

Rig: **ISDL 453** State: **VICTORIA**

Rig: ISDL 453 Field: Flounder GDA 94 Location: Bass Strait Well: FLA-A2a Company: EESO Australia Pty. Ltd.	Gamma Ray Service 1:200 True Vertical Depth Real Time Log									
	Location	Total depth: 2803.0 m				Elevation	K.B. 33.85 m			
		Spud date: 03-Sep-03					G.L. -93.0 m			
		Runs: 1 To 5					D.F. 33.85 m			
		Permanent datum: Mean Sea Level				Elev.: 93.0 m				
		Log measured from: Drill Floor				33.85 m above Perm. datum				
	Depth reference: Driller's Depth									
	API serial no.		Y = 5,758,713.1m X = 625,838.7m			Longitude E148°26'21.74		Latitude S38°18'39.11		
	Depth logged: 1362.0 m To 2784.9 m		Mag decl: 13.22 deg.			Other services:				
	Date logged: 04-Sep-03To 15-Sep-03		Mag dip: -68.76 deg.			Directional Drilling, DNI				
Bore hole record				Casing record						
Hole size	from	to	Size	Density	from	to				
13.375 in.	Surface	981.0 m	13.375 in.	54.50 lbm/ft	Surface	981.0 m				
9.625 in.	Surface	1350.0 m	9.625 in.	47.00 lbm/ft	Surface	1350.0 m				
8.5 in.	1350.0 m	2803.0 m								
Mud record			Borehole deviation record							
Type	from	to	Min	Max	from	to				
KCI/PHPA/Glycol	1362.0 m	2803.0 m	8.9 deg.	16.5 deg.	1350.0 m	1900.1 m				
			10.8 deg.	38.4 deg.	1900.1 m	2359.0 m				
			38.4 deg.	43.9 deg.	2359.0 m	2726.9 m				
			37.0 deg.	40.6 deg.	2726.9 m	2803.0 m				
Surface equipment		Software record								
Unit	OLU-FB-924	IDEAL Wis	ID8_0c_07							
Depth system	DES-98071	SPM	HSPM8_0c_13							
		LWD								
		MWD	v7.0c00/v6.1c00							

Bit Run Summary

Run number	1	2	3	4	5
Bit size	8.5	8.5	8.5	8.5	8.5
Bit start depth	m 1362.6	2243.0	2391.0	2637.0	2748.0
Bit end depth	m 2243.0	2391.0	2637.0	2748.0	2803.0
Top interval logged	m 1343.9	2224.9	2372.9	2618.9	2729.9
Bottom interval logged	m 2225.0	2372.9	2618.9	2729.9	2784.9
Begin log: time	08:00	7:45	4:30	17:38	23:00
Begin log: date	04-Sep-03 07-Sep-03 10-Sep-03 12-Sep-03 14-Sep-03				
End log: time	15:46	16:30	21:20	23:00	10:13
End log: date	07-Sep-03 09-Sep-03 11-Sep-03 13-Sep-03 15-Sep-03				
Mud data					
Depth	m 2239.0	2389.0	2637.0	2747.0	2800.0

Type		KCl/PHPA/Glycol	KCl/PHPA/Glycol	KCl/PHPA/Glycol	KCl/PHPA/Glycol	KCl/PHPA/Glycol					
Mud weight	ppg	9.55	9.4	9.55	9.55	9.45					
Solids	%wt	4.7	4.3	5.6	5.3	5.2					
Chlorides	mg/L	47,500	46,000	43,000	46,500	42,500					
Rm											
Rmf											
Rmc											
Potassium											
Environmental data											
GR											
Mud weight	ppg	9.55	9.4	9.55	9.55	9.45					
Bit size	in	8.5	8.5	8.5	8.5	8.5					
Resistivity											
Neutron porosity											
Hole Size											
Mud weight											
Temperature											
Mud salinity											
Formation salinity											
Recording rate 1	SEC										
Recording rate 2	SEC										
Filtering GR		3pt	3pt	3pt	3pt	3pt					
Filtering density											
Filtering Neutron											
Company representative		G.Campbell	B.Steel								
Anadrill personnel		J.Dolan	O.Radicevic	C.Soper	B.Manjenic	D.Hastie					




DISCLAIMER

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OTHER SERVICES FOR RUN1	OTHER SERVICES FOR RUN2	OTHER SERVICES FOR RUN3
Gamma Ray Directional Drilling Directional Surveys	Gamma Ray Directional Drilling Directional Surveys	Gamma Ray Directional Drilling Directional Surveys
REMARKS: RUN NUMBER 1 8-1/2 in. hole was drilled from 1362.6m to 2243.0m. Depth is referenced to the Driller's Depth. Gamma Ray is corrected for Tool Size, Bit Size, and Mud Weight. Mud type is KCl/PHPA/Glycol. Gamma Ray logged behind casing to 1351m. POOH due to bit change.	REMARKS: RUN NUMBER 2 8-1/2 in. hole was drilled from 2243.0m to 2391.0m. Depth is referenced to the Driller's Depth. Gamma Ray is corrected for Tool Size, Bit Size, and Mud Weight. Mud type is KCl/PHPA/Glycol. POOH due to bit change.	REMARKS: RUN NUMBER 3 8-1/2 in. hole was drilled from 2391.0m to 2637.0m. Depth is referenced to the Driller's Depth. Gamma Ray is corrected for Tool Size, Bit Size, and Mud Weight. Mud type is KCl/PHPA/Glycol. POOH due to bit change.

Thank you for using Schlumberger.

7.9

 Smith PD 8–1/2 in S73PX S/N: Maximum string diam All lengths in	 Smith Inse 8–1/2 in FG20 S/N: M Maximum string diam All lengths in	 Smith Inse 8–1/2 in FG20 S/N: M Maximum string diam All lengths in
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OTHER SERVICES FOR RUN4 Gamma Ray Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN5 Gamma Ray Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 4 8–1/2 in. hole was drilled from 2637.0m to 2748.0m. Depth is referenced to Driller’s Depth. Gamma Ray is corrected for Tool Size, Bit Size, and Mud Weight. Mud type is KCI/PHPA/Glycol. No Gamma Ray data between 2619.0 to 2622.0m due to loss of communication between surface computers. POOH for bit change. Thank you for using Schlumberger.	REMARKS: RUN NUMBER 5 8–1/2 in. hole was drilled from 2748.0m to 2803.0m. Depth is referenced to Driller’s Depth. Gamma Ray is corrected for Tool Size, Bit Size, and Mud Weight. Mud type is KCI/PHPA/Glycol. POOH due to TD of FLA–A2a. Thank you for using Schlumberger.	REMARKS: RUN NUMBER

EQUIPMENT DESCRIPTION		
RUN4	RUN5	RUN

DOWNHOLE EQ

6-3/4 in. Pow
MDC: 06
MEC: 61
MDI: 62
MGR: 29
DH software:

D&I
GR

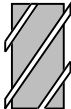


18.7
— 18.1

6-1/2 in. P
S/N:GS9



6-1/8 in. NM
S/N: DOTS
Stab OD: 8



6-1/2 in. P
S/N: ANA9



6-3/4 in. Power
A675XP
S/N: 02
1.15 deg.
8-3/8 in. Moto



DOWNHOLE E

23.06-3/4 in. Pow
MDC: 06
MEC: 61
MDI: 62
MGR: 29
DH software:

D&I
GR



18.7
— 18.1

14.86-1/2 in. P
S/N:GS9



12.26-1/8 in. NM
S/N: DOTS
Stab OD: 8



10.66-1/2 in. P
S/N: ANA9



7.936-3/4 in. Power
A675XP
S/N: 02
1.15 deg.
8-3/8 in. Moto



23.0

14.8

12.2

10.6

7.93

Smith Inse

8-1/2 in

FG20 S/N: M

Maximum string diam

All lengths in



0.00 0.25

Smith Inse

8-1/2 in

GFi30 S/N: M

Maximum string diam

All lengths in



0.00 0.25

FLA-A2a RT 1:200TVD

IDEAL Version: ID8_OC_07 <TVD> Vertical Scale: 1:200

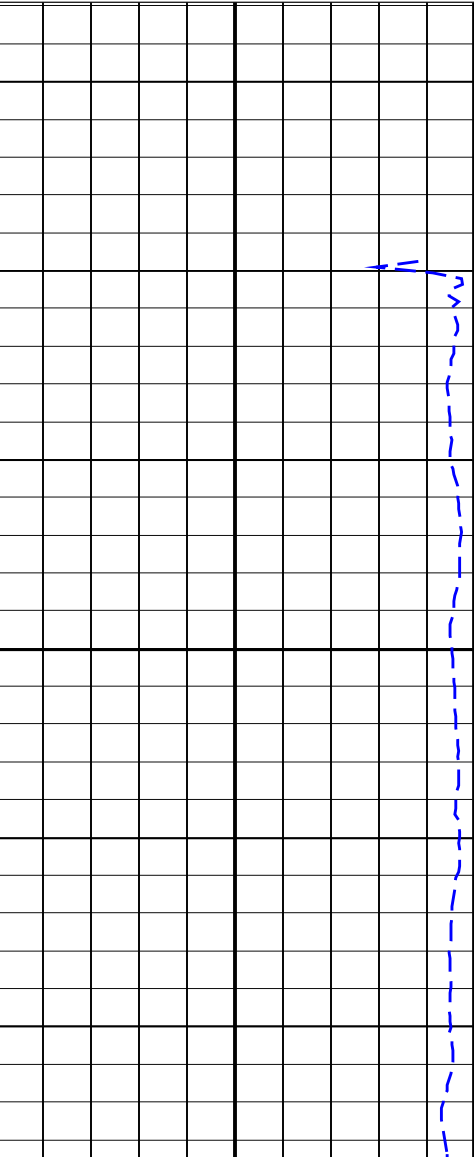
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(M/HR)

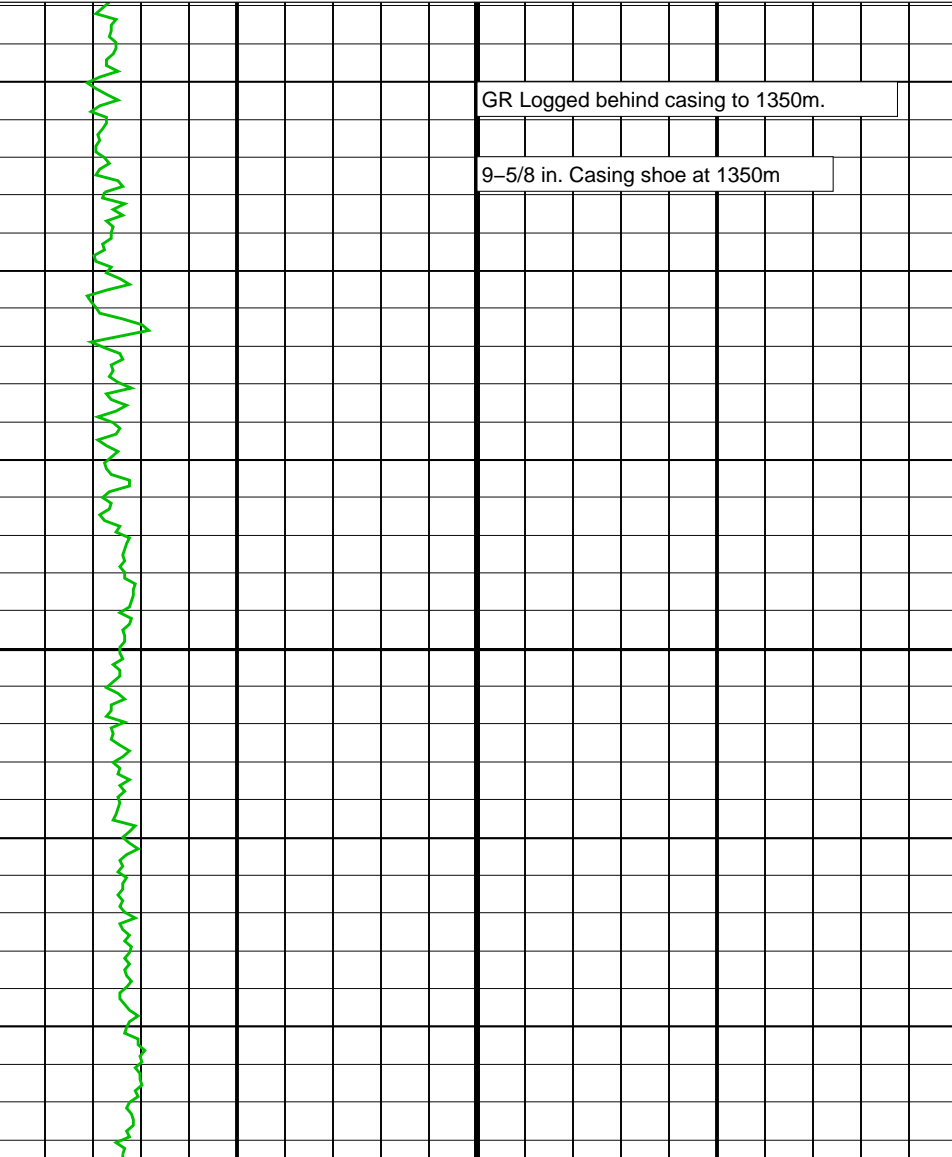
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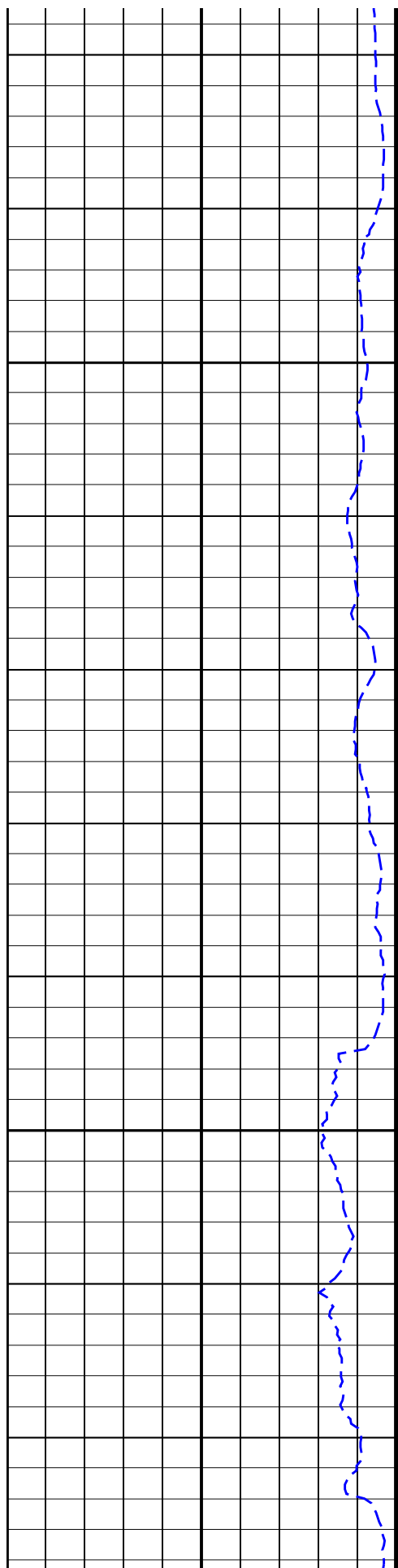
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(GAPI)

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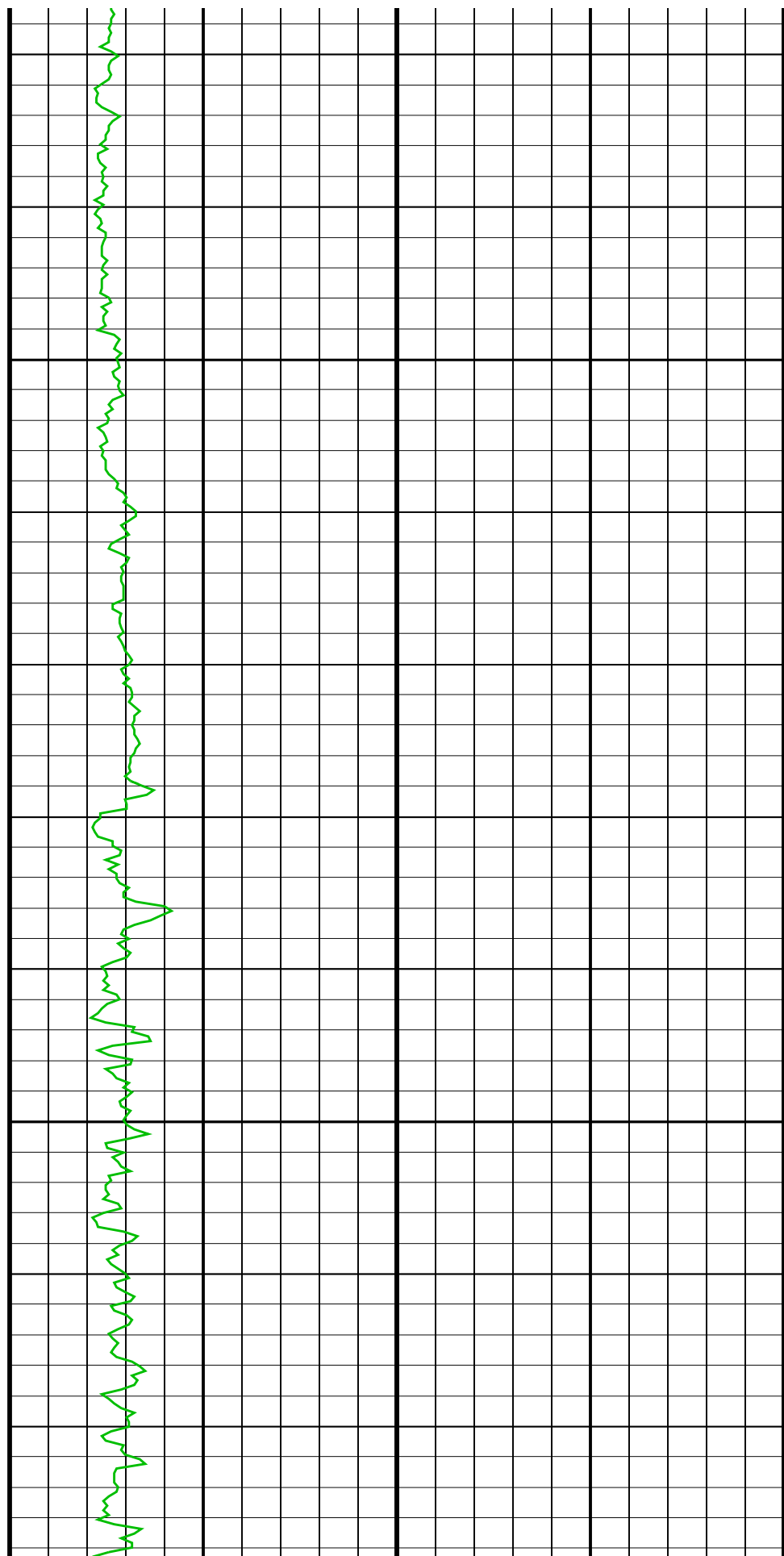


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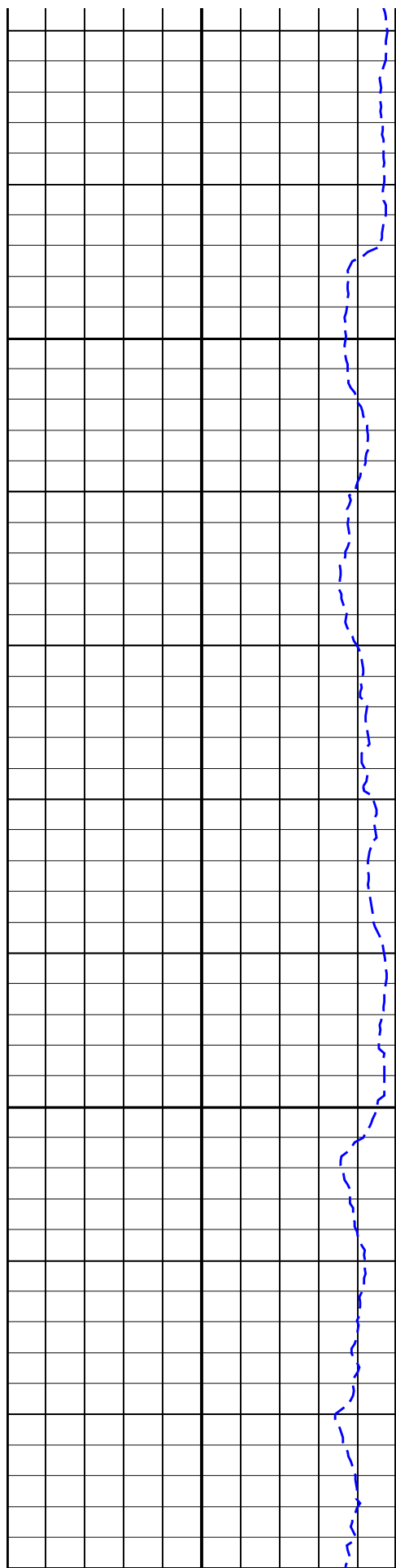




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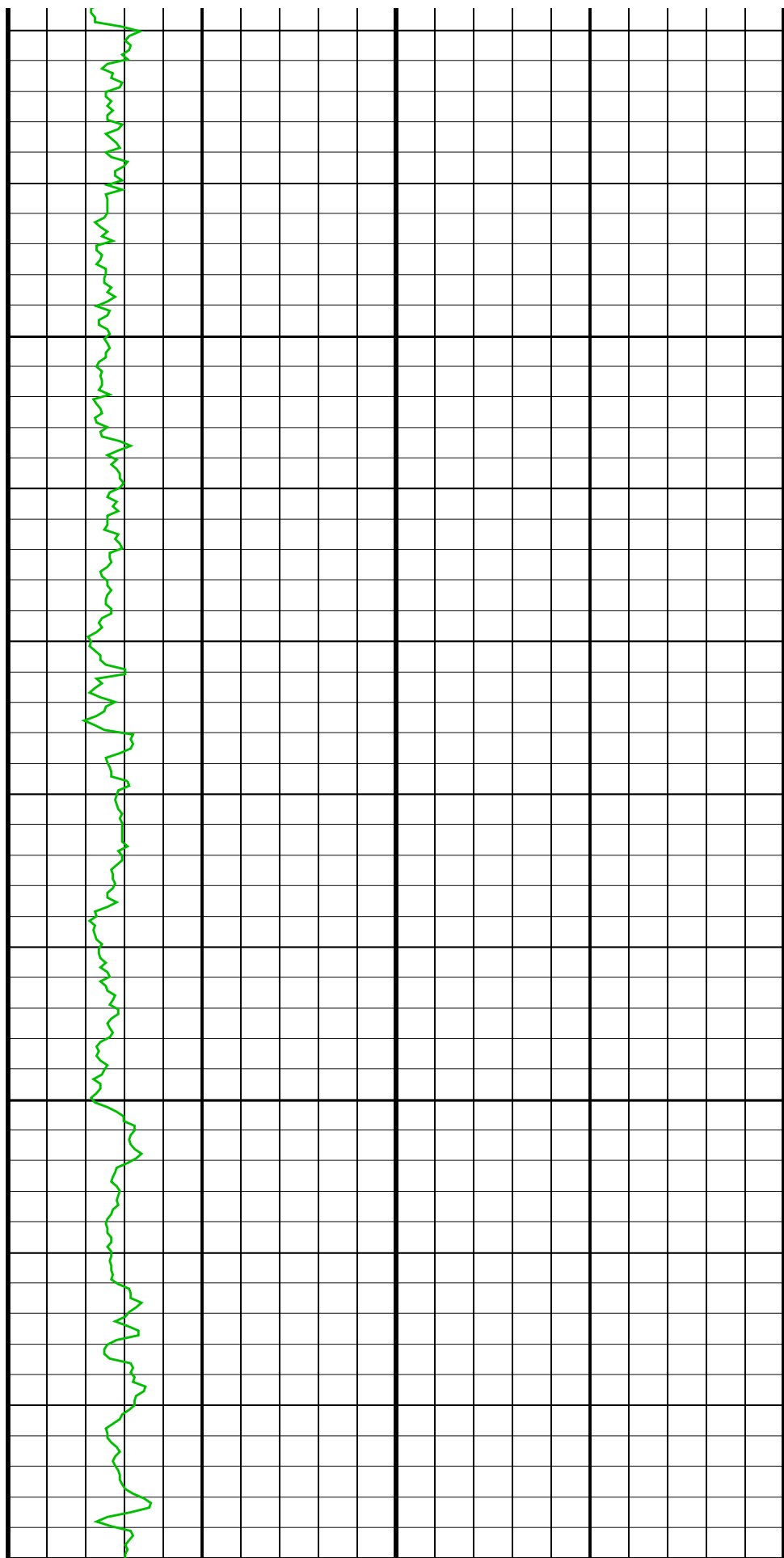


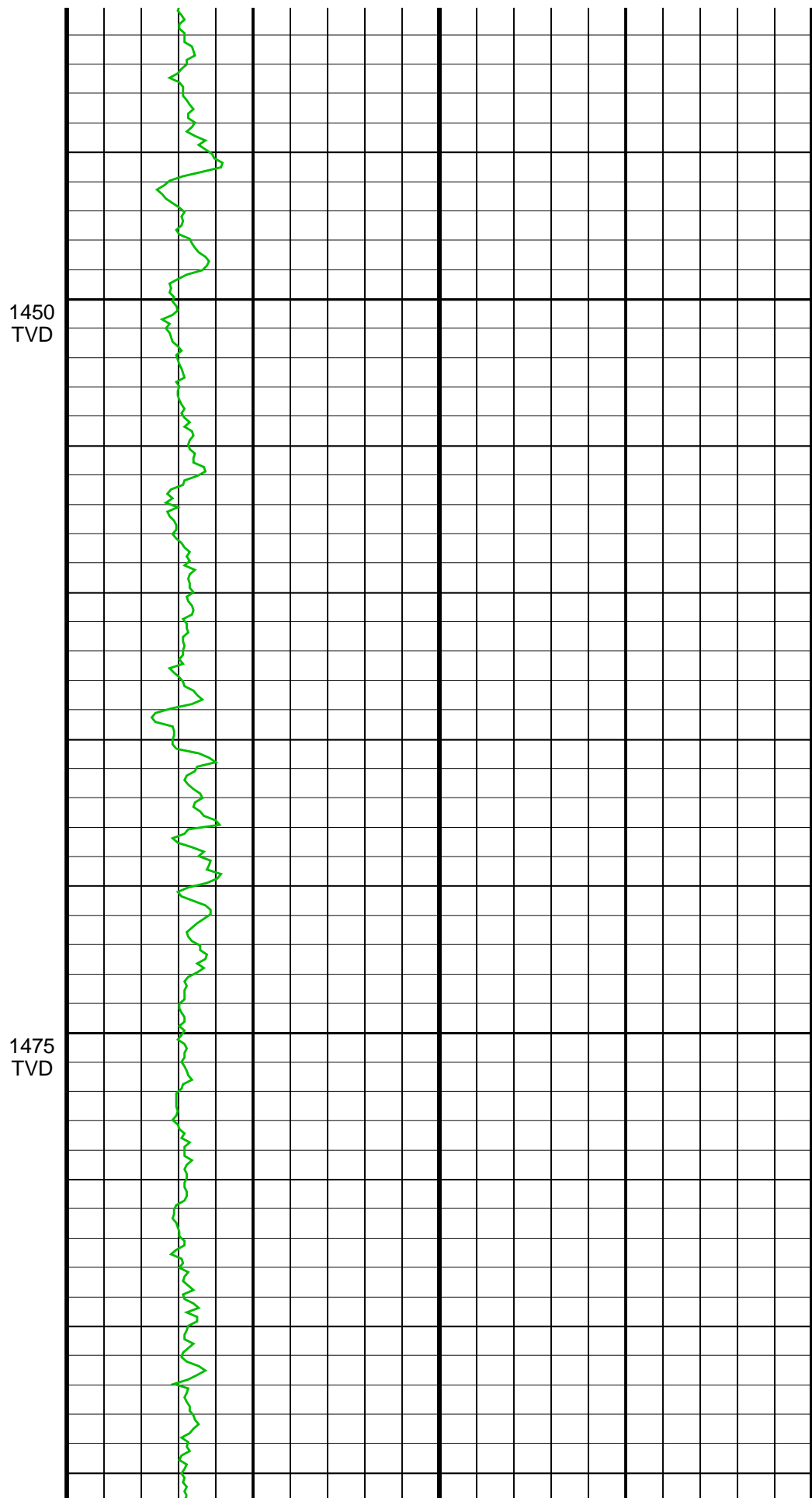
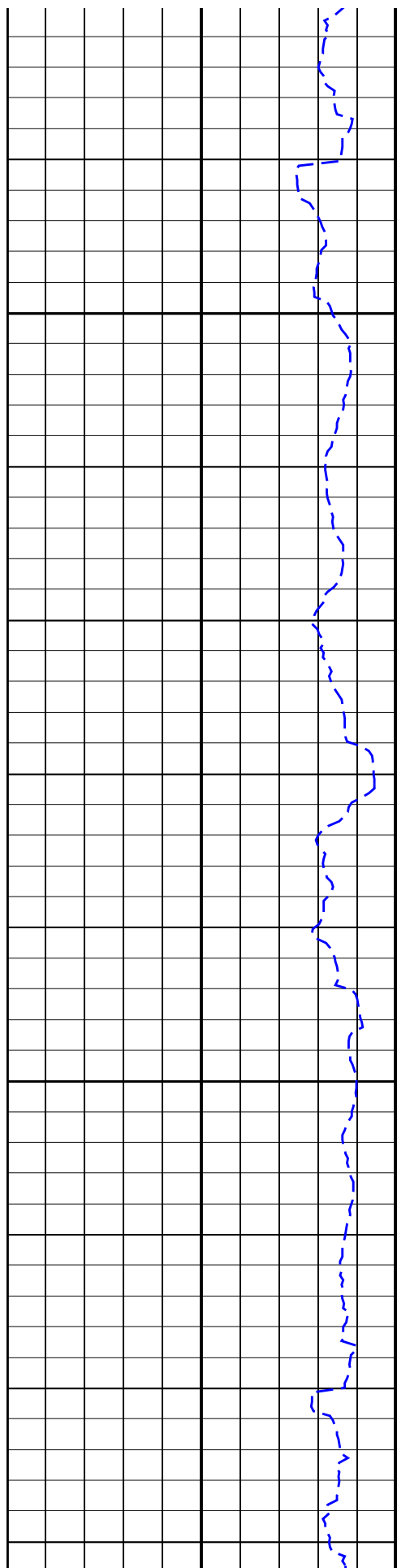
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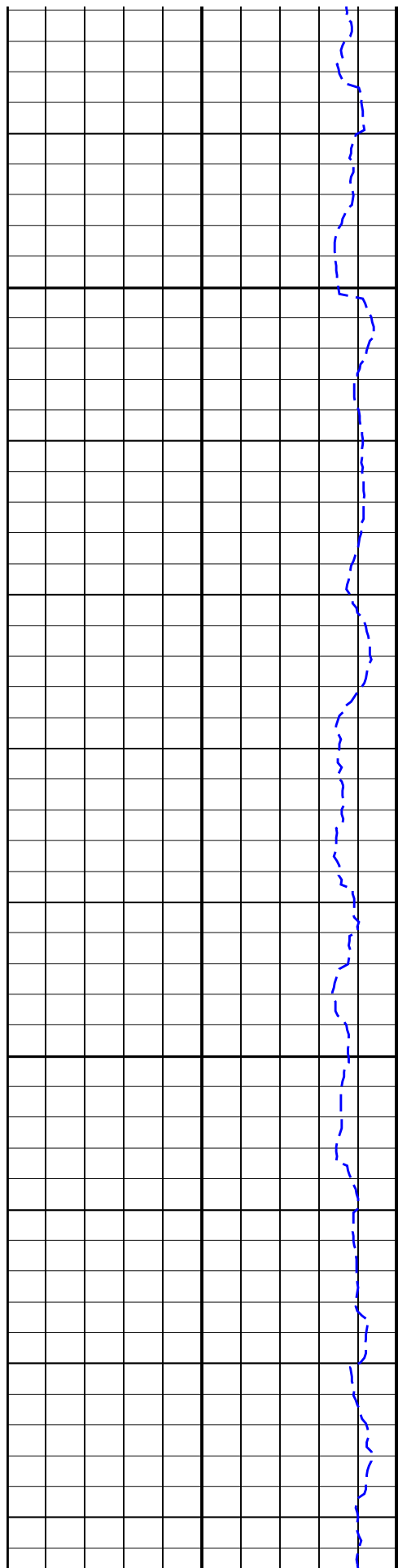


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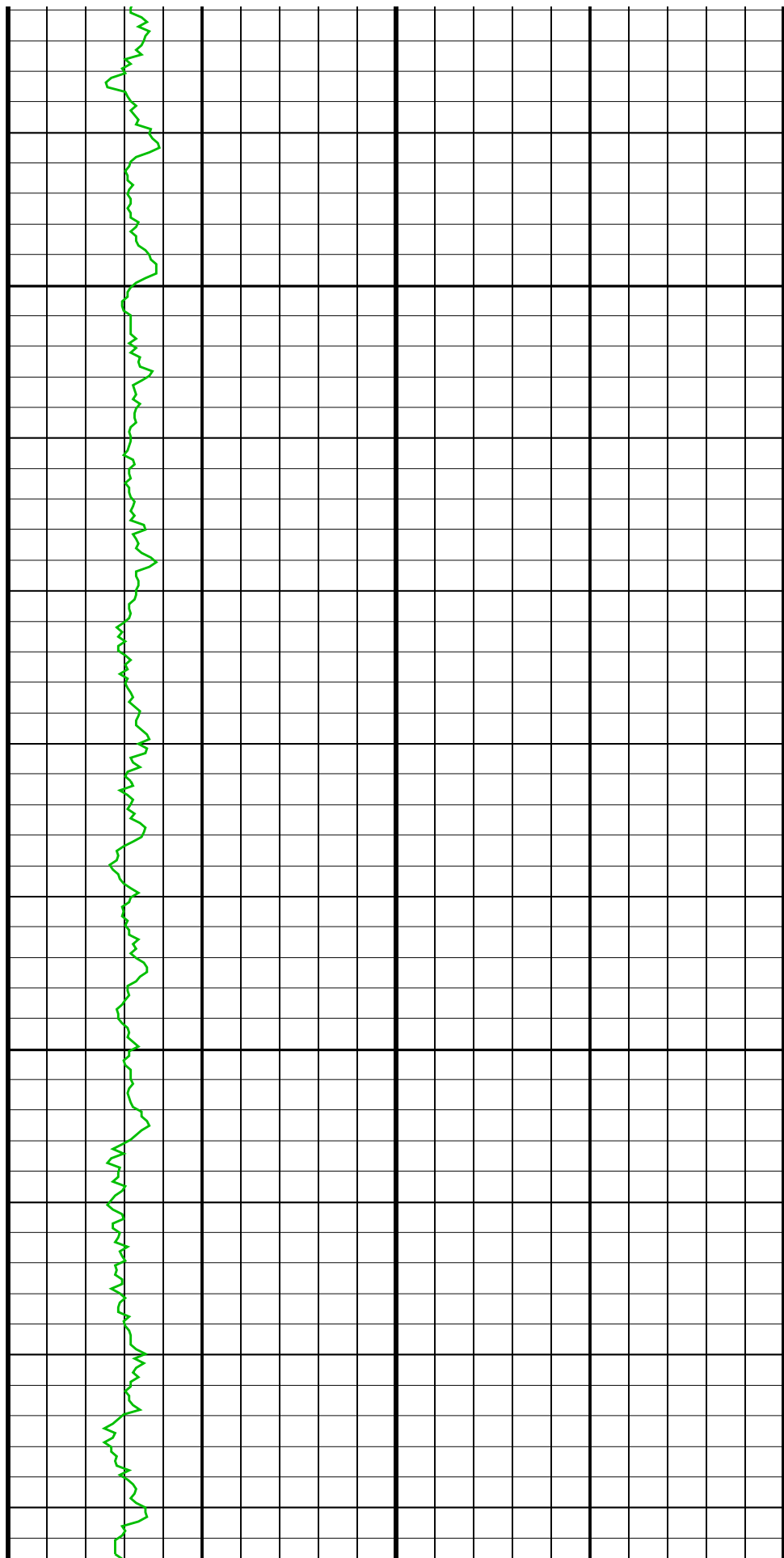


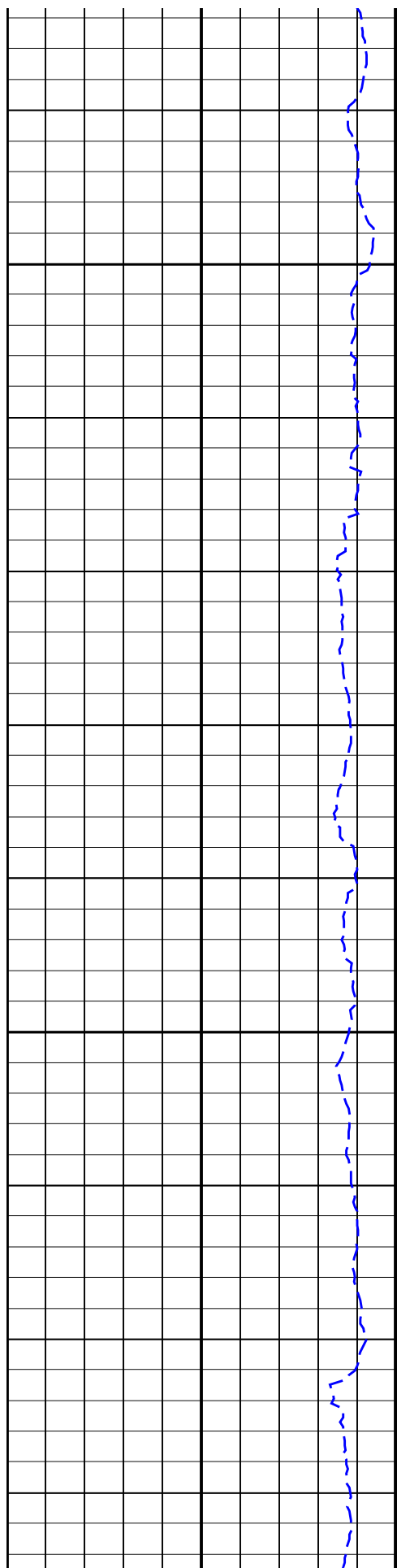


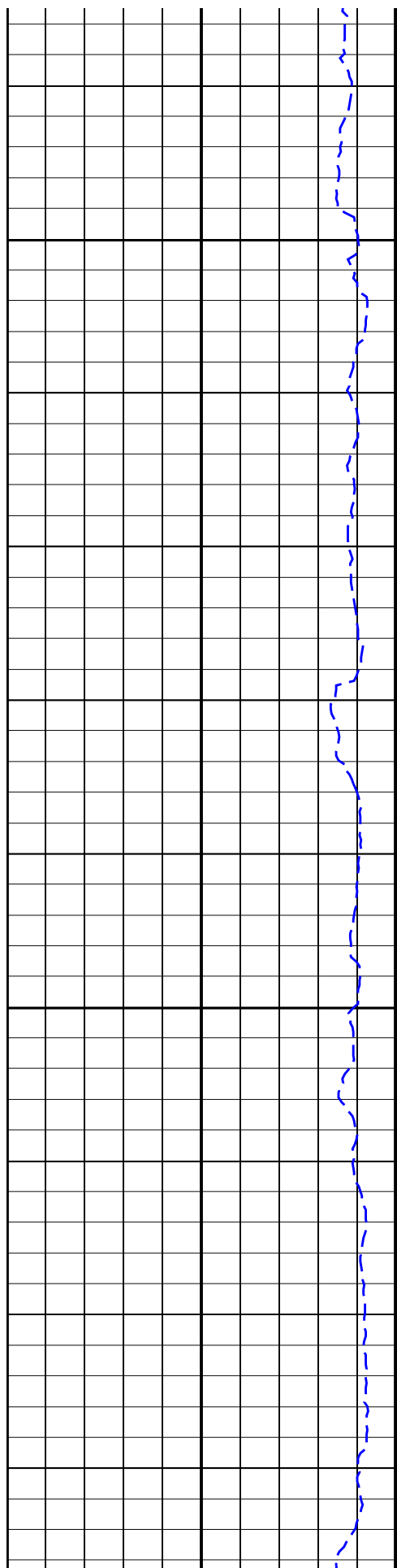


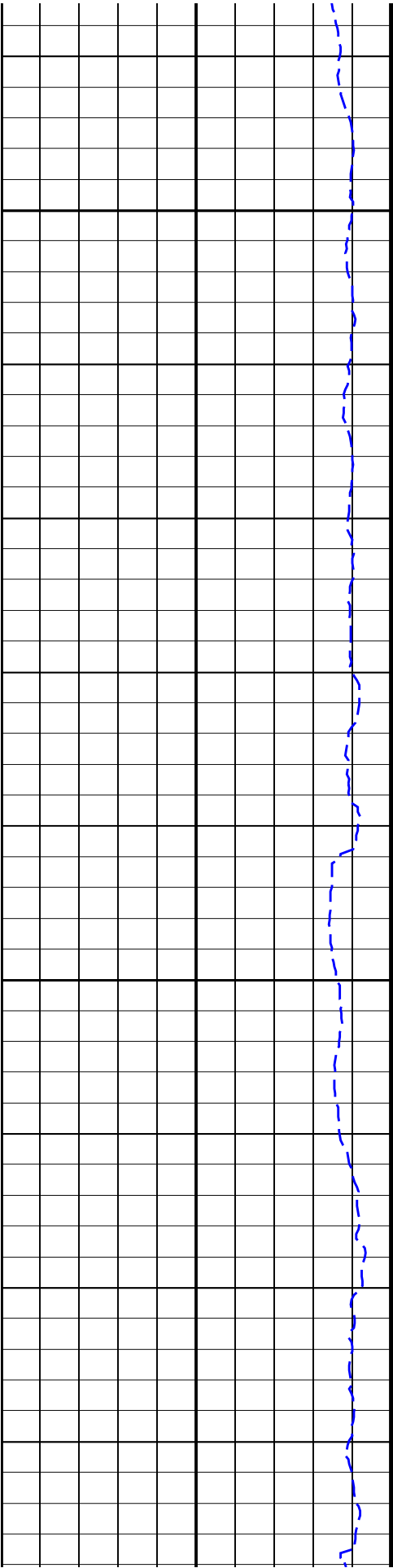
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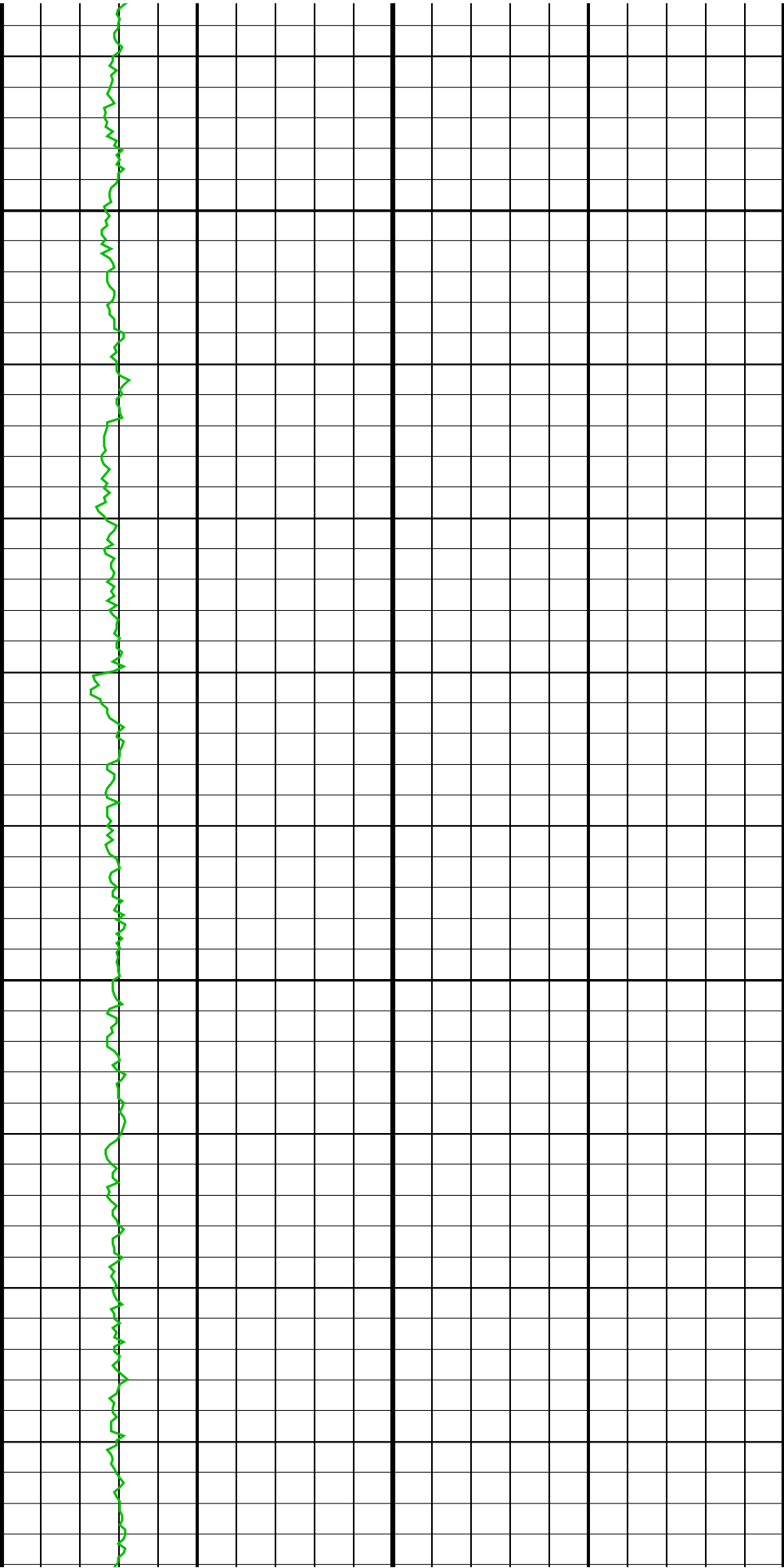


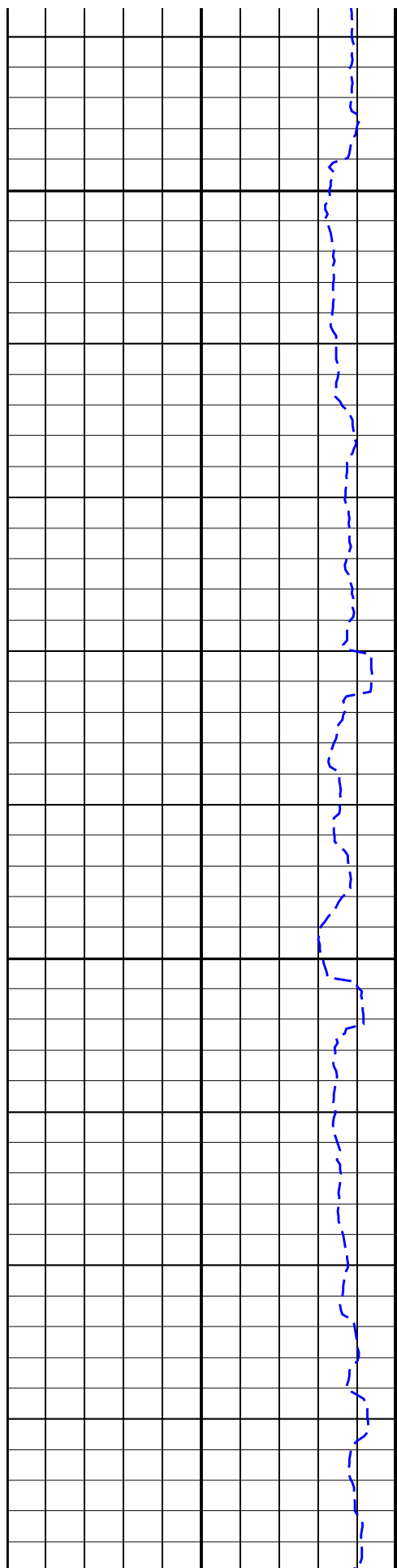


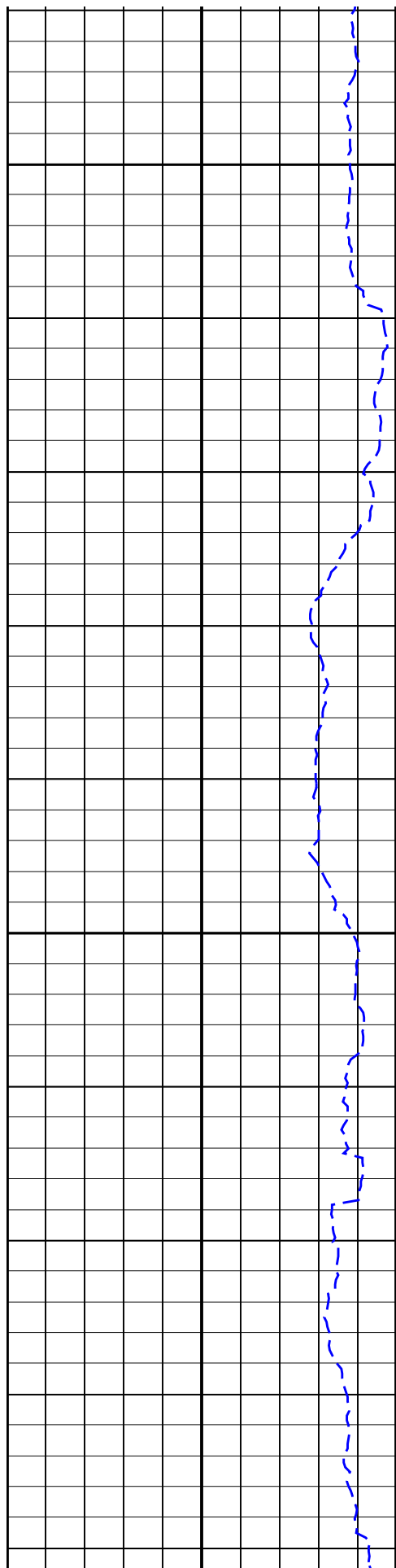


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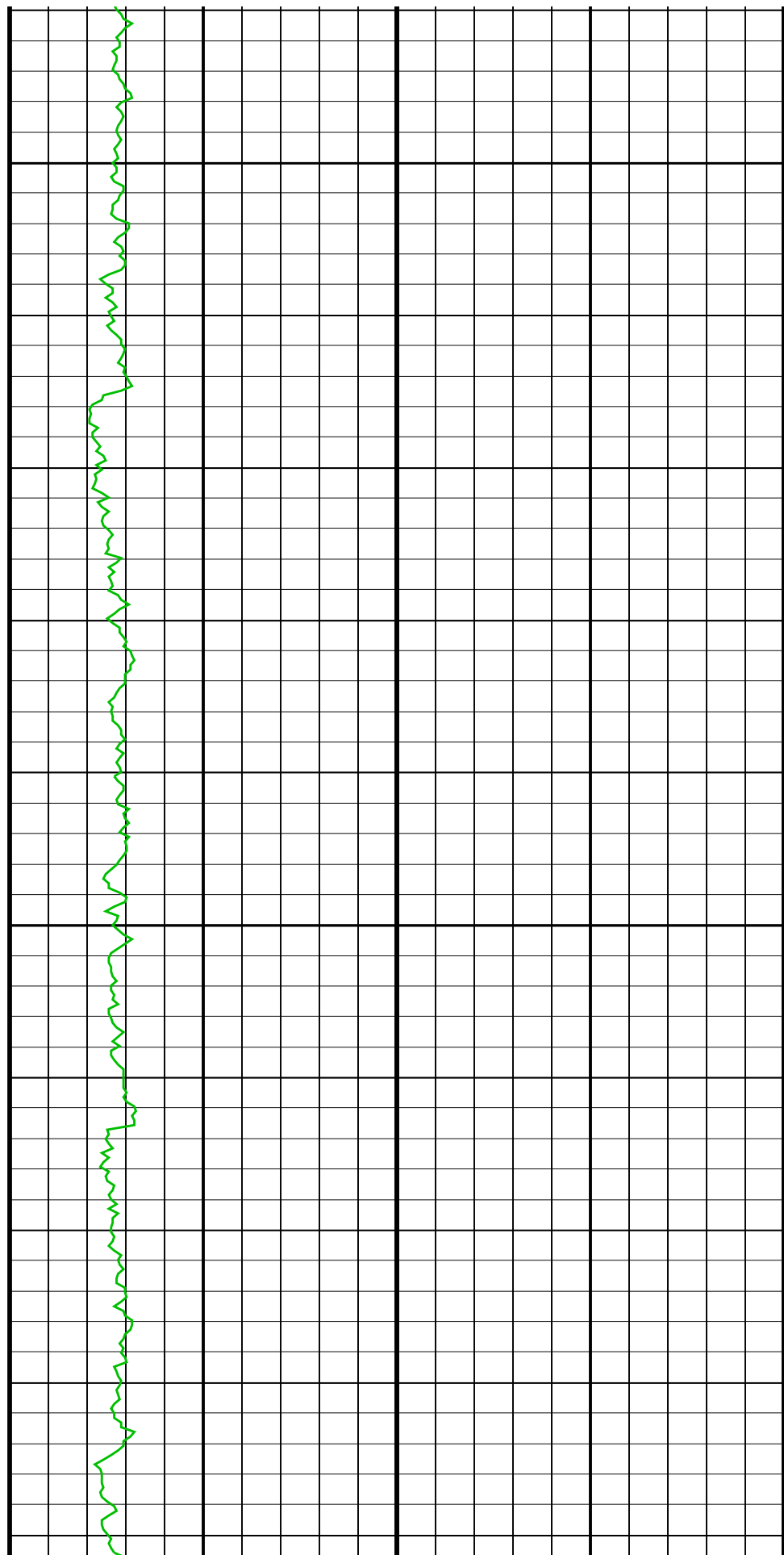
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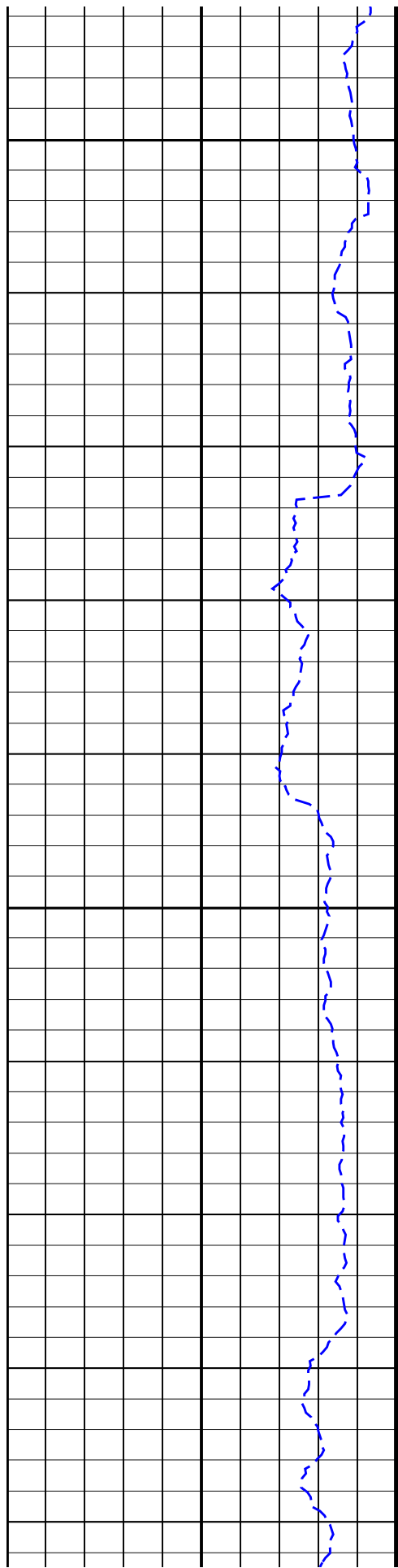




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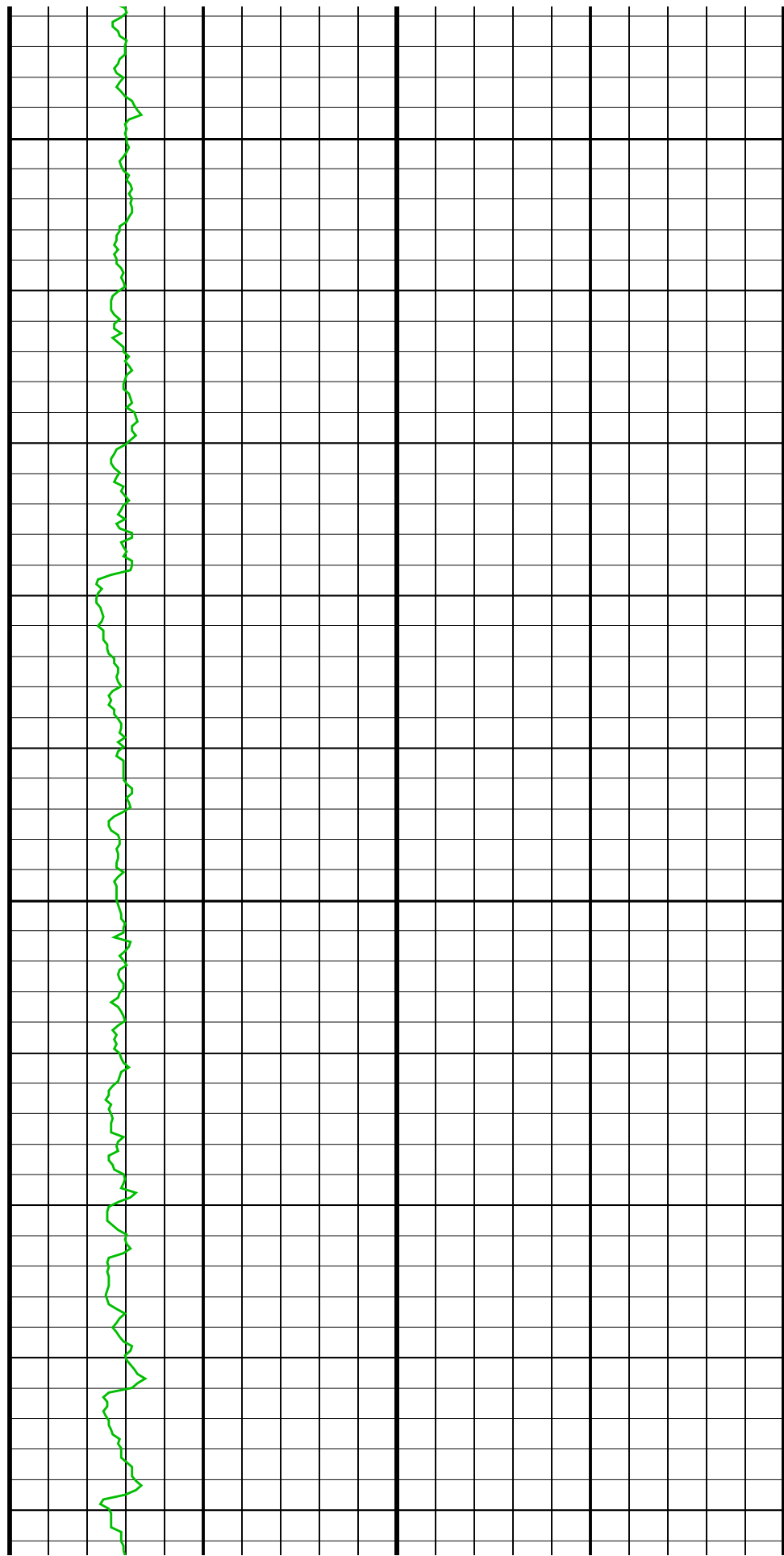


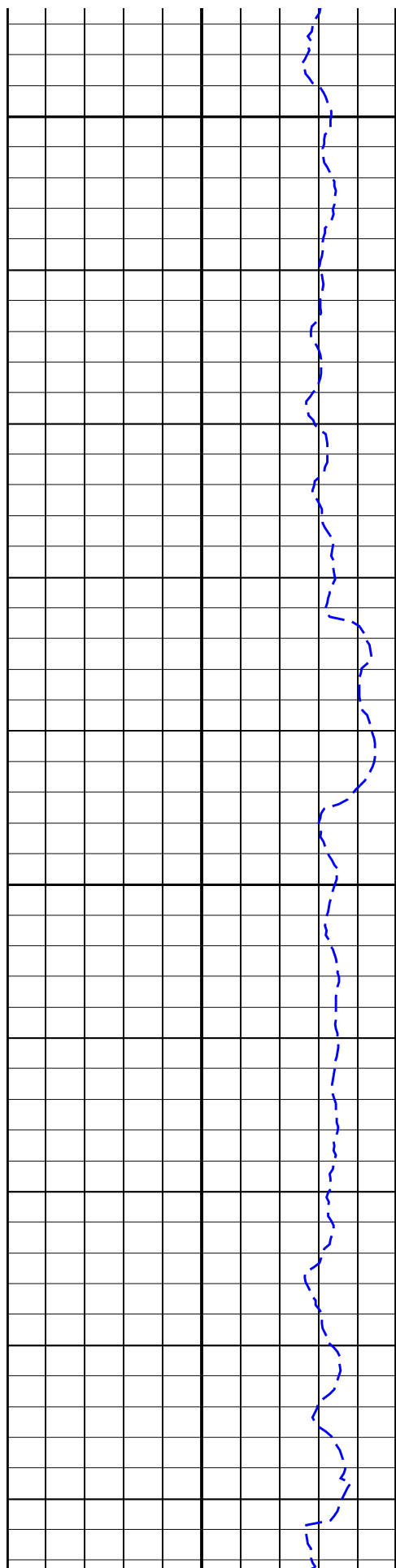
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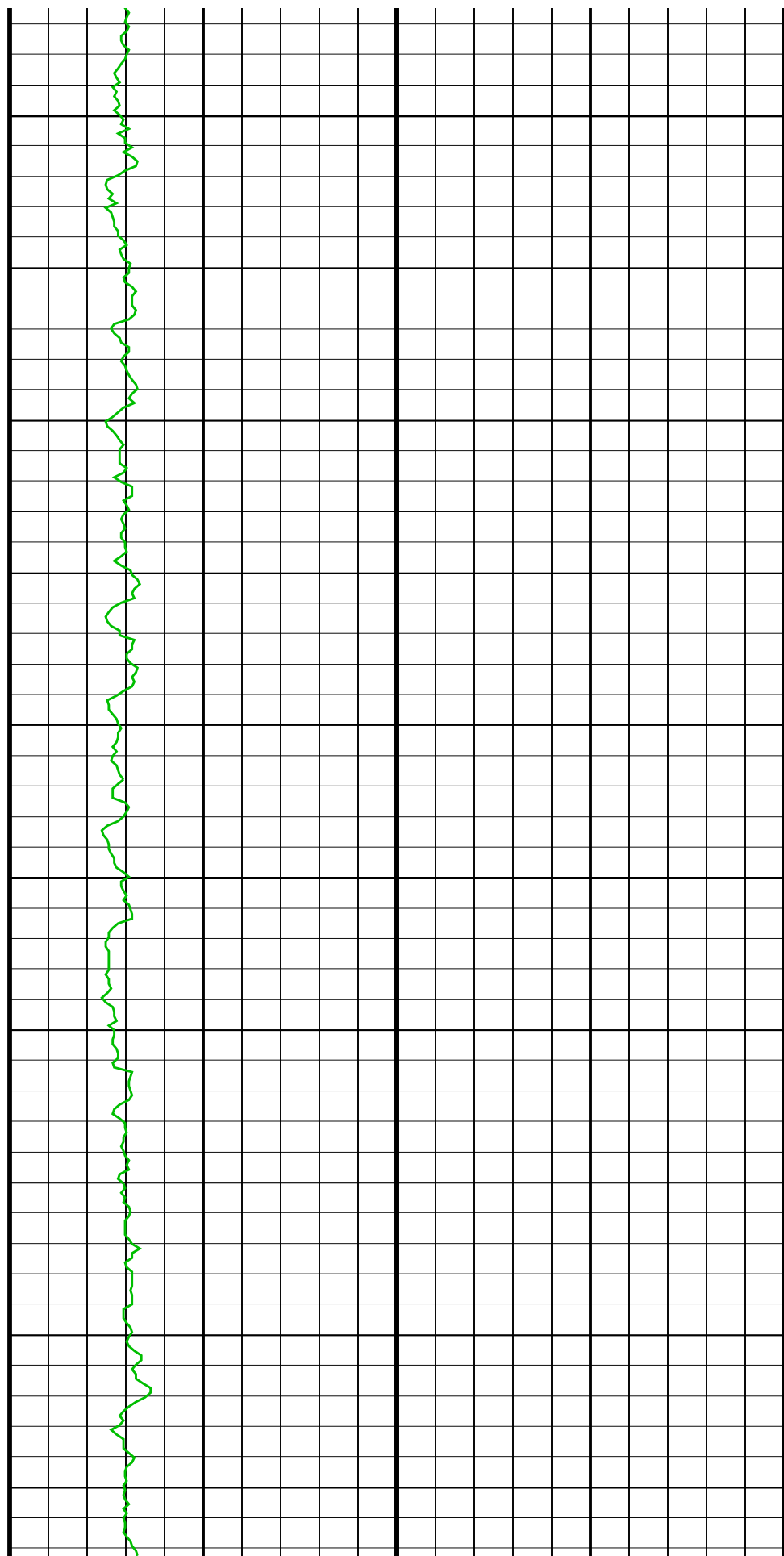
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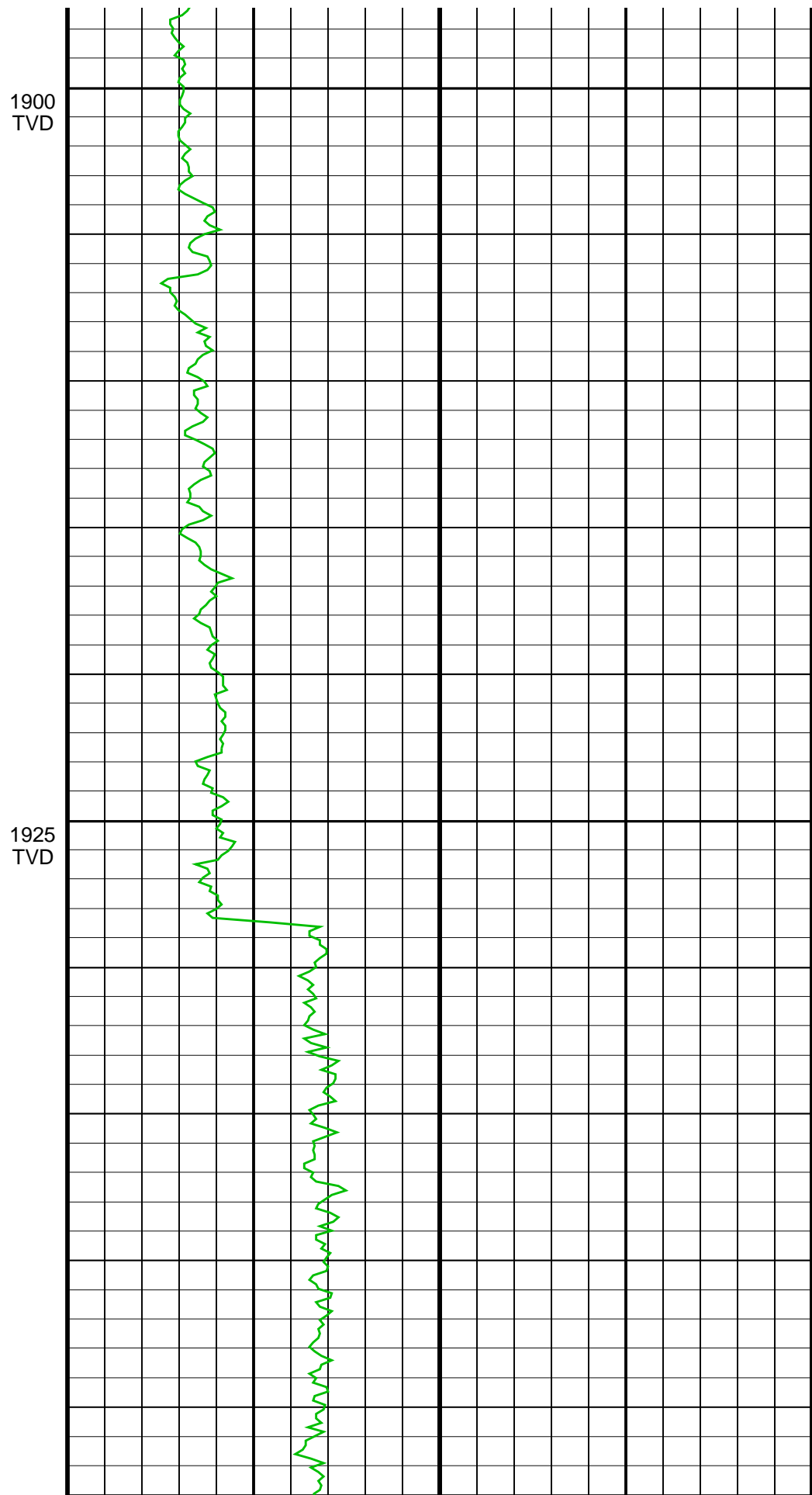
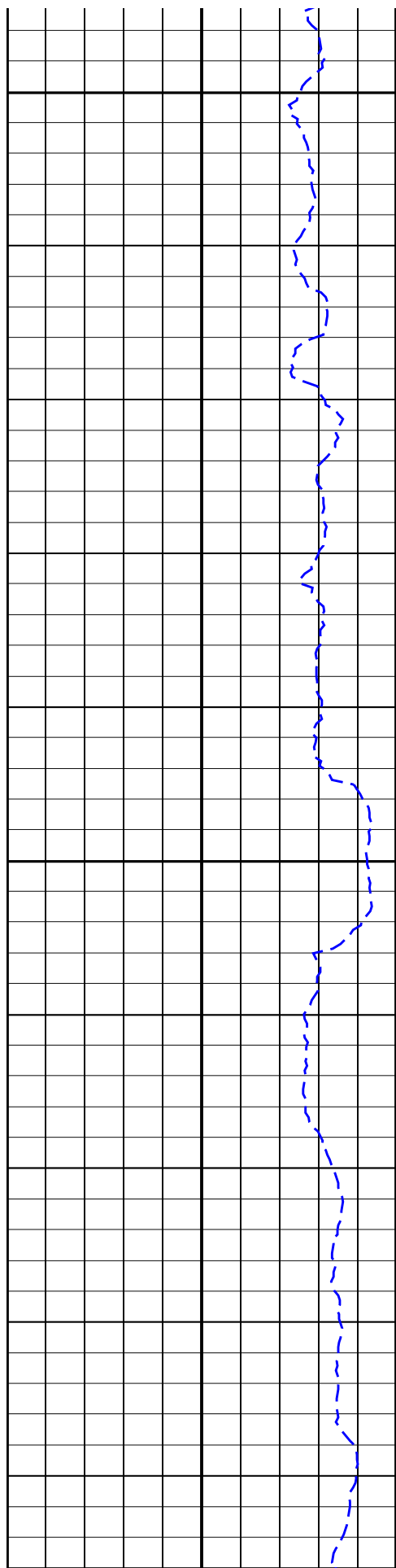


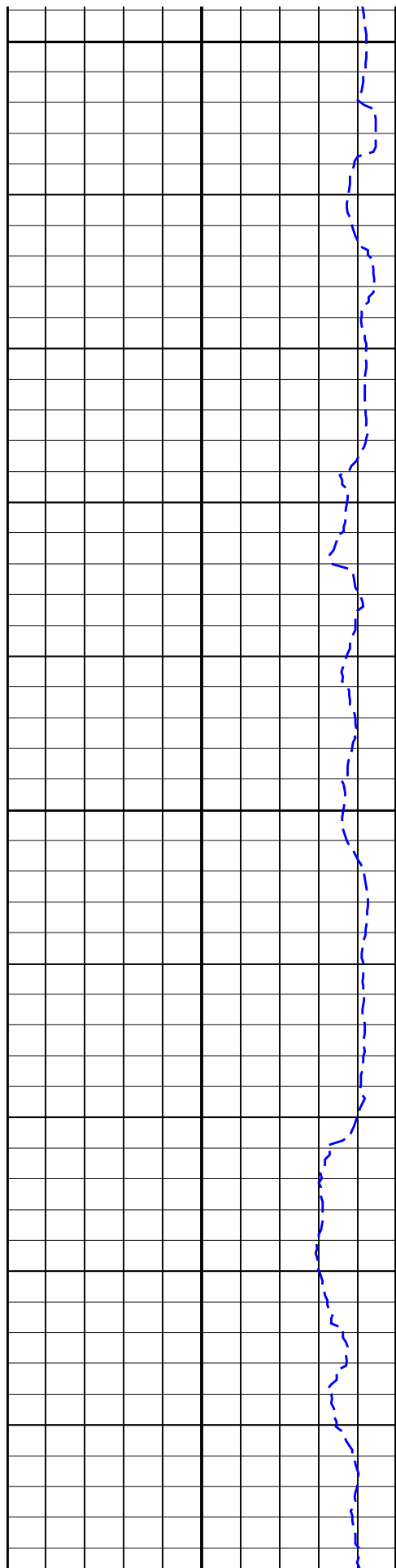


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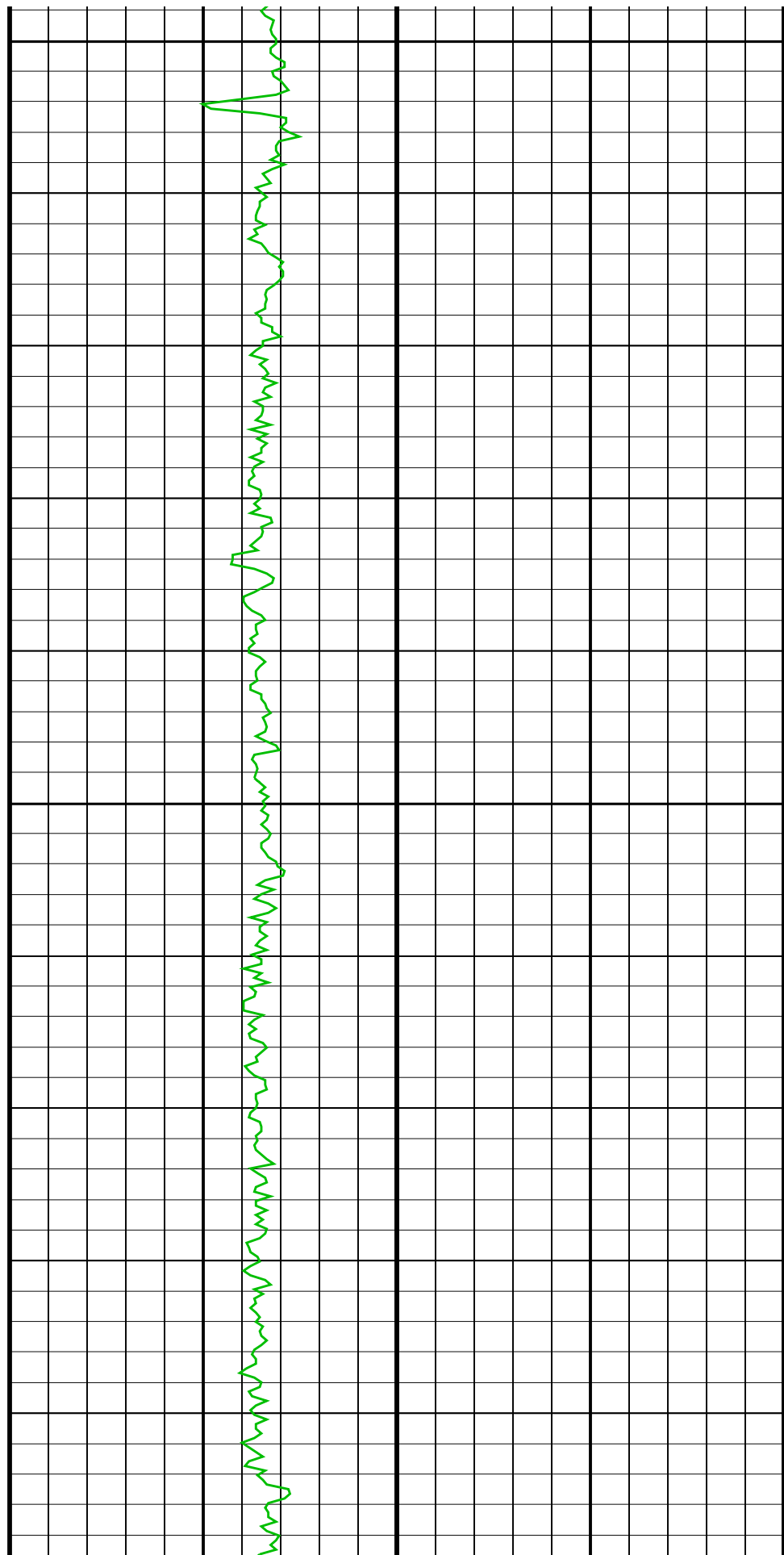
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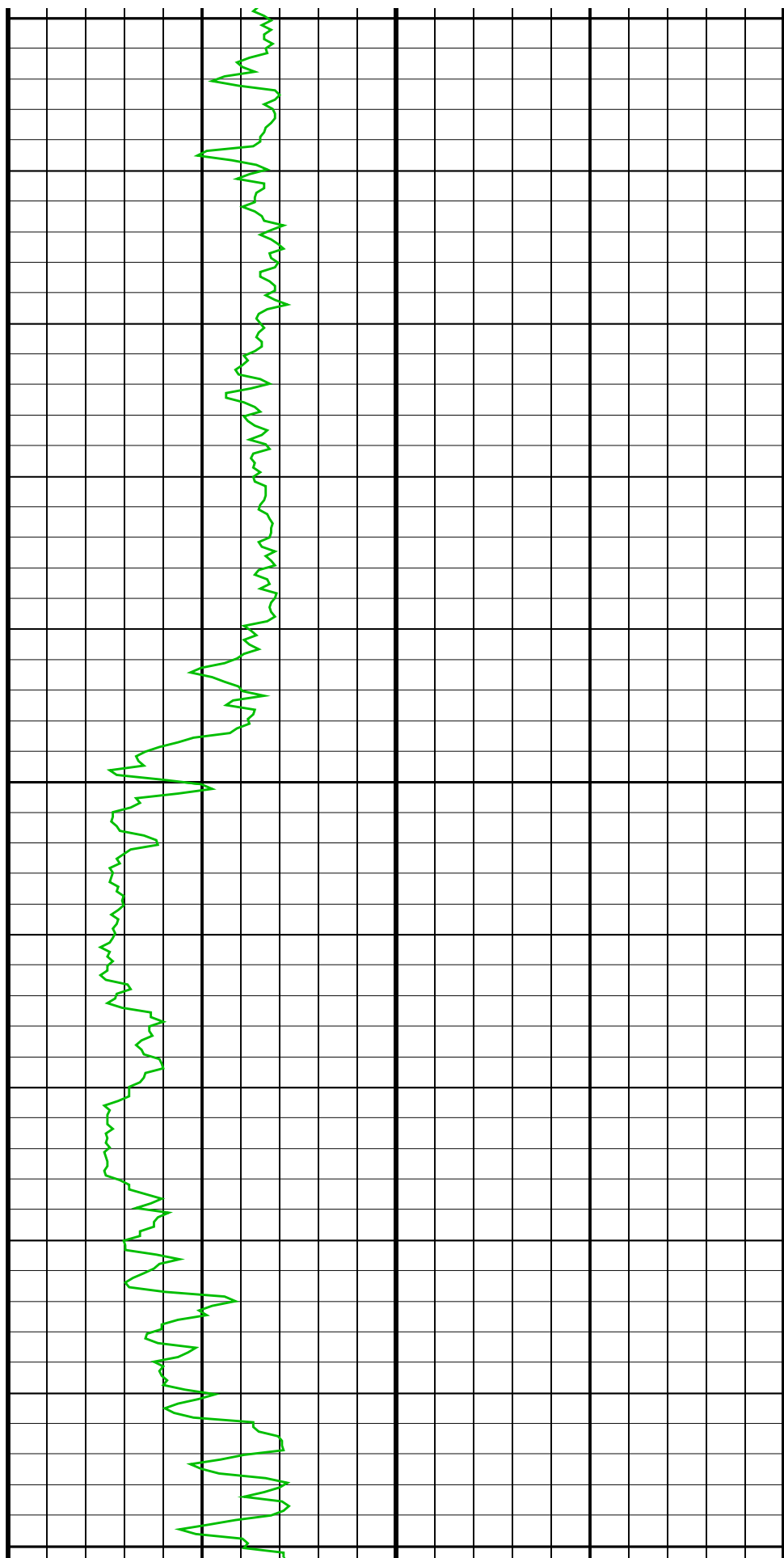
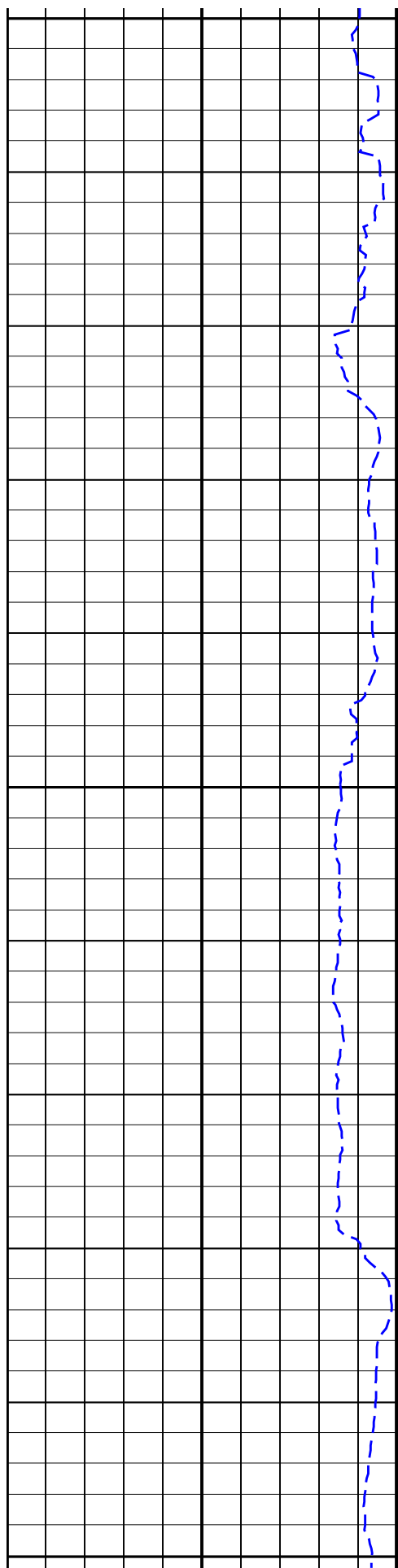


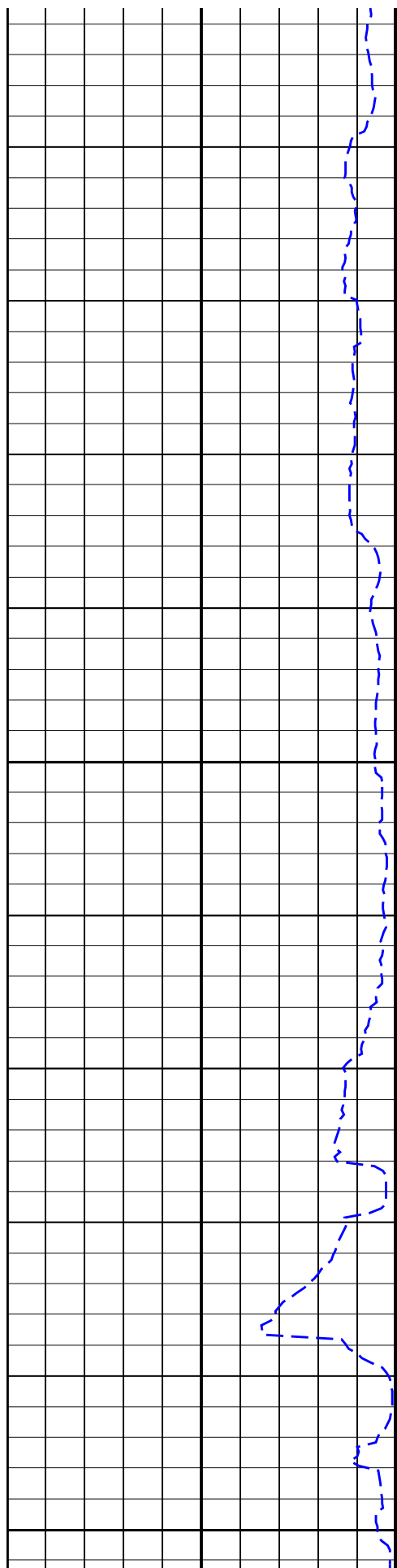


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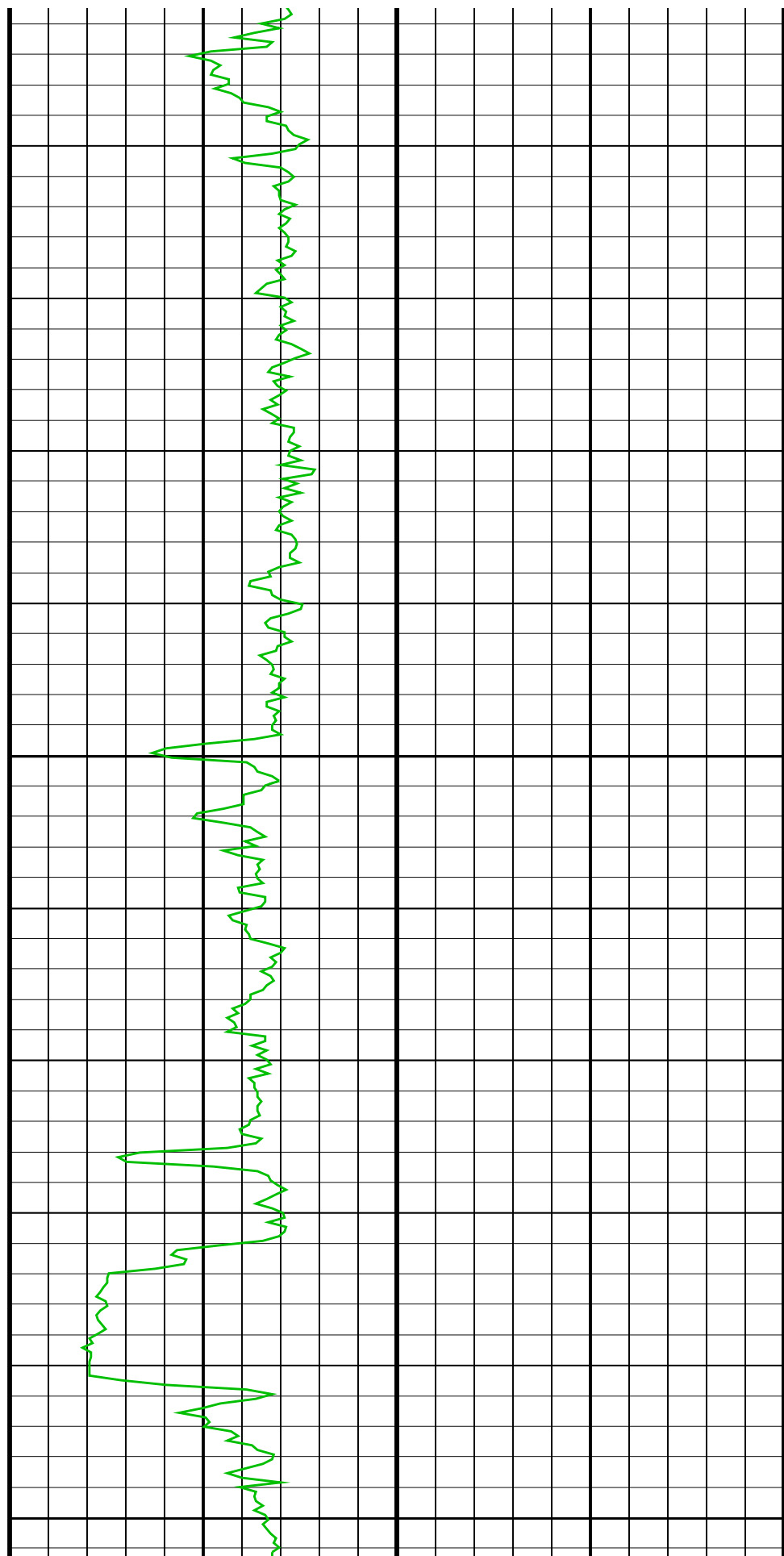


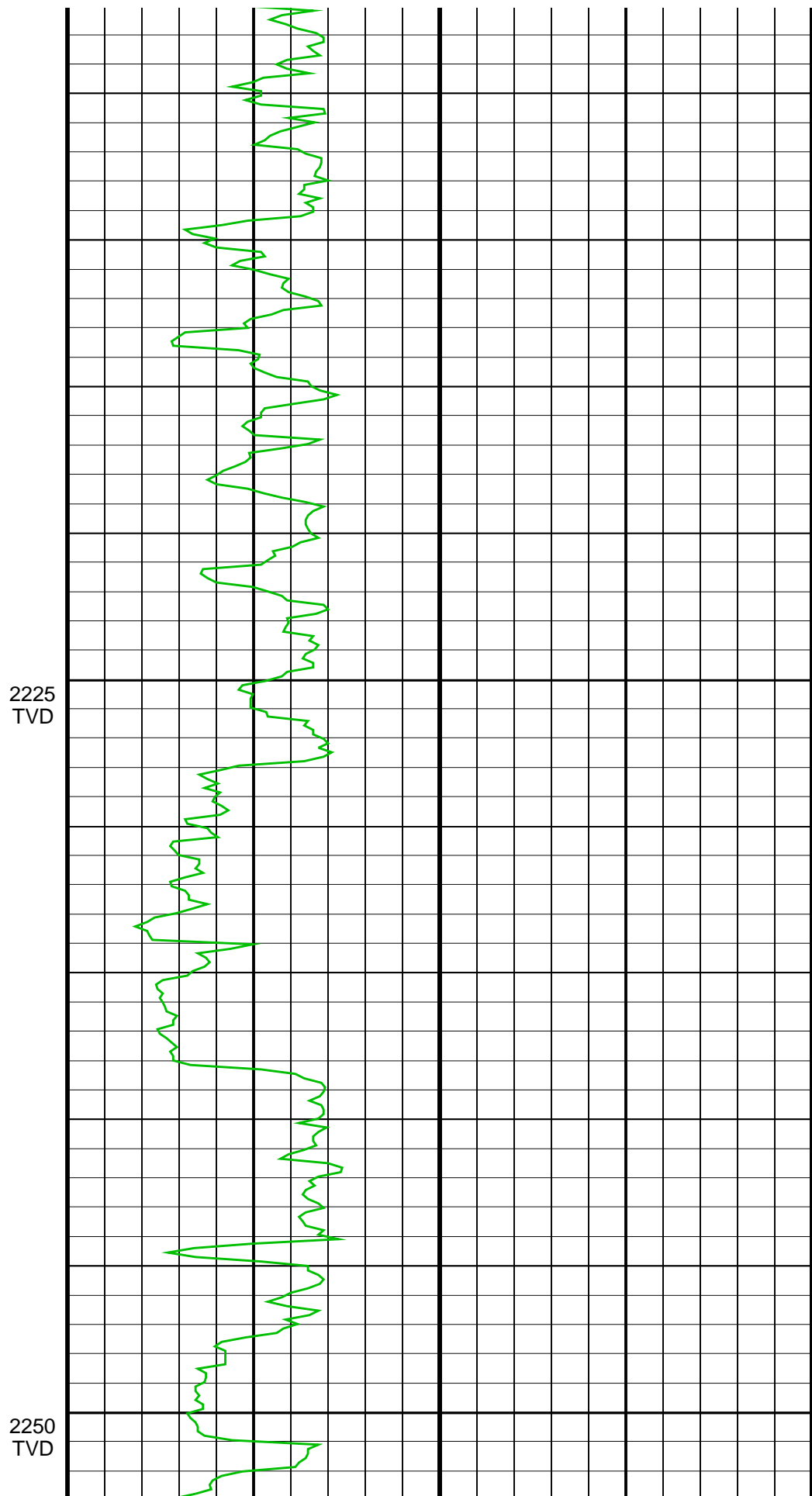
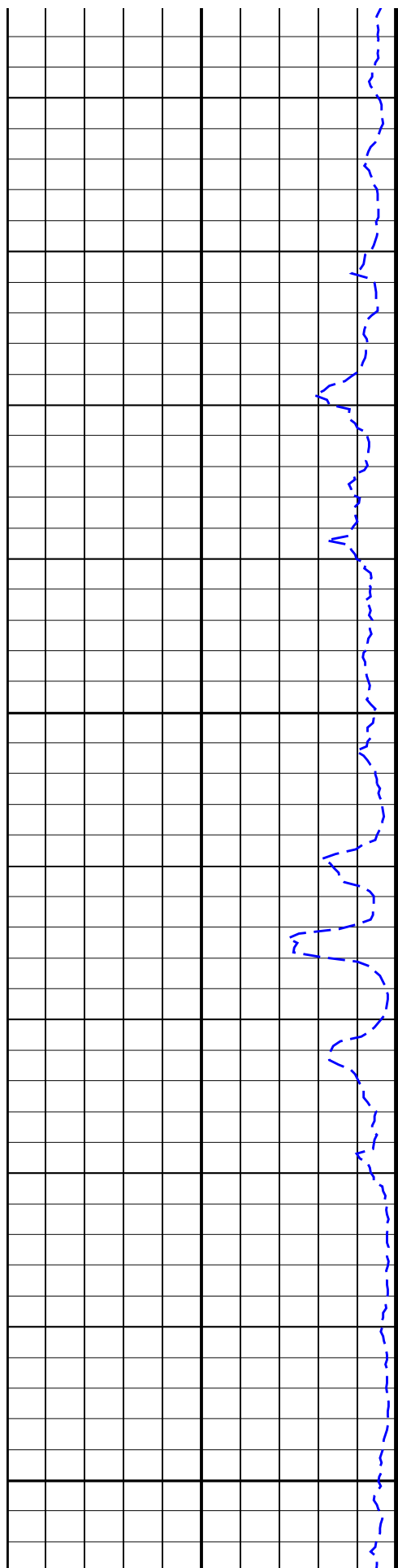


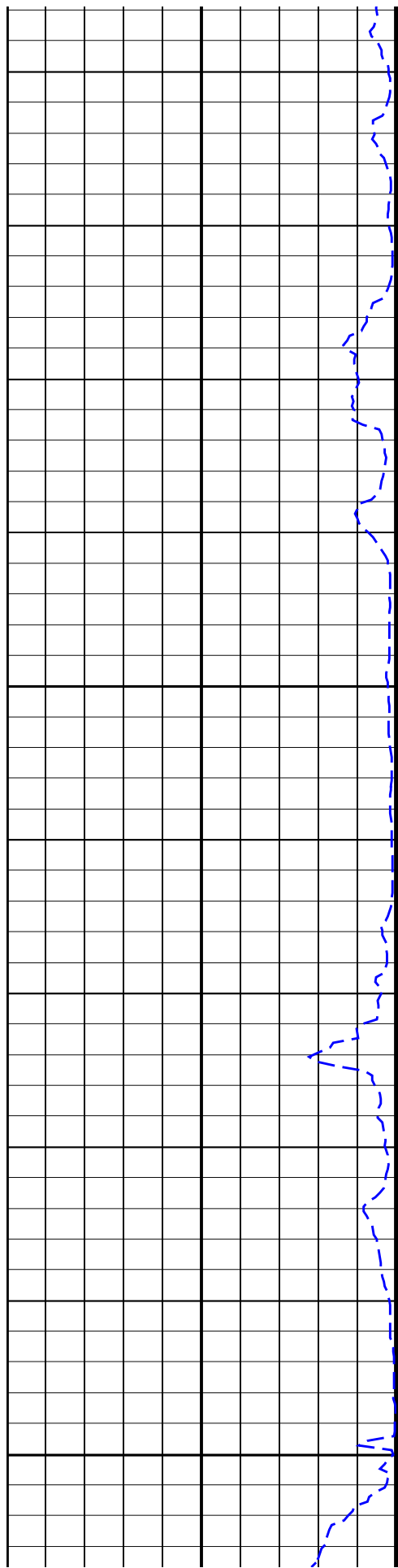
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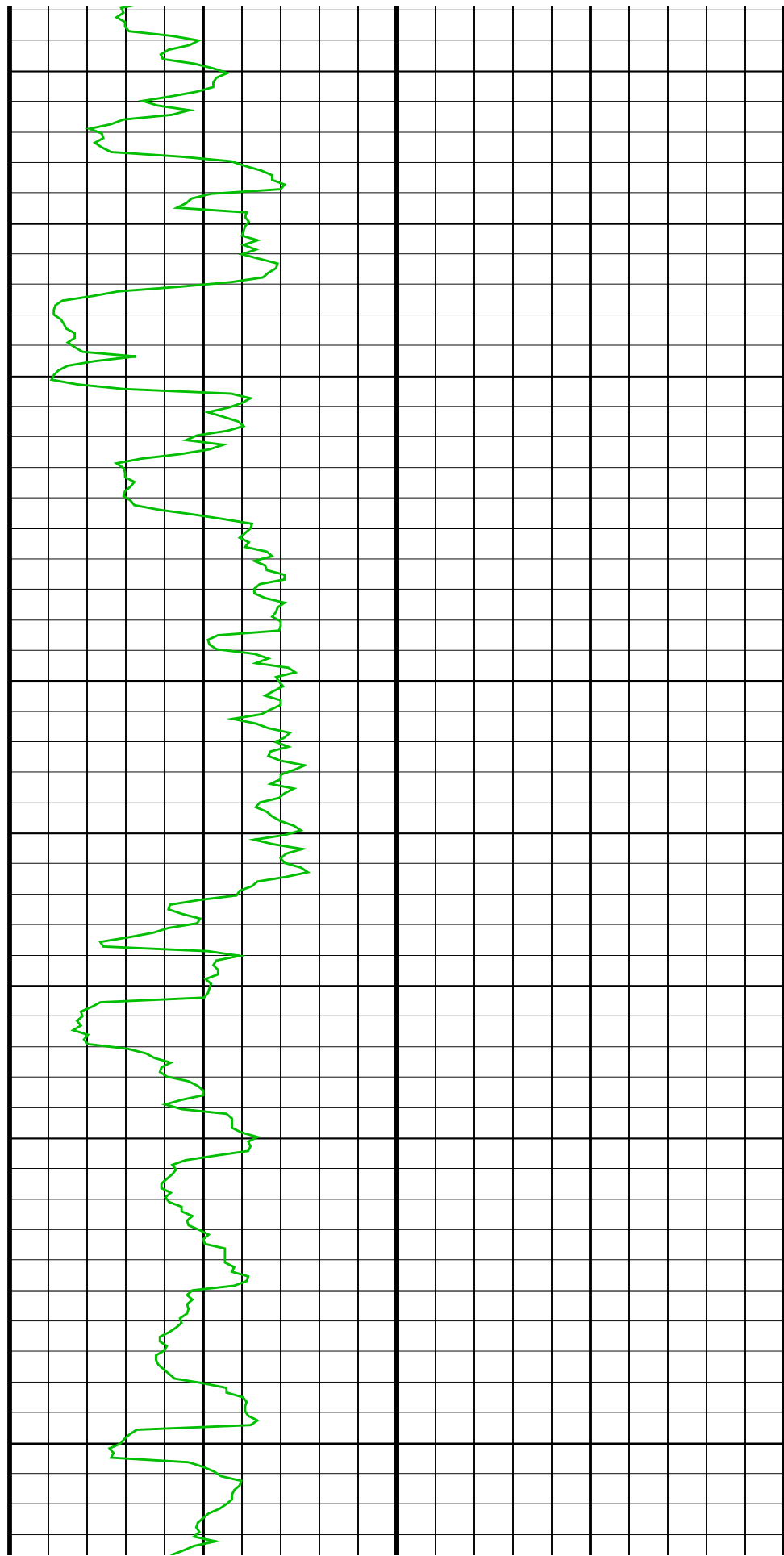
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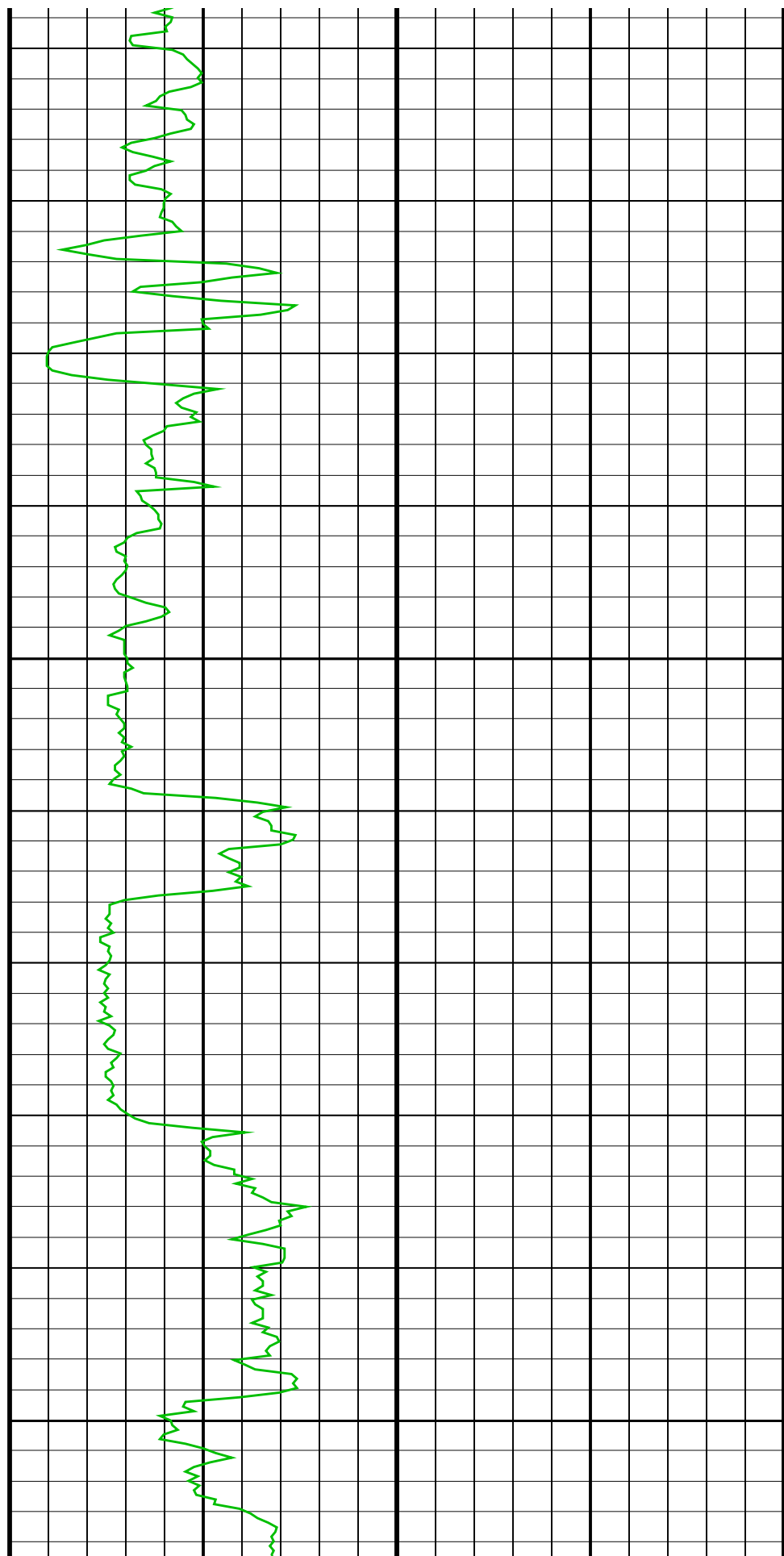
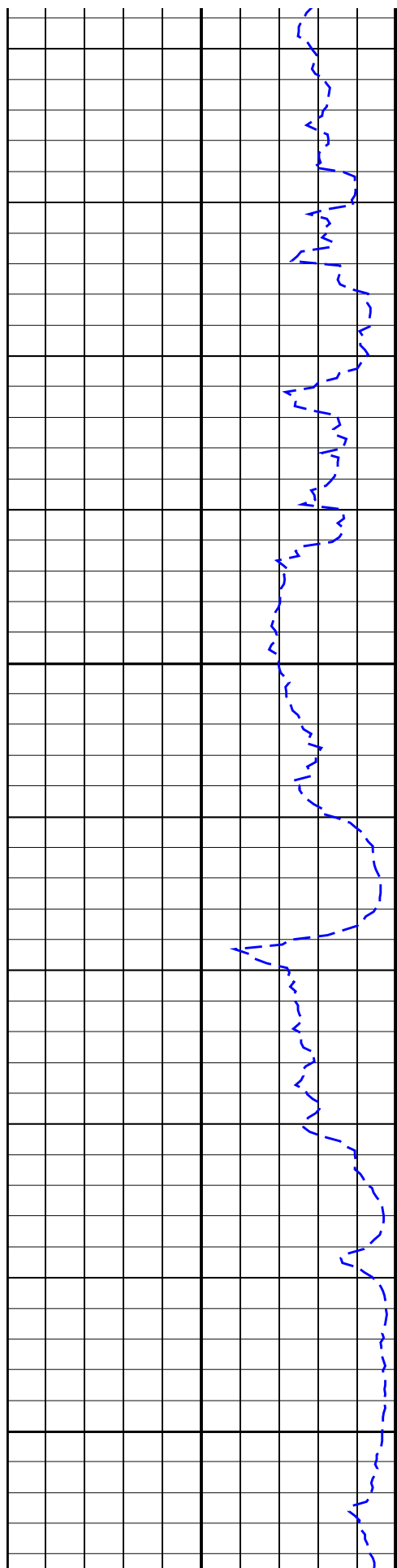


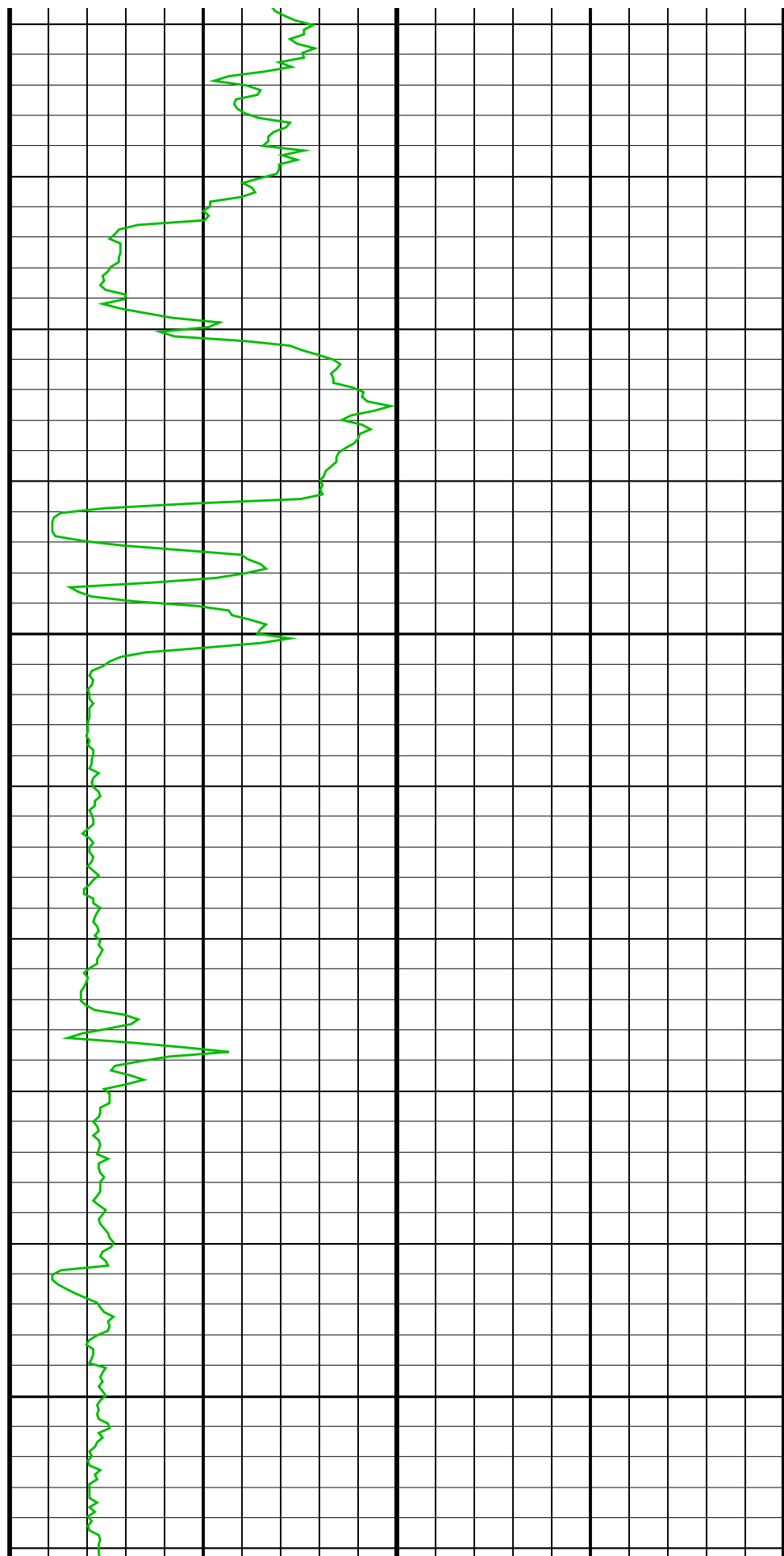
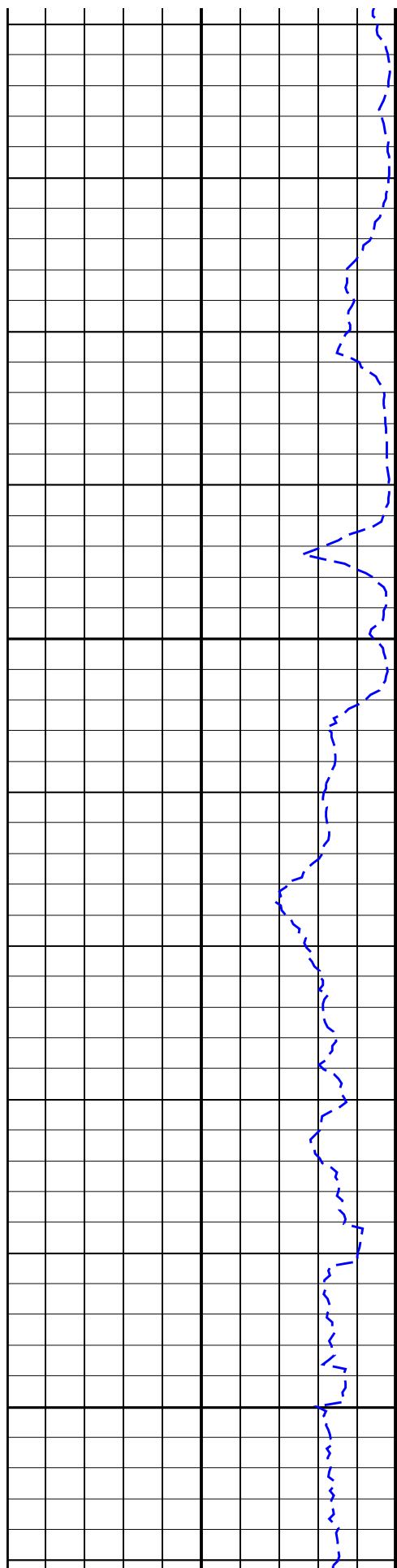


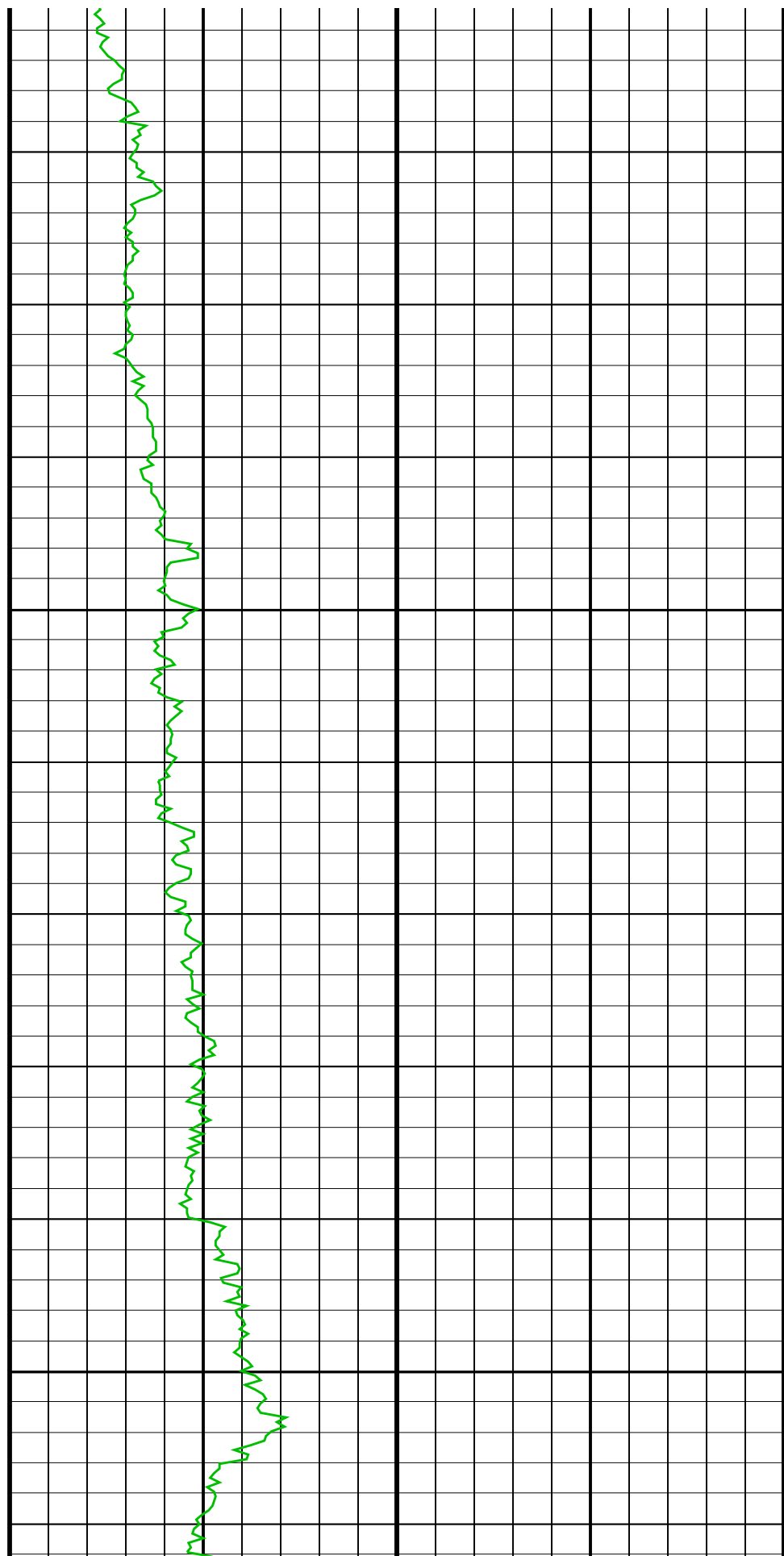
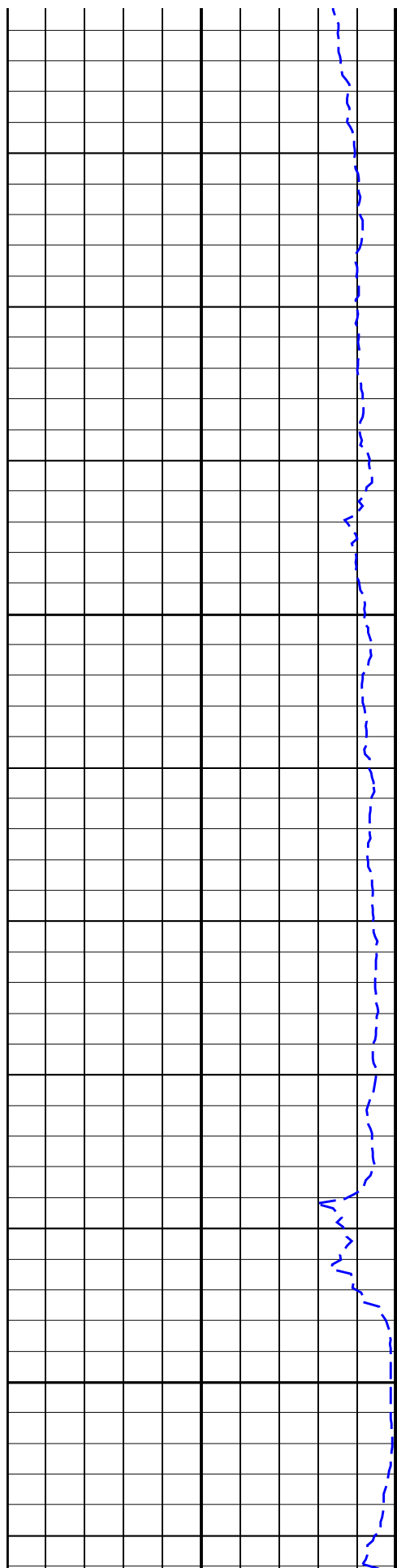
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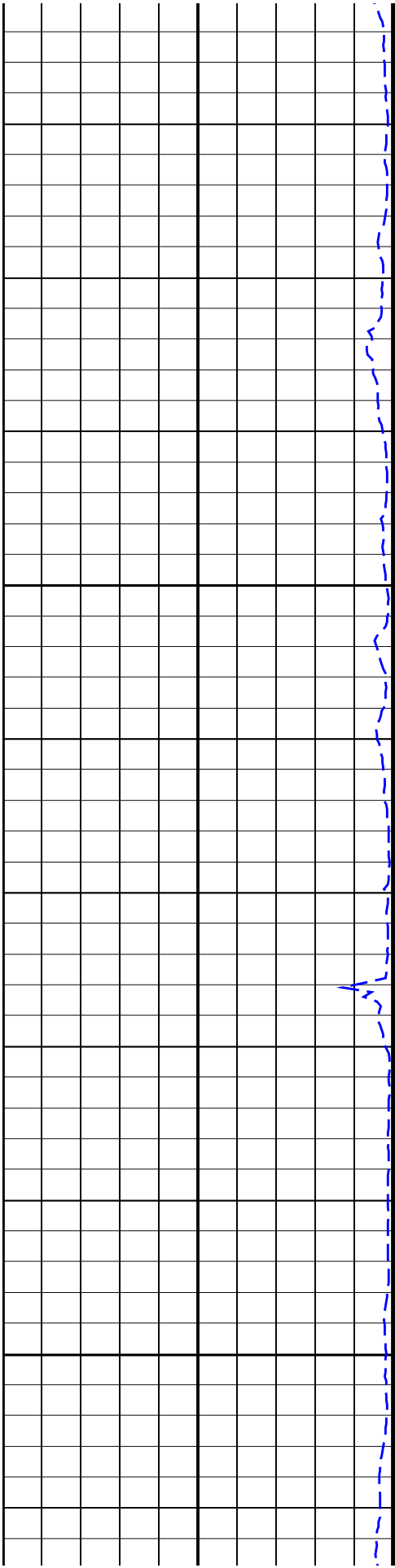


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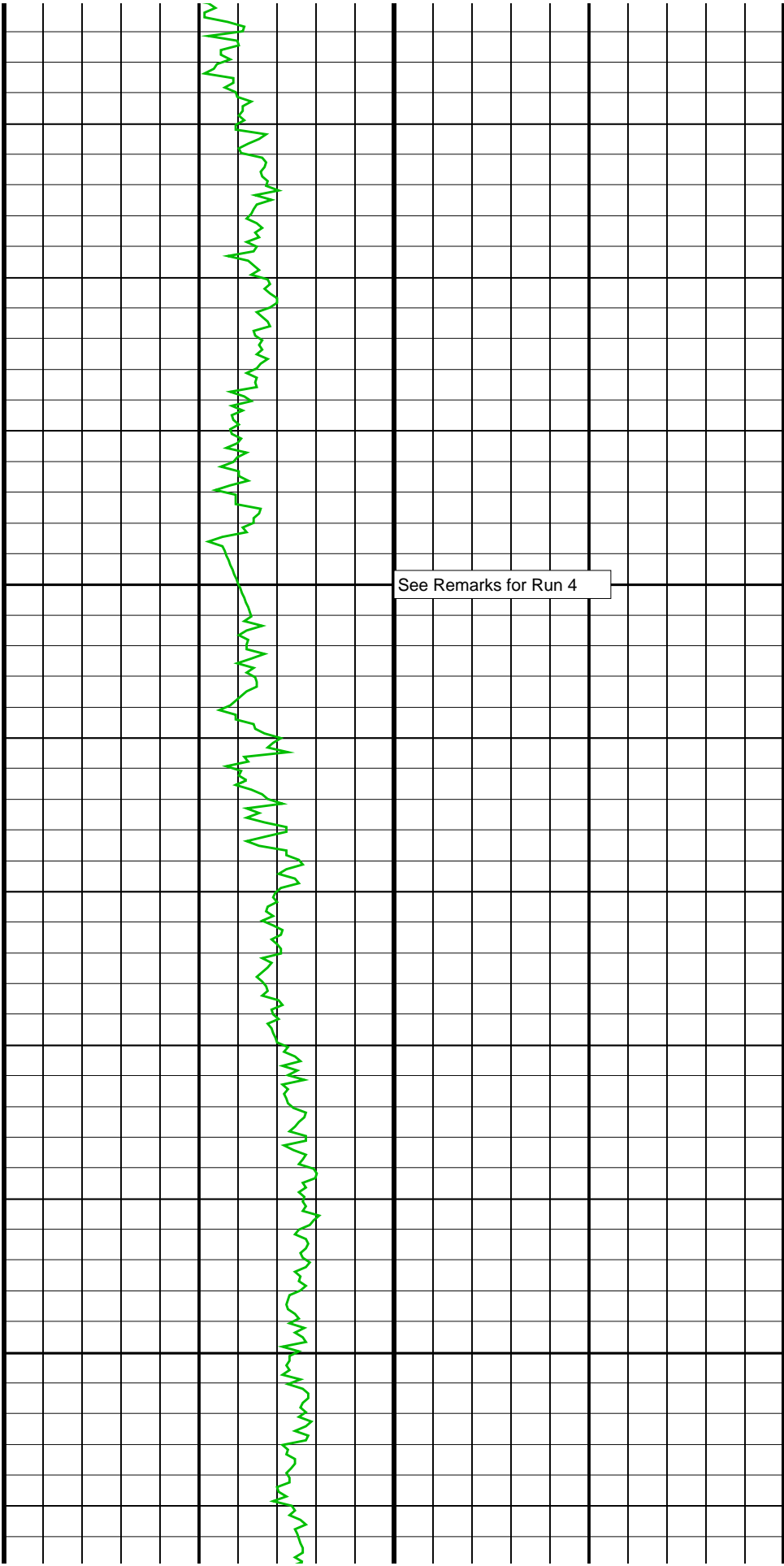


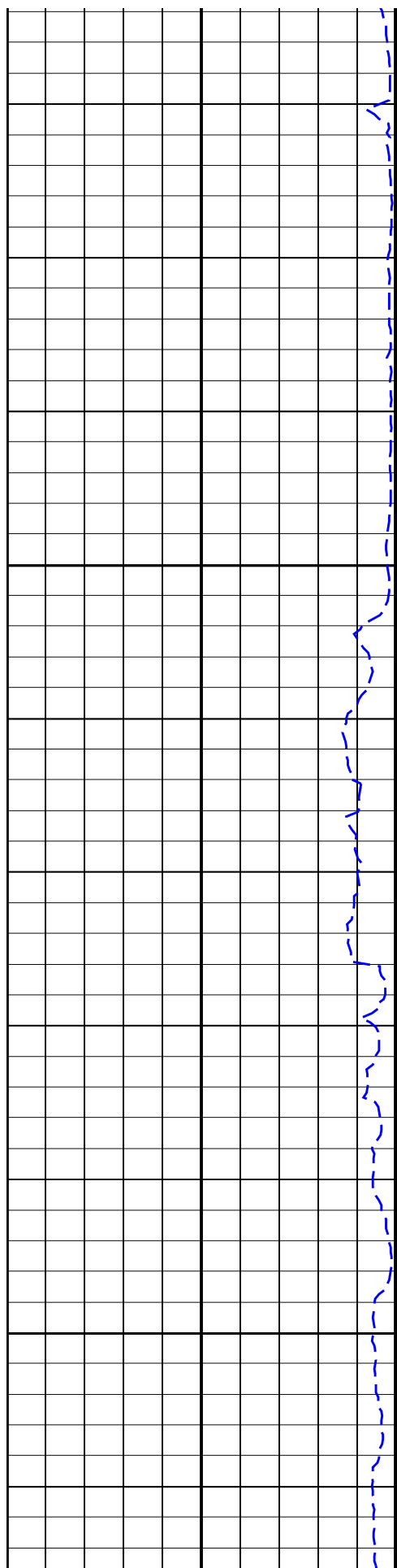


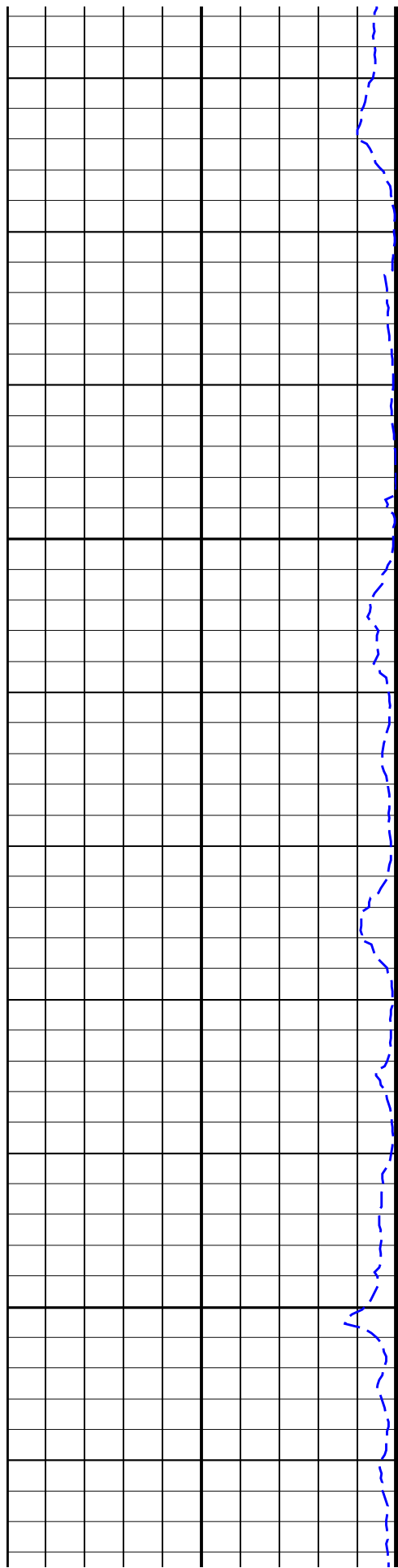


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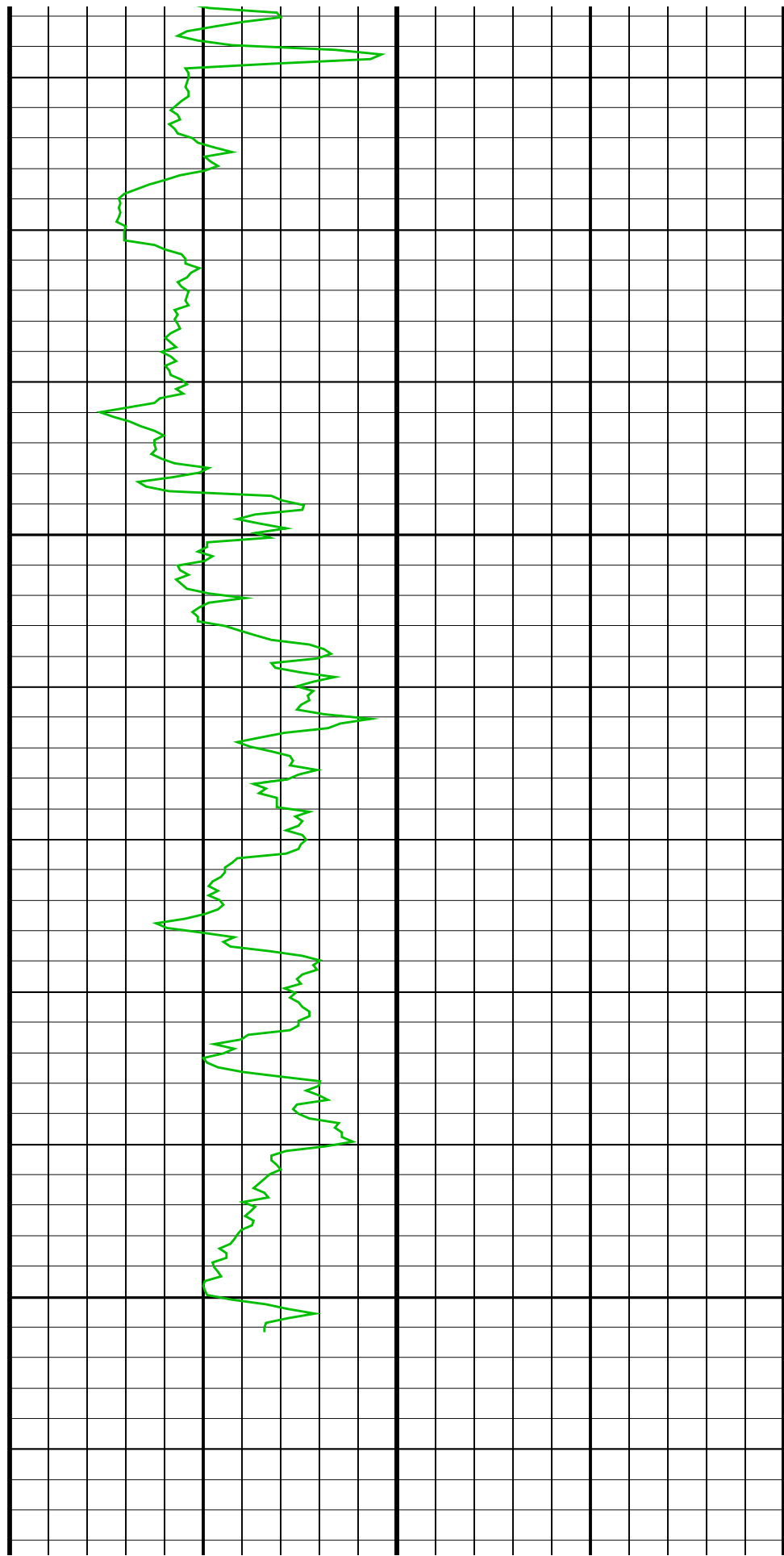


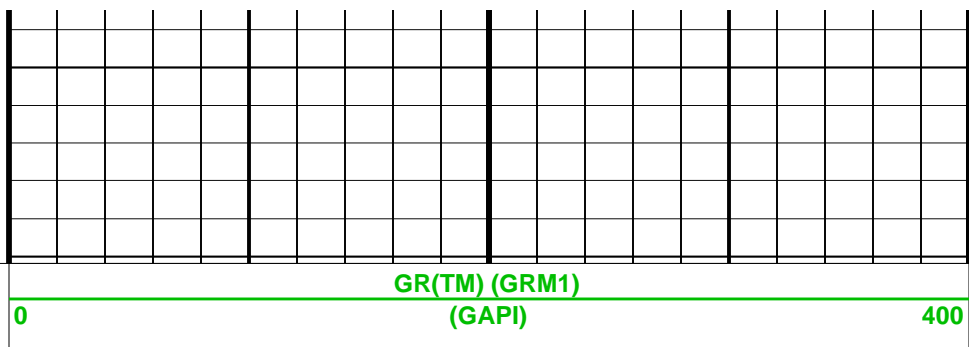
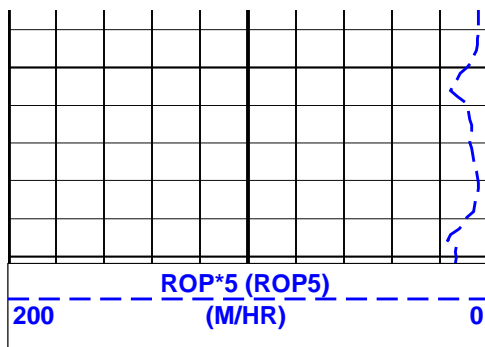




2575
TVD

2600
TVD





SCHLUMBERGER

Survey report 15-Sep-2003 11:02:46 Page 1 of 3

Client.....: ESSO Australia
Field.....: FLA GDA 94

Well.....: FLA-A2a Spud date.....: 03-Sep-03
API number.....: Last survey date.....: 15-Sep-03
Engineer.....: J.Dolan/O.Radicevic/D.Hastie Total accepted surveys....: 54
MD of first survey.....: 1350.00 m
RIG.....: ISDL 453 MD of last survey.....: 2803.00 m
STATE.....: VICTORIA

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor
----- Geomagnetic data -----
Magnetic model.....: BGGM version 2002
Magnetic date.....: 02-Sep-2003
Magnetic field strength...: 1200.85 HCNT

----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Pipe Tally
Magnetic dec (+E/W-).....: 13.22 degrees
Magnetic dip.....: -68.76 degrees

----- MWD survey Reference Criteria -----
GL above permanent.....: -93.00 m
KB above permanent.....: -15240.00 m
DF above permanent.....: 33.85 m
Reference G.....: 1000.03 mGal
Reference H.....: 1200.85 HCNT
Reference Dip.....: -68.76 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).....: 13.22 degrees
Grid convergence (+E/W-).....: -0.89 degrees
Total az corr (+E/W-).....: 14.11 degrees
Azimuth from rotary table to target: 297.15 degrees (Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

[(c)2003 IDEAL ID8_OC_07]
SCHLUMBERGER Survey Report

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (deg)	At 10m	DLS type	Srvy tool	Tool Corr
1	1350.00	16.46	221.99	0.00	1307.62	62.86	-215.88	-179.26	280.60	219.71	1.57	TIP	None
2	1374.40	13.55	232.15	24.40	1331.19	64.95	-220.20	-183.83	286.85	219.86	4.81	GYR	None
3	1411.73	9.13	256.70	37.33	1367.80	69.06	-223.57	-190.17	293.51	220.38	5.19	MWD	None
4	1440.12	8.96	275.09	28.39	1395.85	72.82	-223.90	-194.57	296.62	220.99	3.05	MWD	None
5	1469.06	9.09	292.17	28.94	1424.43	77.19	-222.83	-198.93	298.71	221.76	2.77	MWD	None
6	1497.91	8.97	296.87	28.85	1452.92	81.71	-220.95	-203.05	300.08	222.58	0.78	MWD	None
7	1526.50	10.31	309.60	28.59	1481.11	86.44	-218.32	-207.01	300.86	223.48	2.63	MWD	None
8	1555.14	11.41	326.61	28.64	1509.25	91.41	-214.32	-210.54	300.43	224.49	3.53	MWD	None
9	1584.00	11.80	331.76	28.86	1537.52	96.32	-209.33	-213.51	299.01	225.57	1.15	MWD	None
10	1612.87	11.87	331.37	28.87	1565.77	101.21	-204.13	-216.33	297.43	226.66	0.11	MWD	None
11	1641.74	11.93	331.51	28.87	1594.02	106.12	-198.90	-219.18	295.97	227.78	0.07	MWD	None
12	1670.80	11.79	331.23	29.06	1622.46	111.06	-193.66	-222.04	294.62	228.91	0.16	MWD	None

13	1699.15	11.74	330.47	28.35	1650.22	115.87	-188.61	-224.85	293.48	230.01	0.17	MWD	None
14	1728.09	11.53	329.93	28.94	1678.56	120.76	-183.54	-227.75	292.51	231.14	0.25	MWD	None
15	1757.04	11.41	329.44	28.95	1706.94	125.62	-178.57	-230.66	291.71	232.25	0.16	MWD	None
16	1785.60	11.25	327.87	28.56	1734.94	130.40	-173.78	-233.58	291.13	233.35	0.36	MWD	None
17	1814.31	11.16	332.62	28.71	1763.10	135.07	-168.94	-236.34	290.52	234.44	0.97	MWD	None
18	1843.05	11.19	331.76	28.74	1791.30	139.63	-164.02	-238.94	289.82	235.53	0.18	MWD	None
19	1871.62	11.06	331.55	28.57	1819.33	144.17	-159.16	-241.56	289.28	236.62	0.14	MWD	None
20	1900.06	10.82	332.11	28.44	1847.25	148.61	-154.41	-244.11	288.84	237.69	0.28	MWD	None
21	1928.69	11.77	330.34	28.63	1875.33	153.26	-149.49	-246.81	288.55	238.80	1.06	MWD	None
22	1957.49	11.60	329.37	28.80	1903.53	158.17	-144.45	-249.74	288.51	239.95	0.27	MWD	None
23	1986.11	12.40	330.46	28.62	1931.53	163.17	-139.30	-252.72	288.57	241.14	0.87	MWD	None
24	2015.06	12.13	330.42	28.95	1959.82	168.31	-133.95	-255.75	288.71	242.36	0.28	MWD	None
25	2043.78	13.10	330.59	28.72	1987.84	173.55	-128.49	-258.84	288.98	243.60	1.01	MWD	None
26	2072.44	14.31	331.30	28.66	2015.68	179.19	-122.56	-262.14	289.37	244.94	1.28	MWD	None
27	2101.06	14.00	330.94	28.62	2043.44	184.99	-116.43	-265.52	289.92	246.32	0.34	MWD	None
28	2129.96	15.19	332.71	28.90	2071.40	190.98	-110.00	-268.95	290.58	247.75	1.32	MWD	None
29	2159.25	18.21	334.37	29.29	2099.46	197.75	-102.47	-272.69	291.31	249.41	3.13	MWD	None
30	2187.25	21.60	334.98	28.00	2125.78	205.30	-93.85	-276.77	292.24	251.27	3.64	MWD	None

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Seq	Measured	Incl	Azimuth	Course	TVD	Vertical	Displ	Displ	Total	At	DLS	Srvy	Tool
#	depth	angle	angle	length	depth	section	+N/S-	+E/W-	displ	Azim	(deg/	tool	Corr
-	(m)	(deg)	(deg)	(m)	(m)	(m)	(m)	(m)	(deg)	10m)	type	(deg)	
31	2215.89	24.11	332.81	28.64	2152.17	214.22	-83.87	-281.67	293.89	253.42	2.77	MWD	None
32	2244.50	26.55	331.20	28.61	2178.03	224.27	-73.06	-287.42	296.56	255.74	2.66	MWD	None
33	2272.84	28.75	329.07	28.34	2203.13	235.30	-61.67	-293.98	300.37	258.15	2.55	MWD	None
34	2301.31	32.66	329.75	28.47	2227.60	247.59	-49.15	-301.37	305.35	260.74	4.14	MWD	None
35	2329.86	36.22	329.93	28.55	2251.15	261.18	-35.19	-309.48	311.47	263.51	3.74	MWD	None
36	2359.02	38.38	330.45	29.16	2274.34	275.99	-19.86	-318.26	318.88	266.43	2.25	MWD	None
37	2371.48	38.87	333.19	12.46	2284.07	282.50	-13.10	-322.11	322.19	267.69	1.24	MWD	None
38	2388.13	38.50	329.86	16.65	2297.07	291.24	-4.09	-327.31	326.91	269.32	0.76	MWD	None
39	2416.83	42.45	331.83	28.70	2318.90	306.73	12.18	-336.37	336.18	272.12	4.34	MWD	None
40	2445.44	43.87	331.98	28.61	2339.77	322.78	29.47	-345.55	346.44	274.91	1.52	MWD	None
41	2474.07	38.51	335.08	28.63	2361.31	337.94	46.34	-353.93	356.64	277.50	5.95	MWD	None
42	2502.61	38.45	335.48	28.54	2383.65	351.91	62.48	-361.36	366.41	279.85	0.27	MWD	None
43	2531.19	39.29	335.30	28.58	2405.90	365.99	78.78	-368.82	376.85	282.10	0.89	MWD	None
44	2559.97	39.87	335.27	28.78	2428.08	380.42	95.44	-376.49	388.12	284.26	0.60	MWD	None
45	2589.01	38.93	335.13	29.04	2450.52	394.93	112.17	-384.22	399.99	286.31	0.98	MWD	None
46	2616.01	39.31	334.73	27.00	2471.47	408.40	127.60	-391.44	411.45	288.09	0.51	MWD	None
47	2643.54	39.80	334.52	27.53	2492.70	422.31	143.44	-398.95	423.70	289.81	0.51	MWD	None
48	2675.58	40.05	334.10	32.04	2517.27	438.70	161.97	-407.87	438.61	291.70	0.34	MWD	None
49	2704.02	40.51	333.56	28.44	2538.97	453.44	178.47	-415.98	452.41	293.26	0.61	MWD	None
50	2726.90	40.71	333.58	22.88	2556.33	465.43	191.81	-422.61	463.87	294.45	0.26	MWD	None
51	2733.21	40.62	333.55	6.31	2561.12	468.74	195.49	-424.44	467.06	294.77	0.44	MWD	None
52	2761.16	39.98	333.49	27.95	2582.44	483.29	211.67	-424.44	481.30	296.12	0.69	MWD	None
53	2783.99	38.26	333.88	22.83	2600.15	494.87	224.58	-438.88	492.79	297.14	2.28	MWD	None
54	2803.00	37.00	334.20	19.01	2615.20	504.15	235.02	-443.97	502.12	297.93	2.01	Projection to TD	

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Company: **EESO Australia Pty. Ltd.**

Schlumberger

Well: **FLA-A2a**

Field: **Flounder GDA 94**

Rig: **ISDL 453**

State: **VICTORIA**

Gamma Ray Service

**1:200 True Vertical Depth
Real Time Log**
