

# HALLIBURTON

iCem<sup>®</sup> Service

## **Terra Energy Partners**

**For: Lynn Cass & Abe Alexander**

Date: Tuesday, January 24, 2017

**TR 313-21-597 Surface PJR**

API #05-045-23339-00

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

## 1.1 Job Event Log

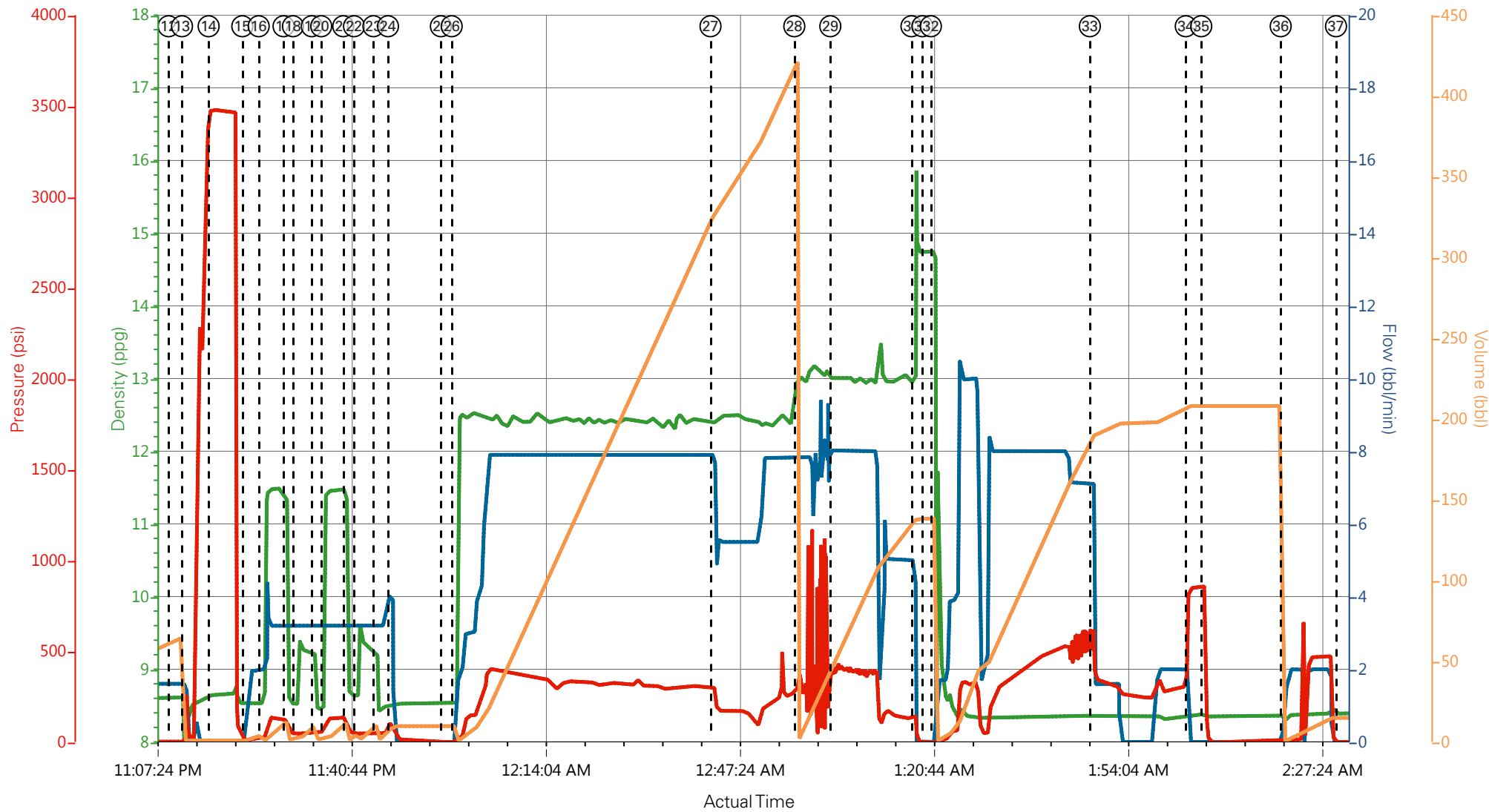
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	1/22/2017	22:00:00	USER					REQUESTED ON LOCATION @ 10:00. 12 HOUR CALL OUT DUE TO WEATHER
Event	2	Pre-Convoy Safety Meeting	1/23/2017	00:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/23/2017	01:00:00	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	1/23/2017	08:00:00	USER					HES ARRIVED TO STAGING AREA @ 07:30. RIG GETTING READY TO START RUNNING CASING WHEN HES SUPERVISOR ARRIVED ON LOCATION
Event	5	Assessment Of Location Safety Meeting	1/23/2017	08:30:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.5, CHLORIDES- 0, TEMP- 60F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Spot Equipment	1/23/2017	15:00:00	USER					WENT TO GET EQUIPMENT AT STAGING AREA. SPOTTED ALL EQUIPMENT BY 18:00
Event	7	Other	1/23/2017	18:00:00	USER					ADD HRS START
Event	8	Pre-Rig Up Safety Meeting	1/23/2017	18:15:00	USER					ALL HES PRESENT
Event	9	Rig-Up Equipment	1/23/2017	18:30:00	USER					RIGGED UP EVERYTHING TO RED ZONE. WILL RESUME ONCE CASING CREW IS RIGGED DOWN. STOPPED RIGGING UP @ 20:00

Event	10	Finish Rig-Up	1/23/2017	21:00:00	USER	FINISED RIG-UP				
Event	11	Pre-Job Safety Meeting	1/23/2017	22:30:00	USER	ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 75 STROKES PRIOR TO JOB WITH NO RETURNS, PRESSURE 200 PSI.				
Event	12	Start Job	1/23/2017	23:09:50	USER	TD 2796' OF 14 3/4" OH, 18" CONDUCTOR SET @, 1789.66' OF 9 5/8" J-55 36# AND 1006.37' OF 9 5/8" J-55 40# FOR A TOTAL PIPE OF 2799.66', SJ 27.80', CSG 9 5/8" 36# J-55, PARASITE STRING 1.90" TOTAL LENGTH 2683', MUD 9.1 PPG				
Event	13	Prime Pumps	1/23/2017	23:12:08	COM5	8.33	2.0	33	2	FRESH WATER
Event	14	Test Lines	1/23/2017	23:16:43	COM5			3480		PRESSURE HELD
Event	15	Pump H2O Spacer	1/23/2017	23:22:30	COM5	8.33	2.0	48	5	5 BBL FRESH WATER
Event	16	Pump Super Flush 100	1/23/2017	23:25:19	COM5	11.7	3.2	148	10	10 BBL SUPER FLUSH 100
Event	17	Pump H2O Spacer	1/23/2017	23:29:35	COM5	8.33	3.2	56	5	5 BBL FRESH WATER
Event	18	Pump Calcium Chloride Spacer	1/23/2017	23:31:12	COM5	8.4	3.2	45	10	10 BBL WITH 10 SKS OF CALCIUM CHLORIDE
Event	19	Pump H2O Spacer	1/23/2017	23:34:26	COM5	8.33	3.2	62	5	5 BBL FRESH WATER
Event	20	Pump Super Flush 100	1/23/2017	23:36:03	COM5	11.7	3.2	135	10	10 BBL SUPER FLUSH 100
Event	21	Pump H2O Spacer	1/23/2017	23:39:50	COM5	8.33	3.2	96	5	5 BBL FRESH WATER
Event	22	Pump Calcium Chloride Spacer	1/23/2017	23:41:41	COM5	8.4	3.2	44	10	10 BBL WITH 10 SKS OF CALCIUM CHLORIDE
Event	23	Pump H2O Spacer	1/23/2017	23:45:01	COM5	8.33	3.2	46	10	10 BBL FRESH WATER
Event	24	Shutdown	1/23/2017	23:47:31	USER	SHUTDOWN TO MIX UP FIRST TUB OF CMT				
Event	25	Check weight	1/23/2017	23:56:36	COM5	WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES				

Event	26	Pump Lead Cement	1/23/2017	23:58:27	COM5	12.3	8.0	320	395	930 SKS VARICEM CMT 12.3, PPG, 2.38 FT3/SK, 13.76 GAL/SK. WITH 60LBS TUF-FIBER THROUGHOUT AFTER THE FIRST 20 BBL AWAY.
Event	27	Slow Rate	1/24/2017	00:42:53	USER					SLOWED TO CMT
Event	28	Pump Tail Cement	1/24/2017	00:57:17	COM5	12.8	8.0	390	129.6	345 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 511.78 GAL/SK
Event	29	Check weight	1/24/2017	01:03:28	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	30	Shutdown	1/24/2017	01:17:24	USER					END OF CMT
Event	31	Drop Top Plug	1/24/2017	01:19:16	USER					VERIFIED BY FLAG INDICATOR
Event	32	Pump Displacement	1/24/2017	01:20:44	COM5	8.33	8.0	600	102.8	FRESH WATER
Event	33	Slow Rate	1/24/2017	01:48:02	USER	8.33	2.0	300	10	SLOWED TO BUMP PLUG
Event	34	Bump Plug	1/24/2017	02:04:30	COM5	8.33	2.0	300	112.8	PLUG BUMPED
Event	35	Check Floats	1/24/2017	02:07:10	USER			850		FLOATS HELD .5 BBL FLOW BACK
Event	36	Clear Parasite	1/24/2017	02:20:48	USER	8.33	2.0	390	15	15 BBL SUGAR WATER USED 20LBS SUGAR
Event	37	Wait on Cement	1/24/2017	02:30:18	USER					WAIT TO DO TOPOUT
Event	38	Rig-Up Equipment	1/24/2017	06:30:00	USER					FINISHED RIG-UP INTO CELLER
Event	39	Other	1/24/2017	07:30:00	USER					HES RTP, WATER 36 DEGREES GOING TO WAIT TILL H2O IS TO TEMP
Event	40	Pump Water	1/24/2017	10:40:09	USER					.5 BBL FRESH WATER TO CHECK FOR FLOW TO START TOPOUT
Event	41	Pump Cement	1/24/2017	10:41:09	COM5	15.6	3.0	200	18.8	89 SKS TOPOUT (18.8 BBL) 15.6PPG, 1.19 YIELD, 5.24 GAL/SK, USED 5 BBL SUPER FLUSH 100 AND 1 50LB BAG CALCIUM CHLORIDE
Event	42	Pump Water Behind	1/24/2017	10:52:46	COM5					PUMPED 2BBL TO CLEAN LINE

Event	43	Shutdown	1/24/2017	10:54:22	USER	END OF TOPOUT
Event	44	End Job	1/24/2017	10:55:00	USER	USED A TOTAL OF 50 LBS SUGAR, 25 BBL SUPER FLUSH 100, 21 BAGS CALCIUM CHLORIDE. 17 TOTAL ADD HRS.
Event	45	Post-Job Safety Meeting (Pre Rig-Down)	1/24/2017	12:15:00	USER	ALL HES PRESENT
Event	46	Pre-Convoy Safety Meeting	1/24/2017	13:45:00	USER	ALL HES PRESENT
Event	47	Crew Leave Location	1/24/2017	14:00:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, DUSTIN HYDE AND CREW

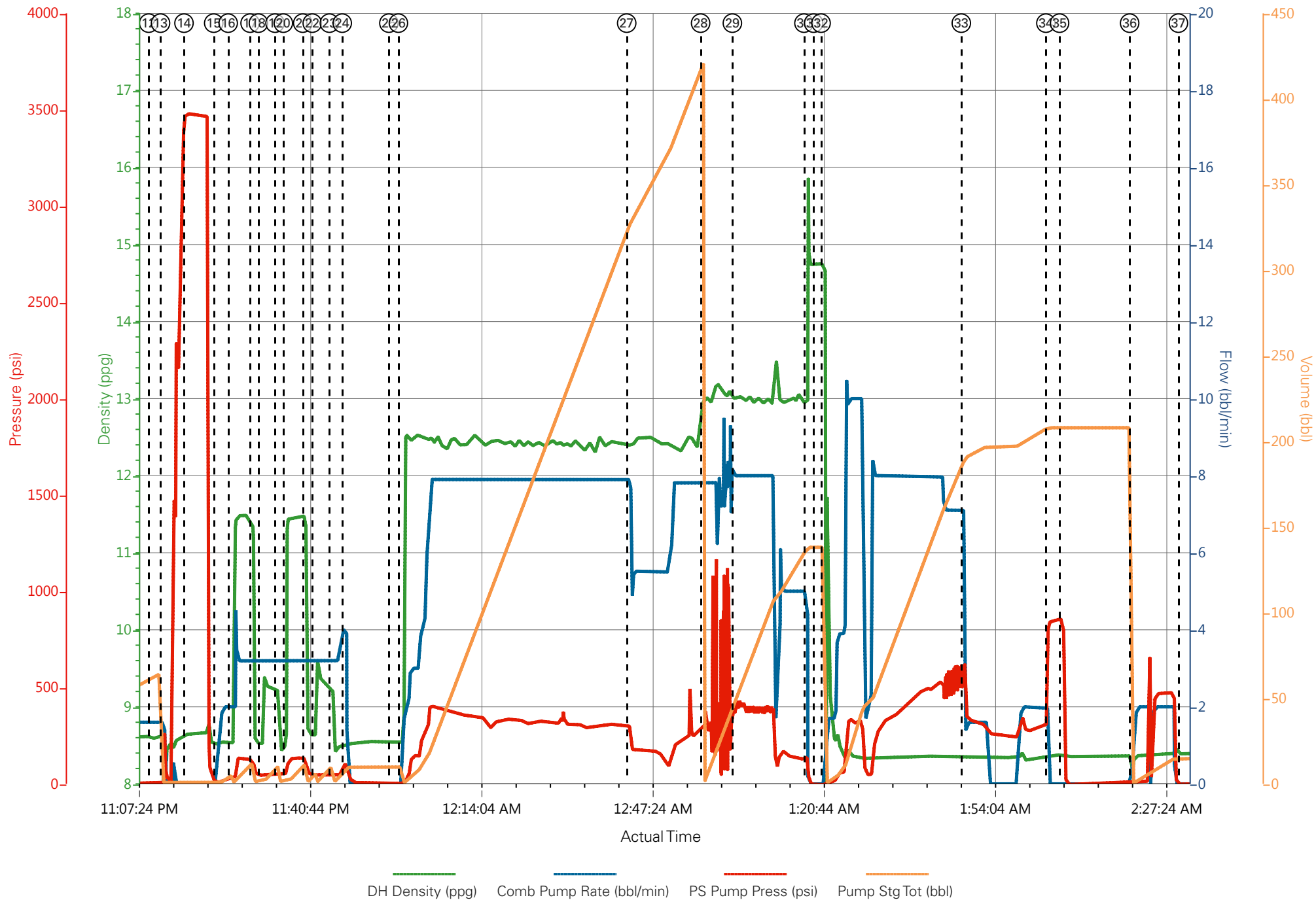
# TERRA, CHEVRON TR 313-21-597, 9 5/8" SURFACE



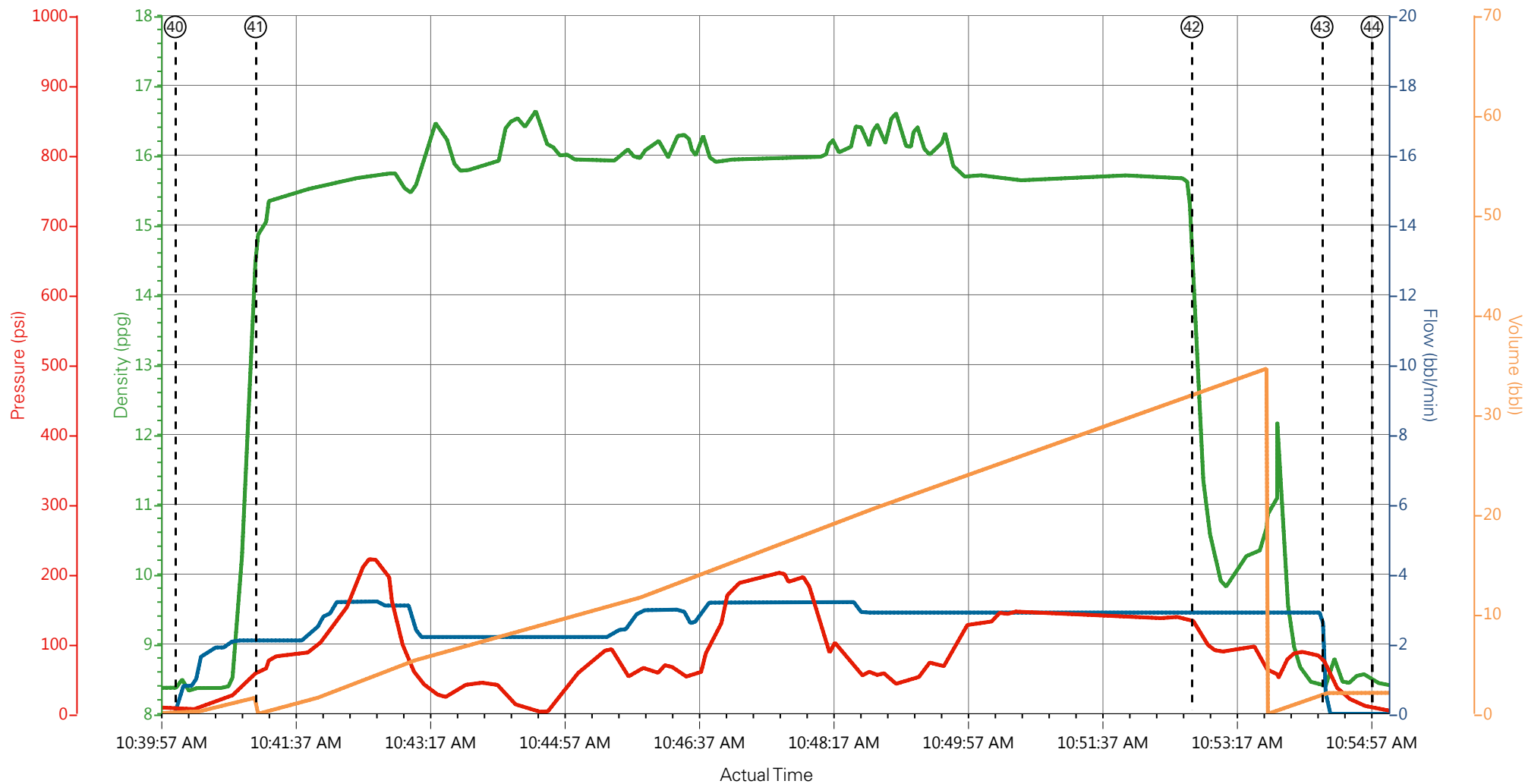
— DH Density (ppg)   
 — Comb Pump Rate (bbl/min)   
 — PS Pump Press (psi)   
 — Pump Stg Tot (bbl)

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

# TERRA, CHEVRON TR 313-21-597, 9 5/8" SURFACE



# TERRA, CHEVRON TR 313-21-597, TOPOUT



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

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

▼ **HALLIBURTON** | iCem® Service

Created: 2017-01-23 15:08:09, Version: 4.2.393

Edit

Customer: TEP ROCKY MOUNTAIN LLC

Job Date: 1/23/2017

Well: Chevron TR 313-21-597

Representative: Beaude Oaks

Sales Order #: 903789806

Elite 1: Hyde / Brennecke



# TERRA, CHEVRON TR 313-21-597, TOPOUT

