 5.5 BBLs/MIN @ 80 PSI. NO RETURNS THROUGHOUT DISPLACEMENT.
Event	23	Bump Plug	Bump Plug	3/13/20 23	14:16:1 0	NONE	8.38	0.00	83.46	72.33	523.61	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 550 PSI. FINAL CIRCULATING PRESSURE 75 PSI.
Event	24	Set Packer	Set Packer	3/13/20 23	14:19:0 5	USER	8.40	0.58	0.00	0.00	543.64	SET LOWER PACKER. PRESSURED UP TO 800 PSI WITH .25 BBLs.

Event	25	Set Packer	Set Packer	3/13/20 23	14:21:1 5	USER	8.45	0.00	0.31	0.00	1073.10	PRESSURED UP TO 1,075 PSI WITH .1 BBLs SETTING LOWER PACKER.
Event	26	Test Annulus	Test Annulus	3/13/20 23	14:24:5 9	USER	8.47	0.00	0.19	0.00	1145.50	TEST ANNULAR PACKER PRESSURING UP TO 1,100 PSI.
Event	27	Set Packer	Set Packer	3/13/20 23	14:31:0 1	USER	8.51	0.00	0.63	0.00	1627.41	PRESSURED UP TO 1,630 PSI PUMPING .6 BBLs TO SET UPPER PACKER.
Event	28	Test Annulus	Test Annulus	3/13/20 23	14:35:0 5	USER	8.53	0.00	1.39	0.50	1911.93	PRESSURED UP TO 1,800 PSI PUMPING .8 BBLs TO TEST UPPER PACKER. BLEED PRESSURE DOWN TO 500 PSI (BUMP PRESSURE) CHECKING VOLUME BACK MATCHED VOLUME PUMPED IN TO SET PACKER.
Event	29	Check Floats	Check Floats	3/13/20 23	14:37:3 8	USER	8.42	0.00	1.39	0.50	525.06	RELEASE FINAL PRESSURE 550 PSI (BUMP PRESSURE) CHECKING FLOATS, 1 BBL BACK TO TRUCK WITH FLOATS HOLDING.

Event	30	Drop Opening Device For Multiple Stage Cementer	Drop Opening Device For Multiple Stage Cementer	3/13/2023	14:47:31	USER	5.31	0.00	0.00	0.00	0.51	DROP STAGE TOOL OPENING DEVICE.
Event	31	Open Multiple Stage Cementer	Open Stage Tool	3/13/2023	15:04:01	NONE	8.42	0.00	0.00	0.00	1.94	PUMPED 1 BBL AT 1 BBL/MIN TO OPEN STAGE TOOL. PRESSURED UP TO 362 PSI OPENING STAGE TOOL AND STARTED CIRCULATION.
Event	32	Circulate Well	Circulate Well	3/13/2023	15:10:00	USER	8.38	5.87	23.56	28.52	105.44	PUMPED 44 BBLS FRESH WATER @ 8 BBLS/MIN 180 PSI TO CIRCULATE ANNULAR VOLUME ABOVE STAGE TOOL. ESTABLISHED CIRCULATION @ 40 BBLS AWAY SEEING ONLY FRESH WATER.

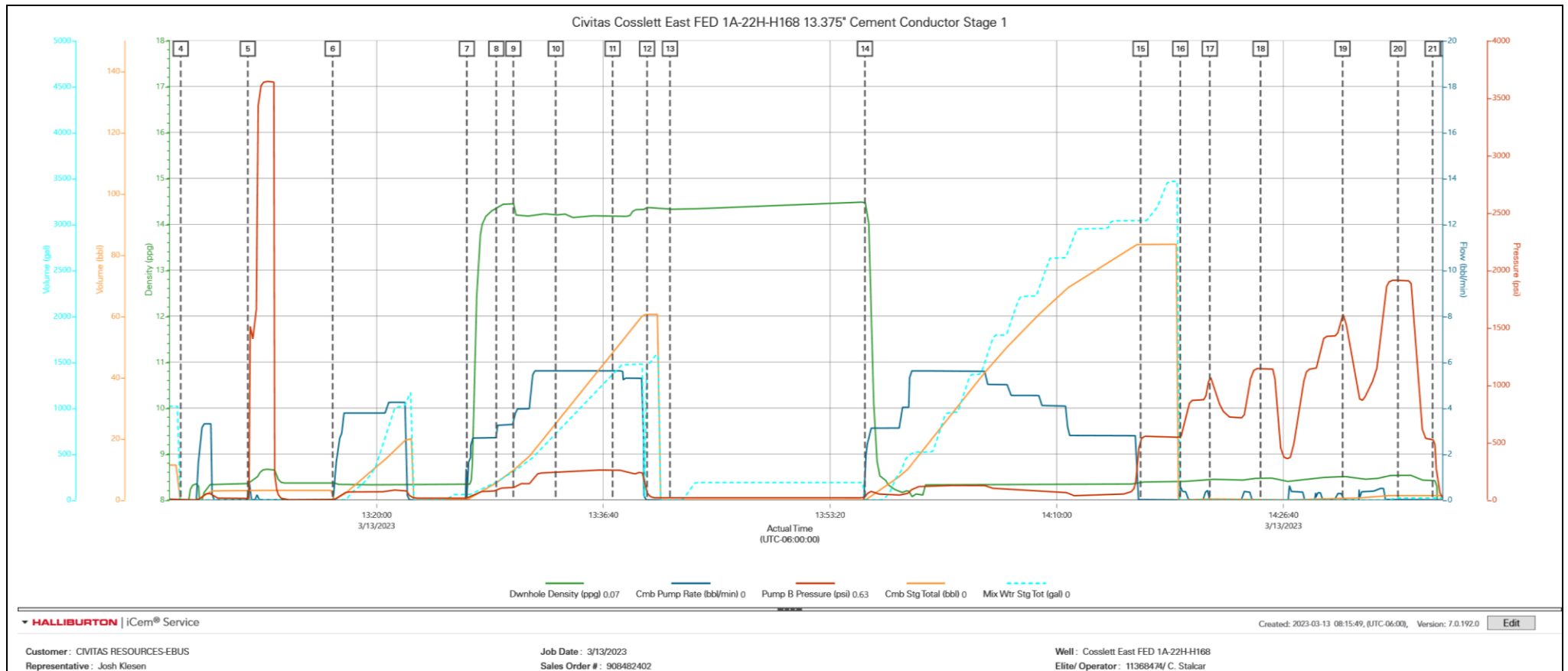
Event	33	Pump Cement	Pump Cement	3/13/20 23	15:20:1 2	NONE	8.40	0.00	0.00	0.00	6.62	PUMP 245 SKS OF SWIFTCEM TYPE G @ 14.2 LB/GAL, 1.55 FT3/SK, 7.83 GAL/SK, 67.22 BBLS. HOC CALCULATED @ 270.5', TOC CALCULATED @ SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 5.5 BBLS/MIN @ 140 PSI.
Event	34	Check Weight	Check Weight	3/13/20 23	15:26:1 1	NONE	8.41	0.00	0.00	1.98	5.08	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	35	Check Weight	Check Weight	3/13/20 23	15:28:3 1	NONE	14.52	4.59	9.20	7.58	173.76	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	36	Shutdown	Shutdown	3/13/20 23	15:39:2 7	NONE	14.34	0.00	56.13	36.04	51.83	SHUTDOWN TO DROP PLUG AND CLEAN MIXING TUBS.
Event	37	Drop Top Plug	Drop Top Plug	3/13/20 23	16:08:2 3	NONE	14.54	0.00	0.00	1.48	3.87	DROP TOP PLUG VERIFIED BY COMPANY REP.

Event	38	Pump Displacement	Pump Displacement	3/13/20 23	16:08:2 7	NONE	14.54	0.00	0.00	0.00	4.09	BEGIN CALCULATED DISPLACEMENT OFR 46 BBLS. PUMP RATE 3 BBLS/MIN @ 90 PSI.
Event	39	Bump Plug	Bump Plug	3/13/20 23	16:25:1 7	NONE	8.36	0.00	47.67	42.41	846.85	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 700 PSI. FINAL CIRCULATING PRESSURE 121 PSI.
Event	40	Check Floats	Check Floats	3/13/20 23	16:26:4 2	NONE	8.39	0.00	47.67	42.41	919.99	RELEASED PRESSURE, FLOATS HELD, .5 BBLS BACK.
Event	41	End Job	End Job	3/13/20 23	16:28:2 3	NONE	8.31	0.00	0.00	0.00	0.57	STOP RECORDING JOB DATA.
Event	42	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	3/13/20 23	16:45:0 0	USER						DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION SPECIFIC HAZARDS, PINCH POINTS RIGGING DOWN/RACKING UP IRON AND HOSES.
Event	43	Rig-Down Equipment	Rig-Down Equipment	3/13/20 23	17:00:0 0	USER						RIG DOWN BULK AND MIXING EQUIPMENT.

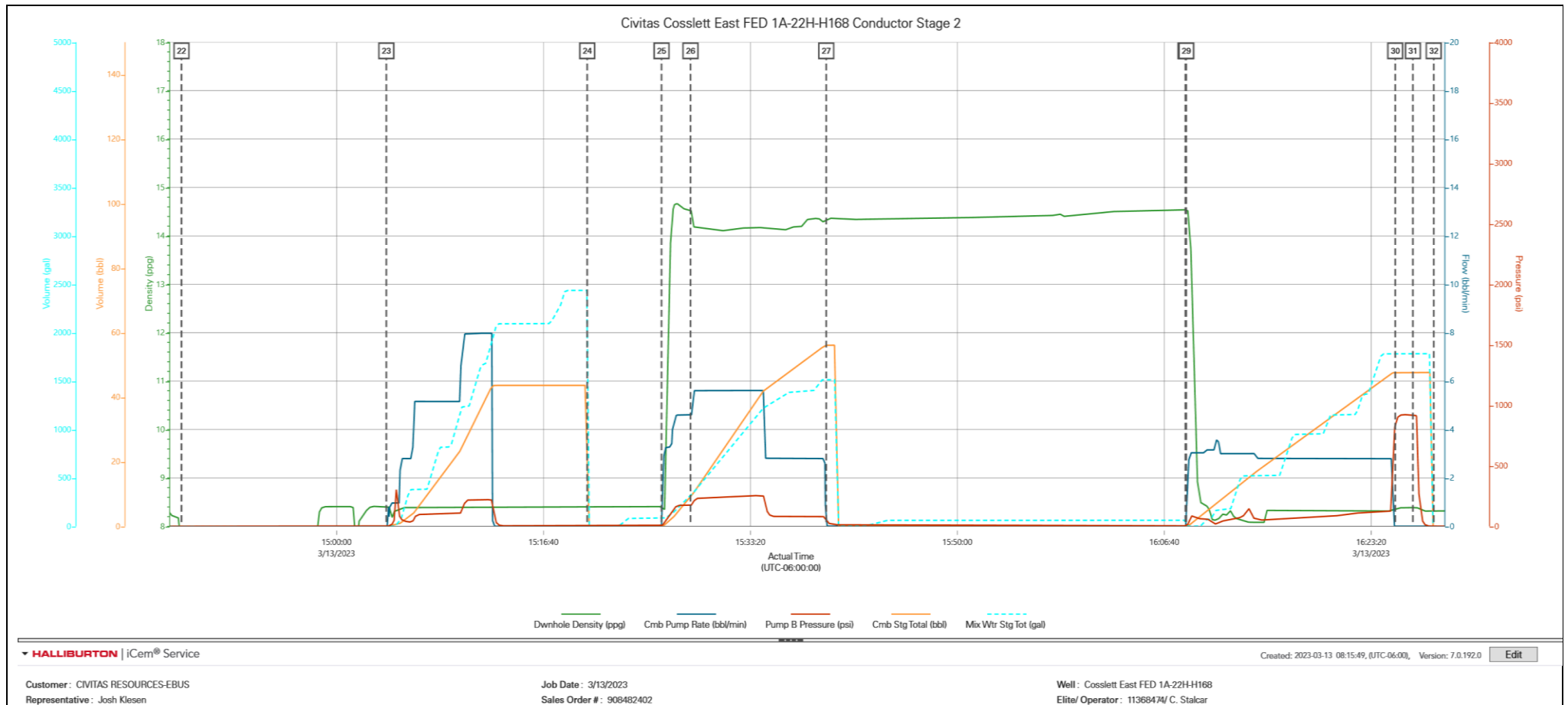
Event	44	Rig-Down Completed	Rig-Down Completed	3/13/20 23	17:30:0 0	USER	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL AND LOCATION WAS CLEAN.
Event	45	Crew Leave Location	Crew Leave Location	3/13/20 23	18:00:0 0	USER	THANK YOU FOR USING HALLIBURTON – LUKE KOSAKEWICH AND CREW.

3.0 Attachments

3.1 Civitas Cosslett East FED 1A-22H-H168 Conductor Stage 1.png



3.2 Civitas Cosslett East FED 1A-22H-H168 Conductor Stage 2.png



3.3 Civitas Cosslett East FED 1A-22H-H168 13.375 Cement Conducto.png

