



WELL STIMULATION REPORT

Bayswater Exploration

Flaherty 13-3-4

05-123-47447-00

April 08, 2024 - April 19, 2024

Engineering Executive Summary

On Monday, April 08, 2024 the stimulation of treatment(s) was performed in the Codell formation on the Flaherty 13-3-4 well in WELD county, COLORADO.

The proposed treatment(s) consisted of:

11,000	gallons of	15% HCl
8,285,104	gallons of	Dry FR
0	gallons of	FR Water
184,778	gallons of	Treated Water
693,000	pounds of	100 Mesh Premium White
6,242,972.5	pounds of	30/50 Premium White
60,000	pounds of	SS-200 Premium White

The actual treatment(s) consisted of:

23,990	gallons of	15% HCl
8,353,393	gallons of	Dry FR
120,136	gallons of	FR Water
178,373	gallons of	Treated Water
696,403	pounds of	100 Mesh Premium White
6,205,192	pounds of	30/50 Premium White
62,990	pounds of	SS-200 Premium White

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

The well was first opened Monday, April 08, 2024 at 19:04 with an opening pressure of 1,338.92 psi.

The total amount of proppant pumped was 6,964,585.0 lbm with an average concentration of 0.81 ppg and maximum concentration of 4.0 ppg. Treating pressure averaged 5938.61 psi and rate averaged 92.16 bpm. Total clean volume was 8,675,892.0 gallons.

The operation came offline at 10:03 and the well was shut in Friday, April 19, 2024 at 10:18 with a final shut-in pressure of 3,602.0 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	11875	12034	12054	6490	32	6	32	120	909263631	Codell	Codell
2	11676	11835	11855	6491	32	6	32	120	909263631	Codell	Codell
3	11477	11636	11656	6492	32	6	32	120	909263631	Codell	Codell
4	11278	11437	11457	6492	32	6	32	120	909263631	Codell	Codell
5	11079	11238	11258	6488	32	6	32	120	909263631	Codell	Codell
6	10880	11039	11059	6488	32	6	32	120	909263631	Codell	Codell
7	10681	10840	10860	6491	32	6	32	120	909263631	Codell	Codell
8	10482	10641	10661	6494	32	6	32	120	909263631	Codell	Codell
9	10283	10442	10462	6491	32	6	32	120	909263631	Codell	Codell
10	10084	10243	10263	6488	32	6	32	120	909263631	Codell	Codell
11	9885	10044	10064	6481	32	6	32	120	909263631	Codell	Codell
12	9686	9845	9865	6481	32	6	32	120	909263631	Codell	Codell
13	9487	9646	9666	6481	32	6	32	120	909263631	Codell	Codell
14	9288	9447	9467	6482	32	6	32	120	909263631	Codell	Codell
15	9089	9248	9268	6482	32	6	32	120	909263631	Codell	Codell
16	8890	9049	9069	6482	32	6	32	120	909263631	Codell	Codell
17	8691	8850	8870	6482	32	6	32	120	909263631	Codell	Codell
18	8492	8651	8671	6483	32	6	32	120	909263631	Codell	Codell
19	8293	8452	8472	6483	32	6	32	120	909263631	Codell	Codell
20	8094	8253	8273	6481	32	6	32	120	909263631	Codell	Codell
21	7895	8054	8074	6477	32	6	32	120	909263631	Codell	Codell
22	7696	7855	7875	6478	32	6	32	120	909263631	Codell	Codell

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	3499	378542	417866	0	51491	8399	9576	387441	482432	497582.82
2	500	2000	378357	375433	0	6993	8399	5292	387256	389718	403074.84
3	500	1499	378171	377973	0	0	8399	9564	387070	389036	400708.14
4	500	2000	377986	376315	0	5693	8399	8274	386885	392282	405972.84
5	500	998	377800	361504	0	0	8399	22309	386699	384811	399509.88
6	500	1000	377615	370698	0	0	8399	23506	386514	395204	410620.98
7	500	998	377430	380298	0	5078	8399	9164	386329	395538	413374.92
8	500	1000	377244	371188	0	0	8399	24101	386143	396289	414040.2
9	500	1000	377059	394415	0	13021	8399	7543	385958	415979	434531.16
10	500	1000	376874	390250	0	0	8399	5922	385773	397172	416028.9
11	500	1000	376688	374068	0	5611	8399	9450	385587	390129	406092.96
12	500	1000	376503	389435	0	0	8399	4998	385402	395433	411389.16
13	500	499	376318	373833	0	5490	8399	5250	385217	385072	400545.18
14	500	499	376132	375666	0	5700	8399	4788	385031	386653	402635.94
15	500	501	375947	381972	0	7955	8399	4284	384846	394712	411041.82
16	500	499	375762	384964	0	5651	8399	3948	384661	395062	411907.86
17	500	1000	375576	382977	0	2572	8399	3906	384475	390455	407604.96
18	500	1000	375391	383686	0	569	8399	3234	384290	388489	404835.06
19	500	1000	375205	375487	0	4312	8399	3150	384104	383949	398215.86
20	500	499	375020	382407	0	0	8399	2436	383919	385342	400593.9
21	500	499	374835	349550	0	0	8399	2268	383734	352317	370162.8
22	500	1000	374649	383408	0	0	8399	5410	383548	389818	403767.84

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	23990	8285104	8353393	0	120136	184778	178373	8480882	8675892	9024238.02

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	36340	283498.75	269940	3000	6000	317998.75	312280
2	31500	33300	283498.75	284102	3000	3000	317998.75	320402
3	31500	31660	283498.75	283180	3000	3000	317998.75	317840
4	31500	31510	283498.75	288945	3000	3000	317998.75	323455
5	31500	31310	283498.75	284360	3000	3000	317998.75	318670
6	31500	31500	283498.75	283432	3000	3000	317998.75	317932
7	31500	30000	283498.75	285940	3000	3000	317998.75	318940
8	31500	30000	283498.75	283500	3000	3000	317998.75	316500
9	31500	31500	283498.75	283380	3000	3000	317998.75	317880
10	31500	31500	283498.75	283500	3000	3000	317998.75	318000
11	31500	31500	283498.75	283480	3000	3000	317998.75	317980
12	31500	31500	283498.75	285660	3000	3000	317998.75	320160
13	31500	31400	283498.75	284250	3000	3040	317998.75	318690
14	31500	31140	283498.75	284280	3000	3000	317998.75	318420
15	31500	31533	283498.75	283806	3000	3000	317998.75	318339
16	31500	31520	283498.75	283380	3000	3000	317998.75	317900
17	31500	31500	283498.75	283500	3000	3000	317998.75	318000
18	31500	31500	283498.75	287080	3000	3000	317998.75	321580
19	31500	31500	283498.75	283580	3000	3000	317998.75	318080
20	31500	31640	283498.75	283621	3000	2950	317998.75	318211
21	31500	31550	286498.75	245770	0	0	317998.75	277320
22	31500	31500	286498.75	286506	0	0	317998.75	318006

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	696403	6242972.5	6205192	60000	62990	6995972.5	6964585

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	1767	378.54	454	1	7	40	0	40	0	0	0	757.08	1143
2	252.5	1515	378.36	19	1	4	40	0	40	0	0	0	756.71	651
3	252.5	757	378.17	376	1	3	40	0	40	0	0	0	756.34	699
4	252.5	1010	377.99	374	1	4	40	0	40	0	0	0	755.97	810
5	252.5	505	377.8	363	1	2	40	0	40	0	0	0	755.6	695
6	252.5	500	377.62	372	1	2	40	0	40	0	0	0	755.23	723
7	252.5	505	377.43	374	1	2	40	0	40	0	0	0	754.86	1322
8	252.5	500	377.24	379	1	2	40	15	40	15	0	0	754.49	895
9	252.5	505	377.06	452	1	2	40	0	40	0	0	0	754.12	860
10	252.5	505	376.87	377	1	2	40	15	40	15	0	0	753.75	875
11	252.5	505	376.69	381	1	2	40	0	40	0	0	0	753.38	710
12	252.5	505	376.5	398	1	2	40	30	40	30	0	0	753.01	737
13	252.5	252	376.32	368	1	1	40	10	40	10	0	0	752.64	681
14	252.5	254	376.13	386	1	1	40	10	40	10	0	0	752.26	729
15	252.5	253	375.95	352	1	1	40	15	40	15	0	0	751.89	747
16	252.5	252	375.76	371	1	1	40	10	40	10	0	0	751.52	800
17	252.5	505	375.58	376	1	2	40	30	40	30	0	0	751.15	892
18	252.5	505	375.39	351	1	2	40	30	40	30	0	0	750.78	762
19	252.5	505	375.2	380	1	2	40	10	40	10	0	0	750.41	888
20	252.5	252	375.02	383	1	1	40	20	40	20	0	0	750.04	877
21	252.5	252	374.84	342	1	1	40	0	40	0	0	0	749.67	856
22	252.5	505	374.65	382	1	2	40	0	40	0	0	0	749.3	943

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	12614	8285.11	8010	22	48	880	195	880	195	0	0	16570.2	18295

ADDITIVE SUMMARY

Treatment Interval	DCA-32019M		Div+1325		MP-D1	
	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)	Proposed (lbs)	Pumped (lbs)
1	1	7	0	0	0	0
2	1	4	0	0	0	0
3	1	3	0	0	0	0
4	1	4	0	0	0	0
5	1	2	0	0	0	0
6	1	2	0	0	0	0
7	1	2	0	0	0	0
8	1	2	0	0	0	0
9	1	2	0	0	0	0
10	1	2	0	0	0	0
11	1	2	0	0	0	0
12	1	2	0	0	0	0
13	1	1	0	0	0	0
14	1	1	0	0	0	0
15	1	1	0	0	0	0
16	1	1	0	0	0	0
17	1	2	0	0	0	0
18	1	2	0	0	0	0
19	1	2	0	0	0	0
20	1	1	0	0	0	0
21	1	1	0	0	0	0
22	1	2	0	0	0	0

ADDITIVE SUMMARY

Treatment Interval	DCA-32019M		Div+1325		MP-D1	
	Proposed (gal)	Pumped (gal)	Proposed (lbs)	Pumped (lbs)	Proposed (lbs)	Pumped (lbs)
Total	22	48	0	0	0	0

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	7177	79.19	0.55	8128	101.21	2
2	Completed	6019	83.36	0.79	7689	90.09	3.6
3	Completed	5817	94.95	0.68	6760	100.36	2
4	Completed	5897	86.56	0.82	6582	97.89	3.84
5	Completed	5738	79.8	0.73	6736	85.34	2
6	Completed	5803	94.54	0.86	6389	101.12	3.97
7	Completed	5706	97.37	0.83	6967	101.74	4
8	Completed	6167	92.75	0.82	7707	100.58	3.98
9	Completed	5973	81.73	0.81	6757	100.02	3
10	Completed	5988	96.68	0.9	6408	100.42	4
11	Completed	6104	93.42	0.9	7191	100.36	3.64
12	Completed	5943	96.06	0.83	6859	100.55	4
13	Completed	5889	96.2	0.81	6326	102.87	3.55
14	Completed	6241	97.05	0.84	7174	100.74	3.82
15	Completed	6170	97.21	0.85	7592	100.81	4
16	Completed	5877	96.54	0.81	6617	101.14	4
17	Completed	5581	94.51	0.87	6076	100.91	4
18	Completed	5521	98.01	0.82	6876	102.17	4
19	Completed	5865	97.21	0.83	6991	100.7	3.82
20	Completed	5681	96.04	0.83	6799	109.24	4
21	Completed	5607	82.44	0.7	6227	99.59	2
22	Completed	5875	95.94	0.85	6442	100.27	3.86

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	2290	5486	14.73	7402	4.83
2	260.71	4183	14.7	0	0
3	0	0	0	3540	9.83
4	0	0	0	4575	8.69
5	0	0	0	5409	9.75
6	0	0	0	4654	9.01
7	0	0	0	6737	44.54
8	0	0	0	3301	6.83
9	0	0	0	4185	7.15
10	0	0	0	4628	10.13
11	0	0	0	3448	7.02
12	0	0	0	4800	9.72
13	0	0	0	4704	10.07
14	0	0	0	6776	29.57
15	0	0	0	4347	9.27
16	0	0	0	6266	34.52
17	0	0	0	4227	7.22
18	0	0	0	0	0
19	0	0	0	4247	4.07
20	0	0	0	5366	37.59
21	0	0	0	5546	35.13
22	0	0	0	4142	8.19

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	1338	3654	1	8.44	0	0	0	3594
2	3167	4060	1.06	5.53	0	0	0	3367
3	3300	4166	1.08	0	0	0	0	3943
4	3352	4691	1.16	2.8	0	0	0	3672
5	3303	3818	1.02	3	0	0	0	3771
6	4220	4548	1.13	9.68	0	0	0	3647
7	3155	3979	1.05	4.67	0	0	0	3693
8	3278	2529	0.82	9.84	0	0	0	2500
9	3308	3829	1.02	0	0	0	0	3719
10	3360	3757	1.01	4.29	0	0	0	3696
11	3295	3805	1.02	0	0	0	0	3771
12	3334	3849	1.03	2.67	0	0	0	3813
13	3443	4060	1.06	0	0	0	0	3974
14	3479	4171	1.08	0	0	0	0	3603
15	3553	4291	1.1	0.56	0	0	0	3699
16	3491	4106	1.07	0	0	0	0	4057
17	4156	4503	1.13	1.68	0	0	0	3532
18	3670	4630	1.15	0	0	0	0	3652
19	4357	4570	1.14	0	0	0	0	4104
20	3693	3845	1.03	0.07	0	0	0	3753
21	4050	3593	0.99	4.23	0	0	0	3550
22	3457	4471	1.12	4.15	3784	3627	3602	3602

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	2024-04-08T00:00:00	2024-04-08T19:04:33	2024-04-08T19:04:56	2024-04-09T03:17:58	2024-04-09T03:18:36	03:17:42	04:55:20
2	2024-04-09T00:00:00	2024-04-09T09:17:52	2024-04-09T09:18:29	2024-04-09T11:29:06	2024-04-09T11:29:39	02:10:37	00:00:00
3	2024-04-09T00:00:00	2024-04-09T19:46:37	2024-04-09T19:47:26	2024-04-09T21:37:20	2024-04-09T21:37:59	01:49:54	00:00:00
4	2024-04-10T00:00:00	2024-04-10T05:39:35	2024-04-10T05:40:09	2024-04-10T07:54:59	2024-04-10T07:55:39	02:14:50	00:00:00
5	2024-04-10T00:00:00	2024-04-10T19:26:34	2024-04-10T19:27:30	2024-04-10T21:33:08	2024-04-10T21:33:50	02:05:38	00:00:00
6	2024-04-11T00:00:00	2024-04-11T07:27:00	2024-04-11T07:27:00	2024-04-11T09:25:41	2024-04-11T09:26:21	01:58:41	00:00:00
7	2024-04-11T00:00:00	2024-04-11T21:32:22	2024-04-11T21:33:01	2024-04-11T23:20:37	2024-04-11T23:21:31	01:47:36	00:00:00
8	2024-04-12T00:00:00	2024-04-12T05:32:31	2024-04-12T05:32:50	2024-04-12T07:28:04	2024-04-12T07:28:52	01:55:14	00:00:00
9	2024-04-12T00:00:00	2024-04-12T15:54:00	2024-04-12T15:54:10	2024-04-12T18:12:43	2024-04-12T18:13:19	02:18:33	00:00:00
10	2024-04-13T00:00:00	2024-04-13T04:47:24	2024-04-13T04:47:53	2024-04-13T06:34:22	2024-04-13T06:35:11	01:46:29	00:00:00
11	2024-04-13T00:00:00	2024-04-13T15:34:47	2024-04-13T15:35:07	2024-04-13T17:22:39	2024-04-13T17:23:21	01:47:32	00:00:00
12	2024-04-14T00:00:00	2024-04-14T08:19:48	2024-04-14T08:20:10	2024-04-14T10:13:43	2024-04-14T10:14:21	01:53:33	00:00:00
13	2024-04-14T00:00:00	2024-04-14T17:20:35	2024-04-14T17:21:05	2024-04-14T19:05:33	2024-04-14T19:06:10	01:44:28	00:00:00
14	2024-04-15T00:00:00	2024-04-15T01:42:42	2024-04-15T01:42:53	2024-04-15T03:26:57	2024-04-15T03:27:31	01:44:04	00:00:00
15	2024-04-15T00:00:00	2024-04-15T09:00:45	2024-04-15T09:01:33	2024-04-15T11:11:55	2024-04-15T11:12:24	02:10:22	00:00:00
16	2024-04-16T00:00:00	2024-04-16T00:30:04	2024-04-16T00:30:29	2024-04-16T02:17:44	2024-04-16T02:18:24	01:47:15	00:00:00
17	2024-04-16T00:00:00	2024-04-16T07:02:48	2024-04-16T07:03:16	2024-04-16T08:56:47	2024-04-16T08:57:21	01:53:31	00:00:00
18	2024-04-16T00:00:00	2024-04-16T12:00:30	2024-04-16T12:00:43	2024-04-16T13:47:17	2024-04-16T13:47:56	01:46:34	00:00:00
19	2024-04-17T00:00:00	2024-04-17T14:38:26	2024-04-17T14:38:53	2024-04-17T16:21:00	2024-04-17T16:21:28	01:42:07	00:00:00
20	2024-04-17T00:00:00	2024-04-17T18:47:26	2024-04-17T18:49:15	2024-04-17T20:35:18	2024-04-17T20:36:52	01:46:03	00:00:00
21	2024-04-18T00:00:00	2024-04-18T21:21:46	2024-04-18T21:22:32	2024-04-18T23:21:31	2024-04-18T23:25:28	01:58:59	00:00:00
22	2024-04-19T00:00:00	2024-04-19T08:16:46	2024-04-19T08:17:42	2024-04-19T10:03:19	2024-04-19T10:18:19	01:45:37	00:00:00

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
1	0	60	0	Bio - 8.990 Geo - 3.987 Bleach - 27.187 Pump Down - 9576 USG Flush -16032 Cut at the end of interval with 98% proppant placed	PNP
2	0	60	0	Bio: 5.4 Geo: 9.6 Bleach: 23.5 Flush: 10;878	PNP
3	0	60	0	Bio - 9.425 Geo - 11.527 Bleach - 26.897 Pump Down - 5082 USG Flush -15249	PNP
4	0	60	0	Bio - 12.688 Geo - 12.688 Bleach - 37.156 Pump Down - 8;274 USG Flush - 10;500 USG	PNP
5	0	60	0	Bio - 6.670 Geo - 8.482 Bleach - 22.112 Pump Down - 7854 USG Flush -14213	PNP
6	0	60	0	Bio: 8.156 Geo: 11.6 Bleach: 27.188 Pumpdown: 7140 USG Flush: 10122 USG	PNP
7	0	60	0	Bio - 10.512 Geo - 13.557 Bleach - 38.425 Pump Down - 7266 USG Flush - 13815	PNP
8	0	60	0	Bio: 10.8 Geo: 14.5 Bleach: 36.9 Pumpdown: 6426 USG Flush: 9744 USG 5 lbs of each Div 1315/1325 sent @ 6295 psi treating pressure; 299 pressure difference once hit. 10 lbs of each Div 1315/1325 sent @ 6115 psi treating pressure; 129 pressure difference once hit.	PNP
9	0	60	0	Bio: 12.035 Geo: 9.135 Bleach: 34.437 Pumpdown: 6468 USG Flush: 13021 USG	PNP
10	0	60	0	Bio: 5 Geo: 13.7 Bleach: 18.1 Pump Down: 5922 USG Flush: 9198 USG 5lbs. of each Div 1315/1325 sent @ 6031 psi treating pressure; 60 psi difference once hit. 10 lbs. of each Div 1315/1325 sent @ 6150 psi treating pressure; 60 psi difference once hit.	PNP
11	0	60	0	Bio: 10.1 Geo: 9 Bleach: 30.8 Pumpdown: 9450 USG Flush: 12813 USG 5 lbs. of each Div 1315/1325 @ 6240 psi treating pressure; 77 psi difference once hit.	PNP

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
12	0	60	0	Bio - 12.6 Geo - 13 Bleach - 39.8 Pump Down - 4998 USG Flush - 9030 USG Diverter 1st Drop Div 1315 20 lbs Div 1325 20 lbs 118 Psi change 2nd Drop Div 1315 10 lbs Div 1325 10 lbs 237 psi change	PNP
13	0	60	0	Bio: 6.25 Geo: 12.688 Bleach: 25.01 Pump Down: 5250 USG Flush: 12571 Diverter 1st Drop Div 1315: 5lbs Div 1325: 5 lbs 28 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 14 Psi	PNP
14	0	60	0	Bio: 6.24 Geo: 12.69 Bleach: 25.01 Pump Down: 4788 USG Flush: 12370 Diverter 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 86 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
15	0	60	0	Bio: 10.5 Geo: 10.8 Bleach: 40.6 Pump Down: 4284 USG Flush: 8484 USG Diverter 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 43 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 51 Psi	PNP
16	0	60	0	Bio: 10.08 Geo: 10.37 Bleach: 26.54 Pump Down: 3948 USG Flush: 12027 USG Diverter 1st Drop Div 1315: 5 lbs Div 1325: 5lbs 0 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 0 Psi	PNP
17	0	60	0	Bio: 5.001 Geo: 9.56 Bleach: 20.15 Pump Down: 3906 USG Flush: 8106 USG Diverter 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 84 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 135 Psi	PNP
18	0	60	0	Bio: 9.063 Geo: 12.216 Bleach: 25.375 Pump Down: 3234 USG Flush: 7896 USG Diverter 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 82 Psi 2nd Drop Div 1315: 20 lbs Div 1325: 20 lbs 138 Psi	PNP
19	0	60	0	Bio: Geo: Bleach: Pump Down: 3150 USG Flush: 7728 USG Diverter 1st Drop Div 1315: 5 lbs Div 1325: 5 lbs 89 Psi 2nd Drop Div 1315: 5 lbs Div 1325: 5 lbs 21 Psi	PNP

QA / QC TECHNICAL DATA

Treatment Interval	Gel Viscosity (cP)	Fluid Temperature (F)	Gel pH	Interval Comments	Technology Application
20	0	60	0	Bio: 8.555 Geo: 9.062 Bleach: 26.390 Pump Down: 2436 USG Flush: 10379 USG Diverter 1st Drop Div 1315: 10 lbs Div 1325: 10 lbs 81 Psi 2nd Drop Div 1315: 10 lbs Div 1325: 10 lbs 34 Psi	PNP
21	0	60	0	Bio: 7.757 Geo: 10.005 Bleach: 23.562 Pump Down: 2268 USG Flush: 7350 USG Wireline: 54 total shots using standard 9 gun	PNP
22	0	60	0	Bio: 11.2 Geo: 11.6 Bleach: 33.3 Pump Down: 1932 USG Flush: 7182 USG Wireline: 54 shots of 9 gun.	PNP

TUBULAR DATA

Type	OD (in)	Weight (lbm/ft)	Top MD (ft)	Bottom MD (ft)	Volume Factor (gal/ft)
Casing	5.5	20	0	12080	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	12033	12034	1	6	0.35	120	6	Codell	Codell
1	2	12001	12002	1	6	0.35	120	6	Codell	Codell
1	3	11969	11970	1	6	0.35	120	6	Codell	Codell
1	4	11938	11939	1	6	0.35	120	6	Codell	Codell
1	5	11906	11907	1	4	0.35	120	4	Codell	Codell
1	6	11875	11876	1	4	0.35	120	4	Codell	Codell
2	1	11834	11835	1	6	0.35	120	6	Codell	Codell
2	2	11802	11803	1	6	0.35	120	6	Codell	Codell
2	3	11770	11771	1	6	0.35	120	6	Codell	Codell
2	4	11739	11740	1	6	0.35	120	6	Codell	Codell
2	5	11707	11708	1	4	0.35	120	4	Codell	Codell
2	6	11676	11677	1	4	0.35	120	4	Codell	Codell
3	1	11635	11636	1	6	0.35	120	6	Codell	Codell
3	2	11603	11604	1	6	0.35	120	6	Codell	Codell
3	3	11571	11572	1	6	0.35	120	6	Codell	Codell
3	4	11540	11541	1	6	0.35	120	6	Codell	Codell
3	5	11508	11509	1	4	0.35	120	4	Codell	Codell
3	6	11477	11478	1	4	0.35	120	4	Codell	Codell
4	1	11436	11437	1	6	0.35	120	6	Codell	Codell
4	2	11404	11405	1	6	0.35	120	6	Codell	Codell
4	3	11372	11373	1	6	0.35	120	6	Codell	Codell
4	4	11341	11342	1	6	0.35	120	6	Codell	Codell

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	11309	11310	1	4	0.35	120	4	Codell	Codell
4	6	11278	11279	1	4	0.35	120	4	Codell	Codell
5	1	11237	11238	1	6	0.35	120	6	Codell	Codell
5	2	11205	11206	1	6	0.35	120	6	Codell	Codell
5	3	11173	11174	1	6	0.35	120	6	Codell	Codell
5	4	11142	11143	1	6	0.35	120	6	Codell	Codell
5	5	11110	11111	1	4	0.35	120	4	Codell	Codell
5	6	11079	11080	1	4	0.35	120	4	Codell	Codell
6	1	11038	11039	1	6	0.35	120	6	Codell	Codell
6	2	11006	11007	1	6	0.35	120	6	Codell	Codell
6	3	10974	10975	1	6	0.35	120	6	Codell	Codell
6	4	10943	10944	1	6	0.35	120	6	Codell	Codell
6	5	10911	10912	1	4	0.35	120	4	Codell	Codell
6	6	10880	10881	1	4	0.35	120	4	Codell	Codell
7	1	10839	10840	1	6	0.35	120	6	Codell	Codell
7	2	10807	10808	1	6	0.35	120	6	Codell	Codell
7	3	10775	10776	1	6	0.35	120	6	Codell	Codell
7	4	10744	10745	1	6	0.35	120	6	Codell	Codell
7	5	10712	10713	1	4	0.35	120	4	Codell	Codell
7	6	10681	10682	1	4	0.35	120	4	Codell	Codell
8	1	10640	10641	1	6	0.35	120	6	Codell	Codell
8	2	10608	10609	1	6	0.35	120	6	Codell	Codell

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	10576	10577	1	6	0.35	120	6	Codell	Codell
8	4	10545	10546	1	6	0.35	120	6	Codell	Codell
8	5	10513	10514	1	4	0.35	120	4	Codell	Codell
8	6	10482	10483	1	4	0.35	120	4	Codell	Codell
9	1	10441	10442	1	6	0.35	120	6	Codell	Codell
9	2	10409	10410	1	6	0.35	120	6	Codell	Codell
9	3	10377	10378	1	6	0.35	120	6	Codell	Codell
9	4	10346	10347	1	6	0.35	120	6	Codell	Codell
9	5	10314	10315	1	4	0.35	120	4	Codell	Codell
9	6	10283	10284	1	4	0.35	120	4	Codell	Codell
10	1	10242	10243	1	6	0.35	120	6	Codell	Codell
10	2	10210	10211	1	6	0.35	120	6	Codell	Codell
10	3	10178	10179	1	6	0.35	120	6	Codell	Codell
10	4	10147	10148	1	6	0.35	120	6	Codell	Codell
10	5	10115	10116	1	4	0.35	120	4	Codell	Codell
10	6	10084	10085	1	4	0.35	120	4	Codell	Codell
11	1	10043	10044	1	6	0.35	120	6	Codell	Codell
11	2	10011	10012	1	6	0.35	120	6	Codell	Codell
11	3	9979	9980	1	6	0.35	120	6	Codell	Codell
11	4	9948	9949	1	6	0.35	120	6	Codell	Codell
11	5	9916	9917	1	4	0.35	120	4	Codell	Codell
11	6	9885	9886	1	4	0.35	120	4	Codell	Codell

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	9844	9845	1	6	0.35	120	6	Codell	Codell
12	2	9812	9813	1	6	0.35	120	6	Codell	Codell
12	3	9780	9781	1	6	0.35	120	6	Codell	Codell
12	4	9749	9750	1	6	0.35	120	6	Codell	Codell
12	5	9717	9718	1	4	0.35	120	4	Codell	Codell
12	6	9686	9687	1	4	0.35	120	4	Codell	Codell
13	1	9645	9646	1	6	0.35	120	6	Codell	Codell
13	2	9613	9614	1	6	0.35	120	6	Codell	Codell
13	3	9581	9582	1	6	0.35	120	6	Codell	Codell
13	4	9550	9551	1	6	0.35	120	6	Codell	Codell
13	5	9518	9519	1	4	0.35	120	4	Codell	Codell
13	6	9487	9488	1	4	0.35	120	4	Codell	Codell
14	1	9446	9447	1	6	0.35	120	6	Codell	Codell
14	2	9414	9415	1	6	0.35	120	6	Codell	Codell
14	3	9382	9383	1	6	0.35	120	6	Codell	Codell
14	4	9351	9352	1	6	0.35	120	6	Codell	Codell
14	5	9319	9320	1	4	0.35	120	4	Codell	Codell
14	6	9288	9289	1	4	0.35	120	4	Codell	Codell
15	1	9247	9248	1	6	0.35	120	6	Codell	Codell
15	2	9215	9216	1	6	0.35	120	6	Codell	Codell
15	3	9183	9184	1	6	0.35	120	6	Codell	Codell
15	4	9152	9153	1	6	0.35	120	6	Codell	Codell

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	9120	9121	1	4	0.35	120	4	Codell	Codell
15	6	9089	9090	1	4	0.35	120	4	Codell	Codell
16	1	9048	9049	1	6	0.35	120	6	Codell	Codell
16	2	9016	9017	1	6	0.35	120	6	Codell	Codell
16	3	8984	8985	1	6	0.35	120	6	Codell	Codell
16	4	8953	8954	1	6	0.35	120	6	Codell	Codell
16	5	8921	8922	1	4	0.35	120	4	Codell	Codell
16	6	8890	8891	1	4	0.35	120	4	Codell	Codell
17	1	8849	8850	1	6	0.35	120	6	Codell	Codell
17	2	8817	8818	1	6	0.35	120	6	Codell	Codell
17	3	8785	8786	1	6	0.35	120	6	Codell	Codell
17	4	8754	8755	1	6	0.35	120	6	Codell	Codell
17	5	8722	8723	1	4	0.35	120	4	Codell	Codell
17	6	8691	8692	1	4	0.35	120	4	Codell	Codell
18	1	8650	8651	1	6	0.35	120	6	Codell	Codell
18	2	8618	8619	1	6	0.35	120	6	Codell	Codell
18	3	8586	8587	1	6	0.35	120	6	Codell	Codell
18	4	8555	8556	1	6	0.35	120	6	Codell	Codell
18	5	8523	8524	1	4	0.35	120	4	Codell	Codell
18	6	8492	8493	1	4	0.35	120	4	Codell	Codell
19	1	8451	8452	1	6	0.35	120	6	Codell	Codell
19	2	8419	8420	1	6	0.35	120	6	Codell	Codell

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	8387	8388	1	6	0.35	120	6	Codell	Codell
19	4	8356	8357	1	6	0.35	120	6	Codell	Codell
19	5	8324	8325	1	4	0.35	120	4	Codell	Codell
19	6	8293	8294	1	4	0.35	120	4	Codell	Codell
20	1	8252	8253	1	6	0.35	120	6	Codell	Codell
20	2	8220	8221	1	6	0.35	120	6	Codell	Codell
20	3	8188	8189	1	6	0.35	120	6	Codell	Codell
20	4	8157	8158	1	6	0.35	120	6	Codell	Codell
20	5	8125	8126	1	4	0.35	120	4	Codell	Codell
20	6	8094	8095	1	4	0.35	120	4	Codell	Codell
21	1	8053	8054	1	6	0.35	120	6	Codell	Codell
21	2	8021	8022	1	6	0.35	120	6	Codell	Codell
21	3	7989	7990	1	6	0.35	120	6	Codell	Codell
21	4	7958	7959	1	6	0.35	120	6	Codell	Codell
21	5	7926	7927	1	4	0.35	120	4	Codell	Codell
21	6	7895	7896	1	4	0.35	120	4	Codell	Codell
22	1	7854	7855	1	6	0.35	120	6	Codell	Codell
22	2	7822	7823	1	6	0.35	120	6	Codell	Codell
22	3	7790	7791	1	6	0.35	120	6	Codell	Codell
22	4	7759	7760	1	6	0.35	120	6	Codell	Codell
22	5	7727	7728	1	4	0.35	120	4	Codell	Codell
22	6	7696	7697	1	4	0.35	120	4	Codell	Codell

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	2499	1000	1092	11062	38215	0	0	328680	344755	37800	59997	0	0
2	500	2000	1000	682	10877	20517	0	0	328680	321564	37800	39663	0	0
3	500	1499	1000	734	10691	10767	0	4482	328680	299306	37800	43662	0	2772
4	500	2000	1000	285	10506	20119	0	0	328680	319323	37800	36960	0	0
5	500	998	1000	499	10320	4015	0	14455	328680	313101	37800	43889	0	0
6	500	1000	1000	1052	10135	19867	0	0	328680	327734	37800	38411	0	0
7	500	998	1000	754	9950	8738	0	5078	328680	325789	37800	41344	0	5571
8	500	1000	1000	511	9764	15833	0	0	328680	327943	37800	42624	0	1952
9	500	1000	1000	305	9579	13021	0	0	328680	324730	37800	37757	0	2498
10	500	1000	1000	175	9394	17339	0	0	328680	332624	37800	40112	0	0
11	500	1000	1000	191	9208	8936	0	3877	328680	325208	37800	36816	0	4651
12	500	1000	1000	289	9023	20984	0	0	328680	327968	37800	40194	0	0
13	500	499	1000	555	8838	8050	0	4521	328680	329922	37800	32103	0	4172
14	500	499	1000	614	8652	7570	0	4800	328680	333669	37800	30885	0	3828
15	500	501	1000	309	8467	19764	0	0	328680	329933	37800	39921	0	0
16	500	499	1000	387	8282	7197	0	4830	328680	330577	37800	44229	0	3395
17	500	1000	1000	334	8096	15641	0	0	328680	332013	37800	37561	0	0
18	500	1000	1000	302	7911	16890	0	0	328680	310583	37800	56480	0	0
19	500	1000	1000	187	7725	11777	0	0	328680	327985	37800	37538	0	2312
20	500	499	1000	576	7540	10379	0	0	328680	326350	37800	42099	0	3003
21	500	499	1000	1465	7355	13306	0	0	328680	271521	37800	63258	0	0
22	500	1000	1000	155	7169	14047	0	0	328680	332311	37800	40373	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	22990	22000	11453	200544	322972	0	42043	7230960	7114909	831600	925876	0	34154

STAGE DESCRIPTION

Treatment Interval	Spacer		Wireline Pump-In		Total	
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)
1	0	26298	0	9576	379042	482432
2	0	0	0	5292	378857	389718
3	0	20732	0	5082	378671	389036
4	0	5321	0	8274	378486	392282
5	0	0	0	7854	378300	384811
6	0	0	0	7140	378115	395204
7	0	0	0	7266	377930	395538
8	0	0	0	6426	377744	396289
9	0	30200	0	6468	377559	415979
10	0	0	0	5922	377374	397172
11	0	0	0	9450	377188	390129
12	0	0	0	4998	377003	395433
13	0	0	0	5250	376818	385072
14	0	0	0	4788	376632	386653
15	0	0	0	4284	376447	394712
16	0	0	0	3948	376262	395062
17	0	0	0	3906	376076	390455
18	0	0	0	3234	375891	388489
19	0	0	0	3150	375705	383949
20	0	0	0	2436	375520	385342
21	0	0	0	2268	375335	352317
22	0	0	0	1932	375149	389818

STAGE DESCRIPTION

Treatment Interval	Spacer		Wireline Pump-In		Total	
	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)	Proposed (gal)	Pumped (gal)
Total	0	82551	0	118944	8296104	8675892

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	18	9576	9576	9576
	2	Breakdown	FR Water		0	0	0	4.88	1092	879	10668
	3	Acid	15% HCl		0	0	0	4.84	499	499	11167
	4	Pad	FR Water		0	0	0	6.47	3181	3386	14348
	5	Acid	15% HCl		0	0	0	9.98	1000	1000	15348
	6	Pad	FR Water		0	0	0	12.51	526	537	15874
	7	Pad	Dry FR		0	0	0	21.96	17375	17467	33249
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	45.22	5074	5217	38323
	9	Spacer	Dry FR		0	0	0	58.17	12617	12806	50940
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	62.95	27062	27708	78002
	11	Flush	Dry FR		0	0	0	64.14	9379	9561	87381
	12	Flush	FR Water		0	0	0	21.66	8777	8911	96158
	13	Acid	15% HCl		0	0	0	9.79	1000	1000	97158
	14	Pad	FR Water		0	0	0	9.81	695	707	97853
	15	Pad	15% HCl		0	0	0	9.95	1000	1000	98853
	16	Pad	FR Water		0	0	0	38.28	37220	37174	136073
	17	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	75.81	2236	2239	138309
	18	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	75.83	3473	3519	141782
	19	Spacer	Dry FR		0	0	0	75.74	13681	13686	155463
	20	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	76.94	33162	33597	188625
	21	PLF	Dry FR	100 Mesh Premium White	0.25	0.28	0.26	77.26	1553	1576	190178
	22	PLF	Dry FR	100 Mesh Premium White	0.5	0.5	0.5	77.06	11587	11866	201765

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	PLF	Dry FR	100 Mesh Premium White	0.28	1.5	0.89	76.07	8401	8933	210166
	24	PLF	Dry FR	100 Mesh Premium White	1.5	1.5	1.5	75.95	2028	2189	212194
	25	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	76.18	12846	13017	225040
	26	PLF	Dry FR	30/50 Premium White	0.5	0.5	0.5	82.2	13812	14163	238852
	27	PLF	Dry FR	30/50 Premium White	0.75	0.75	0.75	84.85	14641	15214	253493
	28	PLF	Dry FR	30/50 Premium White	1	1	1	85.68	14602	15364	268095
	29	PLF	Dry FR	30/50 Premium White	1.25	1.25	1.25	90.27	2686	2856	270781
	30	PLF	Dry FR	30/50 Premium White	1.25	1.99	1.62	90.24	16123	17576	286904
	31	PLF	Dry FR	30/50 Premium White	2	2	2	90.25	10947	12056	297851
	32	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	90.42	9837	9982	307688
	33	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.06	63371	67011	371059
	34	PLF	Dry FR	30/50 Premium White	2	2	2	99.79	10966	12139	382025
	35	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.01	43992	44654	426017
	36	PLF	Dry FR	30/50 Premium White	0.25	0.62	0.44	100.06	5297	5417	431314
	37	PLF	Dry FR	30/50 Premium White	0.5	0.5	0.5	100.01	4571	4711	435885
	38	PLF	Dry FR	30/50 Premium White	1	1	1	99.93	20746	21993	456631
	39	PLF	Dry FR	30/50 Premium White	1.5	1.5	1.5	99.91	5742	6253	462373
	40	Flush	Dry FR		0	0	0	95.56	4027	4028	466400
	41	Flush	Dry FR		0	0	0	81.02	16032	16116	482432
2	1	Wireline Pump-In	Treated Water		0	0	0	10	5292	5292	487724
	2	Breakdown	FR Water		0	0	0	7.87	682	641	488406
	3	Acid	15% HCl		0	0	0	9.49	1000	1000	489406

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	4	Pad	FR Water		0	0	0	11.11	1557	1600	490963
	5	Pad	Dry FR		0	0	0	15.18	3349	3338	494312
	6	Pad	FR Water		0	0	0	9.76	21	27	494333
	7	Acid	15% HCl		0	0	0	9.75	1000	1000	495333
	8	Pad	FR Water		0	0	0	11.72	848	850	496181
	9	Pad	Dry FR		0	0	0	46.92	33888	33588	530069
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	78.19	51015	51522	581084
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	85.49	21648	22542	602732
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	85.46	12073	12198	614805
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	88.47	62680	66192	677485
	14	PLF	Dry FR	30/50 Premium White	2	2	2	89.79	10930	12058	688415
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	89.88	9853	9985	698268
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	89.83	63497	67017	761765
	17	PLF	Dry FR	30/50 Premium White	2	2	2	89.6	10956	12034	772721
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	89.84	45571	45863	818292
	19	PLF	Dry FR	30/50 Premium White	0.27	0.59	0.43	89.89	999	1011	819291
	20	PLF	Dry FR	30/50 Premium White	0.36	3.6	1.98	89.71	32342	34820	851633
	21	Flush	Dry FR		0	0	0	89.87	5065	4992	856698
	22	Flush	Dry FR		0	0	0	90	11567	11517	868265
	23	Flush	FR Water		0	0	0	74.83	3885	3988	872150
3	1	Wireline Pump-In	Treated Water		0	0	0	21	5082	5082	877232
	2	Breakdown	Dry FR		0	0	0	7.59	734	686	877966

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
3	3	Acid	15% HCl		0	0	0	9.74	1000	1000	878966
	4	Pad	Dry FR		0	0	0	9.83	630	636	879596
	5	Acid	15% HCl		0	0	0	9.92	499	499	880095
	6	Pad	Dry FR		0	0	0	13.43	2443	2437	882538
	7	Pad	Dry FR		0	0	0	67.96	40589	40276	923127
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.91	7061	7091	930188
	9	Spacer	Dry FR		0	0	0	99.9	12768	12714	942956
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.14	32053	32319	975009
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	100.14	21792	22602	996801
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.06	12136	12242	1008937
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.08	62977	66219	1071914
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.93	10890	11944	1082804
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100	9889	9984	1092693
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.07	63759	67123	1156452
	17	PLF	Dry FR	30/50 Premium White	2	2	2	99.89	9989	11027	1166441
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	95.72	14133	14266	1180574
	19	Spacer	Dry FR		0	0	0	94.95	7964	7945	1188538
	20	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	95.11	22237	22402	1210775
	21	PLF	Dry FR	30/50 Premium White	0.25	1.97	1.11	95.04	19911	20916	1230686
	22	PLF	Dry FR	30/50 Premium White	1.98	1.98	1.98	94.95	12479	13353	1243165
	23	Pre-Flush	Dry FR		0	0	0	95.24	2772	2746	1245937
	24	Flush	Dry FR		0	0	0	95.21	10767	10778	1256704

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	25	Overflush	Treated Water		0	0	0	75.33	4482	4421	1261186
4	1	Wireline Pump-In	Treated Water		0	0	0	10	8274	8274	1269460
	2	Breakdown	FR Water		0	0	0	7.26	285	352	1269745
	3	Acid	15% HCl		0	0	0	9.73	1000	1000	1270745
	4	Pad	FR Water		0	0	0	9.85	510	516	1271255
	5	Pad	Dry FR		0	0	0	9.81	3242	3187	1274497
	6	Pad	FR Water		0	0	0	9.71	110	109	1274607
	7	Acid	15% HCl		0	0	0	9.71	1000	1000	1275607
	8	Pad	FR Water		0	0	0	9.84	646	678	1276253
	9	Pad	Dry FR		0	0	0	33.13	32452	32022	1308705
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	50.12	2539	2537	1311244
	11	Spacer	Dry FR		0	0	0	50.14	5321	5324	1316565
	12	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	69.85	54869	55612	1371434
	13	PLF	Dry FR	100 Mesh Premium White	0.25	0.87	0.56	97.58	1148	1166	1372582
	14	PLF	Dry FR	100 Mesh Premium White	0.88	1.49	1.18	97.24	9978	10598	1382560
	15	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	97.54	12125	12277	1394685
	16	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	97.49	62636	66221	1457321
	17	PLF	Dry FR	30/50 Premium White	2	2	2	97.44	11000	12127	1468321
	18	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	97.58	9605	9743	1477926
	19	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	97.57	63632	67163	1541558
	20	PLF	Dry FR	30/50 Premium White	2	2	2	97.45	10919	11991	1552477
	21	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	97.67	44218	44638	1596695

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	22	PLF	Dry FR	30/50 Premium White	0.25	3.84	2.05	96.15	36654	39348	1633349
	23	Flush	Dry FR		0	0	0	95.35	4343	4291	1637692
	24	Flush	Dry FR		0	0	0	90.8	11634	11613	1649326
	25	Flush	FR Water		0	0	0	75.7	4142	4186	1653468
5	1	Wireline Pump-In	Treated Water		0	0	0	21	7854	7854	1661322
	2	Breakdown	Dry FR		0	0	0	7.5	499	517	1661821
	3	Acid	15% HCl		0	0	0	9.78	499	499	1662320
	4	Pad	Dry FR		0	0	0	9.84	1812	1819	1664132
	5	Acid	15% HCl		0	0	0	9.79	499	499	1664631
	6	Pad	Dry FR		0	0	0	56.24	42077	42110	1706708
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	77.59	48813	49463	1755521
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	79.87	21614	22578	1777135
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	80.23	12078	12241	1789213
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	84.91	62429	66155	1851642
	11	PLF	Dry FR	30/50 Premium White	2	2	2	84.15	10922	12071	1862564
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	83.13	9837	9995	1872401
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	83.13	63165	66927	1935566
	14	PLF	Dry FR	30/50 Premium White	2	2	2	83.06	10890	12031	1946456
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	83.16	43988	44675	1990444
	16	PLF	Dry FR	30/50 Premium White	0.25	1.97	1.11	83.18	19744	20878	2010188
	17	PLF	Dry FR	30/50 Premium White	1.98	1.98	1.98	83.03	9621	10626	2019809
	18	Flush	Dry FR		0	0	0	83.18	4015	3977	2023824

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	19	Overflush	Treated Water		0	0	0	55.97	14455	14595	2038279
6	1	Wireline Pump-In	Treated Water		0	0	0	18	7140	7140	2045419
	2	Breakdown	Treated Water		0	0	0	8.19	1052	1002	2046471
	3	Acid	15% HCl		0	0	0	9.85	499	499	2046970
	4	Pad	Dry FR		0	0	0	9.61	476	446	2047446
	5	Pad	Dry FR		0	0	0	10.03	3253	3284	2050699
	6	Pad	Dry FR		0	0	0	10.07	470	453	2051169
	7	Acid	15% HCl		0	0	0	10.07	501	501	2051670
	8	Pad	Dry FR		0	0	0	10.41	456	454	2052126
	9	Pad	Dry FR		0	0	0	53.16	33756	33964	2085882
	10	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	94.88	51019	51766	2136901
	11	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.66	21815	22704	2158716
	12	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.66	12079	12262	2170795
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.88	62838	66223	2233633
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.7	10949	11988	2244582
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.03	9825	9988	2254407
	16	PLF	Dry FR	30/50 Premium White	0.25	1.76	1	100.01	55325	58015	2309732
	17	PLF	Dry FR	30/50 Premium White	1.76	2	1.88	99.84	8362	9102	2318094
	18	PLF	Dry FR	30/50 Premium White	2	2	2	99.82	10965	12001	2329059
	19	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.23	44062	44751	2373121
	20	PLF	Dry FR	30/50 Premium White	0.25	3.97	2.11	99.89	40495	44110	2413616
	21	Flush	Dry FR		0	0	0	100.07	4553	4574	2418169

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	22	Flush	Treated Water		0	0	0	94.42	15314	15394	2433483
7	1	Wireline Pump-In	Treated Water		0	0	0	18	7266	7266	2440749
	2	Breakdown	Treated Water		0	0	0	9.28	754	776	2441503
	3	Acid	15% HCl		0	0	0	9.73	499	499	2442002
	4	Pad	Treated Water		0	0	0	9.66	1144	1116	2443146
	5	Acid	15% HCl		0	0	0	9.71	499	499	2443645
	6	Pad	Dry FR		0	0	0	17.63	921	957	2444566
	7	Pad	Dry FR		0	0	0	73.67	39279	39452	2483845
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.04	49424	50293	2533269
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	99.99	21595	22569	2554864
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.13	12078	12321	2566942
	11	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.82	62388	66184	2629330
	12	PLF	Dry FR	30/50 Premium White	2	2	2	100.04	10888	12028	2640218
	13	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.59	9684	9902	2649902
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.41	63179	67072	2713081
	15	PLF	Dry FR	30/50 Premium White	2	2	2	100.12	10956	12108	2724037
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.66	43750	44659	2767787
	17	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.39	41847	46191	2809634
	18	Pre-Flush	Dry FR		0	0	0	99.79	5571	5544	2815205
	19	Flush	Dry FR		0	0	0	100.11	8738	8870	2823943
	20	Overflush	FR Water		0	0	0	76.95	5078	5069	2829021
8	1	Wireline Pump-In	Treated Water		0	0	0	18	6426	6426	2835447

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	2	Breakdown	Treated Water		0	0	0	6.73	511	525	2835958
	3	Acid	15% HCl		0	0	0	10.1	501	501	2836459
	4	Pad	Treated Water		0	0	0	9.88	1331	1326	2837790
	5	Acid	15% HCl		0	0	0	10.27	499	499	2838289
	6	Pad	Dry FR		0	0	0	15.16	1453	1562	2839742
	7	Pad	Dry FR		0	0	0	55.09	33820	34289	2873562
	8	Pad	Dry FR		0	0	0	75.1	3711	3791	2877273
	9	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	84.14	51793	52928	2929066
	10	PLF	Dry FR	100 Mesh Premium White	0.25	1.49	0.87	99.12	21590	22583	2950656
	11	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	96.68	11989	12233	2962645
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	97.88	62593	66209	3025238
	13	PLF	Dry FR	30/50 Premium White	2	2	2	100.04	10946	12028	3036184
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	97.9	9626	9844	3045810
	15	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.79	63464	67149	3109274
	16	PLF	Dry FR	30/50 Premium White	2	2	2	99.79	10982	12068	3120256
	17	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.27	43752	44628	3164008
	18	PLF	Dry FR	30/50 Premium White	0.25	3.98	2.12	99.85	40447	44228	3204455
	19	PLF	Dry FR	30/50 Premium White	0.25	3.98	2.12	99.53	559	630	3205014
	20	PLF	Dry FR	30/50 Premium White	0.25	3.98	2.12	99.53	132	140	3205146
	21	Pre-Flush	Dry FR		0	0	0	99.8	1952	1965	3207098
	22	Pad	Dry FR		0	0	0	100.17	2309	2325	3209407
	23	PLF	Dry FR	30/50 Premium White	0.25	3.98	2.12	100.22	70	70	3209477

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	24	Flush	Treated Water		0	0	0	67.12	15833	16093	3225310
9	1	Wireline Pump-In	Treated Water		0	0	0	20	6468	6468	3231778
	2	Breakdown	Treated Water		0	0	0	6.84	305	341	3232083
	3	Acid	15% HCl		0	0	0	9.97	1000	1000	3233083
	4	Pad	Treated Water		0	0	0	12.23	770	749	3233853
	5	Pad	Dry FR		0	0	0	48.65	36987	37382	3270840
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	86.23	51413	52326	3322253
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	96.02	22223	23231	3344476
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.92	11393	11553	3355869
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.59	62656	66241	3418525
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.4	10959	12021	3429484
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.71	9622	9816	3439106
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.59	63562	67156	3502668
	13	PLF	Dry FR	30/50 Premium White	2	2	2	97.91	10973	12046	3513641
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	89.64	3192	3276	3516833
	15	Spacer	Dry FR		0	0	0	61.83	18206	18377	3535039
	16	PLF	Dry FR	30/50 Premium White	0.5	0.5	0.5	59.58	4489	4650	3539528
	17	Spacer	Dry FR		0	0	0	59.77	11994	12104	3551522
	18	PLF	Dry FR	30/50 Premium White	0.5	0.5	0.5	59.56	14214	14699	3565736
	19	PLF	Dry FR	30/50 Premium White	1	1	1	59.57	13496	14283	3579232
	20	PLF	Dry FR	30/50 Premium White	1.5	1.5	1.5	59.54	32557	35291	3611789
	21	PLF	Dry FR	30/50 Premium White	2.5	2.5	2.5	59.44	10893	12329	3622682

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	22	PLF	Dry FR	30/50 Premium White	3	3	3	59.42	3088	3426	3625770
	23	Pre-Flush	Dry FR		0	0	0	59.71	2498	2477	3628268
	24	Flush	FR Water		0	0	0	57.98	13021	13289	3641289
10	1	Wireline Pump-In	Treated Water		0	0	0	18	5922	5922	3647211
	2	Breakdown	Dry FR		0	0	0	5.54	175	210	3647386
	3	Acid	15% HCl		0	0	0	10.06	1000	1000	3648386
	4	Pad	Dry FR		0	0	0	15.05	1306	1428	3649692
	5	Pad	Dry FR		0	0	0	69.88	38806	39591	3688498
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.19	49181	50229	3737679
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	97.44	21594	22612	3759273
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.24	12077	12334	3771350
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.02	62571	66180	3833921
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.78	11015	12067	3844936
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.16	9581	9790	3854517
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.04	63530	67174	3918047
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.78	11012	12067	3929059
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.25	43705	44617	3972764
	15	PLF	Dry FR	30/50 Premium White	0.25	3.99	2.12	99.82	40506	44360	4013270
	16	PLF	Dry FR	30/50 Premium White	4	4	4	99.45	7852	8880	4021122
	17	Flush	Dry FR		0	0	0	100.21	3977	3946	4025099
	18	Flush	Dry FR		0	0	0	100.33	7798	7900	4032897
	19	Flush	Dry FR		0	0	0	86.72	5564	5722	4038461

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
11	1	Wireline Pump-In	Treated Water		0	0	0	20	9450	9450	4047911
	2	Breakdown	FR Water		0	0	0	6.55	191	244	4048102
	3	Acid	15% HCl		0	0	0	10.08	1000	1000	4049102
	4	Pad	FR Water		0	0	0	15.51	1543	1504	4050645
	5	Pad	Dry FR		0	0	0	60.14	35273	35581	4085918
	6	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	58.41	769	780	4086687
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	91.63	51954	52915	4138641
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.95	21634	22629	4160275
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	99.99	12032	12233	4172307
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.77	62616	66152	4234923
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.52	10974	12036	4245897
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.94	9777	9979	4255674
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.71	63564	67164	4319238
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.34	10890	11944	4330128
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	89.49	43848	44663	4373976
	16	PLF	Dry FR	30/50 Premium White	0.25	3.64	1.94	96.2	37150	40317	4411126
	17	Pre-Flush	Dry FR		0	0	0	96.8	4651	4629	4415777
	18	Flush	Dry FR		0	0	0	97.11	8936	9013	4424713
	19	Overflush	FR Water		0	0	0	75.49	3877	3860	4428590
12	1	Wireline Pump-In	Treated Water		0	0	0	18	4998	4998	4433588
	2	Breakdown	Dry FR		0	0	0	7.13	289	314	4433877
	3	Acid	15% HCl		0	0	0	9.79	1000	499	4434877

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
12	4	Pad	Dry FR		0	0	0	9.52	851	853	4435728
	5	Pad	Dry FR		0	0	0	9.35	426	453	4436154
	6	Pad	Dry FR		0	0	0	10.99	472	699	4436626
	7	Pad	Dry FR		0	0	0	51.87	38445	38491	4475071
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.07	51021	51894	4526092
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.05	21642	22582	4547734
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.21	12056	12261	4559790
	11	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.89	62644	66164	4622434
	12	PLF	Dry FR	30/50 Premium White	2	2	2	99.67	11123	12194	4633557
	13	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.12	9535	9715	4643092
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.12	63626	67160	4706718
	15	PLF	Dry FR	30/50 Premium White	2	2	2	99.9	10954	12012	4717672
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.24	43837	44615	4761509
	17	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.77	41530	45390	4803039
	18	Flush	Dry FR		0	0	0	94.77	7632	7659	4810671
	19	Flush	Dry FR		0	0	0	84.6	13352	13436	4824023
13	1	Wireline Pump-In	Treated Water		0	0	0	20	5250	5250	4829273
	2	Breakdown	FR Water		0	0	0	5.72	555	605	4829828
	3	Acid	15% HCl		0	0	0	9.86	499	499	4830327
	4	Pad	FR Water		0	0	0	14.11	414	423	4830741
	5	Pad	Dry FR		0	0	0	52.46	31689	32016	4862430
	6	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	92.3	5983	6036	4868413

ACTUAL DESIGN

Treatment Interval	Stage Number	Stage Description	Fluid Description	Proppant Type	Proppant Conc. At Start (ppg)	Proppant Conc. At End (ppg)	Slurry Proppant Conc. (ppg)	Slurry Rate (bpm)	Actual Clean Volume (gal)	Slurry Volume (gal)	Total Clean Volume (gal)
13	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	98.05	51981	52951	4920394
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	100.1	21726	22664	4942120
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.27	11981	12198	4954101
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.13	62815	66247	5016916
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.92	10925	11943	5027841
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.18	9743	9932	5037584
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.16	63573	67045	5101157
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.91	11049	12083	5112206
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.39	43838	44610	5156044
	16	PLF	Dry FR	30/50 Premium White	0.25	3.55	1.9	100.09	36308	39268	5192352
	17	Pre-Flush	Dry FR		0	0	0	99.54	4172	4129	5196524
	18	Flush	Dry FR		0	0	0	99.39	8050	8107	5204574
	19	Overflush	FR Water		0	0	0	79.21	4521	4539	5209095
14	1	Wireline Pump-In	Treated Water		0	0	0	20	4788	4788	5213883
	2	Breakdown	FR Water		0	0	0	6.99	614	624	5214497
	3	Acid	15% HCl		0	0	0	10	499	499	5214996
	4	Pad	FR Water		0	0	0	11.99	286	296	5215282
	5	Pad	Dry FR		0	0	0	54.52	30599	31074	5245881
	6	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	98.95	6993	7098	5252874
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.29	51916	52818	5304790
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	100.26	21798	22699	5326588
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.17	12106	12326	5338694

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)
14	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.15	62701	66120	5401395
	11	PLF	Dry FR	30/50 Premium White	2	2	2	100.02	11005	12026	5412400
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.32	9627	9805	5422027
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.29	63626	67059	5485653
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.02	11060	12097	5496713
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.4	43939	44685	5540652
	16	PLF	Dry FR	30/50 Premium White	0.25	3.82	2.04	100.11	38898	42373	5579550
	17	Pre-Flush	Dry FR		0	0	0	100.25	3828	3807	5583378
	18	Flush	Dry FR		0	0	0	100.62	7570	7641	5590948
	19	Overflush	FR Water		0	0	0	81.52	4800	4801	5595748
15	1	Wireline Pump-In	Treated Water		0	0	0	18	4284	4284	5600032
	2	Breakdown	FR Water		0	0	0	4.5	309	249	5600341
	3	Acid	15% HCl		0	0	0	9.98	501	501	5600842
	4	Pad	FR Water		0	0	0	11.82	553	582	5601395
	5	Pad	Dry FR		0	0	0	71.75	28883	29033	5630278
	6	Pad	FR Water		0	0	0	15.82	3630	3829	5633908
	7	Pad	Dry FR		0	0	0	74.59	6855	6879	5640763
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.02	51795	52706	5692558
	9	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.51	21740	22685	5714298
	10	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.47	12018	12221	5726316
	11	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.26	62738	66194	5789054
	12	PLF	Dry FR	30/50 Premium White	2	2	2	100.04	10992	12028	5800046

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	13	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.36	9624	9809	5809670
	14	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.27	63634	67119	5873304
	15	PLF	Dry FR	30/50 Premium White	2	2	2	99.61	10949	11978	5884253
	16	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.4	43894	44687	5928147
	17	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.05	42549	46358	5970696
	18	Flush	Dry FR		0	0	0	100.49	7103	7066	5977799
	19	Flush	Dry FR		0	0	0	96.08	9198	9388	5986997
	20	Flush	FR Water		0	0	0	80.59	3463	3446	5990460
16	1	Wireline Pump-In	Treated Water		0	0	0	20	3948	3948	5994408
	2	Breakdown	FR Water		0	0	0	6.83	387	406	5994795
	3	Acid	15% HCl		0	0	0	10.06	499	499	5995294
	4	Pad	FR Water		0	0	0	12.41	434	446	5995728
	5	Pad	Dry FR		0	0	0	59.87	43795	44377	6039523
	6	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.44	2235	2260	6041758
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.38	52083	53006	6093841
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	100.29	21690	22634	6115531
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.21	12039	12260	6127570
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.09	62730	66224	6190300
	11	PLF	Dry FR	30/50 Premium White	2	2	2	99.95	11048	12088	6201348
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.12	9601	9786	6210949
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.09	63577	67070	6274526
	14	PLF	Dry FR	30/50 Premium White	2	2	2	99.95	11055	12088	6285581

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	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.41	43752	44551	6329333
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	99.95	40767	44765	6370100
	17	Pre-Flush	Dry FR		0	0	0	100.15	3395	3381	6373495
	18	Flush	Dry FR		0	0	0	100.64	7197	7219	6380692
	19	Overflush	FR Water		0	0	0	77.94	4830	4900	6385522
17	1	Wireline Pump-In	Treated Water		0	0	0	18	3906	3906	6389428
	2	Breakdown	FR Water		0	0	0	6.02	334	347	6389762
	3	Acid	15% HCl		0	0	0	8.81	501	501	6390263
	4	Pad	FR Water		0	0	0	8.97	2238	2288	6392501
	5	Acid	15% HCl		0	0	0	9.53	499	499	6393000
	6	Pad	Dry FR		0	0	0	12.24	424	442	6393424
	7	Pad	Dry FR		0	0	0	57.45	34899	35338	6428323
	8	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	88.09	37024	37723	6465347
	9	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	94.89	14971	15243	6480318
	10	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	95.8	21646	22633	6501964
	11	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	96.62	12007	12229	6513971
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.18	62615	66142	6576586
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.92	10962	12014	6587548
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.33	9685	9876	6597233
	15	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.23	63569	67090	6660802
	16	PLF	Dry FR	30/50 Premium White	2	2	2	99.89	10971	12010	6671773
	17	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.55	43881	44682	6715654

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	18	PLF	Dry FR	30/50 Premium White	0.25	3.99	2.12	100.26	40645	44341	6756299
	19	PLF	Dry FR	30/50 Premium White	4	4	4	99.88	4037	4565	6760336
	20	Flush	Dry FR		0	0	0	100.51	3241	3251	6763577
	21	Flush	Dry FR		0	0	0	94.25	12400	12485	6775977
18	1	Wireline Pump-In	Treated Water		0	0	0	18	3234	3234	6779211
	2	Breakdown	FR Water		0	0	0	4.78	302	276	6779513
	3	Acid	15% HCl		0	0	0	7.68	501	501	6780014
	4	Pad	FR Water		0	0	0	8.94	267	264	6780281
	5	Acid	15% HCl		0	0	0	8.9	499	499	6780780
	6	Pad	Dry FR		0	0	0	61.4	56213	56558	6836993
	7	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	100.74	33894	34495	6870887
	8	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.6	21724	22707	6892611
	9	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.71	11965	12180	6904576
	10	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.12	62726	66239	6967302
	11	PLF	Dry FR	30/50 Premium White	2	2	2	100.27	10989	12056	6978291
	12	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.5	9701	9894	6987992
	13	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.45	63547	67167	7051539
	14	PLF	Dry FR	30/50 Premium White	2	2	2	100.22	10991	12051	7062530
	15	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.73	43801	44623	7106331
	16	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.45	41245	44992	7147576
	17	Flush	Dry FR		0	0	0	100.94	4711	4756	7152287
	18	Flush	Dry FR		0	0	0	82.58	12179	12343	7164466

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	1	Wireline Pump-In	Treated Water		0	0	0	18	3150	3150	7167616
	2	Breakdown	FR Water		0	0	0	5.72	187	202	7167803
	3	Acid	15% HCl		0	0	0	9.87	1000	1000	7168803
	4	Pad	FR Water		0	0	0	11.66	604	562	7169407
	5	Pad	Dry FR		0	0	0	63.62	36934	36944	7206341
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.31	52280	52858	7258621
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100	21900	22710	7280521
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.18	12087	12256	7292608
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.01	62879	66173	7355487
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.85	11132	12146	7366619
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.27	9711	9871	7376330
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.07	63744	67053	7440074
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.81	11071	12071	7451145
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.47	44026	44716	7495171
	15	PLF	Dry FR	30/50 Premium White	0.25	3.82	2.03	99.94	39155	42370	7534326
	16	Pre-Flush	Dry FR		0	0	0	100.22	2312	2326	7536638
	17	Flush	Dry FR		0	0	0	100.61	8256	8277	7544894
	18	Flush	FR Water		0	0	0	83.97	3521	3531	7548415
20	1	Wireline Pump-In	Treated Water		0	0	0	22	2436	2436	7550851
	2	Breakdown	Dry FR		0	0	0	7.5	576	653	7551427
	3	Acid	15% HCl		0	0	0	9.99	499	499	7551926
	4	Pad	Dry FR		0	0	0	14.98	1646	1626	7553572

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	5	Pad	Dry FR		0	0	0	59.79	40453	40667	7594025
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	99.94	47912	48630	7641937
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.87	99.9	21772	22618	7663709
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100	11979	12165	7675688
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.71	62847	66181	7738535
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.45	11082	12097	7749617
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	98.27	9712	9878	7759329
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	100.27	63771	67121	7823100
	13	PLF	Dry FR	30/50 Premium White	2	2	2	100.09	10970	11965	7834070
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	100.68	44037	44741	7878107
	15	PLF	Dry FR	30/50 Premium White	0.25	4	2.12	100.15	42268	45911	7920375
	16	Pre-Flush	Dry FR		0	0	0	100.44	3003	2967	7923378
	17	Flush	Dry FR		0	0	0	98.34	6508	6567	7929886
	18	Flush	Dry FR		0	0	0	52.72	3871	3872	7933757
21	1	Wireline Pump-In	Treated Water		0	0	0	22	2268	2268	7936025
	2	Breakdown	Dry FR		0	0	0	9.4	1465	1458	7937490
	3	Acid	15% HCl		0	0	0	10.89	499	499	7937989
	4	Pad	Dry FR		0	0	0	60.51	63258	64667	8001247
	5	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	97.64	33404	34274	8034651
	6	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	99.44	21843	22982	8056494
	7	PLF	Dry FR	100 Mesh Premium White	1.5	1.5	1.5	99.15	2068	2240	8058562
	8	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.35	13035	13376	8071597

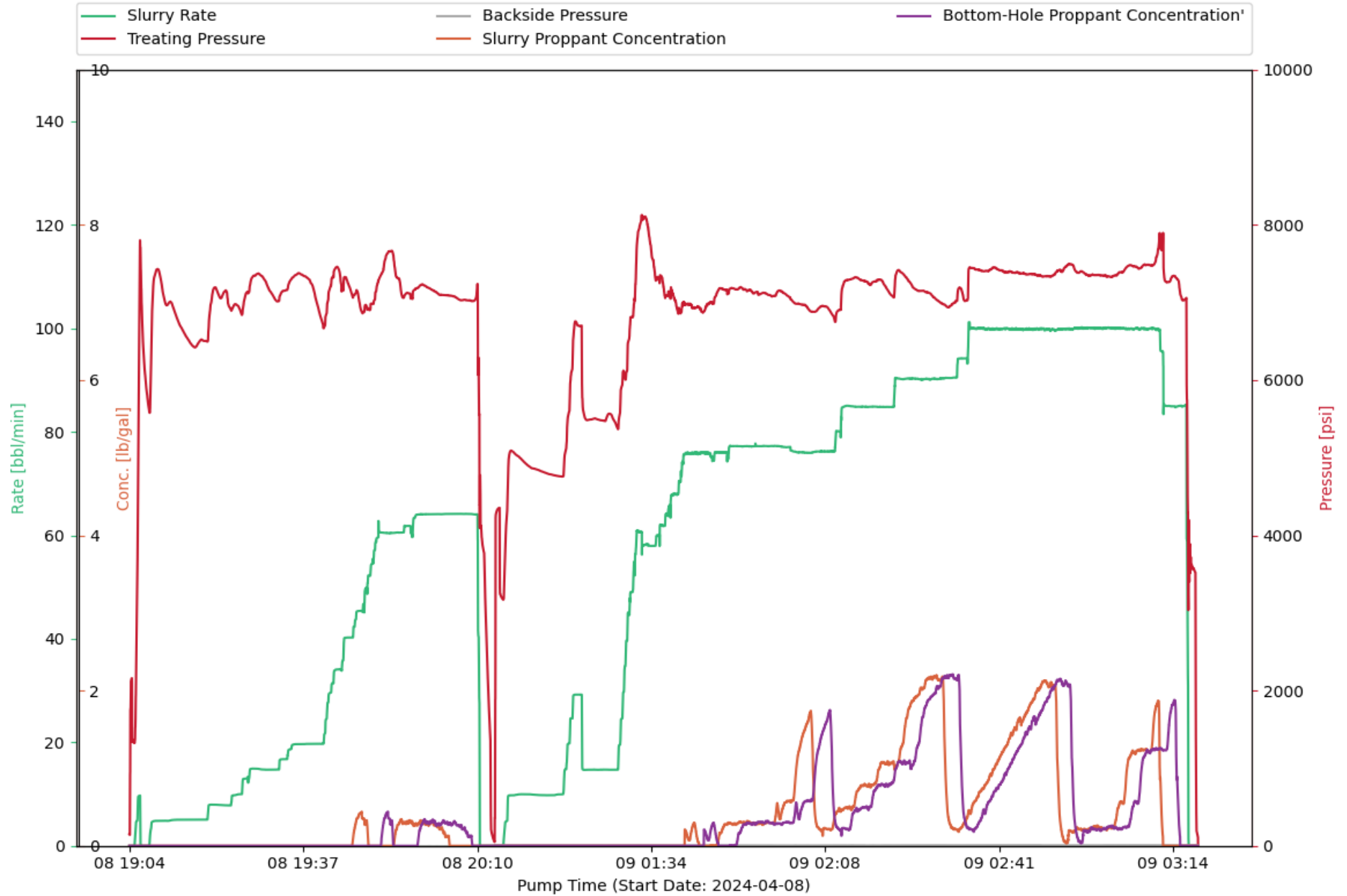
ACTUAL DESIGN

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	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.26	62962	67102	8134559
	10	PLF	Dry FR	30/50 Premium White	2	2	2	97.17	17507	19376	8152066
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	81.32	12509	12886	8164575
	12	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	69.67	63637	68273	8228212
	13	PLF	Dry FR	30/50 Premium White	2	2	2	69.59	10987	12257	8239199
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	69.9	33569	35082	8272768
	15	Flush	Dry FR		0	0	0	26.29	13306	13423	8286074
22	1	Wireline Pump-In	Treated Water		0	0	0	18	1932	1932	8288006
	2	Breakdown	Treated Water		0	0	0	3.88	155	234	8288161
	3	Acid	15% HCl		0	0	0	9.82	1000	1000	8289161
	4	Pad	Dry FR		0	0	0	9.91	481	453	8289642
	5	Pad	Dry FR		0	0	0	63.06	39892	39828	8329534
	6	PLF	Dry FR	100 Mesh Premium White	0.25	0.25	0.25	94.82	53256	53811	8382790
	7	PLF	Dry FR	100 Mesh Premium White	0.25	1.5	0.88	100.03	22753	23631	8405543
	8	PLF	Dry FR	SS-200 Premium White	0.25	0.25	0.25	100.01	12298	12447	8417841
	9	PLF	Dry FR	30/50 Premium White	0.25	2	1.12	99.87	62968	66006	8480809
	10	PLF	Dry FR	30/50 Premium White	2	2	2	99.75	16385	17816	8497194
	11	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.95	9439	9558	8506633
	12	PLF	Dry FR	30/50 Premium White	0.25	1.94	1.1	99.82	61895	64851	8568528
	13	PLF	Dry FR	30/50 Premium White	2	2	2	99.68	15275	16610	8583803
	14	PLF	Dry FR	30/50 Premium White	0.25	0.25	0.25	99.99	38647	39092	8622450
	15	PLF	Dry FR	30/50 Premium White	0.25	3.86	2.06	99.71	39395	42484	8661845

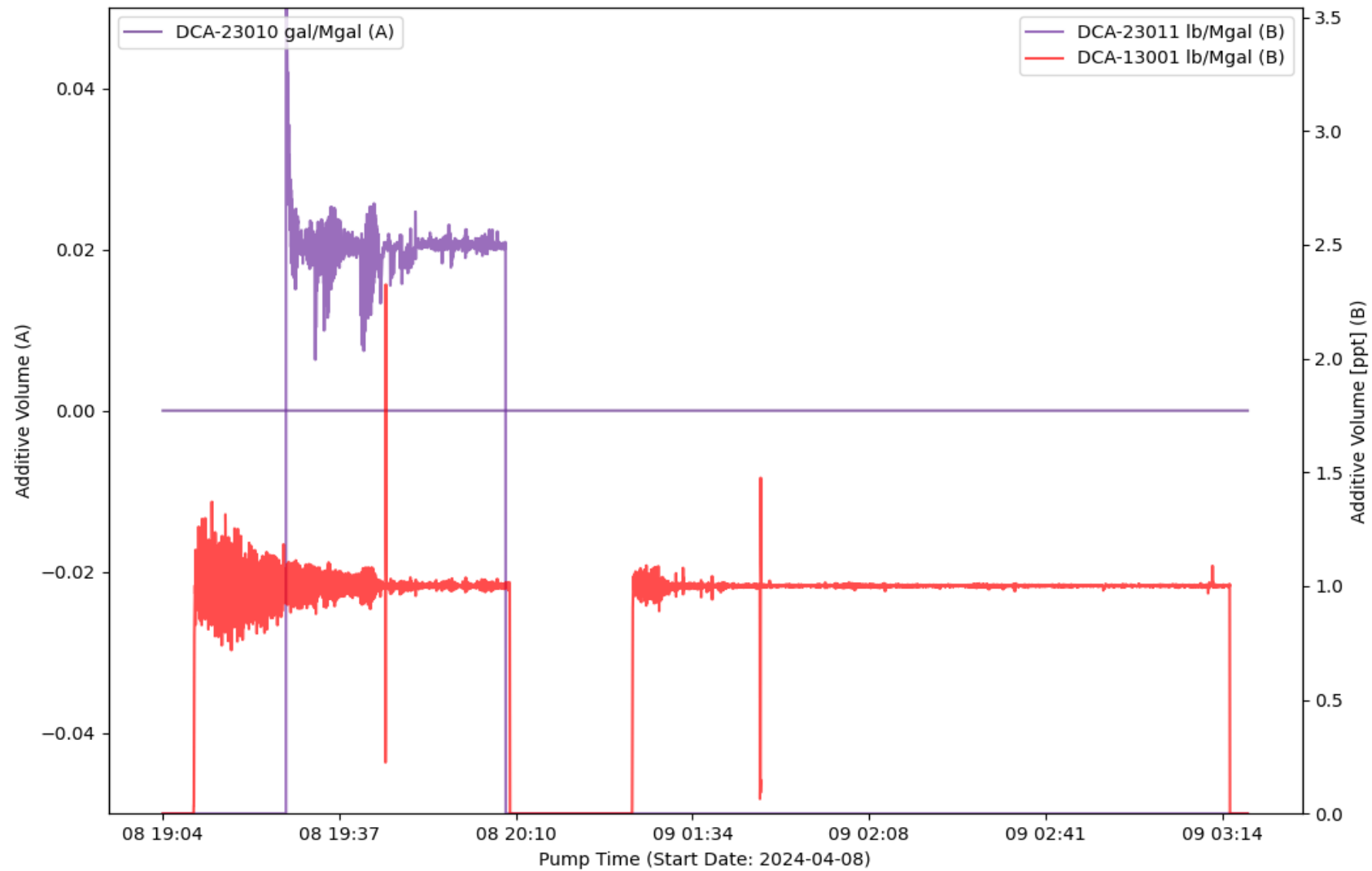
ACTUAL DESIGN

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	16	Flush	Dry FR		0	0	0	99.93	6381	6324	8668226
	17	Flush	Dry FR		0	0	0	100.05	4343	4362	8672569
	18	Flush	Treated Water		0	0	0	81.93	3323	3329	8675892
Total									8675892	9024239	

TREATMENT PLOT : Treatment Interval 1



CHEMISTRY PLOT : Treatment Interval 1



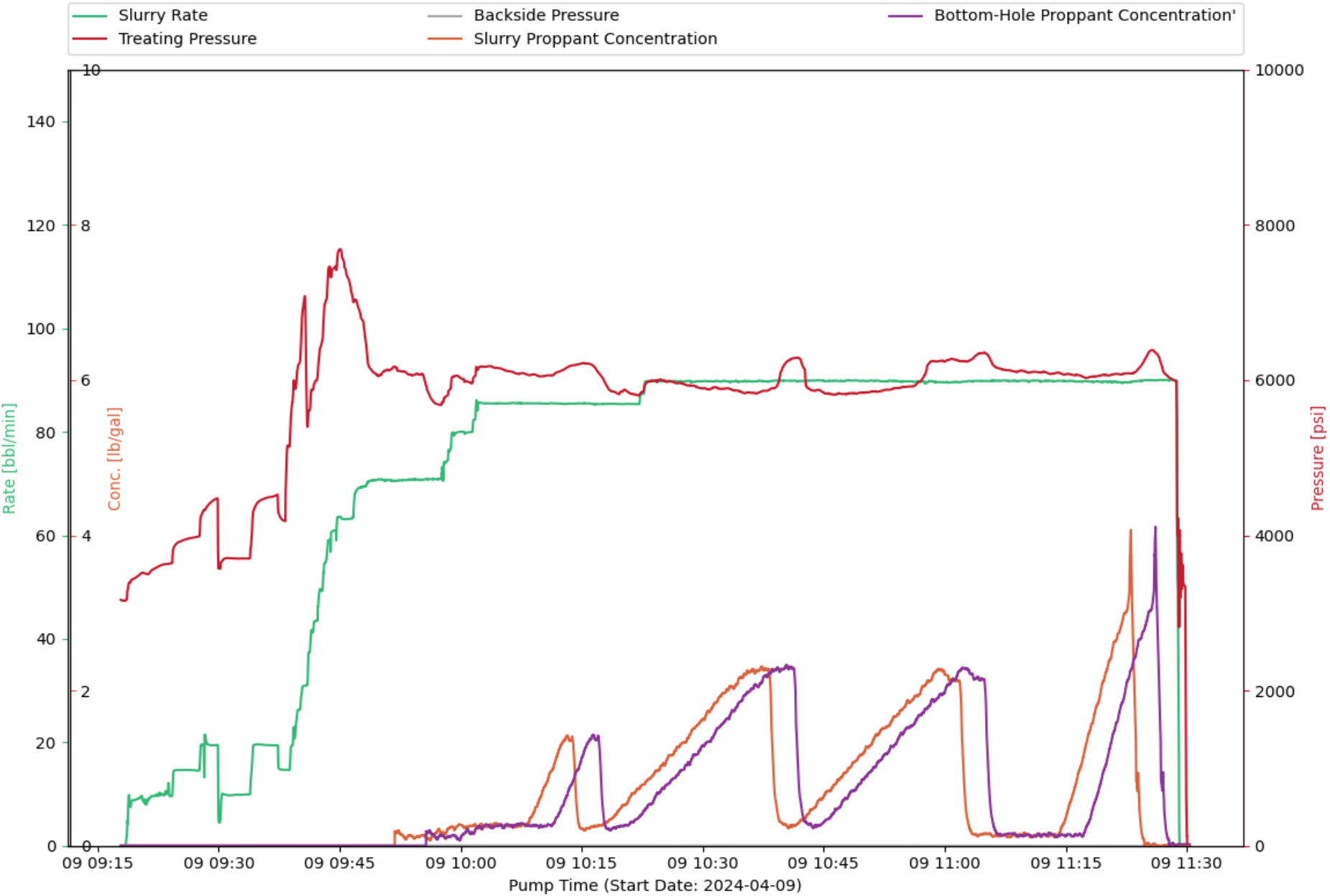
EVENT LOG : TREATMENT INTERVAL 1

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	Start Avg Trt 1	2024-04-08T19:04:23	0	2142	0	0	0	0	0
2	Open Well	2024-04-08T19:04:33	0	1338	0	0	0	0	0
3	Start Pumping	2024-04-08T19:04:56	0	1330	0	0	0	0	0
4	Break Formation	2024-04-08T19:09:41	4.83	7402	0	0	834.9	627.05	0
5	Pump Acid	2024-04-08T19:10:56	4.84	6981	0	0	1095	882.12	0
6	Pump Acid	2024-04-08T19:25:13	9.98	6902	0	0	4778	4769	0
7	Spot Acid	2024-04-08T19:38:34	19.71	7287	0	0	13775	13824	0
8	Flush Acid	2024-04-08T19:41:13	19.76	6667	0	0	15959	16014	0
9	Spot Acid	2024-04-08T19:44:05	34.1	7433	0	0	19546	19592	0
10	Flush Acid	2024-04-08T19:44:48	35.57	7168	0	0	20568	20627	0
11	Stop Pumping	2024-04-08T20:11:12	0	4775	0	0	83750	85125	8812
12	ISIP	2024-04-08T20:11:23	0	4125	0	0	83750	85125	8812
13	Shut In Well	2024-04-08T20:11:33	0	3962	0	0	83750	85125	8812
14	Open Well	2024-04-09T01:05:58	0	3335	0	0	83750	85125	8812
15	Start Pumping	2024-04-09T01:06:32	0	3175	0	0	83750	85125	8812
16	Pump Acid	2024-04-09T01:14:03	9.79	4823	0	0	86588	87988	8812
17	Pump Acid	2024-04-09T01:17:30	9.95	4760	0	0	87985	89408	8812
18	Ball on Seat	2024-04-09T01:26:17	14.73	5486	0	0	94697	96105	8812
19	Break Formation	2024-04-09T01:27:56	14.69	5473	0	0	95734	97118	8812
20	Spot Acid	2024-04-09T01:29:18	24.55	5915	0	0	96761	98130	8812
21	Flush Acid	2024-04-09T01:29:54	34.61	6066	0	0	97491	98852	8812
22	Spot Acid	2024-04-09T01:33:56	58.14	8084	0	0	106459	107795	8812

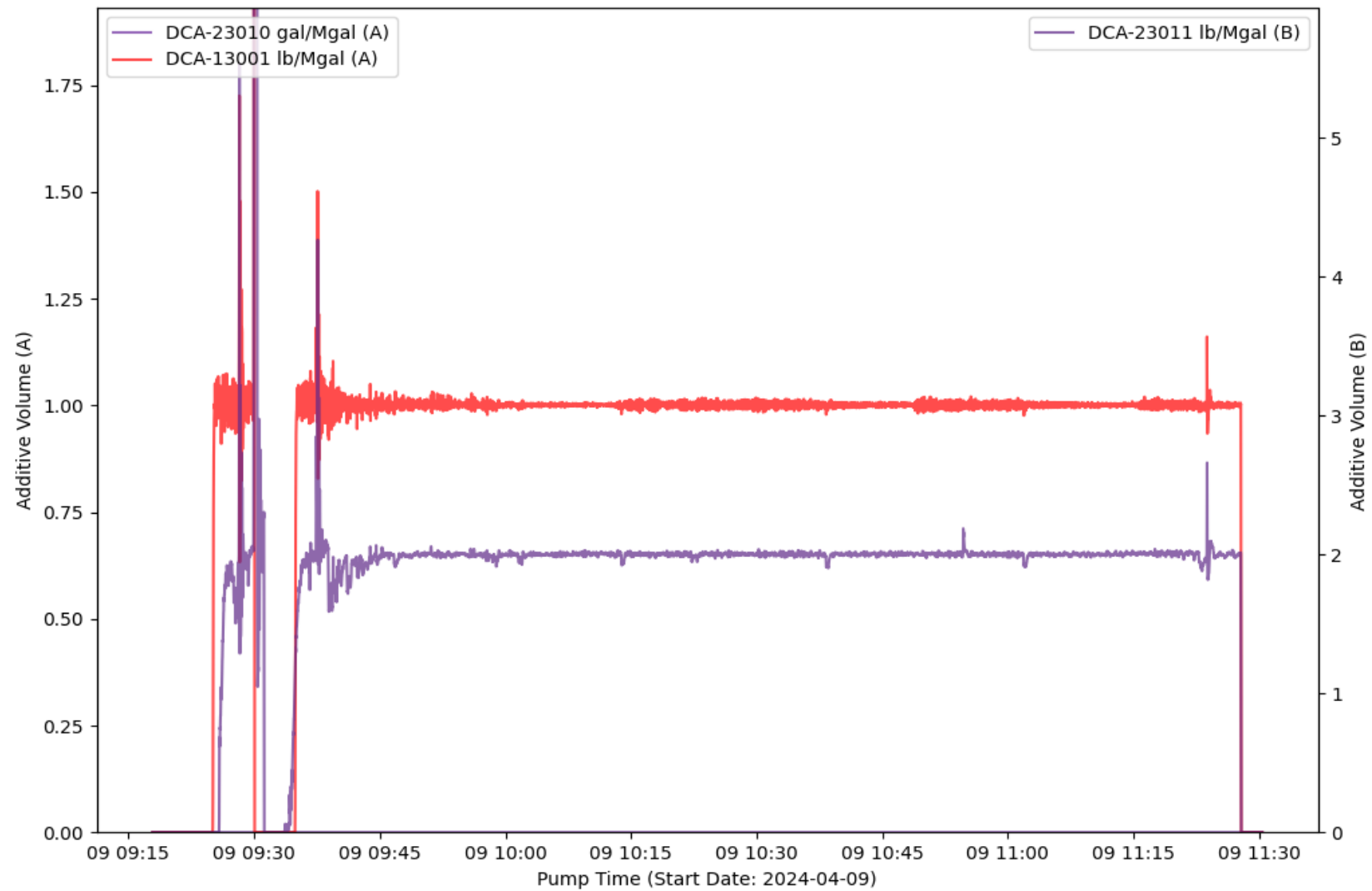
EVENT LOG : TREATMENT INTERVAL 1

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	2024-04-09T01:37:41	63.38	7069	0	0	115821	117169	8812
24	Stop Pumping	2024-04-09T03:17:58	0.83	4130	0	0	472852	488029	281403
25	ISIP	2024-04-09T03:18:21	0	3713	0	0	472854	488029	281403
26	Shut In Well	2024-04-09T03:18:36	0	3594	0	0	472854	488029	281403

TREATMENT PLOT : Treatment Interval 2



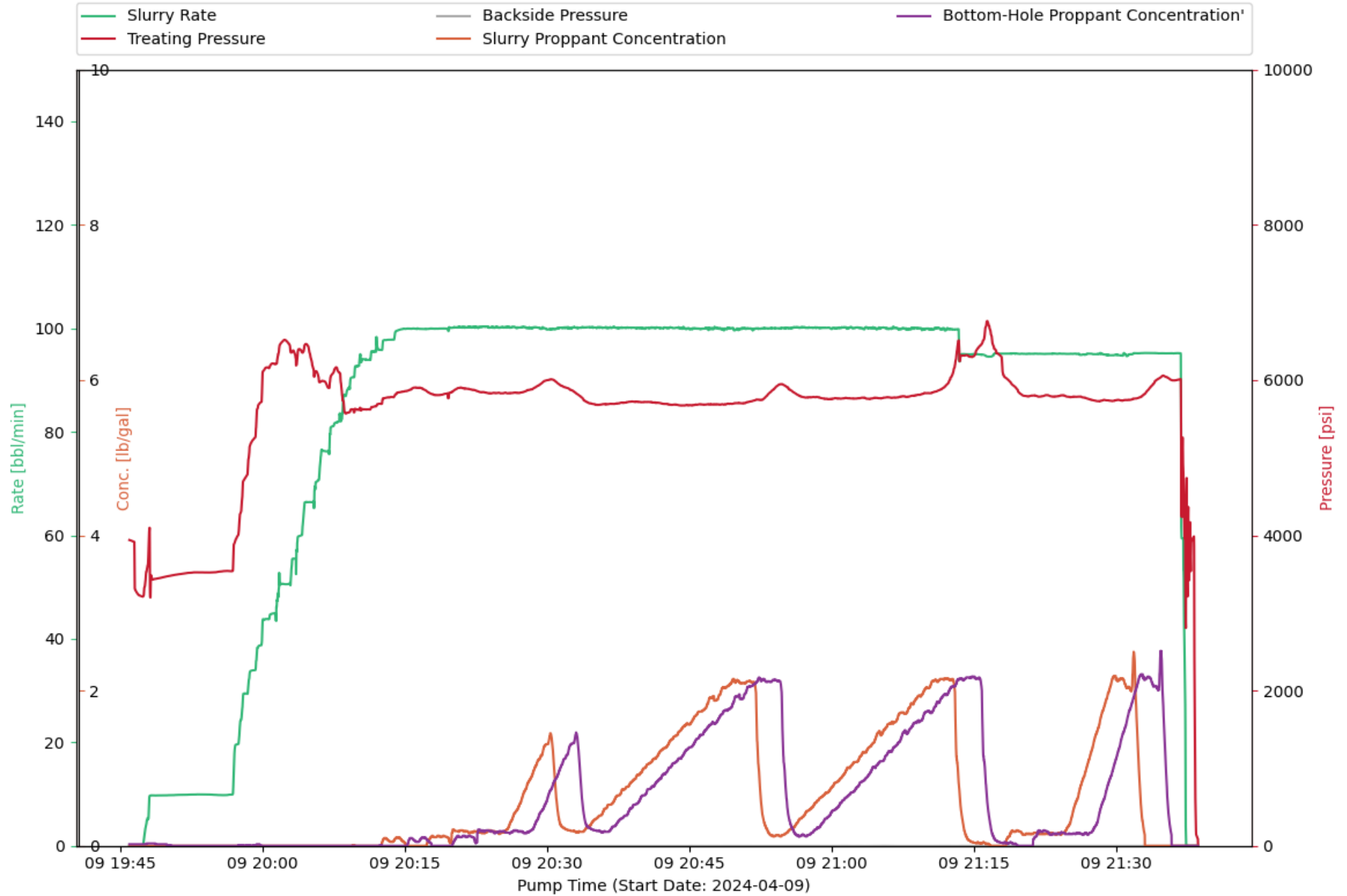
CHEMISTRY PLOT : Treatment Interval 2



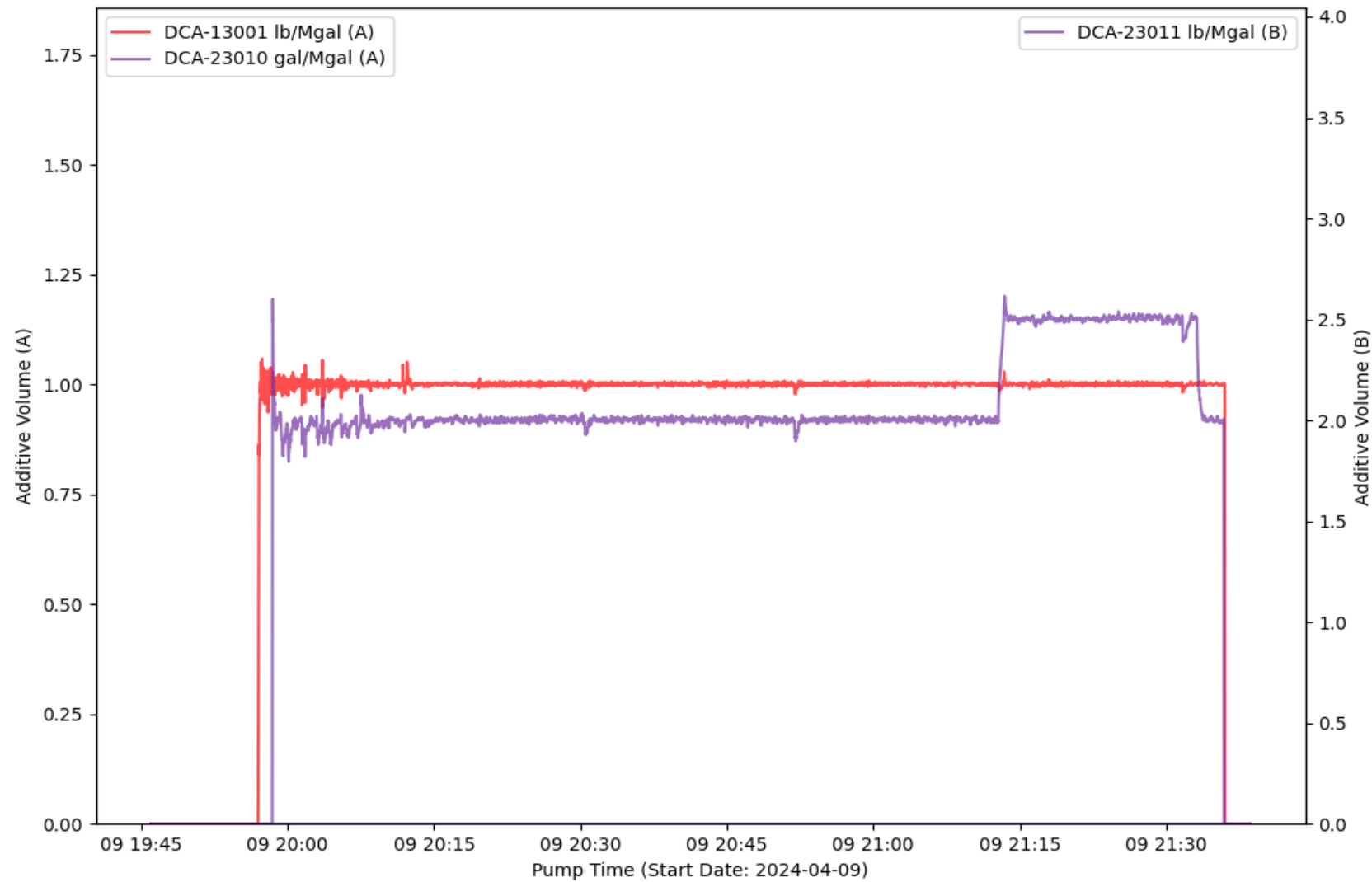
EVENT LOG : TREATMENT INTERVAL 2

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	2024-04-09T09:17:52	0	3167	0	0	0	0	0
2	Start Pumping	2024-04-09T09:18:29	0.31	3164	0	0	0	0.29	0
3	Pump Acid	2024-04-09T09:20:25	9.51	3510	0	0	688.55	648	0
4	Pump Acid	2024-04-09T09:31:17	9.75	3706	0	0	6611	6614	0
5	Ball on Seat	2024-04-09T09:38:14	14.7	4183	0	0	11030	11007	0
6	Spot Acid	2024-04-09T09:40:42	30.95	7077	0	0	13430	13345	0
7	Flush Acid	2024-04-09T09:41:00	31.22	5399	0	0	13829	13738	0
8	Spot Acid	2024-04-09T09:45:05	63.59	7689	0	0	22836	22656	0
9	Flush Acid	2024-04-09T09:48:18	69.64	6439	0	0	31827	31573	0
10	Stop Pumping	2024-04-09T11:29:06	1.02	3935	0	0.02	384420	397790	306957
11	ISIP	2024-04-09T11:29:09	0	4063	0	0.02	384423	397790	306957
12	Shut In Well	2024-04-09T11:29:39	0	3367	0	0.02	384426	397790	306957

TREATMENT PLOT : Treatment Interval 3



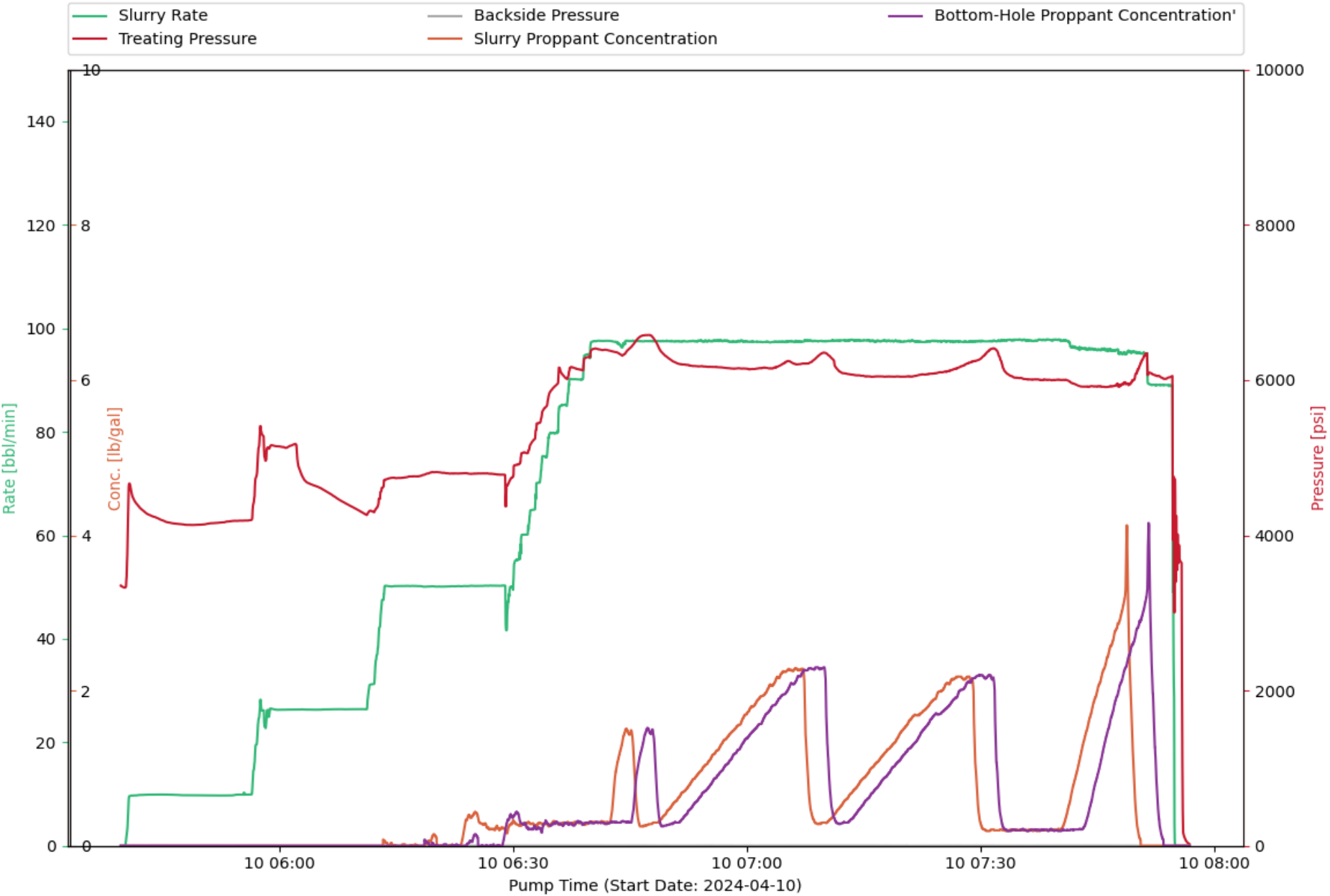
CHEMISTRY PLOT : Treatment Interval 3



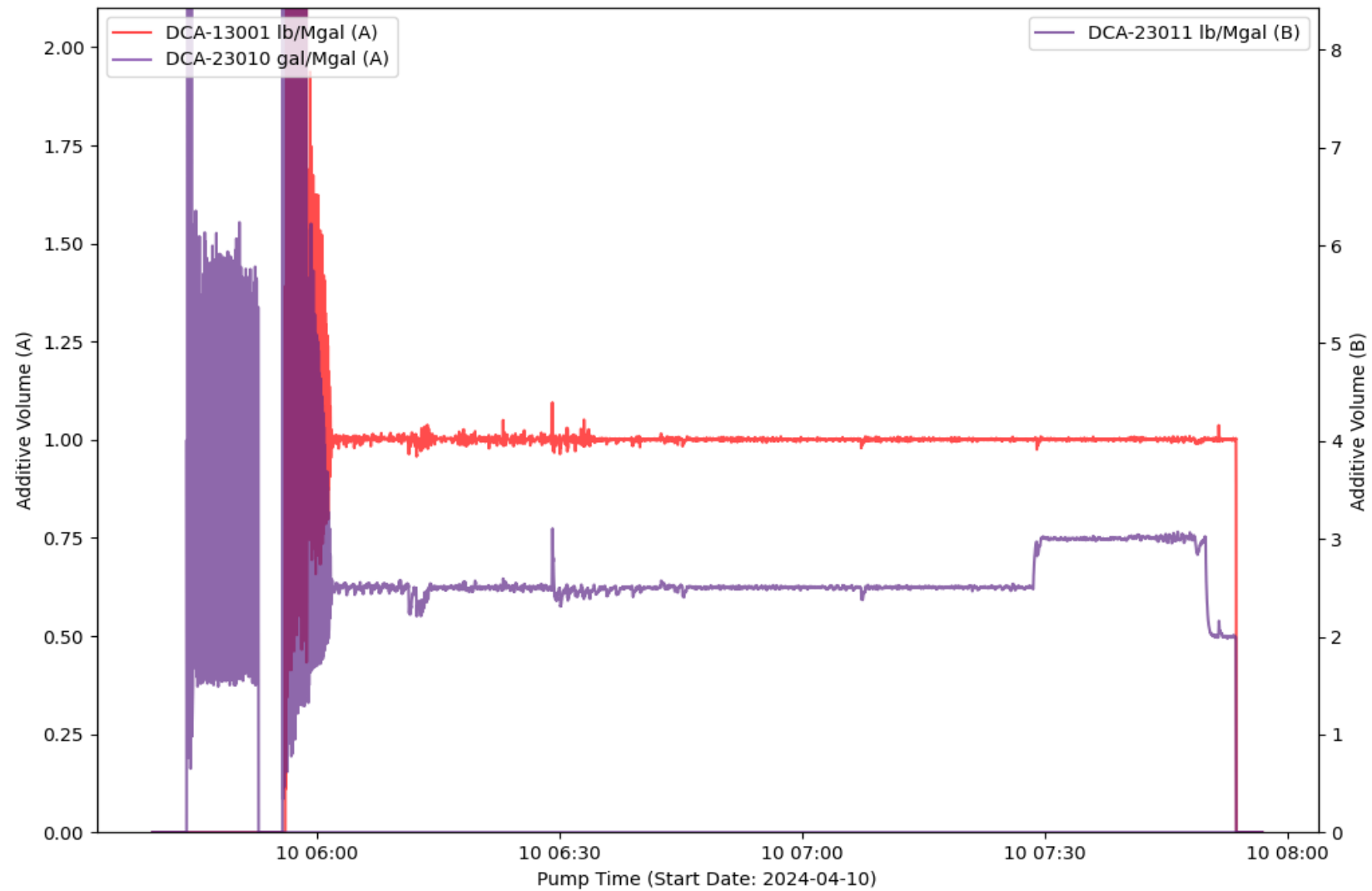
EVENT LOG : TREATMENT INTERVAL 3

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	2024-04-09T19:46:37	0	3300	0	0.02	0	0	0
2	Start Pumping	2024-04-09T19:47:26	0	3211	0	0.02	0	0.18	0
3	Pump Acid	2024-04-09T19:49:31	9.74	3459	0	0.02	740.53	692.74	0
4	Pump Acid	2024-04-09T19:52:37	9.92	3519	0	0	2007	1970	0
5	Break Formation	2024-04-09T19:56:21	9.83	3540	0	0	3535	3520	0
6	Spot Acid	2024-04-09T20:02:22	50.57	6520	0	0	12362	12209	0
7	Flush Acid	2024-04-09T20:03:35	55.24	6190	0	0	15055	14878	0
8	Spot Acid	2024-04-09T20:07:55	81.87	6130	0	0	28055	27786	0
9	Flush Acid	2024-04-09T20:08:47	86.9	5570	0	0	31144	30860	0
10	Stop Pumping	2024-04-09T21:37:20	2.12	2807	0	0	383945	395628	262093
11	ISIP	2024-04-09T21:37:45	0	4152	0	0	383952	395629	262093
12	Shut In Well	2024-04-09T21:37:59	0	3943	0	0	383952	395629	262093
13	Suspending Job	2024-04-09T21:38:36	0	86.11	0	0	383952	395629	262093

TREATMENT PLOT : Treatment Interval 4



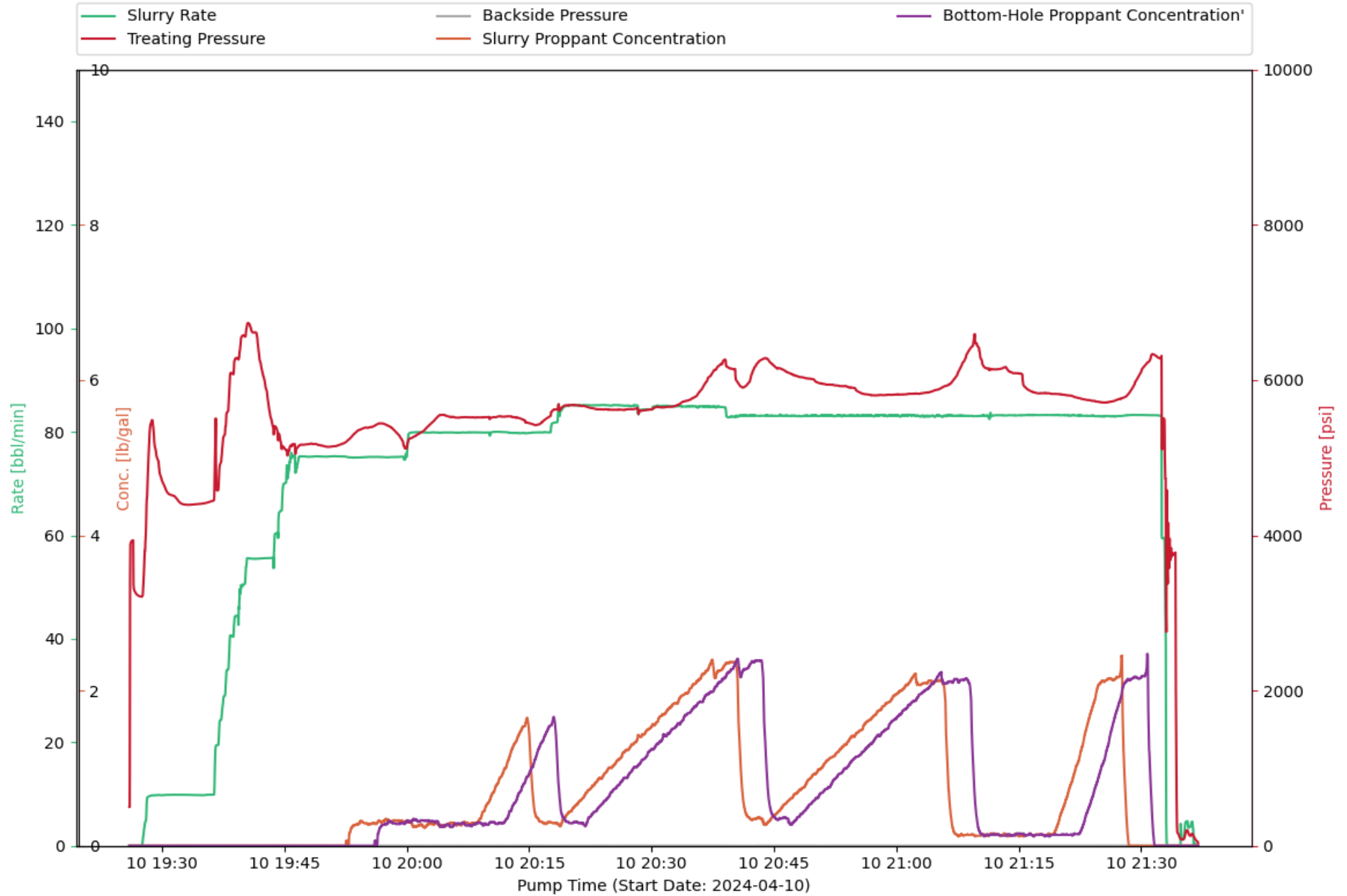
CHEMISTRY PLOT : Treatment Interval 4



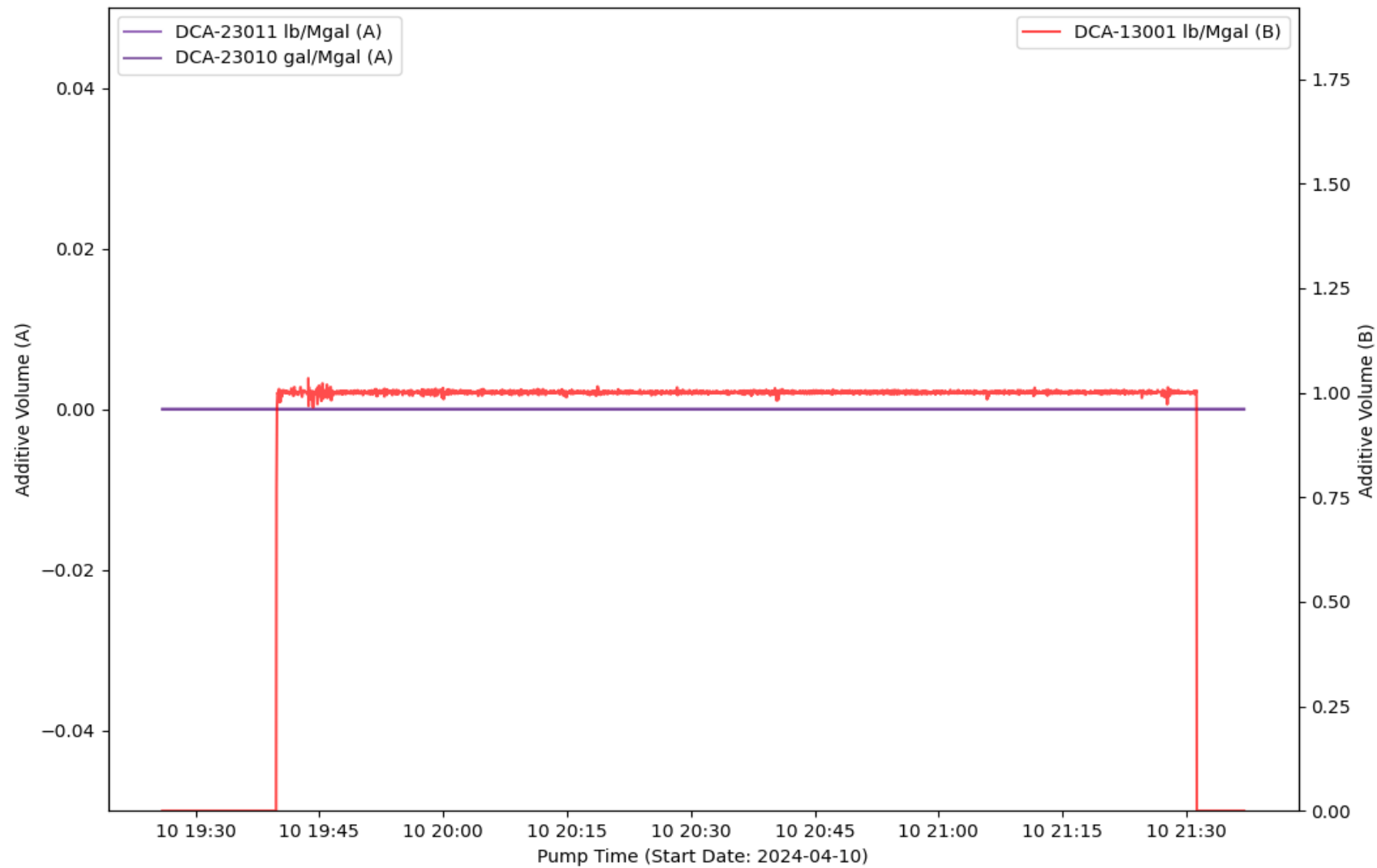
EVENT LOG : TREATMENT INTERVAL 4

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	2024-04-10T05:39:35	0	3352	0	0	0	0	0
2	Start Pumping	2024-04-10T05:40:09	0	3326	0	0	0	0	0
3	Break Formation	2024-04-10T05:40:35	8.69	4575	0	0	21.97	60.59	0
4	Pump Acid	2024-04-10T05:41:19	9.73	4448	0	0	293.67	359.2	0
5	Pump Acid	2024-04-10T05:53:00	9.71	4171	0	0	5156	5175	0
6	Spot Acid	2024-04-10T05:57:30	27.96	5408	0	0	7397	7470	0
7	Flush Acid	2024-04-10T05:57:54	26.18	5278	0	0	7869	7919	0
8	Spot Acid	2024-04-10T05:57:55	26.19	5276	0	0	7877	7937	0
9	Flush Acid	2024-04-10T05:58:10	22.76	4961	0	0	8117	8188	0
10	Stop Pumping	2024-04-10T07:54:59	1.05	4714	0	0	384002	397728	317072
11	ISIP	2024-04-10T07:55:01	0	4724	0	0	384002	397729	317072
12	Shut In Well	2024-04-10T07:55:39	0	3678	0	0	384005	397729	317072
13	Suspending Job	2024-04-10T07:56:53	0	23.13	0	0	384005	397729	317072

TREATMENT PLOT : Treatment Interval 5



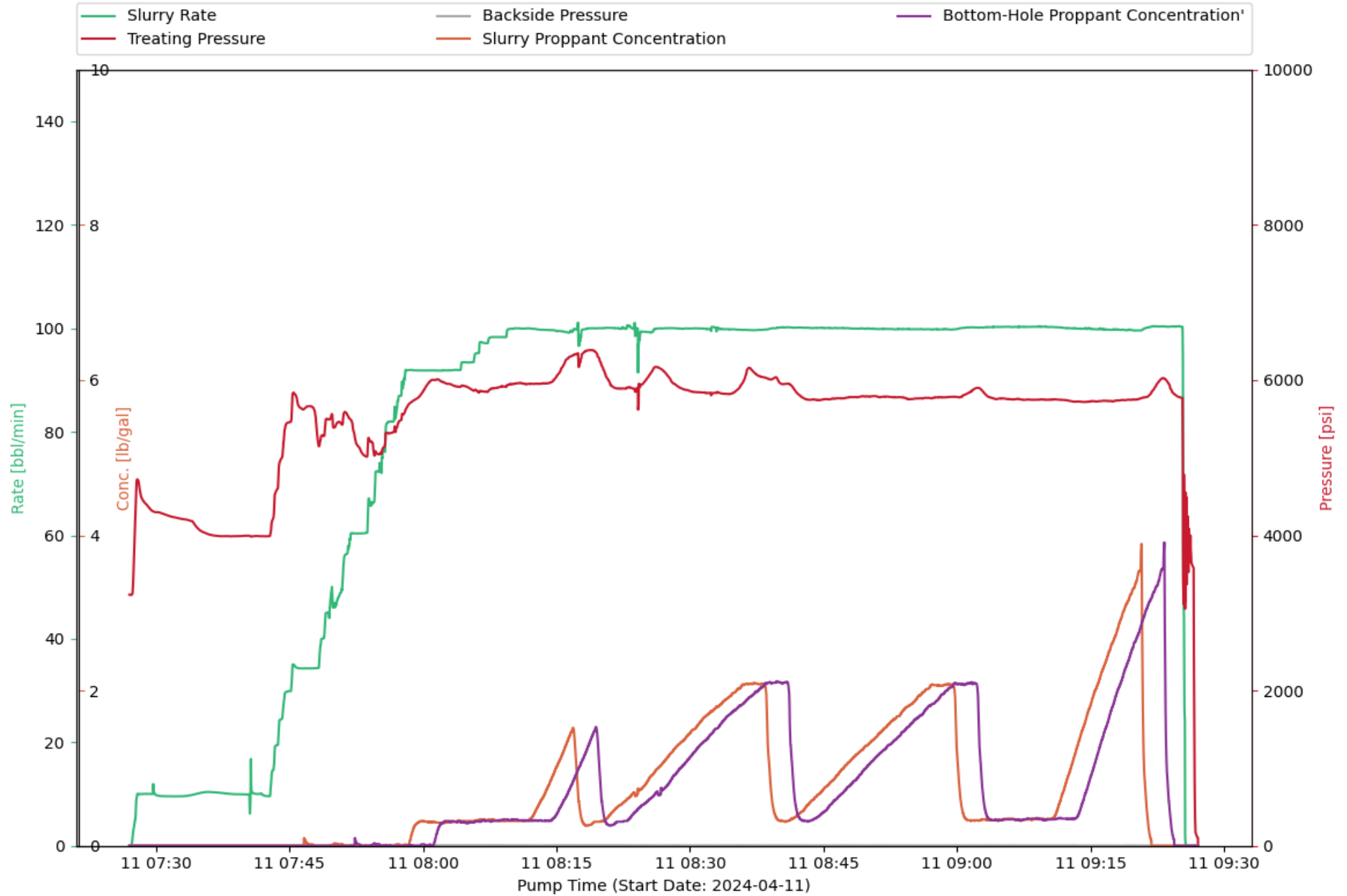
CHEMISTRY PLOT : Treatment Interval 5



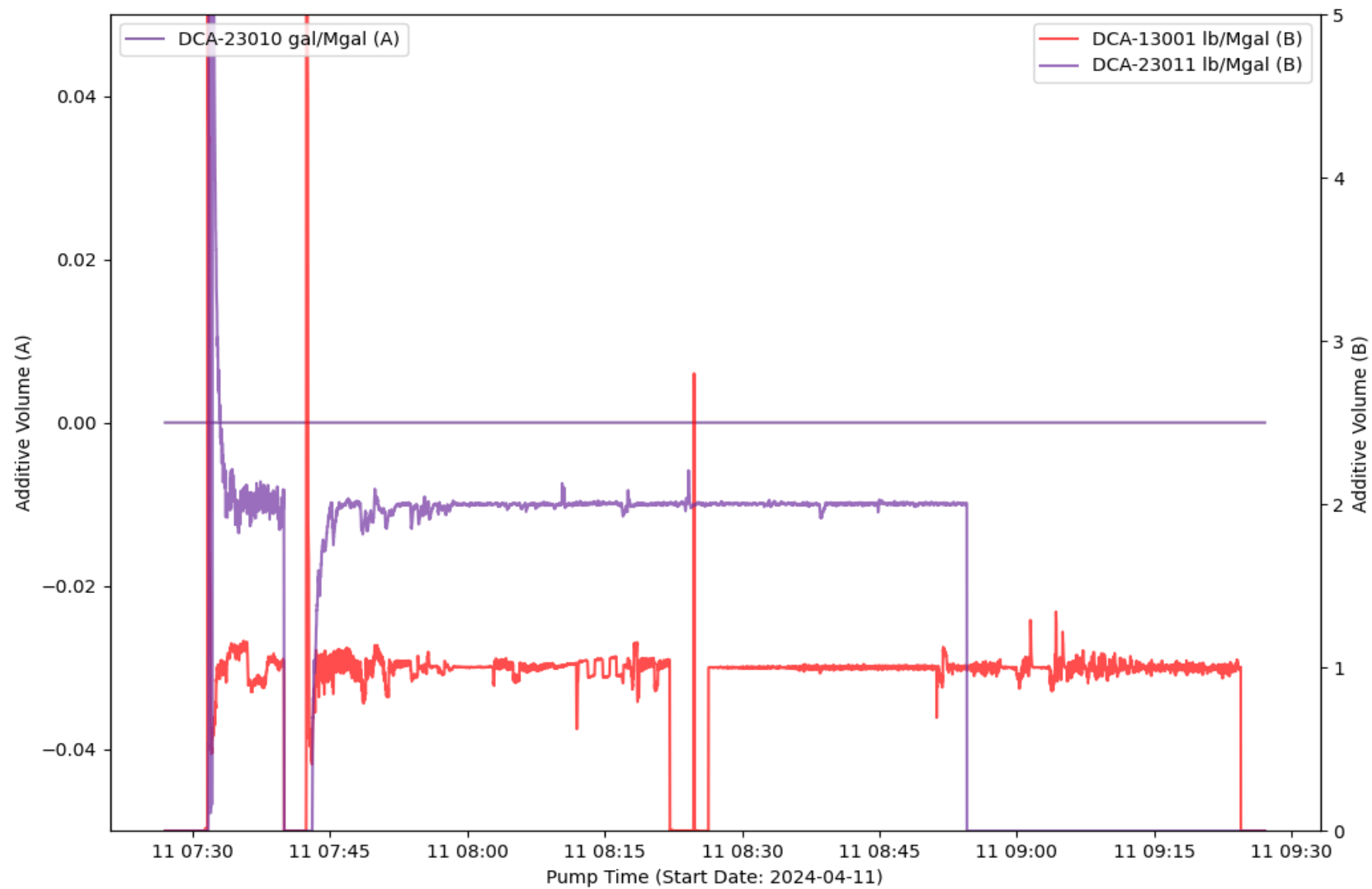
EVENT LOG : TREATMENT INTERVAL 5

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-10T19:26:34	0	3303	0	0	0	0	0
2	Start Pumping	2024-04-10T19:27:30	0	3209	0	0	0	0	0
3	Break Formation	2024-04-10T19:28:53	9.75	5409	0	0	373.89	393.27	0
4	Pump Acid	2024-04-10T19:29:12	9.78	5106	0	0	506.06	523.75	0
5	Pump Acid	2024-04-10T19:34:48	9.79	4407	0	0	2816	2841	0
6	Spot Acid	2024-04-10T19:40:38	55.55	6733	0	0	10219	10234	0
7	Flush Acid	2024-04-10T19:42:01	55.53	6246	0	0	13459	13472	0
8	Spot Acid	2024-04-10T19:43:16	55.62	5536	0	0	16353	16364	0
9	Flush Acid	2024-04-10T19:45:35	73.32	5088	0	0	22630	22629	0
10	Stop Pumping	2024-04-10T21:33:08	0.78	4391	0	0	376709	391432	298814
11	ISIP	2024-04-10T21:33:39	0	3826	0	0	376712	391432	298814
12	Shut In Well	2024-04-10T21:33:50	0	3771	0	0	376712	391432	298814
13	Suspending Job	2024-04-10T21:36:58	0	50.18	0	0	376954	391656	298814

TREATMENT PLOT : Treatment Interval 6



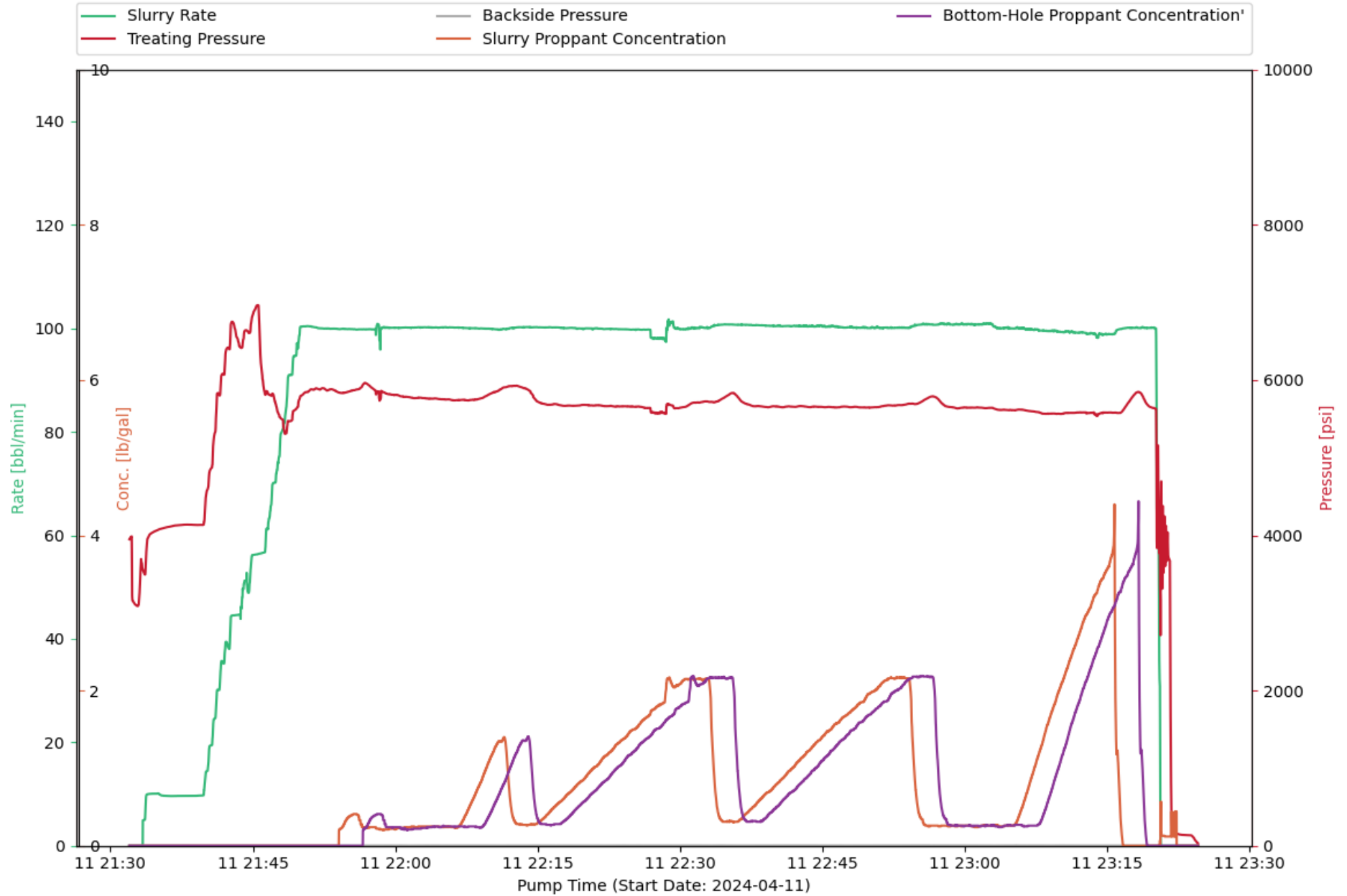
CHEMISTRY PLOT : Treatment Interval 6



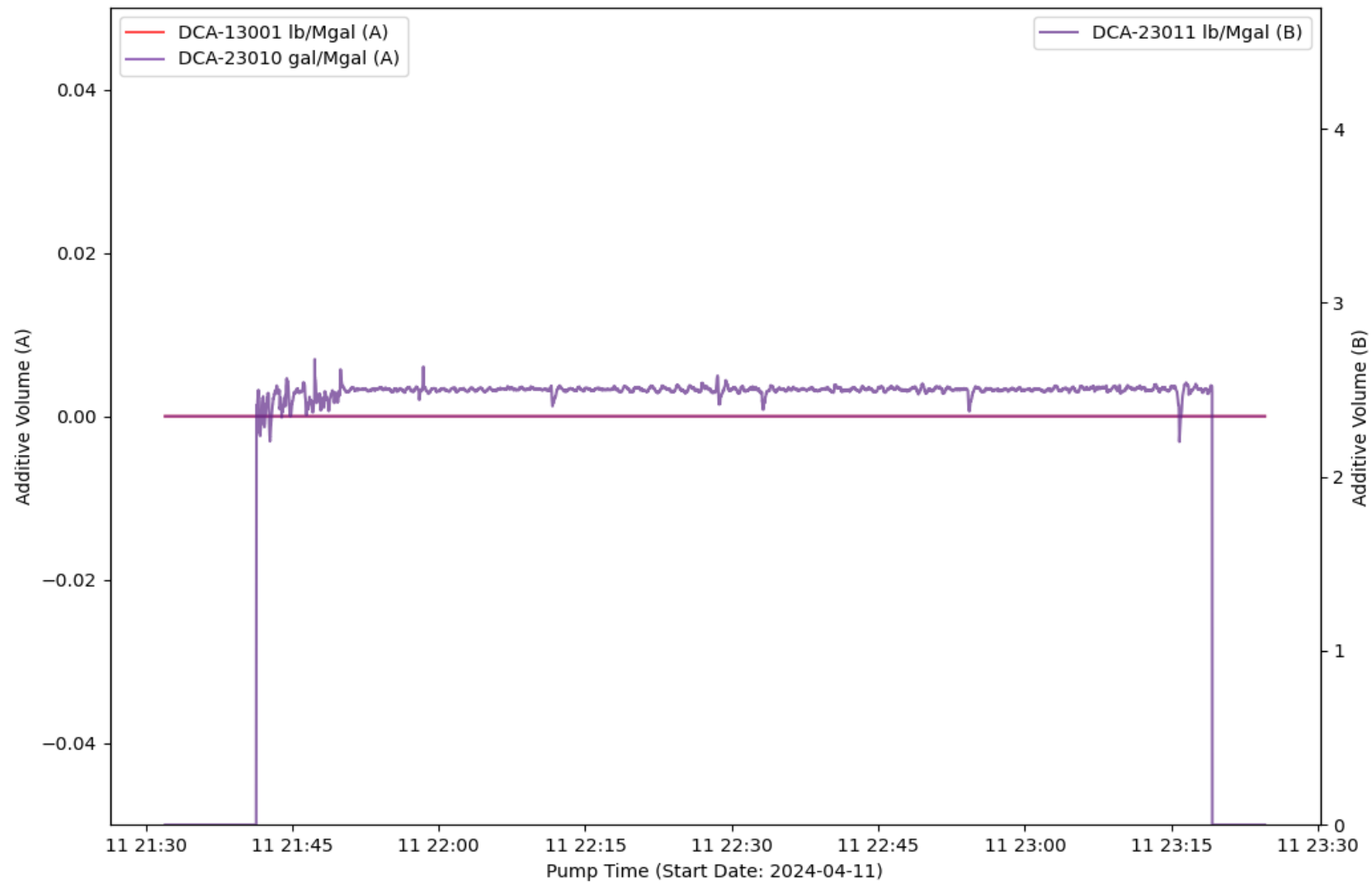
EVENT LOG : TREATMENT INTERVAL 6

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	Start Pumping	2024-04-11T07:27:14	0.01	3231	0	0	0	0.22	0
2	Break Formation	2024-04-11T07:27:47	9.01	4654	0	0	0	89.74	0
3	Pump Acid	2024-04-11T07:29:57	9.84	4298	0	0	1058	1009	0
4	Pump Acid	2024-04-11T07:41:05	10.07	3991	0	0	5756	5661	0
5	Spot Acid	2024-04-11T07:47:28	34.3	5662	0.02	0	12000	11982	49.15
6	ISIP	2024-04-11T07:48:12	34.37	5186	0	0	13057	13044	54.44
7	Spot Acid	2024-04-11T07:51:11	56.01	5589	0	0	18715	18737	108.3
8	Flush Acid	2024-04-11T07:53:35	60.47	5015	0.01	0	24689	24723	114.22
9	Stop Pumping	2024-04-11T09:25:41	0.71	3162	0	0	388062	403448	334923
10	ISIP	2024-04-11T09:25:42	0.53	3934	0	0	388062	403449	334923
11	Shut In Well	2024-04-11T09:26:21	0	3647	0	0	388062	403449	334923

TREATMENT PLOT : Treatment Interval 7



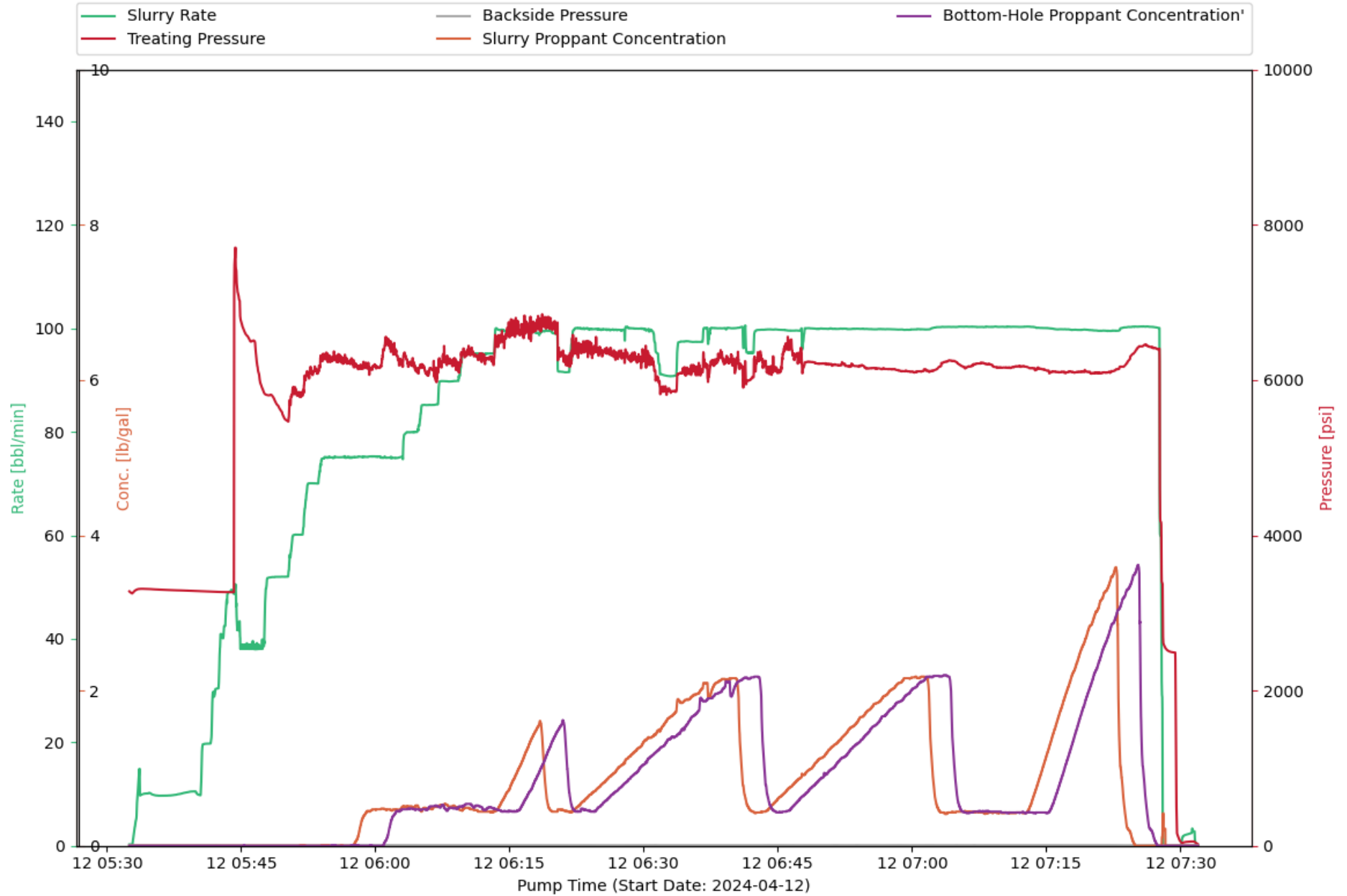
CHEMISTRY PLOT : Treatment Interval 7



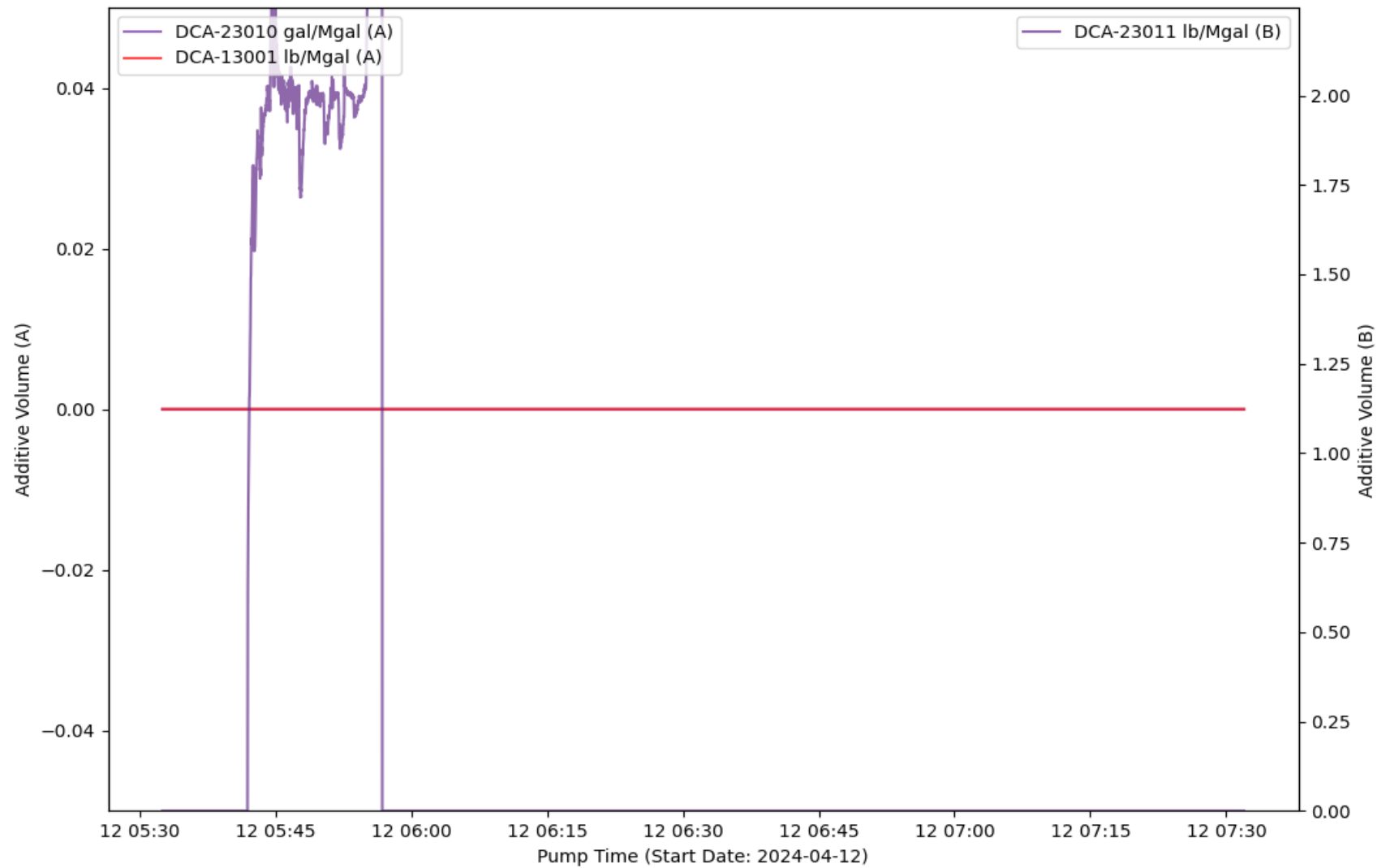
EVENT LOG : TREATMENT INTERVAL 7

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	2024-04-11T21:32:22	0	3155	0	0	0	0	0
2	Start Pumping	2024-04-11T21:33:01	0	3163	0	0	0	0	0
3	Pump Acid	2024-04-11T21:35:24	9.73	4086	0	0	760.98	782.95	0
4	Pump Acid	2024-04-11T21:39:23	9.71	4134	0	0	2405	2399	0
5	Break Formation	2024-04-11T21:42:57	44.54	6737	0	0	6333	6421	0
6	Spot Acid	2024-04-11T21:45:24	56.32	6959	0	0	11529	11535	0
7	Flush Acid	2024-04-11T21:46:05	56.64	5967	0	0	13162	13163	0
8	Spot Acid	2024-04-11T21:47:04	69.86	5827	0	0	15706	15730	0
9	Flush Acid	2024-04-11T21:48:00	79.82	5501	0	0	18528	18568	0
10	Stop Pumping	2024-04-11T23:20:37	1.67	2713	0.34	0	388264	406109	335945
11	ISIP	2024-04-11T23:21:21	0	4039	0.12	0	388271	406109	335948
12	Shut In Well	2024-04-11T23:21:31	0	3693	0.12	0	388271	406109	335948
13	Suspending Job	2024-04-11T23:24:33	0	36.36	0	0	388271	406109	335948

TREATMENT PLOT : Treatment Interval 8



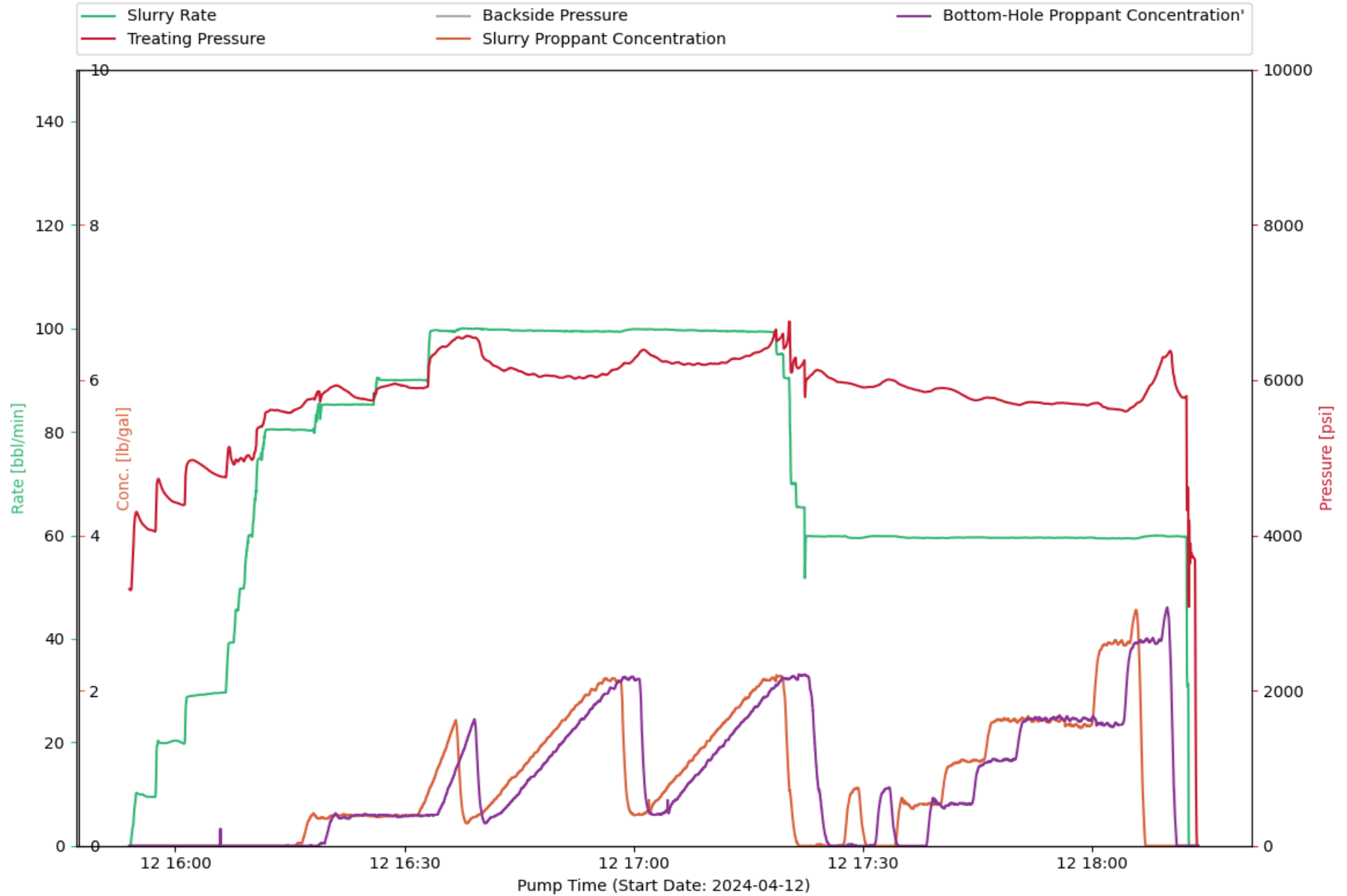
CHEMISTRY PLOT : Treatment Interval 8



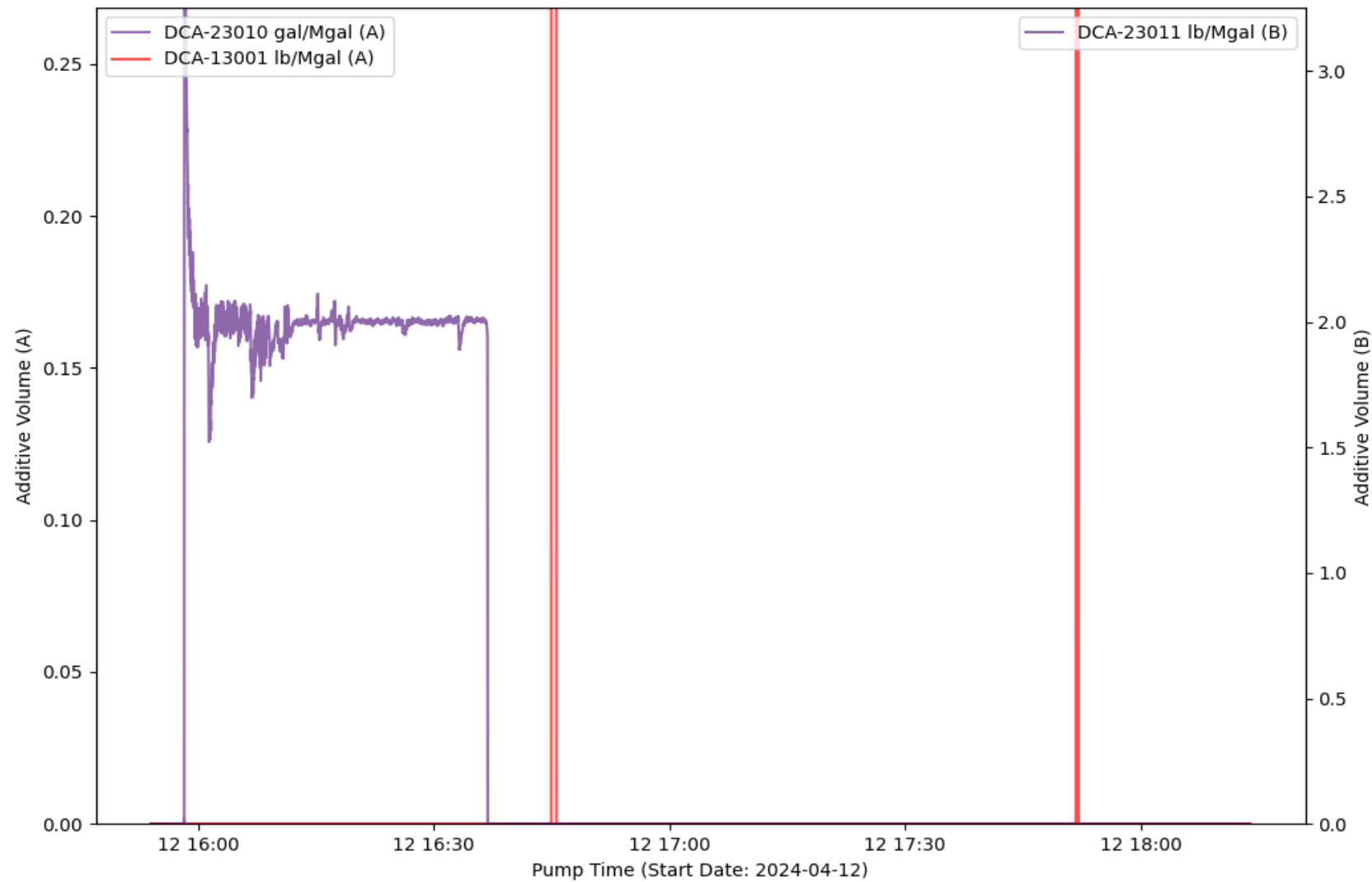
EVENT LOG : TREATMENT INTERVAL 8

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	2024-04-12T05:32:31	0.26	3278	0	0	0	0	0
2	Start Pumping	2024-04-12T05:32:50	0.25	3251	0	0	0	3.24	0
3	Break Formation	2024-04-12T05:33:20	6.83	3301	0	0	23.9	71.42	0
4	Pump Acid	2024-04-12T05:34:22	10.1	3310	0	0	518.55	531.66	0
5	Pump Acid	2024-04-12T05:38:46	10.28	3287	0	0	2350	2358	0
6	Spot Acid	2024-04-12T05:46:28	38.05	6507	0	0	11823	12112	0
7	Flush Acid	2024-04-12T05:47:34	39.62	5838	0	0	13573	13895	0
8	Spot Acid	2024-04-12T05:48:22	51.9	5809	0	0	15198	15549	0
9	Flush Acid	2024-04-12T05:50:09	52.01	5477	0	0	19062	19460	0
10	Stop Pumping	2024-04-12T07:28:04	1.33	2688	0.39	0	389859	407469	371206
11	ISIP	2024-04-12T07:28:09	0	2593	0.21	0	389863	407469	371207
12	Shut In Well	2024-04-12T07:28:52	0	2500	0	0	389863	407469	371207
13	Suspending Job	2024-04-12T07:31:58	0	22.93	0	0	389863	407613	371207

TREATMENT PLOT : Treatment Interval 9



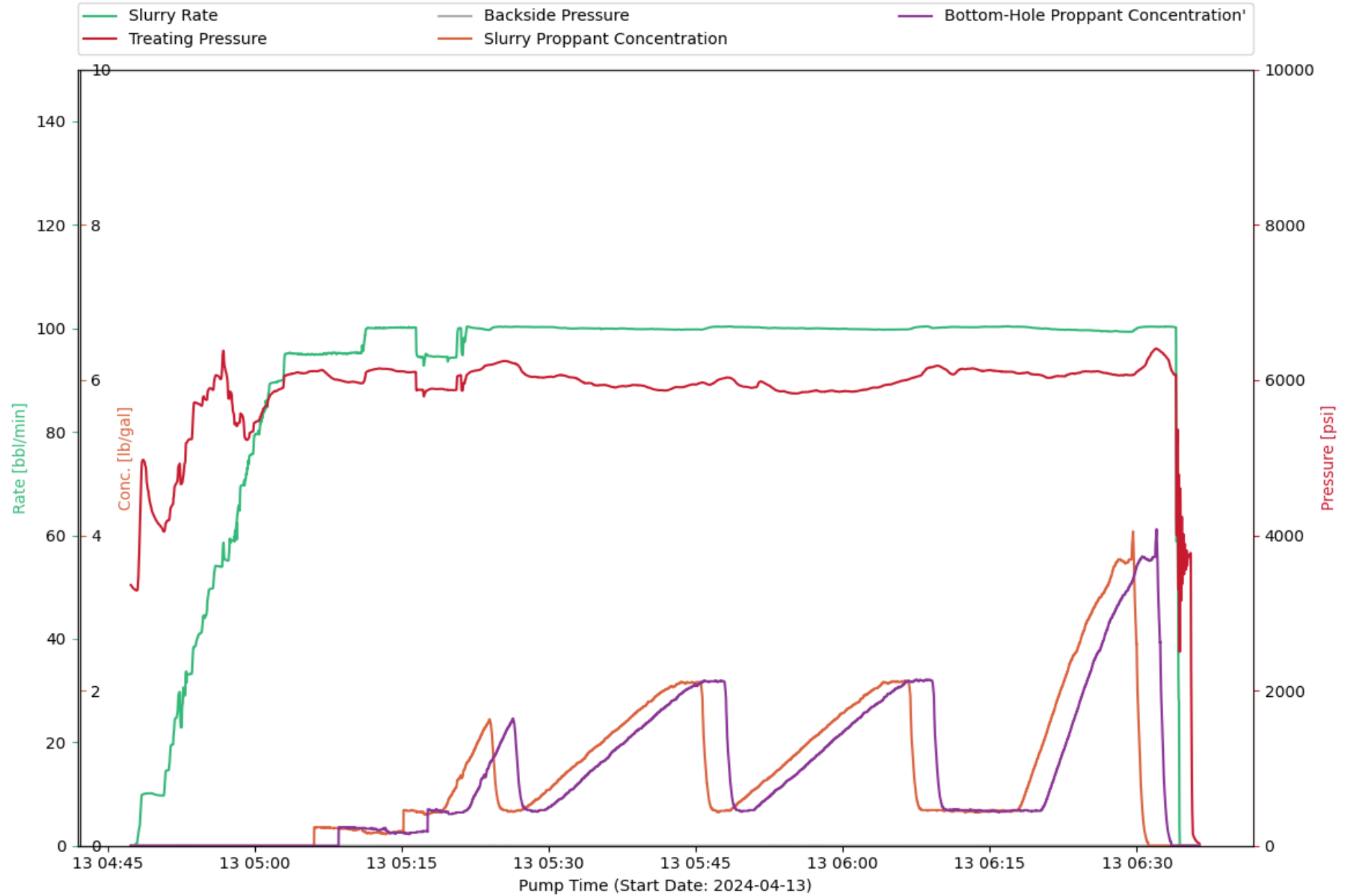
CHEMISTRY PLOT : Treatment Interval 9



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	2024-04-12T15:54:00	0	3308	0	0	0	0	0
2	Start Pumping	2024-04-12T15:54:10	0.05	3292	0	0	0	0.05	0
3	Break Formation	2024-04-12T15:54:40	7.15	4185	0	0	31.28	76.85	0
4	Pump Acid	2024-04-12T15:55:20	9.97	4210	0	0	312.7	348.41	0
5	Spot Acid	2024-04-12T16:02:08	28.97	4969	0	0	5337	5414	0
6	Flush Acid	2024-04-12T16:06:35	29.62	4746	0	0	10806	10901	0
7	Stop Pumping	2024-04-12T18:12:43	1.38	3121	0	0	409511	428039	372570
8	ISIP	2024-04-12T18:12:57	0	3893	0	0	409511	428039	372570
9	Shut In Well	2024-04-12T18:13:19	0	3719	0	0	409511	428039	372570
10	Suspending Job	2024-04-12T18:13:55	0	-12.68	0	0	409511	428039	372570

TREATMENT PLOT : Treatment Interval 10



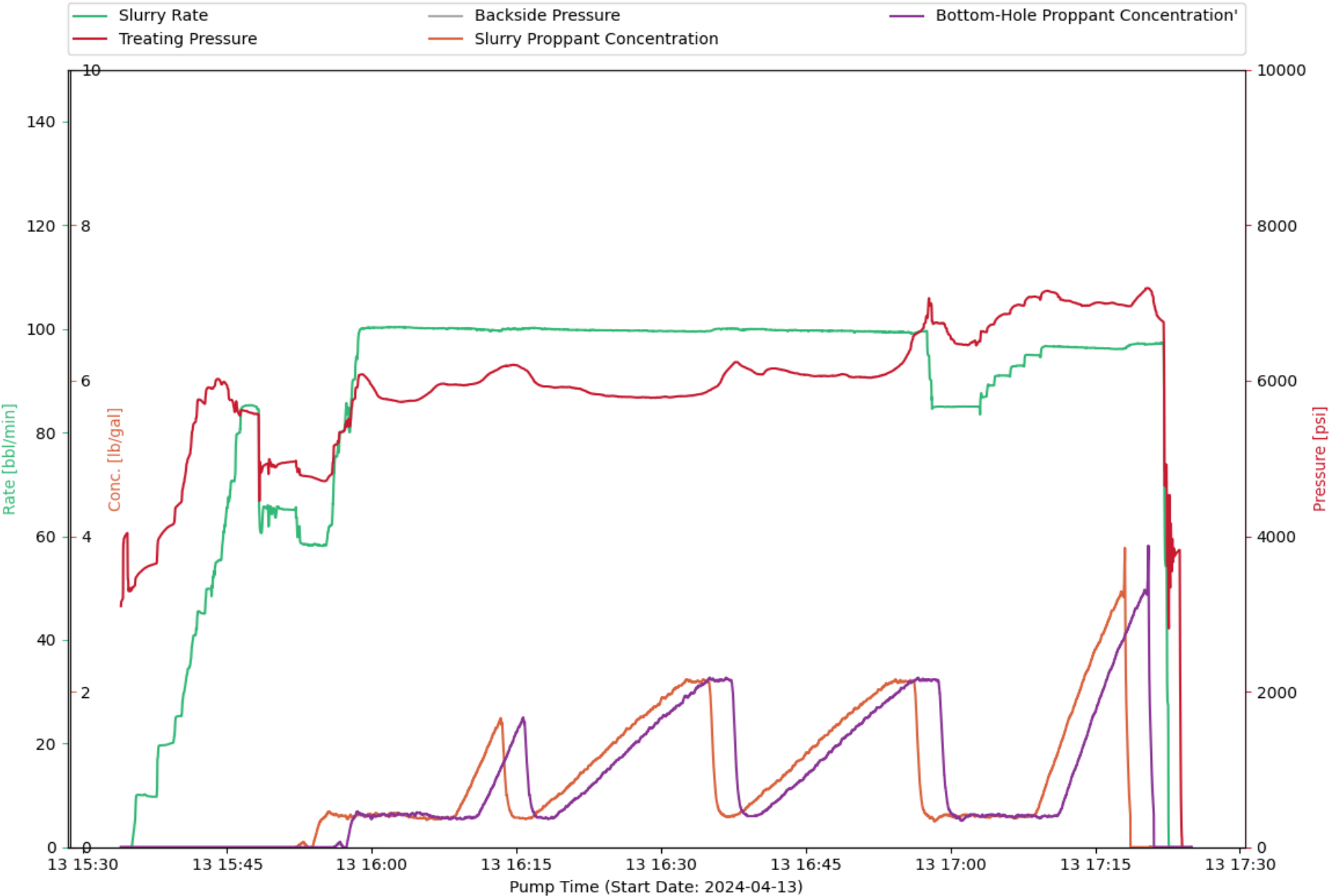
CHEMISTRY PLOT : Treatment Interval 10



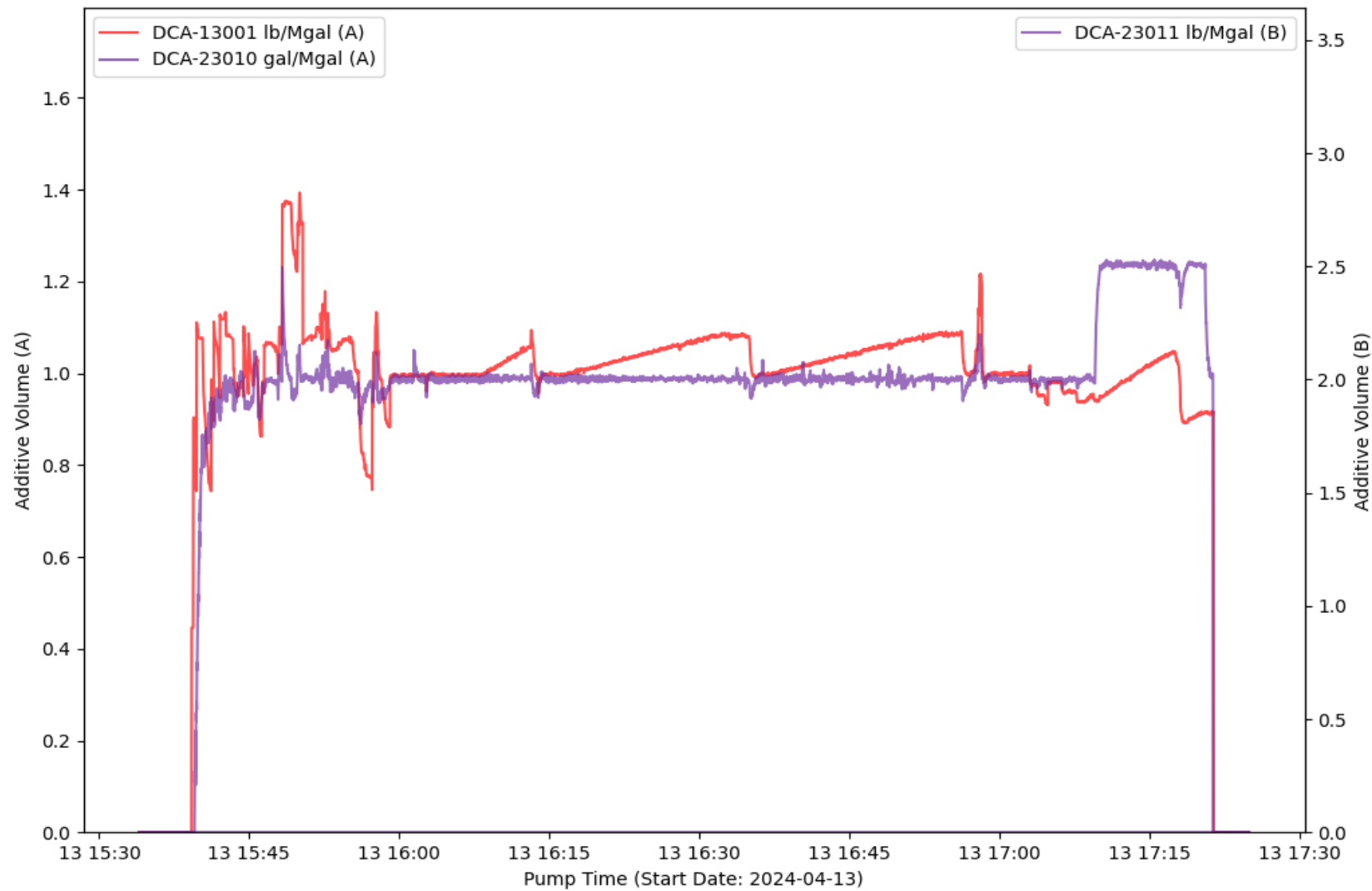
EVENT LOG : TREATMENT INTERVAL 10

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	2024-04-13T04:47:24	0	3360	0	0	0	0	0
2	Start Pumping	2024-04-13T04:47:53	0	3294	0	0	0	0	0
3	Pump Acid	2024-04-13T04:48:48	10.06	4938	0	0	183.09	217.27	0
4	Break Formation	2024-04-13T04:49:05	10.13	4628	0	0	309.04	338.07	0
5	Spot Acid	2024-04-13T04:56:52	58.13	6352	0	0	9986	10384	0
6	Flush Acid	2024-04-13T04:58:54	69.88	5470	0	0	15087	15589	0
7	Stop Pumping	2024-04-13T06:34:22	1.38	2500	0	0	391249	410107	386607
8	ISIP	2024-04-13T06:34:25	0	4344	0	0	391250	410107	386607
9	Shut In Well	2024-04-13T06:35:11	0	3696	0	0	391250	410107	386607
10	Suspending Job	2024-04-13T06:36:23	0	29.83	0	0	391250	410107	386607

TREATMENT PLOT : Treatment Interval 11



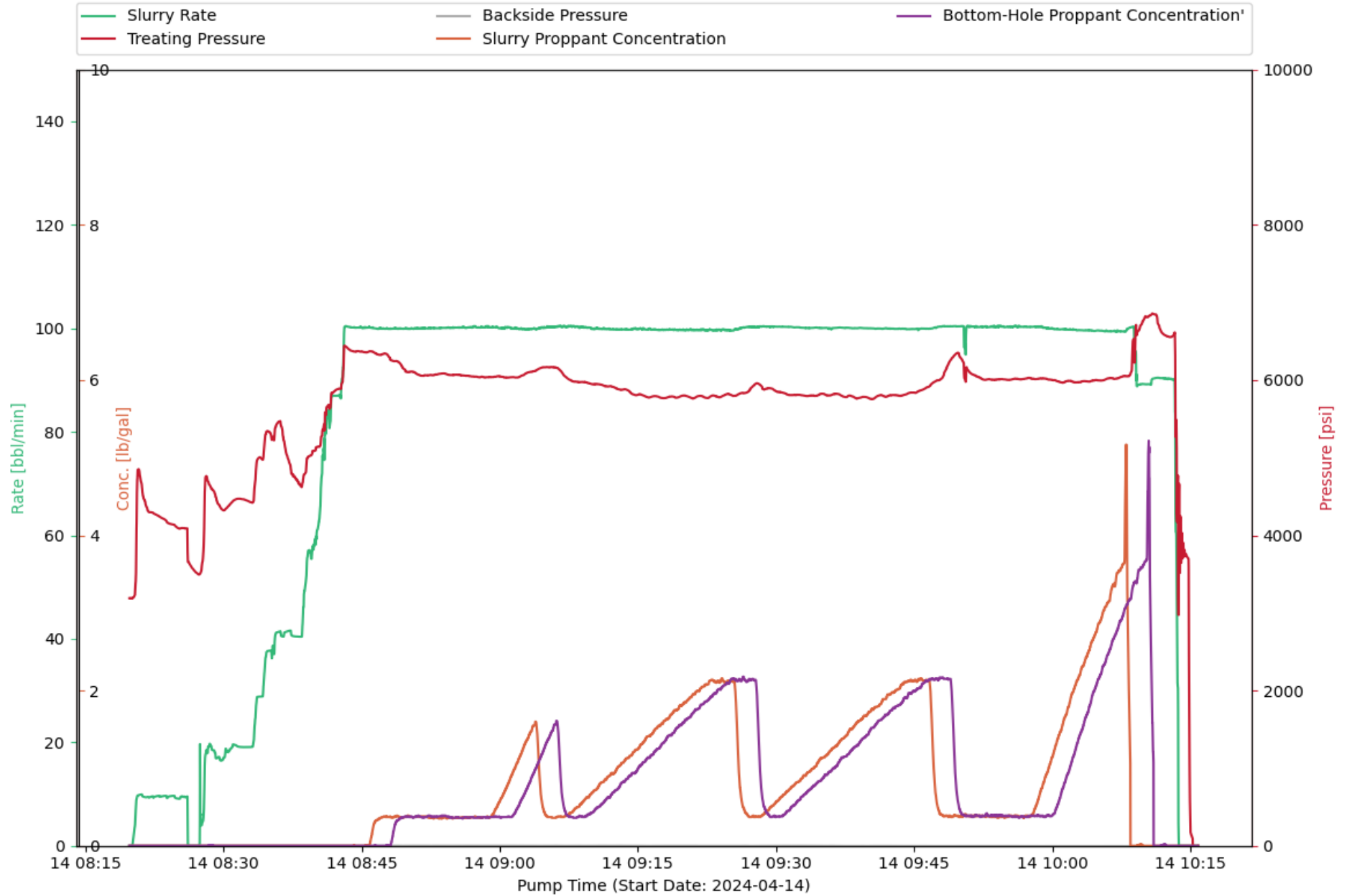
CHEMISTRY PLOT : Treatment Interval 11



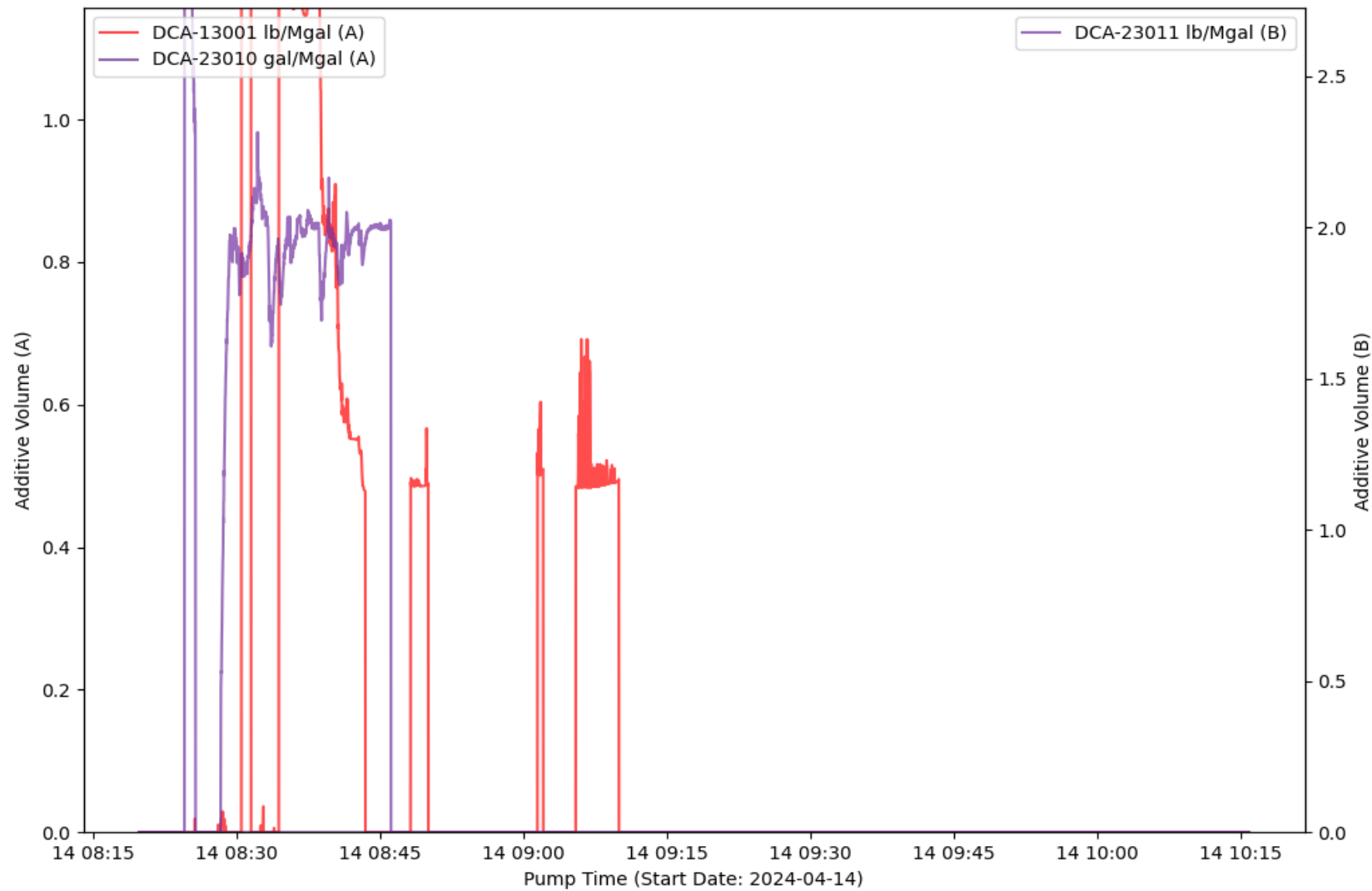
EVENT LOG : TREATMENT INTERVAL 11

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	2024-04-13T15:34:47	0	3295	0	0	0	0	0
2	Start Pumping	2024-04-13T15:35:07	0.01	3308	0	0	0	0.02	0
3	Break Formation	2024-04-13T15:35:30	7.02	3448	0	0	11.93	49.37	0
4	Pump Acid	2024-04-13T15:35:59	10.07	3537	0	0	197.35	251.4	0
5	Spot Acid	2024-04-13T15:44:43	61.51	5983	0	0	11568	11691	0
6	Flush Acid	2024-04-13T15:45:49	71.61	5603	0	0	14697	14832	0
7	Stop Pumping	2024-04-13T17:22:39	0	2814	0	0	380679	396645	346893
8	ISIP	2024-04-13T17:22:52	0	4162	0	0	380679	396645	346893
9	Shut In Well	2024-04-13T17:23:21	0	3771	0	0	380679	396645	346893
10	Suspending Job	2024-04-13T17:24:58	0	-12.34	0	0	380679	396645	346893

TREATMENT PLOT : Treatment Interval 12



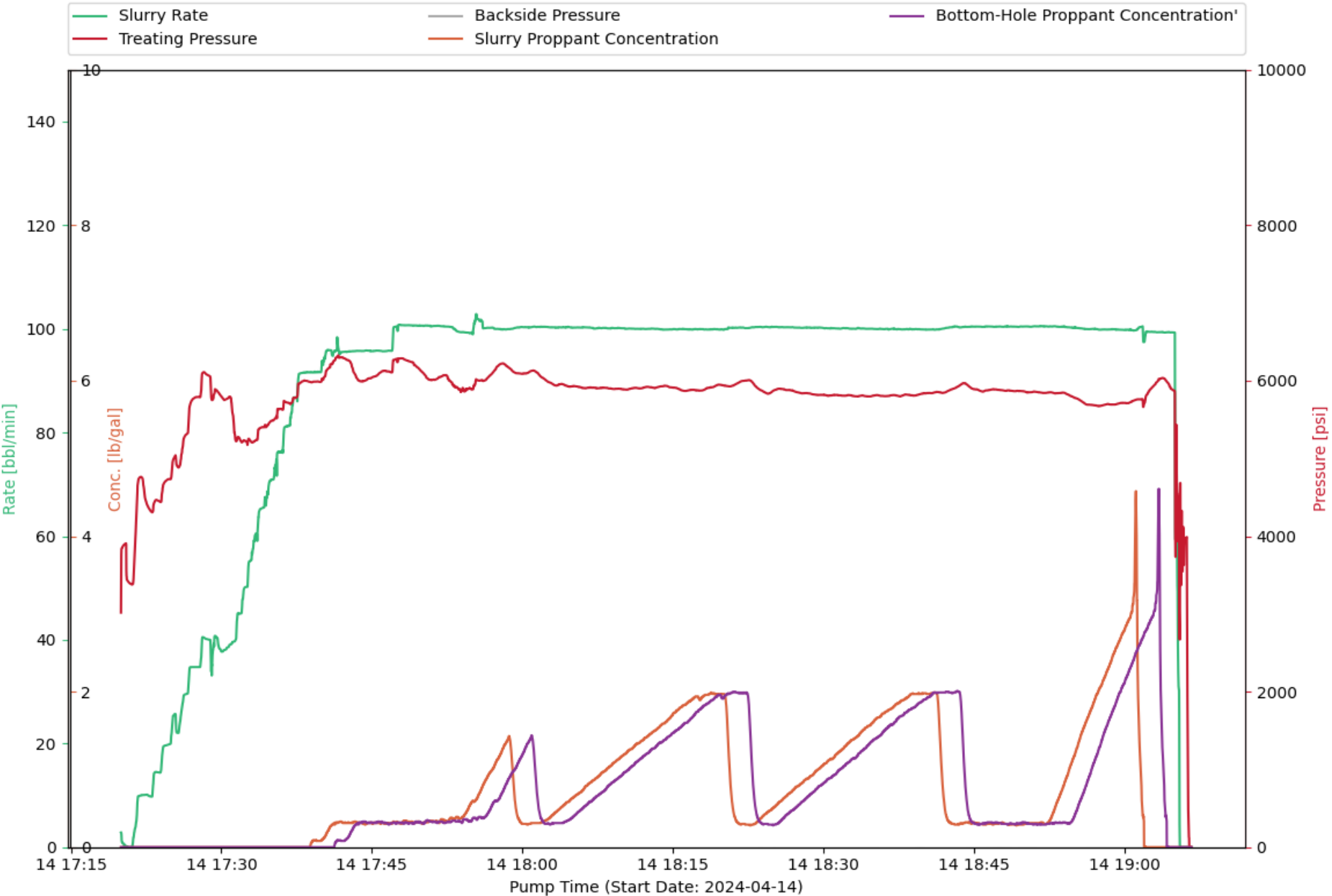
CHEMISTRY PLOT : Treatment Interval 12



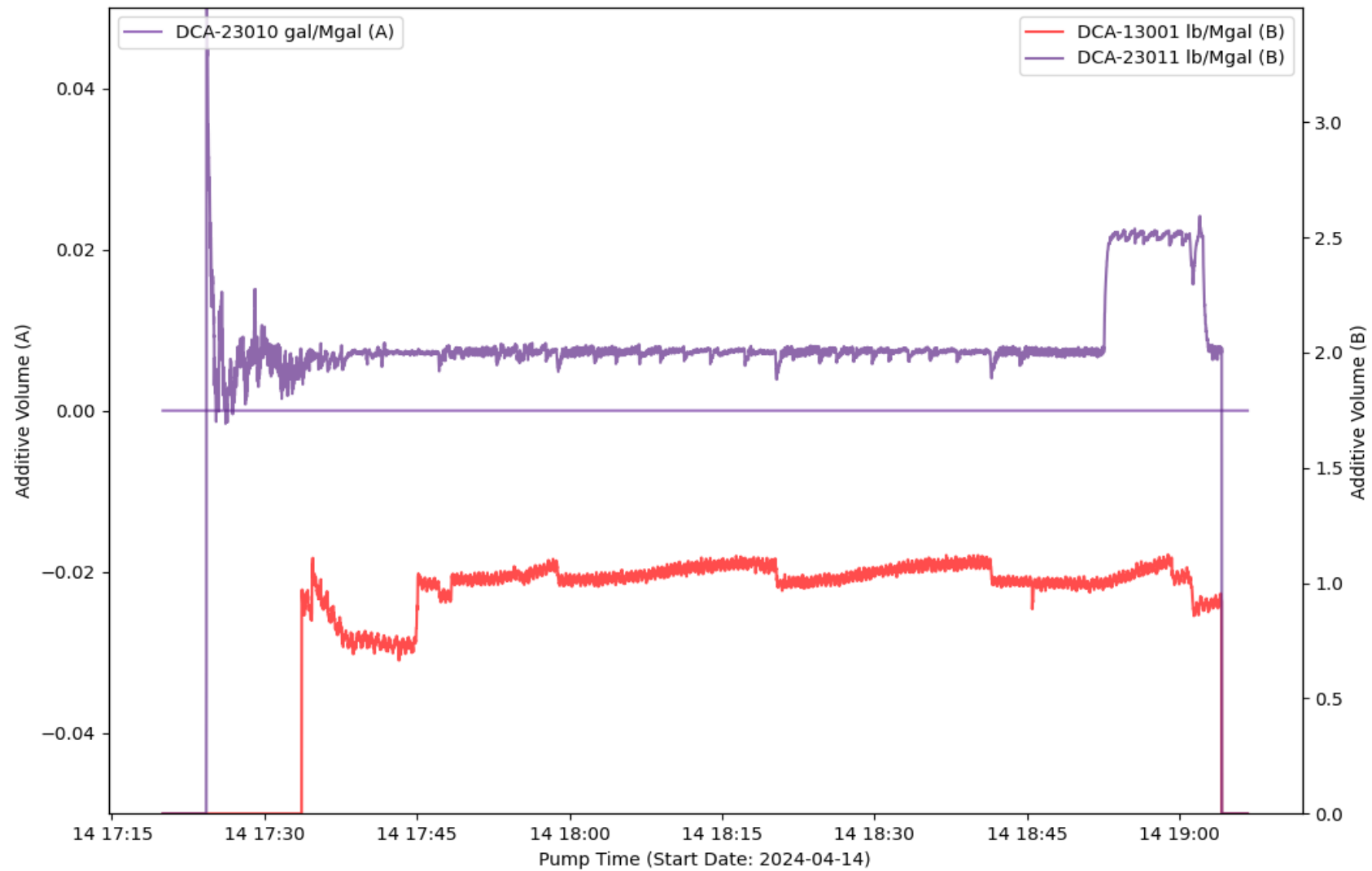
EVENT LOG : TREATMENT INTERVAL 12

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	Start Pumping	2024-04-14T08:20:10	0.61	3195	0	0	0.37	0.42	0
2	Break Formation	2024-04-14T08:20:41	9.72	4800	0	0	87.73	119.79	0
3	Pump Acid	2024-04-14T08:21:11	9.74	4600	0	0	295.99	320.72	0
4	Spot Acid	2024-04-14T08:36:04	41.38	5467	0	0	10345	10526	0
5	Flush Acid	2024-04-14T08:38:28	40.4	4623	0	0	14477	14661	0
6	Stop Pumping	2024-04-14T10:13:43	1.34	4003	0	0	389927	406391	358569
7	ISIP	2024-04-14T10:13:45	0	4660	0	0	389932	406391	358569
8	Shut In Well	2024-04-14T10:14:21	0	3813	0	0	389933	406391	358569

TREATMENT PLOT : Treatment Interval 13



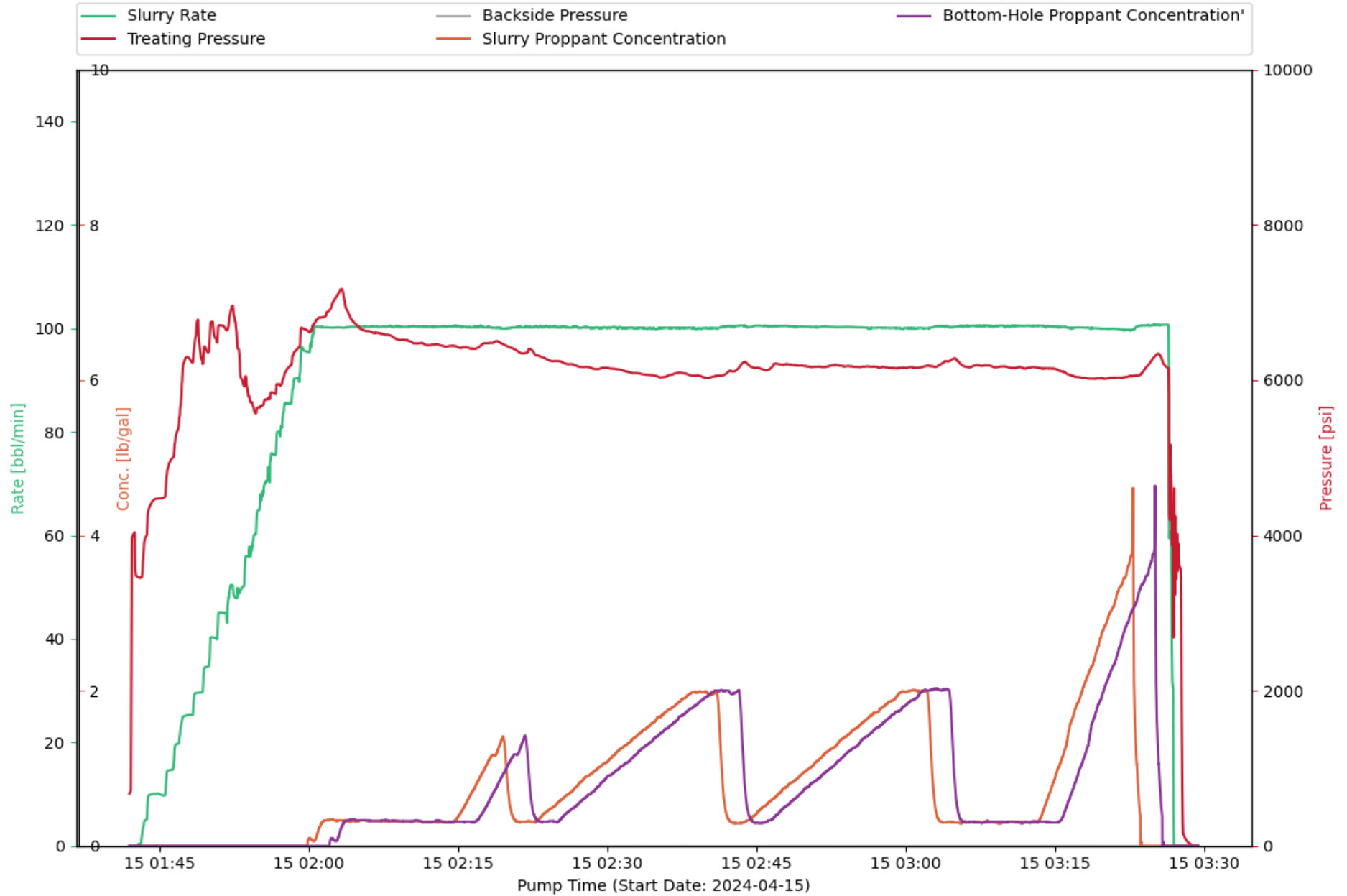
CHEMISTRY PLOT : Treatment Interval 13



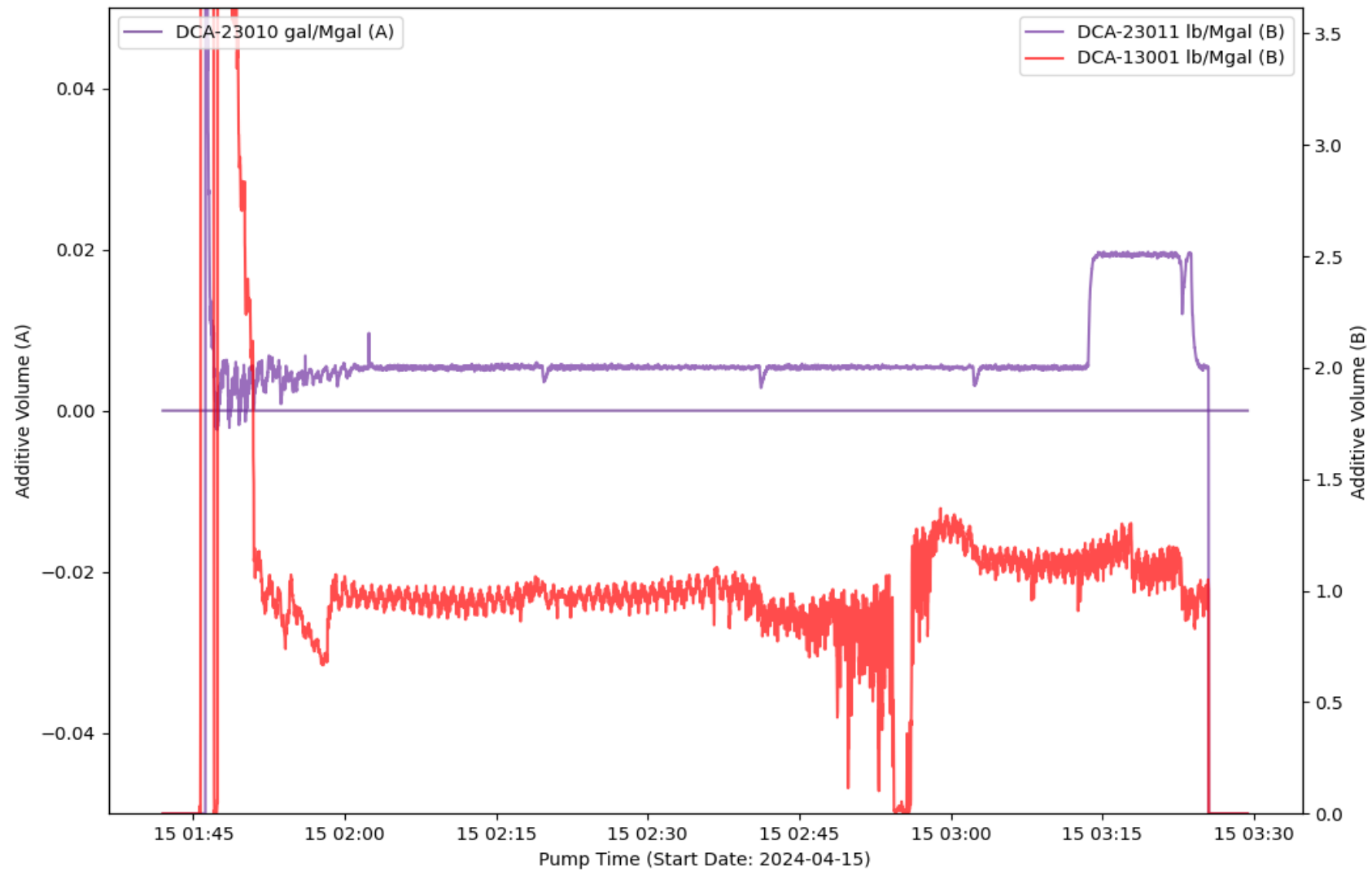
EVENT LOG : TREATMENT INTERVAL 13

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	Open Well	2024-04-14T17:20:35	0	3443	0	0	0	0	0
2	Start Pumping	2024-04-14T17:21:05	0	3379	0	0	0	0.28	0
3	Break Formation	2024-04-14T17:22:12	10.07	4704	0	0	274.01	315.06	0
4	Pump Acid	2024-04-14T17:22:52	9.85	4340	0	0	558.13	597.48	0
5	Spot Acid	2024-04-14T17:30:53	39.08	5793	0	0	10336	10504	0
6	Flush Acid	2024-04-14T17:31:32	43.04	5226	0	0	11384	11567	0
7	Stop Pumping	2024-04-14T19:05:33	1.98	2670	0	0	379808	395290	309234
8	ISIP	2024-04-14T19:05:53	0	4116	0	0	379816	395290	309234
9	Shut In Well	2024-04-14T19:06:10	0	3974	0	0	379816	395290	309234
10	Suspending Job	2024-04-14T19:06:42	0	-4.75	0	0	379816	395290	309234

TREATMENT PLOT : Treatment Interval 14



CHEMISTRY PLOT : Treatment Interval 14



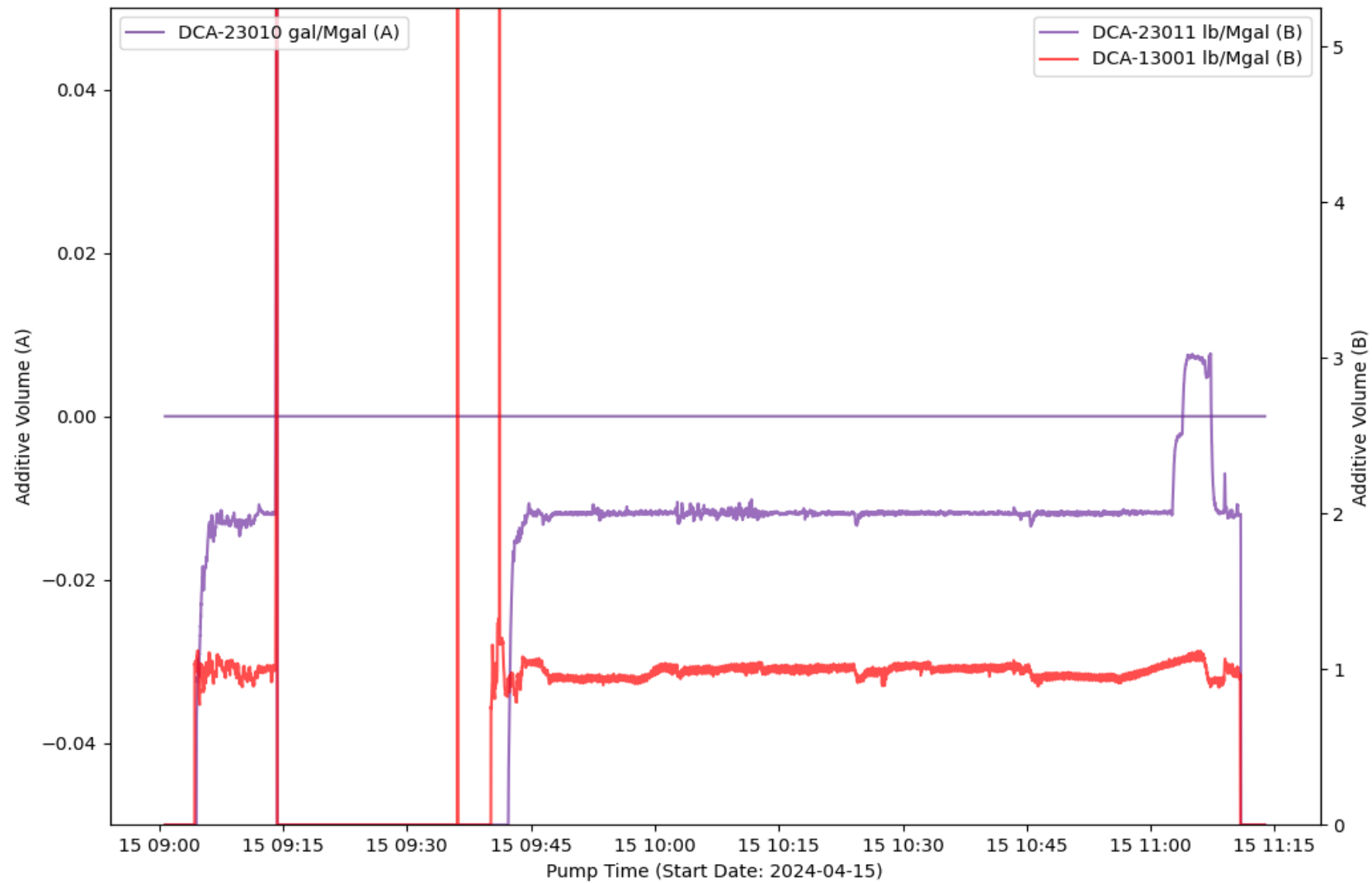
EVENT LOG : TREATMENT INTERVAL 14

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	Open Well	2024-04-15T01:42:42	0	3479	0	0	0	0	0
2	Start Pumping	2024-04-15T01:42:53	0	3462	0	0	0	0	0
3	Pump Acid	2024-04-15T01:45:03	9.99	4477	0	0	621.11	631.14	0
4	Break Formation	2024-04-15T01:48:54	29.57	6776	0	0	3744	3875	0
5	Spot Acid	2024-04-15T01:52:18	50.41	6951	0	0	9376	9591	0
6	Flush Acid	2024-04-15T01:53:34	51.6	5921	0	0	11963	12217	0
7	Stop Pumping	2024-04-15T03:26:57	0	3714	0	0	381865	397858	325690
8	ISIP	2024-04-15T03:27:24	0	3889	0	0	381865	397858	325690
9	Shut In Well	2024-04-15T03:27:31	0	3603	0	0	381865	397858	325690

TREATMENT PLOT : Treatment Interval 15



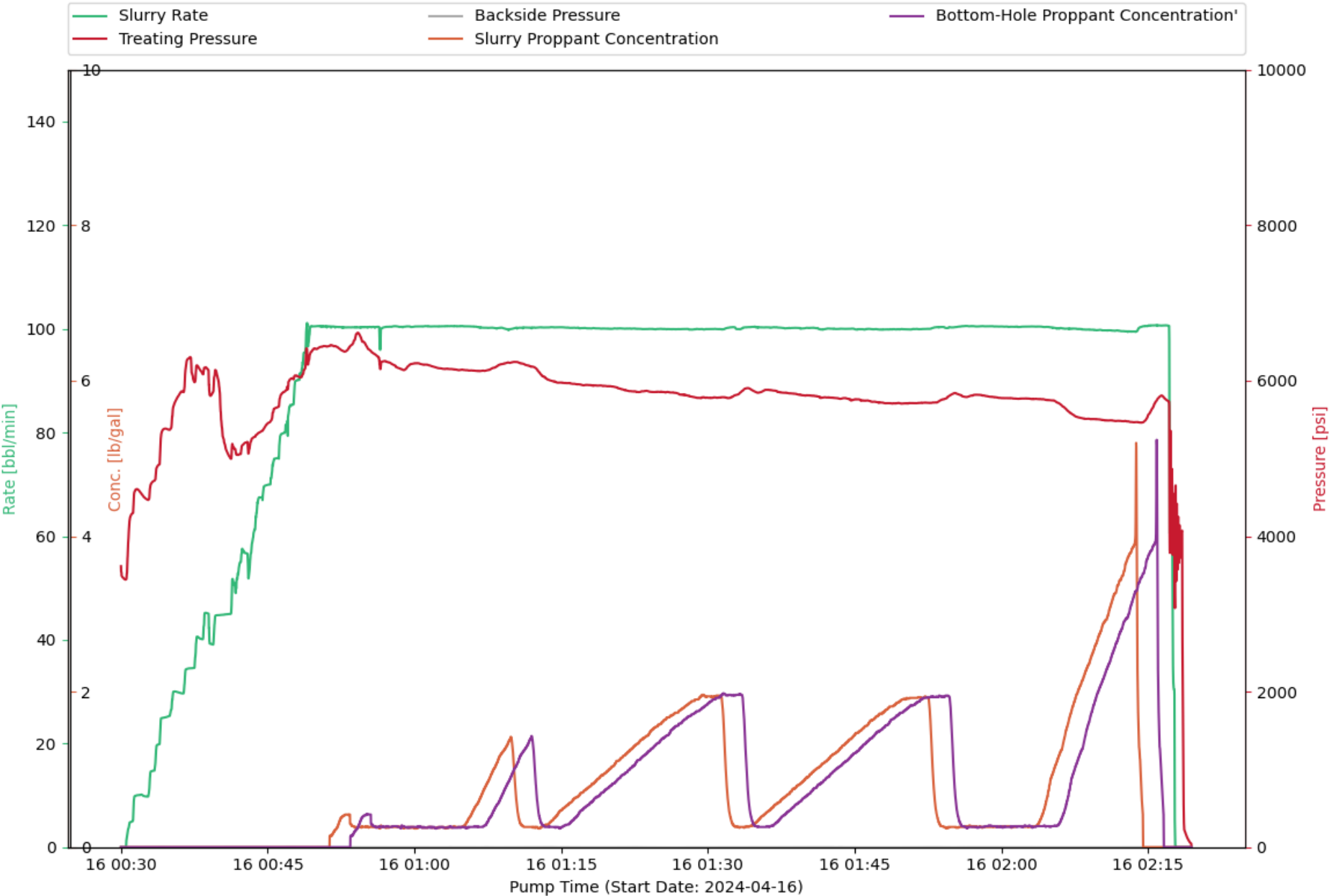
CHEMISTRY PLOT : Treatment Interval 15



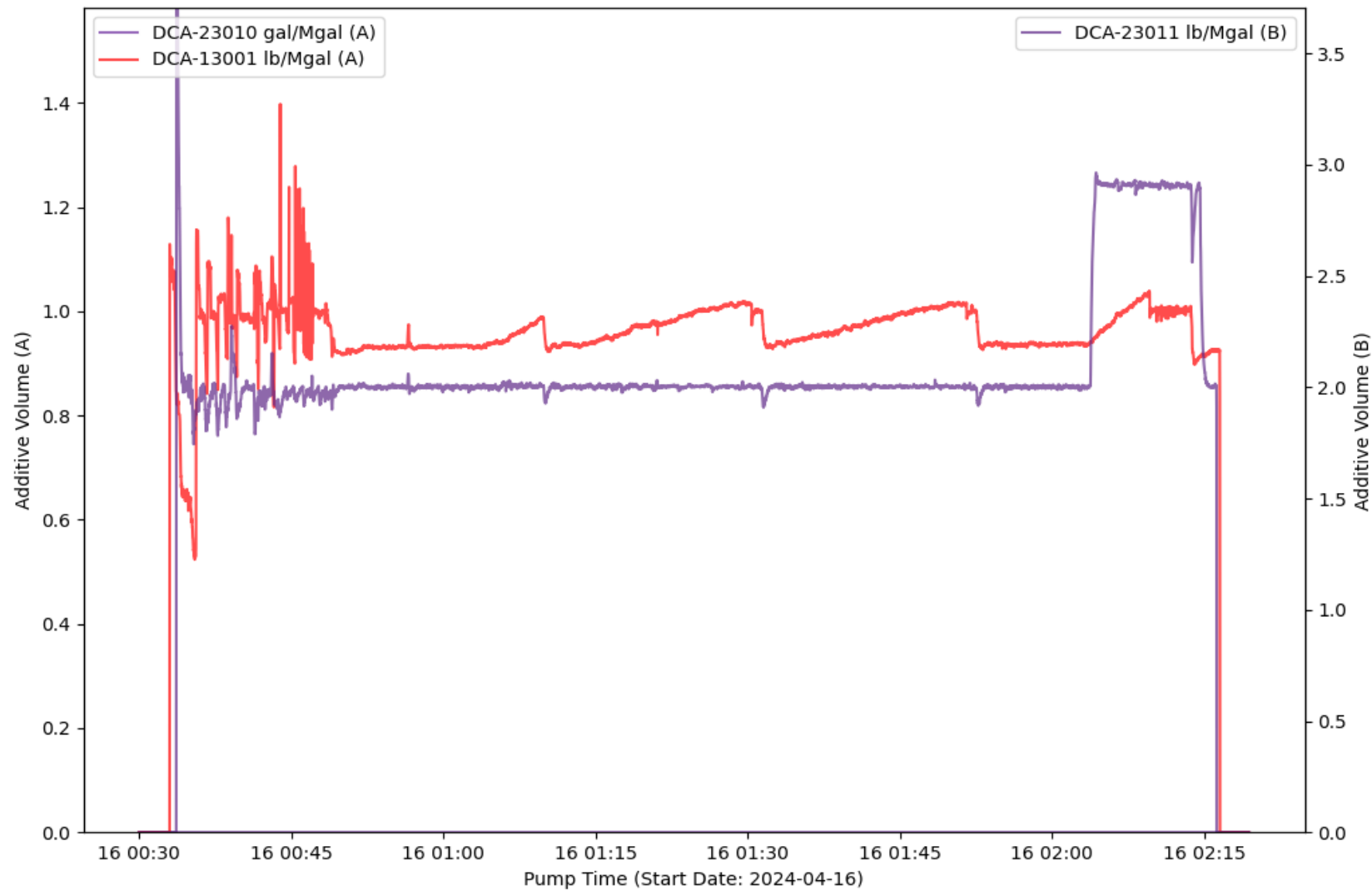
EVENT LOG : TREATMENT INTERVAL 15

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-04-15T09:01:33	0.32	3477	0	0	0	0.23	0
2	Break Formation	2024-04-15T09:02:02	9.27	4347	0	0	5.04	83.52	0
3	Pump Acid	2024-04-15T09:02:26	9.98	4323	0	0	203.54	249.92	0
4	Spot Acid	2024-04-15T09:08:55	66.3	6913	0	0	10051	10252	0
5	Flush Acid	2024-04-15T09:09:30	71.34	6122	0	0	11727	11942	0
6	Stop Pumping	2024-04-15T11:11:55	1.91	3201	0	0	390290	406750	354599
7	ISIP	2024-04-15T11:11:58	0	4291	0	0	390312	406750	354599
8	Shut In Well	2024-04-15T11:12:24	0	3704	0	0	390313	406750	354599
9	Suspending Job	2024-04-15T11:13:48	0	-8.88	0	0	390313	406750	354599

TREATMENT PLOT : Treatment Interval 16



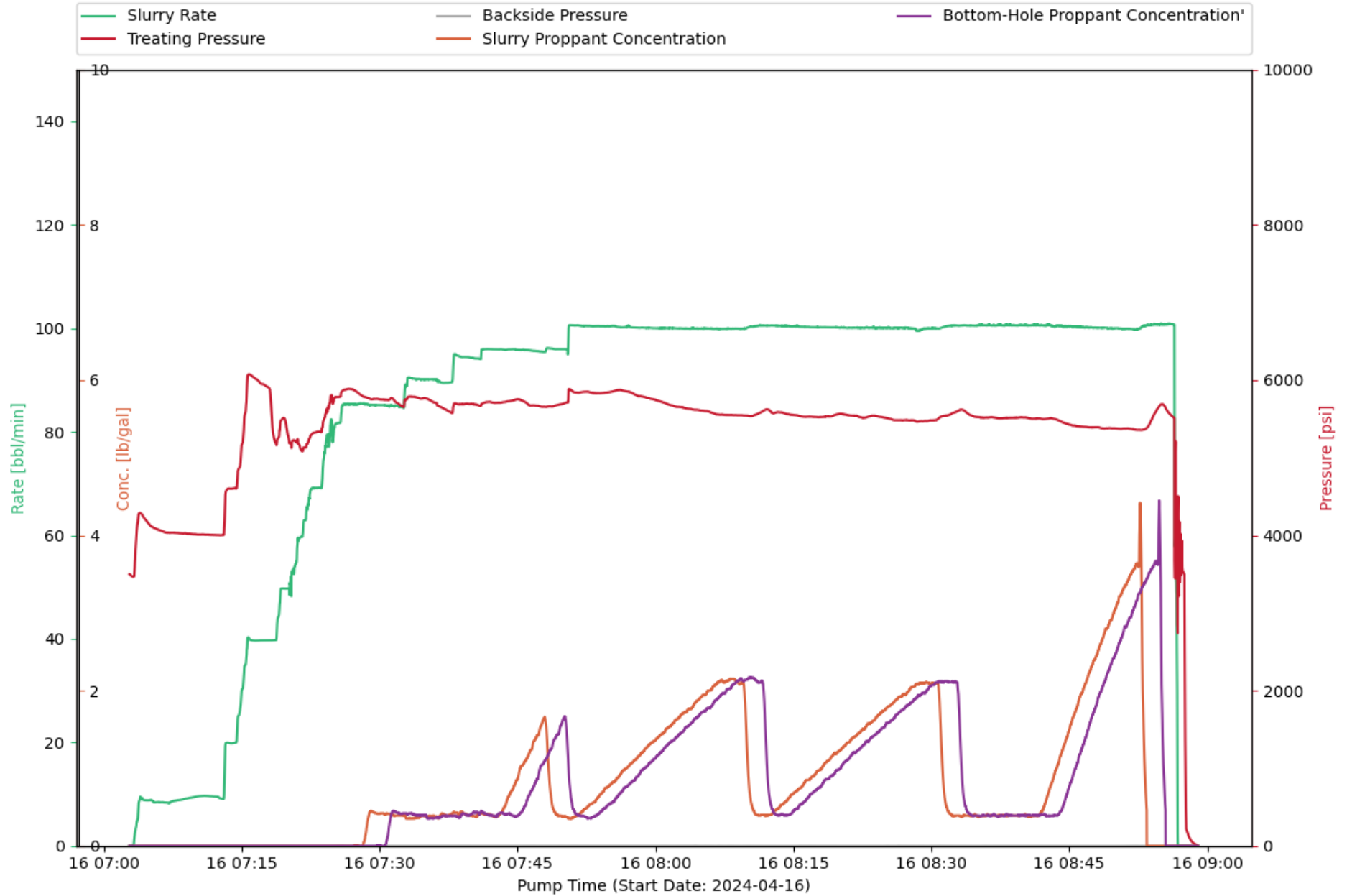
CHEMISTRY PLOT : Treatment Interval 16



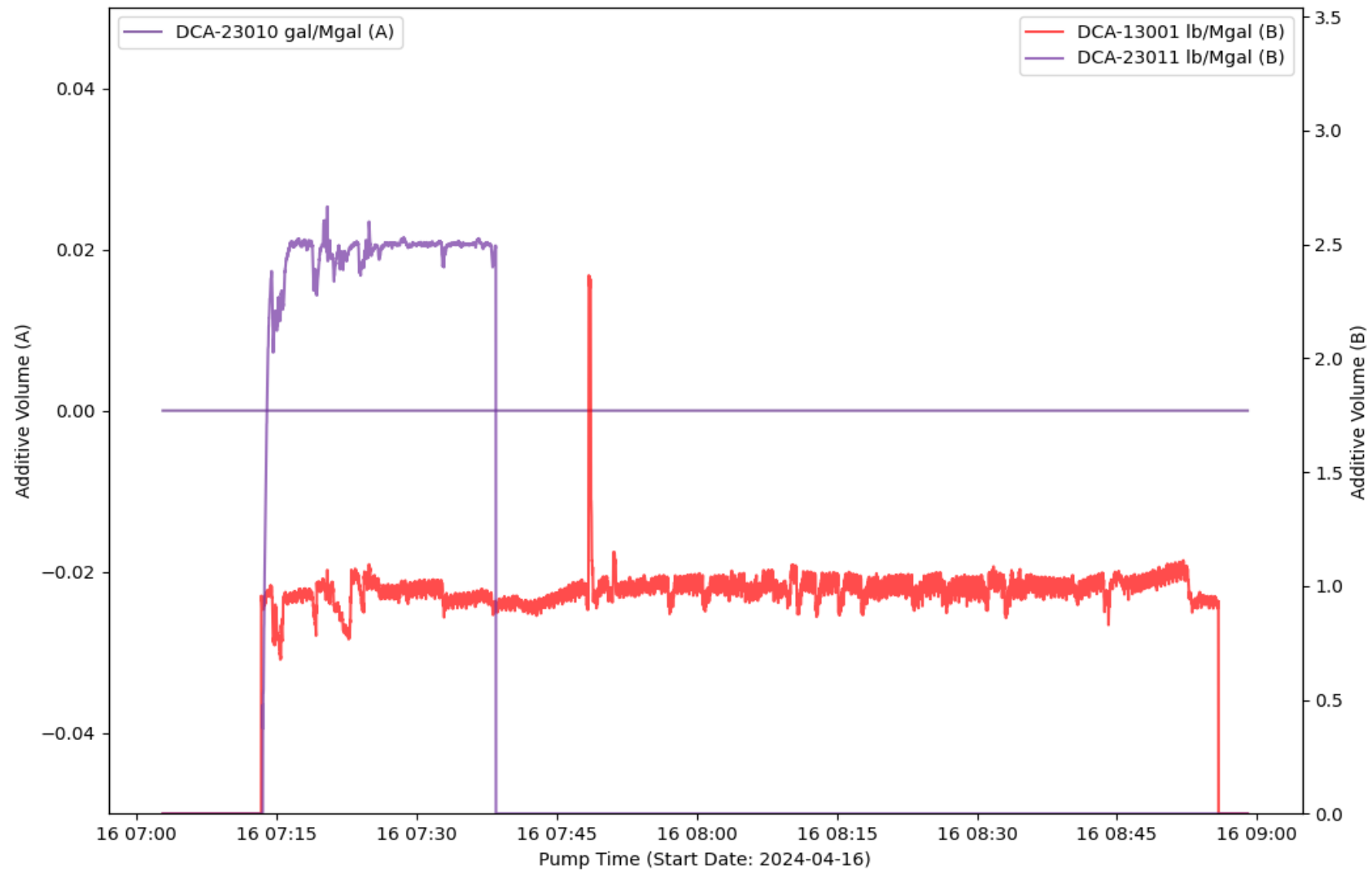
EVENT LOG : TREATMENT INTERVAL 16

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-16T00:30:04	0	3491	0	0	0	0	0
2	Start Pumping	2024-04-16T00:30:29	0	3441	0	0	0	0	0
3	Pump Acid	2024-04-16T00:31:58	10.06	4566	0	0	394.56	413.09	0
4	Break Formation	2024-04-16T00:37:10	34.52	6266	0	0	5269	5444	0
5	Spot Acid	2024-04-16T00:39:52	44.76	6057	0	0	9789	10047	0
6	Flush Acid	2024-04-16T00:41:08	44.99	5016	0	0	12153	12445	0
7	Stop Pumping	2024-04-16T02:17:44	2.52	3075	0	0	391105	407970	321827
8	ISIP	2024-04-16T02:18:04	0	4248	0	0	391116	407971	321827
9	Shut In Well	2024-04-16T02:18:24	0	4057	0	0	391116	407971	321827
10	Suspending Job	2024-04-16T02:19:24	0	43.36	0	0	391116	407971	321827

TREATMENT PLOT : Treatment Interval 17



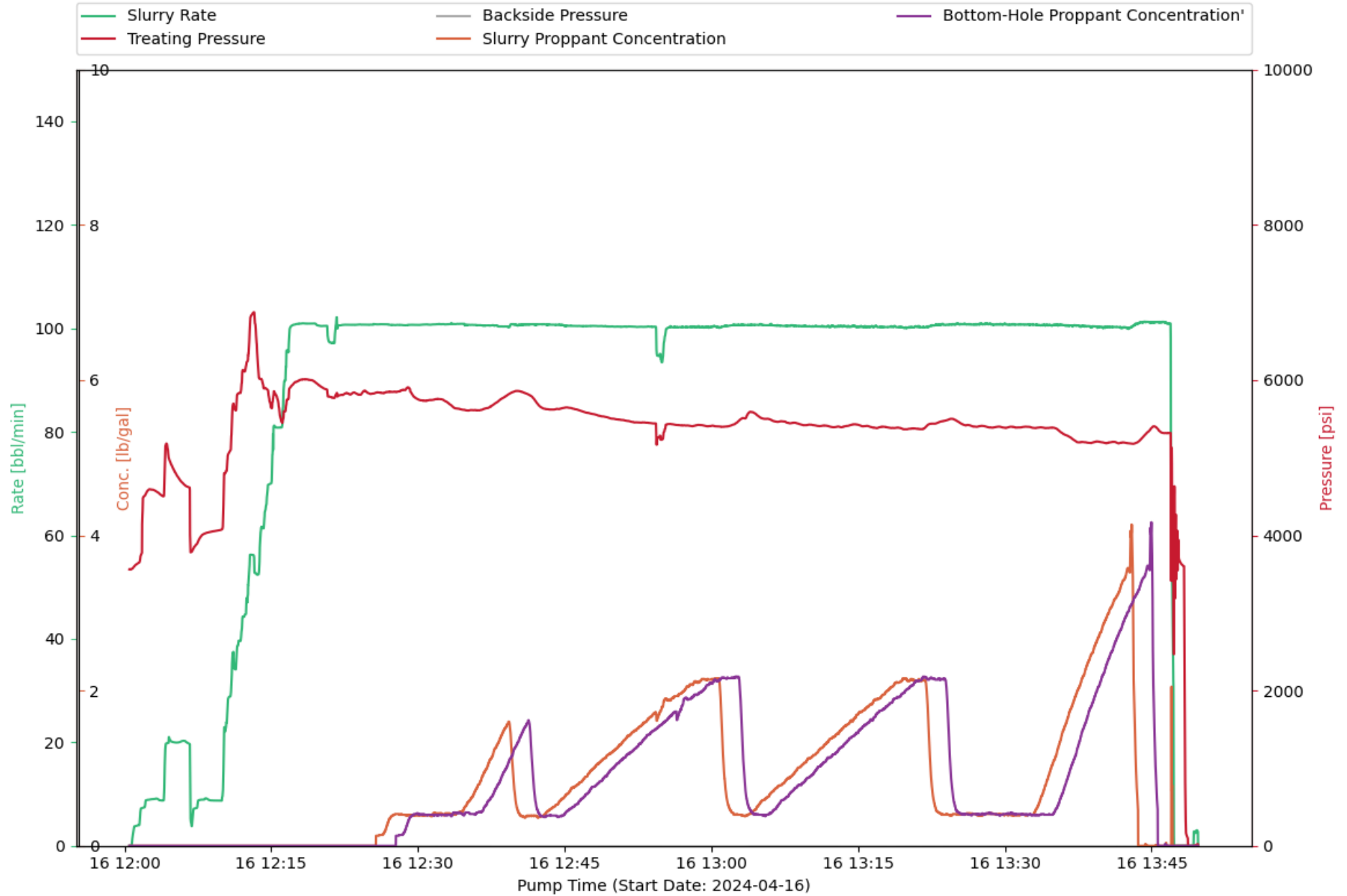
CHEMISTRY PLOT : Treatment Interval 17



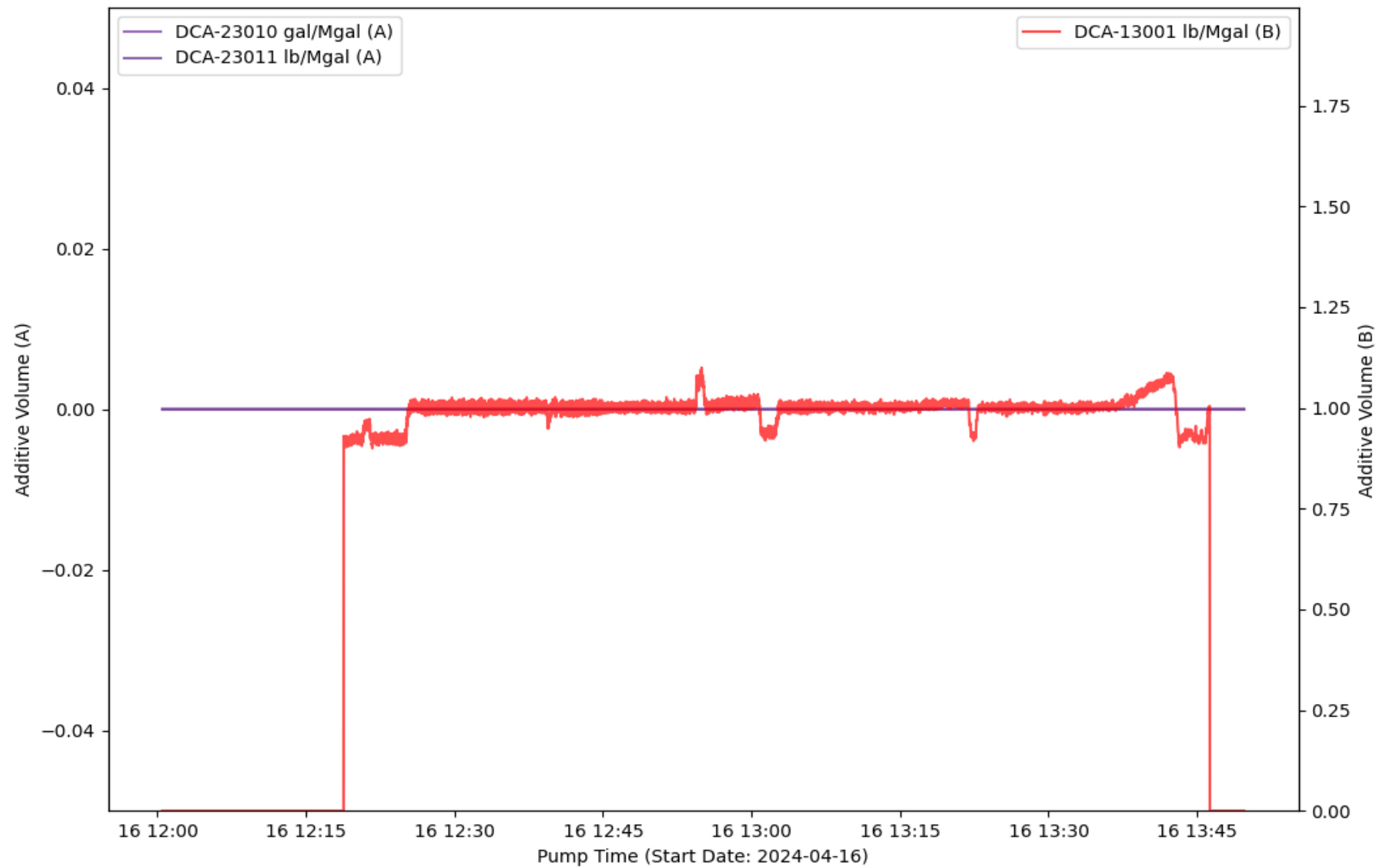
EVENT LOG : TREATMENT INTERVAL 17

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	Start Pumping	2024-04-16T07:03:16	0.2	3468	0	0	0	0.14	0
2	Break Formation	2024-04-16T07:03:46	7.22	4227	0	0	51.33	76.99	0
3	Pump Acid	2024-04-16T07:04:30	8.81	4207	0	0	338.28	353.43	0
4	Pump Acid	2024-04-16T07:11:54	9.53	4003	0	0	3076	3142	0
5	Spot Acid	2024-04-16T07:18:02	39.69	5890	0	0	9963	10207	0
6	Flush Acid	2024-04-16T07:18:46	39.78	5167	0	0	11175	11437	0
7	Spot Acid	2024-04-16T07:19:40	49.72	5507	0	0	12930	13223	0
8	Flush Acid	2024-04-16T07:20:10	49.62	5188	0	0	13965	14272	0
9	Stop Pumping	2024-04-16T08:56:47	2.52	2739	0	0	386531	403718	367633
10	ISIP	2024-04-16T08:56:49	0	4466	0	0	386543	403718	367633
11	Shut In Well	2024-04-16T08:57:21	0	3539	0	0	386547	403718	367633
12	Suspending Job	2024-04-16T08:58:59	0	-0.07	0	0	386547	403718	367633

TREATMENT PLOT : Treatment Interval 18



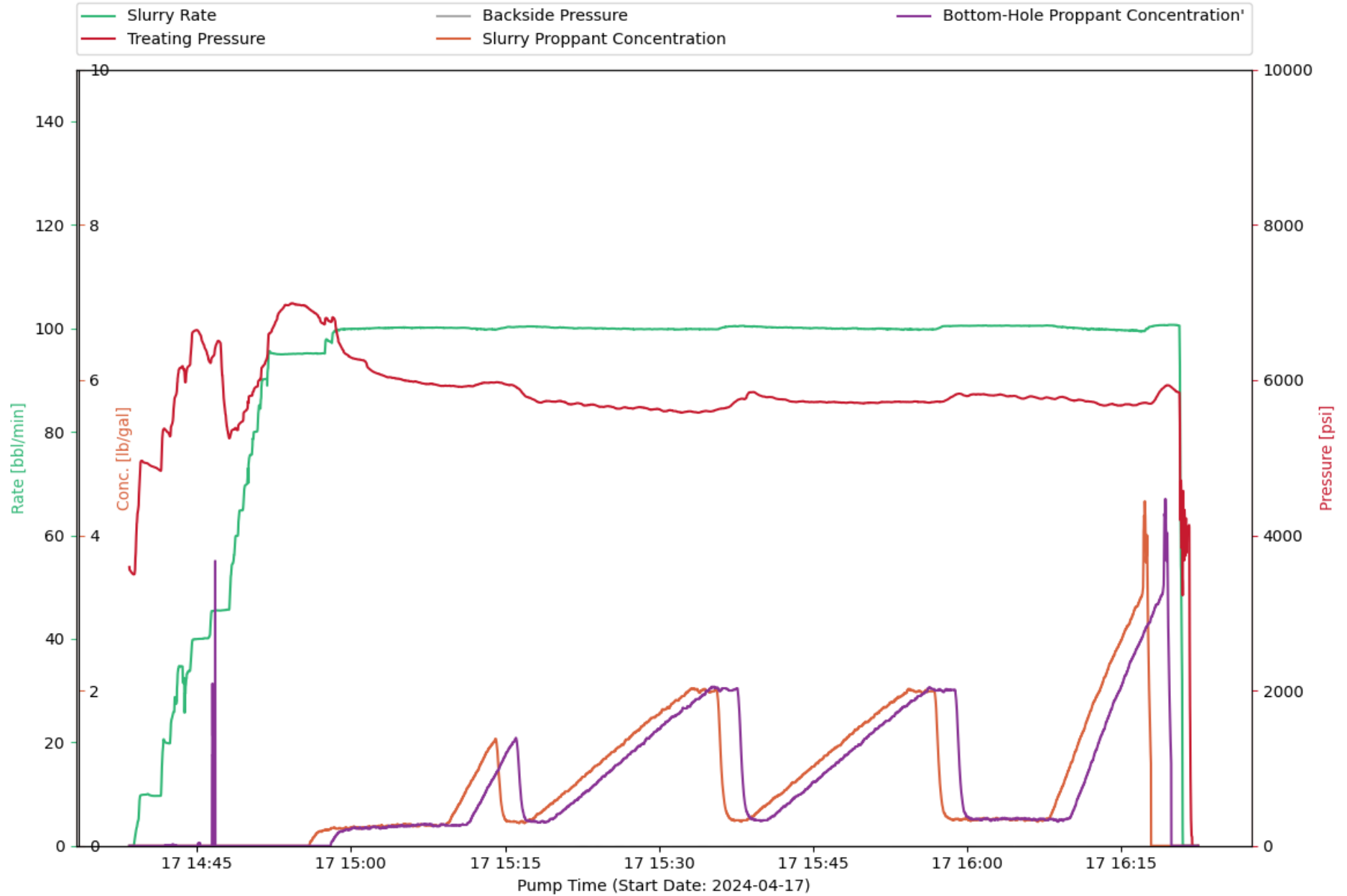
CHEMISTRY PLOT : Treatment Interval 18



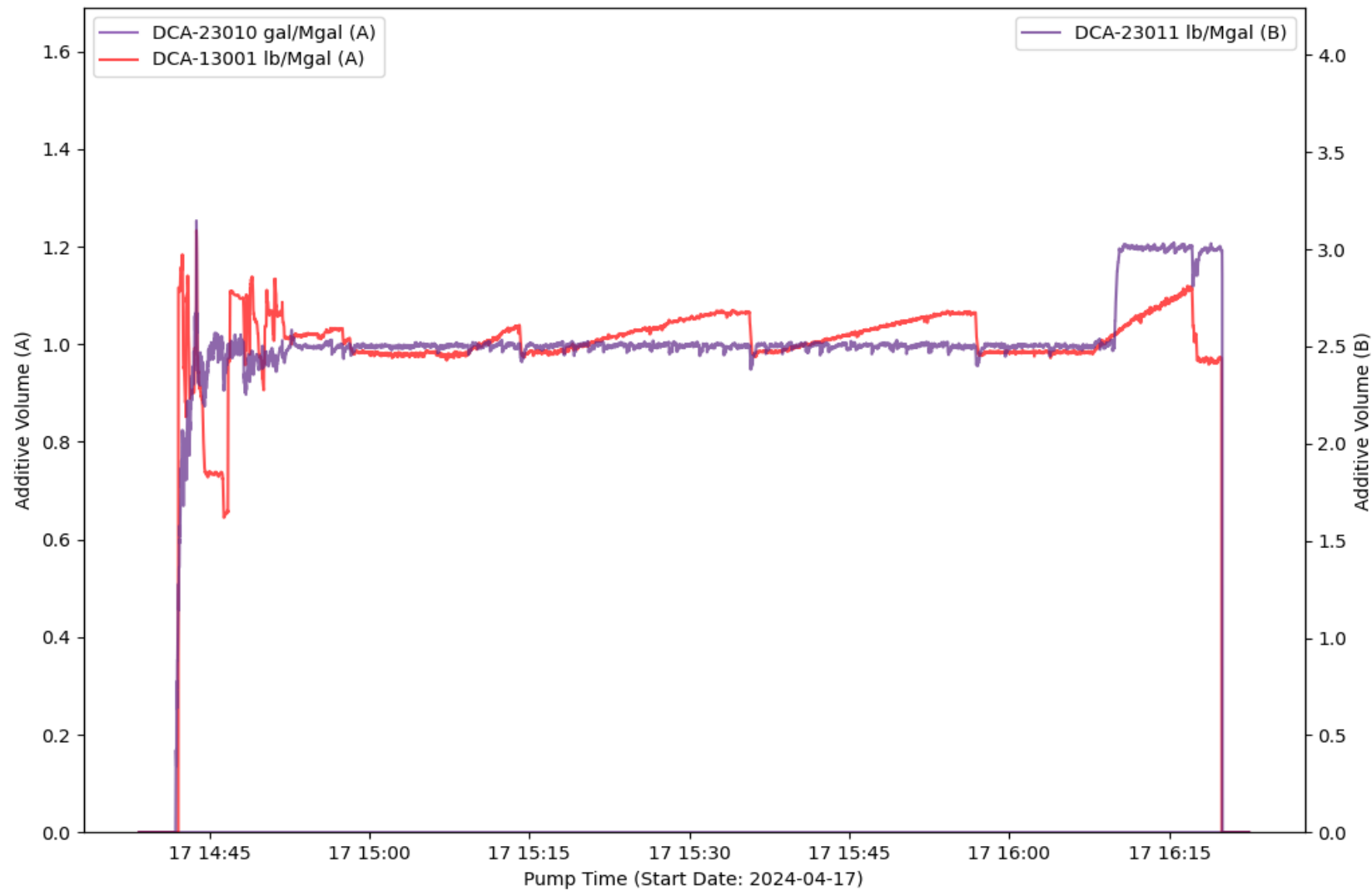
EVENT LOG : TREATMENT INTERVAL 18

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	Start Pumping	2024-04-16T12:00:43	0.06	3563	0	0	0.68	0.04	0
2	Pump Acid	2024-04-16T12:02:06	7.75	4514	0	0	251.23	281.55	0
3	Pump Acid	2024-04-16T12:03:31	8.87	4543	0	0	791.52	816.83	0
4	Spot Acid	2024-04-16T12:04:12	19.39	5157	0	0	1056	1118	0
5	Flush Acid	2024-04-16T12:06:39	19.69	4616	0	0	3062	3179	0
6	Stop Pumping	2024-04-16T13:47:17	2.04	2468	0	0	385178	401545	353572
7	ISIP	2024-04-16T13:47:19	0	4515	0	0	385187	401545	353572
8	Shut In Well	2024-04-16T13:47:56	0	3653	0	0	385190	401545	353572
9	Suspending Job	2024-04-16T13:49:44	2.74	22.36	0	0	385200	401596	353572

TREATMENT PLOT : Treatment Interval 19



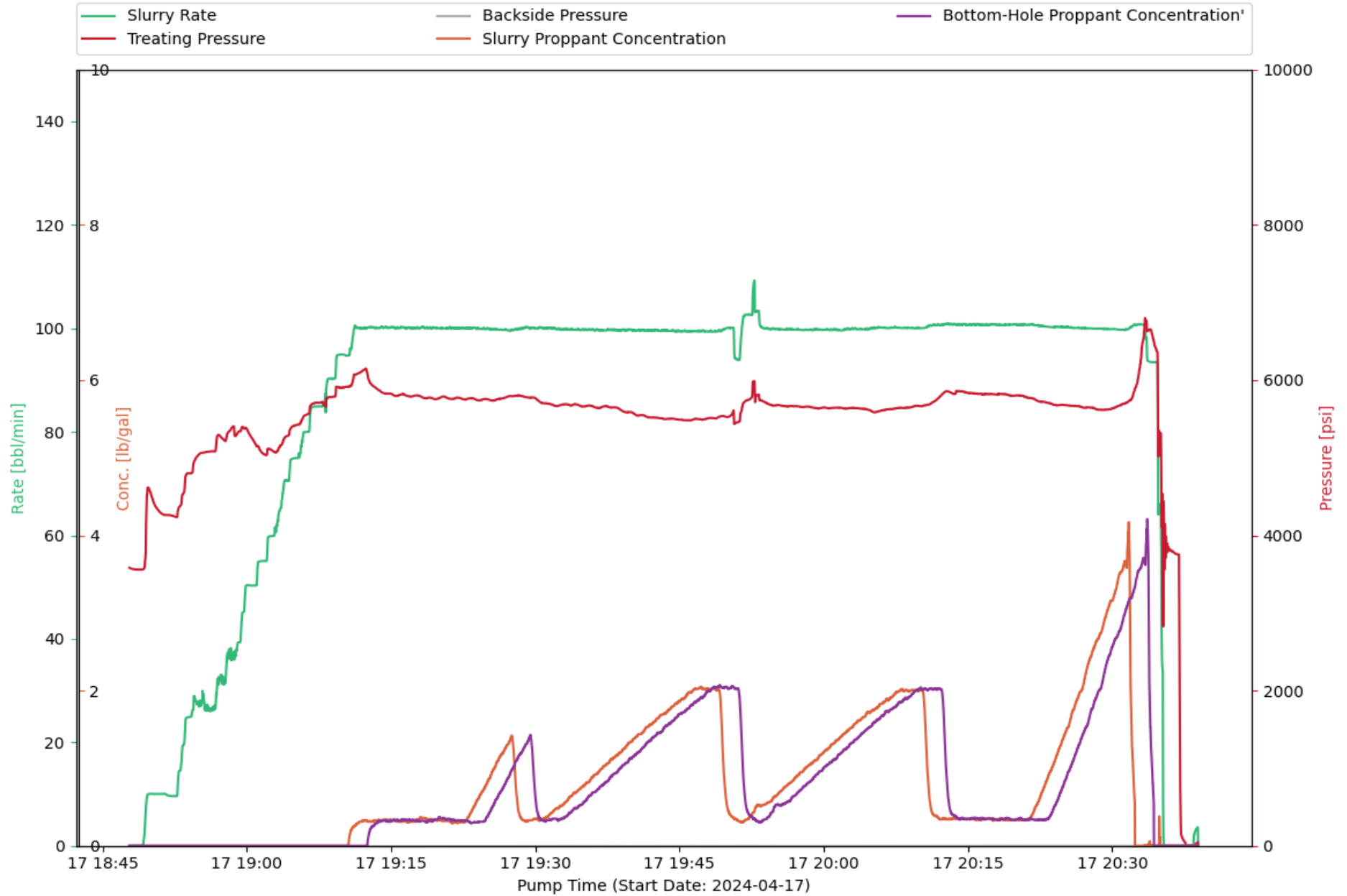
CHEMISTRY PLOT : Treatment Interval 19



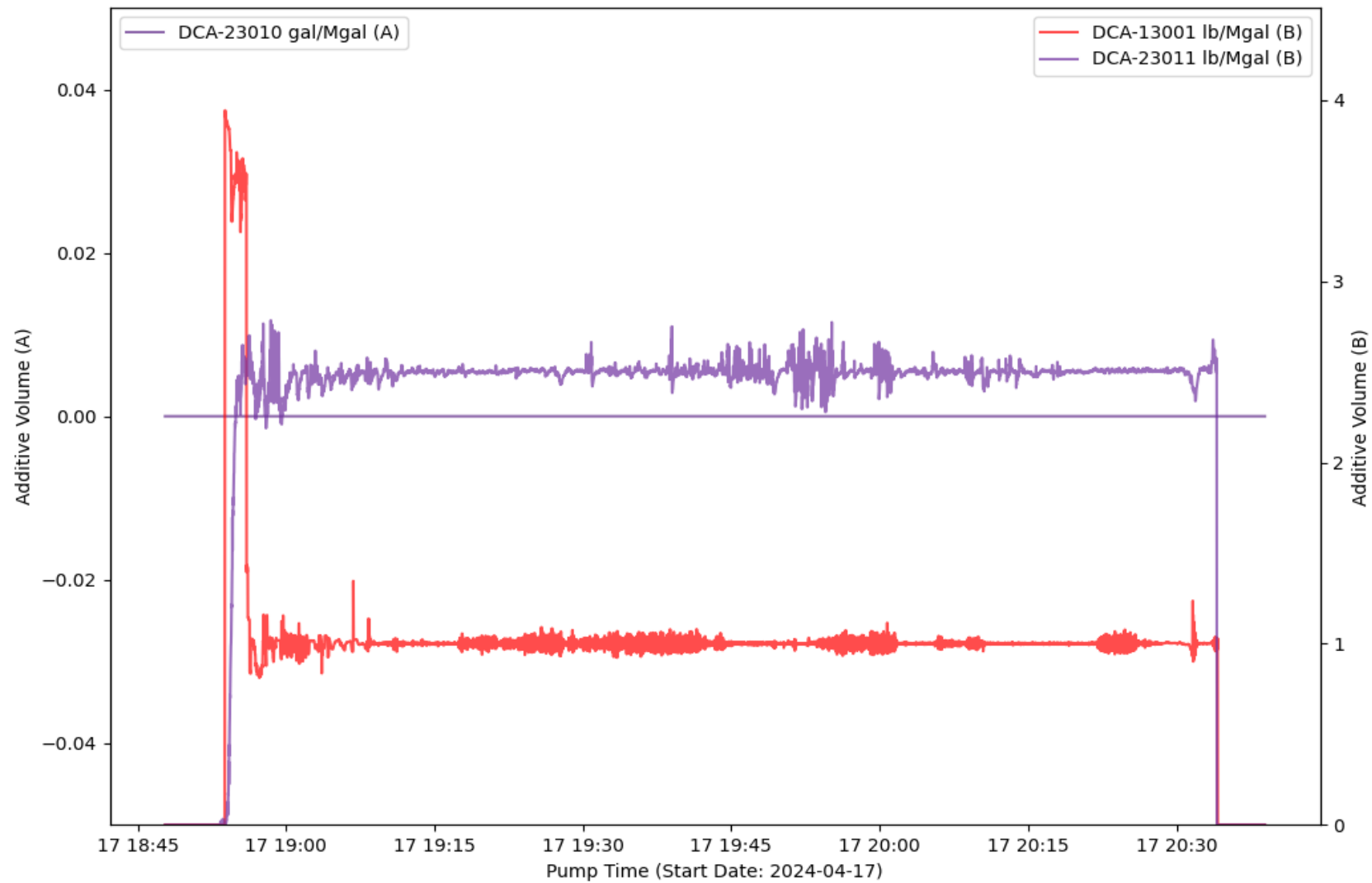
EVENT LOG : TREATMENT INTERVAL 19

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	Start Pumping	2024-04-17T14:38:53	0.31	3498	0	0	0.6	0.22	0
2	Break Formation	2024-04-17T14:39:12	4.07	4247	0	0	17.68	32.89	0
3	Pump Acid	2024-04-17T14:39:44	9.87	4953	0	0	187.44	209.03	0
4	Spot Acid	2024-04-17T14:47:17	45.47	6482	0	0	9223	9299	0
5	Flush Acid	2024-04-17T14:48:08	45.65	5251	0	0	10832	10901	0
6	Stop Pumping	2024-04-17T16:21:00	0.1	4353	0	0	380786	395023	319334
7	ISIP	2024-04-17T16:21:02	0	4572	0	0	380792	395023	319334
8	Shut In Well	2024-04-17T16:21:28	0	4092	0	0	380792	395023	319334
9	Suspending Job	2024-04-17T16:22:28	0	-12.72	0	0	380792	395023	319334

TREATMENT PLOT : Treatment Interval 20



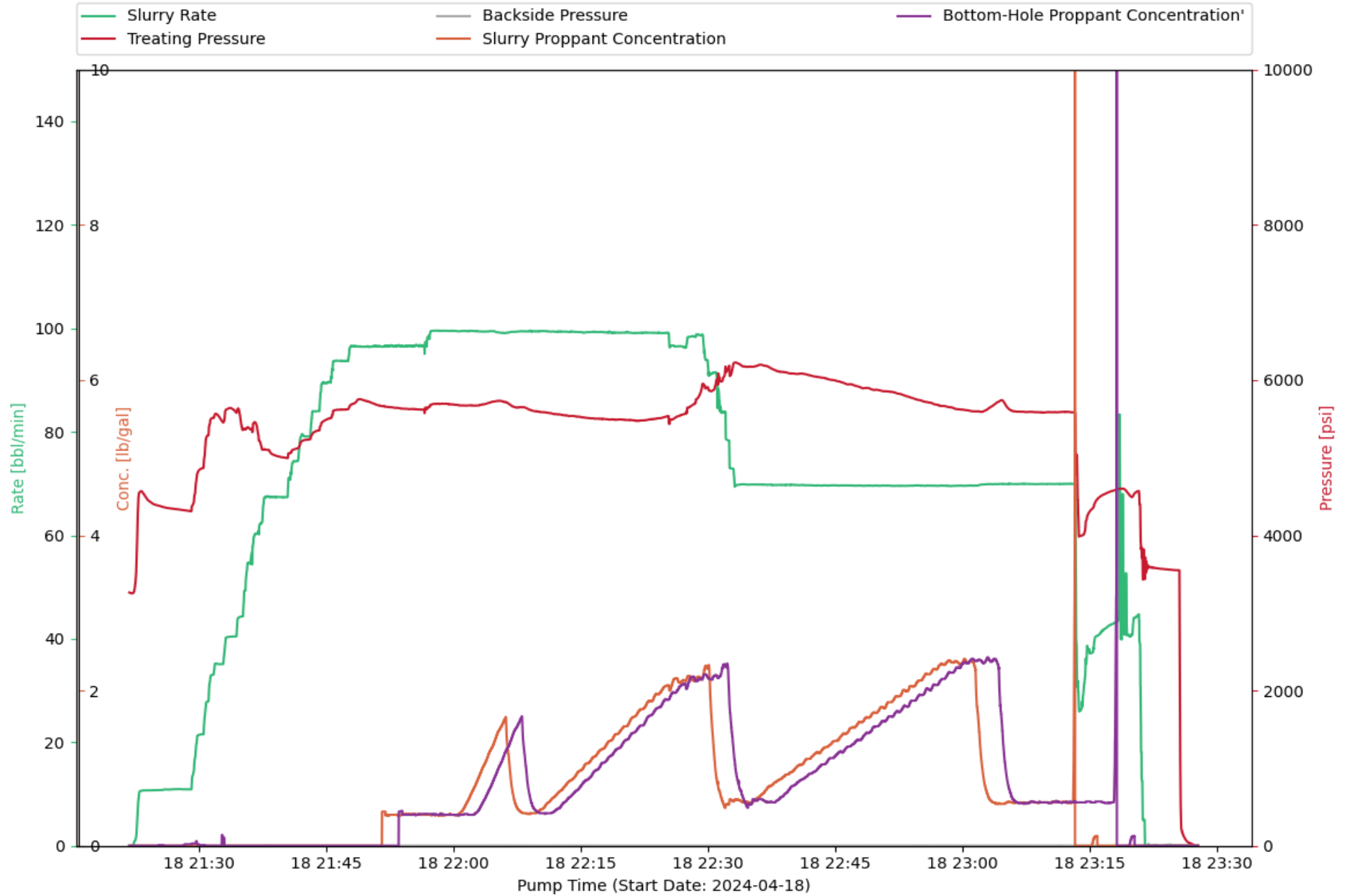
CHEMISTRY PLOT : Treatment Interval 20



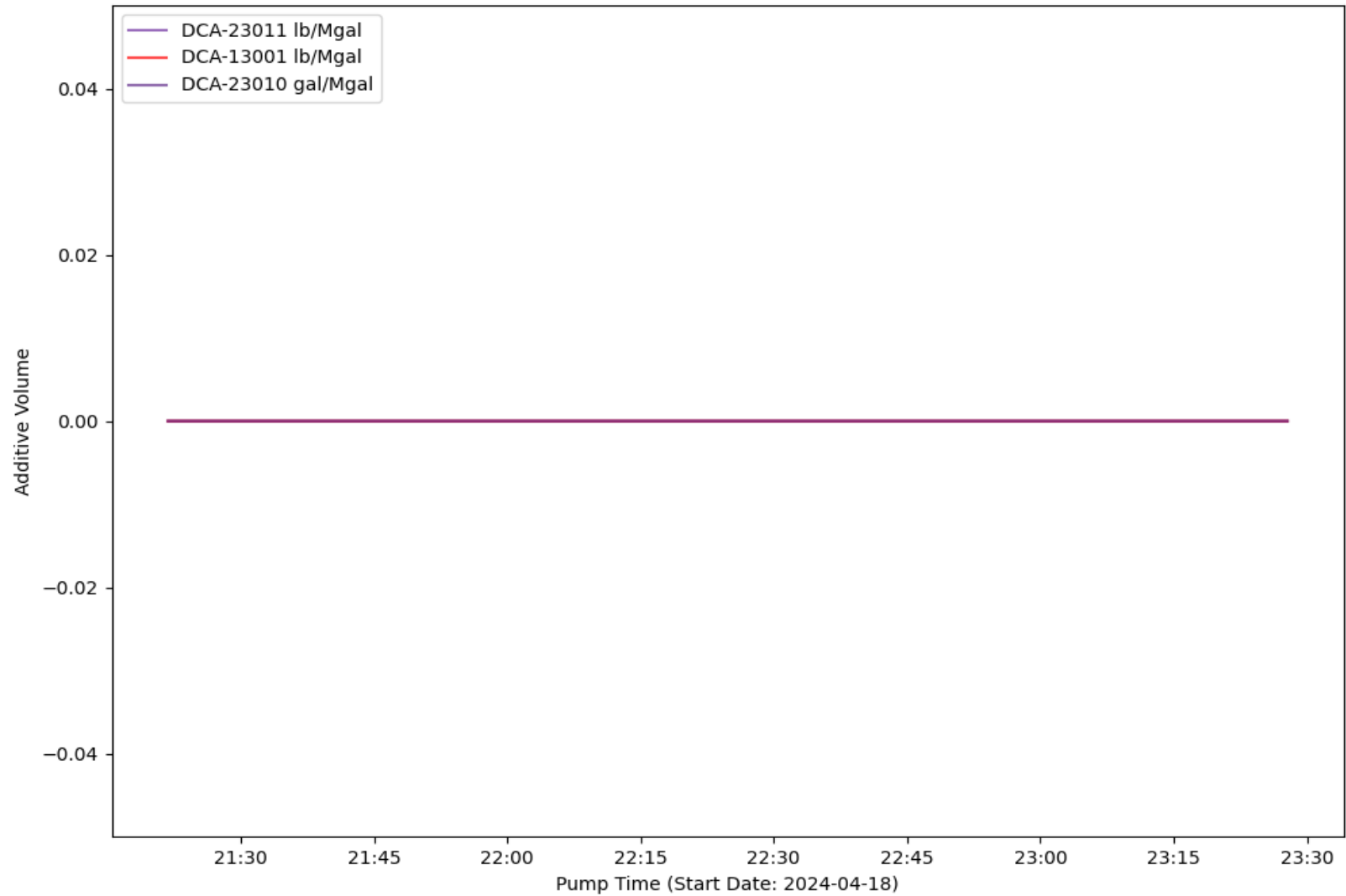
EVENT LOG : TREATMENT INTERVAL 20

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-04-17T18:49:15	0.72	3567	0	0	0	0.51	0
2	Pump Acid	2024-04-17T18:51:00	9.99	4294	0	0	583.2	659.43	0
3	Break Formation	2024-04-17T18:58:41	37.59	5366	0	0	8186	8259	0
4	Spot Acid	2024-04-17T18:59:31	44.95	5397	0	0	9555	9639	0
5	Flush Acid	2024-04-17T19:01:56	55.05	5035	0	0	14744	14846	0
6	Stop Pumping	2024-04-17T20:35:18	8.67	2830	0	0	382818	398095	333896
7	ISIP	2024-04-17T20:35:22	0.65	4372	0	0	382893	398099	333896
8	Shut In Well	2024-04-17T20:36:52	0	3753	0	0	382906	398099	333896
9	Suspending Job	2024-04-17T20:38:55	3.56	45.83	0	0	382906	398156	333896

TREATMENT PLOT : Treatment Interval 21



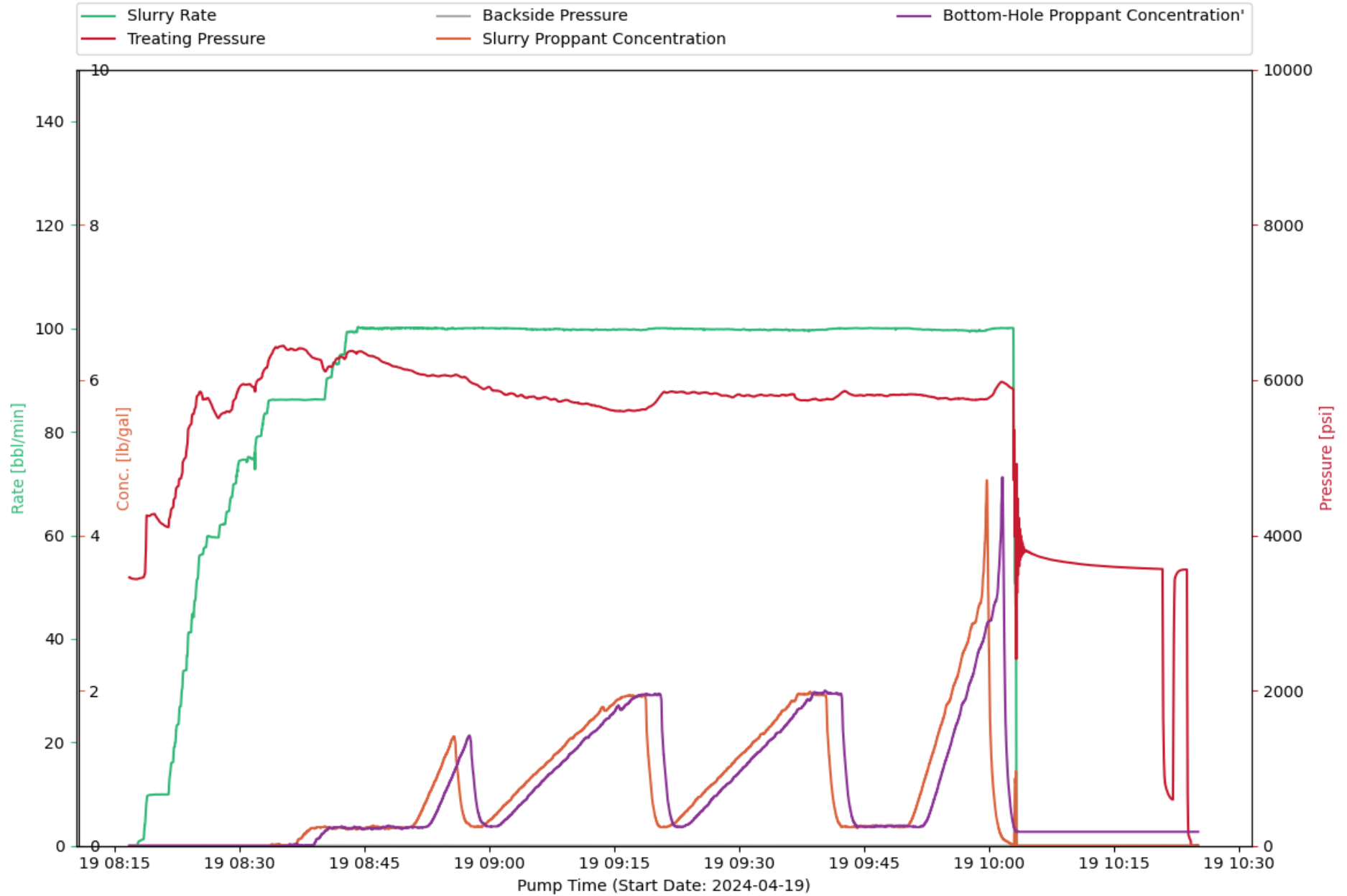
CHEMISTRY PLOT : Treatment Interval 21



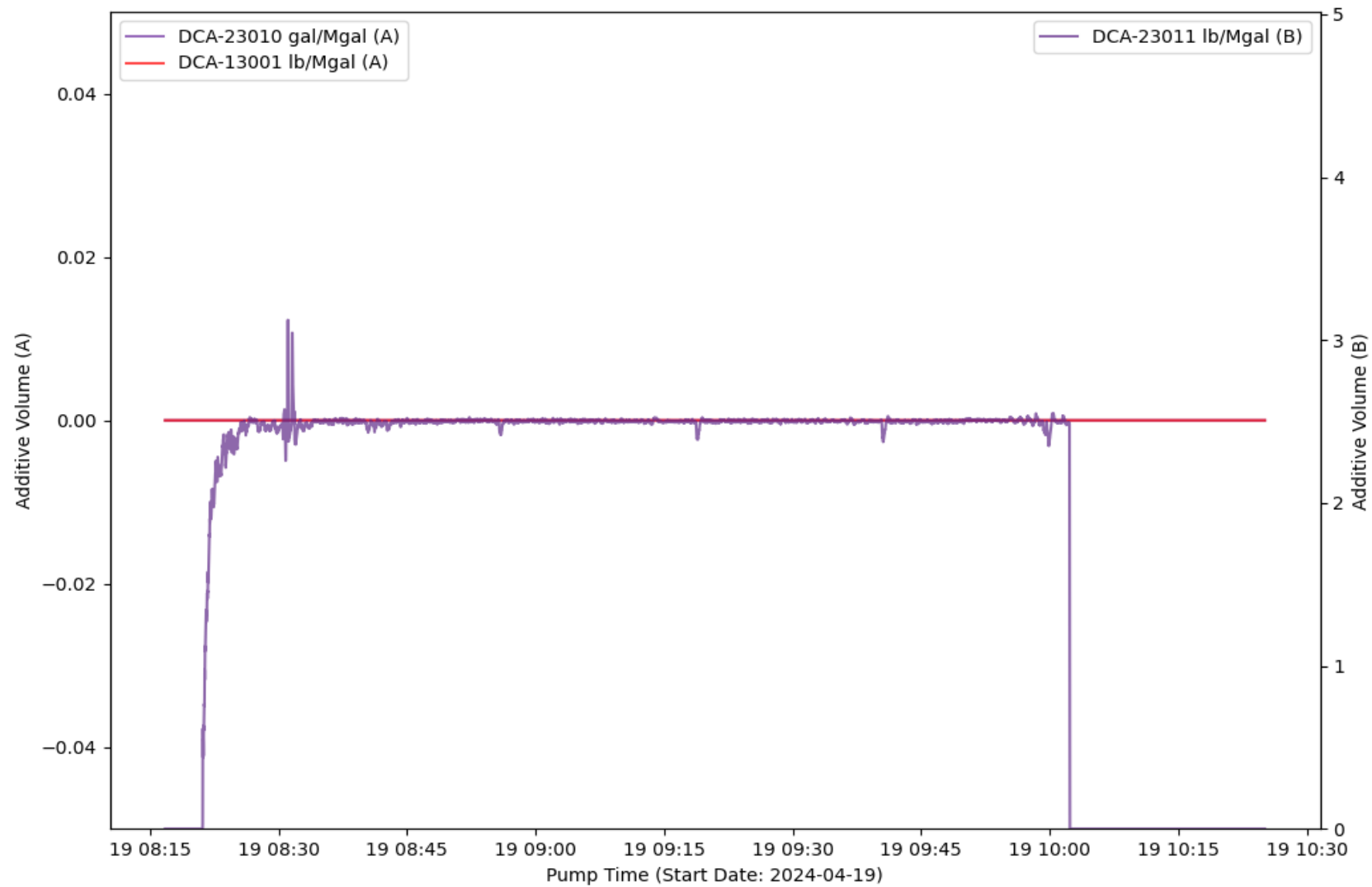
EVENT LOG : TREATMENT INTERVAL 21

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Start Pumping	2024-04-18T21:22:32	1.09	3386	0	0	0	0.77	0
2	Pump Acid	2024-04-18T21:25:59	10.9	4360	0	0	1470	1458	0
3	Break Formation	2024-04-18T21:32:17	35.13	5546	0	0	6152	6270	0
4	Spot Acid	2024-04-18T21:34:38	44.02	5635	0	0	9892	10104	0
5	Flush Acid	2024-04-18T21:40:18	67.35	4997	0	0	24069	24566	0
6	Stop Pumping	2024-04-18T23:21:31	3.11	3479	0	0	350041	367865	310271
7	ISIP	2024-04-18T23:21:35	0.1	3716	0	0	350041	367867	310271
8	Shut In Well	2024-04-18T23:25:28	0.02	3550	0	0	350041	367879	310271
9	Suspending Job	2024-04-18T23:27:47	0.15	-4.04	0	0	350041	367882	310271

TREATMENT PLOT : Treatment Interval 22



CHEMISTRY PLOT : Treatment Interval 22



EVENT LOG : TREATMENT INTERVAL 22

Event Number	Event Name	Event Time (YYYY-MM-DD hh-mm-ss)	Slurry Rate (bpm)	Pressure (psi)	Proppant Conc. (ppg)	Bottom Hole Proppant Conc. (ppg)	Cumulative Clean Volume (gal)	Cumulative Slurry Volume (gal)	Cumulative Proppant Weight (lbm)
1	Open Well	2024-04-19T08:16:46	0	3457	0	0	0	0	0
2	Start Pumping	2024-04-19T08:17:42	0	3436	0	0	0	0	0
3	Break Formation	2024-04-19T08:18:48	8.19	4142	0	0	102.09	93.77	0
4	Pump Acid	2024-04-19T08:19:10	9.82	4249	0	0	156.73	241.26	0
5	Spot Acid	2024-04-19T08:26:10	59.86	5769	0	0	8716	8672	0
6	Flush Acid	2024-04-19T08:27:23	59.59	5516	0	0	11779	11736	0
7	Stop Pumping	2024-04-19T10:03:19	1.28	4920	0	0.19	387878	401813	315723
8	ISIP	2024-04-19T10:03:27	0	4476	0	0.19	387887	401813	315723
9	Shut In Well	2024-04-19T10:18:19	0	3575	0	0.18	387887	401813	315723
10	Suspending Job	2024-04-19T10:25:06	0	0.26	0	0.18	387887	401813	315723

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