

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Friday, March 16, 2018

Federal RU 323-17 Surface

API#05-045-23737

Sincerely,

Grand Junction Cement Engineering

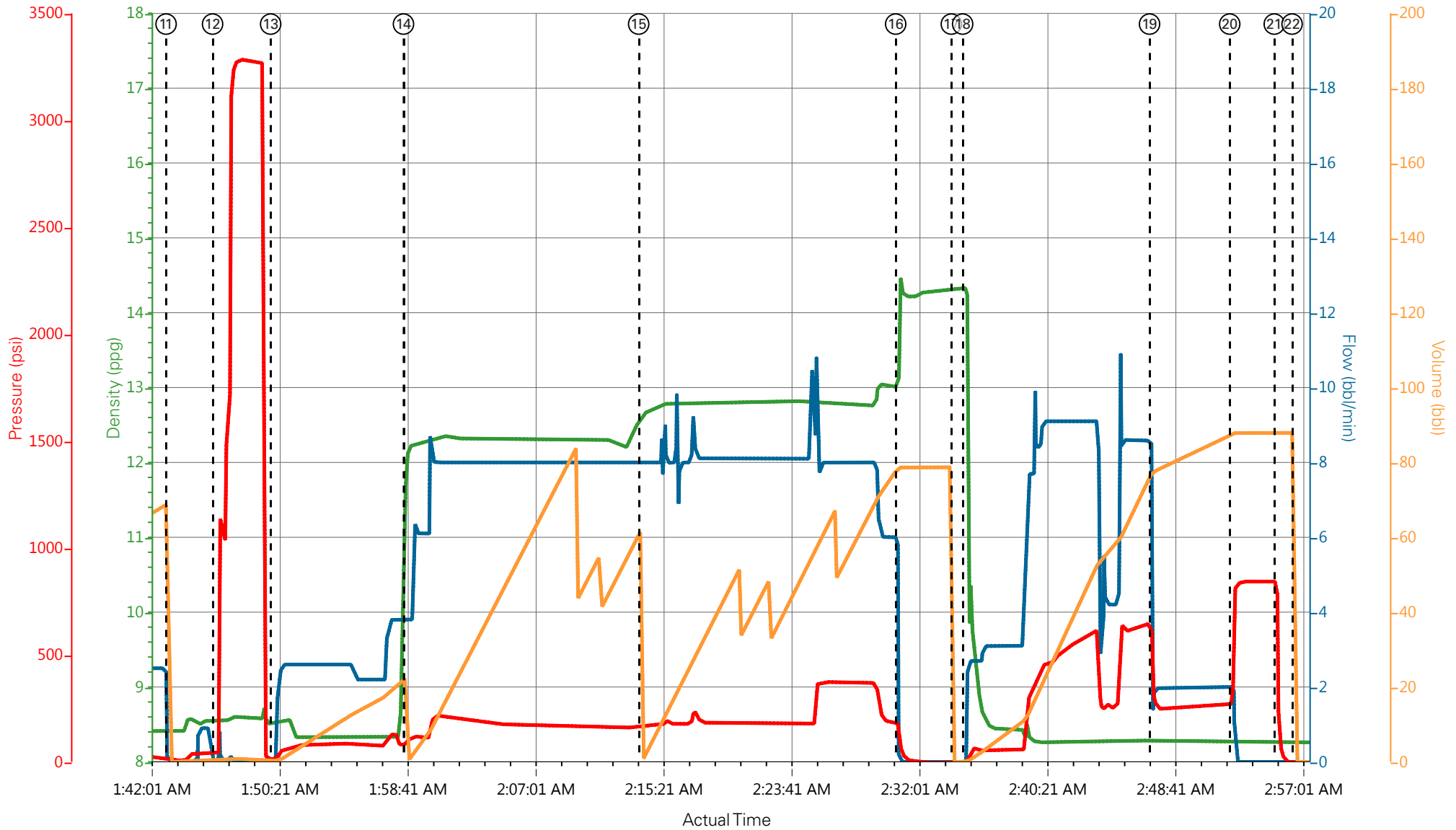
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density <i>(ppg)</i>	Combined Pump Rate <i>(bbl/min)</i>	Pass-Side Pump Pressure <i>(psi)</i>	Pump Stage Total <i>(bbl)</i>	Comments
Event	1	Pre-Job Safety Meeting	3/15/2018	01:00:00	USER					ALL HES, RIG CREW AND COMPANY REP IN ATTENDANCE
Event	2	Call Out	3/15/2018	14:00:00	USER					ON LOCATION 20:00
Event	3	Pre-Convoy Safety Meeting	3/15/2018	16:30:00	USER					JOURNEY CREATED - ALL HES INVOLVED IN SAFETY MEETING
Event	4	Crew Leave Yard	3/15/2018	16:45:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK
Event	5	Arrive At Loc	3/15/2018	19:00:00	USER					ARRIVED 1-HOUR EARLY
Event	6	Assessment Of Location Safety Meeting	3/15/2018	19:15:00	USER					RIG HAD JUST TD'D THE WELL AND WAS PUMPING TD SWEEP - HES REP SPOKE WITH COMPANY REP PRIOR TO SPOTTING EQUIPMENT
Event	7	Pre-Rig Up Safety Meeting	3/15/2018	19:30:00	USER					JSA FILLED OUT AND REVIEWED BY ALL HES
Event	8	Rig-Up Equipment	3/15/2018	19:45:00	USER					RIG-UP IRON TO STAND PIPE, WATER HOSES TO RIG UPRIGHT'S AND BULK TRUCK TO PUMP TRUCK
Event	9	Rig-Up Completed	3/15/2018	20:45:00	USER					COMPLETED SAFELY
Event	10	Well Info/Water Test	3/15/2018	21:15:00	USER					TD: 1117FT TP: 1107FT SJ: 35.73FT OH: 13 1/2" CSG: 9 5/8" 32.3# J-55 MUD WT: 9.3 - WATER TEST: PH- 7 TEMP- 65 CHLOR- 0
Event	11	Start Job	3/16/2018	01:43:09	COM5					START JOB
Event	12	Test Lines	3/16/2018	01:46:11	COM5			3283		PRESSURE TEST LINES TO 3283 PSI - PRESSURE TEST OK
Event	13	Fresh Water Spacer	3/16/2018	01:49:58	COM5	8.34	4	137	20	20BBL FRESH WATER SPACER AHEAD
Event	14	Pump Lead Cement	3/16/2018	01:58:37	COM5	12.3	8	213	52.9	125SKS OF VARICEM CEMENT (52.9BBL) 12.3PPG 2.38YIELD 13.77GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT LEAD

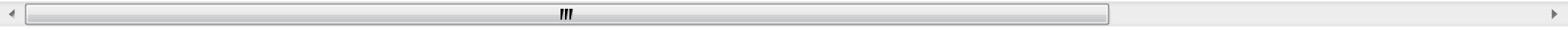
										CEMENT
Event	15	Pump Tail Cement	3/16/2018	02:13:56	COM5	12.8	8	370	65.7	175SKS OF VARICEM CEMENT (65.7BBL) 12.8PPG 2.11YIELD 11.78GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT TAIL CEMENT
Event	16	Shutdown	3/16/2018	02:30:40	USER	12.8			65.7	SHUTDOWN END OF CEMENT - HES WASHED UP ON TOP OF THE PLUG - READY TANKS FOR DISPLACEMENT
Event	17	Drop Top Plug	3/16/2018	02:34:18	USER					TOP PLUG AWAY NO PROBLEMS - POSITIVE DISPLACEMENT WAS UTILIZED
Event	18	Pump Displacement	3/16/2018	02:35:02	COM5	8.34	9	650	74.6	FRESH WATER DISPLACEMENT
Event	19	Slow Rate	3/16/2018	02:47:12	USER	8.34	2	255	10	SLOW RATE TO BUMP THE PLUG - PRESSURE PRIOR TO SLOWING WAS 650PSI AT 9BPM - PRESSURE AFTER SLOWING WAS 255PSI AT 2BPM
Event	20	Bump Plug	3/16/2018	02:52:25	USER	8.34	2	274	84.6	PLUG BUMPED AT CALCULATED DISPLACEMENT - PLUG BUMPED AT 274PSI AT 2BPM
Event	21	Check Floats	3/16/2018	02:55:20	USER					FLOATS HELD .5BBL BACK TO TANKS - 27BBL OF CEMENT TO SURFACE - RIG USED 40 POUNDS OF SUGAR
Event	22	End Job	3/16/2018	02:56:29	COM5					THANK YOU FOR CHOOSING HALLIBURTON CEMENT CARL KUKUS AND CREW
Event	23	Pre-Rig Down Safety Meeting	3/16/2018	03:00:00	USER					JSA REVIEWED - ALL HES INVOLVED IN SAFETY MEETING
Event	24	Rig-Down Equipment	3/16/2018	03:10:00	USER					WASH UP AND BLOW DOWN ALL IRON AND PUMP TRUCK - RIG DOWN ALL LINES AND EQUIPMENT
Event	25	Rig-Down Completed	3/16/2018	04:10:00	USER					COMPLETED SAFELY
Event	26	Pre-Convoy Safety Meeting	3/16/2018	04:20:00	USER					JOURNEY CREATED - ALL HES INVOLVED IN SAFETY MEETING
Event	27	Crew Leave Location	3/16/2018	04:25:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK

TEP - FEDERAL RU 323-17 - 904710491 - 9 5/8" SURFACE



DH Density (ppg) 8.26 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) -7 Pump Stg Tot (bbl) 0

- ① Pre-Job Safety Meeting ③ Pre-Convoy Safety Meeting ⑤ Arrive At Loc ⑦ Pre-Rig Up Safety Meeting ⑨ Rig-Up Completed ⑪ Start Job ⑬ Fresh Water Spacer
- ② Call Out ④ Crew Leave Yard ⑥ Assessment Of Location Safety Meeting ⑧ Rig-Up Equipment ⑩ Well Info/Water Test ⑫ Test Lines ⑭ Pump Lead Cement



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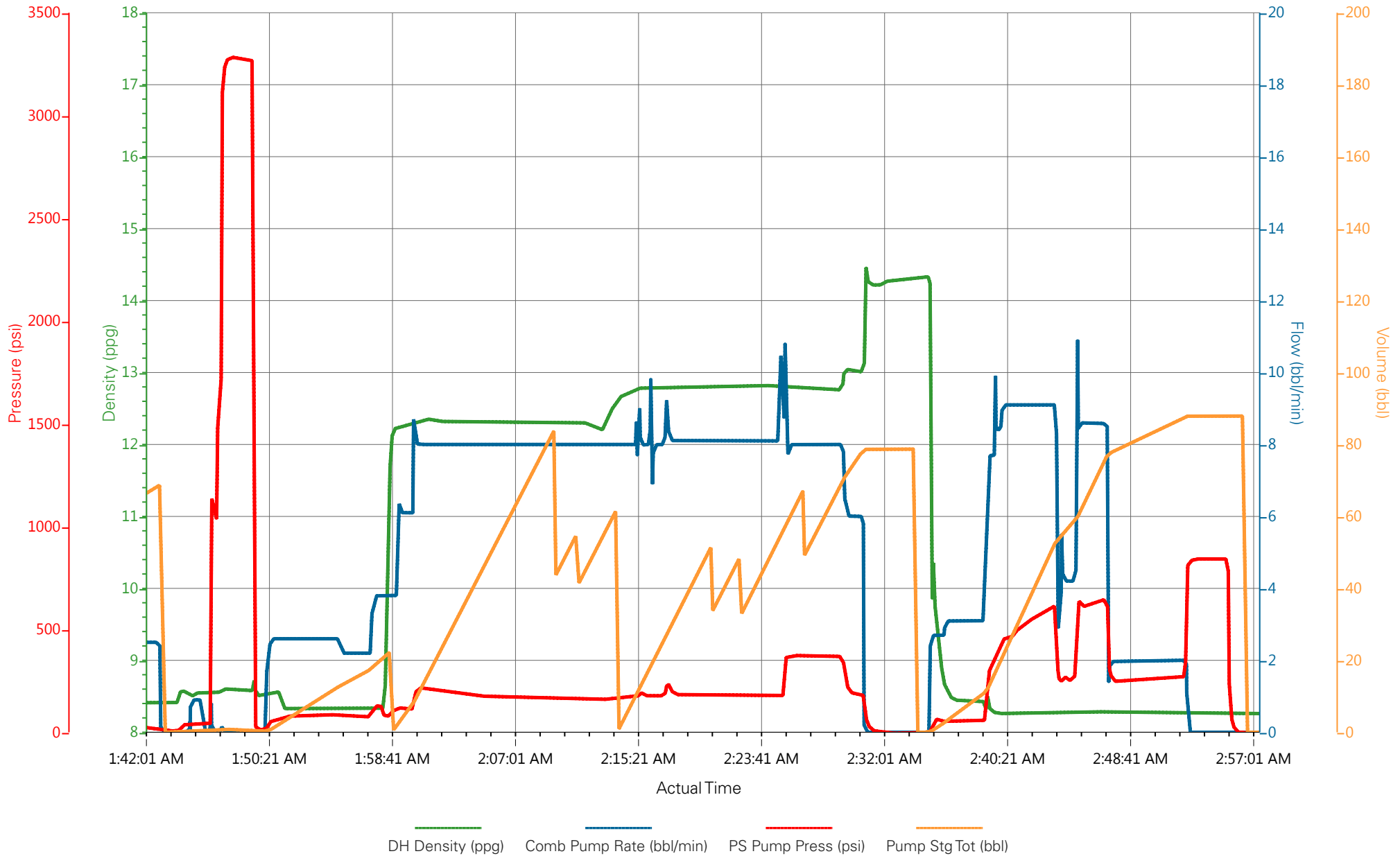
[Edit](#)

Customer : TERRA ENERGY PARTNERS
 Representative : Josh Phillips

Job Date : 3/15/2018 8:38:29 PM
 Sales Order # : 904710491

Well : Federal RU 323-17
 Elite 8 : D. Porter/C. Kukus

TEP - FEDERAL RU 323-17 - 904710491 - 9 5/8" SURFACE



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