



**Multi Sensor 40 Arm Caliper
Magnetic Wall Thickness
Gamma Ray Collar
Log**

Company	POCO Operating	Country	
Well	Guthrie Abner #1		
Field	Wattenburg		
County	Adams		
State	Colorado		
Location:	SEC 2 TWP 1S RGE 67W	API # : 05-001-06251-0000	Other Services
Permanent Datum	Ground Level	Elevation	5012'
Log Measured From	Kelly Bushing	10' APD	K.B. 5022'
Drilling Measured From	Kelly Bushing		D.F. 5021'
			G.L. 5012'

Date	26-Aug-2020
Run Number	One
Depth Driller	8291'
Depth Logger	7615'
Bottom Logged Interval	7614'
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	n/a
Max. Recorded Temp.	
Estimated Cement Top	
Time Well Ready	0900
Time Logger on Bottom	1100
Equipment Number	58
Location	Windsor, Colorado
Recorded By	Jonathan Bowden
Witnessed By	Greg Thorlaksen

Run Number	Borehole Record			Tubing Record			
	Bit	From	To	Size	Weight	From	To
Casing Record							
Surface String		Size		Mgt/Ft		Top	Bottom
Prot. String		8.625		24		0'	202'
Production String		4.5"		10.5/11.6		0'	8291'
Liner							

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log correlated to Cutters Wireline Service Radial Cement Bond Log
DV Tool @1002'
Dated 09-Jan 2018

API Casing Dimensions

LOG columns indicate the Wall Thickness values that may be displayed on the Caliper Log in NEW casing due only to A.P.I.
Dimensional Tolerances 06FEB2019

Casing O.D.			WGT	Wall Thickness			Casing I.D.			*LOG*	
NOM.	MAX.	MIN.	LB/FT	NOM.	MIN.	NOM.	MAX.	MIN.	MAX.	MIN.	
				0.50	0.05	4.990	4.454	4.037	0.238	1.63	

			9.50	205	173	4.090	4.134	4.037	228	182
			10.50	224	191	4.052	4.118	3.996	247	180
			11.60	250	216	4.000	4.069	3.940	273	204
4.500	4.545	4.478	12.60	271	235	3.958	4.029	3.894	294	224
			13.50	290	253	3.920	3.993	3.853	313	242
			15.10	337	298	3.826	3.904	3.751	360	287
			16.60	373	332	3.754	3.836	3.673	396	321
			16.90	380	339	3.740	3.823	3.658	403	327
			11.50	220	185	4.560	4.631	4.502	245	172
5.000	5.050	4.975	13.00	253	216	4.494	4.568	4.431	278	203
			15.00	296	257	4.408	4.486	4.338	321	244
			18.00	362	319	4.276	4.361	4.195	387	307
			20.30	408	363	4.184	4.275	4.095	433	350
			20.80	422	376	4.156	4.248	4.065	447	363
			13.00	228	190	5.044	5.120	4.983	256	176
5.500	5.555	5.473	14.00	244	205	5.012	5.090	4.948	272	191
			15.50	275	234	4.950	5.031	4.881	303	221
			17.00	304	262	4.892	4.976	4.819	332	248
			20.00	361	316	4.778	4.868	4.695	389	302
			23.00	415	367	4.670	4.766	4.578	443	353
			26.00	476	425	4.548	4.651	4.445	504	411
			17.00	245	200	6.135	6.224	6.066	278	184
6.625	6.691	6.592	20.00	288	241	6.049	6.142	5.973	321	225
			24.00	352	302	5.921	6.021	5.835	385	286
			28.00	417	364	5.791	5.898	5.694	450	347
			32.00	475	419	5.675	5.788	5.569	508	402
			35.00	525	466	5.575	5.693	5.460	558	449
			43.20	625	560	5.375	5.505	5.242	658	544
			17.00	231	185	6.538	6.629	6.469	266	168
7.000	7.070	6.965	20.00	272	224	6.456	6.551	6.381	307	207
			23.00	317	267	6.366	6.466	6.284	352	250
			26.00	362	310	6.276	6.380	6.187	397	292
			29.00	408	353	6.184	6.293	6.087	443	336
			32.00	453	396	6.094	6.208	5.990	488	379
			35.00	498	439	6.004	6.123	5.892	533	421
			38.00	540	478	5.920	6.043	5.801	575	461
			41.00	590	526	5.820	5.949	5.692	625	508
			42.70	625	559	5.750	5.883	5.616	660	541
			20.00	250	200	7.125	7.224	7.050	288	181
7.625	7.701	7.587	24.00	300	248	7.025	7.129	6.943	338	239
			26.40	328	274	6.969	7.076	6.882	366	255
			29.70	375	319	6.875	6.987	6.781	413	300
			33.70	430	371	6.765	6.882	6.662	468	352
			39.00	500	438	6.625	6.750	6.510	538	419
			42.80	562	496	6.501	6.632	6.376	600	477
			45.30	595	527	6.435	6.570	6.304	633	508
			24.00	264	209	8.097	8.208	8.015	307	187
8.625	8.711	8.582	28.00	308	250	8.010	8.125	7.922	351	228
			32.00	352	292	7.921	8.040	7.826	395	271
			36.00	400	338	7.825	7.949	7.722	433	316
			38.00	425	362	7.775	7.902	7.668	468	340
			40.00	450	385	7.725	7.854	7.614	493	364
			43.00	487	421	7.651	7.784	7.534	530	399
			44.00	500	433	7.625	7.759	7.506	543	411
			49.00	557	487	7.511	7.651	7.383	600	465
			29.30	281	220	9.063	9.185	8.974	329	196
9.625	9.721	9.577	32.30	312	249	9.001	9.126	8.907	360	225
			36.00	352	287	8.921	9.050	8.821	400	263
			38.00	370	305	8.885	9.016	8.782	418	280
			40.00	395	328	8.835	8.968	8.729	443	304
			42.00	413	345	8.799	8.934	8.690	461	321
			43.50	437	369	8.750	8.888	8.637	486	345
			47.00	472	401	8.681	8.822	8.562	520	377
			53.50	545	471	8.535	8.684	8.405	593	447
			57.40	587	511	8.450	8.603	8.313	636	487
			32.75	279	212	10.192	10.325	10.098	333	186
10.750	10.858	10.696	35.75	305	237	10.140	10.276	10.042	359	210
			40.00	348	278	10.054	10.194	9.949	402	251
			45.00	395	323	9.960	10.104	9.848	449	296
			46.20	400	328	9.950	10.095	9.837	454	301
			48.00	424	350	9.902	10.049	9.786	478	323
			51.00	450	375	9.850	10.000	9.730	504	348
			54.00	483	406	9.784	9.937	9.659	537	380
			55.50	495	418	9.760	9.914	9.633	549	391
11.750	11.868	11.691	38.00	300	227	11.150	11.295	11.048	359	198
			42.00	333	259	11.084	11.232	10.977	392	229
			47.00	375	299	11.000	11.152	10.887	434	269
			50.00	400	323	10.950	11.105	10.833	459	293
			54.00	435	356	10.880	11.038	10.757	494	327
			60.00	489	407	10.722	10.935	10.641	548	378
			61.00	490	408	10.770	10.934	10.639	549	379

PIPE TALLY SUMMARY



Company POCO Operating
Well Guthrie Abner #1
Field Wattenburg

JOINT CLASSIFICATION			Comments
Range	Symbol	# Joints	
0% to 10%	A	232	Log correlated to Cutters Wireline Service Radial Cement Bond Log DV Tool @1002' Dated 09-Jan 2018
10% to 20%	B	1	
20% to 30%	C	0	
30% to 40%	D	1	
40% to 50%	E	0	
50% to 100%		0	

Joint number, Depth, Length, Maximum Penetration Percentage, and Symbol														
1	21.8	32.3	0%	A	31	1001.9	34.0	3%	A	61	1977.3	31.9	0%	A
2	54.1	32.6	0%	A	32	1035.9	32.1	0%	A	62	2009.2	32.6	0%	A
3	86.7	32.5	0%	A	33	1068.0	32.7	0%	A	63	2041.8	32.4	0%	A
4	119.2	32.0	0%	A	34	1100.7	32.5	0%	A	64	2074.2	32.2	0%	A
5	151.2	32.6	0%	A	35	1133.2	32.6	1%	A	65	2106.4	32.7	0%	A
6	183.8	32.6	0%	A	36	1165.8	32.7	1%	A	66	2139.1	32.4	0%	A
7	216.4	32.3	0%	A	37	1198.5	32.4	0%	A	67	2171.4	32.5	0%	A
8	248.6	32.8	0%	A	38	1230.9	32.2	0%	A	68	2203.9	32.4	0%	A
9	281.4	32.6	0%	A	39	1263.1	32.5	0%	A	69	2236.3	32.7	0%	A
10	314.0	33.0	0%	A	40	1295.6	32.7	0%	A	70	2269.0	32.6	0%	A
11	347.1	33.0	0%	A	41	1328.3	32.2	0%	A	71	2301.6	32.5	1%	A
12	380.1	33.4	0%	A	42	1360.5	32.7	1%	A	72	2334.1	33.3	0%	A
13	413.5	32.4	0%	A	43	1393.2	32.4	0%	A	73	2367.4	32.4	0%	A
14	445.9	31.9	0%	A	44	1425.6	32.6	0%	A	74	2399.8	28.7	0%	A
15	477.8	32.8	7%	A	45	1458.3	31.9	0%	A	75	2428.5	33.1	0%	A
16	510.5	33.2	0%	A	46	1490.1	32.4	0%	A	76	2461.6	32.3	0%	A
17	543.7	32.6	0%	A	47	1522.5	32.5	1%	A	77	2493.8	32.3	13%	B
18	576.3	32.5	0%	A	48	1555.0	32.3	2%	A	78	2526.1	32.8	0%	A
19	608.8	32.4	0%	A	49	1587.3	31.7	0%	A	79	2558.9	31.7	0%	A
20	641.2	32.4	0%	A	50	1619.0	32.6	2%	A	80	2590.6	32.0	0%	A
21	673.6	32.5	0%	A	51	1651.6	32.5	1%	A	81	2622.7	32.4	0%	A
22	706.1	32.5	0%	A	52	1684.1	32.5	0%	A	82	2655.0	32.9	0%	A
23	738.6	33.2	0%	A	53	1716.6	32.4	3%	A	83	2687.9	31.9	0%	A
24	771.8	32.3	0%	A	54	1749.0	32.5	0%	A	84	2719.8	32.3	0%	A
25	804.1	33.7	1%	A	55	1781.5	32.6	0%	A	85	2752.1	32.8	0%	A
26	837.8	33.0	0%	A	56	1814.1	32.8	0%	A	86	2784.8	32.5	0%	A
27	870.8	33.5	0%	A	57	1846.9	32.5	0%	A	87	2817.3	32.5	0%	A
28	904.3	31.9	0%	A	58	1879.4	32.9	1%	A	88	2849.8	32.1	0%	A
29	936.2	32.6	0%	A	59	1912.3	32.3	0%	A	89	2882.0	32.6	0%	A
30	968.8	33.1	0%	A	60	1944.5	32.9	0%	A	90	2914.7	32.5	0%	A

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Log Date: 26-Aug 2020

PIPE TALLY SUMMARY



Company POCO Operating
Well Guthrie Abner #1
Field Wattenburg
County Adams

State Colorado

JOINT CLASSIFICATION			Comments
Range	Symbol	# Joints	
0% to 10%	A	232	Log correlated to Cutters Wireline Service Radial Cement Bond Log DV Tool @1002' Dated 09-Jan 2018
10% to 20%	B	1	
20% to 30%	C	0	
30% to 40%	D	1	
40% to 50%	E	0	
50% to 100%		0	

Joint number, Depth, Length, Maximum Penetration Percentage, and Symbol														
91	2947.1	32.1	0%	A	121	3920.9	32.0	0%	A	151	4887.0	32.0	0%	A
92	2979.2	32.4	0%	A	122	3952.9	32.3	0%	A	152	4919.0	32.5	0%	A
93	3011.6	31.7	0%	A	123	3985.2	32.6	1%	A	153	4951.5	32.9	0%	A
94	3043.3	32.1	0%	A	124	4017.8	32.8	0%	A	154	4984.4	32.5	0%	A
95	3075.4	33.1	0%	A	125	4050.6	32.0	0%	A	155	5016.9	32.3	0%	A
96	3108.5	32.6	0%	A	126	4082.6	32.3	0%	A	156	5049.2	32.2	0%	A
97	3141.1	32.2	0%	A	127	4114.9	31.9	38%	D	157	5081.4	30.4	0%	A
98	3173.3	32.8	0%	A	128	4146.8	32.5	0%	A	158	5111.8	32.8	0%	A
99	3206.1	32.8	0%	A	129	4179.3	32.3	0%	A	159	5144.6	30.4	0%	A

Company: POCO Operating
Well: Guthrie Abner #1



Joint			Remaining Wall		
No.	Depth	Length	0.000	0.500	in
1	21.8	32.3			0.283
2	54.1	32.6			0.256
3	86.7	32.5			0.253
4	119.2	32.0			0.255
5	151.2	32.6			0.260
6	183.8	32.6			0.253
7	216.4	32.3			0.256
8	248.6	32.8			0.256
9	281.4	32.6			0.259
10	314.0	33.0			0.266
11	347.1	33.0			0.253
12	380.1	33.4			0.260
13	413.5	32.4			0.258
14	445.9	31.9			0.256
15	477.8	32.8			0.232
16	510.5	33.2			0.249
17	543.7	32.6			0.253
18	576.3	32.5			0.257
19	608.8	32.4			0.255
20	641.2	32.4			0.257
21	673.6	32.5			0.256
22	706.1	32.5			0.251
23	738.6	33.2			0.252
24	771.8	32.3			0.249
25	804.1	33.7			0.248

Joint			Remaining Wall		
No.	Depth	Length	0.000	0.500	in
26	837.8	33.0			0.252
27	870.8	33.5			0.253
28	904.3	31.9			0.250
29	936.2	32.6			0.254
30	968.8	33.1			0.250
31	1001.9	34.0			0.243
32	1035.9	32.1			0.249
33	1068.0	32.7			0.250
34	1100.7	32.5			0.251
35	1133.2	32.6			0.248
36	1165.8	32.7			0.247
37	1198.5	32.4			0.252
38	1230.9	32.2			0.252
39	1263.1	32.5			0.251
40	1295.6	32.7			0.253
41	1328.3	32.2			0.253
42	1360.5	32.7			0.246
43	1393.2	32.4			0.249
44	1425.6	32.6			0.251
45	1458.3	31.9			0.251
46	1490.1	32.4			0.250
47	1522.5	32.5			0.249
48	1555.0	32.3			0.245
49	1587.3	31.7			0.253
50	1619.0	32.6			0.244

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Company: POCO Operating
Well: Guthrie Abner #1



Joint			Remaining Wall		
No.	Depth	Length	0.000	0.500	in
51	1651.6	32.5			0.247
52	1684.1	32.5			0.251
53	1716.6	32.4			0.243
54	1749.0	32.5			0.254
55	1781.5	32.6			0.259
56	1814.1	32.8			0.254
57	1846.9	32.5			0.253
58	1879.4	32.9			0.248
59	1912.3	32.3			0.253
60	1944.5	32.9			0.261

Joint			Remaining Wall		
No.	Depth	Length	0.000	0.500	in
76	2461.6	32.3			0.259
77	2493.8	32.3			0.217
78	2526.1	32.8			0.252
79	2558.9	31.7			0.252
80	2590.6	32.0			0.253
81	2622.7	32.4			0.258
82	2655.0	32.9			0.254
83	2687.9	31.9			0.253
84	2719.8	32.3			0.257
85	2752.1	32.8			0.256

61	1977.3	31.9		0.259
62	2009.2	32.6		0.260
63	2041.8	32.4		0.260
64	2074.2	32.2		0.256
65	2106.4	32.7		0.257
66	2139.1	32.4		0.269
67	2171.4	32.5		0.258
68	2203.9	32.4		0.258
69	2236.3	32.7		0.261
70	2269.0	32.6		0.259
71	2301.6	32.5		0.247
72	2334.1	33.3		0.258
73	2367.4	32.4		0.254
74	2399.8	28.7		0.252
75	2428.5	33.1		0.264

86	2784.8	32.5		0.257
87	2817.3	32.5		0.256
88	2849.8	32.1		0.255
89	2882.0	32.6		0.257
90	2914.7	32.5		0.257
91	2947.1	32.1		0.281
92	2979.2	32.4		0.258
93	3011.6	31.7		0.255
94	3043.3	32.1		0.253
95	3075.4	33.1		0.259
96	3108.5	32.6		0.253
97	3141.1	32.2		0.256
98	3173.3	32.8		0.254
99	3206.1	32.8		0.258
100	3238.8	32.7		0.257

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Company: POCO Operating
Well: Guthrie Abner #1



No.	Joint		Remaining Wall		
	Depth	Length	0.000	0.500	in
101	3271.6	32.9			0.244
102	3304.4	32.7			0.251
103	3337.1	32.5			0.257
104	3369.6	33.4			0.257
105	3403.0	34.4			0.250
106	3437.3	30.4			0.253
107	3467.7	32.4			0.254
108	3500.2	32.2			0.258
109	3532.3	32.5			0.258
110	3564.8	32.5			0.253
111	3597.3	31.9			0.258
112	3629.3	32.0			0.254
113	3661.3	32.8			0.251
114	3694.1	32.3			0.254
115	3726.3	32.5			0.250
116	3758.8	32.3			0.254
117	3791.1	32.4			0.256
118	3823.5	32.5			0.256
119	3856.0	32.0			0.248
120	3888.0	33.0			0.254
121	3920.9	32.0			0.258
122	3952.9	32.3			0.255
123	3985.2	32.6			0.247
124	4017.8	32.8			0.250
125	4050.6	32.0			0.259

No.	Joint		Remaining Wall		
	Depth	Length	0.000	0.500	in
126	4082.6	32.3			0.255
127	4114.9	31.9			0.156
128	4146.8	32.5			0.251
129	4179.3	32.3			0.259
130	4211.6	30.6			0.255
131	4242.1	32.5			0.257
132	4274.6	31.8			0.255
133	4306.4	32.7			0.258
134	4339.1	32.0			0.262
135	4371.2	32.4			0.249
136	4403.6	33.3			0.255
137	4436.9	32.4			0.256
138	4469.3	32.5			0.256
139	4501.7	32.5			0.257
140	4534.2	32.9			0.248
141	4567.1	32.5			0.255
142	4599.6	32.5			0.256
143	4632.1	31.9			0.259
144	4664.0	32.9			0.256
145	4696.9	32.1			0.258
146	4729.0	32.9			0.254
147	4761.9	31.2			0.269
148	4793.1	30.4			0.272
149	4823.6	30.8			0.248
150	4854.4	32.6			0.257

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215	6950.0	31.5	0.263
216	6981.5	32.6	0.267
217	7014.1	32.5	0.263
218	7046.6	32.6	0.266
219	7079.2	32.5	0.262
220	7111.7	32.0	0.265
221	7143.7	32.6	0.262
222	7176.4	32.4	0.261
223	7208.7	32.2	0.264
224	7240.9	32.6	0.265
225	7273.6	31.6	0.261

Log Date:26-Aug 2020

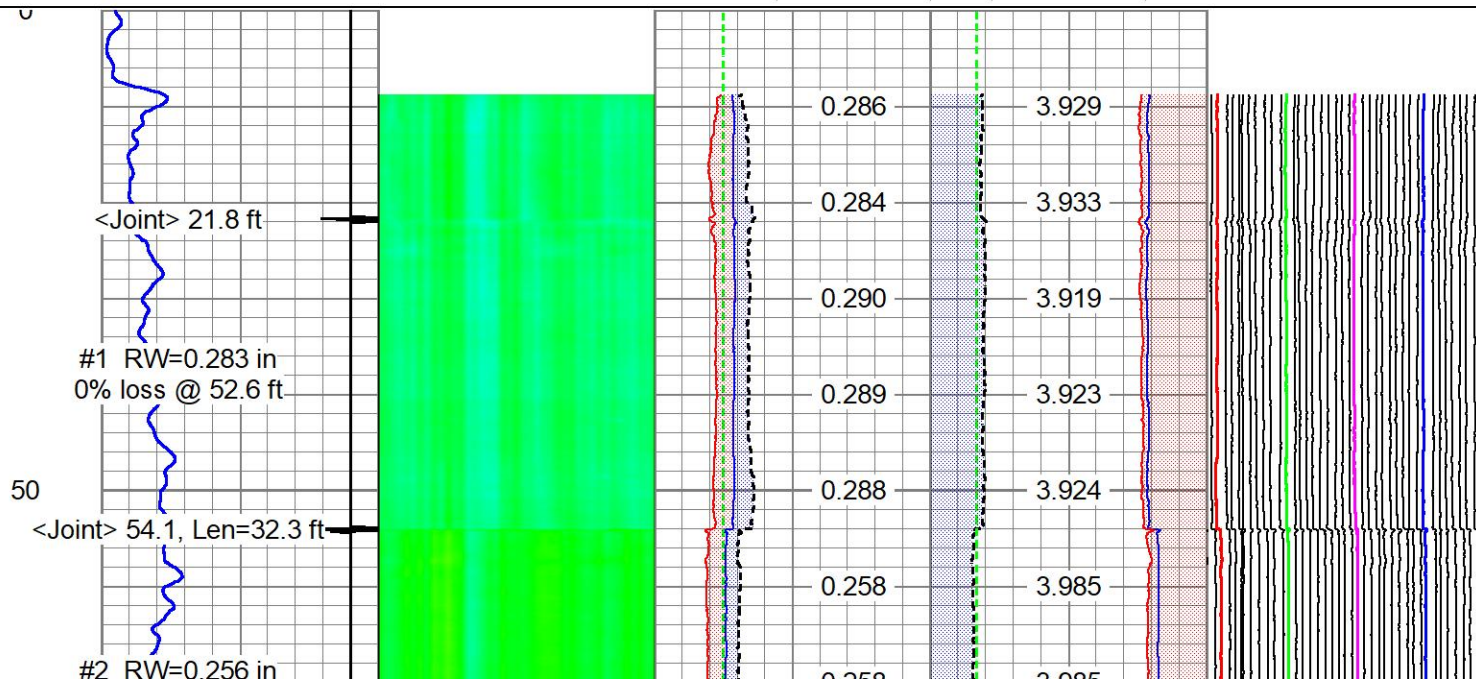
Sheet: 5 of 5

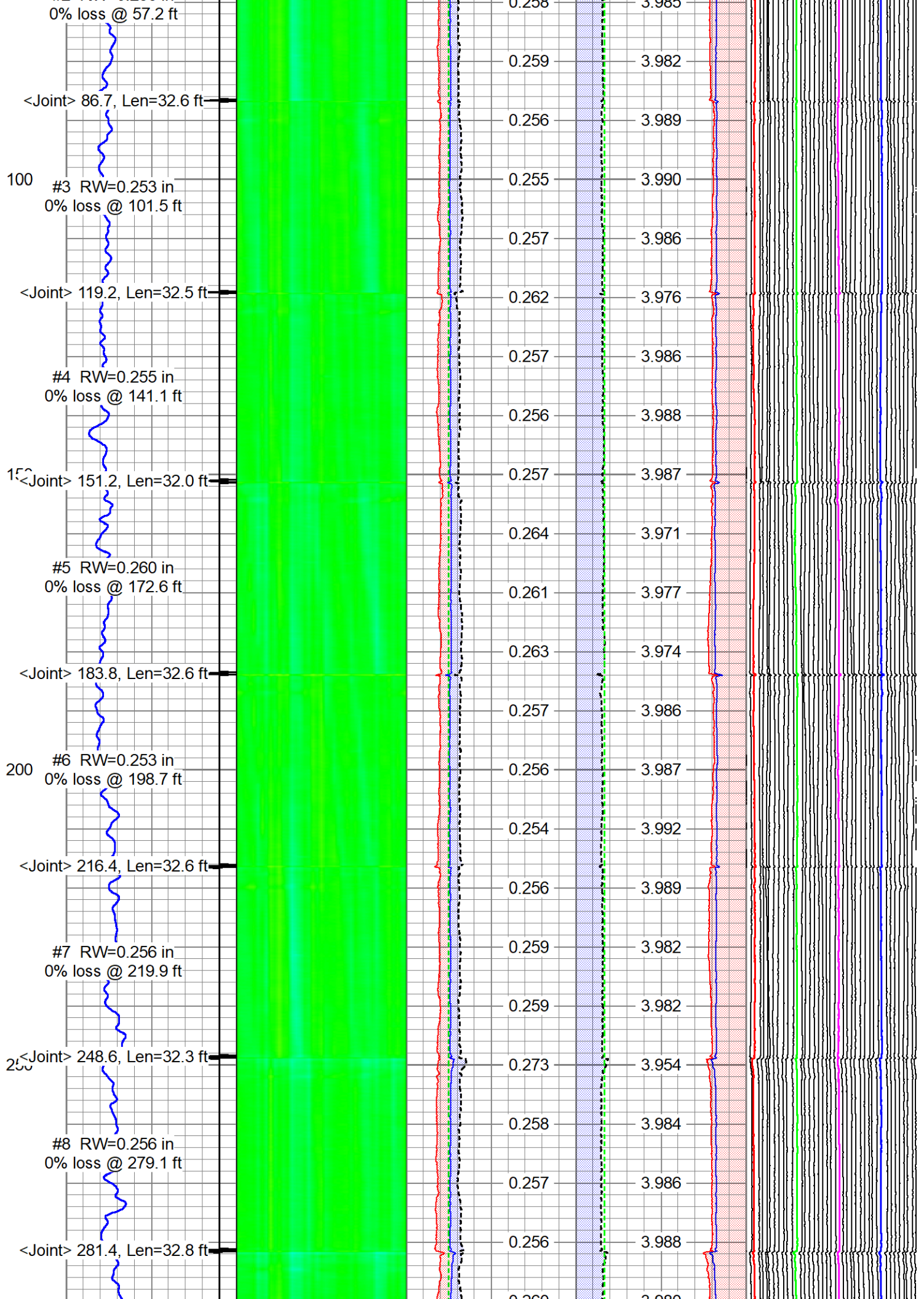


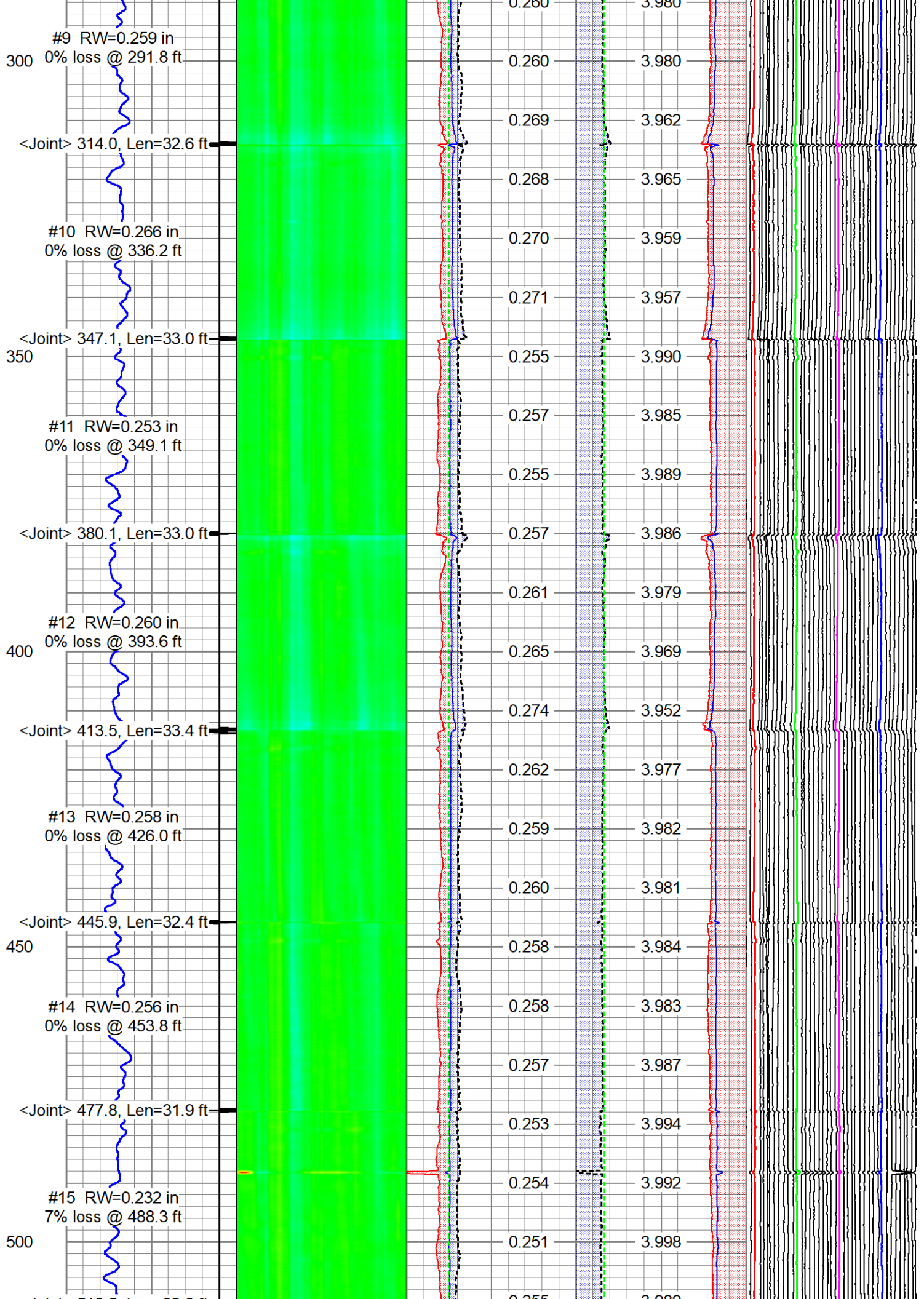
Main Pass 5" = 100'

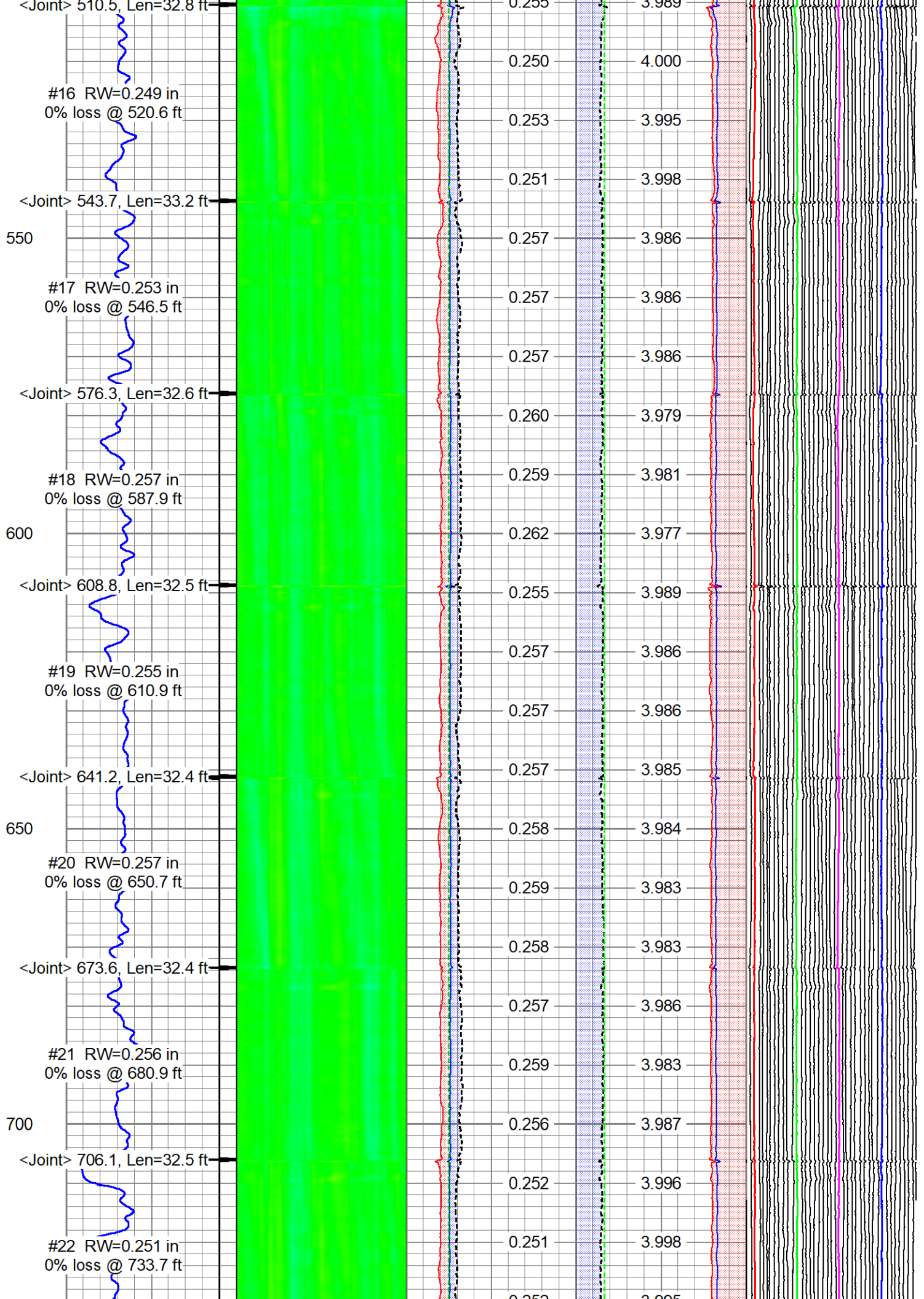
Database File chevron_guthrie_abner_1_mac40\abner gutherie-1_mac40.db
 Dataset Pathname merge1
 Presentation Format 8cm5c45gr
 Dataset Creation Wed Aug 26 22:40:15 2020
 Charted by Depth in Feet scaled 1:240

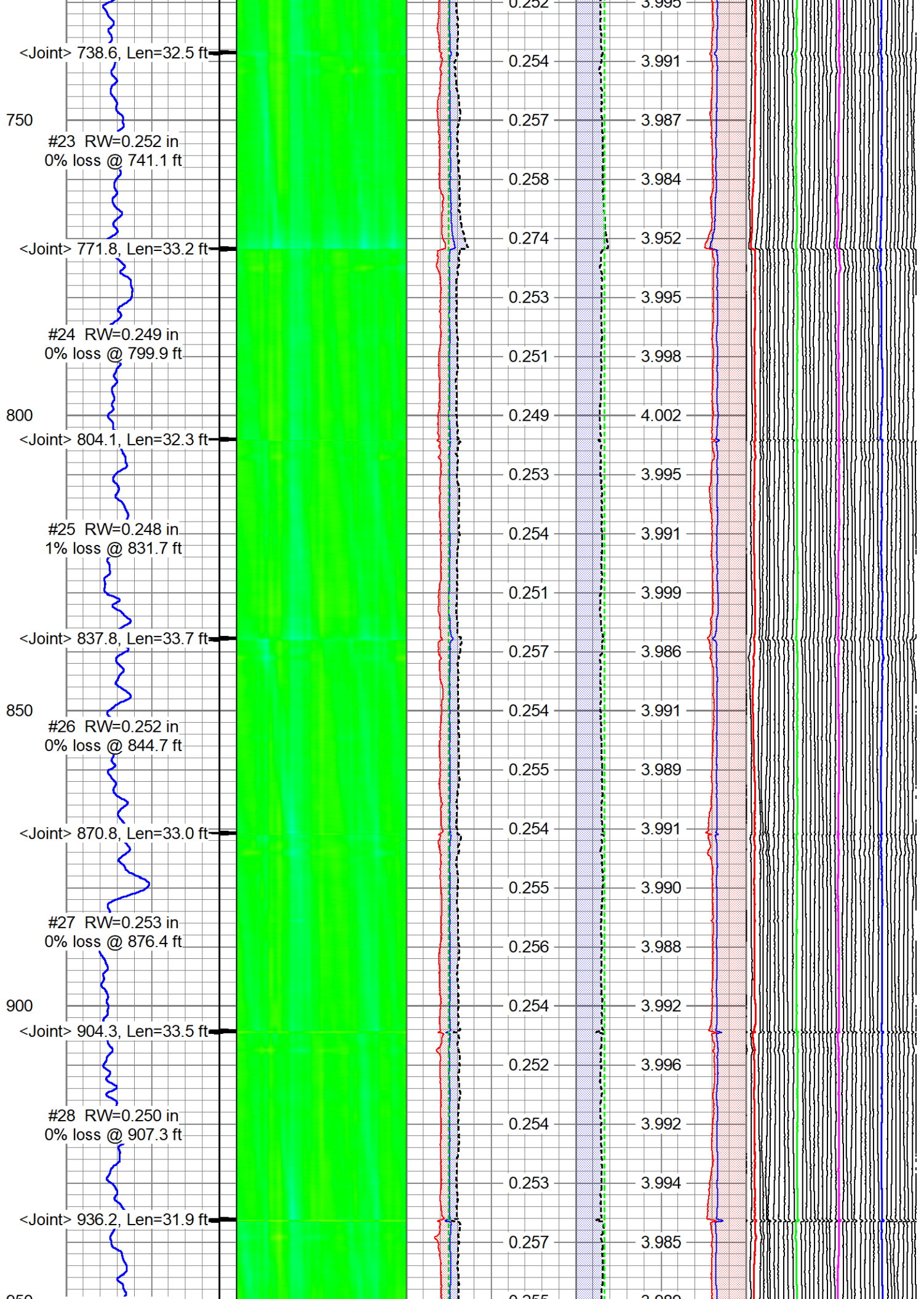
9 Casing Collars -1	Casing Image	Average Thickness	Average ID	RC10
0 GR (GAPI) 150		0 (in) 1 2.75	(in) 4.25	1.875 (in) 4.375
PTANN		Maximum Thickness	Maximum ID	1.25 RC20 (in) 3.75
		0 (in) 1 4.25	(in) 2.75	RC30
		Minimum Thickness	Minimum ID	0.625 (in) 3.125
		0 (in) 1 2.75	(in) 4.25	0 RC40 (in) 2.5
		Nominal Thickness	Nominal ID	
		0 (in) 1 4.25	(in) 2.75	
		AVTK (in)	IDAV (in)	

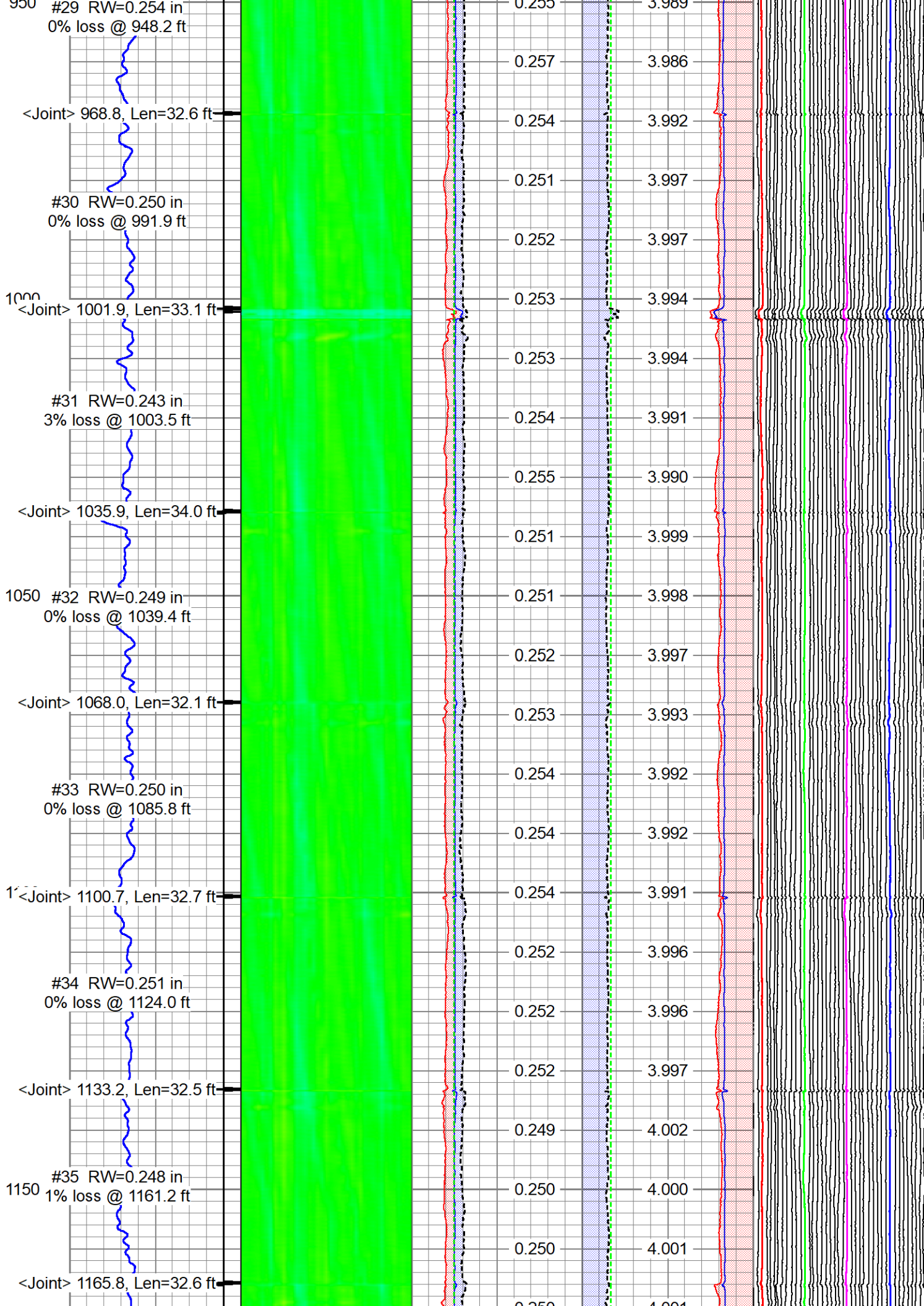


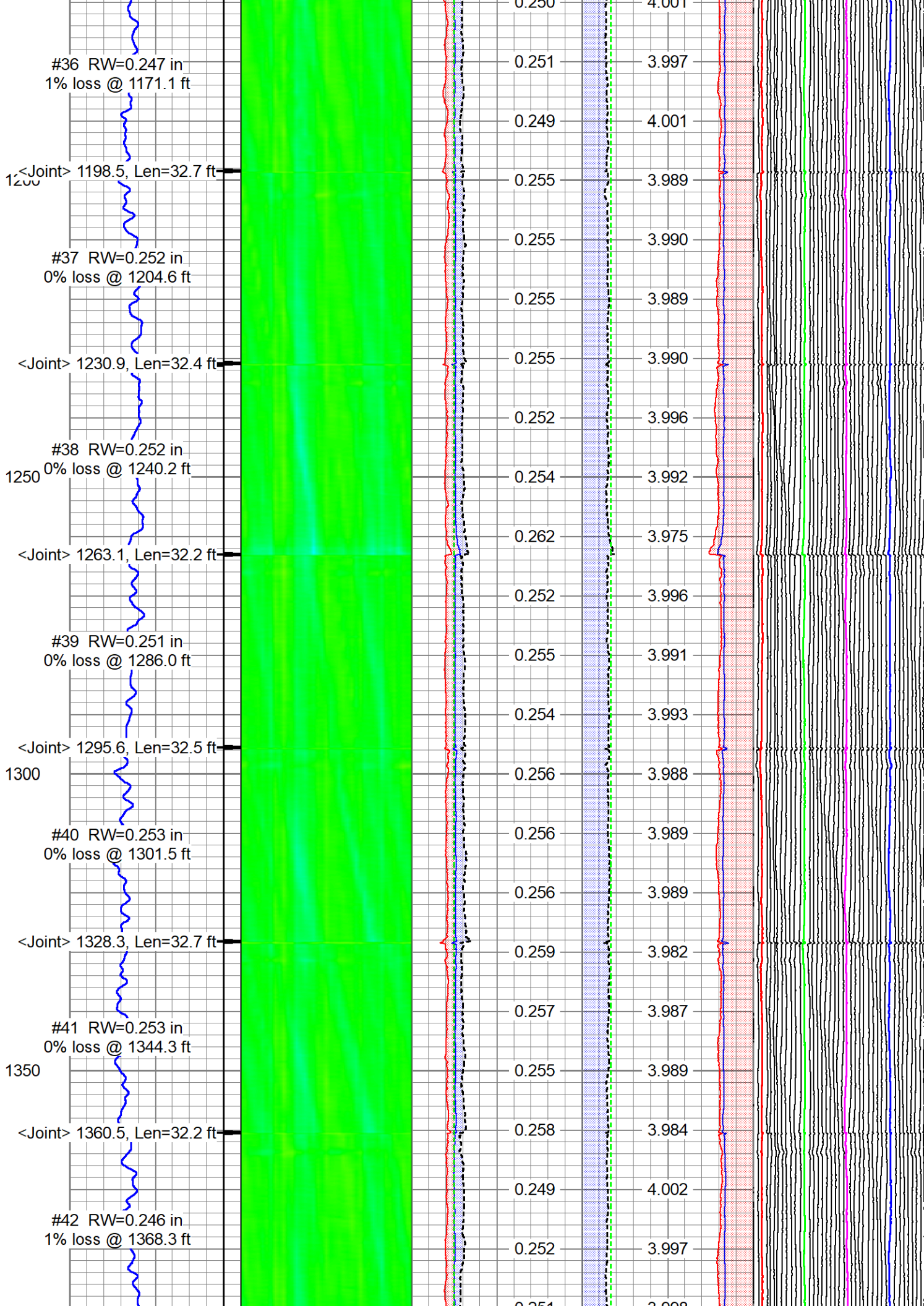


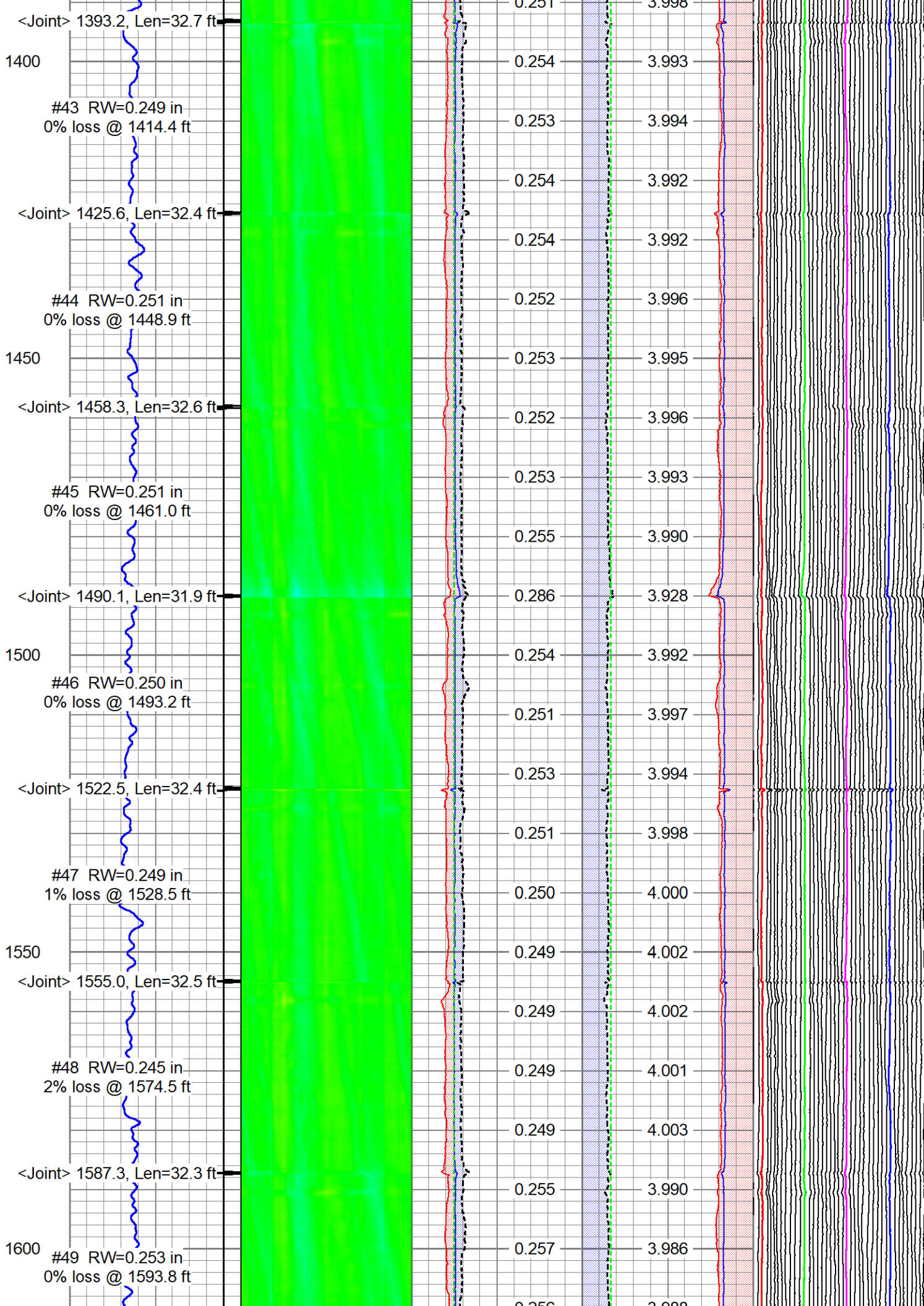


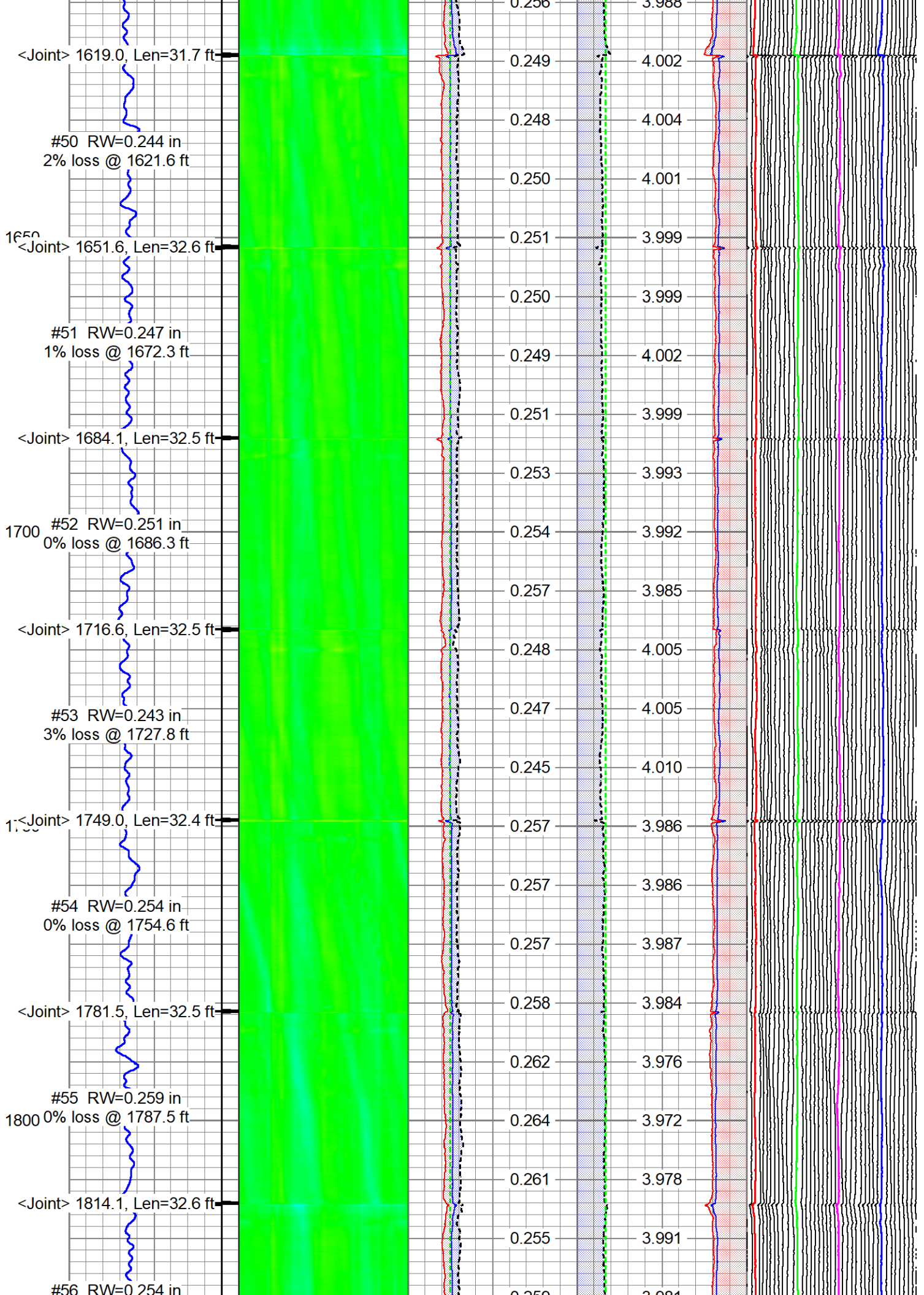


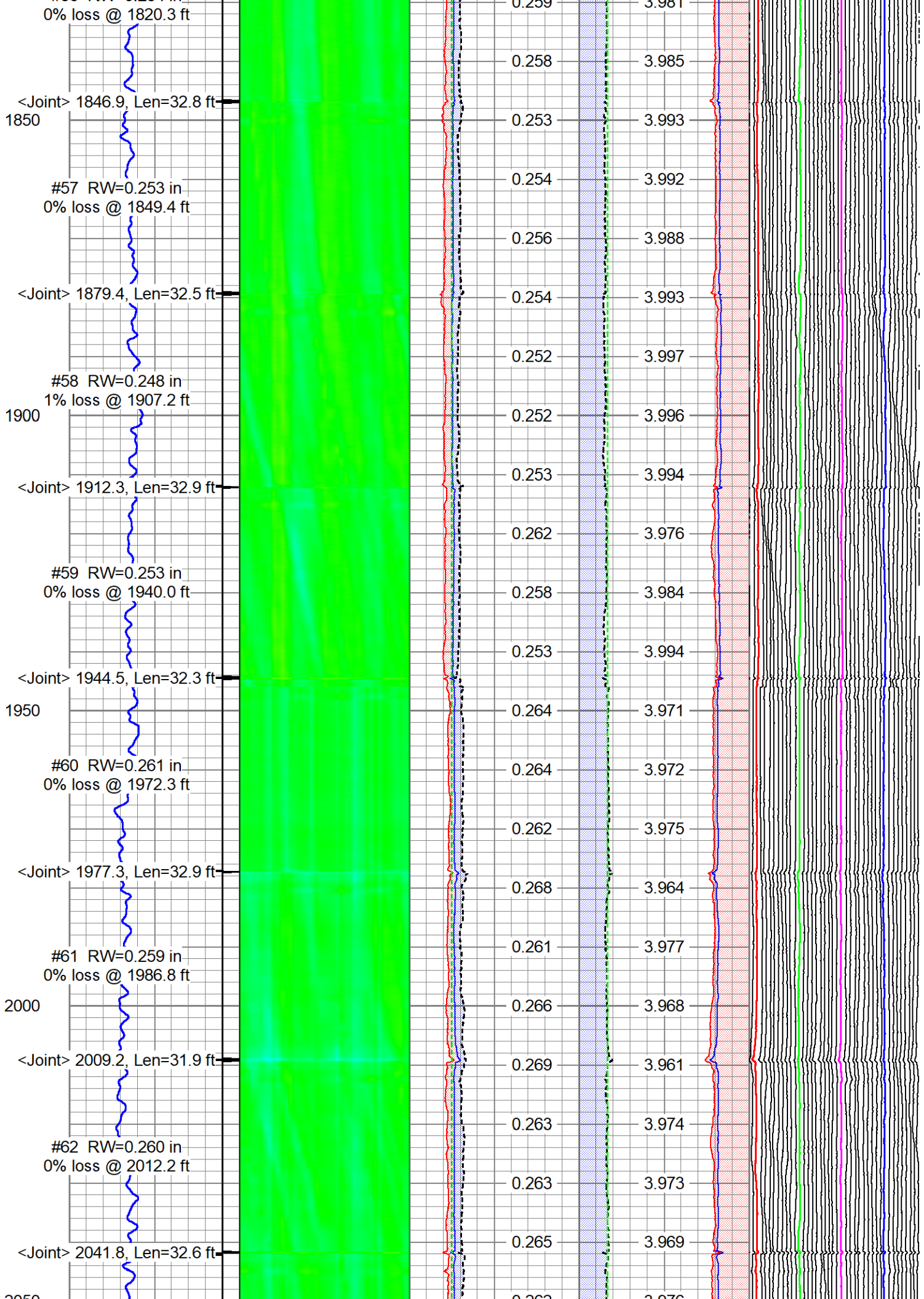


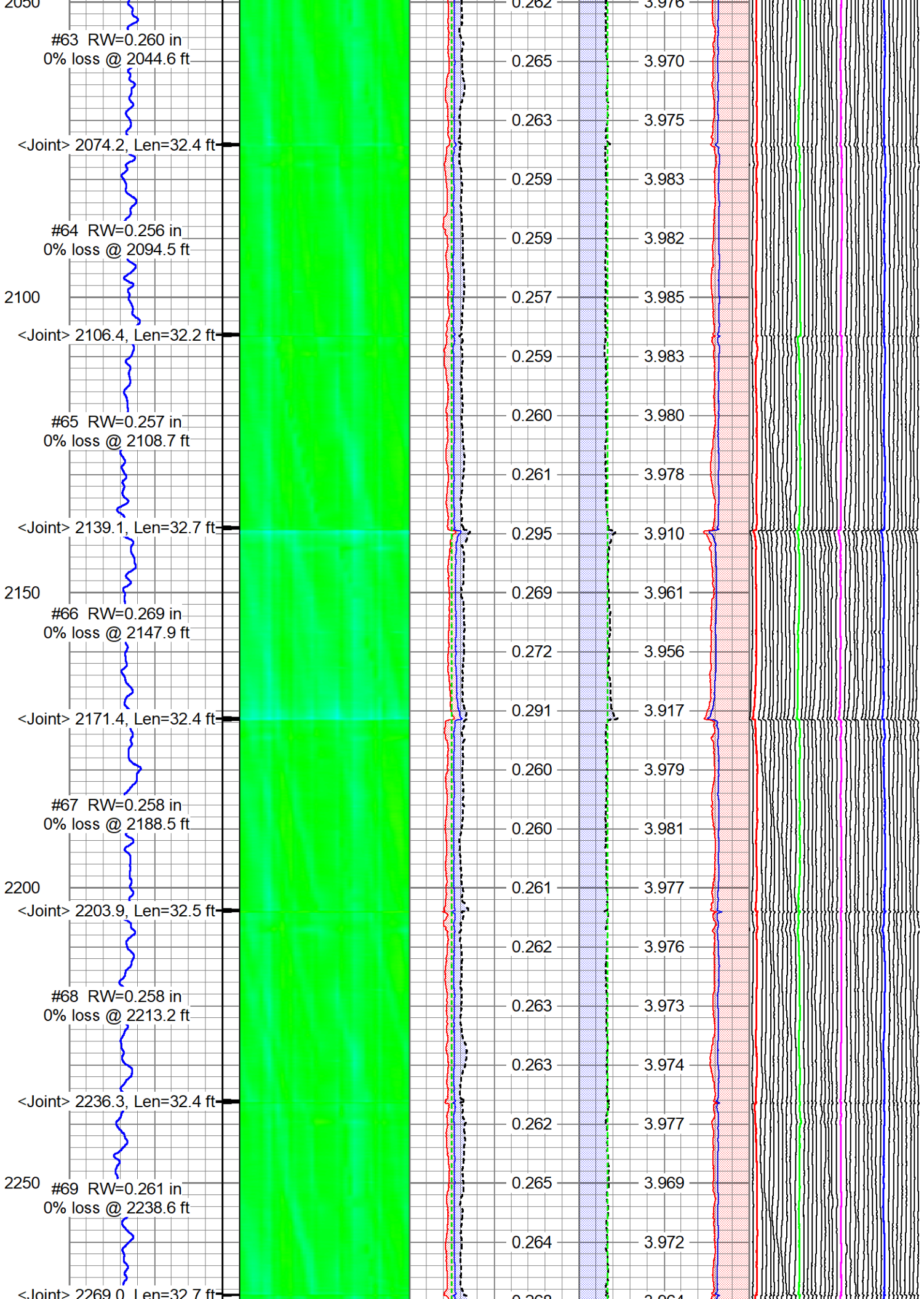


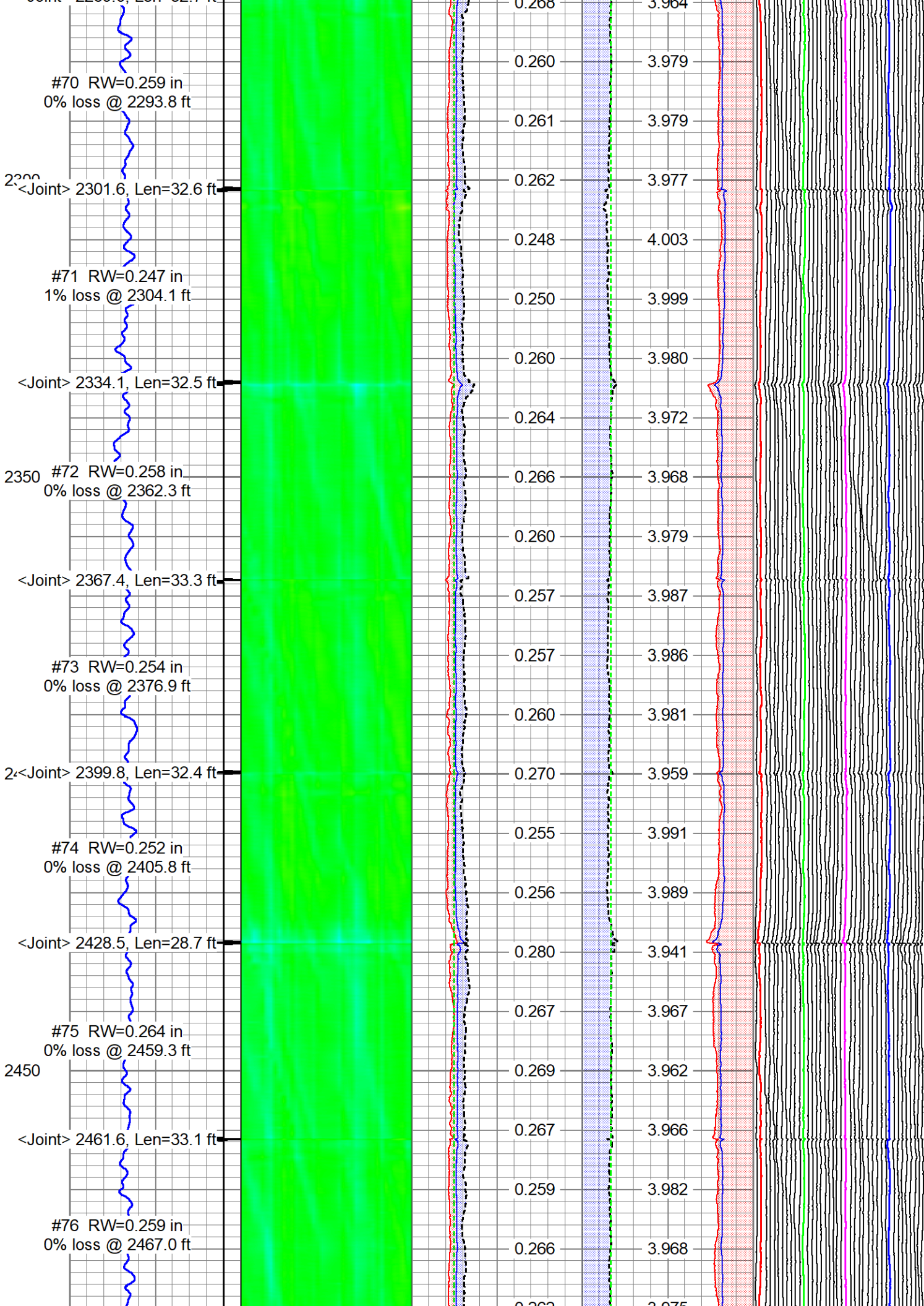


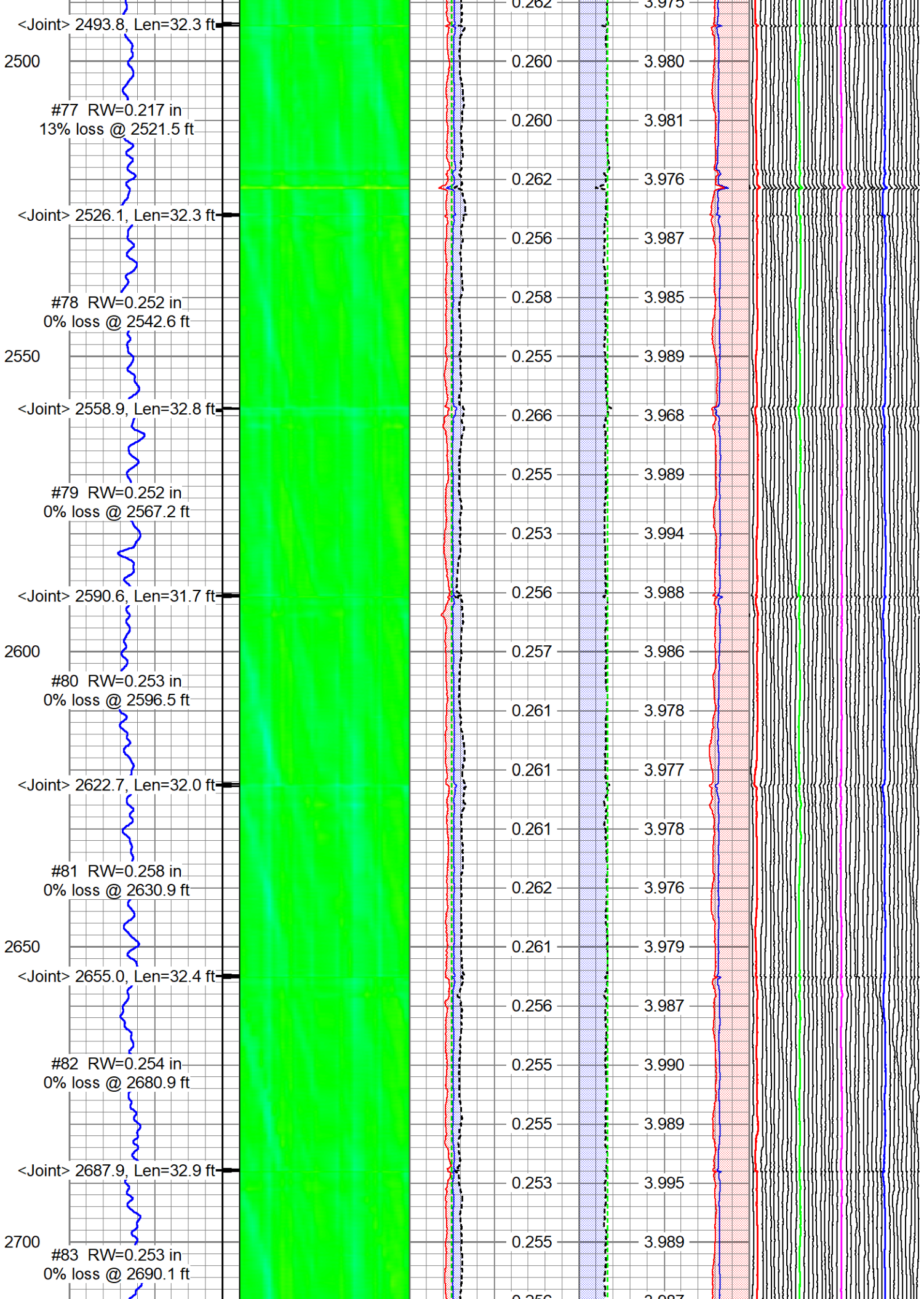


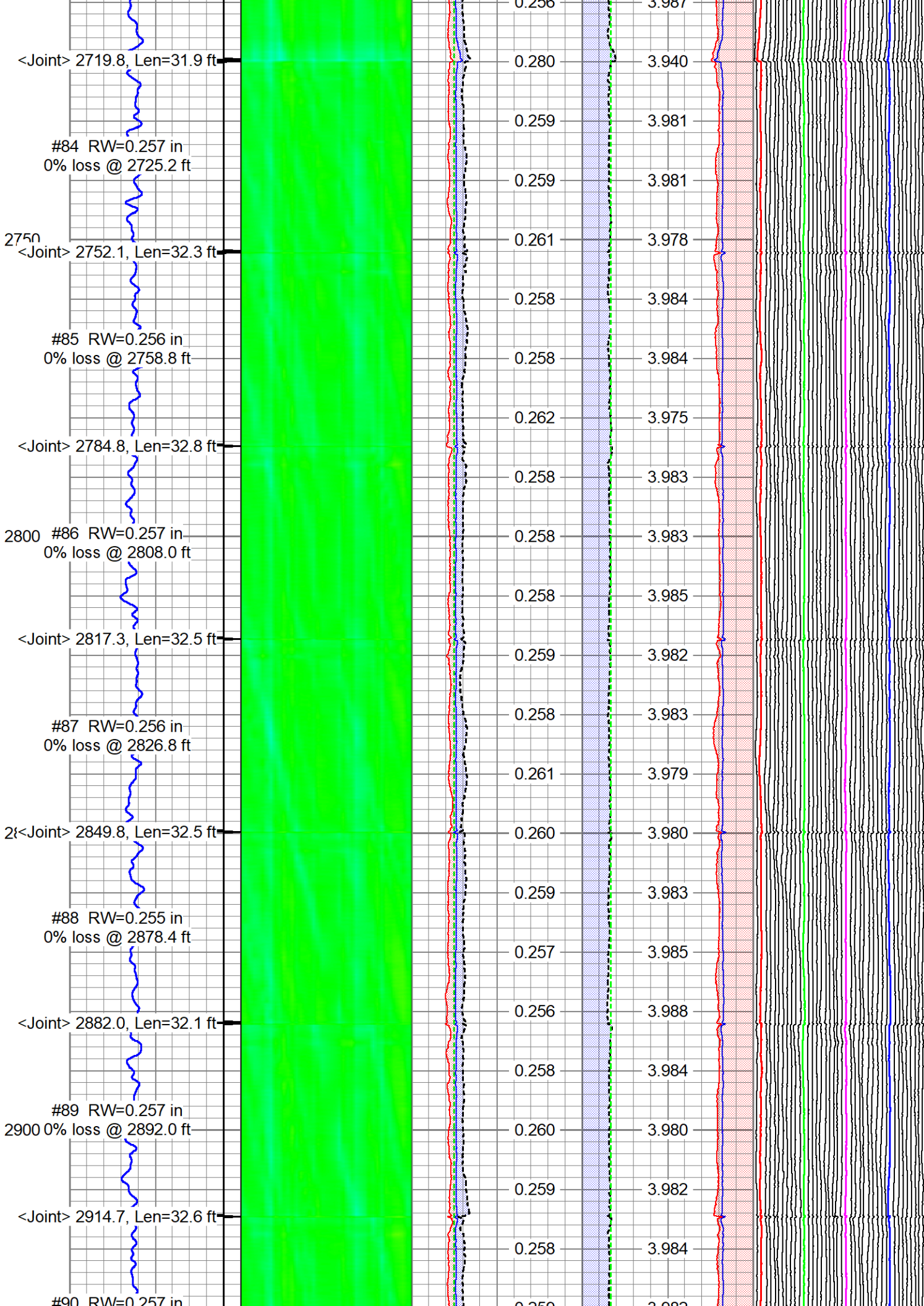


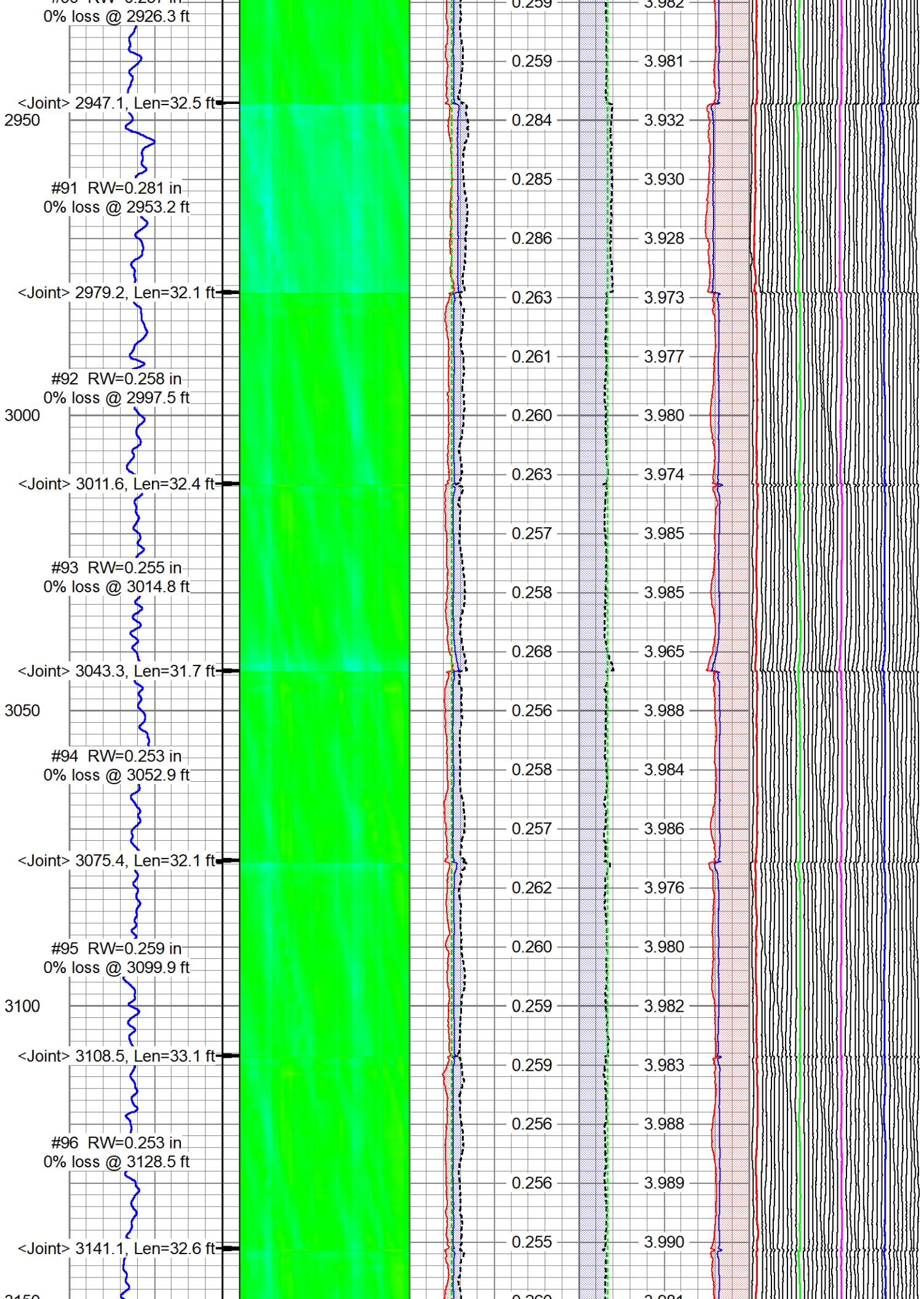


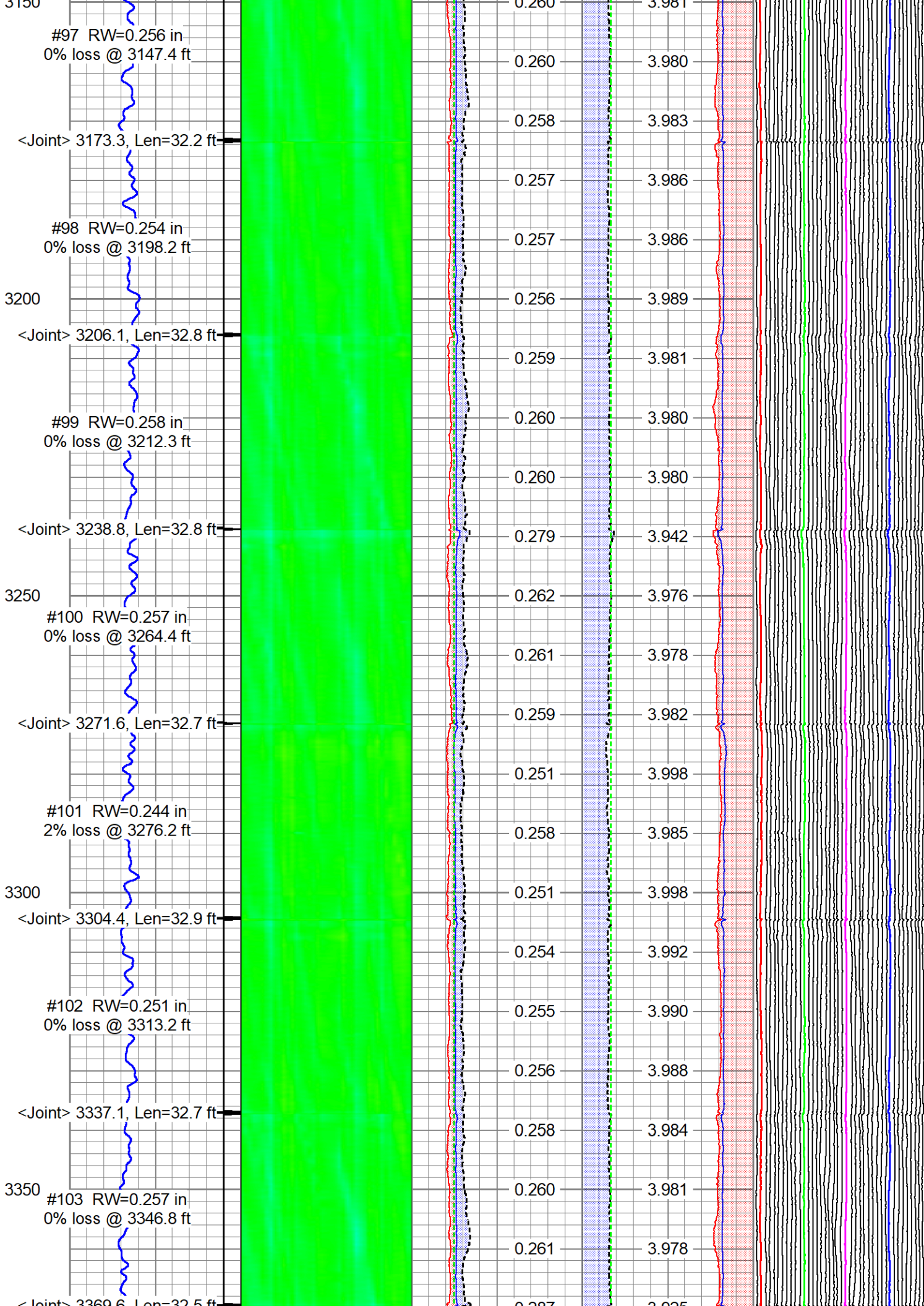


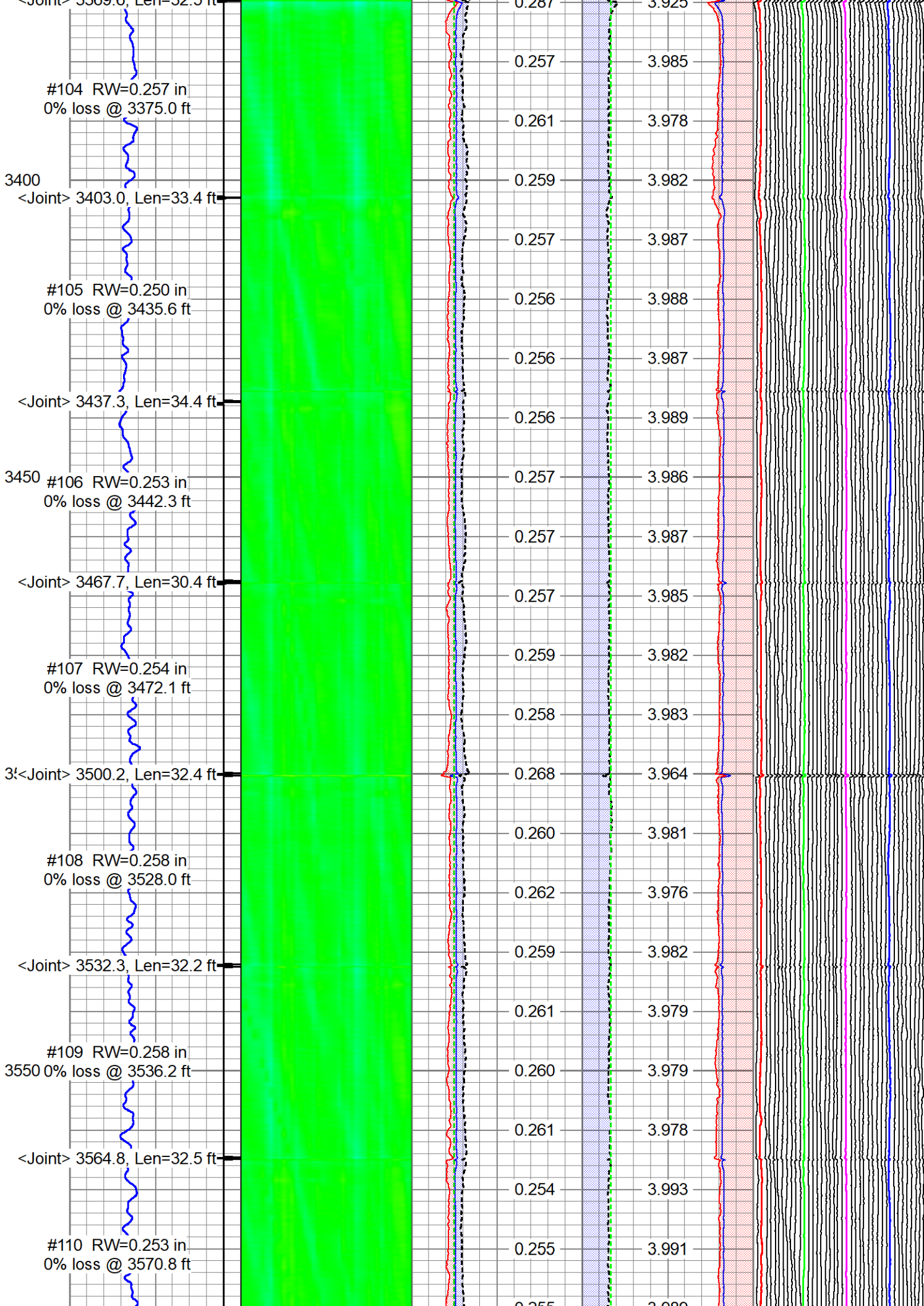


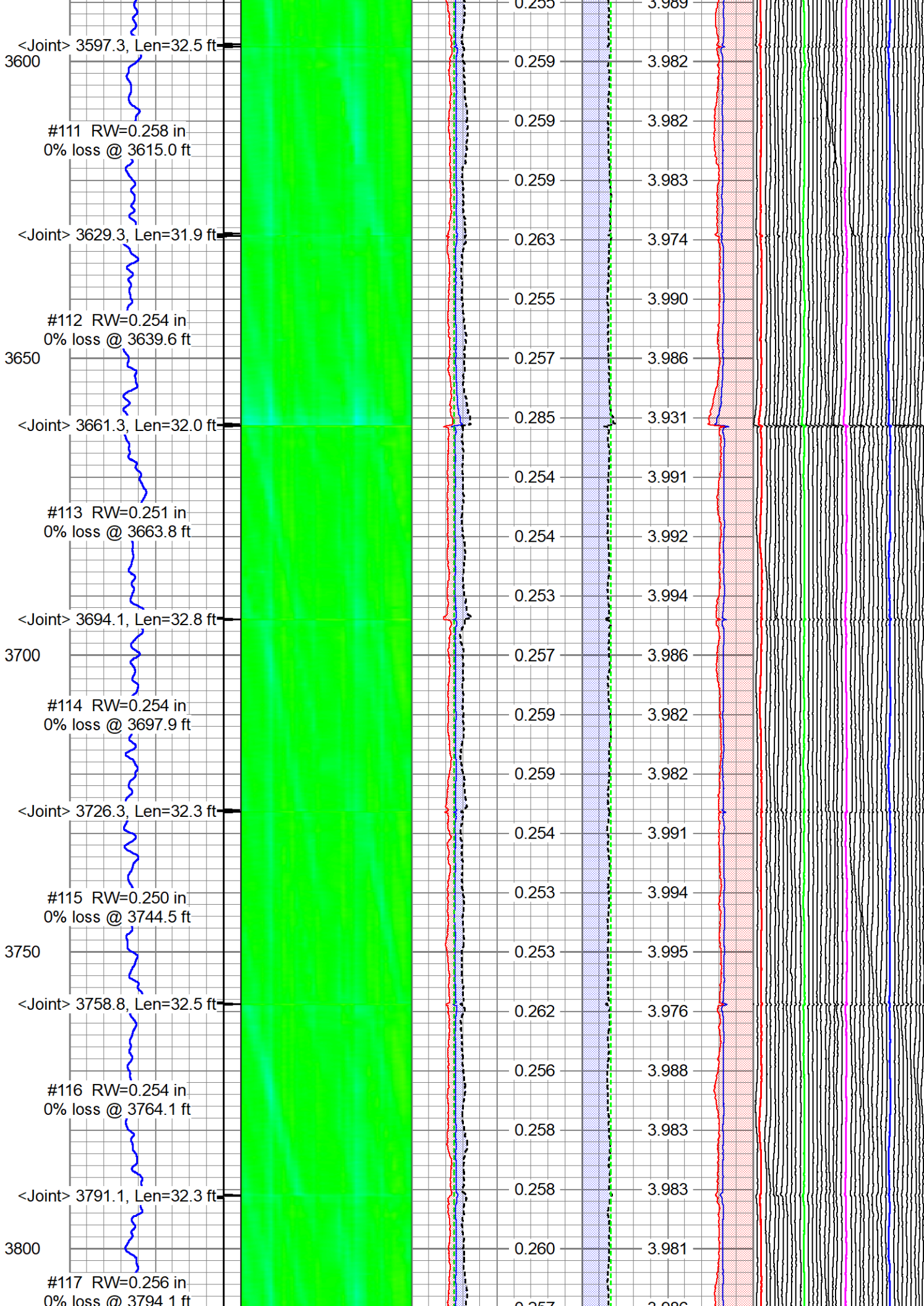


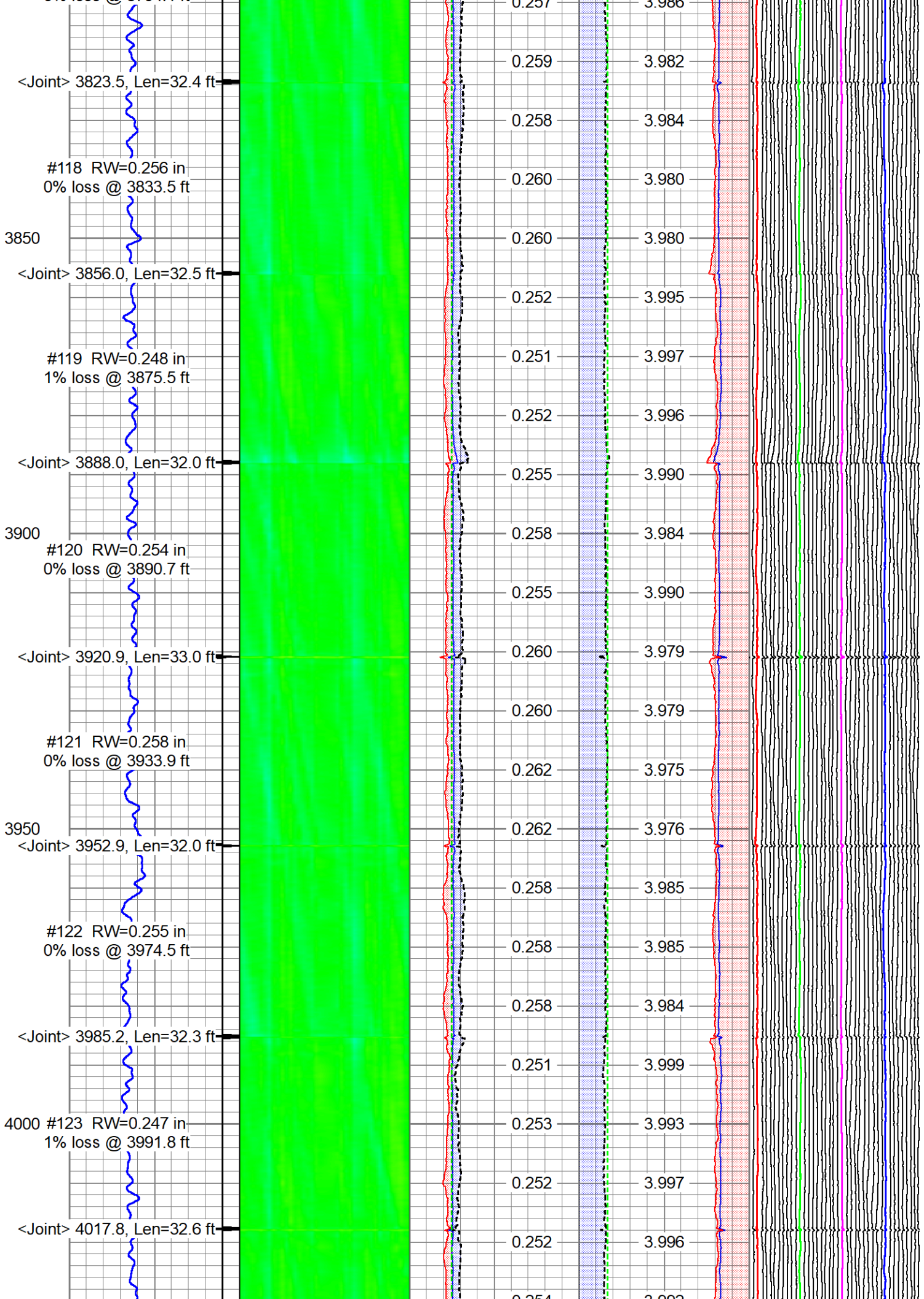


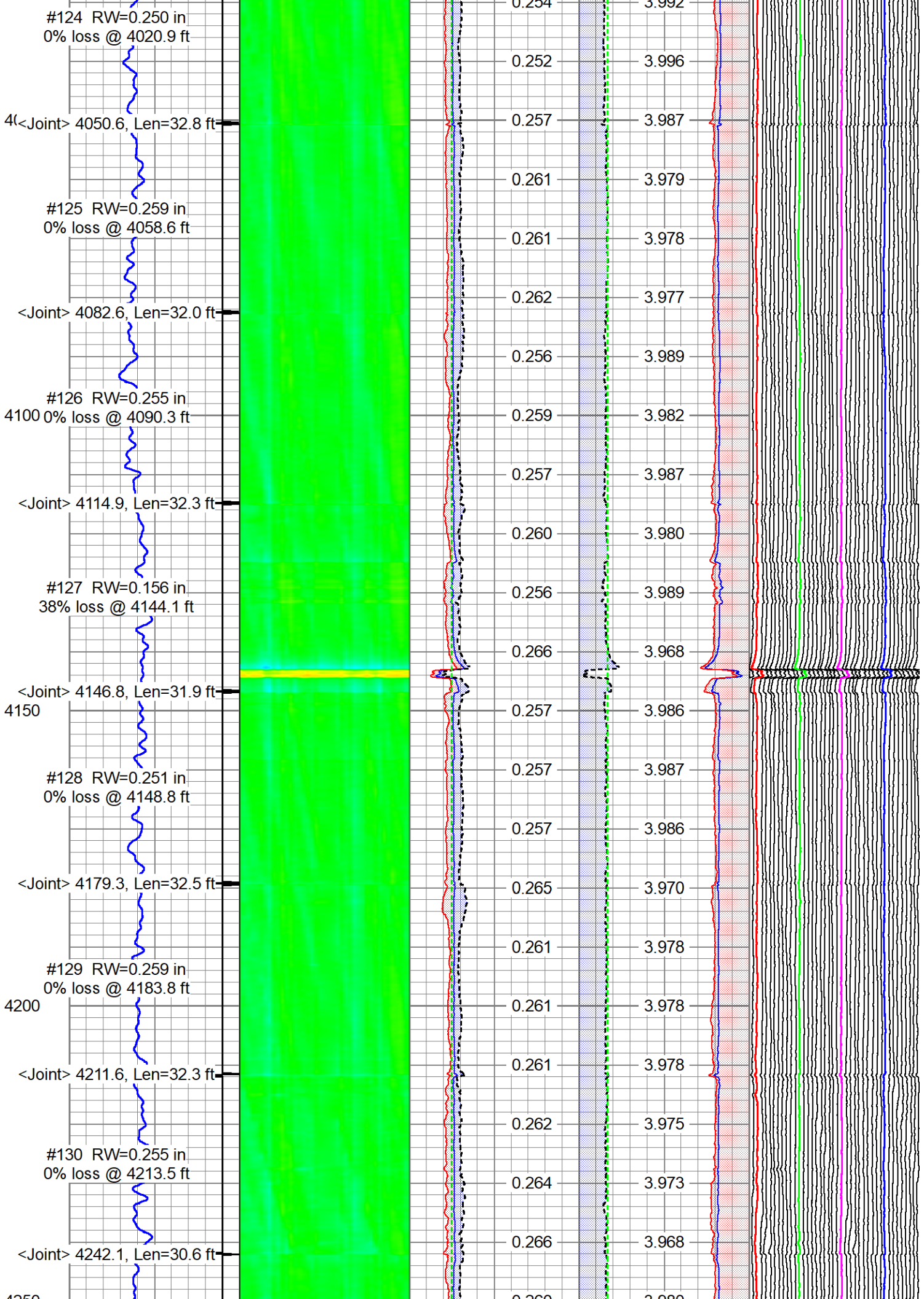


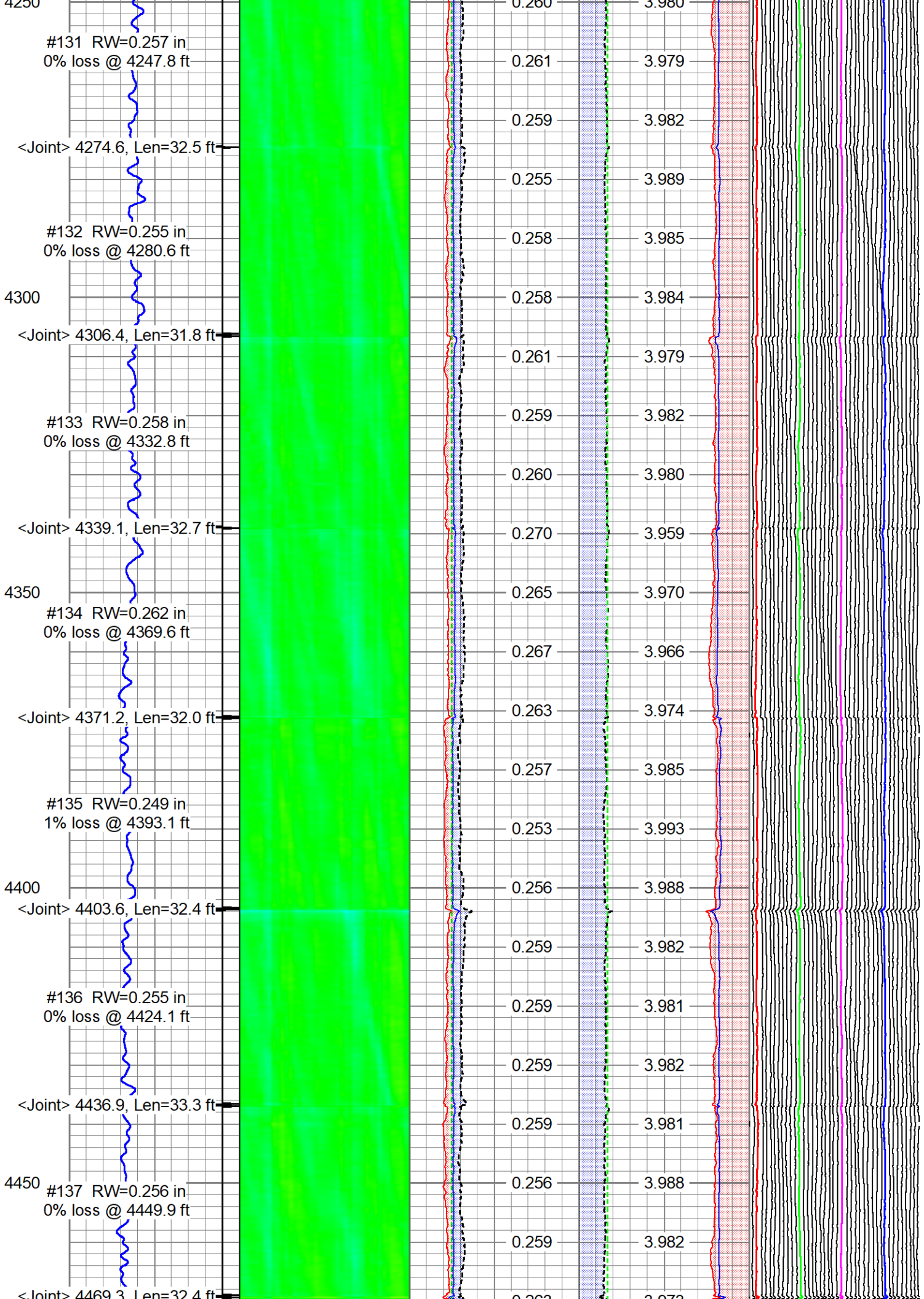


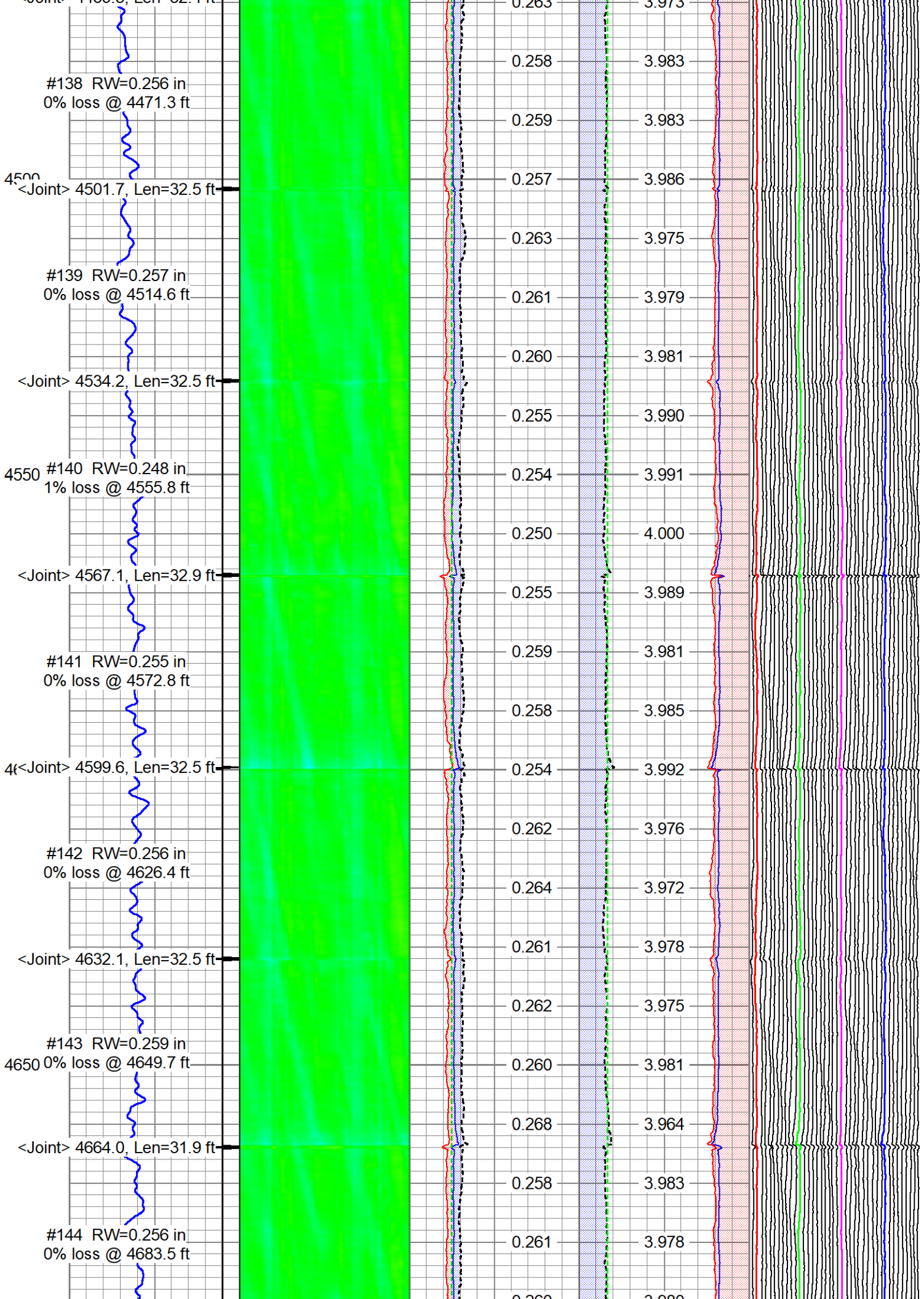


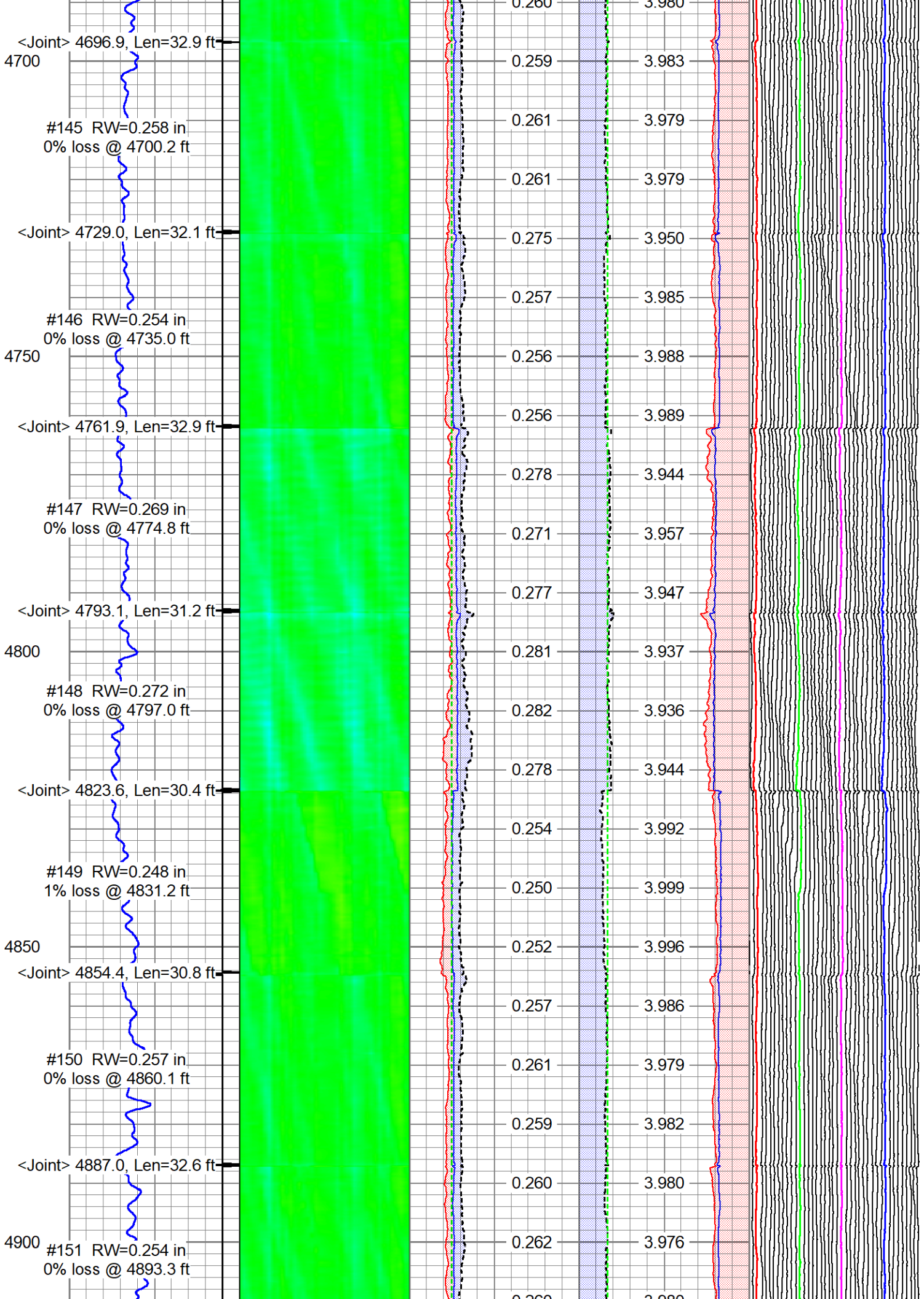


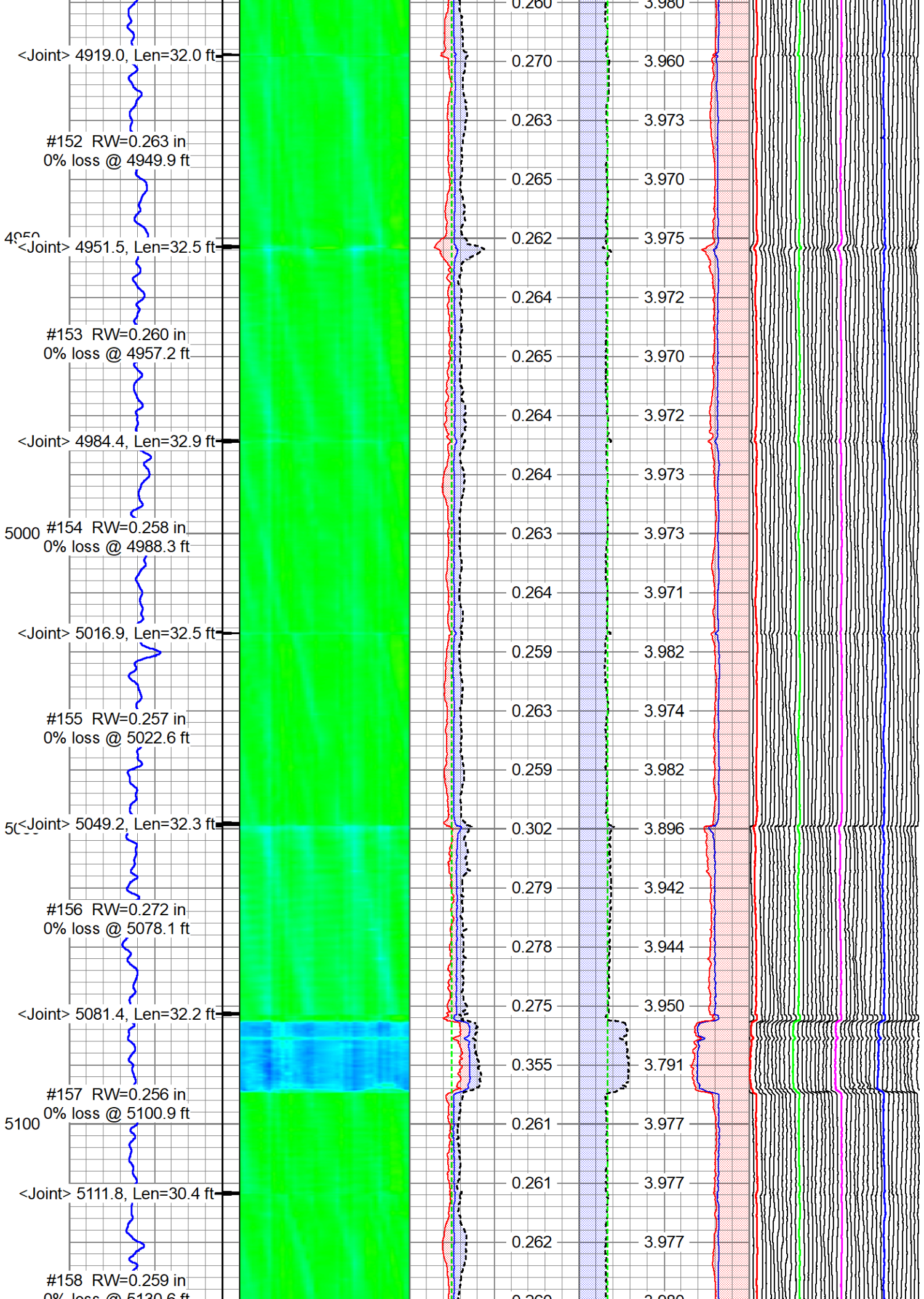


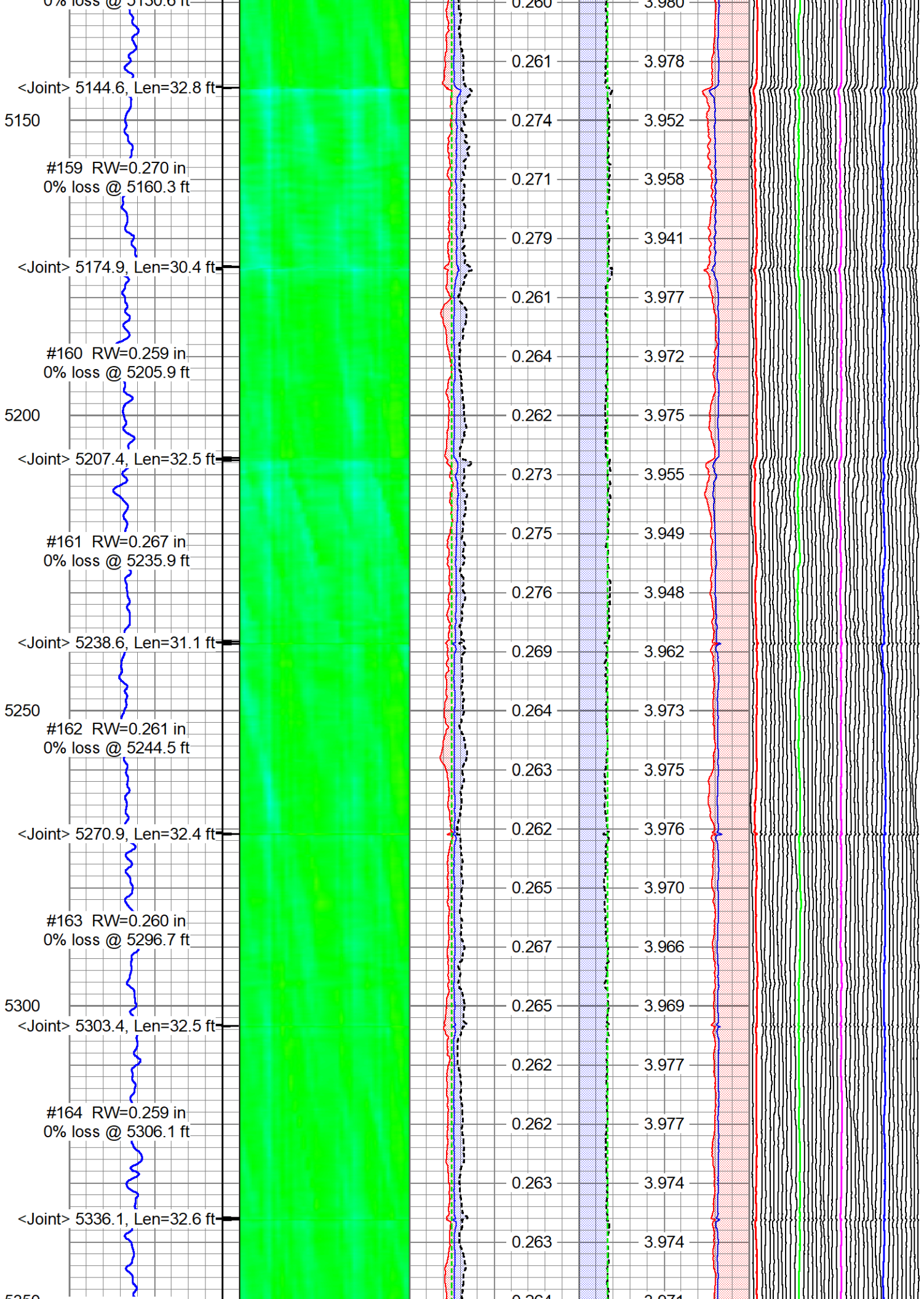


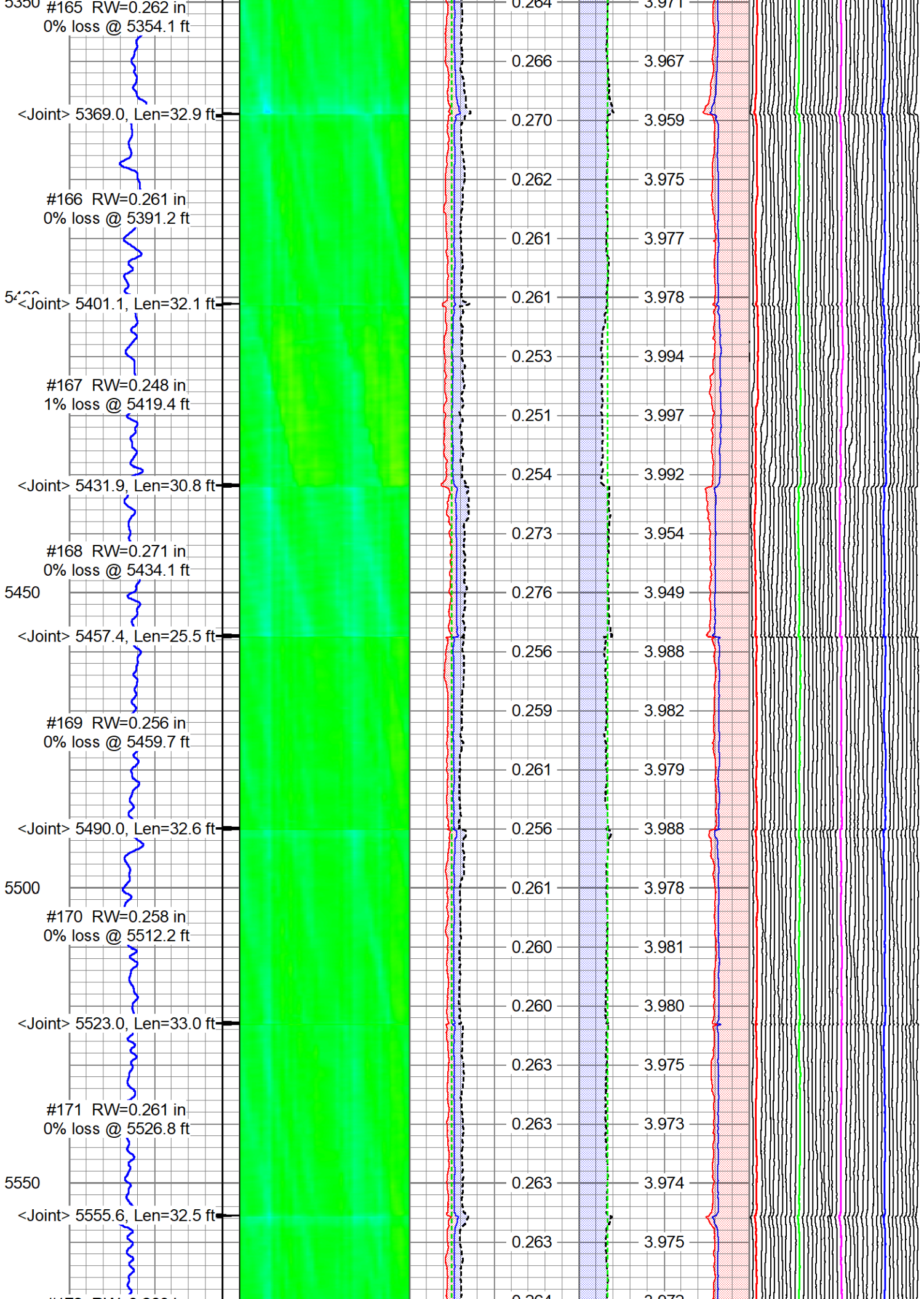


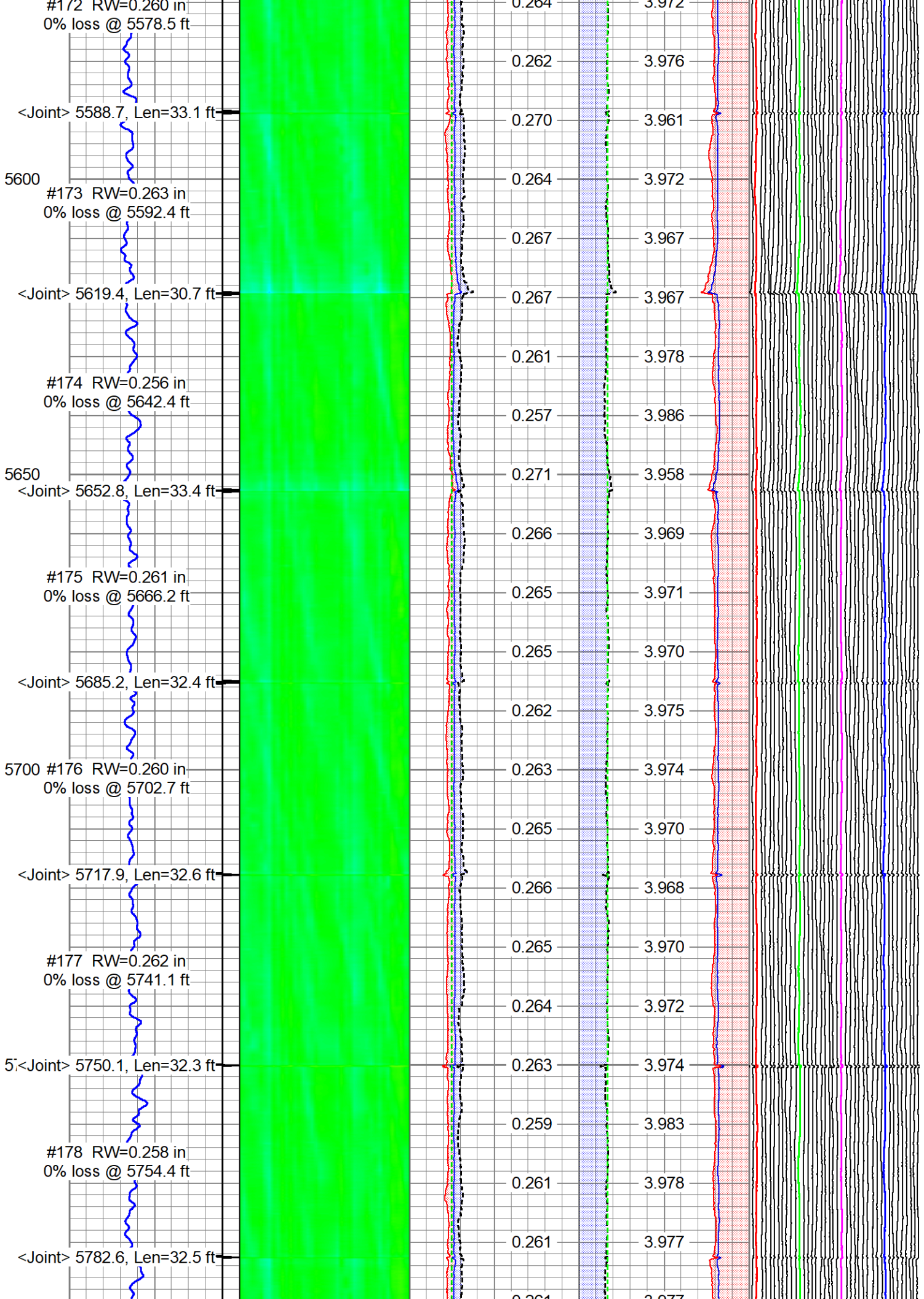












#179 RW=0.260 in
5800 0% loss @ 5804.8 ft

<Joint> 5814.0, Len=31.4 ft

#180 RW=0.262 in
0% loss @ 5836.3 ft

<Joint> 5846.7, Len=32.7 ft
5850

#181 RW=0.256 in
0% loss @ 5849.8 ft

<Joint> 5879.6, Len=32.9 ft

#182 RW=0.263 in
0% loss @ 5885.6 ft
5900

<Joint> 5911.8, Len=32.3 ft

#183 RW=0.264 in
0% loss @ 5916.2 ft

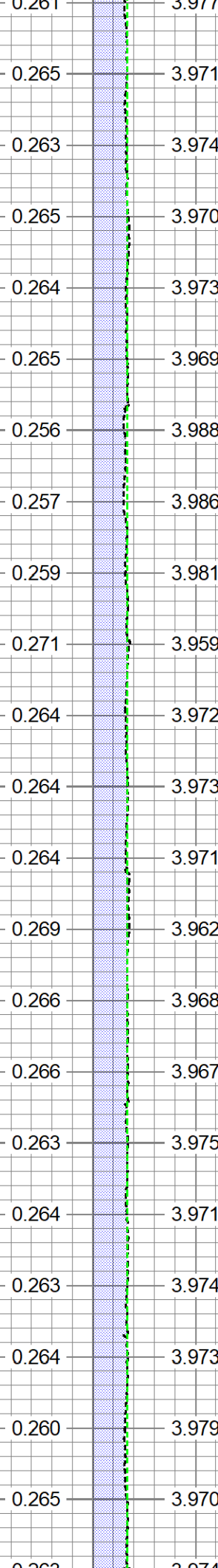
<Joint> 5944.4, Len=32.6 ft
5950

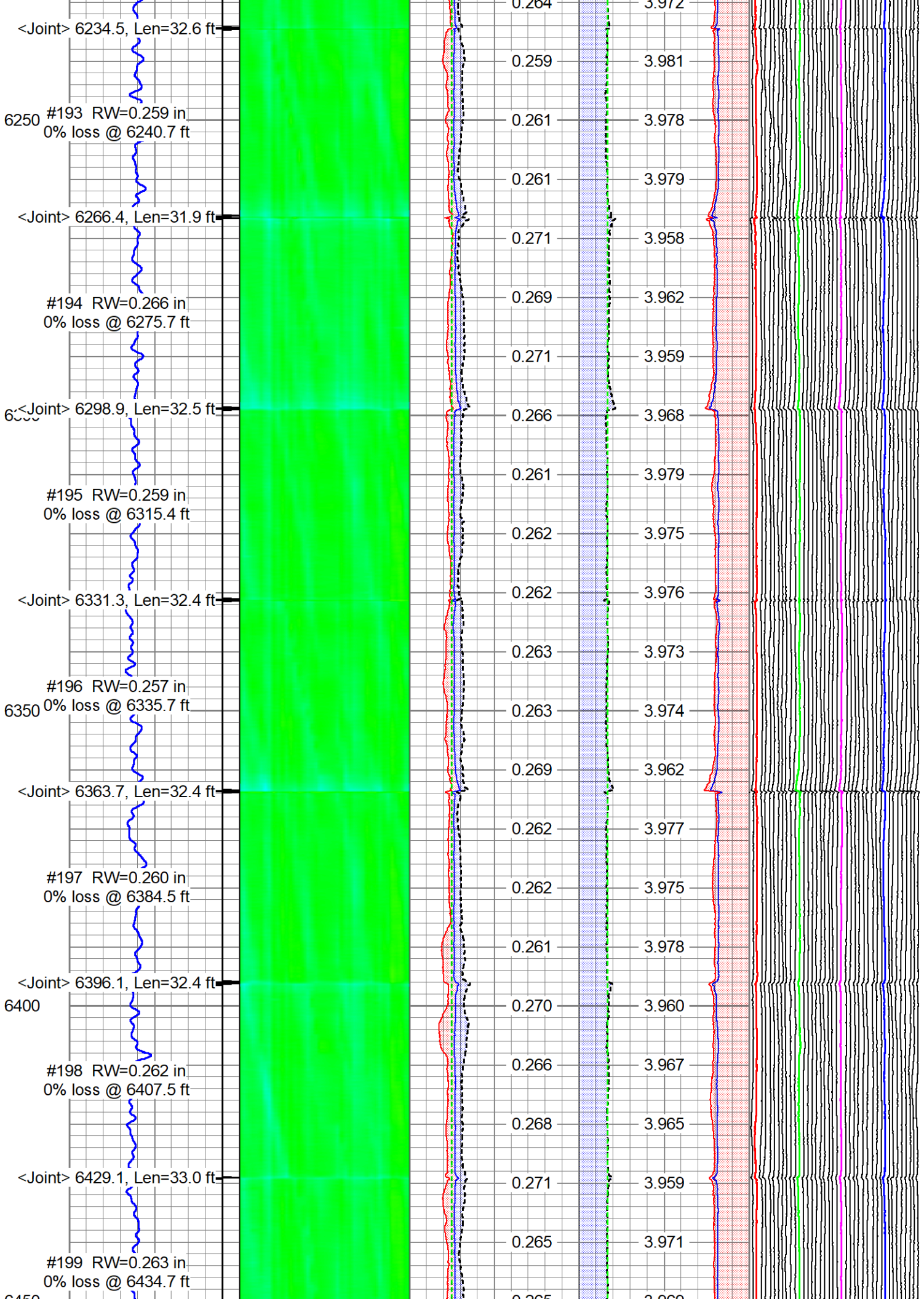
#184 RW=0.261 in
0% loss @ 5971.8 ft

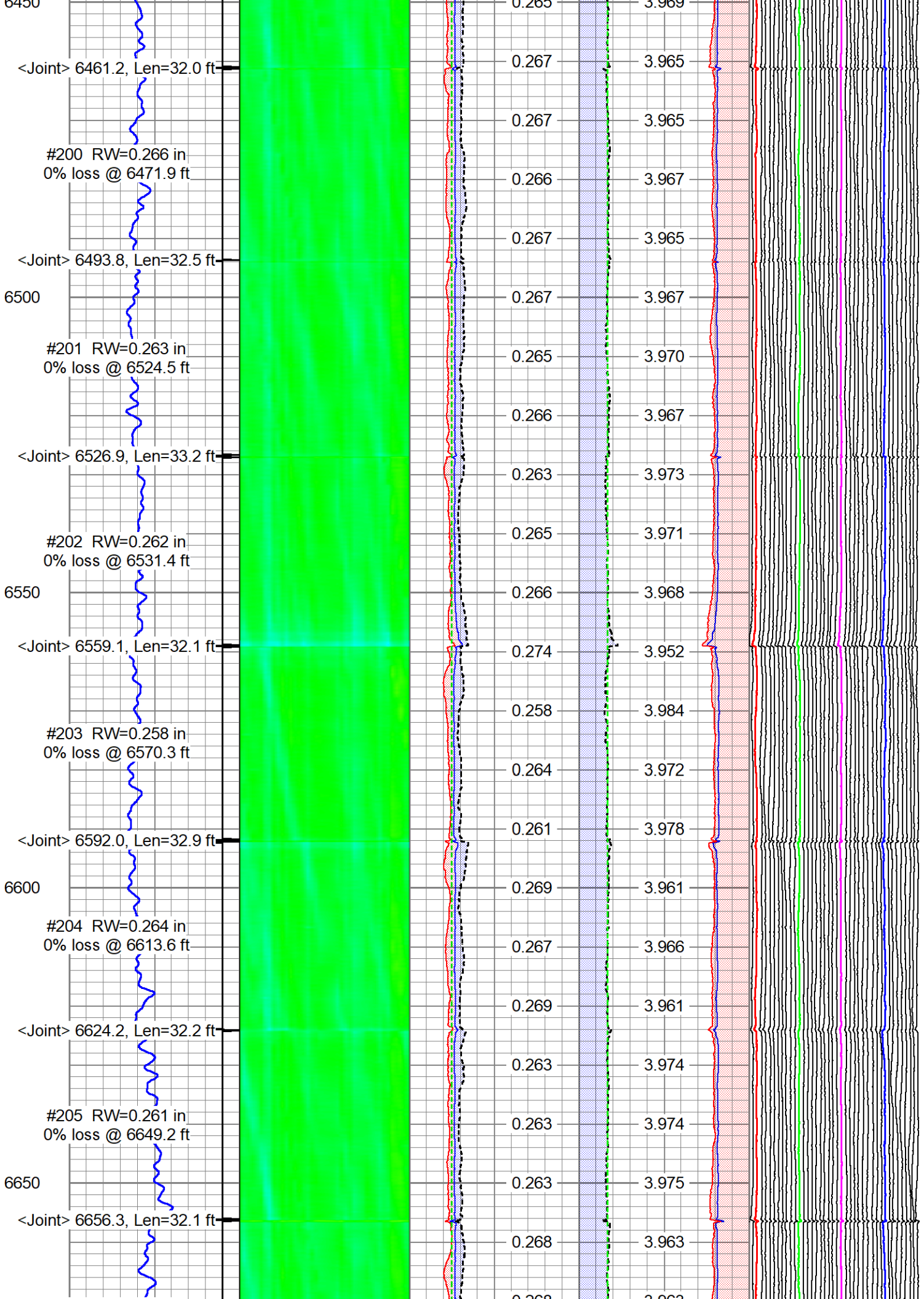
<Joint> 5976.9, Len=32.5 ft

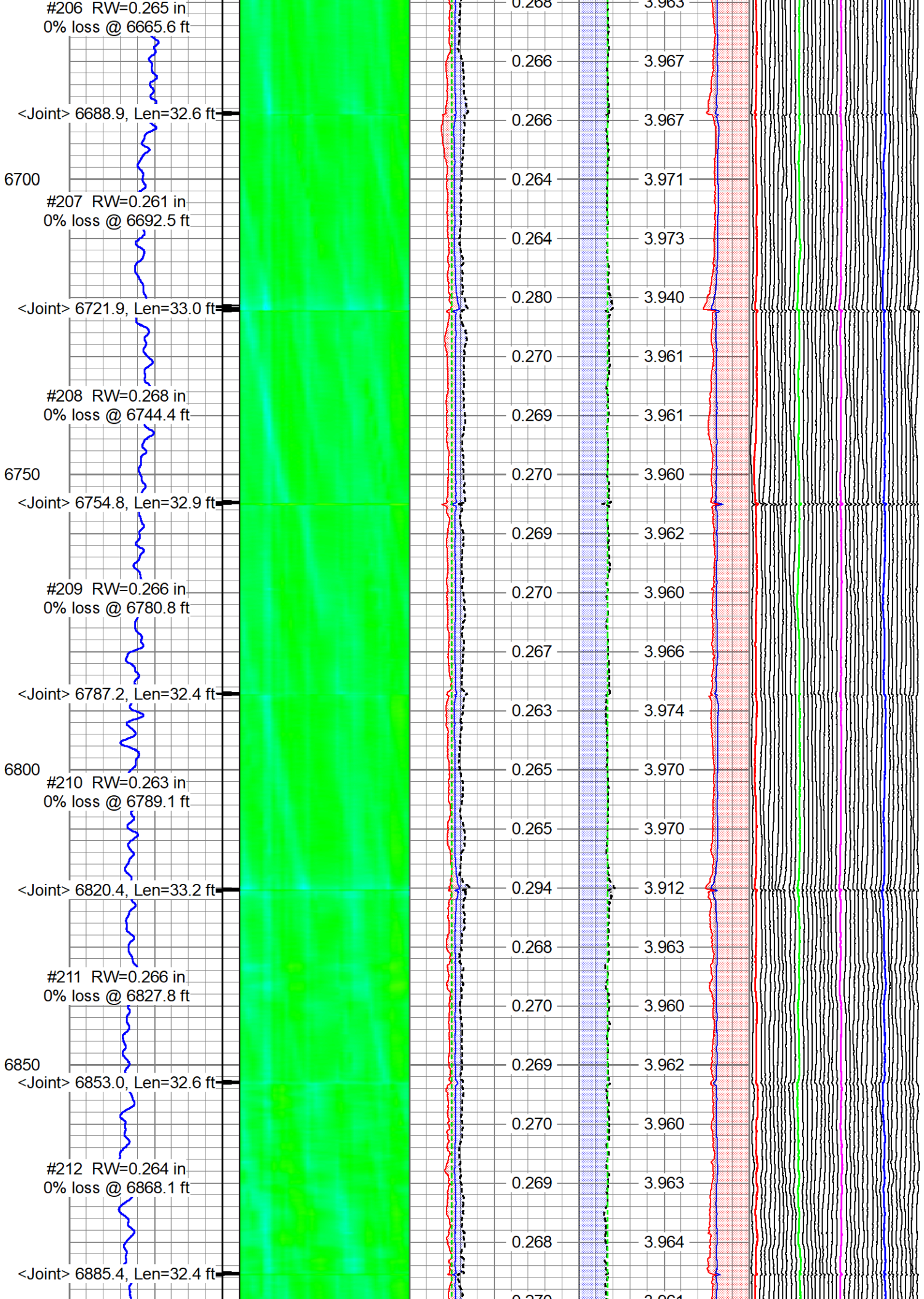
#185 RW=0.260 in
0% loss @ 5989.9 ft
6000

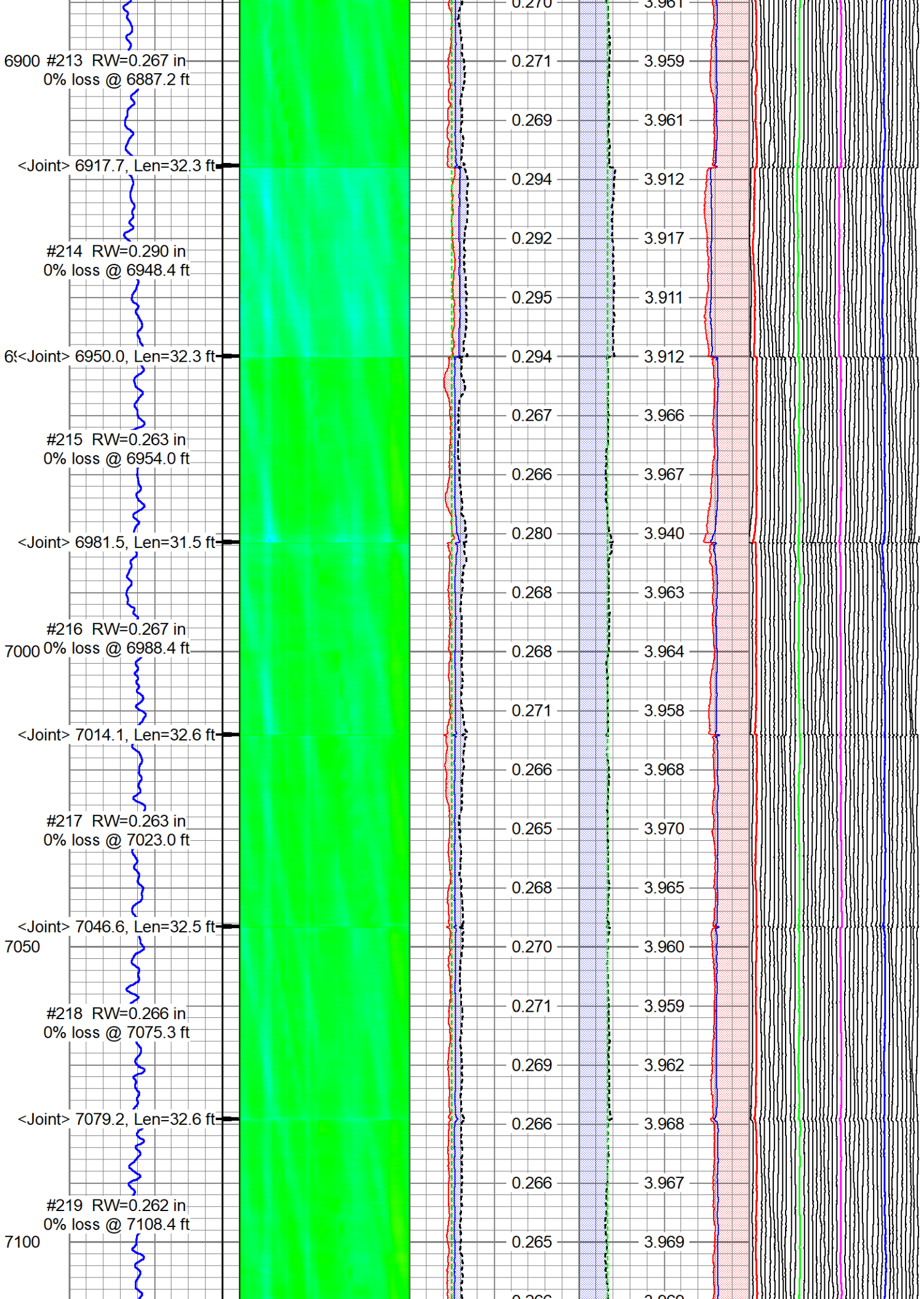
<Joint> 6000.7, Len=32.8 ft

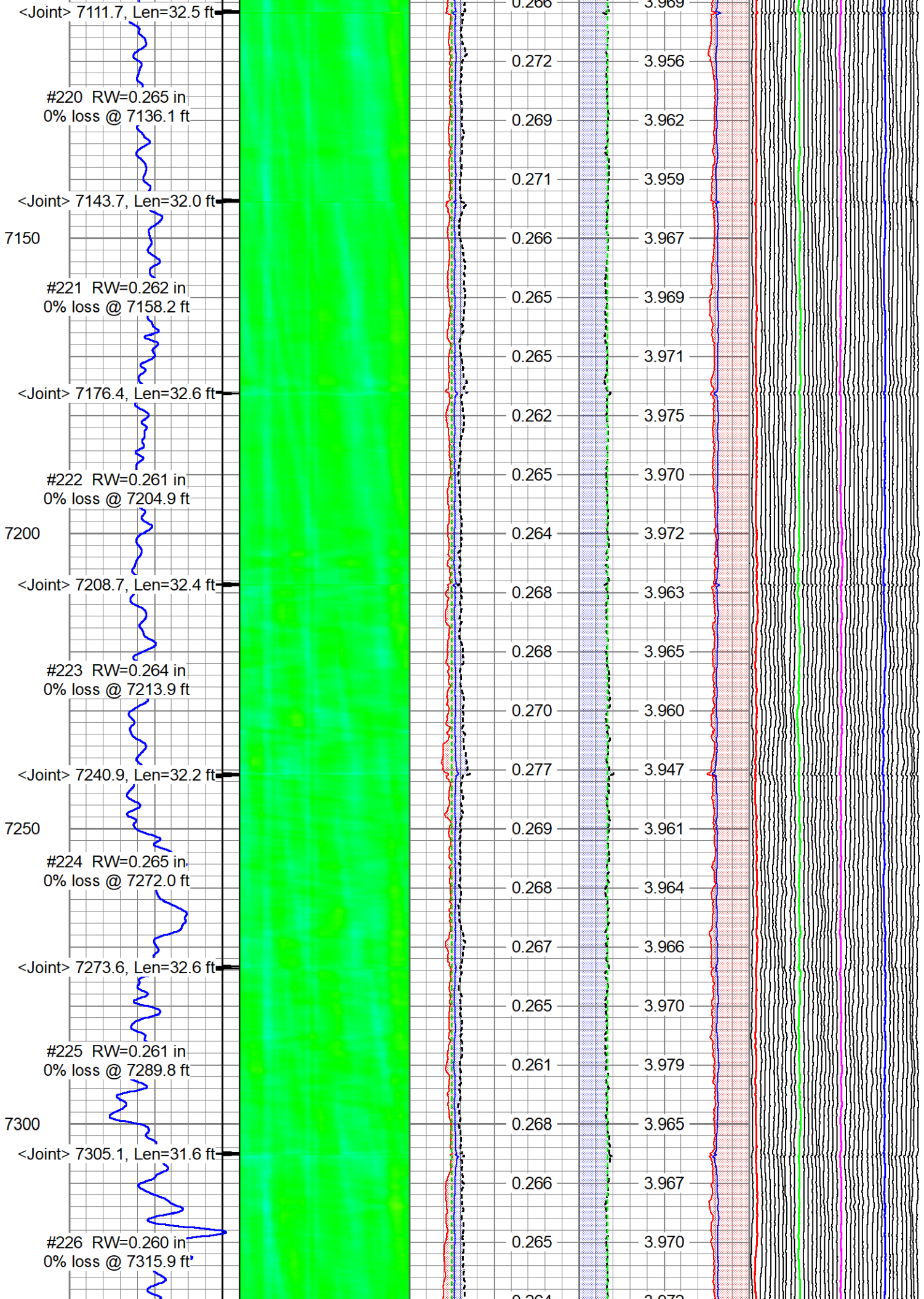


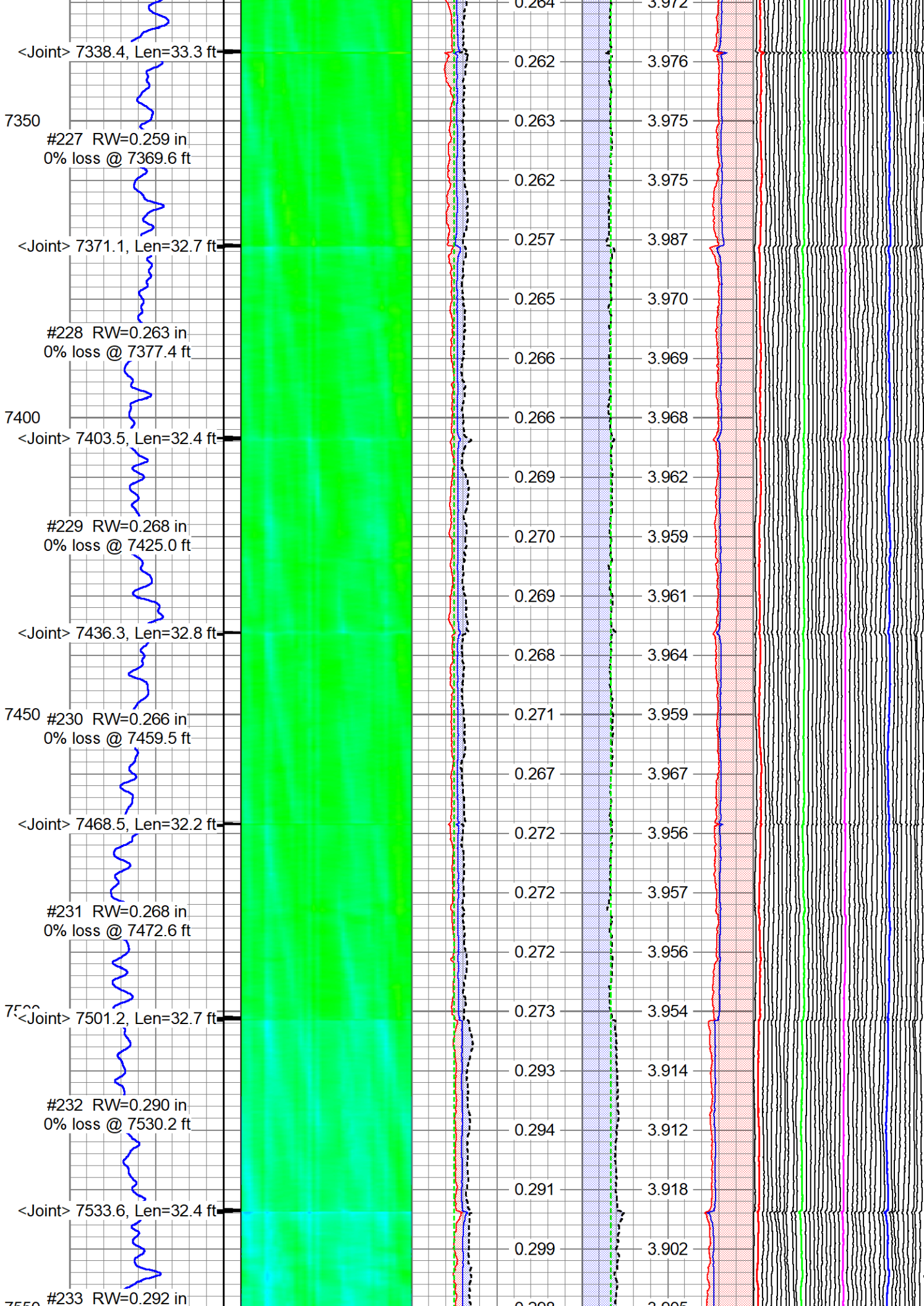


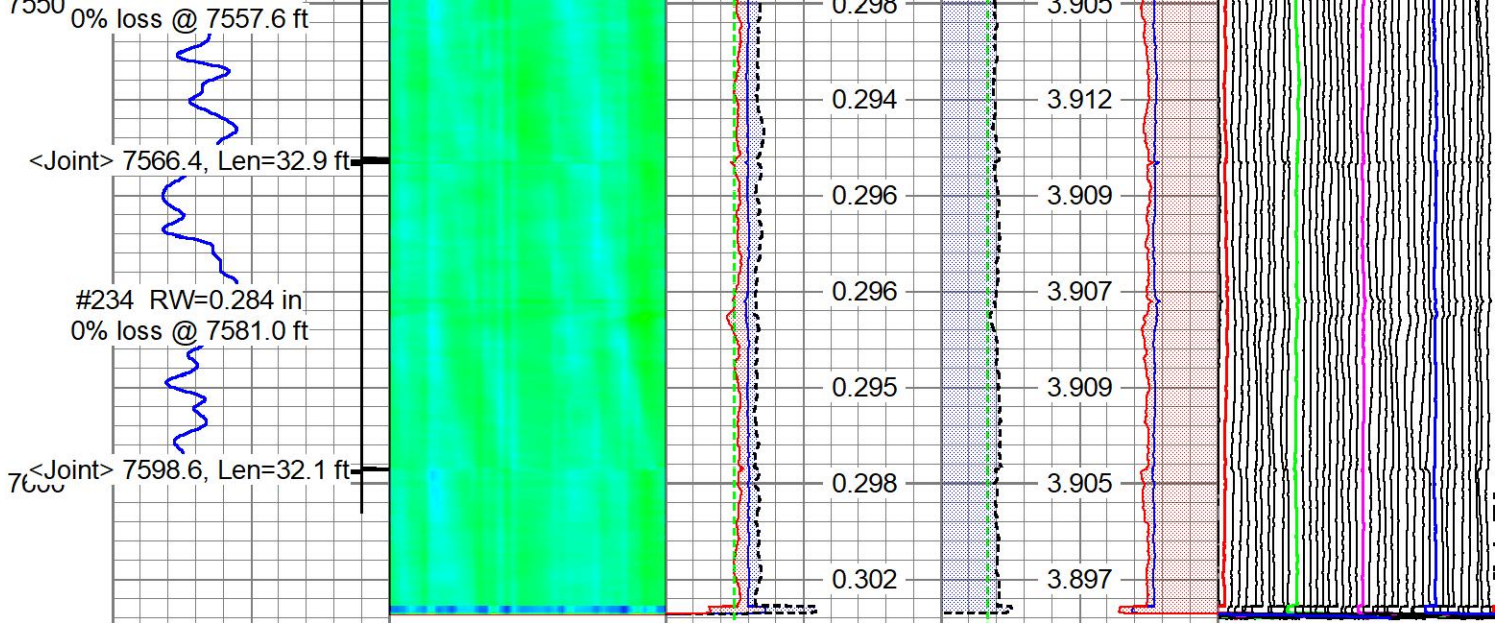












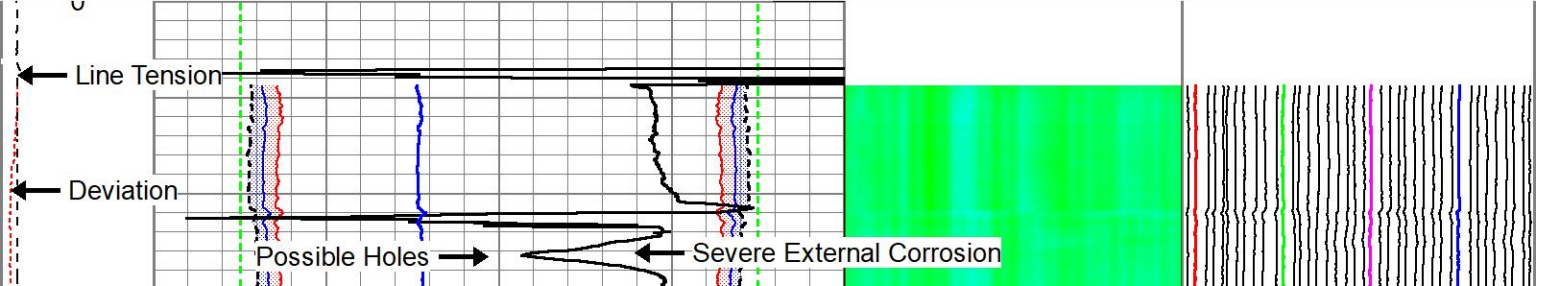
9	Casing Collars	-1	Casing Image	Average Thickness	Average ID	RC10	
0	GR (GAPI)	150		0 (in)	1 2.75 (in)	4.25	1.875 (in)
PTANN			Maximum Thickness	Maximum ID	1.25 RC20 (in) 3.75		
0	(in)	1	4.25 (in)	2.75	RC30		
			Minimum Thickness	Minimum ID	0.625 (in) 3.125		
0	(in)	1	2.75 (in)	4.25	0	RC40 (in) 2.5	
			Nominal Thickness	Nominal ID			
0	(in)	1	4.25 (in)	2.75			
			AVTK (in)	IDAV (in)			

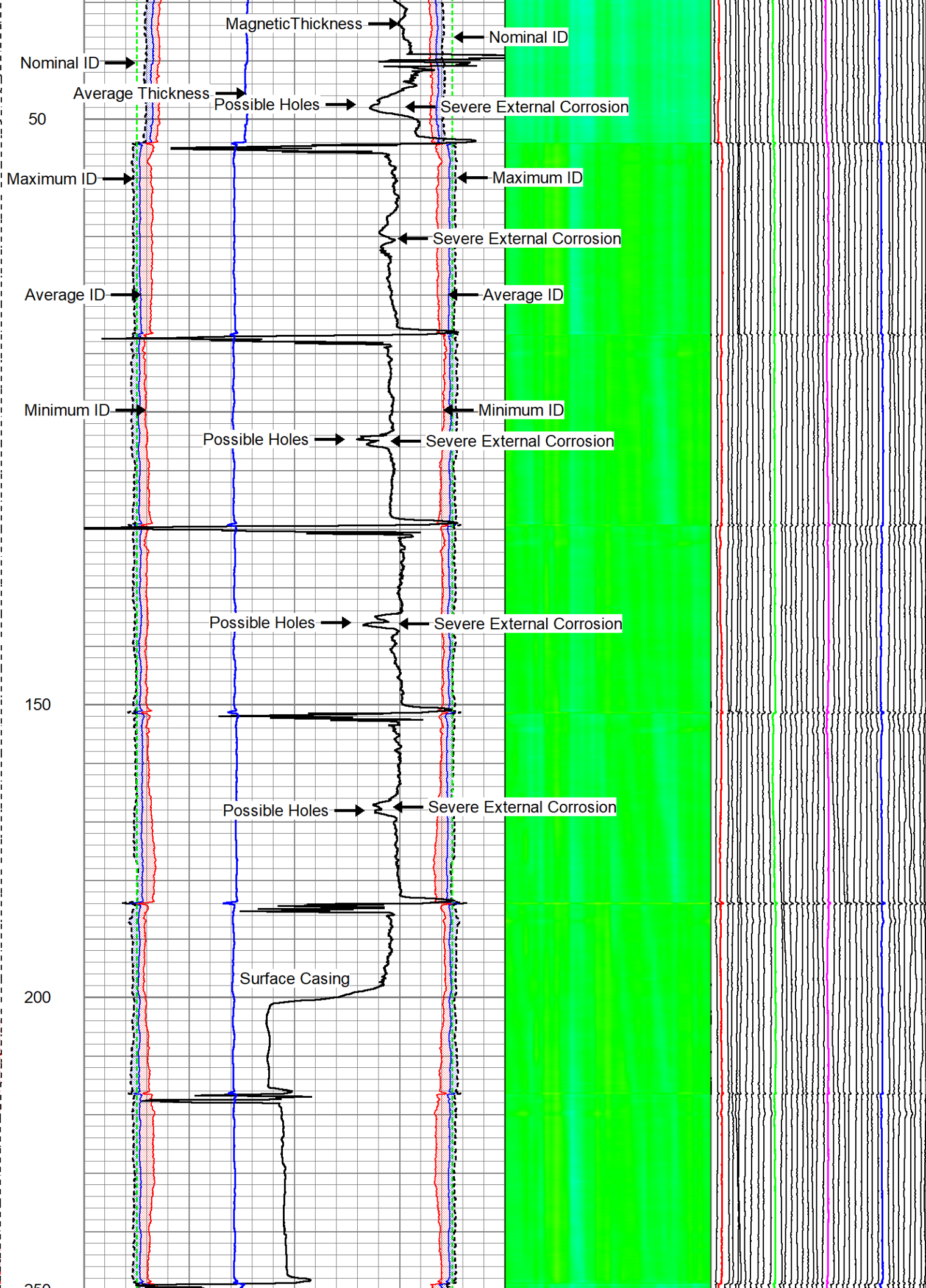


Main Pass 5" = 100'

Database File chevron_guthrie_abner_1_mac40\abner gutherie-1_mac40.db
 Dataset Pathname merge1
 Presentation Format 8cmsc45
 Dataset Creation Wed Aug 26 22:40:15 2020
 Charted by Depth in Feet scaled 1:240

0	DEVI 10	-0.2	Magnetic Thickness (in)		0.8	Casing Image	1.875	RC10 (in)	4.375	
	LTEN	-0.1	Average Thickness (in)		0.9		1.25	RC20 (in)	3.75	
0	(lb3000)	4.25	Average ID (in)	3.25	3.25	Average ID (in)	4.25	0.625	RC30 (in)	3.125
		4.25	Maximum ID (in)	3.25	3.25	Maximum ID (in)	4.25	0	RC40 (in)	2.5
		4.25	Minimum ID (in)	3.25	3.25	Minimum ID (in)	4.25			
		4.25	Nominal ID (in)	3.25	3.25	Nominal ID (in)	4.25			





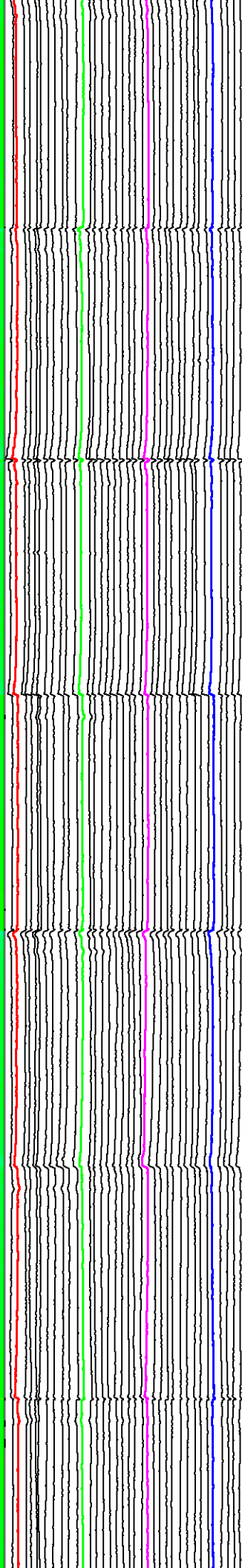
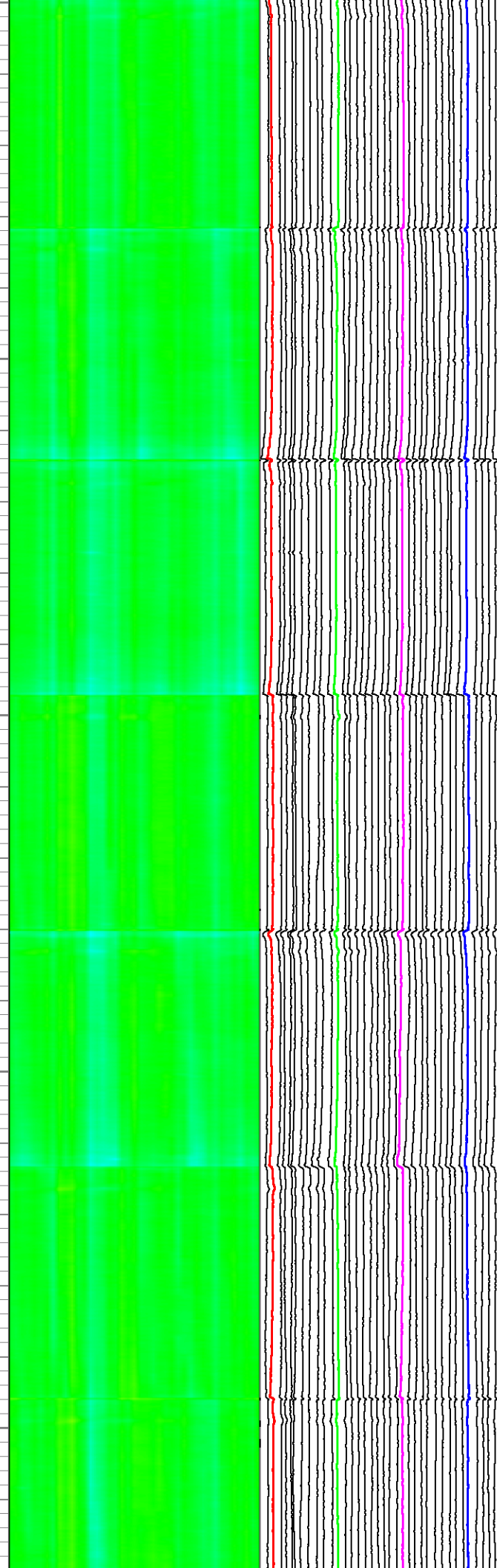
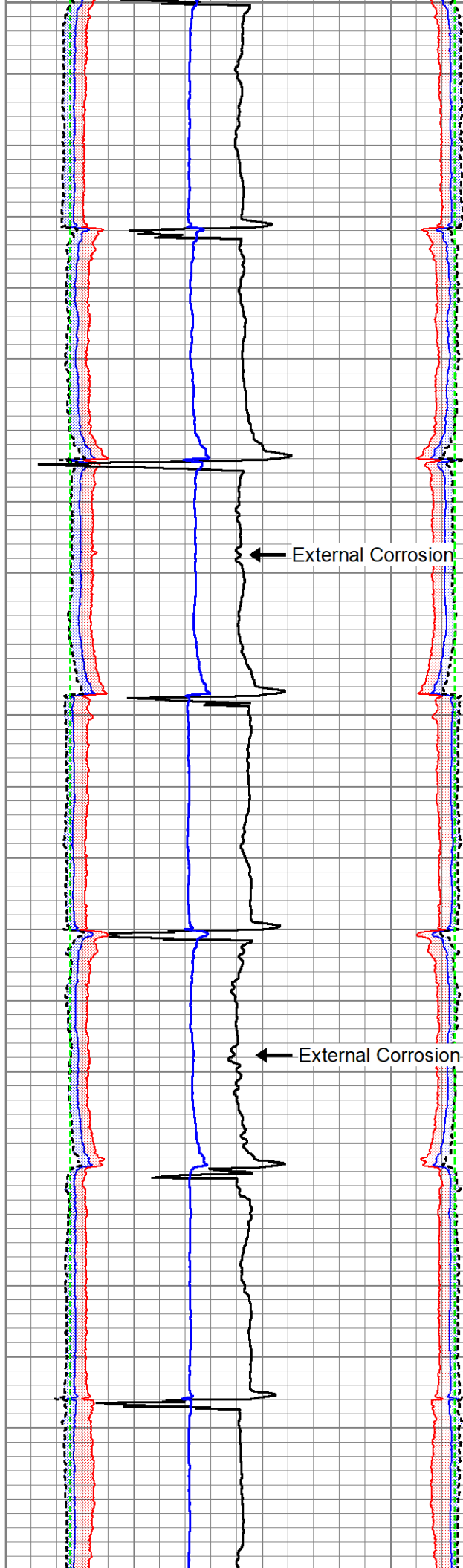
250

300

350

400

450



Pitting / Possible Holes

500

550

600

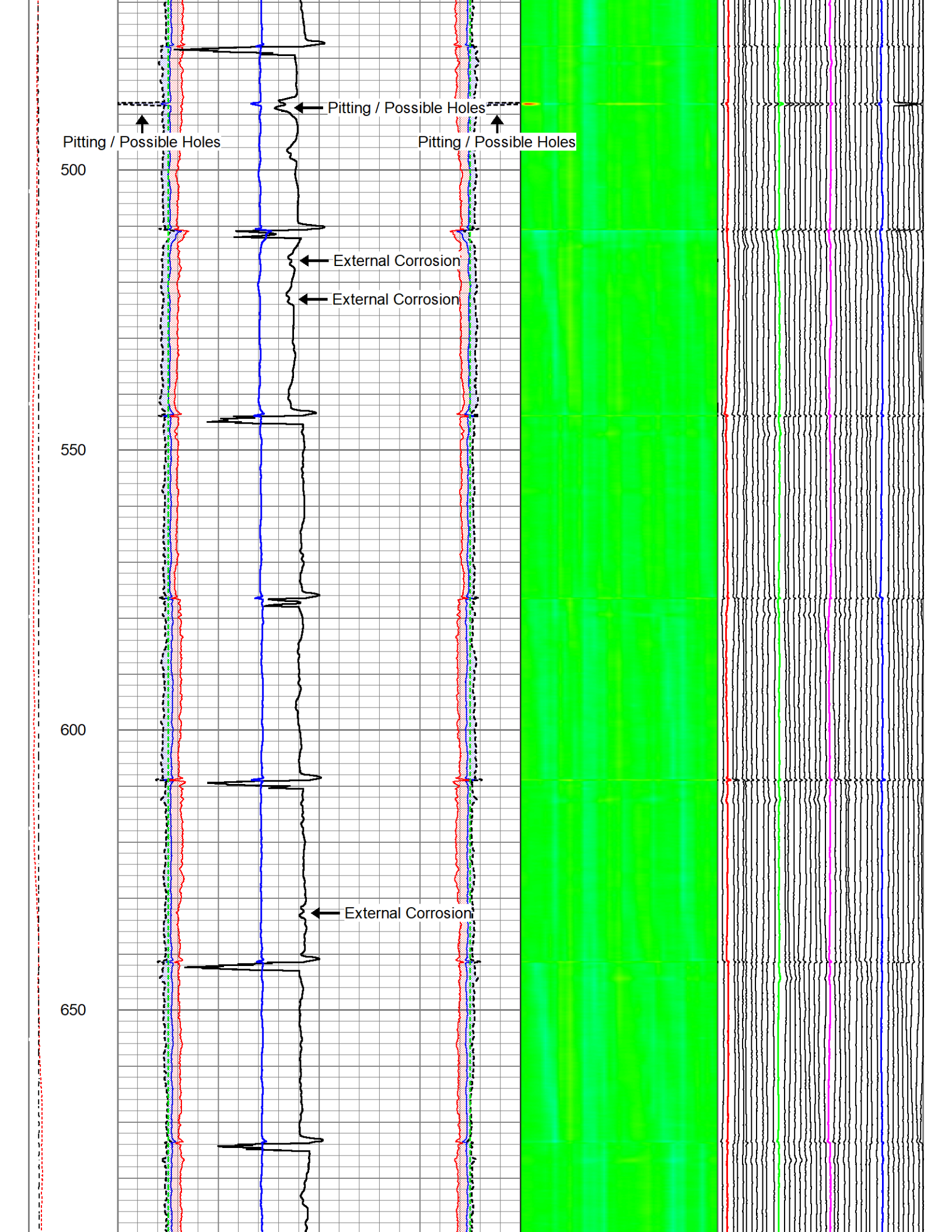
650

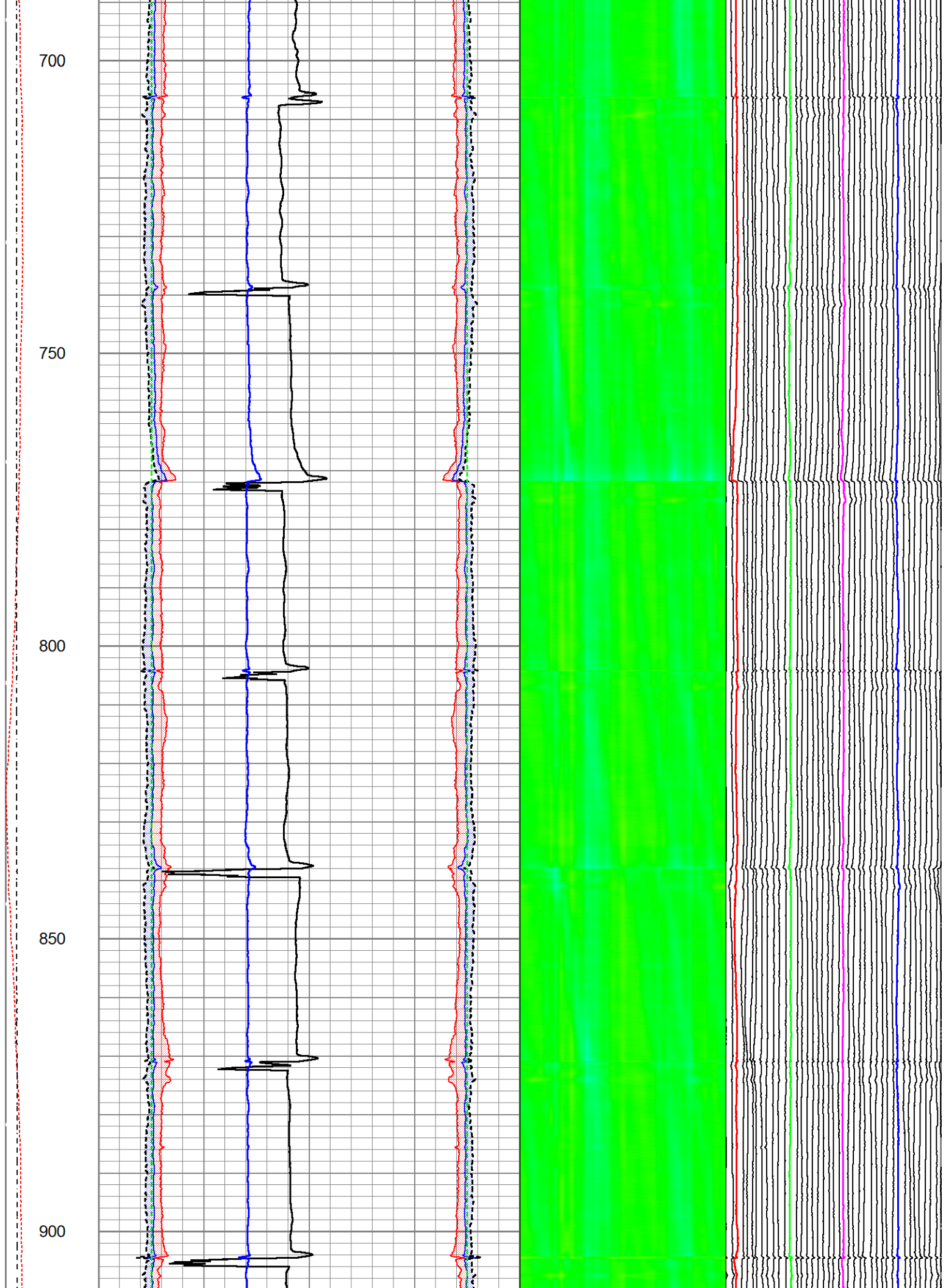
Pitting / Possible Holes

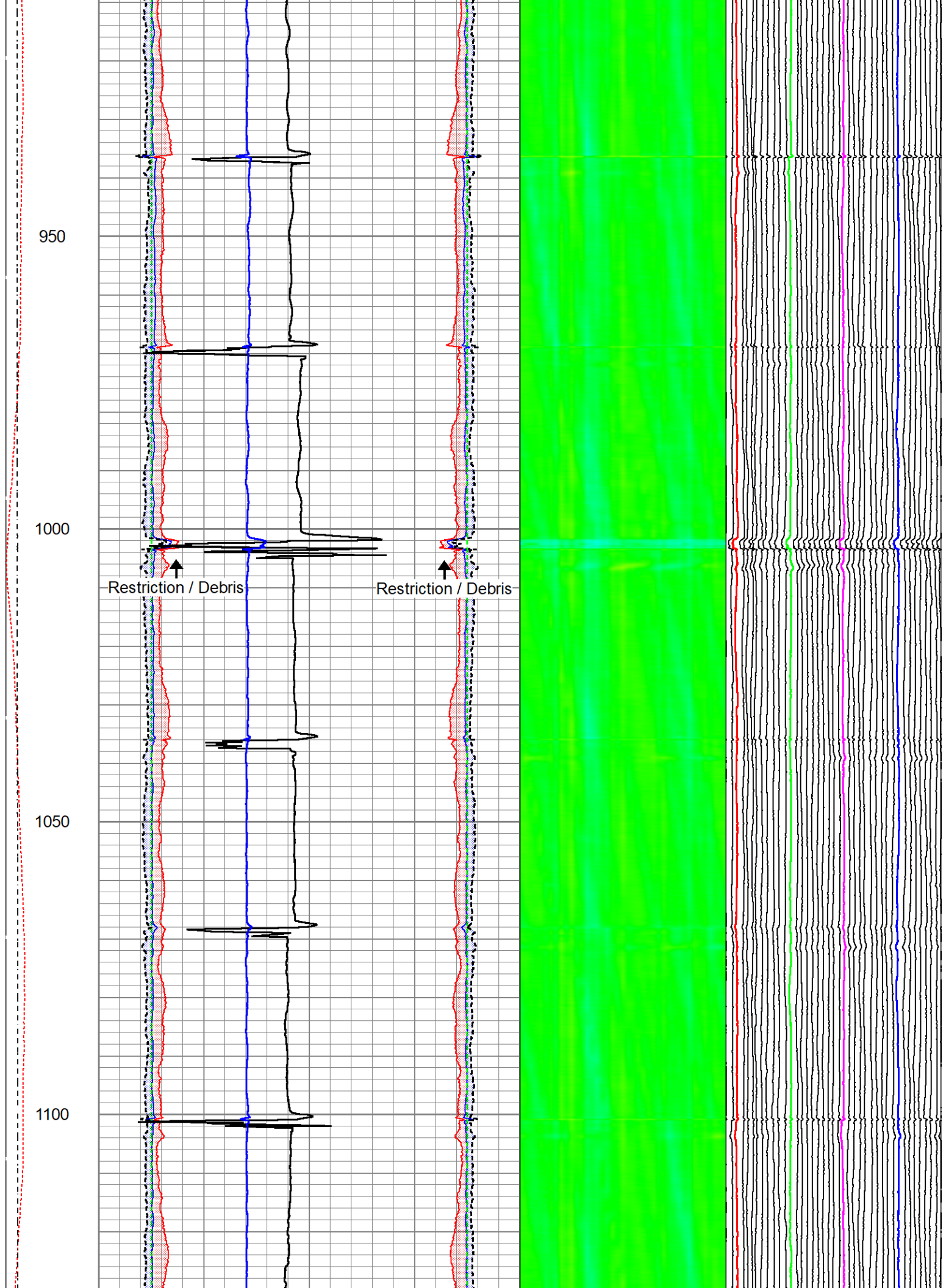
External Corrosion

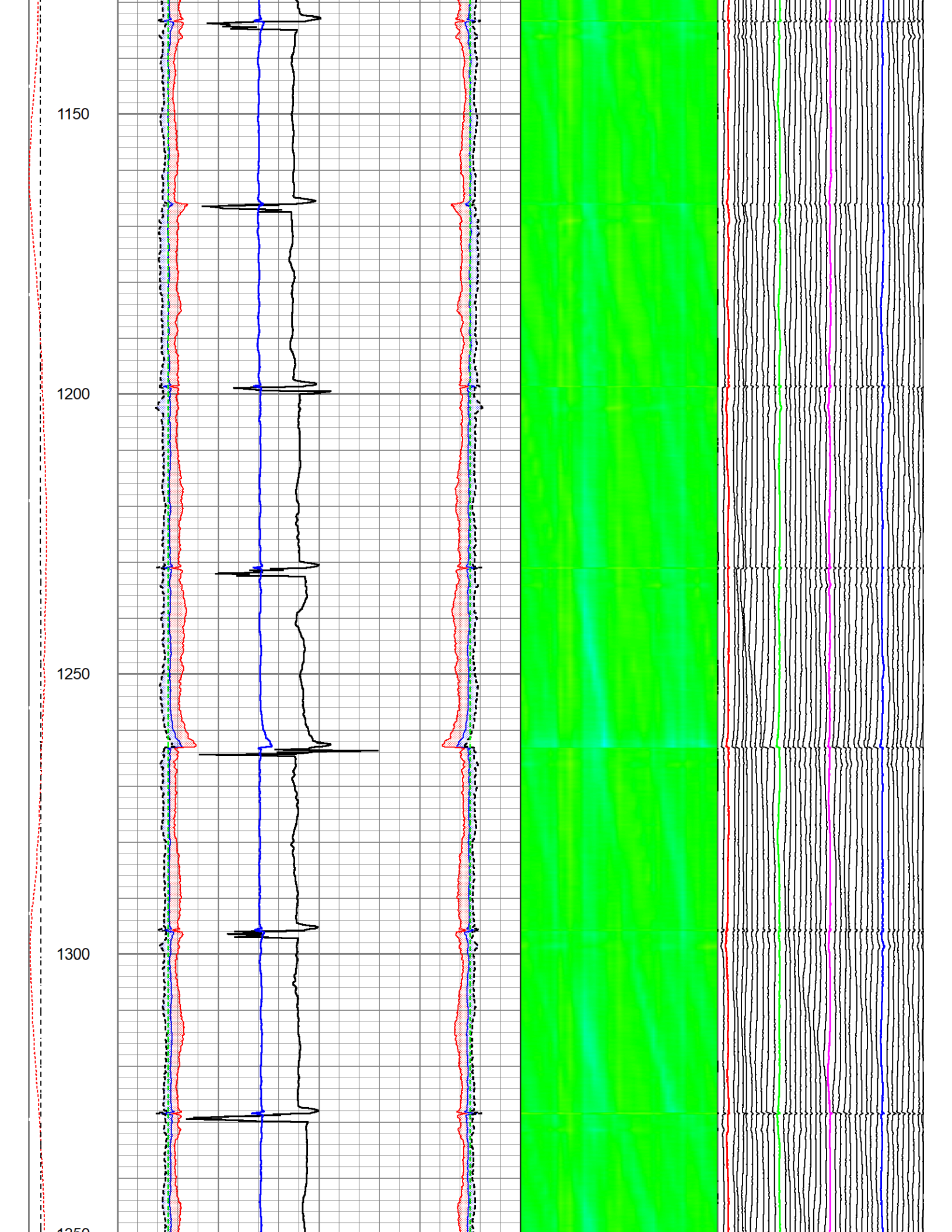
External Corrosion

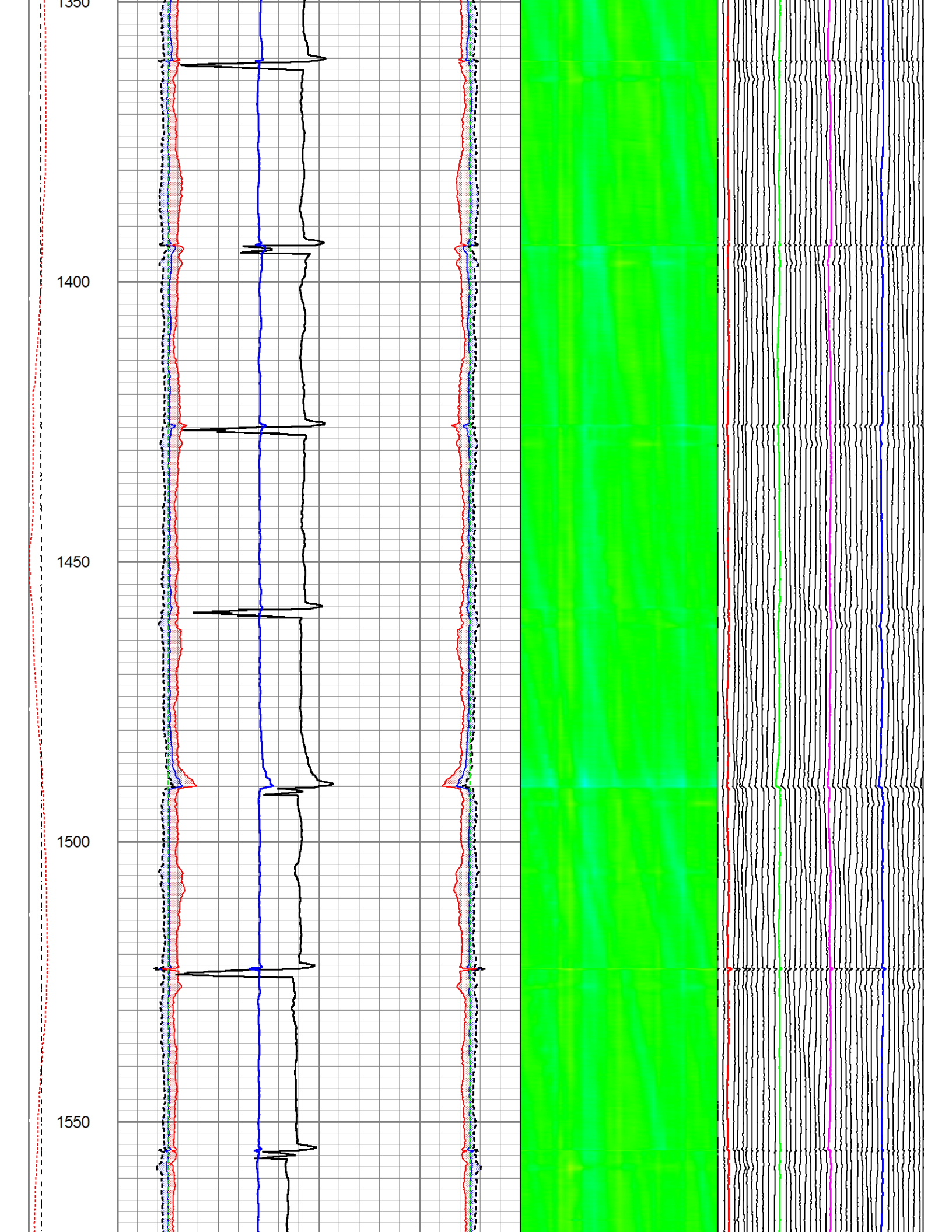
External Corrosion

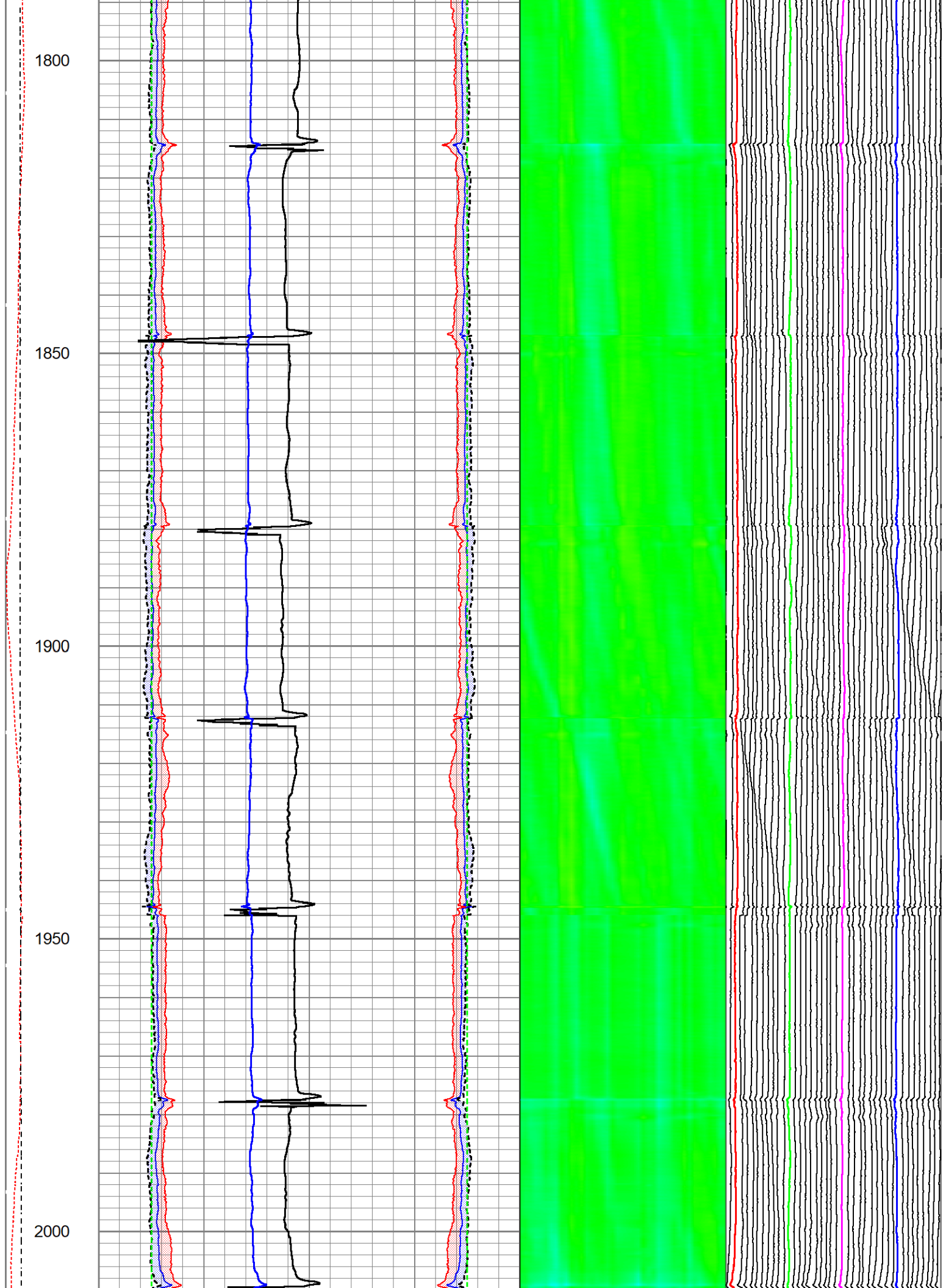










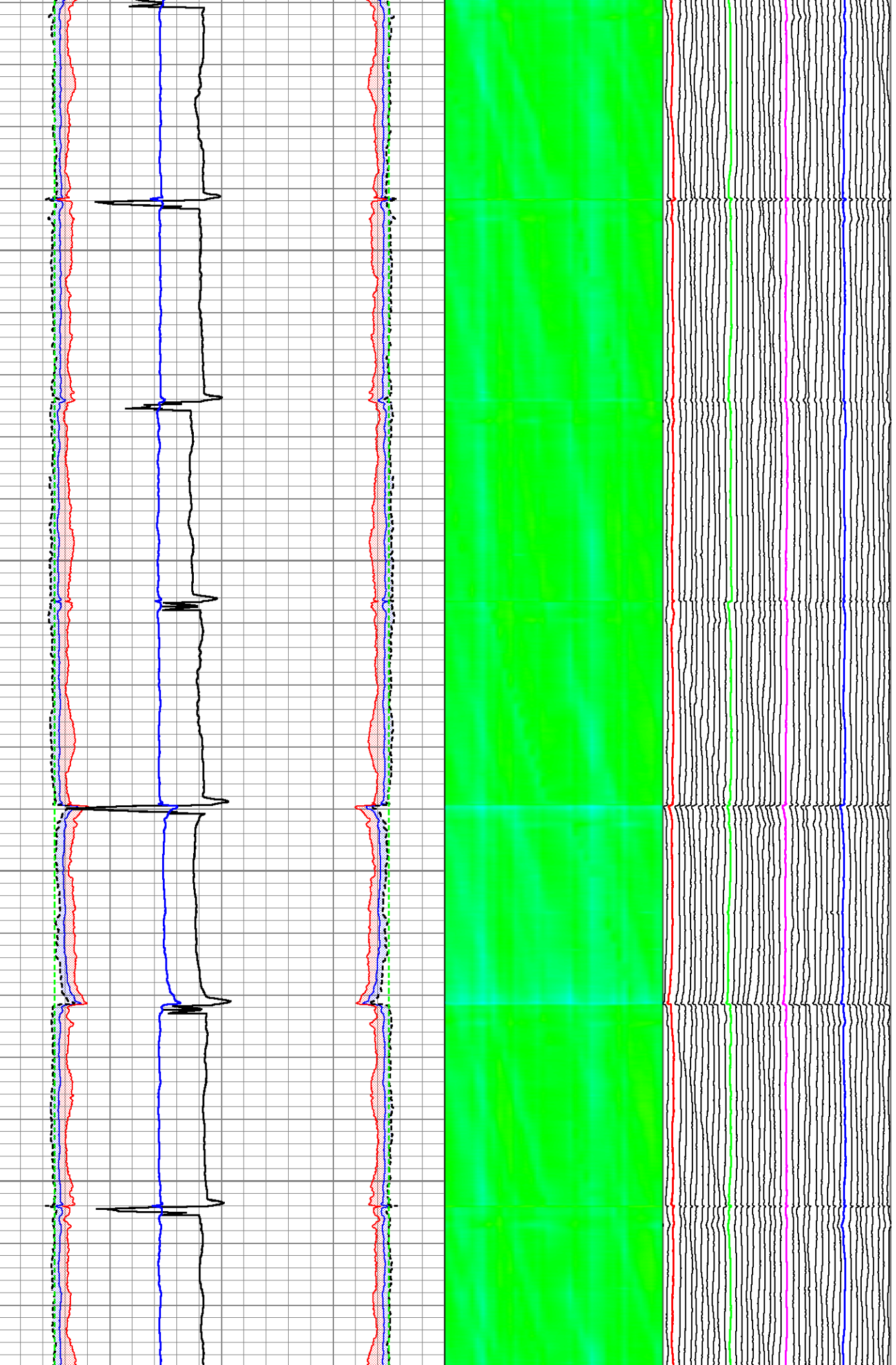


2050

2100

2150

2200



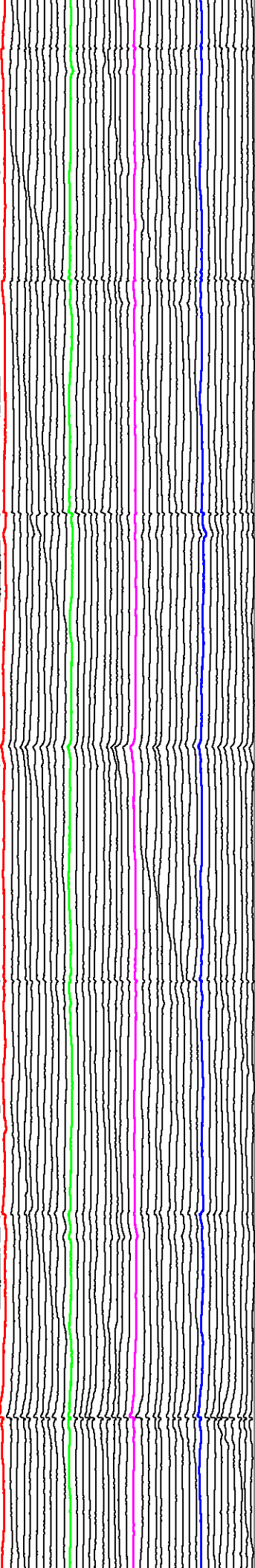
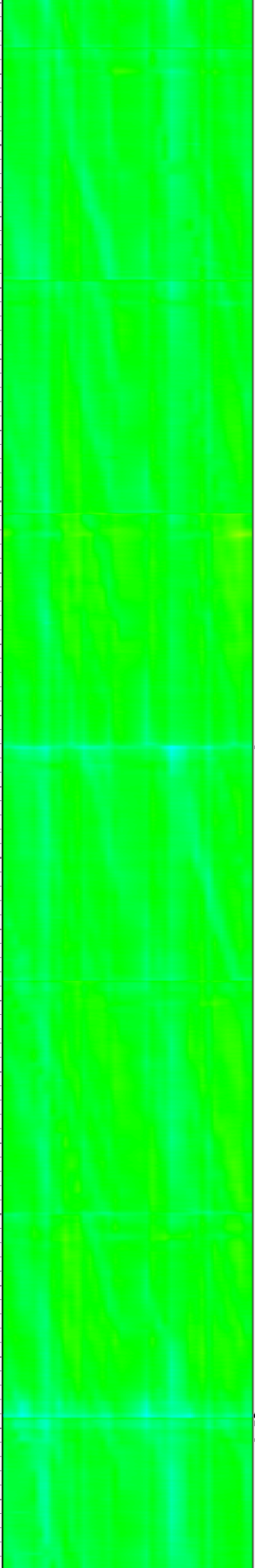
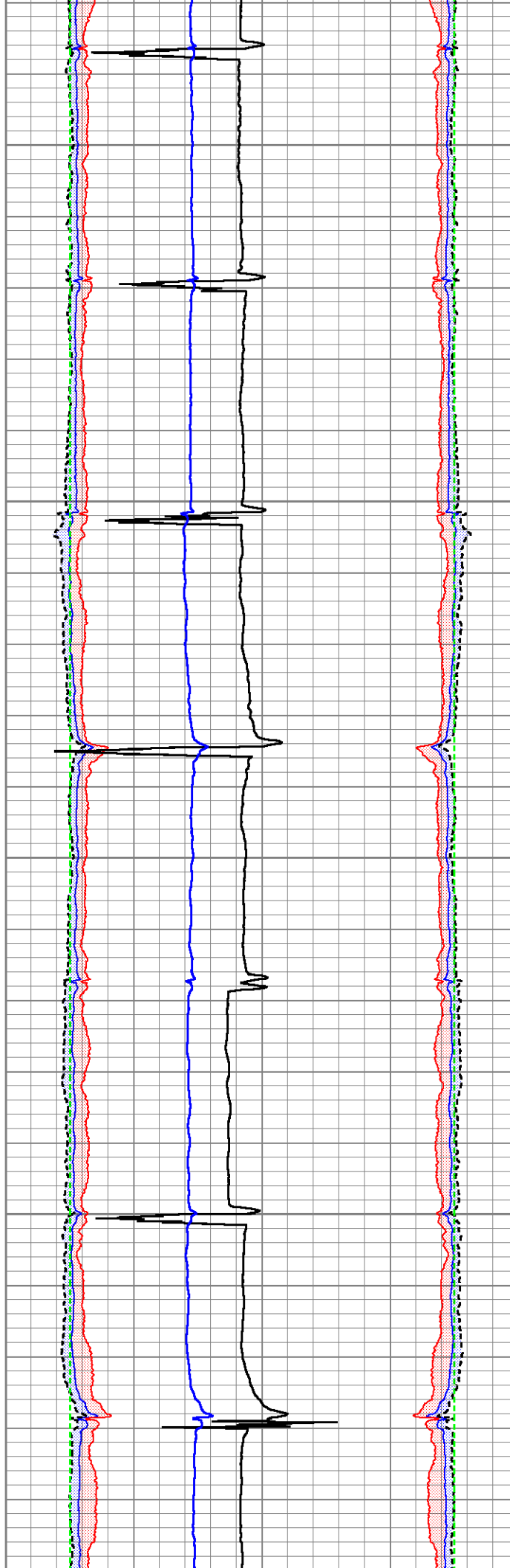
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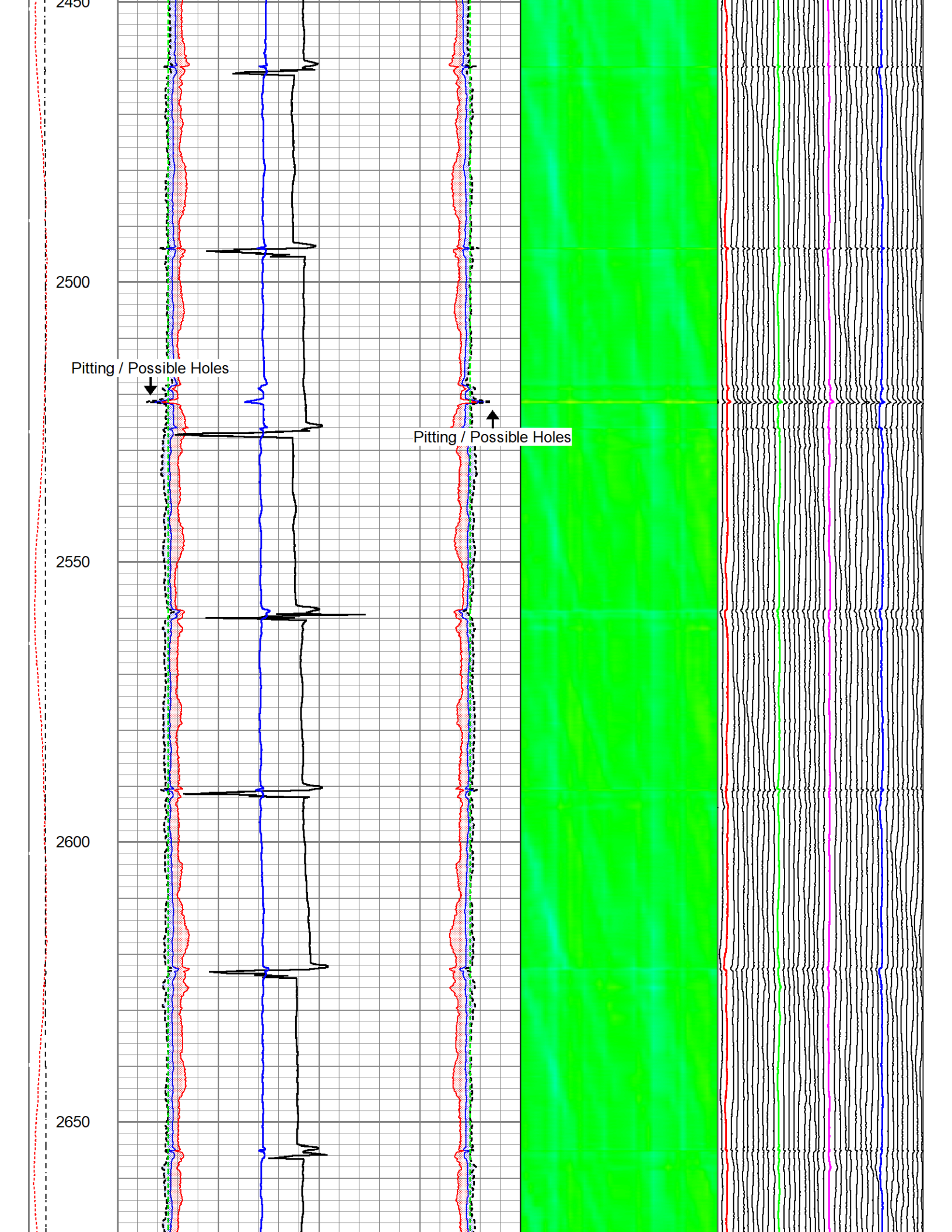
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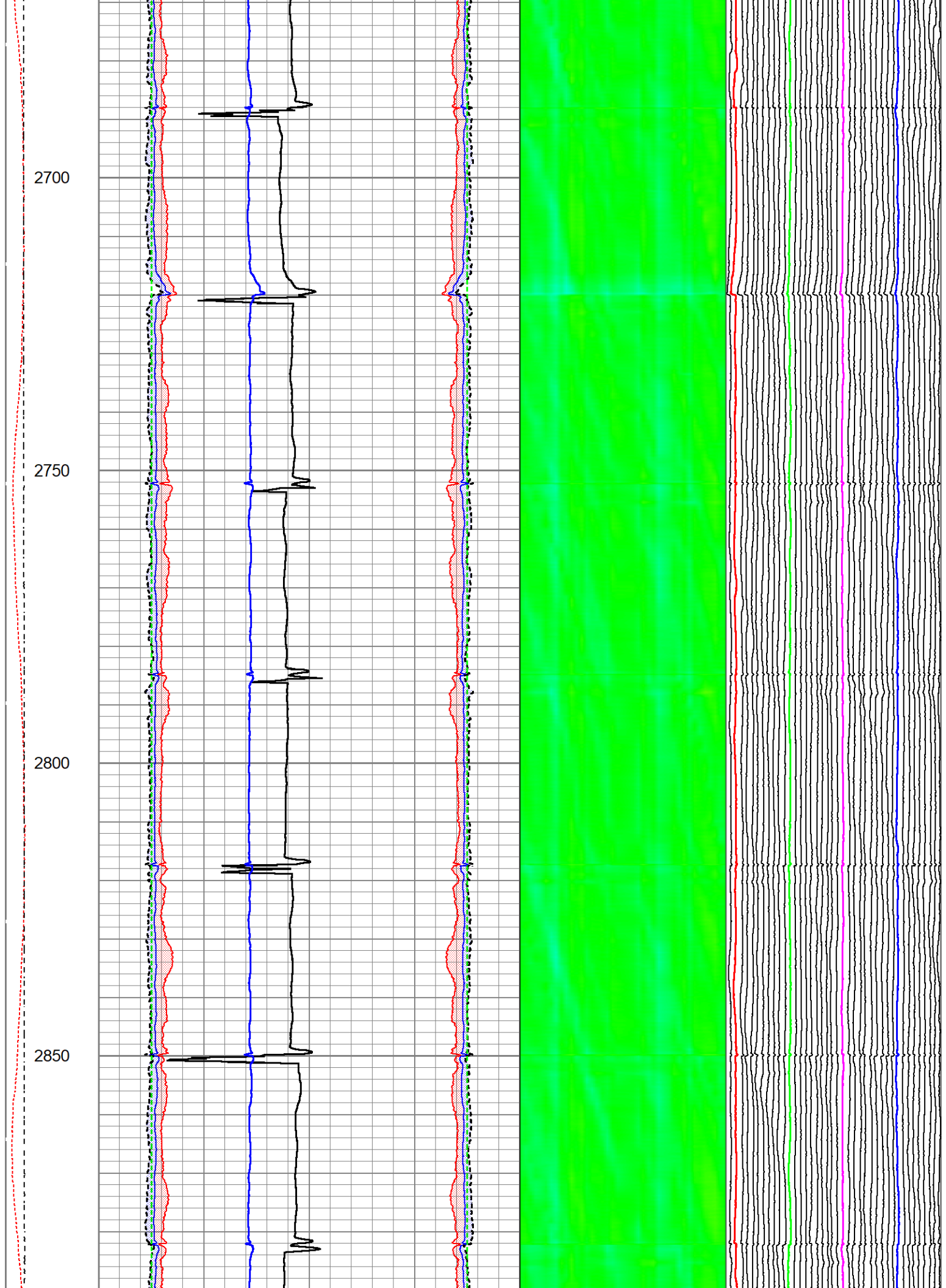
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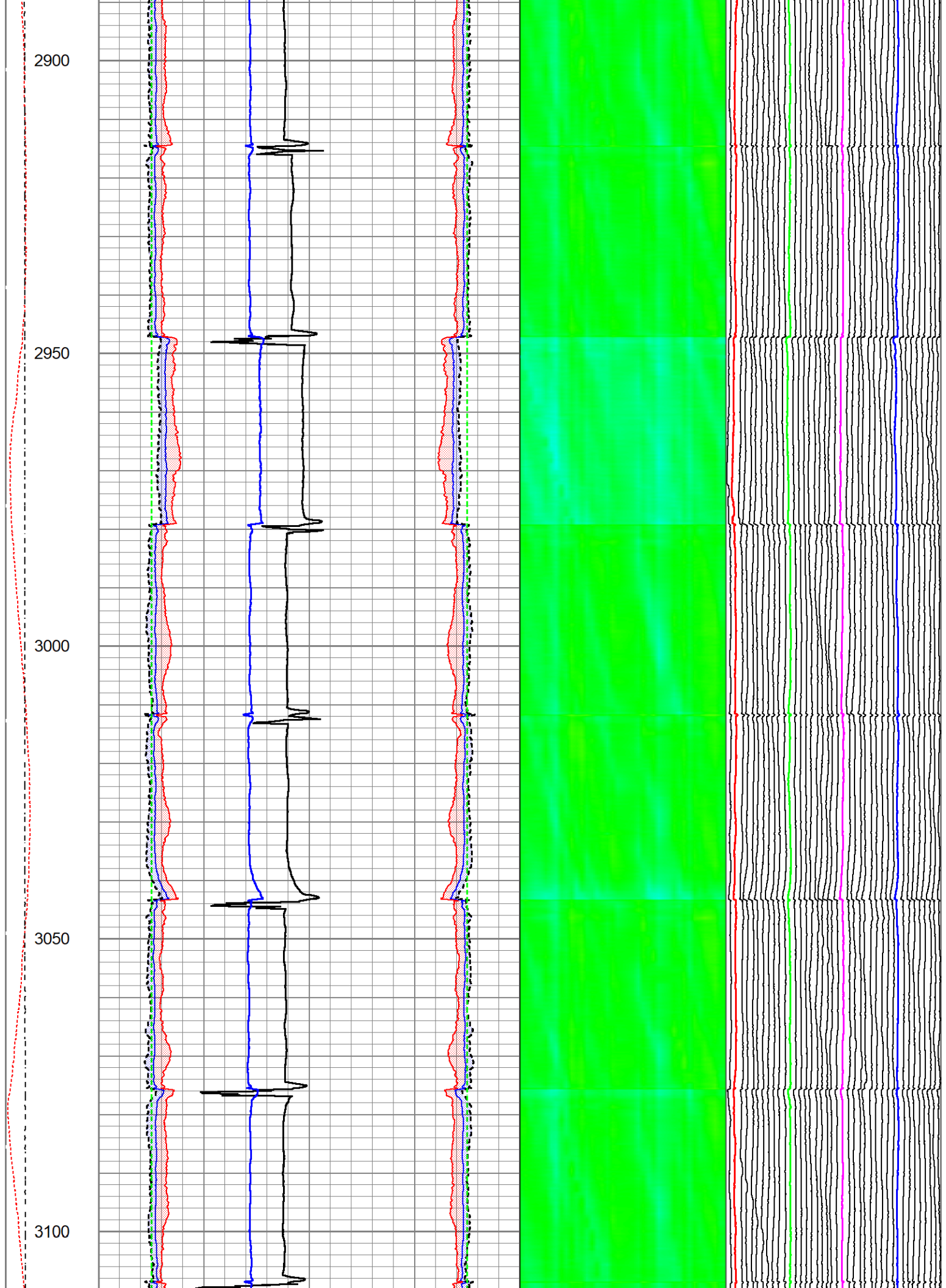
2400

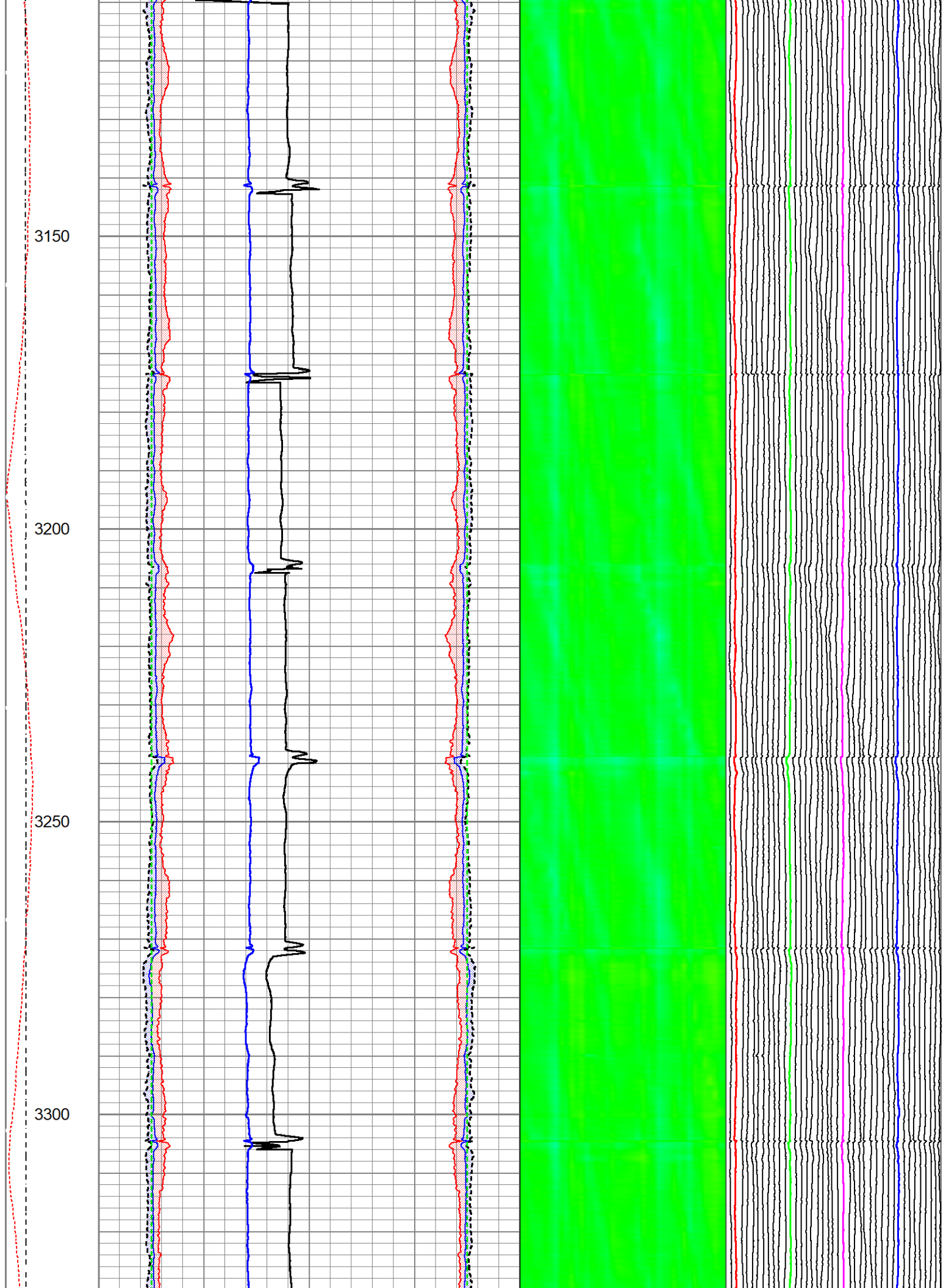
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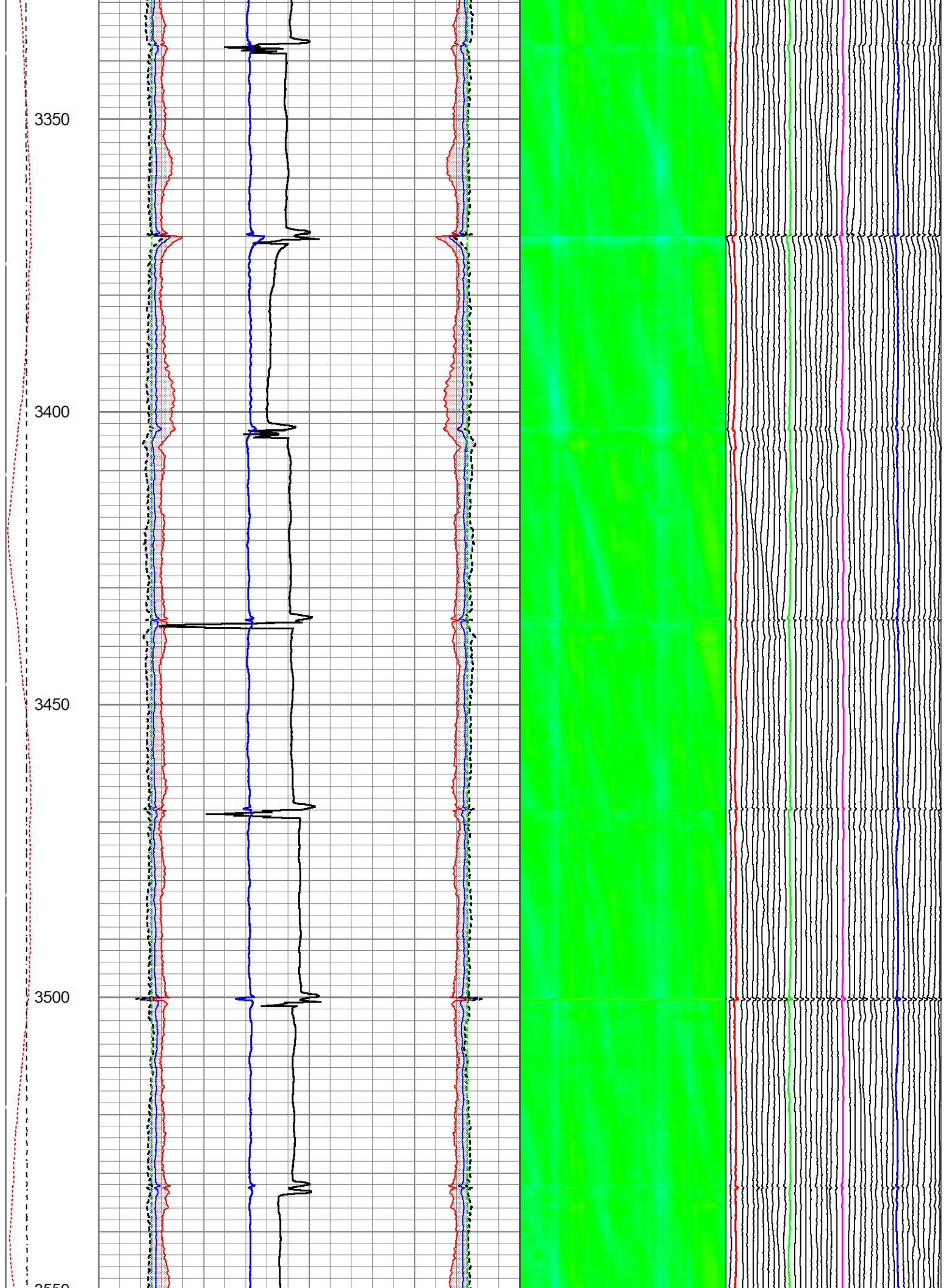


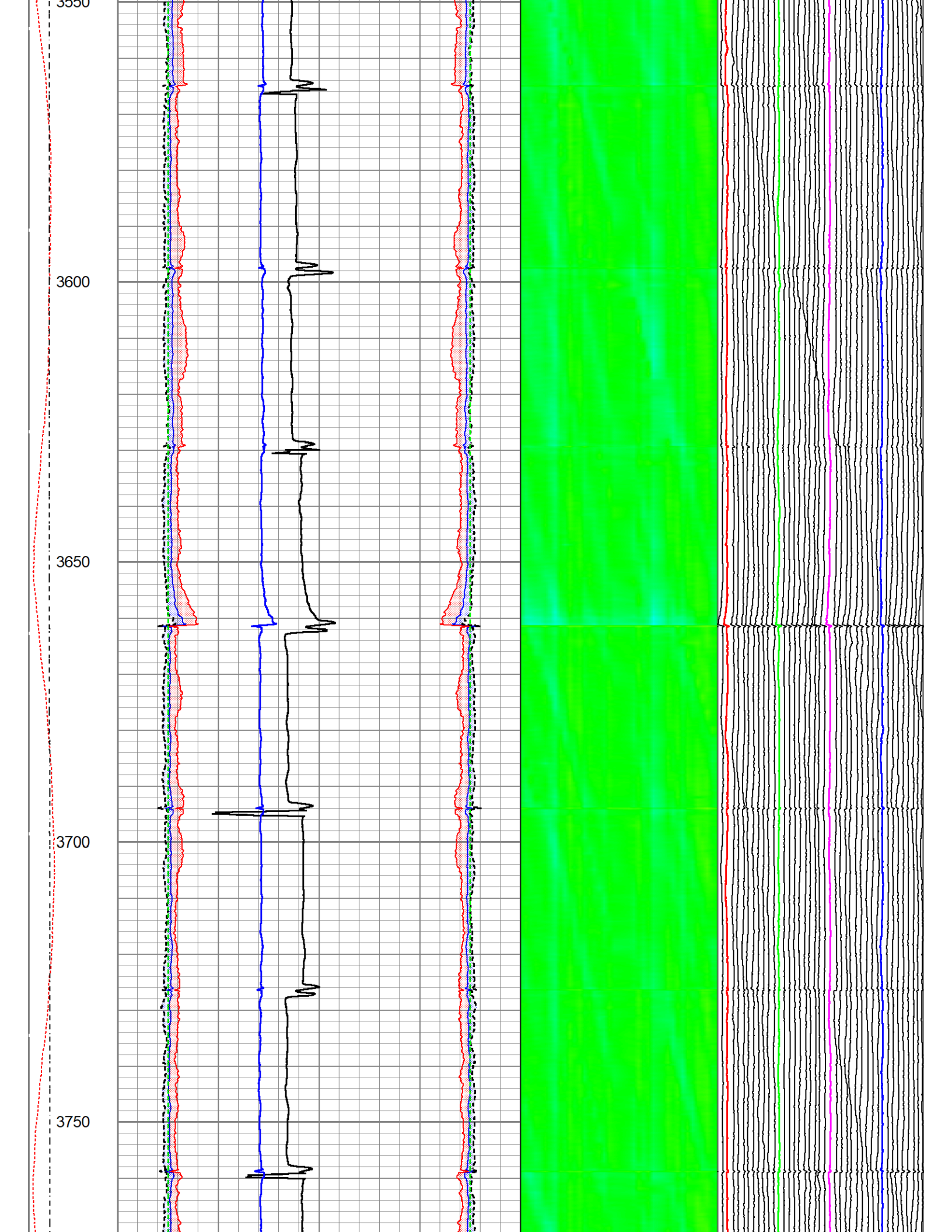


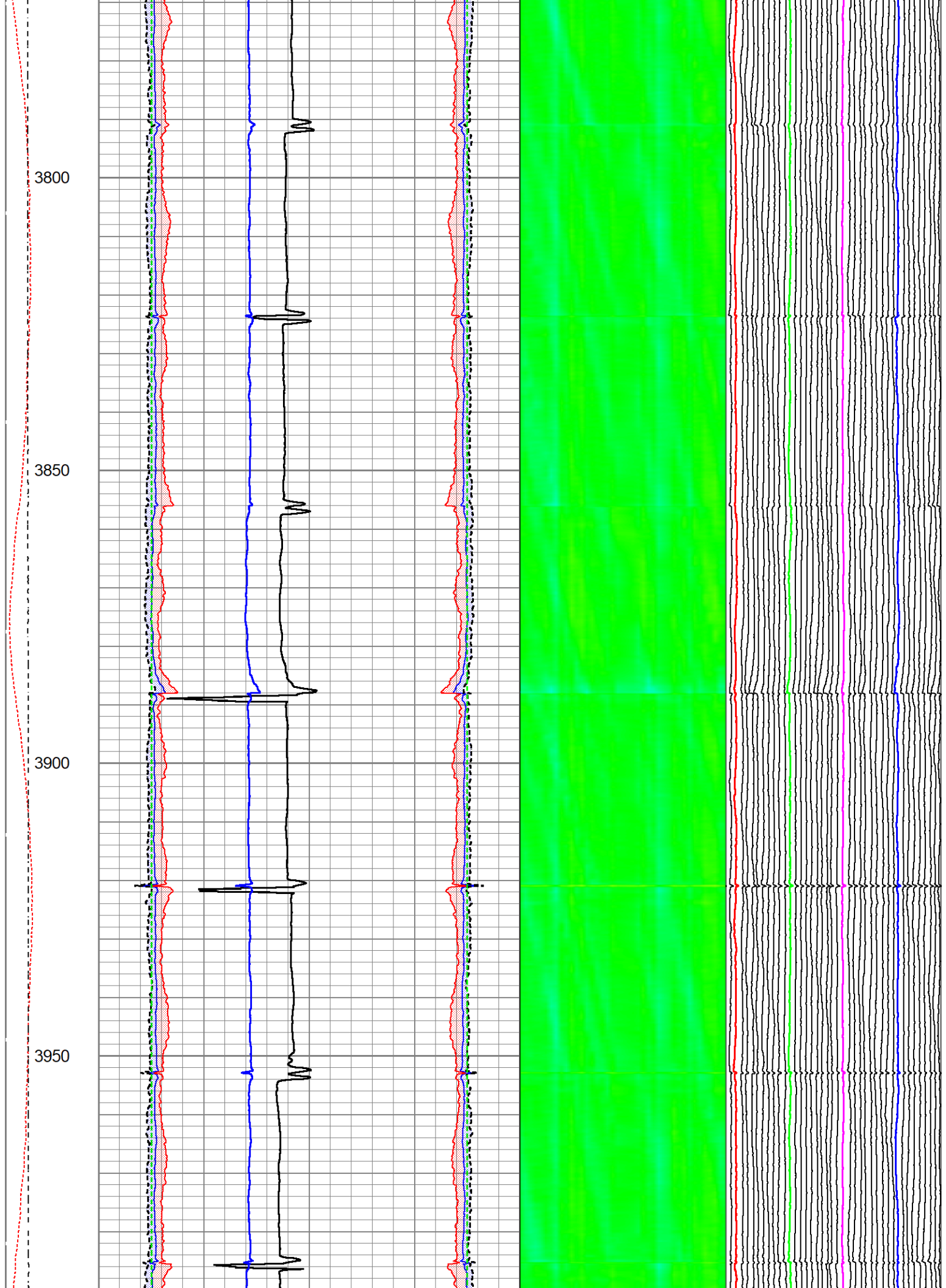


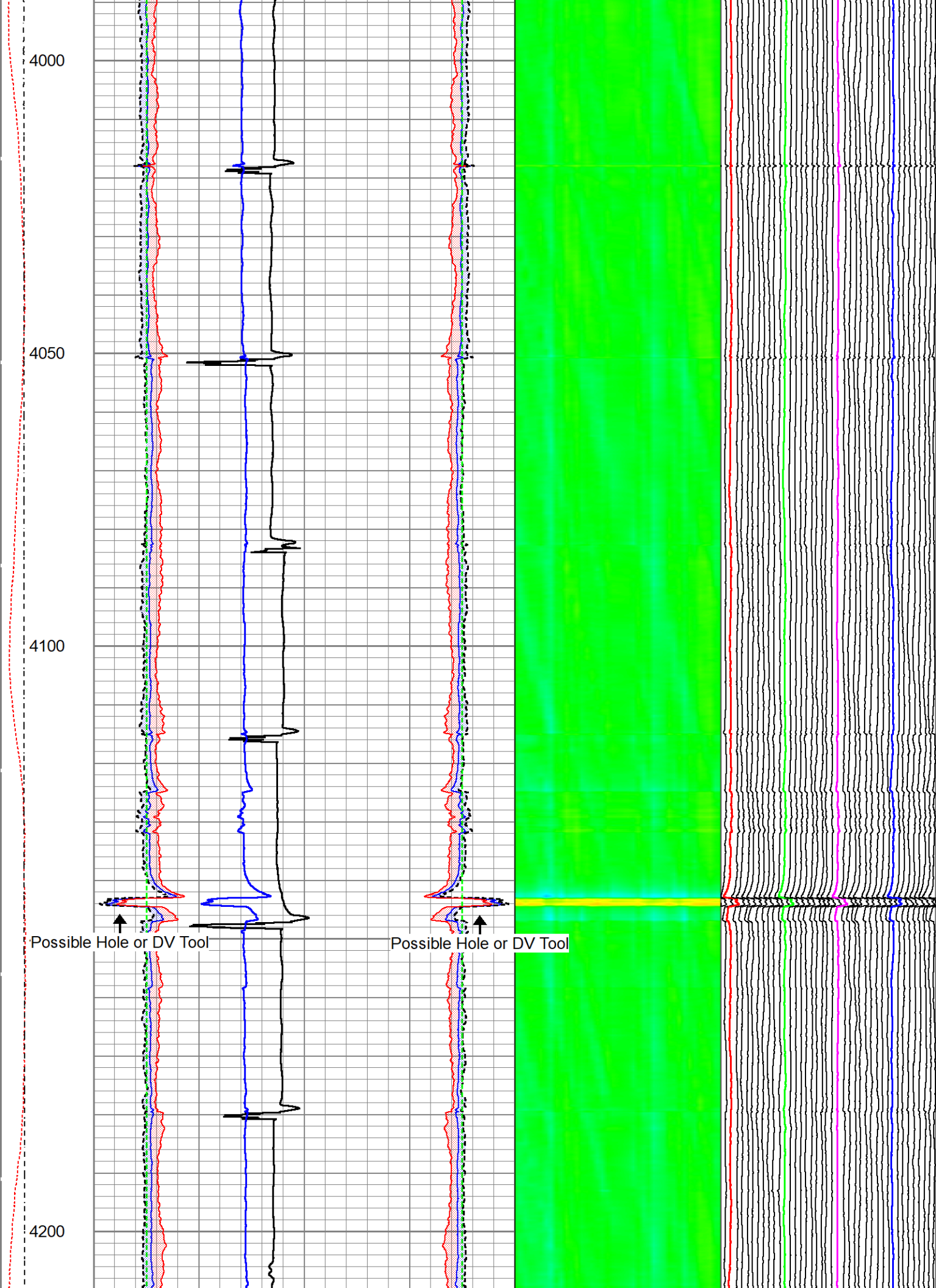


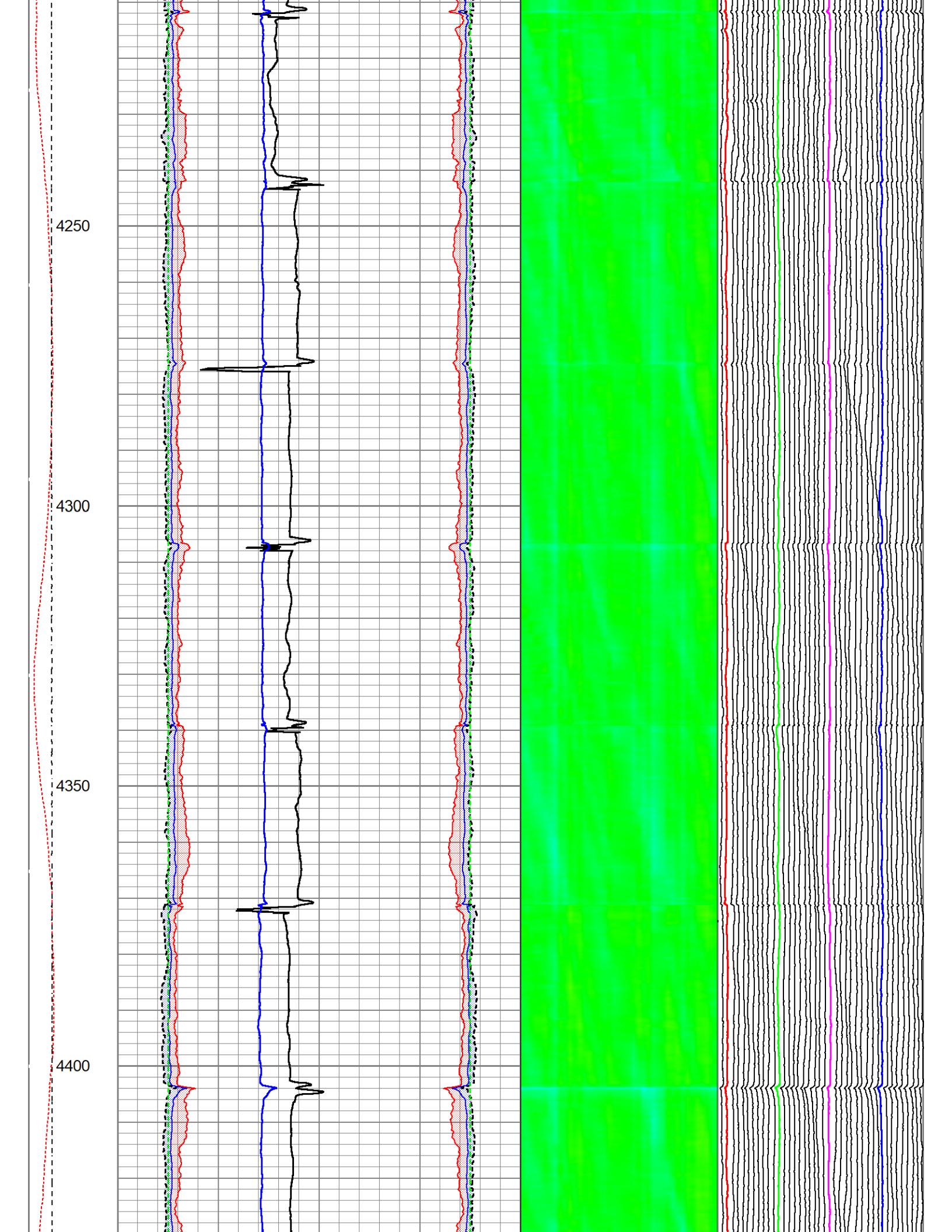


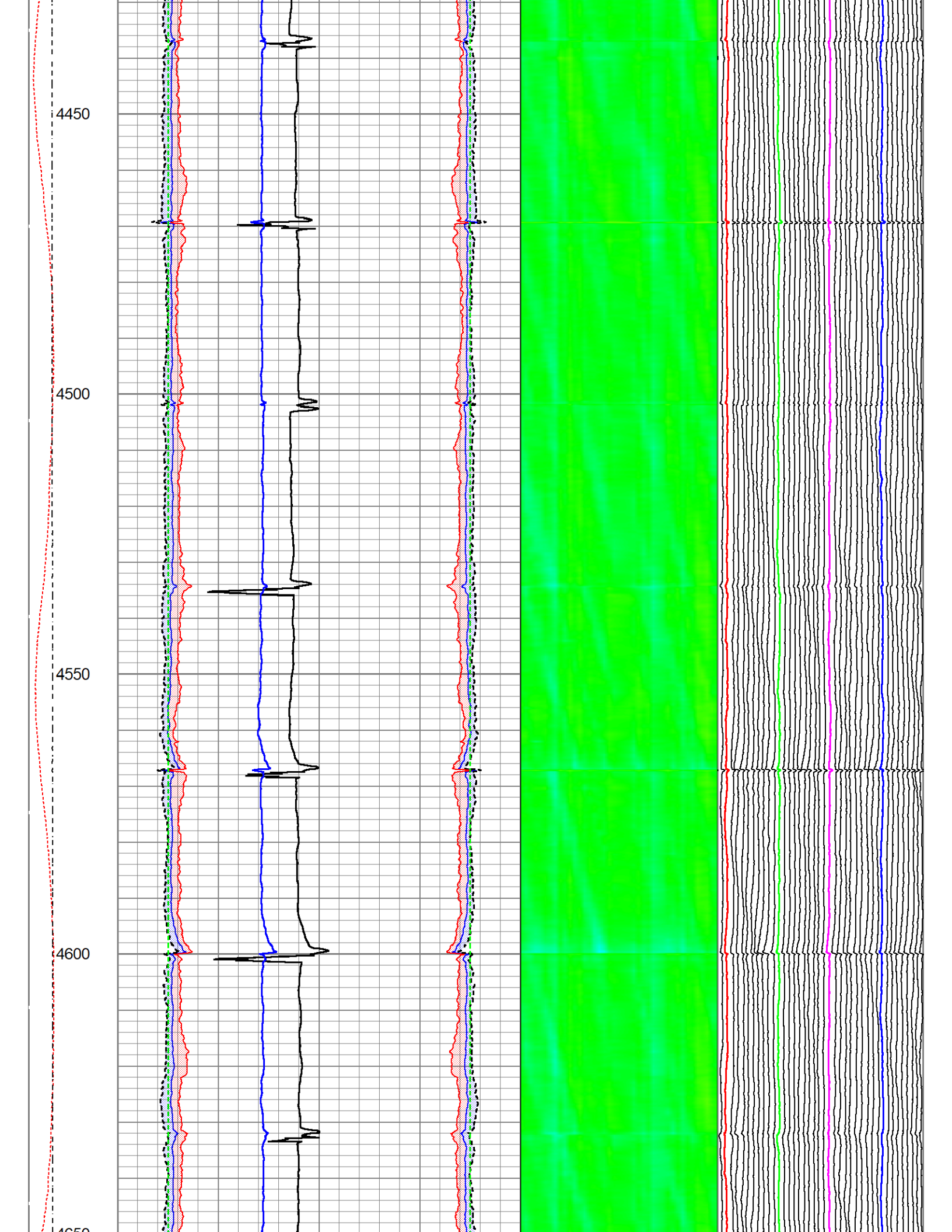


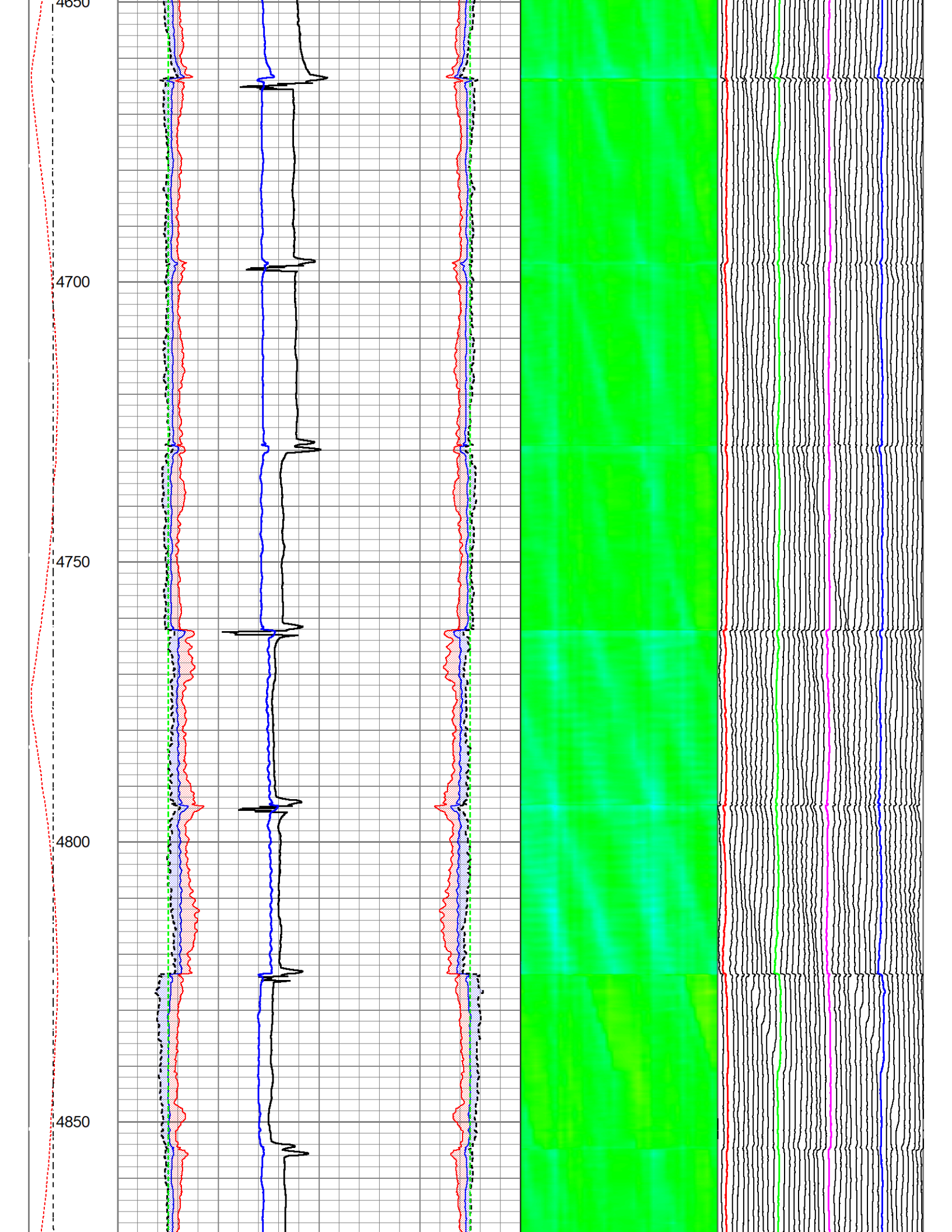


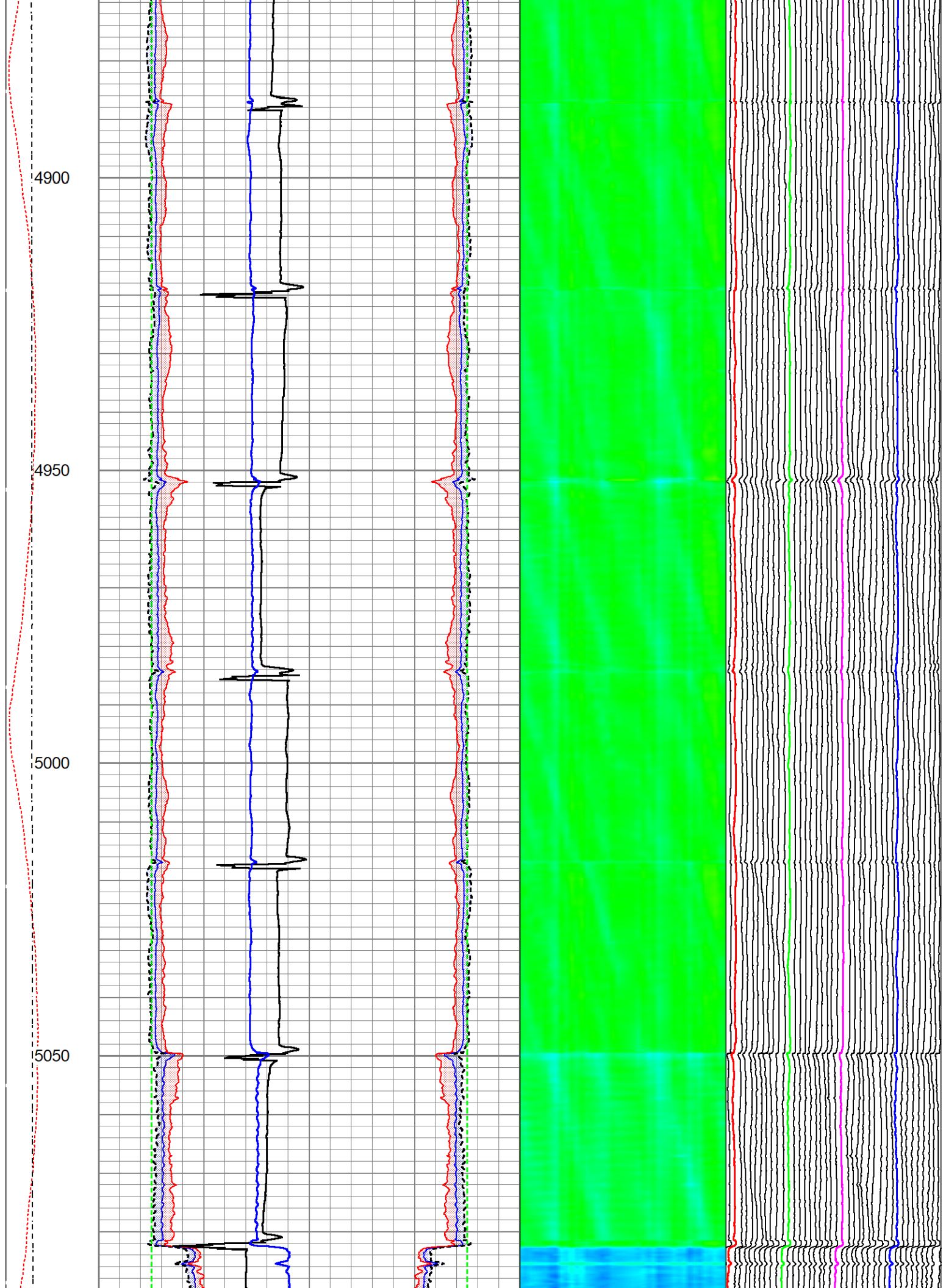


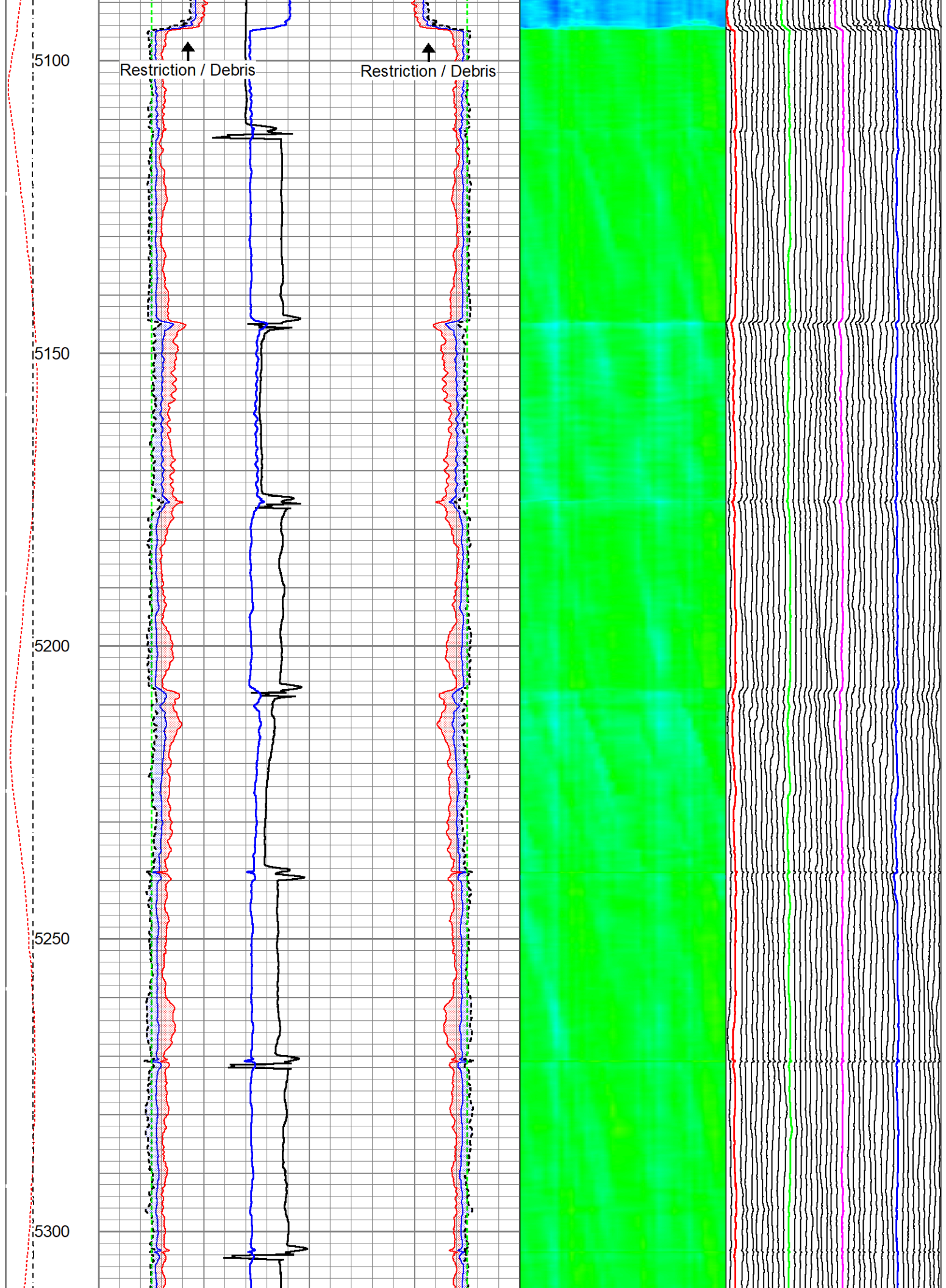


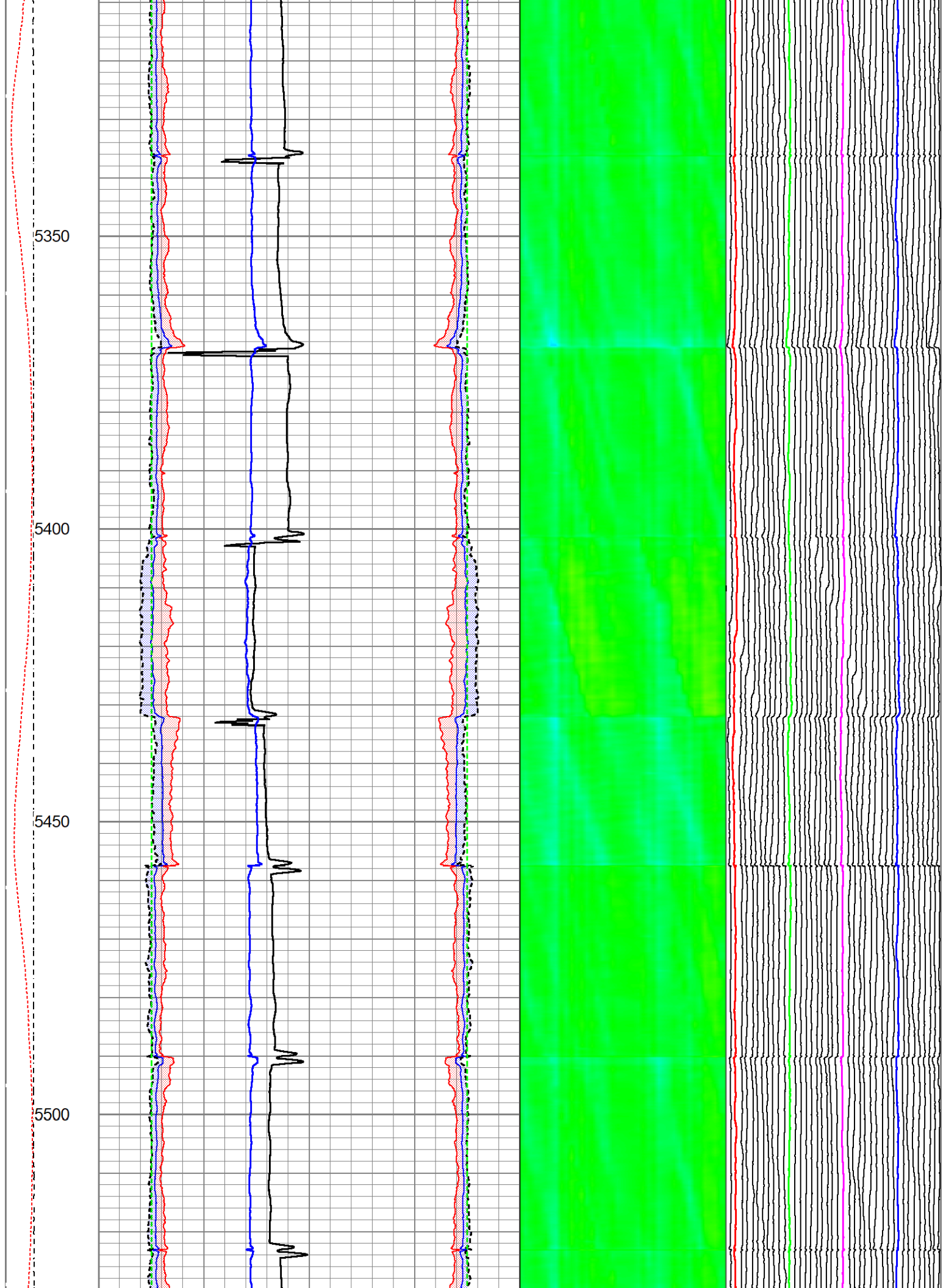


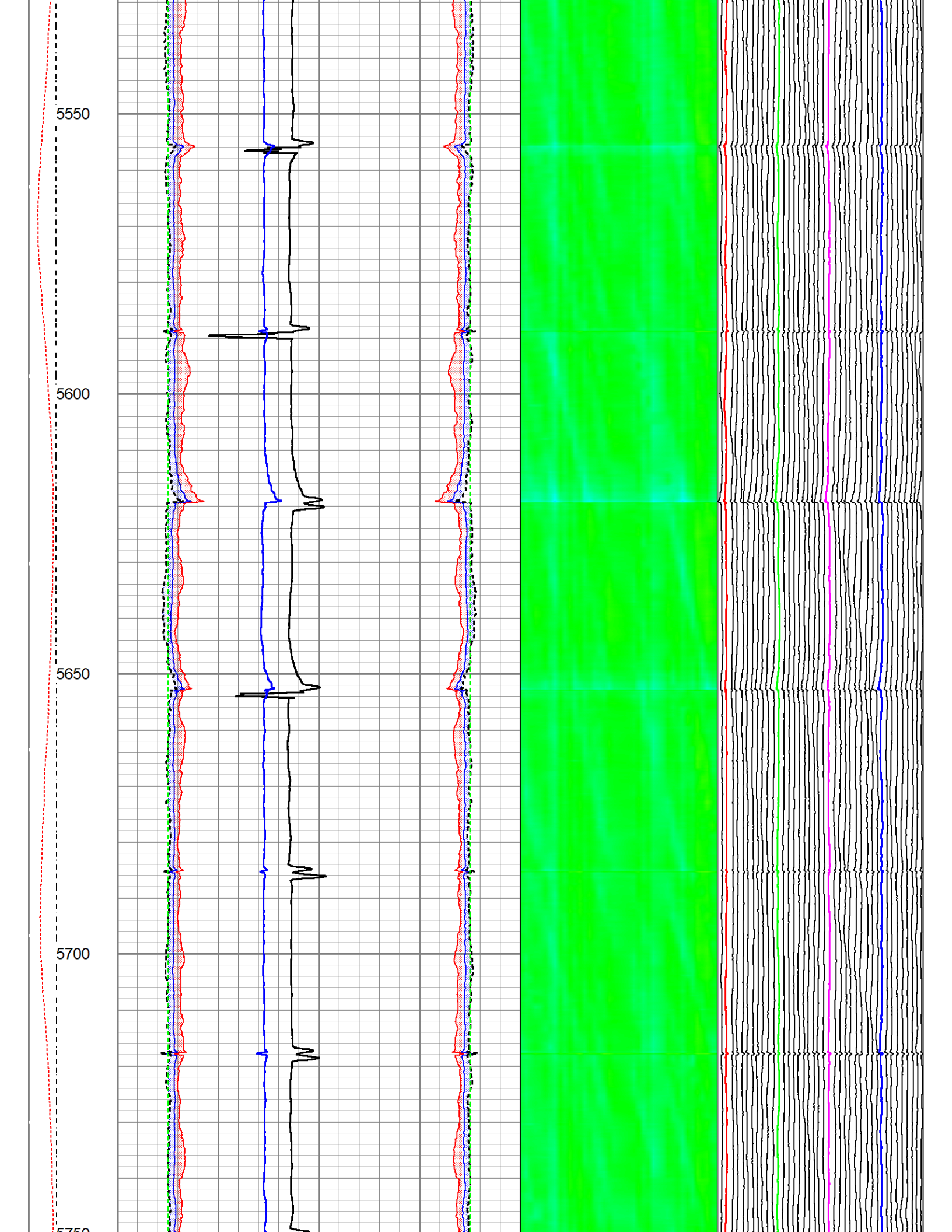


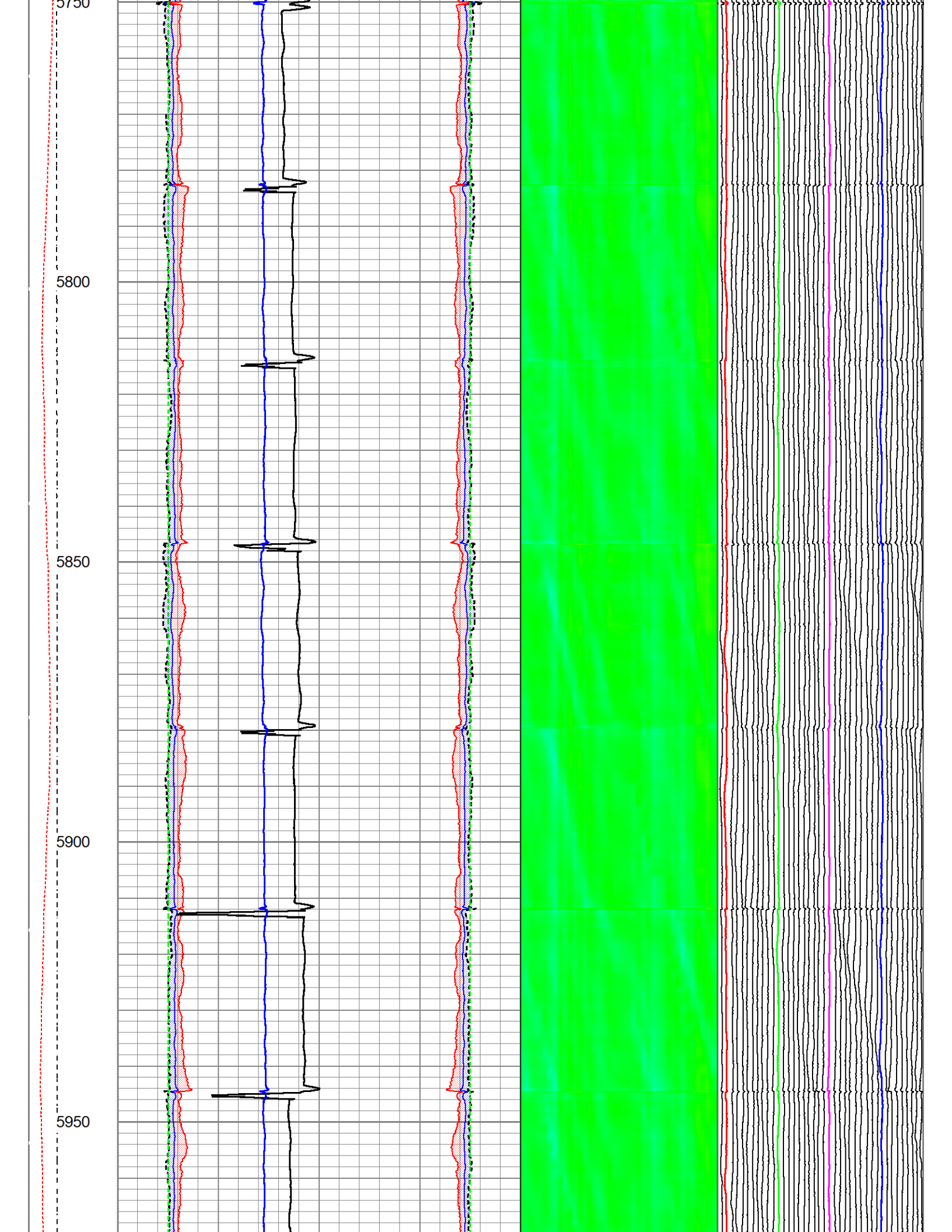


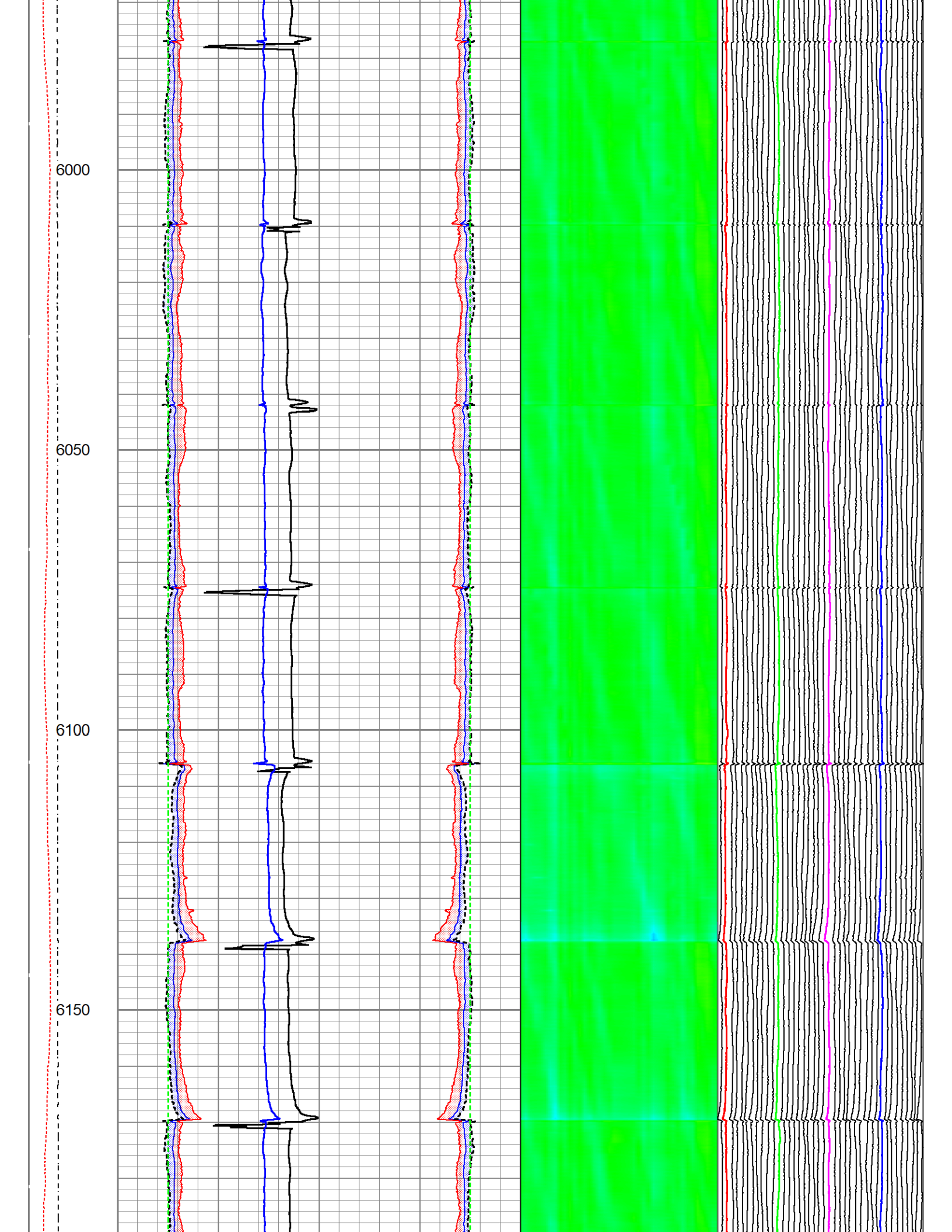


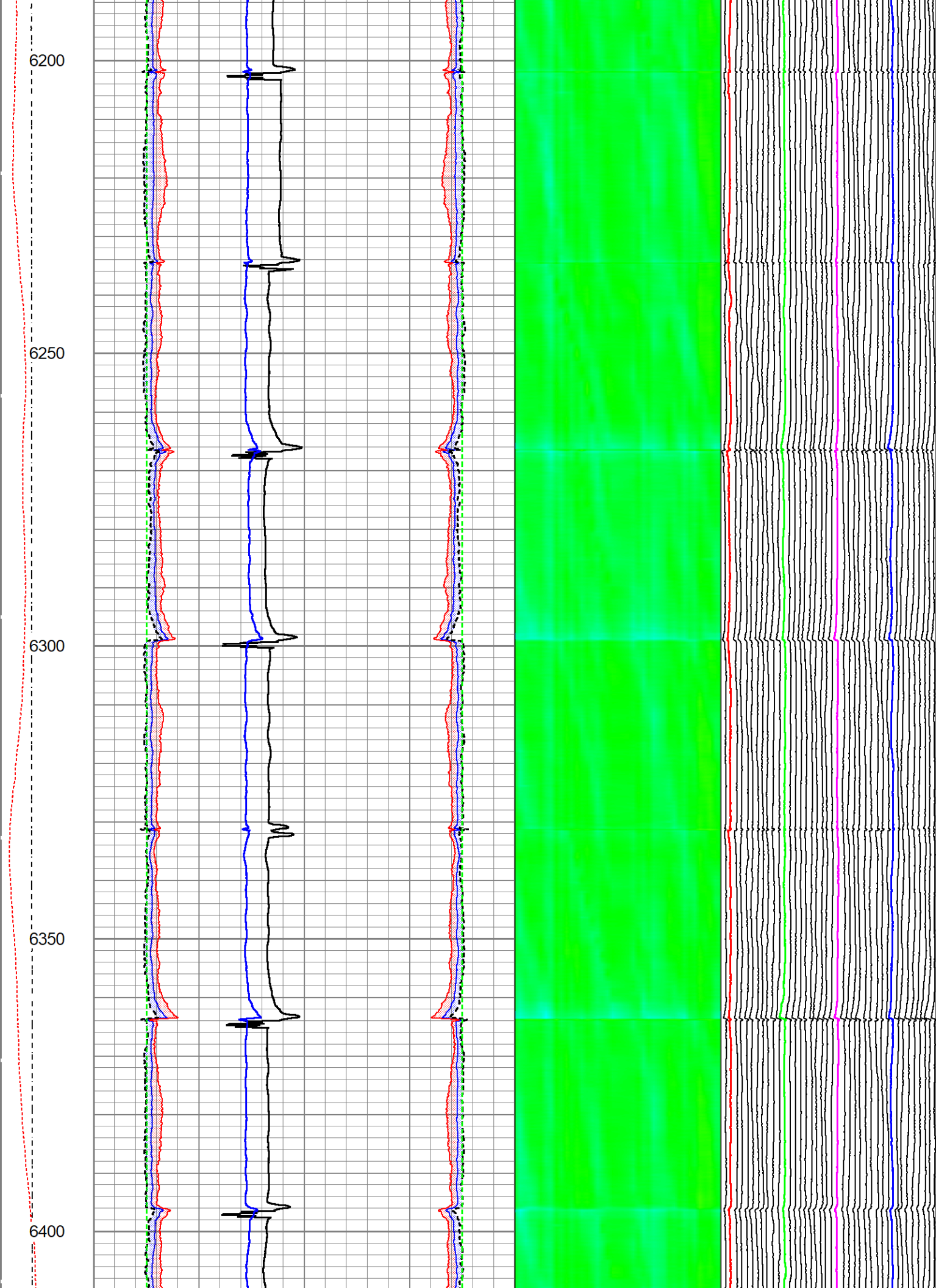


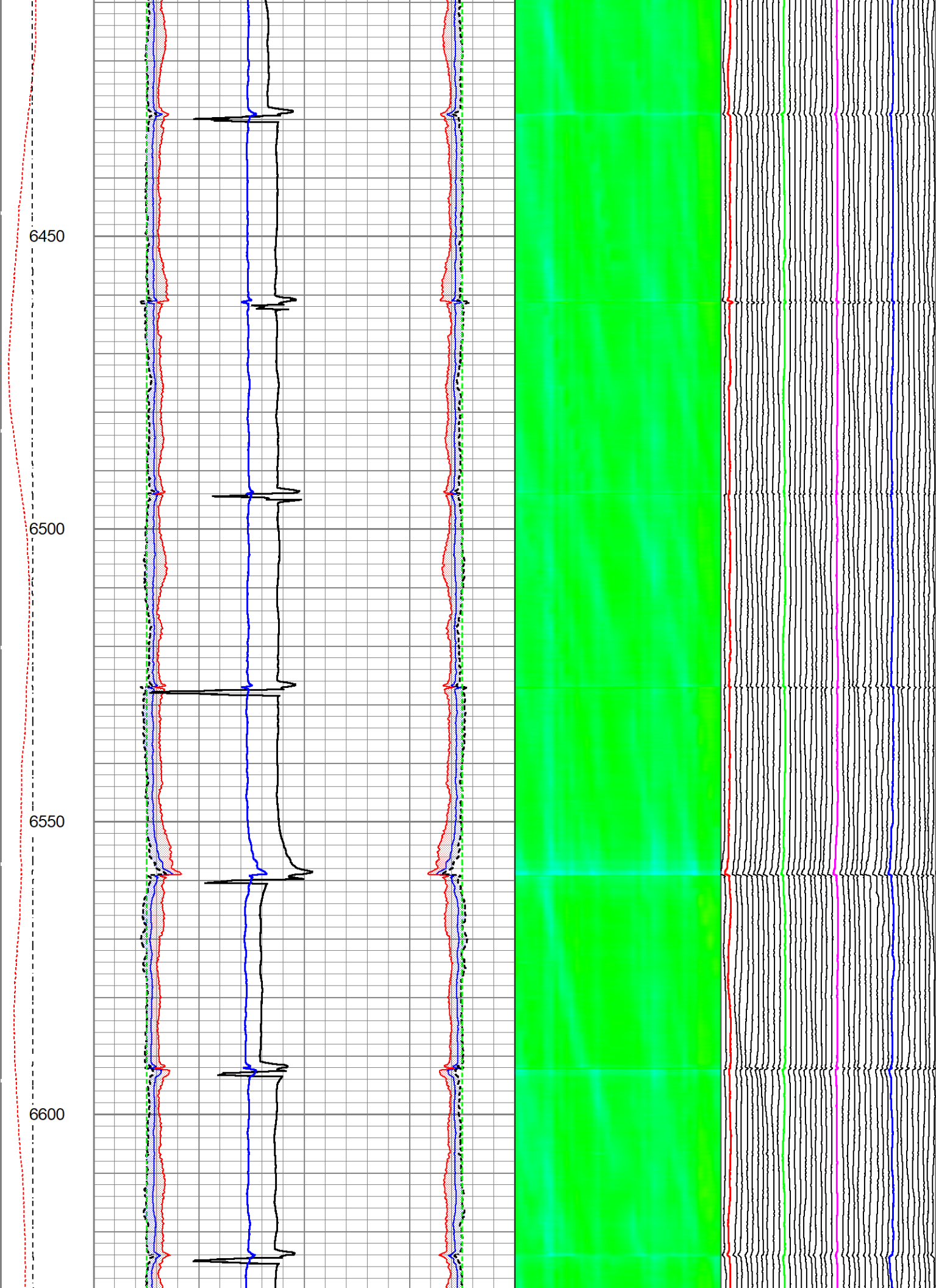












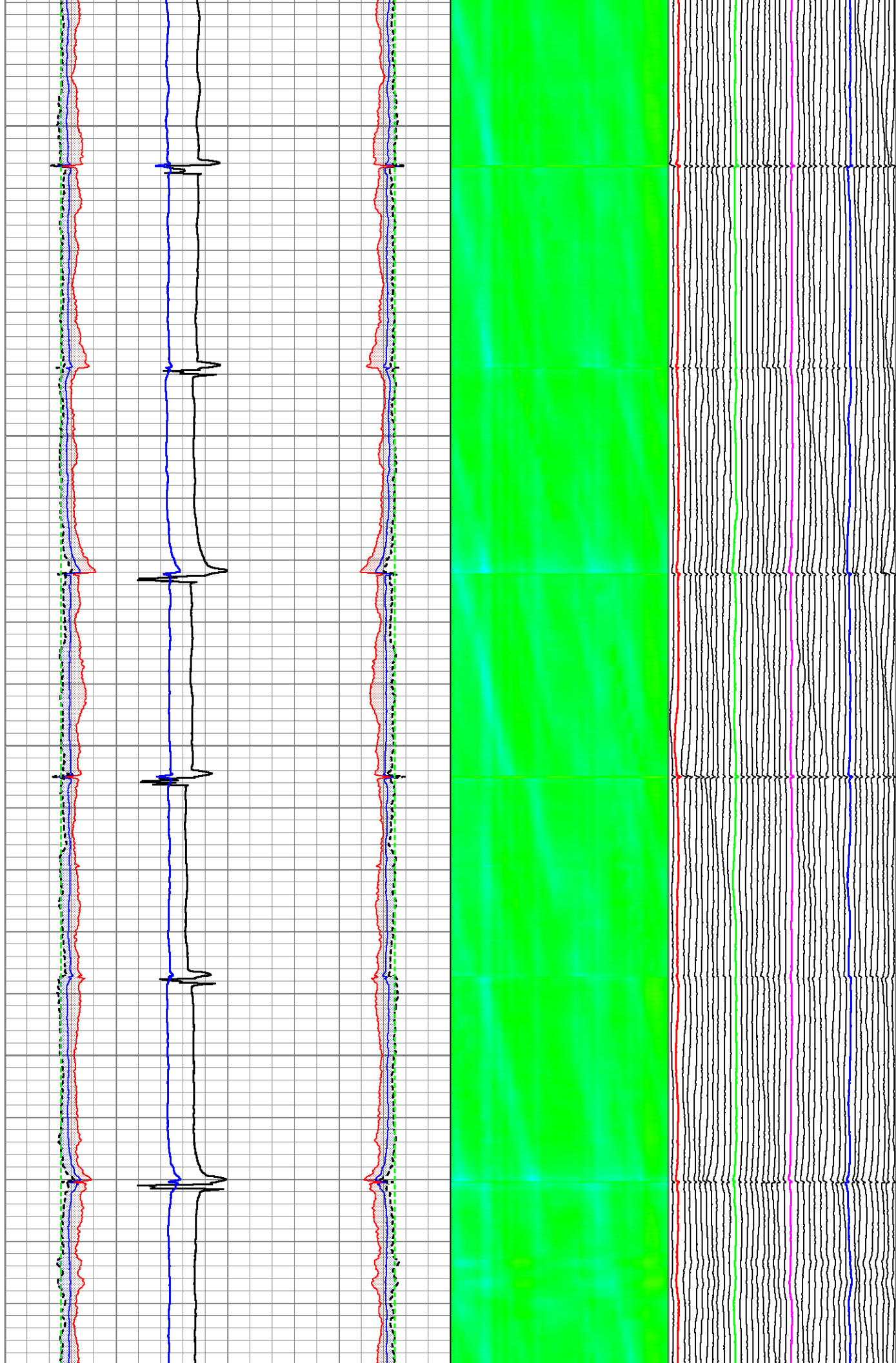
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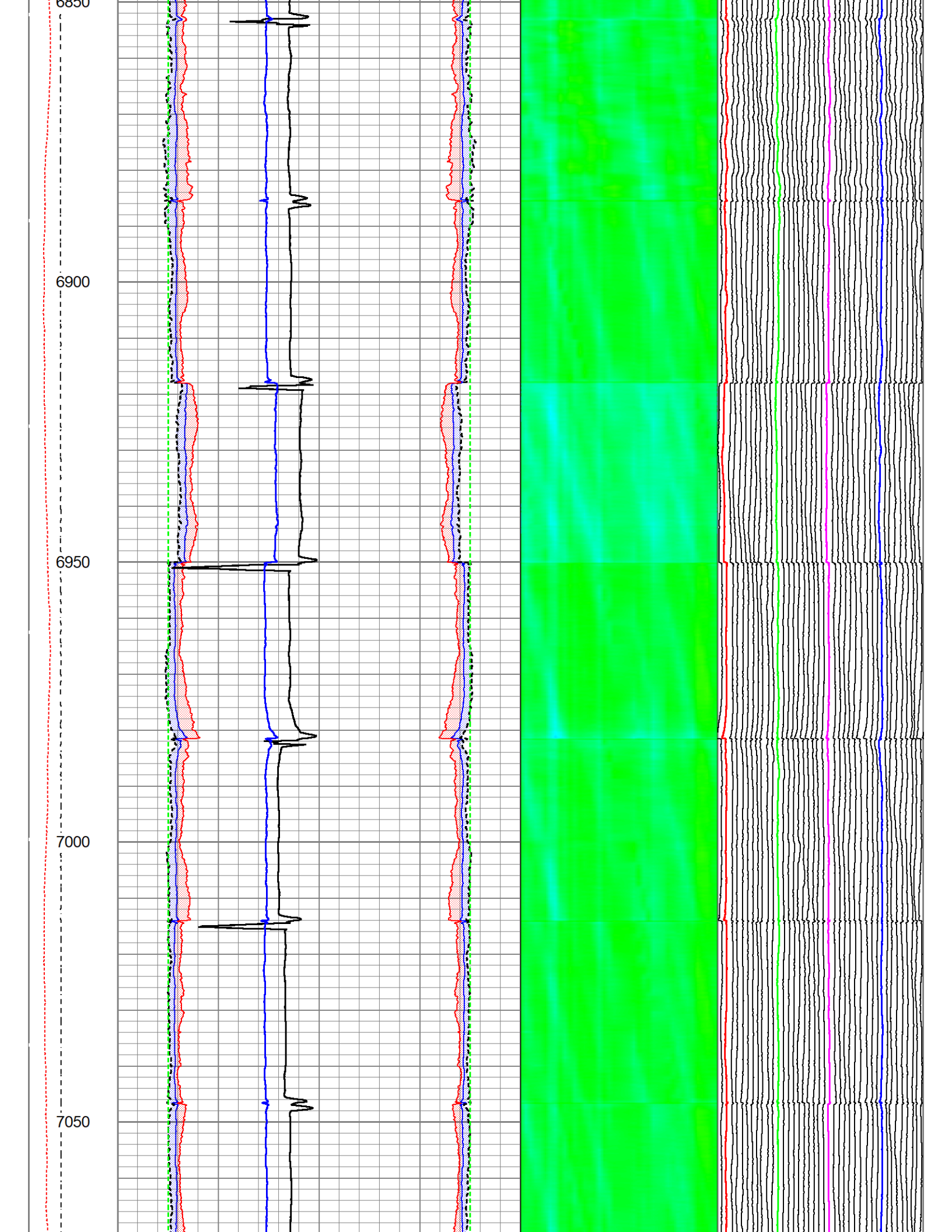
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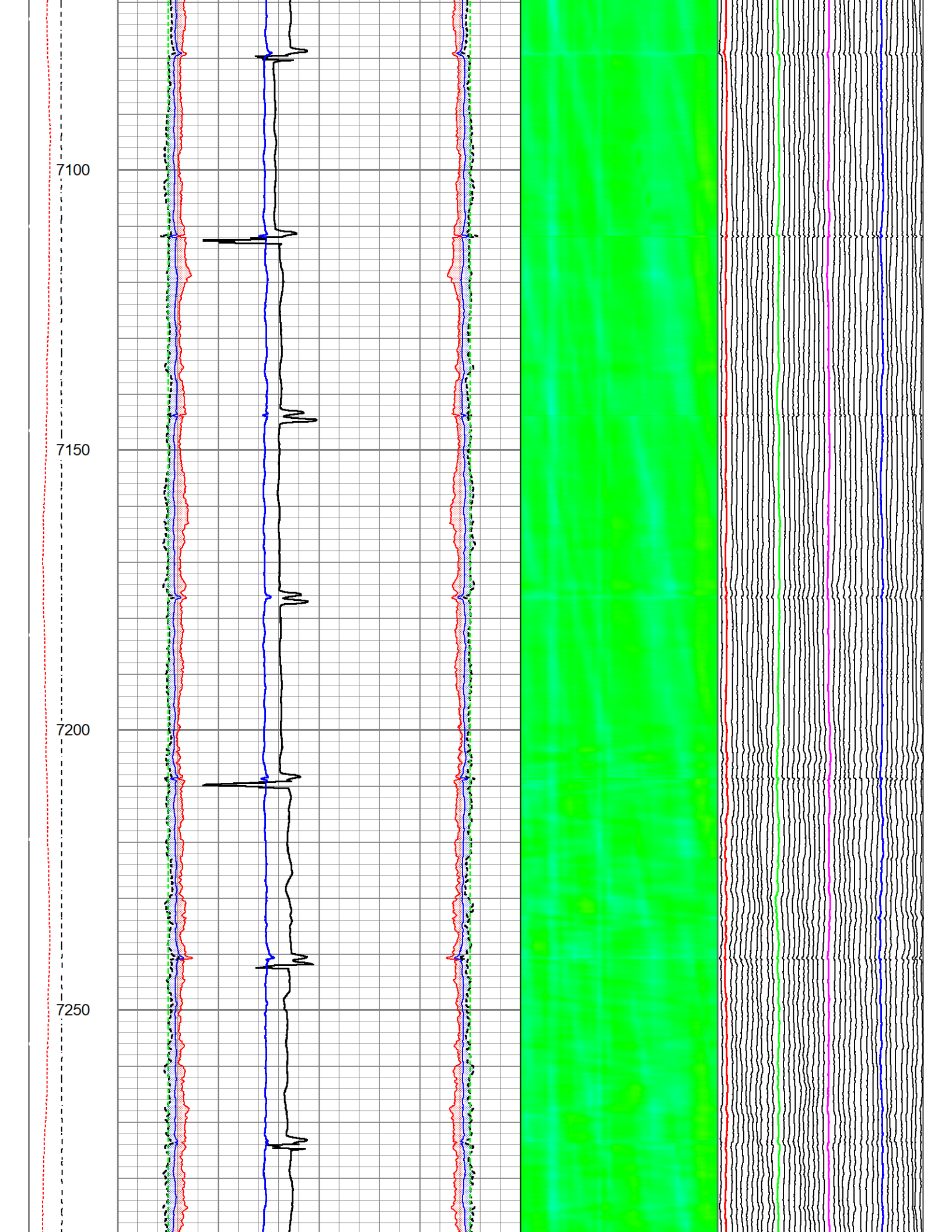
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6800

6850







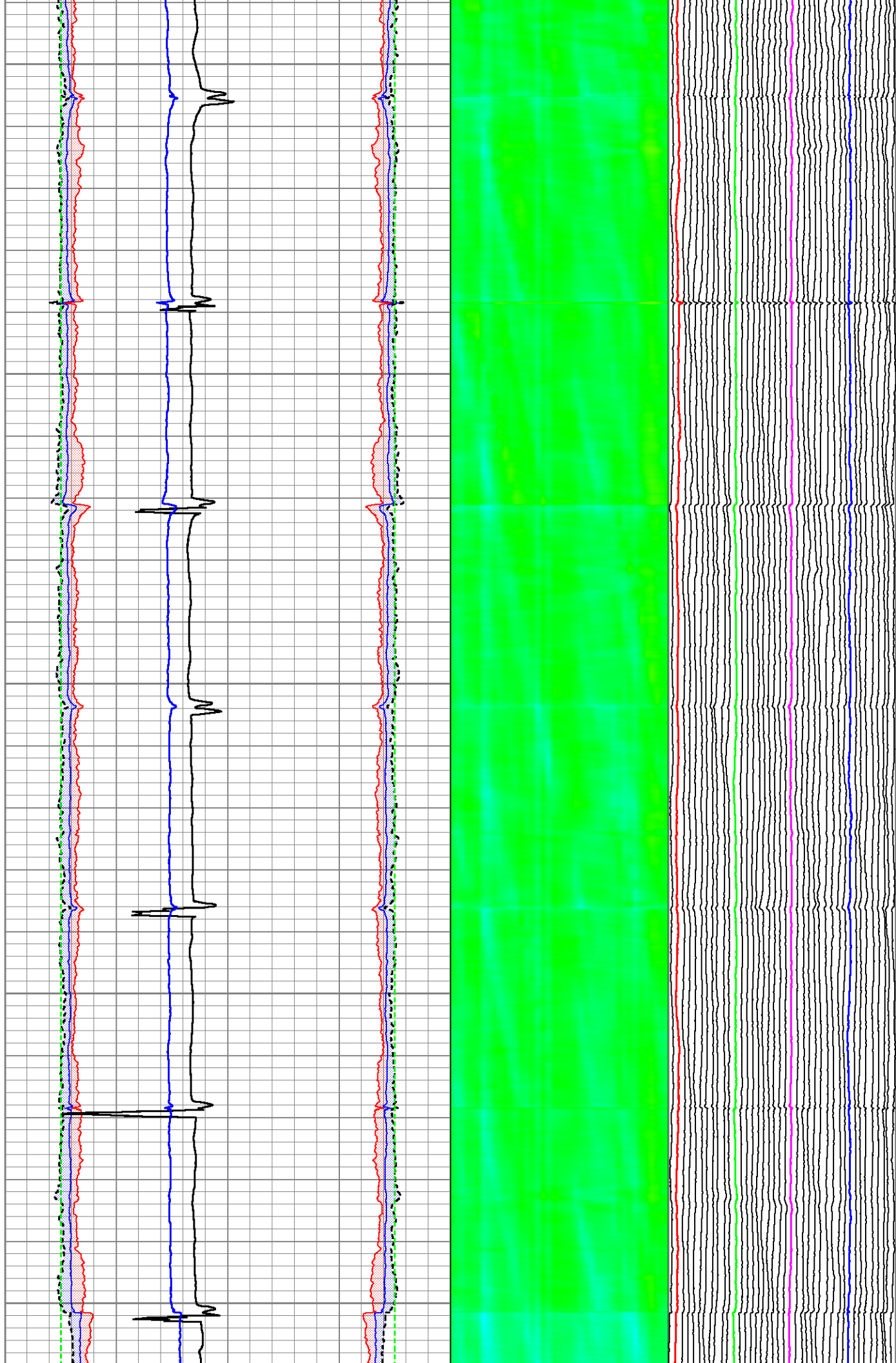
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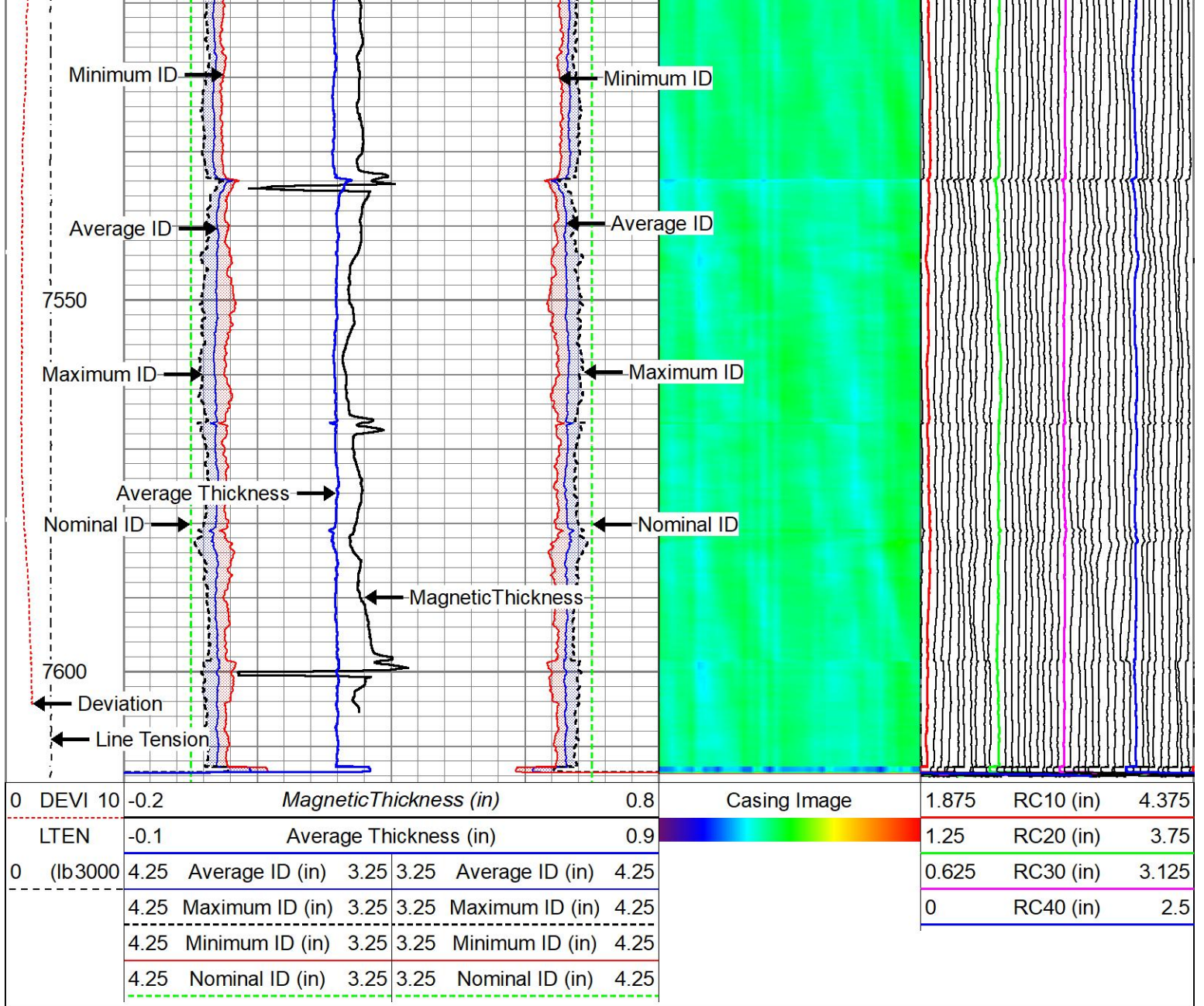
7350

7400

7450

7500





Log Variables

Database: c:\programdata\warrior\data\chevron_guthrie_abner_1_mac40\abner gutherie-1_mac40.dt
 Dataset field/well/run1/pass3.5/_vars_

Top - Bottom

BOREID in 6.125	BOTTEMP degF 100	CASEID in 4	CASEOD in 4.5	CASETHCK in 0.25	IMGCCCLTH 0.15	IMGRWCSRC Ecc-Cor	MinAPIWall in 0.216
PERFS No	SRFTEMP degF 0	TDEPTH ft 0					

Variable Description

BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEID : Casing I.D.
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 IMGCCCLTH : IMG Computed CCL threshold: fraction over nominal
 IMGRWCSRC : IMG Remaining Wall computation source
 MinAPIWall : Minimum API Wall Thickness
 PERFS : Perforation Flag

PERFS : Perforation Flag
 SRFTEMP : Surface Temperature
 TDEPTH : Total Depth

Calibration Report

Database File c:\programdata\warrior\data\chevron_guthrie_abner_1_mac40\abner guthrie-1_mac40.db
 Dataset Pathname pass3.3
 Dataset Creation Wed Aug 26 20:35:51 2020

40 Arm Multi Sensor Caliper Calibration Report

Serial Number: FW1411-56
 Tool Model: 40
 Performed: Wed Aug 26 20:48:38 2020

Ref ID:	3.00	4.00	5.00	6.00	7.00	in
Arm1	1.36	1.81	2.29	2.83	3.36	
Arm2	2.10	2.50	2.88	3.29	3.71	
Arm3	1.80	2.30	2.77	3.27	3.75	
Arm4	1.80	2.23	2.64	3.08	3.53	
Arm5	1.72	2.19	2.67	3.19	3.61	
Arm6	1.65	2.11	2.57	3.07	3.55	
Arm7	1.86	2.31	2.76	3.22	3.68	
Arm8	1.68	2.11	2.54	3.01	3.46	
Arm9	1.69	2.20	2.69	3.20	3.67	
Arm10	1.71	2.18	2.64	3.12	3.59	
Arm11	1.67	2.15	2.63	3.12	3.58	
Arm12	1.92	2.36	2.79	3.23	3.65	
Arm13	1.75	2.24	2.72	3.21	3.66	
Arm14	1.64	2.14	2.64	3.15	3.63	
Arm15	1.60	2.10	2.63	3.14	3.62	
Arm16	1.90	2.35	2.82	3.27	3.69	
Arm17	1.57	2.03	2.52	3.00	3.45	
Arm18	1.50	2.01	2.55	3.07	3.57	
Arm19	1.66	2.12	2.61	3.09	3.54	
Arm20	1.47	1.99	2.53	3.06	3.55	
Arm21	1.50	2.01	2.56	3.08	3.56	-
Arm22	1.91	2.35	2.81	3.24	3.64	-
Arm23	1.63	2.14	2.68	3.19	3.65	-
Arm24	1.96	2.41	2.89	3.34	3.75	-
Arm25	1.87	2.34	2.84	3.31	3.73	-
Arm26	1.82	2.26	2.73	3.18	3.61	-
Arm27	1.74	2.25	2.78	3.28	3.74	-
Arm28	1.51	2.01	2.54	3.05	3.55	-
Arm29	1.92	2.34	2.79	3.22	3.64	-
Arm30	1.68	2.16	2.69	3.20	3.62	-
Arm31	1.59	2.07	2.58	3.08	3.57	-
Arm32	1.57	2.06	2.56	3.06	3.55	-
Arm33	2.02	2.46	2.90	3.34	3.74	-
Arm34	1.77	2.19	2.62	3.07	3.52	-
Arm35	1.92	2.36	2.81	3.26	3.70	-
Arm36	1.79	2.25	2.69	3.15	3.61	-
Arm37	1.60	2.13	2.66	3.20	3.71	-
Arm38	1.80	2.27	2.73	3.21	3.68	-
Arm39	1.63	2.11	2.59	3.10	3.60	-
Arm40	1.71	2.23	2.73	3.26	3.75	-

* Bad

PROBE Verifications Calibration Report

Performed: Pre Verification Mon Nov 27 16:31:58 2017 Post Verification Mon Nov 27 18:12:12 2017 Casing Check

Ref ID: 7.00 7.00 0.00 in

Min.	7.00	6.98	0.00	in
Max.	7.00	7.01	0.00	in
Avg.	7.00	6.99	0.00	in
Dia1	7.00	7.00	0.00	in
Dia2	7.00	6.99	0.00	in
Dia3	7.00	7.01	0.00	in
Dia4	7.00	7.00	0.00	in
Dia5	7.00	7.00	0.00	in
Dia6	7.00	7.00	0.00	in
Dia7	7.00	6.99	0.00	in
Dia8	7.00	6.99	0.00	in
Dia9	7.00	6.99	0.00	in
Dia10	7.00	6.99	0.00	in
Dia11	7.00	6.98	0.00	in
Dia12	7.00	6.98	0.00	in
Dia13	7.00	6.99	0.00	in
Dia14	7.00	7.00	0.00	in
Dia15	7.00	7.00	0.00	in
Dia16	7.00	7.00	0.00	in
Dia17	7.00	6.99	0.00	in
Dia18	7.00	6.98	0.00	in
Dia19	7.00	6.99	0.00	in
Dia20	7.00	7.00	0.00	in

Inclinometer Calibration Report

Performed:	Thu Feb 27 10:50:13 2020				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-3612.53	3555.97	-1.00	1.00	gee
Y Accelerometer	3582.93	-3572.40	-1.00	1.00	gee
Z Accelerometer	73.97	3652.80	0.00	1.00	gee

EMIT Calibration Report

Serial Number: 110510
Tool Model: Probe
Performed: Fri Feb 17 11:04:27 2012

	Reference	Reading	
Thickness			
Reference 1:	0.000 in	5763.930	clock cycles
Reference 2:	0.250 in	9276.000	clock cycles
Reference 3:	in		clock cycles
Reference 4:	in		clock cycles
Reference 5:	in		clock cycles
MAGCAL			
Reference 1:	in		clock cycles
Reference 2:	in		clock cycles
Reference 3:	in		clock cycles
Reference 4:	in		clock cycles
Reference 5:	in		clock cycles
DTHK			

Low Reference: 0.000 in -91.390 clock cycle difference
 High Reference: 0.415 in 121.530 clock cycle difference

Low Reference: A/D conversion
 High Reference: A/D conversion

Gamma Ray Calibration Report


Serial Number: FW1311-102
 Tool Model: GCT_C3
 Performed: Thu Feb 27 09:53:41 2020

Calibrator Value: 155.0 GAPI

Background Reading: 41.5 cps
 Calibrator Reading: 401.6 cps

Sensitivity: 0.4305 GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable-Head-Titan 1 7/16" Cable Head	1.00	1.44	1.00	
GCT_HV	17.12						
DCCL	16.45						
CCL	16.45						
GR	14.95			GR-GCT_C3 (FW1311-102) Probe Digital Gamma CCL Corrosion	4.77	2.75	50.00
ET	10.00						
Thickness	8.88			EMIT-Probe (110510) Magnetic Thickness Tool	5.87	3.50	130.00
DTHK	8.88						
MAGCAL	8.86						

				Probe_MFCAL-40 (FW1411-56) Probe 40 Arm Caliper	6.67	2.88
ETemp	1.00					
Meas	1.00					
ACCZ	0.00					
ACCY	0.00					
ACCX	0.00					

Dataset: abner gutherie-1_mac40.db: field/well/run1/pass3
 Total length: 18.30 ft
 Total weight: 181.00 lb
 O.D.: 3.50 in

Company POCO Operating
 Well Guthrie Abner #1
 Field Wattenburg
 County Adams

State Colorado



Multi Sensor 40 Arm Caliper
 Magnetic Wall Thickness
 Gamma Ray Collar