



Gamma Ray

LWD REALTIME LOG

Scale: Company: Anadarko

1:240 Well: Damore 18-8HZ

Measured Depth Field: Weld County

Depth Reference: County: Weld Country: United States

Driller's Depth State: Colorado

Status: Surface Location: 40° 24' 02.844" N Other Services:

Final Print Latitude: 104° 56' 31.589" W Directional

API No: 051235207730000 SEC: 18 TWN: 5N RGE: 67W

Job ID: 110322531 Permanent Datum (P.D.): Mean Sea Level Elevation: 0.00 ft Elev. KB: N/A

Log Measured From: Rig Floor Above P.D.: 4948.00 ft Elev. DF: 4948.00 ft Elev. GL: 4922.00 ft

Dates Interval Magnetic Field Reference

From: 2020-04-13 Drilled (ft) Logged (ft) Azi Reference North: True Dip Angle: (deg) 66.51
To: 2020-04-15 Top: 1918.00 Bottom: 17545.00 Total Magnetic Field Strength: (nT) 52333
Spud: 2020-04-13 Bottom: 17545.00 Bottom: 17490.00 Mag to Reference North Correction: (deg) 7.98

Borehole Record Casing Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
13.500	26.00	1918.00	9.625	36.00	26.00	1906.00
7.875	1918.00	17545.00				

Mud Record Deviation Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
Oil Based Mud	1918.00	17545.00	7.875	15627.00	0.00 112.50	87.50 88.81

Acquisition System Software Version Other

Cadence	RT 5.5	PD 564	Rig: Contractor: District:
Plot Studio	5.5.8765.1	Precision Drilling 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	7.875	PDC	3.00	Steerable	1918.00	17490.00	1918.00	17545.00	2020-04-13 06:52	2020-04-15 15:54	54.18

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Doug Rusco	2020-04-13	2020-04-16	Matt Yule	2020-04-13	2020-04-14	Emi Iyalla	2020-04-15	2020-04-16

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+ (%)
2020-04-12 22:17	1	1918.00	Oil Based Mud	9.0	12	N/A	N/A	71/29	Active Pit	34000	0.00
2020-04-14 19:53	1	8939.00	Oil Based Mud	9.0	20	N/A	N/A	64/36	Active Pit	45000	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	EvoOne	G650-0317	Gamma (single)	8.15	55.40	6.500	2.750
1	EvoOne	G650-0317	Directional (mag)	9.34	56.59	6.500	2.750

Service and Tool Mnemonics

Mnemonic	Name	Description
MWD	EvoOne - Dir Gamma	EvoOne

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

A sliding indicator is shown to the left edge of track 1 as a heavy line. The indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.
- 3

Baker Hughes run 1 utilized 6.50 inch NaviTrak UT services (Gamma Ray and Directional) behind a 7 7/8 inch bit and steerable assembly from 1918 to 17545 feet MD (1861 to 6918 feet TVD).
- 4

Gamma Ray (GRAX) scale is presented 0 to 200 API per customer request.

Remarks				
Number	Depth	Hole Section	Run No.	Remark
	(ft)	(in)		
1	11782.00	7.875	1	The interval from 11782 to 11802 feet MD (6900 feet TVD) was not logged due to drilling ahead with poor decode.
2	17490.00	7.875	1	The interval from 17487 to 17545 feet MD (6918 feet TVD) was not logged due to sensor to bit offset at the end of TD.

Curve Mnemonics		
Presented Curves	Description	Units
TCDX	Downhole Temperature	degF
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD	True Vertical Depth	ft
WOBA	Weight On Bit 1 ft Average	klb
GRAX	Gamma Ray - Apparent - Real-Time 0.5 ft Average	API
GRIX	Gamma Ray - Data Point Indicator - Real-Time	unitless
GRTX	Gamma Ray - Time Since Drilled - Real-Time	min

Baker Hughes

Company

Well

Interval

Created

Anadarko

Damore 18-8HZ

Date From: 2020-04-13 06:52

Date To: 2020-04-15 15:54

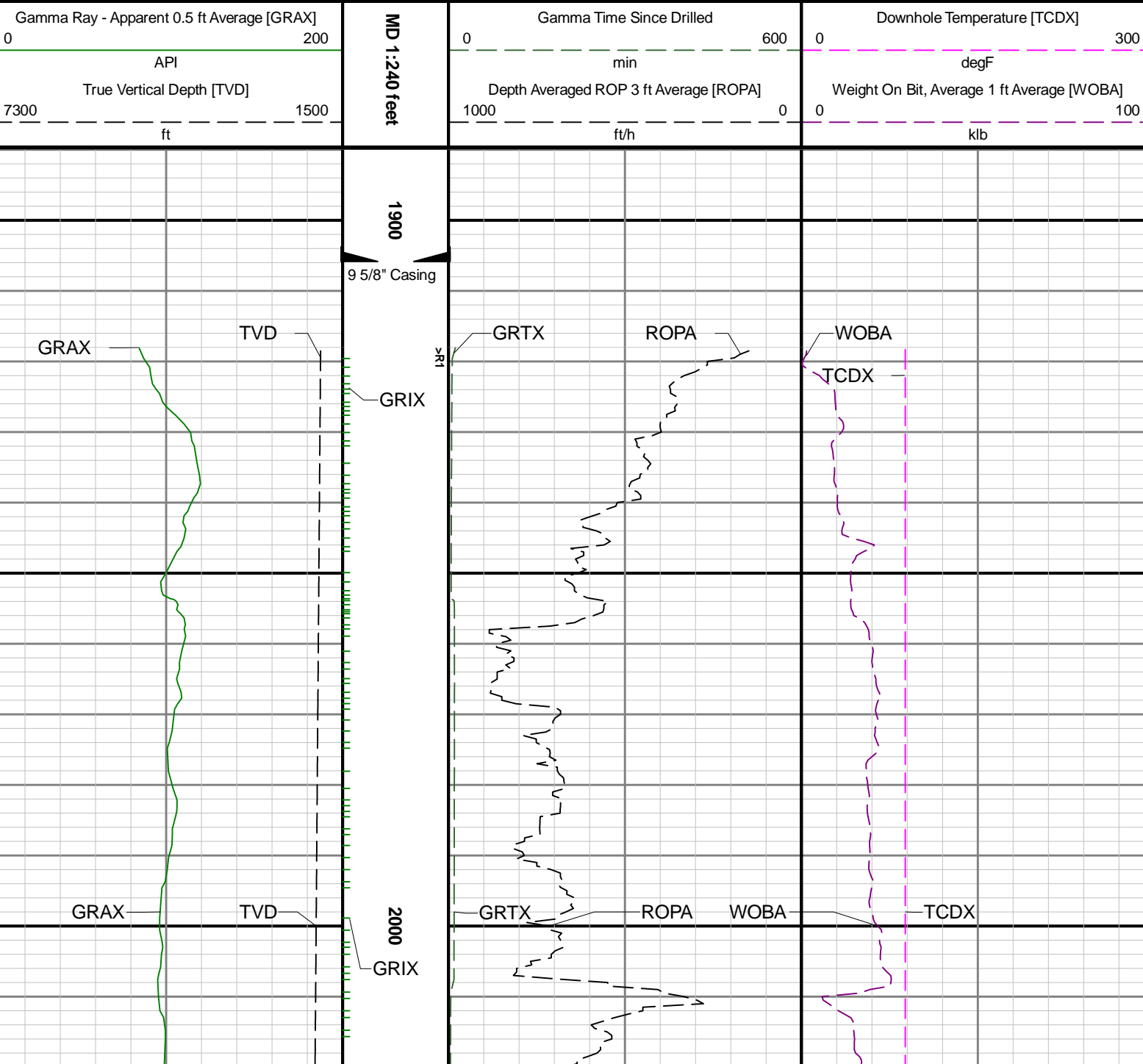
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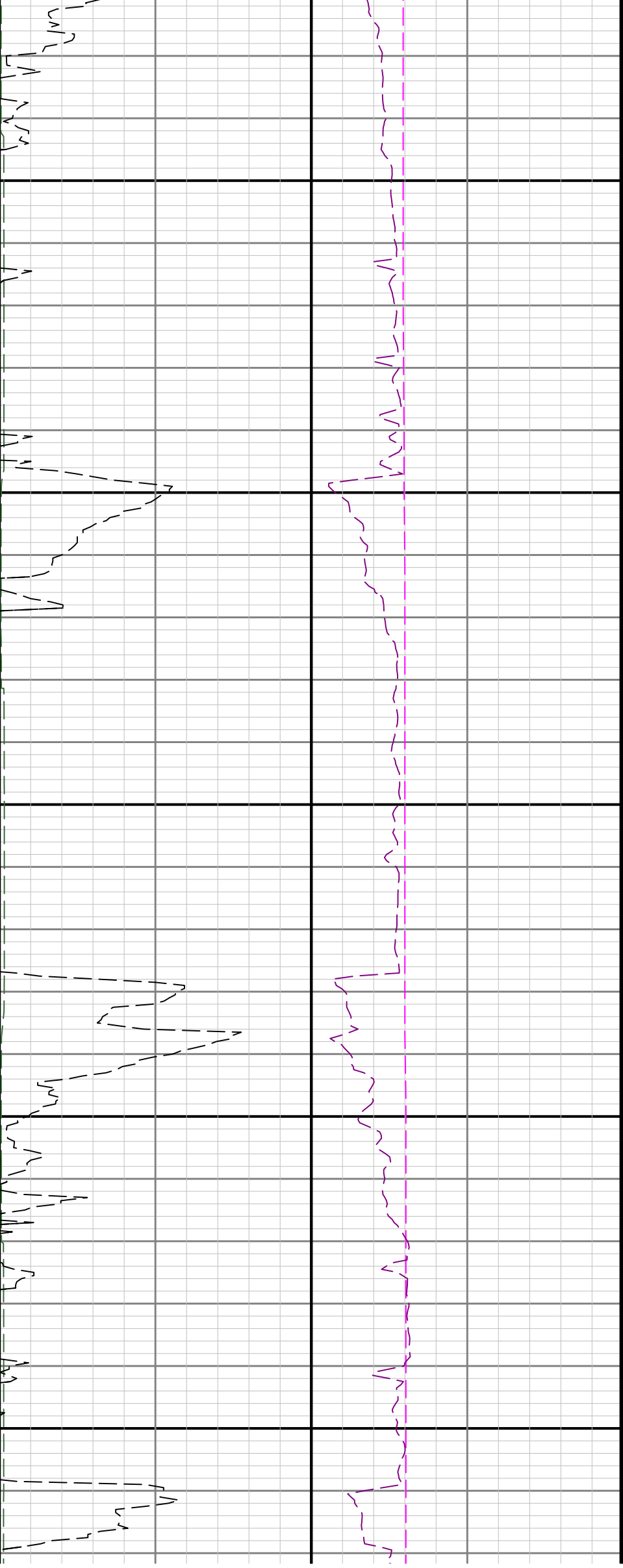
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1918.00 - 17545.00

Interval Logged: (ft)

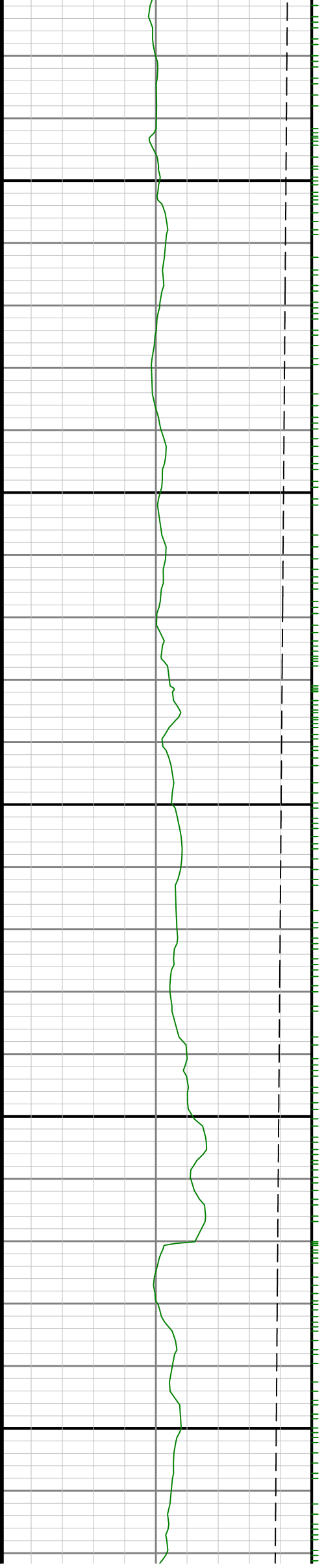
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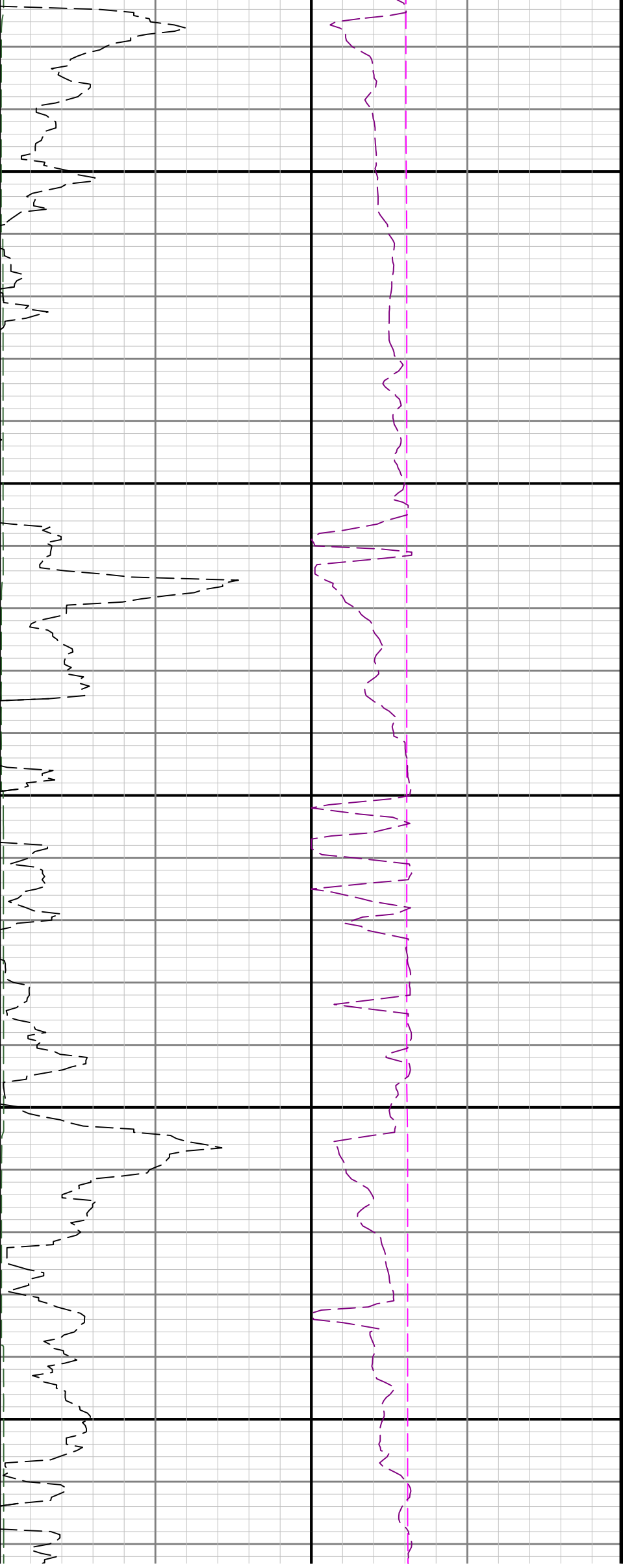




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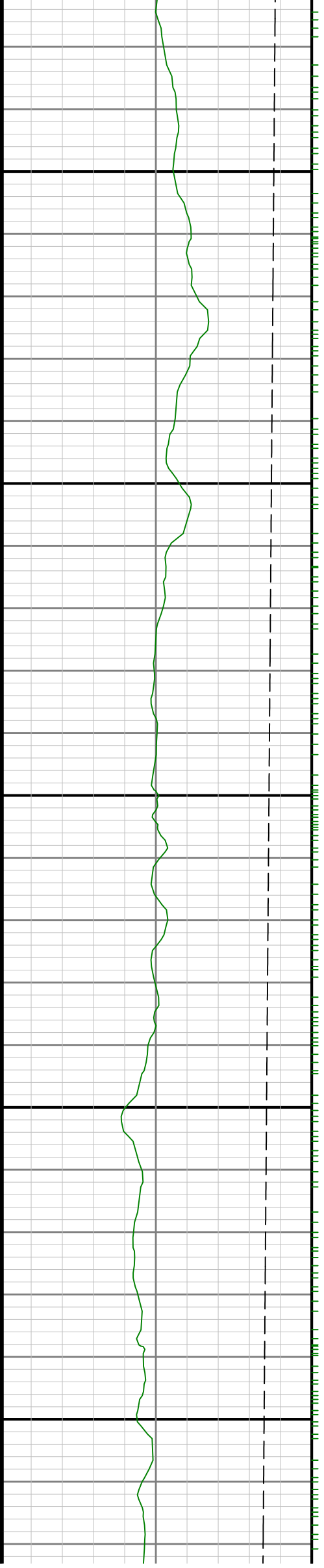


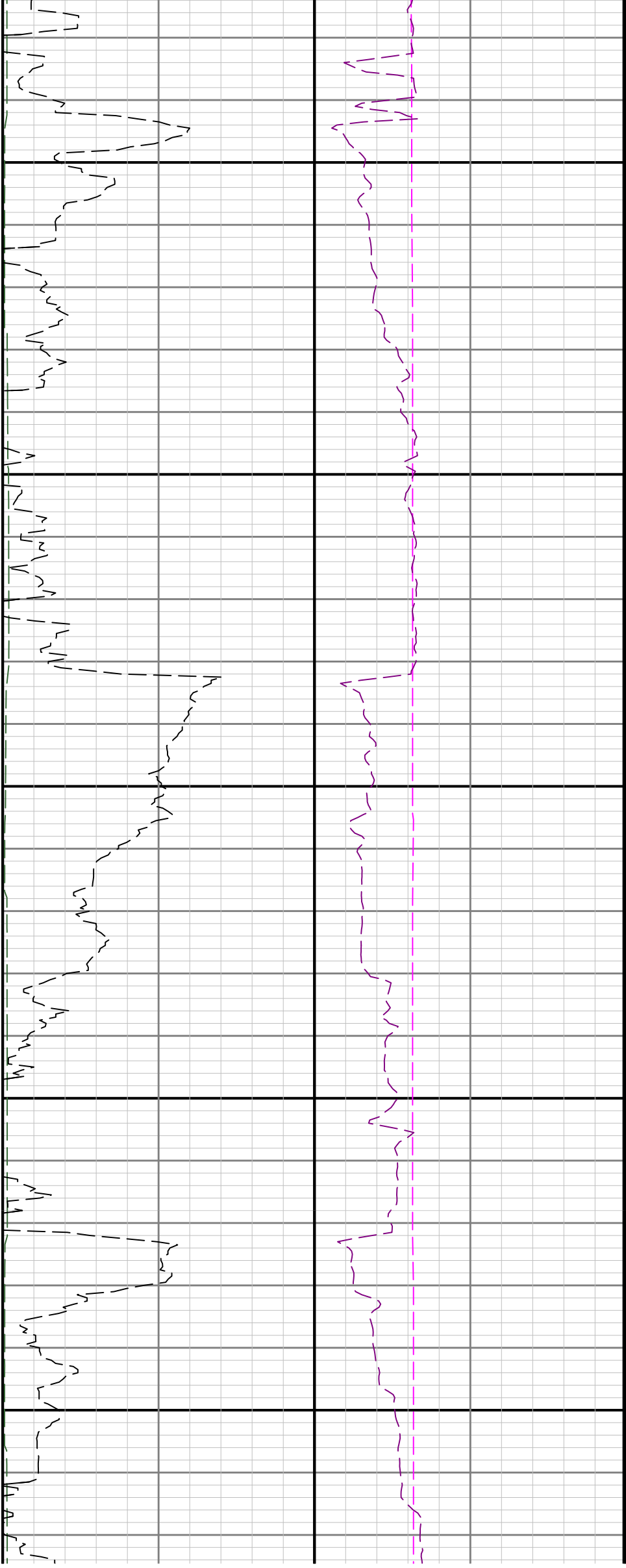


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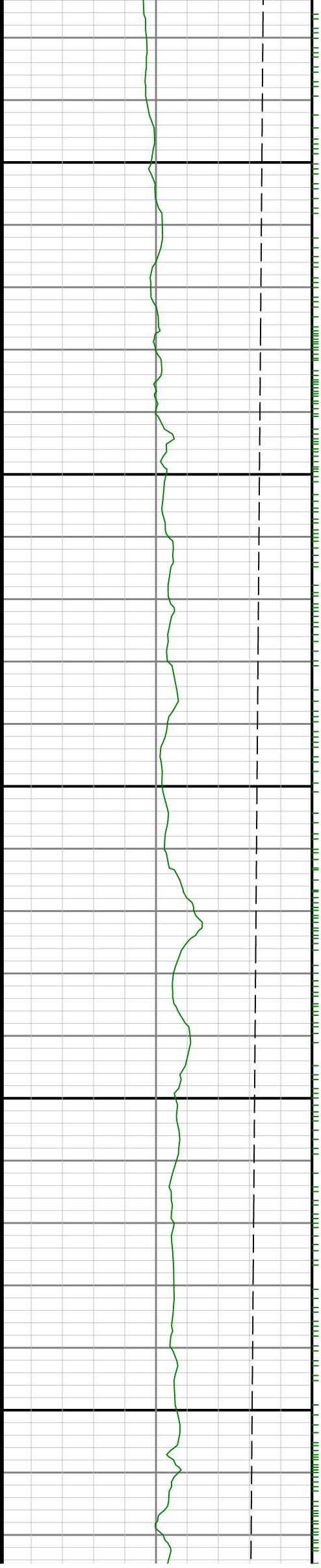
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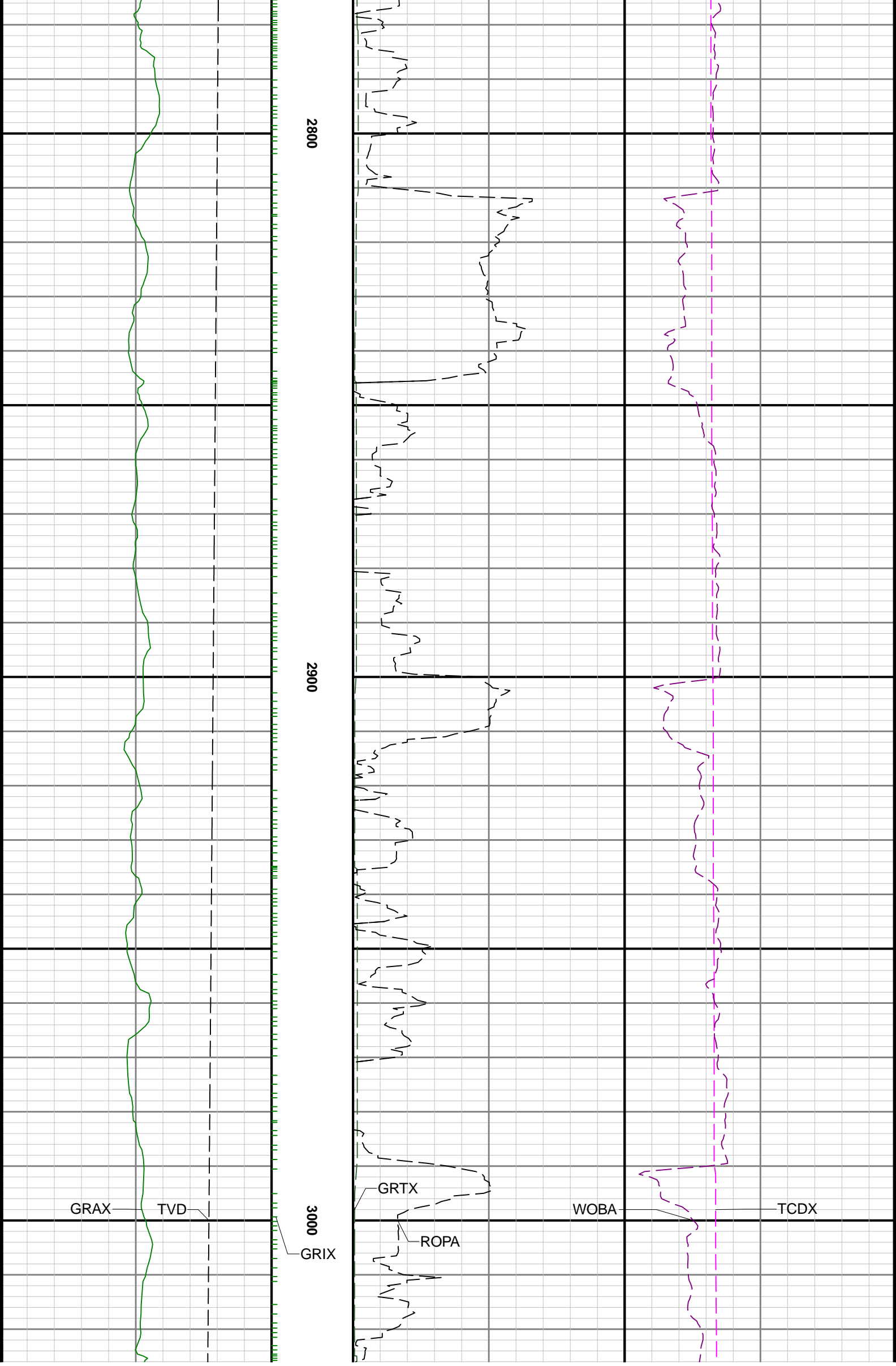


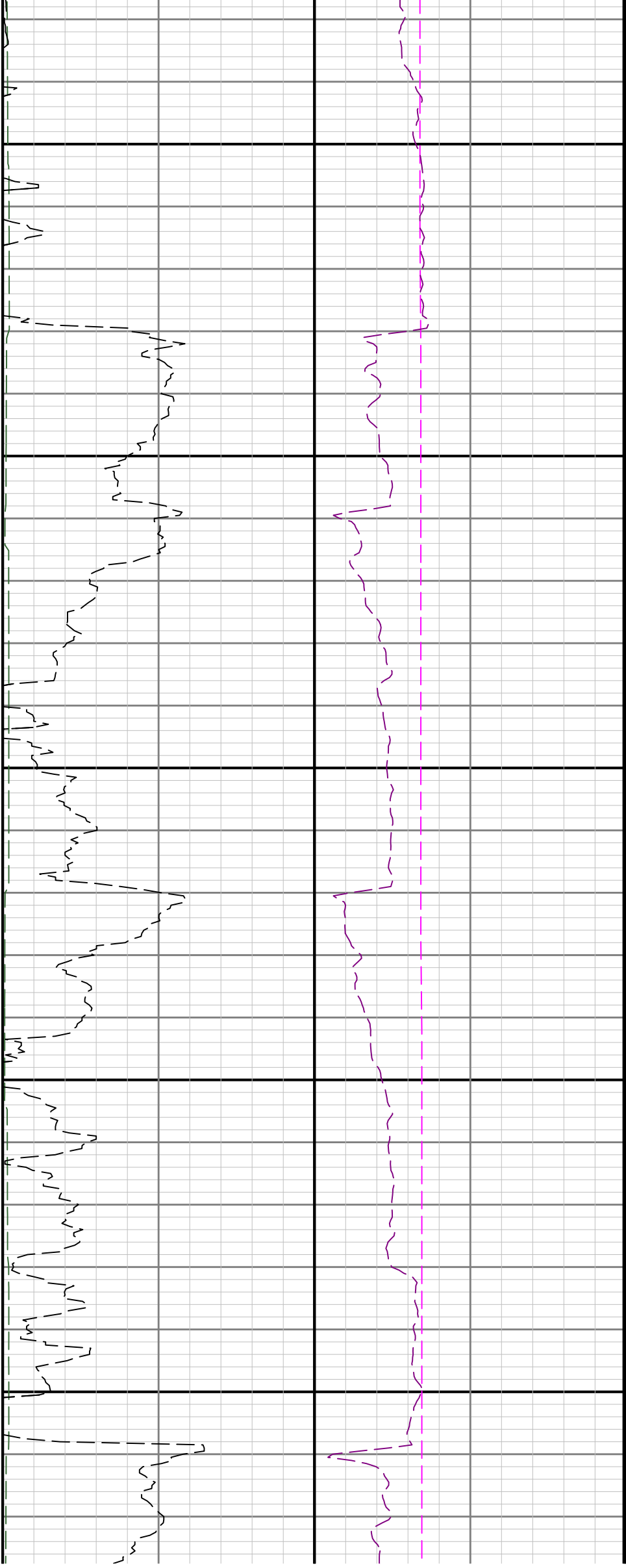


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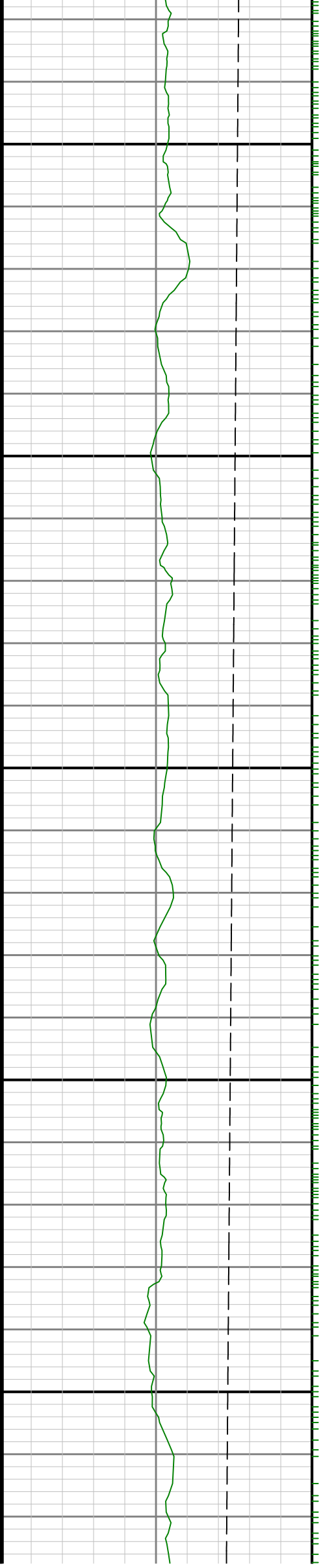


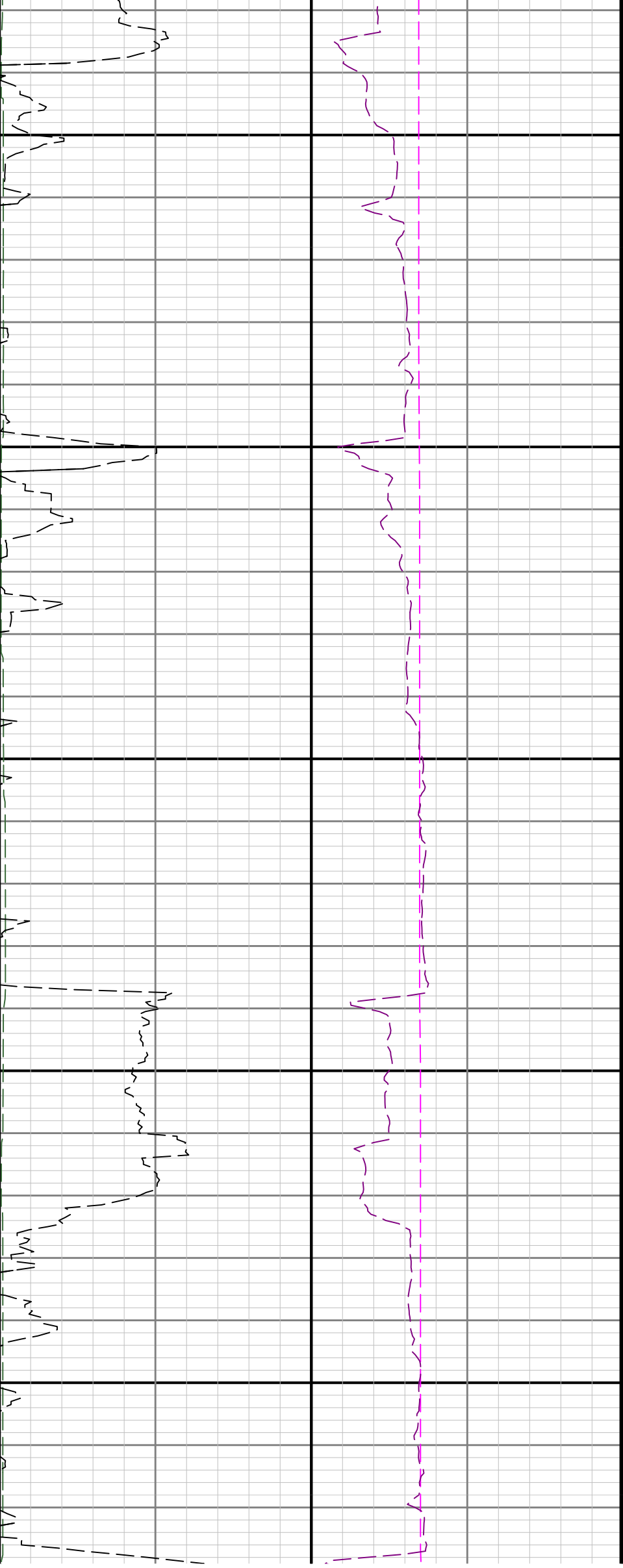




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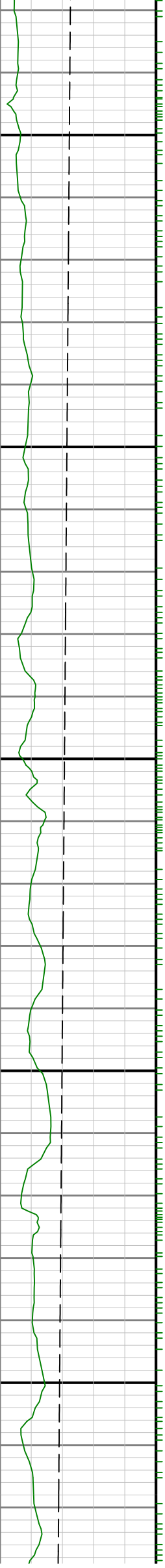


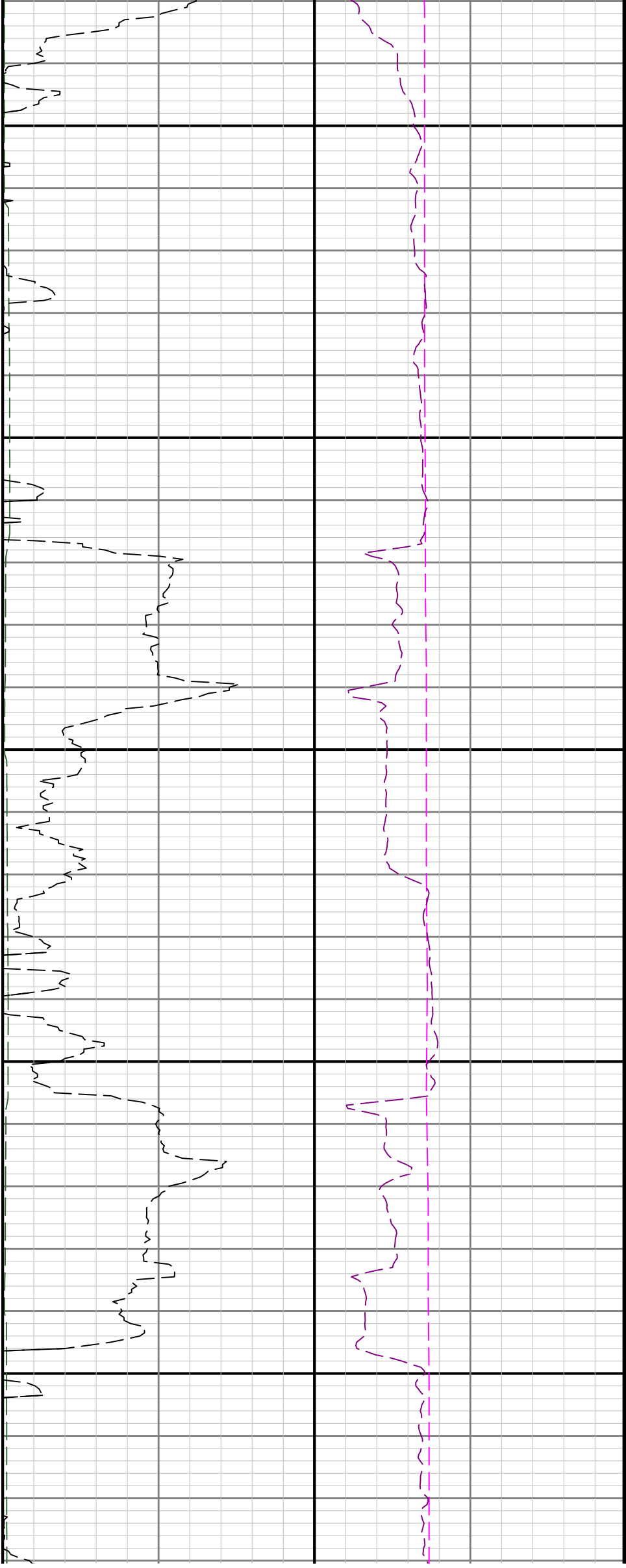


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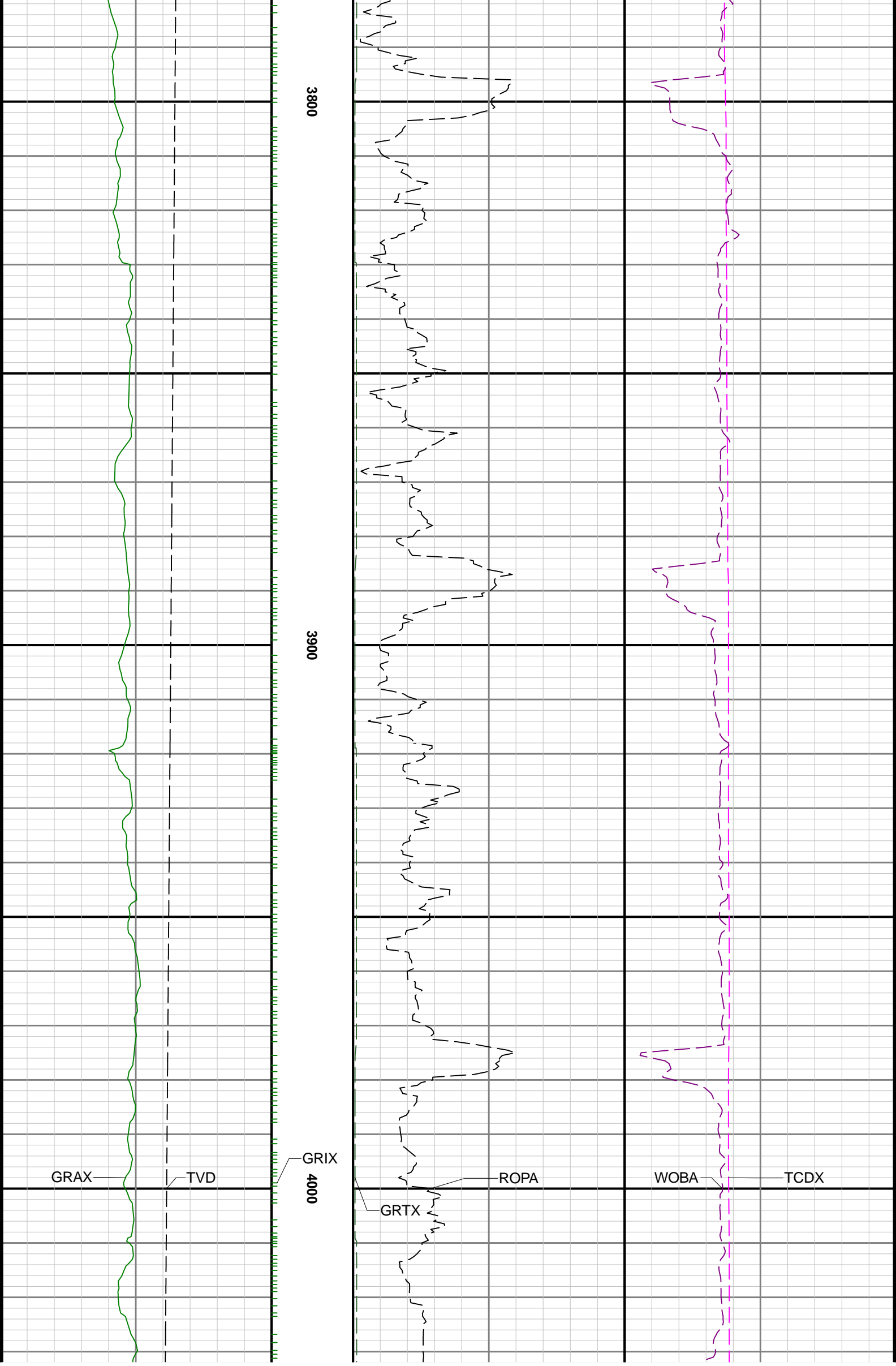


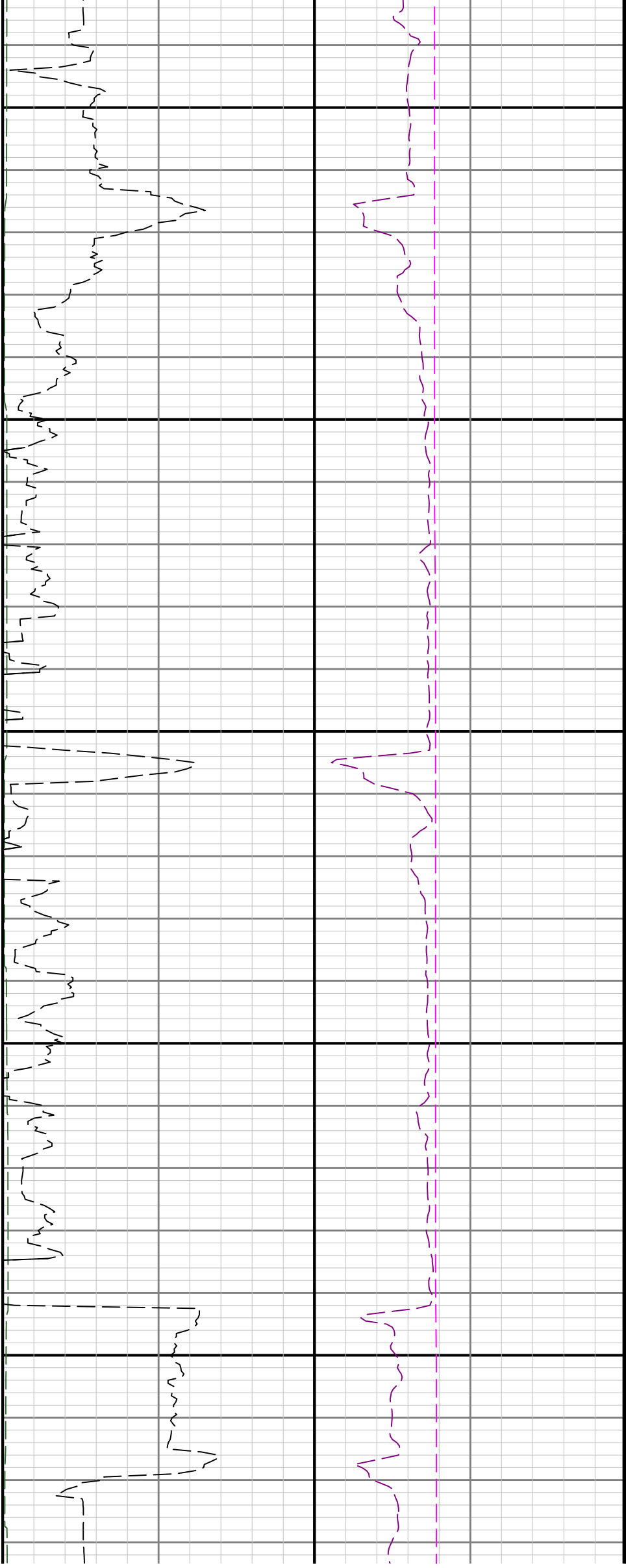


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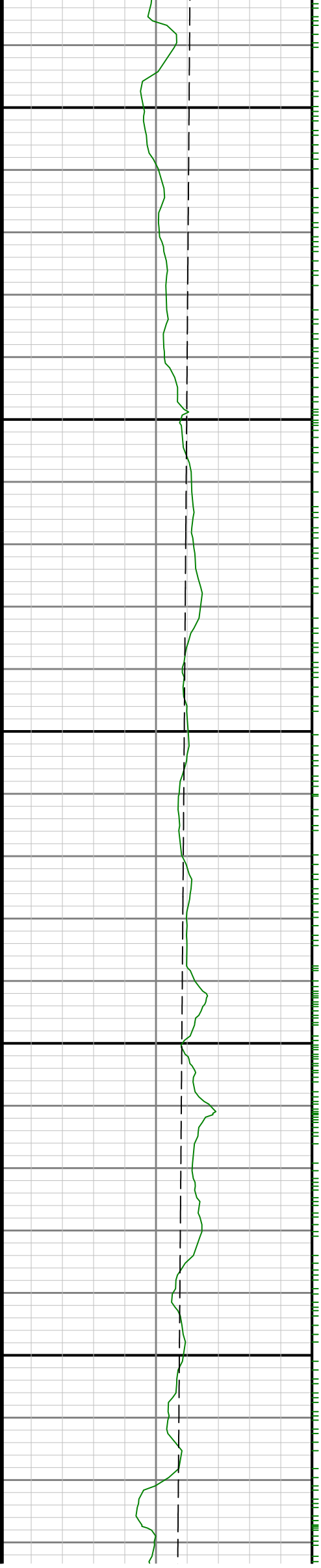


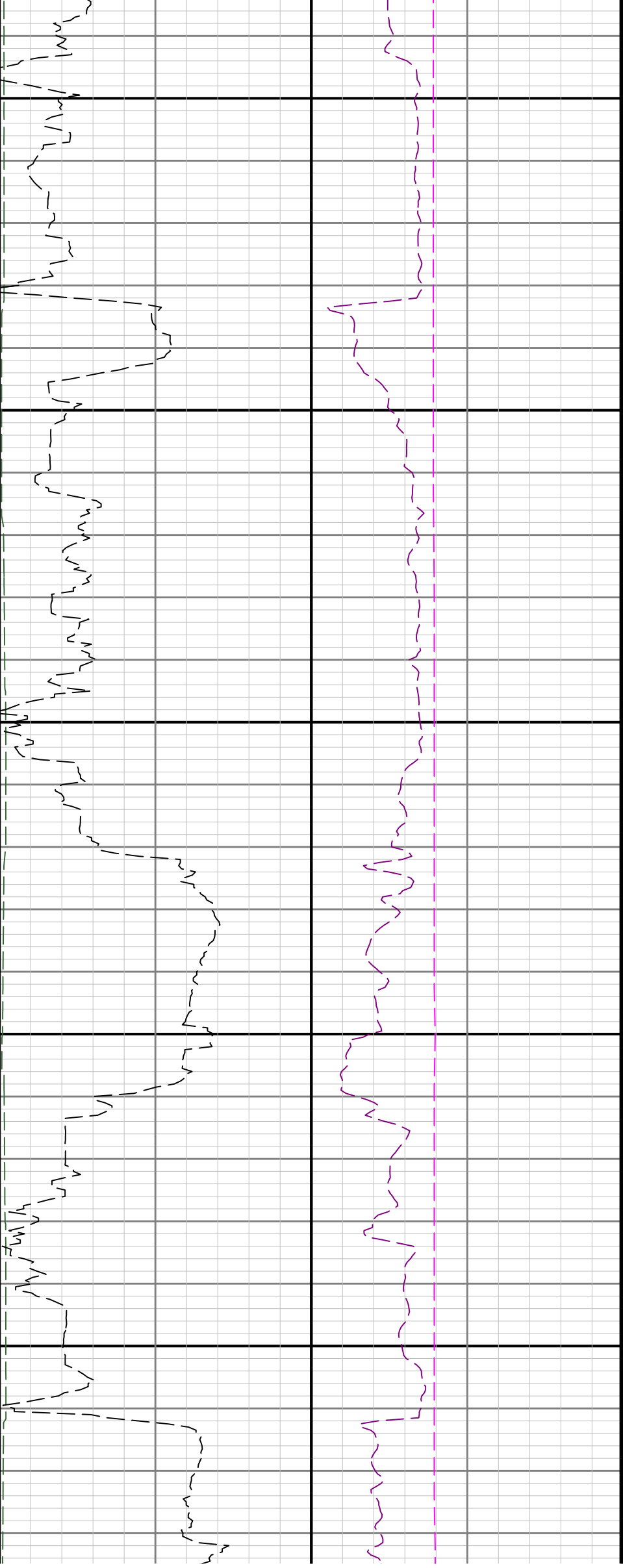




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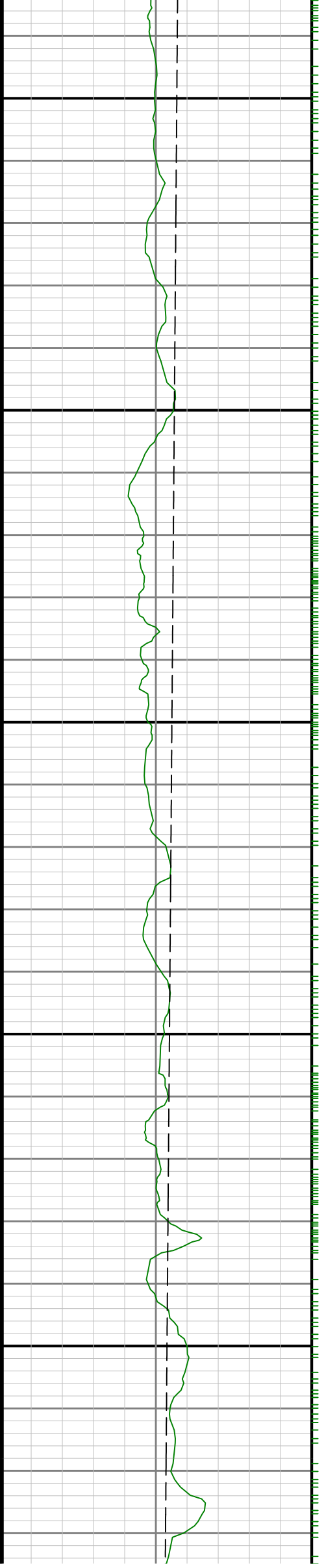


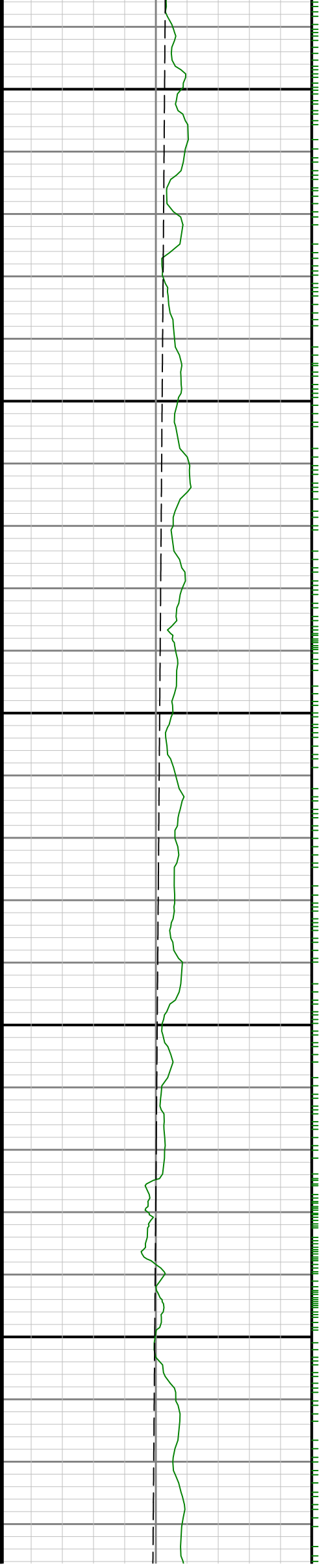
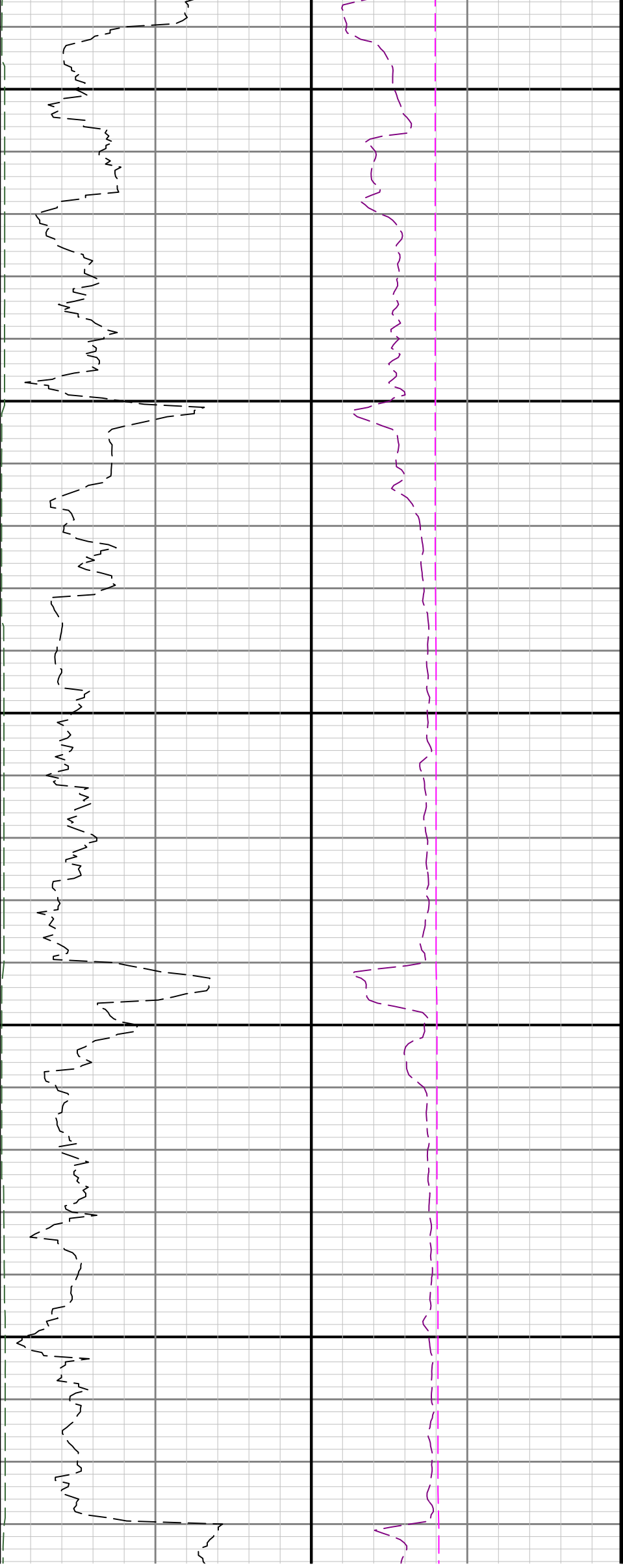


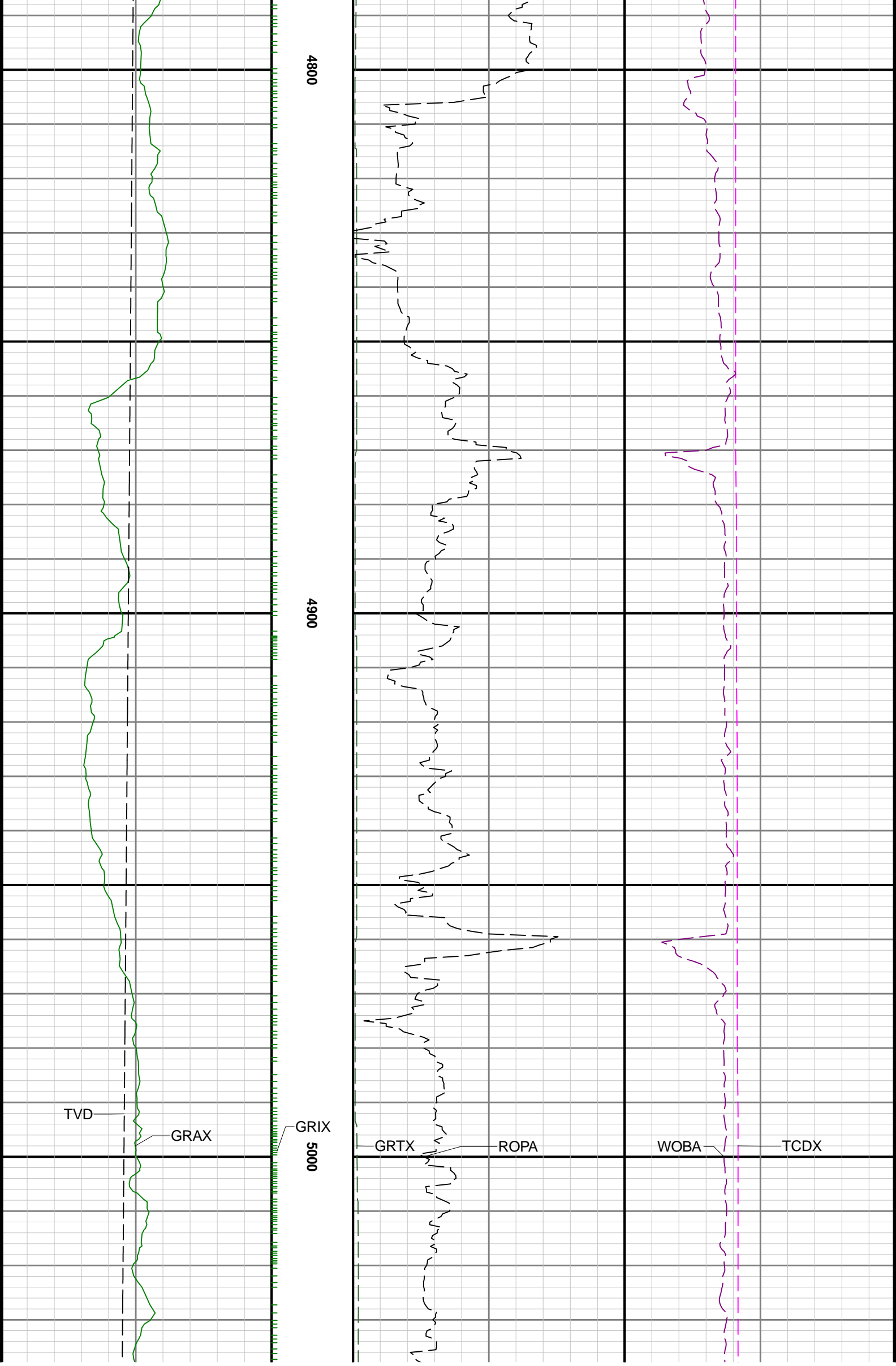
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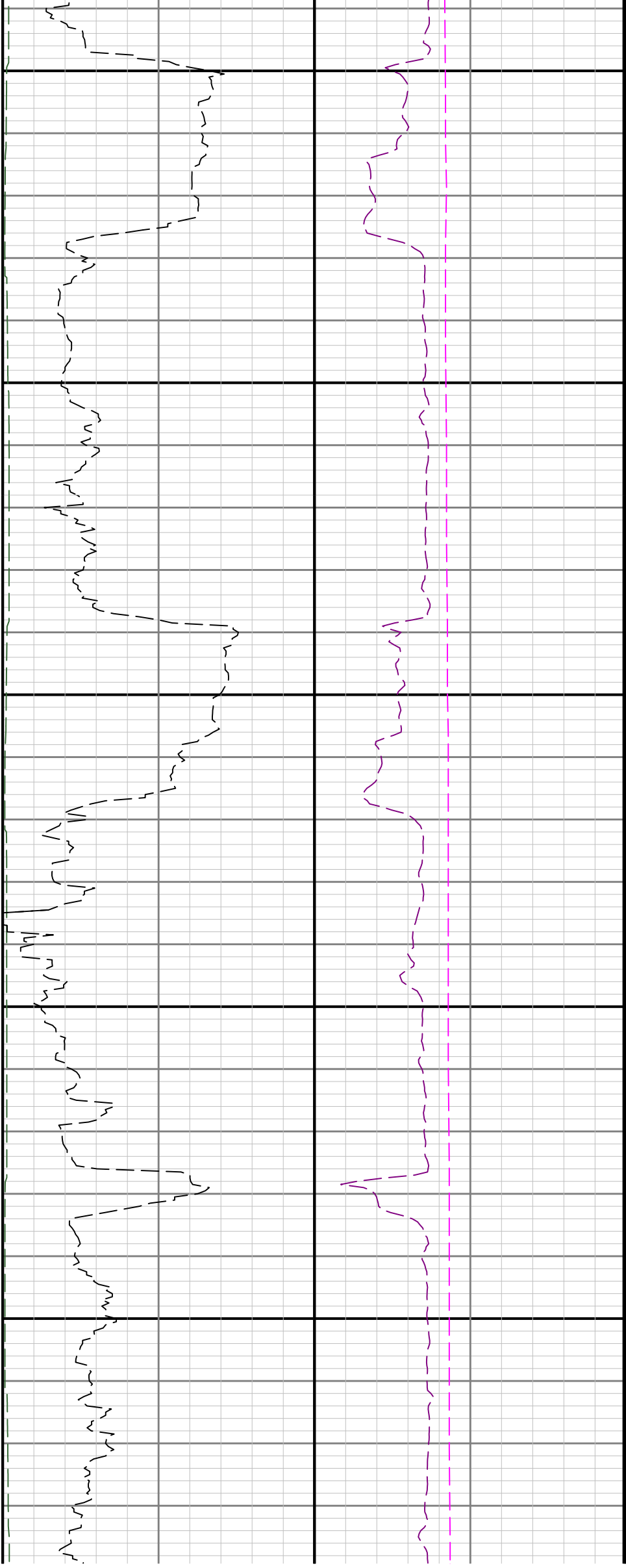
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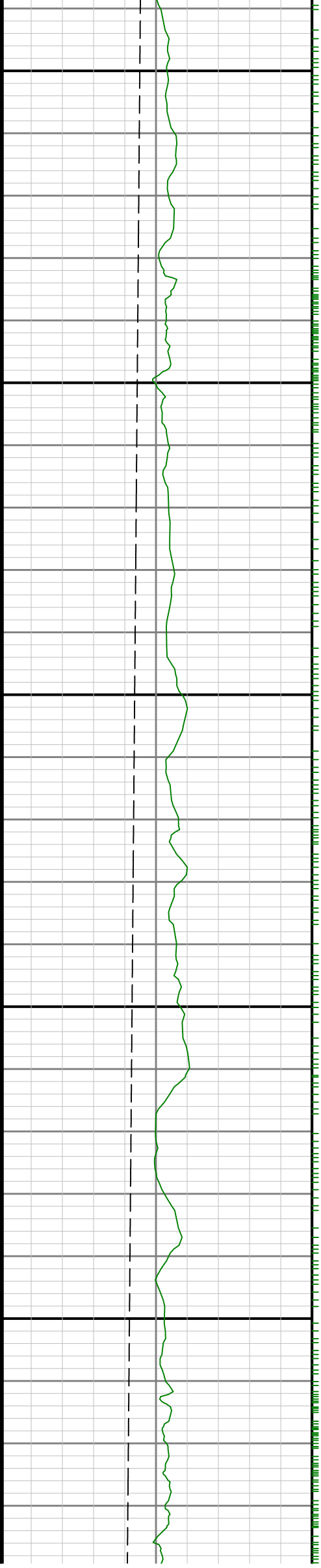


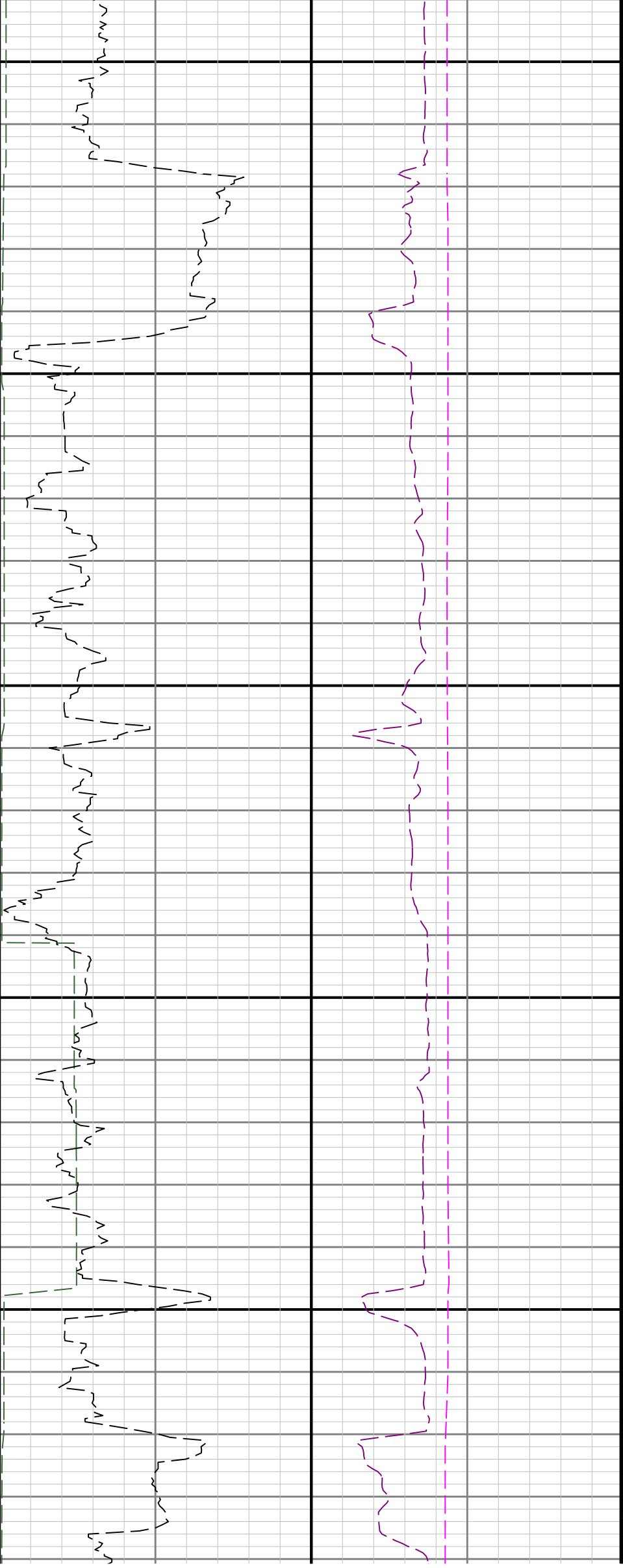




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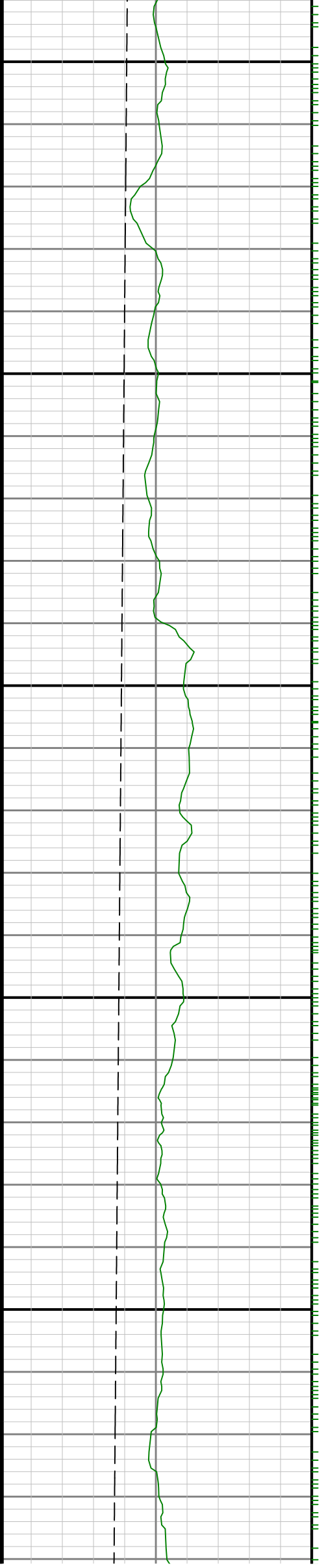


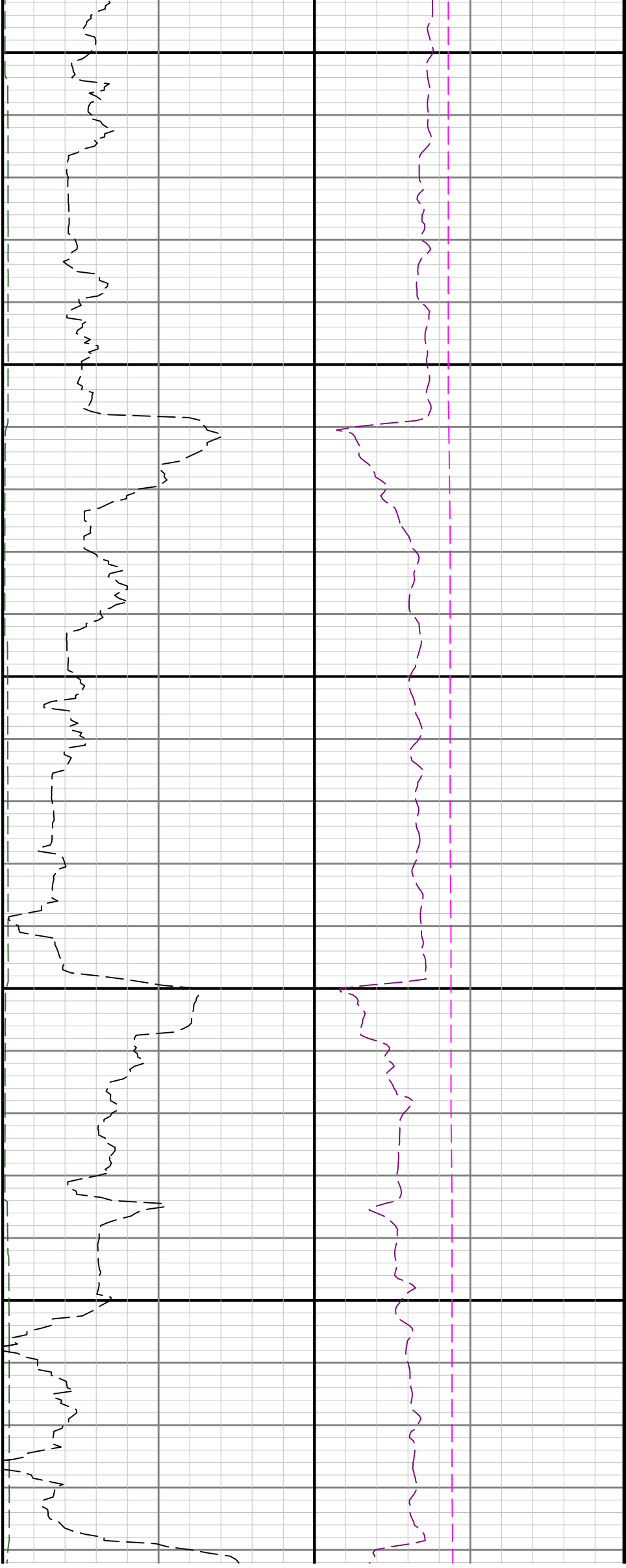


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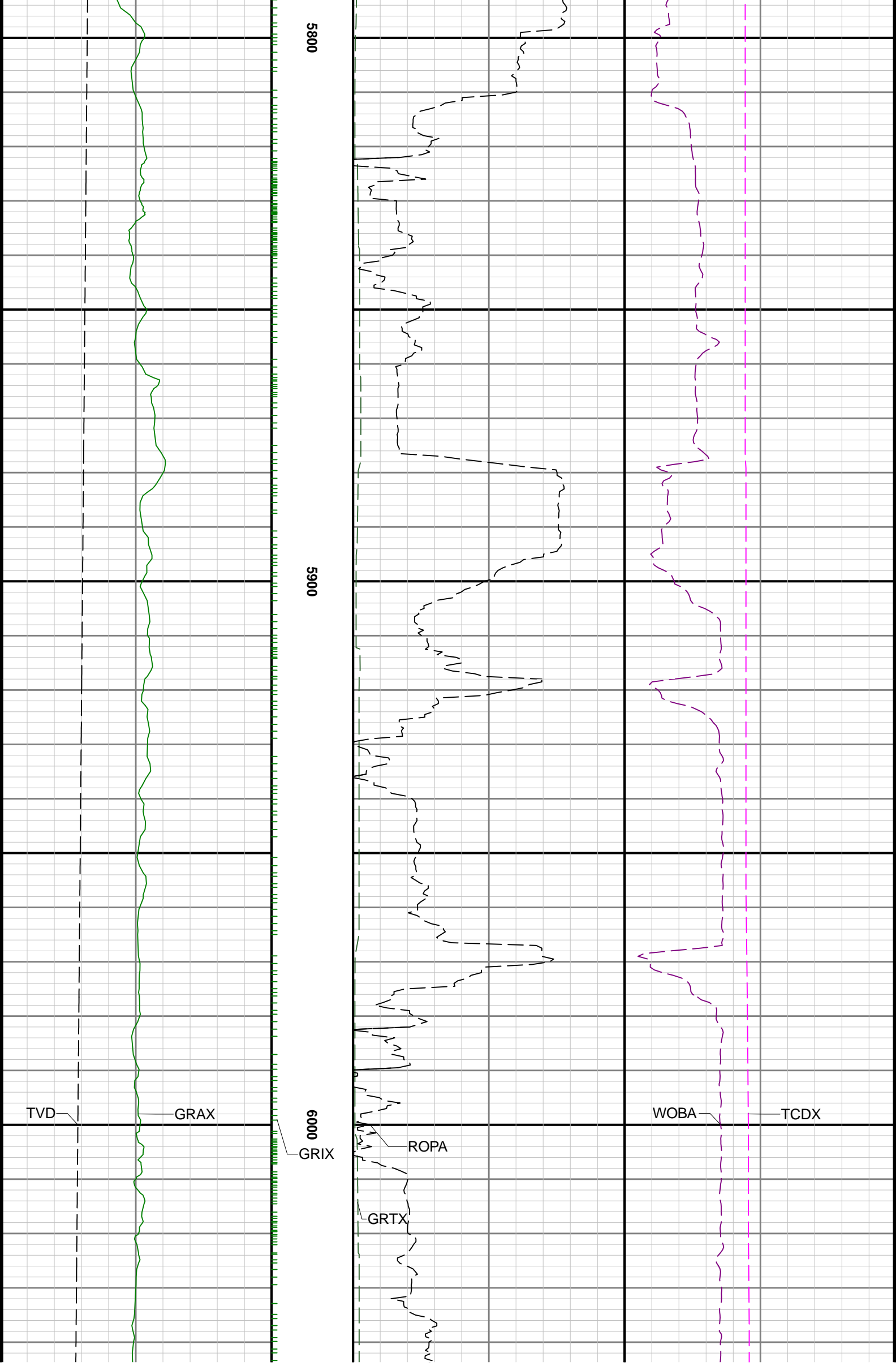
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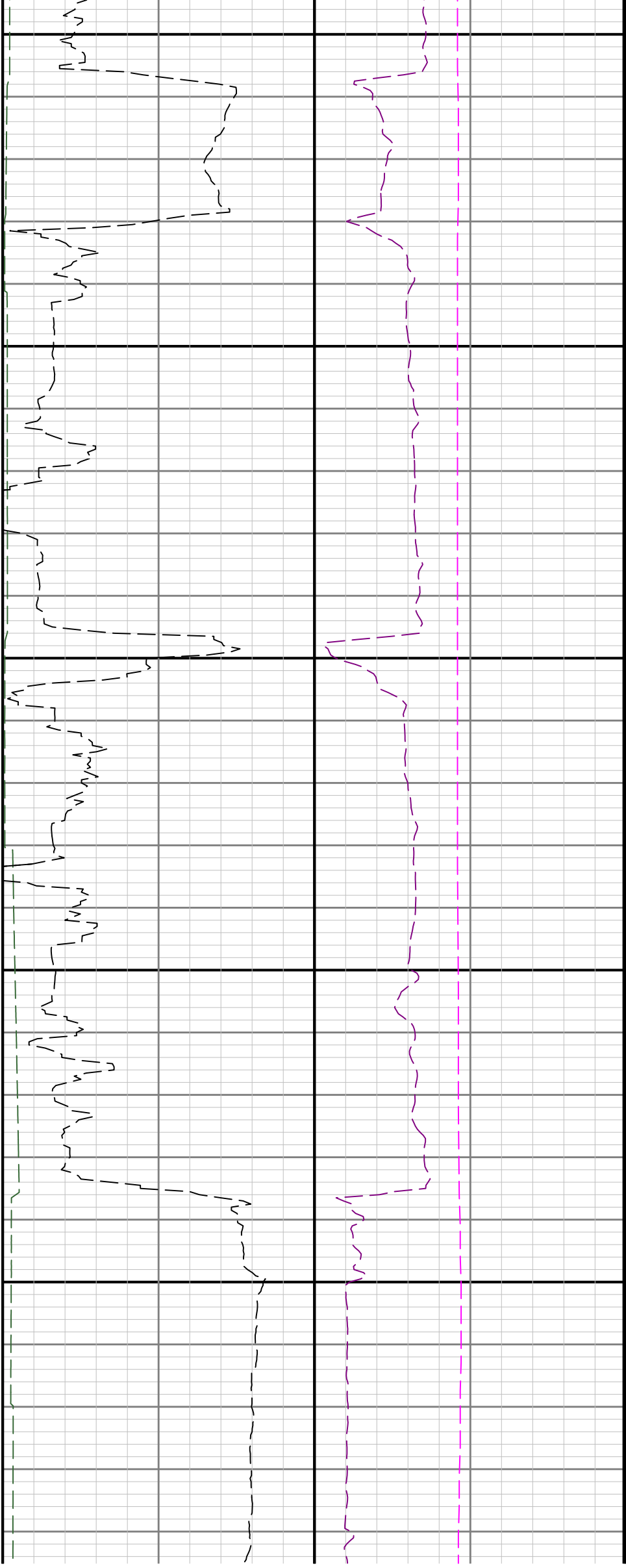




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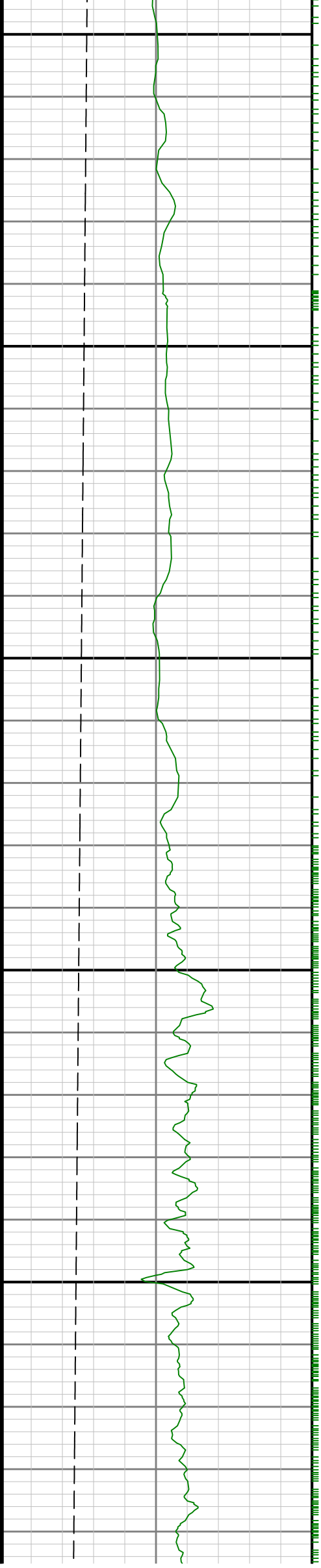
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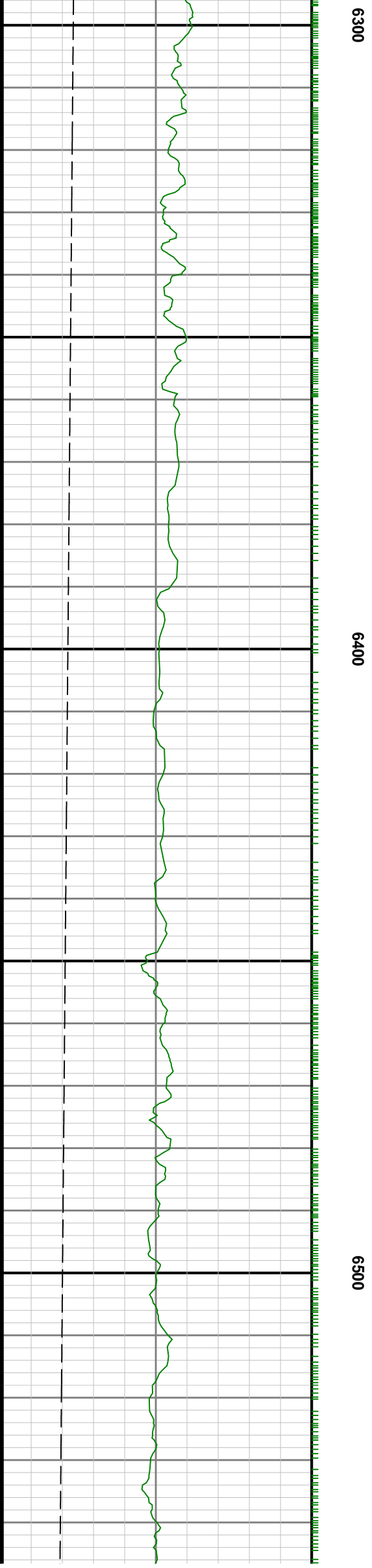
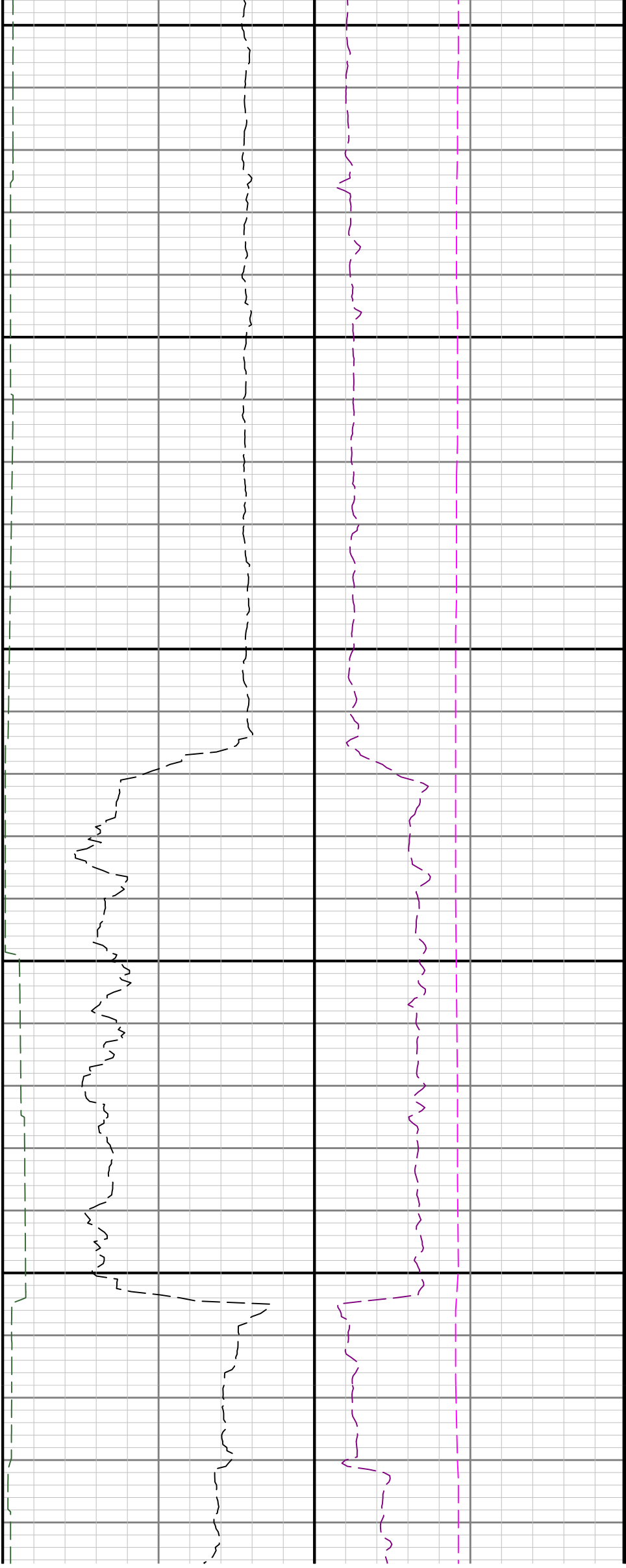


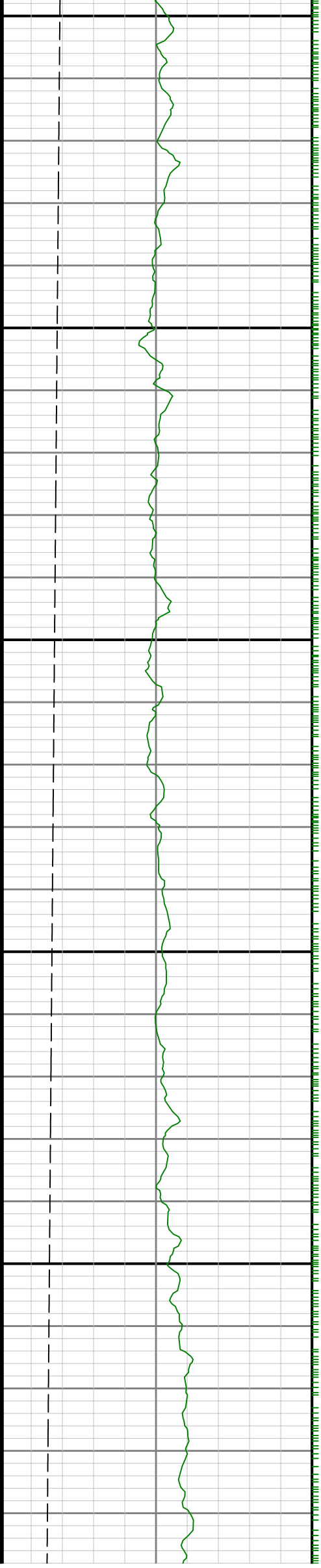


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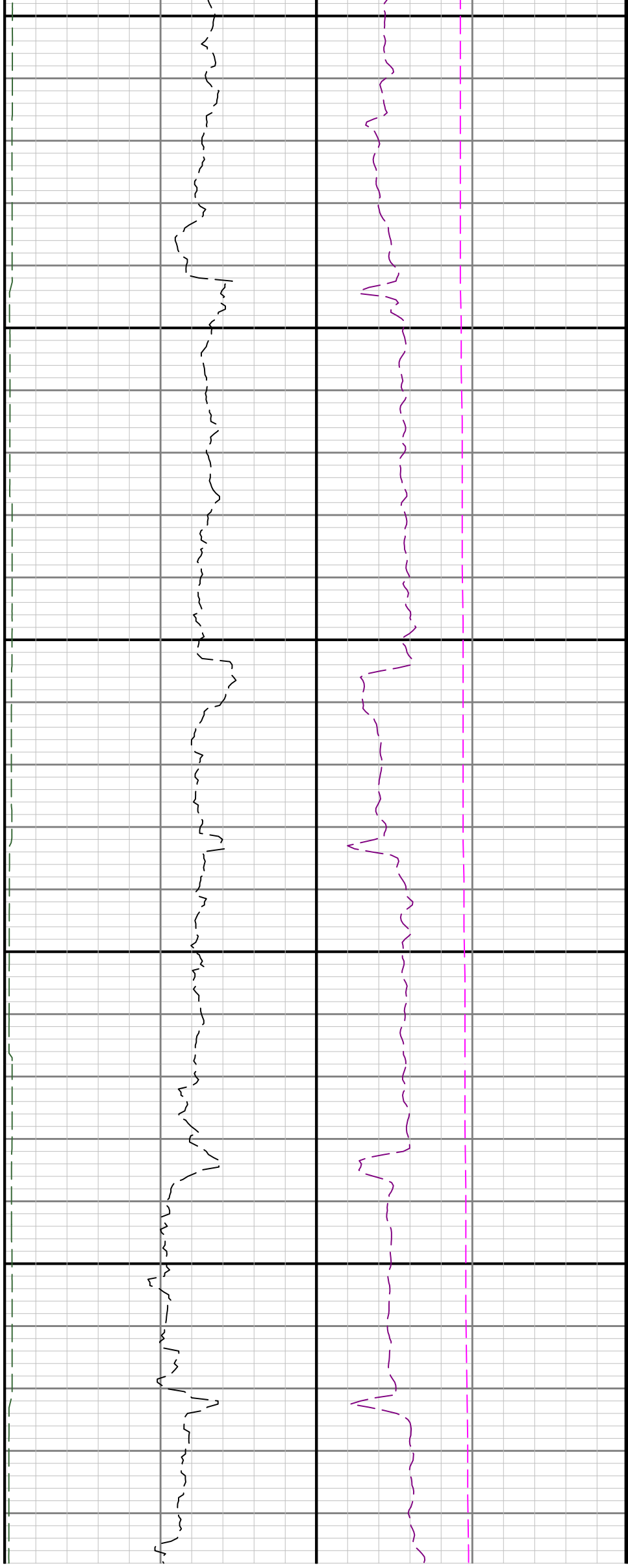


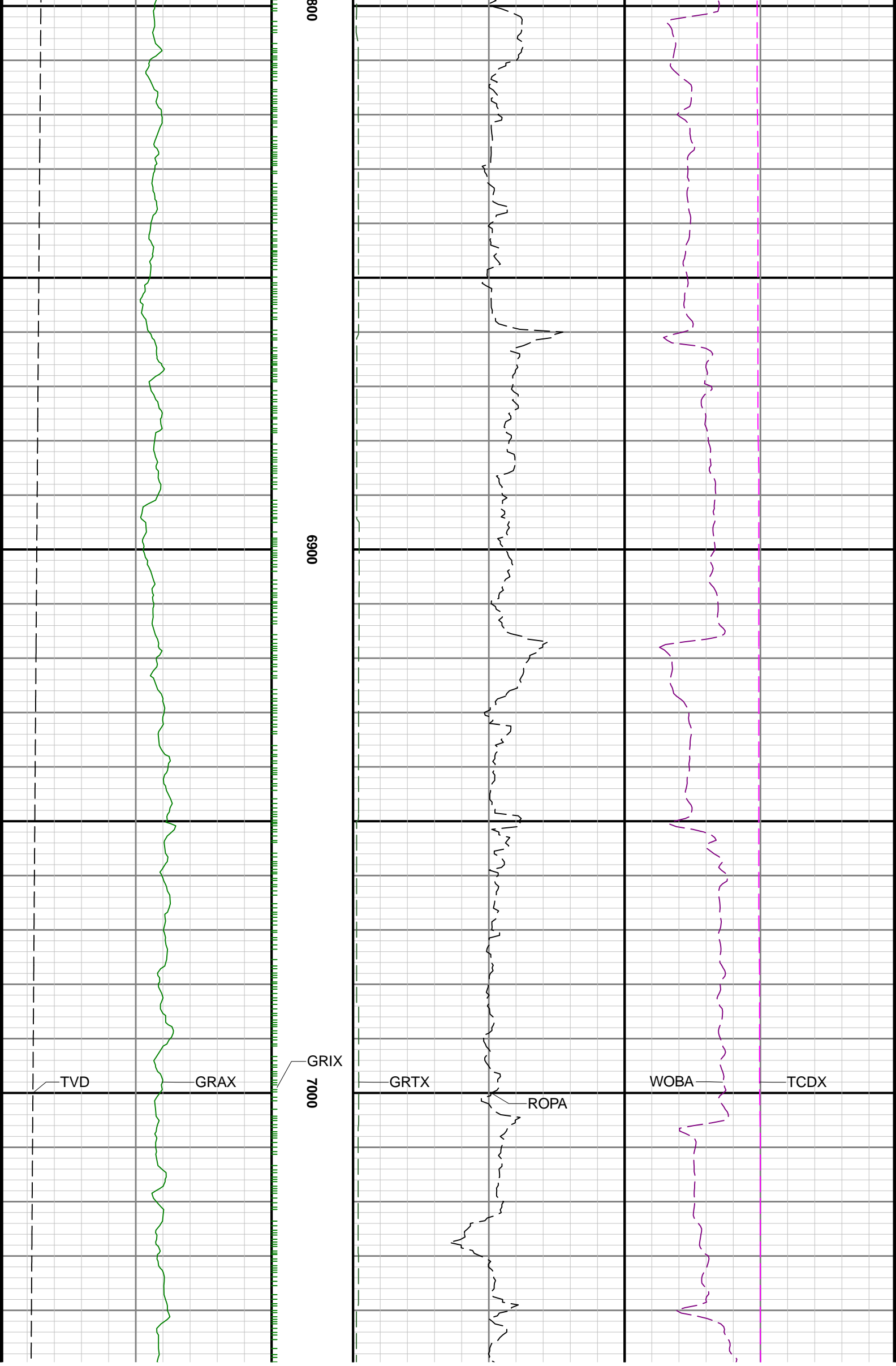


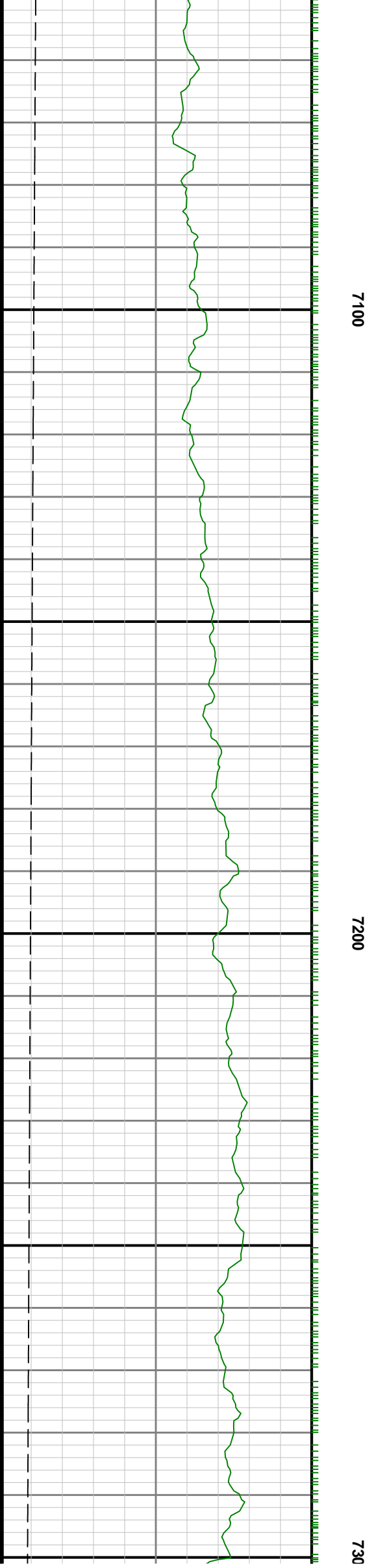
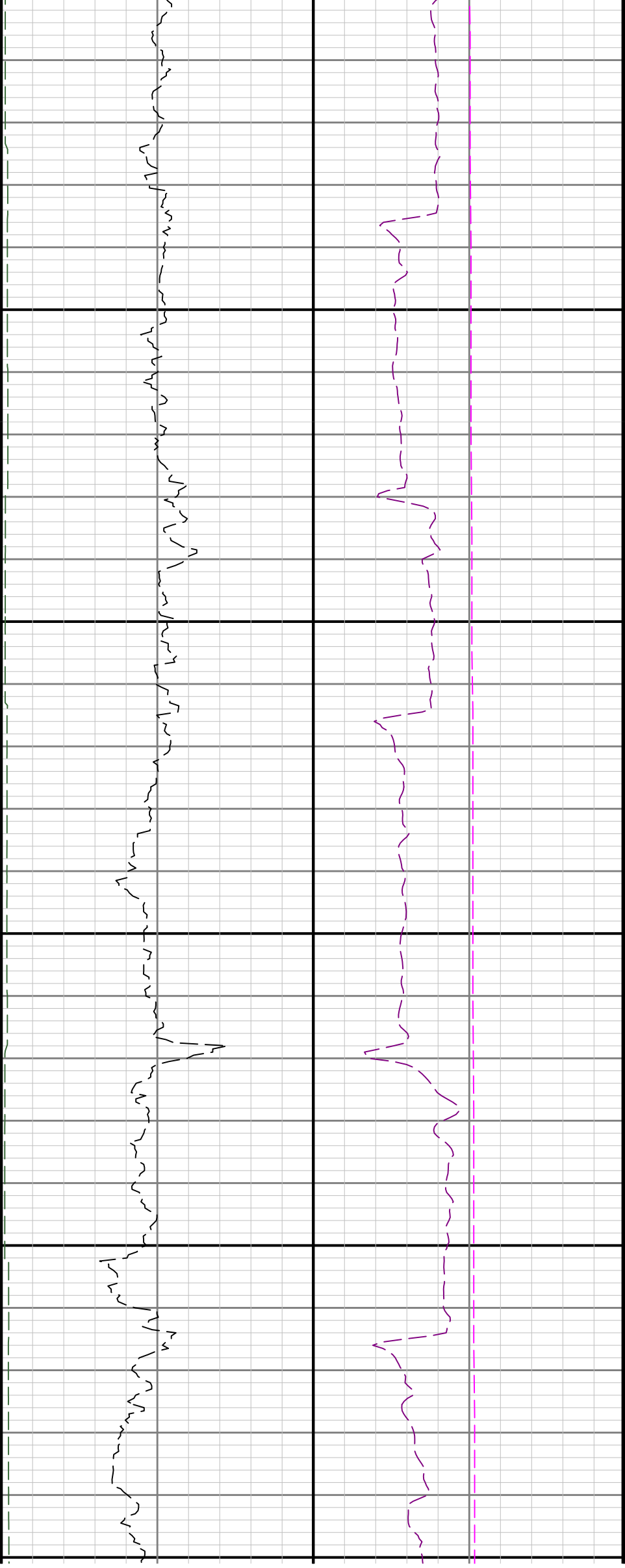
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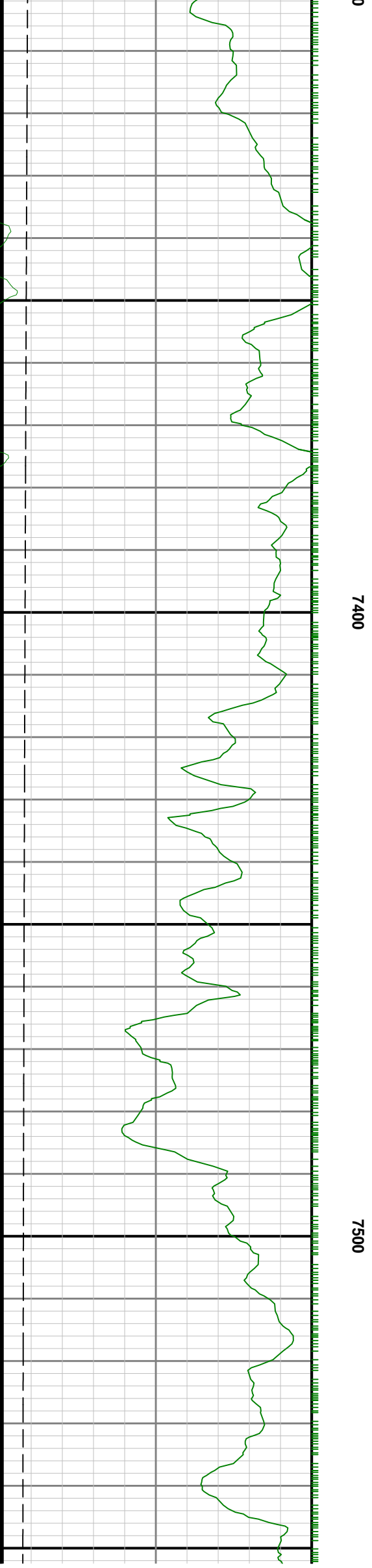
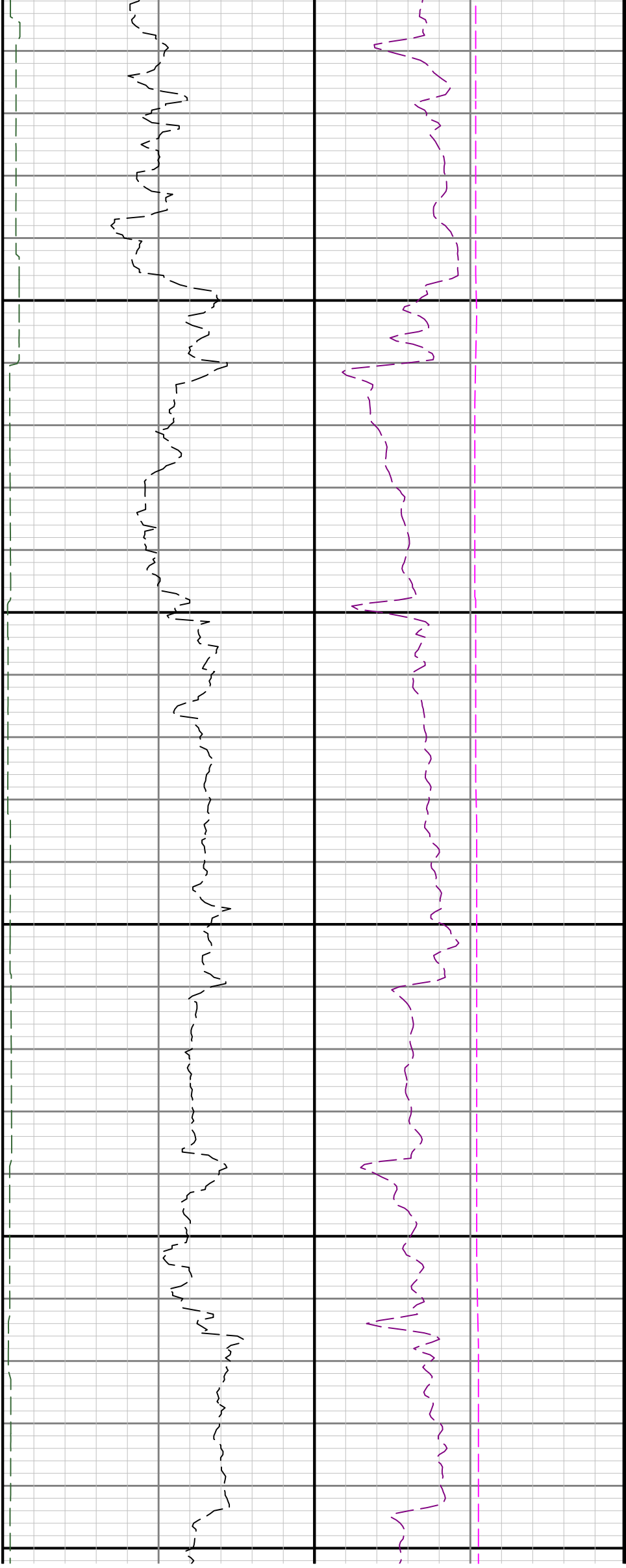
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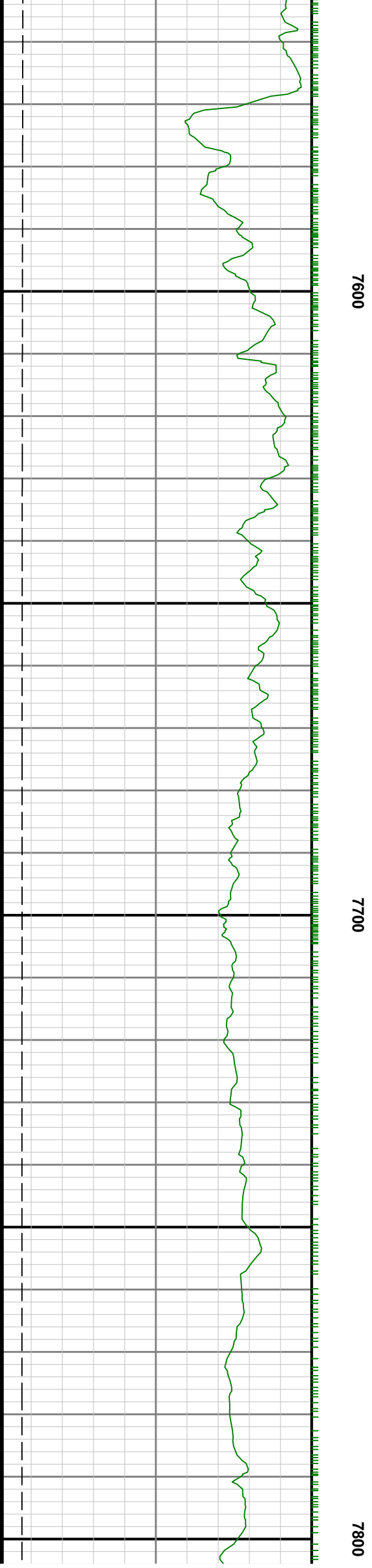
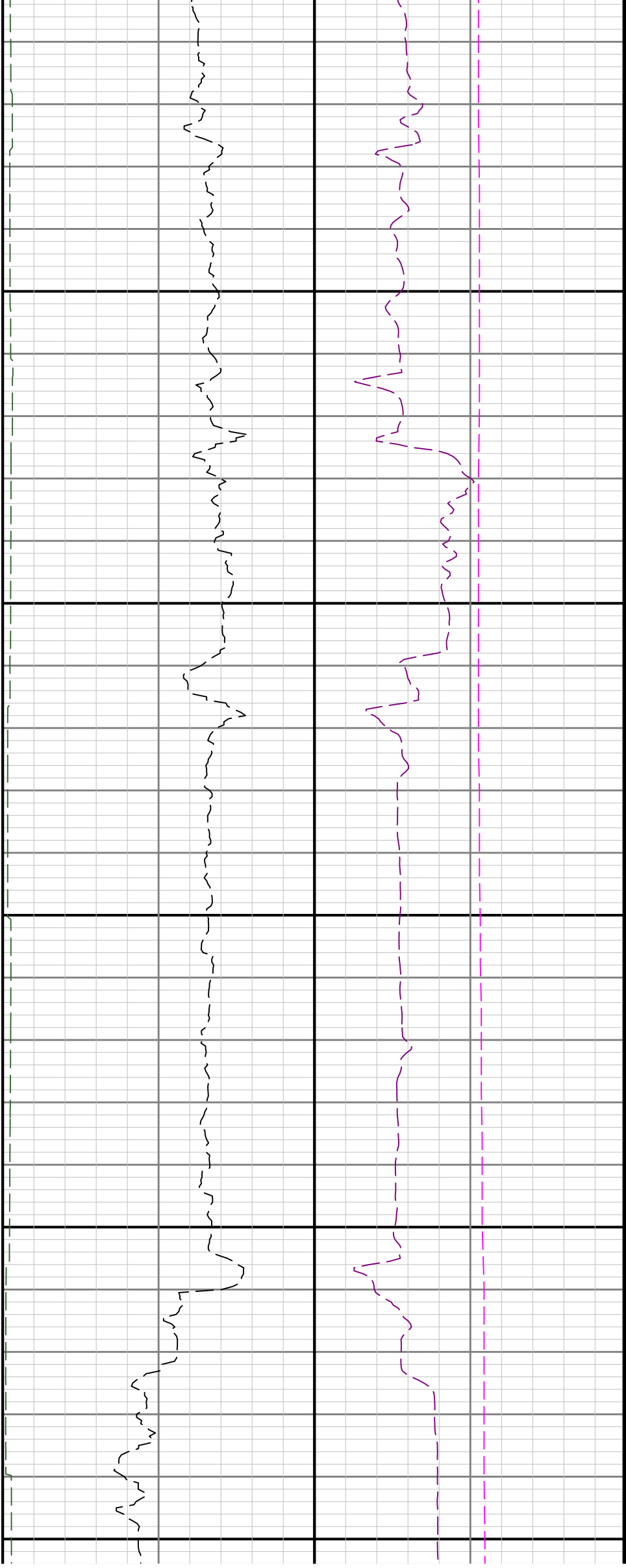
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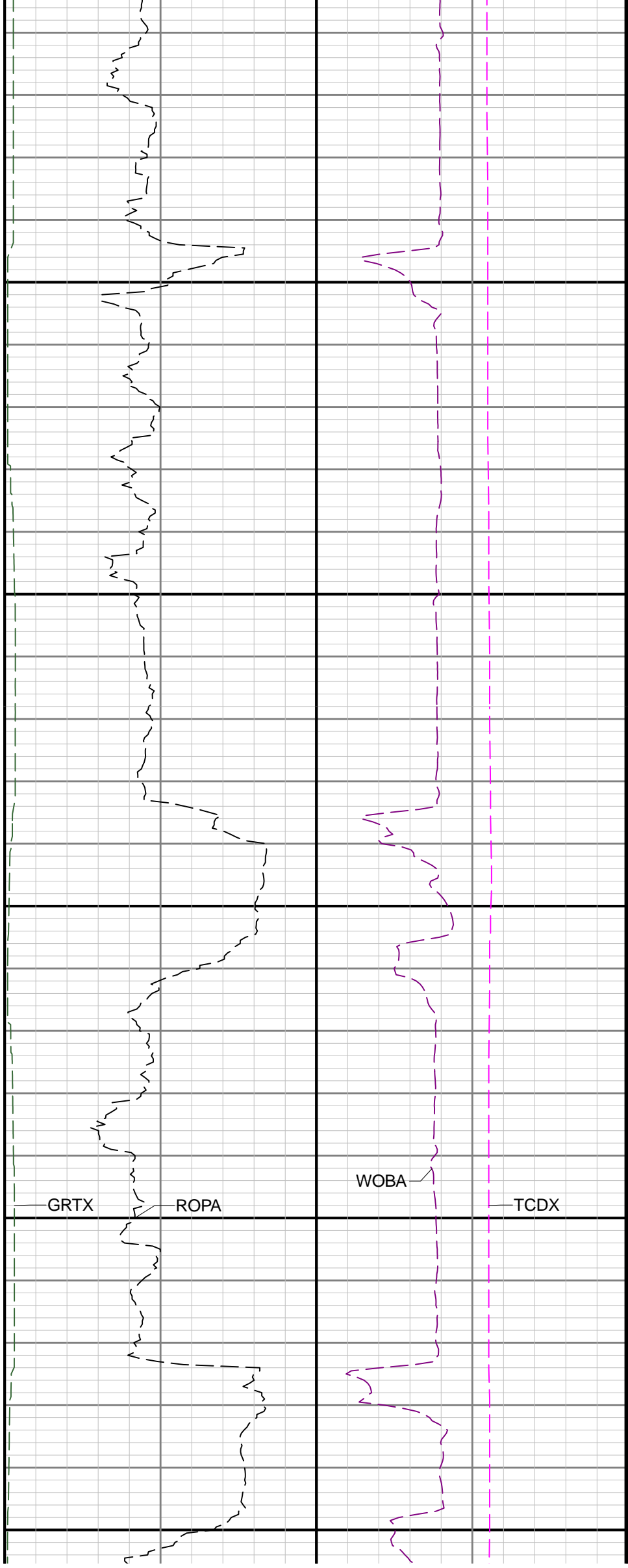
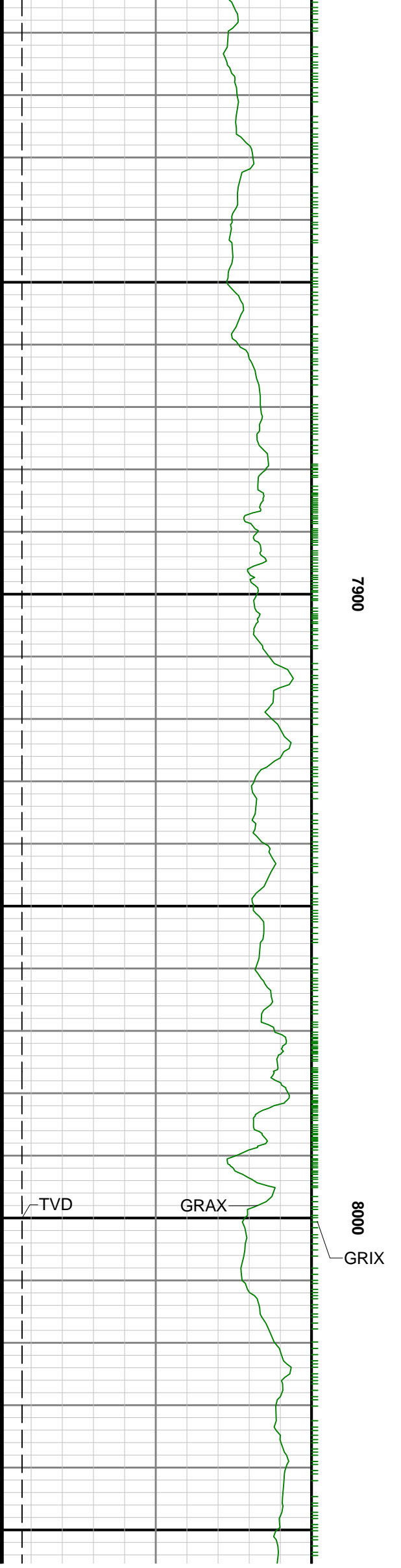


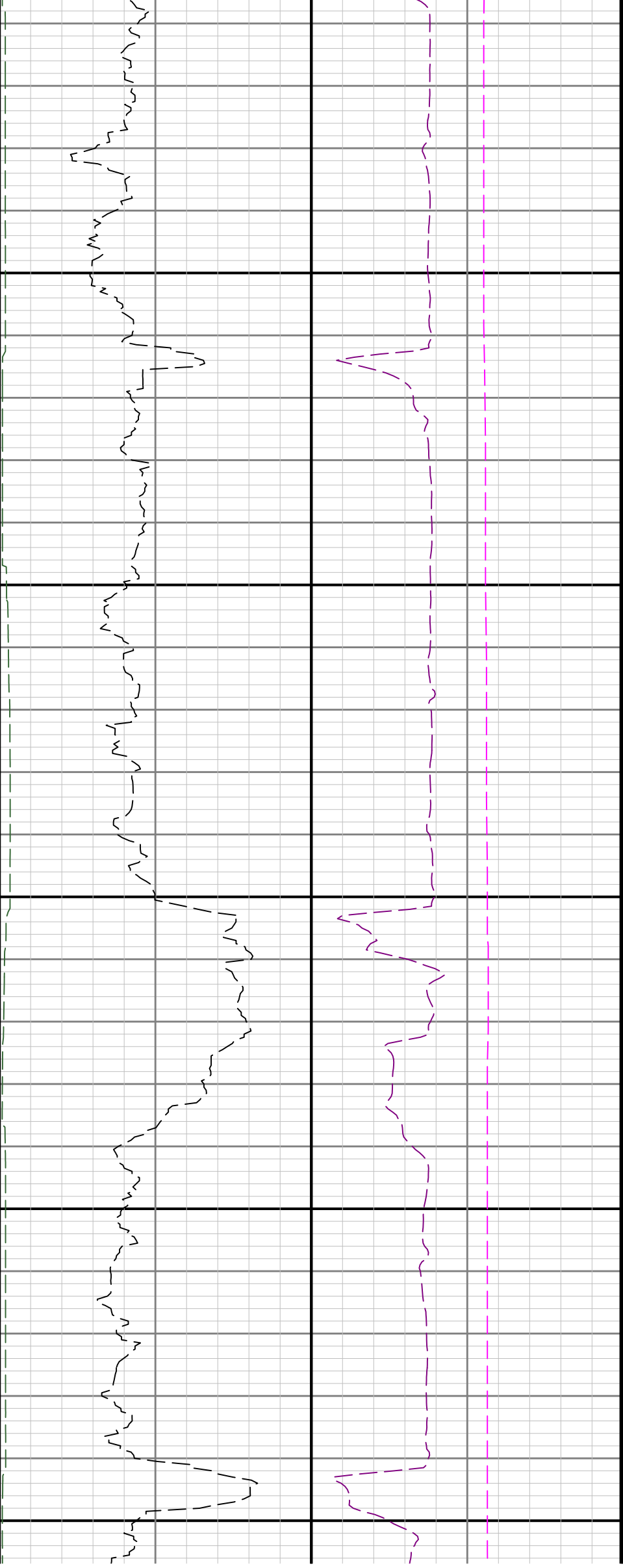








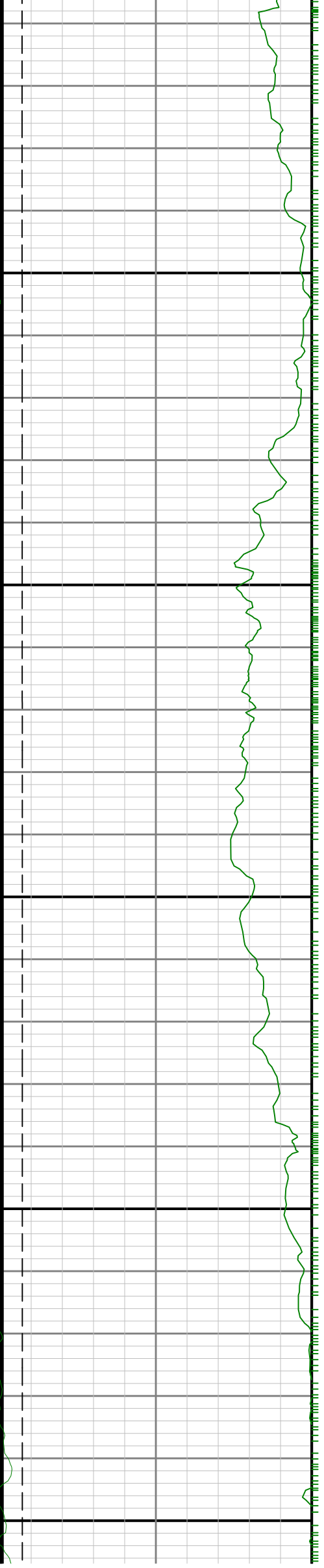


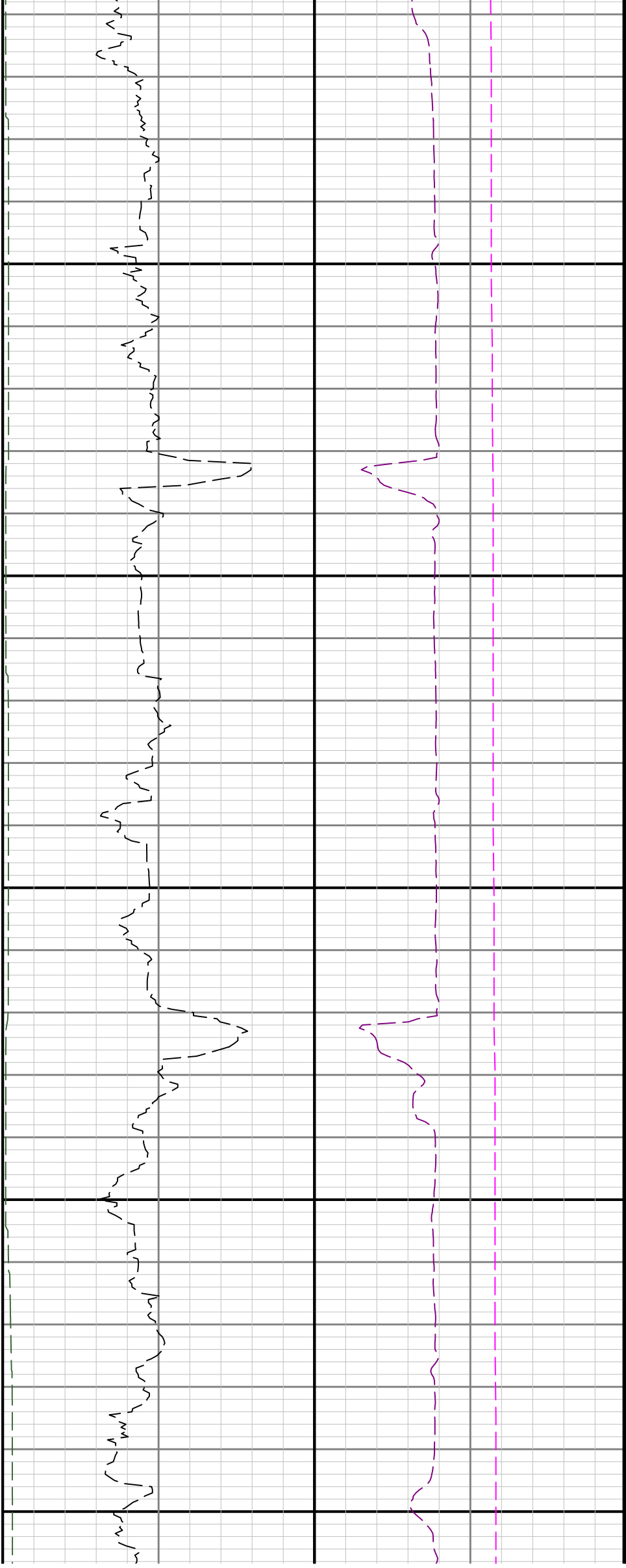


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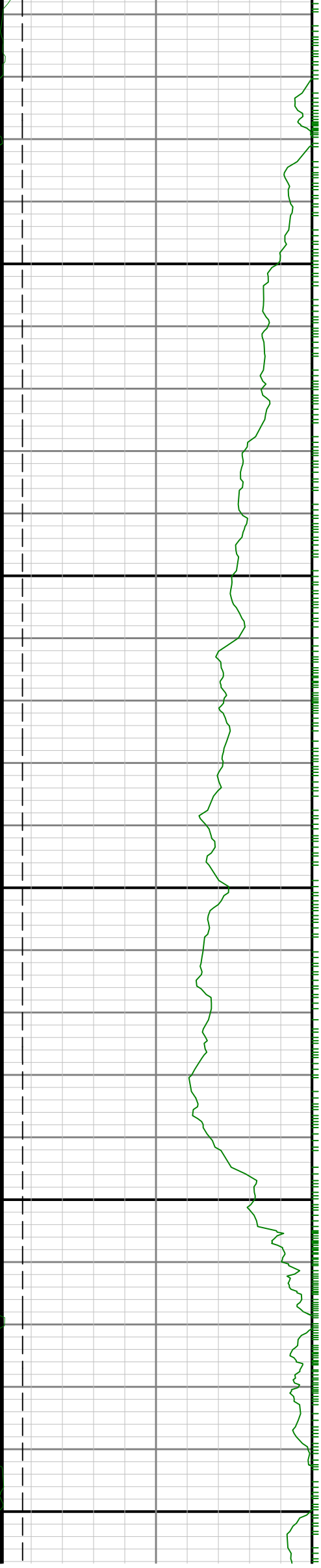
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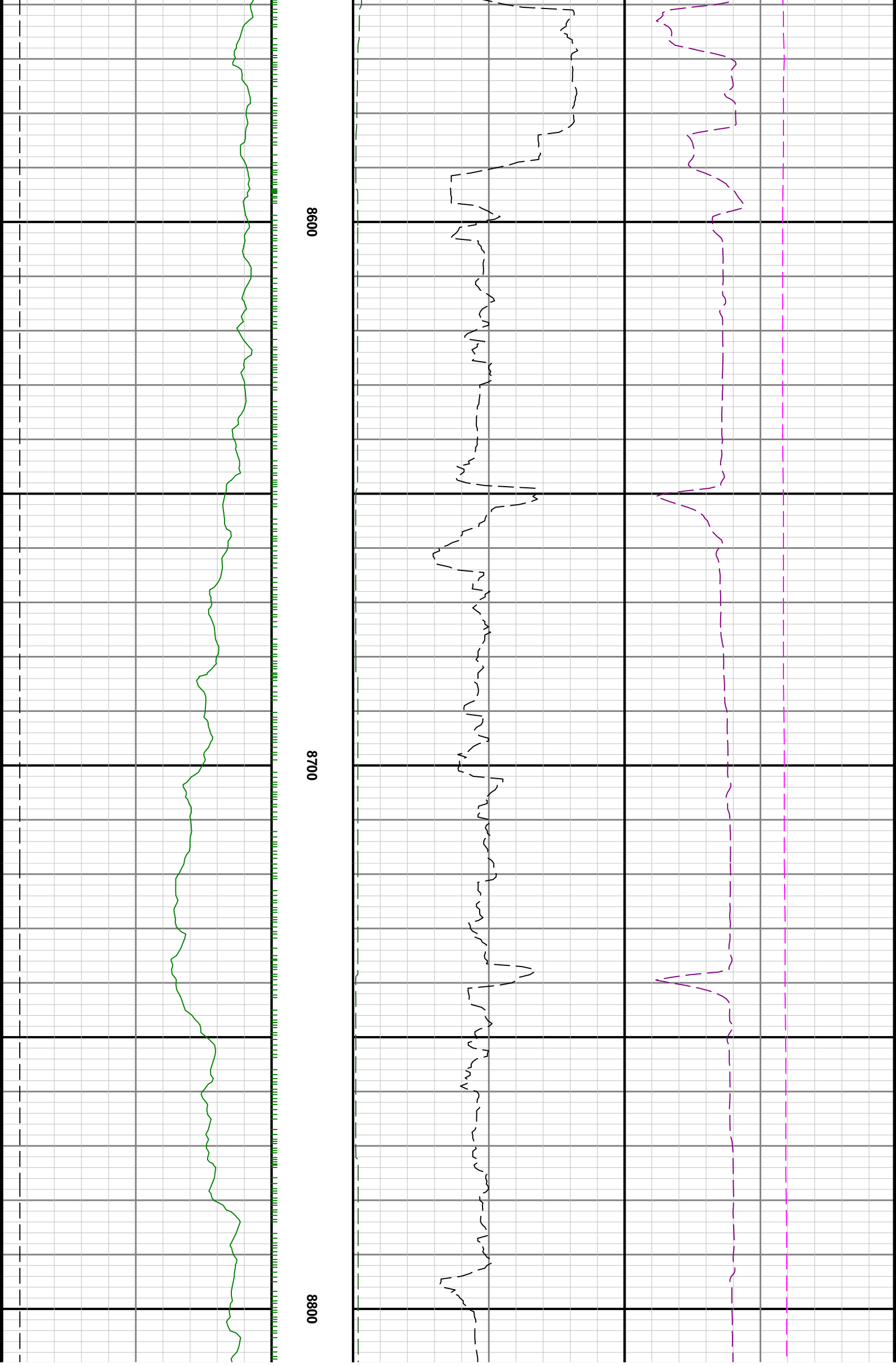


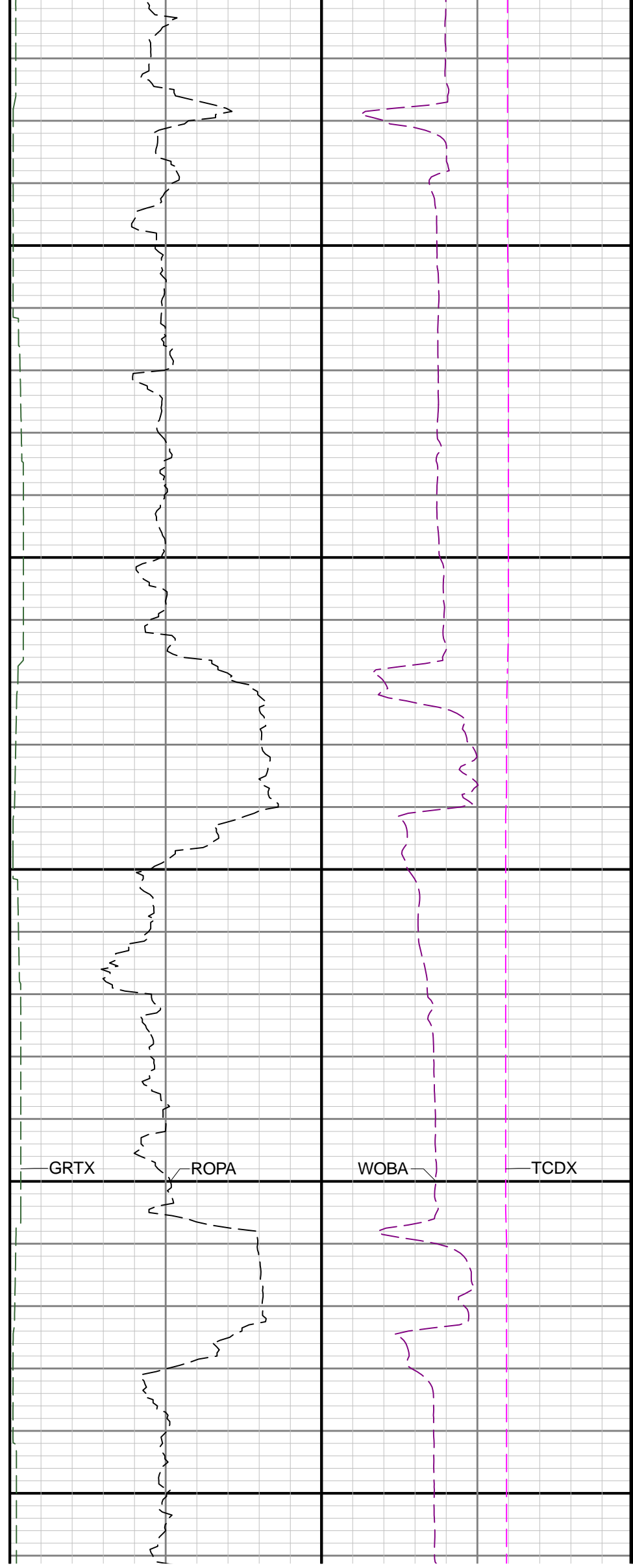
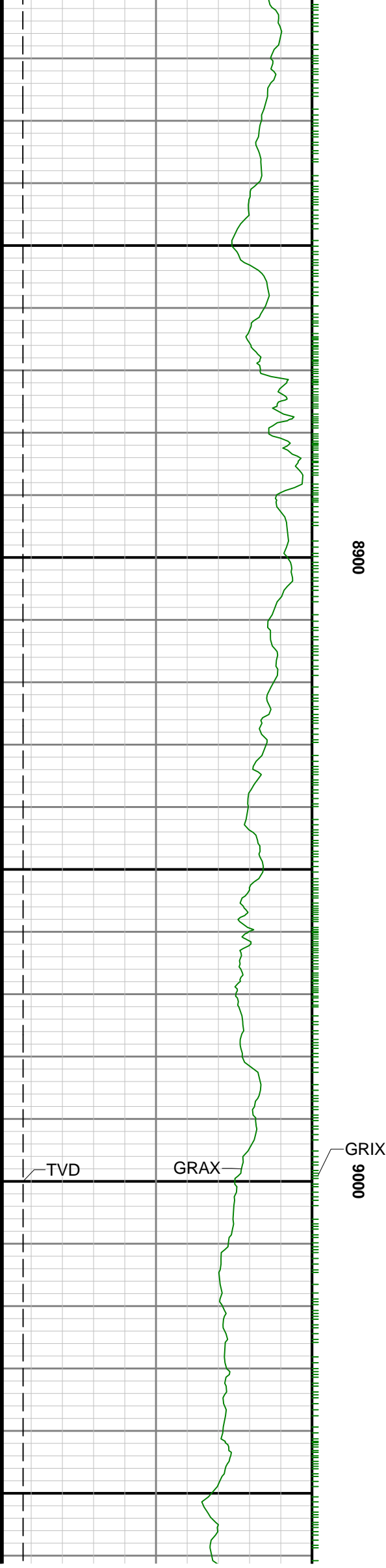


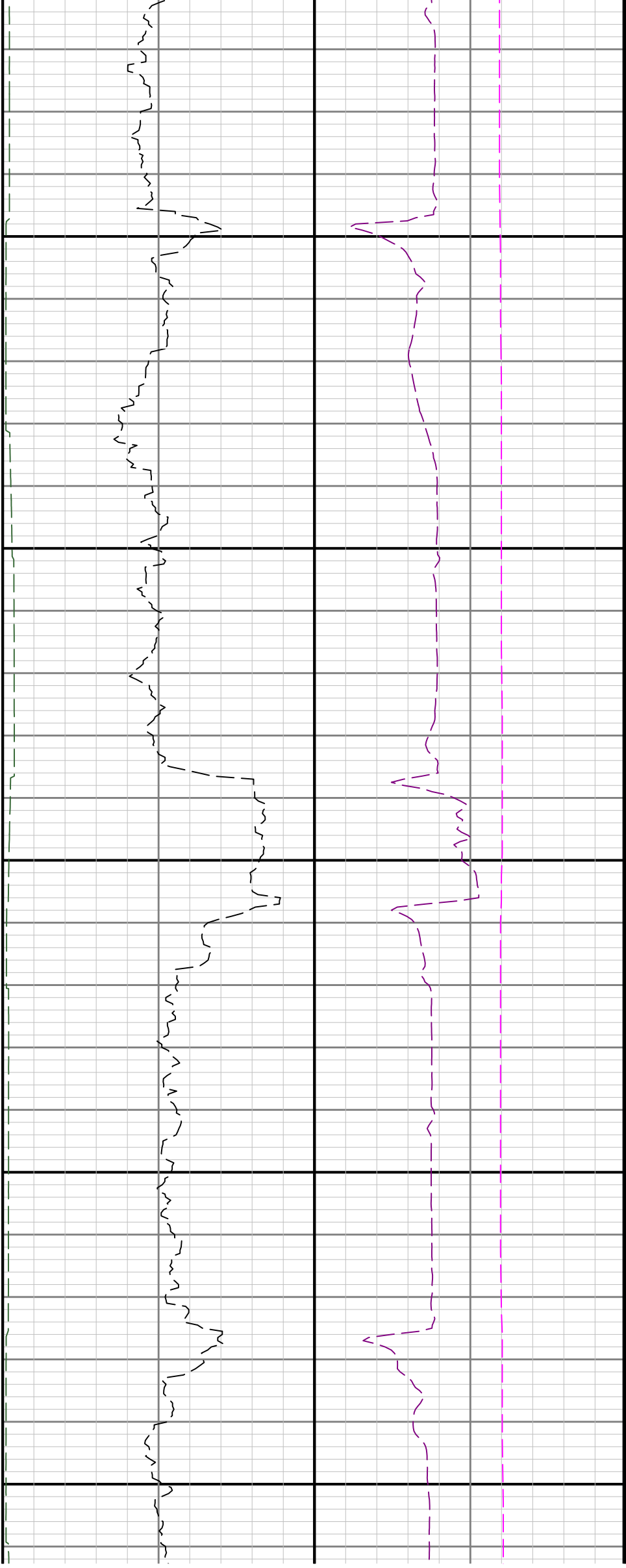
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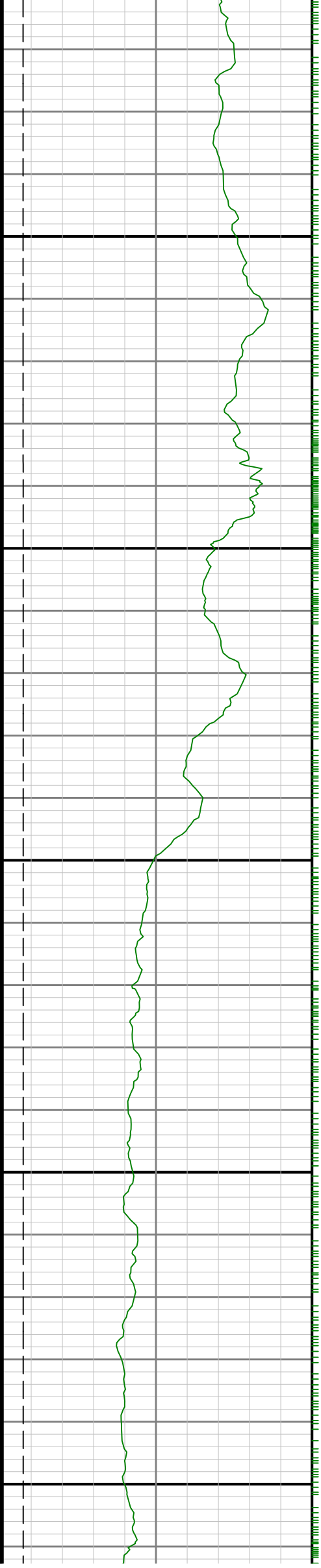


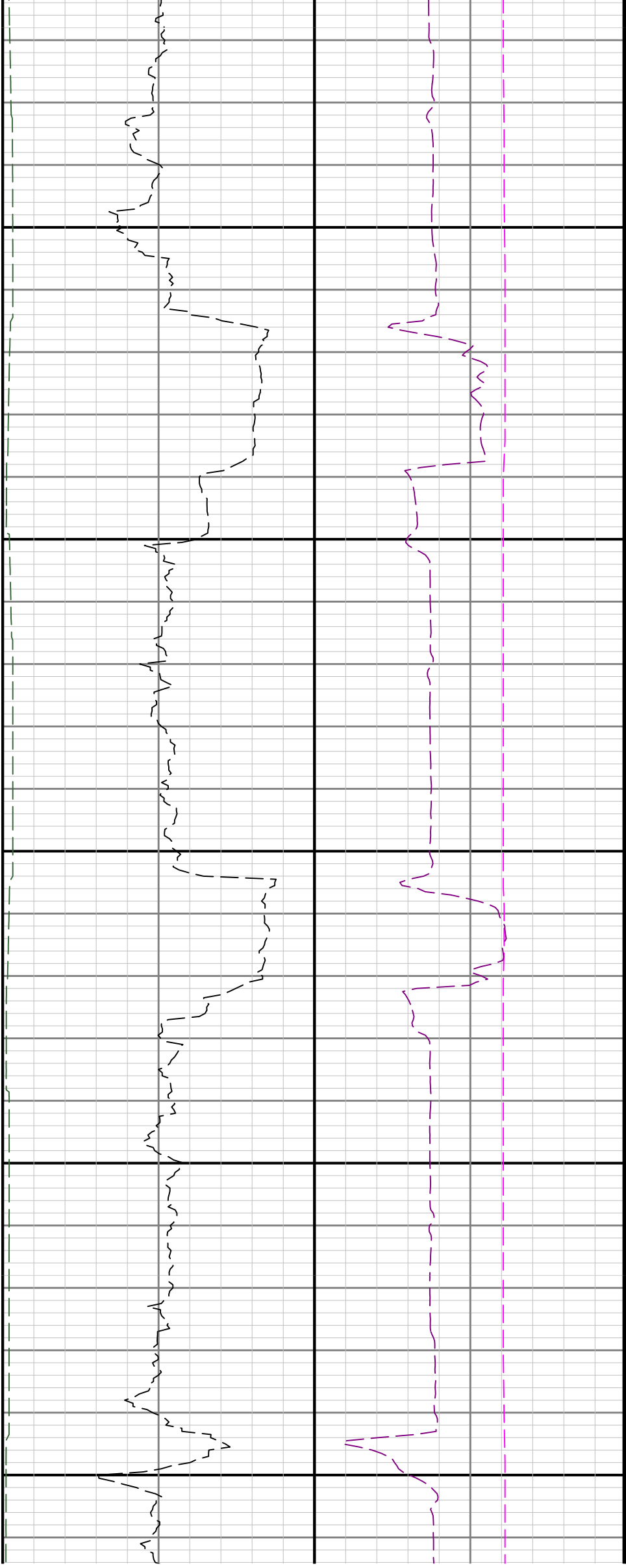


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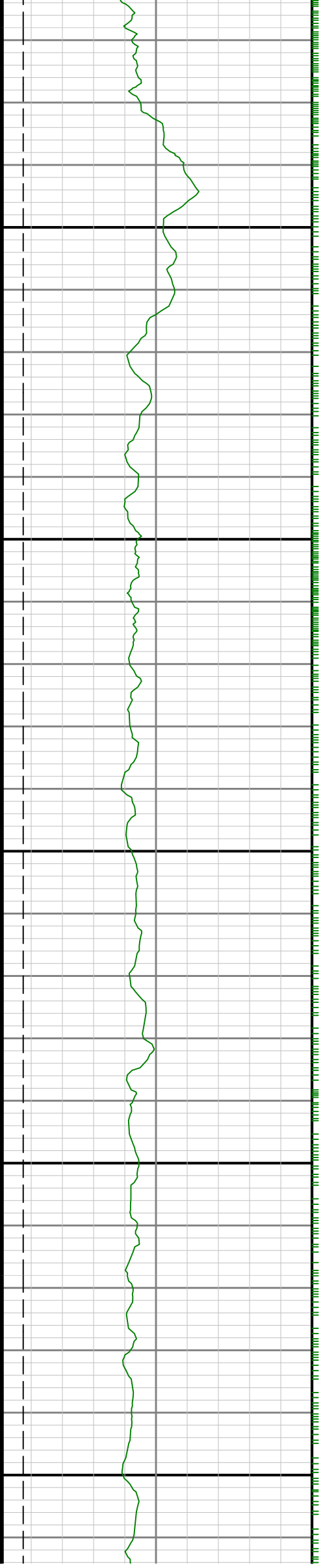
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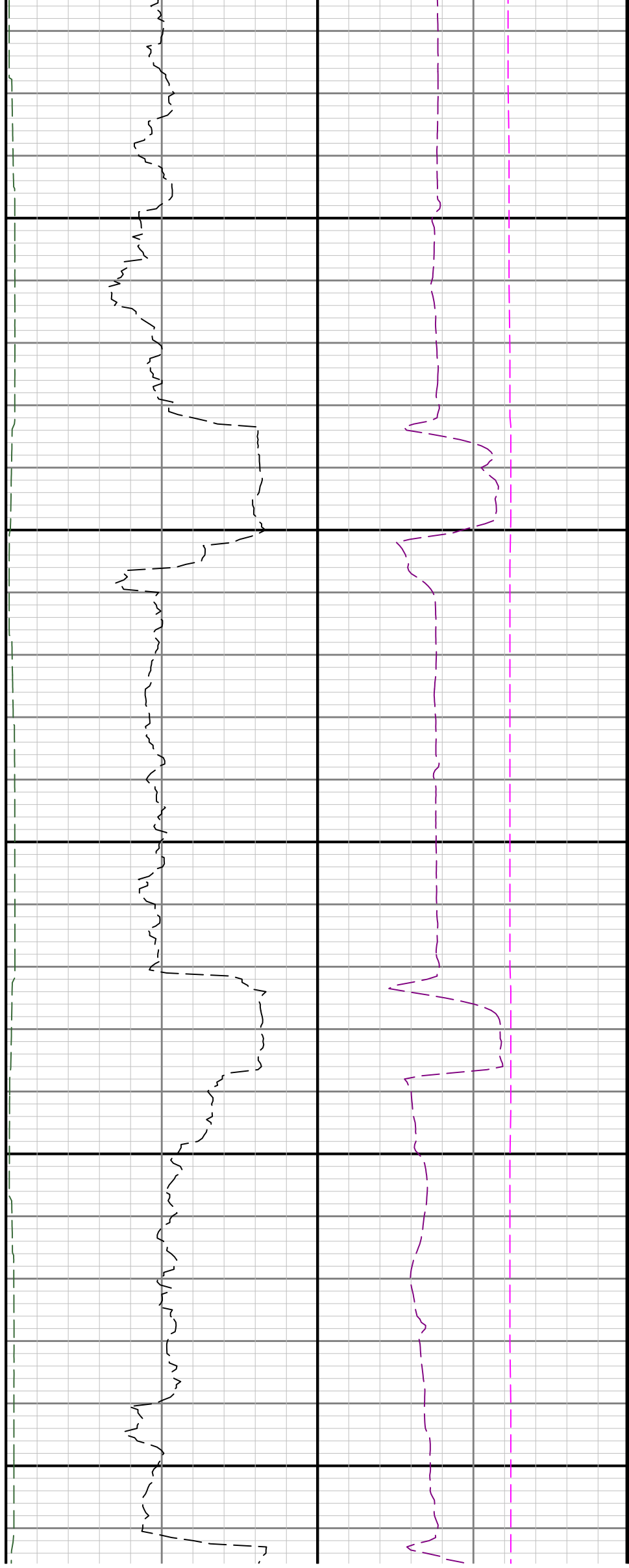
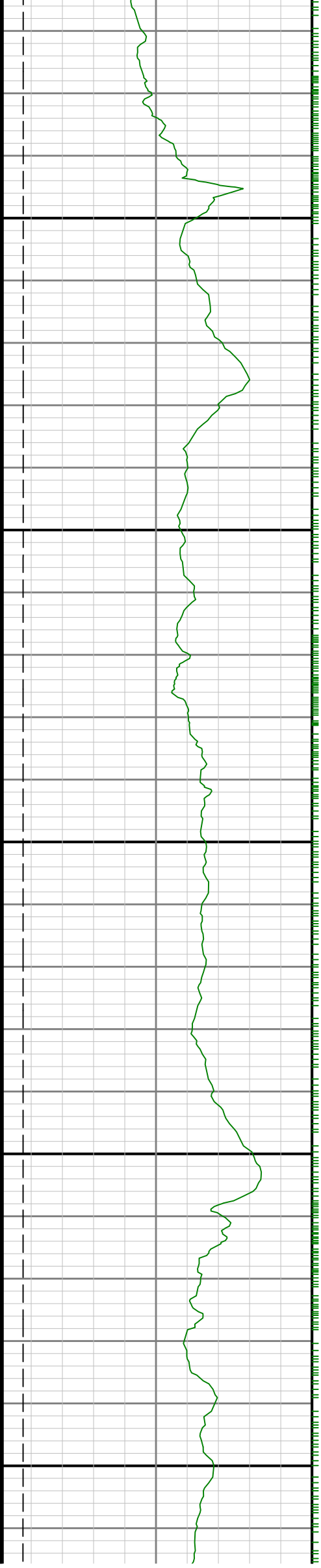


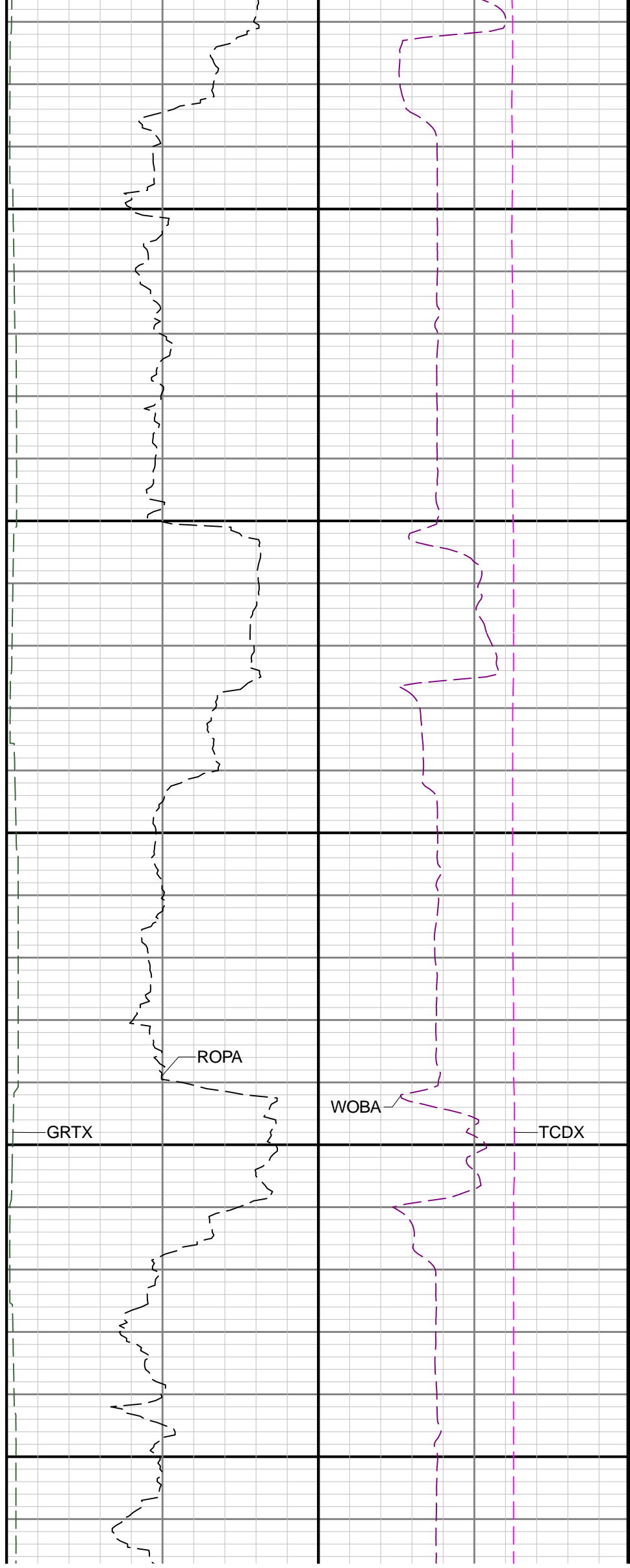
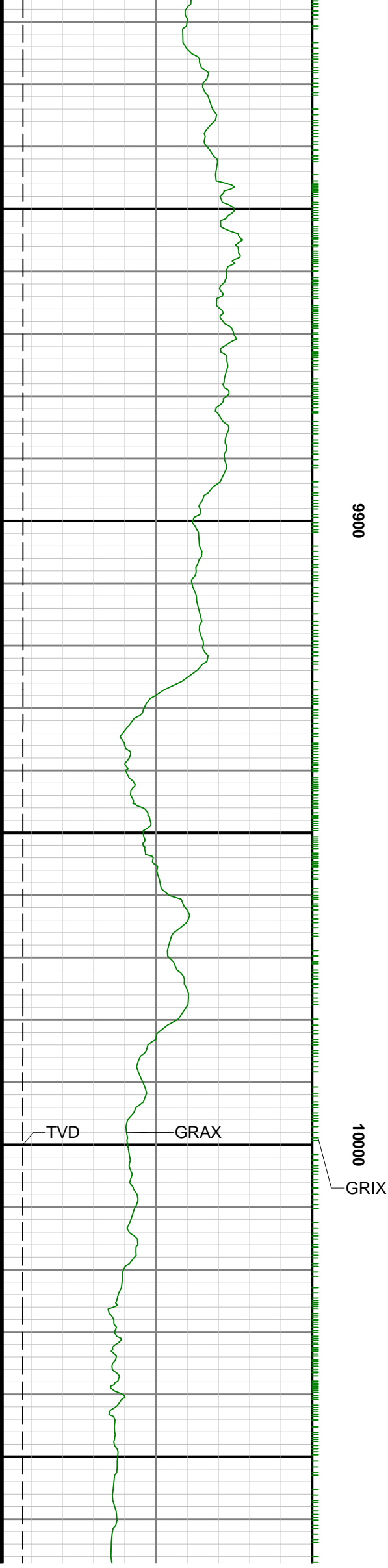


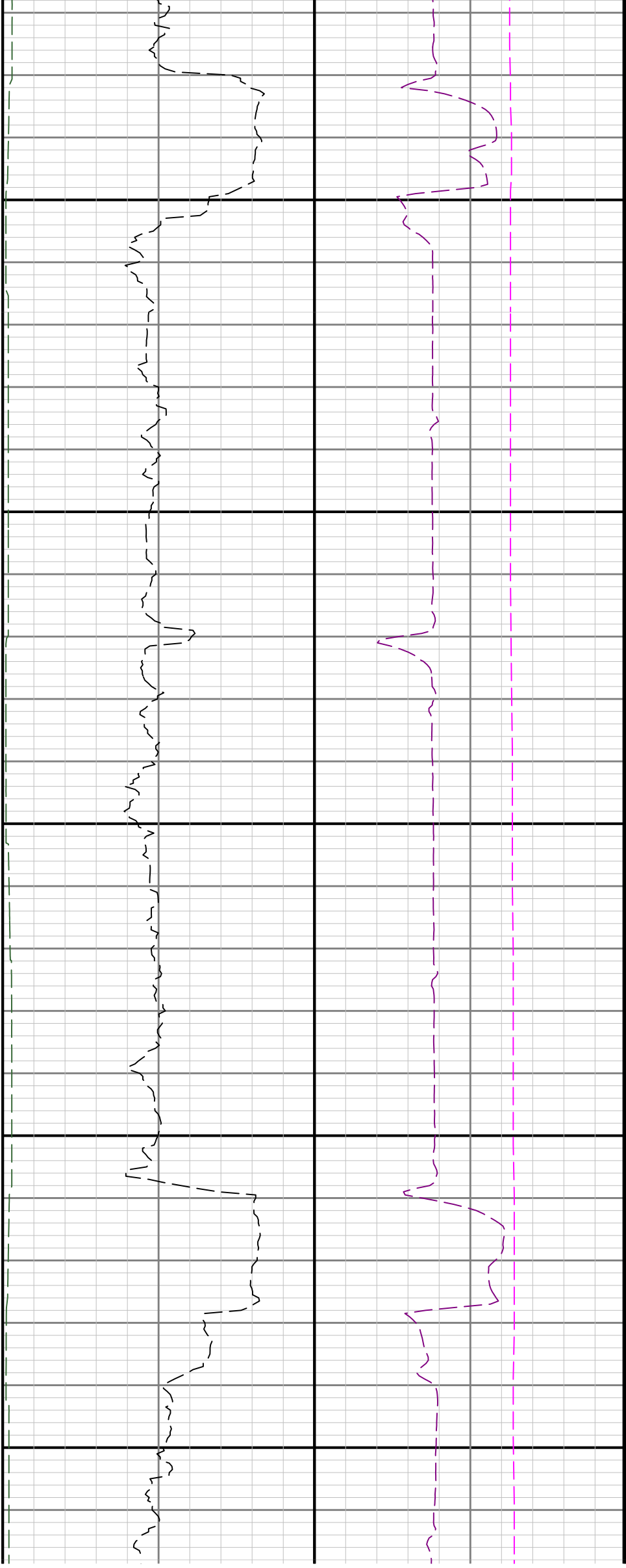
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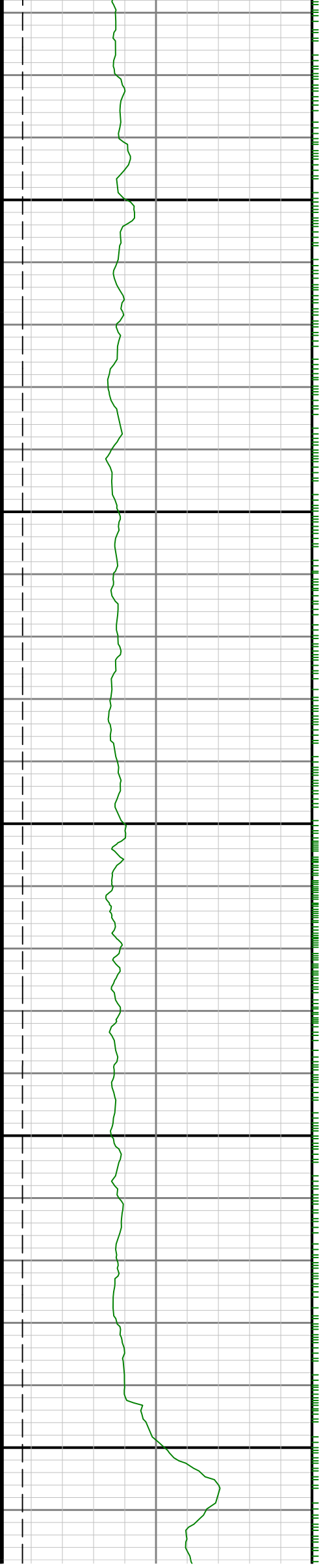


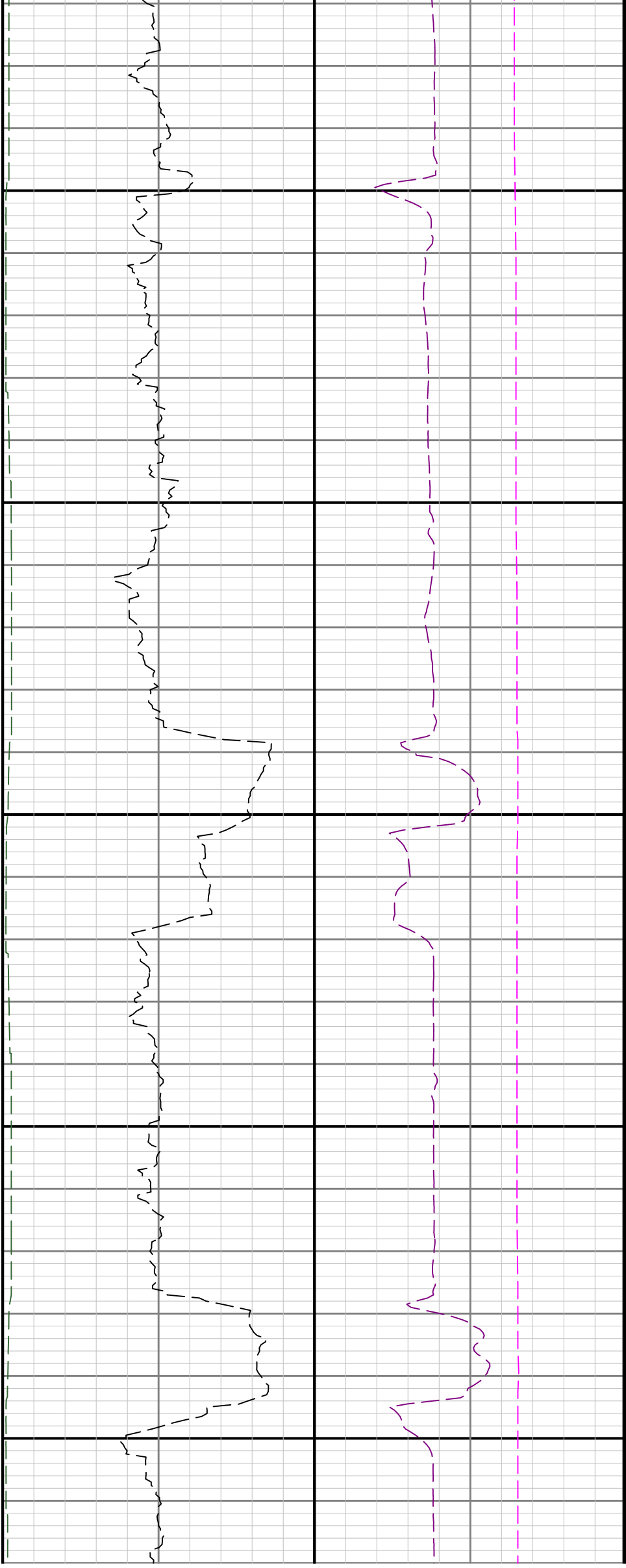


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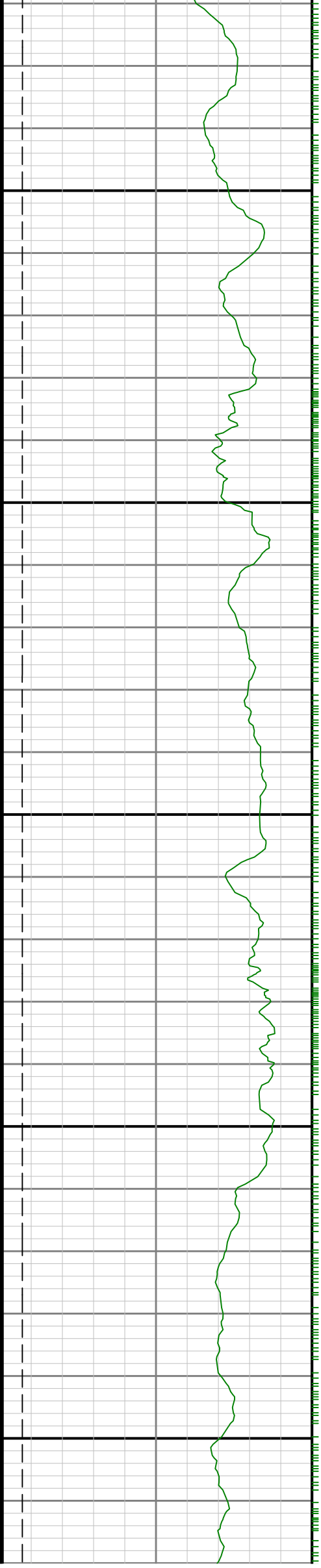
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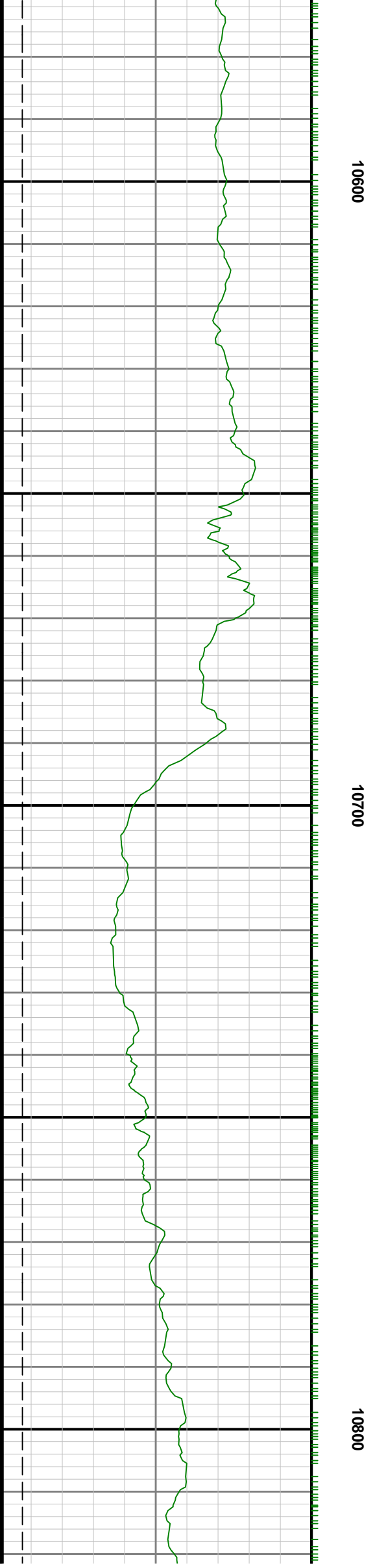
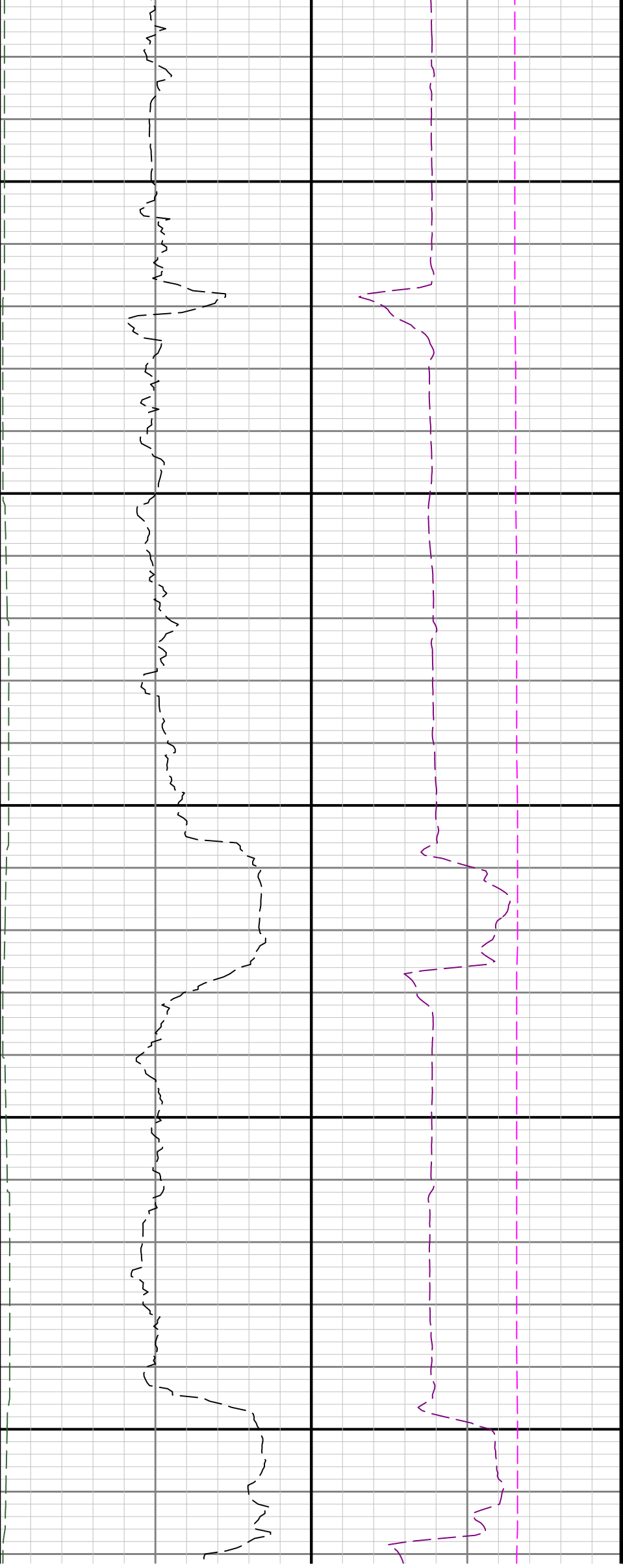


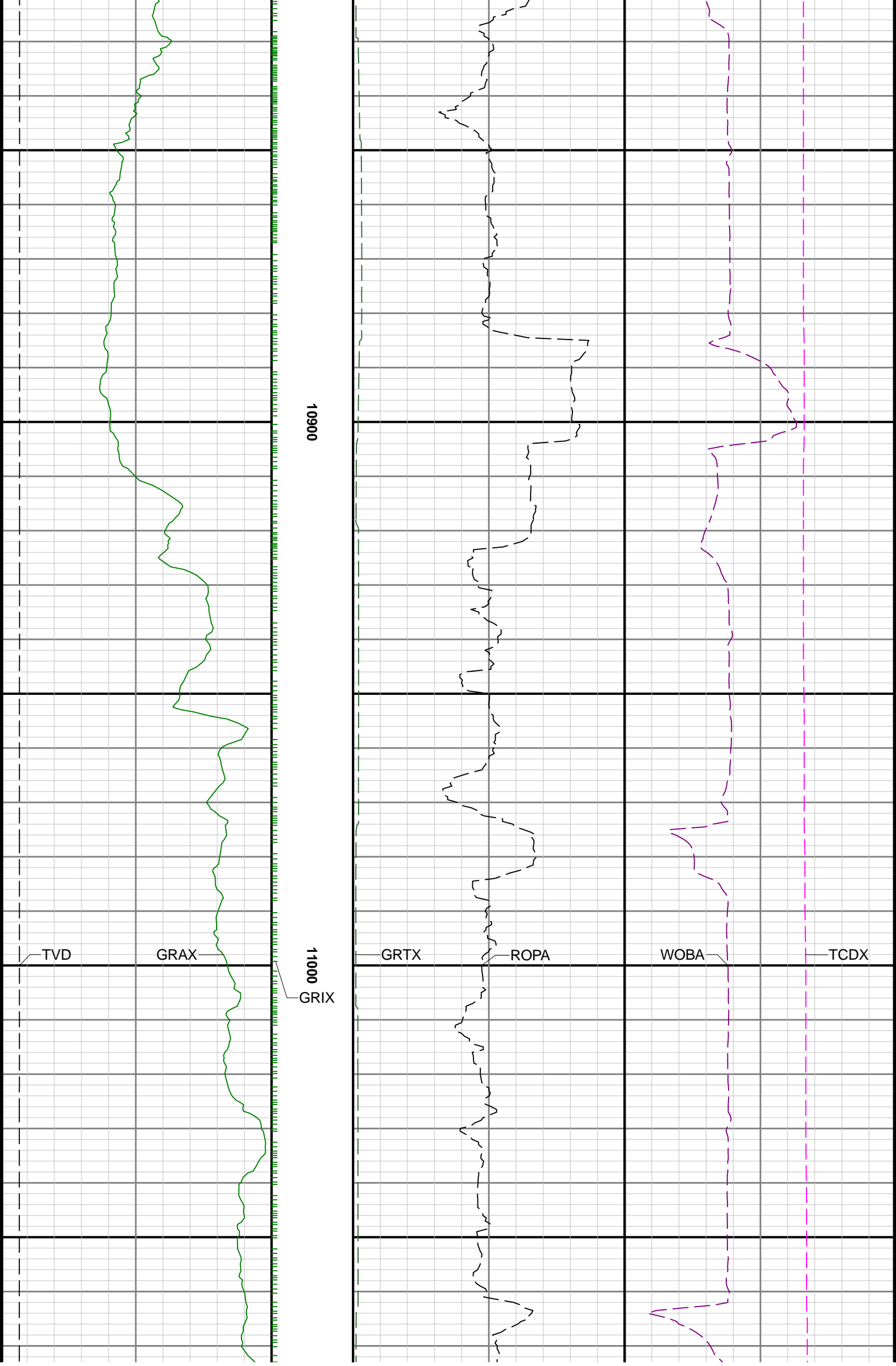


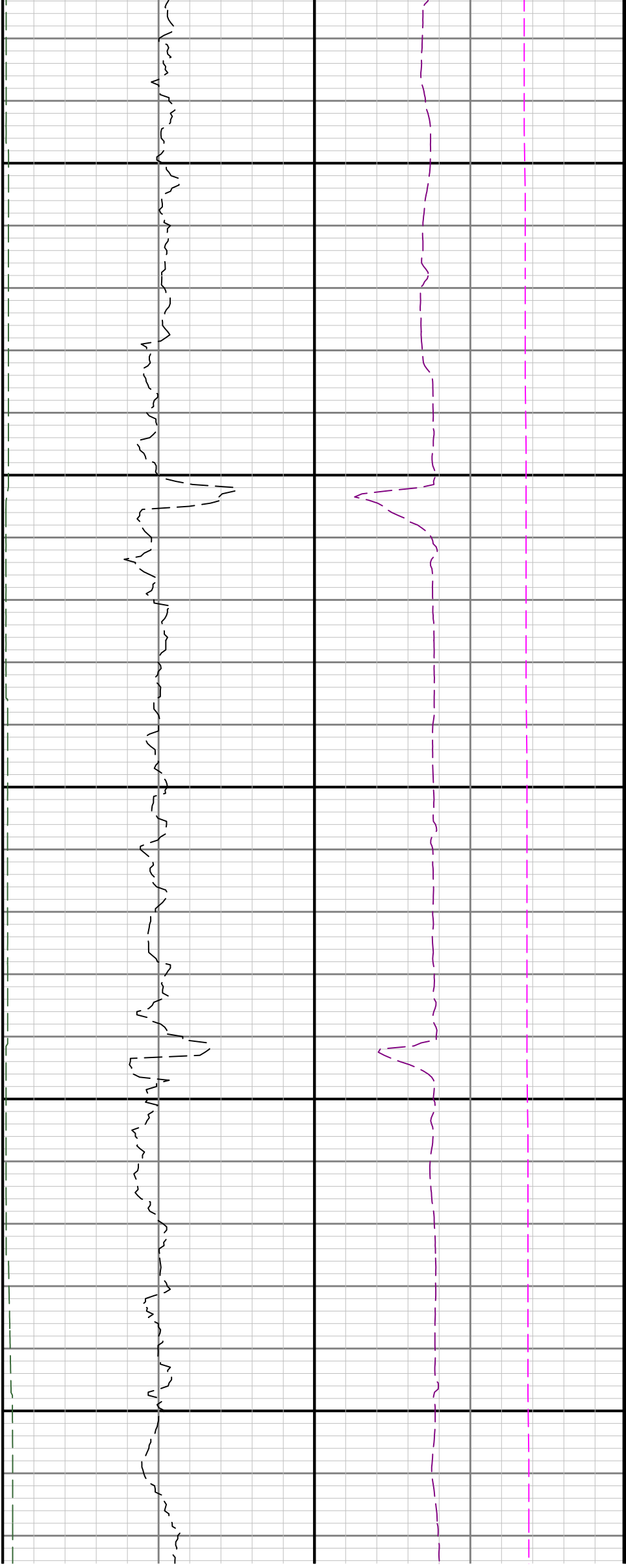
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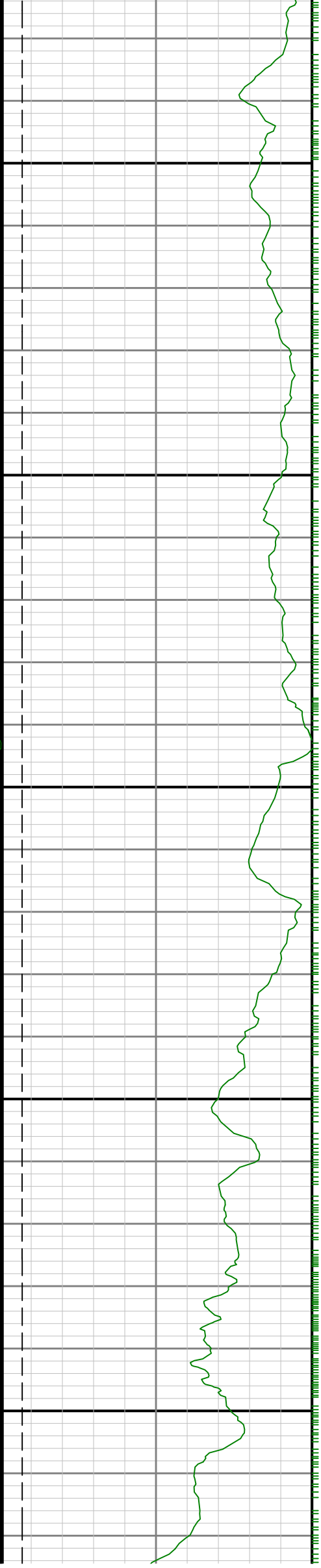


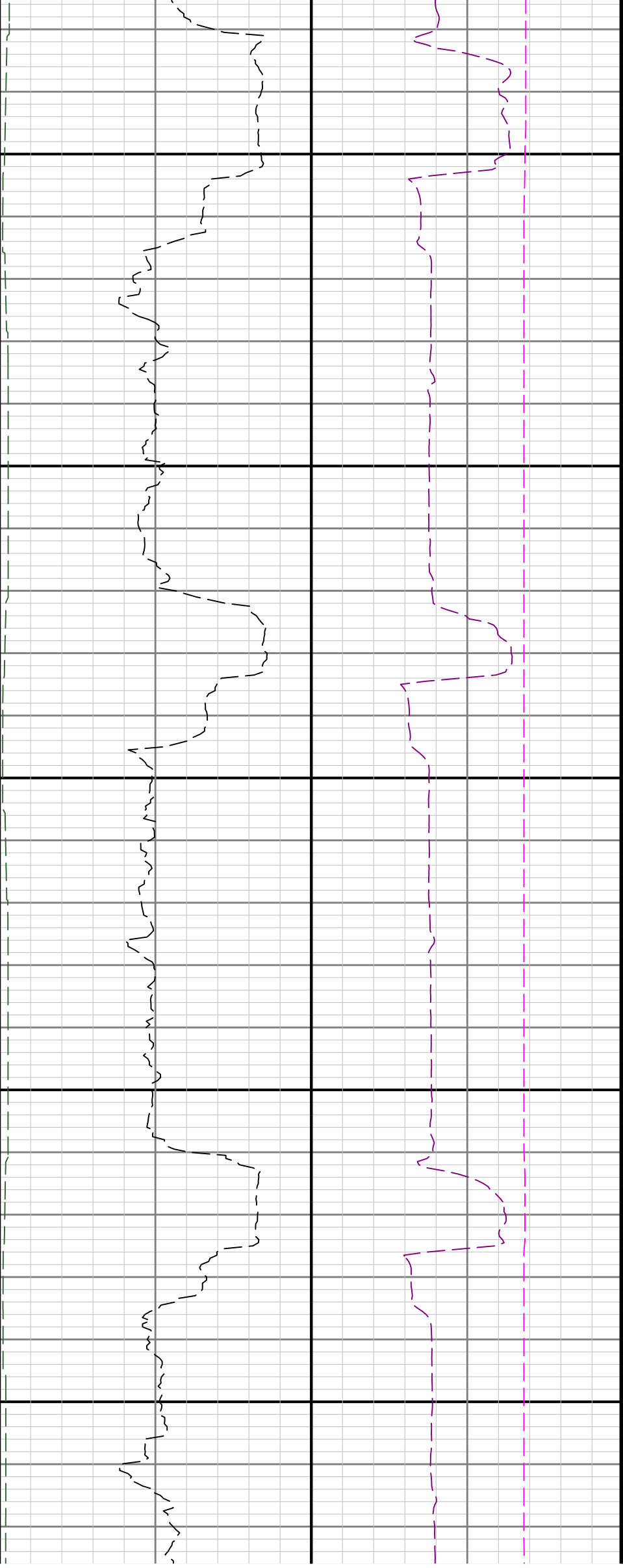


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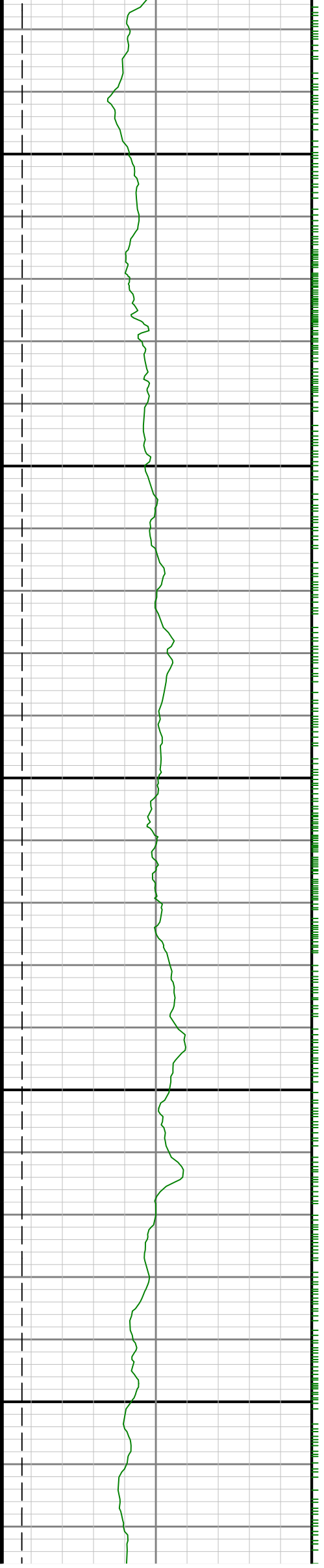
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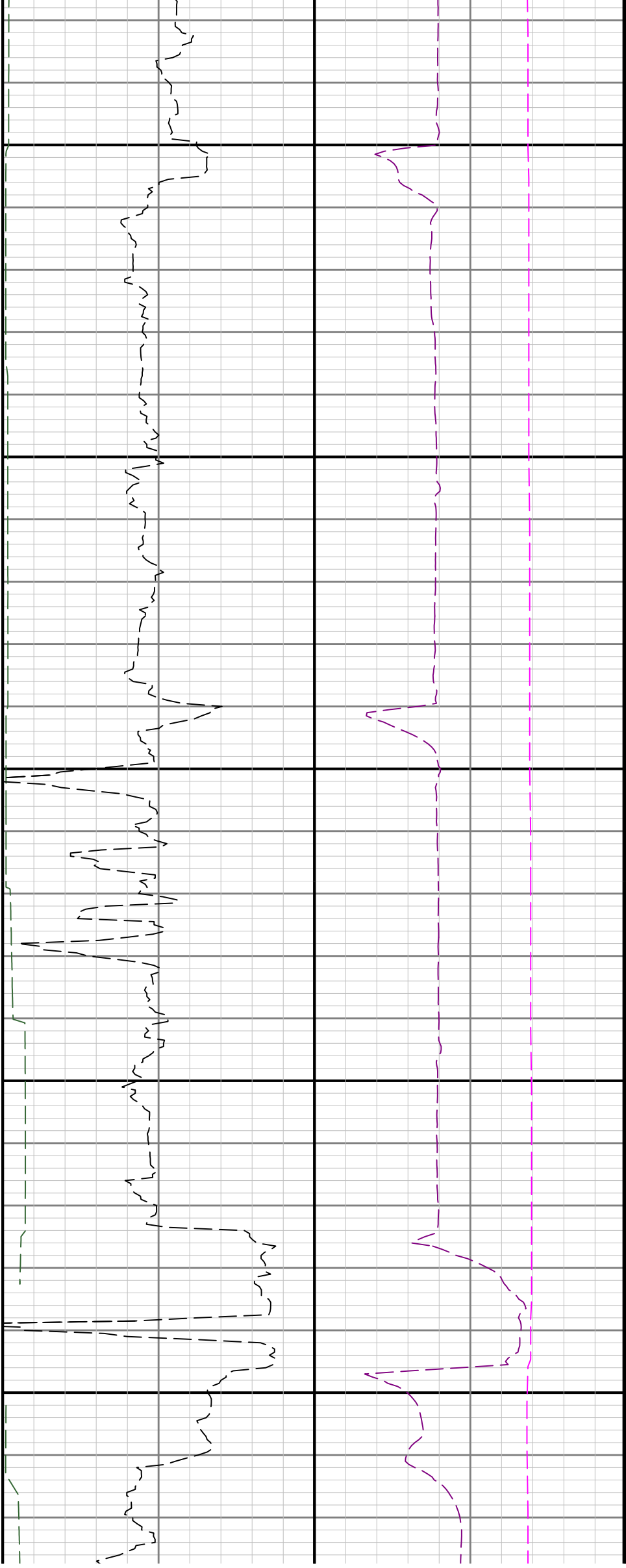




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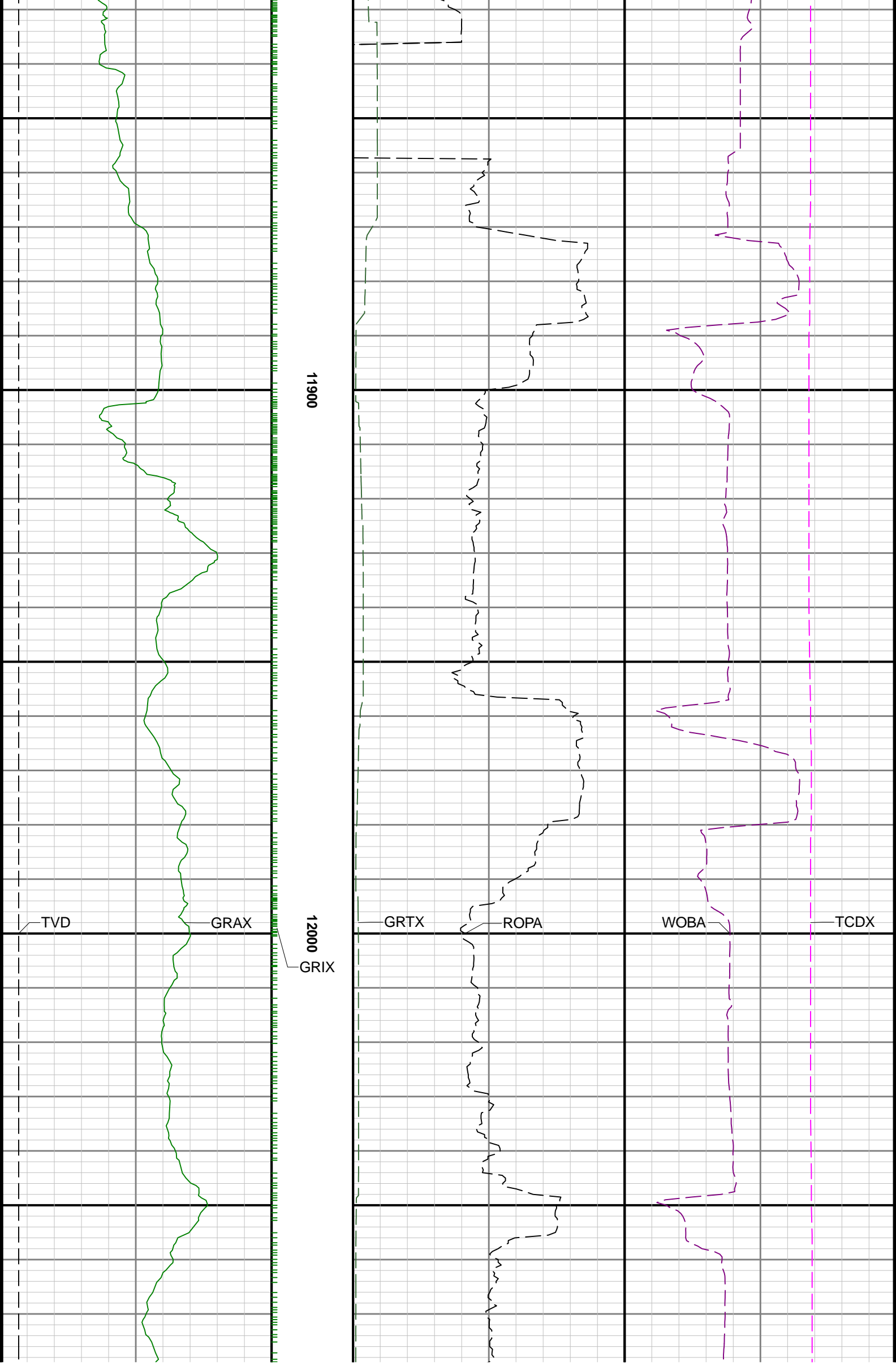


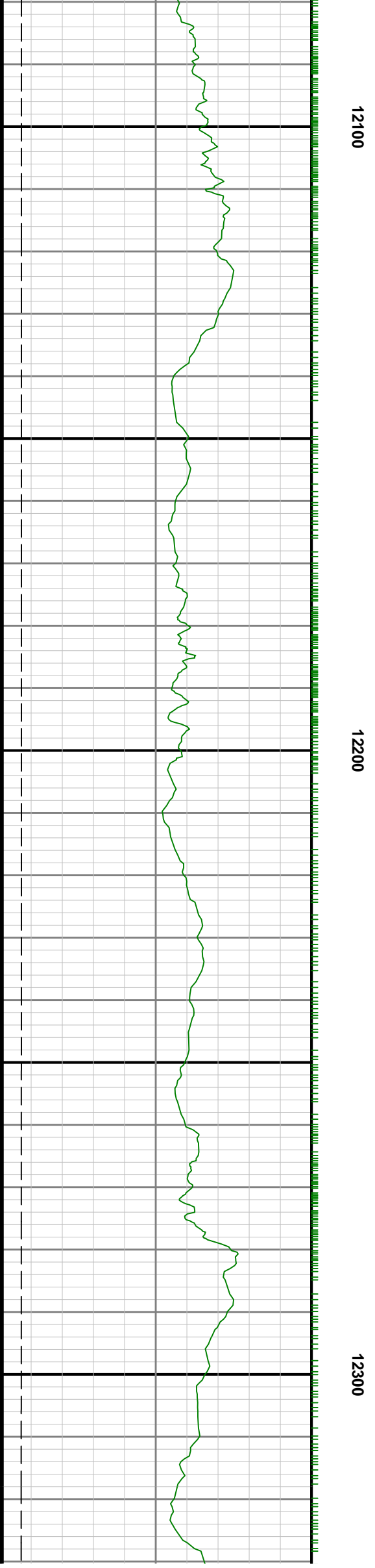
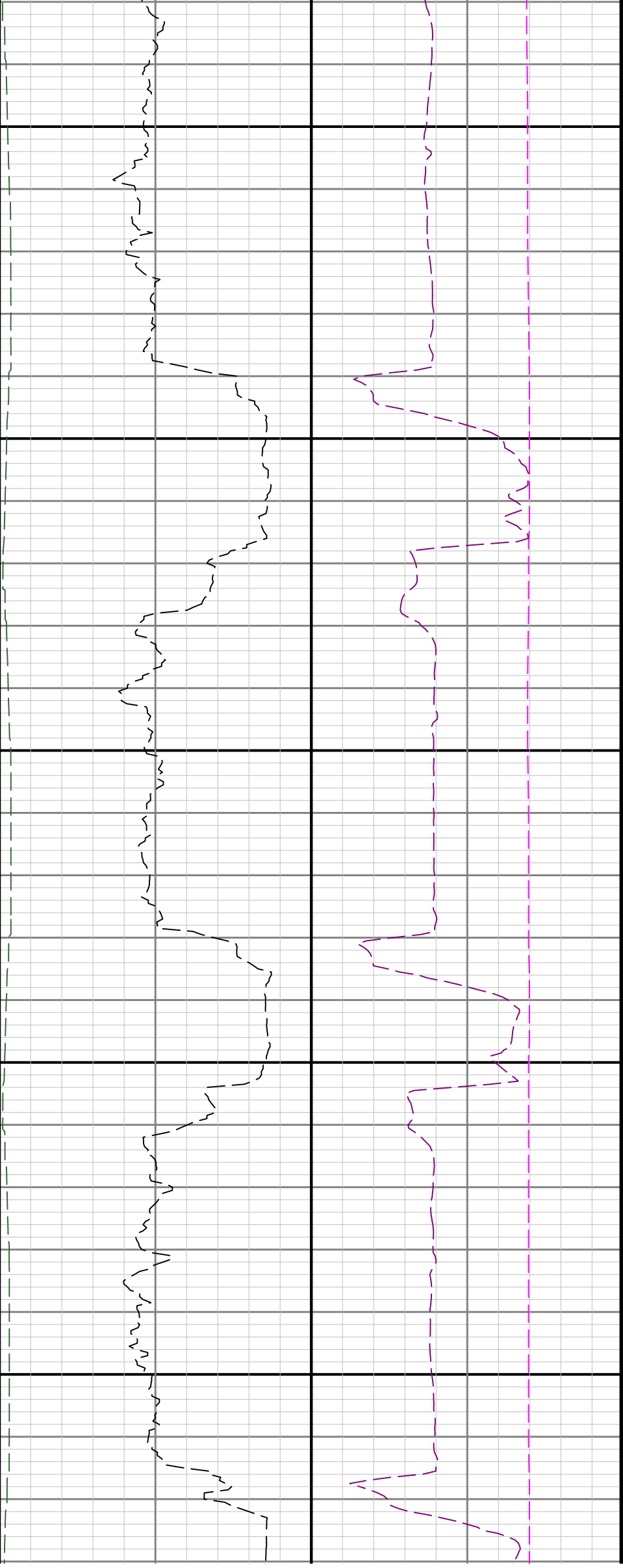
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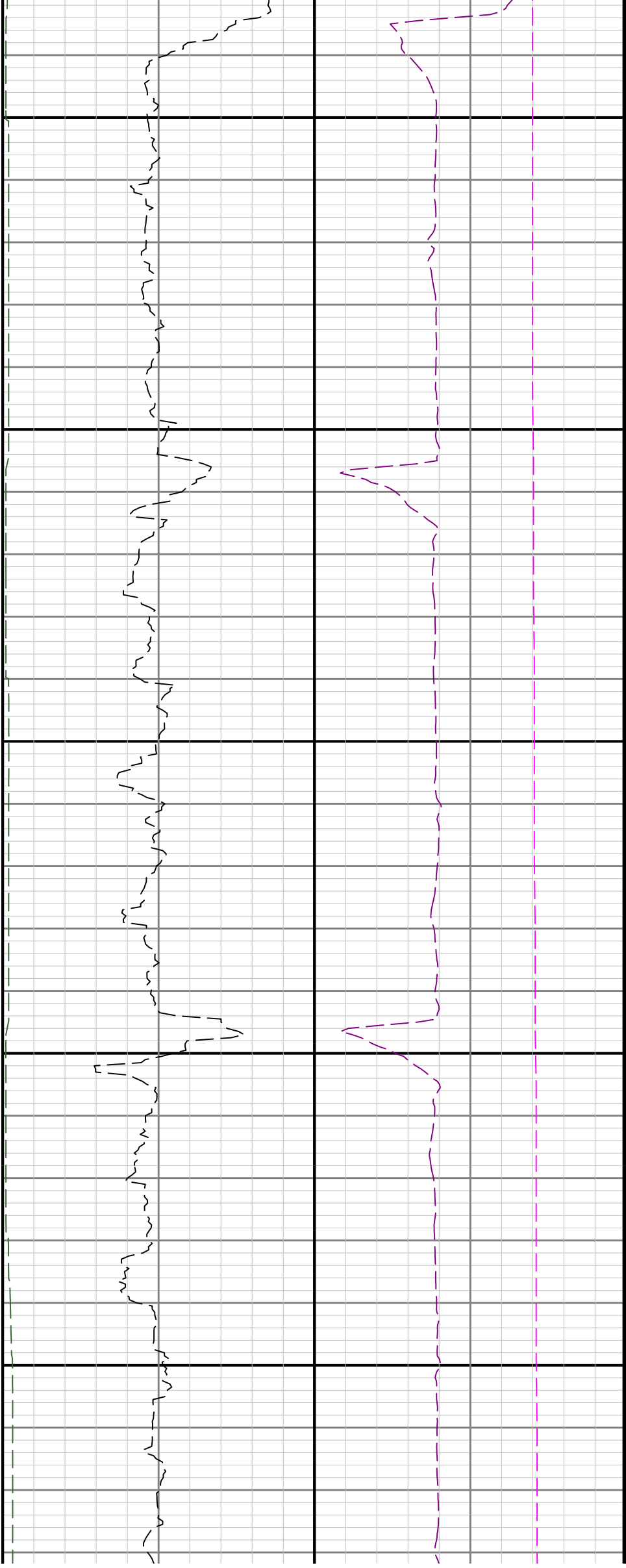
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See Remark 1

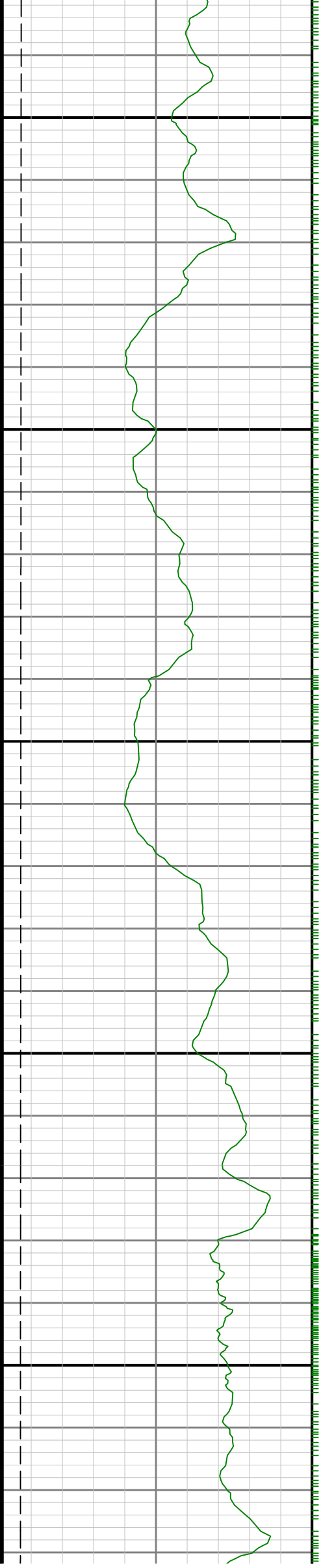


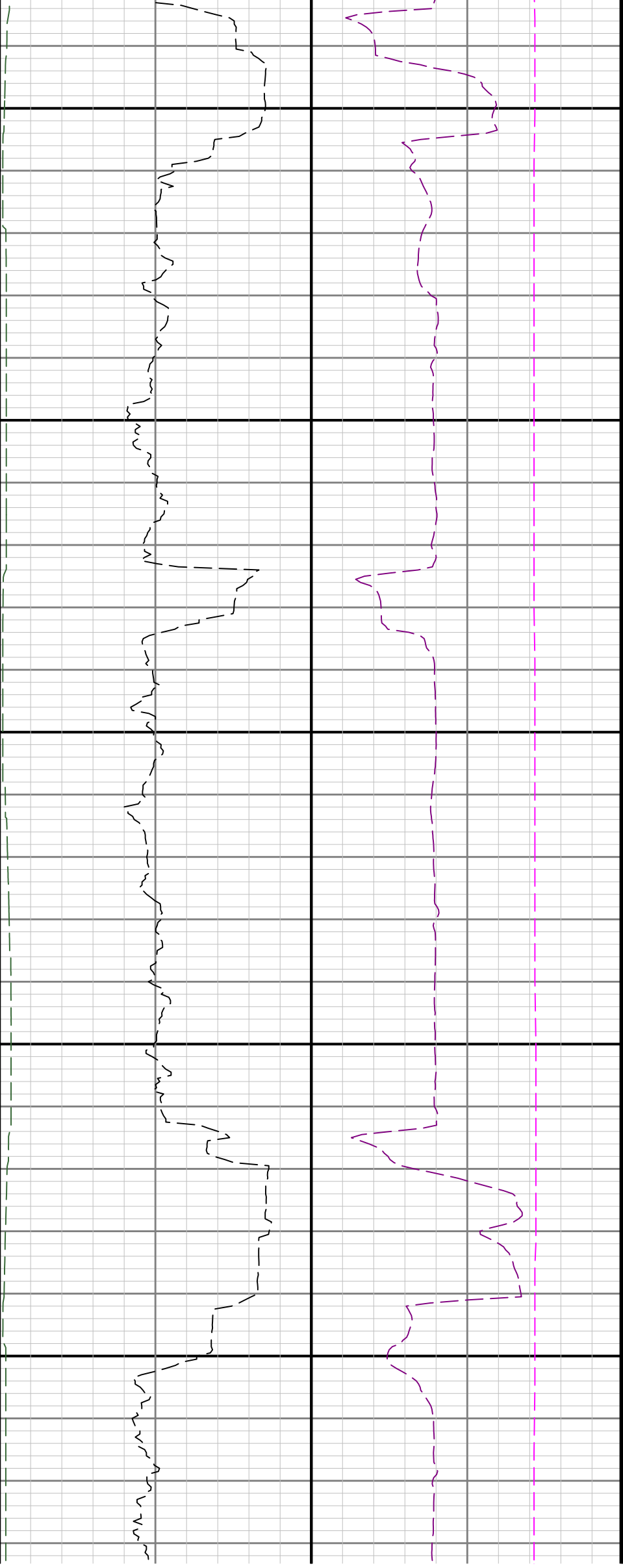




12400

12500

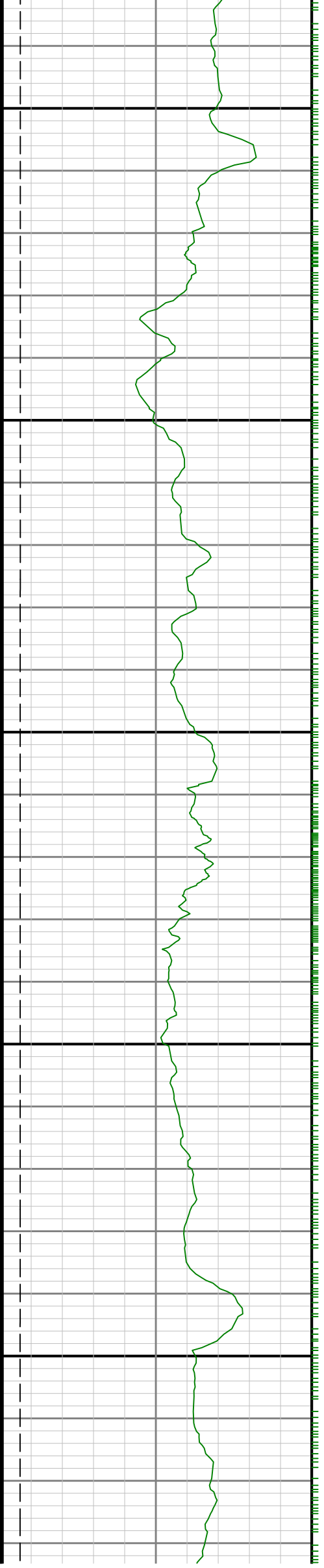


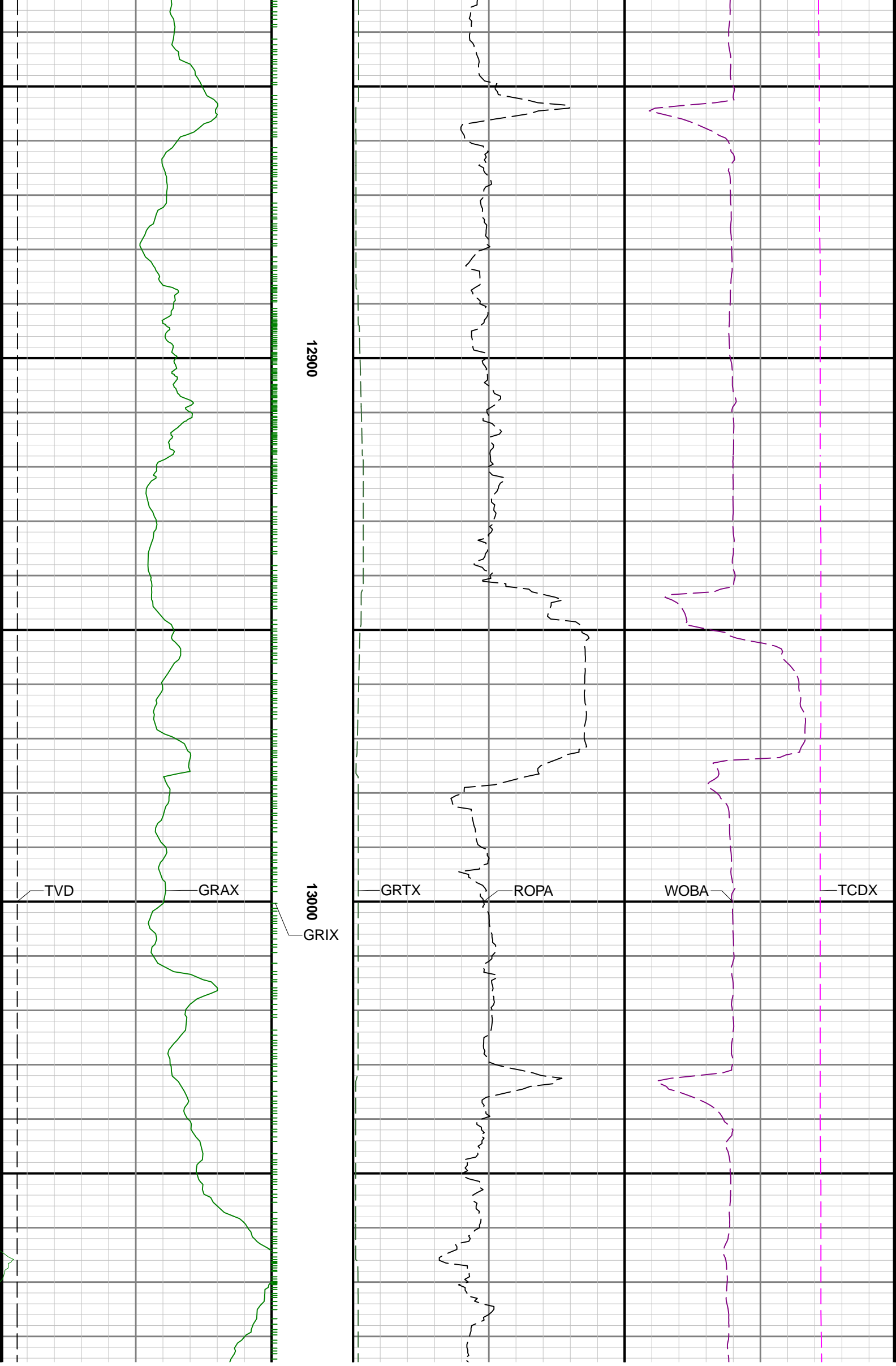


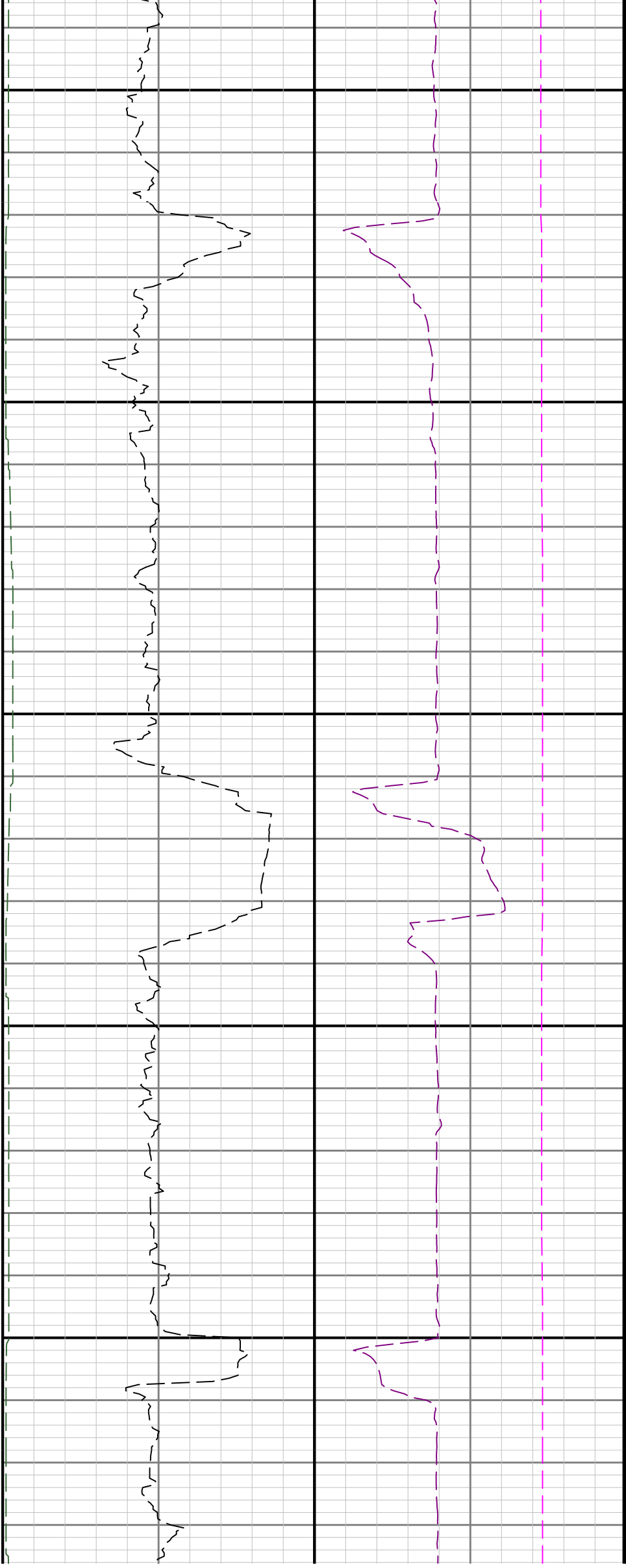
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12700

12800



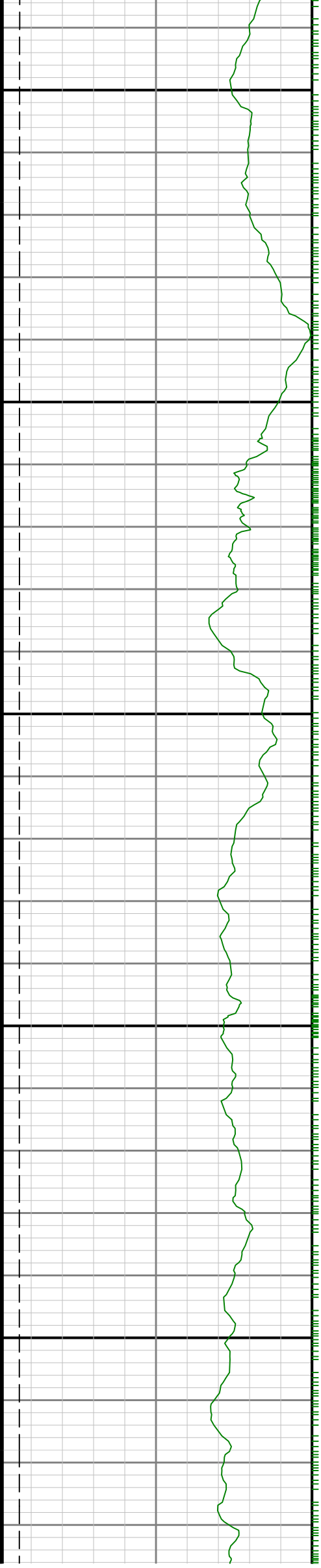


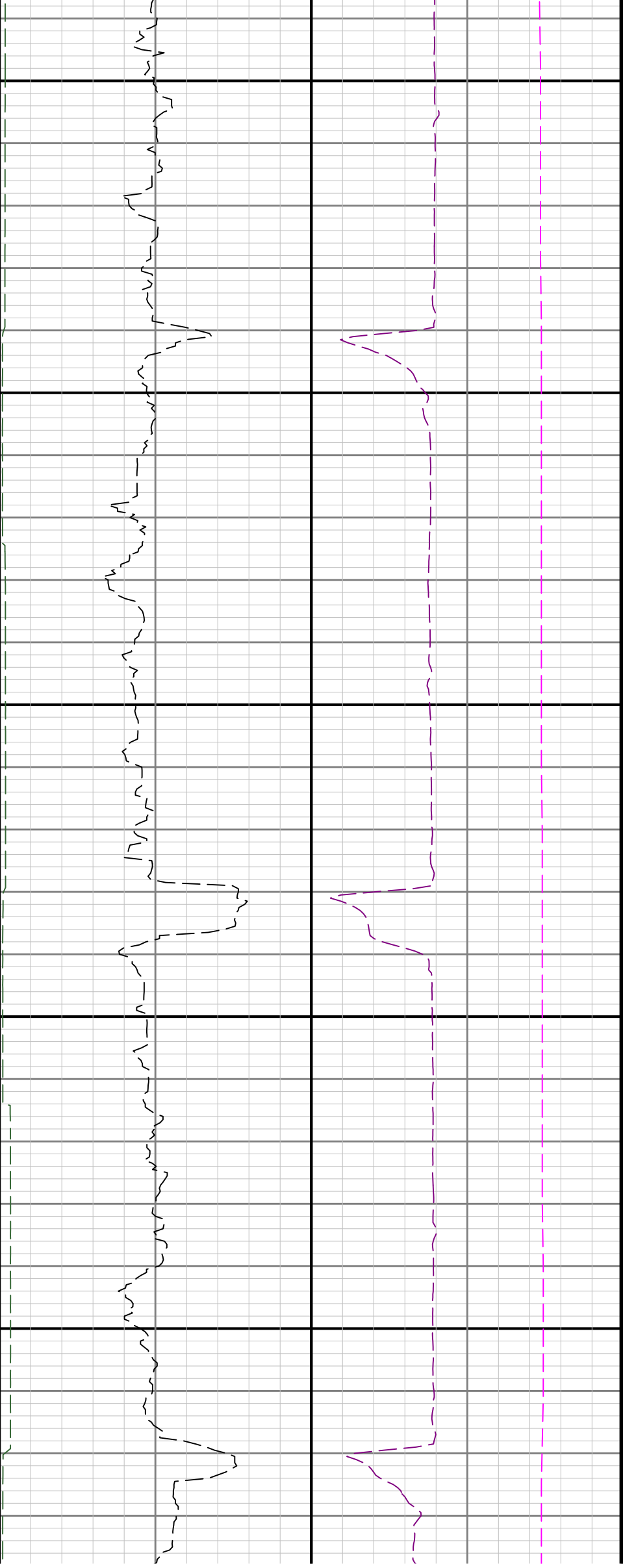


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13200

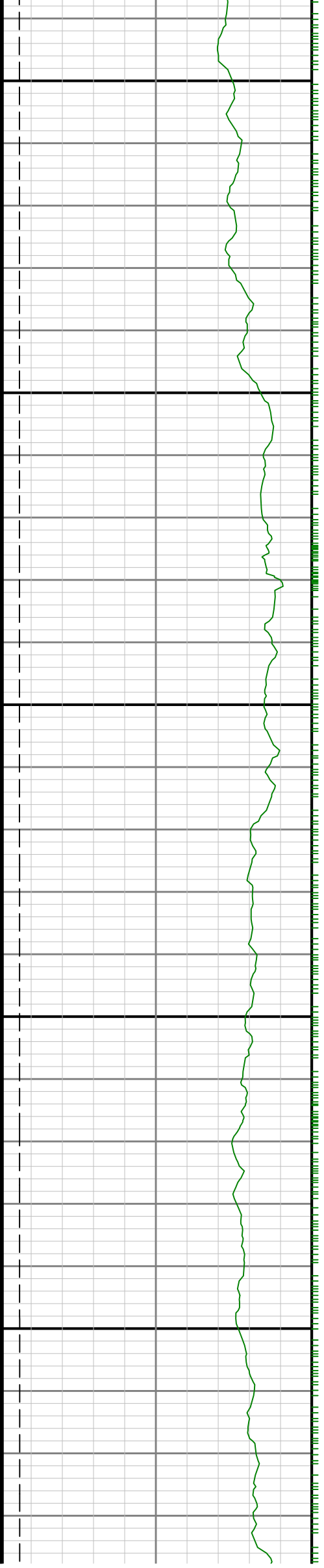
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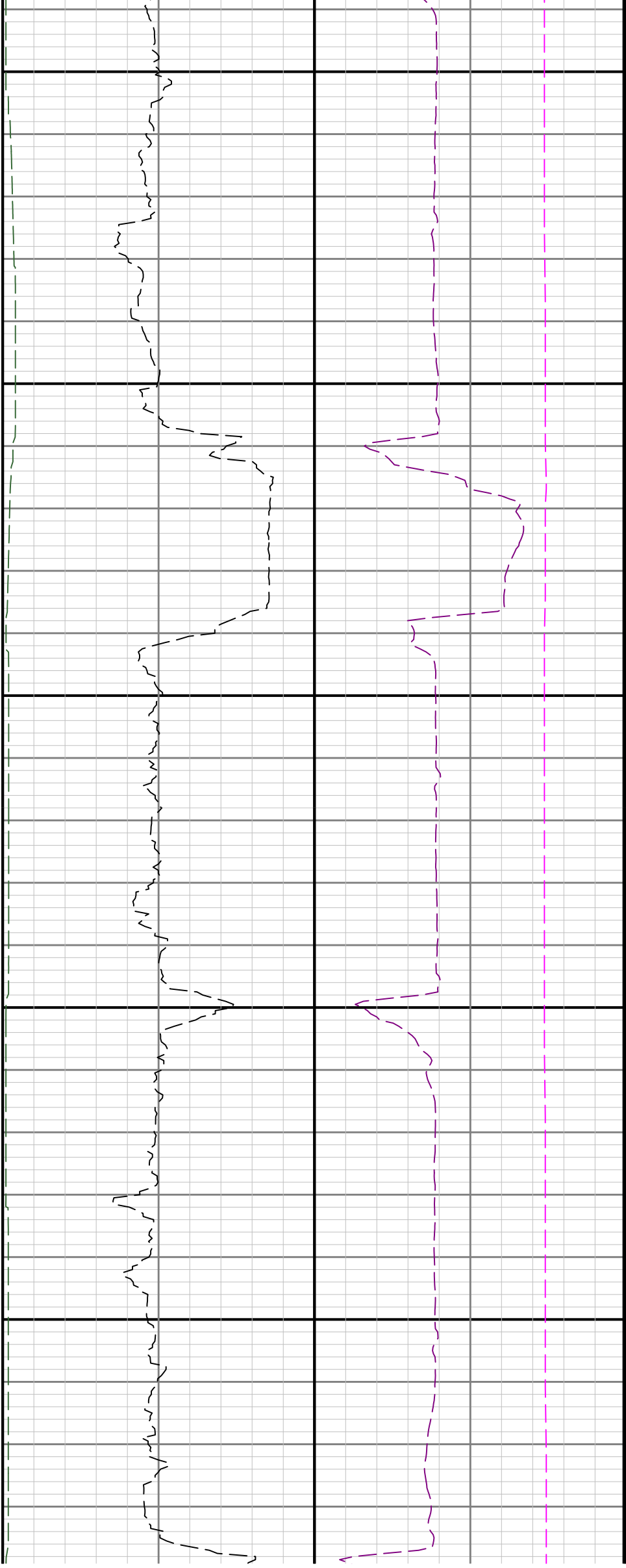




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13500

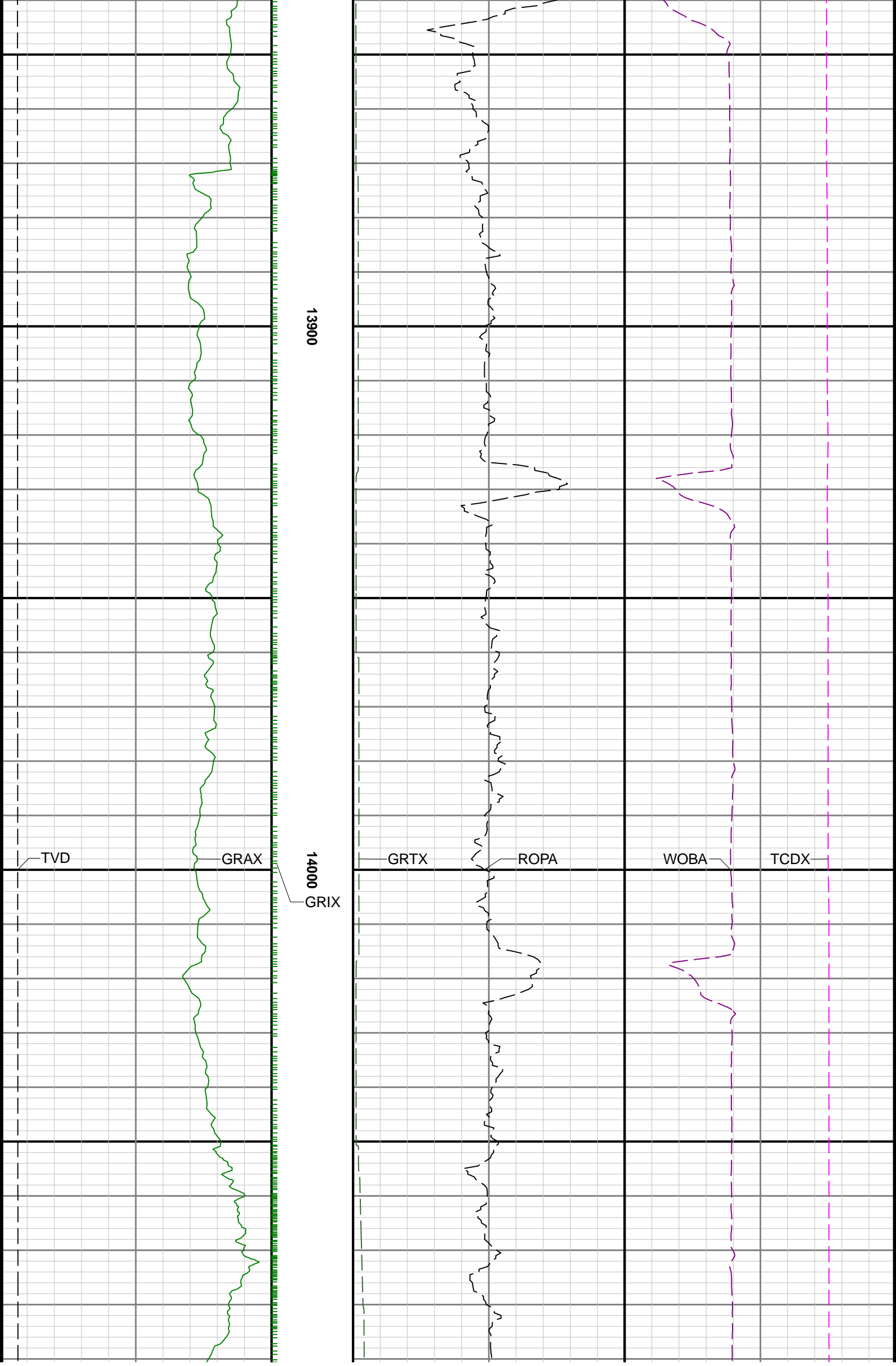


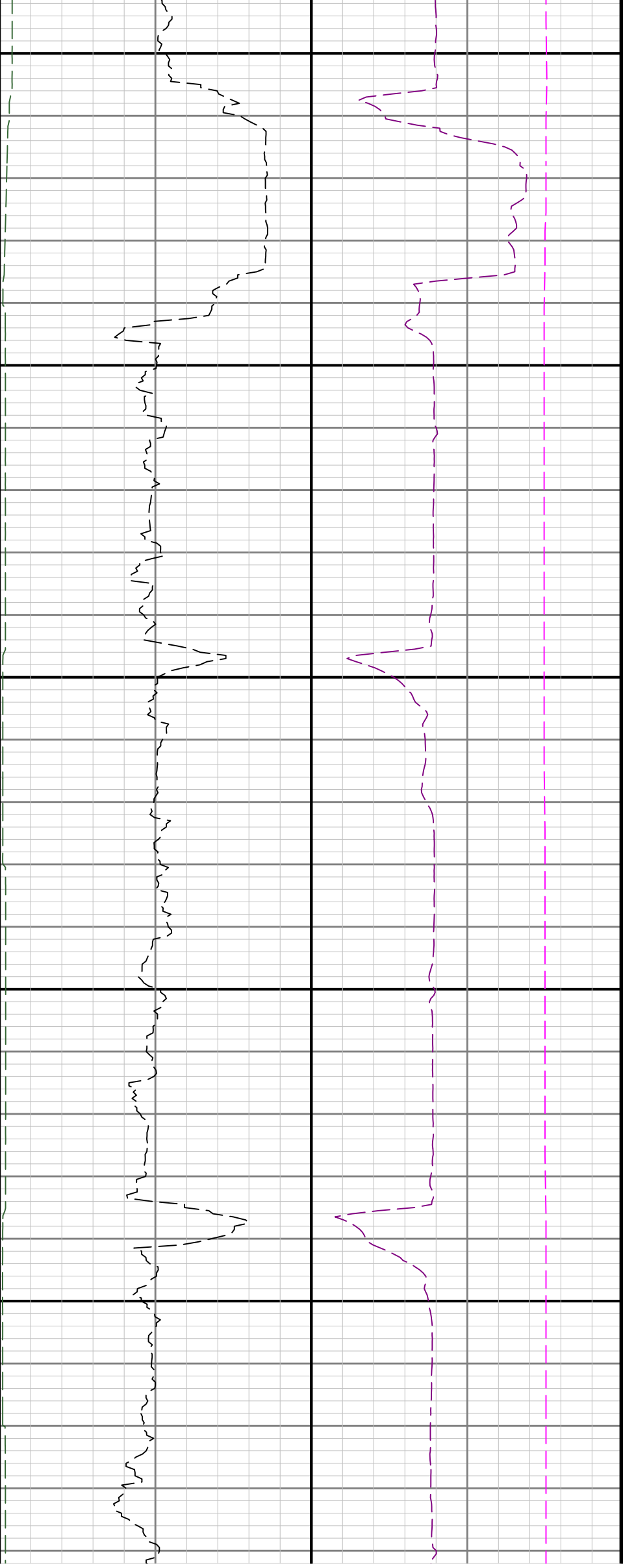


13600

13700

13800

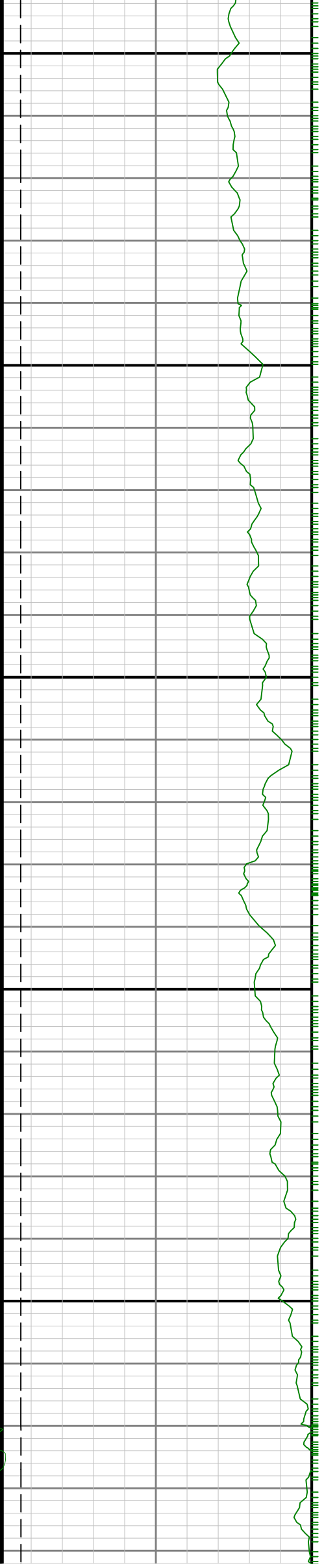


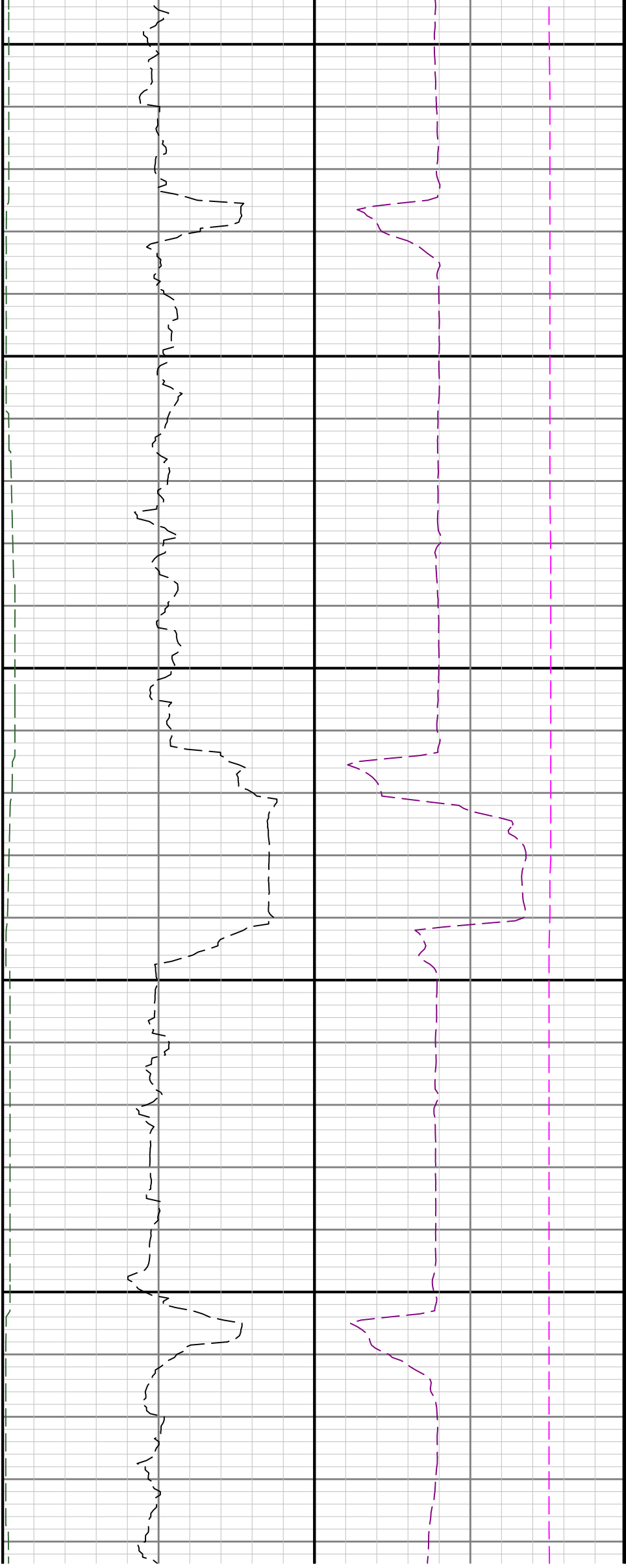


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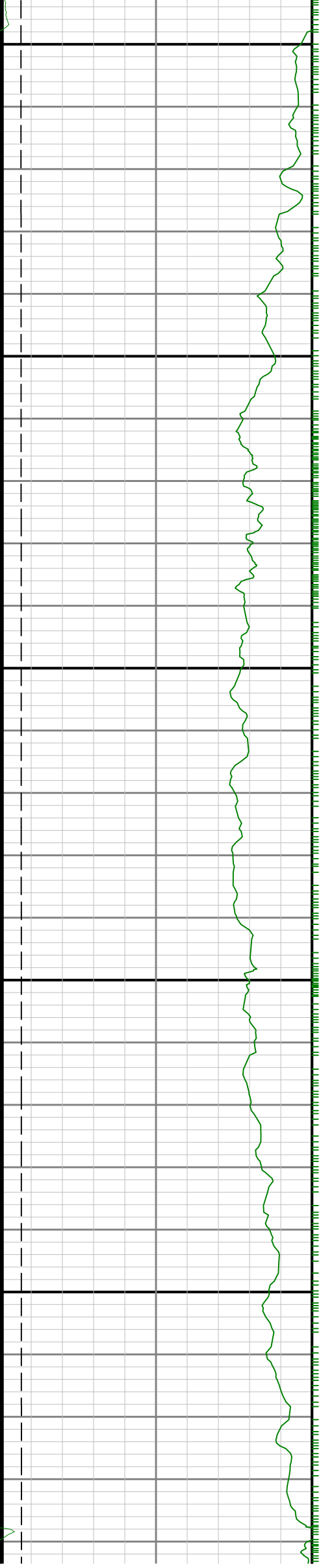
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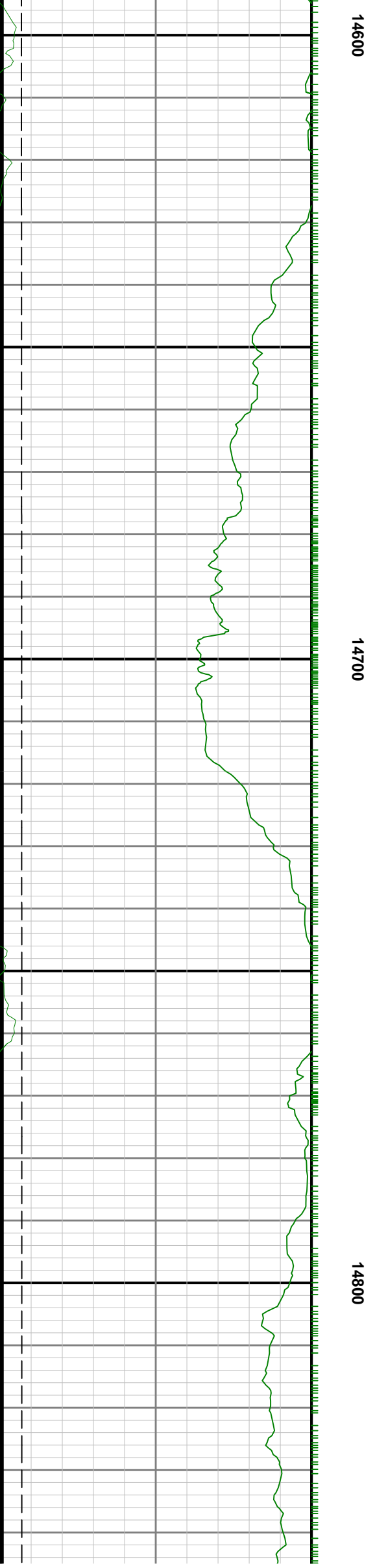
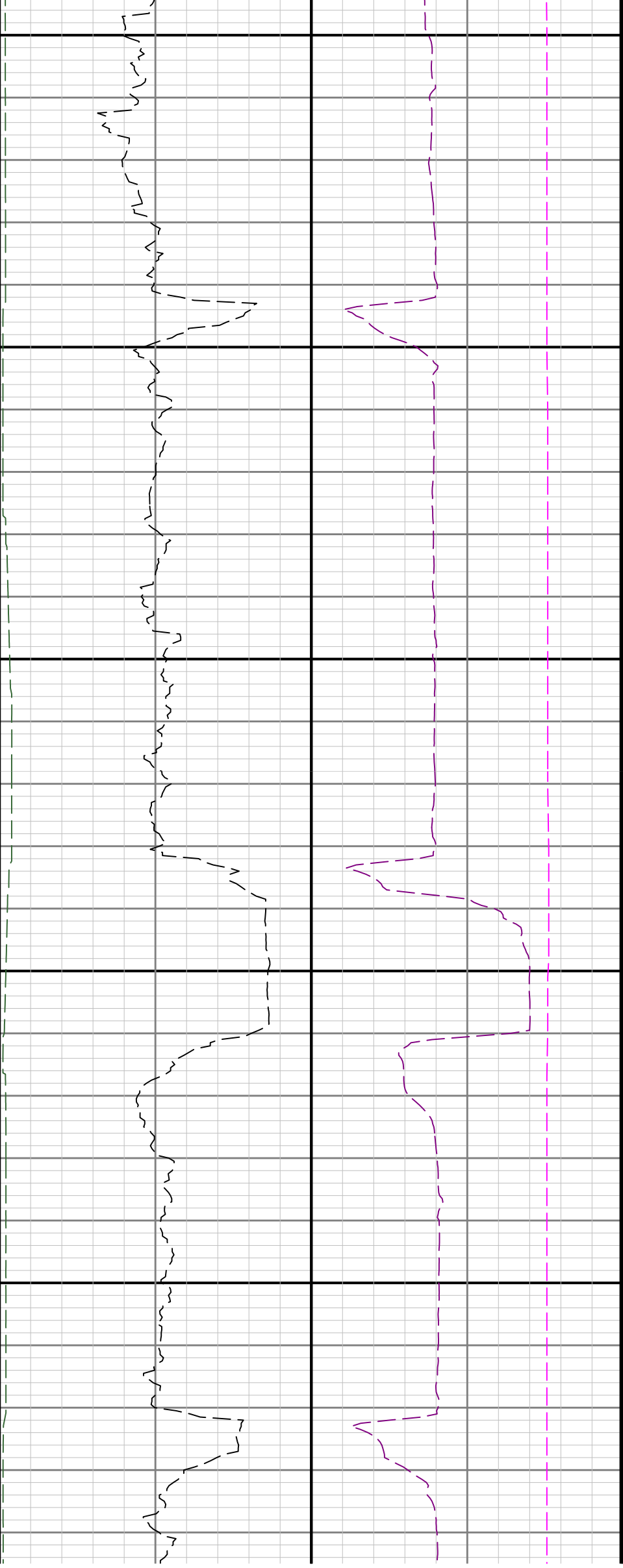


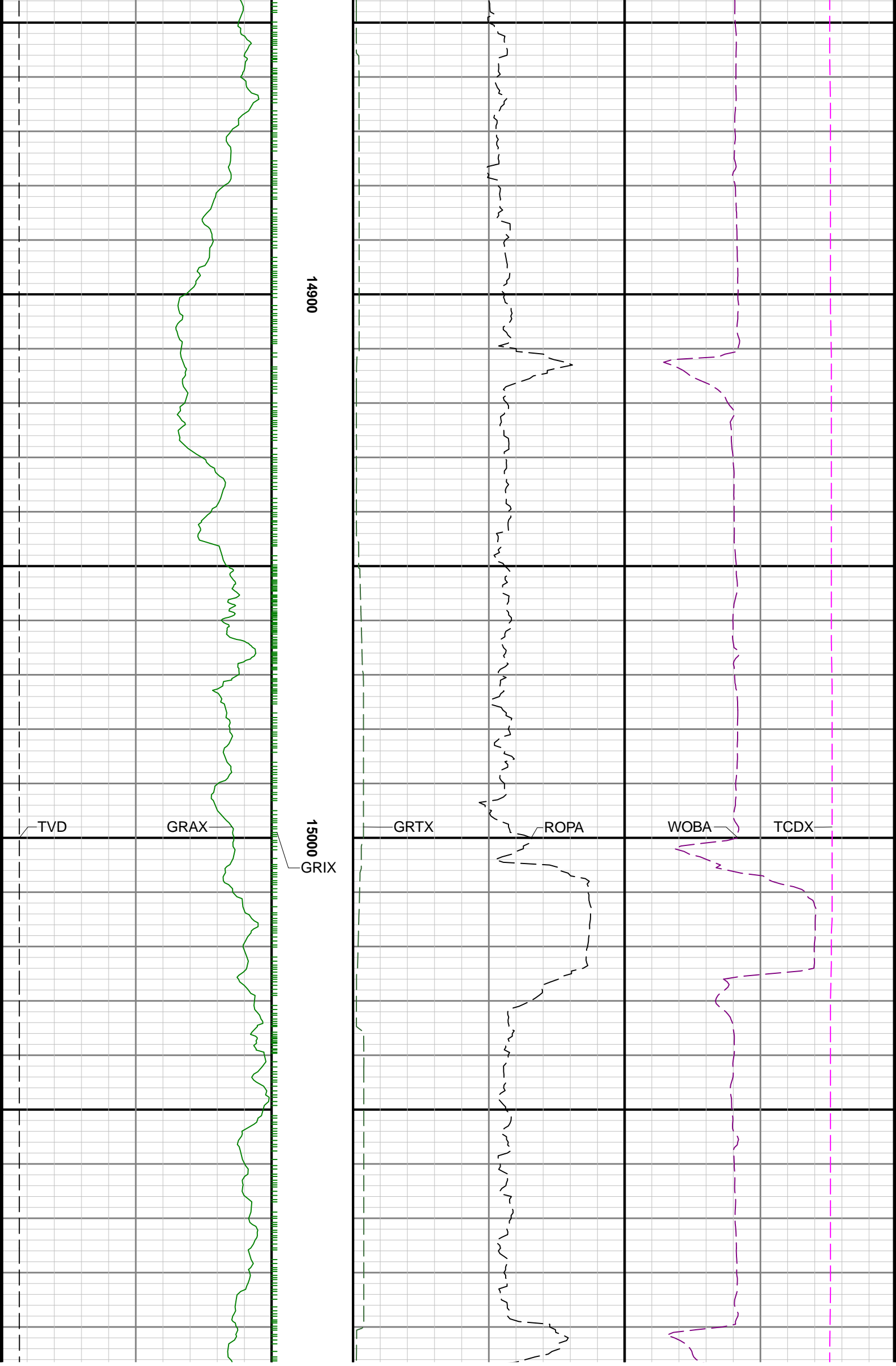


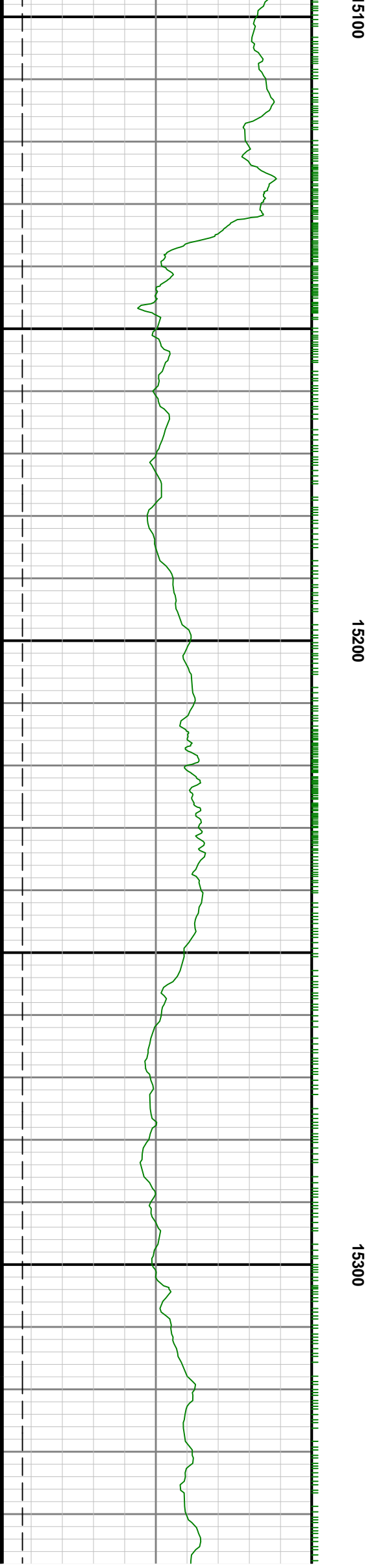
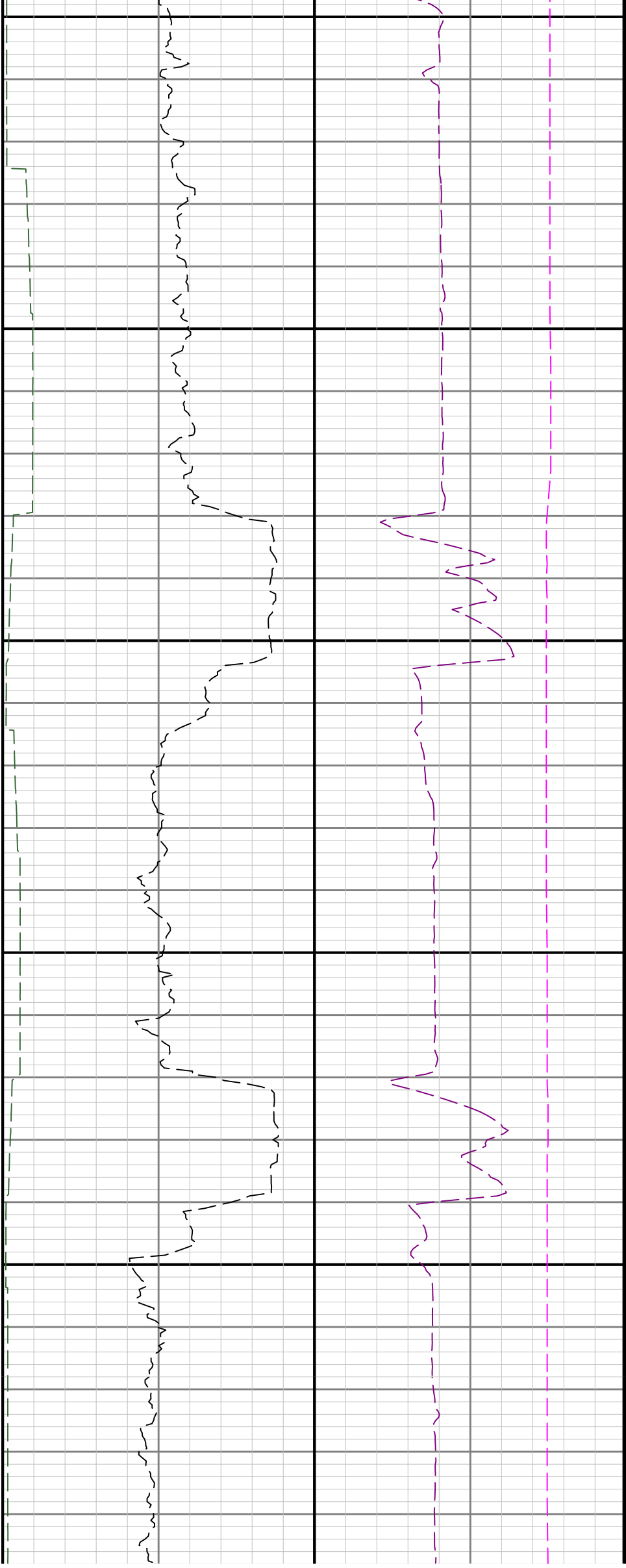
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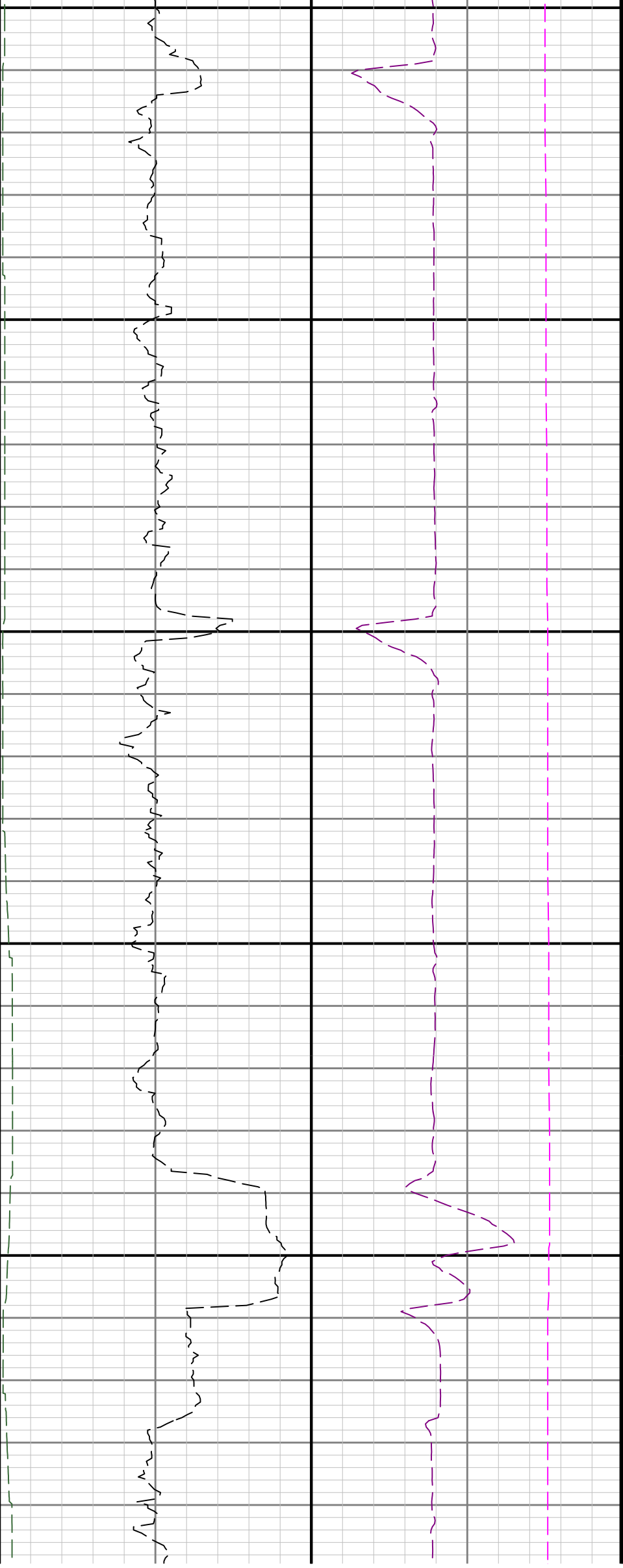
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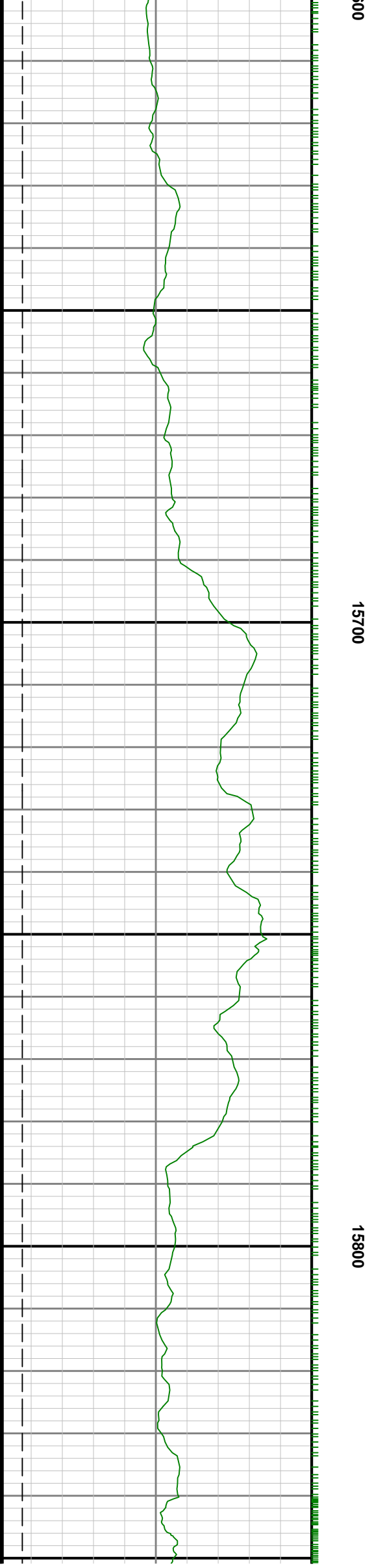


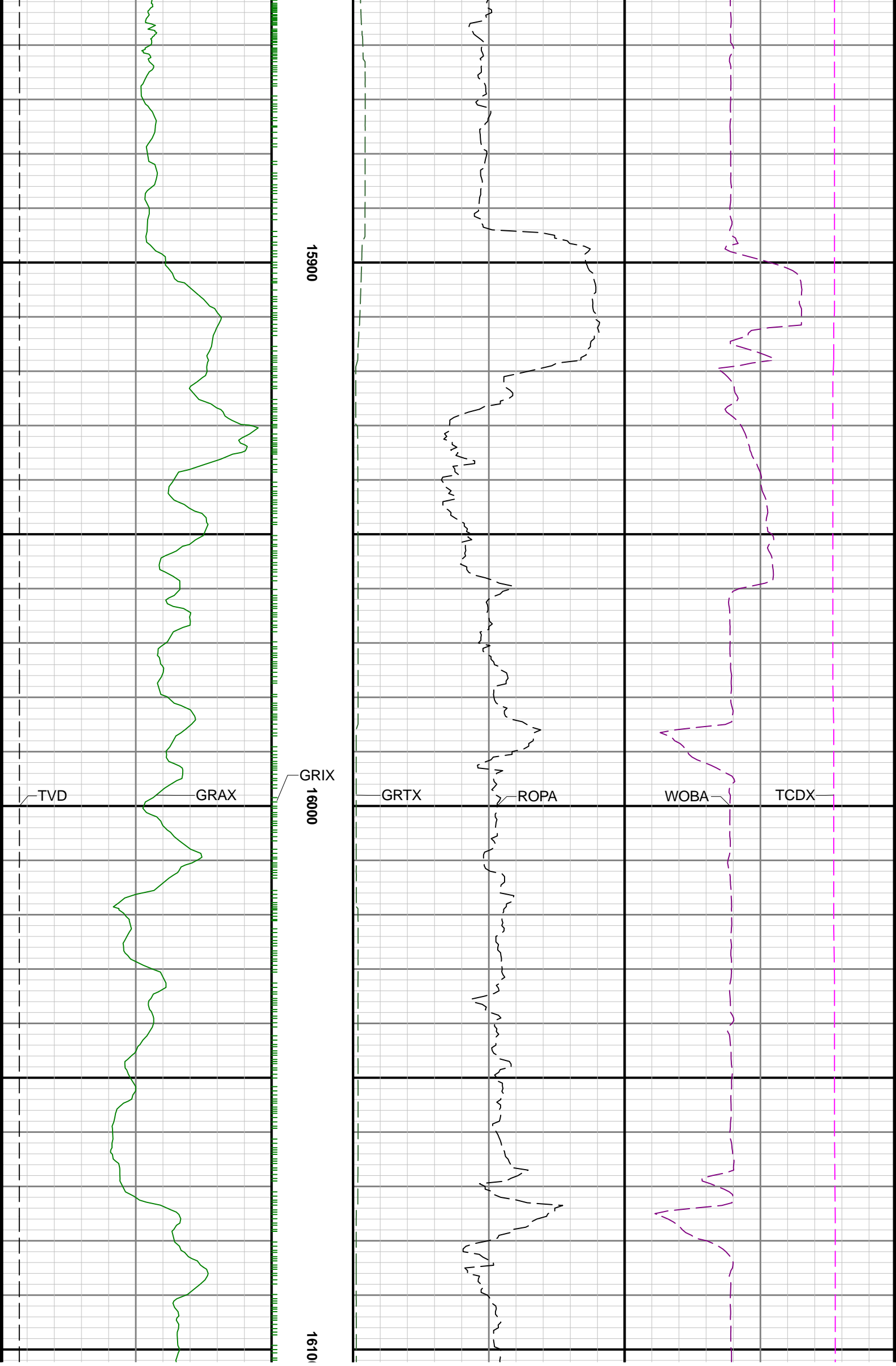


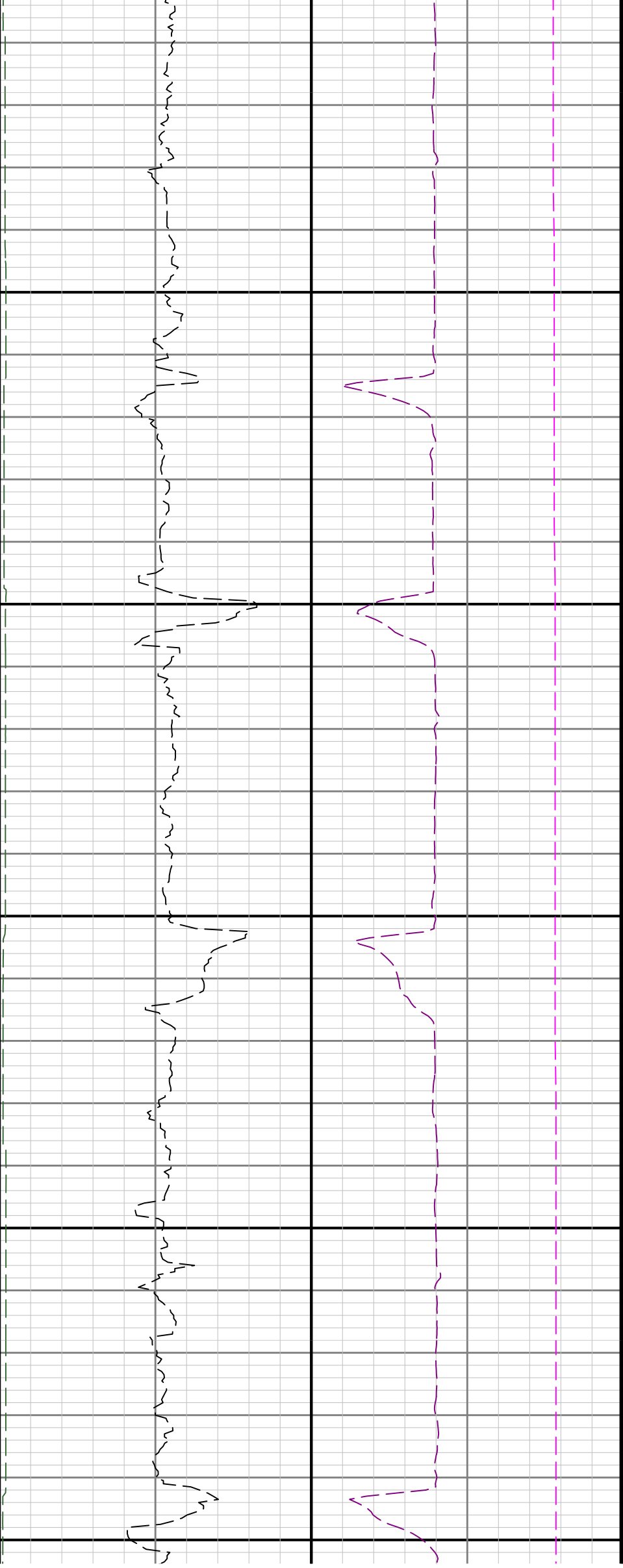
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15500

15

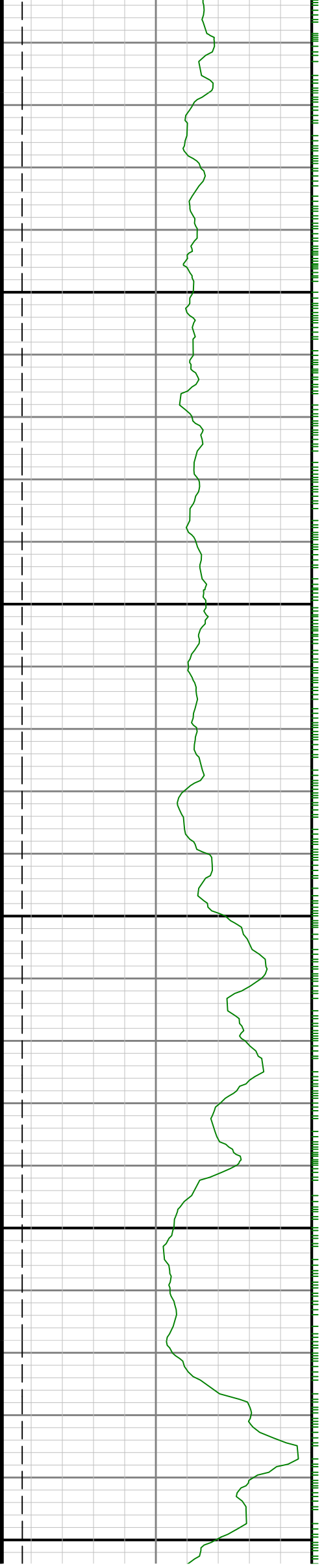


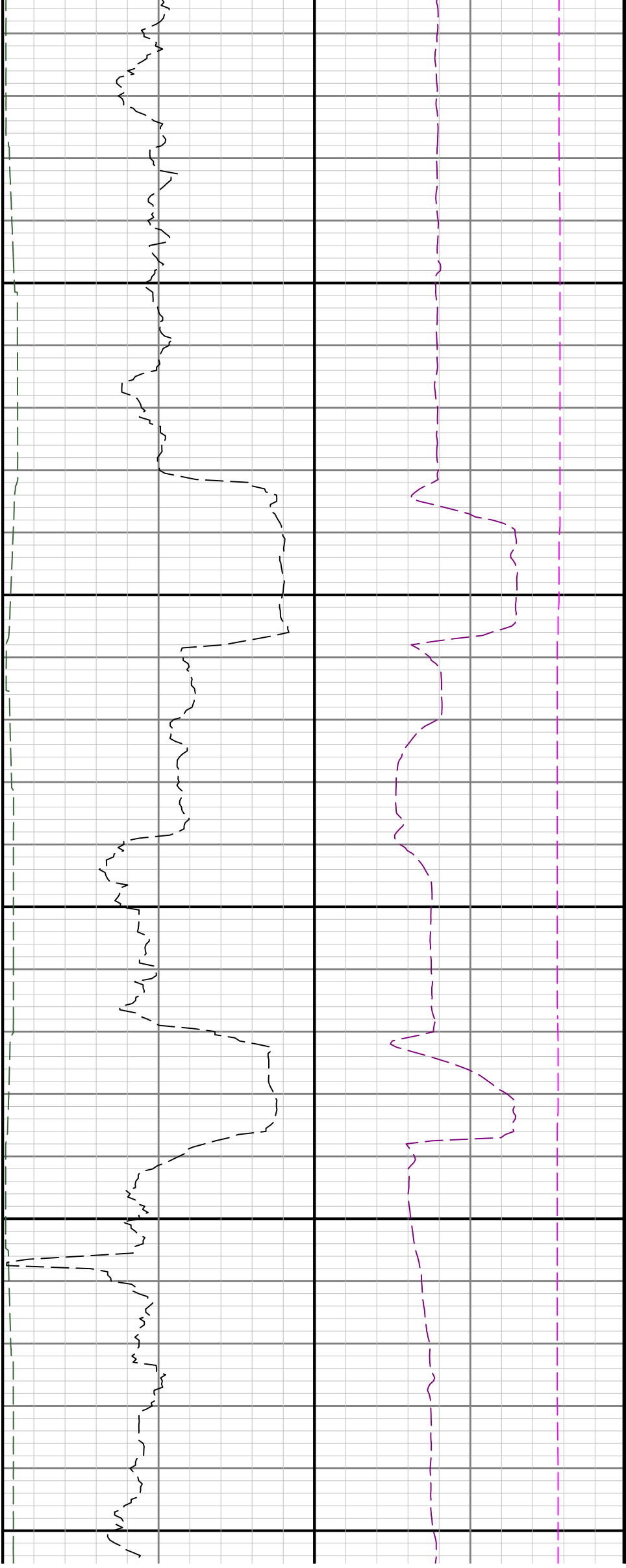




16200

16300

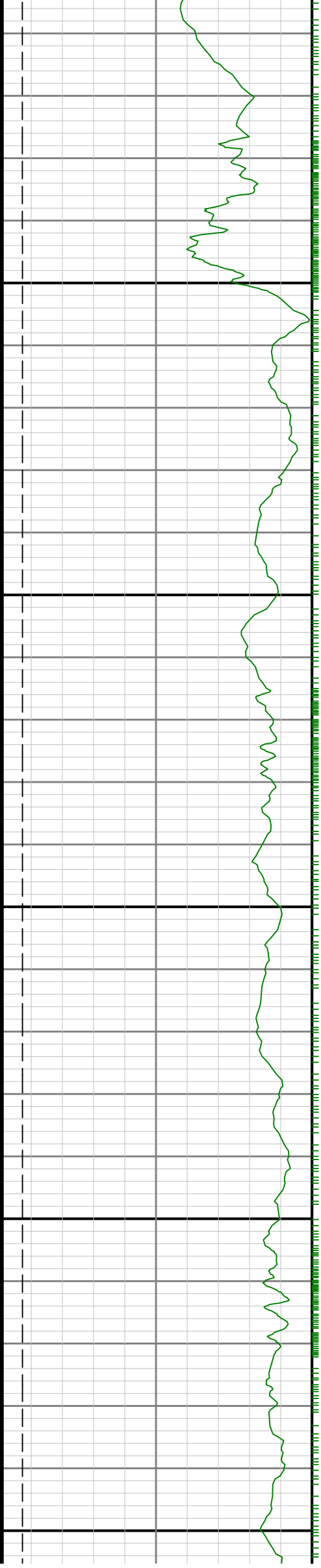




16400

16500

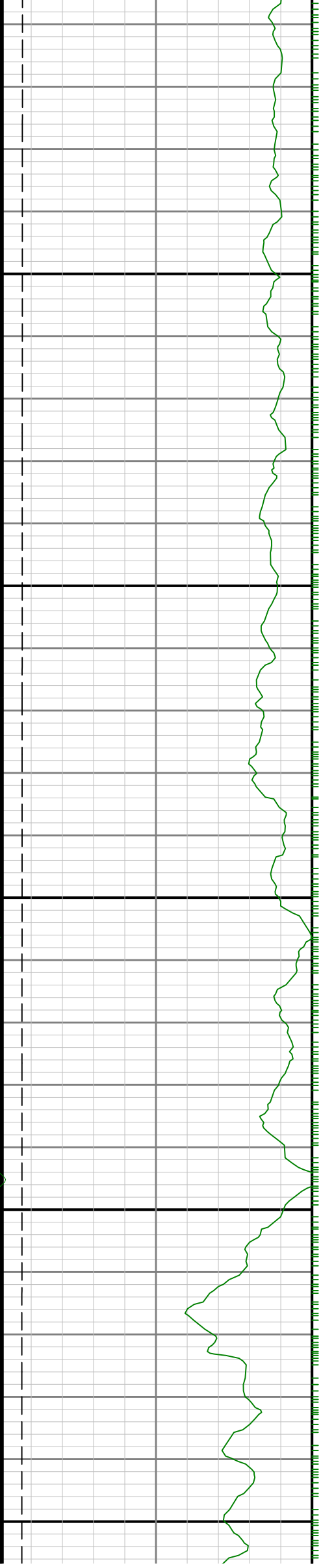
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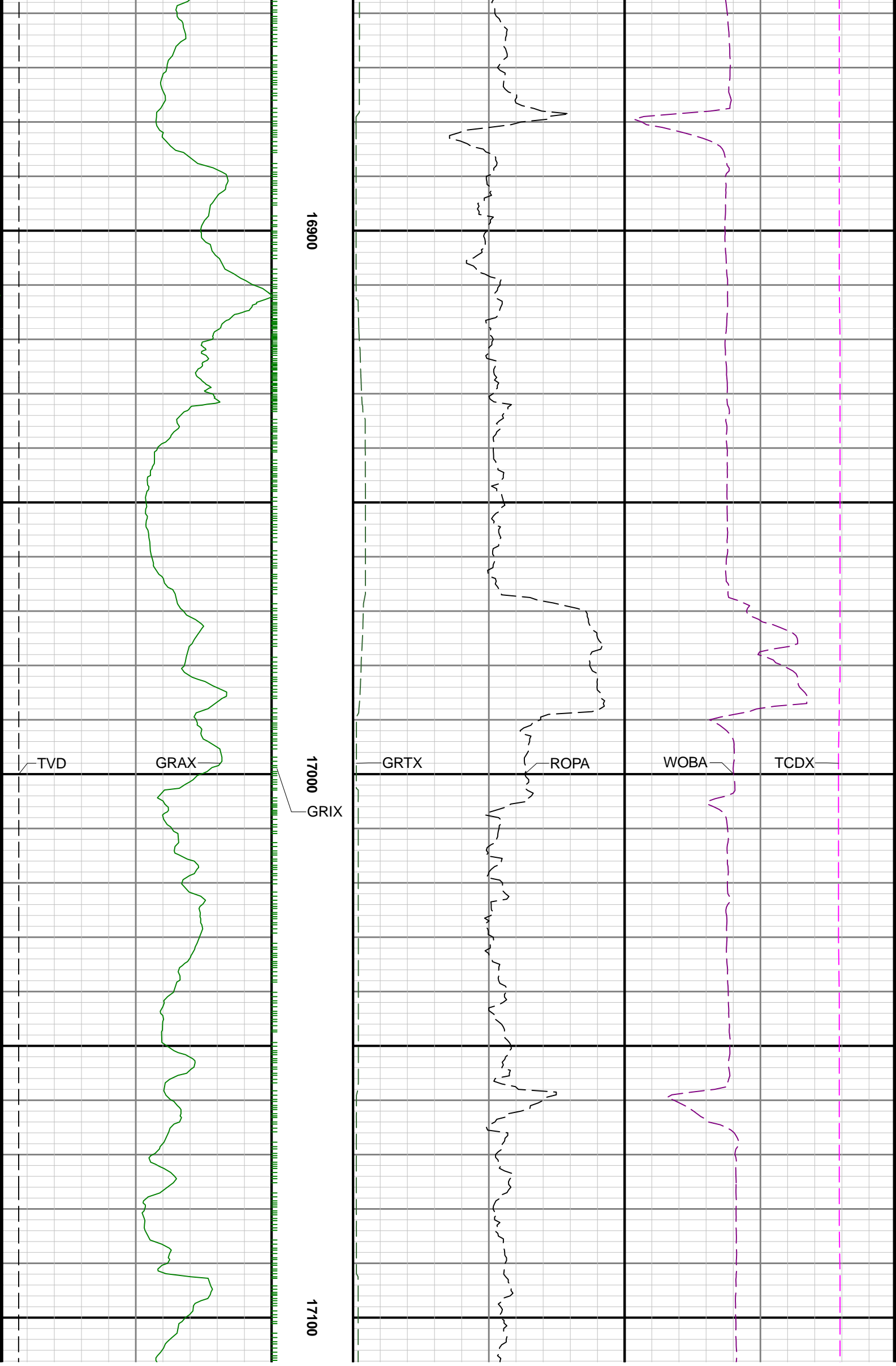


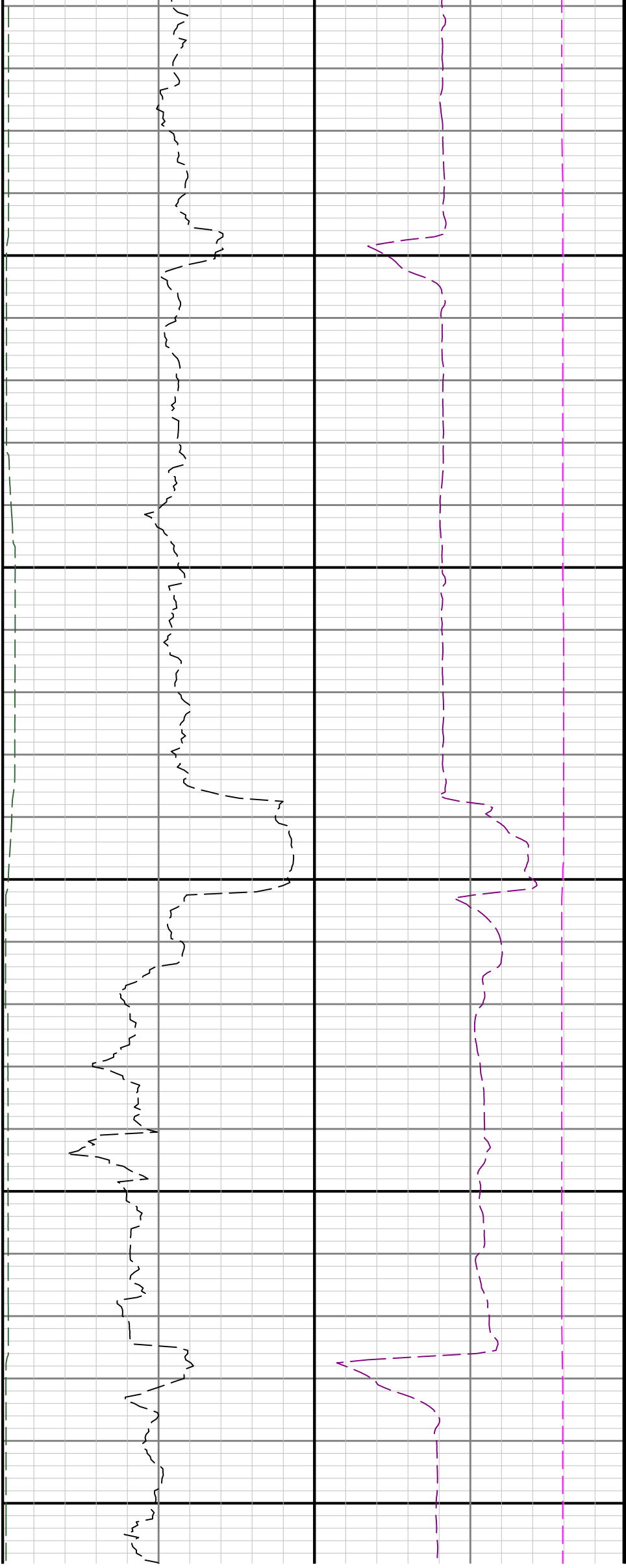


16700

16800







17200

17300

