

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Wednesday, May 17, 2017

TR 413-24-597 Surface PJR

API# 05-045-23472

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

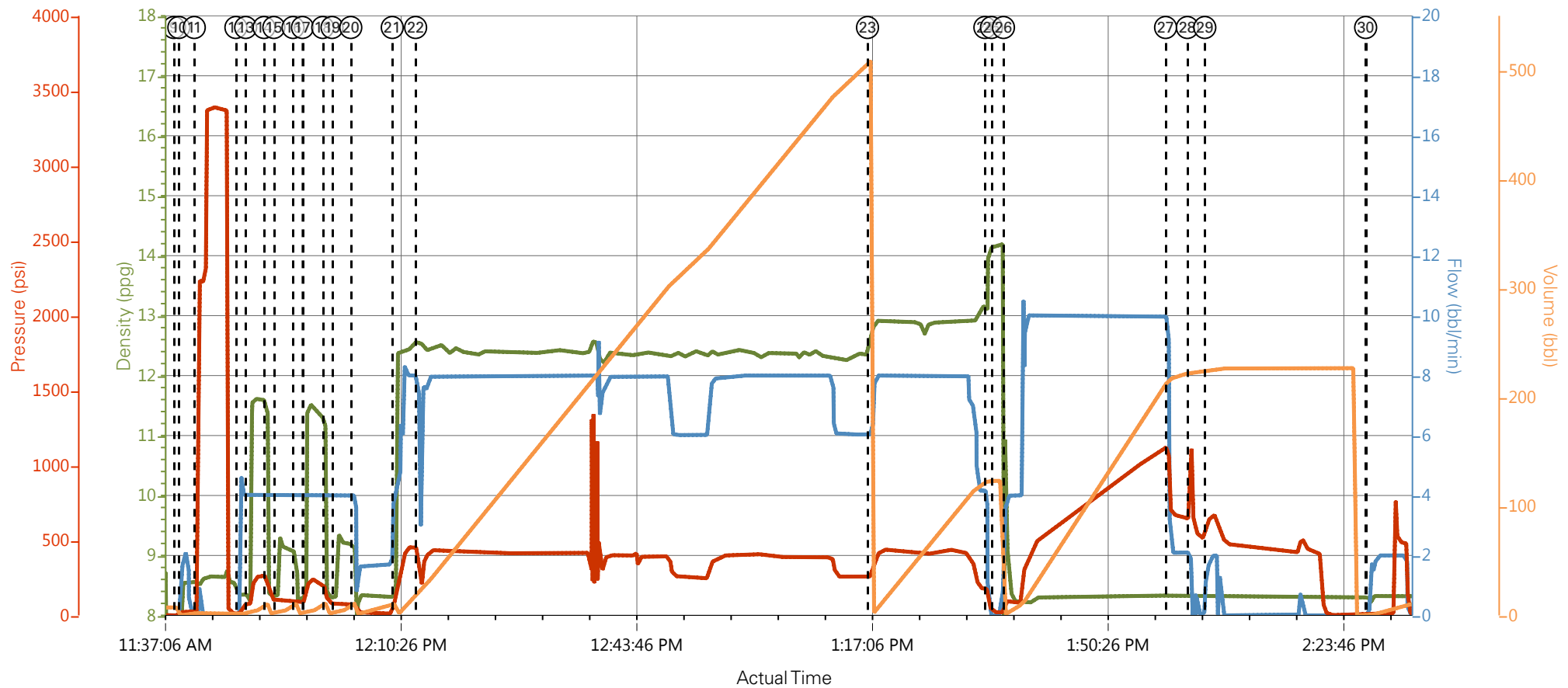
1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	5/16/2017	21:00:00	USER					REQUESTED ON LOCATION AT 04:00 5/17/17
Event	2	Pre-Convoy Safety Meeting	5/16/2017	23:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	5/16/2017	23:15:00	USER					1 550 PU, 1 ELITE PUMP, 1 660 BULK TRUCK AND 1 SF TRANSPORT
Event	4	Arrive At Loc	5/17/2017	03:00:00	USER					ARRIVED 1 HOUR EARLY. CASING CREW WAS AT 1500' GOING IN.
Event	5	Assessment Of Location Safety Meeting	5/17/2017	03:05:00	USER					MET WITH CO REP TO GO OVER NUMBERS AND JOB PROCEDURE. DID A WALK AROUND OF LOCATION AND COLLECTED WATER SAMPLE. PH 7, CHL 0, TEMP 68F. WAITED TO PULL TRUCKS ON LOCATION UNTIL CASING WAS CLOSER TO COMPLETE DUE TO TIGHT SPOTTING AREA
Event	6	Pre-Rig Up Safety Meeting	5/17/2017	07:45:00	USER					FILLED OUT JSA AND SPOTTED TRUCKS ON LOCATION. ALL HES PRESENT
Event	7	Rig-Up Equipment	5/17/2017	08:00:00	USER					RIGGED UP WHAT WE COULD STAYING OUT OF THE RED ZONE UNTIL CASING WAS COMPLETE AT 10:30
Event	8	Pre-Job Safety Meeting	5/17/2017	11:26:19	USER					MET WITH RIG CREW TO GO OVER JOB. ALL HES PRESENT
Event	9	Start Job	5/17/2017	11:38:50	COM5					TD 3001', TP 3005.1', FC 25.1', CSG 9.625" 36# J-55, OH 14.75", MW 8.8 PPG. TOT, 1909', LEAD CALCULATED TO SURFACE. RIG DID NOT GET RETURNS AND WAS NOT CIRCULATING AT THE TIME WE TOOK OVER THE WELL.

Event	10	Prime Pumps	5/17/2017	11:39:32	COM5	8.33	2	24	2	2 BLS FRESH WATER
Event	11	Test Lines	5/17/2017	11:41:43	COM5			3400		TESTED TO 3400 PSI. TESTED WELL, KO'S FUNCTIONING.
Event	12	Pump Spacer 1	5/17/2017	11:47:36	COM5	8.33	4	35	5	5 BBLS FRESH WATER
Event	13	Pump Spacer 2	5/17/2017	11:48:59	COM5	11.5	4	175	10	10 BBLS SUPER FLUSH
Event	14	Pump Spacer 3	5/17/2017	11:51:35	COM5	8.33	4	35	5	5 BBLS FRESH WATER
Event	15	Pump Spacer 4	5/17/2017	11:52:58	COM5	8.4	4	35	10	10 BBLS CALCIUM CHLORIDE
Event	16	Pump Spacer 5	5/17/2017	11:55:41	COM5	8.33	4	35	5	5 BBLS FRESH WATER
Event	17	Pump Spacer 6	5/17/2017	11:57:01	COM5	11.5	4	175	10	10 BBLS SUPER FLUSH
Event	18	Pump Spacer 7	5/17/2017	11:59:53	COM5	8.33	4	35	5	5 BBLS FRESH WATER
Event	19	Pump Spacer 8	5/17/2017	12:01:12	COM5	8.4	4	35	10	10 BBLS CALCIUM CHLORIDE
Event	20	Pump Spacer 9	5/17/2017	12:03:51	COM5	8.33	4	35	10	10 BBLS FRESH WATER
Event	21	Pump Lead Cement	5/17/2017	12:09:43	COM5	12.3	8	450	498	1175 SKS (498 BBLS) 12.3 PPG, 2.38 FT3/SK, 13.76 GAL/SK ADDED 90 LBS TUFF FIBER TO THE LEAD CEMENT
Event	22	Other	5/17/2017	12:13:02	USER					TUB LEVELER STOPPED WORKING AND OPERATOR HAD TO SLOW AND SWITCH TO HEIGHT MODE AND BUILD HIS TUB BACK UP
Event	23	Pump Tail Cement	5/17/2017	13:16:57	COM5	12.8	8	430	130	345 SKS (130 BBLS) 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK
Event	24	Shutdown	5/17/2017	13:33:33	USER					END OF CEMENT
Event	25	Drop Plug	5/17/2017	13:34:29	USER					PLUG WENT, WITNESSED BY CO REP. WASHED FIRST 10 BBLS ON TOP.
Event	26	Pump Displacement	5/17/2017	13:36:11	COM5	8.33	10	1120	226	226 BBLS FRESH WATER
Event	27	Slow Rate	5/17/2017	13:59:06	USER	8.33	2	700	216	SLOWED TO 2 BBLS/MIN TO LAND THE PLUG
Event	28	Bump Plug	5/17/2017	14:02:11	COM5	8.33	2	1155	223.1	BUMPED 3 BBLS EARLY AND PRESSURE FELL

										RIGHT OFF.
Event	29	Pump Displacement	5/17/2017	14:04:39	USER	8.33	2	700	3	PUMPED THE REMAINING 3 BBLS TO GET TO CALCULATED. PRESSURE CAME UP TO 700 AND FELL BACK TO 450 PSI CHECKED FLOATS AND THEY HELD. WE GOT .5 BBLS BACK TO TRUCK
Event	30	Parasite	5/17/2017	14:27:24	COM5					PUMPED 10 BBLS OF SUGAR WATER INTO PARASITE AND IT PRESSURED UP AT 7 BBLS GONE TO 1155 PSI AND WENT BACK TO 550 PSI. PUMPED THE REMAINING 3 BBLS
Event	31	End Job	5/17/2017	14:36:52	COM5					GOT RETURNS DURING THE LAST 10 BBLS OF TAIL CEMENT. THEY CONTINUED THROUGH DISPLACEMENT SLOWING AS WE WENT. WE STARTED TO SEE SPACER DURING THE LAST 30 BBLS. RETURNS FELL WHEN WE SLOWED TO LAND THE PLUG.
Event	32	Start Job	5/17/2017	15:52:25	COM5					
Event	33	Pump Spacer 1	5/17/2017	15:53:41	COM5	11.5	2	50	10	10 BBLS SUPERFLUSH
Event	34	Pump Spacer 1	5/17/2017	15:57:23	COM5	8.33	2	50	3	3 BBLS H2O
Event	35	Pump Cement	5/17/2017	16:03:00	COM5	15.6	2	100	17.4	15.6 PPG 1.19 FT3/SK, 5.24 GAL/SK
Event	36	Shutdown	5/17/2017	16:09:06	USER					CEMENT TO SURFACE
Event	37	End Job	5/17/2017	16:10:19	USER					USED 82 SKS, 17.4 BBLS, 1.5 BAGS CALCIUM CHLORIDE AND GOT CEMENT TO SURFACE
Event	38	Pre-Rig Down Safety Meeting	5/17/2017	16:15:00	USER					ALL HES PRESENT
Event	39	Rig Down Lines	5/17/2017	16:25:00	USER					
Event	40	Pre-Convoy Safety Meeting	5/17/2017	17:30:00	USER					ALL HES PRESENT
Event	41	Crew Leave Location	5/17/2017	17:45:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT.

TERRA CHEVRON TR 413-24-597 9.625" SURFACE TOP OUT



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

① Call Out n/a;n/a;n/a;n/a	⑫ Pump Spacer 1 8.33;0;6;2	23 Pump Tail Cement 12.69;6;262;508.9	34 Pump Spacer 1 11.44;3;191.16;10.46
② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a	⑬ Pump Spacer 2 8.34;4;71;4.9	24 Shutdown 14.13;0;86;123.4	35 Pump Cement 9.41;2.8;36;2.9
③ Crew Leave Yard n/a;n/a;n/a;n/a	⑭ Pump Spacer 3 10.88;4;258;0	25 Drop Plug 14.14;0;22;123.4	36 Shutdown 13.01;0;65;15.2
④ Arrive At Loc n/a;n/a;n/a;n/a	⑮ Pump Spacer 4 8.32;4;100;0	26 Pump Displacement 9.15;4;104;2	37 End Job 10.03;0;-3;15.2
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a	⑯ Pump Spacer 5 8.89;4;100;0	27 Slow Rate 8.32;4;828;216.7	38 Pre-Rig Down Safety Meeting 8.32;0;-8;15.2
⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a	⑰ Pump Spacer 6 8.52;4;85;0	28 Bump Plug 8.33;0.2;1095;223.1	39 Rig Down Lines n/a;n/a;n/a;n/a
⑦ Rig-Up Equipment n/a;n/a;n/a;n/a	⑱ Pump Spacer 7 9.03;4.1;136;0	29 Pump Displacement 8.31;1.6;630;223.9	40 Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a
⑧ Pre-Job Safety Meeting 8.53;0;1;0	⑲ Pump Spacer 8 8.3;4;73;5.4	30 Parasite 8.3;0.9;0;0	41 Crew Leave Location n/a;n/a;n/a;n/a
⑨ Start Job 0.08;0;-1;0	20 Pump Spacer 9 9.12;4;74;10.7	31 End Job 8.31;0;-4;0	
⑩ Prime Pumps 8.54;1.6;24;0.2	21 Pump Lead Cement 8.48;4.1;130.3;3.93	32 Start Job 7.41;0;-8;7.4	
⑪ Test Lines 8.56;0;35;2	22 Other 12.54;3.5;297;22.9	33 Pump Spacer 1 10.23;1.6;8;0.6	

▼ **HALLIBURTON** | iCem® Service

Created: 2017-05-17 04:03:04, Version: 4.2.393

Edit

Customer : TERRA ENERGY PARTNERS
Representative : KARL SCHNEIDER

Job Date : 5/17/2017 10:32:53 AM
Sales Order # : 904037342

Well : TR 413-24-597
ELITE 1 : CLIFF SPARKS /TRAVIS BROWN

TERRA CHEVRON TR 413-24-597 9.625" SURFACE TOP OUT

