

# HALLIBURTON

iCem<sup>®</sup> Service

**TERRA ENERGY LTD.**

**For: Terra**

Date: Saturday, March 17, 2018

**PA 321-25 Production**

API#05-045-23644

Sincerely,

**Grand Junction Cement Engineering**

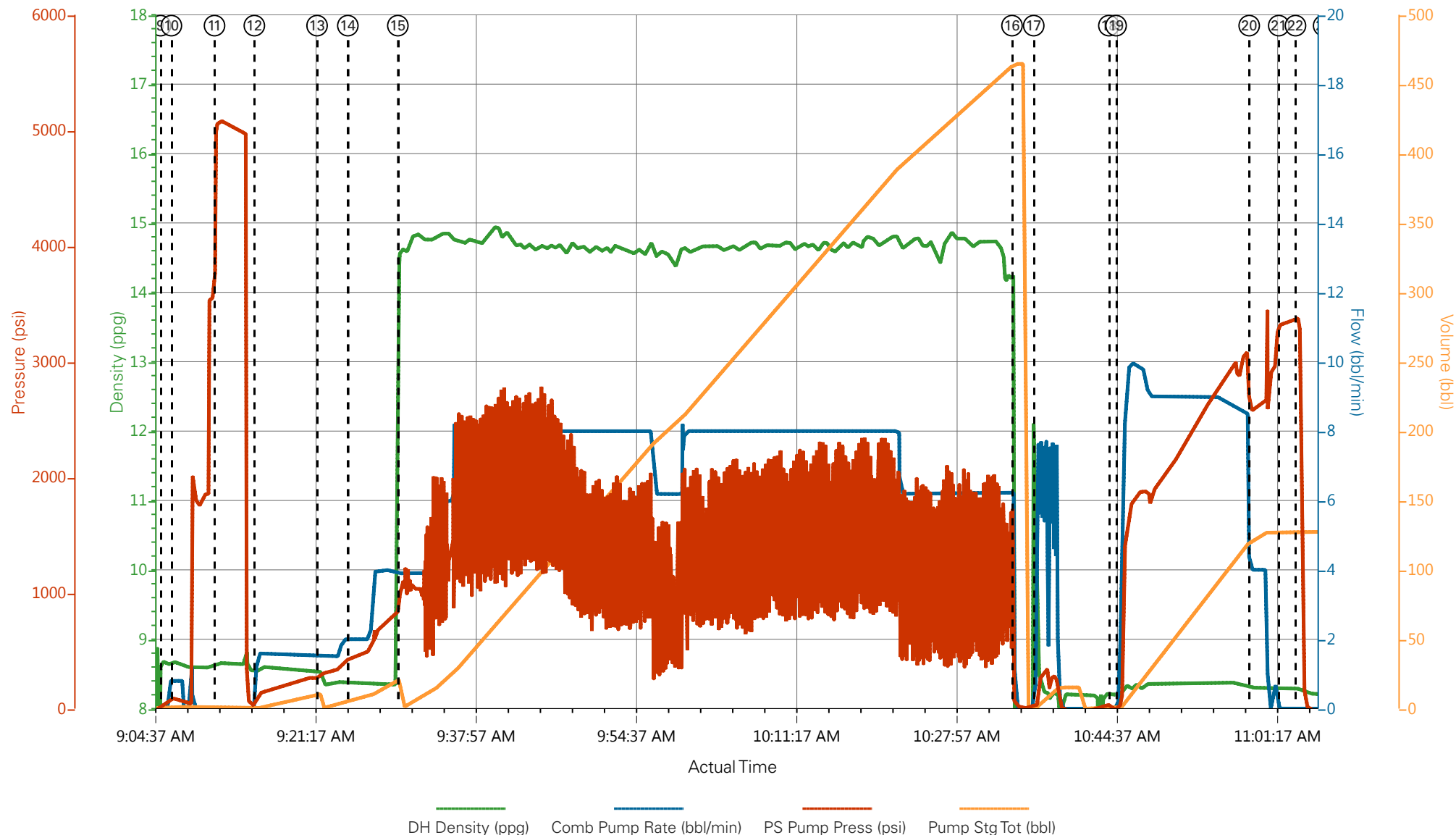
## 1.0 Real-Time Job Summary

## 1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	3/17/2018	00:05:00	USER					REQUESTED ON LOCATION @ 0500
Event	2	Pre-Convoy Safety Meeting	3/17/2018	01:15:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	3/17/2018	01:30:00	USER					1 F550, 1 PUMP TRUCK & 1 660 BULK TURCK
Event	4	Arrive At Loc	3/17/2018	02:30:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	3/17/2018	02:35:00	USER					MET WITH COMP REP AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 78F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	3/17/2018	02:55:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	3/17/2018	03:00:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	3/17/2018	08:00:00	USER					8.33 PPG FRESH WATER
Event	9	Start Job	3/17/2018	09:05:30	COM3					TD 8280', TP 8270', SJ 30.73', OH 8.75'', CSG 4.5'' 11.6#, MUD 14 PPG. RIG CIRCULATED AT 10 BPM WITH 1300 PSI.
Event	10	Prime Pumps	3/17/2018	09:06:37	COM3	179.00	8.37	1.00	2.0	8.33 PPG FRESH WATER
Event	11	Test Lines	3/17/2018	09:11:06	USER	5075.00	8.37	0.50	0.5	ALL LINES HELD PRESSURE AT 5078 PSI
Event	12	Pump Spacer 1	3/17/2018	09:15:14	COM3	290.00	8.30	2.00	9.3	8.33 PPG FRESH WATER (10 BBL)
Event	13	Pump Spacer 2	3/17/2018	09:21:46	COM3	593.00	8.53	4.00	20.4	8.4 PPG MUDFLUSH III (20 BBL)
Event	14	Check weight	3/17/2018	09:24:58	COM3					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	15	Pump Cement	3/17/2018	09:30:10	COM3	2029.00	14.54	8.00	434.7	EXPANDACEM CEMENT 1855 SKS (436 BBLs), 14.5 PPG,

										1.32 FT3/SK, 5.86 GAL/SK
Event	16	Shutdown	3/17/2018	10:34:02	USER					END OF CMT
Event	17	Clean Lines	3/17/2018	10:36:17	USER					WASH UP PUMPS AND LINES TO THE PIT
Event	18	Drop Top Plug	3/17/2018	10:44:06	USER					PLUG WENT, VERIFIED BY CO REP.
Event	19	Pump Displacement	3/17/2018	10:44:51	COM3	2950.00	8.31	9.00	117.7	8.34 PPG FRESH WATER (127.7 BBLS) 3 BAGS BE6, 1 GAL MMCR & 12 SKS KCL
Event	20	Slow Rate	3/17/2018	10:58:42	USER	2568.00	8.33	4.00	10.0	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	21	Bump Plug	3/17/2018	11:01:46	USER	3335.00	8.33	0.00	127.7	LAND PLUG AT 2565 PSI, BROUGHT UP TO 3345 PSI
Event	22	Check Floats	3/17/2018	11:03:31	USER	3380.00	8.33	0.00	127.7	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	23	End Job	3/17/2018	11:04:44	USER					GOOD RETURNS THROUGHOUT, PIPE WAS NOT RECIPROCATED, SPACER BACK TO SURFACE
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	3/17/2018	11:06:26	USER					ALL HES PRESENT
Event	25	Rig-Down Equipment	3/17/2018	11:16:00	USER					ALL HES PRESENT
Event	26	Pre-Convoy Safety Meeting	3/17/2018	12:21:39	USER					ALL HES PRESENT
Event	27	Crew Leave Location	3/17/2018	12:22:53	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

# TEP - PA 321-25 - 4.5" PRODUCTION



- |   |                          |                 |   |                              |
|---|--------------------------|-----------------|---|------------------------------|
| ① Call Out                              | ⑦ Rig-Up Equipment       | ⑬ Pump Spacer 2 | ⑰ Pump Displacement                       | 25 Pre-Convoy Safety Meeting |
| ② Pre-Convoy Safety Meeting             | ⑧ Pre-Job Safety Meeting | ⑭ Check weight  | 20 Slow Rate                              | 26 Crew Leave Location       |
| ③ Crew Leave Yard                       | ⑨ Start Job              | ⑮ Pump Cement   | 21 Bump Plug                              |                              |
| ④ Arrive At Loc                         | ⑩ Prime Pumps            | ⑯ Shutdown      | 22 Check Floats                           |                              |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Test Lines             | ⑰ Clean Lines   | 23 Post-Job Safety Meeting (Pre Rig-Down) |                              |
| ⑥ Pre-Rig Up Safety Meeting             | ⑫ Pump Spacer 1          | ⑱ Drop Top Plug | 24 Rig-Down Equipment                     |                              |

▼ **HALLIBURTON** | iCem® Service

Created: 2018-03-17 03:46:49, Version: 4.2.393

Edit

Customer: TERRA ENERGY LTD.  
Representative: CRAIG BORGSTEDT

Job Date: 3/17/2018 3:47:33 AM  
Sales Order #: 904696929

Well: PA 321-25  
ELITE 1: C.SMITH/R.HOEY

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