

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

United States of America

**For: Lynn Cass & Abe Alexander**

Date: Saturday, February 04, 2017

**TR 414-21-597 Surface PJR**

API# 05-045-23340-00

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

## 1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	2/3/2017	16:00:00	USER					REQUESTED ON LOCATION @ 2200
Event	2	Pre Convoy Safety Meeting	2/4/2017	19:20:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	2/4/2017	19:30:00	USER					1 F550, 1 PUMP TRUCK & 1 SUPER FLUSH TRANSPORT
Event	4	Arrive At Location	2/4/2017	23:30:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location	2/4/2017	23:35:00	USER					MET WITH COMP REP, T.RAGSDALE, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 75F). COMP REP WAS OFFERED SDS FOR ALL CHEMICALS USED BY HES.
Event	6	Pre Rig Up Safety Meeting	2/4/2017	23:45:00	USER					ALL HES PRESENT
Event	7	Rig Up Equipment	2/4/2017	23:55:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre Job Safety Meeting	2/4/2017	04:30:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	2/4/2017	04:52:00	USER					TD 2714', TP 2717.85', SJ 27.8', OH 14.75'', CSG 9.625" 36# (1728.11') 40# (989.67), MUD 9 PPG. NO RETURNS. RIG CLEARED CASING CAPACITY (~215 BBL) AND TURNED OVER TO

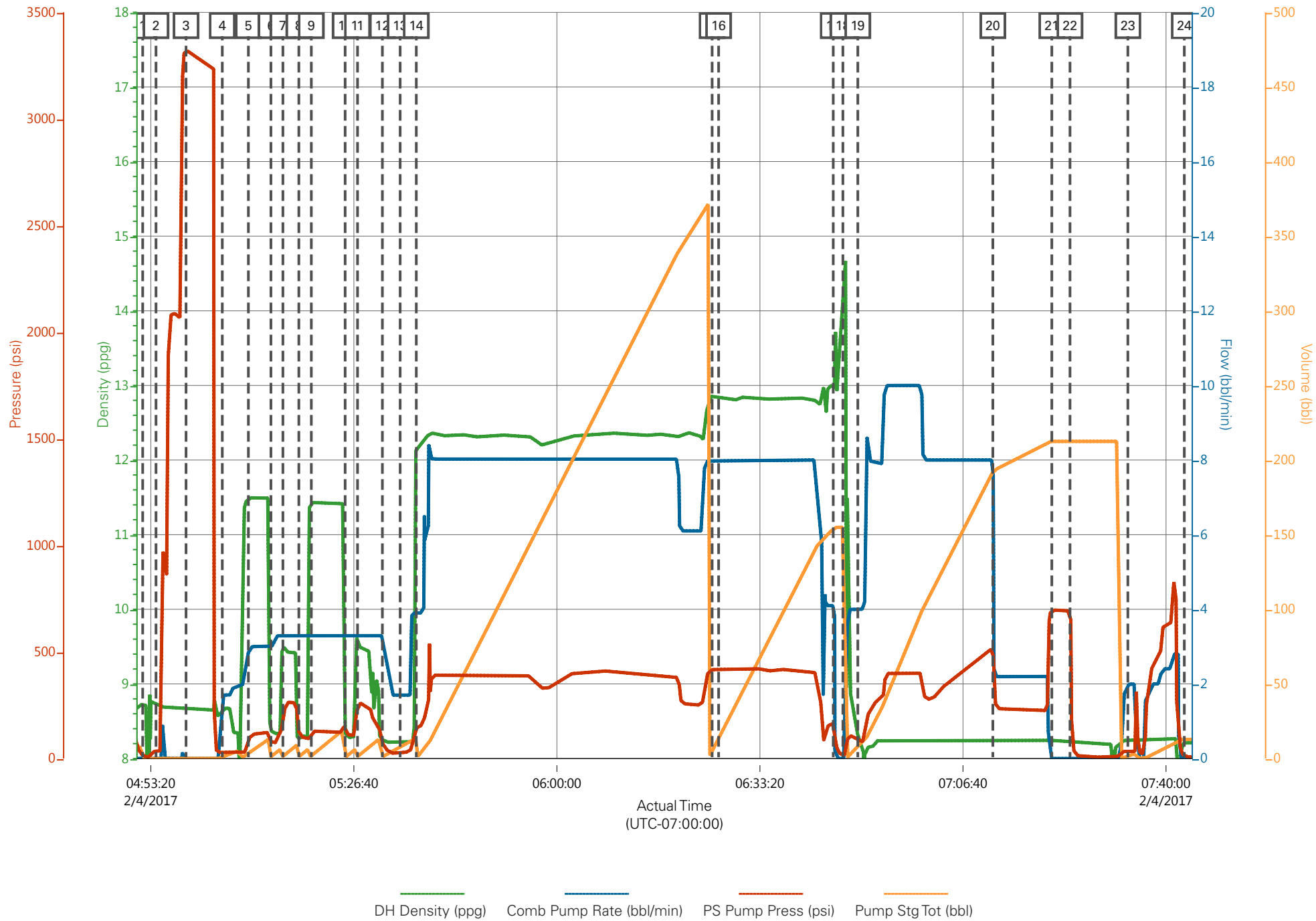
HES.

Event	10	Fill Lines	2/4/2017	04:54:11	USER	33.00	8.72	0.00	0.00	8.33 PPG FRESH WATER
Event	11	Test Lines	2/4/2017	04:59:07	COM6	3324.00	8.69	0.00	0.00	ALL LINES HELD PRESSURE AT 3324 PSI
Event	12	Fresh H2O Spacer	2/4/2017	05:05:04	COM6	35.00	8.67	1.70	0.60	8.33 PPG FRESH WATER (5BBL)
Event	13	Super Flush 100	2/4/2017	05:09:21	COM6	84.00	11.48	2.80	3.00	11 PPG SUPER FLUSH 100 (10BBL)
Event	14	Fresh H2O Spacer	2/4/2017	05:13:03	COM6	80.00	8.37	3.00	1.20	8.33 PPG FRESH WATER (5BBL)
Event	15	Calcium Chloride Spacer	2/4/2017	05:15:01	COM6	176.00	9.53	3.30	1.40	9.4 PPG CALCIUM CHLORIDE WATER (10BBL)
Event	16	Fresh H2O Spacer	2/4/2017	05:17:38	COM6	126.00	8.27	3.30	1.20	8.33 PPG FRESH WATER (5BBL)
Event	17	Super Flush 100	2/4/2017	05:19:41	COM6	115.00	11.42	3.30	1.80	11 PPG SUPER FLUSH 100 (10BBL)
Event	18	Fresh H2O Spacer	2/4/2017	05:25:14	COM6	127.00	8.33	3.30	0.70	8.33 PPG FRESH WATER (5BBL)
Event	19	Calcium Chloride Spacer	2/4/2017	05:27:16	COM6	245.00	9.54	3.30	1.30	9.4 PPG CALCIUM CHLORIDE WATER (10BBL)
Event	20	Fresh H2O Spacer	2/4/2017	05:31:21	COM6	70.00	8.28	3.10	1.00	8.33 PPG FRESH WATER (10BBL)
Event	21	Check Weight	2/4/2017	05:34:16	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	22	Pump Lead Cement	2/4/2017	05:36:55	COM6	136.00	12.20	3.90	0.40	VARICEM CEMENT 895 SKS (379 BBLS), 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK, 60 LBS OF TUFF FIBER (15 LBS PER 60 BBL) DID NOT START ADDING TUFF FIBER UNTIL 20 BBL AWAY ON LEAD CEMENT PER CO REP.
Event	23	Pump Tail Cement	2/4/2017	06:25:29	COM6	414.00	12.87	8.00	4.90	VARICEM CEMENT 305 SKS (114 BBLS), 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK.
Event	24	Check Weight	2/4/2017	06:26:33	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES

Event	25	Shutdown	2/4/2017	06:45:22	USER					END OF CEMENT
Event	26	Drop Top Plug	2/4/2017	06:46:57	USER					WASH UP PUMPS AND LINES ON TOP OF PLUG
Event	27	Pump Displacement	2/4/2017	06:49:24	COM6	87.00	8.36	4.00	7.60	8.34 PPG FRESH WATER (208.6 BBLs)
Event	28	Slow Rate	2/4/2017	07:11:34	COM6					SLOW RATE TO 2 BPM PER CO REP TO LAND PLUG
Event	29	Bump Plug	2/4/2017	07:21:15	COM6	697.00	8.24	0.00	212.50	LAND PLUG AT 225 PSI, BROUGHT UP TO 697 PSI
Event	30	Check Floats	2/4/2017	07:24:14	COM6					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	31	Clear Parasite	2/4/2017	07:33:44	COM6	34.00	8.24	2.00	1.70	8.33 PPG FRESH WATER (5 BBL), 8.33 PPG SUGAR WATER (10 BBL)
Event	32	Fill Lines	2/4/2017	12:21:05	COM6					8.33 PPG FRESH WATER
Event	33	Pump Spacer	2/4/2017	12:21:39	COM6					11 PPG SUPER FLUSH 100 (2 BBL), PUMPED DOWN BACKSIDE FROM SUPER FLUSH TRANSPORT.
Event	34	Pump Cement	2/4/2017	12:32:33	COM6	5.00	15.88	2.10	2.50	TYPE I/II CEMENT 151 SKS (32 BBLs), 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 2% CALCIUM CHLORIDE, 3 BBL OF SUPER FLUSH 100 PUMPED DOWN BACKSIDE WITH CEMENT
Event	35	Clean Lines	2/4/2017	12:49:50	COM6	12.00	16.97	1.70	34.10	8.33 PPG FRESH WATER (5 BBL) END OF TOP OUT
Event	36	End Job	2/4/2017	12:58:00	USER					NO RETURNS DURING THE JOB, PIPE WAS NOT RECIPROCATED, 0 BBL CEMENT BACK TO SURFACE, WAITED 5 HRS BEFORE BEGINNING TOP OUT.
Event	37	Rig Down	2/4/2017	14:30:00	USER					ALL HES PRESENT

Equipment						
Event	38	Crew Leave Location	2/4/2017	15:00:00	USER	ALL HES PRESENT
Event	39	Post Job Safety Meeting	2/4/2017	15:15:00	USER	ALL HES PRESENT
Event	40	Pre Convoy Safety Meeting	2/4/2017	15:20:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

# TERRA - TR 414-21-597 - 9.625" SURFACE



# TERRA - TR 414-21-597 - 9.625" SURFACE (TOP OUT)

