



GAMMA RAY

5" = 100' FEET TVD

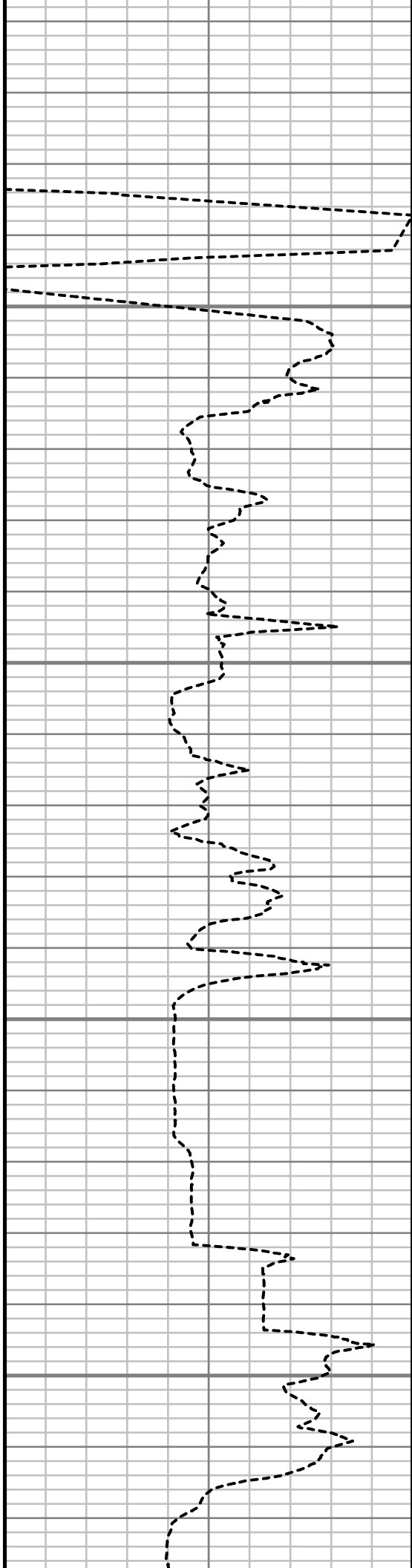
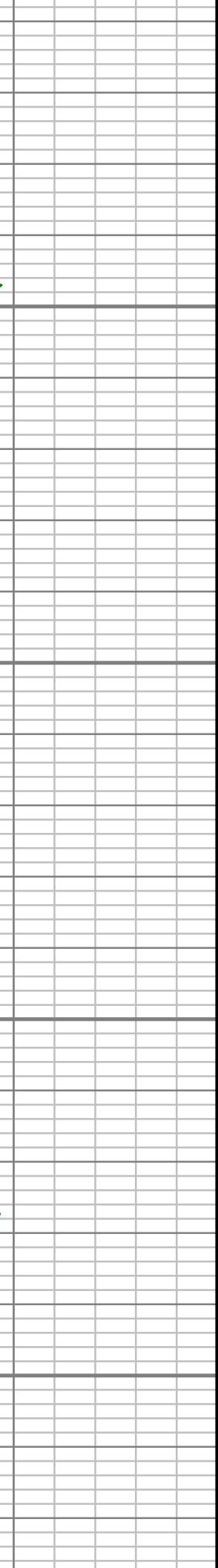
COMPANY : ENCANA OIL AND GAS (USA) INC					
WELL : MCCONAHAY 1D-34-H266					
FIELD : WATTENBERG					
COUNTY : WELD					
STATE : COLORADO					
COUNTRY : U.S.A.					
UWI : 05-123-38057					
DEPTH REF. : R.K.B.			R.O.P.		
REF. HEIGHT : 13.000 ft			R.K.B. to Ground Level		
GROUND LEVEL : 5060.000 ft			G.L. to MEAN SEA LEVEL		
BOREHOLE RECORD			DEVATION RECORD		
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
12.25	96	1110	0 - 15	96	1110
8.75	1110	8020	15 - 86	1110	8020
6.125	8020	11555	86 - 92	8020	11555
CASING RECORD					
CASING SIZE in	FROM ft	TO ft			
9.625	0	1093			
7	0	8004			
DRILLING CO.: ENSIGN					
RLG: 124					
LMD UNIT NO.: C70-EW4#8DISTRICT: CASPER					
SPUD DATE: 03/23/2014					
LMD START DATE: 03/25/2014			DEPTH: 5000 ft		
LMD END DATE: 03/31/2014			DEPTH: 11555 ft		
			TOTAL DEPTH: 11555 ft		

Run Data						
RUN NUMBER	1	2	3			
START DATE	03/23/2014	03/24/2014	03/29/2014			
START TIME	0900	2230	0750			
END DATE	03/23/2014	03/27/2014	03/31/2014			
END TIME	1730	2340	2200			
DEPTH IN (ft)	96	1110	8020			
DEPTH OUT (ft)	1110	8020	11555			
LOG TOP (ft)	-	5000	7968			
LOG BOTTOM (ft)	-	7968	11555			
HOLE SIZE (in)	12.25	8.75	6.125			
MUD DATA @ (ft)	1110	8020	10101			
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED			
DENSITY (lb / gal)	8.4	10.50	10.40			
VISCOSITY (s / qt)	26	45	40			
pH	7.5	8.3	9			
FLUID LOSS (cm3 / 30)	-	-	-			
SALINITY (ppm)	-	-	-			
Rm (ohmm @ deg F)	-	-	-			
Rmf (ohmm @ deg F)	-	-	-			
MAX TEMP (deg F)	86	176	226			
Rm @ MAX TEMP (ohmm)	-	-	-			
LWD ENGINEER #1	M . SMITH	M . SMITH	M . SMITH			
LWD ENGINEER #2	J . SMITH	J . SMITH	J . SMITH			
LWD ENGINEER #3	A . NEJAD	A . NEJAD	A . NEJAD			
LOG WITNESS #1	M . ROANE	M . ROANE	M . ROANE			
LOG WITNESS #2	-	-	-			

Remarks
ENCANA OIL AND GAS (USA) INC PRODUCTION AFE# 13178298
SCIENTIFIC DRILLING INTERNATIONAL JOB# 129593
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE
RUN #1: MWD / DIRECTIONAL RUN
SENSORS S/N: CONT = 814 / MWD EYE = 0932
BIT TO SENSOR OFFSET: SURVEY = 59.07 FT.
RUN #2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-133 / CONT = 831 / MWD EYE = 0932 / GAMMA RAY = 1074
BIT TO SENSOR OFFSETS: SURVEY = 66.28 FT. / GAMMA RAY = 53.03 FT.
RUN #3: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-097 / CONT = 114 / MWD EYE = 0862 / GAMMA RAY = 1050
BIT TO SENSOR OFFSETS: SURVEY = 65.02 FT. / GAMMA RAY = 51.77 FT.
MNEMONICS LIST:
GR = GAMMA RAY
ROP = RATE OF PENETRATION

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 (USA) INC MCCONAHAY 1D-34H-H266 WATTENBURG FIELD WELD COUNTY, COLORADO 05-123-38057			
Gamma Ray (GR) Unit = aapi 0150	TRUE VERTICAL DEPTH 1:240 (ft) <		



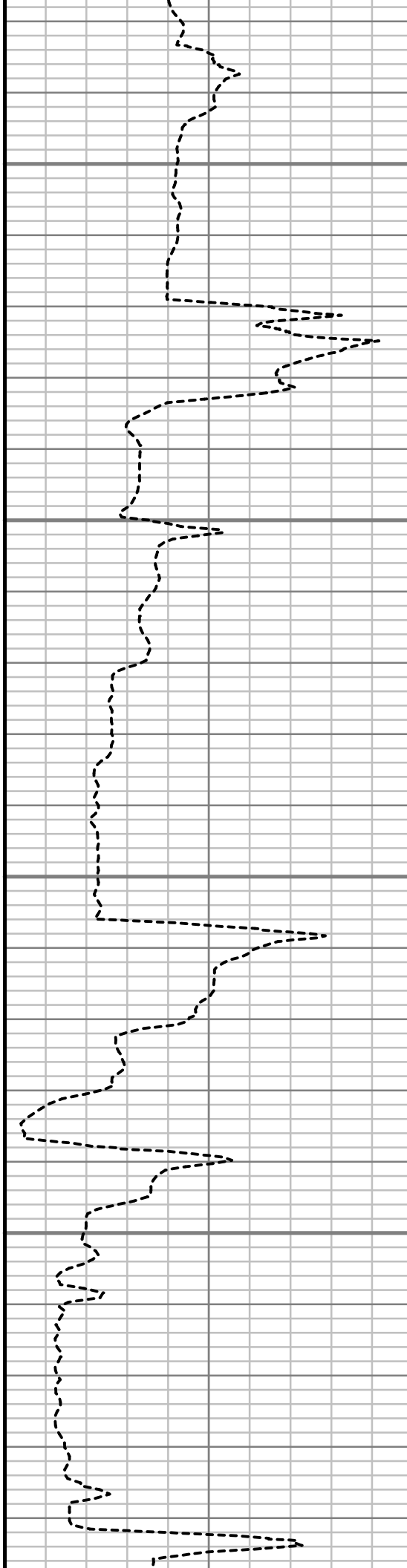


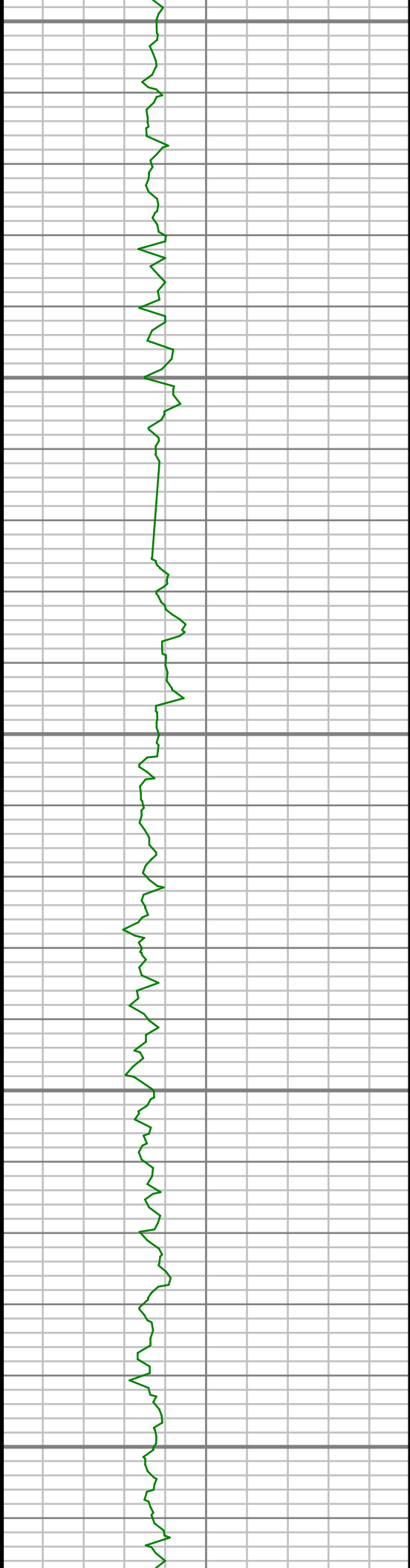
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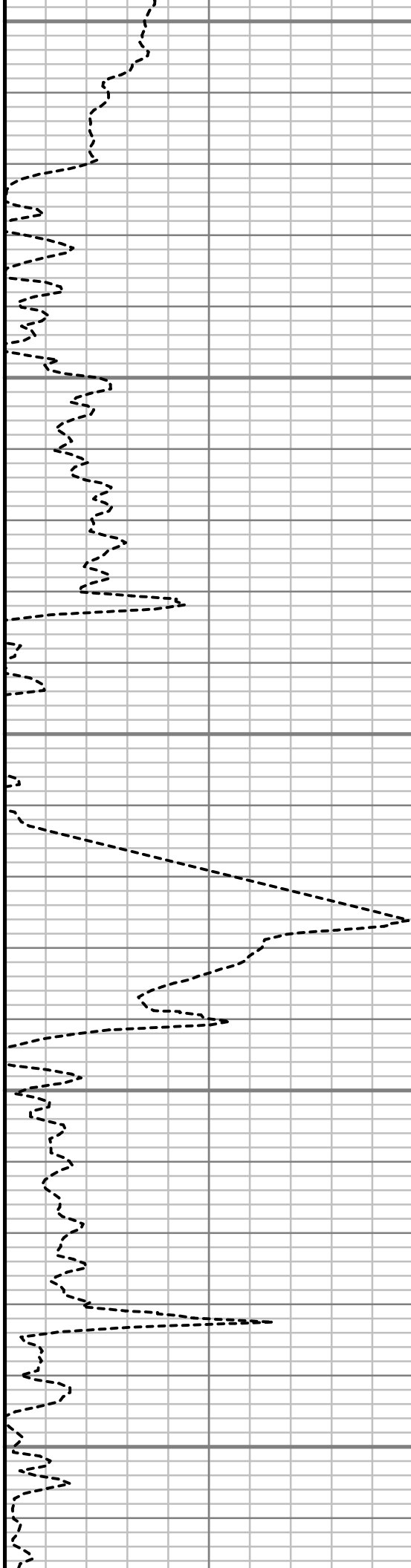
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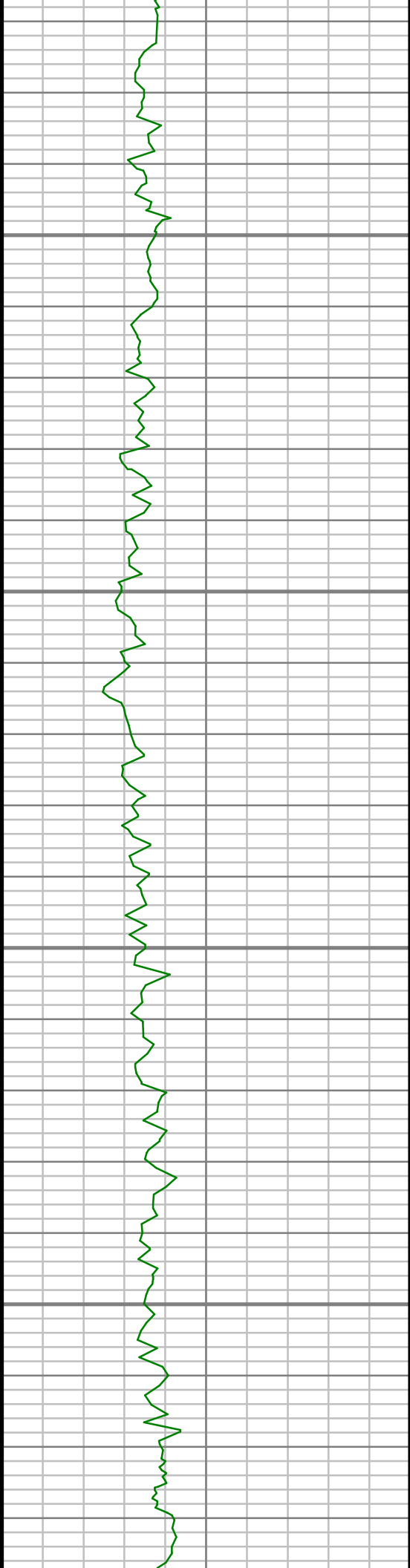
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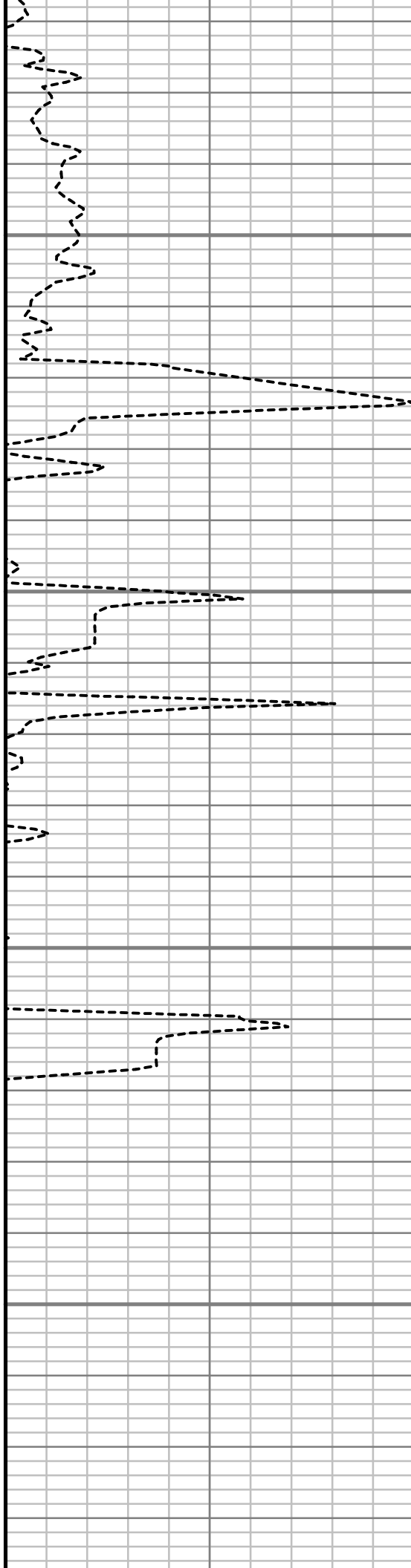


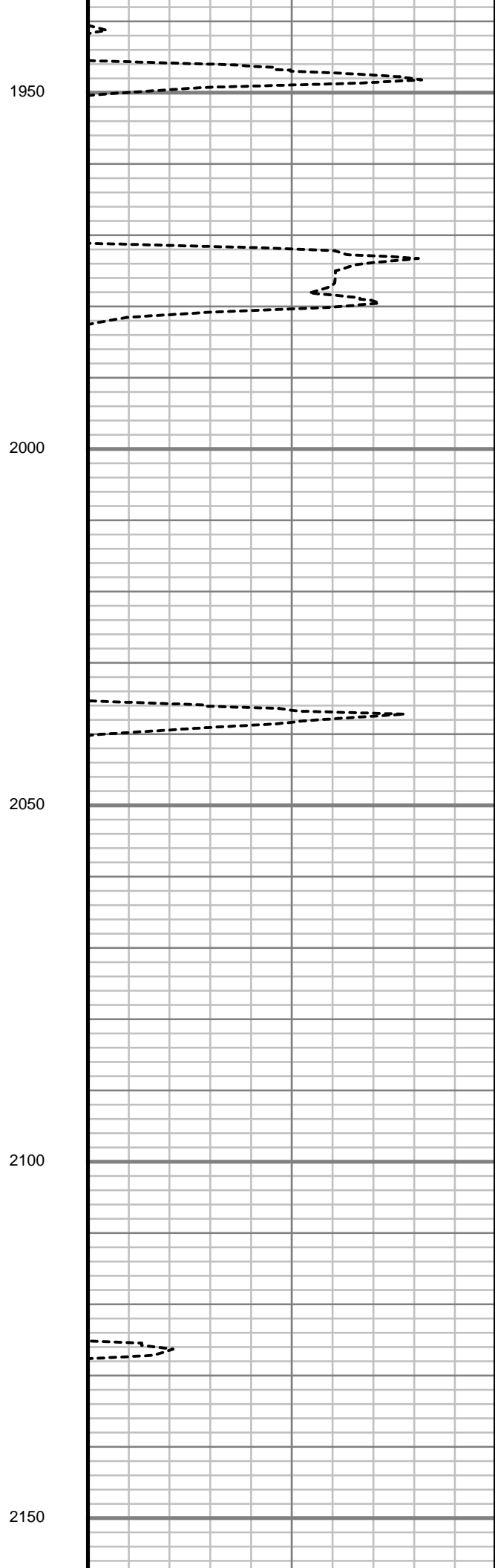
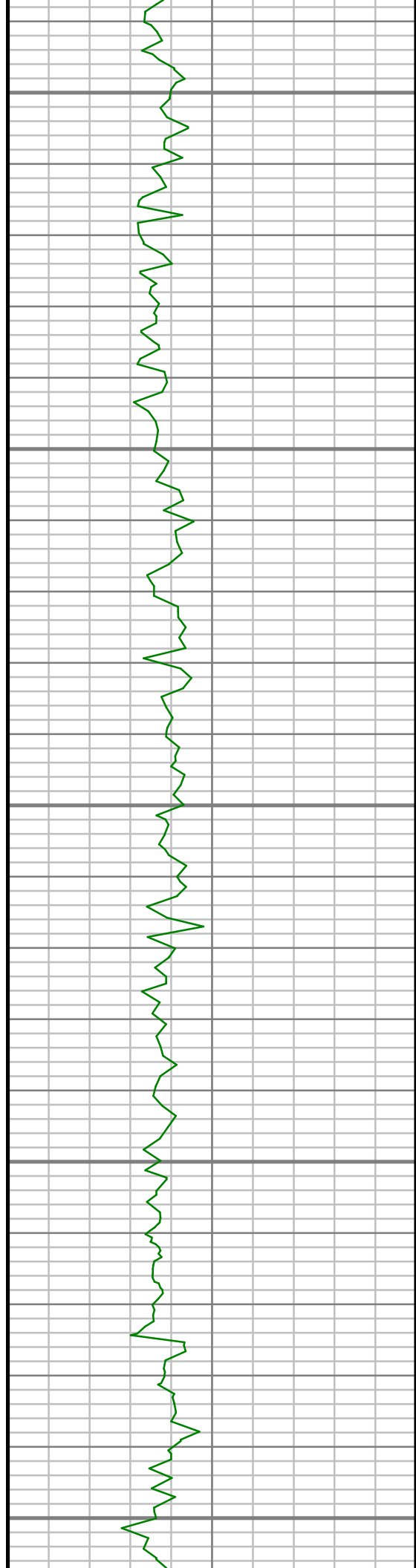
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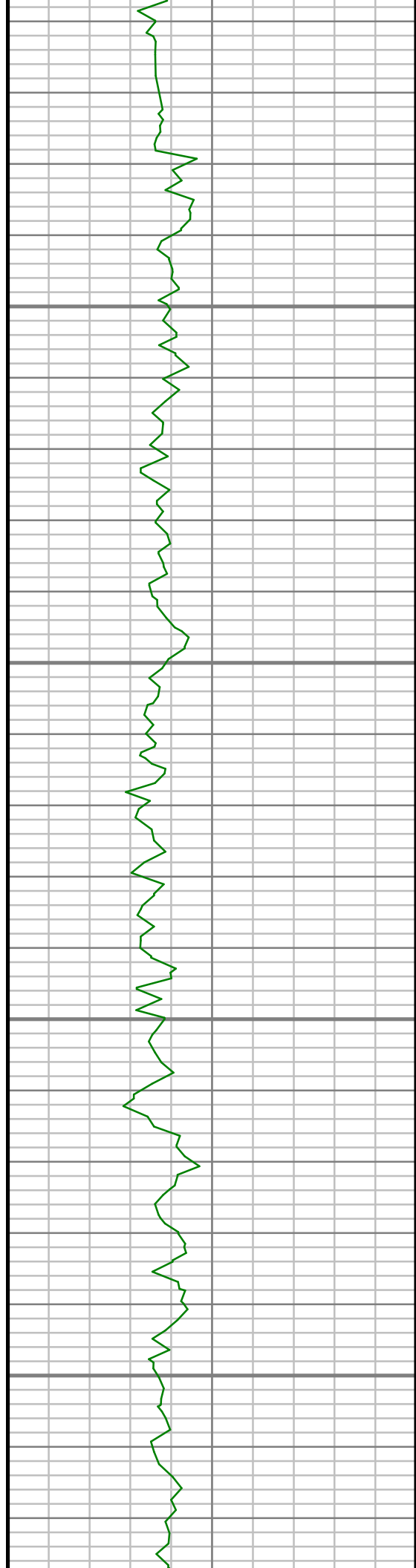
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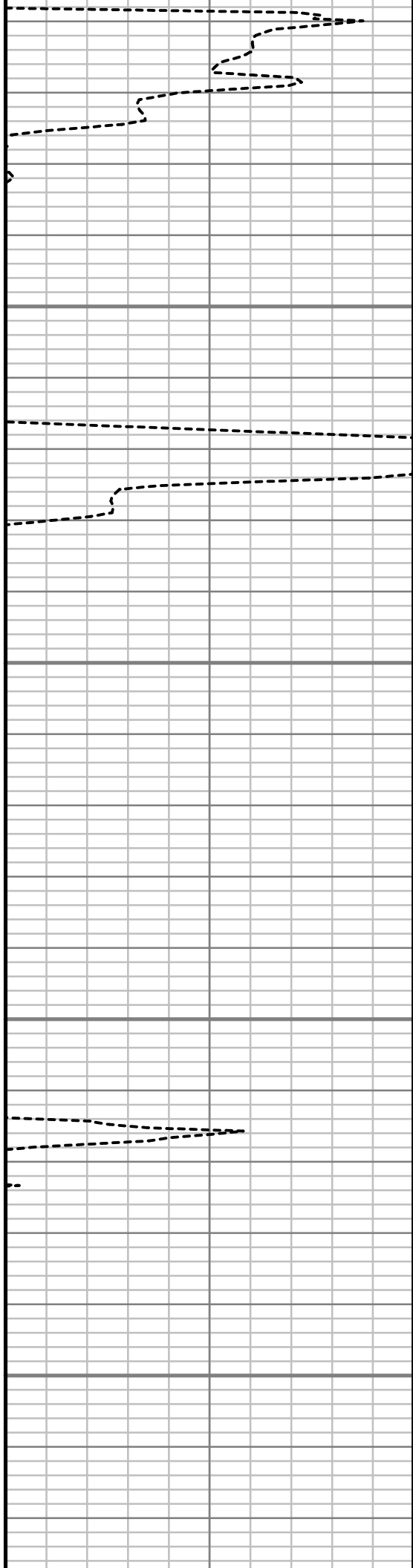


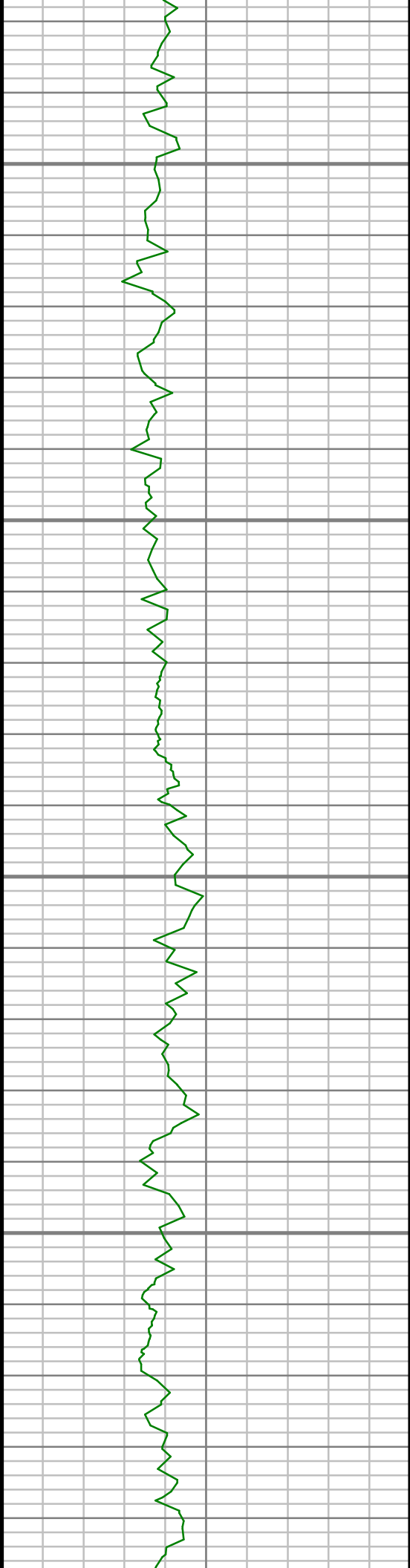
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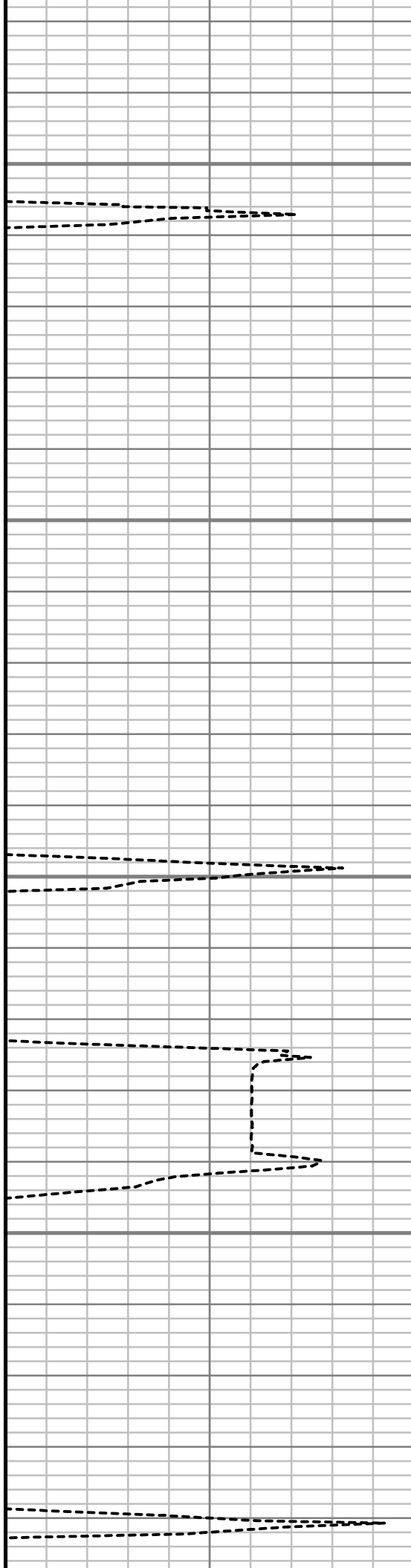


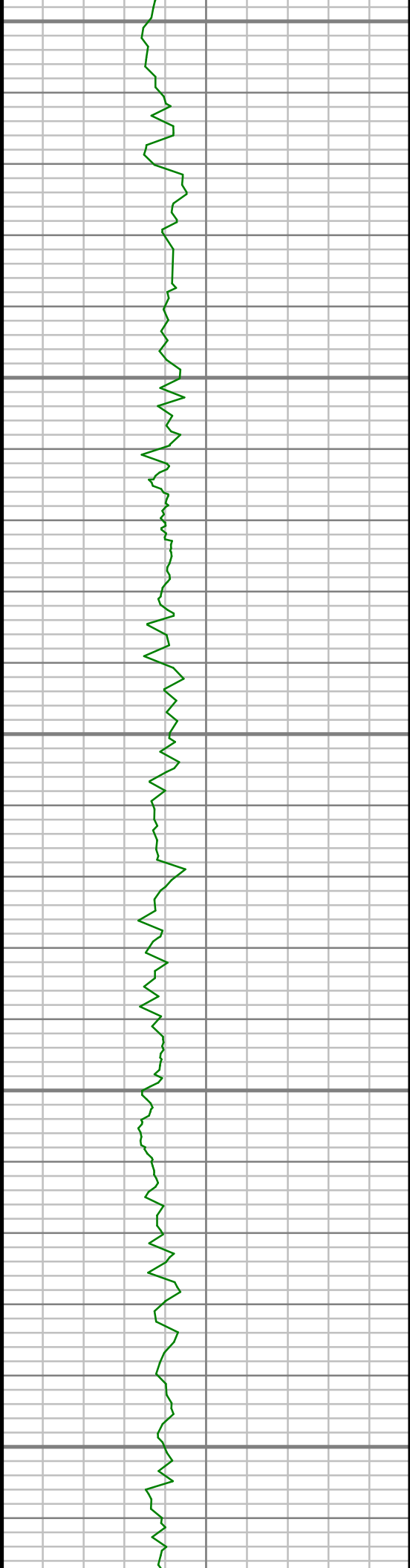
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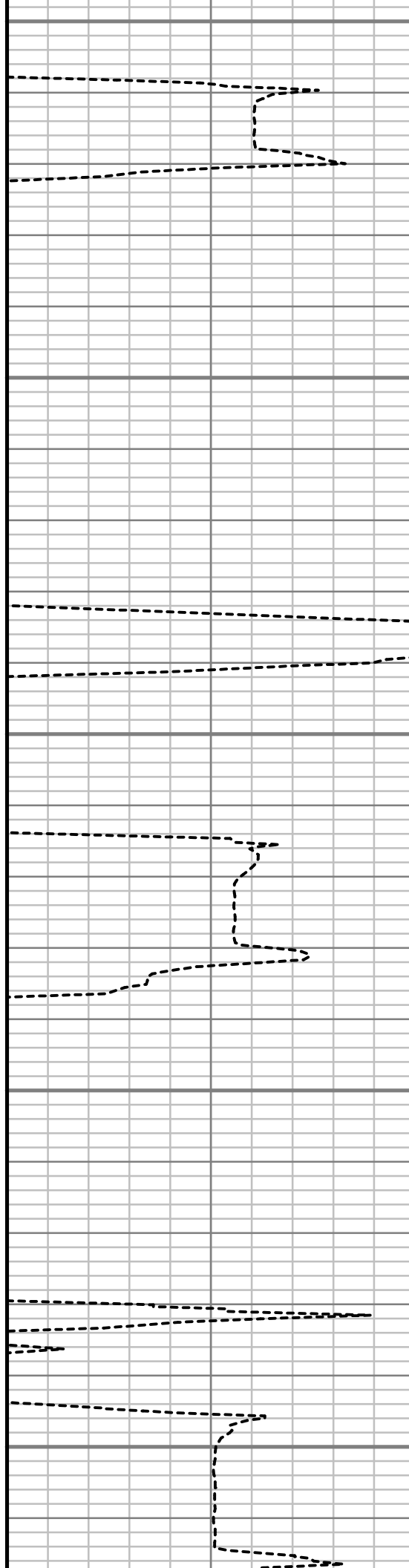
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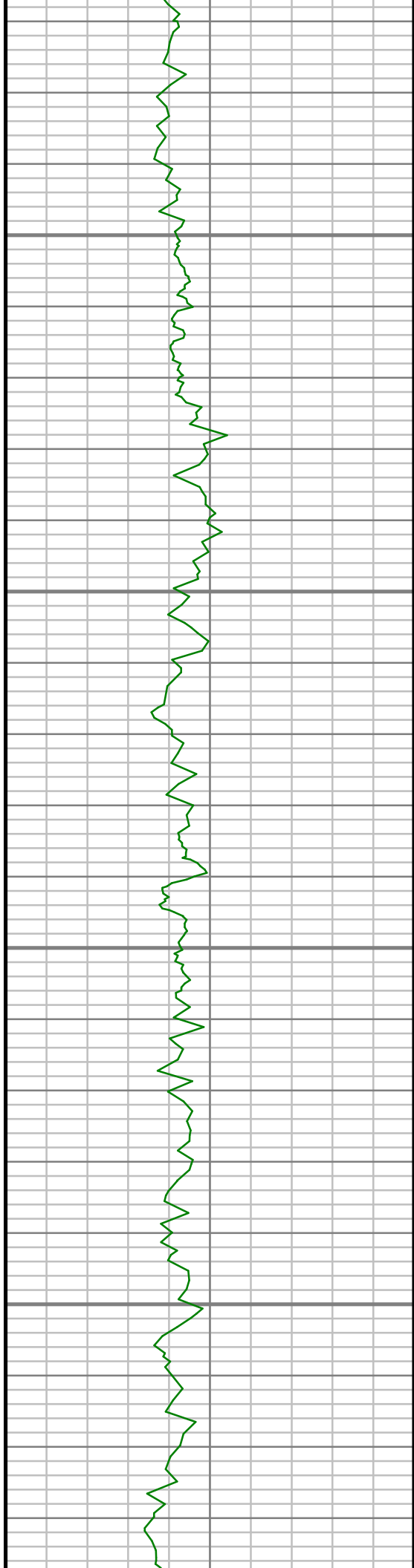
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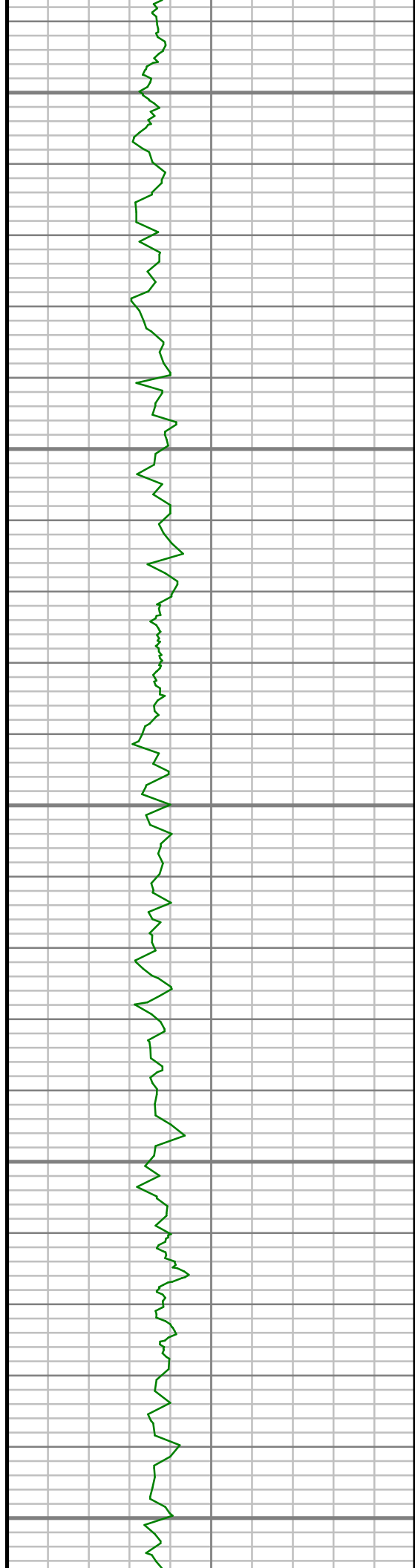
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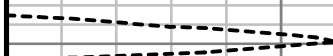
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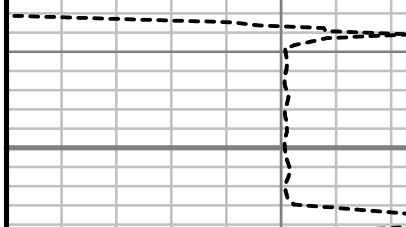




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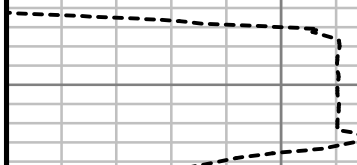
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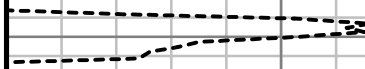
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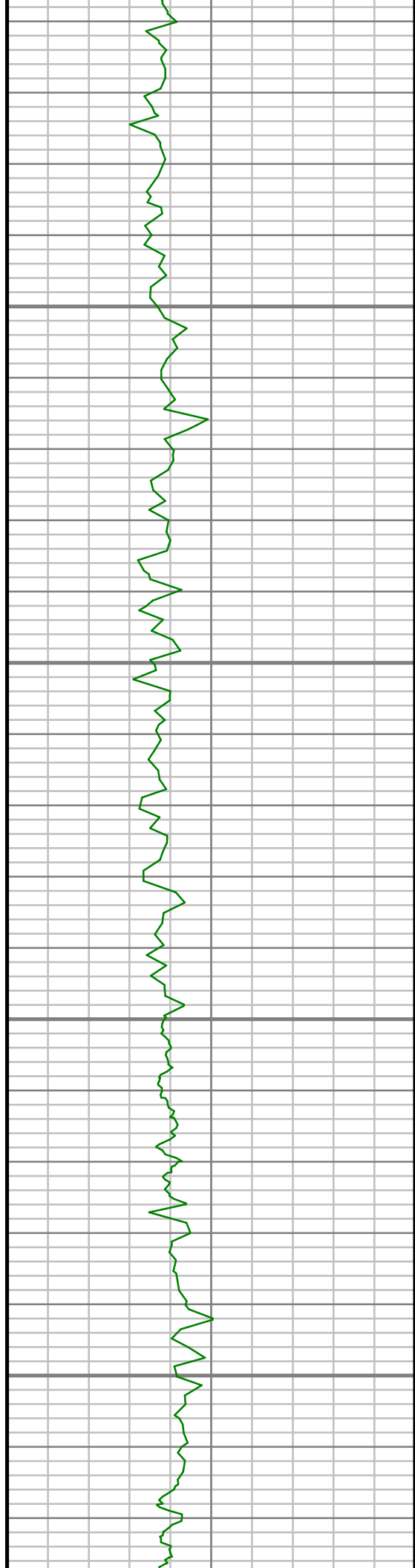


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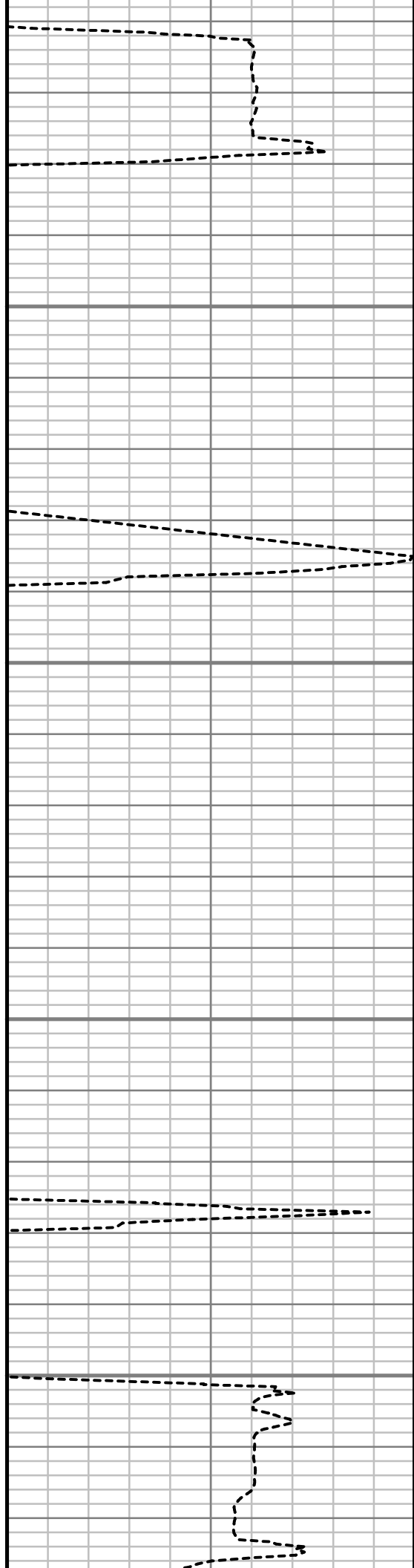


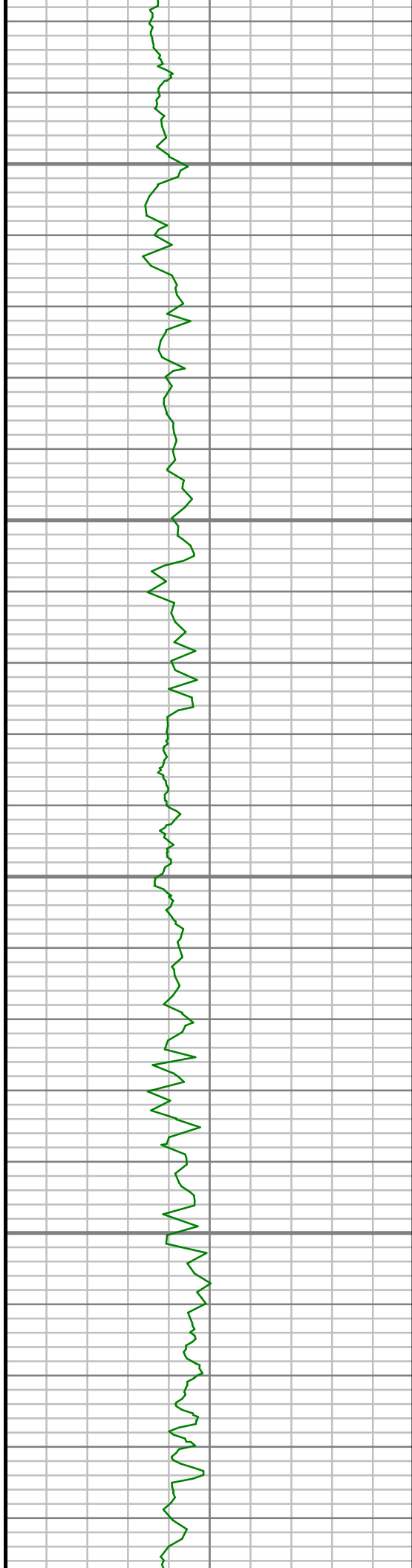
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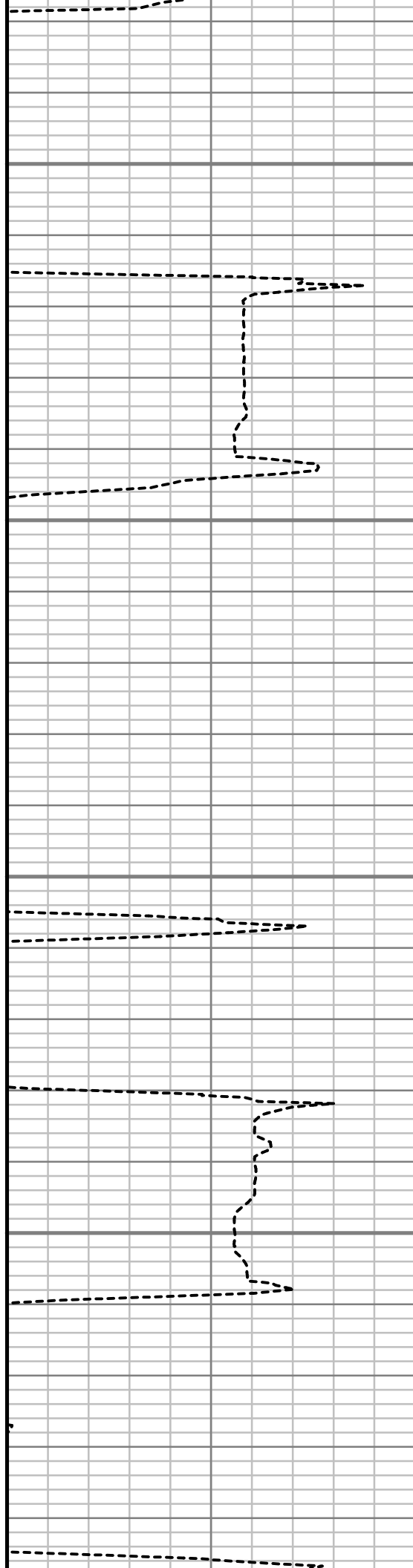


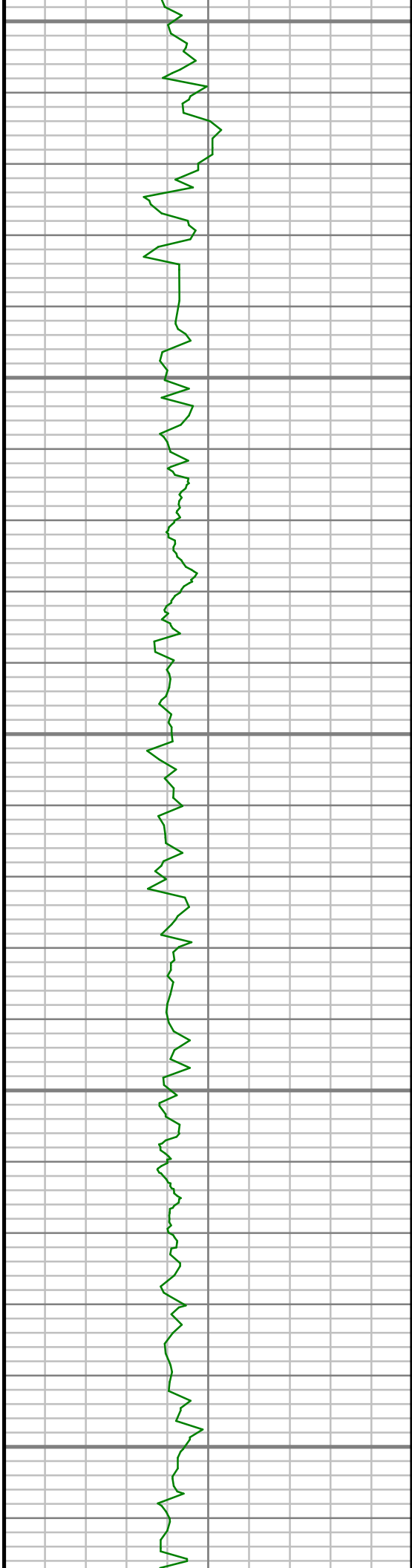
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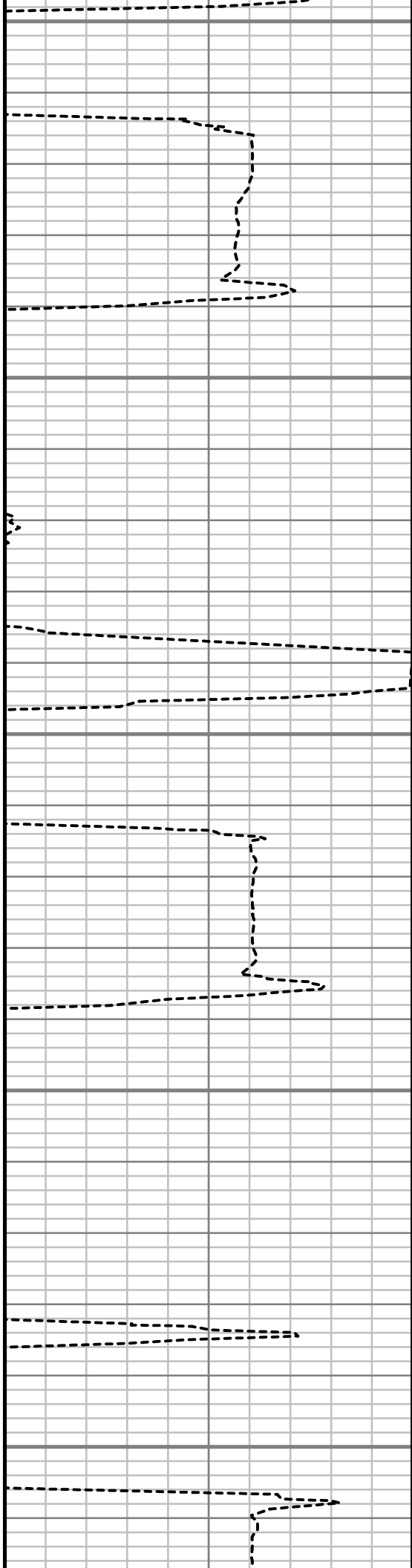
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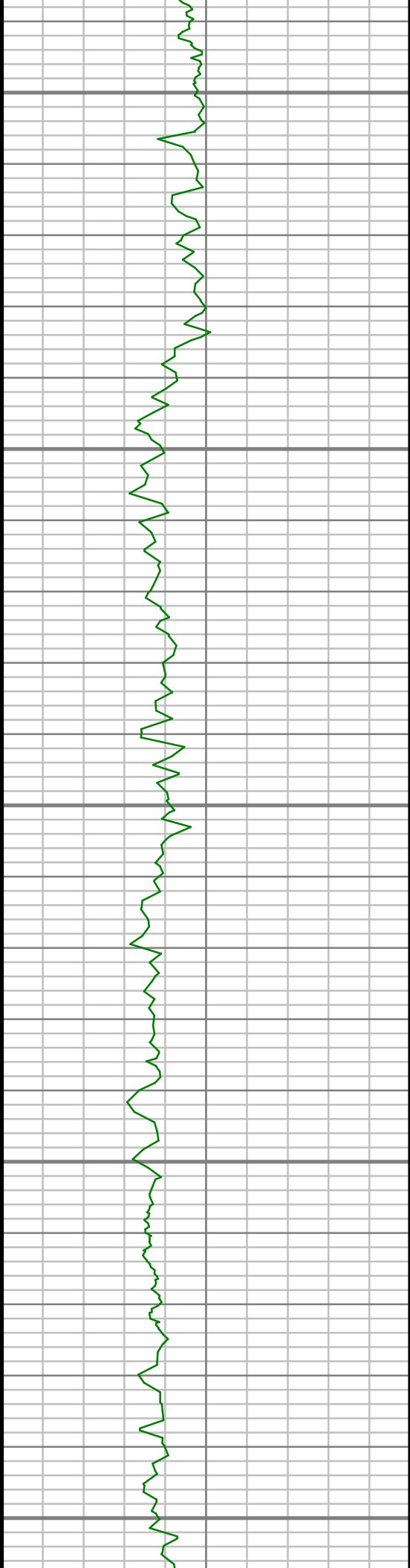
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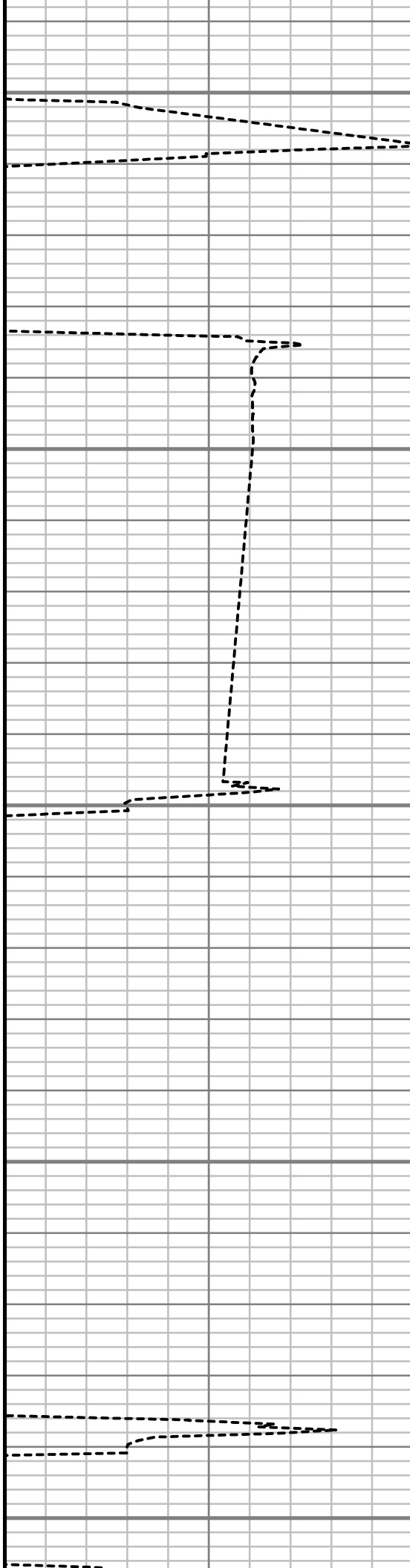
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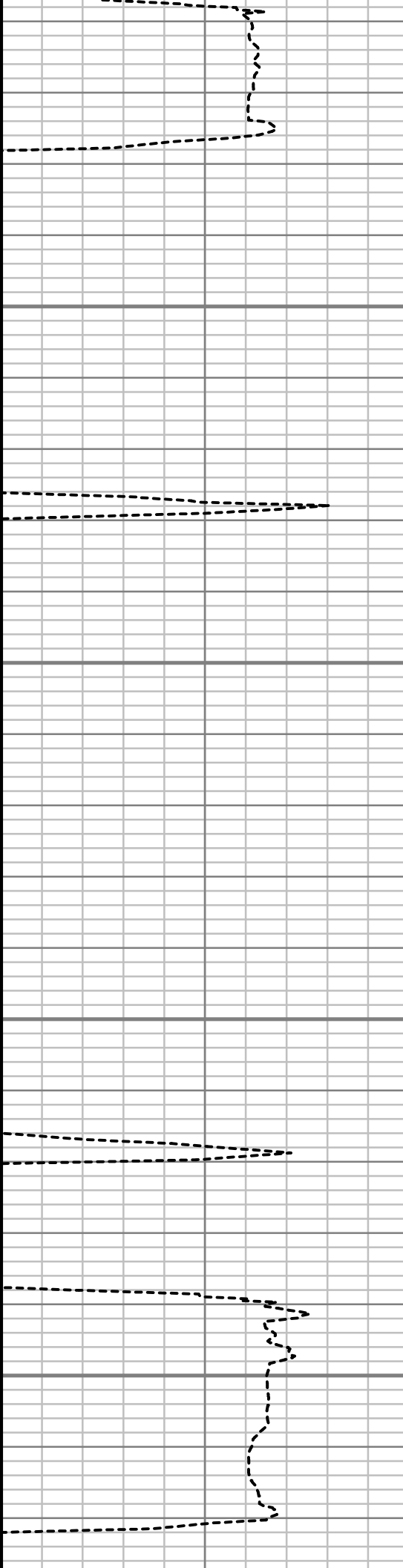


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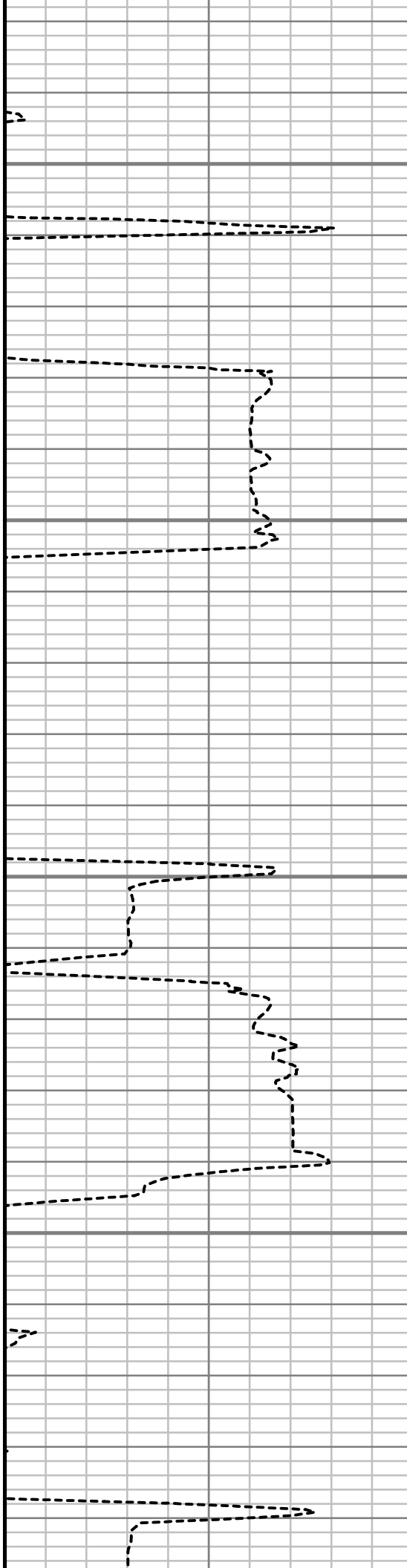


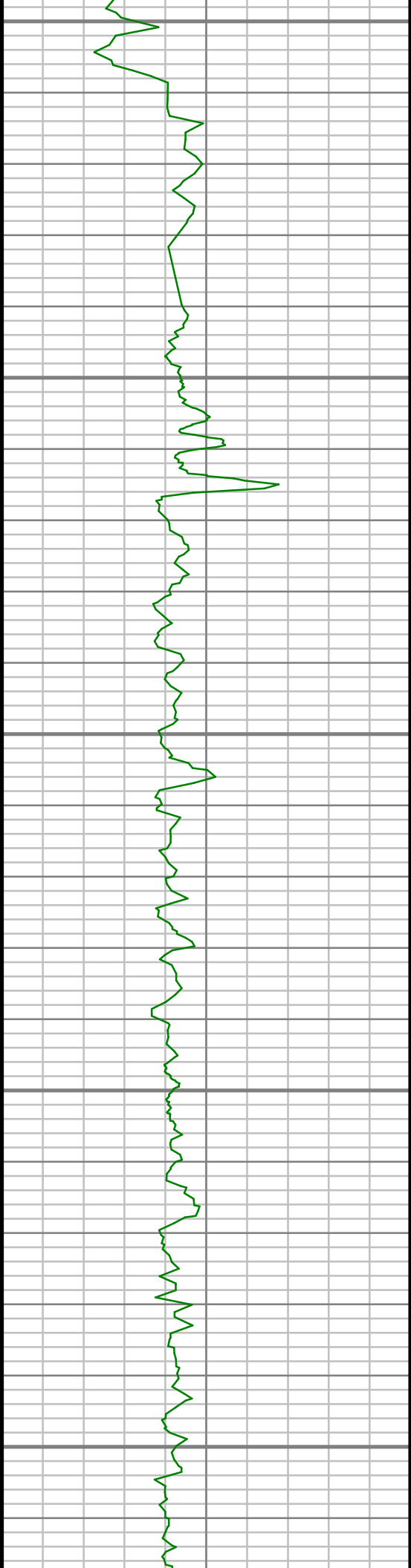
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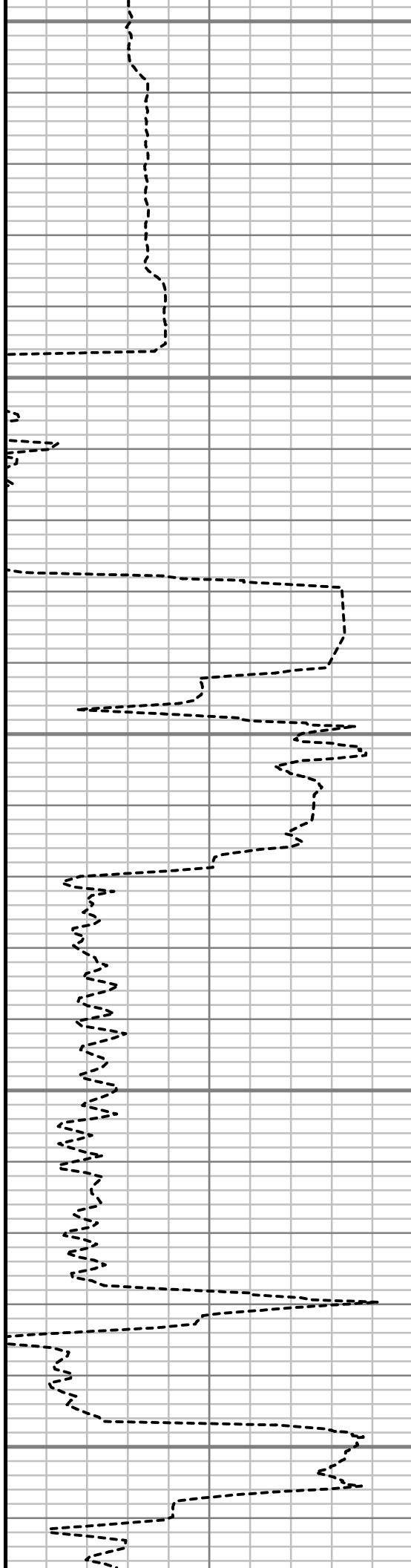
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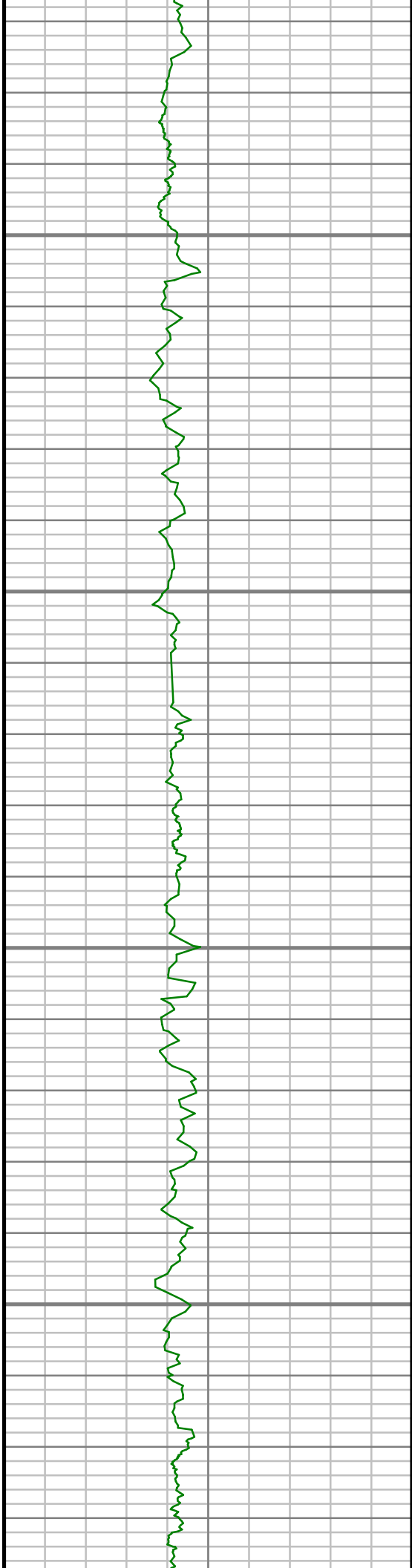
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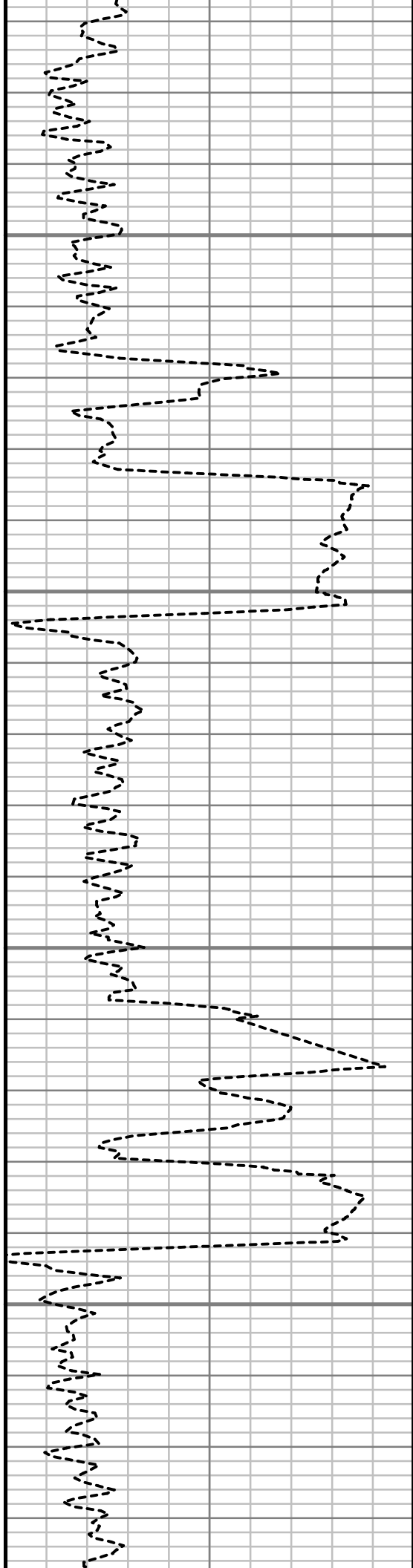


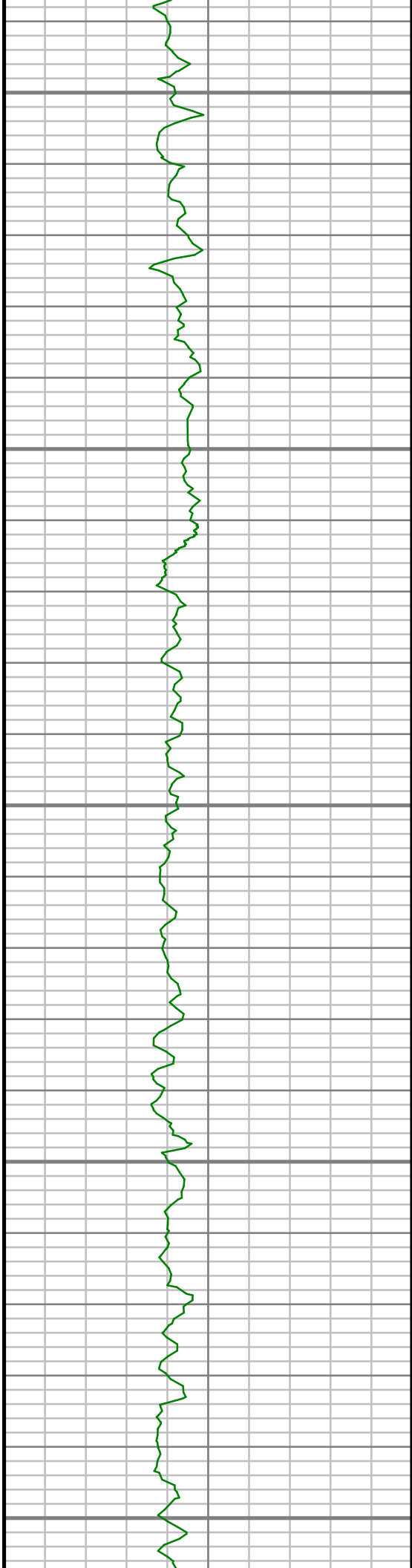
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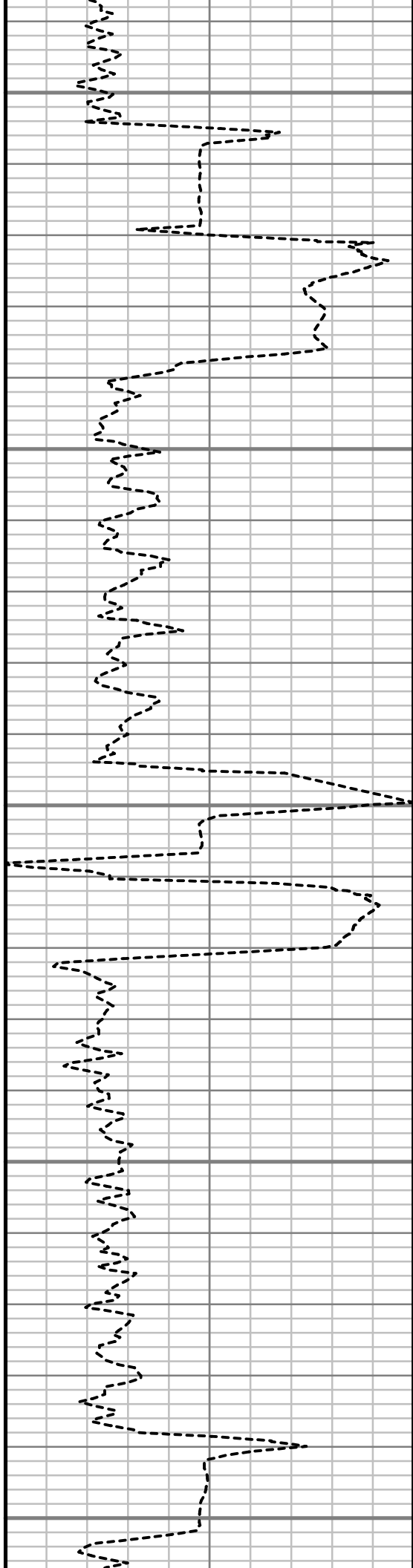
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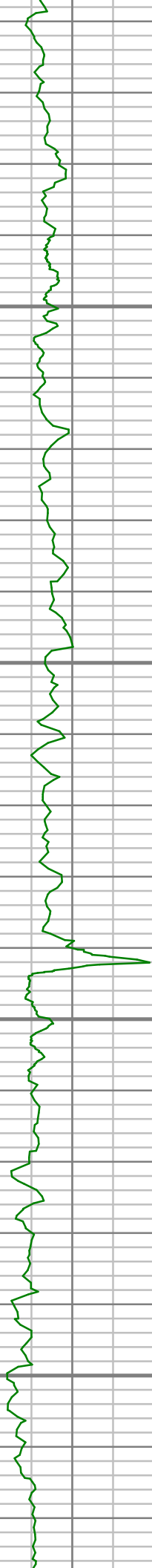
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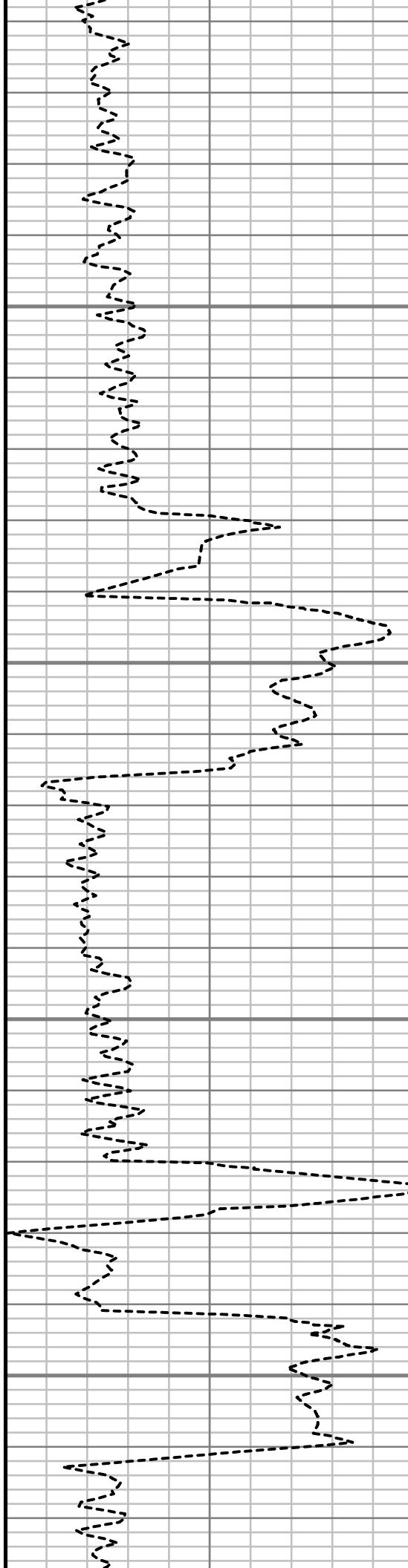


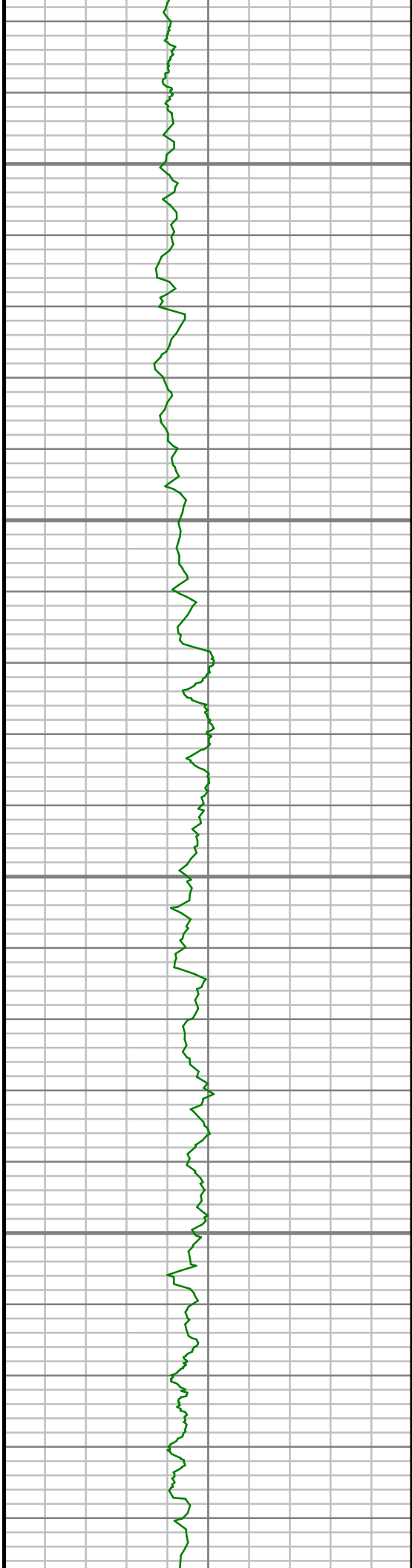
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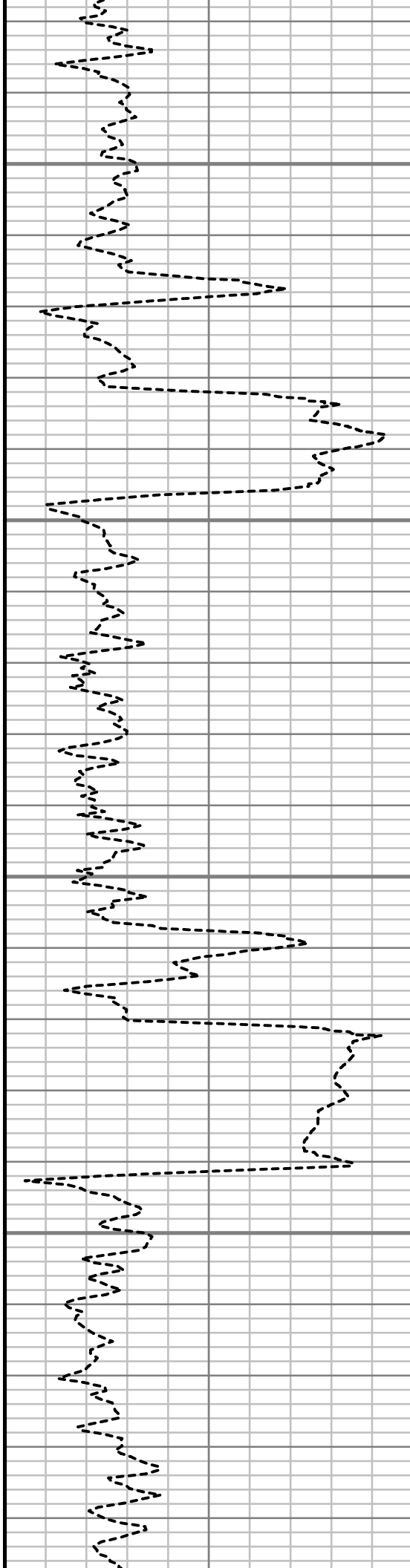


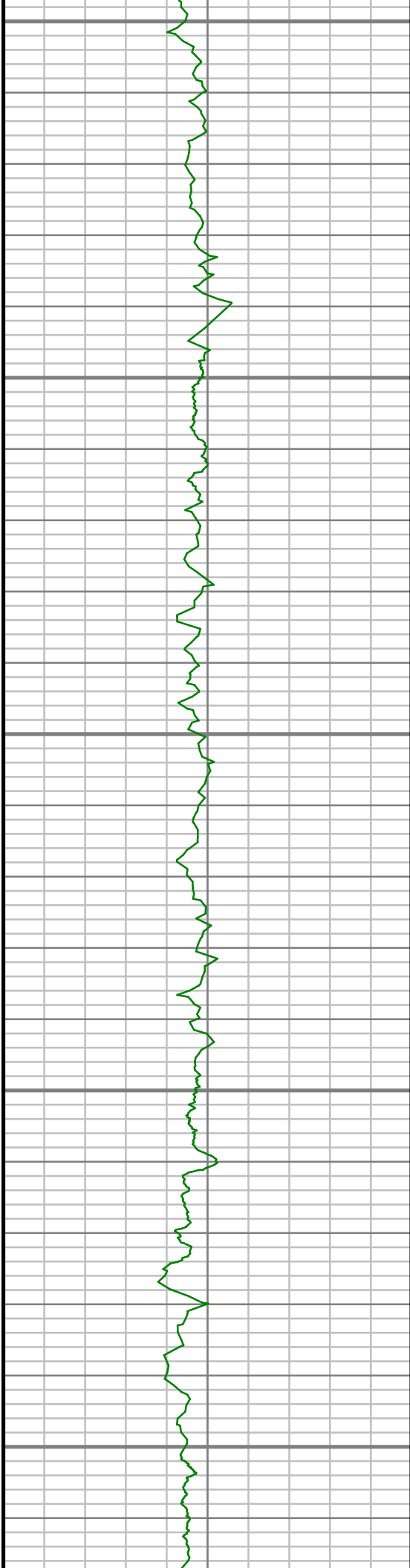
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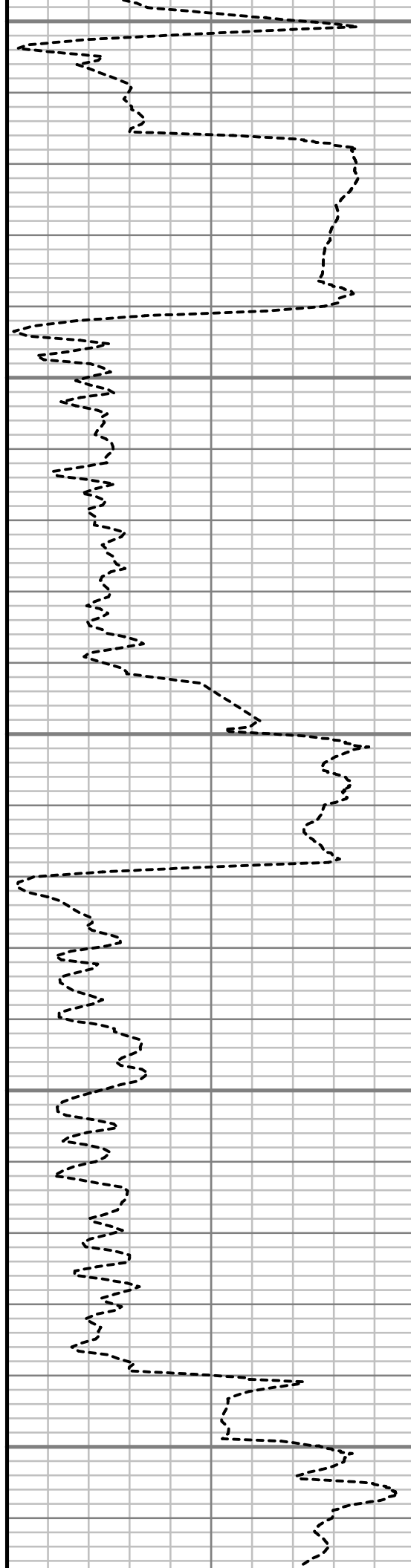
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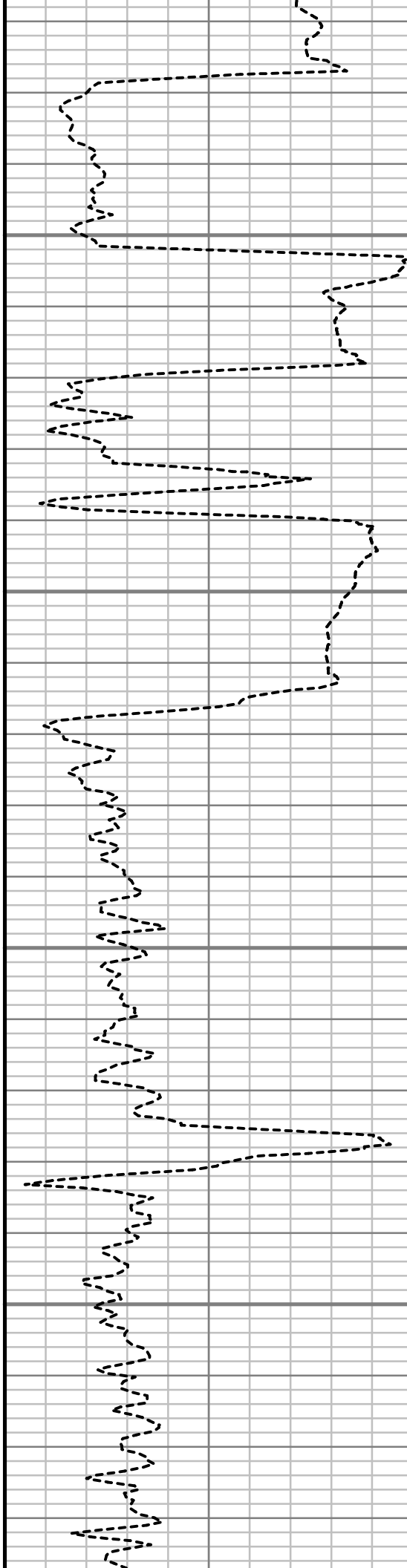


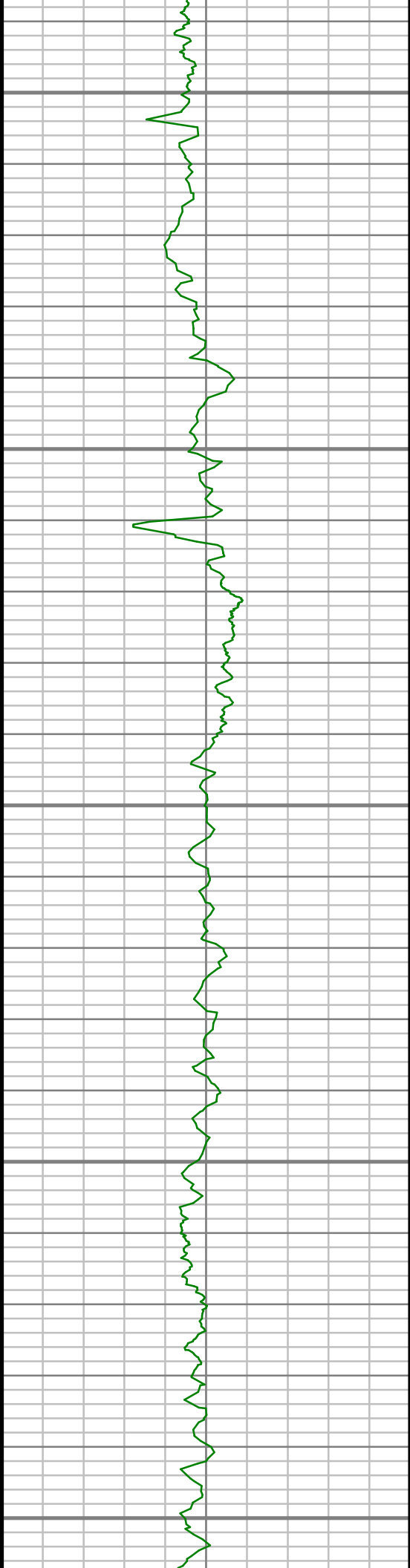
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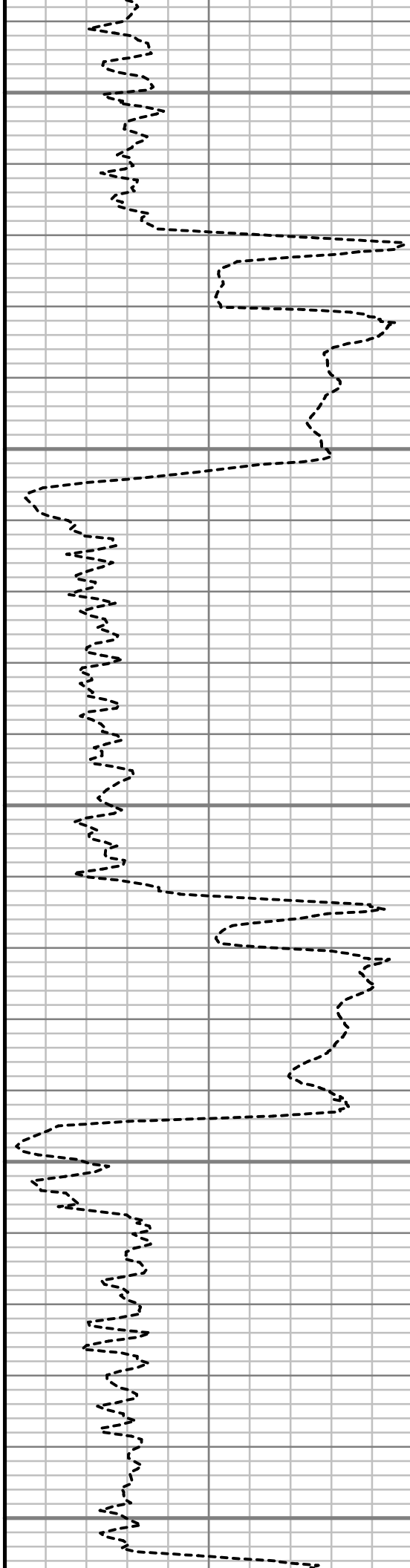
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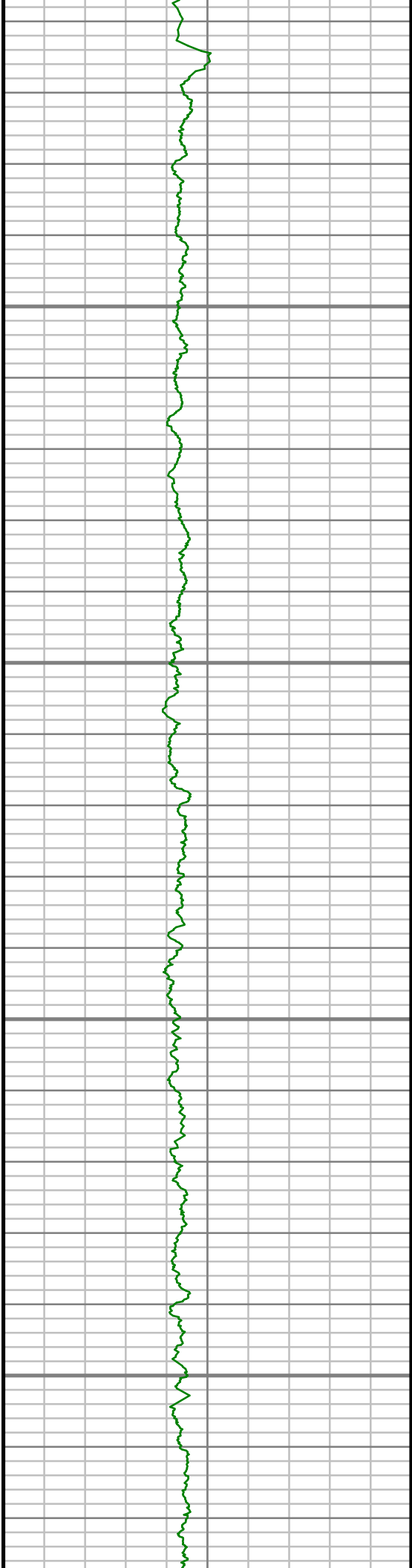
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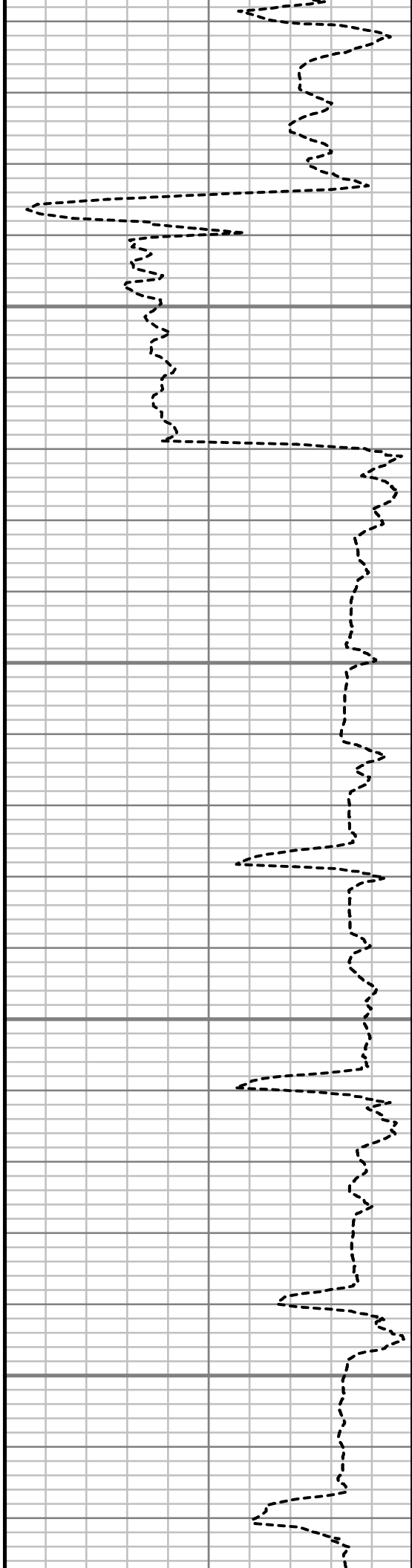


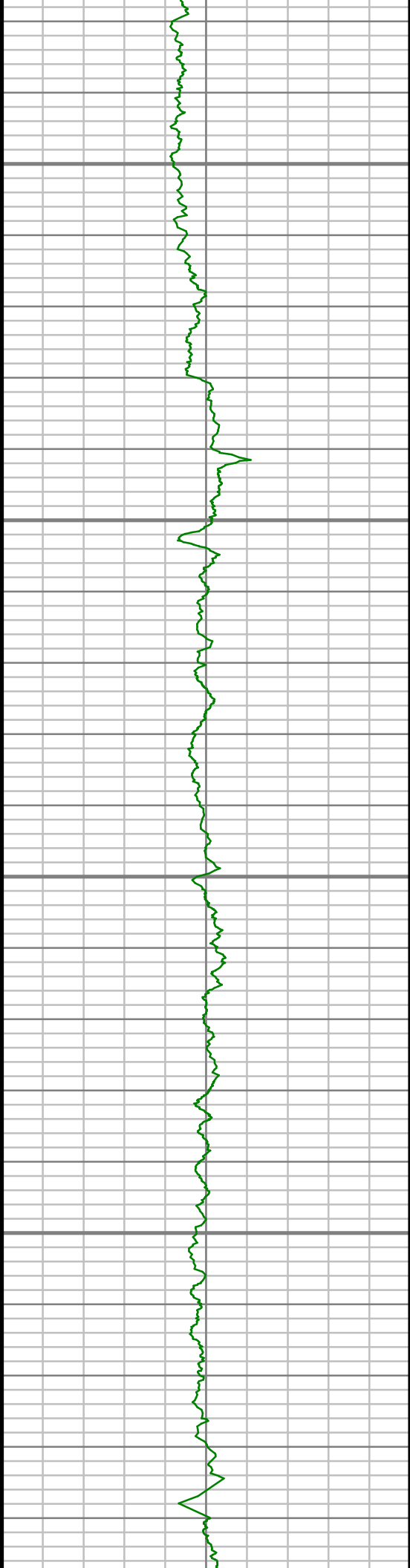
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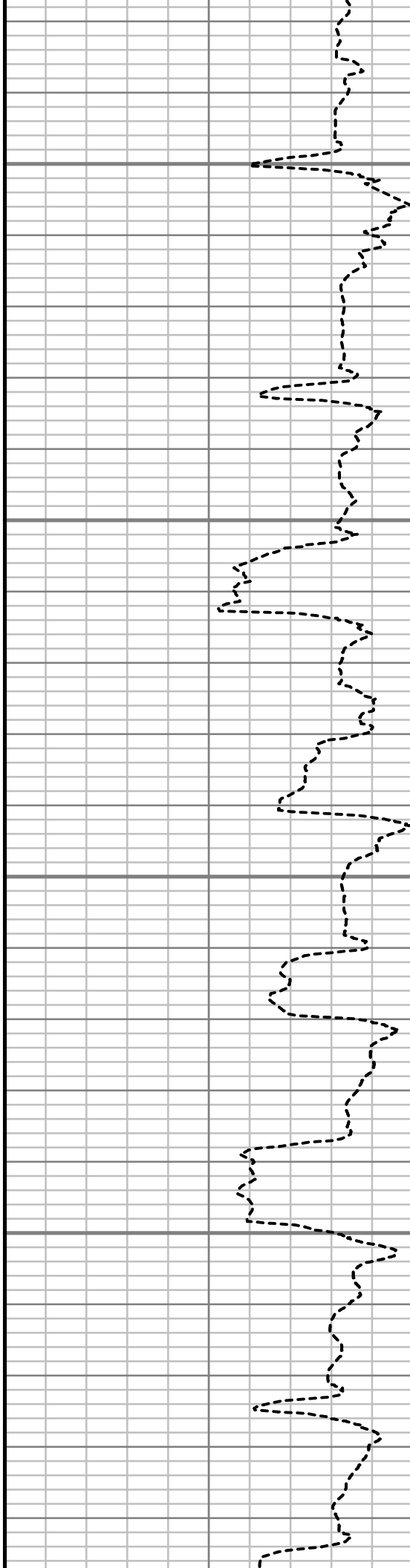


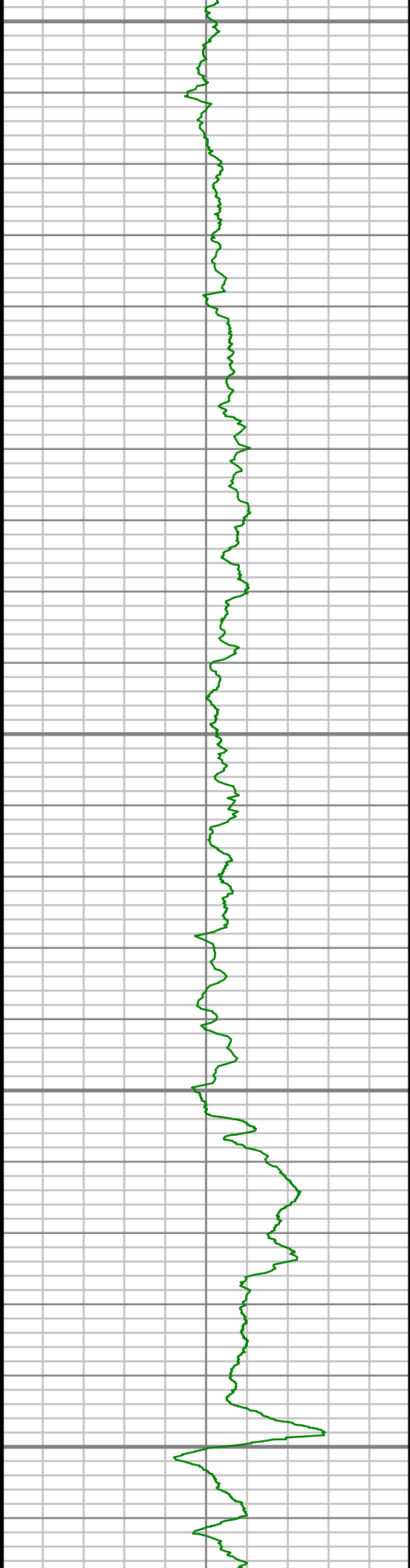
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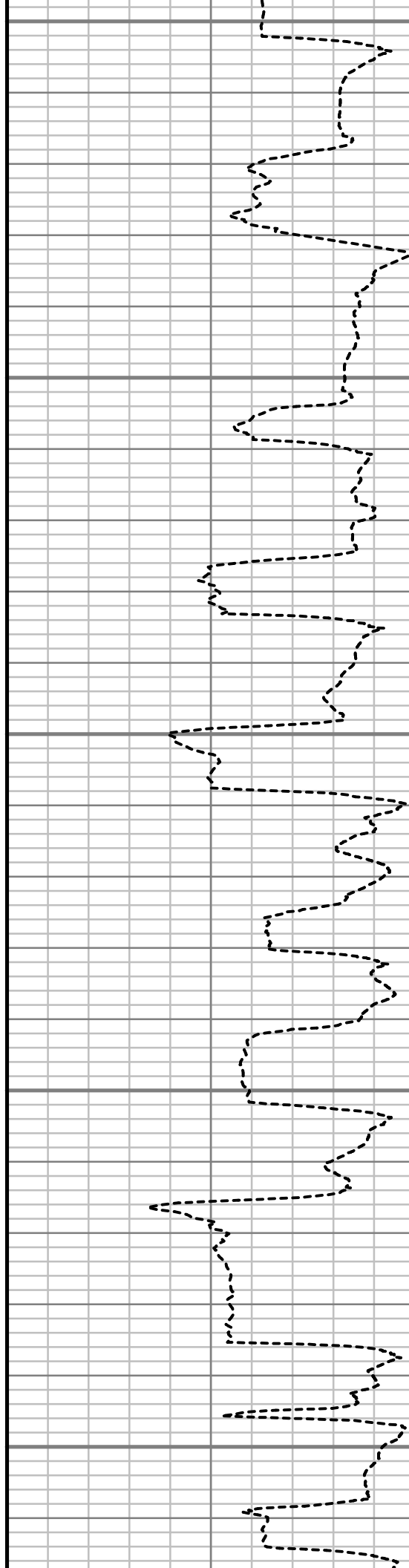
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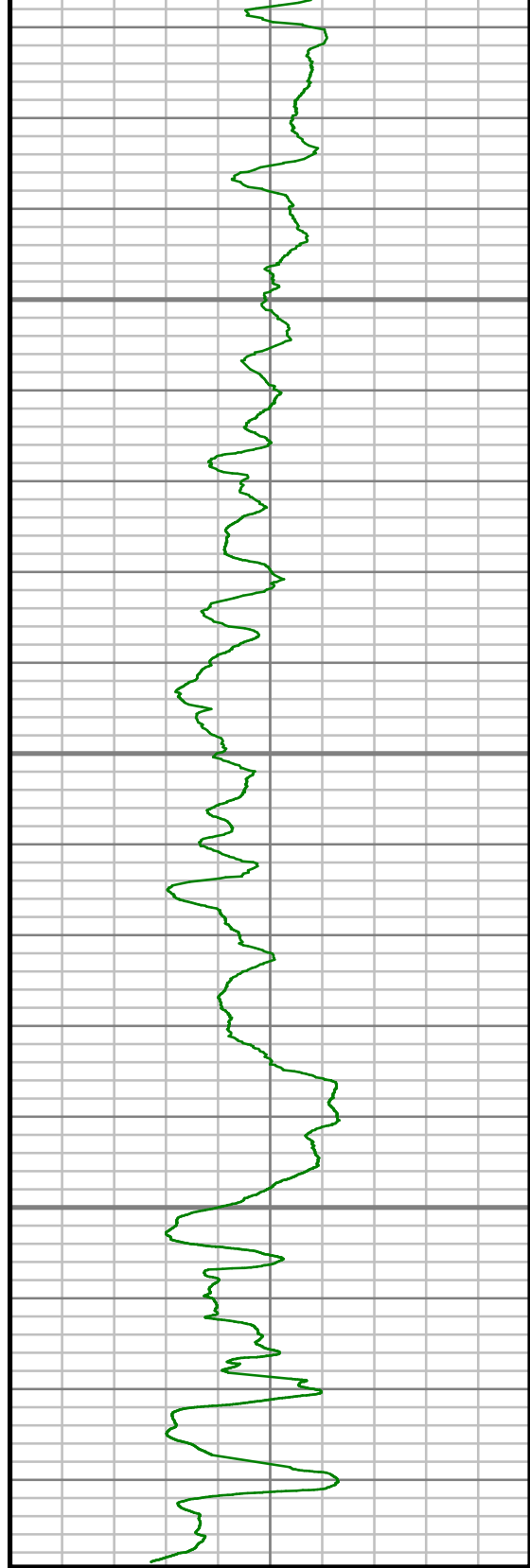
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Gamma Ray (GR)

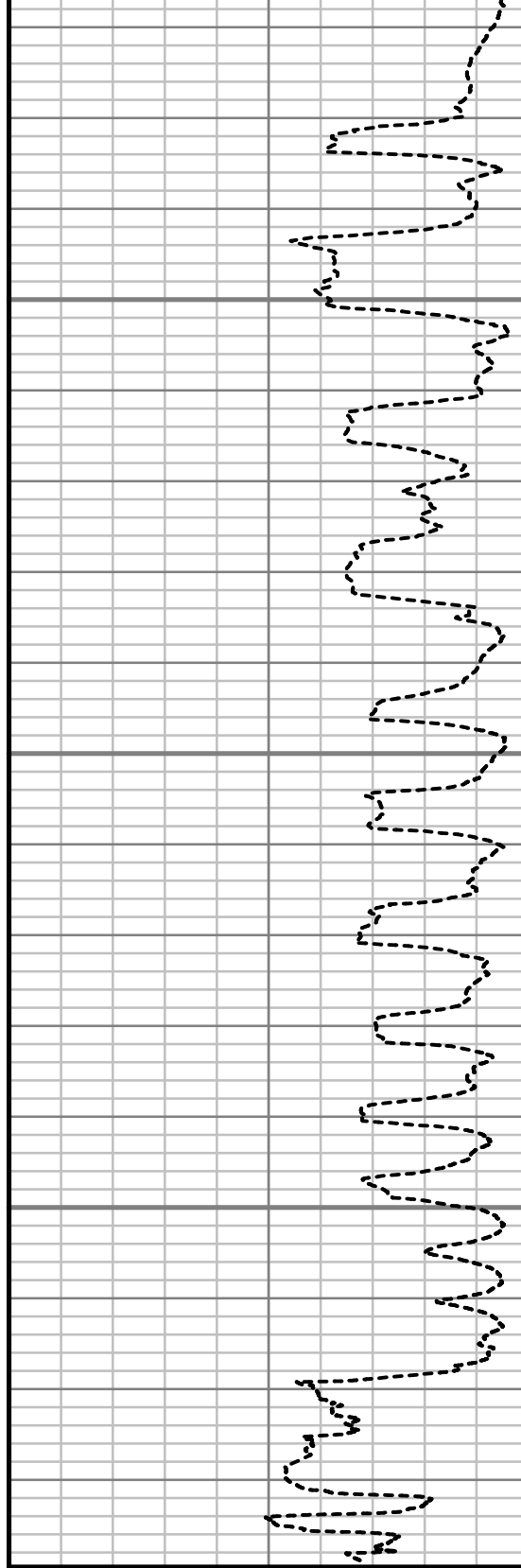
0 Unit = aapi 150

7250

7300

7350

TRUE VERTICAL DEPTH
1:240 (ft)



Rate of Penetration (ROP)

550 Unit = ft/hr 0

Comments

MWD Survey Report

Well Location	McCONAHAY
Well Name	McCONAHAY 1D-34-H266
Survey Date	3/22/2014
Latitude	40°5'52.656"N
Longitude	104°45'27.828"W
Btotal	52598 nT
Dip	66.70 deg
Magnetic Declination	8.51 deg
North Reference	True North
Grid Correction	None
Depth Reference	R.K.B. (13.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 265.00Azim (deg)
Operator(s)	A. NEJAD, J. SMITH, M. SMITH

Well Notes

MD	Inc	Azim	TVD	VS	+N-S	+E-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
455.00	4.82	149.85	454.46	-8.12	-16.53	9.60	149.85	19.12	1.06
548.00	6.34	158.27	547.02	-11.26	-24.68	13.46	151.38	28.11	1.85
641.00	8.29	163.39	639.26	-14.09	-35.87	17.28	154.28	39.82	2.21
733.00	9.84	164.88	730.11	-16.80	-49.81	21.23	156.92	54.14	1.70
826.00	11.89	164.47	821.44	-19.95	-66.71	25.86	158.81	71.55	2.21
920.00	13.09	163.59	913.21	-23.83	-86.26	31.46	159.96	91.82	1.29
1012.00	15.23	158.78	1002.42	-29.27	-107.52	38.78	160.17	114.30	2.65
1049.00	15.30	158.07	1038.11	-32.04	-116.58	42.37	160.03	124.04	0.54
1189.00	13.27	154.52	1173.78	-43.05	-148.22	56.18	159.24	158.51	1.58
1373.00	16.64	158.03	1351.52	-58.13	-191.73	75.13	158.60	205.92	1.90
1559.00	15.77	156.16	1530.13	-74.07	-239.54	95.31	158.30	257.81	0.55
1745.00	18.15	167.21	1708.08	-86.17	-290.93	111.95	158.95	311.73	2.15
1931.00	18.45	165.12	1884.67	-95.14	-347.64	125.92	160.09	369.74	0.39
2122.00	17.55	162.72	2066.32	-106.45	-404.35	142.24	160.62	428.64	0.61
2312.00	15.11	156.39	2248.66	-120.45	-454.41	160.67	160.53	481.98	1.59
2503.00	11.02	159.24	2434.67	-133.36	-494.32	177.12	160.29	525.09	2.17
2694.00	11.71	155.43	2621.93	-144.81	-529.01	191.65	160.09	562.66	0.53
2884.00	12.76	153.56	2807.61	-158.94	-565.34	209.01	159.71	602.74	0.59

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Direction deg	Closure Distance ft	DLS °/100ft
3075.00	13.48	157.19	2993.62	-173.46	-604.76	227.04	159.42	645.97	0.57
3265.00	16.57	151.22	3177.11	-191.17	-648.94	248.67	159.03	694.96	1.82
3456.00	14.69	149.37	3361.04	-212.62	-693.66	274.12	158.44	745.86	1.02
3646.00	16.46	155.12	3544.07	-232.20	-738.81	297.72	158.05	796.54	1.23
3837.00	16.20	163.33	3727.40	-246.79	-788.88	316.75	158.12	850.09	1.22
4027.00	16.72	162.70	3909.61	-257.97	-840.36	332.48	158.41	903.74	0.29
4218.00	18.37	156.81	4091.73	-273.22	-894.27	352.50	158.49	961.24	1.27
4409.00	17.24	156.60	4273.58	-291.55	-947.91	375.59	158.39	1019.61	0.60
4599.00	14.61	156.34	4456.28	-308.10	-995.70	396.39	158.29	1071.70	1.38
4790.00	15.14	150.29	4640.89	-326.24	-1039.42	418.42	158.07	1120.48	0.86
4981.00	17.39	149.51	4824.23	-348.95	-1085.69	445.27	157.70	1173.45	1.19
5171.00	15.57	155.02	5006.43	-369.89	-1133.29	470.45	157.46	1227.05	1.26
5362.00	15.20	161.67	5190.60	-384.42	-1180.30	489.15	157.49	1277.64	0.94
5552.00	16.19	163.71	5373.51	-395.34	-1229.36	504.41	157.69	1328.82	0.59
5744.00	12.94	163.76	5559.32	-404.77	-1275.70	517.93	157.90	1376.83	1.69
5934.00	12.14	161.30	5744.79	-413.65	-1315.05	530.29	158.04	1417.94	0.50
6125.00	11.85	165.10	5931.62	-421.79	-1353.03	541.77	158.18	1457.47	0.44
6315.00	11.27	158.18	6117.77	-430.51	-1389.12	553.69	158.27	1495.40	0.79

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Direction deg	Closure Distance ft	DLS °/100ft
6506.00	12.82	157.79	6304.56	-442.18	-1426.05	568.63	158.26	1535.24	0.81
6696.00	12.42	158.40	6489.98	-454.25	-1464.55	584.12	158.26	1576.74	0.22
6760.00	9.89	158.39	6552.76	-457.79	-1476.06	588.68	158.26	1589.12	3.95
6791.00	10.60	163.38	6583.27	-459.13	-1481.27	590.47	158.27	1594.62	3.68
6823.00	10.45	165.36	6614.73	-460.20	-1486.90	592.05	158.29	1600.43	1.23
6855.00	9.12	177.88	6646.27	-460.56	-1492.24	592.88	158.33	1605.70	7.82
6887.00	8.44	199.48	6677.90	-459.46	-1496.99	592.19	158.42	1609.86	10.45
6918.00	9.55	210.43	6708.52	-457.03	-1501.35	590.13	158.54	1613.17	6.58
6950.00	11.94	220.59	6739.96	-453.12	-1506.16	586.63	158.72	1616.36	9.49
6982.00	14.65	228.45	6771.10	-447.51	-1511.35	581.44	158.96	1619.34	10.17
7013.00	17.17	236.15	6800.92	-440.35	-1516.51	574.71	159.24	1621.75	10.59
7045.00	19.72	243.56	6831.27	-431.18	-1521.54	565.95	159.60	1623.39	10.81
7077.00	21.42	249.11	6861.24	-420.54	-1526.03	555.65	159.99	1624.05	8.07
7109.00	23.16	249.97	6890.84	-408.84	-1530.27	544.28	160.42	1624.18	5.52
7141.00	25.27	249.50	6920.03	-396.18	-1534.82	531.97	160.88	1624.40	6.63
7172.00	26.71	249.15	6947.89	-383.10	-1539.62	519.26	161.36	1624.82	4.68
7204.00	29.08	249.03	6976.17	-368.70	-1544.96	505.28	161.89	1625.49	7.38
7236.00	31.54	249.46	7003.79	-353.16	-1550.68	490.18	162.46	1626.31	7.74

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
7268.00	34.08	248.78	7030.69	-336.49	-1556.86	473.98	163.07	1627.42	8.00
7299.00	37.34	248.99	7055.86	-319.11	-1563.38	457.10	163.70	1628.83	10.54
7331.00	40.14	249.32	7080.81	-299.84	-1570.50	438.39	164.40	1630.54	8.76
7363.00	42.26	249.50	7104.89	-279.54	-1577.92	418.66	165.14	1632.51	6.65
7395.00	43.76	248.35	7128.29	-258.57	-1585.77	398.29	165.90	1635.02	5.29
7427.00	45.83	246.76	7151.00	-237.06	-1594.38	377.46	166.68	1638.45	7.33
7459.00	47.41	246.57	7172.97	-214.99	-1603.59	356.10	167.48	1642.66	4.97
7490.00	49.40	247.67	7193.55	-192.92	-1612.60	334.74	168.27	1646.98	6.96
7522.00	52.31	249.13	7213.75	-169.14	-1621.73	311.67	169.12	1651.41	9.75
7554.00	55.62	250.68	7232.57	-144.16	-1630.61	287.37	170.01	1655.74	11.05
7586.00	58.17	252.02	7250.05	-118.11	-1639.18	261.97	170.92	1659.98	8.71
7617.00	60.53	253.15	7265.85	-92.07	-1647.16	236.53	171.83	1664.05	8.22
7649.00	62.37	254.48	7281.14	-64.49	-1654.99	209.53	172.78	1668.20	6.83
7681.00	64.95	257.11	7295.34	-36.19	-1662.02	181.74	173.76	1671.93	10.90
7713.00	66.86	259.73	7308.41	-7.18	-1667.88	153.12	174.75	1674.89	9.57
7744.00	68.90	261.52	7320.08	21.46	-1672.55	124.79	175.73	1677.20	8.47
7776.00	71.28	263.11	7330.98	51.51	-1676.57	94.98	176.76	1679.26	8.80
7808.00	74.05	264.69	7340.51	82.04	-1679.81	64.61	177.80	1681.06	9.87

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
7840.00	76.11	265.16	7348.75	112.96	-1682.55	33.81	178.85	1682.89	6.56
7871.00	78.40	265.53	7355.59	143.20	-1685.00	3.67	179.88	1685.00	7.49
7903.00	81.58	265.57	7361.15	174.70	-1687.45	-27.74	180.94	1687.67	9.95
7935.00	84.86	264.74	7364.93	206.48	-1690.13	-59.40	182.01	1691.17	10.55
7952.00	86.81	264.49	7366.17	223.43	-1691.72	-76.28	182.58	1693.44	11.58
8051.00	91.21	263.77	7367.88	322.38	-1701.84	-174.72	185.86	1710.78	4.51
8146.00	91.51	264.21	7365.62	417.34	-1711.78	-269.17	188.94	1732.81	0.56
8241.00	91.45	264.46	7363.17	512.30	-1721.15	-363.67	191.93	1759.15	0.27
8337.00	91.72	265.99	7360.52	608.26	-1729.14	-459.30	194.88	1789.10	1.62
8432.00	90.07	267.47	7359.04	703.20	-1734.56	-554.13	197.72	1820.92	2.33
8527.00	88.59	269.78	7360.16	797.99	-1736.84	-649.09	200.49	1854.17	2.90
8623.00	89.60	269.42	7361.68	893.67	-1737.51	-745.07	203.21	1890.52	1.12
8718.00	88.39	270.24	7363.35	988.31	-1737.79	-840.05	205.80	1930.18	1.54
8813.00	88.69	269.85	7365.78	1082.92	-1737.71	-935.02	208.28	1973.30	0.52
8908.00	90.00	270.25	7366.86	1177.54	-1737.63	-1030.01	210.66	2019.97	1.44
9004.00	89.50	270.96	7367.29	1273.08	-1736.61	-1126.01	212.96	2069.71	0.91
9099.00	88.65	271.53	7368.82	1367.50	-1734.55	-1220.97	215.14	2121.18	1.07
9194.00	88.39	271.40	7371.28	1461.86	-1732.12	-1315.91	217.22	2175.29	0.31

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Direction deg	Closure Distance ft	DLS °/100ft
9290.00	89.70	271.44	7372.88	1557.25	-1729.75	-1411.86	219.22	2232.80	1.36
9385.00	88.69	271.81	7374.22	1651.60	-1727.06	-1506.81	221.10	2291.99	1.13
9480.00	89.46	271.59	7375.75	1745.94	-1724.25	-1601.76	222.89	2353.44	0.85
9575.00	89.23	272.19	7376.84	1840.25	-1721.11	-1696.70	224.59	2416.82	0.68
9671.00	90.50	272.50	7377.06	1935.46	-1717.18	-1792.62	226.23	2482.38	1.37
9766.00	89.70	271.75	7376.90	2029.72	-1713.66	-1887.55	227.76	2549.41	1.16
9861.00	90.47	271.49	7376.76	2124.09	-1710.98	-1982.51	229.20	2618.74	0.86
9956.00	90.71	270.68	7375.78	2218.55	-1709.18	-2077.49	230.56	2690.22	0.89
10052.00	91.24	271.56	7374.15	2313.99	-1707.31	-2173.46	231.85	2763.84	1.07
10147.00	90.87	272.52	7372.39	2408.25	-1703.93	-2268.38	233.09	2837.06	1.09
10242.00	90.40	273.25	7371.34	2502.35	-1699.15	-2363.25	234.28	2910.68	0.91
10337.00	87.17	271.12	7373.35	2596.56	-1695.53	-2458.14	235.40	2986.18	4.07
10433.00	86.63	270.47	7378.53	2691.93	-1694.19	-2553.99	236.44	3064.83	0.88
10528.00	87.48	270.01	7383.41	2786.41	-1693.79	-2648.86	237.40	3144.11	1.01
10623.00	88.12	269.71	7387.05	2881.00	-1694.02	-2743.79	238.31	3224.61	0.75
10718.00	89.66	269.22	7388.89	2975.69	-1694.91	-2838.77	239.16	3306.25	1.70
10813.00	90.34	270.47	7388.89	3070.34	-1695.16	-2933.77	239.98	3388.30	1.50
10909.00	90.47	269.31	7388.22	3165.99	-1695.34	-3029.76	240.77	3471.83	1.22

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Direction deg	Closure Distance ft	DLS °/100ft
11004.00	90.64	266.89	7387.30	3260.84	-1698.48	-3124.70	241.47	3556.48	2.55
11099.00	91.75	271.21	7385.32	3355.56	-1700.05	-3219.64	242.16	3640.92	4.69
11194.00	91.75	273.54	7382.42	3449.72	-1696.12	-3314.51	242.90	3723.28	2.45
11290.00	89.50	274.06	7381.38	3544.58	-1689.76	-3410.29	243.64	3805.96	2.41
11385.00	88.92	272.84	7382.69	3638.54	-1684.04	-3505.10	244.34	3888.67	1.42
11488.00	88.35	272.76	7385.14	3740.56	-1679.02	-3607.95	245.04	3979.50	0.56

5" = 100' FEET TVD