

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

United States of America, COLORADO

**For: Lynn Cass and Mark Mewshaw**

Date: Monday, October 10, 2016

**RU 321-7 Production**

**API# 05-045-23134-00**

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

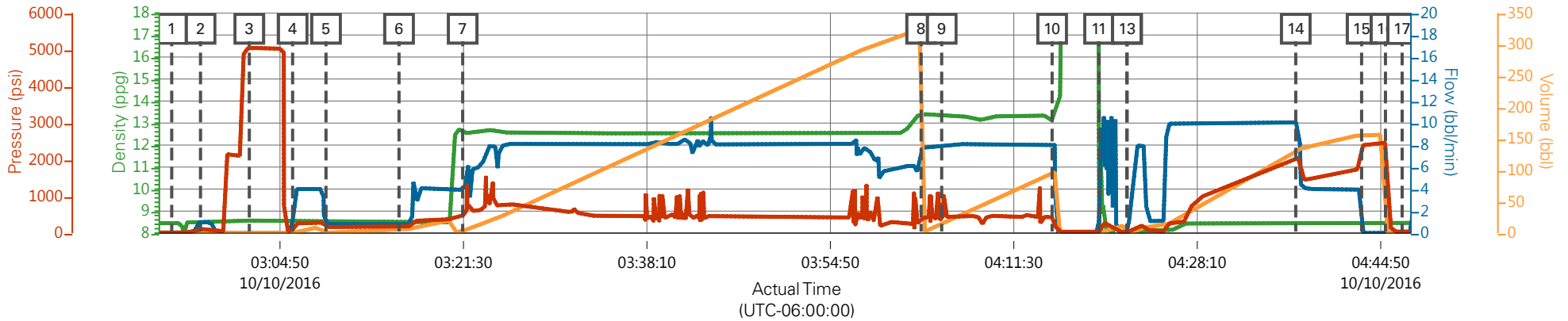
## 1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	10/9/2016	09:30:00	USER					REQUESTED ON LOCATION @ 1600 AND LATER CHANGED TO 1800.
Event	2	Pre Convoy Safety Meeting	10/9/2016	11:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	10/9/2016	12:00:00	USER					1 F550, 1 PUMP TRUCK & 1 660 BULK TURCK
Event	4	Arrive At Location	10/9/2016	16:00:00	USER					RIG PULLING DP/ RIGING UP CASERS.
Event	5	Assessment Of Location	10/9/2016	16:30:00	USER					MET WITH COMP REP, J. ABBEY, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 63F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre Rig Up Safety Meeting	10/10/2016	18:45:00	USER					ALL HES PRESENT
Event	7	Rig Up Equipment	10/10/2016	19:00:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre Job Safety Meeting	10/10/2016	02:40:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	10/10/2016	02:55:00	COM6					TD 9816', TP 9806', SJ 25', OH 8.75'', CSG 4.5'' 11.6#, MUD 10.1 PPG. RIG CIRCULATED WELL @ APPROX 9 BPM WITH 670 PSI FOR APPROX 1.5 HRS.
Event	10	Fill Lines	10/10/2016	02:57:37	COM6	109.00	8.52	1.00	0.40	8.33 PPG FRESH WATER
Event	11	Test Lines	10/10/2016	03:02:03	COM6	5050.00	8.57	0.00	1.50	ALL LINES HELD PRESSURE AT 5054 PSI
Event	12	Pump Spacer 1	10/10/2016	03:05:59	COM6	58.00	8.48	1.90	0.10	FRESH WATER (10 BBL), 8.33 PPG

Event	13	Pump Spacer 2	10/10/2016	03:09:01	COM6	161.00	8.51	0.80	0.50	MUD FLUSH III (20 BBL), 8.4 PPG
Event	14	Check Weight	10/10/2016	03:15:39	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	15	Pump Lead Cement	10/10/2016	03:21:26	COM6	483.00	12.53	4.00	3.60	NEOCEM CEMENT 855 SKS (296 BBLs), 12.5 PPG, 1.94 FT3/SK, 9.58 GAL/SK
Event	16	Pump Tail Cement	10/10/2016	04:03:05	COM6	433.00	13.38	7.70	325.30	THERMACEM CEMENT 265 SKS (82 BBLs), 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	17	Check Weight	10/10/2016	04:04:57	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	18	Shutdown	10/10/2016	04:14:59	USER					END OF CMT
Event	19	Clean Lines	10/10/2016	04:19:15	USER					BLOW DOWN STANDPIPE WITH AIR FROM RIG, WASH UP PUMPS AND LINES TO PIT
Event	20	Drop Top Plug	10/10/2016	04:21:46	COM6					PLUG WENT, DRILLER VERIFIED
Event	21	Pump Displacement	10/10/2016	04:21:48	COM6	22.00	7.86	0.00	0.00	8.34 PPG KCL WATER (151.5 BBLs) 1 GAL MMCR & 3 BAGS BE6
Event	22	Slow Rate	10/10/2016	04:37:07	USER	2017.00	8.50	10.10	130.50	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	23	Bump Plug	10/10/2016	04:43:06	COM6	2389.00	8.49	0.00	156.30	LAND PLUG AT 2017 PSI, BROUGHT UP TO 2476 PSI
Event	24	Check Floats	10/10/2016	04:45:16	COM6	2476.00	8.49	0.00	0.00	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	25	End Job	10/10/2016	04:46:47	USER					RETURNS THROUGHOUT THE JOB, PIPE WAS NOT RECIPROCATED, 0 BBL OF SPACER OR CEMENT BACK TO SURFACE
Event	26	Post Job Safety Meeting	10/10/2016	04:55:00	USER					ALL HES PRESENT
Event	27	Rig Down Equipment	10/10/2016	05:05:00	USER					ALL HES PRESENT

Event	28	Pre Convoy Safety Meeting	10/10/2016	06:00:00	USER	ALL HES PRESENT
Event	29	Crew Leave Location	10/10/2016	06:15:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

# TEP - RU 321-7 - 4.5" PRODUCTION



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

Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	
1 Start Job	02:55:00	8.45	0.00	13.00	0.00	
2 Fill Lines	02:57:37	8.52	1.00	109.00	0.40	
3 Test Lines	03:02:03	8.57	0.00	5050.00	1.50	
4 Pump Spacer 1	03:05:59	8.48	1.90	58.00	0.10	
5 Pump Spacer 2	03:09:01	8.51	0.80	161.00	0.50	
6 Check Weight	03:15:39	8.53	0.80	176.00	6.00	
7 Pump Lead Cement	03:21:26	12.53	4.00	483.00	3.60	
8 Pump Tail Cement	04:03:05	13.38	7.70	433.00	325.30	
9 Check Weight	04:04:57	13.31	7.80	407.00	14.40	
10 Shutdown	04:14:59	13.14	8.00	417.00	95.20	
11 Clean Lines	04:19:15	8.31	1.10	26.00	0.10	
12 Drop Top Plug	04:21:46	7.88	0.00	22.00	0.00	
13 Pump Displacement	04:21:48	7.86	0.00	22.00	0.00	
14 Slow Rate	04:37:07	8.50	10.10	2017.00	130.50	
15 Bump Plug	04:43:06	8.49	0.00	2389.00	156.30	
16 Check Floats	04:45:16	8.49	0.00	2476.00	0.00	
17 End Job	04:46:47	8.46	0.00	28.00	0.00	

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