



WELL STIMULATION REPORT

Bayswater Exploration

Flaherty 13-13-2

05-123-47456-00

April 29, 2024 - May 06, 2024

Engineering Executive Summary

On Monday, April 29, 2024 the stimulation of treatment(s) was performed in the Niobrara formation on the Flaherty 13-13-2 well in WELD county, COLORADO.

The proposed treatment(s) consisted of:

11,000	gallons of	15% HCl
8,270,381	gallons of	Dry FR
0	gallons of	FR Water
184,778	gallons of	Treated Water
693,000	pounds of	100 Mesh Premium White
6,236,972.5	pounds of	30/50 Premium White
66,000	pounds of	SS-200 Premium White

The actual treatment(s) consisted of:

25,923	gallons of	15% HCl
8,991,709	gallons of	Dry FR
505,198	gallons of	FR Water
177,341	gallons of	Treated Water
727,908	pounds of	100 Mesh Premium White
6,515,009	pounds of	30/50 Premium White
72,140	pounds of	SS-200 Premium White

22 of 22 treatment(s) were fully completed. 0 treatment(s) were skipped, and 0 treatment(s) were screened out or otherwise cut short of design.

The well was first opened Monday, April 29, 2024 at 00:50 with an opening pressure of 1,053.75 psi.

The total amount of proppant pumped was 7,315,057.0 lbm with an average concentration of 0.82 ppg and maximum concentration of 4.0 ppg. Treating pressure averaged 6164.76 psi and rate averaged 95.77 bpm. Total clean volume was 9,700,171.0 gallons.

The operation came offline at 08:22 and the well was shut in Monday, May 06, 2024 at 08:23 with a final shut-in pressure of 4,001.0 psi. A more detailed description of the actual treatment can be found further down in this report.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well.

Regards,

Thomas Nowak

Isaac Attobrah

Crew Service Leader

Crew Lead Engineer

WELL COMPLETION DATA

Treatment Interval	Perforation Top (ft)	Perforation Bottom (ft)	Plug Depth (ft)	Vertical Depth (ft)	Perforation Count	Cluster Count	Cluster Spacing (ft)	Perforation Phasing	SalesOrder Number	Formation	Sub Formation
1	11167	11327	11347	6306	32	6	32	120	909264435	Niobrara	Niobrara
2	10967	11127	11147	6317	32	6	32	120	909264435	Niobrara	Niobrara
3	10767	10927	10947	6322	32	6	32	120	909264435	Niobrara	Niobrara
4	10567	10727	10747	6328	32	6	32	120	909264435	Niobrara	Niobrara
5	10367	10527	10547	6330	32	6	32	120	909264435	Niobrara	Niobrara
6	10167	10327	10347	6325	32	6	32	120	909264435	Niobrara	Niobrara
7	9967	10127	10147	6321	32	6	32	120	909264435	Niobrara	Niobrara
8	9767	9927	9947	6318	32	6	32	120	909264435	Niobrara	Niobrara
9	9567	9727	9747	6314	32	6	32	120	909264435	Niobrara	Niobrara
10	9367	9527	9547	6311	32	6	32	120	909264435	Niobrara	Niobrara
11	9167	9327	9347	6308	32	6	32	120	909264435	Niobrara	Niobrara
12	8967	9127	9147	6306	32	6	32	120	909264435	Niobrara	Niobrara
13	8767	8927	8947	6305	32	6	32	120	909264435	Niobrara	Niobrara
14	8567	8727	8747	6304	32	6	32	120	909264435	Niobrara	Niobrara
15	8367	8527	8547	6302	32	6	32	120	909264435	Niobrara	Niobrara
16	8167	8327	8347	6301	32	6	32	120	909264435	Niobrara	Niobrara
17	7967	8127	8147	6299	32	6	32	120	909264435	Niobrara	Niobrara
18	7767	7927	7947	6297	32	6	32	120	909264435	Niobrara	Niobrara
19	7567	7727	7747	6300	32	6	32	120	909264435	Niobrara	Niobrara
20	7367	7527	7547	6304	32	6	32	120	909264435	Niobrara	Niobrara
21	7167	7327	7347	6307	32	6	32	120	909264435	Niobrara	Niobrara
22	6967	7127	7147	6310	32	6	32	120	909264435	Niobrara	Niobrara

FLUID SYSTEM SUMMARY

Treatment Interval	15% HCl		Dry FR		FR Water		Treated Water		Total Fluid		Slurry Volume
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Pumped (gal)
1	500	2002	377882	789664	0	426926	8399	0	386781	1218592	1260207.06
2	500	2000	377696	395155	0	0	8399	7728	386595	404883	419684.16
3	500	1000	377510	388142	0	0	8399	5502	386409	394644	410888.1
4	500	1499	377324	383041	0	8464	8399	8148	386223	401152	417986.94
5	500	1499	377137	390122	0	8539	8399	8022	386036	408182	424192.86
6	500	1000	376951	392113	0	0	8399	14645	385850	407758	423039.12
7	500	1000	376765	387544	0	0	8399	13928	385664	402472	417249
8	500	1000	376578	392404	0	7249	8399	6384	385477	407037	422977.8
9	500	1000	376392	402376	0	10024	8399	6468	385291	419868	434970.06
10	500	1000	376206	386791	0	0	8399	13556	385105	401347	415576.14
11	500	1000	376020	411589	0	6902	8399	5376	384919	424867	438931.92
12	500	1000	375833	389002	0	4313	8399	5124	384732	399439	414082.2
13	500	1000	375647	382073	0	0	8399	11460	384546	394533	407930.88
14	500	1000	375461	388658	0	0	8399	10693	384360	400351	414967.14
15	500	1000	375274	404904	0	6176	8399	4032	384173	416112	430865.82
16	500	2000	375088	398348	0	9299	8399	3906	383987	413553	429631.86
17	500	1000	374902	385334	0	0	8399	10783	383801	397117	411046.86
18	500	1000	374716	385785	0	0	8399	9705	383615	396490	410376.12
19	500	1000	374529	390817	0	0	8399	10623	383428	402440	416361.96
20	500	1000	374343	385994	0	0	8399	8750	383242	395744	410667.18
21	500	923	374157	383029	0	0	8399	10114	383056	394066	408499.98
22	500	1000	373970	378824	0	17306	8399	2394	382869	399524	413301

FLUID SYSTEM SUMMARY

Treatment Interval	15% HCl		Dry FR		FR Water		Treated Water		Total Fluid		Slurry Volume
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Pumped (gal)
Total	11000	25923	8270381	8991709	0	505198	184778	177341	8466159	9700171	10053434.16

PROPPANT SUMMARY

Treatment Interval	100 Mesh Premium White		30/50 Premium White		SS-200 Premium White		Total	
	Proposed (lbm)	Pumped (lbm)	Proposed (lbm)	Pumped (lbm)	Proposed (lbm)	Pumped (lbm)	Proposed (lbm)	Pumped (lbm)
1	31500	62280	283498.75	567850	3000	3000	317998.75	633130
2	31500	31980	283498.75	283372	3000	5000	317998.75	320352
3	31500	35000	283498.75	283600	3000	6200	317998.75	324800
4	31500	31520	283498.75	283980	3000	3440	317998.75	318940
5	31500	31060	283498.75	283420	3000	3000	317998.75	317480
6	31500	31500	283498.75	283830	3000	3000	317998.75	318330
7	31500	31500	283498.75	283613	3000	3000	317998.75	318113
8	31500	31180	283498.75	283300	3000	3000	317998.75	317480
9	31500	37180	283498.75	284860	3000	3500	317998.75	325540
10	31500	31500	283498.75	283500	3000	3000	317998.75	318000
11	31500	31500	283498.75	275796	3000	3000	317998.75	310296
12	31500	31320	283498.75	284200	3000	3000	317998.75	318520
13	31500	31500	283498.75	283574	3000	3000	317998.75	318074
14	31500	31500	283498.75	283503	3000	3000	317998.75	318003
15	31500	33380	283498.75	283340	3000	3000	317998.75	319720
16	31500	31800	283498.75	280820	3000	3000	317998.75	315620
17	31500	31500	283498.75	283664	3000	3000	317998.75	318164
18	31500	31500	283498.75	284173	3000	3000	317998.75	318673
19	31500	31500	283498.75	283499	3000	3000	317998.75	317999
20	31500	31500	283498.75	283571	3000	3000	317998.75	318071
21	31500	31500	283498.75	283511	3000	3000	317998.75	318011
22	31500	24708	283498.75	284033	3000	3000	317998.75	311741

PROPPANT SUMMARY

Treatment Interval	100 Mesh Premium White		30/50 Premium White		SS-200 Premium White		Total	
	Proposed (lbm)	Pumped (lbm)	Proposed (lbm)	Pumped (lbm)	Proposed (lbm)	Pumped (lbm)	Proposed (lbm)	Pumped (lbm)
Total	693000	727908	6236972.5	6515009	66000	72140	6995972.5	7315057

ADDITIVE SUMMARY

Treatment Interval	28% HCl		DCA-13001		DCA-17008		DCA-21008		DCA-21009		DCA-23010		DCA-23011	
	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)	Proposed (lbs)	Pumped (lbs)	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)
1	252.5	1515	377.88	771	1	4	40	0	40	0	0	51.89	755.76	1946
2	252.5	1010	377.7	440	1	4	40	0	0	0	0	0	755.39	841
3	252.5	505	377.51	440	1	2	40	0	0	0	0	0	755.02	873
4	252.5	890	377.32	384	1	3	40	0	0	0	0	48.22	754.65	880
5	252.5	770	377.14	388	1	3	40	0	0	0	0	47.53	754.27	962
6	252.5	505	376.95	392	1	2	40	10	0	10	0	44	753.9	880
7	252.5	505	376.76	383	1	2	40	10	0	10	0	43	753.53	859
8	252.5	505	376.58	394	1	2	40	20	0	20	0	48.63	753.16	837
9	252.5	505	376.39	404	1	2	40	0	0	0	0	47.99	752.78	915
10	252.5	505	376.21	388	1	2	40	10	0	10	0	51	752.41	875
11	252.5	505	376.02	414	1	2	40	10	0	10	0	60.17	752.04	936
12	252.5	505	375.83	390	1	2	40	15	0	15	0	54.31	751.67	895
13	252.5	505	375.65	380	1	2	40	30	0	30	0	40	751.29	870
14	252.5	505	375.46	392	1	2	40	30	0	30	0	40	750.92	931
15	252.5	505	375.27	406	1	2	40	15	0	15	0	36.53	750.55	950
16	252.5	1010	375.09	400	1	4	40	20	0	20	0	383.35	750.18	899
17	252.5	505	374.9	386	1	2	40	30	0	30	0	43	749.8	1314
18	252.5	505	374.72	387	1	2	40	20	0	20	0	35	749.43	1316
19	252.5	505	374.53	391	1	2	40	30	0	30	0	40.26	749.06	1340
20	252.5	505	374.34	387	1	2	40	10	0	10	0	36	748.69	1154
21	252.5	466	374.16	384	1	1.85	40	20	0	20	0	42	748.31	1024
22	252.5	505	373.97	327	1	2	40	0	0	0	0	44.47	747.94	971

ADDITIVE SUMMARY

Treatment Interval	28% HCl		DCA-13001		DCA-17008		DCA-21008		DCA-21009		DCA-23010		DCA-23011	
	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)	Proposed (lbs)	Pumped (lbs)	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)
Total	5555	13741	8270.38	9028	22	51.85	880	280	40	280	0	1237.35	16540.75	22468

ADDITIVE SUMMARY

Treatment Interval	DCA-32019M	
	Proposed (gal)	Pumped (gal)
1	1	4
2	1	4
3	1	2
4	1	3
5	1	3
6	1	2
7	1	2
8	1	2
9	1	2
10	1	2
11	1	2
12	1	2
13	1	2
14	1	2
15	1	2
16	1	4
17	1	2
18	1	2
19	1	2
20	1	2
21	1	1.85
22	1	2

ADDITIVE SUMMARY

Treatment Interval	DCA-32019M	
	Proposed (gal)	Pumped (gal)
Total	22	51.85

AVG / MAX TECHNICAL DATA

Treatment Interval	Treatment Status	Average Pressure (psi)	Average Slurry Rate (bpm)	Average Proppant Conc (ppg)	Maximum Pressure (psi)	Maximum Slurry Rate (bpm)	Maximum Proppant Conc (ppg)
1	Completed	6132	95.16	0.49	7425	102.9	3
2	Completed	6130	95.96	0.87	8319	103.29	4
3	Completed	6554	94.81	0.82	7362	102.06	3.89
4	Completed	5998	96.7	0.88	7124	100.79	3.08
5	Completed	6624	92.67	0.82	7865	99.97	3.07
6	Completed	6511	95.16	0.89	7724	100.37	4
7	Completed	6131	96.95	0.87	7000	100.86	4
8	Completed	6041	97.37	0.84	7513	100.1	4
9	Completed	6736	95.82	0.76	8175	109.31	4
10	Completed	6096	95.88	0.84	7024	100.4	4
11	Completed	5954	96.59	0.75	7025	100.63	4
12	Completed	5914	95.81	0.79	7210	101.47	4
13	Completed	6085	95.5	0.81	6965	100.23	4
14	Completed	5864	96.99	0.85	6936	100.85	4
15	Completed	6488	96.85	0.79	8008	100.2	4
16	Completed	6007	97.23	0.83	7208	100.93	4
17	Completed	6497	95.63	0.85	7409	100.56	4
18	Completed	5535	95.76	0.86	6297	101.53	4
19	Completed	6248	95.28	0.84	7289	100.63	4
20	Completed	6328	91.68	0.86	7507	100.67	4
21	Completed	5615	96.18	0.87	6552	100.82	4
22	Completed	6126	97.04	0.76	7353	100.61	4

BREAKDOWN TECHNICAL DATA

Treatment Interval	Ball Seat Volume (bbl)	Ball Seat Pressure (psi)	Ball Seat Rate (bpm)	Formation Break Pressure (psi)	Formation Break Rate (bpm)
1	10327	5949	15.23	6820	9.9
2	0	0	0	8075	48.72
3	0	0	0	5853	10.54
4	0	0	0	6856	40.13
5	0	0	0	7054	33.91
6	0	0	0	4124	4.47
7	0	0	0	4397	4.24
8	0	0	0	7427	43.1
9	0	0	0	5650	11.93
10	0	0	0	5210	10.09
11	0	0	0	5330	9.98
12	0	0	0	4929	10.47
13	0	0	0	5004	10.23
14	0	0	0	4050	8.62
15	0	0	0	5177	10.42
16	0	0	0	6708	37.88
17	0	0	0	5223	6.39
18	0	0	0	3844	9.92
19	0	0	0	5437	9.28
20	0	0	0	4263	8.89
21	0	0	0	3982	8.97
22	0	0	0	6236	42.64

PRESSURE TECHNICAL DATA

Treatment Interval	Open Well Pressure (psi)	Initial Shut In Pressure (psi)	Fracture Gradient (psi/ft)	Max Annulus Pressure (psi)	5 Min Pressure (psi)	10 Min Pressure (psi)	15 Min Pressure (psi)	Final Shut In Pressure (psi)
1	1053	4199	1.1	28.69	0	0	0	4046
2	3426	4210	1.1	17.12	0	0	0	4158
3	3331	4288	1.11	25.61	0	0	0	4016
4	3745	4349	1.12	20.36	0	0	0	4095
5	3485	4154	1.09	14.66	0	0	0	4107
6	3626	4710	1.18	19.46	0	0	0	3964
7	3671	5002	1.22	21.91	0	0	0	4323
8	3604	4203	1.1	20.71	0	0	0	4102
9	3636	4068	1.08	20.86	0	0	0	3991
10	3654	4628	1.17	23.29	0	0	0	4015
11	3742	4103	1.08	30.79	0	0	0	3946
12	4025	4248	1.11	16.39	0	0	0	3398
13	3944	5043	1.23	19.31	0	0	0	4099
14	3919	5409	1.29	21.22	0	0	0	4062
15	3870	4153	1.09	24.23	0	0	0	4106
16	3945	4373	1.13	15.35	0	0	0	4171
17	3752	4142	1.09	22.81	0	0	0	4140
18	3685	4412	1.13	22.17	0	0	0	4386
19	3577	3903	1.05	16.64	0	0	0	3880
20	3910	4434	1.14	17.73	0	0	0	4426
21	3883	4236	1.11	24.8	0	0	0	4207
22	3673	4157	1.09	21.83	0	0	0	4001

TREATMENT TIME TECHNICAL DATA

Treatment Interval	Start Date (YYYY-MM-DD)	Well Open Time (YYYY-MM-DD hh-mm-ss)	Start Time (YYYY-MM-DD hh-mm-ss)	End Time (YYYY-MM-DD hh-mm-ss)	Well Shut In Time (YYYY-MM-DD hh-mm-ss)	Total Pump Time (hh:mm:ss)	Down Time (hh:mm:ss)
1	2024-04-29T00:00:00	2024-04-29T00:50:46	2024-04-29T00:51:17	2024-04-29T12:53:58	2024-04-29T12:54:28	12:02:41	00:00:00
2	2024-04-29T00:00:00	2024-04-29T17:32:36	2024-04-29T17:32:57	2024-04-29T19:26:20	2024-04-29T19:26:56	01:53:23	00:00:00
3	2024-04-29T00:00:00	2024-04-29T23:50:28	2024-04-29T23:50:59	2024-04-30T01:39:42	2024-04-30T01:40:21	01:48:43	00:00:00
4	2024-04-30T00:00:00	2024-04-30T07:51:03	2024-04-30T07:51:41	2024-04-30T09:41:32	2024-04-30T09:42:11	01:49:51	00:00:00
5	2024-04-30T00:00:00	2024-04-30T13:41:28	2024-04-30T13:41:58	2024-04-30T15:39:25	2024-04-30T15:40:01	01:57:27	00:00:00
6	2024-04-30T00:00:00	2024-04-30T19:39:50	2024-04-30T19:40:06	2024-04-30T21:30:02	2024-04-30T21:30:53	01:49:56	00:00:00
7	2024-05-01T00:00:00	2024-05-01T01:42:40	2024-05-01T01:43:08	2024-05-01T03:29:27	2024-05-01T03:30:16	01:46:19	00:00:00
8	2024-05-01T00:00:00	2024-05-01T08:11:59	2024-05-01T08:12:35	2024-05-01T10:00:08	2024-05-01T10:00:48	01:47:33	00:00:00
9	2024-05-01T00:00:00	2024-05-01T14:19:16	2024-05-01T14:27:47	2024-05-01T16:20:20	2024-05-01T16:20:52	01:52:33	00:00:00
10	2024-05-01T00:00:00	2024-05-01T21:41:44	2024-05-01T21:42:08	2024-05-01T23:31:31	2024-05-01T23:32:07	01:49:23	00:00:00
11	2024-05-02T00:00:00	2024-05-02T03:39:15	2024-05-02T03:39:44	2024-05-02T05:34:15	2024-05-02T05:35:16	01:54:31	00:00:00
12	2024-05-02T00:00:00	2024-05-02T12:38:06	2024-05-02T12:38:36	2024-05-02T14:27:14	2024-05-02T14:28:06	01:48:38	00:00:00
13	2024-05-02T00:00:00	2024-05-02T18:42:56	2024-05-02T18:43:13	2024-05-02T20:29:02	2024-05-02T20:29:31	01:45:49	00:00:00
14	2024-05-03T00:00:00	2024-05-03T00:40:10	2024-05-03T00:40:38	2024-05-03T02:26:25	2024-05-03T02:27:01	01:45:47	00:00:00
15	2024-05-03T00:00:00	2024-05-03T06:32:48	2024-05-03T06:33:26	2024-05-03T08:24:10	2024-05-03T08:25:02	01:50:44	00:00:00
16	2024-05-03T00:00:00	2024-05-03T11:38:59	2024-05-03T11:39:27	2024-05-03T13:34:13	2024-05-03T13:34:52	01:54:46	00:00:00
17	2024-05-04T00:00:00	2024-05-04T23:24:43	2024-05-04T23:25:07	2024-05-05T01:12:40	2024-05-05T01:13:12	01:47:33	00:00:00
18	2024-05-05T00:00:00	2024-05-05T02:25:27	2024-05-05T02:25:50	2024-05-05T04:12:41	2024-05-05T04:13:14	01:46:51	00:00:00
19	2024-05-05T00:00:00	2024-05-05T18:26:26	2024-05-05T18:26:42	2024-05-05T20:18:02	2024-05-05T20:18:25	01:51:20	00:00:00
20	2024-05-05T00:00:00	2024-05-05T22:31:02	2024-05-05T22:31:17	2024-05-06T00:24:09	2024-05-06T00:24:34	01:52:52	00:00:00
21	2024-05-06T00:00:00	2024-05-06T01:23:35	2024-05-06T01:23:56	2024-05-06T03:10:42	2024-05-06T03:11:22	01:46:46	00:00:00
22	2024-05-06T00:00:00	2024-05-06T06:31:50	2024-05-06T06:32:14	2024-05-06T08:22:15	2024-05-06T08:23:14	01:50:01	00:00:00

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
1	0	60	0	Bio: 10.8 Geo: 11.2 Bleach: 46.6 Pump Down: 7602 USG Flush: 16980 USG Volumes include Stage 0 and Stage 1	PNP
2	0	60	0	Bio: 8.917 Geo: 10.222 Bleach: 31.705 Pump Down: 7728 USG Flush: 13206 USG Wireline: 32 shots on 6 guns	PNP
3	0	60	0	Bio: 12.542 Geo: 11.6 Bleach: 35.435 Pump Down: 5502 USG Flush: 12157 USG Wireline: 32 shots on 6 guns Diverter 1st Drop Div 1315: lbs Div 1325: lbs Psi 2nd Drop Div 1315: lbs Div 1325: lbs Psi	PNP
4	0	60	0	Bio: 10.331 Geo: 10.875 Bleach: 32.078 Pump Down: 8148 USG Flush: 14700 USG Wireline: 32 shots on 6 guns	PNP
5	0	60	0	Bio: 8.7 Geo: 10.875 Bleach: 31.705 Pump Down: 8022 USG Flush: 14825 USG Wireline: 32 shots on 6 guns	PNP
6	0	60	0	Bio: 13.775 Geo: 12.542 Bleach: 44.760 Pump Down: 7560 USG Flush: 9450 USG Wireline: 32 shots on 6 guns Diverter 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
7	0	60	0	Bio: 15.225 Geo: 13.412 Bleach: 33.570 Pump Down: 7350 USG Flush: 9282 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
8	0	60	0	Bio: 13.27 Geo: 10.875 Bleach: 32.3 Pump Down: 6384 USG Flush: 15024 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10lbs 0 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 0 Psi	PNP
9	0	60	0	Bio: 13.956 Geo: 11.056 Bleach: 37.3 Pump Down: 6468 USG Flush: 15735 USG Wireline: 32 shots on 6 guns	PNP

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
10	0	60	0	Bio: 9.21 Geo: 13.05 Bleach: 25.96 Pump Down: 5880 USG Flush: 8736 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 51 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
11	0	60	0	Bio: 11.24 Geo: 12.69 Bleach: 31.33 Pump Down: 5376 USG Flush: 8526 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 39 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
12	0	60	0	Bio: 11.23 Geo: 12.68 Bleach: 29.8 Pump Down: 5124 USG Flush: 10823 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 0 Psi	PNP
13	0	60	0	Bio: 10.15 Geo: 12.69 Bleach: 30.77 Pump Down: 5376 USG Flush: 8148 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 51 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 75 Psi	PNP
14	0	60	0	Bio: 10.15 Geo: 13.41 Bleach: 27.98 Pump Down: 4620 USG Flush: 7980 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 32 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 13 Psi	PNP
15	0	60	0	Bio: 10.8 Geo: 13.7 Bleach: 31.7 Pump Down: 4032 USG Flush: 11732 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 247 Psi	PNP
16	0	60	0	Bio: 10.8 Geo: 12.6 Bleach: 42 Pump Down: 3906 USG Flush: 12460 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 55 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 0 Psi	PNP

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
17	0	60	0	Bio: 7.25 Geo: 11.6 Bleach: 26.04 Pump Down: 3360 USG Flush: 7434 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 74 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 46 Psi	PNP
18	0	60	0	Bio: 7.25 Geo: 11.96 Bleach: 26.11 Pump Down: 3024 USG Flush: 7224 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 19 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 0 Psi	PNP
19	0	60	0	Bio: 7.25 Geo: 11.237 Bleach: 28.571 Pump Down: 3444 USG Flush: 7056 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 125 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 0 Psi	PNP
20	0	60	0	Bio: 9.715 Geo: 14.5 Bleach: 30.511 Pump Down: 2142 USG Flush: 6846 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 65 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 81 Psi	PNP
21	0	60	0	Bio: 10.947 Geo: 13.557 Bleach: 31.854 Pump Down: 1974 USG Flush: 6678 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 0 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 15 Psi	PNP
22	0	60	0	Bio: 3.48 Geo: 13.5 Bleach: 11.5 Pump Down: 2394 USG Flush: 9907 USG Wireline: 32 shots on 6 guns	PNP

TUBULAR DATA

Type	OD (in)	Weight (lbm/ft)	Top MD (ft)	Bottom MD (ft)	Volume Factor (gal/ft)
Casing	5.5	20	0	11388	0.931

CLUSTER DATA

Treatment Interval	Cluster Number	Top Depth MD (ft)	Bottom Depth MD (ft)	Cluster Length (ft)	Perforation Density (spf)	Perforation Diameter (inches)	Perforation Phasing (deg)	Total Perforations	Formation	Sub Formation
1	1	11326	11327	1	6	0.35	120	6	Niobrara	Niobrara
1	2	11294	11295	1	6	0.35	120	6	Niobrara	Niobrara
1	3	11262	11263	1	6	0.35	120	6	Niobrara	Niobrara
1	4	11230	11231	1	6	0.35	120	6	Niobrara	Niobrara
1	5	11198	11199	0.67	6	0.35	120	4	Niobrara	Niobrara
1	6	11167	11167	0.67	6	0.35	120	4	Niobrara	Niobrara
2	1	11126	11127	1	6	0.35	120	6	Niobrara	Niobrara
2	2	11094	11095	1	6	0.35	120	6	Niobrara	Niobrara
2	3	11062	11063	1	6	0.35	120	6	Niobrara	Niobrara
2	4	11030	11031	1	6	0.35	120	6	Niobrara	Niobrara
2	5	10998	10999	0.67	6	0.35	120	4	Niobrara	Niobrara
2	6	10967	10967	0.67	6	0.35	120	4	Niobrara	Niobrara
3	1	10926	10927	1	6	0.35	120	6	Niobrara	Niobrara
3	2	10894	10895	1	6	0.35	120	6	Niobrara	Niobrara
3	3	10862	10863	1	6	0.35	120	6	Niobrara	Niobrara
3	4	10830	10831	1	6	0.35	120	6	Niobrara	Niobrara
3	5	10798	10799	0.67	6	0.35	120	4	Niobrara	Niobrara
3	6	10767	10767	0.67	6	0.35	120	4	Niobrara	Niobrara
4	1	10726	10727	1	6	0.35	120	6	Niobrara	Niobrara
4	2	10694	10695	1	6	0.35	120	6	Niobrara	Niobrara
4	3	10662	10663	1	6	0.35	120	6	Niobrara	Niobrara
4	4	10630	10631	1	6	0.35	120	6	Niobrara	Niobrara

CLUSTER DATA

Treatment Interval	Cluster Number	Top Depth MD (ft)	Bottom Depth MD (ft)	Cluster Length (ft)	Perforation Density (spf)	Perforation Diameter (inches)	Perforation Phasing (deg)	Total Perforations	Formation	Sub Formation
4	5	10598	10599	0.67	6	0.35	120	4	Niobrara	Niobrara
4	6	10567	10567	0.67	6	0.35	120	4	Niobrara	Niobrara
5	1	10526	10527	1	6	0.35	120	6	Niobrara	Niobrara
5	2	10494	10495	1	6	0.35	120	6	Niobrara	Niobrara
5	3	10462	10463	1	6	0.35	120	6	Niobrara	Niobrara
5	4	10430	10431	1	6	0.35	120	6	Niobrara	Niobrara
5	5	10398	10399	0.67	6	0.35	120	4	Niobrara	Niobrara
5	6	10367	10367	0.67	6	0.35	120	4	Niobrara	Niobrara
6	1	10326	10327	1	6	0.35	120	6	Niobrara	Niobrara
6	2	10294	10295	1	6	0.35	120	6	Niobrara	Niobrara
6	3	10262	10263	1	6	0.35	120	6	Niobrara	Niobrara
6	4	10230	10231	1	6	0.35	120	6	Niobrara	Niobrara
6	5	10198	10199	0.67	6	0.35	120	4	Niobrara	Niobrara
6	6	10167	10167	0.67	6	0.35	120	4	Niobrara	Niobrara
7	1	10126	10127	1	6	0.35	120	6	Niobrara	Niobrara
7	2	10094	10095	1	6	0.35	120	6	Niobrara	Niobrara
7	3	10062	10063	1	6	0.35	120	6	Niobrara	Niobrara
7	4	10030	10031	1	6	0.35	120	6	Niobrara	Niobrara
7	5	9998	9999	0.67	6	0.35	120	4	Niobrara	Niobrara
7	6	9967	9967	0.67	6	0.35	120	4	Niobrara	Niobrara
8	1	9926	9927	1	6	0.35	120	6	Niobrara	Niobrara
8	2	9894	9895	1	6	0.35	120	6	Niobrara	Niobrara

CLUSTER DATA

Treatment Interval	Cluster Number	Top Depth MD (ft)	Bottom Depth MD (ft)	Cluster Length (ft)	Perforation Density (spf)	Perforation Diameter (inches)	Perforation Phasing (deg)	Total Perforations	Formation	Sub Formation
8	3	9862	9863	1	6	0.35	120	6	Niobrara	Niobrara
8	4	9830	9831	1	6	0.35	120	6	Niobrara	Niobrara
8	5	9798	9799	0.67	6	0.35	120	4	Niobrara	Niobrara
8	6	9767	9767	0.67	6	0.35	120	4	Niobrara	Niobrara
9	1	9726	9727	1	6	0.35	120	6	Niobrara	Niobrara
9	2	9694	9695	1	6	0.35	120	6	Niobrara	Niobrara
9	3	9662	9663	1	6	0.35	120	6	Niobrara	Niobrara
9	4	9630	9631	1	6	0.35	120	6	Niobrara	Niobrara
9	5	9598	9599	0.67	6	0.35	120	4	Niobrara	Niobrara
9	6	9567	9567	0.67	6	0.35	120	4	Niobrara	Niobrara
10	1	9526	9527	1	6	0.35	120	6	Niobrara	Niobrara
10	2	9494	9495	1	6	0.35	120	6	Niobrara	Niobrara
10	3	9462	9463	1	6	0.35	120	6	Niobrara	Niobrara
10	4	9430	9431	1	6	0.35	120	6	Niobrara	Niobrara
10	5	9398	9399	0.67	6	0.35	120	4	Niobrara	Niobrara
10	6	9367	9367	0.67	6	0.35	120	4	Niobrara	Niobrara
11	1	9326	9327	1	6	0.35	120	6	Niobrara	Niobrara
11	2	9294	9295	1	6	0.35	120	6	Niobrara	Niobrara
11	3	9262	9263	1	6	0.35	120	6	Niobrara	Niobrara
11	4	9230	9231	1	6	0.35	120	6	Niobrara	Niobrara
11	5	9198	9199	0.67	6	0.35	120	4	Niobrara	Niobrara
11	6	9167	9167	0.67	6	0.35	120	4	Niobrara	Niobrara

CLUSTER DATA

Treatment Interval	Cluster Number	Top Depth MD (ft)	Bottom Depth MD (ft)	Cluster Length (ft)	Perforation Density (spf)	Perforation Diameter (inches)	Perforation Phasing (deg)	Total Perforations	Formation	Sub Formation
12	1	9126	9127	1	6	0.35	120	6	Niobrara	Niobrara
12	2	9094	9095	1	6	0.35	120	6	Niobrara	Niobrara
12	3	9062	9063	1	6	0.35	120	6	Niobrara	Niobrara
12	4	9030	9031	1	6	0.35	120	6	Niobrara	Niobrara
12	5	8998	8999	0.67	6	0.35	120	4	Niobrara	Niobrara
12	6	8967	8967	0.67	6	0.35	120	4	Niobrara	Niobrara
13	1	8926	8927	1	6	0.35	120	6	Niobrara	Niobrara
13	2	8894	8895	1	6	0.35	120	6	Niobrara	Niobrara
13	3	8862	8863	1	6	0.35	120	6	Niobrara	Niobrara
13	4	8830	8831	1	6	0.35	120	6	Niobrara	Niobrara
13	5	8798	8799	0.67	6	0.35	120	4	Niobrara	Niobrara
13	6	8767	8767	0.67	6	0.35	120	4	Niobrara	Niobrara
14	1	8726	8727	1	6	0.35	120	6	Niobrara	Niobrara
14	2	8694	8695	1	6	0.35	120	6	Niobrara	Niobrara
14	3	8662	8663	1	6	0.35	120	6	Niobrara	Niobrara
14	4	8630	8631	1	6	0.35	120	6	Niobrara	Niobrara
14	5	8598	8599	0.67	6	0.35	120	4	Niobrara	Niobrara
14	6	8567	8567	0.67	6	0.35	120	4	Niobrara	Niobrara
15	1	8526	8527	1	6	0.35	120	6	Niobrara	Niobrara
15	2	8494	8495	1	6	0.35	120	6	Niobrara	Niobrara
15	3	8462	8463	1	6	0.35	120	6	Niobrara	Niobrara
15	4	8430	8431	1	6	0.35	120	6	Niobrara	Niobrara

CLUSTER DATA

Treatment Interval	Cluster Number	Top Depth MD (ft)	Bottom Depth MD (ft)	Cluster Length (ft)	Perforation Density (spf)	Perforation Diameter (inches)	Perforation Phasing (deg)	Total Perforations	Formation	Sub Formation
15	5	8398	8399	0.67	6	0.35	120	4	Niobrara	Niobrara
15	6	8367	8367	0.67	6	0.35	120	4	Niobrara	Niobrara
16	1	8326	8327	1	6	0.35	120	6	Niobrara	Niobrara
16	2	8294	8295	1	6	0.35	120	6	Niobrara	Niobrara
16	3	8262	8263	1	6	0.35	120	6	Niobrara	Niobrara
16	4	8230	8231	1	6	0.35	120	6	Niobrara	Niobrara
16	5	8198	8199	0.67	6	0.35	120	4	Niobrara	Niobrara
16	6	8167	8167	0.67	6	0.35	120	4	Niobrara	Niobrara
17	1	8126	8127	1	6	0.35	120	6	Niobrara	Niobrara
17	2	8094	8095	1	6	0.35	120	6	Niobrara	Niobrara
17	3	8062	8063	1	6	0.35	120	6	Niobrara	Niobrara
17	4	8030	8031	1	6	0.35	120	6	Niobrara	Niobrara
17	5	7998	7999	0.67	6	0.35	120	4	Niobrara	Niobrara
17	6	7967	7967	0.67	6	0.35	120	4	Niobrara	Niobrara
18	1	7926	7927	1	6	0.35	120	6	Niobrara	Niobrara
18	2	7894	7895	1	6	0.35	120	6	Niobrara	Niobrara
18	3	7862	7863	1	6	0.35	120	6	Niobrara	Niobrara
18	4	7830	7831	1	6	0.35	120	6	Niobrara	Niobrara
18	5	7798	7799	0.67	6	0.35	120	4	Niobrara	Niobrara
18	6	7767	7767	0.67	6	0.35	120	4	Niobrara	Niobrara
19	1	7726	7727	1	6	0.35	120	6	Niobrara	Niobrara
19	2	7694	7695	1	6	0.35	120	6	Niobrara	Niobrara

CLUSTER DATA

Treatment Interval	Cluster Number	Top Depth MD (ft)	Bottom Depth MD (ft)	Cluster Length (ft)	Perforation Density (spf)	Perforation Diameter (inches)	Perforation Phasing (deg)	Total Perforations	Formation	Sub Formation
19	3	7662	7663	1	6	0.35	120	6	Niobrara	Niobrara
19	4	7630	7631	1	6	0.35	120	6	Niobrara	Niobrara
19	5	7598	7599	0.67	6	0.35	120	4	Niobrara	Niobrara
19	6	7567	7567	0.67	6	0.35	120	4	Niobrara	Niobrara
20	1	7526	7527	1	6	0.35	120	6	Niobrara	Niobrara
20	2	7494	7495	1	6	0.35	120	6	Niobrara	Niobrara
20	3	7462	7463	1	6	0.35	120	6	Niobrara	Niobrara
20	4	7430	7431	1	6	0.35	120	6	Niobrara	Niobrara
20	5	7398	7399	0.67	6	0.35	120	4	Niobrara	Niobrara
20	6	7367	7367	0.67	6	0.35	120	4	Niobrara	Niobrara
21	1	7326	7327	1	6	0.35	120	6	Niobrara	Niobrara
21	2	7294	7295	1	6	0.35	120	6	Niobrara	Niobrara
21	3	7262	7263	1	6	0.35	120	6	Niobrara	Niobrara
21	4	7230	7231	1	6	0.35	120	6	Niobrara	Niobrara
21	5	7198	7199	0.67	6	0.35	120	4	Niobrara	Niobrara
21	6	7167	7167	0.67	6	0.35	120	4	Niobrara	Niobrara
22	1	7126	7127	1	6	0.35	120	6	Niobrara	Niobrara
22	2	7094	7095	1	6	0.35	120	6	Niobrara	Niobrara
22	3	7062	7063	1	6	0.35	120	6	Niobrara	Niobrara
22	4	7030	7031	1	6	0.35	120	6	Niobrara	Niobrara
22	5	6998	6999	0.67	6	0.35	120	4	Niobrara	Niobrara
22	6	6967	6967	0.67	6	0.35	120	4	Niobrara	Niobrara

STAGE DESCRIPTION

Treatment Interval	Acid		Breakdown		Flush		Overflush		PLF		Pad		Pre-Flush	
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)
1	500	2	1000	967	10402	437767	0	6344	328680	670083	37800	82245	0	4427
2	500	2000	1000	407	10216	18335	0	0	328680	333646	37800	42767	0	0
3	500	1000	0	0	10030	18162	0	0	328680	334489	37800	35491	0	0
4	500	1499	1000	1066	9844	8651	0	6061	328680	332588	37800	39815	0	3324
5	500	1499	1000	1110	9657	8585	0	6240	328680	333653	37800	44902	0	4171
6	500	1000	1000	332	9471	17337	0	0	328680	339012	37800	42517	0	0
7	500	1000	1000	180	9285	17586	0	0	328680	339080	37800	37276	0	0
8	500	1000	1000	582	9098	8671	0	6353	328680	340759	37800	38086	0	5202
9	500	1000	1000	517	8912	7193	0	8542	328680	344741	37800	45092	0	4613
10	500	1000	1000	522	8726	17866	0	0	328680	337843	37800	38236	0	0
11	500	1000	1000	430	8540	8060	0	4995	328680	362305	37800	38611	0	4090
12	500	1000	1000	510	8353	7798	0	3026	328680	335062	37800	42485	0	4434
13	500	1000	1000	274	8167	16877	0	0	328680	332992	37800	38014	0	0
14	500	1000	1000	171	7981	17068	0	0	328680	338207	37800	39285	0	0
15	500	1000	1000	859	7794	6618	0	5114	328680	346145	37800	45705	0	6639
16	500	2000	1000	477	7608	5490	0	6970	328680	348997	37800	39768	0	5945
17	500	1000	1000	499	7422	16143	0	0	328680	337897	37800	38218	0	0
18	500	1000	1000	140	7236	16020	0	0	328680	336100	37800	40206	0	0
19	500	1000	1000	891	7049	16633	0	0	328680	341834	37800	38638	0	0
20	500	1000	1000	122	6863	15837	0	0	328680	339262	37800	37381	0	0
21	500	923	1000	257	6677	16298	0	0	328680	336607	37800	38007	0	0
22	500	1000	1000	598	6490	4465	0	5441	328680	339097	37800	42133	0	4396

STAGE DESCRIPTION

Treatment Interval	Acid		Breakdown		Flush		Overflush		PLF		Pad		Pre-Flush	
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)
Total	11000	23923	21000	10911	185821	707460	0	59086	7230960	7800399	831600	924878	0	47241

STAGE DESCRIPTION

Treatment Interval	Shut-In		Spacer		Wireline Pump-In		Total	
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)
1	0	1000	0	15757	0	0	378382	1218592
2	0	0	0	0	0	7728	378196	404883
3	0	0	0	0	0	5502	377010	394644
4	0	0	0	0	0	8148	377824	401152
5	0	0	0	0	0	8022	377637	408182
6	0	0	0	0	0	7560	377451	407758
7	0	0	0	0	0	7350	377265	402472
8	0	0	0	0	0	6384	377078	407037
9	0	0	0	1702	0	6468	376892	419868
10	0	0	0	0	0	5880	376706	401347
11	0	0	0	0	0	5376	376520	424867
12	0	0	0	0	0	5124	376333	399439
13	0	0	0	0	0	5376	376147	394533
14	0	0	0	0	0	4620	375961	400351
15	0	0	0	0	0	4032	375774	416112
16	0	0	0	0	0	3906	375588	413553
17	0	0	0	0	0	3360	375402	397117
18	0	0	0	0	0	3024	375216	396490
19	0	0	0	0	0	3444	375029	402440
20	0	0	0	0	0	2142	374843	395744
21	0	0	0	0	0	1974	374657	394066
22	0	0	0	0	0	2394	374470	399524

STAGE DESCRIPTION

Treatment Interval	Shut-In		Spacer		Wireline Pump-In		Total	
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)
Total	0	1000	0	17459	0	107814	8280381	9700171

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
1	1	Breakdown	FR Water		0	0	0	9.3	967	933	967
	2	Acid	15% HCl		0	0	0	9.89	1	0	968
	3	Pad	FR Water		0	0	0	10.17	2390	2390	3358
	4	Acid	15% HCl		0	0	0	10.25	1	0	3359
	5	Pad	FR Water		0	0	0	10.07	1321	1321	4680
	6	Pad	Dry FR		0	0	0	44.18	39404	39495	44084
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.16	53464	54058	97548
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.37	21980	22708	119528
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.34	13944	14116	133472
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.32	62944	65944	196416
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.95	12569	13631	208985
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.19	11797	11965	220782
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.08	63941	66910	284723
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.92	12623	13694	297346
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.96	2063	2048	299409
	16	Spacer	Dry FR		0	0	0	100.23	4024	4033	303433
	17	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.22	40322	40810	343755
	18	PLF	Dry FR	30/50 Premium White	0.25	2.44	1.34	100.01	25730	27148	369485
	19	PLF	Dry FR	30/50 Premium White	2	2	2	99.91	21907	23792	391392
	20	Flush	Dry FR		0	0	0	100.02	5113	5090	396505
	21	Flush	Dry FR		0	0	0	100.21	6551	6589	403056
	22	Flush	FR Water		0	0	0	49.15	415470	429400	818526

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
1	23	Shut-In	15% HCl		0	0	0	0.55	1000	1000	819526
	24	Pad	FR Water		0	0	0	9.39	299	302	819825
	25	Pad	15% HCl		0	0	0	11.53	1000	1000	820825
	26	Pad	FR Water		0	0	0	11.4	135	141	820960
	27	Pad	Dry FR		0	0	0	40.45	37696	37744	858656
	28	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	89.7	5145	5195	863801
	29	Spacer	Dry FR		0	0	0	89.89	11733	11755	875534
	30	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.57	35180	35600	910714
	31	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.03	22009	22771	932723
	32	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.99	12022	12158	944745
	33	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.24	62920	65793	1007665
	34	PLF	Dry FR	30/50 Premium White	2	2	2	100.21	11190	12116	1018855
	35	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.45	10310	10441	1029165
	36	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.39	63975	66794	1093140
	37	PLF	Dry FR	30/50 Premium White	2	2	2	100.13	10958	11891	1104098
	38	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.45	43907	44451	1148005
	39	PLF	Dry FR	30/50 Premium White	0.25	2.99	1.62	100.32	30674	32688	1178679
	40	PLF	Dry FR	30/50 Premium White	3	3	3	100.17	18509	20886	1197188
	41	Pre-Flush	Dry FR		0	0	0	100.47	4427	4404	1201615
	42	Flush	Dry FR		0	0	0	100.63	10633	10654	1212248
	43	Overflush	FR Water		0	0	0	90.09	6344	6348	1218592
2	1	Wireline Pump-In	Treated Water		0	0	0	22	7728	7728	1226320

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
2	2	Breakdown	Dry FR		0	0	0	8.96	407	438	1226727
	3	Acid	15% HCl		0	0	0	10.48	1000	1000	1227727
	4	Pad	Dry FR		0	0	0	10.85	886	951	1228613
	5	Acid	15% HCl		0	0	0	11.02	1000	1000	1229613
	6	Pad	Dry FR		0	0	0	11.08	761	817	1230374
	7	Pad	Dry FR		0	0	0	59.37	41120	41254	1271494
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.34	50760	51413	1322254
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.47	0.86	100.4	21445	22209	1343699
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.43	12405	12560	1356104
	11	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.41	62932	65849	1419036
	12	PLF	Dry FR	30/50 Premium White	2	2	2	100.69	11608	12596	1430644
	13	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.83	9639	9764	1440283
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.78	63939	66957	1504222
	15	PLF	Dry FR	30/50 Premium White	2	2	2	100.62	10941	11871	1515163
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.9	43746	44293	1558909
	17	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.66	40731	44323	1599640
	18	PLF	Dry FR	30/50 Premium White	4	4	4	100.5	5500	6393	1605140
	19	Flush	Dry FR		0	0	0	100.95	5128	5066	1610268
	20	Flush	Dry FR		0	0	0	100.31	6370	6372	1616638
	21	Flush	Dry FR		0	0	0	89.83	6837	6830	1623475
3	1	Wireline Pump-In	Treated Water		0	0	0	22	5502	5502	1628977
	2	Pad	Dry FR		0	0	0	8.94	1049	1133	1630026

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
3	3	Acid	15% HCl		0	0	0	12.96	1000	1000	1631026
	4	Pad	Dry FR		0	0	0	15.62	134	134	1631160
	5	Pad	Dry FR		0	0	0	53.12	34308	34624	1665468
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	90.62	56350	57281	1721818
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.48	0.86	100.06	21700	22559	1743518
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.06	11823	12022	1755341
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100	62945	66386	1818286
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.91	10882	11936	1829168
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.02	11634	11879	1840802
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.87	63975	67582	1904777
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.64	10988	12049	1915765
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.97	44504	45306	1960269
	15	PLF	Dry FR	30/50 Premium White	0.25	3.89	2.07	99.75	39688	43356	1999957
	16	Flush	Dry FR		0	0	0	99.29	6005	5965	2005962
	17	Flush	Dry FR		0	0	0	98.1	6013	6033	2011975
	18	Flush	Dry FR		0	0	0	87.17	6144	6141	2018119
4	1	Wireline Pump-In	Treated Water		0	0	0	20	8148	8148	2026267
	2	Breakdown	FR Water		0	0	0	9.63	1066	1115	2027333
	3	Acid	15% HCl		0	0	0	11.48	499	499	2027832
	4	Pad	FR Water		0	0	0	11.6	801	911	2028633
	5	Acid	15% HCl		0	0	0	11.46	1000	1000	2029633
	6	Pad	FR Water		0	0	0	11.51	536	572	2030169

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
4	7	Pad	Dry FR		0	0	0	66.43	38478	38846	2068647
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.13	51818	52673	2120465
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	100.02	21769	22627	2142234
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.08	10926	11112	2153160
	11	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.12	1114	1132	2154274
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.13	99.9	62906	66192	2217180
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.7	11048	12058	2228228
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.91	9721	9886	2237949
	15	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.82	63982	67419	2301931
	16	PLF	Dry FR	30/50 Premium White	2	2	2	99.62	11052	12049	2312983
	17	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.91	41588	42318	2354571
	18	PLF	Dry FR	30/50 Premium White	0.25	3.08	1.67	99.7	31832	34337	2386403
	19	PLF	Dry FR	30/50 Premium White	3	3	3	98.62	14832	16931	2401235
	20	Pre-Flush	Dry FR		0	0	0	93.06	3324	3289	2404559
	21	Flush	Dry FR		0	0	0	93.1	8651	8754	2413210
	22	Overflush	FR Water		0	0	0	84.25	6061	6119	2419271
5	1	Wireline Pump-In	Treated Water		0	0	0	20	8022	8022	2427293
	2	Breakdown	FR Water		0	0	0	10.94	1110	1066	2428403
	3	Acid	15% HCl		0	0	0	10.81	1000	1000	2429403
	4	Pad	FR Water		0	0	0	11.03	462	476	2429865
	5	Pad	Dry FR		0	0	0	30.06	5418	5422	2435283
	6	Pad	FR Water		0	0	0	11.16	343	397	2435626

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
5	7	Acid	15% HCl		0	0	0	10.81	499	499	2436125
	8	Pad	FR Water		0	0	0	11.27	384	406	2436509
	9	Pad	Dry FR		0	0	0	65.44	38295	38678	2474804
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	87.39	51545	52406	2526349
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	87.4	21974	22867	2548323
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	87.41	12029	12237	2560352
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.83	62960	66263	2623312
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.51	12470	13578	2635782
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.54	9615	9789	2645397
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.53	63962	67289	2709359
	17	PLF	Dry FR	30/50 Premium White	2	2	2	99.47	11193	12168	2720552
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.57	43792	44500	2764344
	19	PLF	Dry FR	30/50 Premium White	0.25	3.07	1.66	99.56	33072	35483	2797416
	20	PLF	Dry FR	30/50 Premium White	3	3	3	99.31	11041	12568	2808457
	21	Pre-Flush	Dry FR		0	0	0	99.52	4171	4150	2812628
	22	Flush	Dry FR		0	0	0	99.62	8585	8654	2821213
	23	Overflush	FR Water		0	0	0	89.89	6240	6275	2827453
6	1	Wireline Pump-In	Treated Water		0	0	0	18	7560	7560	2835013
	2	Breakdown	Treated Water		0	0	0	4.92	332	334	2835345
	3	Acid	15% HCl		0	0	0	10.26	1000	1000	2836345
	4	Pad	Treated Water		0	0	0	15.68	1110	1134	2837455
	5	Pad	Dry FR		0	0	0	69.11	41407	41620	2878862

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
6	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	92.56	51424	52077	2930286
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	96.05	21825	22624	2952111
	8	PLF	Dry FR	100 Mesh Premium White	1.5	1.5	1.5	96.75	4290	4583	2956401
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	96.76	10886	11010	2967287
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.01	62928	65901	3030215
	11	PLF	Dry FR	30/50 Premium White	2	2	2	93.96	11939	13023	3042154
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	94.18	10067	10186	3052221
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.39	63911	67062	3116132
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.96	11274	12301	3127406
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.19	44104	44622	3171510
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.81	40700	44329	3212210
	17	PLF	Dry FR	30/50 Premium White	4	4	4	98.93	5664	6294	3217874
	18	Flush	Dry FR		0	0	0	100.12	4045	3963	3221919
	19	Flush	Dry FR		0	0	0	100.18	7649	7647	3229568
	20	Flush	Treated Water		0	0	0	86.22	5643	5769	3235211
7	1	Wireline Pump-In	Treated Water		0	0	0	18	7350	7350	3242561
	2	Breakdown	Treated Water		0	0	0	3.97	180	196	3242741
	3	Acid	15% HCl		0	0	0	10.07	1000	1000	3243741
	4	Pad	Treated Water		0	0	0	11.85	540	558	3244281
	5	Pad	Dry FR		0	0	0	61.37	36736	36892	3281017
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.94	51879	52503	3332896
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.14	22045	22873	3354941

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
7	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.19	12120	12262	3367061
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.19	62998	66098	3430059
	10	PLF	Dry FR	30/50 Premium White	2	2	2	100.13	13917	15146	3443976
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.29	11855	11985	3455831
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.21	63861	66947	3519692
	13	PLF	Dry FR	30/50 Premium White	2	2	2	100.09	11027	12039	3530719
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.35	45431	45904	3576150
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.25	40699	44312	3616849
	16	PLF	Dry FR	30/50 Premium White	4	4	4	100.2	3248	3542	3620097
	17	Flush	Dry FR		0	0	0	100.43	4417	4330	3624514
	18	Flush	Dry FR		0	0	0	100.48	7311	7304	3631825
	19	Flush	Treated Water		0	0	0	86.19	5858	6008	3637683
8	1	Wireline Pump-In	Treated Water		0	0	0	20	6384	6384	3644067
	2	Breakdown	FR Water		0	0	0	5.95	582	594	3644649
	3	Acid	15% HCl		0	0	0	8.98	1000	1000	3645649
	4	Pad	FR Water		0	0	0	9.39	314	336	3645963
	5	Pad	Dry FR		0	0	0	65.52	37772	38180	3683735
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.87	51163	51986	3734898
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.81	21898	22725	3756796
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.81	12020	12211	3768816
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.71	62912	66065	3831728
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.52	12306	13371	3844034

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
8	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.82	13886	14116	3857920
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.82	63958	67073	3921878
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.68	10918	11844	3932796
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.94	44872	45594	3977668
	15	PLF	Dry FR	30/50 Premium White	0.25	3.98	2.12	99.69	40487	43916	4018155
	16	PLF	Dry FR	30/50 Premium White	0.25	3.98	2.12	99.47	840	911	4018995
	17	PLF	Dry FR	30/50 Premium White	4	4	4	99.39	5499	6390	4024494
	18	Pre-Flush	Dry FR		0	0	0	99.8	5202	5142	4029696
	19	Flush	Dry FR		0	0	0	99.91	8671	8755	4038367
	20	Overflush	FR Water		0	0	0	87.11	6353	6385	4044720
9	1	Wireline Pump-In	Treated Water		0	0	0	20	6468	6468	4051188
	2	Breakdown	FR Water		0	0	0	7.25	517	581	4051705
	3	Acid	15% HCl		0	0	0	11.72	1000	1000	4052705
	4	Pad	FR Water		0	0	0	14.65	965	990	4053670
	5	Pad	Dry FR		0	0	0	68.34	44127	44541	4097797
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	92.91	41881	42520	4139678
	7	Spacer	Dry FR		0	0	0	93.6	1702	1717	4141380
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	96.49	17442	17679	4158822
	9	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	98.59	4677	4744	4163499
	10	PLF	Dry FR	100 Mesh Premium White	0.25	1.4	0.82	99.47	20342	20967	4183841
	11	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.86	12145	12285	4195986
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.71	62989	65922	4258975

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
9	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.74	11572	12552	4270547
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100	10055	10182	4280602
	15	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.01	63977	66970	4344579
	16	PLF	Dry FR	30/50 Premium White	2	2	2	99.78	11237	12209	4355816
	17	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.08	44474	45010	4400290
	18	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.83	40706	44329	4440996
	19	PLF	Dry FR	30/50 Premium White	4	4	4	99.31	3244	3863	4444240
	20	Pre-Flush	Dry FR		0	0	0	99.73	4613	4582	4448853
	21	Flush	Dry FR		0	0	0	97.53	7193	7237	4456046
	22	Overflush	FR Water		0	0	0	86.06	8542	8622	4464588
10	1	Wireline Pump-In	Treated Water		0	0	0	18	5880	5880	4470468
	2	Breakdown	Treated Water		0	0	0	6.18	522	525	4470990
	3	Acid	15% HCl		0	0	0	10.32	1000	1000	4471990
	4	Pad	Treated Water		0	0	0	10.42	790	826	4472780
	5	Pad	Dry FR		0	0	0	61.68	37446	37759	4510226
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	93.97	51907	52622	4562133
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	100.22	21797	22541	4583930
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.19	12261	12401	4596191
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.11	62964	65703	4659155
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.97	12780	13780	4671935
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.14	9870	9977	4681805
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.06	63879	66649	4745684

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
10	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.92	10987	11873	4756671
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.14	43935	44385	4800606
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.91	40773	44098	4841379
	16	PLF	Dry FR	30/50 Premium White	4	4	4	99.68	6690	7676	4848069
	17	Flush	Dry FR		0	0	0	100.13	4761	4669	4852830
	18	Flush	Dry FR		0	0	0	100.21	6741	6729	4859571
	19	Flush	Treated Water		0	0	0	85.96	6364	6483	4865935
11	1	Wireline Pump-In	Treated Water		0	0	0	20	5376	5376	4871311
	2	Breakdown	FR Water		0	0	0	5.39	430	261	4871741
	3	Acid	15% HCl		0	0	0	10.25	1000	1000	4872741
	4	Pad	FR Water		0	0	0	11.2	1477	1481	4874218
	5	Pad	Dry FR		0	0	0	64.18	37134	37191	4911352
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	98.22	52043	52768	4963395
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	99.95	21822	22609	4985217
	8	PLF	Dry FR	SS-200 Premium White	1.5	1.5	1.5	99.71	8840	9375	4994057
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.71	3401	3455	4997458
	10	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.99	28583	28970	5026041
	11	PLF	Dry FR	30/50 Premium White	0.25	0.39	0.32	99.95	6264	6362	5032305
	12	PLF	Dry FR	30/50 Premium White	0.39	0.39	0.39	99.92	1938	1978	5034243
	13	PLF	Dry FR	30/50 Premium White	0.39	1.47	0.93	99.8	37135	38662	5071378
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.6	12382	13376	5083760
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.84	9962	10092	5093722

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
11	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.74	63946	66915	5157668
	17	PLF	Dry FR	30/50 Premium White	2	2	2	99.58	13340	14429	5171008
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.96	54596	55260	5225604
	19	PLF	Dry FR	30/50 Premium White	0.25	3.99	2.12	99.64	40664	43962	5266268
	20	PLF	Dry FR	30/50 Premium White	4	4	4	99.32	7389	8350	5273657
	21	Pre-Flush	Dry FR		0	0	0	99.94	4090	4026	5277747
	22	Flush	Dry FR		0	0	0	100.12	8060	8067	5285807
	23	Overflush	FR Water		0	0	0	81.32	4995	4967	5290802
12	1	Wireline Pump-In	Treated Water		0	0	0	20	5124	5124	5295926
	2	Breakdown	FR Water		0	0	0	5.46	510	519	5296436
	3	Acid	15% HCl		0	0	0	10.3	1000	1000	5297436
	4	Pad	FR Water		0	0	0	13.58	777	758	5298213
	5	Pad	Dry FR		0	0	0	60.86	39792	39687	5338005
	6	Pad	Dry FR		0	0	0	93.73	1916	1921	5339921
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.37	49518	49925	5389439
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.02	21940	22600	5411379
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.06	12052	12153	5423431
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.96	62935	65577	5486366
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.9	13506	14671	5499872
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.1	11588	11873	5511460
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.02	63963	67162	5575423
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.45	10994	11991	5586417

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
12	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.69	44723	45502	5631140
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.57	40680	44311	5671820
	17	PLF	Dry FR	30/50 Premium White	4	4	4	95.82	3163	3717	5674983
	18	Pre-Flush	Dry FR		0	0	0	94.46	4434	4666	5679417
	19	Flush	Dry FR		0	0	0	90.32	7798	7774	5687215
	20	Overflush	FR Water		0	0	0	72.31	3026	3151	5690241
13	1	Wireline Pump-In	Treated Water		0	0	0	18	5376	5376	5695617
	2	Breakdown	Treated Water		0	0	0	4.85	274	280	5695891
	3	Acid	15% HCl		0	0	0	10.32	1000	1000	5696891
	4	Pad	Treated Water		0	0	0	14.49	724	724	5697615
	5	Pad	Dry FR		0	0	0	62.19	37290	37196	5734905
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	93.35	52906	53485	5787811
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	99.95	21888	22660	5809699
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.96	11955	12071	5821654
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.81	62974	65815	5884628
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.65	11016	11908	5895644
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100	9571	9682	5905215
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.89	64001	66960	5969216
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.71	12351	13384	5981567
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.98	44747	45183	6026314
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.69	41583	45336	6067897
	16	Flush	Dry FR		0	0	0	99.88	4807	4721	6072704

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
13	17	Flush	Dry FR		0	0	0	100.05	6984	6924	6079688
	18	Flush	Treated Water		0	0	0	83.64	5086	5226	6084774
14	1	Wireline Pump-In	Treated Water		0	0	0	18	4620	4620	6089394
	2	Breakdown	Treated Water		0	0	0	3.88	171	196	6089565
	3	Acid	15% HCl		0	0	0	10.09	1000	1000	6090565
	4	Pad	Treated Water		0	0	0	19.26	1602	1554	6092167
	5	Pad	Dry FR		0	0	0	69.03	37683	37691	6129850
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.47	51756	52400	6181606
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.15	21857	22643	6203463
	8	PLF	Dry FR	100 Mesh Premium White	1.5	1.5	1.5	100.1	2062	2191	6205525
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.22	13912	14089	6219437
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.13	62901	65982	6282338
	11	PLF	Dry FR	30/50 Premium White	2	2	2	100.09	10937	11874	6293275
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.36	9442	9567	6302717
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.25	64020	67187	6366737
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.12	13357	14498	6380094
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.49	45317	45909	6425411
	16	PLF	Dry FR	30/50 Premium White	0.25	3.99	2.12	100.36	40692	44231	6466103
	17	PLF	Dry FR	30/50 Premium White	4	4	4	100.05	1954	2187	6468057
	18	Flush	Dry FR		0	0	0	100.6	5322	5255	6473379
	19	Flush	Dry FR		0	0	0	100.78	7446	7397	6480825
	20	Flush	Treated Water		0	0	0	80.84	4300	4496	6485125

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
15	1	Wireline Pump-In	Treated Water		0	0	0	20	4032	4032	6489157
	2	Breakdown	FR Water		0	0	0	6.26	859	865	6490016
	3	Acid	15% HCl		0	0	0	9.84	1000	1000	6491016
	4	Pad	FR Water		0	0	0	11.34	203	208	6491219
	5	Pad	Dry FR		0	0	0	70.72	45502	45600	6536721
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.64	47023	47600	6583744
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	98.68	21854	22591	6605598
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.13	24145	24442	6629743
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.64	62935	65761	6692678
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.5	12252	13215	6704930
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.76	9608	9729	6714538
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.65	63850	66665	6778388
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.61	10790	11681	6789178
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.8	43880	44419	6833058
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.3	40678	43995	6873736
	16	PLF	Dry FR	30/50 Premium White	4	4	4	93.56	9130	10641	6882866
	17	Pre-Flush	Dry FR		0	0	0	94.89	6639	6701	6889505
	18	Flush	Dry FR		0	0	0	92.73	6618	6549	6896123
	19	Overflush	FR Water		0	0	0	79.78	5114	5172	6901237
16	1	Wireline Pump-In	Treated Water		0	0	0	20	3906	3906	6905143
	2	Breakdown	FR Water		0	0	0	6.4	477	493	6905620
	3	Acid	15% HCl		0	0	0	10.06	2000	2000	6907620

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
16	4	Pad	FR Water		0	0	0	10.74	1852	1864	6909472
	5	Pad	Dry FR		0	0	0	67.08	37916	38082	6947388
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.52	52097	52953	6999485
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	100.48	21791	22644	7021276
	8	PLF	Dry FR	100 Mesh Premium White	1.5	1.5	1.5	100.2	11581	12314	7032857
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.32	12820	13041	7045677
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.2	62909	66058	7108586
	11	PLF	Dry FR	30/50 Premium White	2	2	2	100.02	11004	11934	7119590
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.27	12892	13104	7132482
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.2	64002	67178	7196484
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.02	10998	11936	7207482
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.27	44885	45611	7252367
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.95	40642	44053	7293009
	17	PLF	Dry FR	30/50 Premium White	4	4	4	99.59	3376	3941	7296385
	18	Pre-Flush	Dry FR		0	0	0	100.18	5945	5938	7302330
	19	Flush	Dry FR		0	0	0	100.43	5490	5527	7307820
	20	Overflush	FR Water		0	0	0	61.69	6970	7055	7314790
17	1	Wireline Pump-In	Treated Water		0	0	0	18	3360	3360	7318150
	2	Breakdown	Treated Water		0	0	0	6.05	499	528	7318649
	3	Acid	15% HCl		0	0	0	10.61	1000	1000	7319649
	4	Pad	Treated Water		0	0	0	14.17	586	607	7320235
	5	Pad	Dry FR		0	0	0	62.49	37632	37560	7357867

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
17	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	93	54122	54660	7411989
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	97.67	21859	22631	7433848
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.21	12501	12609	7446349
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.87	63000	65975	7509349
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.85	14515	15806	7523864
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.05	9526	9607	7533390
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.96	63984	67020	7597374
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.87	11610	12630	7608984
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.15	44256	44645	7653240
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.74	42524	46218	7695764
	16	Flush	Dry FR		0	0	0	100.27	4837	4745	7700601
	17	Flush	Dry FR		0	0	0	100.26	4968	4952	7705569
	18	Flush	Treated Water		0	0	0	83.92	6338	6494	7711907
18	1	Wireline Pump-In	Treated Water		0	0	0	18	3024	3024	7714931
	2	Breakdown	Treated Water		0	0	0	3.84	140	195	7715071
	3	Acid	15% HCl		0	0	0	10.11	1000	1000	7716071
	4	Pad	Treated Water		0	0	0	12.67	864	870	7716935
	5	Pad	Dry FR		0	0	0	68.64	39342	39278	7756277
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	91.72	51702	52234	7807979
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	99.77	21866	22626	7829845
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.1	12051	12162	7841896
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.86	63044	66044	7904940

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
18	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.68	11807	12814	7916747
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.92	11195	11296	7927942
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.81	63924	66912	7991866
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.71	12773	13884	8004639
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.97	44108	44481	8048747
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.63	40725	44121	8089472
	16	PLF	Dry FR	30/50 Premium White	4	4	4	99.13	2905	3358	8092377
	17	Flush	Dry FR		0	0	0	100.05	4961	4874	8097338
	18	Flush	Dry FR		0	0	0	100.01	5382	5367	8102720
	19	Flush	Treated Water		0	0	0	82.14	5677	5836	8108397
19	1	Wireline Pump-In	Treated Water		0	0	0	18	3444	3444	8111841
	2	Breakdown	Treated Water		0	0	0	7.65	891	910	8112732
	3	Acid	15% HCl		0	0	0	10.12	1000	1000	8113732
	4	Pad	Treated Water		0	0	0	11.7	682	686	8114414
	5	Pad	Dry FR		0	0	0	58.32	37956	38048	8152370
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	90.39	51698	52302	8204068
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.02	22569	23383	8226637
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.25	12474	12603	8239111
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.14	62914	65922	8302025
	10	PLF	Dry FR	30/50 Premium White	2	2	2	100.06	15198	16469	8317223
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.29	11634	11742	8328857
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.16	63965	66914	8392822

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
19	13	PLF	Dry FR	30/50 Premium White	2	2	2	100.07	10999	11916	8403821
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.34	48271	48746	8452092
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.02	42112	45626	8494204
	16	Flush	Dry FR		0	0	0	100.31	5050	4952	8499254
	17	Flush	Dry FR		0	0	0	100.38	5977	5953	8505231
	18	Flush	Treated Water		0	0	0	41.17	5606	5746	8510837
20	1	Wireline Pump-In	Treated Water		0	0	0	18	2142	2142	8512979
	2	Breakdown	Treated Water		0	0	0	3.26	122	207	8513101
	3	Acid	15% HCl		0	0	0	10.14	1000	1000	8514101
	4	Pad	Treated Water		0	0	0	13.25	768	736	8514869
	5	Pad	Dry FR		0	0	0	57.46	36613	36618	8551482
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	82.4	53063	53843	8604545
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	86.7	21721	22595	8626266
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	86.9	12238	12403	8638504
	9	PLF	Dry FR	30/50 Premium White	0.25	1.99	1.12	91.79	62857	65926	8701361
	10	PLF	Dry FR	30/50 Premium White	2	2	2	100.04	11008	11943	8712369
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.34	10561	10707	8722930
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.23	63979	67039	8786909
	13	PLF	Dry FR	30/50 Premium White	2	2	2	100.04	11740	12718	8798649
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.4	47448	48073	8846097
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.15	40650	44128	8886747
	16	PLF	Dry FR	30/50 Premium White	4	4	4	100.02	3997	4592	8890744

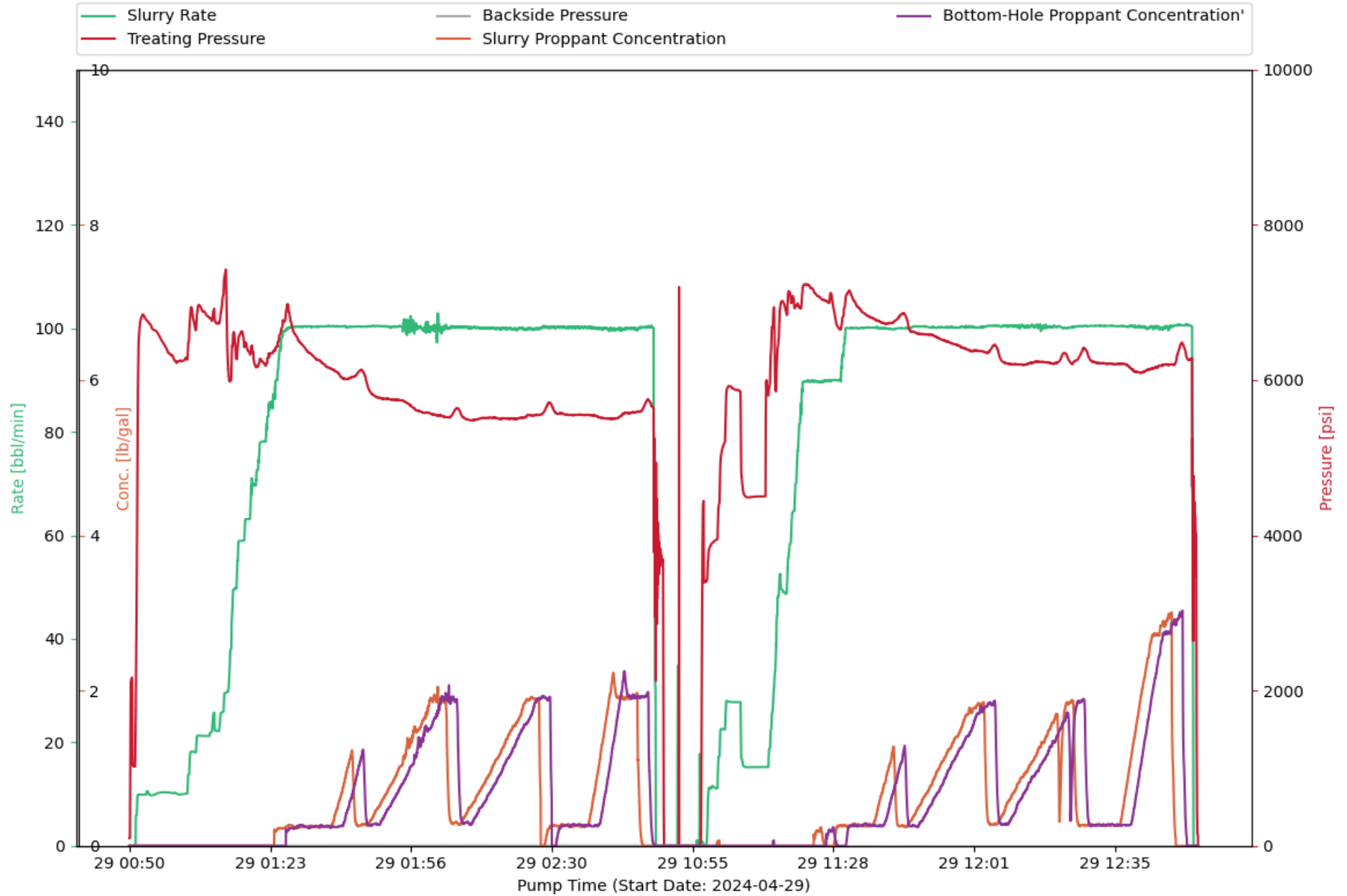
ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
20	17	Flush	Dry FR		0	0	0	100.48	5166	5106	8895910
	18	Flush	Dry FR		0	0	0	100.59	4953	4966	8900863
	19	Flush	Treated Water		0	0	0	42.56	5718	5925	8906581
21	1	Wireline Pump-In	Treated Water		0	0	0	18	1974	1974	8908555
	2	Breakdown	Treated Water		0	0	0	4.34	257	274	8908812
	3	Acid	15% HCl		0	0	0	10.46	923	923	8909735
	4	Pad	Treated Water		0	0	0	18.8	2911	2932	8912646
	5	Pad	Dry FR		0	0	0	67.21	35096	35059	8947742
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	96.88	52502	53236	9000244
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	99.91	21840	22657	9022084
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.96	13377	13556	9035461
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.45	62967	65945	9098428
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.87	11639	12620	9110067
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.24	9706	9839	9119773
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.95	64017	66980	9183790
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.78	12568	13598	9196358
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.1	43877	44385	9240235
	15	PLF	Dry FR	30/50 Premium White	0.25	3.99	2.12	99.78	40702	44108	9280937
	16	PLF	Dry FR	30/50 Premium White	4	4	4	99.33	3412	3926	9284349
	17	Flush	Dry FR		0	0	0	99.46	5356	5269	9289705
	18	Flush	Dry FR		0	0	0	99.78	5970	5988	9295675
	19	Flush	Treated Water		0	0	0	33.21	4972	5231	9300647

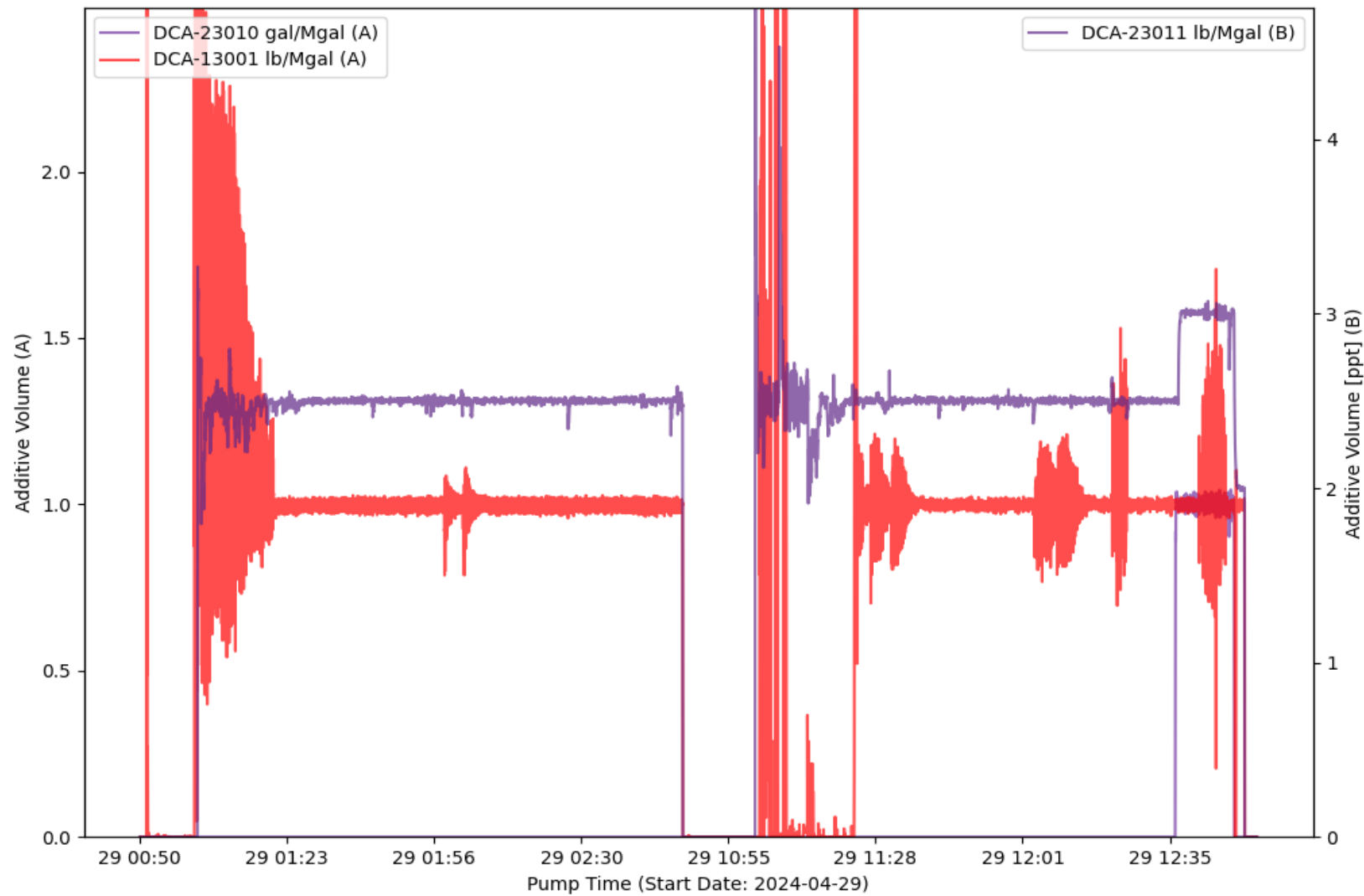
ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
22	1	Wireline Pump-In	Treated Water		0	0	0	20	2394	2394	9303041
	2	Breakdown	FR Water		0	0	0	5.07	598	652	9303639
	3	Acid	15% HCl		0	0	0	11.42	1000	1000	9304639
	4	Pad	FR Water		0	0	0	24.62	11267	11203	9315906
	5	Pad	Dry FR		0	0	0	83.7	30866	30854	9346772
	6	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.92	3804	3803	9350576
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.97	52097	52688	9402673
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.99	21864	22676	9424537
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.06	12048	12199	9436585
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.98	62938	65990	9499523
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.97	11081	12039	9510604
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.14	9485	9597	9520089
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.14	63970	67032	9584059
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.01	11375	12329	9595434
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.3	47621	48208	9643055
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.05	40633	43878	9683688
	17	PLF	Dry FR	30/50 Premium White	4	4	4	99.86	2181	2465	9685869
	18	Pre-Flush	Dry FR		0	0	0	100.45	4396	4325	9690265
	19	Flush	Dry FR		0	0	0	100.48	4465	4472	9694730
	20	Overflush	FR Water		0	0	0	85.99	5441	5497	9700171
Total									9700171	10053434	

TREATMENT PLOT : Treatment Interval 1



CHEMISTRY PLOT : Treatment Interval 1



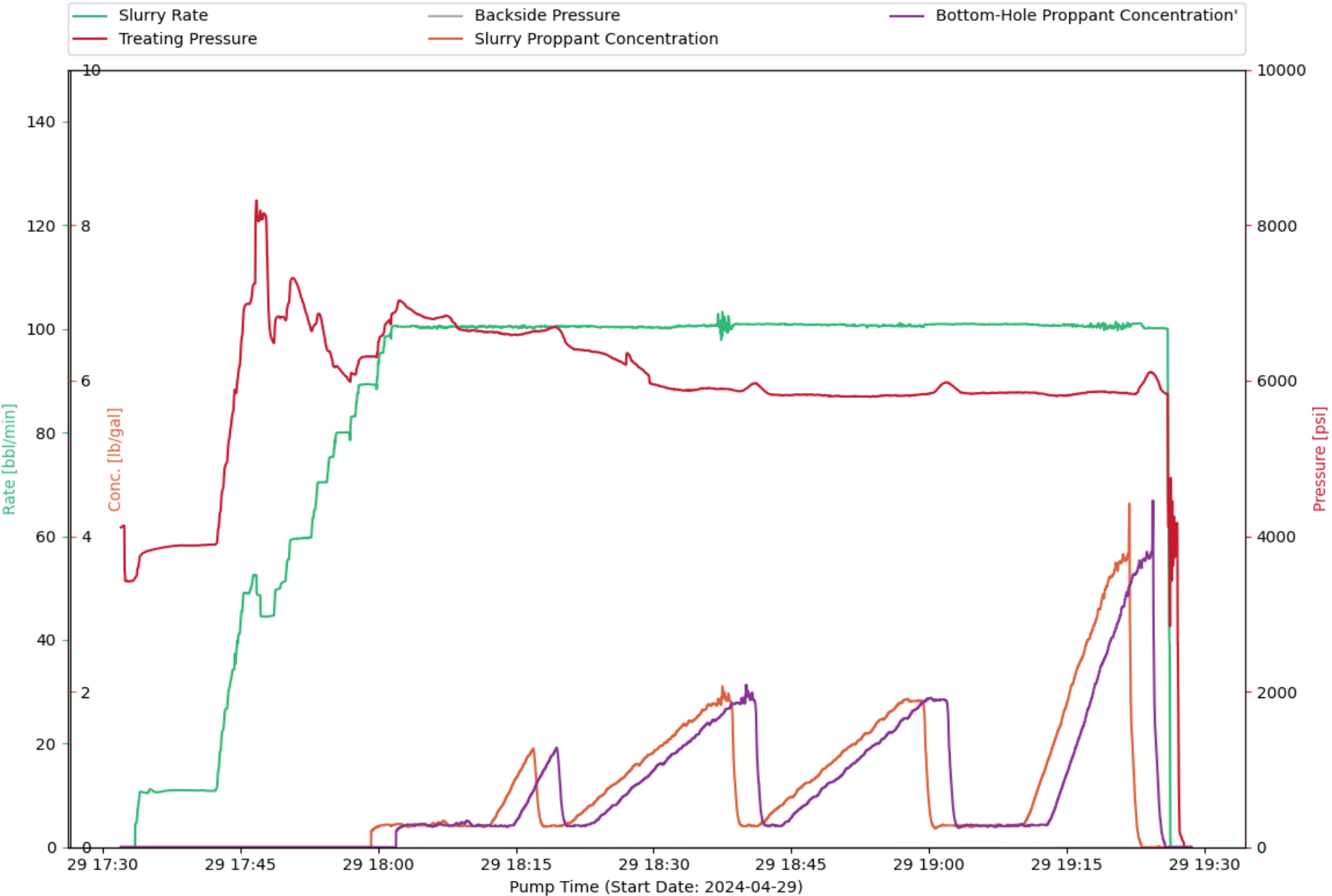
EVENT LOG : TREATMENT INTERVAL 1

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-29T00:50:46	0	1053	0	0	0	0	0
2	Start Pumping	2024-04-29T00:51:17	0	1023	0	0	0	0	0
3	Break Formation	2024-04-29T00:53:30	9.9	6820	0	0	822.81	786.37	0
4	Pump Acid	2024-04-29T00:53:52	9.89	6788	0	0	968.04	940.21	0
5	Pump Acid	2024-04-29T00:59:46	10.25	6324	0	0	3359	3455	0
6	Spot Acid	2024-04-29T01:12:50	29.6	7425	0	0	13238	13368	0
7	Flush Acid	2024-04-29T01:13:40	32.69	5987	0	0	14287	14413	0
8	Spot Acid	2024-04-29T01:14:42	49.52	6619	0	0	16127	16260	0
9	Flush Acid	2024-04-29T01:15:24	50.38	6268	0	0	17561	17701	0
10	Stop Pumping	2024-04-29T02:54:40	1.71	2124	0	0	409055	422866	299476
11	ISIP	2024-04-29T02:54:46	0	4342	0	0	409060	422866	299476
12	Shut In Well	2024-04-29T02:56:15	0	3692	0	0	409063	422866	299476
13	Resuming Job	2024-04-29T10:52:09	0	7199	0	0	818358	846173	299476
14	Open Well	2024-04-29T10:58:09	0	3399	0	0	818513	846258	299476
15	Pump Acid	2024-04-29T10:58:40	0.55	3408	0	0	818522	846260	299476
16	Pump Acid	2024-04-29T11:00:11	11.52	3909	0	0	819127	846872	299476
17	Ball on Seat	2024-04-29T11:12:46	15.23	5949	0	0	829332	857096	299497
18	Break Formation	2024-04-29T11:13:00	15.21	5883	0	0	829484	857247	299497
19	Spot Acid	2024-04-29T11:14:34	29.67	6921	0	0.07	830893	858641	299497
20	Flush Acid	2024-04-29T11:15:00	34.99	5870	0	0	831498	859237	299497
21	Stop Pumping	2024-04-29T12:53:58	1.45	4335	0	0	1218587	1260413	608039
22	ISIP	2024-04-29T12:54:23	0	4239	0	0	1218590	1260413	608039

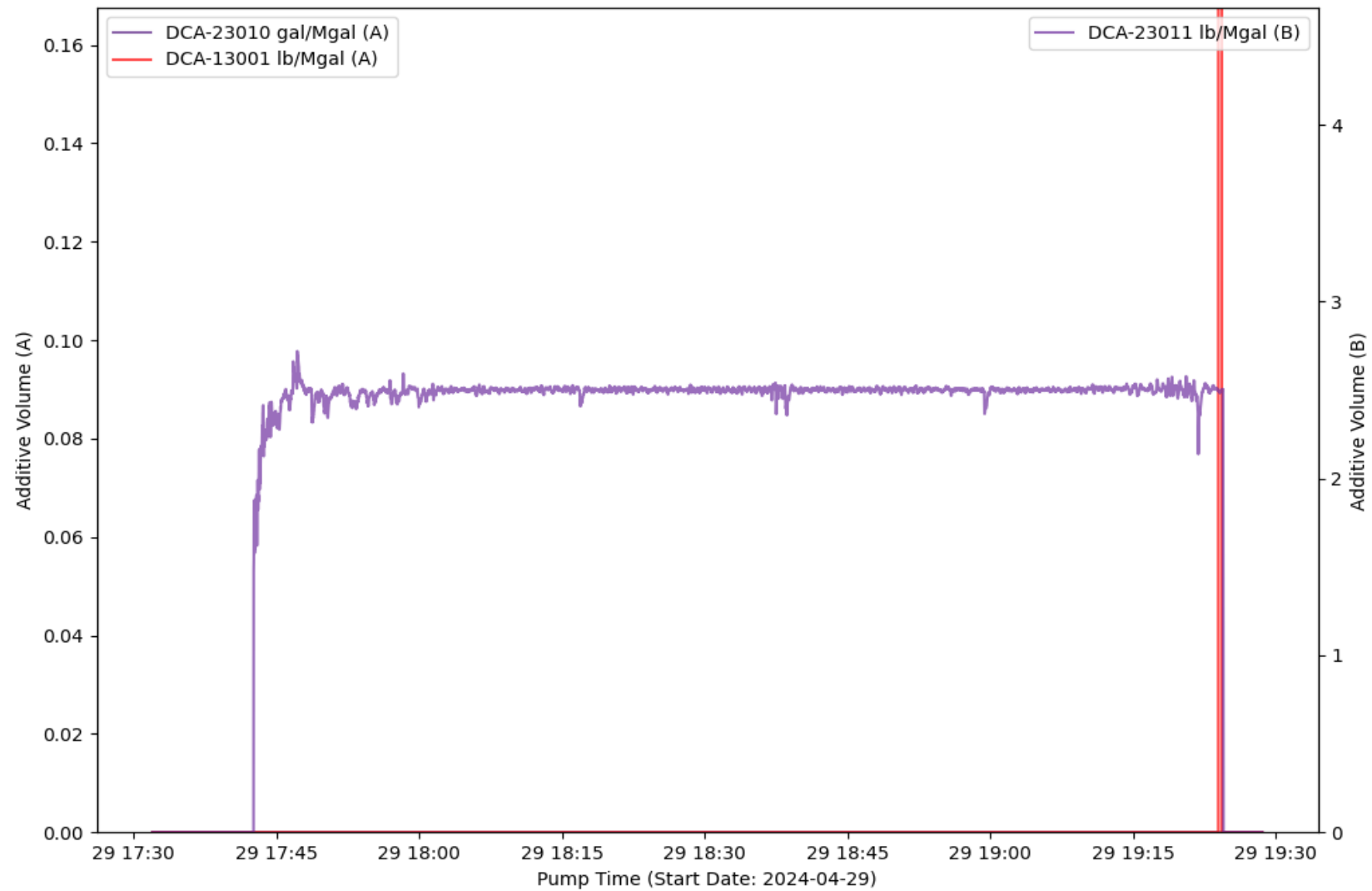
EVENT LOG : TREATMENT INTERVAL 1

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
23	Shut In Well	2024-04-29T12:54:28	0	4046	0	0	1218590	1260413	608039
24	Suspending Job	2024-04-29T12:55:03	0	119.12	0	0	1218590	1260413	608039

TREATMENT PLOT : Treatment Interval 2



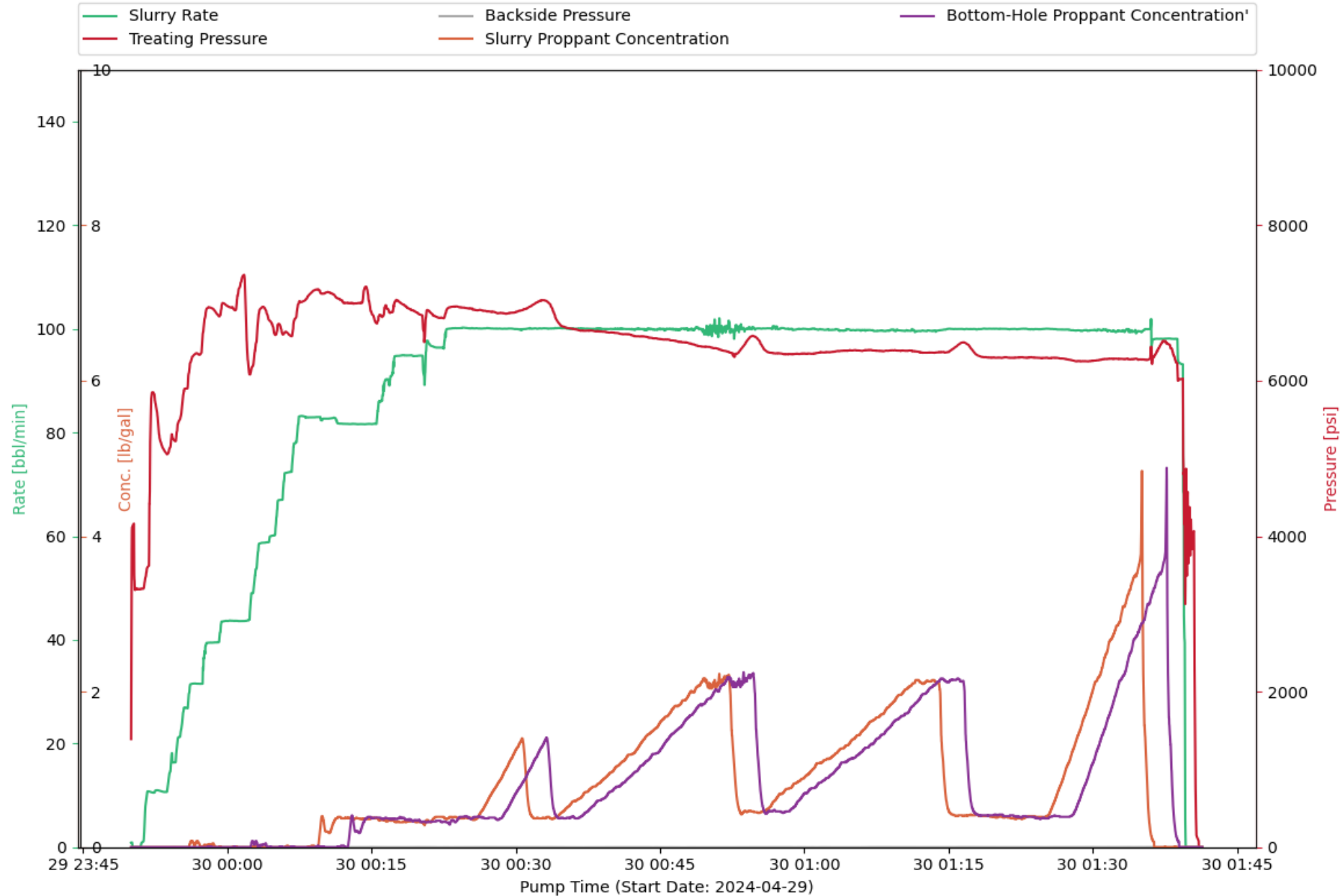
CHEMISTRY PLOT : Treatment Interval 2



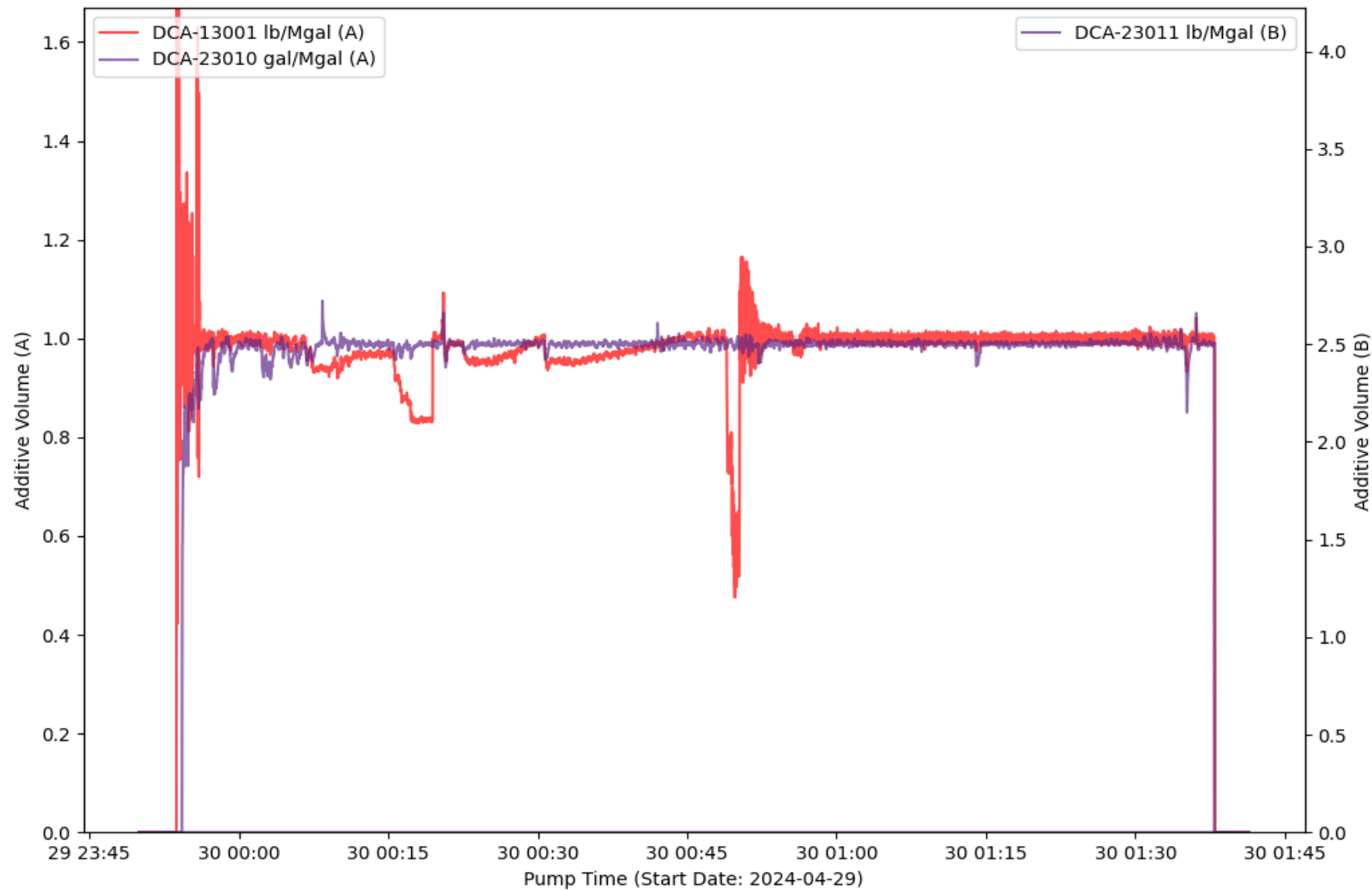
EVENT LOG : TREATMENT INTERVAL 2

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-29T17:32:36	0	3426	0	0	0	0	0
2	Start Pumping	2024-04-29T17:32:57	0	3418	0	0	0	0	0
3	Pump Acid	2024-04-29T17:34:43	10.48	3801	0	0	414.97	445.01	0
4	Pump Acid	2024-04-29T17:38:54	11.02	3881	0	0	2194	2354	0
5	Break Formation	2024-04-29T17:46:52	48.72	8075	0	0	10699	10971	0
6	Spot Acid	2024-04-29T17:47:30	44.5	8145	0	0	11952	12223	0
7	Flush Acid	2024-04-29T17:48:36	44.68	6491	0	0	13993	14268	0
8	Spot Acid	2024-04-29T17:50:23	58.06	7129	0	0	17805	18096	0
9	Flush Acid	2024-04-29T17:51:27	59.55	7152	0	0	20478	20778	0
10	Stop Pumping	2024-04-29T19:26:20	0	4750	0	0	397150	412073	322618
11	ISIP	2024-04-29T19:26:39	0	4214	0	0	397152	412073	322618
12	Shut In Well	2024-04-29T19:26:56	0	4158	0	0	397153	412073	322618
13	Suspending Job	2024-04-29T19:28:34	0	-2.19	0	0	397153	412073	322618

TREATMENT PLOT : Treatment Interval 3



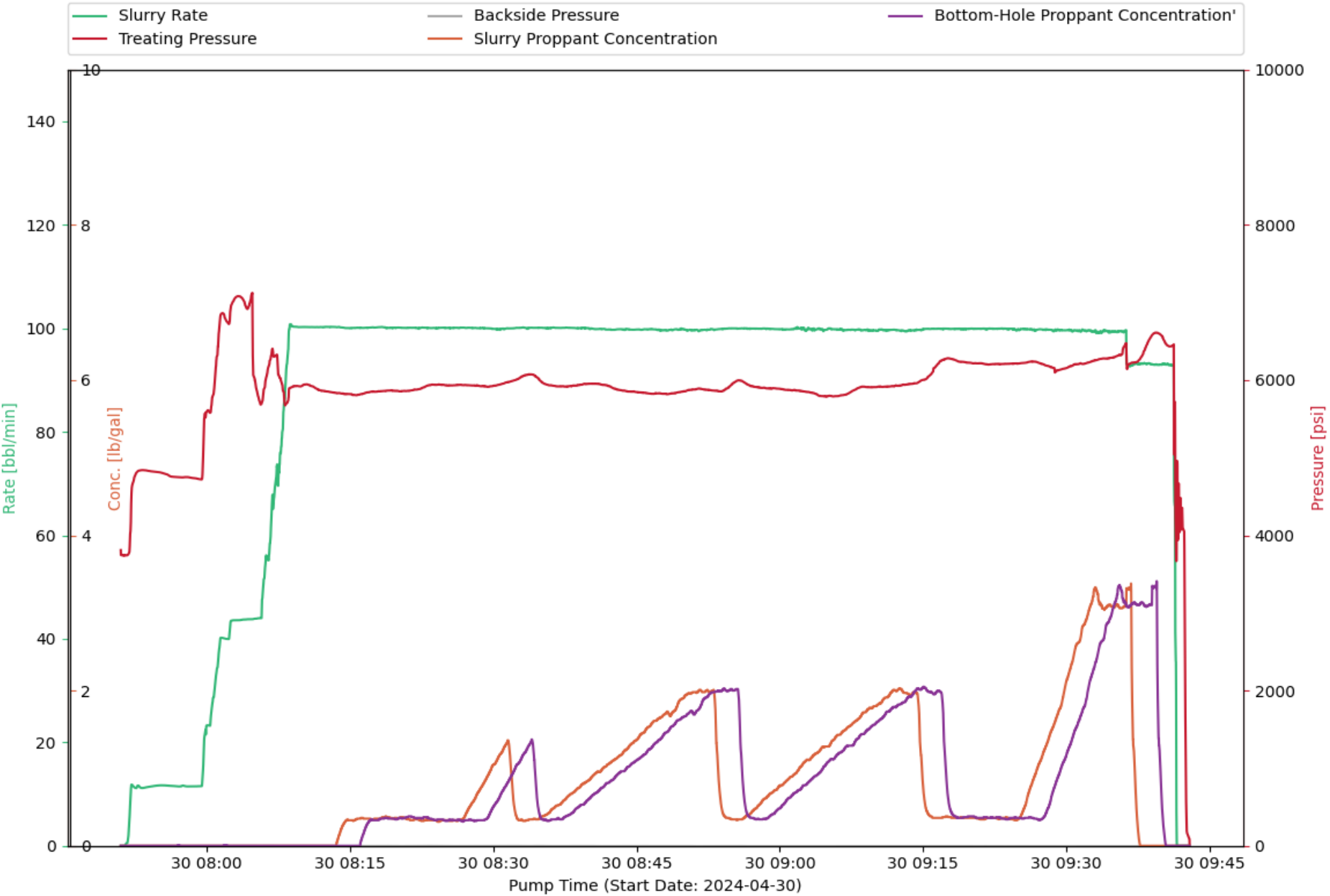
CHEMISTRY PLOT : Treatment Interval 3



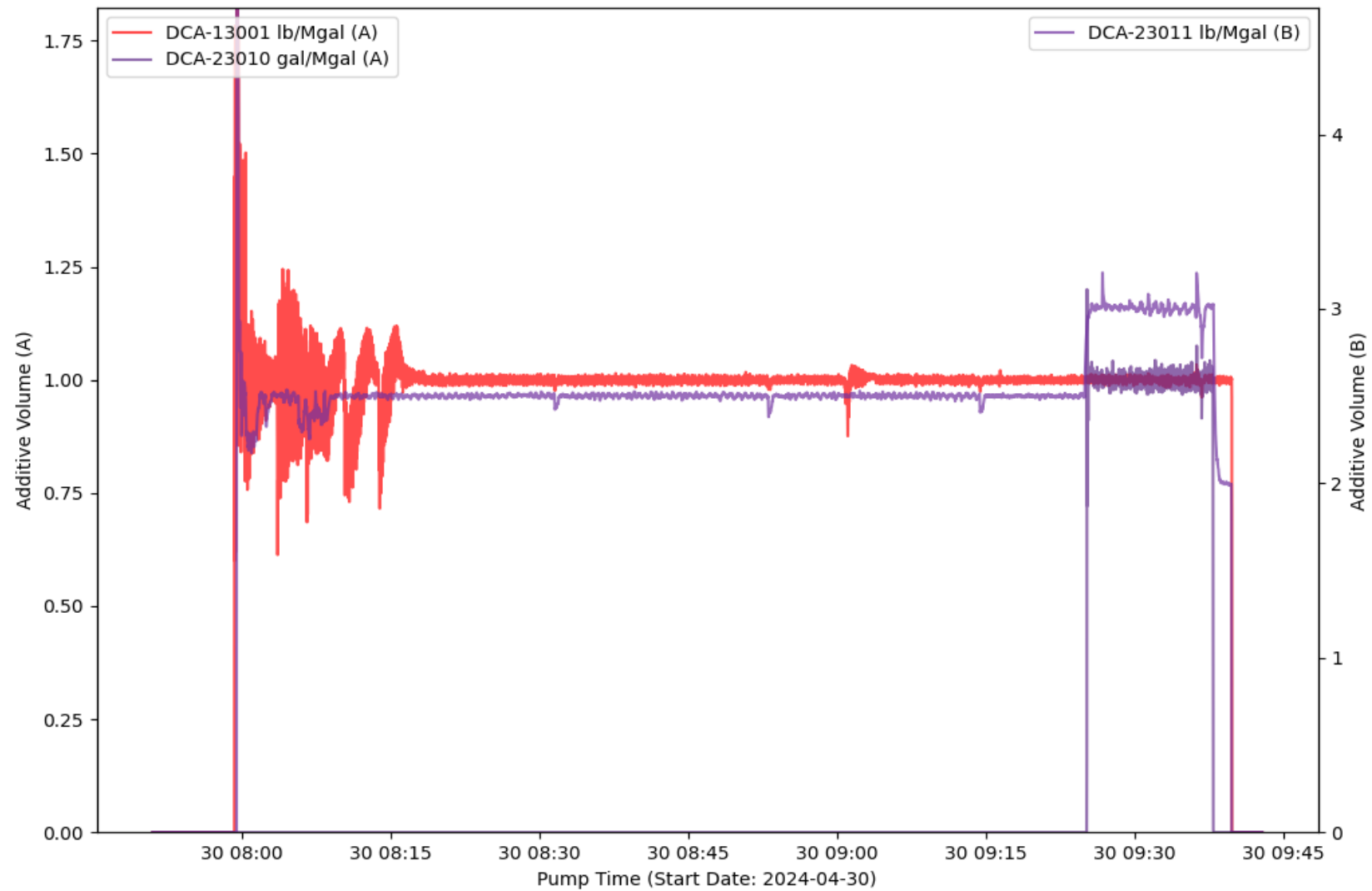
EVENT LOG : TREATMENT INTERVAL 3

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Avg Trt 3	2024-04-29T23:50:03	0.93	3277	0	0	0	0.65	0
2	Open Well	2024-04-29T23:50:28	0	3331	0	0	0	2.97	0
3	Start Pumping	2024-04-29T23:50:59	0.03	3322	0	0	0	2.99	0
4	Break Formation	2024-04-29T23:52:13	10.54	5853	0	0	327.79	365.15	0
5	Pump Acid	2024-04-29T23:53:55	13.09	5084	0	0	1057	1141	0
6	Spot Acid	2024-04-30T00:01:40	43.64	7355	0	0	12137	12299	154.48
7	Flush Acid	2024-04-30T00:02:21	45.41	6079	0	0	13397	13567	154.48
8	Stop Pumping	2024-04-30T01:39:42	0	4841	0	0	389139	405384	351516
9	ISIP	2024-04-30T01:40:01	0	4176	0	0	389141	405384	351516
10	Shut In Well	2024-04-30T01:40:21	0	3989	0	0	389141	405384	351516
11	Suspending Job	2024-04-30T01:41:23	0	-6.53	0	0	389141	405384	351516

TREATMENT PLOT : Treatment Interval 4



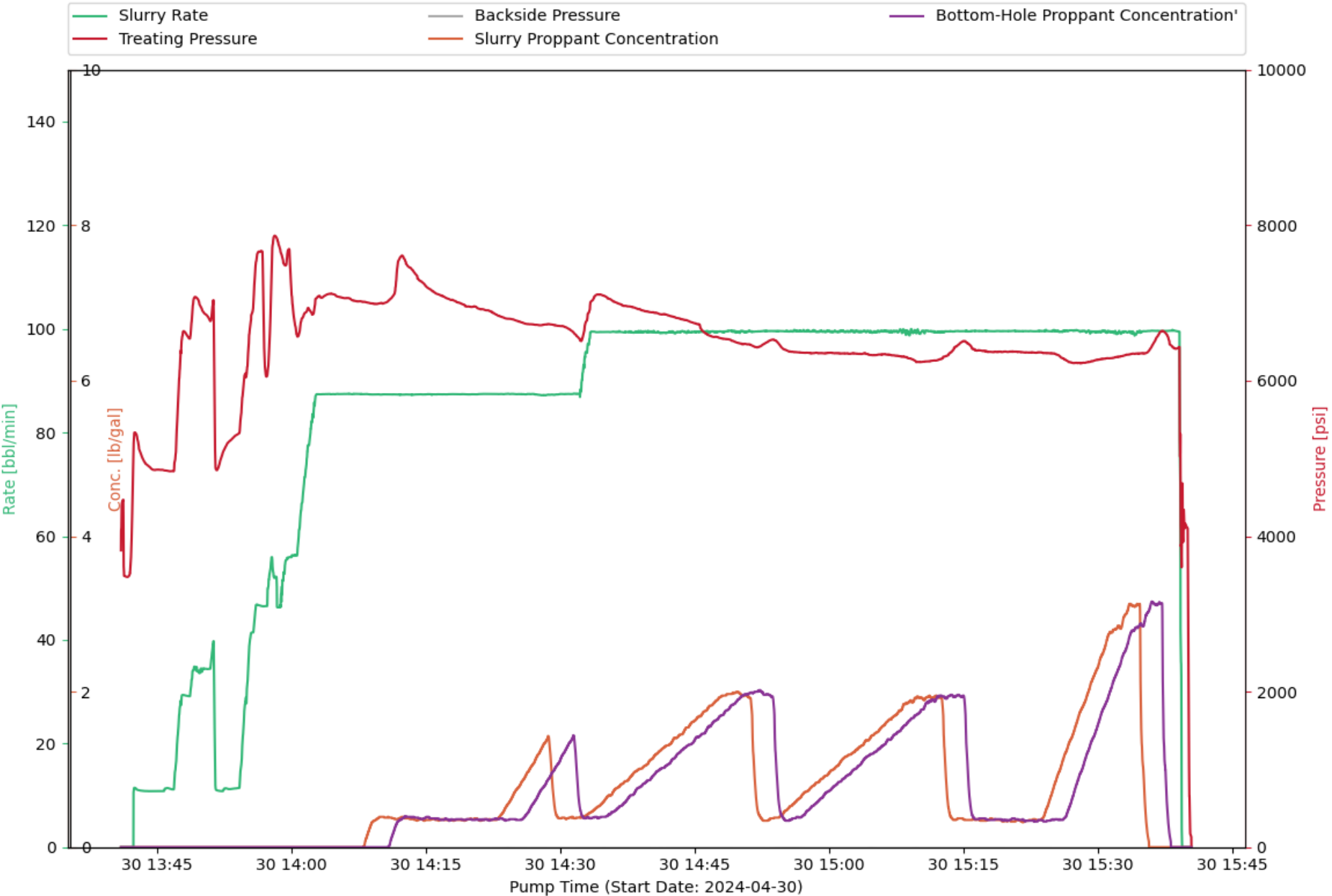
CHEMISTRY PLOT : Treatment Interval 4



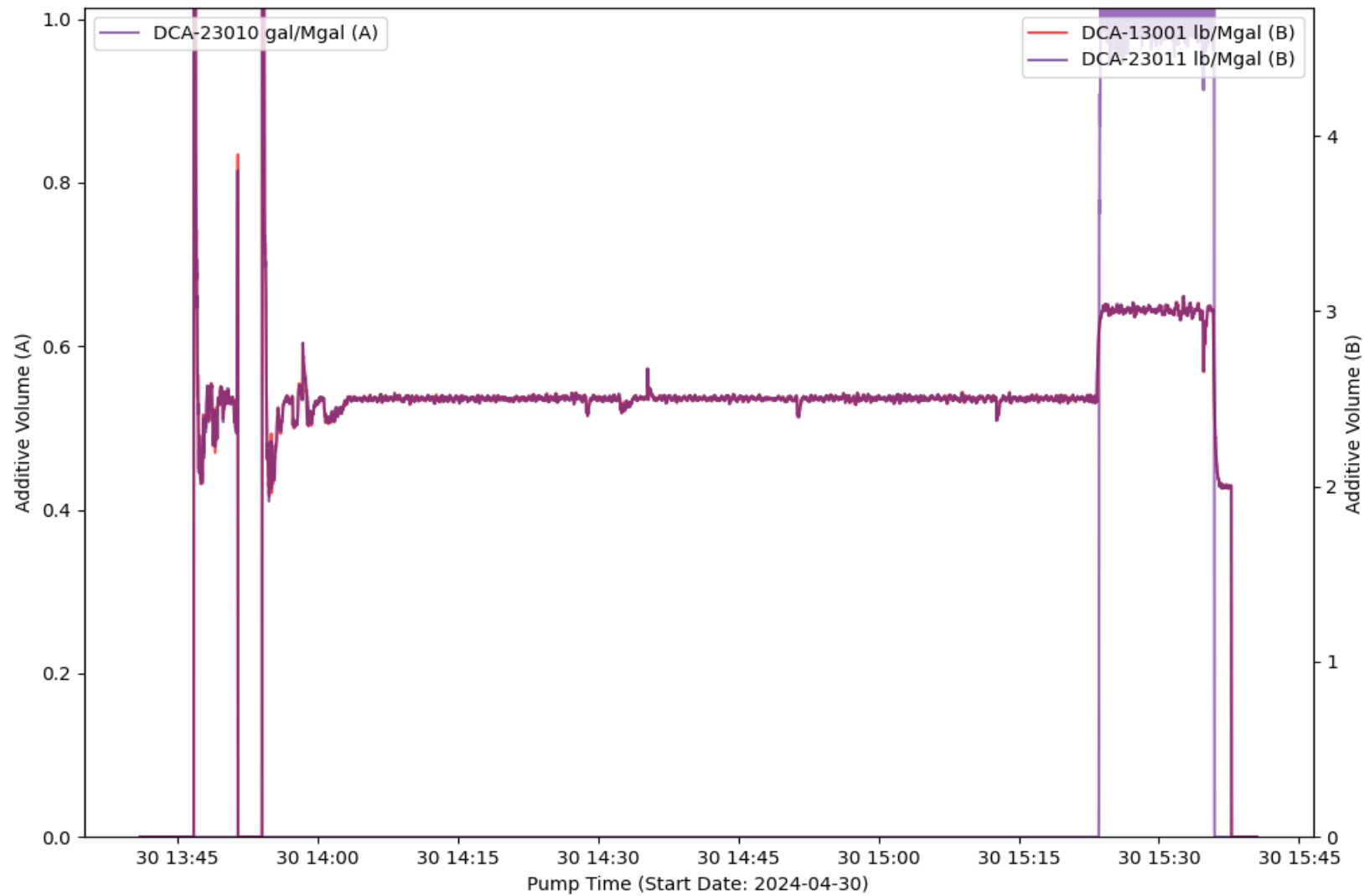
EVENT LOG : TREATMENT INTERVAL 4

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-30T07:51:03	0	3745	0	0	0	0	0
2	Start Pumping	2024-04-30T07:51:41	0.56	3743	0	0	2.2	3.6	0
3	Pump Acid	2024-04-30T07:54:14	11.49	4825	0	0	1073	1122	0
4	Pump Acid	2024-04-30T07:57:08	11.46	4747	0	0	2372	2532	0
5	Break Formation	2024-04-30T08:01:45	40.13	6856	0	0	6141	6401	0
6	Spot Acid	2024-04-30T08:04:40	43.79	7094	0	0	11336	11665	0
7	Flush Acid	2024-04-30T08:04:56	43.85	6044	0	0	11824	12161	0
8	Spot Acid	2024-04-30T08:05:09	43.9	5906	0	0	12192	12533	0
9	Flush Acid	2024-04-30T08:05:41	44.01	5687	0	0	13171	13528	0
10	Stop Pumping	2024-04-30T09:41:32	2.22	3681	0	0	392997	409871	347859
11	ISIP	2024-04-30T09:42:04	0	4282	0	0	393002	409872	347859
12	Shut In Well	2024-04-30T09:42:11	0	4095	0	0	393002	409872	347859
13	Suspending Job	2024-04-30T09:42:53	0	84.31	0	0	393002	409872	347859

TREATMENT PLOT : Treatment Interval 5



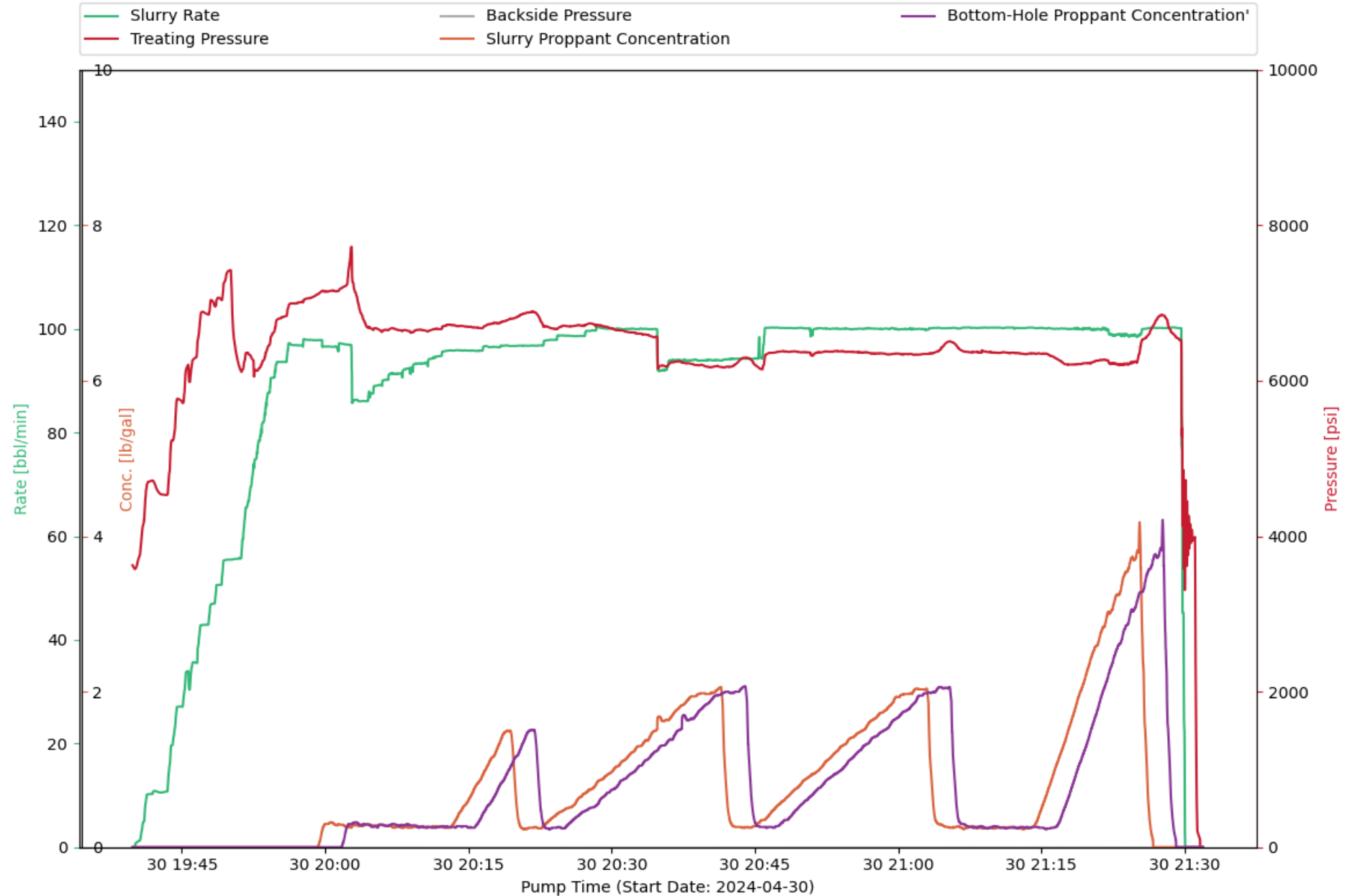
CHEMISTRY PLOT : Treatment Interval 5



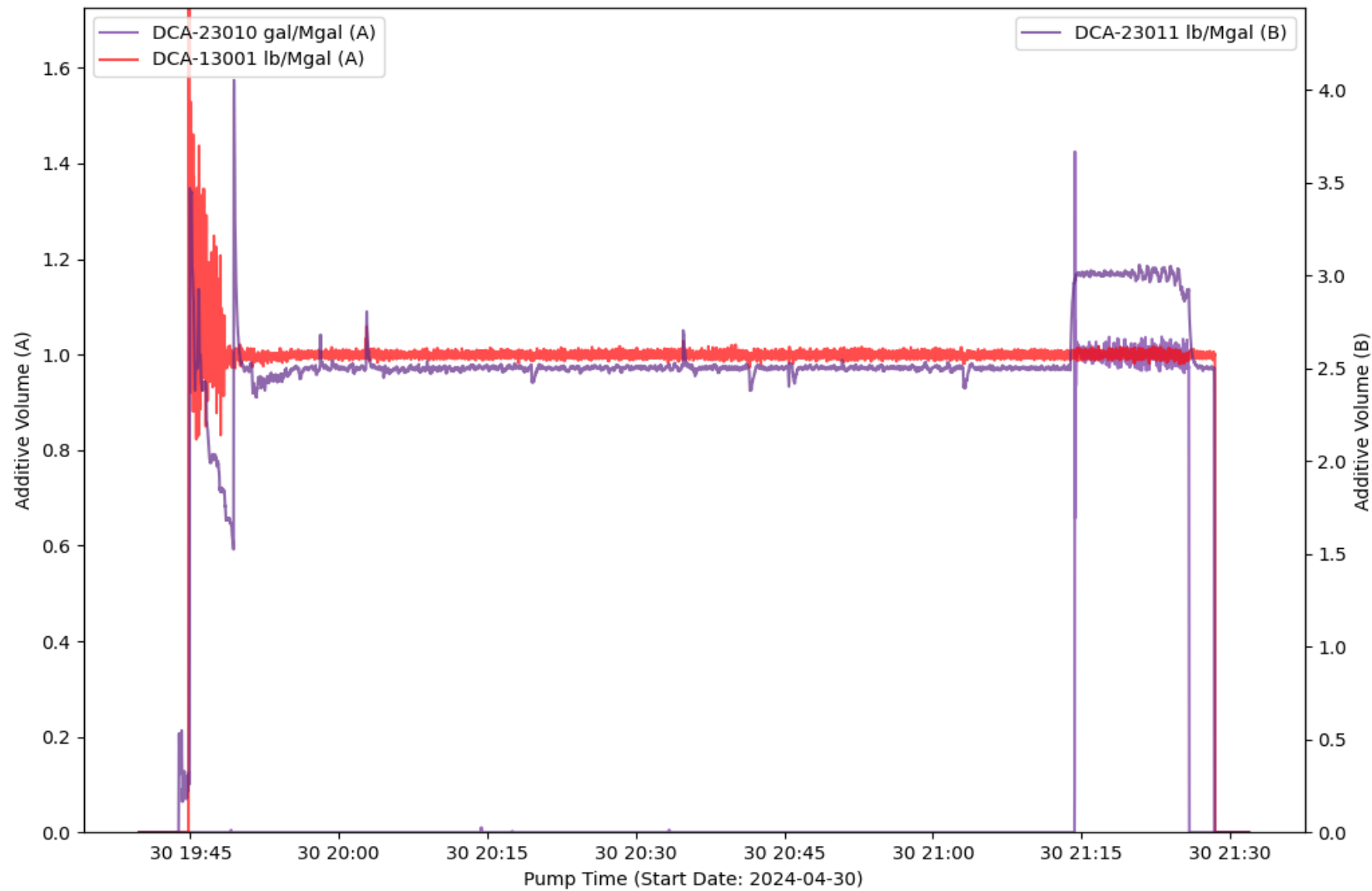
EVENT LOG : TREATMENT INTERVAL 5

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-30T13:41:28	0	3485	0	0	0	0	0
2	Start Pumping	2024-04-30T13:41:58	0	3507	0	0	0	0	0
3	Pump Acid	2024-04-30T13:44:43	10.81	4852	0	0	1117	1074	0
4	Break Formation	2024-04-30T13:49:33	33.91	7054	0	0	5204	5188	0
5	Pump Acid	2024-04-30T13:52:21	10.81	5067	0	0	8339	8381	0
6	Spot Acid	2024-04-30T13:56:42	46.52	7667	0	0	12830	12974	0
7	Flush Acid	2024-04-30T13:57:09	46.51	6075	0	0	13706	13860	0
8	Spot Acid	2024-04-30T13:59:41	55.91	7685	0	0	19122	19335	0
9	Flush Acid	2024-04-30T14:00:48	59.22	6576	0	0	21723	21961	0
10	Stop Pumping	2024-04-30T15:39:25	1.76	4415	0	0	400158	416206	339550
11	ISIP	2024-04-30T15:39:48	0	4160	0	0	400160	416207	339550
12	Shut In Well	2024-04-30T15:40:01	0	4107	0	0	400160	416207	339550
13	Suspending Job	2024-04-30T15:40:28	0	131.28	0	0	400160	416207	339550

TREATMENT PLOT : Treatment Interval 6



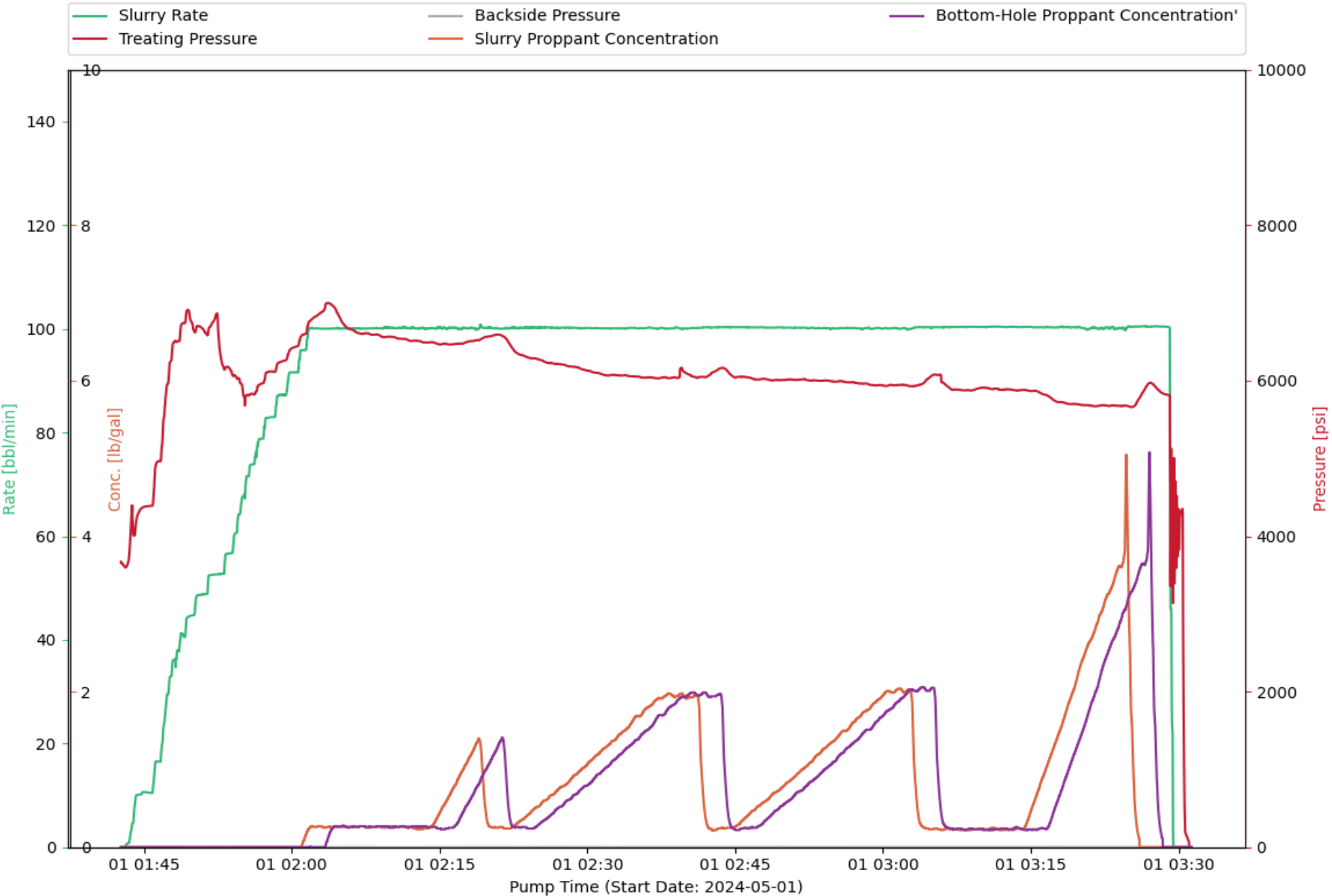
CHEMISTRY PLOT : Treatment Interval 6



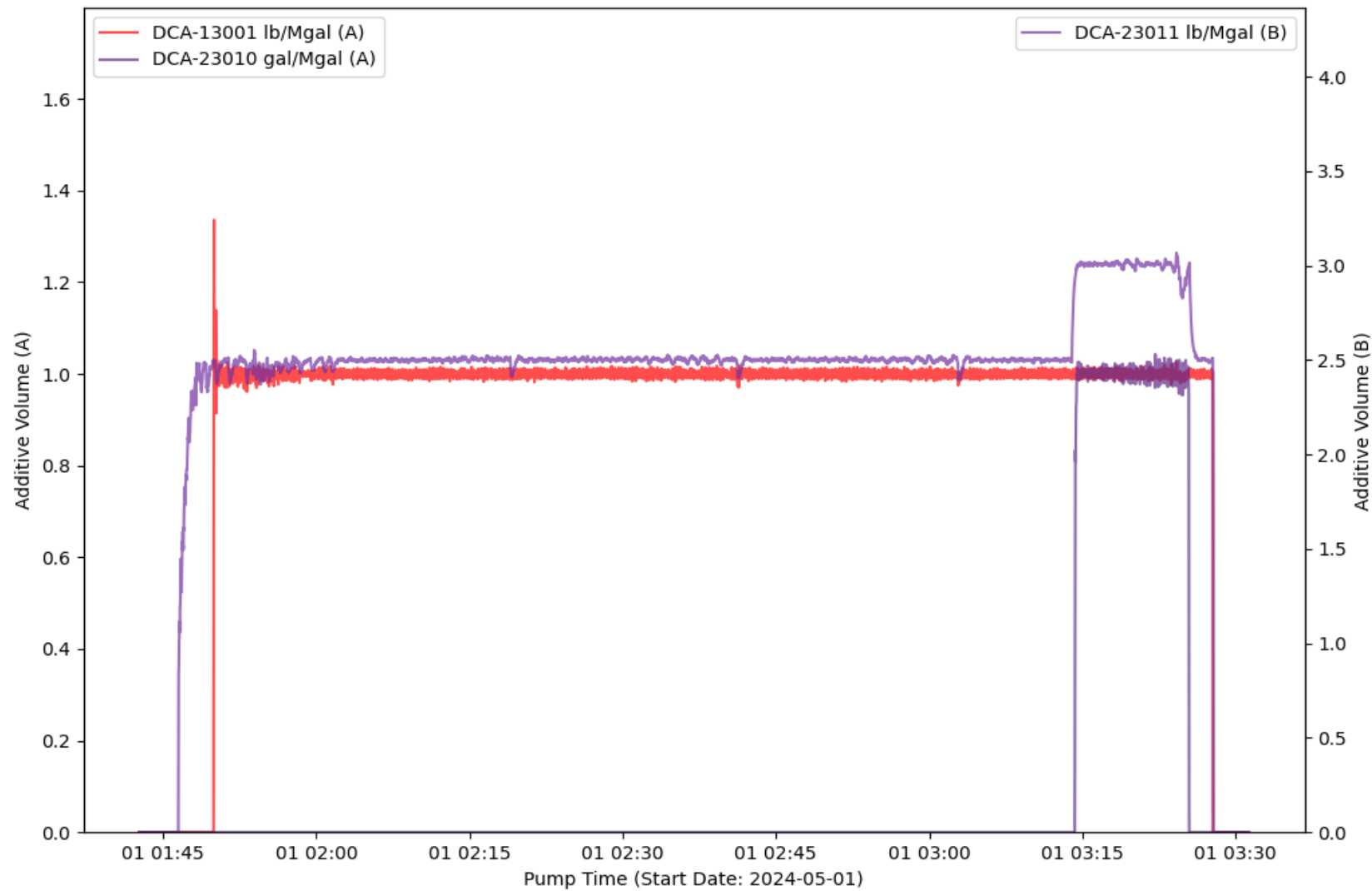
EVENT LOG : TREATMENT INTERVAL 6

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-30T19:39:50	0	3626	0	0	0	0	0
2	Start Pumping	2024-04-30T19:40:06	0.31	3578	0	0	0	0.26	0
3	Break Formation	2024-04-30T19:40:54	4.47	4124	0	0	22.23	56.84	0
4	Pump Acid	2024-04-30T19:41:42	10.26	4708	0	0	340.16	341.37	0
5	Spot Acid	2024-04-30T19:50:05	55.49	7424	0	0	11626	11772	0
6	Flush Acid	2024-04-30T19:51:10	55.76	6135	0	0	14164	14327	0
7	Stop Pumping	2024-04-30T21:30:02	1.11	3744	0	0	400192	415478	335101
8	ISIP	2024-04-30T21:30:05	0	4410	0	0	400196	415478	335101
9	Shut In Well	2024-04-30T21:30:53	0	3959	0	0	400201	415478	335101
10	Suspending Job	2024-04-30T21:31:53	0	-5.18	0	0	400201	415478	335101

TREATMENT PLOT : Treatment Interval 7



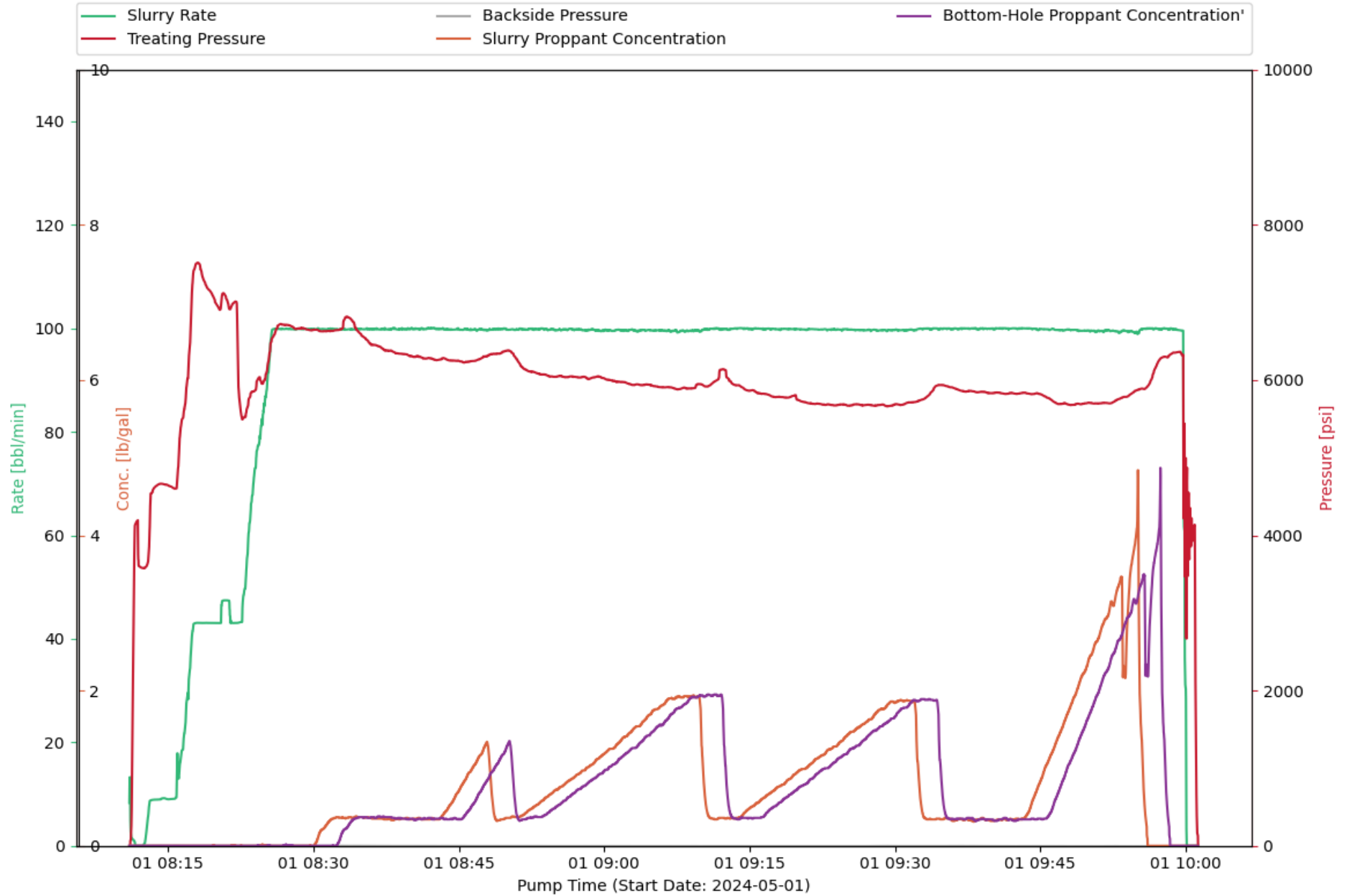
CHEMISTRY PLOT : Treatment Interval 7



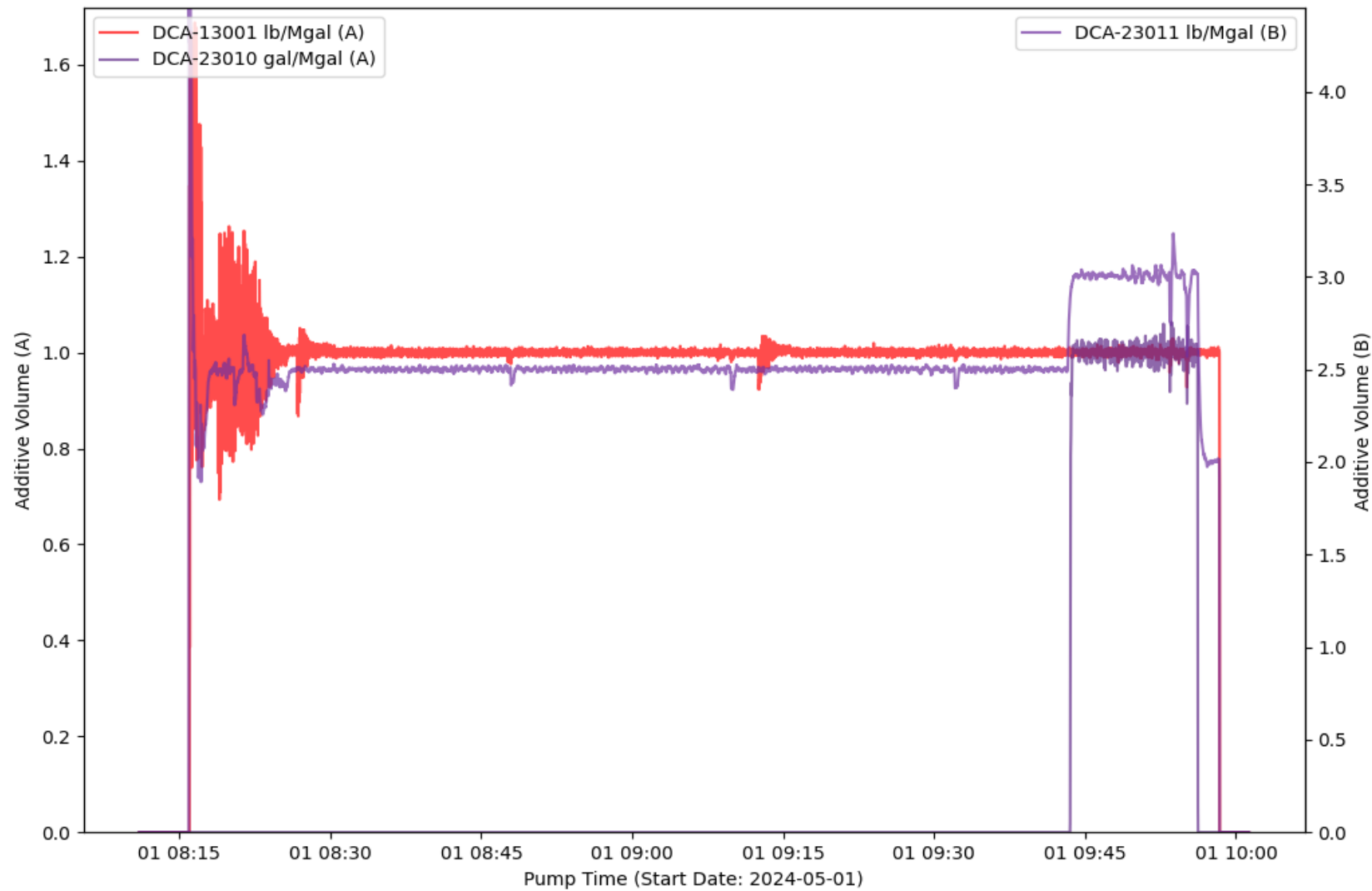
EVENT LOG : TREATMENT INTERVAL 7

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-01T01:42:40	0	3671	0	0	0	0	0
2	Start Pumping	2024-05-01T01:43:08	0.07	3596	0	0	1.72	0.06	0
3	Break Formation	2024-05-01T01:43:47	4.24	4397	0	0	8.73	42.92	0
4	Pump Acid	2024-05-01T01:44:18	10.07	4253	0	0	187.68	202.94	0
5	Spot Acid	2024-05-01T01:52:26	52.61	6865	0	0	11398	11525	0
6	Flush Acid	2024-05-01T01:53:09	53.39	6144	0	0	12954	13091	0
7	Stop Pumping	2024-05-01T03:29:27	1.27	3863	0	0	395117	409916	325074
8	ISIP	2024-05-01T03:29:30	0	4872	0	0	395118	409916	325074
9	Shut In Well	2024-05-01T03:30:16	0	4323	0	0	395121	409916	325074
10	Suspending Job	2024-05-01T03:31:17	0	-5.54	0	0	395121	409916	325074

TREATMENT PLOT : Treatment Interval 8



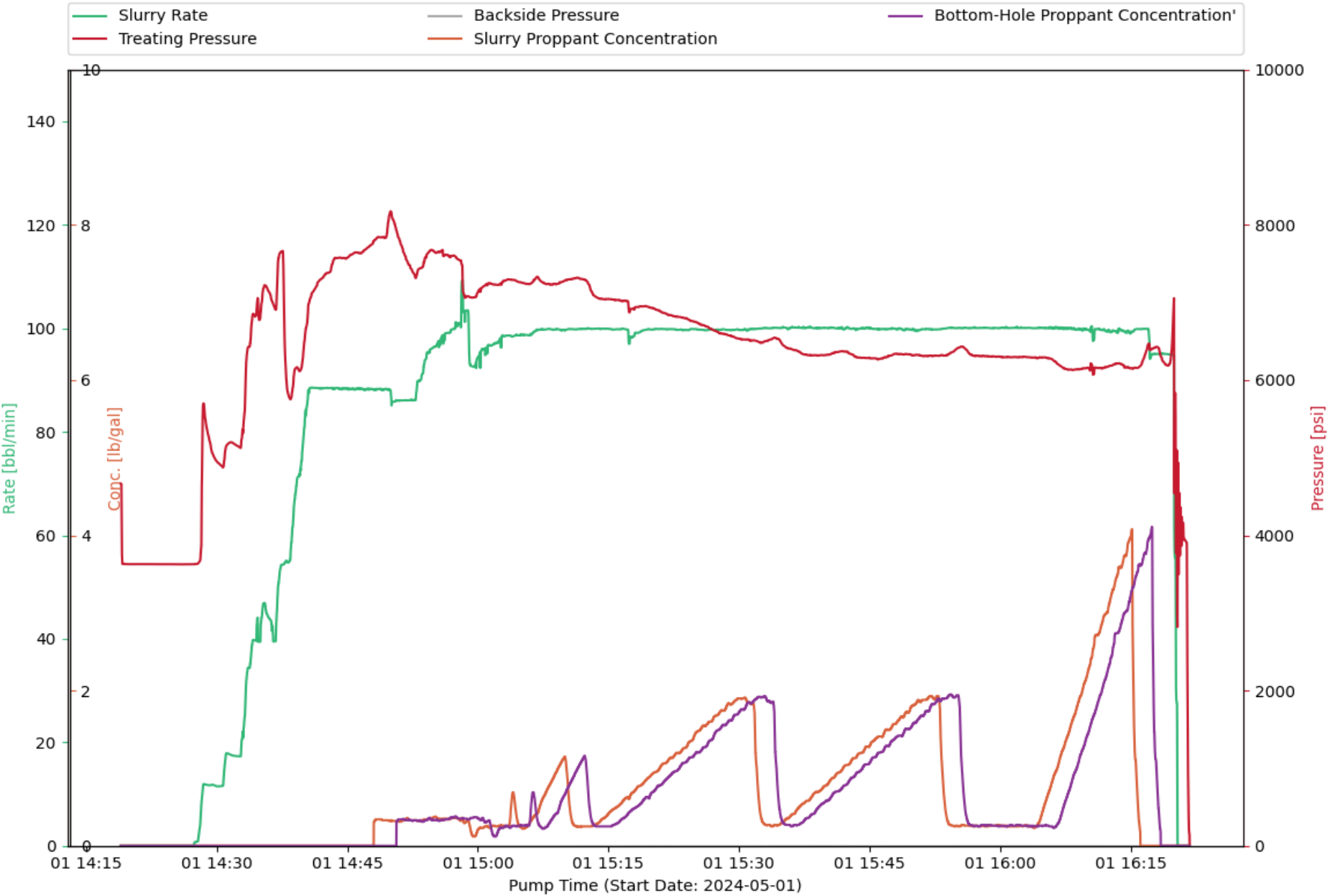
CHEMISTRY PLOT : Treatment Interval 8



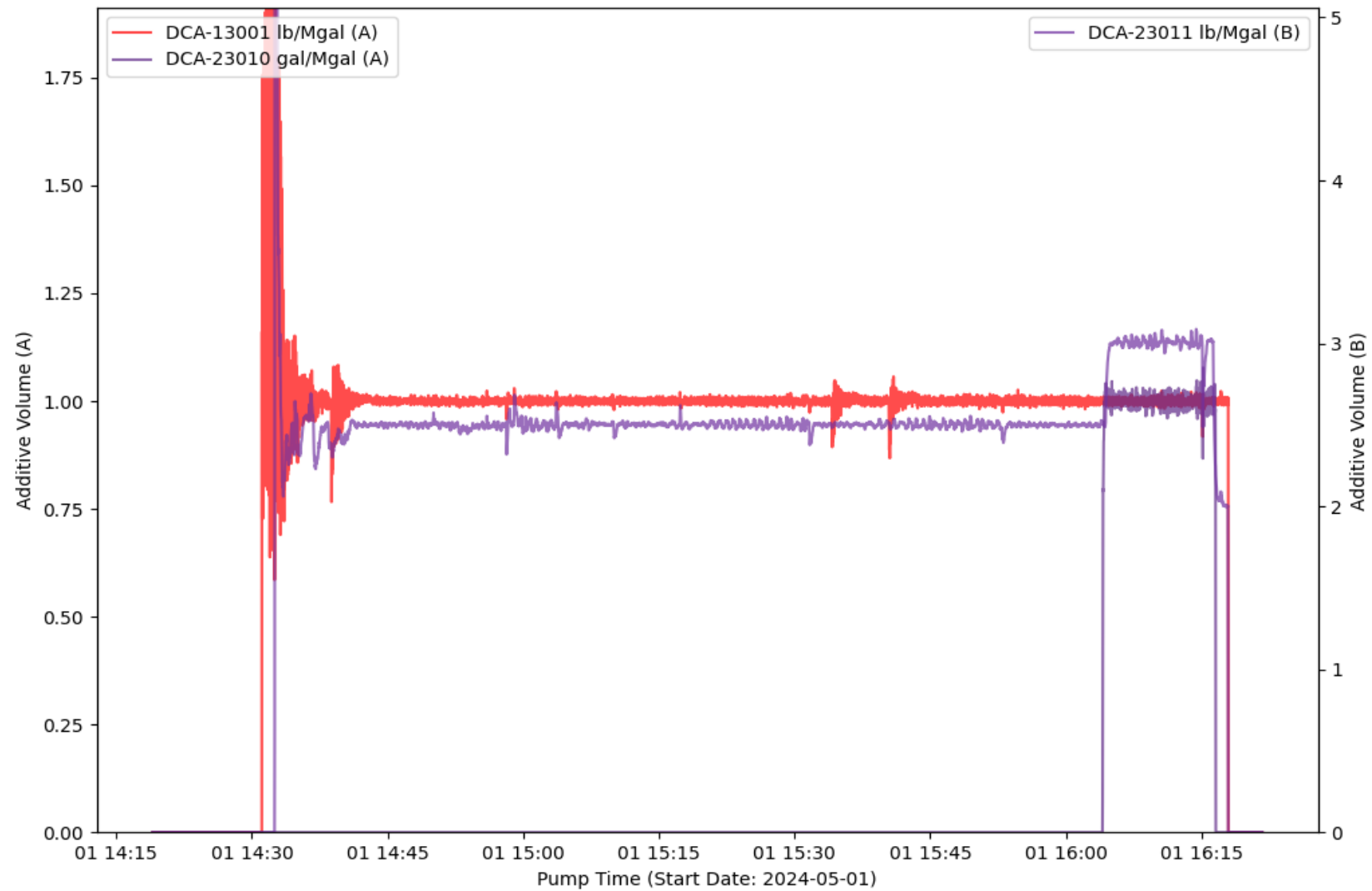
EVENT LOG : TREATMENT INTERVAL 8

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-01T08:11:59	0	3604	0	0	0.12	0	0
2	Start Pumping	2024-05-01T08:12:35	0.48	3577	0	0	4.24	2.04	0
3	Pump Acid	2024-05-01T08:14:15	8.99	4664	0	0	583.96	528.66	0
4	Break Formation	2024-05-01T08:18:21	43.1	7427	0	0	4309	4325	0
5	Spot Acid	2024-05-01T08:21:56	43.04	7010	0	0	10842	10974	6.02
6	Flush Acid	2024-05-01T08:22:41	46.82	5496	0	0	12199	12352	6.32
7	Stop Pumping	2024-05-01T10:00:08	0	4794	0	0	400644	416545	339294
8	ISIP	2024-05-01T10:00:36	0	4186	0	0	400649	416545	339294
9	Shut In Well	2024-05-01T10:00:48	0	4102	0	0	400649	416545	339294
10	Suspending Job	2024-05-01T10:01:16	0	128.5	0	0	400649	416545	339294

TREATMENT PLOT : Treatment Interval 9



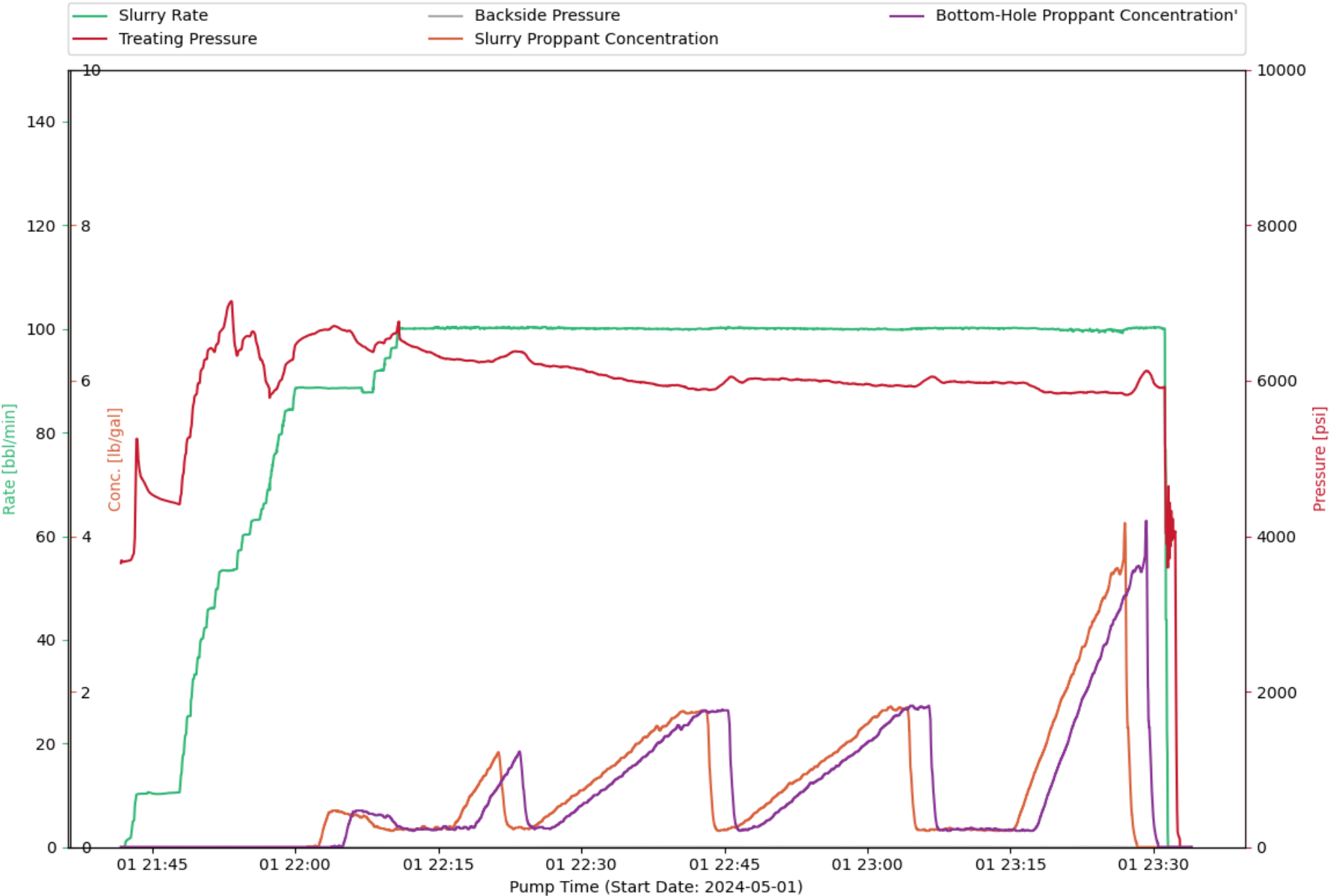
CHEMISTRY PLOT : Treatment Interval 9



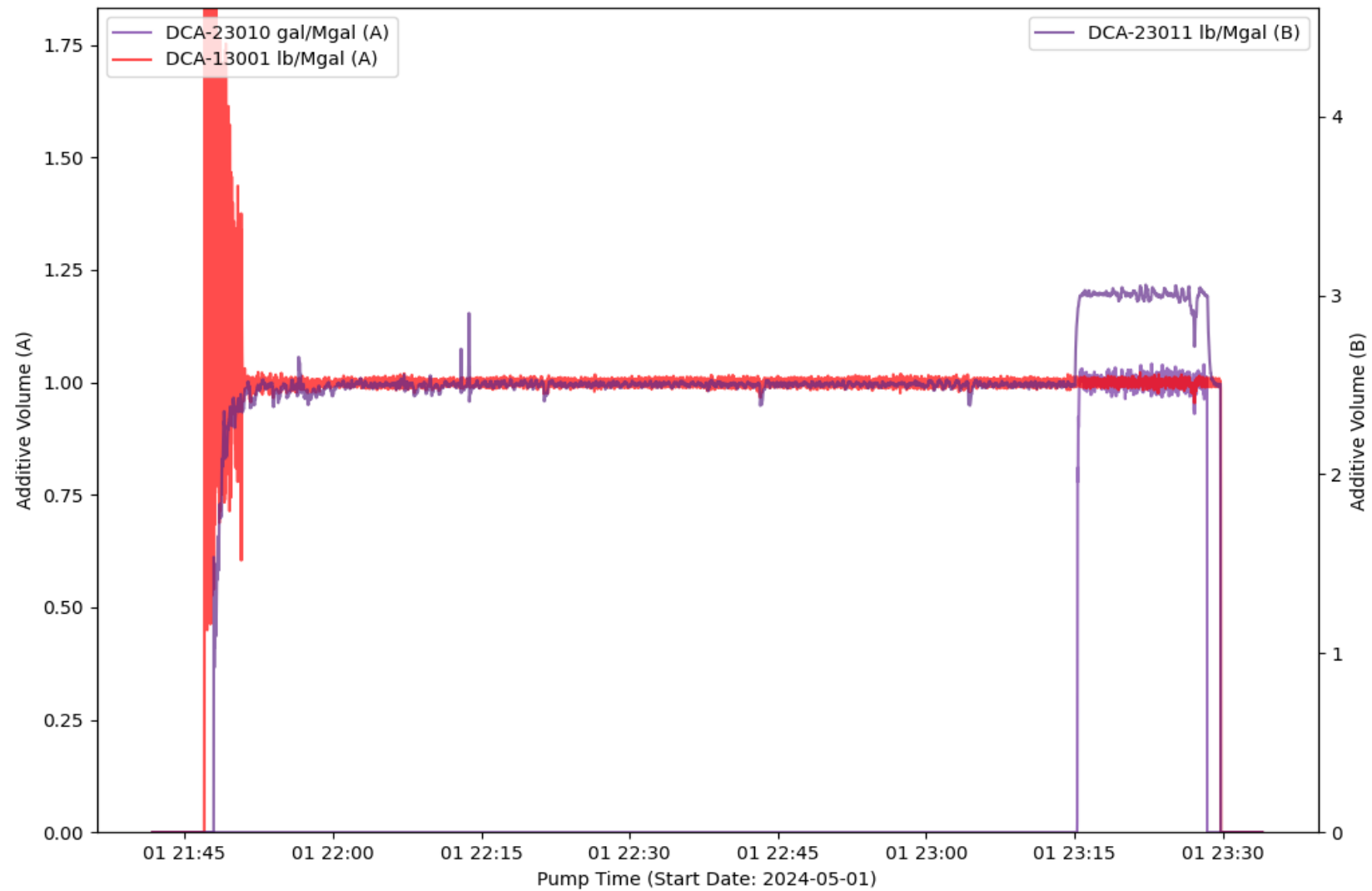
EVENT LOG : TREATMENT INTERVAL 9

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-01T14:19:16	0	3636	0	0	0.16	0	0
2	Start Pumping	2024-05-01T14:27:47	0.81	3632	0	0	51.73	11.59	0
3	Break Formation	2024-05-01T14:28:35	11.93	5650	0	0	140.25	231.42	0
4	Pump Acid	2024-05-01T14:29:19	11.74	5155	0	0	524.26	589.06	0
5	Spot Acid	2024-05-01T14:37:32	54.32	7661	0	0	10564	10757	0
6	Flush Acid	2024-05-01T14:38:11	54.75	5833	0	0	12051	12264	0
7	Stop Pumping	2024-05-01T16:20:20	0	4124	0	0	413398	428526	317120
8	ISIP	2024-05-01T16:20:31	0	4542	0	0	413398	428526	317120
9	Shut In Well	2024-05-01T16:20:52	0	3991	0	0	413398	428526	317120
10	Suspending Job	2024-05-01T16:21:42	0	147.57	0	0	413398	428526	317120

TREATMENT PLOT : Treatment Interval 10



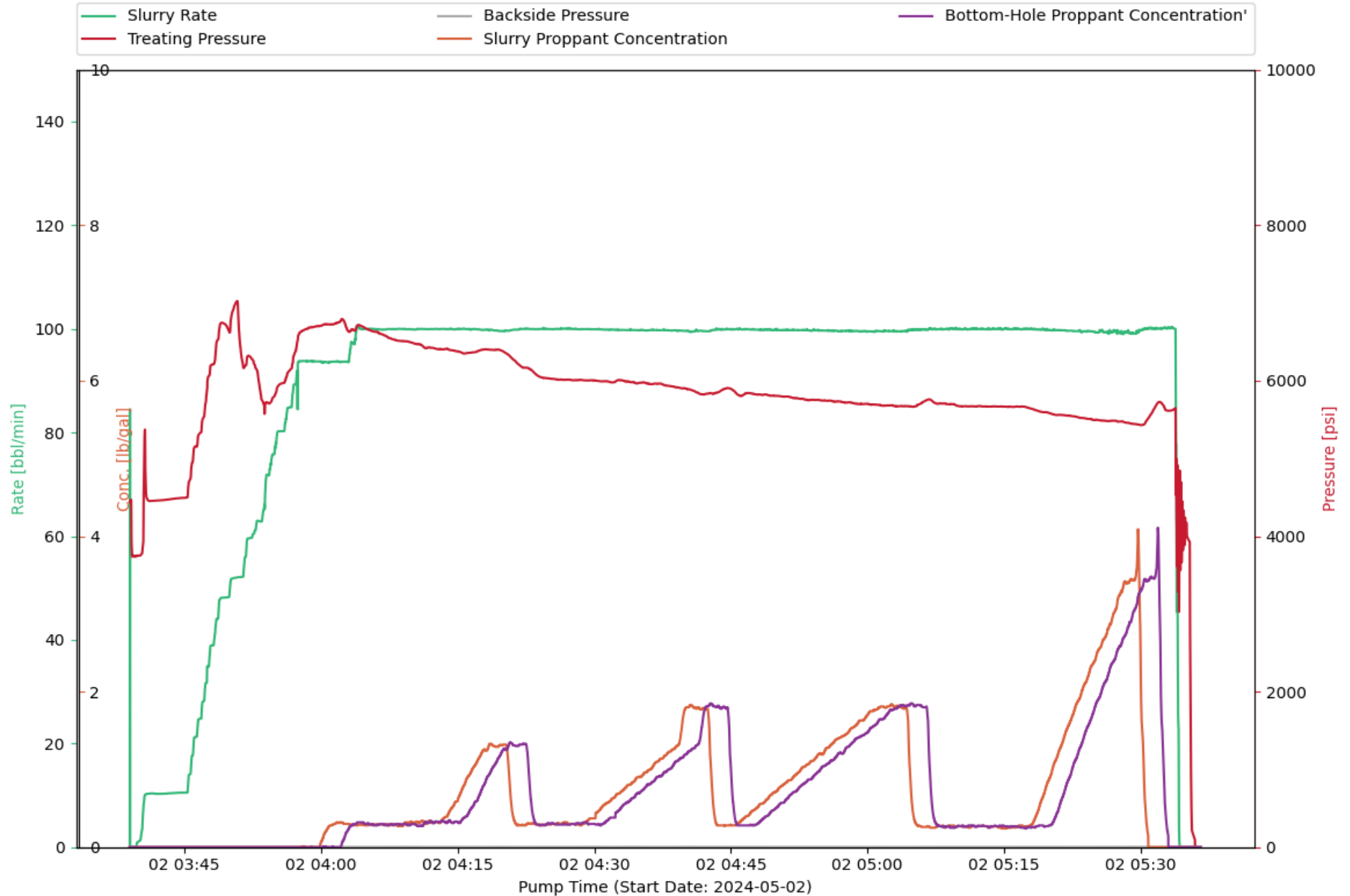
CHEMISTRY PLOT : Treatment Interval 10



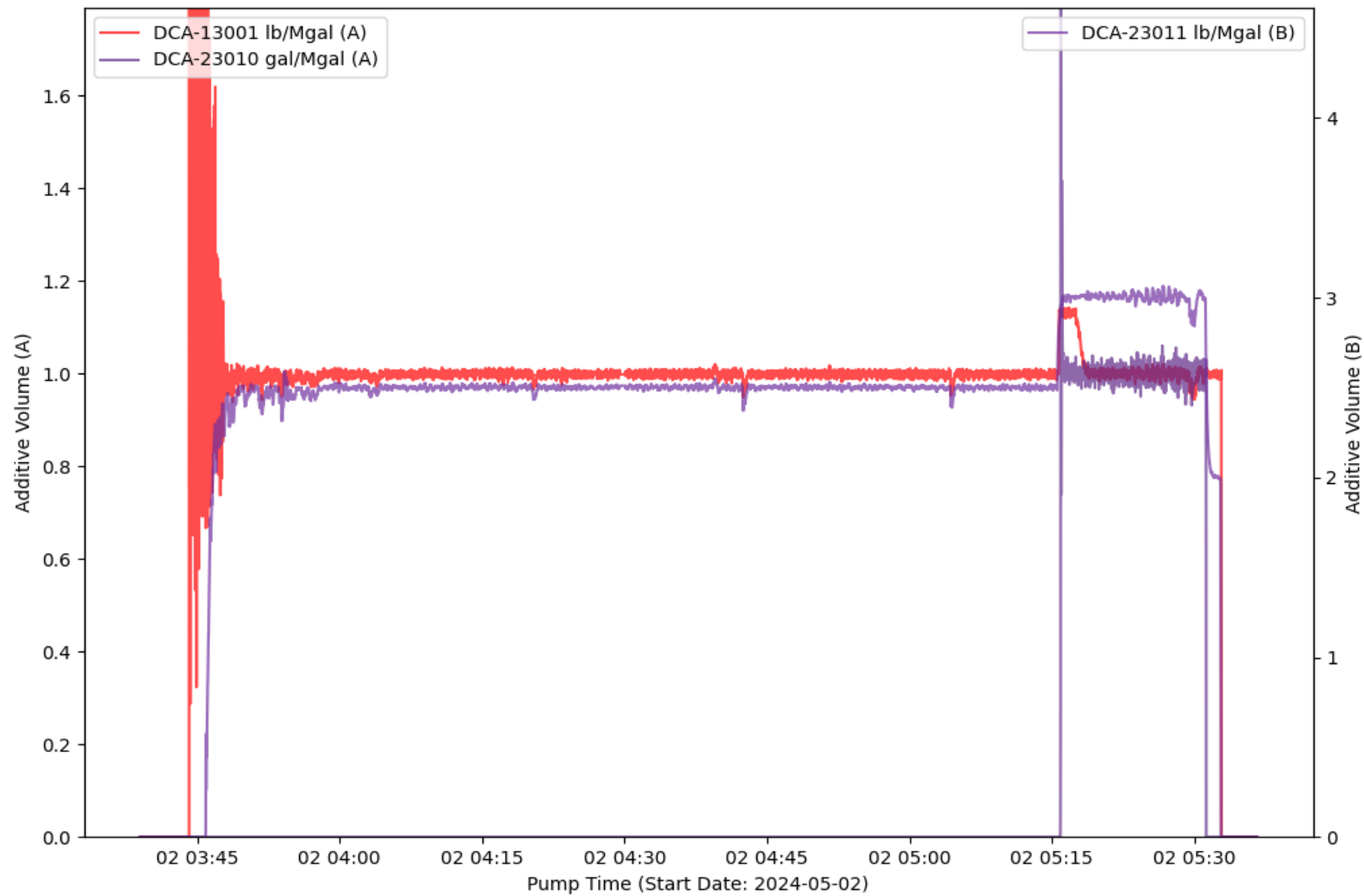
EVENT LOG : TREATMENT INTERVAL 10

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-01T21:41:44	0	3654	0	0	0	0	0
2	Start Pumping	2024-05-01T21:42:08	0.01	3673	0	0	3.23	0.01	0
3	Break Formation	2024-05-01T21:43:21	10.09	5210	0	0	141.58	183.77	0
4	Pump Acid	2024-05-01T21:44:10	10.32	4692	0	0	529.42	532.68	0
5	Spot Acid	2024-05-01T21:53:18	53.38	7024	0	0	11128	11203	0
6	Flush Acid	2024-05-01T21:53:52	53.68	6328	0	0	12370	12453	0
7	Stop Pumping	2024-05-01T23:31:31	1.17	3596	0	0	395461	409729	308934
8	ISIP	2024-05-01T23:31:34	0	4543	0	0	395462	409729	308934
9	Shut In Well	2024-05-01T23:32:07	0	4015	0	0	395465	409729	308934
10	Suspending Job	2024-05-01T23:33:58	0	-17.63	0	0	395467	409729	308934

TREATMENT PLOT : Treatment Interval 11



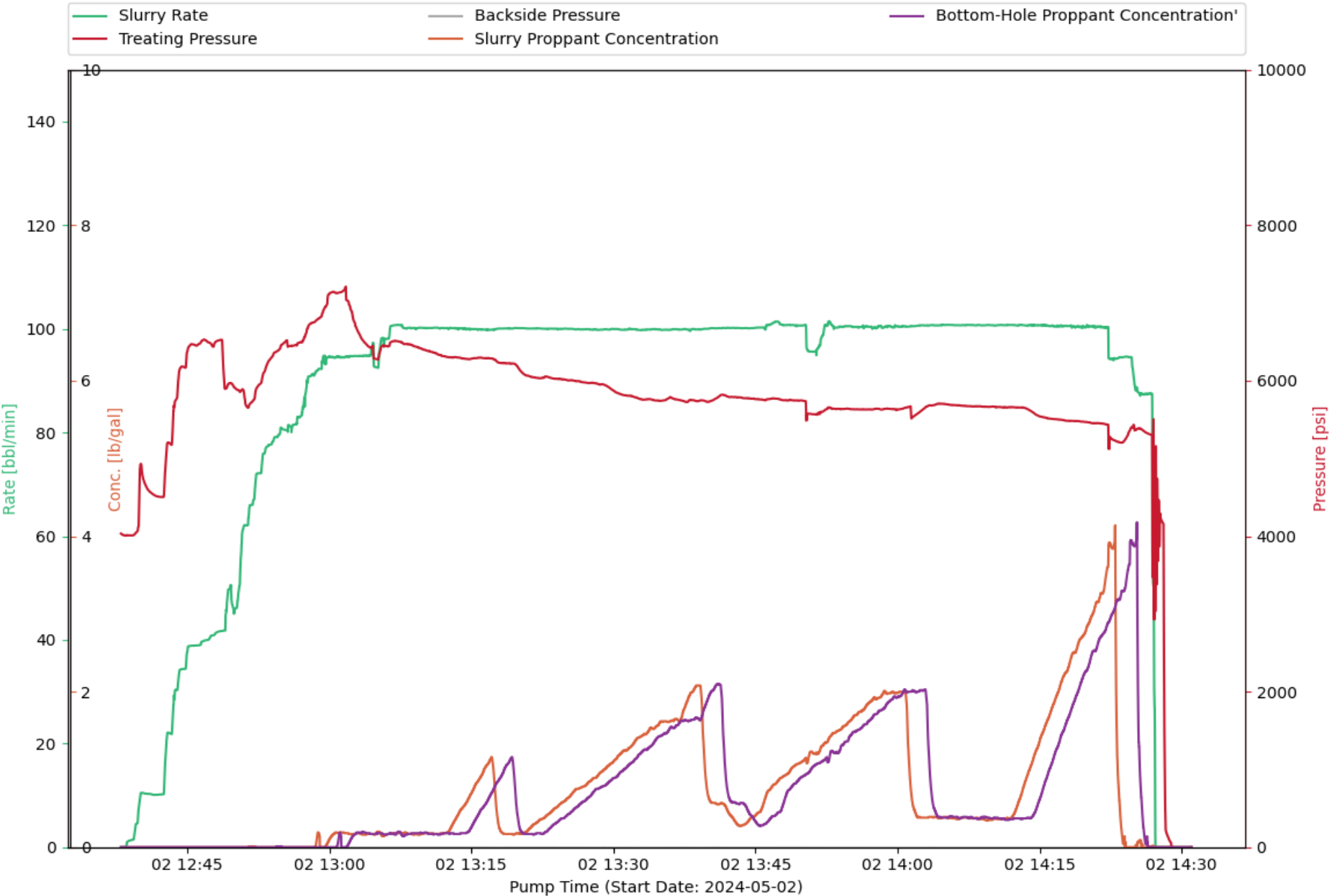
CHEMISTRY PLOT : Treatment Interval 11



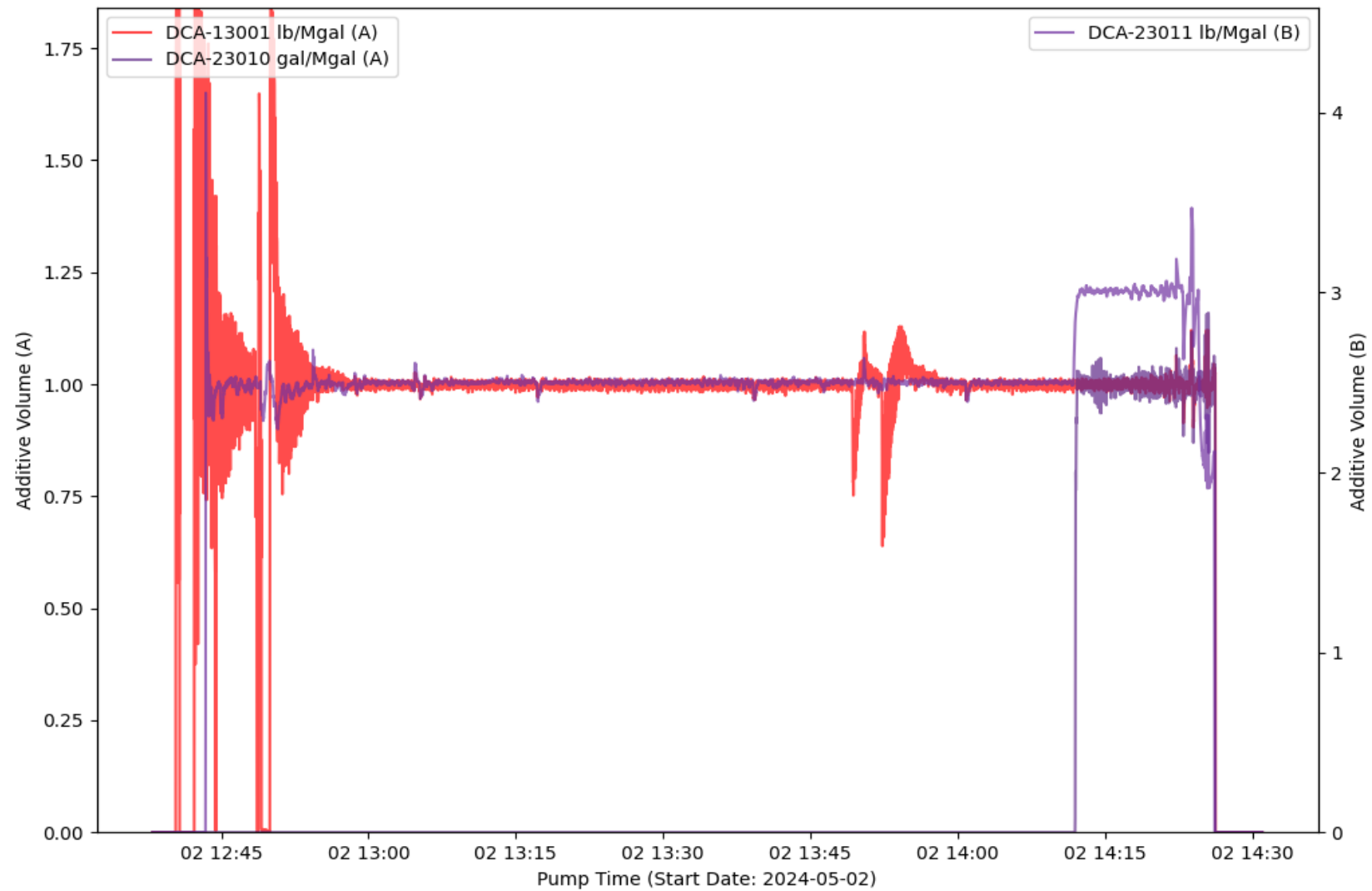
EVENT LOG : TREATMENT INTERVAL 11

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-02T03:39:15	0	3742	0	0	3.74	0	0
2	Start Pumping	2024-05-02T03:39:44	0.21	3747	0	0	177.64	0.16	0
3	Break Formation	2024-05-02T03:40:39	9.98	5330	0	0	261.27	129.97	0
4	Pump Acid	2024-05-02T03:40:50	10.26	4503	0	0	357.15	208.64	0
5	Spot Acid	2024-05-02T03:50:49	52.04	7025	0	0	10823	10608	0
6	Flush Acid	2024-05-02T03:51:29	52.46	6164	0	0	12297	12081	0
7	Stop Pumping	2024-05-02T05:34:15	0.8	4331	0	0	419408	433496	317906
8	ISIP	2024-05-02T05:34:58	0	4044	0	0	419411	433496	317906
9	Shut In Well	2024-05-02T05:35:16	0	3946	0	0	419411	433496	317906

TREATMENT PLOT : Treatment Interval 12



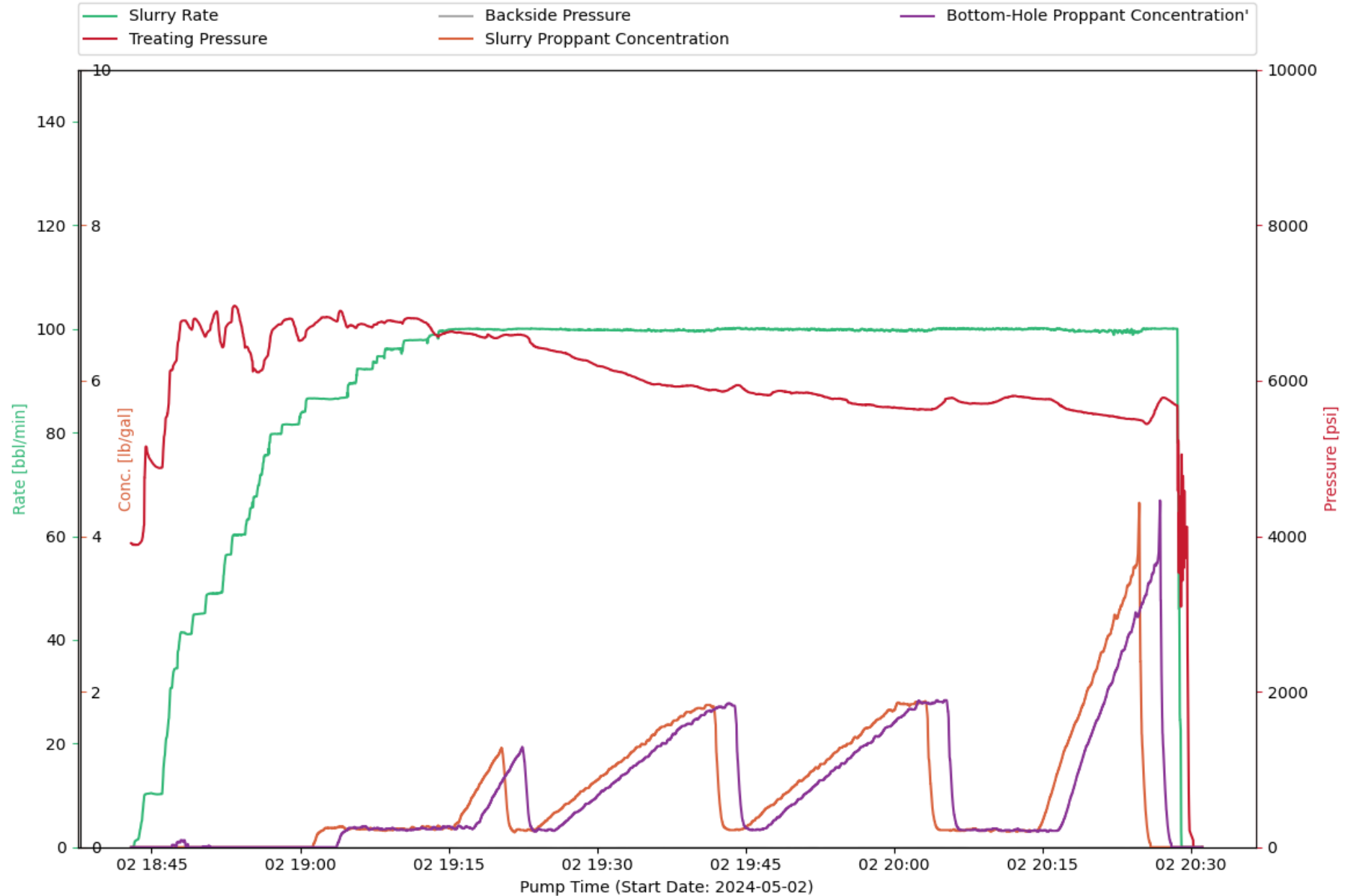
CHEMISTRY PLOT : Treatment Interval 12



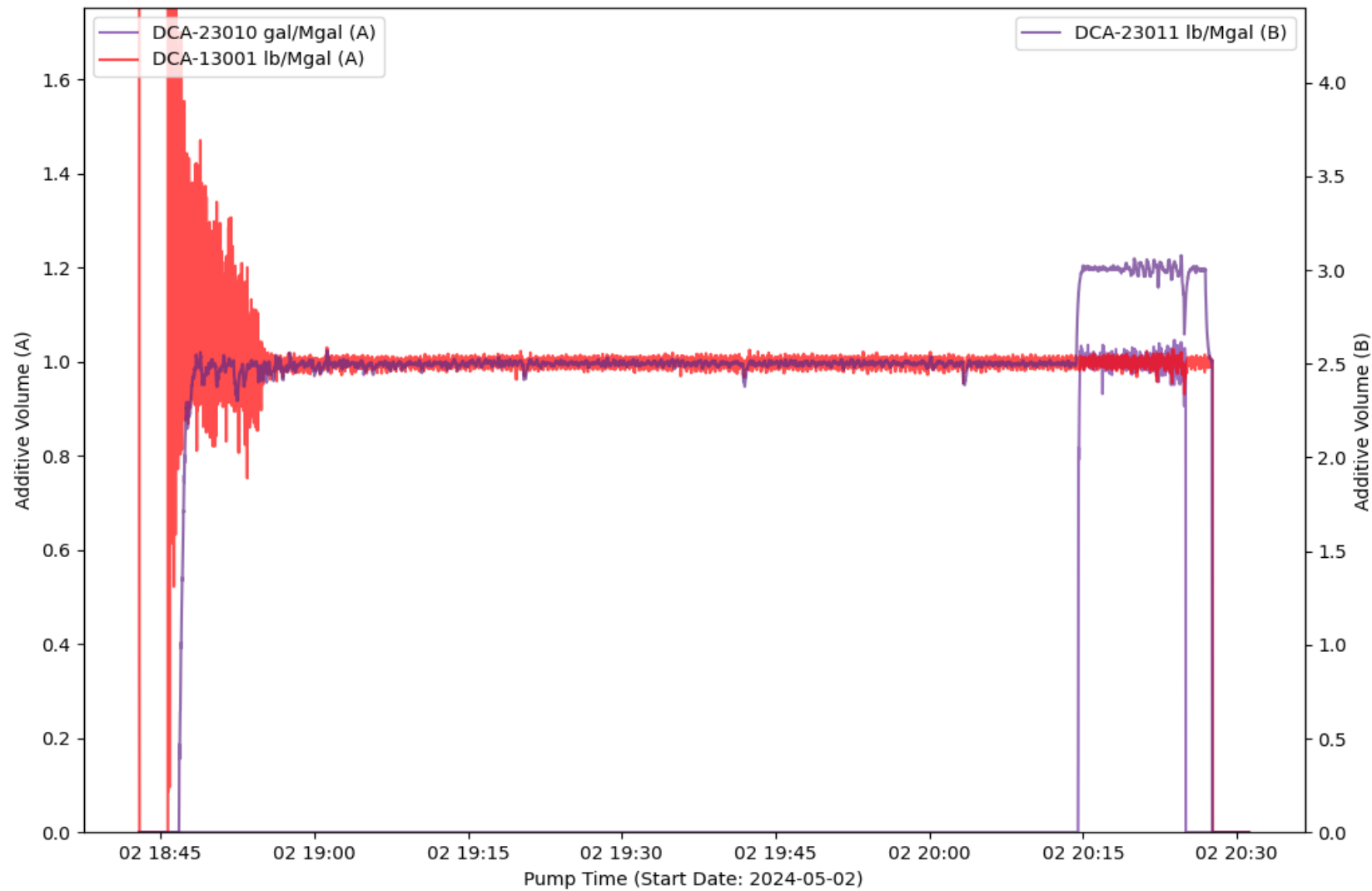
EVENT LOG : TREATMENT INTERVAL 12

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-02T12:38:06	0	4025	0	0	0	0	0
2	Start Pumping	2024-05-02T12:38:36	0.59	4013	0	0	1.03	0.85	0
3	Break Formation	2024-05-02T12:40:07	10.47	4929	0	0	218.47	233.4	0
4	Pump Acid	2024-05-02T12:40:47	10.29	4609	0	0	513.25	526.3	0
5	Spot Acid	2024-05-02T12:48:35	41.71	6526	0	0	10302	10189	0
6	Flush Acid	2024-05-02T12:49:00	41.81	5894	0	0	11042	10925	0
7	Stop Pumping	2024-05-02T14:27:14	0	3643	0	0	394314	408945	315215
8	ISIP	2024-05-02T14:27:44	0	4292	0	0	394314	408945	315215
9	Shut In Well	2024-05-02T14:28:06	0	3398	0	0	394314	408945	315215
10	Suspending Job	2024-05-02T14:31:01	0	-11.04	0	0	394314	408945	315215

TREATMENT PLOT : Treatment Interval 13



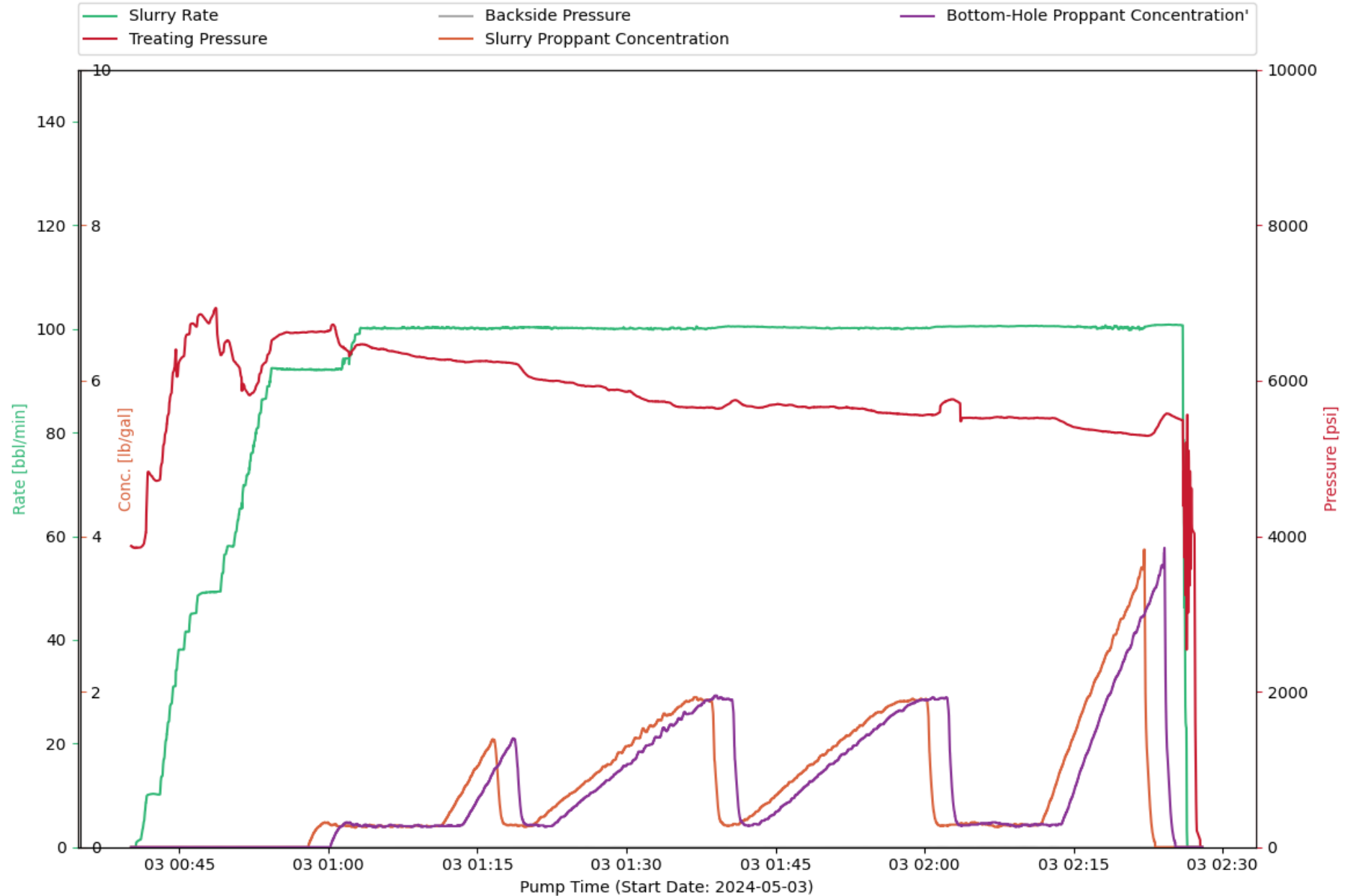
CHEMISTRY PLOT : Treatment Interval 13



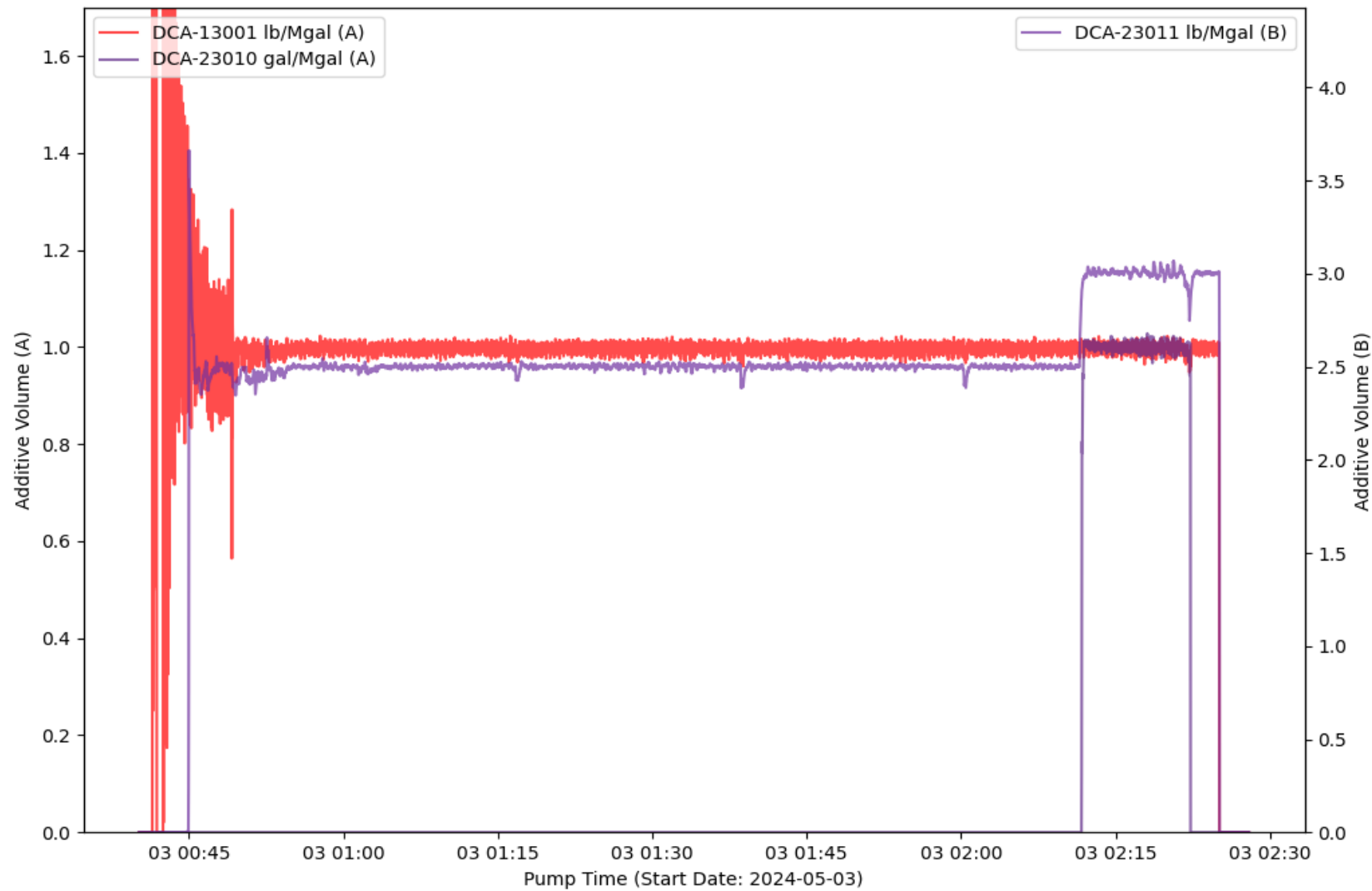
EVENT LOG : TREATMENT INTERVAL 13

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-05-02T18:43:13	0.14	3890	0	0	0.64	0.09	0
2	Break Formation	2024-05-02T18:44:21	10.23	5004	0	0	158.6	185.43	0
3	Pump Acid	2024-05-02T18:44:35	10.32	5068	0	0	263.91	286.96	0
4	Spot Acid	2024-05-02T18:51:36	48.99	6887	0	0	10183	10114	0
5	Flush Acid	2024-05-02T18:52:07	49.11	6440	0	0	11256	11187	0
6	Stop Pumping	2024-05-02T20:29:02	3.17	3440	0	0	389134	402552	297807
7	ISIP	2024-05-02T20:29:04	0.07	4702	0	0	389135	402553	297807
8	Shut In Well	2024-05-02T20:29:31	0	4092	0	0	389137	402553	297807
9	Suspending Job	2024-05-02T20:31:09	0	-10.27	0	0	389137	402553	297807

TREATMENT PLOT : Treatment Interval 14



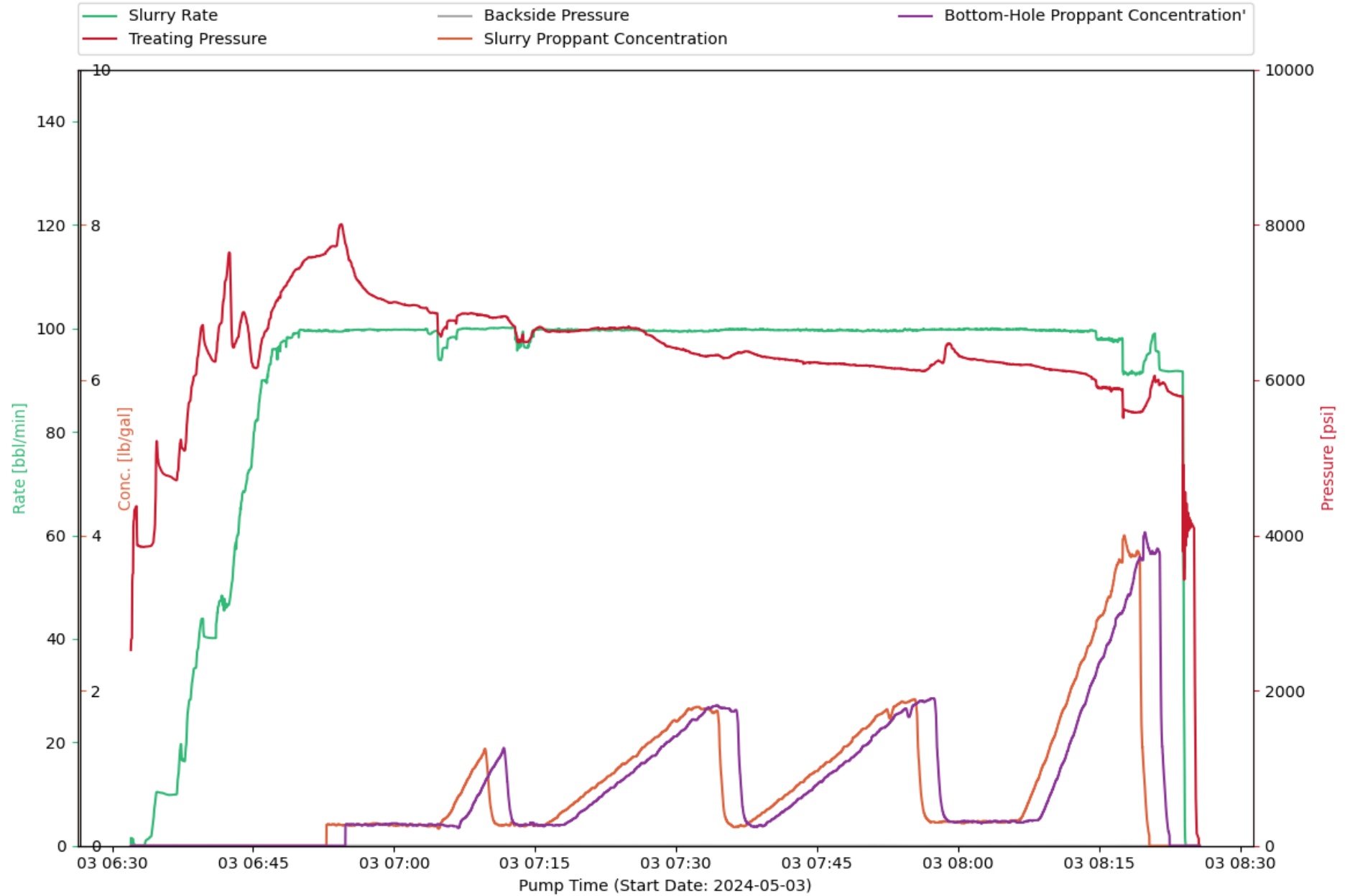
CHEMISTRY PLOT : Treatment Interval 14



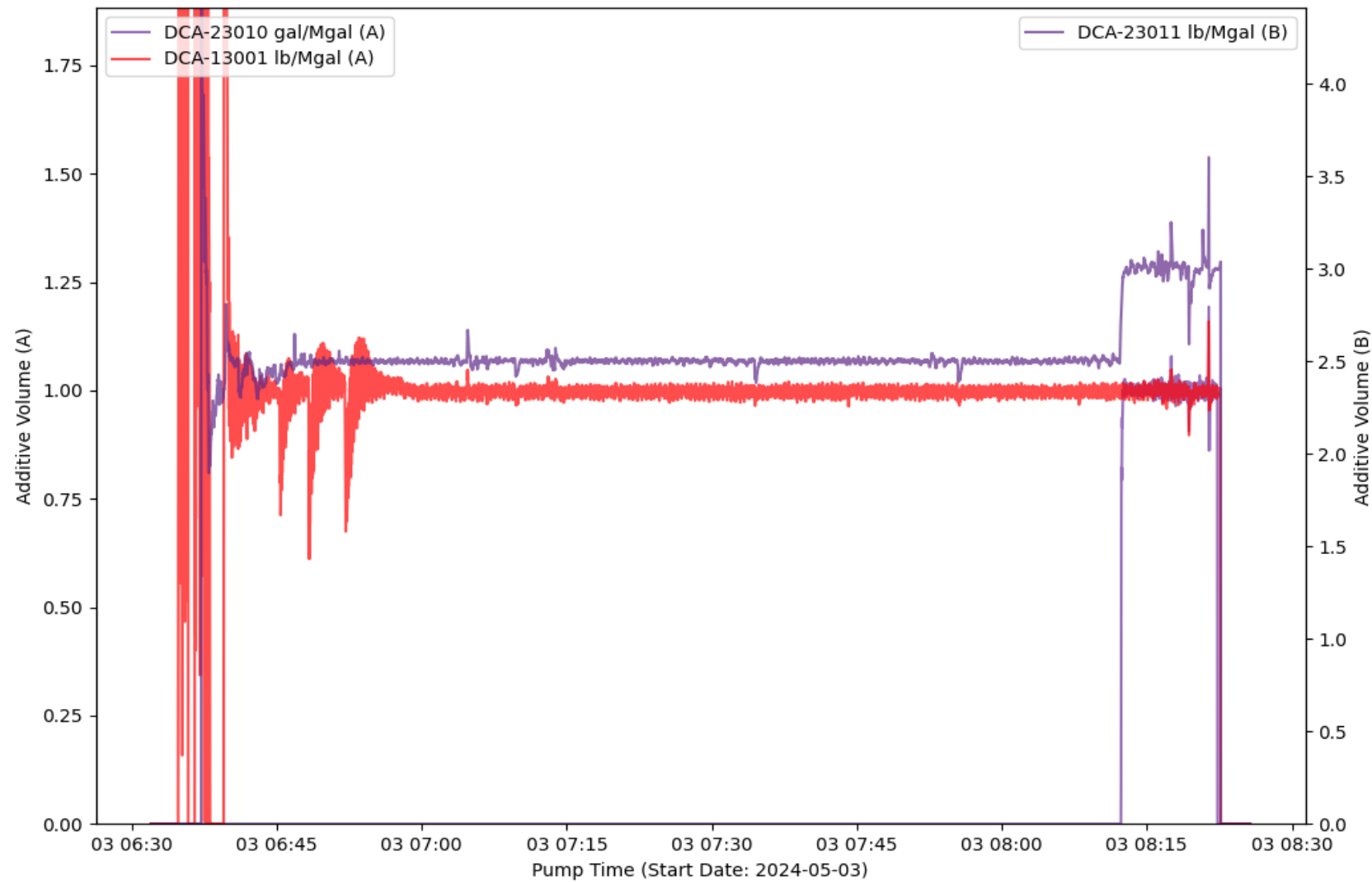
EVENT LOG : TREATMENT INTERVAL 14

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-05-03T00:40:38	0.19	3854	0	0	0.16	0.13	0
2	Break Formation	2024-05-03T00:41:39	8.62	4050	0	0	84.52	127.5	0
3	Pump Acid	2024-05-03T00:41:51	10.09	4824	0	0	173.83	203.45	0
4	Spot Acid	2024-05-03T00:48:42	49.28	6935	0	0	9945	9868	0
5	Flush Acid	2024-05-03T00:49:09	49.32	6336	0	0	10889	10809	0
6	Stop Pumping	2024-05-03T02:26:25	1.72	4619	0	0	395722	410346	321706
7	ISIP	2024-05-03T02:26:26	0.91	5221	0	0	395722	410346	321706
8	Shut In Well	2024-05-03T02:27:01	0	4065	0	0	395724	410346	321706
9	Suspending Job	2024-05-03T02:27:56	0	-4.93	0	0	395724	410346	321706

TREATMENT PLOT : Treatment Interval 15



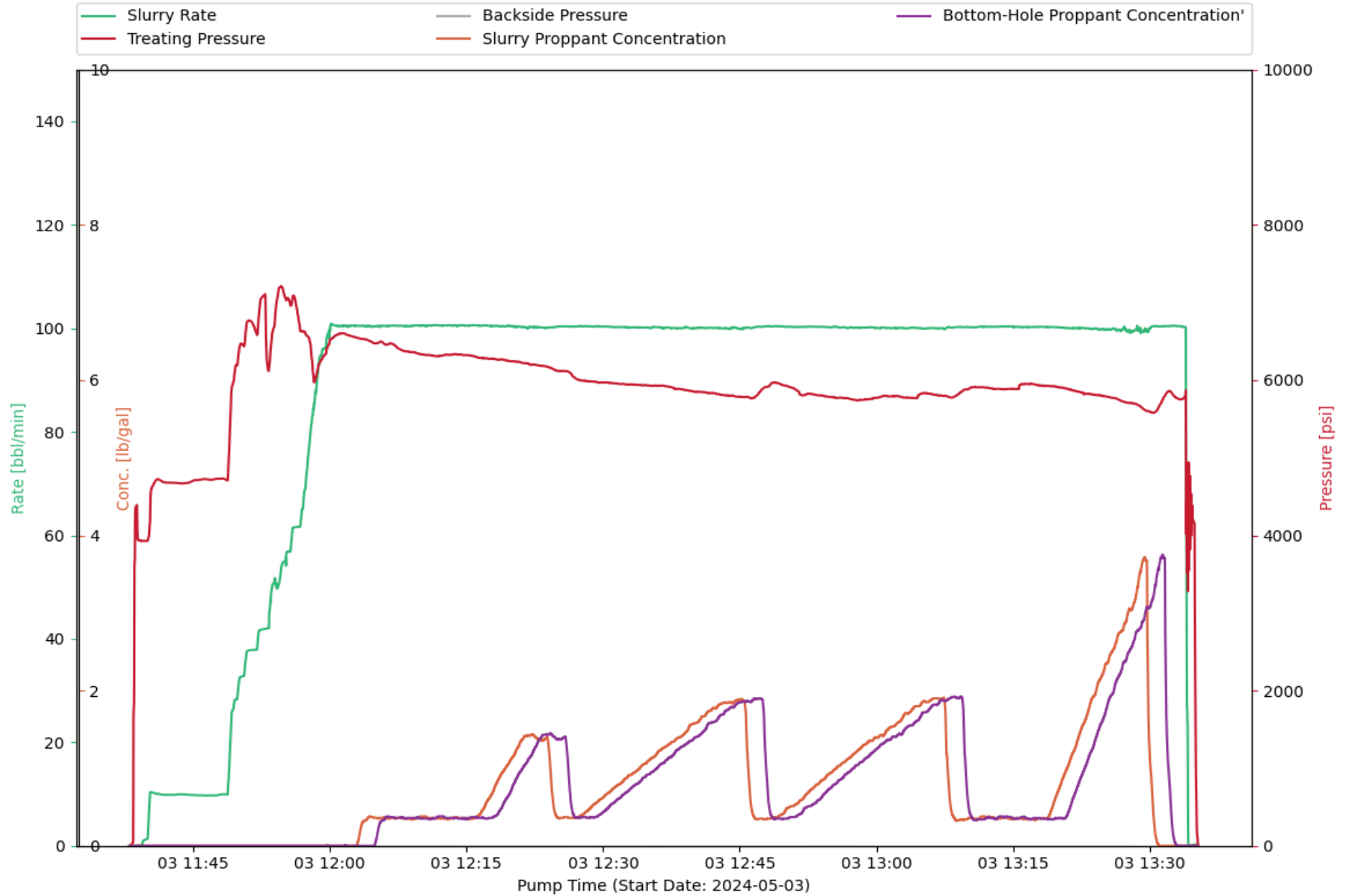
CHEMISTRY PLOT : Treatment Interval 15



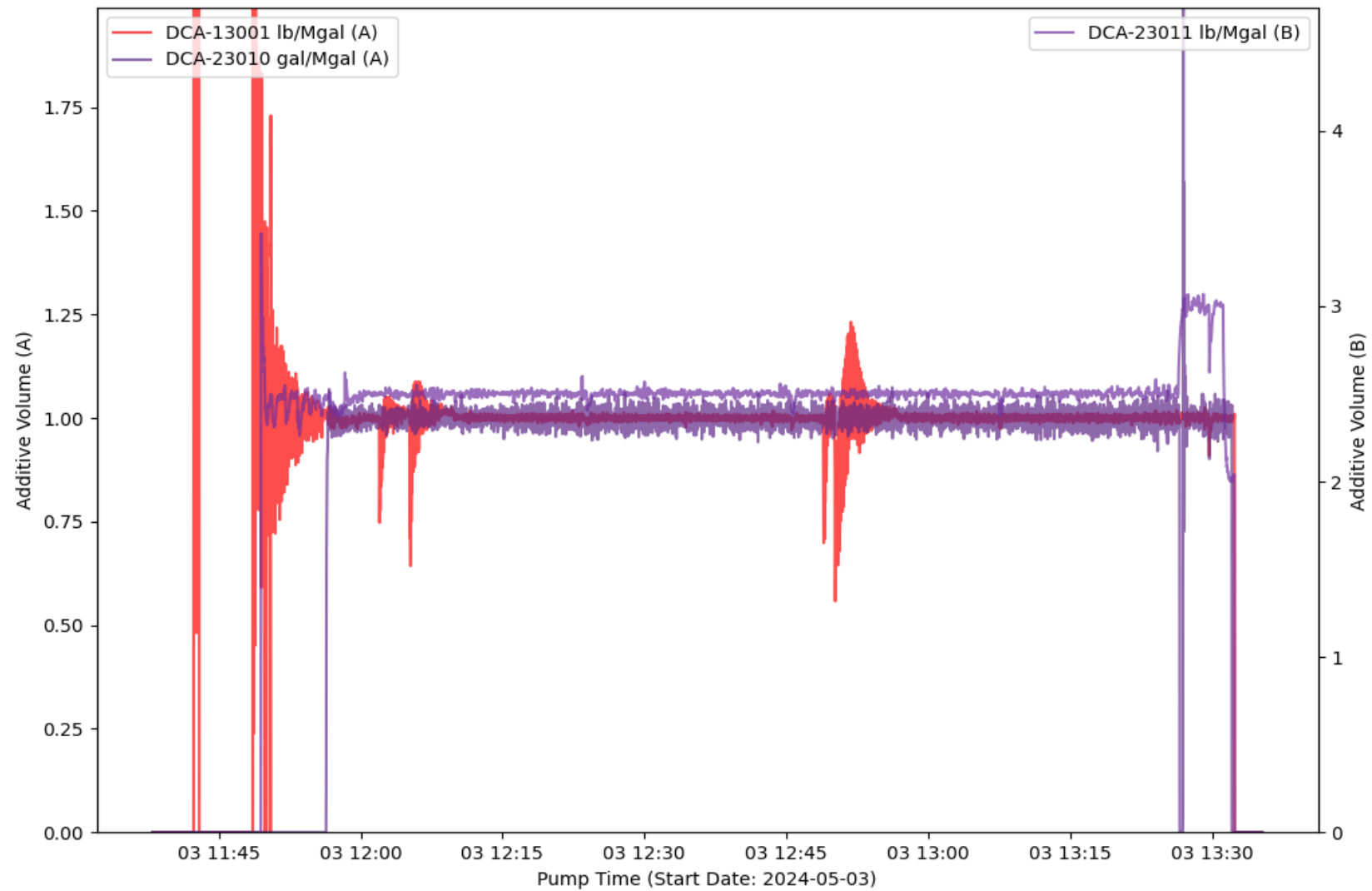
EVENT LOG : TREATMENT INTERVAL 15

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Avg Trt 15	2024-05-03T06:32:41	0	3872	0	0	0.64	0	0
2	Open Well	2024-05-03T06:32:48	0	3870	0	0	4.54	0	0
3	Start Pumping	2024-05-03T06:33:26	0.07	3853	0	0	17.7	0.06	0
4	Break Formation	2024-05-03T06:34:47	10.42	5177	0	0	205.8	210.99	0
5	Pump Acid	2024-05-03T06:36:20	9.84	4751	0	0	845.98	863.43	0
6	Spot Acid	2024-05-03T06:42:27	46.73	7644	0	0	9431	9410	0
7	Flush Acid	2024-05-03T06:42:54	53.99	6419	0	0	10378	10361	0
8	Stop Pumping	2024-05-03T08:24:10	0.72	4445	0	0	412059	426832	327597
9	ISIP	2024-05-03T08:24:48	0	4125	0	0	412060	426832	327597
10	Shut In Well	2024-05-03T08:25:02	0	4106	0	0	412060	426832	327597
11	Suspending Job	2024-05-03T08:25:40	0	4.1	0	0	412060	426832	327597

TREATMENT PLOT : Treatment Interval 16



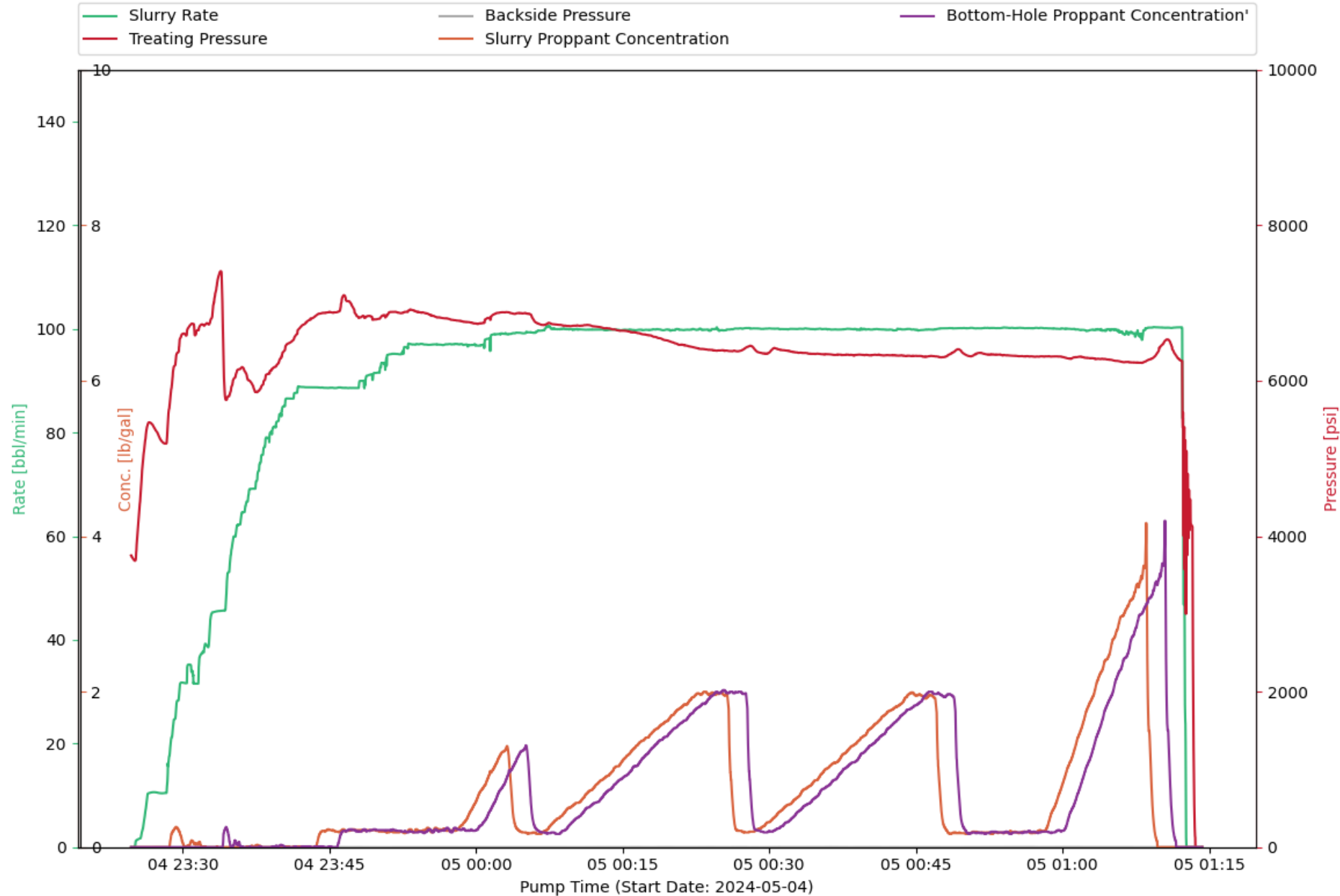
CHEMISTRY PLOT : Treatment Interval 16



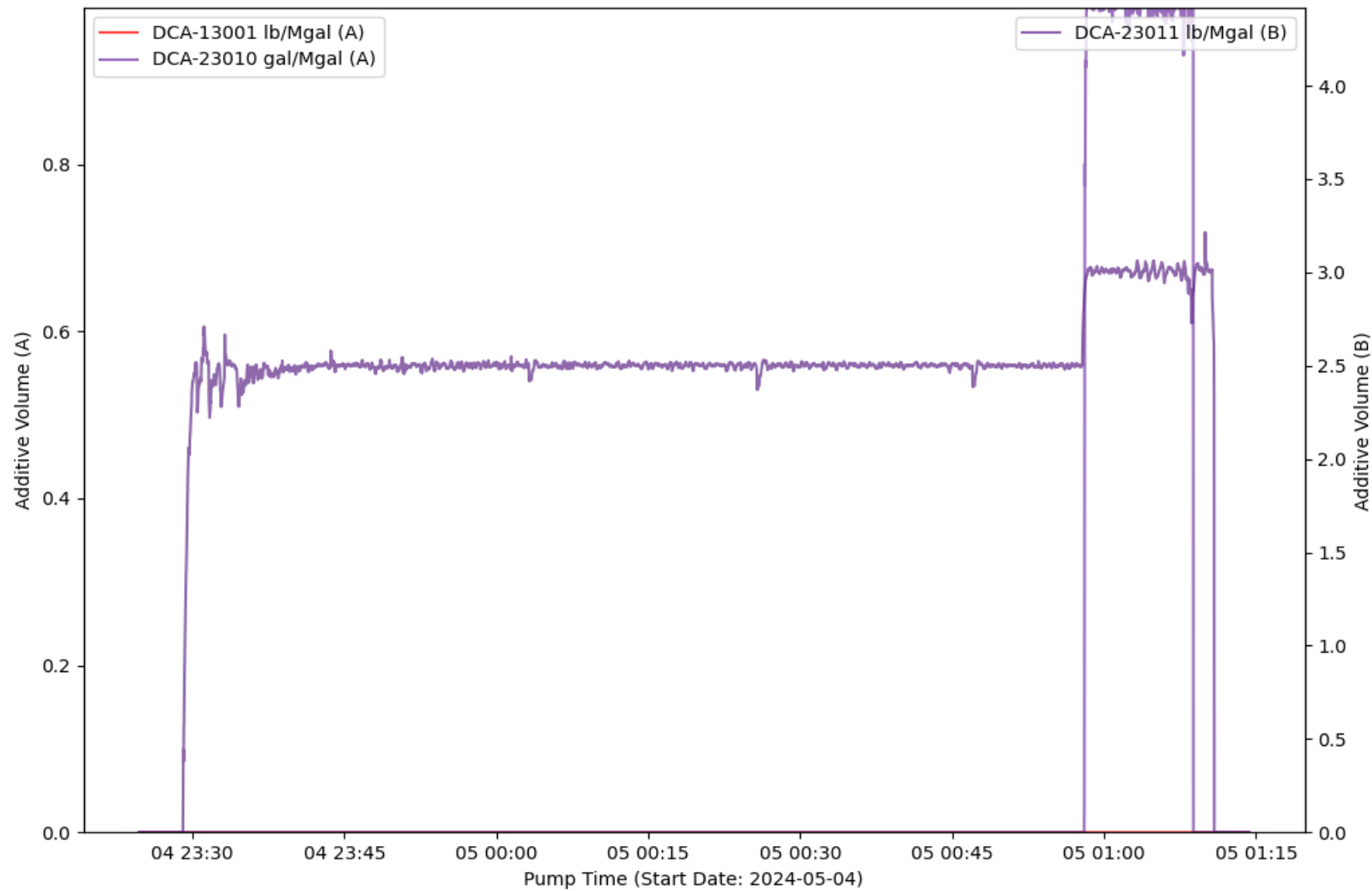
EVENT LOG : TREATMENT INTERVAL 16

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-03T11:38:59	0	3945	0	0	0	0	0
2	Start Pumping	2024-05-03T11:39:27	0.76	3931	0	0	4.03	1.39	0
3	Pump Acid	2024-05-03T11:41:13	10.05	4720	0	0	483.49	500.55	0
4	Break Formation	2024-05-03T11:51:36	37.88	6708	0	0	7251	7263	0
5	Spot Acid	2024-05-03T11:52:55	41.92	7097	0	0	9475	9485	0
6	Flush Acid	2024-05-03T11:53:16	42.06	6118	0	0	10095	10107	0
7	Spot Acid	2024-05-03T11:56:00	61.54	7089	0	0	16139	16183	0
8	Flush Acid	2024-05-03T11:56:40	61.66	6719	0	0	17864	17923	0
9	Stop Pumping	2024-05-03T13:34:13	3.41	3329	0	0	409630	425731	347337
10	ISIP	2024-05-03T13:34:40	0.14	4383	0	0	409645	425733	347337
11	Shut In Well	2024-05-03T13:34:52	0.21	4171	0	0	409645	425734	347337
12	Suspending Job	2024-05-03T13:35:18	0	30.41	0	0	409646	425738	347337

TREATMENT PLOT : Treatment Interval 17



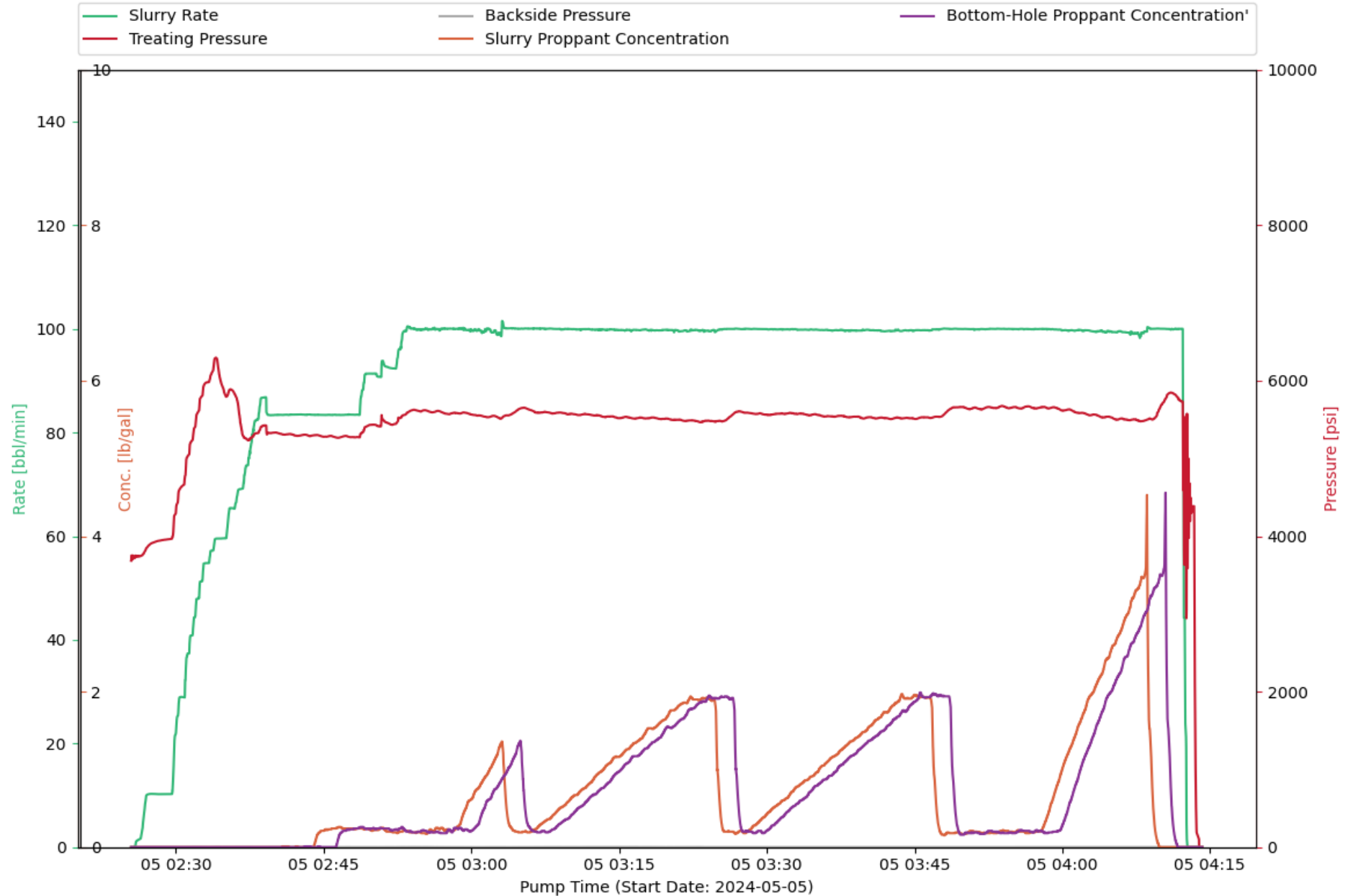
CHEMISTRY PLOT : Treatment Interval 17



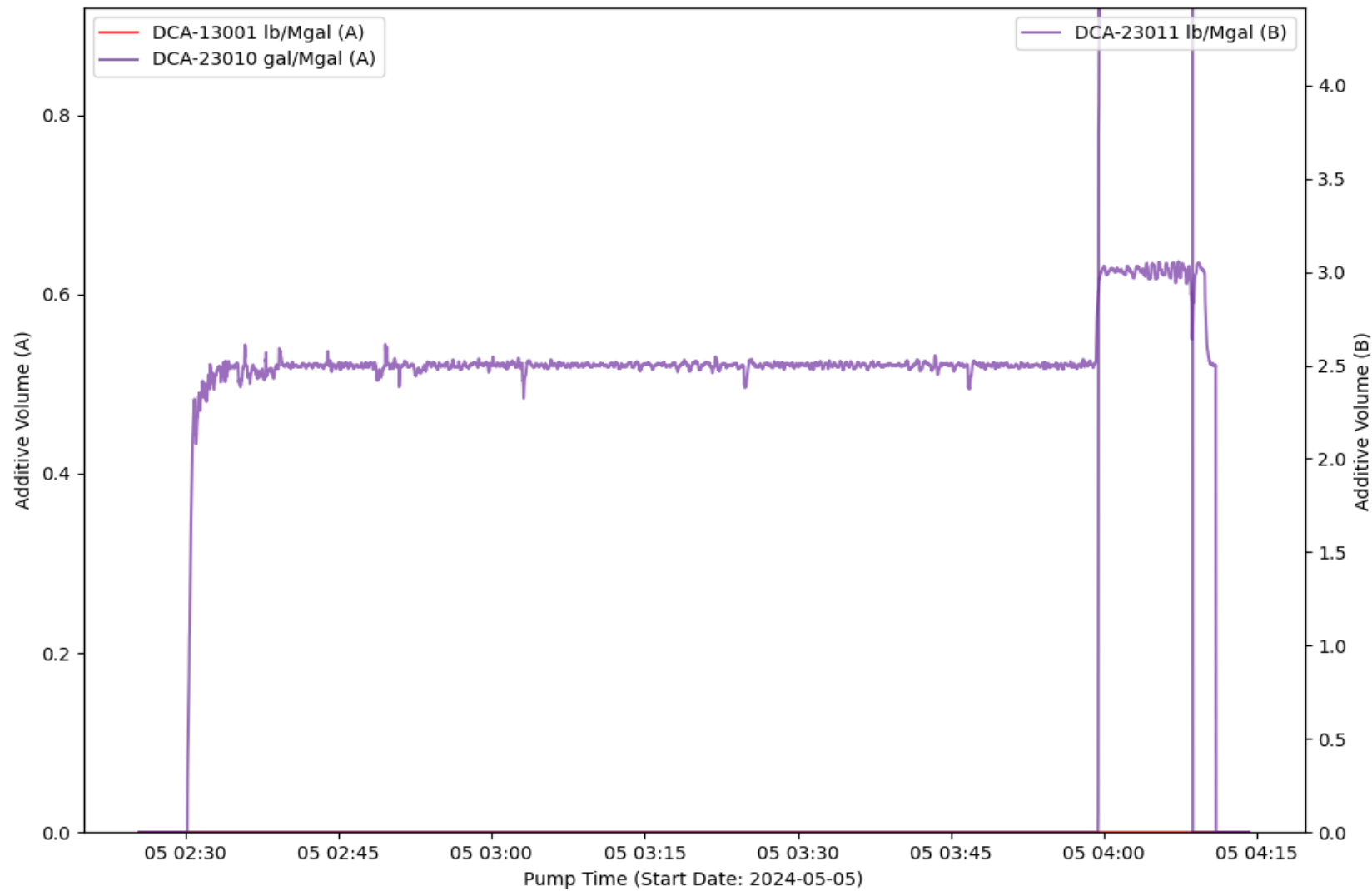
EVENT LOG : TREATMENT INTERVAL 17

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-04T23:24:43	0.01	3752	0	0	0	0	0
2	Start Pumping	2024-05-04T23:25:07	0.09	3683	0	0	2.6	0.08	0
3	Break Formation	2024-05-04T23:26:08	6.39	5223	0	0	77.57	106.22	0
4	Pump Acid	2024-05-04T23:27:09	10.6	5379	0	0	505.42	535.97	0
5	Spot Acid	2024-05-04T23:33:56	45.62	7405	0	0	9027	9035	385.38
6	Flush Acid	2024-05-04T23:34:20	45.7	5786	0	0.24	9797	9805	385.38
7	Stop Pumping	2024-05-05T01:12:40	0.98	4875	0	0	393754	407709	308703
8	ISIP	2024-05-05T01:12:45	0	3755	0	0	393755	407709	308703
9	Shut In Well	2024-05-05T01:13:12	0	4143	0	0	393757	407709	308703
10	Suspending Job	2024-05-05T01:14:17	0	-10.11	0	0	393757	407709	308703

TREATMENT PLOT : Treatment Interval 18



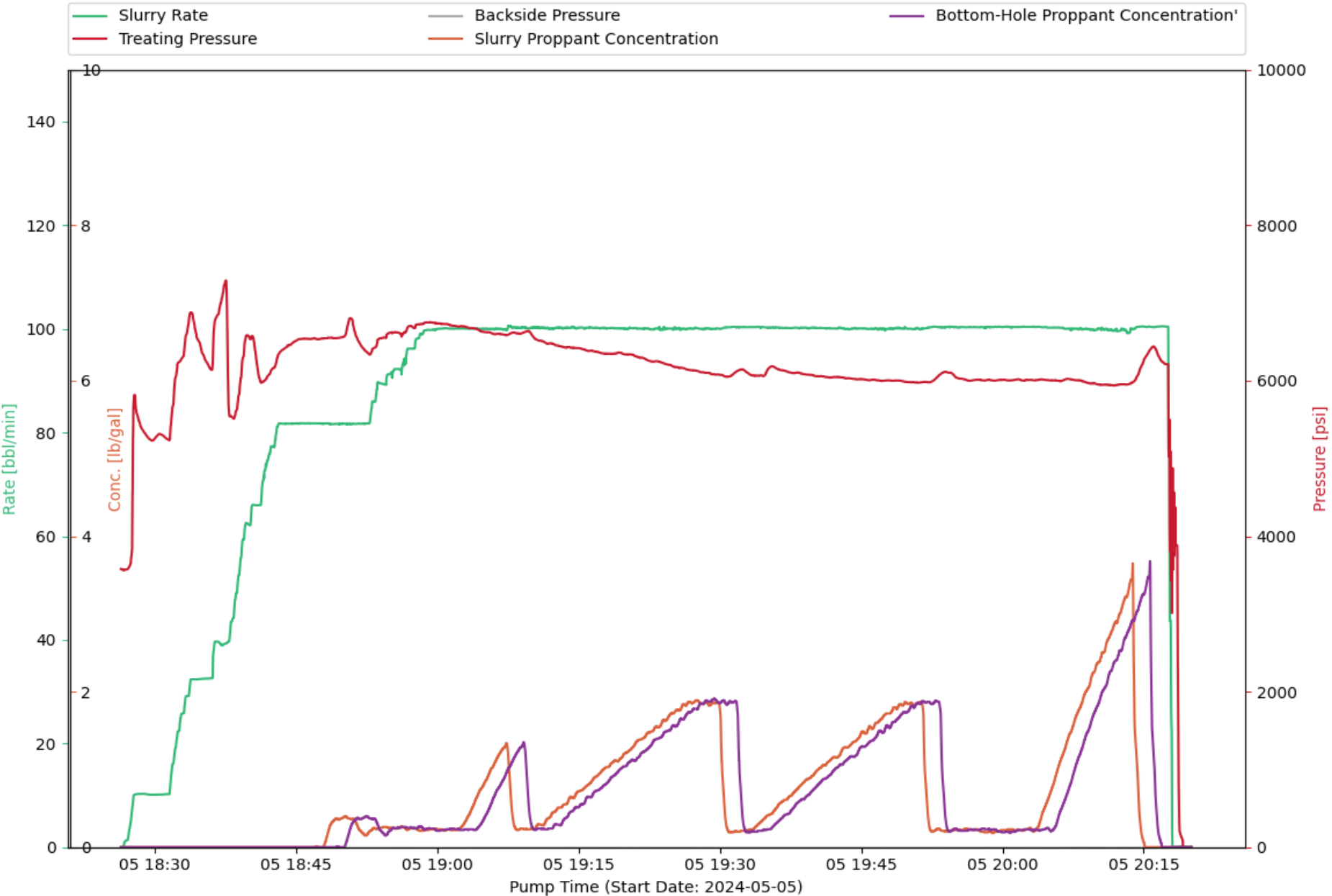
CHEMISTRY PLOT : Treatment Interval 18



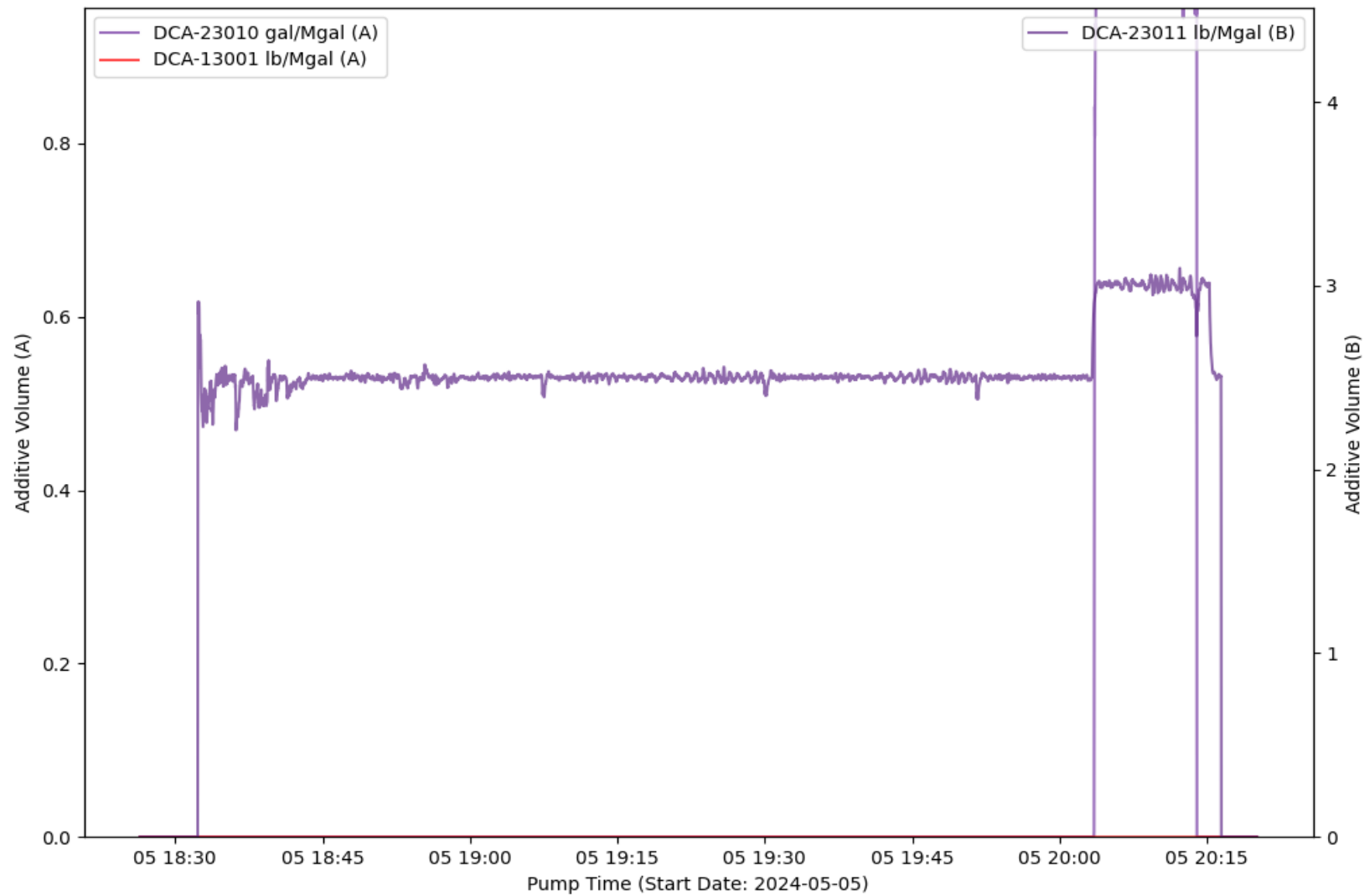
EVENT LOG : TREATMENT INTERVAL 18

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-05T02:25:27	0	3685	0	0	0	0	0
2	Start Pumping	2024-05-05T02:25:50	0	3721	0	0	5.92	0	0
3	Break Formation	2024-05-05T02:26:59	9.92	3844	0	0	109.38	166.93	0
4	Pump Acid	2024-05-05T02:27:04	10.11	3858	0	0	147.39	202.37	0
5	Spot Acid	2024-05-05T02:34:07	59.55	6290	0	0	9261	9265	0
6	Flush Acid	2024-05-05T02:35:02	59.62	5809	0	0	11579	11580	0
7	Stop Pumping	2024-05-05T04:12:41	0.7	4904	0	0	393465	407357	305881
8	ISIP	2024-05-05T04:12:44	0	3590	0	0	393465	407357	305881
9	Shut In Well	2024-05-05T04:13:14	0	4386	0	0	393467	407357	305881
10	Suspending Job	2024-05-05T04:14:12	0	-8.78	0	0	393467	407357	305881

TREATMENT PLOT : Treatment Interval 19



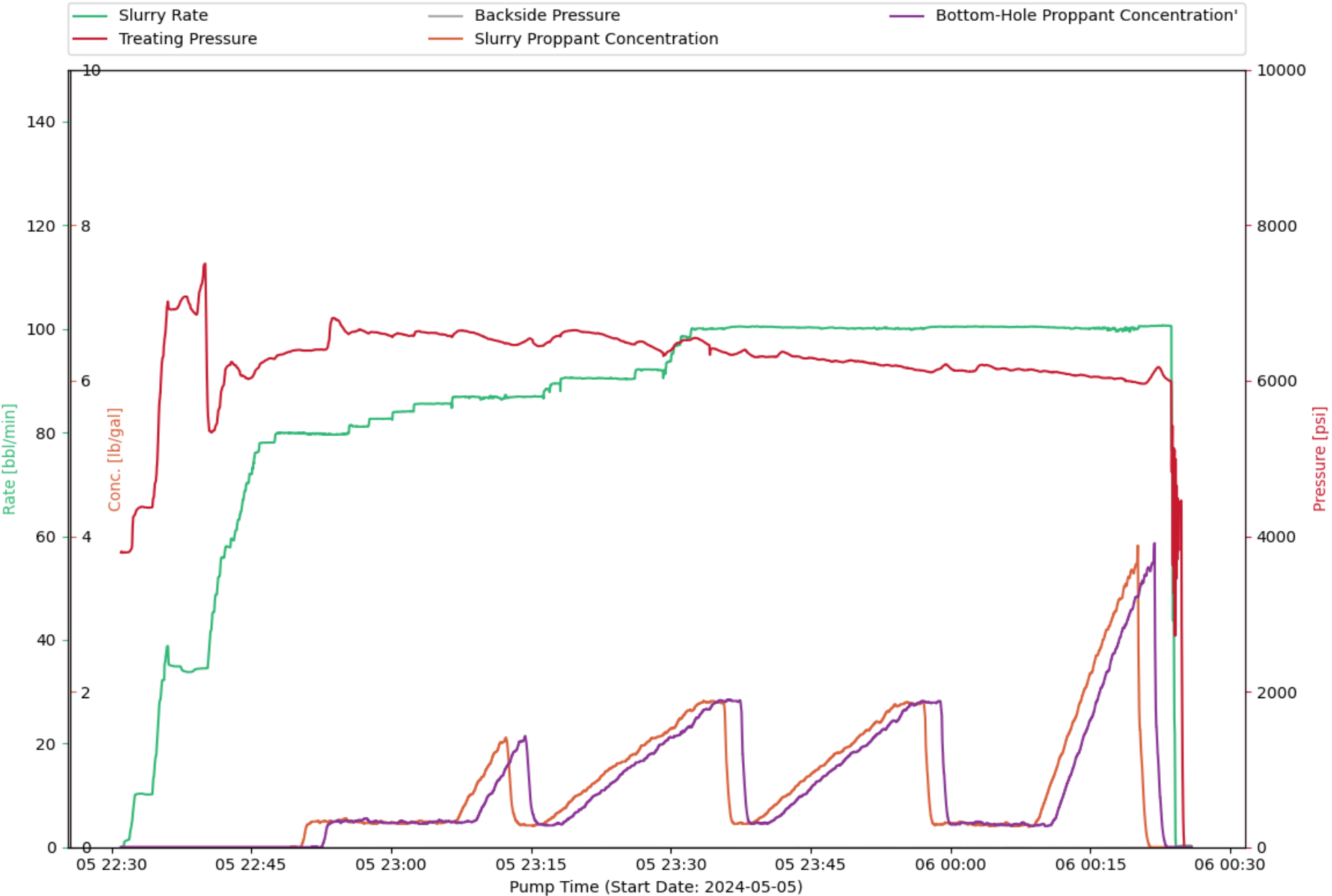
CHEMISTRY PLOT : Treatment Interval 19



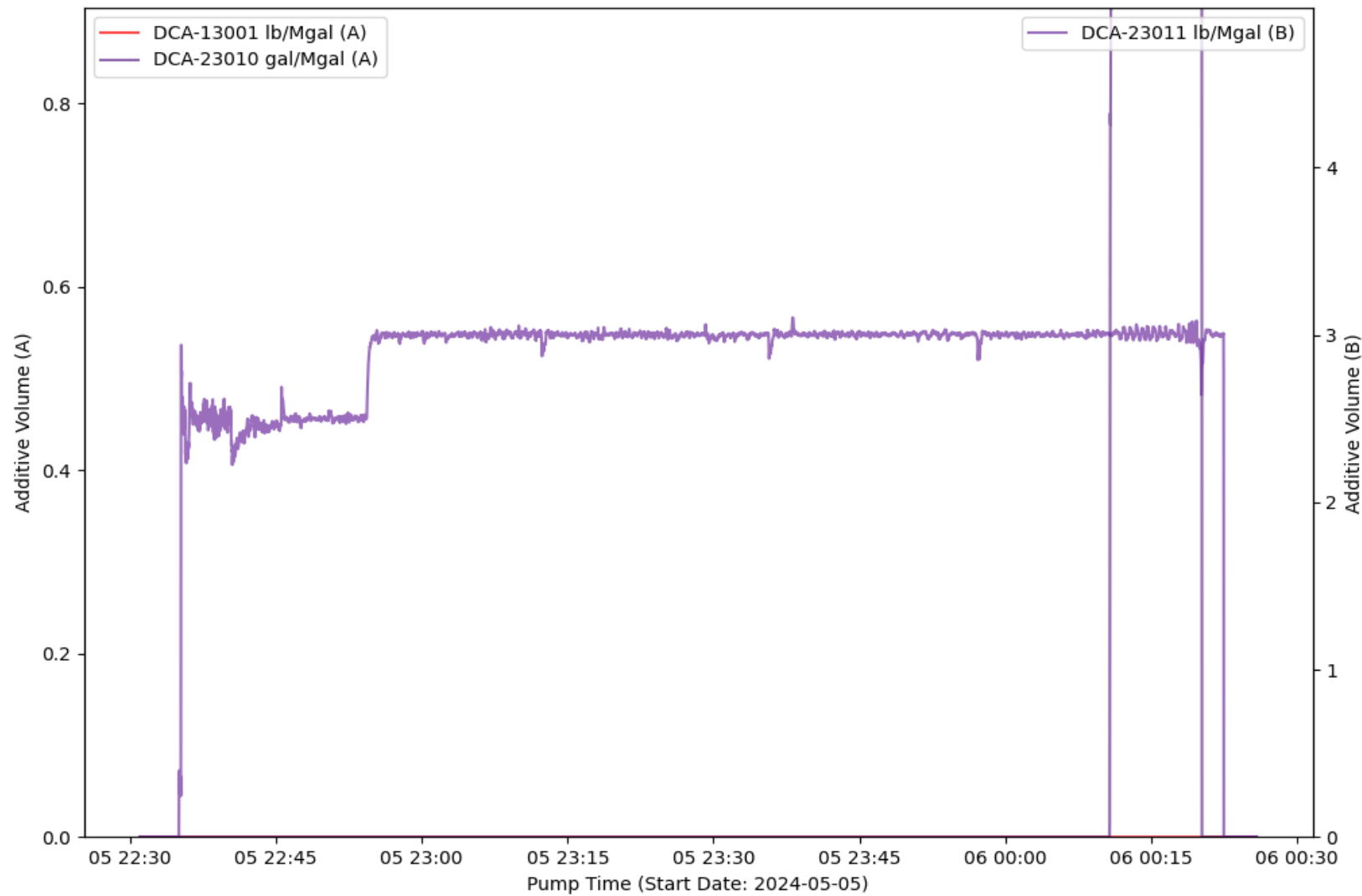
EVENT LOG : TREATMENT INTERVAL 19

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-05T18:26:26	0	3577	0	0	0	0	0
2	Start Pumping	2024-05-05T18:26:42	0.01	3563	0	0	3.18	0.01	0
3	Break Formation	2024-05-05T18:27:44	9.28	5437	0	0	133.93	145.95	0
4	Pump Acid	2024-05-05T18:29:32	10.12	5241	0	0	896.05	917.19	0
5	Spot Acid	2024-05-05T18:37:34	39.33	7289	0	0	9504	9450	0
6	Flush Acid	2024-05-05T18:37:55	39.77	5576	0	0	10088	10035	0
7	Stop Pumping	2024-05-05T20:18:02	1.06	4185	0	0	398993	412915	305622
8	ISIP	2024-05-05T20:18:08	0	3623	0	0	398994	412915	305622
9	Shut In Well	2024-05-05T20:18:25	0.05	3880	0	0	398996	412915	305622
10	Suspending Job	2024-05-05T20:20:03	0.16	-6.96	0	0	398996	412922	305622

TREATMENT PLOT : Treatment Interval 20



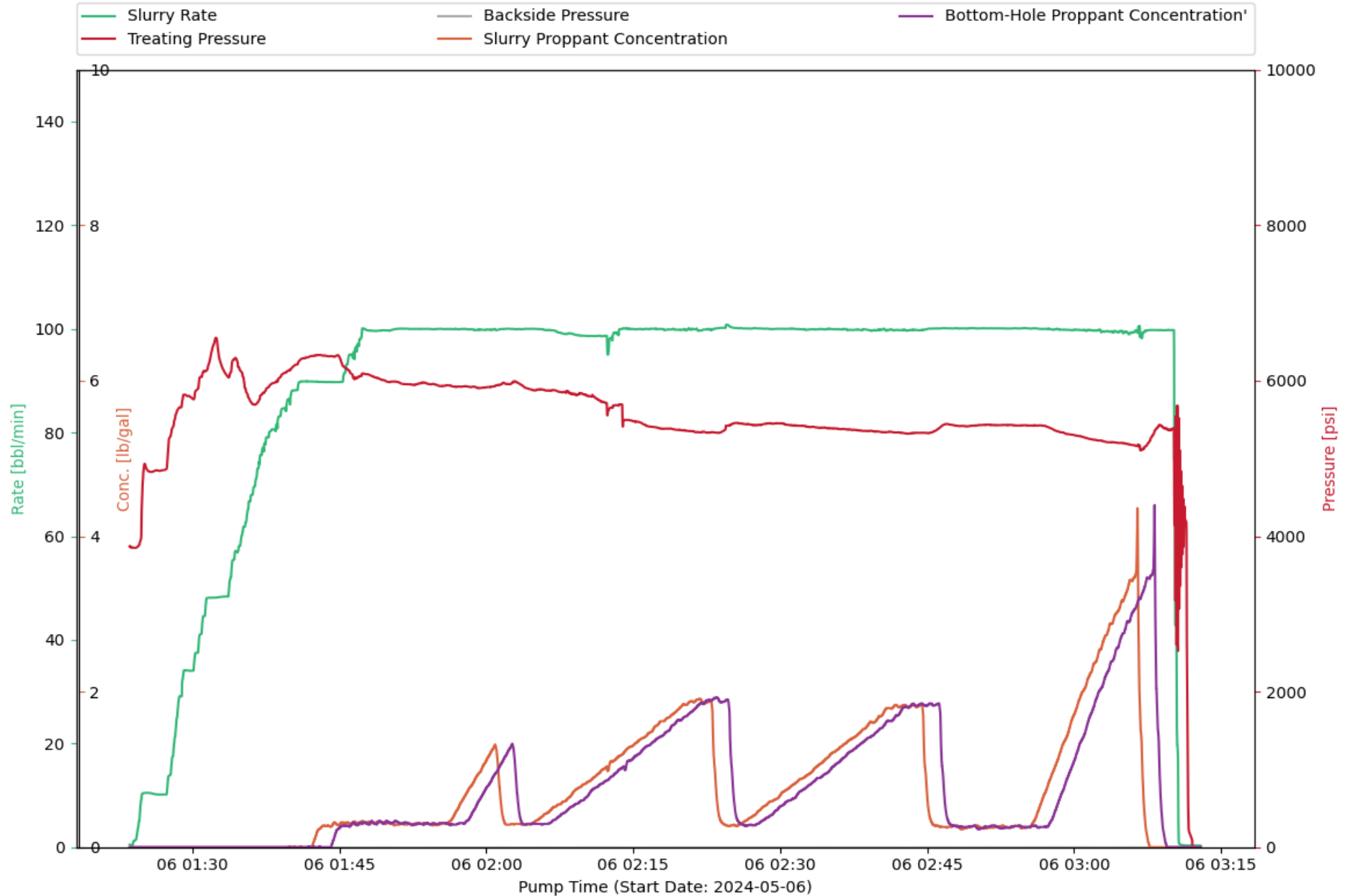
CHEMISTRY PLOT : Treatment Interval 20



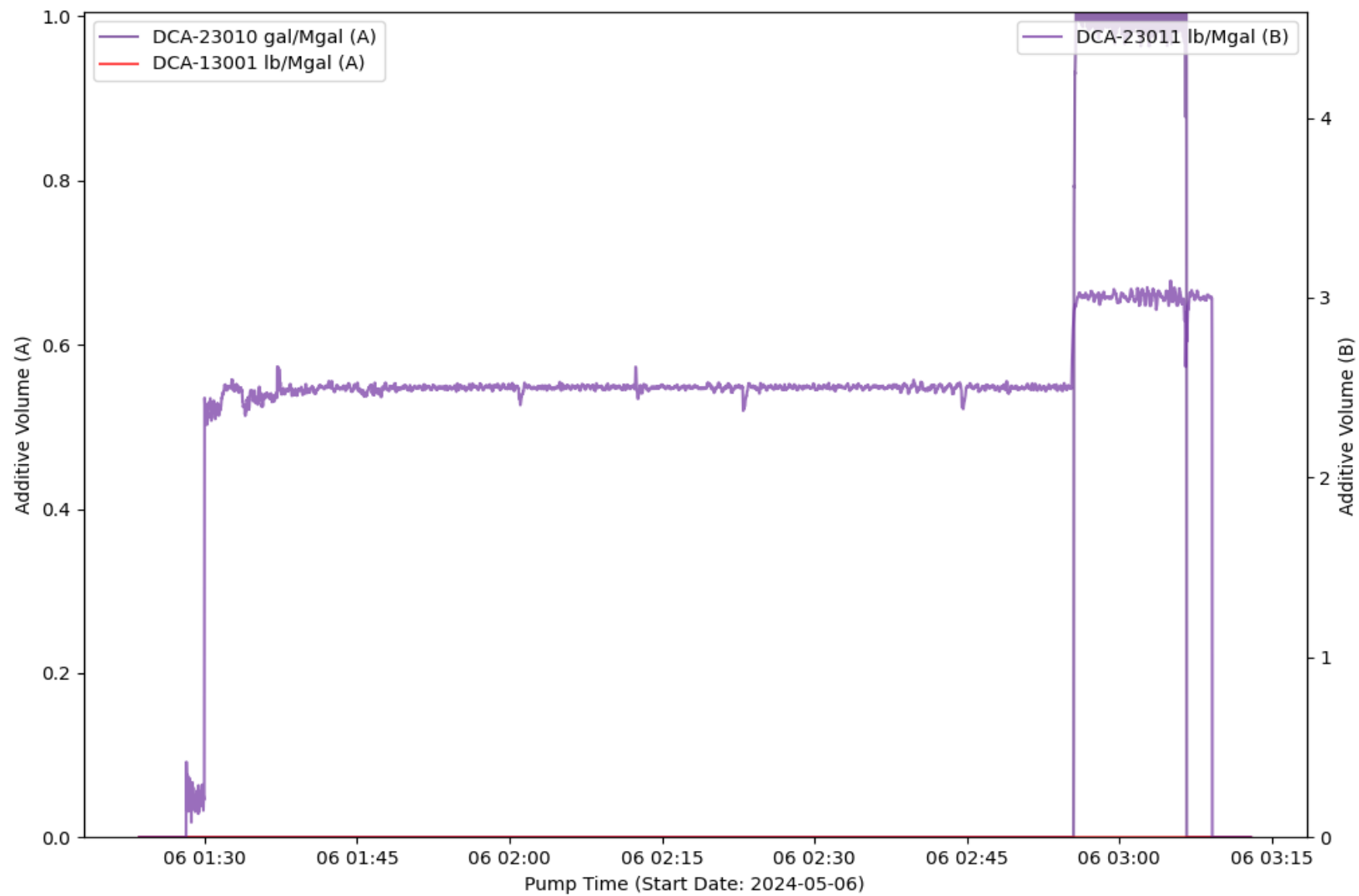
EVENT LOG : TREATMENT INTERVAL 20

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-05-05T22:31:17	0.01	3789	0	0	0.12	0.01	0
2	Break Formation	2024-05-05T22:32:27	8.89	4263	0	0	34.21	144.01	0
3	Pump Acid	2024-05-05T22:32:37	10.14	4311	0	0	130.17	213.85	0
4	Spot Acid	2024-05-05T22:40:03	34.51	7507	0	0	8672	8620	0
5	Flush Acid	2024-05-05T22:40:29	38.01	5361	0	0	9321	9267	0
6	Stop Pumping	2024-05-06T00:24:09	0.69	4988	0	0	393597	408474	325240
7	ISIP	2024-05-06T00:24:13	0.06	3803	0	0	393598	408474	325240
8	Shut In Well	2024-05-06T00:24:34	0.21	4423	0	0	393600	408477	325240
9	Suspending Job	2024-05-06T00:25:49	0.27	-9.29	0	0	393600	408490	325240

TREATMENT PLOT : Treatment Interval 21



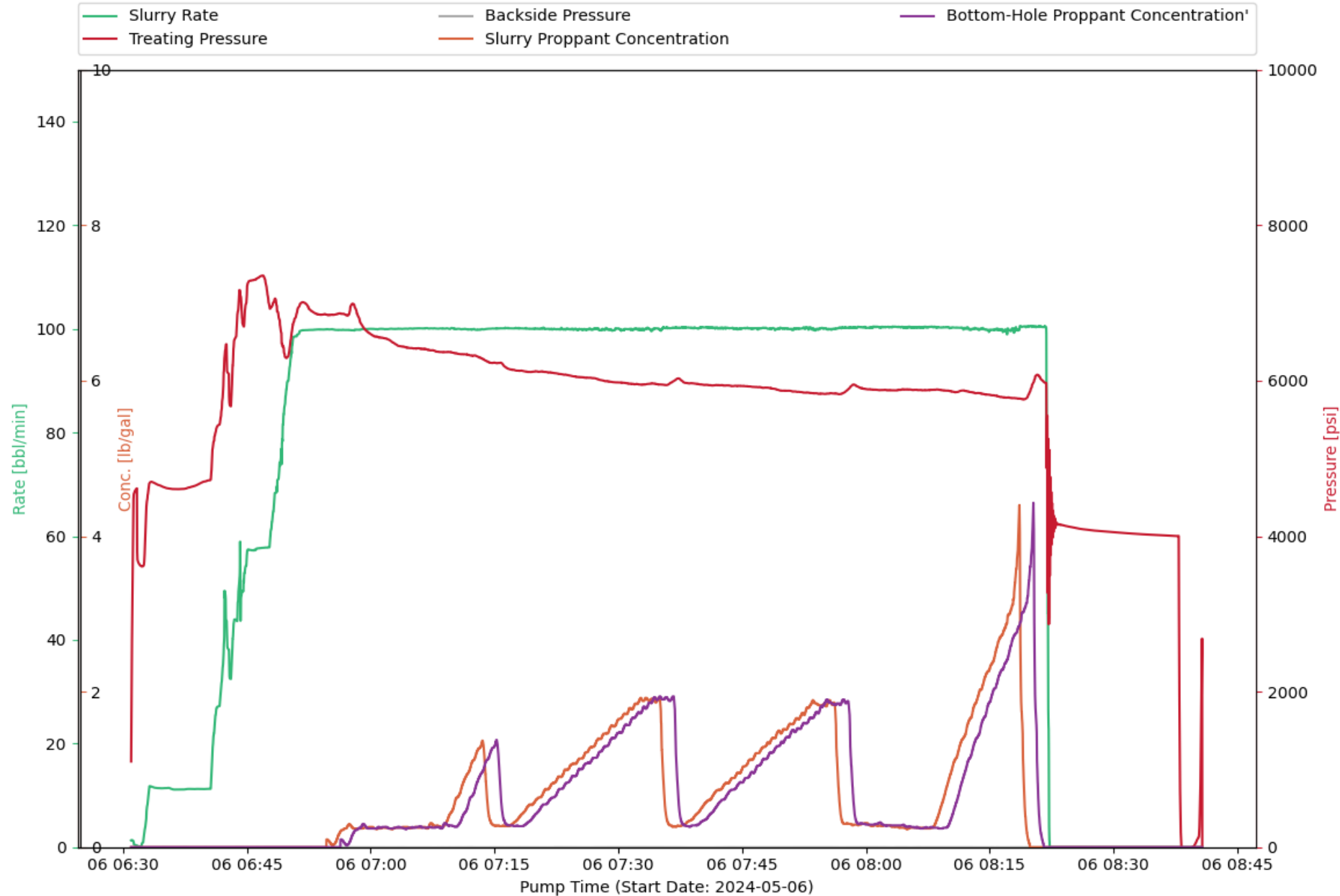
CHEMISTRY PLOT : Treatment Interval 21



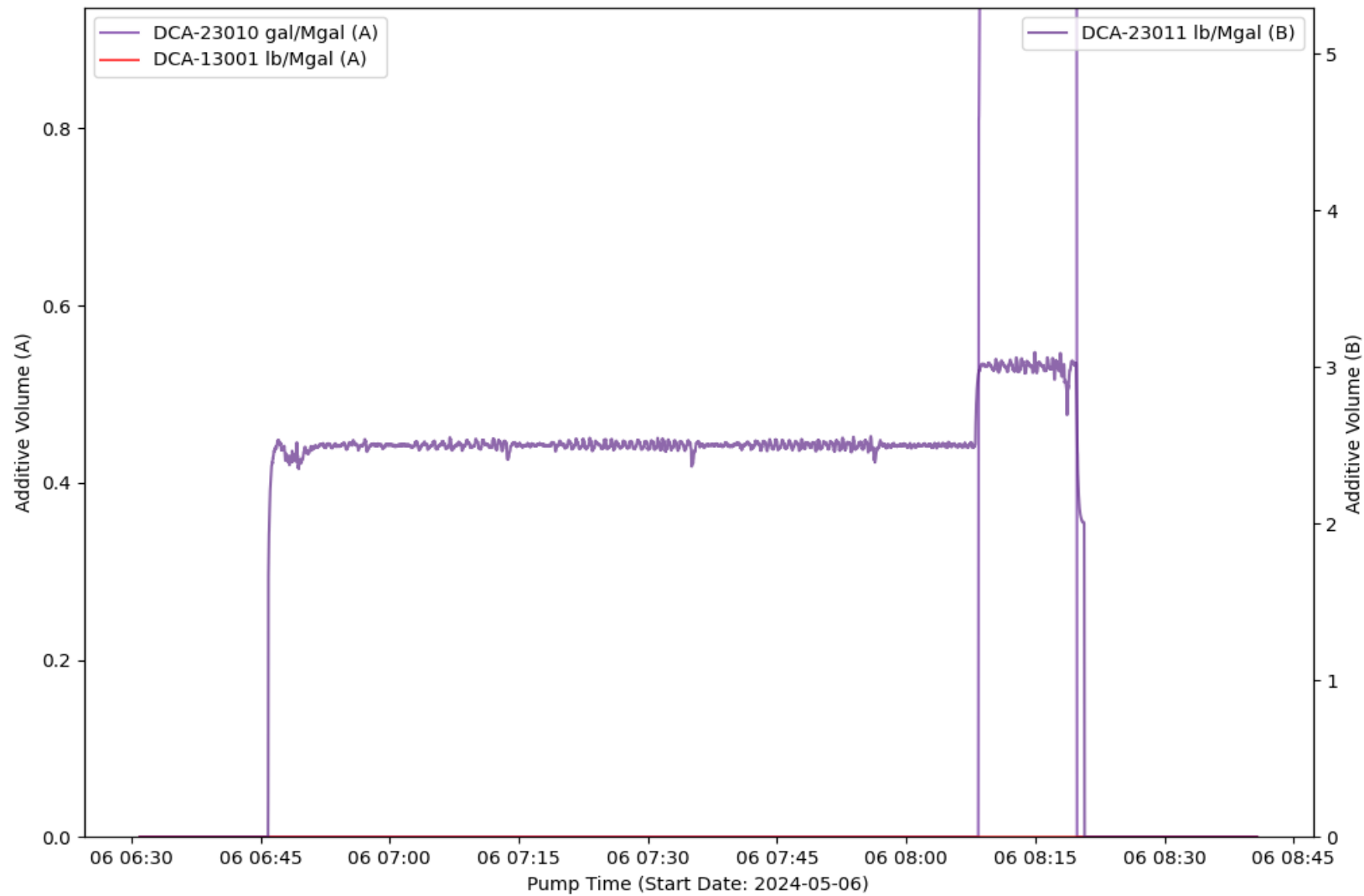
EVENT LOG : TREATMENT INTERVAL 21

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-05-06T01:23:56	0.81	3853	0	0	0.32	0.57	0
2	Break Formation	2024-05-06T01:24:45	8.97	3982	0	0	99.67	123.59	0
3	Pump Acid	2024-05-06T01:25:07	10.46	4931	0	0	253.89	275.39	0
4	Spot Acid	2024-05-06T01:32:27	48.16	6546	0	0	8666	8637	0
5	Flush Acid	2024-05-06T01:33:37	48.38	6049	0	0	11070	11024	0
6	Stop Pumping	2024-05-06T03:10:42	0.95	4402	0	0	392081	406489	315303
7	ISIP	2024-05-06T03:10:44	0.65	3067	0	0	392081	406490	315303
8	Shut In Well	2024-05-06T03:11:22	0.32	4207	0	0	392083	406502	315303
9	Suspending Job	2024-05-06T03:12:55	0.3	-14.41	0	0	392083	406521	315303

TREATMENT PLOT : Treatment Interval 22



CHEMISTRY PLOT : Treatment Interval 22



EVENT LOG : TREATMENT INTERVAL 22

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-05-06T06:31:50	0.01	3673	0	0	0.16	0.01	0
2	Start Pumping	2024-05-06T06:32:14	0.17	3613	0	0	3.83	1.7	0
3	Pump Acid	2024-05-06T06:34:06	11.42	4669	0	0	599.43	635.84	0
4	Break Formation	2024-05-06T06:42:35	42.64	6236	0	0	6011	6145	0
5	Spot Acid	2024-05-06T06:46:56	57.74	7353	0	0	15381	15351	0
6	Flush Acid	2024-05-06T06:49:30	83.59	6369	0	0	22501	22470	0
7	Stop Pumping	2024-05-06T08:22:15	1.1	4174	0	0	397125	410885	307048
8	ISIP	2024-05-06T08:23:00	0	4186	0	0	397125	410885	307048
9	Shut In Well	2024-05-06T08:23:14	0	4158	0	0	397125	410885	307048
10	Suspending Job	2024-05-06T08:40:44	0	2682	0	0	397125	410885	307048

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