

HALLIBURTON

iCem[®] Service

Terra Energy Partners

For: H&P 271

Date: Friday, February 10, 2017

TR 434-21-597 Surface Cementing Program

API/UWI #: 05-045-23343-00

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	2/9/2017	12:00:00	USER					Requested on Location @ 20:00
Event	2	Pre-Convoy Safety Meeting	2/9/2017	15:15:00	USER					
Event	3	Crew Leave Yard	2/9/2017	15:30:00	USER					1 Elite, 1 Compressor Tractor, 1 Pickup, 1 Transport
Event	4	Arrive at Location	2/9/2017	19:30:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	2/9/2017	19:45:00	USER					JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 78 degrees
Event	6	Pre-Rig Up Safety Meeting	2/9/2017	20:00:00	USER					
Event	7	Rig-Up Equipment	2/9/2017	20:30:00	USER					1 hardline to standpipe, water hoses to upright and day tank, bulk hoses to silos
Event	8	Pre-Job Safety Meeting	2/9/2017	23:30:00	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	2/10/2017	00:13:14	COM6					TD 2854' OF 14 3/4" OH, 18" Conductor @86', TP 2854', 1871' OF 9 5/8" J-55 36#/FT, 958' OF 9 5/8" J-55 40#/FT, SJ 25', Parasite 1.90" Total length 2764', Mud 8.8 PPG
Event	10	Fill Lines	2/10/2017	00:13:36	USER	8.4	2	56	10	Freshwater
Event	11	Test Lines	2/10/2017	00:22:56	COM6	8.4	.5	3540	.5	Freshwater
Event	12	H2O Spacer	2/10/2017	00:28:43	COM6	8.4	2.5	52	5	5 bbls Fresh water

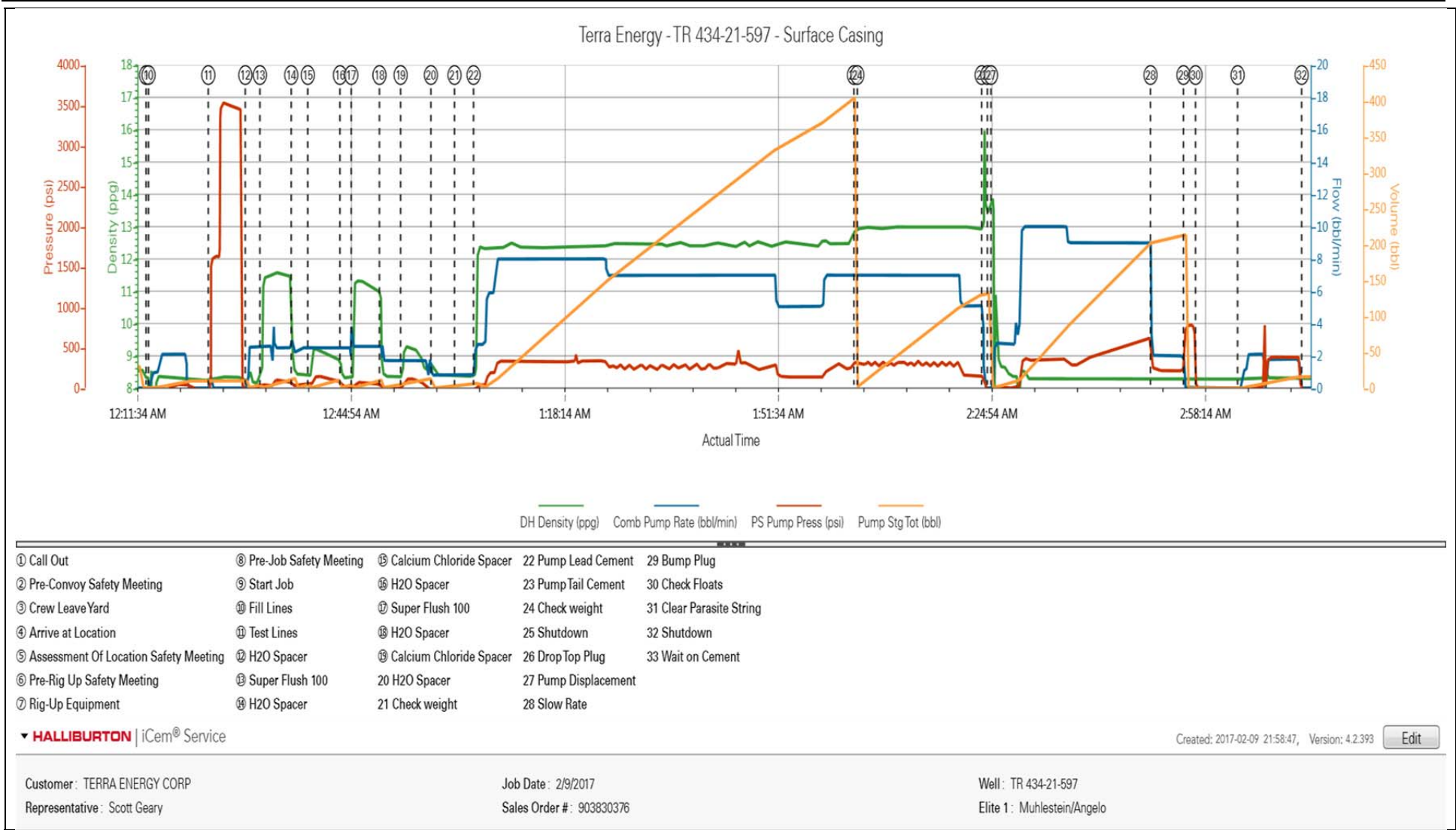
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Event	13	Super Flush 100	2/10/2017	00:31:00	COM6	11	2.5	80	10	10 bbls Super Flush 100
Event	14	H2O Spacer	2/10/2017	00:35:53	COM6	8.4	2.5	53	5	5 bbls Fresh water
Event	15	Calcium Chloride Spacer	2/10/2017	00:38:28	COM6	9	2.5	90	10	10 sks Calcium Chloride in 10 bbls H2O
Event	16	H2O Spacer	2/10/2017	00:43:29	COM6	8.4	2.5	26	5	5 bbls Fresh water
Event	17	Super Flush 100	2/10/2017	00:45:15	COM6	11	2.5	65	10	10 bbls Super Flush 100
Event	18	H2O Spacer	2/10/2017	00:49:39	COM6	8.4	2.5	47	5	5 bbls Fresh water
Event	19	Calcium Chloride Spacer	2/10/2017	00:52:57	USER	9	2.5	55	10	10 sks Calcium Chloride in 10 bbls H2O
Event	20	H2O Spacer	2/10/2017	00:57:41	COM6	8.4	.8	0	10	10 bbls Fresh water
Event	21	Check weight	2/10/2017	01:01:22	COM6	12.3				Density Verified via Mud Scales
Event	22	Pump Lead Cement	2/10/2017	01:04:20	COM6	12.3	7.5	300	404.8	955 sks Varicem 12.3 PPG, 2.38 Ft3/sk, 13.76 Gal/sk. 90 lbs Tuf-Fiber mixed on the fly after first 20 bbl away.
Event	23	Pump Tail Cement	2/10/2017	02:03:42	COM6	12.8	7	329	129.6	345 Sks Varicem 12.8 PPG, 2.11 Ft3/sk, 11.78 Gal/sk
Event	24	Check weight	2/10/2017	02:04:14	COM6	12.8				Density Verified via Mud Scales
Event	25	Shutdown	2/10/2017	02:23:39	USER					Wash up on top of plug

Event	26	Drop Top Plug	2/10/2017	02:24:32	USER						Verify Plug Launched
Event	27	Pump Displacement	2/10/2017	02:25:06	COM6	8.4	10	620	217.2		Fresh Water
Event	28	Slow Rate	2/10/2017	02:50:00	USER	8.4	2	230	207		Slow Rate 10 bbls to Calculated Displacement
Event	29	Bump Plug	2/10/2017	02:55:08	COM6	8.4	2	255	217.2		Plug Bumped at 255 psi, Brought up to 809 psi
Event	30	Check Floats	2/10/2017	02:57:01	USER			809			Floats held – 3/4 bbl back to the truck
Event	31	Clear Parasite String	2/10/2017	03:03:35	USER	8.4	2	850	16		10 lbs sugar in 15 bbls H2O
Event	32	Shutdown	2/10/2017	03:13:35	USER						
Event	33	Wait on Cement	2/10/2017	03:30:00	USER						Waiting to topout. No returns throughout job.
Event	34	Start Topout	2/10/2017	08:26:01	USER						Cement top tagged at 230'
Event	35	H2O Spacer	2/10/2017	08:26:41	USER	8.4	1	0	1		1 bbl Freshwater
Event	36	Check weight	2/10/2017	08:27:57	COM6	15.6					Density Verified via Mud Scales
Event	37	Pump Topout Cement	2/10/2017	08:28:10	USER	15.6	2	50	31.8		150 sks Topout, 15.6 ppg, 1.19 Ft3/sk, 5.24 Gal/sk. 5 bbl Superflush and 2 50 lb bags of CCL
Event	38	Pump Displacement	2/10/2017	08:46:02	USER	8.4	2	50	2		2 bbls Freshwater to clear pumps and lines
Event	39	Shutdown	2/10/2017	08:54:50	USER						Wait on next topout.

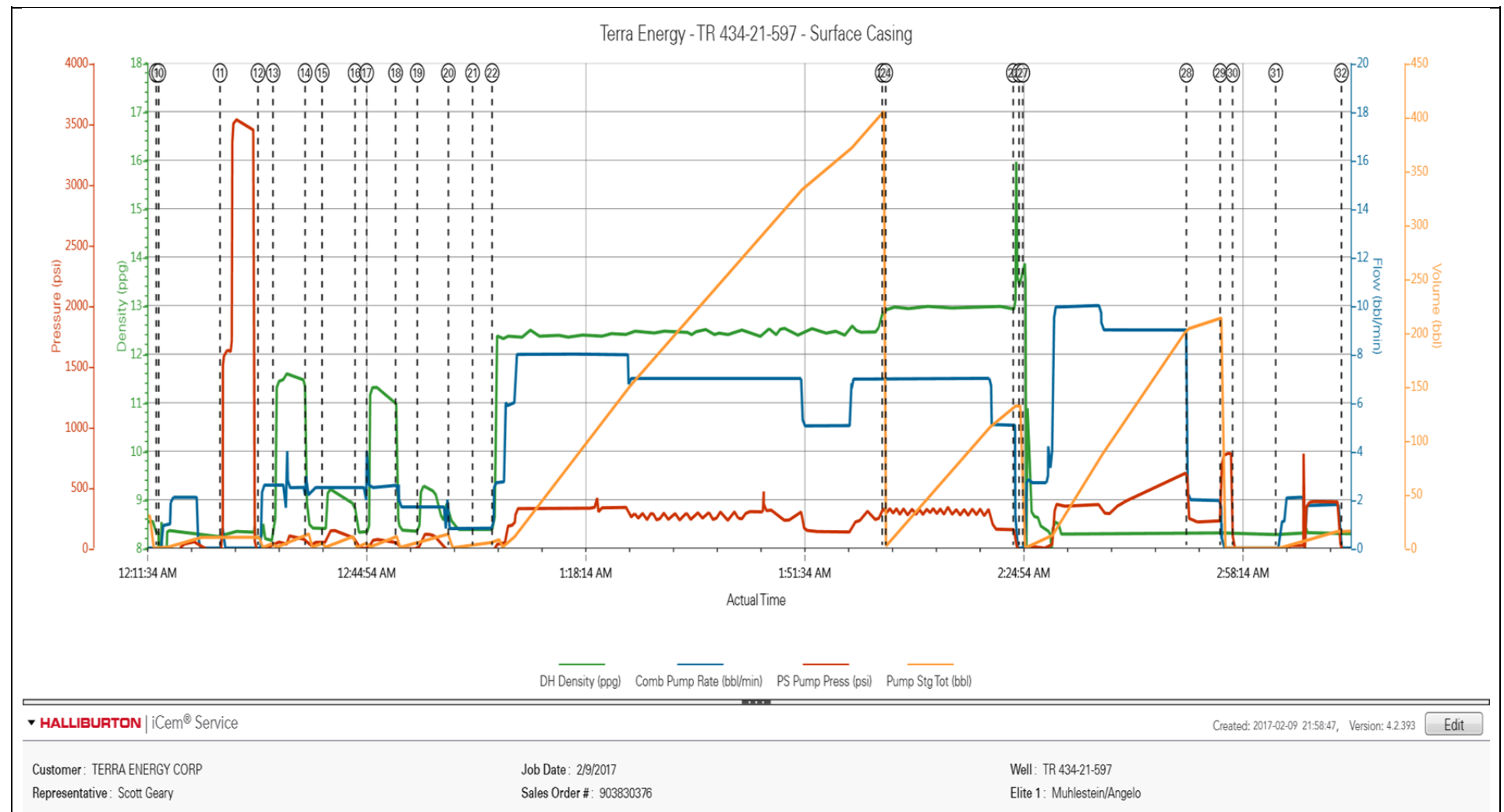
Event	40	Start Topout	2/10/2017	11:16:00	USER					
Event	41	H2O Spacer	2/10/2017	11:16:34	USER	8.4	1	10	1	1 bbl Freshwater
Event	42	Pump Topout Cement	2/10/2017	11:17:52	COM6	15.6	2	10	44.5	213 sks Topout, 15.6 ppg, 1.19 Ft3/sk, 5.24 Gal/sk. 5 bbl Superflush and 4 50 lb bags of CCL
Event	43	Shutdown	2/10/2017	11:42:31	USER					Move iron over and topout previous well
Event	44	Pump Topout Cement	2/10/2017	11:52:11	USER	15.6	2	40	34.3	162 sks Topout, 15.6 ppg, 1.19 Ft3/sk, 5.24 Gal/sk. and 3 50 lb bags of CCL
Event	45	Shutdown	2/10/2017	12:09:43	USER					Wash up in rig cellar
Event	46	End Job	2/10/2017	12:10:30	USER					20 lbs sugar, 8 add hours, 525 total sks topout used.
Event	47	Other	2/10/2017	12:14:00	USER					Rig Circulated 1 hrs prior to cement job at 4.2 bpm 0 psi. No Returns
Event	48	Pre-Rig Down Safety Meeting	2/10/2017	12:15:00	USER					
Event	49	Rig-Down Equipment	2/10/2017	12:25:00	USER					
Event	50	Pre-Convoy Safety Meeting	2/10/2017	13:45:00	USER					
Event	51	Crew Leave Location	2/10/2017	14:00:00	USER					Thank you for using Halliburton – Ryan Muhlestein and crew.

2.2 With Legend.png

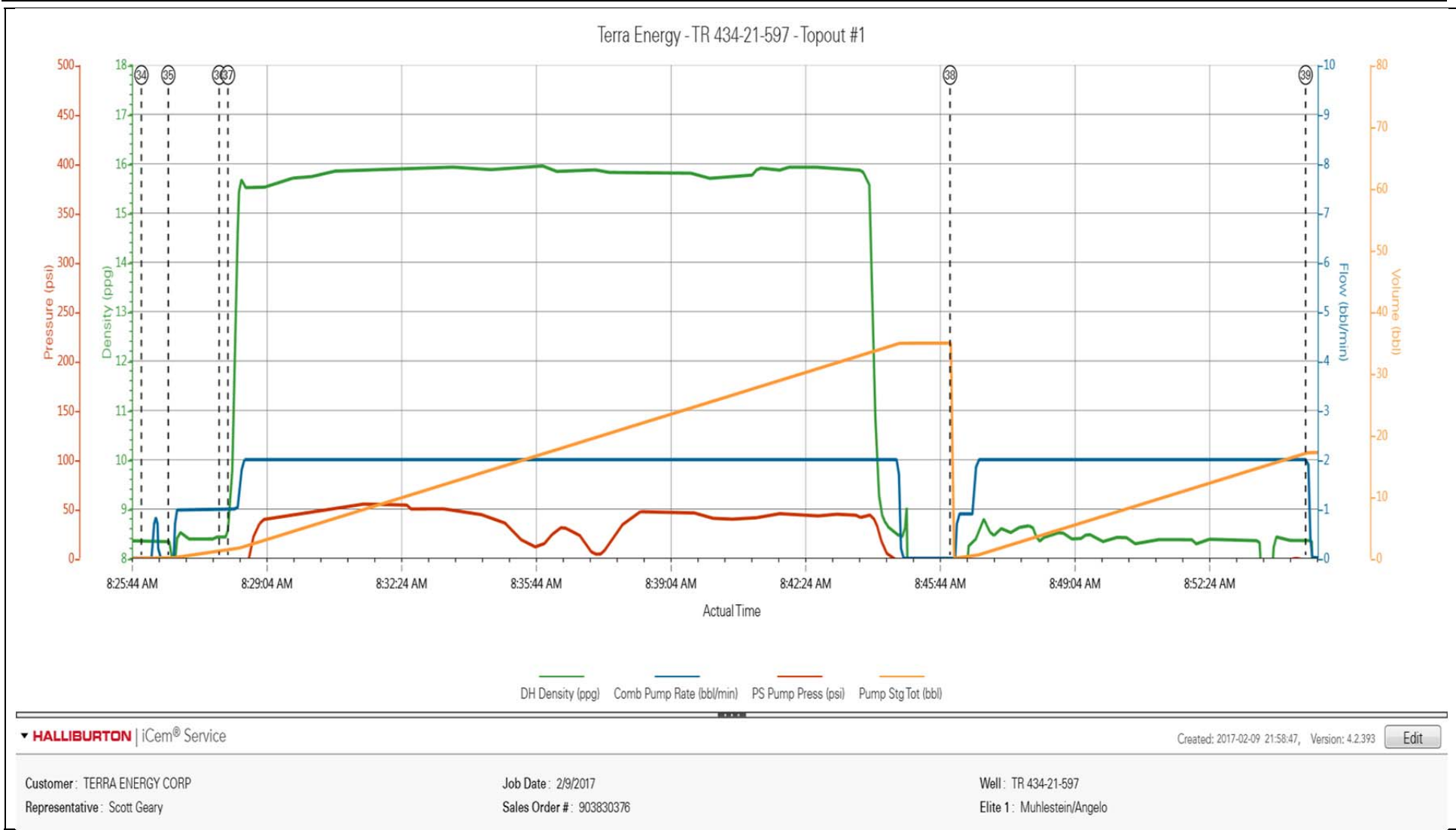


2.0 Attachments

2.1 No Legend.png



2.3 Topout 1.png



2.4 Topout 2.png

