

Depth logged:	1006.0 m To 3060.3 m	Mag decl:	13.06 deg.	Other services:
Date logged:	01-Aug-05 To 10-Aug-05	Mag dip:	-69.04 deg.	Directional Drilling, D&I, APWD

Bit Run Summary

Run number		1	2							
Bit size	in	8.5	8.5							
Bit start depth	m	1006.0	2395.0							
Bit end depth	m	2395.0	3079.0							
Top interval logged	m	1006.0	2376.3							
Bottom interval logged	m	2376.3	3060.3							
Begin log: time		04:14	01:49							
Begin log: date		01-Aug-05	07-Aug-05							
End log: time		15:54	09:07							
End log: date		06-Aug-05	10-Aug-05							
Mud data										
Depth	m	2395.0	3079							
Type		KCl/PHPA/Gly.	KCl/PHPA/Gly.							
Mud weight	ppg	10.05	10.05							
Solids	%	8.3	8.2							
Chlorides	mg/L	44,500	47,000							
Rm		N/A	N/A							
Rmf		N/A	N/A							
Rmc		N/A	N/A							

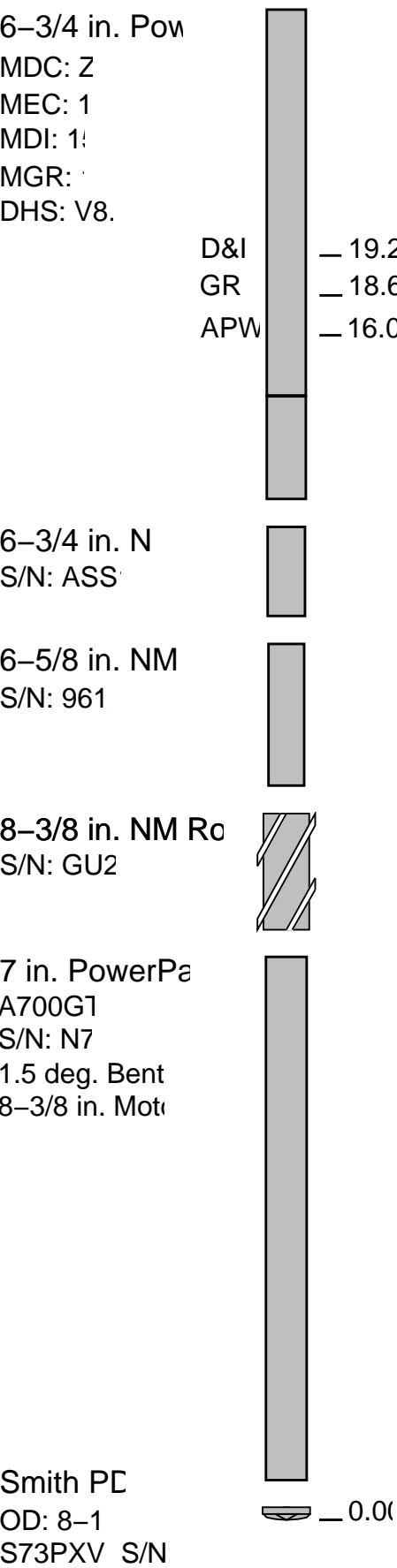
Potassium	%	1.2	1.2								
Environmental data											
GR											
Mud weight	ppg	10.05	10.05								
Bit size	in	8.5	8.5								
Resistivity											
Neutron porosity											
Hole Size		N/A	N/A								
Mud weight		N/A	N/A								
Temperature		N/A	N/A								
Mud salinity		N/A	N/A								
Formation salinity		N/A	N/A								
Recording rate 1	SEC	3.91	3.91								
Recording rate 2	SEC	N/A	N/A								
Filtering GR		3 pt.	3 pt.								
Filtering density		N/A	N/A								
Filtering Neutron		N/A	N/A								
Company representative		B. Steele	B. Davis	J. McKinnon							
Schlumberger D&M Personnel		R. Borjas	L. Johnston	R. Burns	C. Cocks	L. Muskett					

<p style="text-align: center;">DISCLAIMER</p> <p>THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.</p>		
OTHER SERVICES FOR RUN1 Directional Drilling Directional Surveys Annular Pressure While Drilling	OTHER SERVICES FOR RUN2 Directional Drilling Directional Surveys Annular Pressure While Drilling	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 1 Depth is referenced to driller's depth Gamma Ray corrected for Tool Size, Bit Size and Mud Weight Mud Type is KCl/PHPA/Glycol 8-1/2 in. hole was drilled from 1006.0 m to 2395.0 m MD Low Data Density from 1438.0 m to 1454.0 m due to high ROP of reamed section Acquisition Loss from 1451.0 m to 1454.0 m POOH to change bit	REMARKS: RUN NUMBER 2 Depth is referenced to driller's depth Gamma Ray corrected for Tool Size, Bit Size and Mud Weight Mud Type is KCl/PHPA/Glycol 8-1/2 in. hole was drilled from 2395.0 m to 3079.0 m MD POOH due to TD of BMA A14A	REMARKS: RUN NUMBER

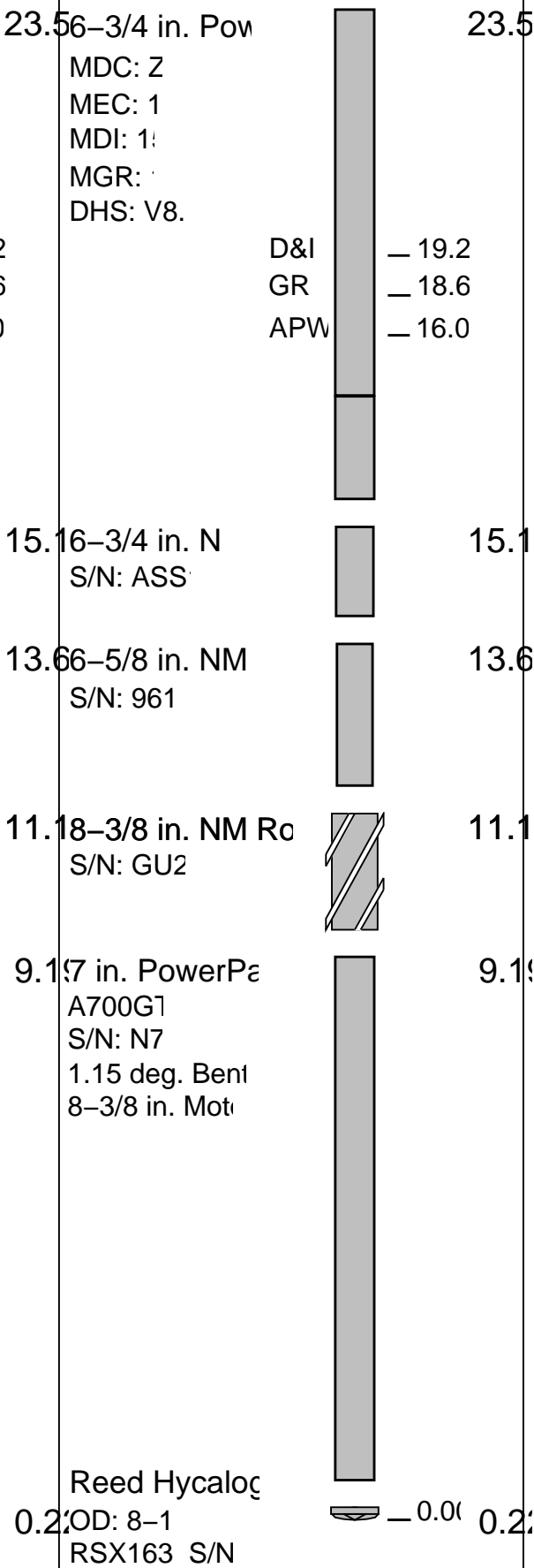
EQUIPMENT DESCRIPTION		
RUN1	RUN2	RUN
DOWNHOLE F	DOWNHOLE F	

DOWNHOLE LOG

DOWNHOLE LOG



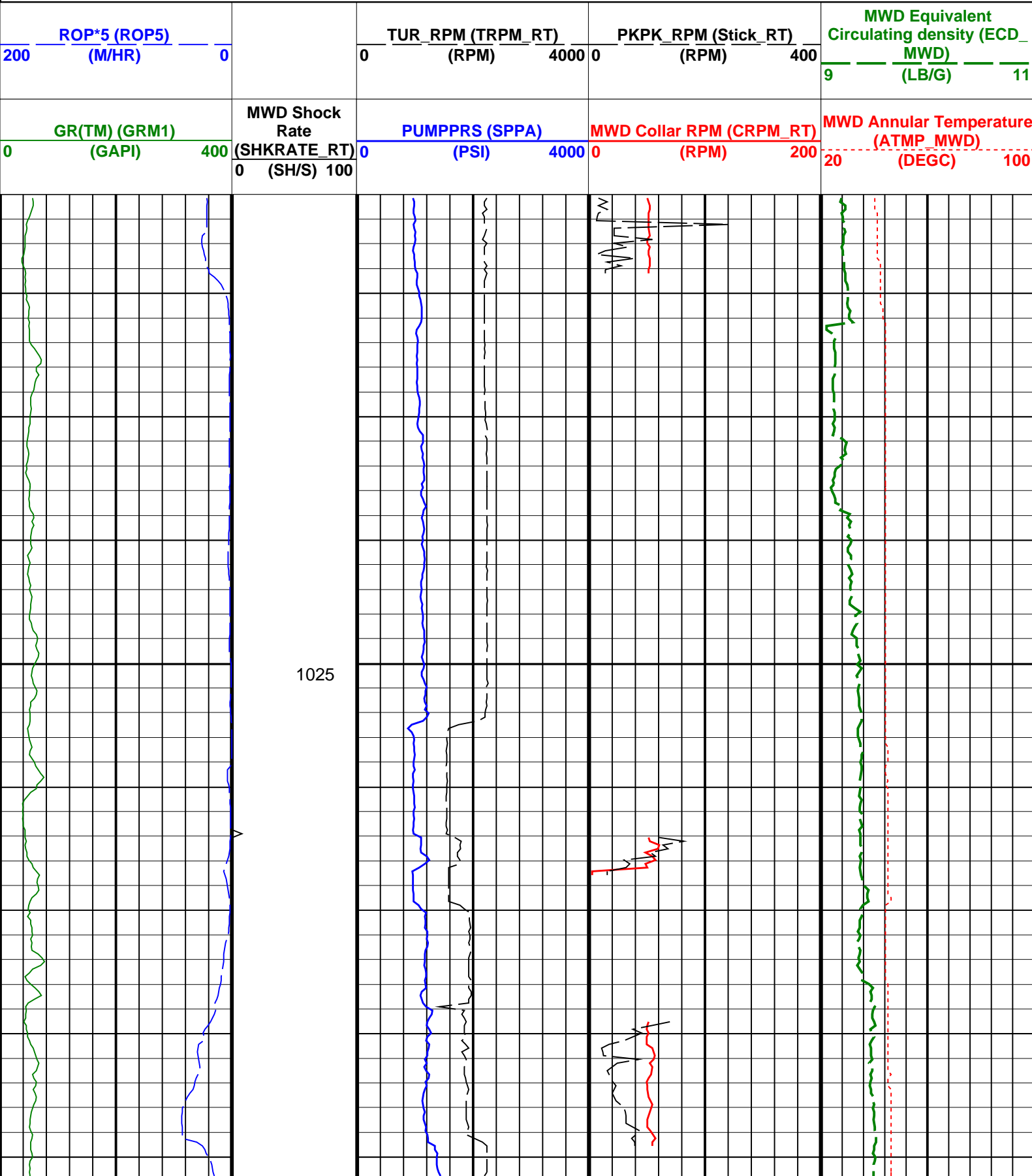
Maximum string dia
All lengths in

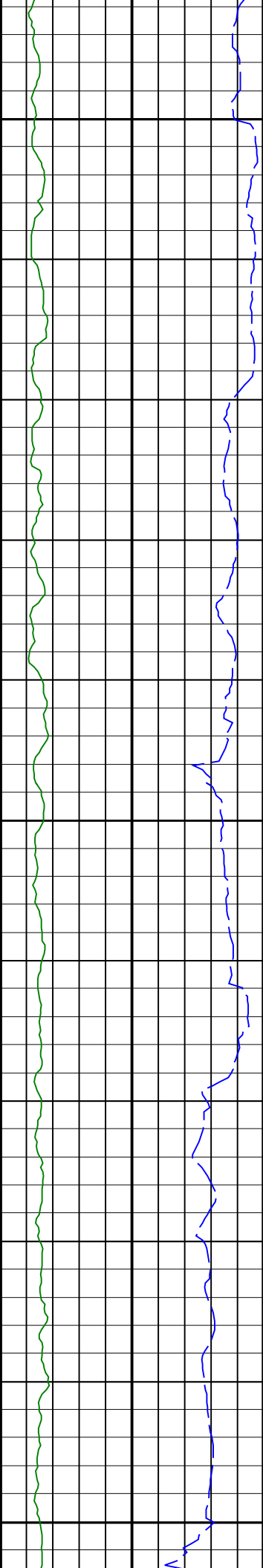


Maximum string dia
All lengths in

BMA A14A Drilling Mechanics

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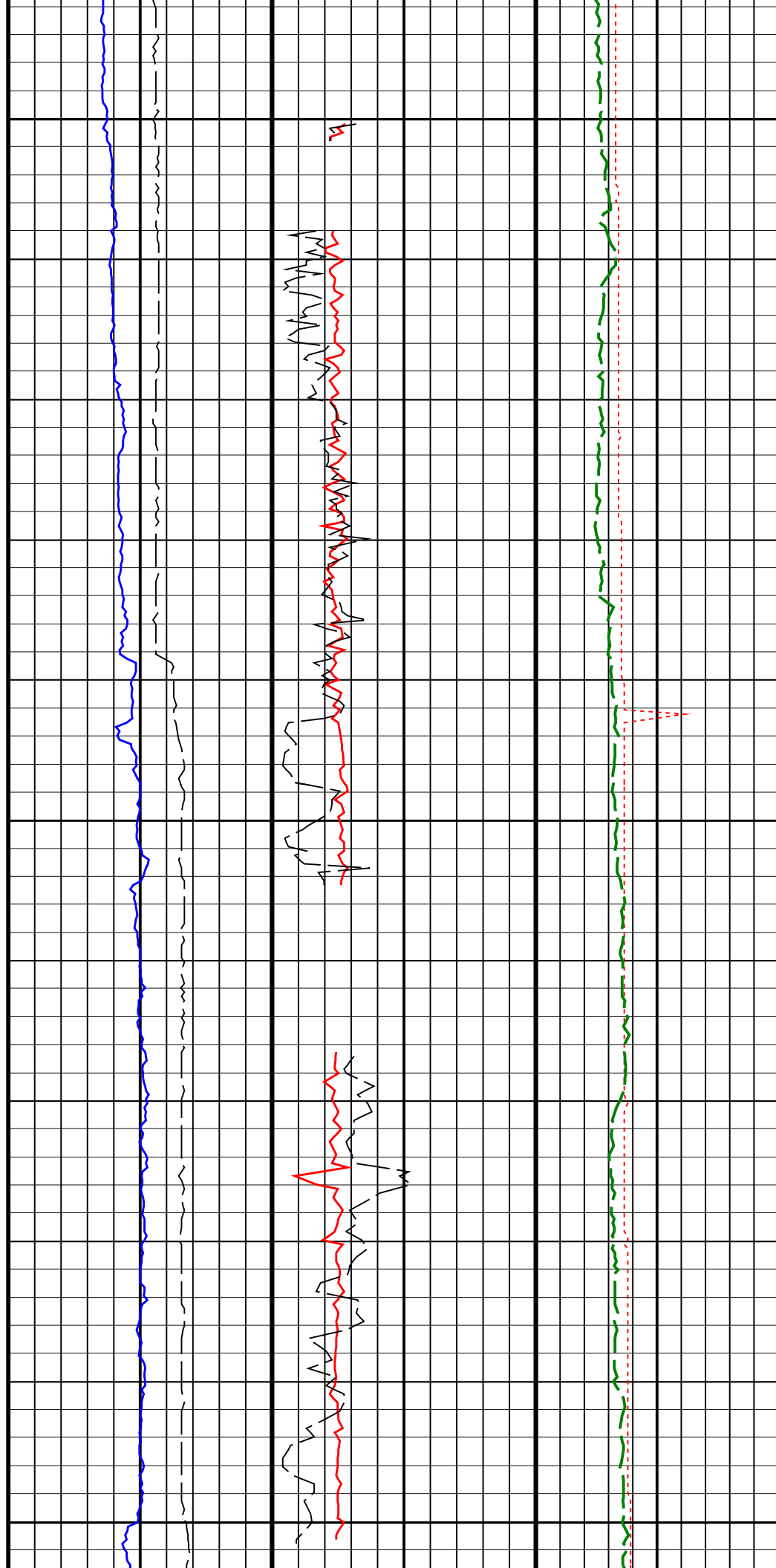


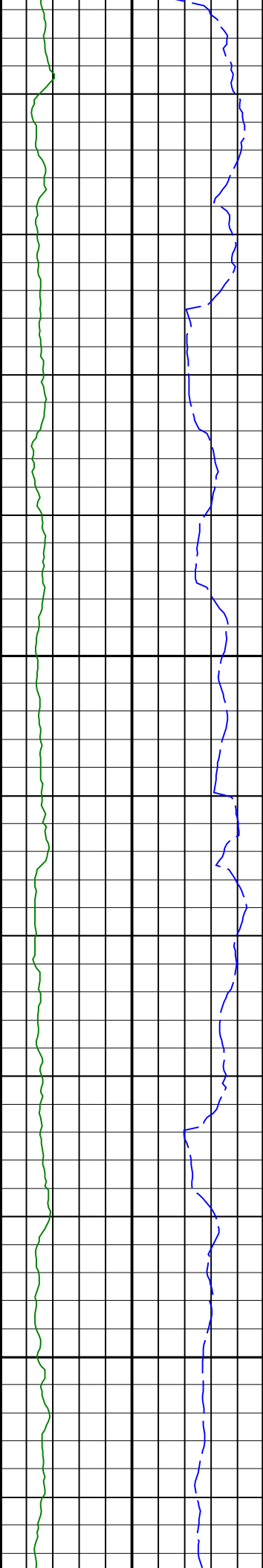


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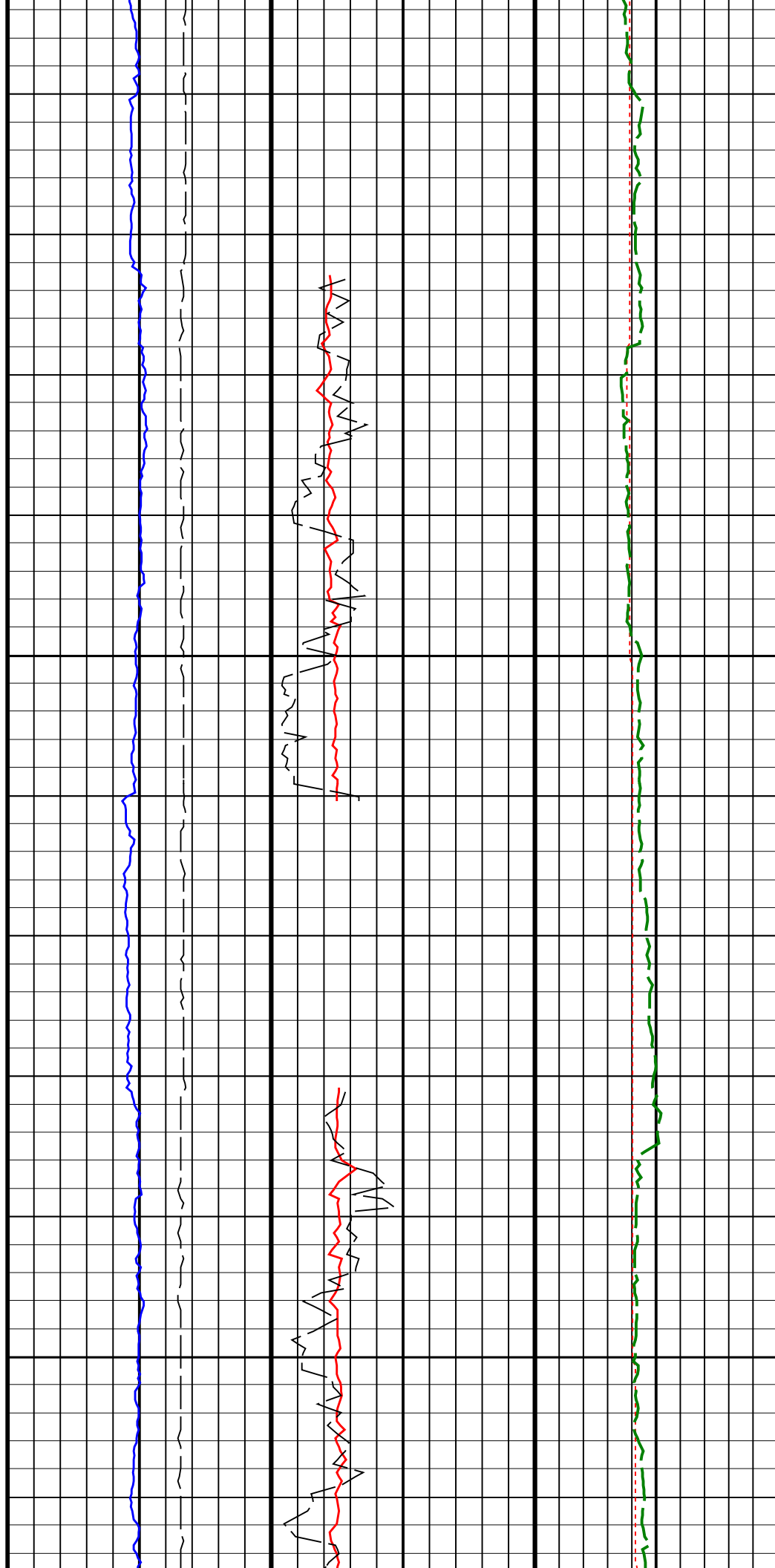
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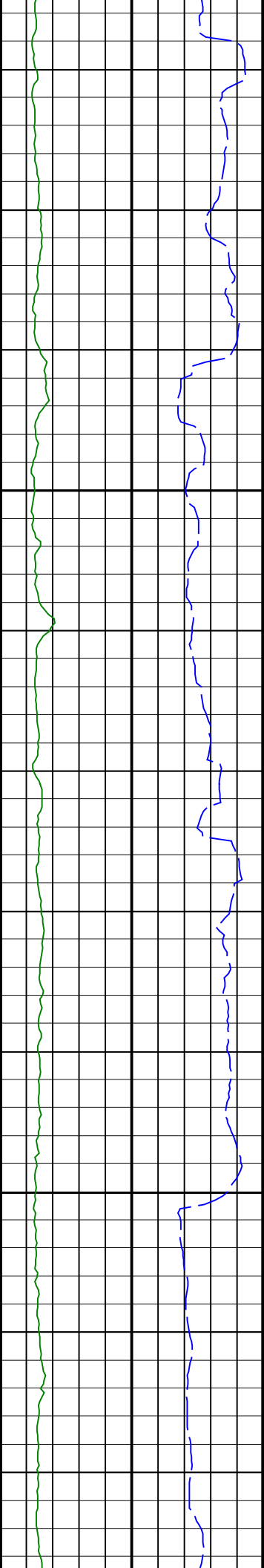




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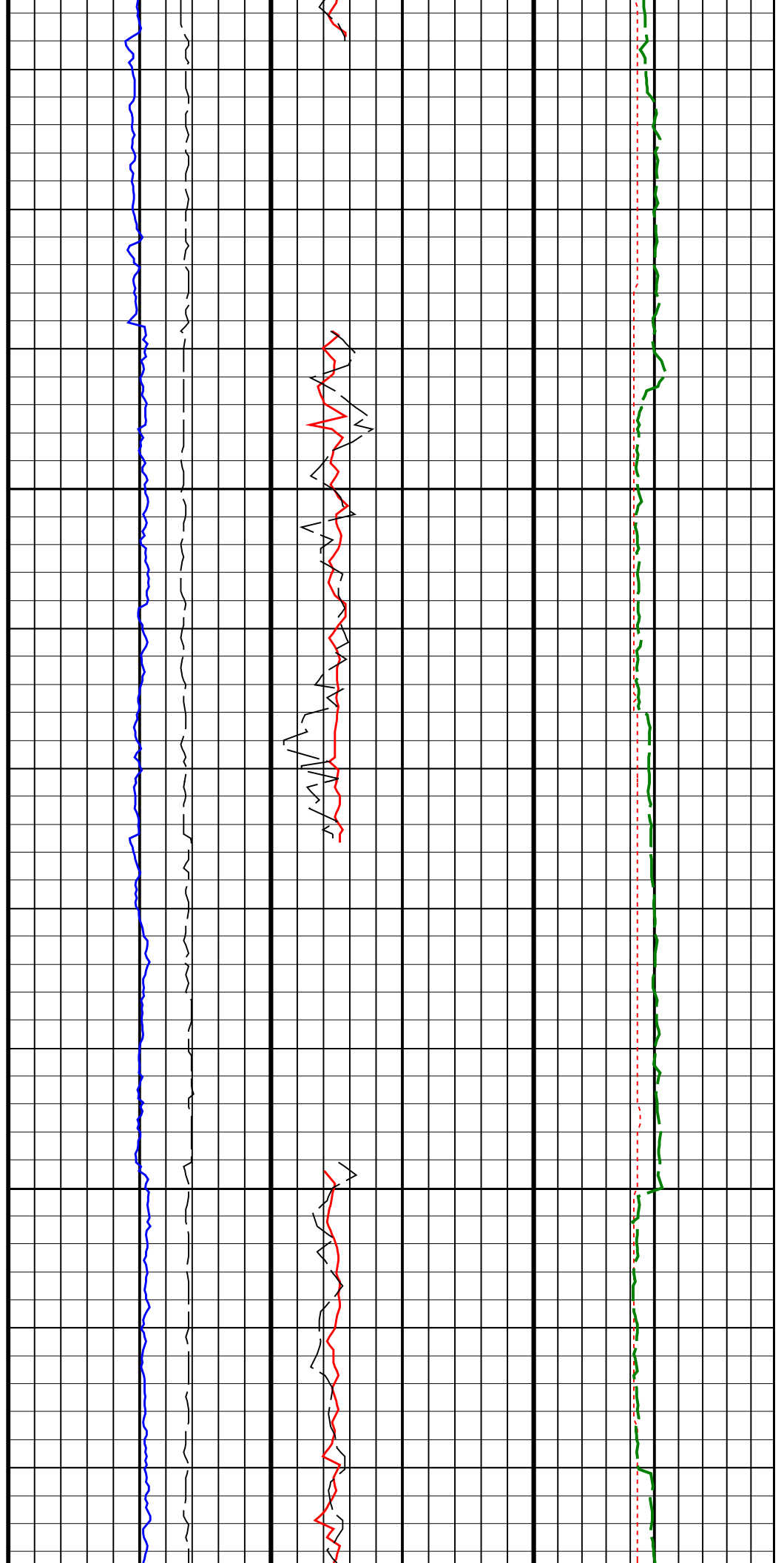
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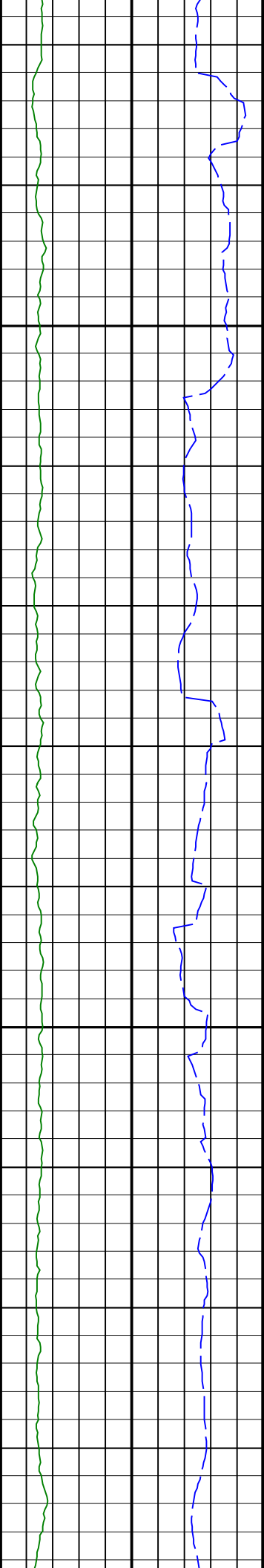




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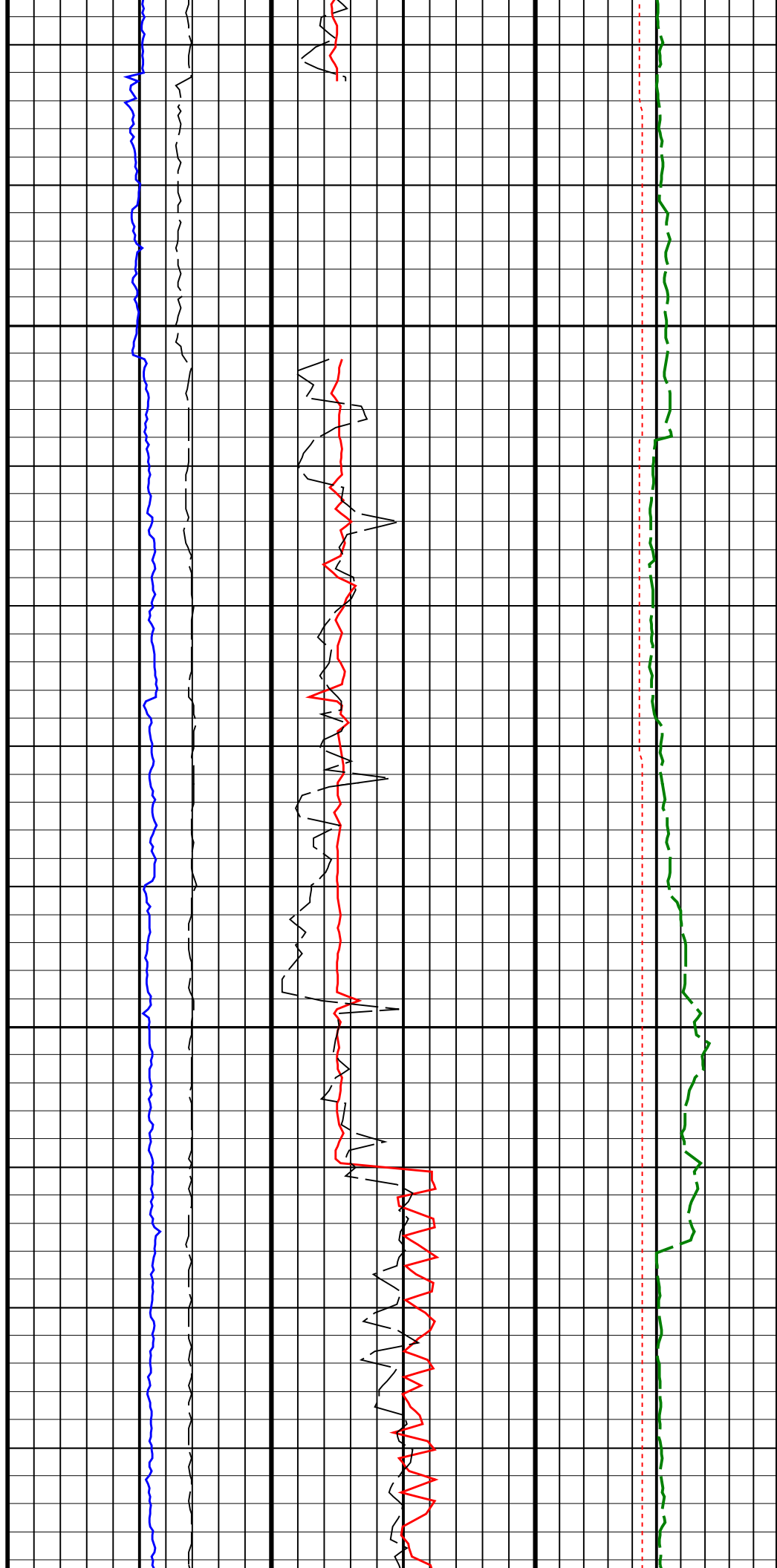
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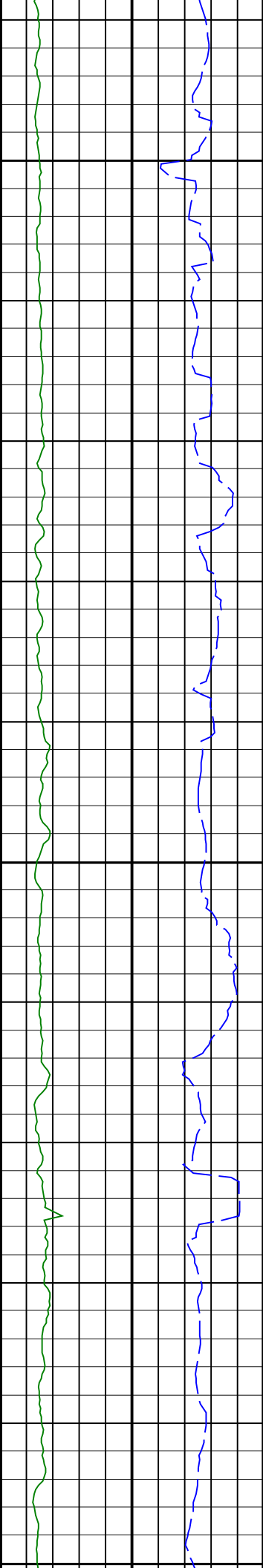




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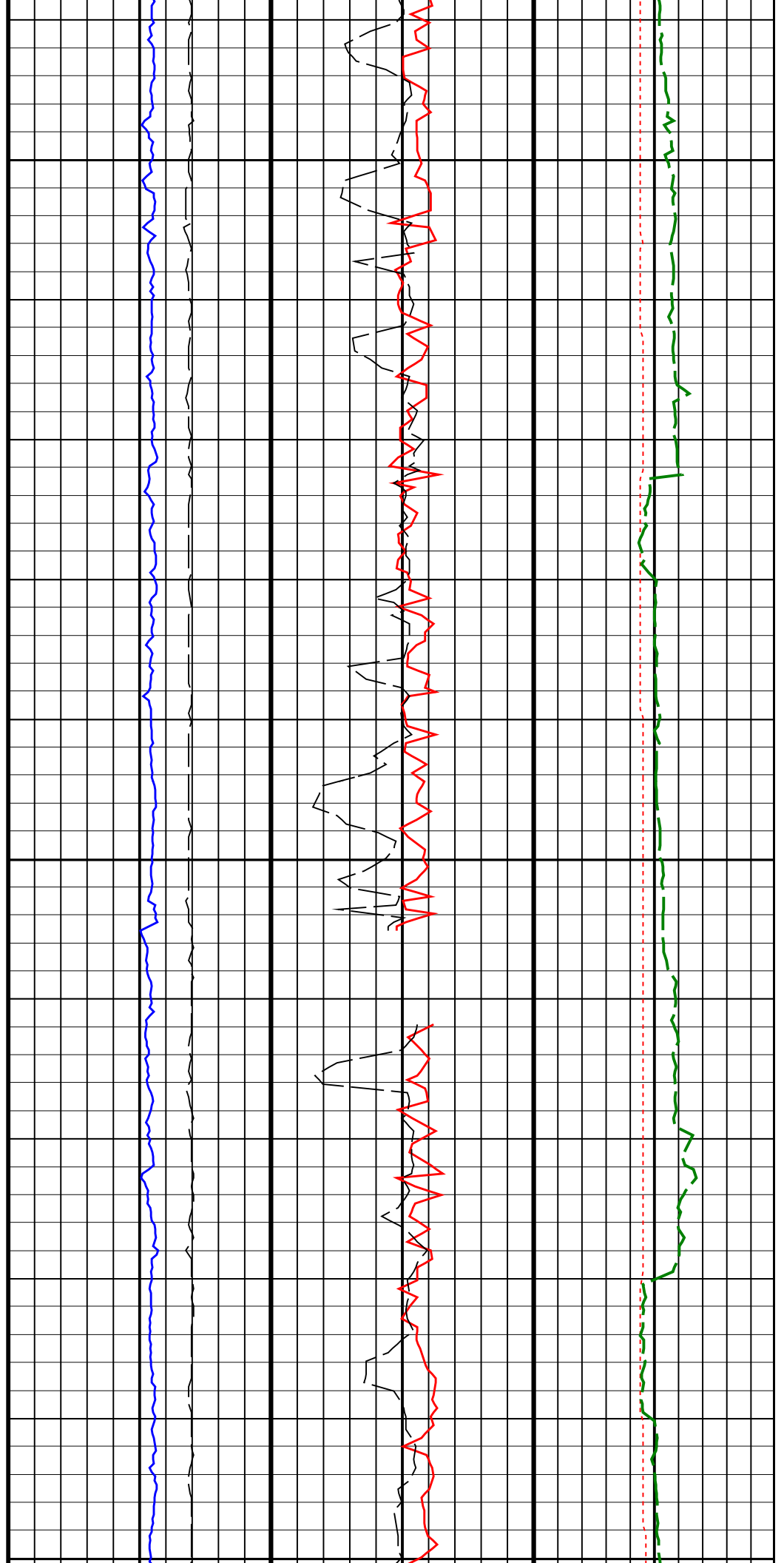
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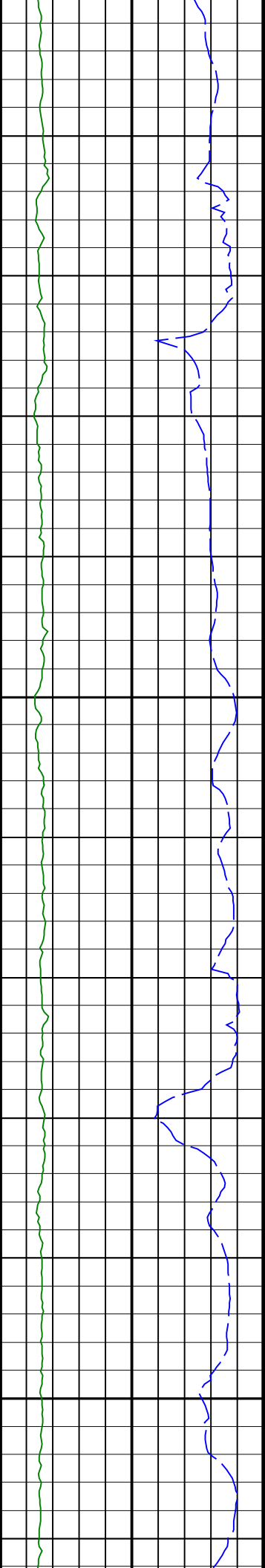




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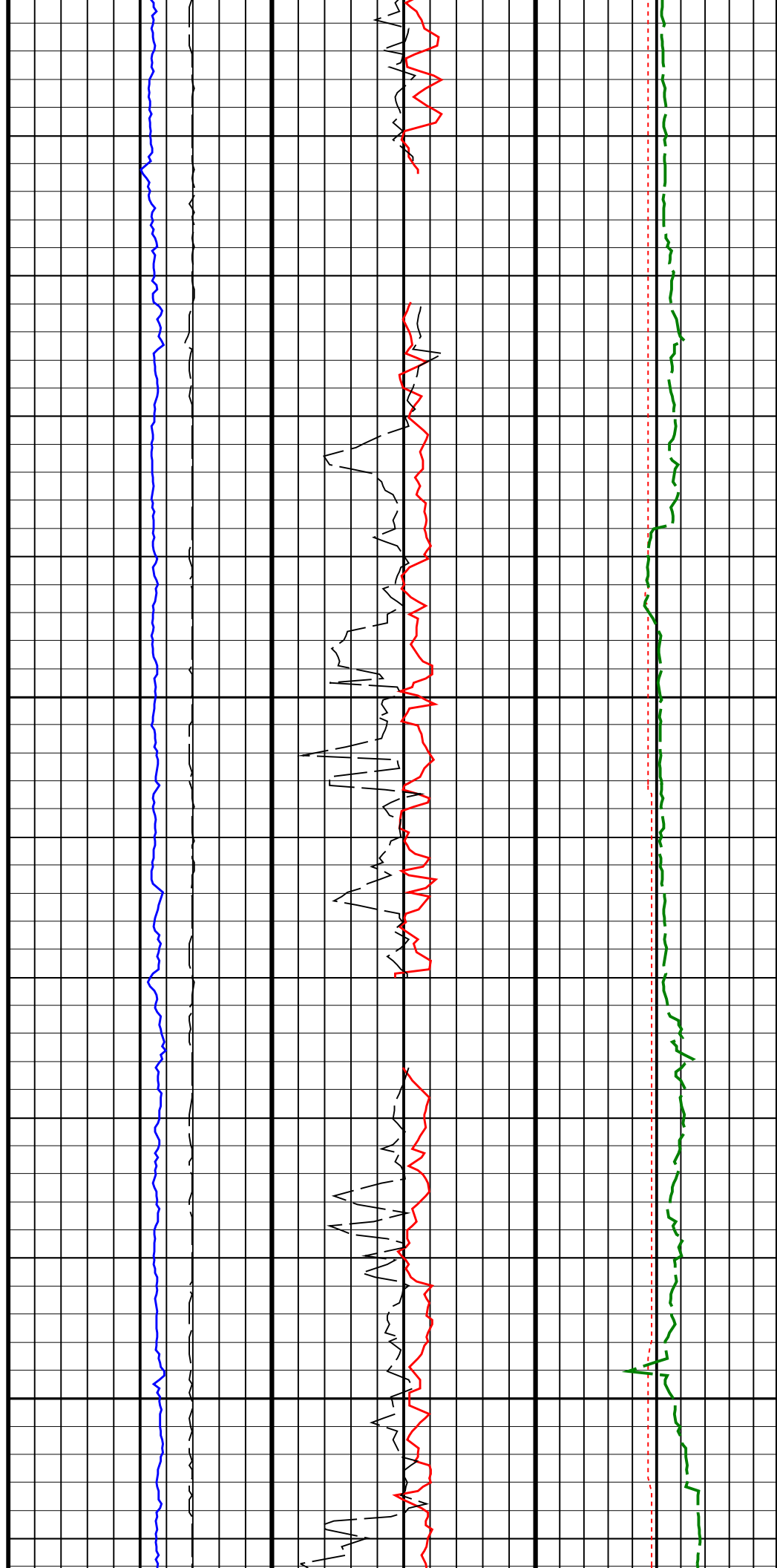


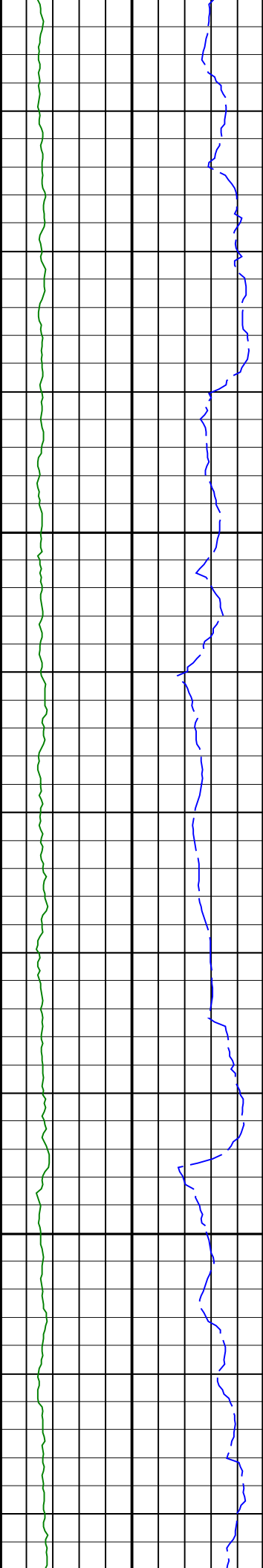


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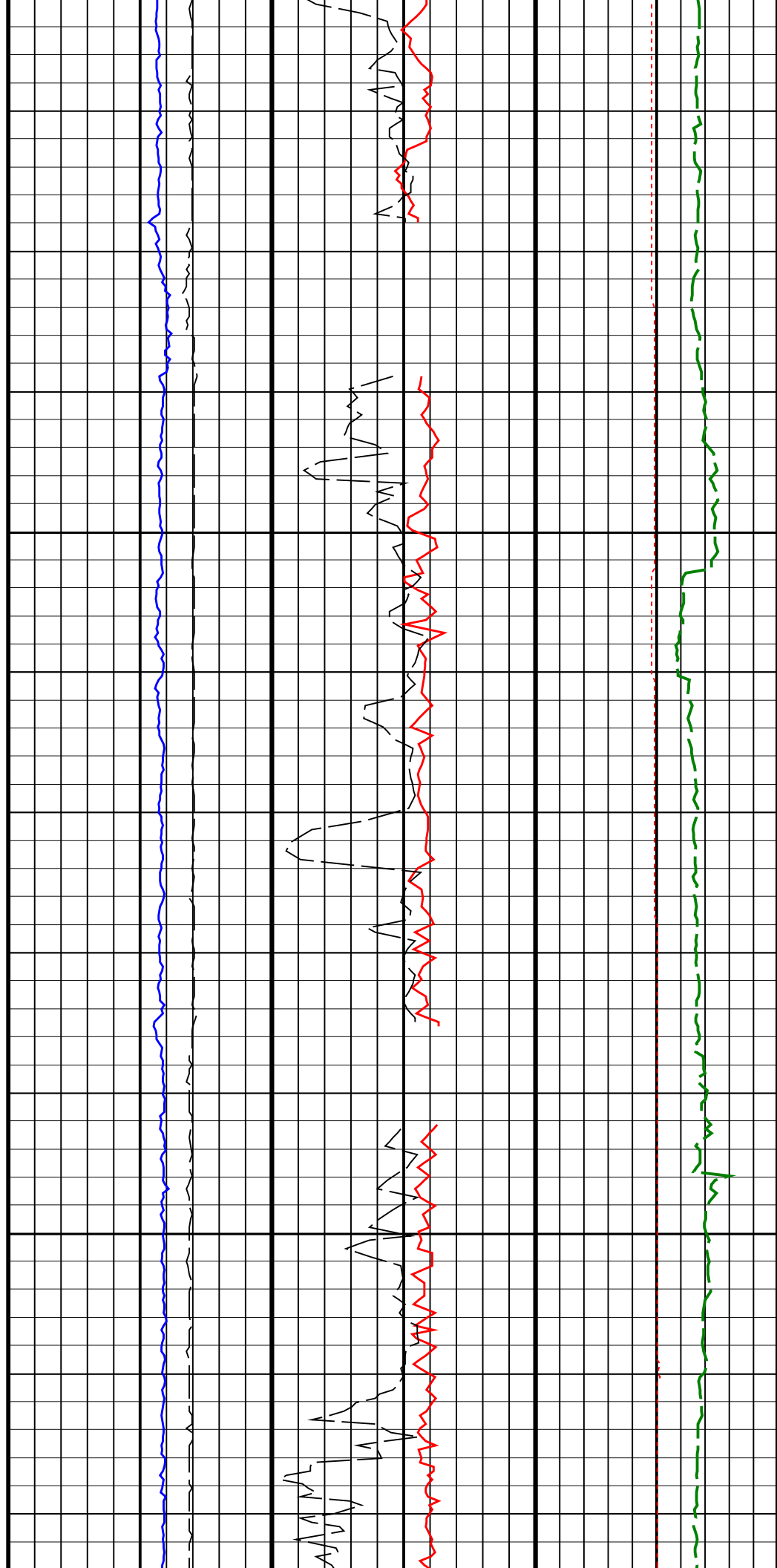
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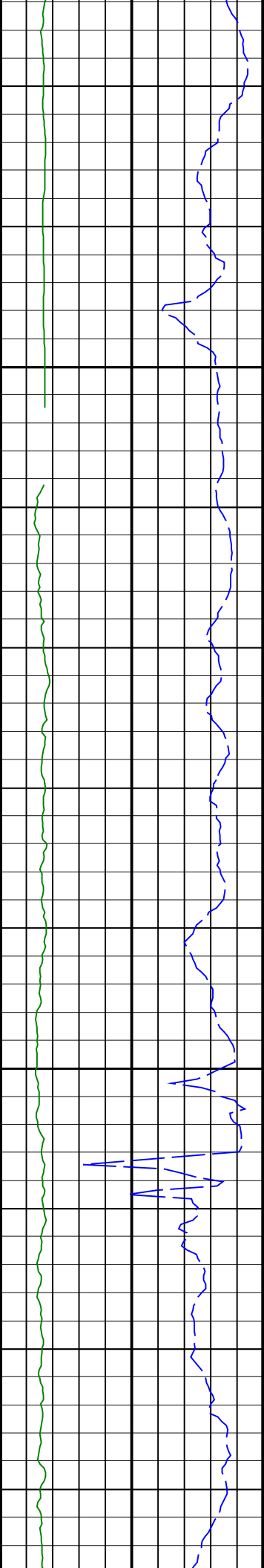




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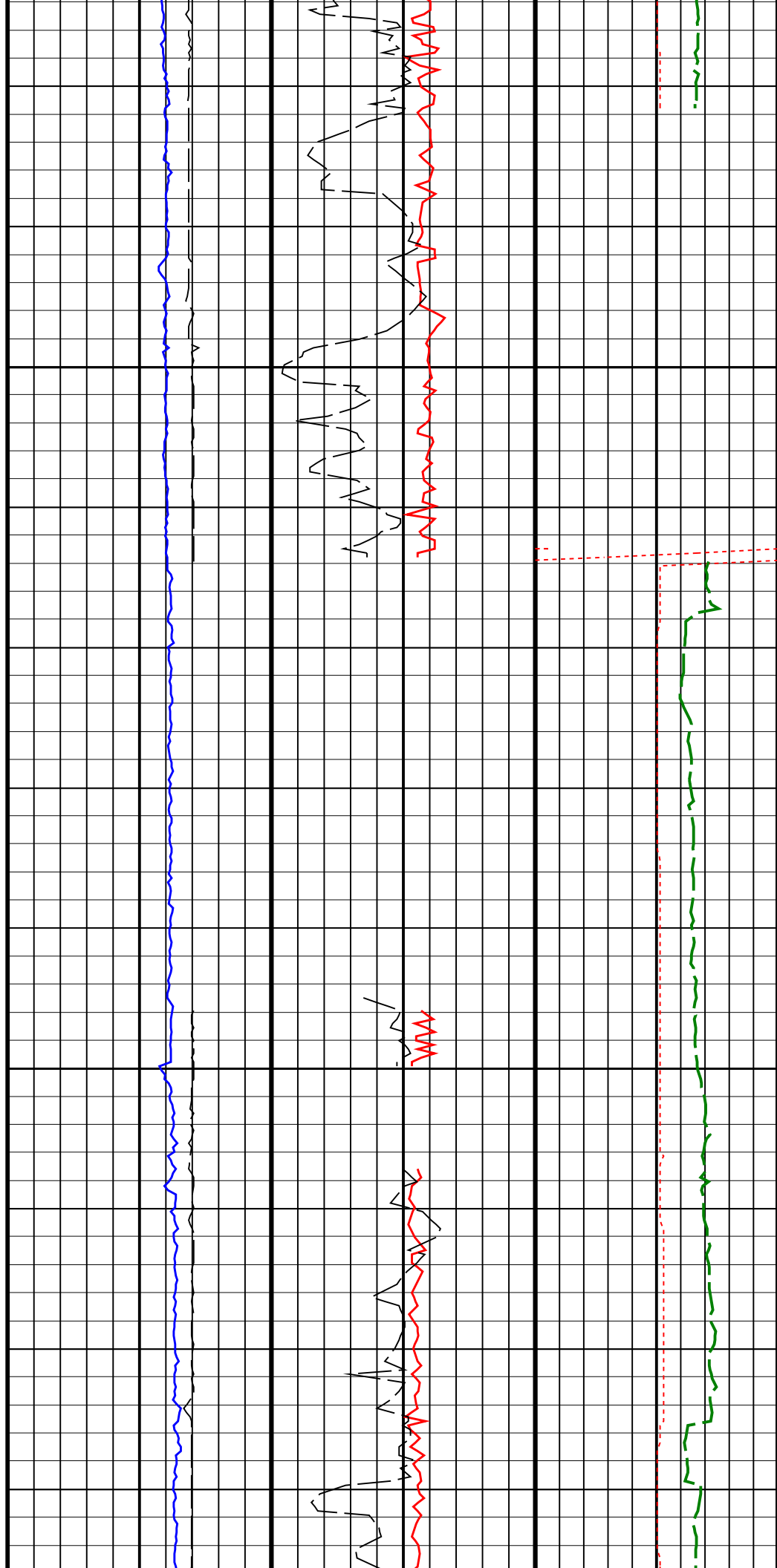
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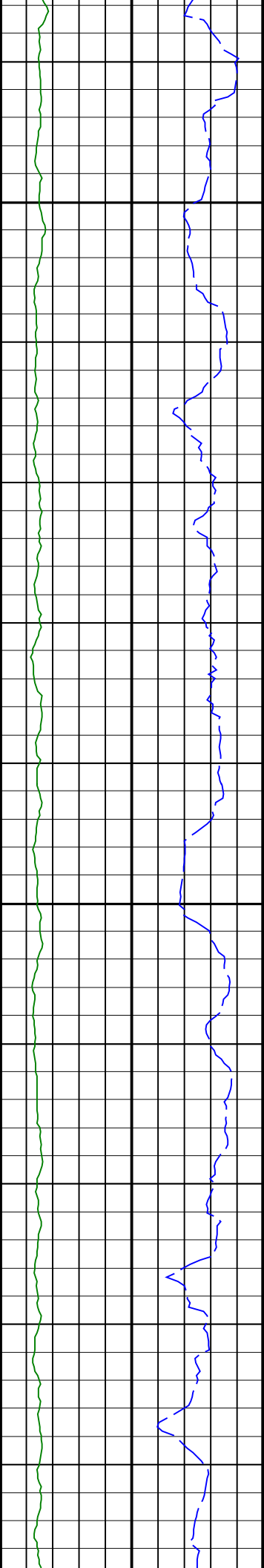




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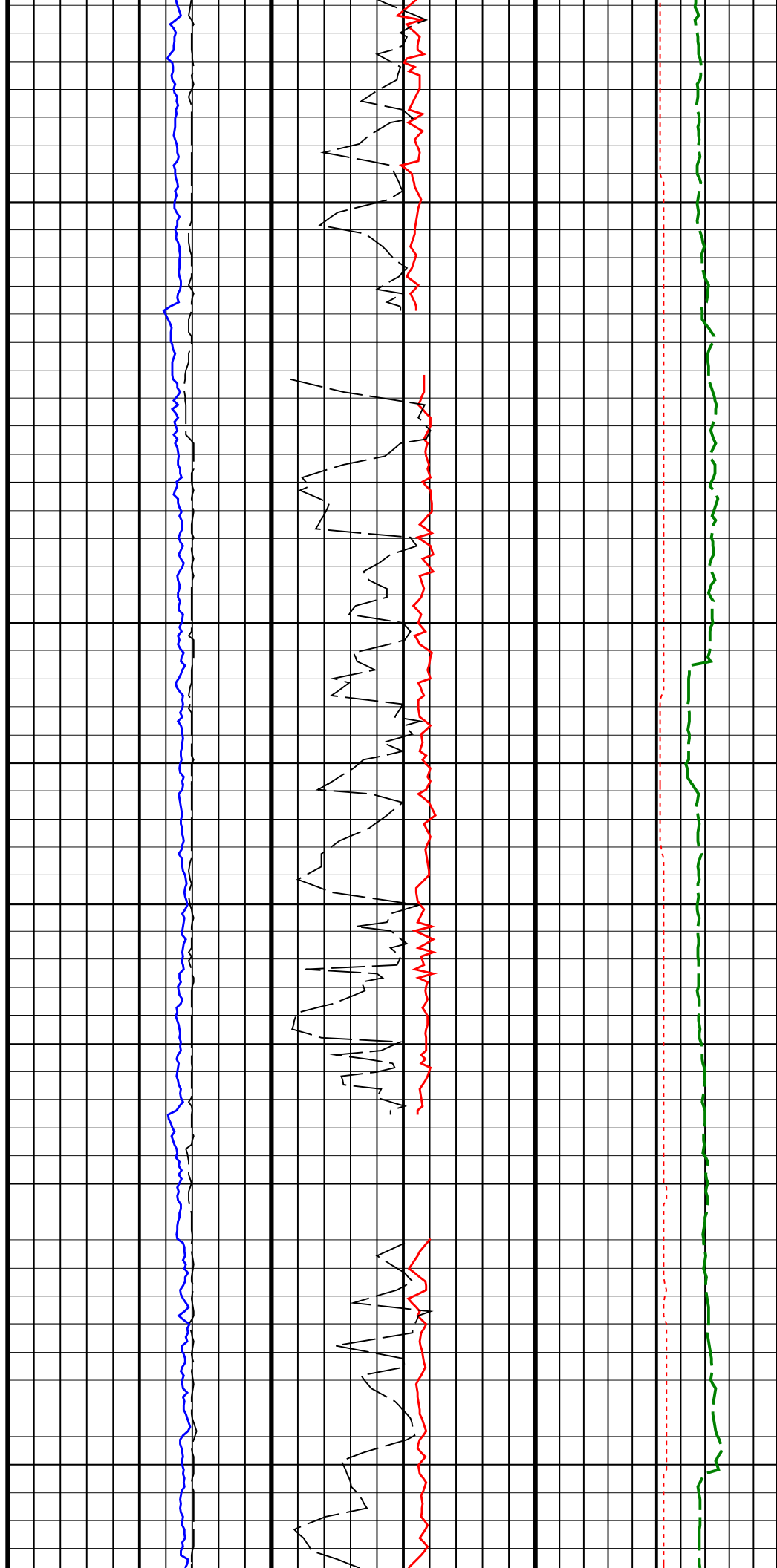
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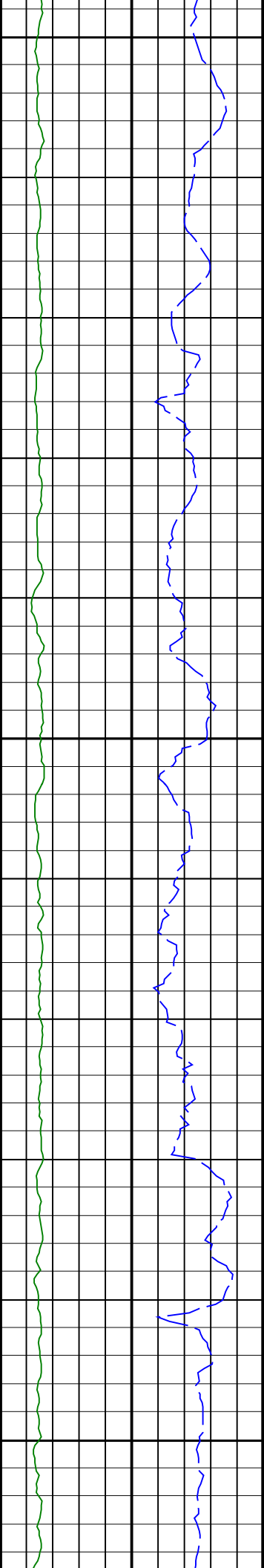




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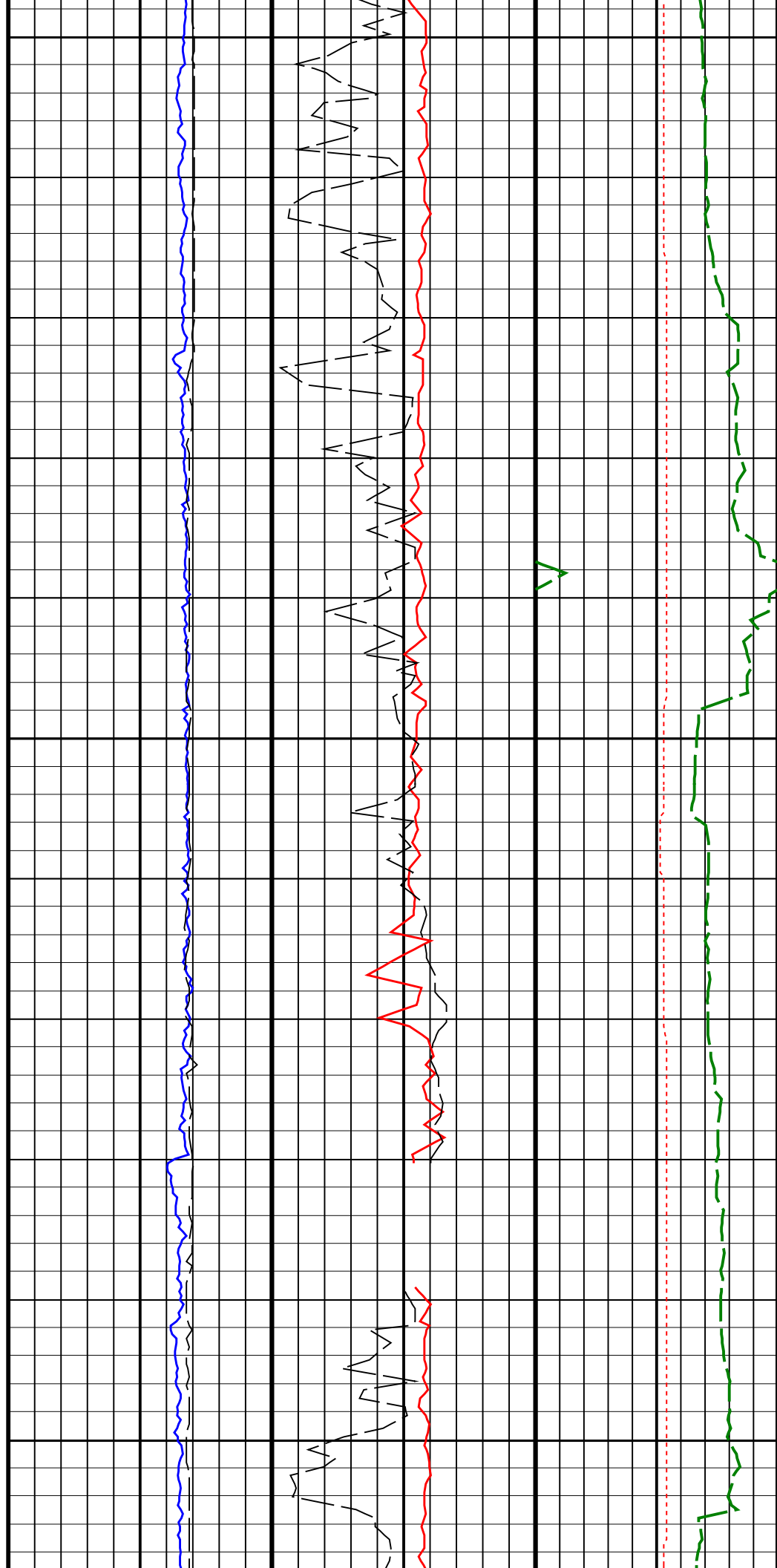


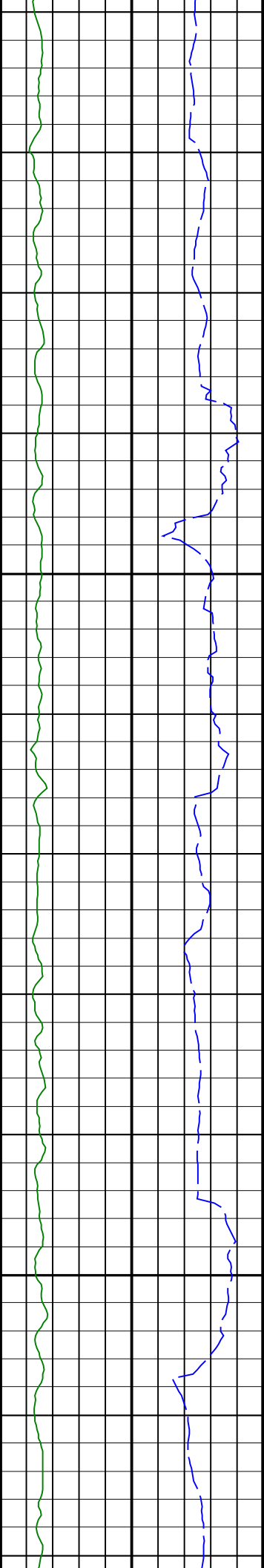


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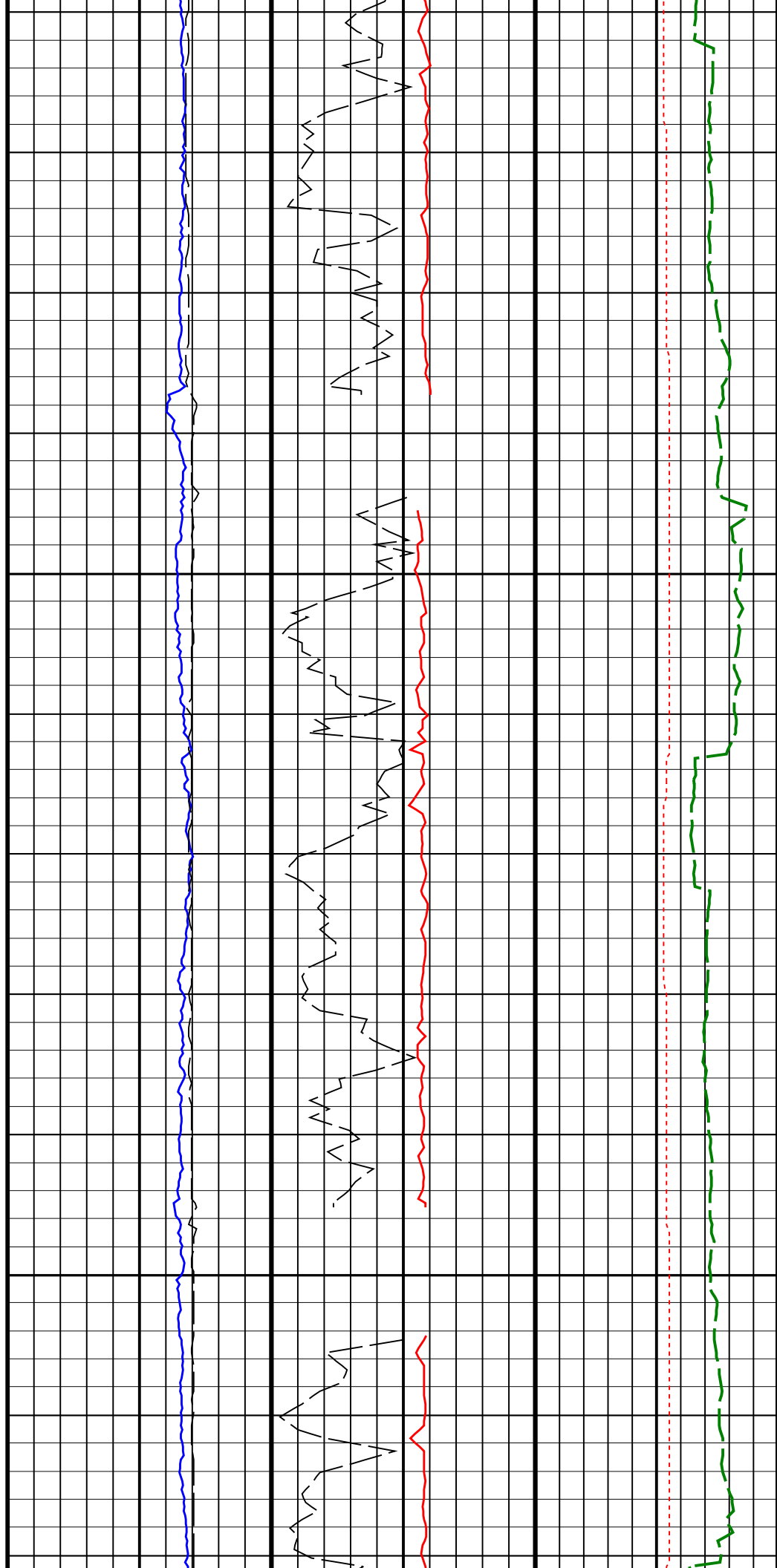
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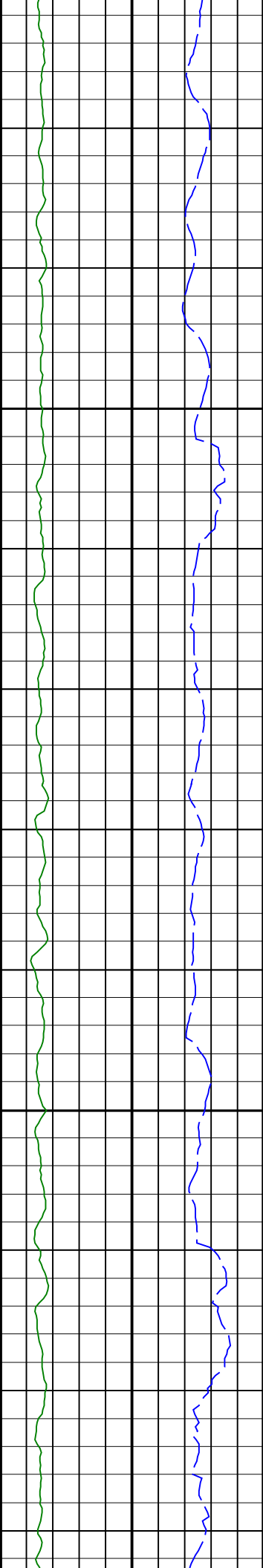




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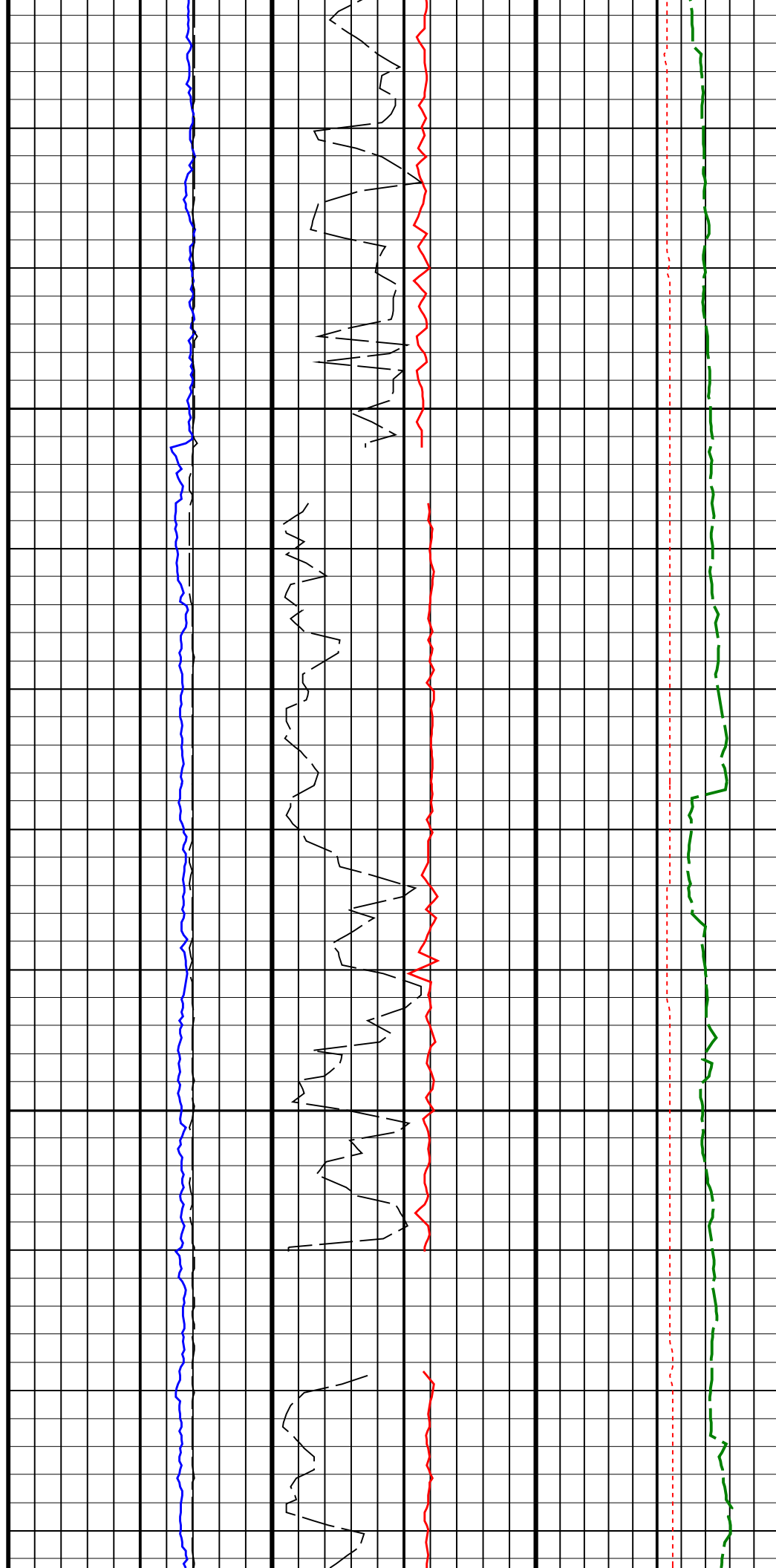
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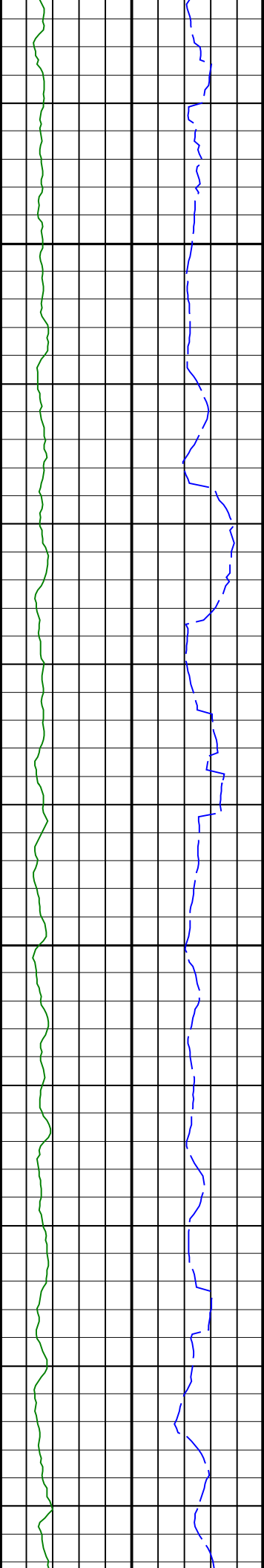




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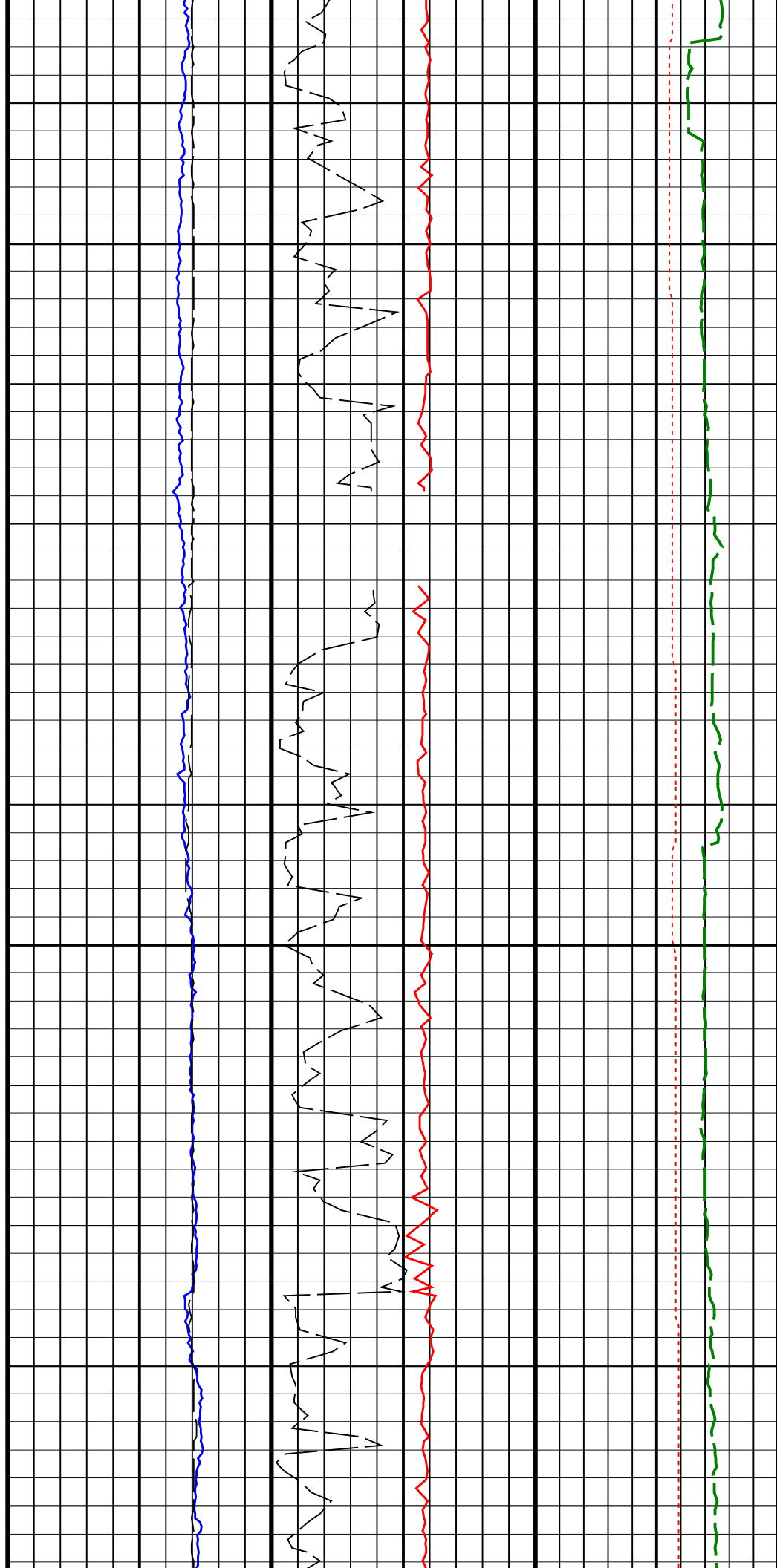
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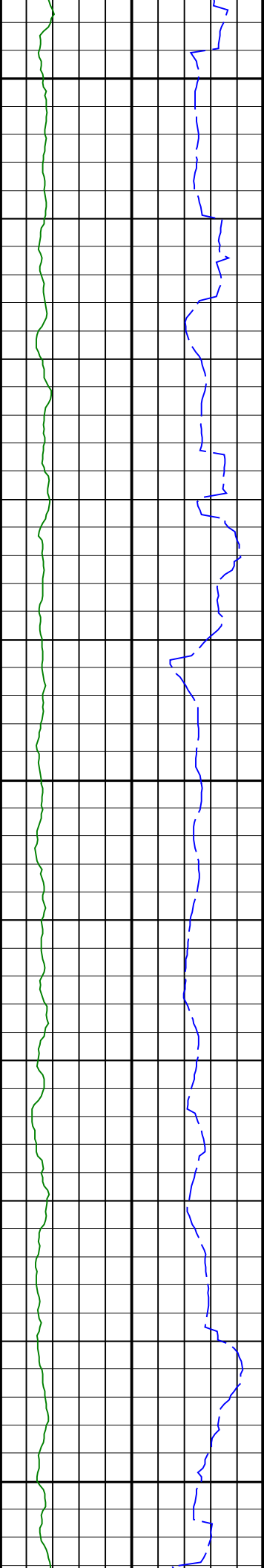




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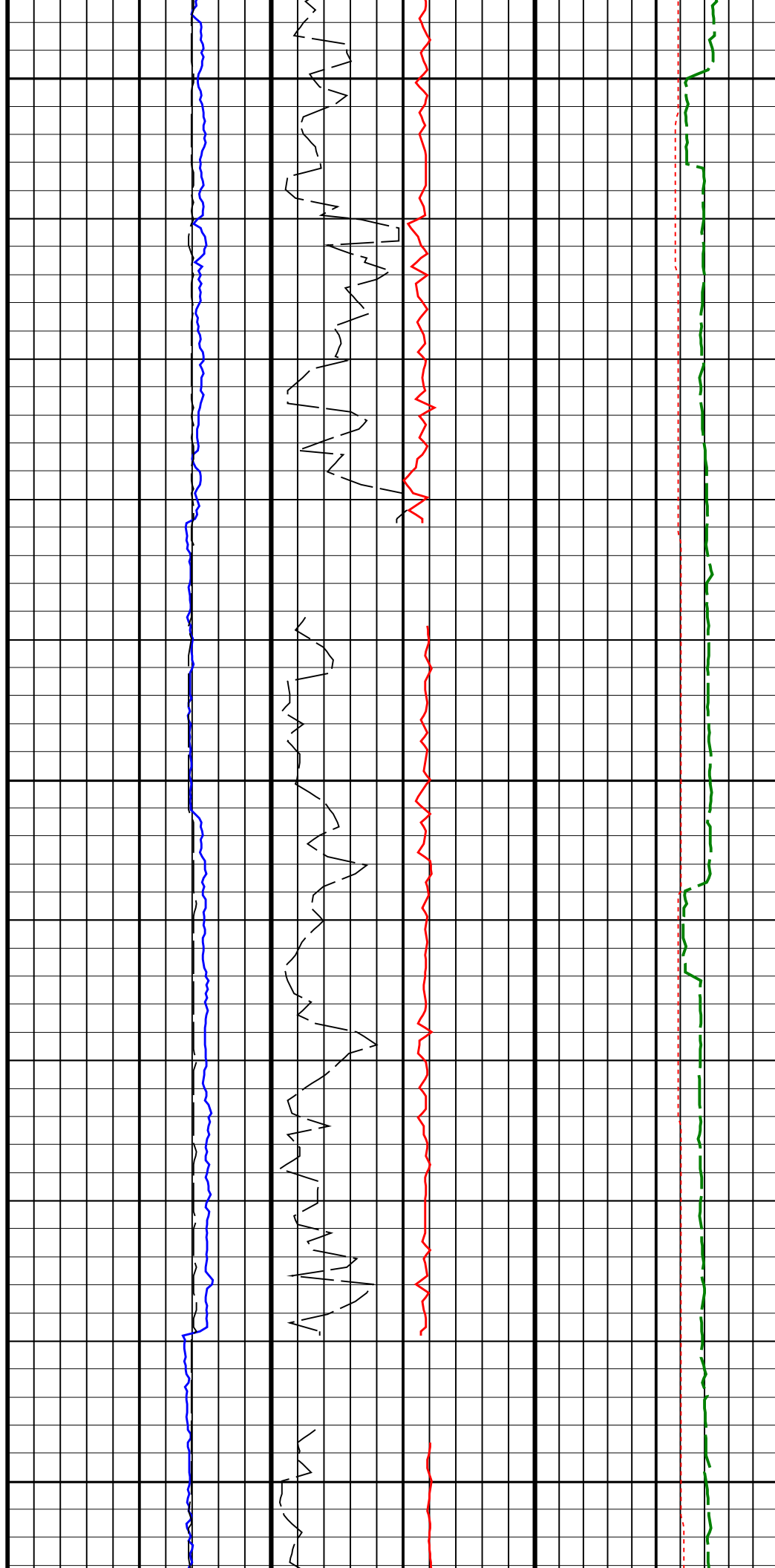


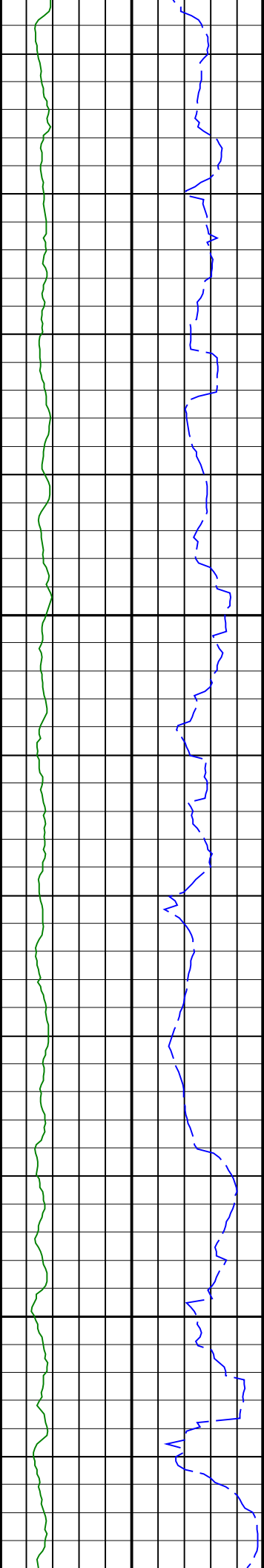


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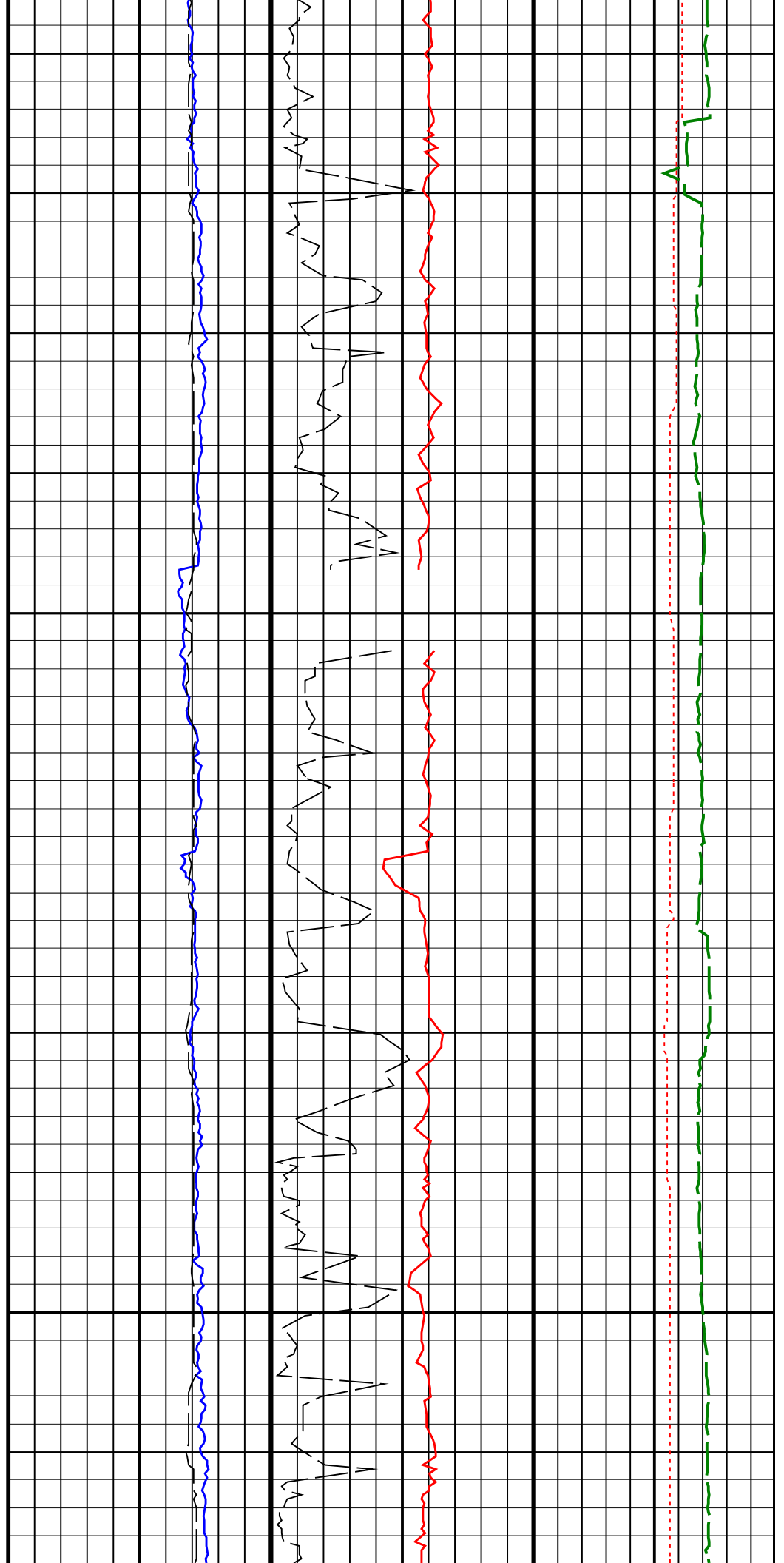
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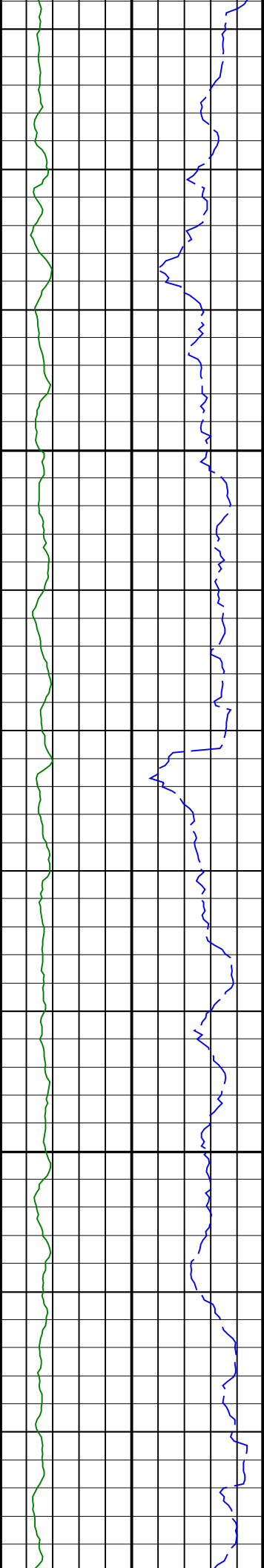




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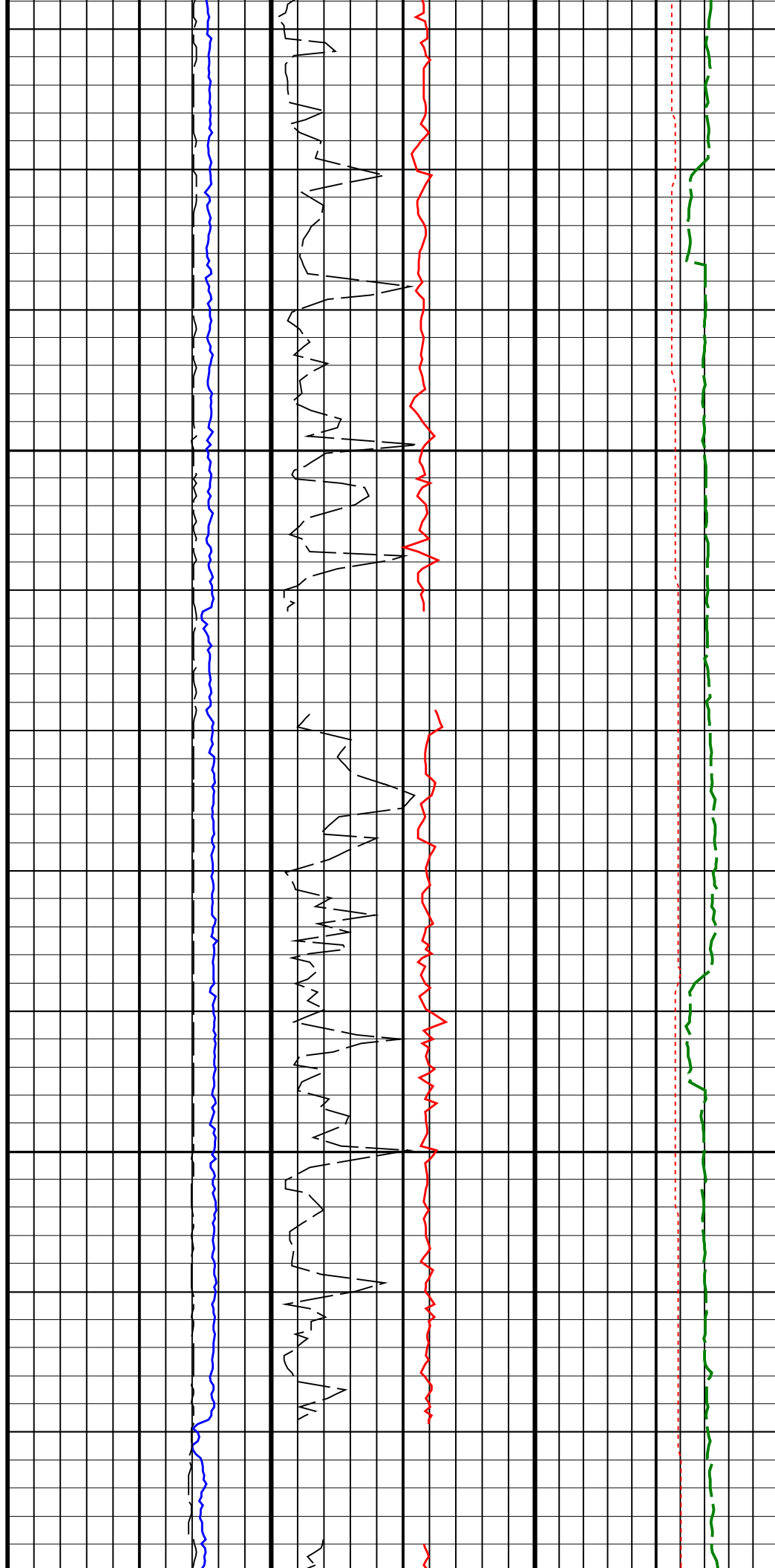
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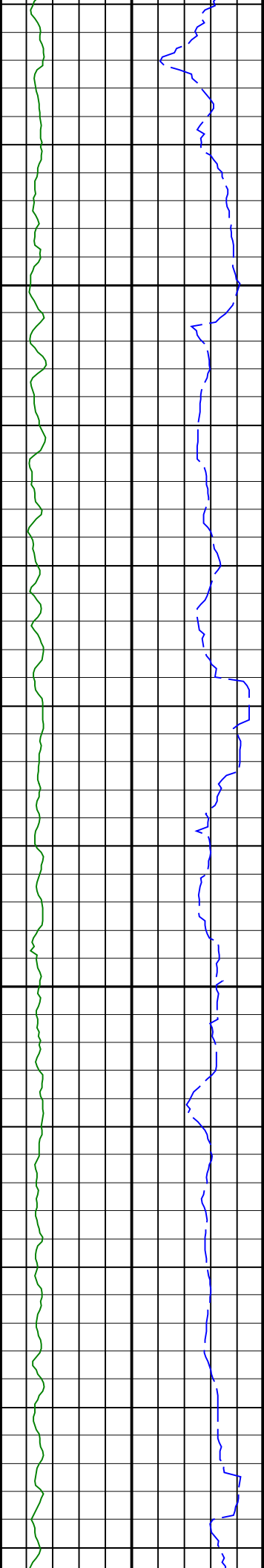




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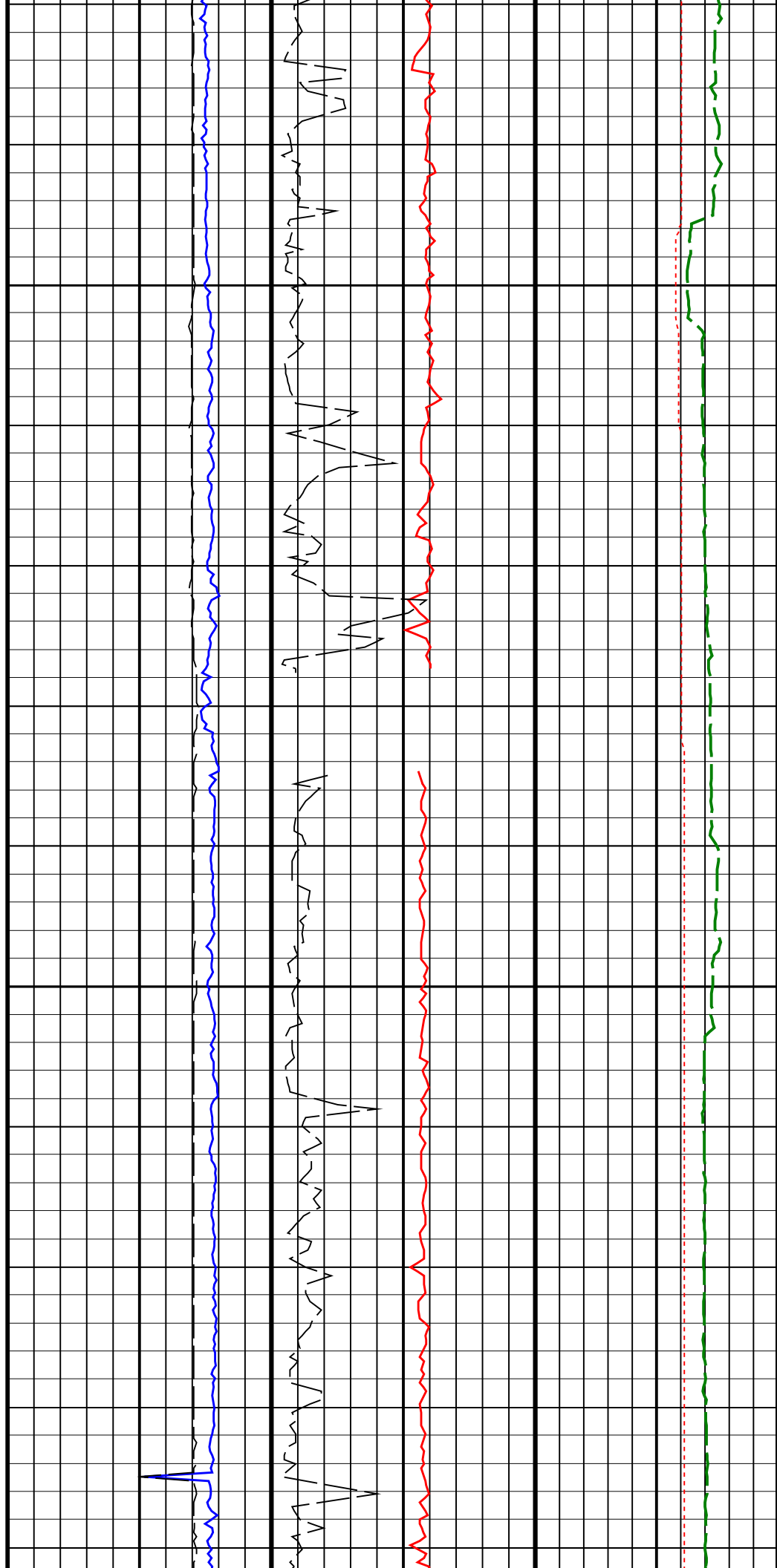
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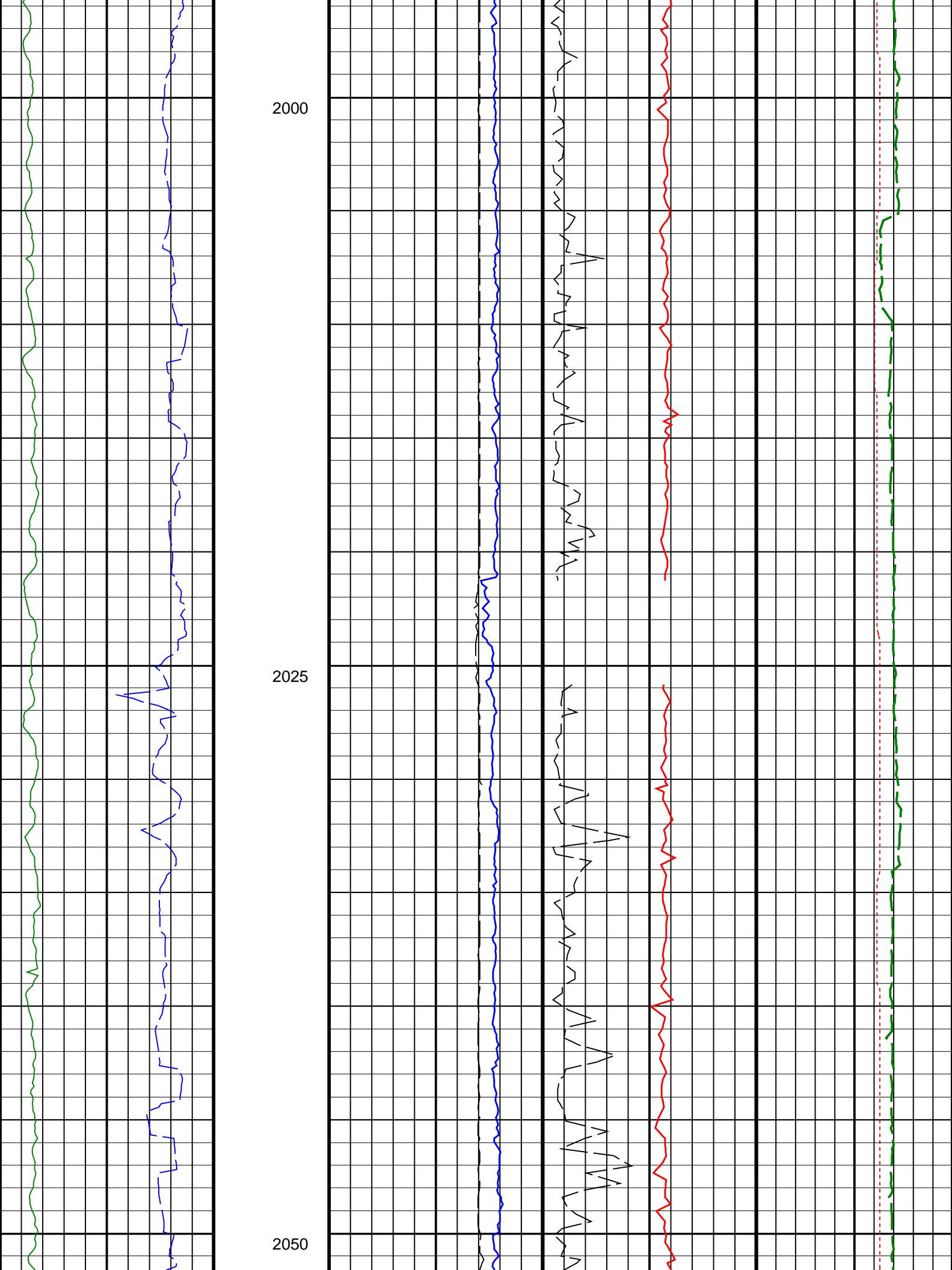


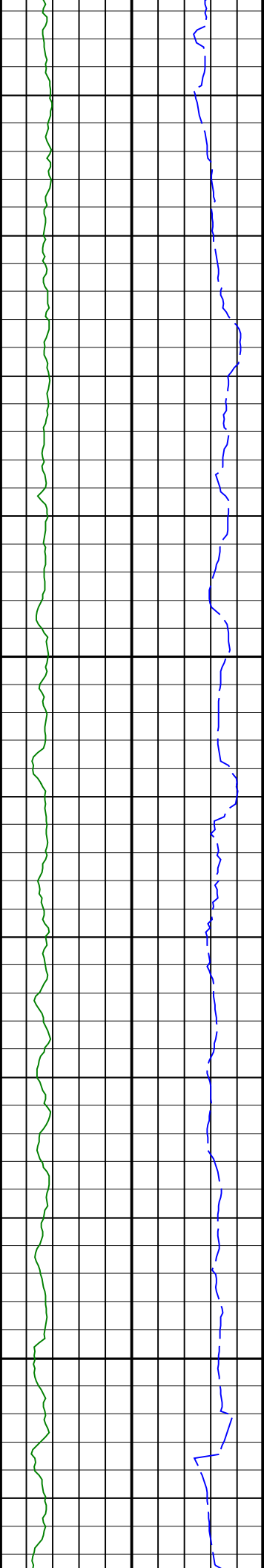


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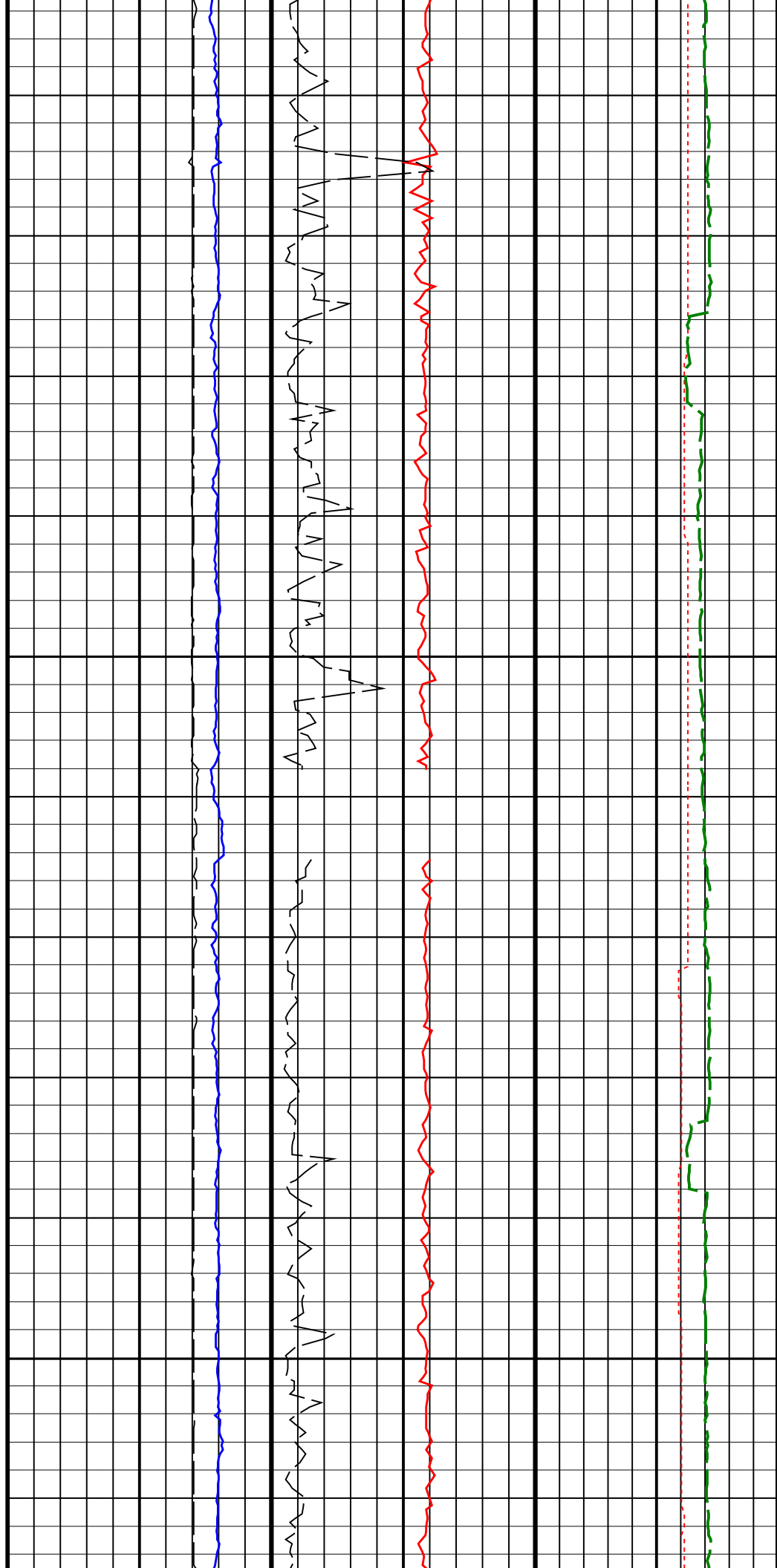


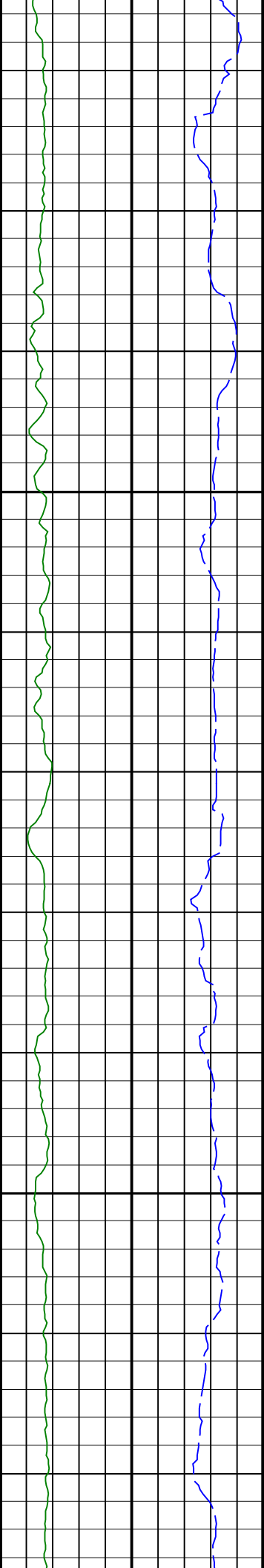




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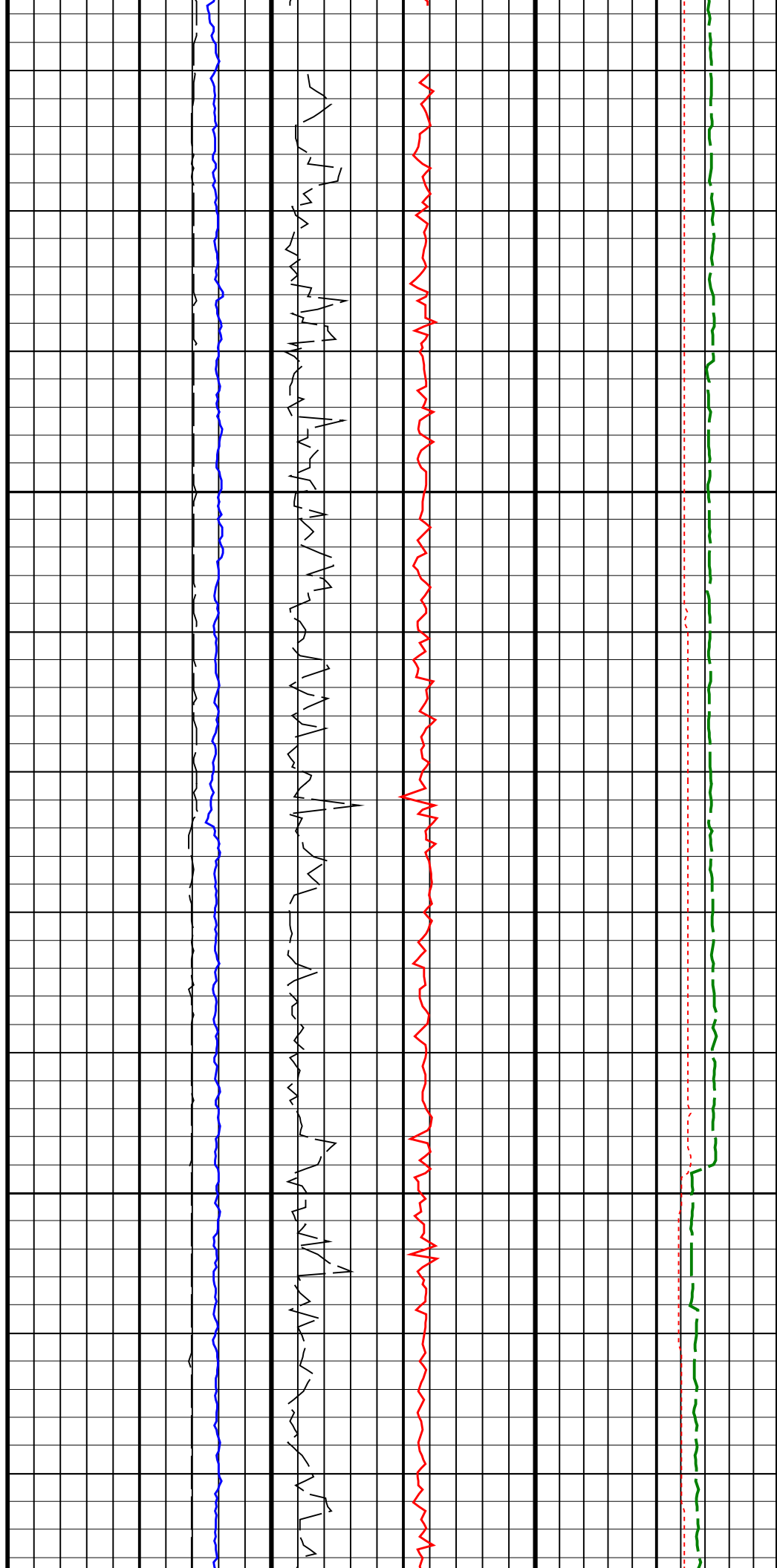
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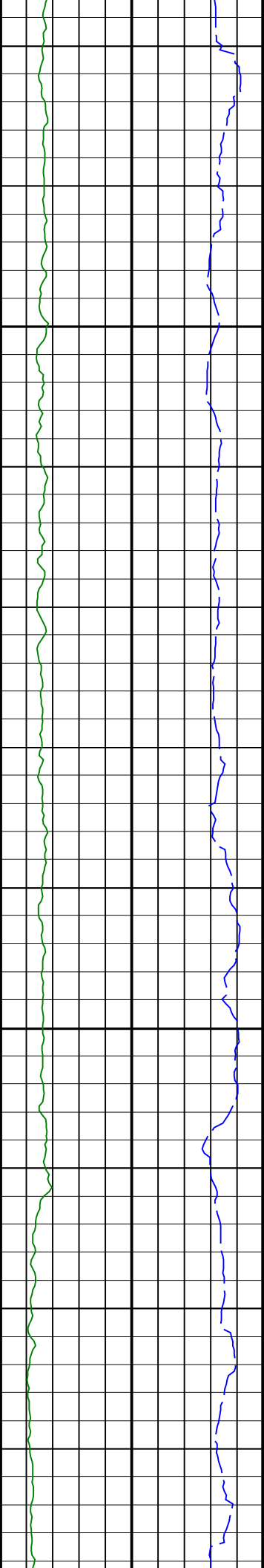




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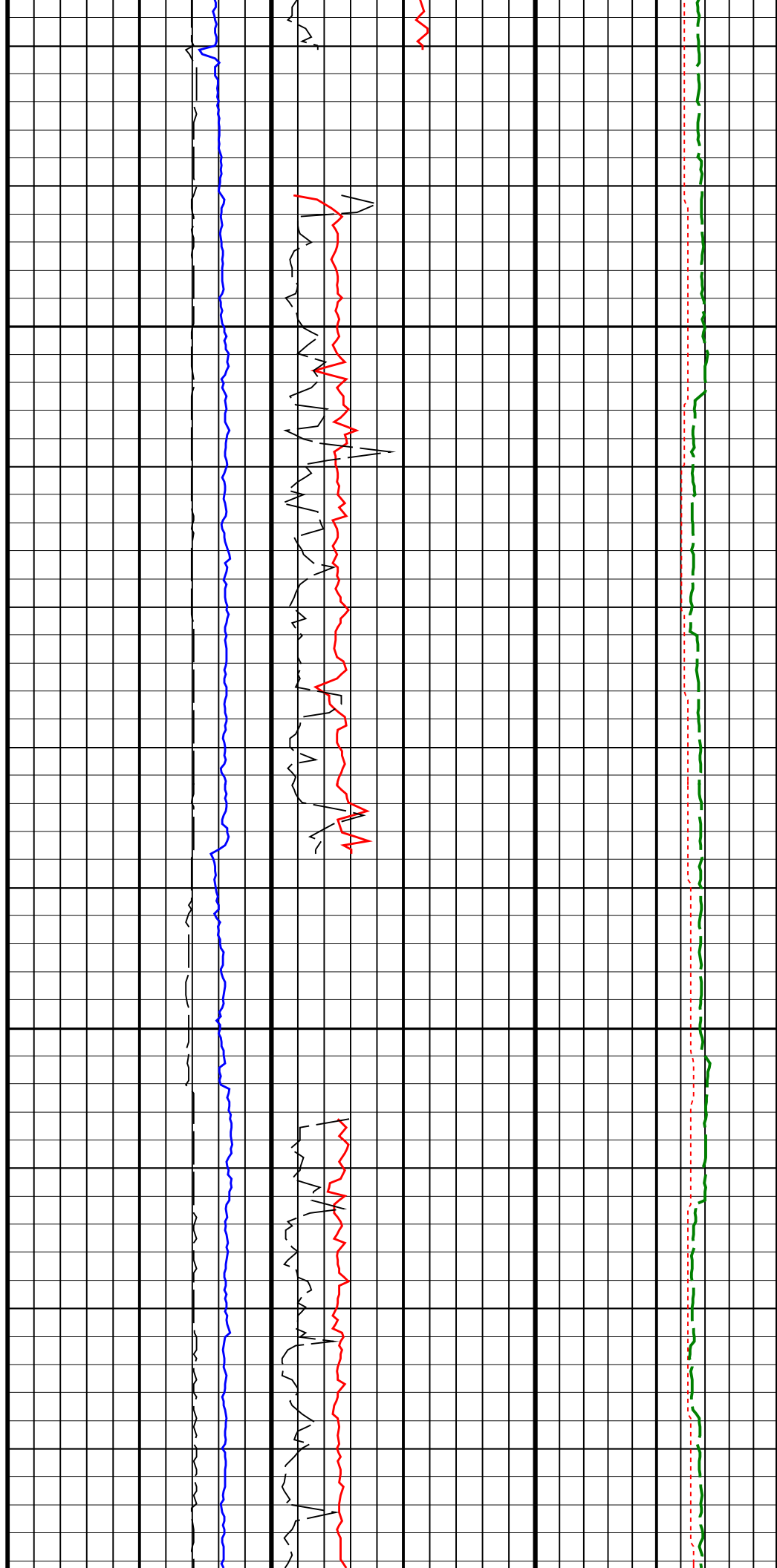
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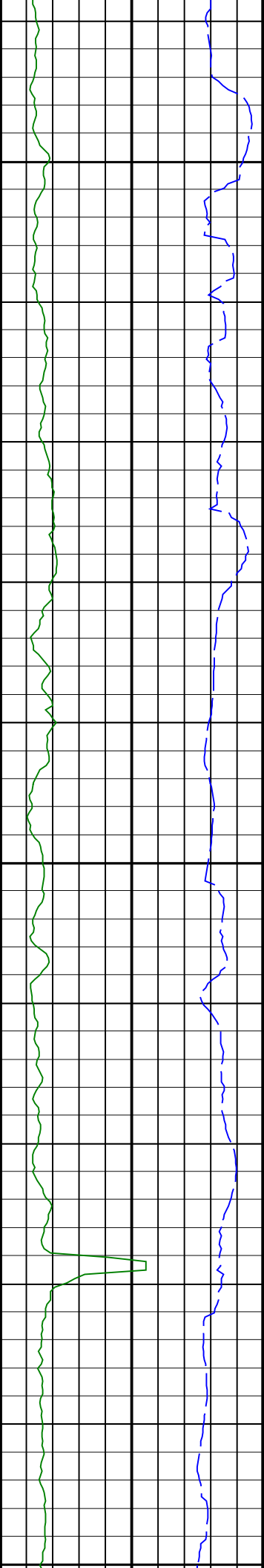




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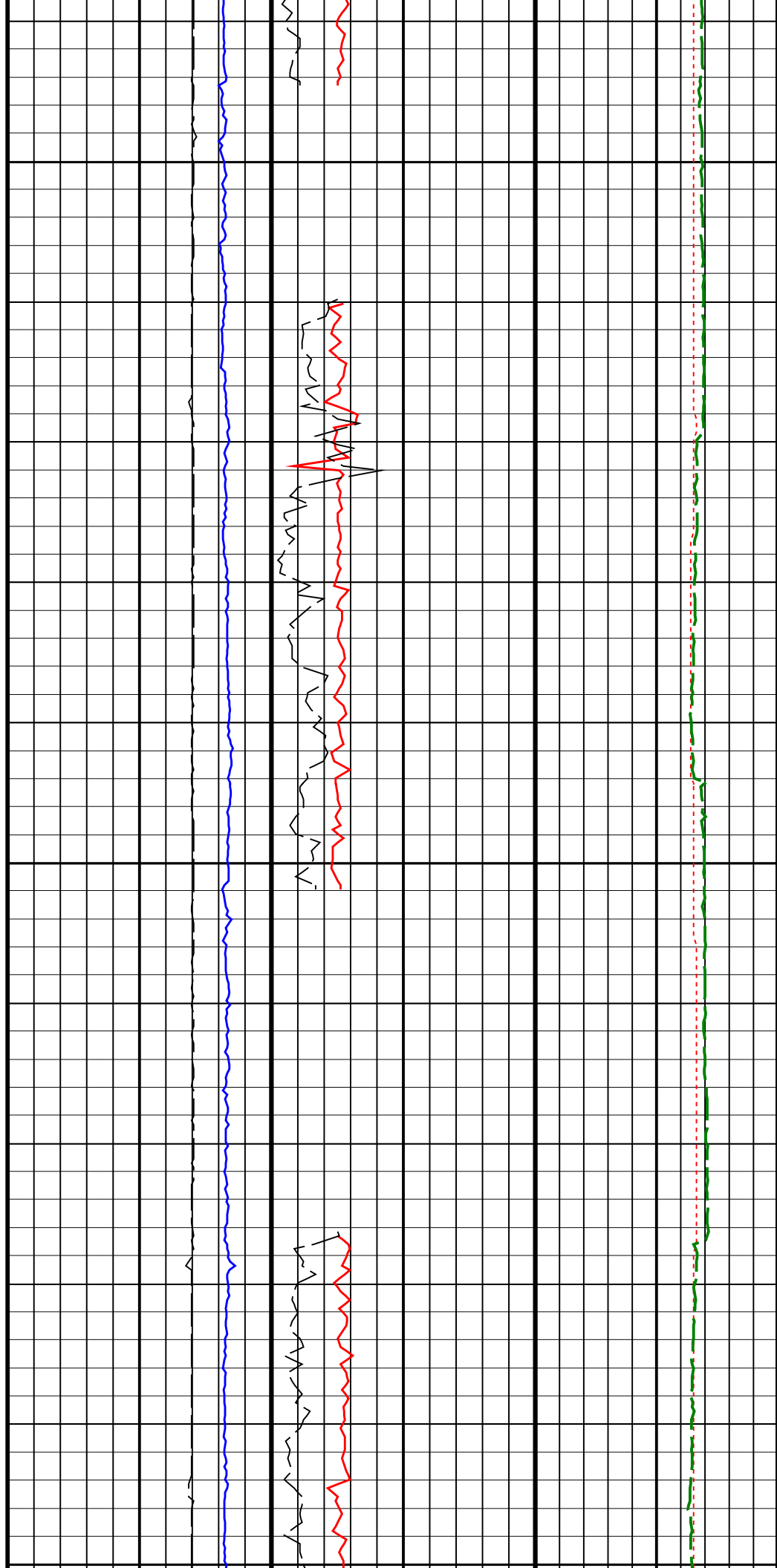
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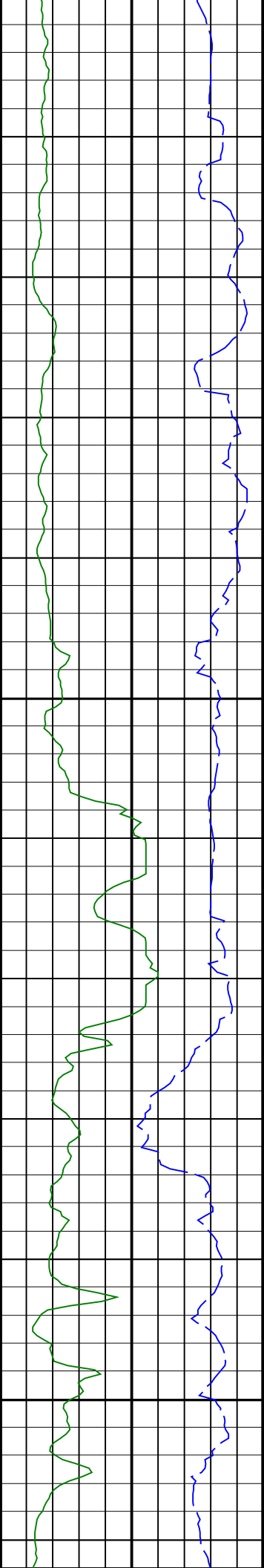




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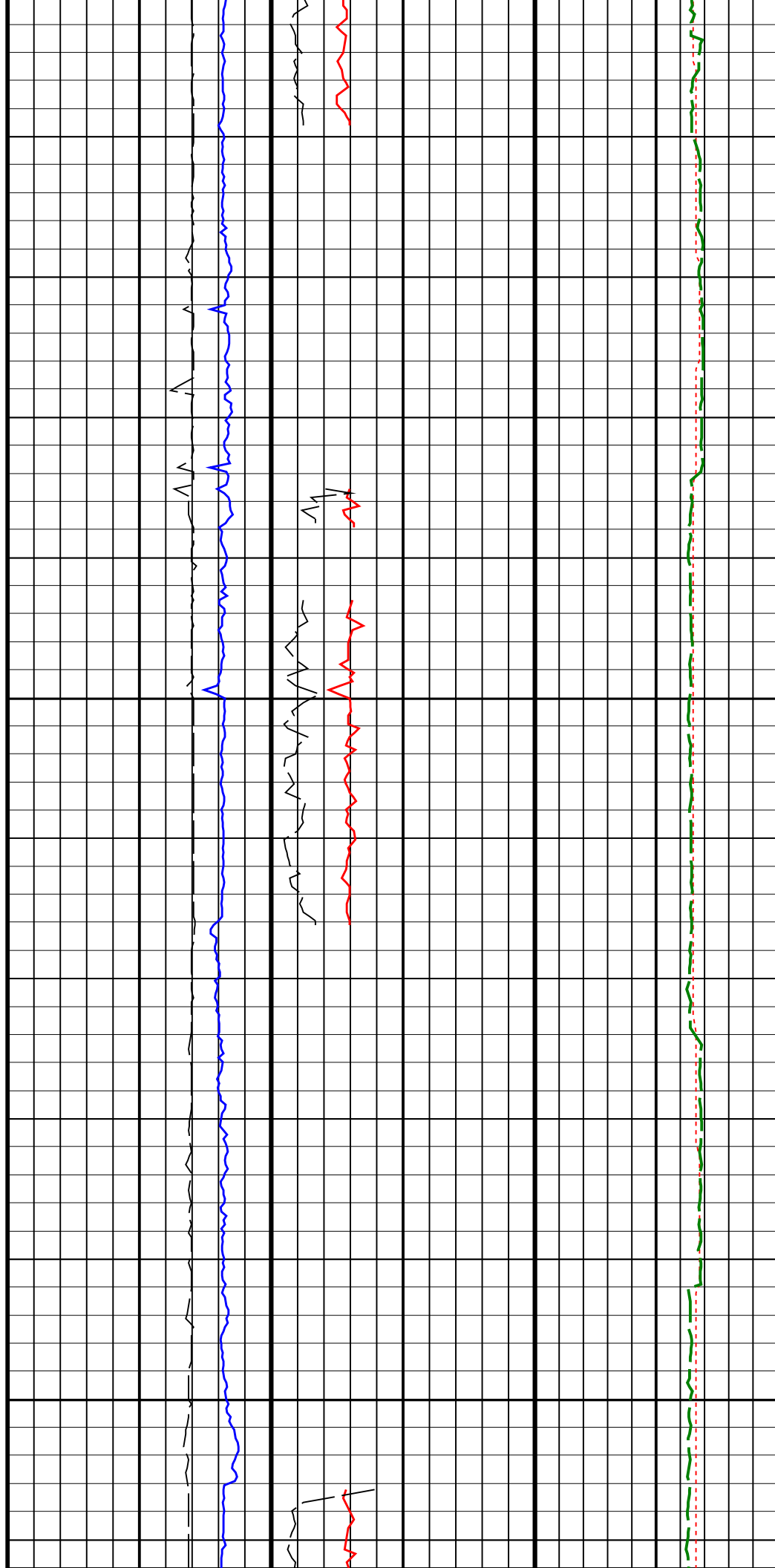


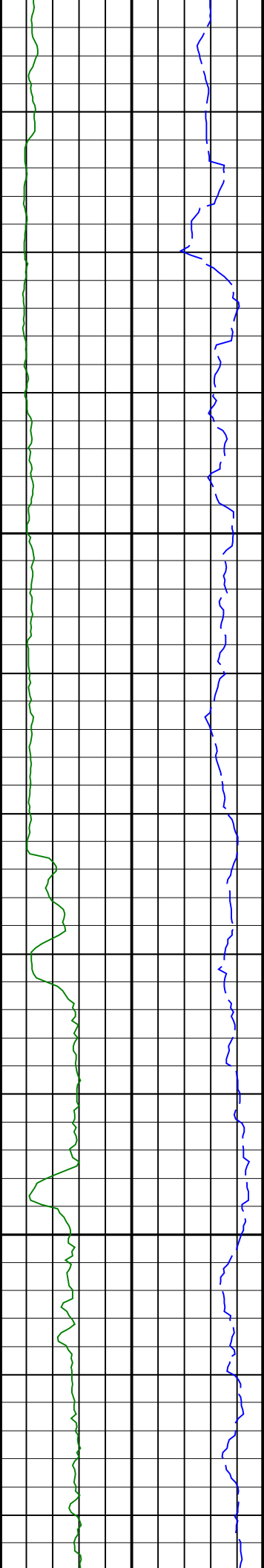


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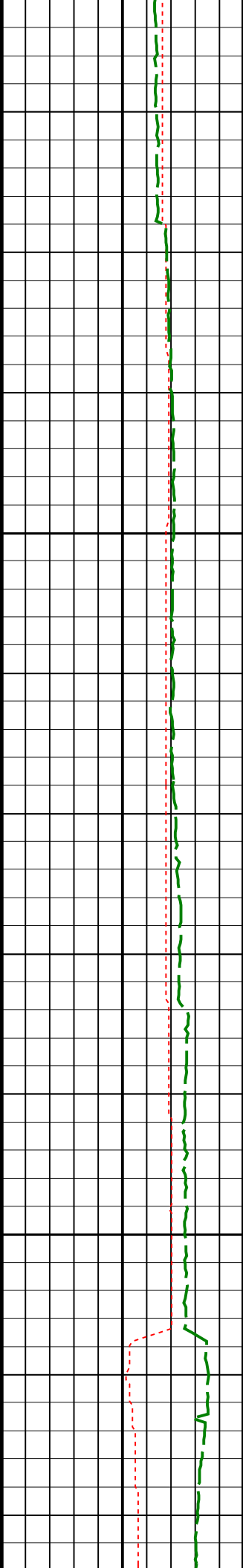
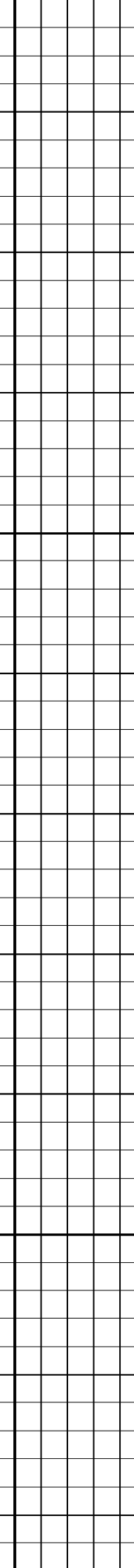
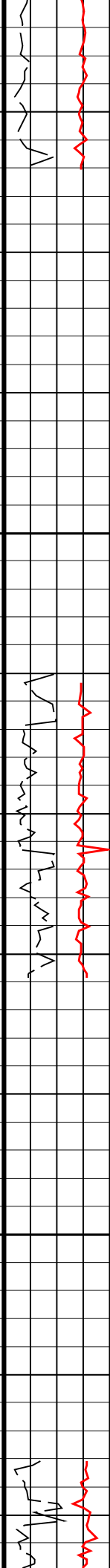
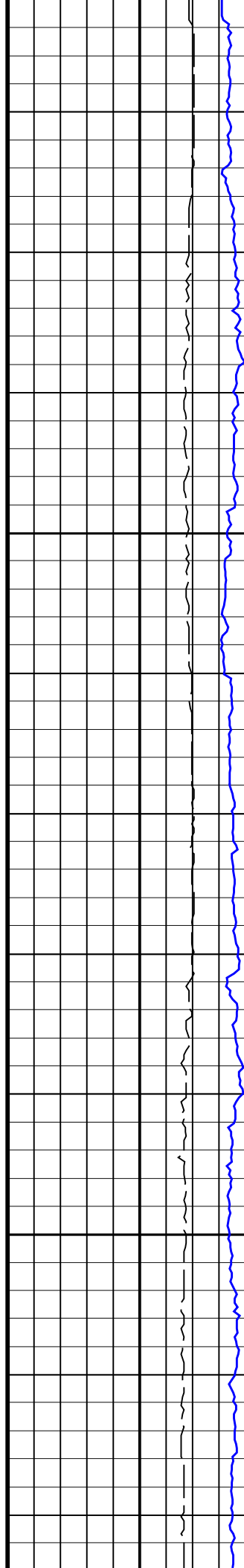
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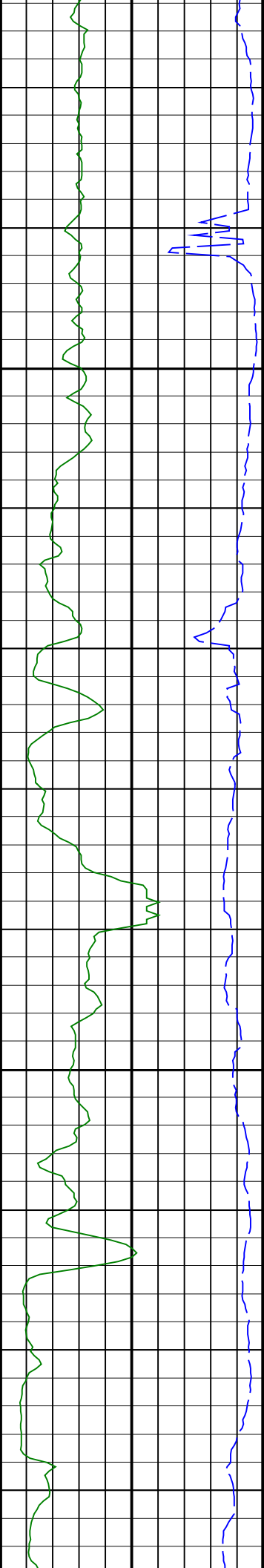




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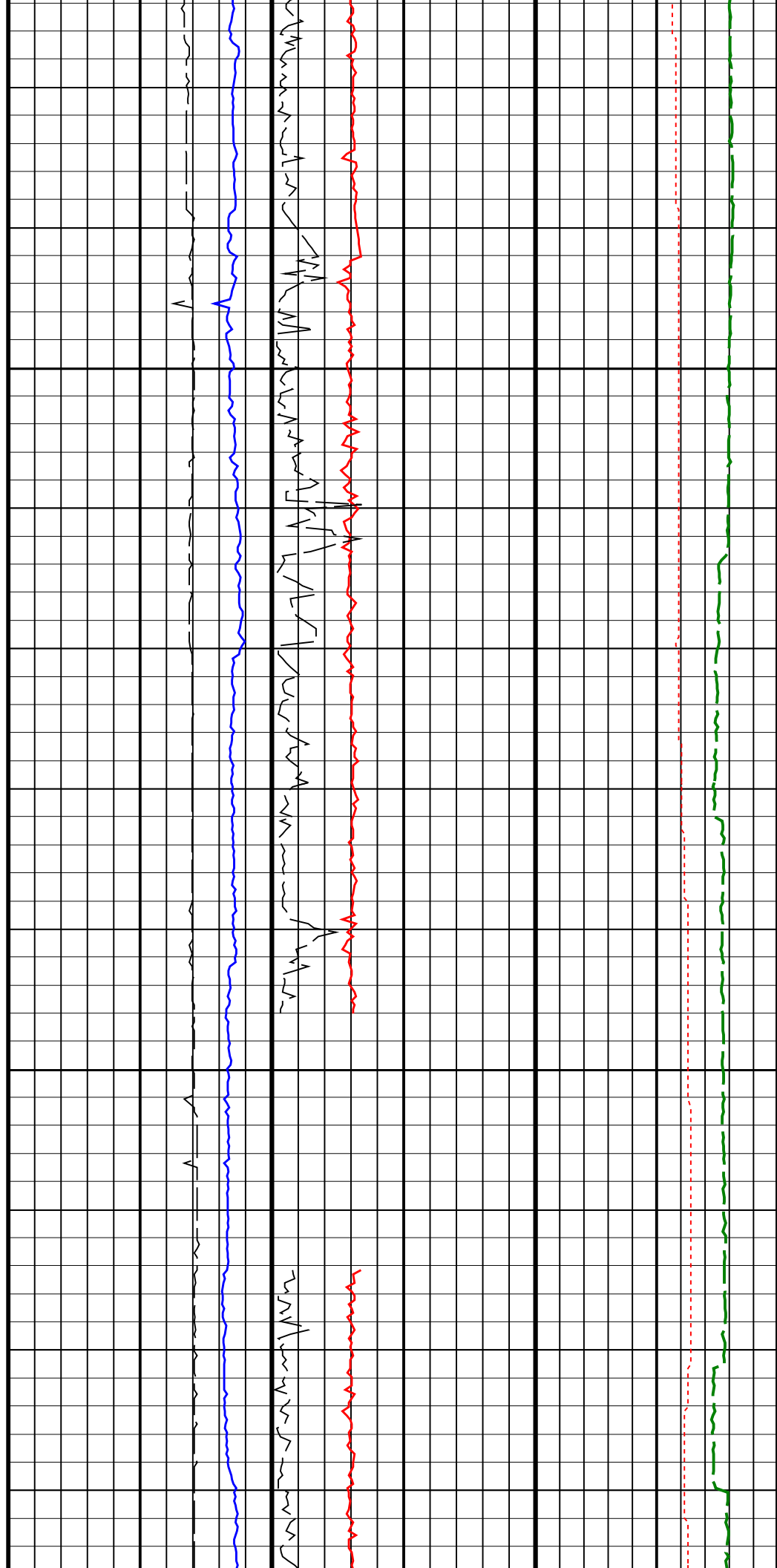
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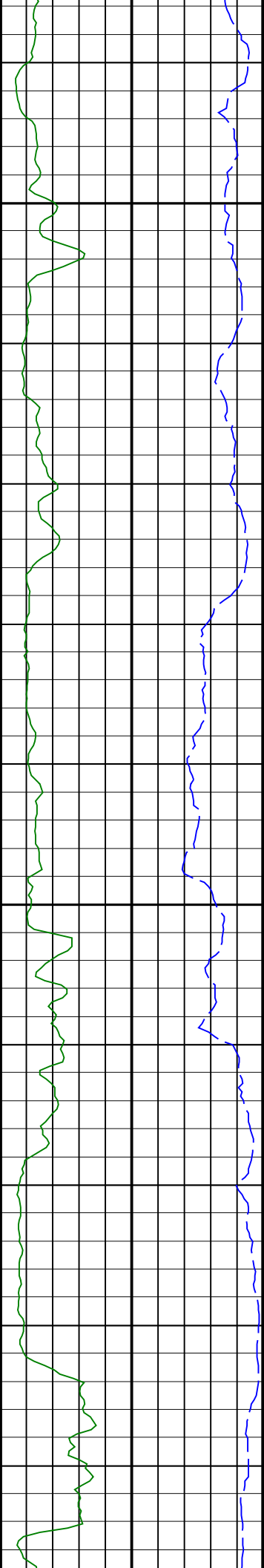




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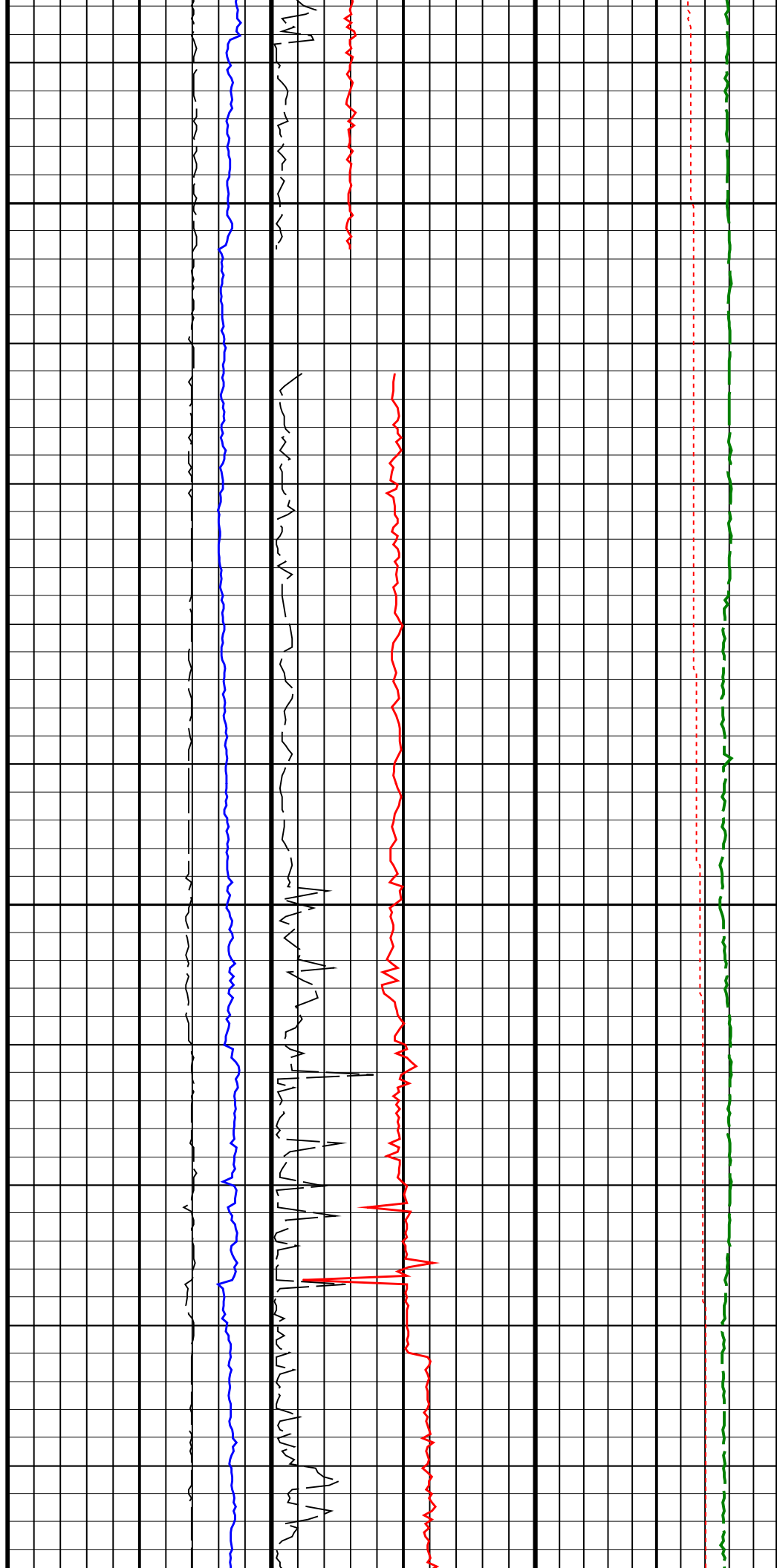
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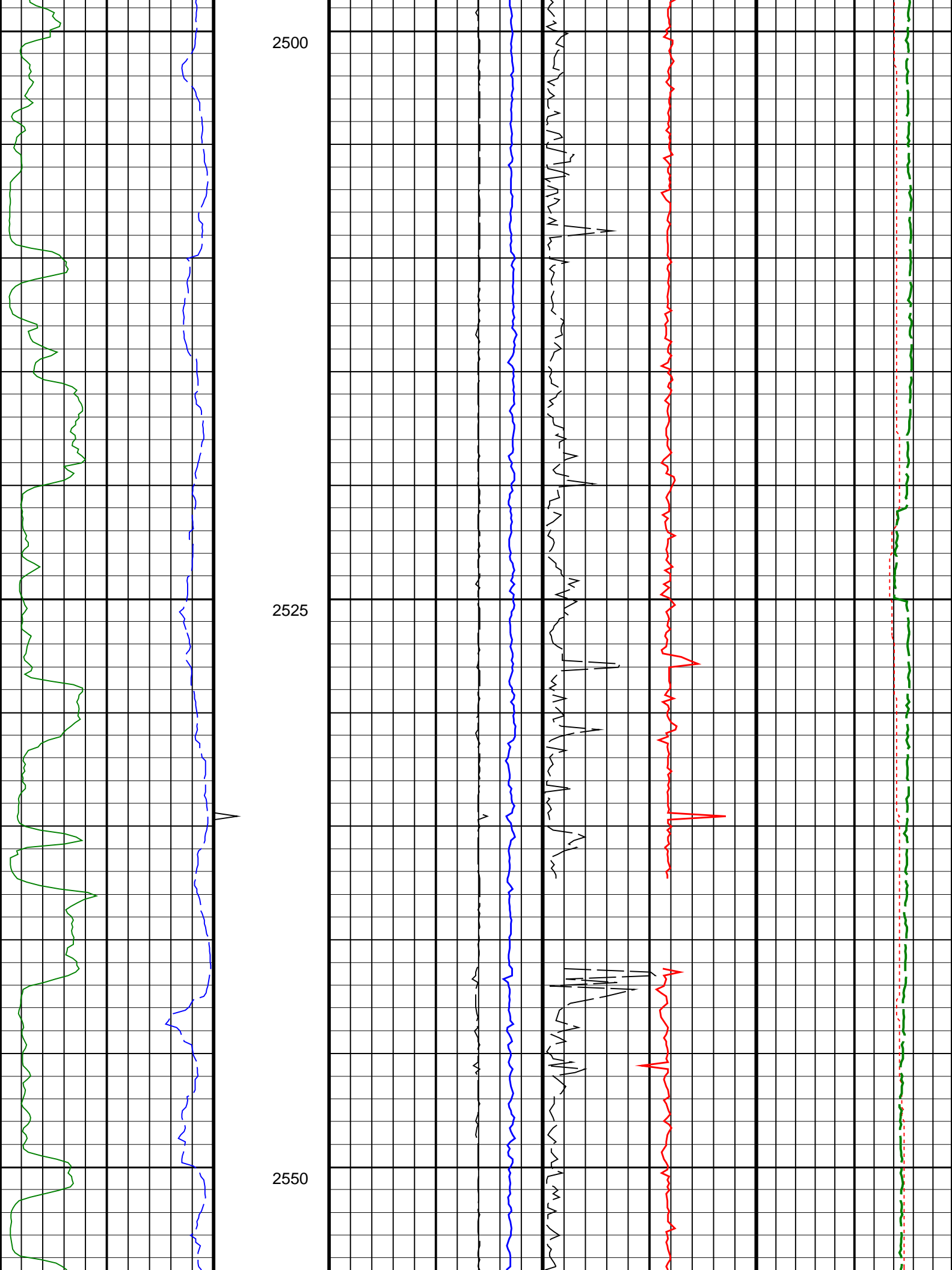


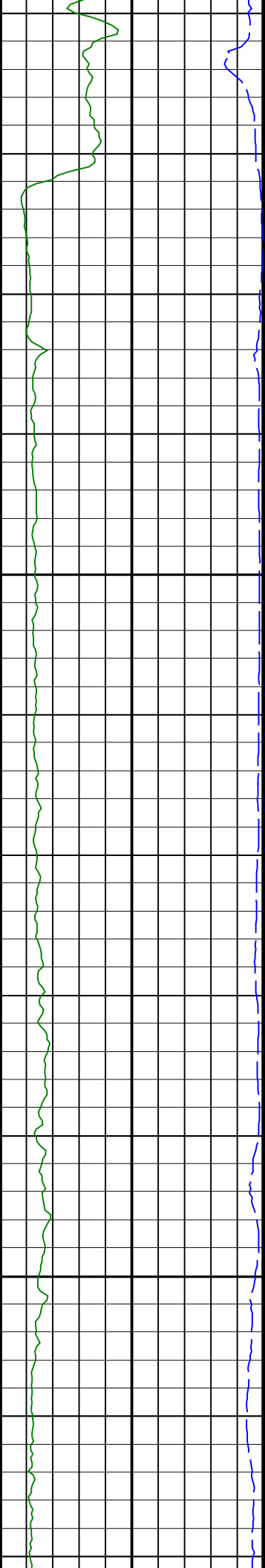


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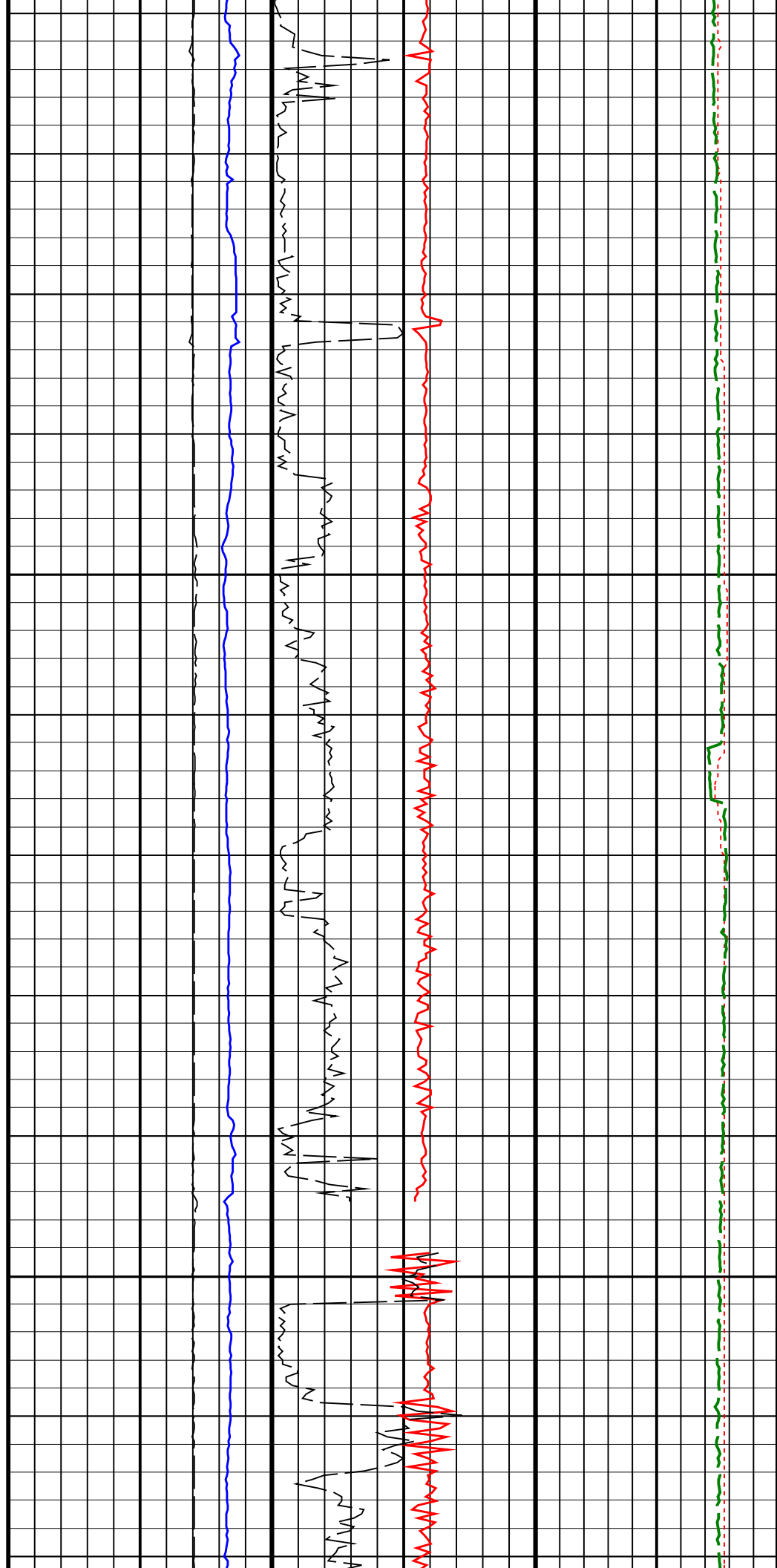


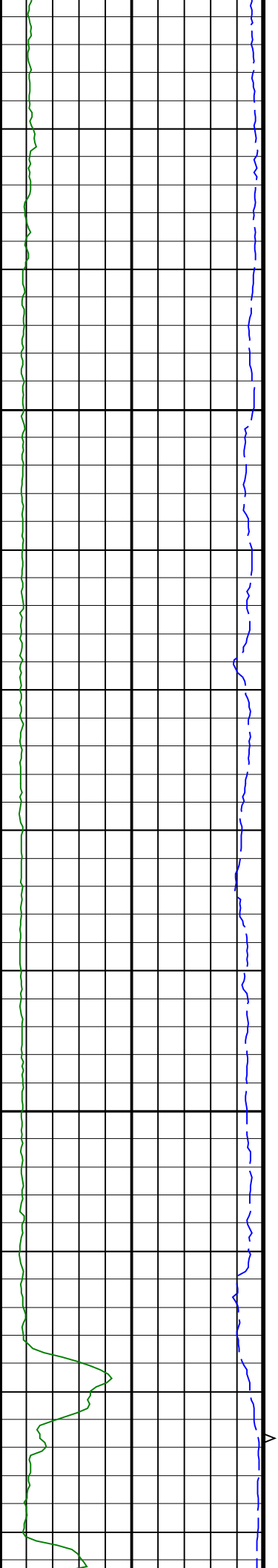




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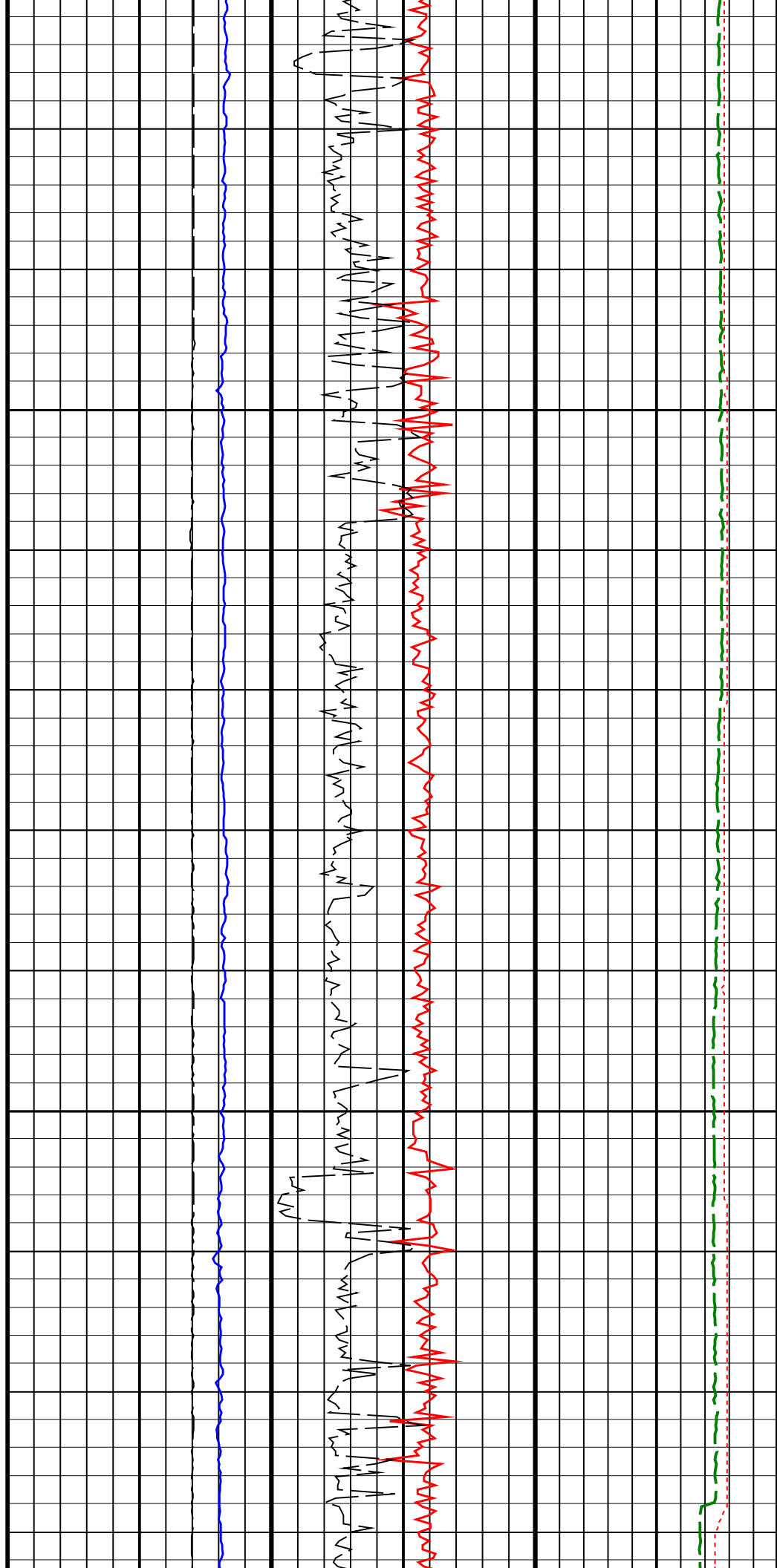
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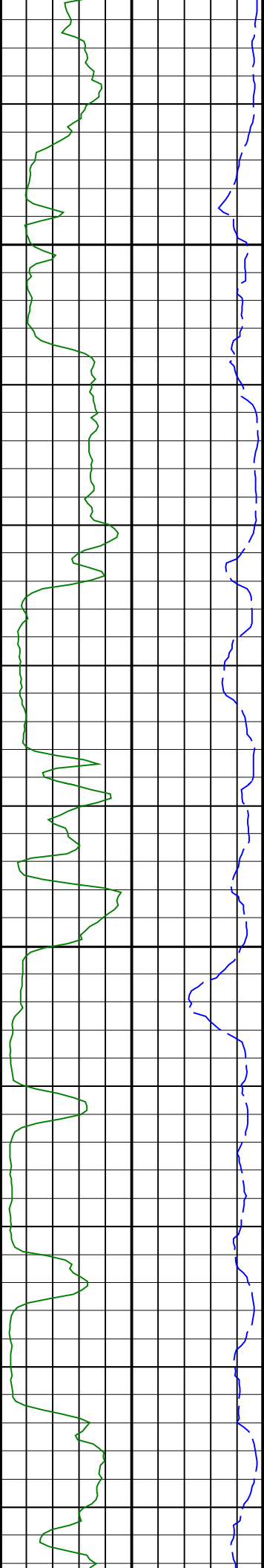




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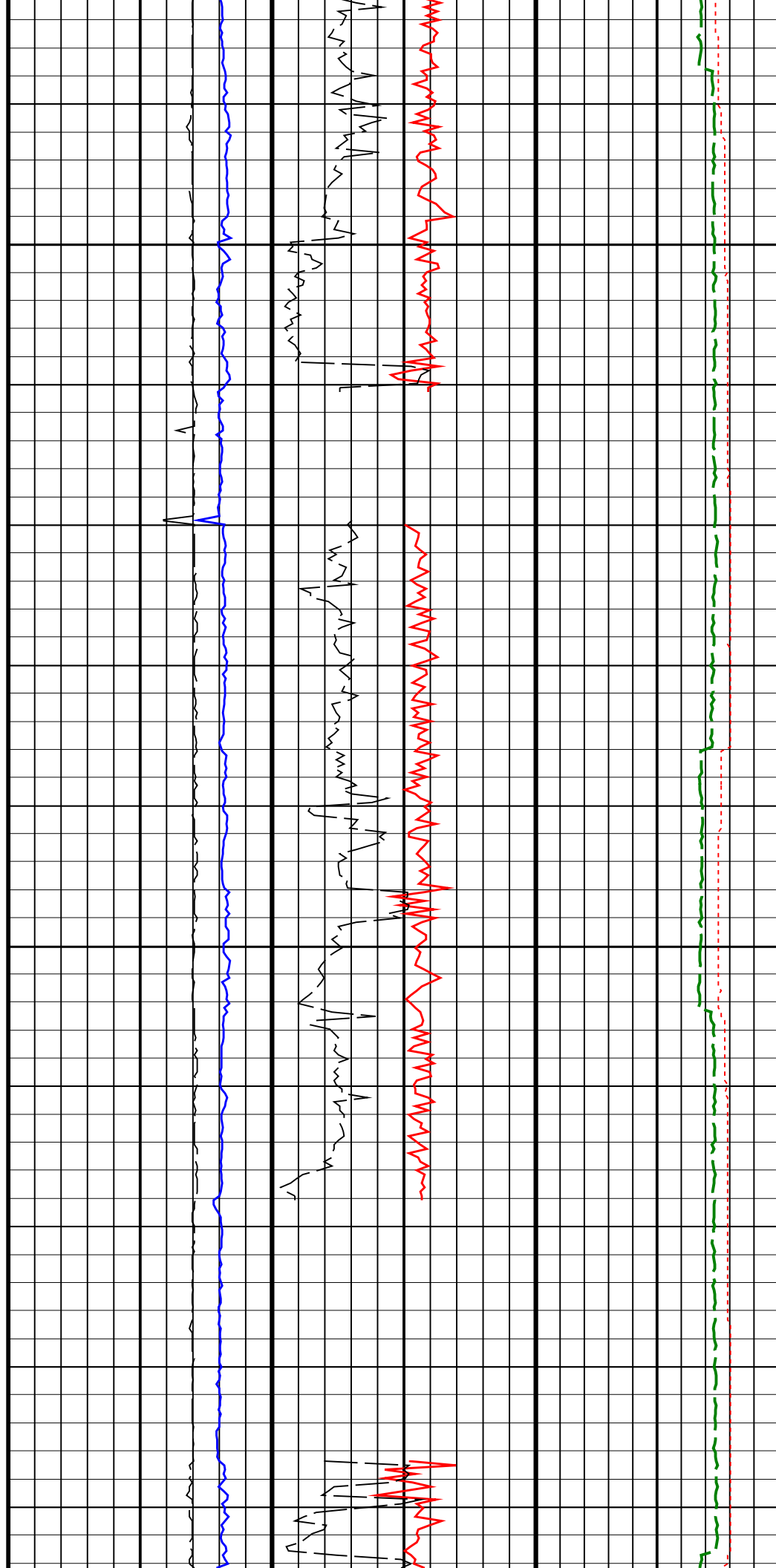
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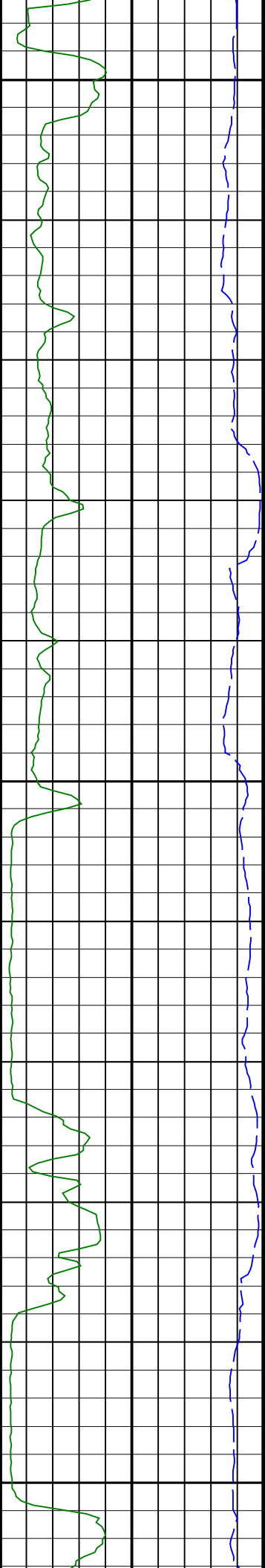




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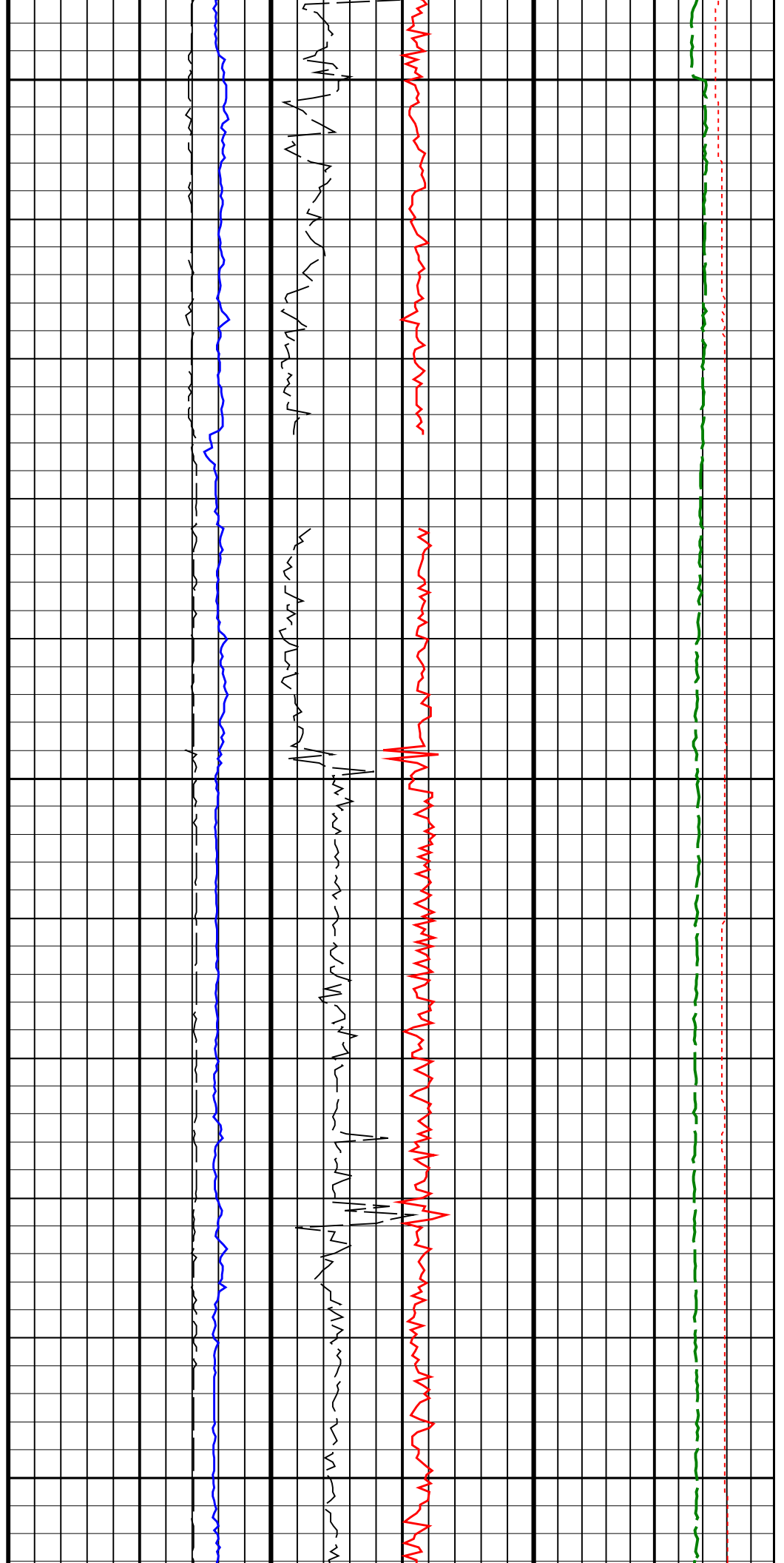


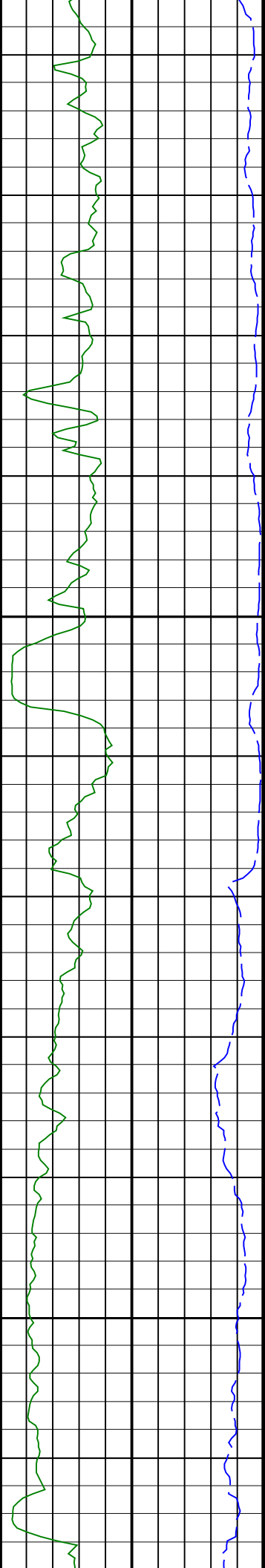


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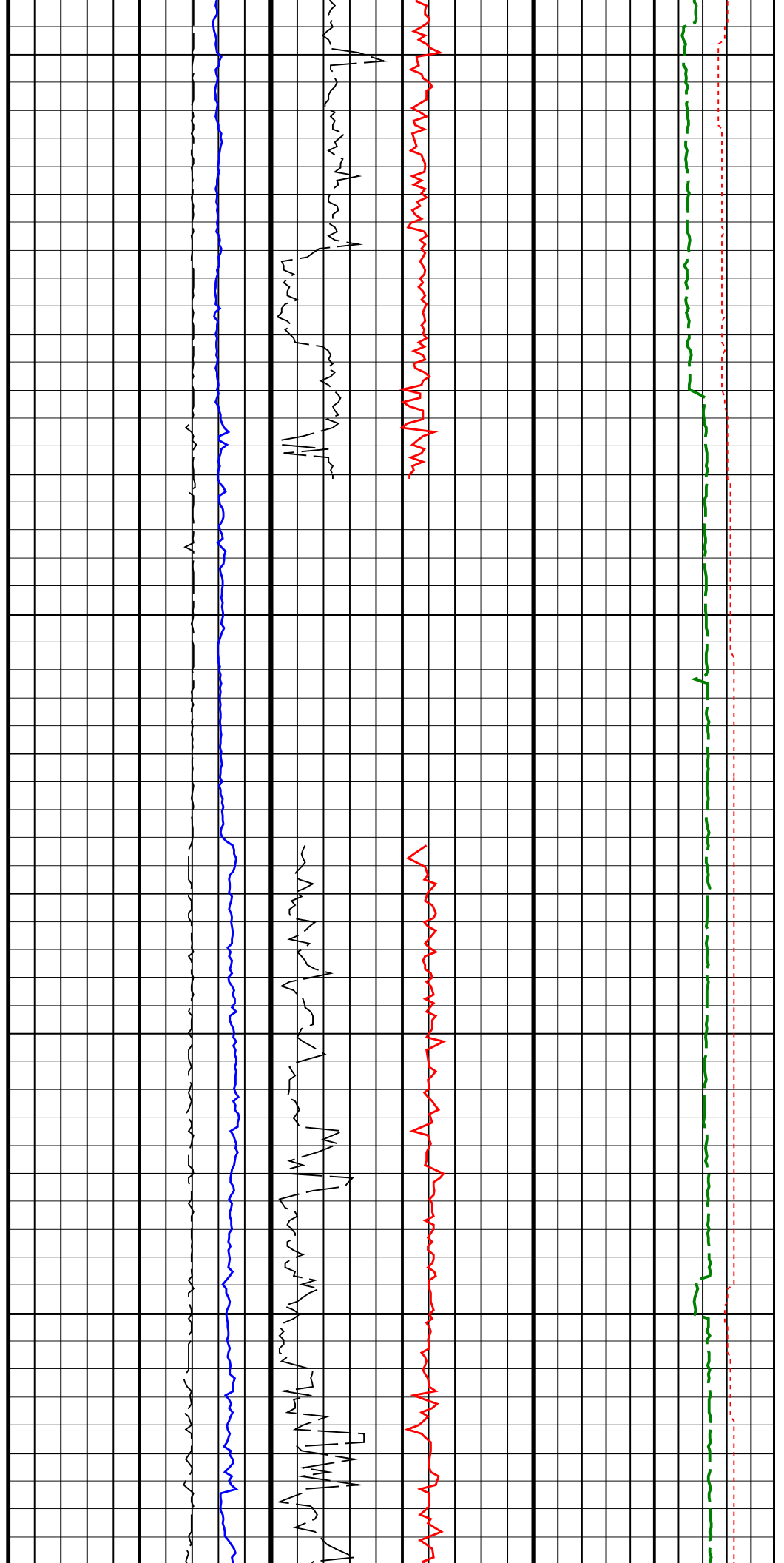
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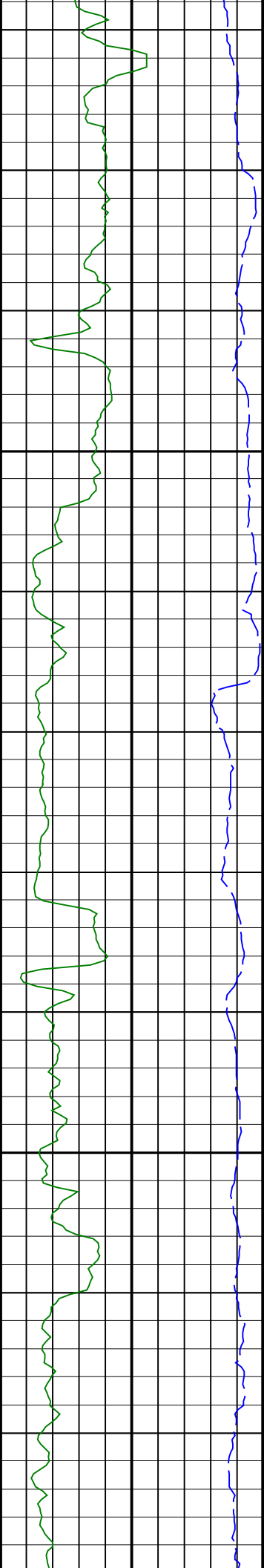




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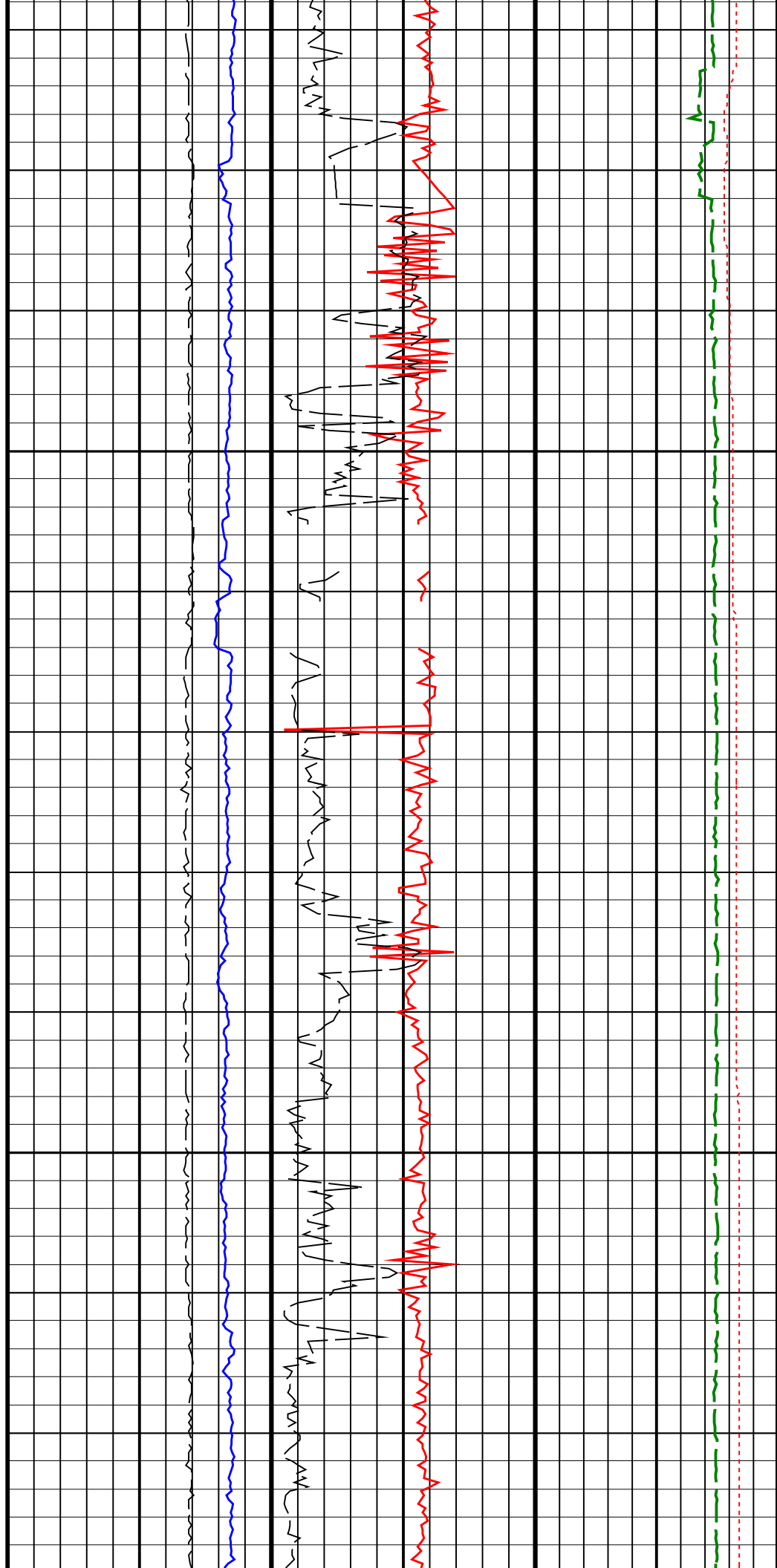
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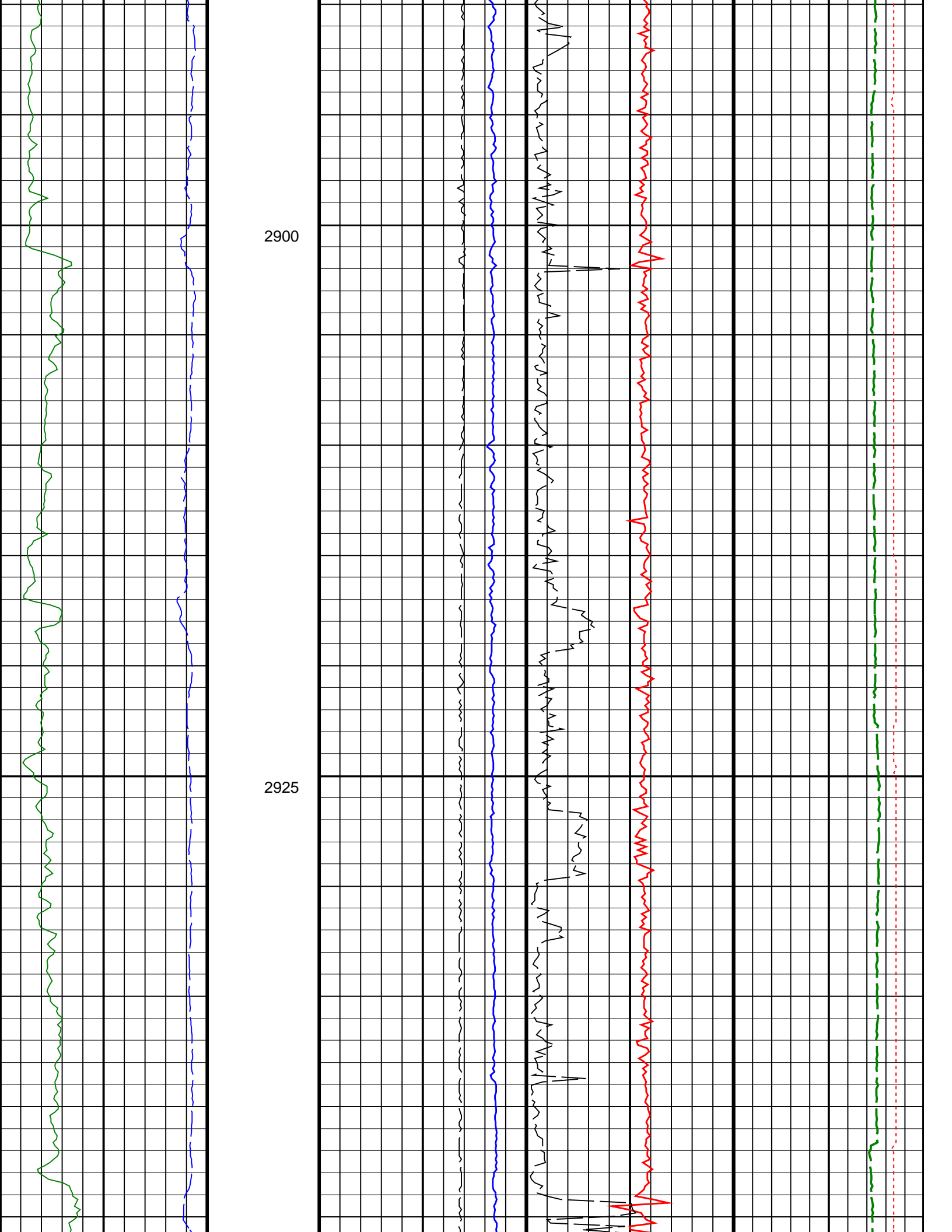


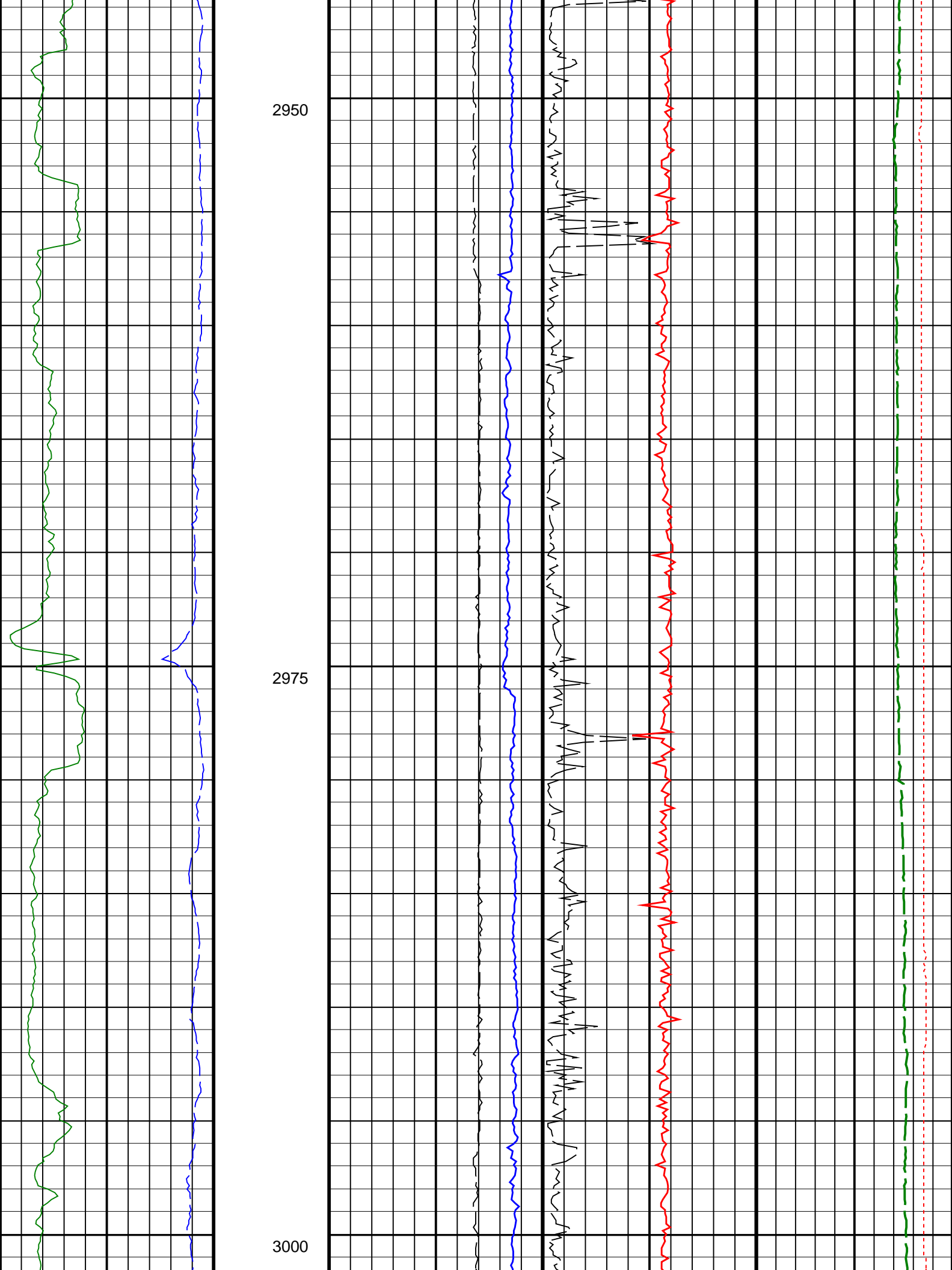


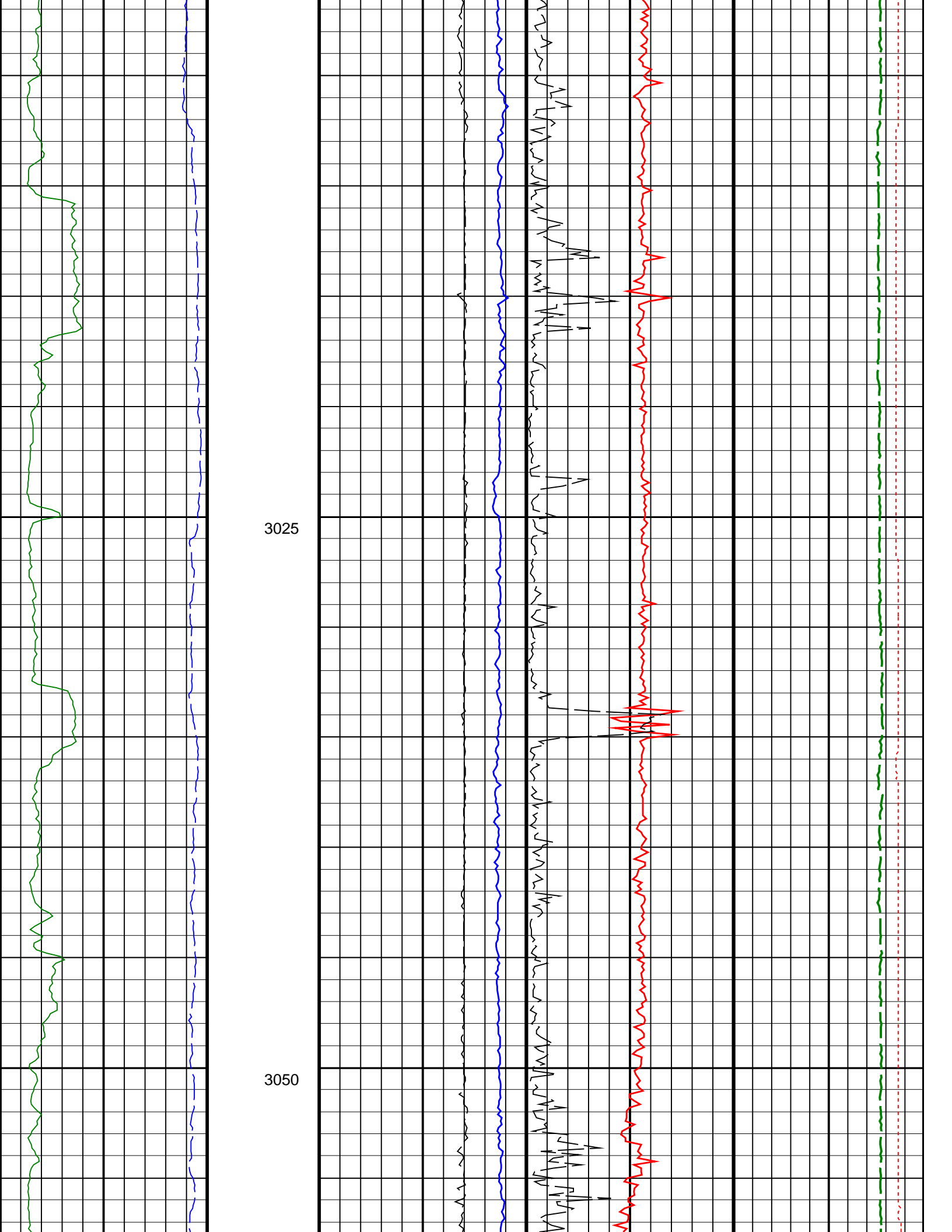
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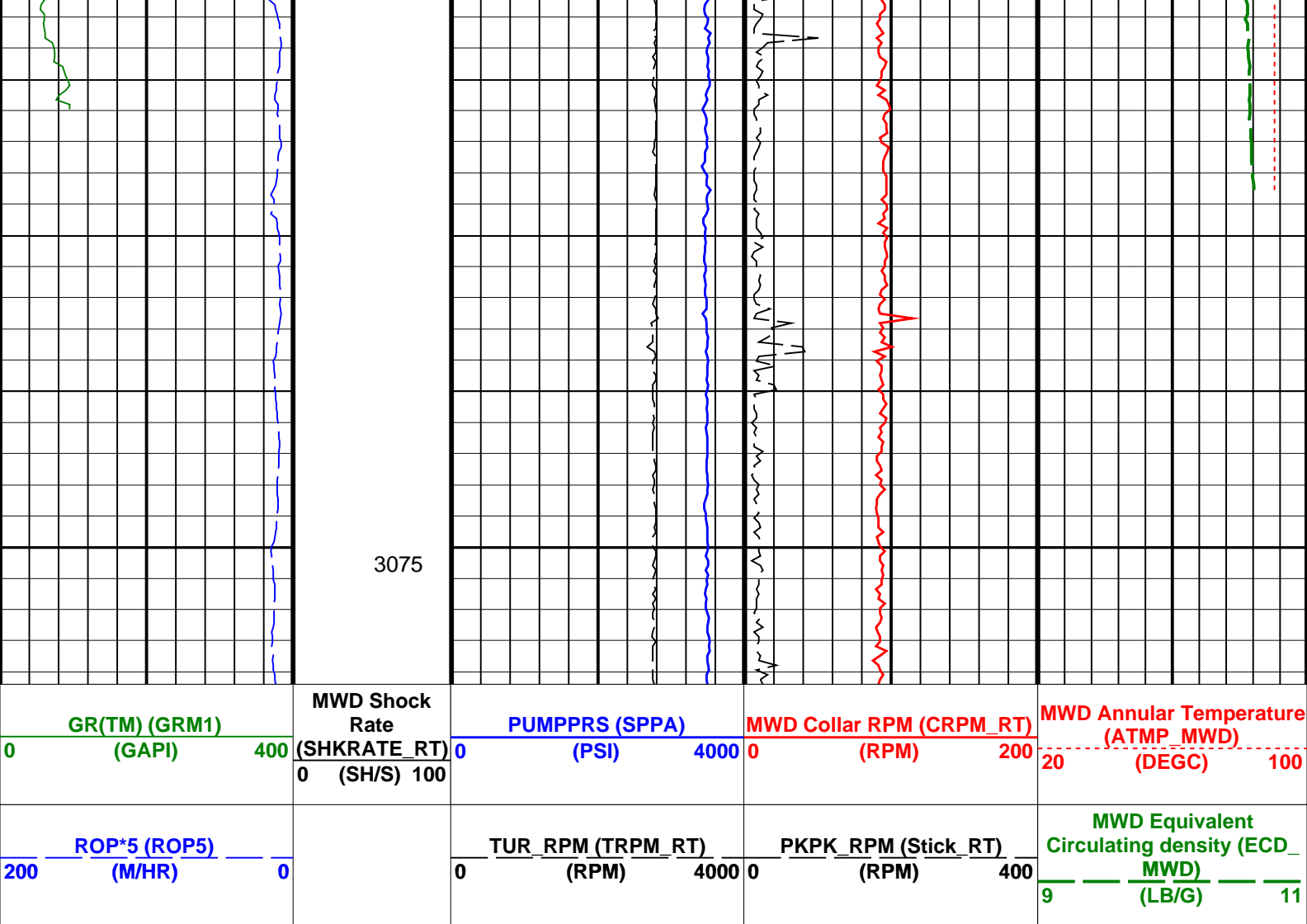
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SCHLUMBERGER

Survey report

16-Aug-2005 13:39:39

Page 1 of 4

Client..... ESSO Australia Pty. Ltd.
Field..... Bream A

Well..... BMA A14A
API number.....
Engineer..... R. Borjas/L. Johnston

RIG:..... ISDL 453
STATE:..... Victoria

Spud date..... 01-Aug-2005
Last survey date..... 10-Aug-05
Total accepted surveys... 73
MD of first survey..... 1005.00 m
MD of last survey..... 3079.00 m

----- Survey calculation methods-----
Method for positions..... Minimum curvature
Method for DLS..... Mason & Taylor

----- Depth reference -----
Permanent datum..... Mean Sea Level
Depth reference..... Driller's Depth
GL above permanent..... -59.40 m
KB above permanent..... 32.82 m
DF above permanent..... 32.82 m

----- Vertical section origin-----
Latitude (+N/S-)..... -2.90 m
Departure (+E/W-)..... 8.31 m

Azimuth from Vsect Origin to target: 167.40 degrees

----- Geomagnetic data -----
Magnetic model..... BGGM version 2005
Magnetic date..... 01-Aug-2005
Magnetic field strength... 1202.90 HCNT
Magnetic dec (+E/W-)..... 13.10 degrees
Magnetic dip..... -69.02 degrees

----- MWD survey Reference Criteria -----
Reference G..... 1000.05 mGal
Reference H..... 1202.90 HCNT
Reference Dip..... -69.02 degrees
Tolerance of G..... (+/-) 2.50 mGal
Tolerance of H..... (+/-) 6.00 HCNT
Tolerance of Dip..... (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-)..... 13.10 degrees
Grid convergence (+E/W-).. -0.48 degrees
Total az corr (+E/W-)..... 13.58 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

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 (m)	At Azim (deg)	DLS (deg/ 100f)	Srvy tool type	Tool Corr (deg)
1	1005.00	47.36	182.94	0.00	834.28	464.50	-478.31	10.80	478.43	178.71	0.00	TIP	None
2	1051.91	42.60	171.91	46.91	867.50	497.02	-511.33	12.15	511.47	178.64	5.93	MWD	None
3	1080.45	43.67	168.59	28.54	888.33	516.51	-530.55	15.46	530.78	178.33	2.68	MWD	None
4	1109.32	45.42	164.58	28.87	908.91	536.75	-550.24	20.17	550.61	177.90	3.50	MWD	None
5	1138.30	45.67	159.74	28.98	929.21	557.33	-569.92	26.50	570.54	177.34	3.64	MWD	None
6	1166.89	46.01	155.20	28.59	949.14	577.53	-588.85	34.36	589.86	176.66	3.49	MWD	None
7	1195.74	45.44	149.44	28.85	969.29	597.46	-607.13	43.94	608.72	175.86	4.40	MWD	None
8	1224.47	44.07	143.40	28.73	989.70	616.33	-623.98	55.11	626.41	174.95	4.74	MWD	None
9	1253.38	43.26	142.42	28.91	1010.61	634.49	-639.90	67.15	643.41	174.01	1.11	MWD	None
10	1282.15	42.52	142.33	28.77	1031.69	652.24	-655.41	79.10	660.16	173.12	0.79	MWD	None
11	1310.56	43.07	143.02	28.41	1052.54	669.77	-670.76	90.80	676.88	172.29	0.78	MWD	None
12	1339.29	44.26	142.42	28.73	1073.32	687.79	-686.54	102.82	694.20	171.48	1.34	MWD	None
13	1368.51	44.14	142.11	29.22	1094.27	706.23	-702.65	115.29	712.04	170.68	0.26	MWD	None
14	1397.20	44.83	144.19	28.69	1114.74	724.56	-718.74	127.34	729.93	169.95	1.71	MWD	None
15	1425.97	44.98	144.23	28.77	1135.11	743.23	-735.21	139.22	748.28	169.28	0.16	MWD	None
16	1454.65	44.45	144.24	28.68	1155.49	761.78	-751.58	151.01	766.61	168.64	0.56	MWD	None
17	1483.50	44.91	144.10	28.85	1176.01	780.42	-768.03	162.89	785.11	168.03	0.50	MWD	None
18	1512.14	44.59	143.62	28.64	1196.35	798.91	-784.31	174.78	803.55	167.44	0.50	MWD	None
19	1540.94	45.07	143.26	28.80	1216.77	817.46	-800.62	186.87	822.14	166.86	0.57	MWD	None
20	1569.16	43.99	143.07	28.22	1236.89	835.51	-816.46	198.73	840.30	166.32	1.18	MWD	None
21	1598.09	44.78	143.33	28.93	1257.56	853.97	-832.67	210.86	858.95	165.79	0.85	MWD	None
22	1626.86	44.58	142.03	28.77	1278.02	872.34	-848.75	223.12	877.59	165.27	0.99	MWD	None
23	1655.64	45.17	140.98	28.78	1298.42	890.61	-864.65	235.76	896.21	164.75	1.00	MWD	None
24	1684.30	44.75	141.08	28.66	1318.70	908.75	-880.39	248.50	914.79	164.24	0.45	MWD	None
25	1713.06	45.26	141.14	28.76	1339.03	926.99	-896.22	261.26	933.53	163.75	0.54	MWD	None
26	1741.44	45.84	141.03	28.38	1358.90	945.15	-911.98	273.99	952.25	163.28	0.63	MWD	None
27	1769.98	45.13	141.10	28.54	1378.91	963.39	-927.81	286.78	971.12	162.82	0.76	MWD	None
28	1799.28	45.39	141.40	29.30	1399.54	982.07	-944.04	299.81	990.51	162.38	0.35	MWD	None
29	1828.01	45.40	141.48	28.73	1419.71	1000.46	-960.04	312.56	1009.64	161.97	0.06	MWD	None
30	1856.46	45.71	141.53	28.45	1439.63	1018.73	-975.94	325.20	1028.69	161.57	0.33	MWD	None

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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 (m)	At Azim (deg)	DLS (deg/ 100f)	Srvy tool type	Tool Corr (deg)
31	1885.59	45.01	141.31	29.13	1460.10	1037.36	-992.14	338.12	1048.17	161.18	0.75	MWD	None
32	1914.06	44.71	142.27	28.47	1480.28	1055.47	-1007.92	350.55	1067.14	160.82	0.79	MWD	None
33	1943.35	45.24	142.01	29.29	1501.00	1074.19	-1024.26	363.25	1086.77	160.47	0.58	MWD	None
34	1972.06	45.11	142.49	28.71	1521.24	1092.63	-1040.36	375.72	1106.13	160.14	0.39	MWD	None
35	2000.86	44.50	142.00	28.80	1541.68	1111.00	-1056.41	388.14	1125.46	159.83	0.74	MWD	None
36	2029.65	45.14	143.24	28.79	1562.10	1129.42	-1072.53	400.46	1144.86	159.53	1.15	MWD	None
37	2058.03	44.53	143.43	28.38	1582.22	1147.69	-1088.59	412.41	1164.09	159.25	0.67	MWD	None
38	2086.87	44.76	143.21	28.84	1602.74	1166.19	-1104.84	424.52	1183.59	158.98	0.29	MWD	None
39	2116.15	44.77	143.06	29.28	1623.53	1184.99	-1121.33	436.89	1203.44	158.71	0.11	MWD	None
40	2144.19	44.20	143.04	28.04	1643.53	1202.89	-1137.04	448.70	1222.37	158.46	0.62	MWD	None
41	2173.44	43.39	145.02	29.25	1664.65	1221.47	-1153.42	460.59	1241.98	158.23	1.66	MWD	None
42	2201.31	41.23	148.37	27.87	1685.26	1239.01	-1169.08	470.90	1260.36	158.06	3.41	MWD	None
43	2230.50	39.70	149.84	29.19	1707.47	1256.99	-1185.34	480.63	1279.07	157.93	1.88	MWD	None
44	2258.57	38.38	153.43	28.07	1729.27	1274.00	-1200.88	489.03	1296.64	157.84	2.84	MWD	None
45	2287.66	36.21	158.00	29.09	1752.42	1291.25	-1216.93	496.29	1314.24	157.81	3.68	MWD	None
46	2317.11	33.85	163.58	29.45	1776.54	1308.02	-1232.87	501.87	1331.11	157.85	4.12	MWD	None
47	2345.91	30.65	174.25	28.80	1800.91	1323.33	-1247.89	504.88	1346.15	157.97	6.90	MWD	None
48	2371.19	29.56	183.12	25.28	1822.79	1335.73	-1260.53	505.18	1357.99	158.16	5.52	MWD	None
49	2401.98	27.88	188.74	30.79	1849.80	1349.75	-1275.23	503.67	1371.10	158.45	3.15	MWD	None
50	2431.04	27.95	192.07	29.06	1875.48	1362.27	-1288.61	501.22	1382.66	158.75	1.64	MWD	None
51	2459.71	27.61	194.37	28.67	1900.84	1374.30	-1301.62	498.16	1393.69	159.06	1.20	MWD	None
52	2488.24	27.52	194.87	28.53	1926.14	1386.04	-1314.39	494.83	1404.45	159.37	0.27	MWD	None
53	2516.66	27.26	195.20	28.42	1951.37	1397.62	-1327.02	491.44	1415.09	159.68	0.32	MWD	None
54	2544.64	27.14	193.50	27.98	1976.26	1409.02	-1339.41	488.27	1425.63	159.97	0.86	MWD	None
55	2573.20	27.03	192.95	28.56	2001.68	1420.73	-1352.07	485.30	1436.52	160.26	0.29	MWD	None
56	2602.67	27.36	192.33	29.47	2027.90	1432.91	-1365.21	482.35	1447.91	160.54	0.45	MWD	None
57	2631.19	27.47	193.05	28.52	2053.21	1444.78	-1378.02	479.46	1459.05	160.82	0.37	MWD	None
58	2659.59	27.14	193.77	28.40	2078.45	1456.49	-1390.69	476.44	1470.04	161.09	0.50	MWD	None
59	2688.14	27.17	193.98	28.55	2103.85	1468.15	-1403.34	473.32	1481.01	161.36	0.11	MWD	None
60	2716.45	27.56	193.47	28.31	2128.99	1479.82	-1415.98	470.23	1492.02	161.63	0.49	MWD	None

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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 (m)	At Azim (deg)	DLS (deg/ 100f)	Srvy tool type	Tool Corr (deg)
61	2745.48	27.81	192.90	29.03	2154.70	1491.96	-1429.11	467.15	1503.53	161.90	0.38	MWD	None
62	2774.02	26.99	193.26	28.54	2180.04	1503.80	-1441.91	464.18	1514.78	162.16	0.89	MWD	None
63	2803.23	27.69	193.40	29.21	2205.99	1515.86	-1454.96	461.09	1526.28	162.42	0.73	MWD	None
64	2831.87	27.41	192.87	28.64	2231.38	1527.80	-1467.86	458.08	1537.68	162.67	0.40	MWD	None
65	2860.78	26.60	192.87	28.91	2257.14	1539.65	-1480.66	455.16	1549.04	162.91	0.85	MWD	None
66	2889.41	25.64	192.82	28.63	2282.84	1551.03	-1492.95	452.35	1559.97	163.14	1.02	MWD	None
67	2917.79	24.91	192.45	28.38	2308.51	1561.99	-1504.77	449.70	1570.53	163.36	0.80	MWD	None
68	2946.12	24.10	192.49	28.33	2334.28	1572.63	-1516.24	447.17	1580.81	163.57	0.87	MWD	None
69	2975.67	23.38	192.32	29.55	2361.33	1583.41	-1527.86	444.61	1591.24	163.77	0.75	MWD	None
70	3004.42	22.82	191.96	28.75	2387.78	1593.66	-1538.89	442.24	1601.17	163.97	0.61	MWD	None

71	3032.80	22.11	192.02	28.38	2414.00	1603.52	-1549.50	439.98	1610.75	164.15	0.76	MWD	None
72	3059.49	21.59	192.07	26.69	2438.78	1612.55	-1559.21	437.91	1619.54	164.31	0.59	MWD	None
73	3079.00	21.30	192.10	19.51	2456.94	1619.03	-1566.19	436.42	1625.86	164.43	0.45	Proj.	to TD
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Company:

ESSO Australia Pty. Ltd.

Schlumberger

Well:

BMA A14A

Field:

Bream A

Rig:

ISDL 453

State:

Victoria

Gamma Ray Service

1:200 Measured Depth

Drilling Mechanics Log