

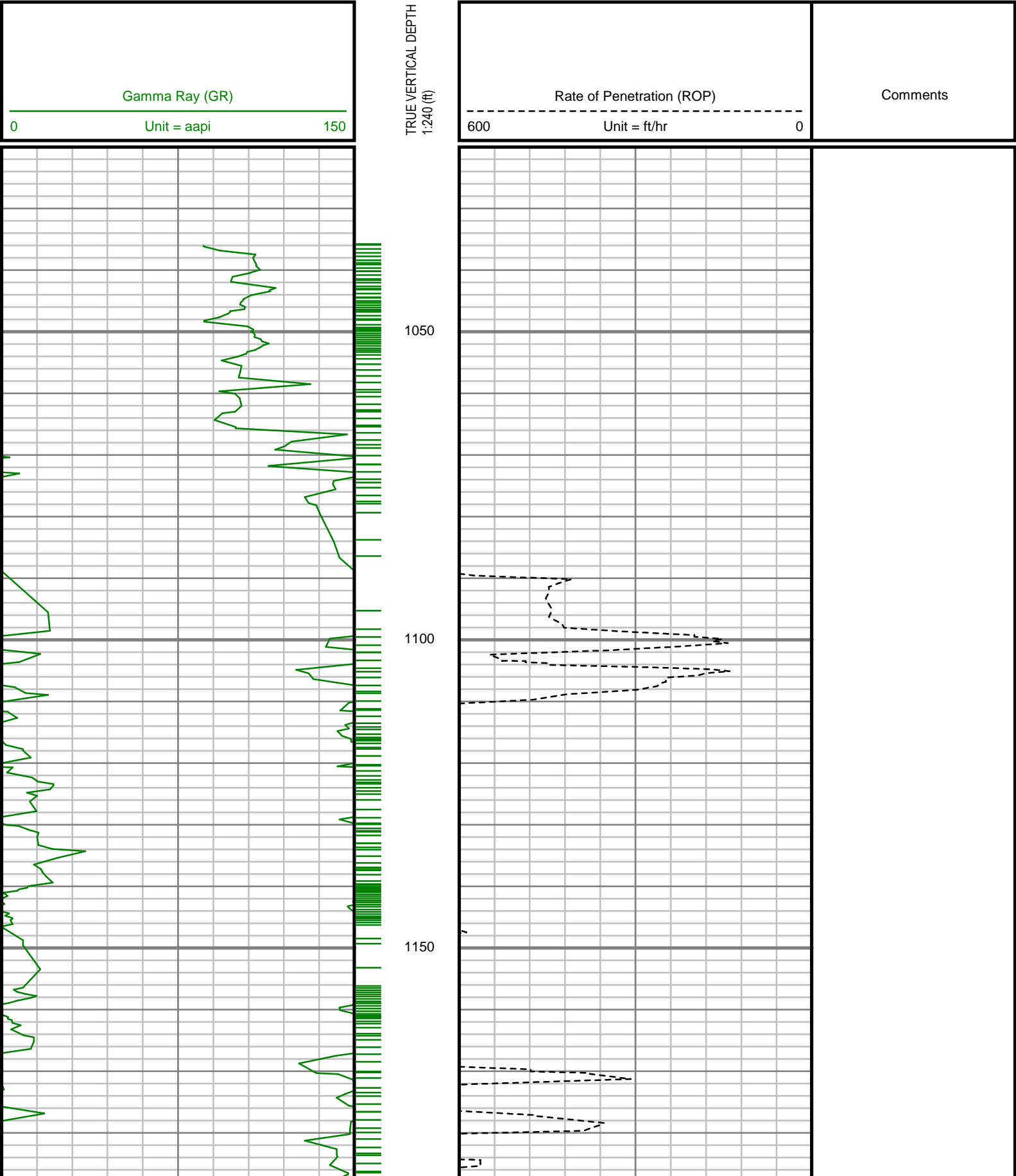
5" = 100' FEET TVD

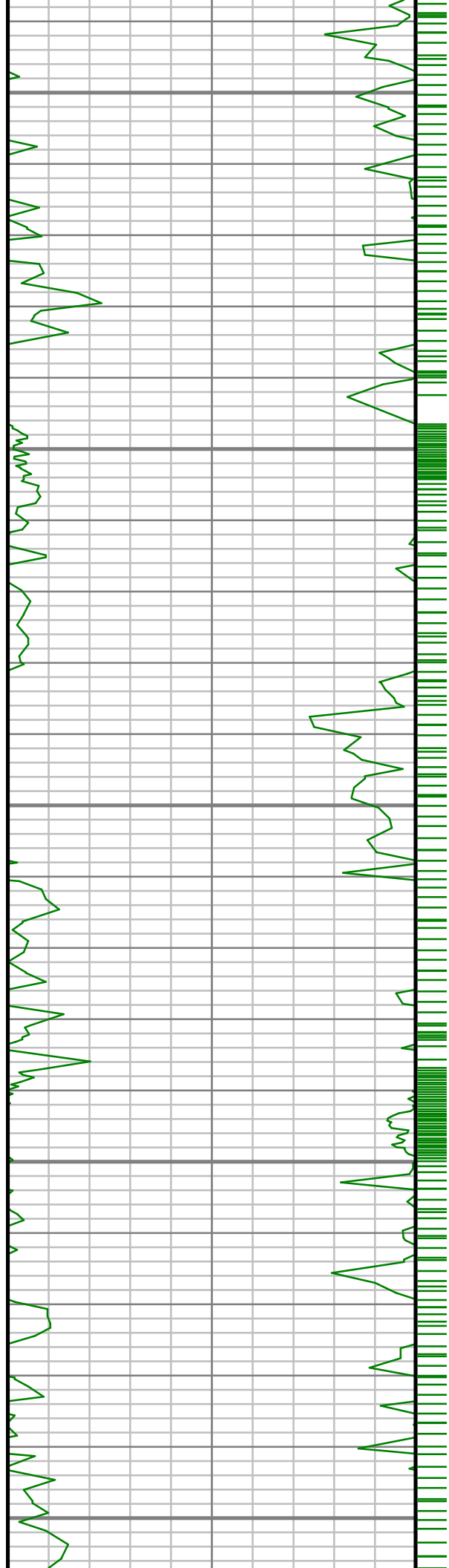
COMPANY : ENCANA OIL & GAS (U.S.A.) INC WELL : 4A-20H-0264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39738										COMPANY : ENCANA OIL & GAS (U.S.A.) INC WELL : 4A-20H-0264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39738													
WELL LOCATION LAT:40°7'3.511"N LONG:104°34'19.276"W N:1287061.51 ft E:3259529.96 ft SEC:20 TWP:2N RANGE:64W										OTHER SERVICES DIRECTIONAL ROP													
DEPTH REF. : RKB REF. HEIGHT : 25.000 ft GROUND LEVEL : 4957.000 ft										RKB to Ground Level G.L. to MEAN SEA LEVEL													
BOREHOLE RECORD						DEVIATION RECORD																	
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg			FROM ft	TO ft																
12.25	0	1097	0-13			0	1218																
8.75	1097	7440	13-0			1218	5904																
6.125	7440	11746	0-88			5904	7440																
			88-92			7440	11746																
CASING RECORD																							
CASING SIZE in	FROM ft	TO ft																					
16	0	118																					
9.625	0	1082																					
7	0	7422																					
DRILLING CO. : H&P RIG : 278 LWD UNIT NO. : MWD-00046-DISTRICT : CASPER, CASPER SPUD DATE : 08/22/2014 LWD START DATE : 11/24/2014 LWD END DATE : 12/01/2014												DEPTH : 5000 ft DEPTH : 11746 ft TOTAL DEPTH : 11746 ft											

Run Data						
RUN NUMBER	1	2	3	4	5	
START DATE	08/24/2014	11/22/2014	11/24/2014	11/25/2014	11/27/2014	
START TIME	1830	0900	0100	0300	2030	
END DATE	08/25/2014	11/24/2014	11/25/2014	11/26/2014	12/01/2014	
END TIME	0130	0100	0030	0430	0730	
DEPTH IN (ft)	140	1097	6952	7232	7440	
DEPTH OUT (ft)	1097	6952	7232	7440	11746	
LOG TOP (ft)	-	5000	6898	7183	7387	
LOG BOTTOM (ft)	-	6898	7183	7387	11746	
HOLE SIZE (in)	12.25	8.75	8.75	8.75	6.125	
MUD DATA @ (ft)	1097	6755	7230	7300	9655	
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED	WATER-BASED	WATER-BASED	
DENSITY (lb / gal)	8.5	10.6	10.55	10.7	11	
VISCOSITY (s / qt)	26	41	35	38	41	
pH	-	8.05	8.05	8.1	8.6	
FLUID LOSS (cm3 / 30)	-	-	-	-	-	
SALINITY (ppm)	-	-	-	-	-	
Rm (ohmm @ deg F)	-	-	-	-	-	
Rmf (ohmm @ deg F)	-	-	-	-	-	
MAX TEMP (deg F)	101	169	180	167	226	
Rm @ MAX TEMP (ohmm)	-	-	-	-	-	
LWD ENGINEER #1	S. WAXLER	S. WAXLER	S. WAXLER	S. WAXLER	S. WAXLER	
LWD ENGINEER #2	T. LE	T. LE	T. LE	T. LE	C. WILSON	
LWD ENGINEER #3	-	-	-	-	-	
LOG WITNESS #1	-	M. ALMUBARAK	M. ALMUBARAK	M. ALMUBARAK	M. ALMUBARAK	
LOG WITNESS #2	-	C. PESICKA	C. PESICKA	C. PESICKA	C. PESICKA	

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 interpretations, 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 as set out in our current price schedule.

ENCANA OIL AND GAS (U.S.A.) INC
DALE 4A-20H-O264
WATTENBERG FIELD
WELD COUNTY, COLORADO
05-123-39738





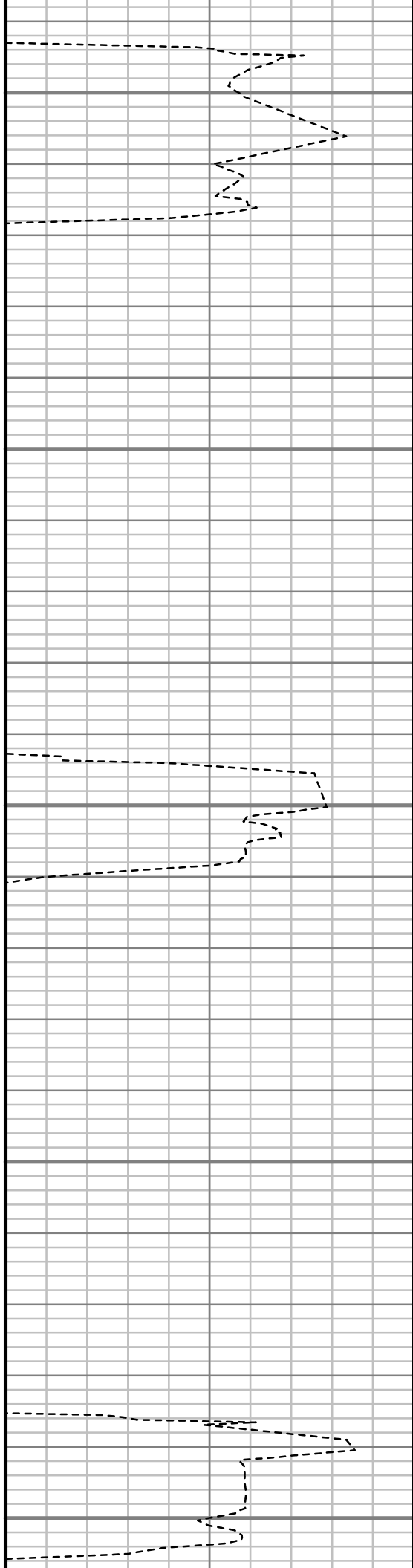
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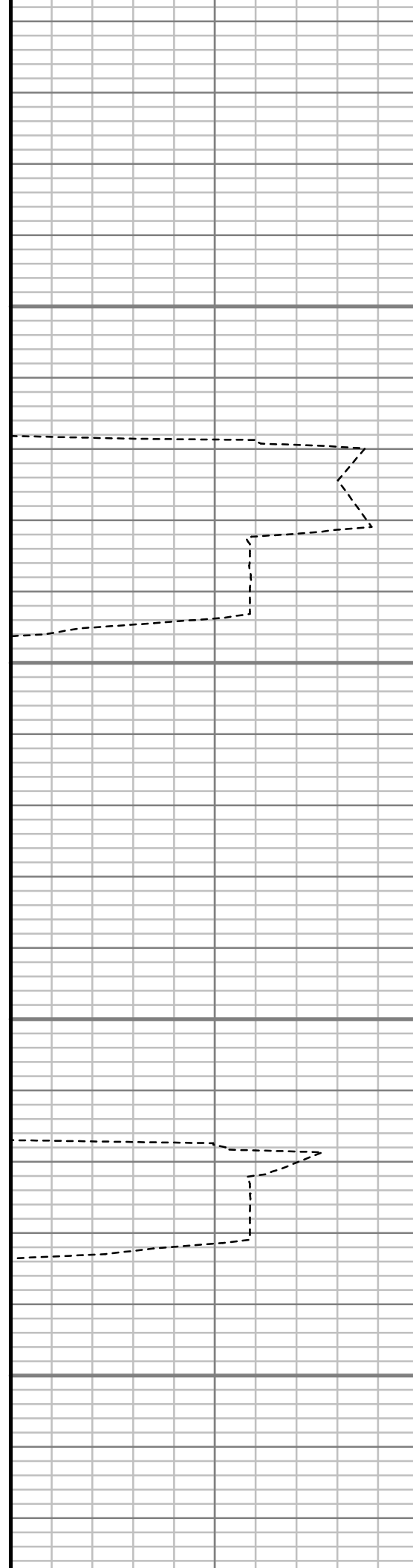
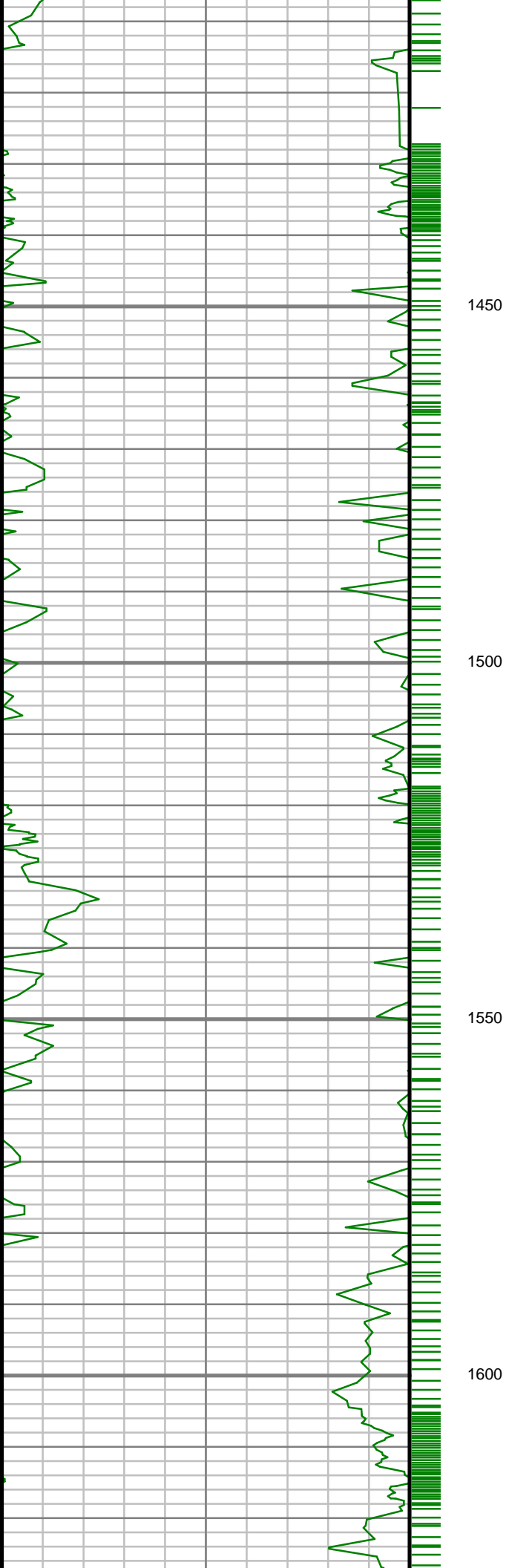
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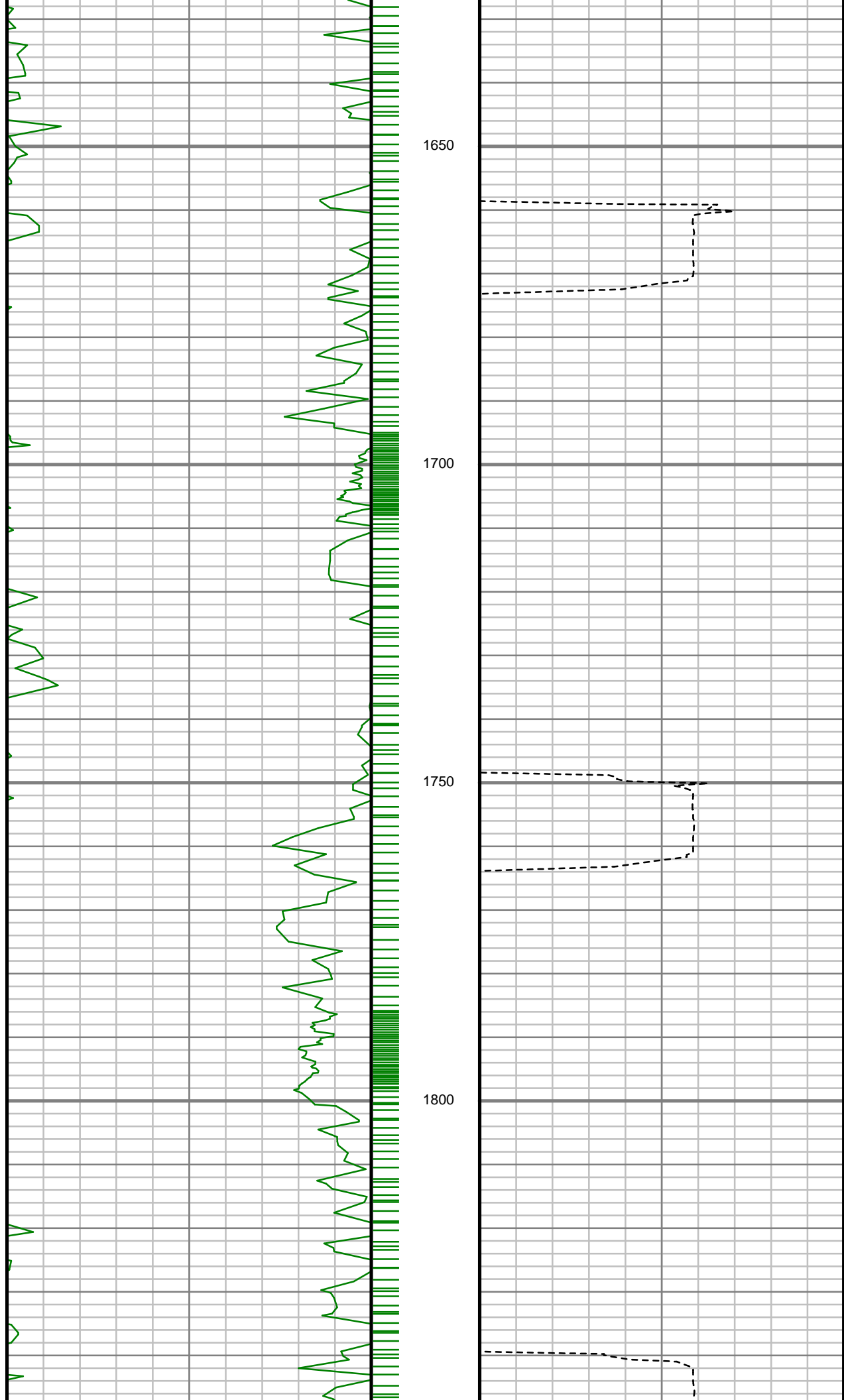
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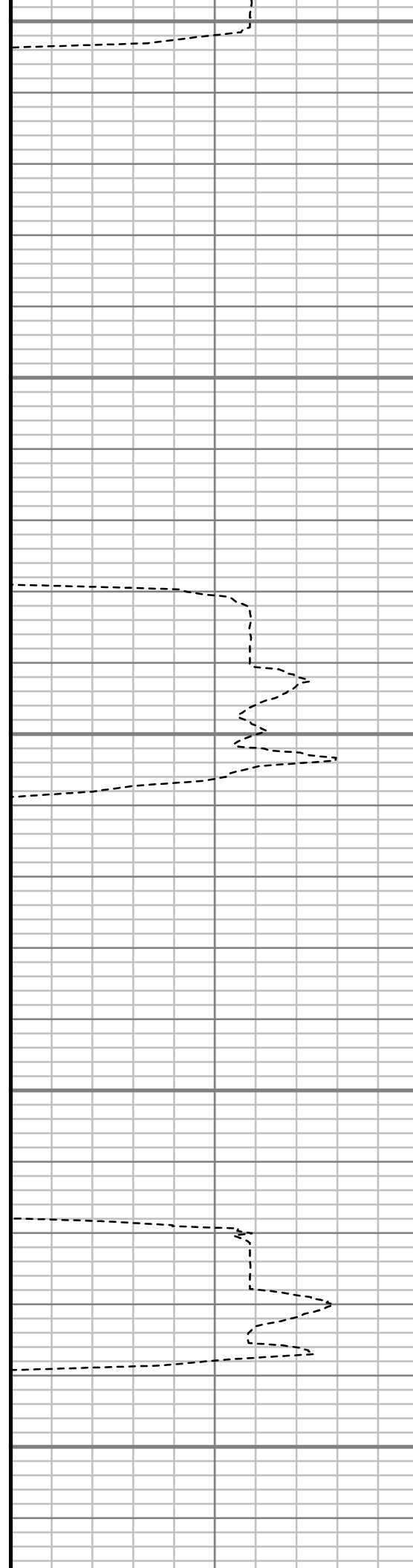
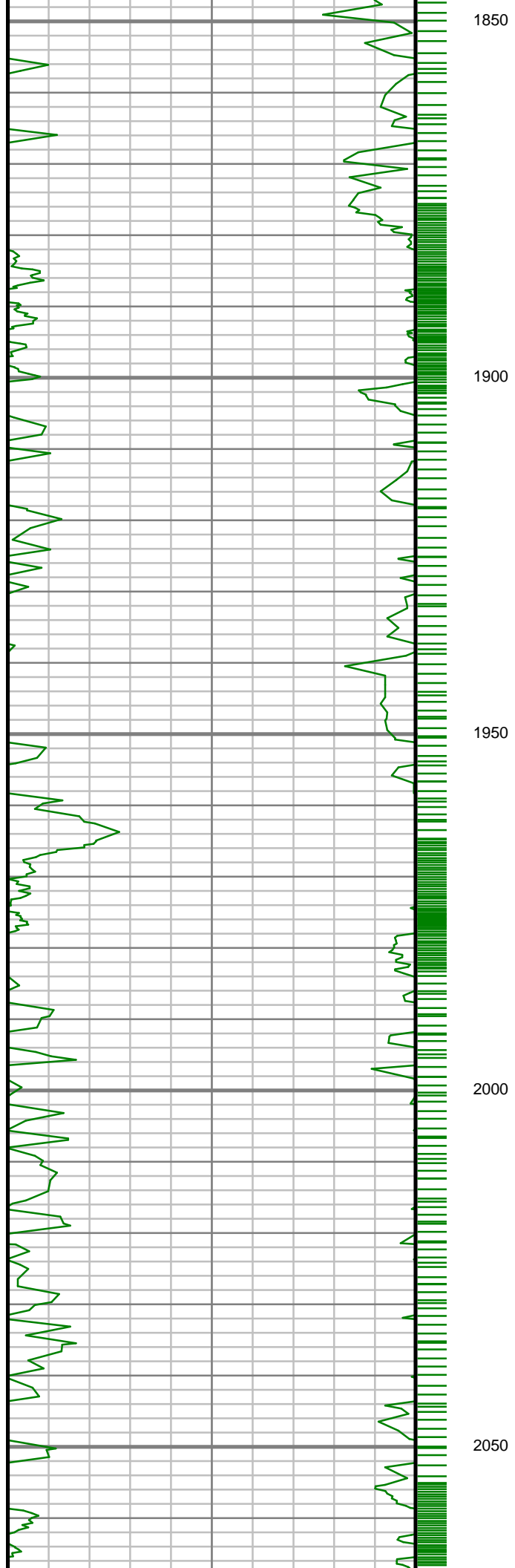
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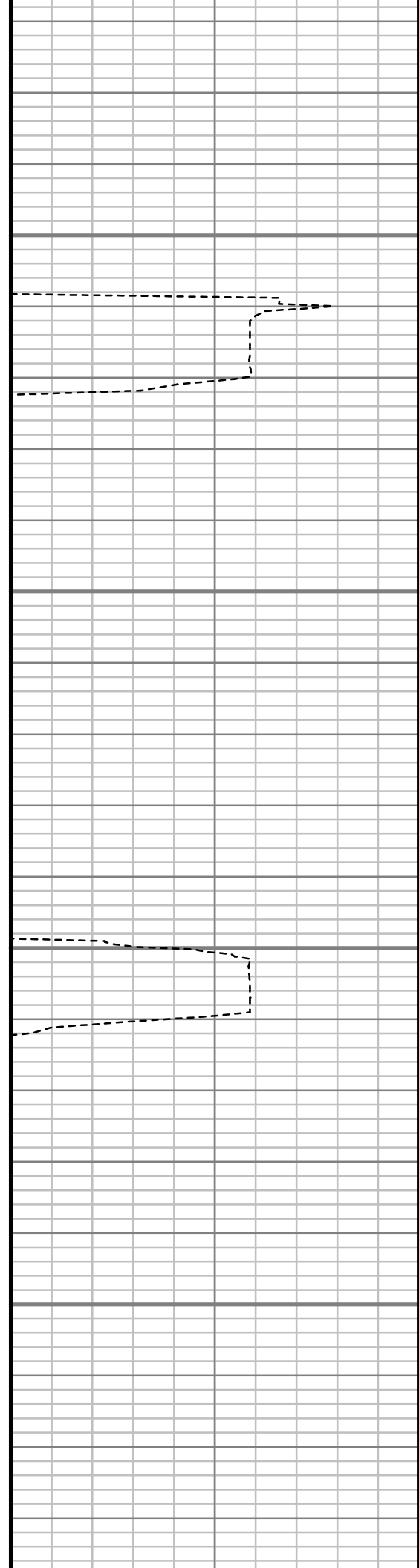
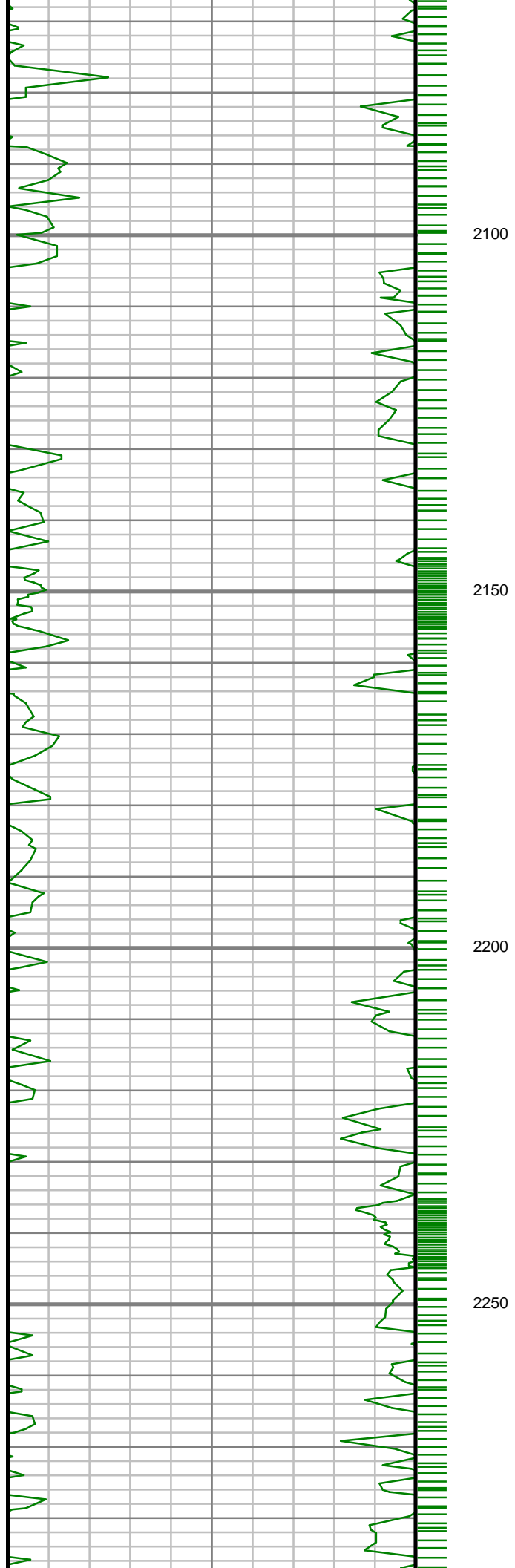
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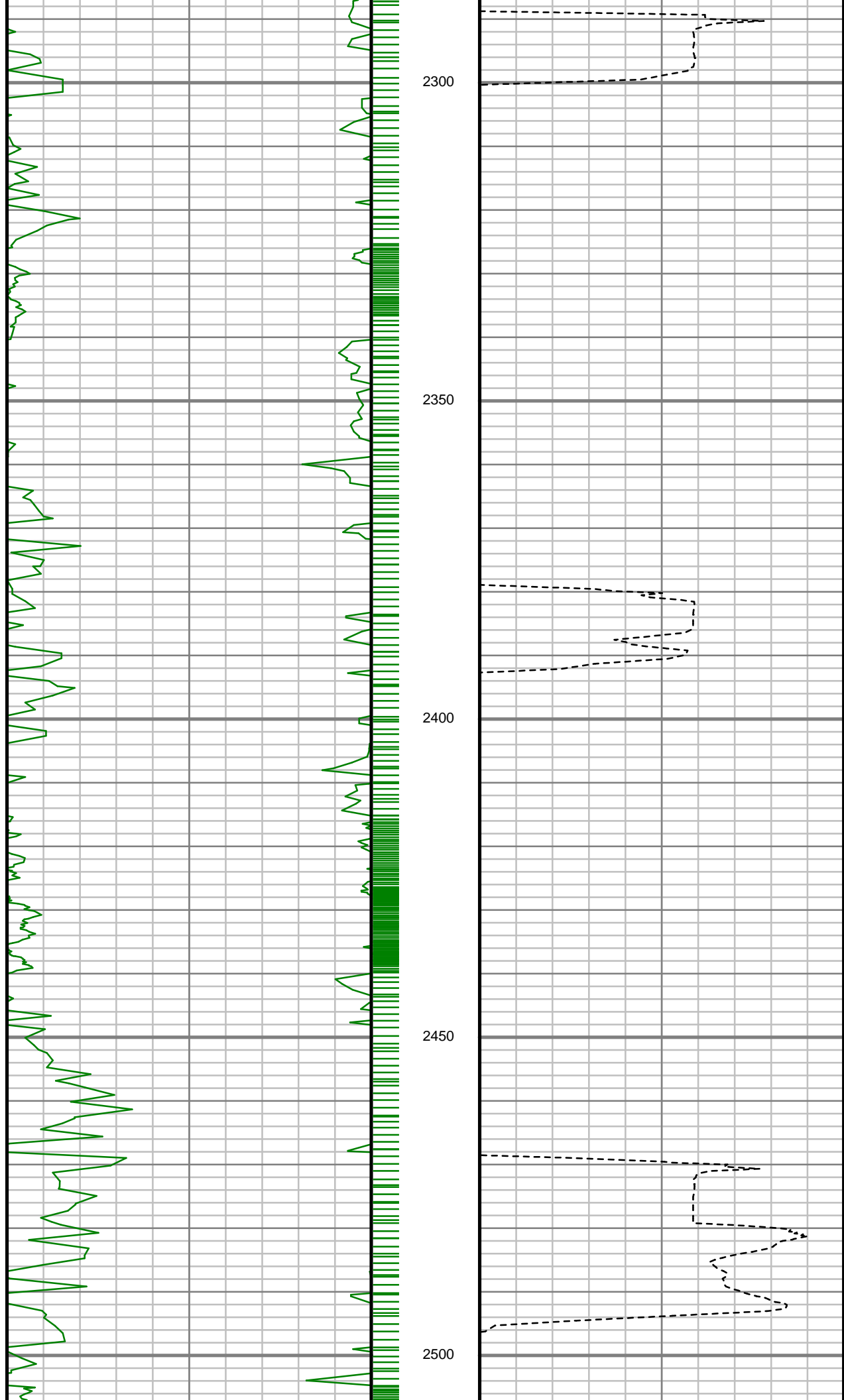


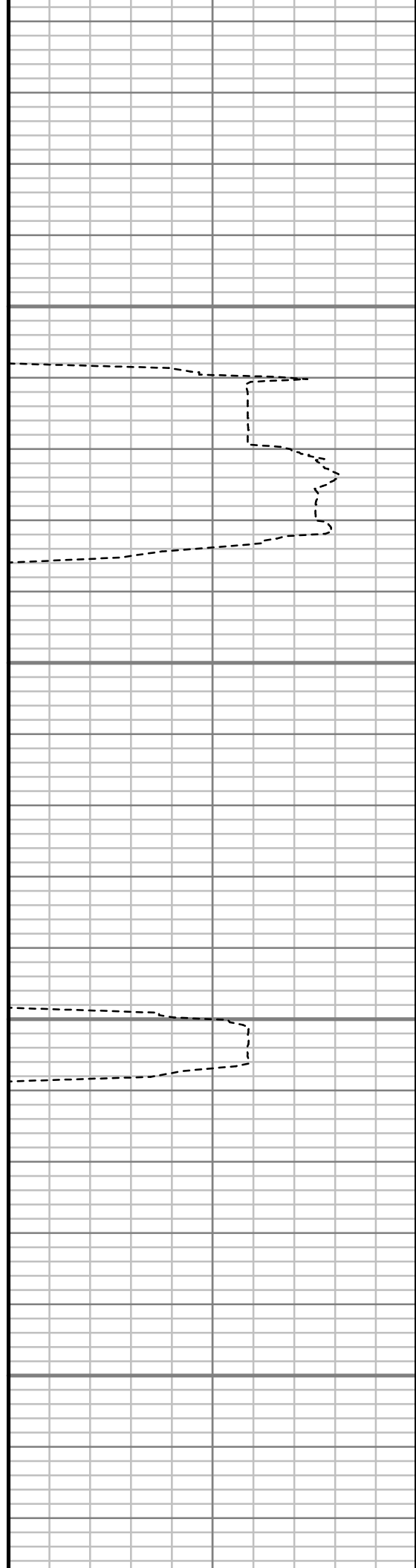
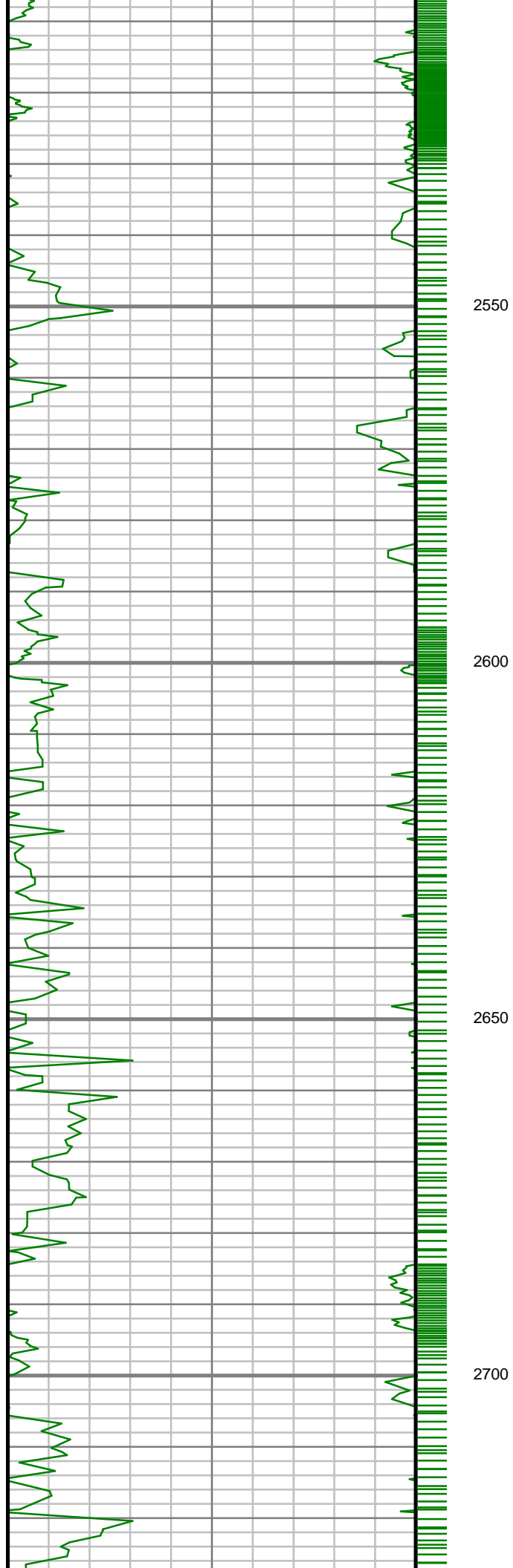


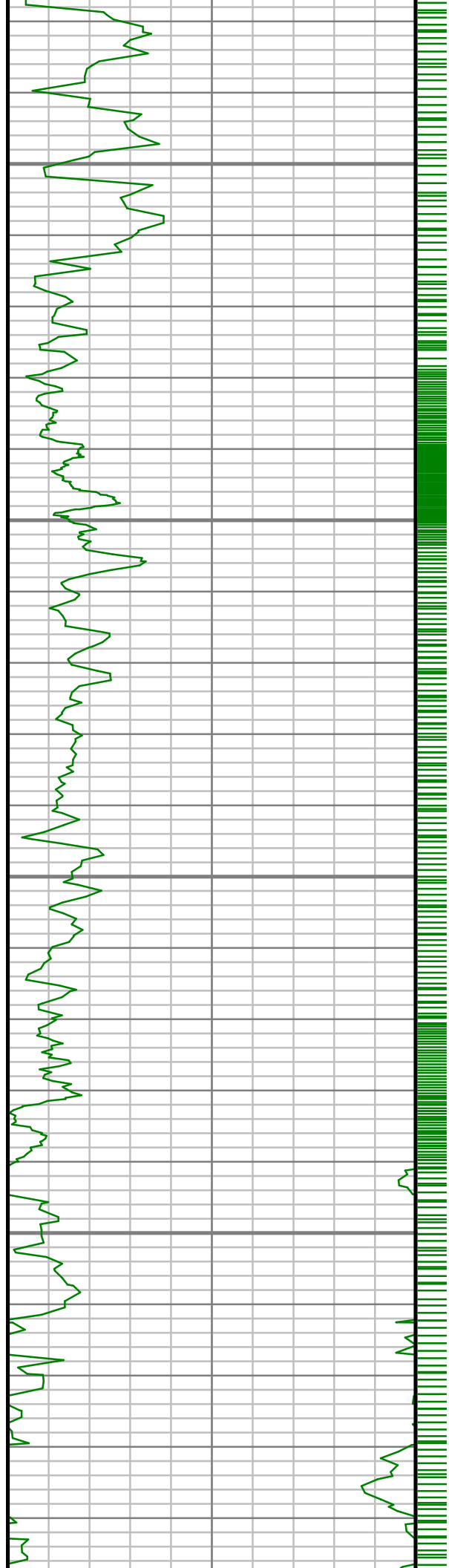










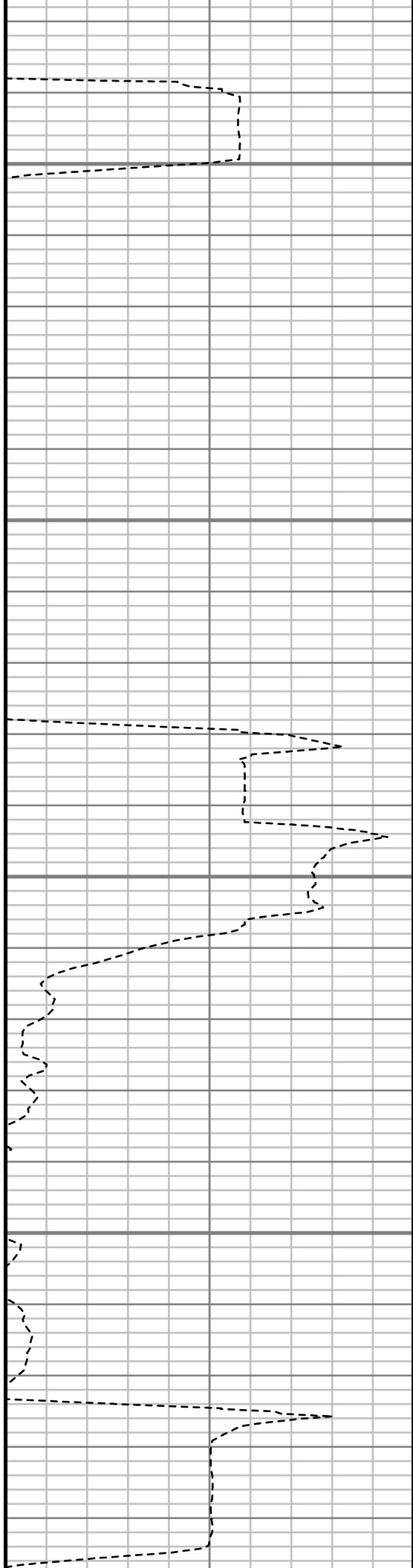


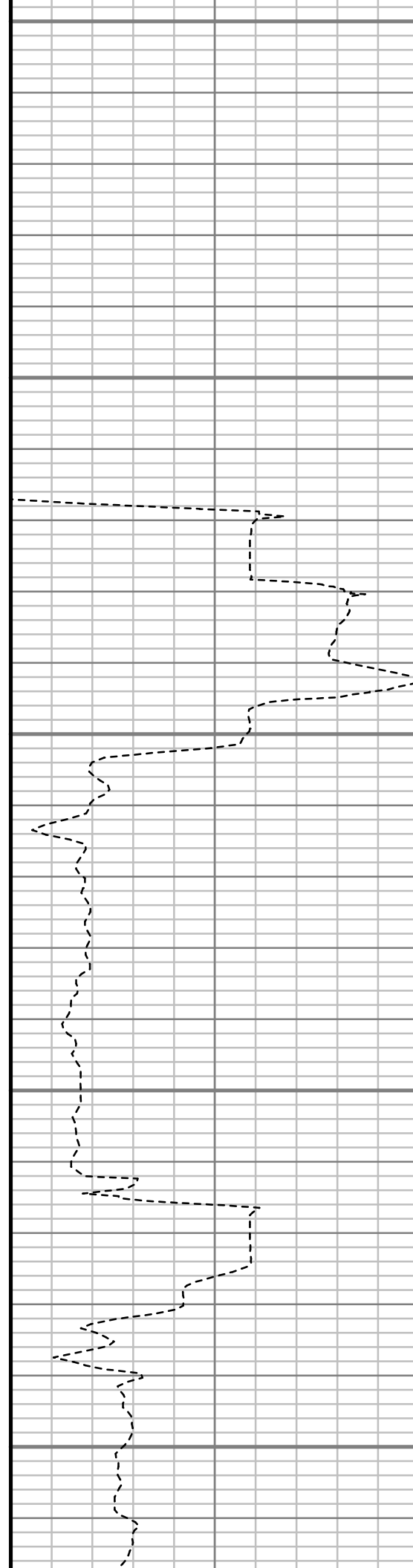
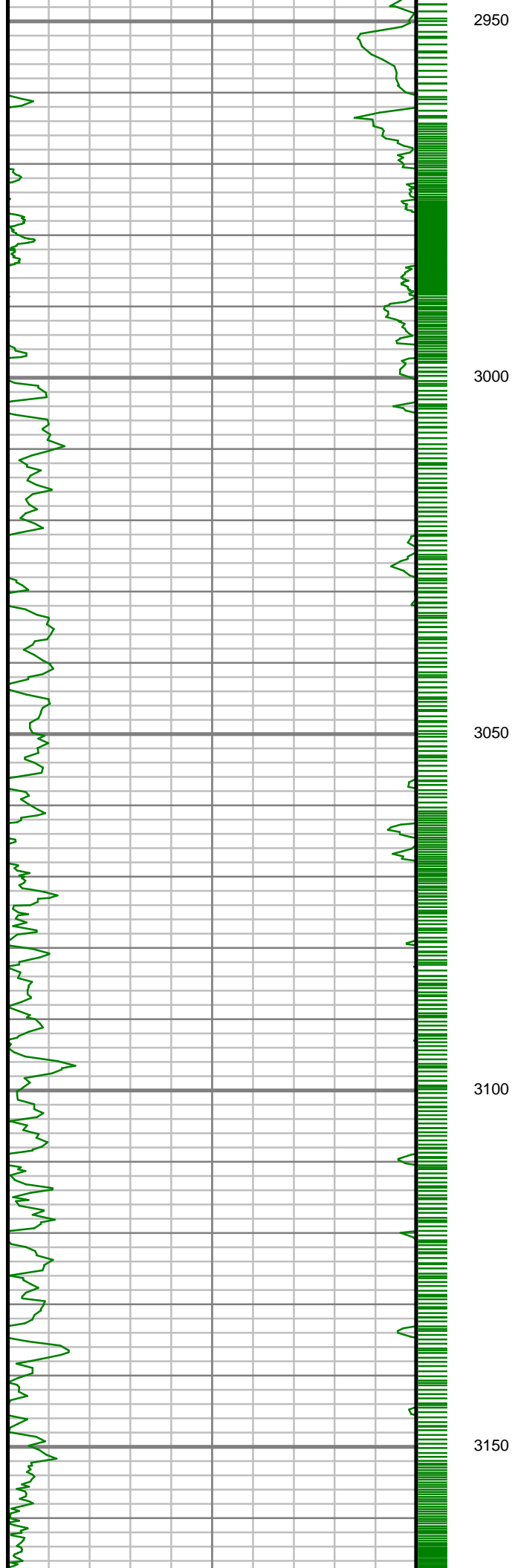
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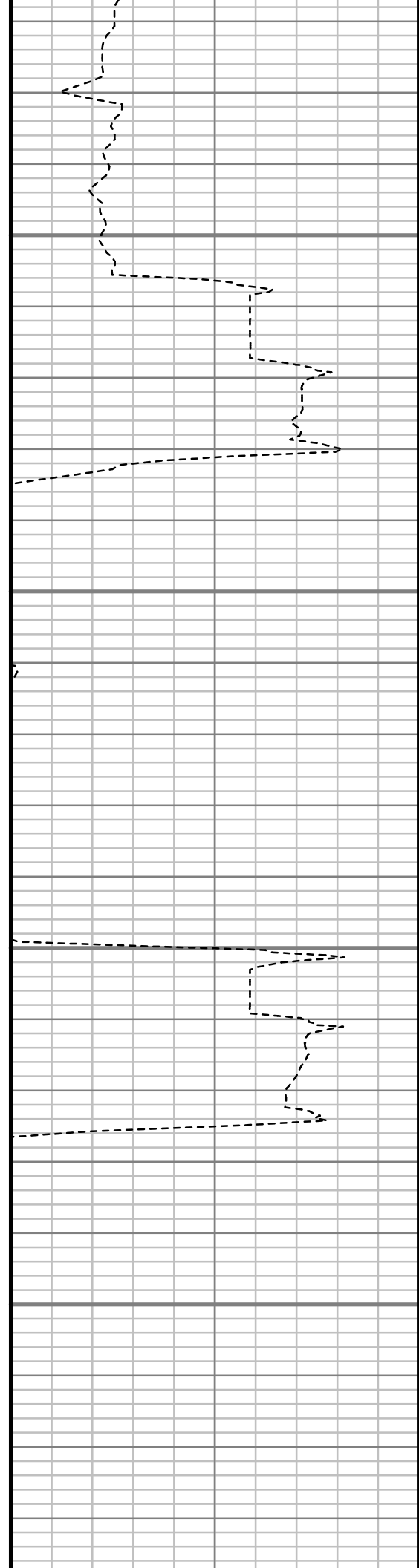
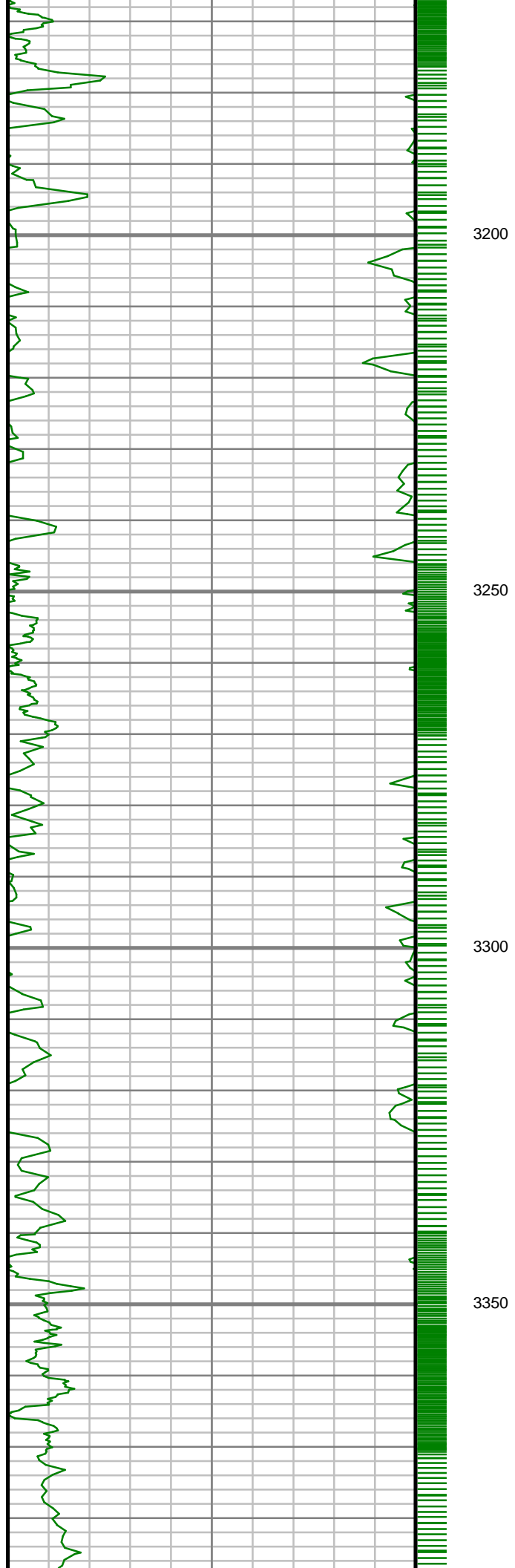
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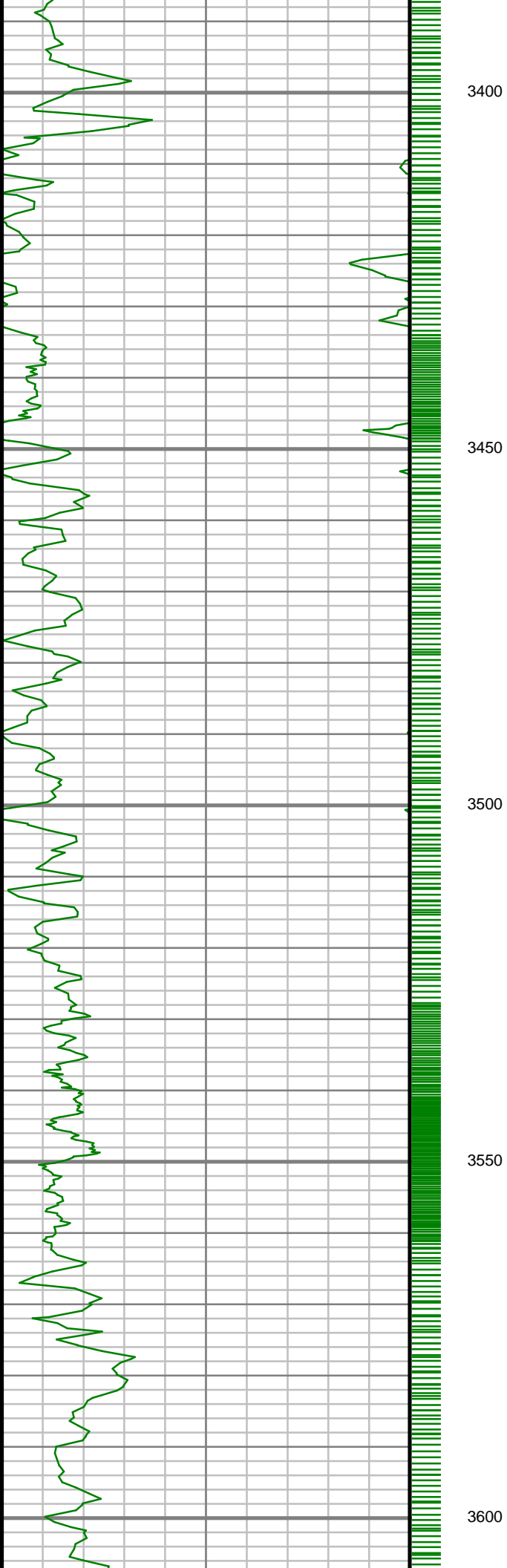
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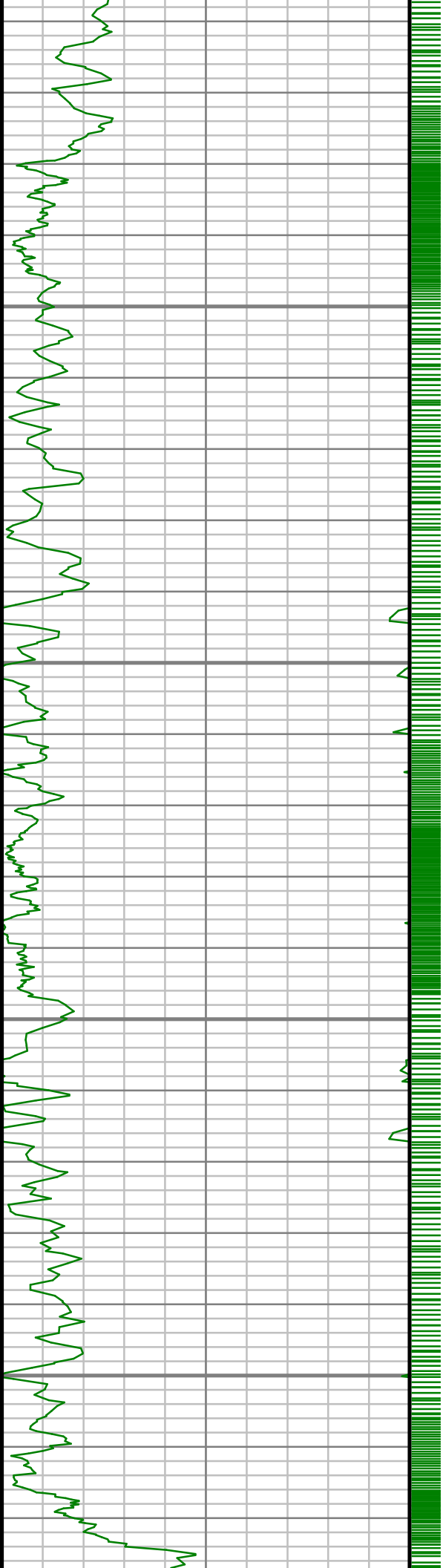
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3500

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3600



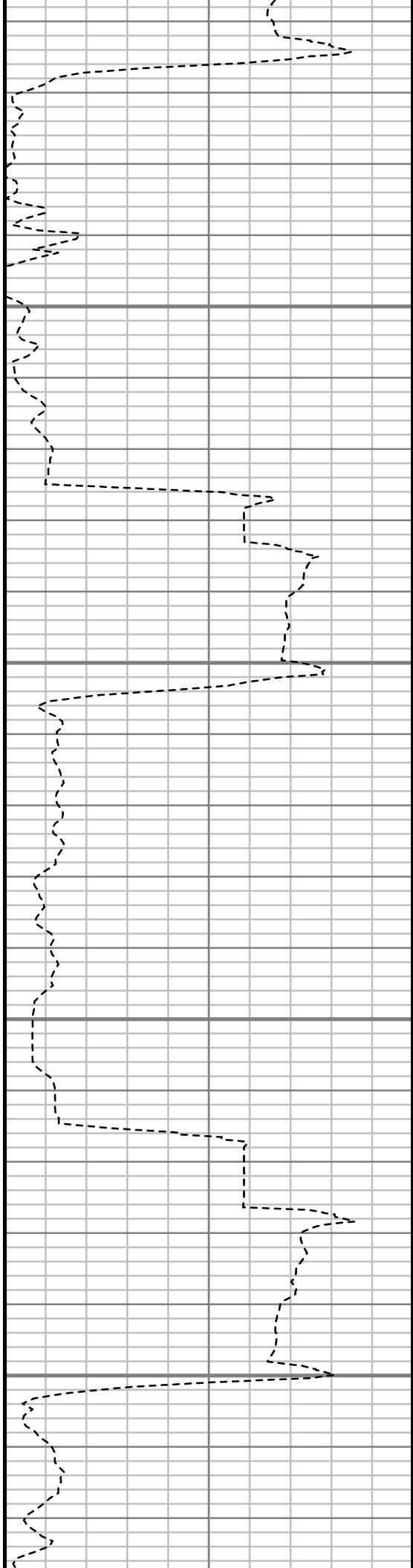


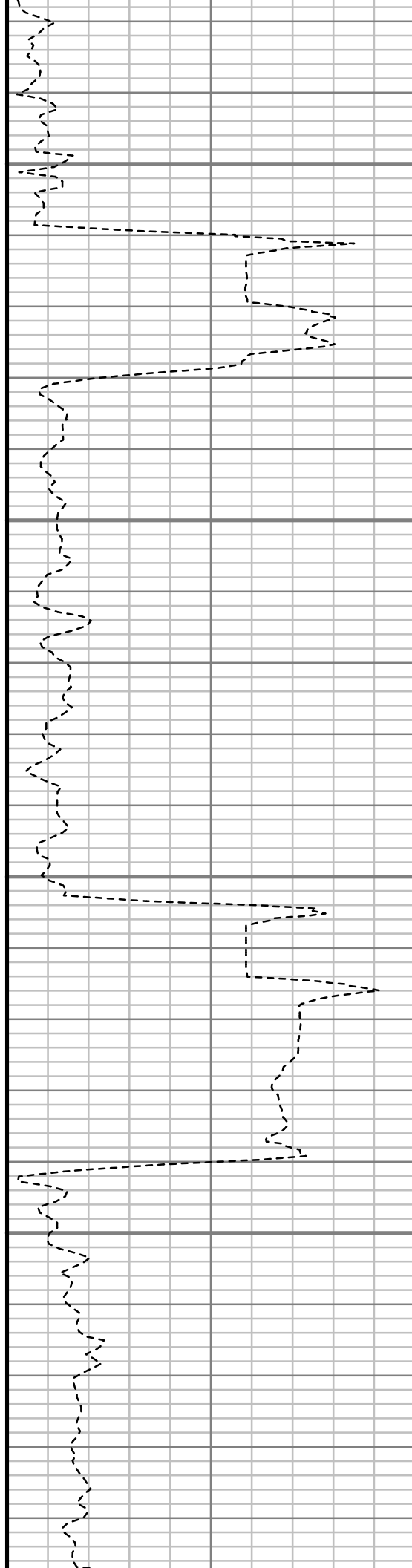
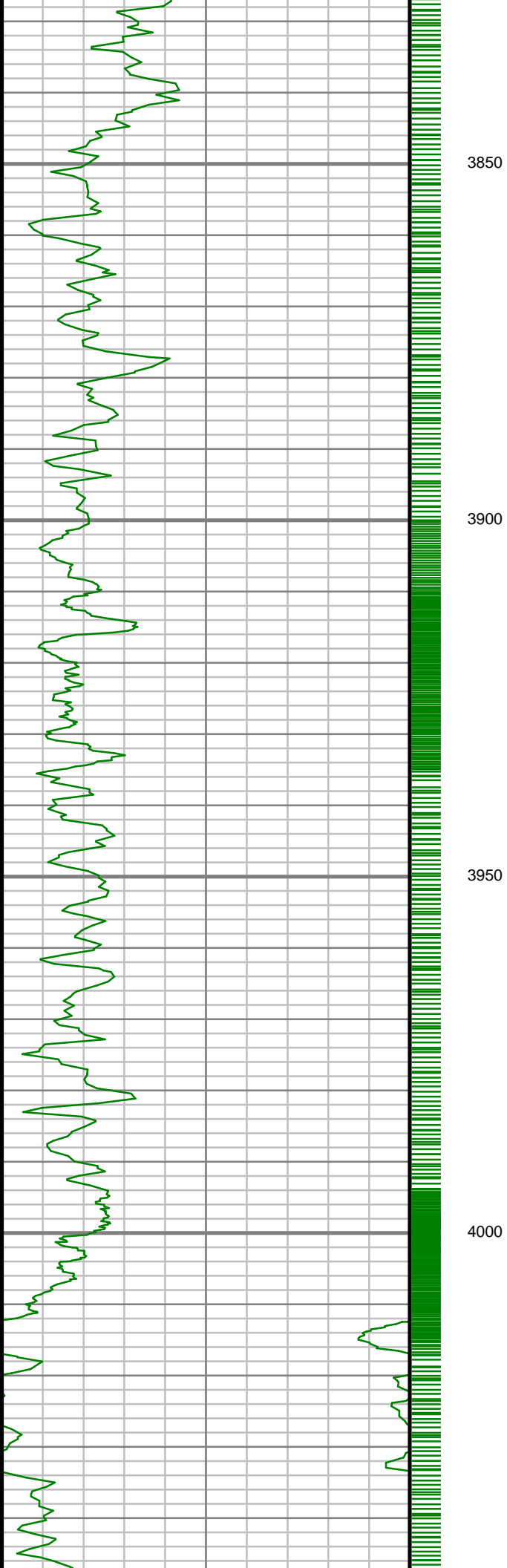
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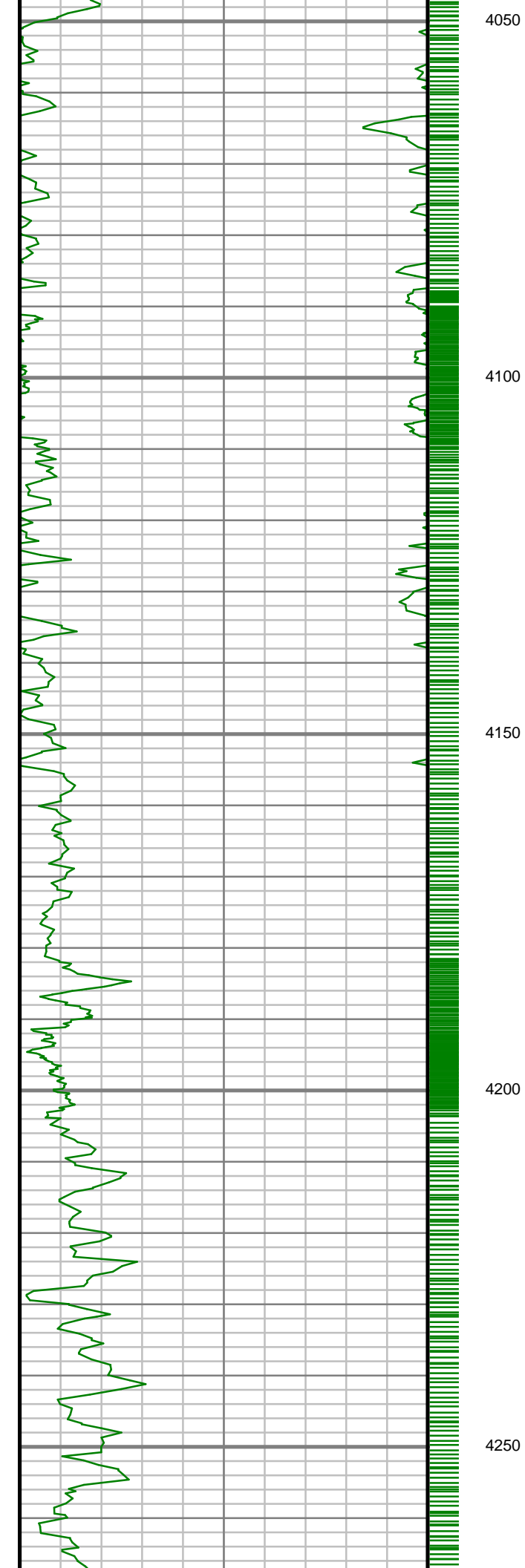
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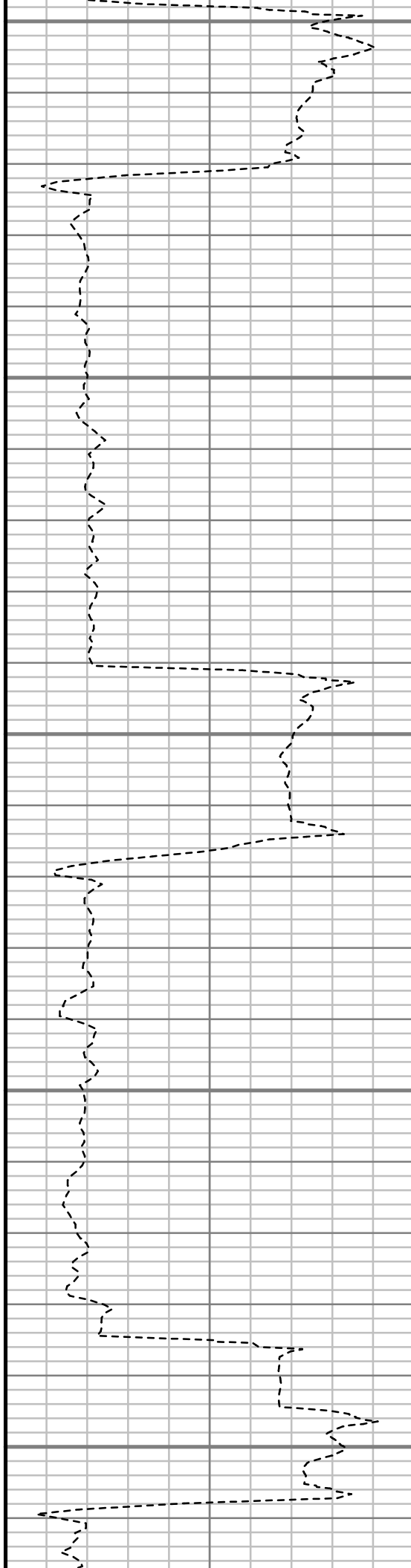
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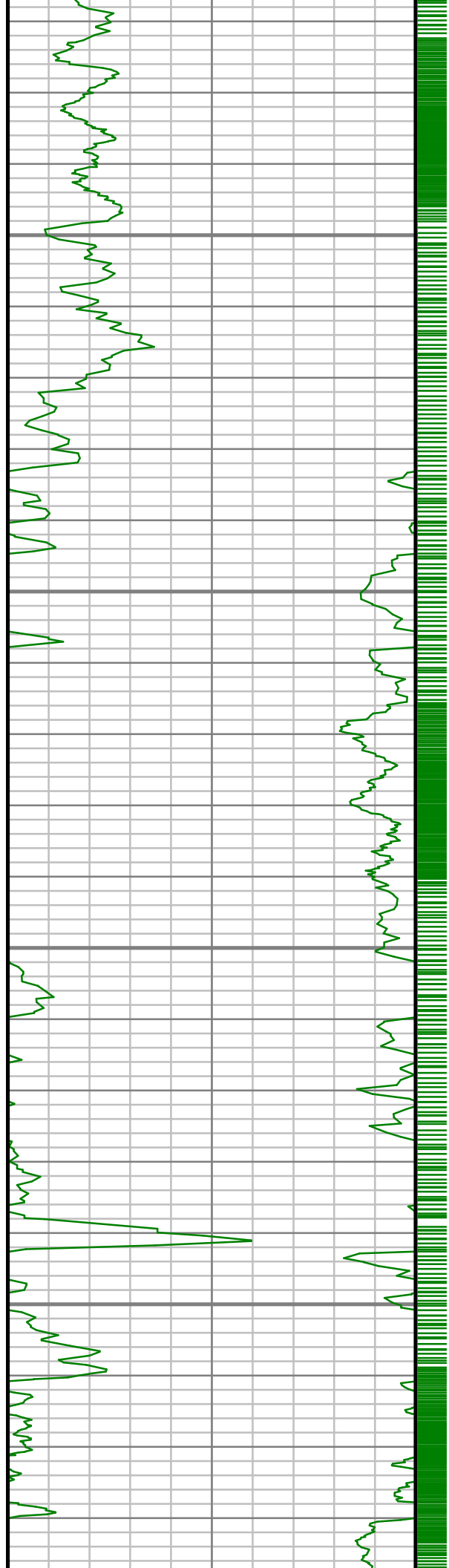
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4250



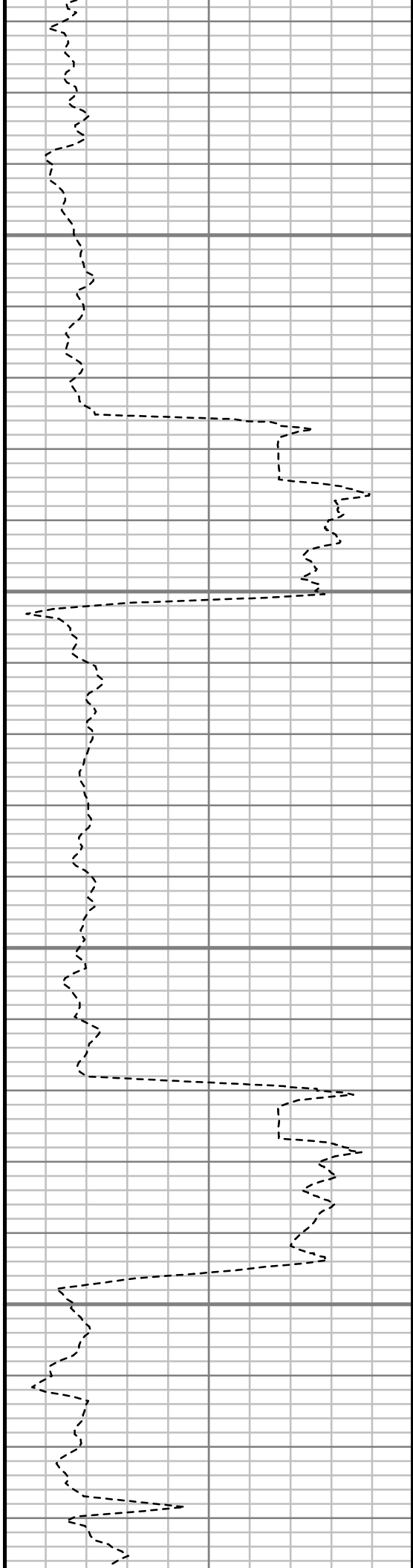


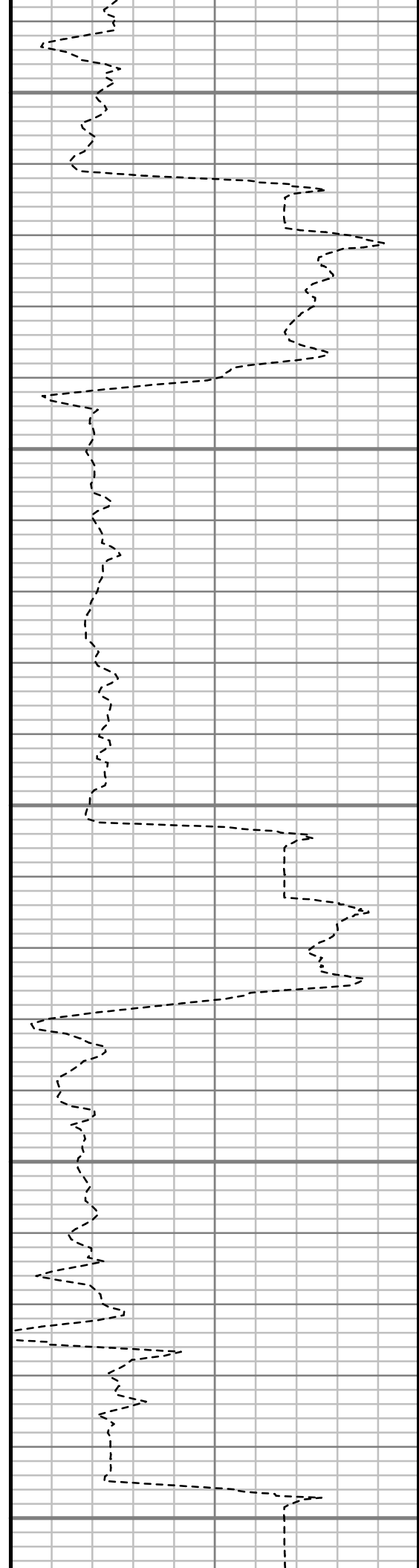
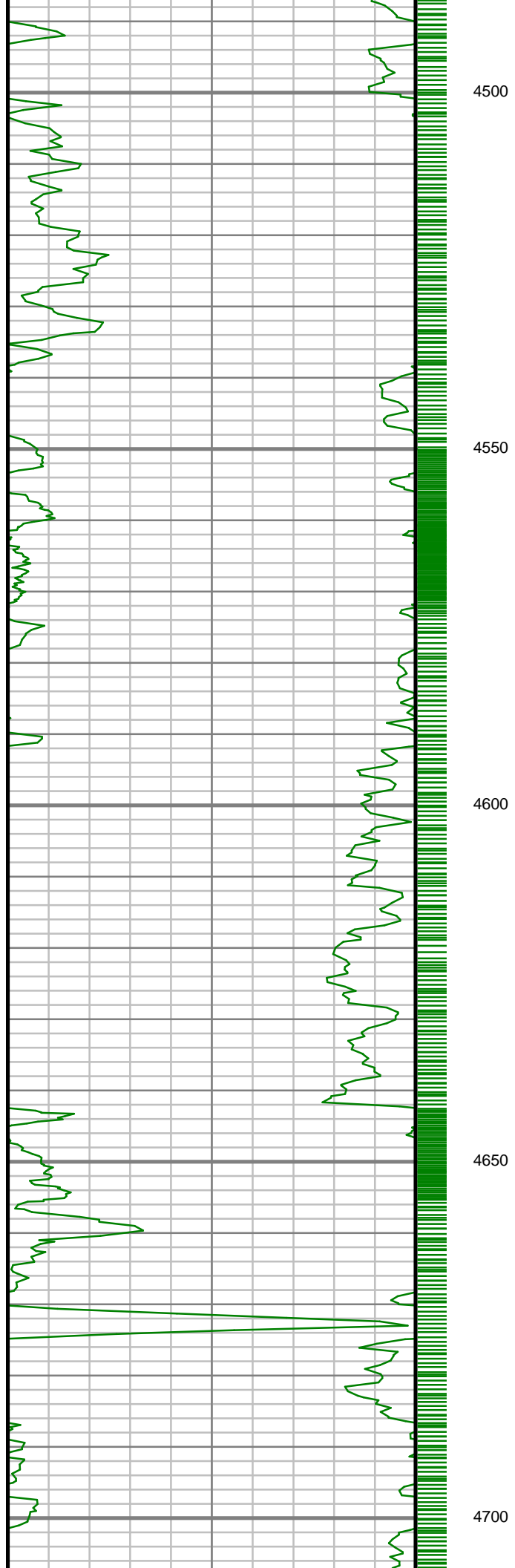
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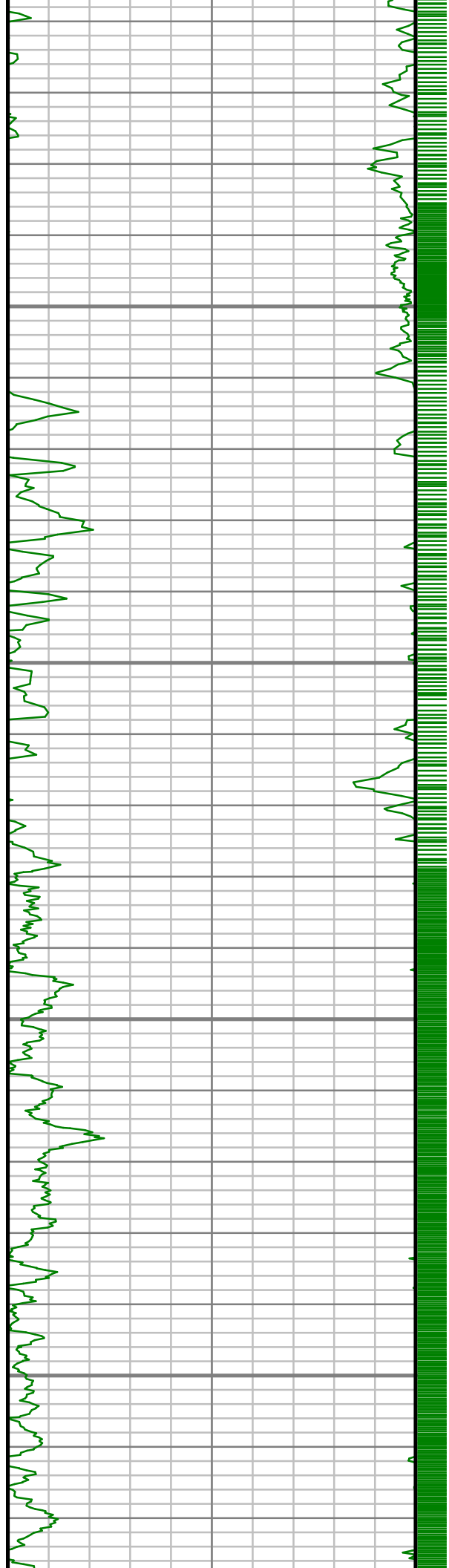
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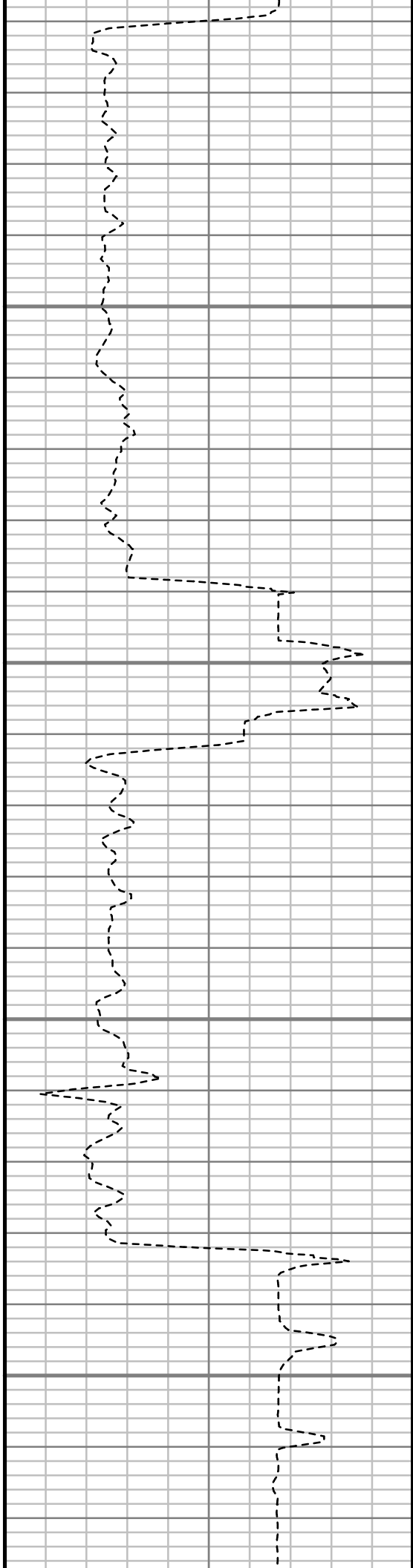


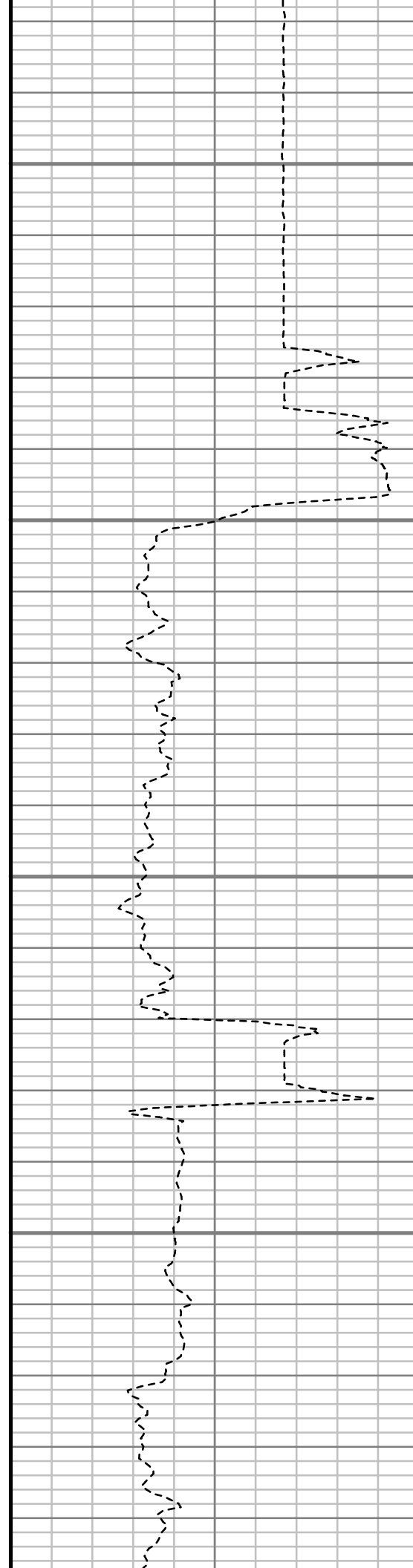
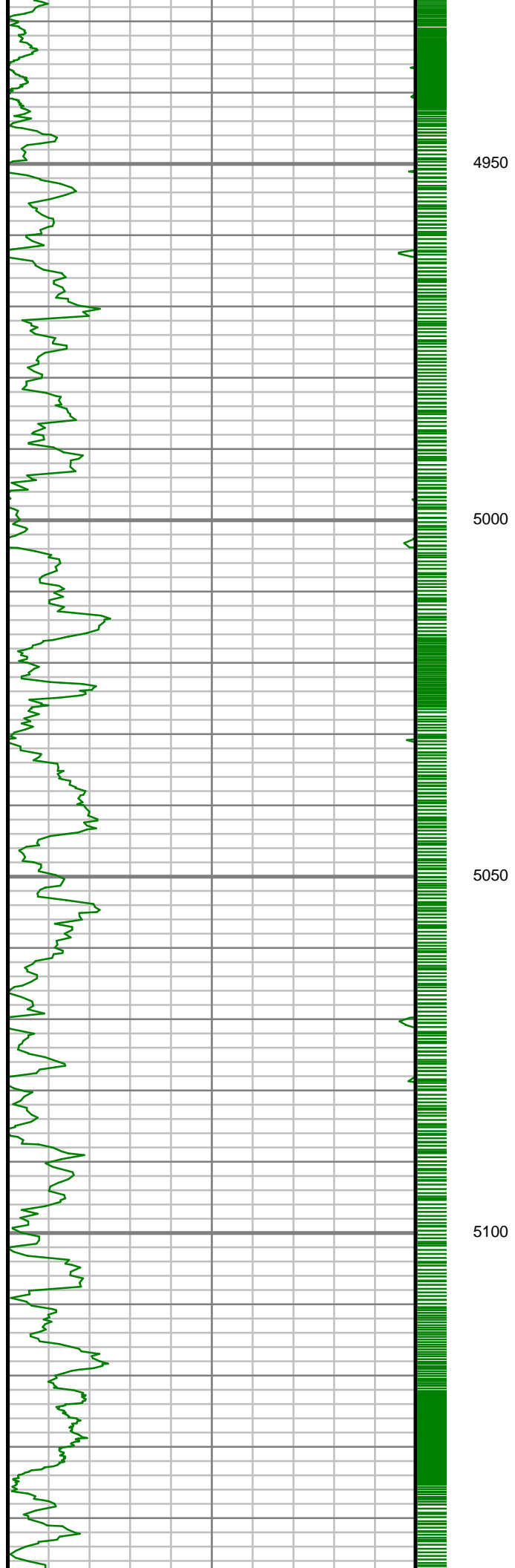
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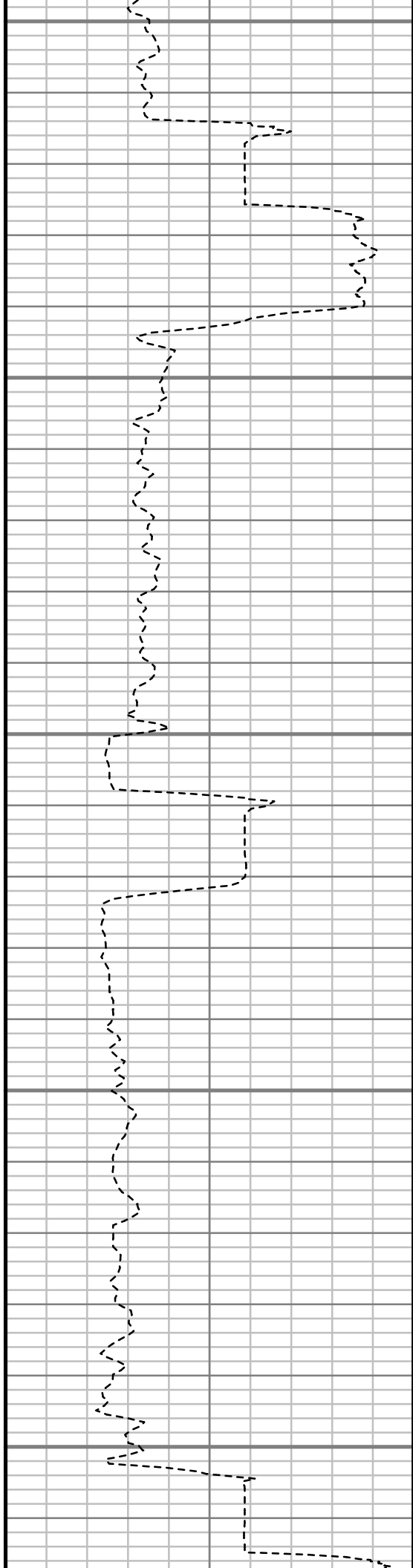
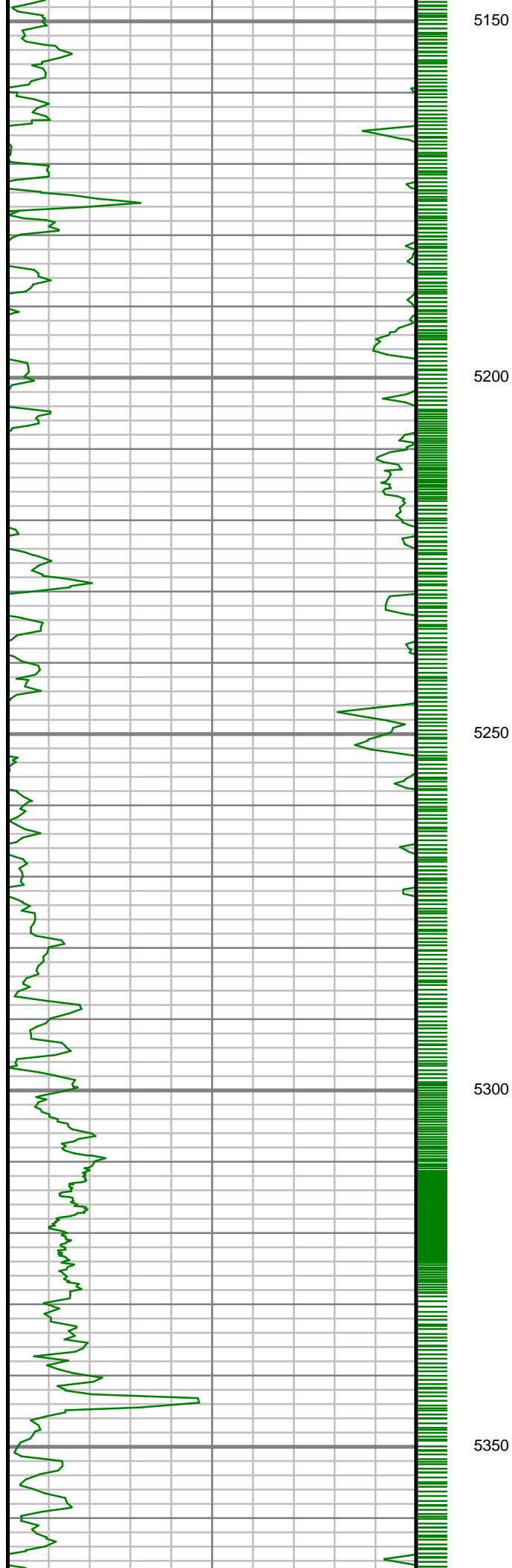
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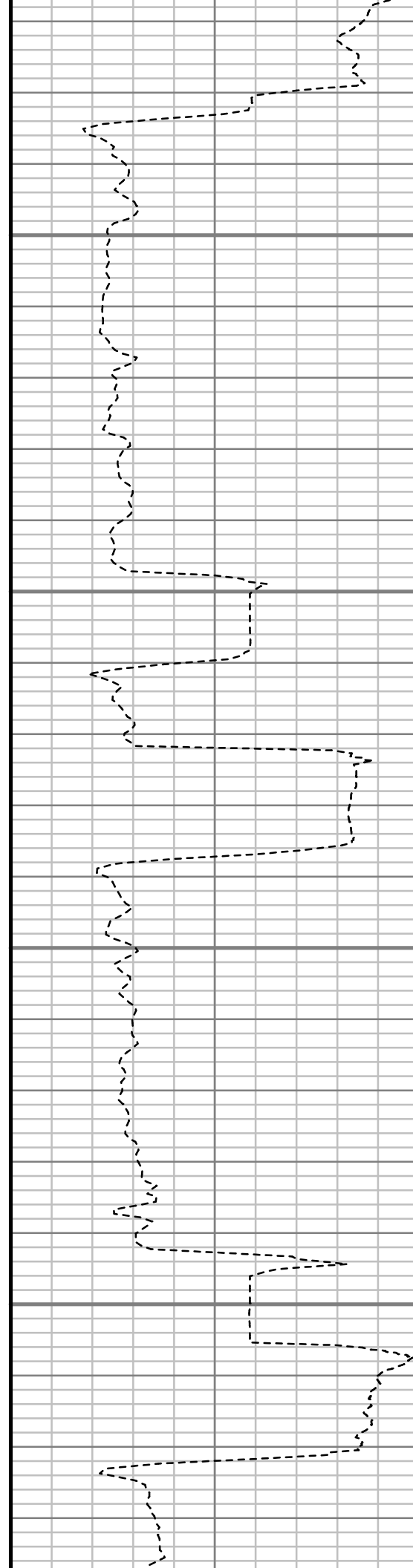
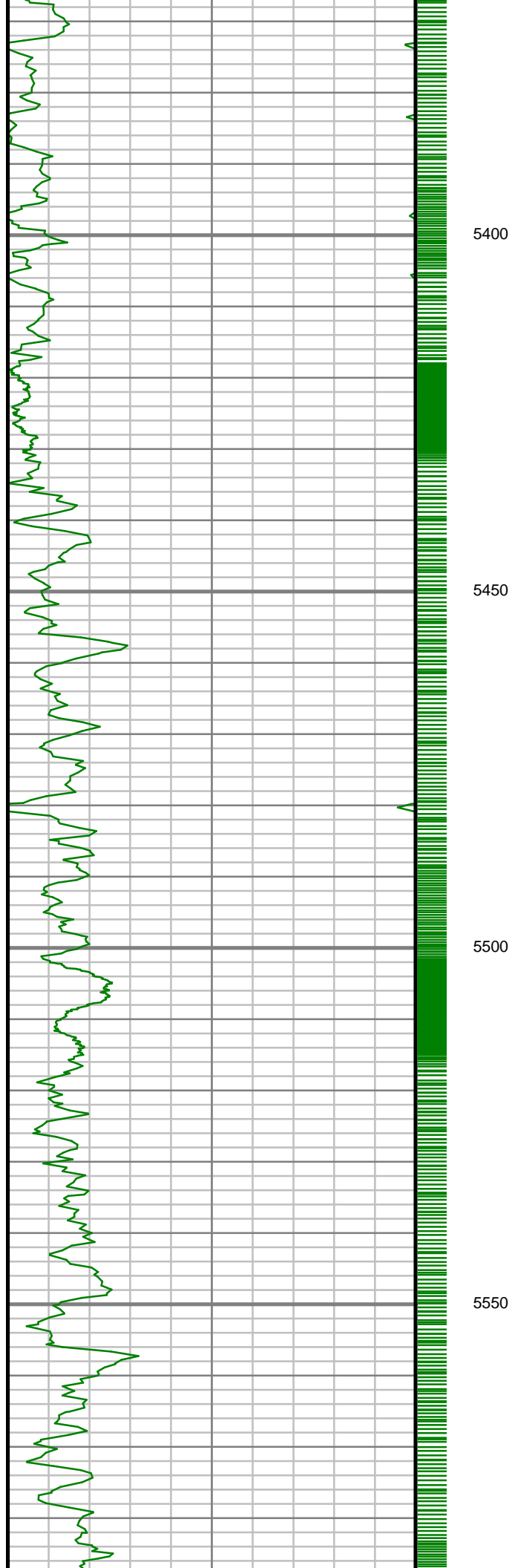
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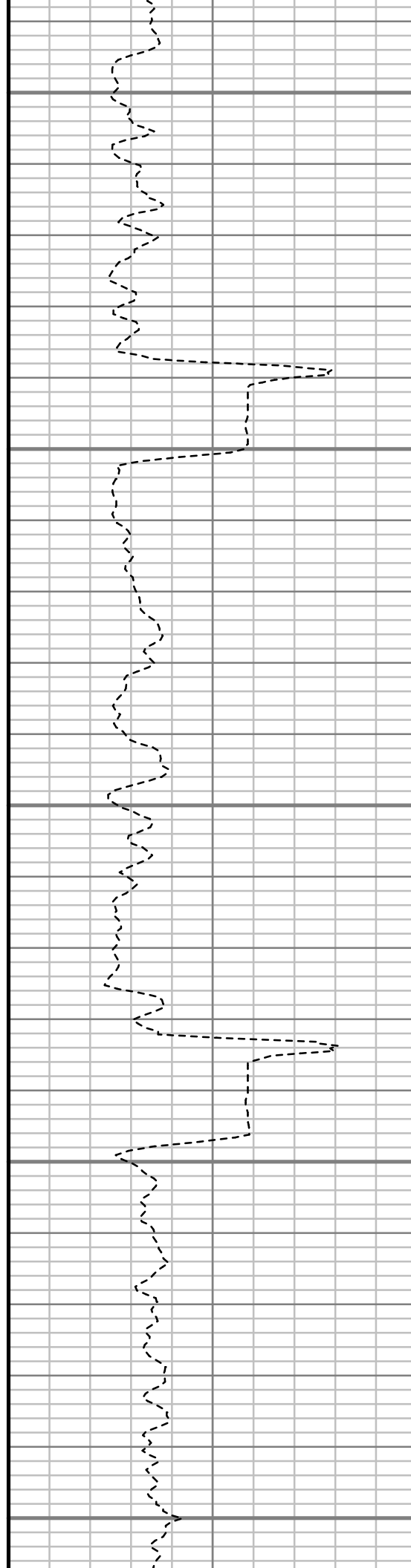
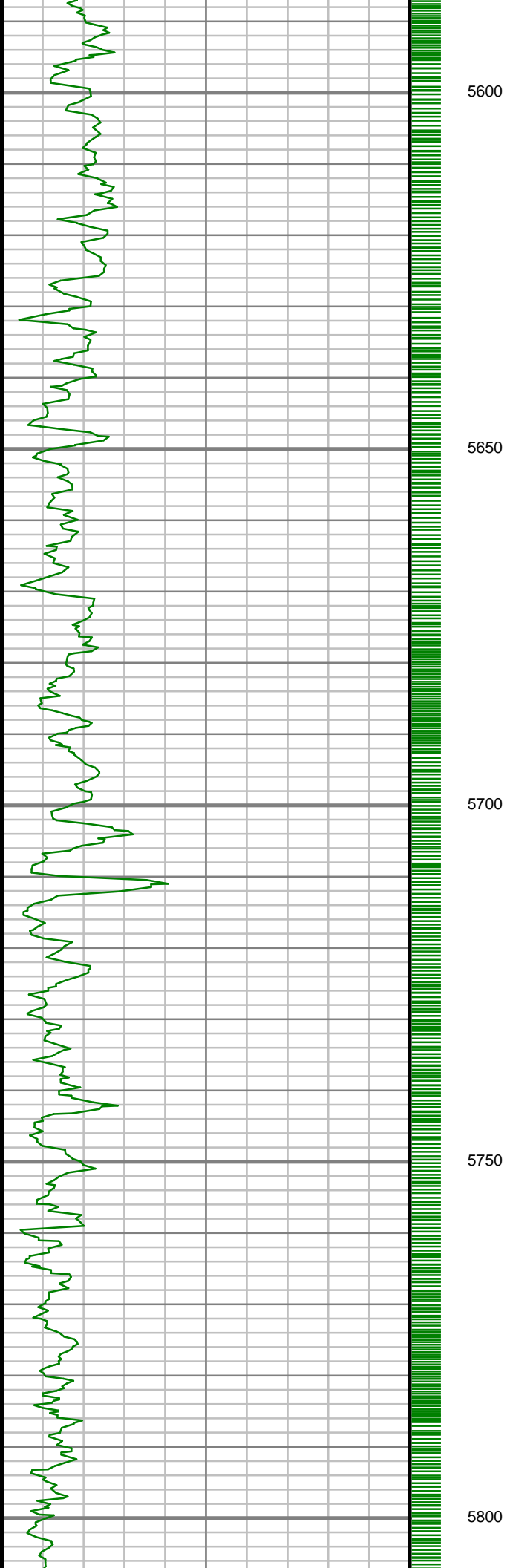
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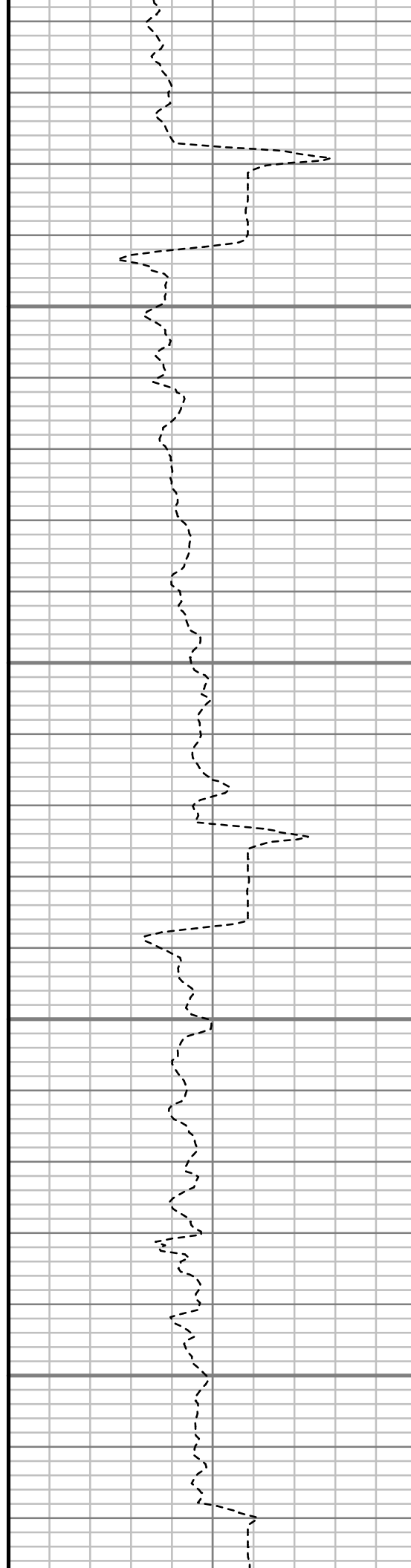
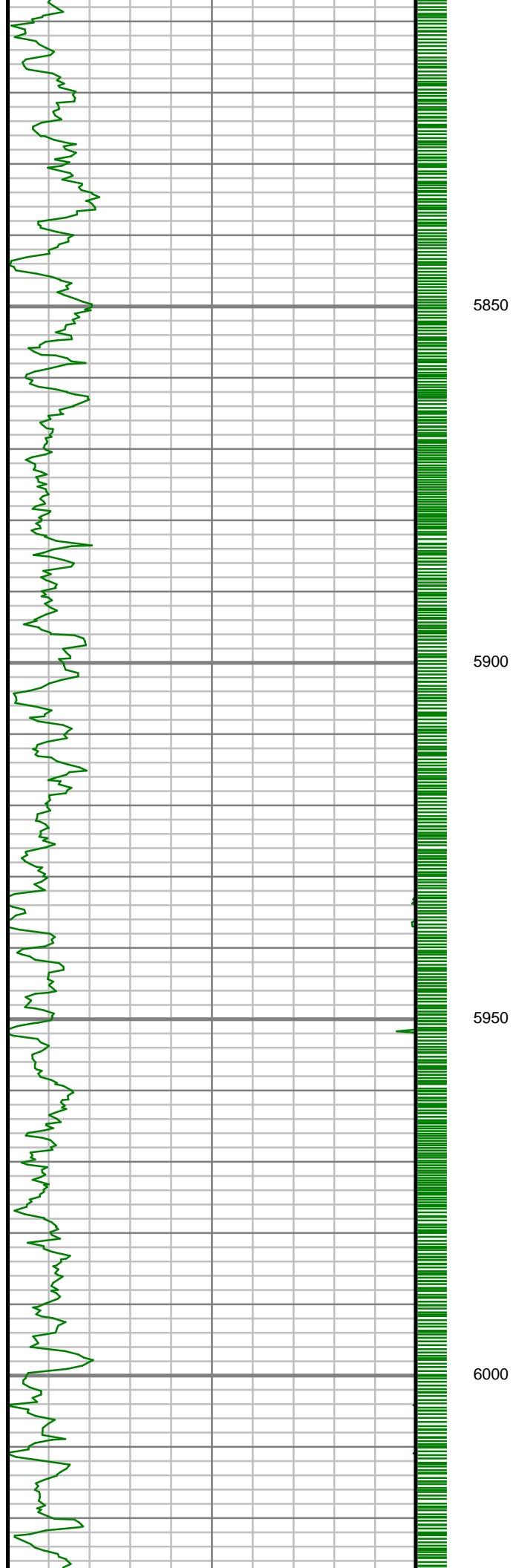


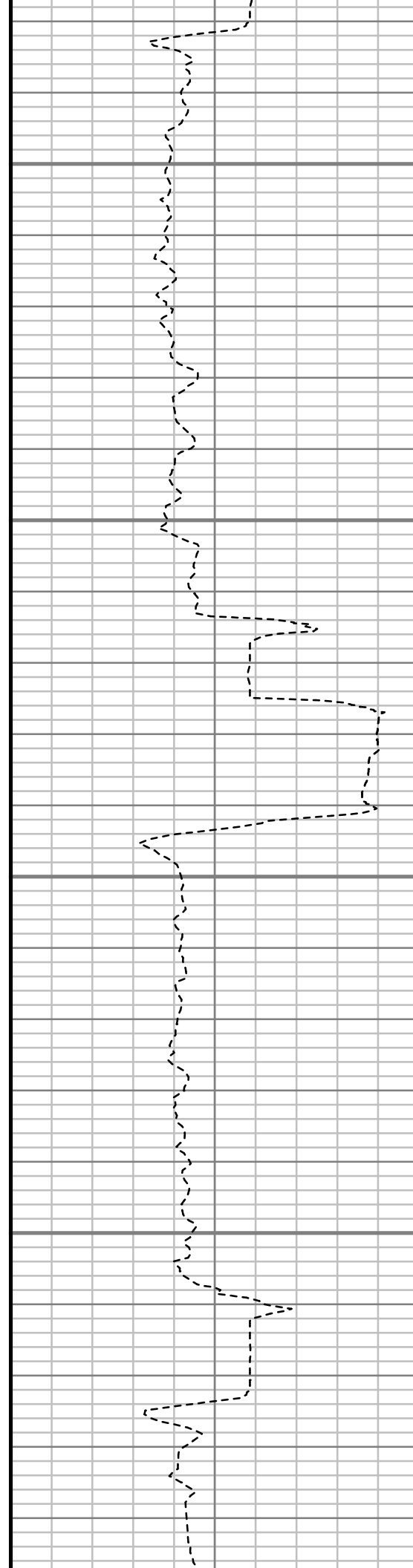
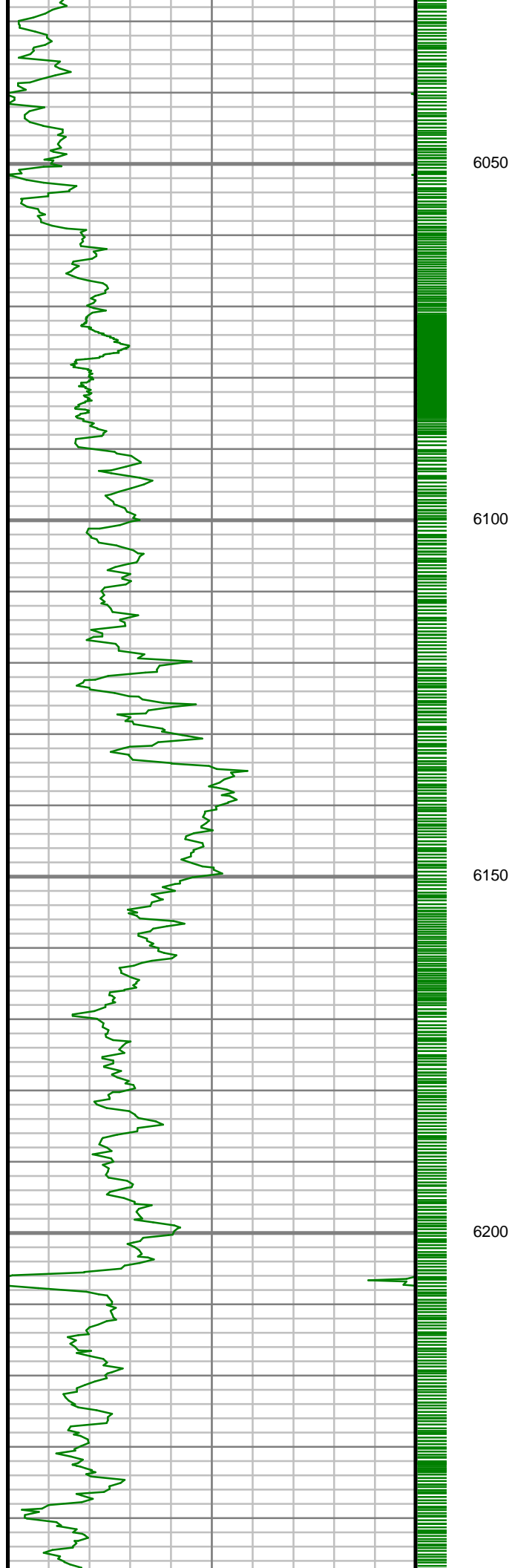


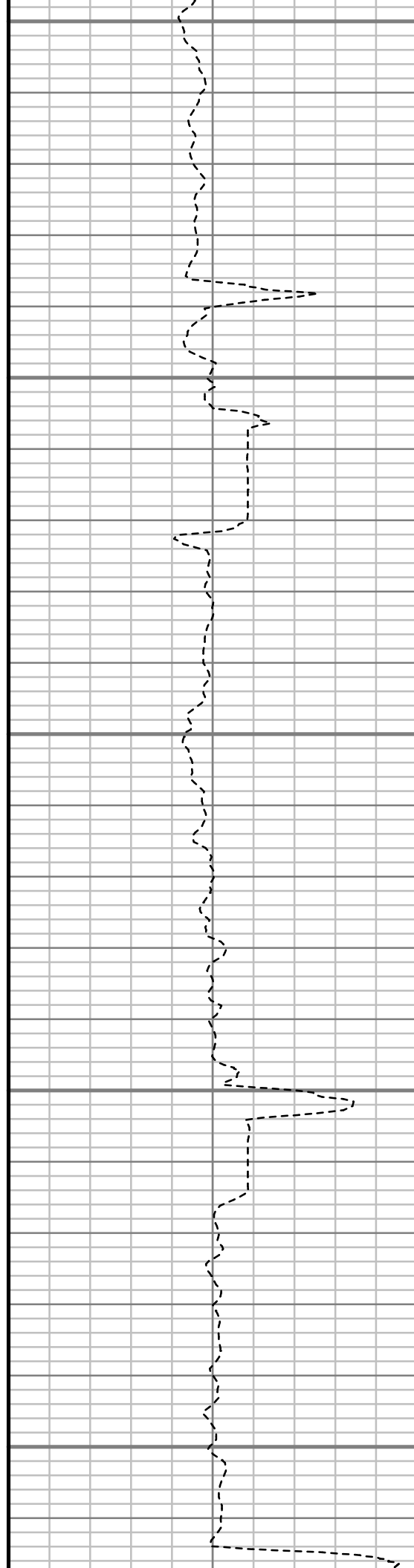
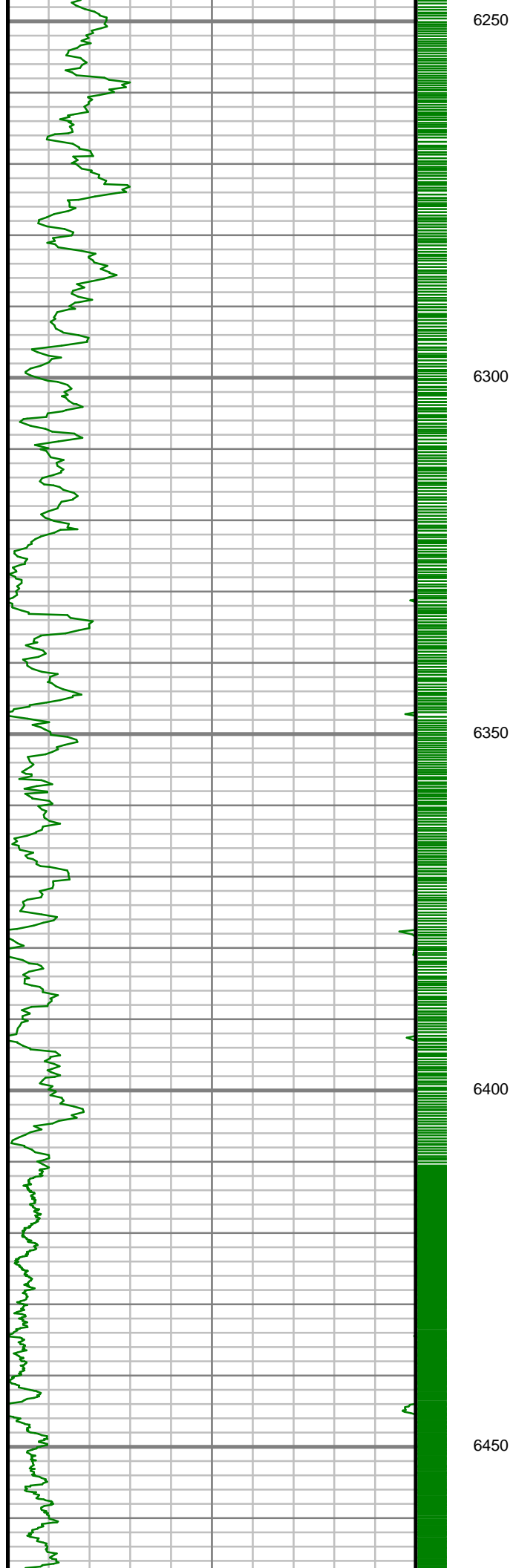


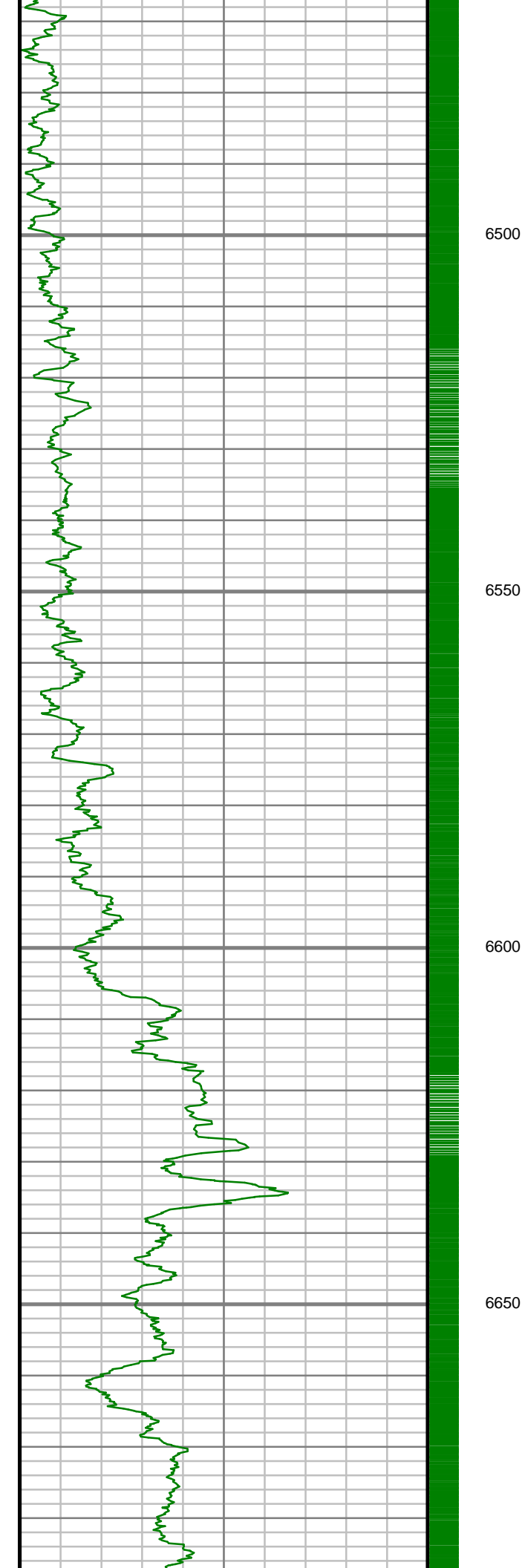










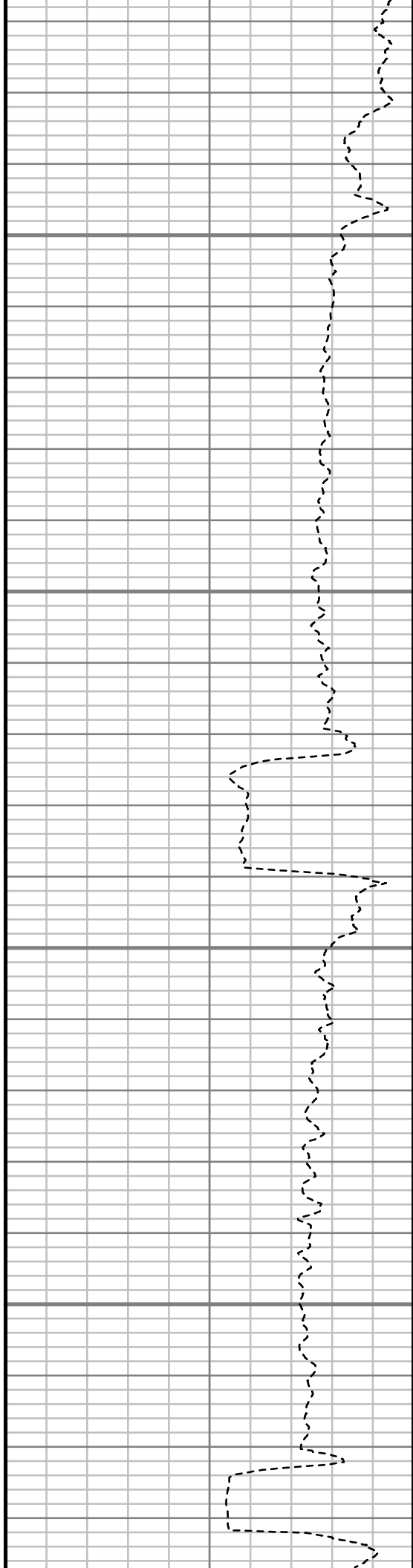


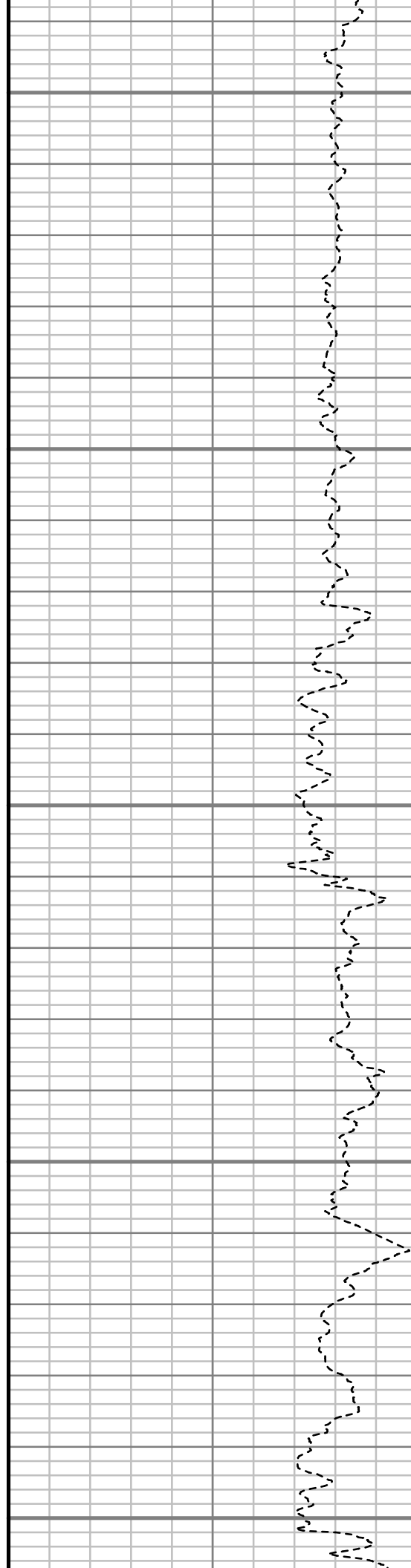
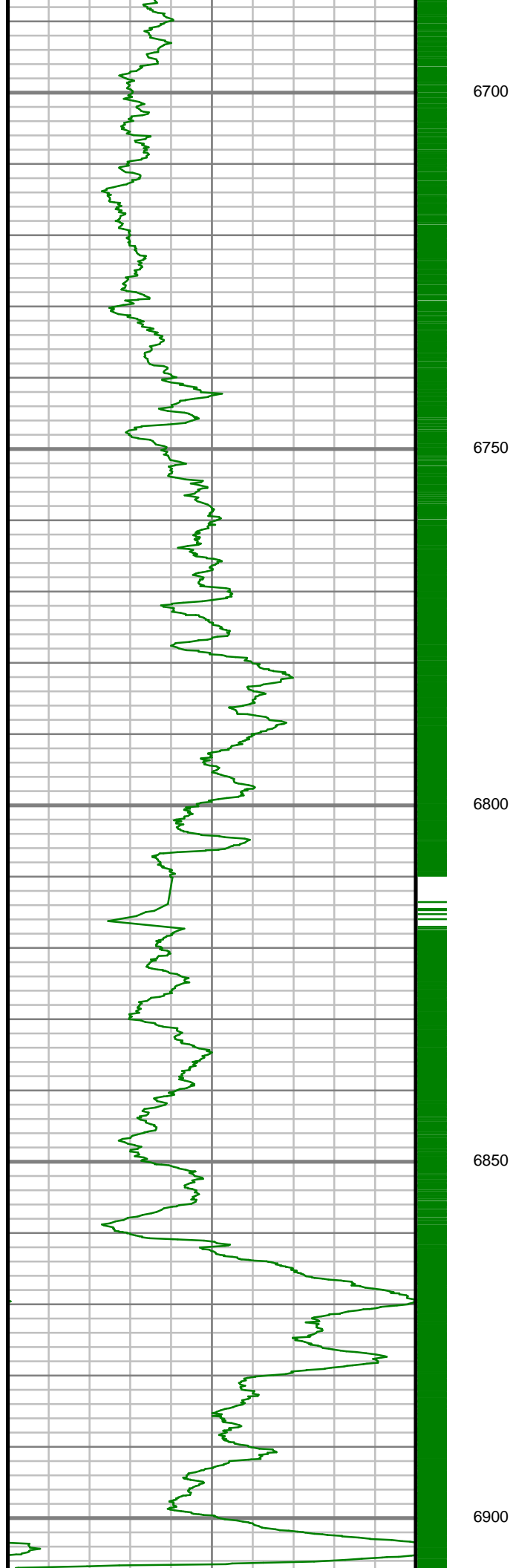
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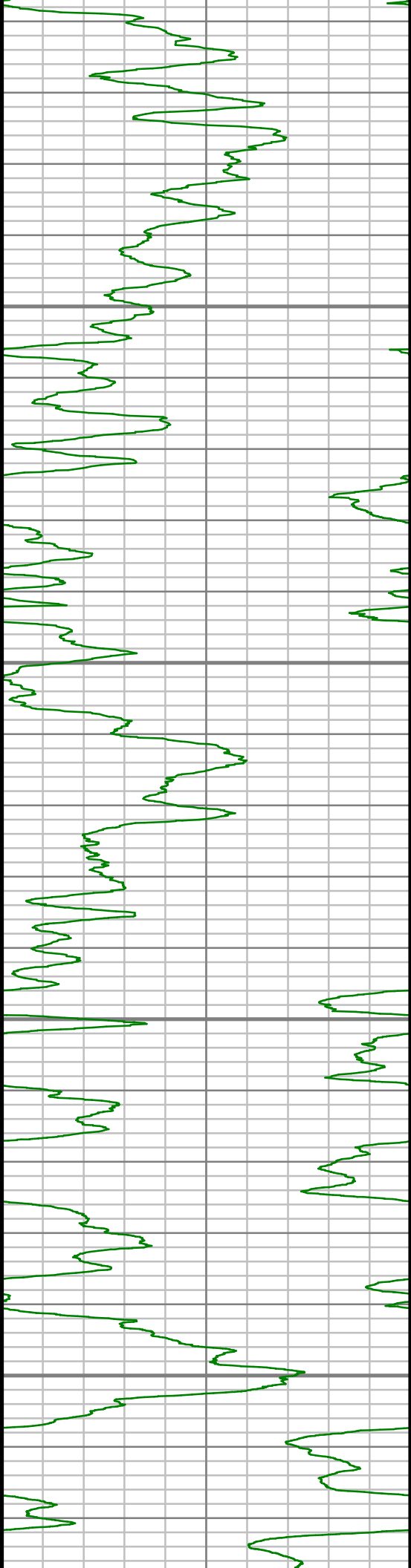
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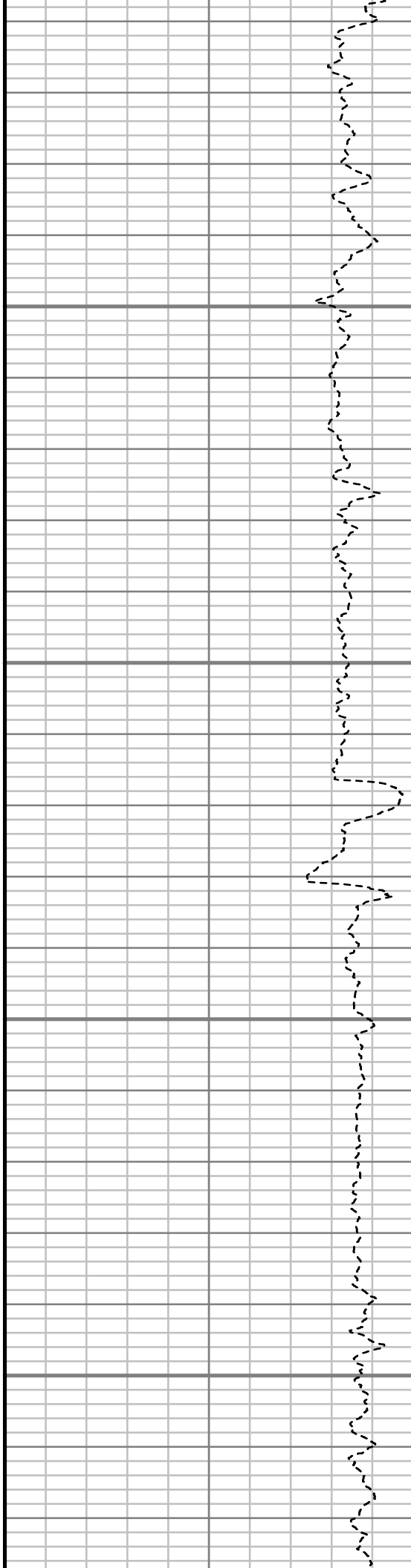


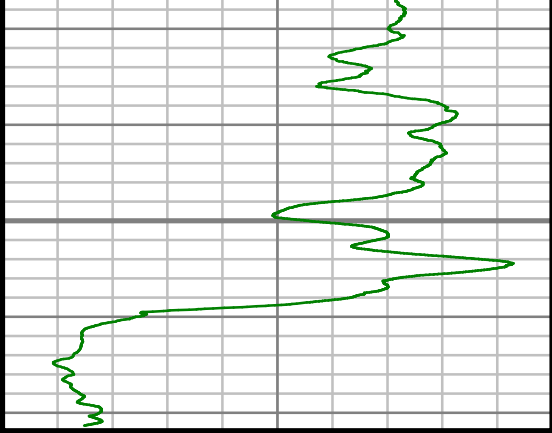
6950

7000

7050

7100





Gamma Ray (GR)		
0	Unit = aapi	150

7150

TRUE VERTICAL DEPTH
1:240 (ft)



Rate of Penetration (ROP)		
600	Unit = ft/hr	0

Comments



MWD Survey Report

Well Location	DALE PAD
Well Name	4A-20H-O264
Survey Date	8/24/2014
Latitude	40°7'3.511"N
Longitude	104°34'19.276"W
Btotal	52529 nT
Dip	66.73 deg
Magnetic Declination	8.37 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (25.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 349.83Azim (deg)
Operator(s)	C. WILSON, S. WAXLER, T. LE

Well Notes

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	"/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
153.00	0.97	267.71	152.99	0.18	-0.05	-1.29	1.29	267.71	0.63
232.00	2.29	261.74	231.96	0.32	-0.30	-3.52	3.53	265.05	1.68
323.00	2.46	263.06	322.88	0.49	-0.80	-7.26	7.30	263.69	0.20
415.00	3.70	259.01	414.75	0.56	-1.61	-12.13	12.24	262.46	1.36
507.00	5.54	246.97	506.45	-0.47	-3.91	-19.13	19.52	258.45	2.26
598.00	7.30	249.52	596.87	-2.48	-7.65	-28.59	29.60	255.02	1.96
690.00	9.06	249.43	687.93	-4.84	-12.24	-40.85	42.65	253.32	1.91
781.00	9.77	249.70	777.71	-7.49	-17.44	-54.80	57.51	252.35	0.77
873.00	9.68	248.03	868.38	-10.44	-23.04	-69.29	73.02	251.61	0.32
964.00	9.68	248.91	958.09	-13.46	-28.65	-83.52	88.30	251.06	0.16
1050.00	9.41	248.29	1042.90	-16.23	-33.86	-96.80	102.55	250.72	0.33
1153.00	8.57	248.32	1144.63	-19.45	-39.81	-111.76	118.63	250.39	0.82
1337.00	10.57	249.49	1326.06	-25.21	-50.79	-140.30	149.21	250.10	1.09
1520.00	10.07	250.89	1506.10	-30.71	-61.90	-171.13	181.99	250.11	0.31
1703.00	9.88	249.66	1686.34	-35.97	-72.59	-200.97	213.67	250.14	0.16
1886.00	9.48	246.63	1866.73	-42.18	-84.03	-229.52	244.42	249.89	0.35
2069.00	10.77	255.94	2046.89	-46.79	-94.16	-259.94	276.47	250.09	1.13
2251.00	10.21	251.10	2225.85	-50.39	-103.52	-291.70	309.52	250.46	0.57

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
2434.00	9.28	250.43	2406.21	-55.26	-113.72	-320.95	340.50	250.49	0.51
2618.00	11.34	251.27	2587.23	-60.38	-124.50	-352.06	373.43	250.53	1.12
2801.00	9.35	252.24	2767.25	-65.02	-134.81	-383.26	406.28	250.62	1.09
2991.00	9.34	250.39	2954.73	-69.58	-144.69	-412.48	437.12	250.67	0.16
3180.00	9.34	253.06	3141.22	-73.90	-154.30	-441.60	467.78	250.74	0.23
3370.00	9.48	250.15	3328.67	-78.35	-164.11	-471.06	498.83	250.79	0.26
3559.00	8.82	251.08	3515.26	-83.17	-174.09	-499.41	528.89	250.78	0.36
3749.00	9.46	248.12	3702.85	-88.56	-184.63	-527.67	559.04	250.72	0.42
3939.00	7.94	243.67	3890.66	-95.38	-196.27	-553.92	587.66	250.49	0.87
4128.00	10.09	247.77	4077.32	-102.47	-208.32	-580.94	617.16	250.27	1.19
4316.00	11.93	250.93	4261.85	-108.92	-220.90	-614.55	653.05	250.23	1.03
4506.00	12.07	244.64	4447.71	-117.16	-235.82	-651.06	692.45	250.09	0.69
4697.00	13.34	247.25	4634.03	-127.19	-252.90	-689.43	734.35	249.86	0.73
4887.00	10.87	246.21	4819.79	-136.19	-268.61	-726.04	774.14	249.70	1.31
5077.00	8.96	251.23	5006.95	-142.62	-280.60	-756.46	806.82	249.65	1.10
5268.00	7.89	258.41	5195.89	-145.17	-288.02	-783.38	834.65	249.81	0.79
5458.00	5.65	243.84	5384.56	-148.08	-294.77	-804.55	856.85	249.88	1.47
5648.00	1.15	219.77	5574.19	-151.88	-300.36	-814.17	867.81	249.75	2.44

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
5839.00	0.48	288.28	5765.17	-152.73	-301.57	-816.16	870.09	249.72	0.56
6029.00	0.87	358.71	5955.16	-150.92	-299.88	-816.95	870.25	249.84	0.44
6220.00	1.08	118.26	6146.14	-150.61	-299.28	-815.39	868.58	249.84	0.89
6411.00	0.20	64.06	6337.13	-151.64	-299.99	-813.51	867.06	249.76	0.51
6506.00	0.34	13.74	6432.13	-151.34	-299.65	-813.30	866.74	249.77	0.27
6601.00	4.86	354.73	6527.01	-147.08	-295.37	-813.60	865.56	250.05	4.78
6697.00	9.86	356.10	6622.19	-134.85	-283.12	-814.53	862.33	250.83	5.21
6792.00	16.45	355.57	6714.65	-113.36	-261.58	-816.12	857.02	252.23	6.93
6887.00	23.63	357.68	6803.84	-81.08	-229.10	-817.94	849.42	254.35	7.60
6982.00	29.76	359.87	6888.67	-38.96	-186.46	-818.76	839.73	257.17	6.53
7077.00	33.91	1.56	6969.37	10.22	-136.37	-818.10	829.38	260.54	4.47
7172.00	41.30	2.67	7044.58	66.81	-78.49	-815.91	819.68	264.50	7.81
7267.00	53.46	1.08	7108.80	135.06	-8.76	-813.72	813.77	269.38	12.86
7362.00	72.57	358.69	7151.71	218.04	75.50	-814.04	817.54	275.30	20.25
7455.00	86.37	1.73	7168.67	307.74	166.70	-813.65	830.55	281.58	15.17
7547.00	90.40	1.89	7171.26	397.68	258.59	-810.74	850.98	287.69	4.39
7638.00	90.94	1.13	7170.20	486.79	349.56	-808.34	880.68	293.39	1.02
7729.00	92.32	0.78	7167.61	576.04	440.50	-806.83	919.24	298.63	1.57

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
7825.00	90.94	0.01	7164.88	670.37	536.46	-806.16	968.34	303.64	1.64
7920.00	92.82	359.64	7161.76	763.88	631.40	-806.45	1024.22	308.06	2.01
8015.00	93.74	0.10	7156.33	857.27	726.25	-806.66	1085.42	312.00	1.08
8110.00	93.76	359.10	7150.12	950.69	821.04	-807.32	1151.46	315.48	1.06
8205.00	94.57	358.56	7143.22	1044.27	915.77	-809.25	1222.09	318.53	1.02
8301.00	92.89	359.26	7136.98	1138.86	1011.54	-811.06	1296.55	321.28	1.90
8396.00	93.76	358.84	7131.47	1232.47	1106.37	-812.64	1372.75	323.70	1.02
8491.00	92.89	359.30	7125.96	1326.08	1201.20	-814.18	1451.12	325.87	1.04
8586.00	93.09	358.81	7121.00	1419.73	1296.05	-815.74	1531.40	327.81	0.56
8681.00	93.23	0.05	7115.77	1513.25	1390.90	-816.68	1612.94	329.58	1.31
8776.00	92.65	359.59	7110.89	1606.69	1485.78	-816.98	1695.58	331.19	0.77
8871.00	93.15	0.48	7106.08	1700.06	1580.65	-816.93	1779.28	332.67	1.08
8966.00	93.80	1.59	7100.32	1793.08	1675.46	-815.22	1863.26	334.05	1.35
9061.00	93.50	1.17	7094.27	1885.97	1770.24	-812.94	1947.98	335.33	0.54
9155.00	93.73	0.70	7088.35	1978.02	1864.04	-811.41	2032.99	336.48	0.56
9250.00	93.63	0.75	7082.26	2071.12	1958.84	-810.21	2119.78	337.53	0.12
9345.00	94.27	0.92	7075.71	2164.15	2053.60	-808.83	2207.14	338.50	0.70
9439.00	93.36	0.03	7069.46	2256.33	2147.39	-808.05	2294.39	339.38	1.36

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
9533.00	92.99	359.76	7064.26	2348.74	2241.24	-808.22	2382.52	340.17	0.49
9628.00	92.79	0.52	7059.47	2442.08	2336.12	-807.99	2471.91	340.92	0.82
9723.00	93.30	0.02	7054.43	2535.38	2430.99	-807.55	2561.61	341.62	0.74
9818.00	91.88	0.73	7050.14	2628.68	2525.88	-806.92	2651.64	342.28	1.67
9913.00	92.45	0.45	7046.56	2721.94	2620.81	-805.94	2741.93	342.91	0.67
10008.00	91.28	0.97	7043.47	2815.18	2715.75	-804.77	2832.48	343.49	1.35
10103.00	91.95	0.70	7040.79	2908.40	2810.70	-803.39	2923.27	344.05	0.76
10198.00	90.70	1.97	7038.60	3001.46	2905.65	-801.17	3014.08	344.58	1.87
10294.00	91.04	1.71	7037.13	3095.34	3001.59	-798.08	3105.88	345.11	0.44
10389.00	89.93	1.76	7036.33	3188.30	3096.54	-795.21	3197.02	345.60	1.17
10484.00	90.07	1.50	7036.33	3281.29	3191.50	-792.50	3288.42	346.05	0.30
10579.00	91.18	1.36	7035.30	3374.34	3286.46	-790.13	3380.11	346.48	1.18
10674.00	90.20	1.51	7034.16	3467.39	3381.43	-787.75	3471.97	346.89	1.04
10769.00	91.28	0.27	7032.93	3560.61	3476.40	-786.27	3564.21	347.26	1.73
10865.00	89.80	0.05	7032.03	3655.05	3572.40	-786.00	3657.84	347.59	1.56
10960.00	90.30	359.82	7031.95	3748.58	3667.40	-786.11	3750.70	347.90	0.58
11055.00	91.07	359.49	7030.81	3842.18	3762.39	-786.68	3843.75	348.19	0.88
11150.00	90.03	0.19	7029.89	3935.72	3857.38	-786.94	3936.83	348.47	1.32

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
11246.00	90.97	0.40	7029.04	4030.12	3953.37	-786.45	4030.84	348.75	1.00
11341.00	88.52	359.37	7029.46	4123.65	4048.36	-786.64	4124.08	349.00	2.80
11436.00	89.13	0.01	7031.41	4217.23	4143.34	-787.15	4217.45	349.24	0.93
11531.00	89.40	0.15	7032.64	4310.70	4238.33	-787.02	4310.78	349.48	0.32
11627.00	89.09	359.87	7033.90	4405.18	4334.32	-787.00	4405.19	349.71	0.43
11683.00	88.93	359.78	7034.87	4460.33	4390.32	-787.17	4460.33	349.84	0.34

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft

5" = 100' FEET TVD