

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

Date: Wednesday, March 6, 2019

SG 324-15 Production

Terra SG 324-15 Production

API #05-045-24126-00

Job Date: Tuesday, January 22, 2019

Sincerely,

Grand Junction Cement Engineering

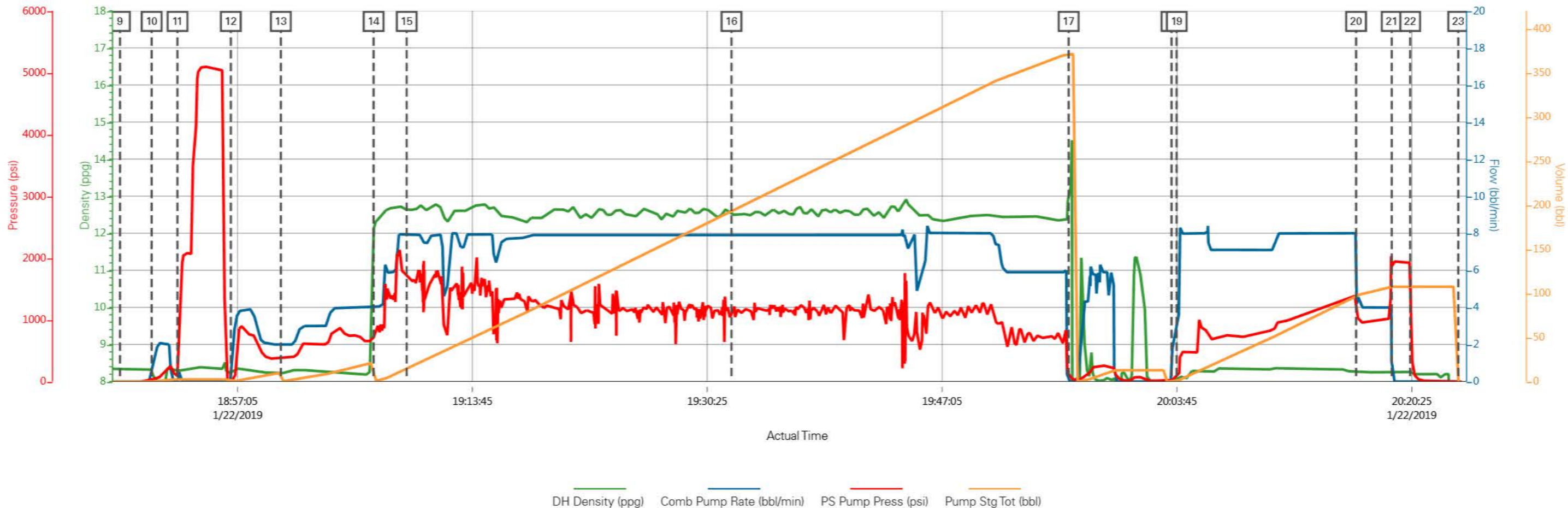
1.0 Real-Time Job Summary

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	1/21/2019	17:00:00	USER					REQUESTED ON LOCATION @ 00:00
Event	2	Pre-Convoy Safety Meeting	1/21/2019	19:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/21/2019	19:10:00	USER					1 HT 400 PUMP TRUCK E1, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	1/21/2019	21:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	1/21/2019	21:15:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.0, CHLORIDES- 500, TEMP- 80F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES. CALIBRATED MUD SCALES ON WATER.
Event	6	Pre-Rig Up Safety Meeting	1/21/2019	21:30:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	1/21/2019	21:40:00	USER					HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2 CEMENT SILOS, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	1/22/2019	16:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 600 PSI. 175 UNITS OF GAS.
Event	9	Start Job	1/22/2019	18:48:44	COM6					TD 7,066', TP 7007', SJ 46.67', SURFACE CSG 9 5/8" 36 # J55 SET @ 1057' PRODUCTION CSG 4 1/2" 11.6# P-110, OH 8 3/4", MUD 10.5 PPG
Event	10	Prime Lines	1/22/2019	18:50:59	COM6	8.33	2	300	3	FRESH WATER
Event	11	Test Lines	1/22/2019	18:52:49	COM6			5100		ALL LINES HELD PRESSURE AT 5100 PSI
Event	12	Pump H2O Spacer	1/22/2019	18:56:36	COM6	8.33	4	800	10	10BBLs FRESH WATER SPACER

Event	13	Mud Flush	1/22/2019	19:00:09	COM6	8.4	4	800	20	20BBLs MUD FLUSH
Event	14	Pump Lead Cement	1/22/2019	19:06:44	COM6	12.5	8	1500	362	1035 SKS NEOCEM CMT 12.5 PPG, 1.96 FT3/SK, 9.4 GAL/SK.
Event	15	Check Weight	1/22/2019	19:09:05	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	16	Check Weight	1/22/2019	19:32:08	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Clean Lines	1/22/2019	19:56:04	USER					END OF CEMENT. CLEAN PUMPS AND LINES TO PIT.
Event	18	Pump Displacement	1/22/2019	20:03:22	COM6	8.4	8	1400	107.9	1 GAL MMCR IN FIRST 10 BBLs, 3 LBS BE-6 IN FIRST 30 BBLs, 1 50 LB. BAG KCL THROUGHOUT DISPLACEMENT
Event	19	Drop Top Plug	1/22/2019	20:03:44	USER					VERIFIED BY FLAG INDICATOR
Event	20	Slow Rate	1/22/2019	20:16:28	USER	8.4	4	950	97.7	SLOW RATE TO 4 BPM TO BUMP PLUG
Event	21	Bump Plug	1/22/2019	20:19:00	COM6	8.4	4	1100	107.9	LANDED PLUG AT 1100 PSI, BROUGHT UP TO 1950 PSI
Event	22	Check Floats	1/22/2019	20:20:18	USER					FLOATS HELD, 1 BBLs BACK TO TRUCK
Event	23	End Job	1/22/2019	20:23:43	COM6					RETURNS THROUGH OUT CEMENT AND BEGINNING OF DISPLACEMENT. LOST RETURNS 80BBLs GONE ON DISPLACEMENT. PIPE WAS RECIPERICATED. USED TOP PLUG, 20# SUGAR USED.
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	1/22/2019	20:30:00	USER					ALL HES PRESENT
Event	25	Rig Down Lines	1/22/2019	20:45:00	USER					ALL HES PRESENT
Event	26	Pre-Convoy Safety Meeting	1/22/2019	22:00:00	USER					ALL HES PRESENT
Event	27	Crew Leave Location	1/22/2019	22:15:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

TERRA SG 324-15, 4.5" PRODUCTION



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

Job Information

Request/Slurry	2528145/1	Rig Name	H&P 318	Date	14/JAN/2019
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SG 324-15

Well Information

Casing/Liner Size	4.5 in	Depth MD	7096 ft	BHST	86°C / 187°F
Hole Size	8.75 in	Depth TVD	6272 ft	BHCT	51°C / 124°F
Pressure	3690 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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Cement Information - Tail Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>MP</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
							Slurry Density	12.5	lbm/gal
							Slurry Yield	1.96	ft ³ /sack
							Water Requirement	9.43	gal/sack
							Total Mix Fluid	9.43	gal/sack
							Water Source	Fresh Water	
							Water Chloride		

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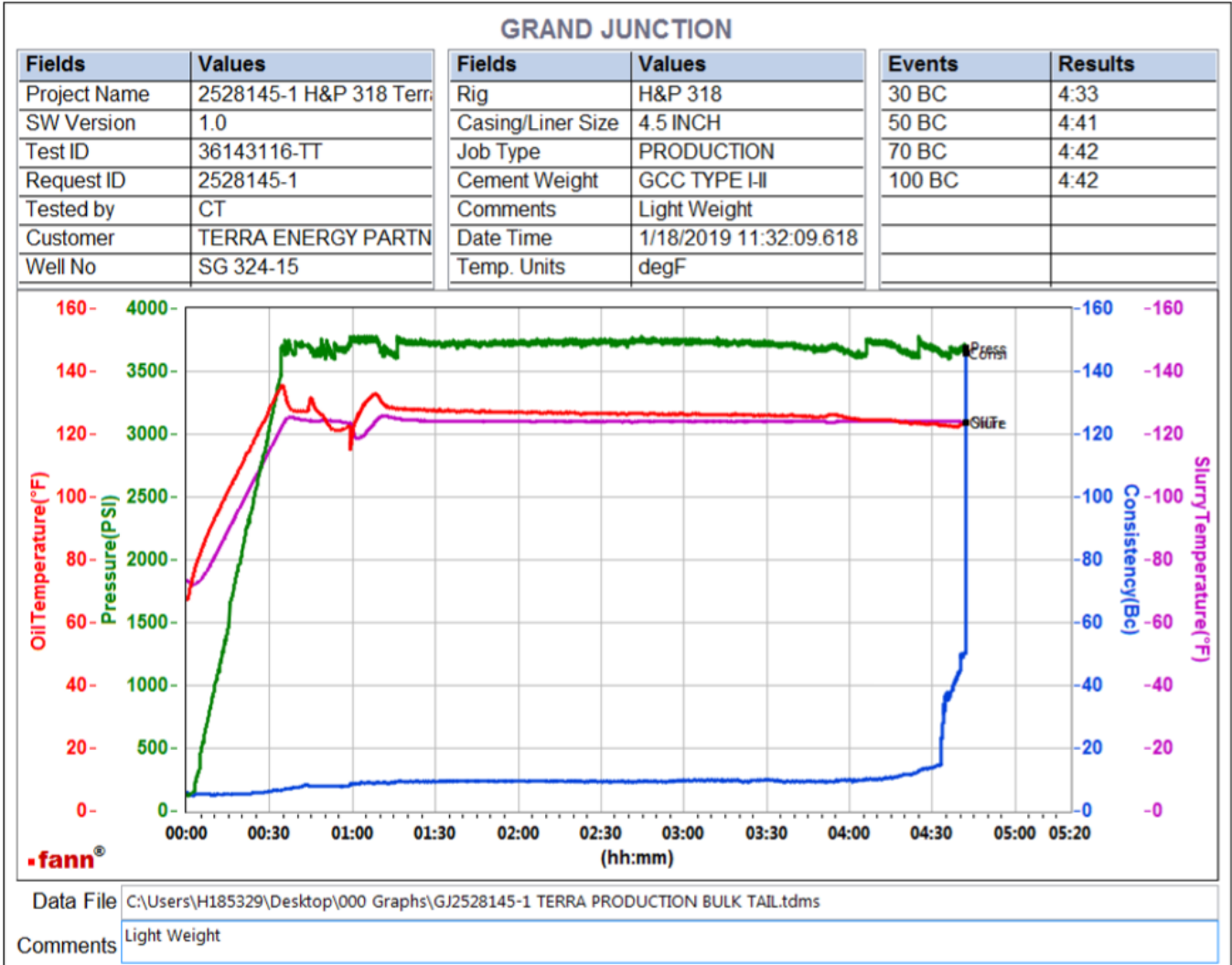
Operation Test Results Request ID 2528145/1

Thickening Time - ON-OFF-ON, Request Test ID:36143116

19/JAN/2019

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
124	3690	34	4:33	4:41	4:42	4:42	6	44	15	8

Total SKS 1035
 CS0094, Trailer 8677, 400 sks
 CS0095, Trailer 8658, 400 sks
 CS0096, Trailer 4080, 235 sks
 Deflection: 7 – 8



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