



Gamma Ray

LWD MEMORY LOG

Scale:

1:240

True Vertical Depth

Company: Noble Energy

Well: Reveille A33-720

Field: Wattenberg

County: Weld Country: United States

State: Colorado

Status:

Final Print

Surface Location: Latitude: 40° 26' 13.668" N Longitude: 104° 32' 25.224" W

Other Services:

API No: 05-123-50790-00

Job ID: 110727944

SEC: 34 TWN: 6N RGE: 64W

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

Log Measured From: Rig Floor

Elevation: Above P.D.:

0.00 ft 4661.00 ft

Elev. KB: 4661.00 ft Elev. DF: 4631.00 ft Elev. GL:

Dates

From: 2021-02-21 To: 2021-02-24 Spud: 2021-02-04

Drilled (ft) Top: 1938.00 Bottom: 17500.50

Logged (ft) Top: 1938.00 Bottom: 17487.00

Azi Reference North: Grid Dip Angle: (deg) 66.81 Total Magnetic Field Strength: (nT) 51962 Mag to Reference North Correction: (deg) 7.12

Interval

Magnetic Field Reference

Borehole Record

Casing Record

Hole Size (in)

From (ft)

To (ft)

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

13.500

30.00

1938.00

9.625

36.00

30.00

1928.00

8.500

1938.00

17500.00

Acquisition System

Software Version

Other

Cadence

RT 5.8

Rig:

H&P 517

Plot Studio

5.8.9018.1

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	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	8.500	PDC	3.00	AutoTrak Curve	1938.00	6612.00	1938.00	6625.00	2021-02-21 12:30	2021-02-22 07:41	17.18
2	2	8.500	PDC	3.00	AutoTrak Curve	6612.00	17487.54	6625.00	17500.00	2021-02-22 17:56	2021-02-24 09:28	37.67

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Tien Bui	2021-02-20	2021-02-24						

Mud Properties Record

Date / Time	Run No.	Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2021-02-20 17:40	1	1938.00	Oil Based Mud	9.2	11	N/A	19.5	79.5/20.5	Active Pit	27000	0.00
2021-02-22 11:26	2	6625.00	Oil Based Mud	9.5	12	N/A	16.2	77.9/22.1	Active Pit	28500	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	AutoTrak Curve Steering Unit	14262247	Near Bit VSS	5.93	6.79	7.000	4.330
1	AutoTrak Curve Steering Unit	14262247	Near Bit Inclination	5.93	6.79	7.000	4.330
1	AutoTrak Curve MWD	12570158	Gamma (single)	2.75	12.96	7.000	3.250
1	AutoTrak Curve MWD	12570158	Directional (mag)	12.27	22.48	7.000	3.250
2	AutoTrak Curve Steering Unit	15103421	Near Bit Inclination	5.93	6.79	7.000	4.330
2	AutoTrak Curve Steering Unit	15103421	Near Bit VSS	5.93	6.79	7.000	4.330
2	AutoTrak Curve MWD	14179563	Gamma (single)	2.76	12.96	7.000	3.250
2	AutoTrak Curve MWD	14179563	Directional (mag)	12.27	22.47	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC SU	AutoTrak Curve SU	Auto Trak Curve Steering Unit
ATC MWD	AutoTrak Curve MWD	Auto Trak Curve MWD
ATC LCPM	AutoTrak Curve LCPM	Auto Trak Curve LCPM

Comments

1	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
2	Baker Hughes LWD Run 1 utilized 6 ¾ inch NaviGamma service (Gamma Ray and Directional) behind a 8 1/2 inch bit and rotary steerable assembly from 1938 to 17500 feet MD (1938 to 6698 feet TVD).
3	The Gamma Ray Apparent (GRAM) data is presented 0 to 300 API, per the customer's request.
4	Several gaps appear in the log due to drilling ahead before the assembly had time to properly power on.

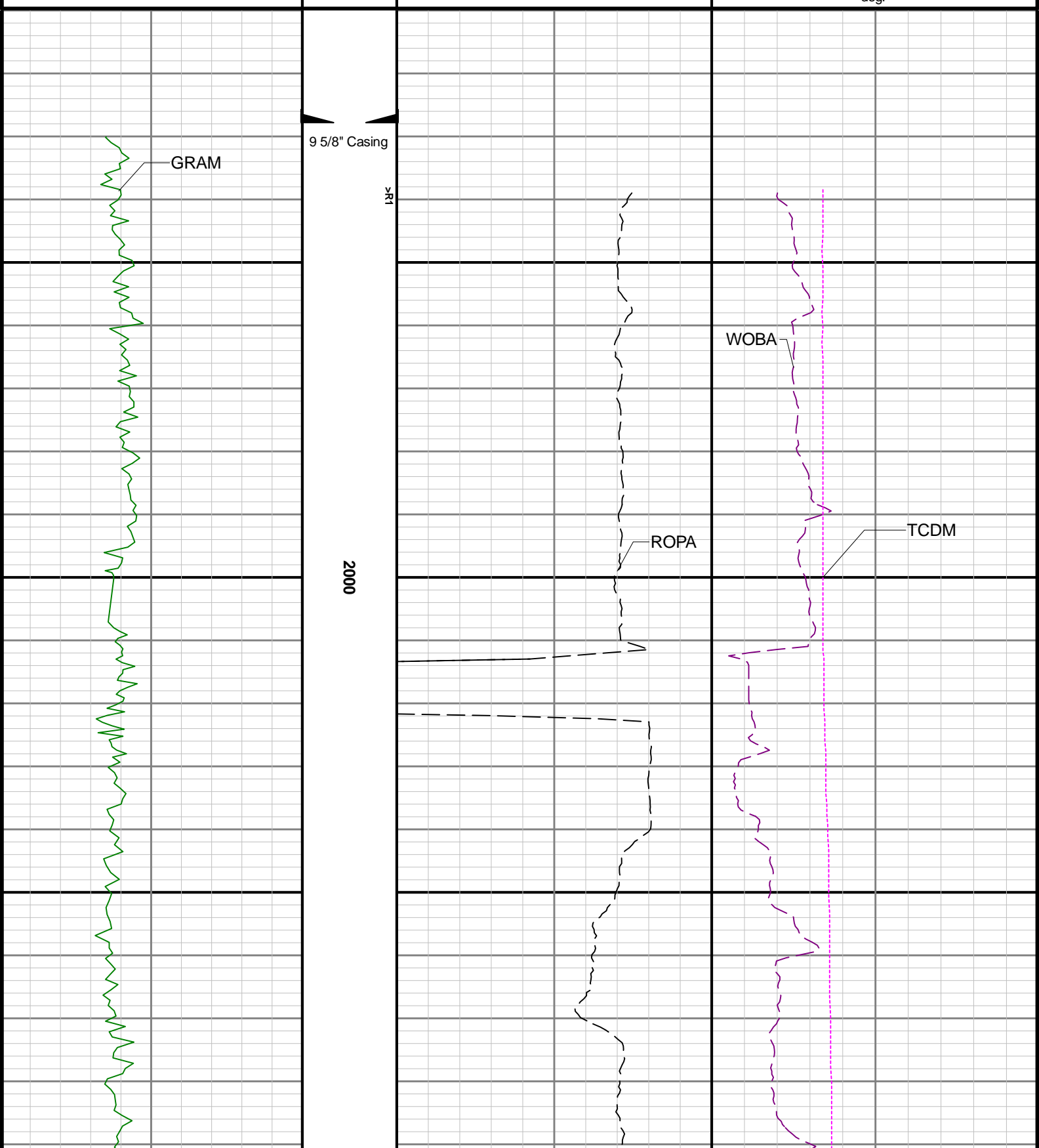
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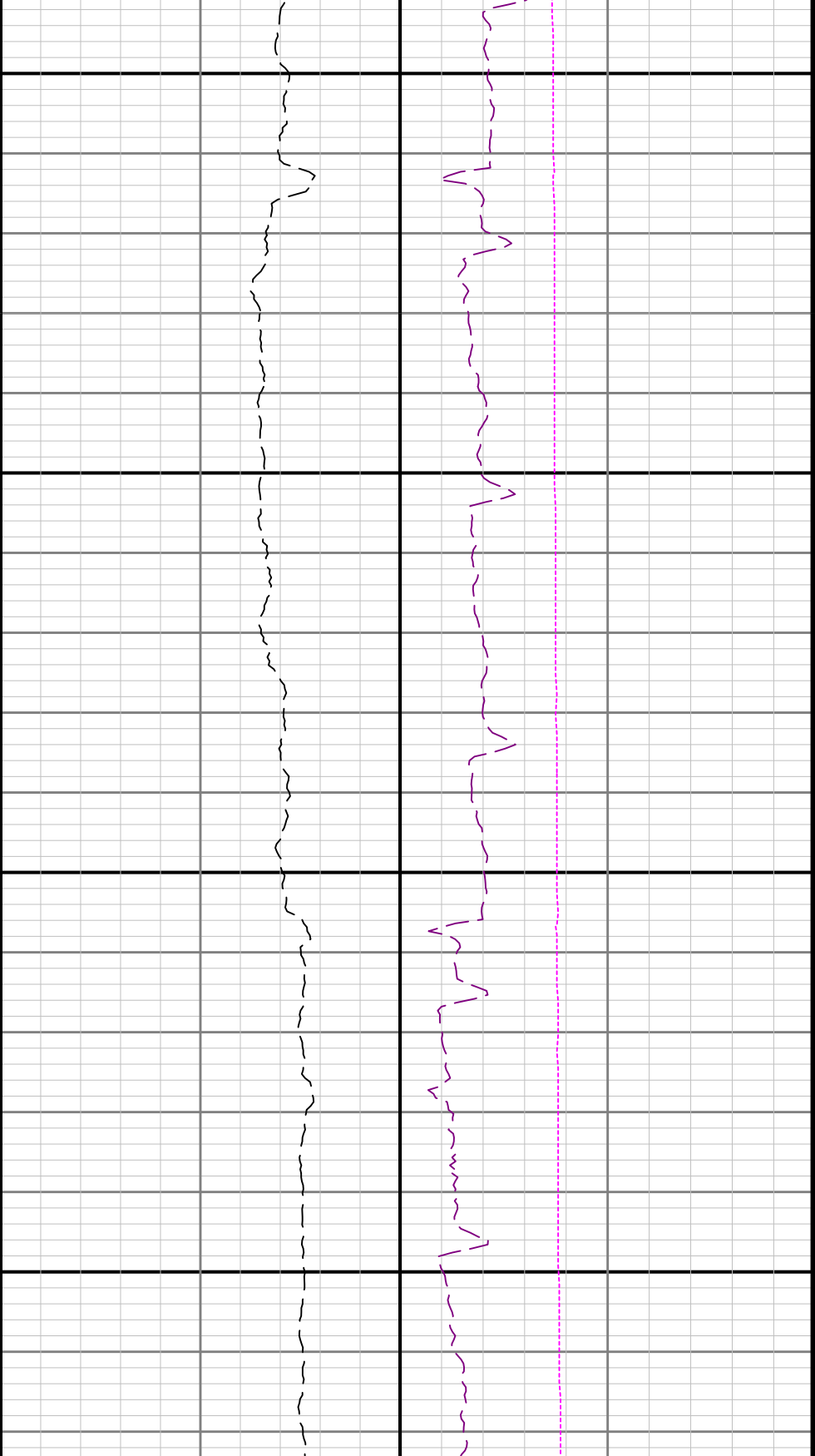
Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	6612.00	8.500	2	The interval from 6612 to 6625 feet MD (6103 to 6114 feet TVD) was logged up to 10.5 hours after being drilled due to a trip out of hole to change out BHA.

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

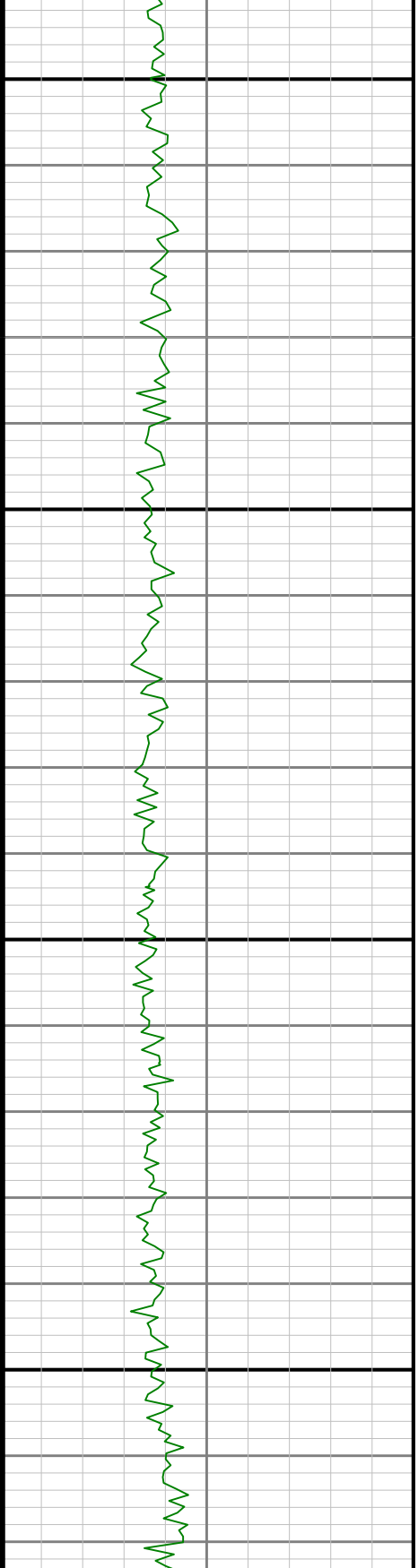
Gamma Ray - Apparent 0.5 ft Average GRAM	TVD 1:240 feet	Depth Averaged ROP 3 ft Average ROPA	Weight On Bit, Average 1 ft Average WOBA
0 300		1000 0	0 50
API		ft/h	klb
			Downhole Temperature TCDM
			0 300
			degF

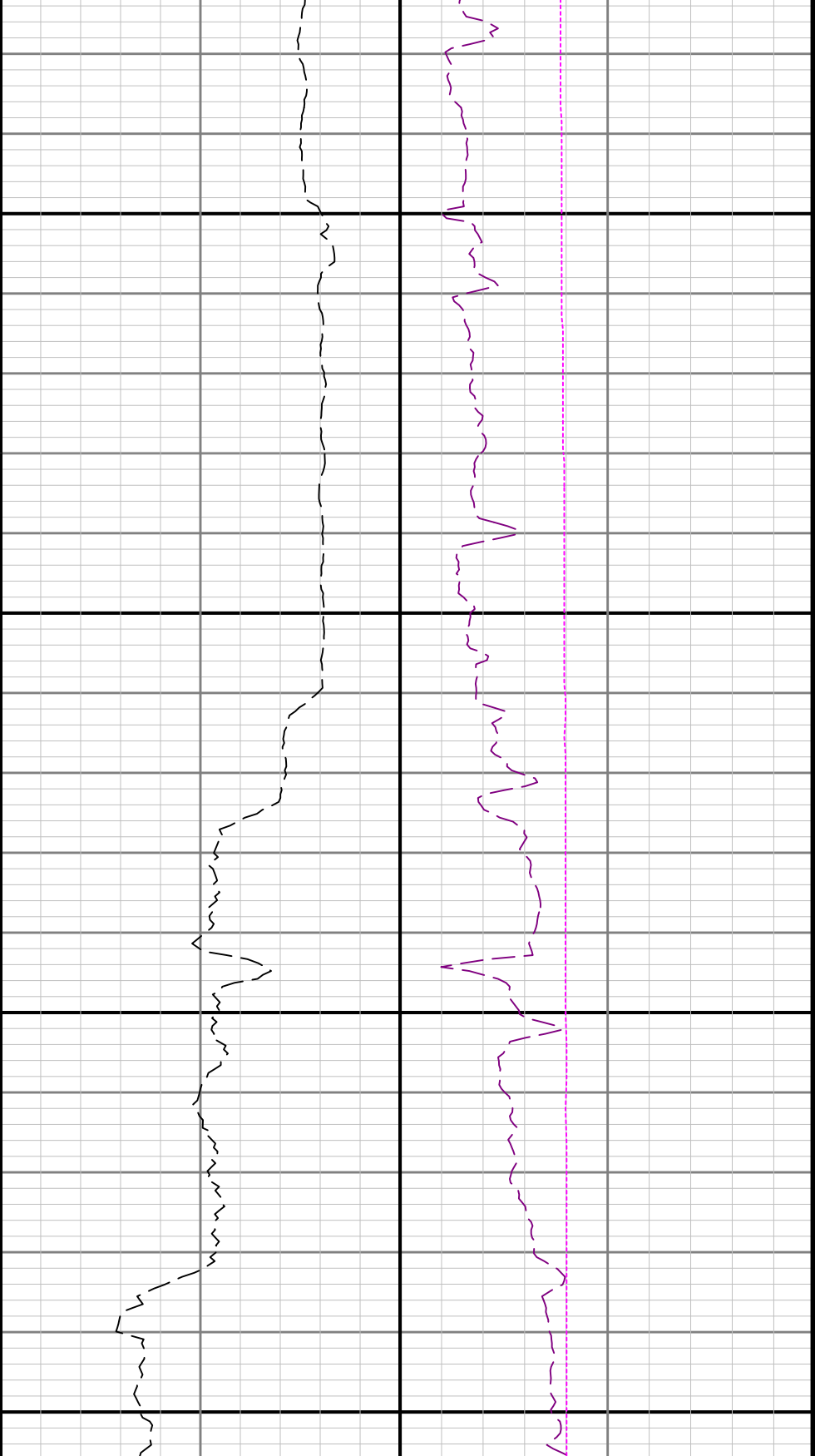




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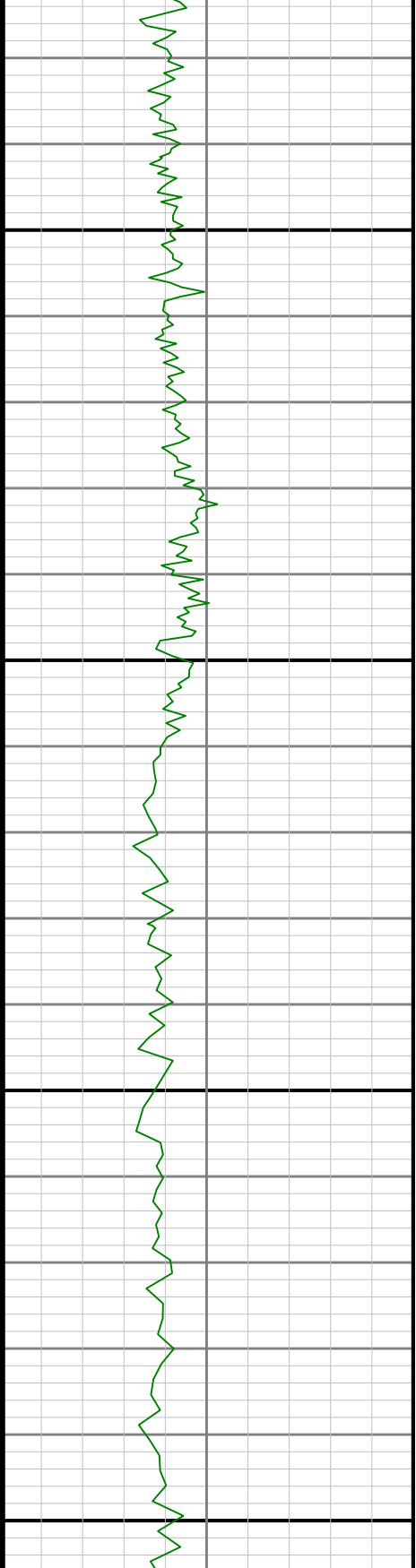
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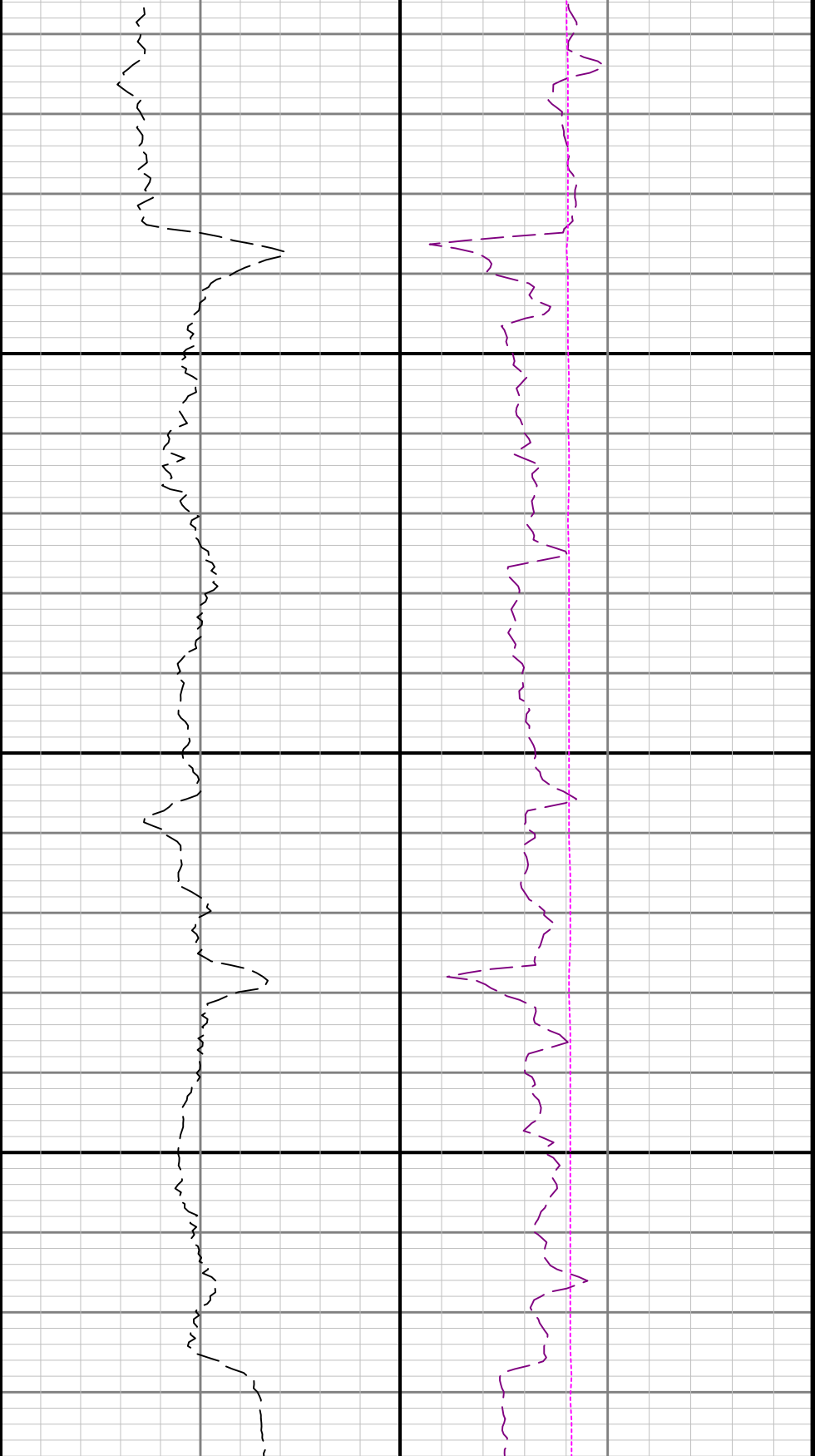




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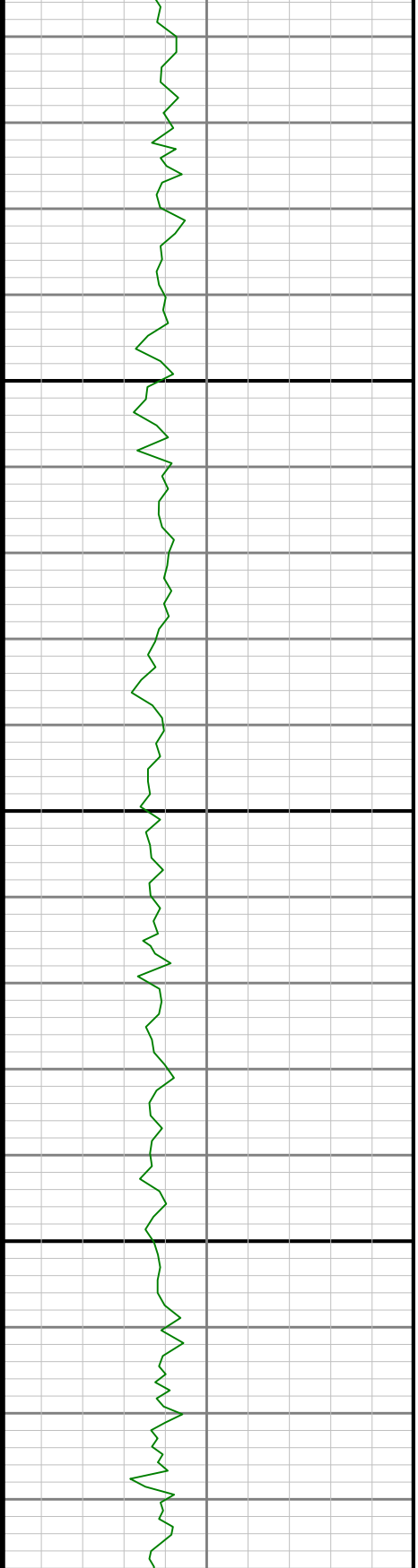
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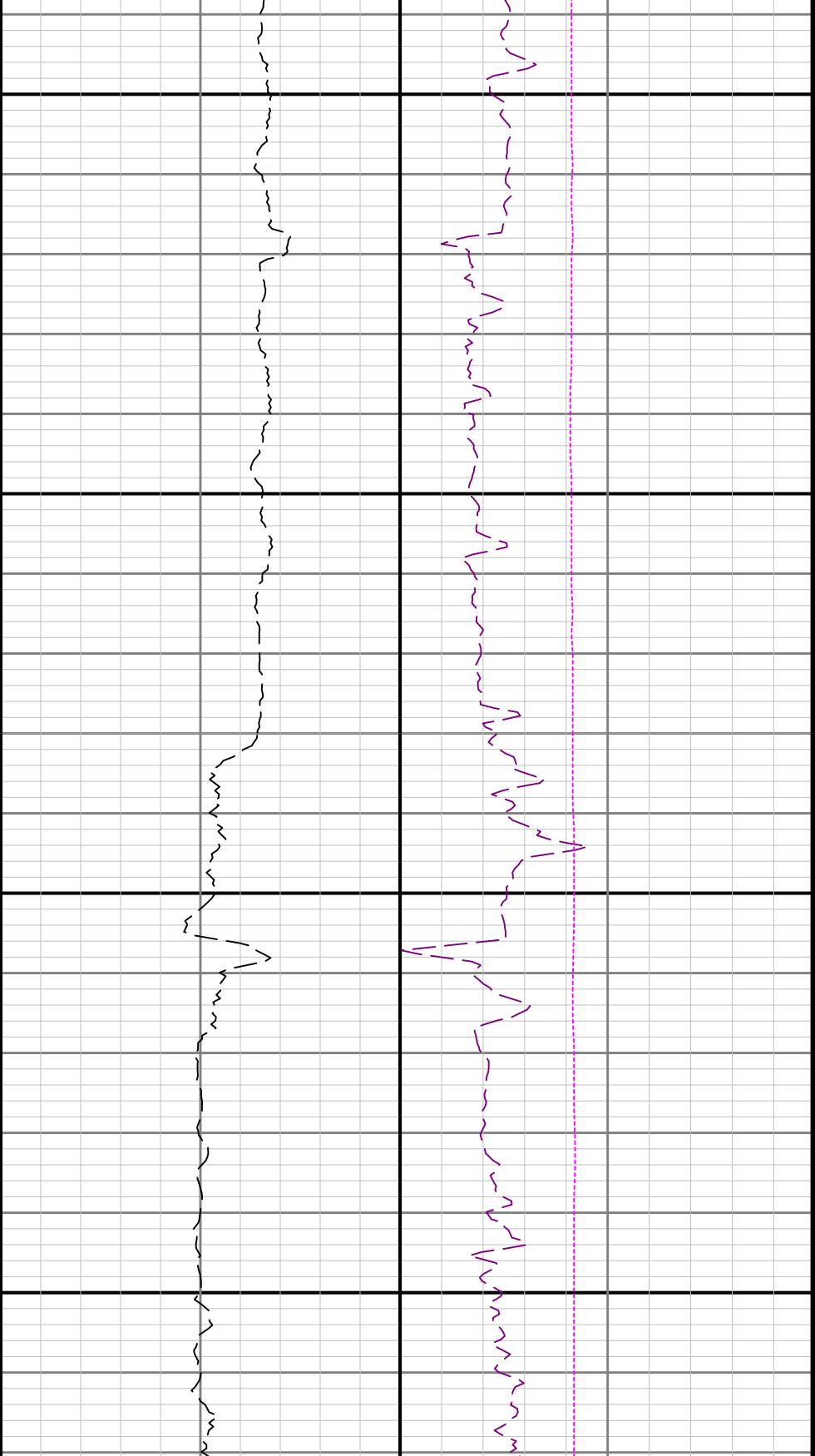




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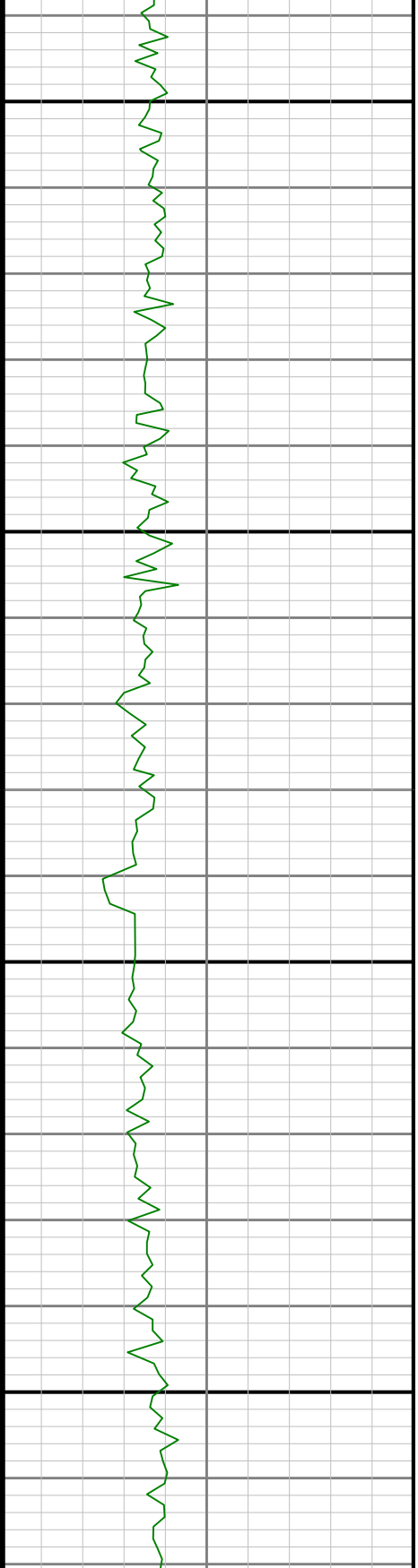
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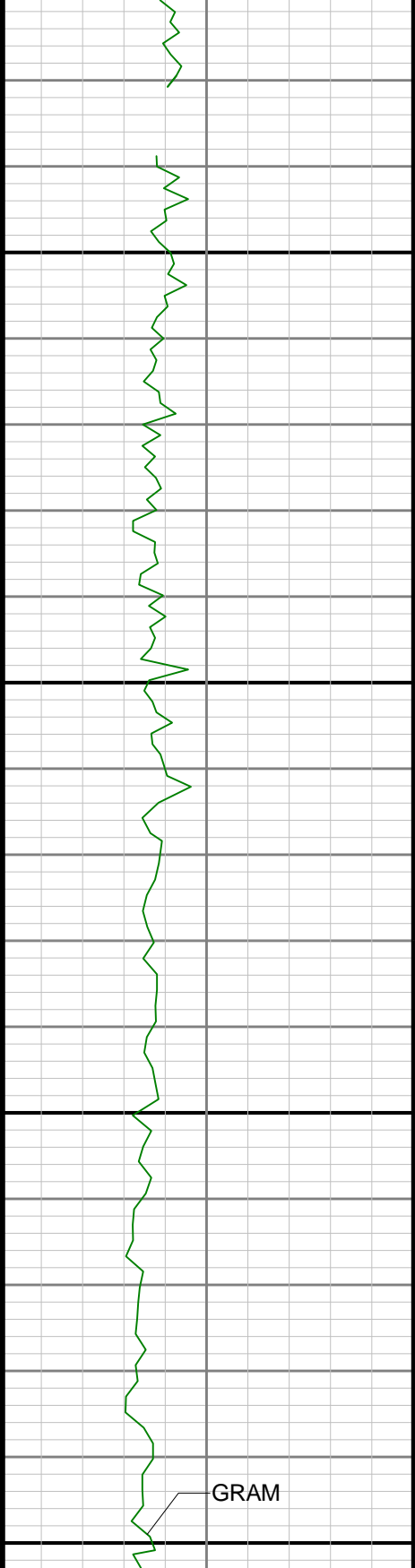




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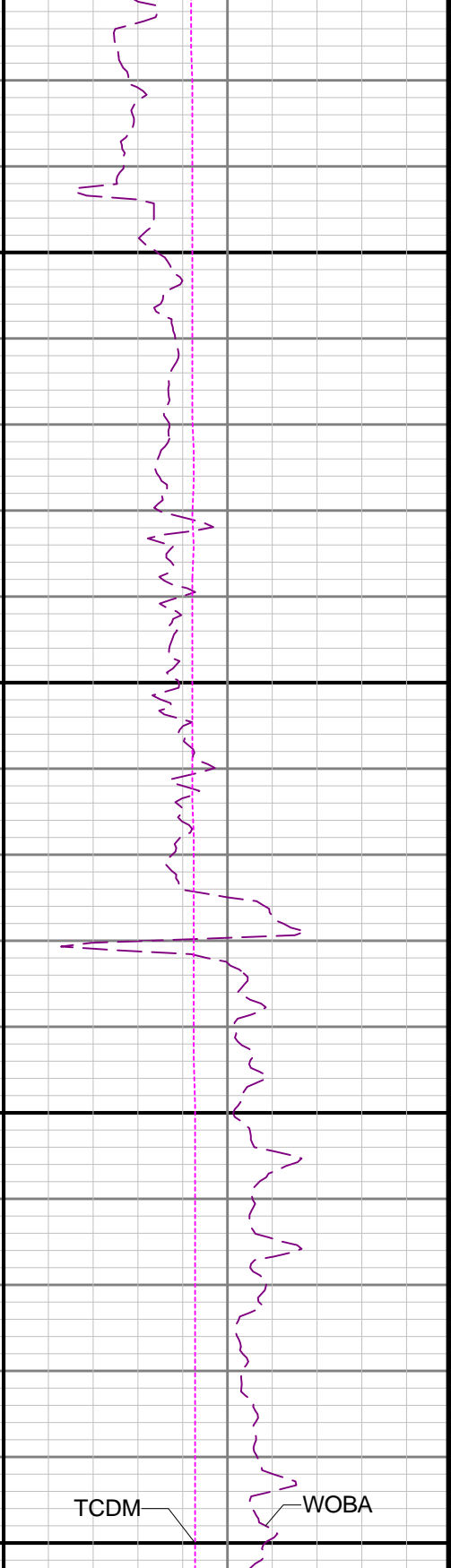
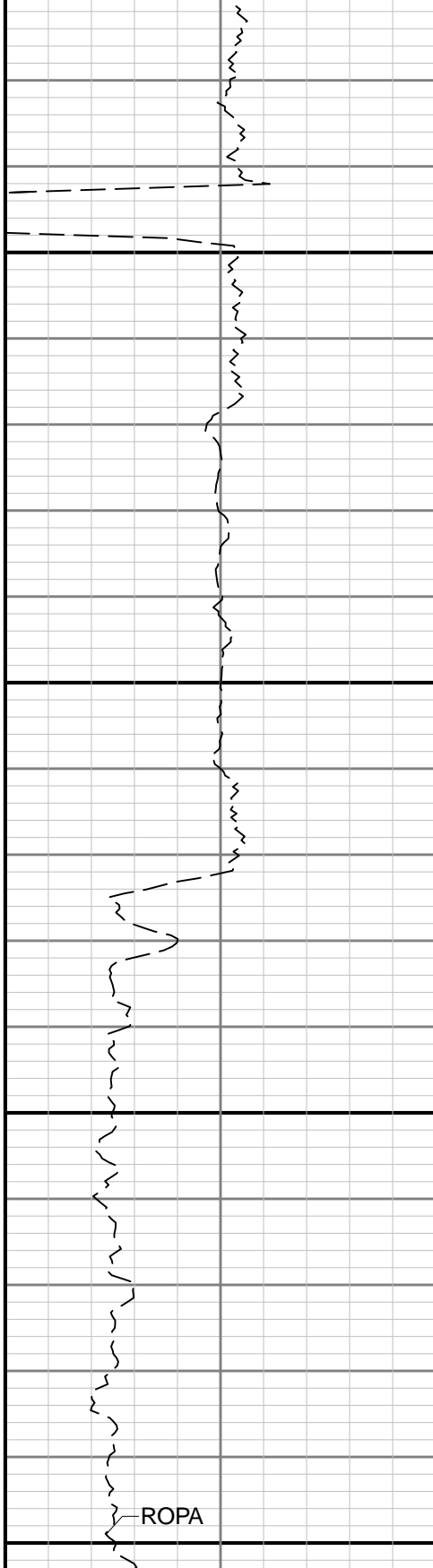
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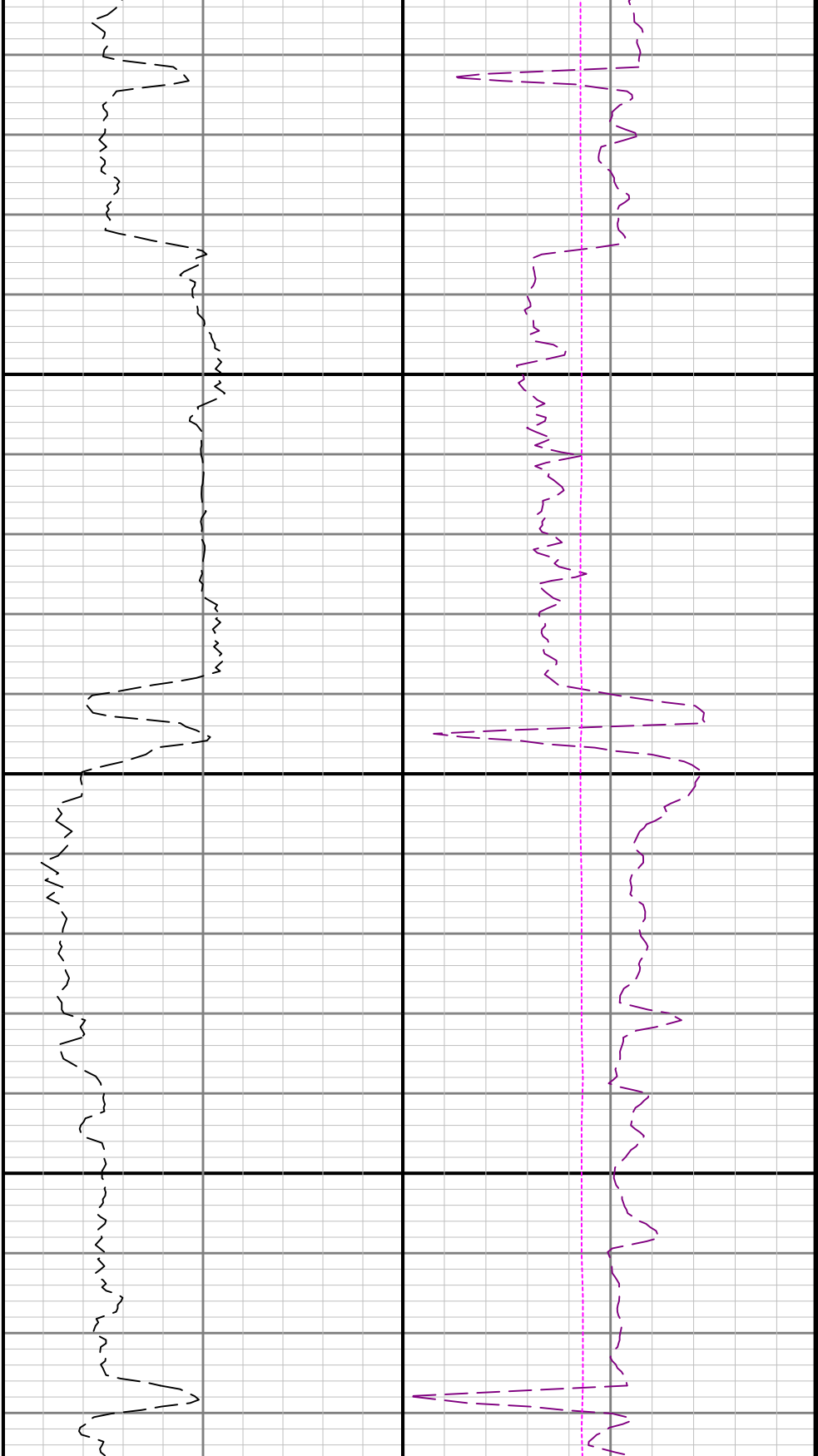




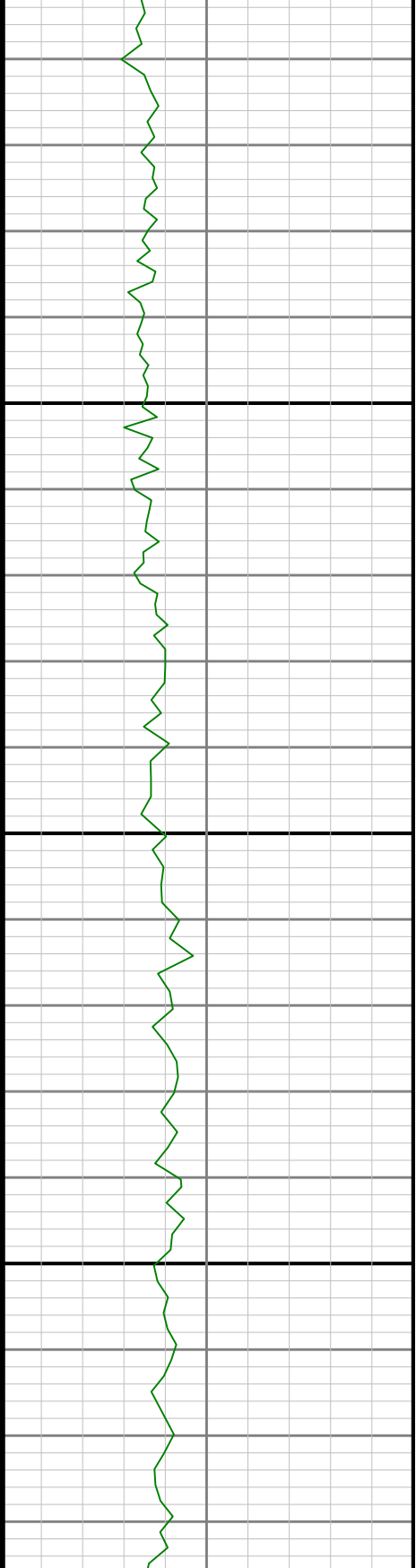
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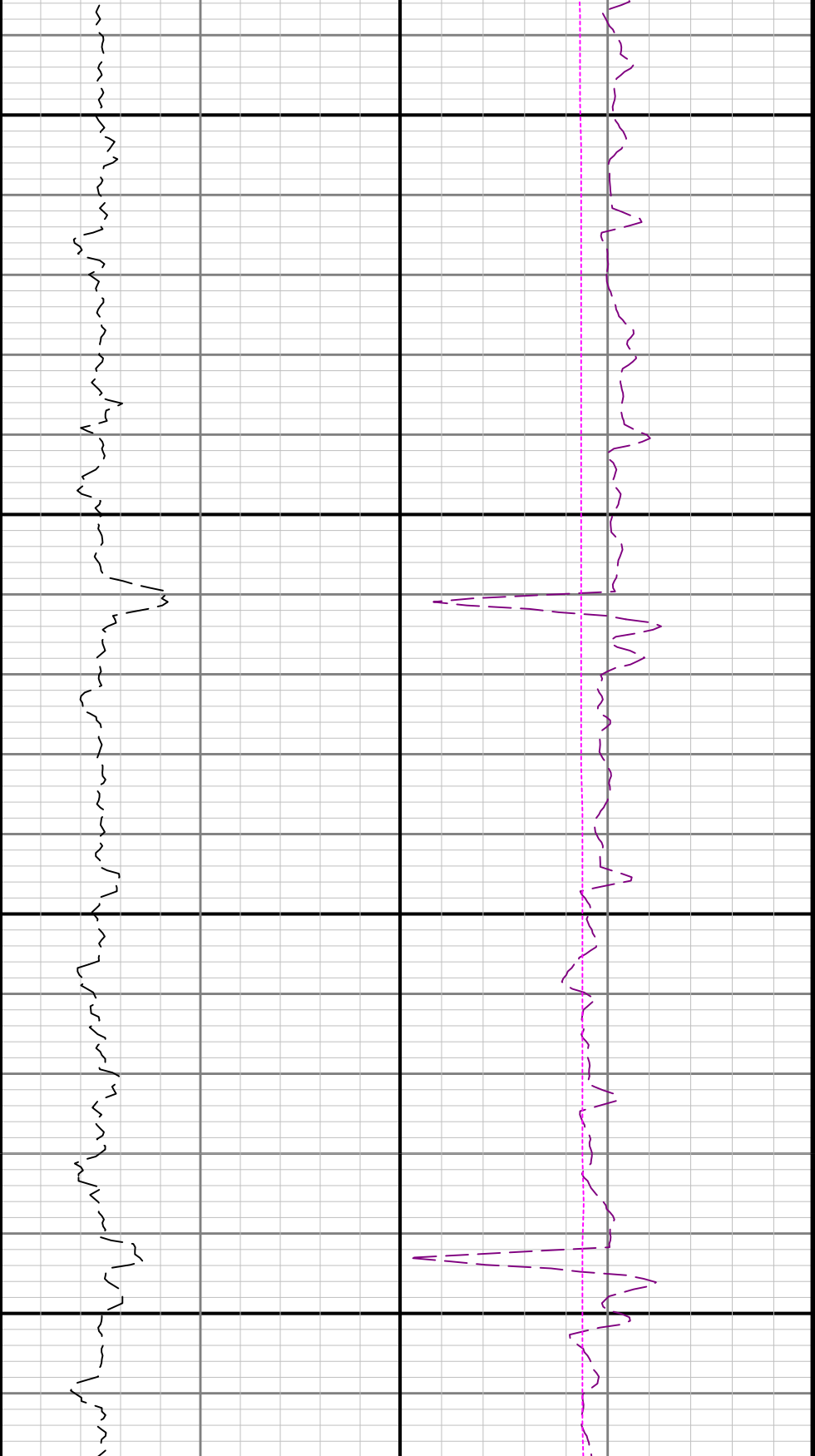
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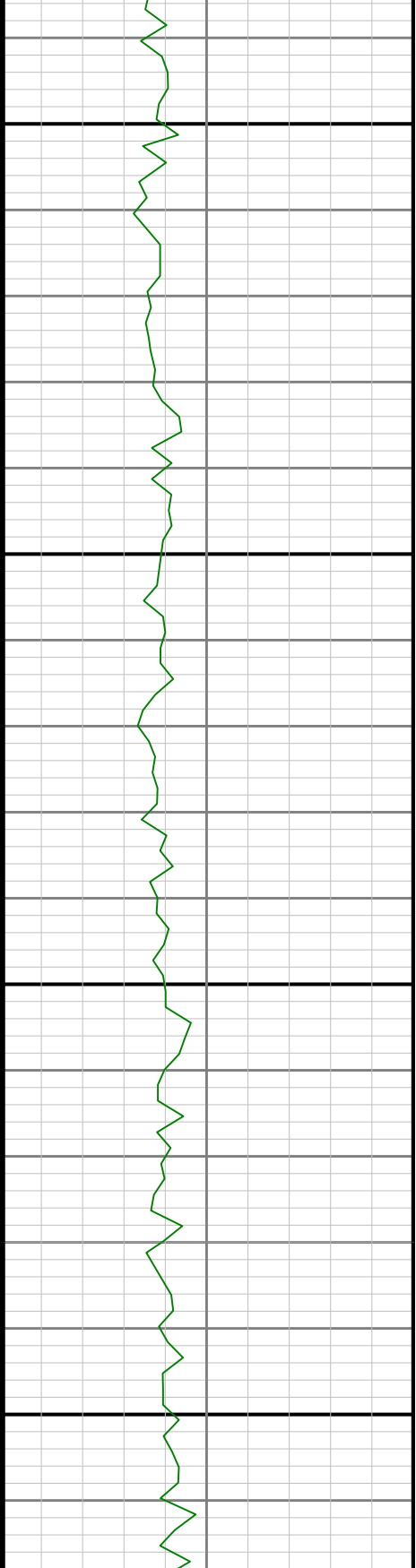
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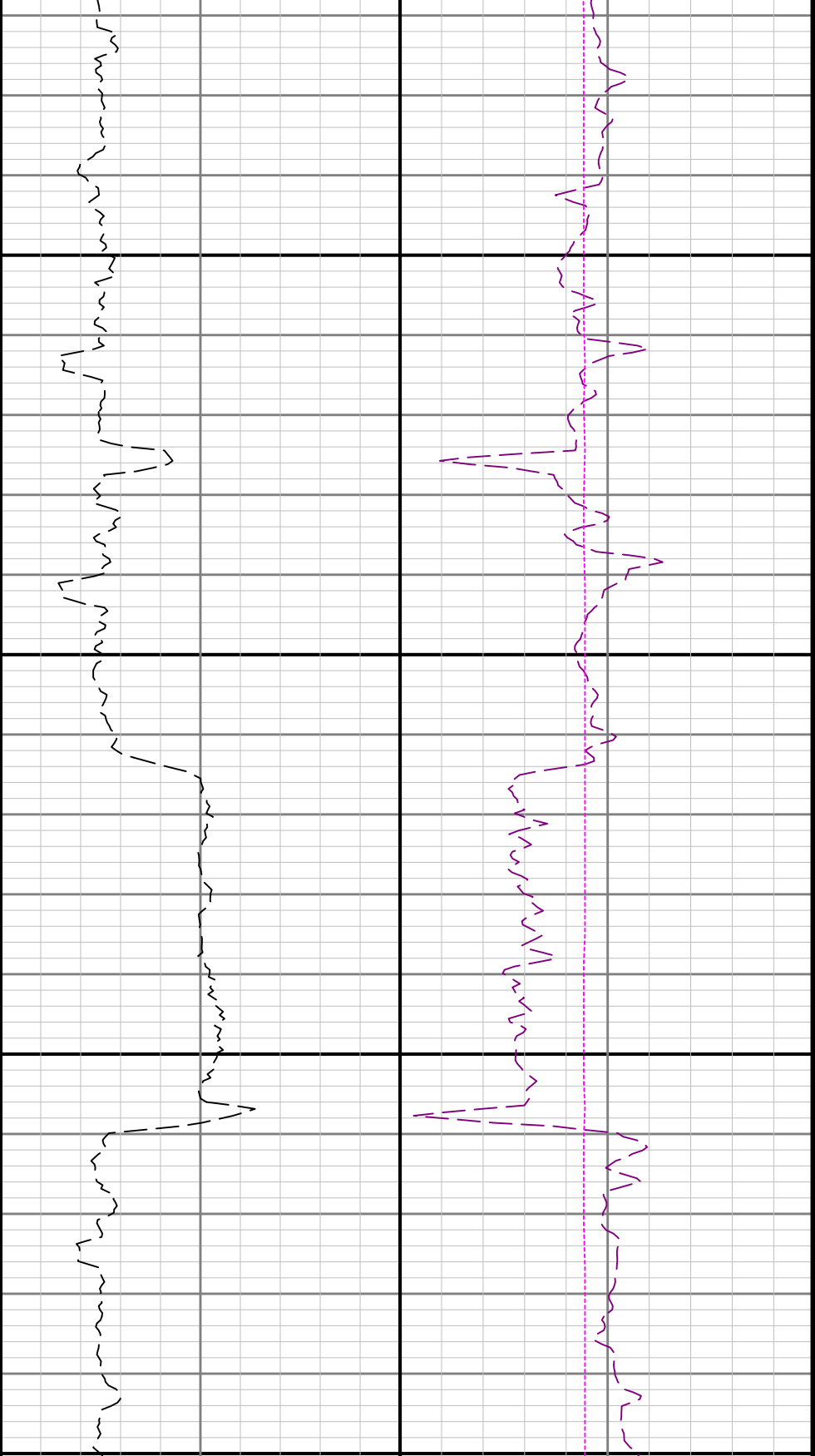




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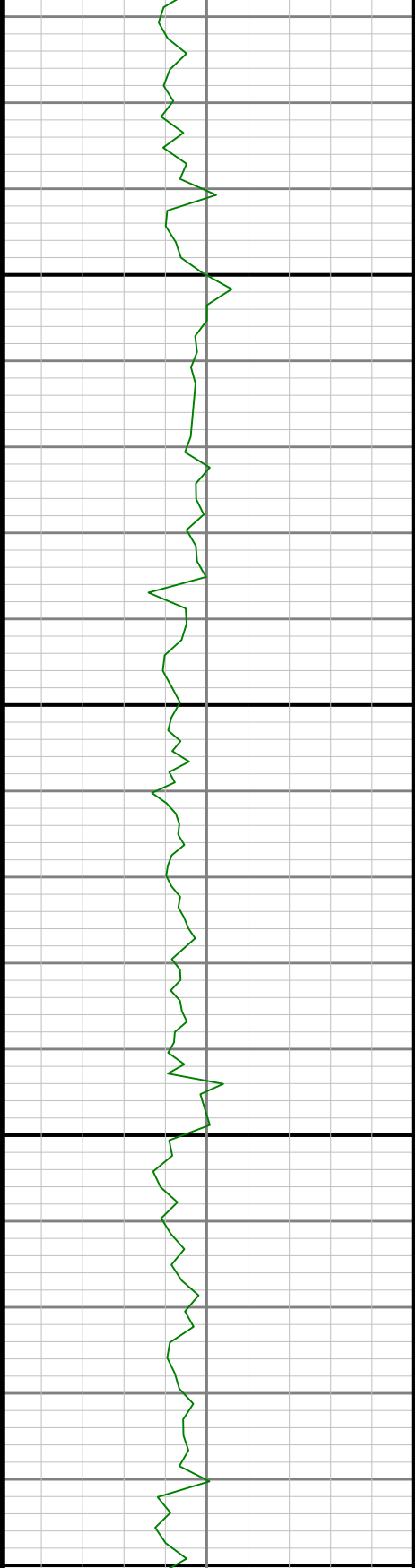
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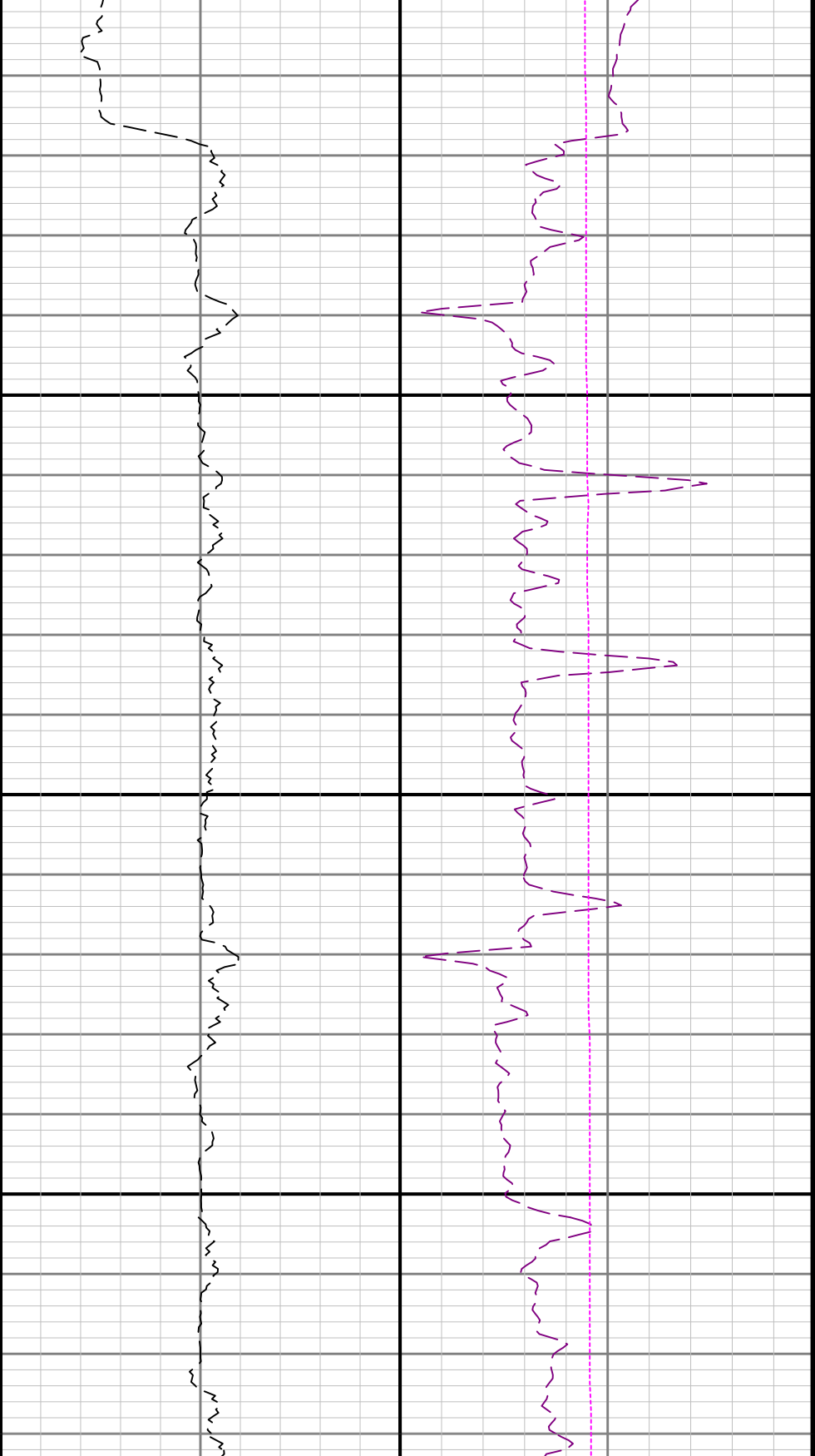




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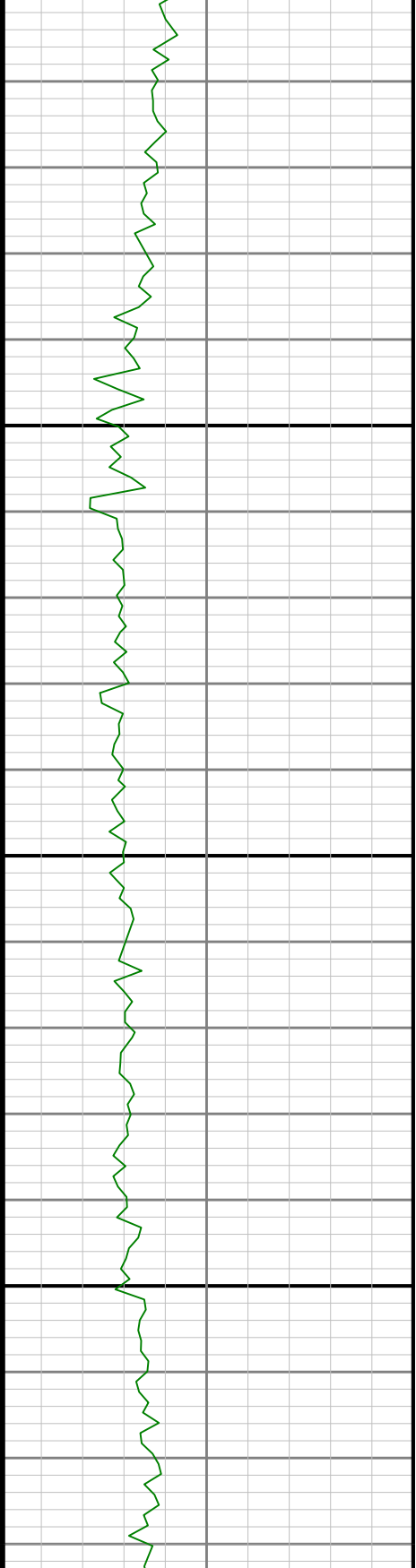
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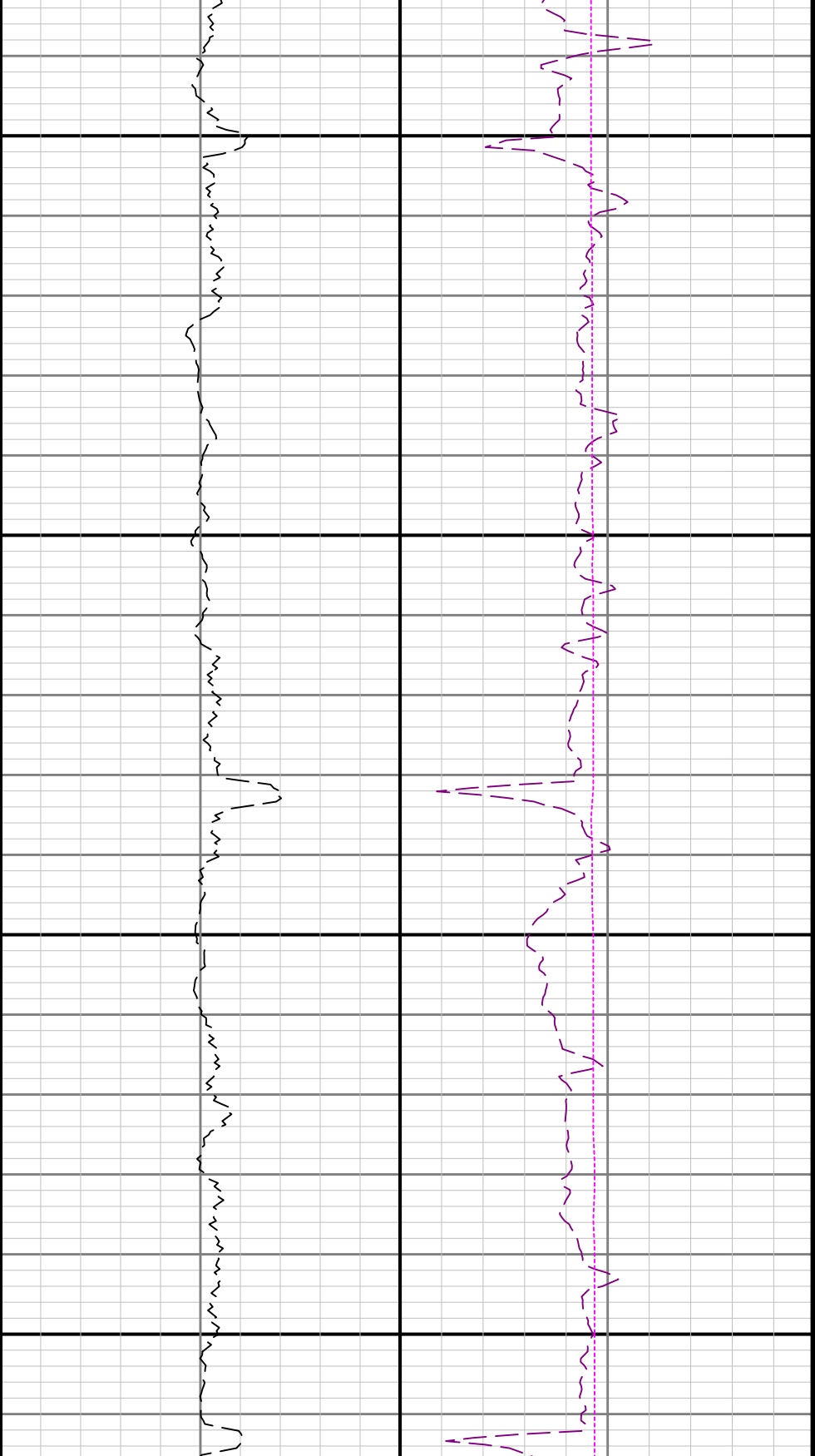




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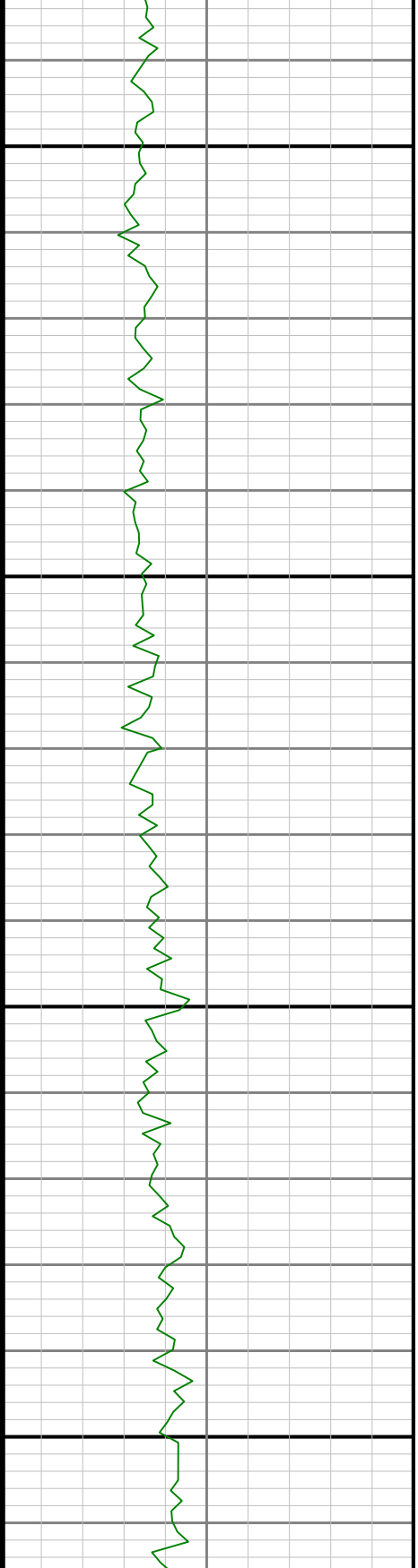
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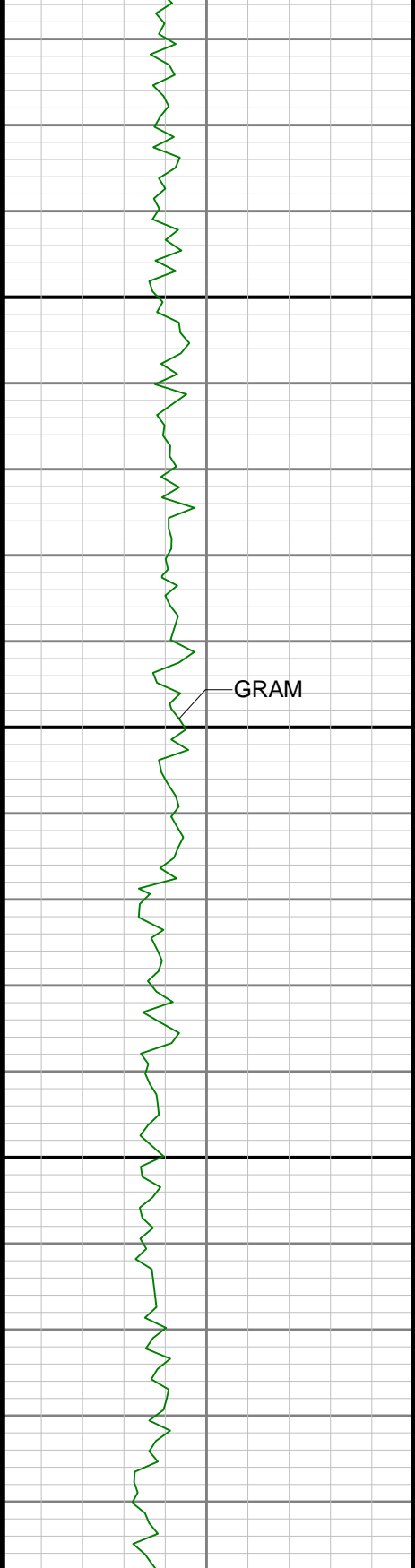




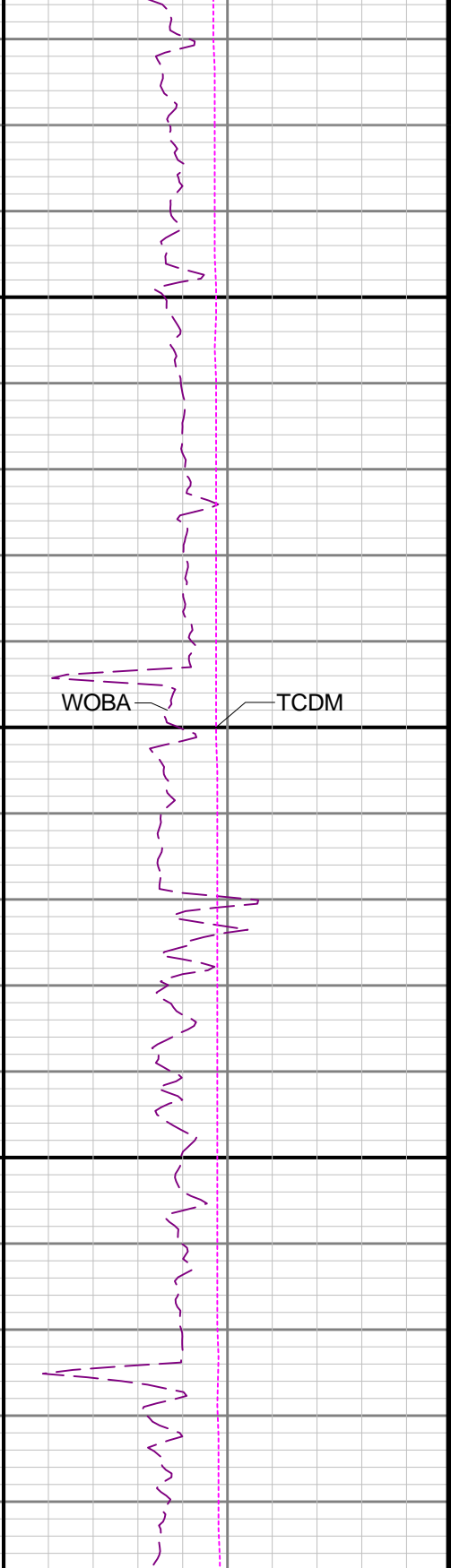
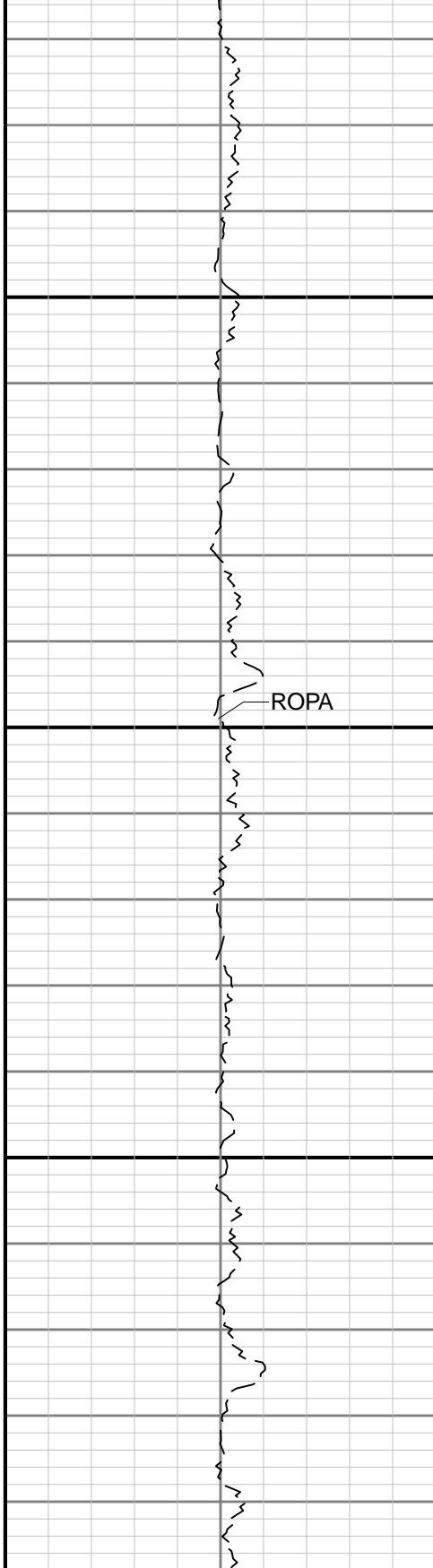
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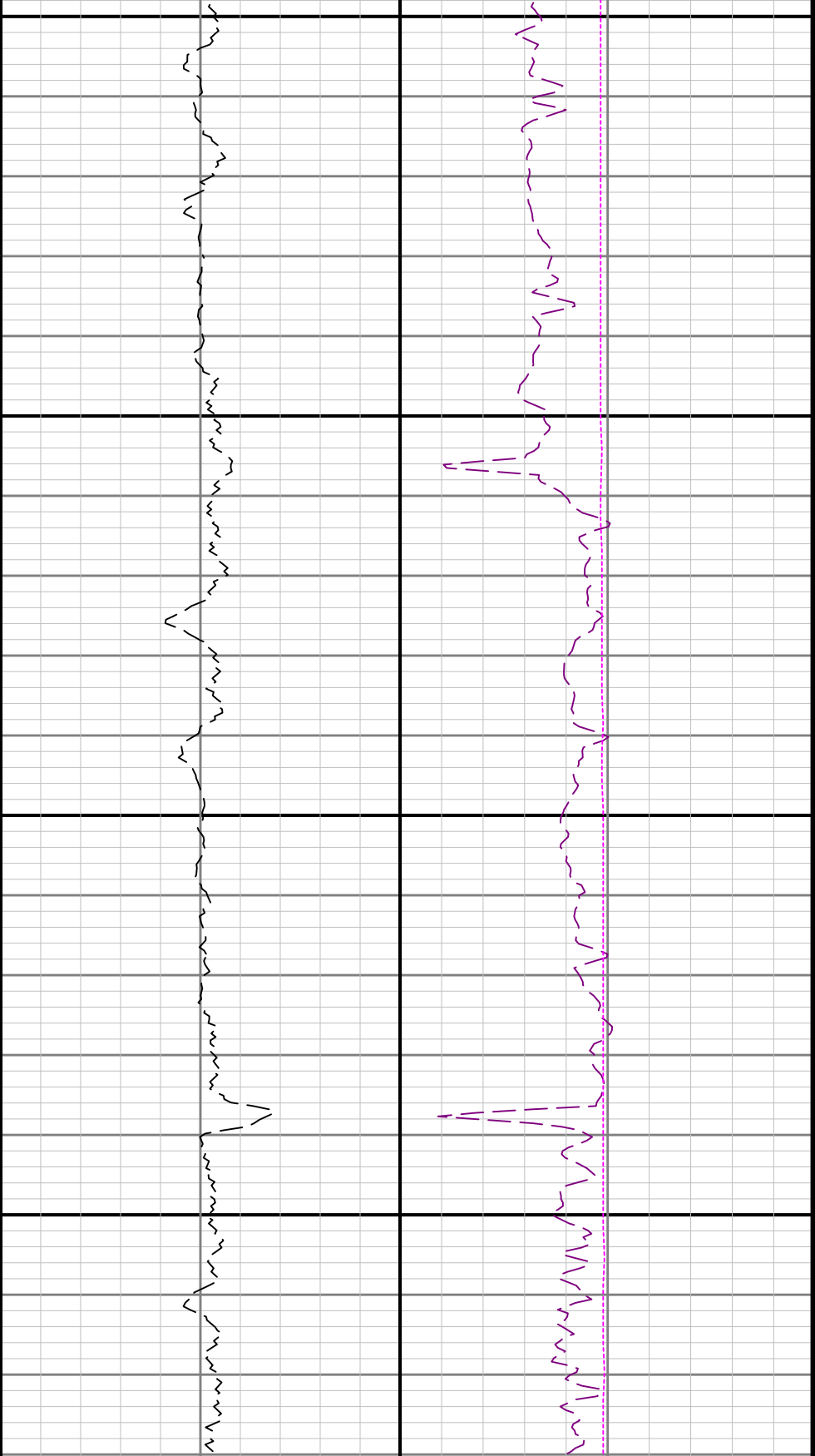
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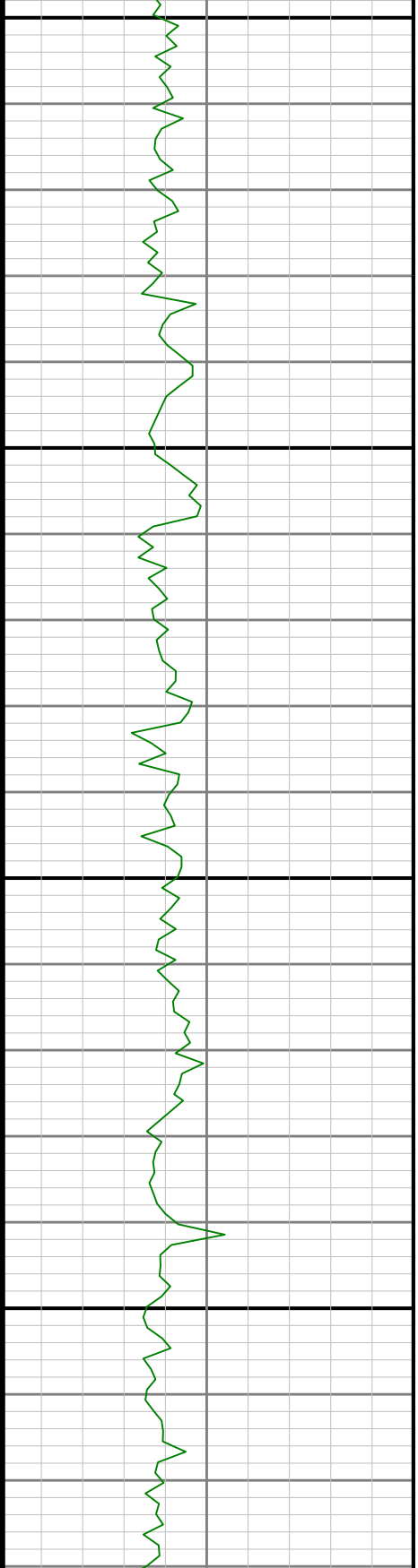
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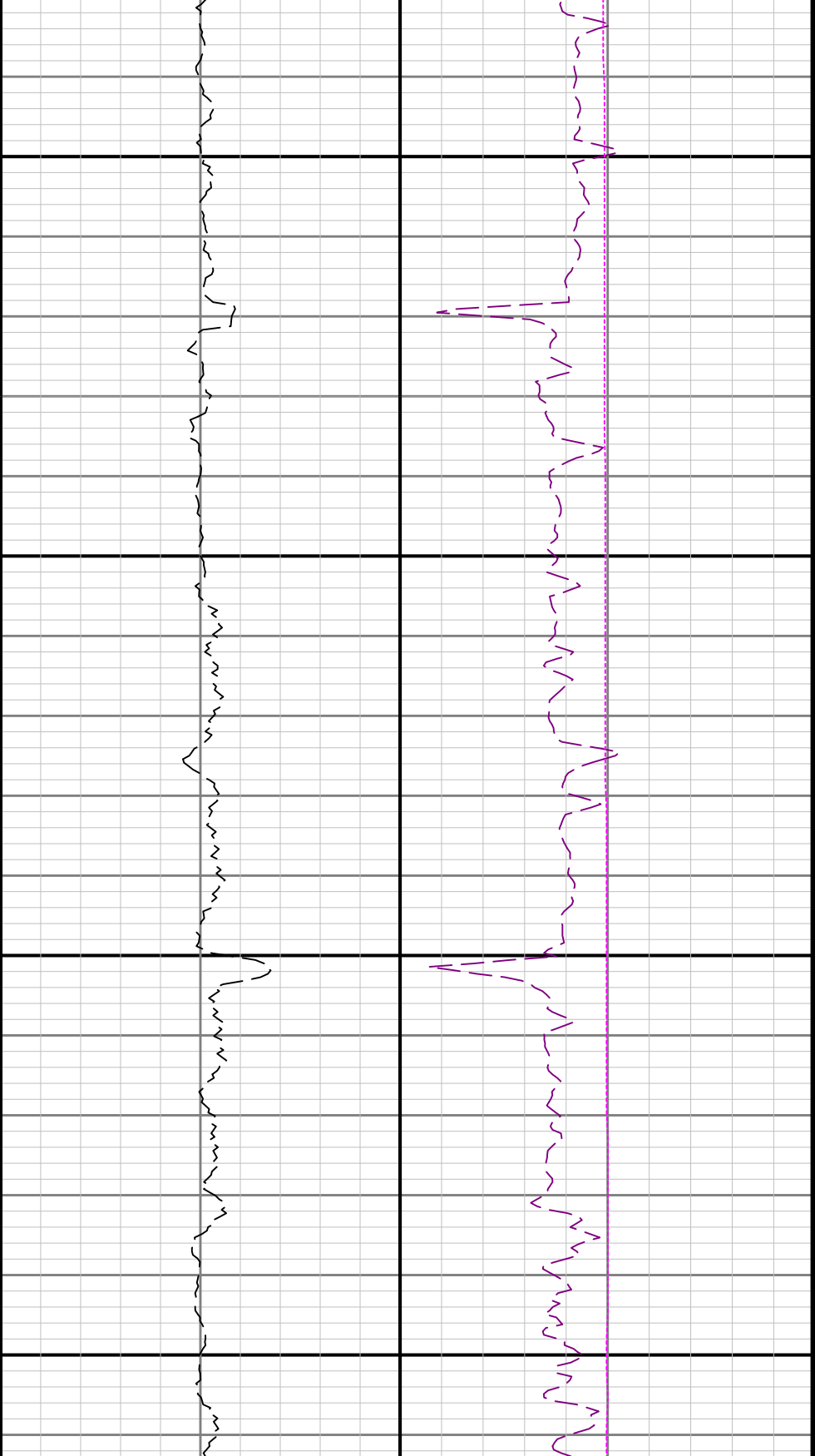




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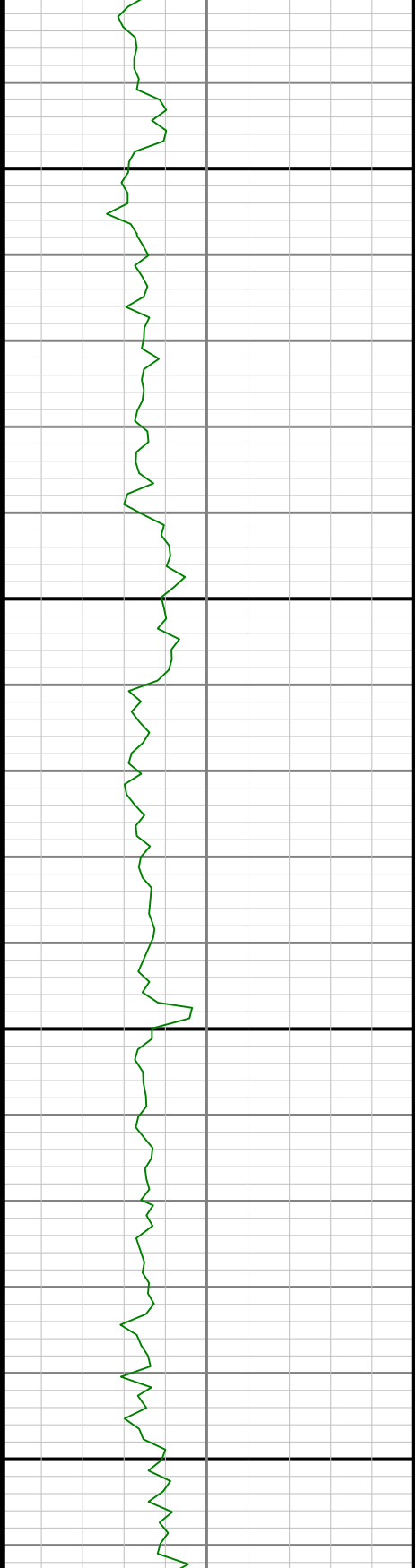
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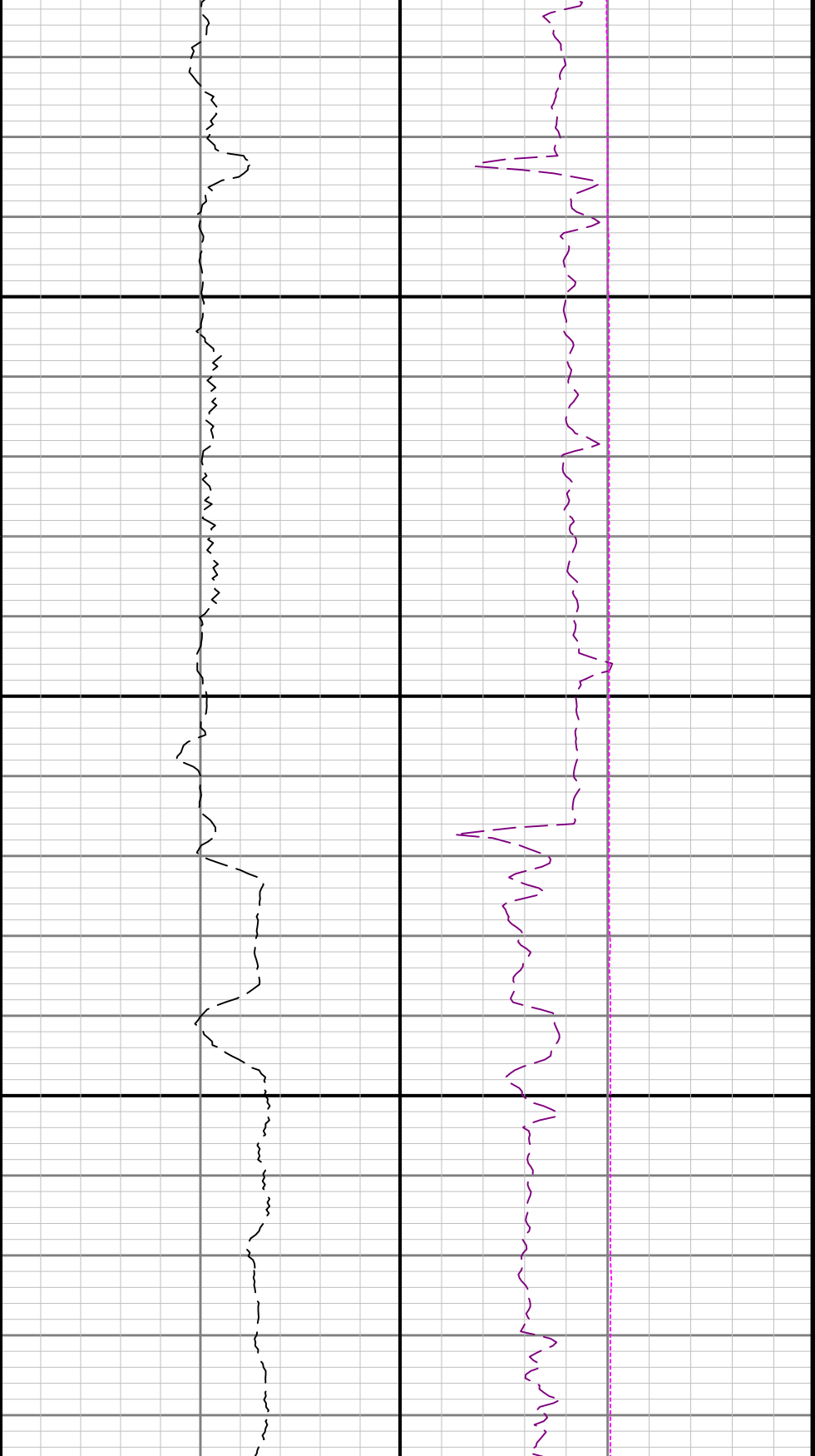




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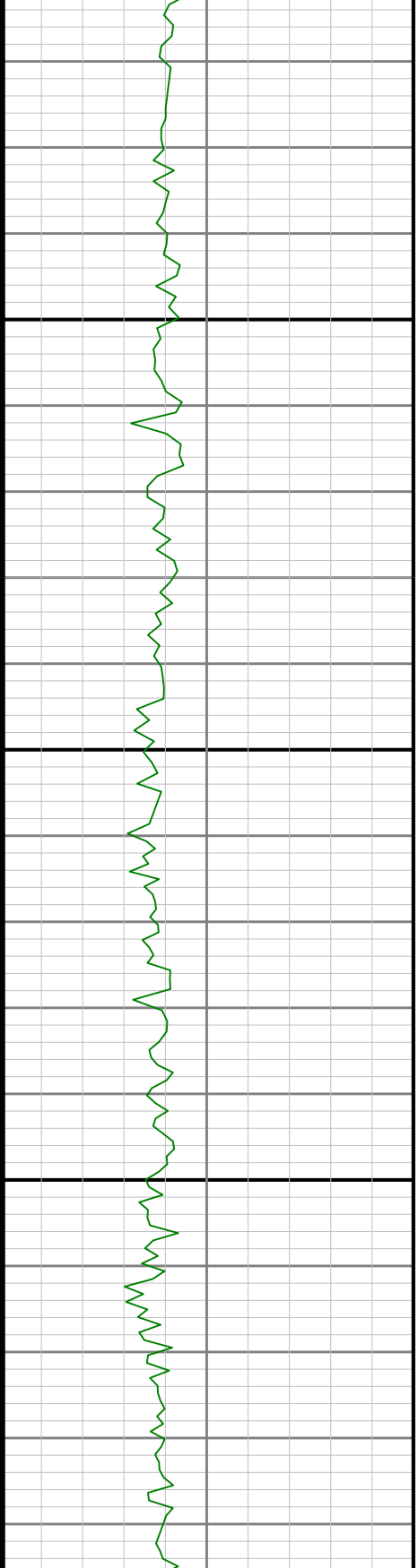
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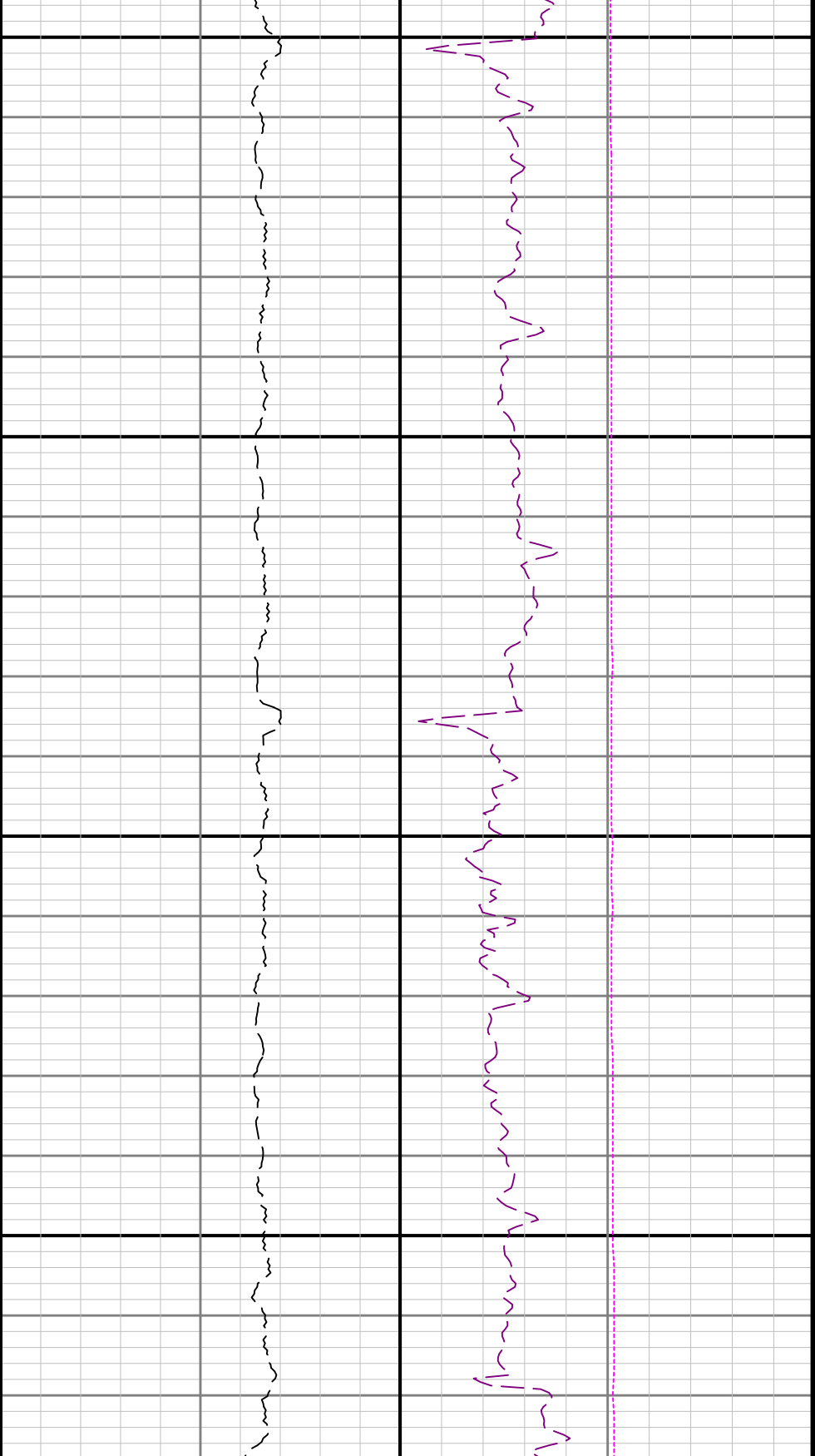




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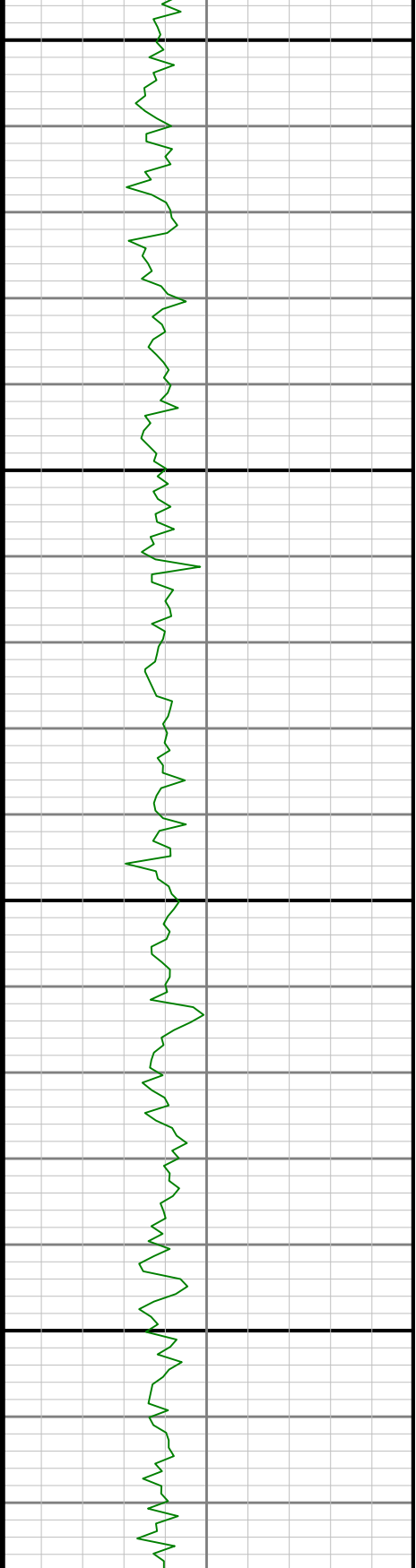
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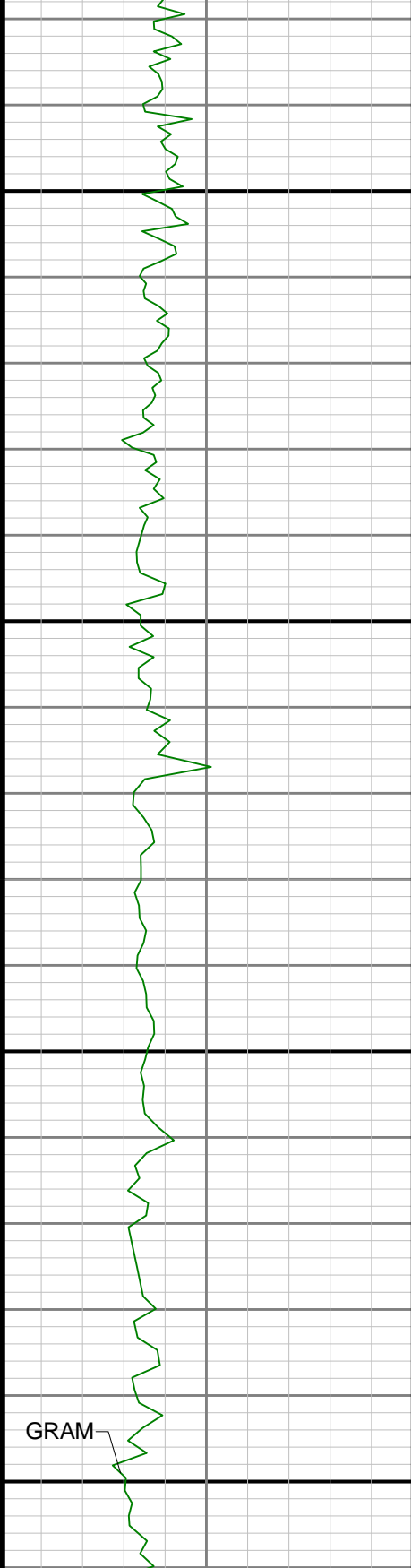




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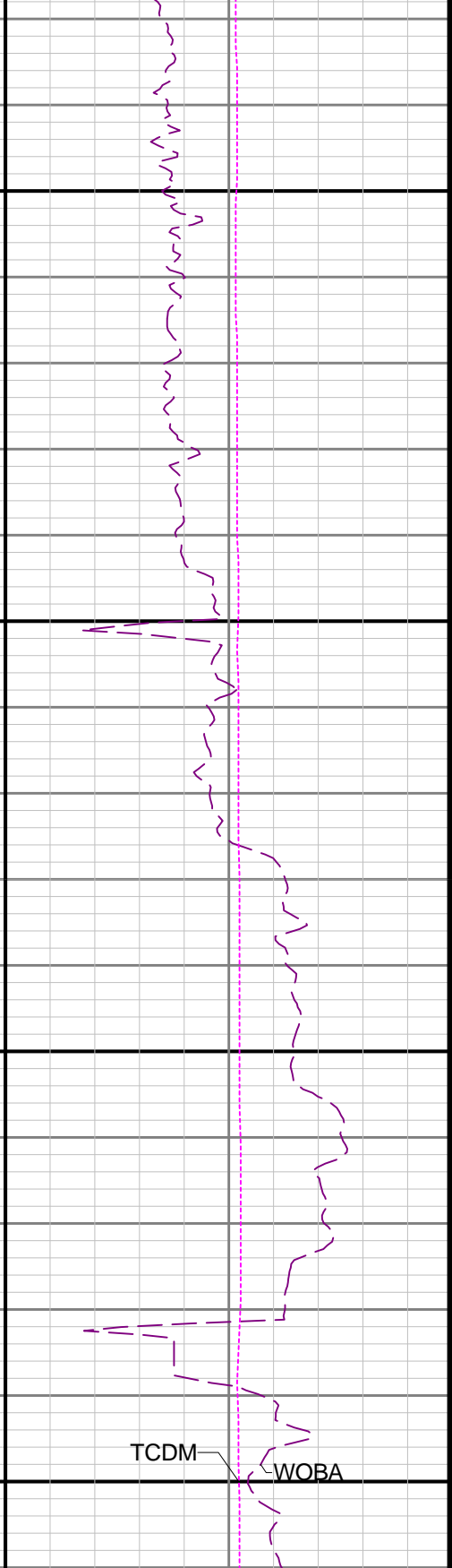
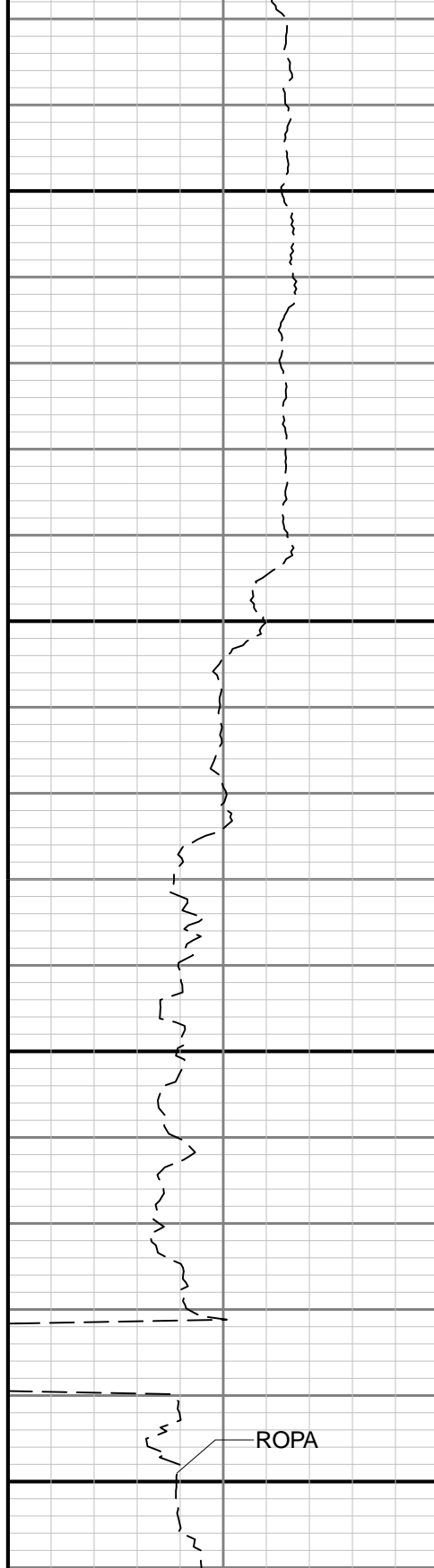
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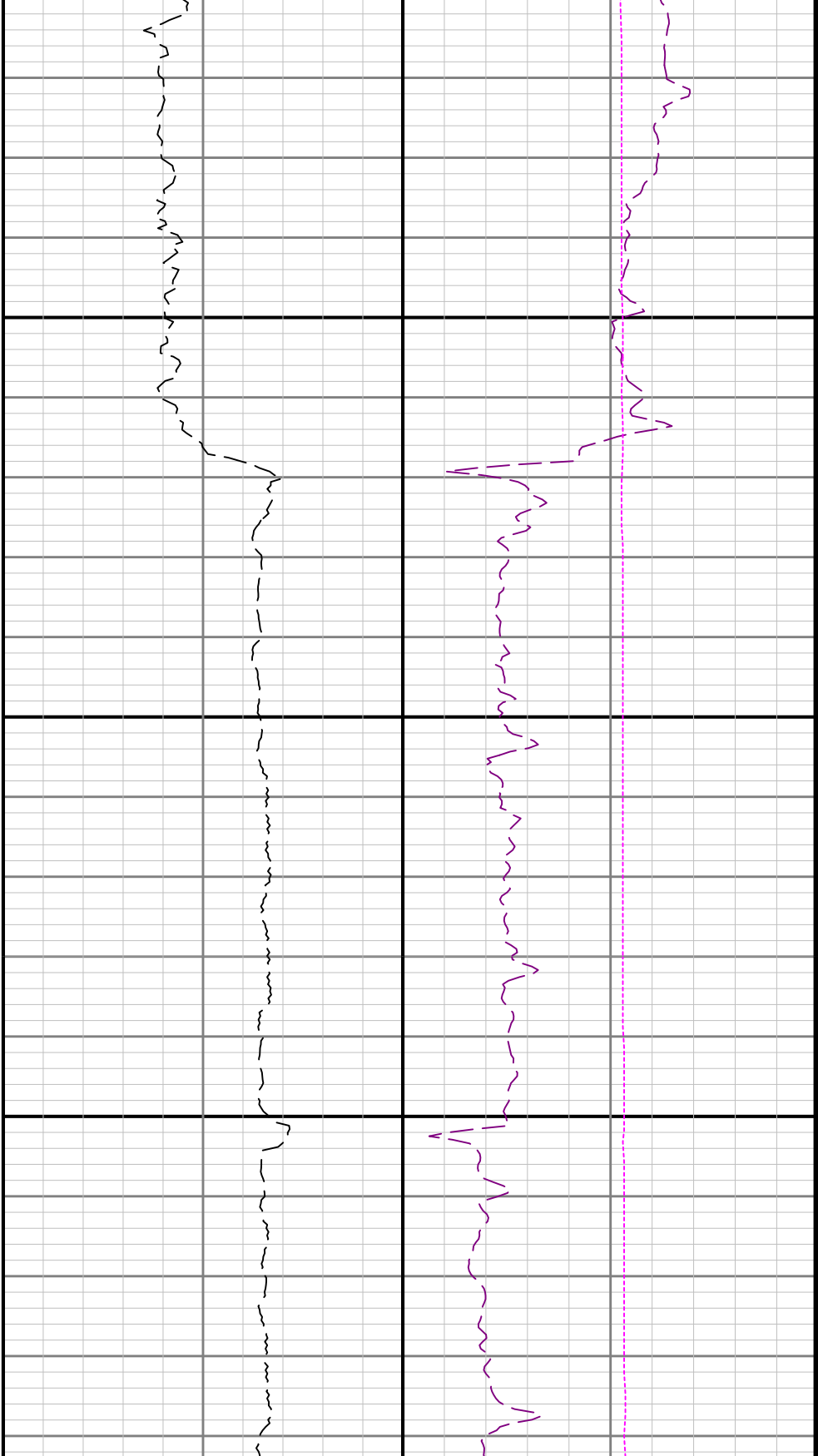




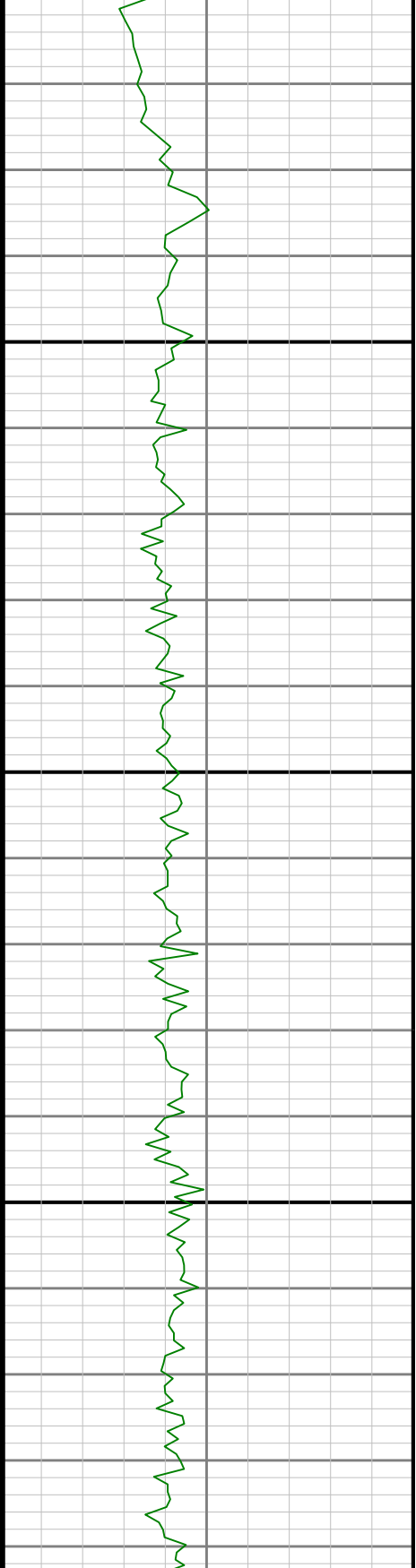
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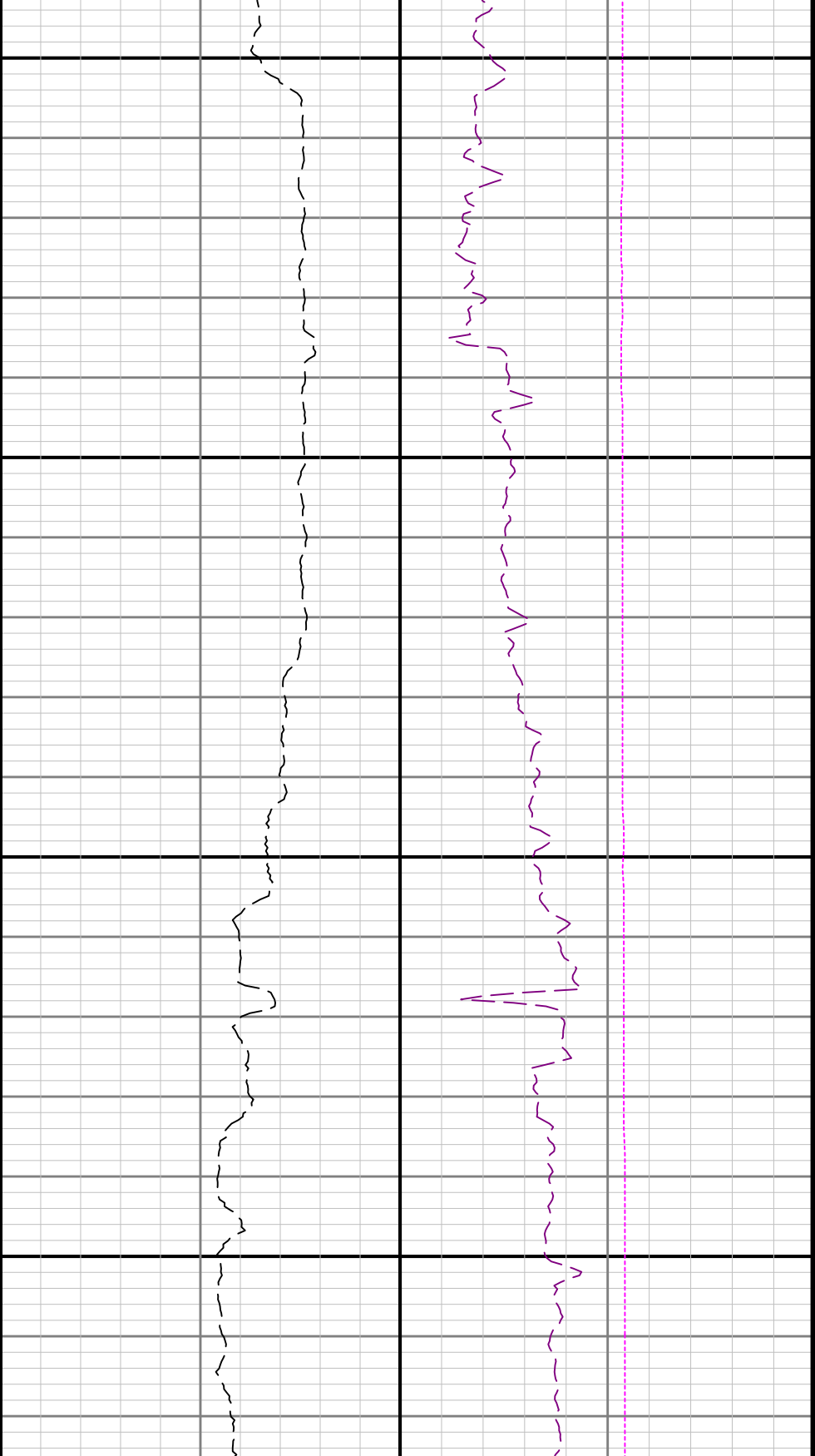
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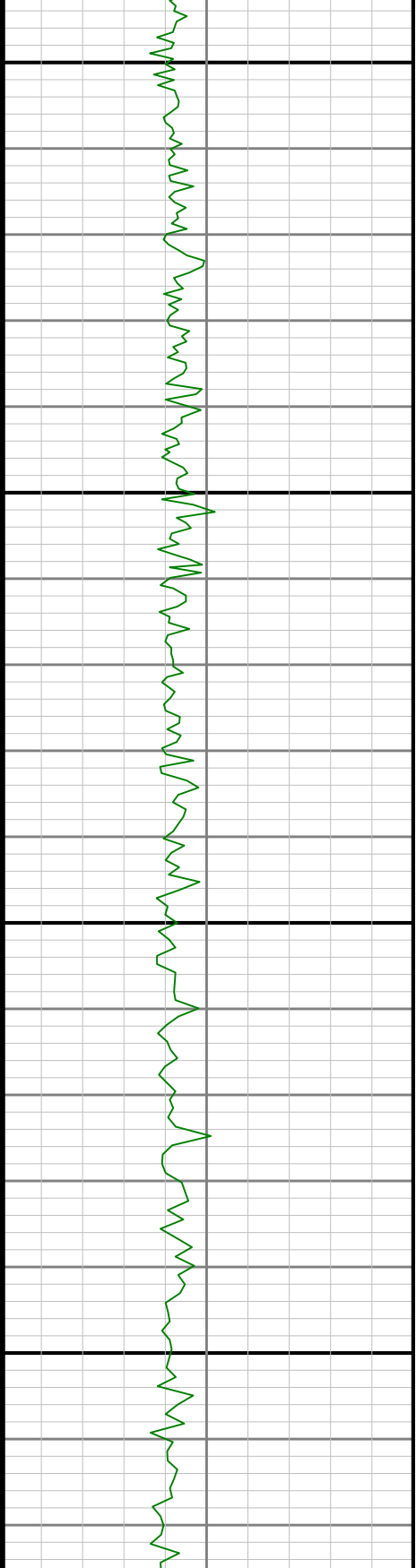
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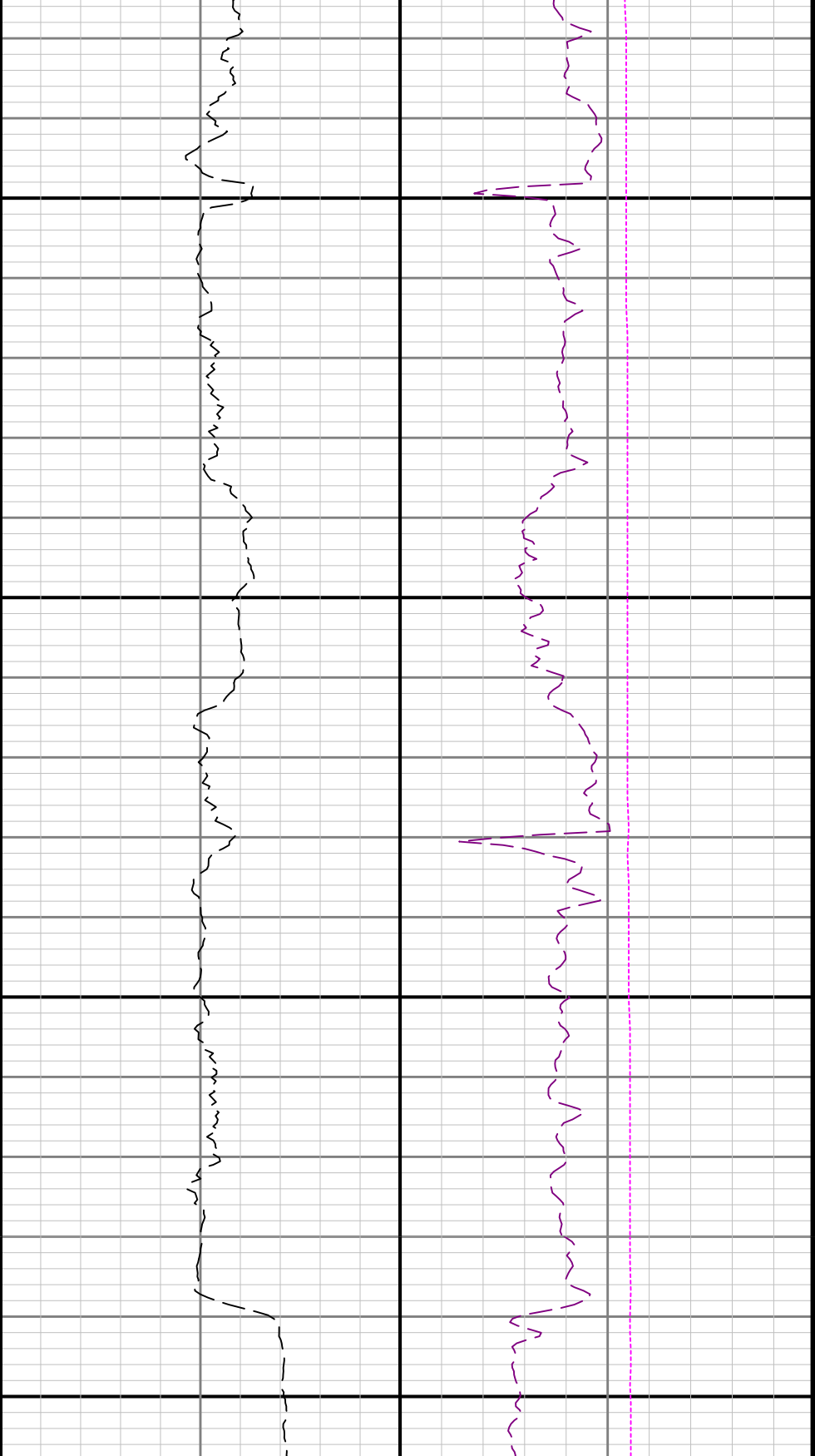




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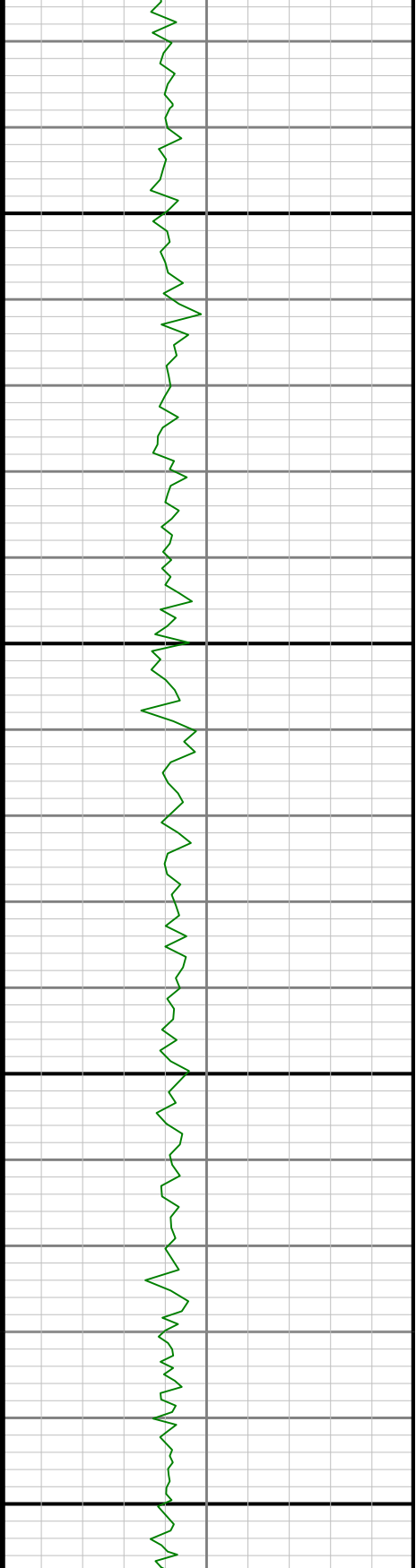
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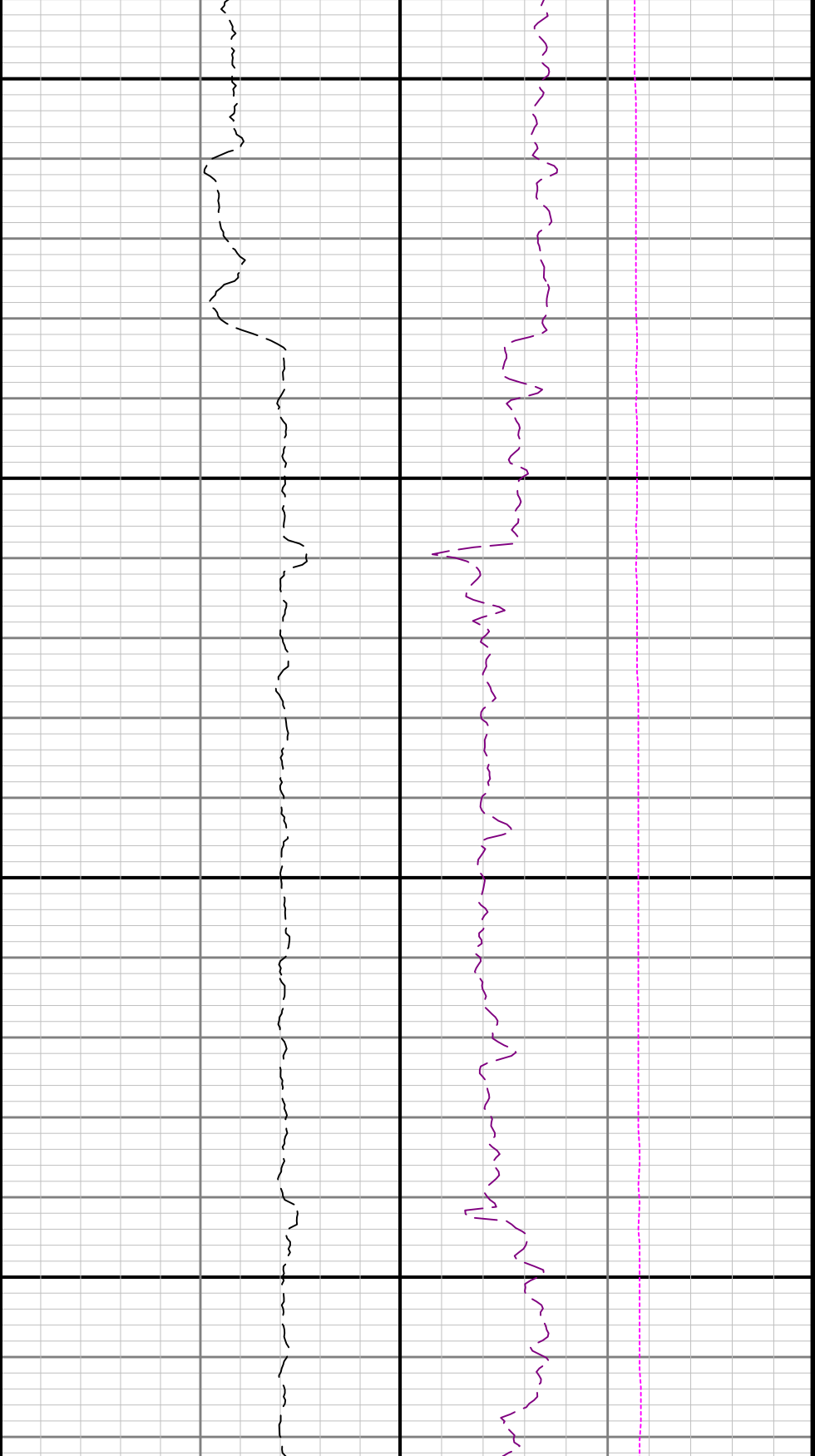




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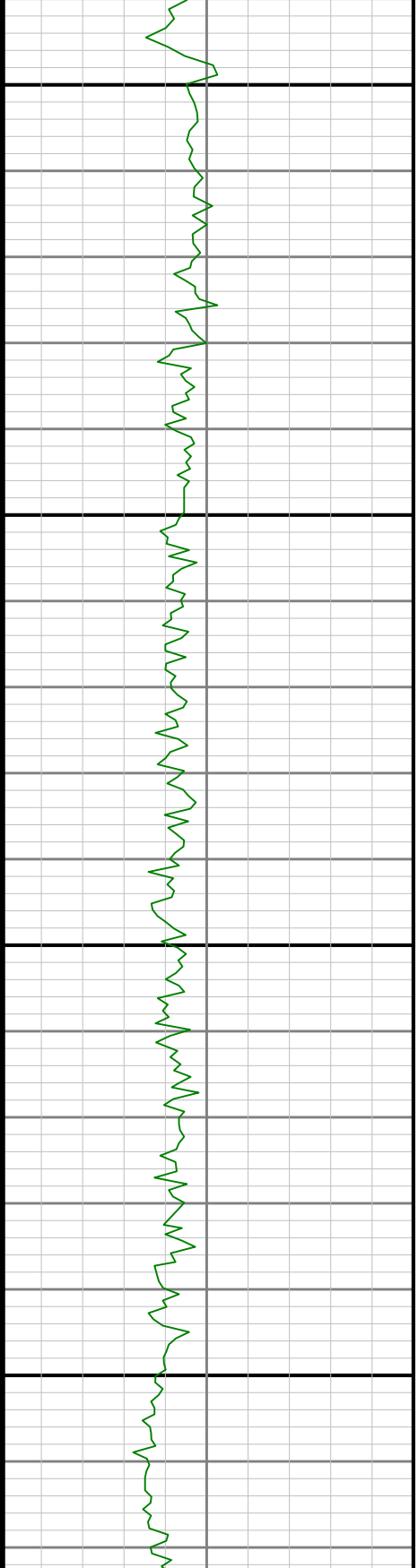
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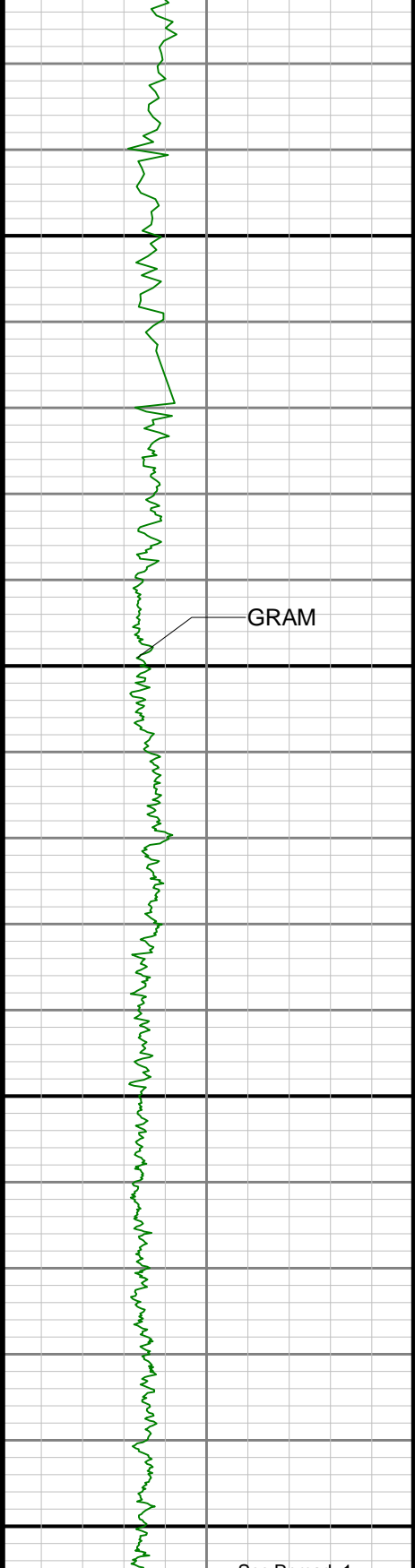




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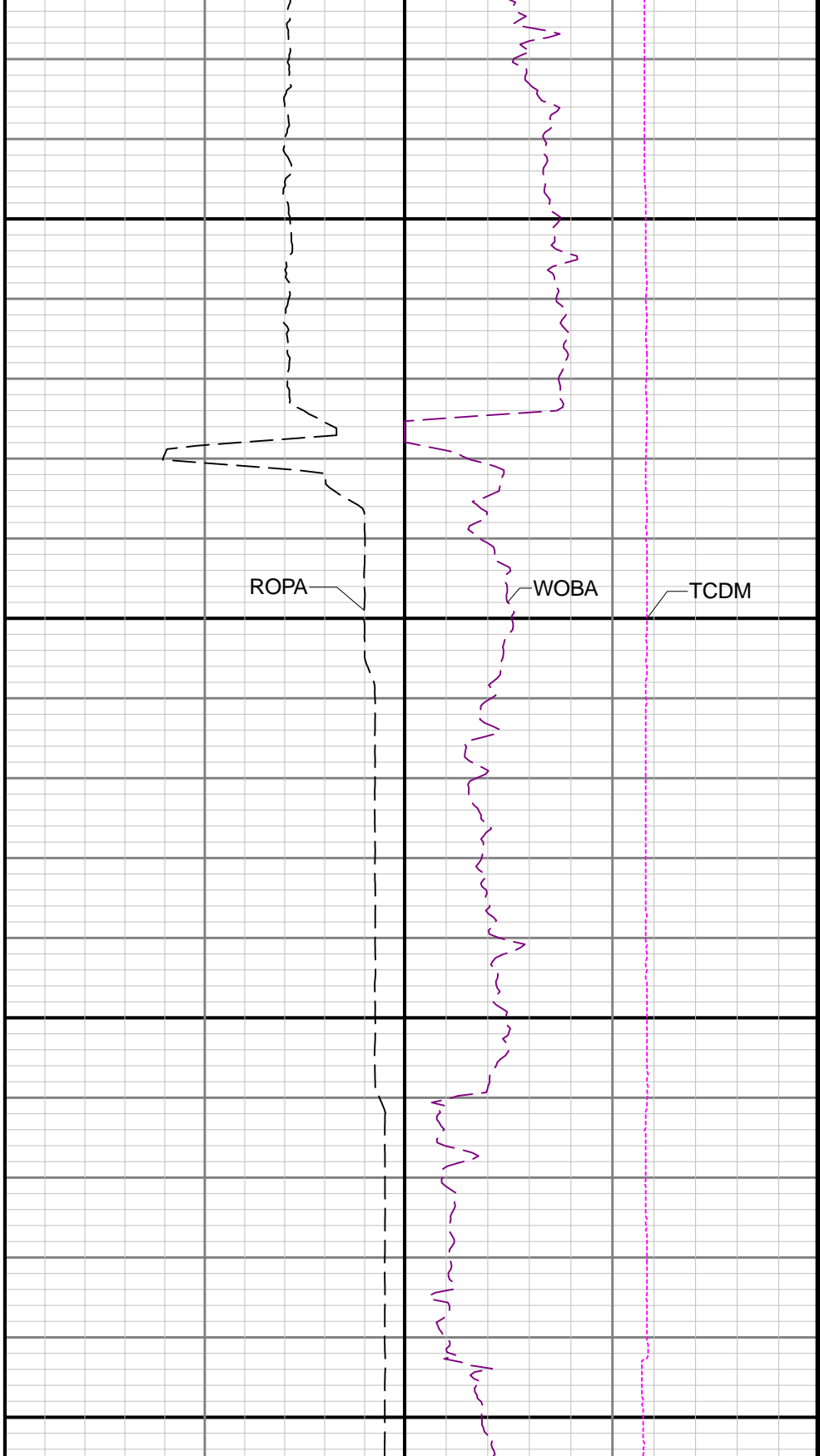
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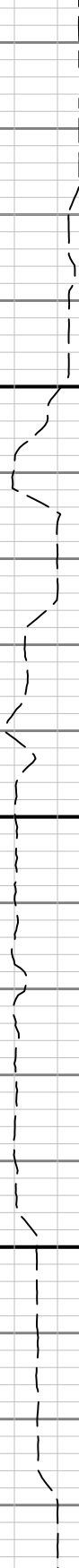
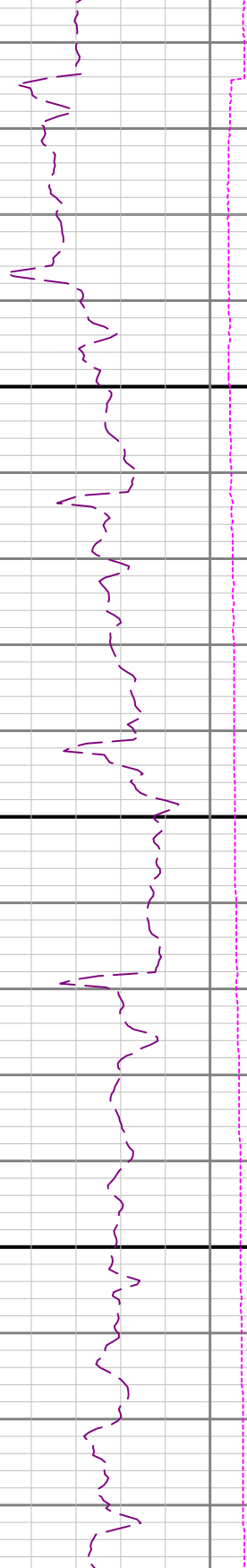
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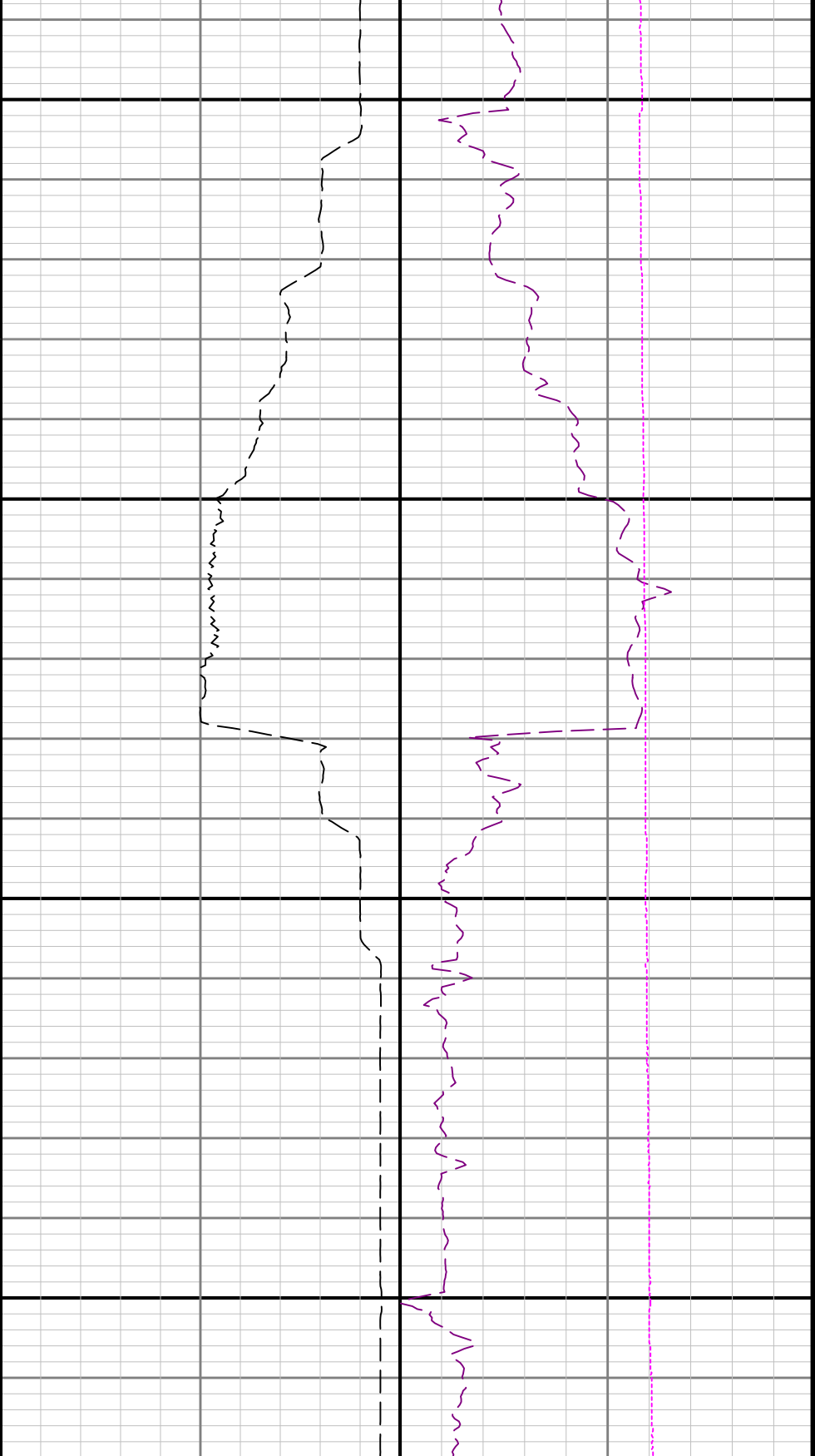


See Remark 1

R1 \circ R2

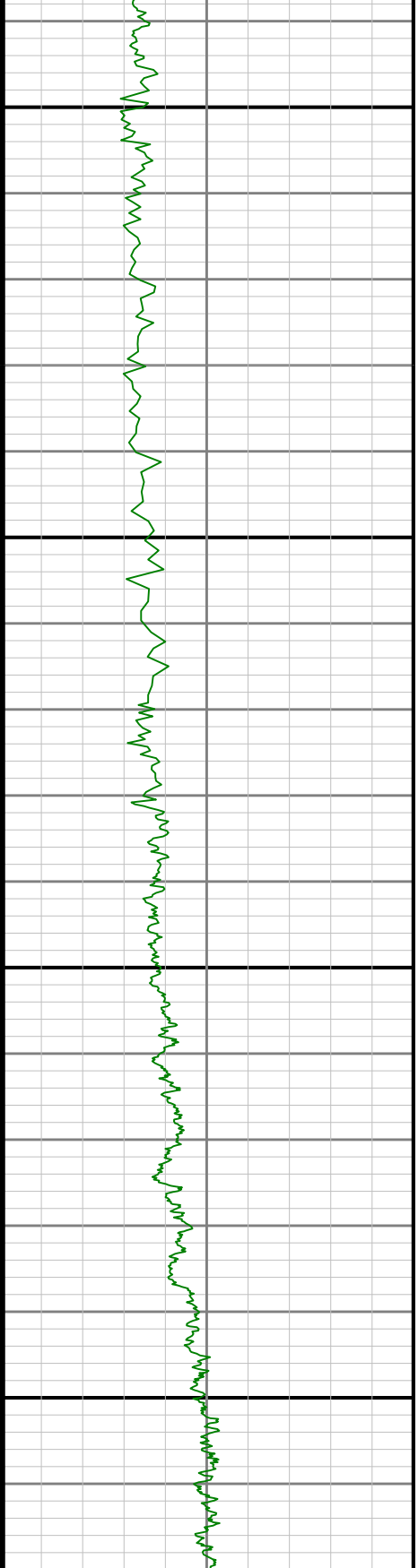
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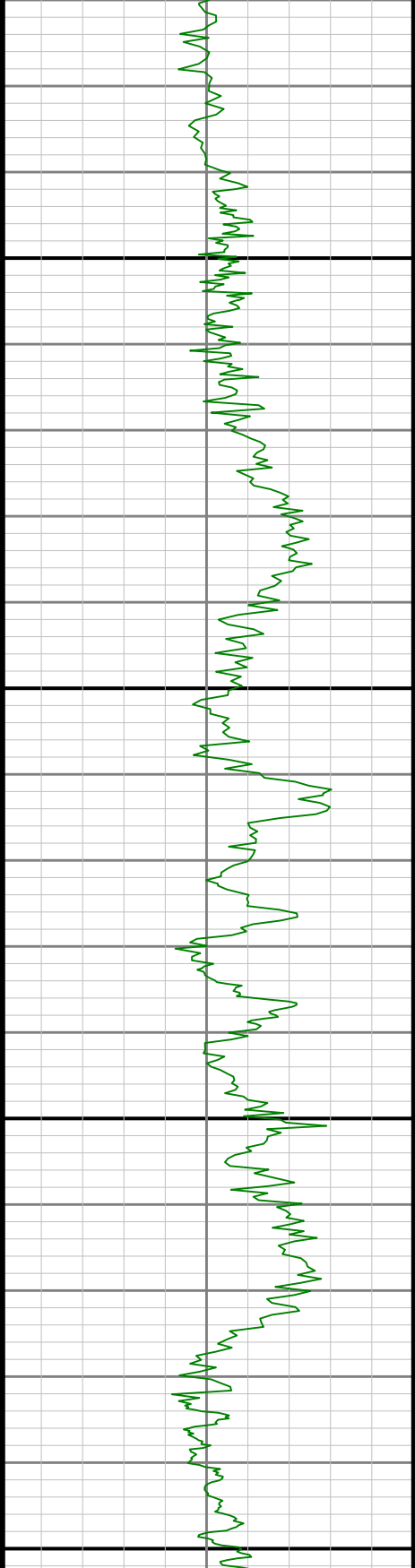




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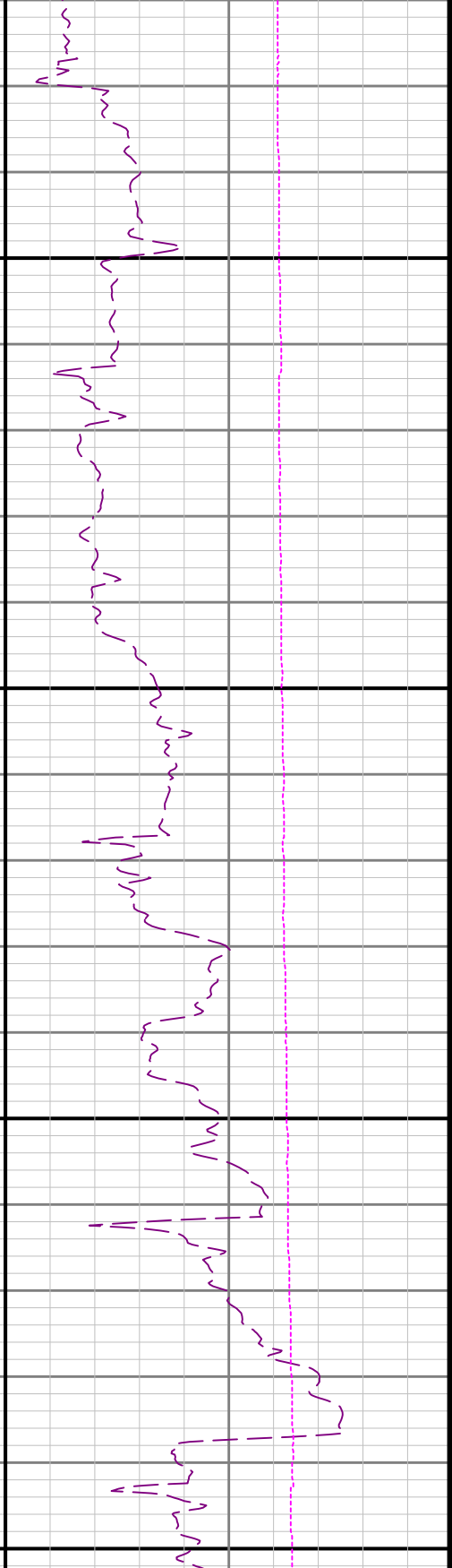
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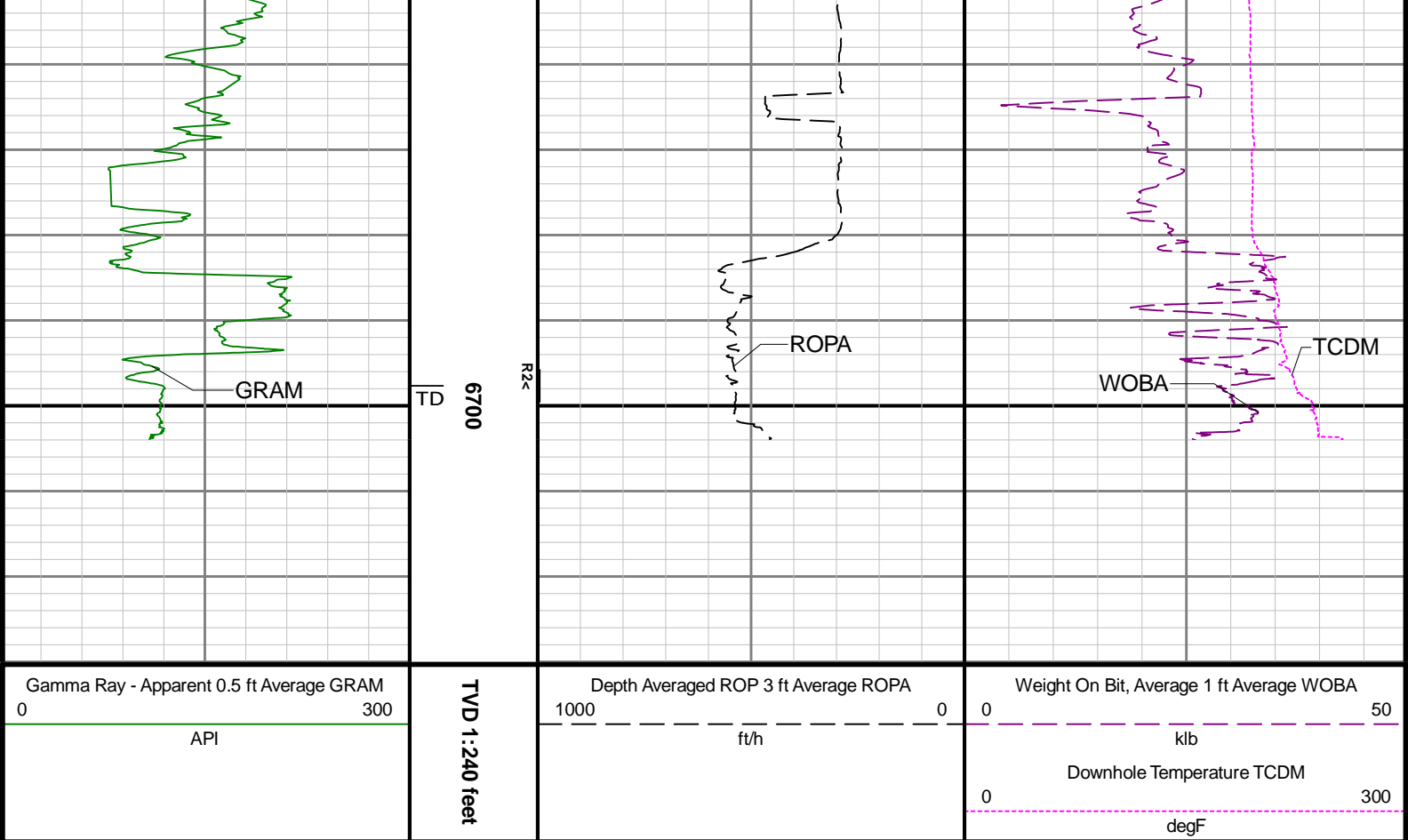




6500

0099





Directional Survey Summary

Latitude:		40° 26' 13.668" N					Longitude:		104° 32' 25.224" W				
North Reference:		Grid					Drill Depth Zero:		Rig Floor				
Vertical Datum is:		Mean Sea Level					Vertical Datum to DDZ: (ft)		4661.00				
Vertical Section North: (ft)		0.00					Vertical Section East: (ft)		0.00				
Vertical Section Azimuth: (deg)		346.99											
Grid Convergence: (deg)		-0.62					Magnetic Declination: (deg)		7.74				
Total Correction: (deg)		7.12					TVD Calculation Method:		Minimum Curvature				
Magnetic Correction:		Off					Local Magnetic Field: (nT)		51962				
Local Magnetic Dip Angle: (deg)		66.81					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	-4661.00	0.00	0.00	0.00	0.00	0.00
	82.00	0.14	108.98	N/A	-0.03	0.09	82.00	-4579.00	-0.05	82.00	0.17	0.17	132.90
	175.00	0.29	152.45	N/A	-0.28	0.31	175.00	-4486.00	-0.34	93.00	0.23	0.16	46.74
	267.00	0.13	184.62	N/A	-0.59	0.41	267.00	-4394.00	-0.67	92.00	0.21	-0.17	34.97
	361.00	0.05	200.59	N/A	-0.73	0.39	361.00	-4300.00	-0.80	94.00	0.09	-0.09	16.99
	456.00	0.17	68.30	N/A	-0.72	0.50	456.00	-4205.00	-0.81	95.00	0.22	0.13	-139.25
	551.00	0.10	138.53	N/A	-0.73	0.69	551.00	-4110.00	-0.87	95.00	0.17	-0.07	73.93
	645.00	0.49	188.87	N/A	-1.19	0.68	645.00	-4016.00	-1.31	94.00	0.46	0.41	53.55
	740.00	0.40	235.10	N/A	-1.78	0.35	739.99	-3921.01	-1.81	95.00	0.38	-0.09	48.66
	835.00	0.39	196.88	N/A	-2.28	-0.02	834.99	-3826.01	-2.22	95.00	0.27	-0.01	-40.23
	929.00	0.30	275.71	N/A	-2.56	-0.36	928.99	-3732.01	-2.41	94.00	0.47	-0.10	83.86
	1024.00	0.15	175.17	N/A	-2.66	-0.59	1023.99	-3637.01	-2.46	95.00	0.38	-0.16	-105.83
	1119.00	0.26	125.57	N/A	-2.91	-0.41	1118.99	-3542.01	-2.74	95.00	0.21	0.12	-52.21

		1213.00	0.07	144.75	N/A	-3.08	-0.20	1212.99	-3448.01	-2.96	94.00	0.21	-0.20	20.40
		1308.00	0.10	161.76	N/A	-3.21	-0.14	1307.99	-3353.01	-3.09	95.00	0.04	0.03	17.91
		1403.00	0.35	29.14	N/A	-3.03	0.03	1402.99	-3258.01	-2.96	95.00	0.45	0.26	-139.60
		1497.00	0.13	316.80	N/A	-2.70	0.09	1496.99	-3164.01	-2.65	94.00	0.36	-0.23	-76.96
		1592.00	0.26	252.60	N/A	-2.69	-0.19	1591.99	-3069.01	-2.58	95.00	0.25	0.14	-67.58
		1687.00	0.23	355.63	N/A	-2.56	-0.41	1686.99	-2974.01	-2.41	95.00	0.40	-0.03	108.45
		1782.00	0.17	209.89	N/A	-2.50	-0.49	1781.99	-2879.01	-2.32	95.00	0.40	-0.06	-153.41
		1876.00	0.63	225.86	N/A	-2.98	-0.93	1875.98	-2785.02	-2.69	94.00	0.50	0.49	16.99
		1921.00	0.86	229.97	N/A	-3.37	-1.37	1920.98	-2740.02	-2.97	45.00	0.52	0.51	9.13
		1996.00	1.72	256.58	101.4	-3.99	-2.89	1995.96	-2665.04	-3.23	75.00	1.37	1.15	35.48
		2091.00	3.80	245.34	112.2	-5.63	-7.14	2090.85	-2570.15	-3.88	95.00	2.25	2.19	-11.83
		2186.00	5.99	246.36	112.2	-8.93	-14.55	2185.49	-2475.51	-5.43	95.00	2.31	2.31	1.07
		2280.00	7.85	248.26	117.6	-13.28	-25.00	2278.81	-2382.19	-7.31	94.00	1.99	1.98	2.02
		2375.00	9.96	247.64	120.3	-18.81	-38.63	2372.66	-2288.34	-9.63	95.00	2.22	2.22	-0.65
		2470.00	12.44	248.68	120.3	-25.66	-55.76	2465.84	-2195.16	-12.44	95.00	2.62	2.61	1.09
		2564.00	14.65	248.24	123.0	-33.74	-76.23	2557.22	-2103.78	-15.72	94.00	2.35	2.35	-0.47
		2659.00	16.70	248.39	123.0	-43.23	-100.08	2648.68	-2012.32	-19.58	95.00	2.16	2.16	0.16
		2754.00	21.03	247.31	125.7	-54.83	-128.51	2738.56	-1922.44	-24.49	95.00	4.57	4.56	-1.14
		2849.00	25.46	246.51	125.7	-69.56	-162.99	2825.82	-1835.18	-31.08	95.00	4.67	4.66	-0.84
		2943.00	27.62	246.05	128.4	-86.46	-201.43	2909.91	-1751.09	-38.89	94.00	2.31	2.30	-0.49
		3038.00	29.68	246.26	128.4	-104.87	-243.09	2993.28	-1667.72	-47.45	95.00	2.17	2.17	0.22
		3133.00	29.66	245.19	128.4	-124.20	-285.96	3075.82	-1585.18	-56.63	95.00	0.56	-0.02	-1.13
		3228.00	28.21	249.09	131.1	-142.08	-328.28	3158.97	-1502.03	-64.53	95.00	2.50	-1.53	4.11
		3322.00	29.41	249.07	131.1	-158.25	-370.59	3241.33	-1419.67	-70.76	94.00	1.28	1.28	-0.02
		3417.00	29.04	248.49	131.1	-175.04	-413.83	3324.24	-1336.76	-77.38	95.00	0.49	-0.39	-0.61
		3511.00	28.86	247.82	133.8	-191.97	-456.06	3406.49	-1254.51	-84.37	94.00	0.39	-0.19	-0.71
		3605.00	29.42	248.61	133.8	-208.95	-498.56	3488.60	-1172.40	-91.35	94.00	0.72	0.60	0.84
		3700.00	30.89	248.02	133.8	-226.59	-542.90	3570.74	-1090.26	-98.55	95.00	1.58	1.55	-0.62
		3794.00	30.86	247.25	136.5	-244.94	-587.51	3651.42	-1009.58	-106.40	94.00	0.42	-0.03	-0.82
		3889.00	30.88	247.51	139.2	-263.69	-632.51	3732.96	-928.04	-114.53	95.00	0.14	0.02	0.27
		3984.00	30.94	247.66	139.2	-282.30	-677.62	3814.47	-846.53	-122.51	95.00	0.10	0.06	0.16
		4078.00	30.46	247.22	141.9	-300.71	-721.94	3895.29	-765.71	-130.47	94.00	0.56	-0.51	-0.47
		4172.00	30.69	247.35	141.9	-319.17	-766.04	3976.22	-684.78	-138.53	94.00	0.25	0.24	0.14
		4267.00	30.71	247.88	144.6	-337.64	-810.89	4057.91	-603.09	-146.43	95.00	0.29	0.02	0.56
		4361.00	30.42	247.93	144.6	-355.62	-855.18	4138.85	-522.15	-153.98	94.00	0.31	-0.31	0.05
		4456.00	30.29	248.68	147.3	-373.37	-899.79	4220.83	-440.17	-161.23	95.00	0.42	-0.14	0.79
		4550.00	29.86	248.51	147.3	-390.56	-943.65	4302.17	-358.83	-168.10	94.00	0.47	-0.46	-0.18
		4645.00	29.95	248.94	150.0	-407.75	-987.78	4384.52	-276.48	-174.91	95.00	0.24	0.09	0.45
		4740.00	29.35	247.82	150.0	-425.06	-1031.47	4467.08	-193.92	-181.94	95.00	0.86	-0.63	-1.18
		4834.00	27.01	249.06	150.0	-441.39	-1072.74	4549.94	-111.06	-188.56	94.00	2.57	-2.49	1.32
		4929.00	26.09	248.12	152.7	-456.88	-1112.28	4634.92	-26.08	-194.76	95.00	1.06	-0.97	-0.99
		5023.00	27.60	244.58	152.7	-473.93	-1151.13	4718.79	57.79	-202.63	94.00	2.34	1.61	-3.77
		5118.00	27.88	249.18	155.4	-491.28	-1191.77	4802.88	141.88	-210.37	95.00	2.27	0.29	4.84
		5212.00	29.39	248.77	155.4	-507.44	-1233.82	4885.38	224.38	-216.66	94.00	1.62	1.61	-0.44
		5307.00	30.28	246.70	155.4	-525.36	-1277.55	4967.79	306.79	-224.27	95.00	1.43	0.94	-2.18
		5401.00	29.62	246.43	158.1	-544.02	-1320.60	5049.24	388.24	-232.76	94.00	0.72	-0.70	-0.29
		5496.00	27.79	250.46	158.1	-560.82	-1363.00	5132.57	471.57	-239.58	95.00	2.80	-1.93	4.24
		5590.00	27.16	250.35	160.8	-575.36	-1403.86	5215.97	554.97	-244.56	94.00	0.67	-0.67	-0.12
		5685.00	30.28	250.64	160.8	-590.60	-1446.88	5299.27	638.27	-249.71	95.00	3.29	3.28	0.31
		5779.00	30.30	250.08	163.5	-606.53	-1491.54	5380.44	719.44	-255.19	94.00	0.30	0.02	-0.60
		5874.00	30.44	250.29	163.5	-622.81	-1536.72	5462.40	801.40	-260.88	95.00	0.18	0.15	0.22
		5968.00	28.56	248.00	166.2	-639.26	-1579.98	5544.21	883.21	-267.17	94.00	2.33	-2.00	-2.44
		6063.00	29.76	248.25	166.2	-656.51	-1622.93	5627.17	966.17	-274.30	95.00	1.27	1.26	0.26
		6158.00	29.94	248.36	168.9	-673.99	-1666.87	5709.57	1048.57	-281.44	95.00	0.20	0.19	0.12
		6253.00	28.66	247.98	171.6	-691.27	-1710.03	5792.41	1131.41	-288.56	95.00	1.36	-1.35	-0.40
		6347.00	28.56	247.45	171.6	-708.34	-1751.68	5874.93	1213.93	-295.82	94.00	0.29	-0.11	-0.56
		6442.00	27.97	246.08	174.3	-726.08	-1793.01	5958.61	1297.61	-303.80	95.00	0.92	-0.62	-1.44
		6537.00	32.20	244.57	174.3	-745.99	-1836.26	6040.79	1379.79	-313.46	95.00	4.52	4.45	-1.59
		6631.00	35.33	252.92	160.8	-764.75	-1884.90	6118.97	1457.97	-320.79	94.00	5.95	3.33	8.88
		6725.00	27.53	277.12	168.9	-770.07	-1932.70	6199.43	1538.43	-315.21	94.00	15.64	-8.30	25.74
		6820.00	28.54	294.46	174.3	-757.93	-1975.21	6283.43	1622.43	-293.81	95.00	8.62	1.06	18.25

	6915.00	37.03	300.09	179.7	-734.14	-2020.71	6363.24	1702.24	-260.39	95.00	9.49	8.94	5.93
	7009.00	43.28	313.71	179.7	-697.58	-2068.64	6435.19	1774.19	-213.98	94.00	11.44	6.65	14.49
	7104.00	49.84	330.09	185.2	-643.35	-2110.47	6500.71	1839.71	-151.73	95.00	14.26	6.91	17.24
	7198.00	56.89	341.66	187.9	-574.61	-2140.87	6556.89	1895.89	-77.91	94.00	12.38	7.50	12.31
	7293.00	63.77	349.87	190.6	-494.70	-2160.94	6603.94	1942.94	4.47	95.00	10.42	7.24	8.64
	7387.00	74.10	355.37	193.3	-407.85	-2172.04	6637.71	1976.71	91.59	94.00	12.27	10.99	5.85
	7482.00	78.13	1.53	193.3	-315.73	-2174.49	6660.52	1999.52	181.90	95.00	7.59	4.24	6.48
	7577.00	83.65	1.09	196.0	-221.99	-2172.35	6675.56	2014.56	272.75	95.00	5.83	5.81	-0.46
	7671.00	89.57	1.67	198.7	-128.22	-2170.09	6681.11	2020.11	363.60	94.00	6.33	6.30	0.62
	7766.00	88.68	359.36	201.4	-33.24	-2169.23	6682.56	2021.56	455.95	95.00	2.61	-0.94	-2.43
	7861.00	89.45	2.09	206.8	61.73	-2168.03	6684.11	2023.11	548.21	95.00	2.99	0.81	2.87
	7956.00	89.38	2.10	209.5	156.66	-2164.56	6685.08	2024.08	639.92	95.00	0.07	-0.07	0.01
	8050.00	89.35	0.79	209.5	250.62	-2162.19	6686.13	2025.13	730.94	94.00	1.39	-0.03	-1.39
	8145.00	88.83	359.13	212.2	345.60	-2162.25	6687.63	2026.63	823.50	95.00	1.83	-0.55	-1.75
	8239.00	89.26	356.15	209.5	439.50	-2166.12	6689.20	2028.20	915.86	94.00	3.20	0.46	-3.17
	8334.00	88.77	356.15	214.9	534.27	-2172.50	6690.83	2029.83	1009.63	95.00	0.52	-0.52	0.00
	8429.00	89.23	355.59	214.9	629.01	-2179.34	6692.49	2031.49	1103.48	95.00	0.76	0.48	-0.59
	8523.00	89.54	356.84	217.6	722.80	-2185.55	6693.50	2032.50	1196.26	94.00	1.37	0.33	1.33
	8618.00	89.35	355.80	217.6	817.60	-2191.65	6694.42	2033.42	1289.99	95.00	1.11	-0.20	-1.09
	8713.00	89.78	355.63	214.9	912.33	-2198.74	6695.14	2034.14	1383.89	95.00	0.49	0.45	-0.18
	8808.00	89.85	356.52	217.6	1007.10	-2205.25	6695.45	2034.45	1477.70	95.00	0.94	0.07	0.94
	8902.00	89.85	356.34	217.6	1100.92	-2211.10	6695.70	2034.70	1570.42	94.00	0.19	-0.00	-0.19
	8997.00	89.66	358.84	220.3	1195.83	-2215.09	6696.10	2035.10	1663.80	95.00	2.64	-0.20	2.63
	9092.00	89.23	358.66	223.0	1290.80	-2217.17	6697.02	2036.02	1756.80	95.00	0.49	-0.45	-0.19
	9187.00	89.69	358.05	223.0	1385.76	-2219.89	6697.92	2036.92	1849.93	95.00	0.80	0.48	-0.64
	9281.00	89.72	358.55	225.7	1479.71	-2222.68	6698.40	2037.40	1942.10	94.00	0.53	0.03	0.53
	9376.00	89.78	359.29	228.4	1574.69	-2224.47	6698.82	2037.82	2035.05	95.00	0.78	0.06	0.78
	9470.00	89.97	359.52	228.4	1668.69	-2225.45	6699.02	2038.02	2126.85	94.00	0.32	0.20	0.24
	9565.00	89.78	359.35	231.1	1763.68	-2226.38	6699.23	2038.23	2219.62	95.00	0.27	-0.20	-0.18
	9660.00	90.15	359.04	233.8	1858.67	-2227.72	6699.29	2038.29	2312.47	95.00	0.51	0.39	-0.33
	9754.00	89.82	359.55	233.8	1952.67	-2228.88	6699.31	2038.31	2404.31	94.00	0.65	-0.35	0.54
	9849.00	89.60	358.10	236.5	2047.64	-2230.82	6699.79	2038.79	2497.29	95.00	1.54	-0.23	-1.53
	9944.00	89.69	359.02	233.8	2142.61	-2233.21	6700.38	2039.38	2590.35	95.00	0.97	0.09	0.97
	10038.00	89.32	358.07	236.5	2236.58	-2235.60	6701.19	2040.19	2682.44	94.00	1.08	-0.39	-1.01
	10133.00	89.48	358.41	239.2	2331.52	-2238.52	6702.19	2041.19	2775.61	95.00	0.40	0.17	0.36
	10228.00	89.32	358.44	239.2	2426.48	-2241.13	6703.18	2042.18	2868.72	95.00	0.17	-0.17	0.03
	10322.00	90.12	357.68	239.2	2520.43	-2244.31	6703.64	2042.64	2960.97	94.00	1.17	0.85	-0.81
	10417.00	90.09	358.84	239.2	2615.38	-2247.19	6703.47	2042.47	3054.14	95.00	1.22	-0.03	1.22
	10511.00	90.22	358.80	239.2	2709.36	-2249.13	6703.21	2042.21	3146.14	94.00	0.14	0.14	-0.04
	10606.00	90.12	359.15	241.9	2804.35	-2250.83	6702.93	2041.93	3239.07	95.00	0.38	-0.11	0.37
	10700.00	89.72	358.52	241.9	2898.33	-2252.74	6703.06	2042.06	3331.07	94.00	0.79	-0.43	-0.67
	10795.00	90.12	358.04	241.9	2993.28	-2255.59	6703.20	2042.20	3424.23	95.00	0.66	0.42	-0.51
	10890.00	90.22	358.36	241.9	3088.23	-2258.58	6702.91	2041.91	3517.42	95.00	0.35	0.11	0.34
	10984.00	90.31	0.34	244.6	3182.22	-2259.64	6702.48	2041.48	3609.23	94.00	2.11	0.10	2.11
	11079.00	89.69	0.94	244.6	3277.22	-2258.58	6702.48	2041.48	3701.55	95.00	0.91	-0.65	0.63
	11173.00	90.00	1.04	247.3	3371.20	-2256.96	6702.73	2041.73	3792.75	94.00	0.35	0.33	0.11
	11268.00	89.97	0.41	247.3	3466.19	-2255.75	6702.76	2041.76	3885.04	95.00	0.66	-0.03	-0.66
	11362.00	90.15	1.39	247.3	3560.18	-2254.28	6702.66	2041.66	3976.28	94.00	1.06	0.19	1.04
	11457.00	89.69	0.38	250.0	3655.17	-2252.81	6702.79	2041.79	4068.50	95.00	1.17	-0.48	-1.06
	11552.00	90.03	1.33	250.0	3750.16	-2251.39	6703.02	2042.02	4160.73	95.00	1.06	0.36	1.00
	11646.00	90.28	0.22	250.0	3844.15	-2250.12	6702.77	2041.77	4252.02	94.00	1.21	0.27	-1.18
	11741.00	89.72	0.39	250.0	3939.14	-2249.62	6702.77	2041.77	4344.46	95.00	0.62	-0.59	0.18
	11835.00	89.48	1.41	252.7	4033.13	-2248.14	6703.43	2042.43	4435.70	94.00	1.11	-0.26	1.09
	11930.00	90.00	1.77	252.7	4128.09	-2245.50	6703.86	2042.86	4527.64	95.00	0.67	0.55	0.38
	12025.00	89.91	1.29	255.4	4223.06	-2242.97	6703.93	2042.93	4619.59	95.00	0.51	-0.09	-0.51
	12119.00	89.97	0.50	252.7	4317.04	-2241.50	6704.03	2043.03	4710.84	94.00	0.84	0.06	-0.84
	12214.00	90.58	1.51	255.4	4412.03	-2239.83	6703.57	2042.57	4803.01	95.00	1.24	0.64	1.06
	12308.00	89.97	0.53	255.4	4506.01	-2238.16	6703.12	2042.12	4894.20	94.00	1.23	-0.65	-1.04
	12403.00	90.25	0.99	255.4	4601.00	-2236.90	6702.94	2041.94	4986.47	95.00	0.57	0.29	0.48
	12498.00	90.28	359.83	255.4	4695.99	-2236.22	6702.50	2041.50	5078.87	95.00	1.22	0.03	-1.22
	12592.00	90.25	359.67	255.4	4789.99	-2236.63	6702.07	2041.07	5170.55	94.00	0.17	-0.03	-0.17

	12781.00	90.40	359.87	247.3	4978.99	-2237.39	6700.99	2039.99	5354.86	189.00	0.13	0.08	0.11
	12876.00	89.94	359.11	252.7	5073.98	-2238.23	6700.71	2039.71	5447.61	95.00	0.94	-0.48	-0.80
	12971.00	90.15	359.86	255.4	5168.98	-2239.09	6700.64	2039.64	5540.36	95.00	0.82	0.22	0.79
	13065.00	90.12	359.28	258.1	5262.98	-2239.79	6700.42	2039.42	5632.10	94.00	0.62	-0.03	-0.62
	13160.00	90.40	0.10	258.1	5357.97	-2240.31	6699.99	2038.99	5724.78	95.00	0.91	0.29	0.86
	13254.00	90.15	0.52	260.8	5451.97	-2239.80	6699.53	2038.53	5816.25	94.00	0.52	-0.27	0.45
	13444.00	90.15	359.95	260.8	5641.97	-2239.02	6699.04	2038.04	6001.19	190.00	0.30	-0.00	-0.30
	13538.00	90.18	0.16	263.5	5735.97	-2238.93	6698.77	2037.77	6092.76	94.00	0.23	0.03	0.22
	13633.00	90.28	0.39	263.5	5830.96	-2238.47	6698.38	2037.38	6185.21	95.00	0.26	0.11	0.24
	13727.00	90.06	0.17	263.5	5924.96	-2238.01	6698.11	2037.11	6276.70	94.00	0.33	-0.23	-0.23
	13822.00	89.72	0.56	263.5	6019.96	-2237.41	6698.29	2037.29	6369.12	95.00	0.54	-0.36	0.41
	13917.00	89.69	0.35	266.2	6114.96	-2236.65	6698.78	2037.78	6461.51	95.00	0.22	-0.03	-0.22
	14012.00	89.57	0.72	266.2	6209.95	-2235.77	6699.39	2038.39	6553.86	95.00	0.41	-0.13	0.39
	14106.00	89.91	359.55	266.2	6303.95	-2235.55	6699.82	2038.82	6645.40	94.00	1.30	0.36	-1.24
	14201.00	89.94	359.37	266.2	6398.94	-2236.44	6699.94	2038.94	6738.16	95.00	0.19	0.03	-0.19
	14295.00	90.03	359.81	269.0	6492.94	-2237.11	6699.97	2038.97	6829.89	94.00	0.48	0.10	0.47
	14390.00	89.75	359.00	269.0	6587.93	-2238.10	6700.15	2039.15	6922.67	95.00	0.90	-0.29	-0.85
	14485.00	90.15	359.67	269.0	6682.93	-2239.20	6700.23	2039.23	7015.47	95.00	0.82	0.42	0.71
	14580.00	90.12	0.12	269.0	6777.92	-2239.38	6700.01	2039.01	7108.07	95.00	0.47	-0.03	0.47
	14674.00	90.03	359.19	269.0	6871.92	-2239.94	6699.88	2038.88	7199.78	94.00	0.99	-0.10	-0.99
	14769.00	90.12	359.94	271.7	6966.92	-2240.66	6699.76	2038.76	7292.50	95.00	0.80	0.09	0.79
	14864.00	89.97	359.26	269.0	7061.92	-2241.33	6699.69	2038.69	7385.21	95.00	0.73	-0.16	-0.72
	14958.00	89.75	356.96	269.0	7155.86	-2244.43	6699.92	2038.92	7477.44	94.00	2.46	-0.23	-2.45
	15053.00	89.94	358.03	271.7	7250.77	-2248.58	6700.17	2039.17	7570.85	95.00	1.14	0.20	1.13
	15147.00	89.88	359.24	271.7	7344.74	-2250.82	6700.32	2039.32	7662.91	94.00	1.29	-0.06	1.29
	15242.00	89.94	359.56	271.7	7439.73	-2251.81	6700.47	2039.47	7755.69	95.00	0.34	0.06	0.34
	15337.00	89.88	359.29	271.7	7534.73	-2252.77	6700.62	2039.62	7848.46	95.00	0.29	-0.06	-0.28
	15431.00	89.88	0.13	274.4	7628.72	-2253.24	6700.82	2039.82	7940.15	94.00	0.89	0.00	0.89
	15526.00	90.15	0.69	274.4	7723.72	-2252.56	6700.79	2039.79	8032.56	95.00	0.65	0.28	0.59
	15621.00	89.94	1.31	274.4	7818.71	-2250.90	6700.72	2039.72	8124.73	95.00	0.69	-0.22	0.65
	15715.00	90.40	0.73	274.4	7912.69	-2249.23	6700.44	2039.44	8215.93	94.00	0.79	0.49	-0.62
	15810.00	90.06	1.18	274.4	8007.68	-2247.65	6700.06	2039.06	8308.12	95.00	0.59	-0.36	0.47
	15905.00	90.46	1.24	274.4	8102.65	-2245.64	6699.62	2038.62	8400.21	95.00	0.43	0.42	0.06
	15999.00	90.37	1.30	274.4	8196.63	-2243.56	6698.94	2037.94	8491.30	94.00	0.12	-0.10	0.06
	16094.00	90.34	1.11	274.4	8291.61	-2241.56	6698.36	2037.36	8583.39	95.00	0.20	-0.03	-0.20
	16188.00	90.80	0.69	274.4	8385.59	-2240.08	6697.42	2036.42	8674.63	94.00	0.66	0.49	-0.45
	16283.00	90.12	0.14	274.4	8480.58	-2239.40	6696.66	2035.66	8767.03	95.00	0.92	-0.72	-0.58
	16377.00	90.31	0.01	274.4	8574.58	-2239.27	6696.30	2035.30	8858.59	94.00	0.24	0.20	-0.14
	16472.00	89.94	0.24	274.4	8669.58	-2239.07	6696.10	2035.10	8951.10	95.00	0.46	-0.39	0.24
	16566.00	89.97	0.29	274.4	8763.58	-2238.63	6696.17	2035.17	9042.59	94.00	0.06	0.03	0.05
	16661.00	89.69	0.25	274.4	8858.58	-2238.18	6696.45	2035.45	9135.05	95.00	0.30	-0.29	-0.04
	16756.00	90.18	0.65	274.4	8953.57	-2237.44	6696.56	2035.56	9227.44	95.00	0.67	0.52	0.42
	16850.00	89.82	0.90	274.4	9047.57	-2236.17	6696.56	2035.56	9318.73	94.00	0.47	-0.38	0.27
	16945.00	89.69	0.37	274.4	9142.56	-2235.11	6696.97	2035.97	9411.05	95.00	0.57	-0.14	-0.56
	17039.00	89.82	359.97	274.4	9236.56	-2234.83	6697.37	2036.37	9502.57	94.00	0.45	0.14	-0.43
	17134.00	90.00	0.31	277.1	9331.56	-2234.60	6697.52	2036.52	9595.08	95.00	0.40	0.19	0.36
	17228.00	89.91	1.60	277.1	9425.54	-2233.04	6697.59	2036.59	9686.30	94.00	1.38	-0.10	1.37
	17323.00	89.85	0.59	277.1	9520.52	-2231.22	6697.79	2036.79	9778.43	95.00	1.07	-0.06	-1.06
	17418.00	90.03	0.67	269.0	9615.52	-2230.18	6697.89	2036.89	9870.75	95.00	0.21	0.19	0.08
	17476.00	89.82	359.98	266.2	9673.52	-2229.85	6697.97	2036.97	9927.19	58.00	1.24	-0.36	-1.19
Projection	17500.00	89.82	359.98	N/A	9697.52	-2229.85	6698.04	2037.04	9950.57	24.00	0.00	0.02	-0.00