

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra Energy

Ware SR 523-12

Ware SR 523-12 Production

Job Date: Monday, January 01, 2018

Sincerely,

Grand Junction Cement Engineering

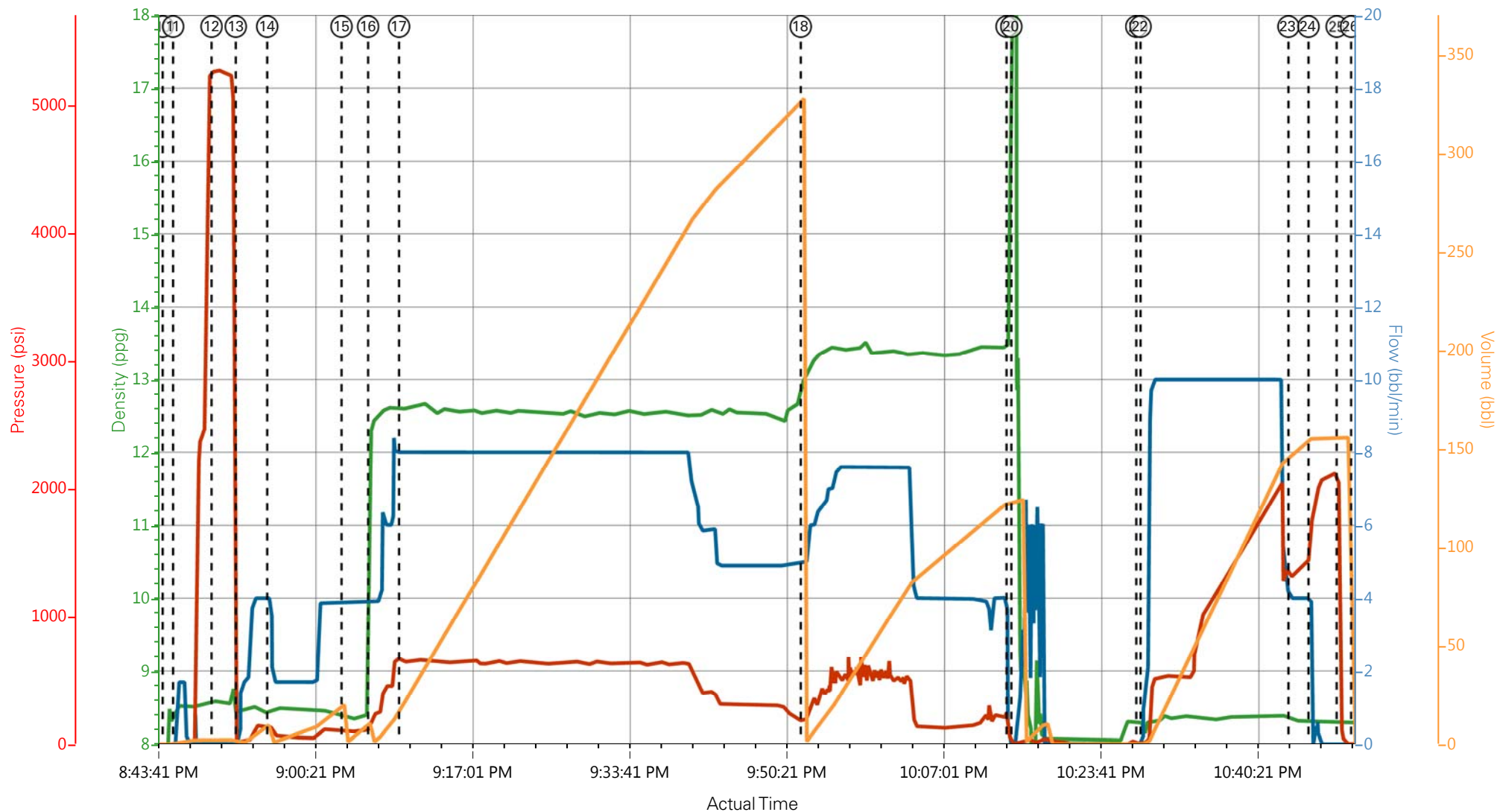
1.0 Real-Time Job Summary

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	1/1/2018	12:00:00	USER					ON LOATION REQUEST 18:00. CREW WAITING IN FIELD
Event	2	Pre-Convoy Safety Meeting	1/1/2018	16:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Location	1/1/2018	16:30:00	USER					
Event	4	Arrive at Location from Other Job or Site	1/1/2018	17:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	1/1/2018	17:05:00	USER					MET WITH COMPANY REP DISCUSSED PROCEDURE, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	1/1/2018	17:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	1/1/2018	19:09:00	USER					1-ELITE, 1-660 BULK TRAILER, 1-FIELD SILO, 4.5" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	1/1/2018	20:15:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	1/1/2018	20:20:23	USER					WATER:TEMP-60, CL-0, PH-7. RIG CIRCULATED 1.5 HOURS 450 GPM 450 PSI
Event	10	Start Job	1/1/2018	20:44:30	USER	8.40	0.00	4.00	0.0	TD-9527', TP-9520', SJ-30.18', OH-8.75", CSG-4.5" 11.6# P110, SCSG-9.625" 32.3# SHOE @1134', MUD-9.2PPG. PIPE RECIPROCATED THROUGH OUT LEAD CEMENT
Event	11	Prime Pumps	1/1/2018	20:45:36	COM5	8.40	1.70	23.00	3.0	FRESH WATER
Event	12	Test Lines	1/1/2018	20:49:40	COM5	8.59	0.00	5282.00	3.1	PRESSURE HELD ON LINES
Event	13	Pump Water	1/1/2018	20:52:14	COM5	8.35	4.00	140.00	10.0	FRESH WATER

Event	14	Pump Mud Flush III	1/1/2018	20:55:34	COM5	8.42	4.00	140.00	20.0	MUD FLUSH III
Event	15	Pump Water	1/1/2018	21:03:27	COM5	8.39	3.90	110.00	10.0	FRESH WATER
Event	16	Pump Lead Cement	1/1/2018	21:06:16	COM5	12.50	8.00	650.00	279.9	NEOCER 810SKS, 12.5PPG, 1.94CF/SK, 9.6GAL/SK
Event	17	Check weight	1/1/2018	21:09:33	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	18	Pump Tail Cement	1/1/2018	21:52:09	COM5	13.30	7.60	663.0	81.6	THERMACER 265SKS, 13.3PPG, 1.73CF/SK, 7.81GAL/SK
Event	19	Shutdown	1/1/2018	22:13:59	USER					
Event	20	Clean Lines	1/1/2018	22:14:30	USER					CLEANED LINES TO PIT
Event	21	Drop Top Plug	1/1/2018	22:27:45	COM5					PLUG AWAY
Event	22	Pump Displacement	1/1/2018	22:28:11	COM5	8.40	10.00	2150.00	147.1	KCL WATER, 1 GAL MCCR, 3#BE6
Event	23	Slow Rate	1/1/2018	22:43:53	USER	8.37	4.00	1309.00	137.1	SLOW RATE LAST 10 BBLS
Event	24	Bump Plug	1/1/2018	22:46:00	COM5	8.31	4.00	1470.00	148.0	PLUG BUMPED 1470PSI
Event	25	Check Floats	1/1/2018	22:49:00	USER	8.31	0.00	2150.00	148.0	FLOATS HELD 1.5BBLS BACK
Event	26	End Job	1/1/2018	22:50:31	COM5					RETURNS THROUGH OUT JOB
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	1/1/2018	22:54:00	USER					ALL HES PRESENT
Event	28	Rig-Down Completed	1/1/2018	23:45:00	USER					
Event	29	Pre-Convoy Safety Meeting	1/1/2018	23:55:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	1/2/2018	00:01:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

TEP - SR 523-12 - 4.5" PRODUCTION



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

- | | | | | | |
|---|-----------------------------|----------------------|--------------------|----------------------|---|
| ① Call Out | ⑥ Pre-Rig Up Safety Meeting | ⑪ Prime Pumps | ⑯ Pump Lead Cement | 21 Drop Top Plug | 26 End Job |
| ② Pre-Convoy Safety Meeting | ⑦ Rig-Up Completed | ⑫ Test Lines | ⑰ Check weight | 22 Pump Displacement | 27 Post-Job Safety Meeting (Pre Rig-Down) |
| ③ Crew Leave Location | ⑧ Pre-Job Safety Meeting | ⑬ Pump Water | ⑱ Pump Tail Cement | 23 Slow Rate | 28 Rig-Down Completed |
| ④ Arrive at Location from Other Job or Site | ⑨ Other | ⑭ Pump Mud Flush III | ⑲ Shutdown | 24 Bump Plug | 29 Pre-Convoy Safety Meeting |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Start Job | ⑮ Pump Water | 20 Clean Lines | 25 Check Floats | 30 Crew Leave Location |

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Created: 2018-01-01 09:56:06, Version: 4.2.393

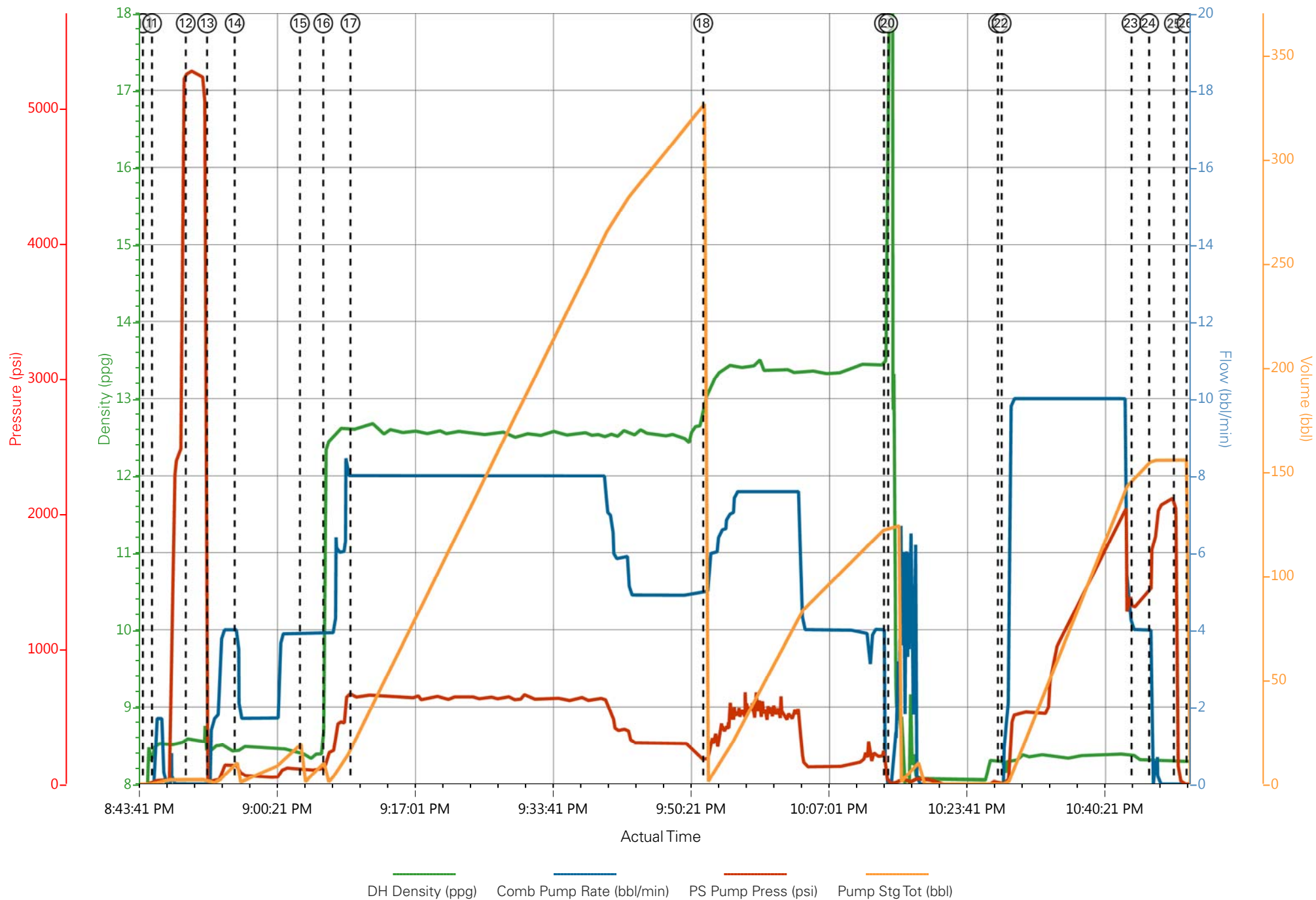
Edit

Customer : TERRA ENERGY PARTNERS
Representative : N.BURR

Job Date : 1/1/2018 6:47:34 PM
Sales Order # : 904534442

Well : SR 523-12
ELITE#8 : J.DIAMANTI

TEP - SR 523-12 - 4.5" PRODUCTION



HALLIBURTON

Rockies, Grand Junction

Lab Results- Lead

Job Information

Request/Slurry	2441019/1	Rig Name	H&P 318	Date	27/DEC/2017
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SR 523-12

Well Information

Casing/Liner Size	4.5 in	Depth MD	9499 ft	BHST	116°C / 241°F
Hole Size	8.75 in	Depth TVD	9472 ft	BHCT	77°C / 171°F
Pressure	5949 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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Cement Information - Lead Design



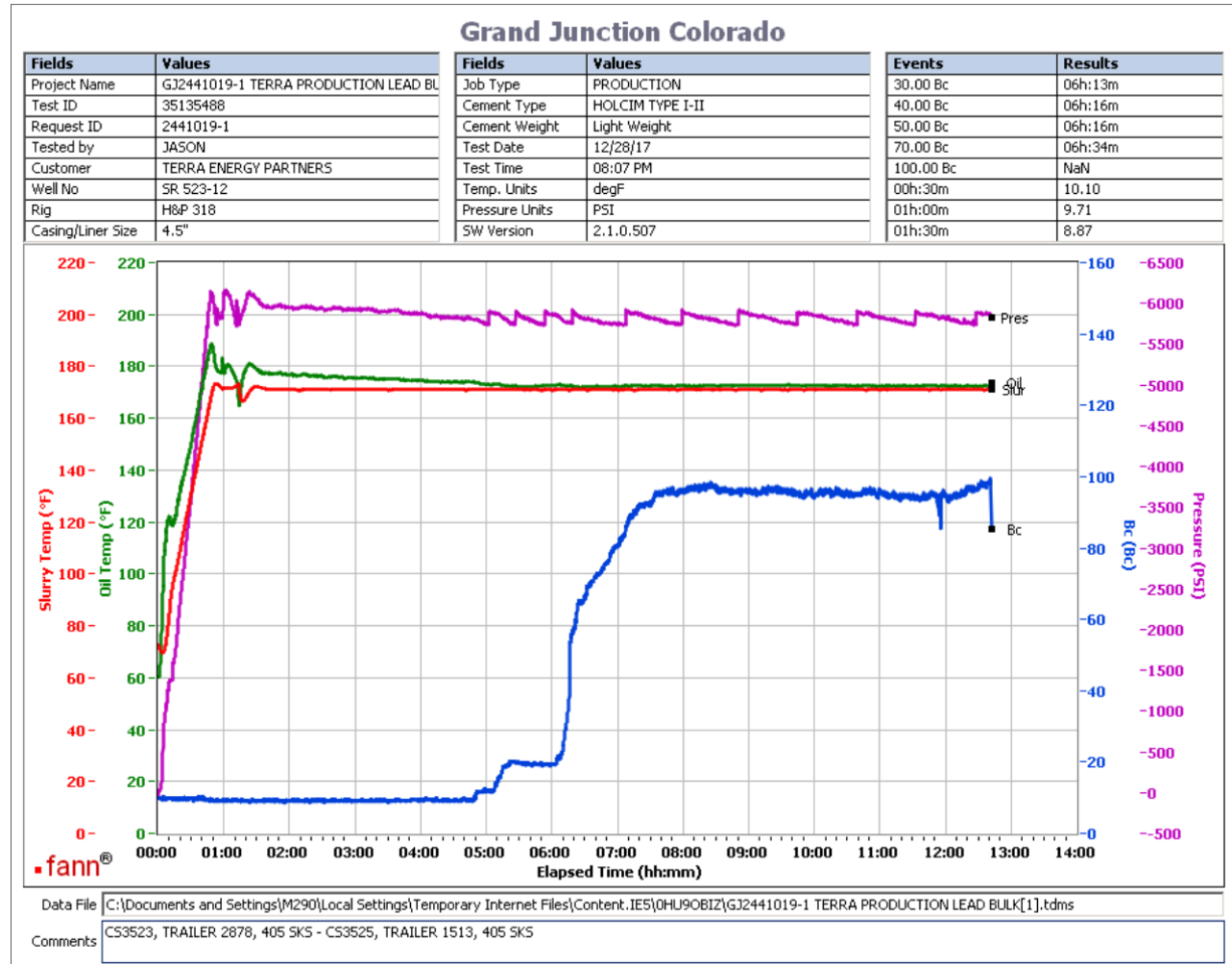
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

29/DEC/2017

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)	Termination time (hh:mm)	Termination Bc
171	5949	48	6:13	6:16	6:34	10	58	15	9	12:41	98



Total sks=810
 CS3523, Trailer 2878, 405 sks
 CS3525, Trailer 1513, 405 sks
 Deflection: 9 - 9

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Job Information

Request/Slurry	2441020/1	Rig Name	H&P 318	Date	27/DEC/2017
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SR 523-12

Well Information

Casing/Liner Size	4.5 in	Depth MD	9499 ft	BHST	116°C / 241°F
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Pressure	5949 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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Cement Information - Tail Design



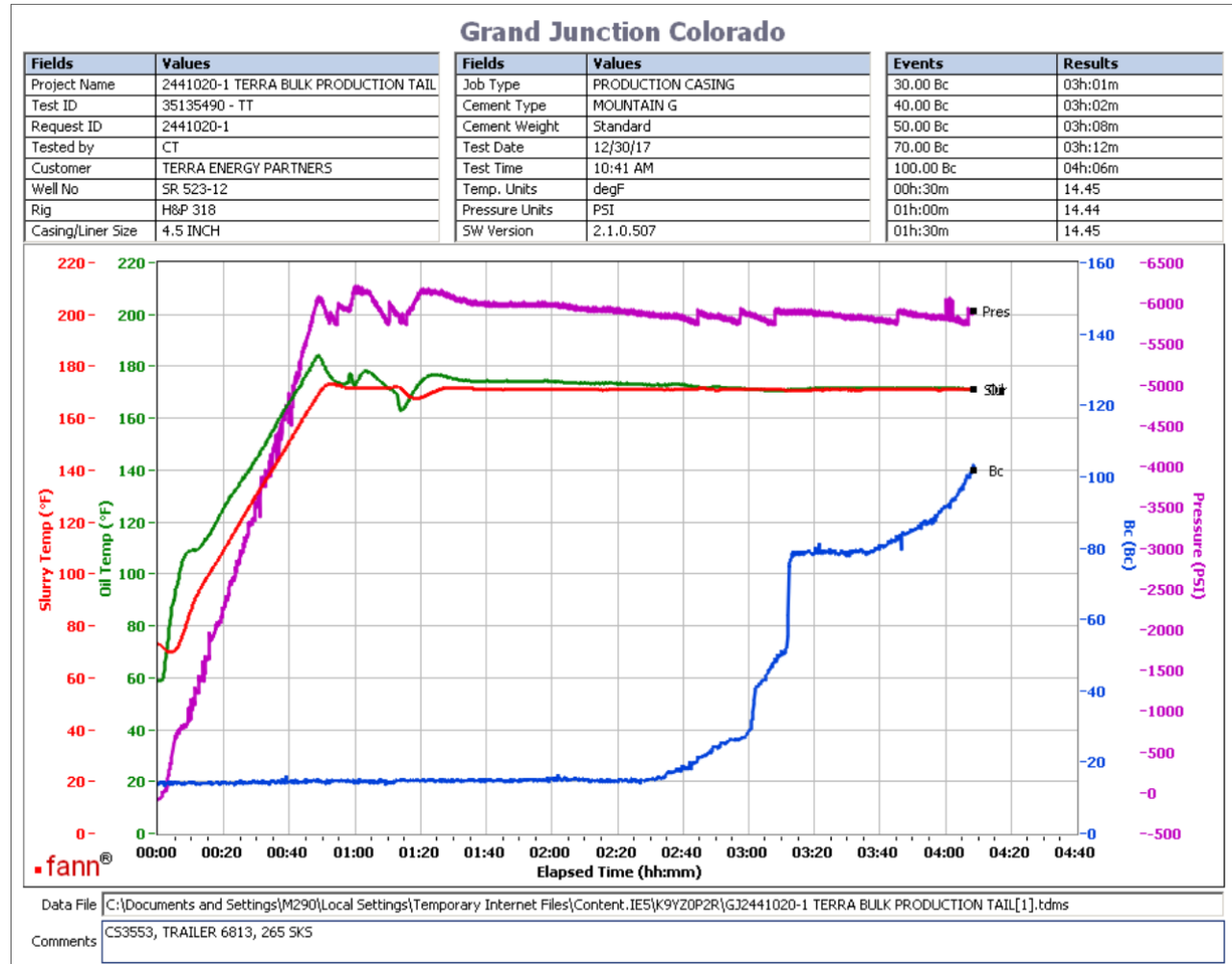
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

30/DEC/2017

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)
171	5949	48	3:01	3:08	3:12	4:06	14	58	15	14



265 sks tail
CS3553, Trailer 6813, 265 sks
Deflection: 14 - 14

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