



LWD MEMORY LOG

Gamma Ray

Scale:

1:240

True Vertical Depth

Company: Noble Energy

Well: Wells Ranch State AA32-745

Field: Wattenberg

County: Weld Country: United States

Depth Reference:

Driller's Depth

State: Colorado

Status:

Final Print

Surface Location:
Latitude: 40° 26' 05.568" N
Longitude: 104° 27' 43.344" W

Other Services:

API No: 05-123-50172-00

Job ID: 110158025

SEC: 5 TWN: 5N RGE: 63W

Permanent Datum (P.D.): Mean Sea Level

Log Measured From: Rig Floor

Elevation:

Above P.D.:

0.00 ft

4715.00 ft

Elev. KB:

Elev. DF:

Elev. GL:

4715.00 ft

4685.00 ft

Dates

Interval

Magnetic Field Reference

From: 2019-12-03

To: 2019-12-04

Spud: 2019-11-28

Drilled (ft)

Top: 1952.00

Bottom: 17198.00

Logged (ft)

Top: 1952.00

Bottom: 17185.00

Azi Reference North:

Total Magnetic Field Strength: (nT)

Mag to Reference North Correction: (deg)

Grid

Dip Angle: (deg)

66.93

52079

7.10

Borehole Record

Casing Record

Hole Size (in)

From (ft)

To (ft)

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

13.500

30.00

1952.00

9.625

36.00

30.00

1942.00

8.500

1952.00

17198.00

Mud Record

Deviation Record

Type

From (ft)

To (ft)

Hole Size (in)

Interval (ft)

Inc | Az (Start)

Inc | Az (End)

0.32

Oil Based Mud

1952.00

17198.00

8.500

15246.00

1.71 | 283.29

89.78 |

0.32

Acquisition System

Software Version

Other

Cadence

RT 5.4

5.4.8632.4

Rig:

H&P 517

Contractor:

Helmerich & Payne Drilling Co

District:

RMA

Unit:

D&E

Pilot Studio

5.4.8632.4

Contractor:

Helmerich & Payne Drilling Co

District:

RMA

Unit:

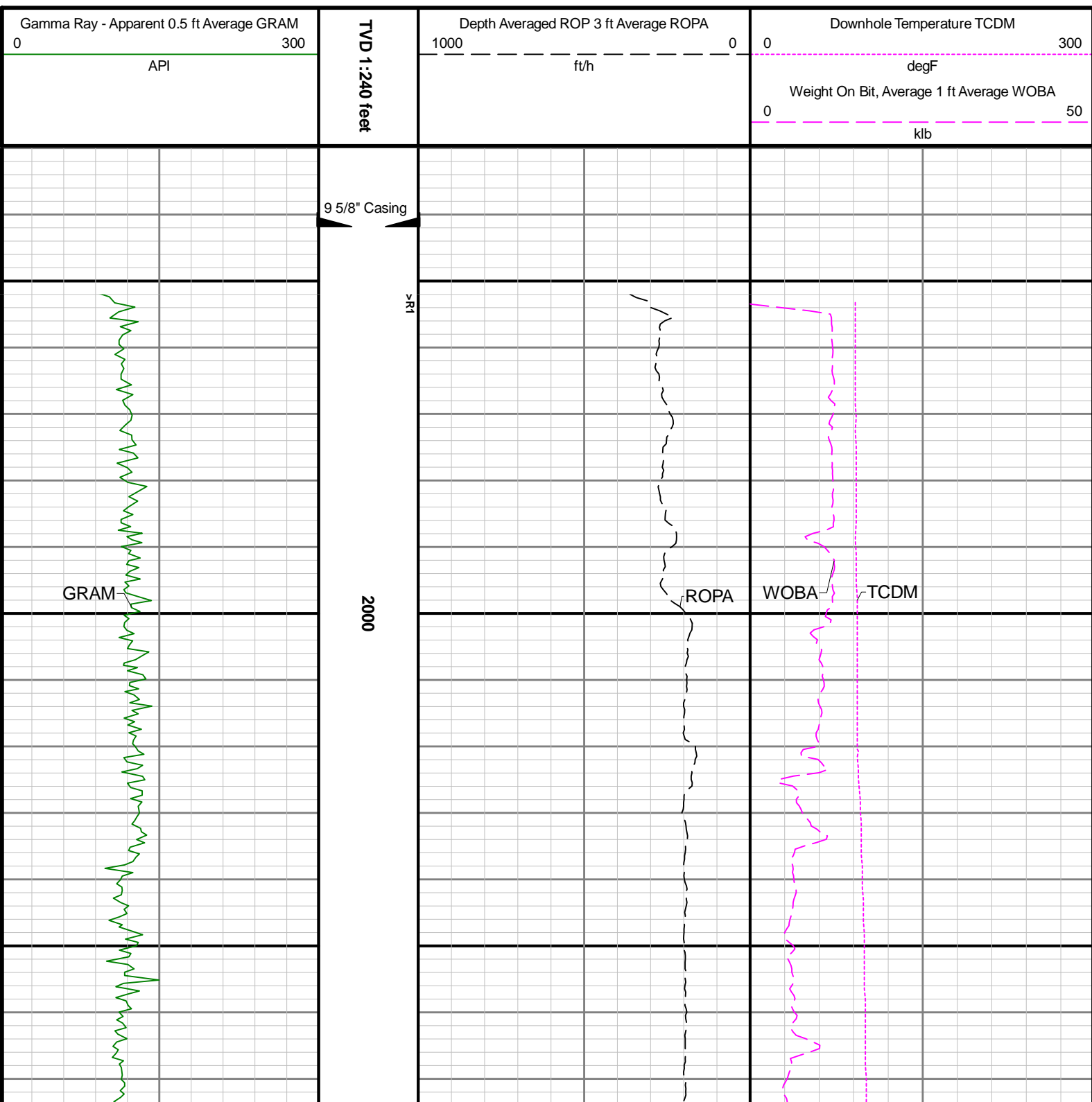
D&E

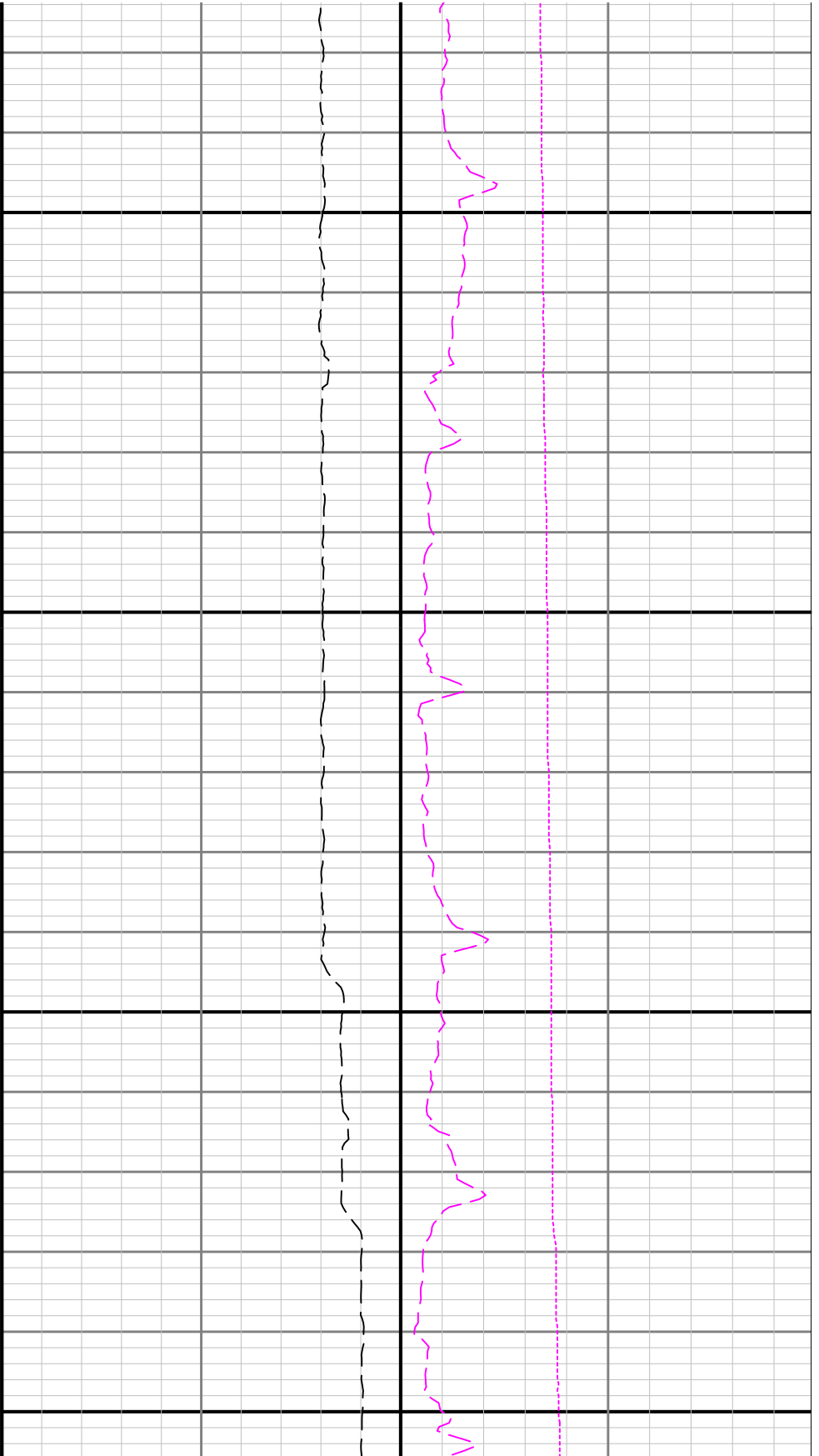
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Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	3.00	Rotary Steerable	1952.00	2318.00	1952.00	2331.00	2019-11-29 10:25	2019-11-29 17:30	7.60
2	2	8.500	PDC	3.00	Rotary Steerable	2318.00	15007.00	2331.00	15020.00	2019-11-29 22:15	2019-12-02 00:00	44.92
3	3	8.500	PDC	2.50	Rotary Steerable	15007.00	17185.00	15020.00	17198.00	2019-12-02 16:00	2019-12-03 01:20	11.73

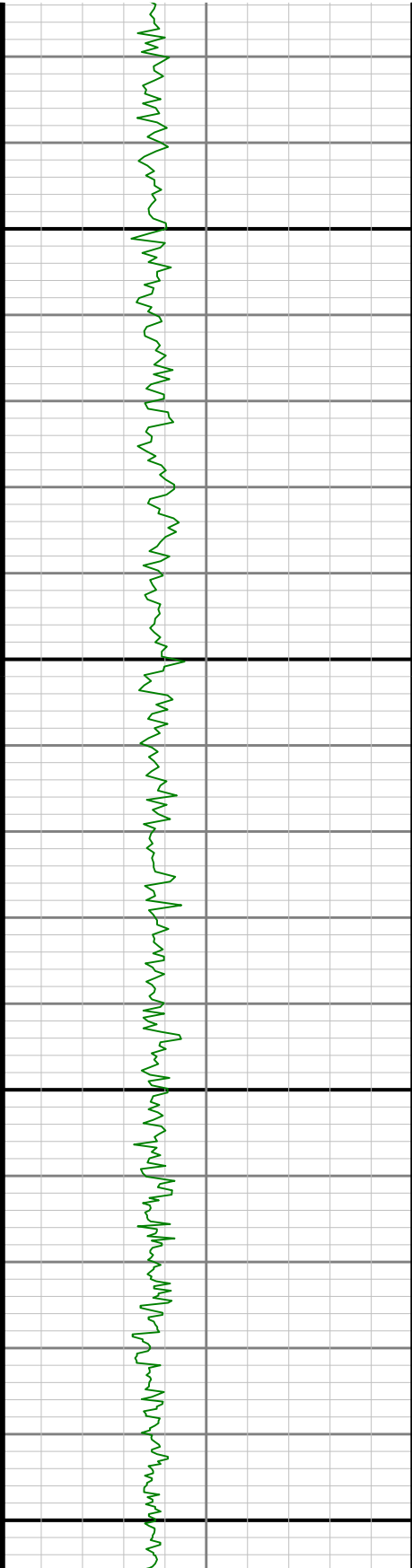
3	6221.00	8.500	2	The interval from 6184 to 6208 feet MD (6116 to 6139 feet TVD) has a gap in gamma ray data, due to downlinking while drilling ahead and terminating power to LWD tool.
4	6908.00	8.500	2	The interval from 6872 to 6895 feet MD (6638 to 6647 feet TVD) has a gap in gamma ray data, due to downlinking while drilling ahead and terminating power to LWD tool.

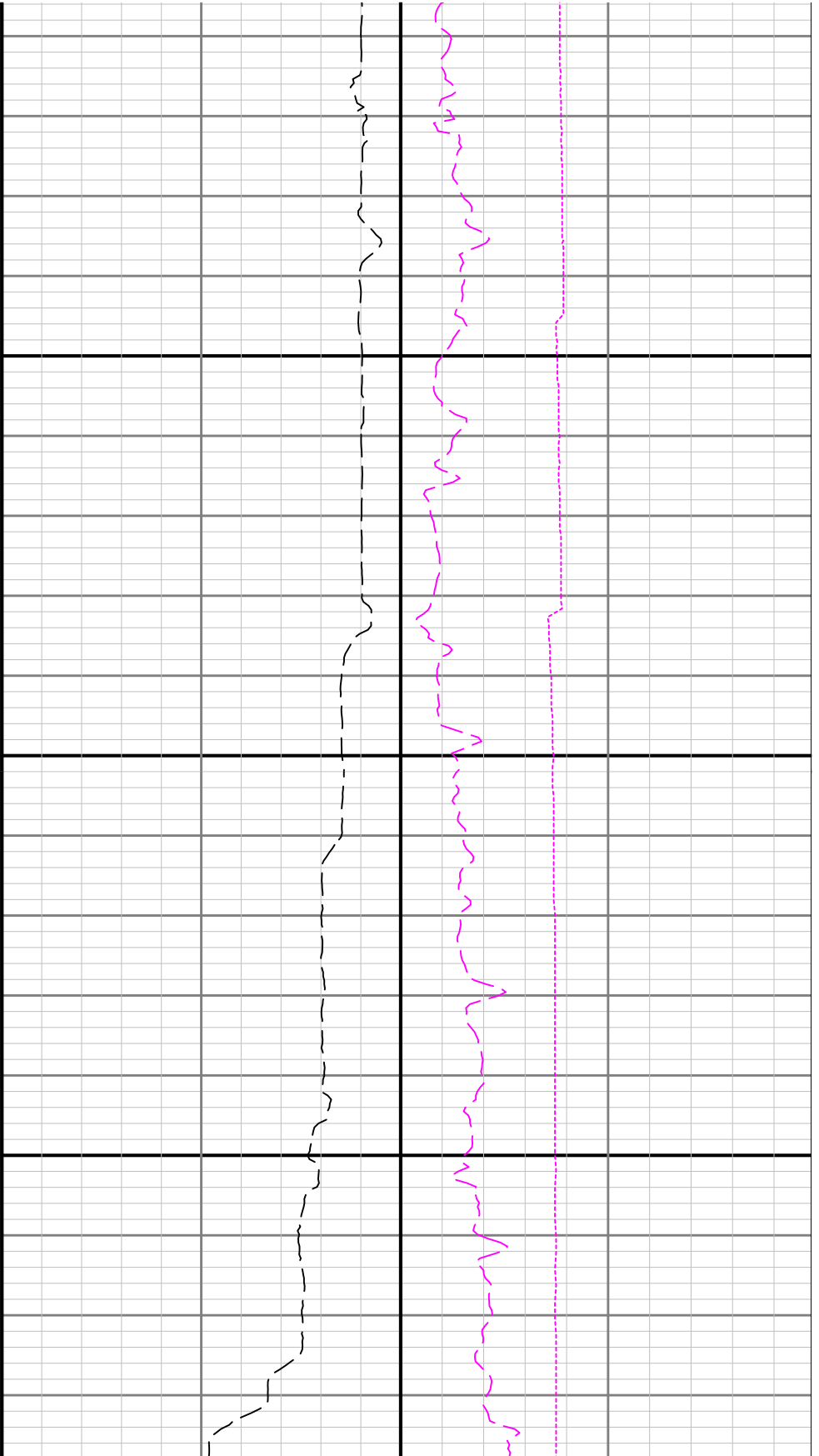




2100

2200

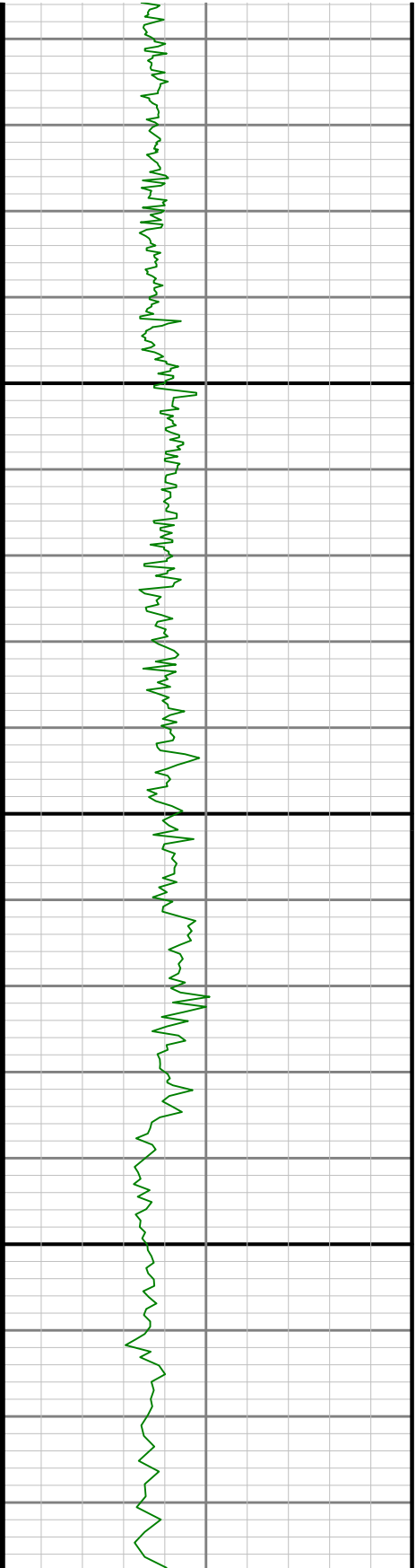


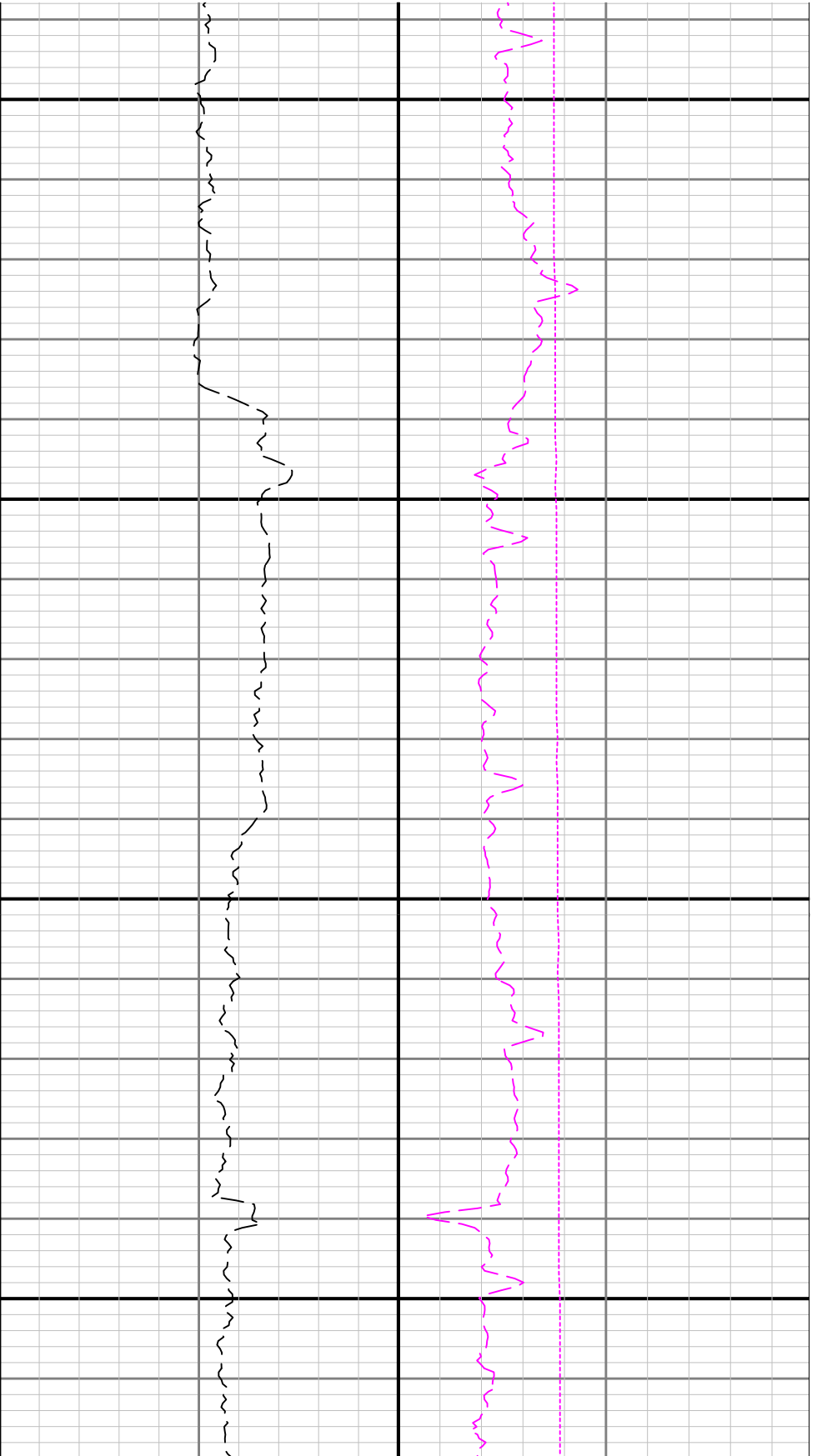


R1 < R2

2300

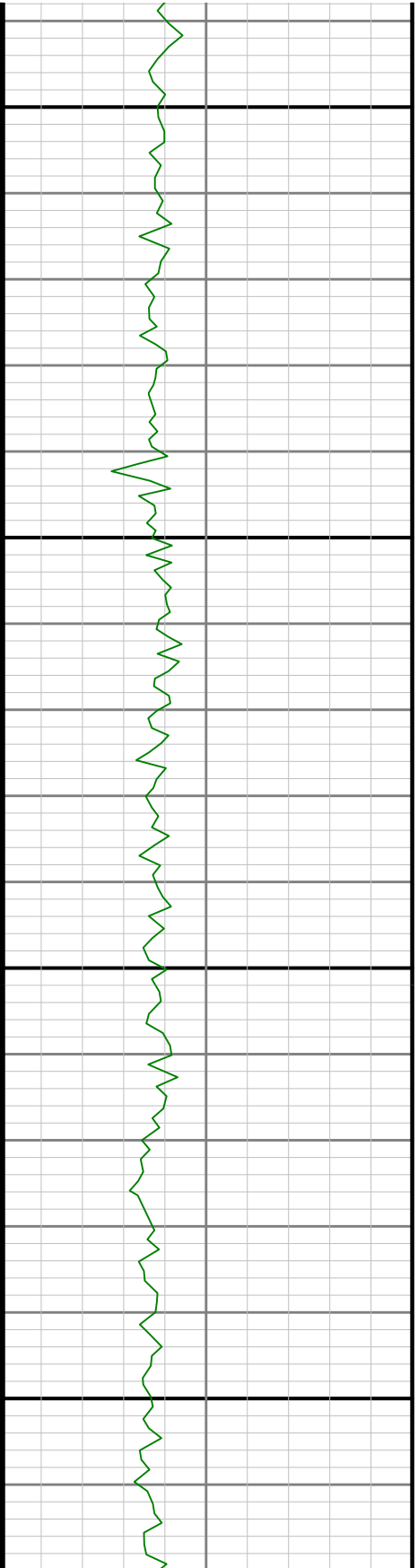
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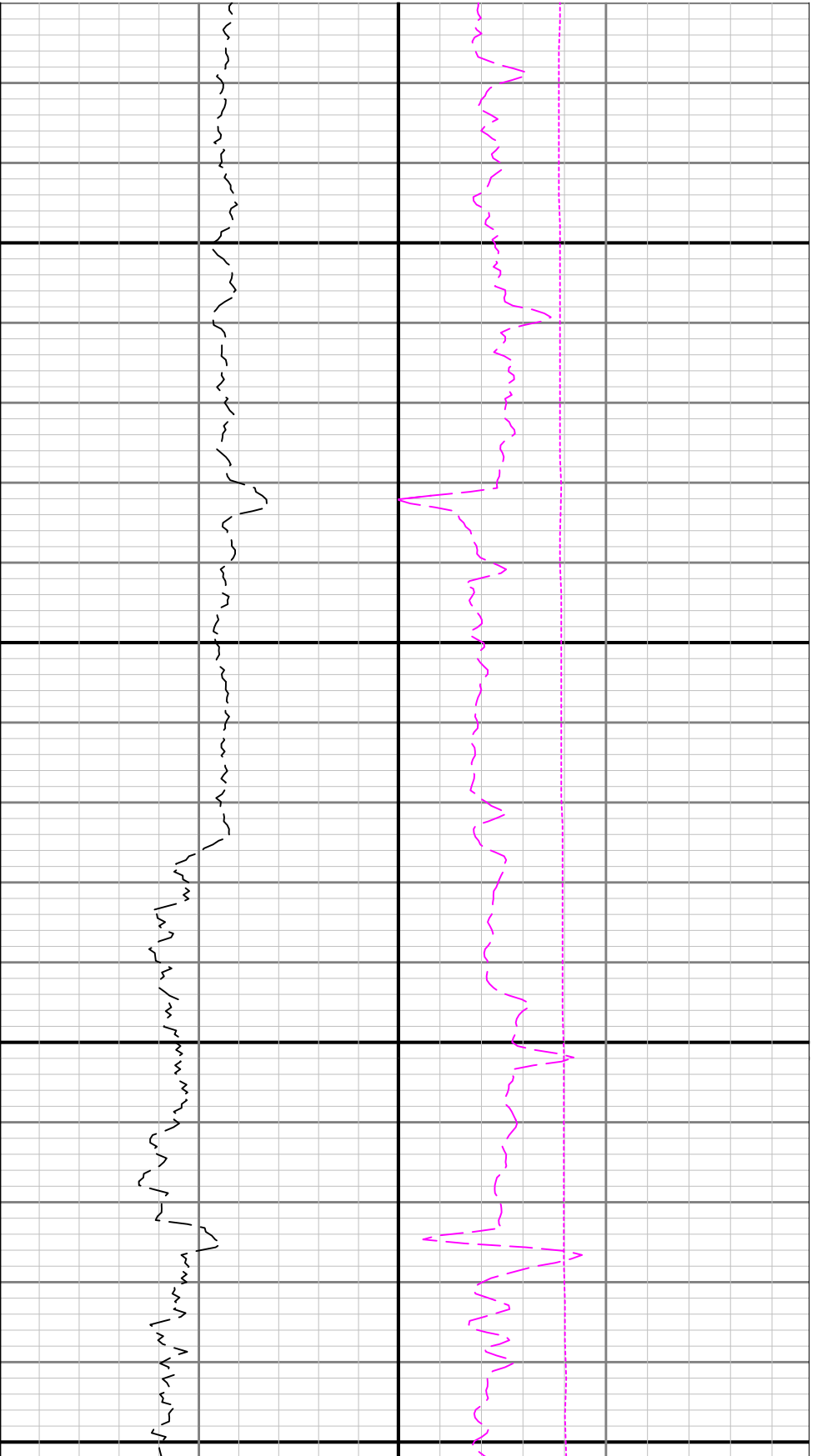




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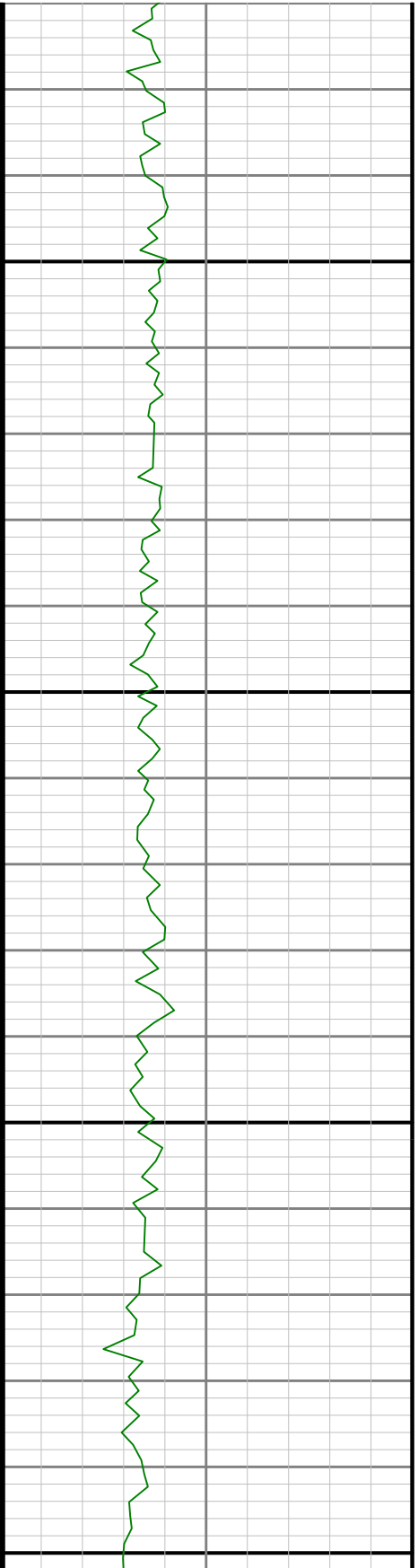
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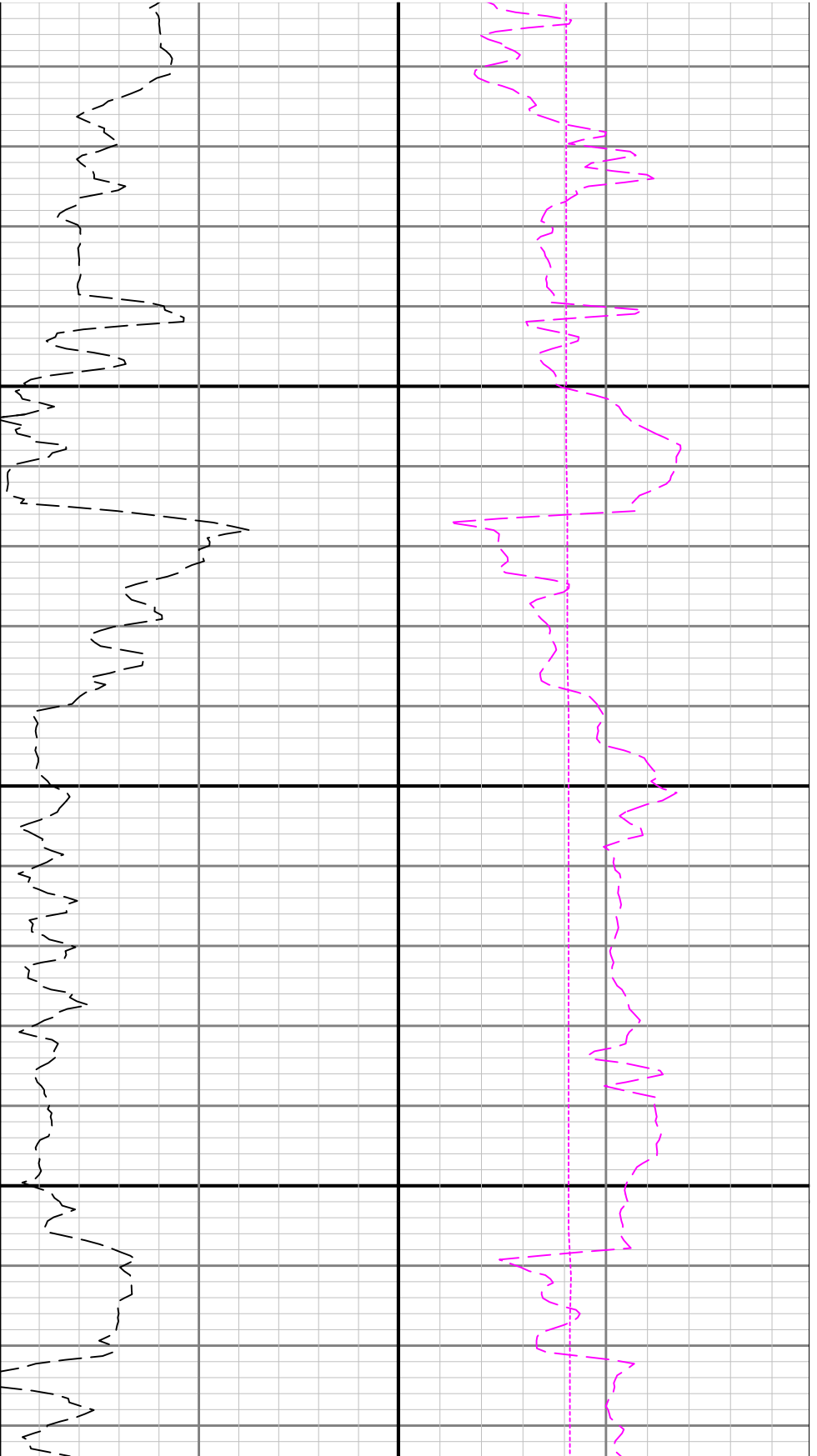




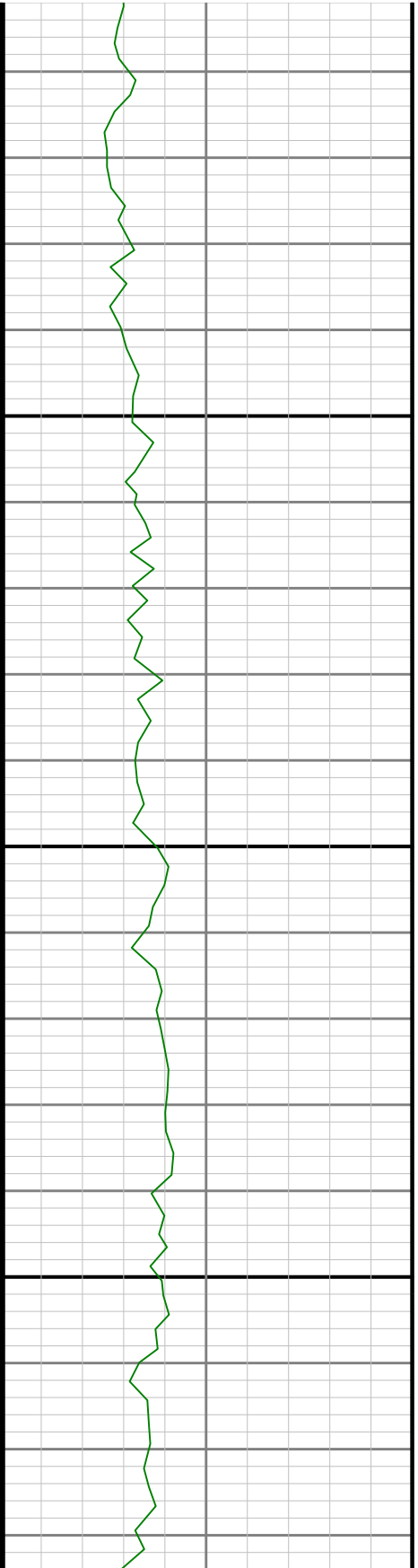
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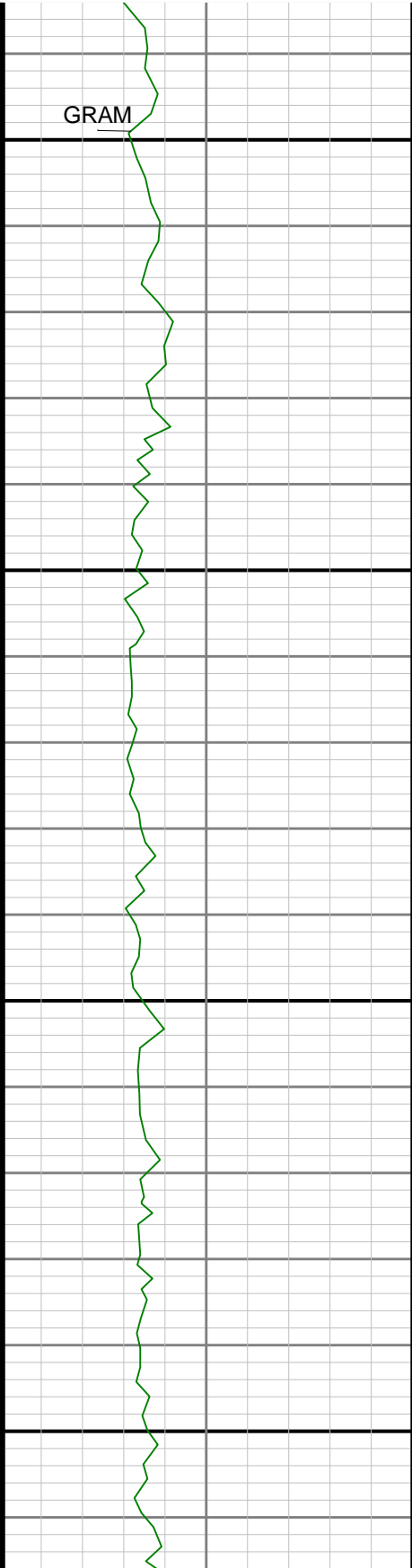
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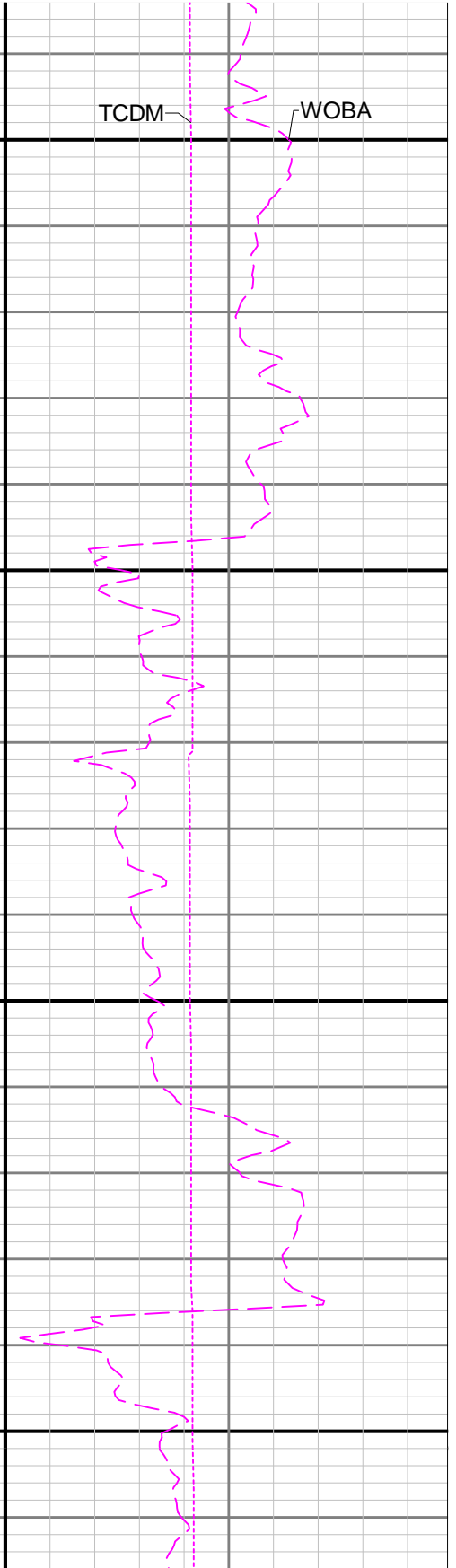
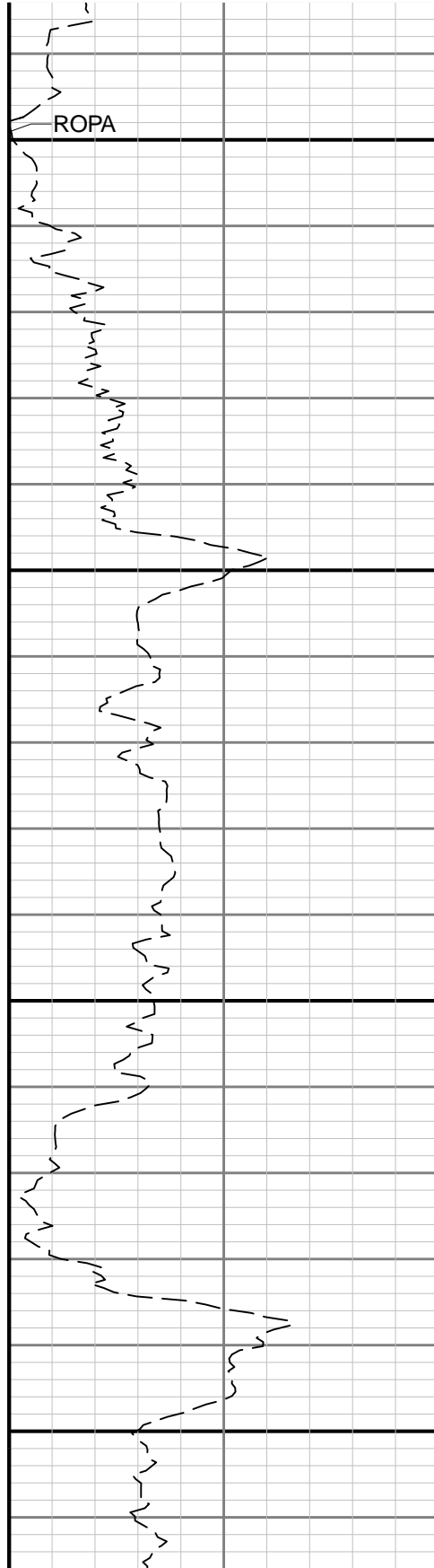
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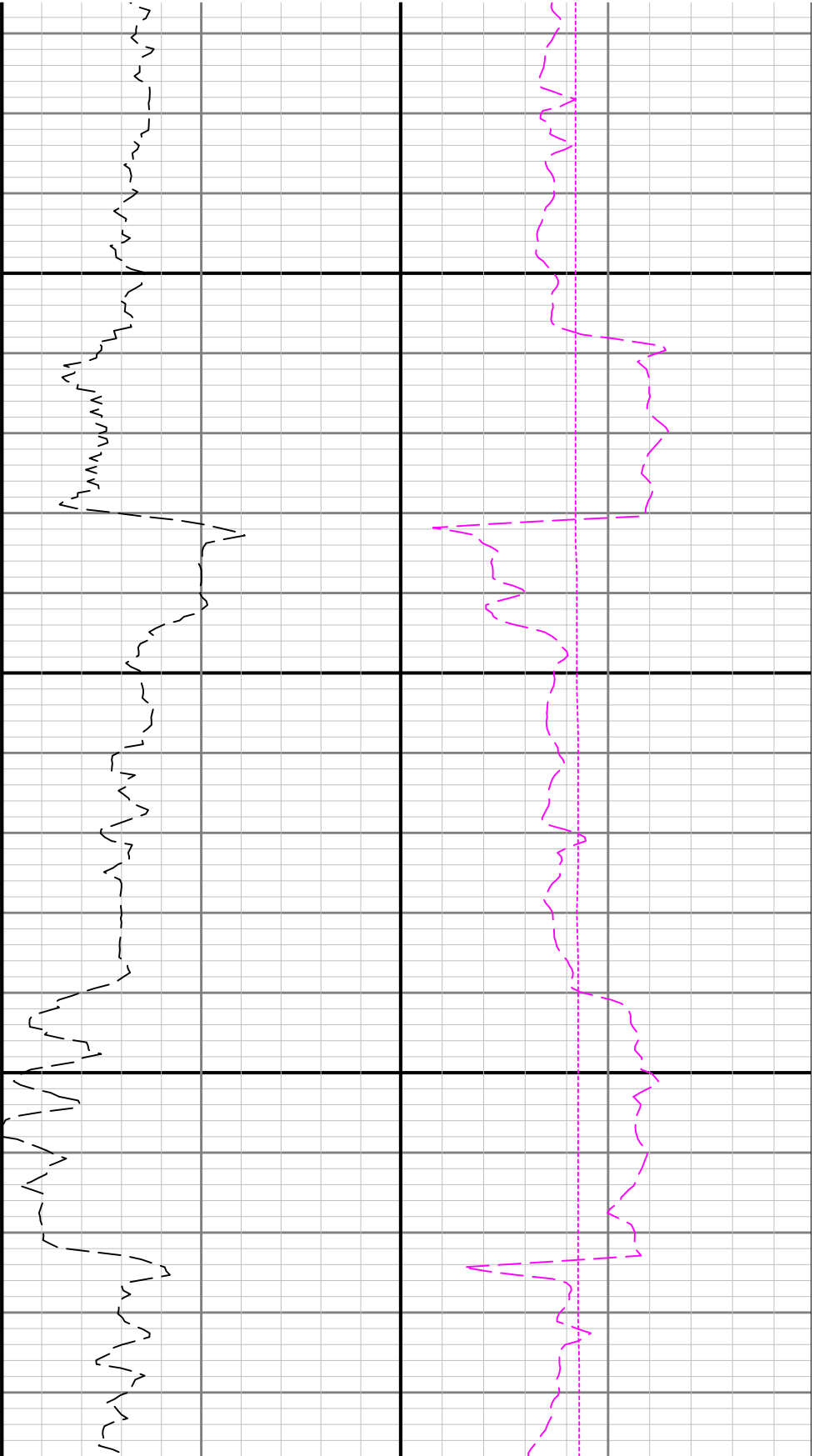




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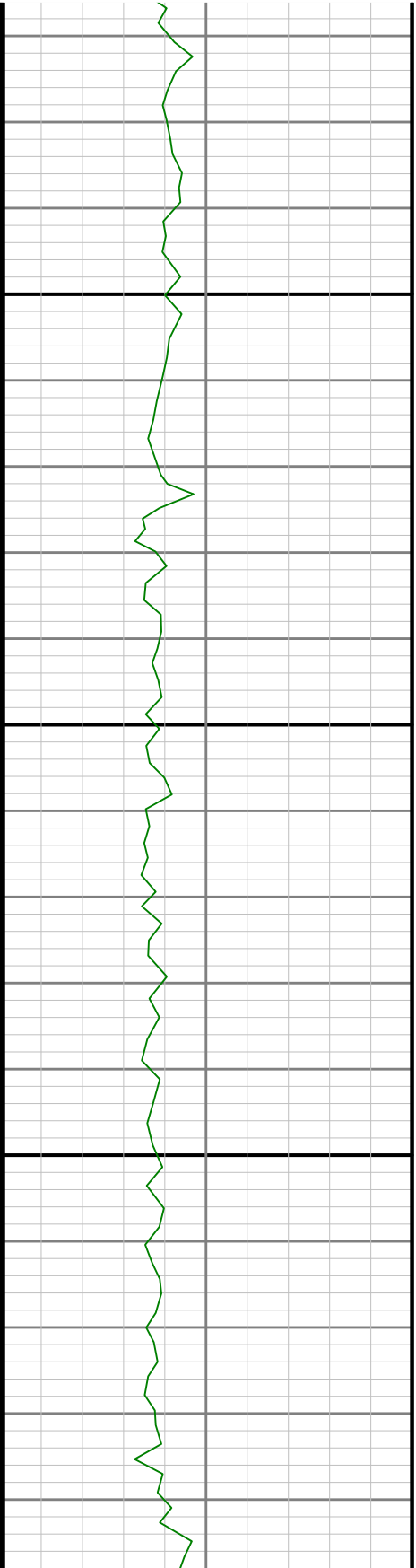
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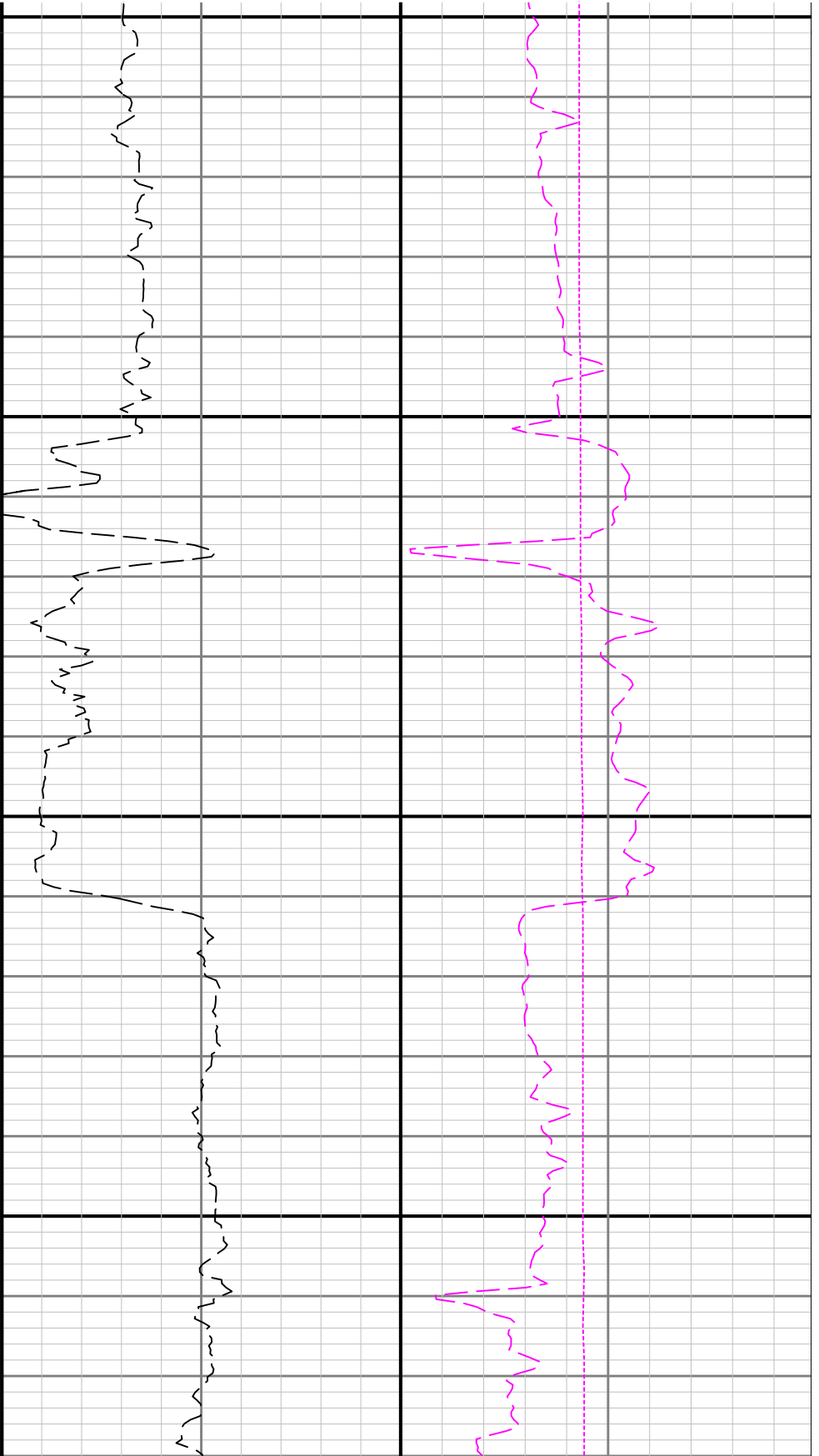




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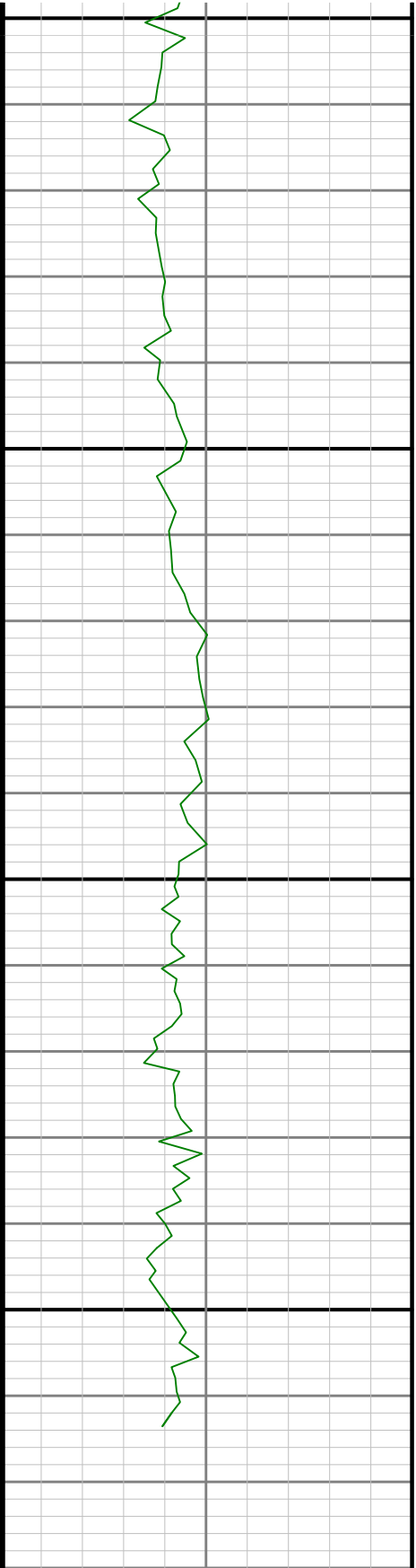
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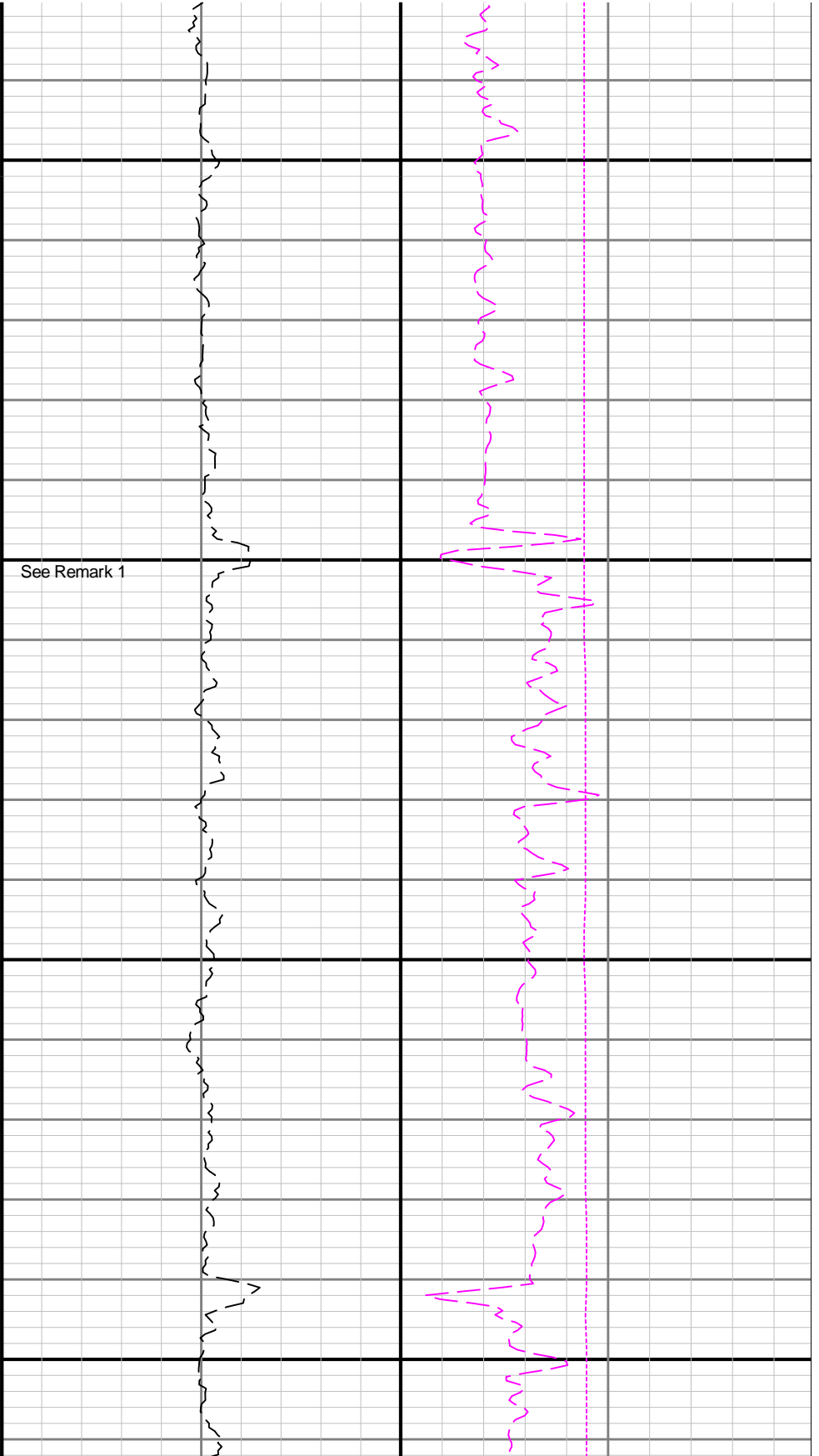




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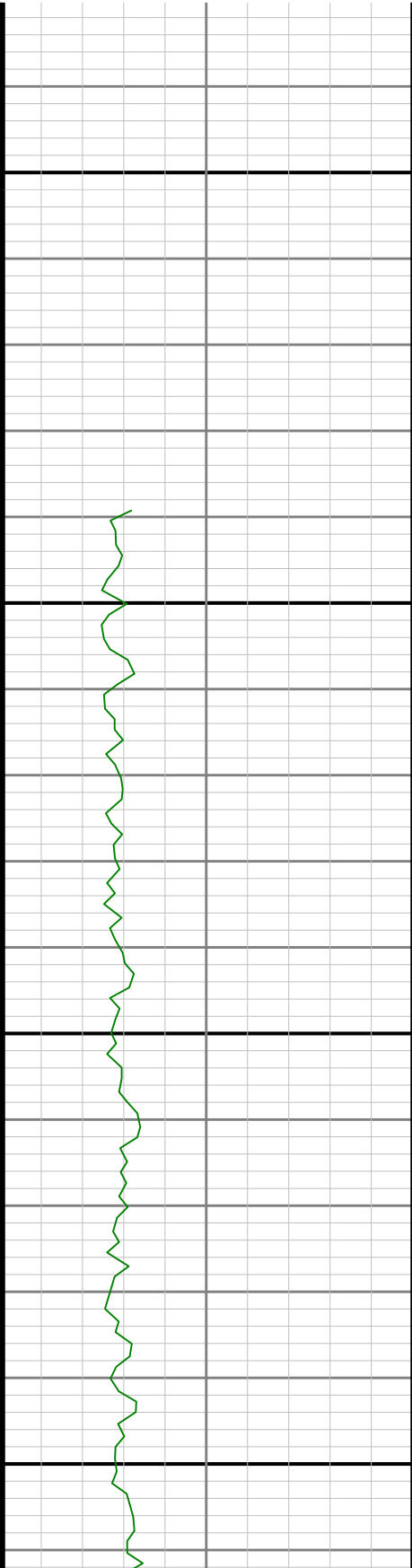
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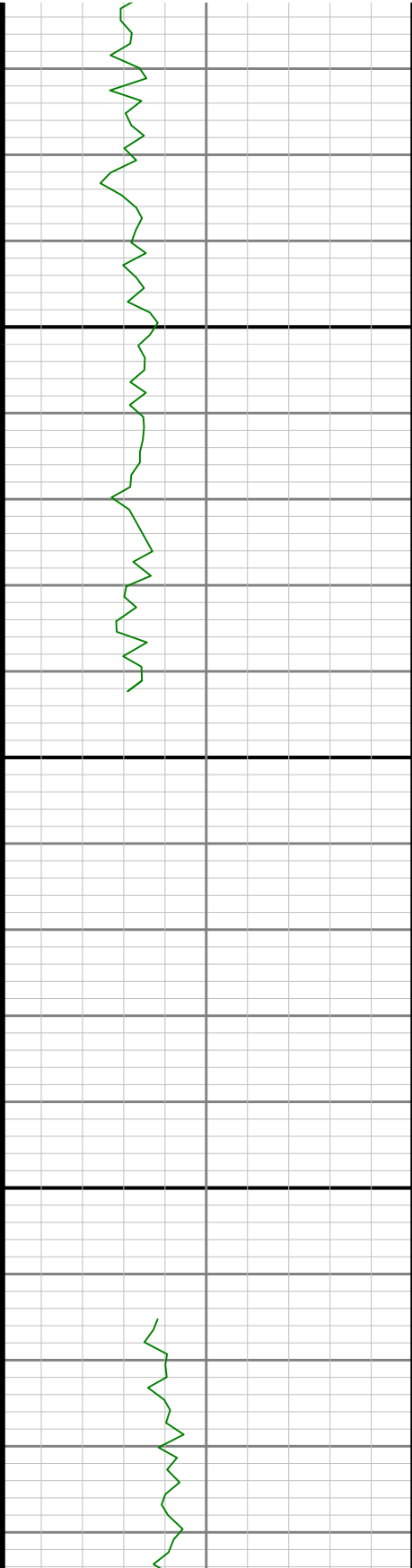




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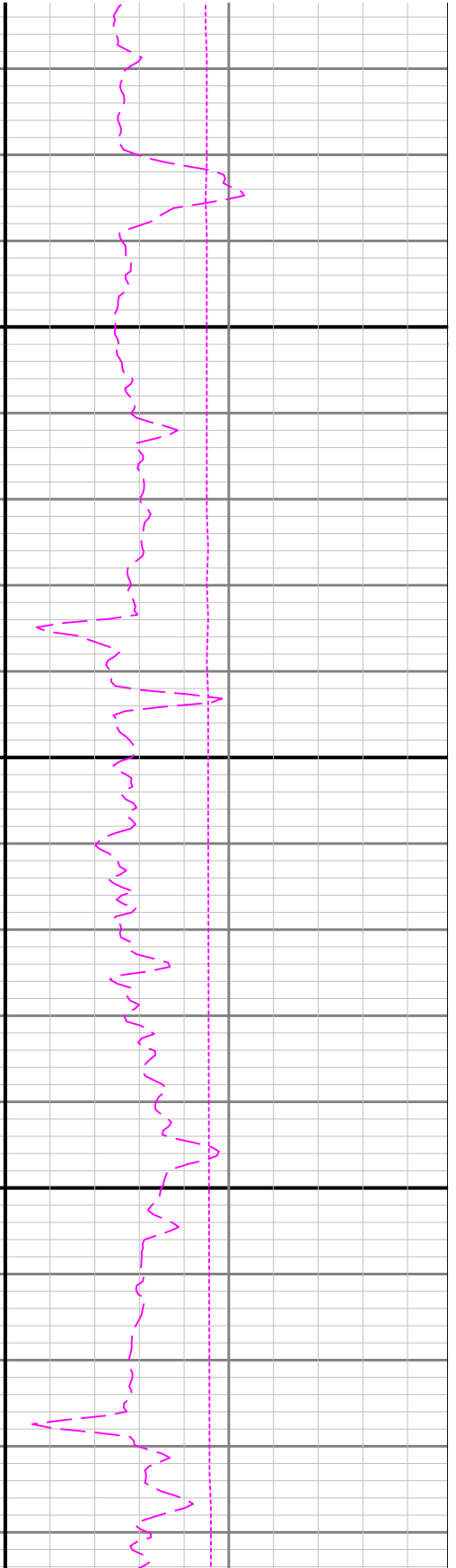
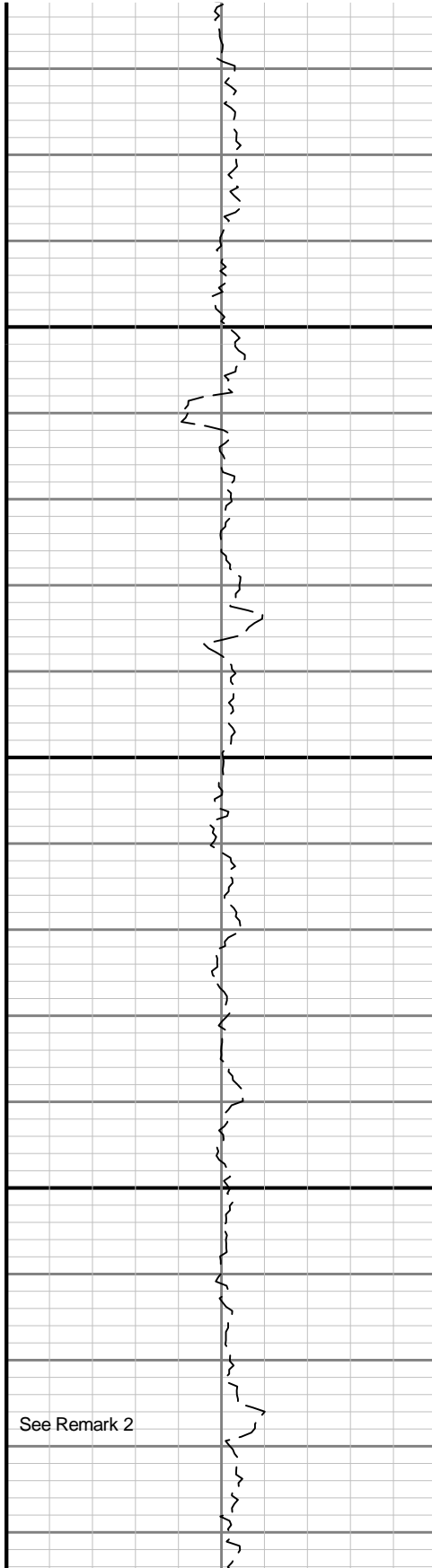
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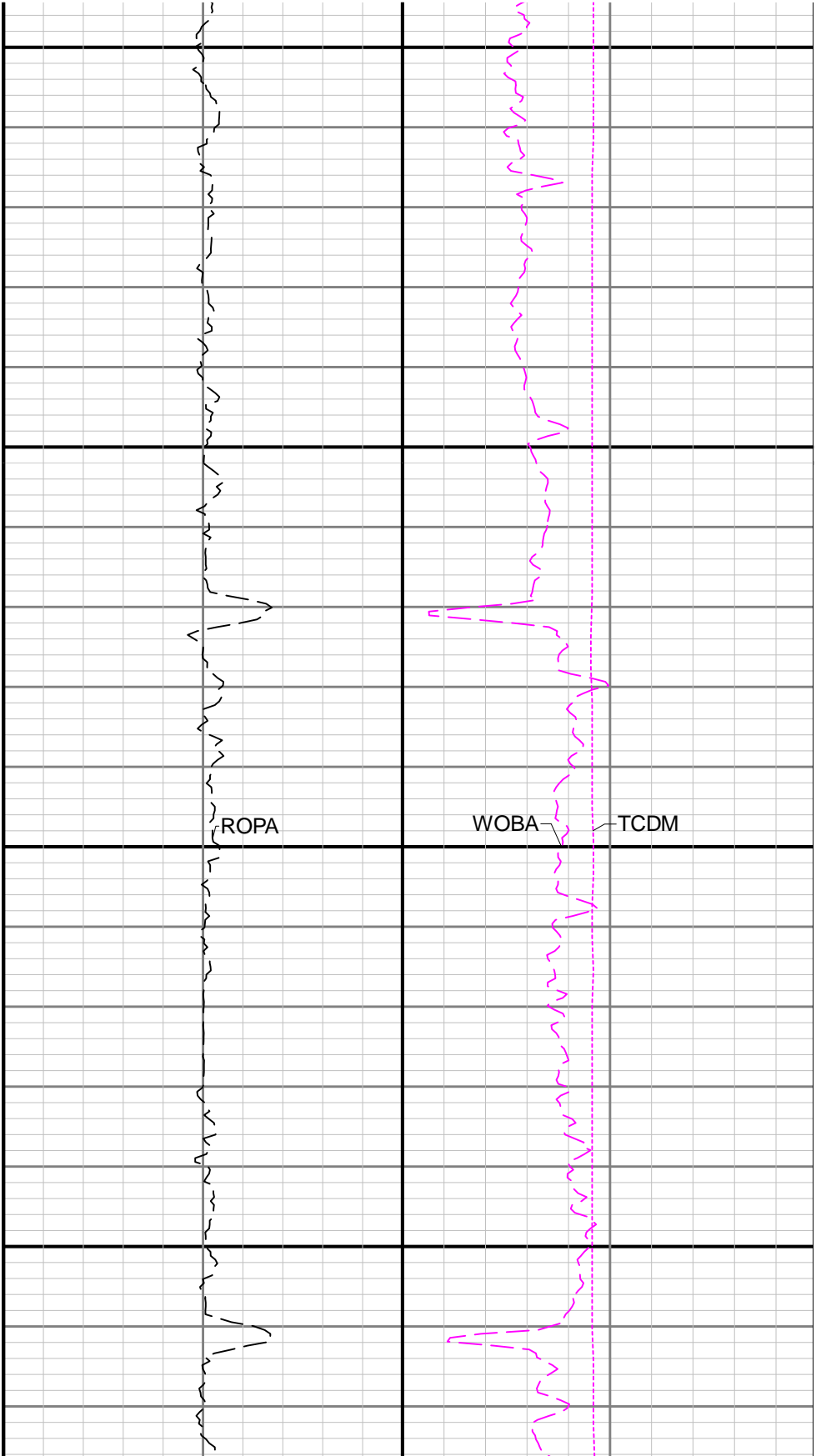




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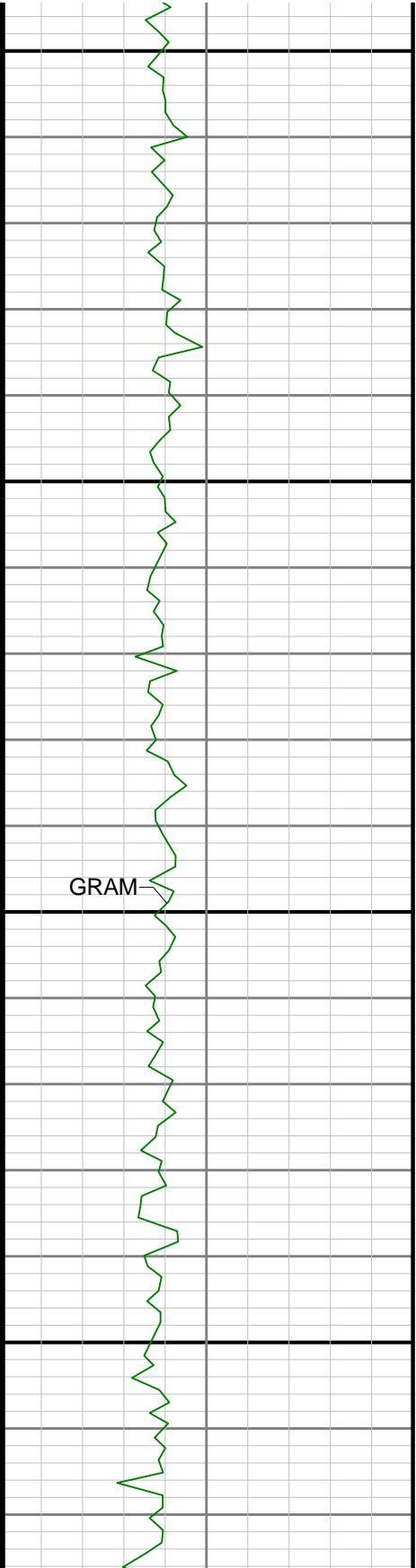
See Remark 2



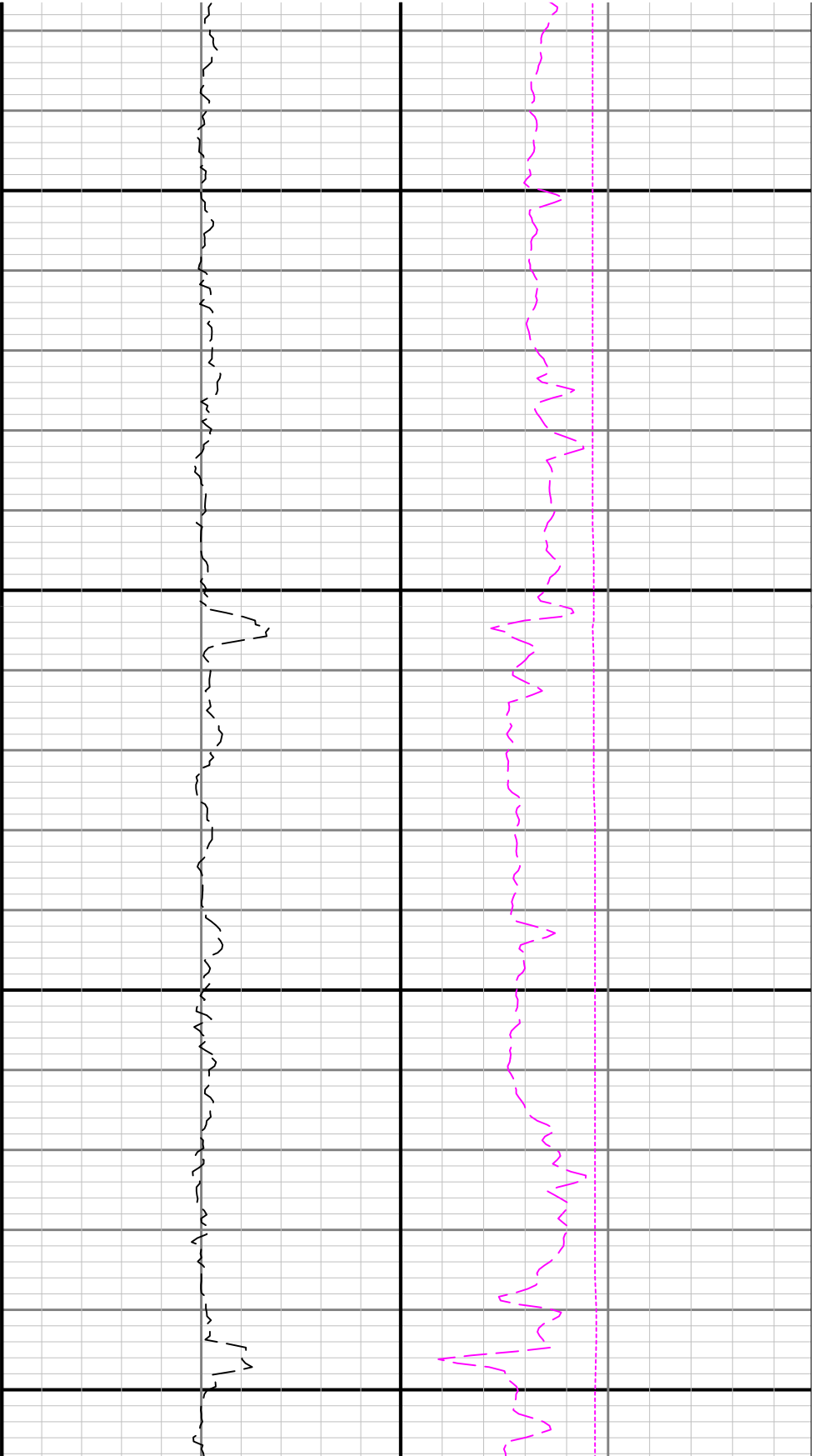


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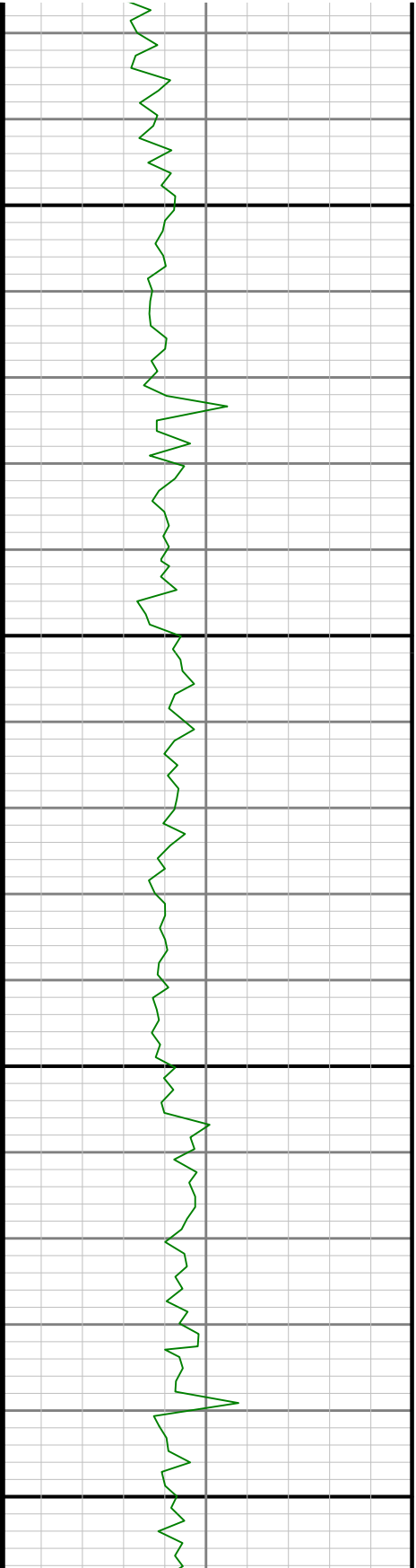


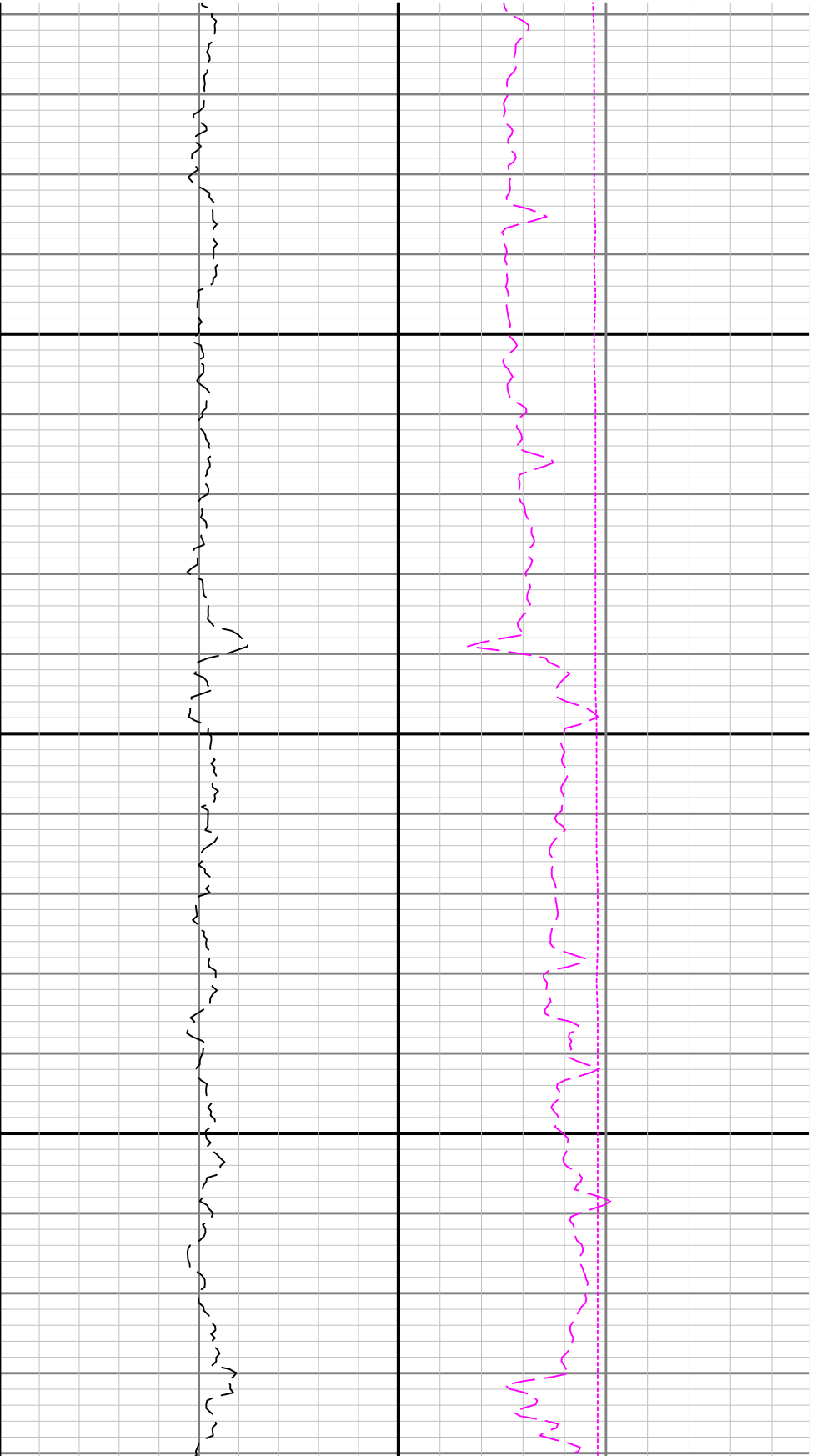
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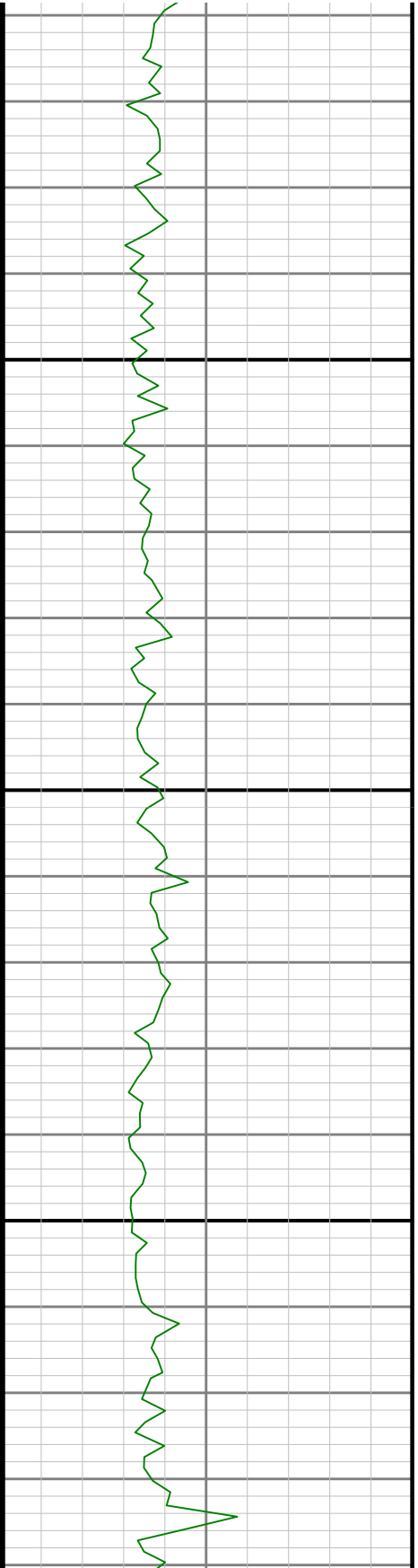
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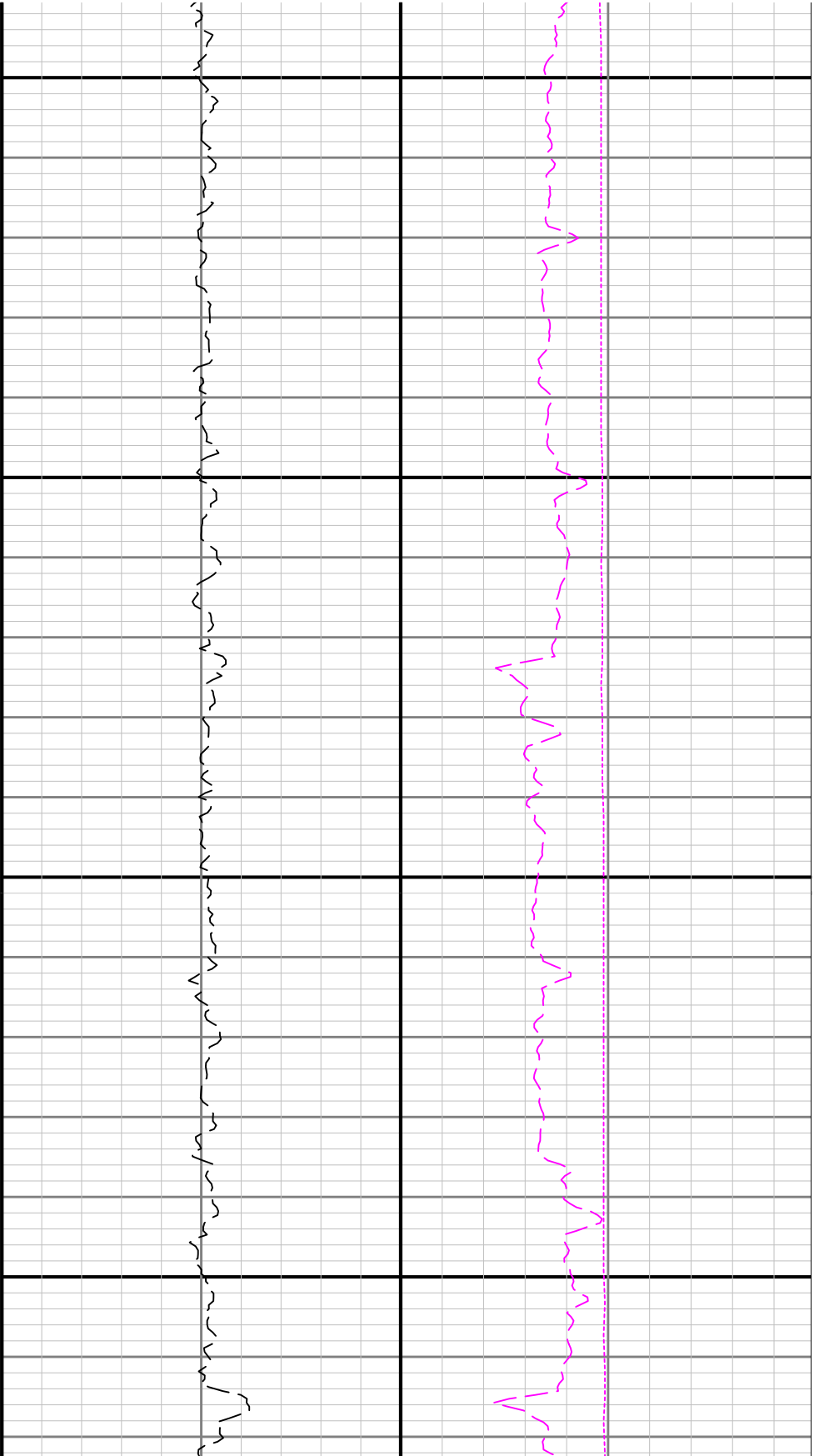




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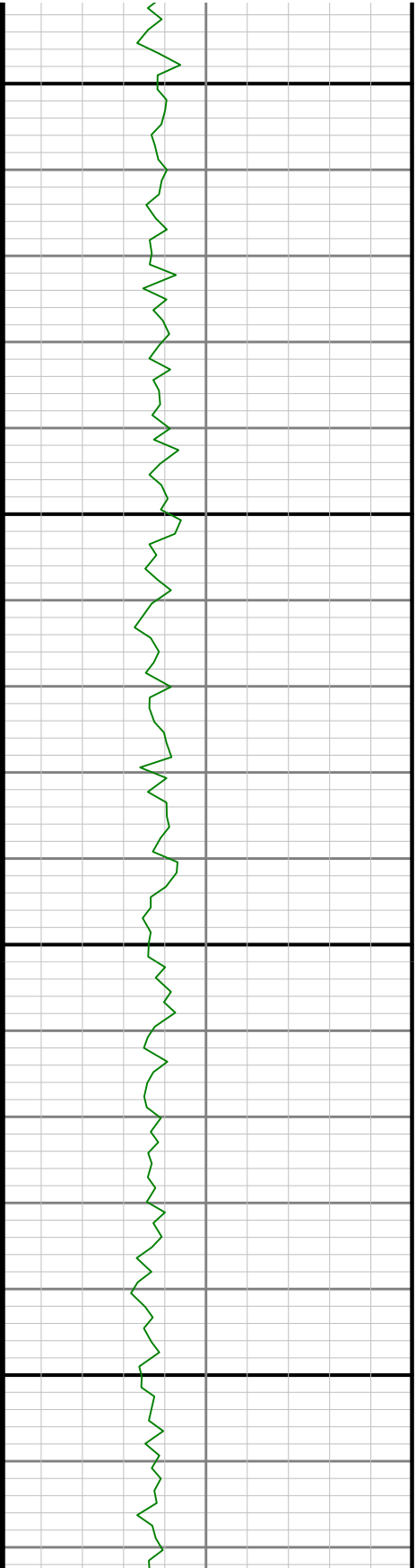
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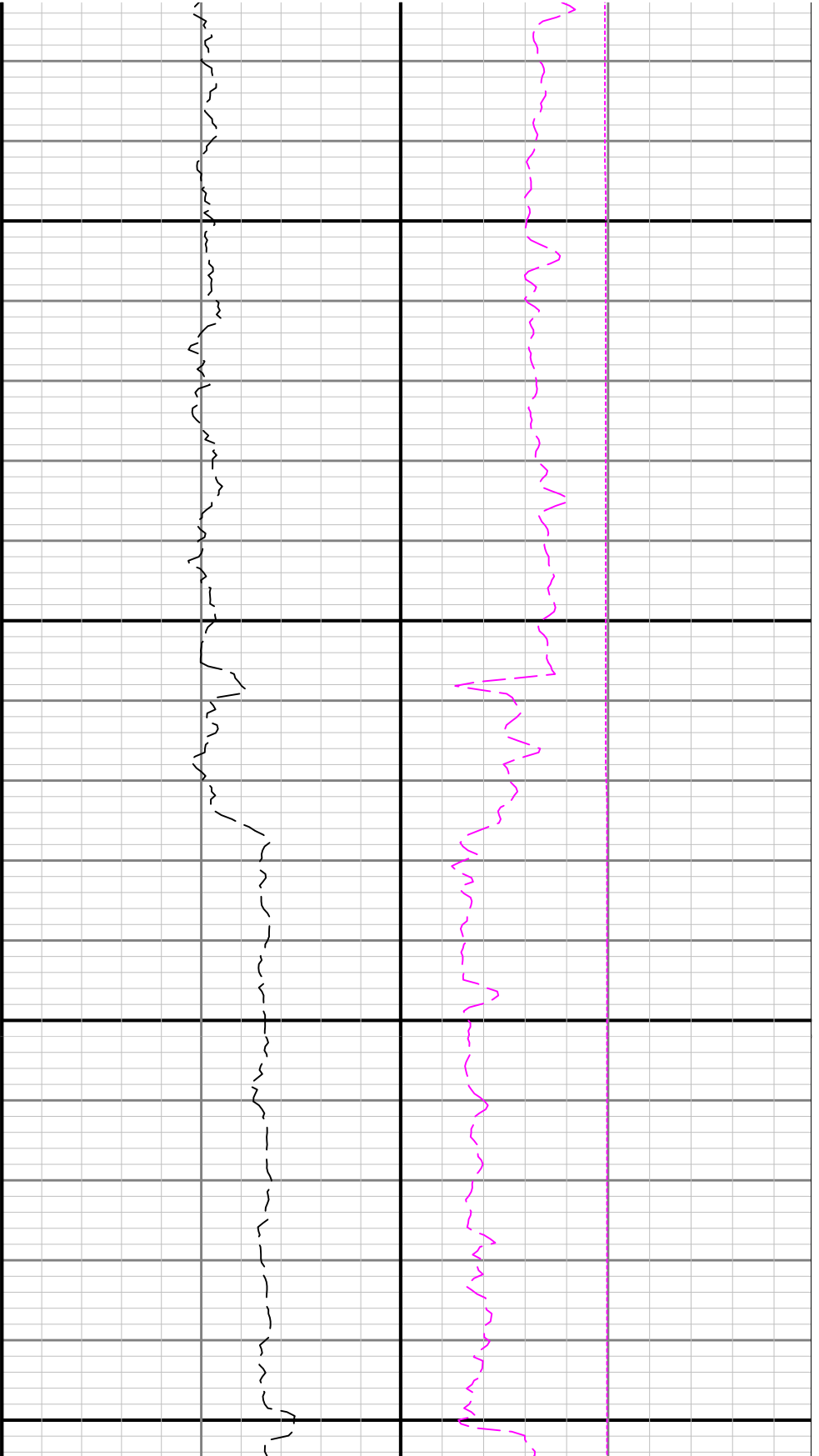




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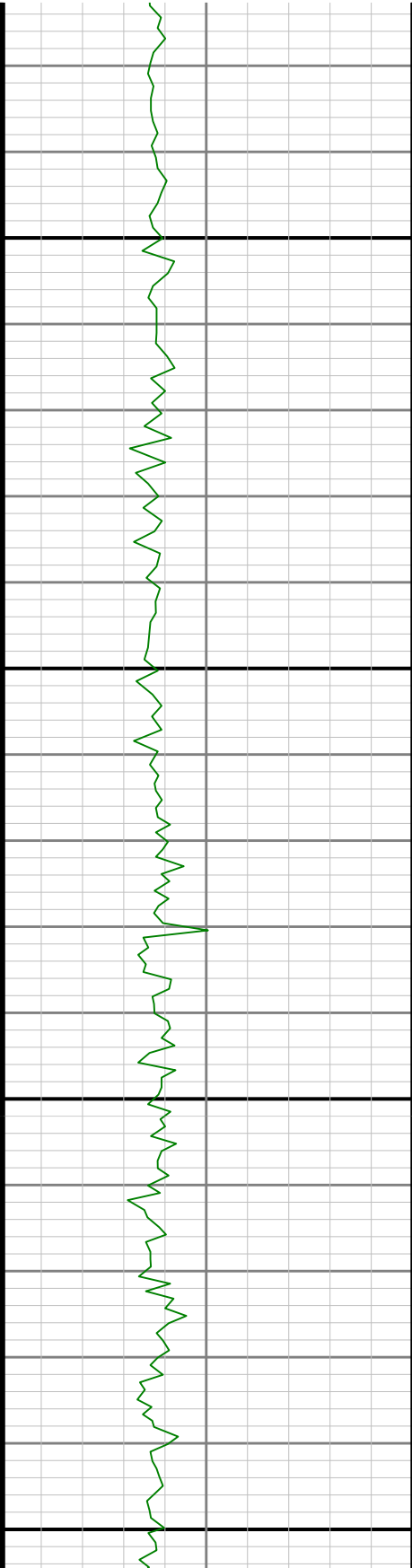
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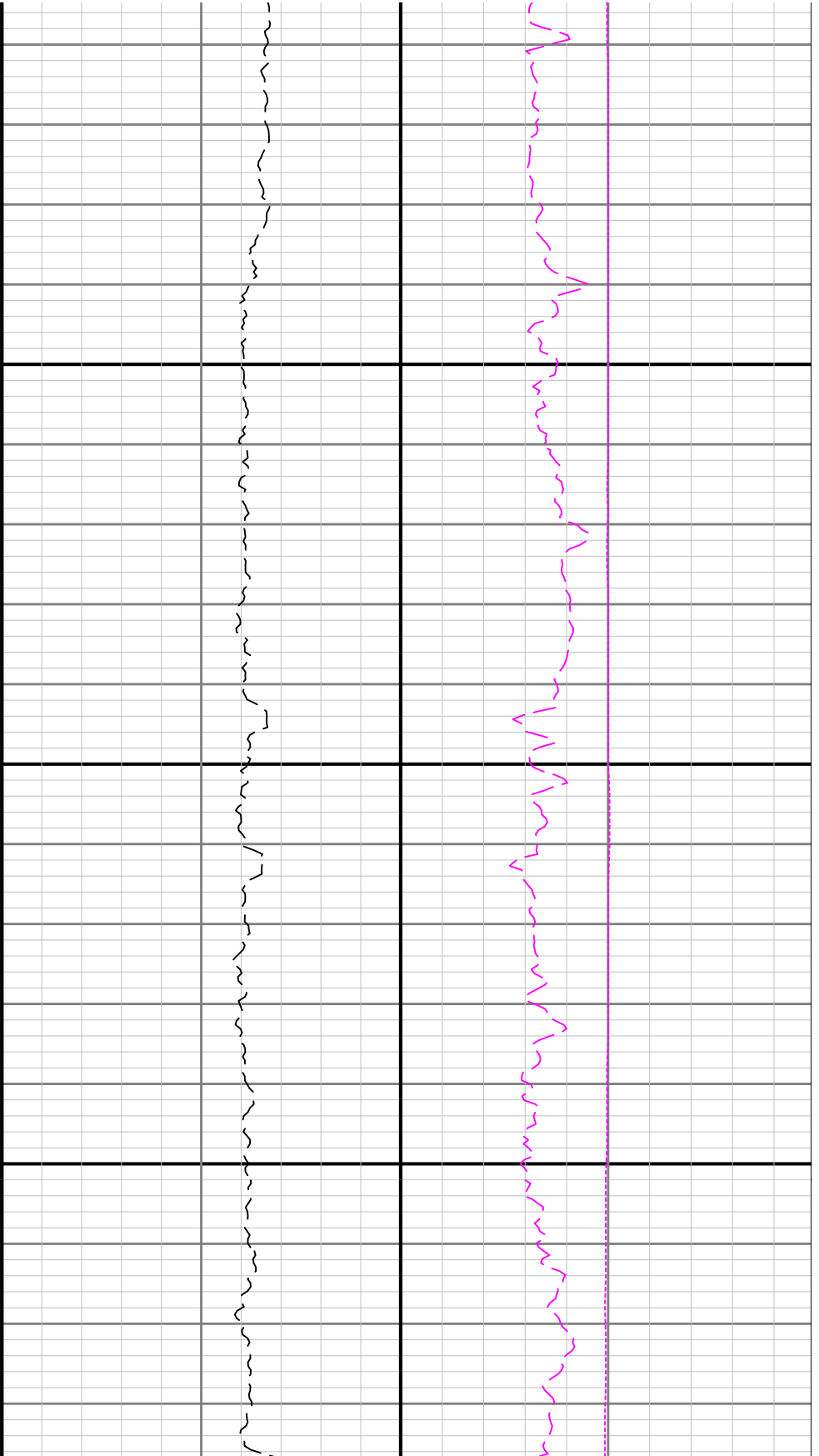




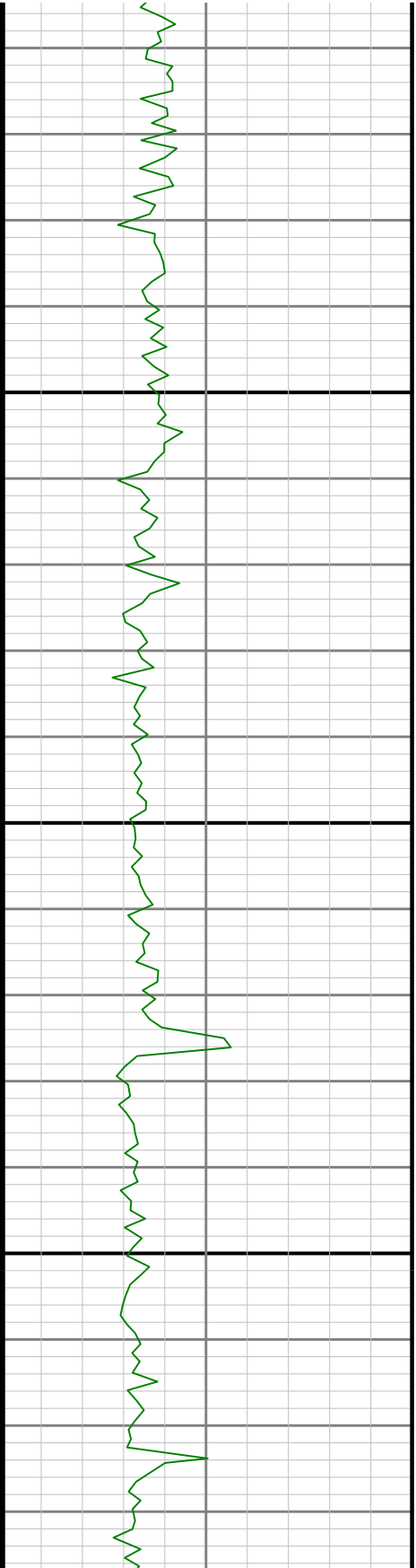
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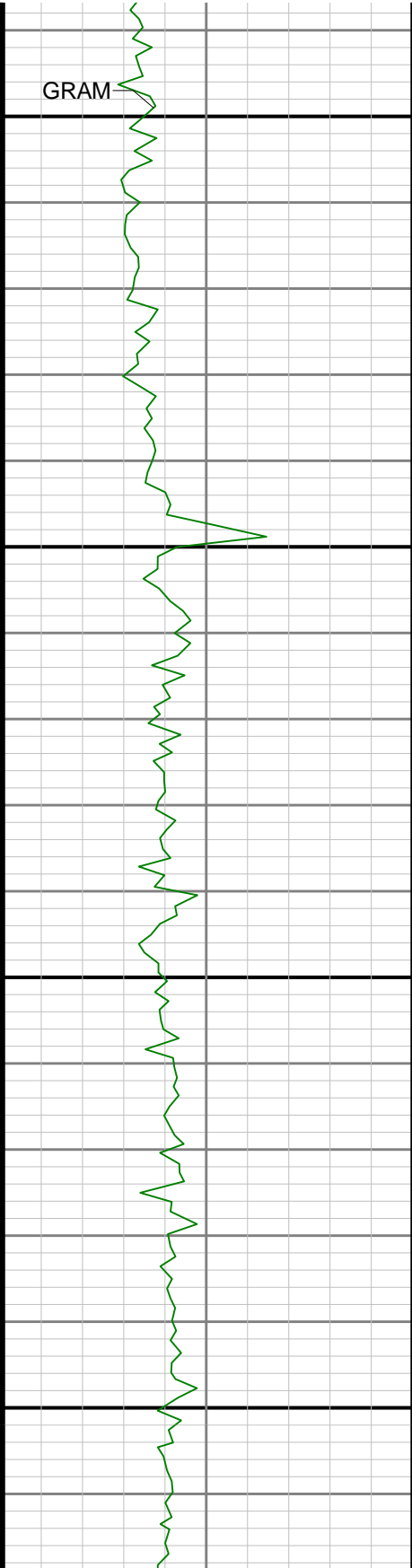
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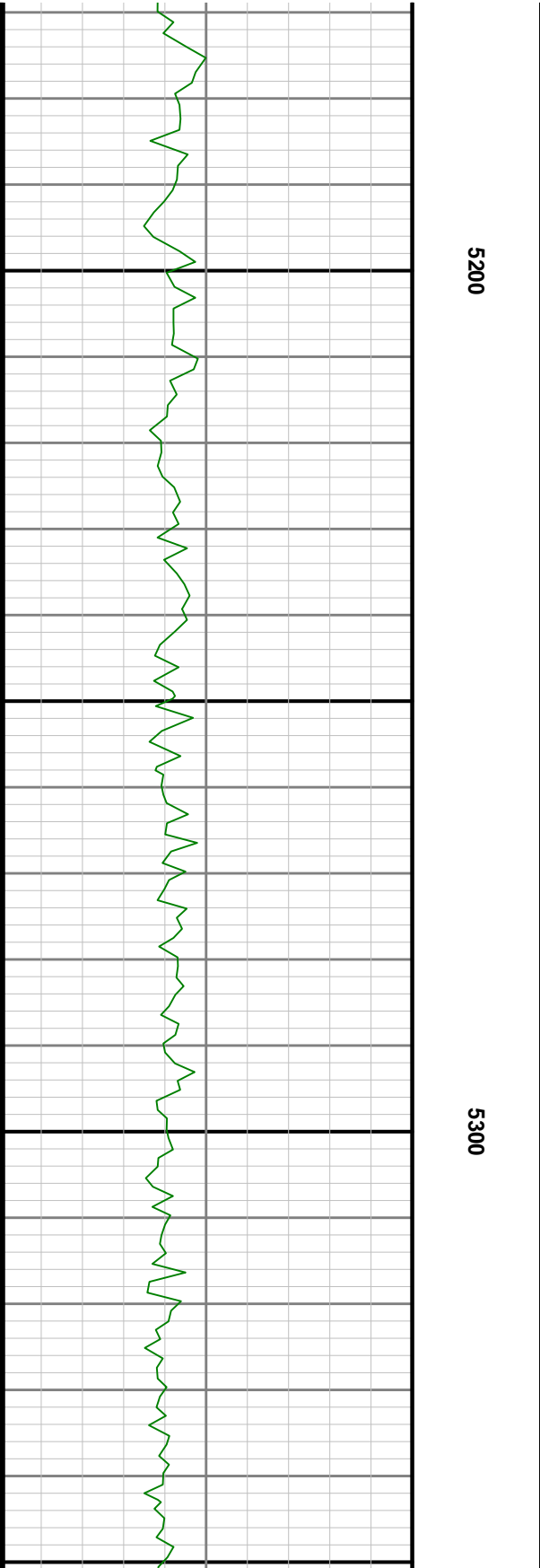
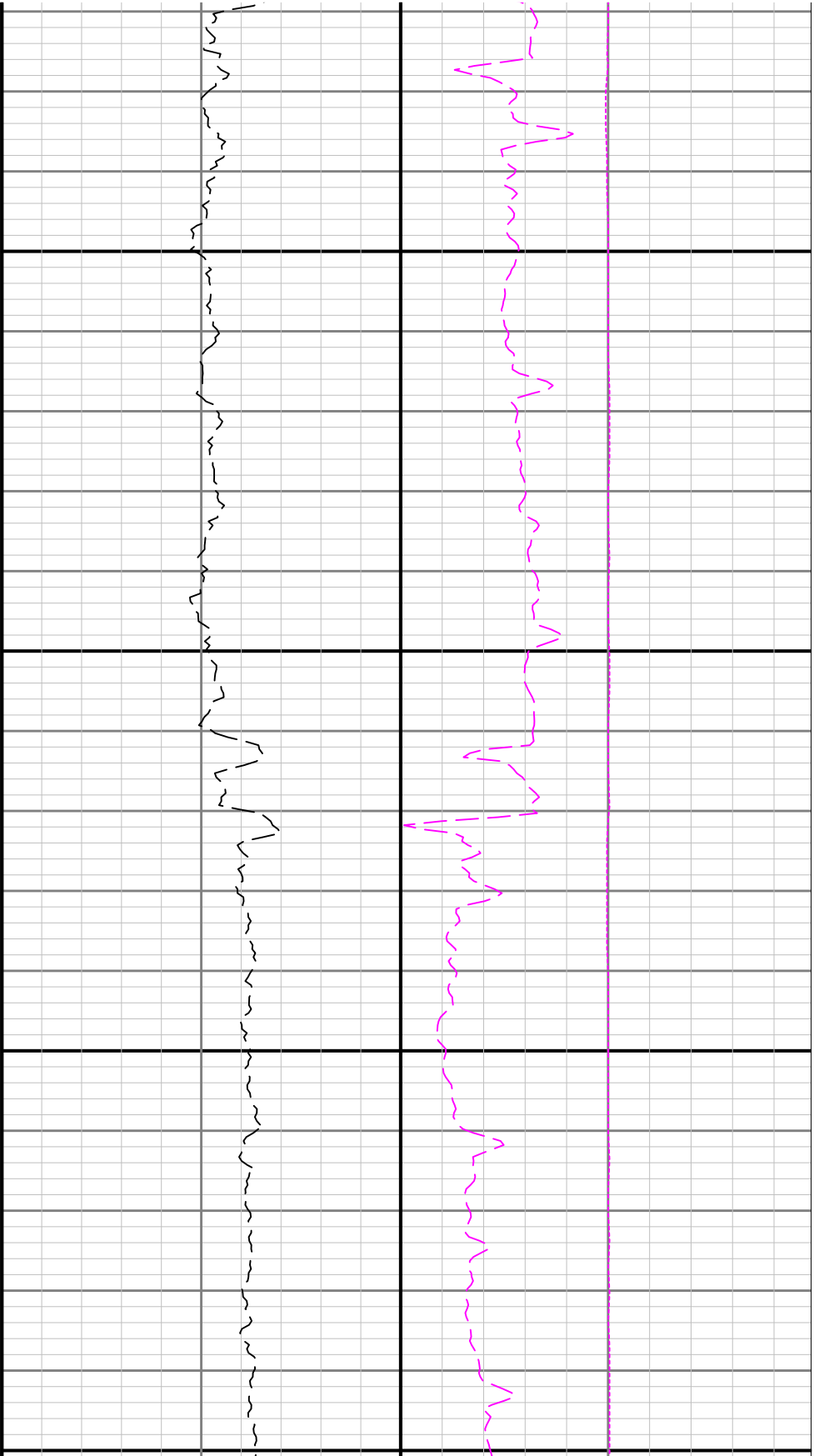


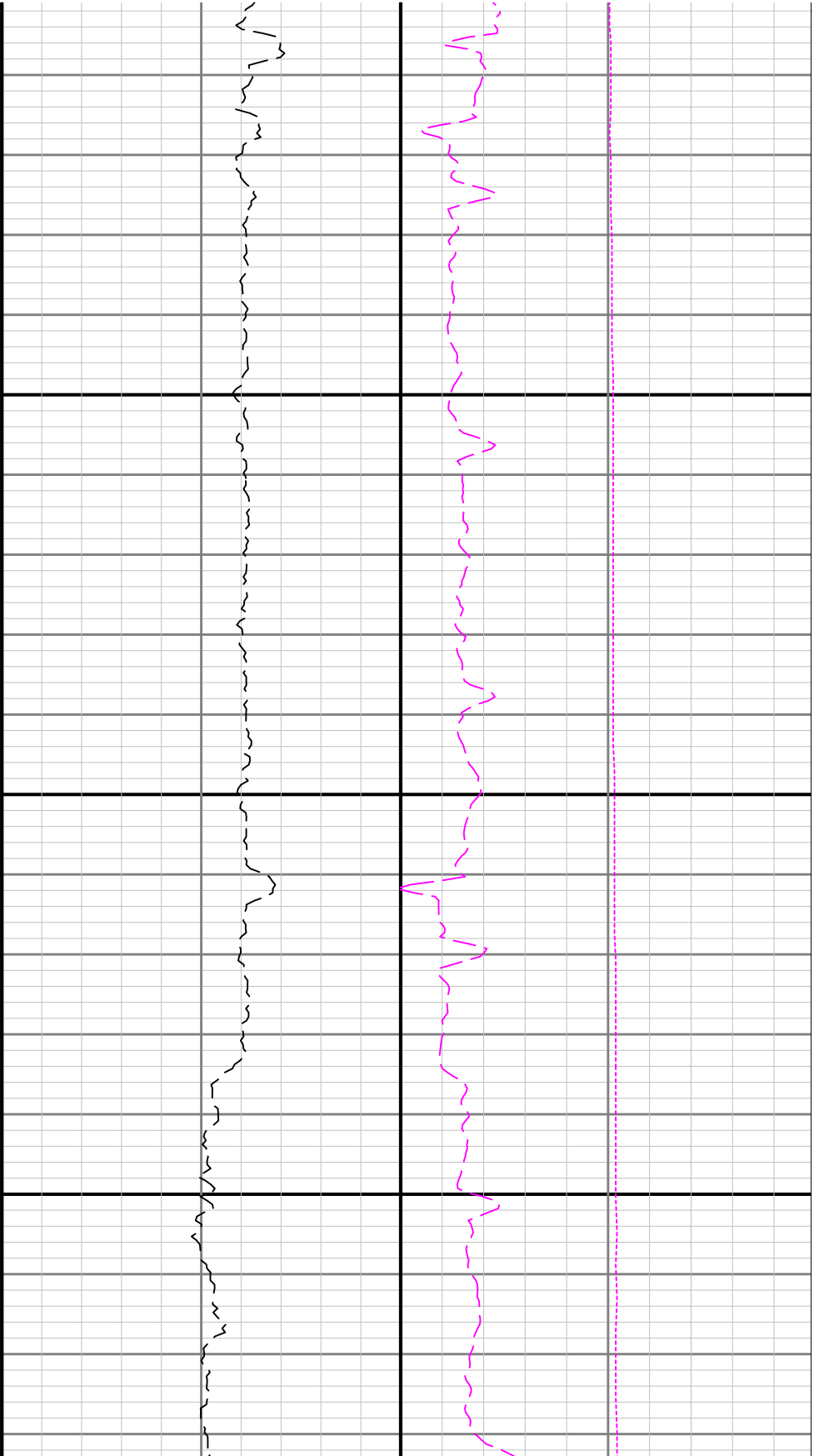


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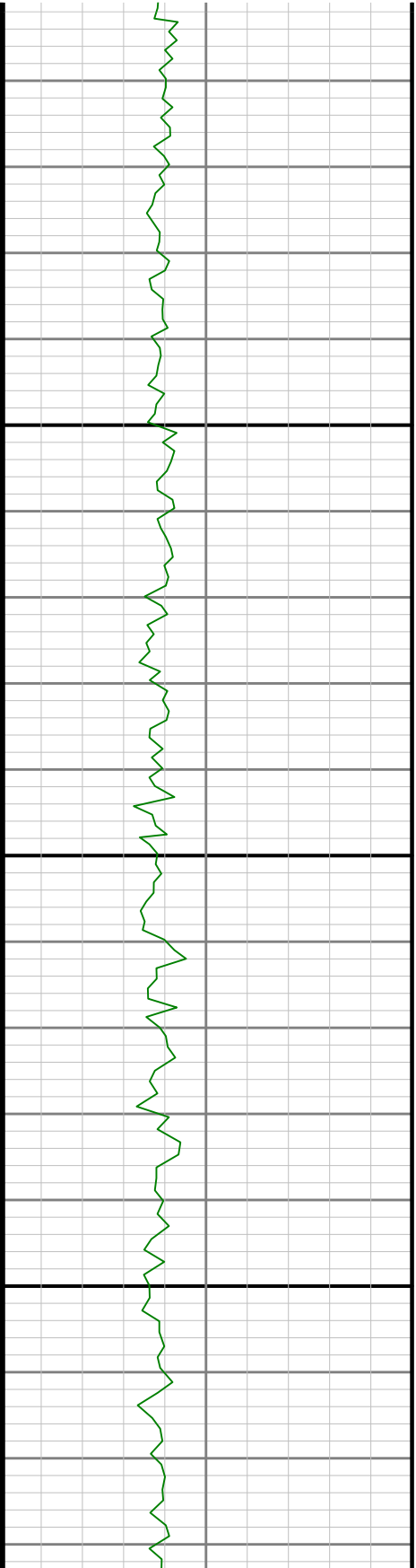


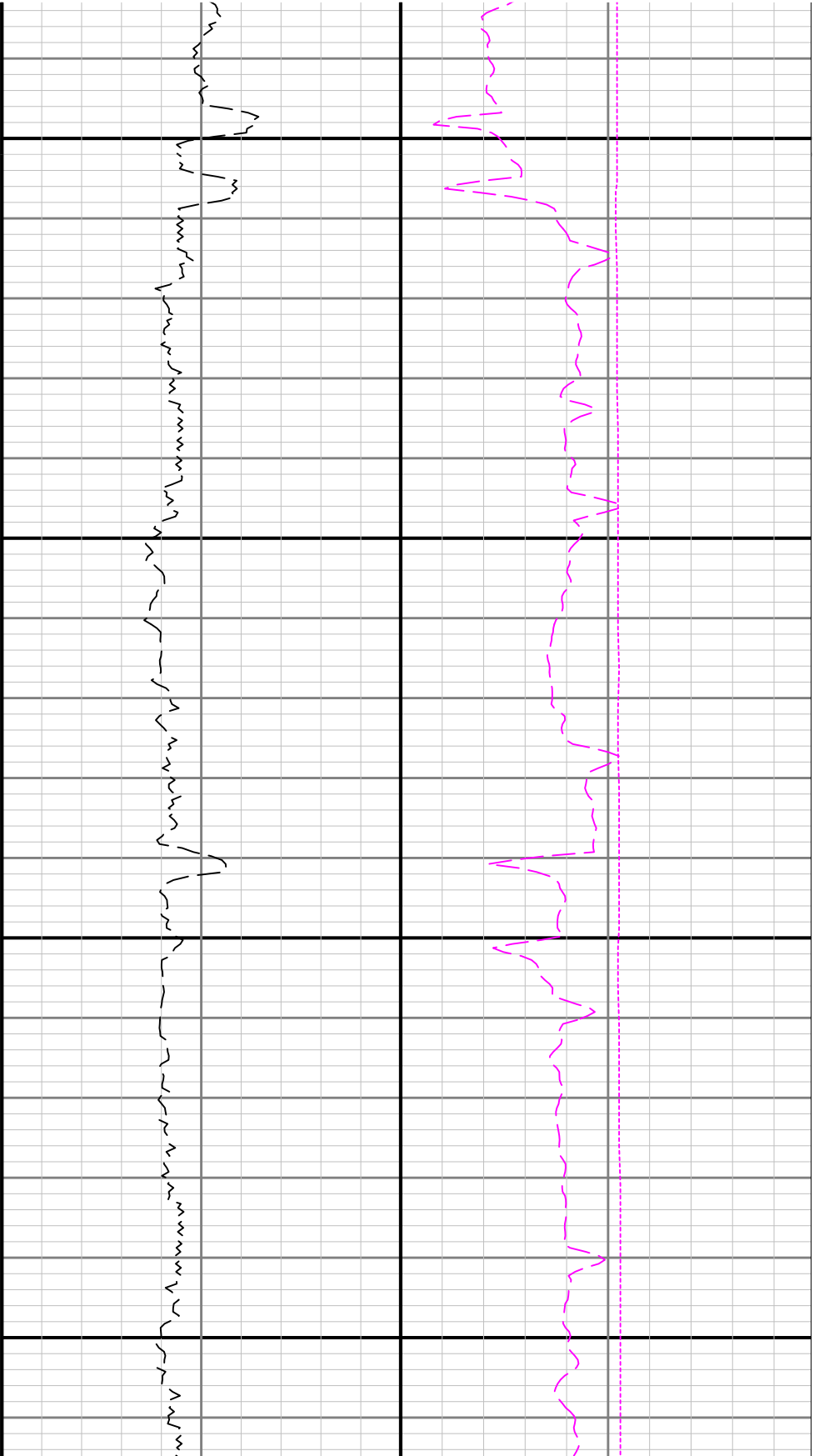




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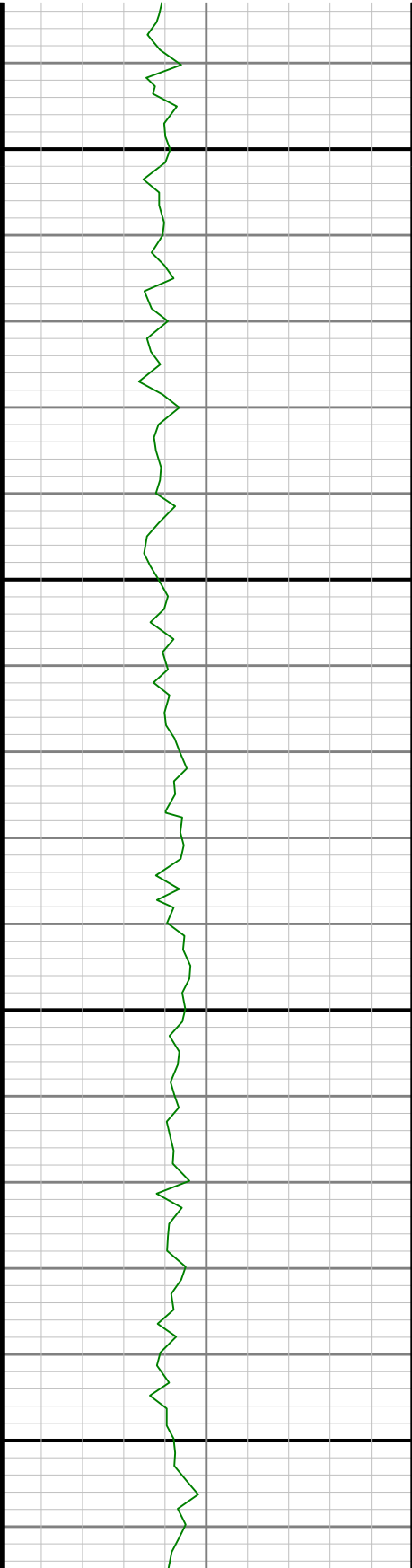
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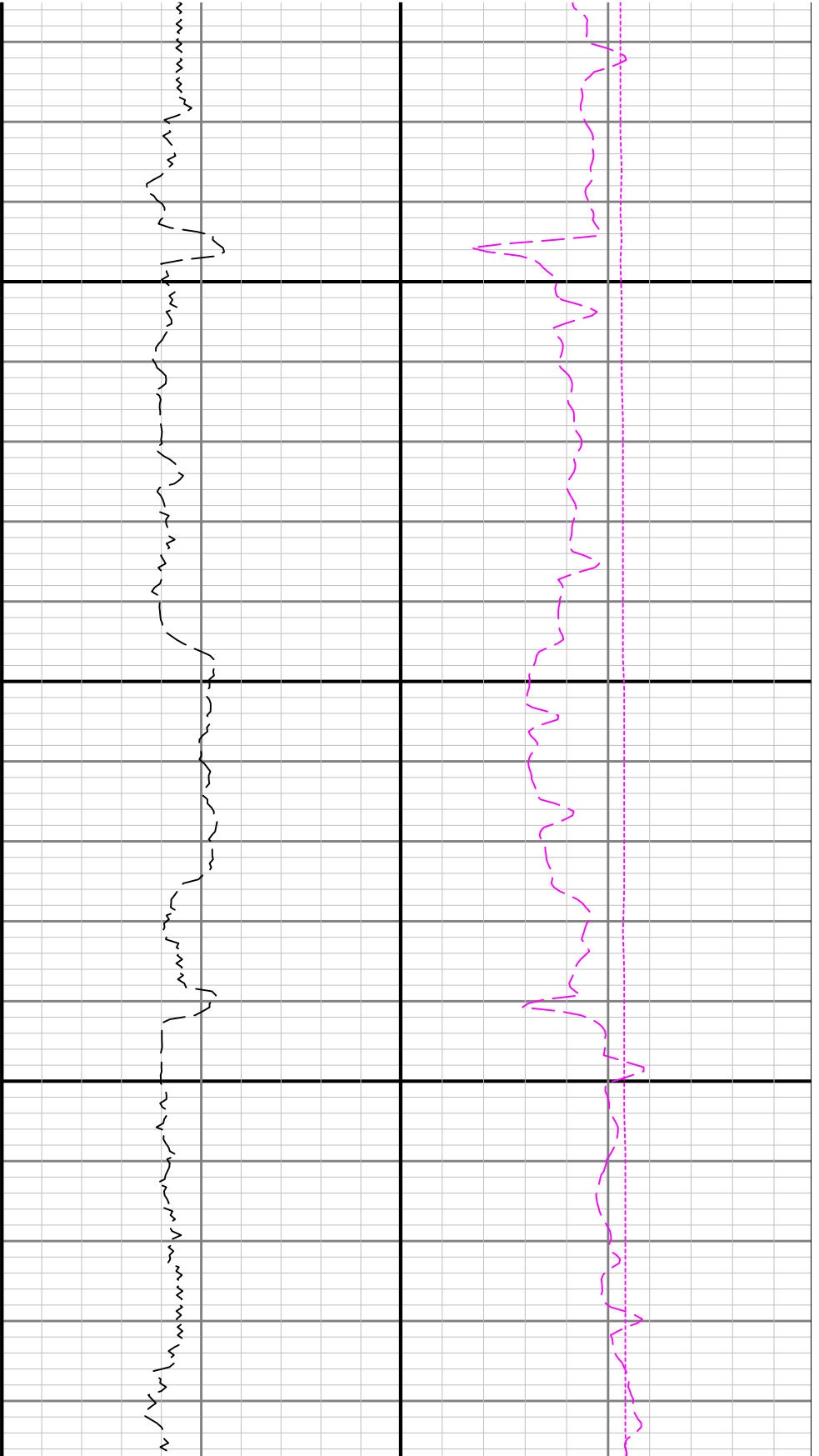




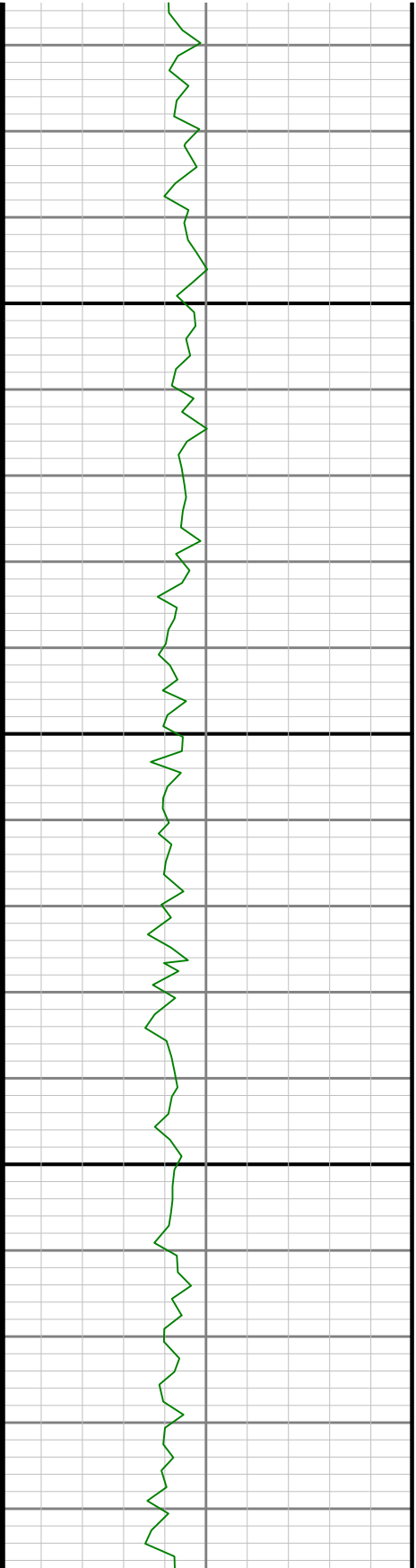
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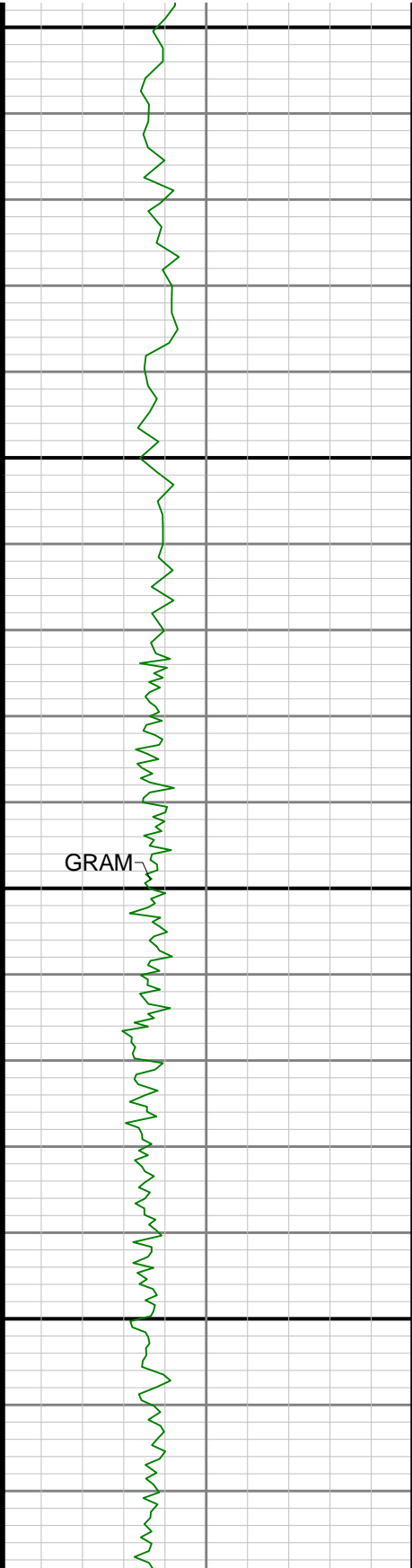
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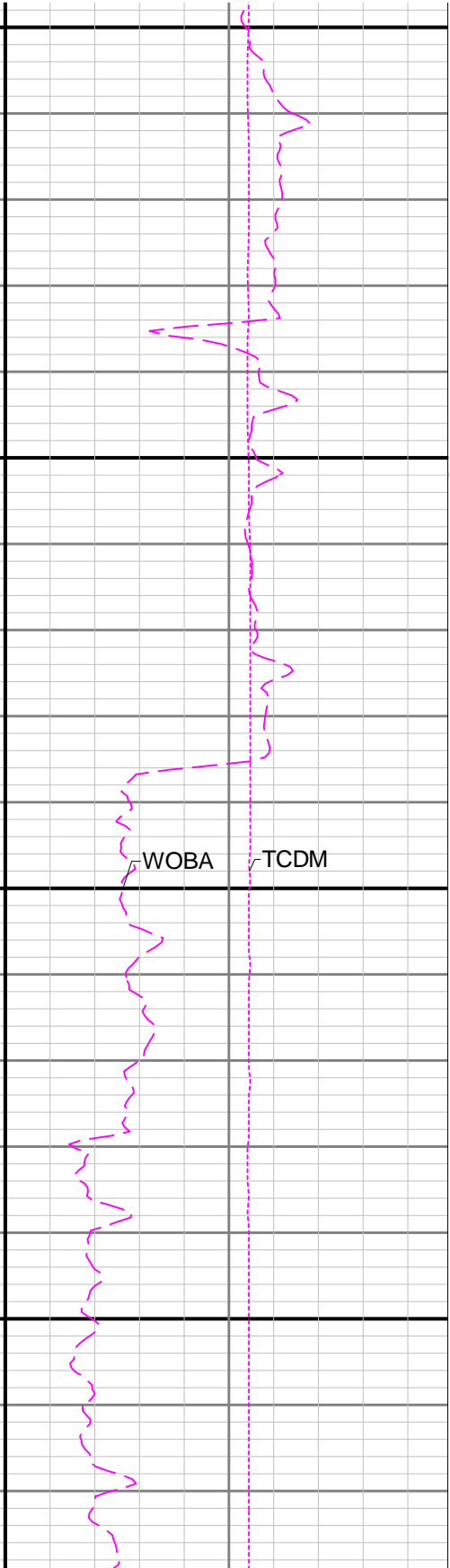
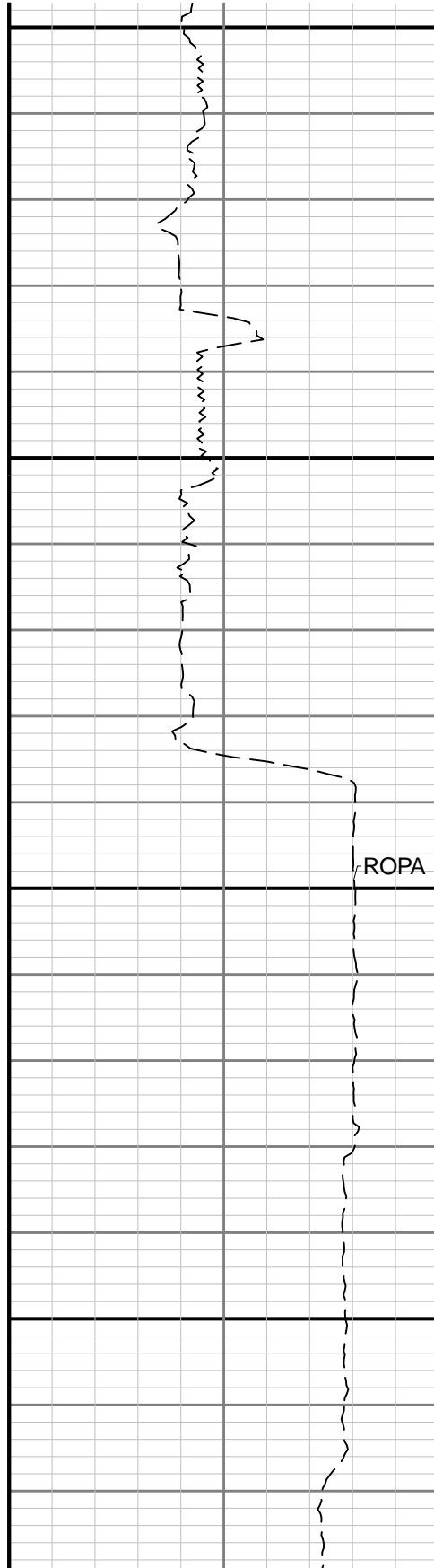
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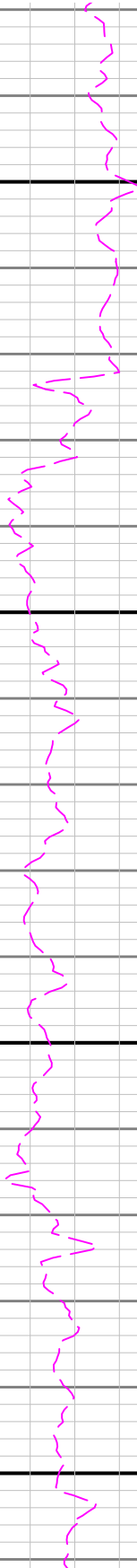
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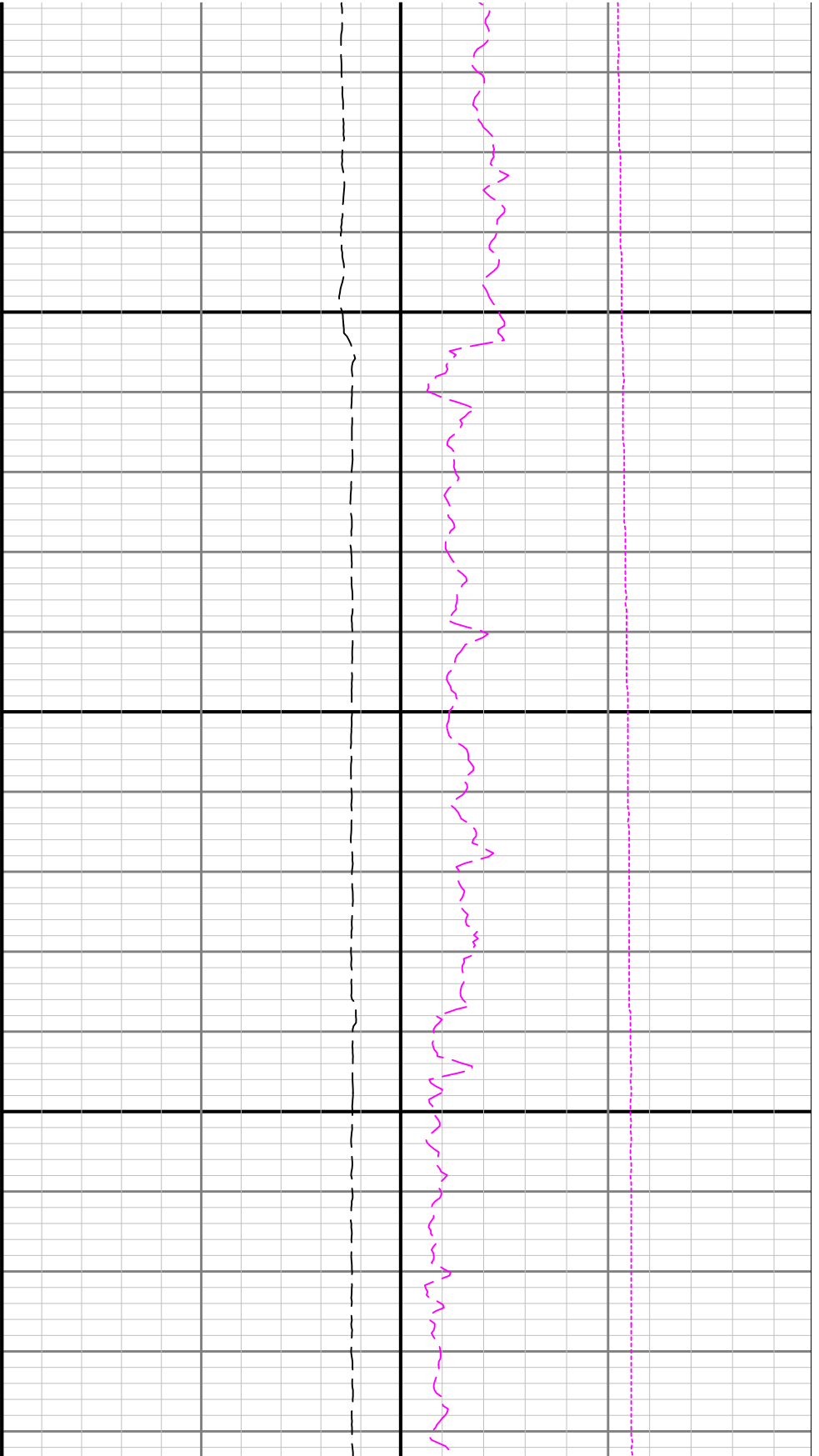


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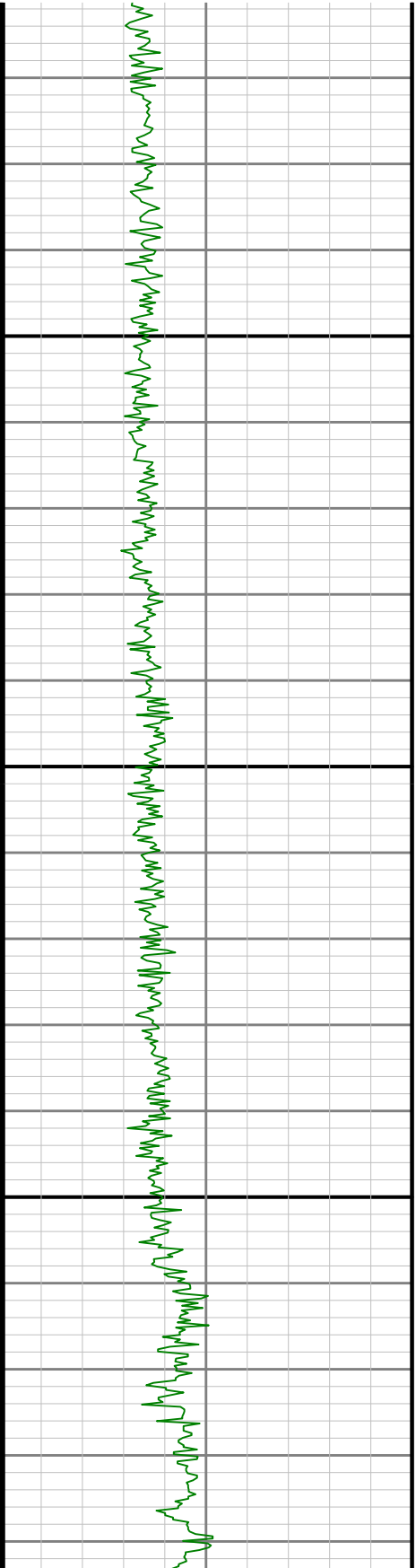
See Remark 3

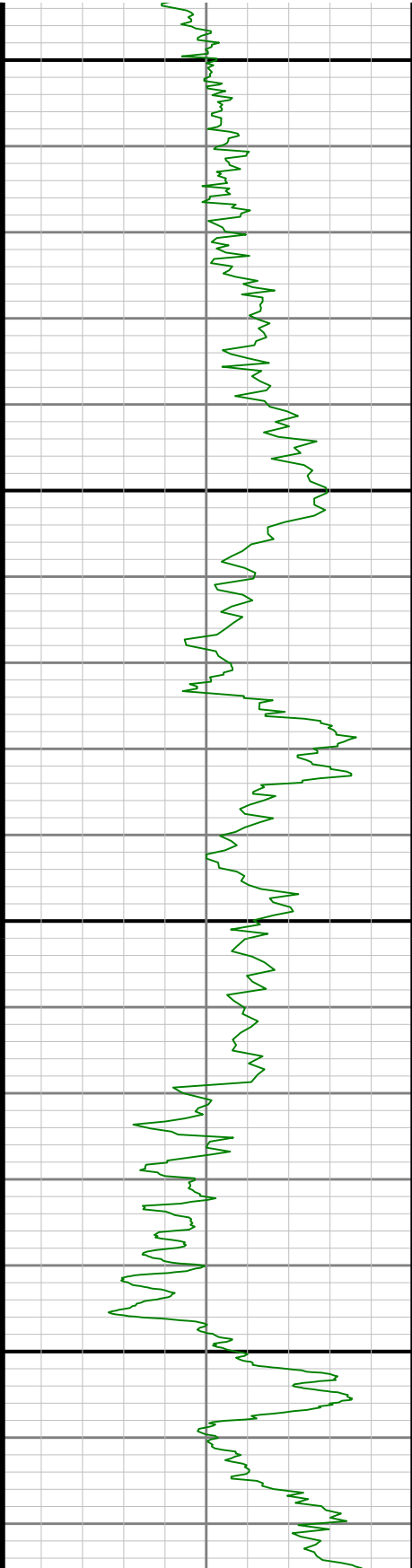




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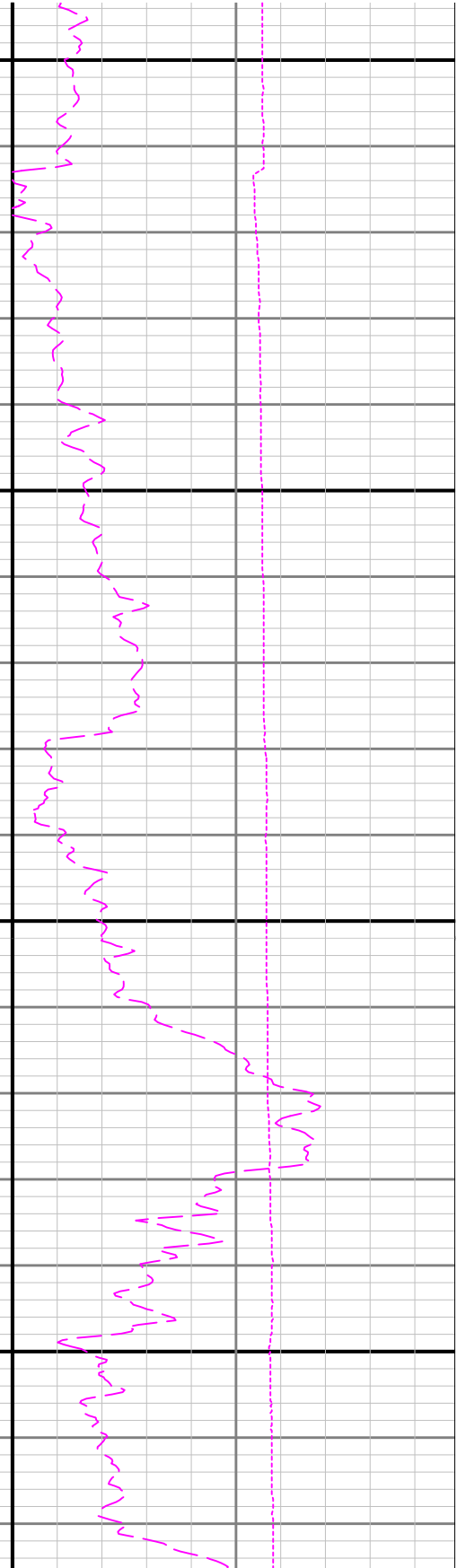
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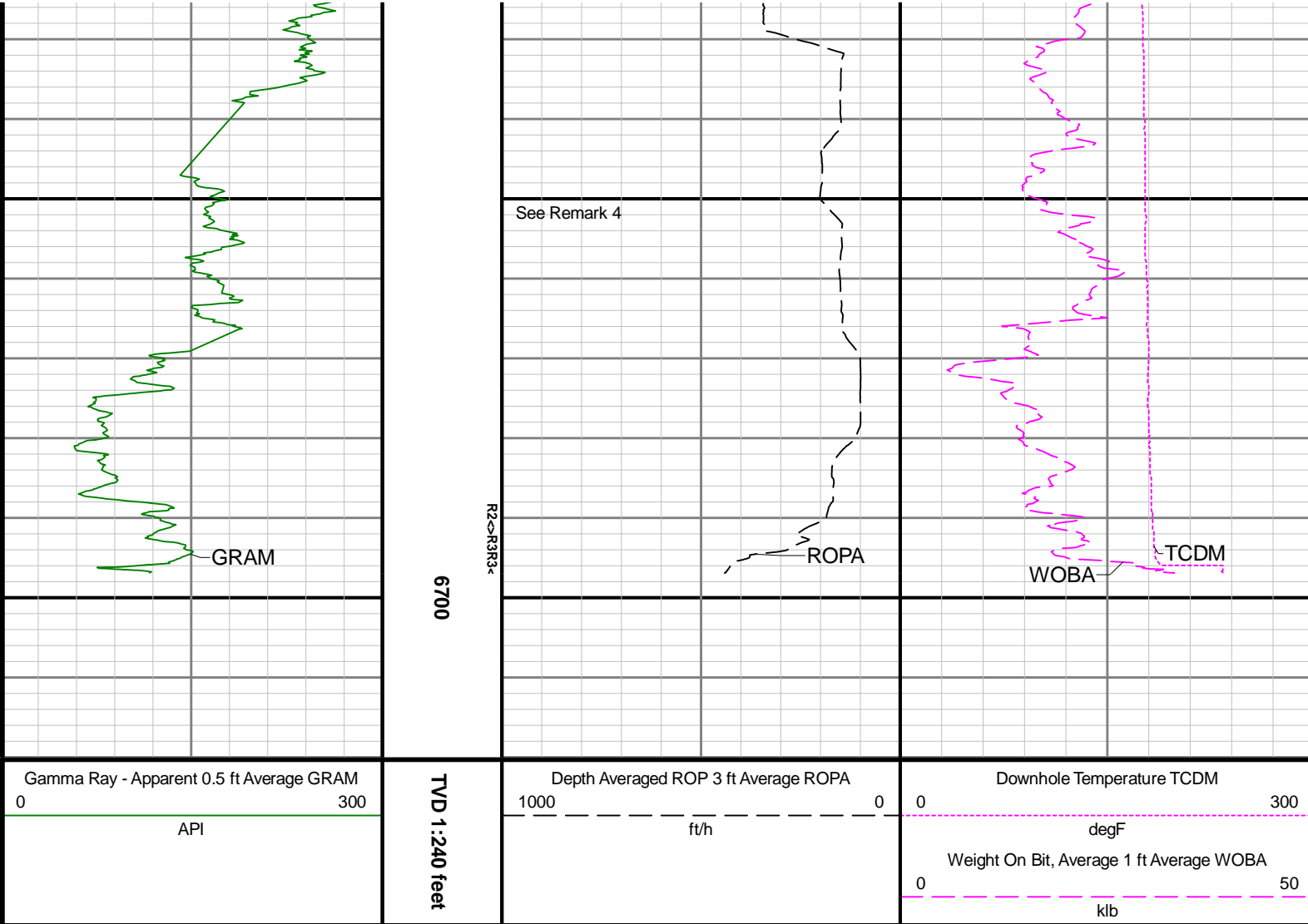




6600

6500





Directional Survey Summary

Latitude:	40° 26' 05.568" N	Longitude:	104° 27' 43.344" W
North Reference:	Grid	Drill Depth Zero:	Rig Floor
Vertical Datum is:	Mean Sea Level	Vertical Datum to DDZ: (ft)	4715.00
Vertical Section North: (ft)	0.00	Vertical Section East: (ft)	0.00
Vertical Section Azimuth: (deg)	4.02	Magnetic Declination: (deg)	7.77
Grid Convergence: (deg)	-0.67	TVD Calculation Method:	Minimum Curvature
Total Correction: (deg)	7.10	Local Magnetic Field: (nT)	52079
Magnetic Correction:	Off	Local Gravity Field: (m/s2)	9.800
Local Magnetic Dip Angle: (deg)	66.93		

Tie-In / Projection	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Temperature (degF)	North (ft)	East (ft)	True Vertical Depth (ft)	TVD Subsea (ft)	Vertical Section (ft)	Course Length (ft)	Dog Leg Severity (deg/100ft)	Build Rate (deg/100ft)	Turn Rate (deg/100ft)
Tie-In	0.00	0.00	0.00	N/A	0.00	0.00	0.00	-4715.00	0.00	0.00	0.00	0.00	0.00
	84.00	0.10	165.15	N/A	-0.07	0.02	84.00	-4631.00	-0.07	84.00	0.12	0.12	196.61
	178.00	0.16	218.47	N/A	-0.25	-0.04	178.00	-4537.00	-0.26	94.00	0.14	0.06	56.72
	269.00	0.14	213.35	N/A	-0.45	-0.18	269.00	-4446.00	-0.46	91.00	0.03	-0.02	-5.63
	332.00	0.17	248.44	N/A	-0.54	-0.31	332.00	-4383.00	-0.56	63.00	0.16	0.05	55.70
	427.00	0.13	221.30	N/A	-0.68	-0.51	427.00	-4288.00	-0.71	95.00	0.08	-0.04	-28.57
	522.00	0.14	60.84	N/A	-0.70	-0.48	522.00	-4193.00	-0.73	95.00	0.28	0.01	-168.91

	617.00	0.14	60.18	N/A	-0.59	-0.28	617.00	-4098.00	-0.61	95.00	0.00	0.00	-0.69
	712.00	0.07	301.68	N/A	-0.50	-0.23	712.00	-4003.00	-0.51	95.00	0.19	-0.07	-124.74
	806.00	0.54	225.92	N/A	-0.78	-0.60	806.00	-3909.00	-0.82	94.00	0.56	0.50	-80.60
	901.00	0.55	150.46	N/A	-1.48	-0.69	900.99	-3814.01	-1.53	95.00	0.70	0.01	-79.43
	996.00	0.36	210.74	N/A	-2.14	-0.62	995.99	-3719.01	-2.18	95.00	0.51	-0.20	63.45
	1090.00	0.28	125.86	N/A	-2.53	-0.59	1089.99	-3625.01	-2.56	94.00	0.46	-0.09	-90.30
	1185.00	0.17	106.15	N/A	-2.70	-0.26	1184.99	-3530.01	-2.71	95.00	0.14	-0.12	-20.75
	1280.00	0.23	239.71	N/A	-2.84	-0.29	1279.99	-3435.01	-2.85	95.00	0.39	0.06	140.59
	1374.00	0.35	172.38	N/A	-3.22	-0.42	1373.99	-3341.01	-3.24	94.00	0.36	0.13	-71.63
	1469.00	0.16	236.63	N/A	-3.58	-0.49	1468.99	-3246.01	-3.60	95.00	0.33	-0.20	67.63
	1563.00	0.44	23.65	N/A	-3.32	-0.45	1562.99	-3152.01	-3.34	94.00	0.62	0.30	156.40
	1658.00	0.07	343.96	N/A	-2.93	-0.32	1657.99	-3057.01	-2.94	95.00	0.41	-0.39	-41.78
	1753.00	0.18	161.62	N/A	-3.01	-0.29	1752.99	-2962.01	-3.03	95.00	0.26	0.12	187.01
	1848.00	0.61	134.11	N/A	-3.51	0.12	1847.98	-2867.02	-3.49	95.00	0.48	0.45	-28.96
Tie-In	1937.00	1.05	158.80	N/A	-4.60	0.75	1936.97	-2778.03	-4.53	89.00	0.63	0.49	27.74
	2002.00	1.71	283.29	90.5	-4.93	0.02	2001.96	-2713.04	-4.92	65.00	3.79	1.02	191.52
	2097.00	0.63	17.57	101.4	-4.11	-1.20	2096.95	-2618.05	-4.18	95.00	1.96	-1.14	99.24
	2192.00	1.64	70.27	106.8	-3.15	0.24	2191.93	-2523.07	-3.13	95.00	1.43	1.06	55.47
	2286.00	2.88	60.01	112.2	-1.52	3.55	2285.86	-2429.14	-1.26	94.00	1.38	1.32	-10.91
	2381.00	5.67	63.78	109.5	1.75	9.83	2380.58	-2334.42	2.44	95.00	2.95	2.94	3.97
	2476.00	9.25	67.62	112.2	6.73	21.10	2474.76	-2240.24	8.20	95.00	3.80	3.77	4.04
	2571.00	11.79	68.50	114.9	13.20	37.20	2568.16	-2146.84	15.77	95.00	2.68	2.67	0.93
	2665.00	13.95	68.61	114.9	20.85	56.68	2659.79	-2055.21	24.77	94.00	2.30	2.30	0.12
	2760.00	14.36	66.67	117.6	29.69	78.16	2751.91	-1963.09	35.10	95.00	0.66	0.43	-2.04
	2854.00	14.82	68.66	120.3	38.69	100.07	2842.88	-1872.12	45.60	94.00	0.72	0.49	2.12
	2949.00	15.21	70.23	123.0	47.32	123.11	2934.63	-1780.37	55.84	95.00	0.59	0.41	1.65
	3044.00	15.21	66.29	123.0	56.55	146.25	3026.31	-1688.69	66.66	95.00	1.09	0.00	-4.15
	3139.00	15.40	69.67	123.0	65.94	169.49	3117.94	-1597.06	77.66	95.00	0.96	0.20	3.56
	3234.00	15.03	68.13	125.7	74.91	192.75	3209.61	-1505.39	88.24	95.00	0.58	-0.39	-1.62
	3328.00	14.20	68.30	128.4	83.72	214.77	3300.57	-1414.43	98.57	94.00	0.88	-0.88	0.18
	3518.00	13.35	69.55	131.1	100.00	256.98	3485.10	-1229.90	117.77	190.00	0.47	-0.45	0.66
	3707.00	14.12	66.89	133.8	116.67	298.63	3668.70	-1046.30	137.32	189.00	0.53	0.41	-1.41
	3802.00	13.17	68.40	136.5	125.20	319.35	3761.02	-953.98	147.28	95.00	1.07	-1.00	1.59
	3991.00	12.73	66.43	136.5	141.46	358.45	3945.21	-769.79	166.24	189.00	0.33	-0.23	-1.04
	4086.00	12.26	67.02	136.5	149.58	377.33	4037.96	-677.04	175.66	95.00	0.51	-0.49	0.62
	4181.00	12.18	70.86	139.2	156.80	396.09	4130.81	-584.19	184.18	95.00	0.86	-0.08	4.04
	4275.00	12.06	69.31	141.9	163.52	414.64	4222.71	-492.29	192.19	94.00	0.37	-0.13	-1.65
	4370.00	12.10	69.01	141.9	170.60	433.22	4315.61	-399.39	200.55	95.00	0.08	0.04	-0.32
	4465.00	12.19	69.29	144.6	177.71	451.90	4408.48	-306.52	208.95	95.00	0.11	0.09	0.29
	4559.00	12.11	70.26	144.6	184.55	470.46	4500.38	-214.62	217.08	94.00	0.23	-0.09	1.03
	4654.00	12.17	70.23	147.3	191.30	489.27	4593.25	-121.75	225.13	95.00	0.06	0.06	-0.03
	4749.00	12.07	69.47	147.3	198.17	507.99	4686.14	-28.86	233.30	95.00	0.20	-0.11	-0.80
	4844.00	10.47	69.86	150.0	204.63	525.40	4779.30	64.30	240.96	95.00	1.69	-1.68	0.41
	4938.00	7.82	67.86	150.0	209.98	539.34	4872.10	157.10	247.27	94.00	2.84	-2.82	-2.13
	5033.00	6.24	69.63	150.0	214.21	550.17	4966.38	251.38	252.26	95.00	1.68	-1.66	1.86
	5127.00	4.62	69.52	147.3	217.32	558.51	5059.96	344.96	255.94	94.00	1.72	-1.72	-0.12
	5222.00	1.86	43.41	150.0	219.78	563.15	5154.80	439.80	258.71	95.00	3.22	-2.91	-27.48
	5317.00	0.80	248.88	150.0	220.66	563.59	5249.79	534.79	259.62	95.00	2.74	-1.12	-162.66
	5412.00	0.65	240.65	150.0	220.15	562.50	5344.78	629.78	259.05	95.00	0.19	-0.16	-8.66
	5506.00	0.63	239.83	152.7	219.63	561.59	5438.77	723.77	258.46	94.00	0.02	-0.02	-0.87
	5601.00	0.09	115.29	155.4	219.34	561.21	5533.77	818.77	258.14	95.00	0.72	-0.57	-131.09
	5696.00	0.80	186.58	158.1	218.65	561.20	5628.77	913.77	257.45	95.00	0.82	0.75	75.04
	5790.00	0.09	202.99	158.1	217.93	561.10	5722.76	1007.76	256.73	94.00	0.76	-0.76	17.46
	5885.00	0.92	142.57	160.8	217.25	561.53	5817.76	1102.76	256.08	95.00	0.93	0.87	-63.60
	5980.00	0.09	146.21	163.5	216.59	562.03	5912.76	1197.76	255.45	95.00	0.87	-0.87	3.83
	6075.00	0.37	24.78	163.5	216.80	562.20	6007.76	1292.76	255.68	95.00	0.45	0.29	-127.82
	6169.00	8.58	20.80	163.5	223.64	564.83	6101.39	1386.39	262.69	94.00	8.74	8.73	-4.23
	6264.00	13.68	25.64	163.5	240.41	572.21	6194.57	1479.57	279.93	95.00	5.45	5.37	5.09
	6359.00	22.75	37.16	158.1	265.23	588.20	6284.75	1569.75	305.82	95.00	10.23	9.55	12.13
	6454.00	31.04	36.67	166.2	299.58	613.97	6369.40	1654.40	341.88	95.00	8.73	8.73	-0.52
	6548.00	39.59	24.83	166.2	346.34	641.10	6446.12	1731.12	390.43	94.00	11.62	9.10	-12.60

	6643.00	48.53	18.61	168.9	407.70	665.24	6514.35	1799.35	453.33	95.00	10.45	9.41	-6.55
	6738.00	55.74	13.72	171.6	479.69	685.94	6572.64	1857.64	526.60	95.00	8.61	7.59	-5.15
	6832.00	62.77	6.64	174.3	559.11	700.02	6620.71	1905.71	606.81	94.00	9.88	7.48	-7.53
	6927.00	70.32	2.50	179.7	645.91	706.86	6658.51	1943.51	693.87	95.00	8.89	7.95	-4.36
	7022.00	79.85	357.87	179.7	737.57	707.08	6682.95	1967.95	785.33	95.00	11.08	10.03	-4.87
	7116.00	87.47	355.08	182.5	830.74	701.32	6693.32	1978.32	877.86	94.00	8.63	8.11	-2.97
	7211.00	89.60	355.64	185.2	925.39	693.64	6695.75	1980.75	971.74	95.00	2.32	2.24	0.59
	7306.00	90.28	357.27	190.6	1020.21	687.77	6695.85	1980.85	1065.91	95.00	1.86	0.72	1.72
	7401.00	90.18	1.40	193.3	1115.18	686.66	6695.47	1980.47	1160.57	95.00	4.35	-0.11	4.35
	7496.00	90.43	5.65	196.0	1209.98	692.50	6694.96	1979.96	1255.55	95.00	4.48	0.26	4.47
	7685.00	90.52	0.25	198.7	1398.65	702.23	6693.40	1978.40	1444.44	189.00	2.86	0.05	-2.86
	7780.00	90.43	0.14	204.1	1493.64	702.55	6692.61	1977.61	1539.22	95.00	0.15	-0.09	-0.12
	7875.00	90.43	0.50	204.1	1588.64	703.08	6691.90	1976.90	1634.02	95.00	0.38	-0.00	0.38
	7969.00	89.94	359.77	206.8	1682.64	703.30	6691.59	1976.59	1727.80	94.00	0.94	-0.52	-0.78
	8064.00	89.82	0.63	206.8	1777.64	703.63	6691.79	1976.79	1822.59	95.00	0.91	-0.13	0.91
	8159.00	90.03	1.36	209.5	1872.62	705.28	6691.92	1976.92	1917.46	95.00	0.80	0.22	0.77
	8253.00	89.97	0.44	212.2	1966.61	706.76	6691.92	1976.92	2011.32	94.00	0.98	-0.06	-0.98
	8348.00	90.18	0.23	212.2	2061.61	707.31	6691.79	1976.79	2106.12	95.00	0.31	0.22	-0.22
	8443.00	90.12	0.67	214.9	2156.60	708.06	6691.54	1976.54	2200.94	95.00	0.47	-0.06	0.46
	8538.00	90.18	1.09	214.9	2251.59	709.52	6691.29	1976.29	2295.79	95.00	0.45	0.06	0.44
	8632.00	89.48	0.79	217.6	2345.58	711.06	6691.57	1976.57	2389.66	94.00	0.81	-0.74	-0.32
	8727.00	89.60	0.34	217.6	2440.57	712.00	6692.34	1977.34	2484.48	95.00	0.49	0.13	-0.47
	8822.00	89.88	0.81	220.3	2535.56	712.95	6692.77	1977.77	2579.31	95.00	0.58	0.29	0.49
	8917.00	90.25	0.66	220.3	2630.56	714.17	6692.66	1977.66	2674.15	95.00	0.42	0.39	-0.16
	9011.00	90.06	0.34	220.3	2724.55	714.99	6692.40	1977.40	2767.97	94.00	0.40	-0.20	-0.34
	9106.00	89.78	1.20	223.0	2819.54	716.27	6692.54	1977.54	2862.82	95.00	0.95	-0.29	0.91
	9201.00	89.88	0.93	223.0	2914.53	718.03	6692.82	1977.82	2957.69	95.00	0.30	0.11	-0.28
	9295.00	89.91	2.68	223.0	3008.48	720.99	6692.99	1977.99	3051.62	94.00	1.86	0.03	1.86
	9390.00	89.82	2.11	225.7	3103.39	724.96	6693.22	1978.22	3146.58	95.00	0.61	-0.09	-0.60
	9485.00	90.03	359.72	225.7	3198.37	726.48	6693.34	1978.34	3241.43	95.00	2.53	0.22	-2.52
	9579.00	90.15	0.49	228.4	3292.37	726.65	6693.19	1978.19	3335.21	94.00	0.83	0.13	0.82
	9674.00	90.03	2.07	228.4	3387.34	728.77	6693.04	1978.04	3430.10	95.00	1.67	-0.13	1.66
	9769.00	88.71	359.91	228.4	3482.32	730.42	6694.09	1979.09	3524.95	95.00	2.66	-1.39	-2.27
	9863.00	90.71	3.19	225.7	3576.26	732.96	6694.56	1979.56	3618.85	94.00	4.09	2.13	3.49
	9958.00	90.00	1.49	228.4	3671.18	736.84	6693.97	1978.97	3713.80	95.00	1.94	-0.75	-1.79
	10052.00	89.45	359.48	228.4	3765.17	737.63	6694.43	1979.43	3807.62	94.00	2.22	-0.59	-2.14
	10147.00	89.94	359.71	228.4	3860.16	736.96	6694.93	1979.93	3902.33	95.00	0.57	0.52	0.24
	10242.00	89.63	359.17	231.1	3955.16	736.03	6695.29	1980.29	3997.03	95.00	0.66	-0.33	-0.57
	10337.00	90.06	358.98	231.1	4050.15	734.50	6695.55	1980.55	4091.67	95.00	0.49	0.45	-0.20
	10431.00	89.85	358.61	233.8	4144.13	732.52	6695.62	1980.62	4185.28	94.00	0.45	-0.22	-0.39
	10526.00	89.85	358.98	233.8	4239.10	730.52	6695.87	1980.87	4279.89	95.00	0.39	0.00	0.39
	10620.00	89.38	0.36	233.8	4333.10	729.98	6696.50	1981.50	4373.61	94.00	1.55	-0.50	1.47
	10715.00	90.15	358.61	233.8	4428.09	729.13	6696.89	1981.89	4468.31	95.00	2.01	0.81	-1.84
	10810.00	90.71	359.53	233.8	4523.07	727.59	6696.18	1981.18	4562.95	95.00	1.13	0.59	0.97
	10904.00	90.06	0.06	236.5	4617.07	727.25	6695.54	1980.54	4656.69	94.00	0.89	-0.69	0.56
	10999.00	89.78	1.51	239.2	4712.06	728.55	6695.68	1980.68	4751.54	95.00	1.55	-0.29	1.53
	11094.00	90.34	2.36	239.2	4807.00	731.76	6695.58	1980.58	4846.47	95.00	1.07	0.59	0.89
	11188.00	90.09	1.82	241.9	4900.94	735.19	6695.22	1980.22	4940.42	94.00	0.63	-0.27	-0.57
	11283.00	90.15	1.64	247.3	4995.89	738.06	6695.03	1980.03	5035.34	95.00	0.20	0.06	-0.19
	11378.00	90.40	1.51	244.6	5090.86	740.67	6694.57	1979.57	5130.26	95.00	0.30	0.26	-0.14
	11472.00	90.12	1.19	244.6	5184.83	742.88	6694.14	1979.14	5224.15	94.00	0.45	-0.30	-0.34
	11567.00	91.05	0.59	244.6	5279.81	744.36	6693.17	1978.17	5319.00	95.00	1.16	0.98	-0.63
	11662.00	89.88	358.90	244.6	5374.80	743.93	6692.40	1977.40	5413.73	95.00	2.16	-1.23	-1.78
	11757.00	89.20	2.18	244.6	5469.78	744.83	6693.17	1978.17	5508.54	95.00	3.53	-0.72	3.45
	11852.00	88.77	6.55	247.3	5564.47	752.06	6694.85	1979.85	5603.50	95.00	4.62	-0.45	4.60
	11946.00	90.18	5.57	244.6	5657.94	761.98	6695.71	1980.71	5697.43	94.00	1.83	1.50	-1.04
	12041.00	90.06	359.86	244.6	5752.79	766.48	6695.51	1980.51	5792.37	95.00	6.01	-0.13	-6.01
	12136.00	89.94	357.99	250.0	5847.77	764.70	6695.51	1980.51	5886.99	95.00	1.97	-0.13	-1.97
	12230.00	90.03	358.32	250.0	5941.72	761.67	6695.54	1980.54	5980.50	94.00	0.36	0.10	0.35
	12325.00	89.78	358.31	250.0	6036.68	758.88	6695.69	1980.69	6075.03	95.00	0.26	-0.26	-0.01
	12420.00	90.45	358.66	252.7	6121.64	766.26	6695.75	1980.75	6169.59	95.00	0.54	0.29	0.27

	12420.00	90.13	356.66	252.7	6131.64	756.36	6696.73	1980.73	6169.36	95.00	0.54	0.39	0.37
	12515.00	89.45	1.22	252.7	6226.64	756.26	6696.08	1981.08	6264.33	95.00	2.79	-0.74	2.69
	12609.00	89.97	359.25	252.7	6320.63	756.65	6696.56	1981.56	6358.12	94.00	2.17	0.55	-2.10
	12704.00	90.37	358.51	255.4	6415.61	754.79	6696.28	1981.28	6452.74	95.00	0.89	0.42	-0.78
	12799.00	90.49	356.57	252.7	6510.51	750.72	6695.56	1980.56	6547.12	95.00	2.05	0.13	-2.04
	12894.00	89.91	356.22	252.7	6605.33	744.74	6695.23	1980.23	6641.28	95.00	0.71	-0.61	-0.37
	12988.00	90.37	359.03	255.4	6699.23	740.85	6695.00	1980.00	6734.69	94.00	3.03	0.49	2.99
	13083.00	90.00	0.15	255.4	6794.23	740.17	6694.70	1979.70	6829.40	95.00	1.24	-0.39	1.18
	13178.00	90.06	0.65	255.4	6889.23	740.83	6694.65	1979.65	6924.21	95.00	0.53	0.06	0.53
	13272.00	89.94	359.65	258.1	6983.23	741.08	6694.65	1979.65	7018.00	94.00	1.07	-0.13	-1.06
	13367.00	90.00	0.66	258.1	7078.22	741.33	6694.70	1979.70	7112.78	95.00	1.07	0.06	1.06
	13462.00	89.97	359.78	258.1	7173.22	741.70	6694.72	1979.72	7207.57	95.00	0.93	-0.03	-0.93
	13557.00	90.00	359.29	260.8	7268.22	740.93	6694.75	1979.75	7302.28	95.00	0.52	0.03	-0.52
	13652.00	89.94	357.44	255.4	7363.18	738.22	6694.80	1979.80	7396.81	95.00	1.95	-0.06	-1.95
	13746.00	90.18	358.74	258.1	7457.12	735.08	6694.70	1979.70	7490.31	94.00	1.41	0.26	1.38
	13841.00	90.18	358.21	258.1	7552.09	732.56	6694.40	1979.40	7584.86	95.00	0.56	0.00	-0.56
	13935.00	90.22	357.75	360.9	7646.03	729.24	6694.07	1979.07	7678.34	94.00	0.49	0.04	-0.49
	14030.00	90.22	358.49	260.8	7740.98	726.13	6693.71	1978.71	7772.84	95.00	0.78	-0.00	0.78
	14125.00	90.22	358.96	260.8	7835.95	724.01	6693.34	1978.34	7867.43	95.00	0.49	0.00	0.49
	14219.00	90.22	358.86	263.5	7929.93	722.22	6692.98	1977.98	7961.05	94.00	0.11	-0.00	-0.11
	14314.00	90.00	1.20	263.5	8024.93	722.27	6692.80	1977.80	8055.82	95.00	2.47	-0.23	2.46
	14408.00	90.22	1.01	263.5	8118.91	724.09	6692.62	1977.62	8149.70	94.00	0.31	0.23	-0.20
	14503.00	90.62	2.30	263.5	8213.86	726.83	6691.92	1976.92	8244.61	95.00	1.42	0.42	1.36
	14598.00	89.91	0.93	263.5	8308.82	729.51	6691.48	1976.48	8339.52	95.00	1.62	-0.75	-1.44
	14693.00	90.15	0.86	266.2	8403.81	730.99	6691.43	1976.43	8434.38	95.00	0.26	0.25	-0.07
	14787.00	89.78	1.62	266.2	8497.79	733.03	6691.49	1976.49	8528.27	94.00	0.90	-0.39	0.81
	14882.00	90.22	3.15	269.0	8592.70	736.98	6691.49	1976.49	8623.23	95.00	1.68	0.46	1.61
	14977.00	90.09	0.76	269.0	8687.64	740.22	6691.23	1976.23	8718.16	95.00	2.52	-0.14	-2.52
	15060.00	90.22	357.66	252.7	8770.62	739.08	6691.01	1976.01	8800.86	83.00	3.74	0.16	-3.73
	15155.00	90.00	357.55	252.7	8865.54	735.11	6690.82	1975.82	8895.26	95.00	0.26	-0.23	-0.12
	15249.00	89.94	359.93	255.4	8959.51	733.04	6690.87	1975.87	8988.86	94.00	2.53	-0.06	2.53
	15344.00	90.22	1.26	255.4	9054.50	734.02	6690.74	1975.74	9083.68	95.00	1.43	0.29	1.40
	15439.00	90.28	0.99	255.4	9149.48	735.89	6690.33	1975.33	9178.56	95.00	0.29	0.06	-0.28
	15534.00	90.00	2.27	258.1	9244.44	738.59	6690.09	1975.09	9273.48	95.00	1.38	-0.29	1.35
	15628.00	90.00	0.99	258.1	9338.40	741.27	6690.09	1975.09	9367.39	94.00	1.36	0.00	-1.36
	15723.00	90.09	1.43	260.8	9433.38	743.27	6690.02	1975.02	9462.28	95.00	0.47	0.09	0.46
	15818.00	90.00	1.46	260.8	9528.35	745.67	6689.95	1974.95	9557.18	95.00	0.10	-0.09	0.03
	15912.00	89.78	1.98	263.5	9622.31	748.49	6690.13	1975.13	9651.11	94.00	0.60	-0.23	0.55
	16007.00	90.25	1.11	263.5	9717.27	751.05	6690.10	1975.10	9746.02	95.00	1.04	0.49	-0.92
	16102.00	89.35	1.58	263.5	9812.24	753.28	6690.43	1975.43	9840.91	95.00	1.07	-0.95	0.49
	16197.00	89.63	1.81	263.5	9907.20	756.09	6691.28	1976.28	9935.83	95.00	0.38	0.29	0.24
	16291.00	90.46	3.02	266.2	10001.11	760.05	6691.20	1976.20	10029.79	94.00	1.56	0.88	1.29
	16386.00	89.72	4.16	266.2	10095.92	766.00	6691.06	1976.06	10124.78	95.00	1.43	-0.78	1.20
	16481.00	90.25	1.41	266.2	10190.80	770.61	6691.08	1976.08	10219.75	95.00	2.95	0.56	-2.89
	16576.00	89.66	2.31	266.2	10285.75	773.70	6691.15	1976.15	10314.68	95.00	1.13	-0.62	0.95
	16670.00	89.20	2.30	269.0	10379.67	777.48	6692.09	1977.09	10408.64	94.00	0.49	-0.49	-0.01
	16765.00	89.97	1.93	269.0	10474.60	780.98	6692.78	1977.78	10503.58	95.00	0.90	0.81	-0.39
	16860.00	89.72	2.19	269.0	10569.54	784.40	6693.03	1978.03	10598.52	95.00	0.38	-0.26	0.27
	16954.00	90.22	0.16	263.5	10663.51	786.33	6693.08	1978.08	10692.40	94.00	2.22	0.53	-2.16
	17049.00	89.38	0.46	266.2	10758.51	786.84	6693.42	1978.42	10787.20	95.00	0.94	-0.88	0.32
	17144.00	89.78	0.35	269.0	10853.51	787.51	6694.11	1979.11	10882.01	95.00	0.44	0.42	-0.12
Projection	17198.00	89.78	0.35	N/A	10907.50	787.84	6694.32	1979.32	10935.90	54.00	0.00	-0.01	-0.00