

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Monday, January 22, 2018

WARE SR 424-12 Production

API#05-045-23450

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

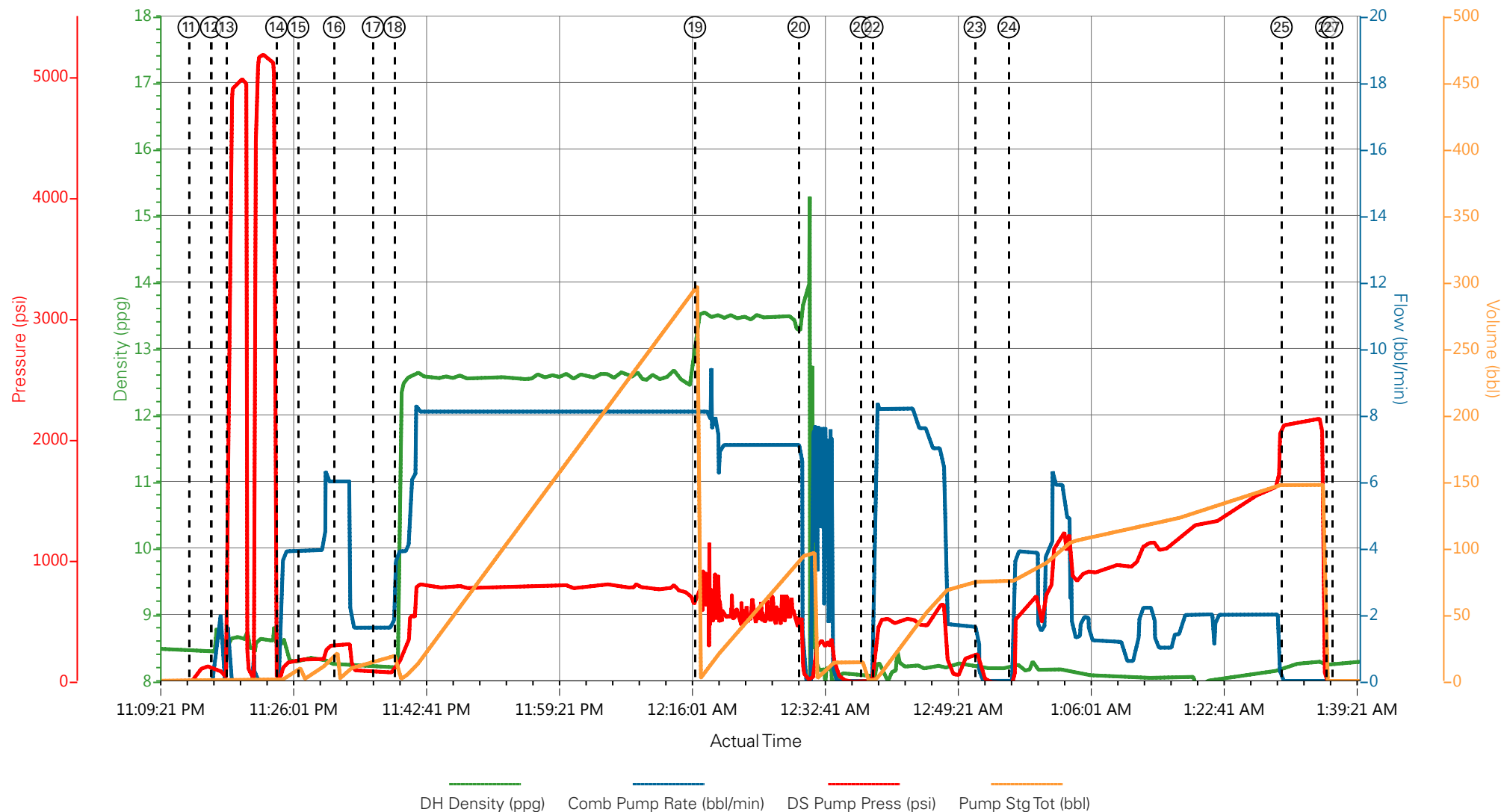
2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Driv-Side Pump Pressure (psi)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	1/21/2018	06:30:00	USER					ON LOCATION 14:00
Event	2	Pre-Convoy Safety Meeting	1/21/2018	06:45:00	USER					CREW ROLLED FROM PREVIOUS JOB - PUMP TRUCK STAYED IN THE FIELD
Event	3	Crew Leave Yard	1/21/2018	11:30:00	USER					1-F-550 PICKUP, 1-660 BULK TRUCK
Event	4	Arrive At Loc	1/21/2018	14:00:00	USER					ARRIVED ON TIME
Event	5	Assessment Of Location Safety Meeting	1/21/2018	14:15:00	USER					RIG WAS RUNNING CASING - HES REP SPOKE WITH COMPANY REP
Event	6	Pre-Rig Up Safety Meeting	1/21/2018	17:00:00	USER					JSA FILLED OUT AND REVIEWED BY ALL HES
Event	7	Rig-Up Equipment	1/21/2018	17:30:00	USER					RIG-UP IRON TO THE RIG FLOOR AND TO THE PIT - WATER HOSES TO BOTH RIG UPRIGHTS AND BULK EQUIPMENT TO PUMP TRUCK
Event	8	Rig-Up Completed	1/21/2018	19:00:00	USER					COMPLETED SAFELY
Event	9	Well Info/Water Test	1/21/2018	19:10:00	USER					TD: 9655FT TP: 9658.64FT SJ: 31.25FT OH: 8 3/4" CSG: 4 1/2" 11.6# I-80 SRF: 1104FT 36# J-55 MUD: 9.2PPG - WATER TEST: TEMP- 60 PH- 7 CHLOR- 0
Event	10	Pre-Job Safety Meeting	1/21/2018	20:30:00	USER					ALL HES, RIG CREW AND COMPANY REP IN ATTENDANCE
Event	11	Start Job	1/21/2018	23:13:19	COM5					START JOB
Event	12	Fill Lines	1/21/2018	23:16:07	USER	8.34	2	88	2	FILL LINES TO PRESSURE TEST
Event	13	Test Lines	1/21/2018	23:18:01	COM5			5250		PRESSURE TEST LINES TO 5050 PSI THERE WAS A SMALL LEAK, PRESSURE WAS BLED OFF AND LEAK WAS FIXED AND WE RE-TESTED TO 5250 PSI - PRESSURE TEST GOOD
Event	14	Fresh Water Spacer	1/21/2018	23:24:18	COM5	8.34	4	260	10	10 BBLS OF FRESH WATER AHEAD - PRESSURE WAS 260 PSI AT 4 BPM

Event	15	Mud Flush Spacer	1/21/2018	23:27:02	COM5	8.5	6	330	20	20 BBLS OF MUD FLUSH SPACER - PRESSURE WAS 330 PSI AT 6 BPM
Event	16	Fresh Water Spacer	1/21/2018	23:31:32	COM5	8.34	4	260	20	20 BBLS OF FRESH WATER SPACER - PRESSURE WAS 260 AT 4 BPM
Event	17	Check weight	1/21/2018	23:36:25	COM5					
Event	18	Pump Lead Cement	1/21/2018	23:39:06	COM5	12.5	8	880	279.8	810 SKS OF NEOCEM CEMENT (279.8BBLS) 12.5PPG 1.94YIELD 9.6GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT LEAD CEMENT
Event	19	Pump Tail Cement	1/22/2018	00:16:48	COM5	13.3	7	700	81.6	265 SKS OF THERMACEM CEMENT (81.6BBLS) 13.3PPG 1.73YIELD 7.81GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT TAIL CEMENT
Event	20	Shutdown	1/22/2018	00:29:47	USER					SHUTDOWN END OF CEMENT - CLEAN LINES TO THE PIT - FLUSH LINES TO THE PIT WITH RIG SUPPLIED WATER
Event	21	Drop Top Plug	1/22/2018	00:37:36	USER					TOP PLUG AWAY NO PROBLEMS - POSITIVE DISPLACEMENT WAS USED
Event	22	Pump Displacement	1/22/2018	00:39:02	COM5	8.45	7	590	80	FRESH WATER DISPLACEMENT WITH 15 SKS OF KCL, 1-GAL MMCR AND 3 POUNDS OF BE-6
Event	23	Shutdown	1/22/2018	00:51:52	USER					SHUTDOWN DURING DISPLACEMENT - WAS UNABLE TO KEEP GOOD PRIME TO PUMP TRUCK
Event	24	Resume Displacement	1/22/2018	00:56:07	USER	8.45	2	1400	50.7	RESUMED PUMPING DISPLACEMENT
Event	25	Bump Plug	1/22/2018	01:30:20	COM5	8.45	2	1651	149.7	PLUG BUMPED AT CALCULATED DISPLACEMENT - PLUG BUMPED AT 1651 PSI AT 2 BPM TOOK TO 2166 PSI
Event	26	Check Floats	1/22/2018	01:35:56	COM5			2166		FLOATS HELD 1.5 BBLS BACK TO TANKS - THERE WERE GOOD RETURNS THROUGHOUT CEMENT JOB
Event	27	End Job	1/22/2018	01:36:41	COM5					THANK YOU FOR CHOOSING HALLIBURTON CEMENT CARL KUKUS AND CREW
Event	28	Pre-Rig Down Safety Meeting	1/22/2018	01:40:00	USER					JSA REVIEWED - ALL HES INVOLVED IN SAFETY MEETING
Event	29	Rig-Down Equipment	1/22/2018	01:45:00	USER					WASH UP AND BLOW DOWN PUMP TRUCK - ALL IRON THAT IS BEING LEFT ON LOCATION WAS BLOWN DOWN FROM THE RIG FLOOR WITH RIG SUPPLIED AIR

Event	30	Rig-Down Completed	1/22/2018	02:45:00	USER	COMPLETED SAFELY
Event	31	Pre-Convoy Safety Meeting	1/22/2018	02:50:00	USER	JOURNEY CREATED - ALL HES INVOLVED IN SAFETY MEETING
Event	32	Crew Leave Location	1/22/2018	02:55:00	USER	1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK

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|---|--------------------------|------------------------|-----------------|
| ① Call Out | ⑨ Well Info/Water Test | ⑰ Check weight | 25 Bump Plug |
| ② Pre-Convoy Safety Meeting | ⑩ Pre-Job Safety Meeting | ⑱ Pump Lead Cement | 26 Check Floats |
| ③ Crew Leave Yard | ⑪ Start Job | ⑲ Pump Tail Cement | 27 End Job |
| ④ Arrive At Loc | ⑫ Fill Lines | 20 Shutdown | |
| ⑤ Assessment Of Location Safety Meeting | ⑬ Test Lines | 21 Drop Top Plug | |
| ⑥ Pre-Rig Up Safety Meeting | ⑭ Fresh Water Spacer | 22 Pump Displacement | |
| ⑦ Rig-Up Equipment | ⑮ Mud Flush Spacer | 23 Shutdown | |
| ⑧ Rig-Up Completed | ⑯ Fresh Water Spacer | 24 Resume Displacement | |

▼ **HALLIBURTON** | iCem® Service

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Edit

Customer: TERRA ENERGY PARTNERS
Representative: Darrell Leatherman

Job Date: 1/21/2018 7:36:01 PM
Sales Order #: 904581868

Well: WARE SR 424-12
Elite 1: D. Martin/Kukus

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