



REALTIME LOG

Gamma Ray

Scale:		Company: Anadarko					
1:240		Well: MAB 15-3HZ					
Measured Depth		Field: Weld County					
Depth Reference:		County:		Weld		Country: United States	
Driller's Depth		State:		Colorado			
Status:	Surface Location:						
Final Print		Latitude:		040° 02' 43.562" N			
API No: 051234924100		Longitude:		104° 45' 41.951" W			
Job ID: 109688747		SEC:		15 TWN:		1N RGE: 66W	
Permanent Datum (P.D.):		Ground Level		Elevation:		5113.00 ft	
Log Measured From:		Rig Floor		Above P.D.:		17.00 ft	
						Elev. KB: 5130.00 ft Elev. DF: 5113.00 ft Elev. GL:	
Dates		Interval		Magnetic Field Reference			
From: 2019-03-21		Drilled (ft)		Logged (ft)		Azi Reference North: True Dip Angle: (deg) 66.39	
To: 2019-03-23		Top: 1869.00		Top: 1869.00		Total Magnetic Field Strength: (nT) 52373	
Spud: 2019-03-20		Bottom: 17990.00		Bottom: 17940.00		Mag to Reference North Correction: (deg) 7.95	
Borehole Record							Casing Record
Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)	
13.500	17.00	1869.00	9.625	25.00	17.00	1859.00	
7.875	1869.00	17990.00					
Mud Record							
Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)	
Oil Based Mud	1869.00	17990.00	7.875	16121.00	9.93 157.34	89.39 0.86	
Acquisition System							
Baker Hughes Cadence	RT 5.1		Rig:	Akita 522	Unit: D&E		
Prior Studio	5.1.8355.1		Contractor:	Akita Drilling District:	RMD		

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Log Run Summary

Run No	Bit Run No.	Bit Size	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	
		(in)				(ft)	(ft)	(ft)	(ft)			
1	1	7.875	PDC	2.00	Steerable	1869.00	17940.00	1869.00	17990.00	2019-03-21 06:12	2019-03-24 18:01	62.54

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Austin Brattin	2019-03-20	2019-03-26	Steve Johnson	2019-03-20	2019-03-26	Teni Onafowokan	2019-03-24	2019-03-26

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+ (%)
2019-03-21 02:47	1	1869.00	Oil Based Mud	9.2	10	N/A	N/A	71.7/28.3	Active Pit	36000	0.00
2019-03-22 17:41	1	8607.00	Oil Based Mud	9.1	12	N/A	N/A	73.5/26.5	Active Pit	36000	0.00
2019-03-23 21:48	1	13197.00	Oil Based Mud	9.0	10	N/A	N/A	74.7/25.3	Active Pit	34000	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	G650-0290	Gamma (single)	8.75	49.59	6.500	2.750
1	EvoOne	G650-0290	Directional (mag)	9.94	50.78	6.500	2.750

Service and Tool Mnemonics

Mnemonic	Name	Description
MWD	EvoOne - Dir Gamma	EvoOne

Comments

1 Baker Hughes run 1 utilized 6.50 inch Evo One services (Gamma Ray and Directional) behind a 7.875 inch bit and steerable assembly from 1869 to 17990 feet MD (1853 to 2414 feet TVD)

- 1853 to 7414 feet TVD).
- 2 Gamma Ray (GRAX) scale is presented 0 to 200 API per customer request.
- 3 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 engineers, depth calibrations and measurements could not be independently verified.
- 4 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.

Remarks


Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	2104.44	7.875	1	The interval from 1973 to 2041 feet MD (2000 feet TVD) was not logged due to surface gear malfunction
2	2130.00	7.875	1	The interval from 2126 to 2145 feet MD (2110 feet TVD) was not logged due to surface gear malfunction
3	3575.00	7.875	1	The interval from 3548 to 3596 feet MD (3505 feet TVD) was not logged due to surface gear malfunction
4	12325.13	7.875	1	The interval from 12311 to 12332 feet MD (7409 feet TVD) was not logged due to loss of rig power.
5	17960.00	7.875	1	The interval from 17990 to 17939 feet MD (7414 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

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Company

Well

Interval

Created

Anadarko

MAB 15-3HZ

Date From: 2019-03-21 04:32

Date To: 2019-03-23 06:17

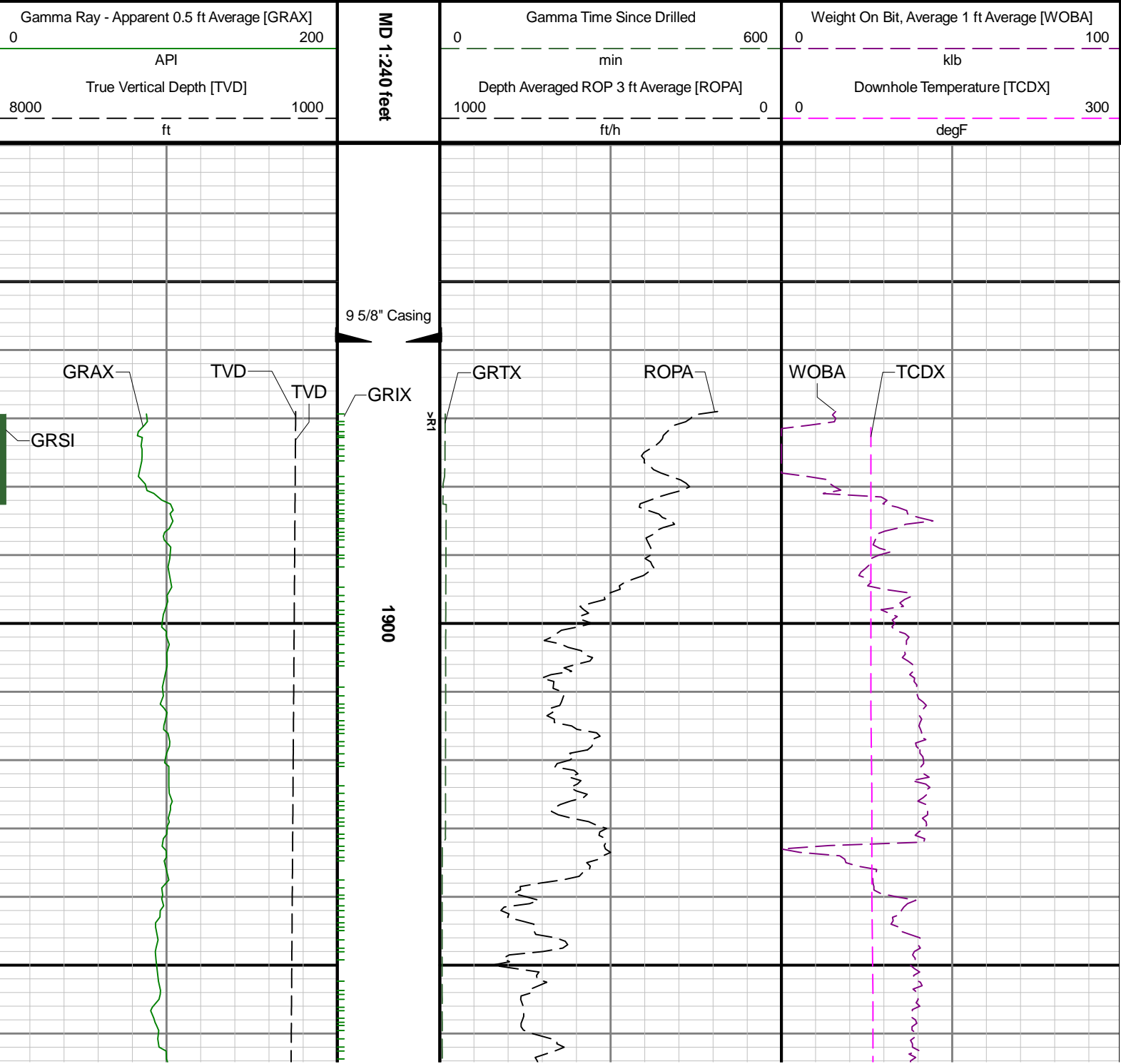
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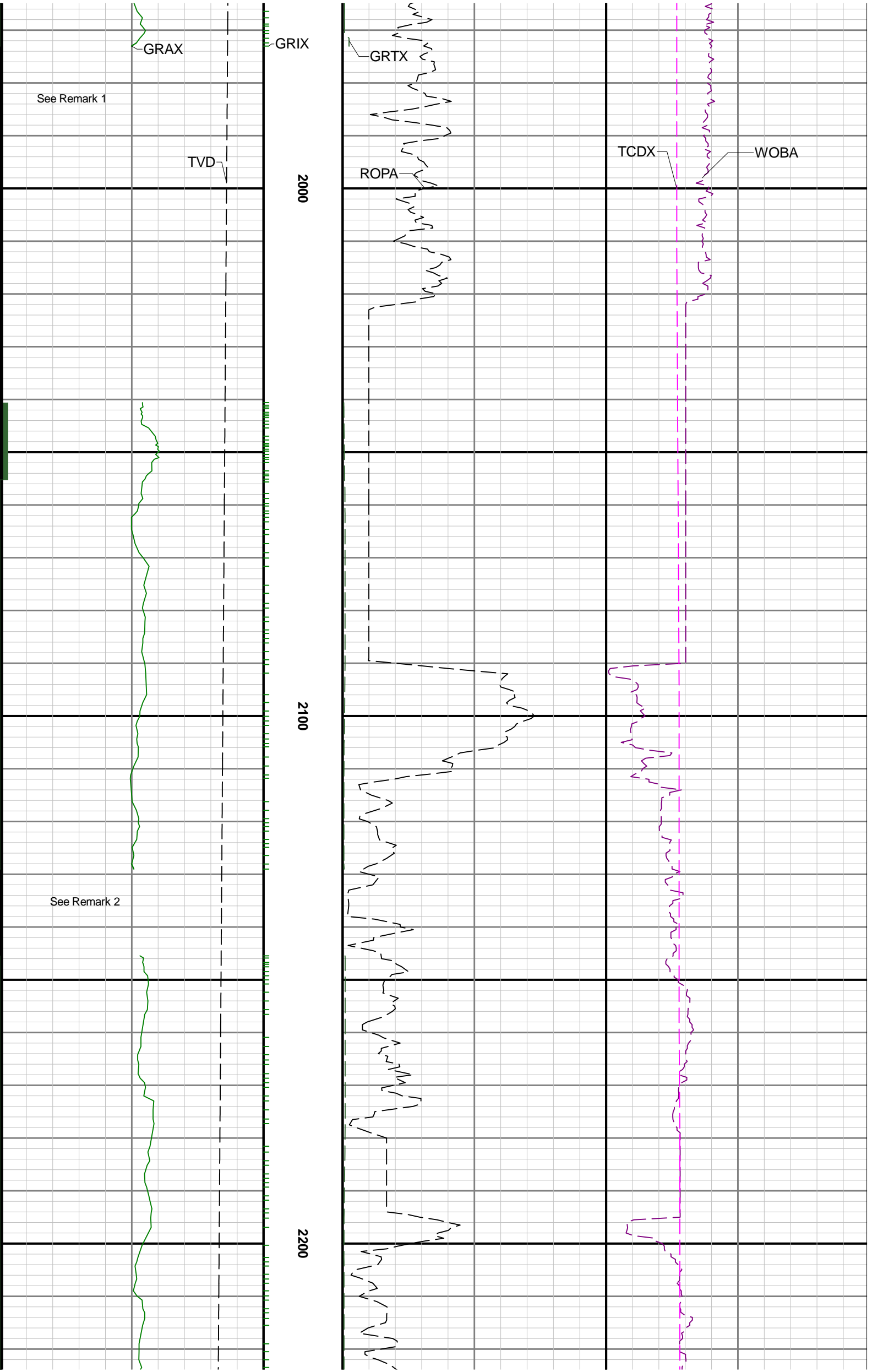
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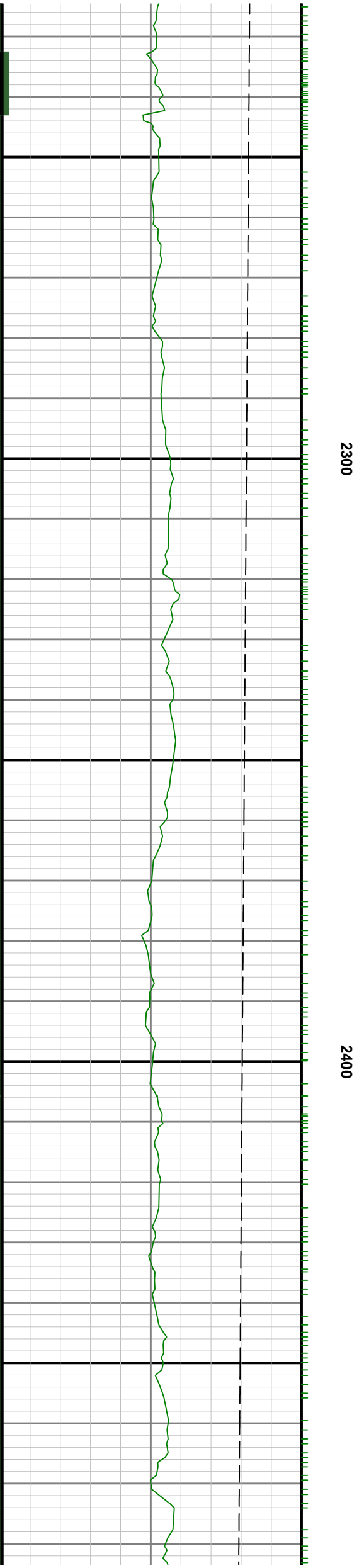
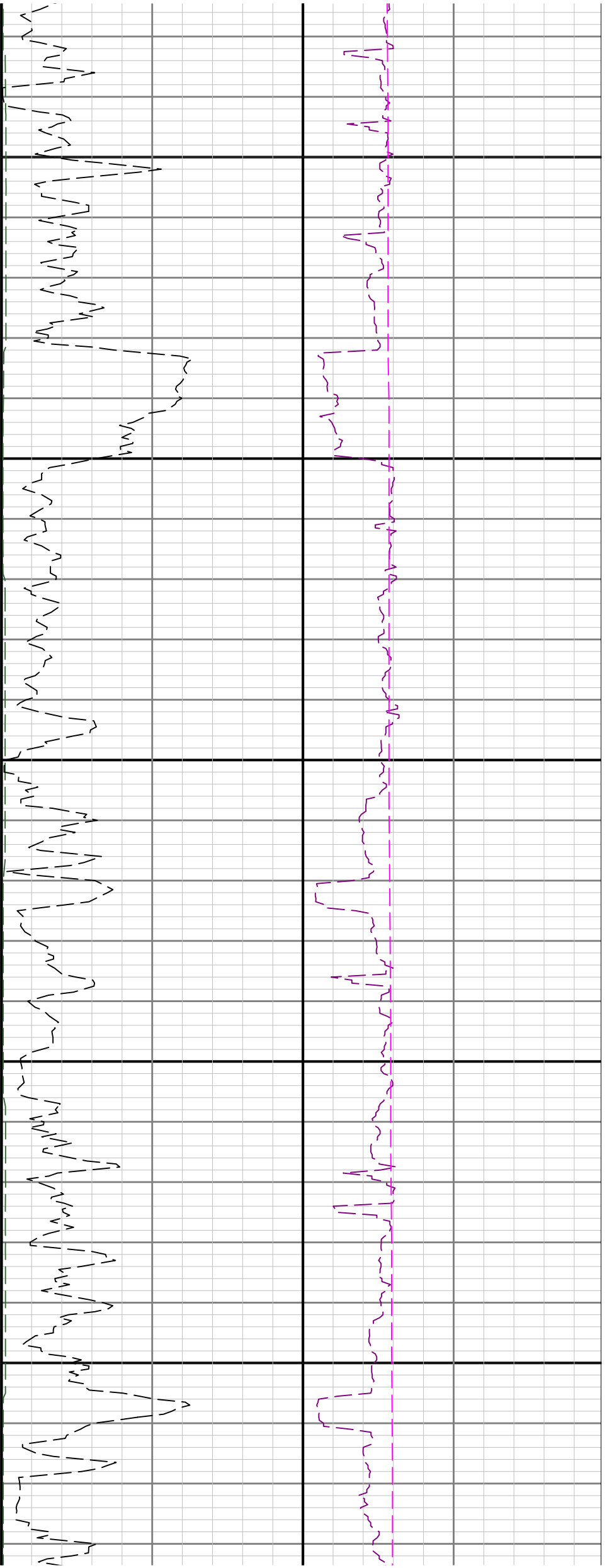
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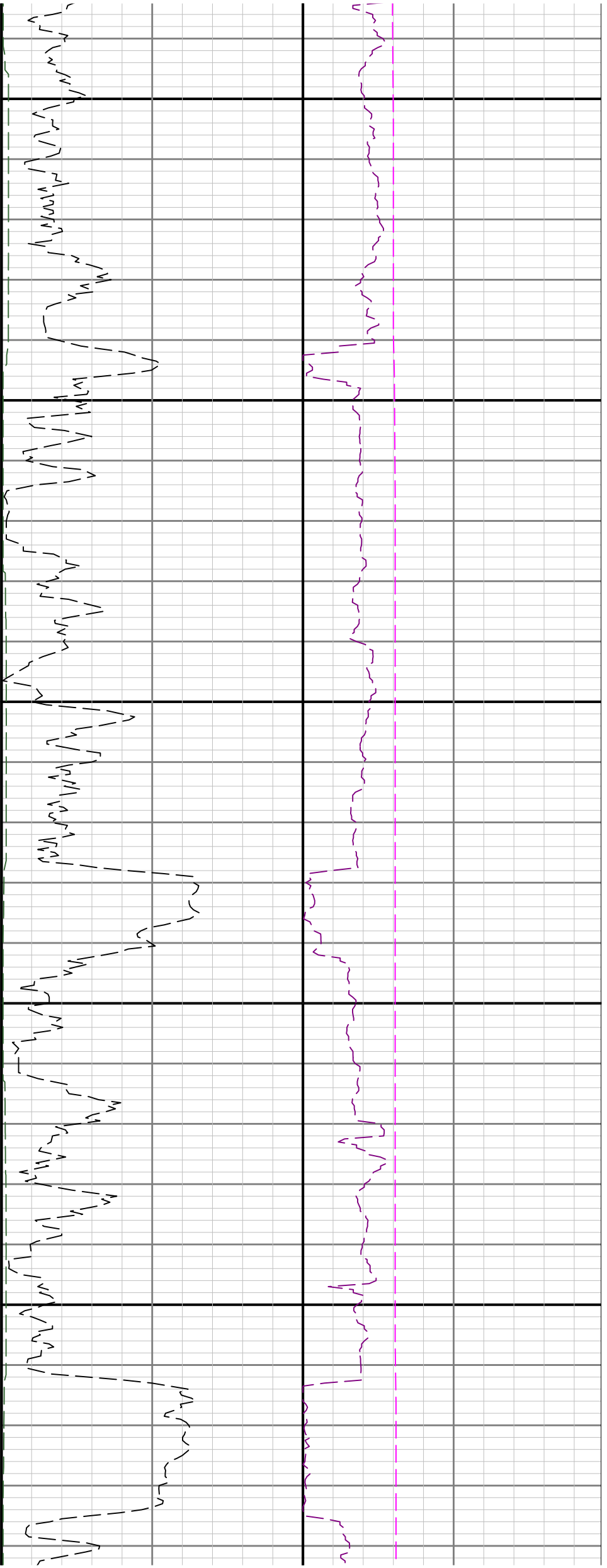
1869.00 - 17990.00

1869.00 - 17940.00





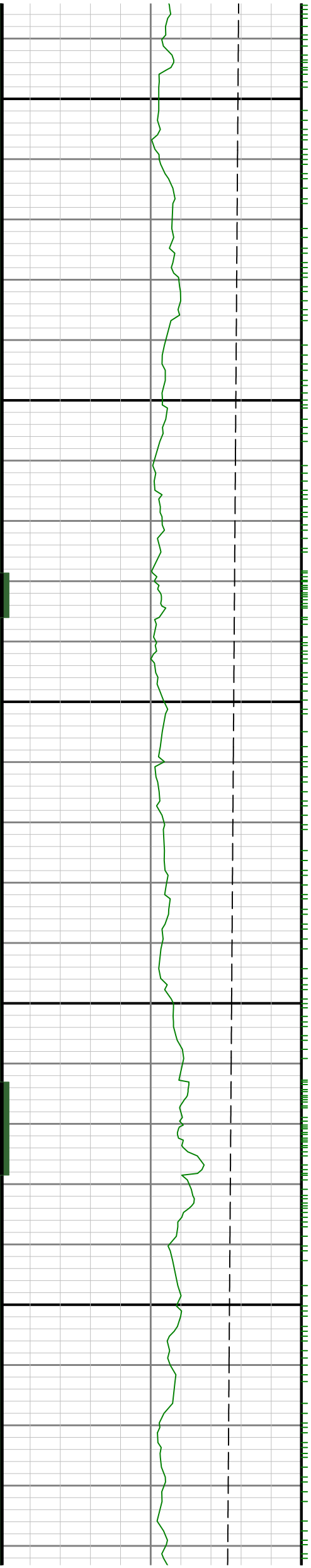


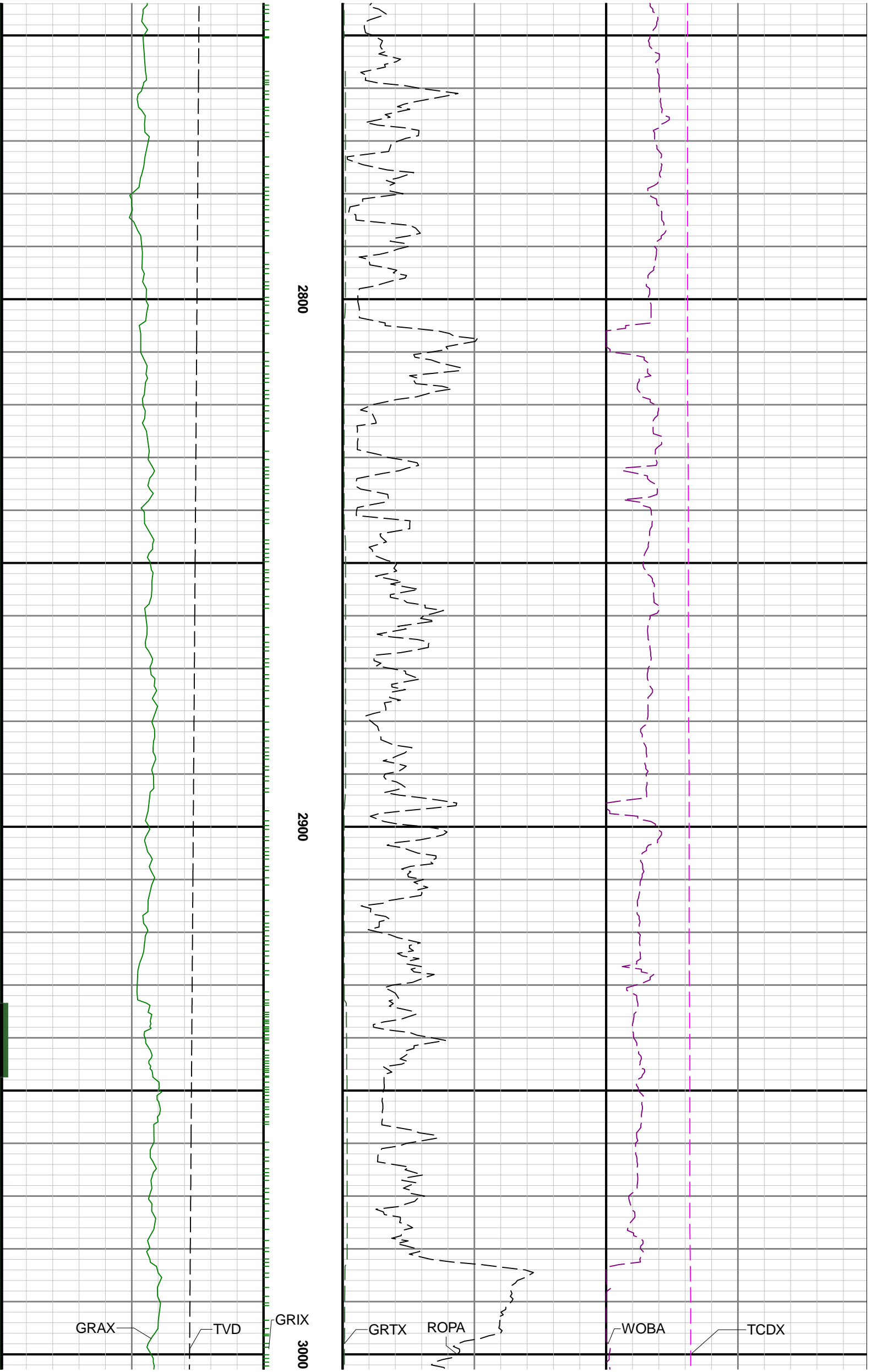


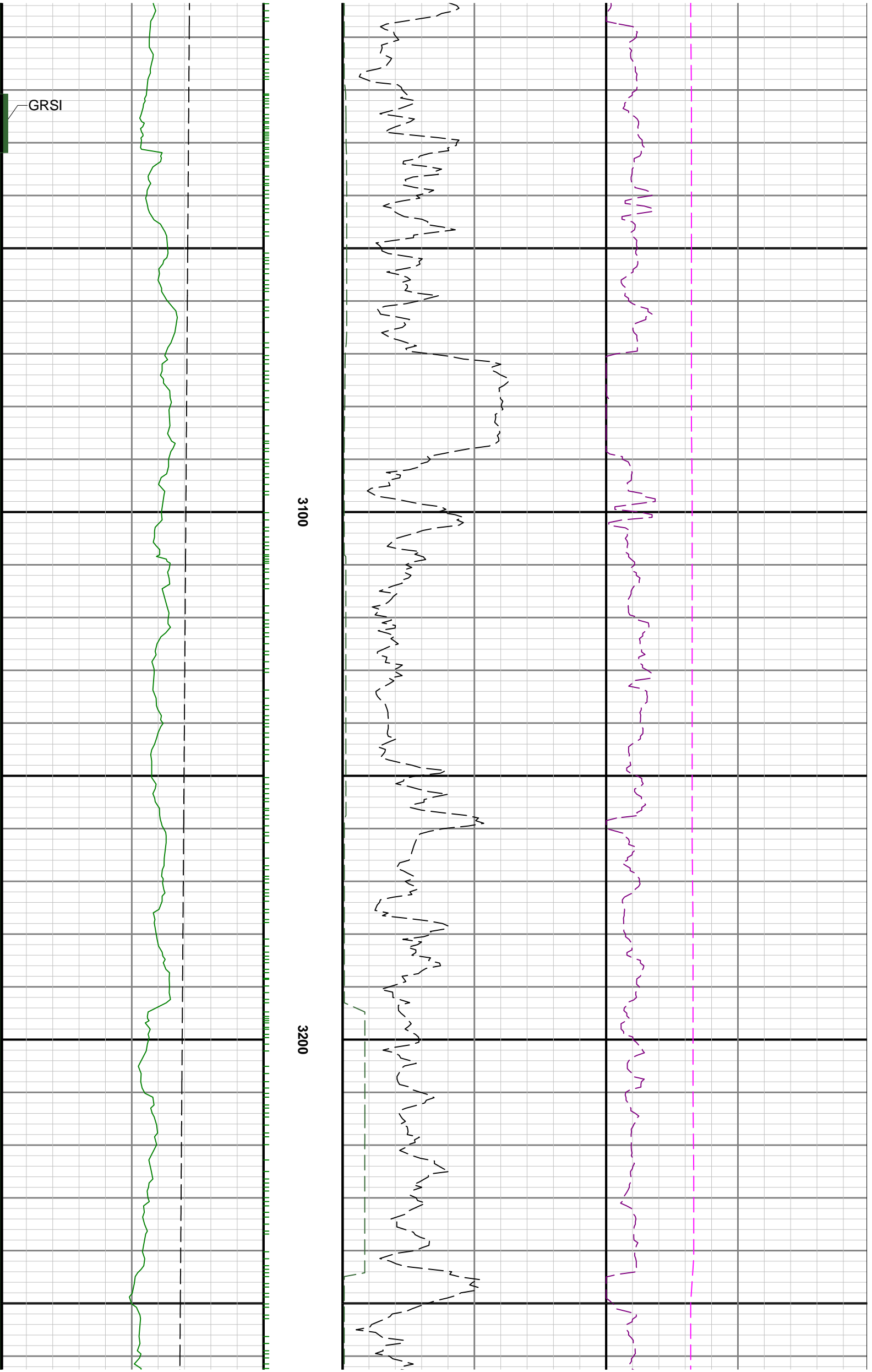
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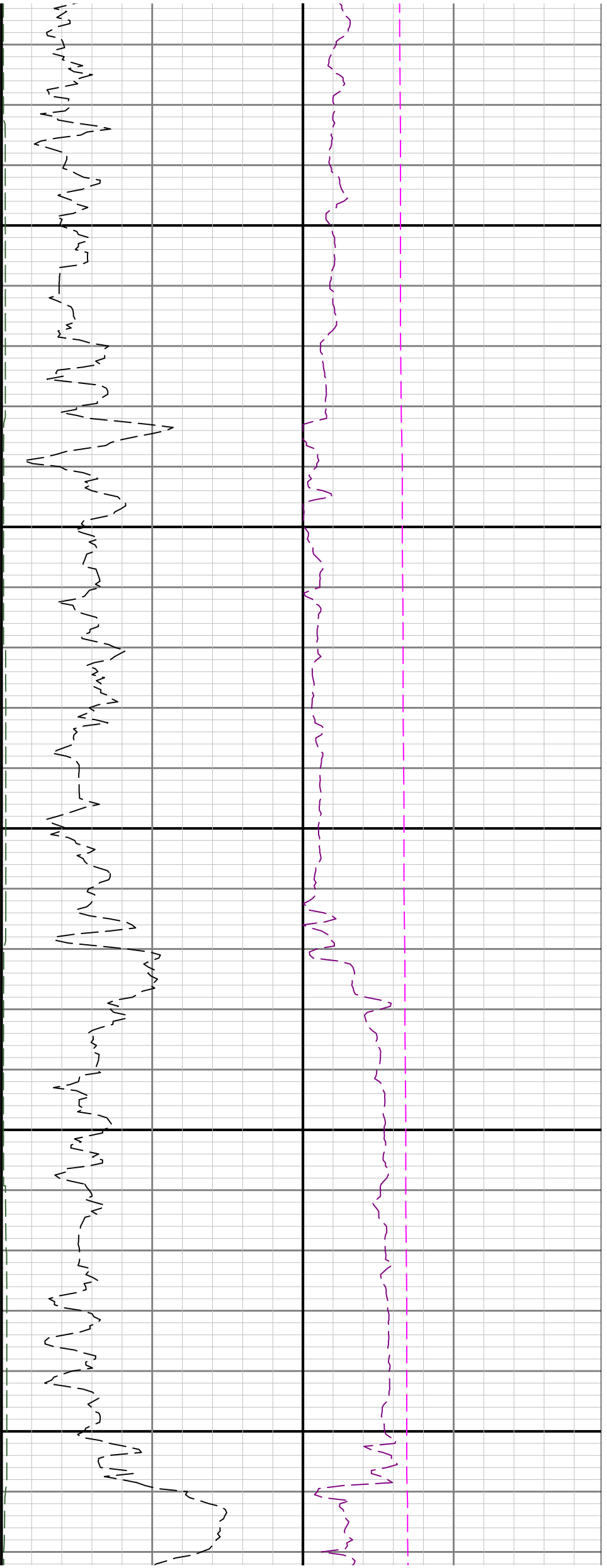
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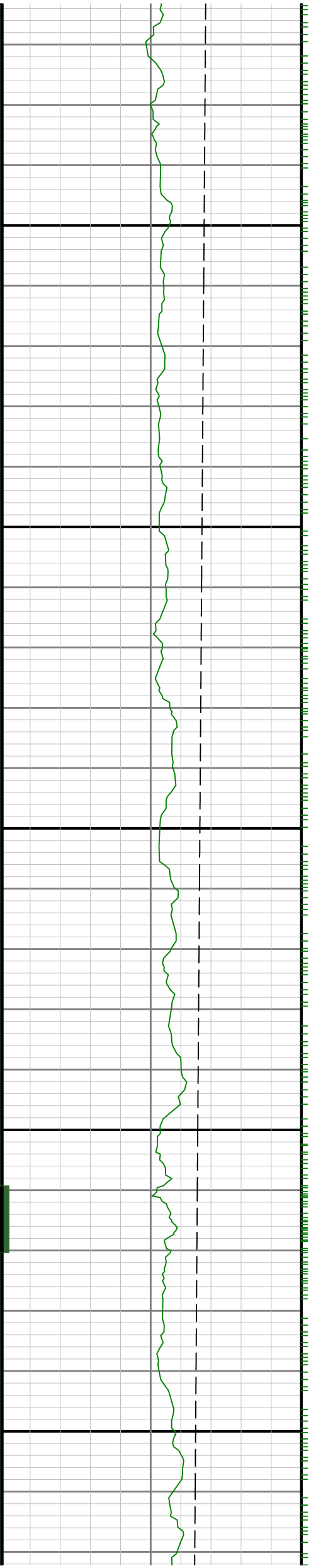


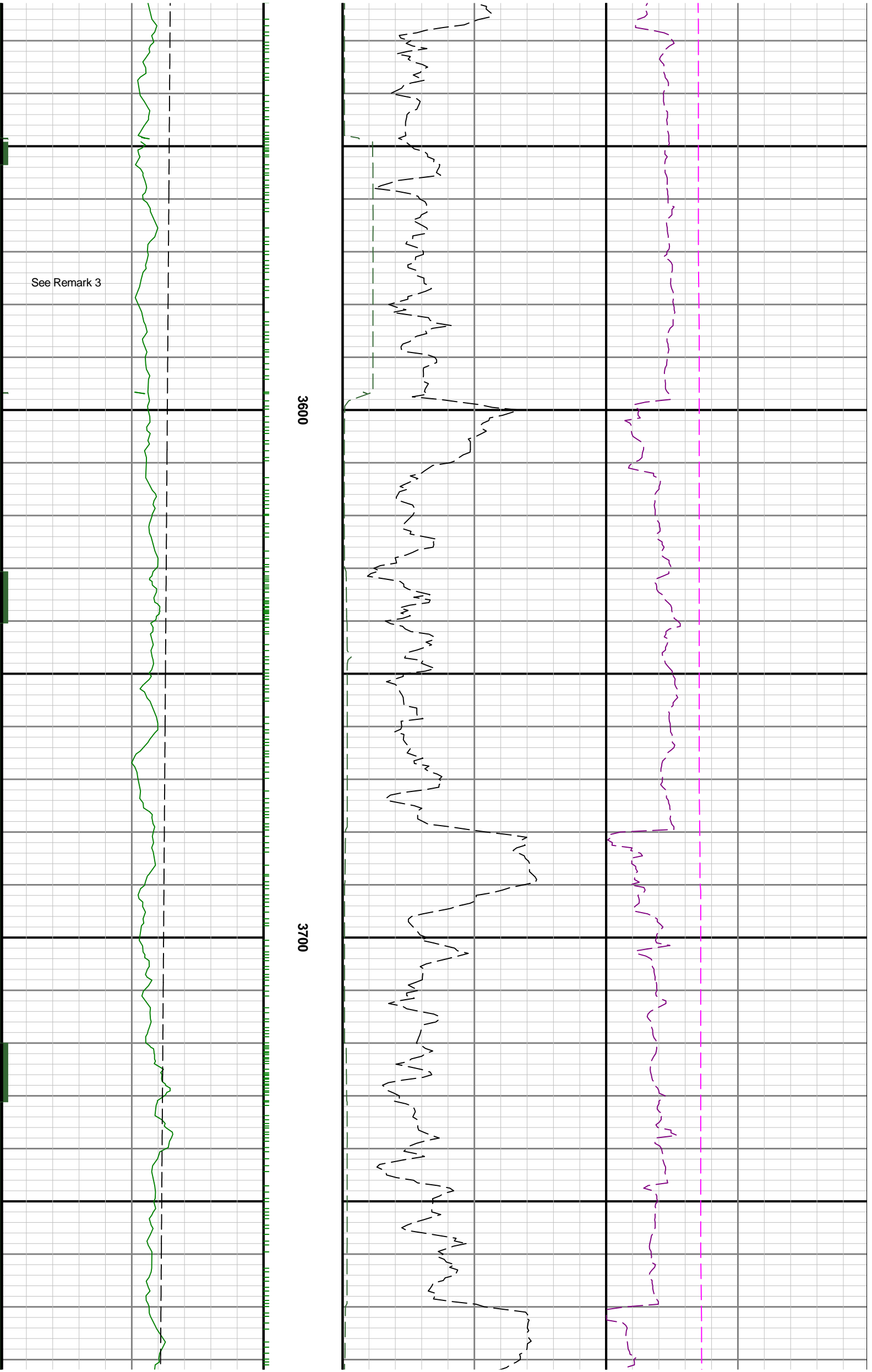


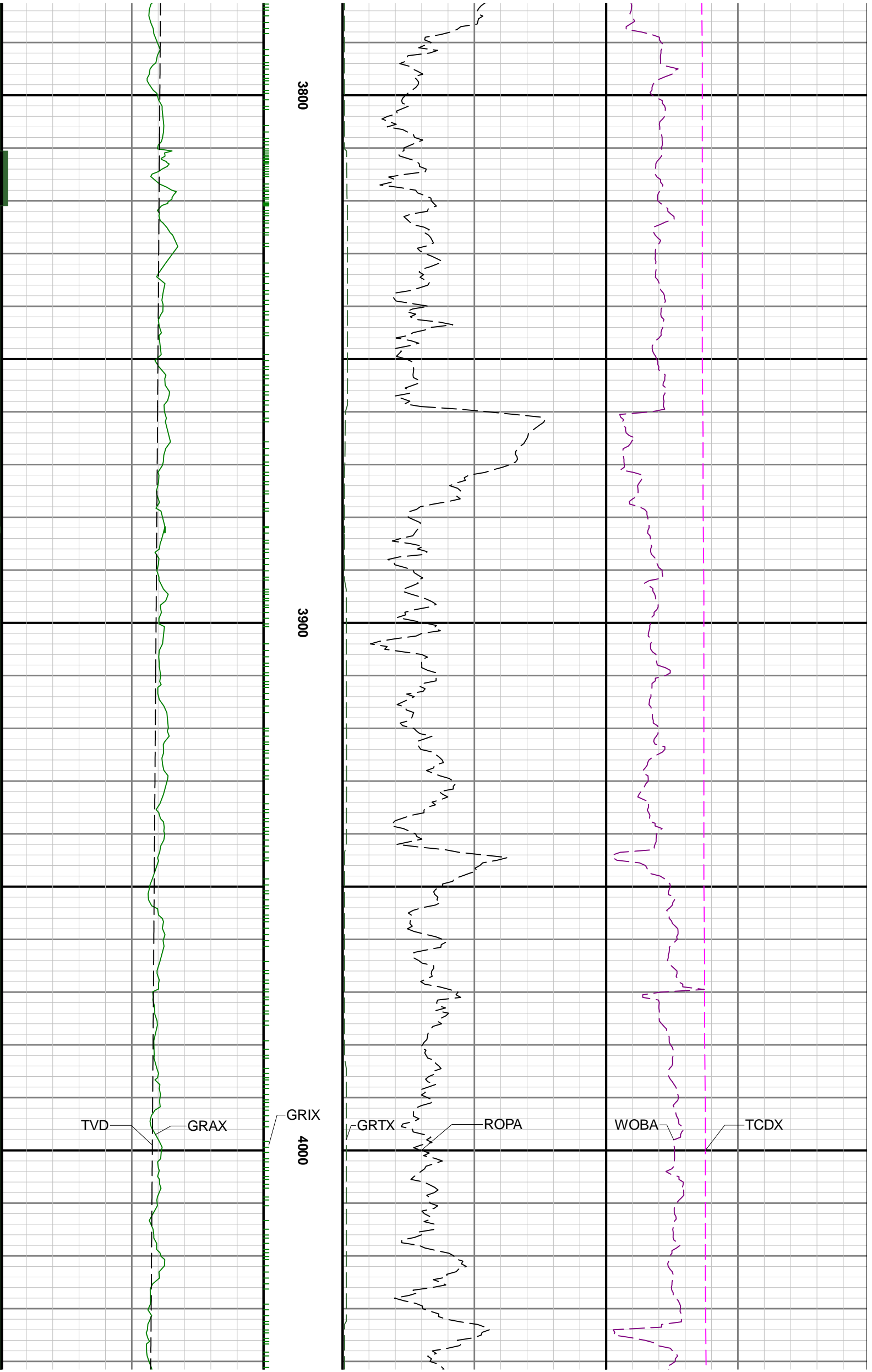
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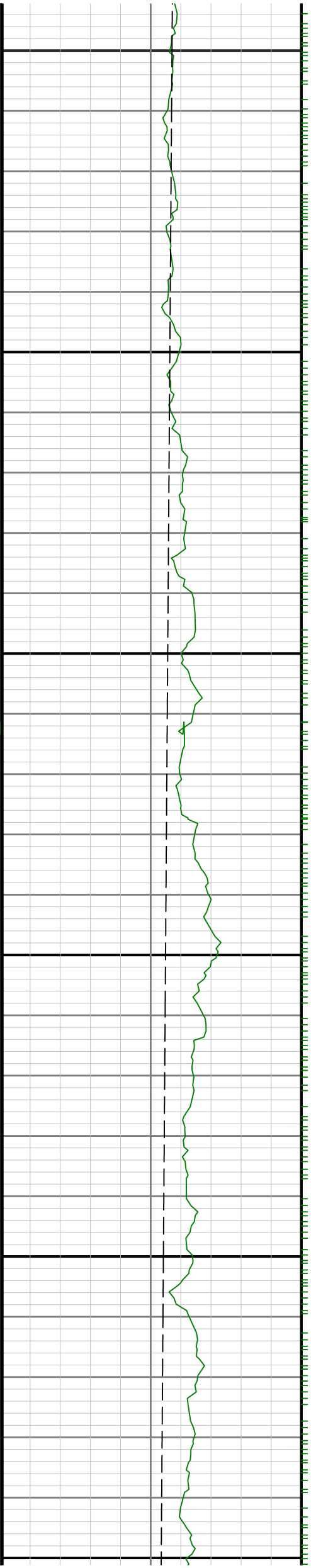
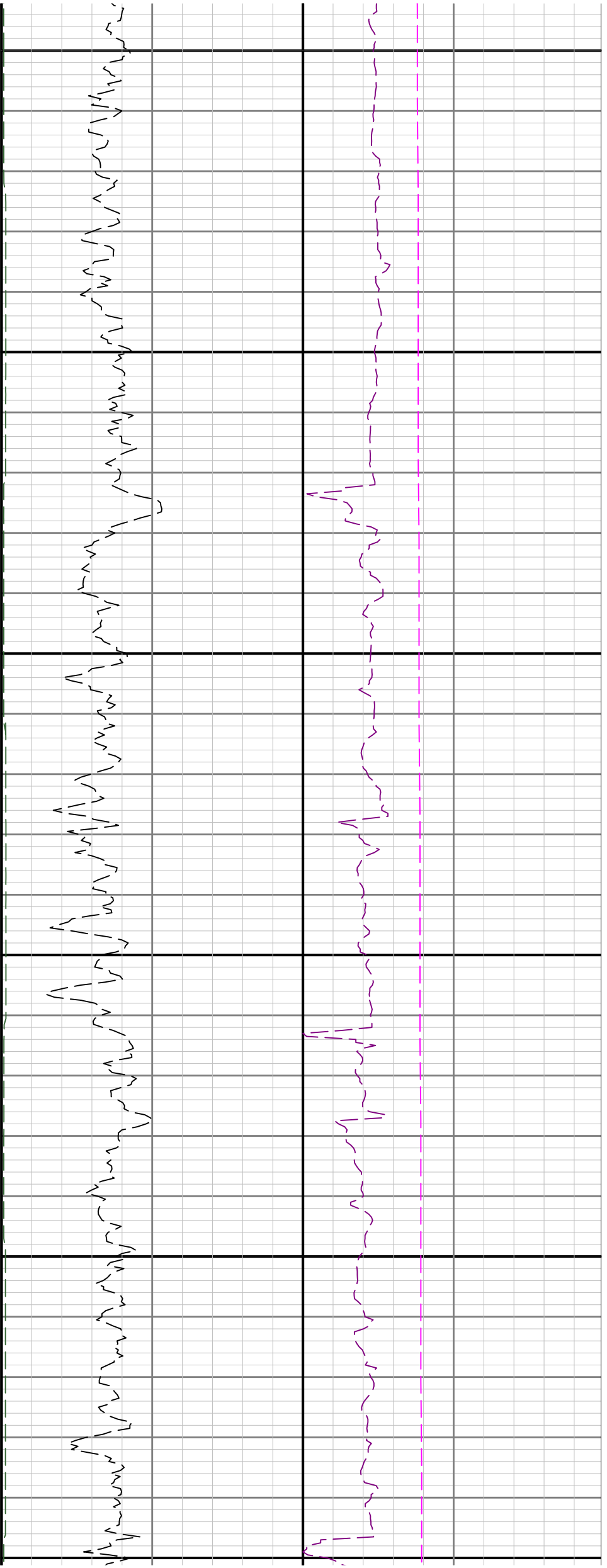
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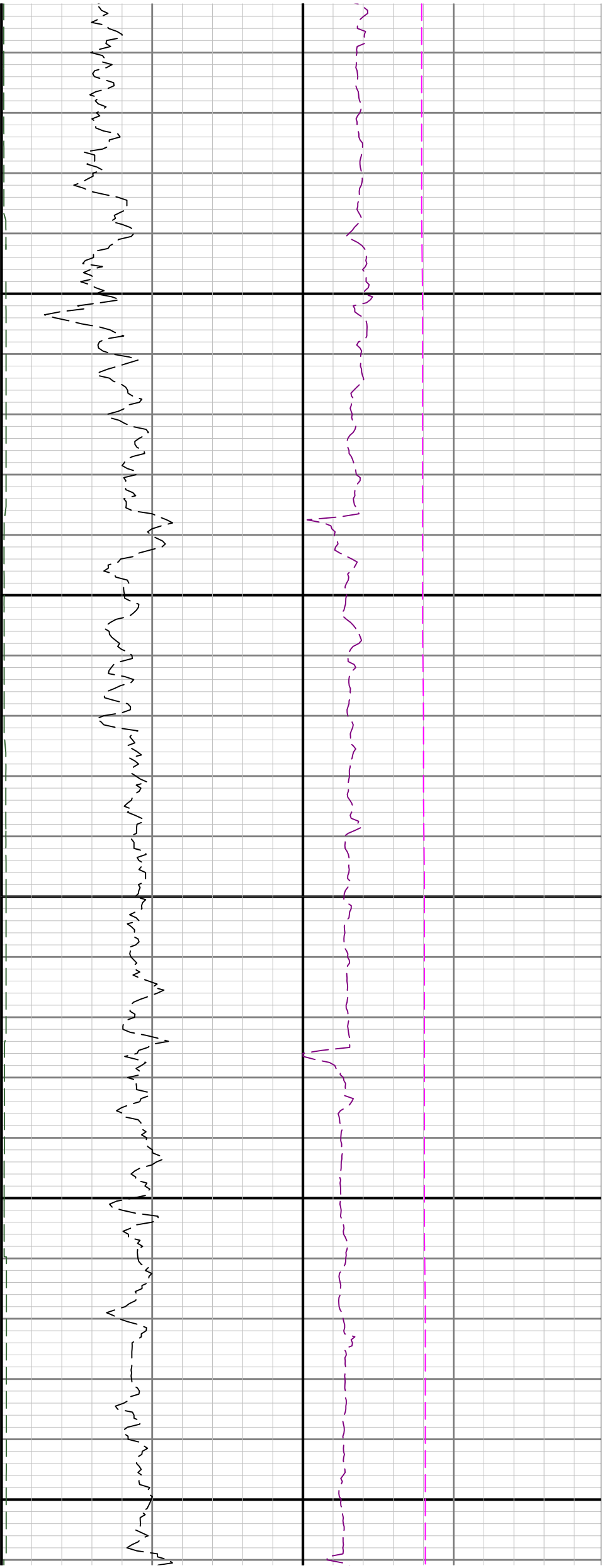
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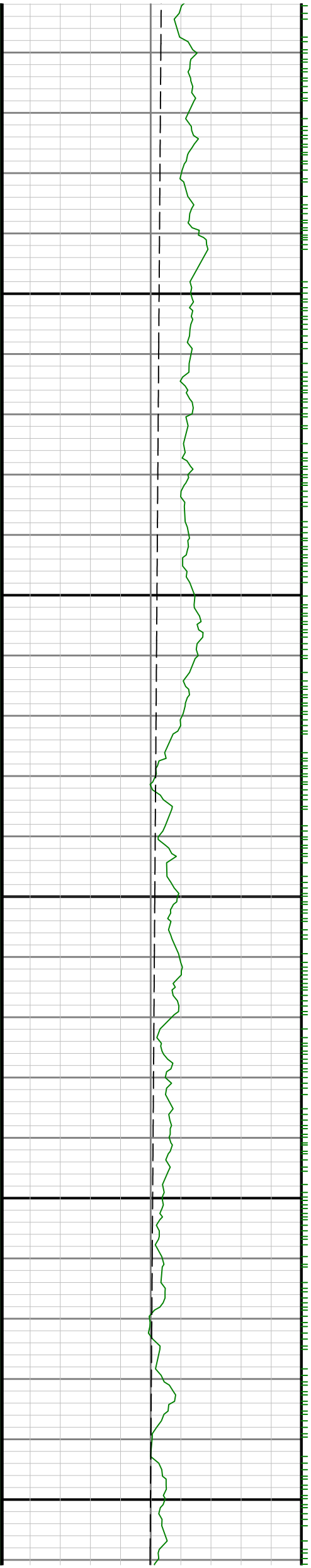


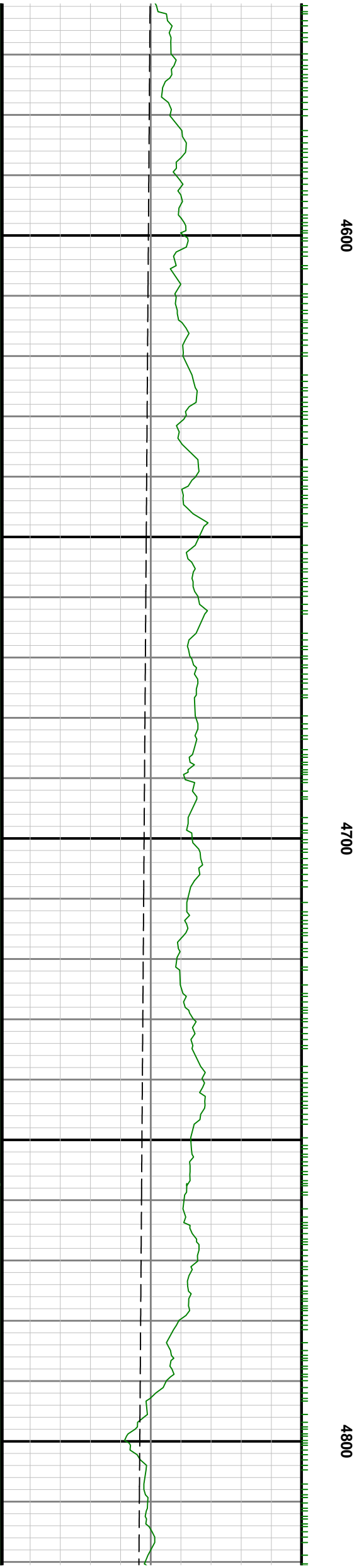
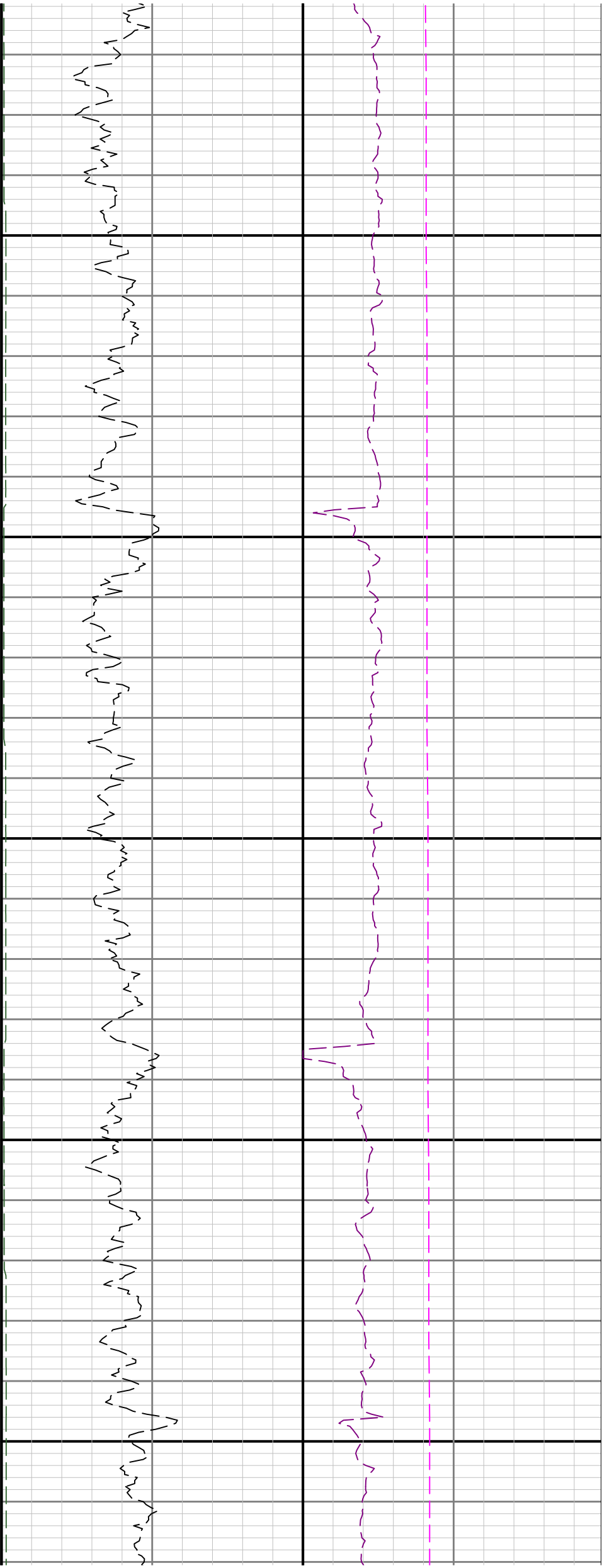


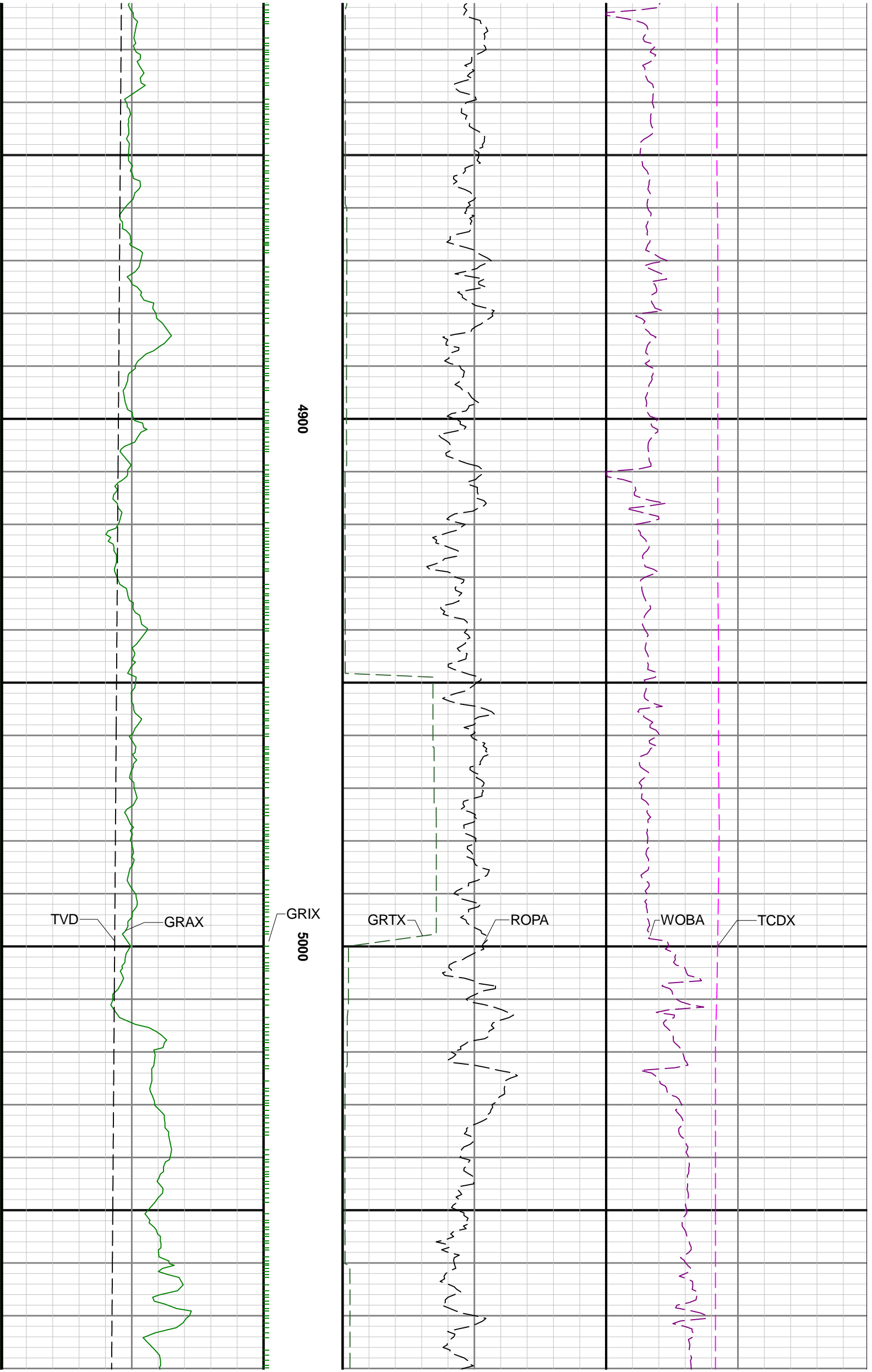


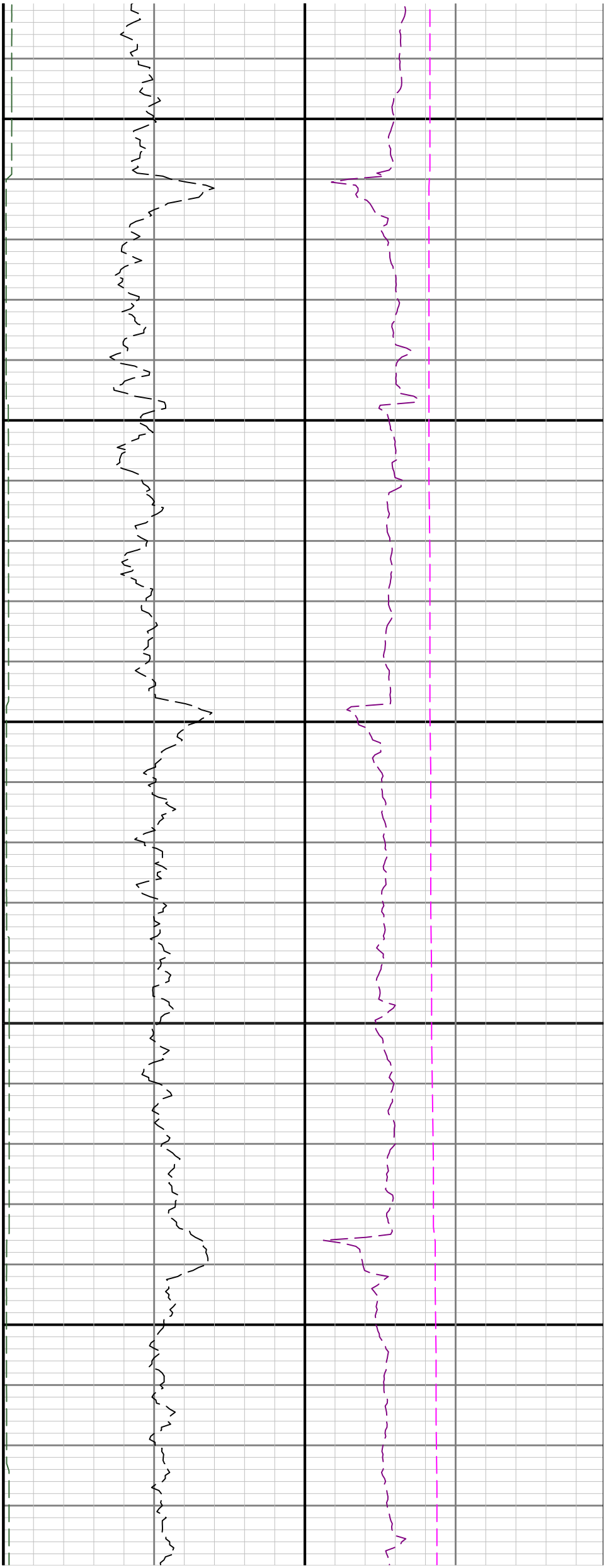
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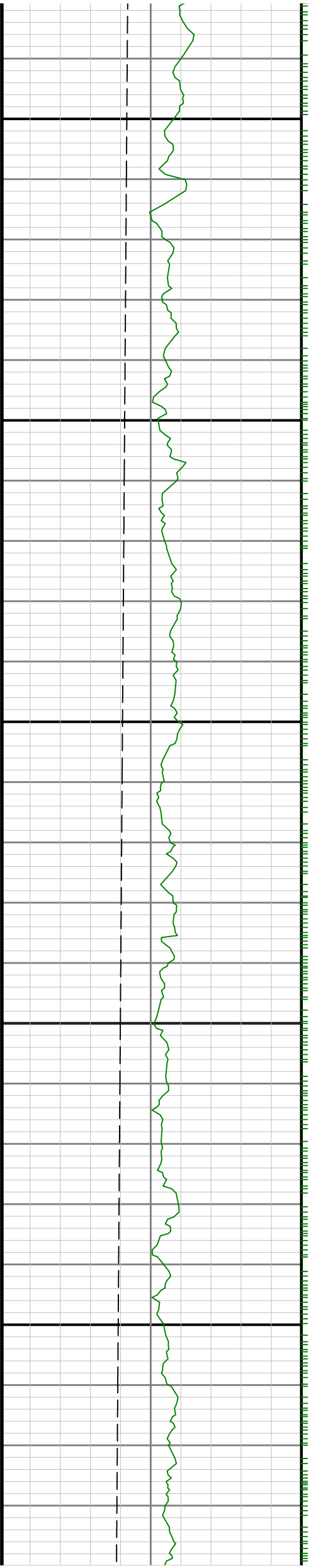


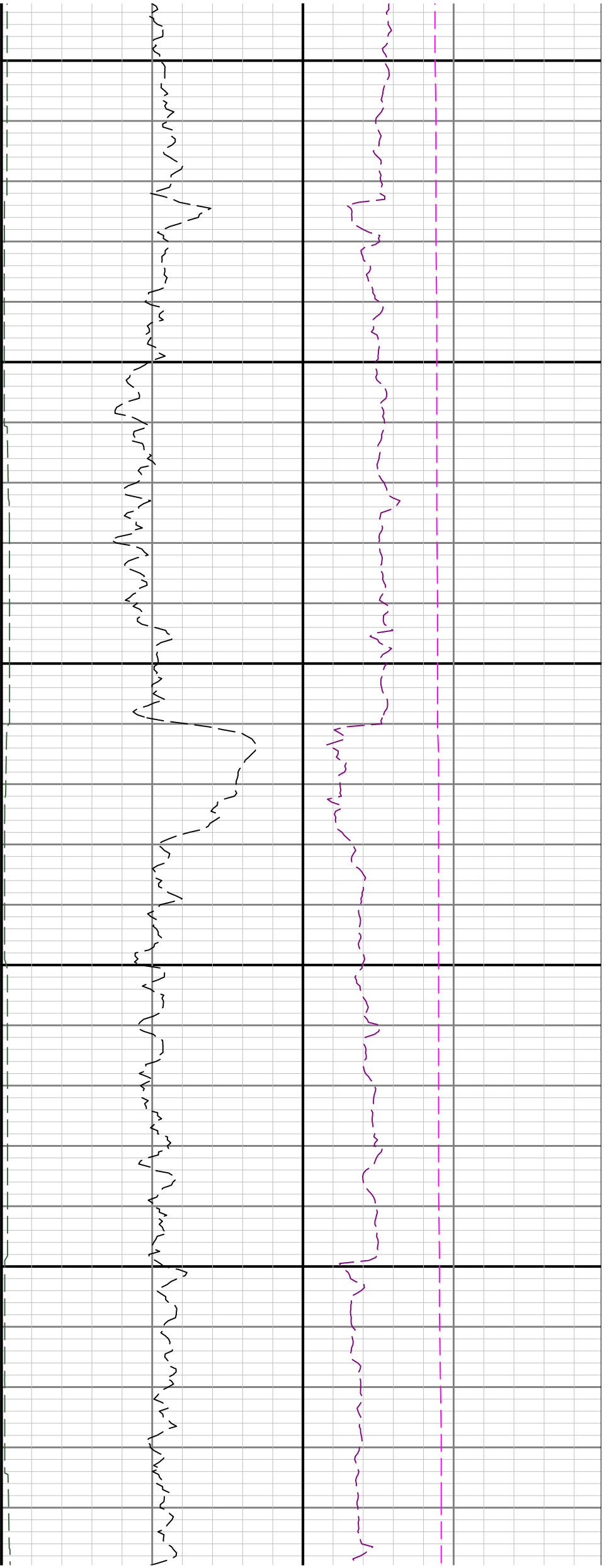


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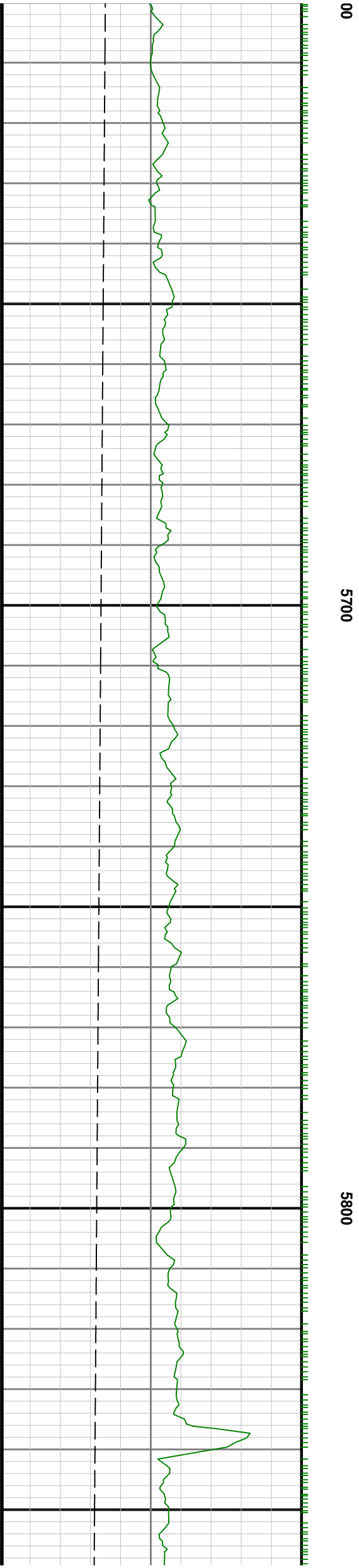
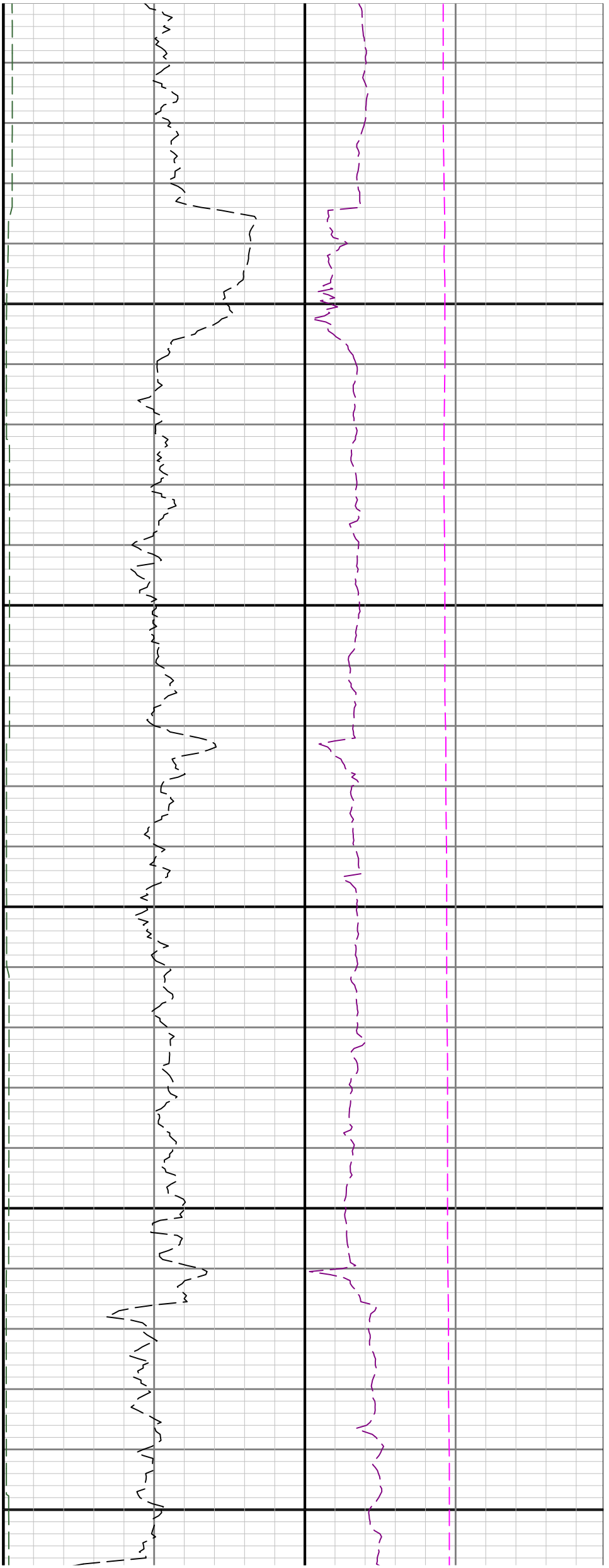


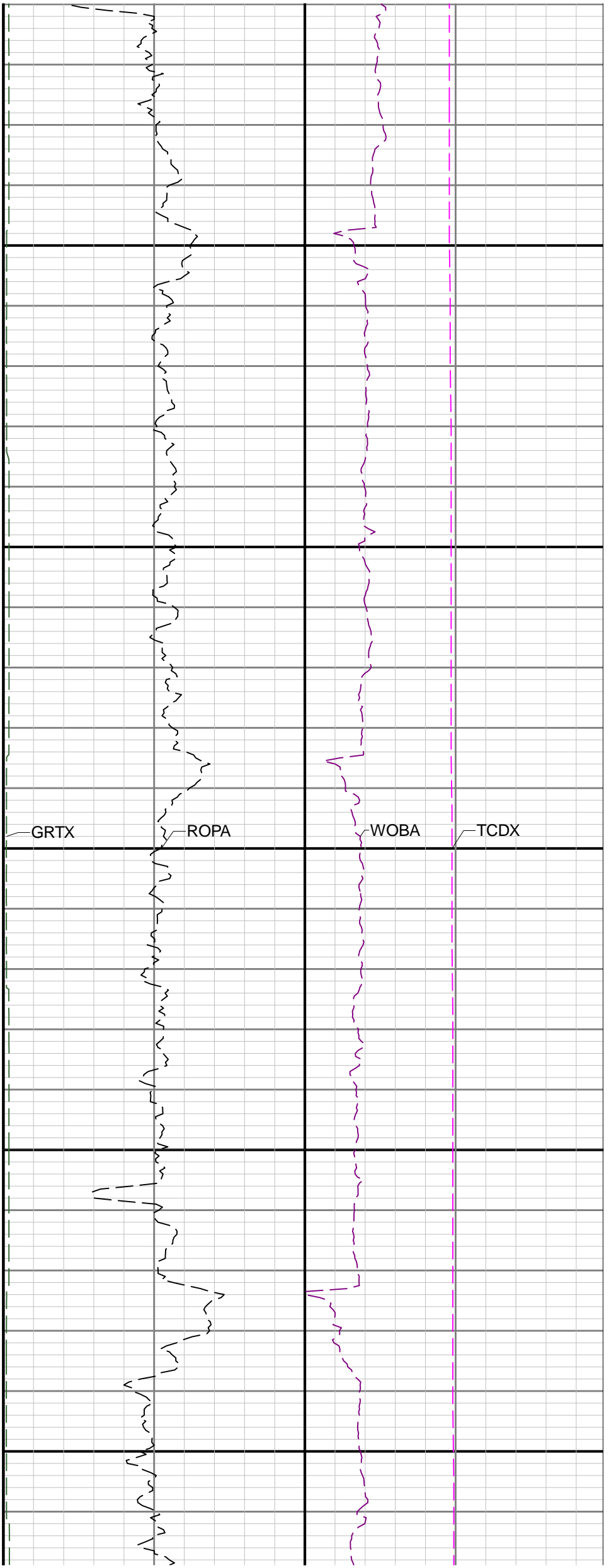
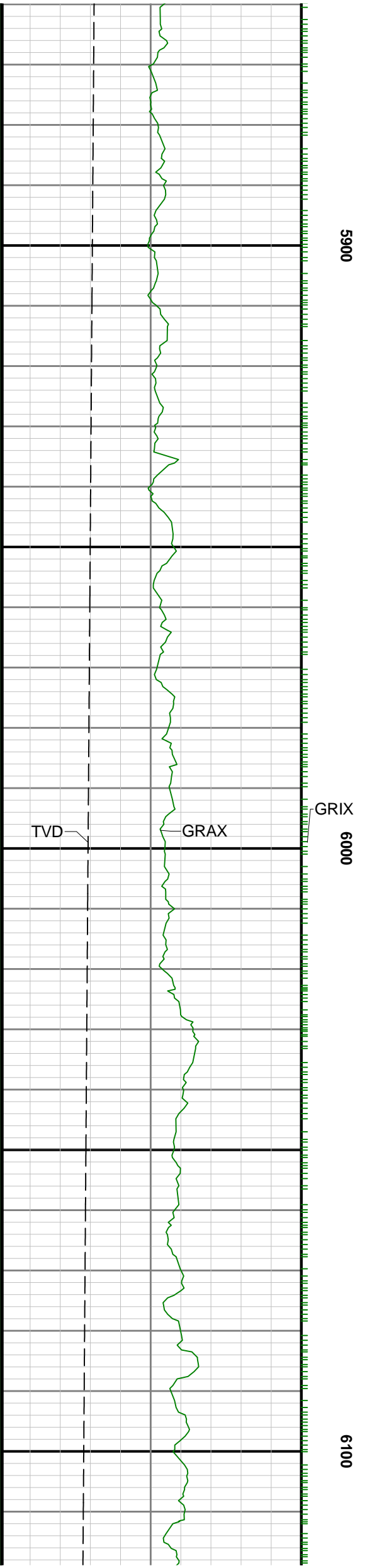


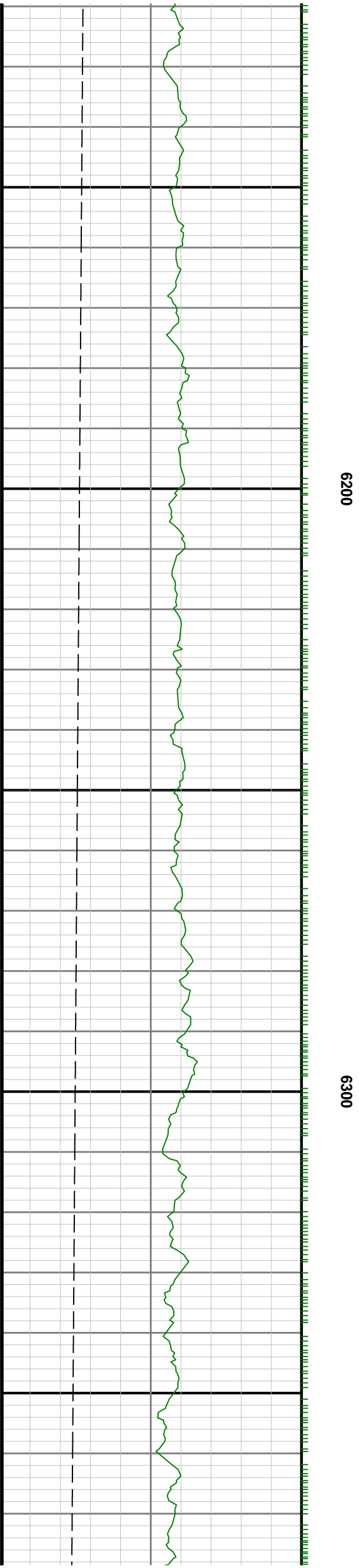
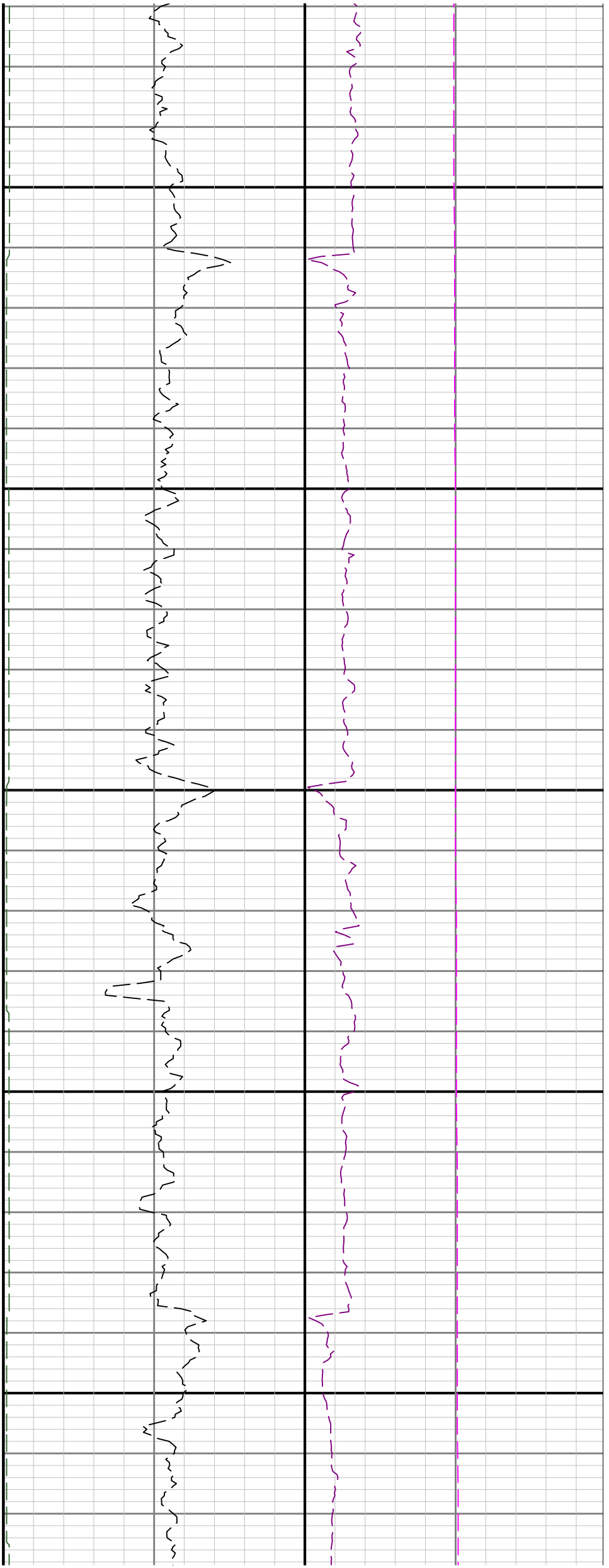
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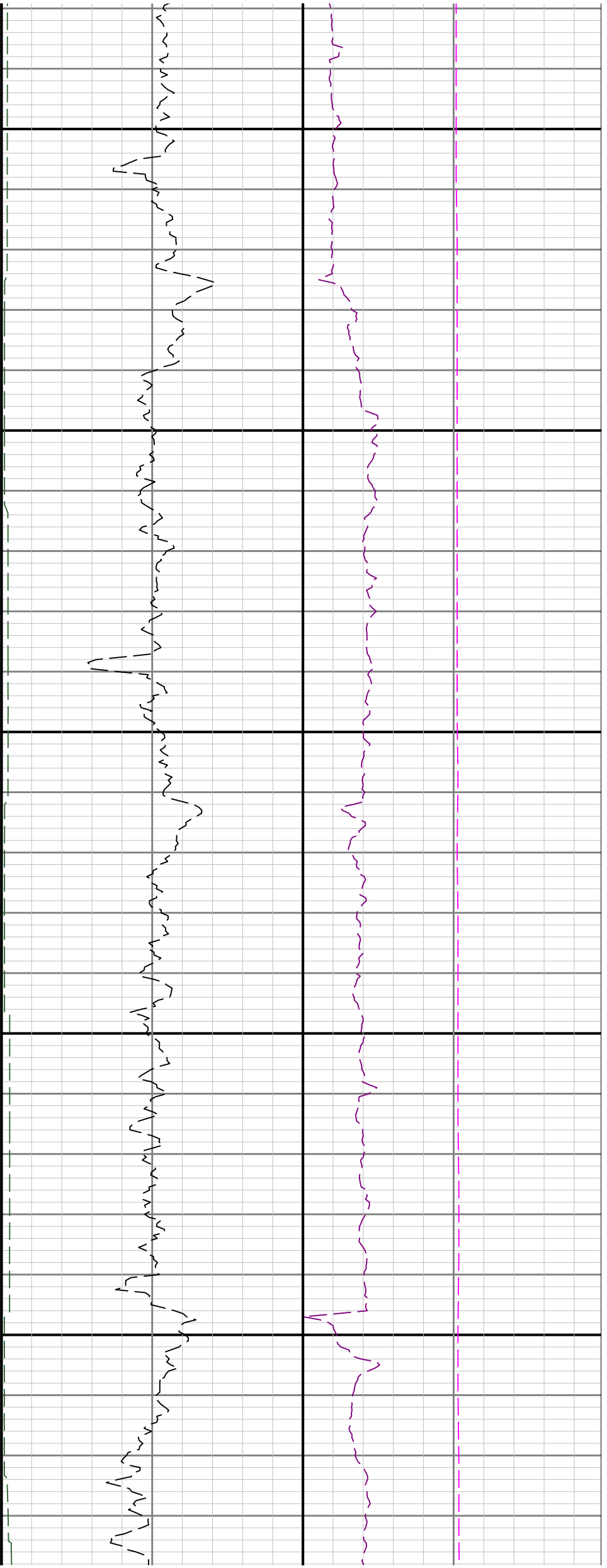
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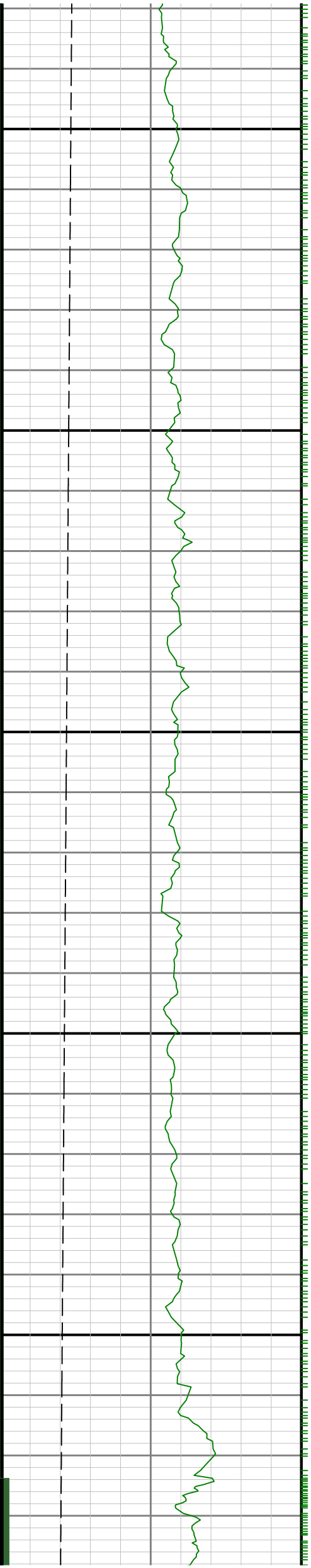


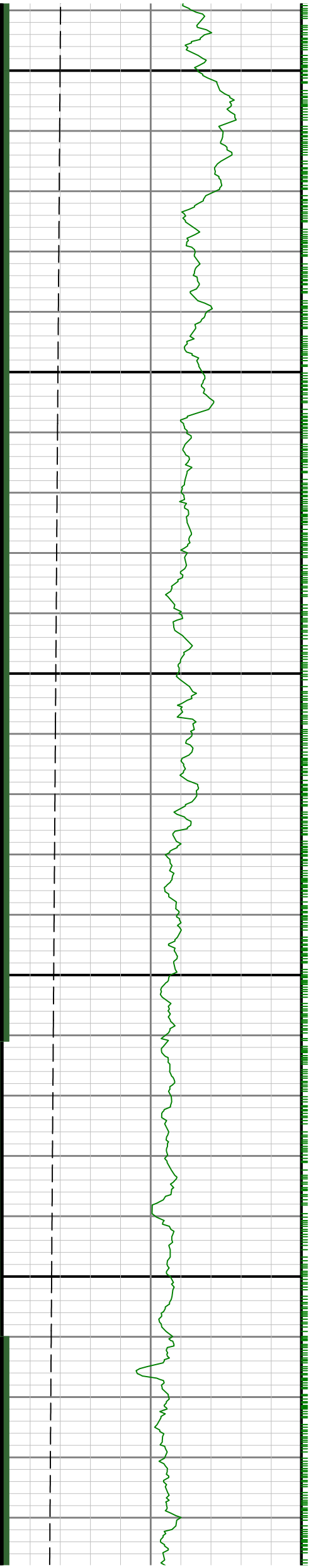


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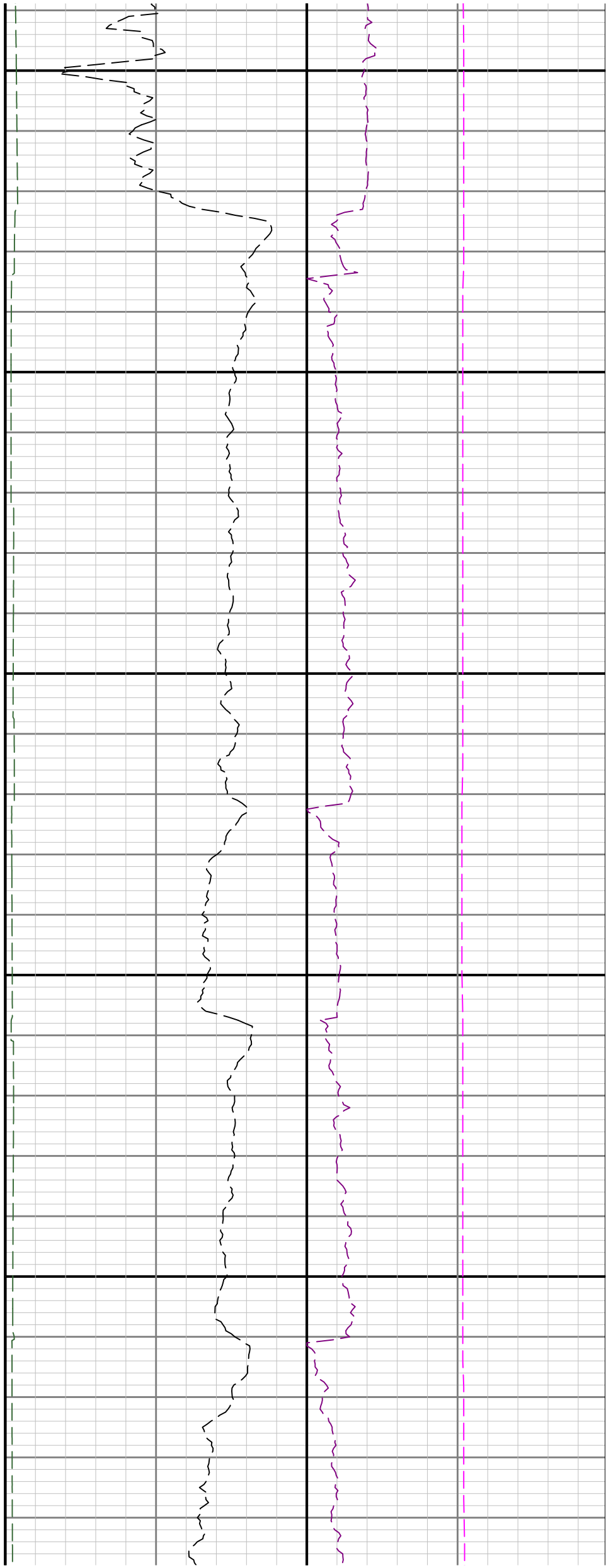
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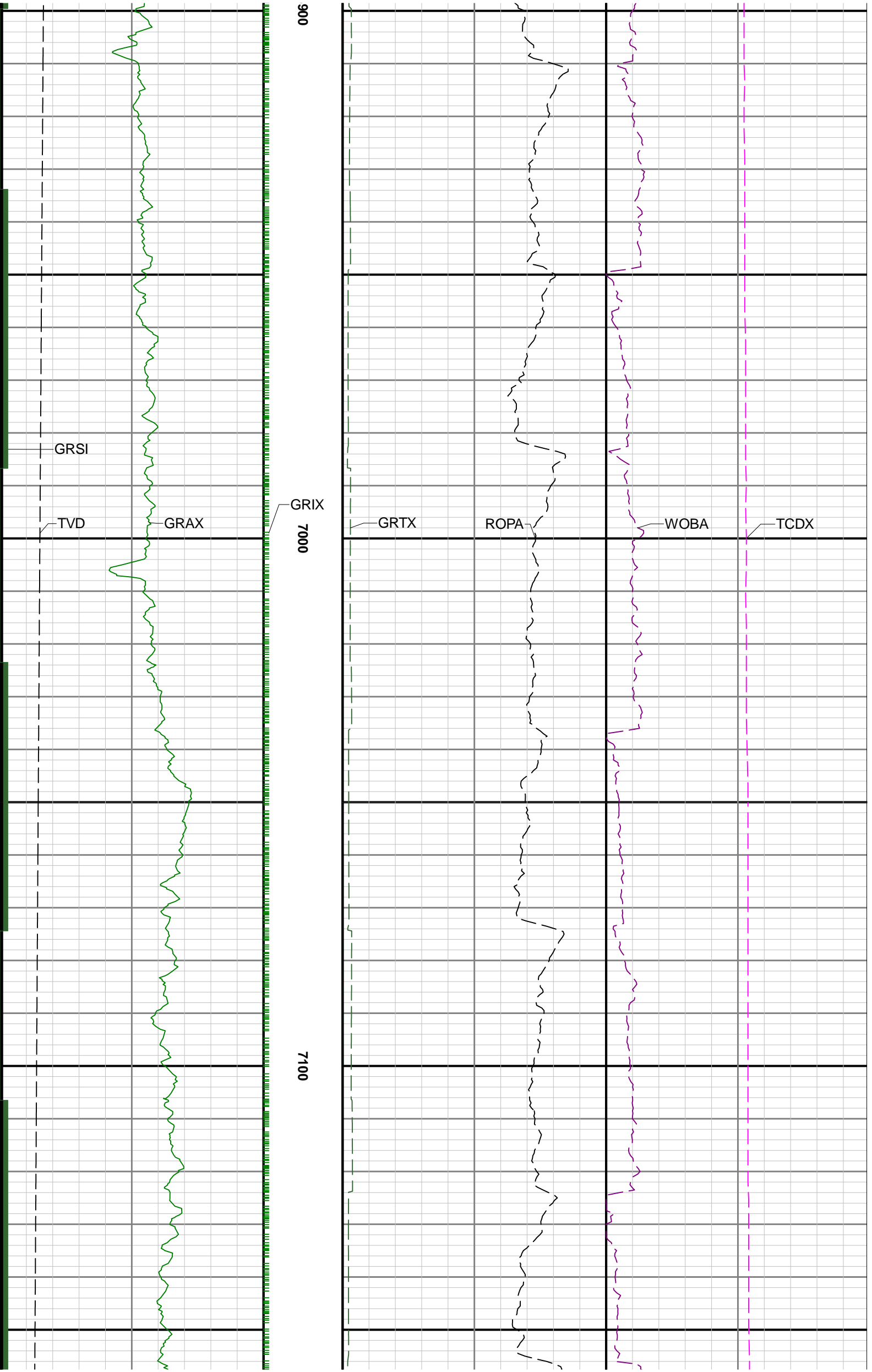


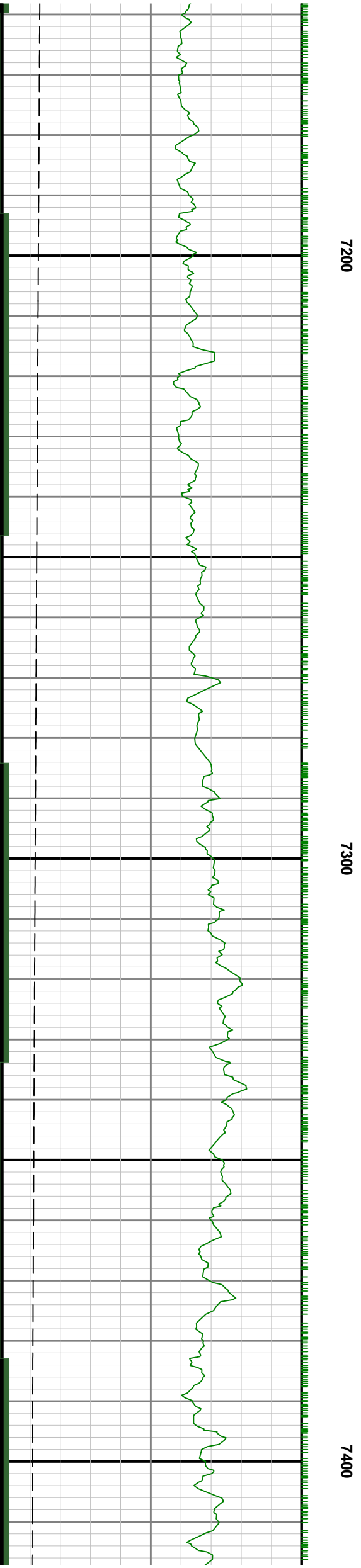
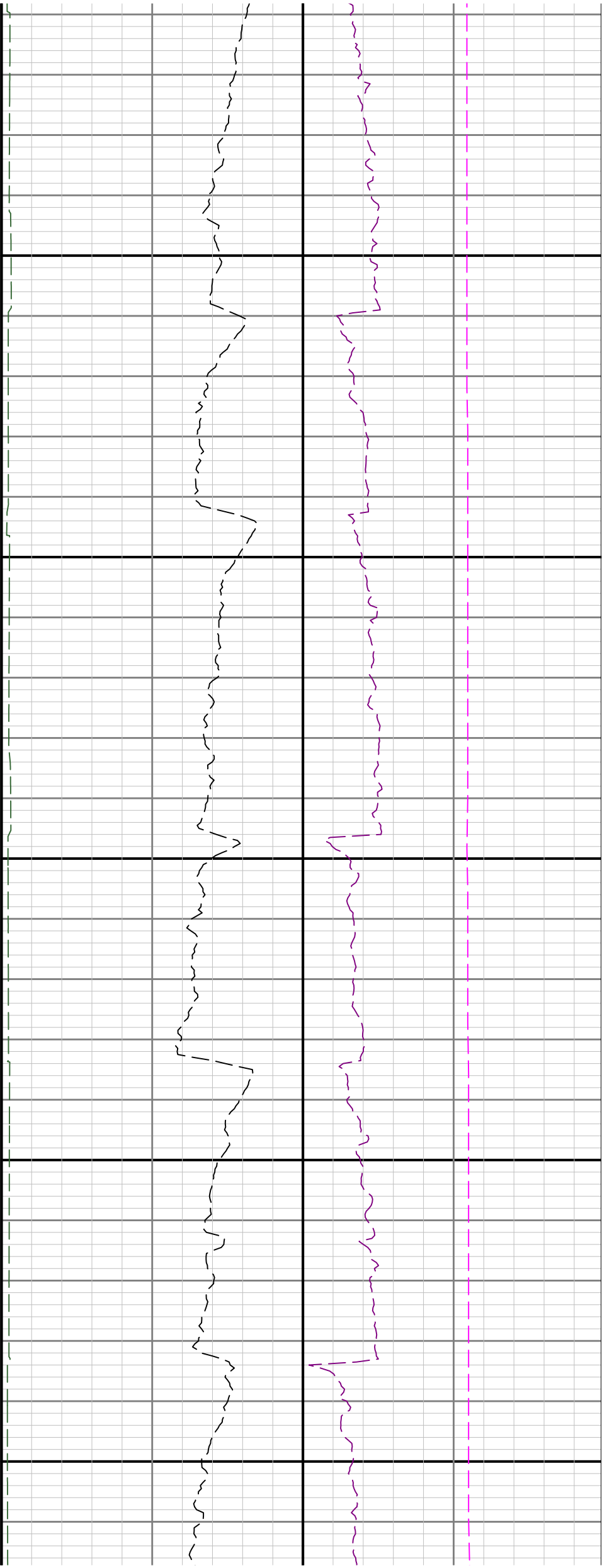


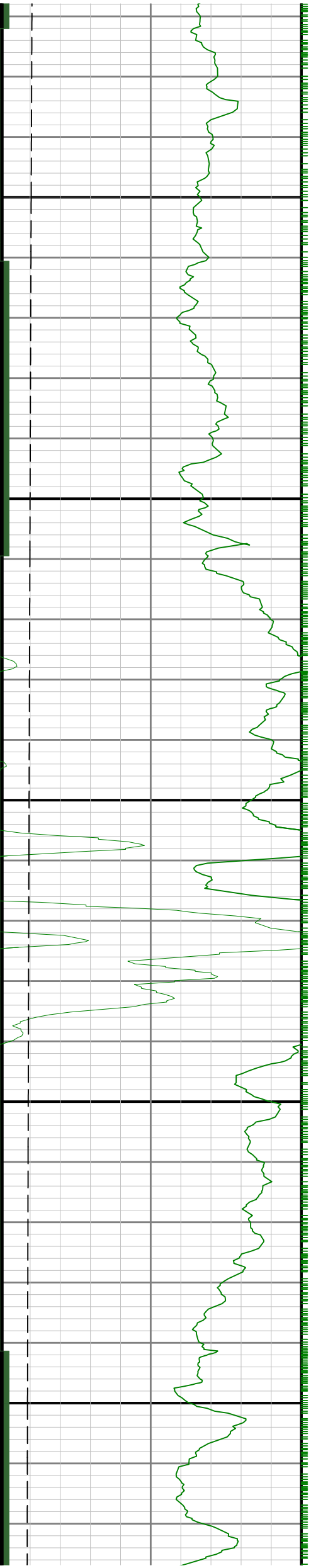
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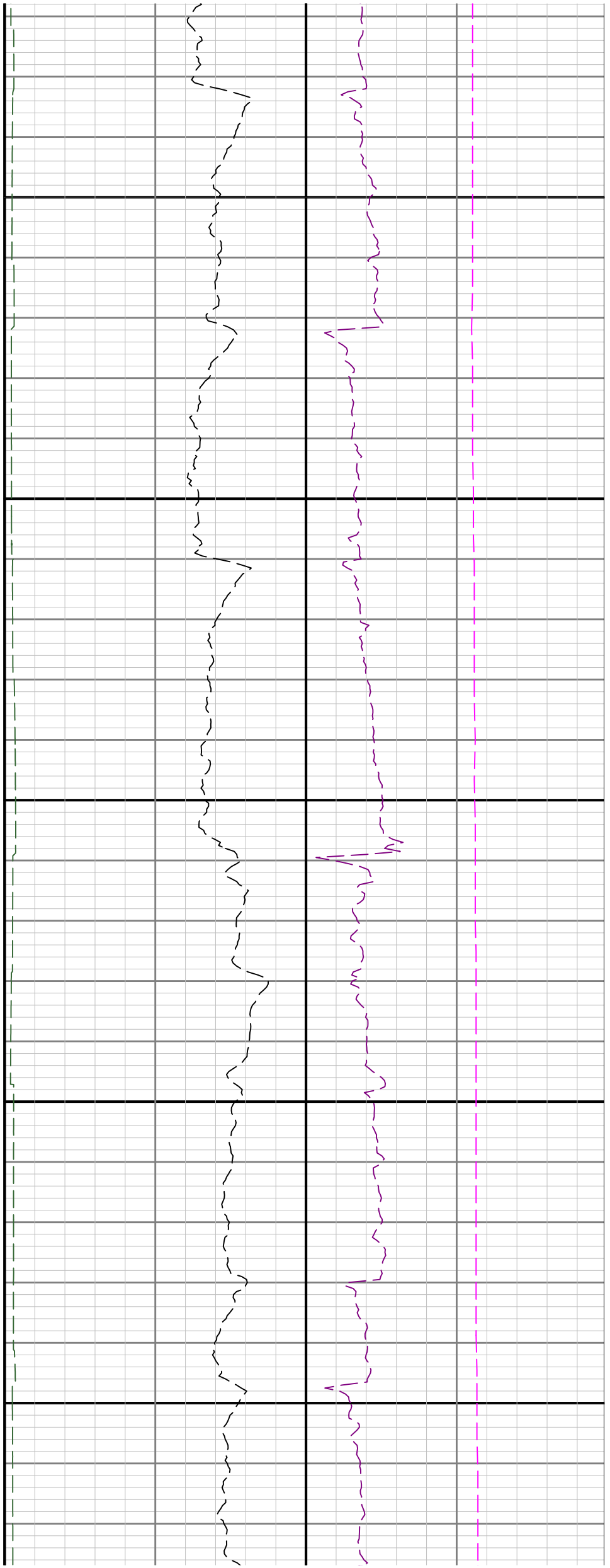


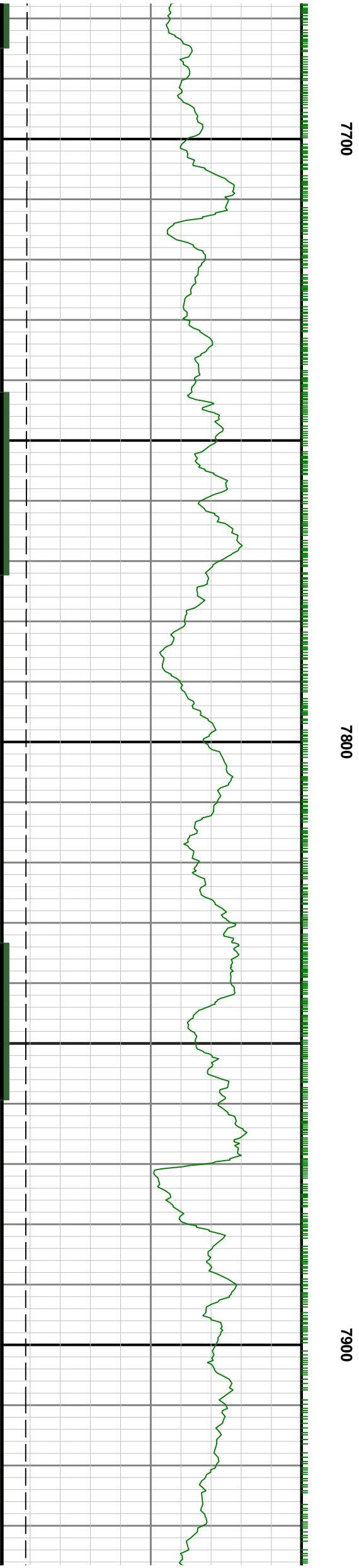
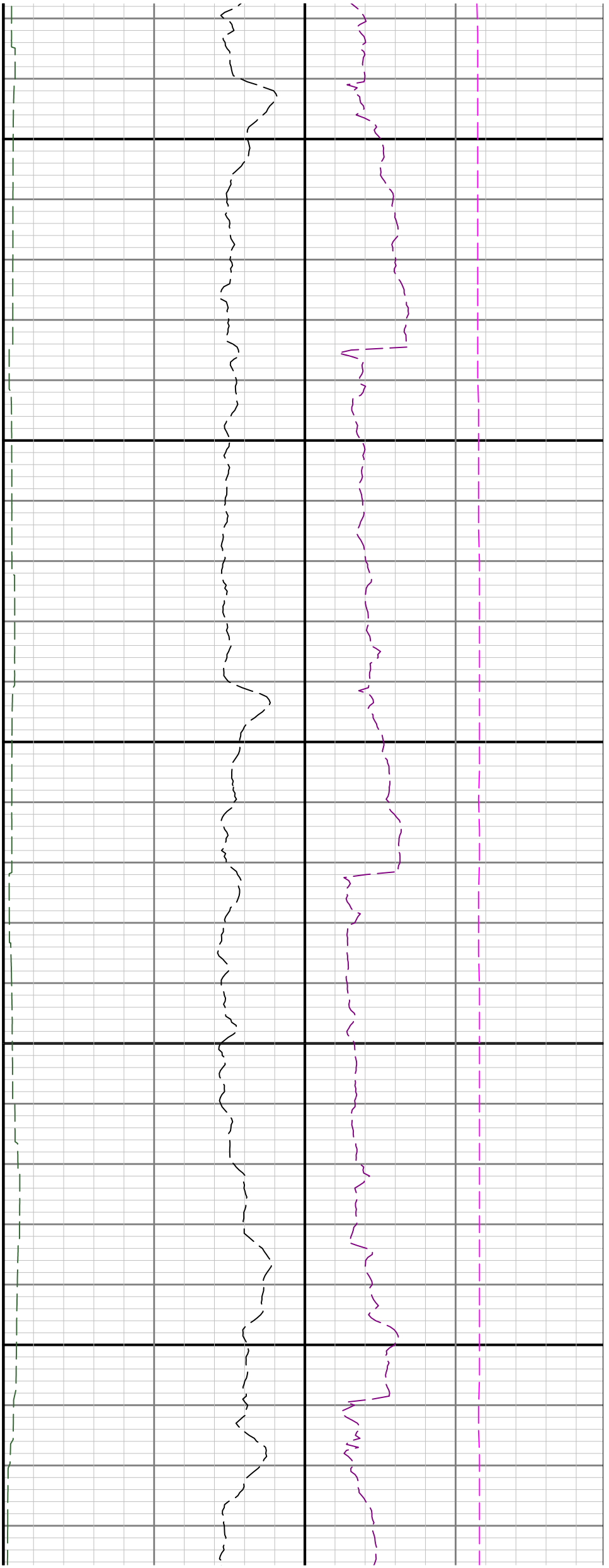


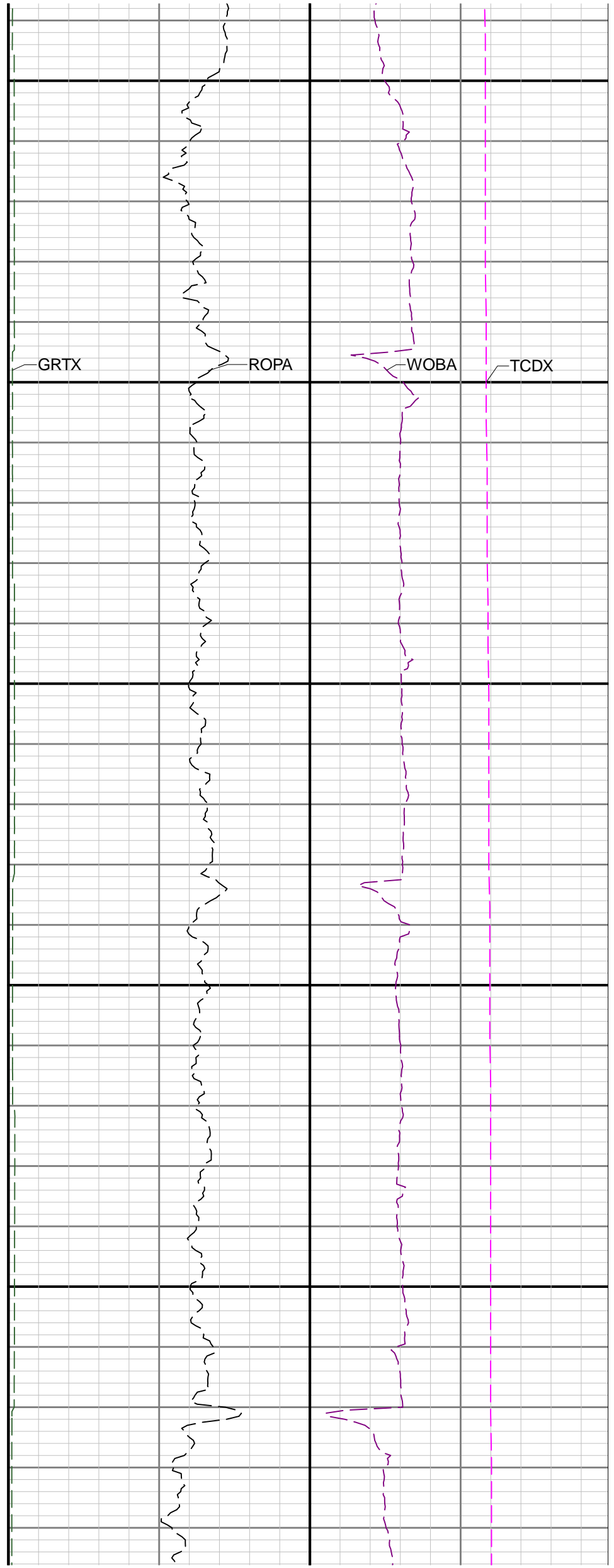
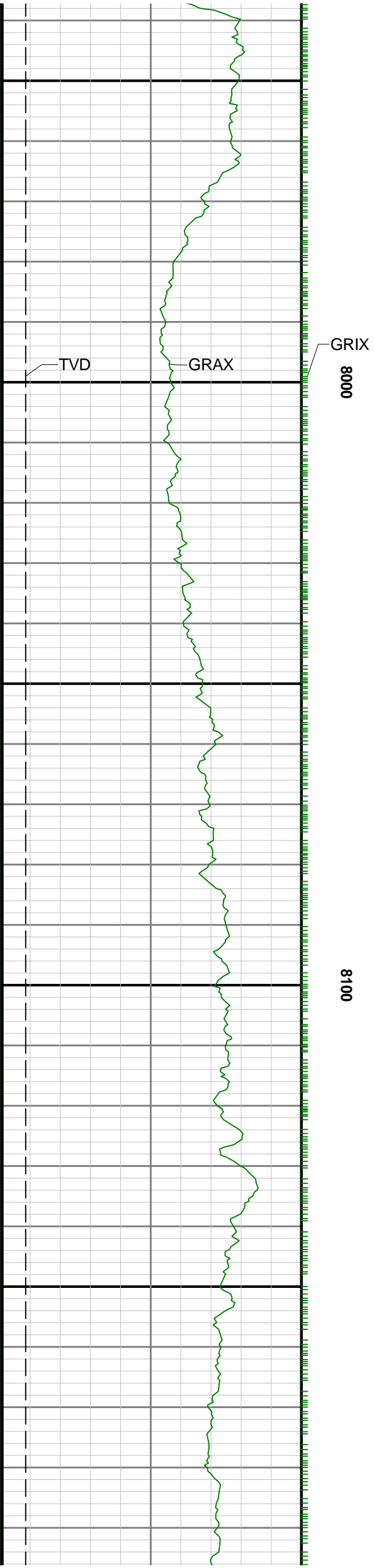


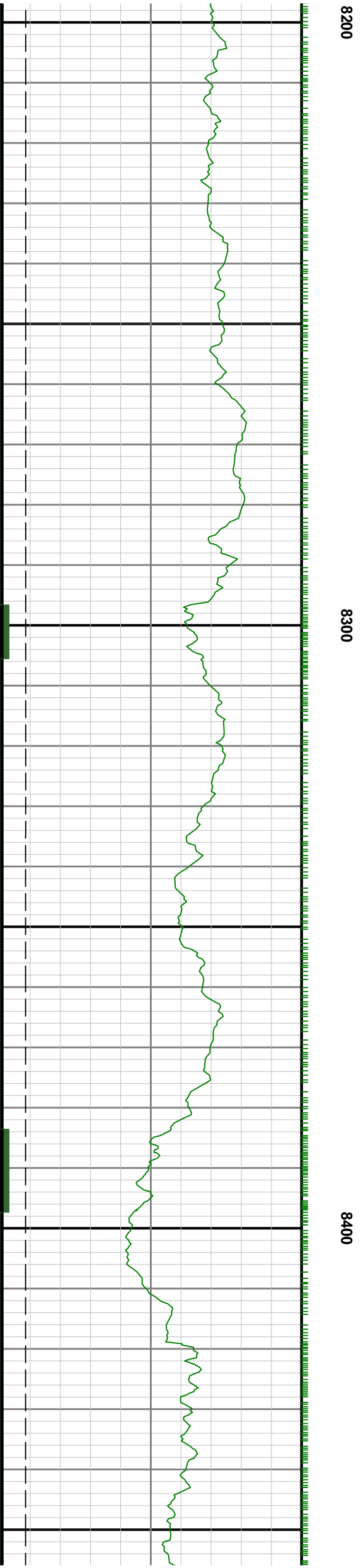
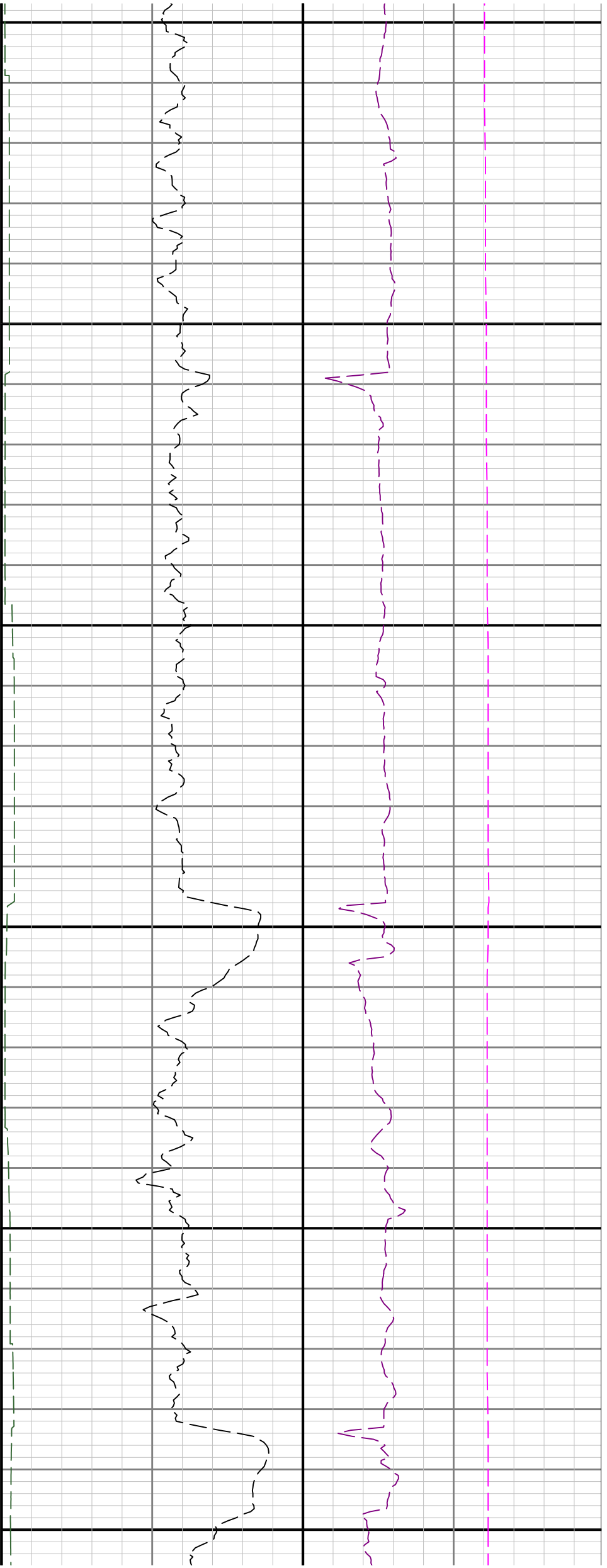
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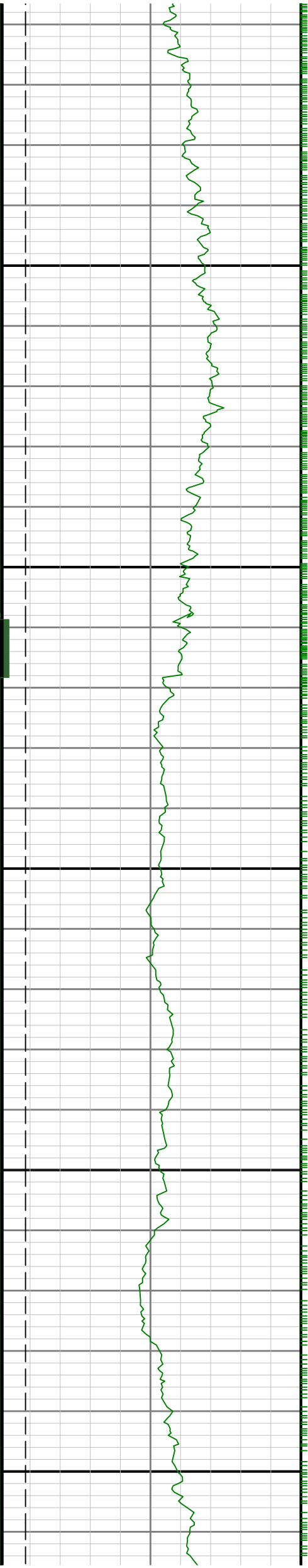
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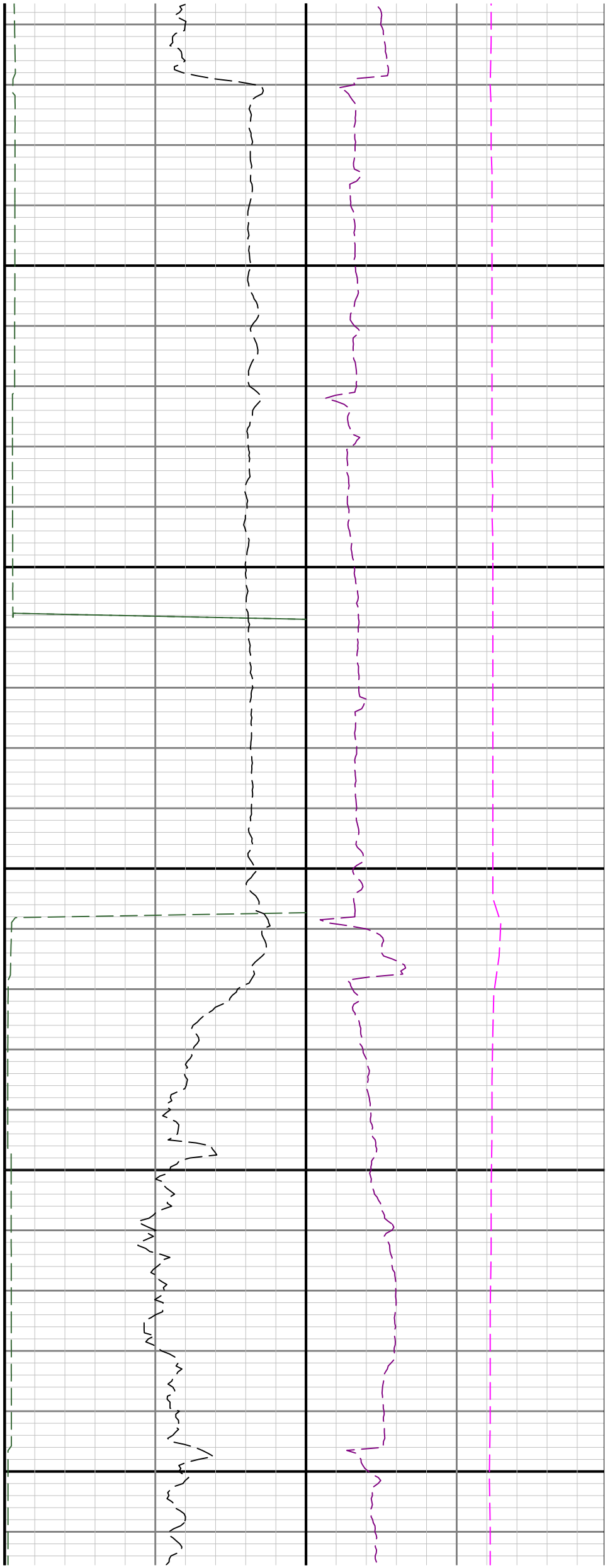


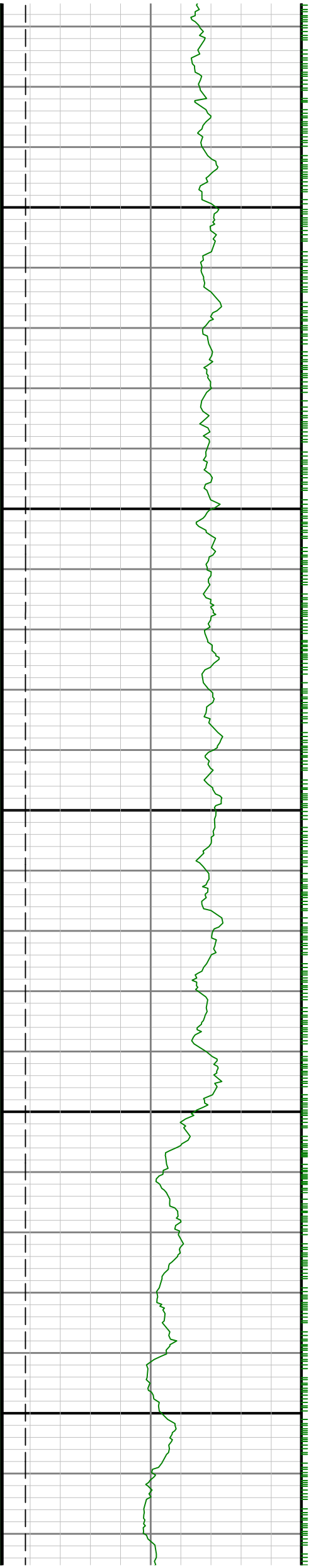


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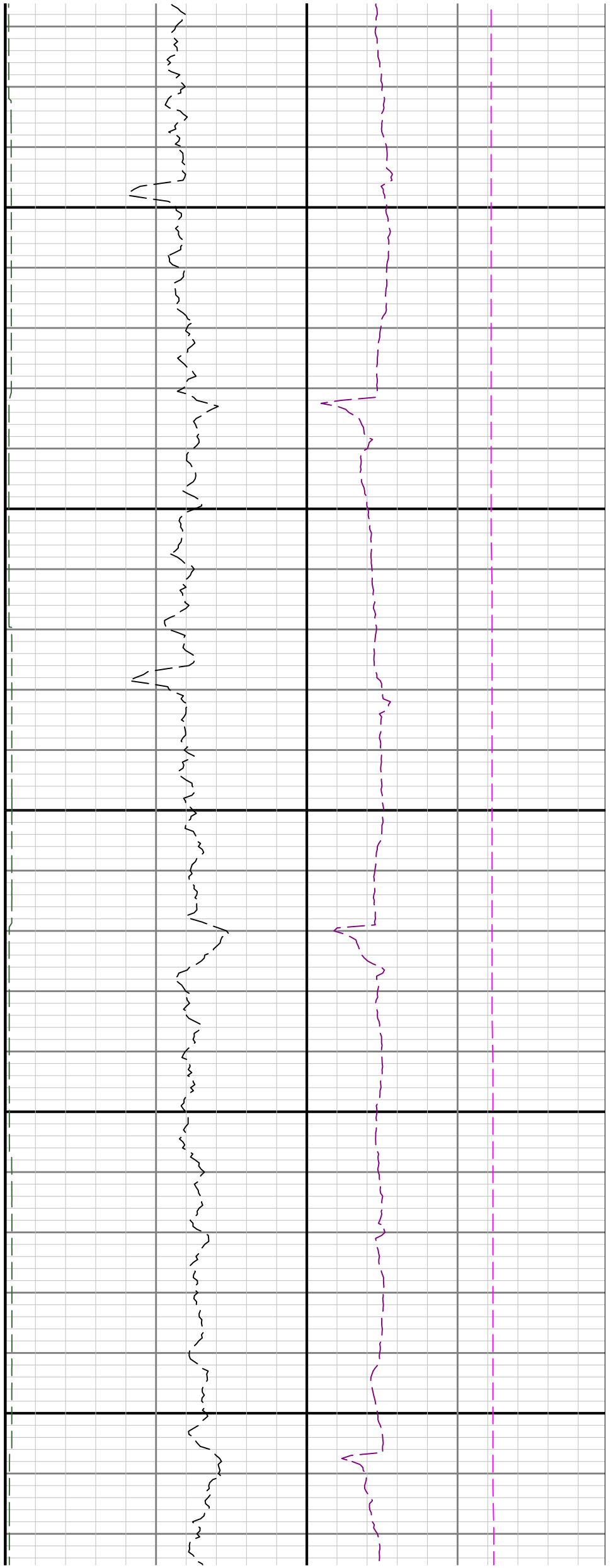
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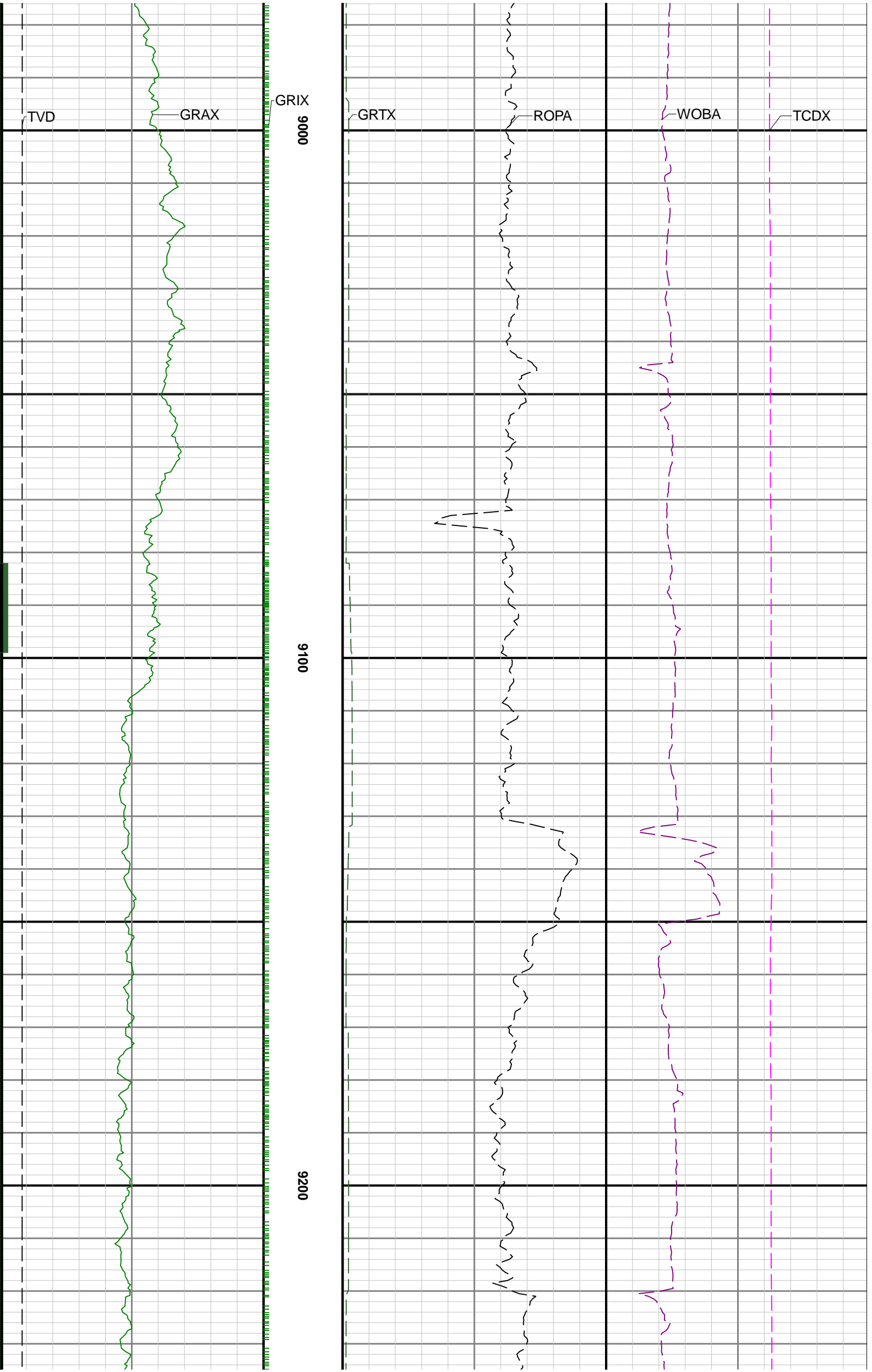


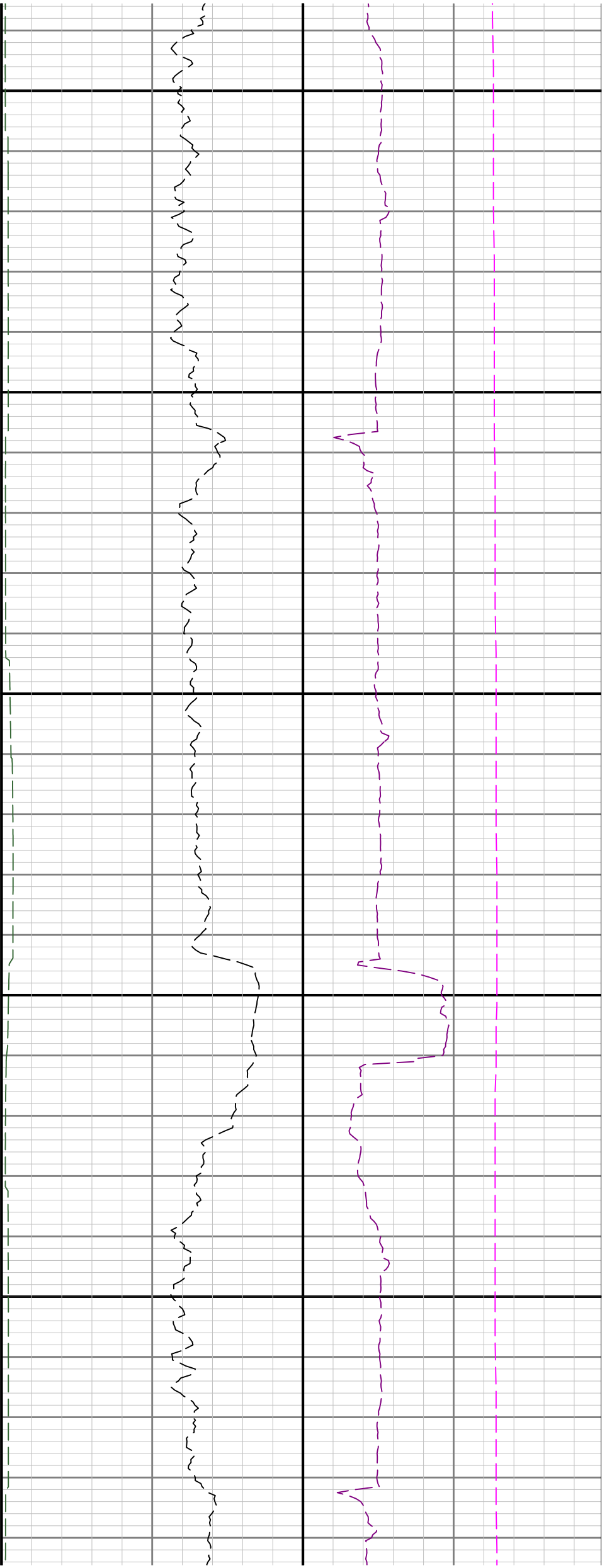


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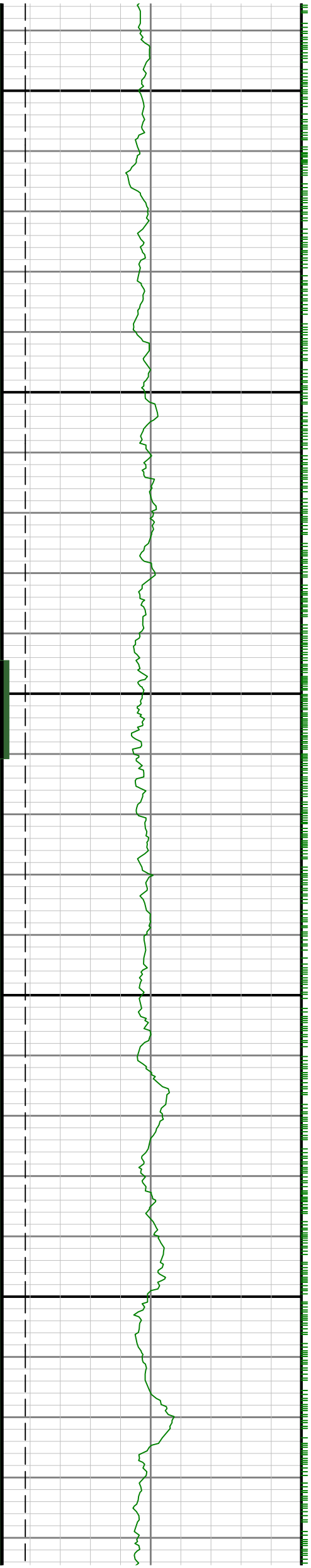


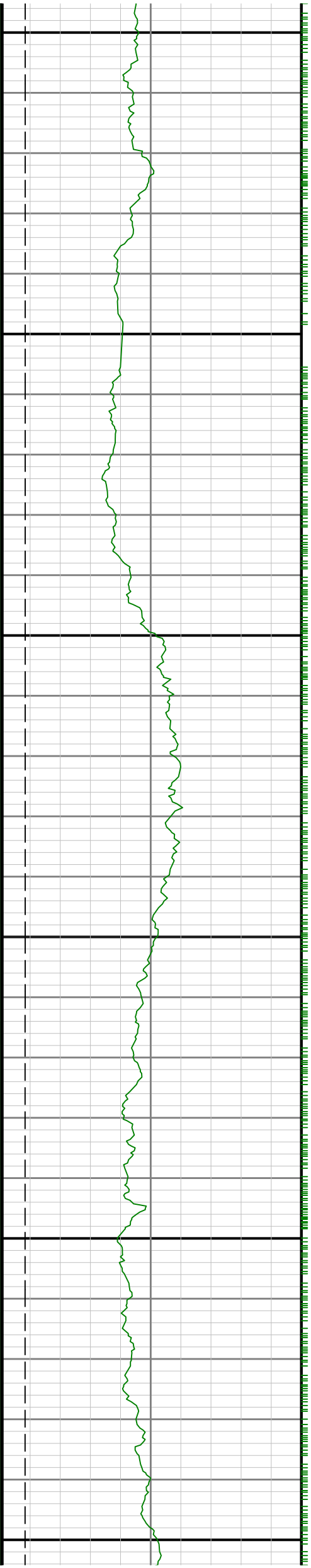




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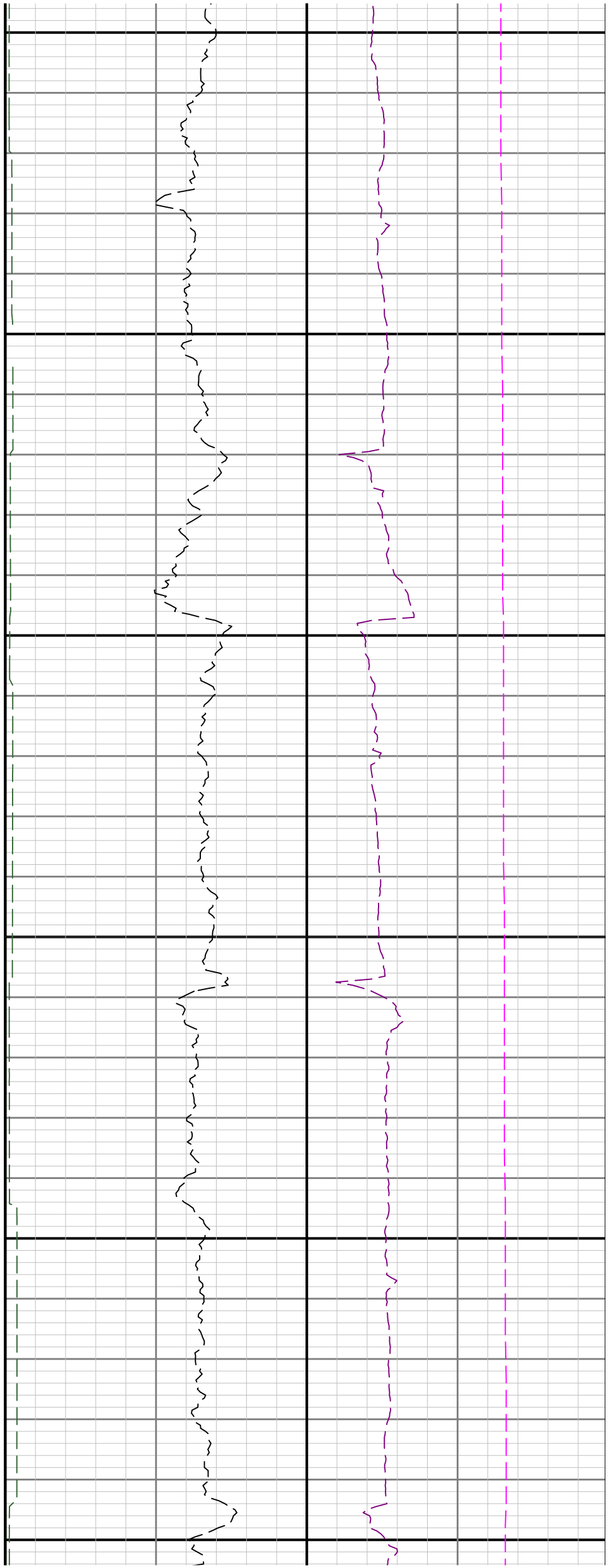


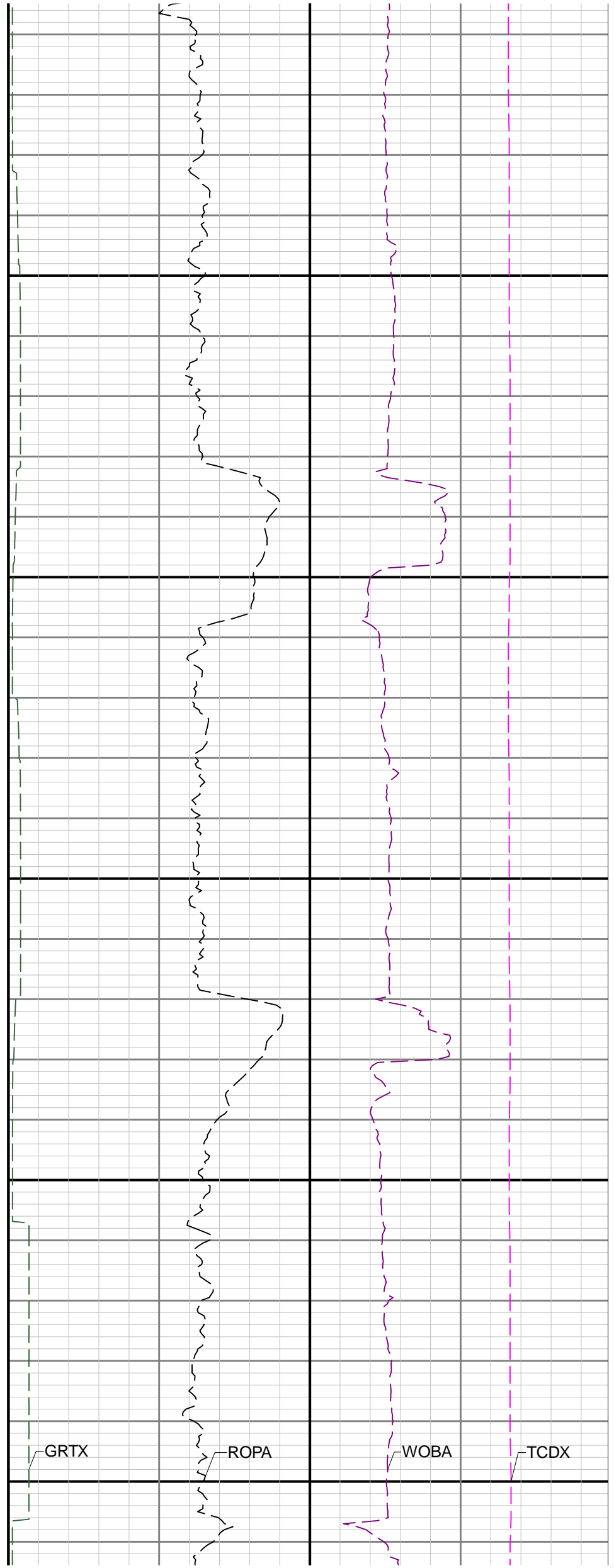
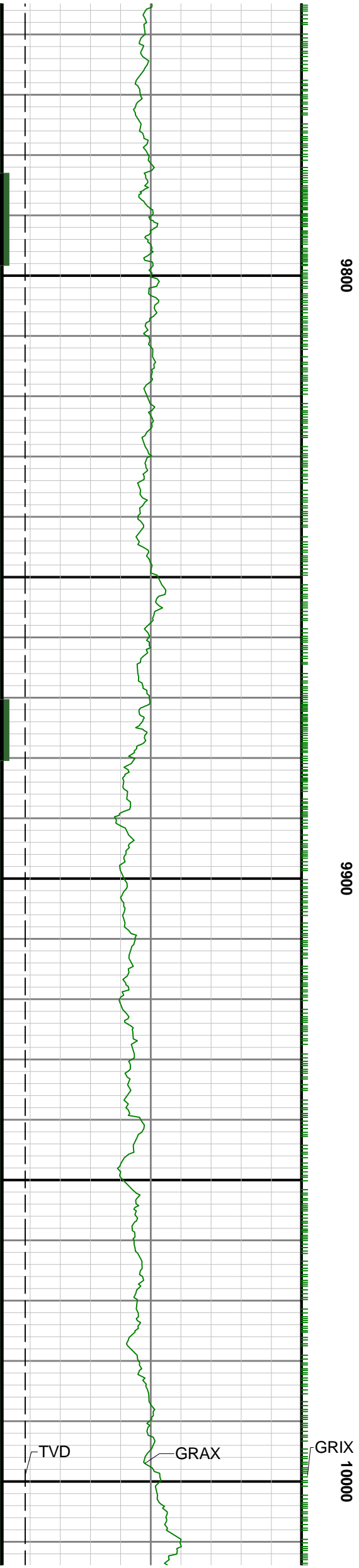


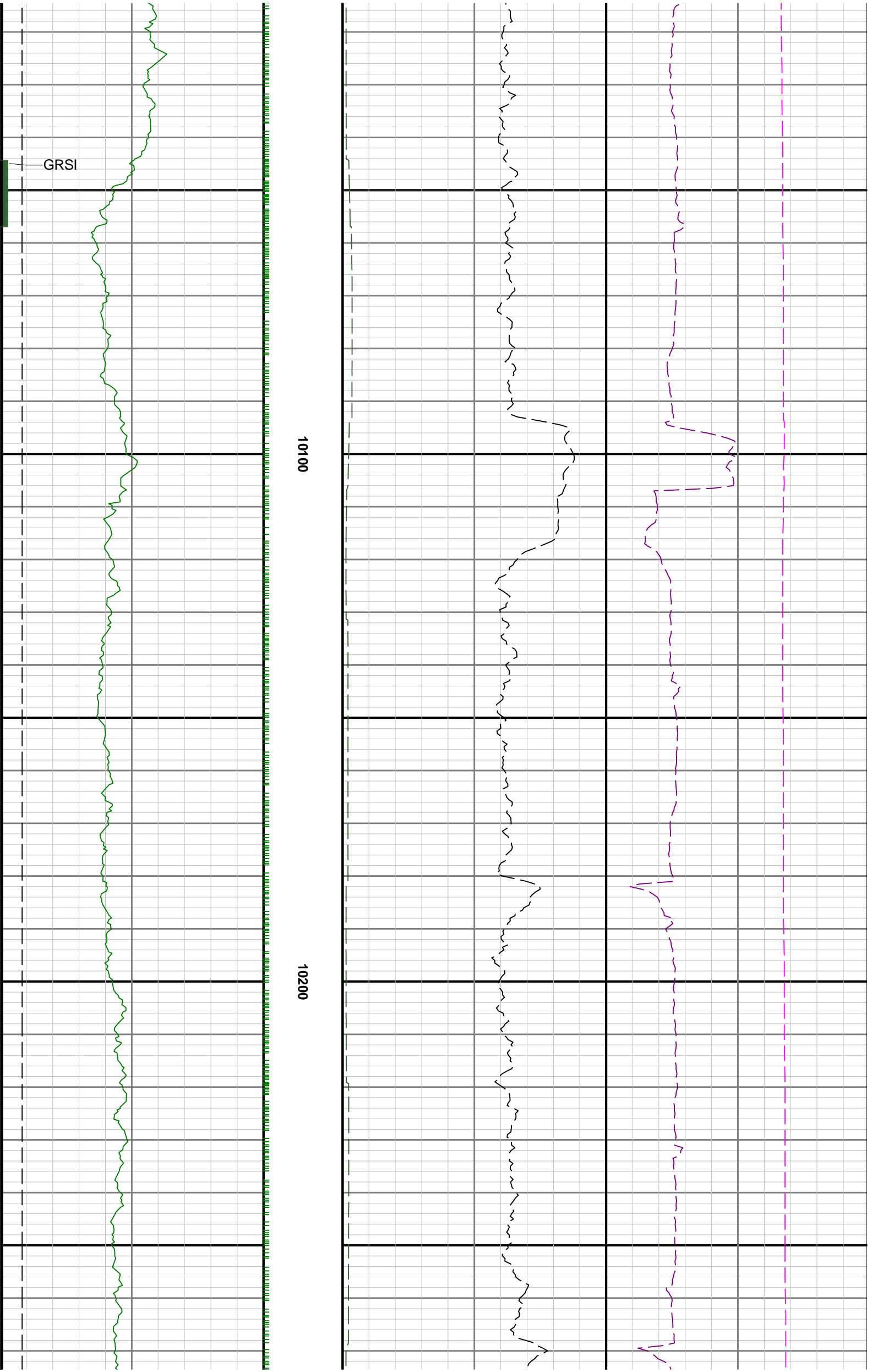
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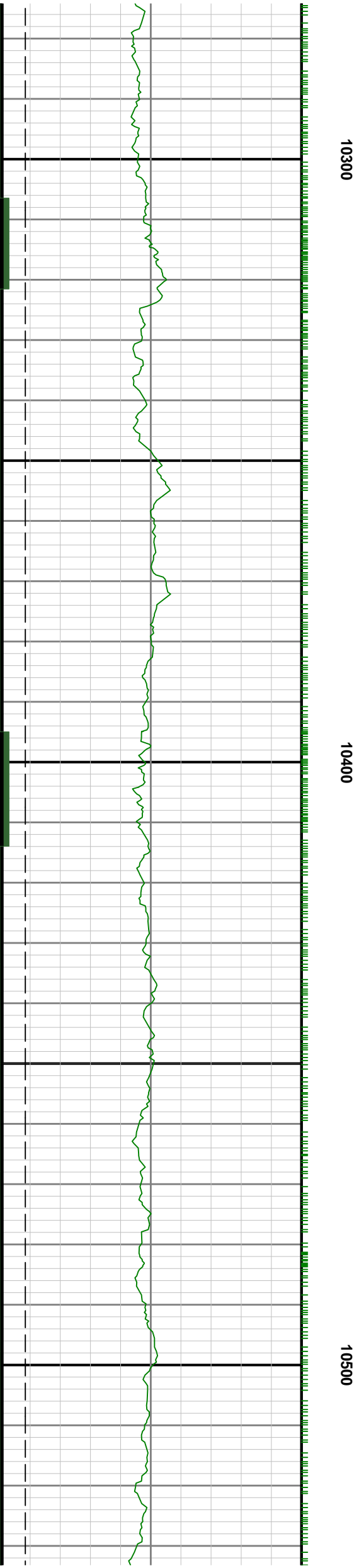
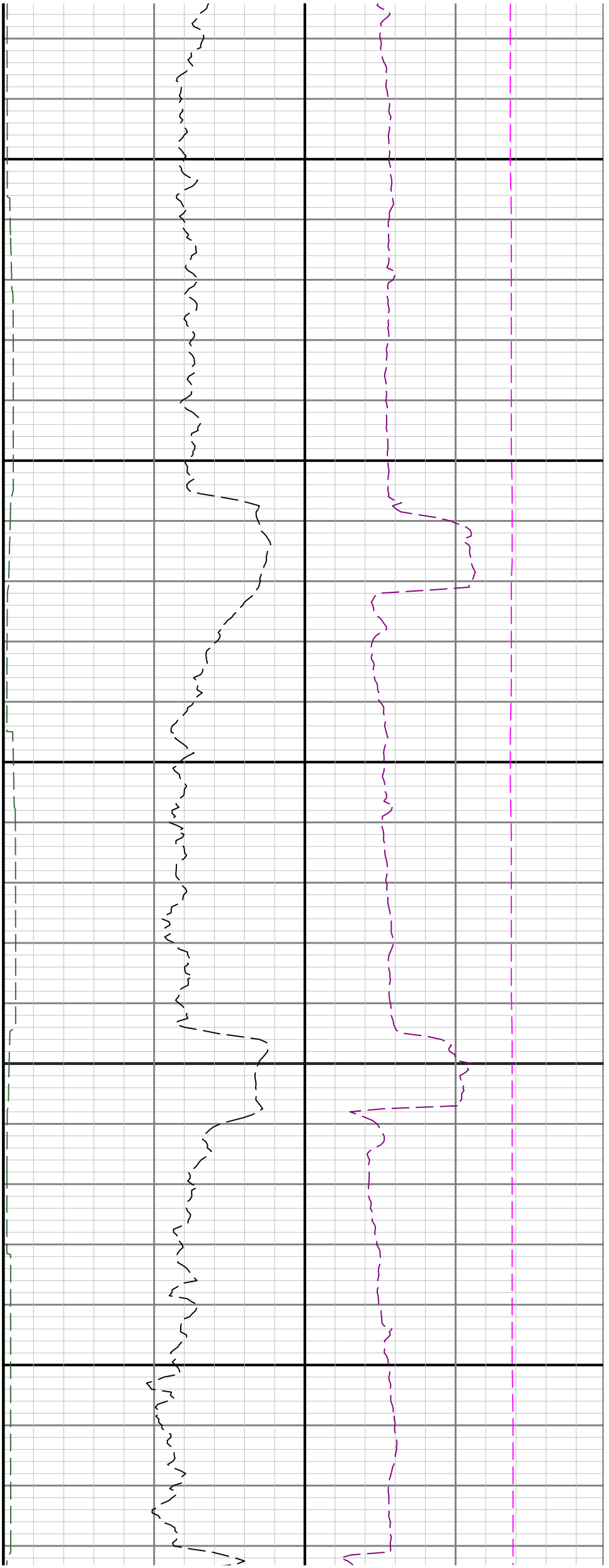
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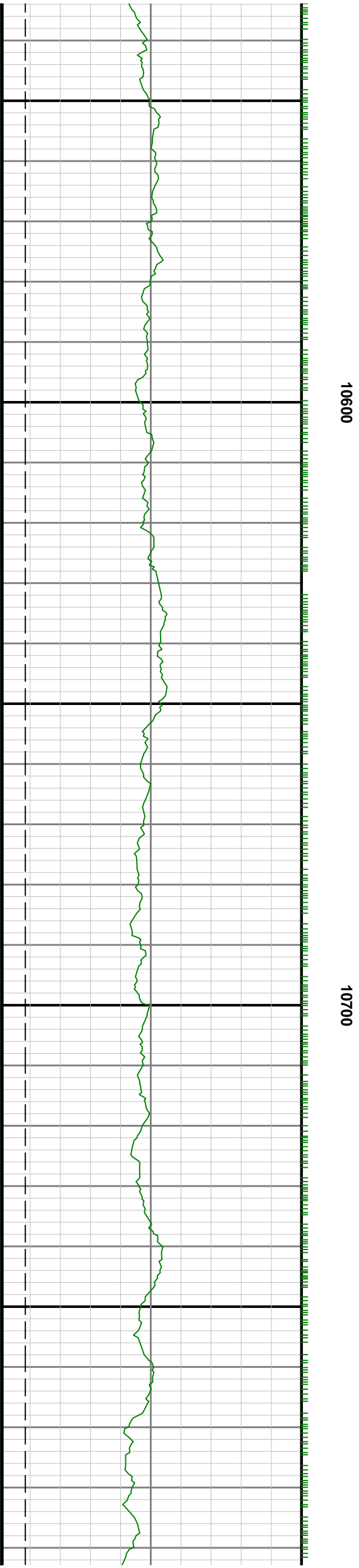
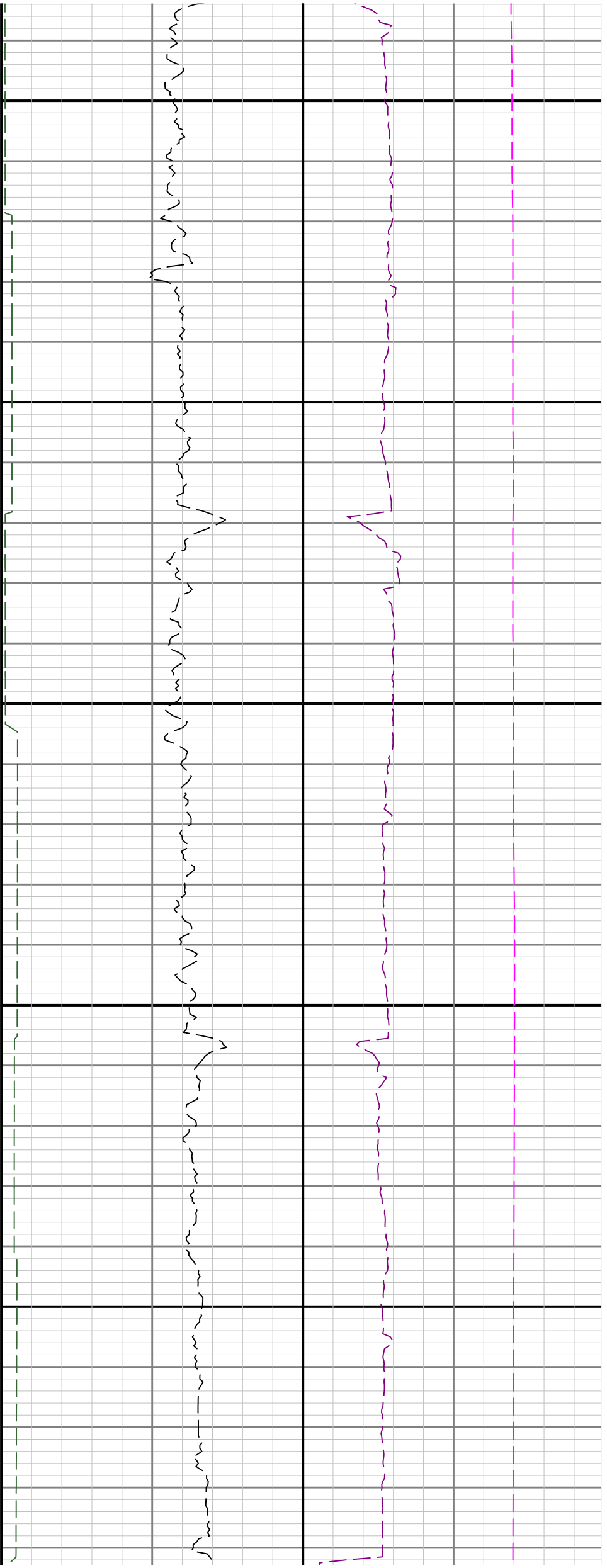
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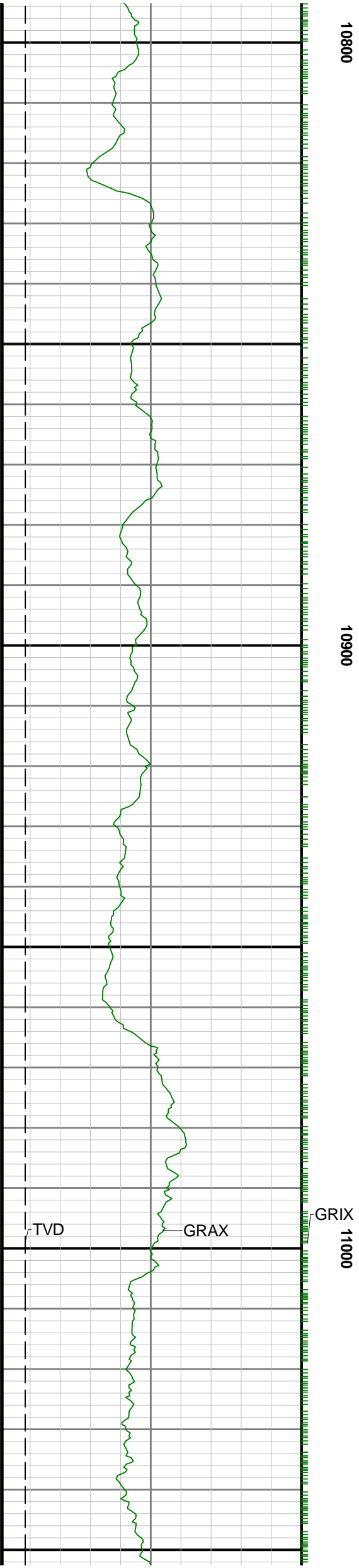
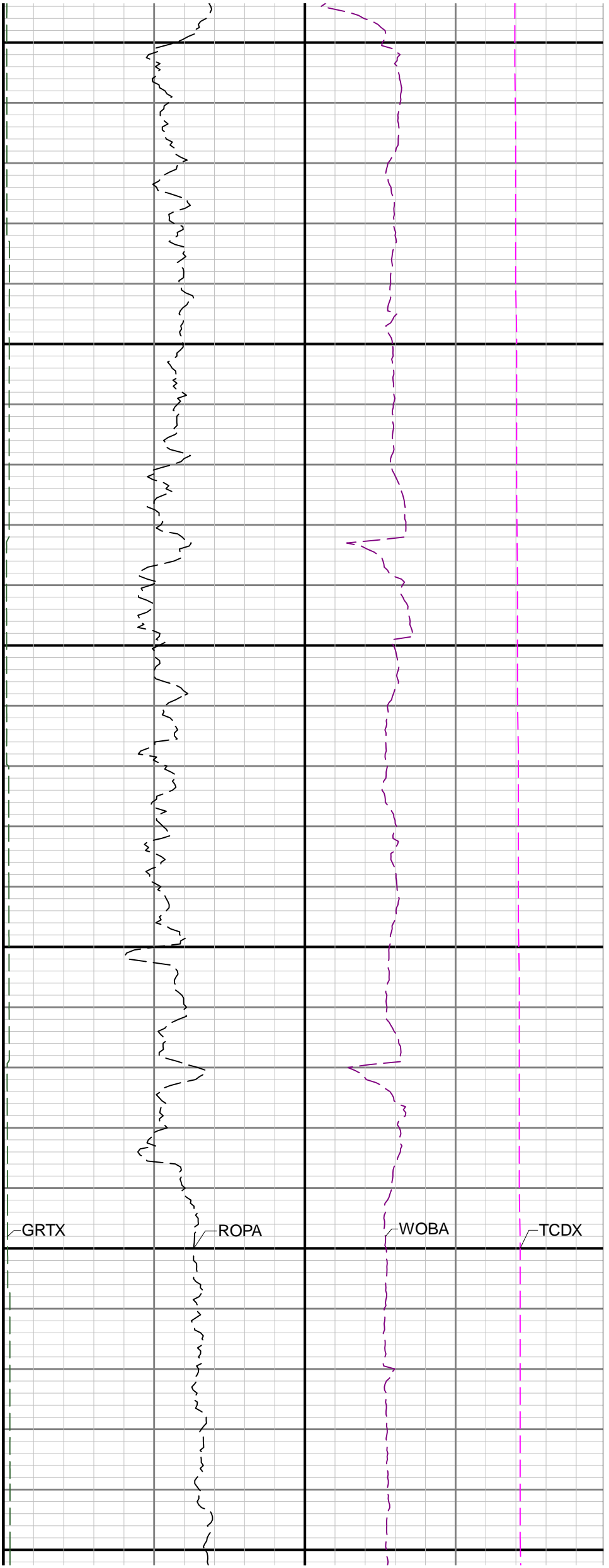


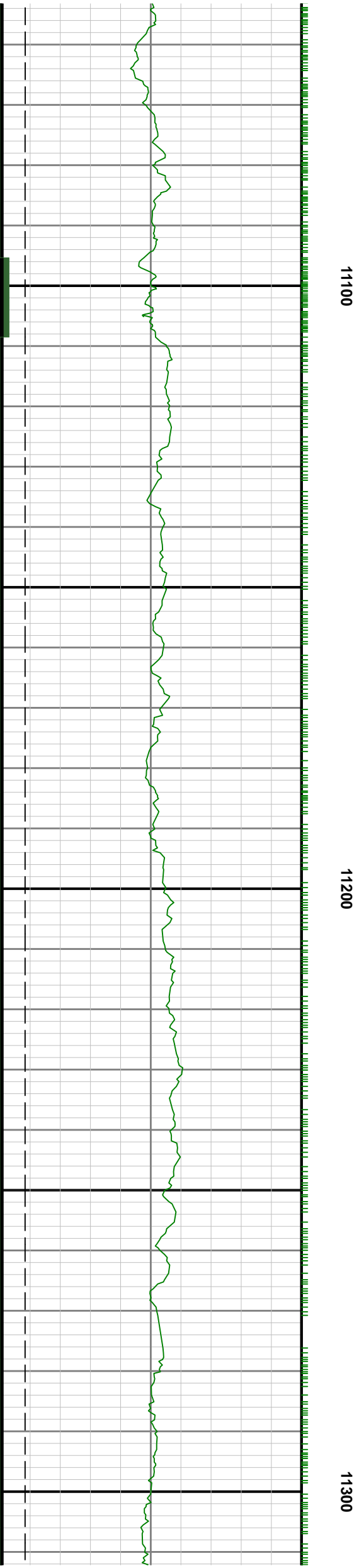
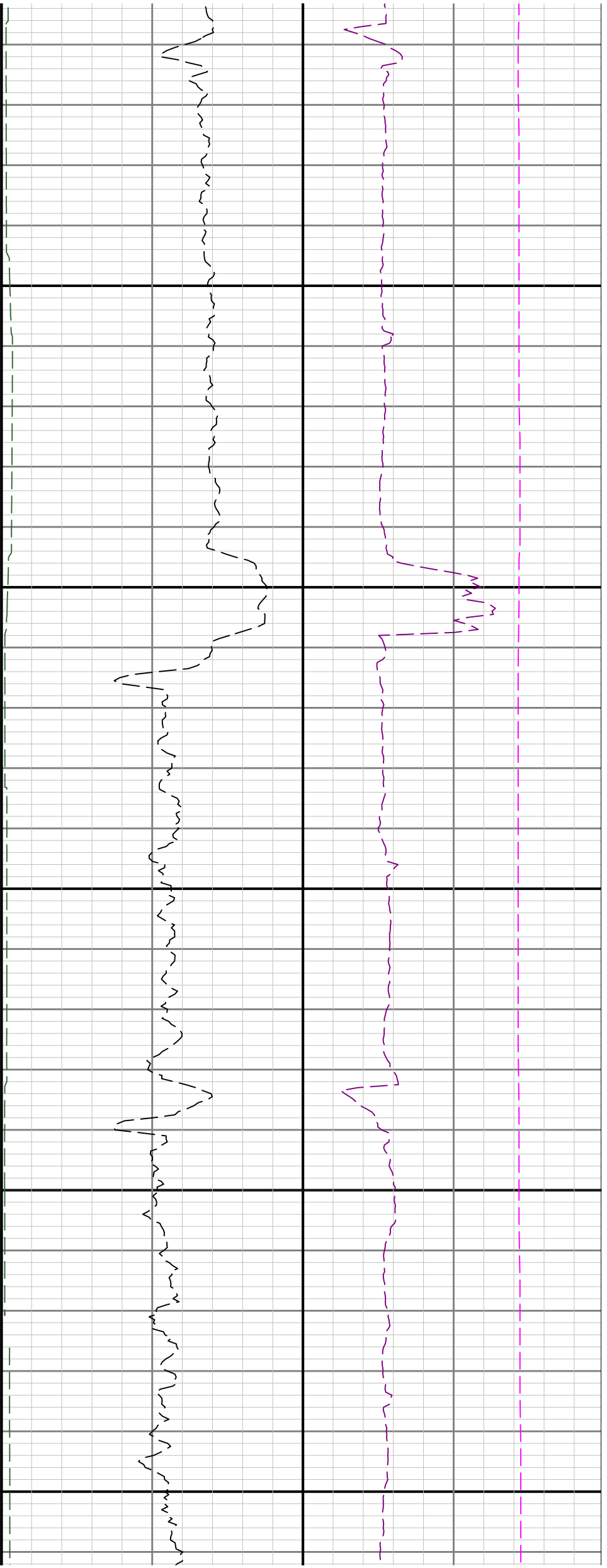


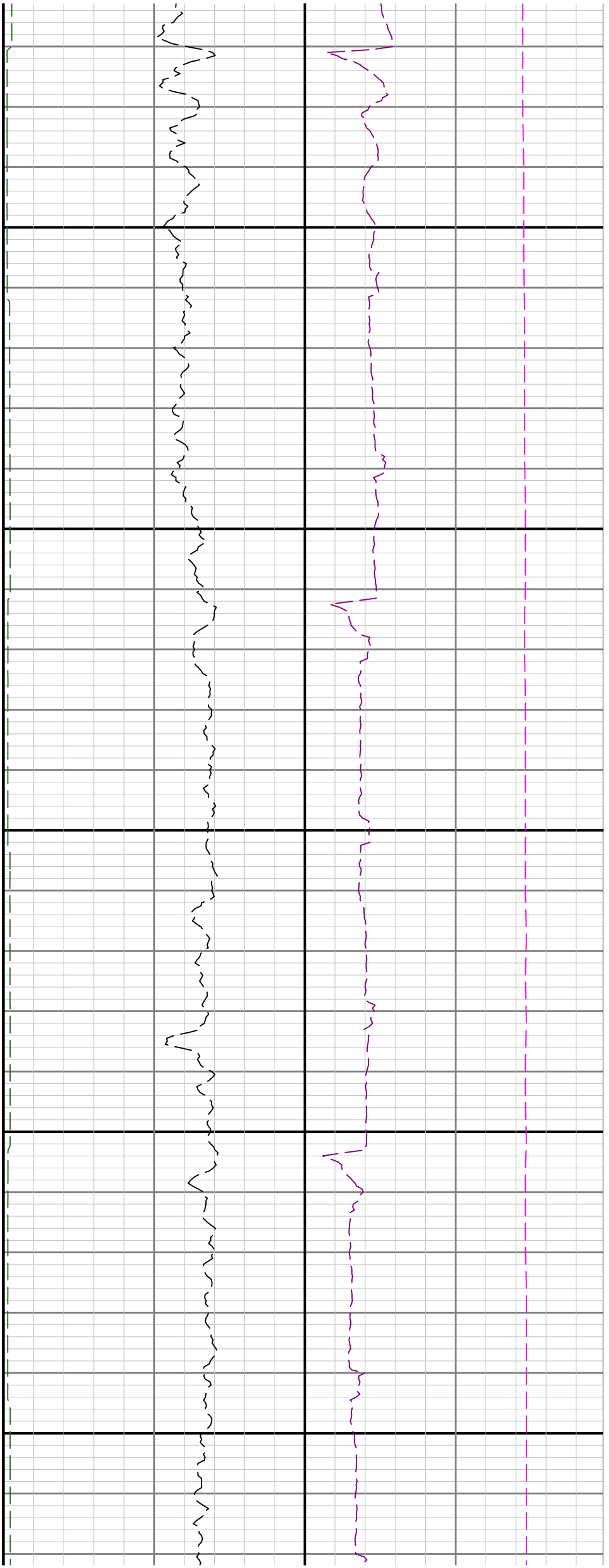






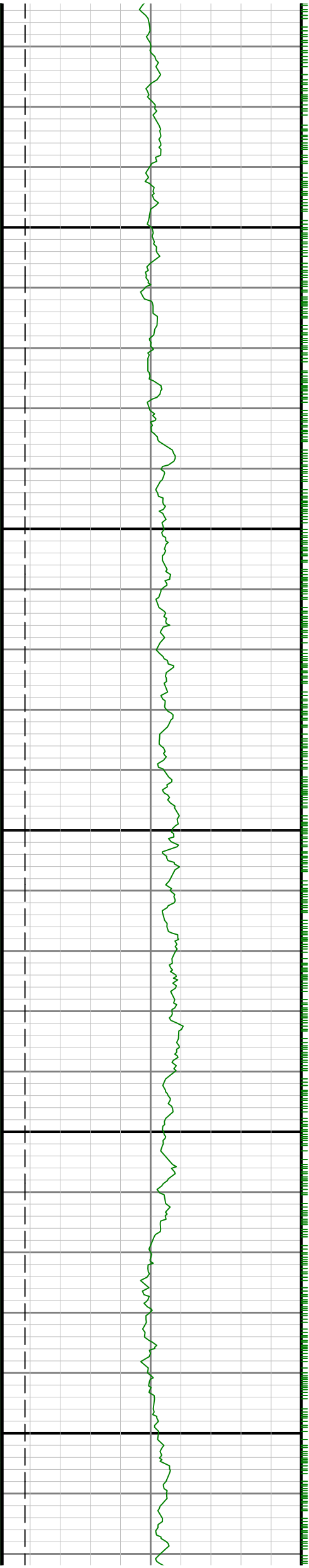


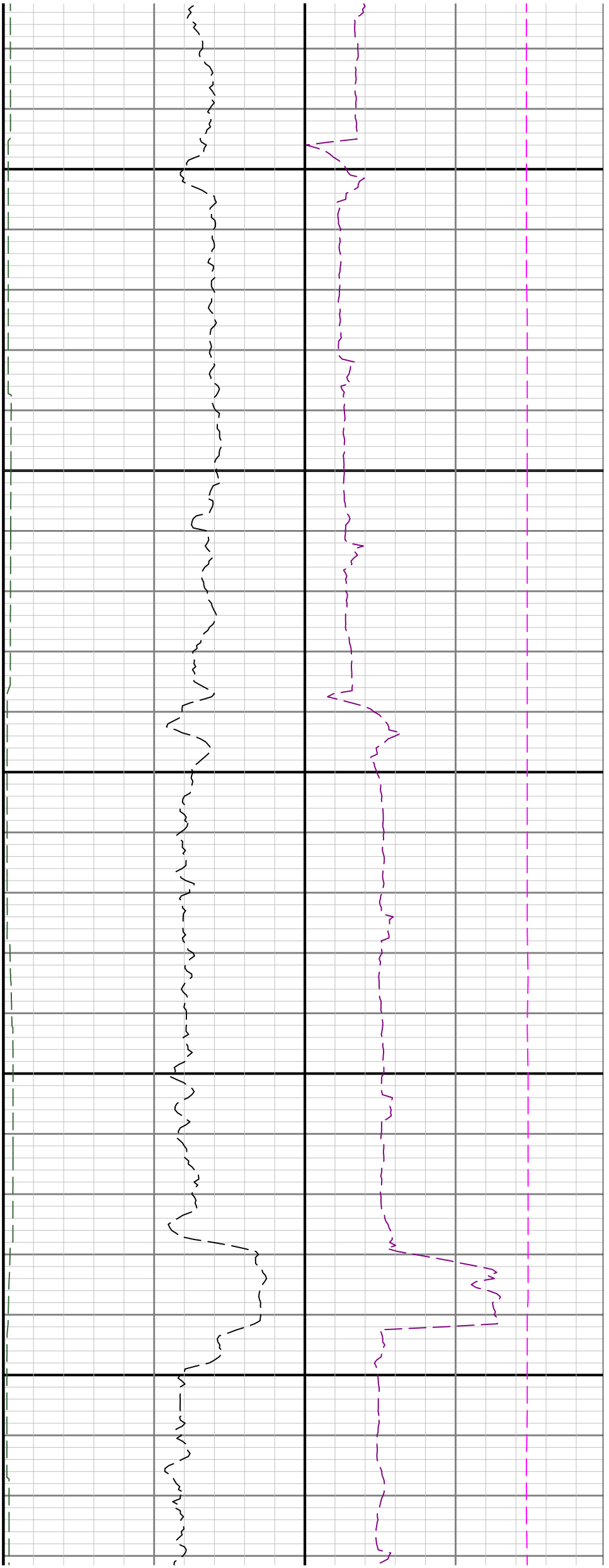




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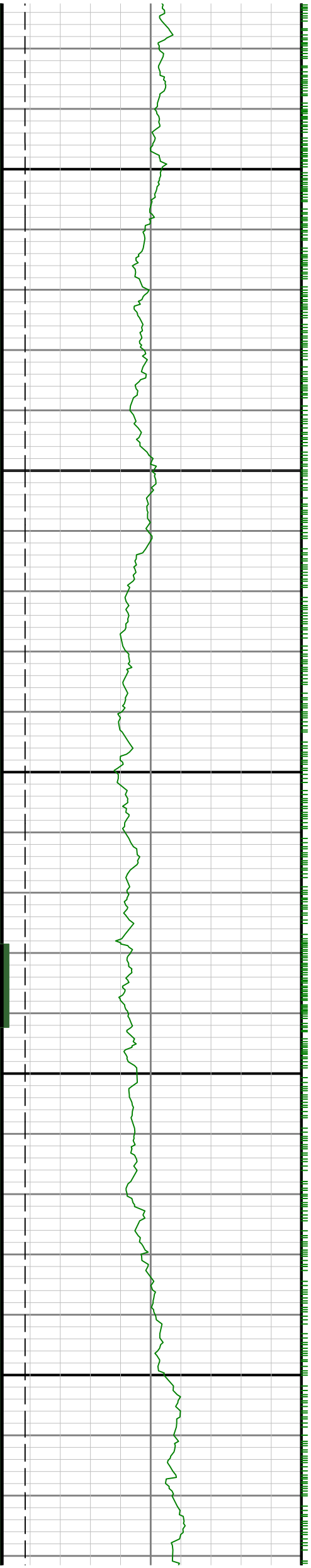


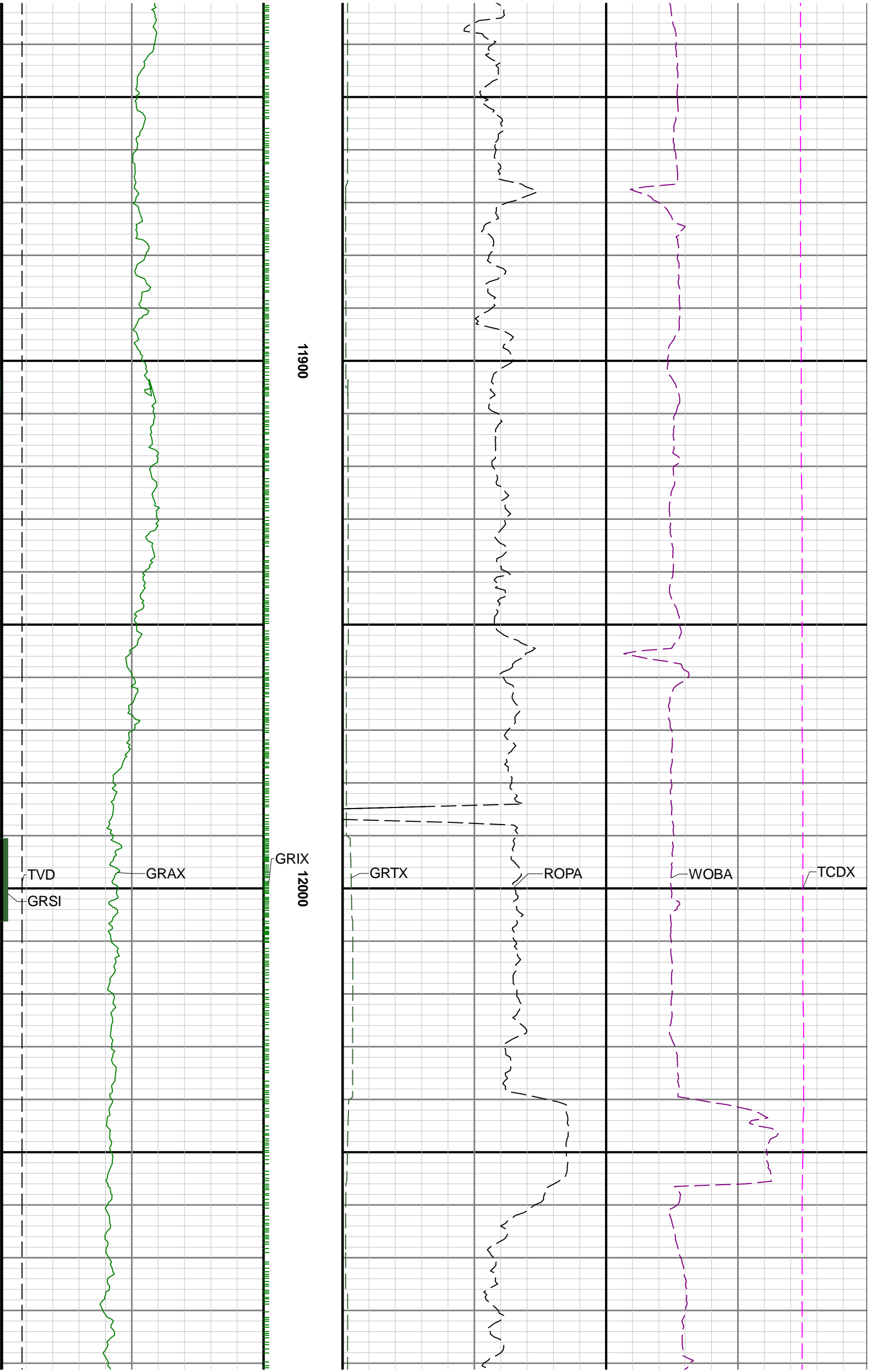


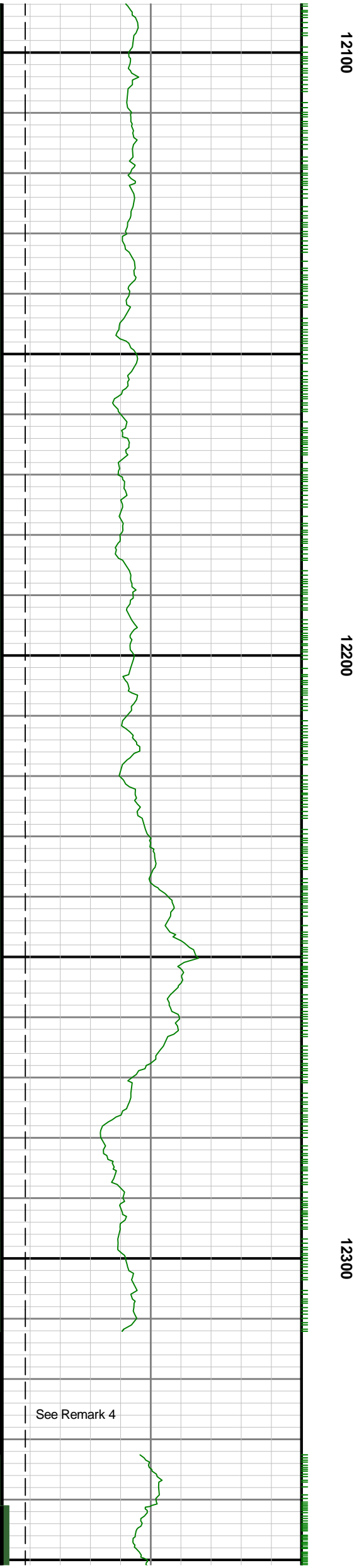
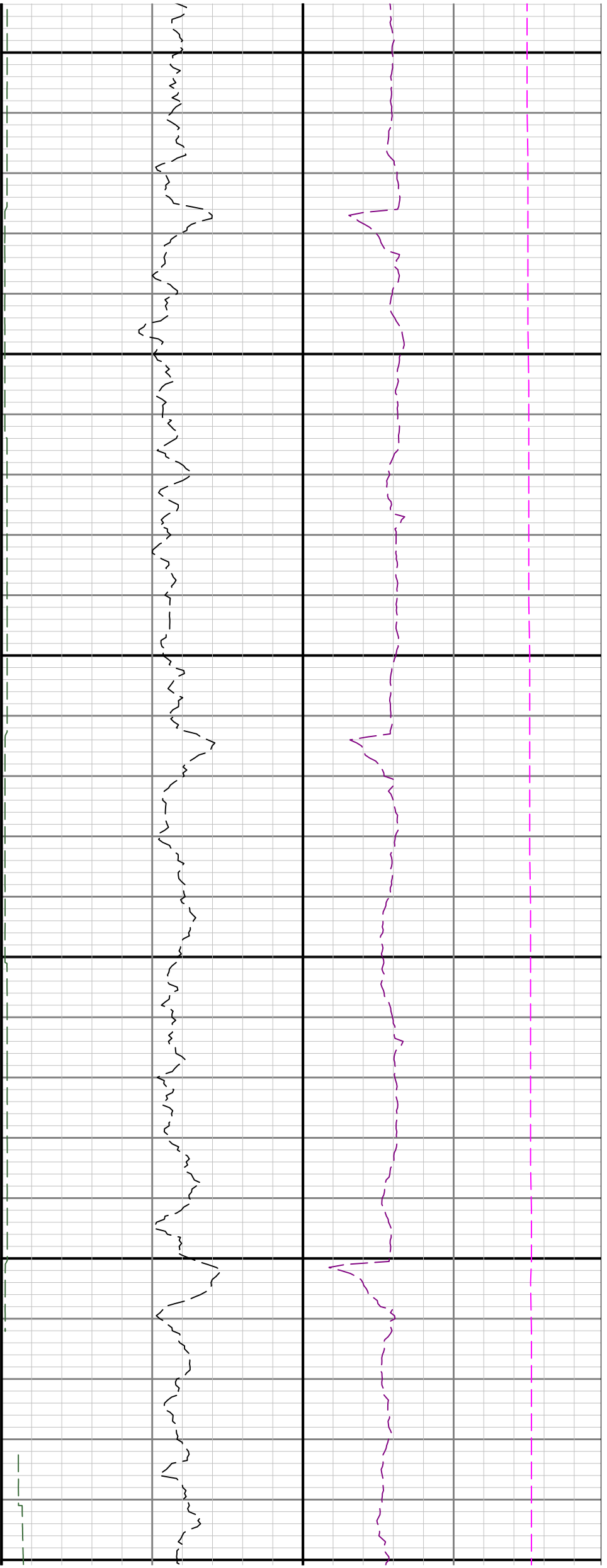
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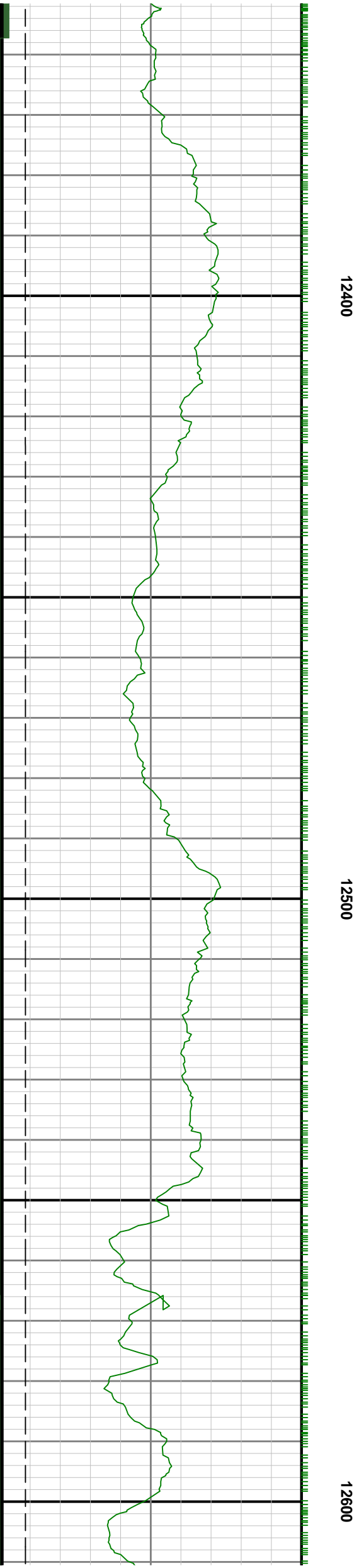
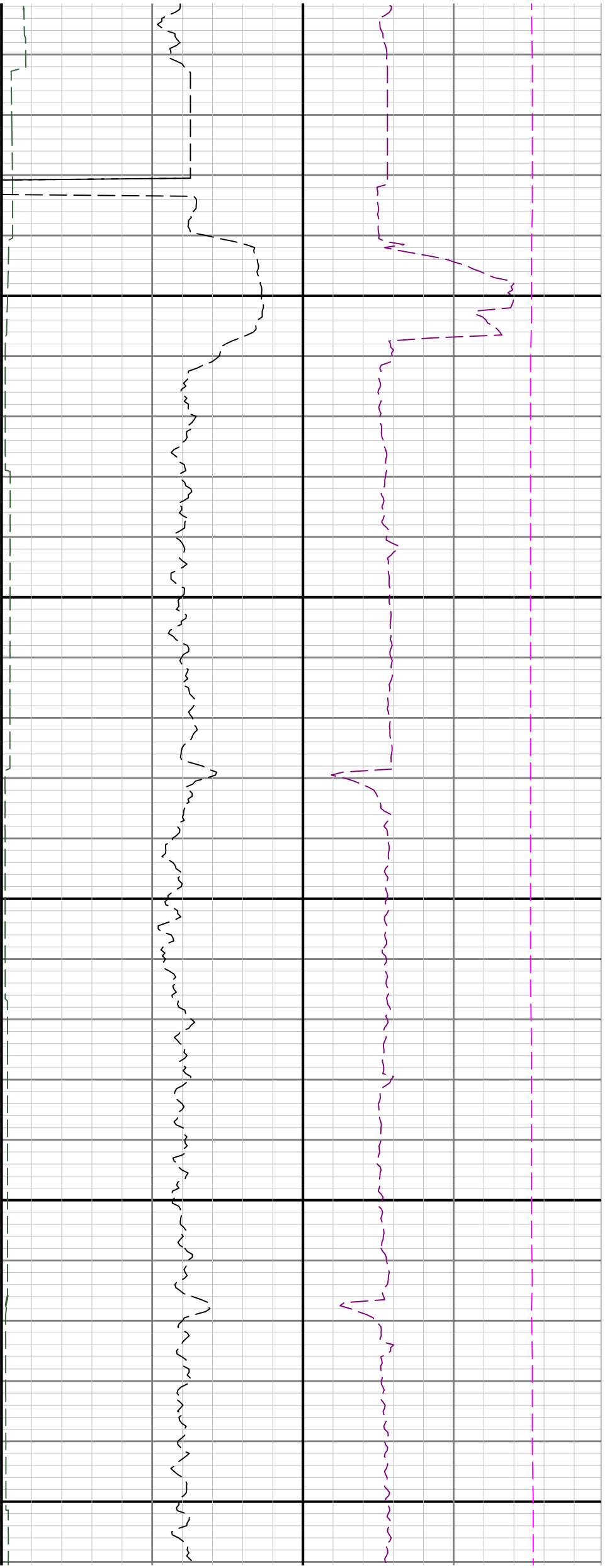
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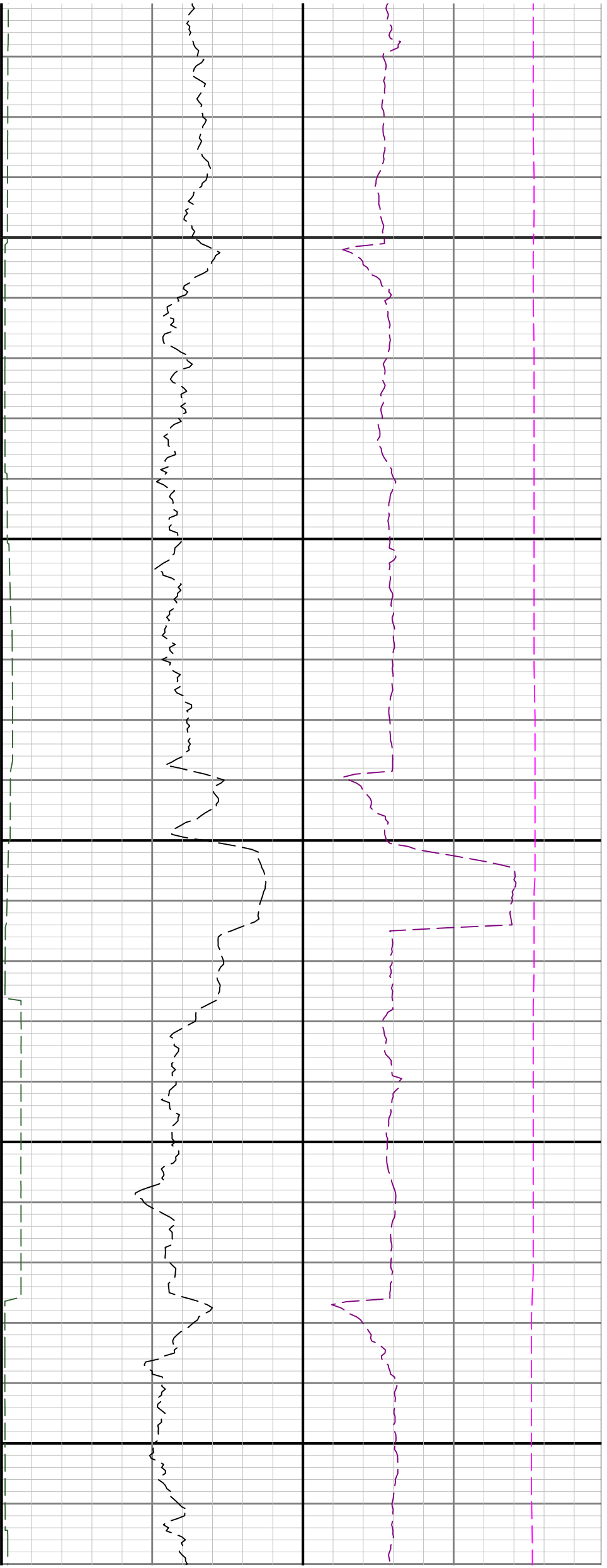
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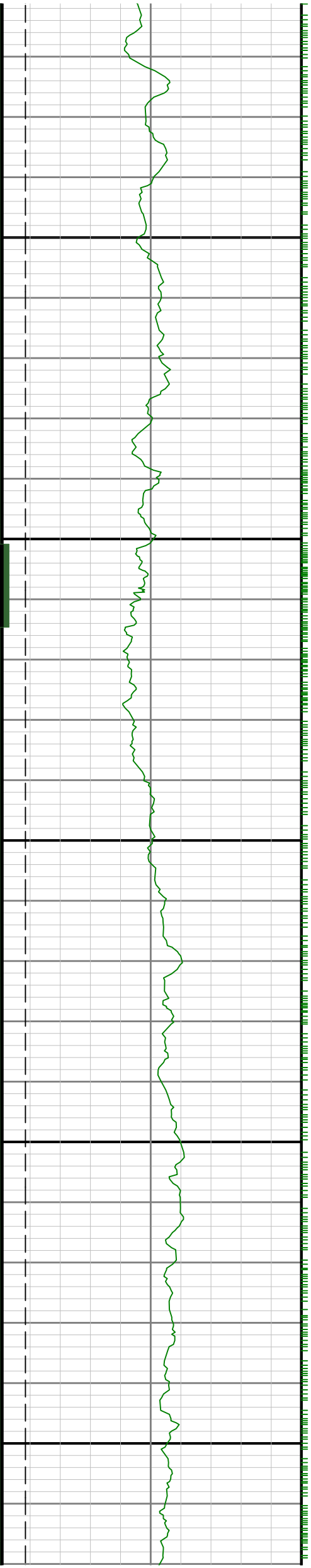


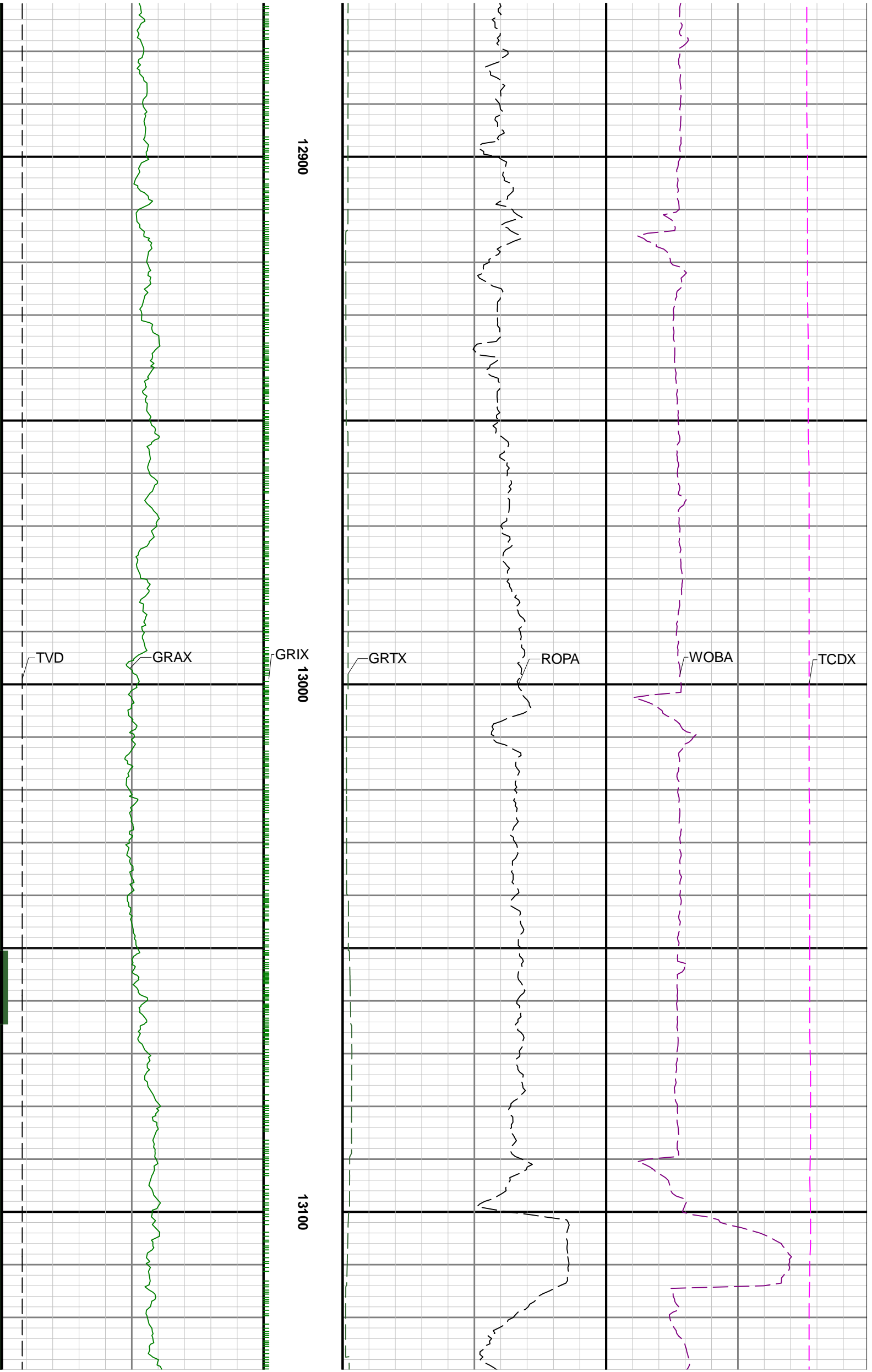


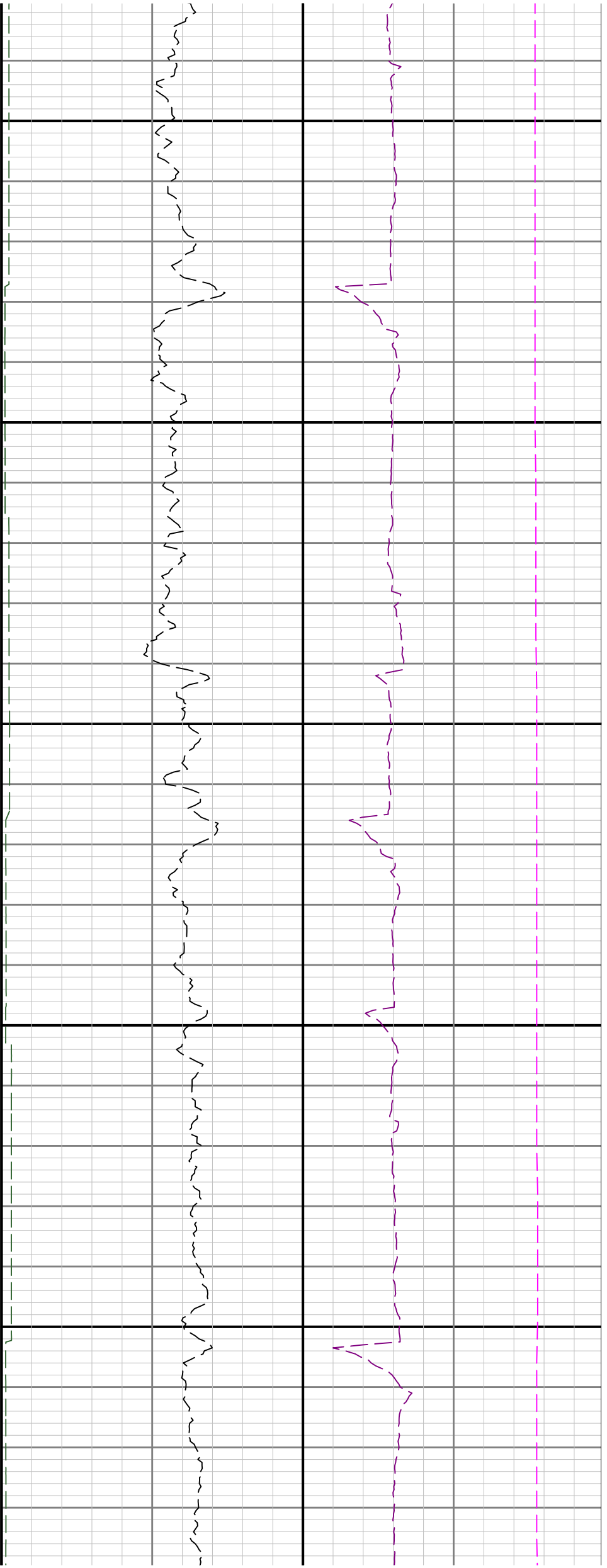


12700

12800

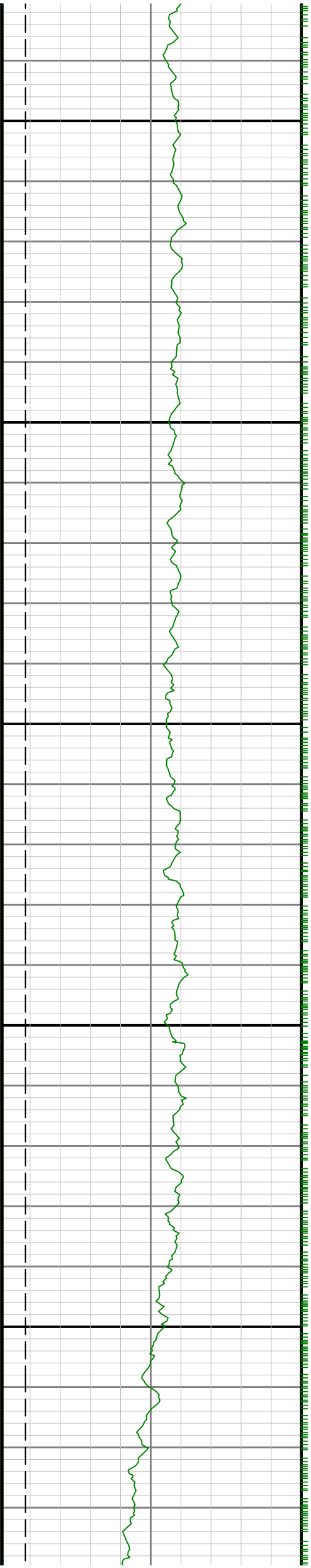


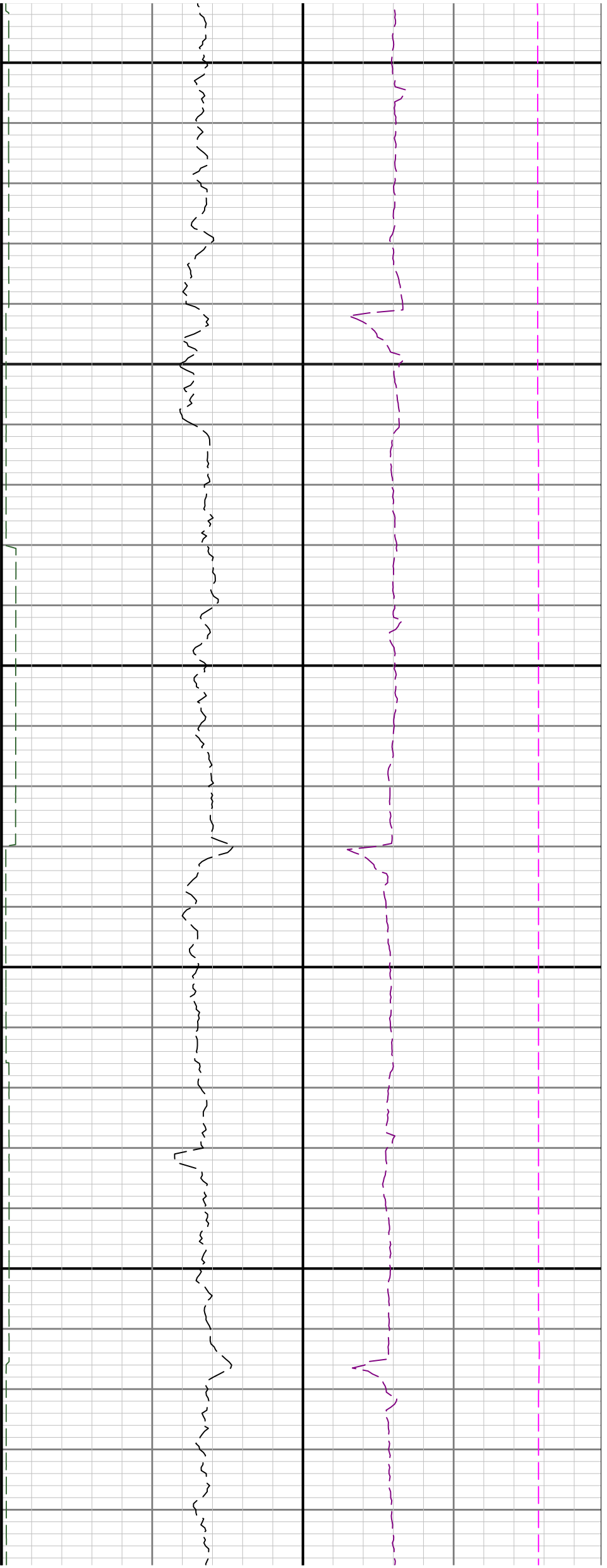




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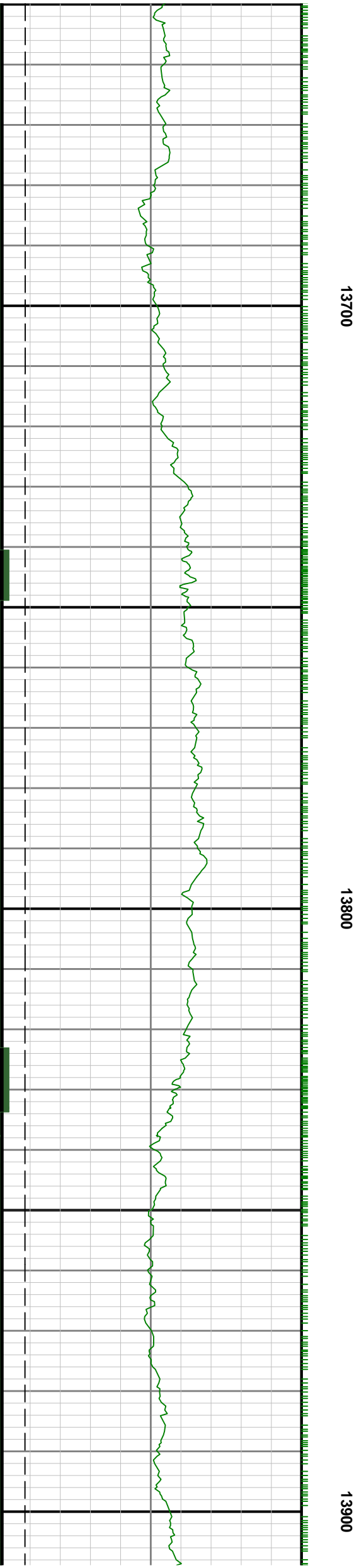
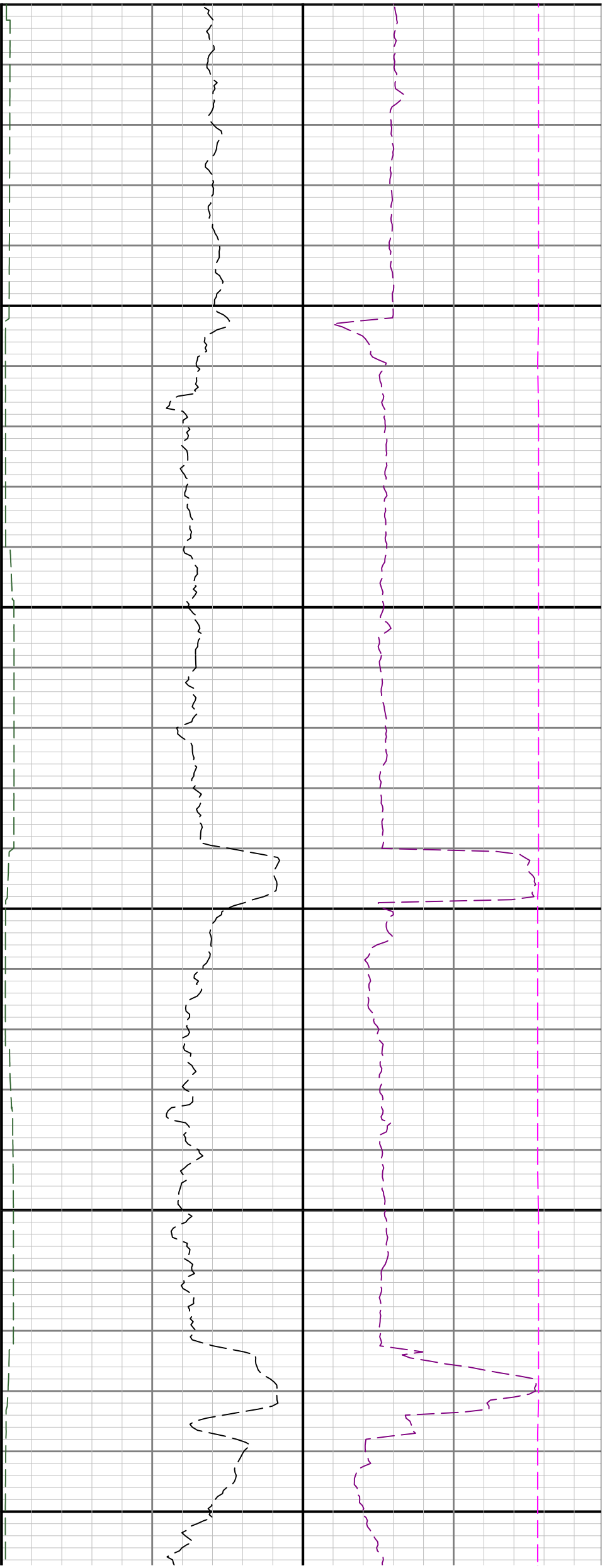


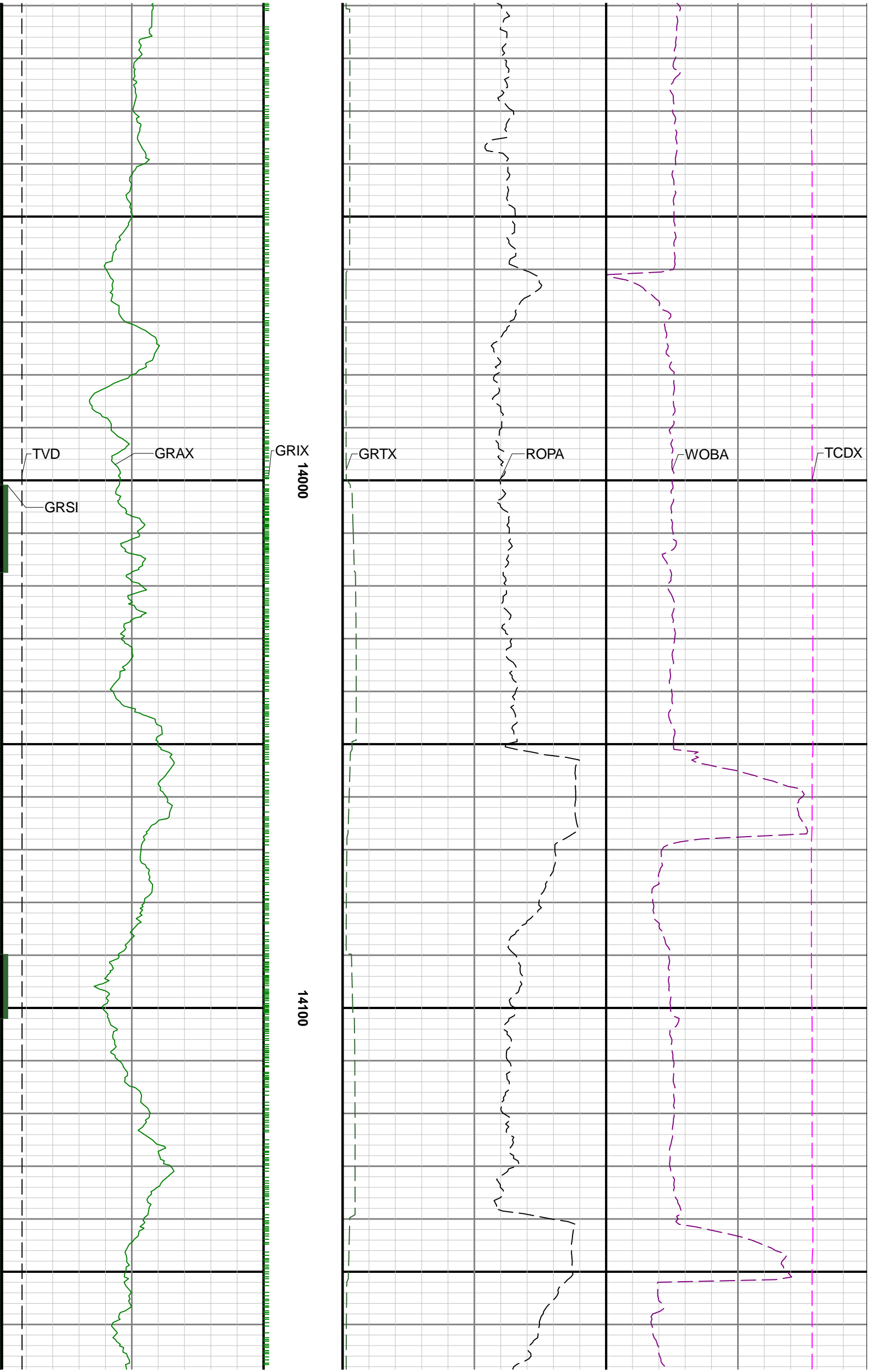


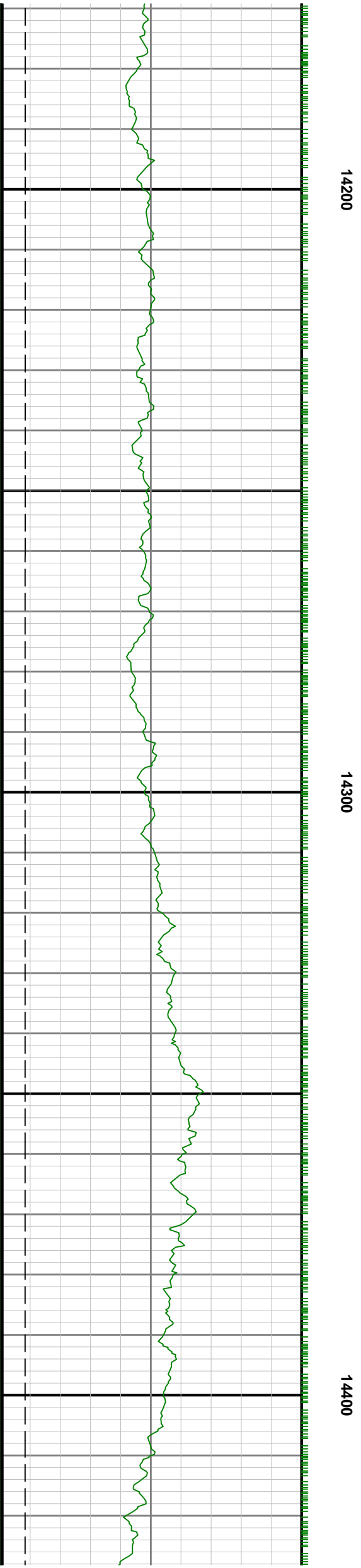
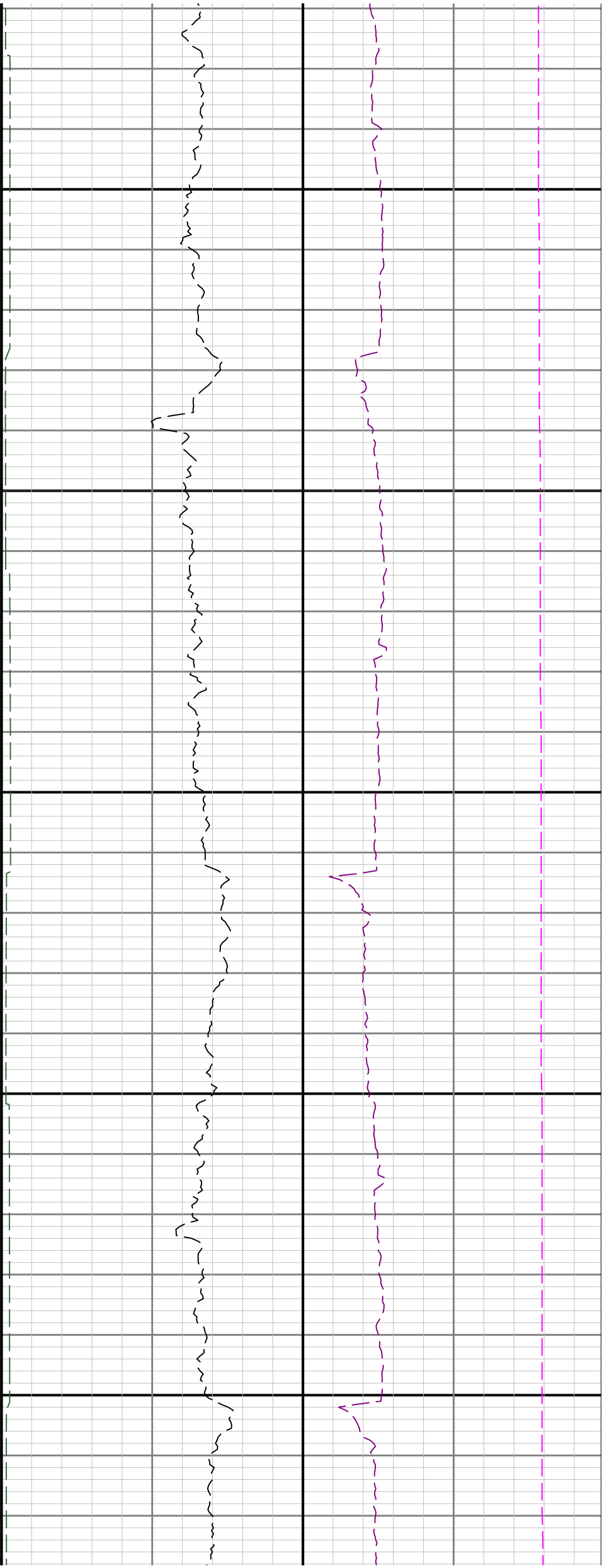
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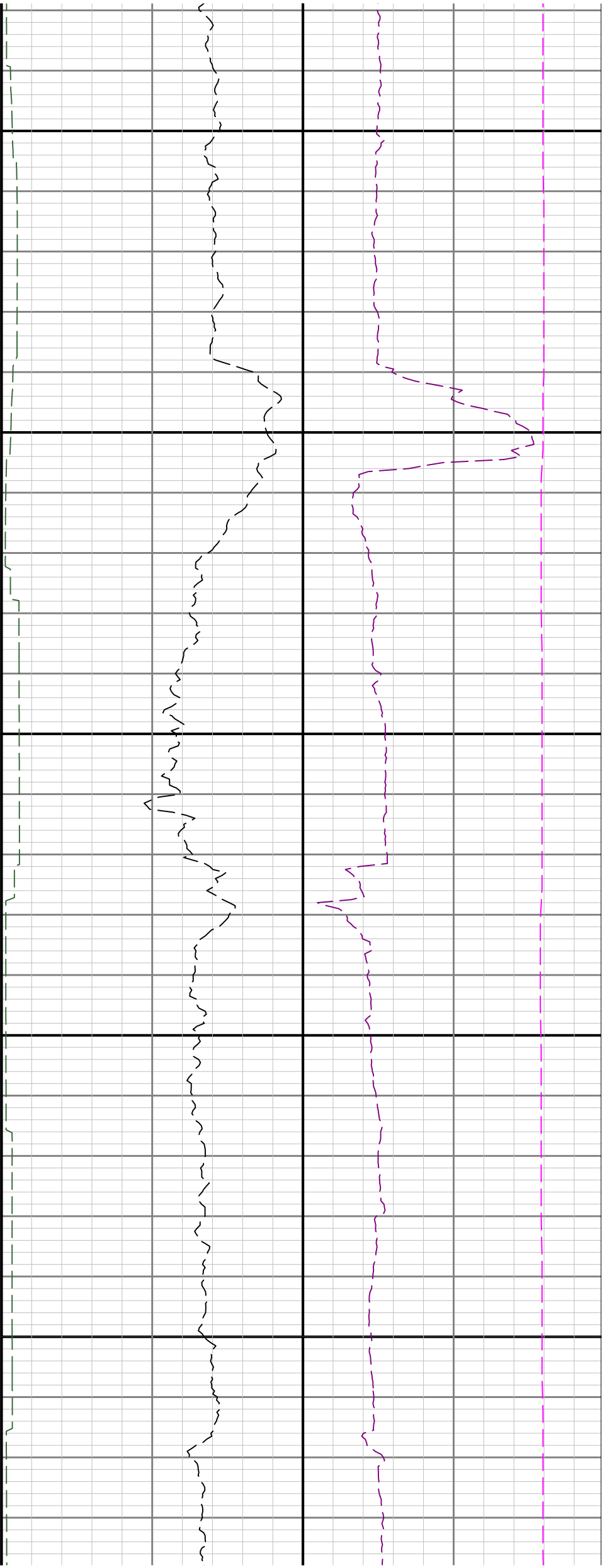
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13600



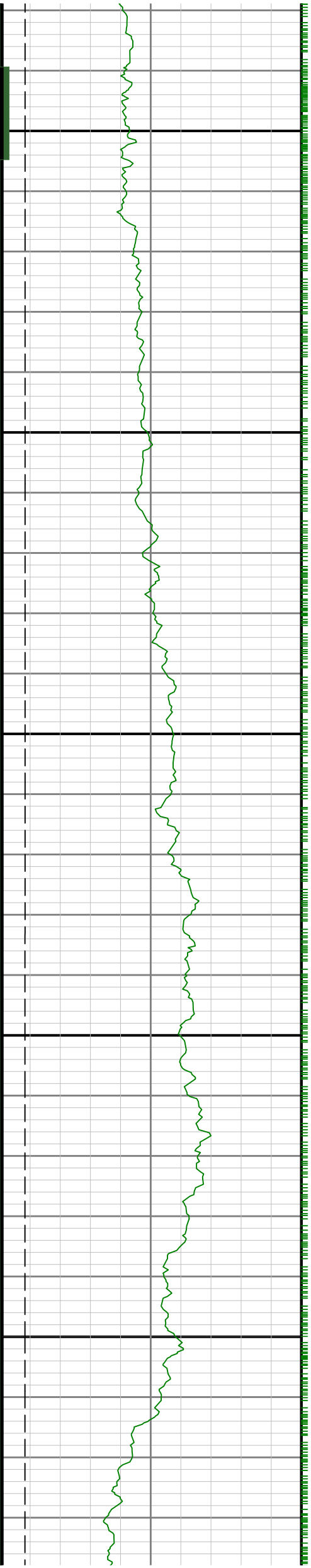


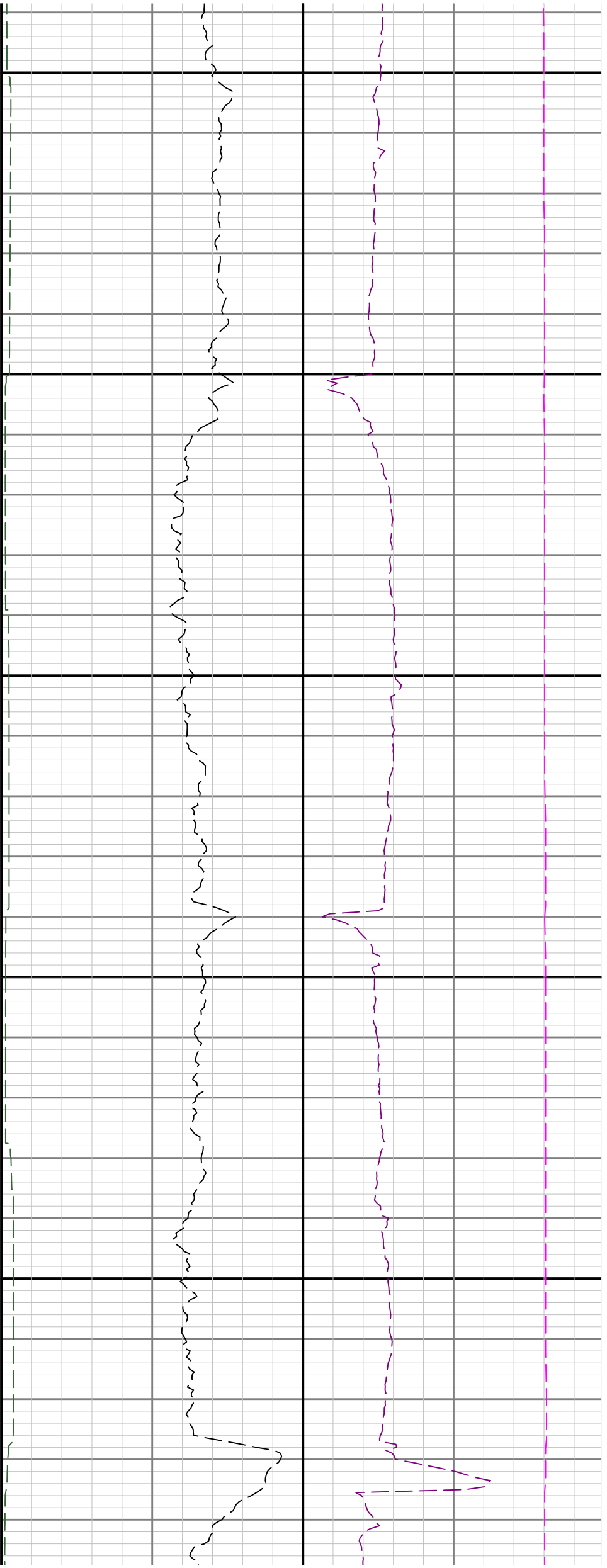




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14600

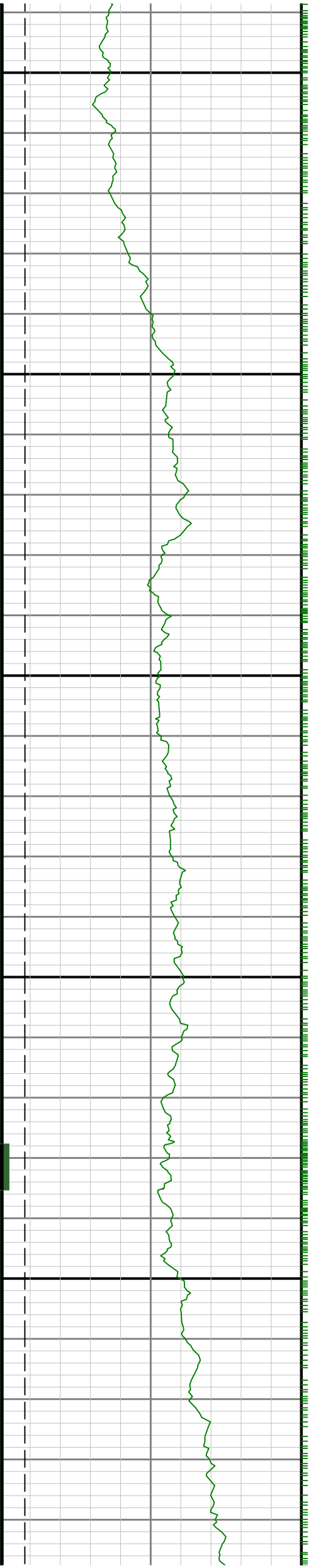


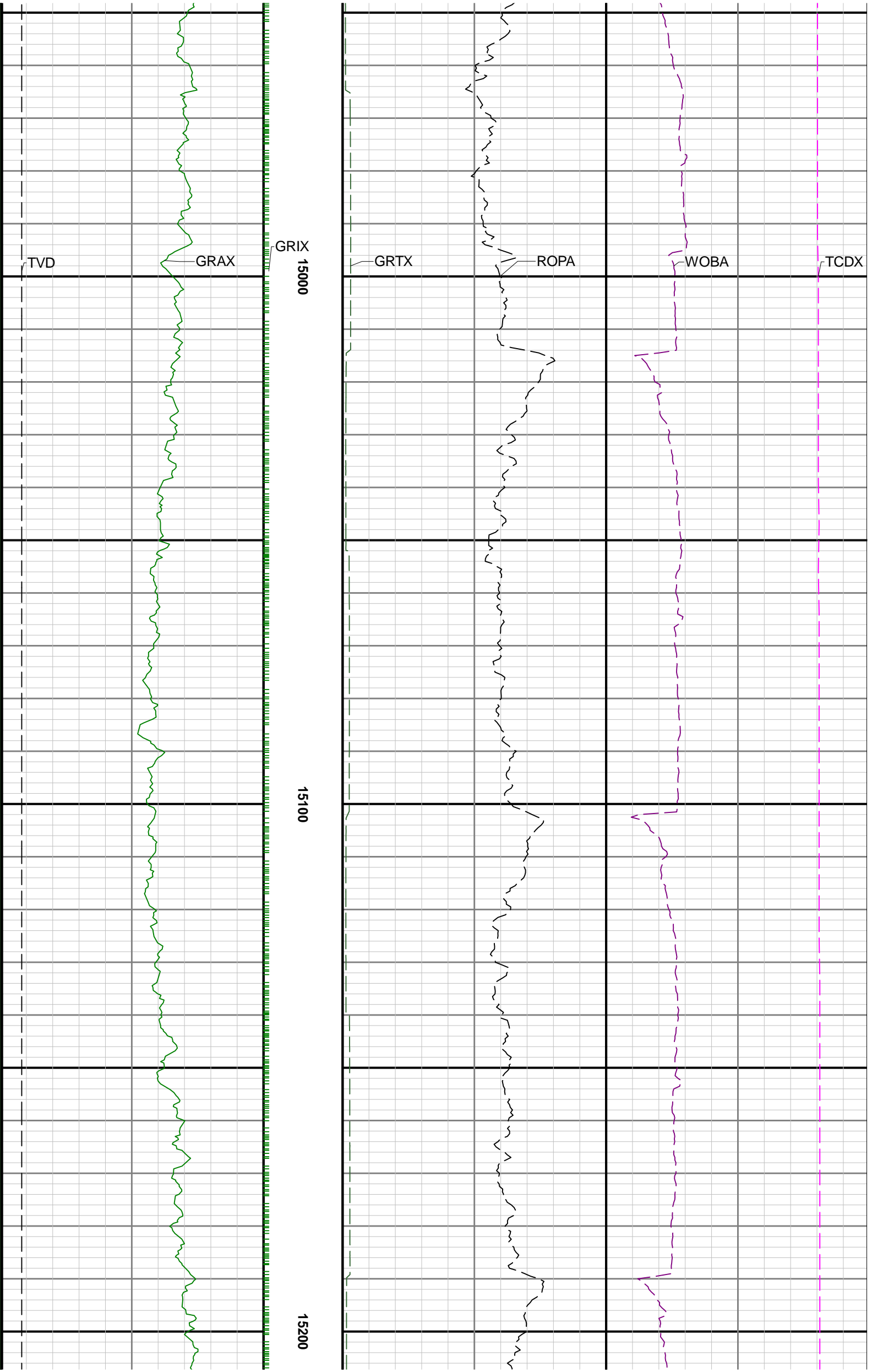


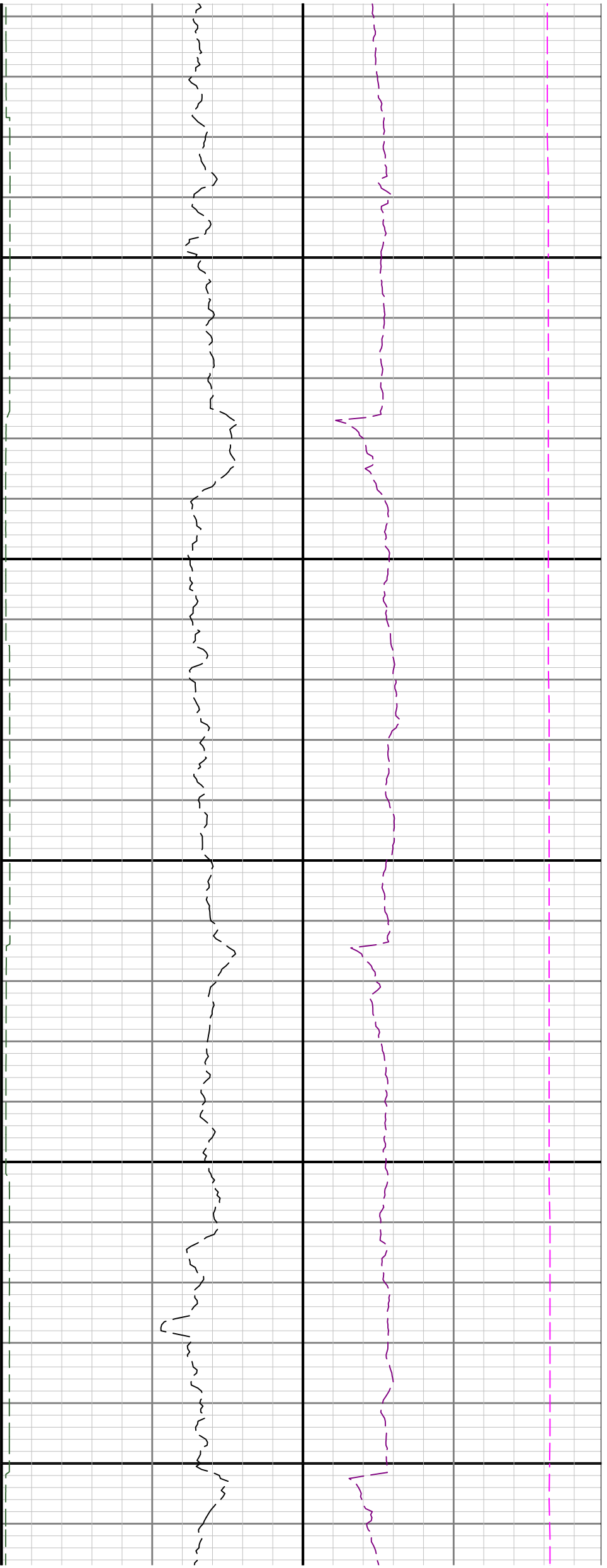
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14800

14900

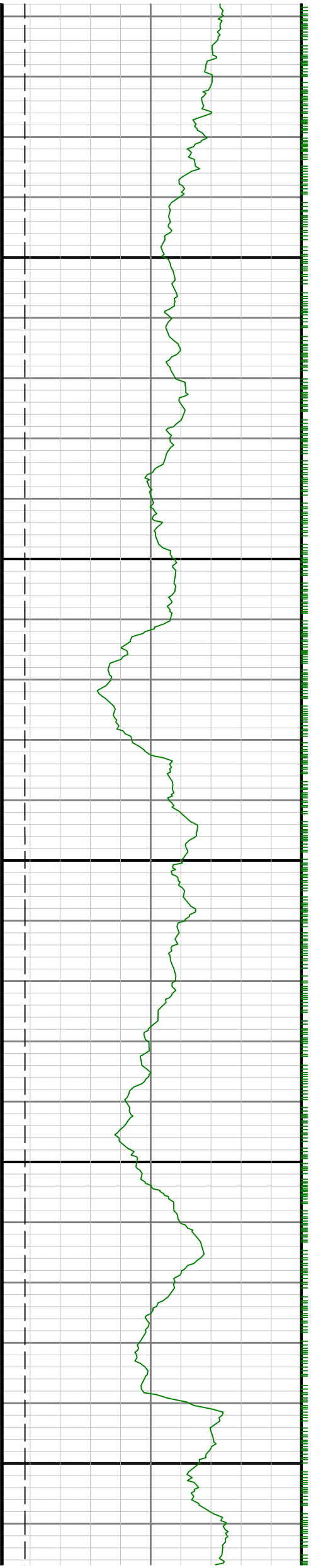


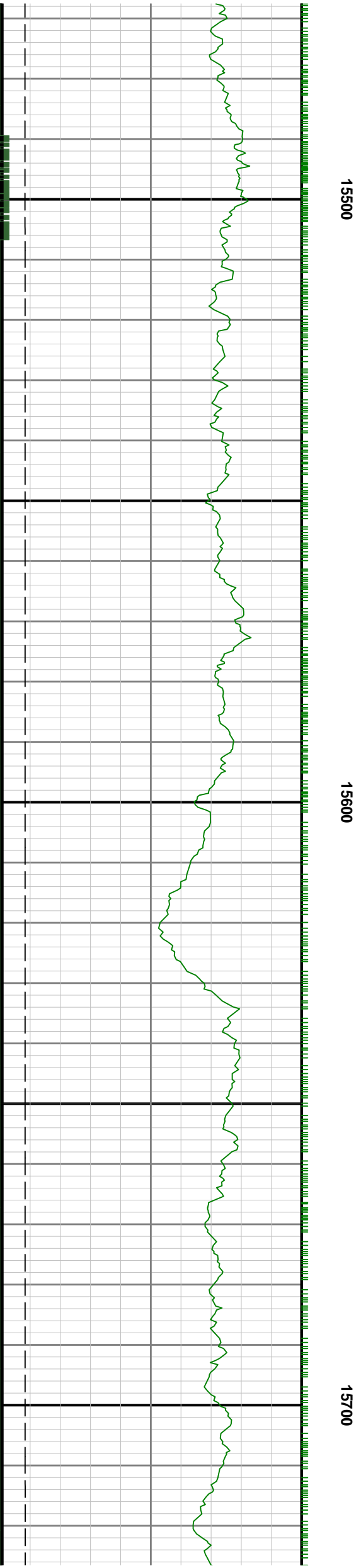
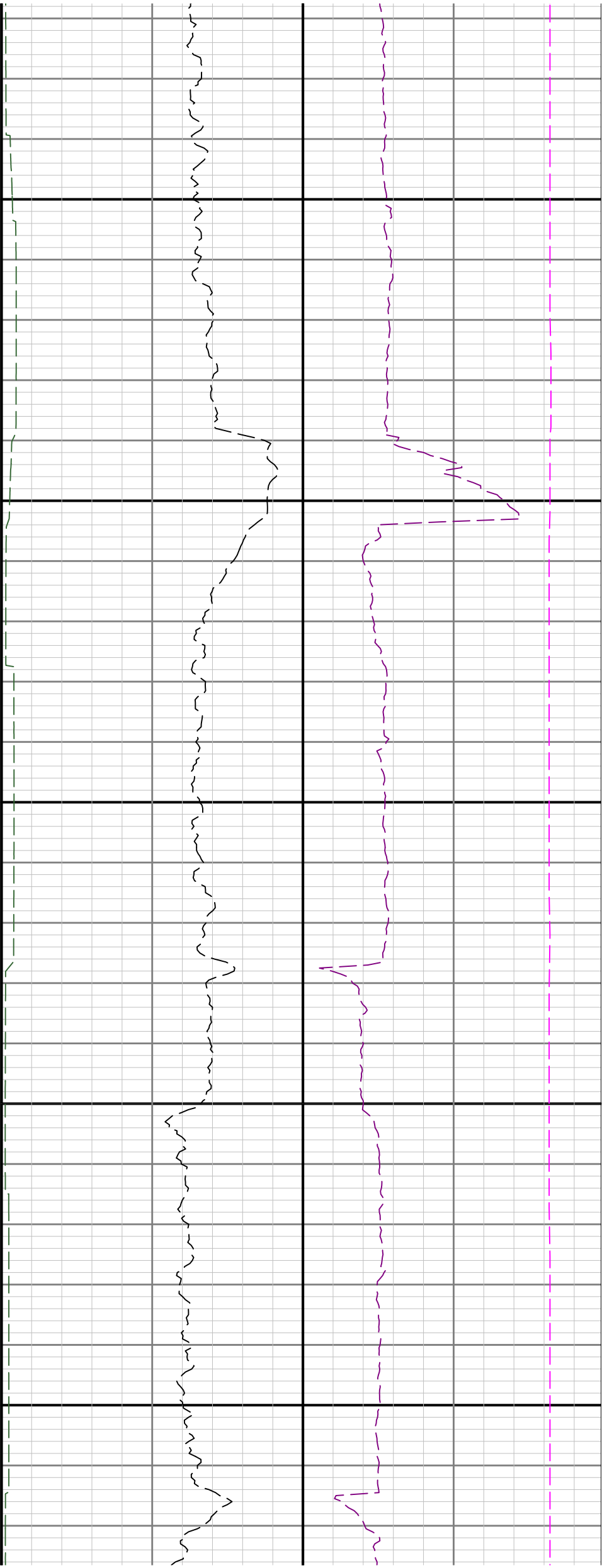


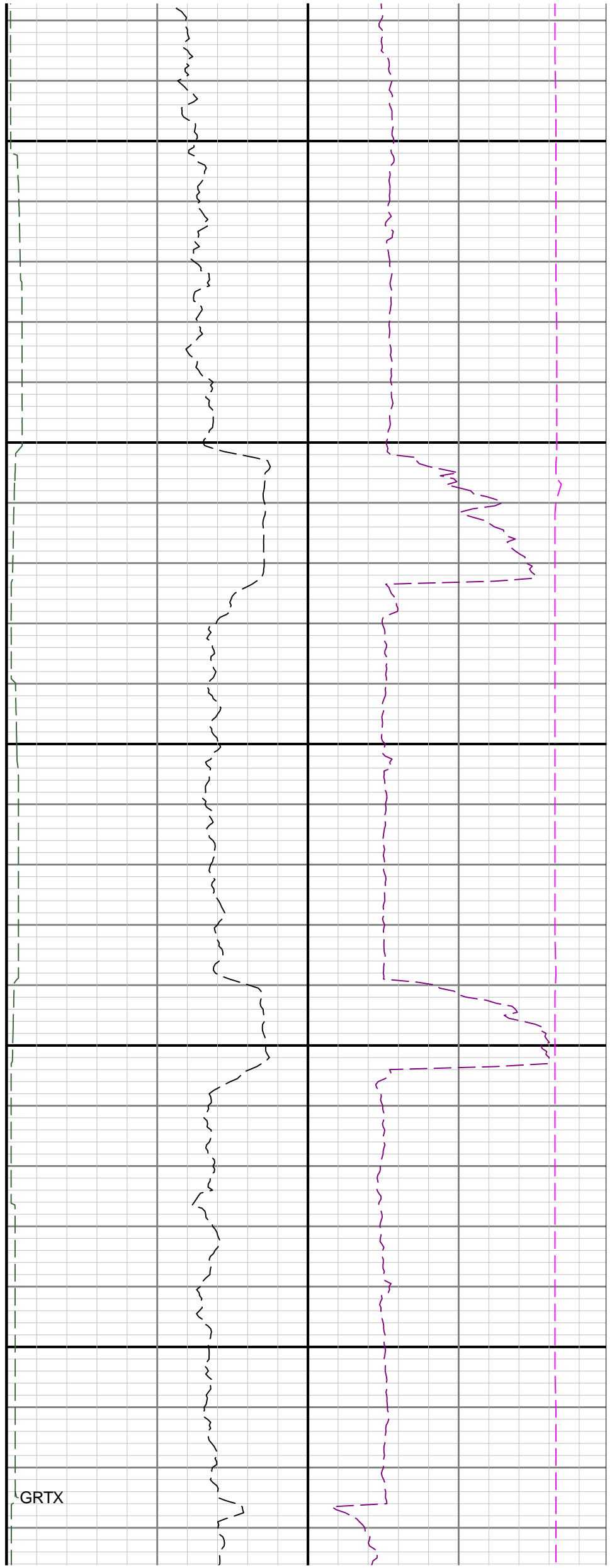
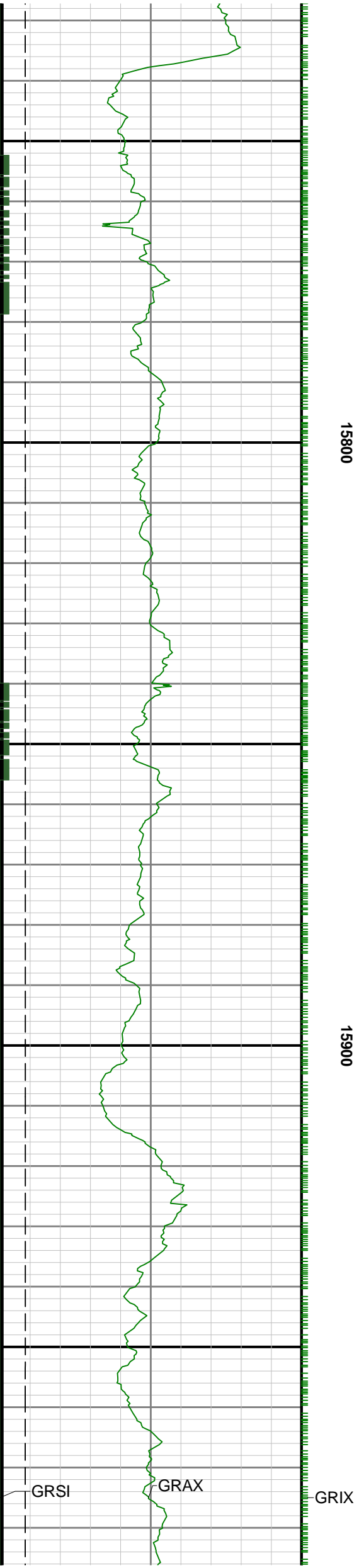


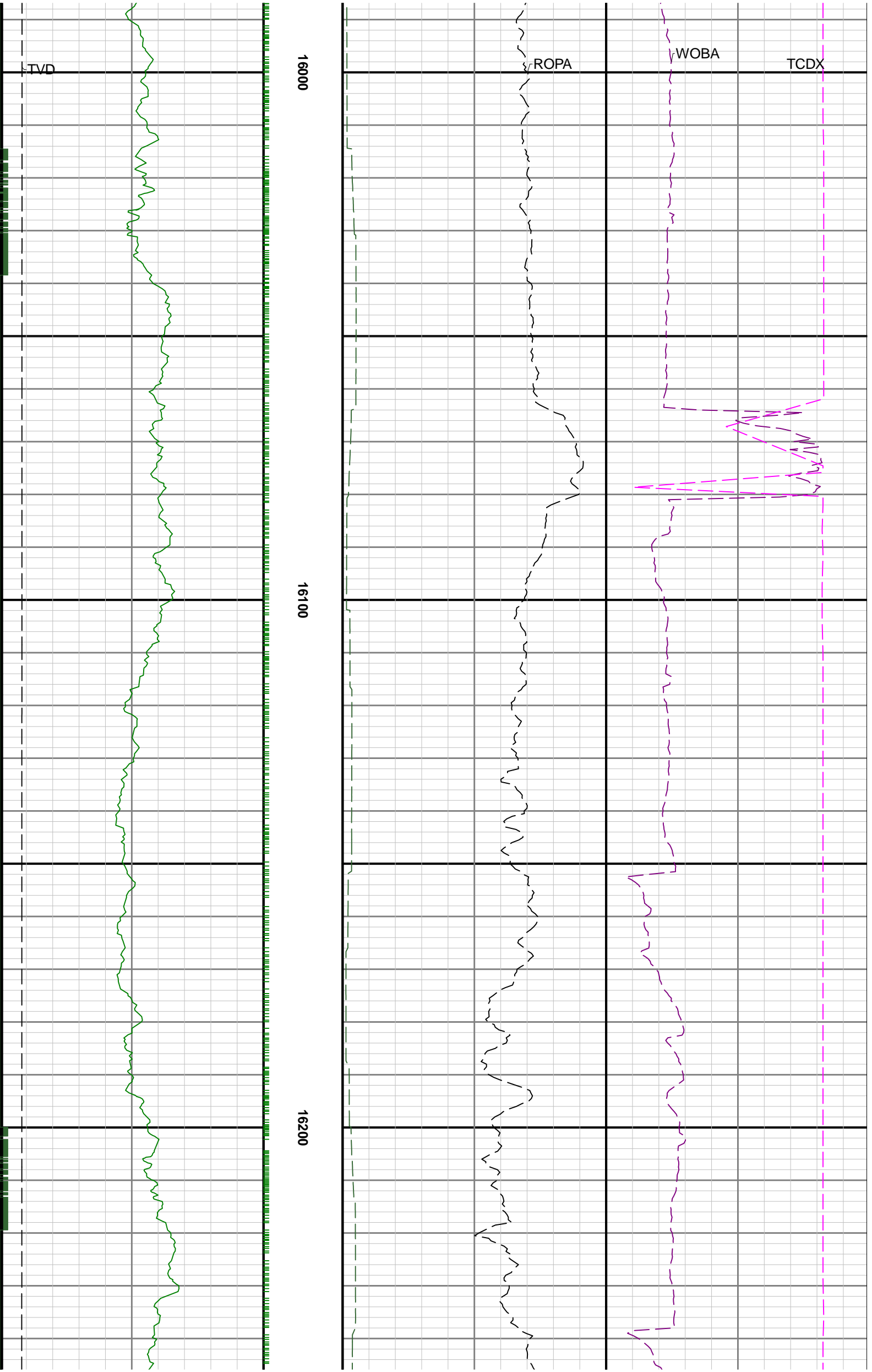
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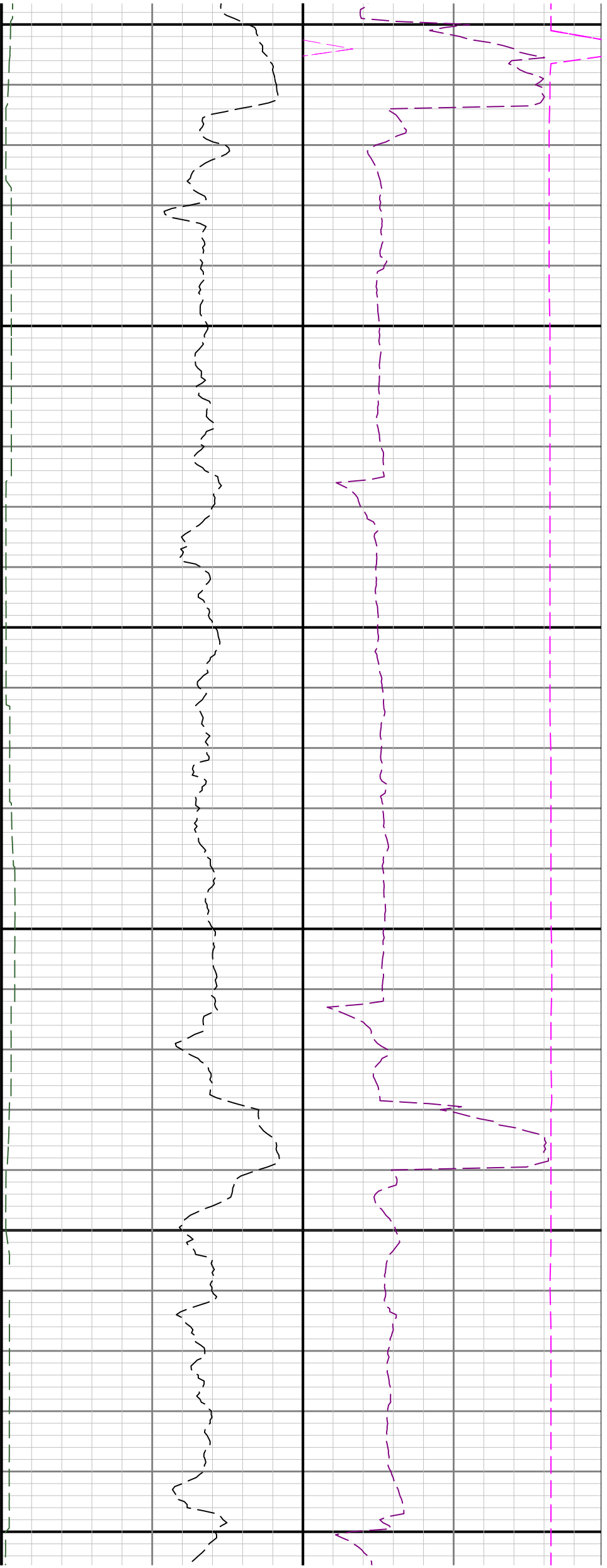
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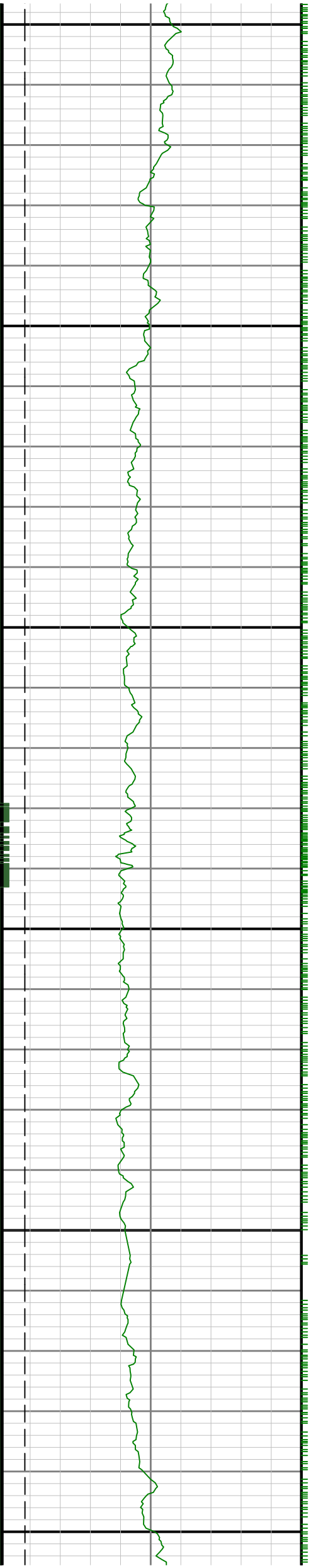


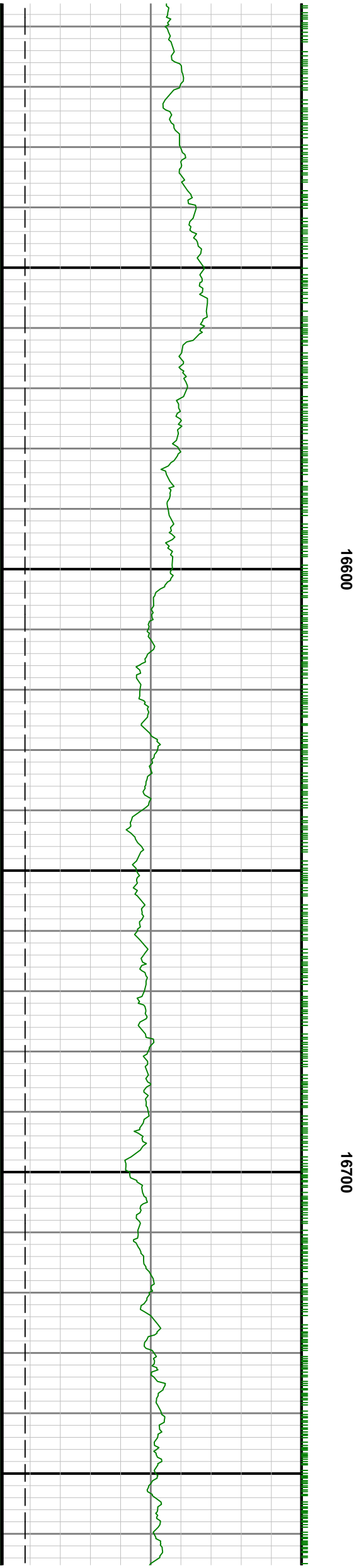
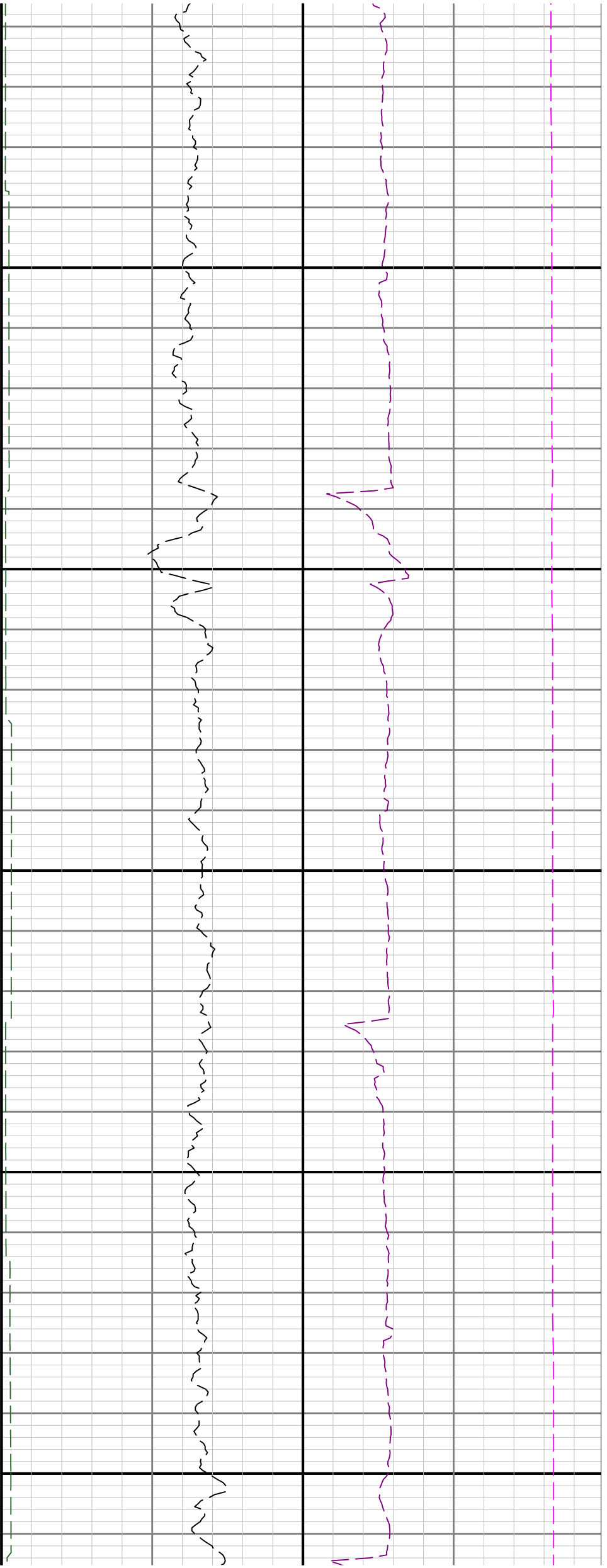


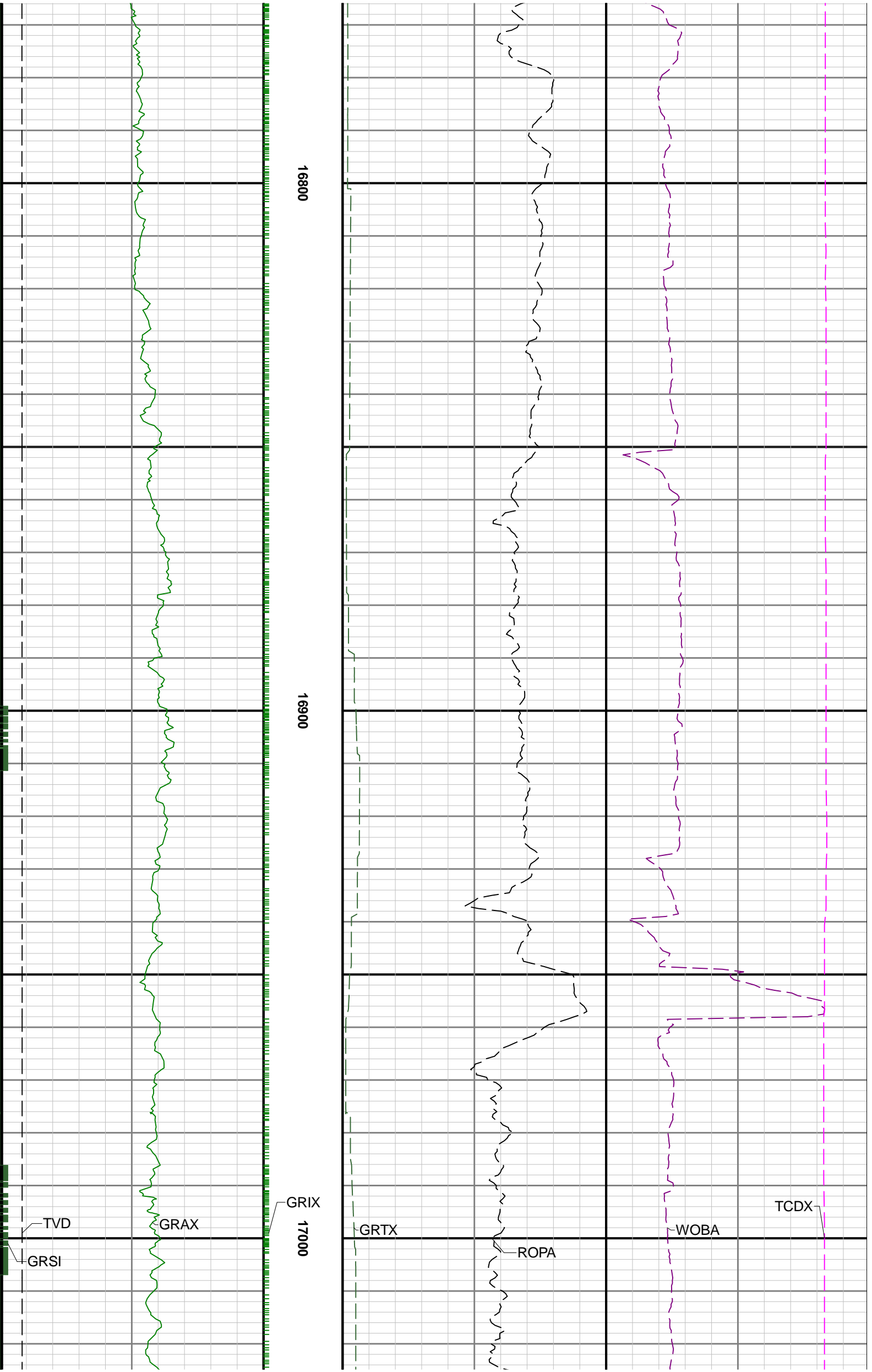
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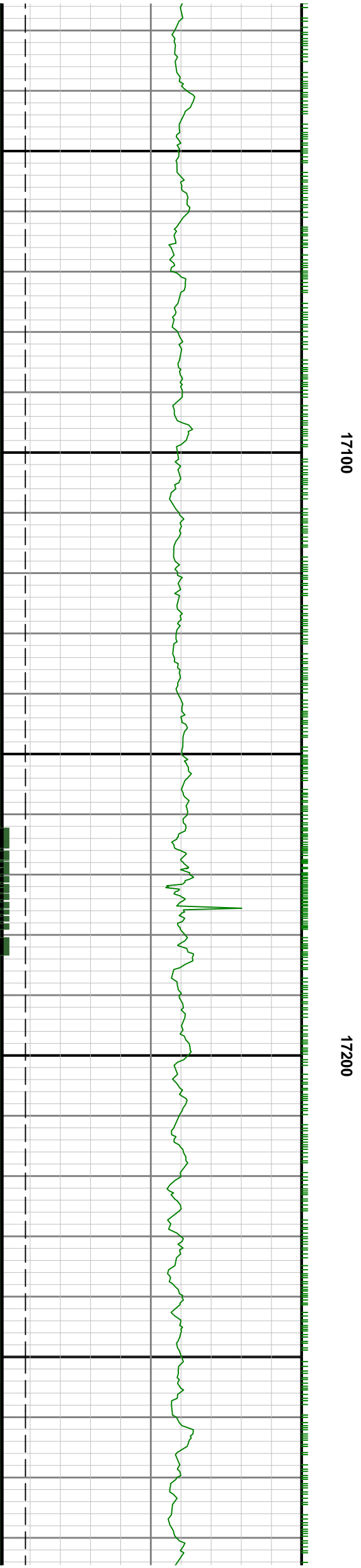
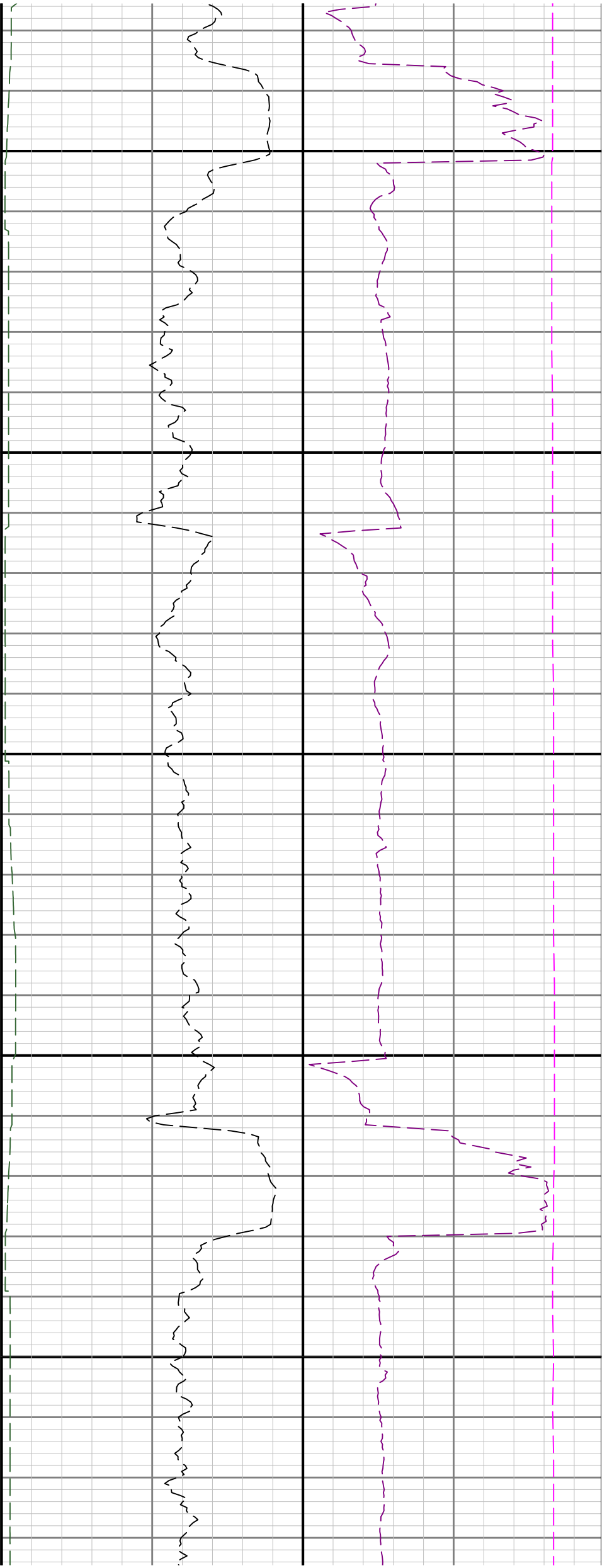
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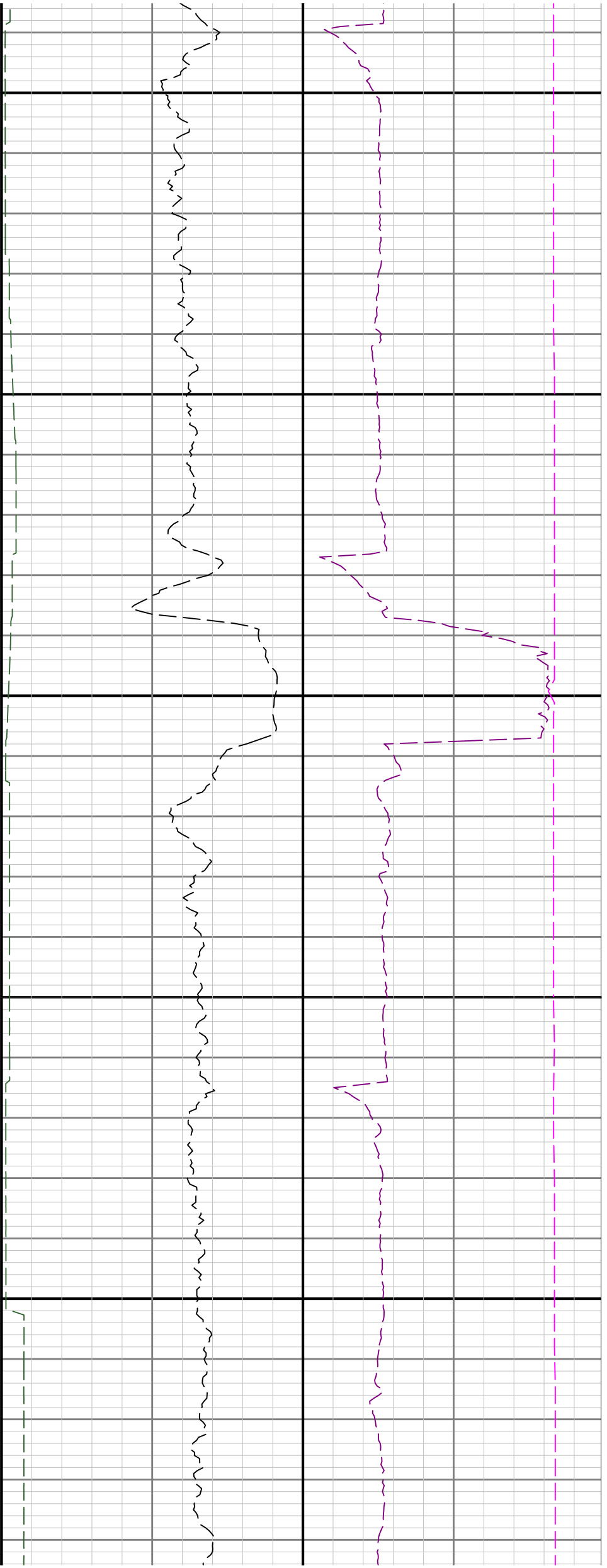
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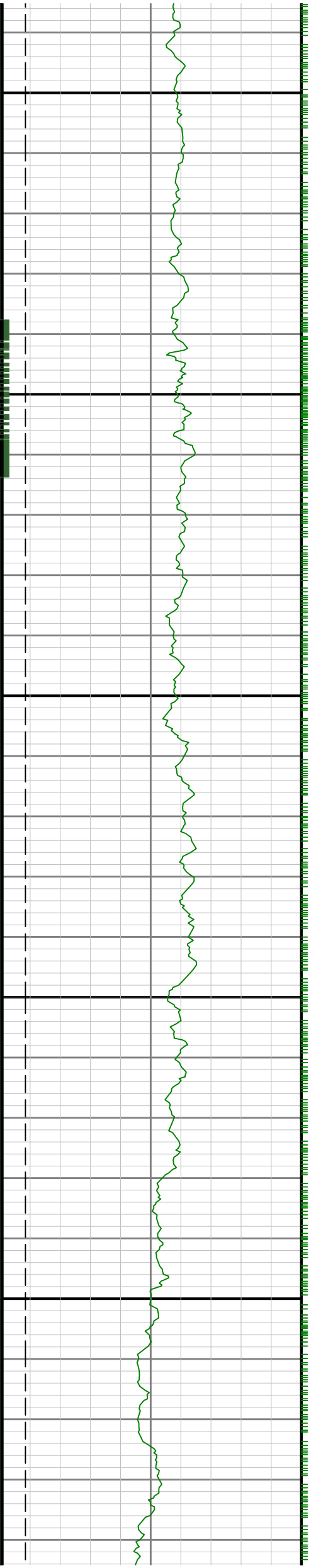


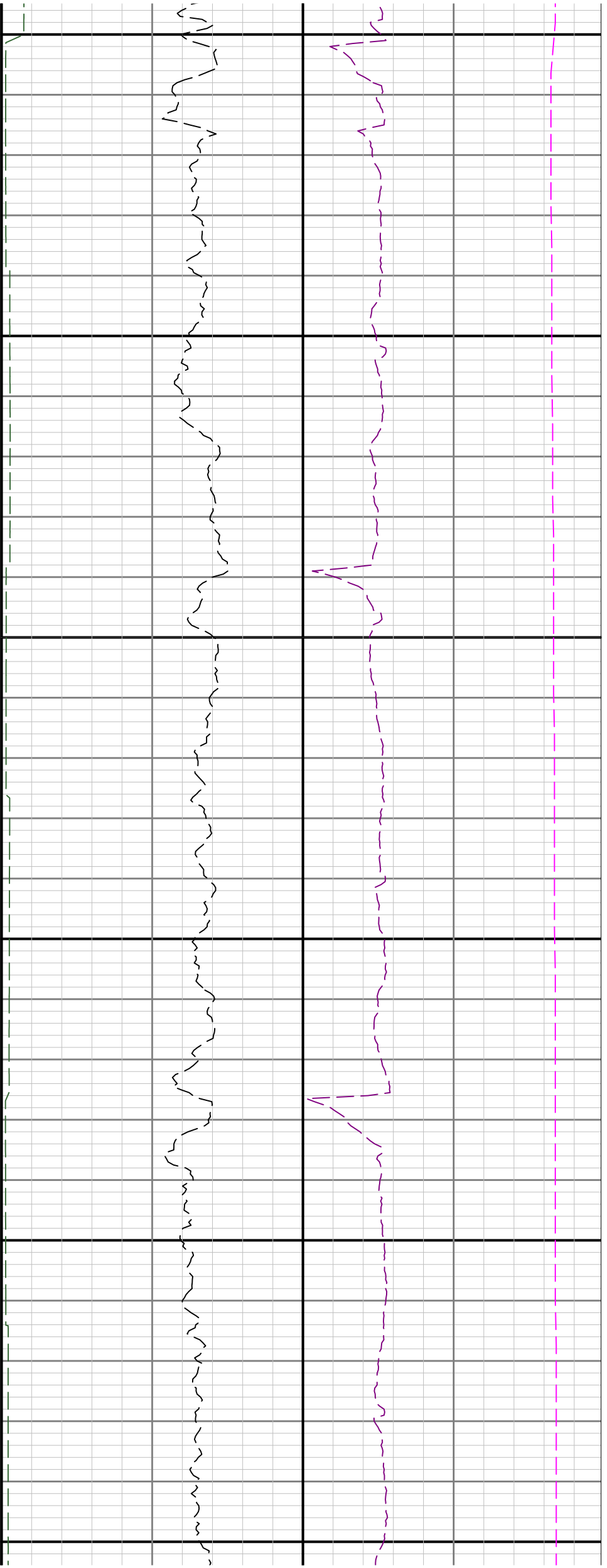


17300

17400

17500





17600

17700

17800

