



Gamma Ray

LWD MEMORY LOG

Scale: **1:240 TVD**

Company: **Noble Energy**
Well: **Hurley H26-768**

Field: **Wattenberg**

Driller's Depth
County: **Weld** Country: **United States**
State: **Colorado**

Status: **Final Print** Surface Location: Other Services:

API No: **05-123-46766-00** Latitude: **040° 11' 49.560" N**

Longitude: **104° 38' 07.764" W**

Job ID: **9172372** SEC: **26** TWN: **3N** RGE: **65W**

Permanent Datum (P.D.): **Ground Level** Elevation: **4822.00 ft**

Log Measured From: **Rig Floor** Above P.D. 30.00 ft

Elev. KB: **4852.00 ft**
Elev. DF: **4822.00 ft**
Elev. GL: **4822.00 ft**

Dates Interval Drilled Magnetic Field Reference

Date From:	2018-06-07	Top: (ft)	1943.00	Azi Reference North:	Grid	Dip Angle: (deg)	66.73
Date To:	2018-06-10	Bottom: (ft)	16146.00	Total Magnetic Field Strength: (nT)			52121
Spud Date:	2018-06-06			Mag to Reference North Correction: (deg)			7.56

Borehole Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
13.500	30.00	1943.00	9.625	36.00	30.00	1933.00
8.500	1943.00	16146.00				

Casing Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
13.500	30.00	1943.00	9.625	36.00	30.00	1933.00
8.500	1943.00	16146.00				

Mud Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
Oil Based Mud	1943.00	16146.00	8.500	14203.00	0.51 317.84	90.03 354.80

Deviation Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
Oil Based Mud	1943.00	16146.00	8.500	14203.00	0.51 317.84	90.03 354.80

Acquisition System

Software Version

Other

Baker Hughes Cadence
Plot Studio

RT 4.2
4.2.8155.1

Rig: H&P 517
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 (h)
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	3.00	Rotary Steerable	1943.00	16133.00	1943.00	16146.00	2018-06-07 13:25	2018-06-09 17:42	47.91

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Adam Schlenz	2018-06-06	2018-06-10						

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2018-06-07 13:45	1	2032.00	Oil Based Mud	9.4	13	N/A	16.4	70/18	Active Pit	30000	0.00
2018-06-08 02:30	1	6055.00	Oil Based Mud	9.2	11	N/A	16.0	75/14	Active Pit	21500	0.00
2018-06-08 10:45	1	7864.00	Oil Based Mud	9.3	11	N/A	16.0	74/15	Active Pit	20000	0.00
2018-06-09 02:30	1	12497.00	Oil Based Mud	9.7	14	N/A	16.0	73/14	Active Pit	23500	0.00
2018-06-09 13:30	1	15226.00	Oil Based Mud	9.6	15	N/A	23.8	73.5/13	Active Pit	24000	0.00

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	ATC_SU	14186736	Near Bit Inclination	5.93	6.73	7.000	4.330
1	ATC_SU	14186736	Near Bit VSS	5.93	6.73	7.000	4.330
1	ATC_MWD	14269330	Gamma (single)	2.76	12.90	7.000	3.250
1	ATC_MWD	14269330	Directional (mag)	12.27	22.41	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

Comments


- Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes, depth calibrations and measurements could not be independently verified.
- Baker Hughes LWD run 1 utilized a 6.75 inch NaviGamma service (Directional and Gamma Ray) behind a 8.5 inch bit and rotary steerable assembly from 1943 to 16146 feet MD (1943 to 6978 feet TVD).
- The Gamma Ray Apparent (GRAM) data is presented 0 to 300 API, per the customer's request.

Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark

Curve Mnemonics

Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAM	Gamma Ray - Apparent - Memory 0.5 ft Average	API
TCDM	Directional Real-Time Survey Temperature	degF

	Company	Noble Energy	
	Well	Hurley H26-768	
	Interval	Date From: 2018-06-07 12:15	Top: 1943.00 ft
	Created	Date To: 2018-06-10 02:37	Bottom: 16146.00 ft
		Created 2018-06-10 03:50:42	

Gamma Ray - Apparent 0.5 ft Average GRAM 0 300	TVD 1:240 feet	Depth Averaged ROP 3 ft Average ROPA 1000 0	Weight On Bit, Average 1 ft Average WOBA 0 50
API		ft/h	klb
			Downhole Temperature TCDM 0 300
			degF

9 5/8" Casing

RT

GRAM

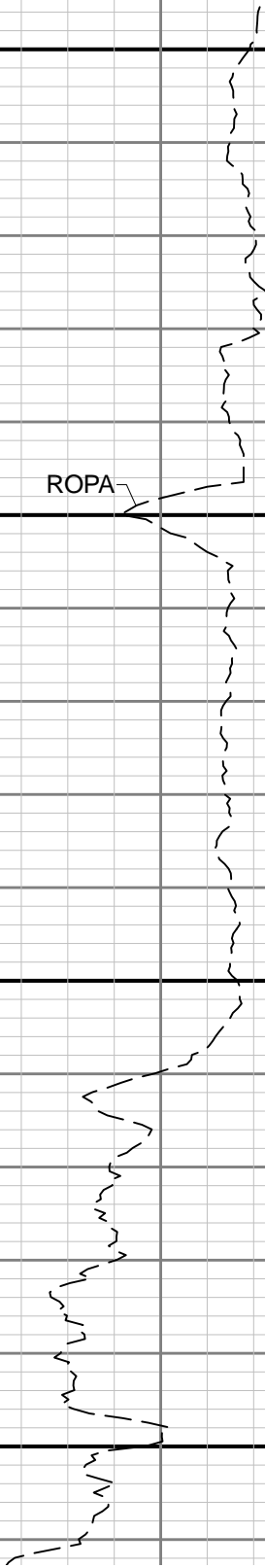
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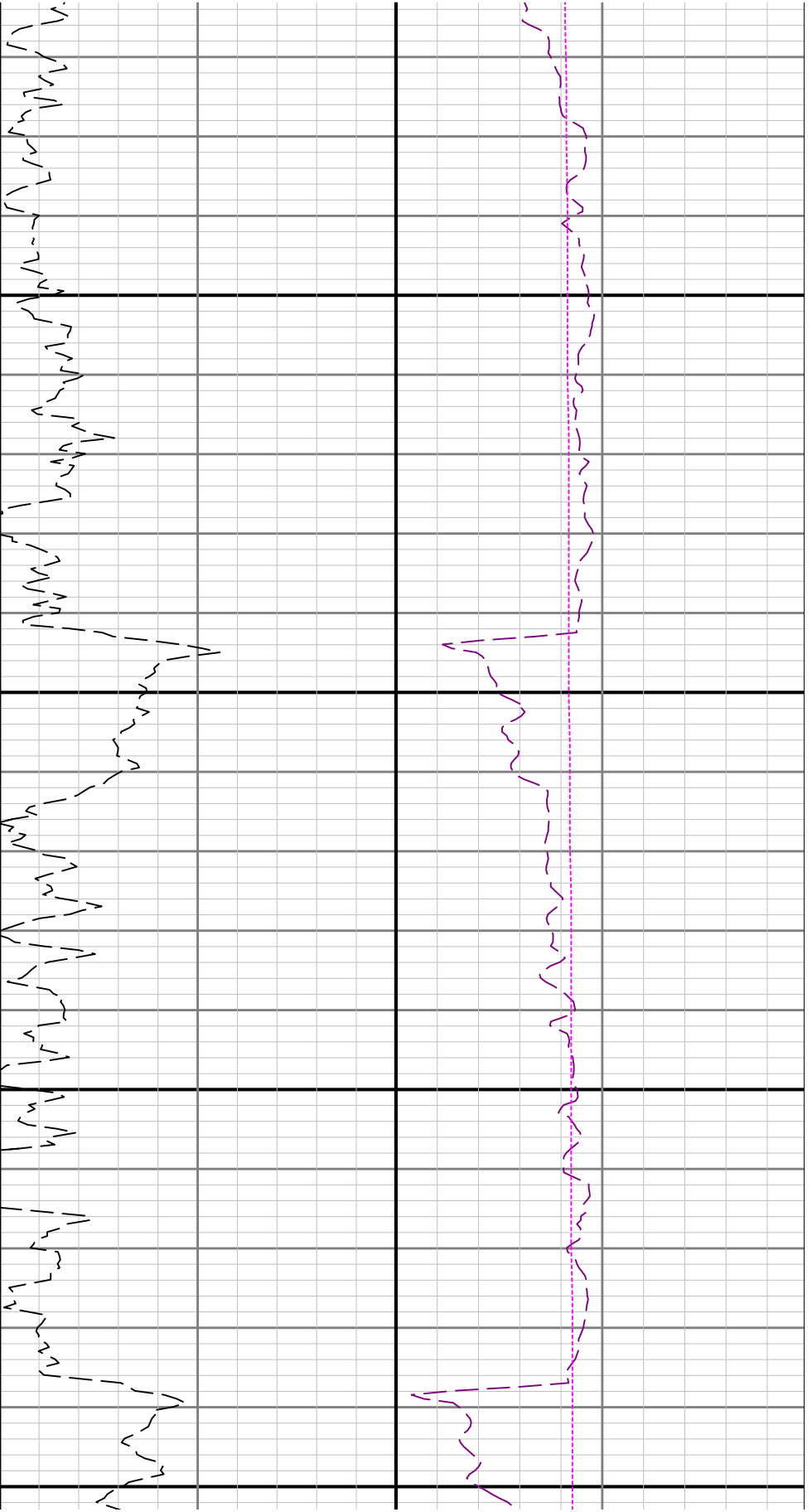
ROPA

WOBA

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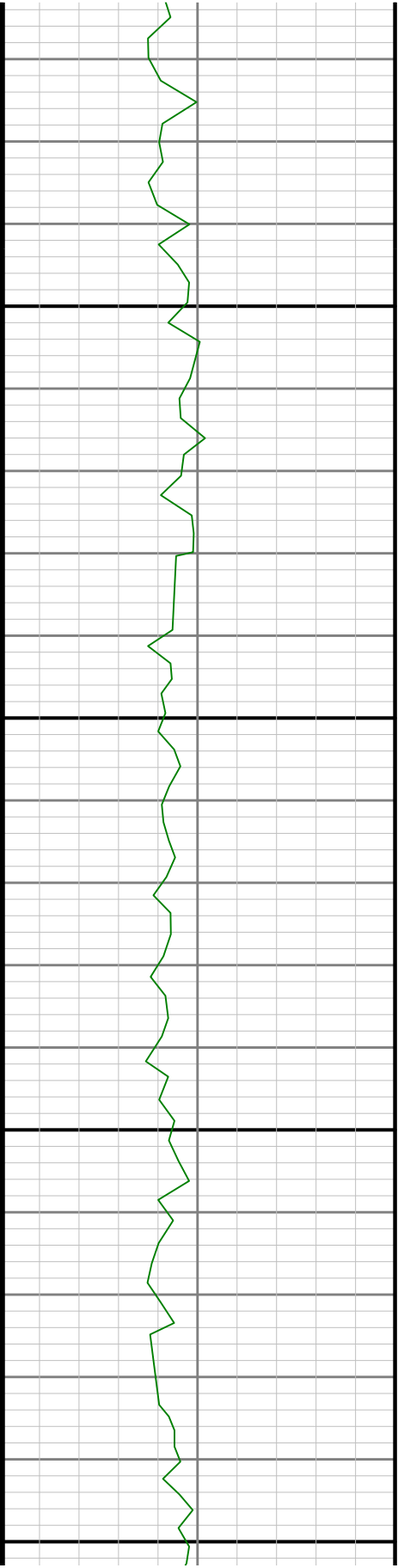
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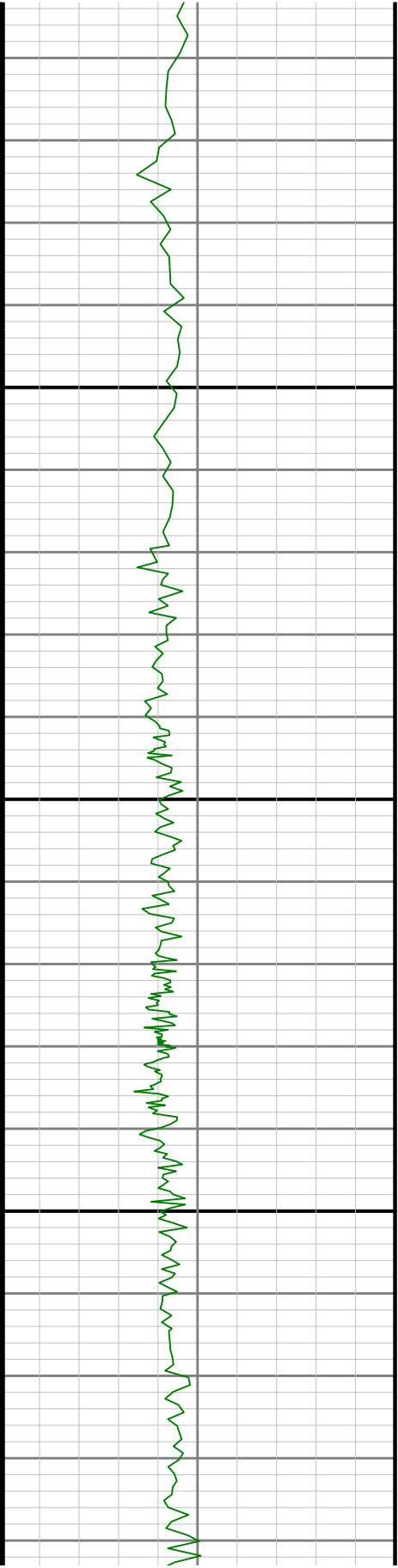




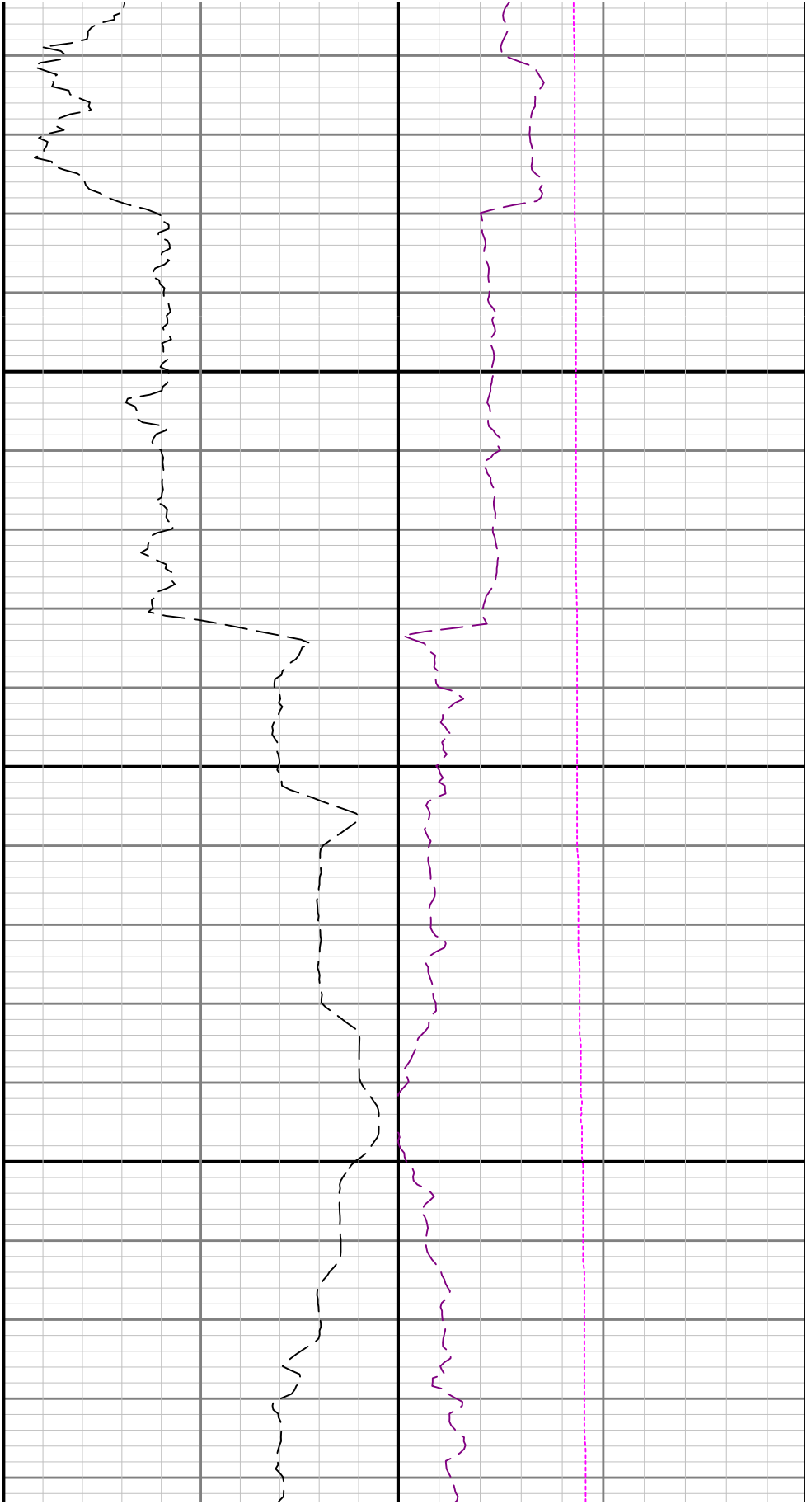
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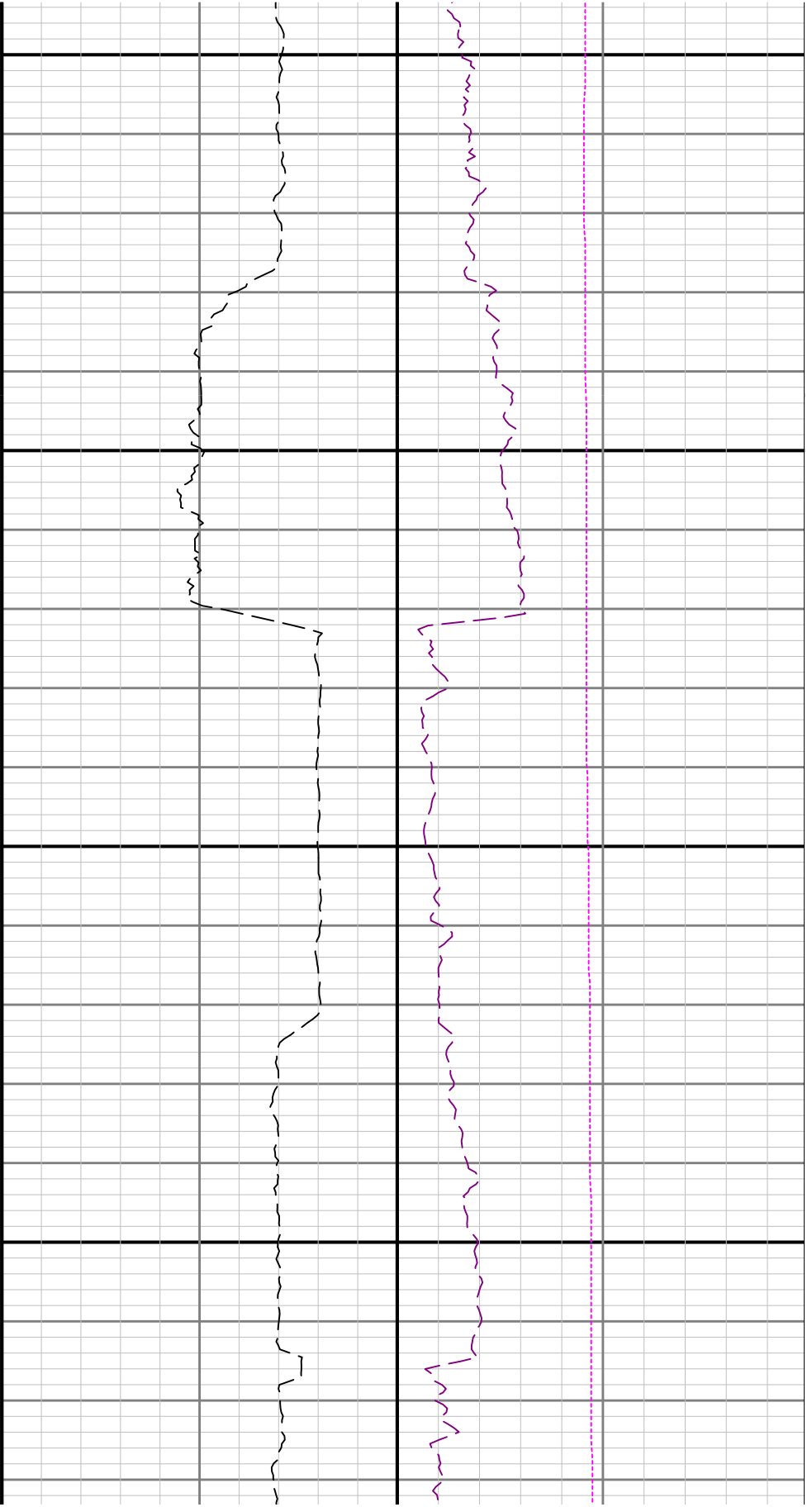
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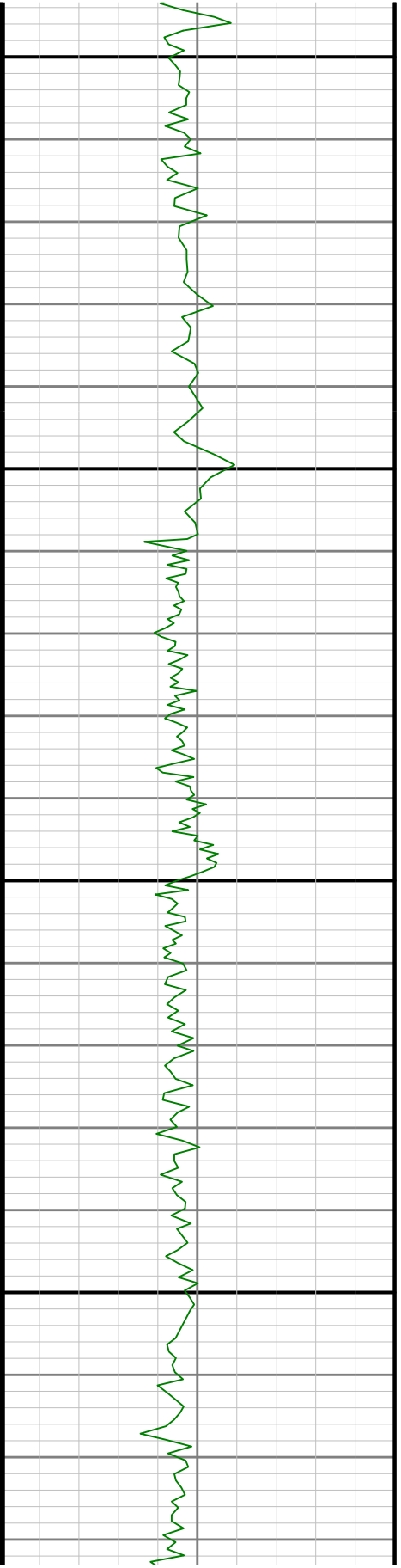
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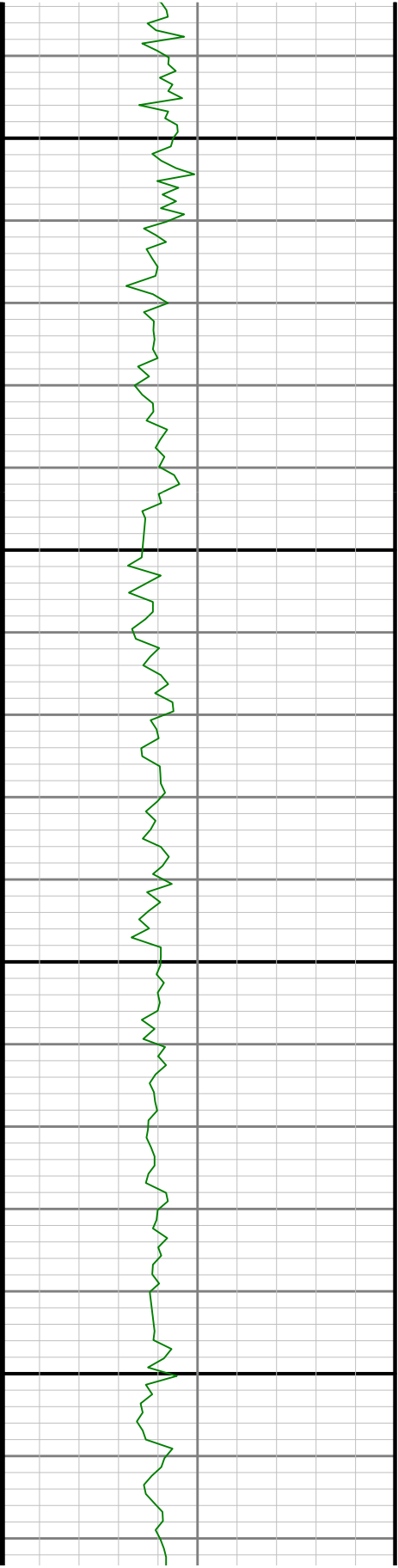




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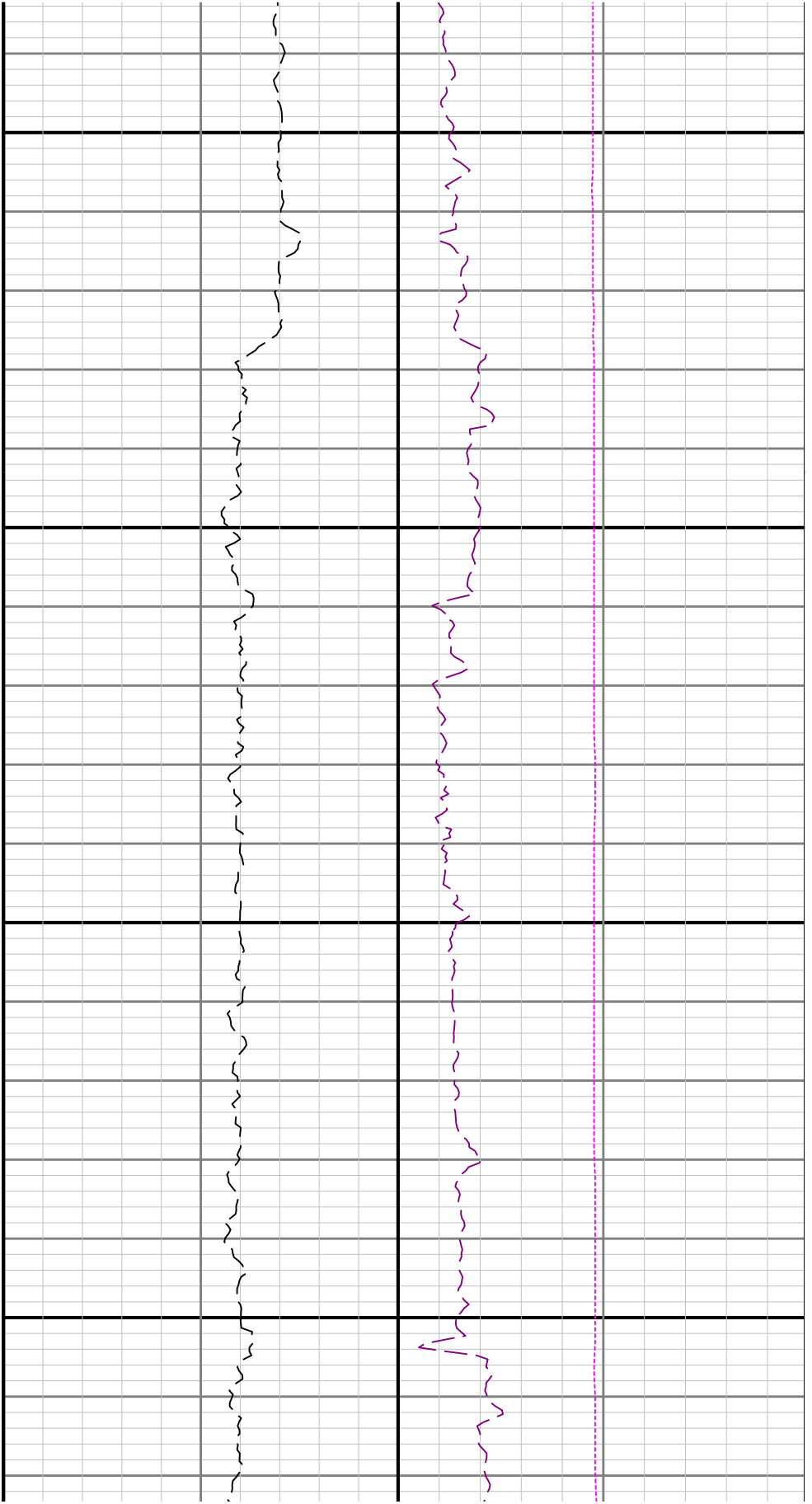
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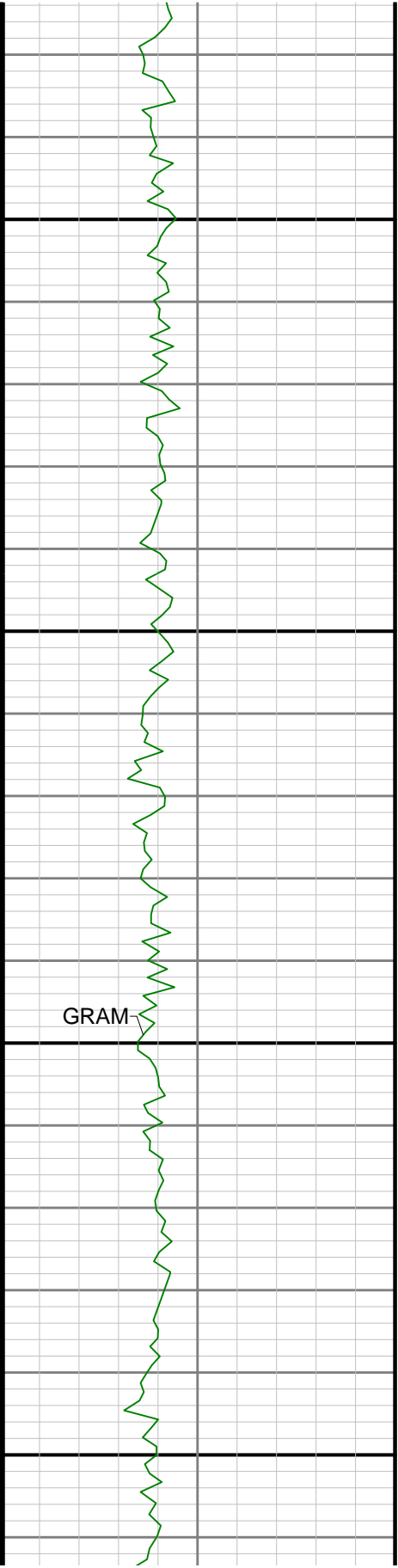




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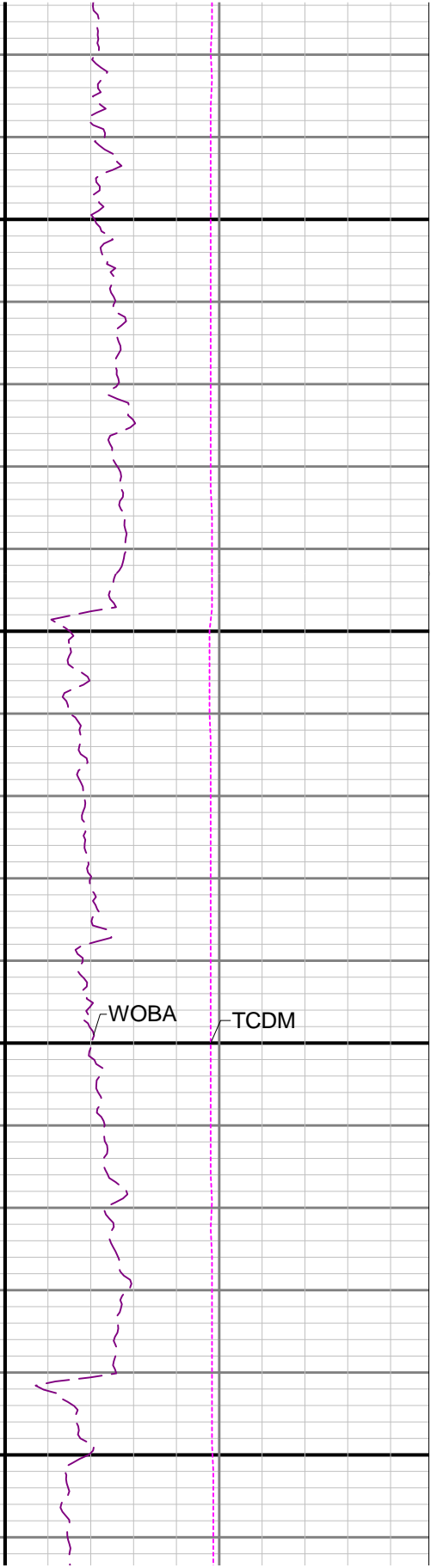
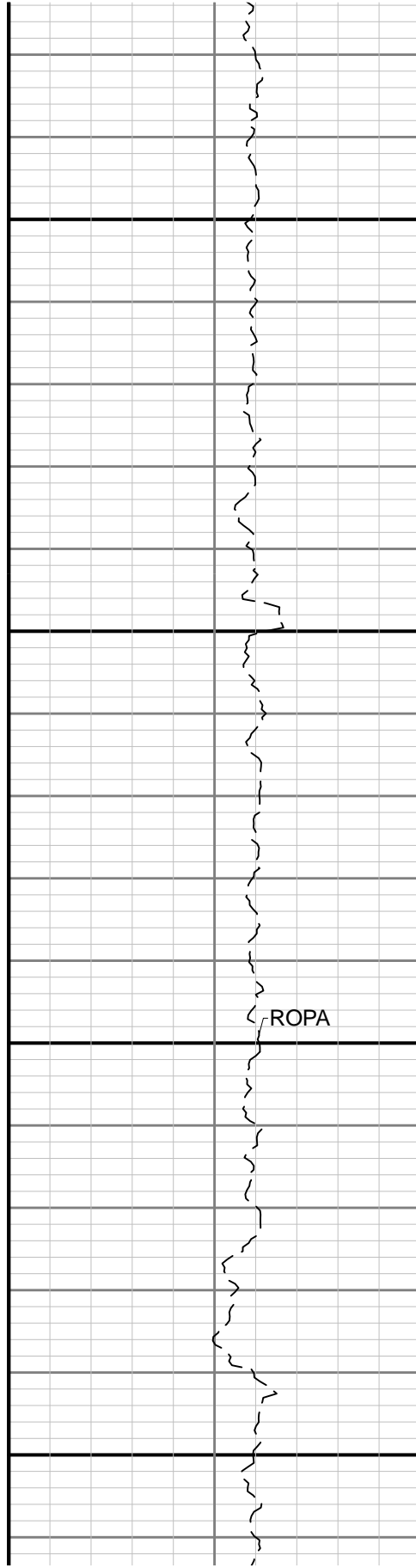
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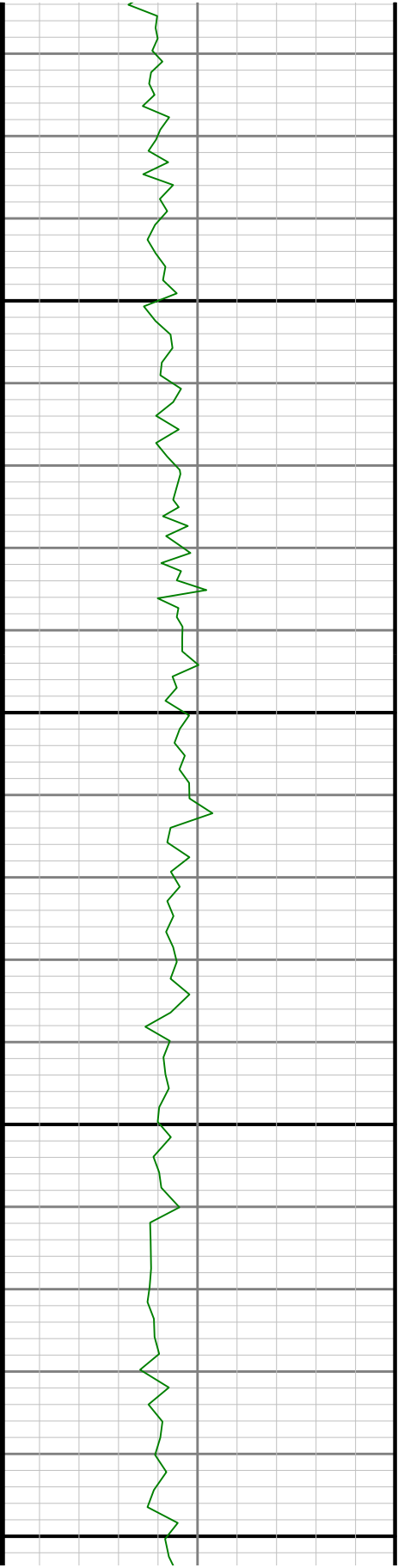




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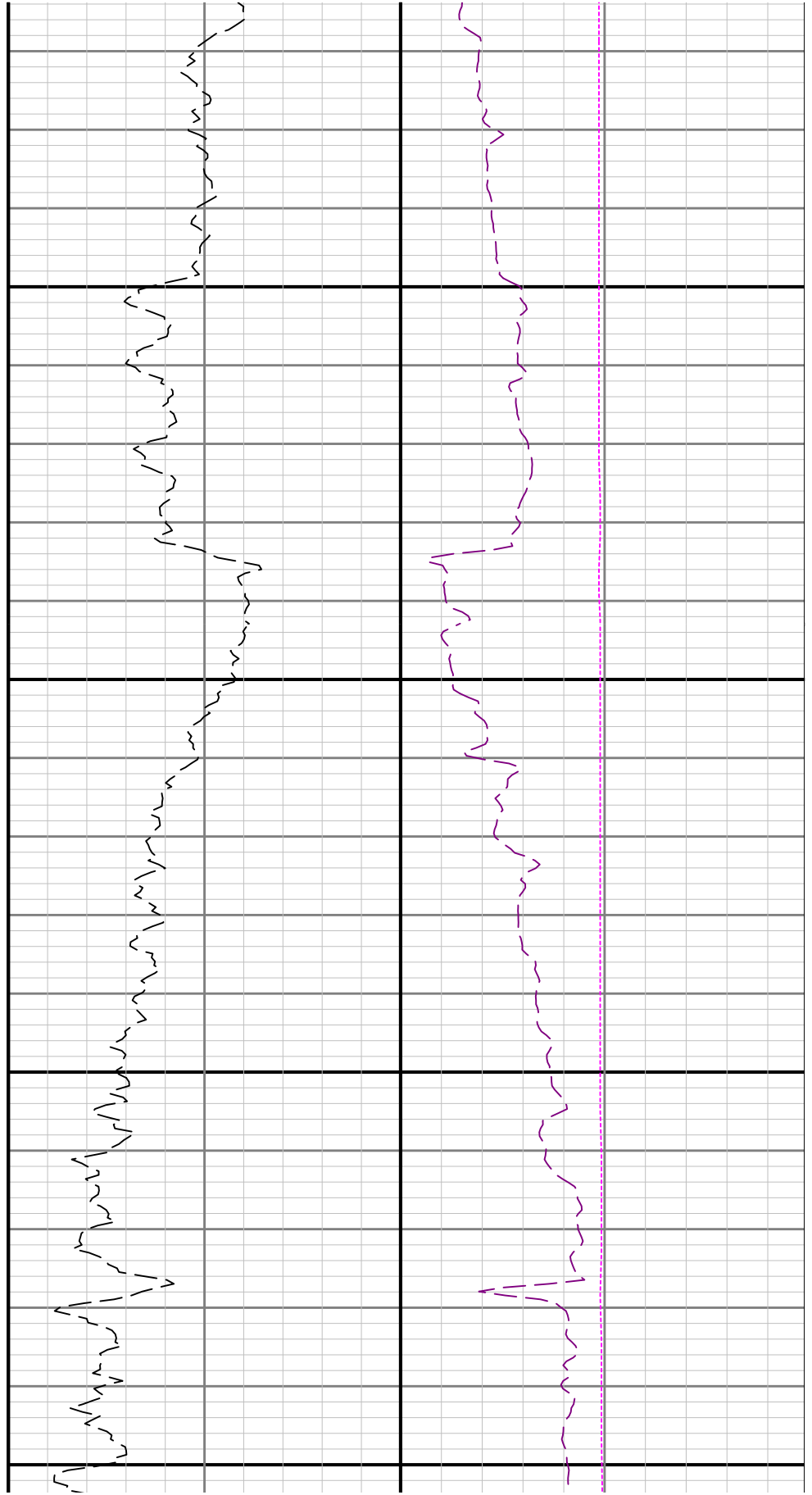
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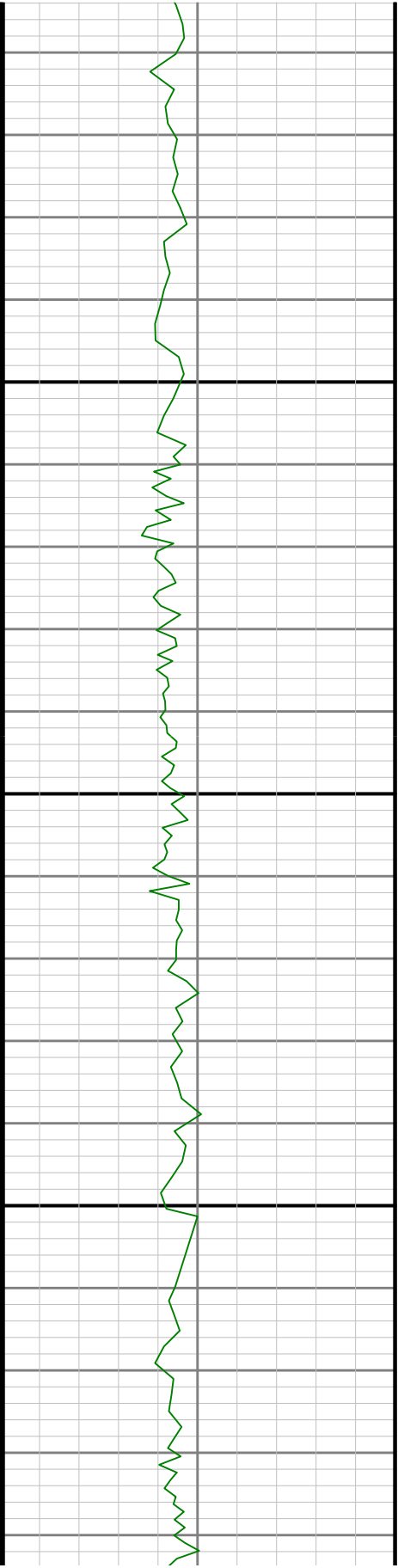




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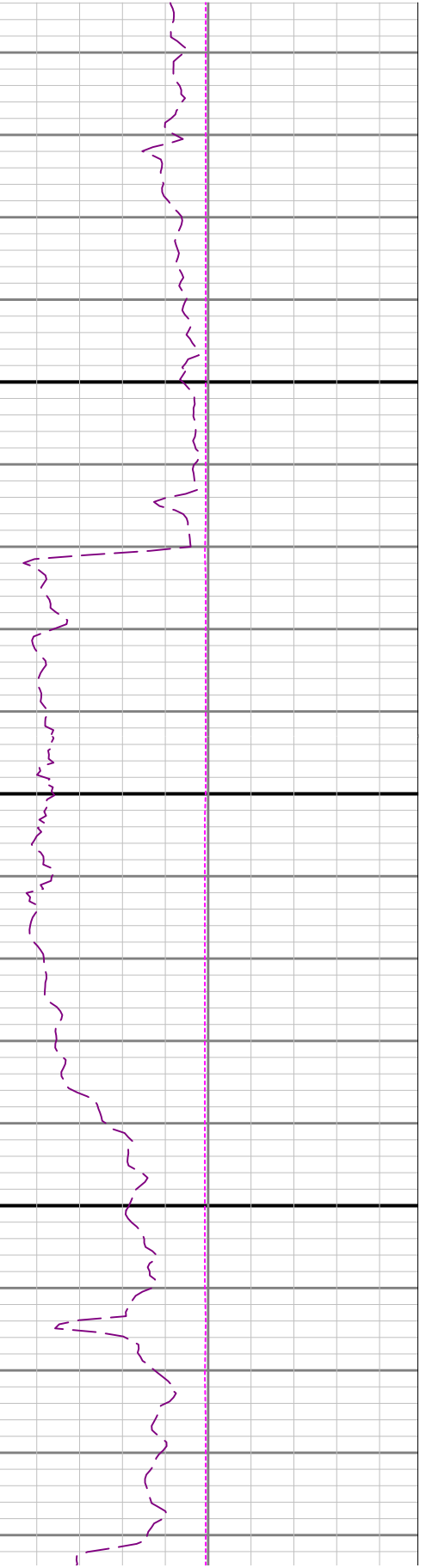
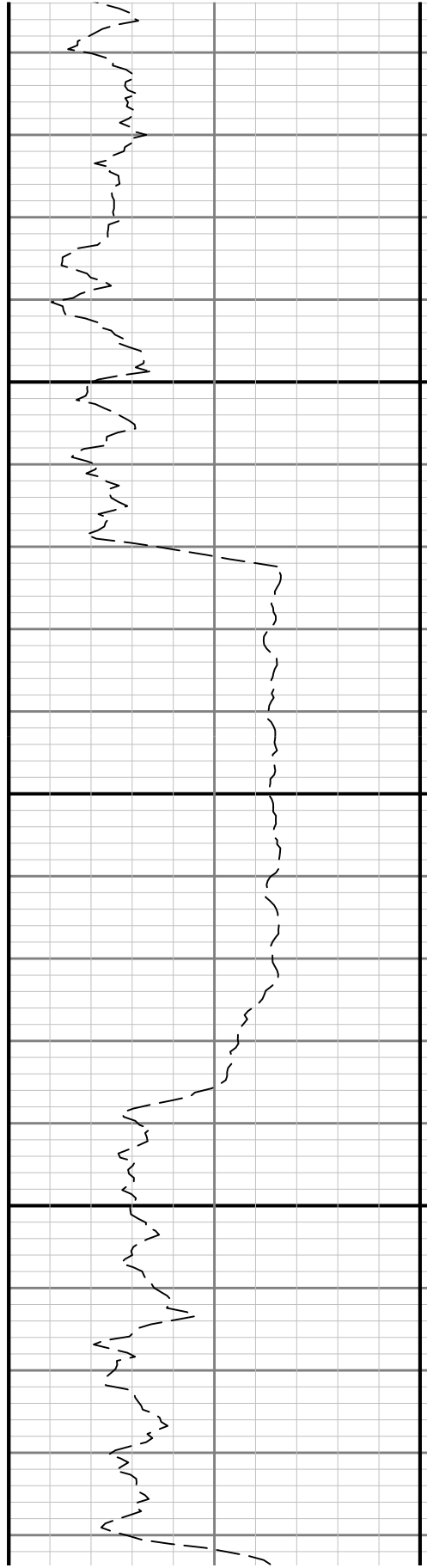
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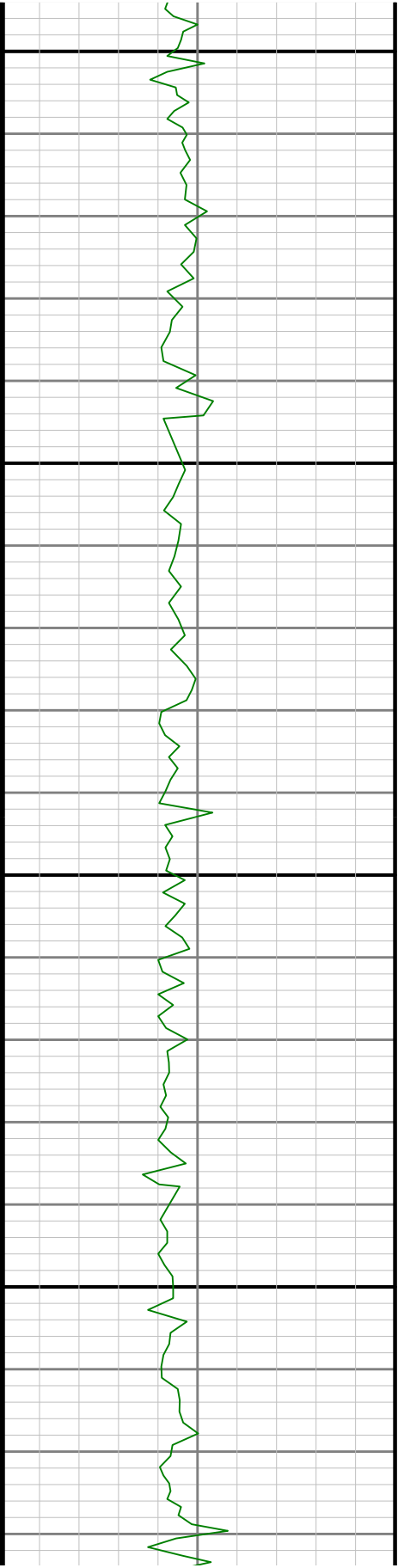




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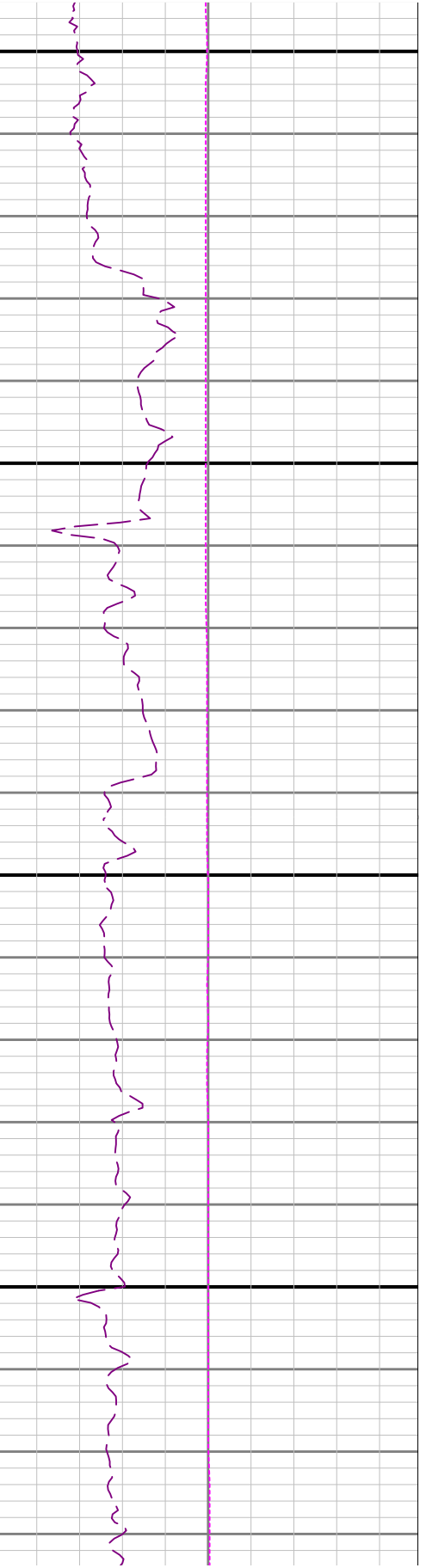
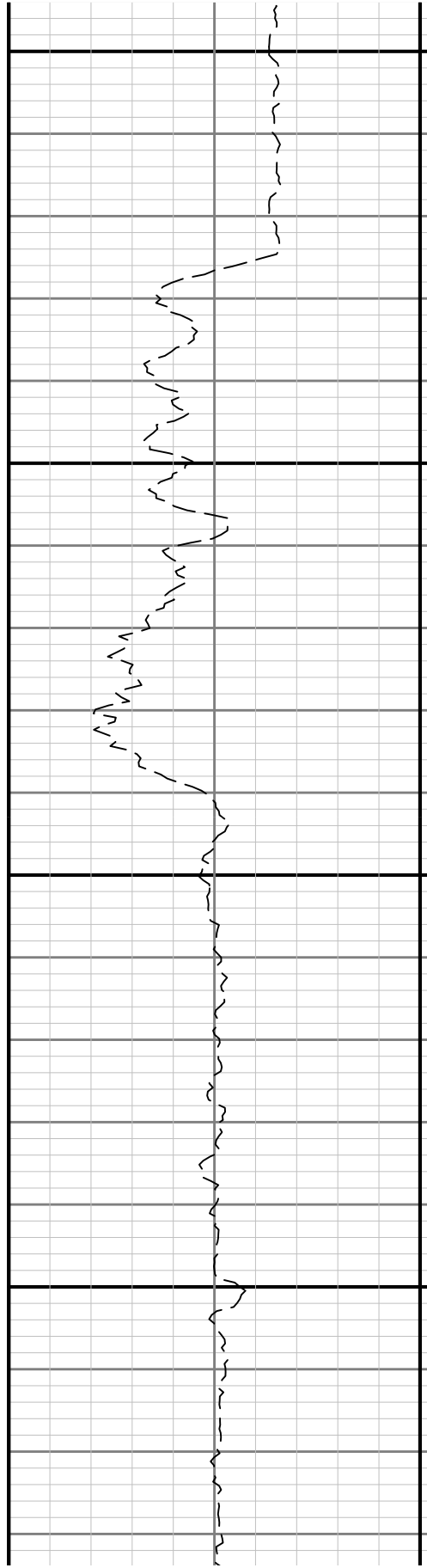
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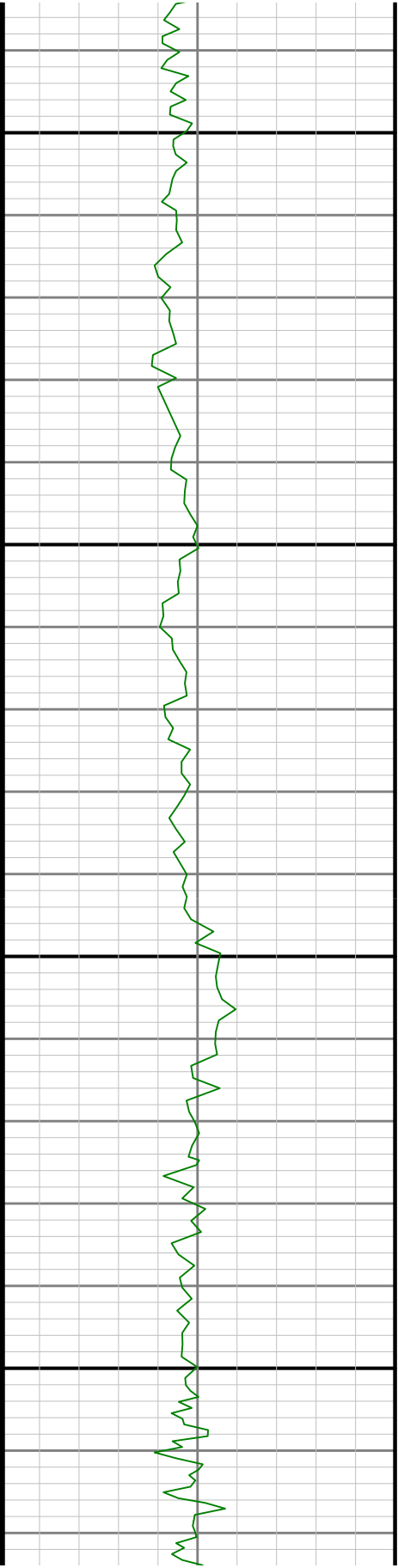




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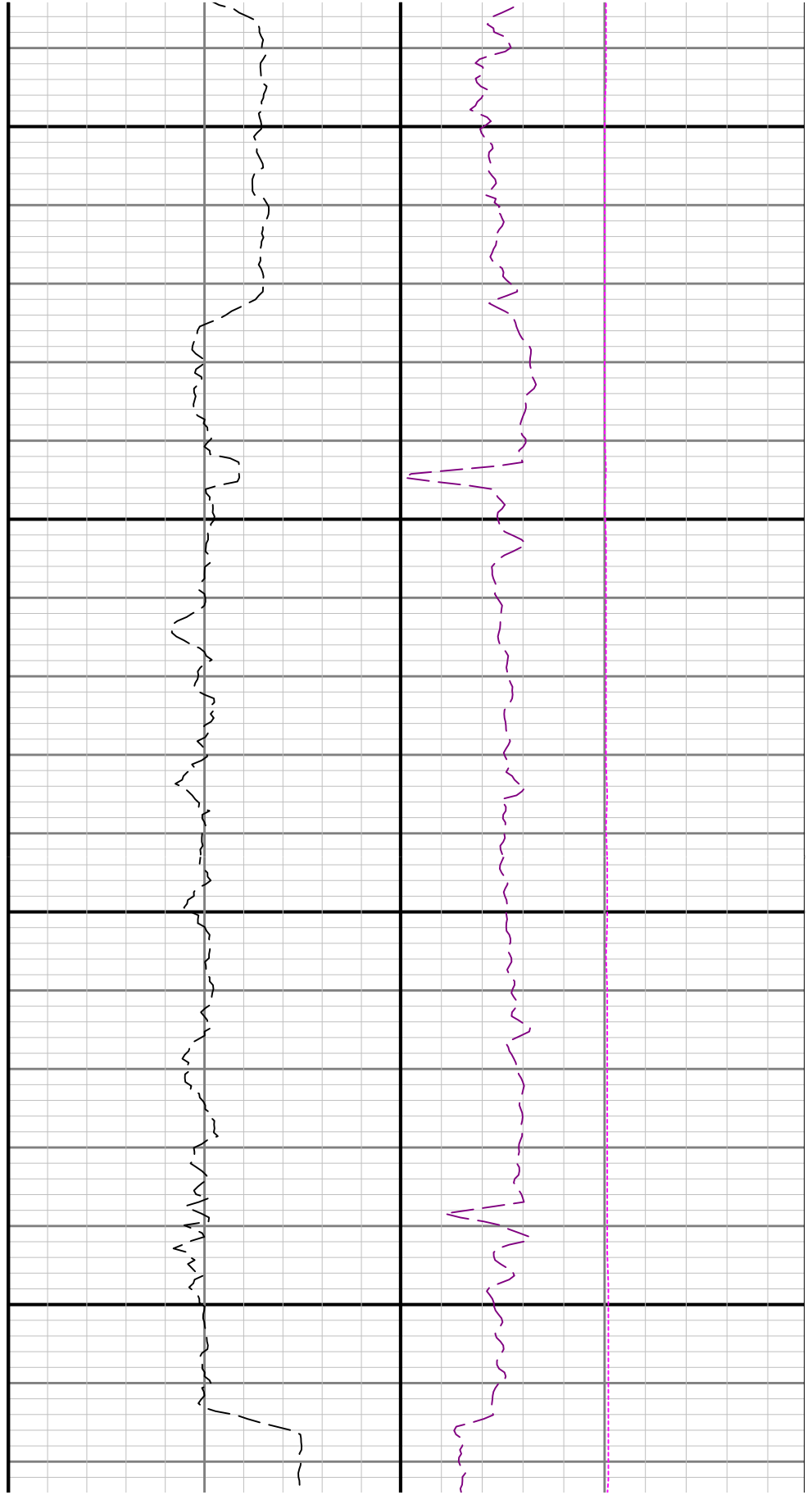
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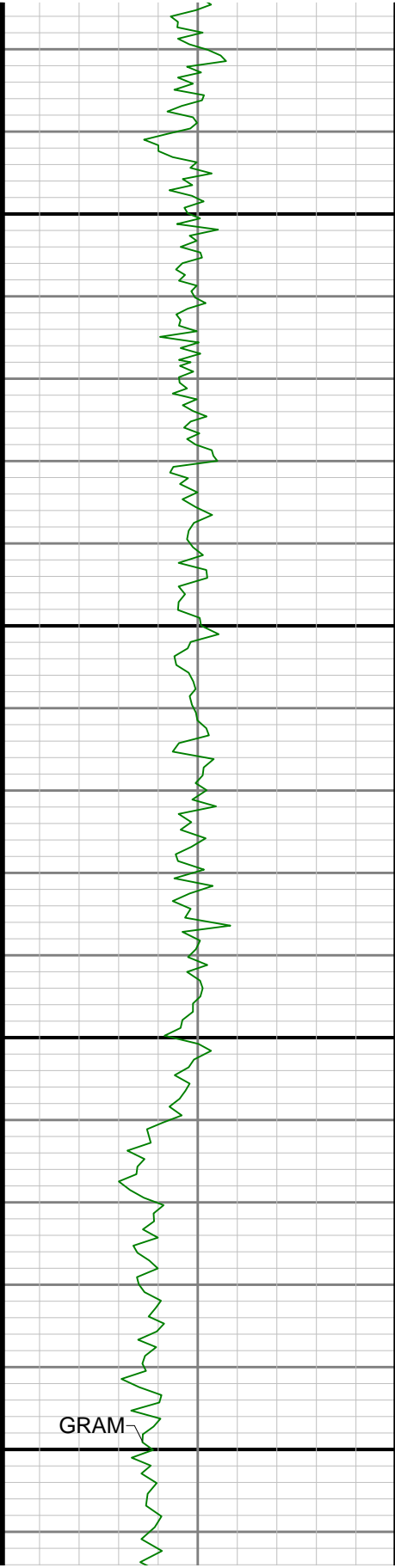




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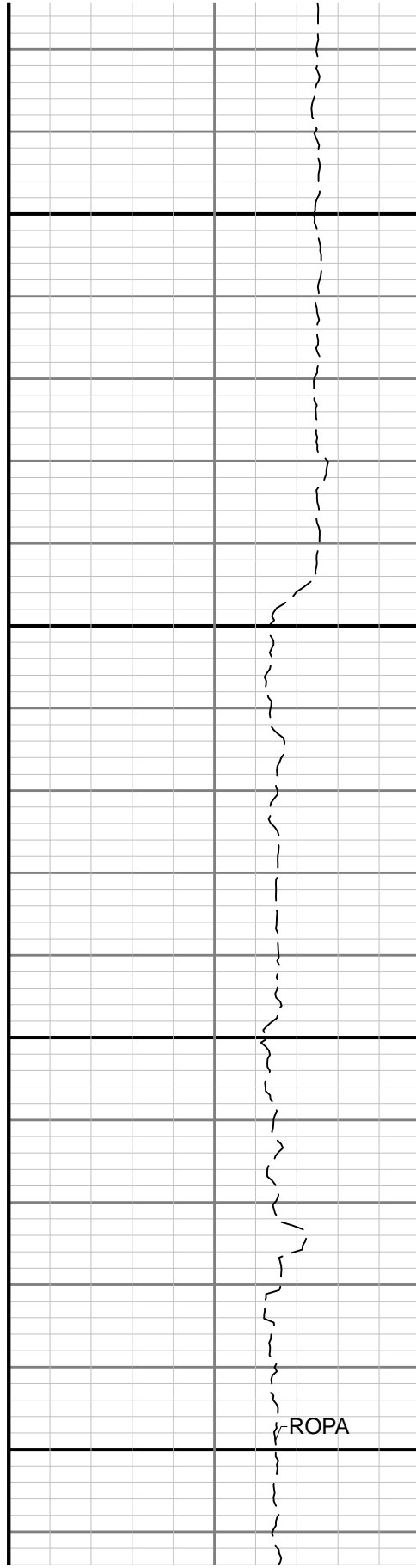
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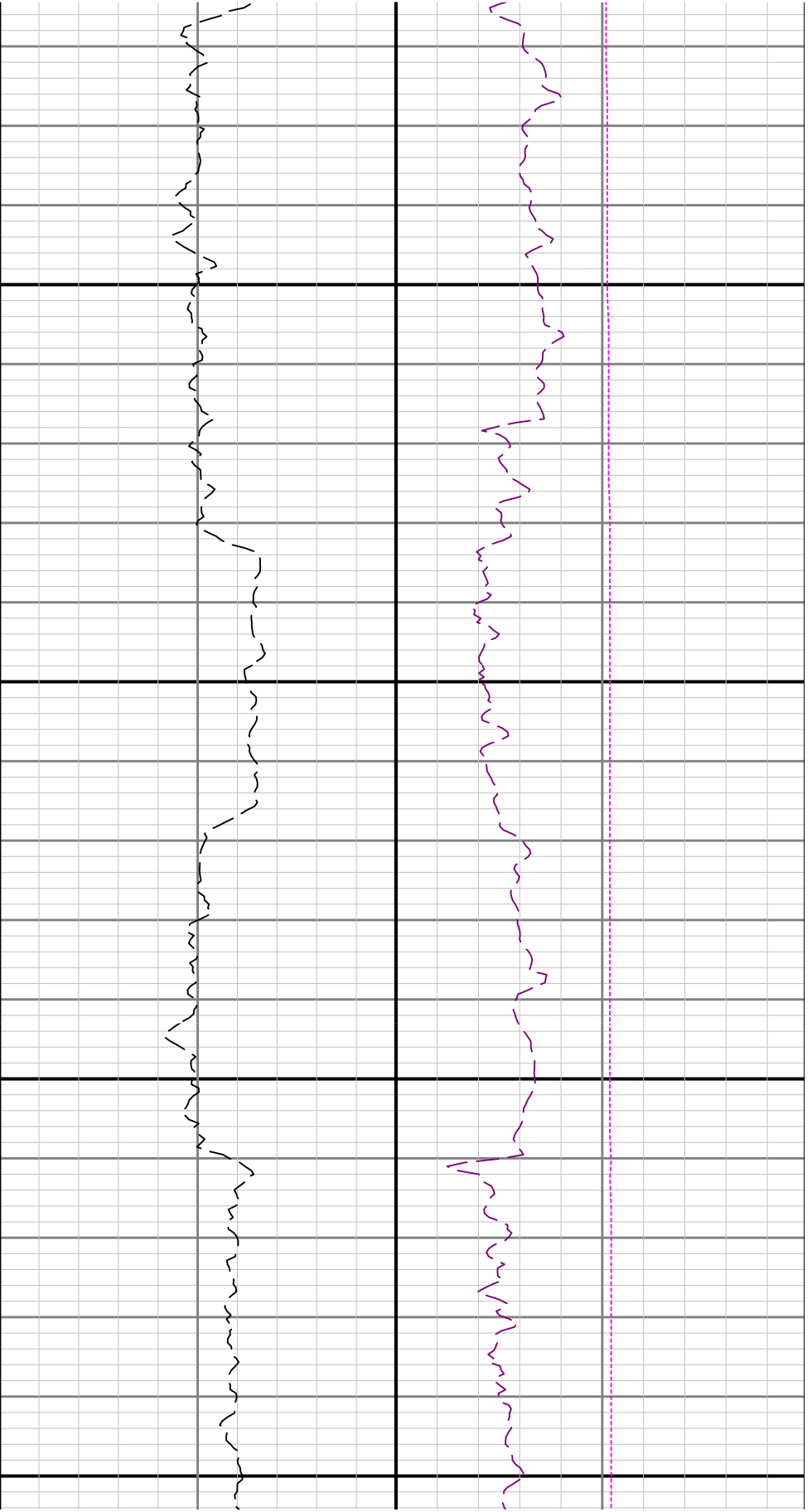




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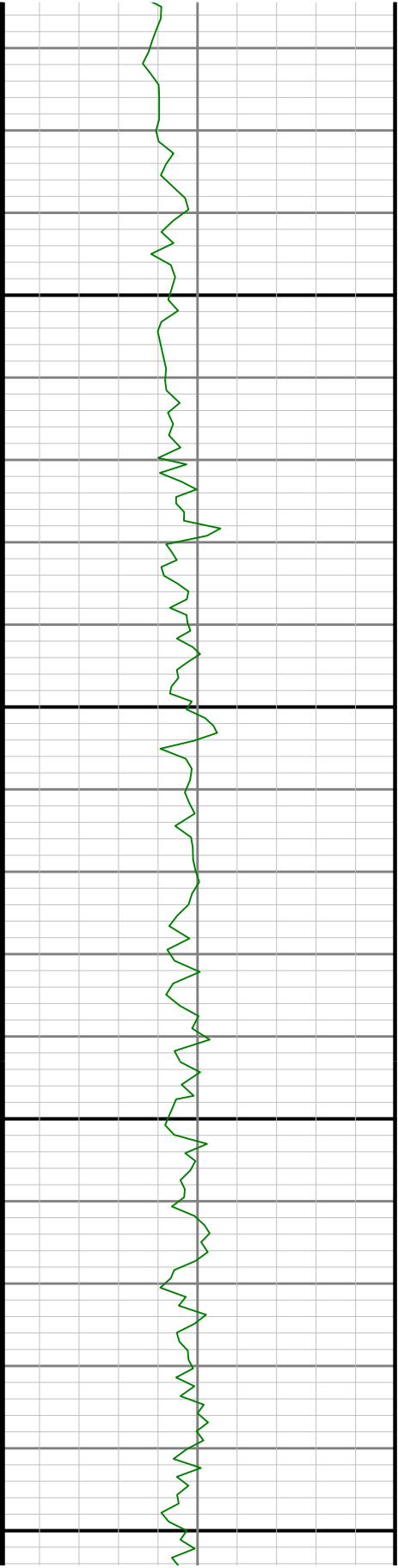
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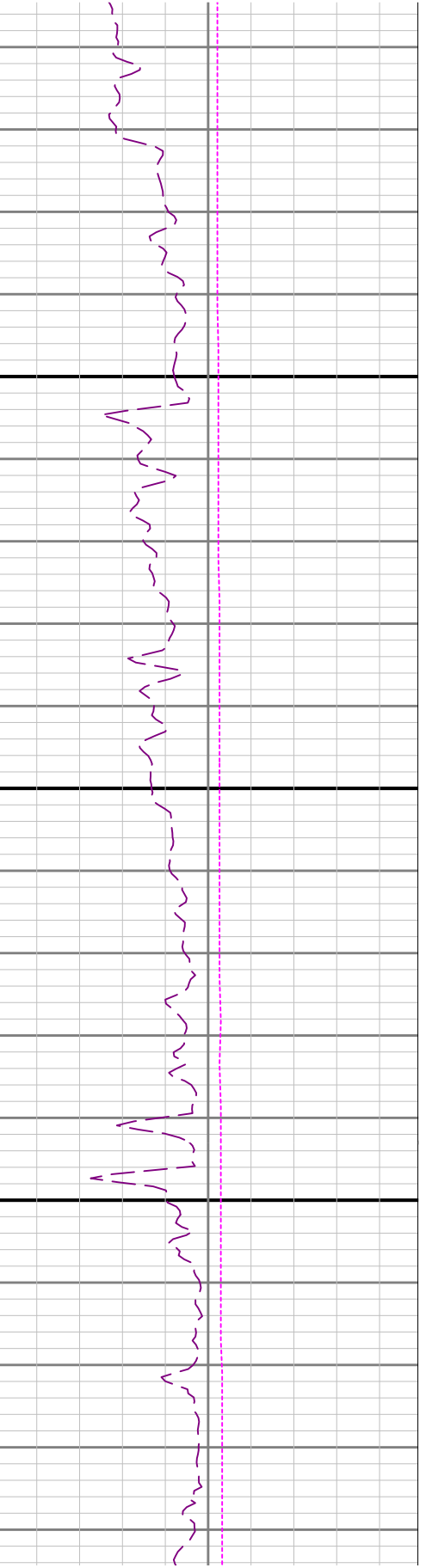
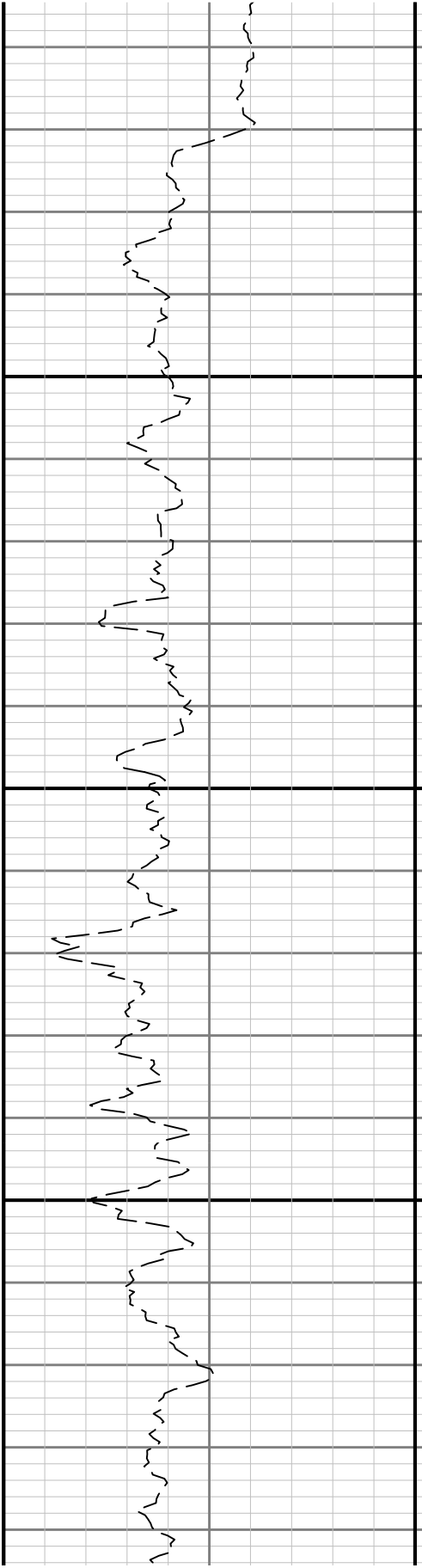
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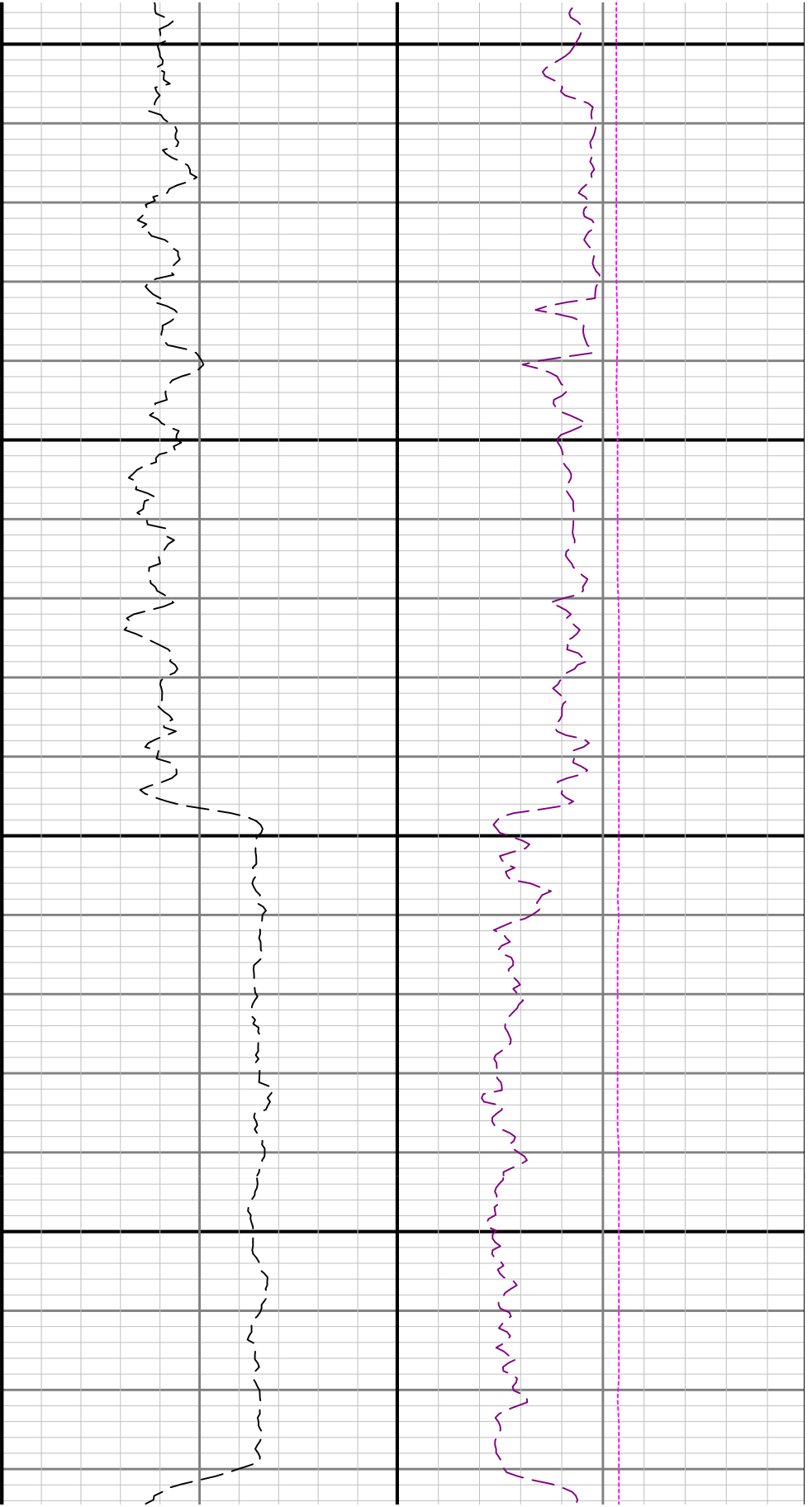
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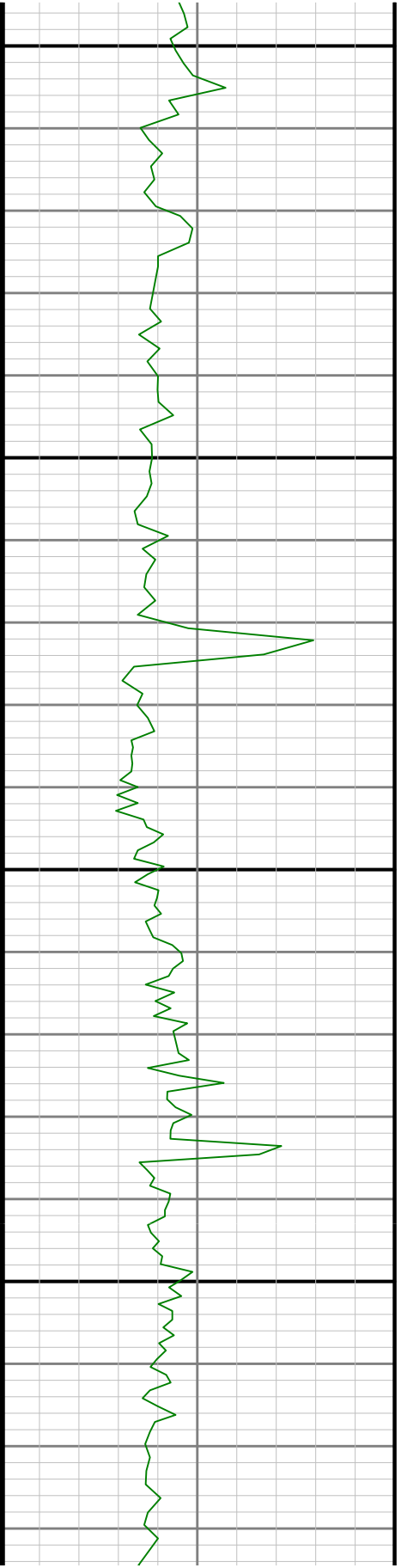
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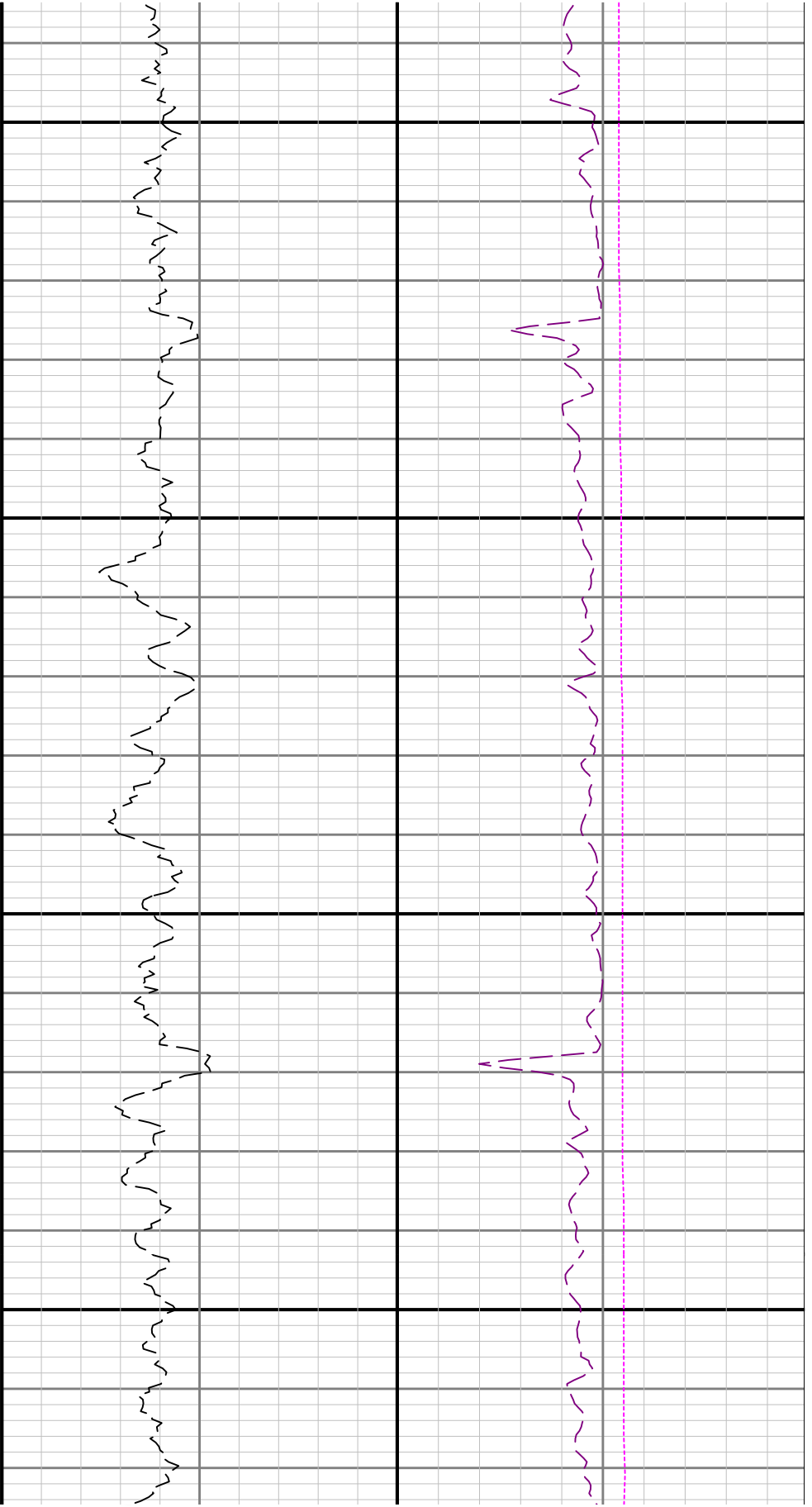




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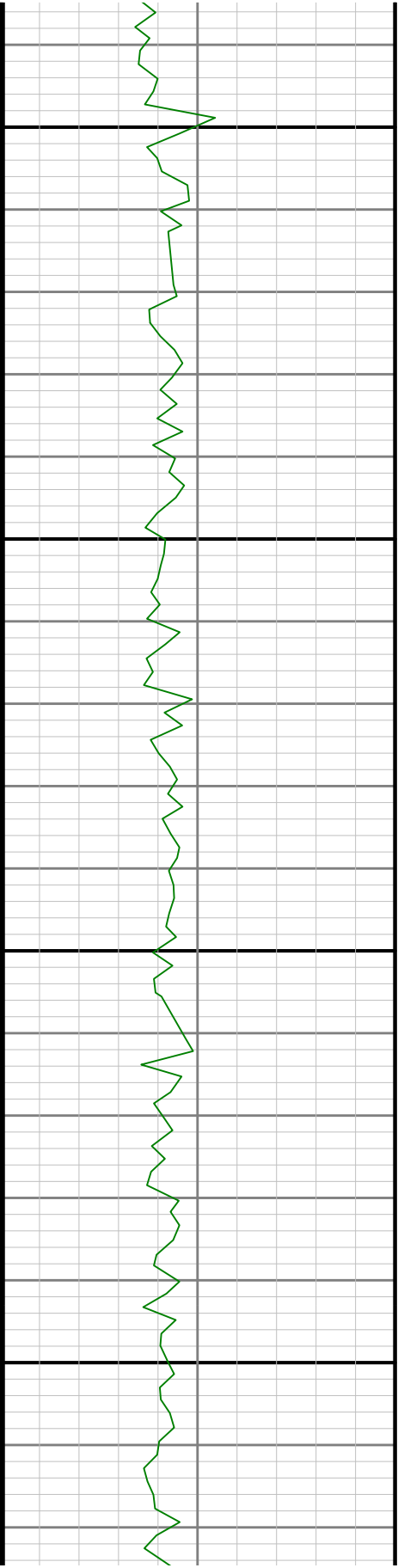
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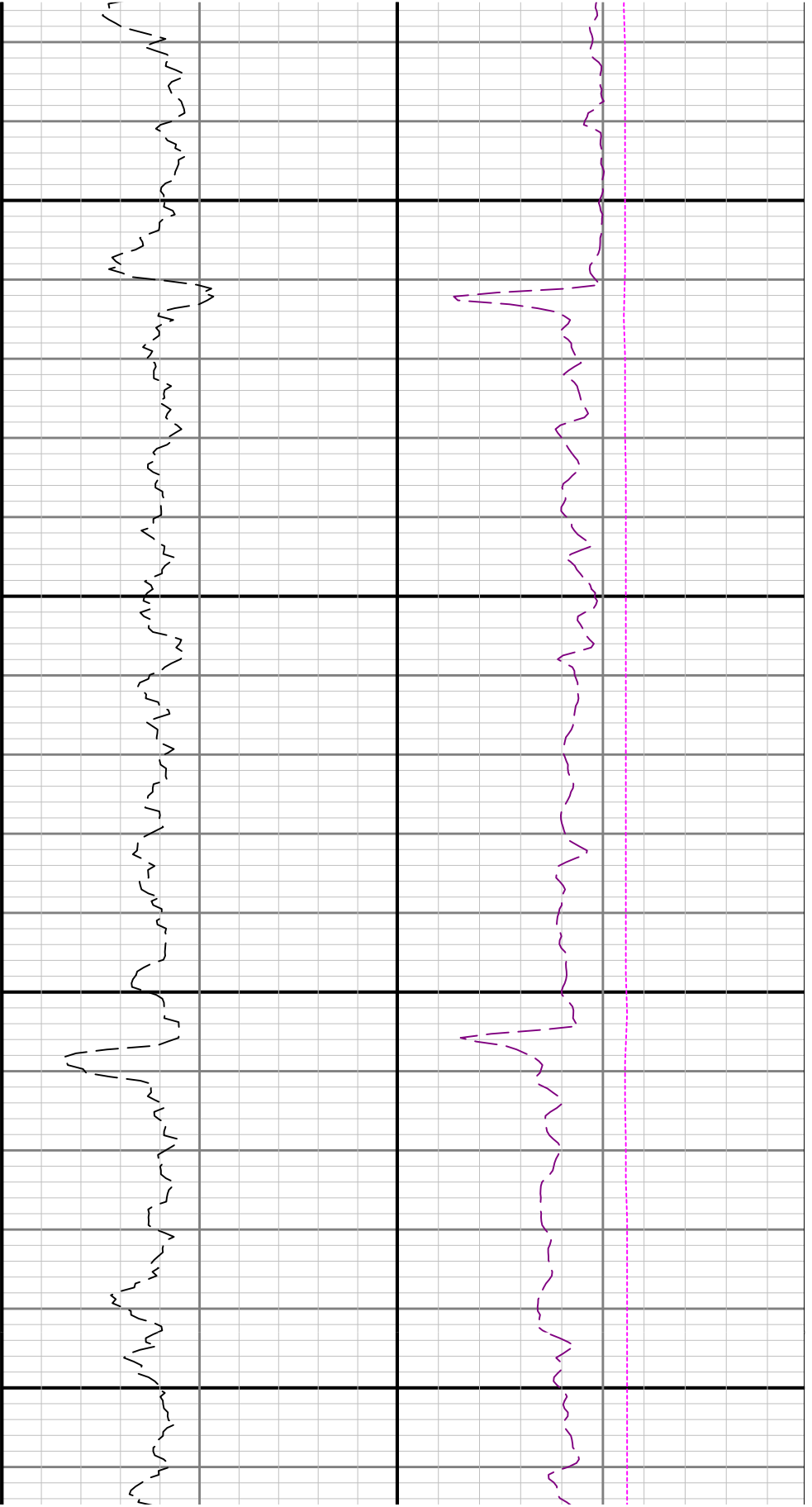




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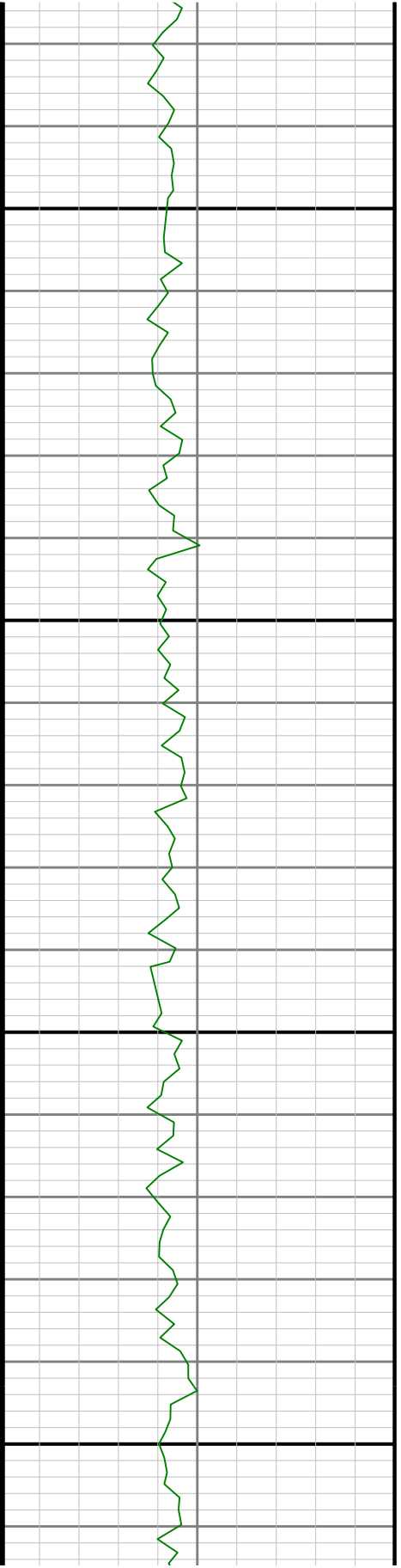
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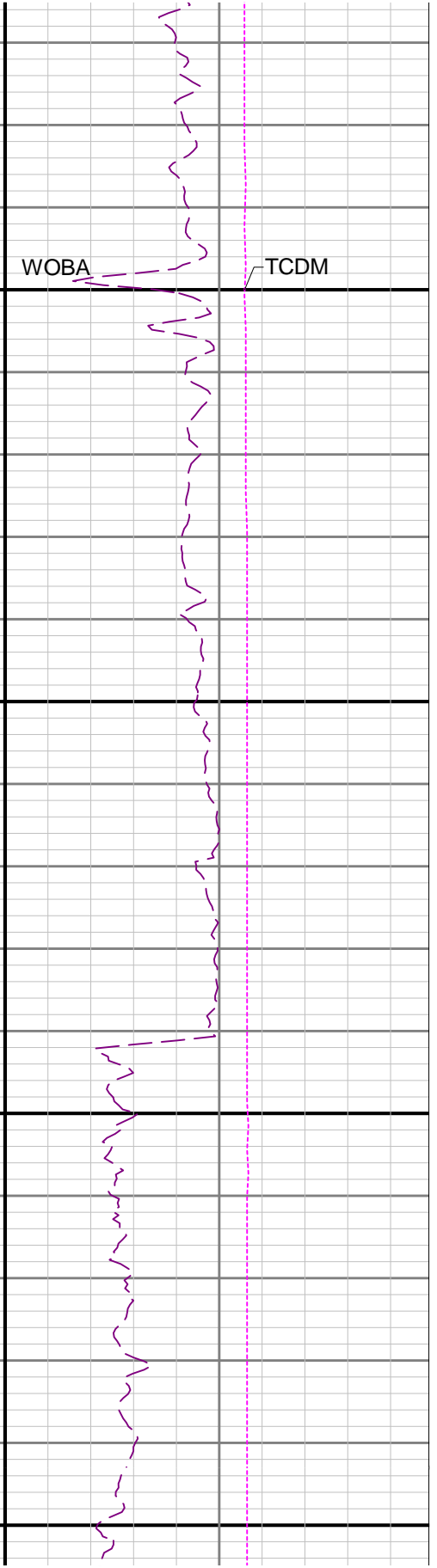
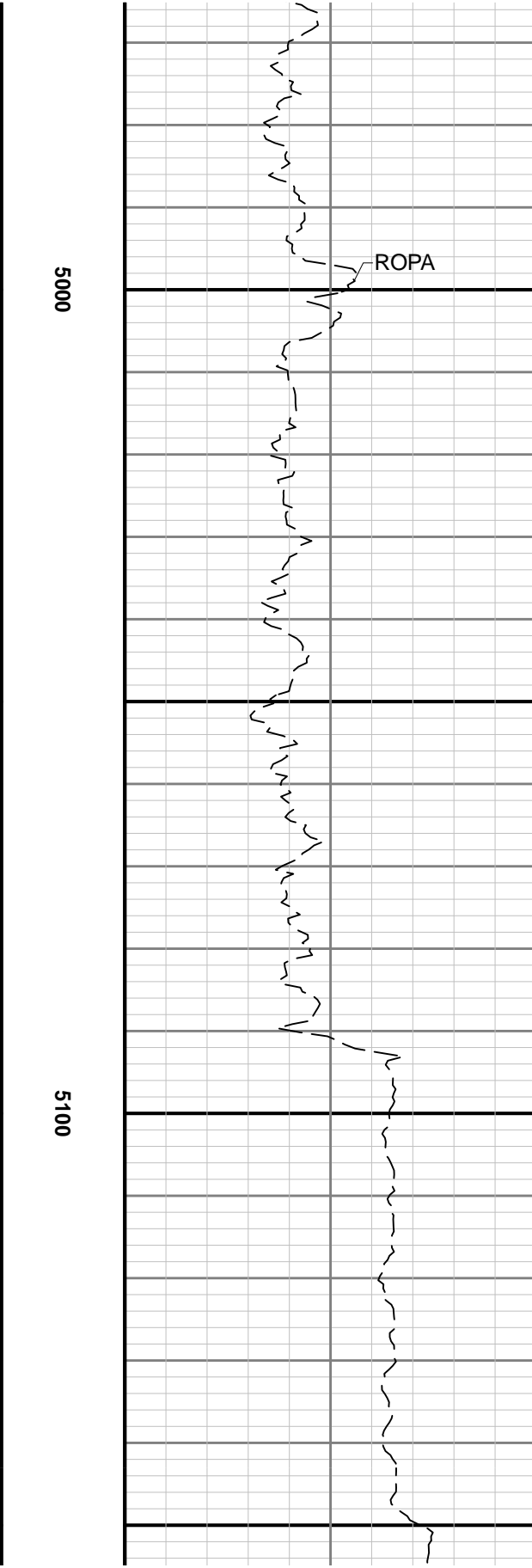
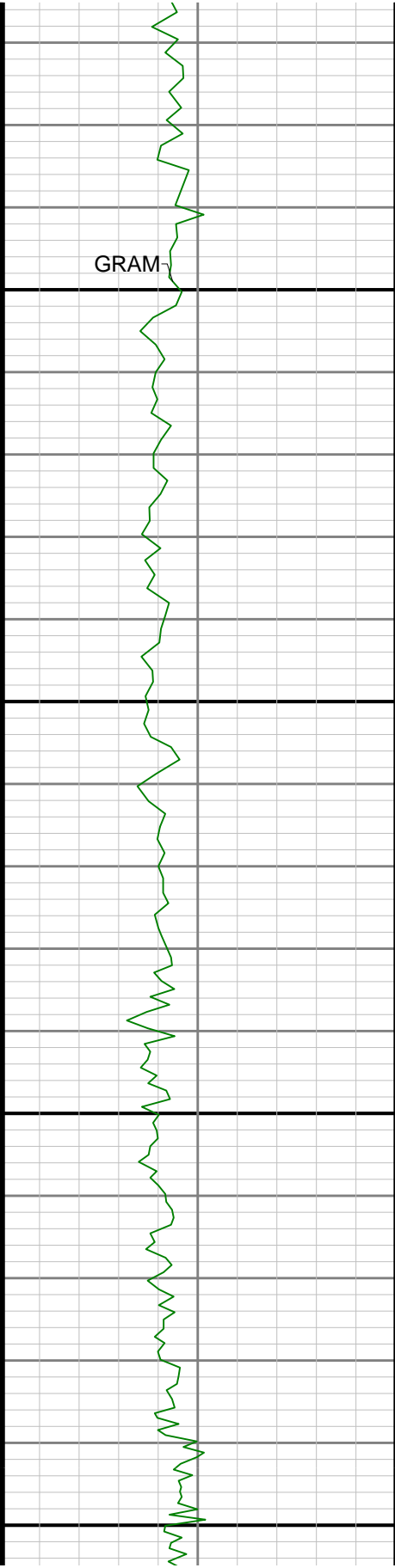




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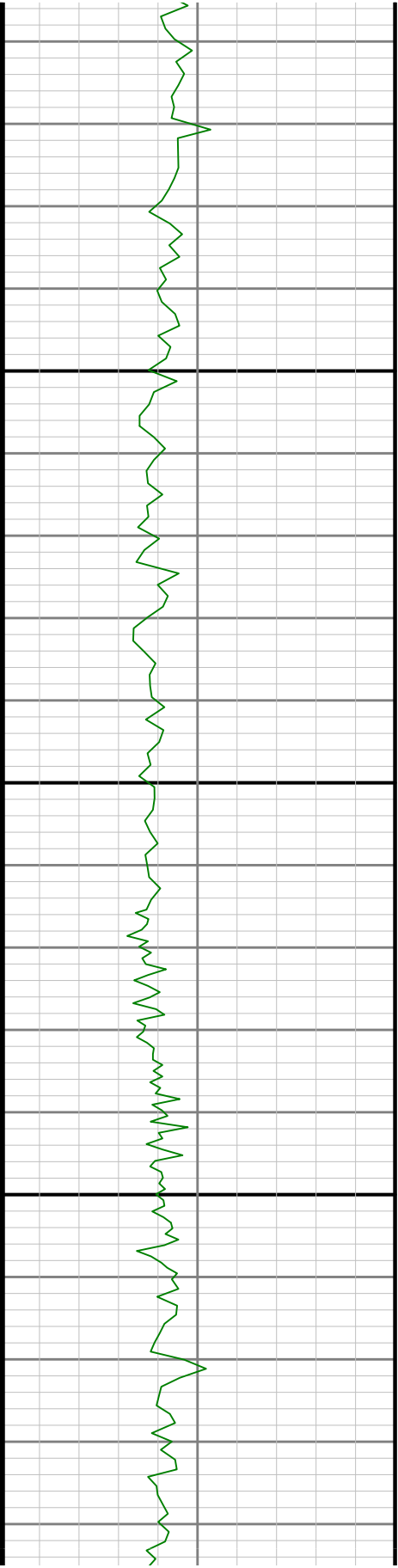
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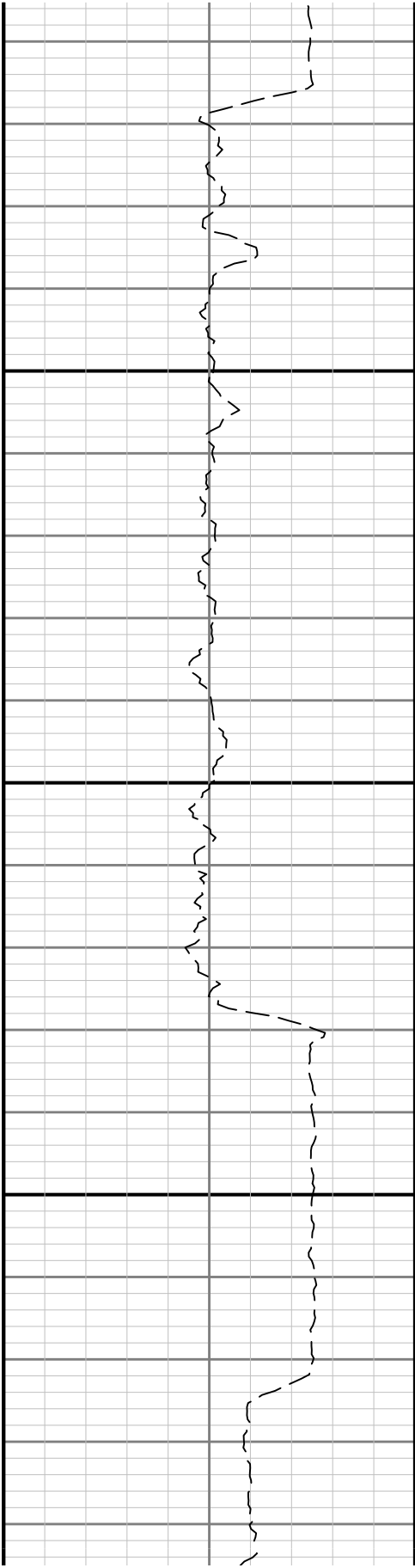
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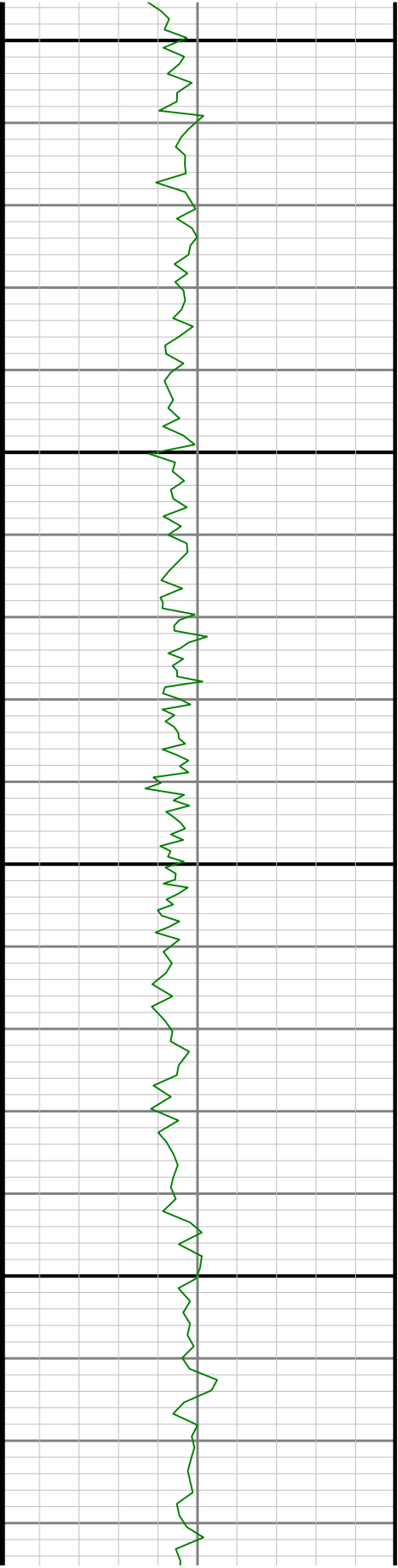
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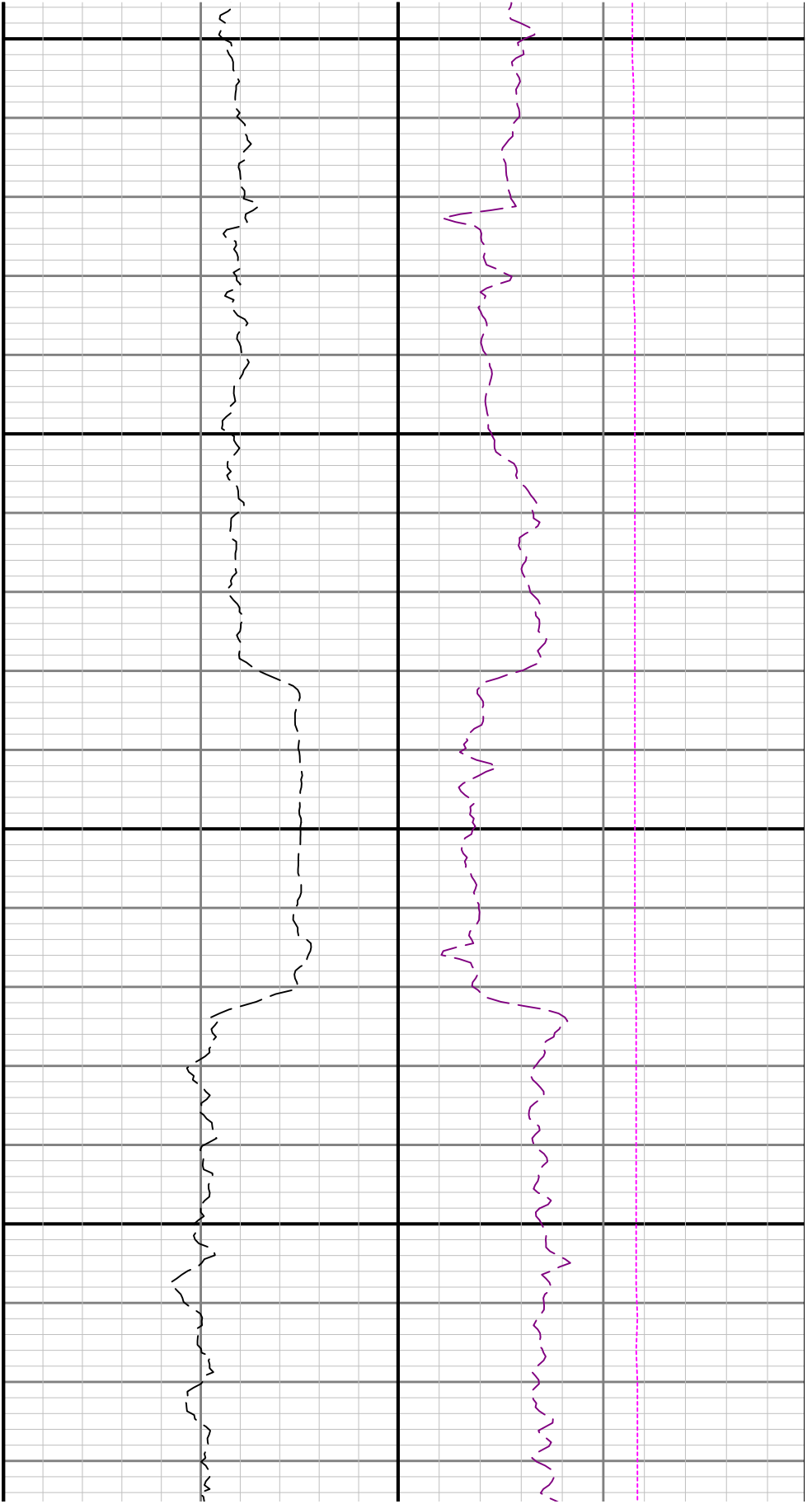
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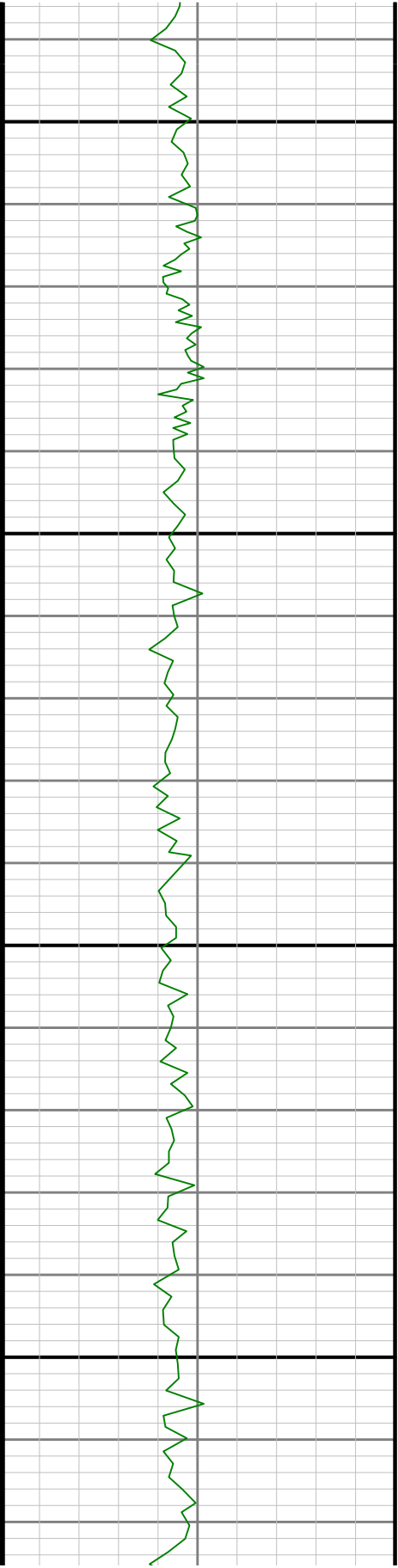




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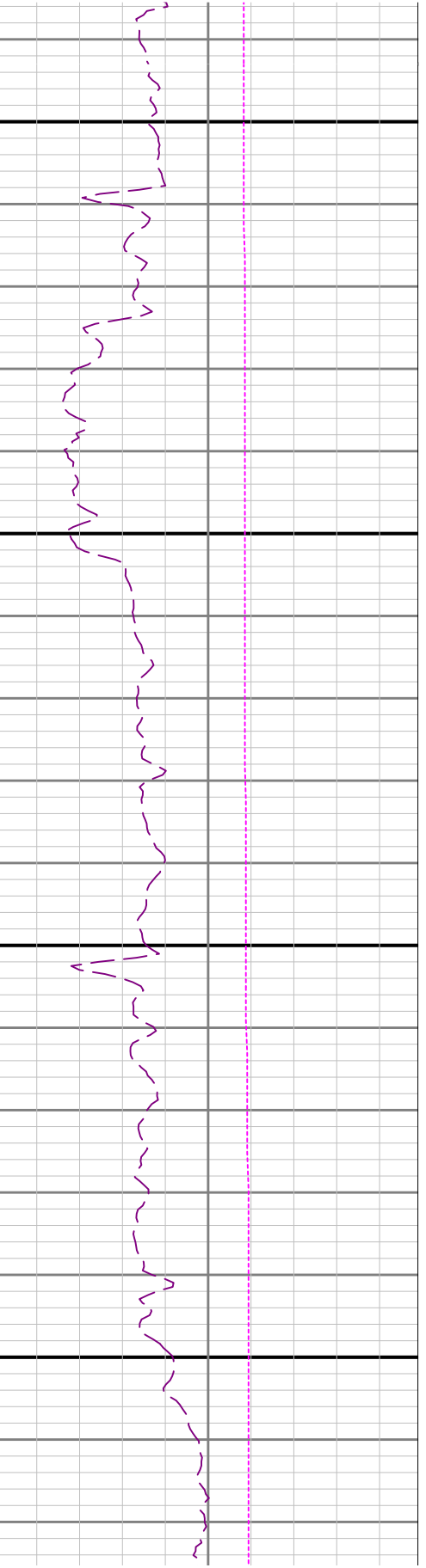
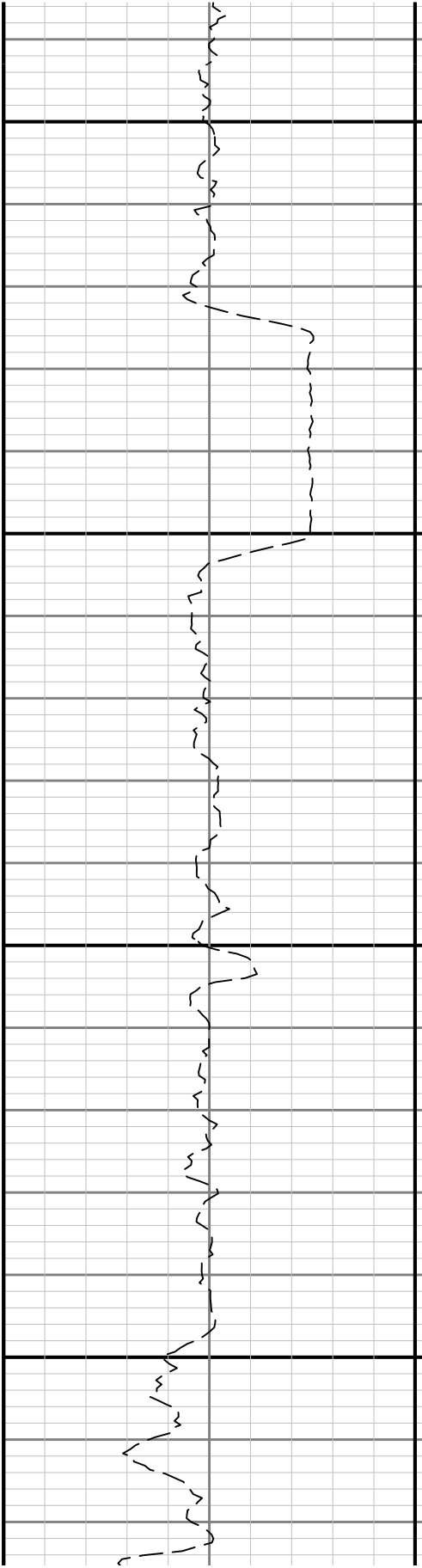
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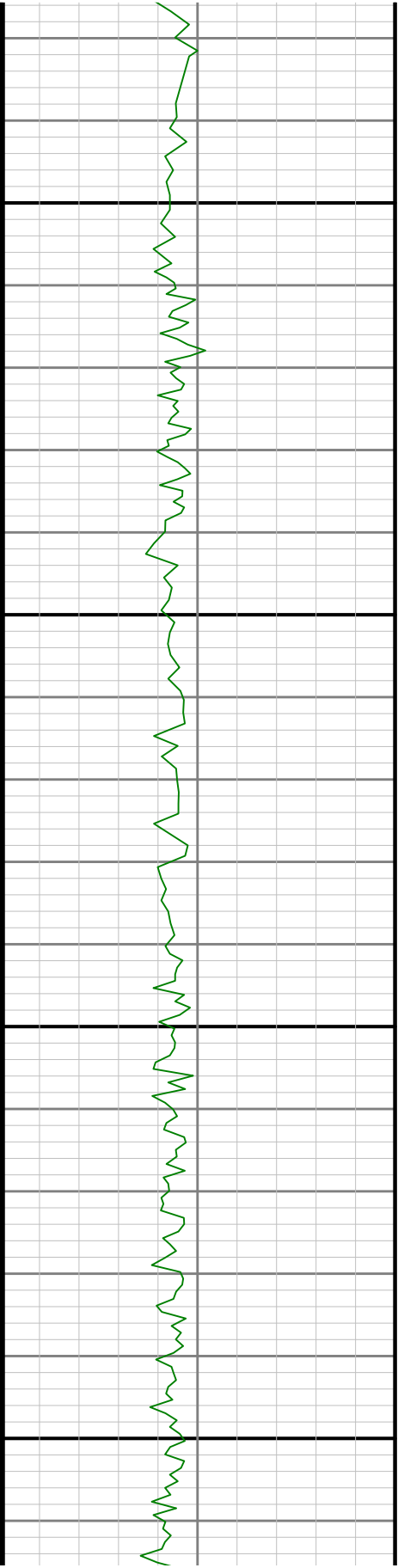




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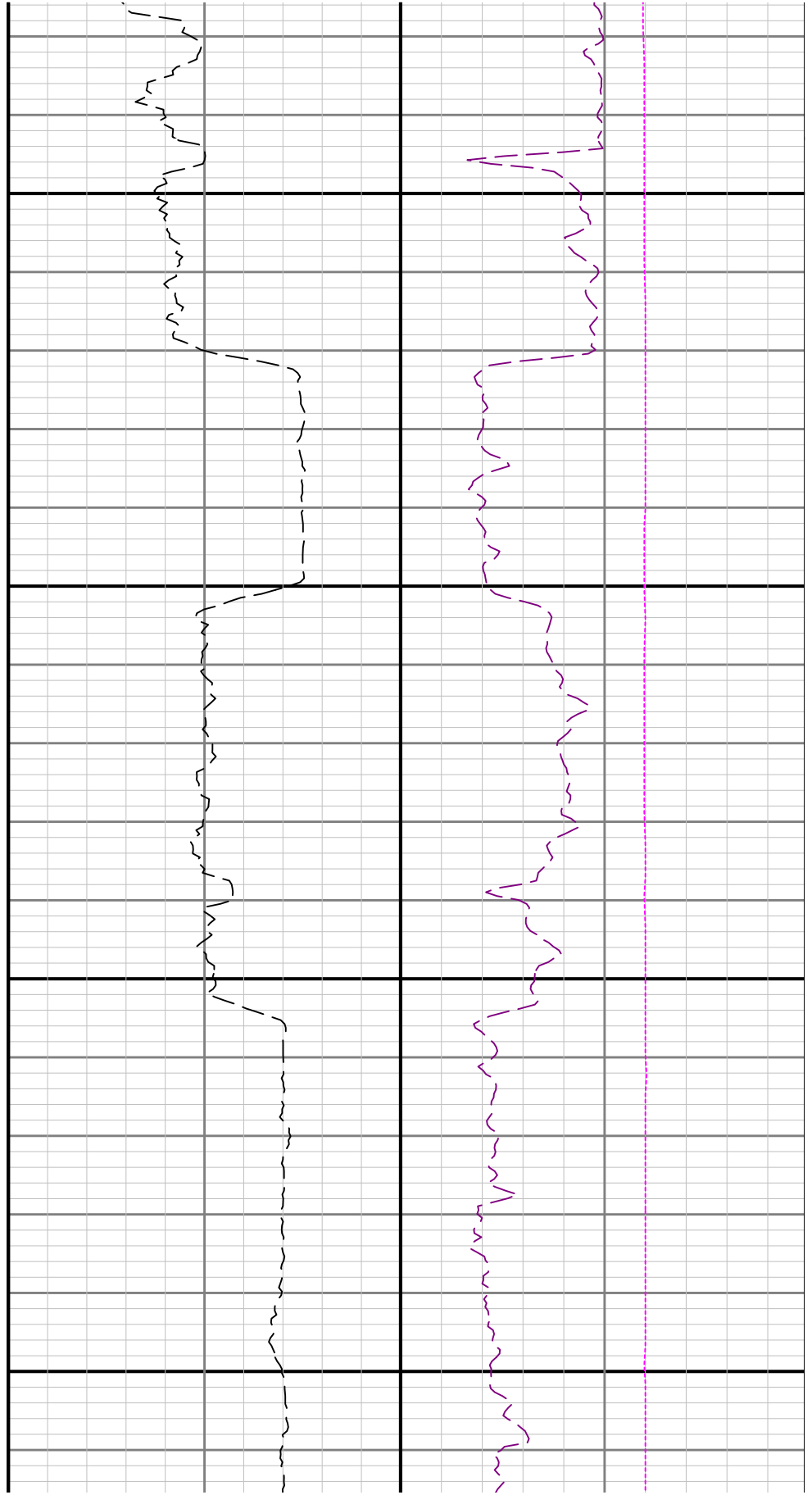
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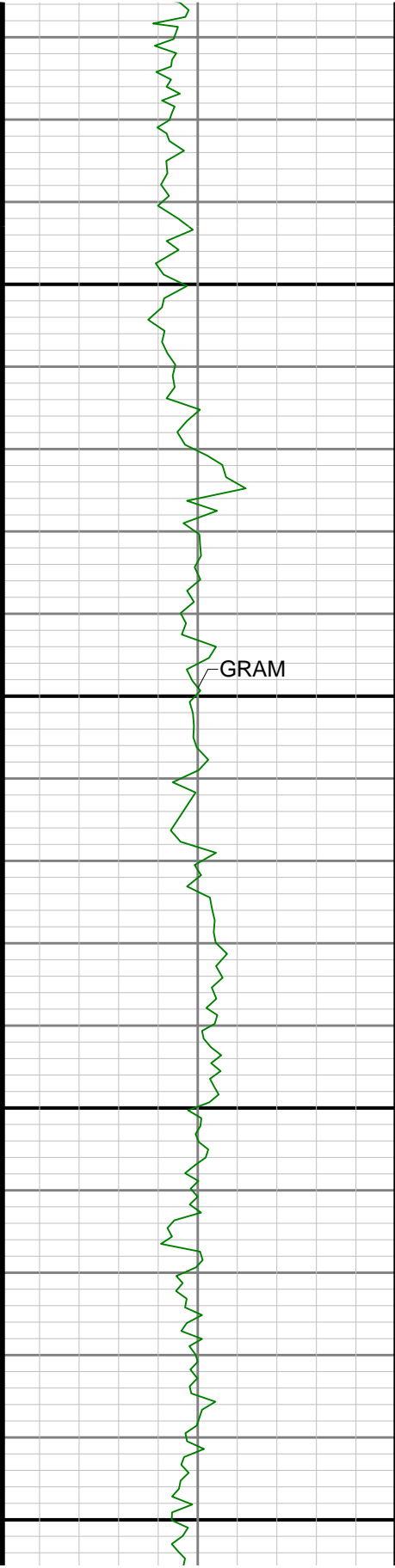




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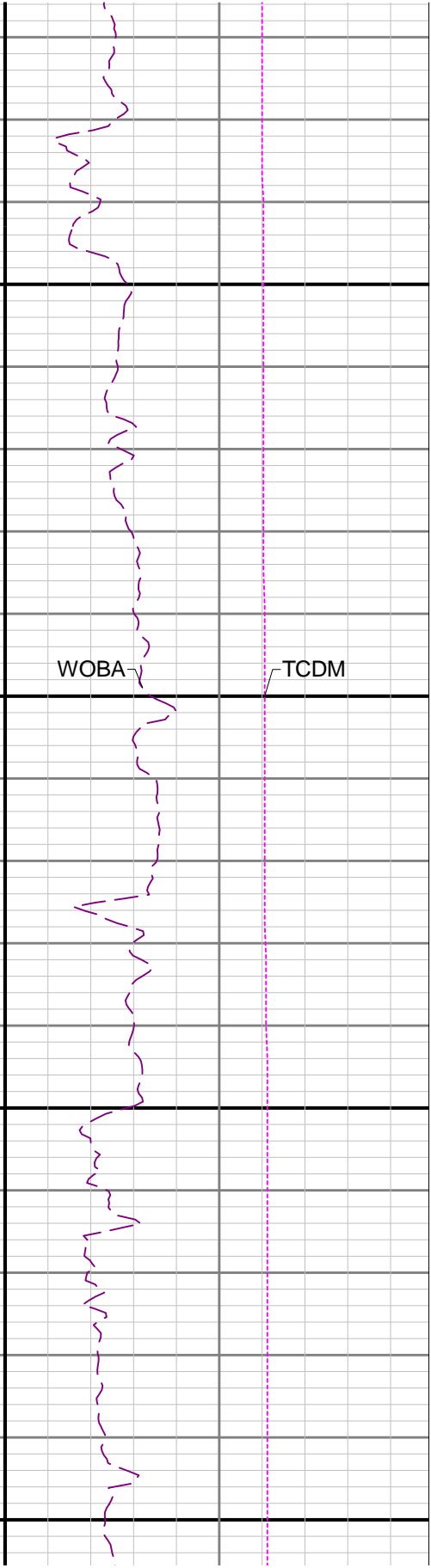
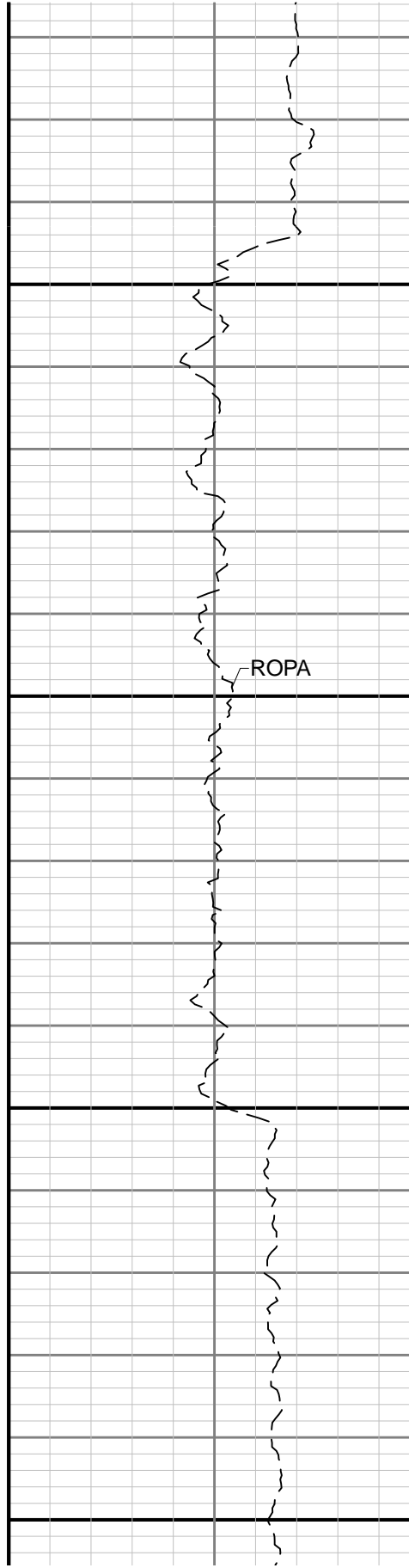
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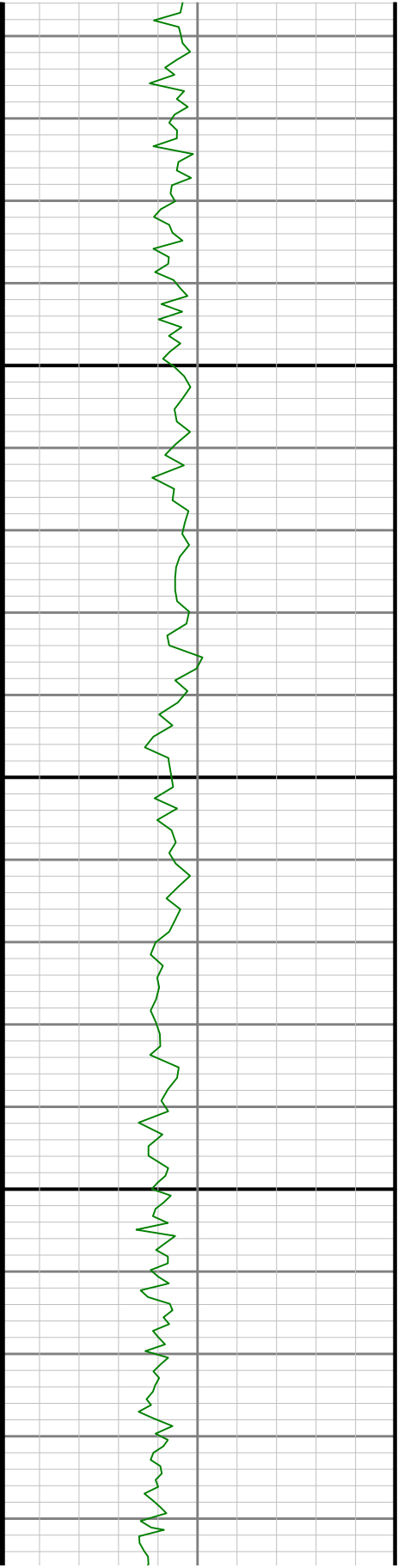




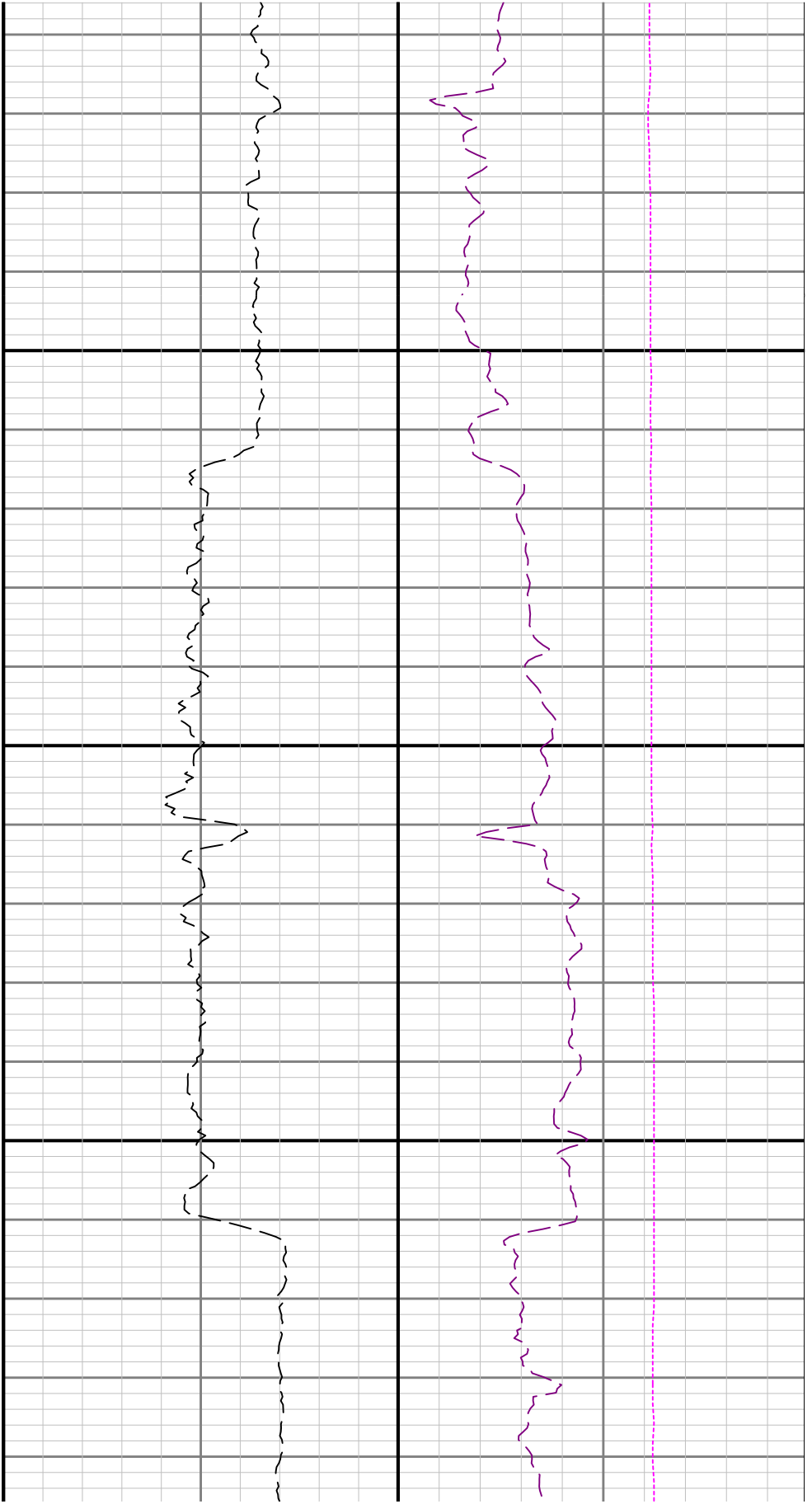
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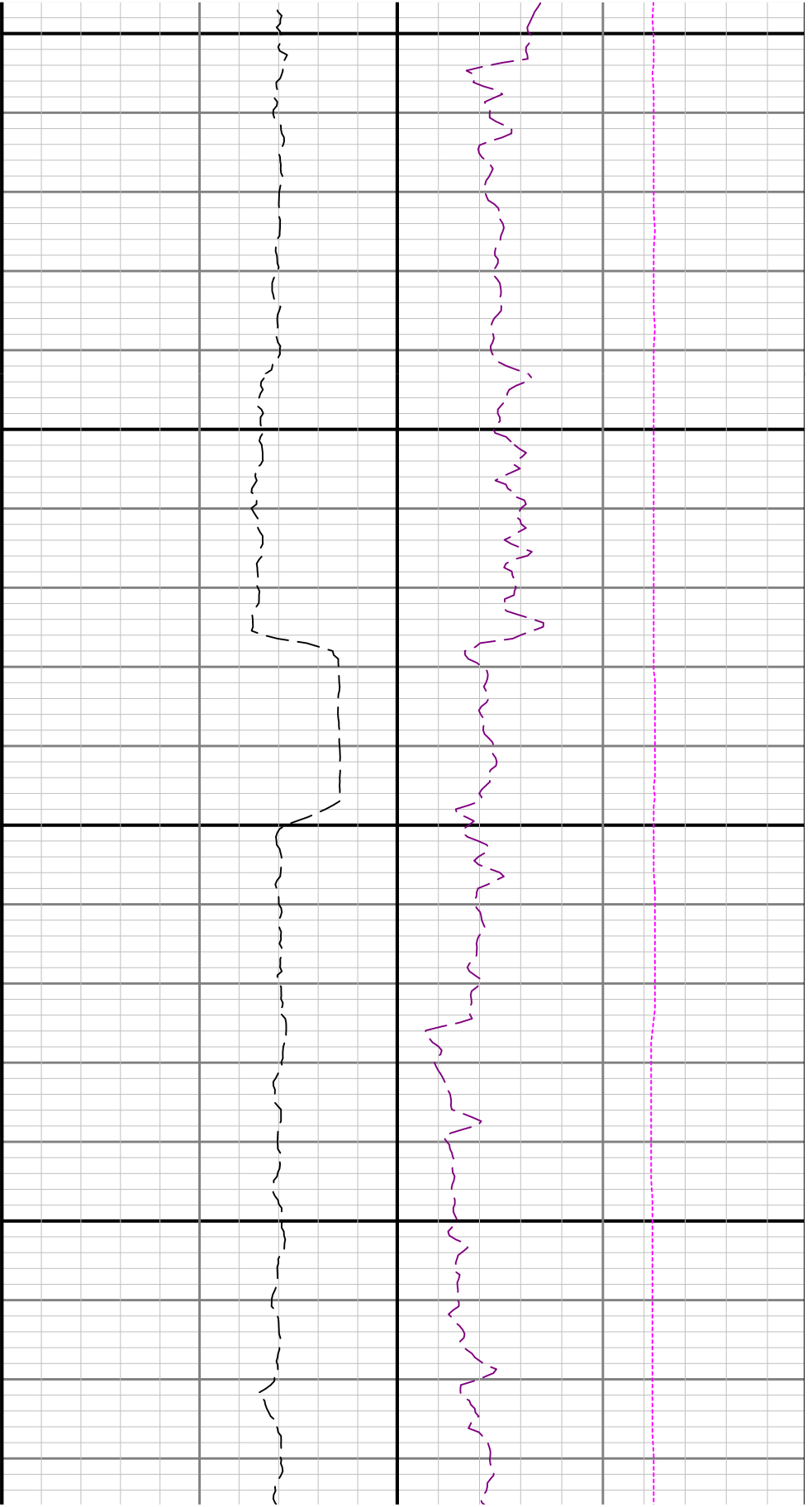
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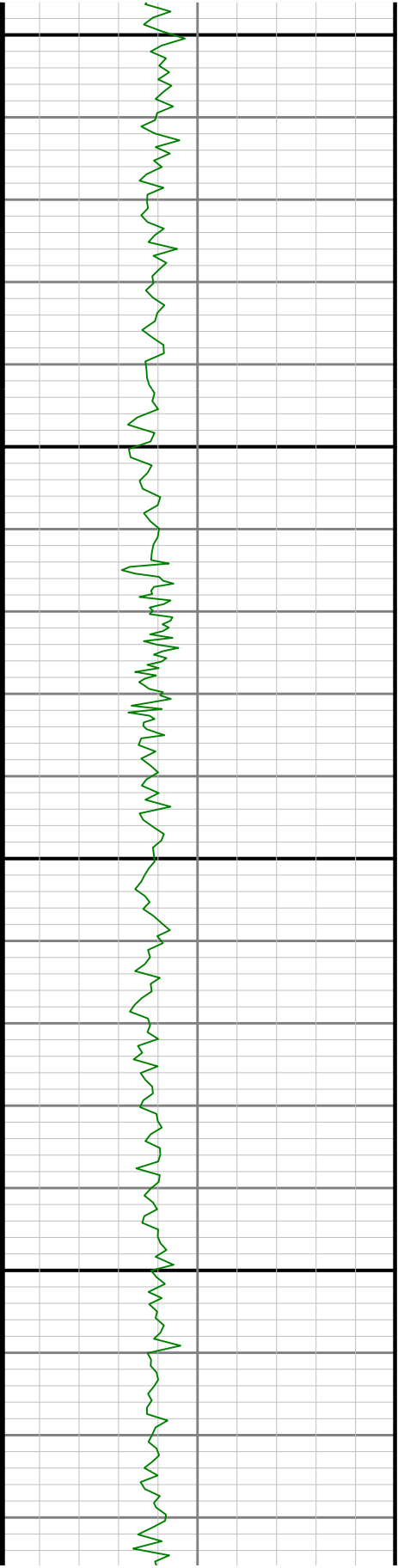
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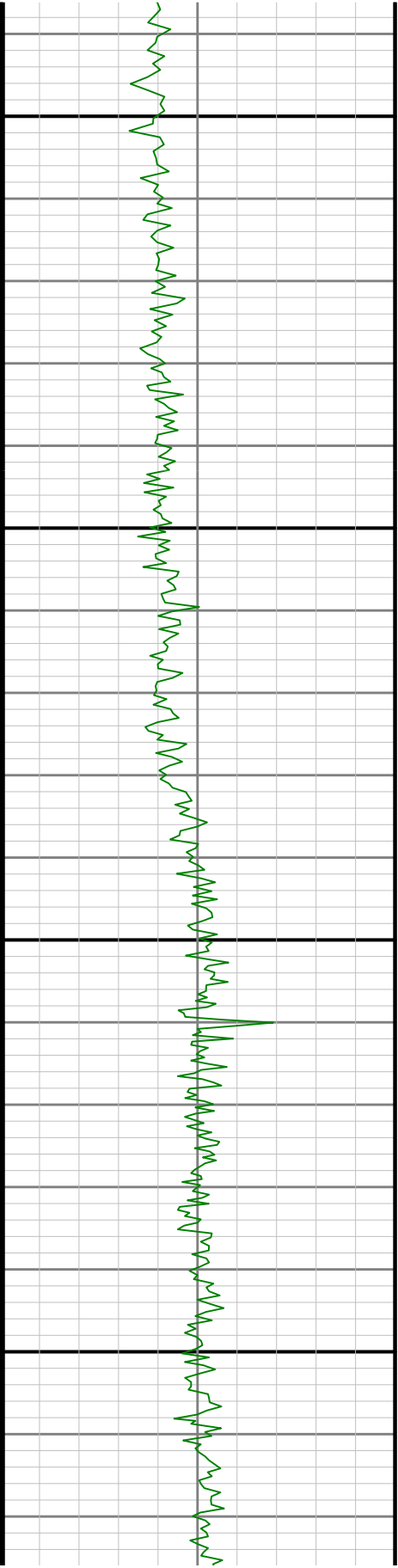




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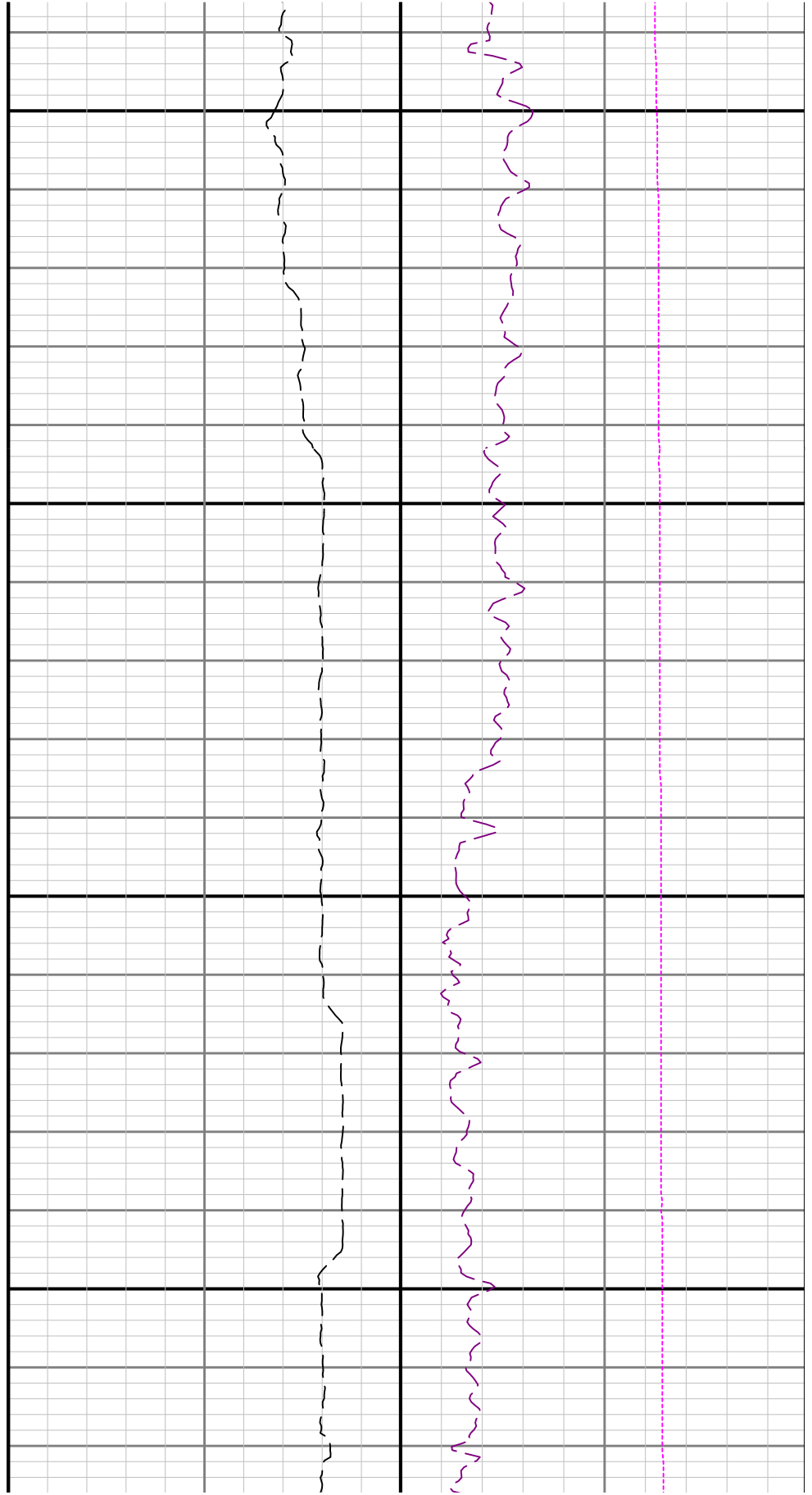
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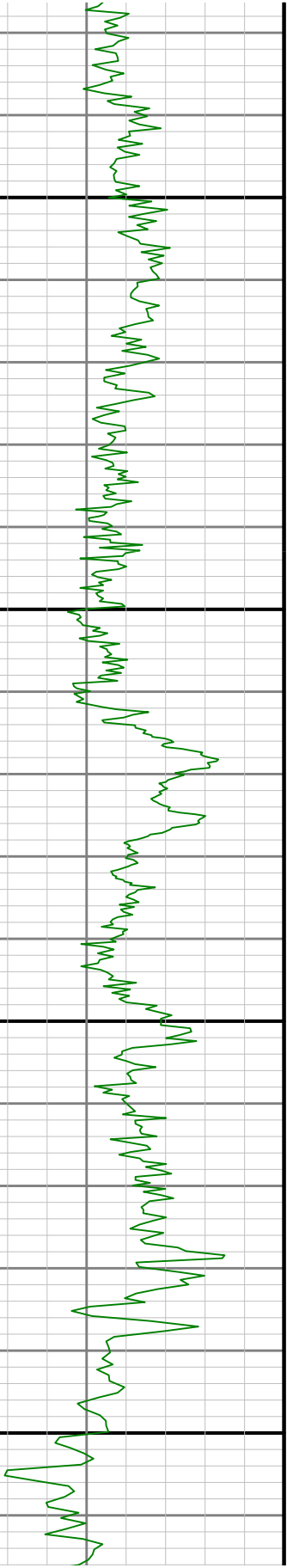




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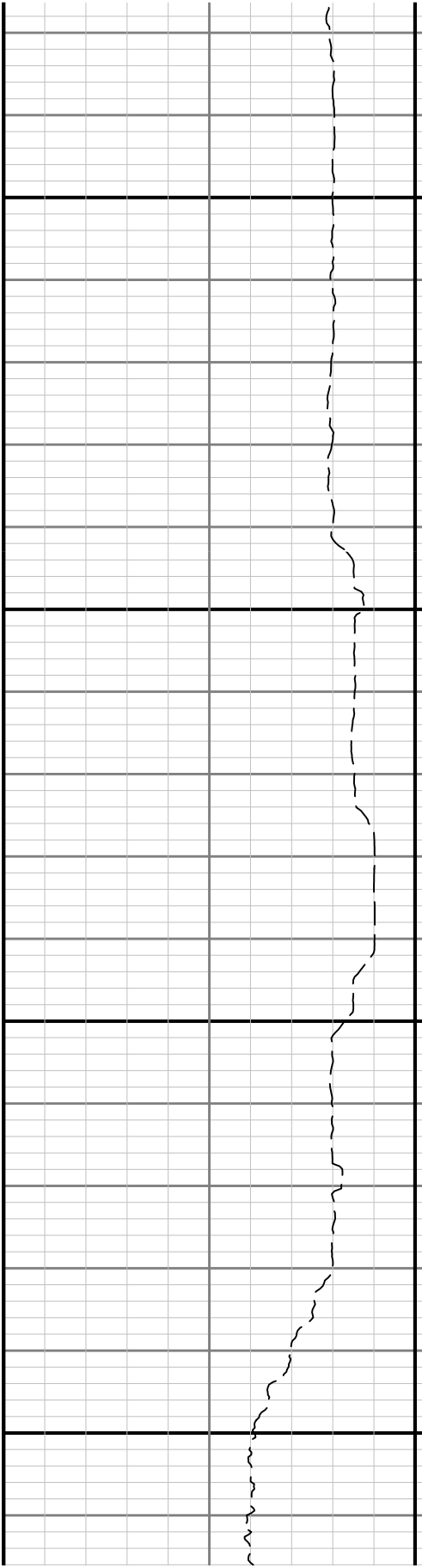
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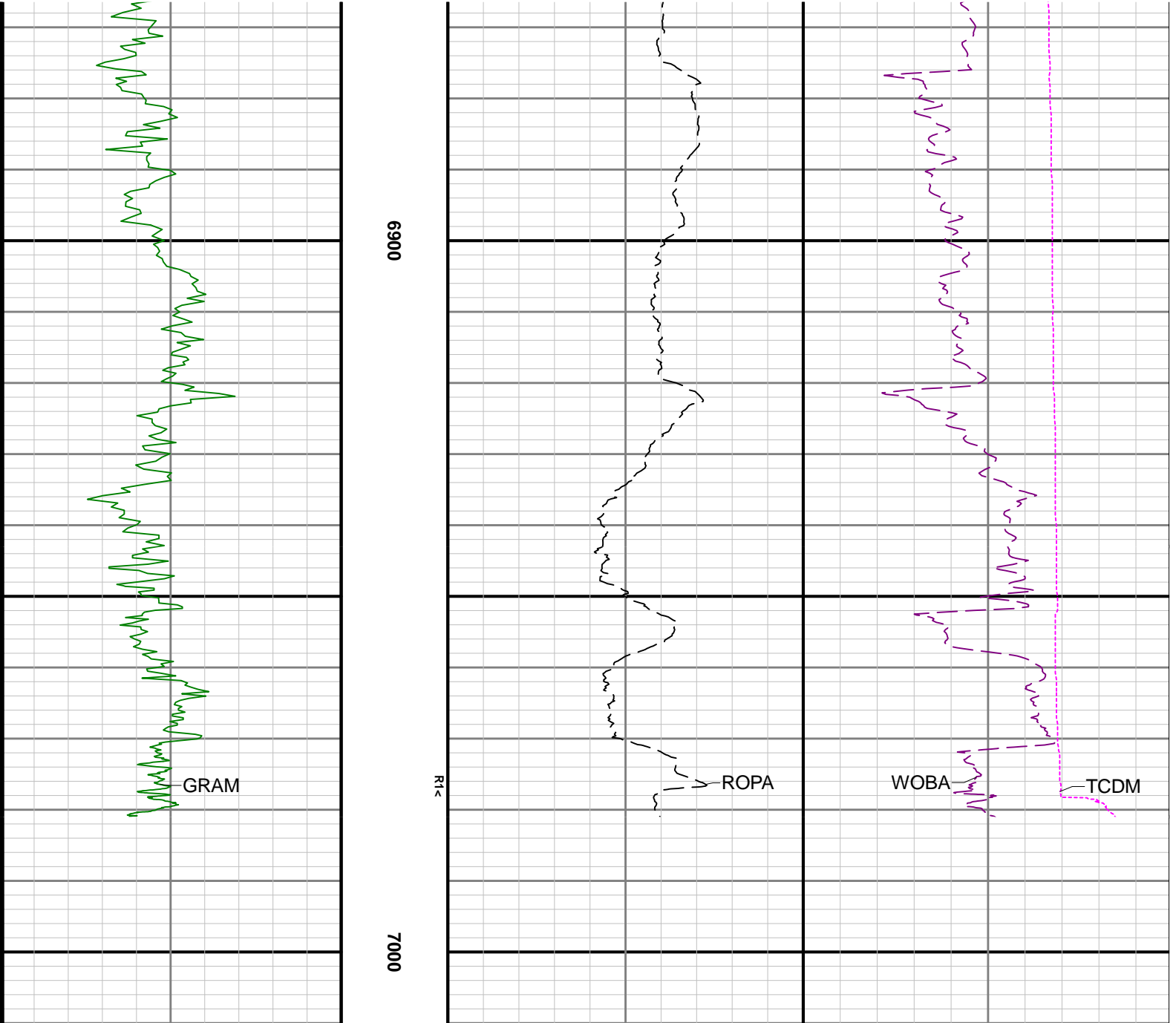




6700

6800





Gamma Ray - Apparent 0.5 ft Average GRAM
 0 300
 API

TVD 1:240 feet

Depth Averaged ROP 3 ft Average ROPA
 1000 0
 ft/h

Weight On Bit, Average 1 ft Average WOBA
 0 50
 klb
 Downhole Temperature TCDM
 0 300
 degF

Directional Survey Summary

Latitude: 040° 11' 49.560" N
 North Reference: Grid
 Vertical Datum is: Ground Level
 Vertical Section North: (ft) 0.00
 Vertical Section Azimuth: (deg) 0.22
 Grid Convergence: (deg) -0.56

Longitude: 104° 38' 07.764" W
 Drill Depth Zero: Rig Floor
 Vertical Datum to DDZ: (ft) 30.00
 Vertical Section East: (ft) 0.00
 Magnetic Declination: (deg) 8.12

0 50
 klb
 Downhole Temperature TCDM
 0 300
 degF

Total Correction: (deg)				7.56			TVD Calculation Method:			Minimum Curvature			
Magnetic Correction:				On			Local Magnetic Field: (nT)			52121			
Local Magnetic Dip Angle: (deg)				66.73			Local Gravity Field: (m/s2)			9.800			
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	-4852.00	0.00	0.00	0.00	0.00	0.00
	83.00	0.10	67.17	N/A	0.03	0.07	83.00	-4769.00	0.03	83.00	0.12	0.12	80.93
	181.00	0.30	218.95	N/A	-0.14	-0.02	181.00	-4671.00	-0.14	98.00	0.40	0.20	154.88
	273.00	0.47	184.92	N/A	-0.70	-0.20	273.00	-4579.00	-0.70	92.00	0.30	0.18	-36.99
	368.00	0.21	173.66	N/A	-1.26	-0.21	368.00	-4484.00	-1.26	95.00	0.28	-0.27	-11.85
	462.00	0.54	194.61	N/A	-1.86	-0.31	461.99	-4390.01	-1.86	94.00	0.37	0.35	22.29
	557.00	0.37	228.35	N/A	-2.50	-0.65	556.99	-4295.01	-2.50	95.00	0.33	-0.18	35.52
	651.00	0.53	172.28	N/A	-3.13	-0.82	650.99	-4201.01	-3.14	94.00	0.47	0.17	-59.65
	745.00	0.60	98.82	N/A	-3.64	-0.27	744.98	-4107.02	-3.64	94.00	0.72	0.07	-78.15
	840.00	0.19	335.53	N/A	-3.57	0.15	839.98	-4012.02	-3.57	95.00	0.76	-0.43	-129.78
	934.00	0.18	103.97	N/A	-3.47	0.23	933.98	-3918.02	-3.46	94.00	0.35	-0.01	136.64
	1029.00	0.12	234.67	N/A	-3.56	0.30	1028.98	-3823.02	-3.56	95.00	0.29	-0.06	137.58
	1123.00	0.30	172.41	N/A	-3.86	0.25	1122.98	-3729.02	-3.86	94.00	0.28	0.19	-66.23
	1218.00	0.39	175.99	N/A	-4.43	0.30	1217.98	-3634.02	-4.43	95.00	0.10	0.09	3.77
	1312.00	0.18	199.63	N/A	-4.89	0.28	1311.98	-3540.02	-4.89	94.00	0.25	-0.22	25.15
	1407.00	0.45	199.58	N/A	-5.38	0.10	1406.98	-3445.02	-5.38	95.00	0.28	0.28	-0.05
	1501.00	0.54	208.11	N/A	-6.12	-0.23	1500.97	-3351.03	-6.12	94.00	0.12	0.10	9.07
	1595.00	0.37	228.97	N/A	-6.71	-0.67	1594.97	-3257.03	-6.71	94.00	0.25	-0.18	22.19
	1690.00	0.38	271.31	N/A	-6.90	-1.21	1689.97	-3162.03	-6.91	95.00	0.29	0.01	44.57
	1785.00	0.37	270.07	N/A	-6.89	-1.84	1784.97	-3067.03	-6.90	95.00	0.01	-0.01	-1.31
	1879.00	0.42	303.18	N/A	-6.70	-2.43	1878.97	-2973.03	-6.71	94.00	0.24	0.05	35.22
Tie-In	1925.00	0.51	317.84	N/A	-6.46	-2.71	1924.96	-2927.04	-6.47	46.00	0.32	0.20	31.87
	1982.00	0.65	66.17	117.6	-6.14	-2.58	1981.96	-2870.04	-6.15	57.00	1.66	0.25	190.05
	2077.00	0.22	106.81	120.3	-5.98	-1.91	2076.96	-2775.04	-5.98	95.00	0.53	-0.45	42.78
	2171.00	0.93	289.09	125.7	-5.78	-2.46	2170.96	-2681.04	-5.79	94.00	1.22	0.76	-189.06
	2266.00	1.37	218.62	128.4	-6.42	-3.90	2265.94	-2586.06	-6.43	95.00	1.45	0.46	-74.18
	2360.00	1.09	157.21	128.4	-8.12	-4.25	2359.92	-2492.08	-8.13	94.00	1.36	-0.30	-65.33
	2455.00	1.15	179.63	133.8	-9.90	-3.90	2454.91	-2397.09	-9.92	95.00	0.46	0.06	23.60
	2550.00	5.72	189.78	139.2	-15.53	-4.70	2549.71	-2302.29	-15.54	95.00	4.83	4.81	10.68
	2644.00	6.49	182.55	141.9	-25.45	-5.73	2643.18	-2208.82	-25.47	94.00	1.16	0.82	-7.69
	2739.00	6.79	166.30	144.6	-36.27	-4.64	2737.55	-2114.45	-36.29	95.00	2.00	0.32	-17.11
	2833.00	6.50	143.61	144.6	-45.95	-0.16	2830.93	-2021.07	-45.95	94.00	2.79	-0.31	-24.14
	2928.00	7.12	152.01	144.6	-55.48	5.79	2925.26	-1926.74	-55.46	95.00	1.23	0.65	8.84
	3022.00	8.82	162.27	144.6	-67.49	10.72	3018.36	-1833.64	-67.45	94.00	2.35	1.81	10.91
	3116.00	8.66	162.88	144.6	-81.12	15.00	3111.27	-1740.73	-81.06	94.00	0.20	-0.17	0.65
	3211.00	8.57	165.69	147.3	-94.81	18.85	3205.19	-1646.81	-94.74	95.00	0.45	-0.09	2.96
	3305.00	7.92	164.18	147.3	-107.83	22.35	3298.22	-1553.78	-107.74	94.00	0.73	-0.69	-1.61
	3400.00	9.09	174.00	147.3	-121.59	24.92	3392.18	-1459.82	-121.50	95.00	1.96	1.23	10.34
	3494.00	9.26	184.88	147.3	-136.51	25.05	3484.99	-1367.01	-136.42	94.00	1.85	0.18	11.57
	3589.00	9.23	185.43	150.0	-151.71	23.68	3578.75	-1273.25	-151.62	95.00	0.10	-0.03	0.58
	3683.00	9.36	182.16	150.0	-166.86	22.68	3671.52	-1180.48	-166.77	94.00	0.58	0.14	-3.48
	3778.00	9.40	182.30	150.0	-182.33	22.07	3765.25	-1086.75	-182.24	95.00	0.05	0.04	0.15
	3872.00	9.83	177.52	152.7	-198.02	22.11	3857.93	-994.07	-197.93	94.00	0.96	0.46	-5.09
	3966.00	9.71	157.17	152.7	-213.34	25.54	3950.59	-901.41	-213.24	94.00	3.66	-0.13	-21.65
	4061.00	9.83	141.56	152.7	-227.08	33.69	4044.23	-807.77	-226.95	95.00	2.78	0.13	-16.43
	4155.00	9.70	152.27	155.4	-240.38	42.36	4136.88	-715.12	-240.21	94.00	1.93	-0.14	11.39
	4250.00	9.80	162.79	155.4	-255.18	48.48	4230.51	-621.49	-255.00	95.00	1.88	0.11	11.07
	4344.00	9.59	155.95	158.1	-269.98	54.04	4323.17	-528.83	-269.77	94.00	1.24	-0.22	-7.28
	4439.00	9.75	163.92	160.8	-284.93	59.49	4416.83	-435.17	-284.70	95.00	1.42	0.17	8.39
	4533.00	9.79	162.06	160.8	-300.18	64.16	4509.47	-342.53	-299.94	94.00	0.34	0.04	-1.98
	4628.00	9.69	154.78	160.8	-315.10	70.05	4603.10	-248.90	-314.83	95.00	1.30	-0.11	-7.66
	4722.00	9.50	160.39	163.5	-329.57	76.03	4695.79	-156.21	-329.27	94.00	1.01	-0.20	5.97
	4817.00	9.71	148.92	166.2	-343.81	82.79	4789.46	-62.54	-343.49	95.00	2.02	0.22	-12.07
	4911.00	9.72	144.88	166.2	-357.09	91.45	4882.12	30.12	-356.74	94.00	0.73	0.01	-4.30
	5006.00	9.57	146.37	168.9	-370.23	100.44	4975.77	123.77	-369.84	95.00	0.31	-0.16	1.57
	5101.00	9.69	135.36	168.9	-382.49	110.43	5069.44	217.44	-382.07	95.00	1.94	0.13	-11.59
	5195.00	8.66	119.23	168.9	-391.58	122.17	5162.25	310.25	-391.11	94.00	2.94	-1.10	-17.16

	5290.00	8.80	125.41	171.6	-399.28	134.33	5256.16	404.16	-398.77	95.00	1.00	0.15	6.51
	5384.00	9.27	131.40	171.6	-408.46	145.87	5348.99	496.99	-407.89	94.00	1.12	0.50	6.37
	5479.00	9.24	144.30	174.3	-419.71	156.06	5442.77	590.77	-419.11	95.00	2.18	-0.03	13.58
	5574.00	9.31	166.35	179.7	-433.38	162.33	5536.55	684.55	-432.75	95.00	3.72	0.07	23.21
	5668.00	9.43	179.16	177.0	-448.47	164.24	5629.31	777.31	-447.83	94.00	2.22	0.13	13.63
	5763.00	9.45	198.24	179.7	-463.66	161.91	5723.05	871.05	-463.04	95.00	3.28	0.02	20.08
	5857.00	9.37	194.21	179.7	-478.41	157.62	5815.78	963.78	-477.80	94.00	0.71	-0.09	-4.29
	5952.00	9.00	180.22	179.7	-493.34	155.69	5909.58	1057.58	-492.74	95.00	2.38	-0.39	-14.73
	6047.00	9.59	147.23	179.7	-507.43	159.95	6003.39	1151.39	-506.81	95.00	5.57	0.62	-34.73
	6141.00	9.58	122.79	182.5	-518.26	170.76	6096.12	1244.12	-517.60	94.00	4.30	-0.01	-26.00
	6236.00	10.02	143.80	185.2	-529.21	182.29	6189.76	1337.76	-528.51	95.00	3.77	0.46	22.12
	6330.00	9.55	165.34	185.2	-543.36	189.10	6282.43	1430.43	-542.63	94.00	3.90	-0.50	22.91
	6425.00	0.79	54.87	187.9	-550.62	191.64	6377.00	1525.00	-549.88	95.00	10.37	-9.22	-116.28
	6519.00	7.34	352.01	187.9	-544.30	191.33	6470.72	1618.72	-543.56	94.00	7.46	6.97	-66.87
	6614.00	15.91	345.31	190.6	-525.66	187.18	6563.69	1711.69	-524.93	95.00	9.12	9.02	-7.05
	6708.00	26.84	342.69	193.3	-492.83	177.57	6651.10	1799.10	-492.15	94.00	11.67	11.63	-2.79
	6802.00	35.67	352.14	193.3	-445.30	167.48	6731.42	1879.42	-444.66	94.00	10.72	9.39	10.05
	6897.00	45.49	359.30	196.0	-383.81	163.27	6803.53	1951.53	-383.18	95.00	11.43	10.34	7.54
	6992.00	55.28	358.89	198.7	-310.72	162.09	6864.03	2012.03	-310.10	95.00	10.31	10.31	-0.43
	7086.00	64.16	358.47	201.4	-229.65	160.21	6911.38	2059.38	-229.04	94.00	9.45	9.45	-0.45
	7181.00	73.29	359.72	204.1	-141.23	158.84	6945.81	2093.81	-140.62	95.00	9.69	9.61	1.32
	7275.00	79.79	2.12	204.1	-49.88	160.34	6967.68	2115.68	-49.27	94.00	7.35	6.91	2.55
	7370.00	88.65	3.35	209.5	44.43	164.85	6977.24	2125.24	45.06	95.00	9.41	9.33	1.29
	7464.00	90.03	1.98	212.2	138.32	169.22	6978.32	2126.32	138.97	94.00	2.07	1.47	-1.46
	7559.00	90.22	0.63	212.2	233.29	171.38	6978.12	2126.12	233.95	95.00	1.44	0.20	-1.42
	7654.00	90.34	0.07	214.9	328.29	171.96	6977.65	2125.65	328.94	95.00	0.60	0.13	-0.59
	7748.00	90.22	355.45	217.6	422.19	168.29	6977.19	2125.19	422.83	94.00	4.92	-0.13	-4.91
	7843.00	90.00	355.35	214.9	516.88	160.67	6977.01	2125.01	517.50	95.00	0.25	-0.23	-0.11
	7937.00	89.94	359.95	217.6	610.78	156.82	6977.06	2125.06	611.38	94.00	4.89	-0.06	4.89
	8032.00	90.06	2.94	220.3	705.74	159.21	6977.06	2125.06	706.34	95.00	3.15	0.13	3.15
	8127.00	89.91	1.79	220.3	800.65	163.13	6977.08	2125.08	801.27	95.00	1.22	-0.16	-1.21
	8221.00	90.00	359.93	223.0	894.64	164.55	6977.16	2125.16	895.26	94.00	1.98	0.10	-1.98
	8316.00	89.78	359.09	225.7	989.63	163.73	6977.34	2125.34	990.26	95.00	0.91	-0.23	-0.88
	8410.00	90.00	359.85	225.7	1083.63	162.86	6977.52	2125.52	1084.25	94.00	0.84	0.23	0.81
	8505.00	89.75	358.99	228.4	1178.62	161.90	6977.73	2125.73	1179.24	95.00	0.94	-0.26	-0.91
	8599.00	89.78	358.23	228.4	1272.59	159.62	6978.11	2126.11	1273.20	94.00	0.81	0.03	-0.81
	8694.00	89.85	357.37	231.1	1367.52	155.97	6978.42	2126.42	1368.11	95.00	0.91	0.07	-0.91
	8788.00	90.03	356.93	231.1	1461.41	151.30	6978.52	2126.52	1461.98	94.00	0.51	0.19	-0.47
	8883.00	89.97	356.87	233.8	1556.27	146.16	6978.52	2126.52	1556.82	95.00	0.09	-0.06	-0.06
	8977.00	90.06	357.21	233.8	1650.14	141.31	6978.49	2126.49	1650.67	94.00	0.37	0.10	0.36
	9072.00	90.00	357.56	233.8	1745.04	136.98	6978.44	2126.44	1745.56	95.00	0.37	-0.06	0.37
	9166.00	89.97	357.77	236.5	1838.96	133.15	6978.47	2126.47	1839.46	94.00	0.23	-0.03	0.22
	9261.00	89.94	358.31	236.5	1933.91	129.90	6978.54	2126.54	1934.39	95.00	0.57	-0.03	0.57
	9355.00	90.15	358.82	236.5	2027.88	127.54	6978.47	2126.47	2028.35	94.00	0.59	0.22	0.54
	9450.00	89.97	358.85	236.5	2122.86	125.61	6978.37	2126.37	2123.33	95.00	0.19	-0.19	0.03
	9544.00	89.85	359.18	236.5	2216.85	123.99	6978.52	2126.52	2217.30	94.00	0.37	-0.13	0.35
	9639.00	89.91	359.51	239.2	2311.84	122.91	6978.72	2126.72	2312.29	95.00	0.35	0.06	0.35
	9733.00	89.97	359.04	241.9	2405.83	121.72	6978.82	2126.82	2406.28	94.00	0.50	0.06	-0.50
	9828.00	89.82	359.36	239.2	2500.82	120.39	6978.99	2126.99	2501.26	95.00	0.37	-0.16	0.34
	9922.00	90.28	359.27	241.9	2594.81	119.27	6978.91	2126.91	2595.25	94.00	0.50	0.49	-0.10
	10017.00	89.78	358.45	244.6	2689.79	117.38	6978.86	2126.86	2690.23	95.00	1.01	-0.53	-0.86
	10111.00	90.03	359.33	241.9	2783.78	115.56	6979.01	2127.01	2784.20	94.00	0.97	0.27	0.94
	10206.00	89.82	359.14	244.6	2878.77	114.29	6979.14	2127.14	2879.18	95.00	0.30	-0.22	-0.20
	10300.00	89.94	359.48	244.6	2972.76	113.16	6979.33	2127.33	2973.17	94.00	0.38	0.13	0.36
	10395.00	89.82	1.09	247.3	3067.76	113.63	6979.53	2127.53	3068.17	95.00	1.70	-0.13	1.69
	10489.00	89.85	1.01	247.3	3161.74	115.35	6979.80	2127.80	3162.16	94.00	0.09	0.03	-0.09
	10584.00	89.94	0.62	247.3	3256.73	116.70	6979.98	2127.98	3257.15	95.00	0.42	0.09	-0.41
	10679.00	89.94	359.71	247.3	3351.73	116.98	6980.08	2128.08	3352.15	95.00	0.96	0.00	-0.96
	10773.00	89.88	358.61	250.0	3445.72	115.60	6980.23	2128.23	3446.13	94.00	1.17	-0.06	-1.17
	10868.00	89.82	358.52	250.0	3540.69	113.22	6980.47	2128.47	3541.09	95.00	0.11	-0.06	-0.09
	10963.00	90.03	358.41	250.0	3635.65	110.68	6980.60	2128.60	3636.05	95.00	0.25	0.22	-0.12
	11057.00	89.88	358.56	252.7	3729.62	108.19	6980.67	2128.67	3730.01	94.00	0.23	-0.16	0.16
	11152.00	89.78	358.40	252.7	3824.58	105.67	6980.95	2128.95	3824.96	95.00	0.20	-0.11	-0.17

	11246.00	89.82	358.58	252.7	3918.55	103.19	6981.28	2129.28	3918.92	94.00	0.20	0.04	0.19
	11341.00	90.03	358.85	255.4	4013.53	101.06	6981.41	2129.41	4013.89	95.00	0.36	0.22	0.28
	11436.00	89.97	358.78	255.4	4108.51	99.10	6981.41	2129.41	4108.86	95.00	0.10	-0.06	-0.07
	11531.00	90.06	359.82	255.4	4203.50	97.94	6981.38	2129.38	4203.84	95.00	1.10	0.09	1.09
	11625.00	89.97	1.69	255.4	4297.49	99.18	6981.36	2129.36	4297.84	94.00	1.99	-0.10	1.99
	11720.00	90.25	1.23	258.1	4392.45	101.60	6981.18	2129.18	4392.81	95.00	0.57	0.29	-0.48
	11814.00	90.52	0.79	258.1	4486.44	103.25	6980.54	2128.54	4486.80	94.00	0.55	0.29	-0.47
	11909.00	90.31	0.77	258.1	4581.43	104.55	6979.86	2127.86	4581.79	95.00	0.22	-0.22	-0.02
	12003.00	90.12	359.66	258.1	4675.42	104.90	6979.50	2127.50	4675.79	94.00	1.20	-0.20	-1.18
	12098.00	90.28	359.38	260.8	4770.42	104.10	6979.17	2127.17	4770.78	95.00	0.34	0.17	-0.29
	12192.00	90.34	359.26	260.8	4864.41	102.99	6978.66	2126.66	4864.77	94.00	0.14	0.06	-0.13
	12287.00	90.28	358.30	260.8	4959.39	100.97	6978.15	2126.15	4959.74	95.00	1.01	-0.06	-1.01
	12381.00	90.03	0.14	260.8	5053.37	99.69	6977.89	2125.89	5053.72	94.00	1.98	-0.27	1.96
	12476.00	90.25	1.81	225.7	5148.36	101.30	6977.66	2125.66	5148.71	95.00	1.77	0.23	1.76
	12571.00	90.18	2.00	263.5	5243.30	104.46	6977.31	2125.31	5243.67	95.00	0.21	-0.07	0.20
	12665.00	90.15	0.61	263.5	5337.28	106.60	6977.03	2125.03	5337.65	94.00	1.48	-0.03	-1.48
	12760.00	90.25	359.41	266.2	5432.27	106.62	6976.70	2124.70	5432.64	95.00	1.27	0.11	-1.26
	12855.00	90.06	358.12	266.2	5527.25	104.57	6976.45	2124.45	5527.61	95.00	1.37	-0.20	-1.36
	12949.00	89.85	355.93	266.2	5621.12	99.69	6976.52	2124.52	5621.46	94.00	2.34	-0.22	-2.33
	13044.00	90.31	355.11	266.2	5715.83	92.27	6976.39	2124.39	5716.14	95.00	0.99	0.48	-0.86
	13138.00	89.97	353.60	266.2	5809.37	83.03	6976.16	2124.16	5809.64	94.00	1.65	-0.36	-1.61
	13233.00	90.28	351.52	263.5	5903.56	70.73	6975.95	2123.95	5903.79	95.00	2.21	0.33	-2.19
	13327.00	89.66	351.80	266.2	5996.57	57.09	6976.00	2124.00	5996.74	94.00	0.72	-0.66	0.30
	13422.00	89.69	354.08	263.5	6090.84	45.42	6976.54	2124.54	6090.97	95.00	2.40	0.03	2.40
	13516.00	89.60	357.89	263.5	6184.59	38.83	6977.12	2125.12	6184.69	94.00	4.05	-0.10	4.05
	13611.00	89.78	359.63	263.5	6279.56	36.78	6977.64	2125.64	6279.66	95.00	1.84	0.19	1.83
	13705.00	89.88	359.20	269.0	6373.56	35.82	6977.91	2125.91	6373.65	94.00	0.47	0.11	-0.46
	13800.00	90.00	0.54	269.0	6468.55	35.60	6978.01	2126.01	6468.64	95.00	1.42	0.13	1.41
	13894.00	90.00	1.00	269.0	6562.55	36.87	6978.01	2126.01	6562.64	94.00	0.49	0.00	0.49
	13989.00	90.58	2.34	269.0	6657.50	39.64	6977.53	2125.53	6657.60	95.00	1.54	0.61	1.41
	14083.00	89.85	3.26	271.7	6751.39	44.23	6977.18	2125.18	6751.51	94.00	1.25	-0.78	0.98
	14178.00	90.03	3.54	271.7	6846.22	49.86	6977.28	2125.28	6846.36	95.00	0.35	0.19	0.29
	14273.00	89.94	1.60	271.7	6941.12	54.12	6977.30	2125.30	6941.28	95.00	2.04	-0.09	-2.04
	14367.00	89.97	0.72	271.7	7035.10	56.02	6977.38	2125.38	7035.26	94.00	0.94	0.03	-0.94
	14462.00	89.88	1.99	274.4	7130.07	58.27	6977.50	2125.50	7130.24	95.00	1.34	-0.09	1.34
	14557.00	90.12	3.17	274.4	7224.97	62.55	6977.50	2125.50	7225.16	95.00	1.27	0.25	1.24
	14651.00	89.91	4.05	274.4	7318.78	68.47	6977.48	2125.48	7318.99	94.00	0.96	-0.22	0.94
	14746.00	89.78	4.54	274.4	7413.52	75.58	6977.74	2125.74	7413.75	95.00	0.53	-0.14	0.52
	14840.00	90.00	2.93	277.1	7507.31	81.70	6977.92	2125.92	7507.57	94.00	1.73	0.23	-1.71
	14935.00	90.00	1.97	277.1	7602.23	85.76	6977.92	2125.92	7602.50	95.00	1.01	0.00	-1.01
	15029.00	90.15	1.81	277.1	7696.17	88.86	6977.79	2125.79	7696.46	94.00	0.23	0.16	-0.17
	15124.00	89.88	2.03	274.4	7791.12	92.05	6977.77	2125.77	7791.42	95.00	0.37	-0.28	0.23
	15219.00	90.00	1.07	274.4	7886.09	94.62	6977.87	2125.87	7886.39	95.00	1.02	0.13	-1.01
	15313.00	90.09	358.98	274.4	7980.08	94.66	6977.79	2125.79	7980.38	94.00	2.23	0.10	-2.22
	15408.00	90.03	356.89	274.4	8075.01	91.23	6977.69	2125.69	8075.30	95.00	2.20	-0.06	-2.20
	15502.00	89.97	356.67	274.4	8168.86	85.95	6977.69	2125.69	8169.13	94.00	0.24	-0.06	-0.23
	15597.00	89.85	356.71	277.1	8263.71	80.47	6977.84	2125.84	8263.95	95.00	0.13	-0.13	0.04
	15691.00	90.25	356.01	277.1	8357.52	74.50	6977.76	2125.76	8357.74	94.00	0.86	0.43	-0.74
	15786.00	89.97	356.36	277.1	8452.30	68.18	6977.58	2125.58	8452.50	95.00	0.47	-0.29	0.37
	15880.00	90.00	355.63	277.1	8546.07	61.62	6977.60	2125.60	8546.25	94.00	0.78	0.03	-0.78
	15975.00	89.72	353.70	277.1	8640.66	52.78	6977.84	2125.84	8640.80	95.00	2.05	-0.29	-2.03
	16069.00	89.88	353.71	277.1	8734.09	42.48	6978.16	2126.16	8734.19	94.00	0.17	0.17	0.01
	16122.00	90.03	354.80	277.1	8786.82	37.17	6978.21	2126.21	8786.90	53.00	2.08	0.28	2.06
Projection	16146.00	90.03	354.80	N/A	8810.72	35.00	6978.19	2126.19	8810.79	24.00	0.00	0.00	0.00