

# HALLIBURTON

iCem<sup>®</sup> Service

## **TEP ROCKY MOUNTAIN LLC**

**For: Lynn Cass & Abe Alexander**

Date: Wednesday, February 01, 2017

**TR 314-21-597 Surface PJR**

API #05-045-23341-00

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

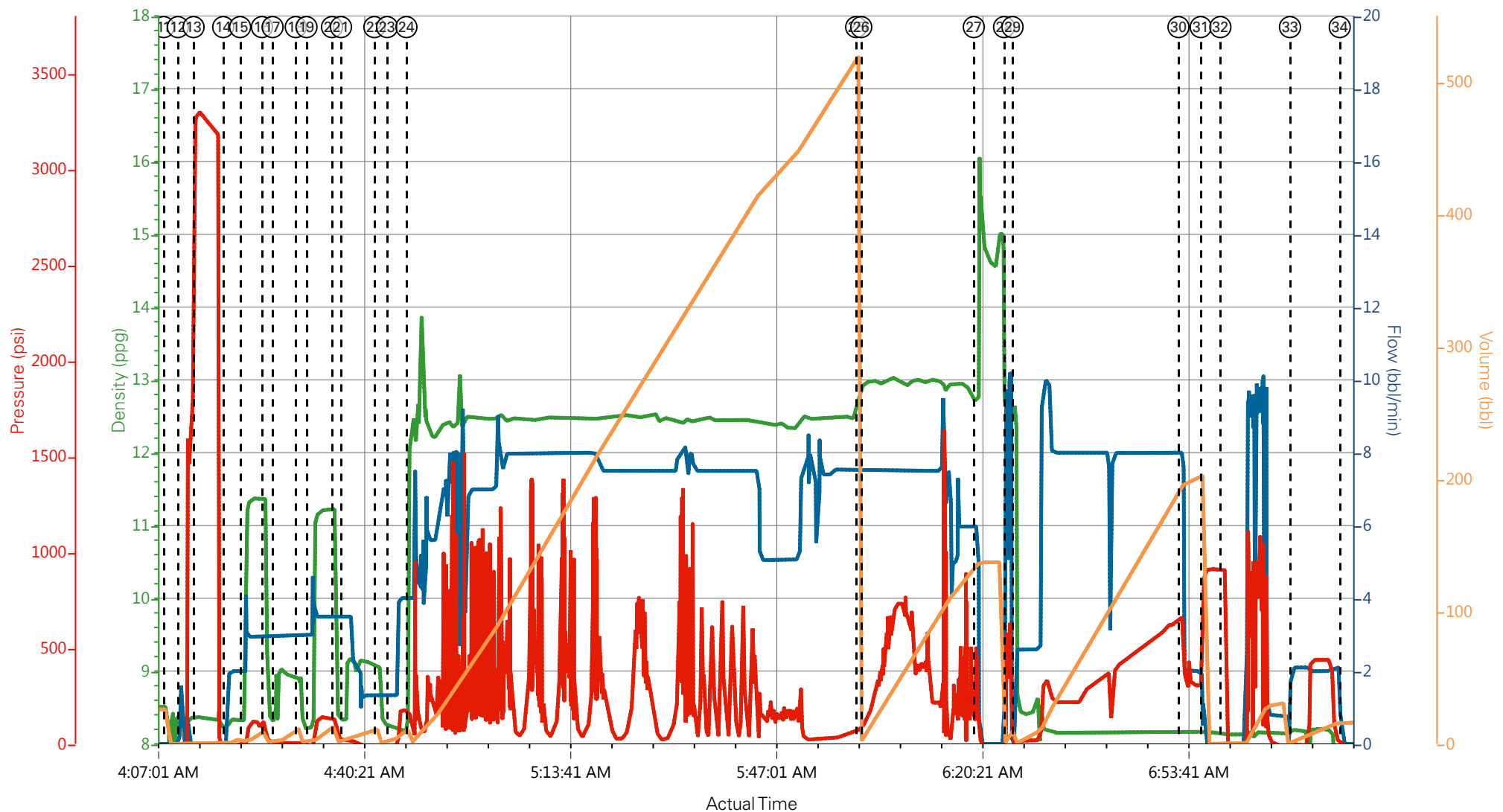
## 1.1 Job Event Log

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	1/31/2017	14:00:00	USER					REQUESTED ON LOCATION @ 21:00
Event	2	Pre-Convoy Safety Meeting	1/31/2017	16:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/31/2017	17:00:00	USER					1 HT 400 PUMP TRUCK E1, 1 SUPER FLUSH TRANSPORT, 2 550 SERVICE PICKUP'S WITH A COMPRESSOR AND A HEATER TRAILER
Event	4	Arrive At Loc	1/31/2017	21:00:00	USER					HES ARRIVED TO MTW @19:30. CHAINED UP, AND DROVE TO STAGING AREA DESIGNATED BY ROAD BOSS. RIG RUNNING CASING WHEN HES SUPERVISOR ARRIVED ON LOCATION CALLED FOR HES EQUIPMENT TO SPOT ON LOCATION
Event	5	Assessment Of Location Safety Meeting	1/31/2017	21:30:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.0, CHLORIDES- 0, TEMP- 80F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Spot Equipment	1/31/2017	22:00:00	USER					1 HT 400 PUMP TRUCK E1, 1 SUPER FLUSH TRANSPORT, 2 550 SERVICE PICKUP'S WITH A COMPRESSOR AND A HEATER TRAILER
Event	7	Pre-Rig Up Safety Meeting	1/31/2017	22:30:00	USER					ALL HES PRESENT
Event	8	Rig-Up Equipment	1/31/2017	22:45:00	USER					RIGGED UP TO REDZONE BY 01:00 WILL RESUME RIGGING UP ONCE REDZONE IS SAFE
Event	9	Other	2/1/2017	03:00:00	USER					FINISHED RIGGING UP

Event	10	Pre-Job Safety Meeting	2/1/2017	03:45:00	USER						ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 85 STROKES PRIOR TO JOB WITH RETURNS, PRESSURE 115 PSI.
Event	11	Start Job	2/1/2017	04:08:26	USER						TD 2714'OF 14 ¾" OH, 18" CONDUCTOR SET @108', 2715' OF 9 5/8" J-55 36#/FT, TOTAL PIPE 2715', SJ 27.80', PARASITE STRING 1.90" TOTAL LENGTH 2602', MUD 9.0 PPG
Event	12	Prime Lines	2/1/2017	04:10:44	USER	8.33	2.0	0	2	FRESH WATER	
Event	13	Test Lines	2/1/2017	04:13:16	COM5	3310					PRESSURE HELD
Event	14	Pump H2O Spacer	2/1/2017	04:18:04	COM5	8.33	2.0	0	5	5 BBL FRESH WATER	
Event	15	Pump Super Flush 100	2/1/2017	04:20:48	COM5	11.7	3.0	80	10	10 BBL SUPER FLUSH 100	
Event	16	Pump H2O Spacer	2/1/2017	04:24:20	COM5	8.33	3.0	20	5	5 BBL FRESH WATER	
Event	17	Pump Calcium Chloride Spacer	2/1/2017	04:26:03	COM5	8.4	3.0	9	10	10 SKS CALCIUM CHLORIDE IN 10BBL H2O	
Event	18	Pump H2O Spacer	2/1/2017	04:29:48	COM5	8.33	3.0	5	5	5 BBL FRESH WATER	
Event	19	Pump Super Flush 100	2/1/2017	04:31:32	COM5	11.7	3.5	140	10	10 BBL SUPER FLUSH 100	
Event	20	Pump H2O Spacer	2/1/2017	04:35:40	COM5	8.33	3.5	40	5	5 BBL FRESH WATER	
Event	21	Pump Calcium Chloride Spacer	2/1/2017	04:37:07	COM5	8.4	3.5	24	10	10 SKS CALCIUM CHLORIDE IN 10BBL H2O	
Event	22	Pump H2O Spacer	2/1/2017	04:42:31	COM5	8.33	4.0	180	10	10 BBL FRESH WATER	
Event	23	Check weight	2/1/2017	04:44:34	COM5						WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	24	Pump Lead Cement	2/1/2017	04:47:42	COM5	12.3	7.5	150	381.5	900 SKS VARICEM CMT 12.3 PPG, 2.38 FT3/SK, 13.76 GAL/SK. WITH 45LBS TUF-FIBER THROUGHOUT CMT AFTER THE FIRST 20 BBL AWAY.	
Event	25	Other	2/1/2017	05:00:00	USER						ADD HRS START
Event	26	Pump Tail Cement	2/1/2017	06:00:27	COM5	12.8	7.5	370	129.6	345 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 511.78 GAL/SK	
Event	27	Check weight	2/1/2017	06:01:16	COM5						WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	28	Shutdown	2/1/2017	06:19:29	USER						END OF CMT.

Event	29	Drop Top Plug	2/1/2017	06:24:22	USER					VERIFIED BY FLAG INDICATOR
Event	30	Pump Displacement	2/1/2017	06:25:45	COM5	8.33	8.0	680	198	FRESH WATER
Event	31	Slow Rate	2/1/2017	06:52:35	USER	8.33	2.0	330	10	SLOWED TO BUMP PLUG
Event	32	Bump Plug	2/1/2017	06:56:11	COM5	8.33	2.0	320	208	PLUG BUMPED
Event	33	Check Floats	2/1/2017	06:59:22	USER			880		FLOATS HELD .5 BBL FLOWBACK
Event	34	Clear Parasite String	2/1/2017	07:10:37	COM5	8.34	2.0	420	15	10 LBS SUGAR IN 15 BBL H2O
Event	35	Wait on Cement	2/1/2017	07:18:41	USER					WAIT TO DO TOP OUT. NO RETURNS THROUGHOUT JOB
Event	36	Start Top Out	2/1/2017	11:10:59	USER					TAGGED CMT @ 180'. CONDUCTOR 18" SET @ 108' AND 14 3/4" OH BELOW THAT WITH 9 5/8" SURFACE CSG
Event	37	Check weight	2/1/2017	11:11:45	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	38	Pump Water	2/1/2017	11:12:37	USER					PUMPED WATER TO CHECK FOR FLOW
Event	39	Pump Cement	2/1/2017	11:14:18	COM5	15.6	2.0	35	86.3	406 SKS TOPOUT CMT (86.3 BBL), 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 4 BBL SUPER FLUSH AND 1 50 LB BAG OF CALCIUM CHLORIDE
Event	40	End Of Top Out	2/1/2017	12:15:30	USER					
Event	41	Post-Job Safety Meeting (Pre Rig-Down)	2/1/2017	14:14:36	USER					ALL HES PRESENT
Event	42	Pre-Convoy Safety Meeting	2/1/2017	14:45:00	USER					
Event	43	Crew Leave Location	2/1/2017	15:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, DUSTIN HYDE AND CREW

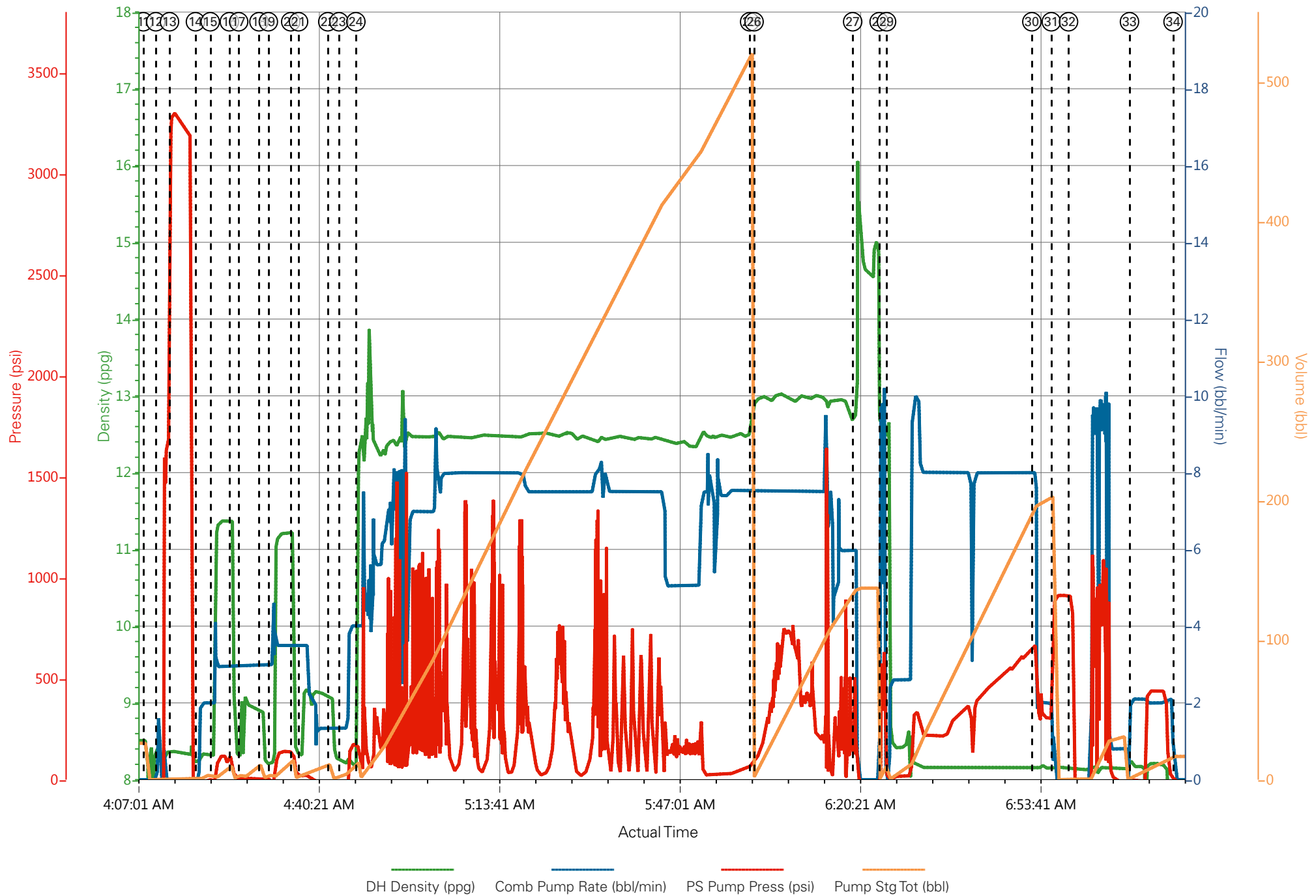
# TERRA ENERGY, CHEVRON TRAIL RIDGE 314-21-597, 9 5/8" SURFACE



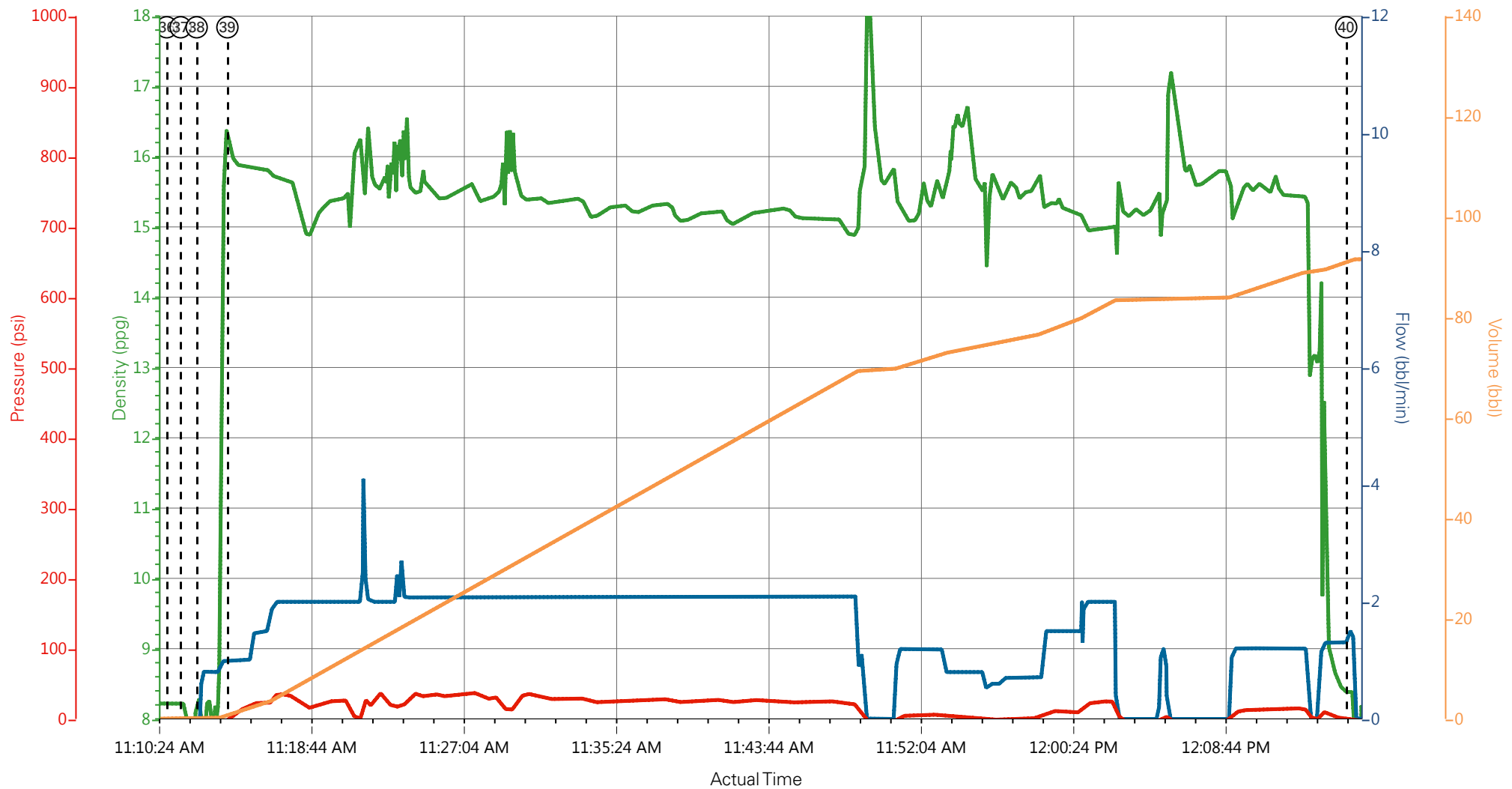
— DH Density (ppg)
 — Comb Pump Rate (bbl/min)
 — PS Pump Press (psi)
 — Pump Stg Tot (bbl)

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

# TERRA ENERGY, CHEVRON TRAIL RIDGE 314-21-597, 9 5/8" SURFACE



# TERRA ENERGY, CHEVRON TRAIL RIDGE 314-21-597, TOPOUT



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

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

# TERRA ENERGY, CHEVRON TRAIL RIDGE 314-21-597, TOPOUT

