



LWD REALTIME LOG

Gamma Ray

Scale:		Company: Anadarko			
1:240		Well: Jodster South 25-8HZ			
Measured Depth		Field: Wattenberg			
Depth Reference:		County: Larimer County		Country: United States	
Driller's Depth		State: Colorado			
Status:	Surface Location:			Other Services:	
Final Print	Latitude:			40° 22' 18.203" N	
	Longitude:			104° 56' 51.850" W	
API No:	050690651800			Directional	
Job ID:	110058805			SEC:	25 TWN: 5N RGE: 68W
Permanent Datum (P.D.):		Mean Sea Level		Elevation:	0.00 ft
Log Measured From:		Rig Floor		Above P.D.:	4887.00 ft
					Elev. KB: N/A Elev. DF: 4887.00 ft Elev. GL: 4861.00 ft
Dates		Interval		Magnetic Field Reference	
From: 2019-11-07	Drilled (ft)		Logged (ft)		Azi Reference North: True Dip Angle: (deg)
To: 2019-11-09	Top: 1899.00		Top: 1899.00		Total Magnetic Field Strength: (nT)
Spud: 2019-11-06	Bottom: 17942.00		Bottom: 17886.00		Mag to Reference North Correction: (deg)
Borehole Record					
Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)
13.500	26.00	1899.00	9.625	36.00	26.00
7.875	1899.00	17942.00			1889.00
Mud Record					
Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)
Oil Based Mud	1899.00	17942.00	7.875	16043.00	23.69 178.84
					94.48 90.83
Acquisition System					
Cadence	RT 5.4		Rig:	PD 564	
Plot Studio	5.4.8632.4		Contractor:	Precision Drilling	
			District:	RMD	
				Unit: RMA	

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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	7.875	PDC	2.50	Steerable	1899.00	17886.00	1899.00	17942.00	2019-11-07 05:27	2019-11-09 17:35	52.55

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Kaewan Gardi	2019-11-06	2019-11-08	Matt Yule	2019-11-06	2019-11-10	Joshua Monroe	2019-11-08	2019-11-10

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+ (%)
2019-11-07 06:00	1	1915.00	Oil Based Mud	8.9	19	N/A	N/A	68/24	Active Pit	40000	0.00
2019-11-08 07:00	1	9536.00	Oil Based Mud	9.0	20	N/A	N/A	66/24	Active Pit	42000	0.00
2019-11-09 15:00	1	17621.00	Oil Based Mud	9.3	22	N/A	N/A	67/22	Active Pit	41000	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	G650-0349	Gamma (single)	8.18	56.43	6.500	2.875
1	EvoOne	G650-0349	Directional (mag)	9.37	57.62	6.500	2.875

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 the lack of control by Baker Hughes logging



- Depth measurements were obtained from a depth control system operated by Baker Hughes. Due to the 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 1899 to 17942 feet MD (1852 to 6778 feet TVD).
- 4 Gamma Ray (GRAX) scale is presented 0 to 200 API per customer request.

Remarks

Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	5235.00	7.875	1	The interval from 5223 to 5258 feet MD (4745 to 4779 feet TVD) was not logged due to loss of surface gear malfunction.
2	17915.00	7.875	1	The interval from 17886 to 17942 feet MD (6778 feet TVD) was not logged due to sensor to bit offset at the end of Run 1.

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, Average 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
GRSI	Sliding Indicator Flag	unitless



Company

Well

Interval

Created

Anadarko

Jodster South 25-8HZ

Date From: 2019-11-07 05:27

Date To: 2019-11-09 17:35

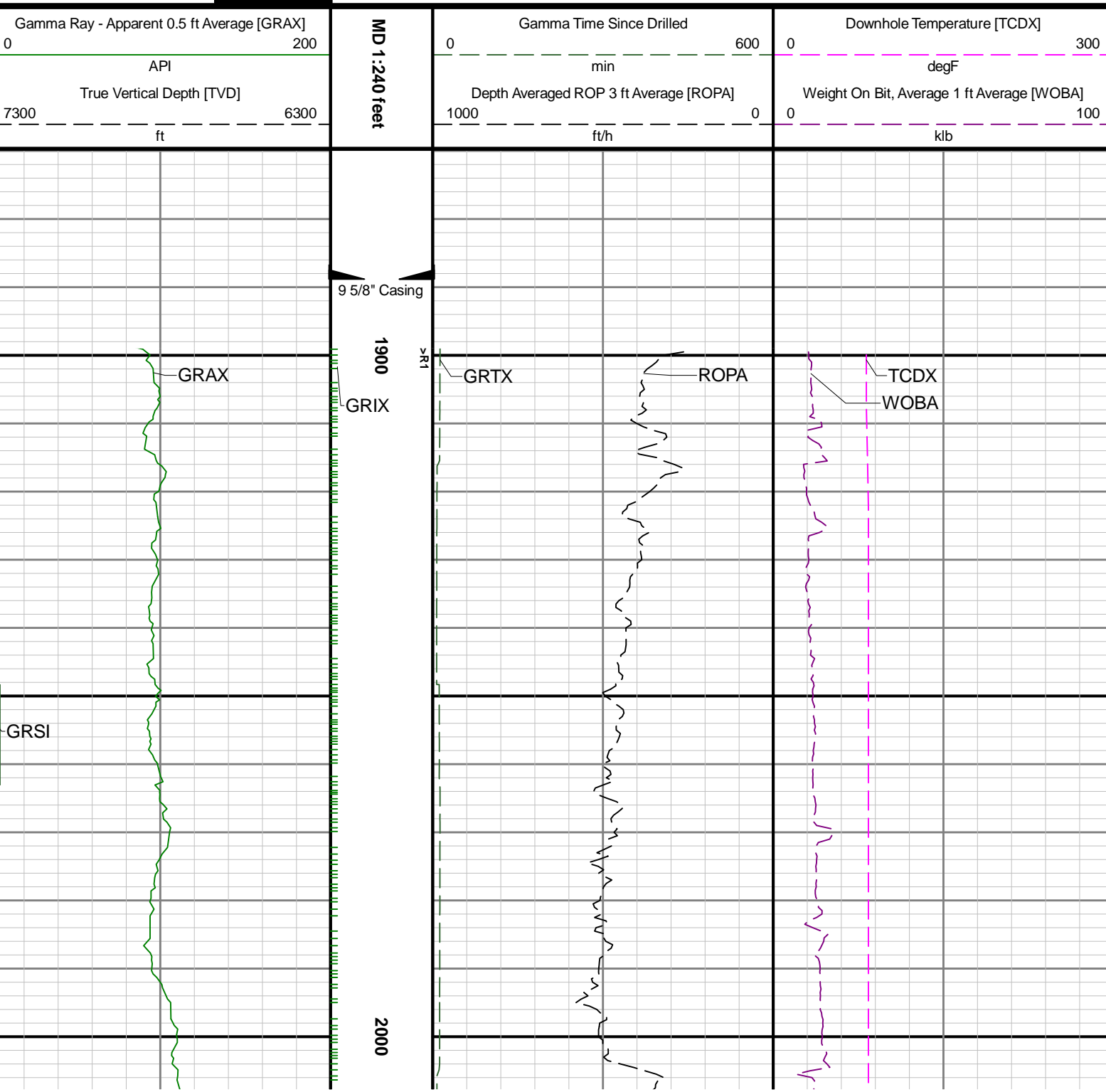
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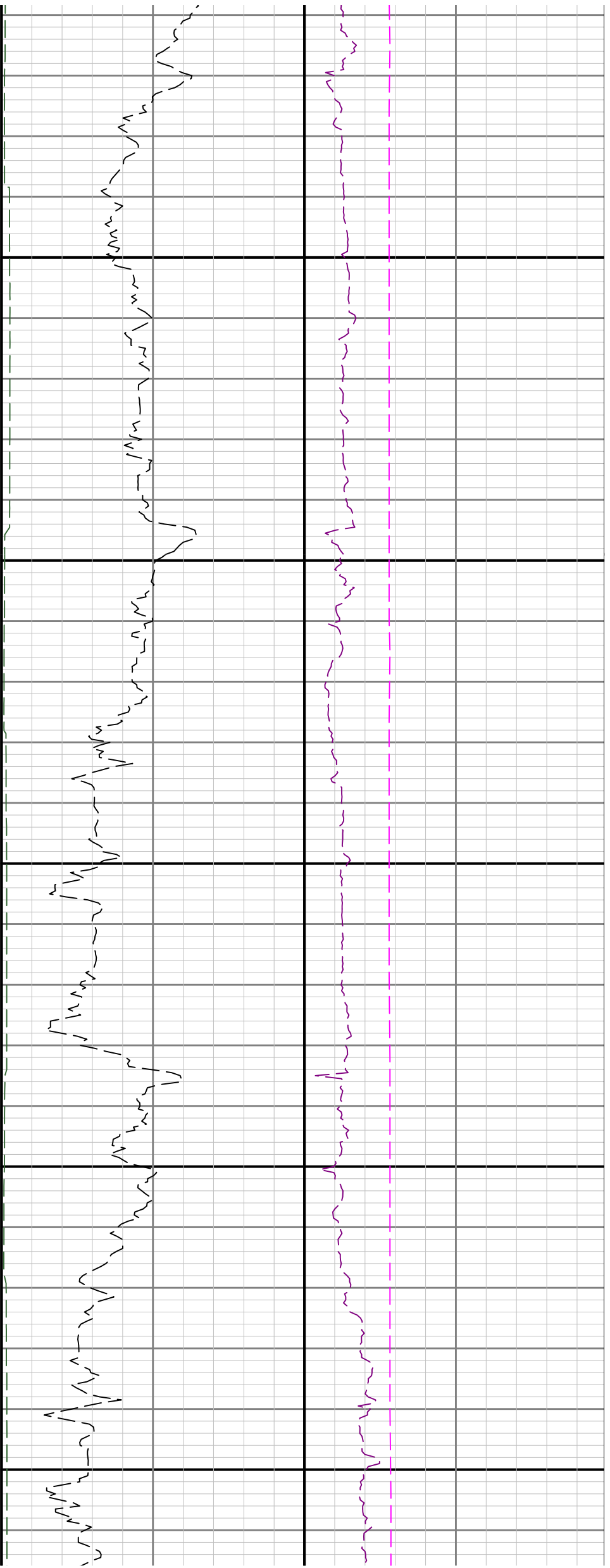
Interval Drilled: (ft)

Interval Logged: (ft)

1899.00 - 17942.00

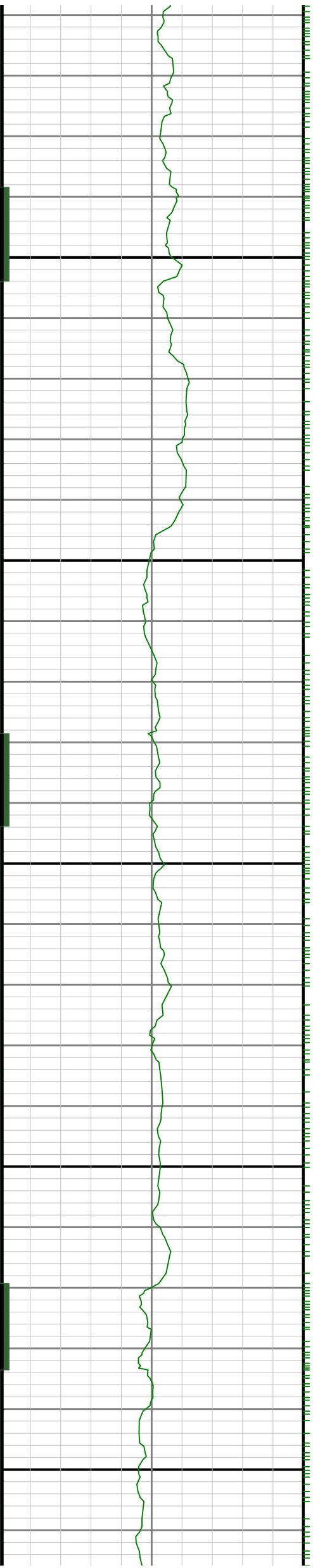
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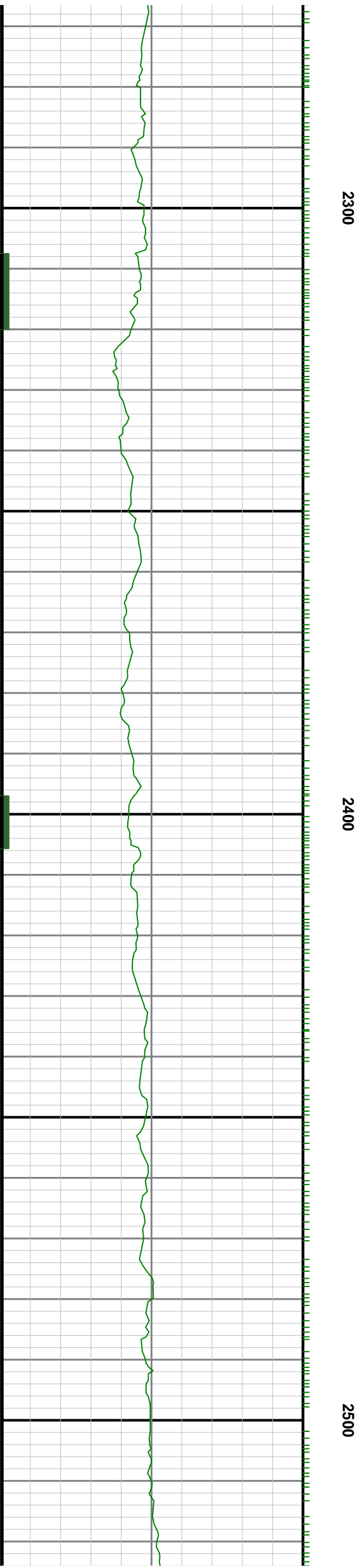
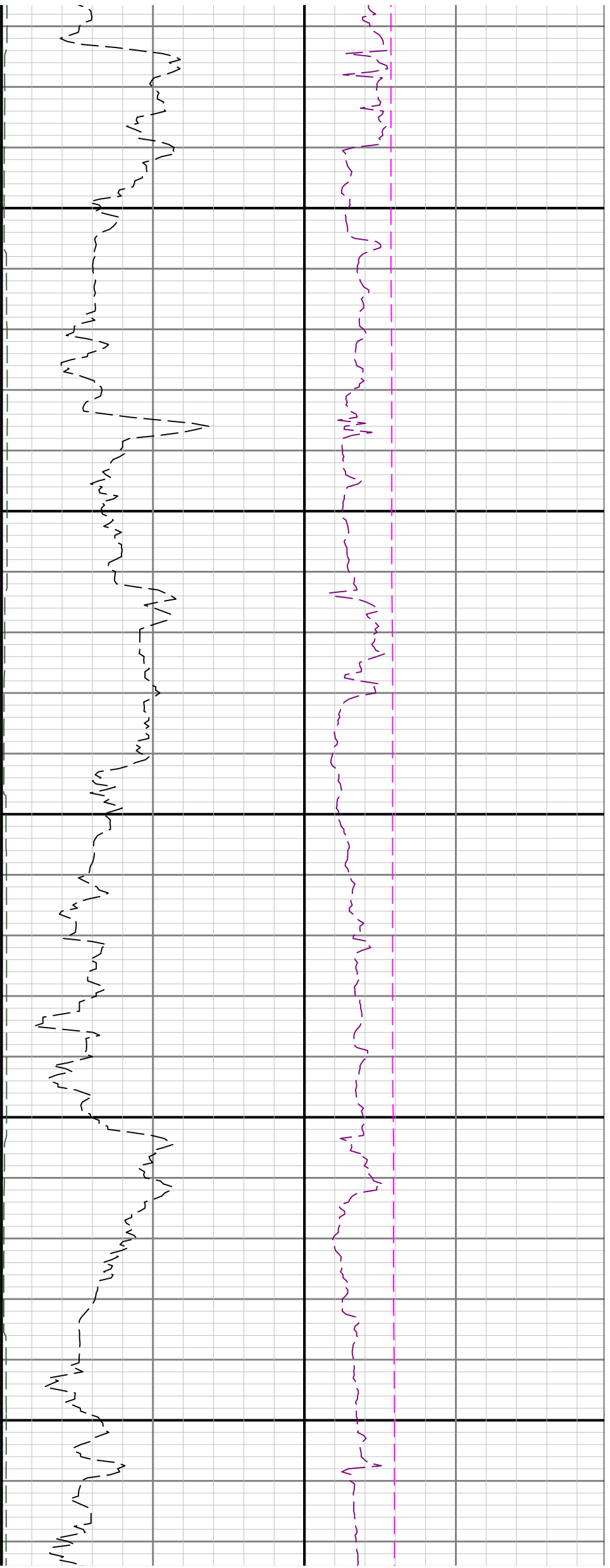


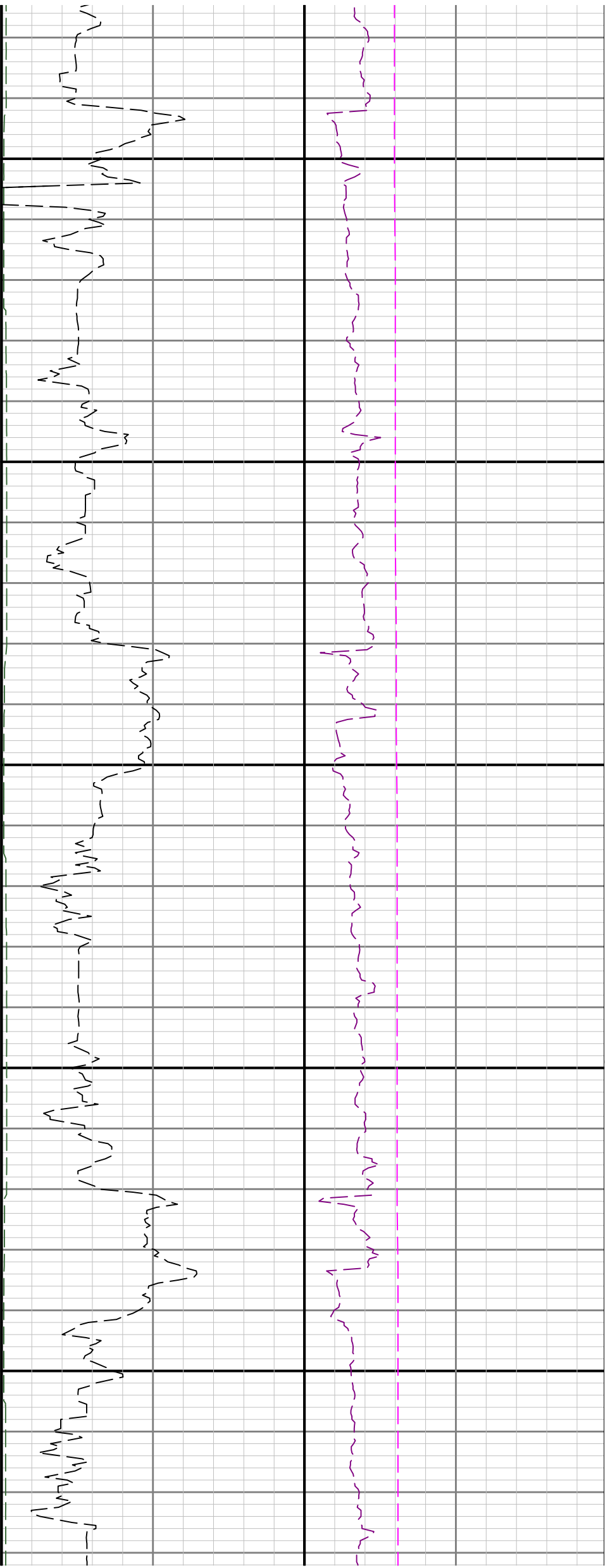


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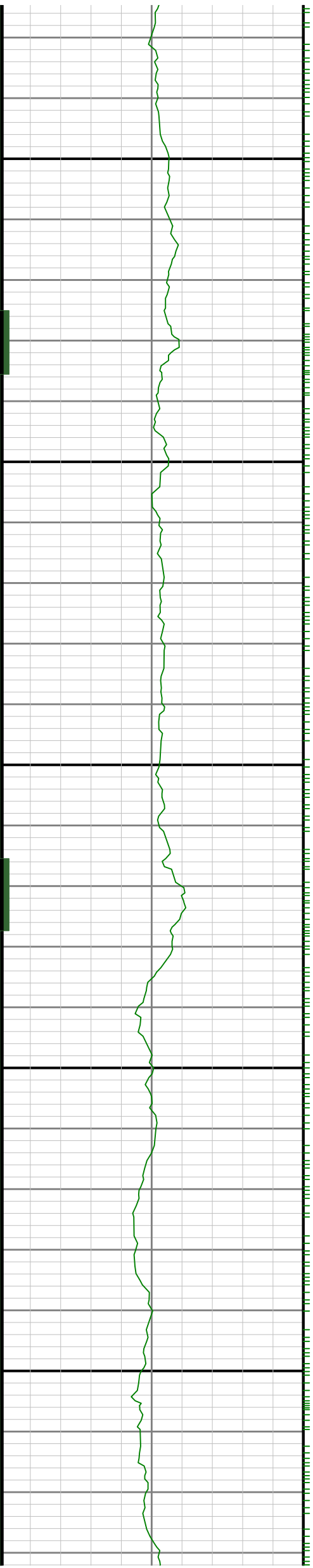


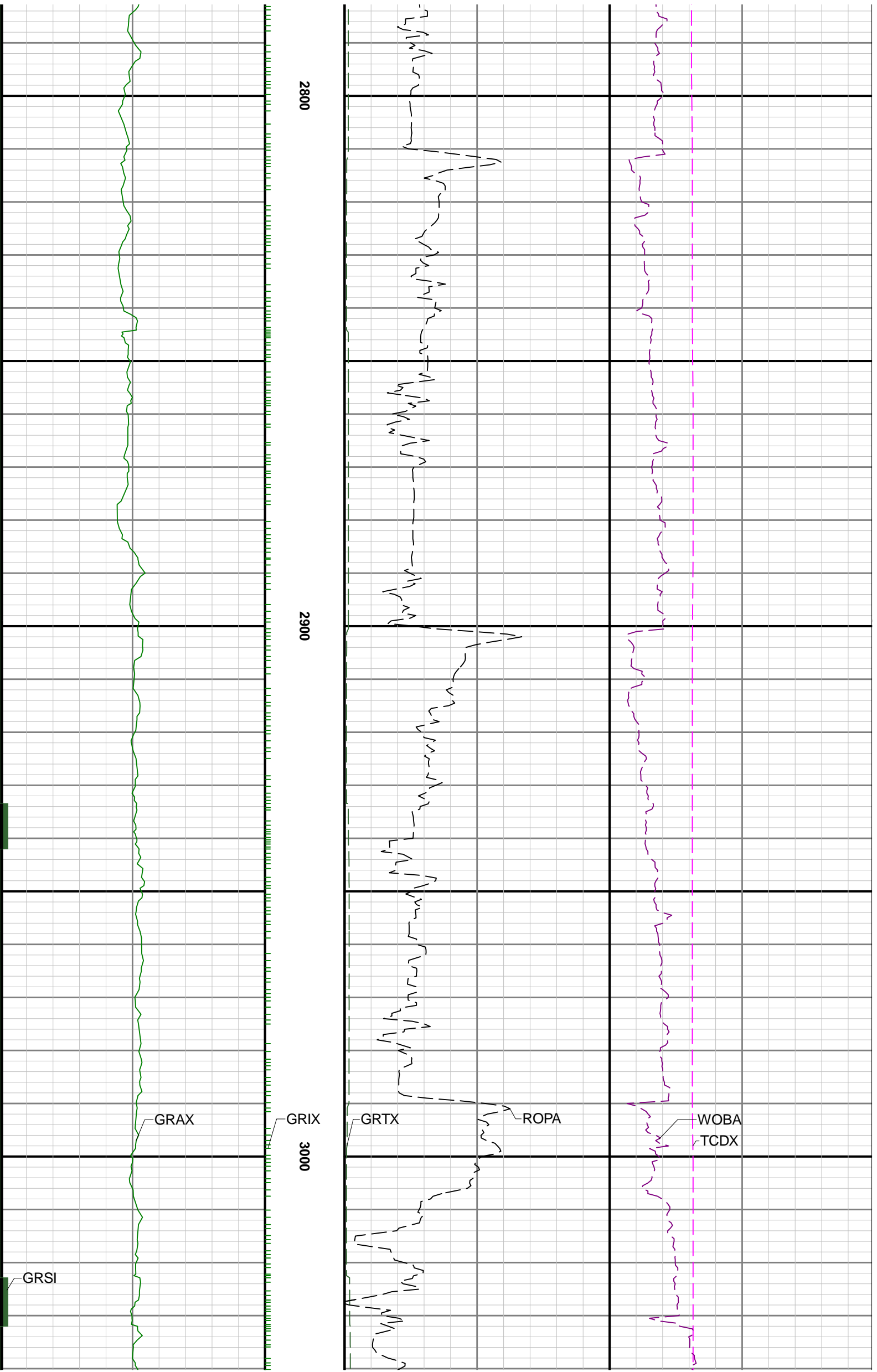


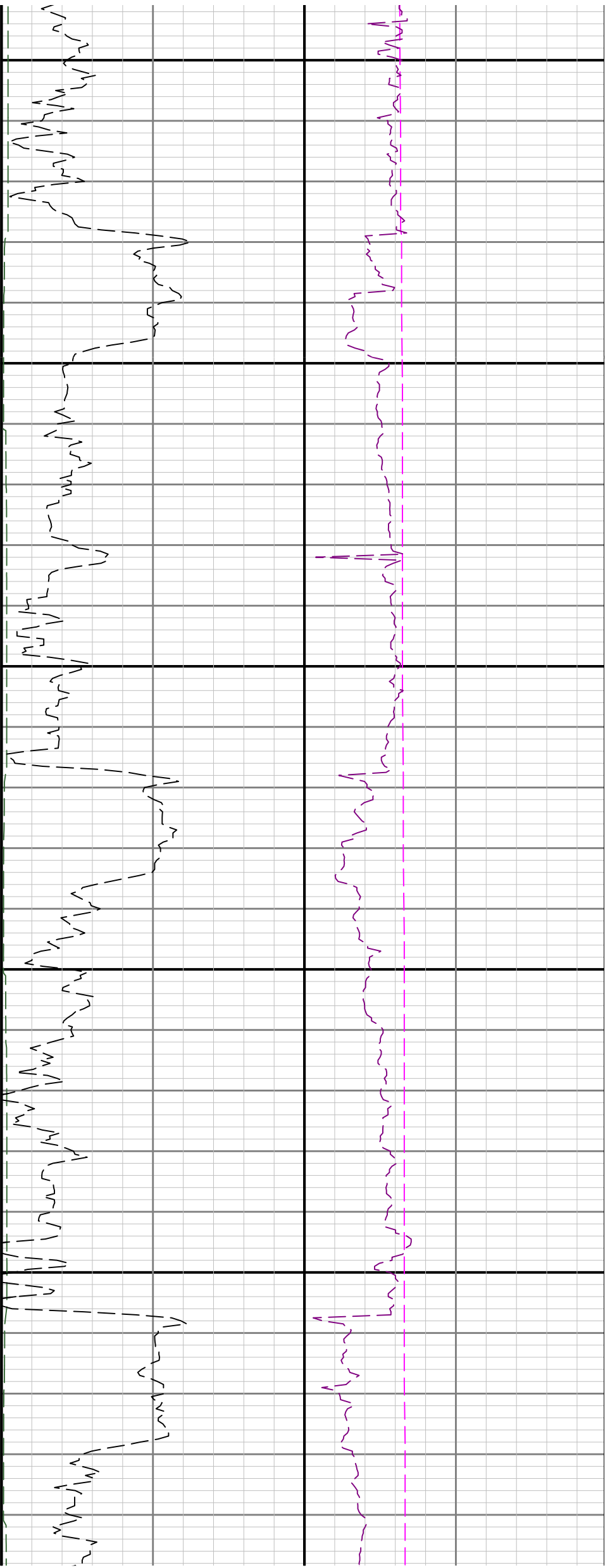


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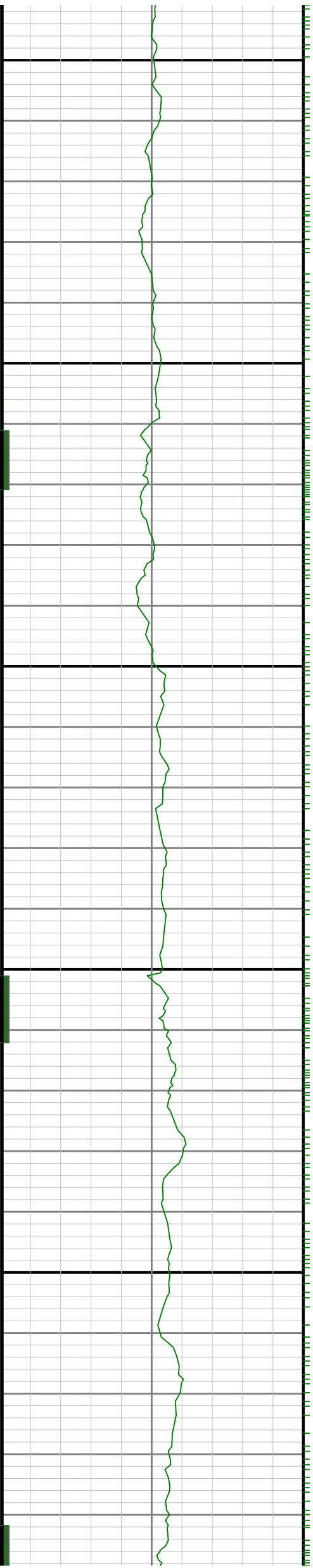


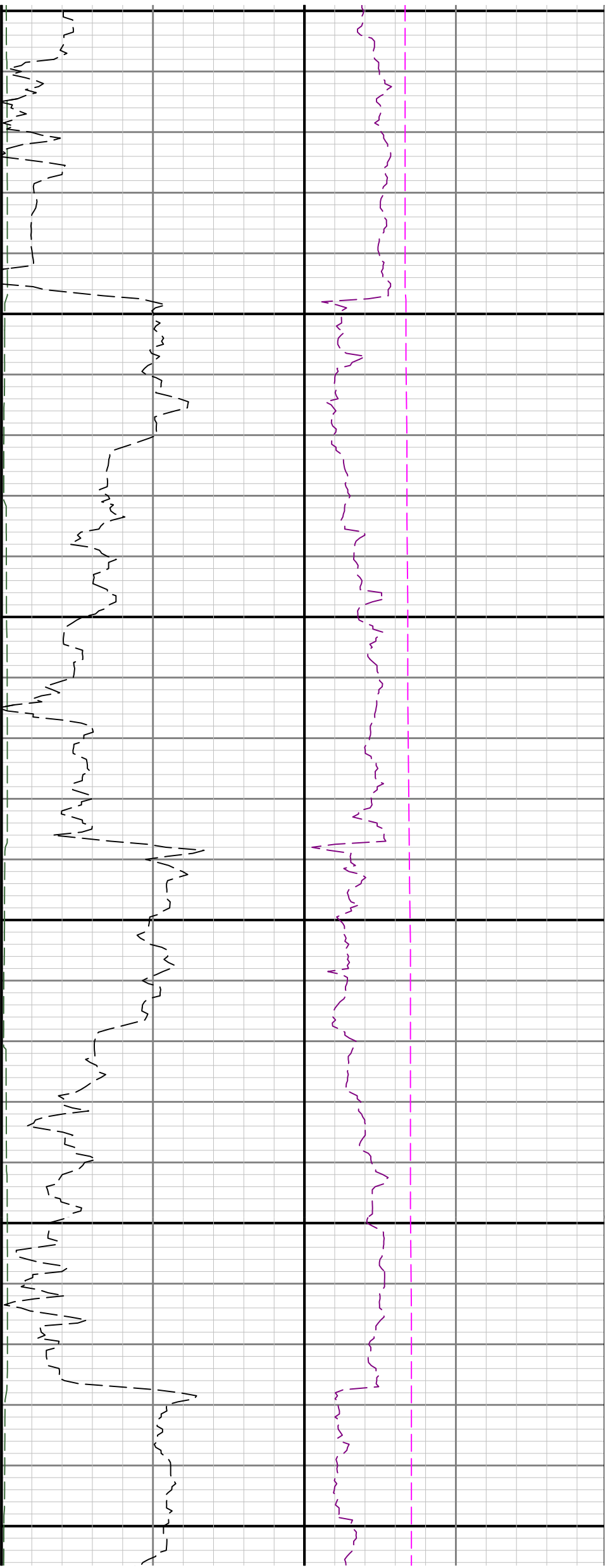


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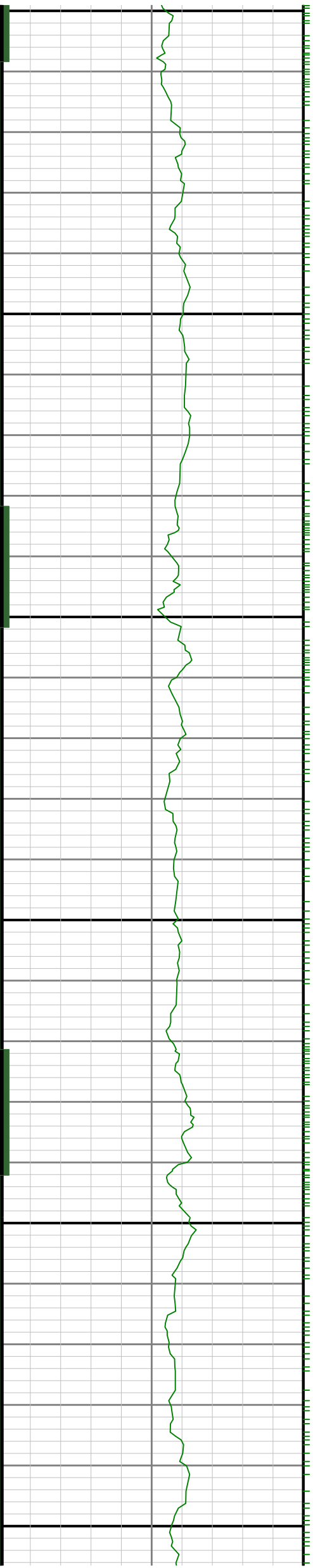


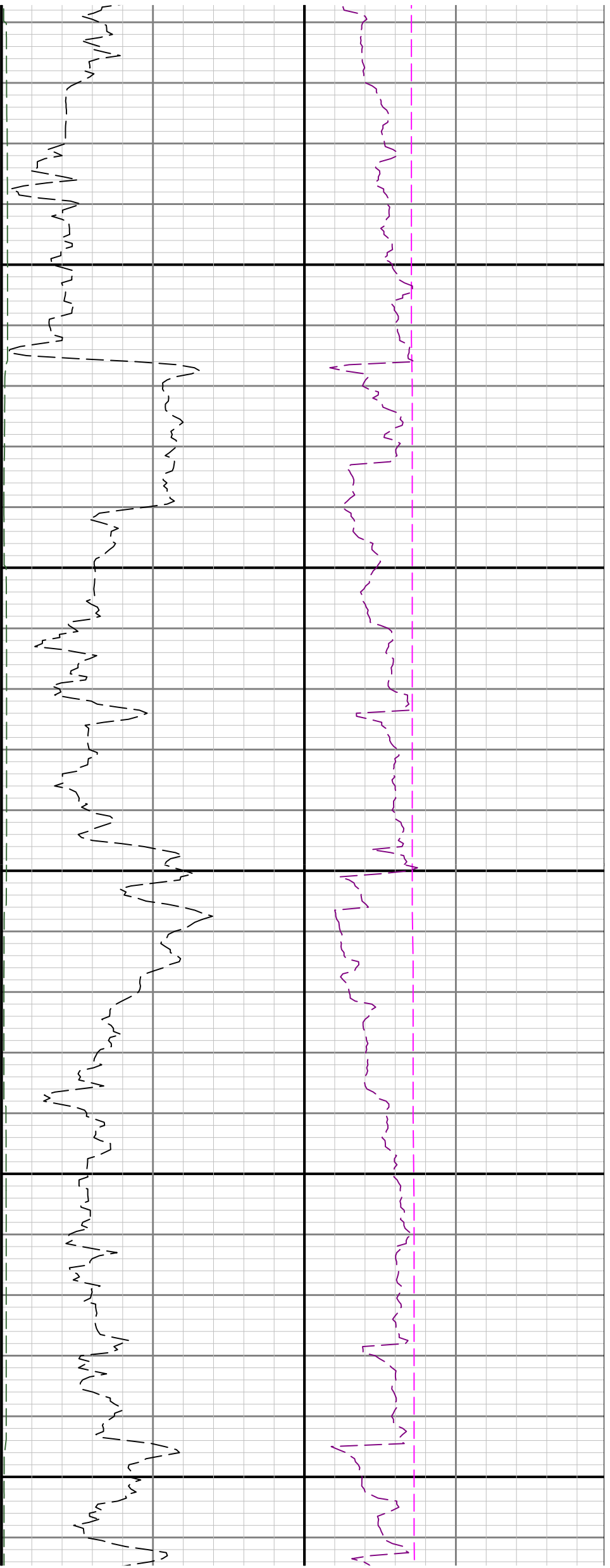


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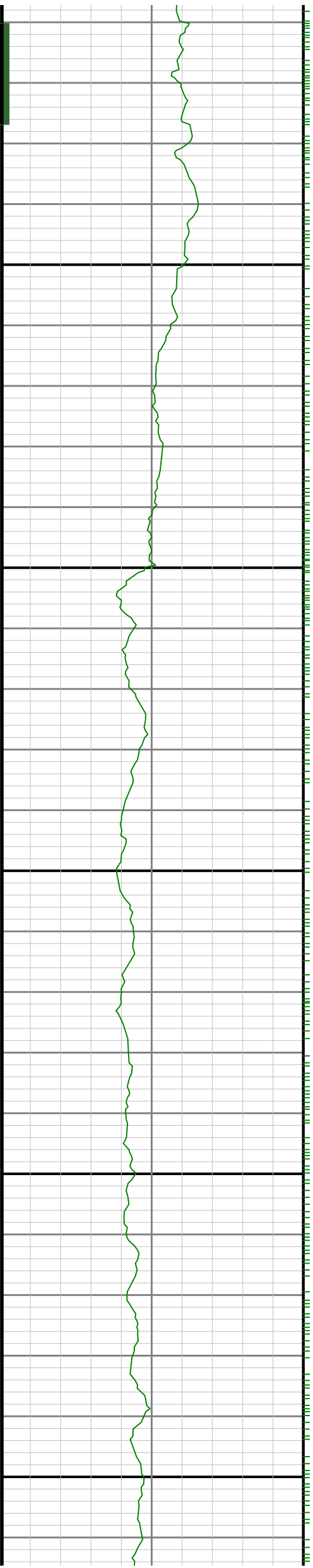


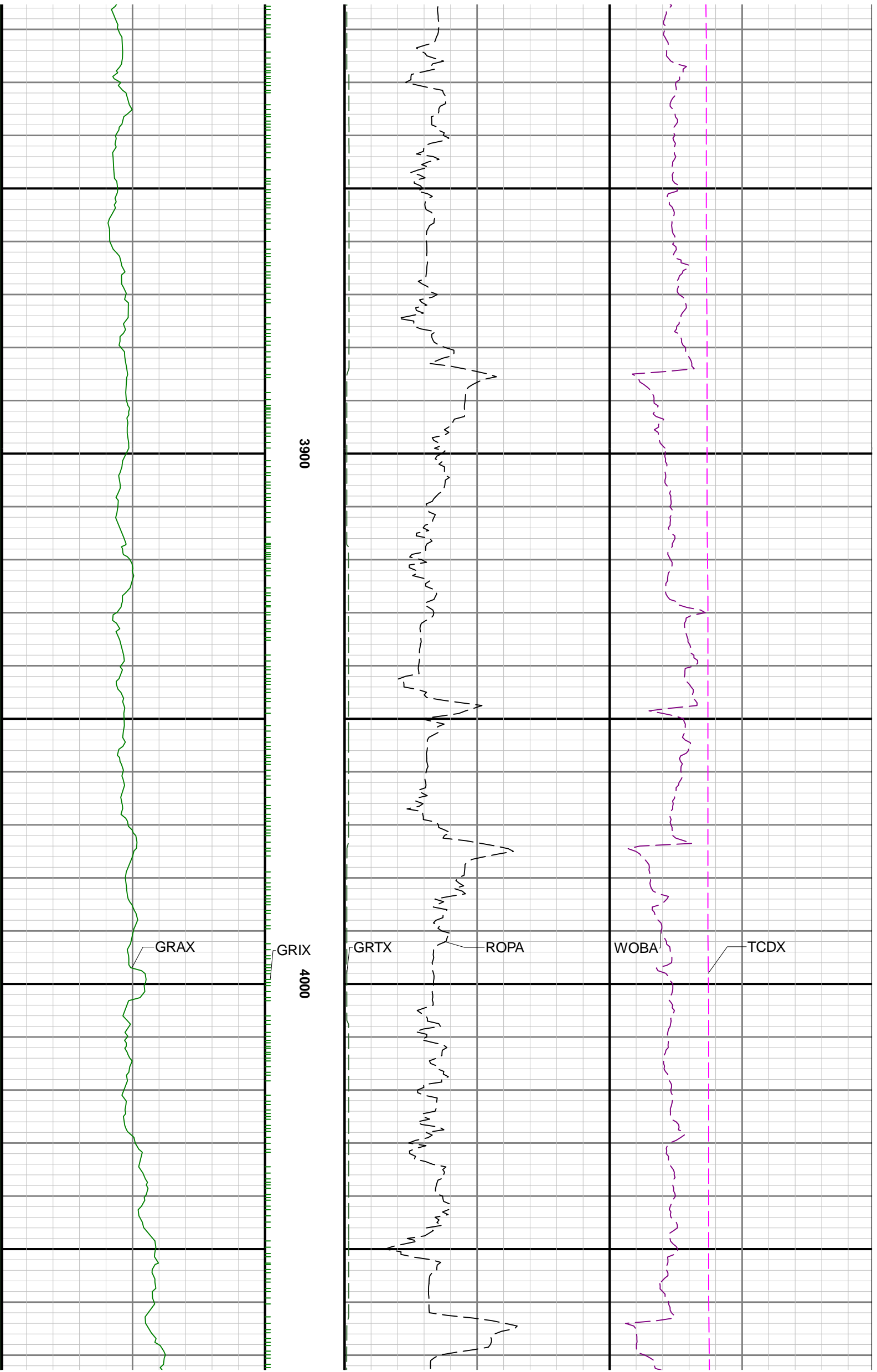


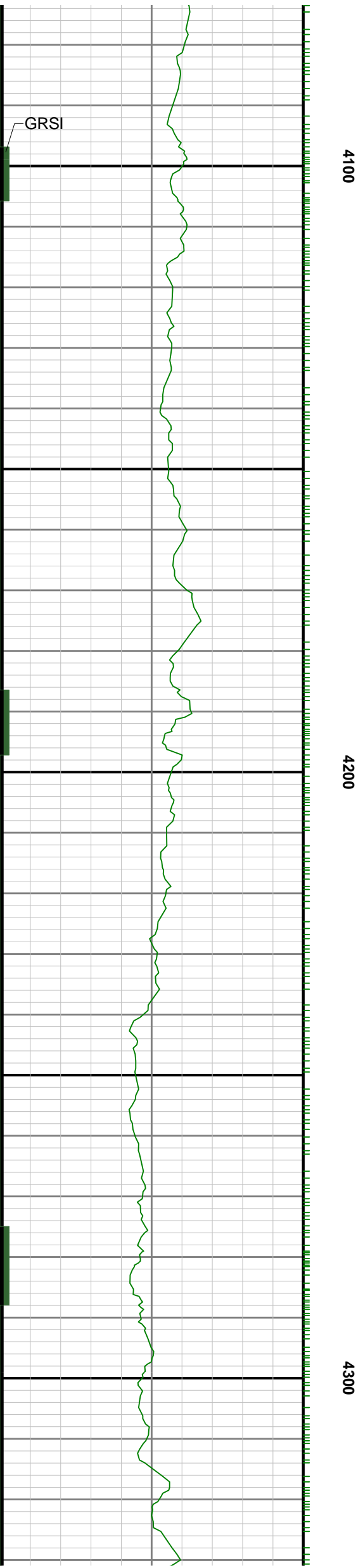
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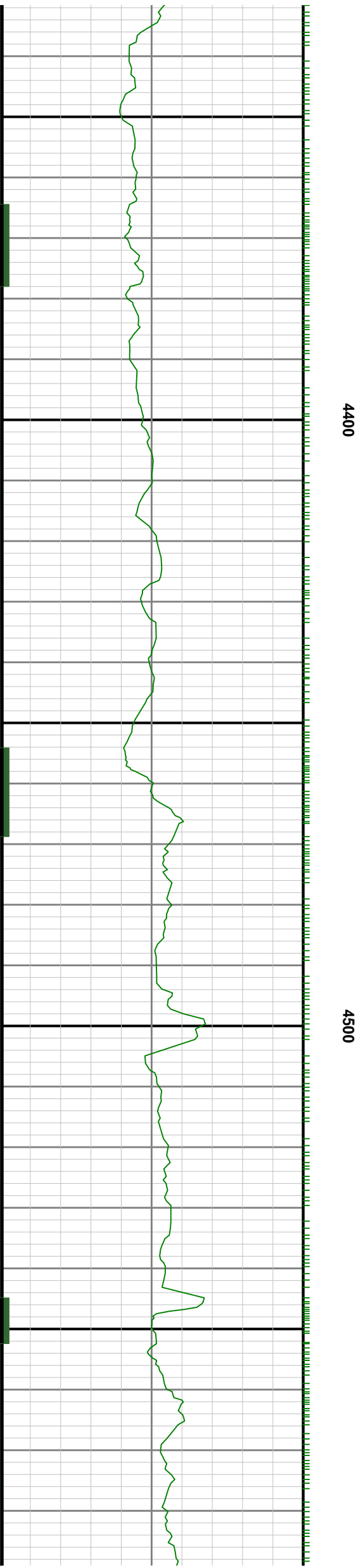
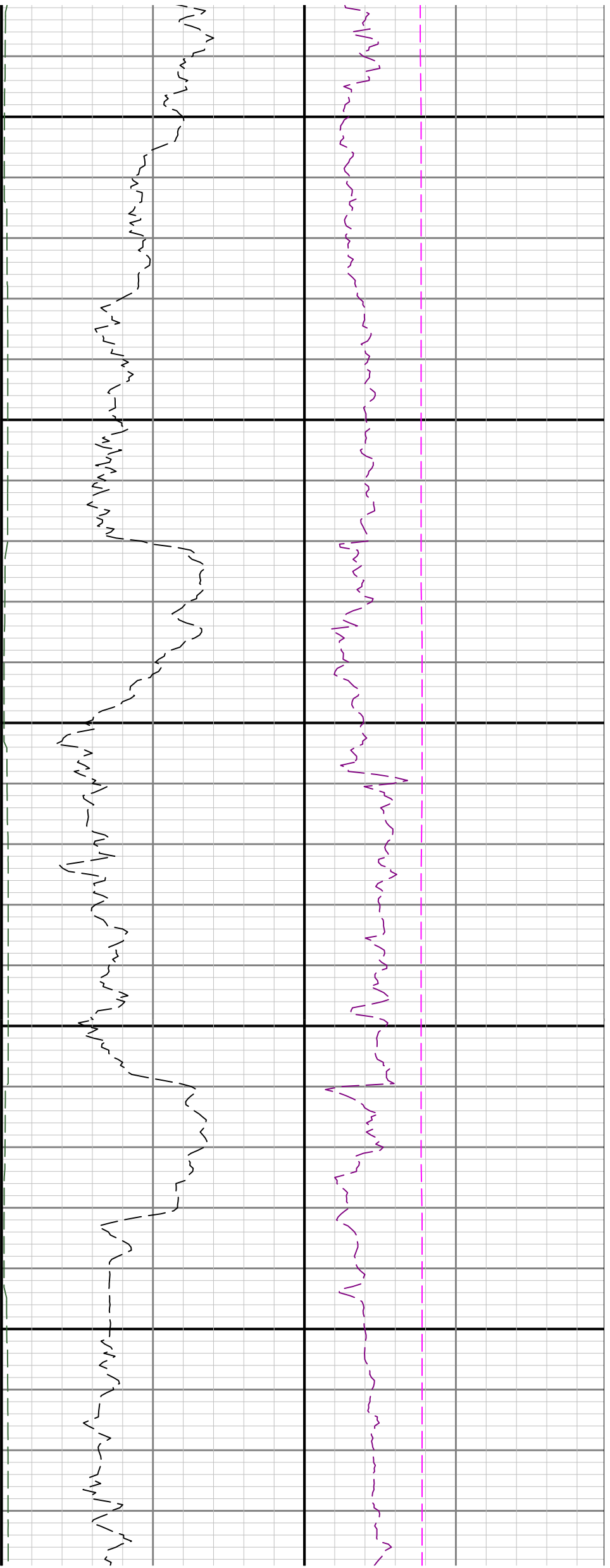
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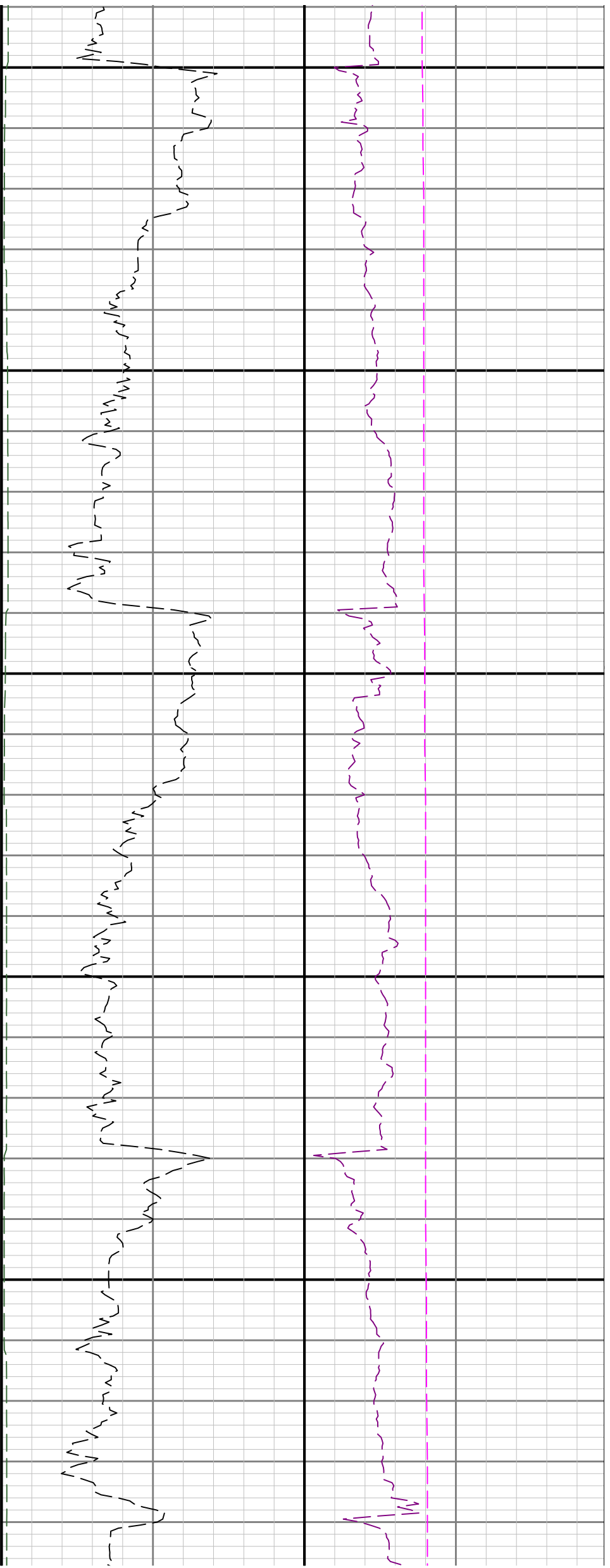
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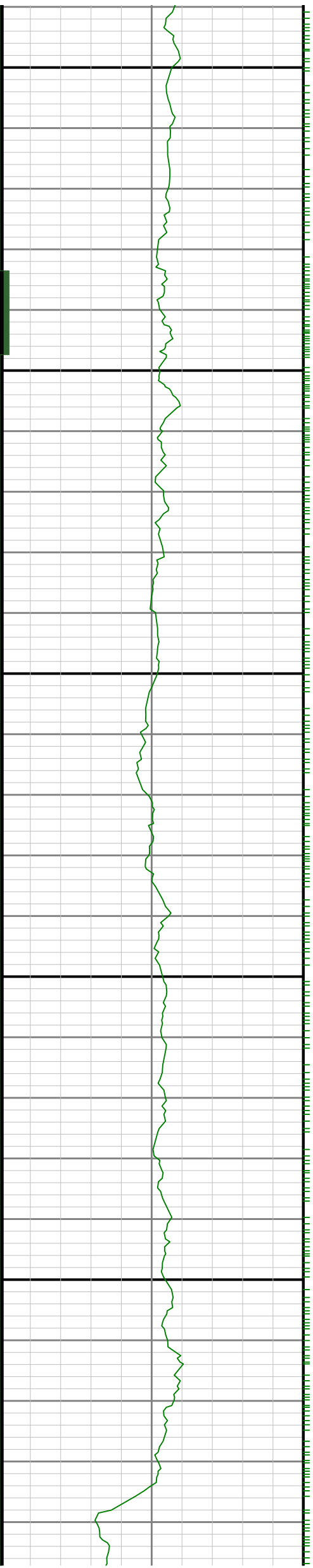


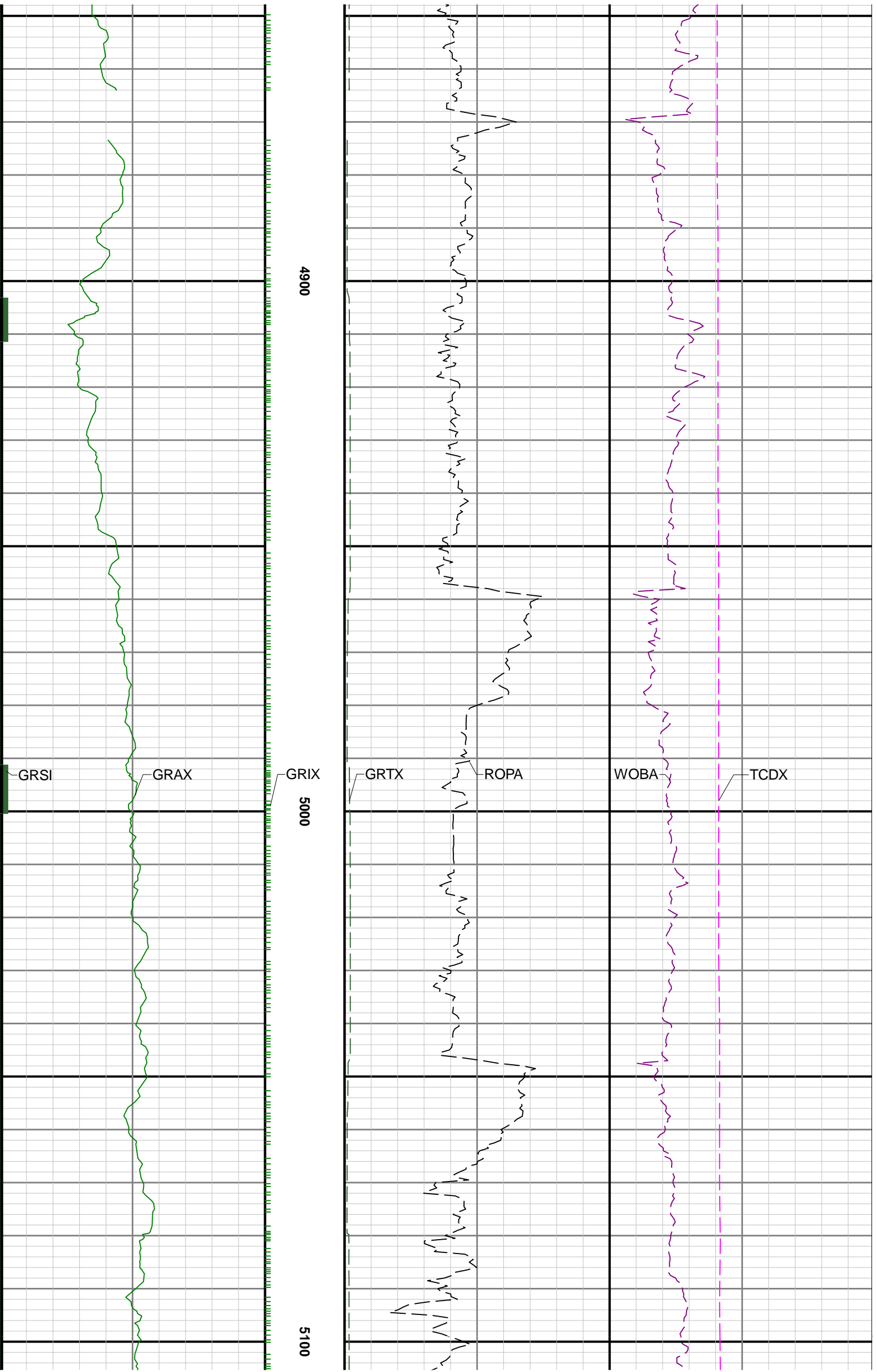


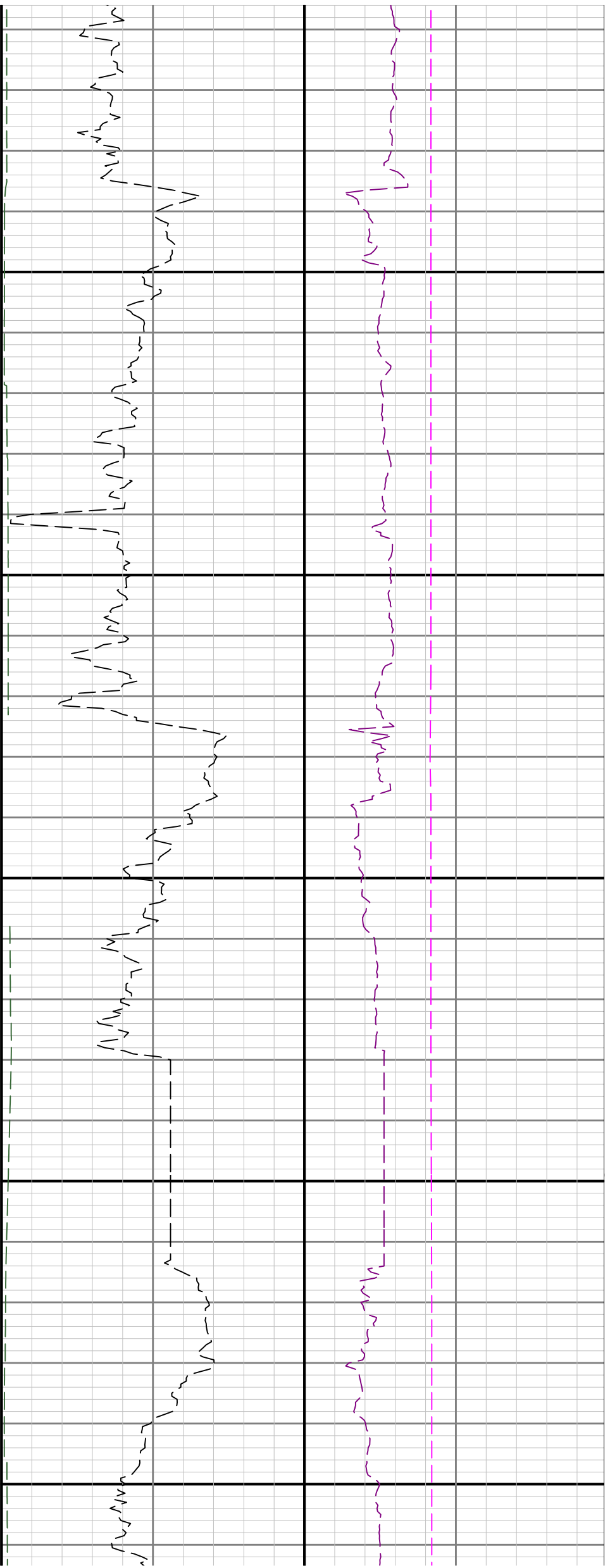
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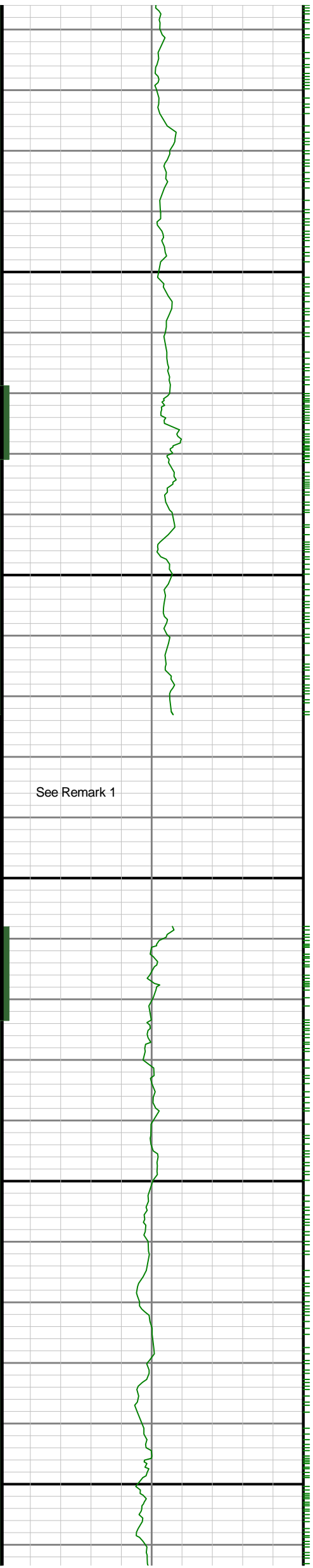




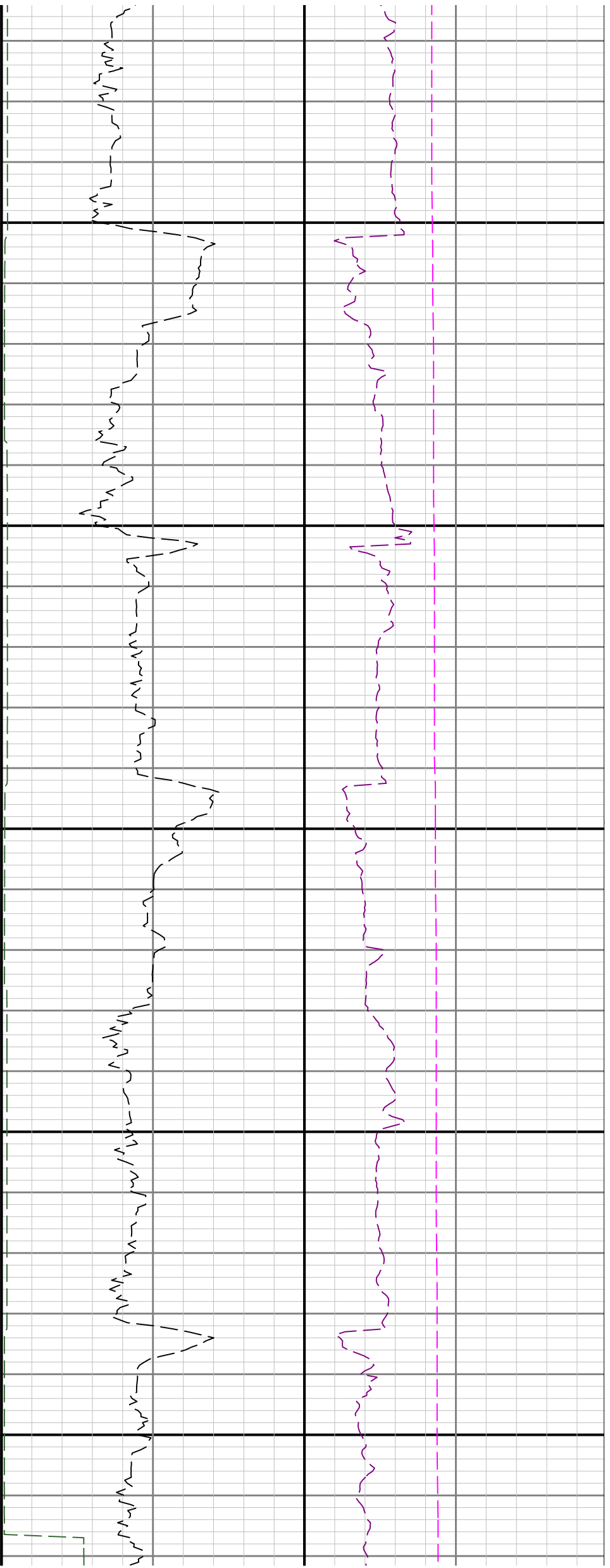


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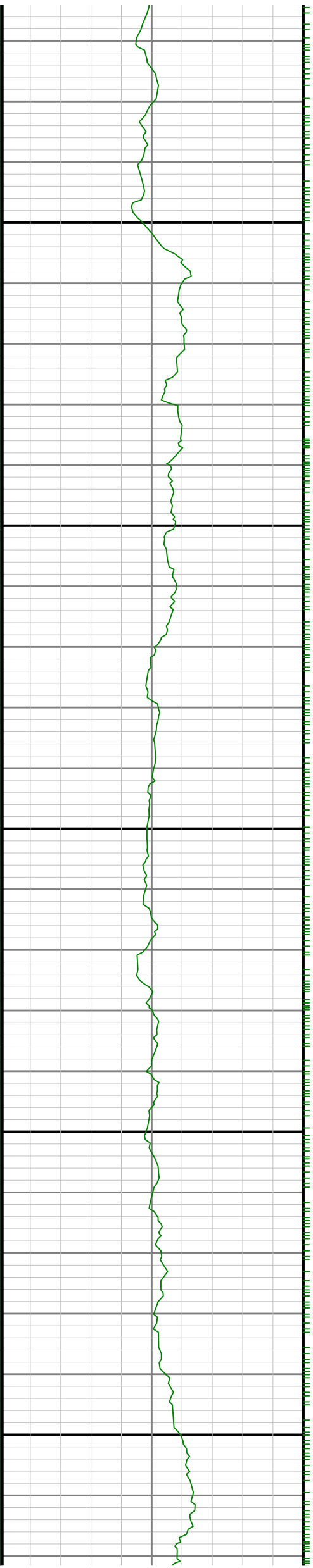
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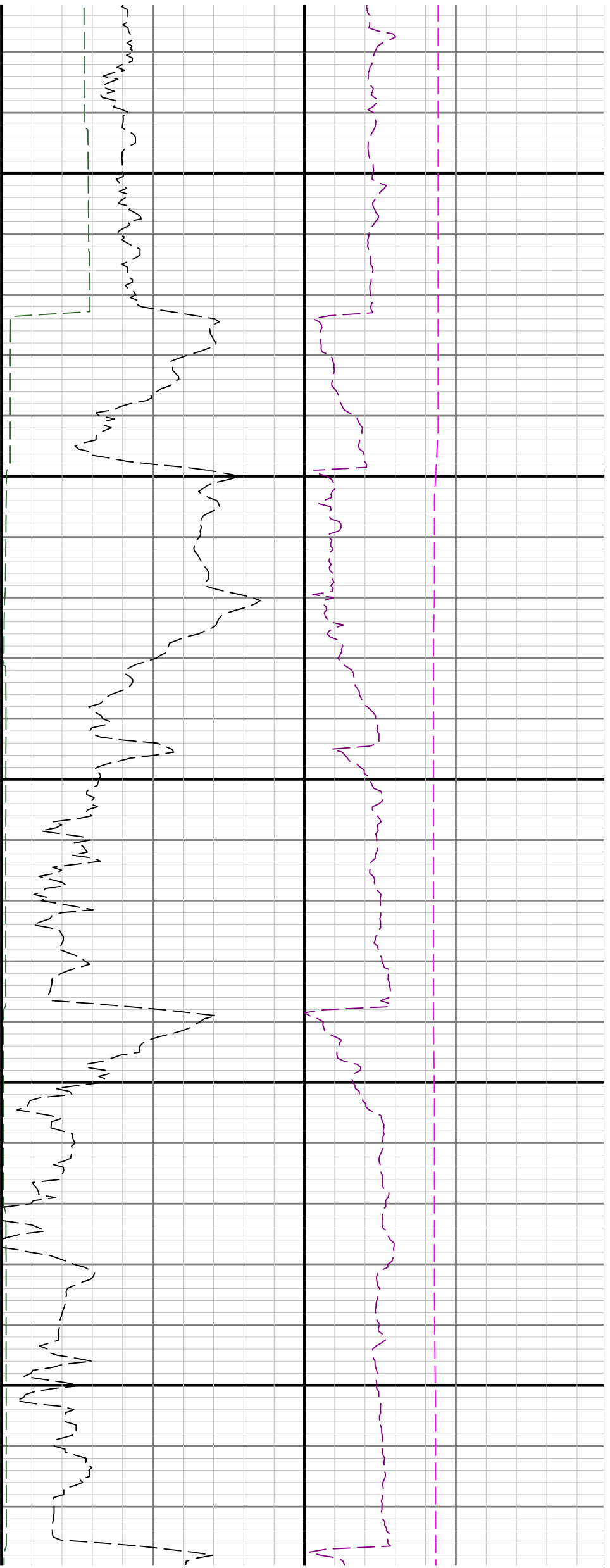


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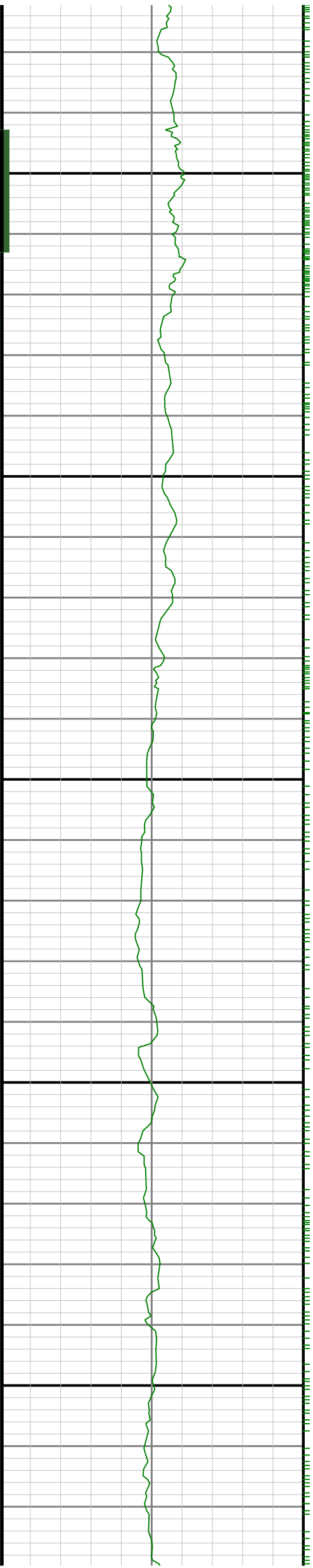
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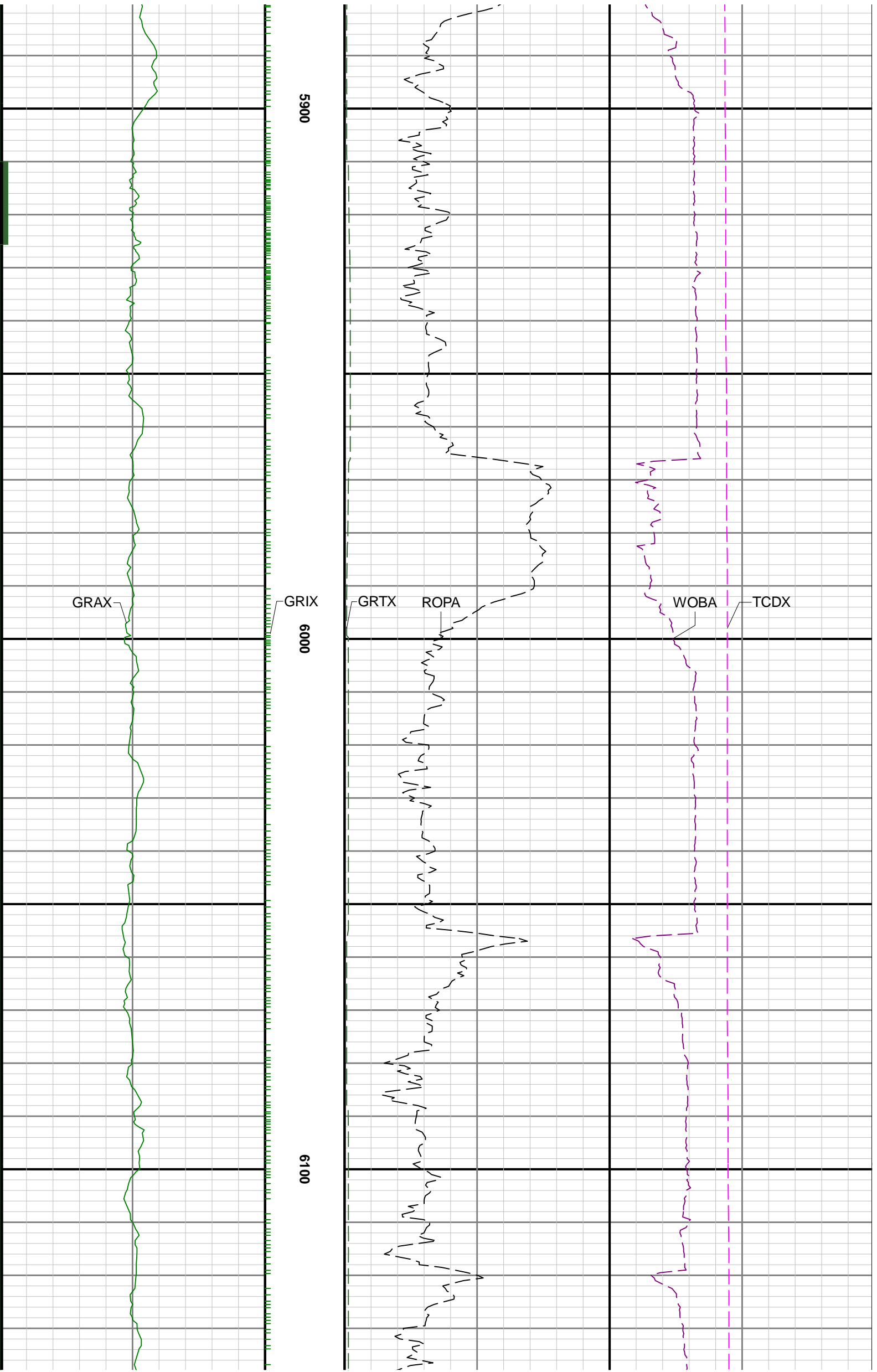


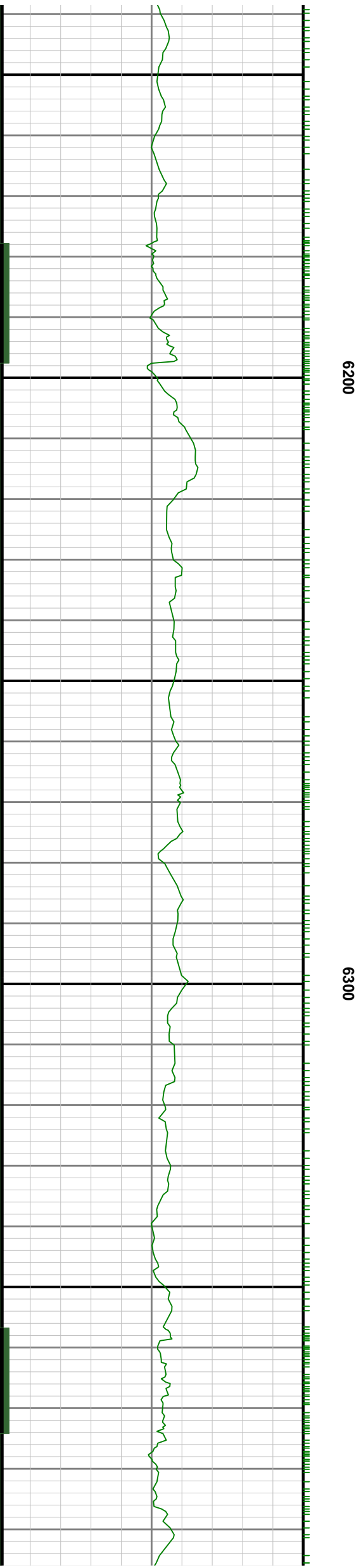
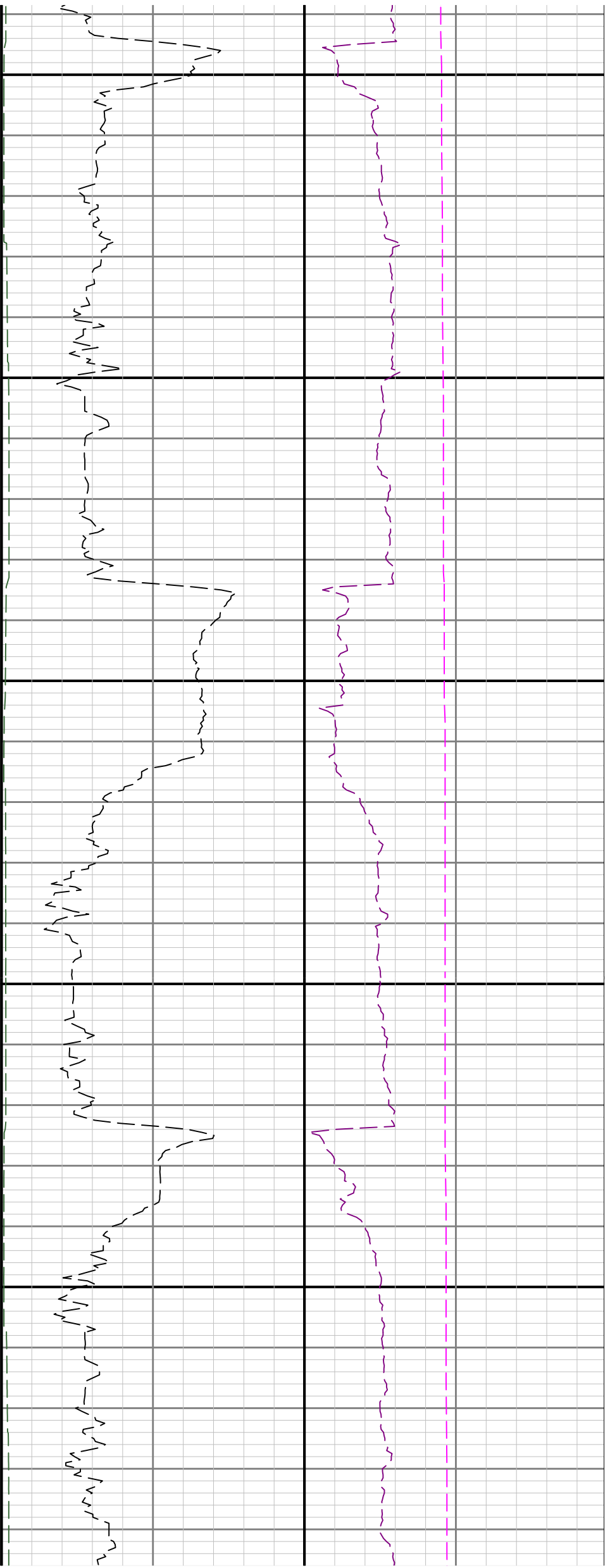


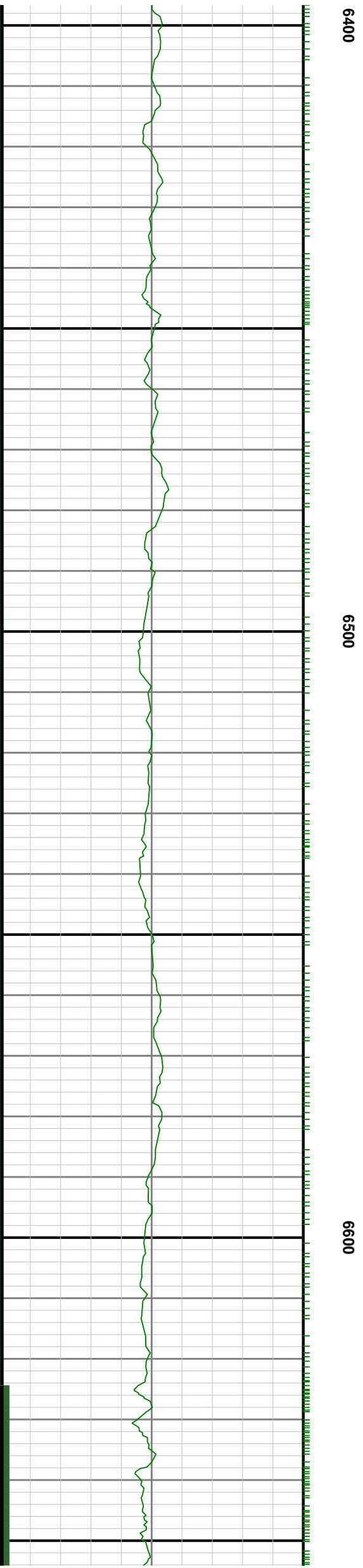
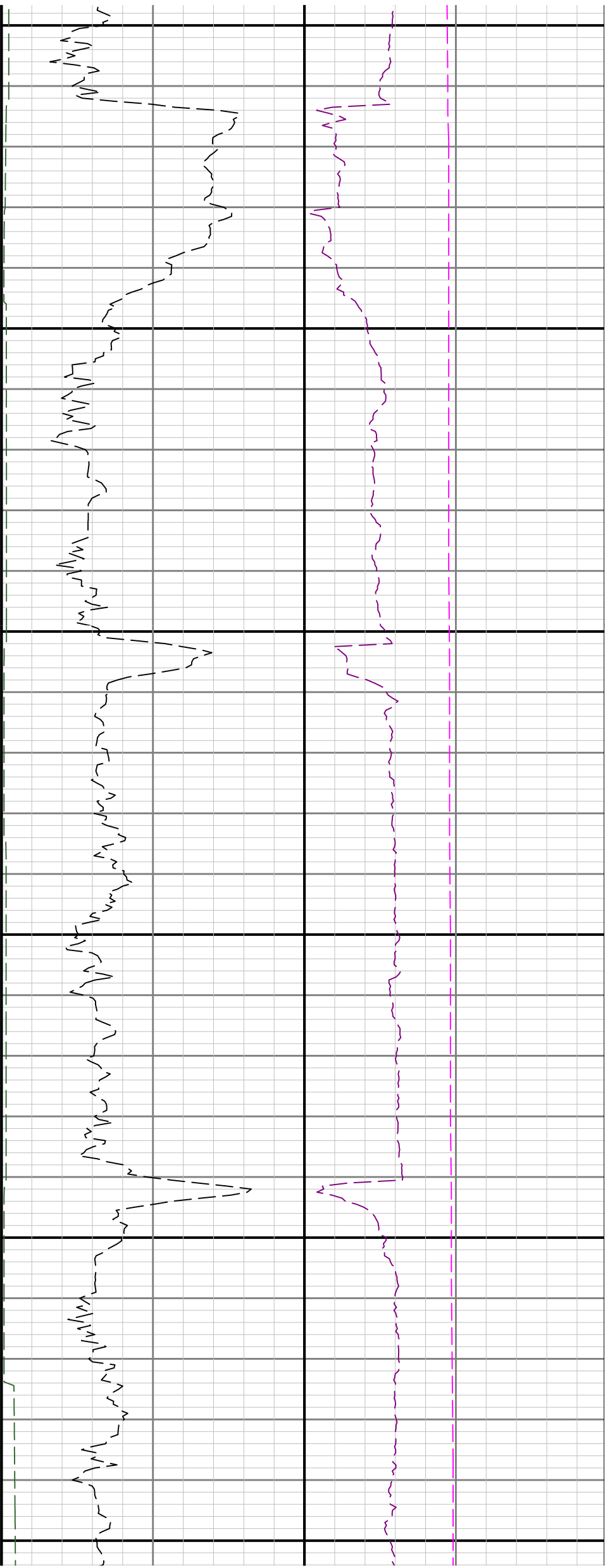
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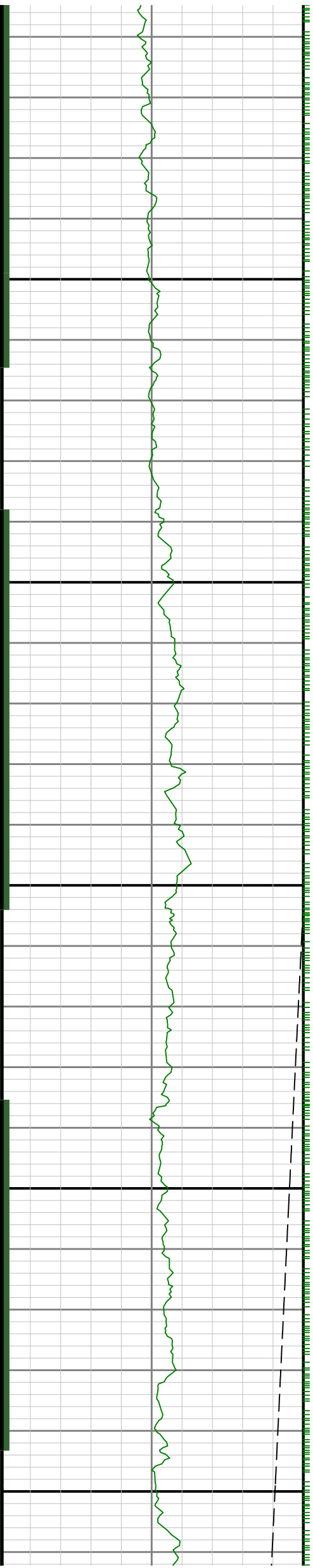
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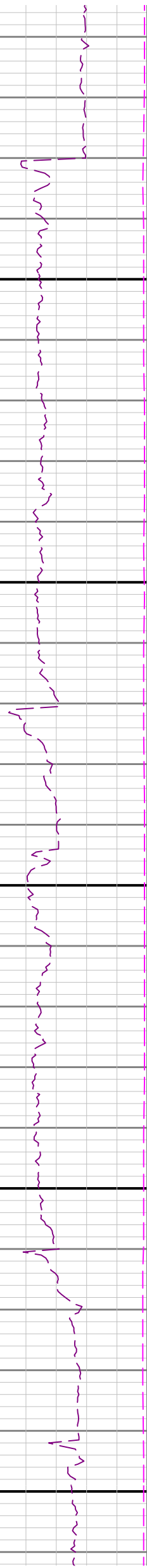


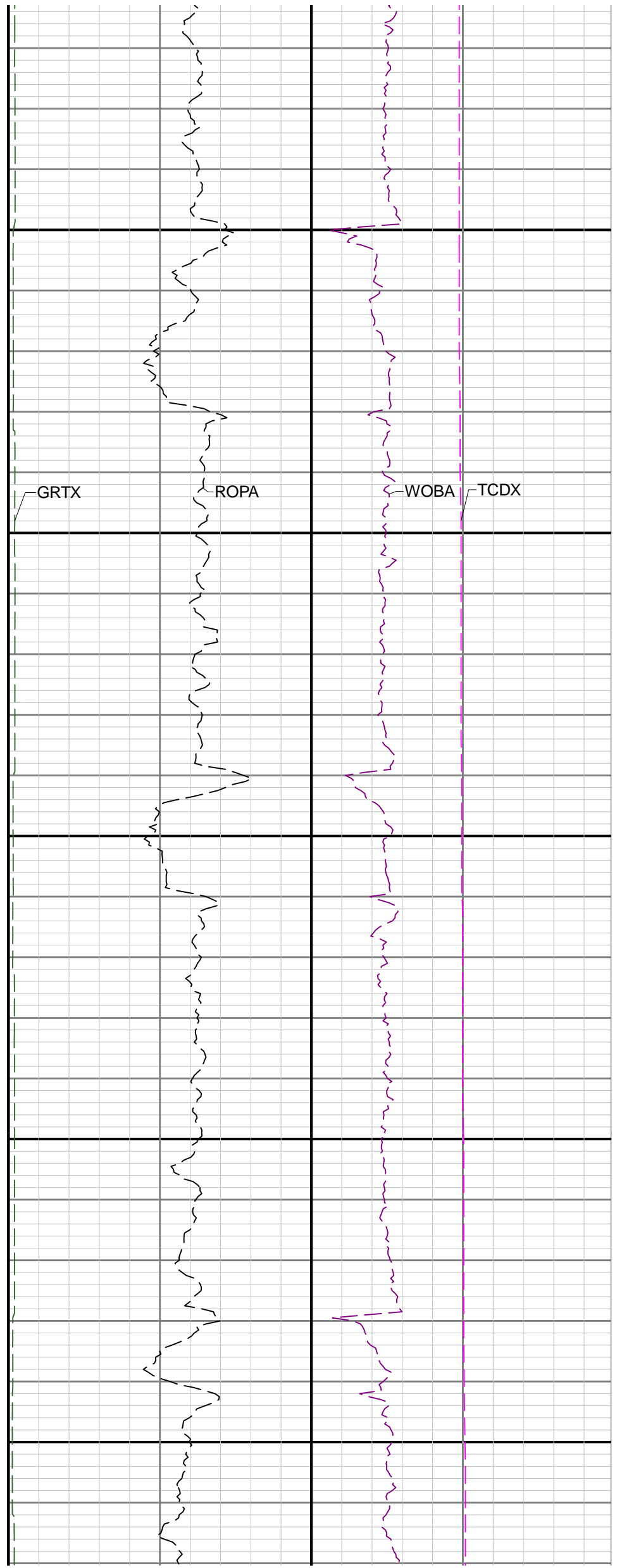
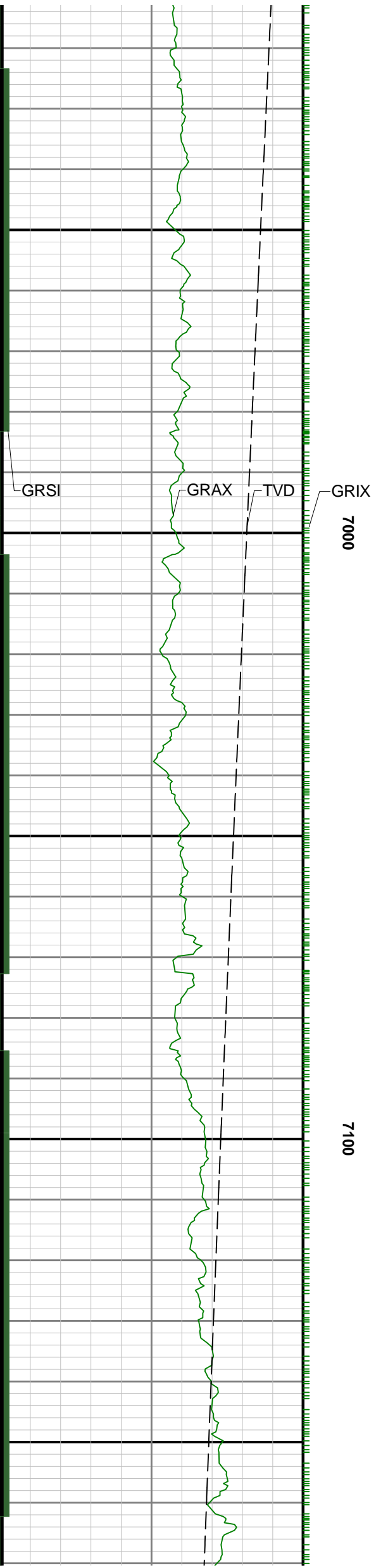


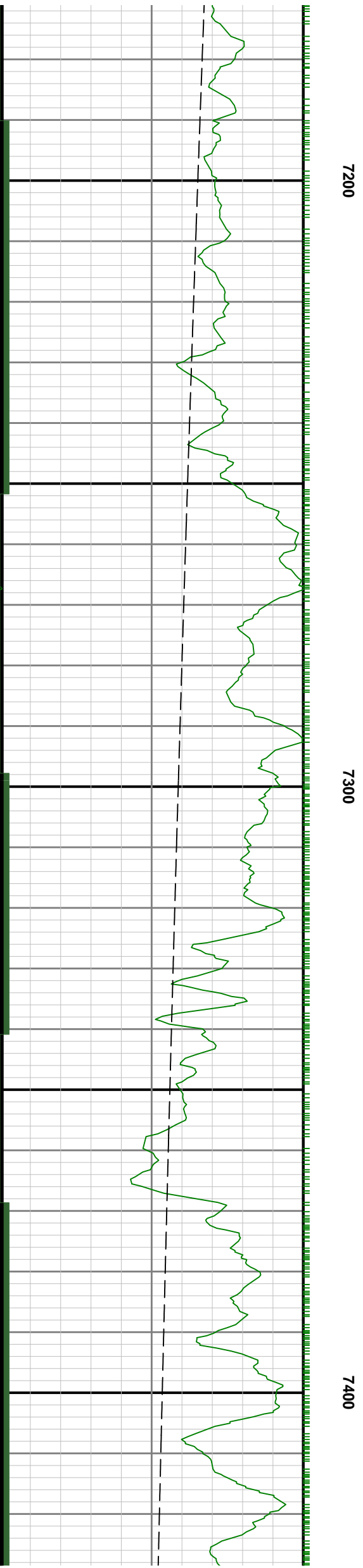
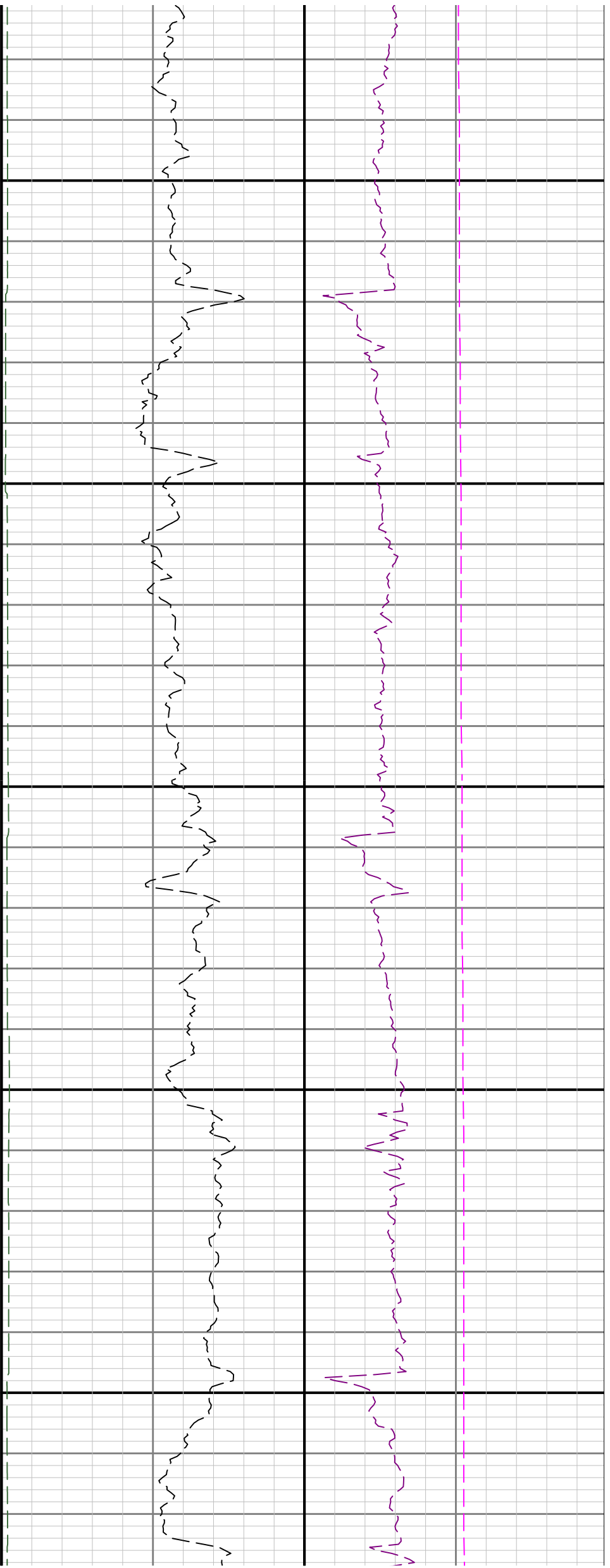
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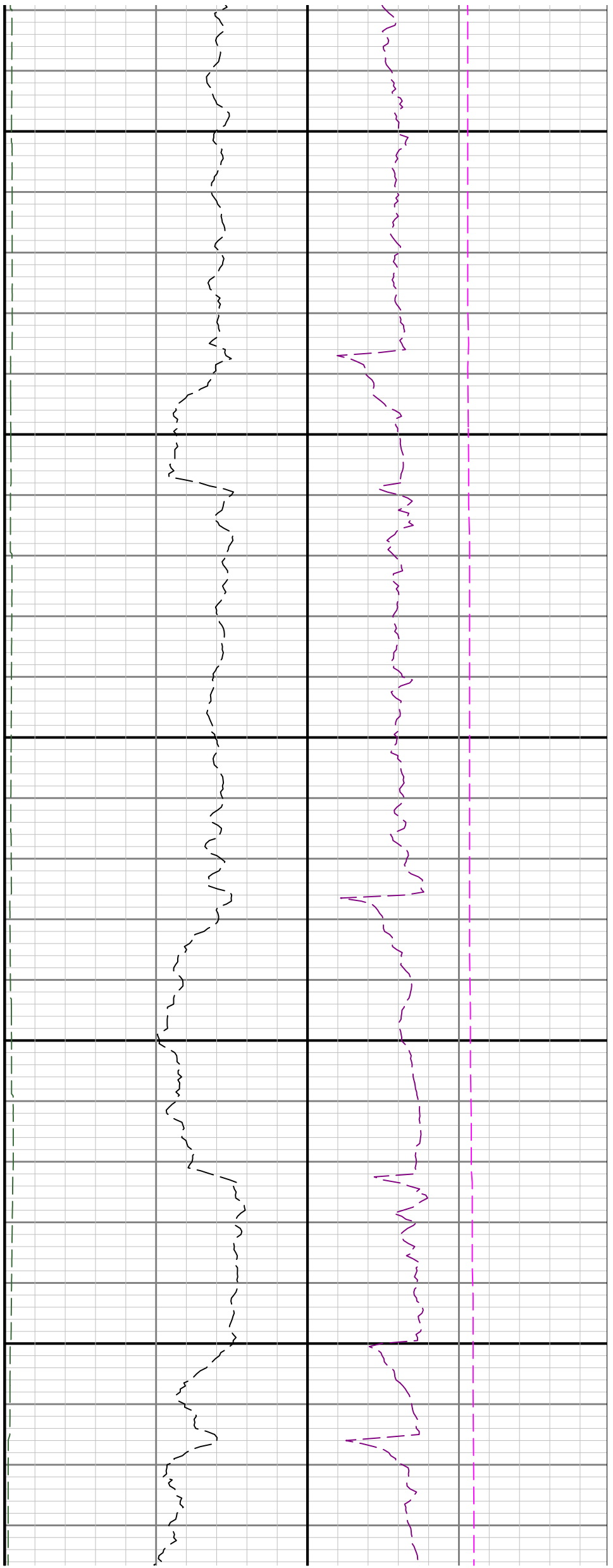


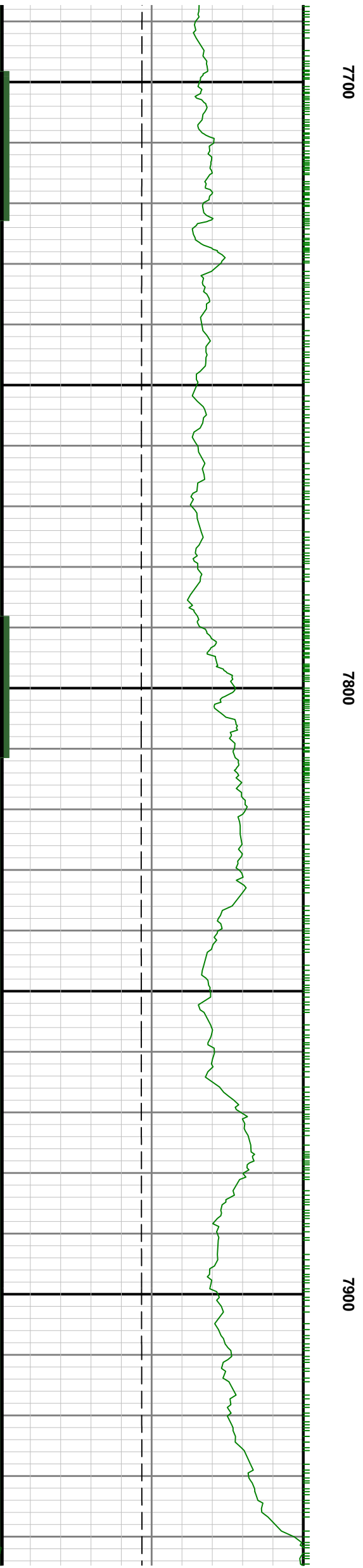
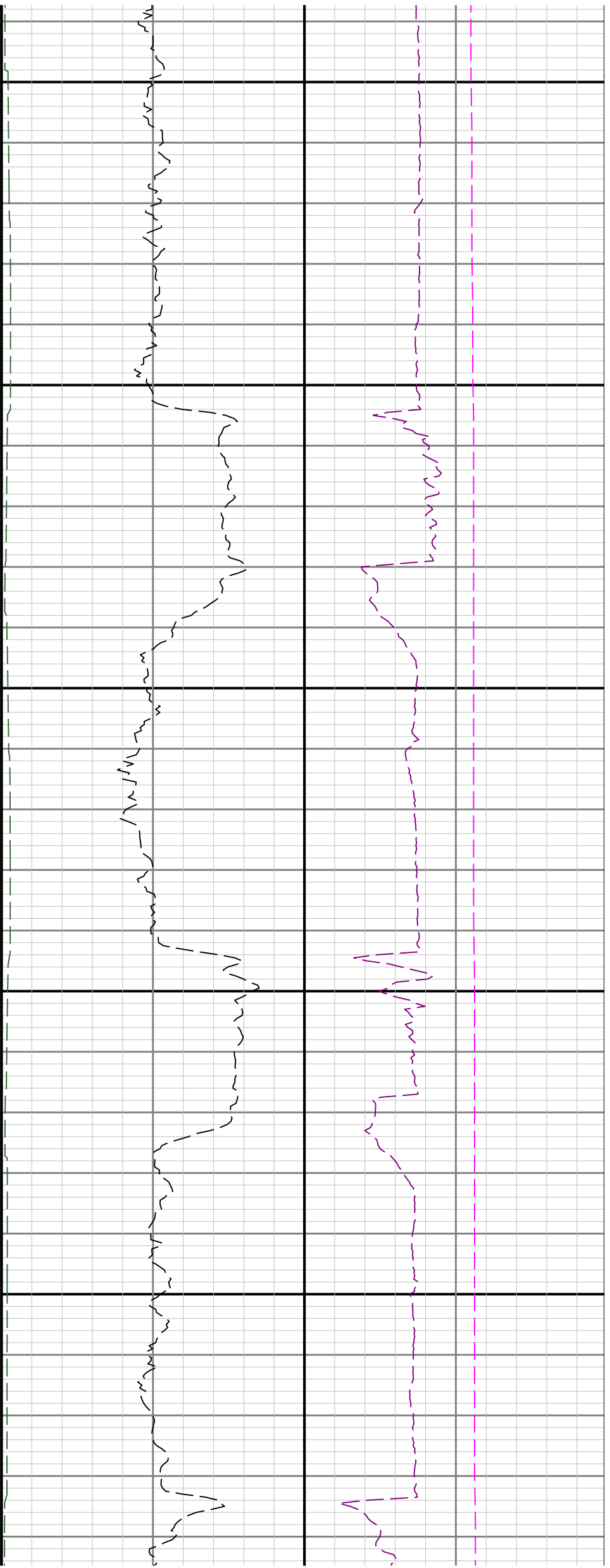


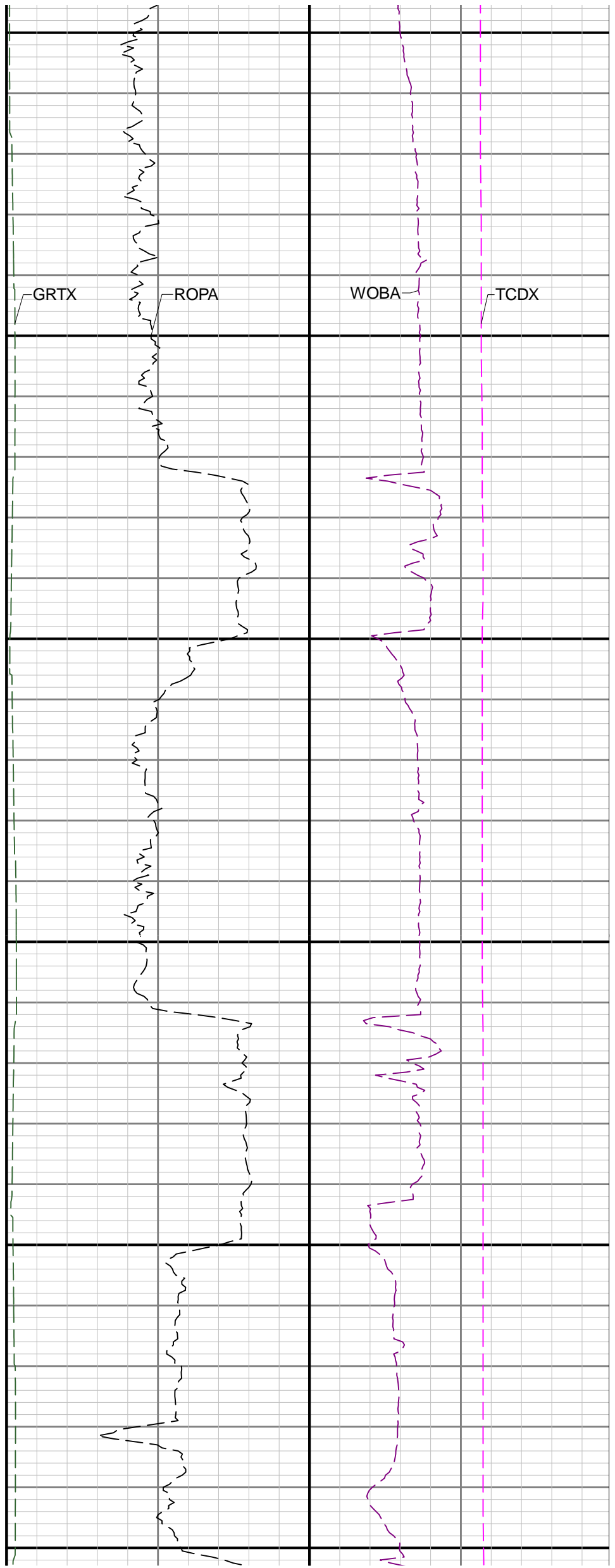
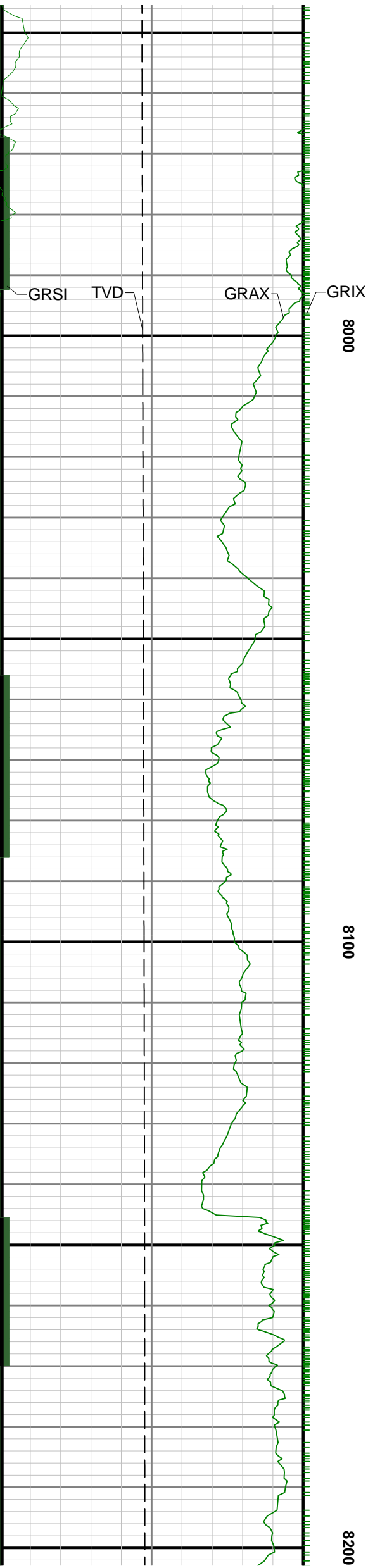


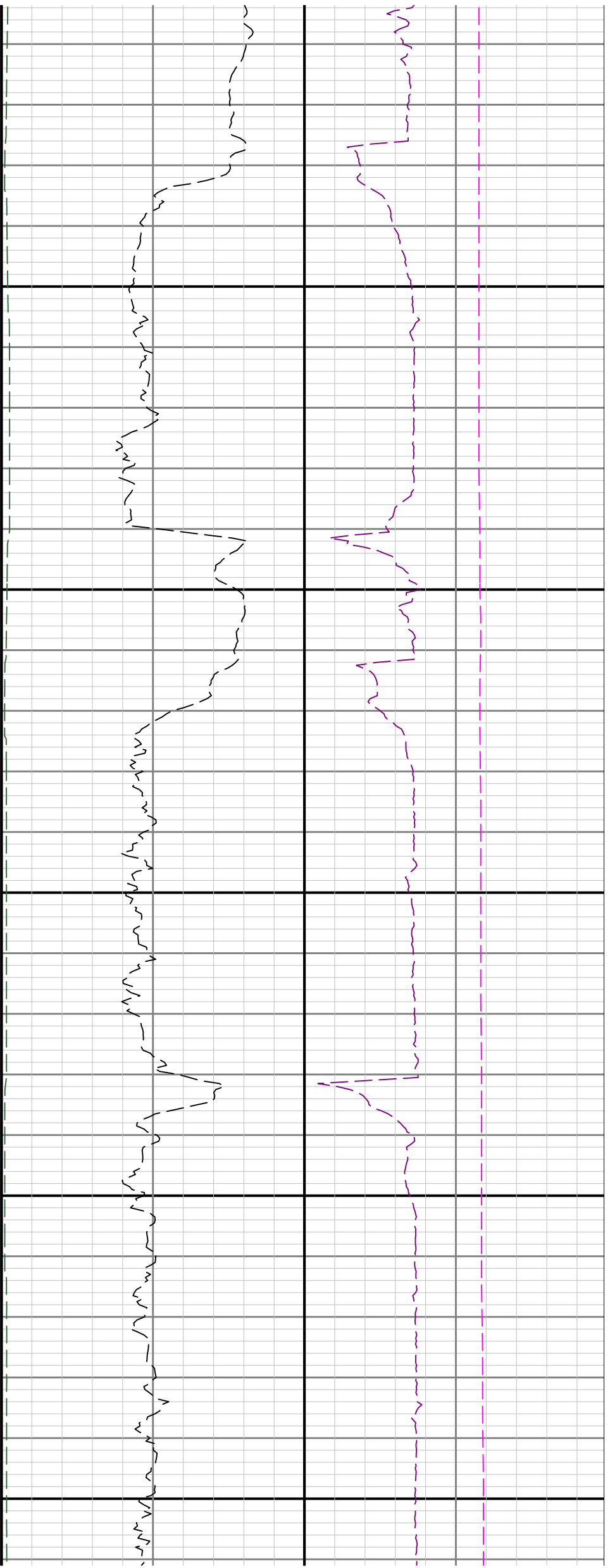
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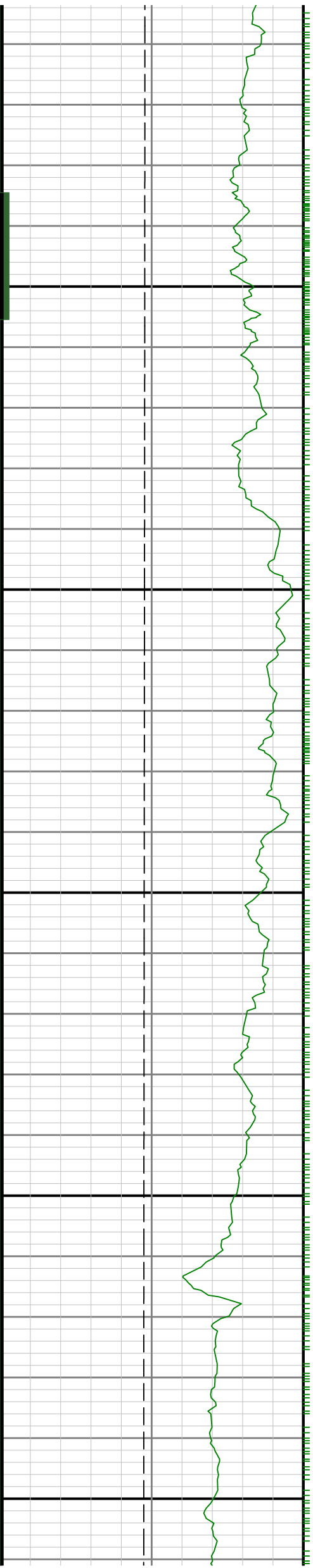


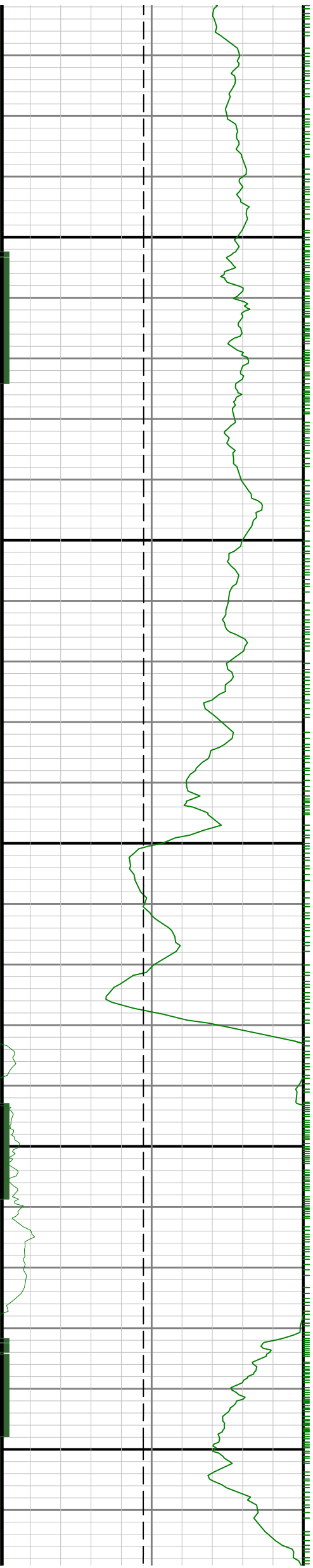




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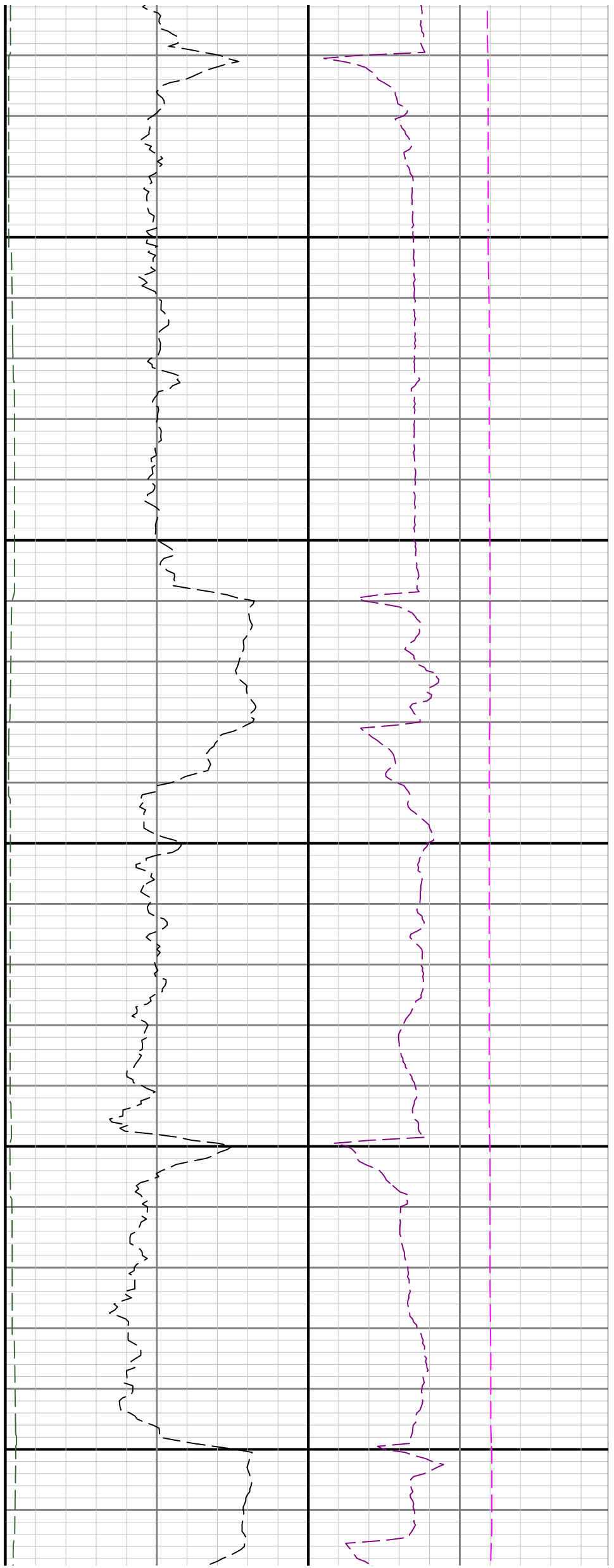


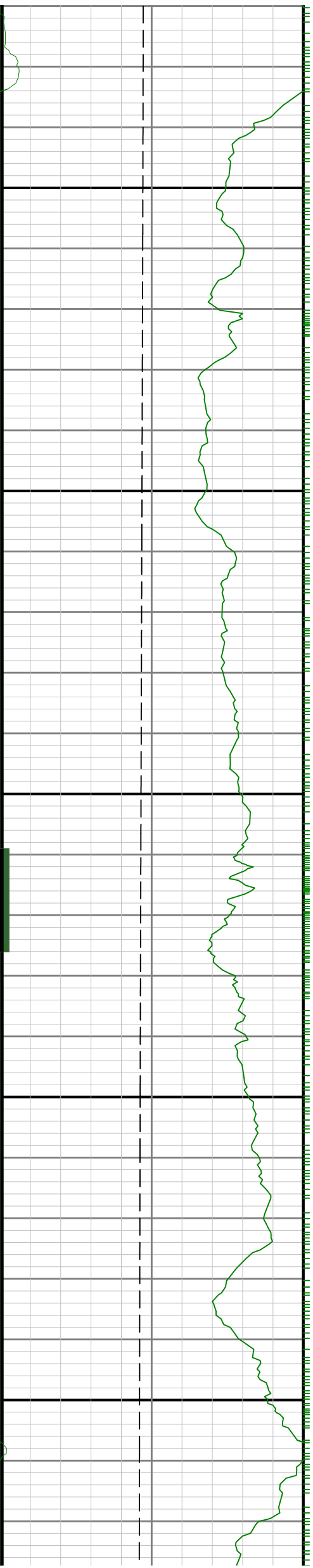


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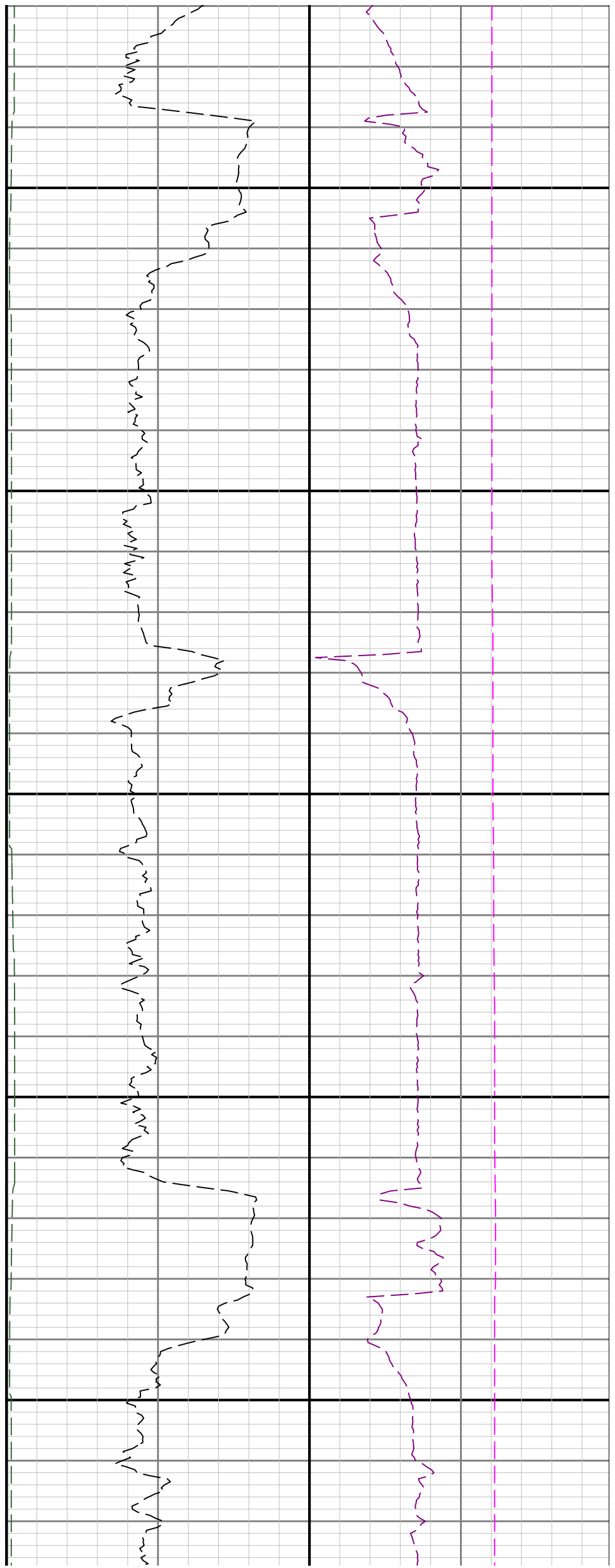
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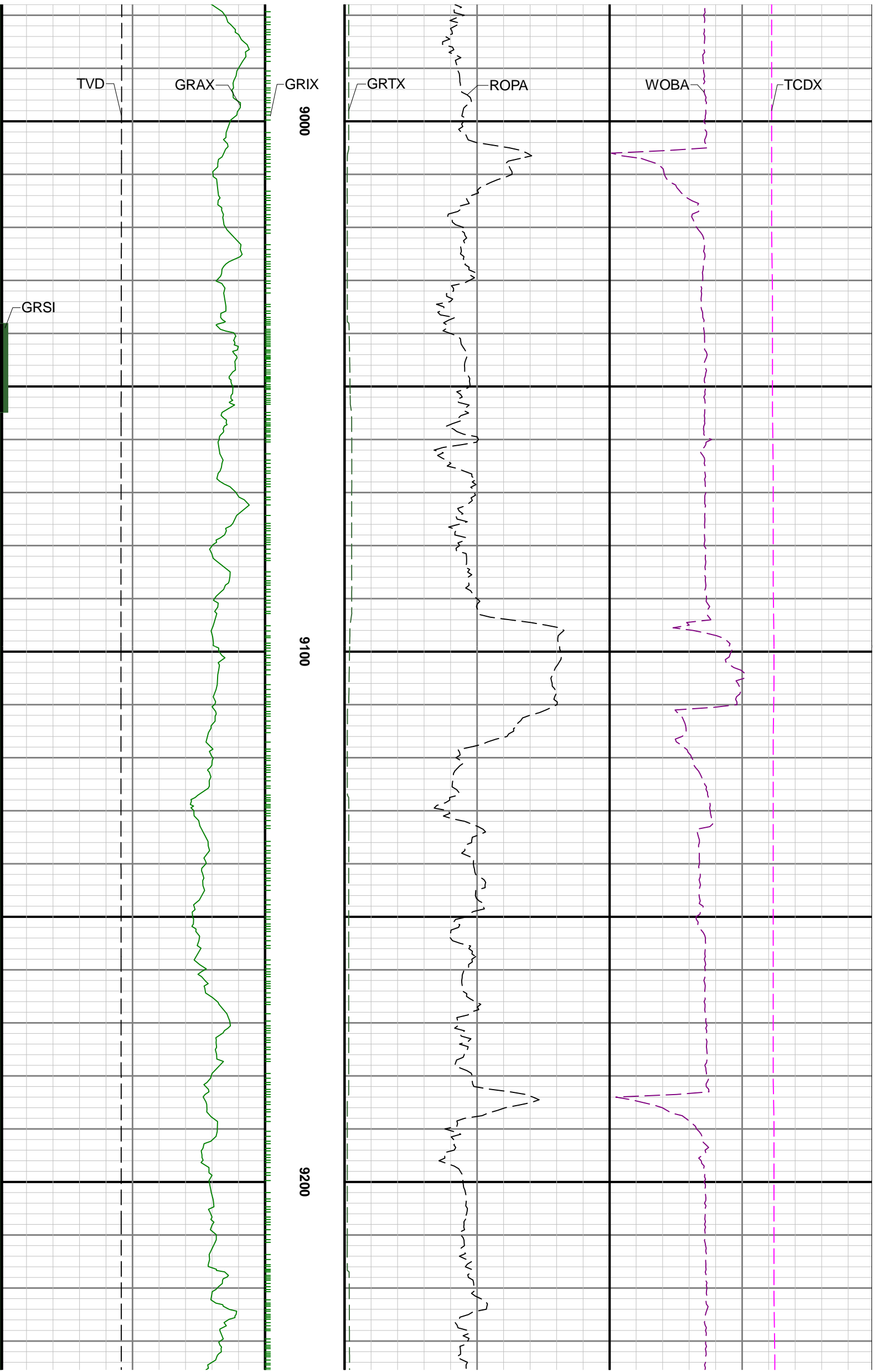


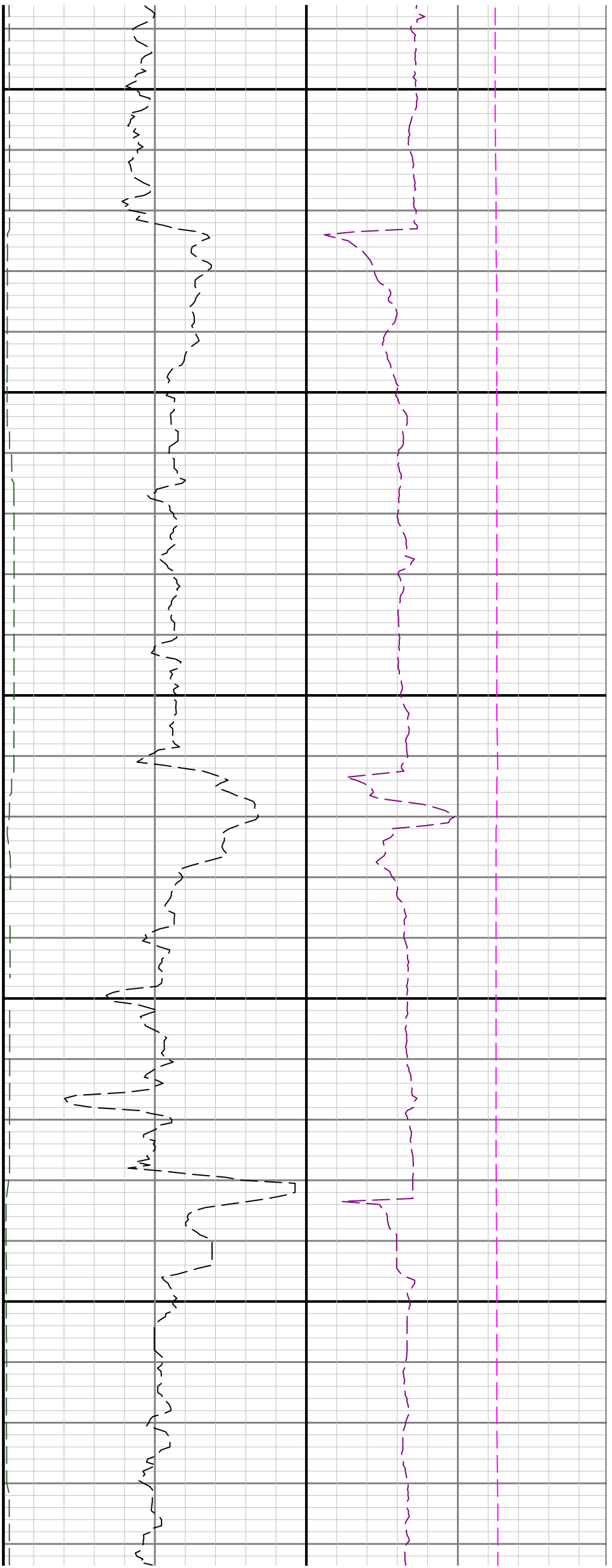


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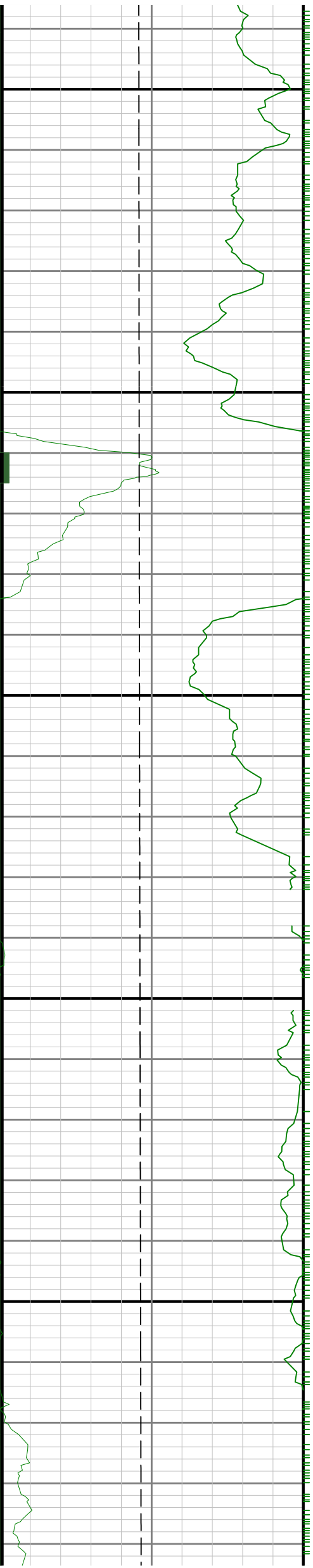


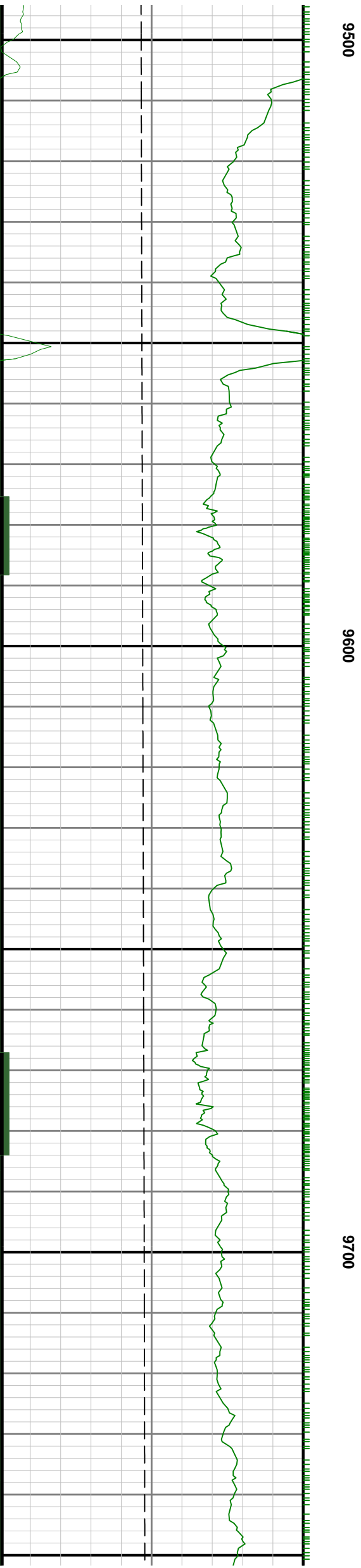
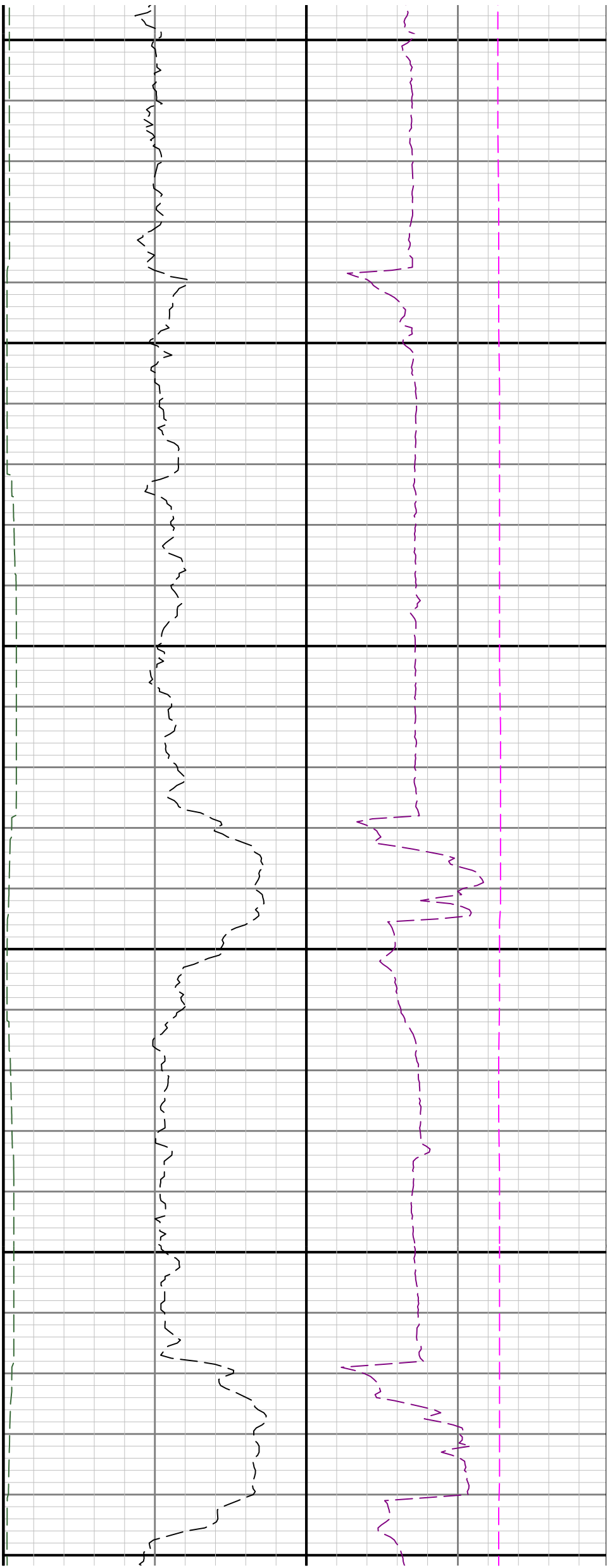


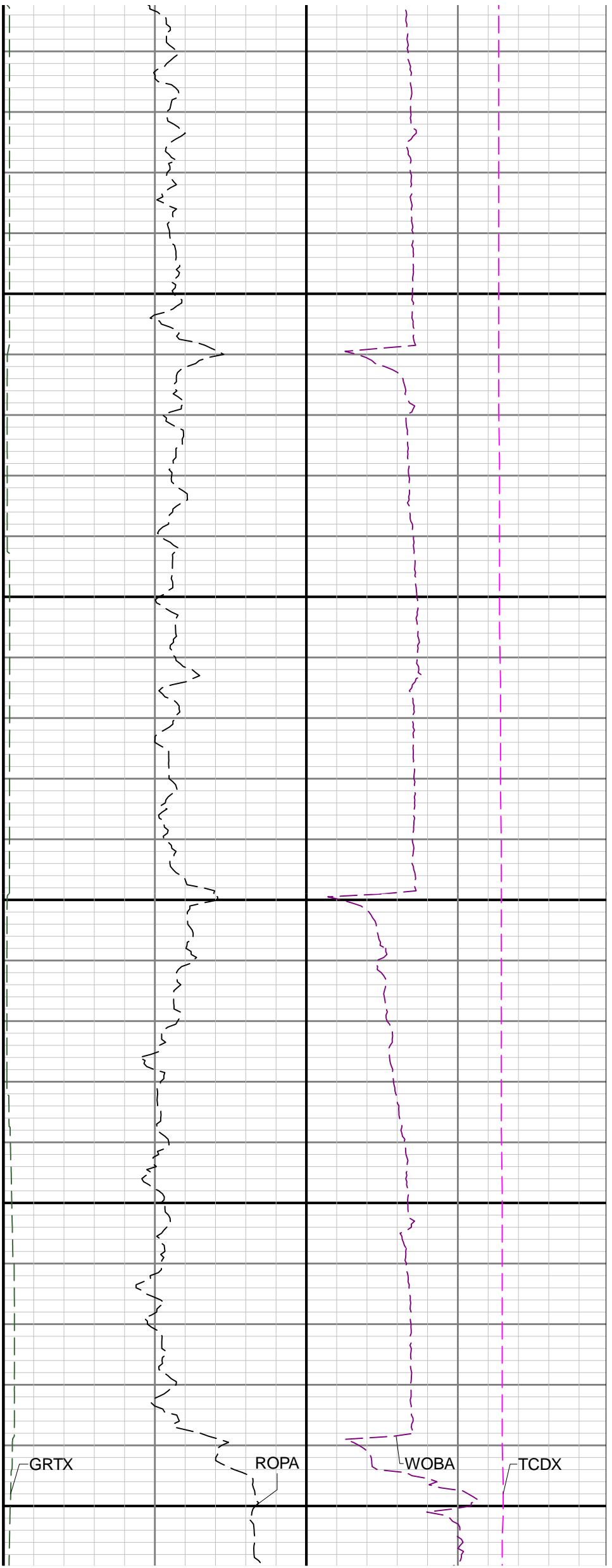
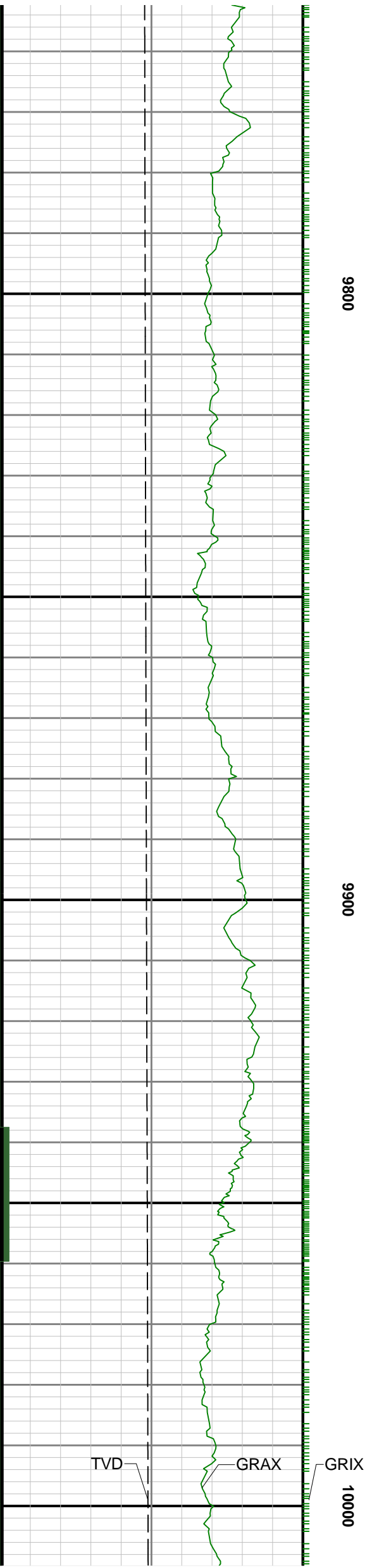


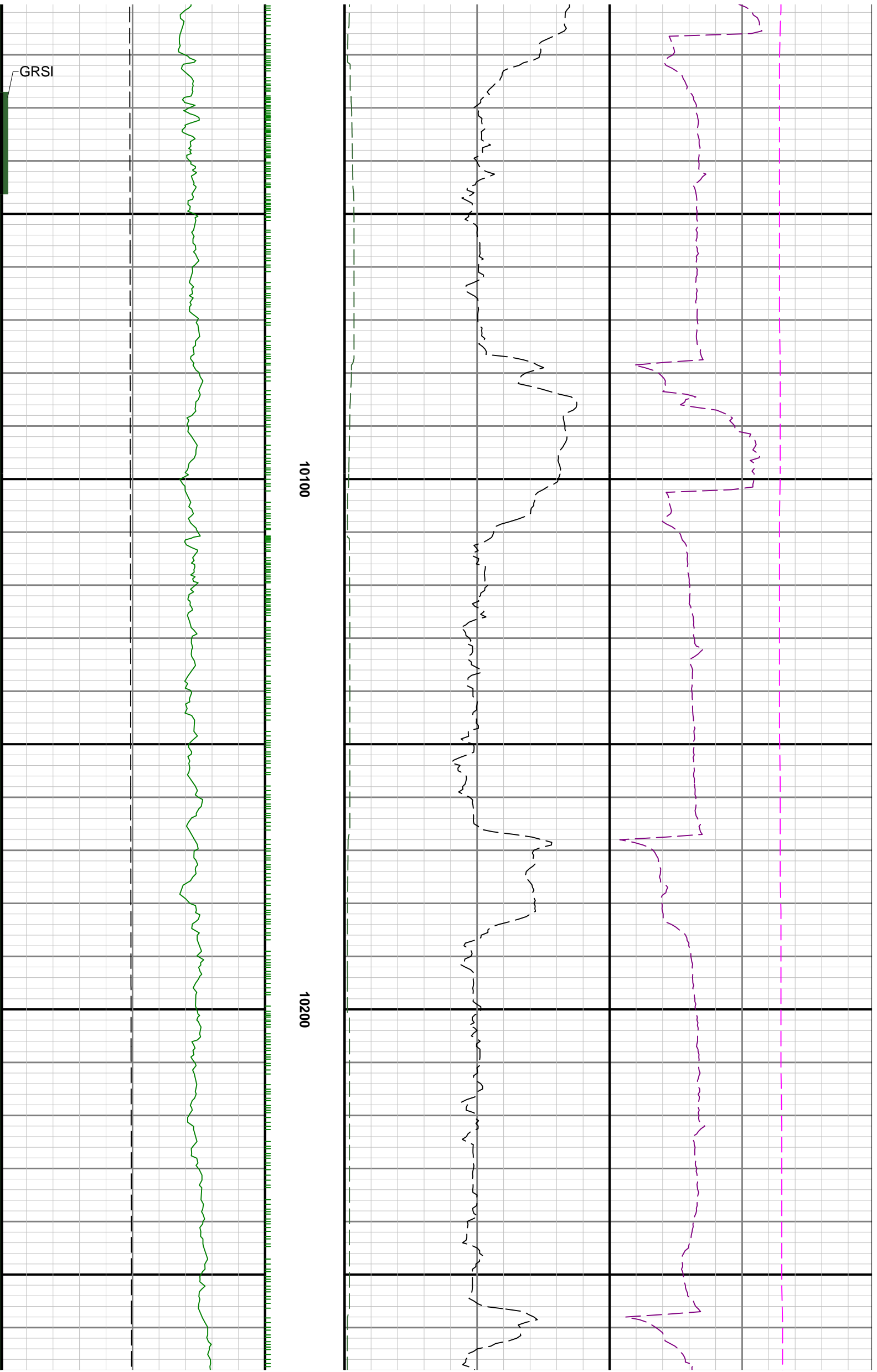
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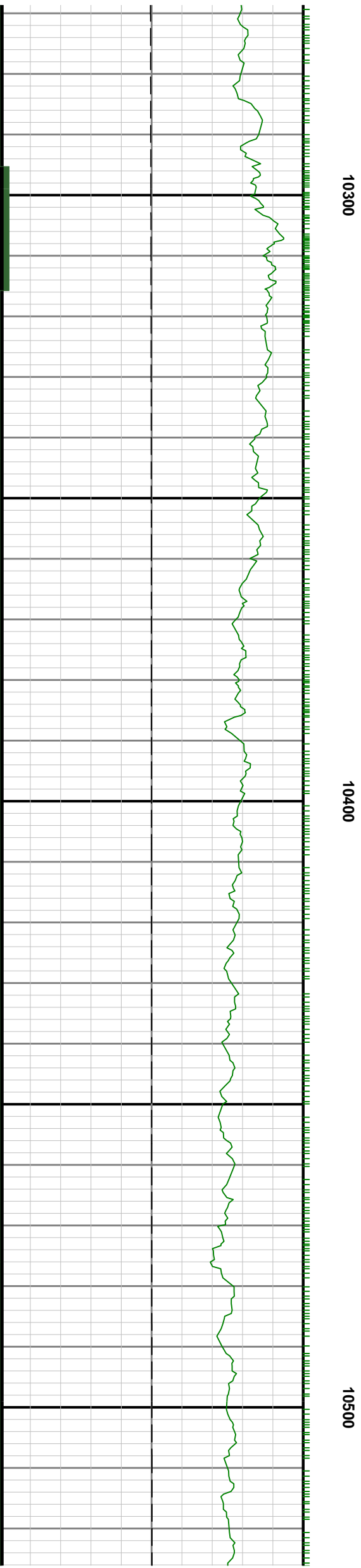
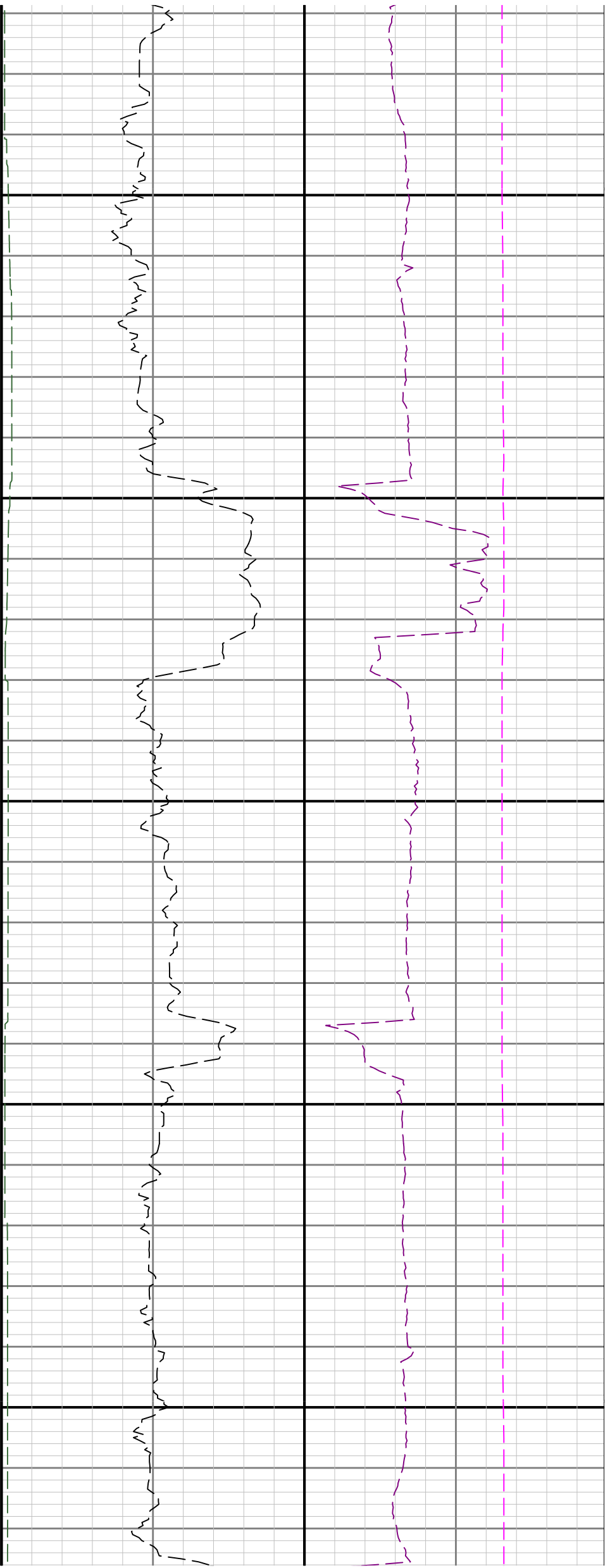
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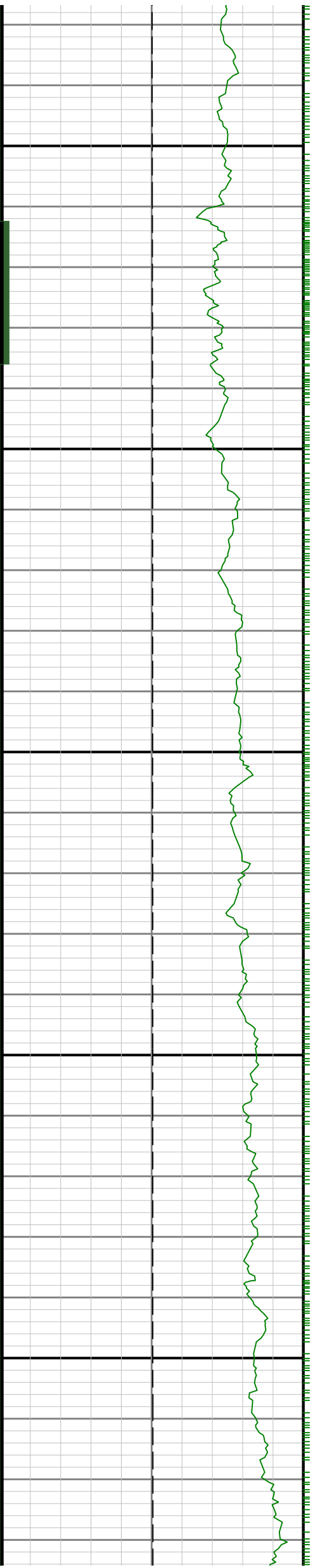


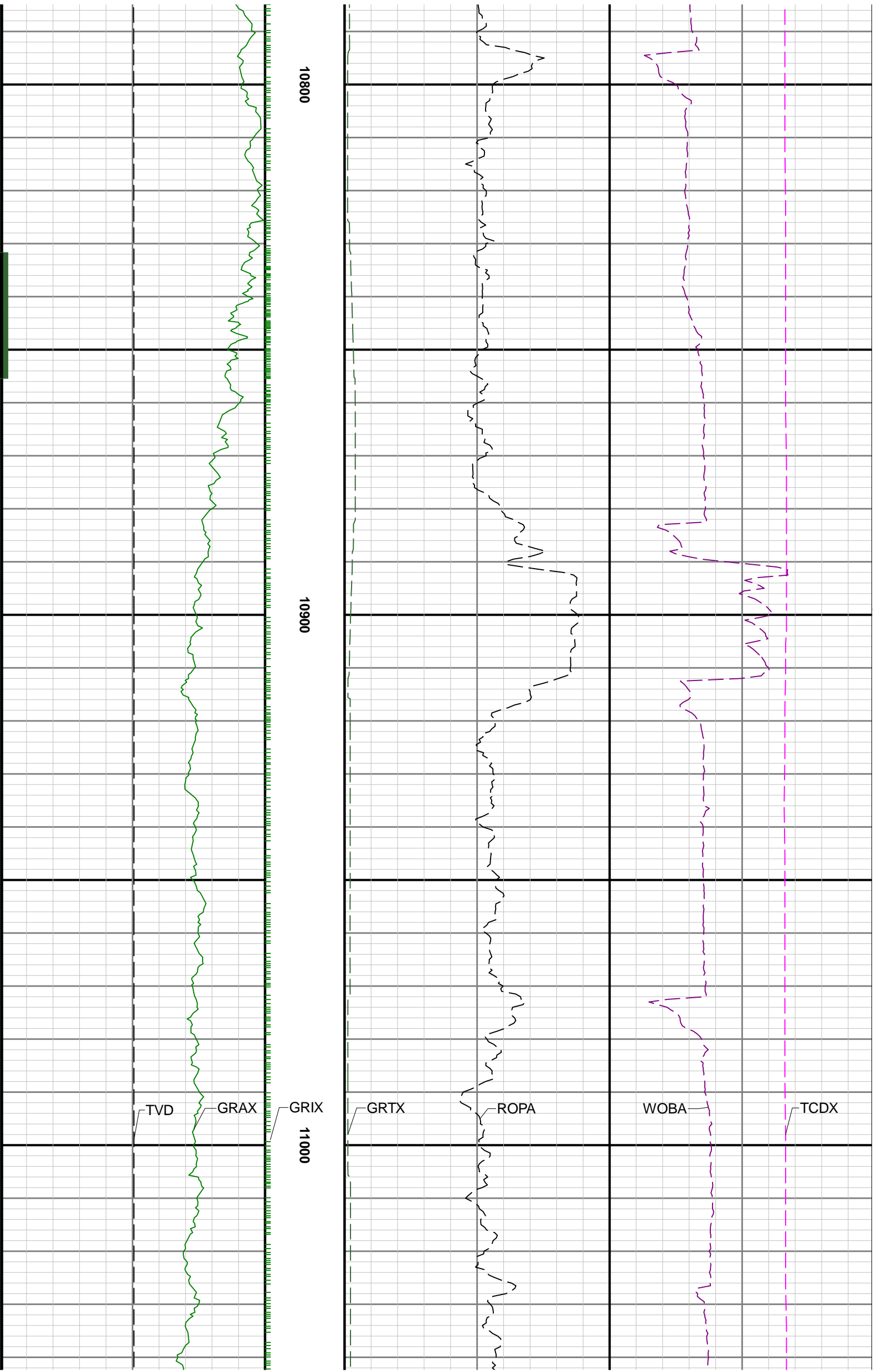


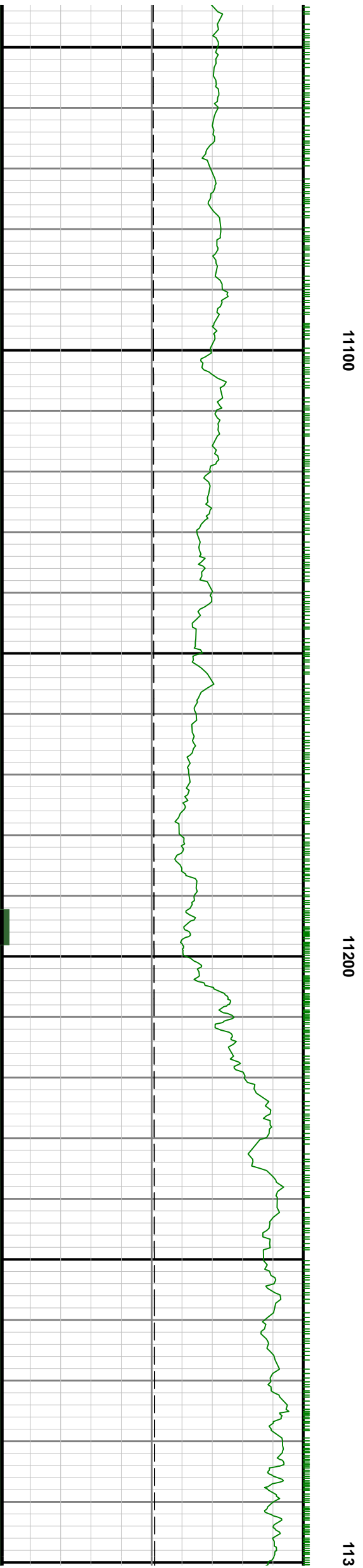
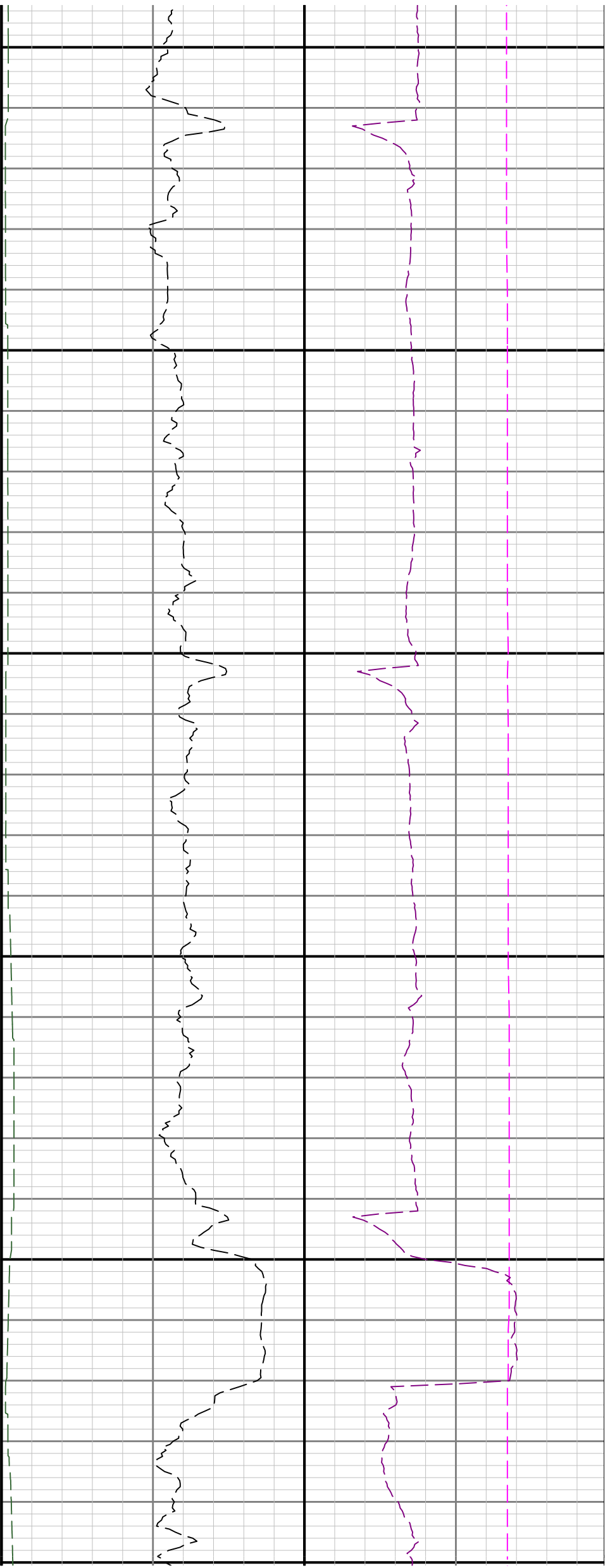


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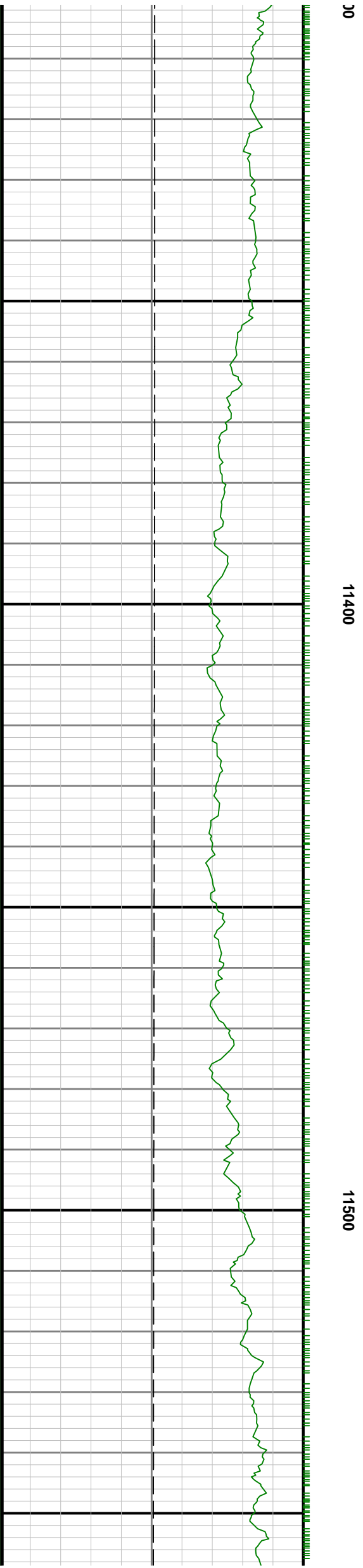
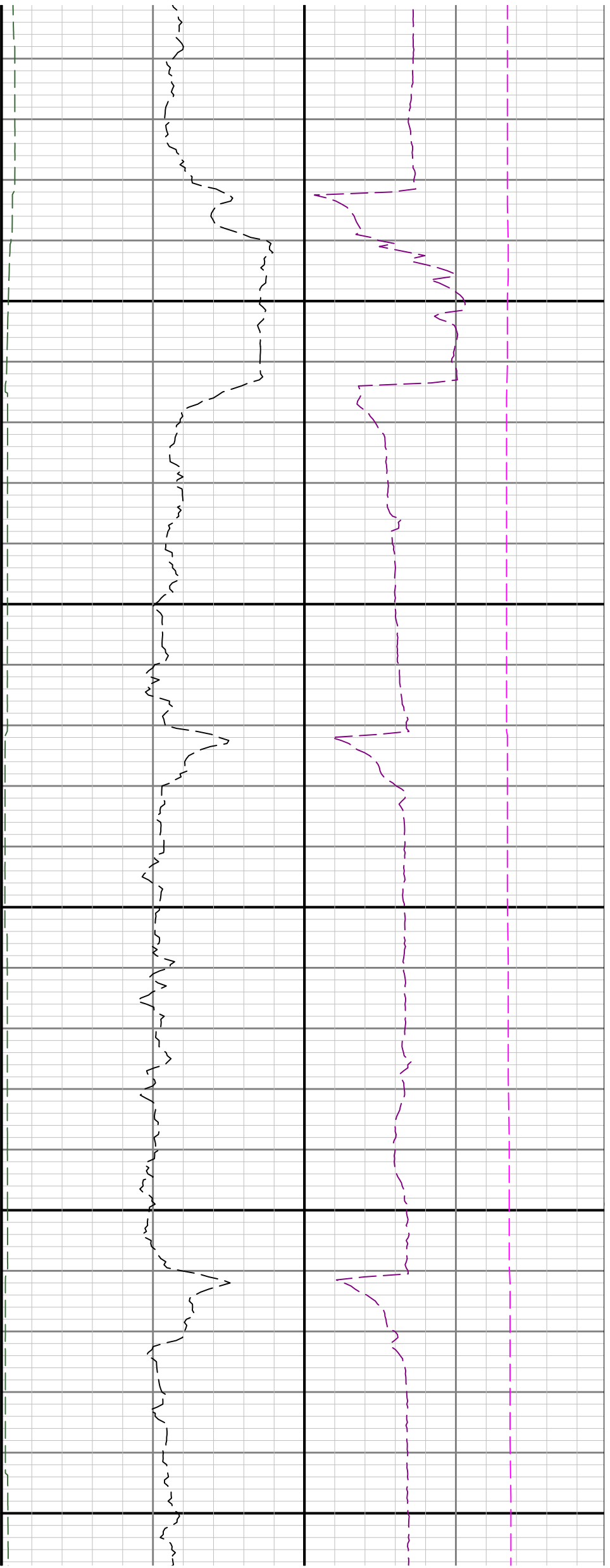
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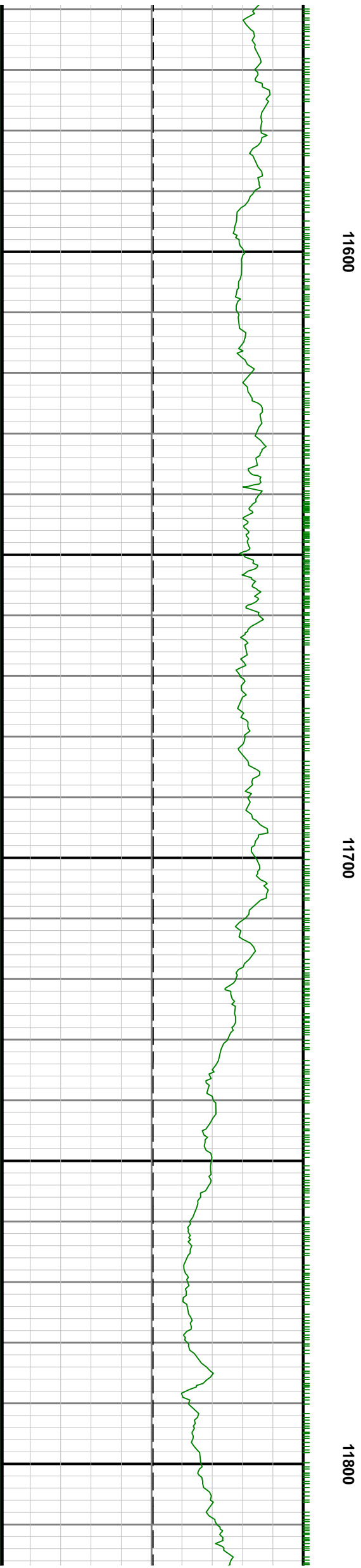
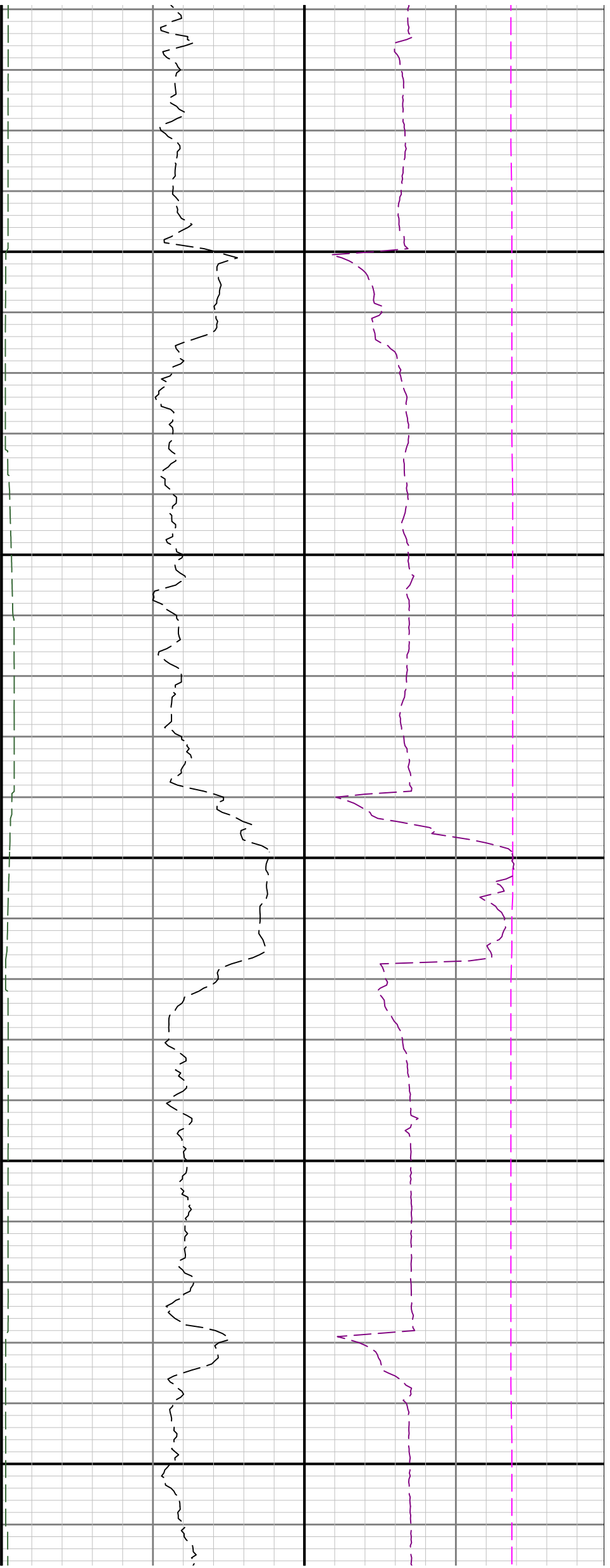


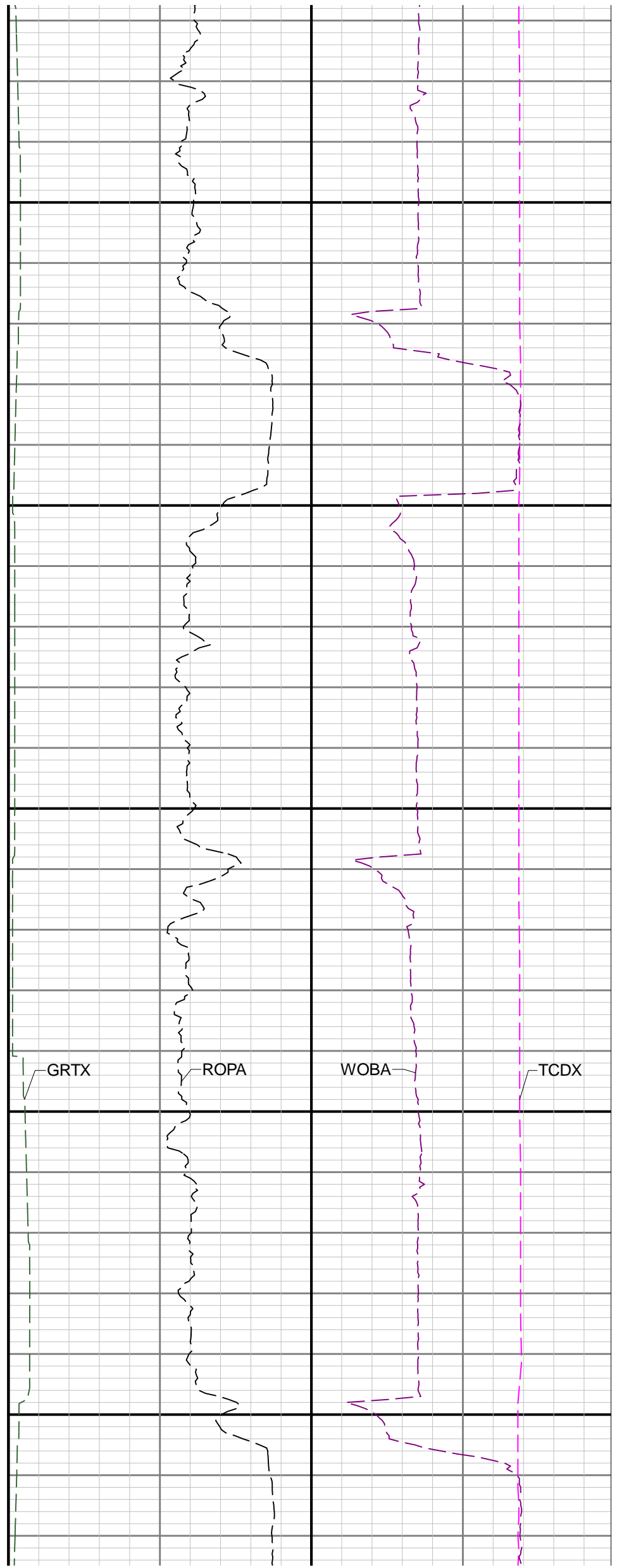
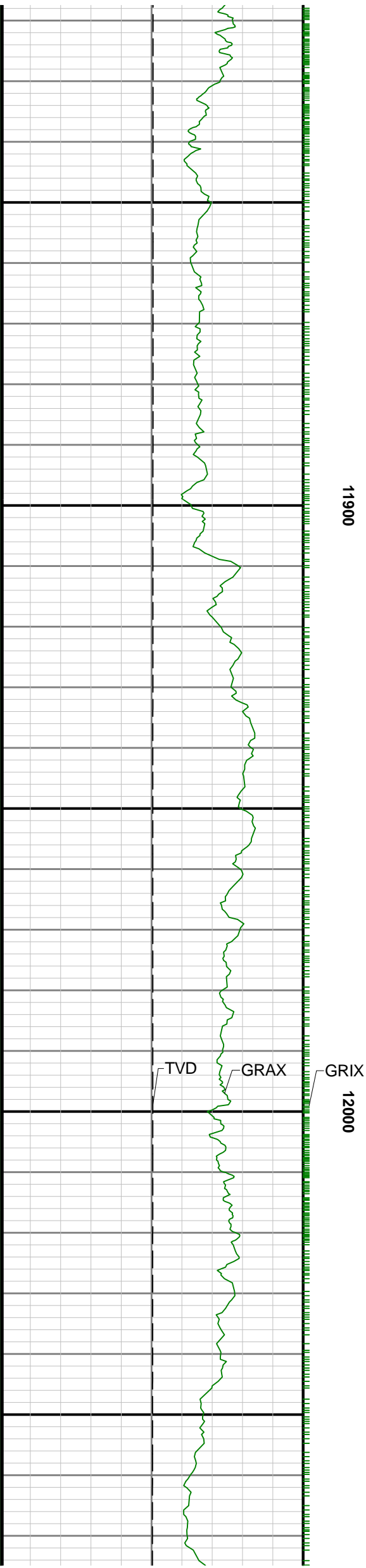


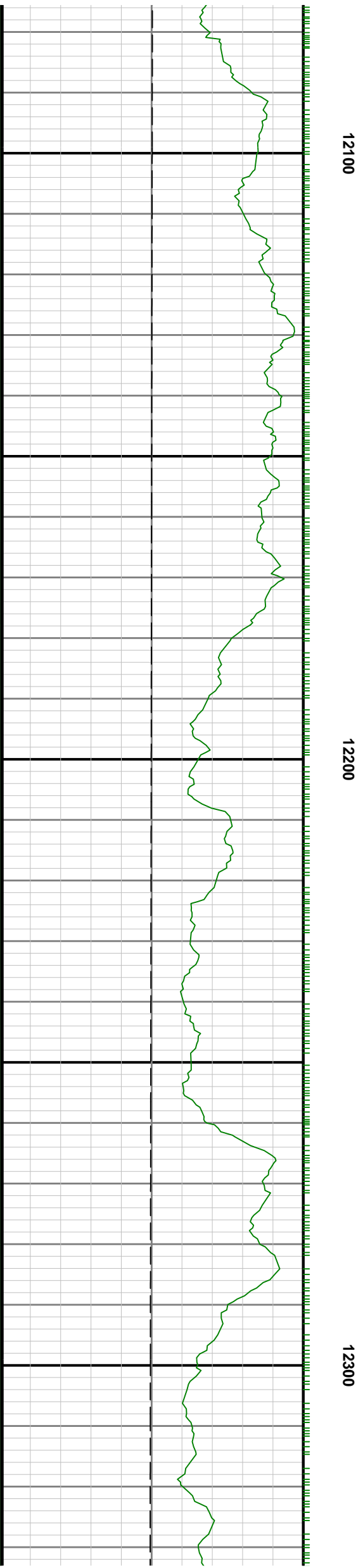
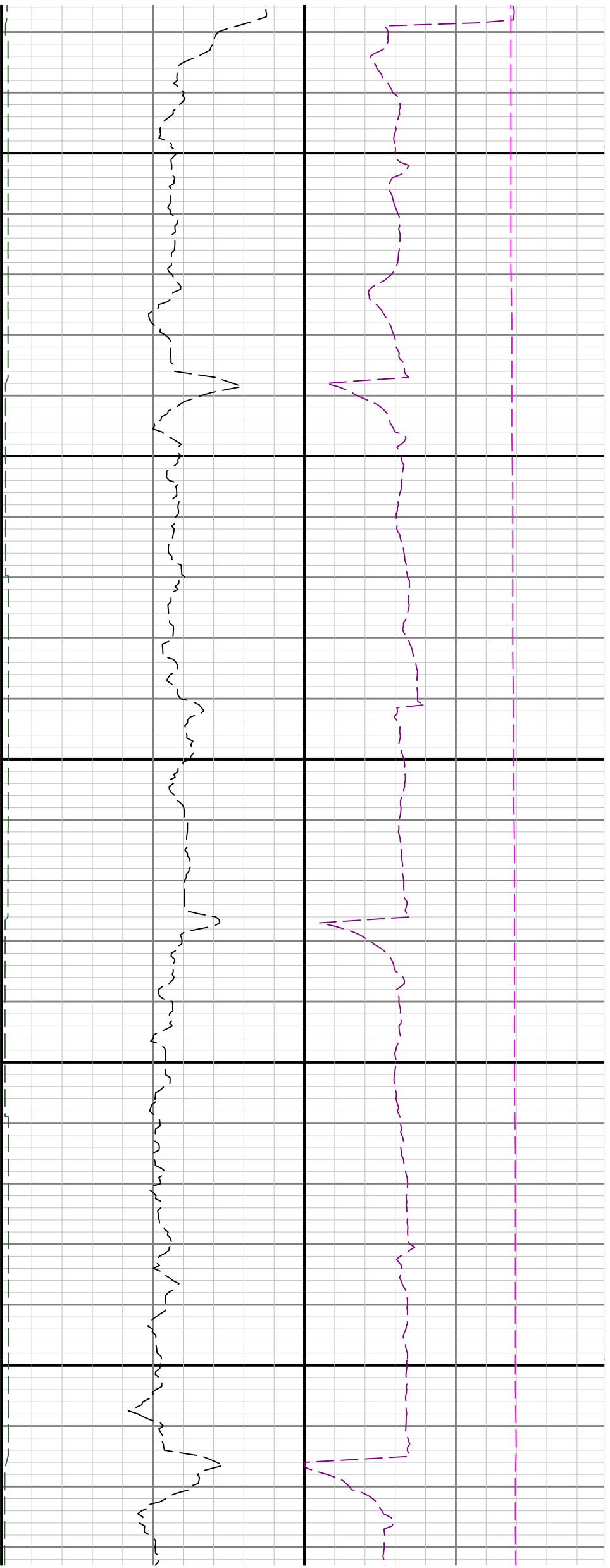


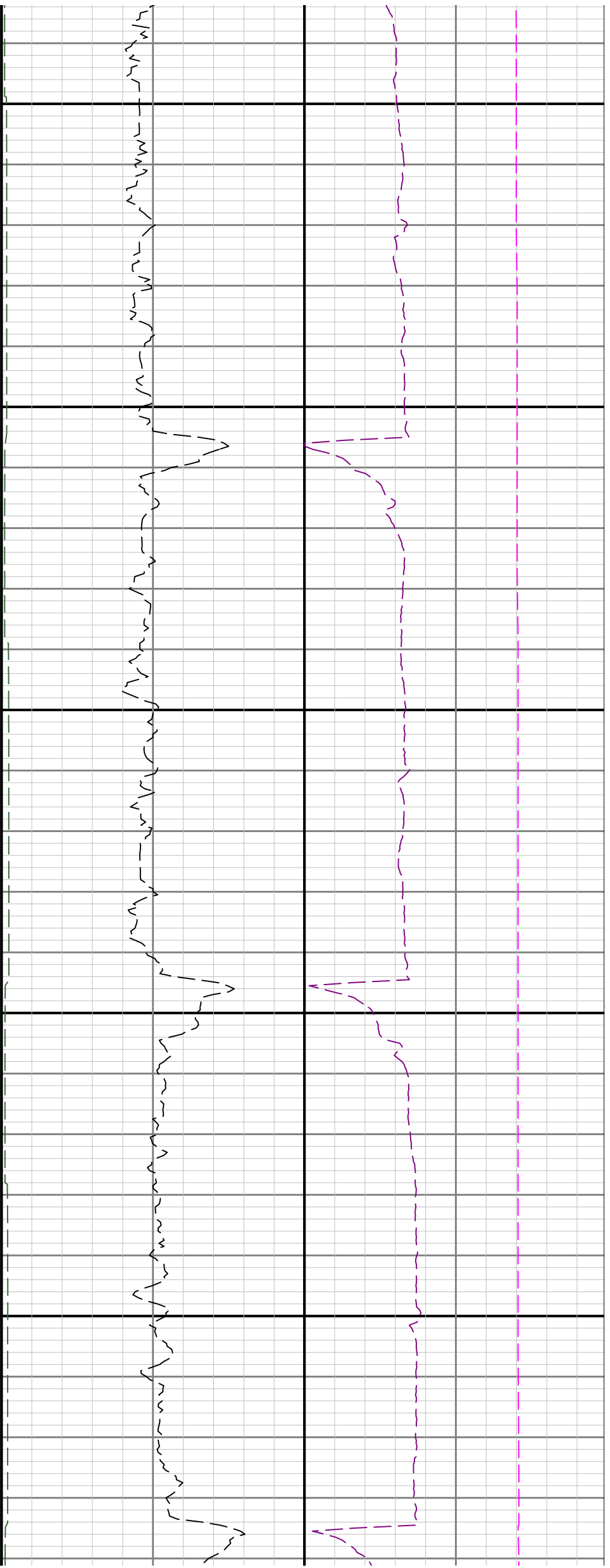
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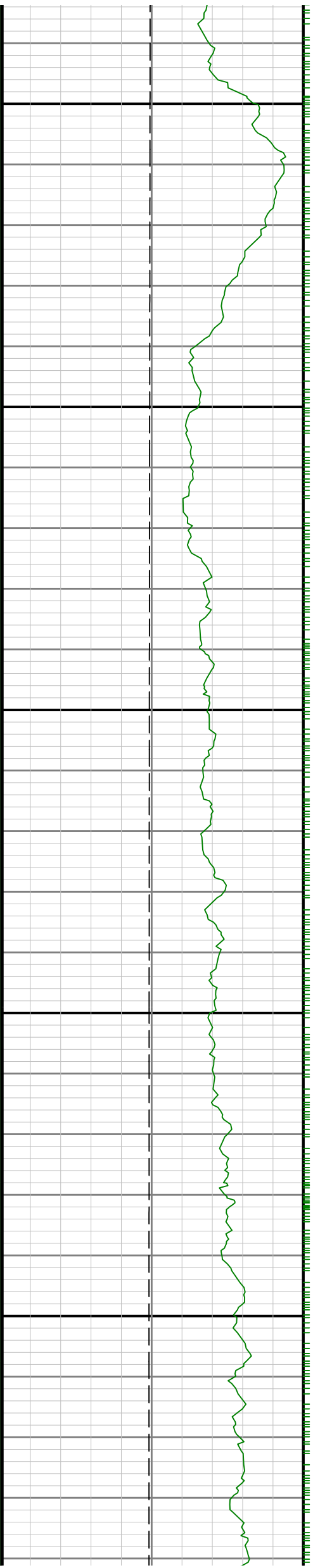


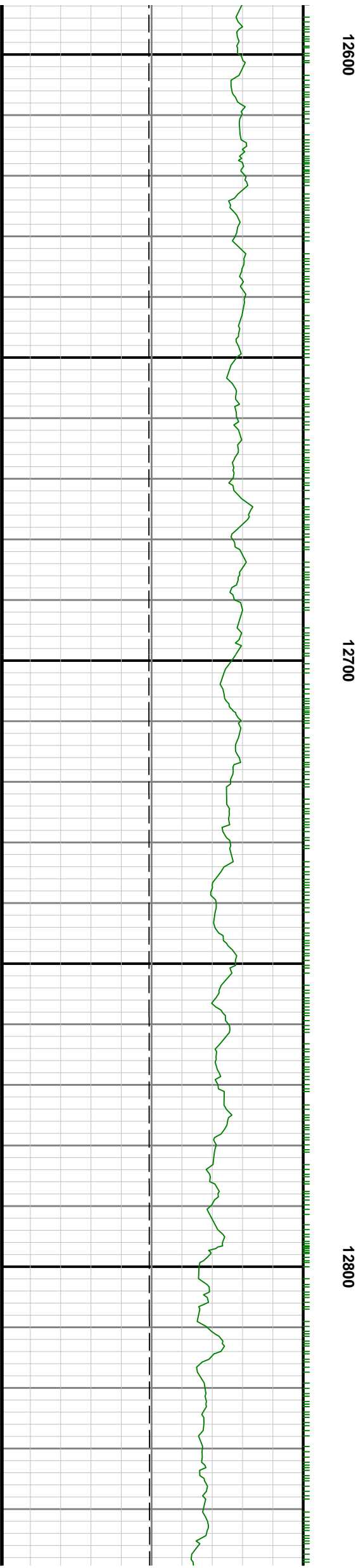
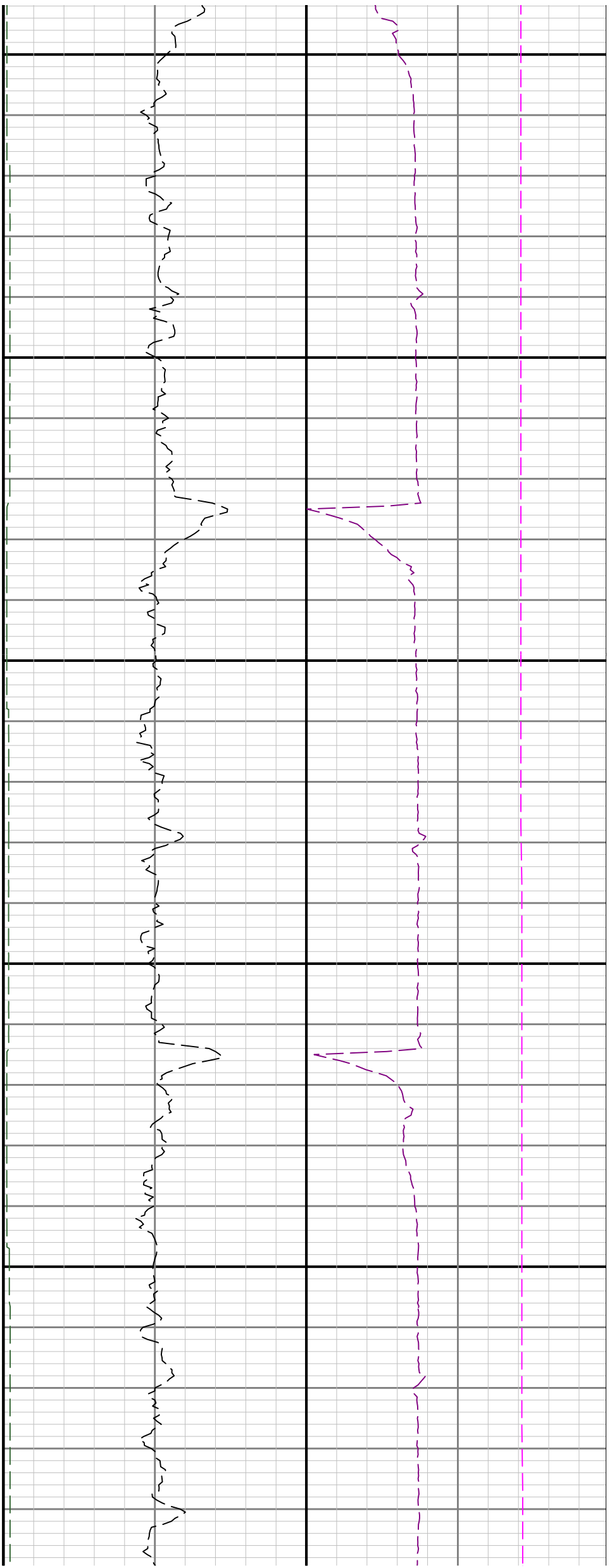


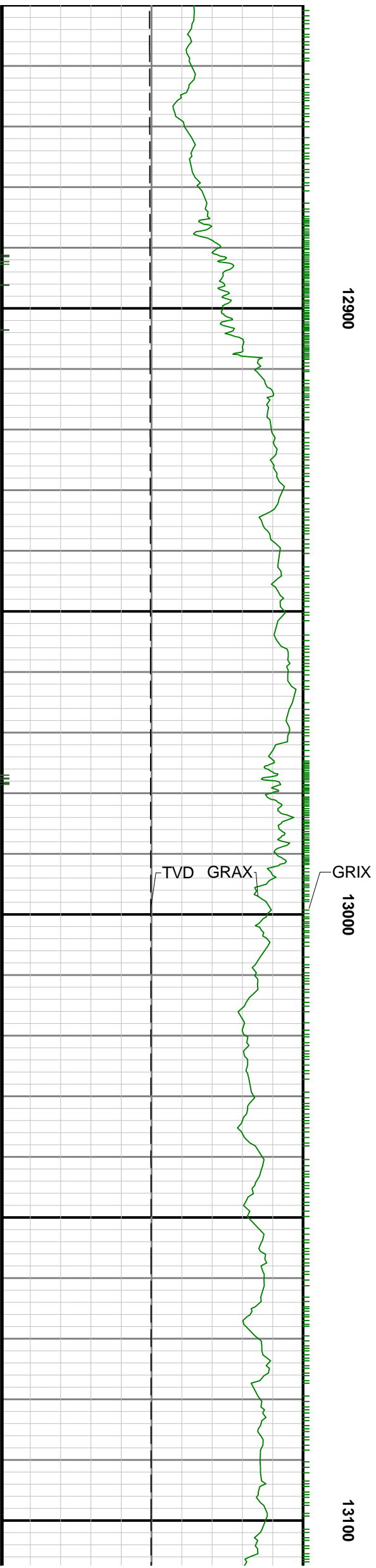
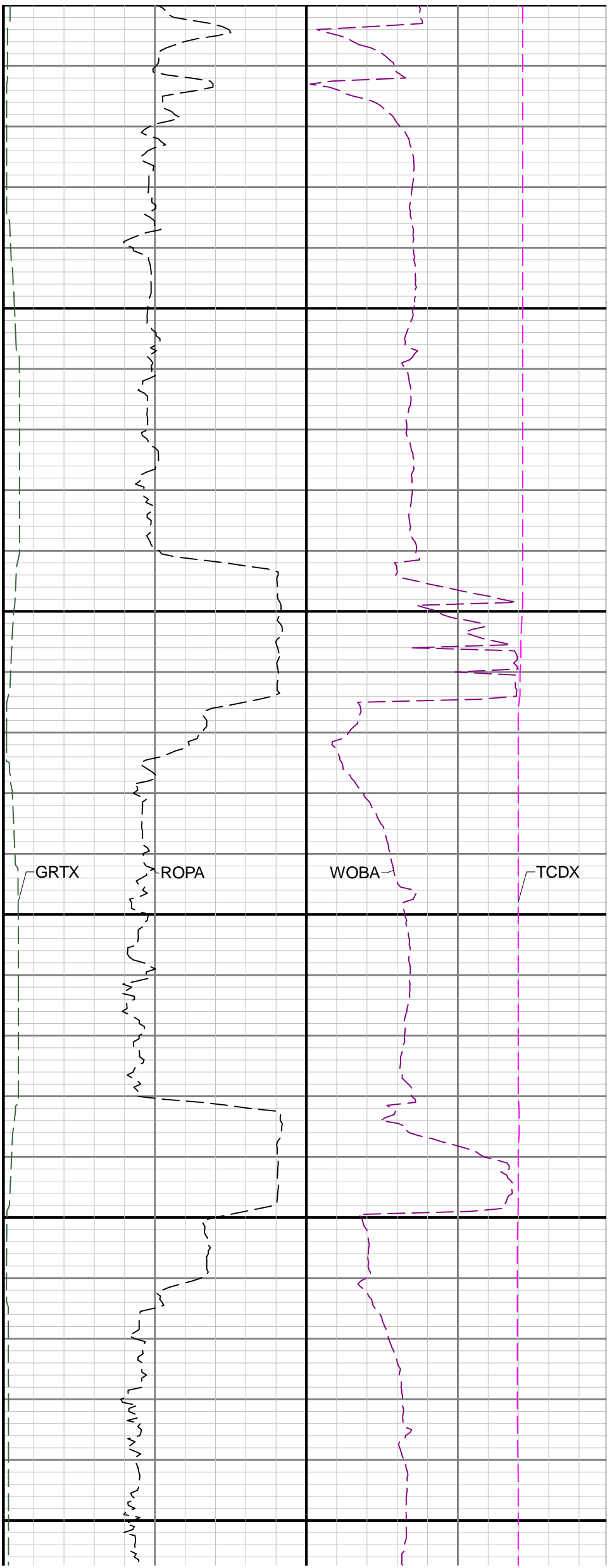


12400

12500



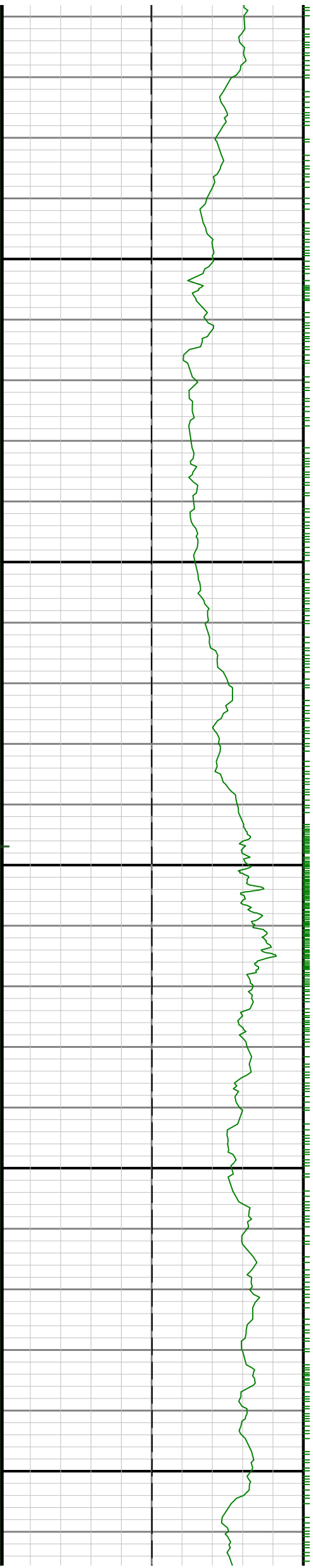


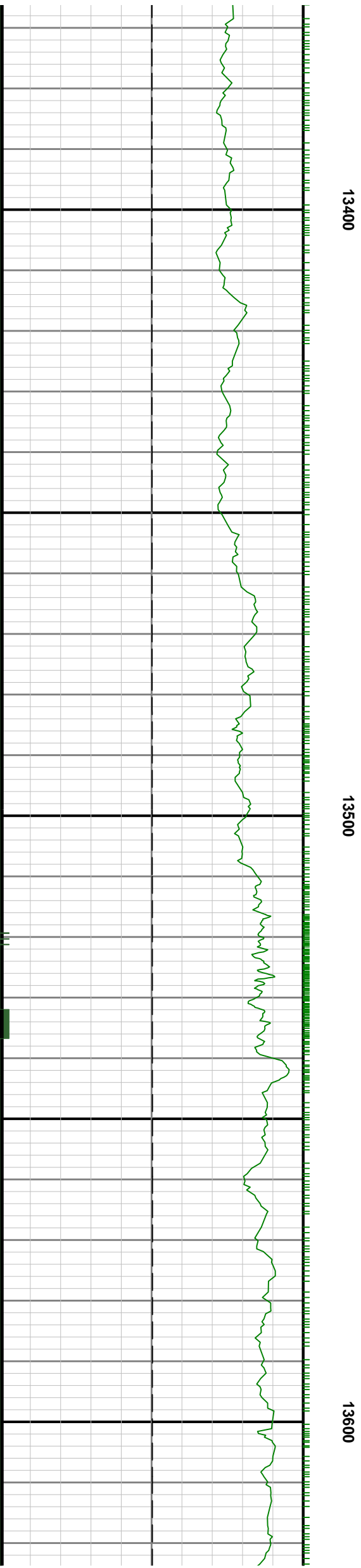
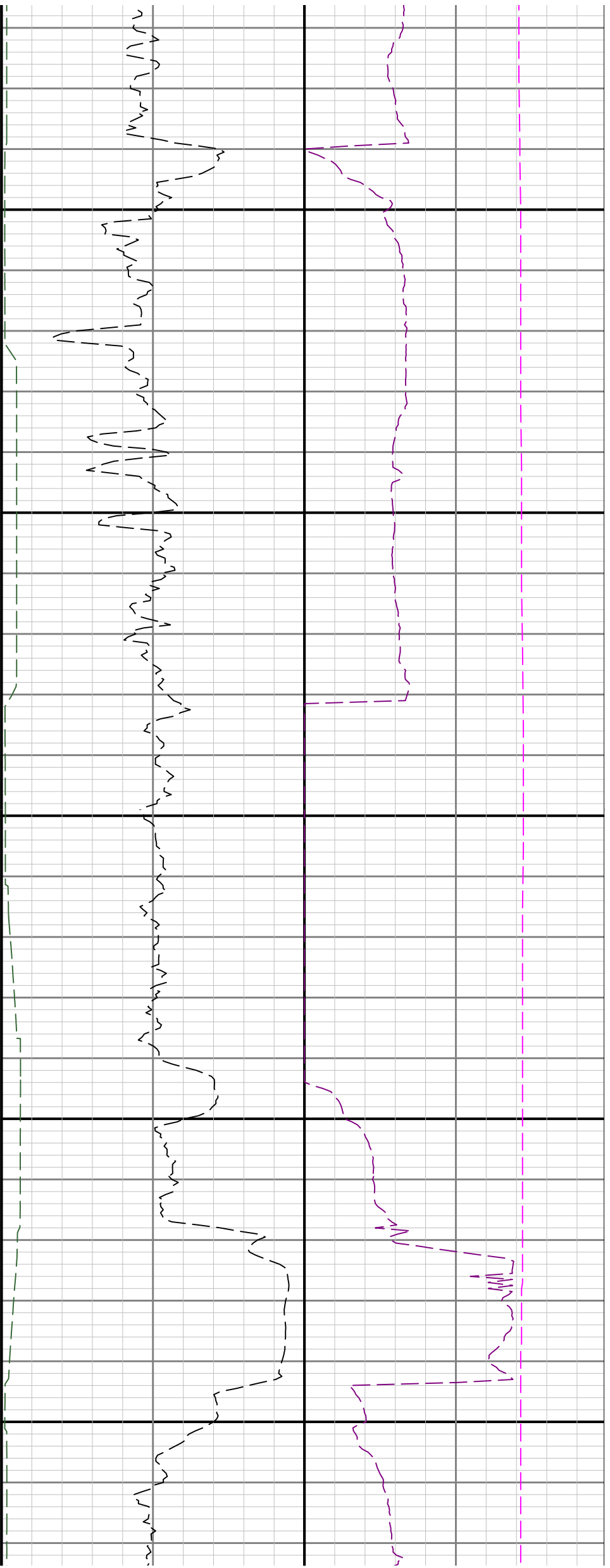


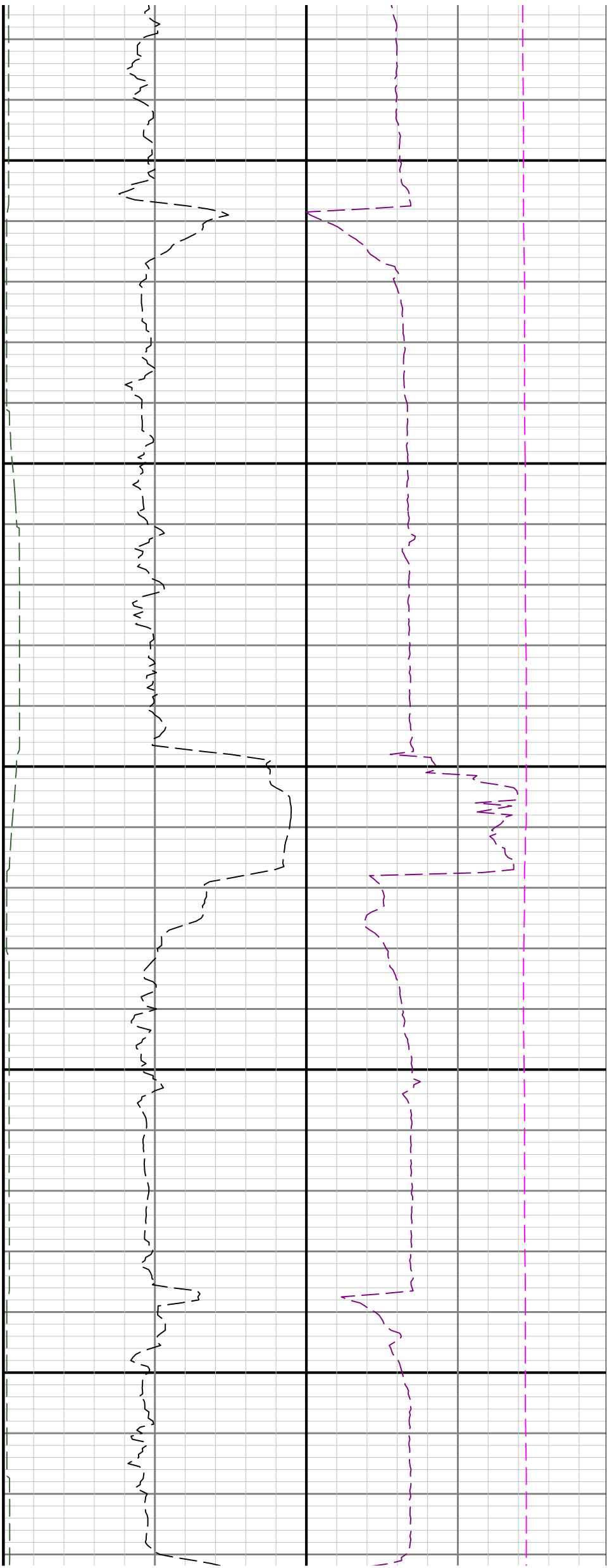


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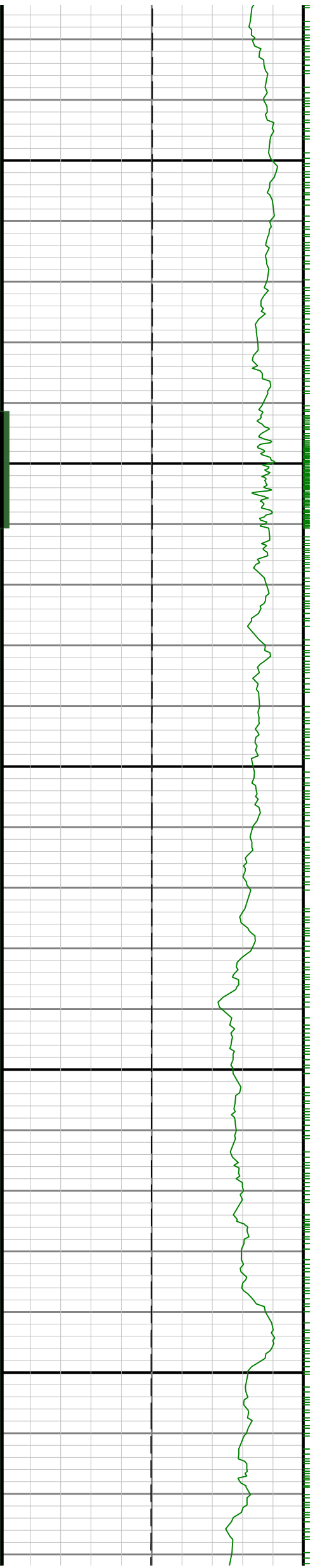


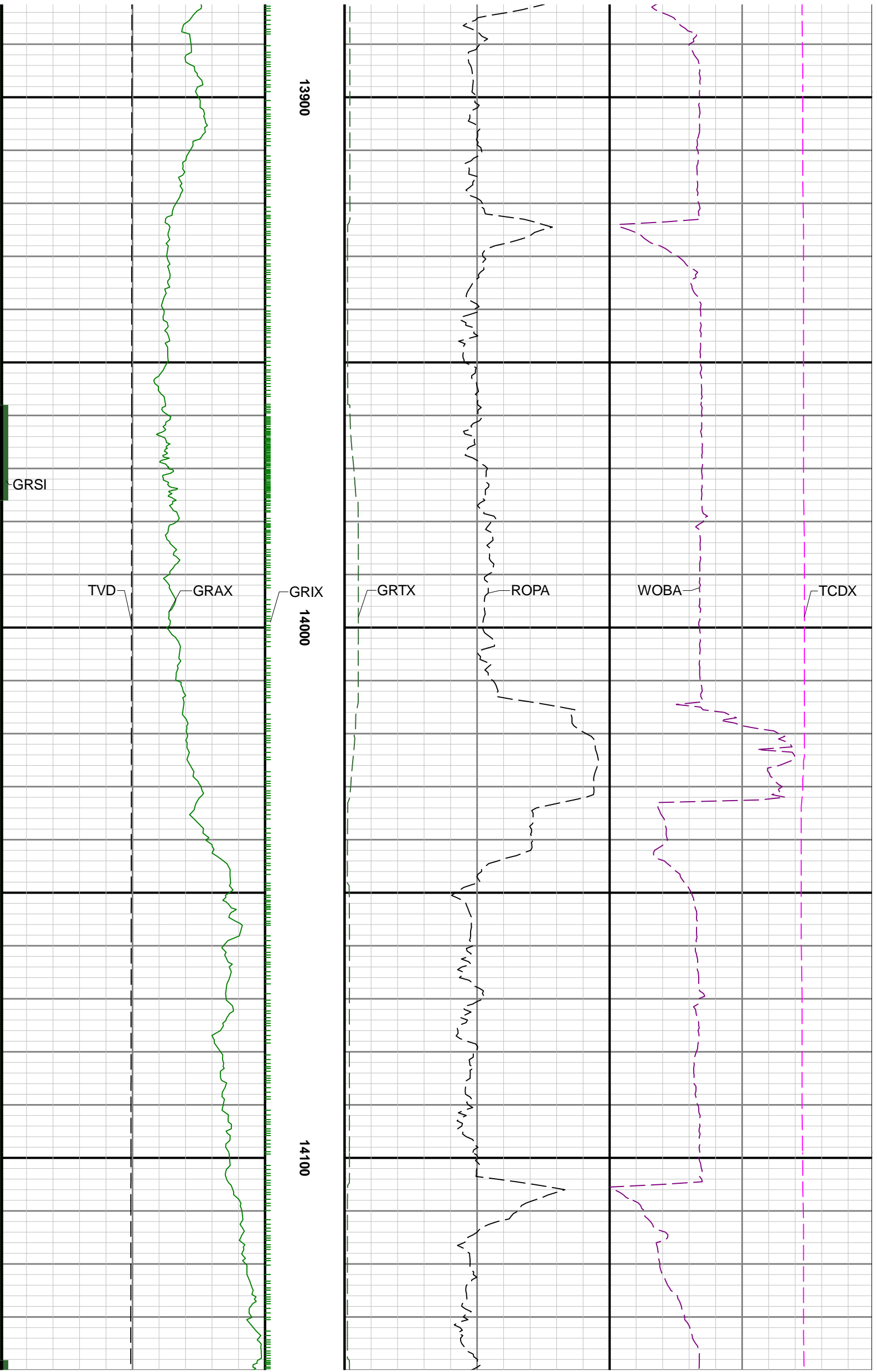


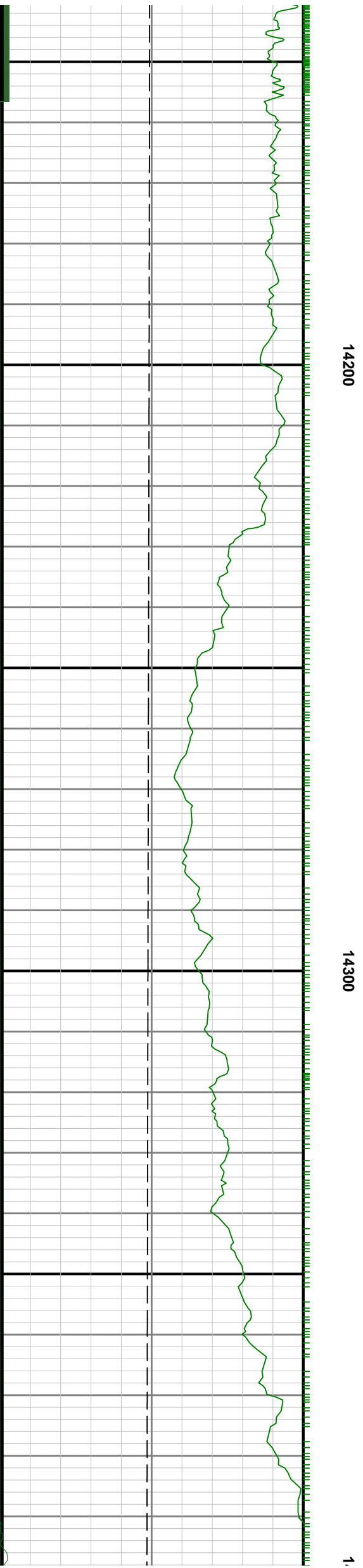
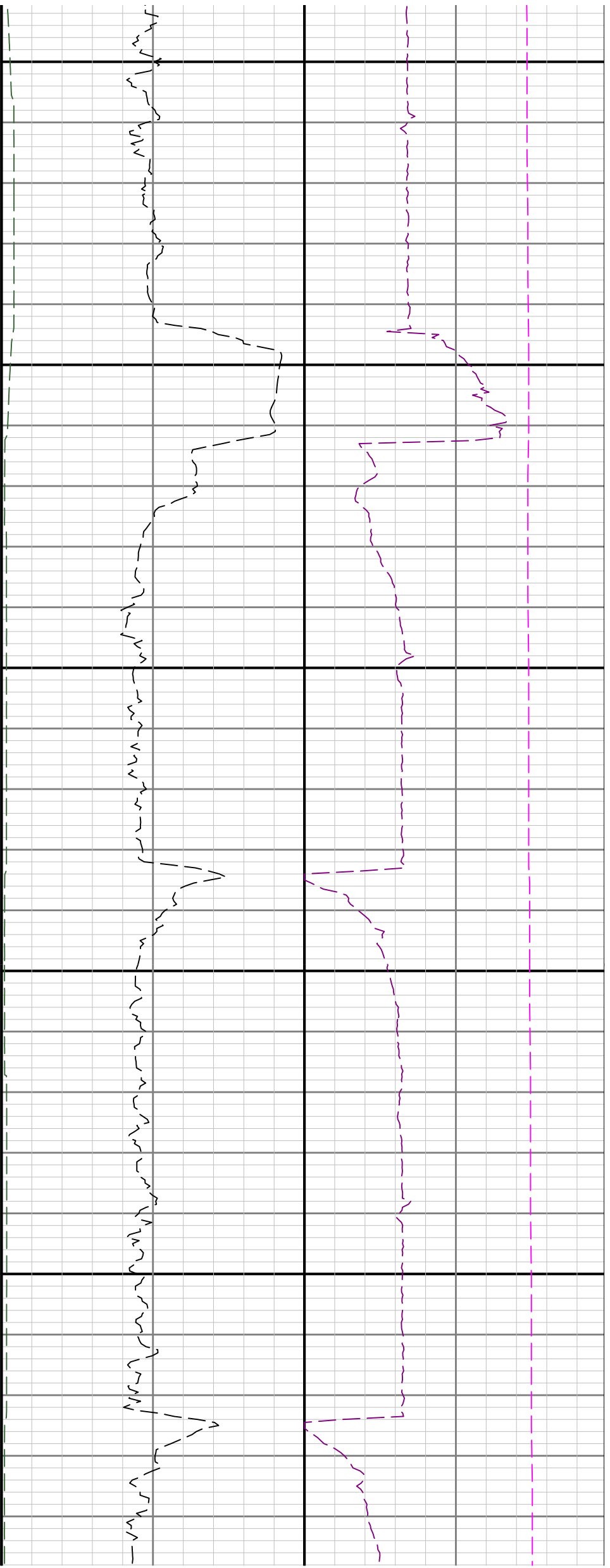


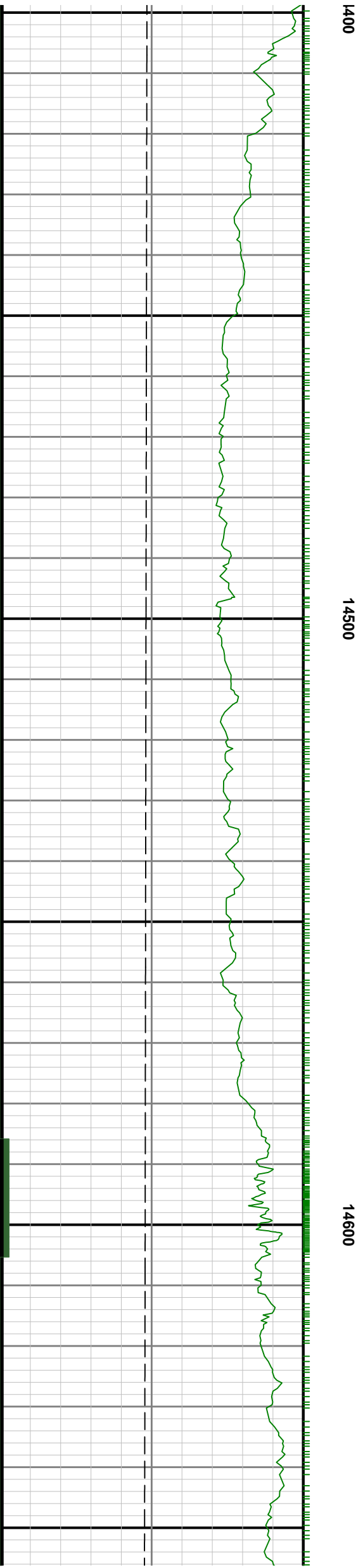
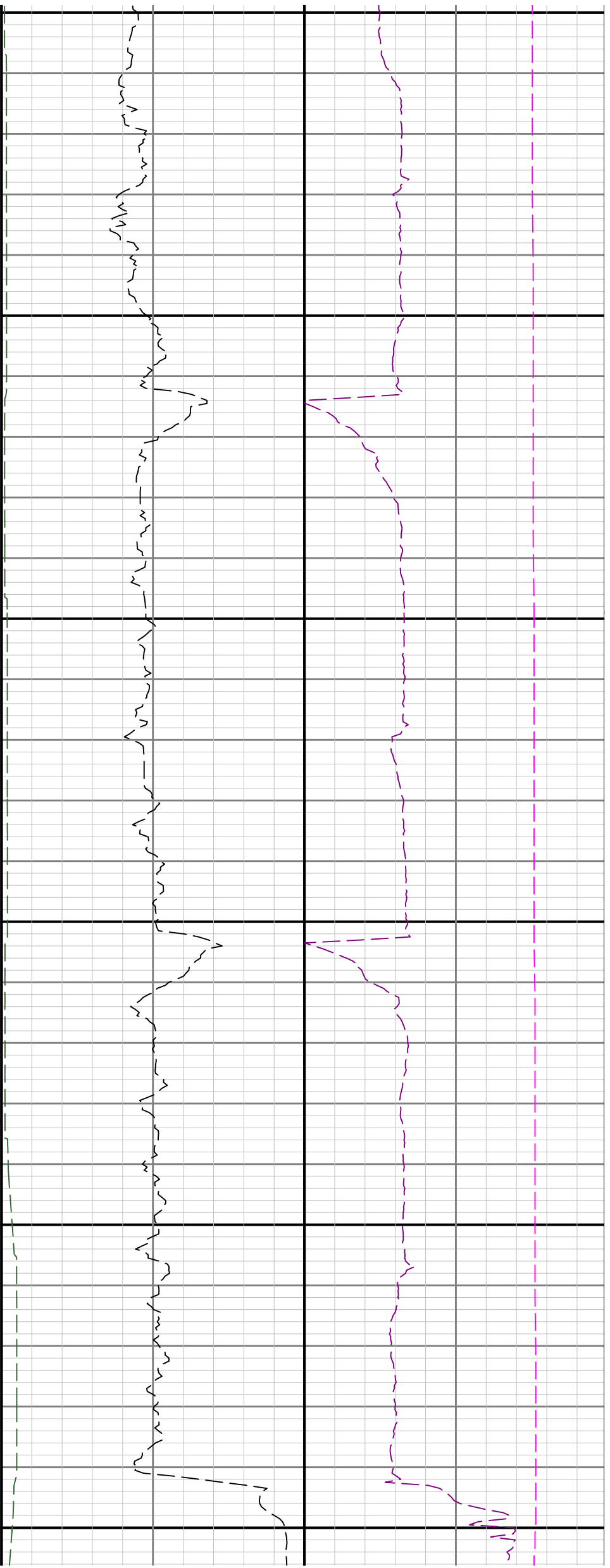
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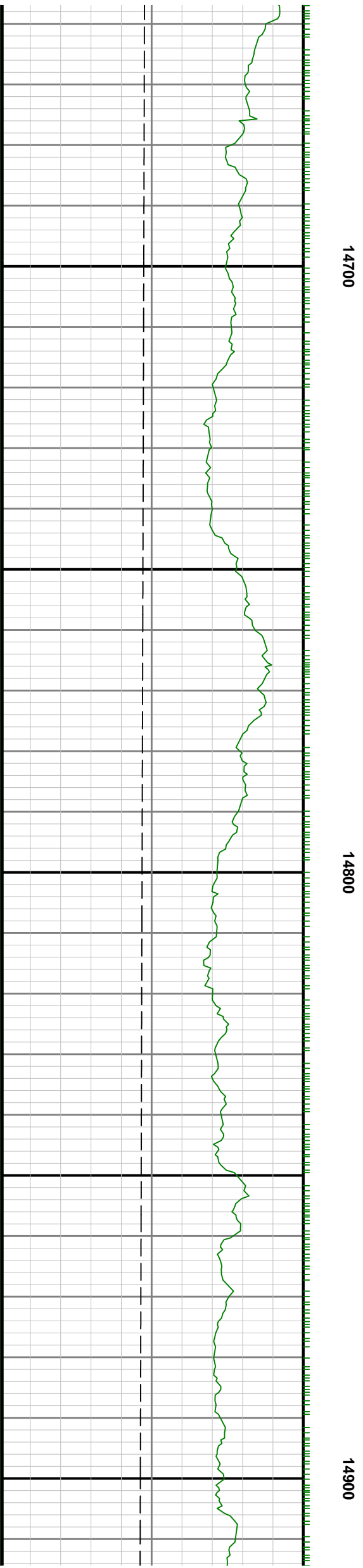
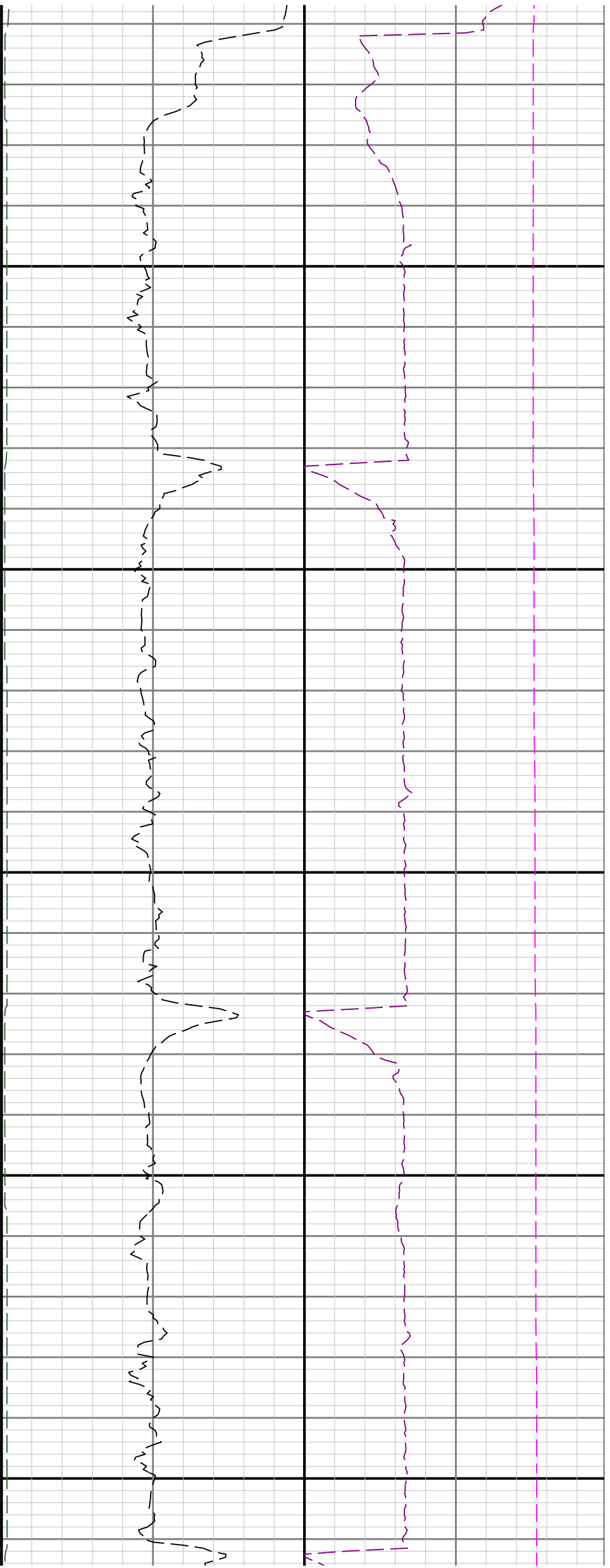
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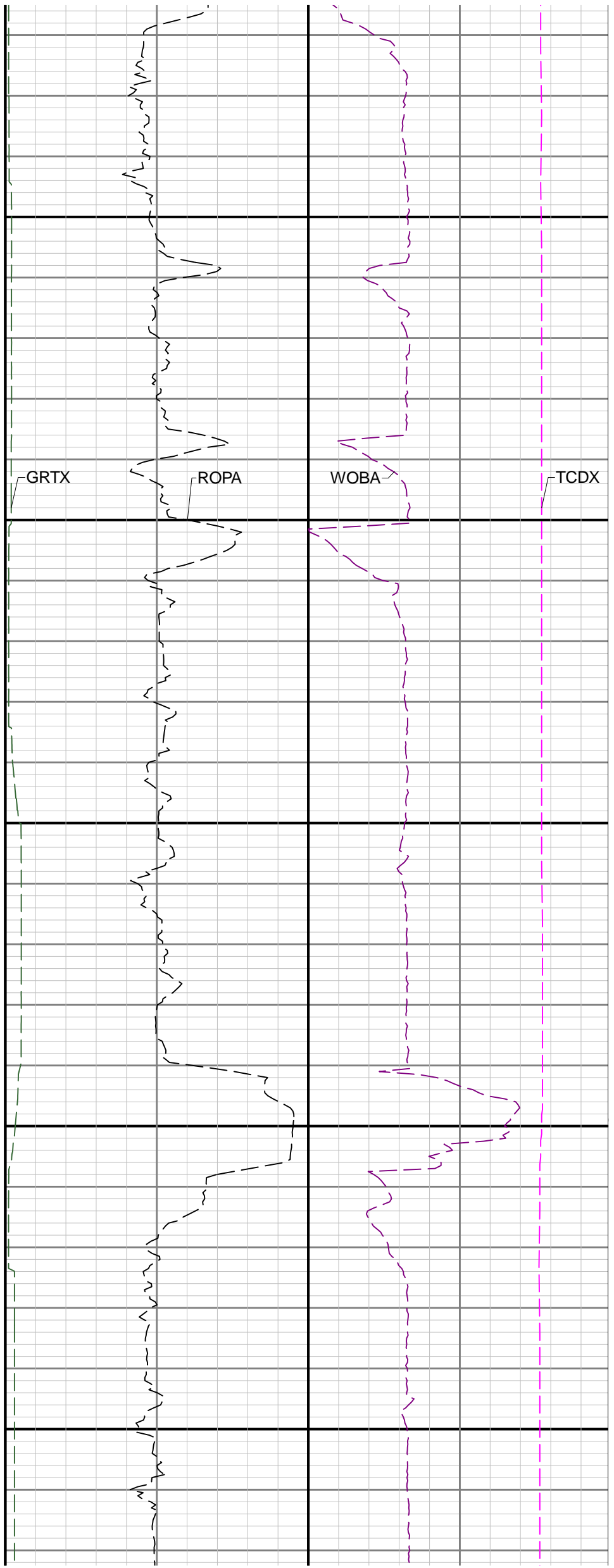
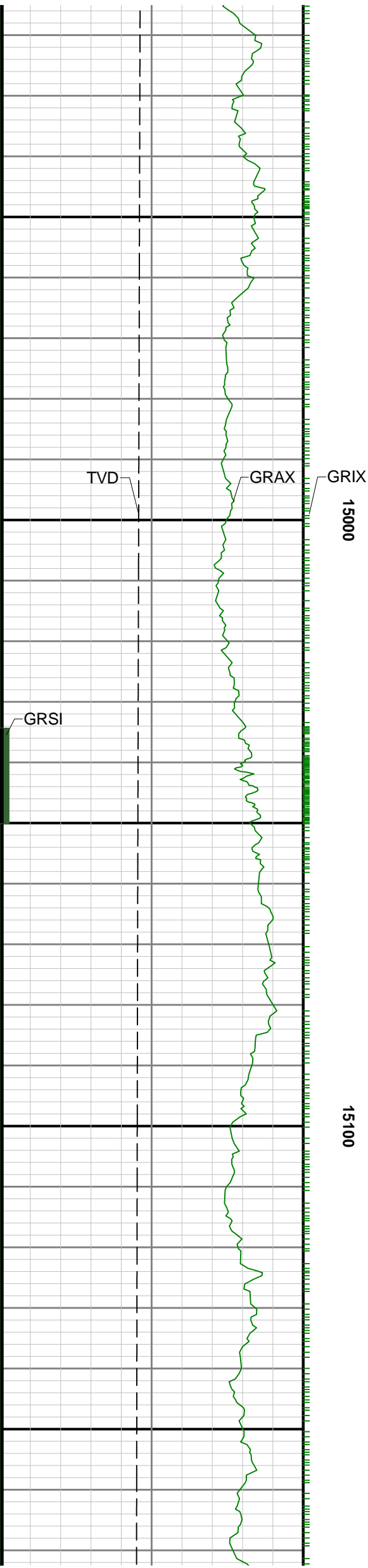


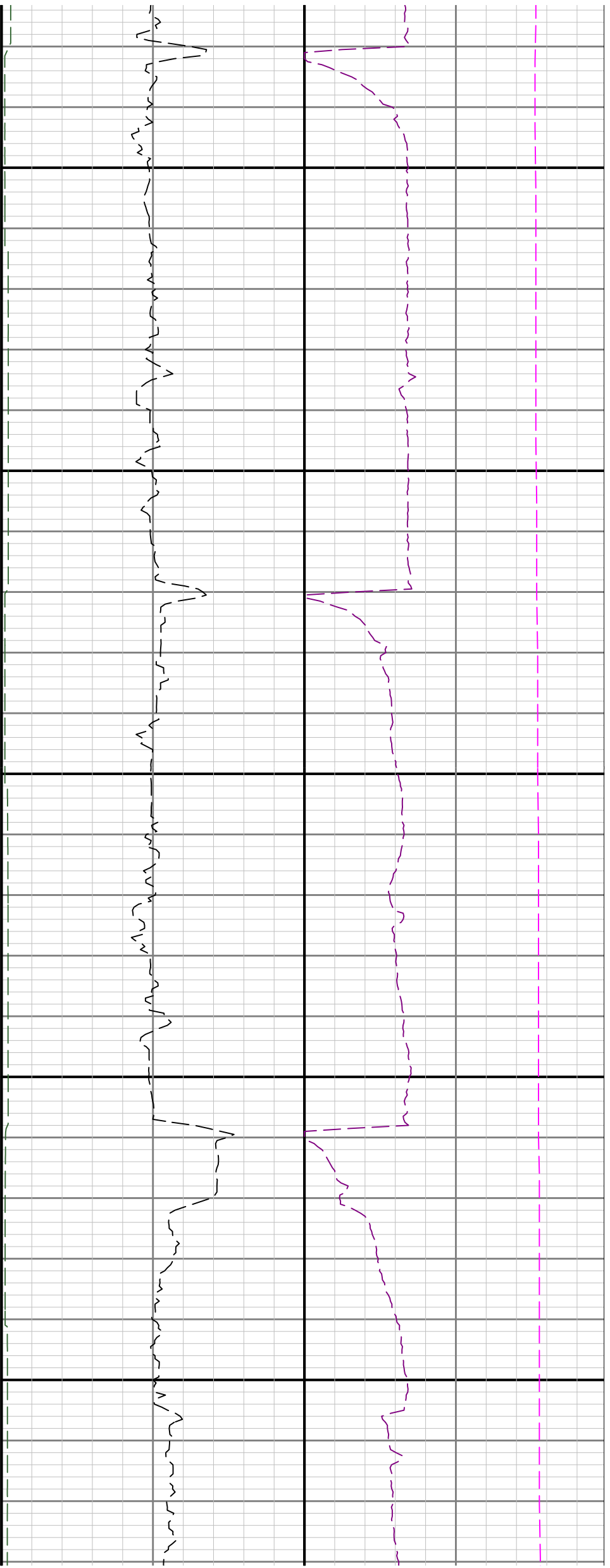








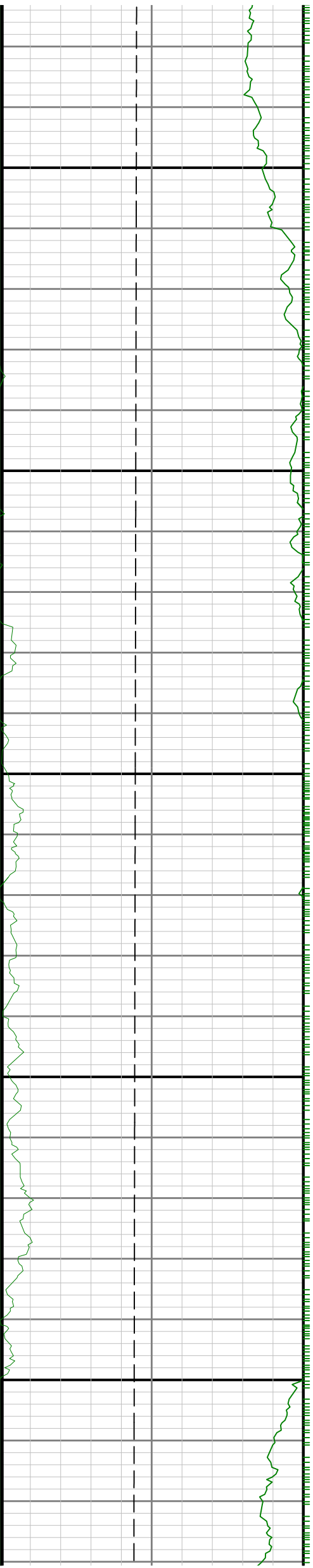


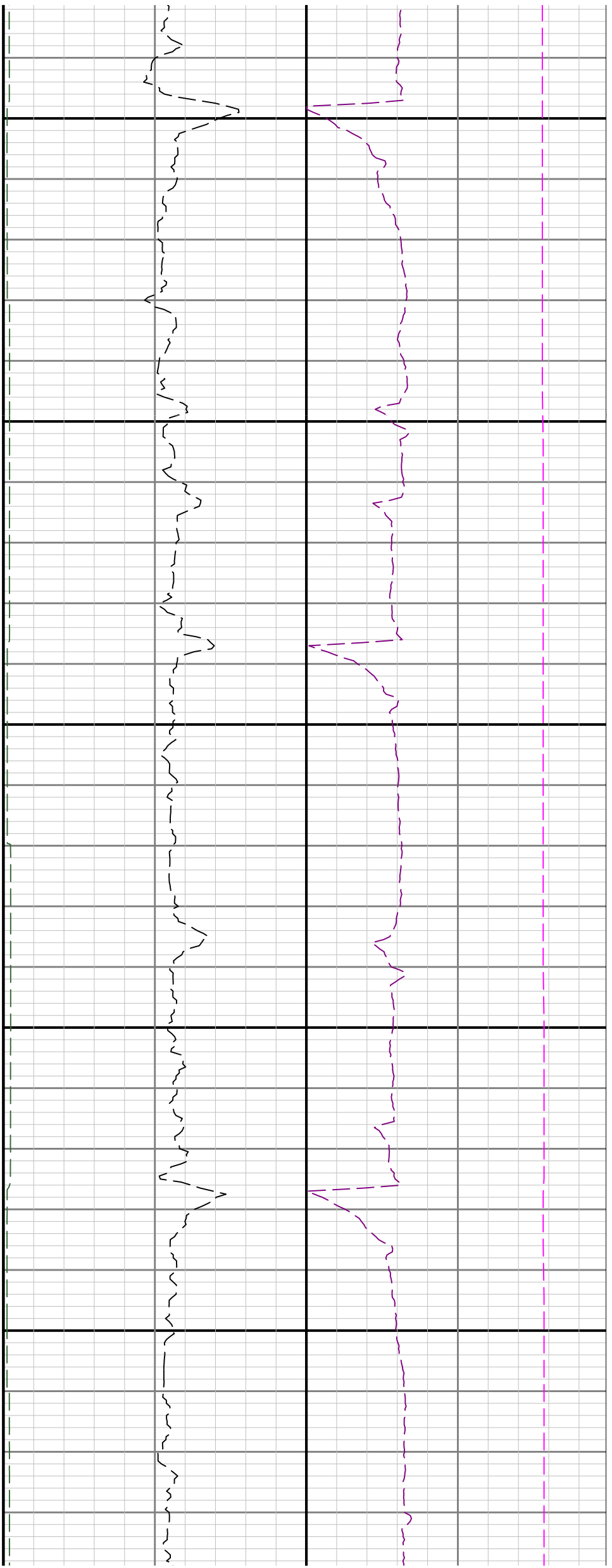


15200

15300

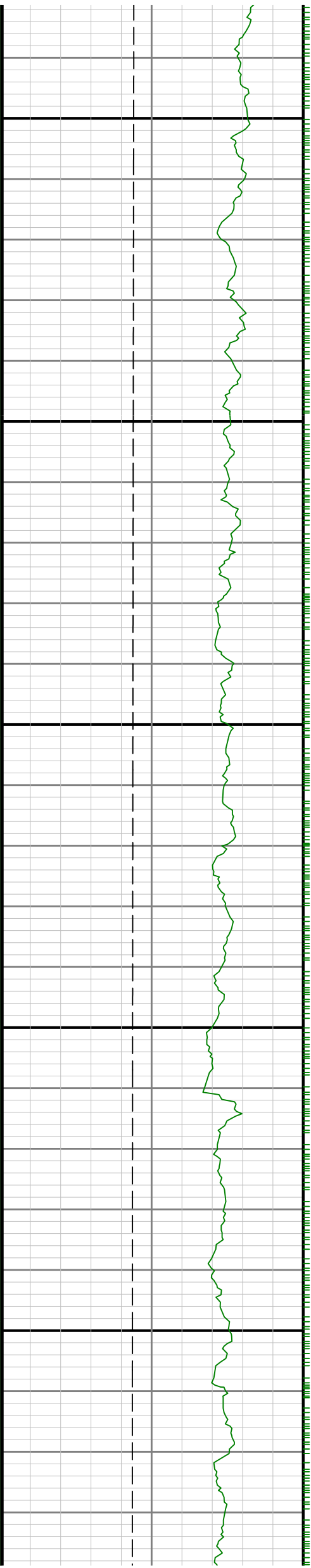
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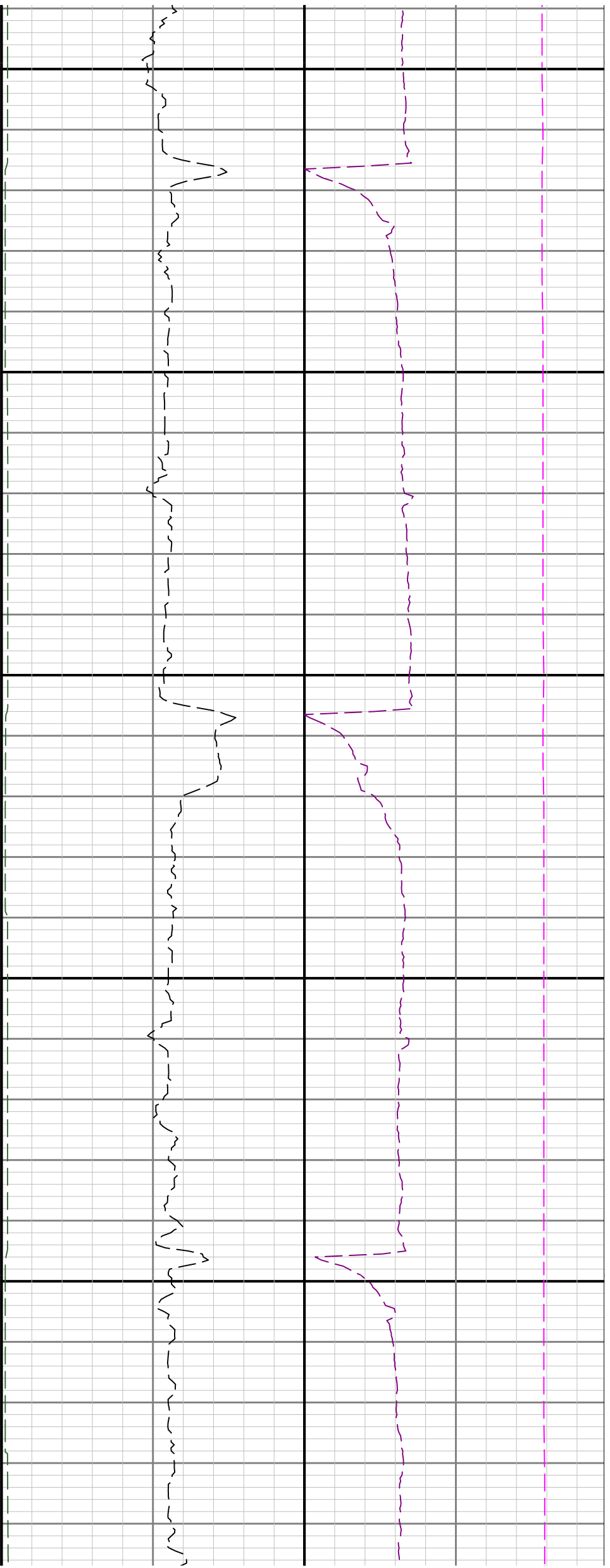




15500

15600

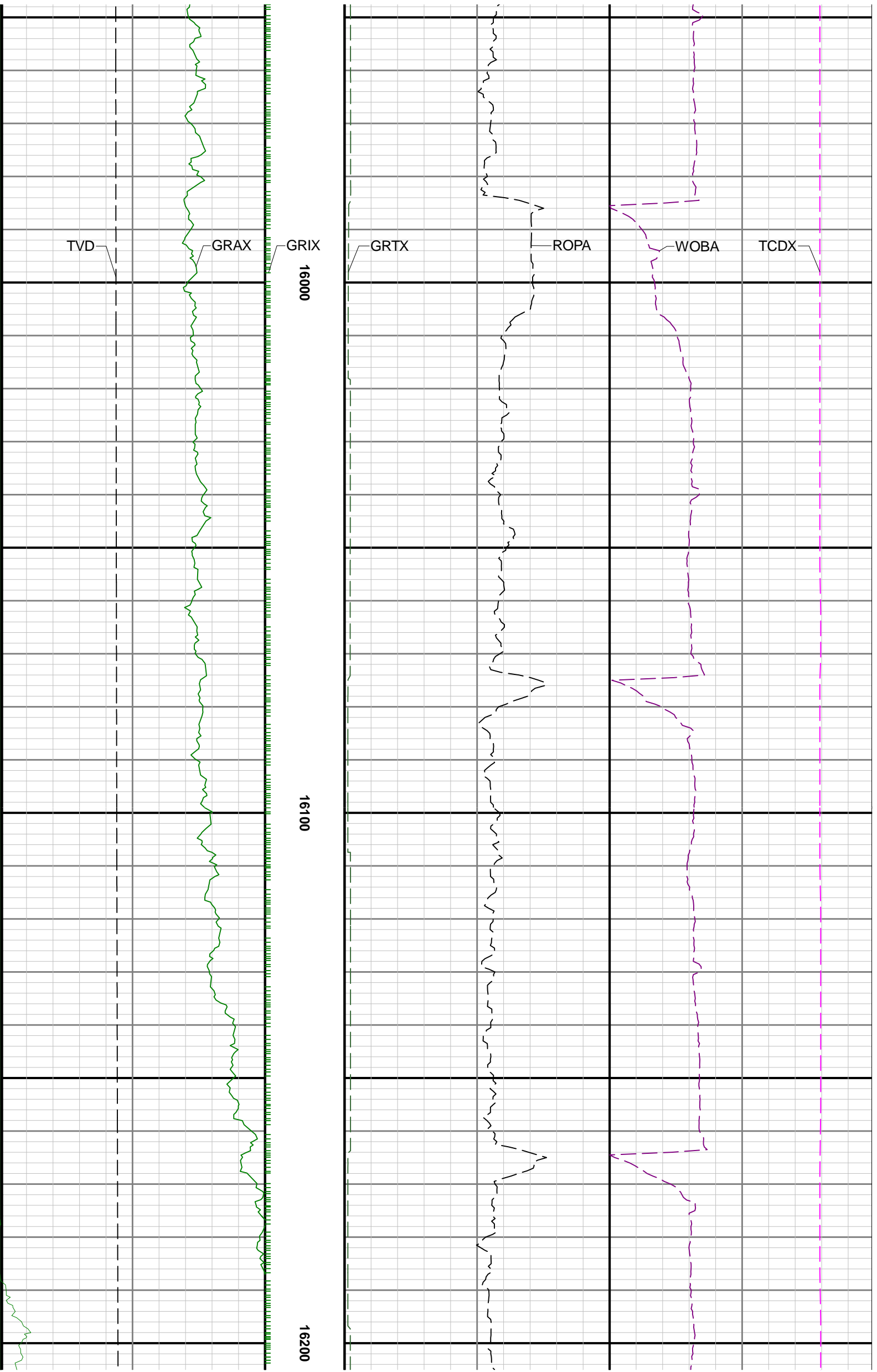


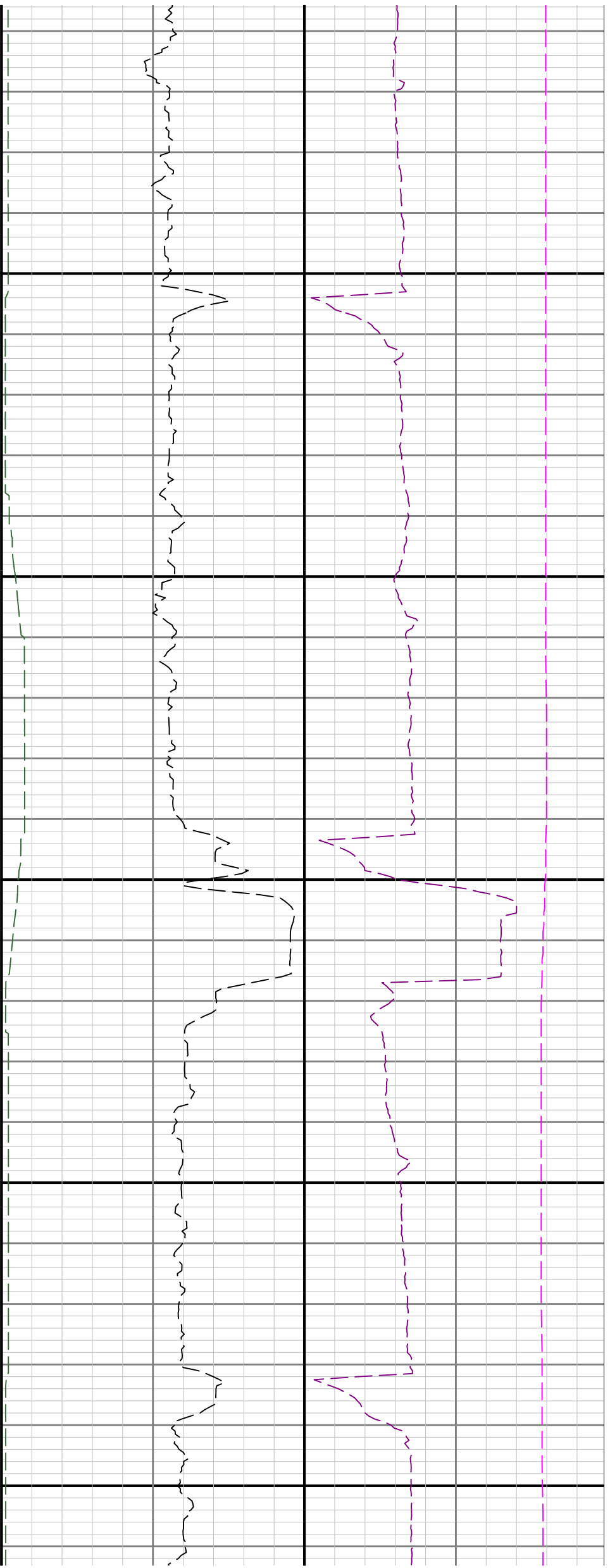


15700

15800

15900





16300

16400

