

# HALLIBURTON

iCem<sup>®</sup> Service

## **TEP ROCKY MOUNTAIN LLC**

**For: Lynn Cass and Mark Mewshaw**

Date: Thursday, September 22, 2016

**RU 421-7 Surface**

**API#: 05-045-23233-00**

Sincerely,

**Grand Junction Cement Engineering**

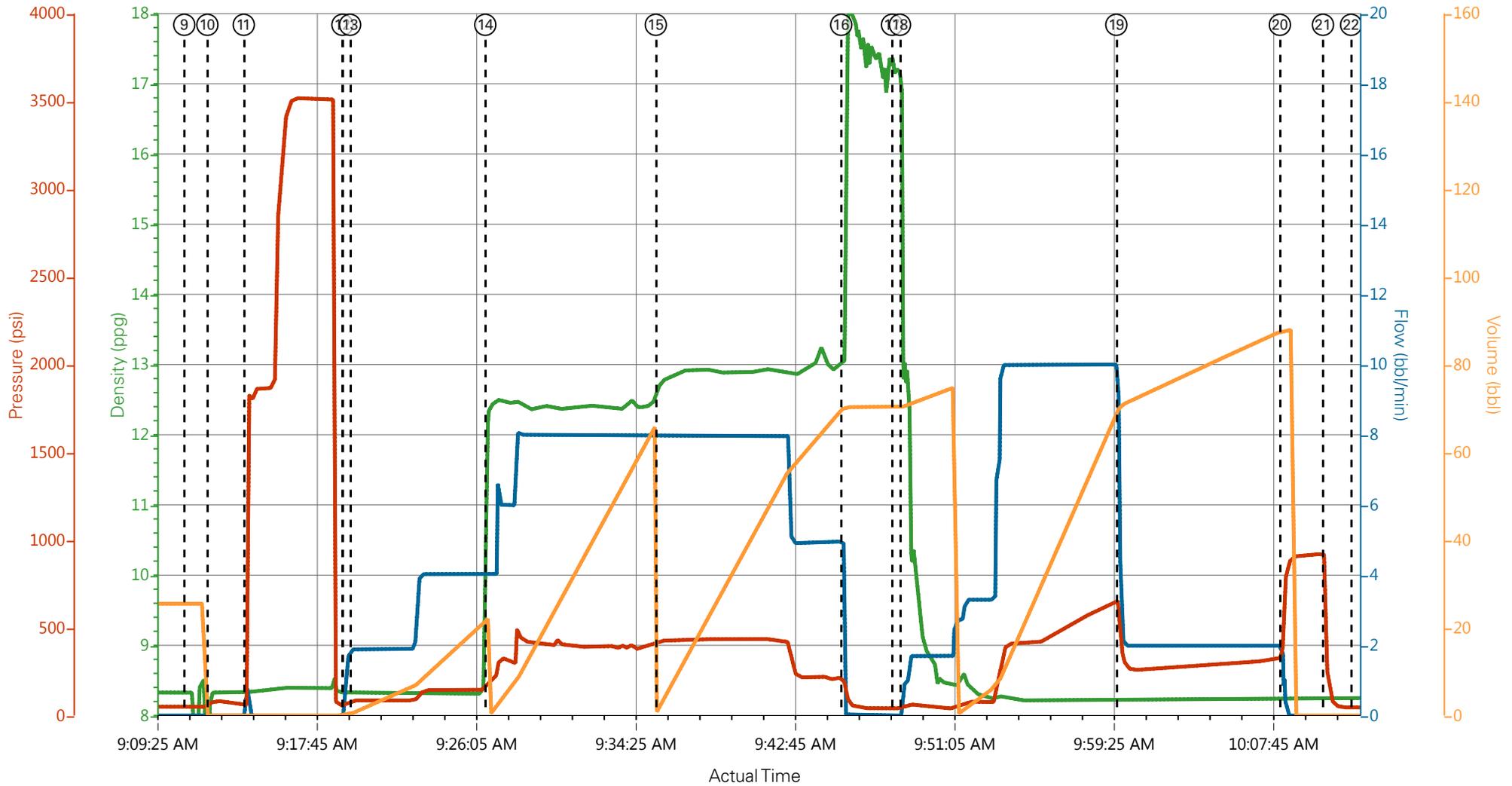
## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	9/22/2016	03:00:00	USER					Requested on Location @ 7:00
Event	2	Pre-Convoy Safety Meeting	9/22/2016	04:50:00	USER					
Event	3	Crew Leave Yard	9/22/2016	05:00:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location	9/22/2016	07:00:00	USER					Rig still running casing
Event	5	Assessment Of Location Safety Meeting	9/22/2016	08:23:12	USER					JSA completed - Customer offered/received SDS - water test pH 7.0, CI <200, temp 61 degrees
Event	6	Pre-Rig Up Safety Meeting	9/22/2016	08:23:53	USER					
Event	7	Rig-Up Equipment	9/22/2016	08:24:05	USER					1 hardline to standpipe, water hoses to upright and day tank, bulk hoses to silo and 660.
Event	8	Pre-Job Safety Meeting	9/22/2016	08:24:50	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	9/22/2016	09:11:00	USER					TD 1184', TP 1178, SJ 46.6', FC 1131.4 OH 13.5'', Csg 9.625'' 32.3 lb/ft H-40, Mud 9.3 ppg.
Event	10	Fill Lines	9/22/2016	09:12:12	USER	8.4	0	80	2	Fresh water
Event	11	Test Lines	9/22/2016	09:14:06	COM6	8.4	.5	3518	.5	Held pressure 2 minutes no leaks
Event	12	Pump H2O Spacer	9/22/2016	09:19:16	COM6	8.4	3	145	20	Fresh water
Event	13	Check weight	9/22/2016	09:19:40	COM6	12.3				Verified Via Mud Scales
Event	14	Pump Lead Cement	9/22/2016	09:26:44	COM6	12.3	8	465	57.2	135 Sks 12.3 ppg 2.38 yield 13.77 gal/sk
Event	15	Pump Tail Cement	9/22/2016	09:35:38	COM6	12.8	8	395	65.8	175 Sks 12.8 ppg 2.11 yield 11.78 gal/sk
Event	16	Shutdown	9/22/2016	09:45:20	USER					Wash up on top of plug

Event	17	Drop Top Plug	9/22/2016	09:48:00	USER						Verify Plug Launched
Event	18	Pump Displacement	9/22/2016	09:48:24	COM6	8.4	10	650	89		Fresh Water
Event	19	Slow Rate	9/22/2016	09:59:43	USER	8.4	2	350	70		Slow Rate 19 bbls to Calculated Displacement
Event	20	Bump Plug	9/22/2016	10:08:16	USER	8.4	2	350	89		Plug Bumped at 350 psi, Brought up to 915 psi
Event	21	Check Floats	9/22/2016	10:10:31	USER						Floats held – ½ bbl back to the truck
Event	22	End Job	9/22/2016	10:12:00	USER						Good returns throughout job, Pipe was not reciprocated during cement, 15 bbls of Cement to surface
Event	23	Pre-Rig Down Safety Meeting	9/22/2016	10:20:00	USER						40 lbs sugar, No add hours
Event	24	Rig-Down Equipment	9/22/2016	10:30:00	USER						
Event	25	Pre-Convoy Safety Meeting	9/22/2016	10:50:00	USER						
Event	26	Crew Leave Location	9/22/2016	11:00:00	USER						Thank you for using Halliburton – Ryan Muhlestein and crew.

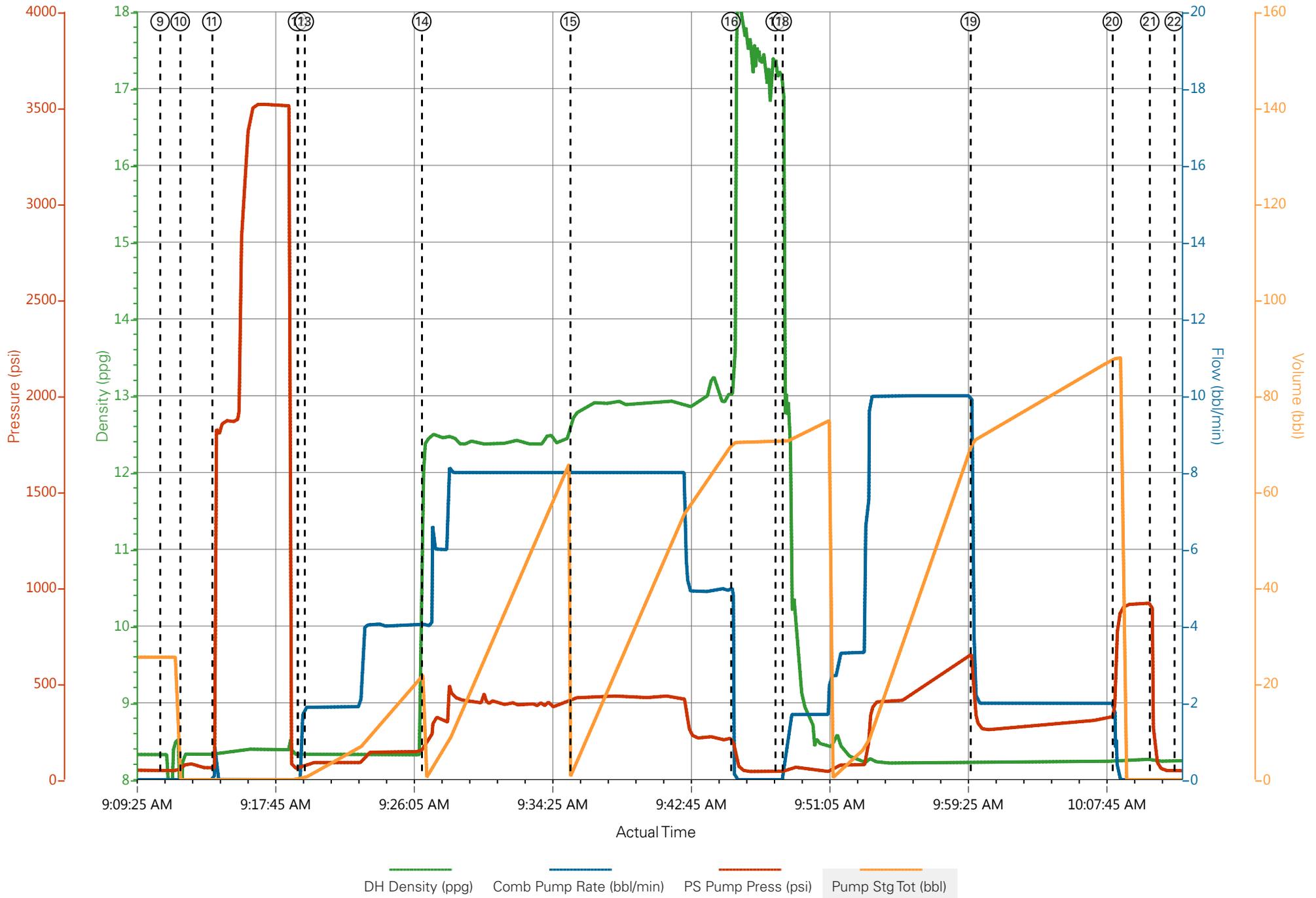
# TEP ROCKY MOUNTAIN - RU 421-7 - Surface Casing



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

- |   |                          |                     |                               |                             |
|---|--------------------------|---------------------|-------------------------------|-----------------------------|
| ① Call Out                              | ⑦ Rig-Up Equipment       | ⑬ Check weight      | ⑰ Slow Rate                   | ⑲ Pre-Convoy Safety Meeting |
| ② Pre-Convoy Safety Meeting             | ⑧ Pre-Job Safety Meeting | ⑭ Pump Lead Cement  | ⑱ Bump Plug                   | ⑳ Crew Leave Location       |
| ③ Crew Leave Yard                       | ⑨ Start Job              | ⑮ Pump Tail Cement  | ⑳ Check Floats                |                             |
| ④ Arrive at Location                    | ⑩ Fill Lines             | ⑯ Shutdown          | ㉑ End Job                     |                             |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Test Lines             | ⑰ Drop Top Plug     | ㉒ Pre-Rig Down Safety Meeting |                             |
| ⑥ Pre-Rig Up Safety Meeting             | ⑫ Pump H2O Spacer        | ⑱ Pump Displacement | ㉓ Rig-Down Equipment          |                             |

# TEP ROCKY MOUNTAIN - RU 421-7 - Surface Casing



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