

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

**For: Terra**

Date: Wednesday, October 18, 2017

**GM 423-4 Surface PJR**

API #: 05-045-23508

Sincerely,

**Grand Junction Engineering**

## 2.0 Real-Time Job Summary

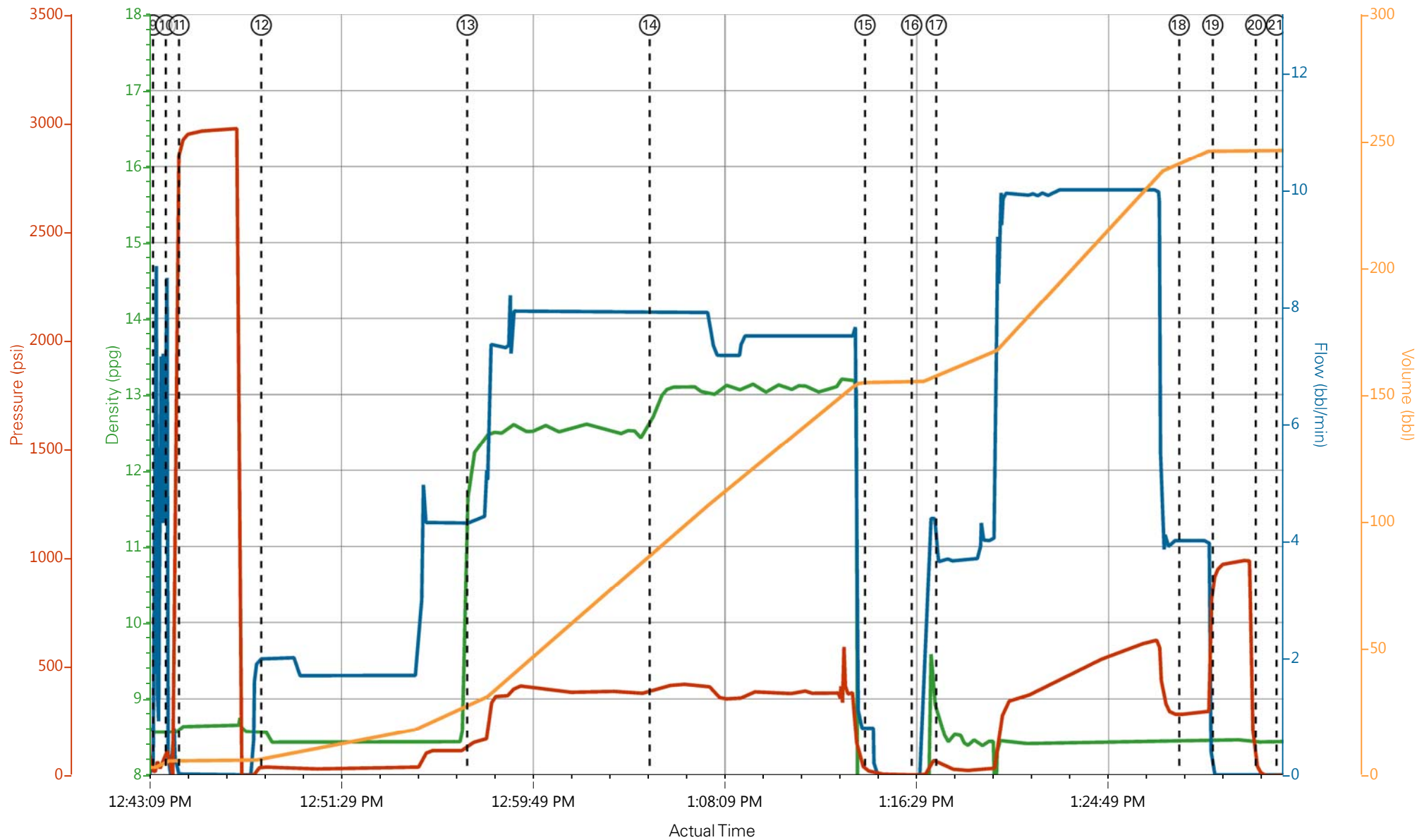
## 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Driv-Side Pump Pressure (psi)	Combined Pump Total (bbl)	Comments
Event	1	Call Out	10/18/2017	05:30:00						Requested on Location @ 11:00
Event	2	Pre-Convoy Safety Meeting	10/18/2017	08:00:00						
Event	3	Crew Leave Yard	10/18/2017	08:30:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	10/18/2017	11:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	10/18/2017	11:02:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 58 degrees
Event	6	Pre-Rig Up Safety Meeting	10/18/2017	11:10:00						
Event	7	Rig-Up Equipment	10/18/2017	11:15:00						1 hardline to standpipe, water hoses to upright, bulk hoses to 660.
Event	8	Pre-Job Safety Meeting	10/18/2017	12:39:47						All HES personnel, rig crew, and company rep
Event	9	Start Job	10/18/2017	12:43:26						TD 1205, TP 1209.67, SJ 38.65, MUD 9.0#,
Event	10	Fill Lines	10/18/2017	12:44:00		8.33	1	20	3	Fresh Water
Event	11	Test Lines	10/18/2017	12:44:34				3000		Held pressure 2 minutes no leaks
Event	12	Pump Spacer	10/18/2017	12:48:09		833	4	200	20	Fresh Water

7

Event	13	Pump Lead Cement	10/18/2017	12:57:05	12.3	8	420	61.5	145 Sks 12.3 ppg 2.38 yield 13.77 gal/sk
Event	14	Pump Tail Cement	10/18/2017	13:05:01	12.8	7.5	410	65.8	175 Sks 12.8 ppg 2.11 yield 11.78 gal/sk
Event	15	Shutdown	10/18/2017	13:14:23					
Event	16	Drop Top Plug	10/18/2017	13:16:24					Wash up on top of plug
Event	17	Pump Displacement	10/18/2017	13:17:28	8.33	10	640	82	Positive Displace Plug With Fresh Water
Event	18	Slow Rate	10/18/2017	13:28:02	8.33		300	82	Slow Rate 10 bbls to calculated displacement
Event	19	Bump Plug	10/18/2017	13:29:29	8.33	4	1000	92.2	Plug Bumped at 293 psi, Brought up to 1000 psi
Event	20	Check Floats	10/18/2017	13:31:21					Floats Held
Event	21	End Job	10/18/2017	13:32:16					Good returns throughout job, 32 bbls of cement to surface.
Event	22	Pre-Rig Down Safety Meeting	10/18/2017	13:39:31					40 lbs sugar, No add hours
Event	23	Rig-Down Equipment	10/18/2017	13:45:28					
Event	24	Pre-Convoy Safety Meeting	10/18/2017	14:13:39					
Event	25	Crew Leave Location	10/18/2017	14:18:21					Thanks For Using Halliburton Cement – Chris Martinez And Crew

# GM 423-4 SURFACE



— DH Density (ppg)   
 — Comb Pump Rate (bbl/min)   
 — DS Pump Press (psi)   
 — Comb Pump Total (bbl)

- |   |   |                              |                                      |                               |
|---|---|------------------------------|--------------------------------------|-------------------------------|
| ① Call Out n/a;n/a;n/a;n/a                  | ⑤ Assessment Of Location Safety Meeting 8.61;0;-2;0 | ⑨ Start Job 8.57;5.6;87;3.3  | ⑬ Pump Lead Cement 11.98;4.3;144;276 | ⑰ Pump Displacement 8.68;3    |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a | ⑥ Pre-Rig Up Safety Meeting 8.61;0;-1;0             | ⑩ Fill Lines 8.57;0.1;46;5.6 | ⑭ Pump Tail Cement 12.7;7.9;393;87.2 | ⑱ Slow Rate 8.44;4;280;241.7  |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a           | ⑦ Rig-Up Equipment 8.61;0;-2;0                      | ⑪ Test Lines 8.64;0;2922;5.6 | ⑮ Shutdown 0.04;0.8;18;154.8         | ⑲ Bump Plug 8.45;0;934;246.5  |
| ④ Arrive At Loc 8.61;0;0;0                  | ⑧ Pre-Job Safety Meeting 8.66;0;3429;2.6            | ⑫ Pump Spacer 8.56;2;36;6.6  | ⑯ Drop Top Plug -0.03;0;0;155        | ⑳ Check Floats 8.43;0;17;246. |

# GM 423-4 SURFACE

