

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

United States of America

**For: Lynn Cass and Abe Alexander**

Date: Sunday, January 01, 2017

**TR 23-21-597 Surface**

**API# 05-045-23346-00**

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

## 1.1 Job Event Log

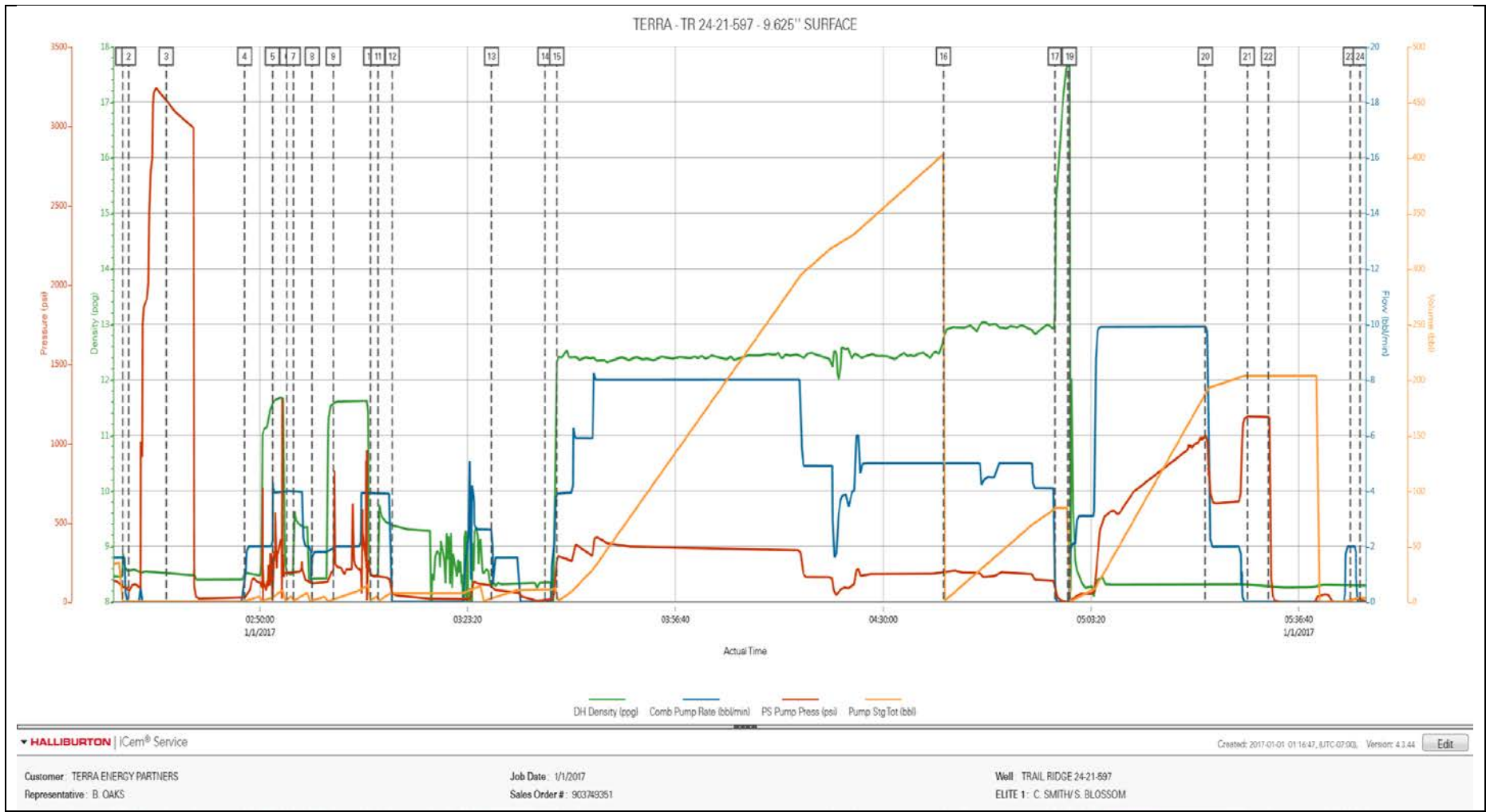
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/31/2016	23:30:00	USER					REQUESTED ON LOCATION @ 0900
Event	2	Pre Convoy Safety Meeting	12/31/2016	02:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	12/31/2016	03:00:00	USER					1 F550, 1 PUMP TRUCK, & 1 660 BULK TRUCK.
Event	4	Arrive At Location	12/31/2016	07:30:00	USER					RIG PULLING DRILL PIPE
Event	5	Assessment Of Location	12/31/2016	08:30:00	USER					RIG PULLING DRILL PIPE
Event	6	Pre Rig Up Safety Meeting	1/1/2017	23:30:00	USER					ALL HES PRESENT
Event	7	Rig Up Equipment	1/1/2017	01:00:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre Job Safety Meeting	1/1/2017	02:00:00	USER					ALL HES PRESENT AND RIG CREW
Event	9	Start Job	1/1/2017	02:28:00	USER					TD 2692', TP 2695', SJ 44.9', OH 14.75", CSG 9.625" 36#, MUD 9.3 PPG. RIG CLEARED CASING CAPACITY (215 BBL) AND TURNED OVER TO HES.
Event	10	Prime Pumps	1/1/2017	02:28:58	COM6	8.54	0.00	62.00	0.00	8.33 PPG FRESH WATER
Event	11	Test Lines	1/1/2017	02:34:59	COM6	8.50	0.00	3157.00	0.00	ALL LINES HELD PRESSURE AT 3157 PSI
Event	12	Pump Spacer 1	1/1/2017	02:47:33	COM6	8.55	0.80	27.00	0.20	8.33 PPG FRESH WATER (5BBL)
Event	13	Pump Spacer 2	1/1/2017	02:52:02	COM6	11.56	2.20	82.00	4.10	11 PPG SUPER FLUSH 100 (10BBL)
Event	14	Pump Spacer 1	1/1/2017	02:54:19	COM6	8.53	4.00	184.00	2.00	8.33 PPG FRESH WATER (5BBL)
Event	15	Pump Spacer 3	1/1/2017	02:55:23	COM6	8.96	4.00	192.00	0.90	9 PPG CALCIUM CHLORIDE WATER (10BBL)

Event	16	Pump Spacer 1	1/1/2017	02:58:24	COM6	8.43	1.60	109.00	1.20	8.33 PPG FRESH WATER (5BBL)
Event	17	Pump Spacer 2	1/1/2017	03:01:47	COM6	11.57	1.90	194.00	2.20	11 PPG SUPER FLUSH 100 (10BBL)
Event	18	Pump Spacer 1	1/1/2017	03:07:47	COM6	8.49	3.90	170.00	1.30	8.33 PPG FRESH WATER (5BBL)
Event	19	Pump Spacer 3	1/1/2017	03:08:57	COM6	8.87	3.90	156.00	0.40	9 PPG CALCIUM CHLORIDE WATER (10BBL)
Event	20	Shutdown	1/1/2017	03:11:14	USER	9.35	0.00	56.00	7.80	ESTABLISHED FULL RETURNS AND RIG WAS NOT SET UP TO TRANSFER.
Event	21	Pump Spacer 1	1/1/2017	03:27:09	COM6	8.30	2.60	104.00	4.00	8.33 PPG FRESH WATER (10 BBL)
Event	22	Check Weight	1/1/2017	03:35:44	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	23	Pump Lead Cement	1/1/2017	03:37:38	COM6	12.32	3.90	261.00	13.20	VARICEM CEMENT 900 SKS (381 BBLS), 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK
Event	24	Pump Tail Cement	1/1/2017	04:39:40	COM6	12.81	4.10	191.00	2.15	VARICEM CEMENT 305 SKS (114 BBLS), 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK.
Event	25	Shutdown	1/1/2017	04:57:34	USER					END OF CEMENT
Event	26	Drop Top Plug	1/1/2017	04:59:37	COM6					PLUG WENT, VERIFIED BY CO REP.
Event	27	Pump Displacement	1/1/2017	04:59:53	COM6	17.80	1.70	0.00	0.00	8.34 PPG FRESH WATER (204.8 BBLS)
Event	28	Slow Rate	1/1/2017	05:21:40	USER	8.32	9.90	1049.00	187.20	SLOW RATE TO 2 BPM PER CO REP TO LAND PLUG
Event	29	Bump Plug	1/1/2017	05:28:25	COM6	8.31	0.00	1169.00	203.40	LAND PLUG AT 662 PSI, BROUGHT UP TO 1160 PSI
Event	30	Check Floats	1/1/2017	05:31:47	USER	8.30	0.00	1168.00	203.40	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	31	Pumping On Tubing Or Casing	1/1/2017	05:44:56	USER	8.29	2.00	6.00	1.60	8.33 PPG SUGAR WATER (6 BBL) CIRCULATE PARACITE STRING THROUGH CASING
Event	32	End Job	1/1/2017	05:46:30	USER	8.29	0.00	13.00	3.40	RETURNS THROUGHOUT JOB, GAINED RETURNS AT 55 BBLS AWAY ON SPACER TRAIN, LOST RETURNS AT 50 BBLS OF TAIL CEMENT AWAY, GAINED RETURNS AT 30 BBLS AWAY ON DISPLACEMENT. PIPE NOT WAS RECIPROCATED DURING THE JOB AND 114 BBLS OF CEMENT TO SURFACE. CEMENT FELL BACK APROX 50'
Event	33	Start Top Out	1/1/2017	09:20:01	COM6					
Event	34	Prime Pumps	1/1/2017	09:32:19	COM6	8.69	0.00	-5.00	0.00	8.33 PPG FRESH WATER

Event	35	Pump Cement	1/1/2017	09:40:51	USER	15.71	1.50	12.00	0.80	TOP OUT CEMENT 50 SKS (11 BBLS), 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK
Event	36	Clean Lines	1/1/2017	09:49:54	USER	11.67	0.80	21.00	11.50	8.33 PPG FRESH WATER
Event	37	End Top Out	1/1/2017	09:52:00	COM6					CEMENT FELL BACK APROX 50', 6 BBLS OF CMNT TO FILL ANNULUS. 50 SKS USED FOR TOP OUT
Event	38	Post Job Safety Meeting	1/1/2017	10:00:00	USER					ALL HES PRESENT
Event	39	Rig Down Equipment	1/1/2017	10:20:00	USER					ALL HES PRESENT
Event	40	Crew Leave Location	1/1/2017	11:15:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW
Event	41	Pre Convoy Safety Meeting	1/1/2017	11:30:00	USER					ALL HES PRESENT

2.0 Attachments

2.1 PRIMARY JOB.png



2.2 TOP OUT.png

