

State: **VICTORIA**

Rig: ISDL 453 Field: Flounder Location: Bass Strait Well: FLA A20a Company: ESSO Australia Ltd.	Gamma Ray Service 1:500 Measured Depth Real Time Log							
	Location	Total depth: 2789.0 m			Elevation	K.B. 33.85 m		
		Spud date: 03-Feb-03				G.L. -93.0 m		
		Runs: 1 To 3				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=5758708.90m (North) x=625840.95m (East)		Longitude		Latitude	
					E148°26'21.748		S38°18'39.245	
	Depth logged: 796.4 m To 2774.4 m		Mag decl: 13.22 deg.		Other services:			
Date logged: 07-Feb-03To 19-Feb-03		Mag dip: -68.77 deg.		Directional Drilling, D&I				
Bore hole record				Casing record				
Hole size		from	to	Size	Density	from	to	
17.5 in.		0.0 m	803.5 m	13.375 in.	157.5 lbm/m	0.0 m	803.5 m	
8.5 in.		803.5 m	2789.0 m					
Mud record				Borehole deviation record				
Type		from	to	Min	Max	from	to	
KCl/PHPA/Glycol		811.0 m	2789.0 m	25.5 deg.	48.7 deg.	800.0 m	1134.3 m	
				0.6 deg.	25.5 deg.	1134.3 m	1508.4 m	
				0.6 deg.	3.31 deg.	1508.4 m	2310.4 m	
				3.3 deg.	13.7 deg.	2310.4 m	2625.8 m	
Surface equipment			Software record					
Unit		OLU-FB-924	IDEAL Wis	ID8_0c_07				
Depth system		DES-98071	SPM	HSPM8-0c-13				
			LWD	N/A				
			MWD	6.1c00				

Bit Run Summary

[illegible]

Type		KCl/PHPA/Glycol									
Mud weight	ppg	9.5	9.7	9.6							
Solids	%	5.2	7.0	6.6							
Chlorides	mg/L	41000	38500	37000							
Rm	ohm-m	N/A	N/A	N/A							
Rmf	ohm-m	N/A	N/A	N/A							
Rmc	ohm-m	N/A	N/A	N/A							
Potassium	%	7.5	7.0	6.6							
Environmental data											
GR											
Mud weight	ppg	9.5	9.7	9.6							
Bit size	in	8.5	8.5	8.5							
Resistivity											
Neutron porosity											
Hole Size		N/A	N/A	N/A							
Mud weight		N/A	N/A	N/A							
Temperature		N/A	N/A	N/A							
Mud salinity		N/A	N/A	N/A							
Formation salinity		N/A	N/A	N/A							
Recording rate 1	SEC	N/A	N/A	N/A							
Recording rate 2	SEC	N/A	N/A	N/A							
Filtering GR		N/A	N/A	N/A							
Filtering density		N/A	N/A	N/A							
Filtering Neutron		N/A	N/A	N/A							
Company representative		R. Morris	B. Davis								
Anadrill personnel		J. Dolan	W. Gamlin	C. Soper	B. Manjenic						

DISCLAIMER

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OTHER SERVICES FOR RUN1 Gamma Ray Directional Drilling Directional Surveys			OTHER SERVICES FOR RUN2 Gamma Ray Directional Drilling Directional Surveys			OTHER SERVICES FOR RUN3 Gamma Ray Directional Drilling Directional Surveys		
REMARKS: RUN NUMBER 1 8 1/2 in. hole section was drilled from 811 m to 2330 m. Depth is referenced to Driller's Depth. All data presented is Real Time data. Gamma Ray is corrected for Tool size, Bit size, Potassium content and Mud weight. Mud type is water-based KCl/PHPA/Glycol. Barite is present in the mud system. GR logged in casing to 803.5 m POOH at 2330 m for a bit change due to poor penetration rate.			REMARKS: RUN NUMBER 2 8 1/2 in. hole section was drilled from 2330 m to 2612 m. Depth is referenced to Driller's Depth. All data presented is Real Time data. Gamma Ray is corrected for Tool size, Bit size, Potassium content and Mud weight. Mud type is water-based KCl/PHPA/Glycol. Barite is present in the mud system. POOH at 2612 m for a bit change due to poor penetration rate.			REMARKS: RUN NUMBER 3 8 1/2 in. hole section was drilled from 2612 m to 2789 m. Depth is referenced to Driller's Depth. All data presented is Real Time data. Gamma Ray is corrected for Tool size, Bit size, Potassium content and Mud weight. Mud type is water-based KCl/PHPA/Glycol. Barite is present in the mud system. Reached TD of FLA A20a at 2789 m.		

EQUIPMENT DESCRIPTION

RUN1

RUN2

RUN3

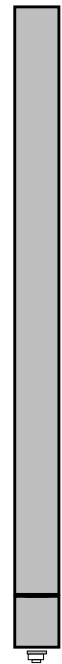
DOWNHOLE EQ

DOWNHOLE E

DOWNHOLE EQ

6 3/4 in. Pow
MDC Z40
MDI 11
MEC 11
MGR AA
DH software:

D&I 15.2
GR 14.6



6 1/8 in. NM
SN: DOTS
8 3/8 in. Stab



6 3/4 in. NM
SN: 9612

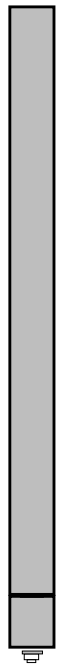


PowerPak* M
A675XP
SN: 023
1.15 deg
8 1/8 in. moto



20.66 3/4 in. Pow
MDC Z40
MDI 11
MEC 11
MGR AA
DH software:

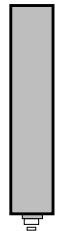
D&I 15.2
GR 14.6



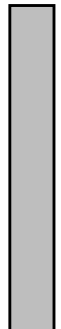
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SN: DOTS
8 3/8 in. Stab



10.76 3/4 in. NM
SN: 9612

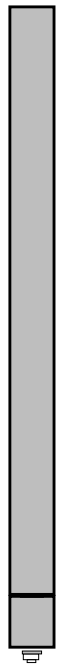


7.98 PowerPak* M
A675XP
SN: 023
1.15 deg
8 1/8 in. moto



20.66 3/4 in. Pow
MDC Z40
MDI 11
MEC 11
MGR AA
DH software:

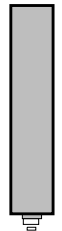
D&I 15.2
GR 14.6



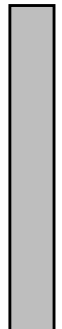
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8 3/8 in. Stab

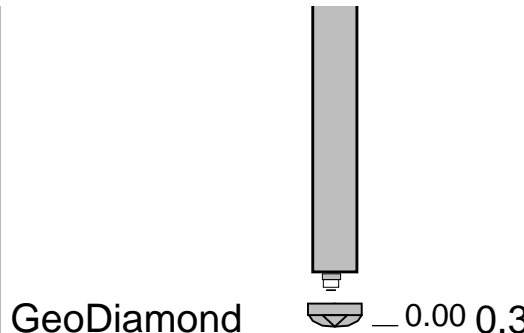


10.76 3/4 in. NM
SN: 9612



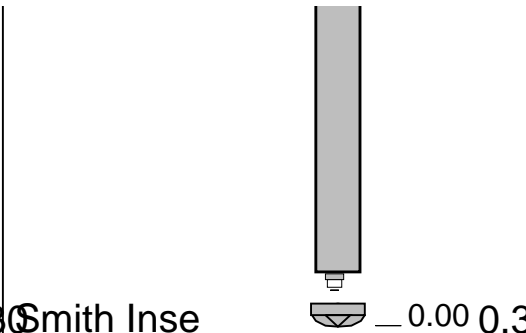
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A675XP
SN: 023
1.15 deg
8 1/8 in. moto





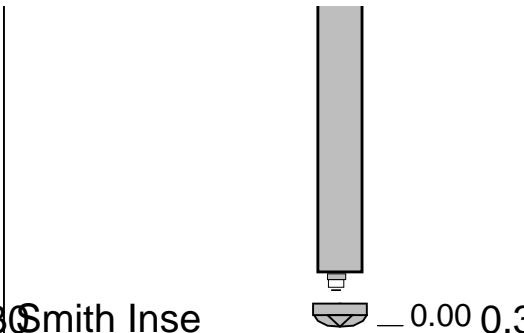
GeoDiamond
8 1/2 in.
S73PX SN:

Maximum string diam
All lengths in



Smith Inse
8 1/2 in.
20GF SN: M

Maximum string diam
All lengths in



Smith Inse
8 1/2 in.
ER6027RP SN

Maximum string diam
All lengths in

FLA A20a RT 1:500MD

IDEAL Version: ID8_OC_07 <MD> Vertical Scale: 1:500

Graphics File Created: 19-Feb-2003 10:35

PIP SUMMARY

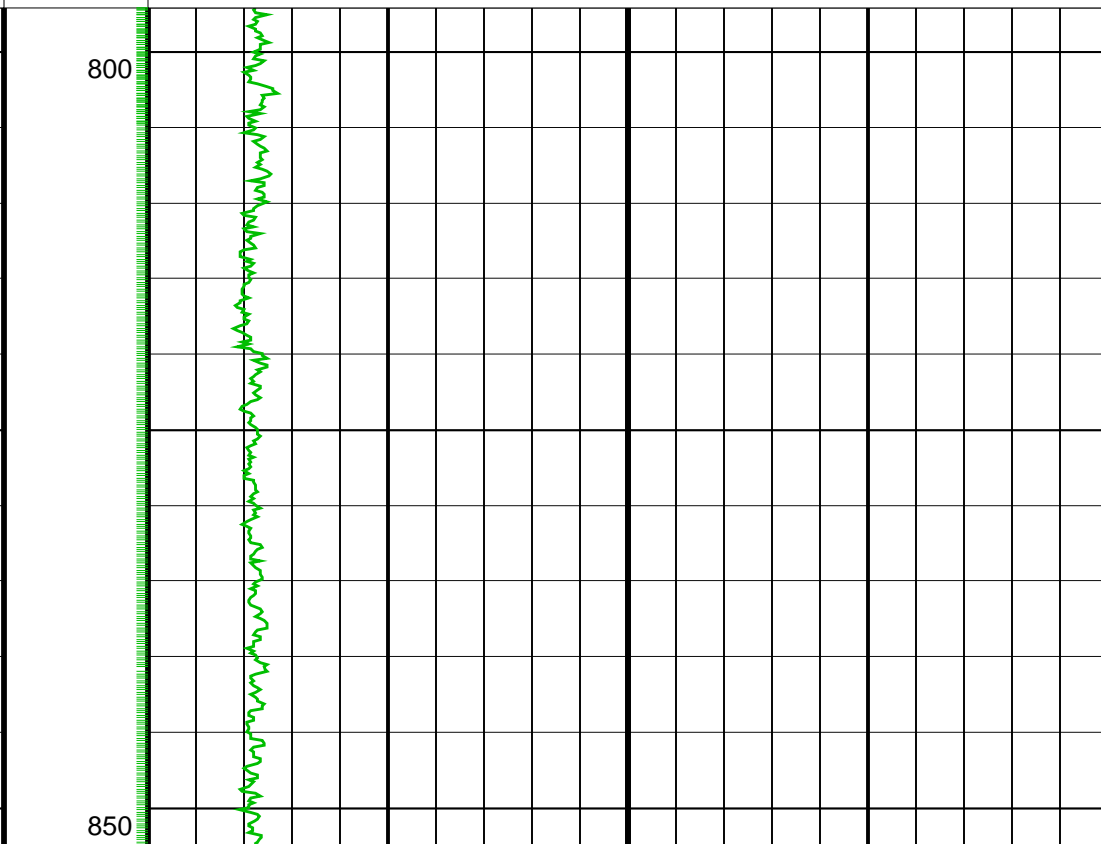
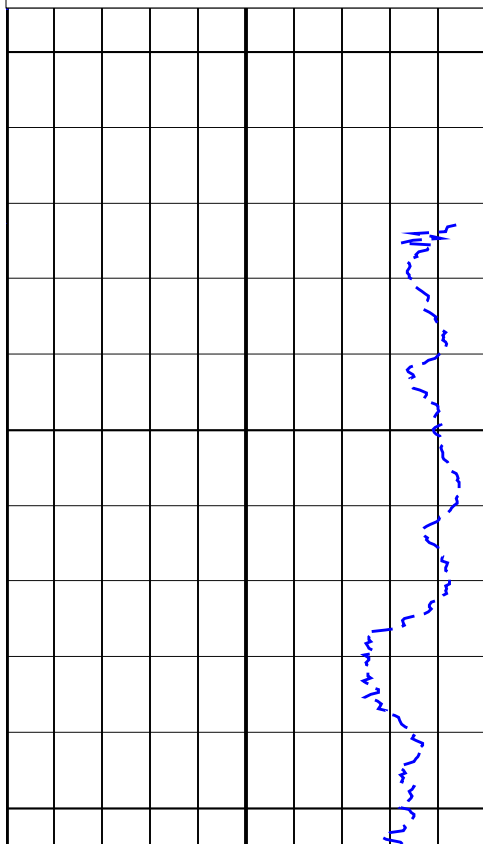
GR(TM) PIP

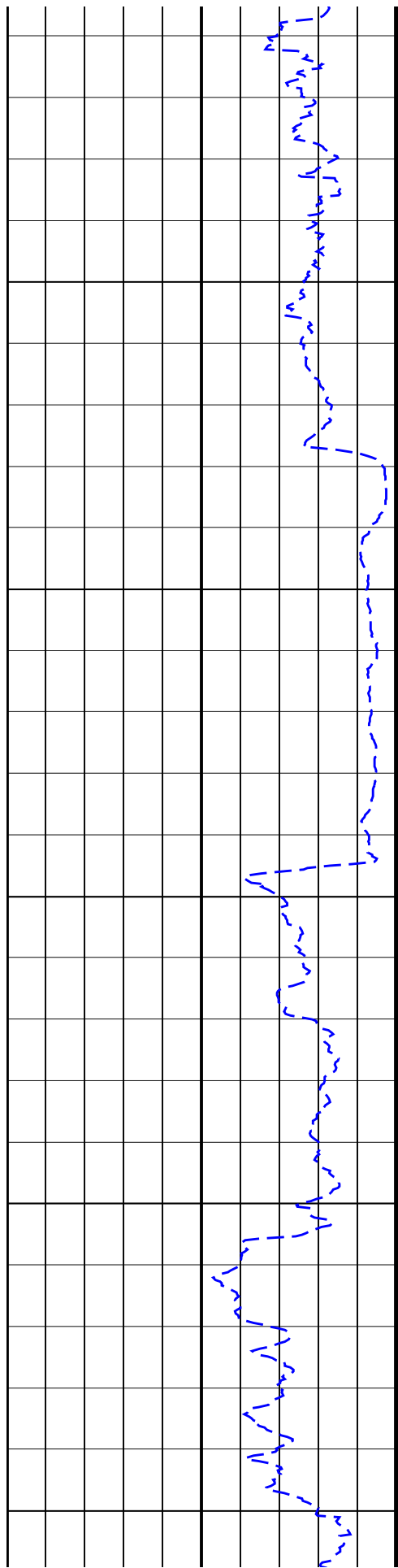
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(M/HR)

200 0

GR(TM) (GRM1)
(GAPI)

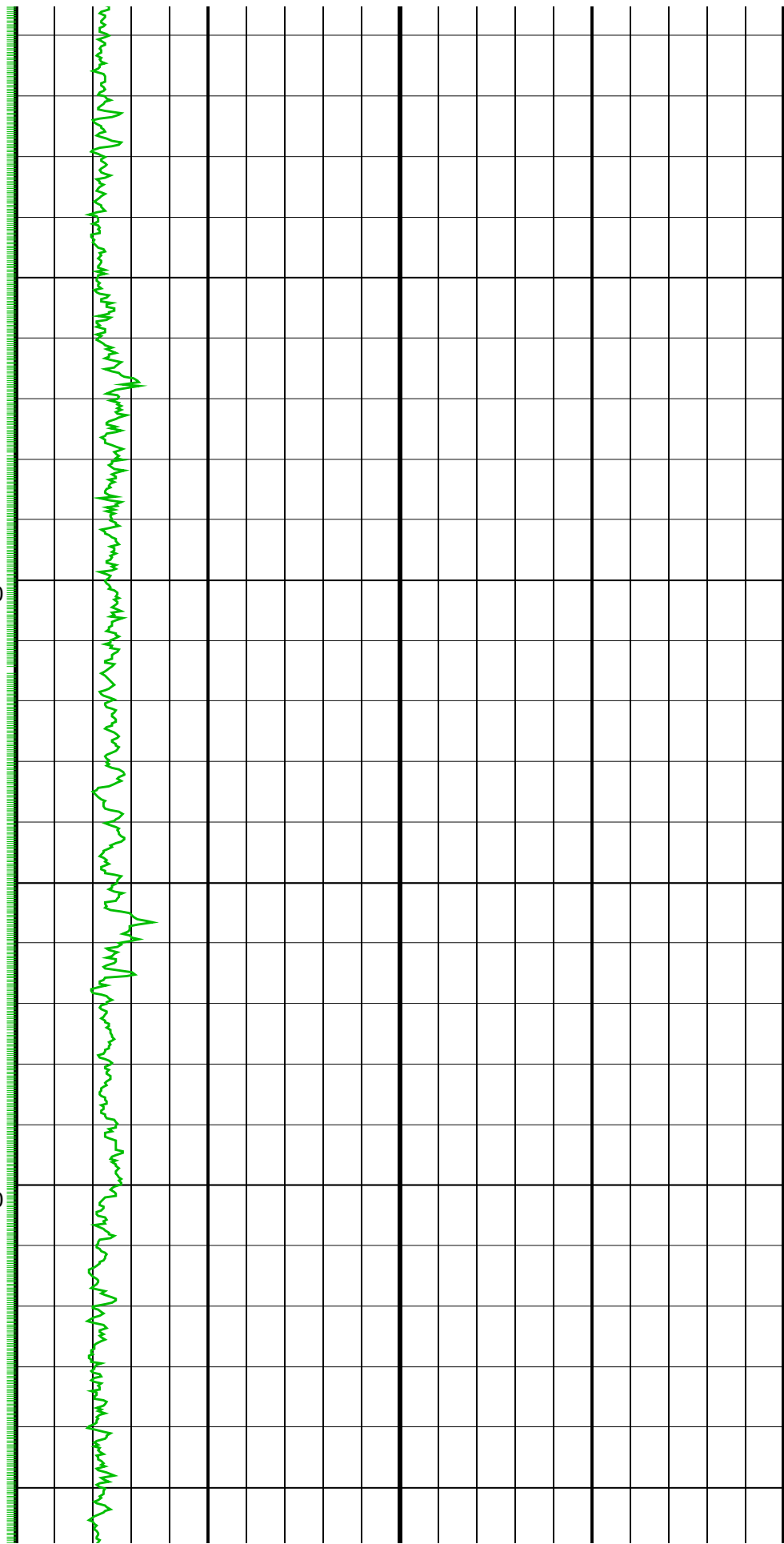
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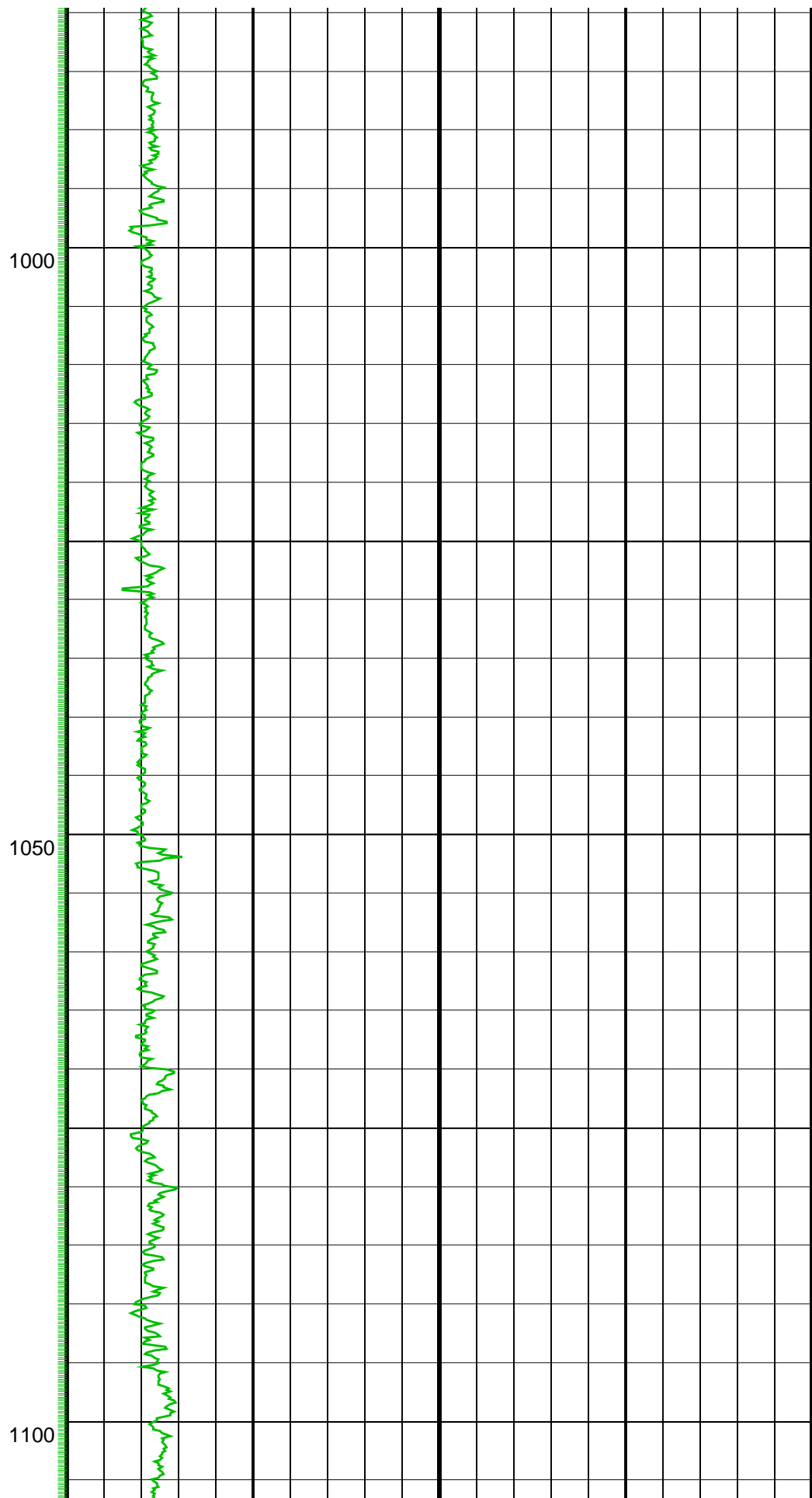
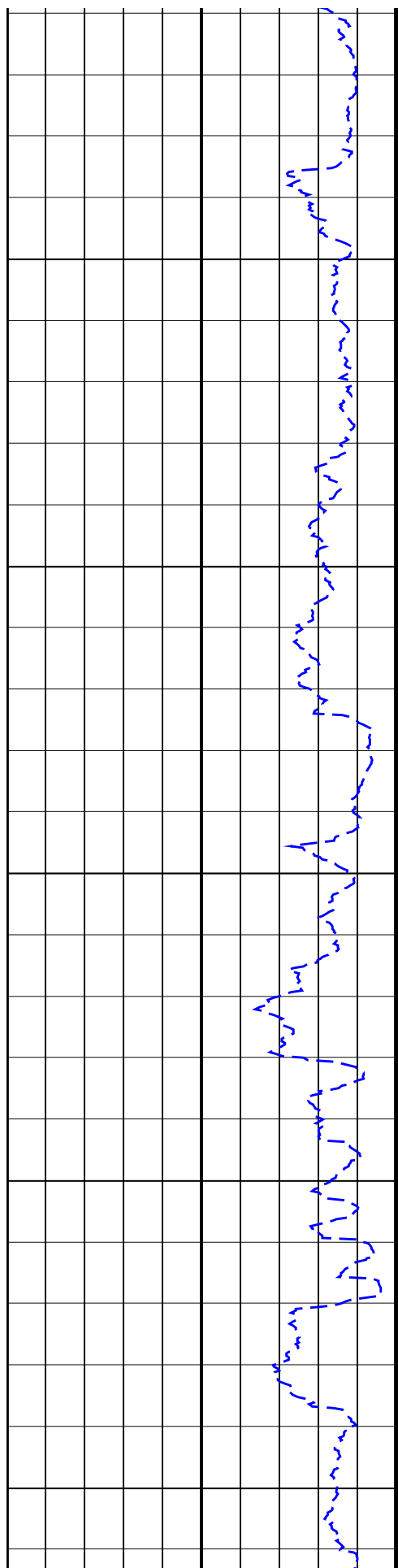


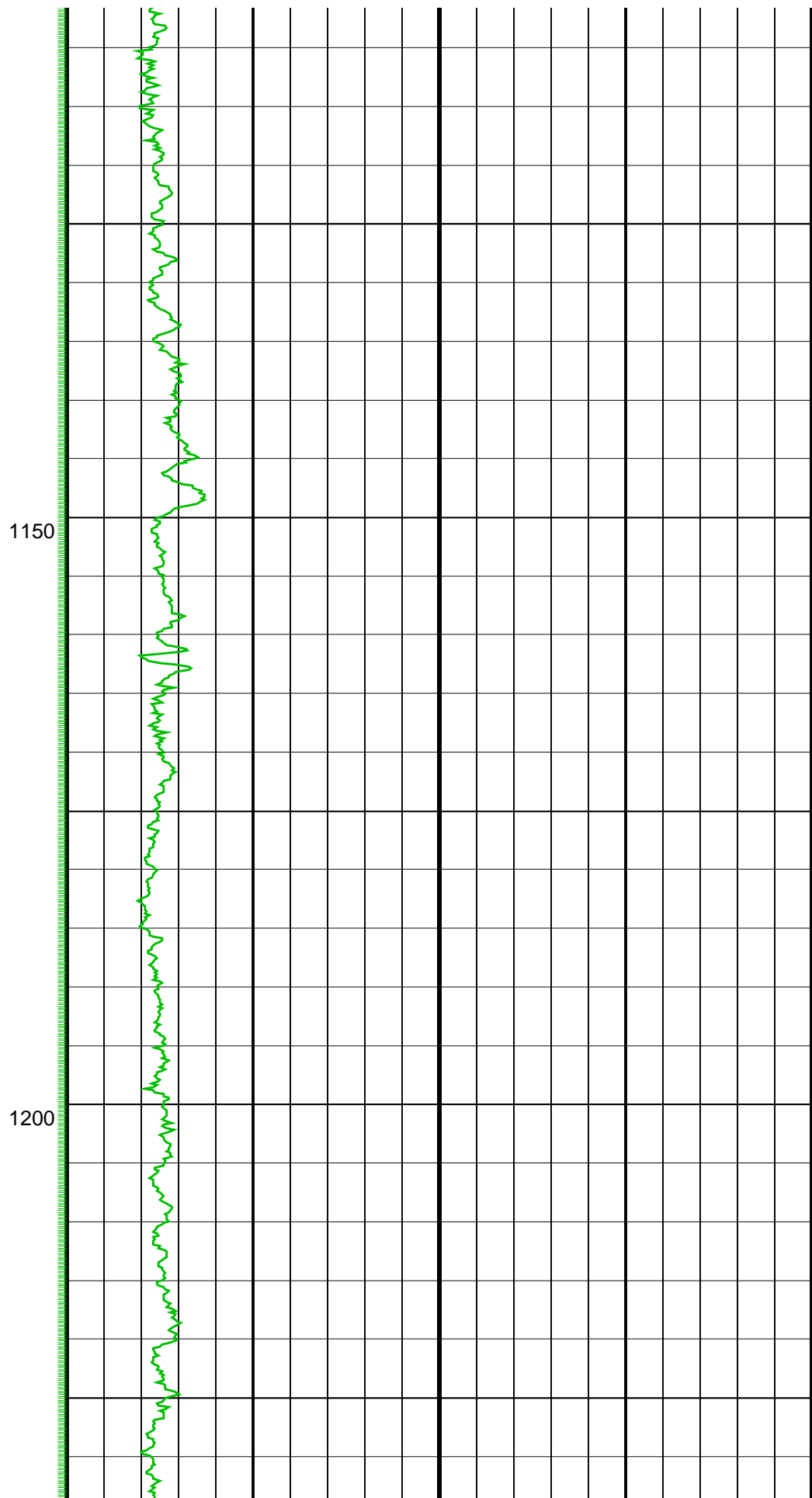
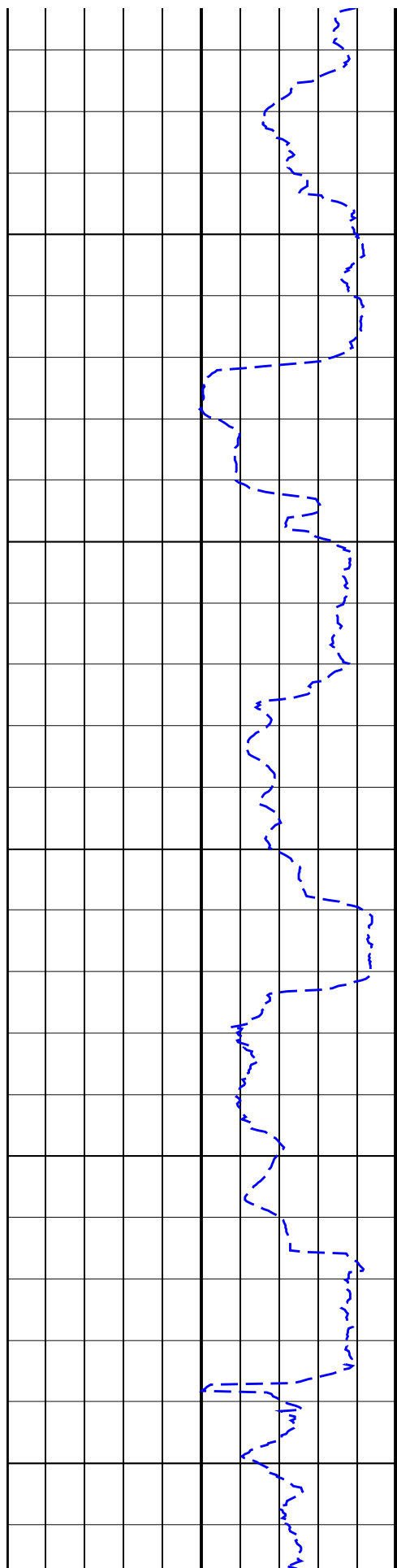


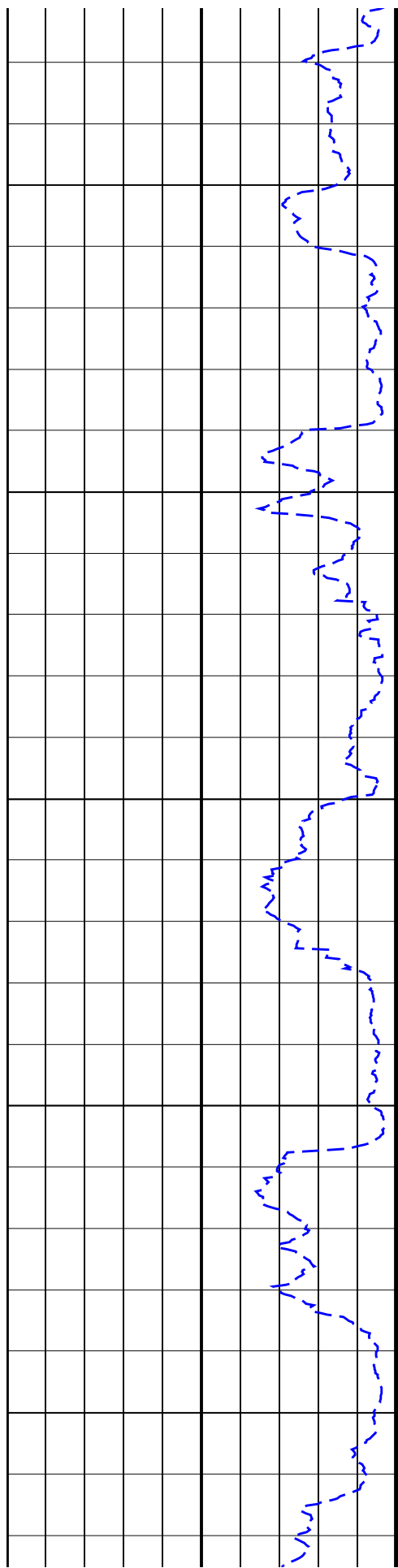
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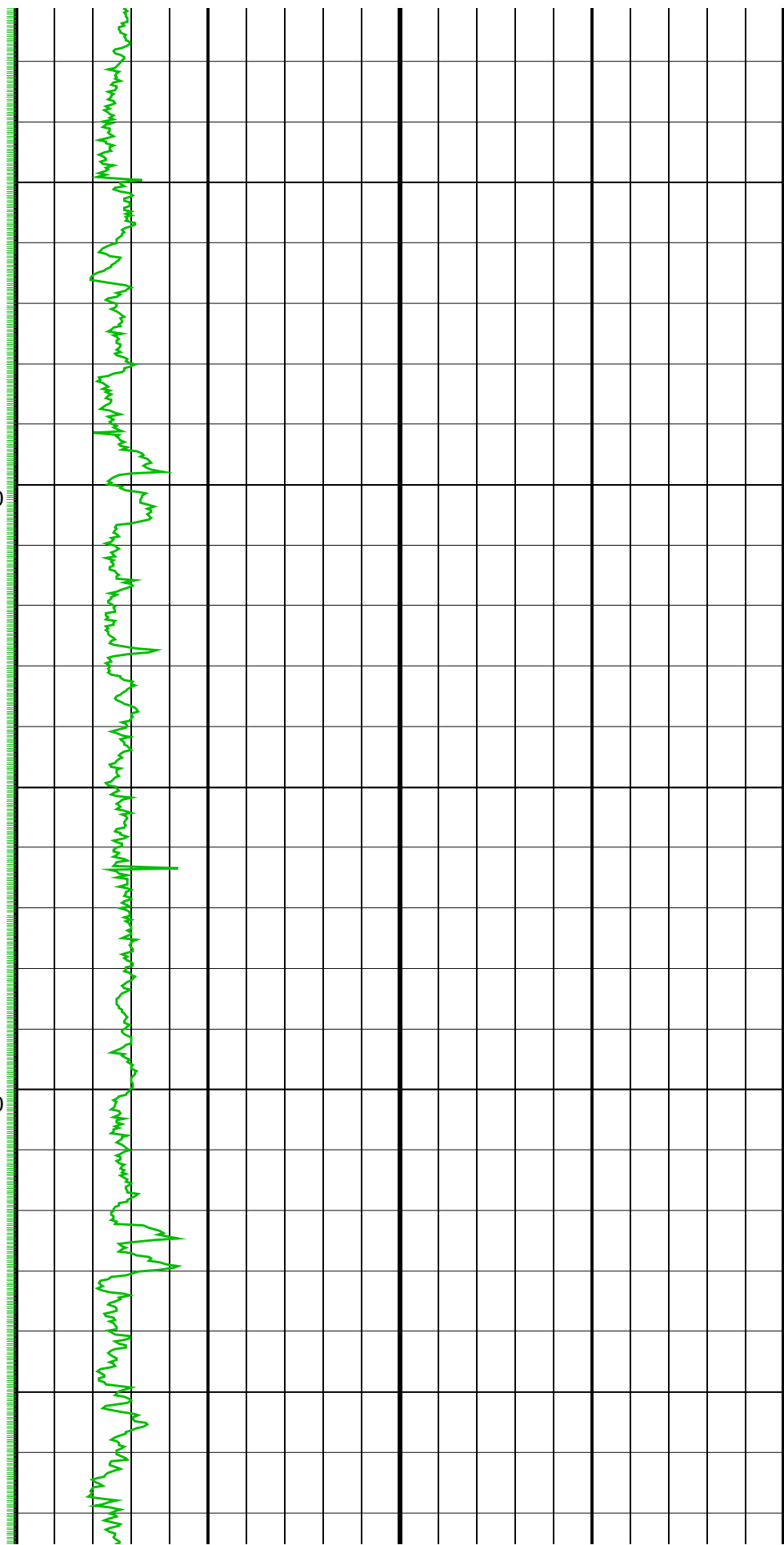


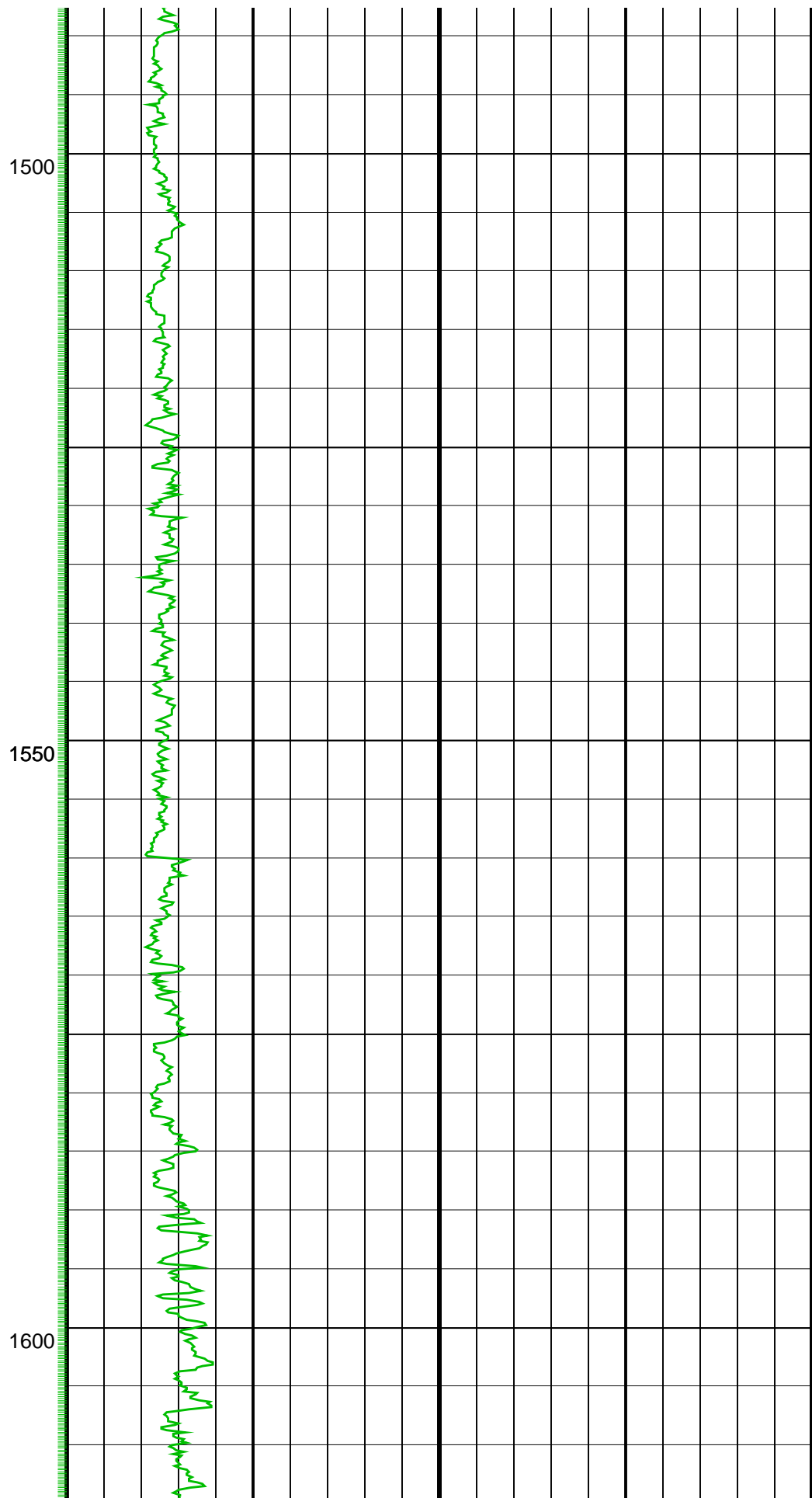
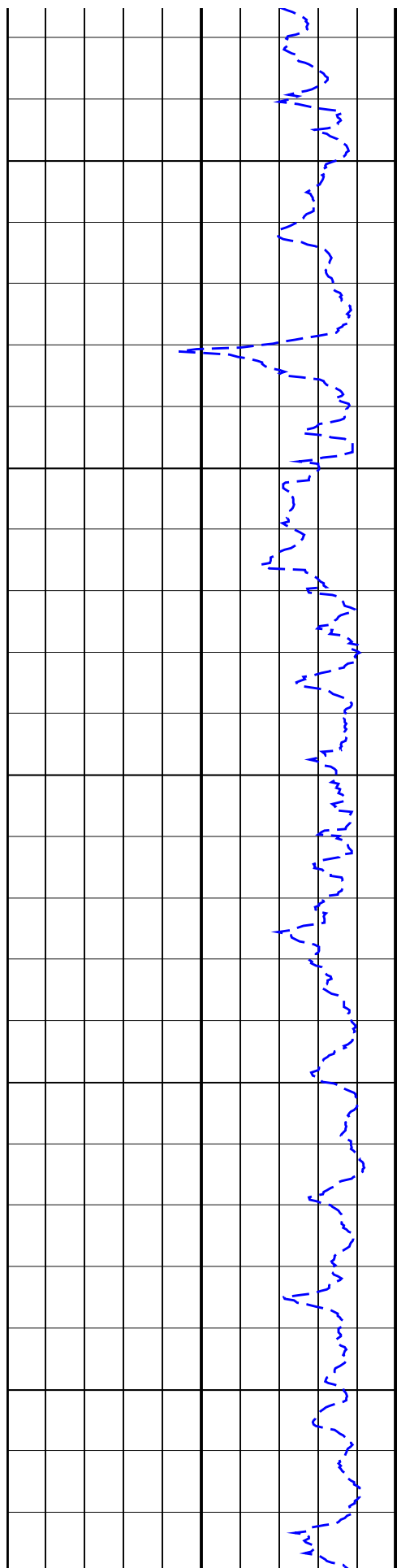


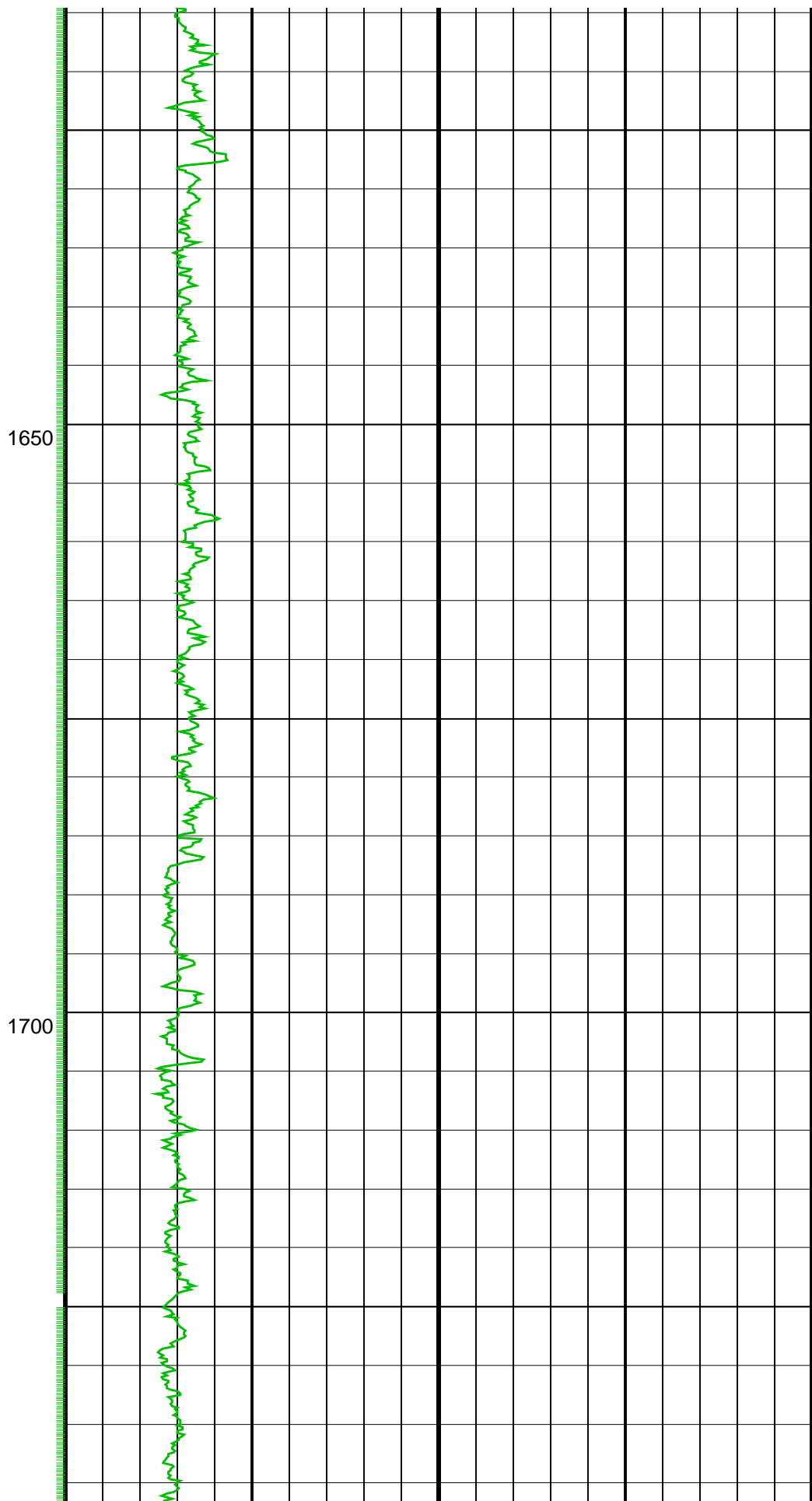
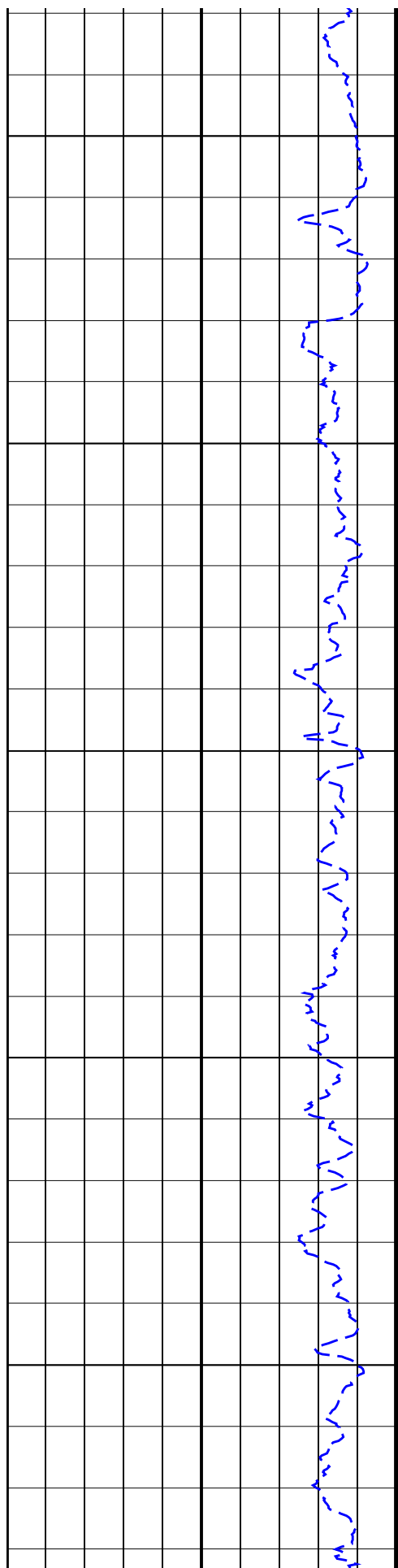


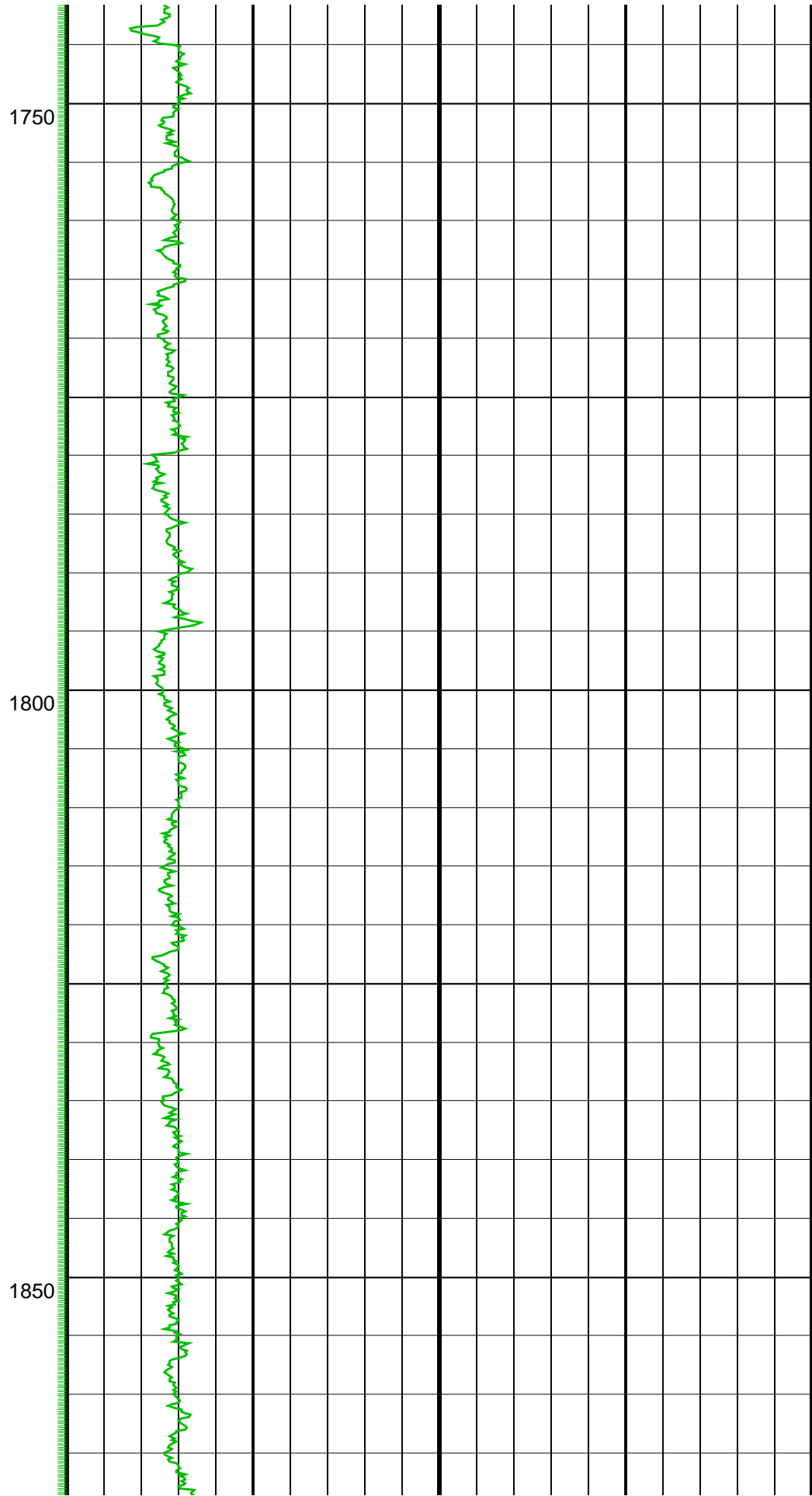
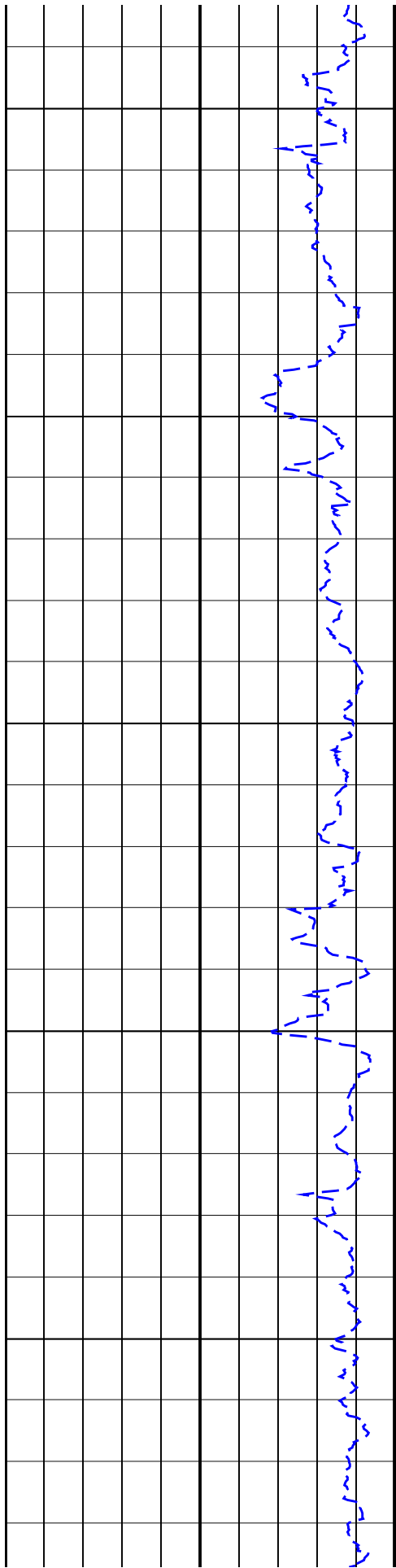
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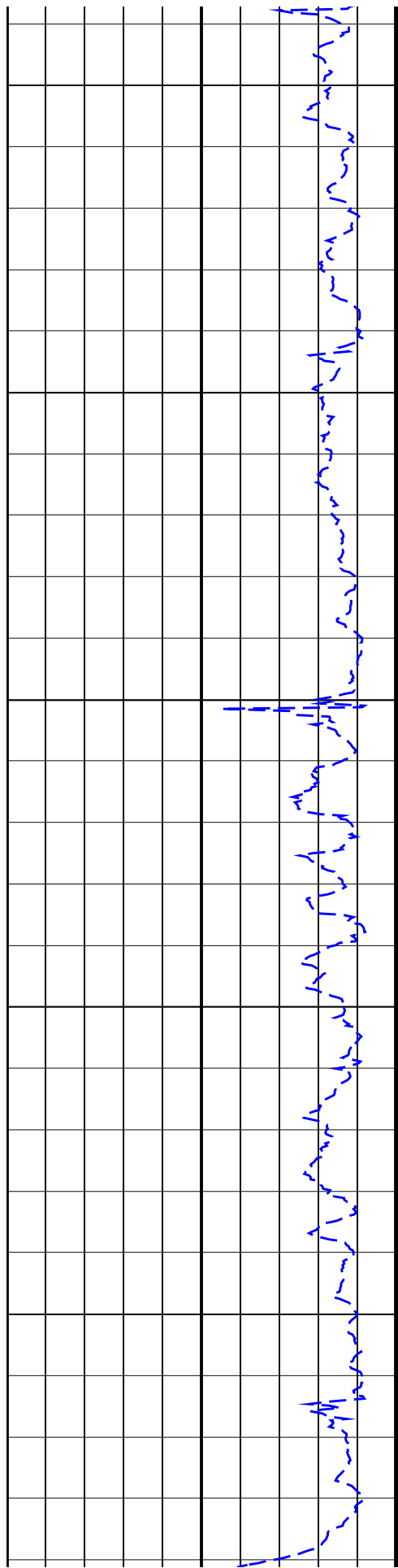
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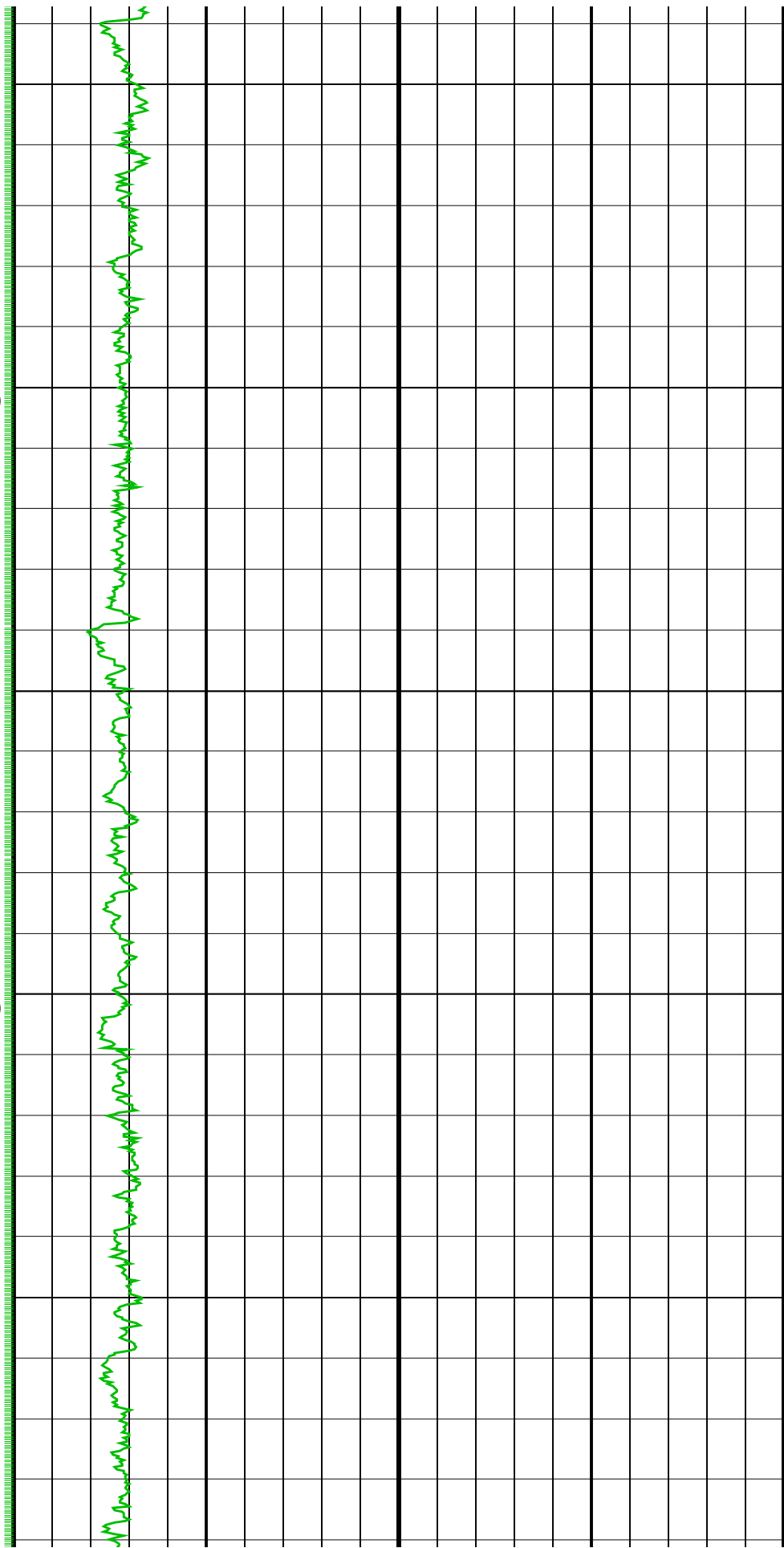


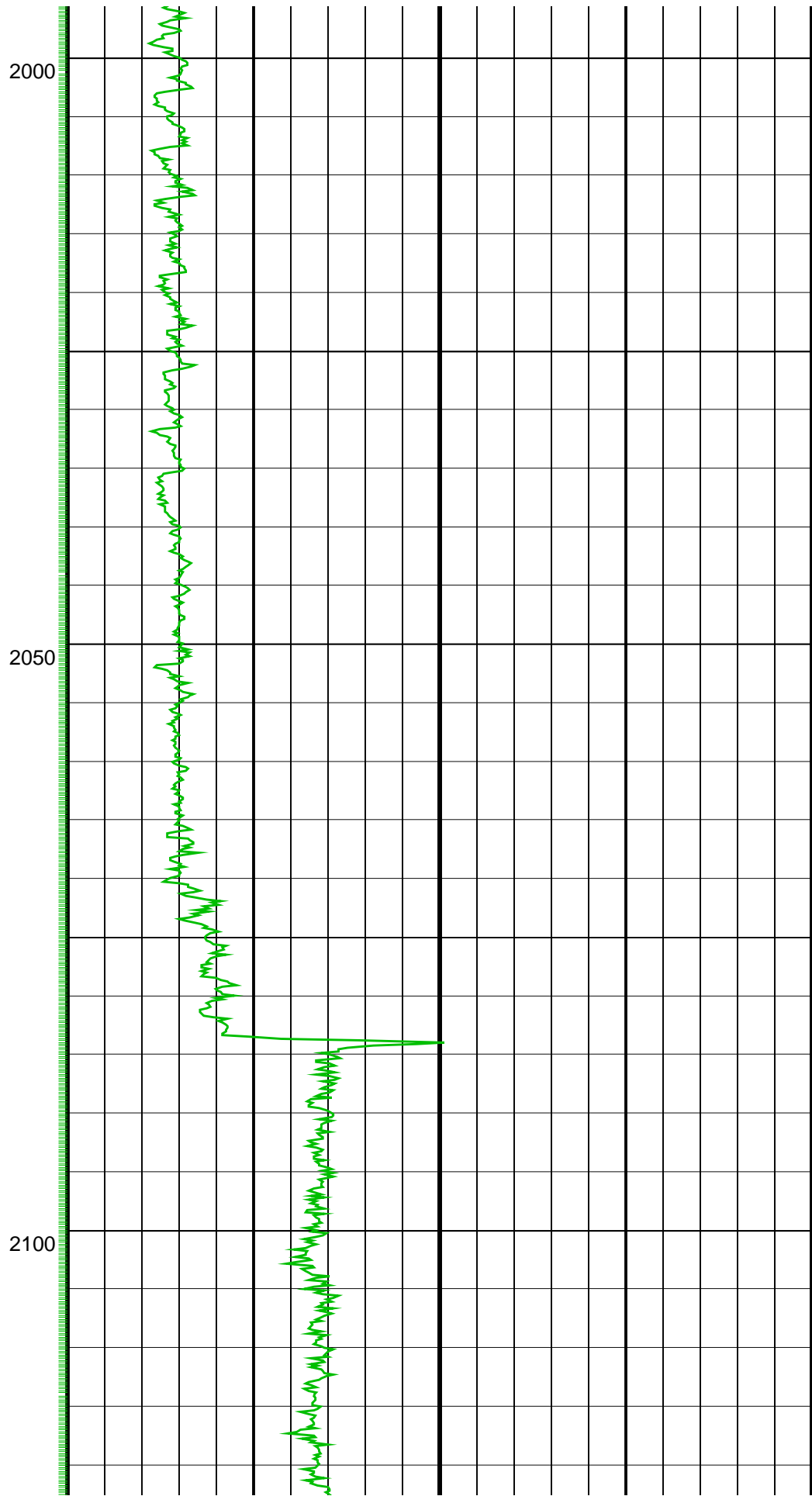
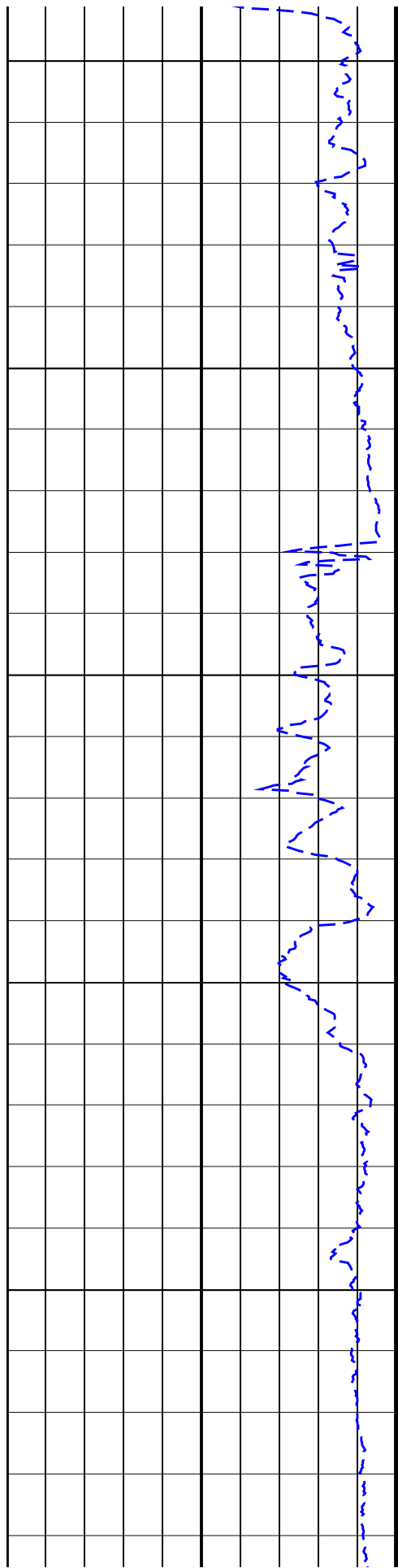


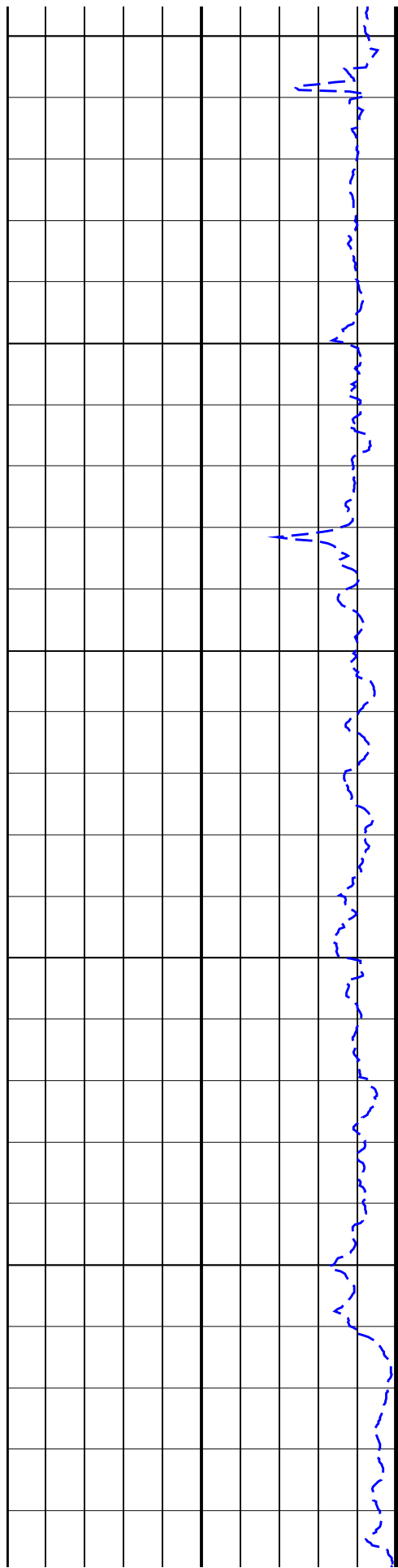


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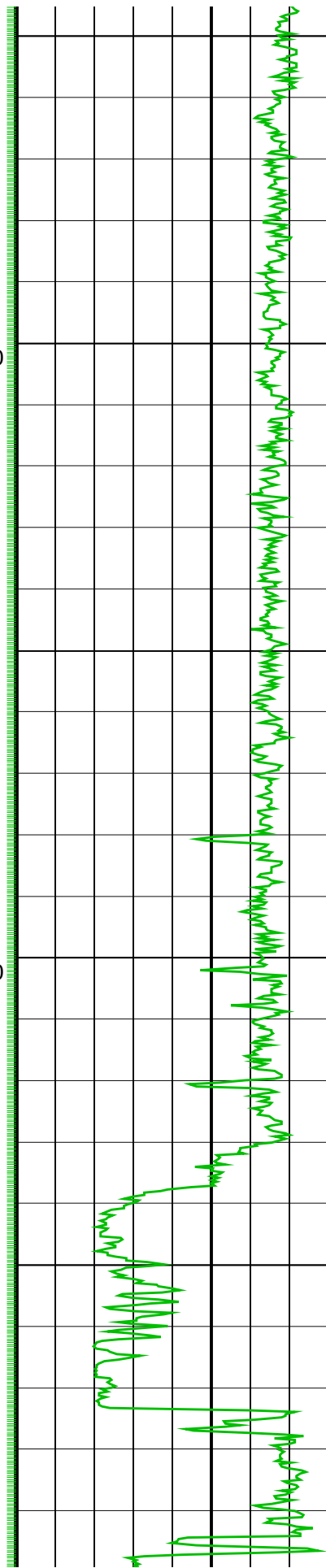


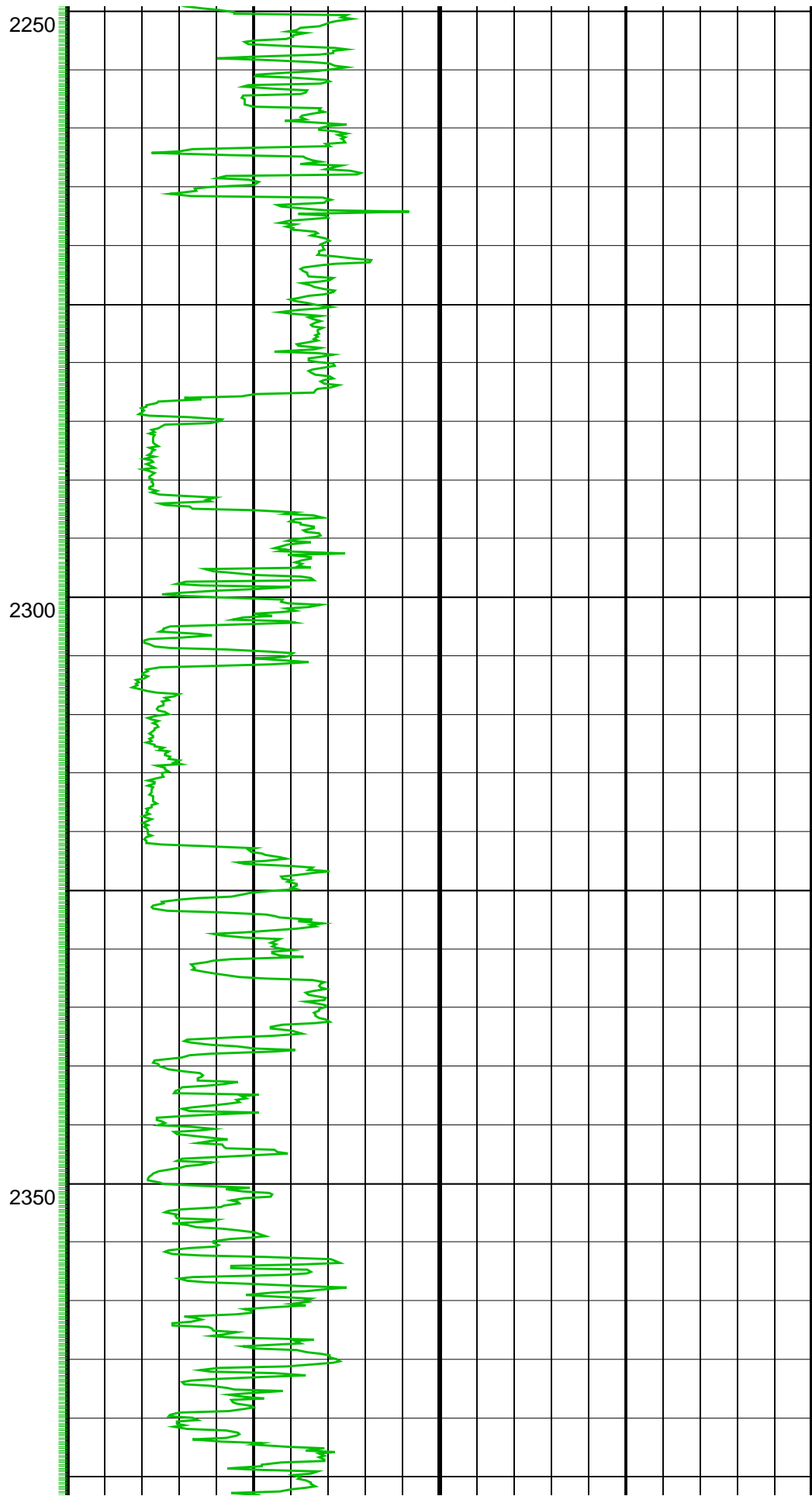
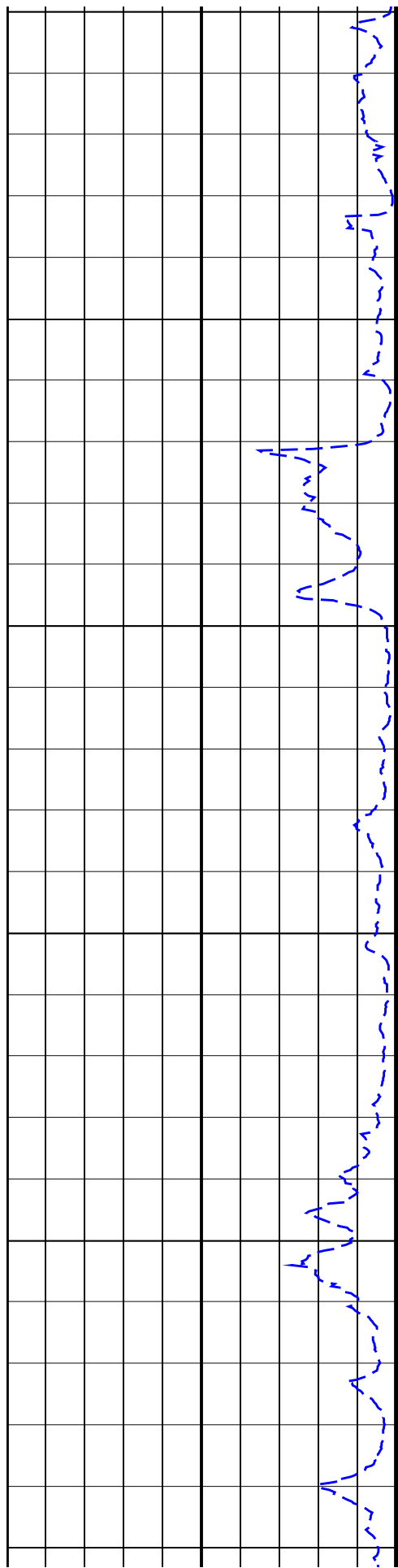


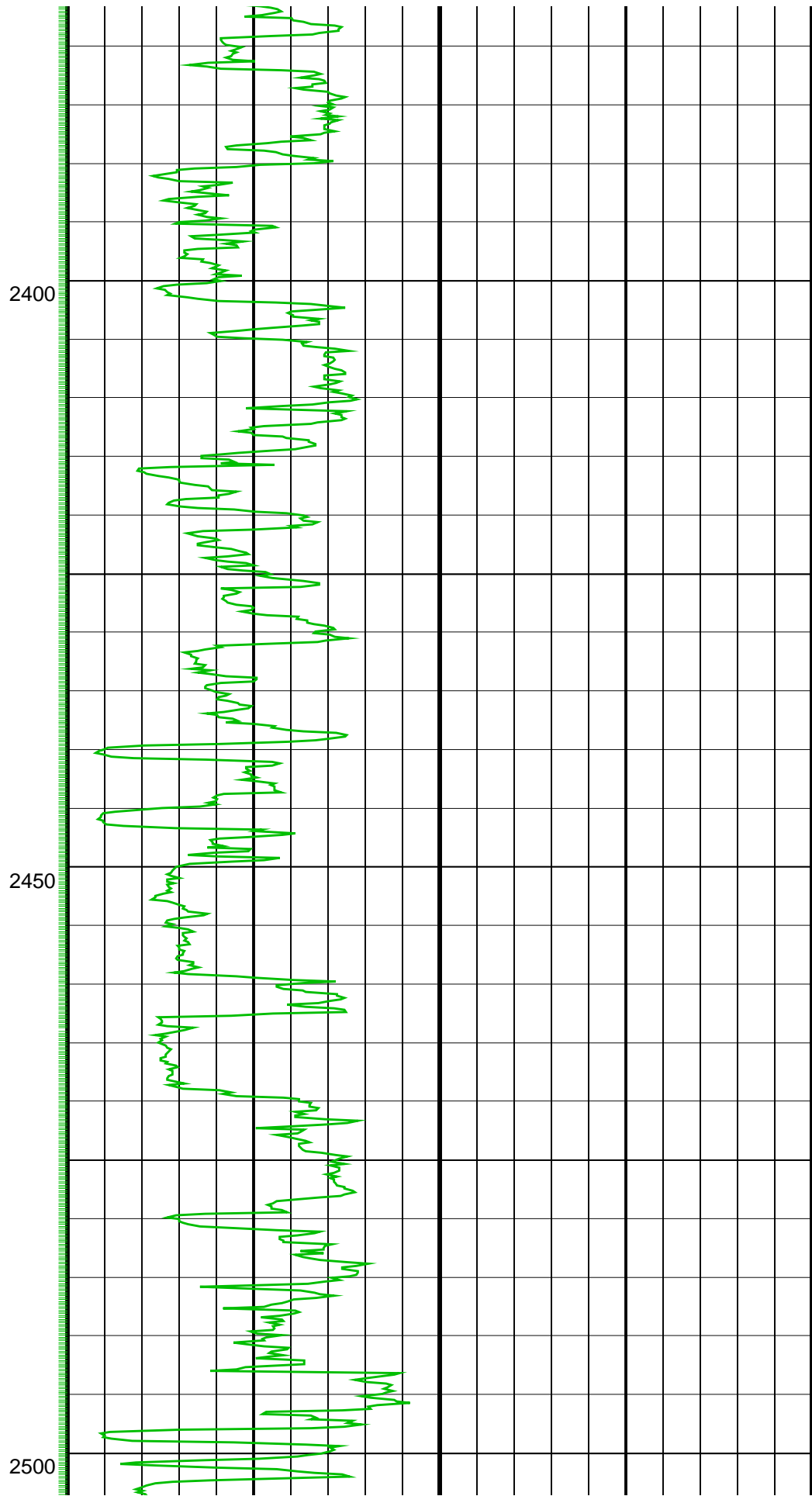
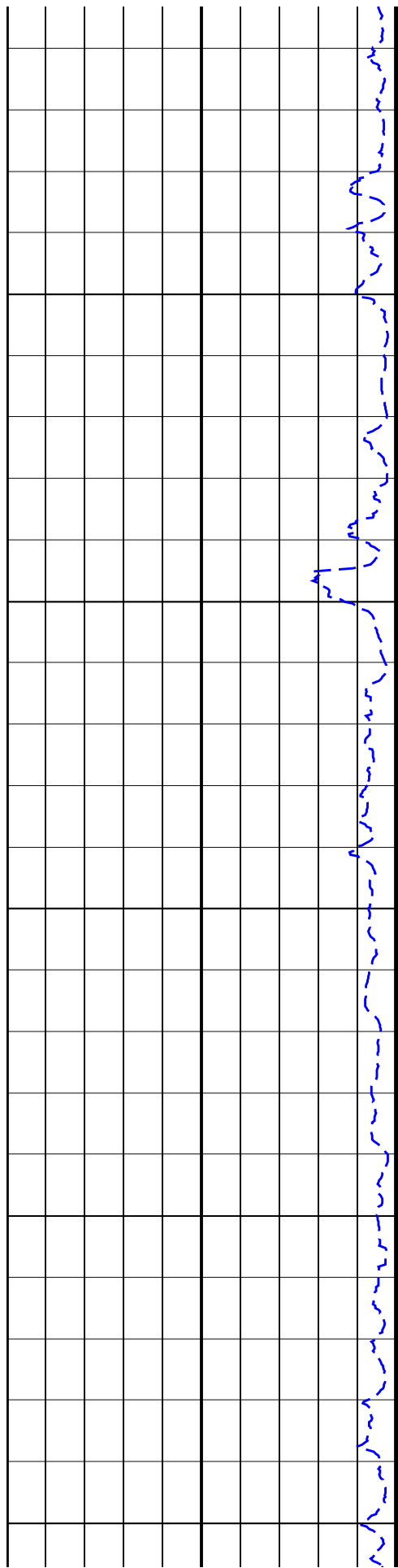


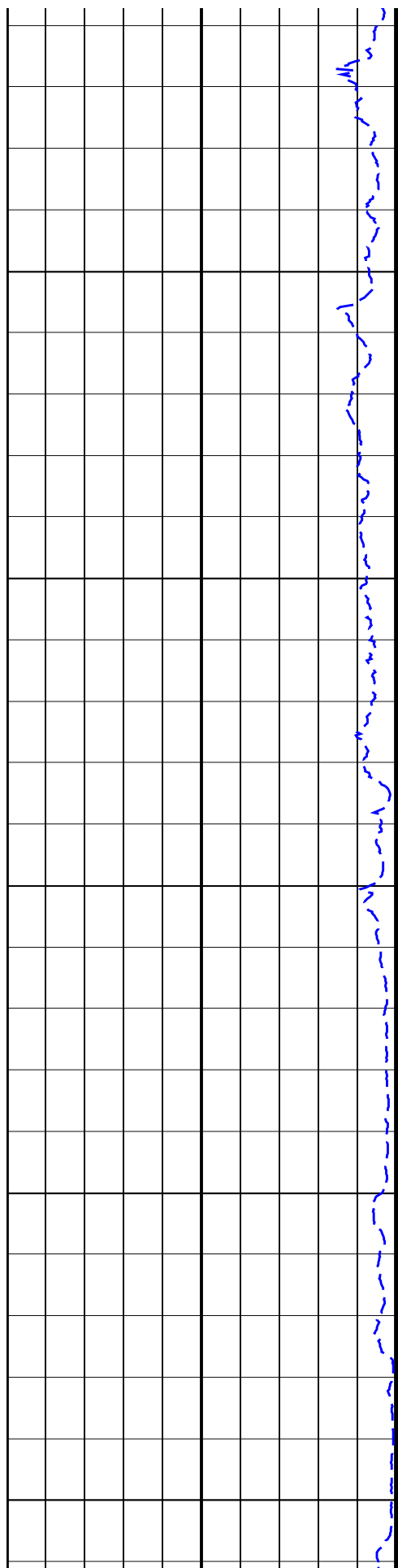
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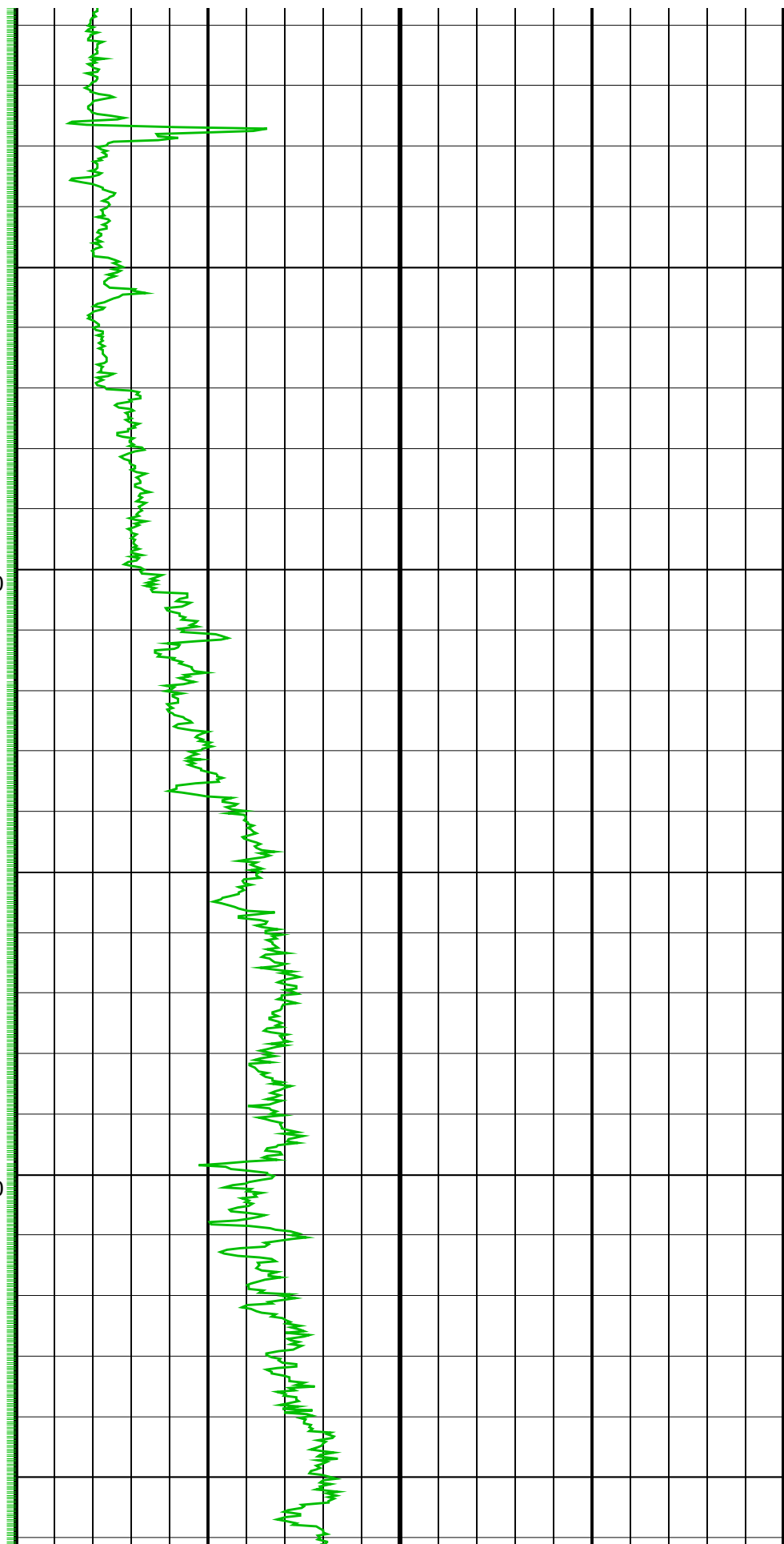


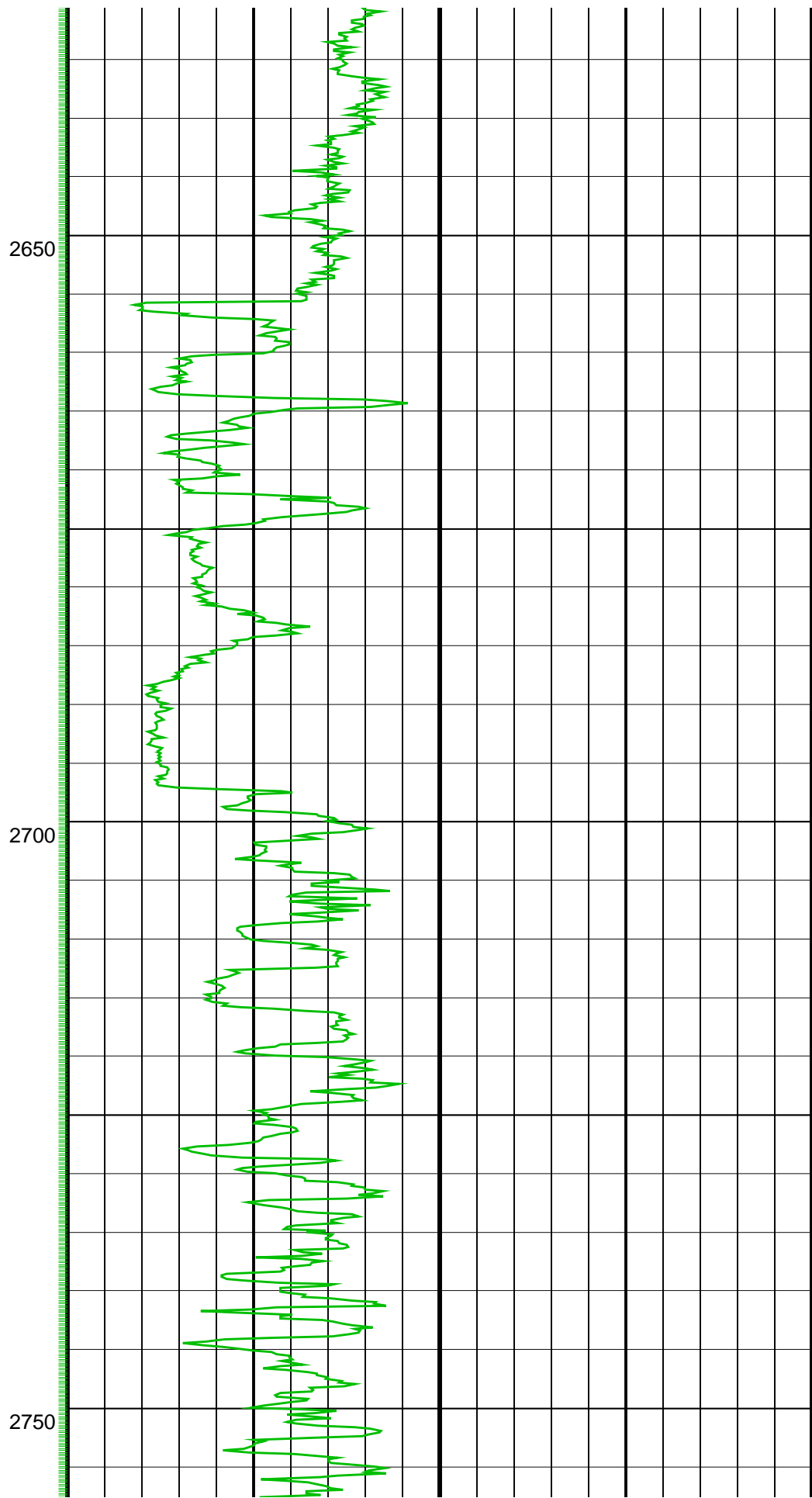
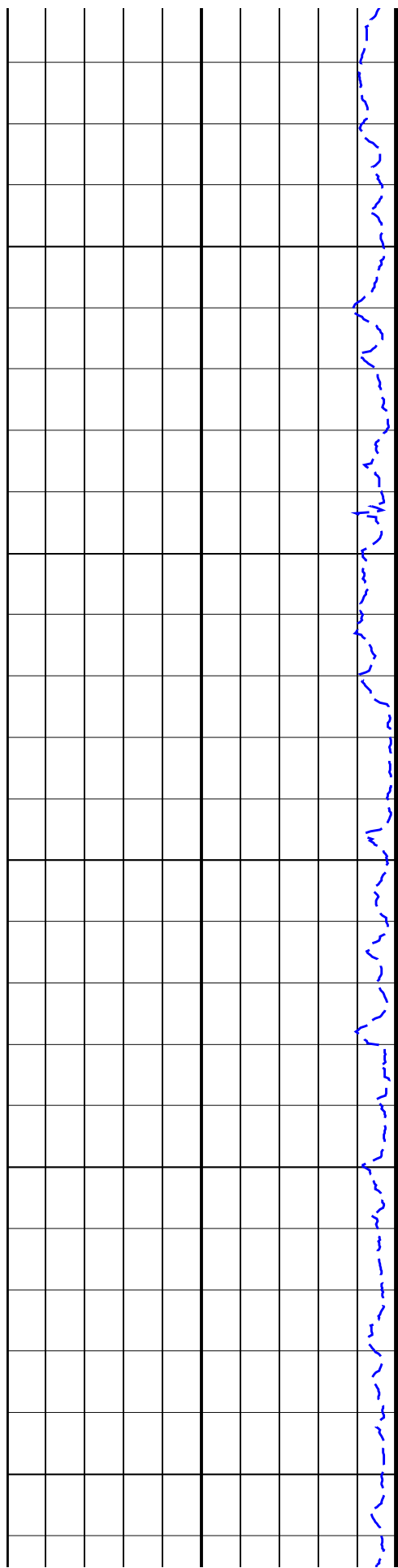




2550

2600





1	769.00	44.97	212.13	0.00	706.90	244.63	-210.89	-128.64	244.64	211.38	0.00	TIP	17.57G
2	775.00	45.42	212.33	6.00	711.13	248.89	-214.49	-130.91	248.90	211.40	2.36	GYR	-19.75G
3	780.00	45.88	212.10	5.00	714.62	252.46	-217.51	-132.81	252.48	211.41	2.93	GYR	-35.38G
4	785.00	46.36	211.63	5.00	718.09	256.07	-220.57	-134.71	256.08	211.41	3.53	GYR	-26.08G
5	790.00	47.14	211.11	5.00	721.52	259.71	-223.68	-136.61	259.72	211.41	5.20	GYR	-25.60G
6	795.00	48.20	210.43	5.00	724.88	263.40	-226.86	-138.50	263.42	211.40	7.04	GYR	-20.97G
7	800.00	48.71	210.17	5.00	728.20	267.14	-230.09	-140.39	267.16	211.39	3.28	GYR	-97.61G
8	805.00	48.70	210.07	5.00	731.50	270.90	-233.34	-142.27	270.91	211.37	0.45	GYR	-108.42G
9	807.00	48.69	210.03	2.00	732.82	272.40	-234.64	-143.03	272.41	211.36	0.48	GYR	-164.72G
10	836.80	41.23	206.93	29.80	753.89	293.41	-253.11	-153.09	293.41	211.17	7.83	GYR	-168.89G
11	877.02	38.12	205.94	40.22	784.85	318.97	-276.10	-164.53	318.79	210.79	2.37	MWD	-112.65G
12	905.52	37.93	205.19	28.50	807.30	336.42	-291.94	-172.10	336.44	210.52	0.53	MWD	95.45G
13	934.75	37.89	205.91	29.23	830.36	354.28	-308.14	-179.85	354.31	210.27	0.46	MWD	180.00G
14	964.06	37.48	205.91	29.31	853.55	372.10	-324.26	-187.68	372.17	210.06	0.42	MWD	-165.07G
15	992.37	34.99	204.75	28.31	876.39	388.73	-339.38	-194.84	388.83	209.86	2.74	MWD	-134.55G
16	1020.56	34.90	204.59	28.19	899.49	404.7	-354.0	-201.58	404.90	209.66	0.14	MWD	153.73G
17	1048.62	34.14	205.26	28.06	922.61	420.54	-368.47	-208.28	420.73	209.48	0.91	MWD	151.27G
18	1077.47	31.79	207.73	28.85	946.82	436.17	-382.52	-215.27	436.40	209.37	2.81	MWD	141.97G
19	1105.53	28.51	213.29	28.06	971.08	450.24	-394.67	-222.39	450.48	209.40	4.60	MWD	147.97G
20	1134.29	25.49	217.78	28.76	996.71	463.26	-405.30	-229.95	463.46	209.57	3.80	MWD	161.82G
21	1163.00	22.73	220.14	28.71	1022.91	474.89	-414.42	-237.31	475.05	209.80	3.05	MWD	171.92G
22	1191.38	20.51	221.04	28.38	1049.29	485.23	-422.37	-244.11	485.34	210.03	2.37	MWD	-180.00G
23	1220.17	17.92	221.01	28.79	1076.48	494.58	-429.51	-250.33	494.66	210.23	2.70	MWD	177.52G
24	1248.30	16.66	221.20	28.13	1103.34	502.83	-435.81	-255.83	502.89	210.41	1.35	MWD	-160.06G
25	1276.95	13.94	217.05	28.65	1130.97	510.32	-441.66	-260.61	510.36	210.54	3.07	MWD	-140.25G
26	1306.13	12.90	213.06	29.18	1159.35	517.07	-447.20	-264.51	517.11	210.60	1.43	MWD	129.19G
27	1335.52	11.50	222.68	29.39	1188.08	523.23	-452.10	-268.29	523.26	210.69	2.51	MWD	158.09G
28	1363.42	9.82	226.70	27.90	1215.50	528.26	-455.78	-271.90	528.28	210.82	1.97	MWD	162.35G
29	1392.66	7.72	231.75	29.24	1244.40	532.52	-458.70	-275.26	532.53	210.97	2.29	MWD	157.22G
30	1421.94	6.11	238.27	29.28	1273.46	535.76	-460.74	-278.13	535.76	211.12	1.83	MWD	177.97G

[(c)2003 IDEAL ID8_OC_07]
SCHLUMBERGER Survey Report

19-Feb-2003 07:30:37

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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	1451.21	3.41	239.88	29.27	1302.63	537.92	-462.00	-280.21	537.92	211.24	2.77	MWD	-121.59M
32	1479.71	1.29	238.41	28.50	1331.10	538.96	-462.59	-281.21	538.96	211.30	2.23	MWD	-128.69M
33	1508.40	0.64	231.31	28.69	1359.79	539.39	-462.86	-281.61	539.39	211.32	0.69	MWD	-134.86M
34	1536.69	0.61	225.14	28.29	1388.08	539.69	-463.06	-281.84	539.69	211.33	0.08	MWD	-116.80M
35	1565.06	0.63	243.20	28.37	1416.45	539.97	-463.24	-282.09	539.97	211.34	0.21	MWD	-123.98M
36	1593.67	0.63	236.02	28.61	1445.05	540.25	-463.40	-282.36	540.25	211.36	0.08	MWD	-110.37M
37	1621.98	0.66	249.63	28.31	1473.36	540.52	-463.54	-282.64	540.52	211.37	0.17	MWD	-123.41M
38	1650.74	0.83	236.59	28.76	1502.12	540.84	-463.72	-282.97	540.84	211.39	0.25	MWD	-118.49M
39	1679.24	0.70	241.51	28.50	1530.62	541.18	-463.91	-283.30	541.18	211.41	0.15	MWD	-120.95M
40	1707.69	0.59	239.05	28.45	1559.06	541.46	-464.07	-283.58	541.46	211.43	0.12	MWD	-143.85M
41	1736.30	0.51	216.15	28.61	1587.67	541.72	-464.25	-283.78	541.72	211.44	0.24	MWD	-141.09M
42	1765.27	0.47	218.91	28.97	1616.64	541.96	-464.45	-283.93	541.96	211.44	0.05	MWD	-150.01M
43	1794.11	0.34	209.99	28.84	1645.48	542.16	-464.61	-284.05	542.17	211.44	0.15	MWD	-107.41M
44	1822.56	0.20	252.59	28.45	1673.93	542.29	-464.70	-284.14	542.29	211.44	0.25	MWD	-94.06M
45	1850.75	0.06	265.94	28.19	1702.12	542.33	-464.72	-284.20	542.33	211.45	0.15	MWD	-125.94M
46	1879.57	0.06	232.06	28.82	1730.94	542.36	-464.72	-284.22	542.36	211.45	0.03	MWD	-123.49M
47	1908.27	0.34	236.51	28.70	1759.64	542.45	-464.78	-284.31	542.45	211.45	0.29	MWD	-112.76M
48	1937.11	0.41	247.24	28.84	1788.48	542.61	-464.87	-284.47	542.61	211.46	0.10	MWD	-144.17M
49	1965.92	0.37	215.83	28.81	1817.29	542.79	-464.98	-284.62	542.79	211.47	0.22	MWD	-151.75M
50	1994.24	0.51	208.25	28.32	1845.61	543.00	-465.17	-284.74	543.00	211.47	0.16	MWD	-153.61M
51	2023.18	0.50	206.39	28.94	1874.55	543.26	-465.39	-284.85	543.26	211.47	0.02	MWD	-151.41M
52	2052.60	0.49	208.59	28.96	1903.97	543.51	-465.62	-284.97	543.51	211.47	0.02	MWD	-143.35M
53	2081.51	0.60	216.65	28.91	1932.88	543.78	-465.85	-285.12	543.79	211.47	0.14	MWD	-150.49M
54	2119.16	0.59	209.51	37.65	1970.52	544.17	-466.18	-285.33	544.18	211.47	0.06	MWD	-157.25M
55	2167.19	0.56	202.75	48.03	2018.55	544.65	-466.61	-285.55	544.65	211.47	0.05	MWD	-160.27M
56	2195.89	0.66	199.73	28.70	2047.25	544.95	-466.89	-285.66	544.95	211.46	0.11	MWD	177.62M
57	2223.99	0.73	177.62	28.10	2075.35	545.26	-467.22	-285.70	545.26	211.45	0.29	MWD	161.99M
58	2252.93	1.26	161.99	28.94	2104.28	545.62	-467.71	-285.60	545.62	211.41	0.61	MWD	169.50M

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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 Azim 10m	DLS (deg)	Srvy tool	Tool Corr
59	2281.95	2.44	169.50	23.02	2133.29	546.28	-468.62	-285.39	546.28	211.34	1.24	MWD	176.28M
60	2310.40	3.31	176.28	28.45	2161.70	547.40	-470.04	-285.22	547.40	211.25	0.98	MWD	-156.99M
61	2338.37	4.76	203.01	27.97	2189.60	549.20	-471.91	-285.62	549.20	211.18	2.51	MWD	-143.56M
62	2366.94	8.31	216.44	28.57	2217.98	552.43	-474.66	-287.31	552.44	211.19	4.03	MWD	6.86G
63	2396.06	10.57	217.92	29.11	2246.70	557.19	-478.47	-290.21	557.19	211.24	2.34	MWD	-2.58G
64	2425.11	12.16	217.58	29.06	2275.19	562.88	-482.99	-293.71	562.88	211.30	1.64	MWD	-39.34G
65	2454.01	12.97	214.68	28.90	2303.40	569.15	-488.07	-297.41	569.15	211.36	1.07	MWD	-159.12G
66	2482.80	12.43	213.72	28.79	2331.48	575.47	-493.31	-300.97	575.47	211.39	0.60	MWD	-25.62G
67	2510.32	13.06	212.39	27.52	2358.32	581.54	-498.39	-304.28	581.54	211.40	0.76	MWD	-76.45G
68	2539.20	13.20	210.04	28.88	2386.45	588.10	-504.00	-307.68	588.10	211.40	0.57	MWD	43.36G
69	2568.25	13.32	210.53	29.05	2414.72	594.76	-509.76	-311.04	594.76	211.39	0.17	MWD	53.58G
70	2596.81	13.53	211.73	28.56	2442.50	601.39	-515.43	-314.47	601.39	211.39	0.37	MWD	-30.75G
71	2625.84	13.73	211.23	29.03	2470.72	608.23	-521.27	-318.04	608.23	211.39	0.24	MWD	131.28G
72	2655.11	13.67	211.52	29.27	2499.15	615.16	-527.19	-321.65	615.16	211.39	0.09	MWD	124.26G
73	2682.30	13.63	211.77	27.19	2525.58	621.58	-532.65	-325.01	621.58	211.39	0.08	MWD	10.75G
74	2711.21	13.73	211.85	28.91	2553.67	628.42	-538.46	-328.62	628.42	211.40	0.11	MWD	154.32G
75	2740.15	12.71	214.10	28.94	2581.84	635.03	-544.01	-332.22	635.03	211.41	1.18	MWD	170.63G
76	2768.93	11.84	214.80	28.78	2609.96	641.14	-549.06	-335.68	641.14	211.44	0.92	MWD	-175.50G
77	2773.49	11.61	214.71	4.56	2614.43	642.07	-549.82	-336.20	642.07	211.44	1.52	MWD	174.12G
78	2789.00	11.25	214.90	15.51	2629.63	645.14	-552.34	-337.96	645.14	211.46	0.70	Projected to TD	

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Company: **ESSO Australia Ltd.****Schlumberger**Well: **FLA A20a**Field: **Flounder**Rig: **ISDL 453**State: **VICTORIA**

Gamma Ray Service
1:500 Measured Depth
Real Time Log

