



Realtime Log

Natural Formation Evaluation  
Gamma Ray

INTEQ

Scale:

Company: EXTRACTION OIL & GAS

1:240 Measured Depth

Well: Diamond Valley East #3

Field: Weld County

Region: Continental US Country: U.S.A

Status:

Final Print

Surface Location:

Latitude: 40° 28' 2.964" N

Longitude: 104° 52' 11.316" W

Other Services:

API Number:

05123385000000

Section: 23

TWN: 6S

Range: 67W

Directional  
VSS

Permanent Datum (P.D.): Ground Level

Elevation: 4791.00 ft.

Elevations:

Log Measured From:

Kelly Bushing

24.00 ft.

Above P.D.

KB:

4781.00 ft.

Depth Reference:

Driller's Depth

GL:

DF:

4791.00 ft.

0.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 7418.0 ft. Date From: 04/Oct/14 Dip Angle: 66.97° Azi Reference North: True

Bottom: 16728.0 ft. Date To: 12/Oct/14 Total Mag to Reference

Spud Date: 03/Oct/14 Field Strength: 52703.1 nT North Correction: 8.57°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	802.0 ft.	9.625 in.	N/A	Surface	802.0 ft.
8.750 in.	802.0 ft.	7418.0 ft.	8.750 in.	N/A	802.0 ft.	7418.0 ft.
6.125 in.	7418.0 ft.	16728.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Oil Based	Surface	7418.0 ft.	13.250 in.		/	/
Salt water based	7418.0 ft.	16728.0 ft.	8.750 in.		0.3° / 105.7°	87.8° / 271.0°
			6.125 in.		87.8° / 271.0°	87.3° / 271.9°
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig / Contractor:	Frontier 10	/	Advance Drilling
PATS	6.4.1.34	Job No:	6661800	/	
		District / Unit:		/	

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Time (hrs.)
							Top (ft.)	Bottom (ft.)	From (ft.)	To (ft.)	Start	End	
1	1	2	6.000	PDC	3.000	Fulcrum	7353.0	9376.0	7418.0	9443.0	04/Oct/2014 01:10	05/Oct/2015 09:15	18.2
2	2	3	6.000	PDC	3.250	Fulcrum	9377.0	16669.0	9450.0	16728.0	05/Oct/2014 06:38	11/Oct/2014 18:30	115

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Jerry Williams	04 Oct 14	09 Oct 14	TERRY MARSHALL	04 Oct 14	08 Oct 14	ALAN MALAKOWSKY	06 Oct 14	On site
Ahmed Bani-Saad	04 Oct 14	On site	DAN HEINZE	04 Oct 14	On site	SCOTT SANFORD	08 Oct 14	On site

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (sg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
04 Oct 14	05:00	1	7350.0	LSND	9.1	13	8.5	4.8	5/91.2	SUCTION	400	N/A
05 Oct 14	05:00	2	9450.0	LSND	9.3	19	8.5	5.6	5/90.2	SUCTION	400	N/A
06 Oct 14	05:00	2	11226.0	LSND	9.3	15	8.5	5.6	5/90.2	SUCTION	500	N/A
07 Oct 14	05:00	2	12702.0	LSND	9.3	17	8.0	5.6	5/87.8	SUCTION	400	N/A
09 Oct 14	05:00	2	14835.0	LSND	9.3	15	10.5	4.0	6/89.2	SUCTION	400	N/A
10 Oct 14	05:00	2	15746.0	LSND	9.3	14	9.0	4.0	5/90.2	SUCTION	400	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent 0.5 Avg	API
GRIX	Gamma Ray Density	Points
GRSI	Gamma Ray Slide Indicator	unitless
GRTX	Gamma Ray Time Since Drilled	min
ROPA	Rate of Penetration 3.0 ft Avg.	ft/hr
TCDX	Downhole Temperature	degF
TVD	True Vertical Depth	ft.
WOBA	Surface Weight on Bit 1.0 ft Avg	klbf

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	11954360	Directional	65.31	4.750	2.688
1	SRIG	12578112	Gamma	61.93	4.750	2.688
2	DIR	13099217	Directional	63.02	4.750	2.688
2	SRIG	12673191	Gamma	59.64	4.750	2.688

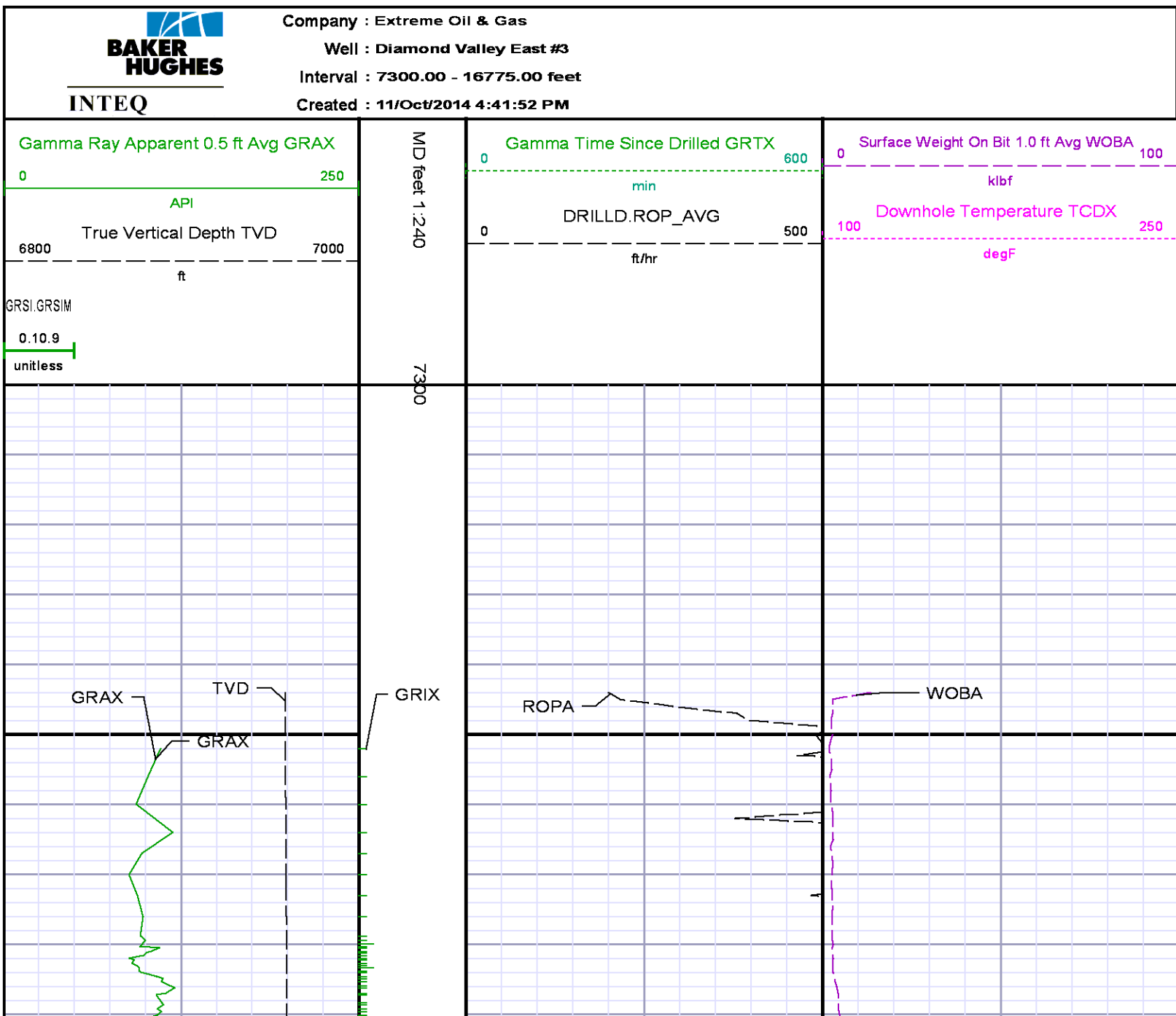
Service and Tool Mnemonics

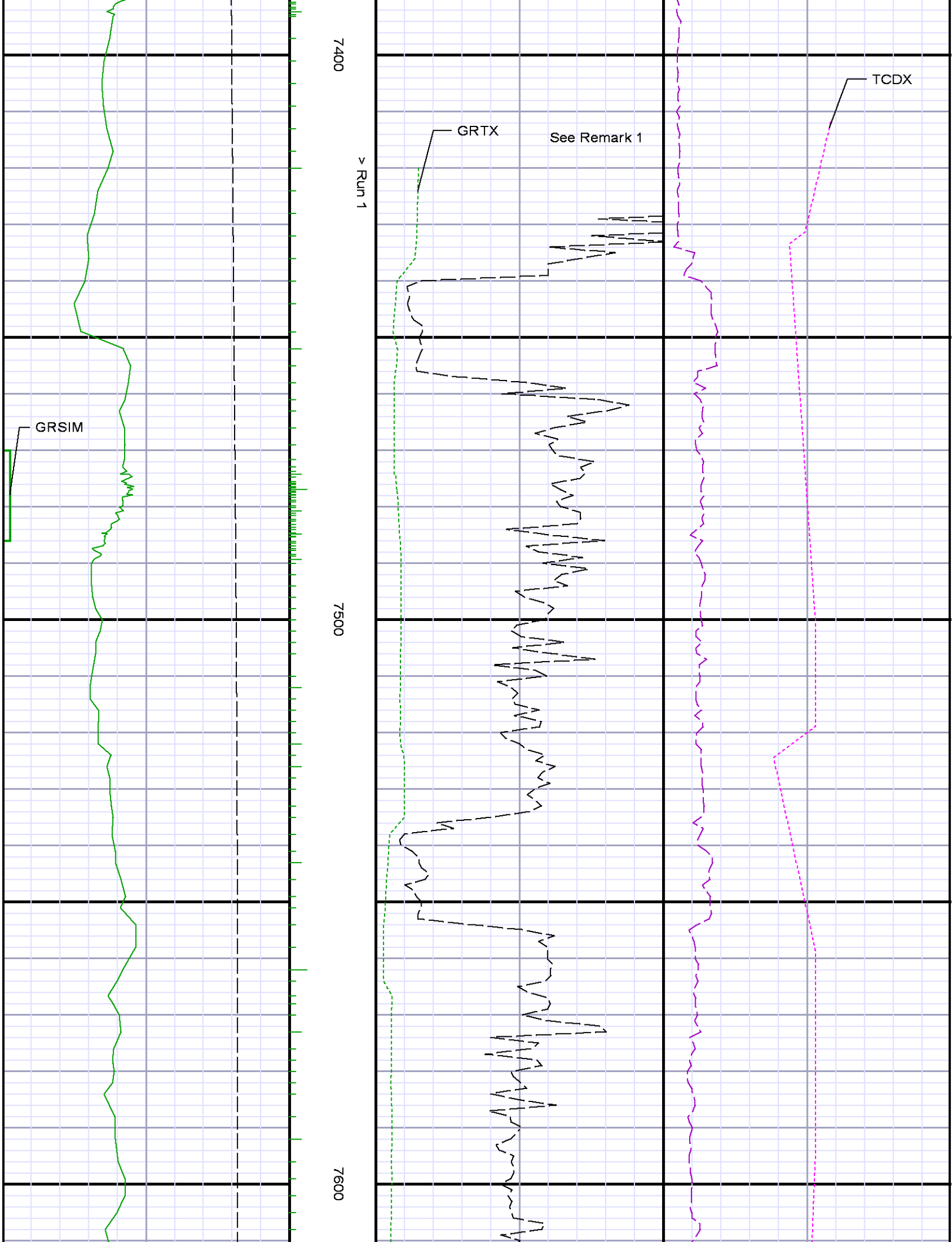
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

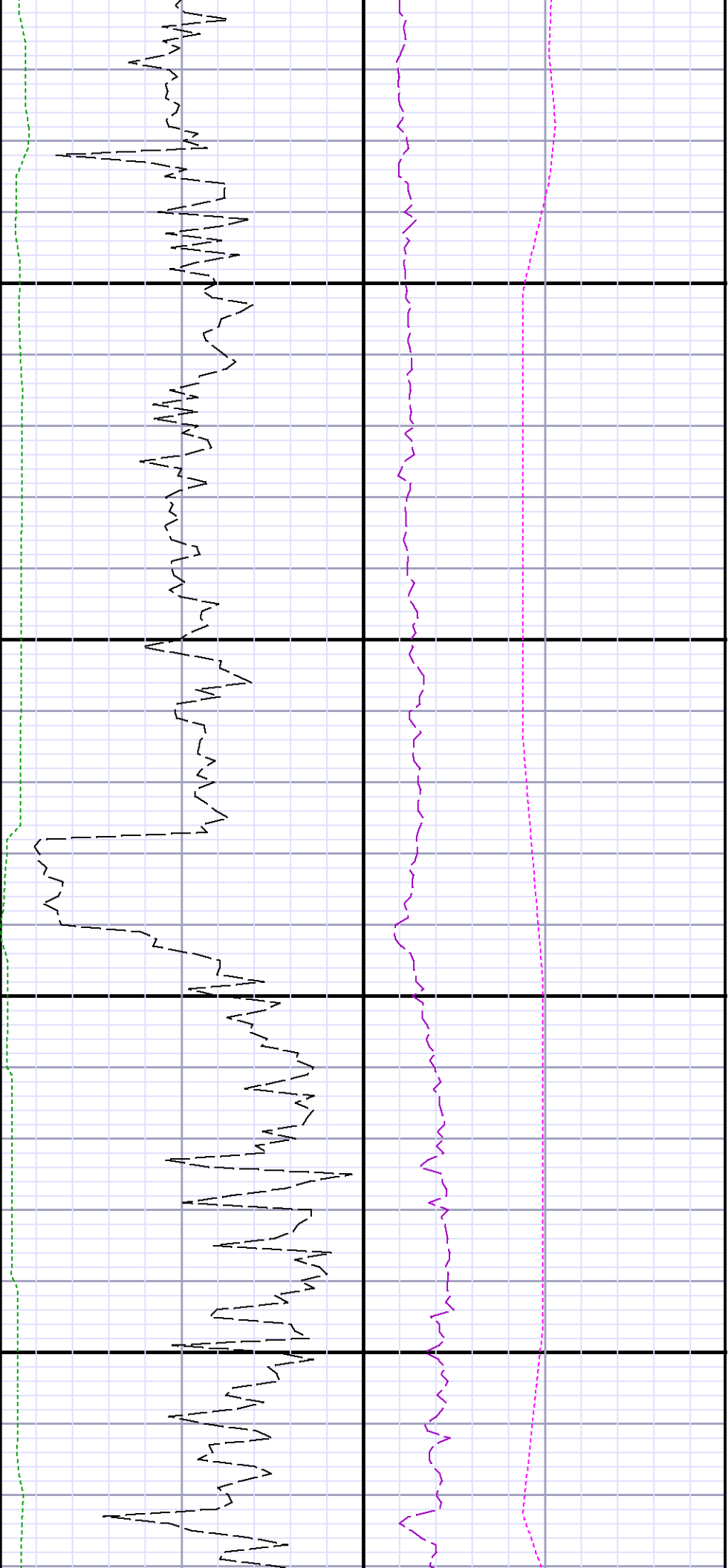
Comments

1) Depth measurements were obtained from a depth control system that was not supplied or operated by Baker Hughes INTEQ. Due to lack of control by Baker Hughes INTEQ logging engineers, depth calibrations and measurements could not be independently verified
2) The slide indicator is shown on the left side of track 1 as a heavy line. This indicator has been shifted to the Gamma Ray sensor offset to correspond with GammaRay data acquired while sliding
3) Baker Hughes INTEQ run 1 utilized 4 3/4 NaviGamma (Gamma Ray and Directional) behind a 6.125 inch bit and rotary steerable assembly from 7418 feet to 9450 feet MD (6960 ft to 6971 ft TVD).
3) Baker Hughes INTEQ run 2 utilized 4 3/4 NaviGamma (Gamma Ray and Directional) behind a 6.125 inch bit and rotary steerable assembly from 9450 feet to 16728 feet MD (6971 ft to 6976 ft TVD).

Remarks				
Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	7418	6.125	1	GRAX logging started at 7418 feet MD (6960 feet TVD) per customer request.
2	9376	6.125	2	The interval from 9376 to 9445 feet MD (6969.34 to 696.75 feet TVD) was logged up to 18 hours after drilling due to tripping from Run 1 to Run 2.
3	11287	6.125	2	The interval from 11287 to 11348 feet MD (6964.84 to 6965.38 feet TVD) was logged up to 14 hours after drilling due to short trip remove the agitator.
4	16669	6.125	2	The interval from 16669 to 16728 feet MD (6973.84 to 6976.89 feet TVD) was not logged due to sensor to bit offset, TD well

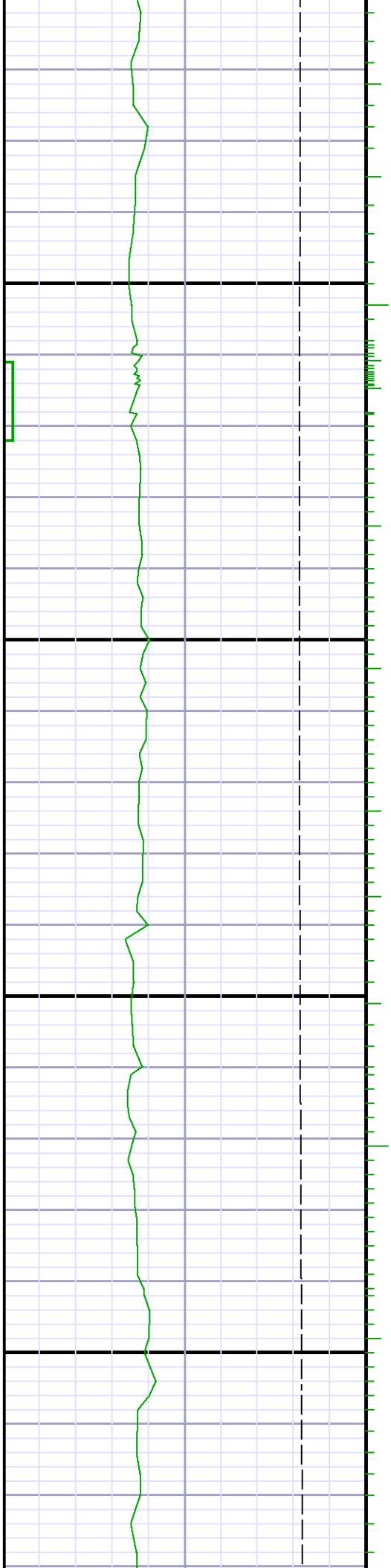


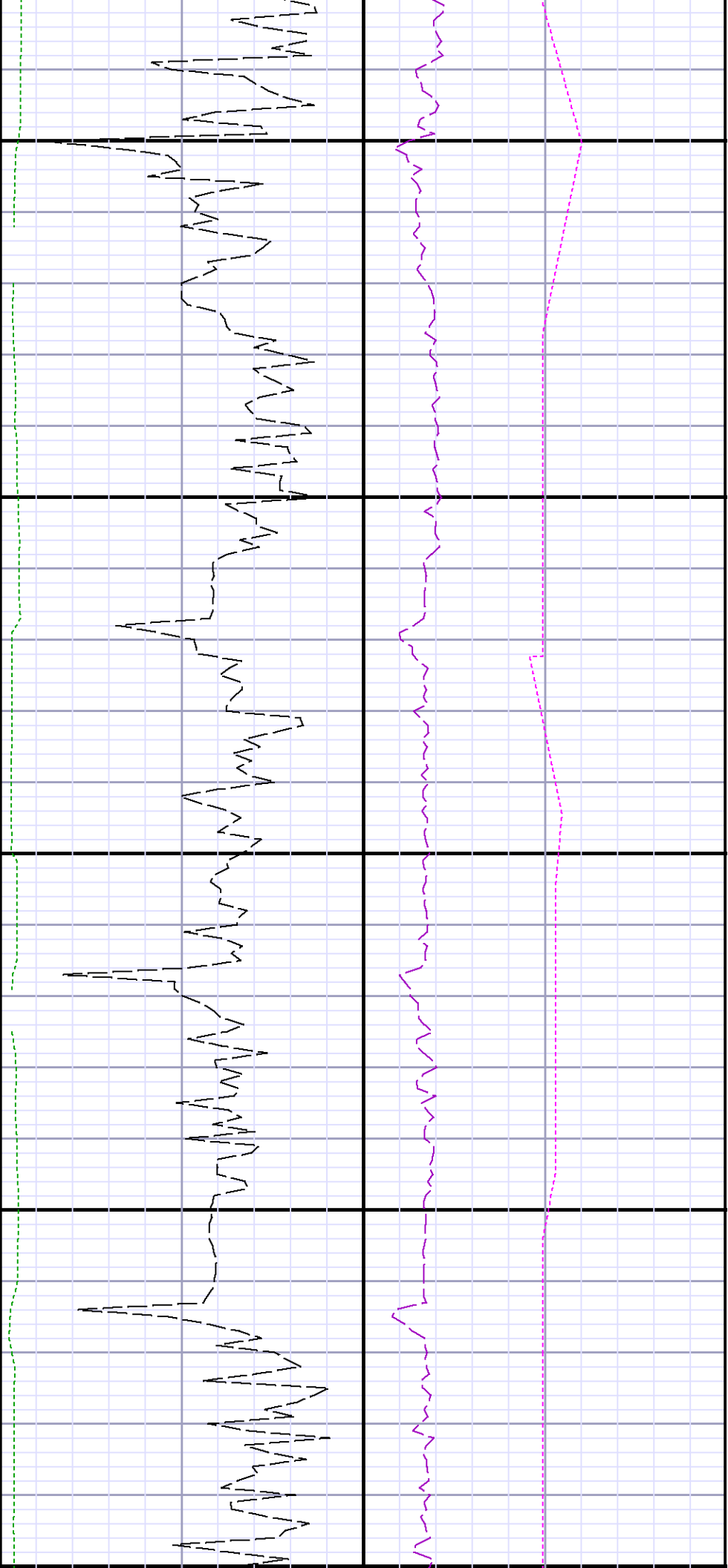




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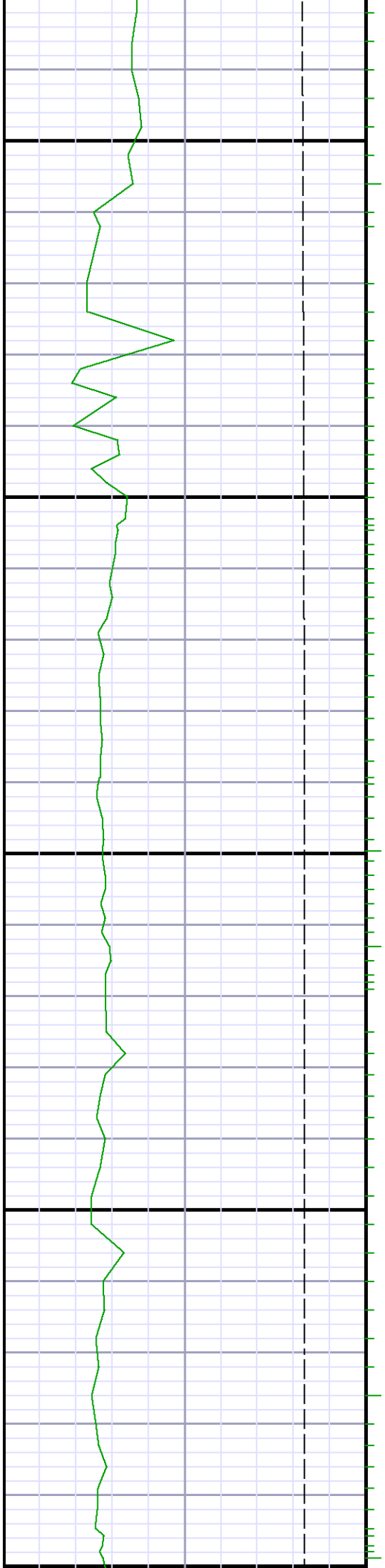
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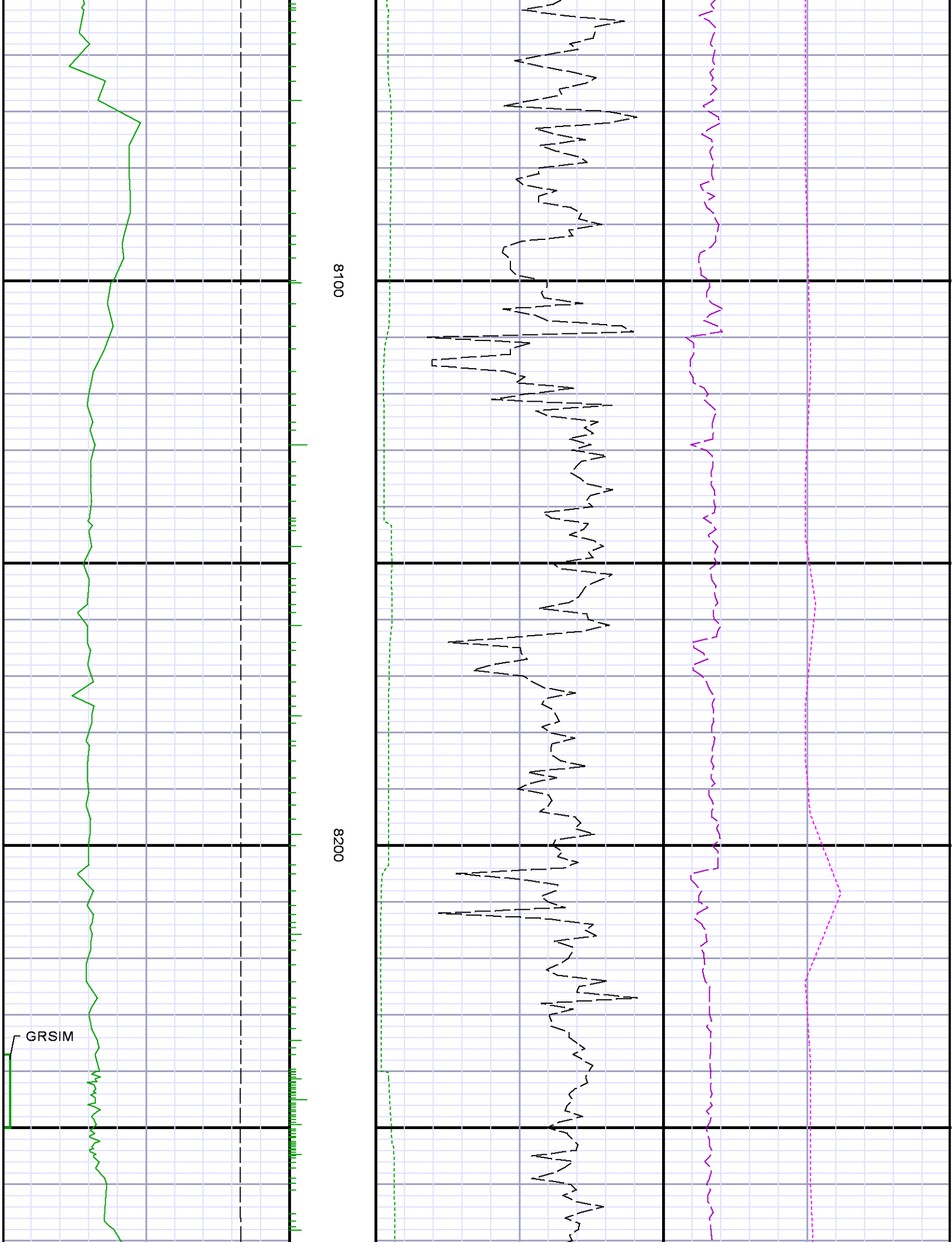


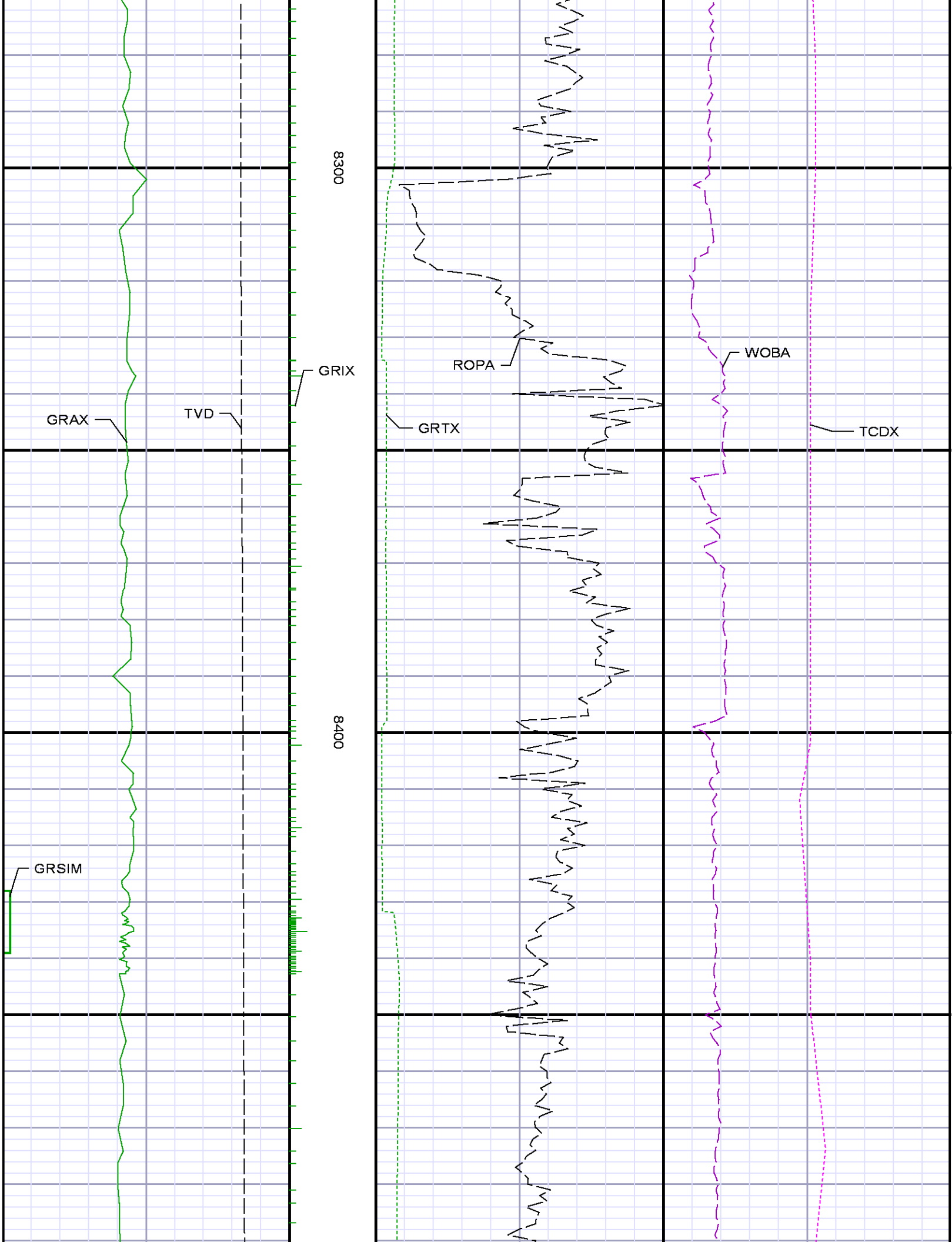


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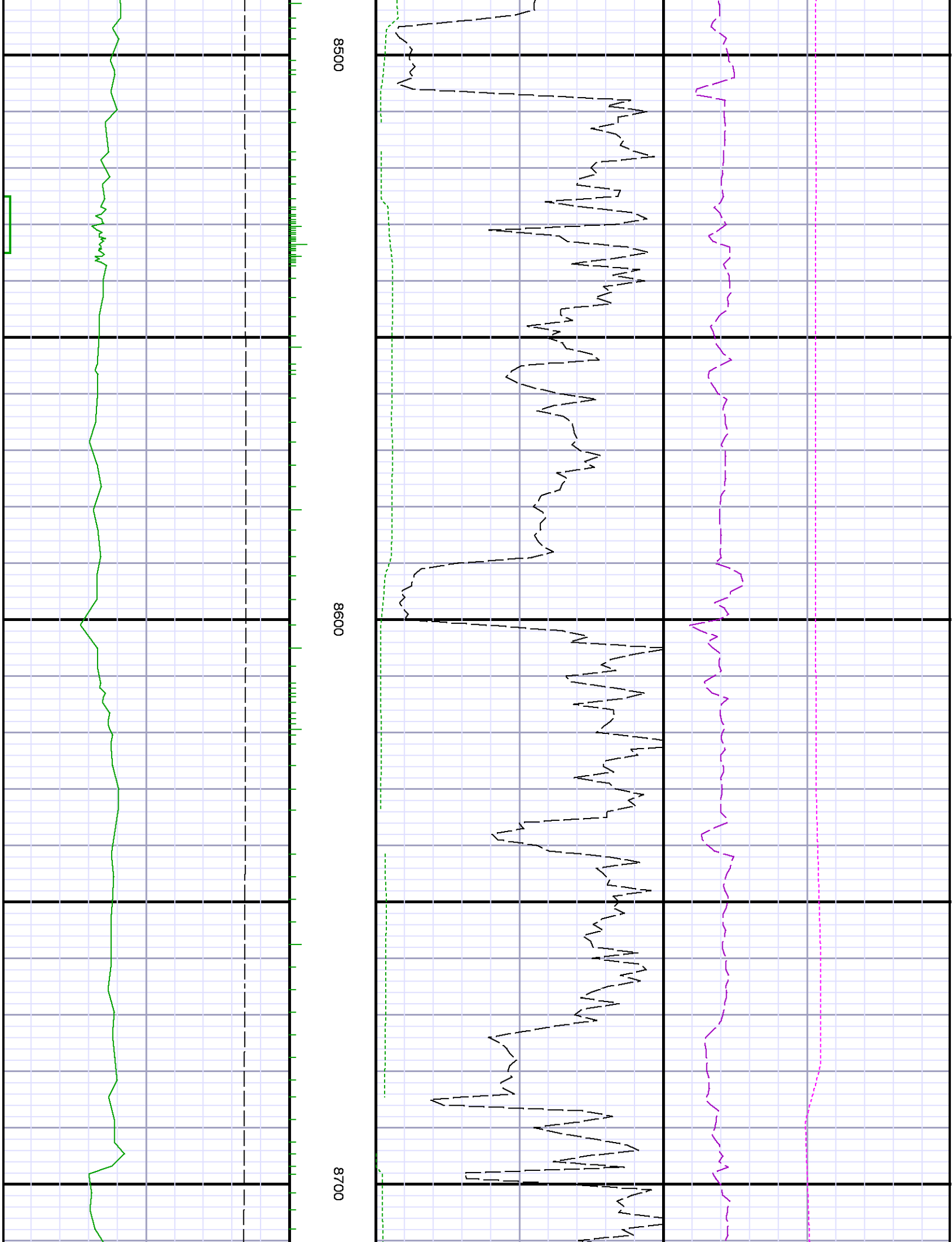
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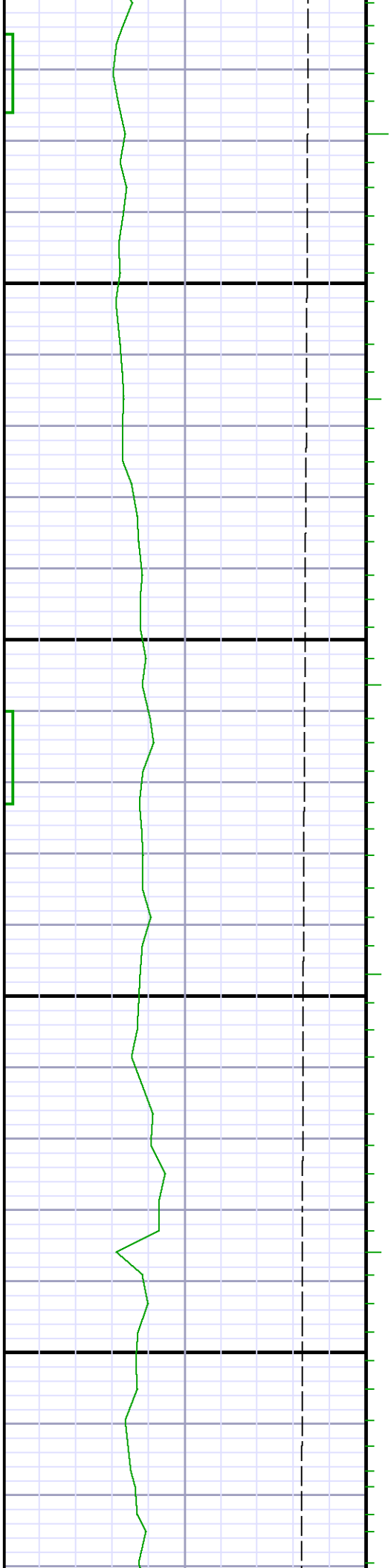






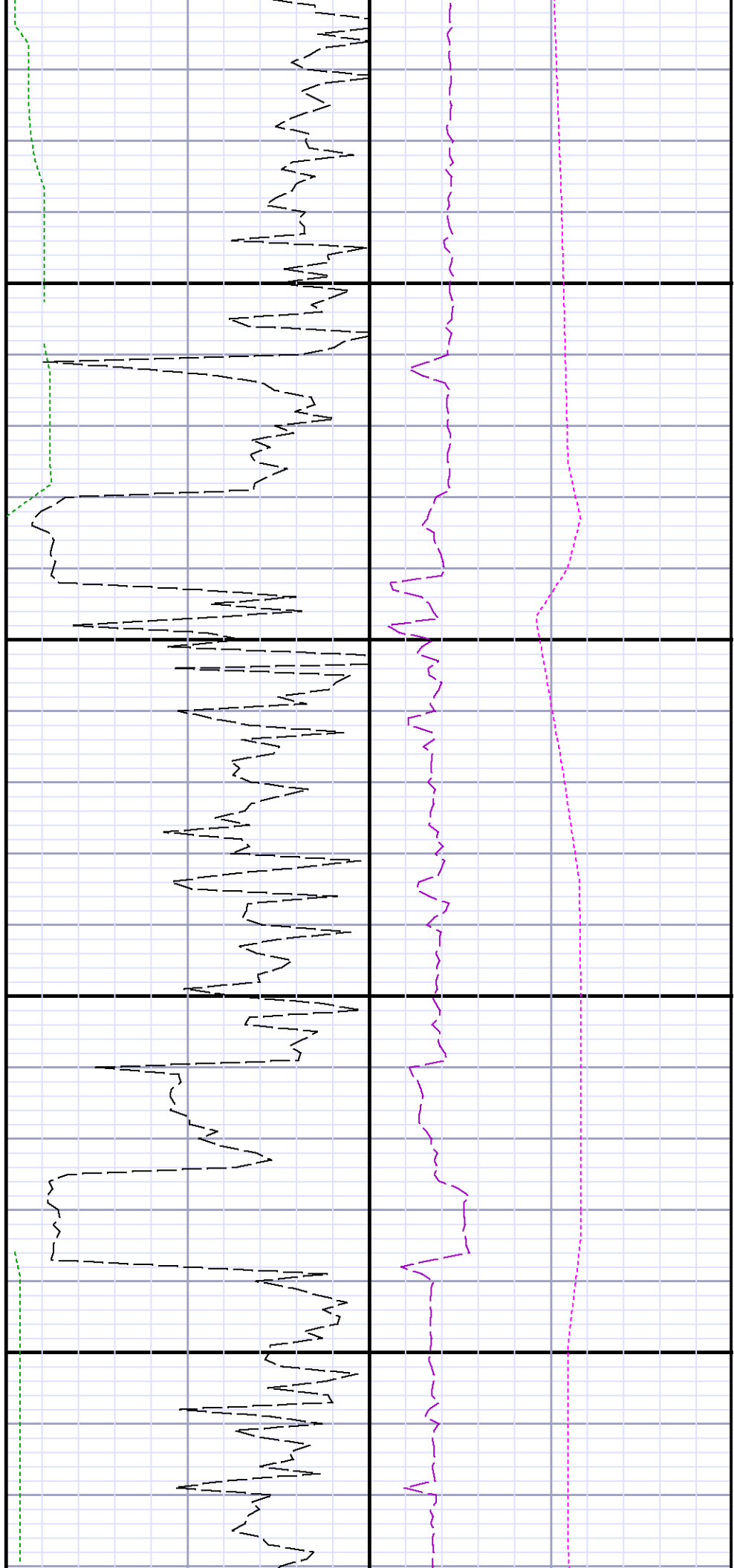


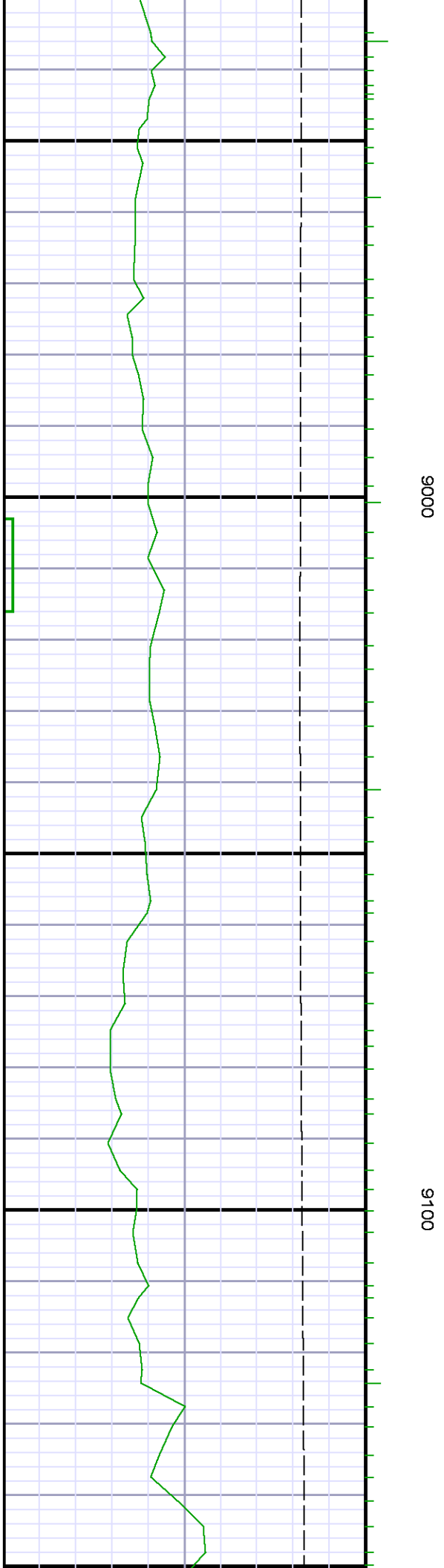
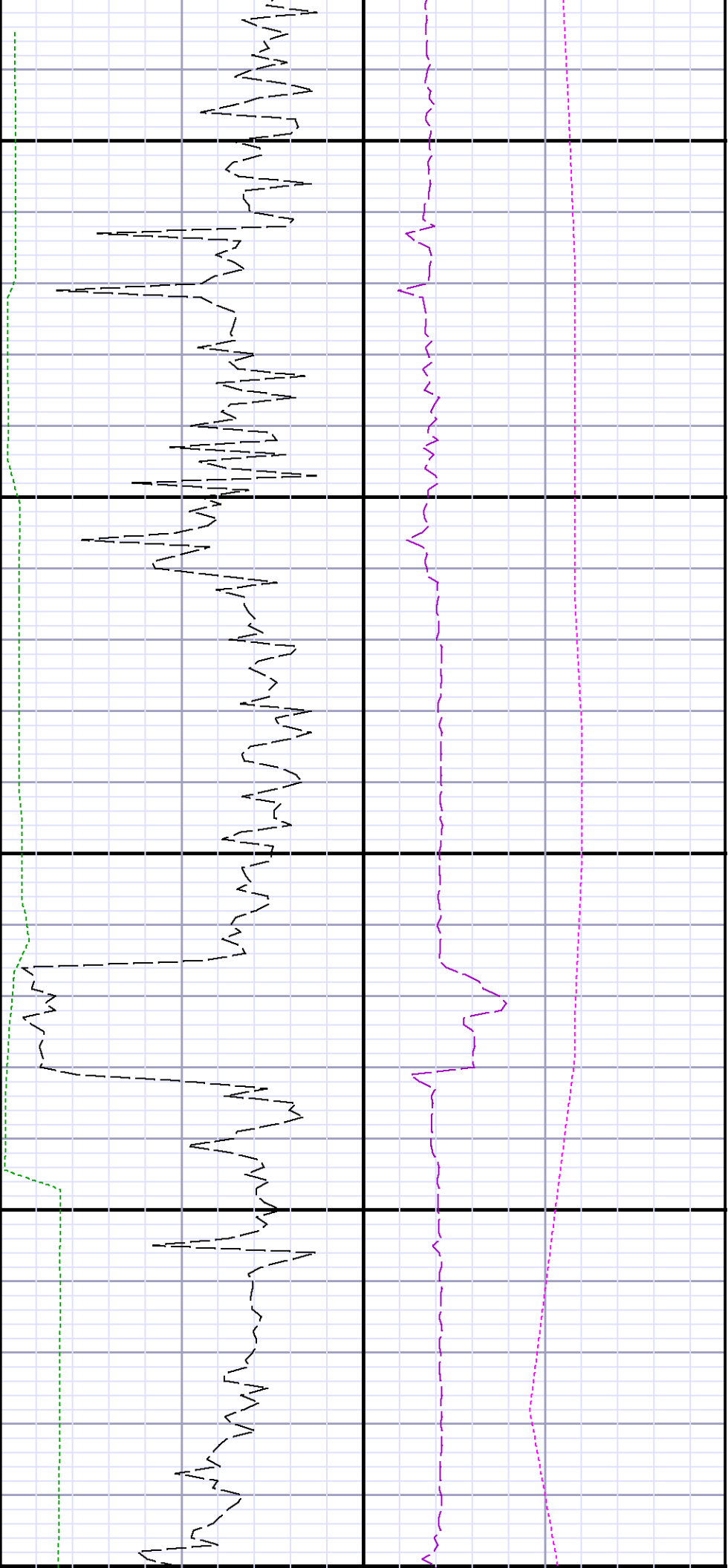


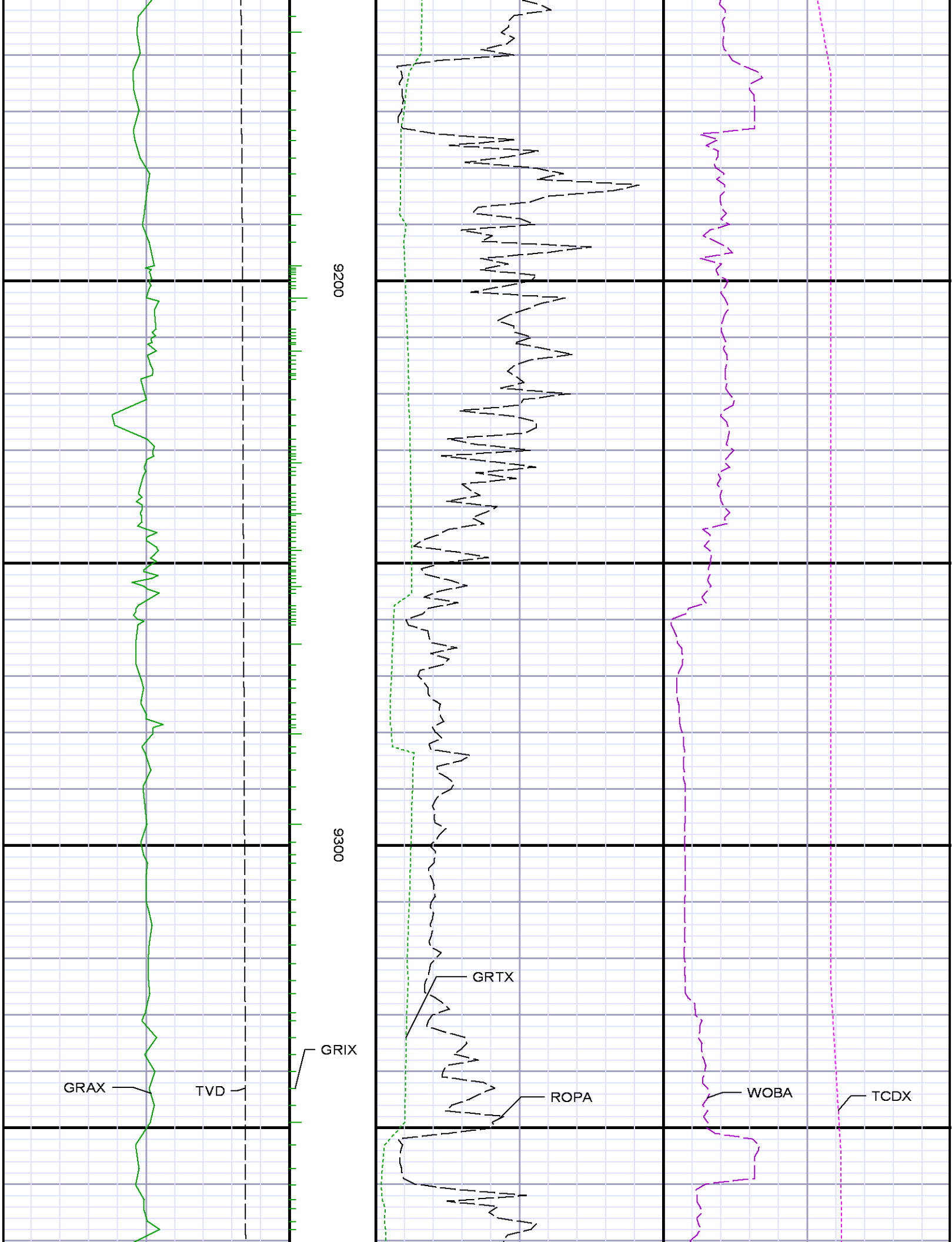


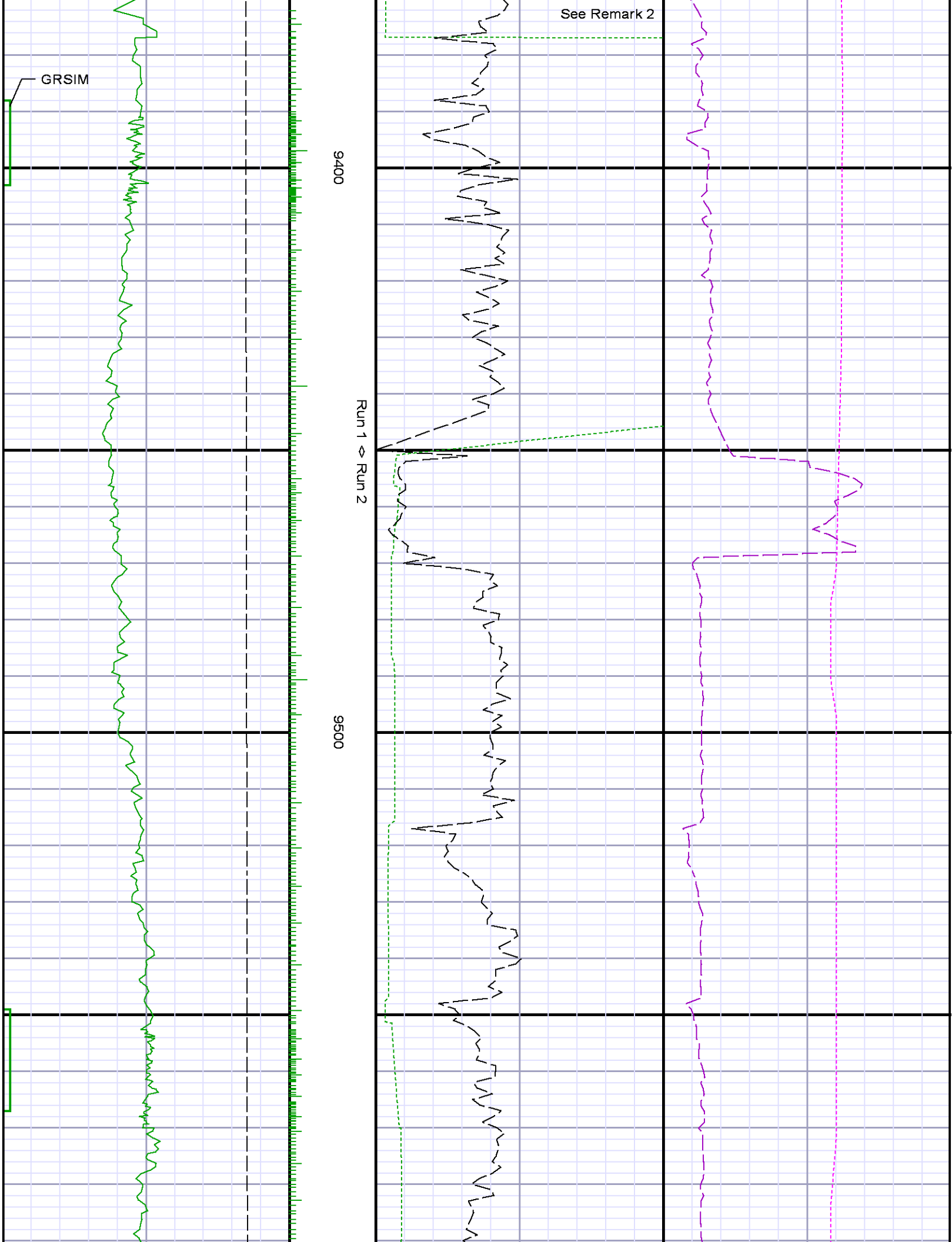
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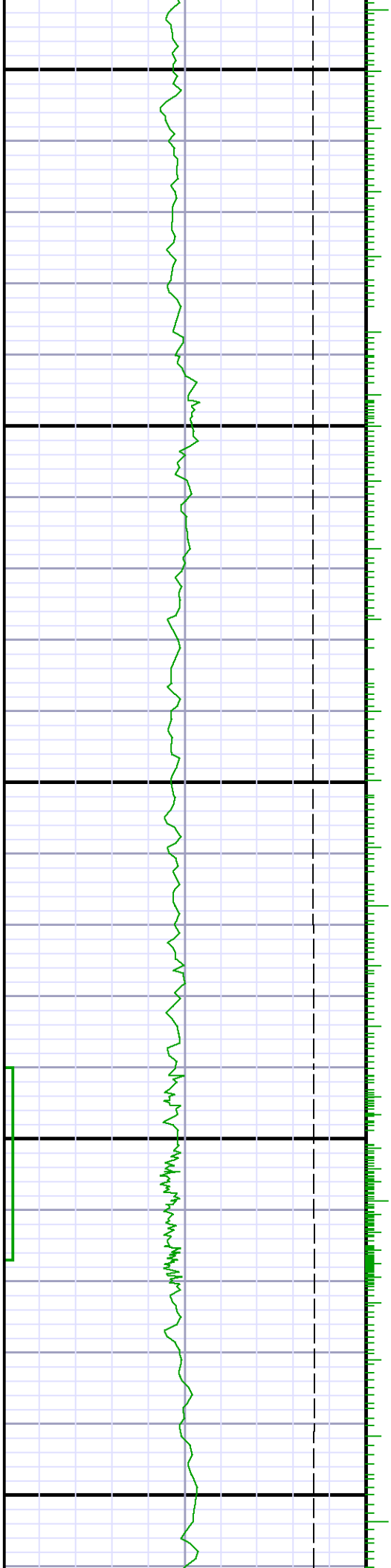
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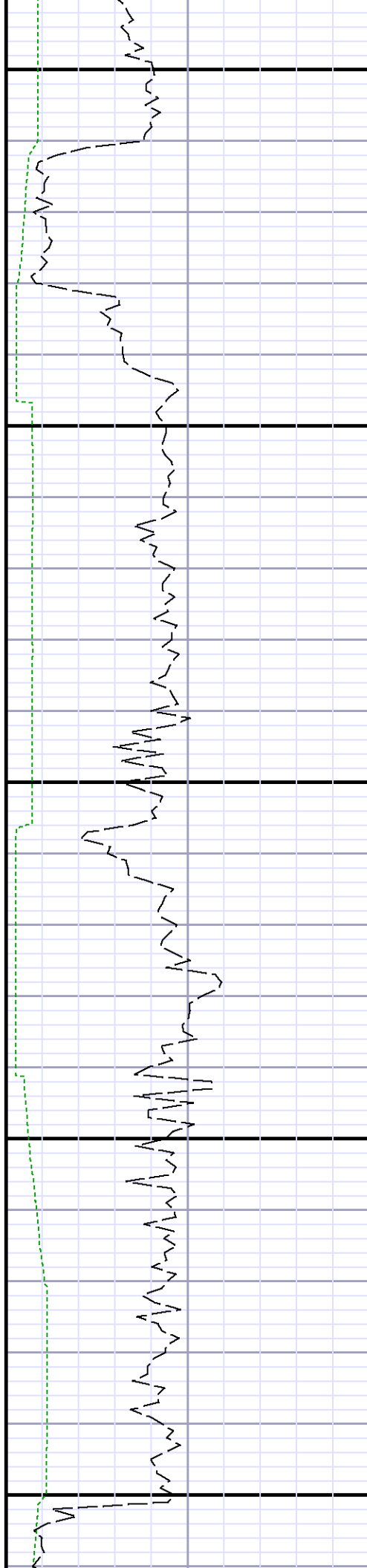


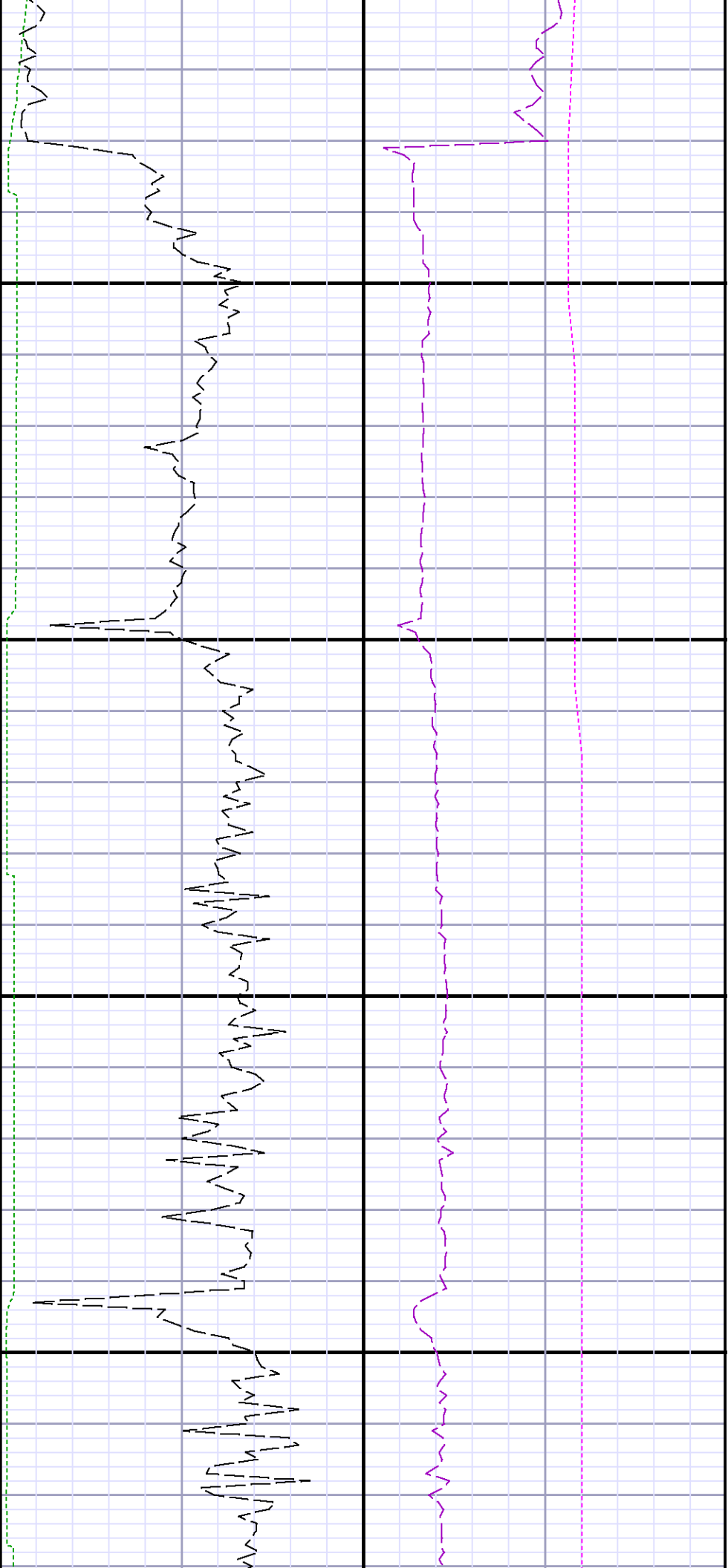


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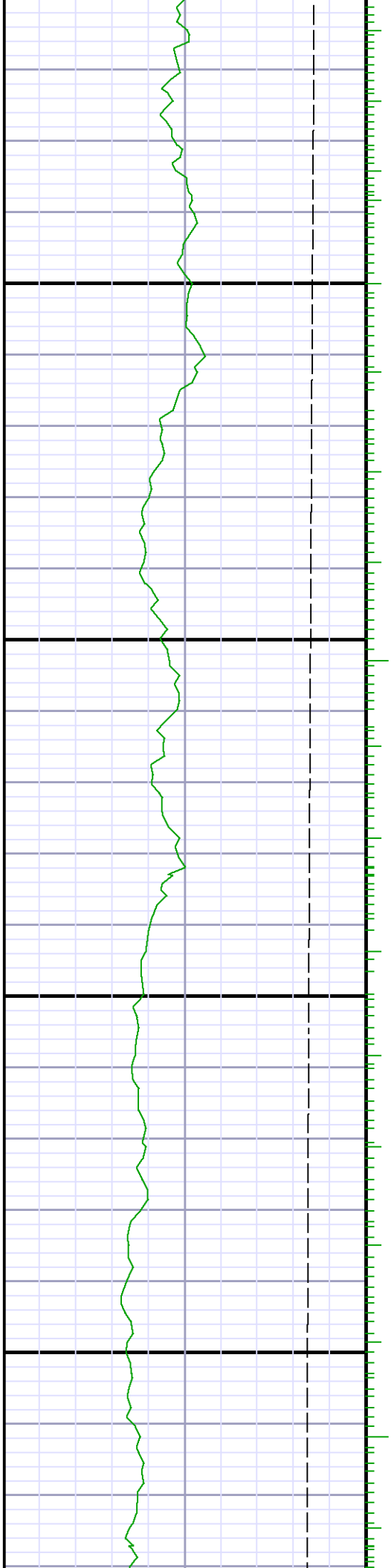
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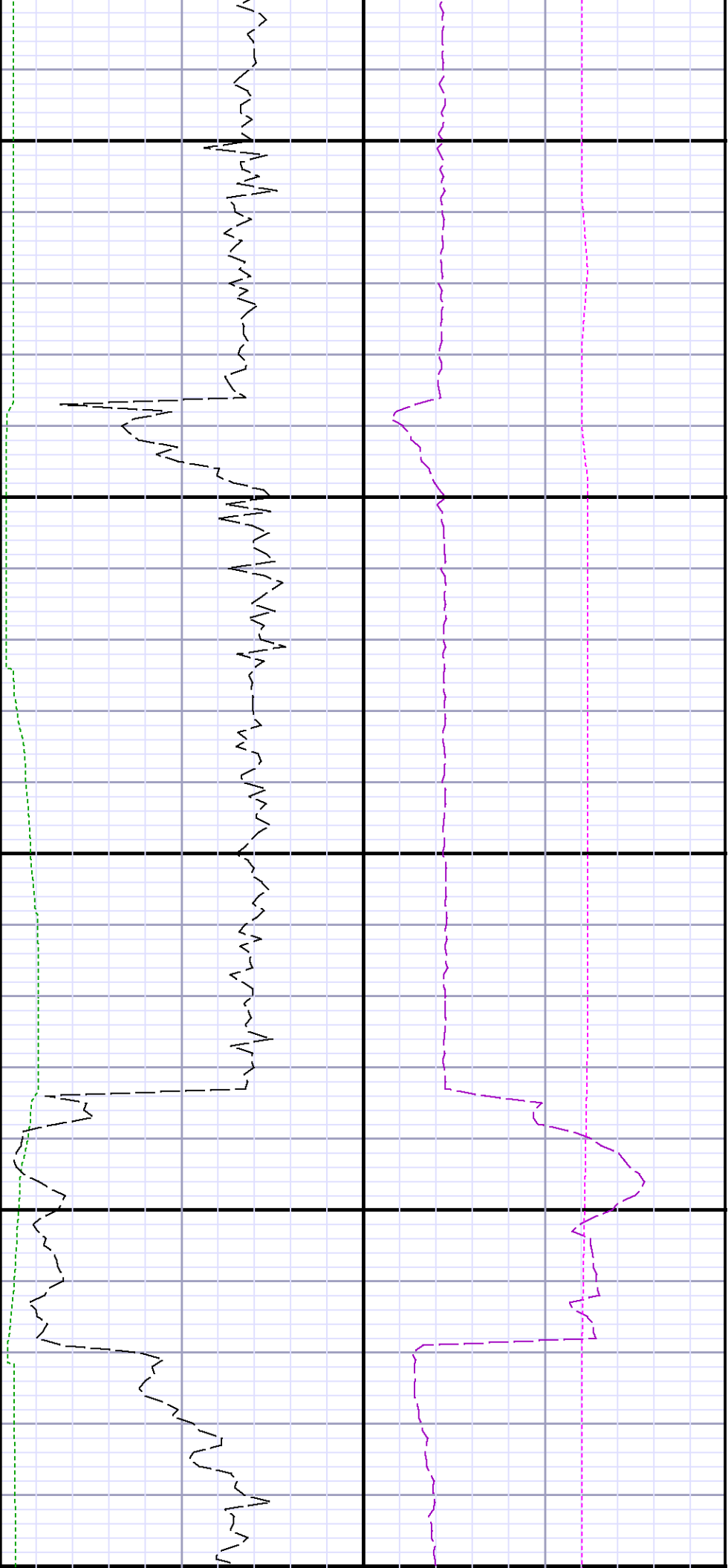




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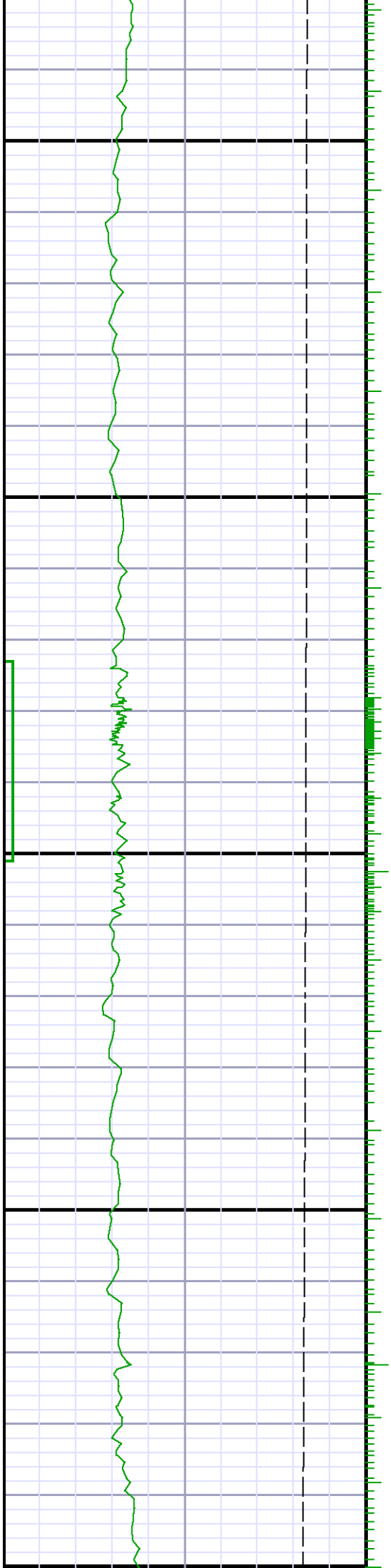
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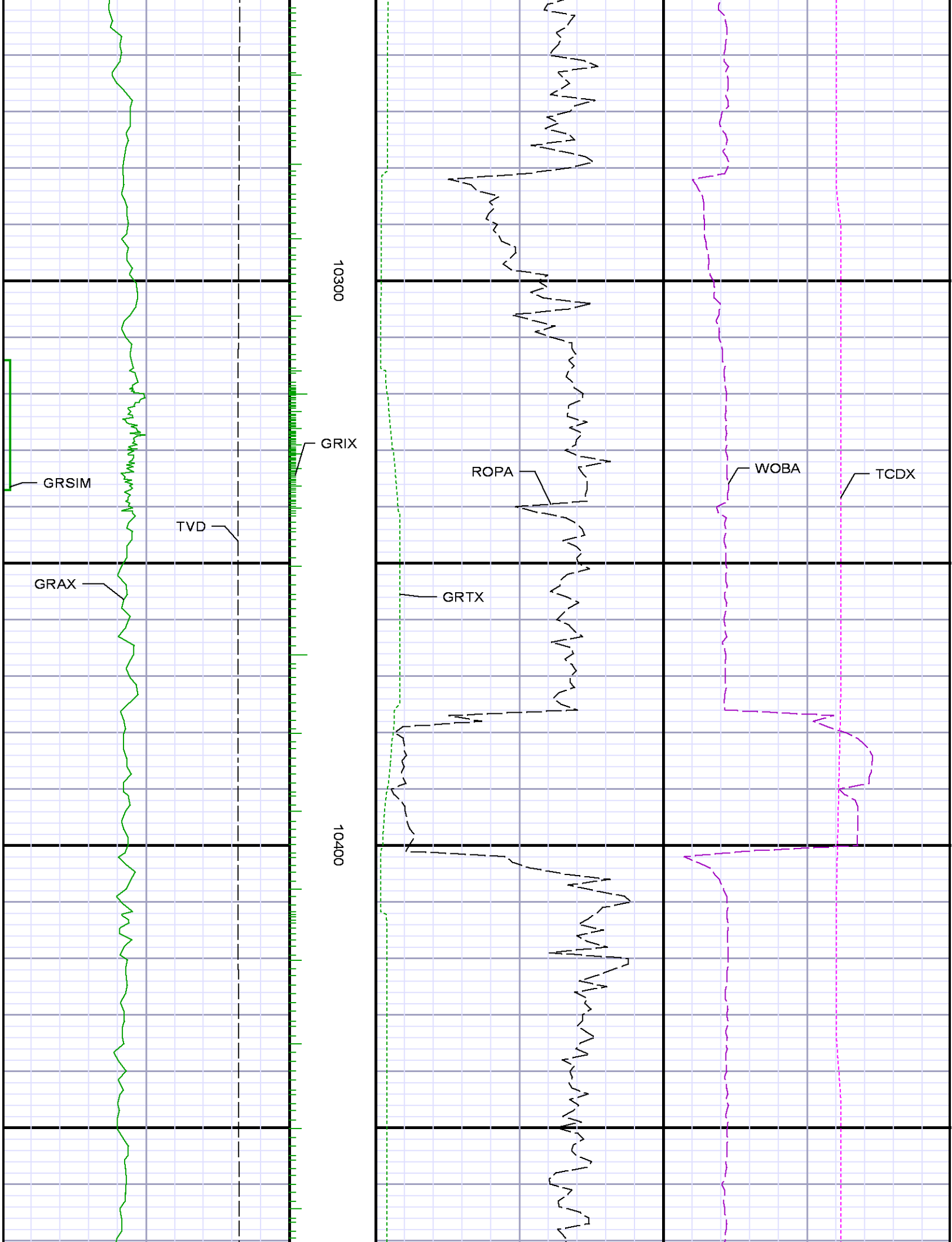


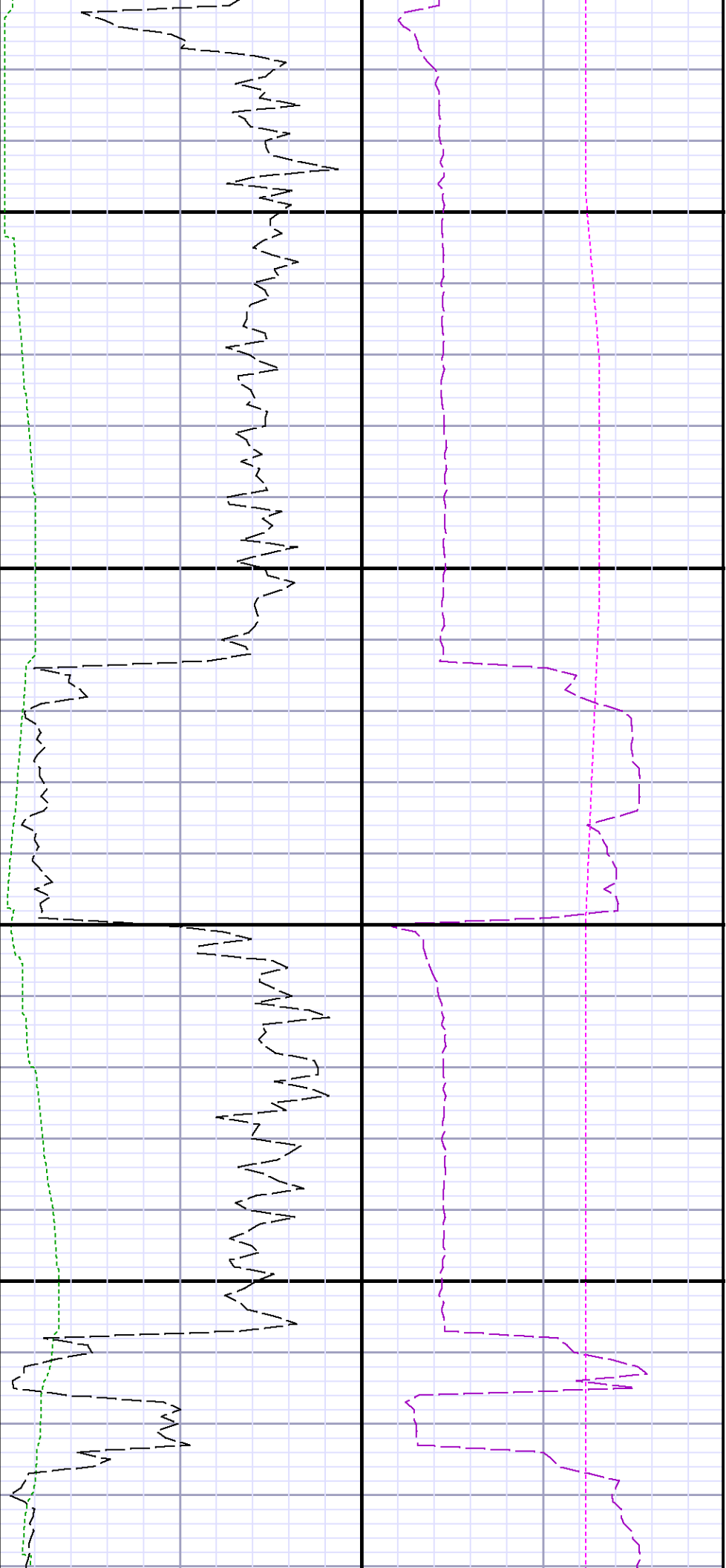
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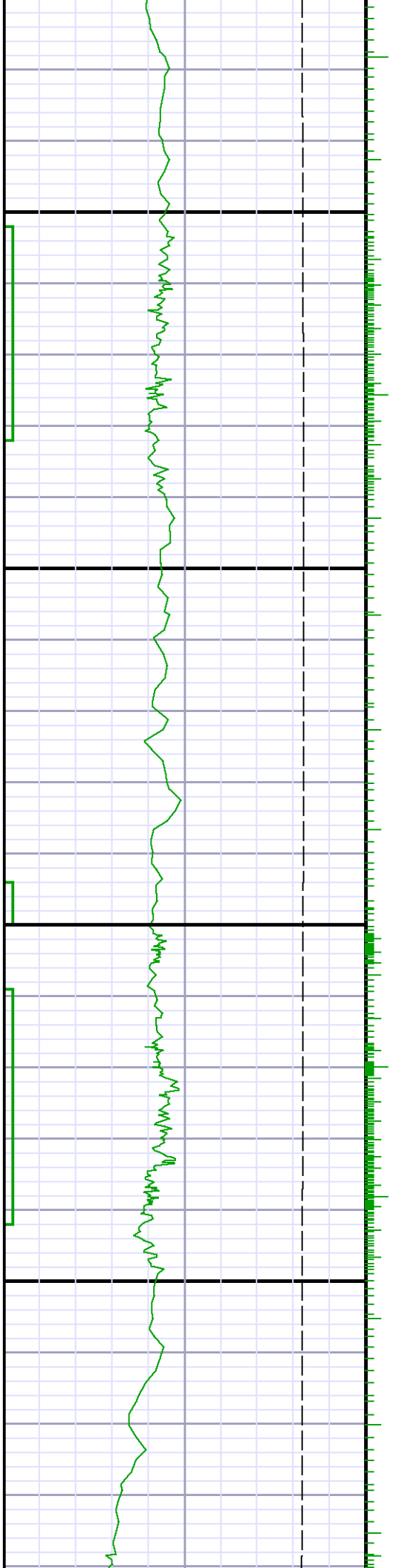


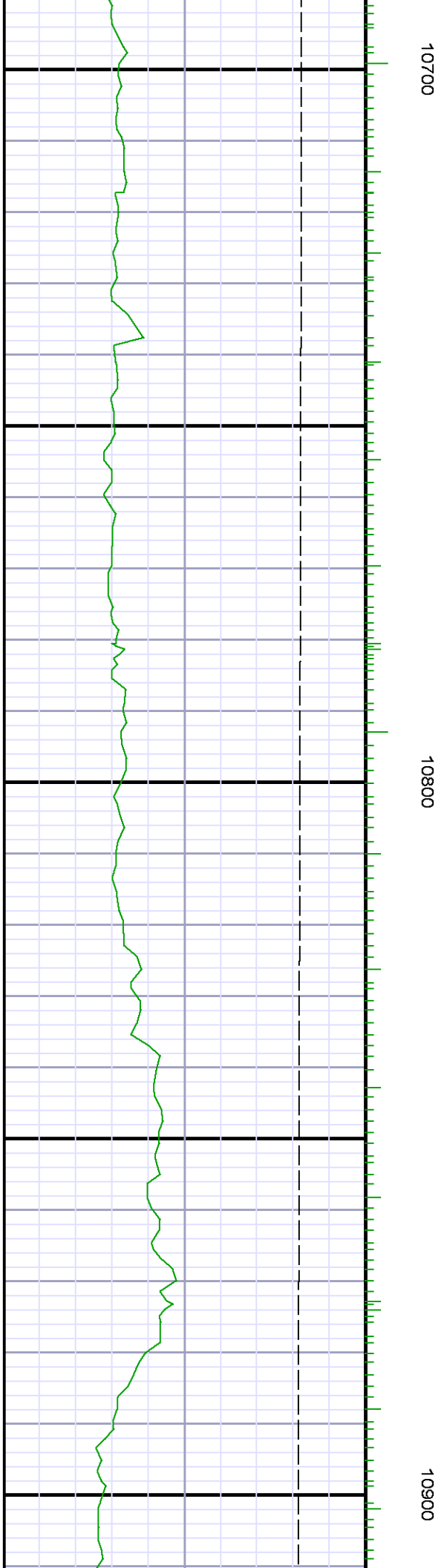
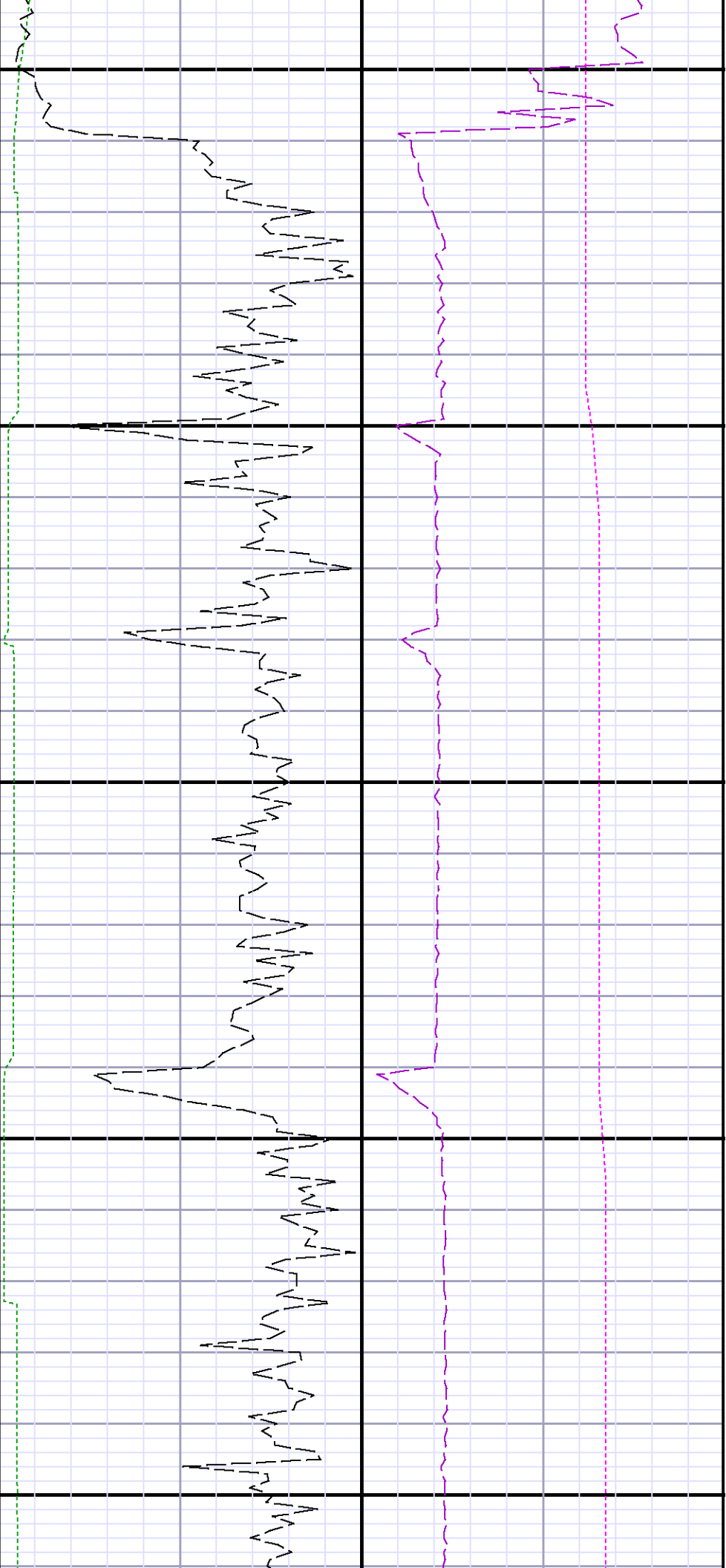


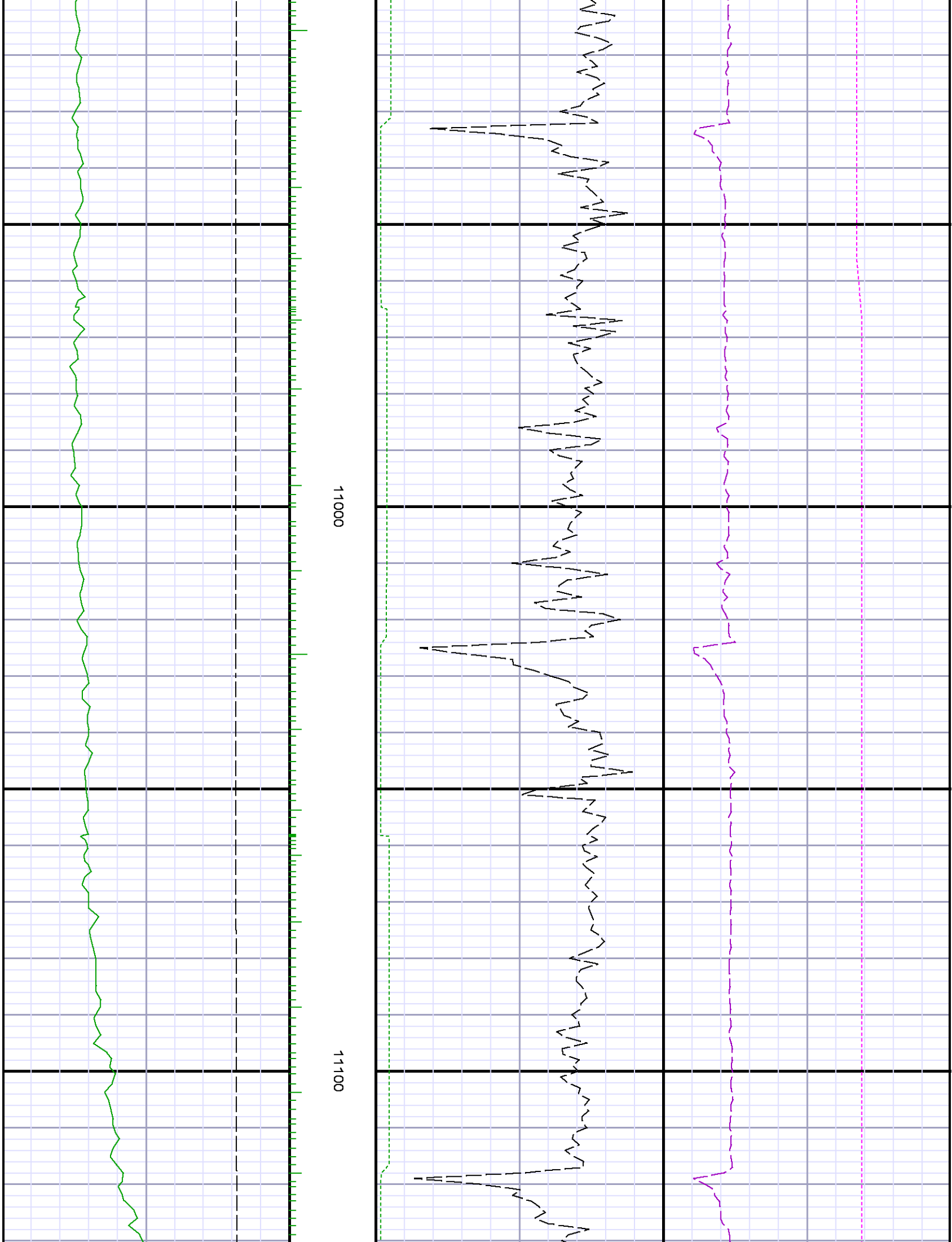


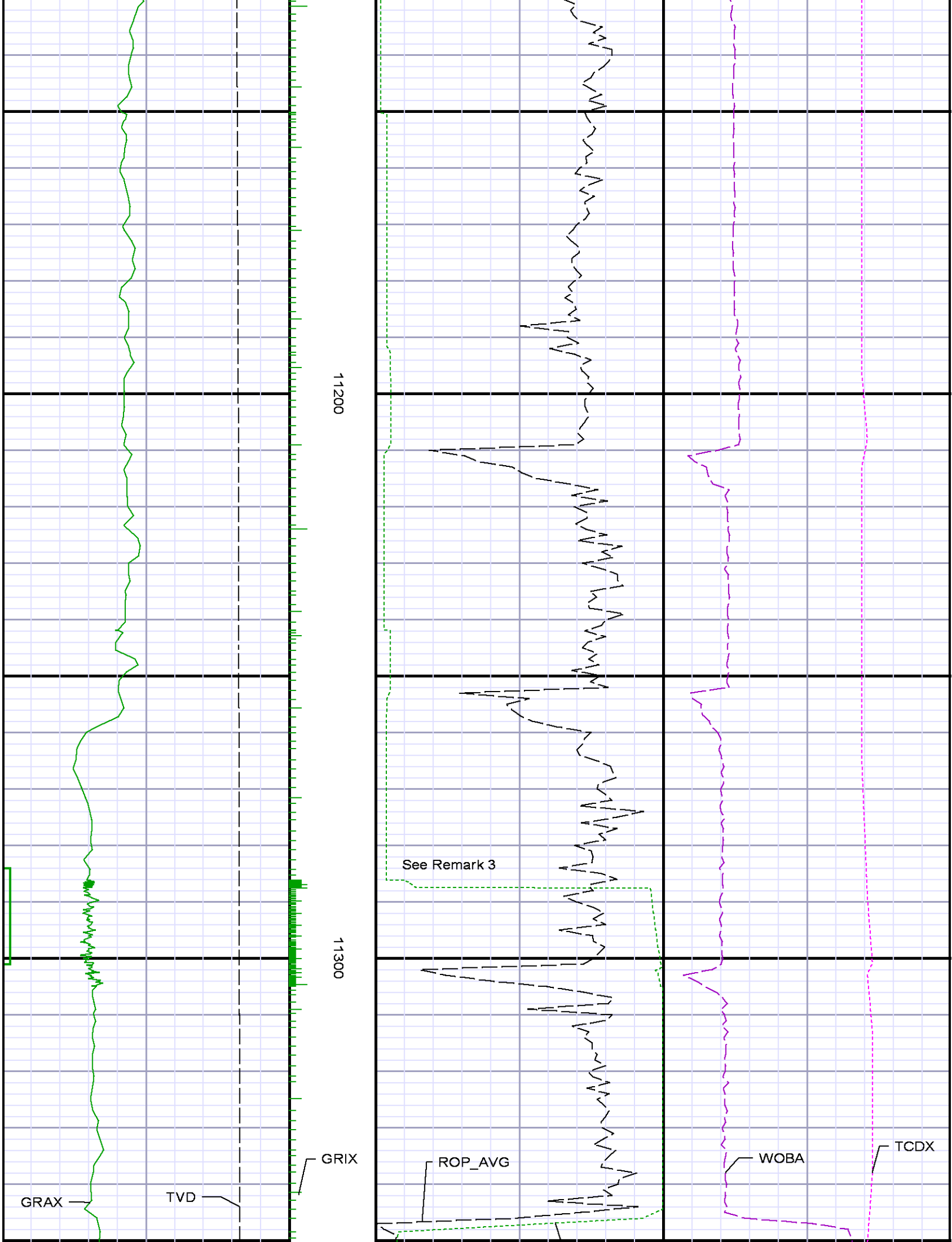
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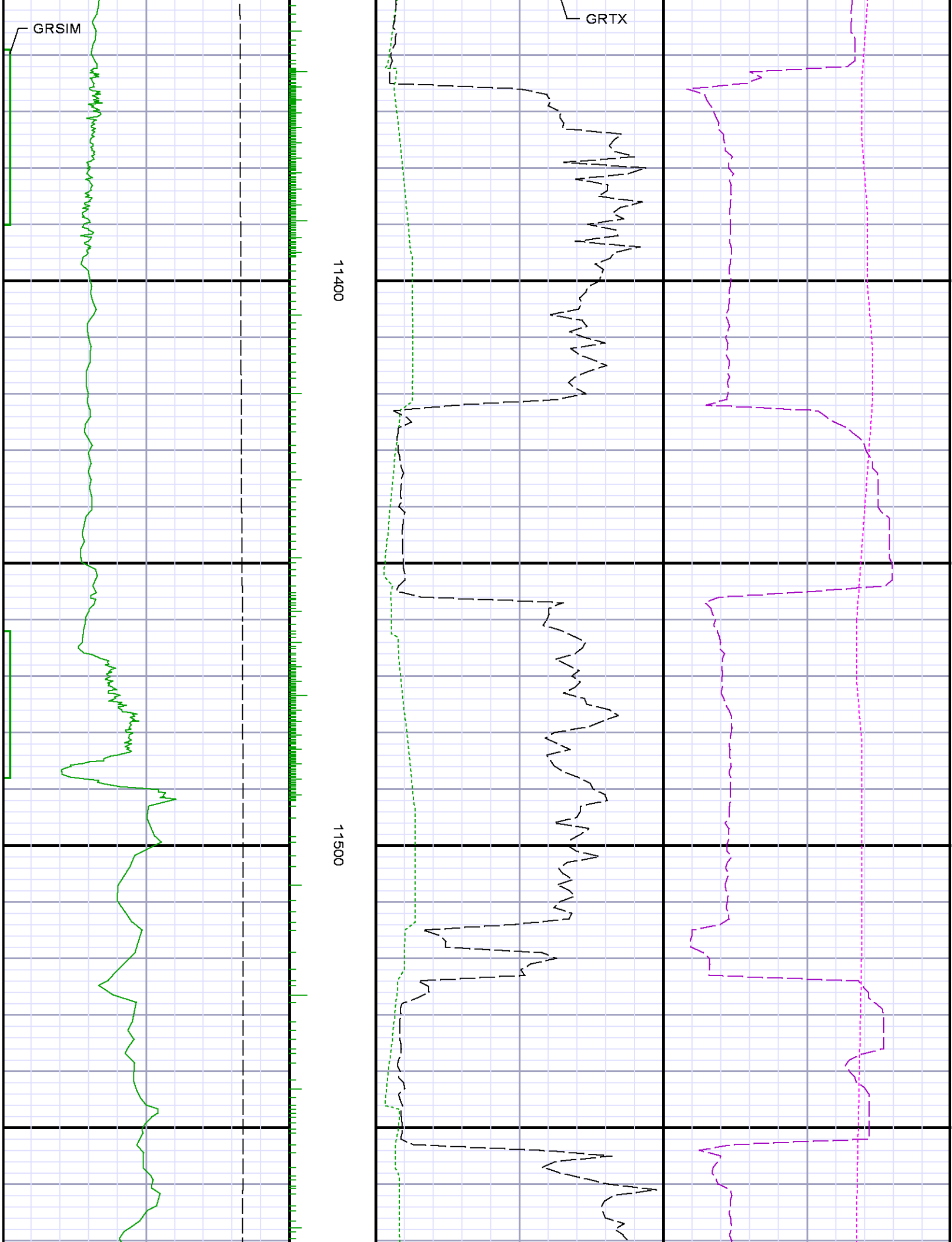
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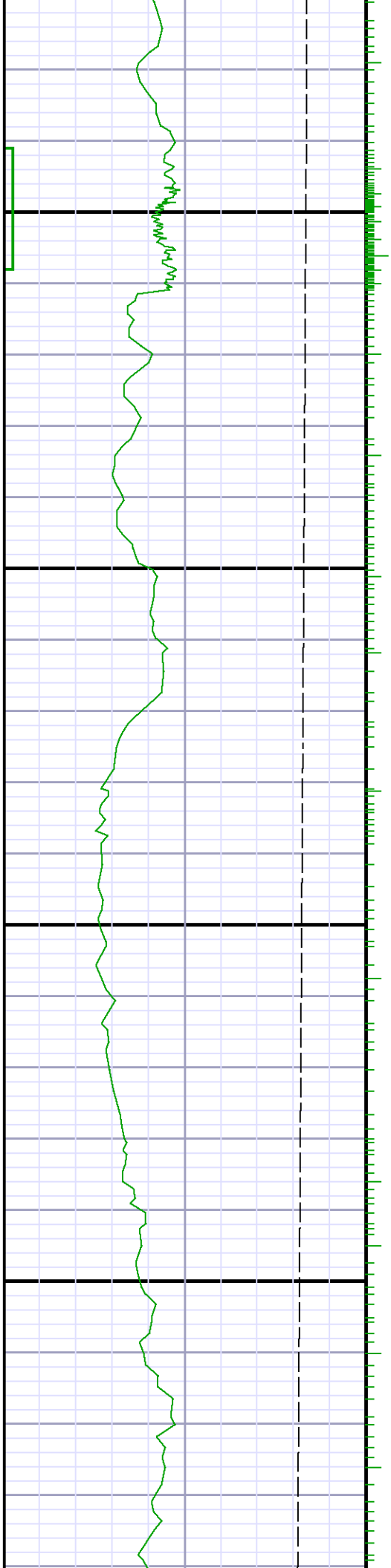


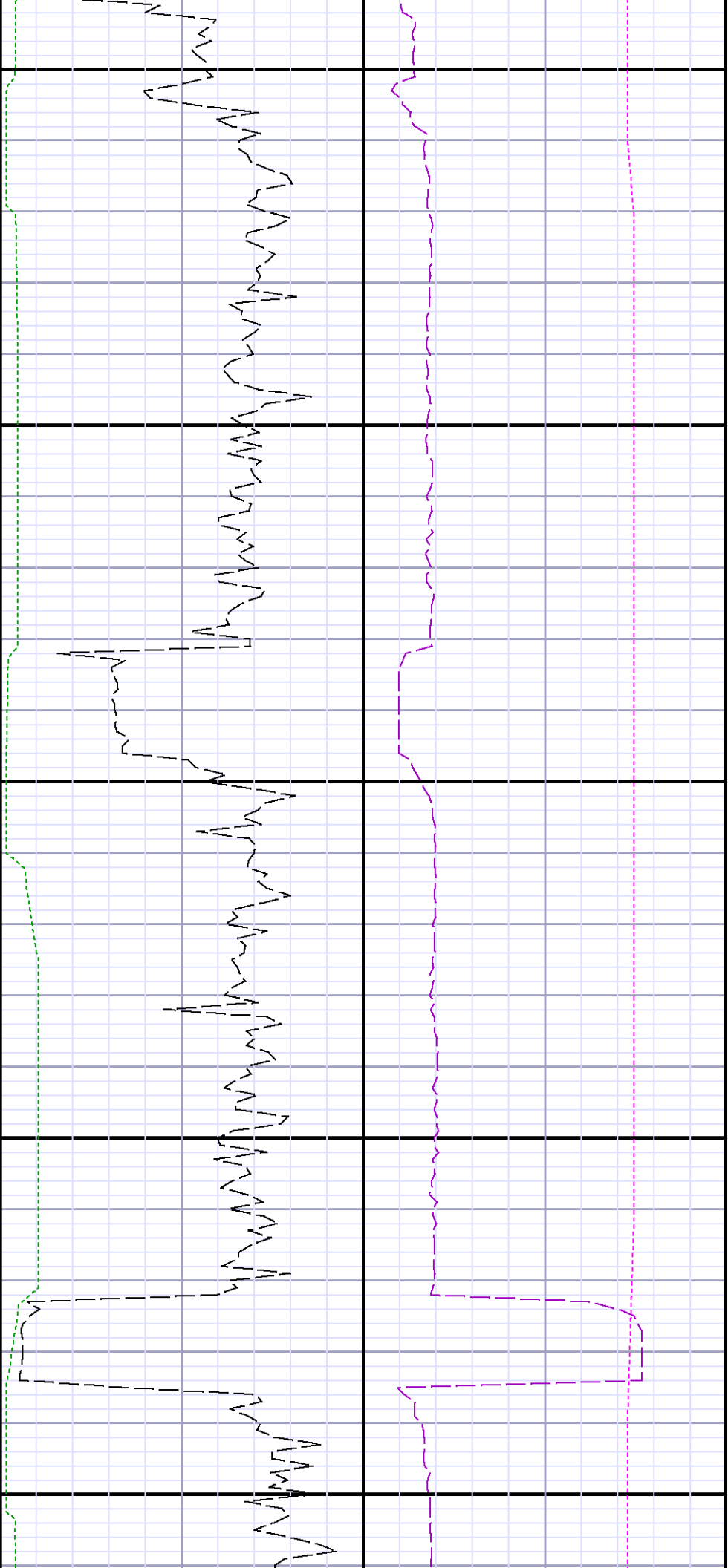




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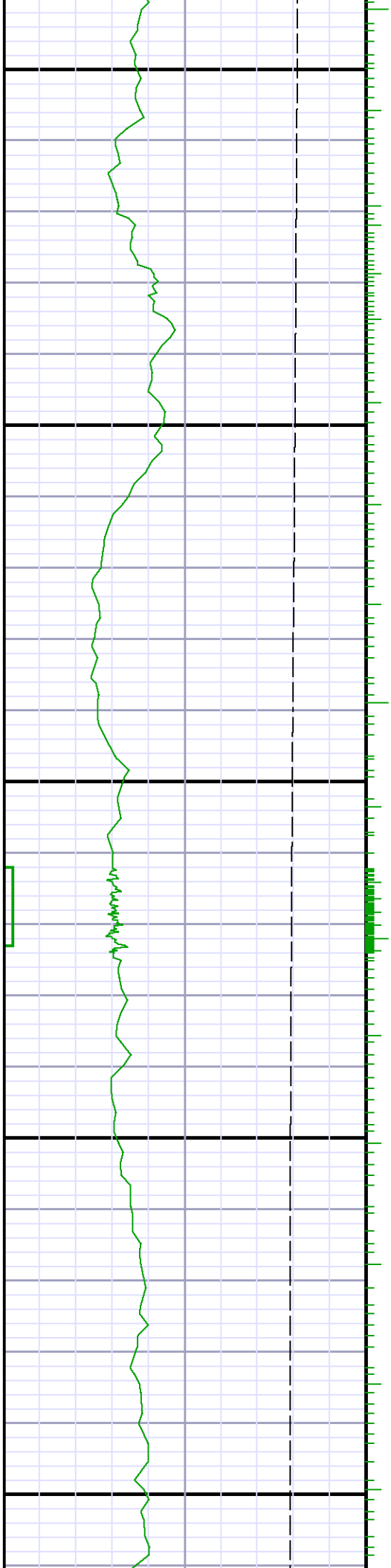




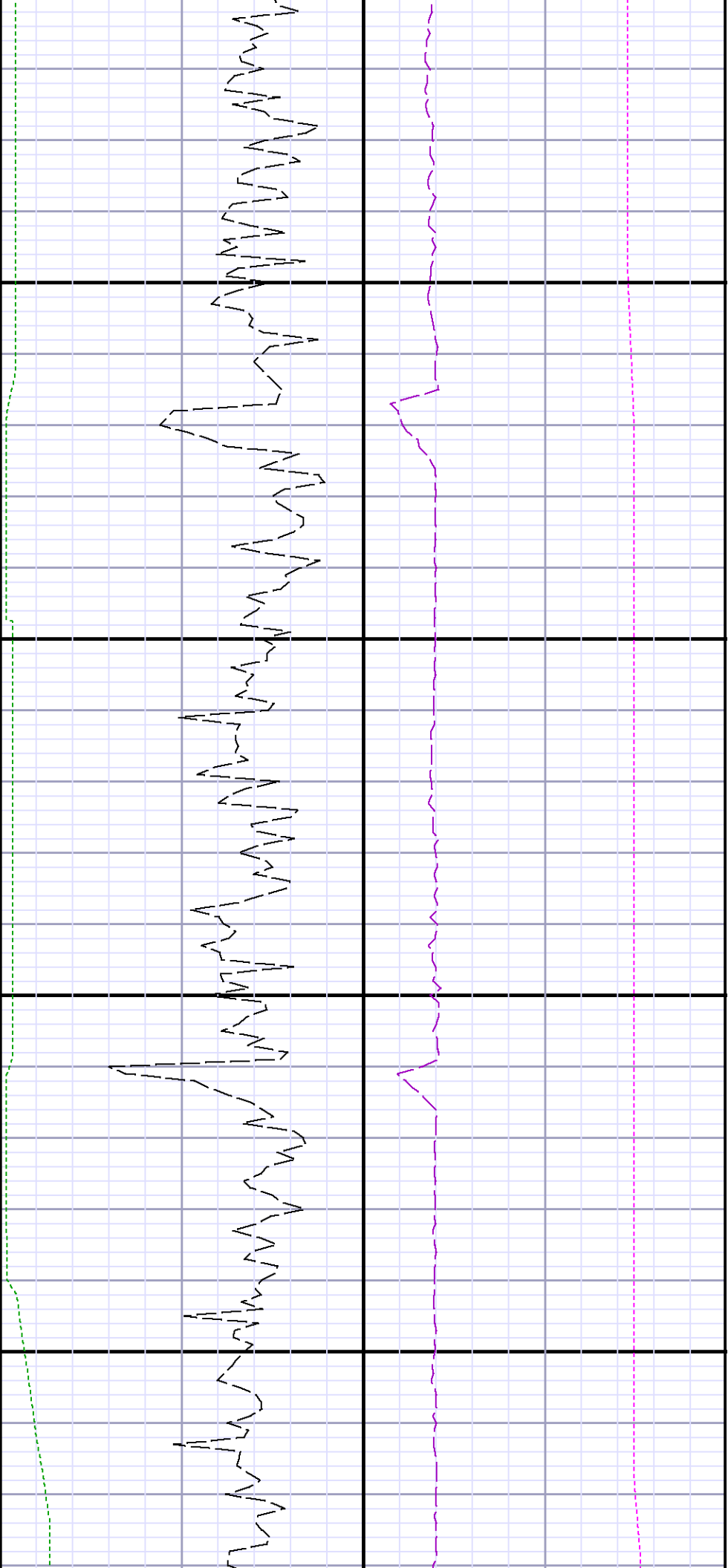
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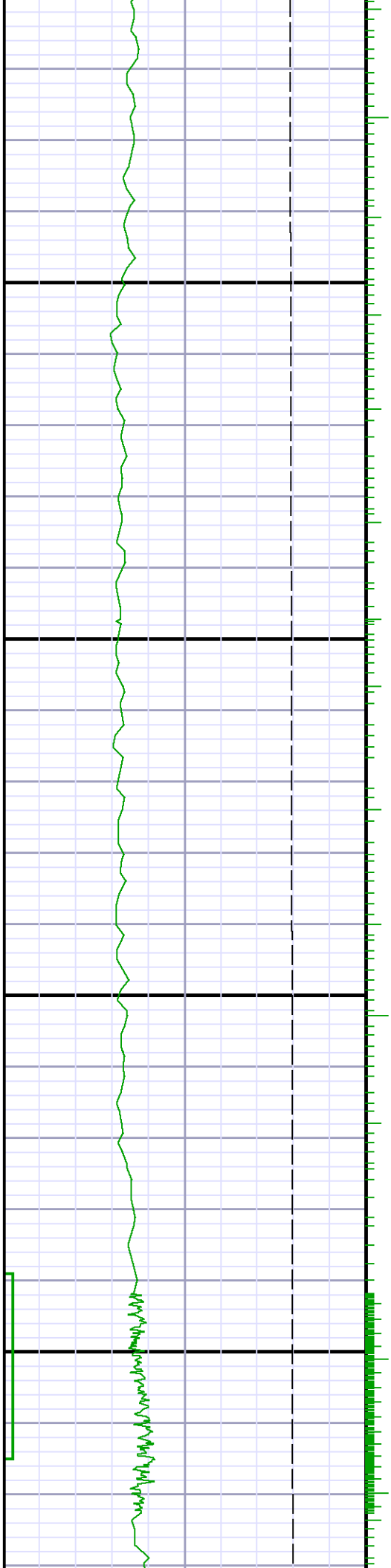


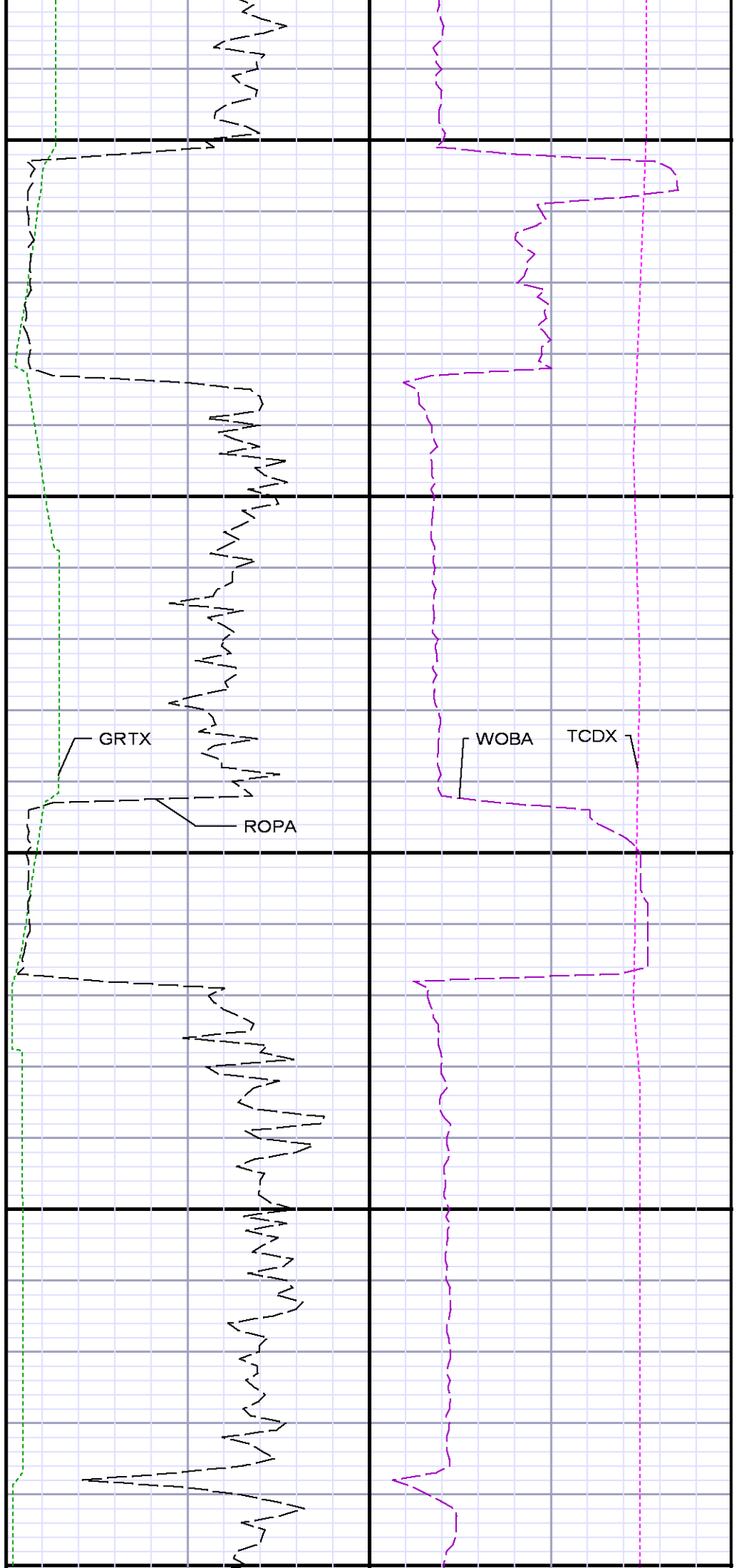
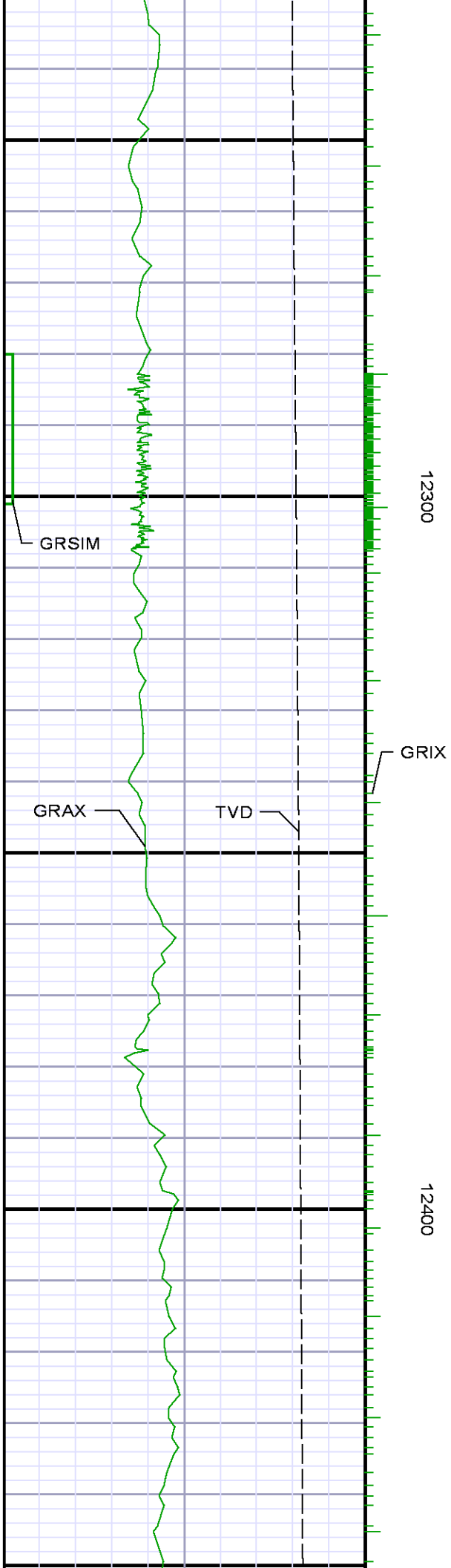


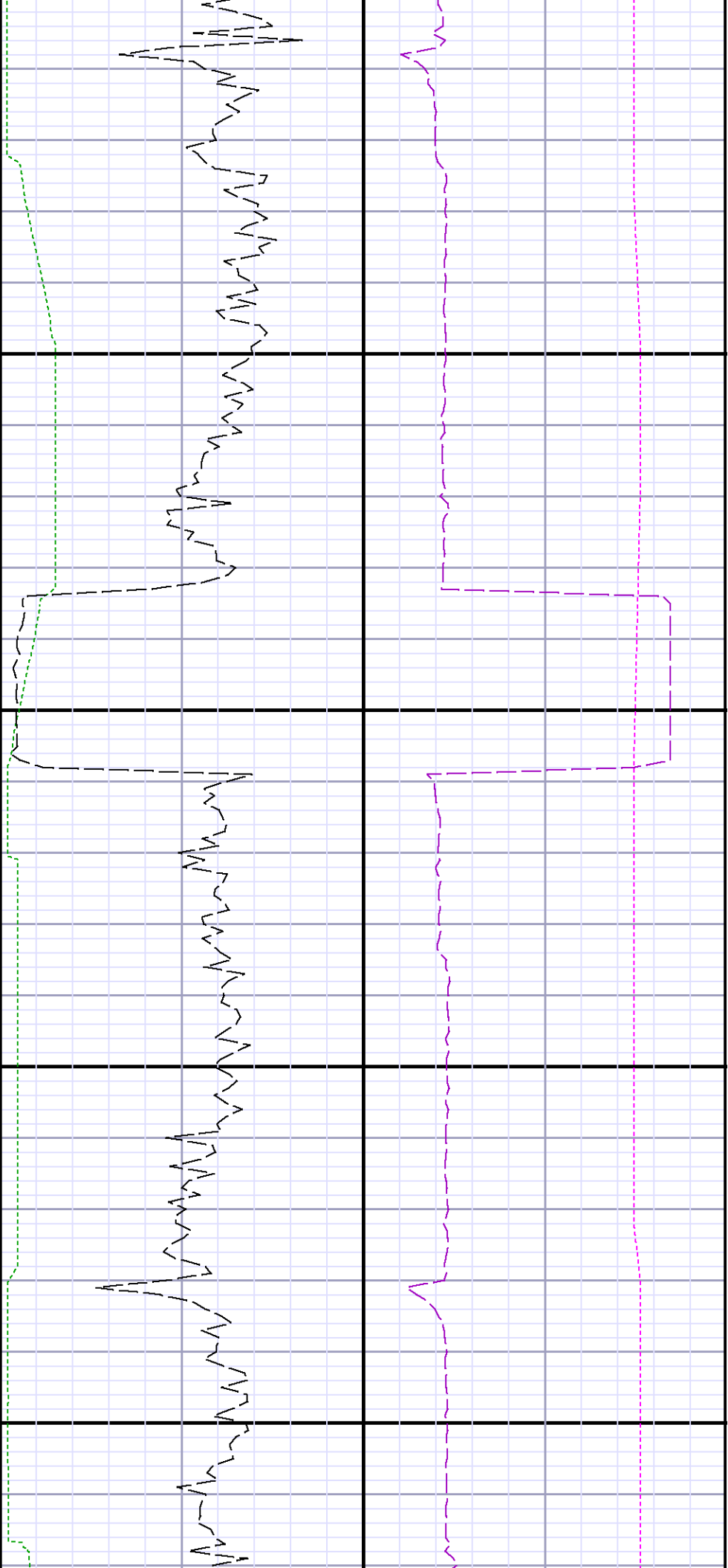


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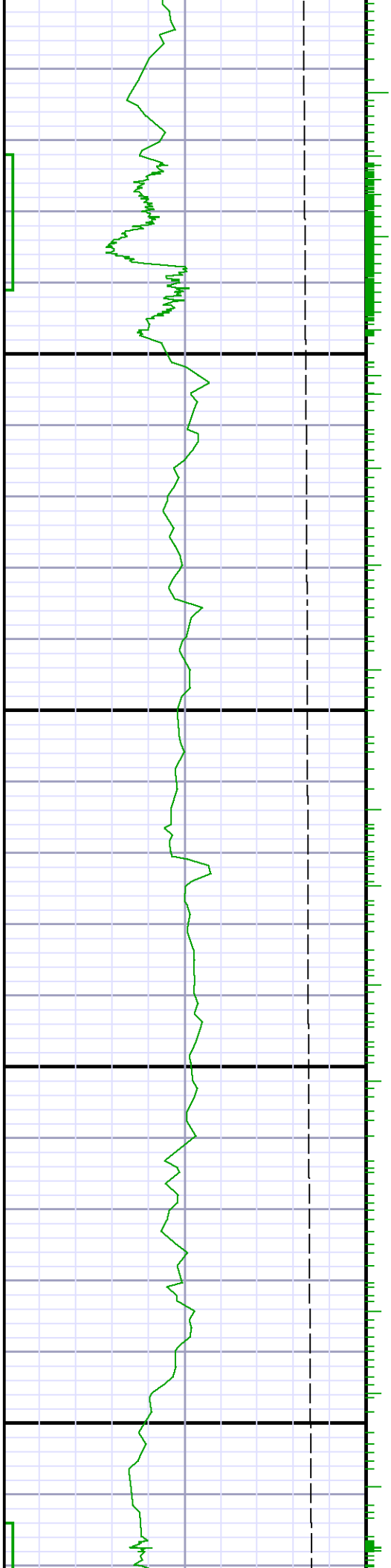


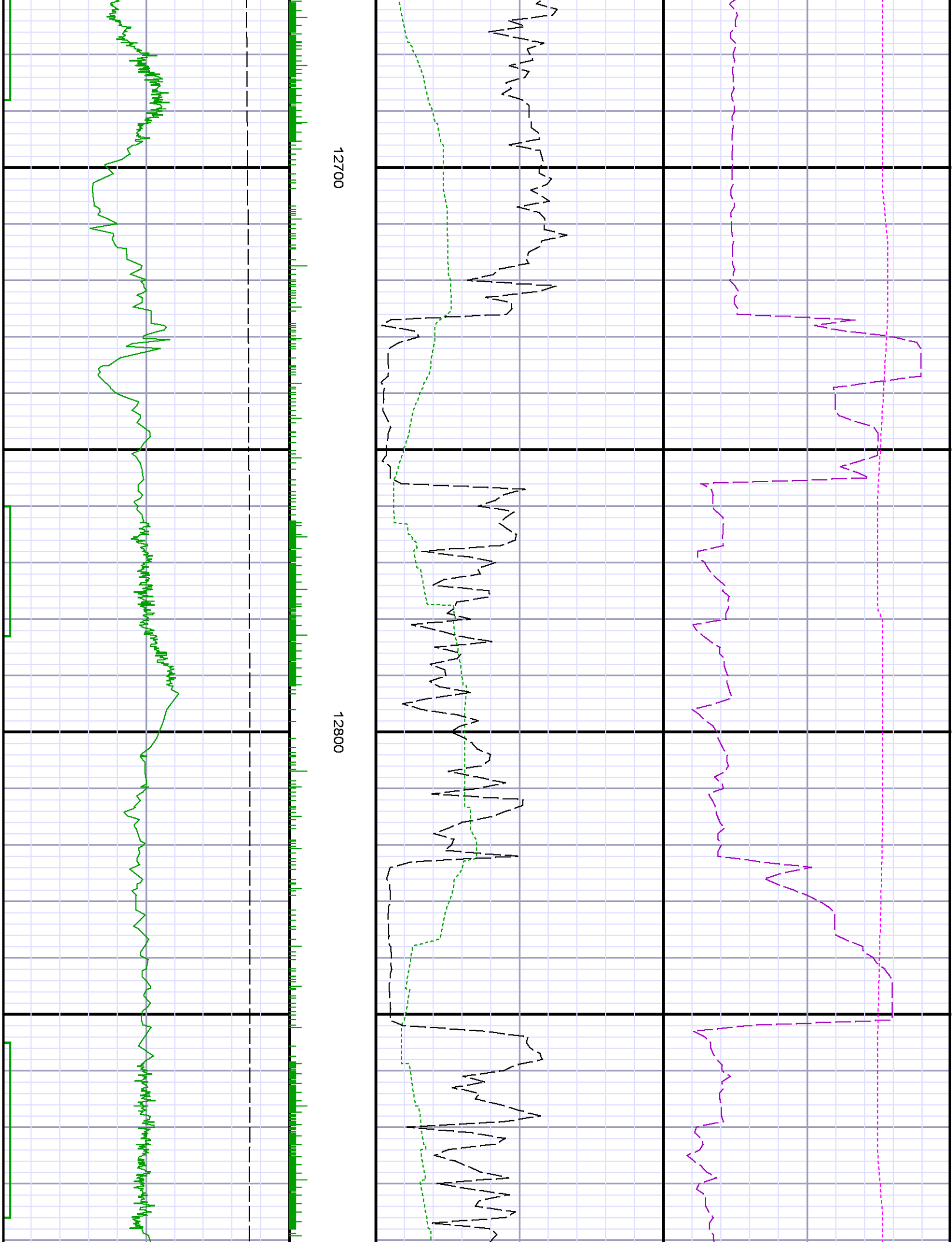


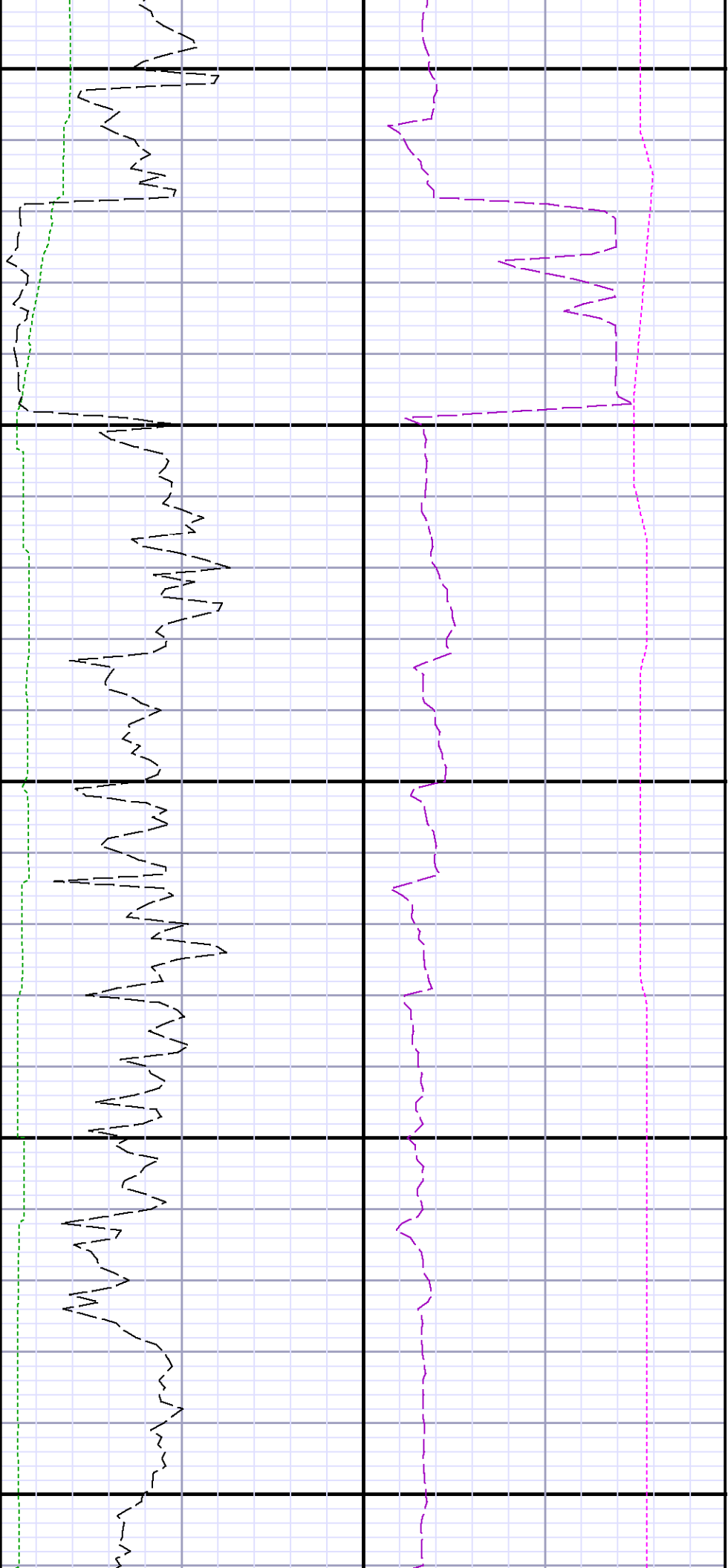


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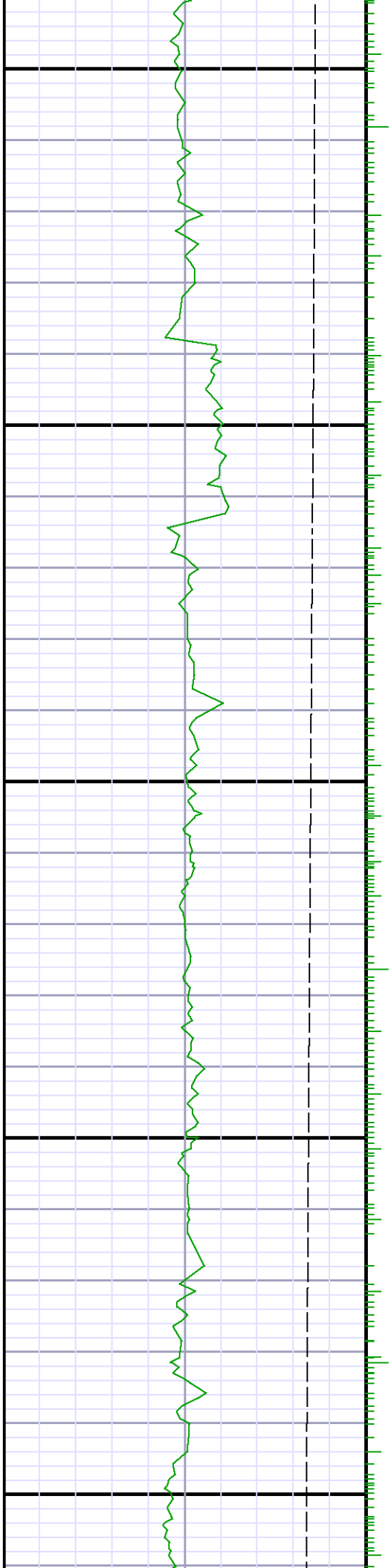


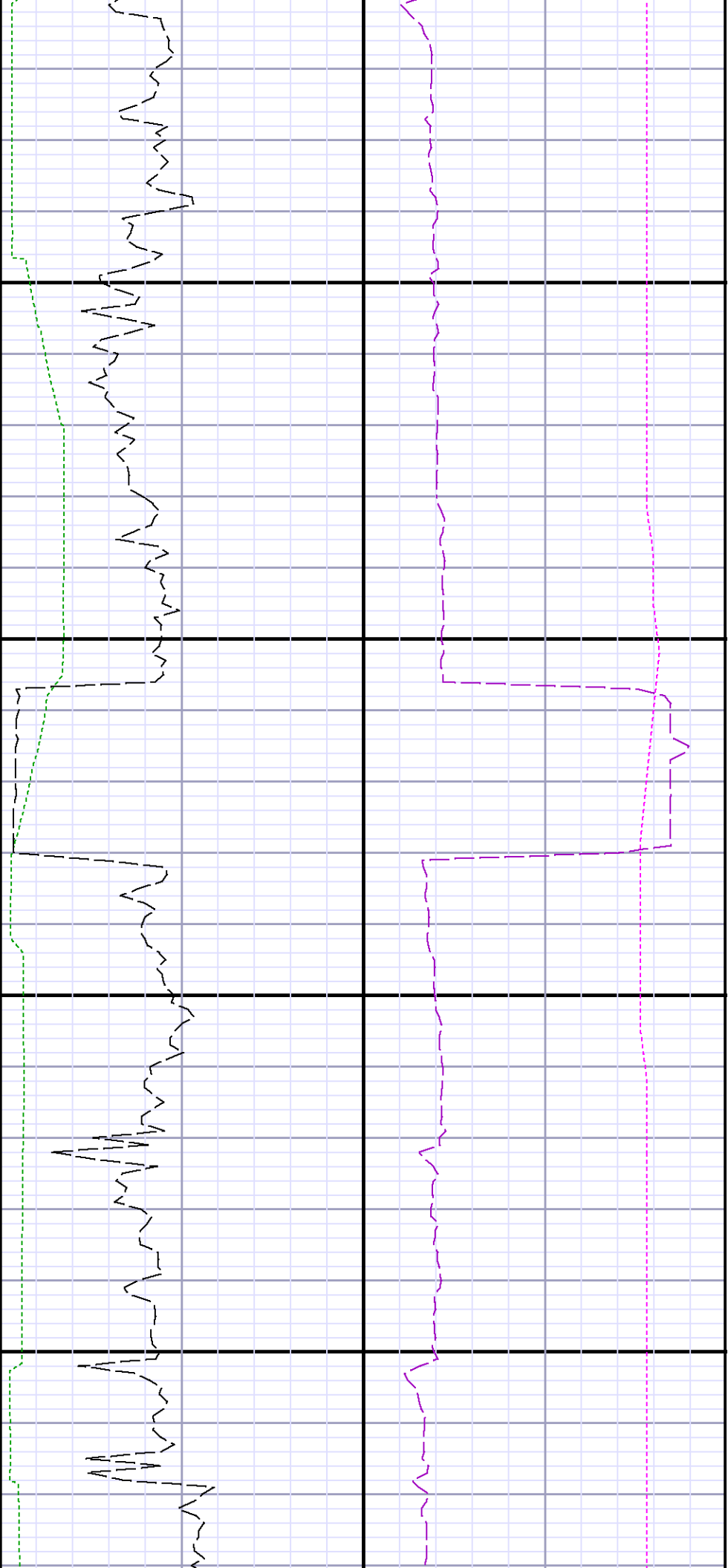


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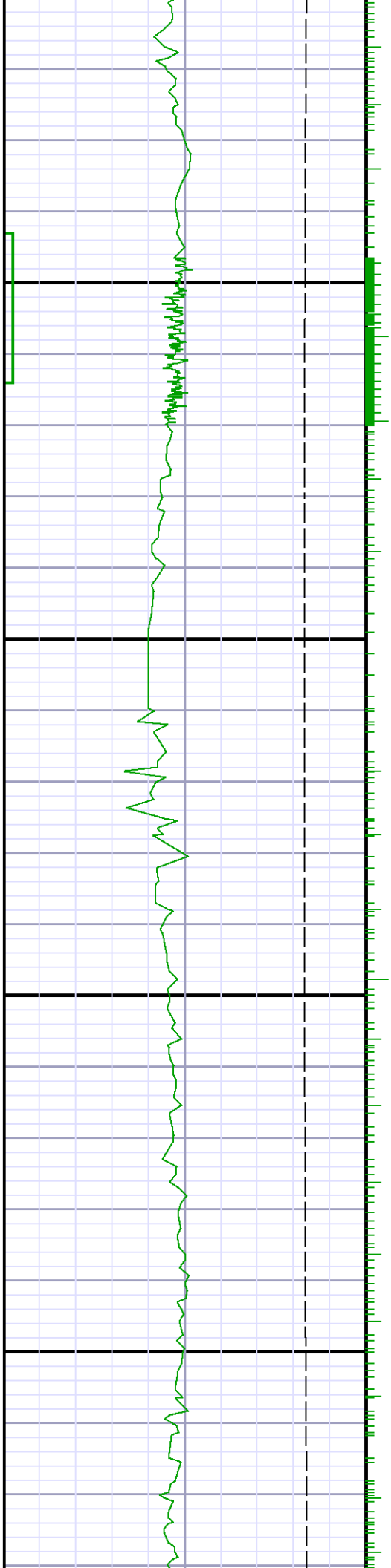
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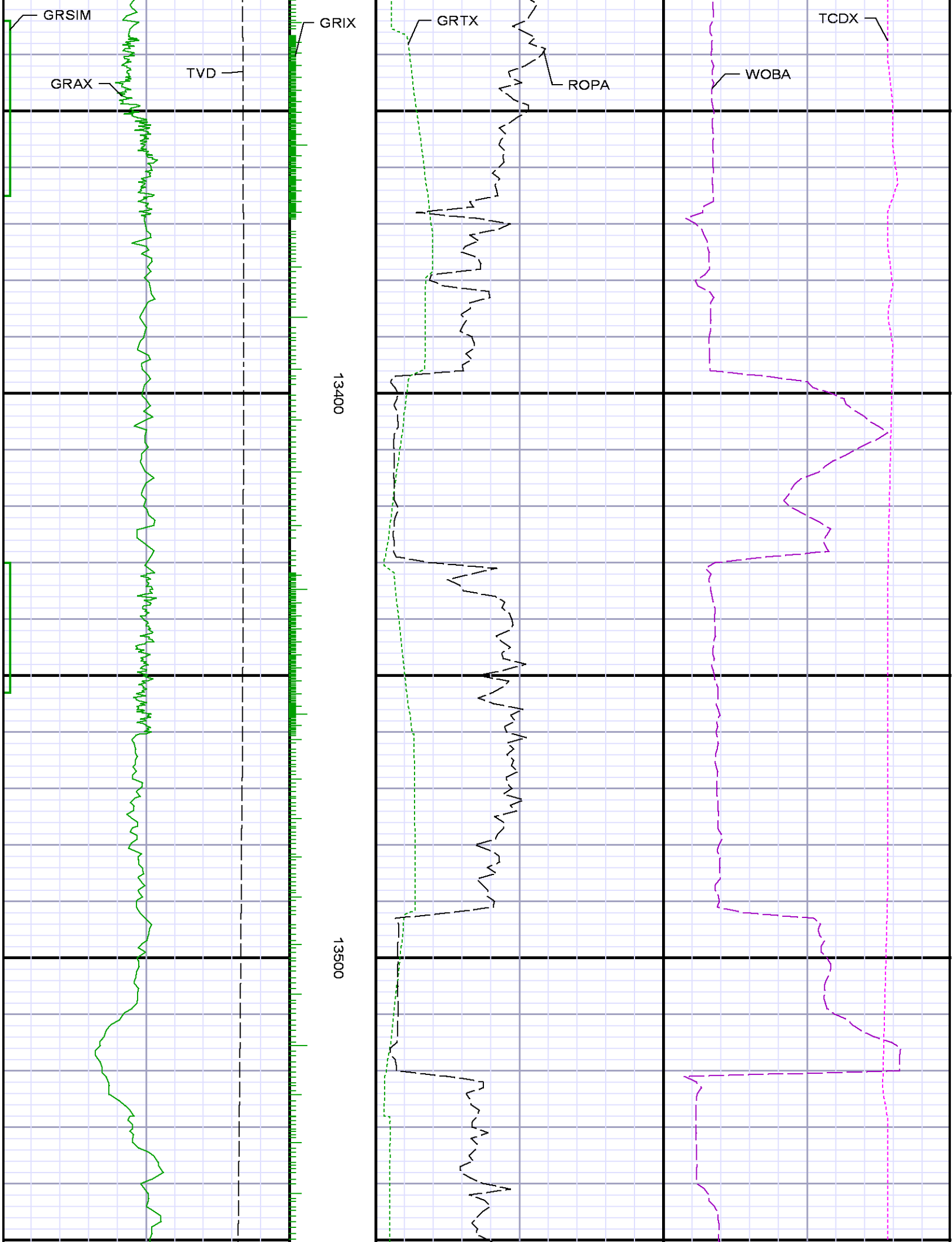


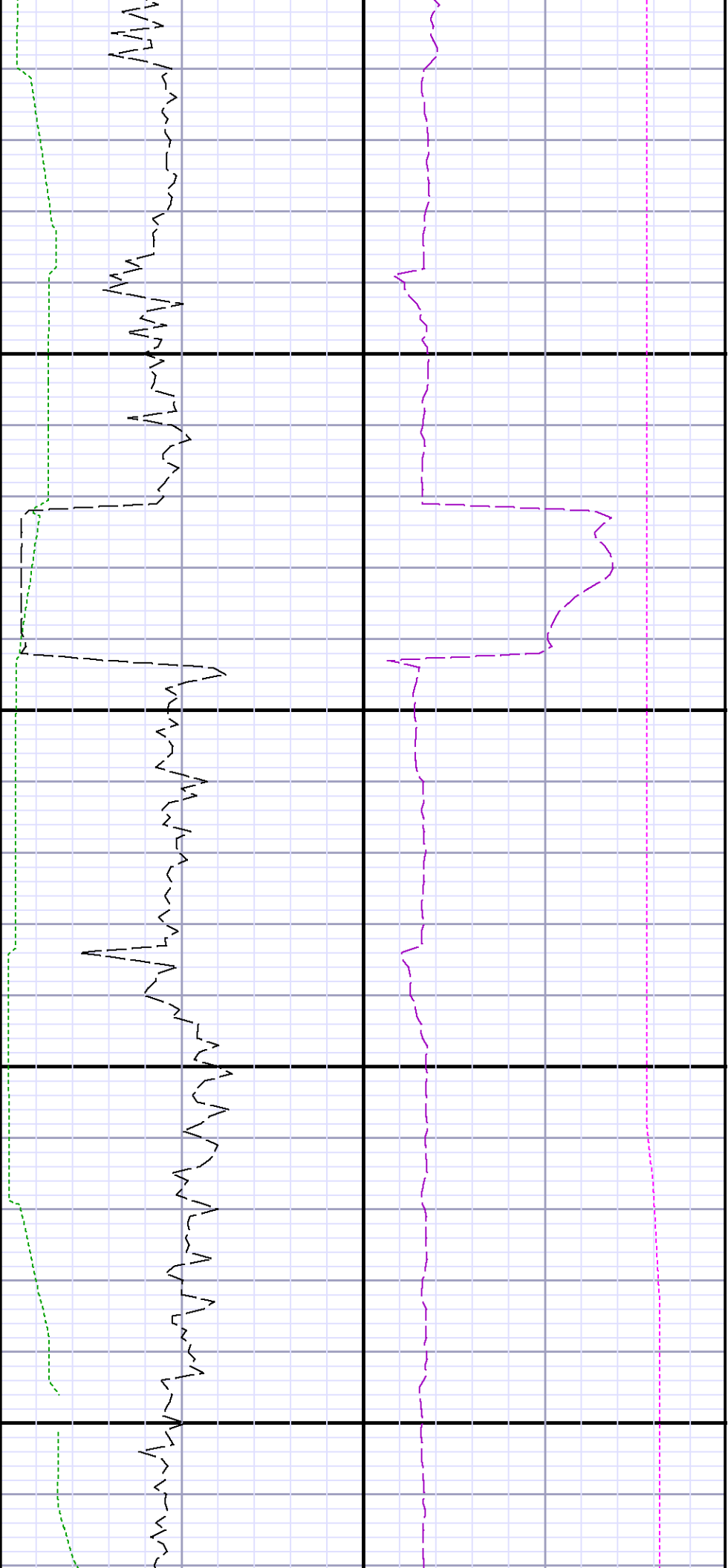


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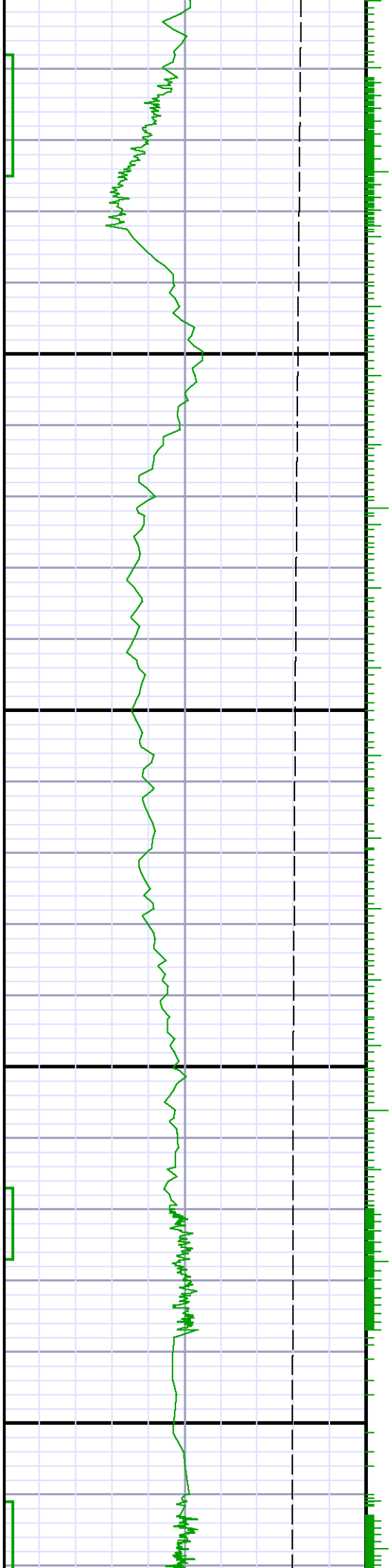




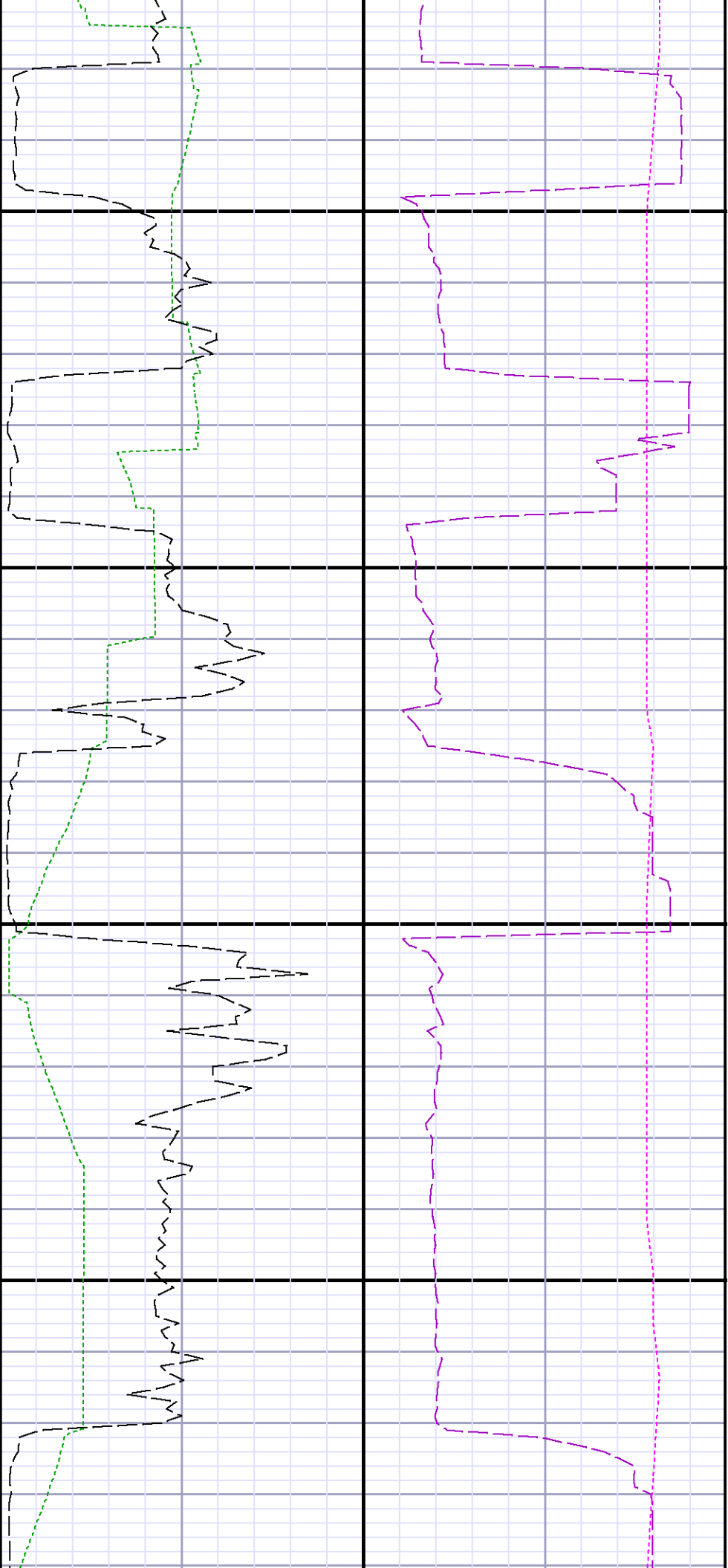


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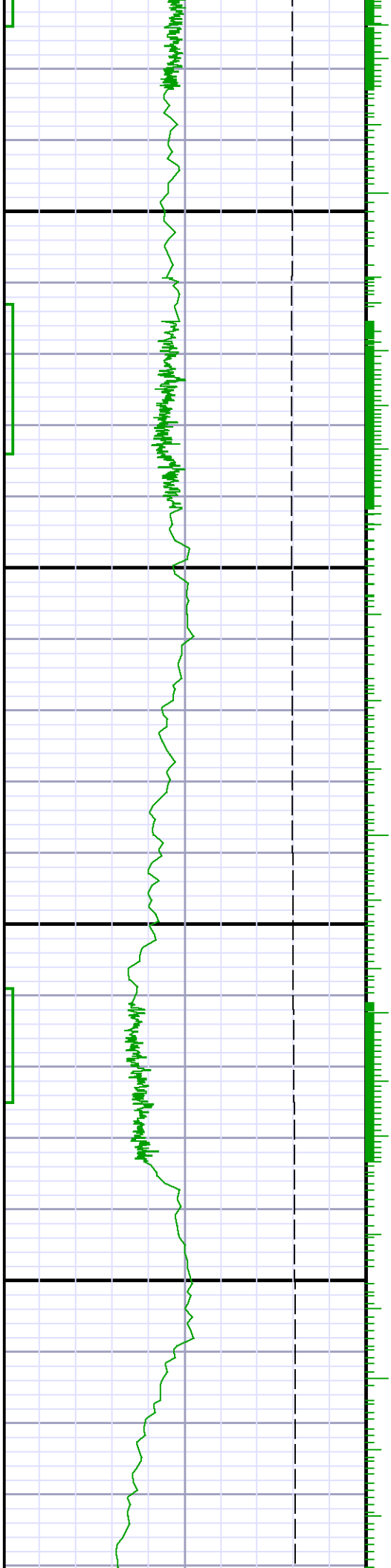


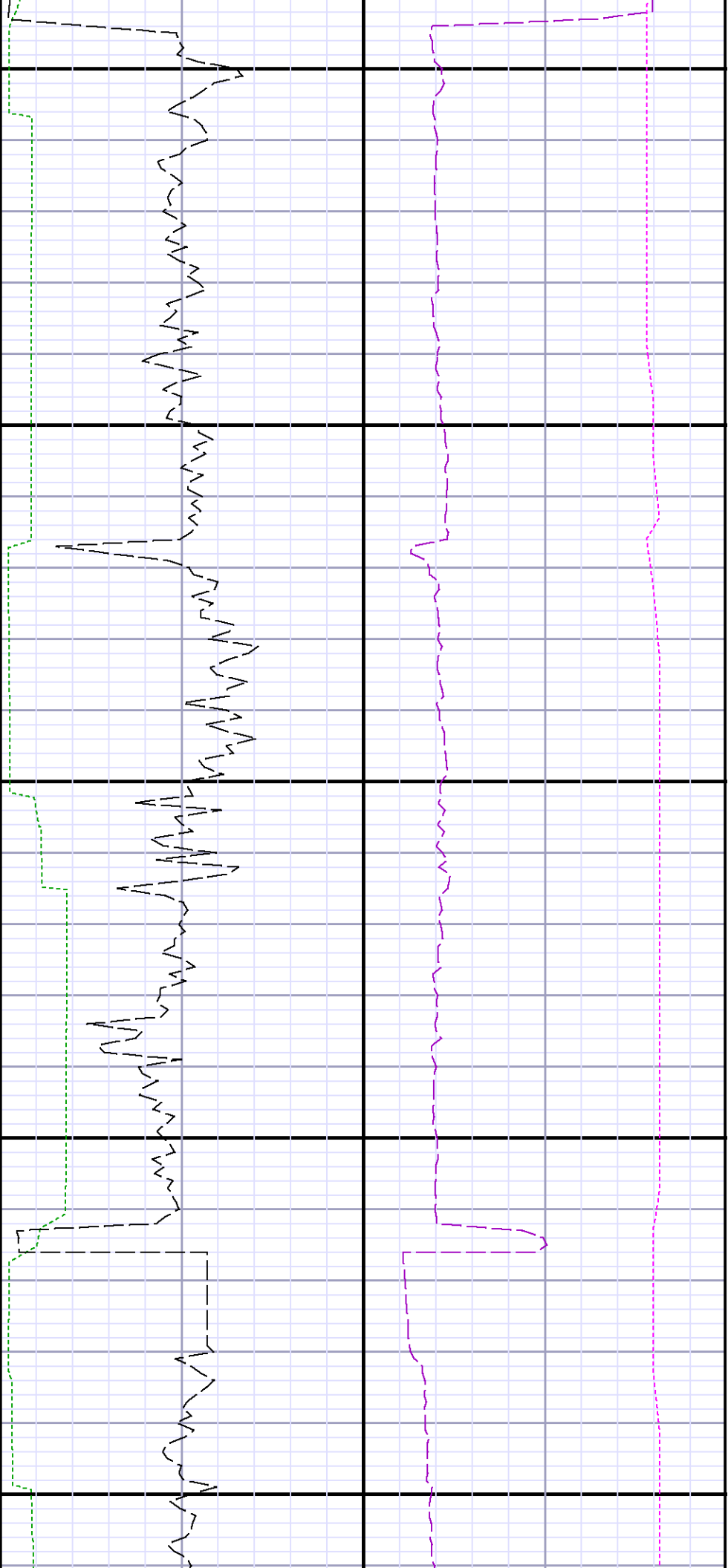




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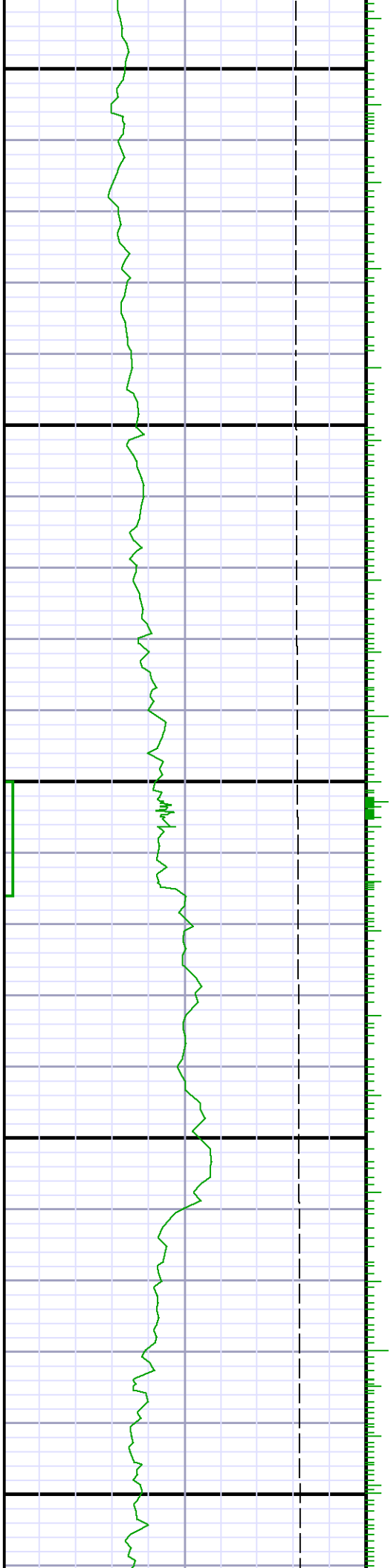


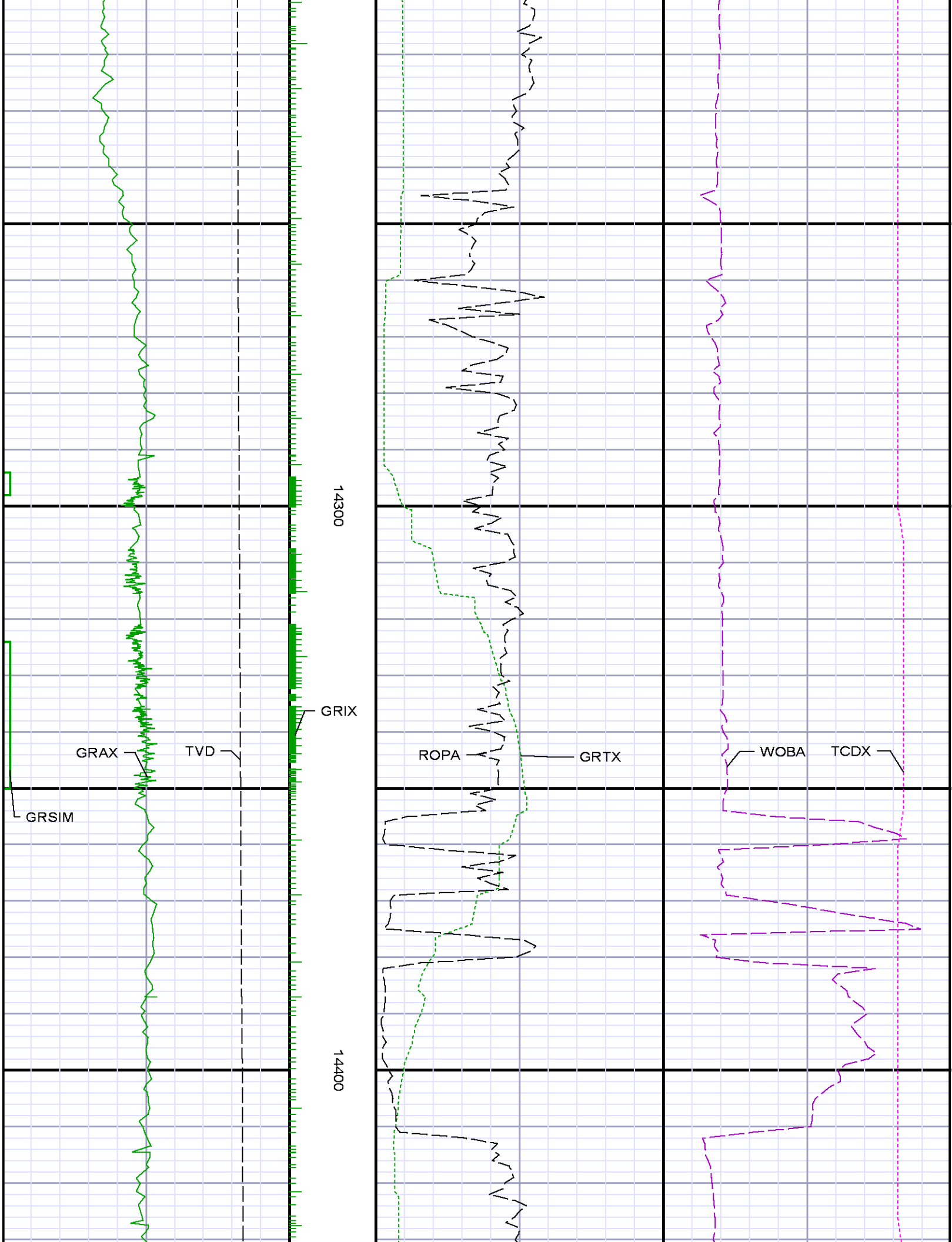


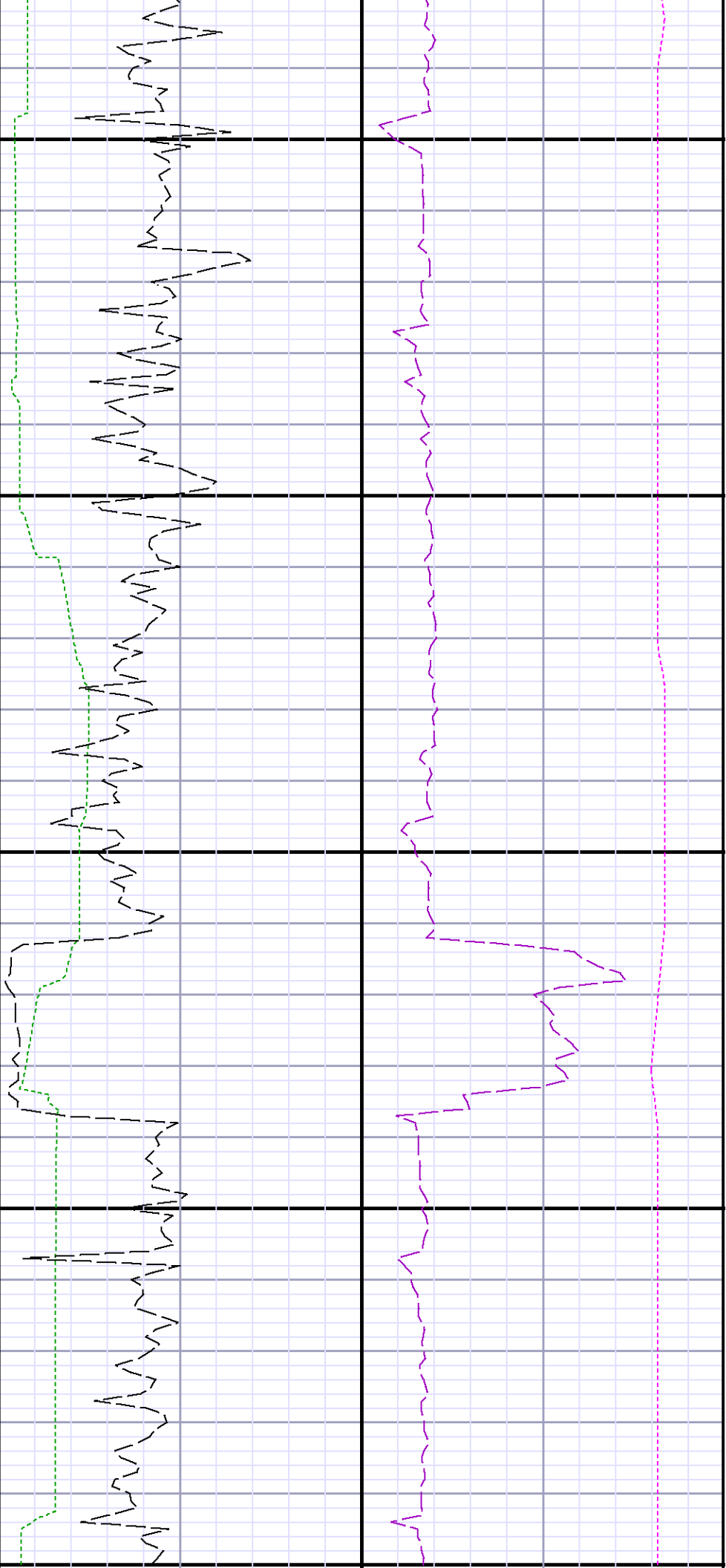
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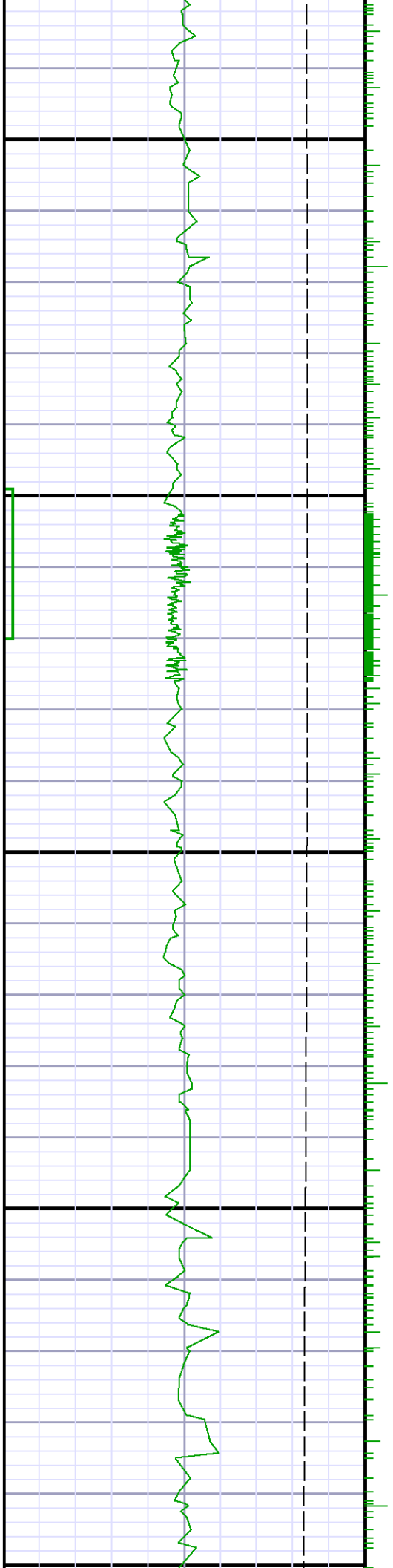


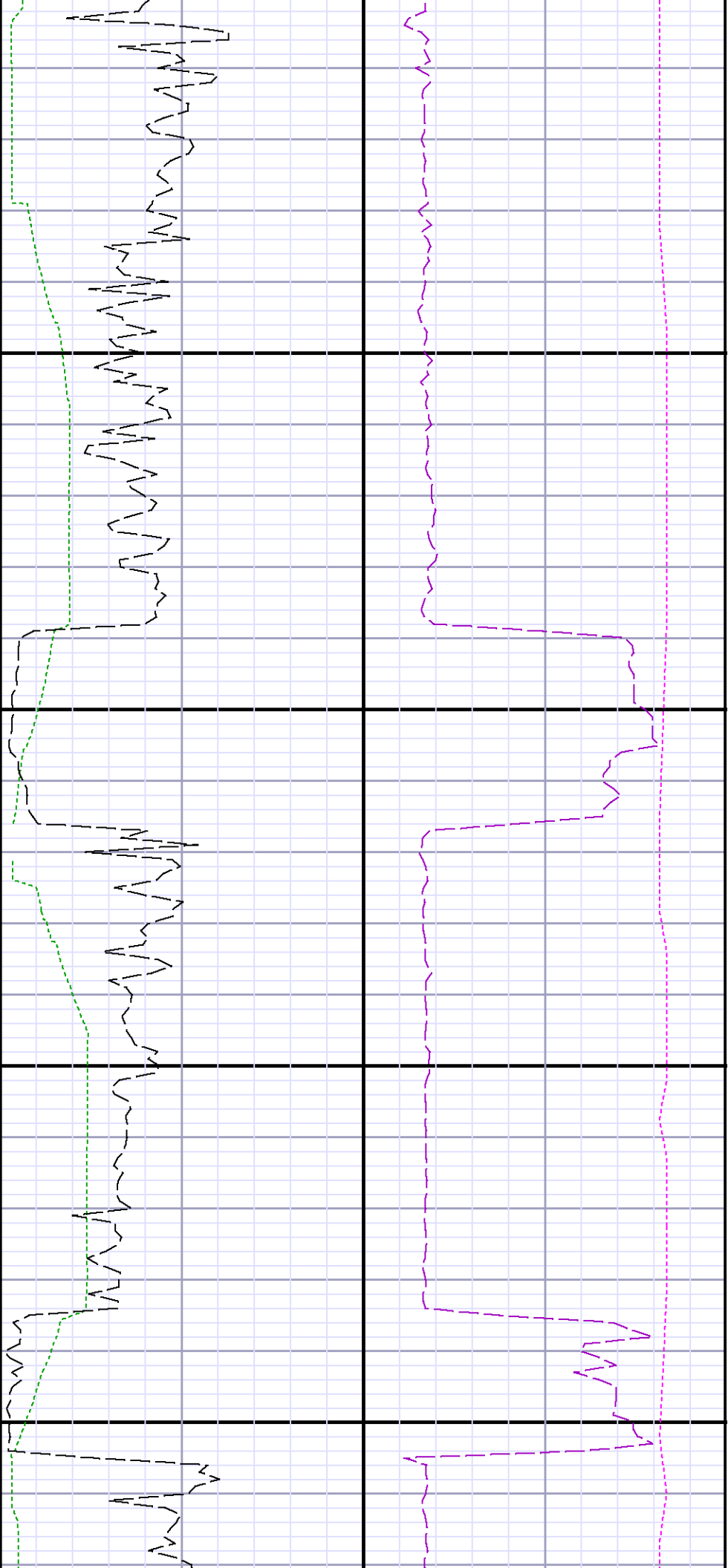




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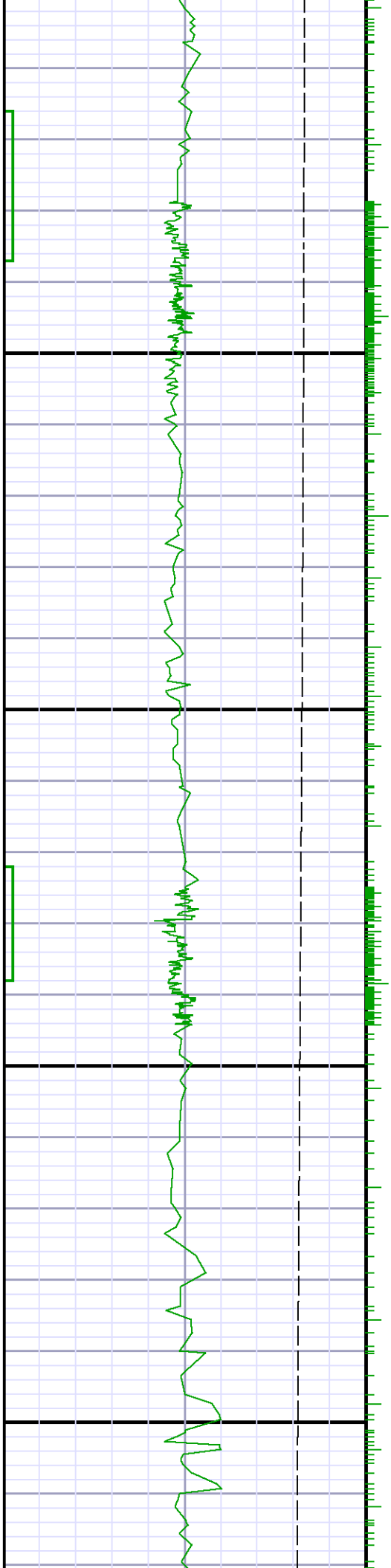
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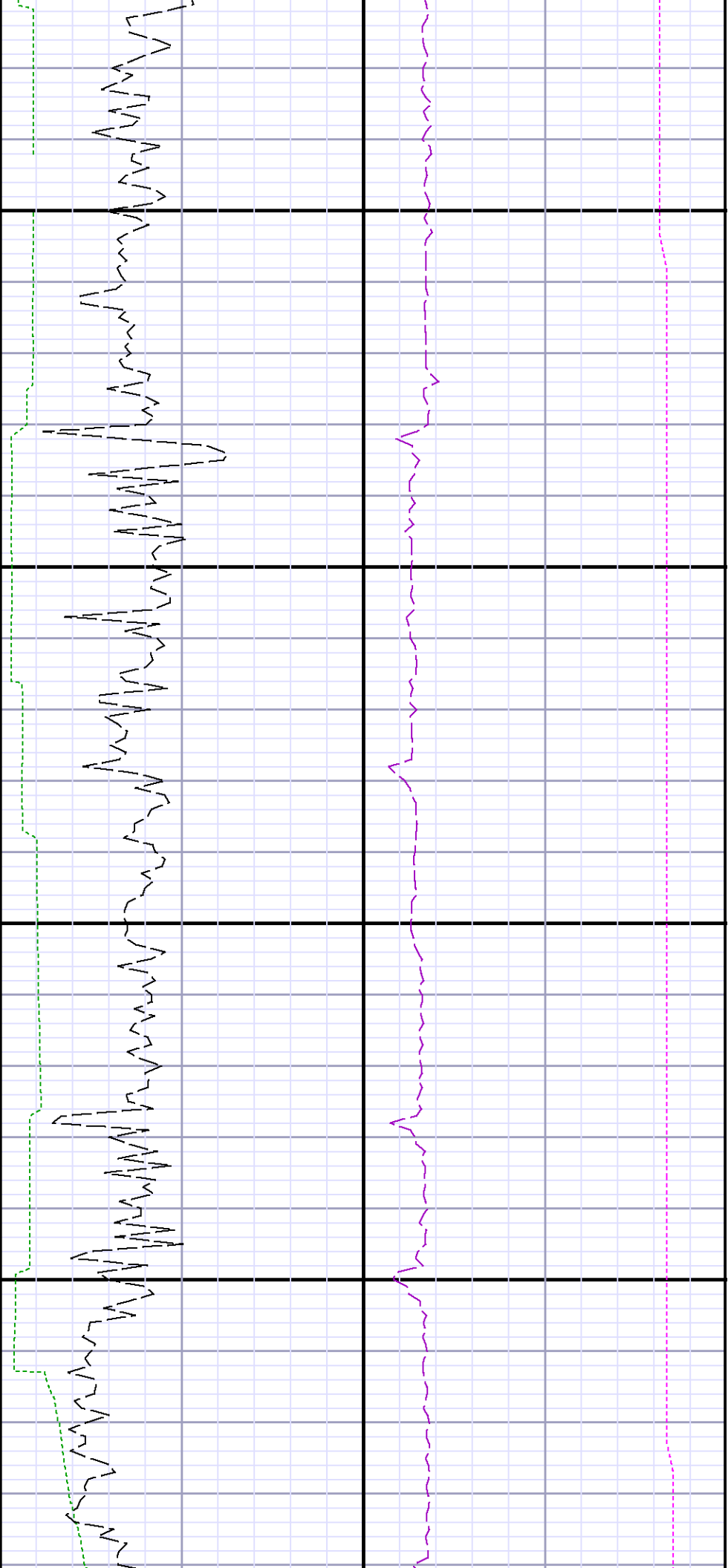




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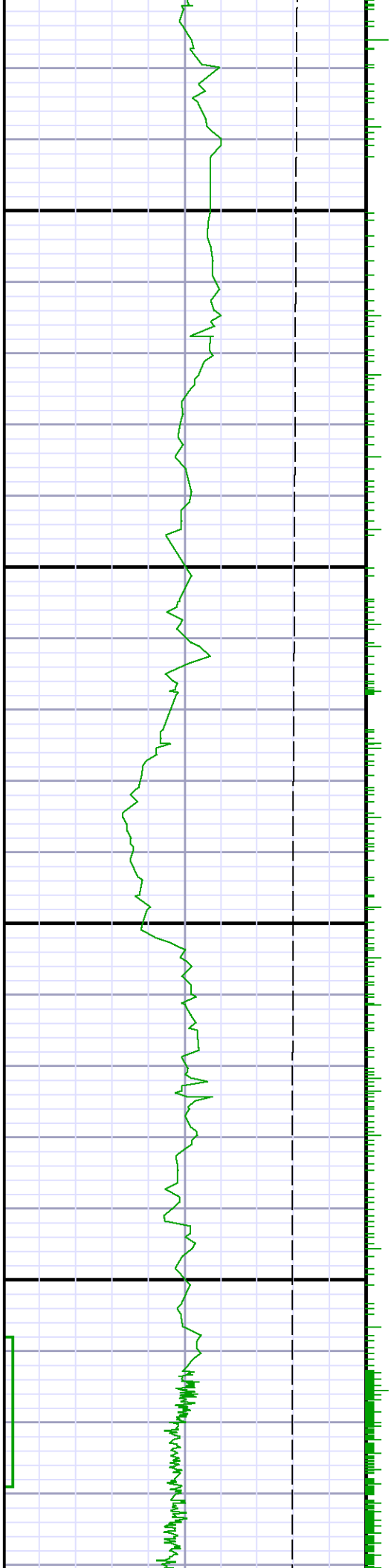
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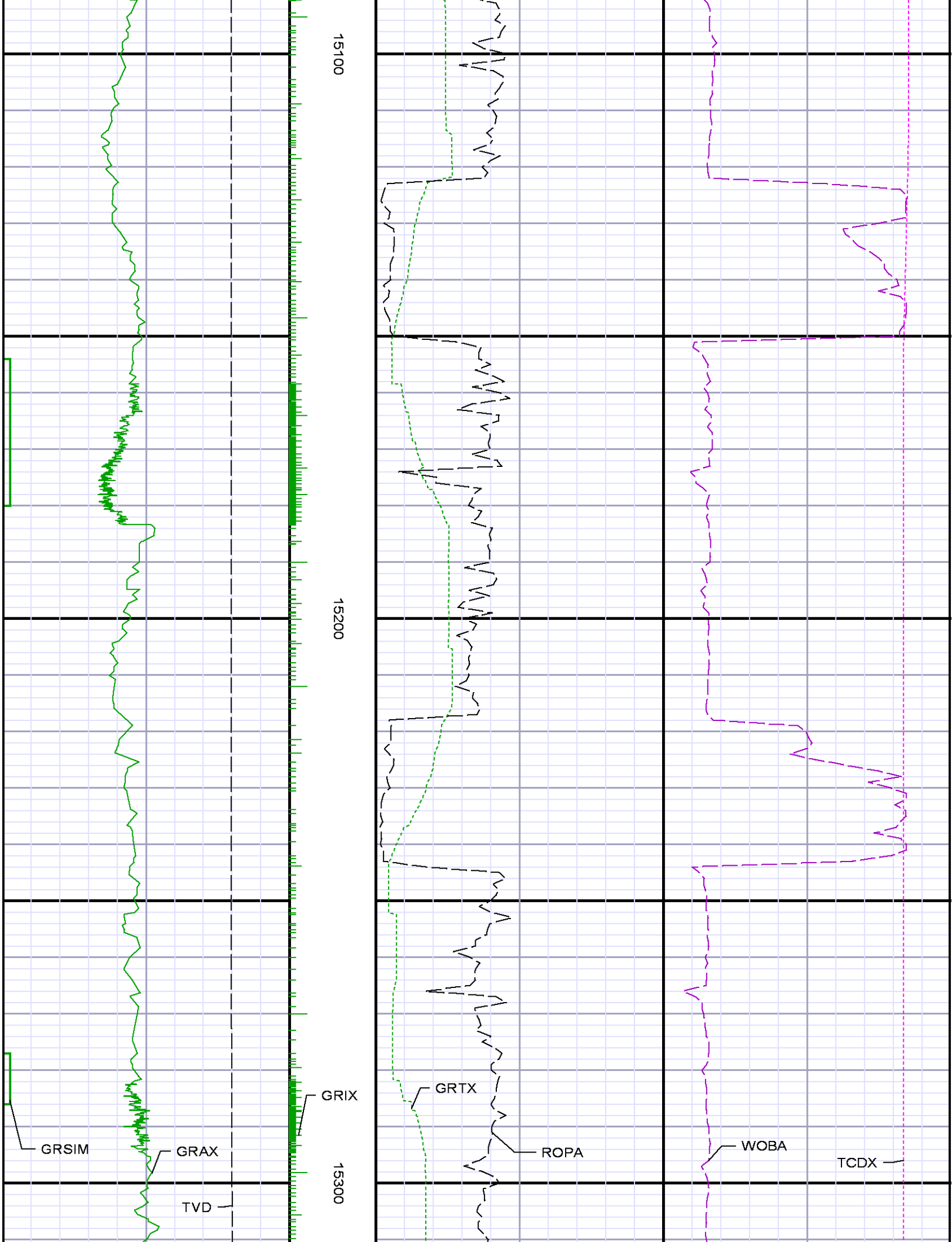


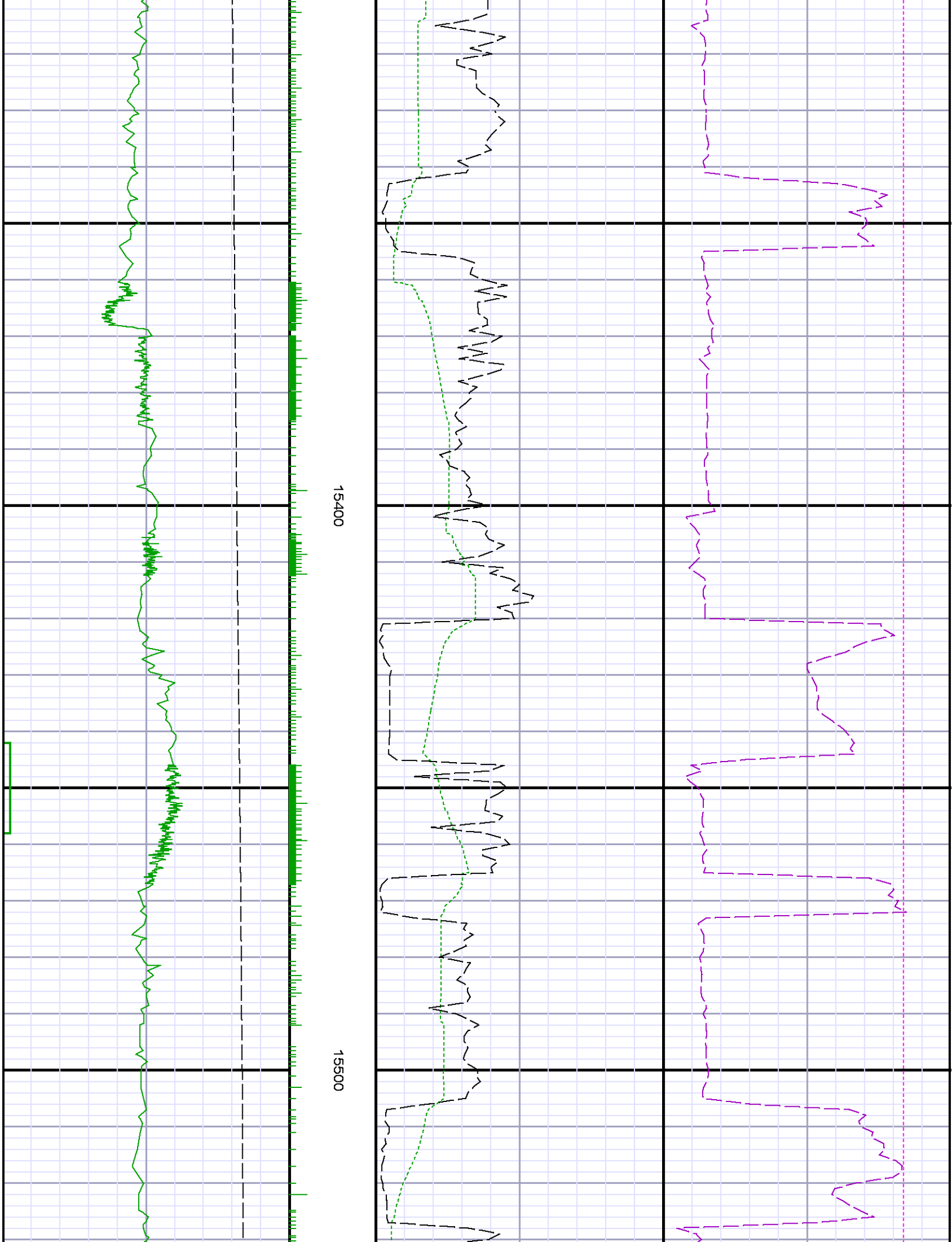


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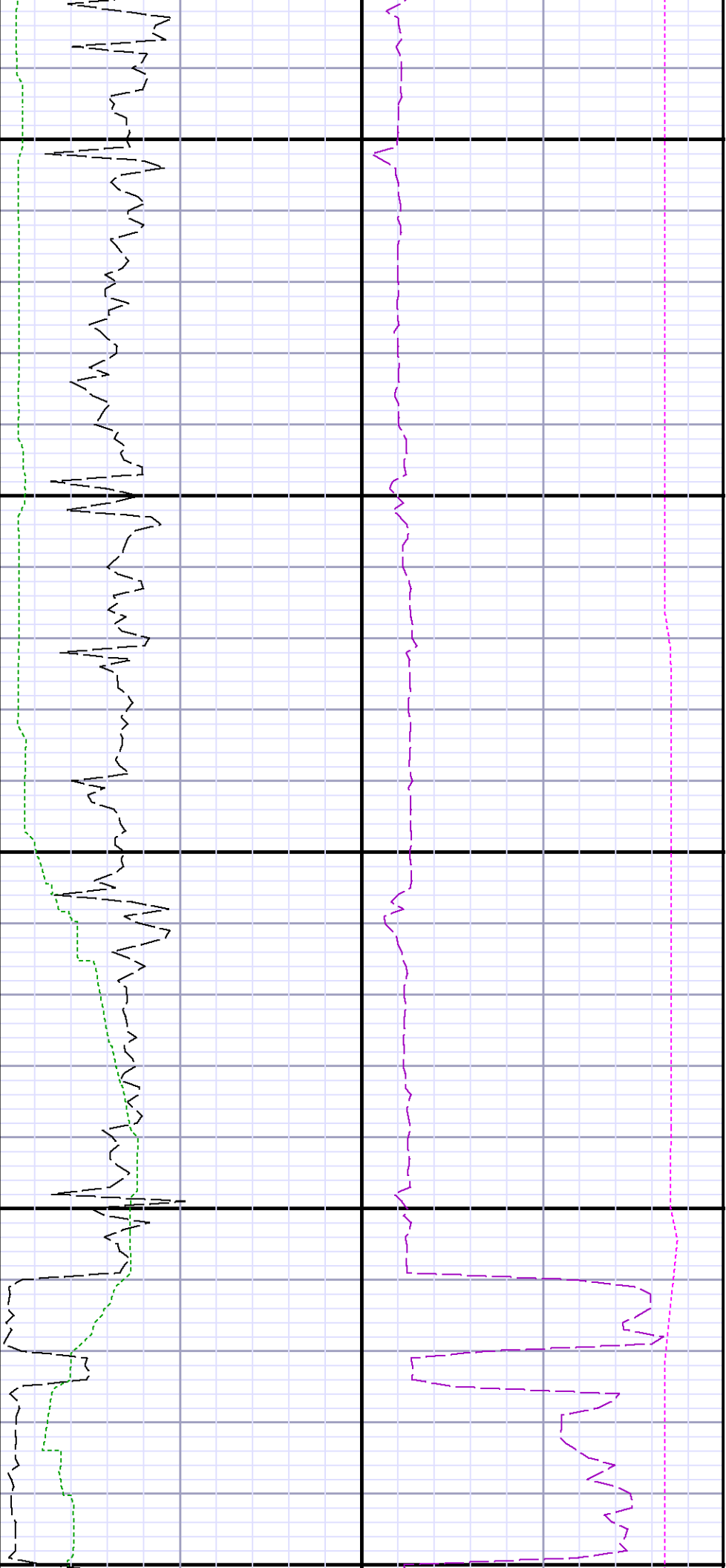
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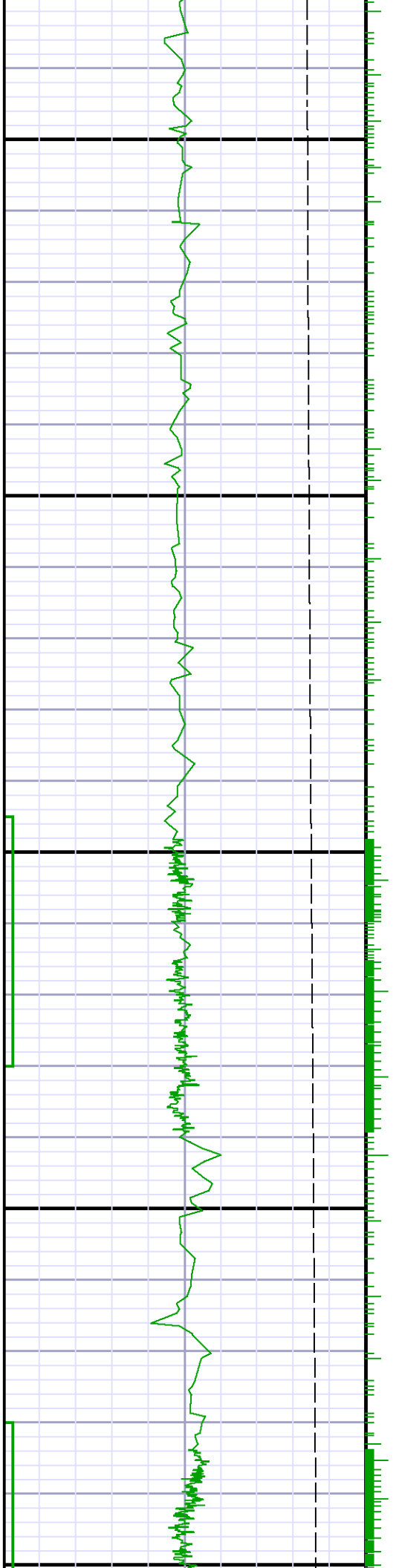


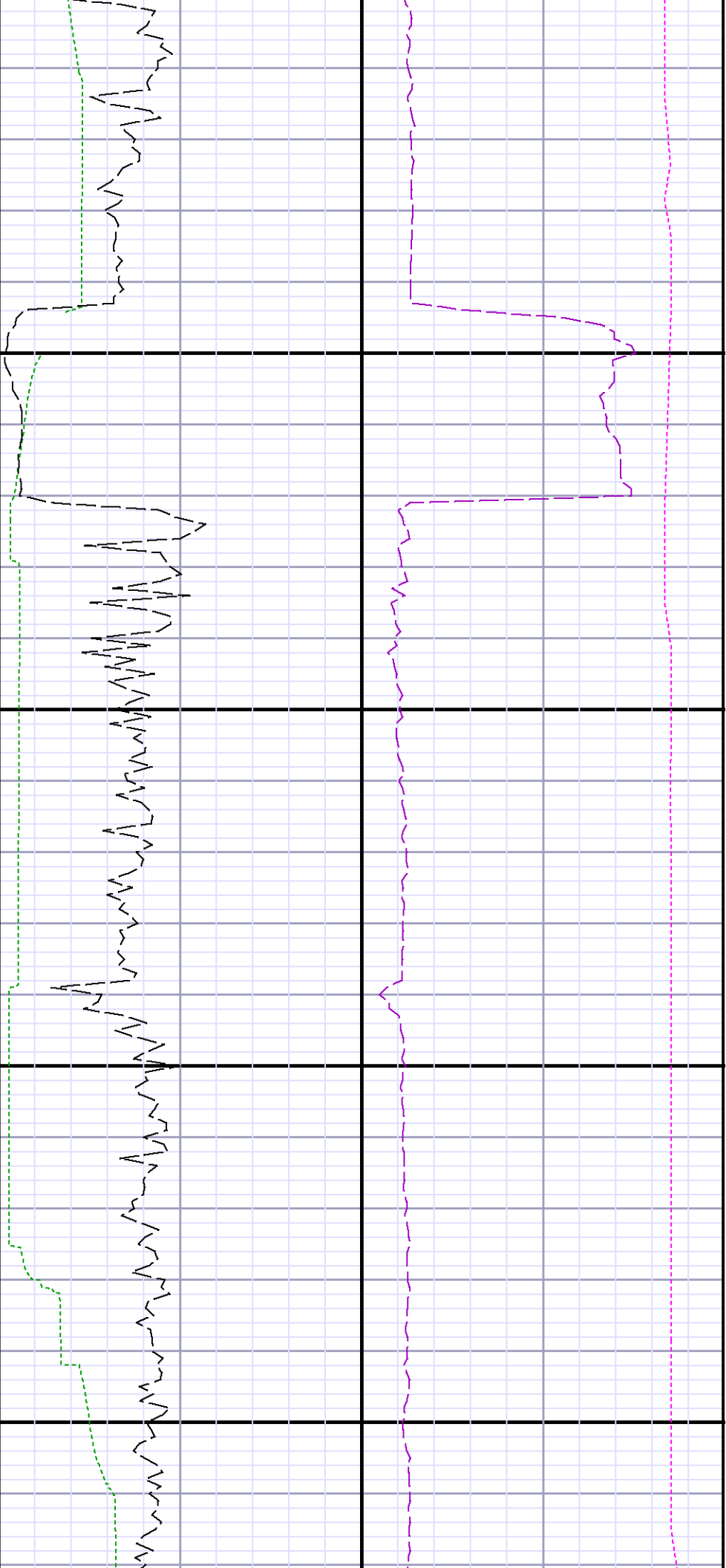




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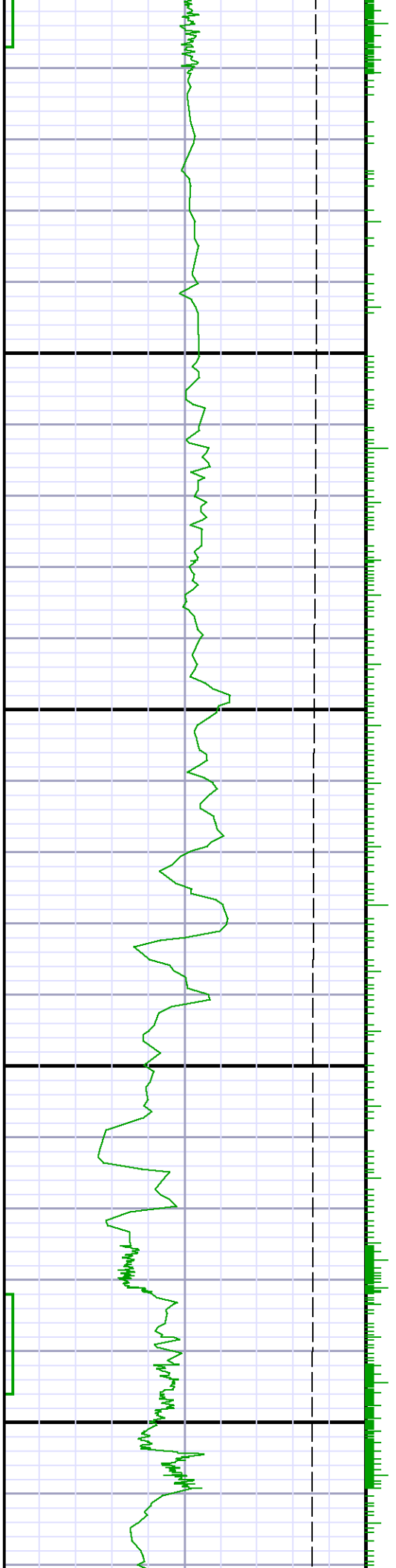
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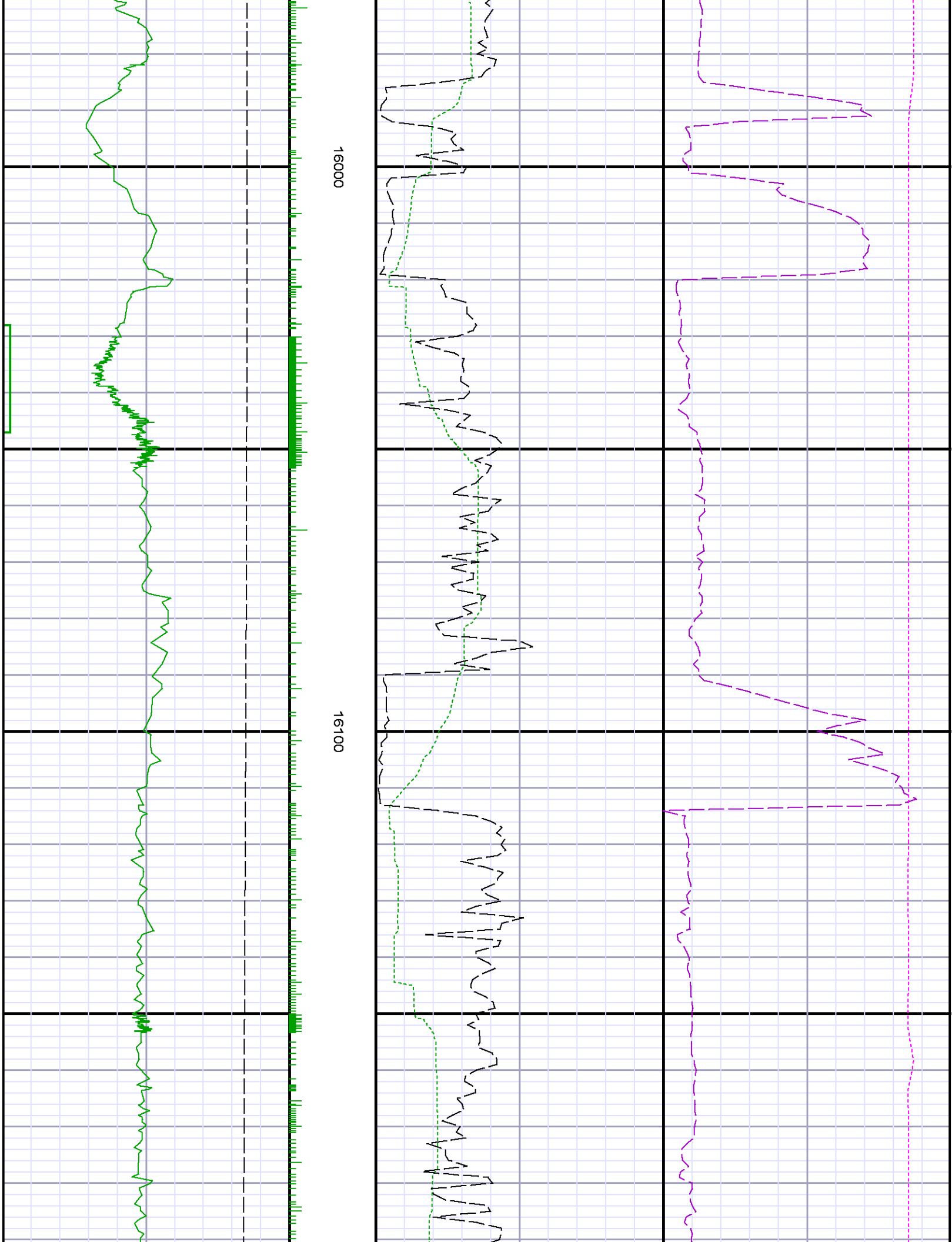


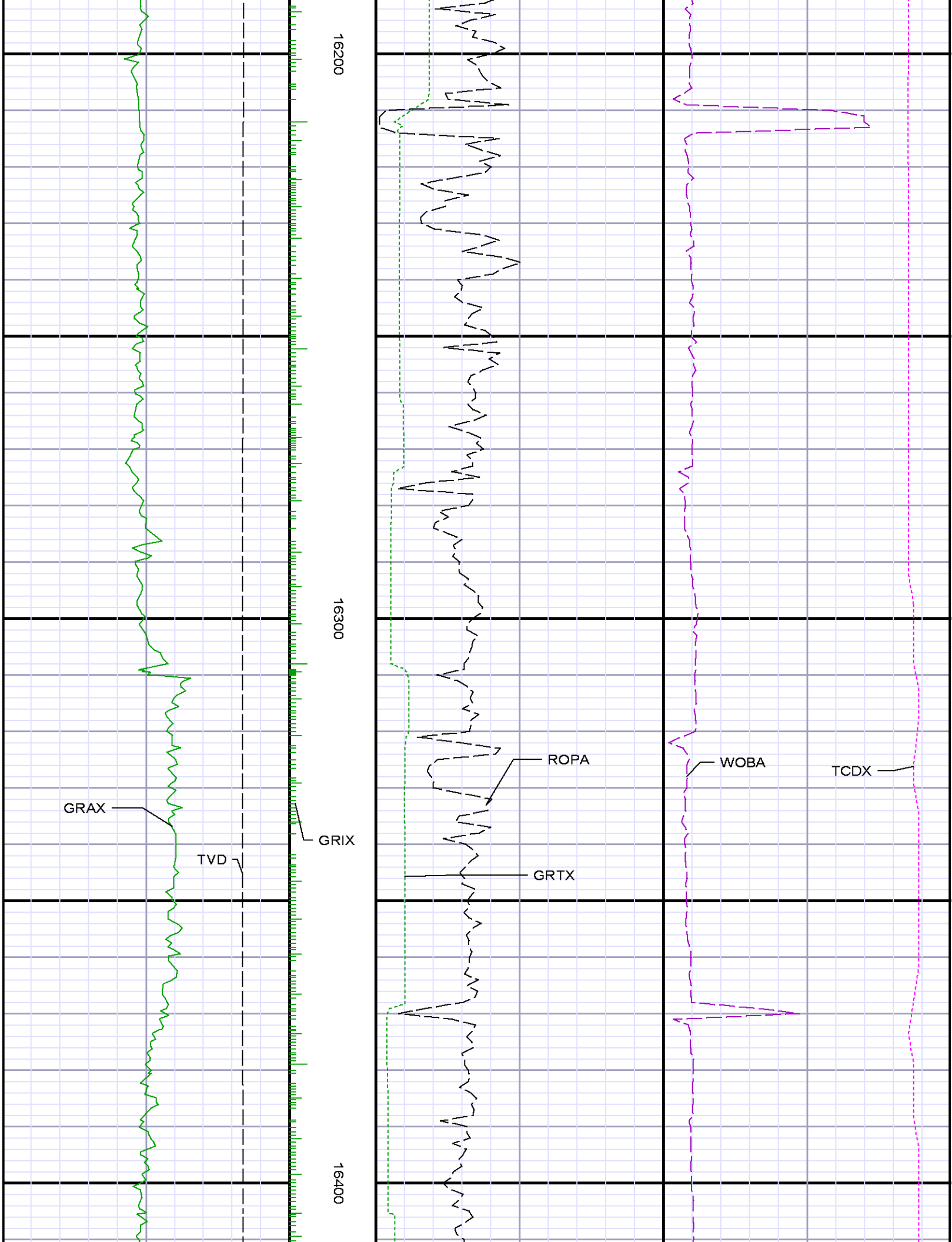


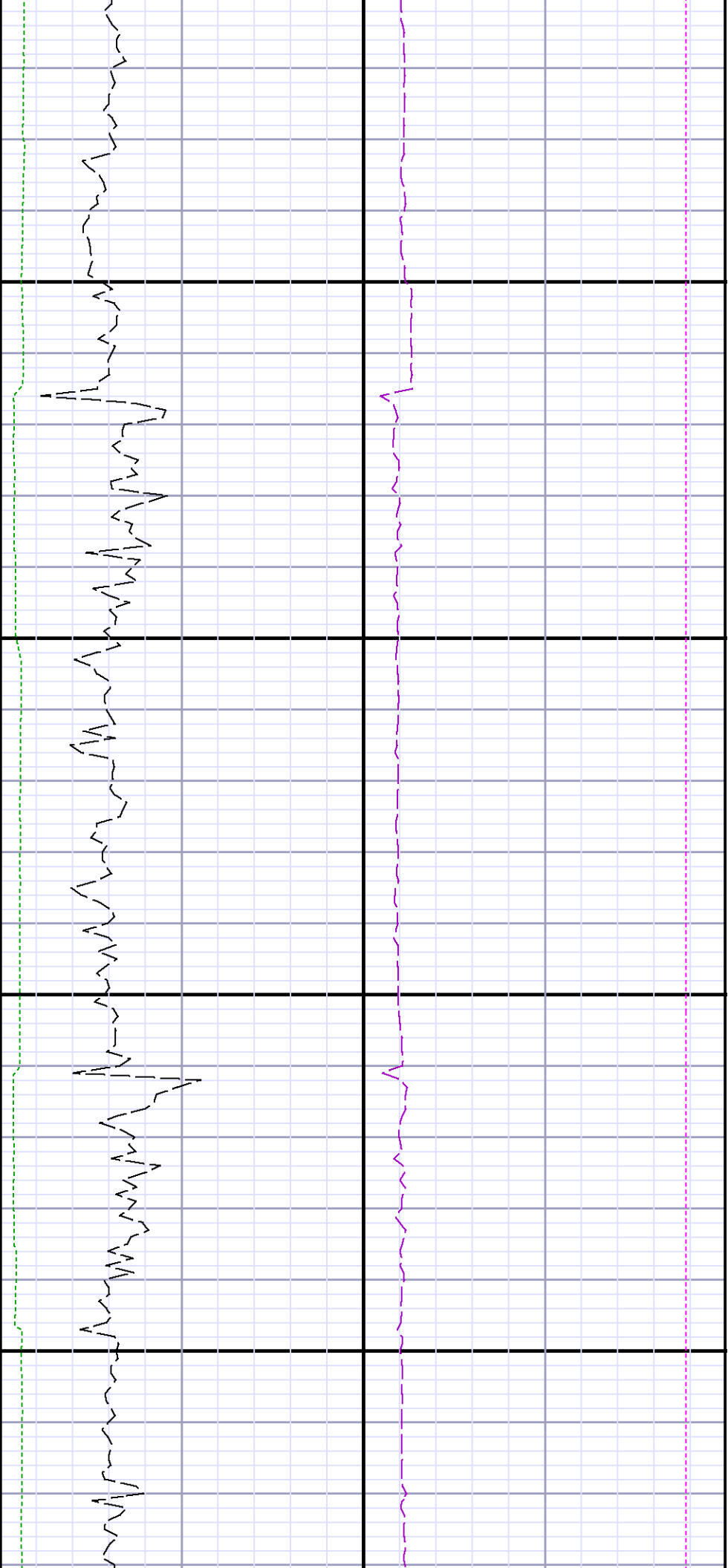
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16500

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