



GAMMA RAY

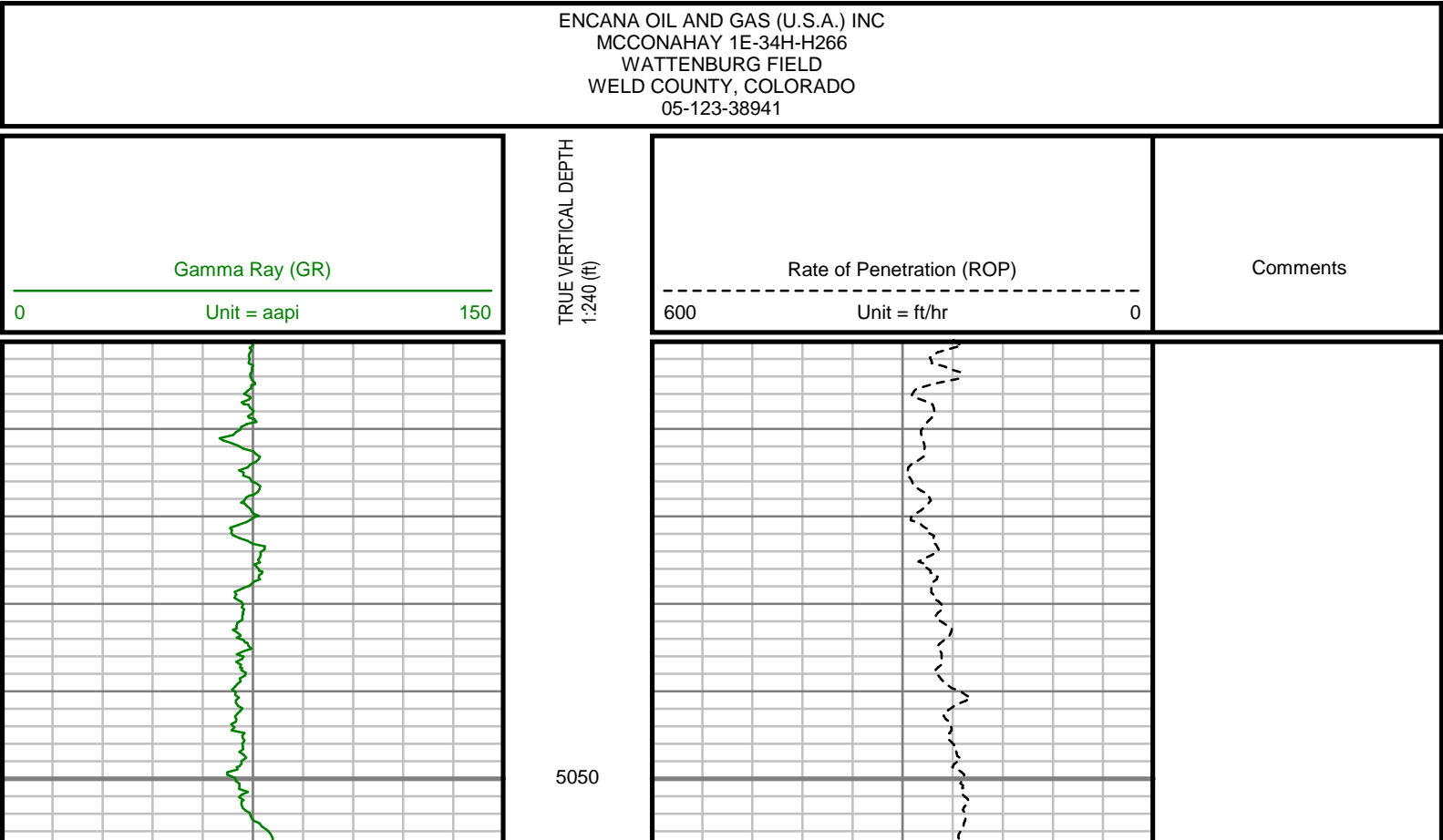
5" = 100' FEET TWD

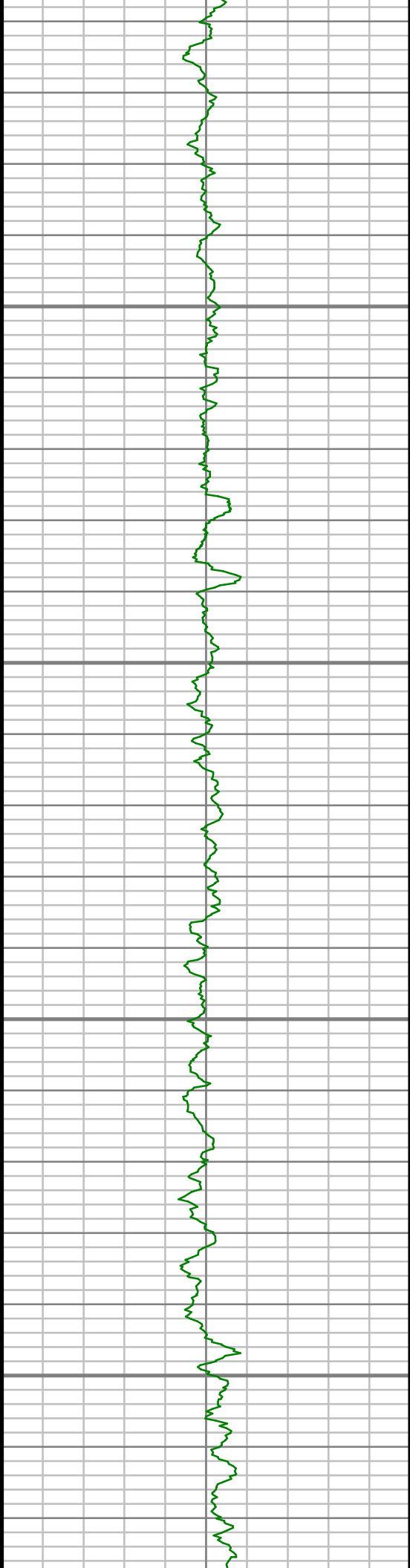
COMPANY : ENCANA OIL AND GAS (U.S.A.) INC WELL : MCCONAHAY 1E-34H-H266 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-38941						COMPANY : ENCANA OIL AND GAS (U.S.A.) INC WELL : MCCONAHAY 1E-34H-H266 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-38941					
DEPTH REF. : RKB						DIRECTIONAL  ROP		OTHER SERVICES			
REF. HEIGHT : 13.000 ft		RKB to Ground Level									
GROUND LEVEL : 5060.000 ft		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	96	1125		0 - 11	0	1125					
8.75	1125	7787		11 - 84	1125	7787					
6.125	7787	11387		84 - 92	7787	11387					
CASING RECORD											
CASING SIZE in	FROM ft	TO ft									
9.625	0	1112									
7	0	7777									
				DRILLING CO.: ENSIGN RLG: 124							
				LMD UNIT NO.: C70-EW4#8DISTRICT: CASPER							
				SPUD DATE: 04/25/2014							
				LMD START DATE: 04/27/2014				DEPTH: 1125 ft			
				LMD END DATE: 05/03/2014				DEPTH: 11387 ft			
				TOTAL DEPTH: 11387 ft							

Run Data						
RUN NUMBER	1	2	3			
START DATE	04/26/2014	04/27/2014	05/01/2014			
START TIME	0030	0800	0730			
END DATE	04/27/2014	04/30/2014	05/03/2014			
END TIME	0900	0530	1200			
DEPTH IN (ft)	96	1125	7787			
DEPTH OUT (ft)	1125	7787	11387			
LOG TOP (ft)	-	1125	7742			
LOG BOTTOM (ft)	-	7742	11387			
HOLE SIZE (in)	12.25	8.75	6.125			
MUD DATA @ (ft)	1125	7787	11387			
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED			
DENSITY (lb / gal)	9.7	10.4	10.10			
VISCOSITY (s / qt)	32	41	41			
pH	2	8.0	8.3			
FLUID LOSS (cm3 / 30)	8	-	-			
SALINITY (ppm)	-	-	-			
Rm (ohmm @ deg F)	-	-	-			
Rmf (ohmm @ deg F)	-	-	-			
MAX TEMP (deg F)	86	165	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 (U.S.A.) INC PRODUCTION AFE# 13178660
SCIENTIFIC DRILLING INTERNATIONAL JOB# 143321
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 = 1011 / MWD EYE = 862
BIT TO SENSOR OFFSET: SURVEY = 60.01 FT.
RUN #2: MWD / GAMMA RAY / PROPAGATION RESISTIVITY LOGGING RUN
SENSORS S/N: PULSER = 128-376 / CONT = 831 / MWD EYE = 0429 / GAMMA RAY = 1074 / PRT = 337
BIT TO SENSOR OFFSETS: SURVEY = 66.28 FT. / GAMMA RAY = 53.03 FT. / RESISTIVITY = 45.84 FT.
RUN #3: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-252 / CONT = 114 / MWD EYE = 0862 / GAMMA RAY = 1050
BIT TO SENSOR OFFSETS: SURVEY = 65.22 FT. / GAMMA RAY = 51.97 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.



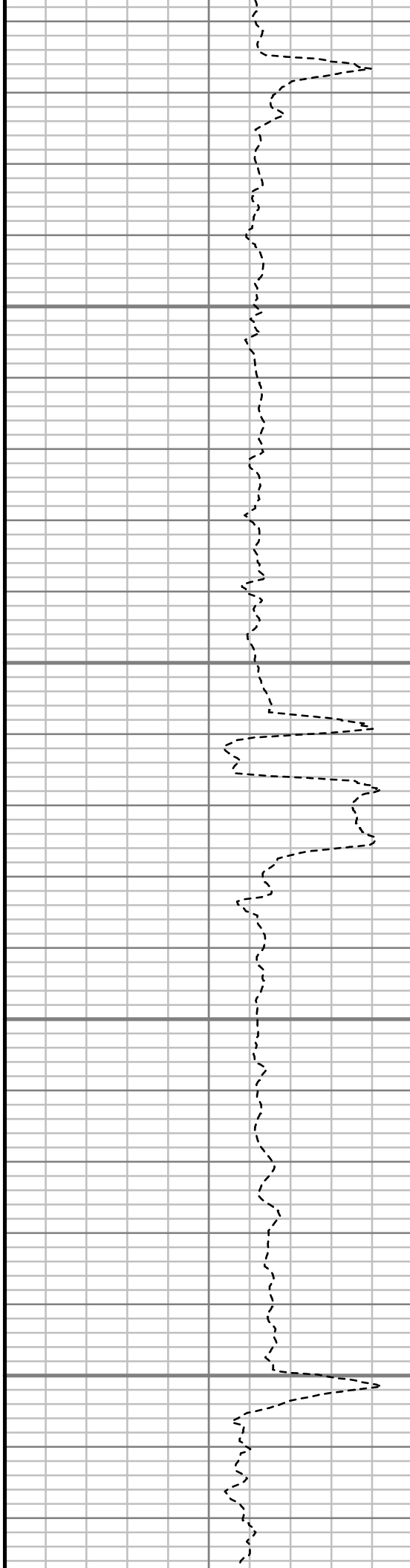


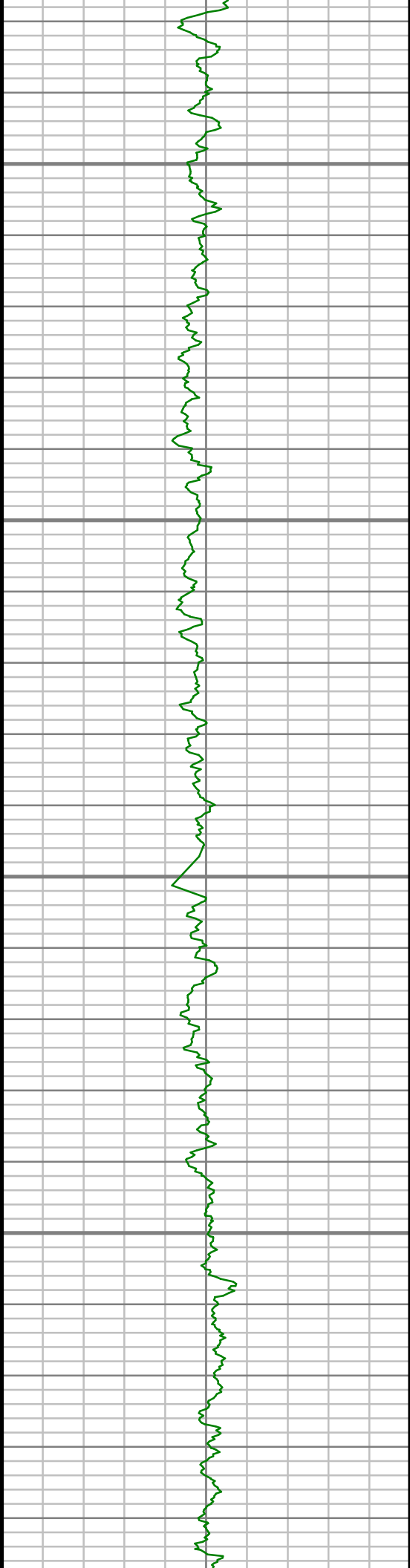
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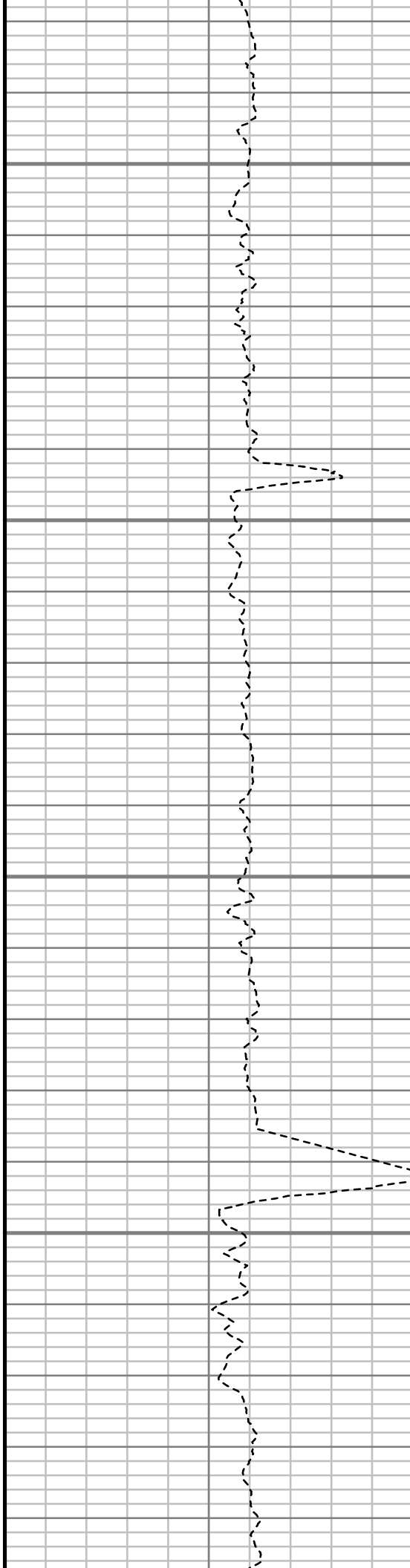


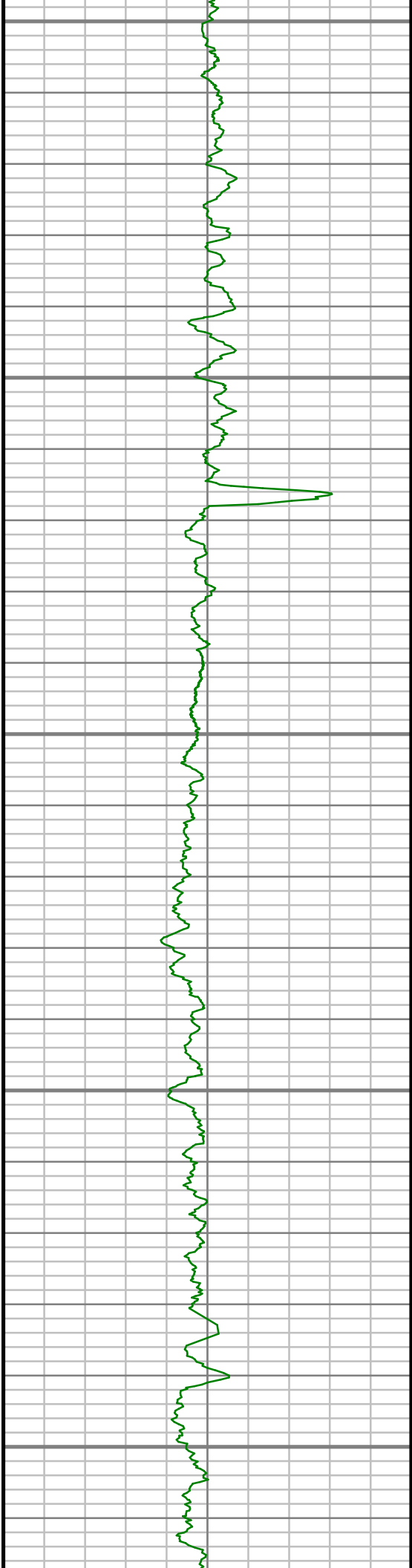
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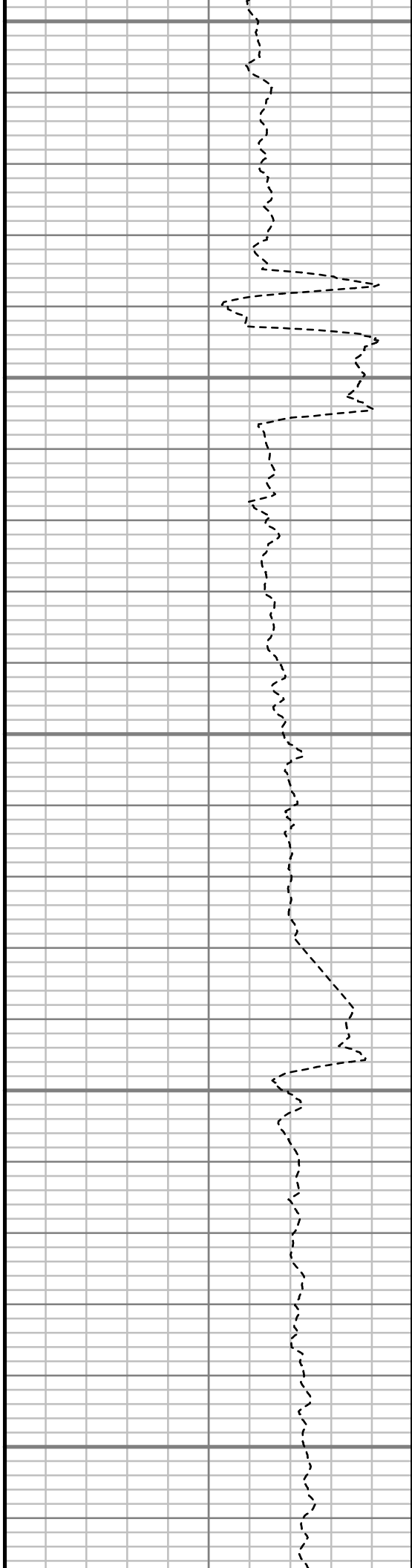
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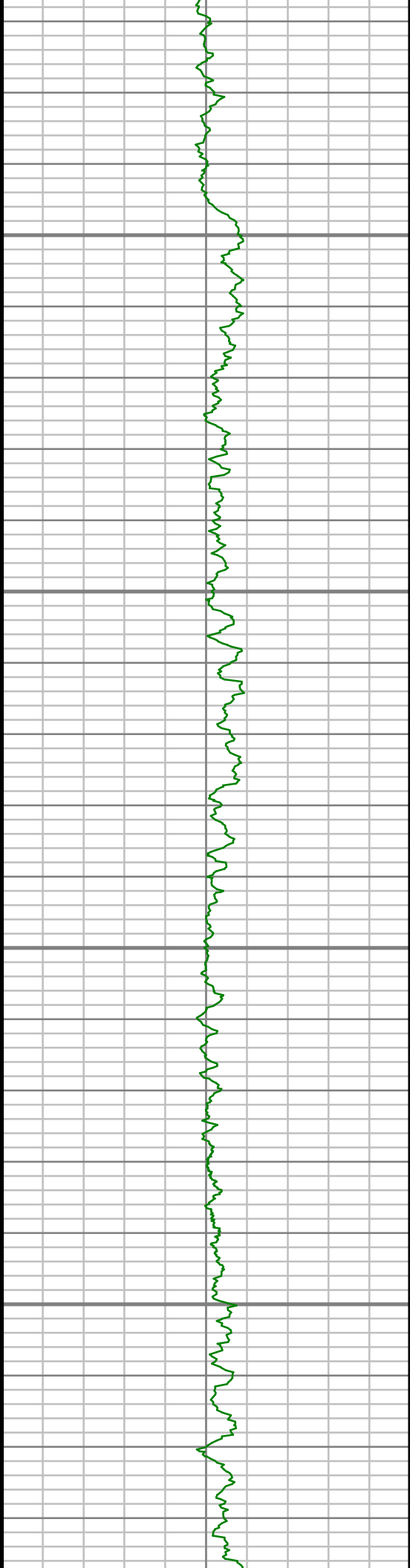
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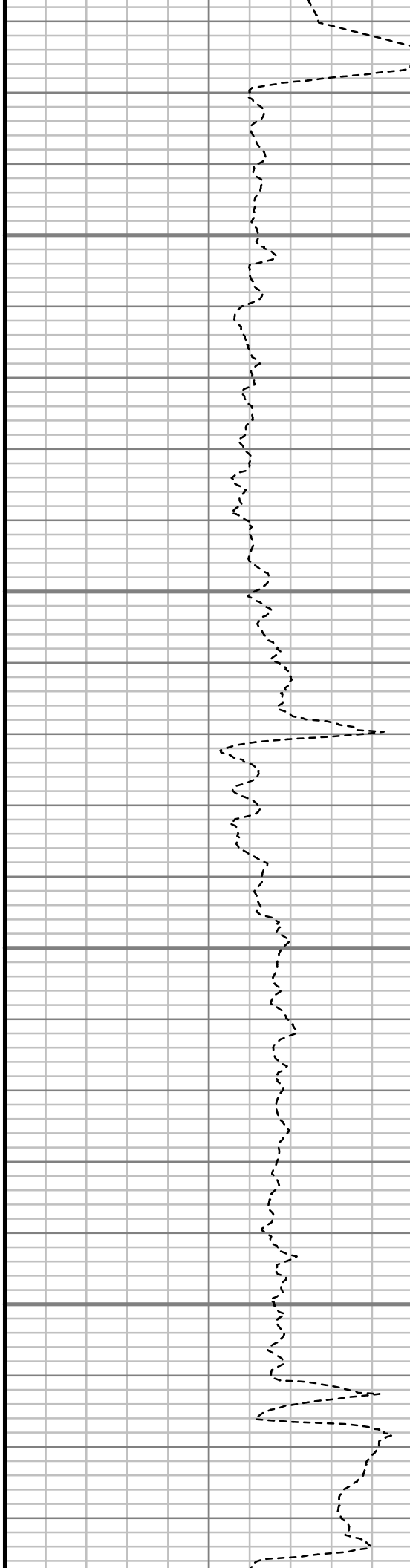


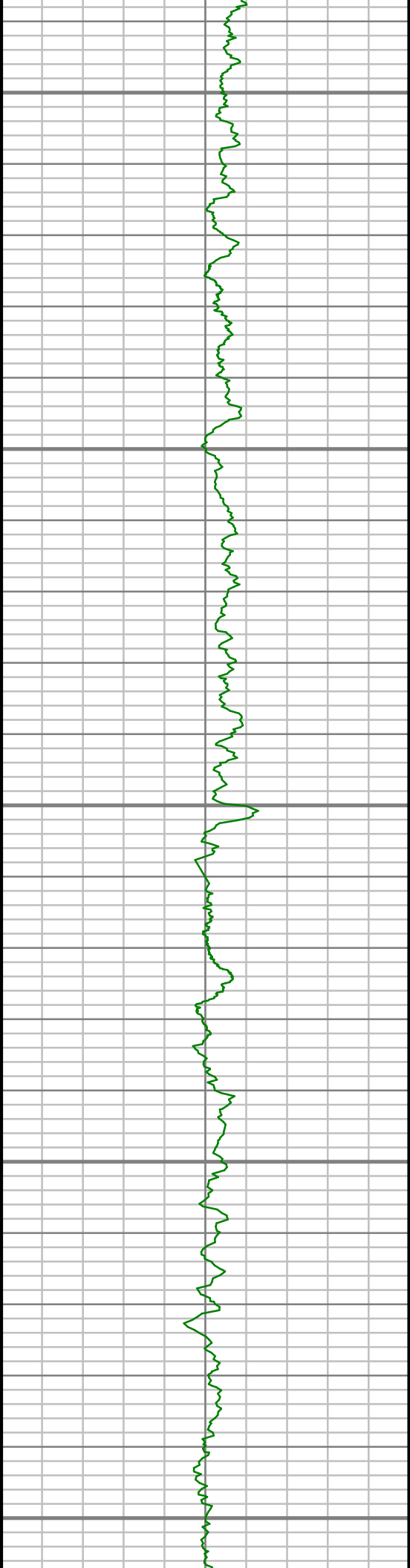
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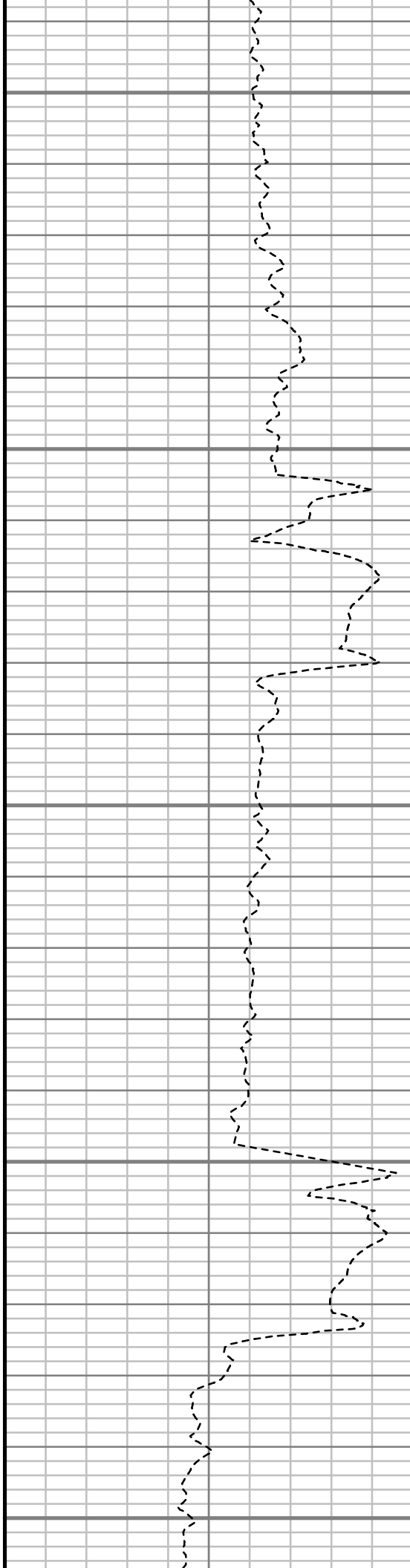
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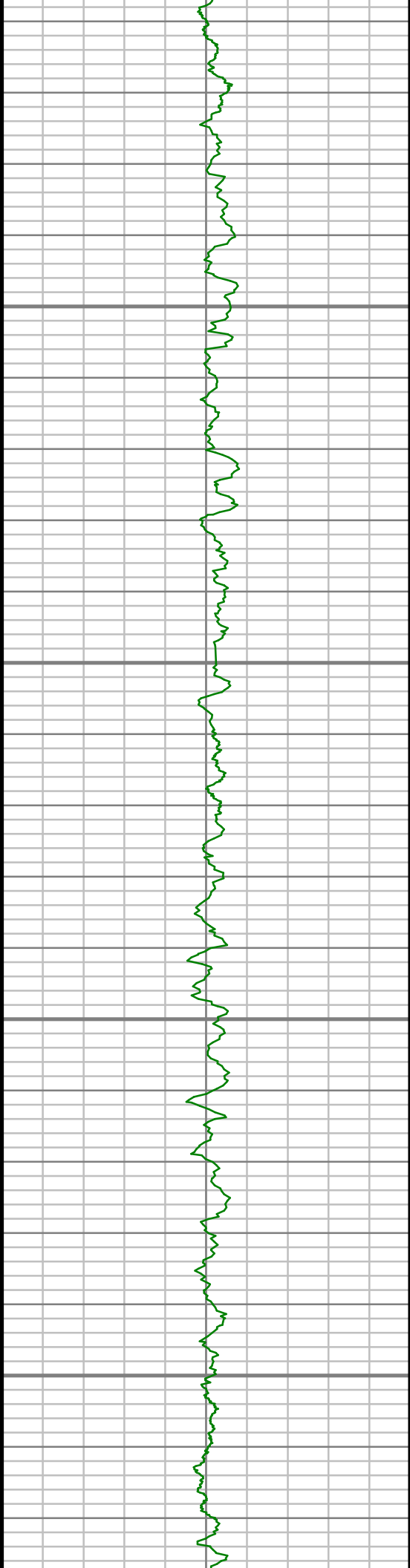
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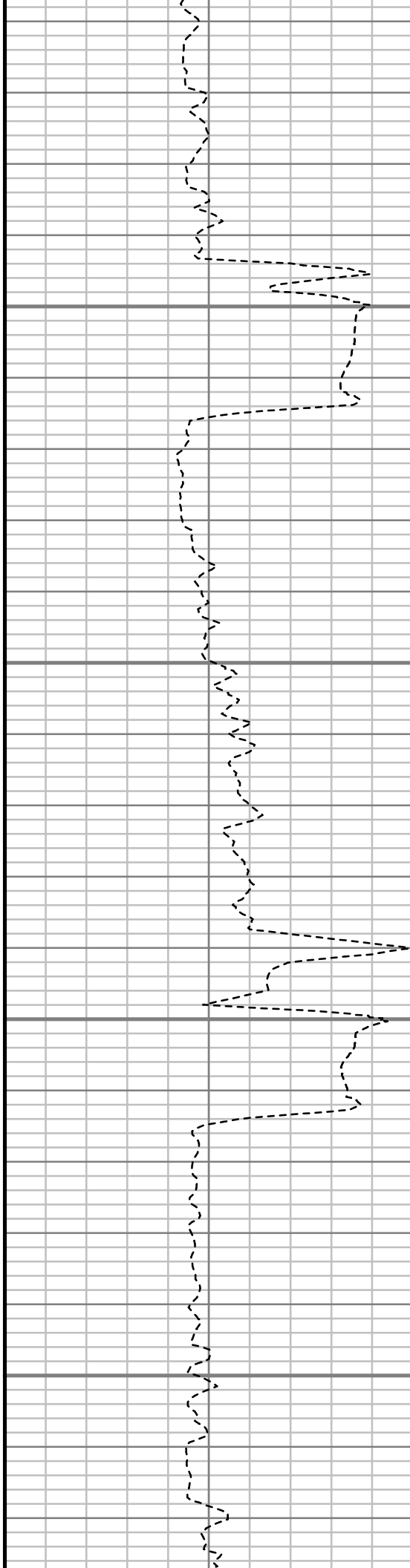


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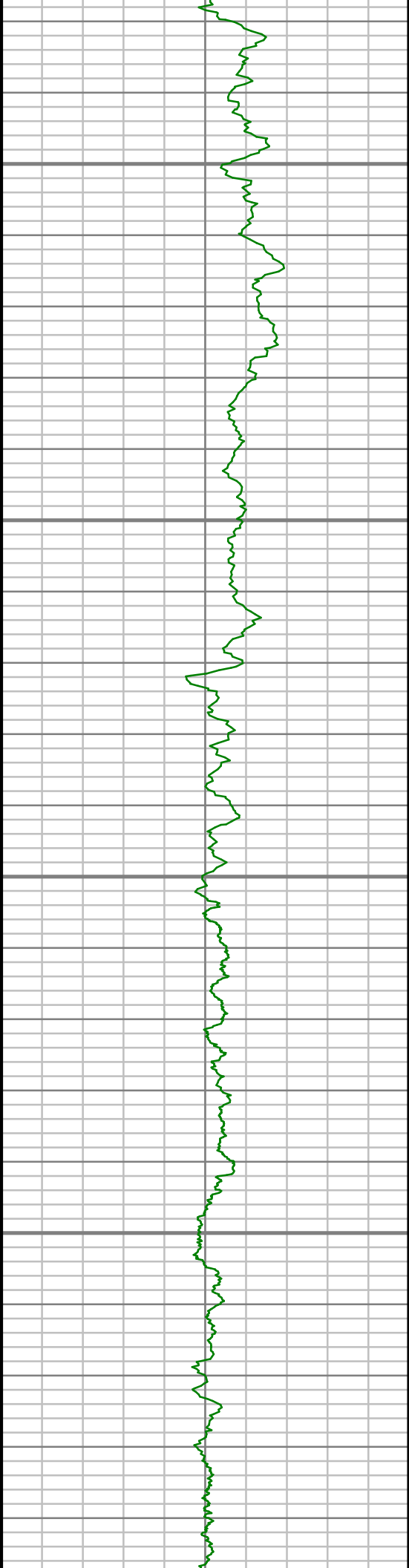
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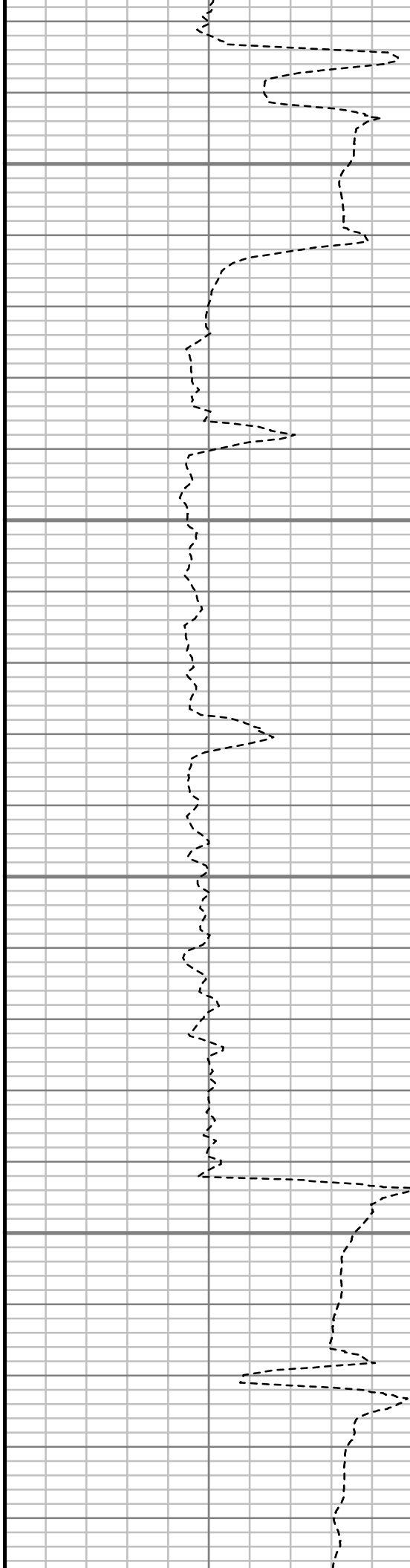


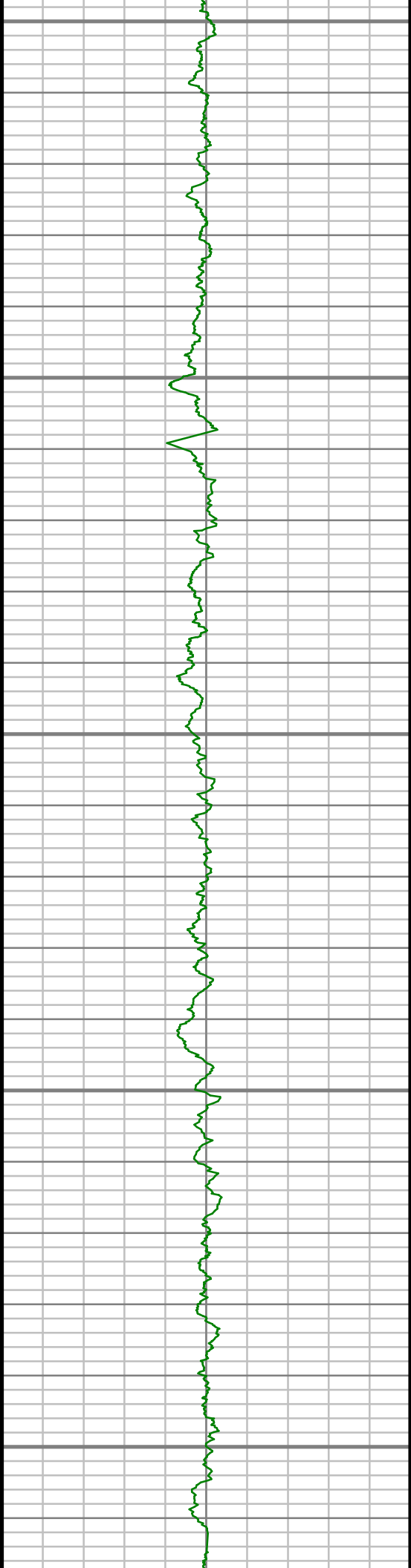
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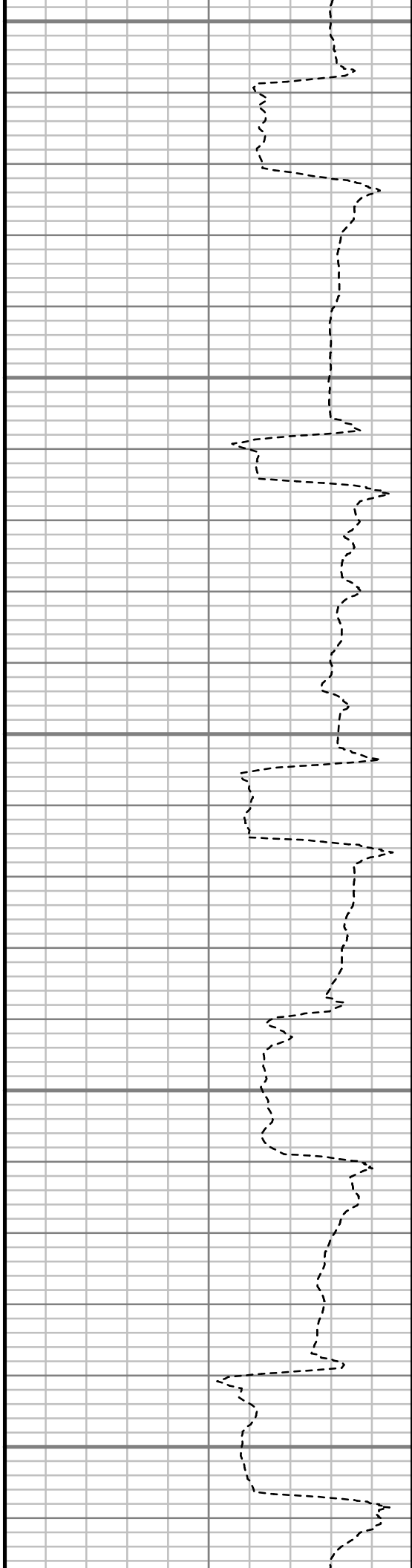
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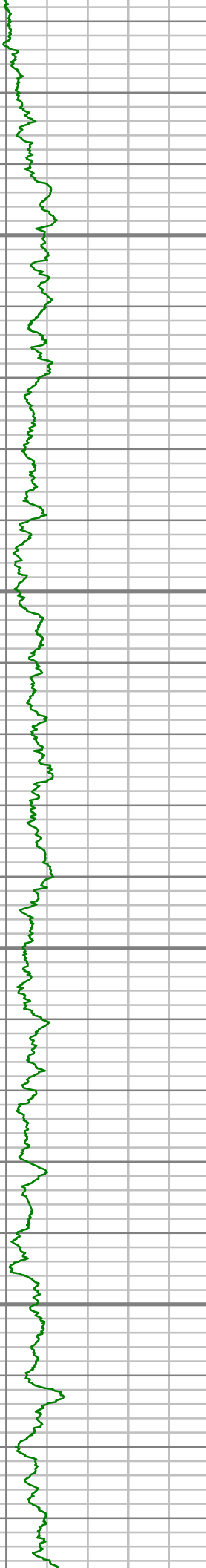
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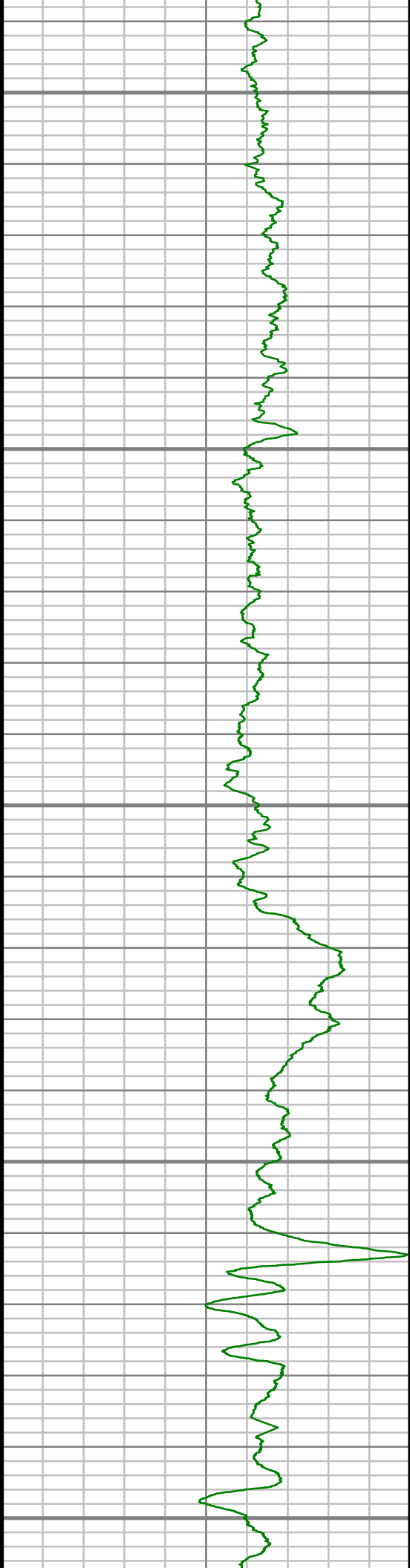
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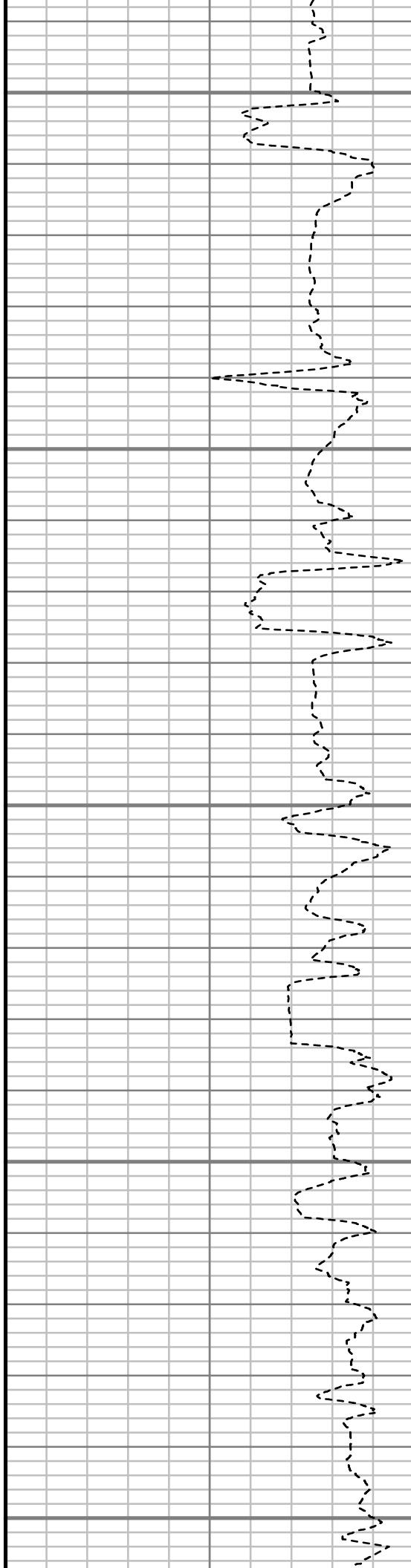
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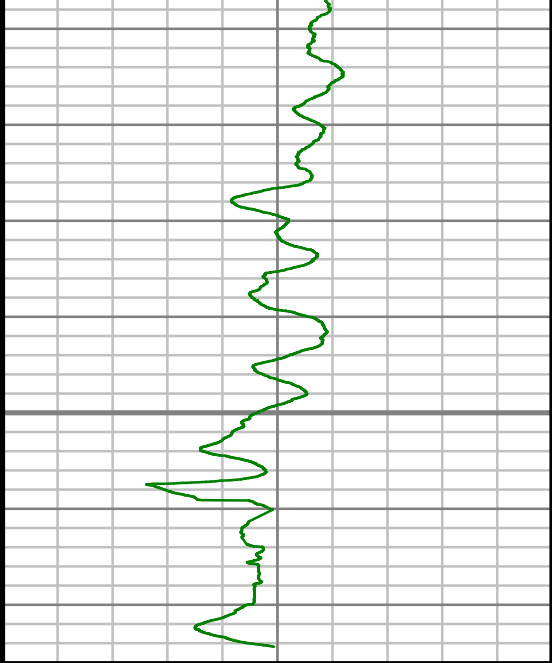
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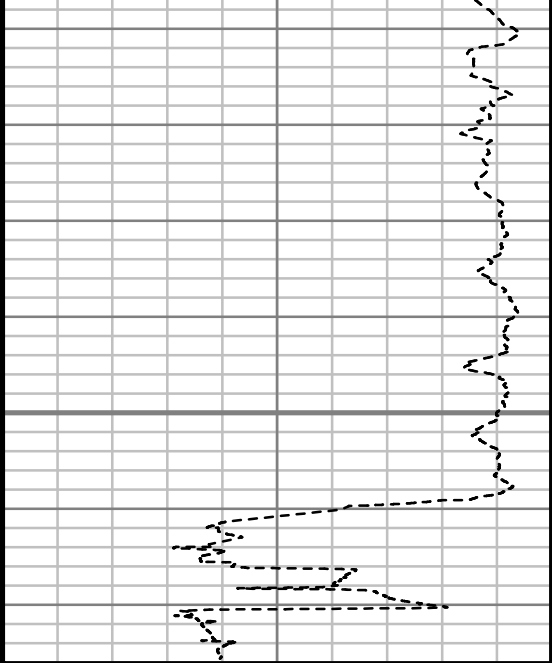




Gamma Ray (GR)		
0	Unit = aapi	150

7300

TRUE VERTICAL DEPTH  
1:240 (ft)



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

Comments
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## MWD Survey Report

Well Location	McCONAHAY
Well Name	McCONAHAY 1E-34H-H266
Survey Date	4/25/2014
Latitude	40°5'52.980"N
Longitude	104°45'27.828"W
Btotal	52586 nT
Dip	66.70 deg
Magnetic Declination	8.50 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (13.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 283.96Azim (deg)
Operator(s)	ALI NEJAD, JEFFREY SMITH, MARK 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
467.00	2.55	28.68	466.85	-2.64	9.10	4.98	28.68	10.38	0.55
731.00	7.51	34.56	729.75	-10.21	28.48	17.60	31.71	33.47	1.89
824.00	9.96	36.22	821.66	-15.39	39.97	25.80	32.84	47.58	2.64
917.00	9.93	34.71	913.27	-21.28	53.05	35.12	33.50	63.62	0.28
1010.00	10.61	32.82	1004.78	-26.89	66.84	44.32	33.55	80.20	0.81
1063.00	10.07	30.58	1056.91	-29.79	74.93	49.32	33.36	89.70	1.26
1279.00	8.77	36.76	1270.00	-41.58	104.38	68.79	33.39	125.01	0.76
1465.00	9.97	40.10	1453.52	-54.16	128.05	87.64	34.39	155.17	0.71
1651.00	11.63	45.09	1636.22	-70.95	153.60	111.29	35.93	189.69	1.03
1837.00	12.11	43.38	1818.25	-90.23	181.02	137.97	37.31	227.61	0.32
2025.00	10.46	39.15	2002.61	-107.18	208.59	162.29	37.88	264.29	0.98
2216.00	9.95	30.06	2190.60	-119.13	236.32	181.50	37.53	297.97	0.88
2406.00	10.96	32.08	2377.45	-129.30	265.82	199.31	36.86	332.24	0.56
2597.00	9.81	29.51	2565.32	-139.31	295.35	216.97	36.30	366.48	0.65
2787.00	10.09	29.36	2752.46	-148.07	323.94	233.10	35.74	399.09	0.15
2978.00	9.37	30.07	2940.71	-156.82	351.97	249.09	35.29	431.20	0.39
3169.00	9.88	43.16	3129.05	-169.13	377.37	268.08	35.39	462.90	1.17
3359.00	10.52	43.61	3316.04	-185.66	401.82	291.19	35.93	496.24	0.34

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
3549.00	10.54	38.57	3502.85	-201.47	427.96	313.99	36.27	530.79	0.48
3740.00	9.56	35.67	3690.92	-214.61	454.49	334.12	36.32	564.09	0.58
3931.00	10.15	34.14	3879.10	-226.28	481.30	352.81	36.24	596.76	0.34
4121.00	8.90	21.56	4066.50	-234.00	508.84	367.61	35.85	627.74	1.27
4312.00	9.16	33.27	4255.15	-240.97	535.29	381.37	35.47	657.25	0.97
4503.00	11.08	35.21	4443.17	-252.65	562.99	400.29	35.41	690.79	1.02
4693.00	9.65	33.10	4630.07	-264.49	591.25	419.52	35.36	724.96	0.78
4884.00	11.32	34.02	4817.87	-276.17	620.21	438.75	35.28	759.71	0.88
5074.00	10.88	39.52	5004.32	-290.31	649.50	460.60	35.34	796.25	0.60
5265.00	9.90	42.89	5192.18	-306.03	675.44	483.25	35.58	830.51	0.61
5455.00	9.16	41.24	5379.56	-320.86	698.77	504.33	35.82	861.76	0.41
5646.00	8.35	36.72	5568.34	-333.19	721.32	522.64	35.93	890.76	0.55
5837.00	9.22	31.14	5757.10	-343.08	745.53	538.85	35.86	919.88	0.63
6028.00	8.63	30.74	5945.79	-351.74	770.95	554.09	35.71	949.41	0.31
6218.00	8.52	39.51	6133.67	-361.93	794.07	570.34	35.69	977.67	0.69
6409.00	8.08	44.21	6322.67	-374.79	814.61	588.70	35.85	1005.06	0.43
6599.00	5.96	31.91	6511.25	-384.56	832.55	603.23	35.93	1028.12	1.36
6646.00	4.38	10.49	6558.06	-385.20	836.39	604.84	35.87	1032.18	5.25

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
6695.00	6.36	328.46	6606.86	-383.15	840.55	603.76	35.69	1034.92	8.71
6742.00	9.12	299.35	6653.44	-377.70	844.59	599.15	35.35	1035.53	10.02
6790.00	11.46	279.88	6700.68	-369.28	847.28	591.14	34.90	1033.11	8.66
6837.00	13.91	272.79	6746.53	-359.08	848.35	580.90	34.40	1028.17	6.18
6885.00	16.56	272.87	6792.84	-346.70	848.98	568.30	33.80	1021.63	5.51
6932.00	19.28	275.39	6837.56	-332.46	850.04	553.88	33.09	1014.57	6.02
6980.00	23.03	275.83	6882.32	-315.32	851.74	536.65	32.21	1006.70	7.82
7027.00	26.61	276.61	6924.97	-295.77	853.89	517.04	31.20	998.22	7.65
7075.00	30.05	276.57	6967.21	-273.19	856.50	494.42	30.00	988.96	7.16
7122.00	33.64	273.76	7007.14	-248.70	858.70	469.73	28.68	978.78	8.28
7171.00	38.52	273.00	7046.73	-220.34	860.39	440.93	27.13	966.79	9.99
7218.00	43.27	273.67	7082.24	-190.11	862.19	410.22	25.44	954.80	10.16
7266.00	47.29	274.50	7116.01	-156.51	864.63	376.21	23.51	942.93	8.47
7313.00	51.65	274.57	7146.55	-121.28	867.45	340.61	21.44	931.93	9.28
7361.00	54.06	274.36	7175.53	-83.54	870.43	302.46	19.16	921.48	5.02
7408.00	56.84	275.56	7202.18	-45.31	873.78	263.90	16.81	912.76	6.29
7457.00	60.85	273.18	7227.53	-3.98	876.95	222.10	14.21	904.64	9.16
7504.00	65.67	273.54	7248.67	37.26	879.41	180.22	11.58	897.69	10.28

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
7552.00	69.67	272.97	7266.91	80.88	881.93	135.90	8.76	892.34	8.41
7599.00	74.87	273.22	7281.22	124.83	884.35	91.21	5.89	889.04	11.07
7648.00	77.66	271.85	7292.85	171.48	886.45	43.66	2.82	887.52	6.31
7695.00	81.95	270.11	7301.17	216.54	887.24	-2.57	359.83	887.24	9.83
7724.00	84.76	269.26	7304.53	244.45	887.08	-31.37	357.97	887.63	10.11
7861.00	91.11	271.04	7309.47	377.33	887.44	-168.21	349.27	903.24	4.81
7956.00	92.35	270.84	7306.60	469.84	889.00	-263.15	343.51	927.13	1.32
8051.00	92.29	269.63	7302.75	562.05	889.39	-358.07	338.07	958.76	1.28
8147.00	92.26	270.86	7298.94	655.24	889.79	-453.99	332.97	998.92	1.29
8242.00	89.39	271.68	7297.58	747.90	891.90	-548.95	328.39	1047.30	3.13
8337.00	88.29	271.97	7299.50	840.76	894.93	-643.88	324.27	1102.49	1.21
8432.00	88.35	272.84	7302.28	933.79	898.91	-738.75	320.59	1163.53	0.92
8528.00	88.18	273.30	7305.18	1028.02	904.05	-834.57	317.29	1230.37	0.52
8623.00	89.03	272.43	7307.49	1121.22	908.81	-929.42	314.36	1299.91	1.27
8718.00	88.99	271.60	7309.14	1214.15	912.15	-1024.35	311.68	1371.61	0.87
8813.00	89.90	271.21	7310.06	1306.87	914.49	-1119.32	309.25	1445.39	1.04
8909.00	90.27	270.57	7309.92	1400.38	915.98	-1215.30	307.01	1521.84	0.77
9004.00	90.34	268.94	7309.42	1492.47	915.58	-1310.30	304.94	1598.49	1.72

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
9099.00	91.65	268.88	7307.77	1584.20	913.76	-1405.26	303.03	1676.22	1.39
9195.00	90.97	269.26	7305.57	1676.95	912.20	-1501.22	301.28	1756.64	0.81
9290.00	89.73	269.71	7304.98	1768.93	911.35	-1596.22	299.72	1838.06	1.39
9385.00	89.43	269.84	7305.68	1861.03	910.98	-1691.21	298.31	1920.96	0.34
9480.00	89.43	270.81	7306.63	1953.35	911.51	-1786.21	297.04	2005.34	1.02
9576.00	89.60	270.35	7307.44	2046.74	912.48	-1882.20	295.86	2091.72	0.51
9671.00	91.24	270.79	7306.75	2139.15	913.42	-1977.19	294.80	2177.98	1.79
9766.00	90.77	270.25	7305.08	2231.53	914.28	-2072.17	293.81	2264.90	0.75
9862.00	88.49	270.11	7305.70	2324.76	914.57	-2168.16	292.87	2353.16	2.39
9957.00	88.83	270.65	7307.93	2417.07	915.20	-2263.13	292.02	2441.18	0.67
10052.00	88.89	270.23	7309.82	2509.42	915.93	-2358.11	291.23	2529.74	0.44
10147.00	89.33	269.03	7311.29	2601.45	915.31	-2453.09	290.46	2618.29	1.35
10243.00	89.26	269.21	7312.48	2694.24	913.84	-2549.07	289.72	2707.93	0.20
10338.00	90.27	268.94	7312.87	2786.05	912.30	-2644.06	289.04	2797.02	1.10
10433.00	90.07	269.40	7312.59	2877.91	910.93	-2739.05	288.40	2886.55	0.53
10528.00	88.66	270.50	7313.65	2970.07	910.85	-2834.04	287.82	2976.81	1.89
10623.00	88.86	270.17	7315.71	3062.38	911.40	-2929.02	287.28	3067.54	0.41
10719.00	90.20	270.17	7316.50	3155.60	911.69	-3025.01	286.77	3159.41	1.40



MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	"/100ft
10814.00	89.73	270.51	7316.56	3247.93	912.25	-3120.01	286.30	3250.64	0.61
10909.00	89.26	271.20	7317.39	3340.45	913.67	-3214.99	285.86	3342.30	0.88
11004.00	89.53	270.71	7318.40	3433.01	915.25	-3309.97	285.46	3434.18	0.58
11099.00	89.66	270.17	7319.06	3525.38	915.98	-3404.97	285.06	3526.02	0.59
11195.00	88.15	270.71	7320.89	3618.69	916.72	-3500.94	284.67	3618.98	1.68
11290.00	88.93	270.79	7323.32	3711.15	917.96	-3595.90	284.32	3711.22	0.82
11320.00	88.62	271.00	7323.96	3740.37	918.43	-3625.89	284.21	3740.40	1.22

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

5" = 100' FEET TVD