



WELL STIMULATION REPORT

Bayswater Exploration

Flaherty 13-14-3

05-123-47462-00

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 13-14-3 well in WELD county, COLORADO.

The proposed treatment(s) consisted of:

11,000	gallons of	15% HCl
8,223,968	gallons of	Dry FR
0	gallons of	FR Water
233,137	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:

42,322	gallons of	15% HCl
8,598,065	gallons of	Dry FR
464,774	gallons of	FR Water
256,104	gallons of	Treated Water
720,224	pounds of	100 Mesh Premium White
5,923,636	pounds of	30/50 Premium White
64,180	pounds of	SS-200 Premium White

19 of 22 treatment(s) were fully completed. 0 treatment(s) were skipped, and 3 treatment(s) were screened out or otherwise cut short of design.

The well was first opened Monday, April 29, 2024 at 03:16 with an opening pressure of 3,279.13 psi.

The total amount of proppant pumped was 6,708,040.0 lbm with an average concentration of 0.73 ppg and maximum concentration of 4.0 ppg. Treating pressure averaged 6422.54 psi and rate averaged 85.2 bpm. Total clean volume was 9,361,265.0 gallons.

The operation came offline at 22:06 and the well was shut in Monday, May 06, 2024 at 22:21 with a final shut-in pressure of 3,978.0 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	11262	11422	11442	6371	32	6	32	120	909264729	Niobrara	Niobrara
2	11062	11222	11242	6371	32	6	32	120	909264729	Niobrara	Niobrara
3	10862	11022	11042	6371	32	6	32	120	909264729	Niobrara	Niobrara
4	10662	10822	10842	6371	32	6	32	120	909264729	Niobrara	Niobrara
5	10462	10622	10642	6371	32	6	32	120	909264729	Niobrara	Niobrara
6	10262	10422	10442	6371	32	6	32	120	909264729	Niobrara	Niobrara
7	10062	10222	10242	6372	32	6	32	120	909264729	Niobrara	Niobrara
8	9862	10022	10042	6375	32	6	32	120	909264729	Niobrara	Niobrara
9	9662	9822	9842	6378	32	6	32	120	909264729	Niobrara	Niobrara
10	9462	9622	9642	6380	32	6	32	120	909264729	Niobrara	Niobrara
11	9262	9422	9442	6380	32	6	32	120	909264729	Niobrara	Niobrara
12	9062	9222	9242	6380	32	6	32	120	909264729	Niobrara	Niobrara
13	8862	9022	9042	6380	32	6	32	120	909264729	Niobrara	Niobrara
14	8662	8822	8842	6379	32	6	32	120	909264729	Niobrara	Niobrara
15	8462	8622	8642	6380	32	6	32	120	909264729	Niobrara	Niobrara
16	8262	8422	8442	6381	32	6	32	120	909264729	Niobrara	Niobrara
17	8062	8222	8242	6383	32	6	32	120	909264729	Niobrara	Niobrara
18	7862	8022	8042	6384	32	6	32	120	909264729	Niobrara	Niobrara
19	7662	7822	7842	6385	32	6	32	120	909264729	Niobrara	Niobrara
20	7462	7622	7642	6386	32	6	32	120	909264729	Niobrara	Niobrara
21	7262	7422	7442	6387	32	6	32	120	909264729	Niobrara	Niobrara
22	7062	7222	7242	6383	32	6	32	120	909264729	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	3900	377971	820180	0	19388	8399	7812	386870	851280	879256.98
2	500	2000	377785	394992	0	0	8399	7434	386684	404426	420349.86
3	500	4000	377598	125617	0	353102	8399	33978	386497	516697	533554.14
4	500	2000	377412	390372	0	7990	8399	8442	386311	408804	425283.18
5	500	1000	377226	392202	0	0	8399	15020	386125	408222	424961.88
6	500	1000	328680	395752	0	7804	56758	7224	385938	411780	427144.2
7	500	1000	376853	396838	0	9483	8399	6846	385752	414167	429085.86
8	500	1000	376667	384175	0	7714	8399	6594	385566	399483	416138.94
9	500	1000	376481	402223	0	0	8399	13181	385380	416404	433991.88
10	500	1000	376294	398338	0	0	8399	13856	385193	413194	427977.06
11	500	4000	376108	494276	0	11995	8399	5334	385007	515605	527692.2
12	500	2000	375922	379365	0	8952	8399	5460	384821	395777	409134.18
13	500	1000	375735	385273	0	0	8399	11436	384634	397709	411122.88
14	500	1000	375549	388560	0	0	8399	9980	384448	399540	413923.02
15	500	2000	375363	392244	0	9317	8399	4116	384262	407677	421734.18
16	500	1000	375177	400473	0	0	8399	12934	384076	414407	428811.18
17	500	3000	374990	395659	0	10690	8399	15960	383889	425309	439693.8
18	500	2000	374804	460861	0	10857	8399	3192	383703	476910	492256.8
19	500	1923	374618	436318	0	0	8399	19017	383517	457258	470239.14
20	500	2000	374431	347353	0	7482	8399	6510	383330	363345	372985.2
21	500	2499	374245	89286	0	0	8399	24647	383144	116432	118337.1
22	500	2000	374059	327708	0	0	8399	17131	382958	346839	355742.1

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	42322	8223968	8598065	0	464774	233137	256104	8468105	9361265	9679415.76

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	62080	283498.75	567880	3000	3000	317998.75	632960
2	31500	31480	283498.75	283500	3000	3500	317998.75	318480
3	31500	42959	283498.75	283480	3000	3000	317998.75	329439
4	31500	32040	283498.75	282760	3000	3000	317998.75	317800
5	31500	32800	283498.75	283620	3000	3000	317998.75	319420
6	31500	31500	283498.75	283708	3000	3000	317998.75	318208
7	31500	31500	283498.75	283225	3000	3000	317998.75	317725
8	31500	33000	283498.75	283040	3000	3000	317998.75	319040
9	31500	31500	283498.75	282924	3000	3000	317998.75	317424
10	31500	31500	283498.75	283585	3000	3000	317998.75	318085
11	31500	36780	283498.75	283780	3000	3000	317998.75	323560
12	31500	31820	283498.75	283860	3000	3000	317998.75	318680
13	31500	31500	283498.75	283689	3000	3000	317998.75	318189
14	31500	32740	283498.75	283599	3000	3000	317998.75	319339
15	31500	31200	283498.75	283240	3000	3000	317998.75	317440
16	31500	31500	283498.75	283556	3000	3000	317998.75	318056
17	31500	36040	283498.75	283546	3000	3680	317998.75	323266
18	31500	32080	283498.75	283340	3000	3000	317998.75	318420
19	31500	31500	283498.75	248465	3000	3000	317998.75	282965
20	31500	32020	283498.75	168020	3000	3000	317998.75	203040
21	31500	1185	283498.75	0	3000	0	317998.75	1185
22	31500	31500	283498.75	120819	3000	3000	317998.75	155319

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	720224	6236972.5	5923636	66000	64180	6995972.5	6708040

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	1911	377.97	748	1	7.8	40	0	40	0	0	394.46	755.94	1994
2	252.5	1010	377.78	440	1	4	40	0	40	0	0	0	755.57	884
3	252.5	2016	377.6	467	1	8	40	0	40	0	0	45	755.2	1111
4	252.5	1010	377.41	391	1	4	40	0	40	0	0	44.41	754.82	890
5	252.5	505	377.23	390	1	2	40	10	40	10	0	52	754.45	871
6	252.5	505	328.68	396	1	2	40	10	40	10	44.81	43	657.36	899
7	252.5	505	376.85	398	1	2	40	15	40	15	0	44.77	753.71	892
8	252.5	505	376.67	377	1	2	40	20	40	20	0	45	753.33	868
9	252.5	505	376.48	387	1	2	40	0	40	0	0	278	752.96	783
10	252.5	505	376.29	292	1	2	40	5	40	5	0	46	752.59	928
11	252.5	2020	376.11	489	1	8	40	0	40	0	0	77.82	752.22	1240
12	252.5	1010	375.92	324	1	4	40	5	40	5	0	44.7	751.84	1010
13	252.5	505	375.74	387	1	2	40	15	40	15	0	40	751.47	876
14	252.5	505	375.55	391	1	2	40	0	40	0	0	38	751.1	928
15	252.5	1010	375.36	393	1	4	40	15	40	15	0	123.52	750.73	873
16	252.5	505	375.18	404	1	2	40	30	40	30	0	27	750.35	1366
17	252.5	1537	374.99	477	1	6	40	10	40	10	0	55.66	749.98	1834
18	252.5	1590	374.8	461	1	4	40	20	40	20	0	288.77	749.61	1416
19	252.5	971	374.62	605	1	3.85	40	10	40	10	0	115	749.24	1302
20	252.5	1515	374.43	486	1	4	40	0	40	0	0	235	748.86	932
21	252.5	1010	374.24	82	1	5	40	0	40	0	0	76	748.49	204
22	252.5	1010	374.06	329	1	4	40	0	40	0	0	0	748.12	1059

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	22165	8223.96	9114	22	84.65	880	165	880	165	44.81	2114.11	16447.94	23160

ADDITIVE SUMMARY

Treatment Interval	DCA-32019M	
	Proposed (gal)	Pumped (gal)
1	1	7.8
2	1	4
3	1	8
4	1	4
5	1	2
6	1	2
7	1	2
8	1	2
9	1	2
10	1	2
11	1	8
12	1	4
13	1	2
14	1	2
15	1	4
16	1	2
17	1	6
18	1	4
19	1	3.85
20	1	4
21	1	5
22	1	4

ADDITIVE SUMMARY

Treatment Interval	DCA-32019M	
	Proposed (gal)	Pumped (gal)
Total	22	84.65

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	6765	86.21	0.72	7925	101.01	2.17
2	Completed	6681	87.66	0.86	7489	100.59	3.86
3	Completed	6285	84.14	0.73	8503	100.48	3.5
4	Completed	6271	94.81	0.86	7607	101.28	4
5	Completed	6086	95.2	0.9	7902	100.43	4
6	Completed	6484	91.48	0.86	7898	100.29	4
7	Completed	6150	96.7	0.8	7759	101.01	4
8	Completed	5982	96.98	0.91	7987	100.9	4
9	Completed	6881	61.23	0.86	8286	75.56	2.02
10	Completed	6170	95.92	0.84	7239	100.36	2.75
11	Completed	6914	76.49	0.58	8013	93.05	2.02
12	Completed	6831	90.35	0.77	7442	100.56	3.86
13	Completed	6200	96.28	0.82	6857	100.39	4
14	Completed	6726	88.85	0.83	7104	100.38	4
15	Completed	6431	92.37	0.75	7912	100.14	4
16	Completed	6067	89	0.85	7915	100.98	4
17	Completed	5953	95.28	0.75	6837	102.05	4
18	Completed	6451	90.91	0.68	7901	99.83	2.5
19	Completed	6410	76.25	0.63	8916	100.37	3.05
20	Cut	6813	78.4	0.59	8385	96.04	2
21	Cut	6557	47.87	0.01	8538	74.64	0.25
22	Cut	6178	62.01	0.49	8416	84.94	2

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	10918	5708	15.56	7259	18.39
2	240.5	5220	20.4	7484	20.32
3	0	0	0	7312	26.62
4	1.62	3940	6.26	6072	11.29
5	0	0	0	5353	11.29
6	0	0	0	5743	9.97
7	0	0	0	5798	9.88
8	0	0	0	7139	40.38
9	0	0	0	0	0
10	0	0	0	3962	10.75
11	0	0	0	6073	11.33
12	0	0	0	5662	9.77
13	0	0	0	4060	4.58
14	0	0	0	5547	10.22
15	0	0	0	5073	9.44
16	0	0	0	3430	9.98
17	0	0	0	0	0
18	0	0	0	5142	9.79
19	0	0	0	3776	10.33
20	0	0	0	5808	11.69
21	0	0	0	5496	11.87
22	0	0	0	4674	9.14

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	3279	4058	1.07	54.29	0	0	0	3690
2	3422	4004	1.06	43.02	0	0	0	3912
3	3528	4144	1.08	30.22	0	0	0	4081
4	3784	4044	1.07	48.35	0	0	0	3999
5	3971	4969	1.21	61.12	0	0	0	3991
6	3625	4338	1.11	35.28	0	0	0	4031
7	3664	5316	1.27	25.26	0	0	0	3973
8	3717	4021	1.06	44.92	0	0	0	3855
9	3843	4231	1.1	40.3	0	0	0	4065
10	3750	4610	1.16	28.09	0	0	0	4136
11	3657	4367	1.12	46.82	0	0	0	4142
12	3935	4293	1.11	54.04	0	0	0	4257
13	4065	4110	1.08	36.22	0	0	0	4099
14	5128	4923	1.21	28.19	0	0	0	4126
15	3973	4564	1.15	44.58	0	0	0	4261
16	3280	4505	1.14	46.24	0	0	0	4486
17	3690	4143	1.08	28.24	0	0	0	4016
18	3504	4162	1.09	56.85	0	0	0	4144
19	3553	5336	1.27	46.71	0	0	0	5080
20	3668	4335	1.11	45.65	0	0	0	4236
21	3847	4311	1.11	47.72	0	0	0	4188
22	4188	4245	1.1	35.09	4125	3992	3978	3978

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	2024-04-29T03:16:23	2024-04-29T03:17:00	2024-04-29T15:14:24	2024-04-29T15:14:54	04:44:39	07:12:45
2	2024-04-29T00:00:00	2024-04-29T19:32:55	2024-04-29T19:33:36	2024-04-29T21:44:55	2024-04-29T21:45:29	02:11:19	00:00:00
3	2024-04-30T00:00:00	2024-04-30T01:58:28	2024-04-30T01:58:57	2024-04-30T07:45:43	2024-04-30T07:46:28	03:33:45	02:13:01
4	2024-04-30T00:00:00	2024-04-30T09:45:02	2024-04-30T09:45:23	2024-04-30T11:39:42	2024-04-30T11:40:09	01:54:19	00:00:00
5	2024-04-30T00:00:00	2024-04-30T15:43:50	2024-04-30T15:44:24	2024-04-30T17:35:04	2024-04-30T17:35:37	01:50:40	00:00:00
6	2024-04-30T00:00:00	2024-04-30T21:35:14	2024-04-30T21:35:34	2024-04-30T23:33:01	2024-04-30T23:33:41	01:57:27	00:00:00
7	2024-05-01T00:00:00	2024-05-01T03:46:08	2024-05-01T03:46:34	2024-05-01T05:44:32	2024-05-01T05:45:20	01:57:58	00:00:00
8	2024-05-01T00:00:00	2024-05-01T10:09:18	2024-05-01T10:09:48	2024-05-01T11:57:31	2024-05-01T11:58:04	01:47:43	00:00:00
9	2024-05-01T00:00:00	2024-05-01T16:30:41	2024-05-01T16:31:36	2024-05-01T19:31:03	2024-05-01T19:31:30	02:59:27	00:00:00
10	2024-05-01T00:00:00	2024-05-01T23:41:51	2024-05-01T23:42:15	2024-05-02T01:34:42	2024-05-02T01:35:13	01:52:27	00:00:00
11	2024-05-02T00:00:00	2024-05-02T06:55:47	2024-05-02T06:56:33	2024-05-02T12:33:41	2024-05-02T12:34:06	03:14:44	02:22:24
12	2024-05-02T00:00:00	2024-05-02T14:45:54	2024-05-02T14:45:56	2024-05-02T16:45:54	2024-05-02T16:46:30	01:59:58	00:00:00
13	2024-05-02T00:00:00	2024-05-02T20:41:09	2024-05-02T20:43:38	2024-05-02T22:29:09	2024-05-02T22:29:38	01:45:31	00:00:00
14	2024-05-03T00:00:00	2024-05-03T02:30:30	2024-05-03T02:31:31	2024-05-03T04:30:01	2024-05-03T04:30:34	01:58:30	00:00:00
15	2024-05-03T00:00:00	2024-05-03T08:42:51	2024-05-03T08:43:34	2024-05-03T10:46:51	2024-05-03T10:47:30	02:03:17	00:00:00
16	2024-05-04T00:00:00	2024-05-04T19:21:10	2024-05-04T19:21:59	2024-05-04T21:25:31	2024-05-04T21:26:01	02:03:32	00:00:00
17	2024-05-05T00:00:00	2024-05-05T05:27:11	2024-05-05T05:28:11	2024-05-05T07:24:55	2024-05-05T07:25:39	01:56:44	00:00:00
18	2024-05-05T00:00:00	2024-05-05T13:15:56	2024-05-05T13:16:57	2024-05-05T15:55:21	2024-05-05T15:55:52	02:38:24	00:00:00
19	2024-05-05T00:00:00	2024-05-05T20:22:45	2024-05-05T20:23:01	2024-05-06T01:14:13	2024-05-06T01:15:10	02:44:09	02:07:03
20	2024-05-06T00:00:00	2024-05-06T08:41:15	2024-05-06T08:41:43	2024-05-06T12:39:18	2024-05-06T12:40:00	02:13:24	01:44:11
21	2024-05-06T00:00:00	2024-05-06T13:37:23	2024-05-06T13:38:00	2024-05-06T17:15:13	2024-05-06T17:15:44	01:31:38	02:05:35
22	2024-05-06T00:00:00	2024-05-06T18:20:47	2024-05-06T18:21:06	2024-05-06T22:06:36	2024-05-06T22:21:37	02:38:19	01:07:11

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
1	0	60	0	Bio: 1392 Geo: 5574 Bleach: 673 Pump Down: 7812 USG Flush: 14700 USG Volumes include stage 0 and stage 1	PNP
2	0	60	0	Bio: 15.225 Geo: 11.237 Bleach: 47.125 Pump Down: 7437 USG Flush: 12689 USG Wireline: 32 shots on 6 guns	PNP
3	0	60	0	Bio: 12.107 Geo: 1.087 Bleach: 34.316 Pump Down: 33978 USG Flush: 14966 USG Wireline: 32 shots on 6 guns x2	PNP
4	0	60	0	Bio: 8.7 Geo: 10.875 Bleach: 31.705 Pump Down: 8442 USG Flush: 14112 USG Wireline: 32 shots on 6 guns	PNP
5	0	60	0	Bio: 12.688 Geo: 10.875 Bleach: 32.265 Pump Down: 7602 USG Flush: 9744 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
6	0	60	0	Bio: 8.7 Geo: 10.367 Bleach: 30.812 Pump Down: 7224 USG Flush: 9576 USG Wireline: 32 shots on 6 guns Diverter 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 82 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 58 Psi	PNP
7	0	60	0	Bio: 13.267 Geo: 12.905 Bleach: 36.927 Pump Down: 6846 USG Flush: 8862 USG Wireline: 32 shots on 6 guns Came offline 03:52 due to discharge plug coming off missile. Back online 03:58. 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
8	0	60	0	Bio: 13.96 Geo: 11.06 Bleach: 37.3 Pump Down: 6594 USG Flush: 9198 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 0 Psi	PNP

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
9	0	60	0	Bio: 14.5 Geo: 5.73 Bleach: 30.45 Pump Down: 6300 USG Flush: 8988 USG Wireline: 32 shots on 6 guns	PNP
10	0	60	0	Bio: 9.98 Geo: 12.69 Bleach: 26.11 Pump Down: 6426 USG Flush: 8736 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 95 Psi	PNP
11	0	60	0	Bio: 5.8 Geo: 10.8 Bleach: 21.2 Pump Down: 12180 USG Flush: 12804 USG Wireline: 32 shots on 6 guns	PNP
12	0	60	0	Bio: 12.6 Geo: 13.7 Bleach: 35.4 Pump Down: 5460 USG Flush: 12525 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 40 Psi	PNP
13	0	60	0	Bio: 10.88 Geo: 12.33 Bleach: 32.08 Pump Down: 4620 USG Flush: 8274 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 181 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 34 Psi	PNP
14	0	60	0	Bio: 10.88 Geo: 11.78 Bleach: 32.64 Pump Down: 4662 USG Flush: 8064 USG Wireline: 32 shots on 6 guns	PNP
15	0	60	0	Bio: 14.5 Geo: 13.7 Bleach: 41.7 Pump Down: 4116 USG Flush: 12355 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 739 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 38 Psi	PNP
16	0	60	0	Bio: 10.18 Geo: 9.38 Bleach: 40.74 Pump Down: 3822 USG Flush: 7686 USG Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 22 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 33 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: 10.51 Geo: 14.05 Bleach: 36.36 Pump Down: 13925 USG Flush: 7518 USG Wireline: 40 shots on 8 guns Wireline: 32 shots on 6 guns Diverter: 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 72 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
18	0	60	0	Bio: 10.5 Geo: 16.3 Bleach: 42.8 Pump Down: 3192 USG Flush: 12238 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 215 Psi	PNP
19	0	60	0	Bio: 14.282 Geo: 11.527 Bleach: 46.822 Pump Down: 12012 USG Flush: 7140 USG Wireline: 40 shots on 8 guns Diverter: 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 394 Psi Sent 87.6% proppant into formation. Cut due to high pressure.	PNP
20	0	60	0	Bio: 9.64 Geo: 9.78 Bleach: 34.6 Pump Down: 6510 USG Flush: 6930 USG Injected: Wireline: 32 shots on 6 guns +8 Shots Cut stage after 2nd 2lb ramp due to pressure.	PNP
21	0	60	0	Bio: 10.8 Geo: 9.7 Bleach: 38.7 Pump Down: 5460 USG Flush: 6762 USG Wireline: 46 shots on 9 guns Sent .4% of proppant into formation. Cut due to high pressure.	PNP
22	0	60	0	Bio: 8.59 Geo: 7.28 Bleach: 34.05 Pump Down: 5166 USG Flush: 6594 USG Wireline: 50 shots on 9 guns Sent 48.8% proppant into formation. Cut due to high pressure.	PNP

TUBULAR DATA

Type	OD (in)	Weight (lbm/ft)	Top MD (ft)	Bottom MD (ft)	Volume Factor (gal/ft)
Casing	5.5	20	0	11490	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	11421	11422	1	6	0.35	120	6	Niobrara	Niobrara
1	2	11389	11390	1	6	0.35	120	6	Niobrara	Niobrara
1	3	11357	11358	1	6	0.35	120	6	Niobrara	Niobrara
1	4	11325	11326	1	6	0.35	120	6	Niobrara	Niobrara
1	5	11293	11294	1	4	0.35	120	4	Niobrara	Niobrara
1	6	11262	11263	1	4	0.35	120	4	Niobrara	Niobrara
2	1	11221	11222	1	6	0.35	120	6	Niobrara	Niobrara
2	2	11189	11190	1	6	0.35	120	6	Niobrara	Niobrara
2	3	11157	11158	1	6	0.35	120	6	Niobrara	Niobrara
2	4	11125	11126	1	6	0.35	120	6	Niobrara	Niobrara
2	5	11093	11094	1	4	0.35	120	4	Niobrara	Niobrara
2	6	11062	11063	1	4	0.35	120	4	Niobrara	Niobrara
3	1	11021	11022	1	6	0.35	120	6	Niobrara	Niobrara
3	2	10989	10990	1	6	0.35	120	6	Niobrara	Niobrara
3	3	10957	10958	1	6	0.35	120	6	Niobrara	Niobrara
3	4	10925	10926	1	6	0.35	120	6	Niobrara	Niobrara
3	5	10893	10894	1	4	0.35	120	4	Niobrara	Niobrara
3	6	10862	10863	1	4	0.35	120	4	Niobrara	Niobrara
4	1	10821	10822	1	6	0.35	120	6	Niobrara	Niobrara
4	2	10789	10790	1	6	0.35	120	6	Niobrara	Niobrara
4	3	10757	10758	1	6	0.35	120	6	Niobrara	Niobrara
4	4	10725	10726	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	10693	10694	1	4	0.35	120	4	Niobrara	Niobrara
4	6	10662	10663	1	4	0.35	120	4	Niobrara	Niobrara
5	1	10621	10622	1	6	0.35	120	6	Niobrara	Niobrara
5	2	10589	10590	1	6	0.35	120	6	Niobrara	Niobrara
5	3	10557	10558	1	6	0.35	120	6	Niobrara	Niobrara
5	4	10525	10526	1	6	0.35	120	6	Niobrara	Niobrara
5	5	10493	10494	1	4	0.35	120	4	Niobrara	Niobrara
5	6	10462	10463	1	4	0.35	120	4	Niobrara	Niobrara
6	1	10421	10422	1	6	0.35	120	6	Niobrara	Niobrara
6	2	10389	10390	1	6	0.35	120	6	Niobrara	Niobrara
6	3	10357	10358	1	6	0.35	120	6	Niobrara	Niobrara
6	4	10325	10326	1	6	0.35	120	6	Niobrara	Niobrara
6	5	10293	10294	1	4	0.35	120	4	Niobrara	Niobrara
6	6	10262	10263	1	4	0.35	120	4	Niobrara	Niobrara
7	1	10221	10222	1	6	0.35	120	6	Niobrara	Niobrara
7	2	10189	10190	1	6	0.35	120	6	Niobrara	Niobrara
7	3	10157	10158	1	6	0.35	120	6	Niobrara	Niobrara
7	4	10125	10126	1	6	0.35	120	6	Niobrara	Niobrara
7	5	10093	10094	1	4	0.35	120	4	Niobrara	Niobrara
7	6	10062	10063	1	4	0.35	120	4	Niobrara	Niobrara
8	1	10021	10022	1	6	0.35	120	6	Niobrara	Niobrara
8	2	9989	9990	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	9957	9958	1	6	0.35	120	6	Niobrara	Niobrara
8	4	9925	9926	1	6	0.35	120	6	Niobrara	Niobrara
8	5	9893	9894	1	4	0.35	120	4	Niobrara	Niobrara
8	6	9862	9863	1	4	0.35	120	4	Niobrara	Niobrara
9	1	9821	9822	1	6	0.35	120	6	Niobrara	Niobrara
9	2	9789	9790	1	6	0.35	120	6	Niobrara	Niobrara
9	3	9757	9758	1	6	0.35	120	6	Niobrara	Niobrara
9	4	9725	9726	1	6	0.35	120	6	Niobrara	Niobrara
9	5	9693	9694	1	4	0.35	120	4	Niobrara	Niobrara
9	6	9662	9663	1	4	0.35	120	4	Niobrara	Niobrara
10	1	9621	9622	1	6	0.35	120	6	Niobrara	Niobrara
10	2	9589	9590	1	6	0.35	120	6	Niobrara	Niobrara
10	3	9557	9558	1	6	0.35	120	6	Niobrara	Niobrara
10	4	9525	9526	1	6	0.35	120	6	Niobrara	Niobrara
10	5	9493	9494	1	4	0.35	120	4	Niobrara	Niobrara
10	6	9462	9463	1	4	0.35	120	4	Niobrara	Niobrara
11	1	9421	9422	1	6	0.35	120	6	Niobrara	Niobrara
11	2	9389	9390	1	6	0.35	120	6	Niobrara	Niobrara
11	3	9357	9358	1	6	0.35	120	6	Niobrara	Niobrara
11	4	9325	9326	1	6	0.35	120	6	Niobrara	Niobrara
11	5	9293	9294	1	4	0.35	120	4	Niobrara	Niobrara
11	6	9262	9263	1	4	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	9221	9222	1	6	0.35	120	6	Niobrara	Niobrara
12	2	9189	9190	1	6	0.35	120	6	Niobrara	Niobrara
12	3	9157	9158	1	6	0.35	120	6	Niobrara	Niobrara
12	4	9125	9126	1	6	0.35	120	6	Niobrara	Niobrara
12	5	9093	9094	1	4	0.35	120	4	Niobrara	Niobrara
12	6	9062	9063	1	4	0.35	120	4	Niobrara	Niobrara
13	1	9021	9022	1	6	0.35	120	6	Niobrara	Niobrara
13	2	8989	8990	1	6	0.35	120	6	Niobrara	Niobrara
13	3	8957	8958	1	6	0.35	120	6	Niobrara	Niobrara
13	4	8925	8926	1	6	0.35	120	6	Niobrara	Niobrara
13	5	8893	8894	1	4	0.35	120	4	Niobrara	Niobrara
13	6	8862	8863	1	4	0.35	120	4	Niobrara	Niobrara
14	1	8821	8822	1	6	0.35	120	6	Niobrara	Niobrara
14	2	8789	8790	1	6	0.35	120	6	Niobrara	Niobrara
14	3	8757	8758	1	6	0.35	120	6	Niobrara	Niobrara
14	4	8725	8726	1	6	0.35	120	6	Niobrara	Niobrara
14	5	8693	8694	1	4	0.35	120	4	Niobrara	Niobrara
14	6	8662	8663	1	4	0.35	120	4	Niobrara	Niobrara
15	1	8621	8622	1	6	0.35	120	6	Niobrara	Niobrara
15	2	8589	8590	1	6	0.35	120	6	Niobrara	Niobrara
15	3	8557	8558	1	6	0.35	120	6	Niobrara	Niobrara
15	4	8525	8526	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	8493	8494	1	4	0.35	120	4	Niobrara	Niobrara
15	6	8462	8463	1	4	0.35	120	4	Niobrara	Niobrara
16	1	8421	8422	1	6	0.35	120	6	Niobrara	Niobrara
16	2	8389	8390	1	6	0.35	120	6	Niobrara	Niobrara
16	3	8357	8358	1	6	0.35	120	6	Niobrara	Niobrara
16	4	8325	8326	1	6	0.35	120	6	Niobrara	Niobrara
16	5	8293	8294	1	4	0.35	120	4	Niobrara	Niobrara
16	6	8262	8263	1	4	0.35	120	4	Niobrara	Niobrara
17	1	8221	8222	1	6	0.35	120	6	Niobrara	Niobrara
17	2	8189	8190	1	6	0.35	120	6	Niobrara	Niobrara
17	3	8157	8158	1	6	0.35	120	6	Niobrara	Niobrara
17	4	8125	8126	1	6	0.35	120	6	Niobrara	Niobrara
17	5	8093	8094	1	4	0.35	120	4	Niobrara	Niobrara
17	6	8062	8063	1	4	0.35	120	4	Niobrara	Niobrara
18	1	8021	8022	1	6	0.35	120	6	Niobrara	Niobrara
18	2	7989	7990	1	6	0.35	120	6	Niobrara	Niobrara
18	3	7957	7958	1	6	0.35	120	6	Niobrara	Niobrara
18	4	7925	7926	1	6	0.35	120	6	Niobrara	Niobrara
18	5	7893	7894	1	4	0.35	120	4	Niobrara	Niobrara
18	6	7862	7863	1	4	0.35	120	4	Niobrara	Niobrara
19	1	7821	7822	1	6	0.35	120	6	Niobrara	Niobrara
19	2	7789	7790	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	7757	7758	1	6	0.35	120	6	Niobrara	Niobrara
19	4	7725	7726	1	6	0.35	120	6	Niobrara	Niobrara
19	5	7693	7694	1	4	0.35	120	4	Niobrara	Niobrara
19	6	7662	7663	1	4	0.35	120	4	Niobrara	Niobrara
20	1	7621	7622	1	6	0.35	120	6	Niobrara	Niobrara
20	2	7589	7590	1	6	0.35	120	6	Niobrara	Niobrara
20	3	7557	7558	1	6	0.35	120	6	Niobrara	Niobrara
20	4	7525	7526	1	6	0.35	120	6	Niobrara	Niobrara
20	5	7493	7494	1	4	0.35	120	4	Niobrara	Niobrara
20	6	7462	7463	1	4	0.35	120	4	Niobrara	Niobrara
21	1	7421	7422	1	6	0.35	120	6	Niobrara	Niobrara
21	2	7389	7390	1	6	0.35	120	6	Niobrara	Niobrara
21	3	7357	7358	1	6	0.35	120	6	Niobrara	Niobrara
21	4	7325	7326	1	6	0.35	120	6	Niobrara	Niobrara
21	5	7293	7294	1	4	0.35	120	4	Niobrara	Niobrara
21	6	7262	7263	1	4	0.35	120	4	Niobrara	Niobrara
22	1	7221	7222	1	6	0.35	120	6	Niobrara	Niobrara
22	2	7189	7190	1	6	0.35	120	6	Niobrara	Niobrara
22	3	7157	7158	1	6	0.35	120	6	Niobrara	Niobrara
22	4	7125	7126	1	6	0.35	120	6	Niobrara	Niobrara
22	5	7093	7094	1	4	0.35	120	4	Niobrara	Niobrara
22	6	7062	7063	1	4	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	1900	1000	642	10491	55131	0	6005	328680	683009	37800	57554	0	4129
2	500	2000	1000	1287	10305	16988	0	0	328680	330885	37800	32990	0	0
3	500	3000	1000	375	10118	23254	0	12797	328680	352113	37800	84208	0	6972
4	500	2000	1000	776	9932	8821	0	6098	328680	326011	37800	42610	0	4176
5	500	1000	1000	979	9746	18058	0	0	328680	341107	37800	39476	0	0
6	500	1000	1000	332	9559	17785	0	0	328680	345448	37800	39991	0	0
7	500	1000	1000	641	9373	11402	0	6634	328680	342275	37800	41451	0	3918
8	500	1000	1000	1020	9187	18968	0	0	328680	332856	37800	39045	0	0
9	500	1000	1000	672	9001	16261	0	0	328680	331026	37800	37788	0	0
10	500	1000	1000	1133	8814	17414	0	0	328680	349579	37800	37642	0	0
11	500	4000	1000	557	8628	46051	0	5685	328680	367759	37800	69335	0	5588
12	500	2000	1000	523	8442	6121	0	6404	328680	339495	37800	21709	0	4662
13	500	1000	1000	106	8255	17910	0	0	328680	334777	37800	39296	0	0
14	500	1000	1000	272	8069	17028	0	0	328680	337145	37800	39433	0	0
15	500	2000	1000	586	7883	6049	0	6306	328680	332411	37800	51436	0	4773
16	500	1000	1000	132	7697	16921	0	0	328680	326354	37800	40249	0	0
17	500	3000	1000	522	7510	5645	0	8279	328680	325315	37800	39503	0	5725
18	500	2000	1000	564	7324	16430	0	7199	328680	351693	37800	74898	0	7470
19	500	1000	0	0	7138	35193	0	0	328680	319767	37800	49514	0	0
20	500	2000	1000	1708	6951	31735	0	1873	328680	233447	37800	78463	0	0
21	500	2499	1000	1926	6765	32635	0	0	328680	3870	37800	70042	0	0
22	500	2000	1000	115	6579	23058	0	0	328680	227610	37800	70752	0	0

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	38399	21000	14868	187767	458858	0	67280	7230960	7233952	831600	1097385	0	47413

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	0	0	35098	0	7812	378471	851280
2	0	0	0	12842	0	7434	378285	404426
3	0	0	0	0	0	33978	378098	516697
4	0	0	0	9870	0	8442	377912	408804
5	0	0	0	0	0	7602	377726	408222
6	0	0	0	0	0	7224	377539	411780
7	0	0	0	0	0	6846	377353	414167
8	0	0	0	0	0	6594	377167	399483
9	0	0	0	23357	0	6300	376981	416404
10	0	0	0	0	0	6426	376794	413194
11	0	0	0	11296	0	5334	376608	515605
12	0	0	0	9403	0	5460	376422	395777
13	0	0	0	0	0	4620	376235	397709
14	0	0	0	0	0	4662	376049	399540
15	0	0	0	0	0	4116	375863	407677
16	0	0	0	25929	0	3822	375677	414407
17	0	0	0	21360	0	15960	375490	425309
18	0	0	0	13464	0	3192	375304	476910
19	0	94	0	39678	0	12012	374118	457258
20	0	0	0	7609	0	6510	374931	363345
21	0	0	0	0	0	5460	374745	116432
22	0	0	0	18138	0	5166	374559	346839

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	94	0	228044	0	174972	8282327	9361265

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	Wireline Pump-In	Treated Water		0	0	0	20	7812	7812	7812
	2	Breakdown	FR Water		0	0	0	7.34	642	649	8454
	3	Acid	15% HCl		0	0	0	9.73	950	950	9404
	4	Pad	FR Water		0	0	0	9.94	790	832	10194
	5	Acid	15% HCl		0	0	0	10.14	950	950	11144
	6	Pad	FR Water		0	0	0	10.36	1100	1191	12244
	7	Pad	Dry FR		0	0	0	35.69	38774	38747	51018
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	61.49	3814	3851	54832
	9	Spacer	Dry FR		0	0	0	61.14	17297	17302	72129
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	65.15	53545	54086	125674
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	72.07	21565	22267	147239
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	78.3	12916	13054	160155
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	85.19	62966	65831	223121
	14	PLF	Dry FR	30/50 Premium White	2	2	2	92.24	7054	7539	230175
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	92.24	11160	11295	241335
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	97.88	63841	66765	305176
	17	PLF	Dry FR	30/50 Premium White	2	2	2	99.88	10655	11110	315831
	18	Spacer	Dry FR		0	0	0	99.94	4339	4429	320170
	19	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.1	39817	40305	359987
	20	PLF	Dry FR	30/50 Premium White	0.25	2.17	1.21	100.18	22367	23463	382354
	21	PLF	Dry FR	30/50 Premium White	2	2	2	100.06	38299	41614	420653
	22	Flush	Dry FR		0	0	0	100.33	4413	4376	425066

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	Flush	Dry FR		0	0	0	100.42	9714	9752	434780
	24	Flush	FR Water		0	0	0	47.1	7865	7840	442645
	25	Flush	15% HCl		0	0	0	10.73	1000	1000	443645
	26	Flush	FR Water		0	0	0	14.06	398	412	444043
	27	Flush	Dry FR		0	0	0	24.5	17246	17220	461289
	28	Flush	FR Water		0	0	0	11.18	1050	1103	462339
	29	Flush	15% HCl		0	0	0	10.37	1000	1000	463339
	30	Flush	FR Water		0	0	0	14.5	1538	1563	464877
	31	Pad	Dry FR		0	0	0	40.66	16890	16904	481767
	32	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	64.67	3646	3687	485413
	33	Spacer	Dry FR		0	0	0	64.87	13462	13522	498875
	34	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	77.16	35635	36119	534510
	35	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	90.48	21711	22469	556221
	36	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	90.48	12146	12295	568367
	37	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	96.47	62892	65884	631259
	38	PLF	Dry FR	30/50 Premium White	2	2	2	100.43	10980	11949	642239
	39	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.62	9433	9568	651672
	40	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.5	64053	67132	715725
	41	PLF	Dry FR	30/50 Premium White	2	2	2	100.44	11644	12649	727369
	42	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.61	43910	44461	771279
	43	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.63	20252	21171	791531
	44	PLF	Dry FR	30/50 Premium White	2	2	2	100.6	38708	42041	830239

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	45	Pre-Flush	Dry FR		0	0	0	100.85	4129	4114	834368
	46	Flush	Dry FR		0	0	0	100.87	10907	10931	845275
	47	Overflush	FR Water		0	0	0	88.84	6005	6053	851280
2	1	Wireline Pump-In	Treated Water		0	0	0	22	7434	7434	858714
	2	Breakdown	Dry FR		0	0	0	9.22	1287	1335	860001
	3	Acid	15% HCl		0	0	0	10.72	1000	1000	861001
	4	Pad	Dry FR		0	0	0	10.75	874	922	861875
	5	Acid	15% HCl		0	0	0	11	1000	1000	862875
	6	Pad	Dry FR		0	0	0	11.04	689	745	863564
	7	Pad	Dry FR		0	0	0	37.43	31427	31578	894991
	8	PLF	Dry FR	30/50 Premium White	0.15	0.15	0.15	56.17	1409	1425	896400
	9	Spacer	Dry FR		0	0	0	56.25	12842	12908	909242
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	69.72	52577	53319	961819
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	86.35	21800	22616	983619
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	87.02	11901	12071	995520
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	94.85	62942	66259	1058462
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.06	12590	13807	1071052
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.25	9146	9312	1080198
	16	PLF	Dry FR	30/50 Premium White	0.25	1.99	1.12	100.17	63831	67483	1144029
	17	PLF	Dry FR	30/50 Premium White	2	2	2	100.11	11282	12402	1155311
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.4	43956	44750	1199267
	19	PLF	Dry FR	30/50 Premium White	0.25	3.86	2.06	100.19	39451	43016	1238718

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	20	Flush	Dry FR		0	0	0	100.45	4438	4386	1243156
	21	Flush	Dry FR		0	0	0	100.53	6266	6298	1249422
	22	Flush	Dry FR		0	0	0	89.1	6284	6284	1255706
3	1	Wireline Pump-In	Treated Water		0	0	0	20	33978	33978	1289684
	2	Breakdown	FR Water		0	0	0	7.03	375	371	1290059
	3	Acid	15% HCl		0	0	0	10.46	1000	1000	1291059
	4	Pad	FR Water		0	0	0	11.51	466	490	1291525
	5	Pad	Dry FR		0	0	0	33.67	26744	26818	1318269
	6	PLF	Dry FR	30/50 Premium White	0.15	0.15	0.15	43.5	1097	1135	1319366
	7	PLF	Dry FR	30/50 Premium White	0.15	0.15	0.15	46.39	12041	12184	1331407
	8	Pre-Flush	Dry FR		0	0	0	20.67	1262	1288	1332669
	9	Flush	FR Water		0	0	0	19.88	223	224	1332892
	10	Pad	Dry FR		0	0	0	18.89	10881	10868	1343773
	11	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	24.05	3263	3269	1347036
	12	Flush	Dry FR		0	0	0	11.16	7009	6996	1354045
	13	Flush	FR Water		0	0	0	9.99	183	183	1354228
	14	Acid	15% HCl		0	0	0	9.99	1000	1000	1355228
	15	Pad	FR Water		0	0	0	10.28	802	835	1356030
	16	Pad	Dry FR		0	0	0	18.83	5664	5728	1361694
	17	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	23.86	2132	2149	1363826
	18	Pre-Flush	Dry FR		0	0	0	17.49	1565	1584	1365391
	19	Flush	FR Water		0	0	0	6.54	172	215	1365563

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	20	Flush	Dry FR		0	0	0	14.08	8285	8195	1373848
	21	Flush	FR Water		0	0	0	17.11	5213	5201	1379061
	22	Acid	15% HCl		0	0	0	11.48	1000	1000	1380061
	23	Pad	FR Water		0	0	0	11.51	871	934	1380932
	24	Pad	15% HCl		0	0	0	11.51	1000	1000	1381932
	25	Pad	FR Water		0	0	0	61.67	37780	38180	1419712
	26	PLF	FR Water	100 Mesh Premium White	0.25	0.25	0.25	99.53	52632	53508	1472344
	27	PLF	FR Water	100 Mesh Premium White	0.25	1.5	0.88	94.03	22306	23283	1494650
	28	PLF	FR Water	SS-200 Premium White	0.25	0.25	0.25	99.53	14038	14291	1508688
	29	PLF	FR Water	30/50 Premium White	0.25	2	1.12	99.3	62948	66240	1571636
	30	PLF	FR Water	30/50 Premium White	2	2	2	99.15	10945	11934	1582581
	31	PLF	FR Water	30/50 Premium White	0.25	0.25	0.25	99.28	9468	9645	1592049
	32	PLF	FR Water	30/50 Premium White	0.25	2	1.12	99.25	63993	67395	1656042
	33	PLF	FR Water	30/50 Premium White	2	2	2	99.13	10926	11926	1666968
	34	PLF	FR Water	30/50 Premium White	0.25	0.25	0.25	99.45	43786	44529	1710754
	35	PLF	FR Water	30/50 Premium White	0.25	0.43	0.34	99.91	3178	3233	1713932
	36	PLF	Dry FR	30/50 Premium White	0.44	3.49	1.96	99.83	32583	35629	1746515
	37	PLF	Dry FR	30/50 Premium White	3.5	3.5	3.5	99.71	6777	7862	1753292
	38	Pre-Flush	Dry FR		0	0	0	99.94	4145	4154	1757437
	39	Flush	Dry FR		0	0	0	100.12	2169	2186	1759606
	40	Overflush	FR Water		0	0	0	94.13	12797	12914	1772403
4	1	Wireline Pump-In	Treated Water		0	0	0	20	8442	8442	1780845

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	2	Breakdown	FR Water		0	0	0	8.33	776	773	1781621
	3	Acid	15% HCl		0	0	0	10.92	1000	1000	1782621
	4	Pad	FR Water		0	0	0	11.05	533	548	1783154
	5	Acid	15% HCl		0	0	0	11.17	1000	1000	1784154
	6	Pad	FR Water		0	0	0	11.53	583	648	1784737
	7	Pad	Dry FR		0	0	0	62.46	41494	41889	1826231
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	84.52	4151	4223	1830382
	9	Spacer	Dry FR		0	0	0	84.53	9870	9937	1840252
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	92.49	37909	38554	1878161
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.89	21825	22713	1899986
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.91	12044	12240	1912030
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.77	63041	66427	1975071
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.68	11139	12149	1986210
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.85	11600	11811	1997810
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.74	64001	67405	2061811
	17	PLF	Dry FR	30/50 Premium White	2	2	2	99.58	13407	14657	2075218
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.91	44286	45069	2119504
	19	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.92	40745	44454	2160249
	20	PLF	Dry FR	30/50 Premium White	4	4	4	99.45	1863	2169	2162112
	21	Pre-Flush	Dry FR		0	0	0	100.14	4176	4159	2166288
	22	Flush	Dry FR		0	0	0	100.21	8821	8891	2175109
	23	Overflush	FR Water		0	0	0	88.99	6098	6125	2181207

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	1	Wireline Pump-In	Treated Water		0	0	0	18	7602	7602	2188809
	2	Breakdown	Treated Water		0	0	0	9.41	979	1019	2189788
	3	Acid	15% HCl		0	0	0	11.4	1000	1000	2190788
	4	Pad	Treated Water		0	0	0	12.37	159	170	2190947
	5	Pad	Dry FR		0	0	0	57.16	39317	39807	2230264
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	92.26	50970	51833	2281234
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	99.87	21901	22773	2303135
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	98.69	14772	15016	2317907
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.41	62941	66195	2380848
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.81	10892	11872	2391740
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.13	9617	9797	2401357
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.04	63946	67322	2465303
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.85	13076	14204	2478379
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.13	45695	46450	2524074
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.97	40723	44330	2564797
	16	PLF	Dry FR	30/50 Premium White	4	4	4	99.92	6574	7381	2571371
	17	Flush	Dry FR		0	0	0	100.22	4485	4441	2575856
	18	Flush	Dry FR		0	0	0	100.19	7293	7331	2583149
	19	Flush	Treated Water		0	0	0	87.77	6280	6419	2589429
6	1	Wireline Pump-In	Treated Water		0	0	0	20	7224	7224	2596653
	2	Breakdown	FR Water		0	0	0	4.79	332	310	2596985
	3	Acid	15% HCl		0	0	0	10.12	1000	1000	2597985

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	4	Pad	FR Water		0	0	0	15	1273	1356	2599258
	5	Pad	Dry FR		0	0	0	55.13	38718	38850	2637976
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	77.92	53428	54122	2691404
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	87.82	21761	22548	2713165
	8	PLF	Dry FR	100 Mesh Premium White	1.5	1.5	1.5	90.03	3561	3798	2716726
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	92.29	16736	16954	2733462
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.97	63039	66243	2796501
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.88	13670	14900	2810171
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.13	17177	17400	2827348
	13	PLF	Dry FR	30/50 Premium White	0.25	1.99	1.12	100.07	63661	66913	2891009
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.94	10201	11116	2901210
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.52	38273	38805	2939483
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.69	40685	44269	2980168
	17	PLF	Dry FR	30/50 Premium White	4	4	4	99.58	3256	3502	2983424
	18	Flush	Dry FR		0	0	0	99.99	4352	4291	2987776
	19	Flush	Dry FR		0	0	0	99.96	7234	7242	2995010
	20	Flush	FR Water		0	0	0	85.52	6199	6301	3001209
7	1	Wireline Pump-In	Treated Water		0	0	0	20	6846	6846	3008055
	2	Breakdown	FR Water		0	0	0	7	641	618	3008696
	3	Acid	15% HCl		0	0	0	10.23	1000	1000	3009696
	4	Pad	FR Water		0	0	0	14.28	830	853	3010526
	5	Pad	Dry FR		0	0	0	34.04	732	753	3011258

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	6	Pad	FR Water		0	0	0	4.5	1378	1489	3012636
	7	Pad	Dry FR		0	0	0	65.68	38511	38635	3051147
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.48	55943	56550	3107090
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.47	0.86	100.6	21438	22159	3128528
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.6	11908	12041	3140436
	11	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.5	62930	65947	3203366
	12	PLF	Dry FR	30/50 Premium White	2	2	2	100.32	13347	14554	3216713
	13	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.63	9527	9635	3226240
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.56	64022	67192	3290262
	15	PLF	Dry FR	30/50 Premium White	2	2	2	100.42	14453	15755	3304715
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.7	45075	45658	3349790
	17	PLF	Dry FR	30/50 Premium White	0.25	3.99	2.12	100.4	40676	44251	3390466
	18	PLF	Dry FR	30/50 Premium White	4	4	4	100.23	2956	3245	3393422
	19	Pre-Flush	Dry FR		0	0	0	100.71	3918	3829	3397340
	20	Flush	Dry FR		0	0	0	100.83	11402	11421	3408742
	21	Overflush	FR Water		0	0	0	88.6	6634	6655	3415376
8	1	Wireline Pump-In	Treated Water		0	0	0	20	6594	6594	3421970
	2	Breakdown	FR Water		0	0	0	10.41	1020	1054	3422990
	3	Acid	15% HCl		0	0	0	11.36	1000	1000	3423990
	4	Pad	FR Water		0	0	0	13.36	914	944	3424904
	5	Pad	Dry FR		0	0	0	64.26	38131	38494	3463035
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.55	52081	52932	3515116

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	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.68	21951	22885	3537067
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.62	11222	11402	3548289
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.61	1045	1062	3549334
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.38	62882	66427	3612216
	11	PLF	Dry FR	30/50 Premium White	2	2	2	100.26	11070	12140	3623286
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.4	9517	9686	3632803
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.32	64063	67645	3696866
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.2	12207	13395	3709073
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.43	43831	44472	3752904
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.24	40771	44456	3793675
	17	PLF	Dry FR	30/50 Premium White	4	4	4	99.91	2216	2604	3795891
	18	Flush	Dry FR		0	0	0	100.25	4169	4163	3800060
	19	Flush	Dry FR		0	0	0	98.06	9019	8977	3809079
	20	Flush	FR Water		0	0	0	81.2	5780	5807	3814859
9	1	Wireline Pump-In	Treated Water		0	0	0	18	6300	6300	3821159
	2	Breakdown	Treated Water		0	0	0	8	672	664	3821831
	3	Acid	15% HCl		0	0	0	10.79	1000	1000	3822831
	4	Pad	Treated Water		0	0	0	10.95	486	504	3823317
	5	Pad	Dry FR		0	0	0	44.47	37302	37727	3860619
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	64.82	16076	16425	3876695
	7	Spacer	Dry FR		0	0	0	45.71	12225	12368	3888920
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	41.46	2746	2803	3891666

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	9	Spacer	Dry FR		0	0	0	40.89	11132	11221	3902798
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	39.68	10972	11181	3913770
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	40.76	21703	22585	3935473
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	45.71	11963	12198	3947436
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	53.16	62974	66465	4010410
	14	PLF	Dry FR	30/50 Premium White	2	2	2	62.09	13256	14464	4023666
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	65.51	9871	10057	4033537
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	68.51	63653	67071	4097190
	17	PLF	Dry FR	30/50 Premium White	2	2	2	70.8	12204	13308	4109394
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	74.03	45124	45917	4154518
	19	PLF	Dry FR	30/50 Premium White	0.25	2.02	1.13	74.22	20256	21312	4174774
	20	PLF	Dry FR	30/50 Premium White	2.02	2.02	2.02	74.15	40228	43837	4215002
	21	Flush	Dry FR		0	0	0	74.33	3505	3503	4218507
	22	Flush	Dry FR		0	0	0	74.48	7033	7075	4225540
	23	Flush	Treated Water		0	0	0	59.8	5723	6007	4231263
10	1	Wireline Pump-In	Treated Water		0	0	0	18	6426	6426	4237689
	2	Breakdown	Treated Water		0	0	0	8.24	1133	1065	4238822
	3	Acid	15% HCl		0	0	0	10.64	1000	1000	4239822
	4	Pad	Treated Water		0	0	0	16.57	1426	1394	4241248
	5	Pad	Dry FR		0	0	0	60.89	36216	36146	4277464
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	96.48	52067	52560	4329531
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.42	0.34	100.21	7678	7756	4337209

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	8	PLF	Dry FR	100 Mesh Premium White	0.42	1.28	0.85	100.09	15030	15564	4352239
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.11	11951	12124	4364190
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100	62948	65936	4427138
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.88	13090	14133	4440228
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.05	11528	11692	4451756
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.93	63953	67020	4515709
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.74	11012	11936	4526721
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.99	47912	48563	4574633
	16	PLF	Dry FR	30/50 Premium White	0.25	2.5	1.38	99.8	25590	27037	4600223
	17	PLF	Dry FR	30/50 Premium White	2.5	2.5	2.5	99.51	17660	19604	4617883
	18	PLF	Dry FR	30/50 Premium White	2.75	2.75	2.75	99.55	9160	10299	4627043
	19	Flush	Dry FR		0	0	0	99.94	4822	4784	4631865
	20	Flush	Dry FR		0	0	0	100.04	7721	7743	4639586
	21	Flush	Treated Water		0	0	0	59.85	4871	5195	4644457
11	1	Wireline Pump-In	Treated Water		0	0	0	20	5334	5334	4649791
	2	Breakdown	FR Water		0	0	0	6.5	557	544	4650348
	3	Acid	15% HCl		0	0	0	10.93	1000	1000	4651348
	4	Pad	FR Water		0	0	0	10.87	473	488	4651821
	5	Pad	Dry FR		0	0	0	44.97	38996	39119	4690817
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	66.49	19898	20088	4710715
	7	Flush	Dry FR		0	0	0	49.72	19235	19229	4729950
	8	Flush	FR Water		0	0	0	10.63	1519	1607	4731469

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11	9	Flush	Dry FR		0	0	0	24.57	15684	15482	4747153
	10	Flush	FR Water		0	0	0	13.32	2494	2580	4749647
	11	Acid	15% HCl		0	0	0	10.61	2000	2000	4751647
	12	Pad	FR Water		0	0	0	10.46	858	887	4752505
	13	Acid	15% HCl		0	0	0	10.32	1000	1000	4753505
	14	Pad	FR Water		0	0	0	9.92	409	396	4753914
	15	Pad	Dry FR		0	0	0	42.08	27351	26475	4781265
	16	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	67.83	815	812	4782080
	17	Pre-Flush	Dry FR		0	0	0	67.82	1195	1195	4783275
	18	Pad	Dry FR		0	0	0	68.2	1248	1249	4784523
	19	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	68.55	3648	3668	4788171
	20	Spacer	Dry FR		0	0	0	68.31	8988	8894	4797159
	21	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	68.46	1732	1735	4798891
	22	Spacer	Dry FR		0	0	0	69.7	2308	2306	4801199
	23	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	80.63	48165	48643	4849364
	24	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	83.89	21726	22447	4871090
	25	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	83.76	12675	12801	4883765
	26	PLF	Dry FR	30/50 Premium White	0.25	0.57	0.41	86.65	11940	12136	4895705
	27	PLF	Dry FR	30/50 Premium White	0.57	0.57	0.57	80.89	4228	4324	4899933
	28	PLF	Dry FR	30/50 Premium White	0.57	1.96	1.27	86.17	50571	53129	4950504
	29	PLF	Dry FR	30/50 Premium White	2	2	2	89.25	11346	12315	4961850
	30	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	89.43	9721	9817	4971571

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11	31	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	91.35	63824	66723	5035395
	32	PLF	Dry FR	30/50 Premium White	2	2	2	89.76	10921	11826	5046316
	33	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	87.65	44647	45071	5090963
	34	PLF	Dry FR	30/50 Premium White	0.25	2.01	1.13	88.89	20336	21156	5111299
	35	PLF	Dry FR	30/50 Premium White	2.02	2.02	2.02	89.4	31566	34018	5142865
	36	Pre-Flush	Dry FR		0	0	0	89.68	4393	4358	5147258
	37	Flush	Dry FR		0	0	0	89.83	7119	7149	5154377
	38	Overflush	FR Water		0	0	0	80.13	5685	5691	5160062
12	1	Wireline Pump-In	Treated Water		0	0	0	20	5460	5460	5165522
	2	Breakdown	FR Water		0	0	0	5.84	523	427	5166045
	3	Acid	15% HCl		0	0	0	9.92	1000	1000	5167045
	4	Pad	FR Water		0	0	0	9.78	1709	1775	5168754
	5	Acid	15% HCl		0	0	0	9.87	1000	1000	5169754
	6	Pad	FR Water		0	0	0	10.86	316	329	5170070
	7	Pad	Dry FR		0	0	0	40.41	19684	19824	5189754
	8	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	65.5	7552	7705	5197306
	9	Spacer	Dry FR		0	0	0	64.44	7539	7491	5204845
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	77.43	55580	55803	5260425
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	85.13	21939	22604	5282364
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	87.16	1963	1962	5284327
	13	Spacer	Dry FR		0	0	0	88.02	1864	1861	5286191
	14	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	88.72	8786	8874	5294977

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12	15	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	96.73	62935	66221	5357912
	16	PLF	Dry FR	30/50 Premium White	2	2	2	99.95	11656	12675	5369568
	17	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.22	9985	10102	5379553
	18	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.17	64031	67159	5443584
	19	PLF	Dry FR	30/50 Premium White	2	2	2	100.02	11078	12037	5454662
	20	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.37	44580	45101	5499242
	21	PLF	Dry FR	30/50 Premium White	0.25	3.86	2.06	100.08	39410	42570	5538652
	22	Pre-Flush	Dry FR		0	0	0	100.3	4662	4590	5543314
	23	Flush	Dry FR		0	0	0	100.49	6121	6156	5549435
	24	Overflush	FR Water		0	0	0	90.31	6404	6408	5555839
13	1	Wireline Pump-In	Treated Water		0	0	0	18	4620	4620	5560459
	2	Breakdown	Treated Water		0	0	0	4.8	106	166	5560565
	3	Acid	15% HCl		0	0	0	10.11	1000	1000	5561565
	4	Pad	Treated Water		0	0	0	12.73	682	642	5562247
	5	Pad	Dry FR		0	0	0	64.74	38614	38495	5600861
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	98.34	51475	52008	5652336
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	100.14	21751	22492	5674087
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.05	11925	12045	5686012
	9	PLF	Dry FR	30/50 Premium White	0.25	1.99	1.12	99.97	62749	65599	5748761
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.8	10917	11807	5759678
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.99	9600	9715	5769278
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.88	63983	66885	5833261

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13	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.73	12016	12993	5845277
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.93	46895	47353	5892172
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.72	40678	44226	5932850
	16	PLF	Dry FR	30/50 Premium White	4	4	4	99.27	2788	3145	5935638
	17	Flush	Dry FR		0	0	0	99.47	5783	5669	5941421
	18	Flush	Dry FR		0	0	0	91.09	6099	6088	5947520
	19	Flush	Treated Water		0	0	0	76.12	6028	6175	5953548
14	1	Wireline Pump-In	Treated Water		0	0	0	18	4662	4662	5958210
	2	Breakdown	Treated Water		0	0	0	4.88	272	312	5958482
	3	Acid	15% HCl		0	0	0	10.33	1000	1000	5959482
	4	Pad	Treated Water		0	0	0	13.45	900	916	5960382
	5	Pad	Dry FR		0	0	0	52.87	38533	38478	5998915
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	73.06	53039	53700	6051954
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	79.37	22675	23525	6074629
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	81.78	11893	12027	6086522
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	91.26	62964	65920	6149486
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.18	16902	18296	6166388
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.97	8757	8871	6175145
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.98	63867	66956	6239012
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.89	10515	11393	6249527
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.15	44528	45072	6294055
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.92	42005	45660	6336060

ACTUAL DESIGN

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14	16	Flush	Dry FR		0	0	0	100.18	5092	5013	6341152
	17	Flush	Dry FR		0	0	0	100.33	7790	7772	6348942
	18	Flush	Treated Water		0	0	0	78.43	4146	4350	6353088
15	1	Wireline Pump-In	Treated Water		0	0	0	20	4116	4116	6357204
	2	Breakdown	FR Water		0	0	0	5.76	586	624	6357790
	3	Acid	15% HCl		0	0	0	9.89	1000	1000	6358790
	4	Pad	FR Water		0	0	0	11.71	368	380	6359158
	5	Pad	Dry FR		0	0	0	33.18	9838	9766	6368996
	6	Pad	FR Water		0	0	0	10.74	1725	1780	6370721
	7	Acid	15% HCl		0	0	0	10.7	1000	1000	6371721
	8	Pad	FR Water		0	0	0	11.32	332	343	6372053
	9	Pad	Dry FR		0	0	0	49.14	39173	39309	6411226
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	96.04	51284	52025	6462510
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.81	21917	22706	6484427
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.82	12067	12230	6496494
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.7	62930	65853	6559424
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.57	11164	12063	6570588
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.74	9762	9904	6580350
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.57	63915	66834	6644265
	17	PLF	Dry FR	30/50 Premium White	2	2	2	99.52	11032	11913	6655297
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.83	43931	44504	6699228
	19	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.55	40718	43973	6739946

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	20	PLF	Dry FR	30/50 Premium White	4	4	4	99.09	3691	4261	6743637
	21	Pre-Flush	Dry FR		0	0	0	99.82	4773	4714	6748410
	22	Flush	Dry FR		0	0	0	100.01	6049	6128	6754459
	23	Overflush	FR Water		0	0	0	87.91	6306	6308	6760765
16	1	Wireline Pump-In	Treated Water		0	0	0	18	3822	3822	6764587
	2	Breakdown	Treated Water		0	0	0	3.79	132	181	6764719
	3	Acid	15% HCl		0	0	0	10.12	1000	1000	6765719
	4	Pad	Treated Water		0	0	0	19.73	3560	3512	6769279
	5	Pad	Dry FR		0	0	0	59.49	36689	36756	6805968
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	85.69	11737	11884	6817705
	7	Spacer	Dry FR		0	0	0	64.65	11158	11183	6828863
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	59.24	1925	1960	6830788
	9	Spacer	Dry FR		0	0	0	59.3	14771	14820	6845559
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	63.77	21770	22047	6867329
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	70.22	21675	22546	6889004
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	83.59	14203	14362	6903207
	13	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	89.92	938	950	6904145
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.72	62949	65874	6967094
	15	PLF	Dry FR	30/50 Premium White	2	2	2	99.99	11398	12385	6978492
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.4	11069	11164	6989561
	17	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.21	63974	66882	7053535
	18	PLF	Dry FR	30/50 Premium White	2	2	2	99.94	11978	13016	7065513

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	19	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.38	45200	45564	7110713
	20	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.93	40735	44105	7151448
	21	PLF	Dry FR	30/50 Premium White	4	4	4	97.62	6803	7836	7158251
	22	Flush	Dry FR		0	0	0	100.5	5395	5308	7163646
	23	Flush	Dry FR		0	0	0	100.51	6106	6086	7169752
	24	Flush	Treated Water		0	0	0	86.14	5420	5568	7175172
17	1	Wireline Pump-In	Treated Water		0	0	0	20	15960	15960	7191132
	2	Breakdown	FR Water		0	0	0	6.35	522	562	7191654
	3	Acid	15% HCl		0	0	0	9.74	2000	2000	7193654
	4	Pad	FR Water		0	0	0	9.6	1180	1186	7194834
	5	Acid	15% HCl		0	0	0	9.45	1000	1000	7195834
	6	Pad	FR Water		0	0	0	15.65	709	707	7196543
	7	Pad	Dry FR		0	0	0	69.57	37614	37648	7234157
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.05	4415	4463	7238572
	9	Spacer	Dry FR		0	0	0	99.12	10729	10748	7249301
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.03	39061	39524	7288362
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	98.45	23571	24529	7311933
	12	Spacer	Dry FR		0	0	0	98.05	10631	10634	7322564
	13	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	98	11158	11315	7333722
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.3	62909	66020	7396631
	15	PLF	Dry FR	30/50 Premium White	2	2	2	98.16	11072	12020	7407703
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	98.46	9714	9845	7417417

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	17	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.42	63988	66998	7481405
	18	PLF	Dry FR	30/50 Premium White	2	2	2	98.27	11034	11967	7492439
	19	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	98.59	44433	44979	7536872
	20	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	98.3	40705	44083	7577577
	21	PLF	Dry FR	30/50 Premium White	4	4	4	97.98	3255	3795	7580832
	22	Pre-Flush	Dry FR		0	0	0	98.56	5725	5689	7586557
	23	Flush	Dry FR		0	0	0	98.66	5645	5692	7592202
	24	Overflush	FR Water		0	0	0	83.07	8279	8330	7600481
18	1	Wireline Pump-In	Treated Water		0	0	0	20	3192	3192	7603673
	2	Breakdown	FR Water		0	0	0	4.54	564	596	7604237
	3	Acid	15% HCl		0	0	0	9.73	1000	1000	7605237
	4	Pad	FR Water		0	0	0	9.43	1215	1243	7606452
	5	Acid	15% HCl		0	0	0	9.56	1000	1000	7607452
	6	Pad	FR Water		0	0	0	15.66	440	440	7607892
	7	Pad	Dry FR		0	0	0	59.92	45036	45140	7652928
	8	Pad	Dry FR		0	0	0	88.67	12306	12366	7665234
	9	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	91	37121	37675	7702355
	10	PLF	Dry FR	100 Mesh Premium White	0.25	1.38	0.82	91	19937	20636	7722292
	11	Spacer	Dry FR		0	0	0	91.33	2637	2634	7724929
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	83.34	3169	3220	7728098
	13	Pre-Flush	Dry FR		0	0	0	47.71	1193	1196	7729291
	14	Flush	Dry FR		0	0	0	40.65	9950	10043	7739241

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	15	Flush	FR Water		0	0	0	19.47	1439	1576	7740680
	16	Pad	Dry FR		0	0	0	52.76	15901	15908	7756581
	17	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	88.19	4398	4471	7760979
	18	Spacer	Dry FR		0	0	0	90.23	10827	10864	7771806
	19	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	94.98	11710	11901	7783516
	20	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	98.19	1091	1106	7784607
	21	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	98.88	62909	66060	7847516
	22	PLF	Dry FR	30/50 Premium White	2	2	2	98.77	12501	13557	7860017
	23	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.14	14842	15080	7874859
	24	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.01	64025	67246	7938884
	25	PLF	Dry FR	30/50 Premium White	2	2	2	98.9	11275	12251	7950159
	26	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.01	49377	50166	7999536
	27	PLF	Dry FR	30/50 Premium White	0.25	0.42	0.34	98.72	4025	4100	8003561
	28	PLF	Dry FR	30/50 Premium White	0.5	0.5	0.5	98.72	7270	7437	8010831
	29	PLF	Dry FR	30/50 Premium White	1	1	1	98.66	12899	13471	8023730
	30	PLF	Dry FR	30/50 Premium White	1.5	1.5	1.5	98.91	14103	15037	8037833
	31	PLF	Dry FR	30/50 Premium White	2	2	2	98.75	8052	8755	8045885
	32	PLF	Dry FR	30/50 Premium White	2.5	2.5	2.5	98.65	12989	14377	8058874
	33	Pre-Flush	Dry FR		0	0	0	98.48	6277	6245	8065151
	34	Flush	Dry FR		0	0	0	98.65	5041	5068	8070192
	35	Overflush	FR Water		0	0	0	88.22	7199	7200	8077391
19	1	Wireline Pump-In	Treated Water		0	0	0	18	12012	12012	8089403

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	2	Shut-In	Treated Water		0	0	0	2.94	91	146	8089494
	3	Acid	15% HCl		0	0	0	10.3	1000	1000	8090494
	4	Pad	Treated Water		0	0	0	12.33	681	669	8091175
	5	Pad	Dry FR		0	0	0	29.52	25642	25551	8116817
	6	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	59.74	3881	3910	8120698
	7	Spacer	Dry FR		0	0	0	59.82	7763	7748	8128461
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	74.89	53311	53998	8181772
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	97.71	23247	24145	8205019
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.98	12867	13032	8217886
	11	Flush	Dry FR		0	0	0	92.32	3250	3248	8221136
	12	Pad	Dry FR		0	0	0	91.84	8829	8859	8229965
	13	PLF	Dry FR	30/50 Premium White	0.3	0.27	0.28	91.78	2670	2715	8232635
	14	Spacer	Dry FR		0	0	0	85.99	10587	10659	8243222
	15	PLF	Dry FR	30/50 Premium White	0.65	0.25	0.45	80	3619	3716	8246841
	16	Spacer	Dry FR		0	0	0	80.09	7820	7842	8254661
	17	PLF	Dry FR	30/50 Premium White	0.5	0.5	0.5	80.01	10997	11277	8265658
	18	PLF	Dry FR	30/50 Premium White	1	1	1	79.95	9527	9963	8275185
	19	PLF	Dry FR	30/50 Premium White	1.5	1.5	1.5	79.96	10517	11210	8285702
	20	PLF	Dry FR	30/50 Premium White	2	2	2	80.01	27602	29972	8313304
	21	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	80.29	9752	9887	8323056
	22	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	84.37	63779	66851	8386835
	23	PLF	Dry FR	30/50 Premium White	2	2	2	90.06	8487	9201	8395322

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	24	Spacer	Dry FR		0	0	0	72.01	13508	13518	8408830
	25	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	66.9	3947	4003	8412777
	26	Flush	Dry FR		0	0	0	63.72	10290	10322	8423067
	27	Flush	Dry FR		0	0	0	62.82	5525	5575	8428592
	28	Flush	Treated Water		0	0	0	27.85	5660	5934	8434252
	29	Flush	15% HCl		0	0	0	10.7	923	923	8435175
	30	Flush	Treated Water		0	0	0	11.19	570	572	8435745
	31	Pad	Dry FR		0	0	0	40.34	14362	14271	8450107
	32	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	75.32	44008	44630	8494115
	33	PLF	Dry FR	30/50 Premium White	0.25	3.05	1.65	79.96	31556	33785	8525671
	34	Flush	Dry FR		0	0	0	51.24	8975	8997	8534646
	35	Shut-In	Treated Water		0	0	0	0.45	3	98	8534649
20	1	Wireline Pump-In	Treated Water		0	0	0	20	6510	6510	8541159
	2	Breakdown	FR Water		0	0	0	8.78	1708	1813	8542867
	3	Acid	15% HCl		0	0	0	11.55	1000	1000	8543867
	4	Pad	FR Water		0	0	0	11.62	480	492	8544347
	5	Pad	Dry FR		0	0	0	47.19	39822	39752	8584169
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	66.12	2304	2329	8586473
	7	Flush	Dry FR		0	0	0	42.46	18571	18597	8605044
	8	Flush	FR Water		0	0	0	2.69	2892	3288	8607936
	9	Acid	15% HCl		0	0	0	11.71	1000	1000	8608936
	10	Pad	FR Water		0	0	0	11.35	529	491	8609465

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	11	Pad	Dry FR		0	0	0	54.01	37632	37647	8647097
	12	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	94.64	14293	14467	8661390
	13	Spacer	Dry FR		0	0	0	90.91	7609	7621	8668999
	14	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	91.03	29942	30308	8698941
	15	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	91.08	21786	22578	8720727
	16	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	91.15	12042	12196	8732769
	17	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	91.02	62963	65960	8795732
	18	PLF	Dry FR	30/50 Premium White	2	2	2	90.99	10860	11788	8806592
	19	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	91.29	9569	9710	8816161
	20	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	91.27	63910	66965	8880071
	21	PLF	Dry FR	30/50 Premium White	2	2	2	89.13	5778	6274	8885849
	22	Flush	Dry FR		0	0	0	34.18	10272	10288	8896121
	23	Overflush	FR Water		0	0	0	10.29	1873	1911	8897994
21	1	Wireline Pump-In	Treated Water		0	0	0	18	5460	5460	8903454
	2	Breakdown	Treated Water		0	0	0	9.38	1926	1990	8905380
	3	Acid	15% HCl		0	0	0	10.62	1000	1000	8906380
	4	Pad	Treated Water		0	0	0	10.9	935	898	8907315
	5	Pad	Dry FR		0	0	0	23.06	17411	17553	8924726
	6	Pad	Treated Water		0	0	0	5.53	11446	12750	8936172
	7	Acid	15% HCl		0	0	0	11.45	1000	1000	8937172
	8	Pad	Treated Water		0	0	0	11.26	457	460	8937629
	9	Acid	15% HCl		0	0	0	11.18	499	499	8938128

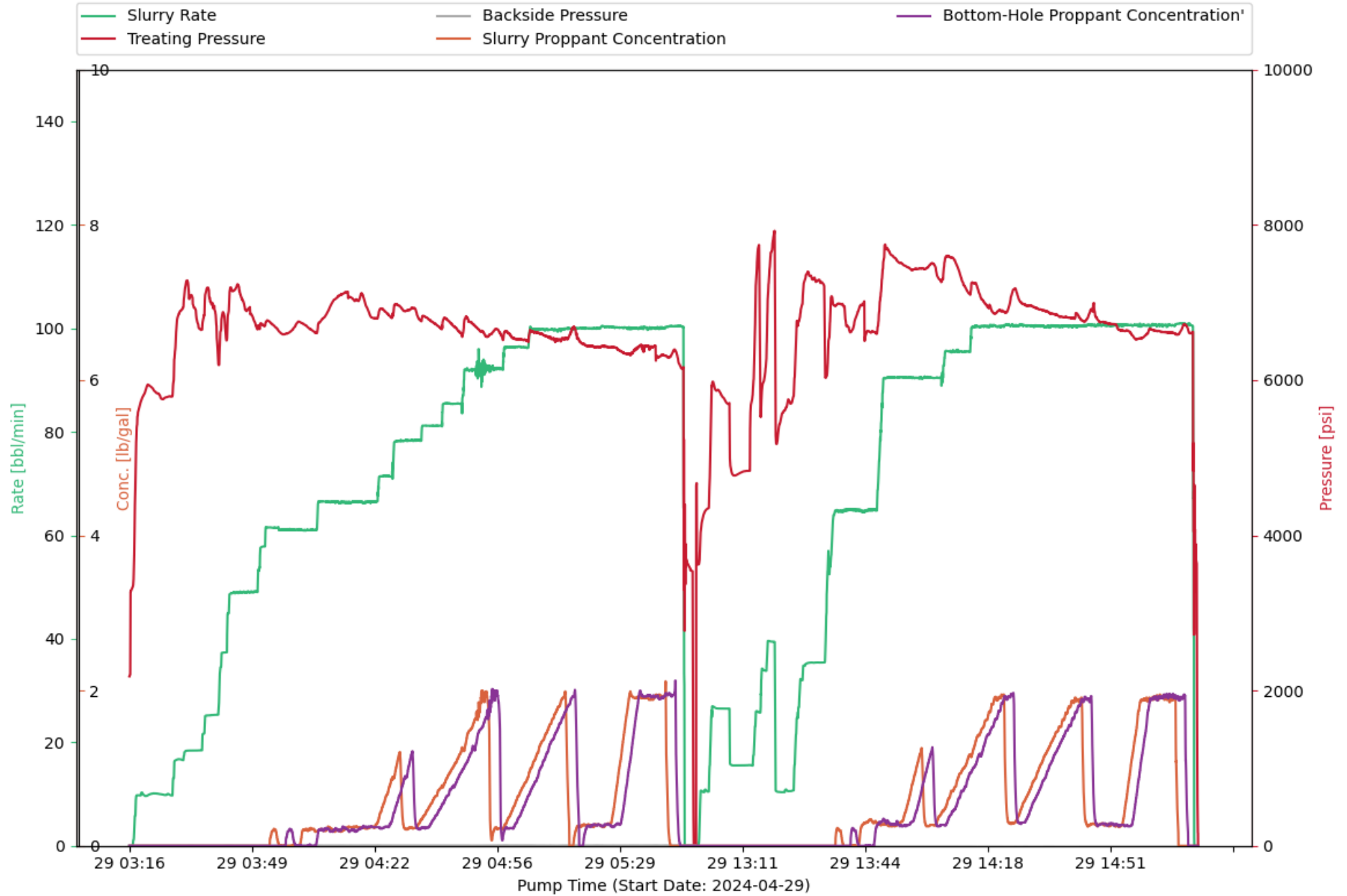
ACTUAL DESIGN

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)
21	10	Pad	Treated Water		0	0	0	11.42	200	201	8938328
	11	Pad	Dry FR		0	0	0	55.85	39593	39553	8977921
	12	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	70.41	3870	3916	8981791
	13	Flush	Dry FR		0	0	0	52.54	28412	28546	9010203
	14	Flush	Treated Water		0	0	0	10.08	4223	4511	9014426
22	1	Wireline Pump-In	Treated Water		0	0	0	18	5166	5166	9019592
	2	Breakdown	Treated Water		0	0	0	3.3	115	196	9019707
	3	Acid	15% HCl		0	0	0	9.89	499	499	9020206
	4	Pad	Treated Water		0	0	0	9.91	2051	2015	9022257
	5	Acid	15% HCl		0	0	0	9.77	499	499	9022756
	6	Pad	Treated Water		0	0	0	13.51	846	808	9023602
	7	Pad	Dry FR		0	0	0	48.98	28859	28950	9052461
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	69.47	8021	8121	9060482
	9	Flush	Dry FR		0	0	0	23.63	10215	10251	9070697
	10	Flush	Treated Water		0	0	0	14.84	2535	2788	9073232
	11	Acid	15% HCl		0	0	0	10.58	501	501	9073733
	12	Pad	Treated Water		0	0	0	10.36	2027	2023	9075760
	13	Acid	15% HCl		0	0	0	10.2	501	501	9076261
	14	Pad	Treated Water		0	0	0	10.89	382	376	9076643
	15	Pad	Dry FR		0	0	0	50.97	36587	36513	9113230
	16	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	77.71	4201	4271	9117431
	17	Spacer	Dry FR		0	0	0	76.49	11156	11196	9128587

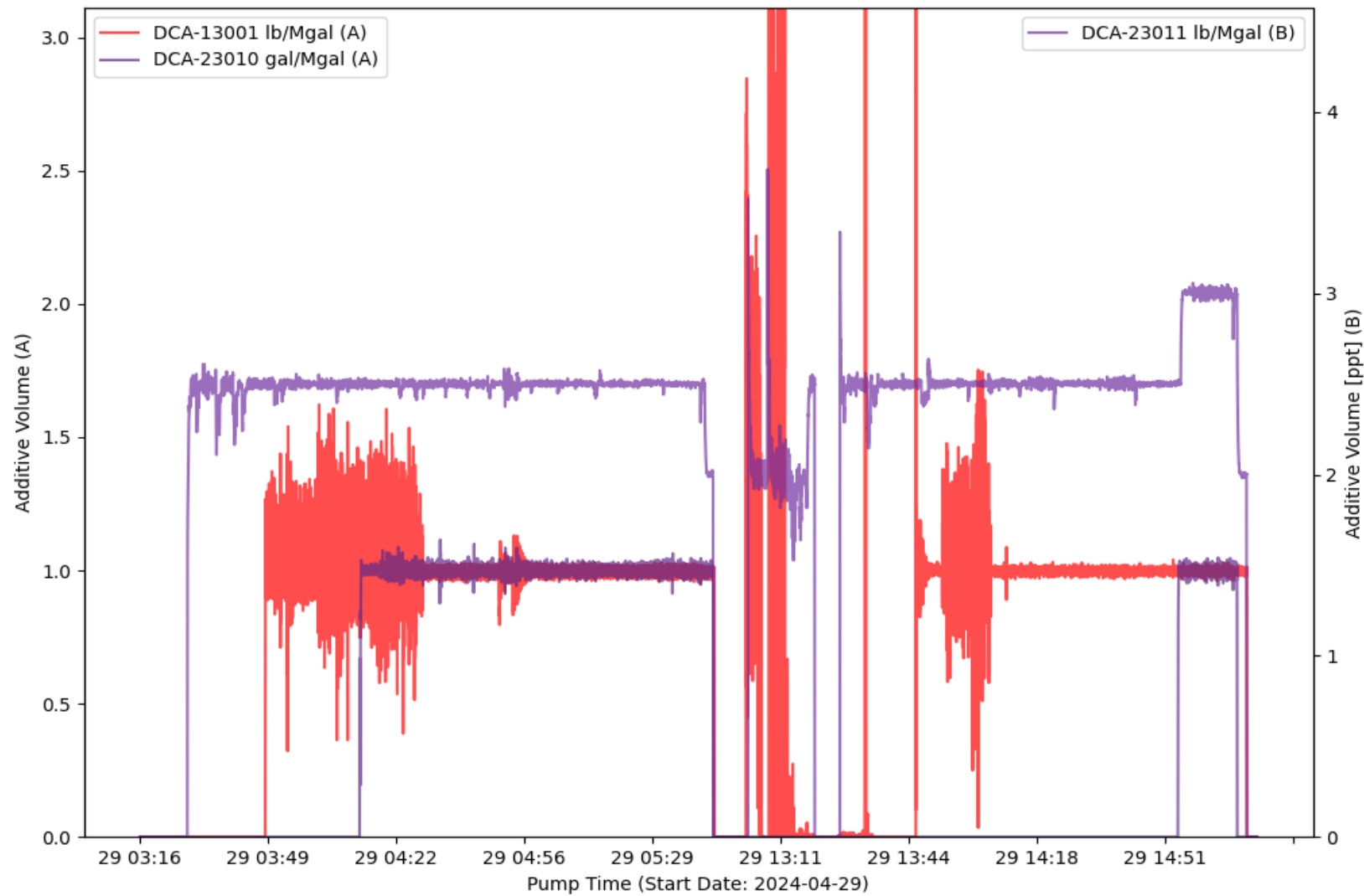
ACTUAL DESIGN

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	18	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	61.75	3756	3825	9132343
	19	Spacer	Dry FR		0	0	0	59.64	6982	7012	9139325
	20	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	61.15	52370	53132	9191695
	21	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	65.92	21488	22334	9213183
	22	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	69.7	12660	12815	9225843
	23	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	69.5	62983	66157	9288826
	24	PLF	Dry FR	30/50 Premium White	2	2	2	69.45	10993	11983	9299819
	25	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	69.62	9816	9949	9309635
	26	PLF	Dry FR	30/50 Premium White	0.25	1.2	0.72	69.56	35420	36634	9345055
	27	PLF	Dry FR	30/50 Premium White	1.2	1.2	1.2	68.53	5902	6223	9350957
	28	Flush	Dry FR		0	0	0	65.32	3451	3451	9354408
	29	Flush	Dry FR		0	0	0	49.07	2848	2858	9357256
	30	Flush	Treated Water		0	0	0	5.21	4009	4695	9361265
Total									9361265	9679415	

TREATMENT PLOT : Treatment Interval 1



CHEMISTRY PLOT : Treatment Interval 1



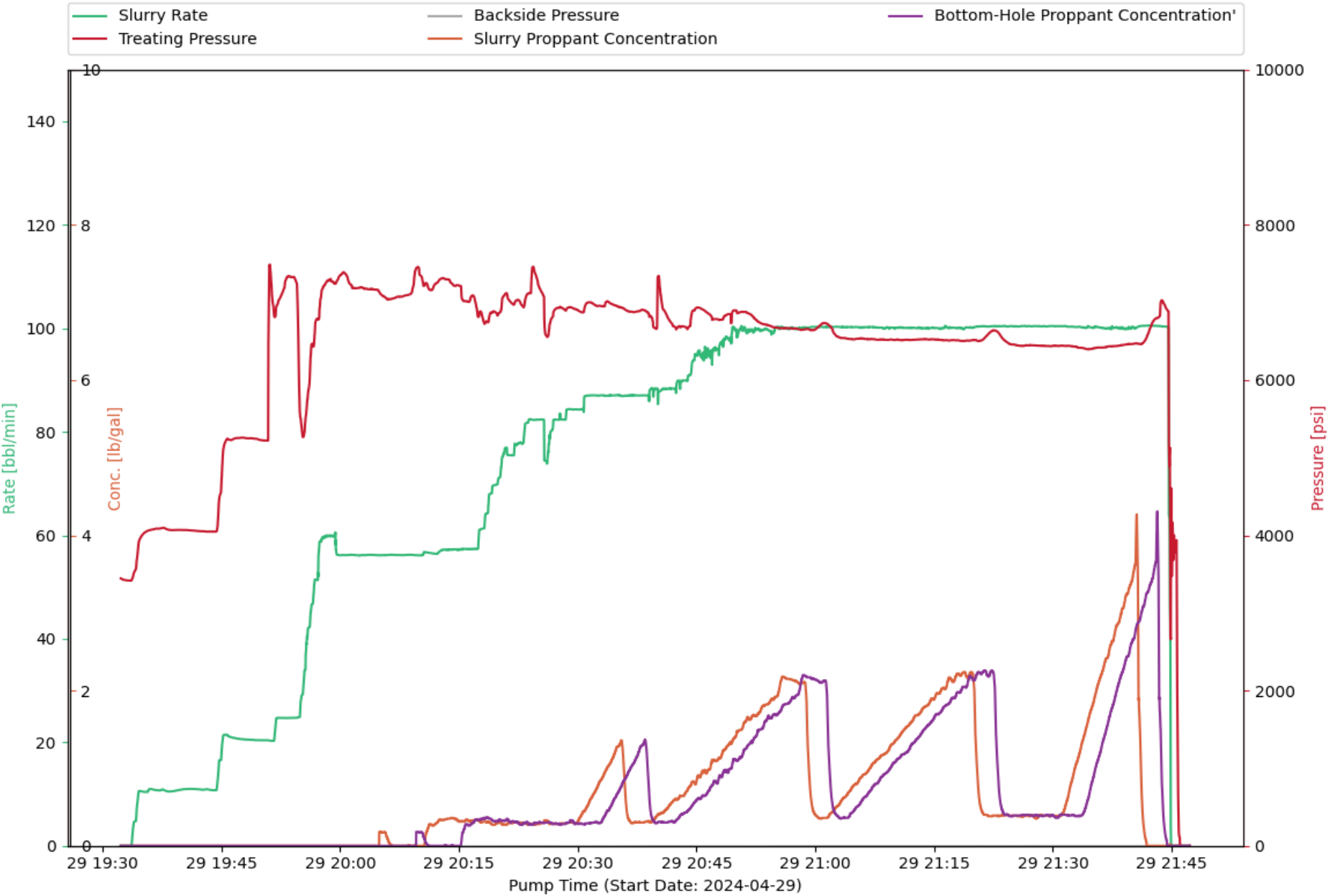
EVENT LOG : TREATMENT INTERVAL 1

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	2024-04-29T03:16:23	0	3279	0	0	0	0	0
2	Start Pumping	2024-04-29T03:17:00	0.78	3350	0	0	1.23	1.39	0
3	Pump Acid	2024-04-29T03:19:03	9.73	5716	0	0	648.36	656.18	0
4	Pump Acid	2024-04-29T03:23:03	10.14	5849	0	0	2235	2327	0
5	Break Formation	2024-04-29T03:31:54	18.39	7259	0	0	7019	7195	0
6	Spot Acid	2024-04-29T03:39:13	25.29	6900	0	0	13595	13728	0
7	Flush Acid	2024-04-29T03:40:16	26.66	6194	0	0	14728	14854	0
8	Spot Acid	2024-04-29T03:41:29	37.35	6874	0	0	16471	16595	0
9	Flush Acid	2024-04-29T03:42:23	37.38	6511	0	0	17884	18014	0
10	Stop Pumping	2024-04-29T05:46:58	1.06	3871	0	0	434030	447464	294424
11	ISIP	2024-04-29T05:47:12	0	3742	0	0	434034	447464	294424
12	Shut In Well	2024-04-29T05:47:37	0	3655	0	0	434034	447464	294424
13	Suspending Job	2024-04-29T05:50:04	0	-94.01	0	0	434034	447464	294424
14	Open Well	2024-04-29T12:59:26	0	3627	0	0	434034	447464	294424
15	Start Pumping	2024-04-29T12:59:43	0.55	3628	0	0	434036	447466	294424
16	Pump Acid	2024-04-29T13:01:44	10.72	4329	0	0	434839	448248	294424
17	Ball on Seat	2024-04-29T13:14:02	15.56	5708	0	0	445116	458519	294424
18	Break Formation	2024-04-29T13:14:13	15.55	5759	0	0	445237	458639	294424
19	Spot Acid	2024-04-29T13:15:58	25.83	7726	0	0	446880	460274	294424
20	Flush Acid	2024-04-29T13:16:32	26.28	5530	0	0	447499	460891	294424
21	Pump Acid	2024-04-29T13:22:49	10.37	5603	0	0	454532	467998	294424
22	Spot Acid	2024-04-29T13:33:37	35.4	7237	0	0	466730	480213	294424

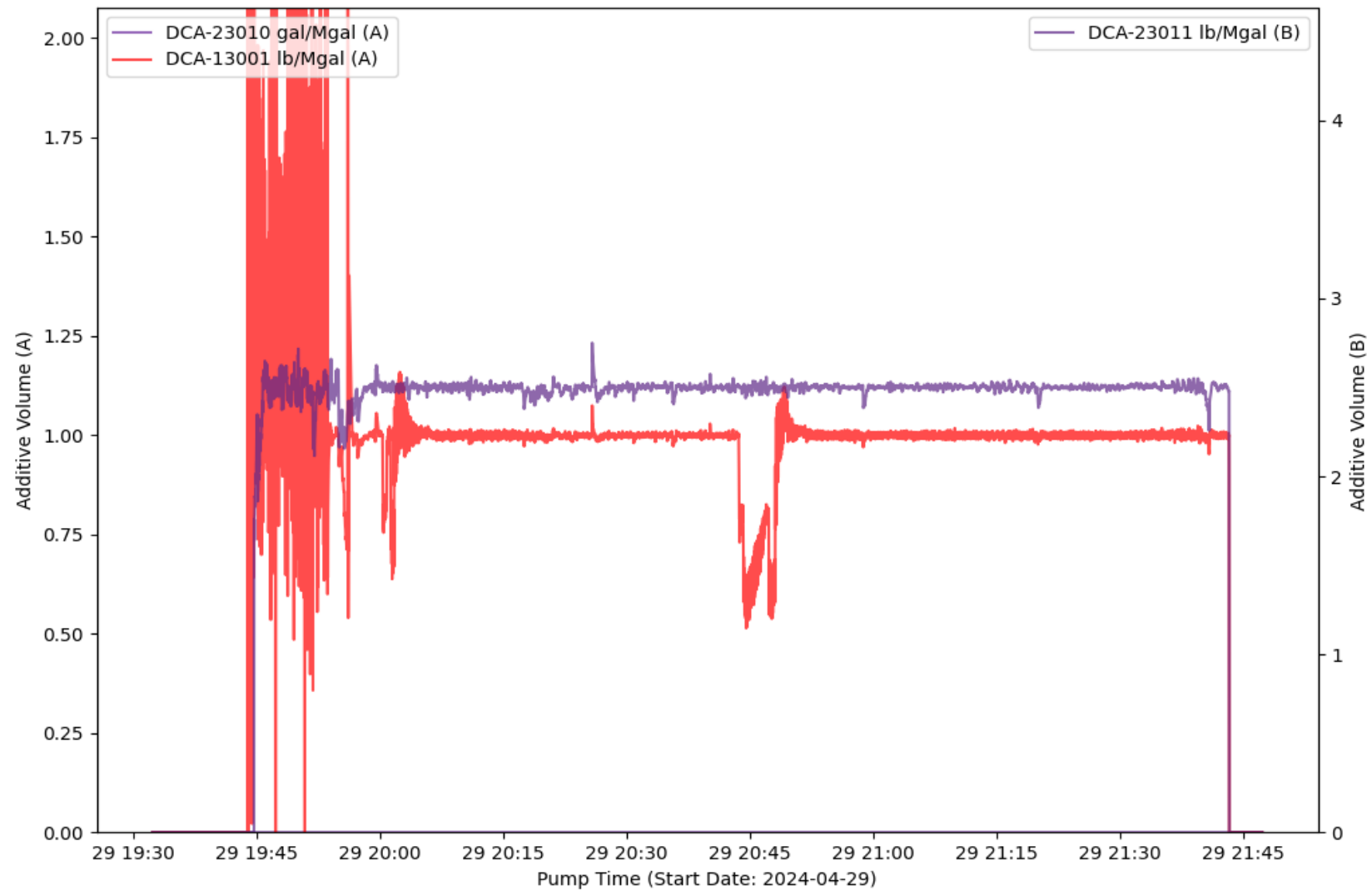
EVENT LOG : TREATMENT INTERVAL 1

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	Flush Acid	2024-04-29T13:34:11	38.99	6027	0	0	467559	481045	294424
24	Stop Pumping	2024-04-29T15:14:24	1.66	2814	0	0	843464	871502	612120
25	ISIP	2024-04-29T15:14:39	0	4079	0	0	843467	871502	612120
26	Shut In Well	2024-04-29T15:14:54	0	3690	0	0	843468	871502	612120
27	Suspending Job	2024-04-29T15:15:27	0	160.12	0	0	843469	871502	612120

TREATMENT PLOT : Treatment Interval 2



CHEMISTRY PLOT : Treatment Interval 2



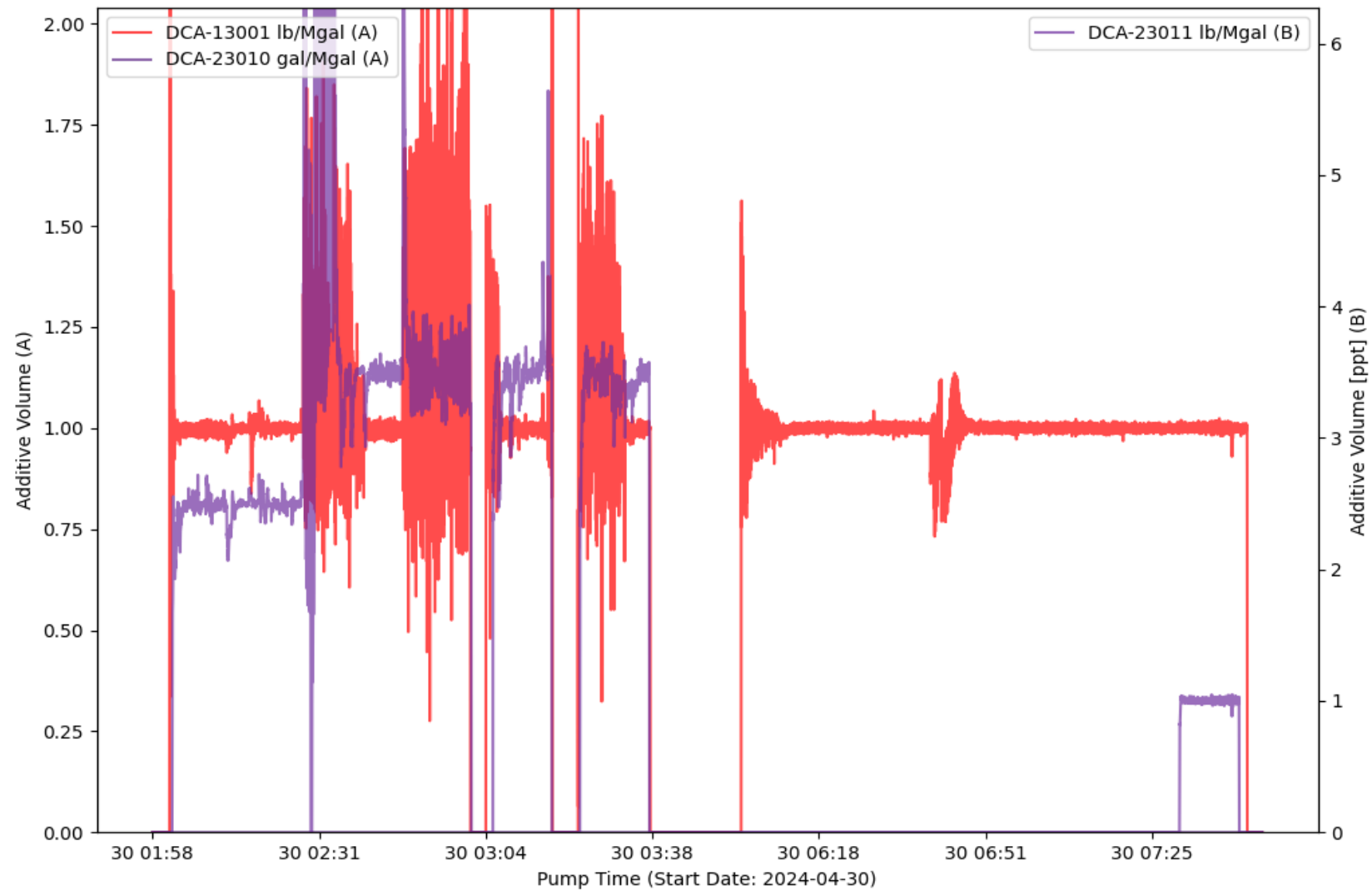
EVENT LOG : TREATMENT INTERVAL 2

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	2024-04-29T19:32:55	0	3422	0	0	0	0	0
2	Start Pumping	2024-04-29T19:33:36	0	3416	0	0	0.58	0	0
3	Pump Acid	2024-04-29T19:37:07	10.72	4085	0	0	1293	1342	0
4	Pump Acid	2024-04-29T19:41:13	11	4063	0	0	3046	3195	0
5	Ball on Seat	2024-04-29T19:50:54	20.4	5220	0	0	9826	10136	0
6	Break Formation	2024-04-29T19:51:09	20.32	7484	0	0	10038	10351	0
7	Spot Acid	2024-04-29T19:54:09	24.74	7332	0	0	13047	13343	0
8	Spot Acid	2024-04-29T19:54:59	26.88	5520	0	0	13917	14218	0
9	Flush Acid	2024-04-29T19:55:17	29.24	5269	0	0	14288	14582	0
10	Flush Acid	2024-04-29T19:55:30	33.67	5326	0	0	14578	14872	0
11	Stop Pumping	2024-04-29T21:44:55	0.83	4607	0	0	396986	413022	344755
12	ISIP	2024-04-29T21:45:03	0	3695	0	0	396989	413022	344755
13	Shut In Well	2024-04-29T21:45:29	0	3912	0	0	396991	413022	344755
14	Suspending Job	2024-04-29T21:47:15	0	-10.27	0	0	396991	413022	344755

TREATMENT PLOT : Treatment Interval 3



CHEMISTRY PLOT : Treatment Interval 3



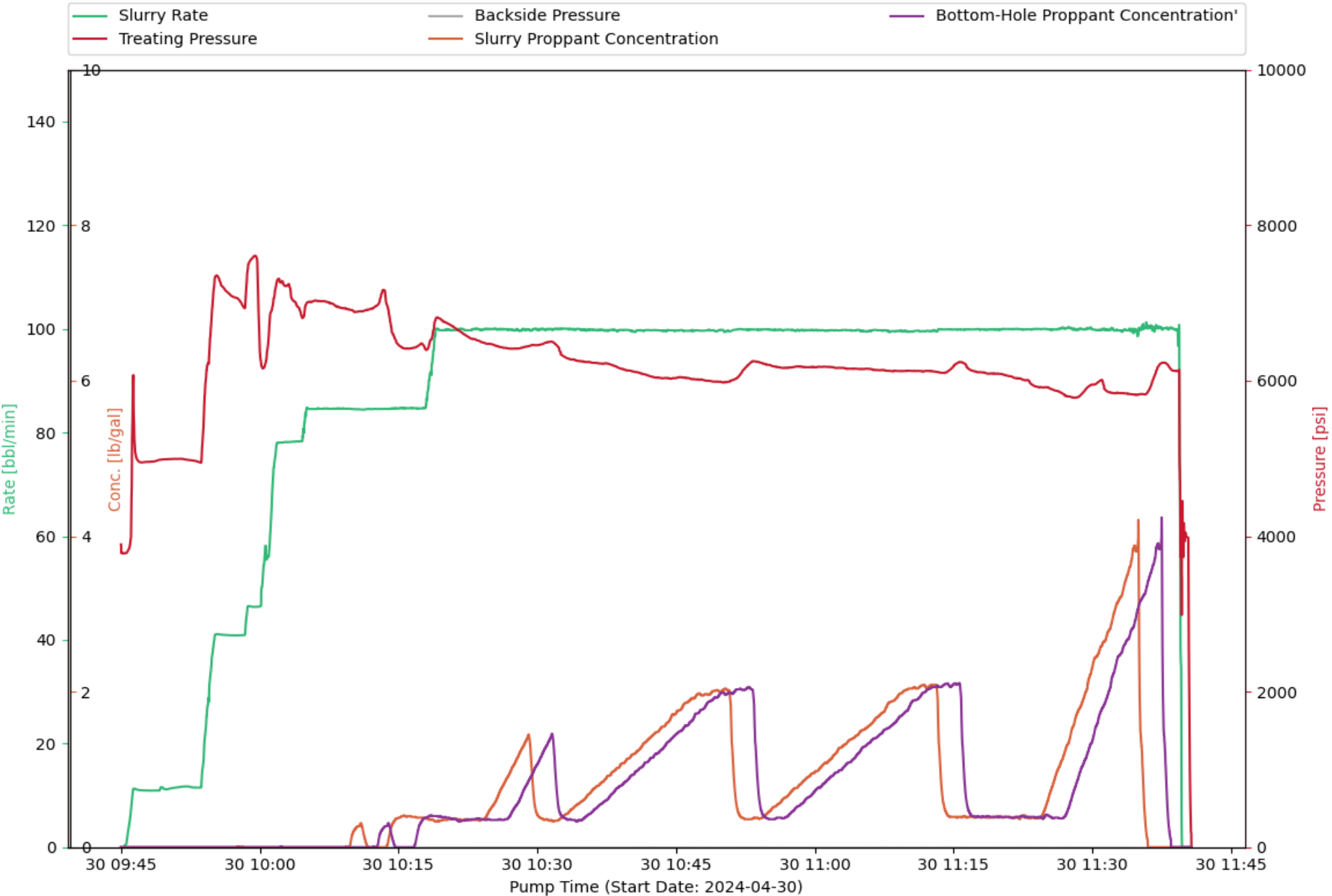
EVENT LOG : TREATMENT INTERVAL 3

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	Open Well	2024-04-30T01:58:28	0	3528	0	0	0	0	0
2	Start Pumping	2024-04-30T01:58:57	0	3507	0	0	1.17	0	0
3	Pump Acid	2024-04-30T02:00:15	10.46	5985	0	0	382.53	378.64	0
4	Break Formation	2024-04-30T02:06:17	26.62	7312	0	0	5454	5533	0
5	Spot Acid	2024-04-30T02:12:33	26.72	7168	0	0	12476	12540	0
6	Flush Acid	2024-04-30T02:13:10	26.78	5764	0	0	13173	13235	0
7	Pump Acid	2024-04-30T03:02:34	9.99	6869	0.02	0.02	64551	64856	4176
8	Spot Acid	2024-04-30T03:11:43	22.82	7405	0	0	69811	70239	4516
9	Flush Acid	2024-04-30T03:14:44	23.88	7841	0.25	0.06	72826	73268	4731
10	Stop Pumping	2024-04-30T03:42:49	0	4028	0	0.02	88823	89218	5277
11	Shut In Well	2024-04-30T03:43:10	0	3928	0	0.02	88825	89218	5277
12	Suspending Job	2024-04-30T03:48:13	0	-18.49	0	0.02	88826	89218	5277
13	Open Well	2024-04-30T05:55:35	0	3234	0	0.03	88839	89258	5277
14	Start Pumping	2024-04-30T05:55:50	0	3228	0	0.03	88842	89258	5277
15	Pump Acid	2024-04-30T05:57:54	11.51	3980	0	0	89383	89797	5277
16	Pump Acid	2024-04-30T06:01:47	11.51	4109	0	0.01	91133	91674	5277
17	Spot Acid	2024-04-30T06:08:46	40	6686	0	0	101003	101727	5277
18	Flush Acid	2024-04-30T06:09:17	41.33	5737	0	0	101866	102603	5277
19	Spot Acid	2024-04-30T06:09:55	56.38	6153	0	0	103226	103973	5277
20	Flush Acid	2024-04-30T06:10:48	71.16	6598	0	0	105398	106167	5277
21	Stop Pumping	2024-04-30T07:45:43	1.64	3185	0	0	482710	499695	355336
22	ISIP	2024-04-30T07:46:18	0	4149	0	0	482716	499695	355336

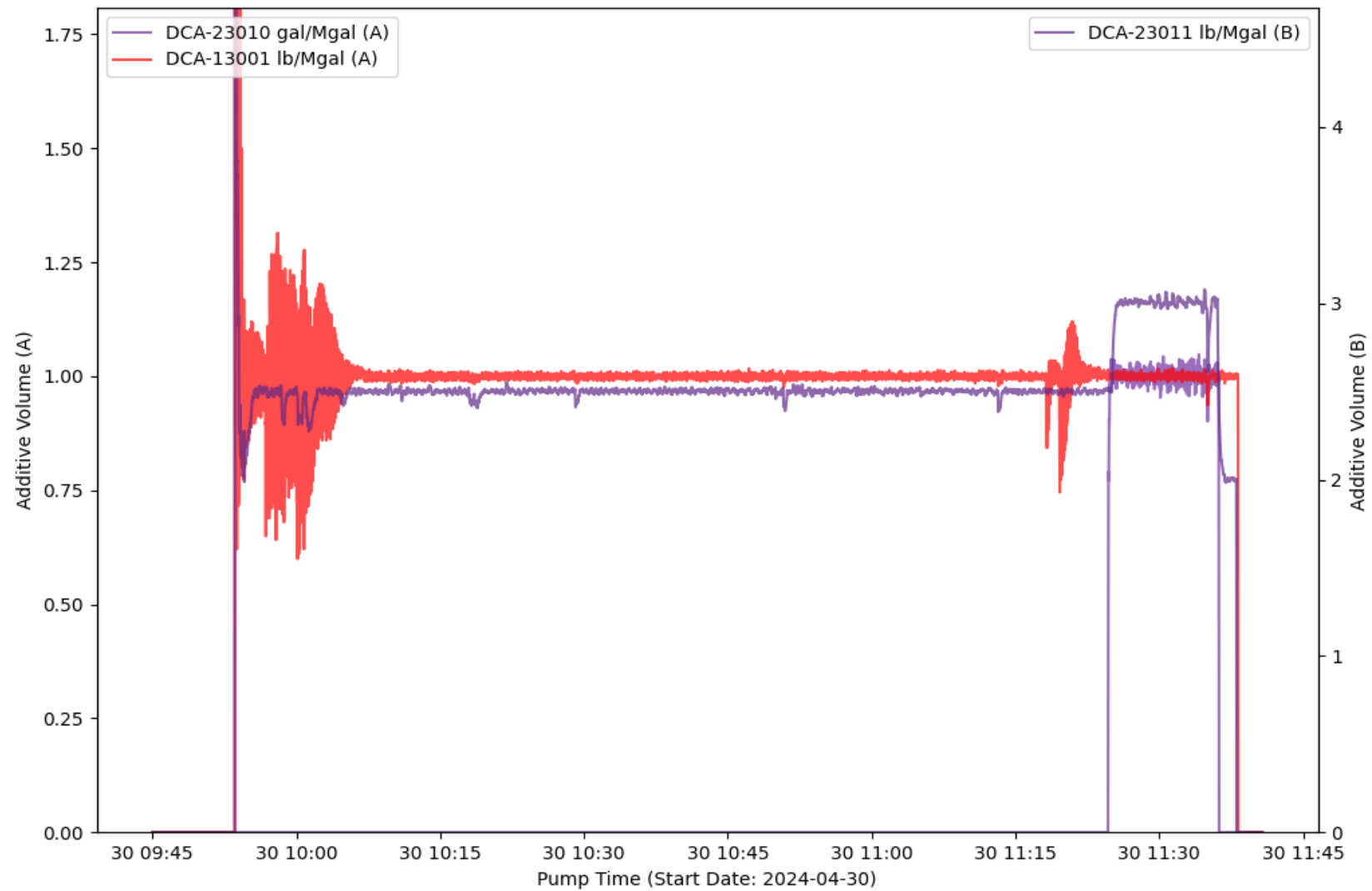
EVENT LOG : TREATMENT INTERVAL 3

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)
23	Shut In Well	2024-04-30T07:46:28	0	4081	0	0	482716	499695	355336
24	Suspending Job	2024-04-30T07:47:04	0	171.94	0	0	482716	499695	355336

TREATMENT PLOT : Treatment Interval 4



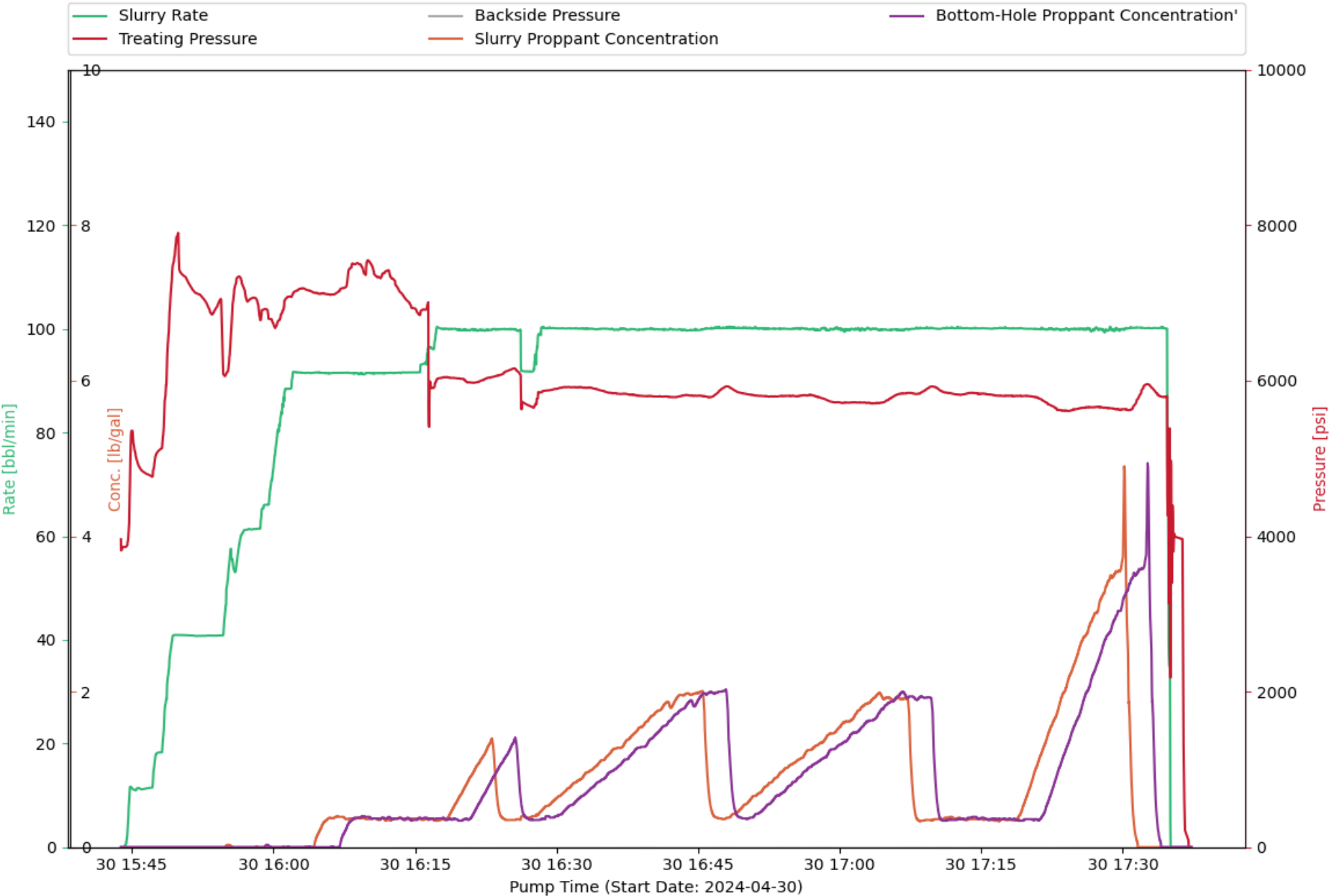
CHEMISTRY PLOT : Treatment Interval 4



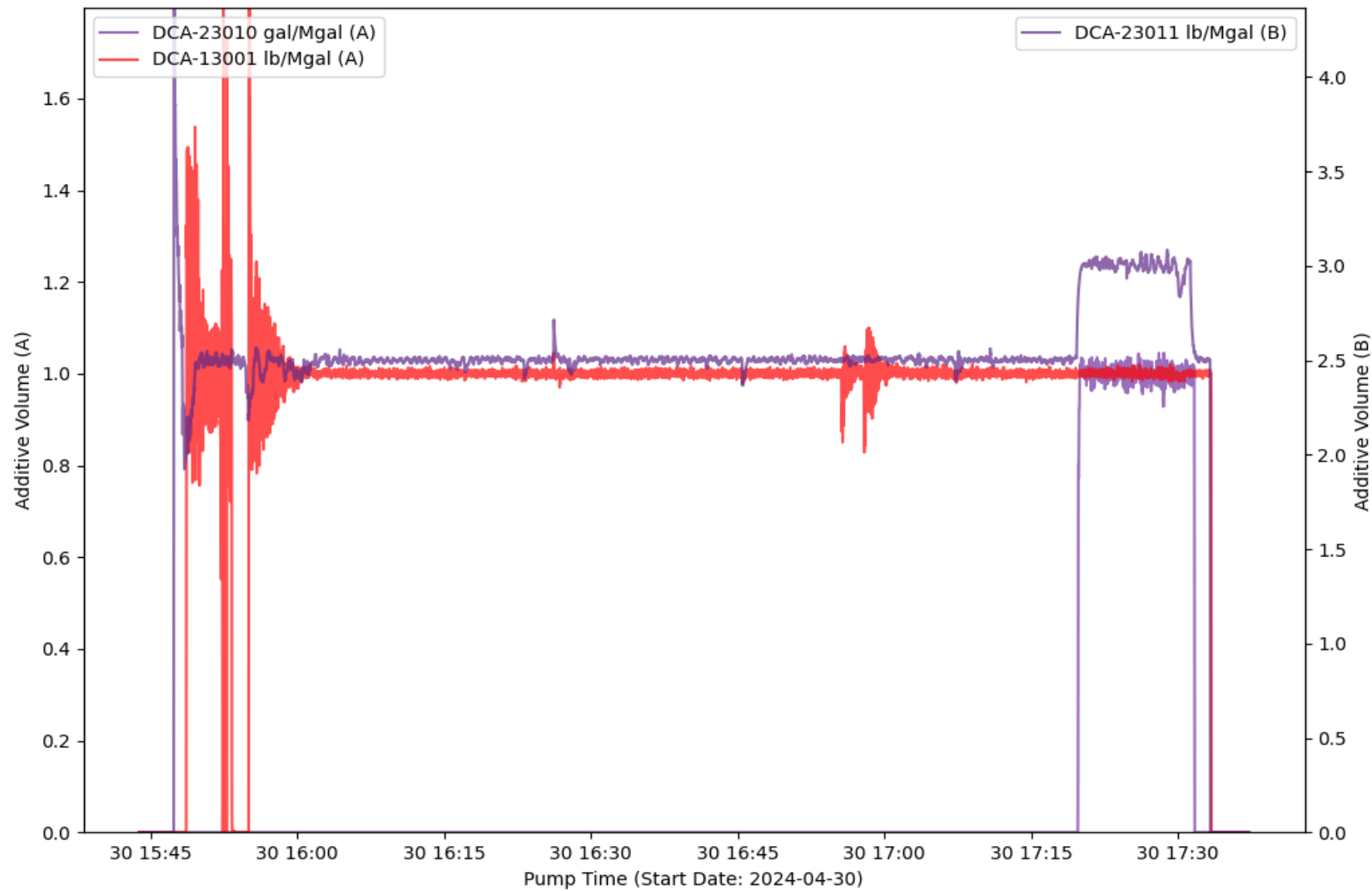
EVENT LOG : TREATMENT INTERVAL 4

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	2024-04-30T09:45:02	0	3784	0	0	0	0	0
2	Start Pumping	2024-04-30T09:45:23	0	3781	0	0	0	0	0
3	Ball on Seat	2024-04-30T09:46:02	6.26	3940	0	0	40.59	72.36	0
4	Break Formation	2024-04-30T09:46:20	11.29	6072	0	0	180.35	188.88	0
5	Pump Acid	2024-04-30T09:47:37	10.92	4953	0	0	783.59	780.59	0
6	Pump Acid	2024-04-30T09:49:59	11.17	4989	0	0	1857	1885	0
7	Spot Acid	2024-04-30T09:59:35	46.37	7602	0	0	12990	13270	5.73
8	Flush Acid	2024-04-30T10:00:10	49.73	6196	0	0	14123	14416	5.73
9	Spot Acid	2024-04-30T10:01:00	56.66	6632	0	0	15992	16308	5.73
10	Flush Acid	2024-04-30T10:01:11	62.05	6880	0	0	16449	16769	5.73
11	Stop Pumping	2024-04-30T11:39:42	1.13	4206	0	0	400361	416921	349987
12	ISIP	2024-04-30T11:40:03	0	4039	0	0	400362	416921	349987
13	Shut In Well	2024-04-30T11:40:09	0	3999	0	0	400362	416921	349987
14	Suspending Job	2024-04-30T11:40:43	0	176.56	0	0	400362	416921	349987

TREATMENT PLOT : Treatment Interval 5



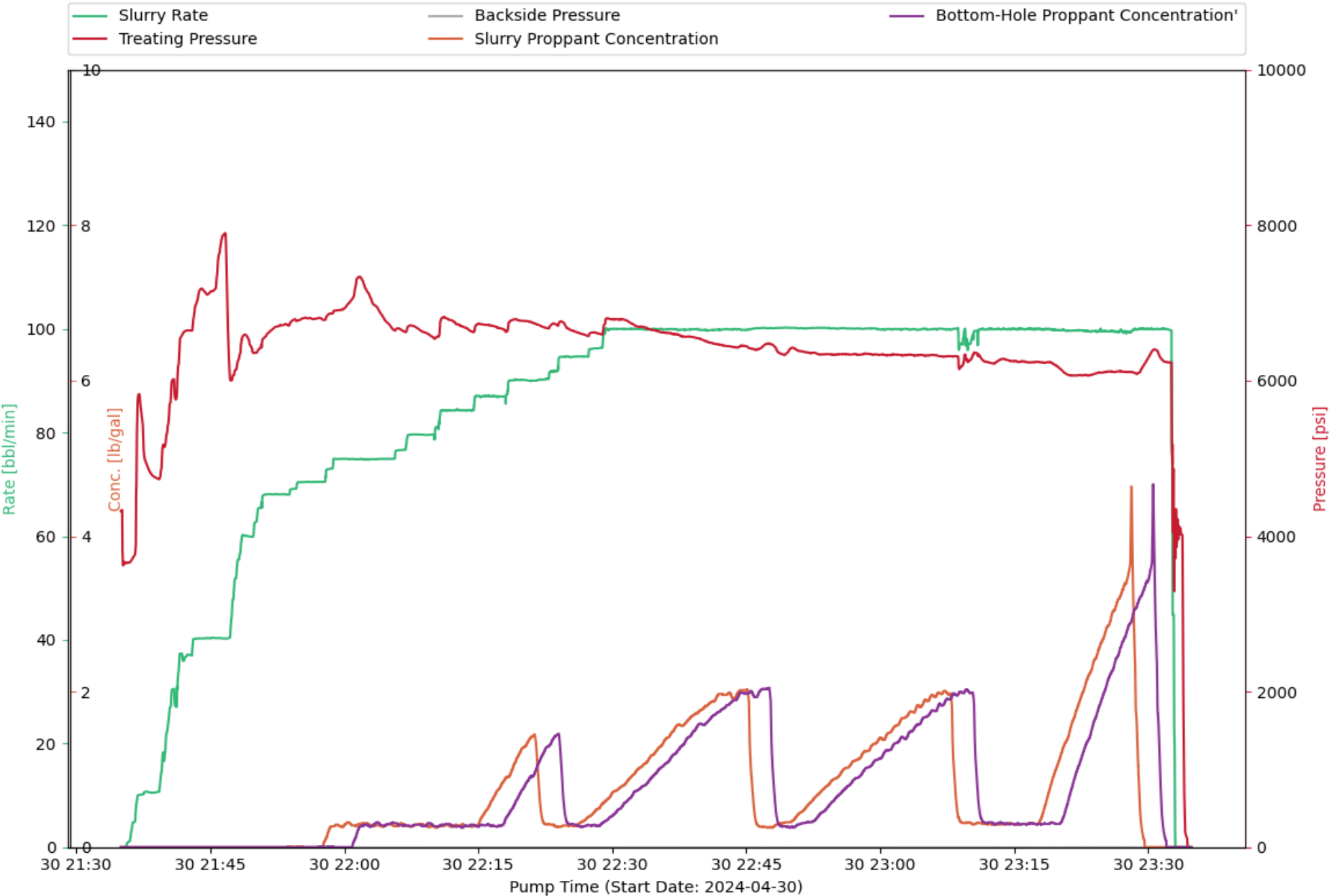
CHEMISTRY PLOT : Treatment Interval 5



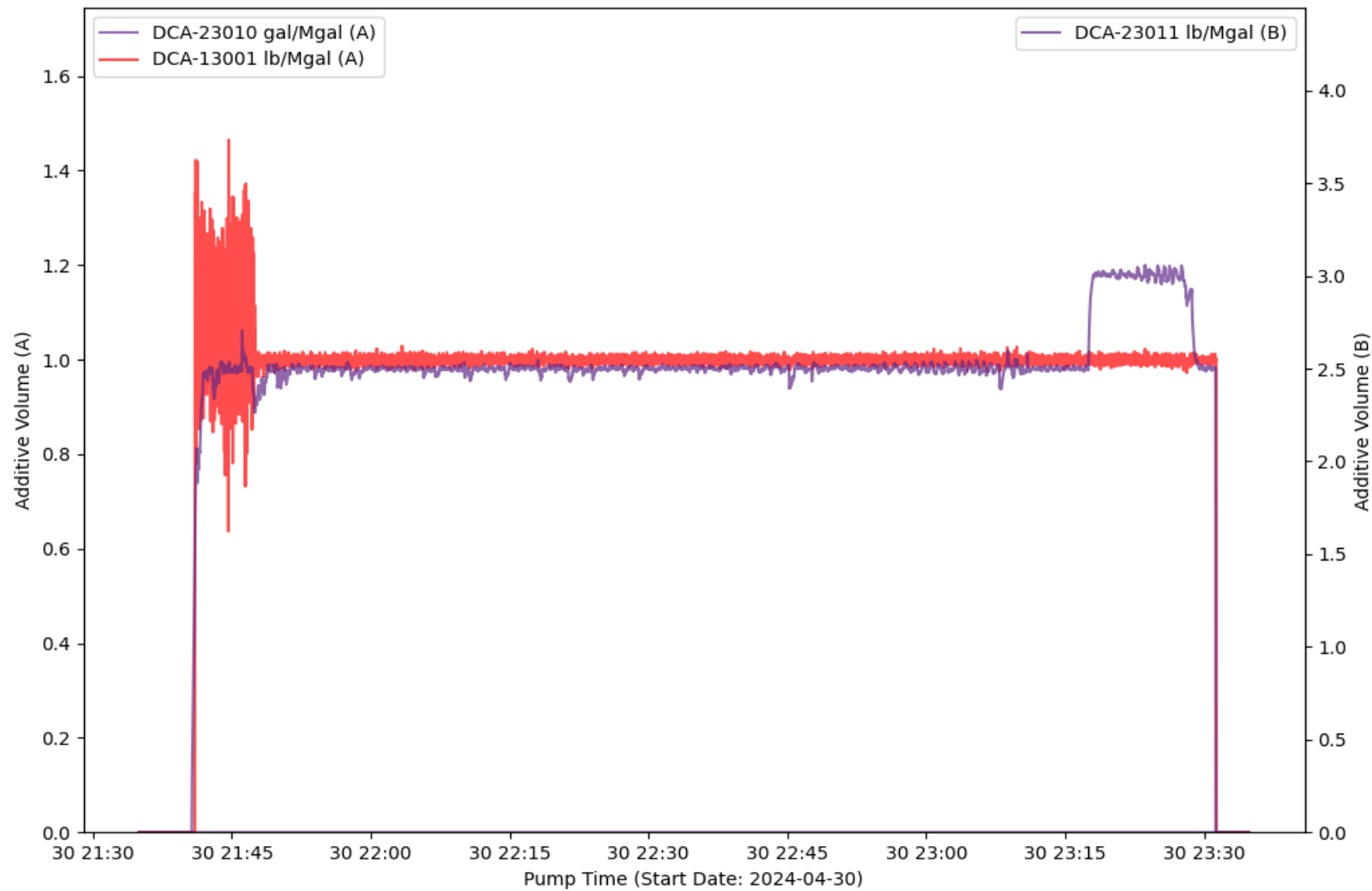
EVENT LOG : TREATMENT INTERVAL 5

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	Start Pumping	2024-04-30T15:44:24	0.87	3868	0	0	0.12	0.6	0
2	Break Formation	2024-04-30T15:45:03	11.29	5353	0	0	197.35	216.93	0
3	Pump Acid	2024-04-30T15:46:45	11.4	4793	0	0	981.62	1023	0
4	Spot Acid	2024-04-30T15:54:24	40.85	7052	0	0	11895	12137	0
5	Flush Acid	2024-04-30T15:54:46	43.03	6072	0	0	12518	12774	0
6	Stop Pumping	2024-04-30T17:35:04	0.31	3959	0	0	400612	417368	358383
7	ISIP	2024-04-30T17:35:06	0	4972	0	0	400612	417368	358383
8	Shut In Well	2024-04-30T17:35:37	0	3992	0	0	400615	417368	358383
9	Suspending Job	2024-04-30T17:37:15	0	0	0	0	400615	417368	358383

TREATMENT PLOT : Treatment Interval 6



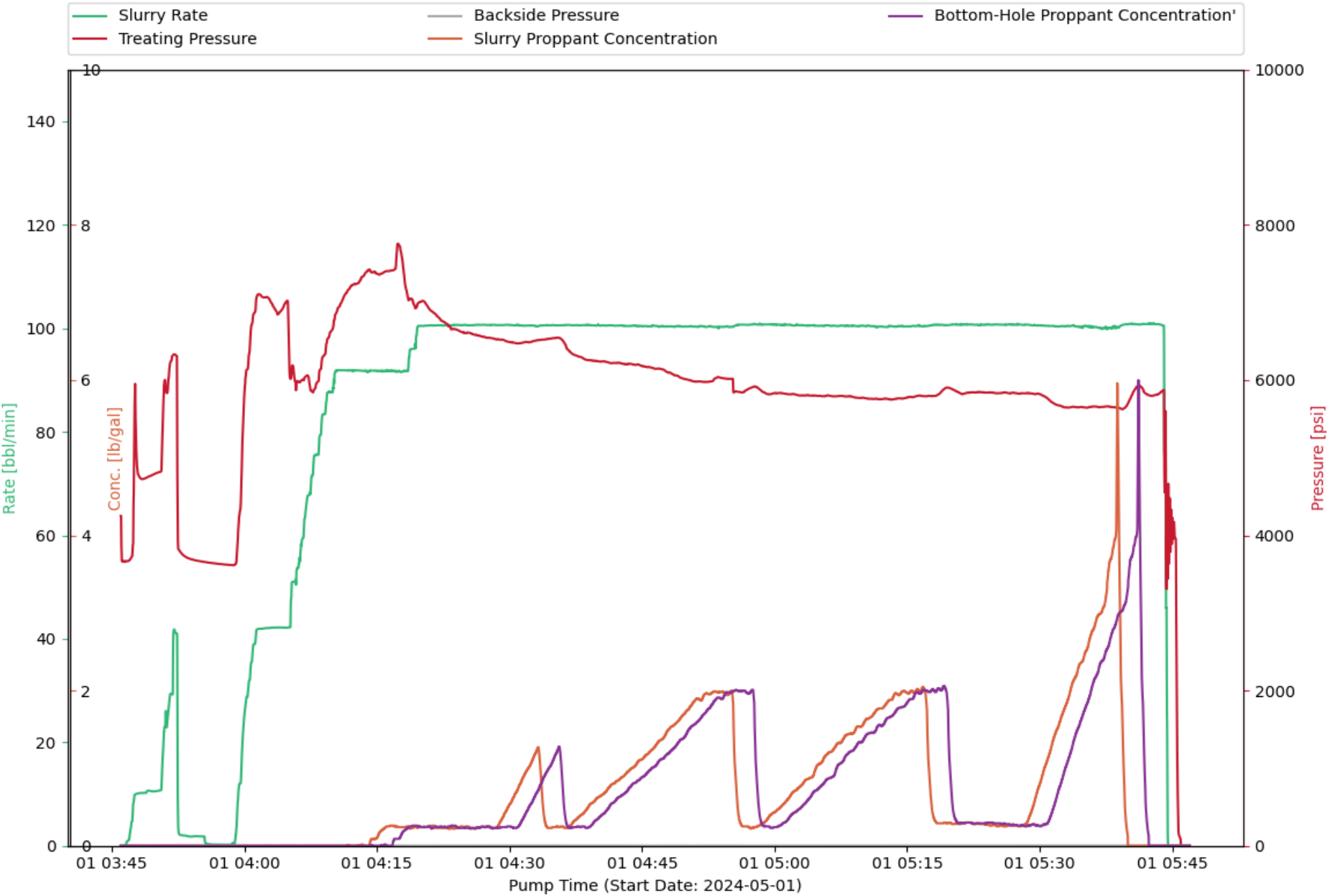
CHEMISTRY PLOT : Treatment Interval 6



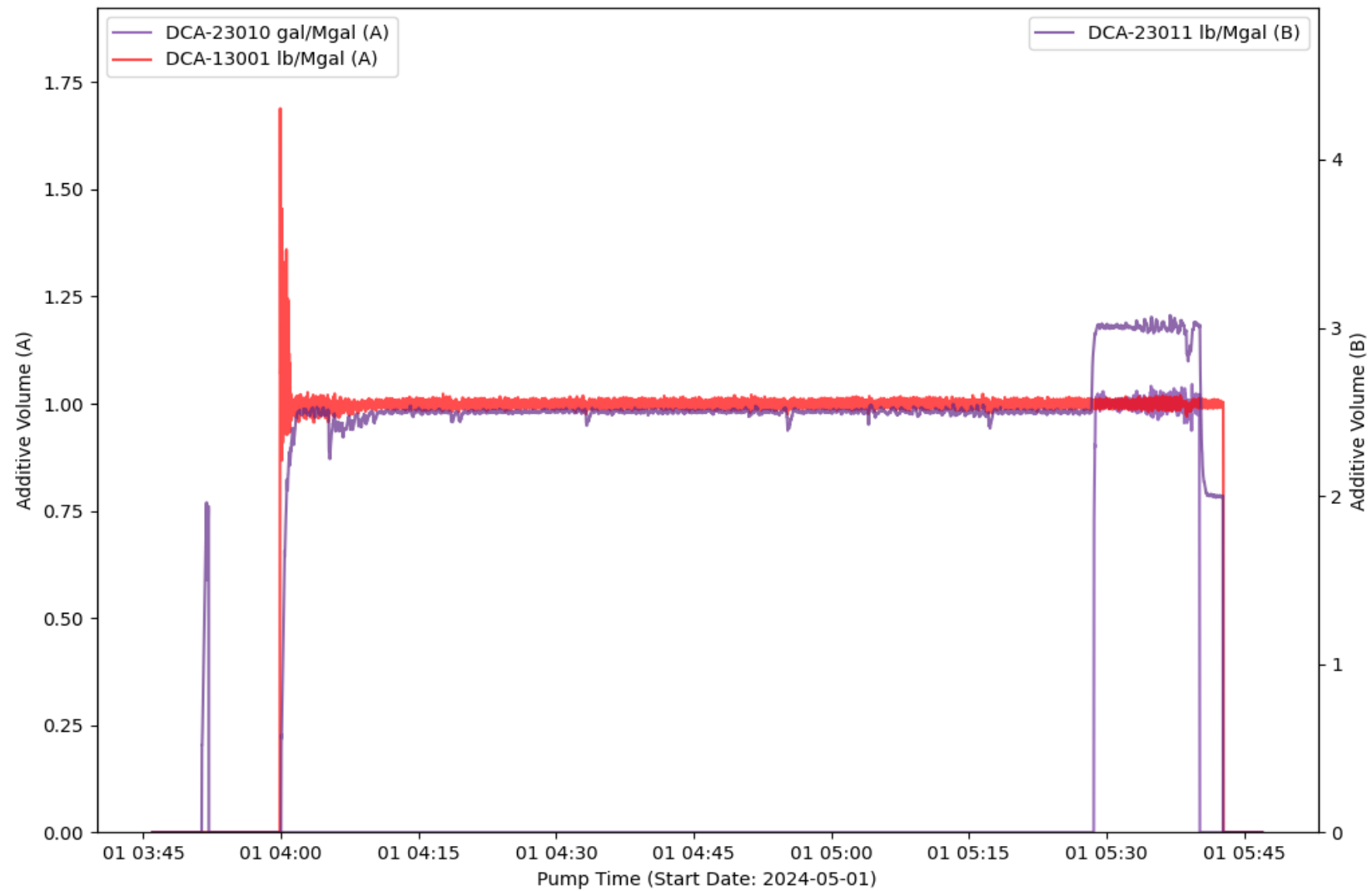
EVENT LOG : TREATMENT INTERVAL 6

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	2024-04-30T21:35:14	0	3625	0	0	0.01	0	0
2	Start Pumping	2024-04-30T21:35:34	0	3653	0	0	0.04	0	0
3	Break Formation	2024-04-30T21:36:52	9.97	5743	0	0	226.74	211.03	0
4	Pump Acid	2024-04-30T21:37:07	10.12	5782	0	0	338.8	317.27	0
5	Spot Acid	2024-04-30T21:46:40	40.27	7898	0	0	11938	12035	0
6	Flush Acid	2024-04-30T21:47:12	40.44	6018	0	0	12850	12943	0
7	Stop Pumping	2024-04-30T23:33:01	1.3	3712	0	0	404552	419919	337917
8	ISIP	2024-04-30T23:33:05	0	4208	0	0	404553	419919	337917
9	Shut In Well	2024-04-30T23:33:41	0	4031	0	0	404555	419919	337917

TREATMENT PLOT : Treatment Interval 7



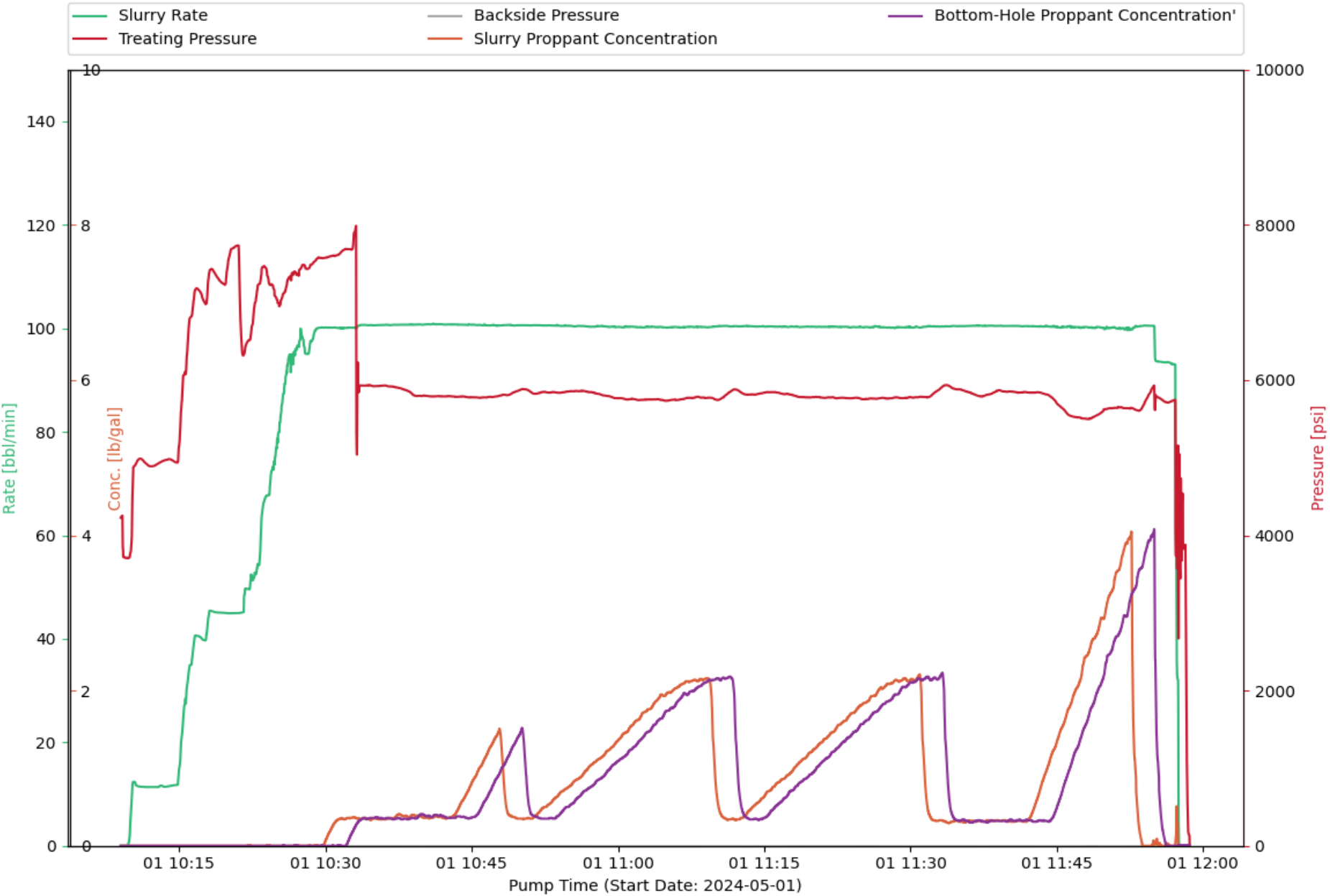
CHEMISTRY PLOT : Treatment Interval 7



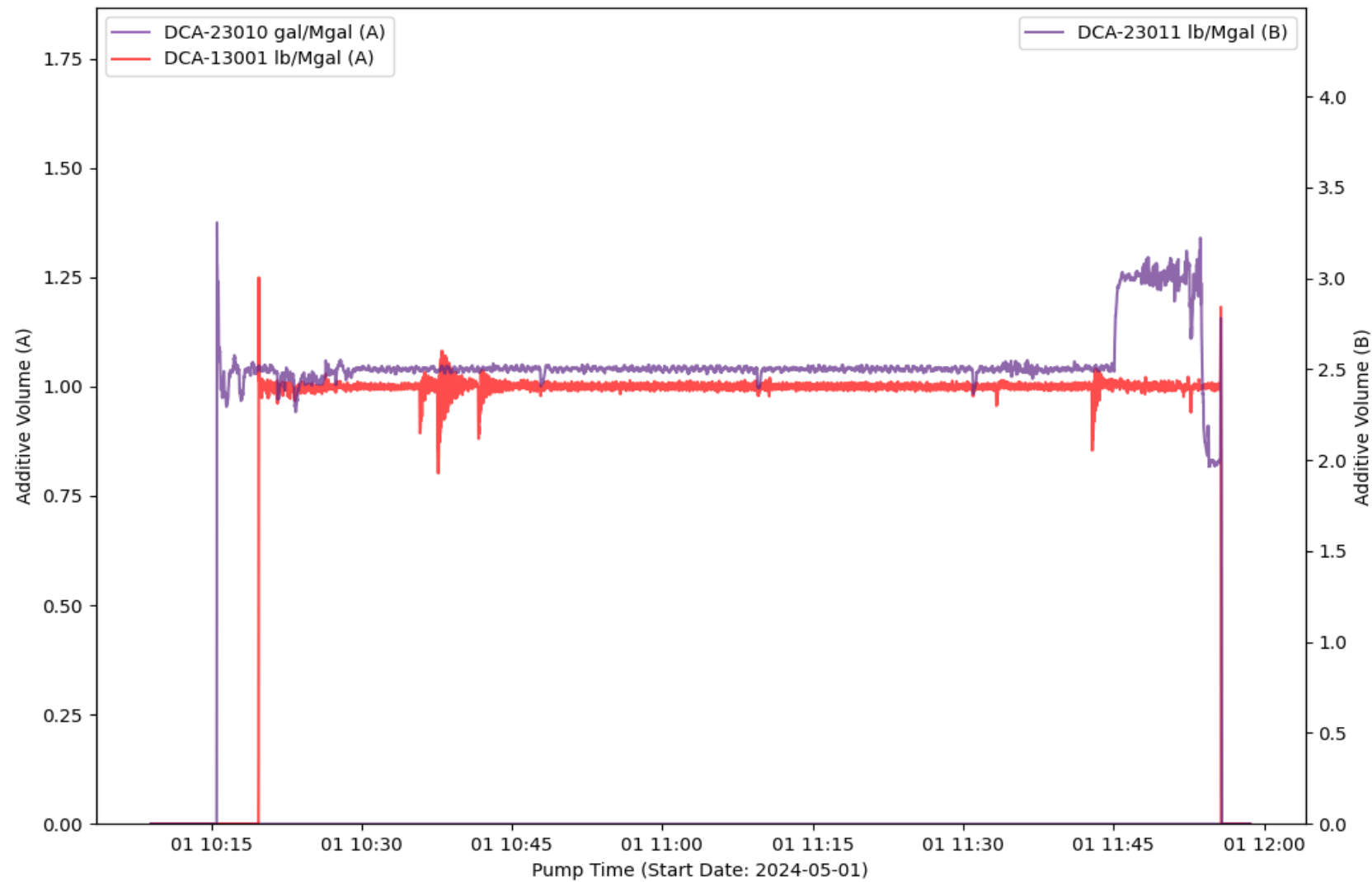
EVENT LOG : TREATMENT INTERVAL 7

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	2024-05-01T03:46:08	0	3664	0	0	0.03	0	0
2	Start Pumping	2024-05-01T03:46:34	0.01	3669	0	0	0.25	0.01	0
3	Break Formation	2024-05-01T03:47:35	9.88	5798	0	0	155.31	161.16	0
4	Pump Acid	2024-05-01T03:48:40	10.23	4730	0	0	648.22	624.76	0
5	Spot Acid	2024-05-01T04:04:53	42.18	7021	0	0	12533	12724	0
6	Flush Acid	2024-05-01T04:05:07	42.24	6066	0	0	12949	13141	0
7	Stop Pumping	2024-05-01T05:44:32	0	4380	0	0	407318	422262	328288
8	ISIP	2024-05-01T05:45:13	0	4172	0	0	407322	422262	328288
9	Shut In Well	2024-05-01T05:45:20	0	3973	0	0	407322	422262	328288
10	Suspending Job	2024-05-01T05:46:58	0	-15.53	0	0	407322	422262	328288

TREATMENT PLOT : Treatment Interval 8



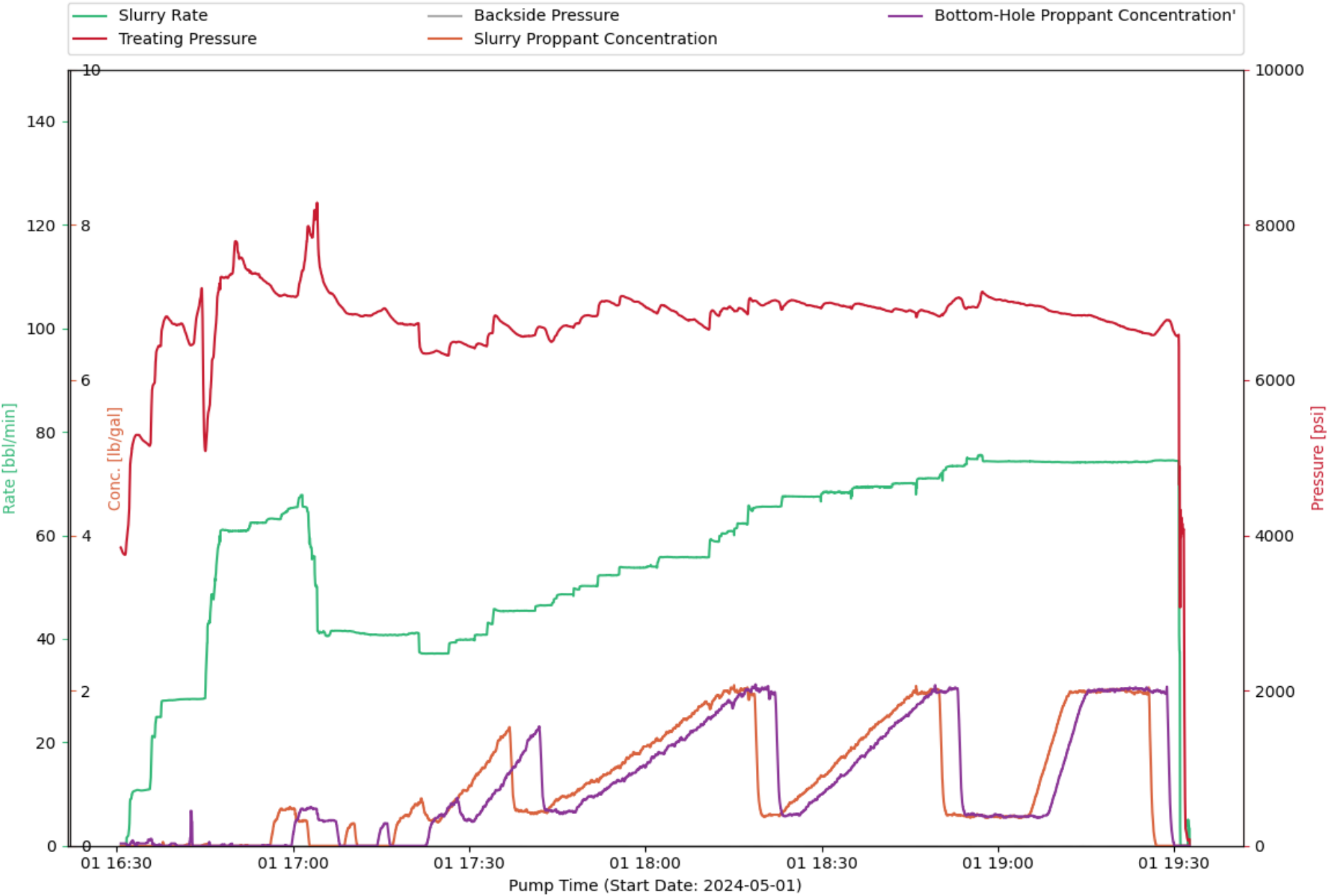
CHEMISTRY PLOT : Treatment Interval 8



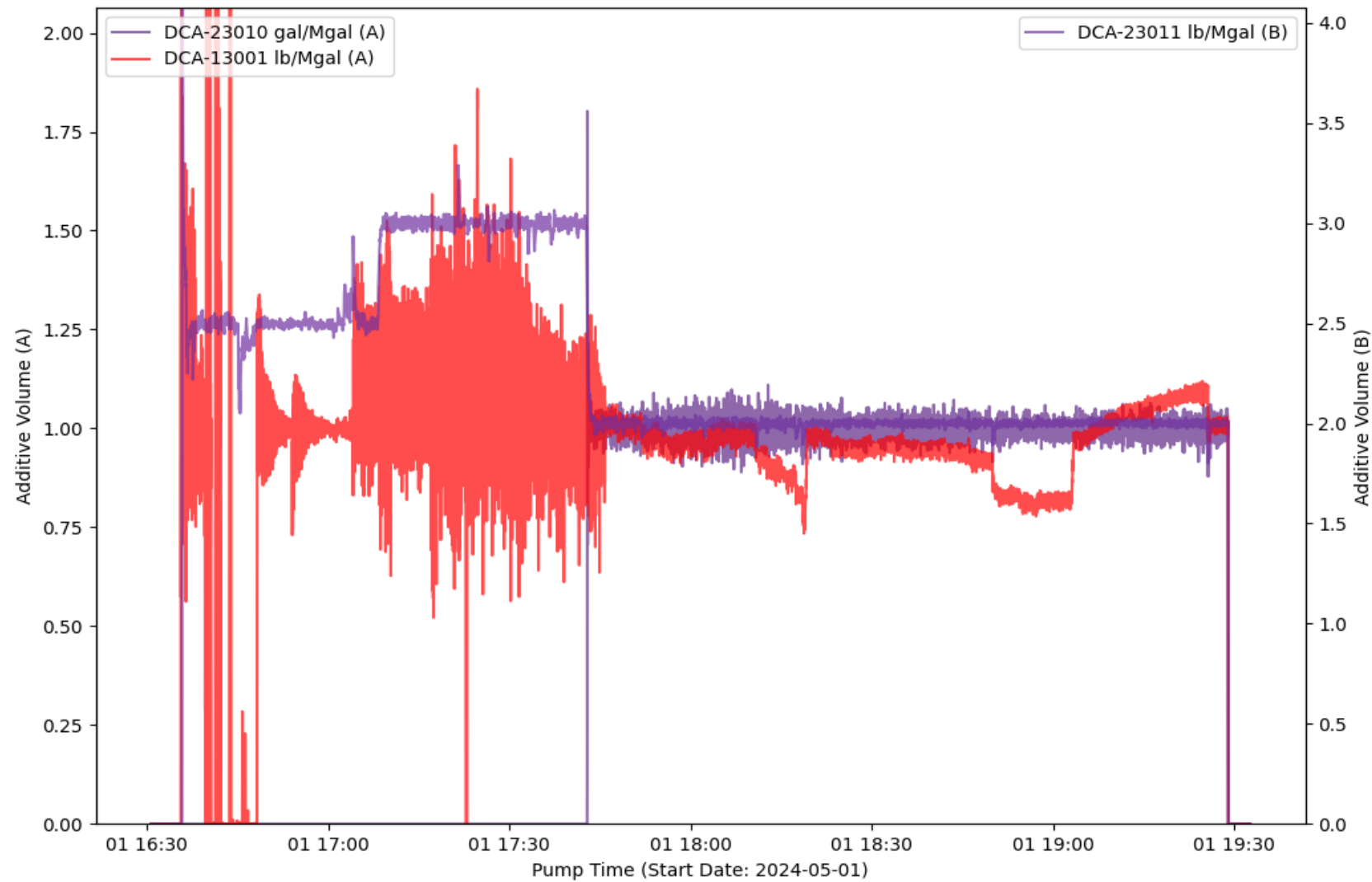
EVENT LOG : TREATMENT INTERVAL 8

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	2024-05-01T10:09:18	0	3717	0	0	0	0	0
2	Start Pumping	2024-05-01T10:09:48	0.61	3707	0	0	0.26	0.84	0
3	Pump Acid	2024-05-01T10:12:12	11.36	4889	0	0	1028	1061	0
4	Break Formation	2024-05-01T10:17:08	40.38	7139	0	0	5250	5356	0
5	Spot Acid	2024-05-01T10:20:29	44.94	7699	0	0	11352	11550	0
6	Flush Acid	2024-05-01T10:21:31	45.14	6319	0	0	13254	13484	0
7	Stop Pumping	2024-05-01T11:57:31	1.09	4536	0	0.01	392886	409577	358468
8	ISIP	2024-05-01T11:57:54	0	4387	0	0.01	392888	409577	358468
9	Shut In Well	2024-05-01T11:58:04	0	3855	0	0.01	392888	409577	358468
10	Suspending Job	2024-05-01T11:58:36	0	126.91	0	0.01	392888	409577	358468

TREATMENT PLOT : Treatment Interval 9



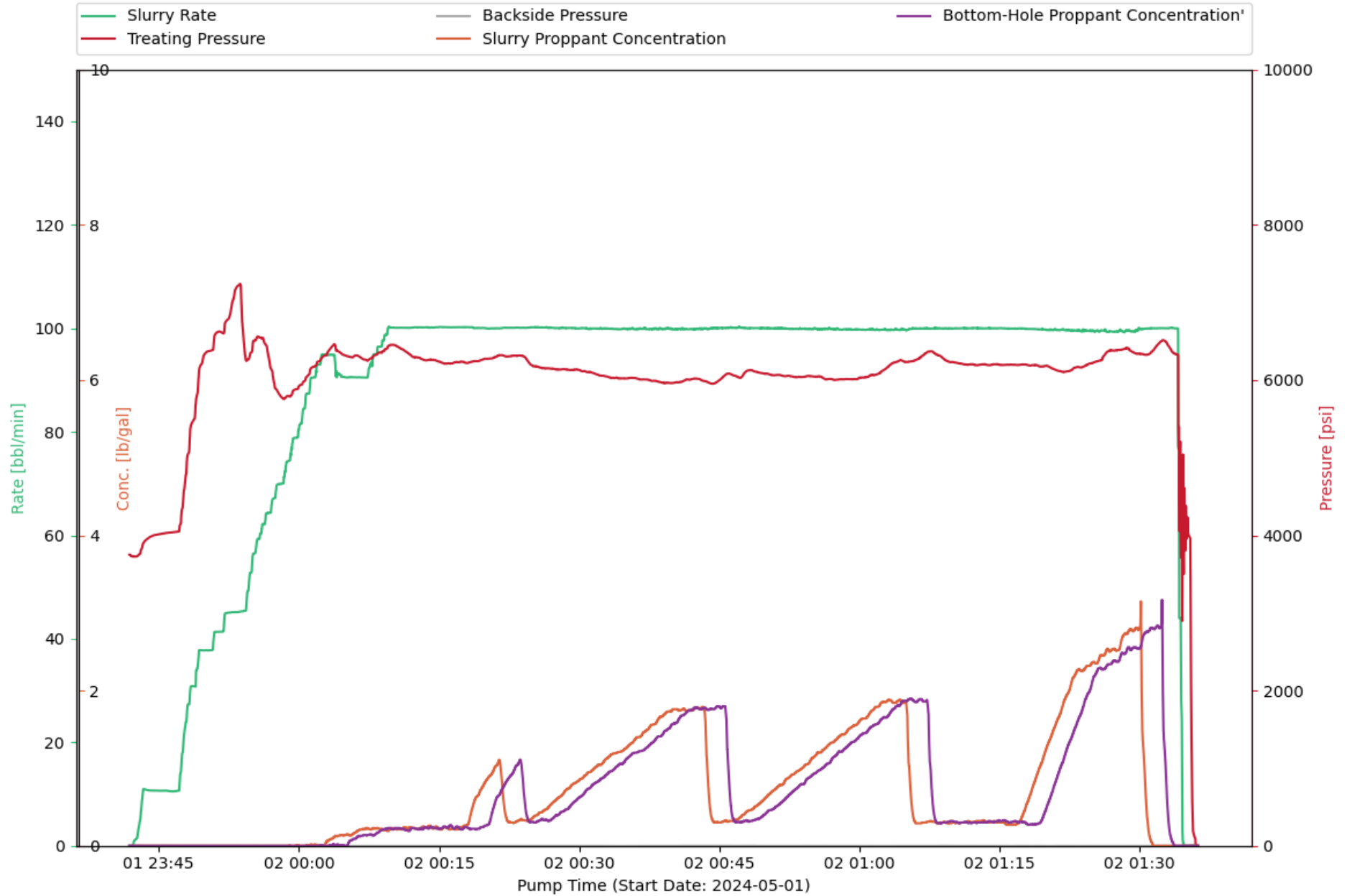
CHEMISTRY PLOT : Treatment Interval 9



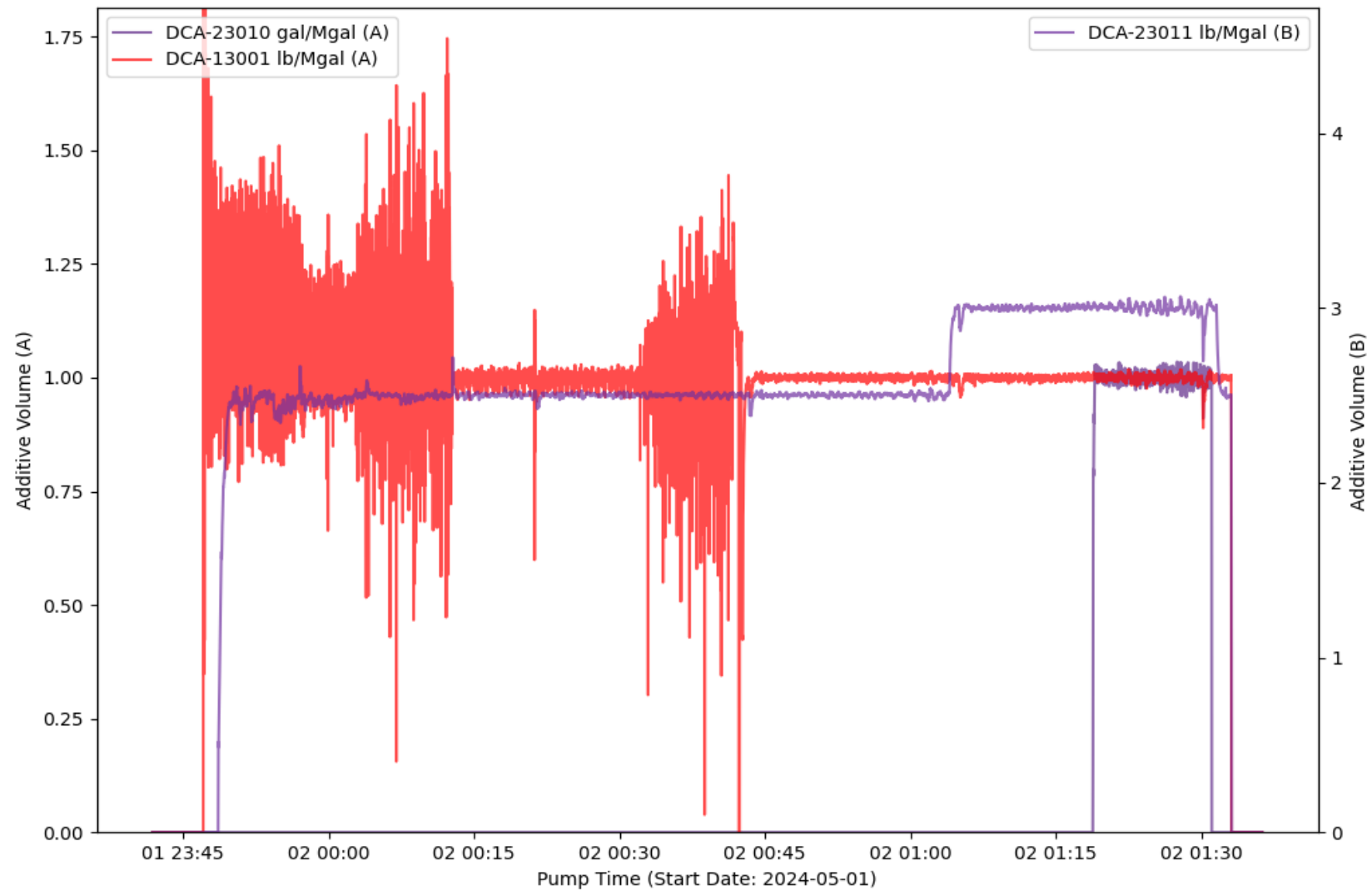
EVENT LOG : TREATMENT INTERVAL 9

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	2024-05-01T16:30:41	0	3843	0	0.03	0	0	0
2	Start Pumping	2024-05-01T16:31:36	0	3859	0	0.03	0	0	0
3	Pump Acid	2024-05-01T16:33:38	10.79	5293	0	0.04	679.55	671.22	0
4	Spot Acid	2024-05-01T16:44:27	28.38	7183	0	0	11453	11544	18.95
5	Flush Acid	2024-05-01T16:45:04	29.06	5087	0.01	0	12171	12265	26.93
6	Stop Pumping	2024-05-01T19:31:03	0.99	4329	0	0	410098	427660	365971
7	ISIP	2024-05-01T19:31:11	0	4128	0	0	410100	427660	365971
8	Shut In Well	2024-05-01T19:31:30	0	4065	0	0	410101	427660	365971
9	Suspending Job	2024-05-01T19:32:37	3.26	84.51	0	0	410103	427708	365971

TREATMENT PLOT : Treatment Interval 10



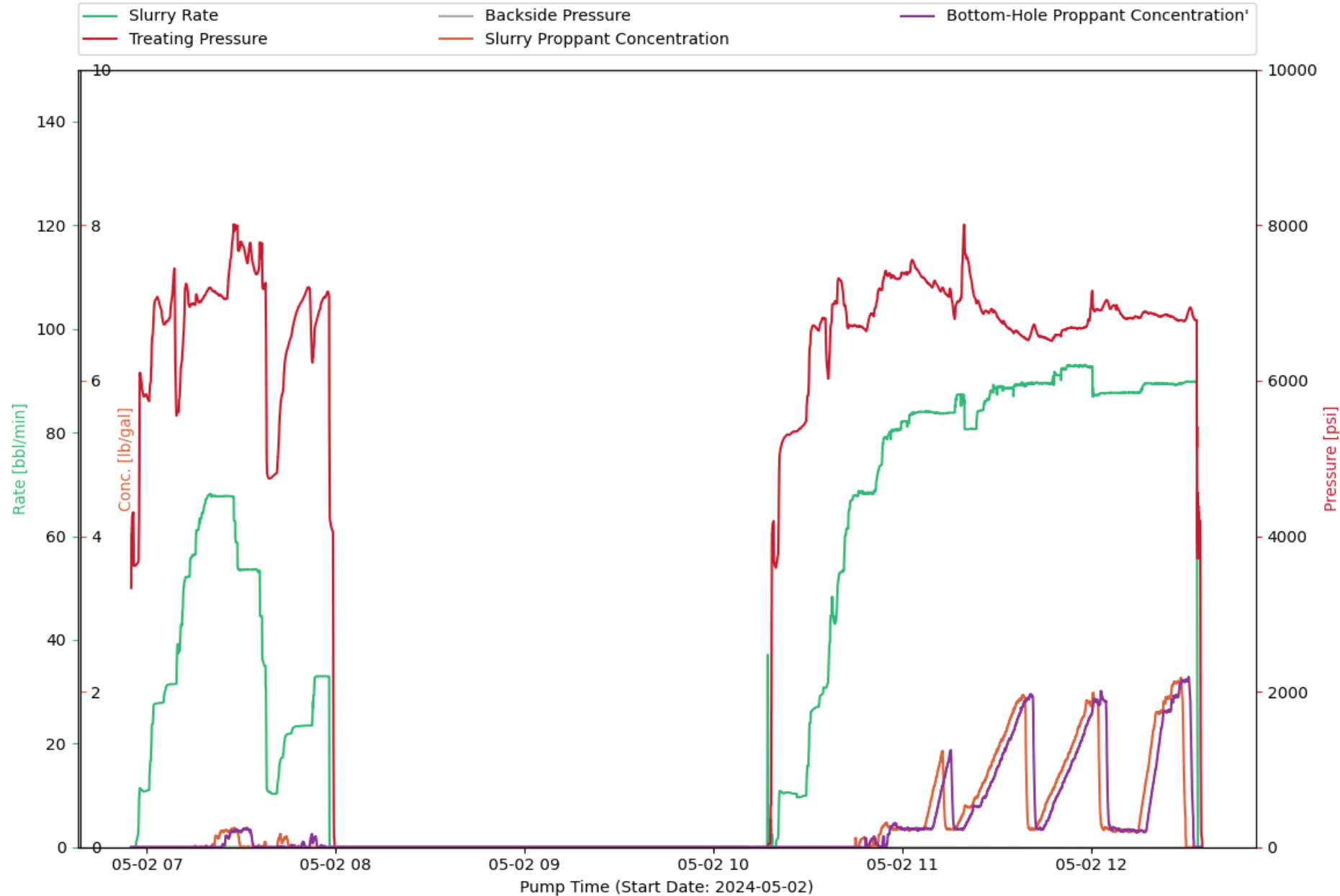
CHEMISTRY PLOT : Treatment Interval 10



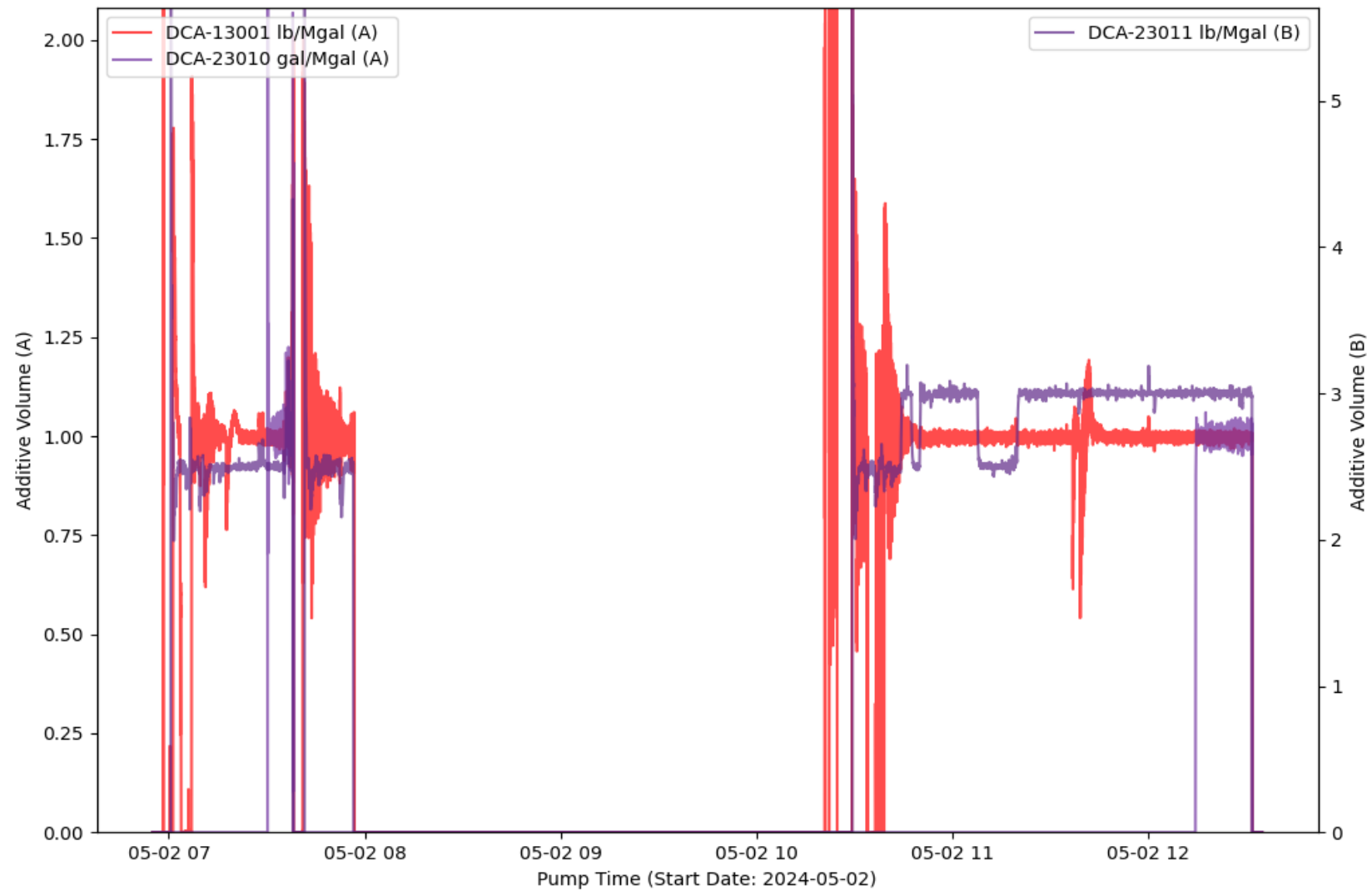
EVENT LOG : TREATMENT INTERVAL 10

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	2024-05-01T23:41:51	0	3750	0	0	0	0	0
2	Start Pumping	2024-05-01T23:42:15	0.09	3729	0	0	25.79	0.08	0
3	Break Formation	2024-05-01T23:43:50	10.75	3962	0	0	465.61	404.39	0
4	Pump Acid	2024-05-01T23:45:19	10.64	4020	0	0	1139	1072	0
5	Spot Acid	2024-05-01T23:53:45	45.26	7233	0	0	12207	12021	0
6	Flush Acid	2024-05-01T23:54:18	45.43	6271	0	0	13263	13074	0
7	Stop Pumping	2024-05-02T01:34:42	0.47	3566	0	0	406766	421550	323988
8	ISIP	2024-05-02T01:34:46	0	4523	0	0	406766	421550	323988
9	Shut In Well	2024-05-02T01:35:13	0	4011	0	0	406767	421550	323988
10	Suspending Job	2024-05-02T01:36:14	0	-3.73	0	0	406767	421551	323988

TREATMENT PLOT : Treatment Interval 11



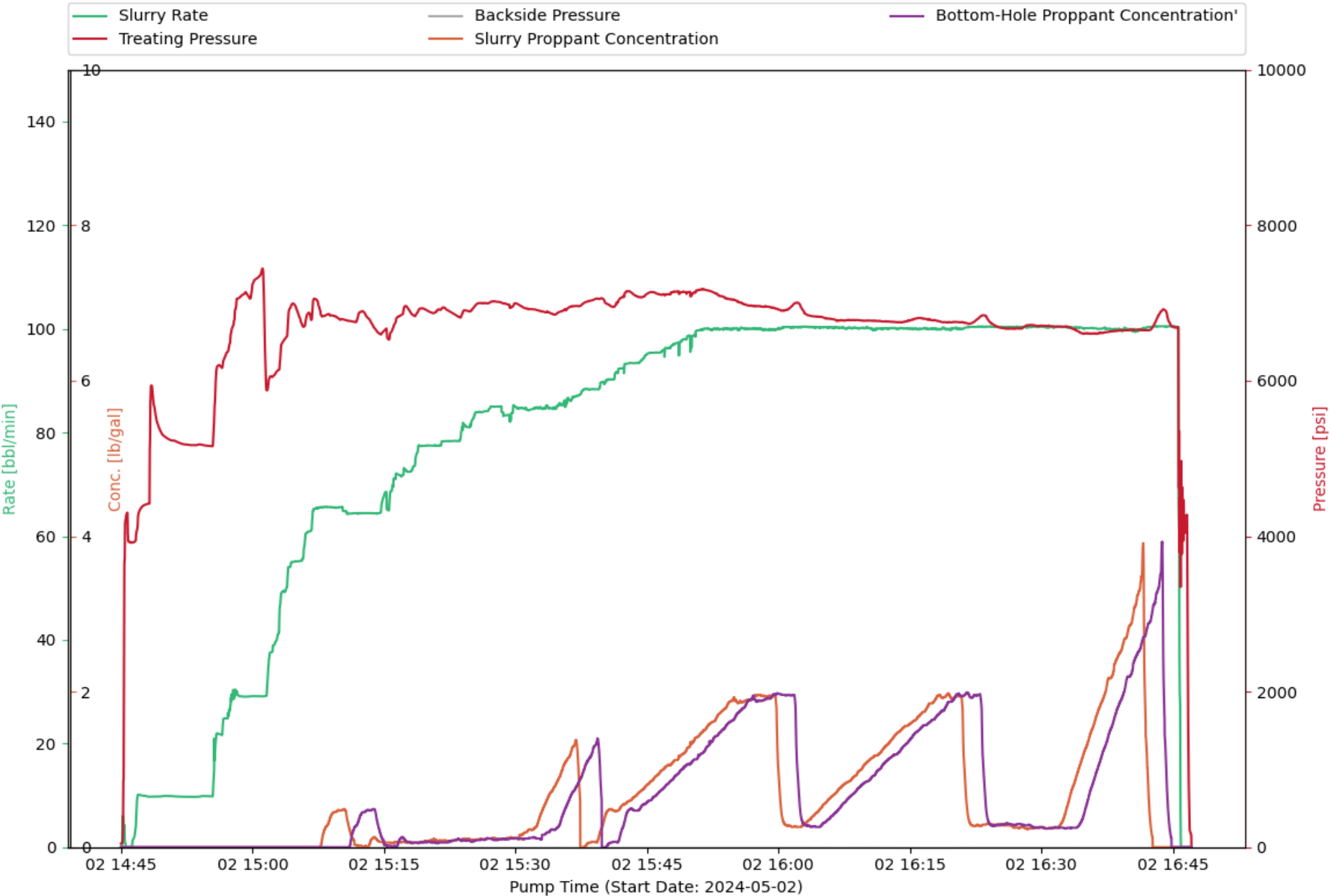
CHEMISTRY PLOT : Treatment Interval 11



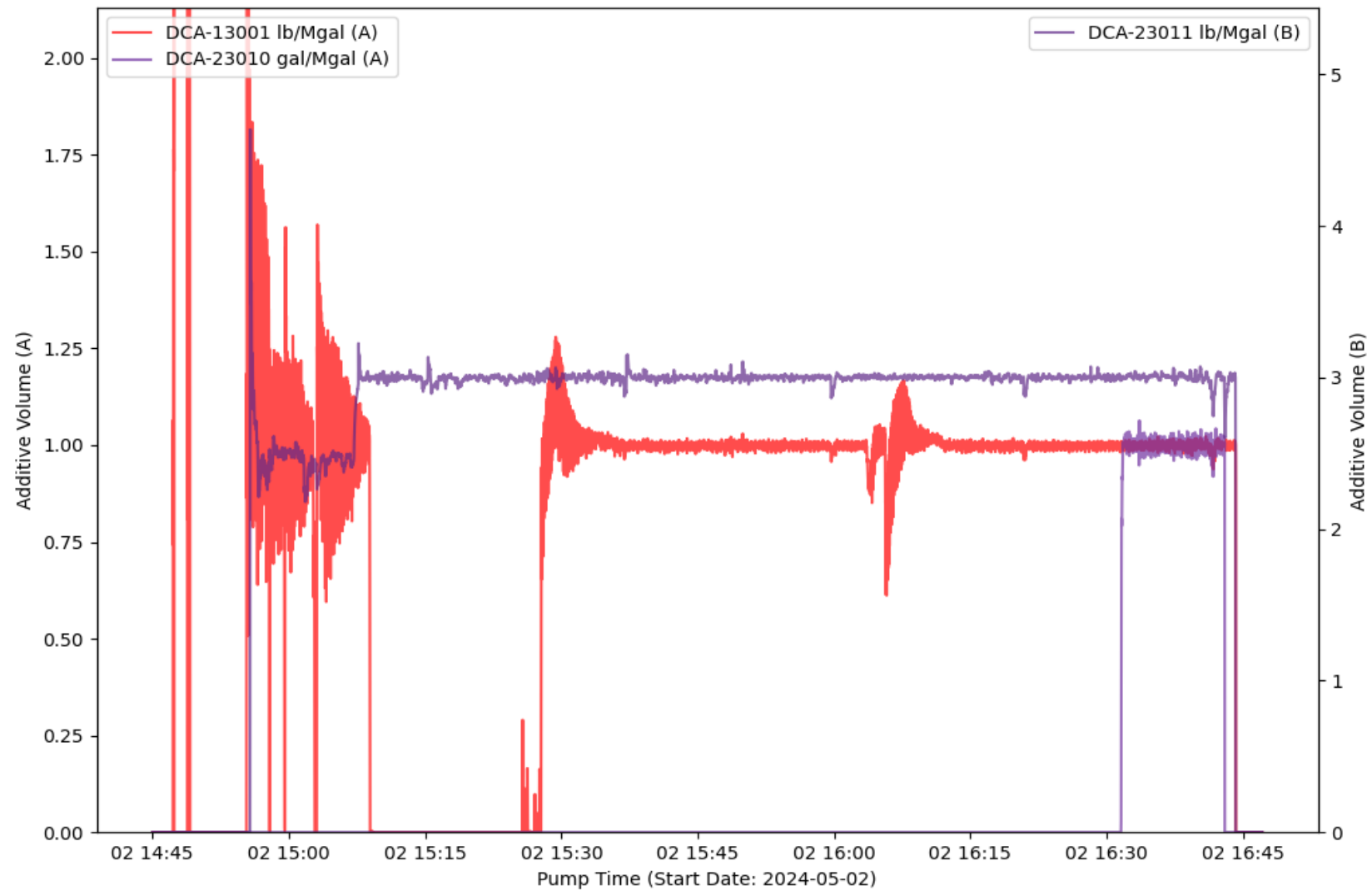
EVENT LOG : TREATMENT INTERVAL 11

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	2024-05-02T06:55:47	0	3657	0	0	0	0	0
2	Start Pumping	2024-05-02T06:56:33	0.76	3636	0	0	8.67	1.16	0
3	Break Formation	2024-05-02T06:57:56	11.33	6073	0	0	314.41	301.91	0
4	Pump Acid	2024-05-02T06:58:28	10.93	5898	0	0	567.22	551.58	0
5	Spot Acid	2024-05-02T07:08:38	31.46	7425	0	0	10852	10813	0
6	Flush Acid	2024-05-02T07:09:26	33.16	5551	0	0	11888	11857	0
7	Stop Pumping	2024-05-02T07:58:01	0.63	4432	0	0	99138	99366	4603
8	Shut In Well	2024-05-02T07:58:48	0	4080	0	0	99139	99367	4603
9	Suspending Job	2024-05-02T08:00:09	0	0	0	0	99139	99367	4603
10	Resuming Job	2024-05-02T10:10:35	0	0	0	0	99139	99367	4603
11	Open Well	2024-05-02T10:19:08	0	3672	0	0	99379	99655	4603
12	Start Pumping	2024-05-02T10:20:25	2.04	3774	0	0	99391	99700	4603
13	Pump Acid	2024-05-02T10:21:35	10.6	5195	0	0	99861	100158	4603
14	Pump Acid	2024-05-02T10:25:38	10.32	5345	0	0	101585	101939	4603
15	Spot Acid	2024-05-02T10:35:23	30.77	6804	0	0	110245	110035	4603
16	Flush Acid	2024-05-02T10:35:58	31.36	6170	0	0	111039	110775	4603
17	Spot Acid	2024-05-02T10:36:10	31.61	6076	0	0	111325	111041	4603
18	Flush Acid	2024-05-02T10:37:18	44.69	6745	0	0	113306	112909	4603
19	Stop Pumping	2024-05-02T12:33:41	0	4250	0	0	510264	522357	299263
20	ISIP	2024-05-02T12:33:48	0	4374	0	0	510265	522357	299263
21	Shut In Well	2024-05-02T12:34:06	0	4142	0	0	510267	522357	299263
22	Suspending Job	2024-05-02T12:35:02	0	84.57	0	0	510267	522357	299263

TREATMENT PLOT : Treatment Interval 12



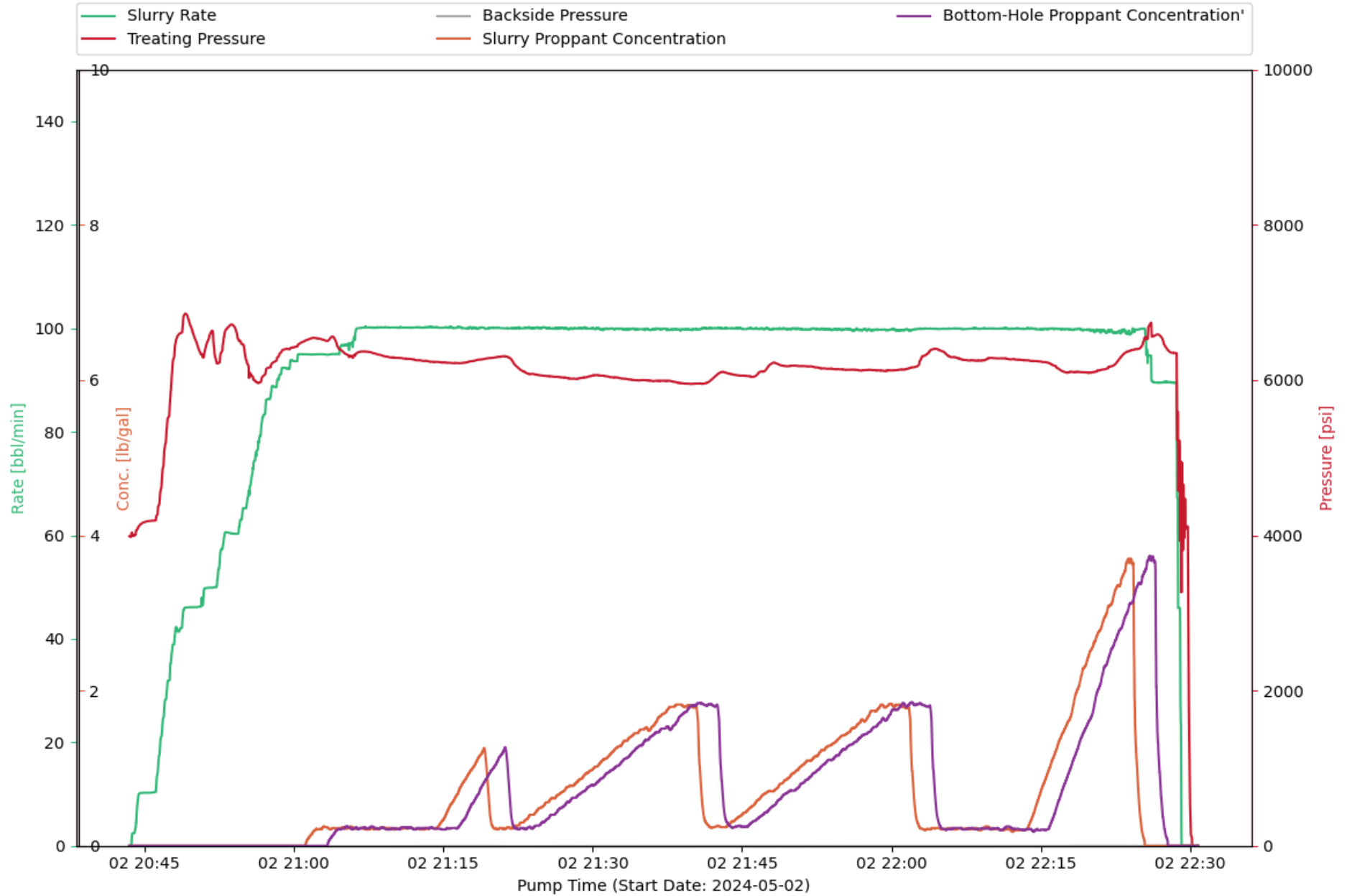
CHEMISTRY PLOT : Treatment Interval 12



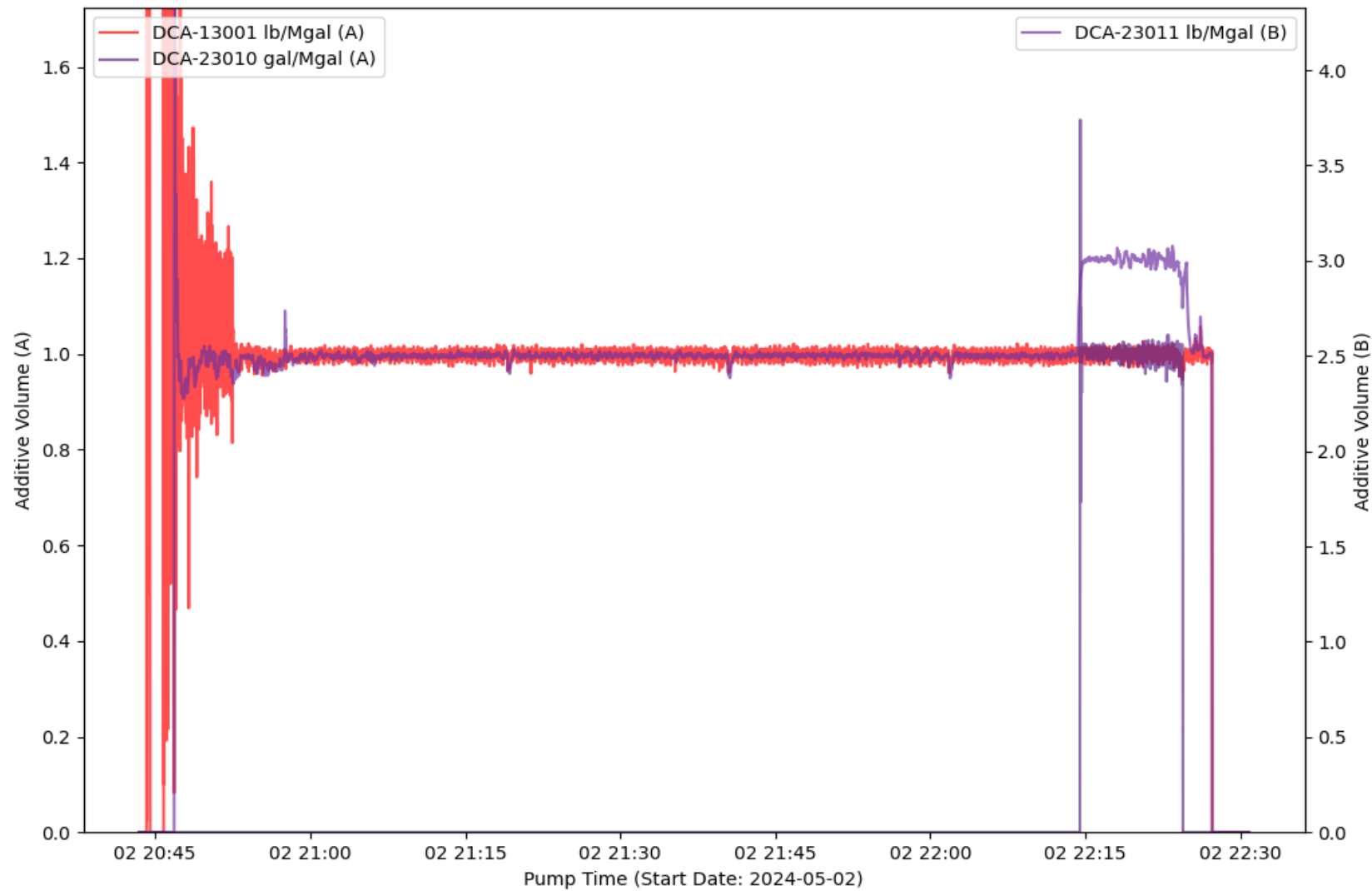
EVENT LOG : TREATMENT INTERVAL 12

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	2024-05-02T14:45:54	0	3935	0	0	0.2	0	0
2	Open Well	2024-05-02T14:46:19	1.18	3924	0	0	4.7	2.34	0
3	Pump Acid	2024-05-02T14:47:33	9.92	4393	0	0	365.46	382.26	0
4	Break Formation	2024-05-02T14:48:48	9.77	5662	0	0	857.08	892.13	0
5	Pump Acid	2024-05-02T14:54:18	9.87	5174	0	0	3072	3155	0
6	Spot Acid	2024-05-02T15:01:04	29.12	7419	0	0	9840	9913	0
7	Flush Acid	2024-05-02T15:01:39	30.33	5875	0	0	10554	10632	0
8	Spot Acid	2024-05-02T15:04:46	55.05	6984	0	0	16455	16590	0
9	Flush Acid	2024-05-02T15:06:01	59.7	6729	0	0	19353	19535	0
10	Stop Pumping	2024-05-02T16:45:54	1.73	4570	0	0	390151	403631	304090
11	ISIP	2024-05-02T16:46:06	0	4517	0	0	390151	403631	304090
12	Shut In Well	2024-05-02T16:46:30	0	4257	0	0	390151	403631	304090
13	Suspending Job	2024-05-02T16:47:06	0	151.12	0	0	390151	403631	304090

TREATMENT PLOT : Treatment Interval 13



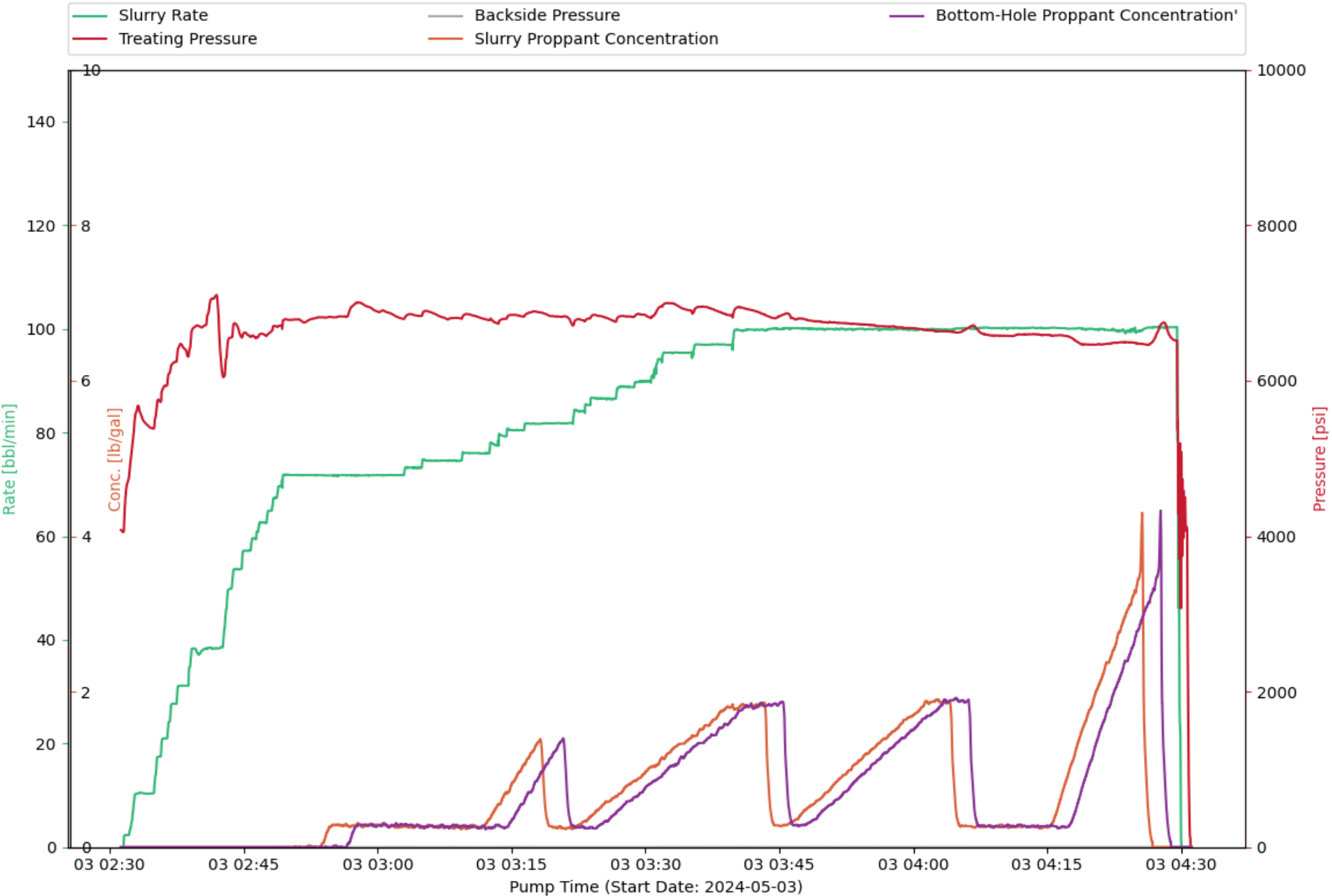
CHEMISTRY PLOT : Treatment Interval 13



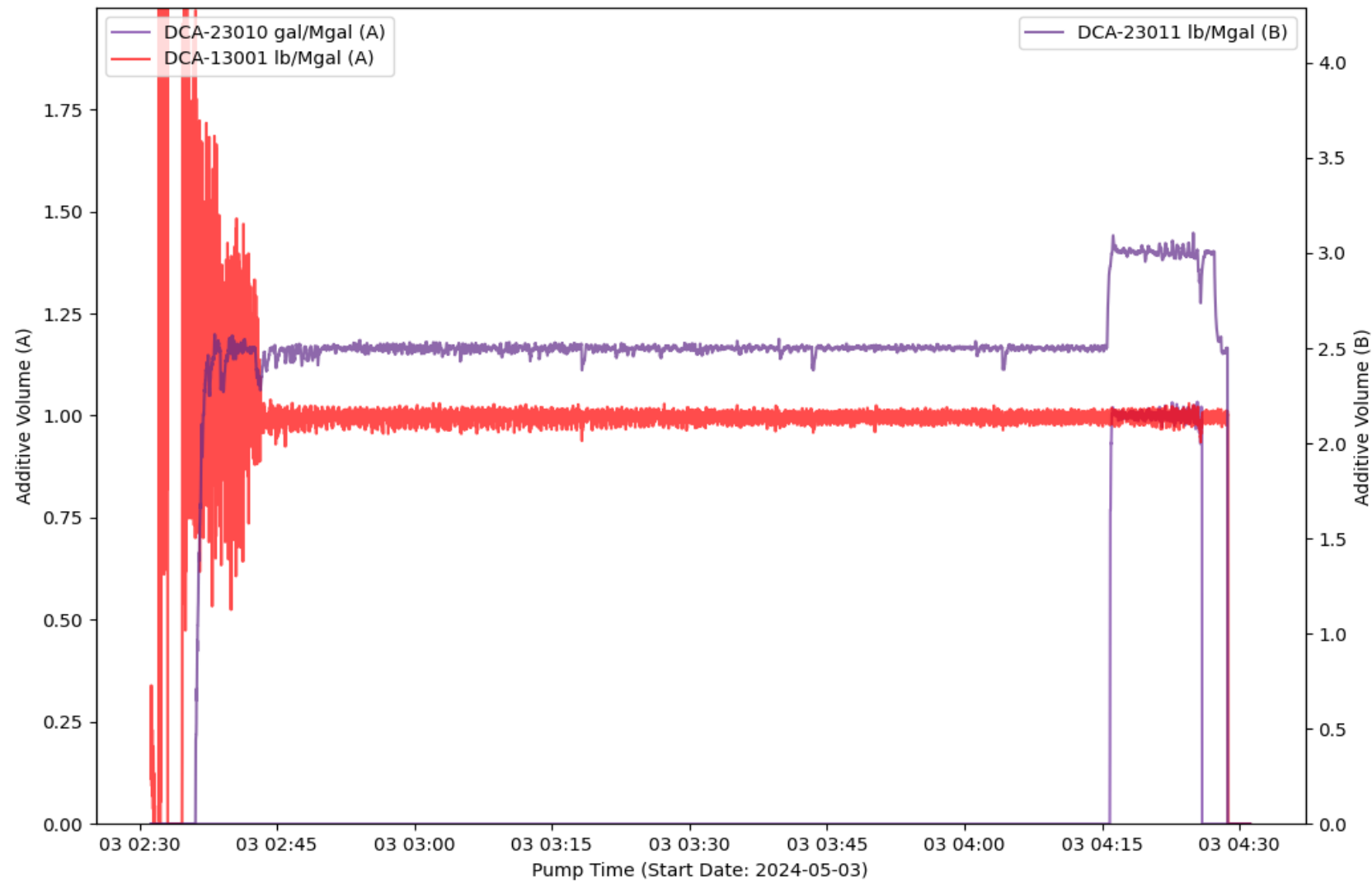
EVENT LOG : TREATMENT INTERVAL 13

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	2024-05-02T20:43:38	0.01	3981	0	0	0.24	0.01	0
2	Break Formation	2024-05-02T20:44:07	4.58	4060	0	0	7.08	51.57	0
3	Pump Acid	2024-05-02T20:44:28	10.14	4128	0	0	111.94	172.87	0
4	Spot Acid	2024-05-02T20:51:48	49.89	6634	0	0	10539	10415	0
5	Flush Acid	2024-05-02T20:52:14	50.22	6215	0	0	11462	11331	0
6	ISIP	2024-05-02T22:29:09	1.95	3266	0	0	393084	406462	299070
7	Stop Pumping	2024-05-02T22:29:09	1.95	3266	0	0	393084	406462	299070
8	Shut In Well	2024-05-02T22:29:38	0	4094	0	0	393087	406462	299070

TREATMENT PLOT : Treatment Interval 14



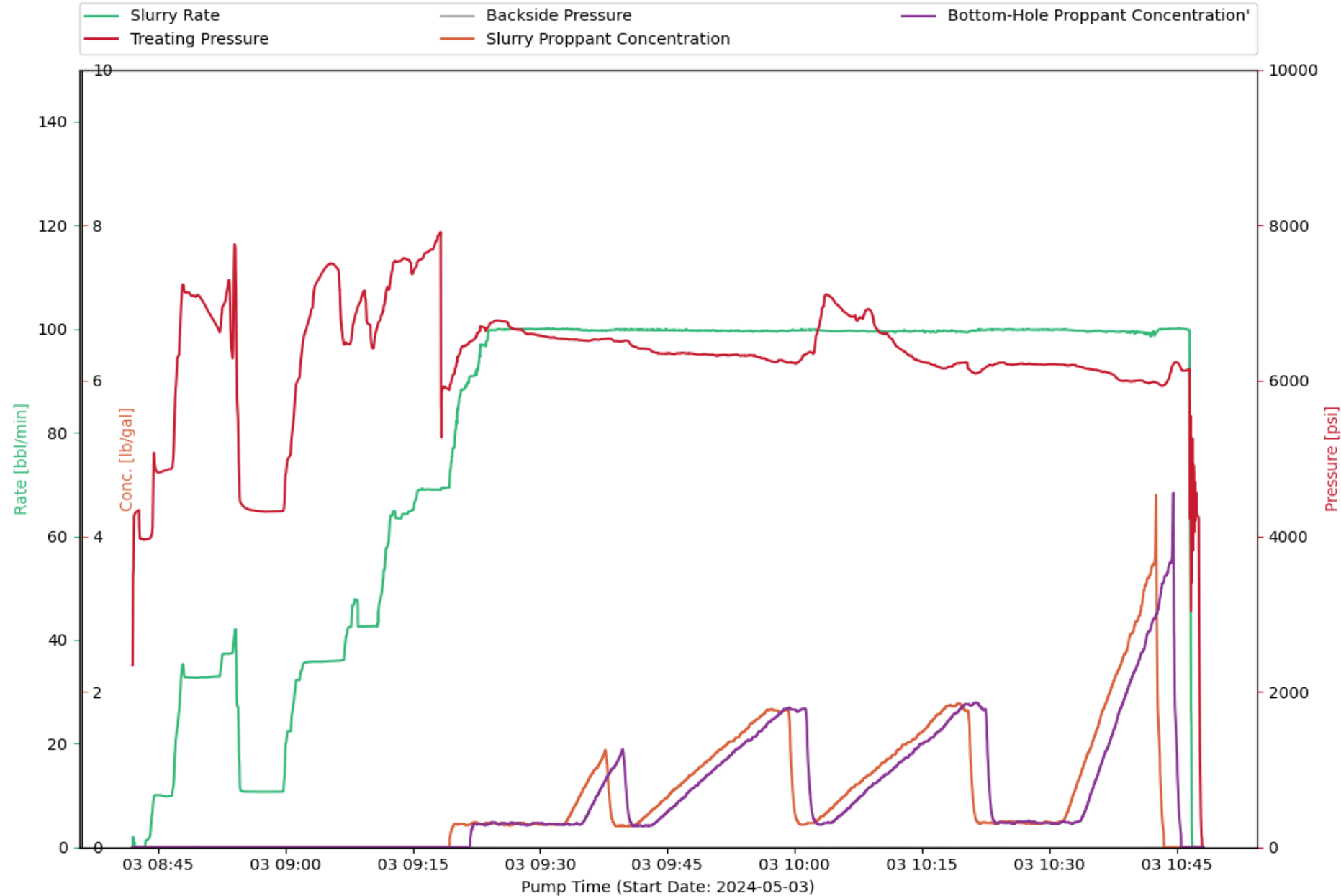
CHEMISTRY PLOT : Treatment Interval 14



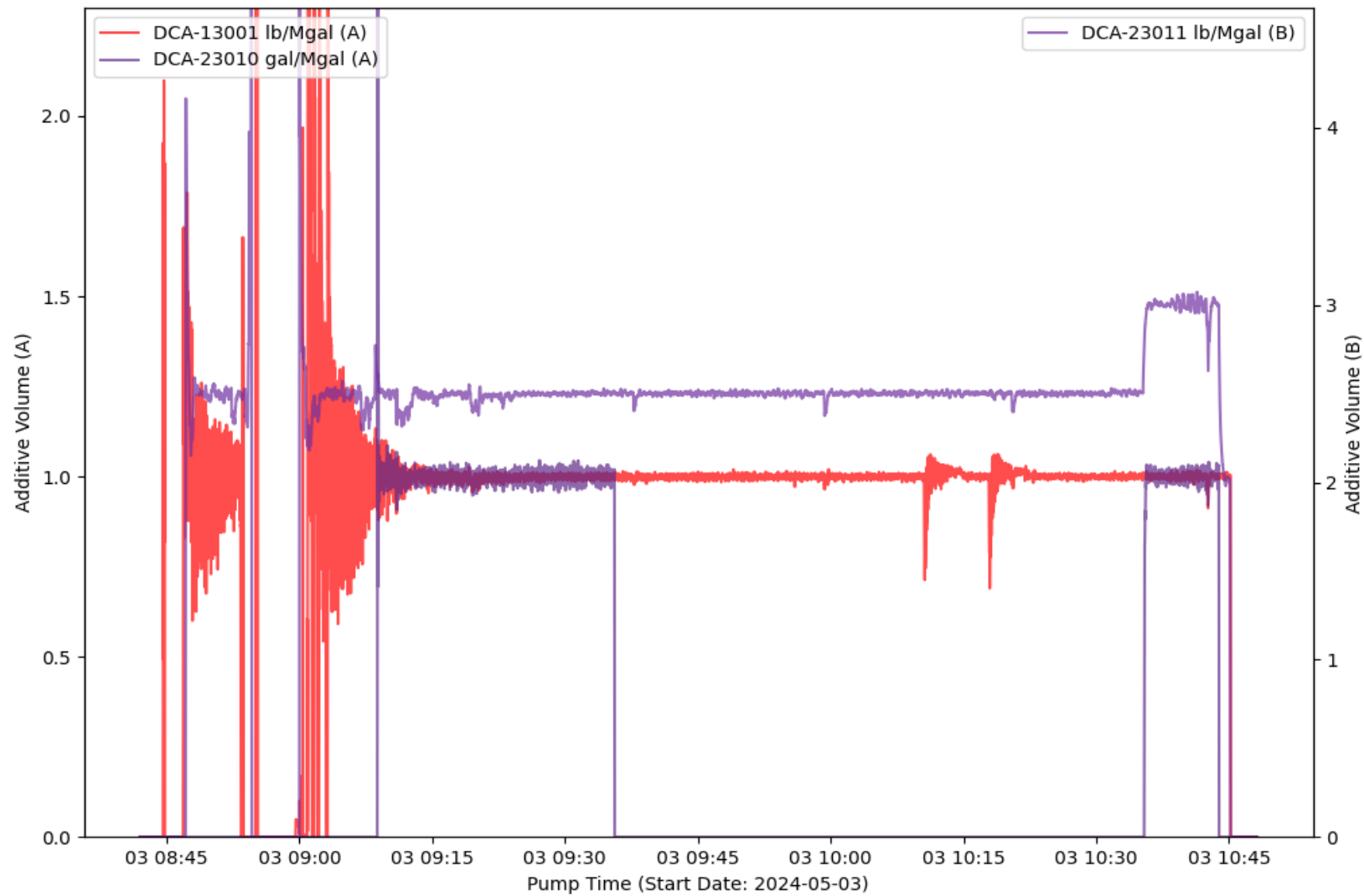
EVENT LOG : TREATMENT INTERVAL 14

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	2024-05-03T02:31:31	0	4052	0	0	0.19	0	0
2	Break Formation	2024-05-03T02:32:51	10.22	5547	0	0	186.53	232.96	0
3	Pump Acid	2024-05-03T02:33:03	10.33	5626	0	0	276.31	319.81	0
4	Spot Acid	2024-05-03T02:41:59	38.41	7103	0	0	10209	10200	0
5	Flush Acid	2024-05-03T02:42:39	38.63	6067	0	0	11295	11282	0
6	Stop Pumping	2024-05-03T04:30:01	0.7	5083	0	0	394873	409275	315839
7	ISIP	2024-05-03T04:30:01	0.7	5083	0	0	394873	409275	315839
8	Shut In Well	2024-05-03T04:30:34	0	4126	0	0	394875	409275	315839
9	Suspending Job	2024-05-03T04:31:08	0	-1.97	0	0	394875	409275	315839

TREATMENT PLOT : Treatment Interval 15



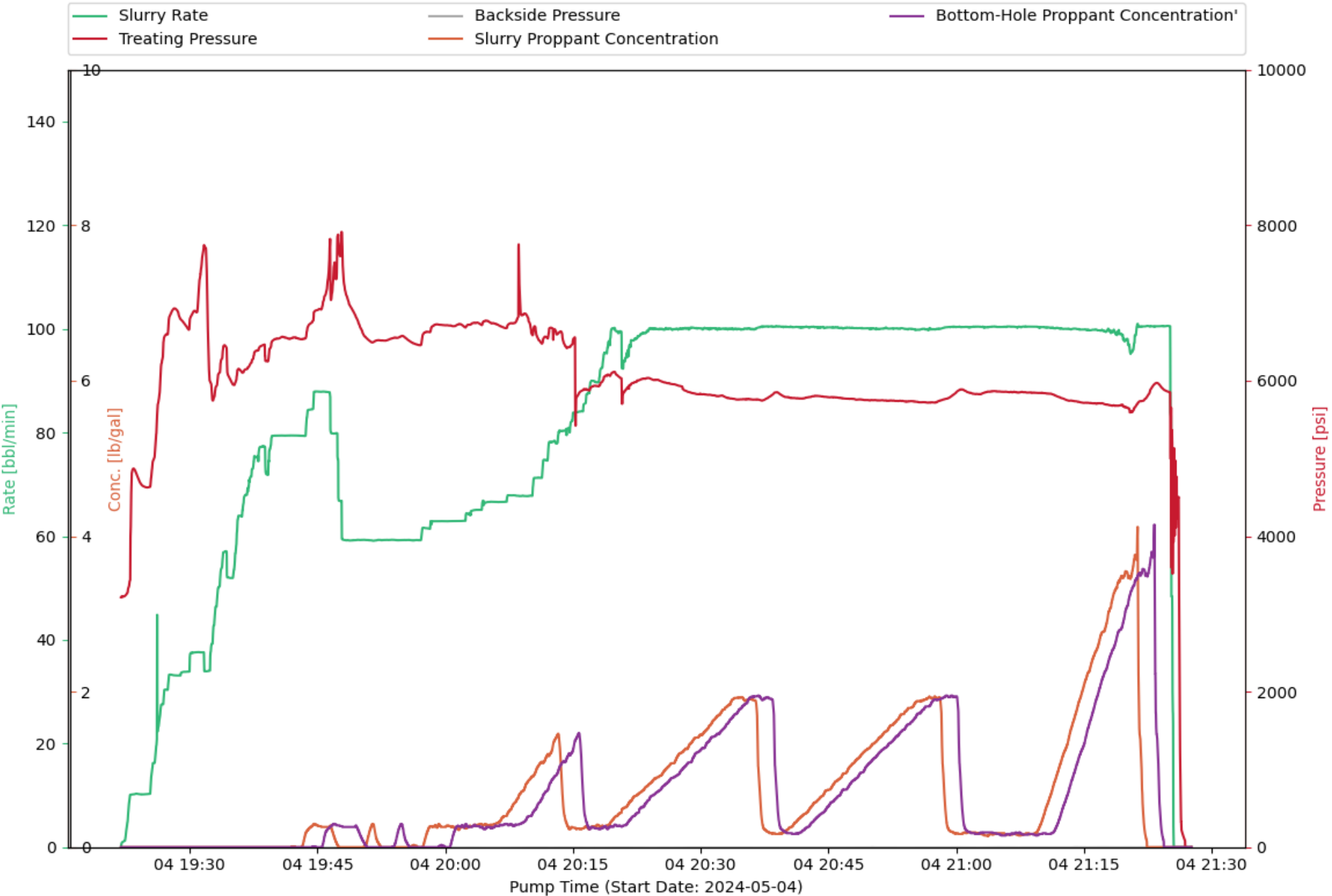
CHEMISTRY PLOT : Treatment Interval 15



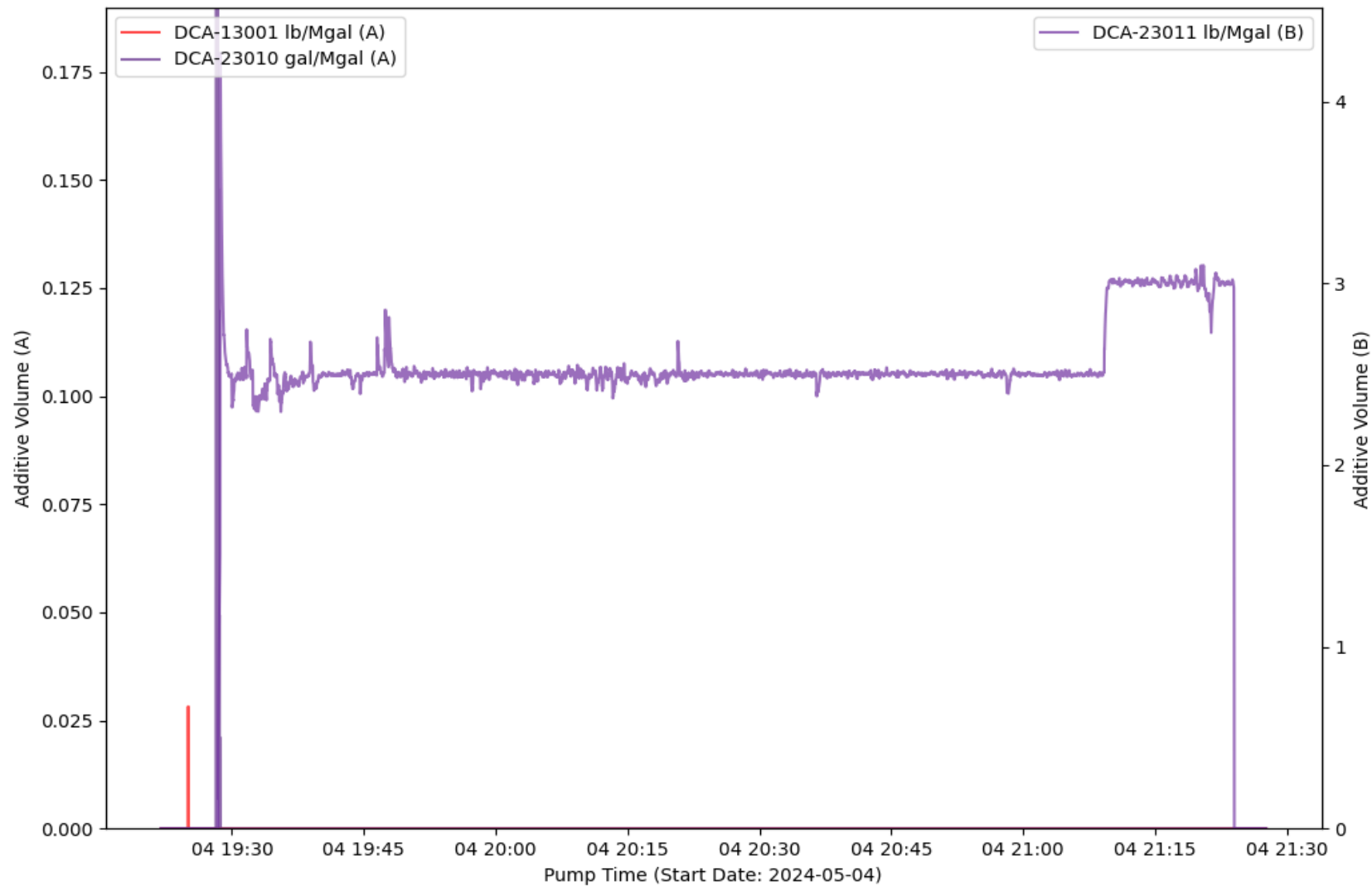
EVENT LOG : TREATMENT INTERVAL 15

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	Open Well	2024-05-03T08:42:51	0	3973	0	0	0.22	0	0
2	Start Pumping	2024-05-03T08:43:34	1.22	3959	0	0	8.27	3.65	0
3	Break Formation	2024-05-03T08:44:30	9.44	5073	0	0	78.65	149.48	0
4	Pump Acid	2024-05-03T08:45:37	9.88	4838	0	0	563.92	620.72	0
5	Spot Acid	2024-05-03T08:53:21	37.32	7296	0	0	9937	9952	0
6	Flush Acid	2024-05-03T08:53:44	37.47	6323	0	0	10545	10557	0
7	Pump Acid	2024-05-03T08:58:35	10.7	4319	0	0	13494	13558	0
8	Spot Acid	2024-05-03T09:06:12	35.95	7435	0	0	22844	22888	0
9	Flush Acid	2024-05-03T09:06:56	36.56	6464	0	0	23934	23980	0
10	Stop Pumping	2024-05-03T10:46:51	0.74	4410	0	0	403528	417630	308868
11	ISIP	2024-05-03T10:47:18	0	4563	0	0	403532	417630	308868
12	Shut In Well	2024-05-03T10:47:30	0	4261	0	0	403532	417630	308868
13	Suspending Job	2024-05-03T10:48:08	0	-2.11	0	0	403532	417630	308868

TREATMENT PLOT : Treatment Interval 16



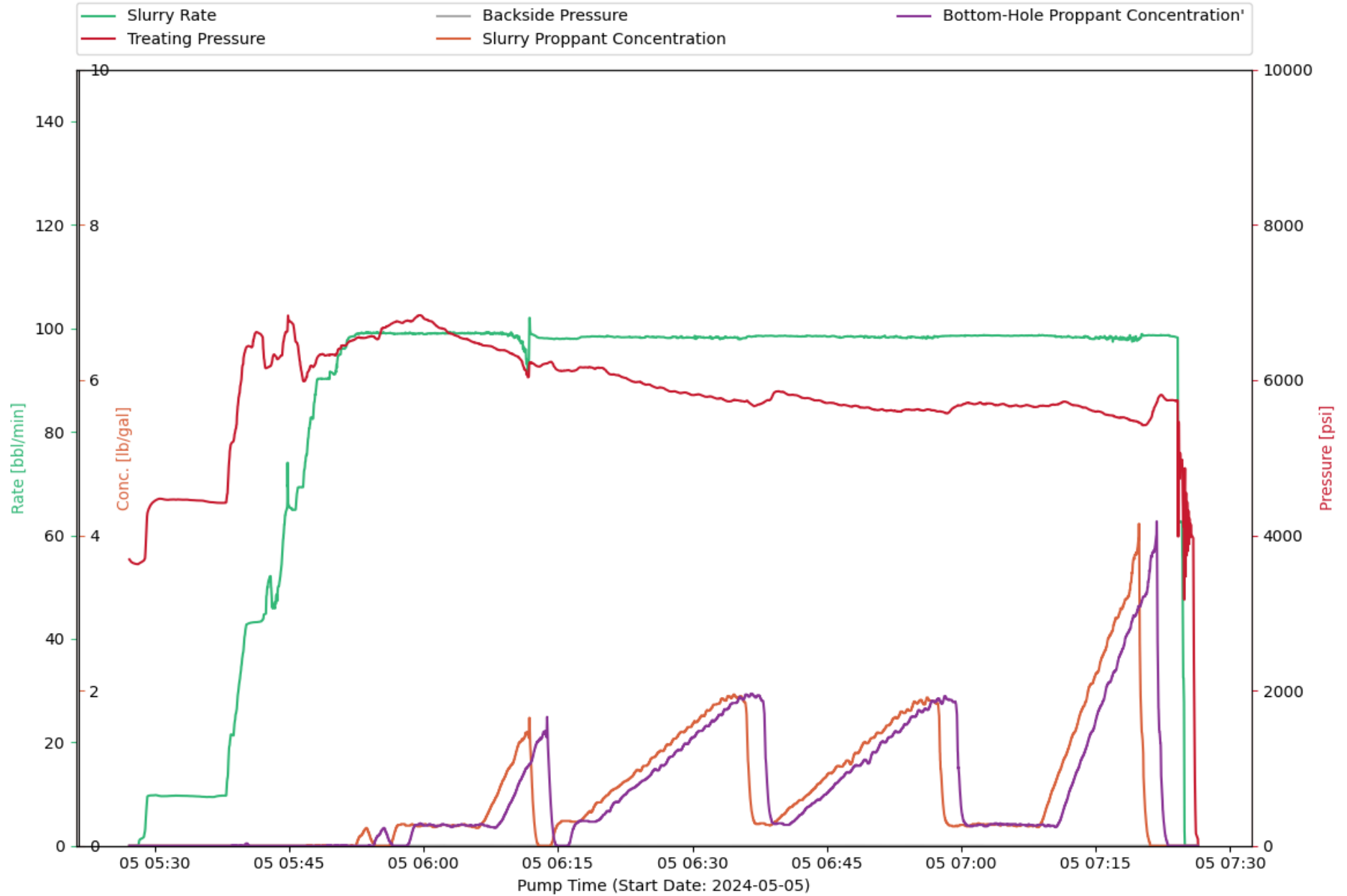
CHEMISTRY PLOT : Treatment Interval 16



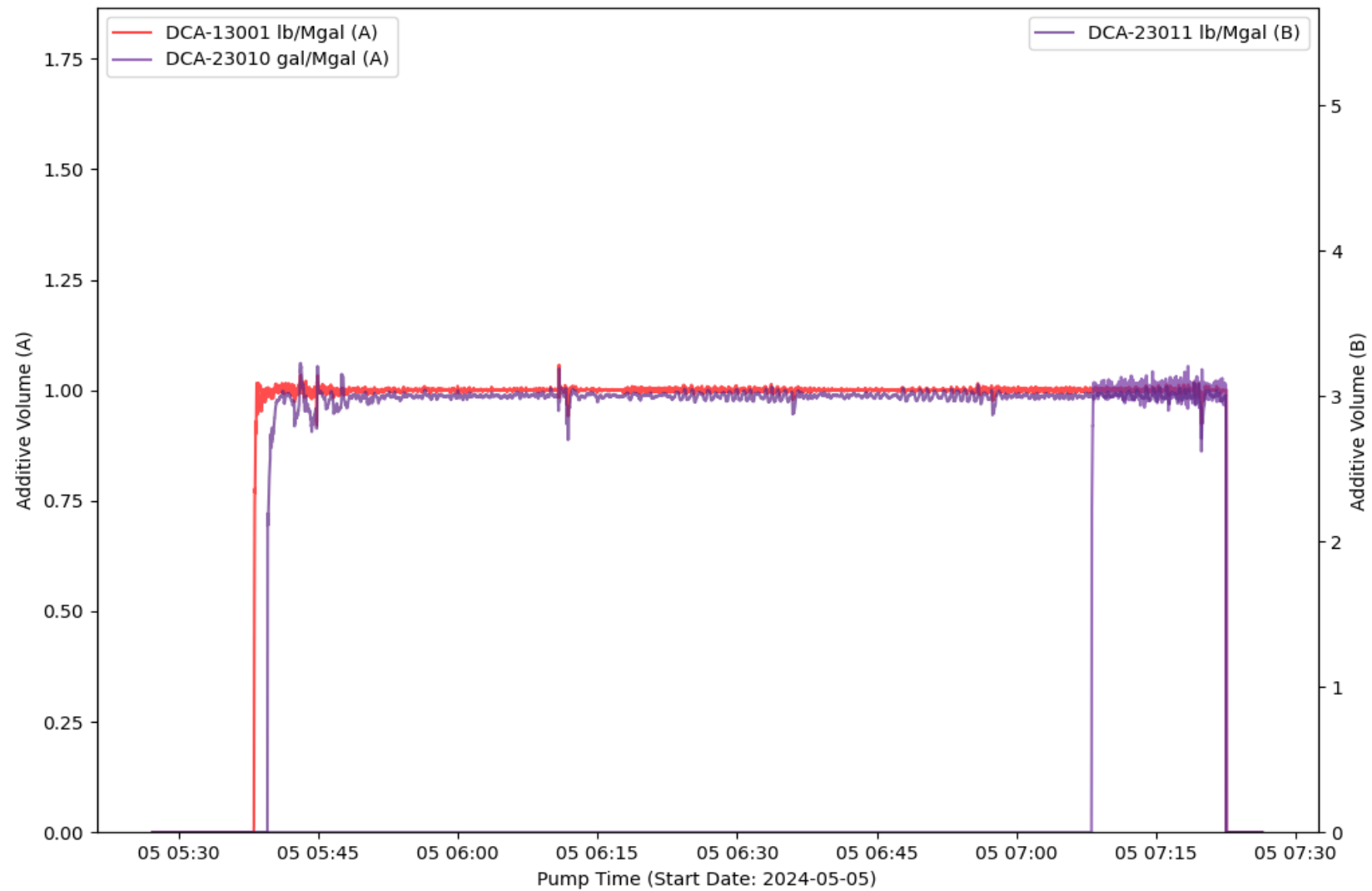
EVENT LOG : TREATMENT INTERVAL 16

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	Break Formation	2024-05-04T19:22:59	9.98	3430	0	0	90.88	152.44	0
2	Pump Acid	2024-05-04T19:23:04	10.12	4073	0	0	141.54	187.93	0
3	Spot Acid	2024-05-04T19:31:52	33.94	7712	0	0	9745	9727	0
4	Flush Acid	2024-05-04T19:32:20	34.06	6006	0	0	10412	10396	0
5	Stop Pumping	2024-05-04T21:25:31	0.85	4203	0	0	410579	424984	314084
6	ISIP	2024-05-04T21:25:40	0	4341	0	0	410581	424984	314084
7	Shut In Well	2024-05-04T21:26:01	0	4486	0	0	410582	424984	314084
8	Suspending Job	2024-05-04T21:27:35	0	-9.87	0	0	410582	424984	314084

TREATMENT PLOT : Treatment Interval 17



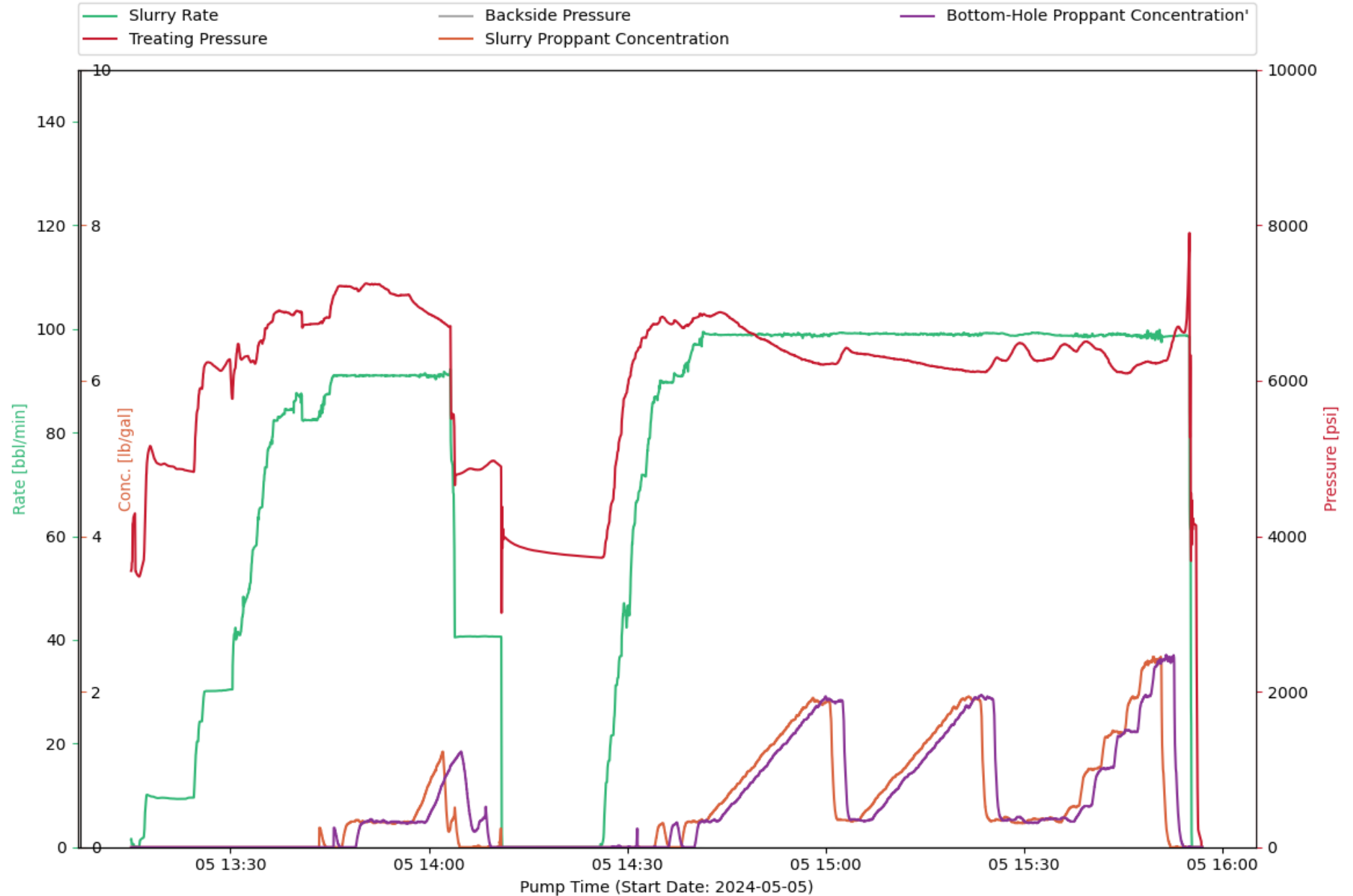
CHEMISTRY PLOT : Treatment Interval 17



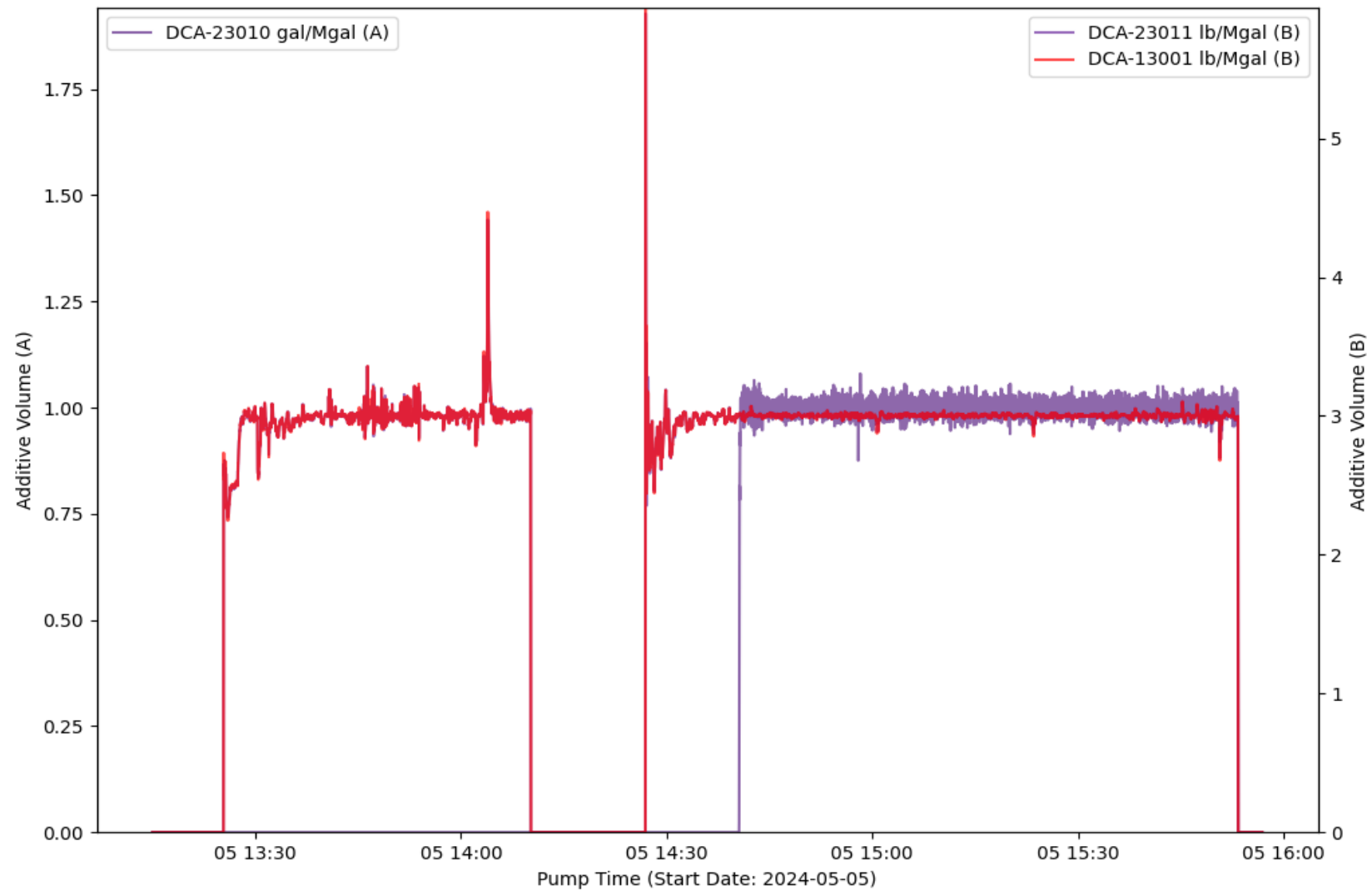
EVENT LOG : TREATMENT INTERVAL 17

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	2024-05-05T05:27:11	0	3690	0	0	0	0	0
2	Start Pumping	2024-05-05T05:28:11	0.01	3630	0	0	2.06	0.01	0
3	Pump Acid	2024-05-05T05:30:17	9.74	4461	0	0	527.74	568.91	0
4	Pump Acid	2024-05-05T05:36:11	9.44	4428	0	0	2893	2947	0
5	Spot Acid	2024-05-05T05:41:53	43.37	6585	0	0	9207	9243	0
6	Flush Acid	2024-05-05T05:42:29	48.3	6157	0	0	10335	10372	0
7	Spot Acid	2024-05-05T05:43:02	49.03	6206	0	0	11509	11549	0
8	Flush Acid	2024-05-05T05:43:55	50.93	6292	0	0	13288	13330	0
9	Stop Pumping	2024-05-05T07:24:55	1.78	4526	0	0	409343	423735	314841
10	ISIP	2024-05-05T07:25:34	0	4066	0	0	409347	423735	314841
11	Shut In Well	2024-05-05T07:25:39	0	4016	0	0	409347	423735	314841
12	Suspending Job	2024-05-05T07:26:24	0	86	0	0	409347	423735	314841

TREATMENT PLOT : Treatment Interval 18



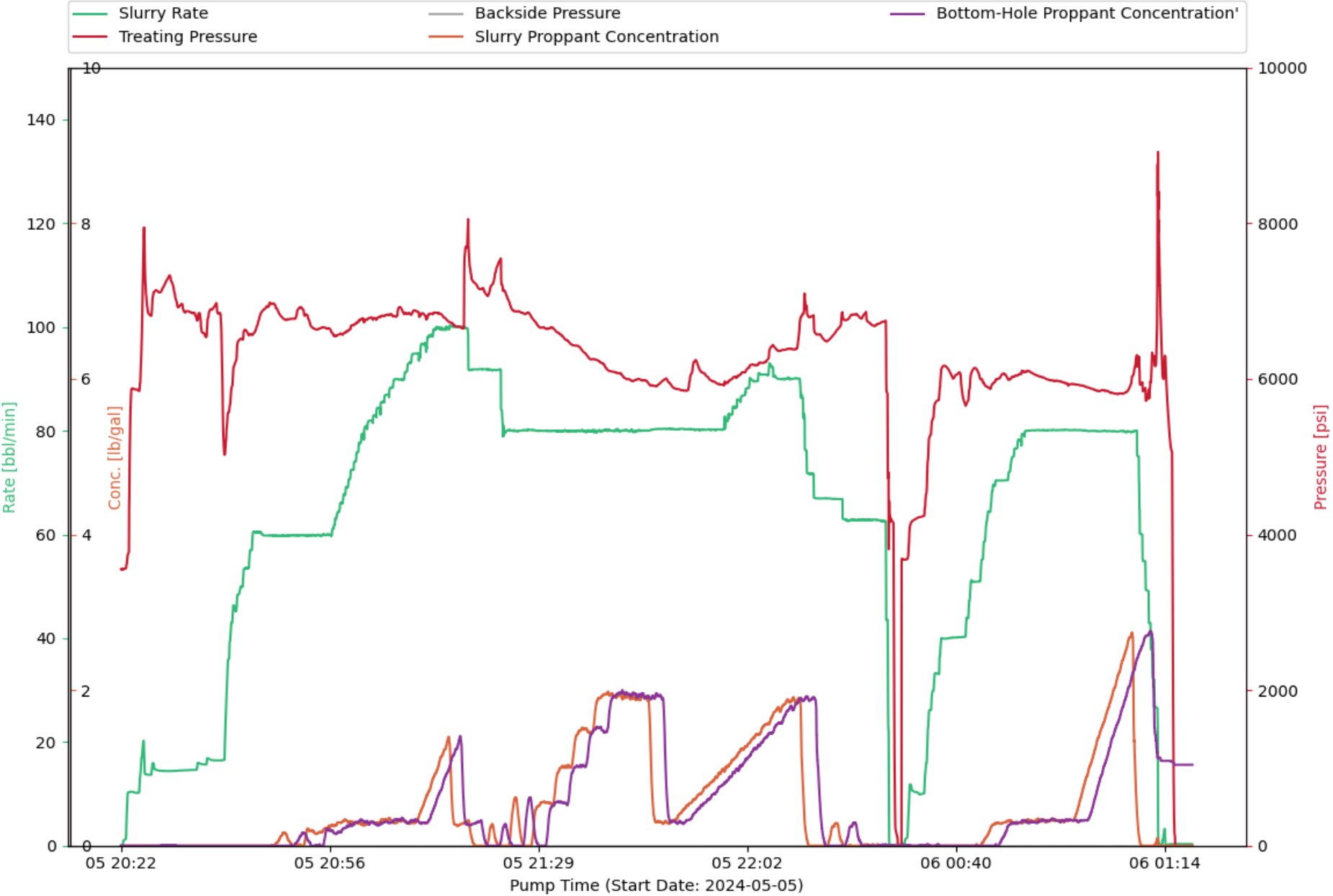
CHEMISTRY PLOT : Treatment Interval 18



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	2024-05-05T13:15:56	0.06	3504	0	0	0.2	0.04	0
2	Start Pumping	2024-05-05T13:16:57	2.38	3737	0	0	11.5	47.72	0
3	Break Formation	2024-05-05T13:18:00	9.79	5142	0	0	398.51	433.4	0
4	Pump Acid	2024-05-05T13:18:23	9.73	5030	0	0	552.64	591.72	0
5	Pump Acid	2024-05-05T13:24:02	9.56	4834	0	0	2766	2833	0
6	Spot Acid	2024-05-05T13:29:53	30.4	6276	0	0	9357	9328	0
7	Flush Acid	2024-05-05T13:30:19	30.65	5768	0	0	9916	9885	0
8	Spot Acid	2024-05-05T13:31:08	41.51	6471	0	0	11278	11241	0
9	Flush Acid	2024-05-05T13:31:39	42.34	6272	0	0	12179	12142	0
10	Stop Pumping	2024-05-05T15:55:21	0	4424	0	0	473694	489054	328154
11	ISIP	2024-05-05T15:55:34	0	4156	0	0	473696	489054	328154
12	Shut In Well	2024-05-05T15:55:52	0	4144	0	0	473697	489054	328154
13	Suspending Job	2024-05-05T15:56:53	0	-0.75	0	0	473697	489054	328154

TREATMENT PLOT : Treatment Interval 19



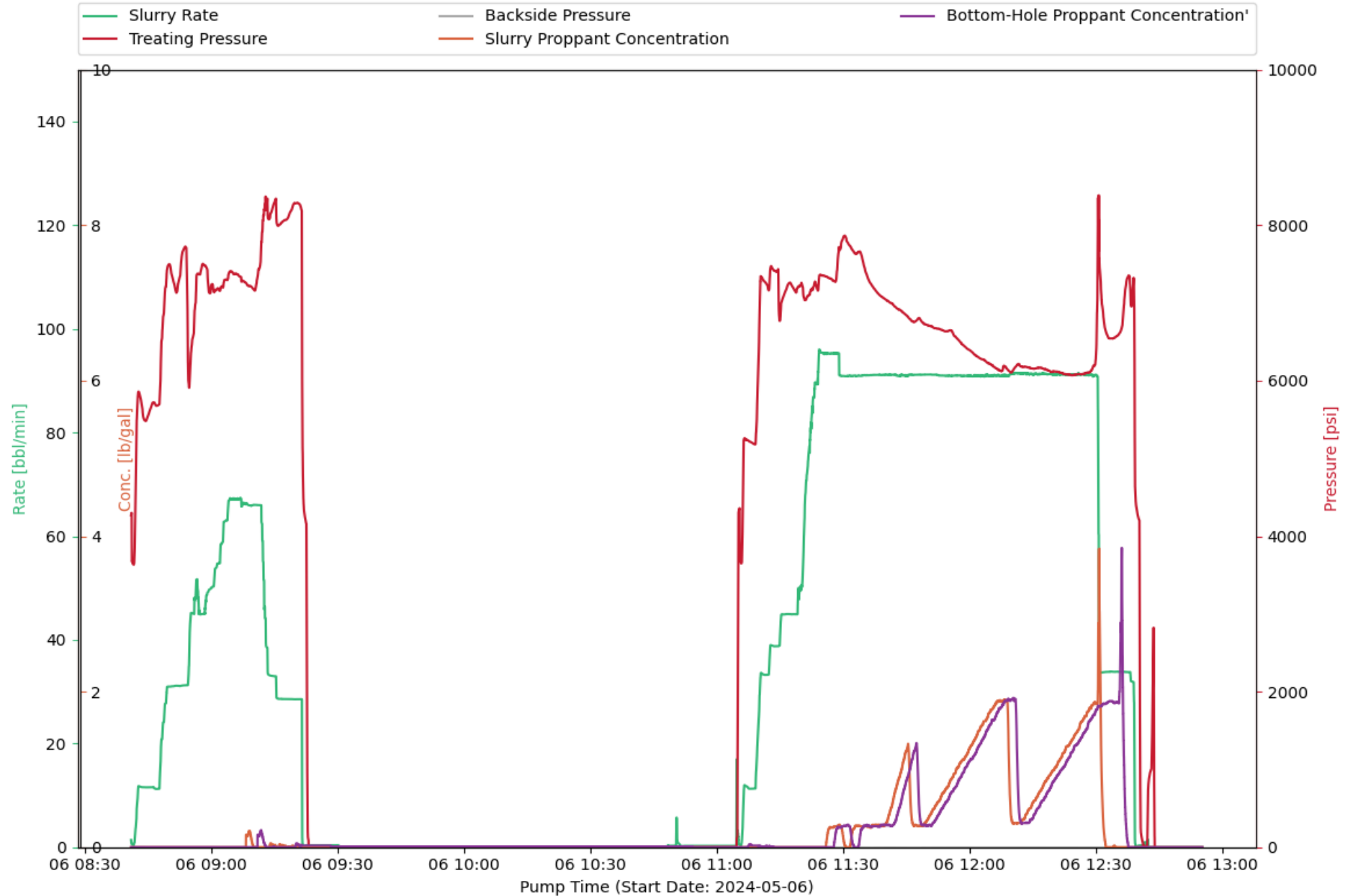
CHEMISTRY PLOT : Treatment Interval 19



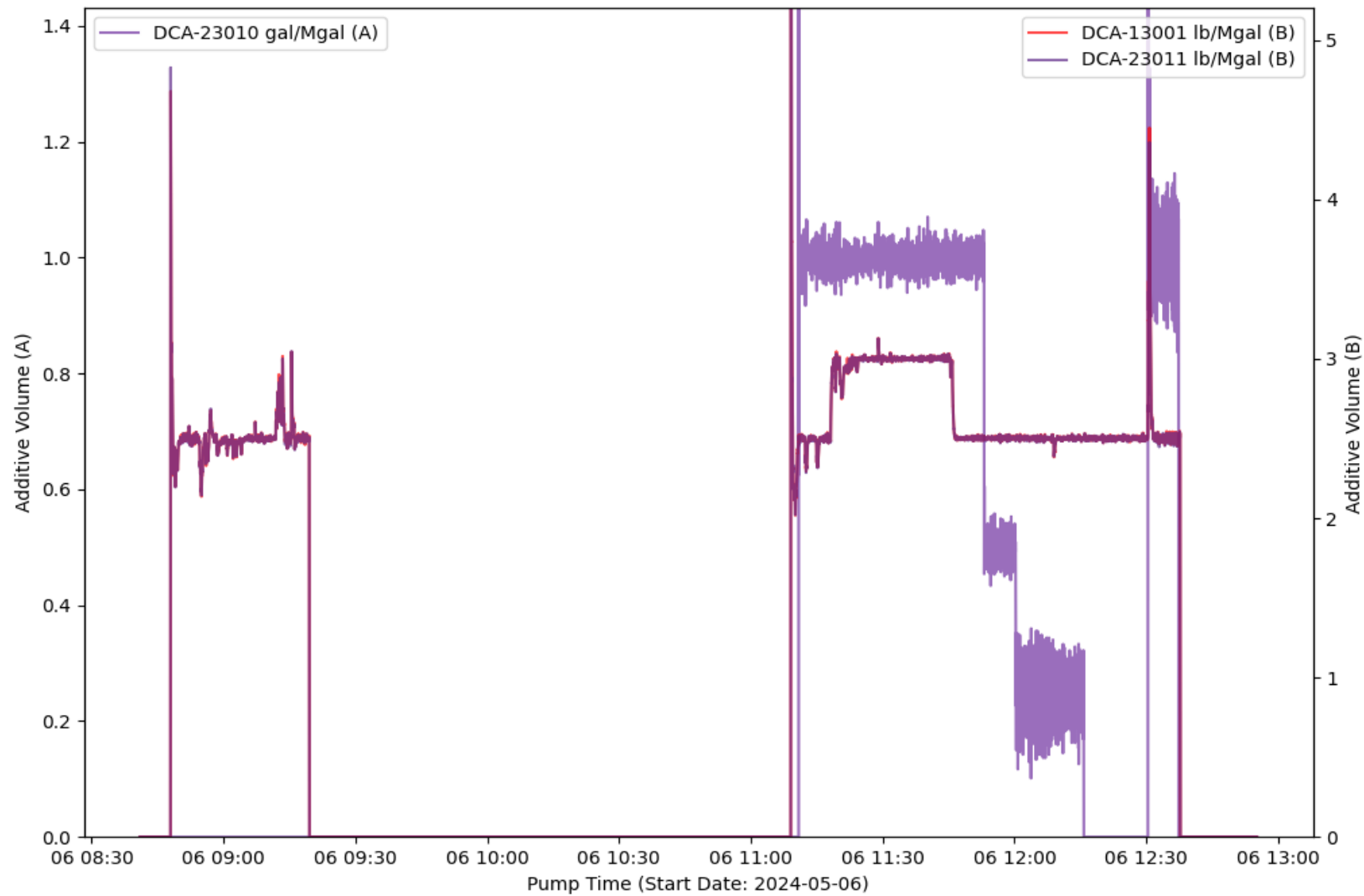
EVENT LOG : TREATMENT INTERVAL 19

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	2024-05-05T20:22:45	0.03	3553	0	0	0	0	0
2	Start Pumping	2024-05-05T20:23:01	0.11	3552	0	0	3.21	0.72	0
3	Pump Acid	2024-05-05T20:23:56	10.3	3765	0	0	101.76	152.92	0
4	Break Formation	2024-05-05T20:23:59	10.33	3776	0	0	131	174.67	0
5	Spot Acid	2024-05-05T20:38:36	16.44	6839	0	0	9123	9099	0
6	Flush Acid	2024-05-05T20:39:12	16.54	5069	0	0	9540	9516	0
7	Stop Pumping	2024-05-05T22:25:25	1.3	4427	0	0.01	344559	354593	215465
8	ISIP	2024-05-05T22:25:29	0	4158	0	0.01	344559	354593	215465
9	Shut In Well	2024-05-05T22:25:47	0	4187	0	0.01	344561	354593	215465
10	Suspending Job	2024-05-05T22:27:22	0	-2.98	0	0	344562	354599	215465
11	Start Pumping	2024-05-06T00:32:28	0.32	3672	0	0.01	344569	354624	215465
12	Break Formation	2024-05-06T00:33:20	11.09	4040	0	0.01	344609	354743	215465
13	Pump Acid	2024-05-06T00:33:45	10.68	4169	0	0	344855	354944	215465
14	Spot Acid	2024-05-06T00:41:28	40.19	6059	0	0	354110	364112	215465
15	Flush Acid	2024-05-06T00:42:16	40.3	5659	0	0	355468	365471	215465
16	Stop Pumping	2024-05-06T01:14:13	0.53	6219	0	1.09	445245	458158	277779
17	ISIP	2024-05-06T01:14:48	0.26	5342	0	1.09	445245	458161	277779
18	Shut In Well	2024-05-06T01:15:10	0.31	5080	0	1.08	445245	458166	277779
19	Suspending Job	2024-05-06T01:18:29	0.32	-11.12	0	1.04	445245	458211	277779

TREATMENT PLOT : Treatment Interval 20



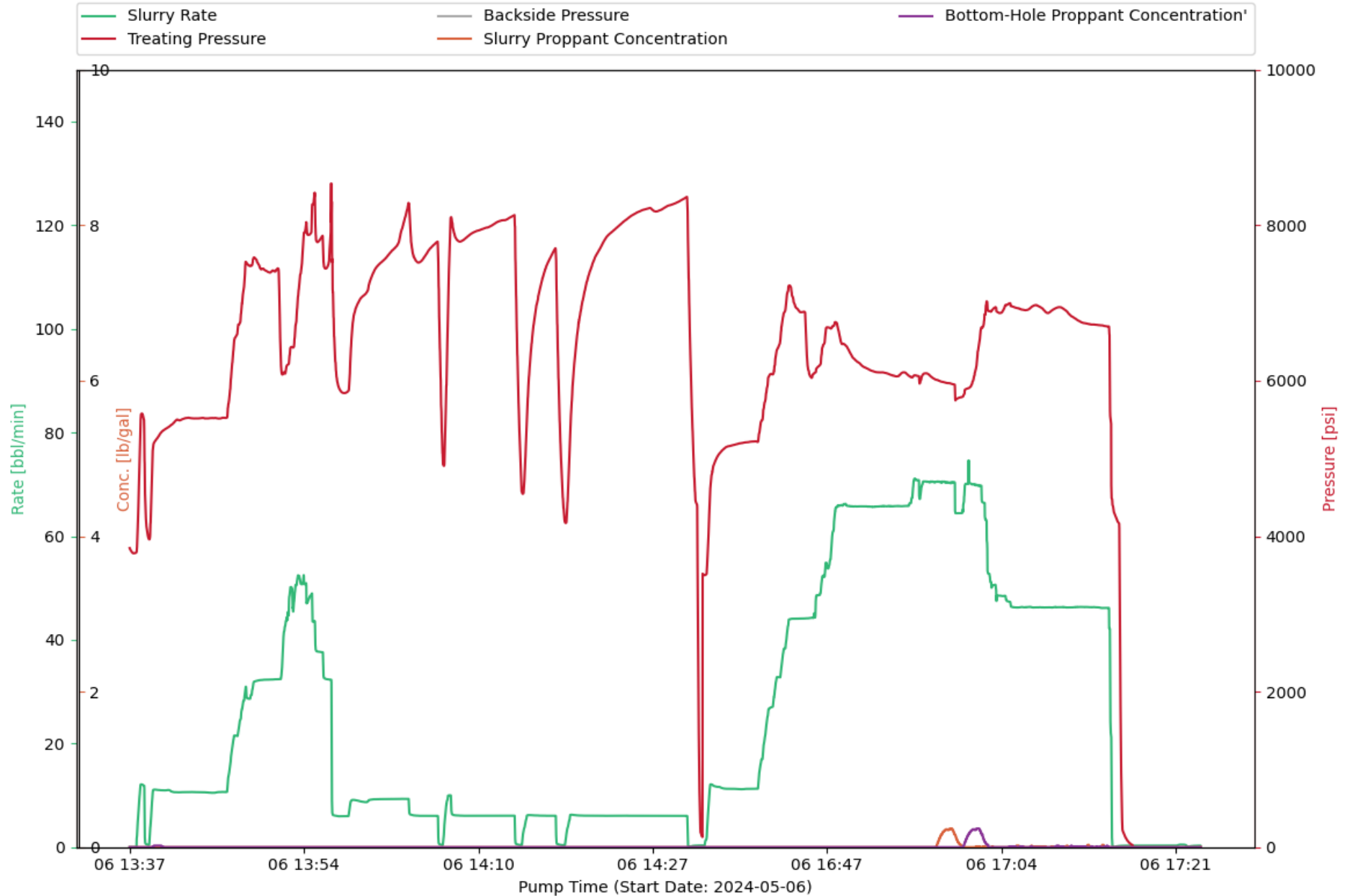
CHEMISTRY PLOT : Treatment Interval 20



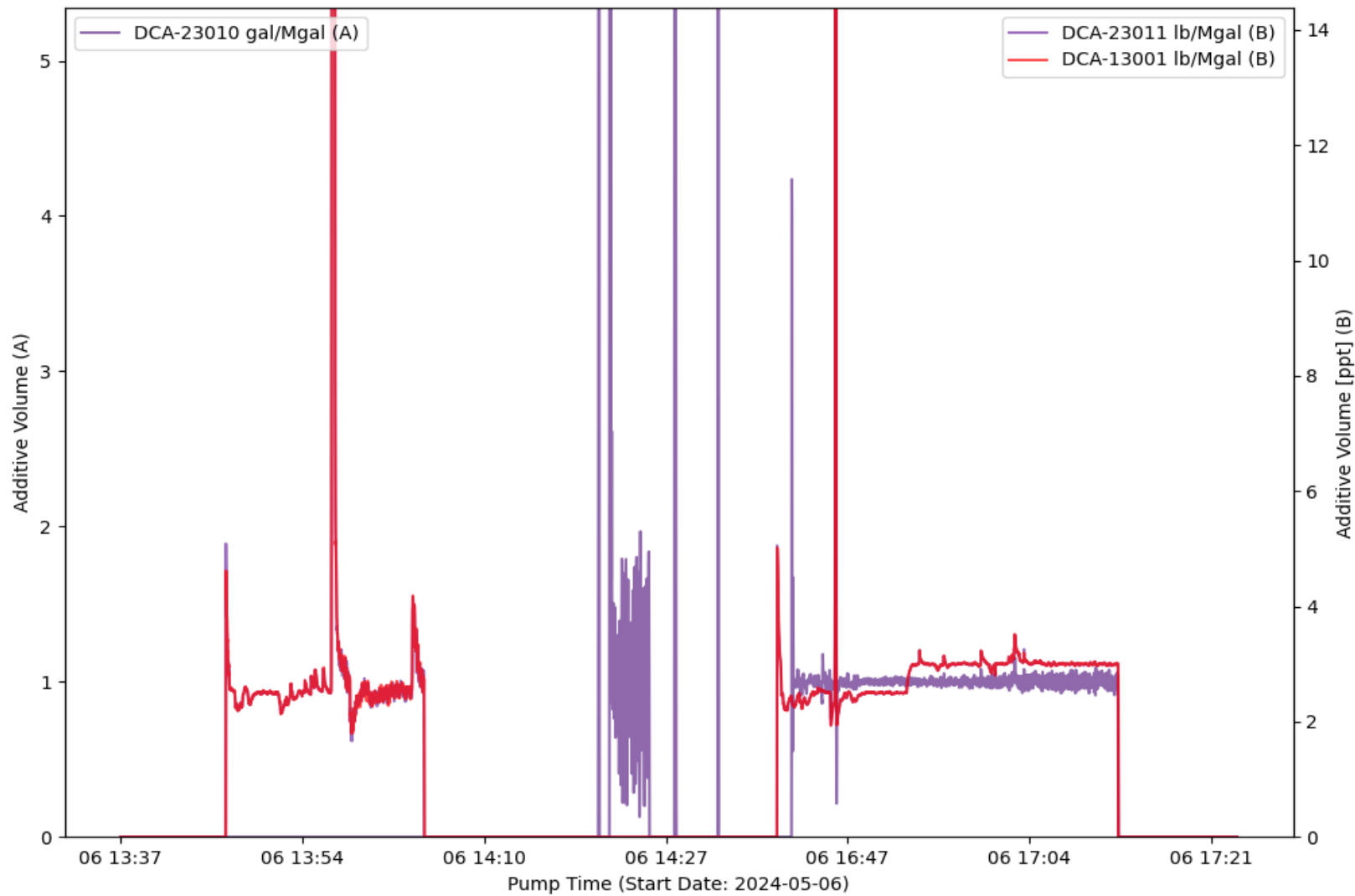
EVENT LOG : TREATMENT INTERVAL 20

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	Open Well	2024-05-06T08:41:15	0.5	3668	0	0	0.18	0.36	0
2	Start Pumping	2024-05-06T08:41:43	0.82	3659	0	0	5.19	10.13	0
3	Break Formation	2024-05-06T08:43:06	11.69	5808	0	0	393.29	447.8	0
4	Pump Acid	2024-05-06T08:45:55	11.55	5694	0	0	1713	1814	0
5	Spot Acid	2024-05-06T08:54:05	31.25	7711	0	0	10382	10390	0
6	Flush Acid	2024-05-06T08:54:46	36.37	5910	0	0	11319	11321	0
7	Stop Pumping	2024-05-06T09:21:34	7.41	6870	0	0.02	66170	66417	776.73
8	Shut In Well	2024-05-06T09:22:26	0.31	4187	0	0.02	66191	66430	776.73
9	Suspending Job	2024-05-06T09:30:14	0	0	0	0.01	66191	66544	776.73
10	Resuming Job	2024-05-06T10:48:18	0	0	0	0.01	66191	66544	776.73
11	Open Well	2024-05-06T11:05:32	0.37	3697	0	0	66474	66840	776.73
12	Start Pumping	2024-05-06T11:05:45	0.33	3650	0	0	66476	66843	776.73
13	Pump Acid	2024-05-06T11:07:02	11.71	5245	0	0	66782	67284	776.73
14	Spot Acid	2024-05-06T11:14:26	38.78	7424	0	0	75204	75582	776.73
15	Flush Acid	2024-05-06T11:14:54	39.12	6769	0	0	75970	76349	776.73
16	Stop Pumping	2024-05-06T12:39:18	0.58	4501	0	0	356828	366387	202263
17	ISIP	2024-05-06T12:39:37	0.16	4345	0	0	356830	366388	202263
18	Shut In Well	2024-05-06T12:40:00	0.29	4236	0	0	356830	366392	202263

TREATMENT PLOT : Treatment Interval 21



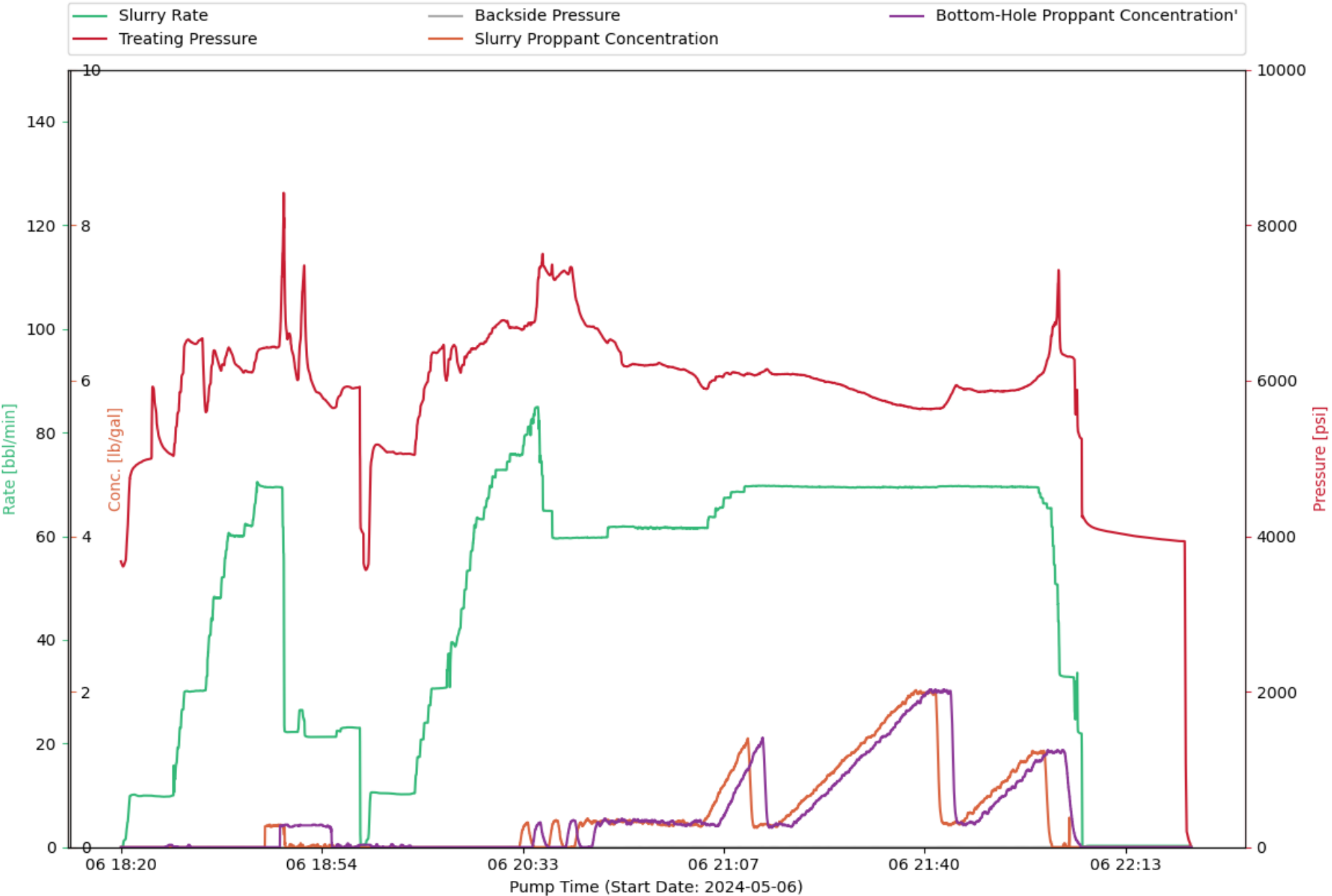
CHEMISTRY PLOT : Treatment Interval 21



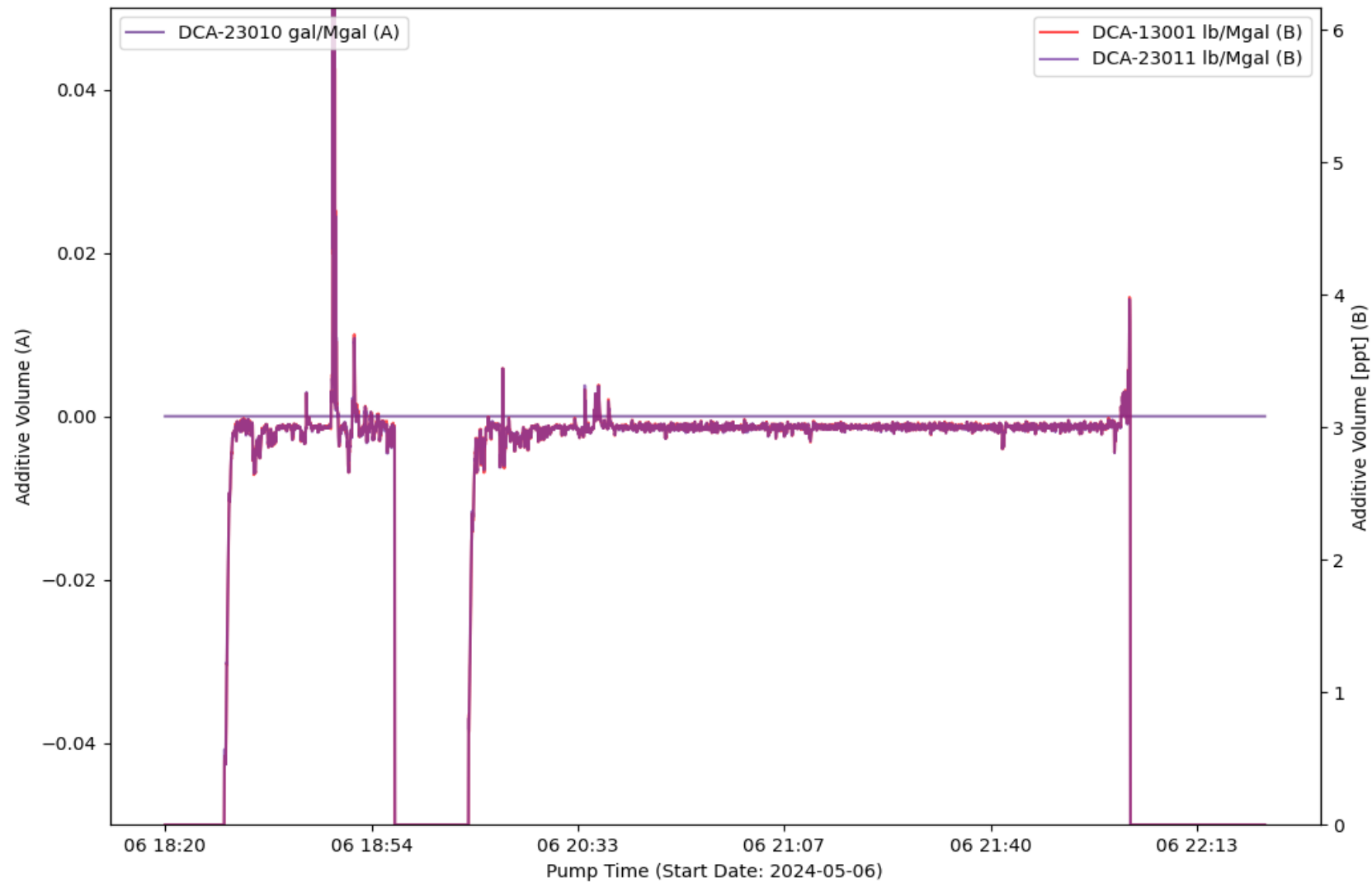
EVENT LOG : TREATMENT INTERVAL 21

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	Open Well	2024-05-06T13:37:23	0	3847	0	0	0	0	0
2	Start Pumping	2024-05-06T13:38:00	0	3789	0	0	0	0	0
3	Break Formation	2024-05-06T13:38:45	11.87	5496	0	0	49.7	274.3	0
4	Pump Acid	2024-05-06T13:43:07	10.62	5521	0	0	1926	1997	0
5	Spot Acid	2024-05-06T13:51:32	32.41	7445	0	0	9301	9265	0
6	Flush Acid	2024-05-06T13:51:57	34.71	6081	0	0	9871	9841	0
7	Stop Pumping	2024-05-06T14:30:46	0	7733	0	0	26673	27402	0
8	Start Pumping	2024-05-06T16:36:21	1.37	3503	0	0	32111	33525	0
9	Pump Acid	2024-05-06T16:37:52	11.45	5095	0	0	32725	34166	0
10	Pump Acid	2024-05-06T16:39:49	11.18	5197	0	0	33647	35094	0
11	Spot Acid	2024-05-06T16:44:29	44.04	7208	0	0	38277	39692	0
12	Flush Acid	2024-05-06T16:45:18	44.11	6893	0	0	39797	41213	0
13	Spot Acid	2024-05-06T16:45:50	44.13	6883	0	0	40719	42175	0
14	Flush Acid	2024-05-06T16:46:17	44.2	6081	0	0	41517	43016	0
15	Stop Pumping	2024-05-06T17:15:13	1.26	4473	0	0	110966	112747	1154
16	ISIP	2024-05-06T17:15:22	0	4322	0	0	110968	112747	1154
17	Shut In Well	2024-05-06T17:15:44	0.19	4191	0	0	110970	112749	1154
18	Suspending Job	2024-05-06T17:23:40	0.3	-12.87	0	0	110970	112849	1154

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	Start Pumping	2024-05-06T18:21:06	0.02	3612	0	0	0.21	0.01	0
2	Break Formation	2024-05-06T18:22:11	9.14	4674	0	0	71.11	161.09	0
3	Pump Acid	2024-05-06T18:22:18	9.89	4770	0	0	118.72	202.4	0
4	Pump Acid	2024-05-06T18:28:20	9.77	5094	0	0.01	2666	2714	0
5	Spot Acid	2024-05-06T18:34:17	30.17	6545	0	0	8549	8530	0
6	Flush Acid	2024-05-06T18:34:49	30.26	5602	0	0	9229	9212	0
7	Spot Acid	2024-05-06T18:36:17	48.3	6391	0	0	11694	11694	0
8	Flush Acid	2024-05-06T18:37:21	48.35	6129	0	0	13851	13862	0
9	Stop Pumping	2024-05-06T19:00:31	1.71	4192	0	0.03	53427	53850	2577
10	ISIP	2024-05-06T19:00:36	0	4091	0	0.03	53430	53851	2577
11	Shut In Well	2024-05-06T19:01:00	0.19	4029	0	0.03	53433	53852	2577
12	Start Pumping	2024-05-06T20:07:42	0.42	3565	0	0.03	53467	53913	2577
13	Break Formation	2024-05-06T20:08:30	10.39	4890	0	0.02	53554	54042	2577
14	Pump Acid	2024-05-06T20:08:42	10.58	5006	0	0.01	53641	54131	2577
15	Pump Acid	2024-05-06T20:14:30	10.2	5059	0	0	56168	56655	2577
16	Spot Acid	2024-05-06T20:20:37	30.72	6459	0	0	61976	62337	2577
17	Flush Acid	2024-05-06T20:21:03	30.8	6001	0	0	62541	62900	2577
18	Spot Acid	2024-05-06T20:22:31	38.72	6442	0	0	64814	65162	2577
19	Flush Acid	2024-05-06T20:23:24	42.27	6104	0	0	66333	66678	2577
20	Stop Pumping	2024-05-06T22:06:36	0.37	4256	0	0	341661	350390	172933
21	ISIP	2024-05-06T22:06:42	0	4244	0	0	341664	350390	172933
22	Shut In Well	2024-05-06T22:21:37	0.24	3945	0	0	341668	350539	172933

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)
23	Suspending Job	2024-05-06T22:24:41	0.23	-1.2	0	0	341668	350570	172933

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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