

HALLIBURTON

iCem[®] Service

Terra Energy Partners

For: Lynn Cass & Abe Alexander

Date: Tuesday, January 17, 2017

TR 324-21-597 Surface PJR

API #05-045-23351-00

Job Date: Sunday, January 15, 2017

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	1/15/2017	08:00:00	USER					REQUESTED ON LOCATION @ 1600
Event	2	Pre-Convoy Safety Meeting	1/15/2017	11:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/15/2017	12:00:00	USER					1 HT 400 PUMP TRUCK E1, 1 SUPER FLUSH TRANSPORT, 2 550 SERVICE PICKUP
Event	4	Arrive At Loc	1/15/2017	16:00:00	USER					RIG RUNNING CSG UPON HES ARRIVAL
Event	5	Assessment Of Location Safety Meeting	1/15/2017	16:30:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.9, CHLORIDES- 0, TEMP- 77F). COMP REP WAS OFFERED SDS FOR ALL CHEMICALS USED BY HES.
Event	6	Spot Equipment	1/15/2017	19:00:00	USER					1 HT 400 PUMP TRUCK E1, 1 SUPER FLUSH TRANSPORT, 2 550 SERVICE PICKUP WITH COMPRESSOR TRAILER AND HEATER TRAILER
										ALL HES PRESENT
Event	7	Pre-Rig Up Safety Meeting	1/15/2017	19:30:00	USER					
Event	8	Pre-Job Safety Meeting	1/15/2017	22:00:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 5 BPM PRIOR TO JOB WITH NO RETURNS, PRESSURE 130 PSI.
Event	9	Start Job	1/15/2017	22:45:53	USER					TD 2714', TP 2717.88', SJ 29', CSG 9 5/8" 36# J-55, CONDUCTOR CSG 18" @ 63', OH 14 3/4", MUD 9.1 PPG

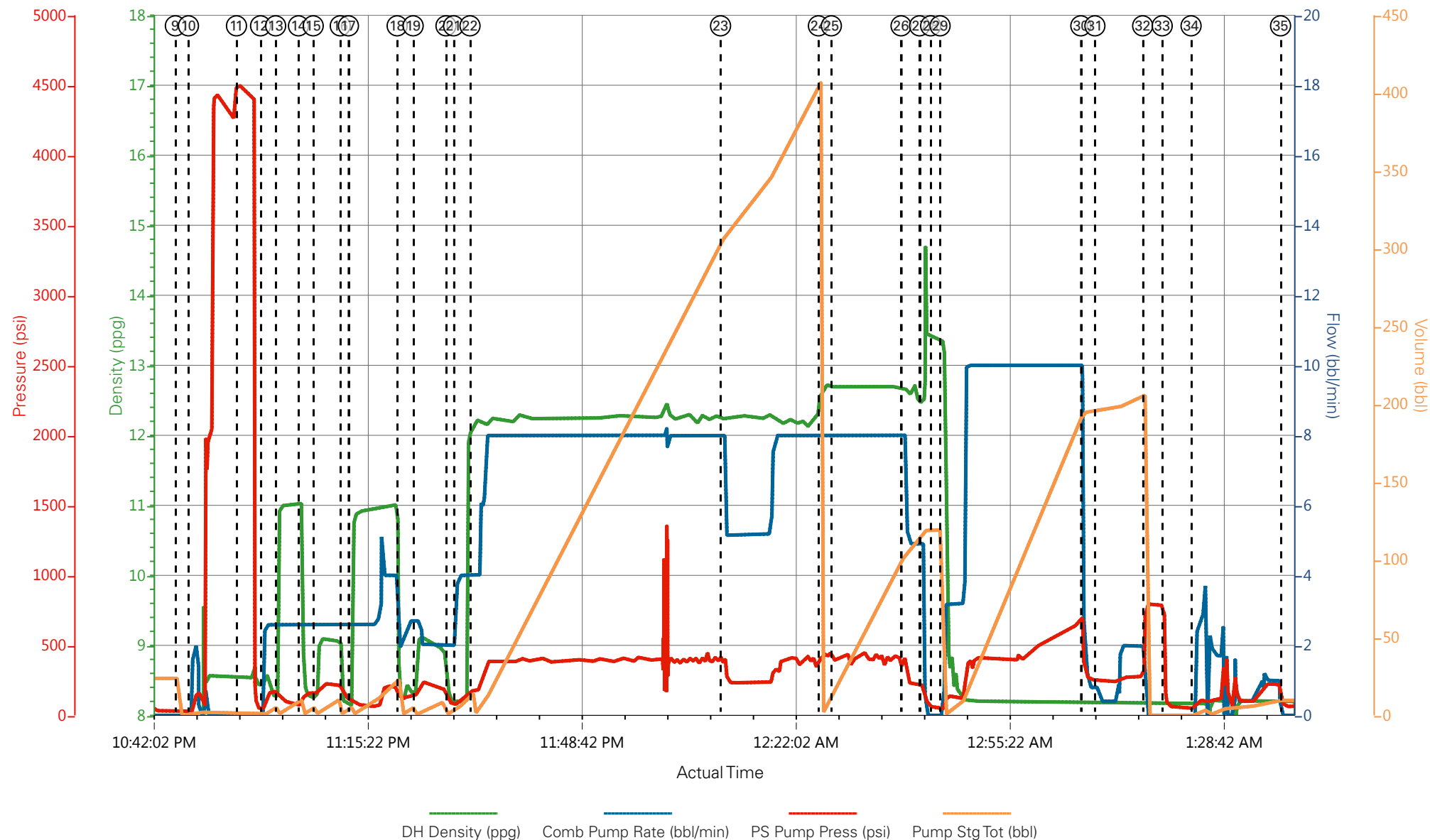
Event	10	Prime Lines	1/15/2017	22:47:55	USER	8.33	2.0	180	2	FRESH WATER
Event	11	Test Lines	1/15/2017	22:55:24	COM5			4508		PRESSURE HELD
Event	12	Pump H2O Spacer	1/15/2017	22:59:09	COM5	8.33	2.6	80	5	5 BBL FRESH WATER
Event	13	Pump Super Flush 100	1/15/2017	23:01:30	COM5	11.0	2.6	134	10	10 BBL SUPER FLUSH 100
Event	14	Pump H2O Spacer	1/15/2017	23:05:03	COM5	8.33	2.6	160	5	5 BBL FRESH WATER
Event	15	Pump Calcium Chloride	1/15/2017	23:07:21	COM5	8.4	2.6	220	10	10 BBL CALCIUM CHLORIDE
Event	16	Pump H2O Spacer	1/15/2017	23:11:34	COM5	8.33	2.6	120	5	5 BBL FRESH WATER
Event	17	Pump Super Flush 100	1/15/2017	23:12:50	COM5	11.0	4.0	206	10	10 BBL SUPER FLUSH 100
Event	18	Pump H2O Spacer	1/15/2017	23:20:25	COM5	8.33	2.6	147	5	5 BBL FRESH WATER
Event	19	Pump Calcium Chloride	1/15/2017	23:22:55	COM5	8.4	2.0	210	10	10 BBL CALCIUM CHLORIDE
Event	20	Pump H2O Spacer	1/15/2017	23:28:02	COM5	8.33	4.0	102	10	10 BBL FRESH WATER
Event	21	Check weight	1/15/2017	23:29:13	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	22	Pump Lead Cement	1/15/2017	23:31:46	COM5	12.3	8.0	400	383.6	905 SKS VARICEM CMT 12.3, PPG, 2.38 FT3/SK, 13.76 GAL/SK. WITH 60 LBS TUF-FIBER
Event	23	Slow Rate	1/16/2017	00:10:48	USER					SLOWED TO END SILO
Event	24	Pump Tail Cement	1/16/2017	00:26:03	COM5	12.8	8.0	430	129.6	209 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 511.78 GAL/SK
Event	25	Check weight	1/16/2017	00:28:03	COM5	12.67	8.00	408.00	16.1	WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	26	Slow Rate	1/16/2017	00:38:55	USER					SLOWED TO END CMT
Event	27	Shutdown	1/16/2017	00:41:48	USER					END OF CMT
Event	28	Drop Top Plug	1/16/2017	00:43:32	USER					VERIFIED BY FLAG INDICATOR
Event	29	Pump Displacement	1/16/2017	00:45:00	COM5	8.33	10.0	680	198	FRESH WATER
Event	30	Slow Rate	1/16/2017	01:06:55	USER	8.33	2.0	250	10	SLOWED TO BUMP PLUG
Event	31	Slow Rate	1/16/2017	01:09:06	USER					SLOWED DUE TO WATER. UPRIGHT LEVEL INDICATOR OFF

Event	32	Bump Plug	1/16/2017	01:16:33	COM5	8.33	2.0	280	208	PLUG BUMPED
Event	33	Check Floats	1/16/2017	01:19:36	USER					FLOATS HELD .5 BBL FLOWBACK
Event	34	Clear Parasite	1/16/2017	01:24:05	USER	8.33	1.5	120	10	PUMPED 10 BBL SUGAR WATER SPACER WITH 20 LBS SUGAR. 6 BBLS TO FILL PARASITE PRESSURE @ 150 PSI
										NO RETURNS THROUGHOUT JOB. USED 20 LBS SUGAR AND 20 SKS CALCIUM CLORIDE AND 20 BBL SUPER FLUSH 100 USED DURING SPACER TRAIN
Event	35	Wait On Rig	1/16/2017	01:38:02	USER					
Event	36	Start Job	1/16/2017	06:36:01	USER					TOP OUT BETWEEN 9 5/8" CSG 36# J-55 AND 14 3/4" OH
Event	37	Pump Water	1/16/2017	06:36:34	USER	8.33	.5	32	.5	CHECKING FOR FLOW
Event	38	Pump Cement	1/16/2017	06:37:12	USER	15.6	2.0	93	29	136 SKS TOP OUT CMT, 15.6 PPG, 1.19 FT3/SK, 5.24 GAL /SK. 29 BBL OF CMT. USED 100 LBS CALCIUM CLORIDE 5 BBL SUPER FLUSH 100
Event	39	Shutdown	1/16/2017	06:48:29	USER					SHUTDOWN TO BLOW DOWN HOSE
Event	40	Resume	1/16/2017	06:52:22	USER					RESUME PUMPING
Event	41	Shutdown	1/16/2017	06:56:18	USER					END OF CMT
Event	42	Wait	1/16/2017	06:56:51	USER					WAIT
Event	43	Start Job	1/16/2017	08:58:00	USER					TOP OUT BETWEEN 9 5/8" CSG 36# J-55 AND 14 3/4" OH. THOUGHT TO HAVE TAGGED CMT 40' DOWN
Event	44	Pump Water	1/16/2017	08:58:15	USER	8.33	.5	36	.5	CHECKING FOR FLOW
Event	45	Pump Cement	1/16/2017	08:58:42	USER	15.6	1.5	45	27	126 SKS TOPOUT CMT, 15.6 PPG, 1.19 FT3/SK, 5.42 GAL /SK. 27 BBLS
Event	46	Shutdown	1/16/2017	09:24:24	USER					END OF CMT
Event	47	Wait	1/16/2017	09:24:55	USER					WAIT
Event	48	Start Job	1/16/2017	11:15:54	USER					TOP OUT BETWEEN 9 5/8" CSG 36# J-55 AND 14 3/4" OH. THOUGHT TO HAVE TAGGED CMT 170' DOWN

Event	49	Pump Water	1/16/2017	11:16:20	USER	8.33	.5	29	.5	CHECKING FOR FLOW
Event	50	Pump Cement	1/16/2017	11:17:10	USER	15.6	2.0	70	50	235 SKS TOP OUT CMT, 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 50 BBL. WITH 8 SKS CALCIUM CLORIDE AND 2 BBL SUPER FLUSH 100
Event	51	Shutdown	1/16/2017	11:46:40	USER					END OF CMT
Event	52	Wait	1/16/2017	11:47:05	USER					WAIT
Event	53	Start Job	1/16/2017	14:21:45	USER					TOP OUT BETWEEN 9 5/8" CSG 36# J-55 AND 14 3/4" OH. THOUGHT TO HAVE TAGGED CMT 85' DOWN
Event	54	Pump Water	1/16/2017	14:22:31	USER	8.33	.5	40	.5	CHECKING FOR FLOW
Event	55	Pump Cement	1/16/2017	14:23:18	USER	15.6	2.0	109	106	500 SKS TOP OUT CMT. 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK 106 BBL. WITH 6 SK CAL CHL CMT TO SURFACE KEPT FALLING BACK
Event	56	Shutdown	1/16/2017	15:13:21	USER					
Event	57	Wait For More Top Out	1/16/2017	15:13:44	USER					CALLED FOR MORE CMT
Event	58	Other	1/17/2017	06:00:00	USER					1000 SKS TOP OUT ARRIVED IN TWO LOADS @ STAGING AREA @ 23:00 UNABLE TO GET ONTO LOCATION TILL 3:00. TOP OUT LOADED AND TRUCKS OFF LOCATION @ 6:00
Event	59	Re-Spot Equipment	1/17/2017	06:15:00	USER					1 HT 400 PUMP TRUCK E1, 1 SUPER FLUSH TRANSPORT, 2 550 SERVICE PICKUPS
Event	60	Pre-Rig Up Safety Meeting	1/17/2017	06:45:00	USER					ALL HES PRESENT
Event	61	Start Job	1/17/2017	08:04:58	USER					TOP OUT BETWEEN 9 5/8" CSG 36# J-55 AND 14 3/4" OH
Event	62	Pump Water	1/17/2017	08:05:54	USER	8.33	.5	20	.5	CHECKING FOR FLOW
Event	63	Pump Cement	1/17/2017	08:08:18	COM5	15.6	1.5	45	5	24 SKS TOP OUT CMT, 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 5 BBL. WITH 2 SKS CALCIUM CLORIDE AND 2

BBL SUPER FLUSH 100										
Event	64	Shutdown	1/17/2017	08:11:49	USER					
Event	65	Resume	1/17/2017	08:14:53	USER	CONT. TO BRING CMT TO SURFACE				
Event	66	Shutdown	1/17/2017	08:15:27	USER					
Event	67	Clean Lines	1/17/2017	08:24:28	USER	CLEANED LINES AND CELLUR PUMP WITH FRESH WATER				
Event	68	Shutdown	1/17/2017	08:28:08	USER	END OF TOP OUT ON CHEVRON TR 324-21-597 USED A TOTAL OF 1,015 SKS (217 BBL). 18 SKS CALCIUM CHLORIDE, AND 9 BBL SUPER FLUSH 100				
Event	69	Other	1/17/2017	08:30:11	USER	MOVED OVER TO CHEVRON TR 423-21-597				
Event	70	Pump Water	1/17/2017	08:53:21	USER	8.33	.5	40	.5	CHECKING FOR FLOW
Event	71	Pump Cement	1/17/2017	08:54:06	COM5	15.6	1.0	60	6	28 SKS TOP OUT CMT, 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 6 BBL
Event	72	Shutdown	1/17/2017	09:00:22	USER					
Event	73	Clean Lines	1/17/2017	09:02:22	USER	FLUSHED LINES				
Event	74	Shutdown	1/17/2017	09:03:00	USER					
Event	75	End Job	1/17/2017	09:03:16	USER					
Event	76	Post-Job Safety Meeting (Pre Rig-Down)	1/17/2017	09:10:00	USER	ALL HES PRESENT				
Event	77	Pre-Convoy Safety Meeting	1/17/2017	12:45:00	USER	947 SKS OF TOP OUT CMT LEFT IN TOP OUT SILO 27 BAGS OF CALCIUM CHLORIDE LEFT ON LOCATION				
Event	78	Crew Leave Location	1/17/2017	13:00:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, DUSTIN HYDE AND CREW				

Terra Energy, Chevron TR 324-21-597, 9 5/8" Surface



① Call Out	⑥ Spot Equipment	⑪ Test Lines	⑯ Pump H2O Spacer	21 Check weight	26 Slow Rate	31 Slow Rate
② Pre-Convoy Safety Meeting	⑦ Pre-Rig Up Safety Meeting	⑫ Pump H2O Spacer	⑰ Pump Super Flush 100	22 Pump Lead Cement	27 Shutdown	32 Bump Plug
③ Crew Leave Yard	⑧ Pre-Job Safety Meeting	⑬ Pump Super Flush 100	⑱ Pump H2O Spacer	23 Slow Rate	28 Drop Top Plug	33 Check Floats
④ Arrive At Loc	⑨ Start Job	⑭ Pump H2O Spacer	⑲ Pump Calcium Chloride	24 Pump Tail Cement	29 Pump Displacement	34 Clear Parasite
⑤ Assessment Of Location Safety Meeting	⑩ Prime Lines	⑮ Pump Calcium Chloride	20 Pump H2O Spacer	25 Check weight	30 Slow Rate	35 Wait On Rig

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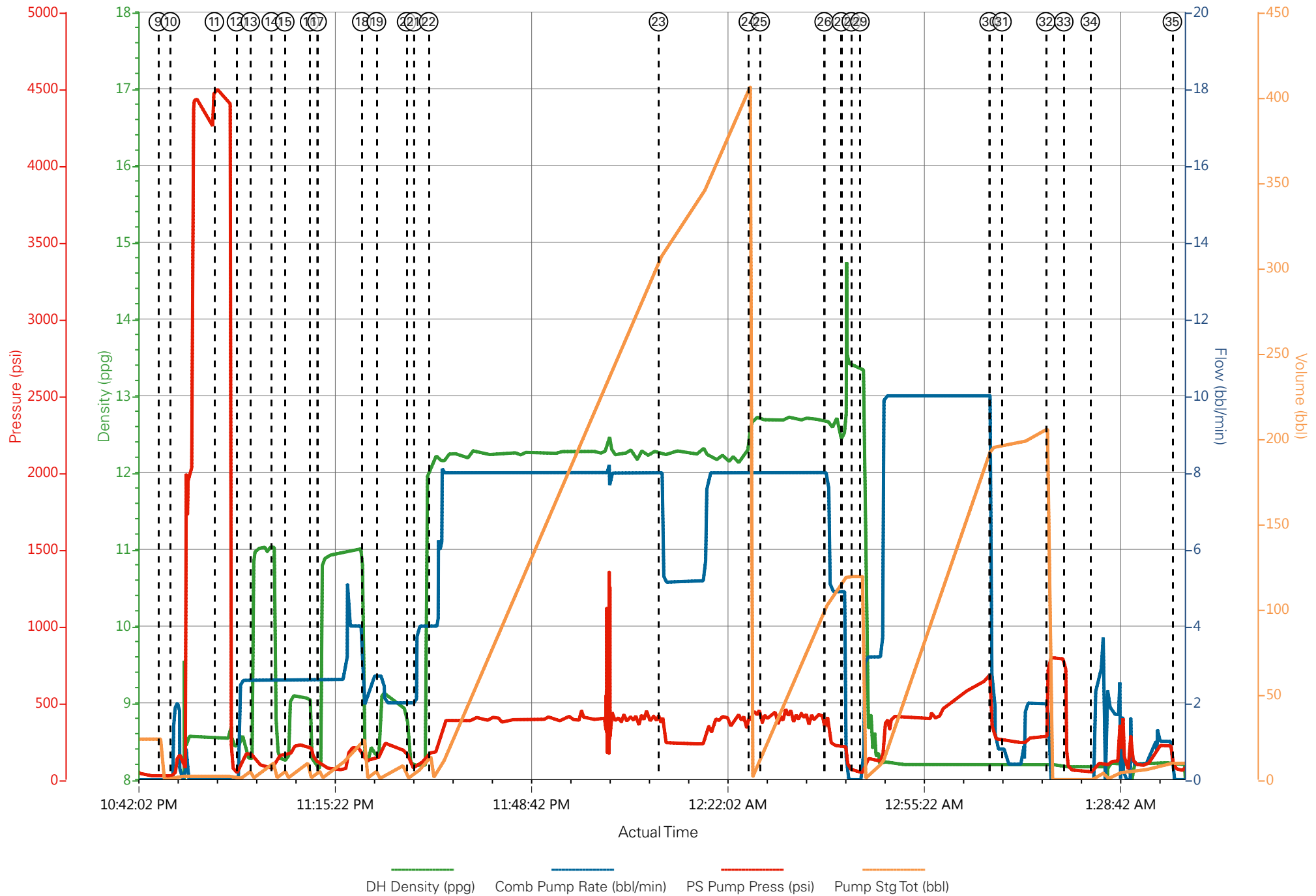
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Customer : TEP ROCKY MOUNTAIN LLC
Representative : Garrett Wade

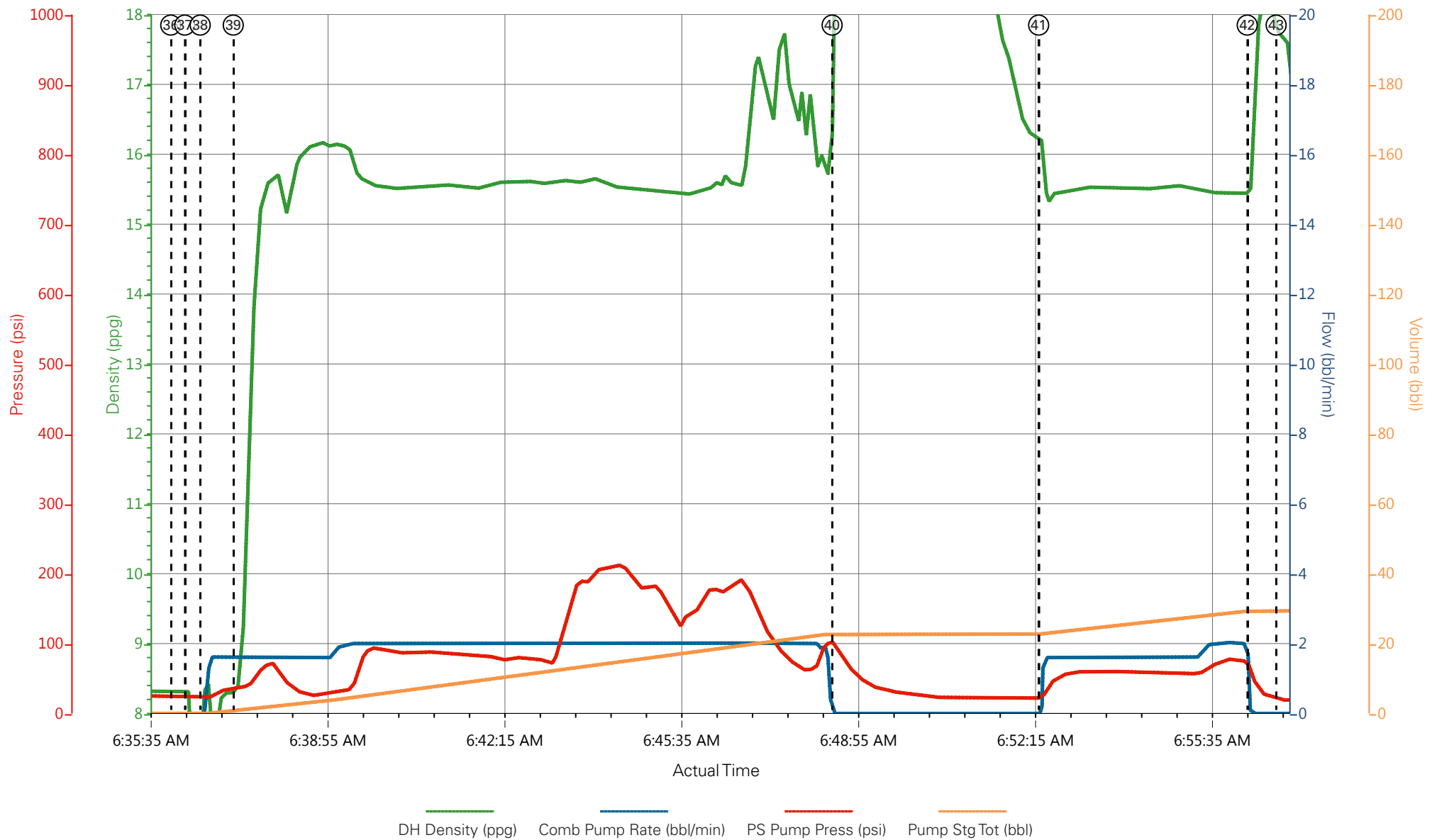
Job Date : 1/15/2017
Sales Order # : 903777748

Well : Chevron TR 324-21-597
Elite 1 : Hyde / Angelo

Terra Energy, Chevron TR 324-21-597, 9 5/8" Surface



Terra Energy, Chevron TR 324-21-597, Top Out #1

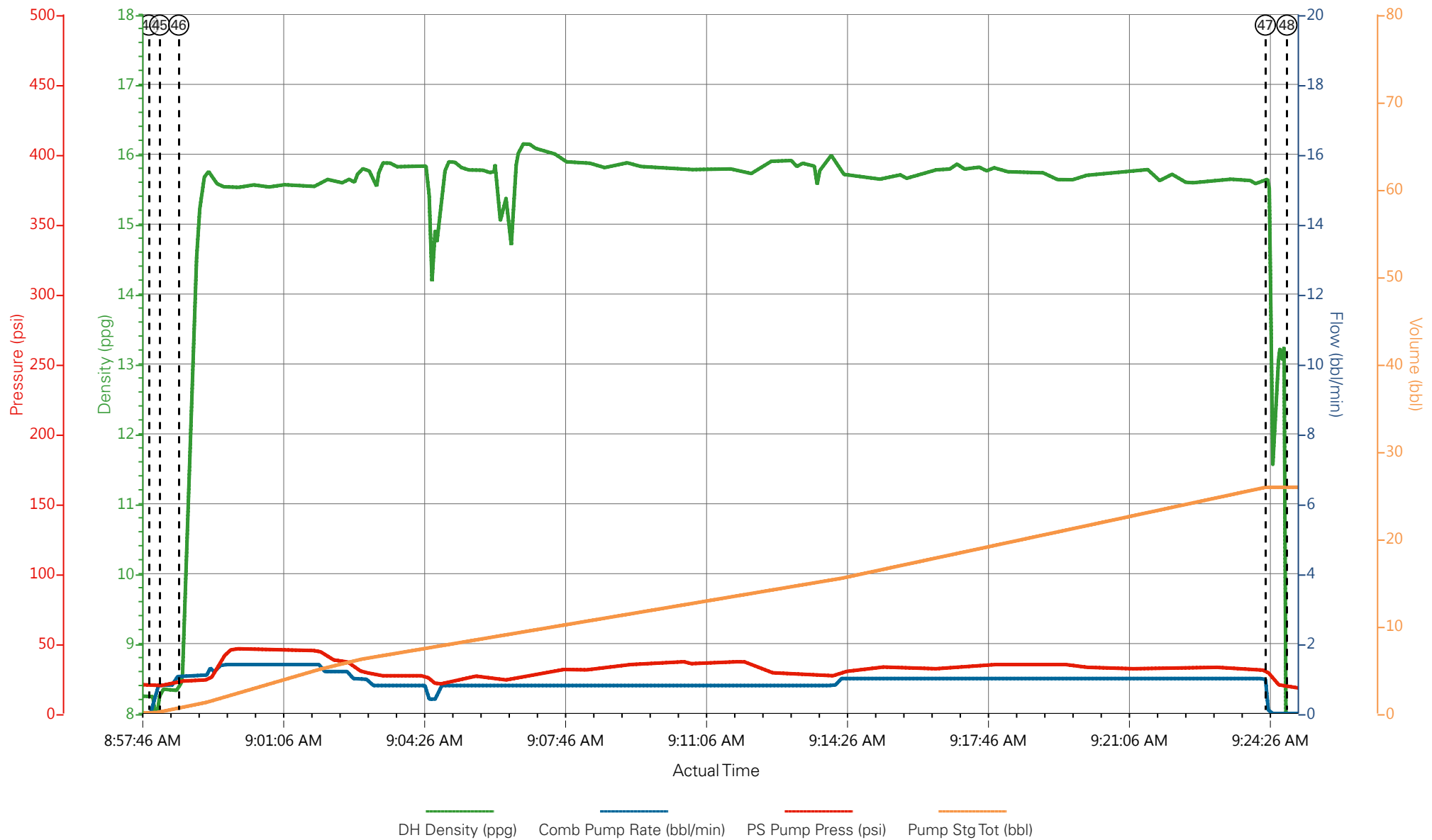


① Call Out	⑤ Assessment Of Location Safety Meeting	⑨ Start Job	⑬ Pump Super Flush 100	⑰ Pump Super Flush 100	21 Check weight	25 Check weight	2
② Pre-Convoy Safety Meeting	⑥ Spot Equipment	⑩ Prime Lines	⑭ Pump H2O Spacer	⑱ Pump H2O Spacer	22 Pump Lead Cement	26 Slow Rate	3
③ Crew Leave Yard	⑦ Pre-Rig Up Safety Meeting	⑪ Test Lines	⑮ Pump Calcium Chloride	⑲ Pump Calcium Chloride	23 Slow Rate	27 Shutdown	3
④ Arrive At Loc	⑧ Pre-Job Safety Meeting	⑫ Pump H2O Spacer	⑯ Pump H2O Spacer	20 Pump H2O Spacer	24 Pump Tail Cement	28 Drop Top Plug	3

Terra Energy, Chevron TR 324-21-597, Top Out #1

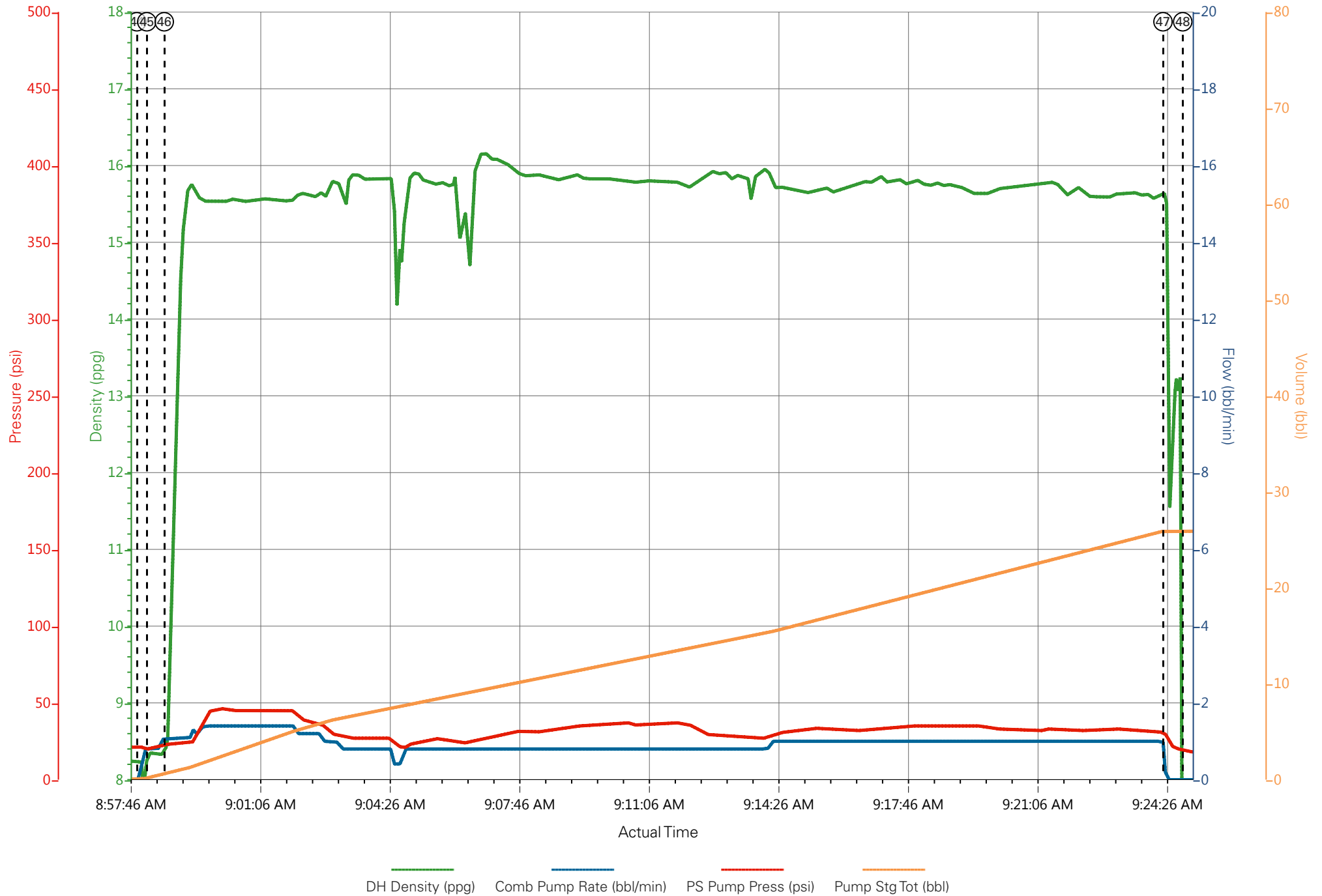


Terra Energy, Chevron TR 324-21-597, Top Out #2

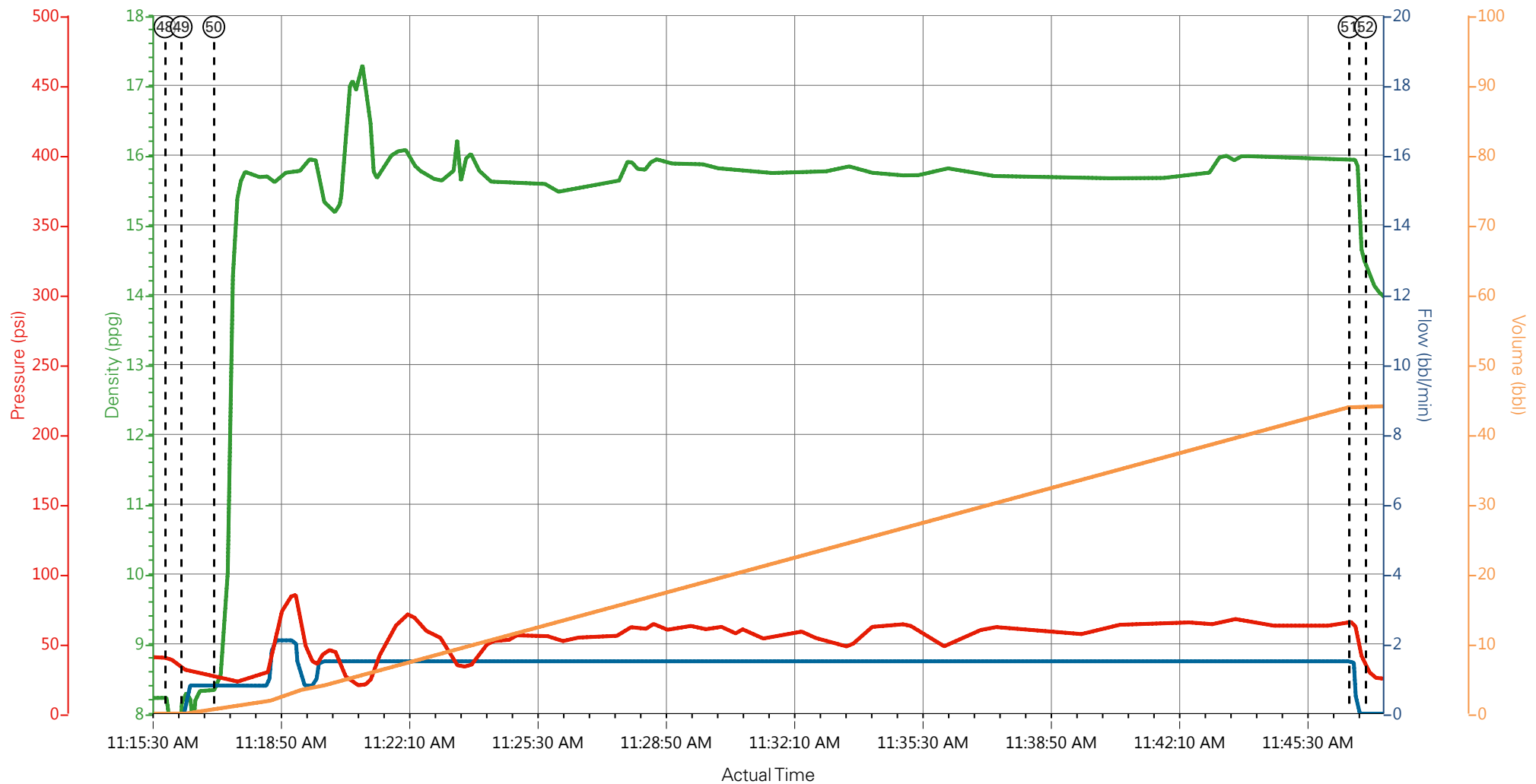


① Call Out	⑤ Assessment Of Location Safety Meeting	⑨ Start Job	⑬ Pump Super Flush 100	⑰ Pump Super Flush 100	21 Check weight	25 Check weight	29
② Pre-Convoy Safety Meeting	⑥ Spot Equipment	⑩ Prime Lines	⑭ Pump H2O Spacer	⑱ Pump H2O Spacer	22 Pump Lead Cement	26 Slow Rate	30
③ Crew Leave Yard	⑦ Pre-Rig Up Safety Meeting	⑪ Test Lines	⑮ Pump Calcium Chloride	⑲ Pump Calcium Chloride	23 Slow Rate	27 Shutdown	31
④ Arrive At Loc	⑧ Pre-Job Safety Meeting	⑫ Pump H2O Spacer	⑯ Pump H2O Spacer	20 Pump H2O Spacer	24 Pump Tail Cement	28 Drop Top Plug	32

Terra Energy, Chevron TR 324-21-597, Top Out #2



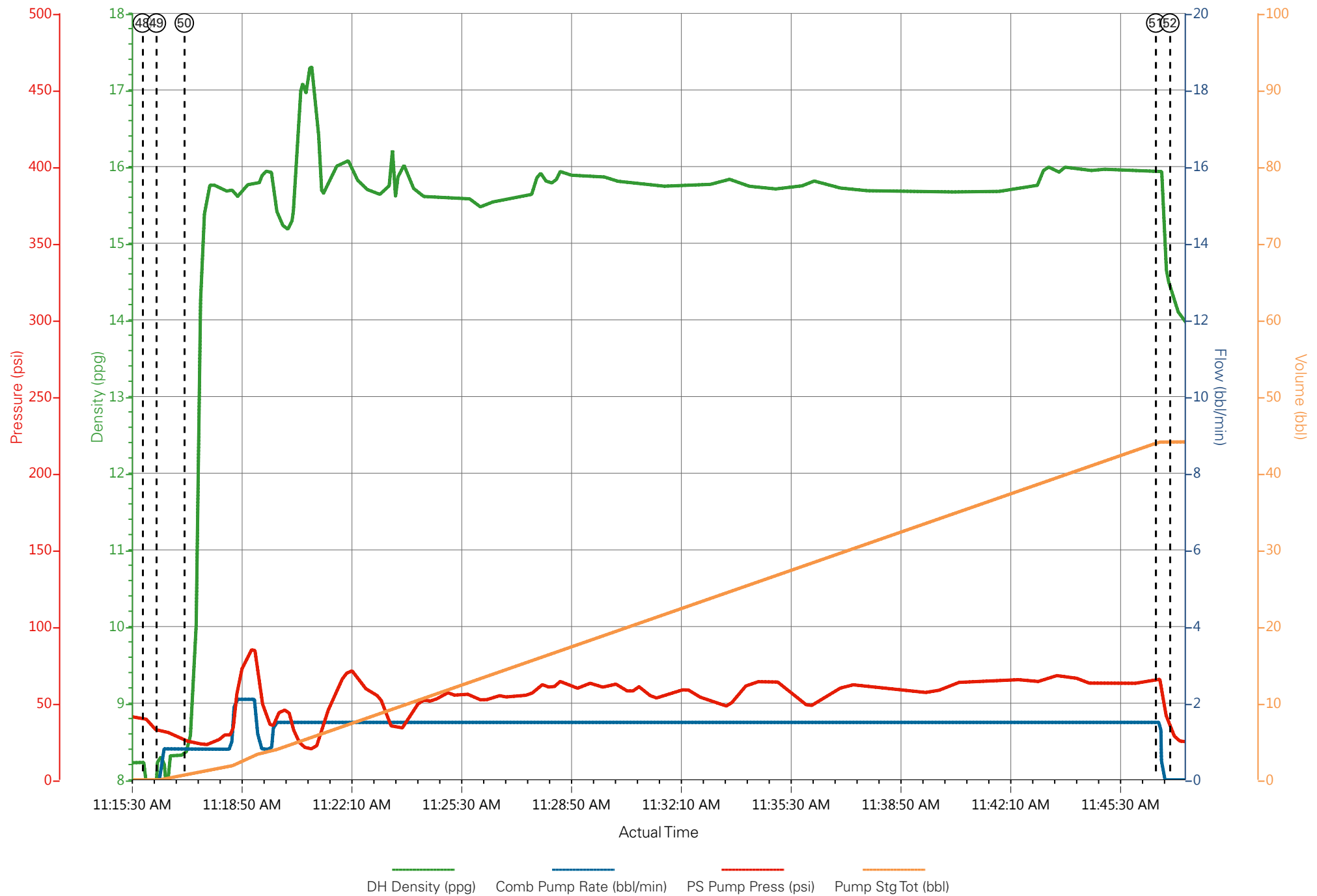
Terra Energy, Chevron TR 324-21-597, Top Out #3



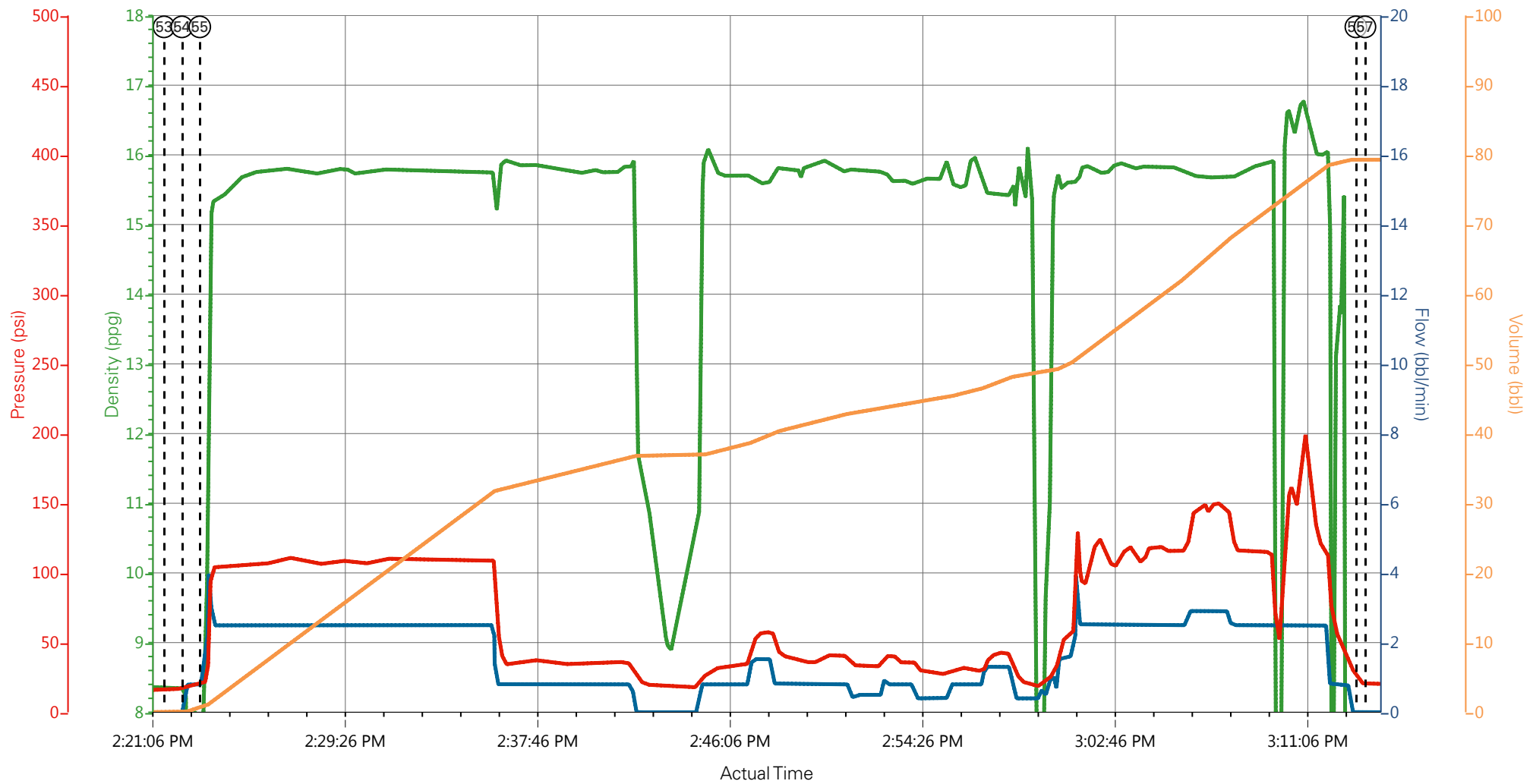
DH Density (ppg) Comb Pump Rate (bbl/min) PS Pump Press (psi) Pump Stg Tot (bbl)

① Call Out	⑦ Pre-Rig Up Safety Meeting	⑬ Pump Super Flush 100	⑲ Pump Calcium Chloride	25 Check weight	31 Slow Rate	37 Pump Water	43 Sta
② Pre-Convoy Safety Meeting	⑧ Pre-Job Safety Meeting	⑭ Pump H2O Spacer	20 Pump H2O Spacer	26 Slow Rate	32 Bump Plug	38 Pump Cement	44 Pu
③ Crew Leave Yard	⑨ Start Job	⑮ Pump Calcium Chloride	21 Check weight	27 Shutdown	33 Check Floats	39 Shutdown	45 Pu
④ Arrive At Loc	⑩ Prime Lines	⑯ Pump H2O Spacer	22 Pump Lead Cement	28 Drop Top Plug	34 Clear Parasite	40 Resume	46 Sh
⑤ Assessment Of Location Safety Meeting	⑪ Test Lines	⑰ Pump Super Flush 100	23 Slow Rate	29 Pump Displacement	35 Wait On Rig	41 Shutdown	47 Wa
⑥ Spot Equipment	⑫ Pump H2O Spacer	⑱ Pump H2O Spacer	24 Pump Tail Cement	30 Slow Rate	36 Start Job	42 Wait	48 Sta

Terra Energy, Chevron TR 324-21-597, Top Out #3

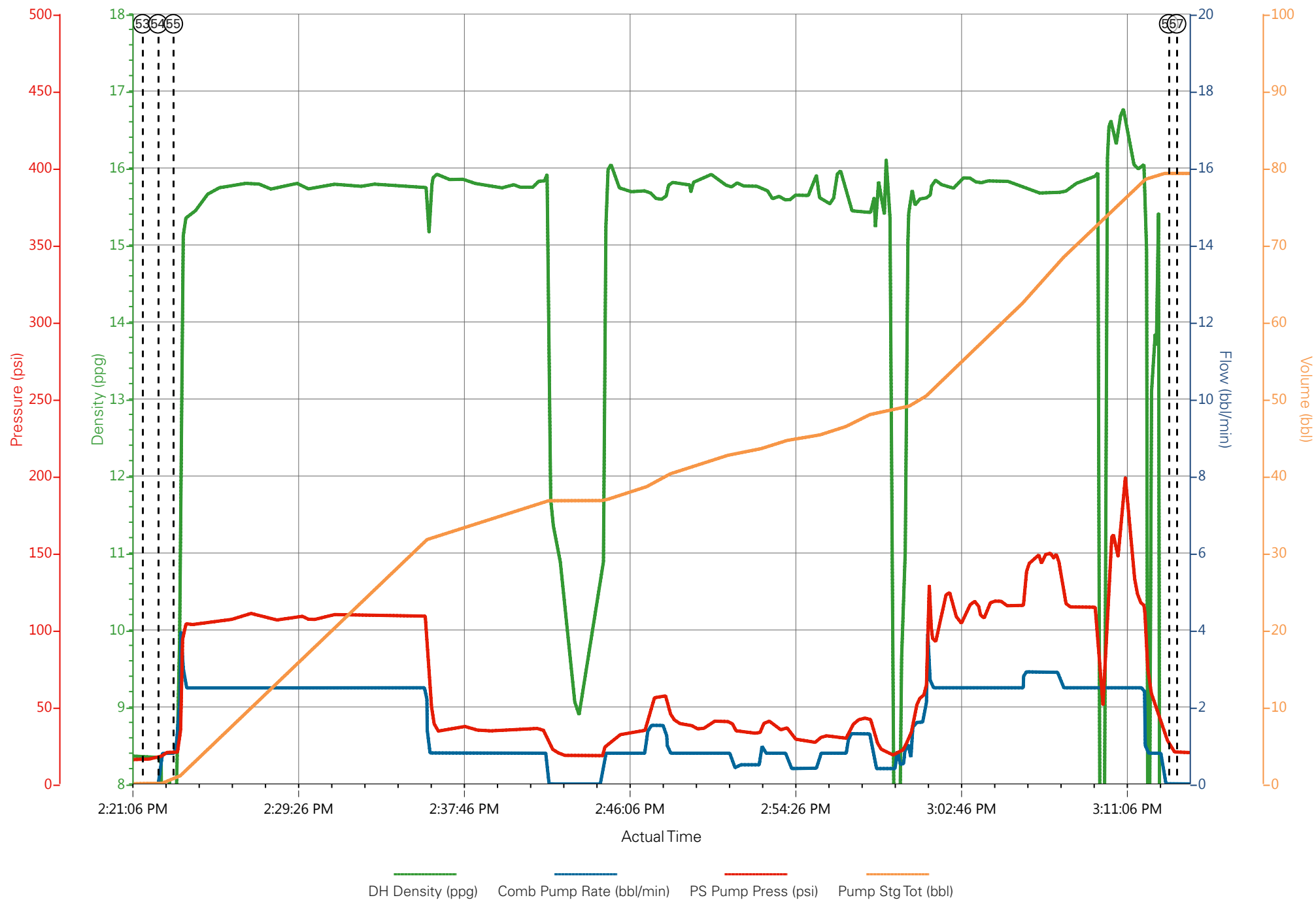


Terra Energy, Chevron TR 324-21-597, Top Out #4

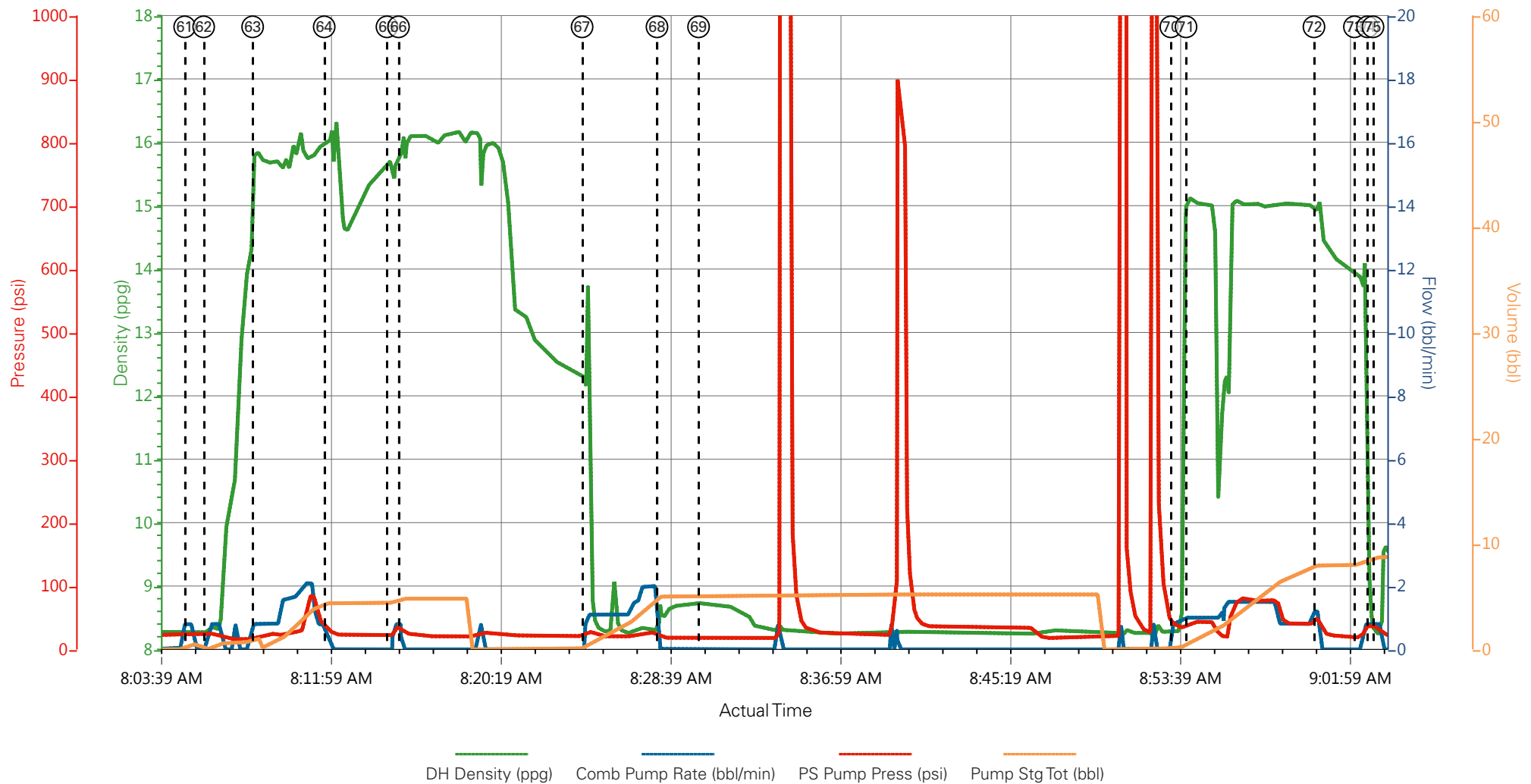


① Call Out	⑦ Pre-Rig Up Safety Meeting	⑬ Pump Super Flush 100	⑲ Pump Calcium Chloride	25 Check weight	31 Slow Rate	37 Pump Water	43 Sta
② Pre-Convoy Safety Meeting	⑧ Pre-Job Safety Meeting	⑭ Pump H2O Spacer	20 Pump H2O Spacer	26 Slow Rate	32 Bump Plug	38 Pump Cement	44 Pu
③ Crew Leave Yard	⑨ Start Job	⑮ Pump Calcium Chloride	21 Check weight	27 Shutdown	33 Check Floats	39 Shutdown	45 Pu
④ Arrive At Loc	⑩ Prime Lines	⑯ Pump H2O Spacer	22 Pump Lead Cement	28 Drop Top Plug	34 Clear Parasite	40 Resume	46 Sh
⑤ Assessment Of Location Safety Meeting	⑪ Test Lines	⑰ Pump Super Flush 100	23 Slow Rate	29 Pump Displacement	35 Wait On Rig	41 Shutdown	47 Wa
⑥ Spot Equipment	⑫ Pump H2O Spacer	⑱ Pump H2O Spacer	24 Pump Tail Cement	30 Slow Rate	36 Start Job	42 Wait	48 Sta

Terra Energy, Chevron TR 324-21-597, Top Out #4



Terra Energy, Chevron TR 324-21-597, Top Out #5



① Call Out	⑨ Start Job	⑰ Pump Super Flush 100	25 Check weight	33 Check Floats	41 Shutdown	49 Pump Water	57 Wait For More
② Pre-Convoy Safety Meeting	⑩ Prime Lines	⑱ Pump H2O Spacer	26 Slow Rate	34 Clear Parasite	42 Wait	50 Pump Cement	58 Other
③ Crew Leave Yard	⑪ Test Lines	⑲ Pump Calcium Chloride	27 Shutdown	35 Wait On Rig	43 Start Job	51 Shutdown	59 Re-Spot Equip
④ Arrive At Loc	⑫ Pump H2O Spacer	20 Pump H2O Spacer	28 Drop Top Plug	36 Start Job	44 Pump Water	52 Wait	60 Pre-Rig Up Sa
⑤ Assessment Of Location Safety Meeting	⑬ Pump Super Flush 100	21 Check weight	29 Pump Displacement	37 Pump Water	45 Pump Cement	53 Start Job	61 Start Job
⑥ Spot Equipment	⑭ Pump H2O Spacer	22 Pump Lead Cement	30 Slow Rate	38 Pump Cement	46 Shutdown	54 Pump Water	62 Pump Water
⑦ Pre-Rig Up Safety Meeting	⑮ Pump Calcium Chloride	23 Slow Rate	31 Slow Rate	39 Shutdown	47 Wait	55 Pump Cement	63 Pump Cement
⑧ Pre-Job Safety Meeting	⑯ Pump H2O Spacer	24 Pump Tail Cement	32 Bump Plug	40 Resume	48 Start Job	56 Shutdown	64 Shutdown

Terra Energy, Chevron TR 324-21-597, Top Out #5

