


LWD REALTIME LOG									
<div><div><div><div>BAKER HUGHES</div><div>a GE company</div></div><div></div></div></div>				Gamma Ray					
Scale:		Company: Great Western							
1:240 MD		Well: Marcus LD 11-371HNX							
Depth Reference:		Field: Weld							
Driller's Depth		County: Weld							
		State: Colorado							
		Country: United States							
Status:		Surface Location:				Other Services:			
Final Print		Latitude:				Directional			
API No: 05-123-45383		Longitude:							
Job ID: 8789646		SEC: 34		TWN: 1N		RGE: 67W			
Permanent Datum (P.D.):		Ground Level		Elevation:		5042.00 ft		Elev. KB: N/A	
Log Measured From:		Rig Floor		Above P.D.		20.00 ft		Elev. DF: 5062.00 ft	
								Elev. GL: 5042.00 ft	
Dates									
Interval Logged					Magnetic Field Reference				
Date From: 2017-12-17		Top: (ft) 1722.00		Azi Reference North: True		Dip Angle: (deg) 66.52			
Date To: 2017-12-20		Bottom: (ft) 17598.00		Total Magnetic Field Strength: (nT) 52120					
Spud Date: 2017-08-01				Mag to Reference North Correction: (deg) 8.38 E					
Borehole Record									
Casing Record									
Hole Size (in)		From (ft)		To (ft)		Size (in)		Weight (lb/ft)	
13.500		20.00		1722.00		9.625		37.00	
8.500		1722.00		17598.00					
Mud Record									
Deviation Record									
Type		From (ft)		To (ft)		Hole Size (in)		Interval (ft)	
Oil Based Mud		1722.00		17598.00		8.500		15876.00	
								1.32   73.19	
								90.28   181.58	
Acquisition System									
Software Version				Other					
Baker Hughes Cadence				RT4.1		Rig: PD 460		Contractor: Precision Drilling	
PlotStudio				4.1.7763.3		District: US Land		Unit: RMA	

2017-12-19 15:05	2	14245.00	Oil Based Mud	10.4	27	0	0.0	74/26	Active Pit	21000	0.00
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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	ATC_SU	14178989	Near Bit VSS	5.93	6.73	7.000	4.330
1	ATC_SU	14178989	Near Bit Inclination	5.93	6.73	7.000	4.330
1	ATC_MWD	12661246	Gamma (single)	2.74	12.90	7.000	3.250
1	ATC_MWD	12661246	Directional (mag)	12.26	22.42	7.000	3.250
2	ATC_SU	14236914	Near Bit Inclination	5.93	6.73	7.000	4.330
2	ATC_SU	14236914	Near Bit VSS	5.93	6.73	7.000	4.330
2	ATC_MWD	12332940	Gamma (single)	2.19	12.35	7.000	3.250
2	ATC_MWD	12332940	Directional (mag)	12.26	22.42	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

Comments



1	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
2	Observed gamma ray data is not available for the interval from 1722 to 17598 feet MD (1721 to 7347 feet TVD).
3	Gaps in Gamma Ray data are present throughout the log due to downlinking while drilling ahead.

Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	14235.00	8.500	2	The interval from 14235 to 14255 feet MD (7355 feet TVD) was logged up to 11 hours after being drilled due to a trip out of hole to change out BHA.
2	17585.00	8.500	2	The interval from 17585 to 17598 feet MD (7347 feet TVD) was not logged due to sensor to bit offset at well 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, 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



Company

Well

Interval

Created

Great Western

Marcus LD 11-371HNX

Date From: 2017-12-17 09:39:03  
Date To: 2017-12-20 19:46:50

Top: 1722.00  
Bottom: 17598.00

2017-12-20 20:46:05

Gamma Ray - Apparent 0.5 ft Average GRAX

0150

API

True Vertical Depth TVD

80001000

ft

MD 1:240 feet

1700

9 / 8" Casing

Depth Averaged ROP 3 ft Average ROPA

10000

ft/h

Gamma Time Since Drilled GRTX

0600

min

Weight On Bit, Average 1 ft Average WOBA

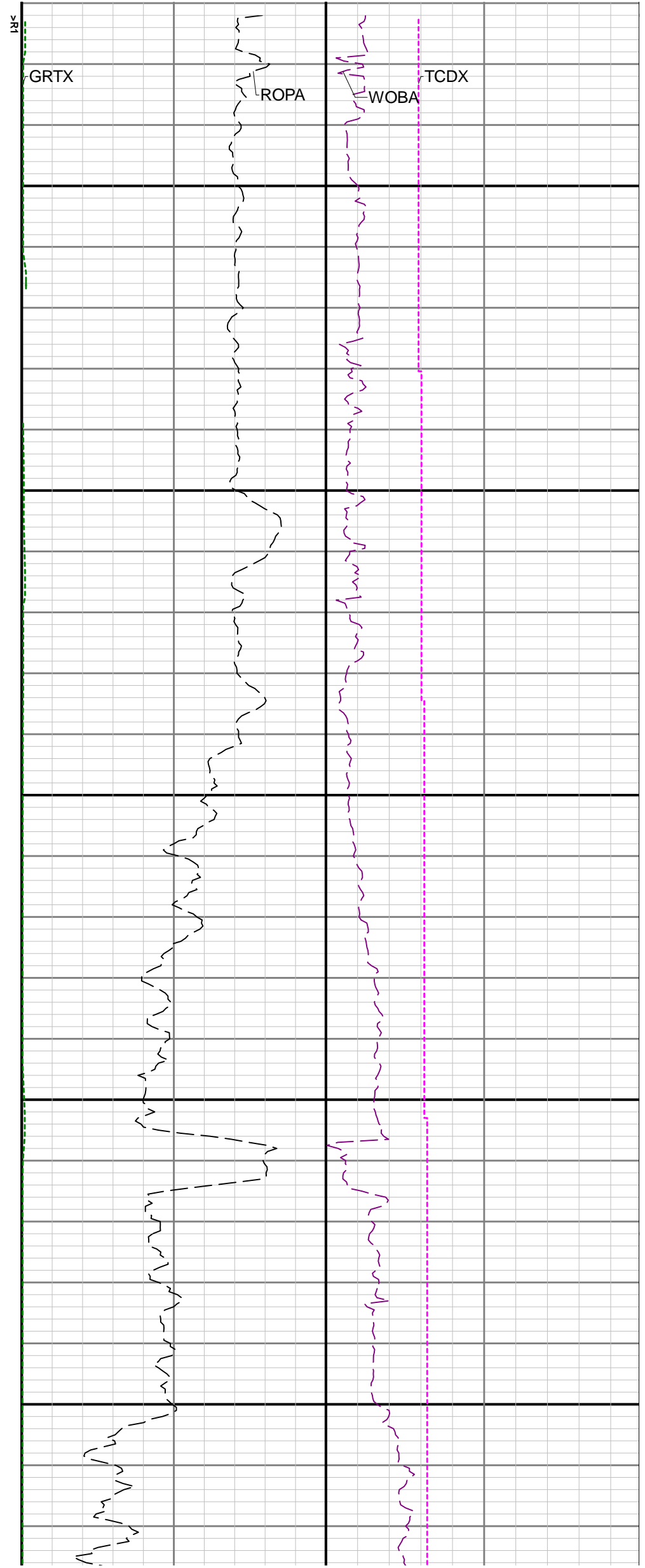
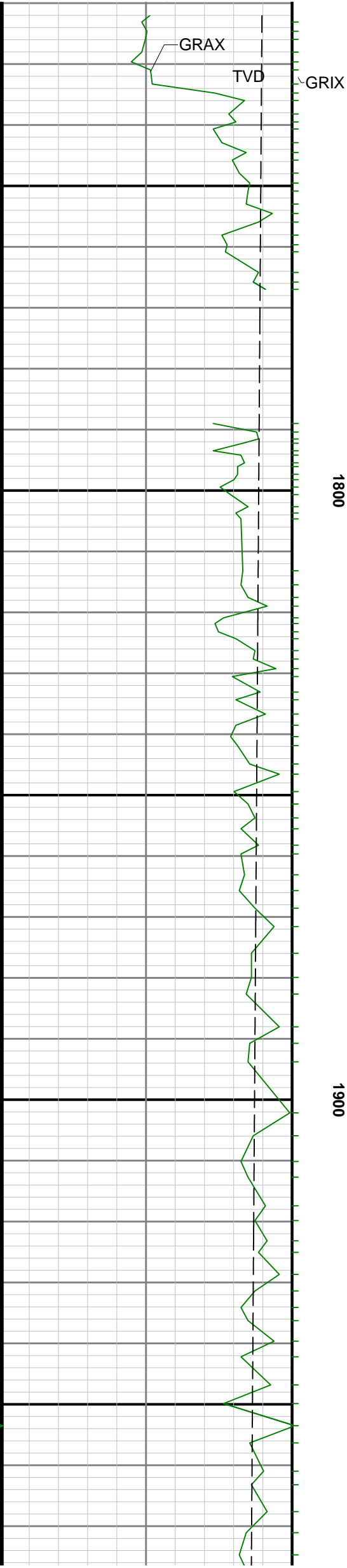
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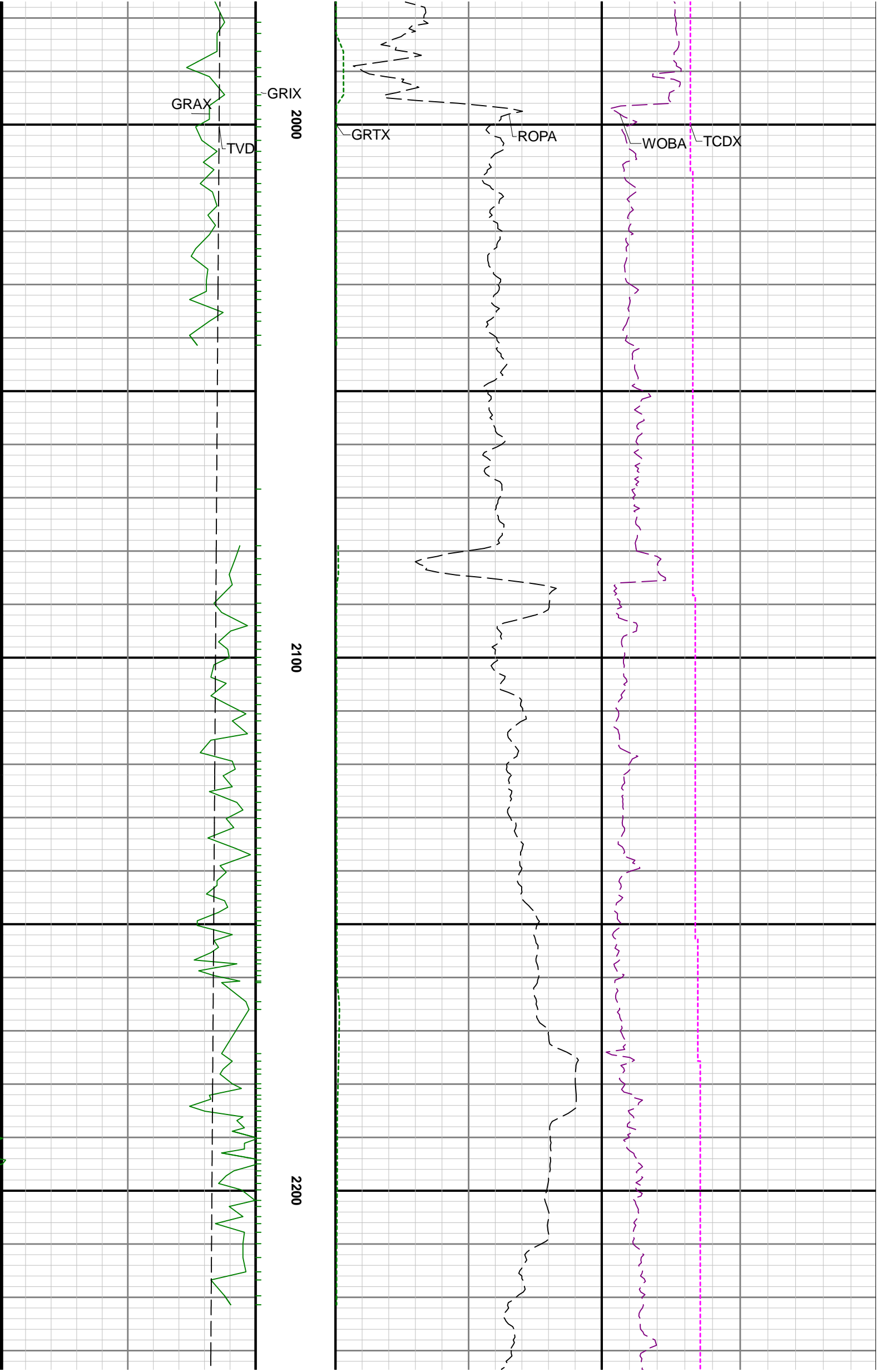
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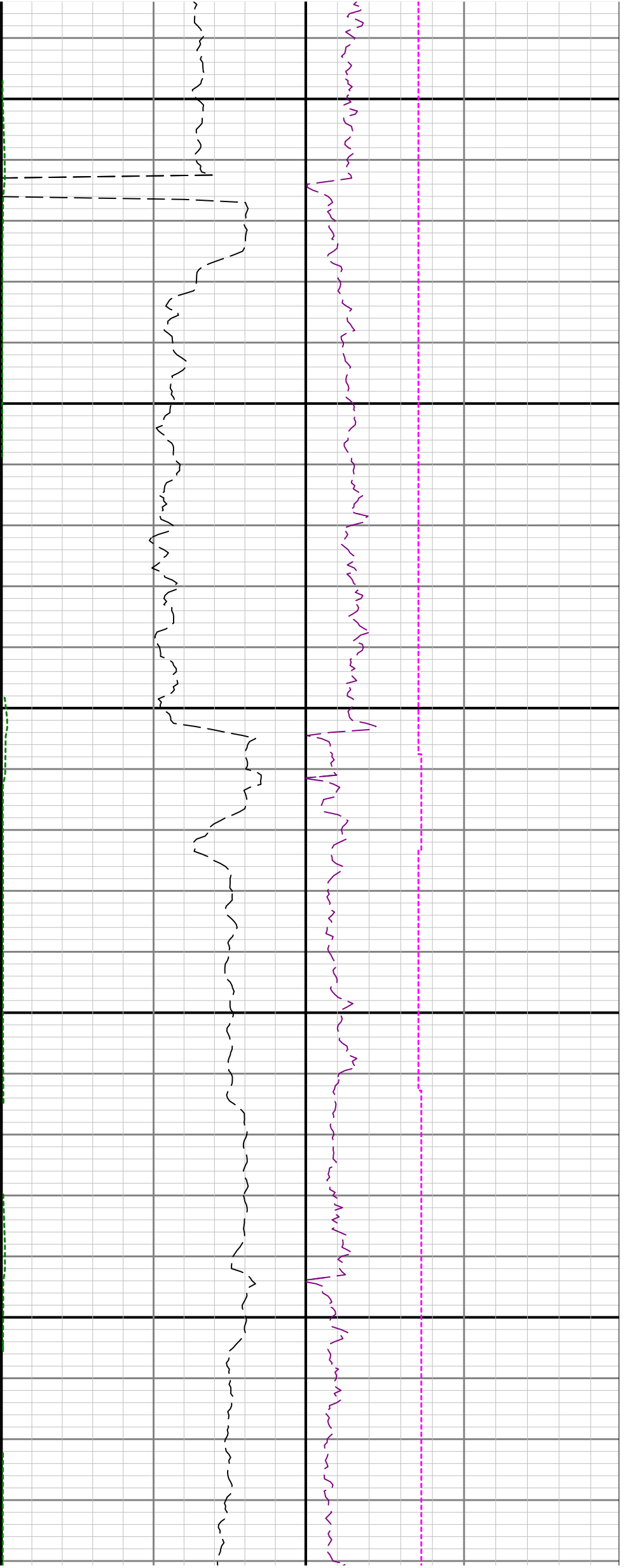
Downhole Temperature TCDX

0300

degF

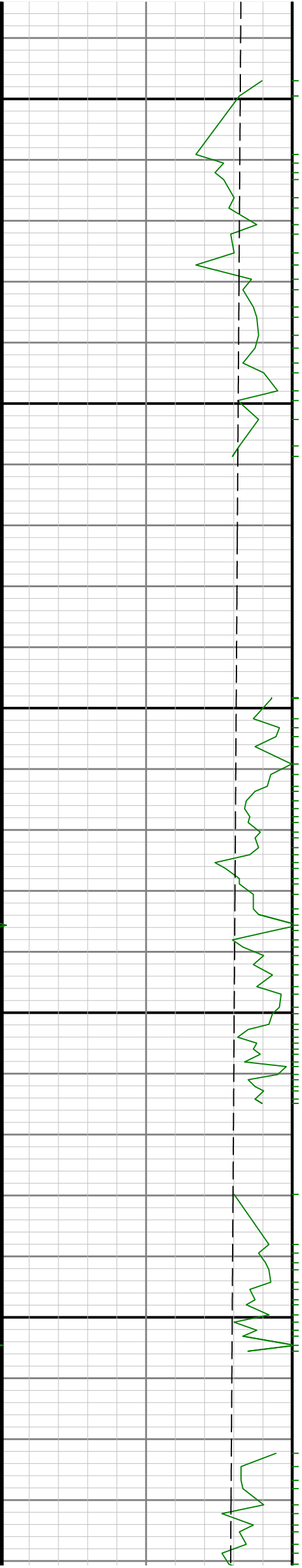


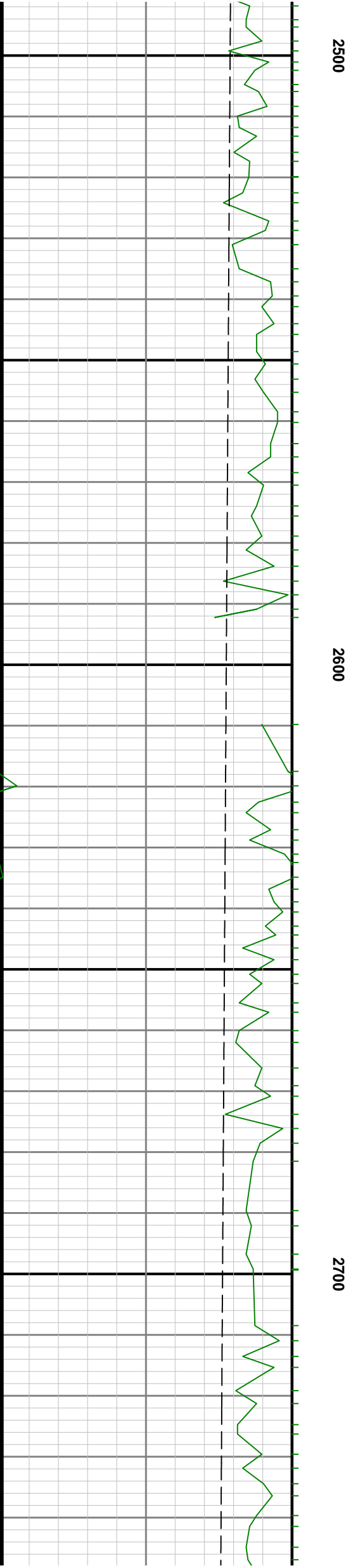
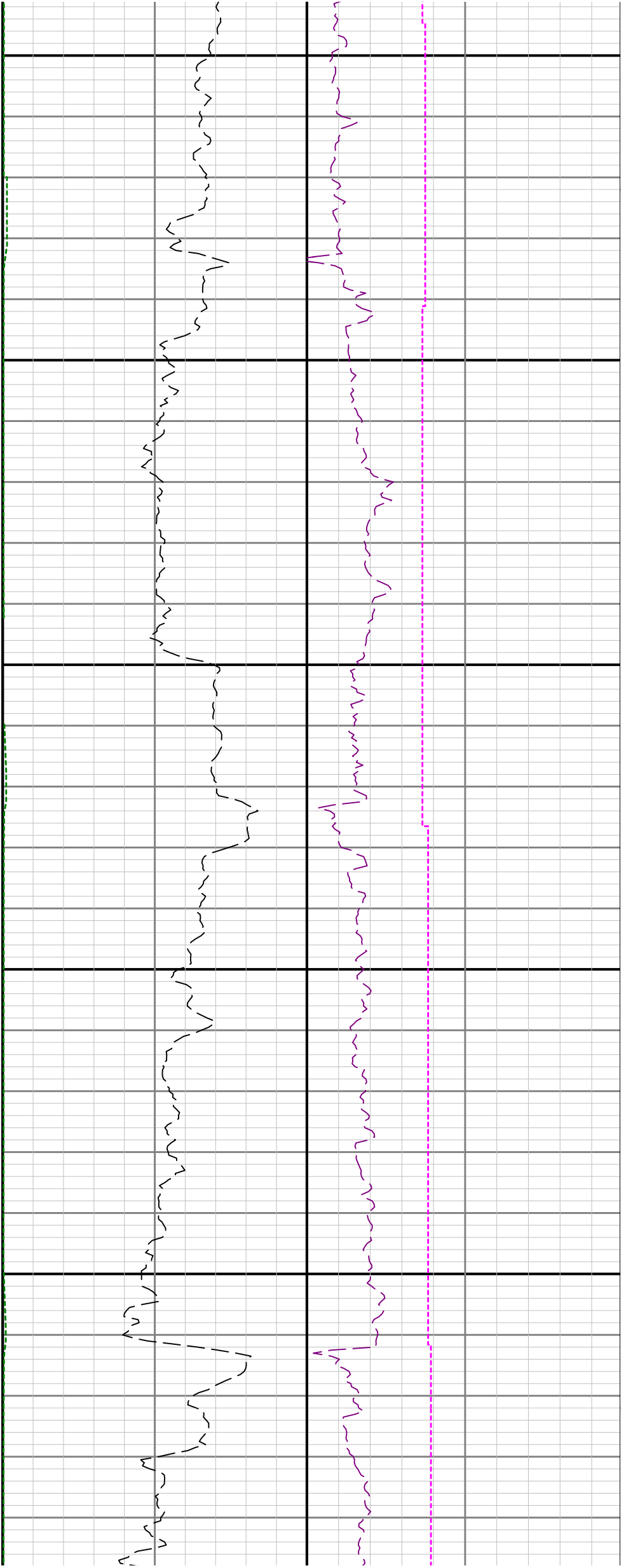


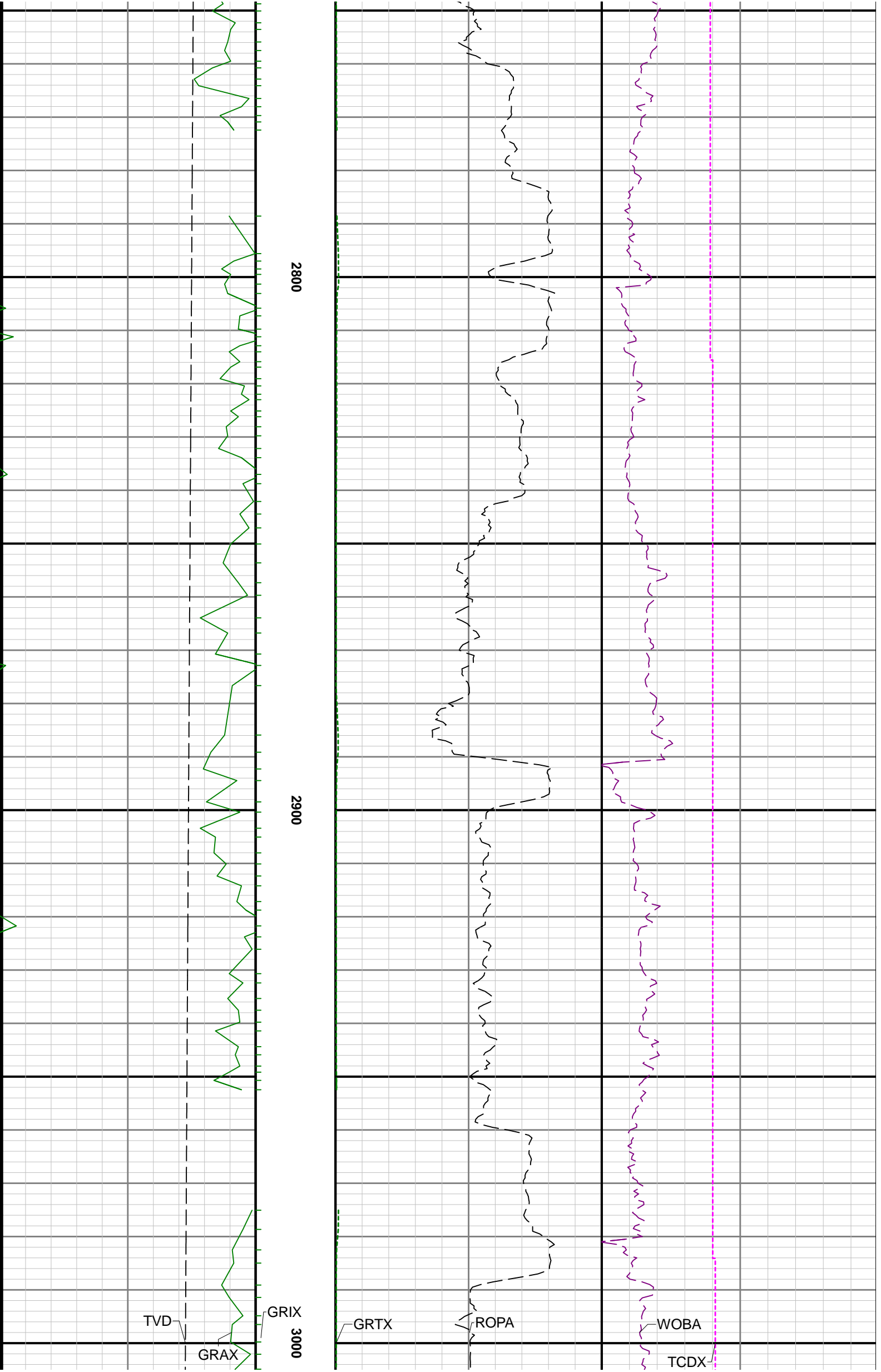


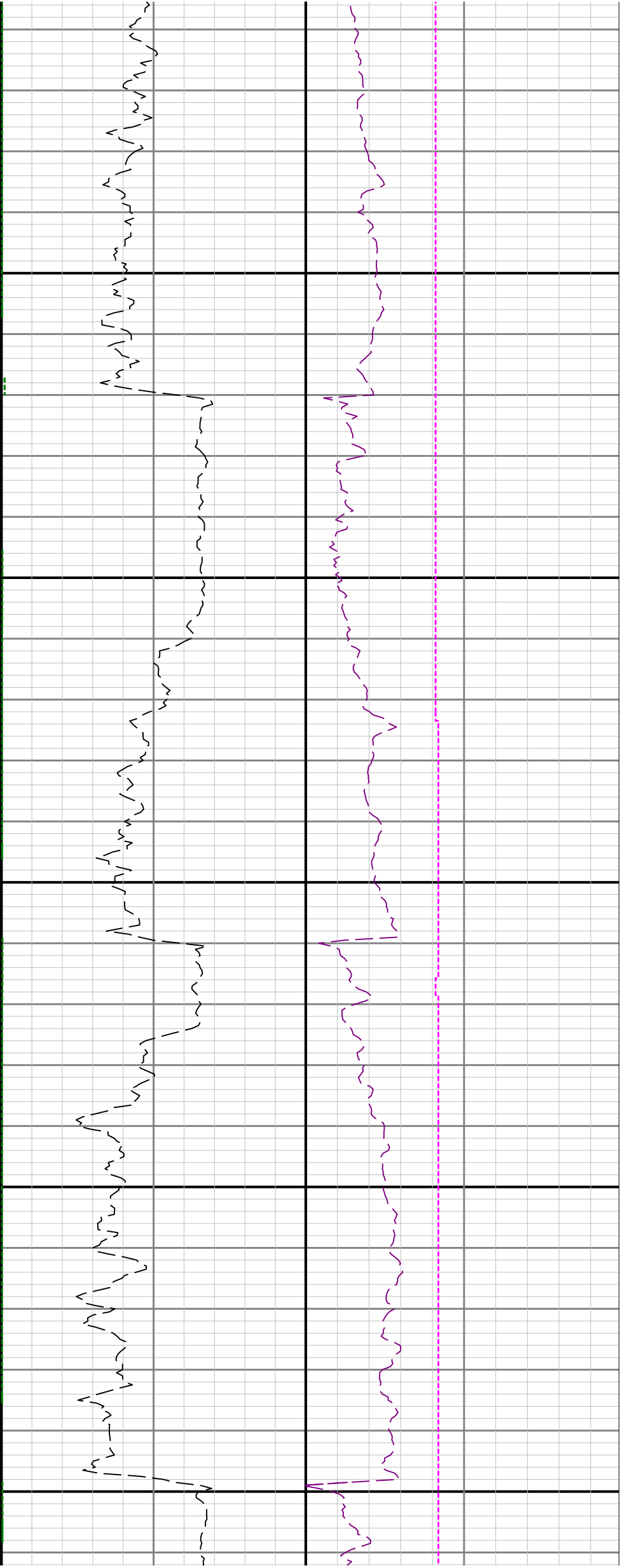
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2400



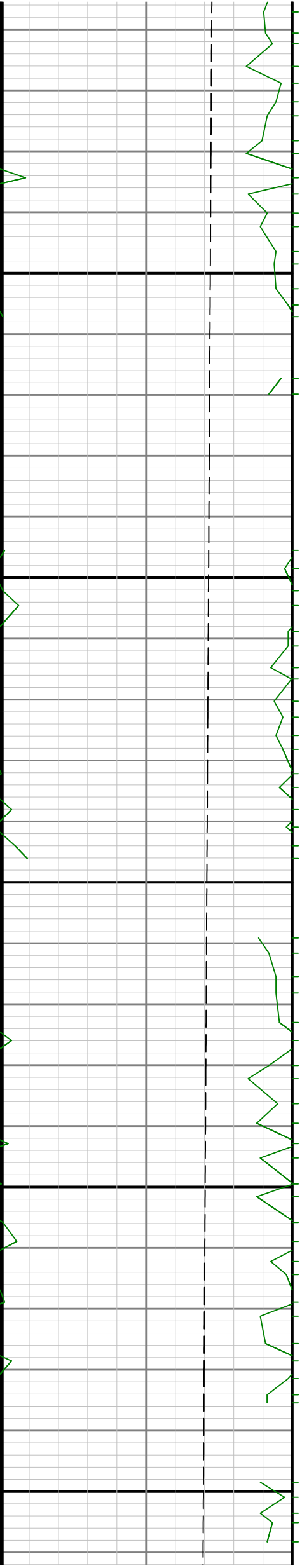




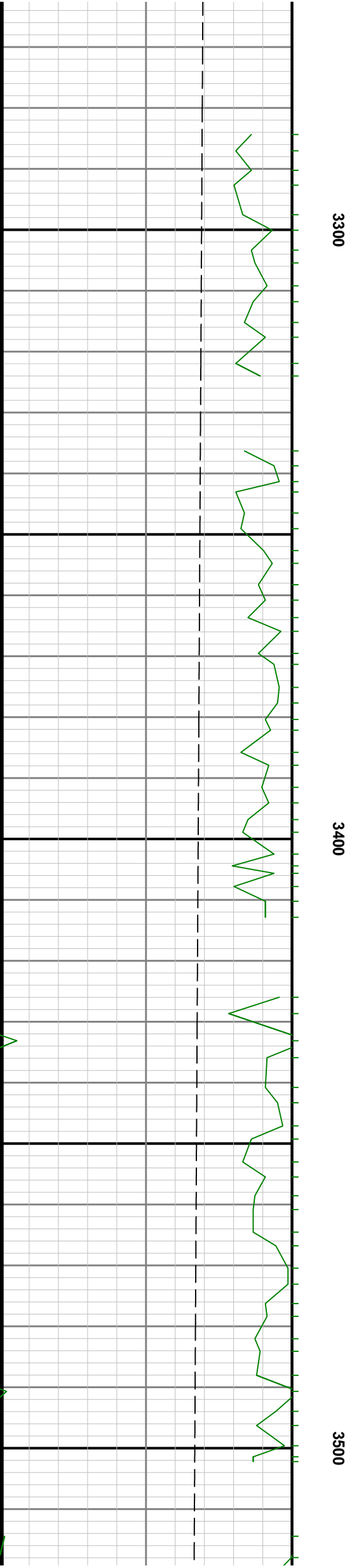
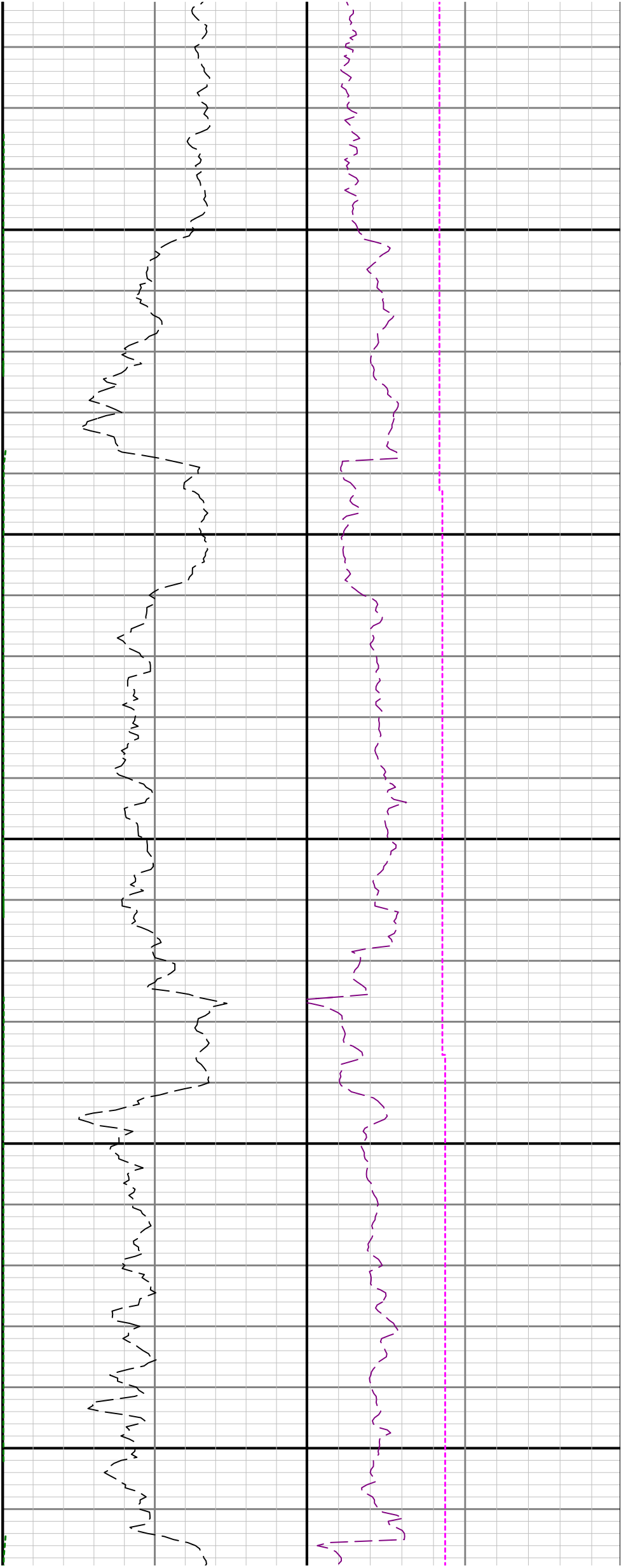


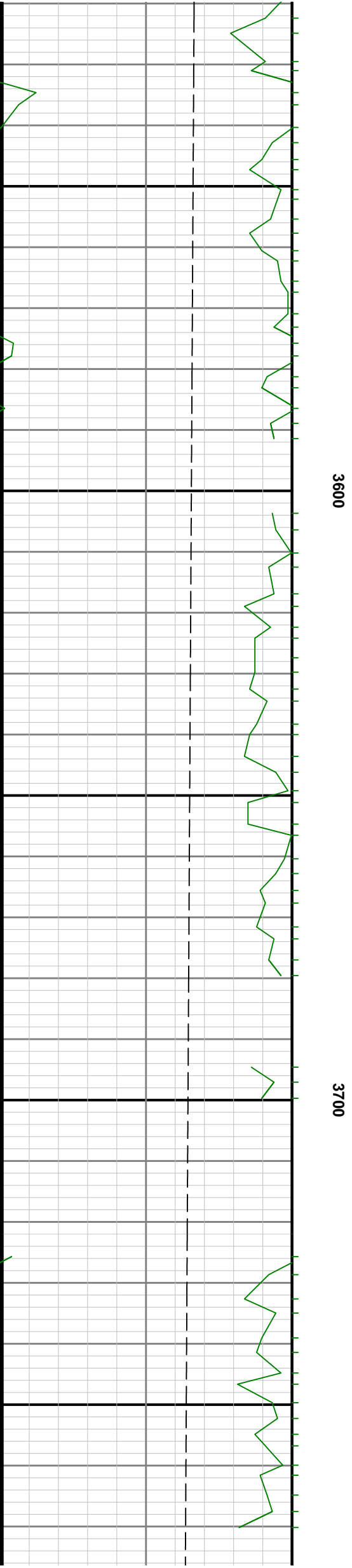
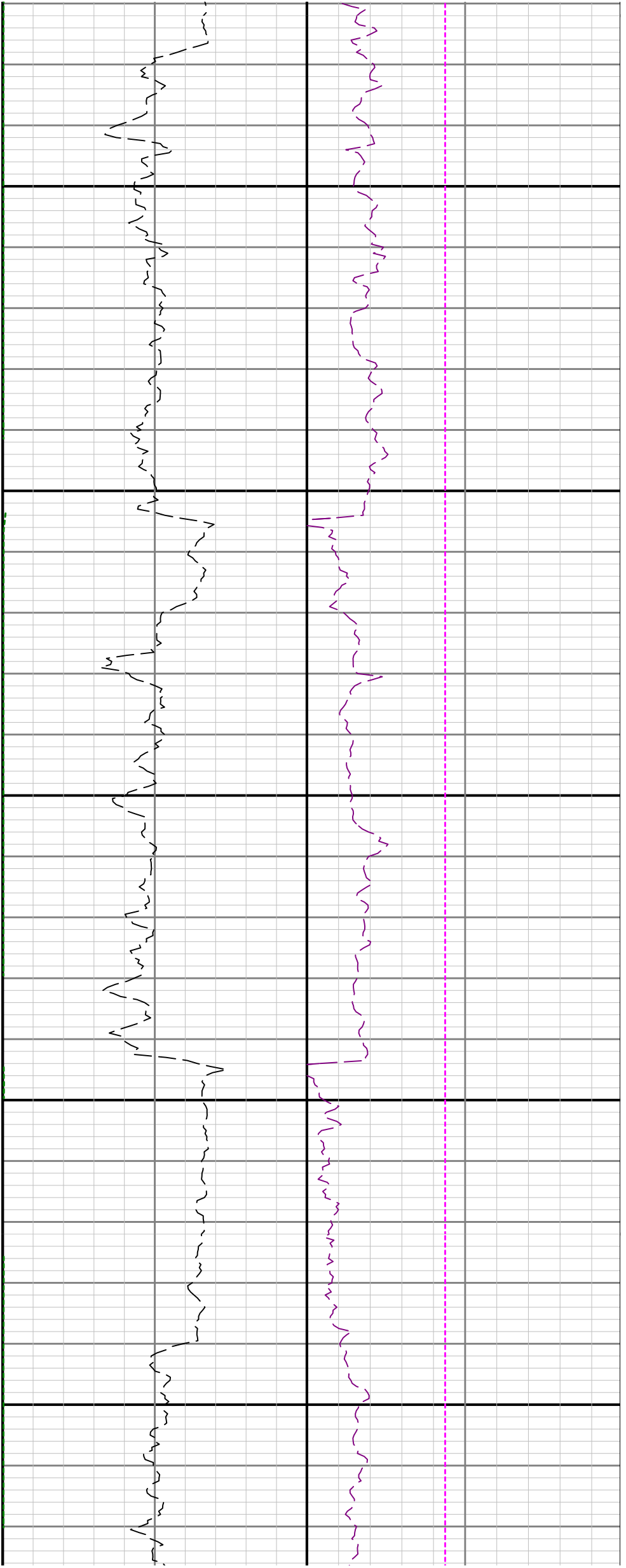
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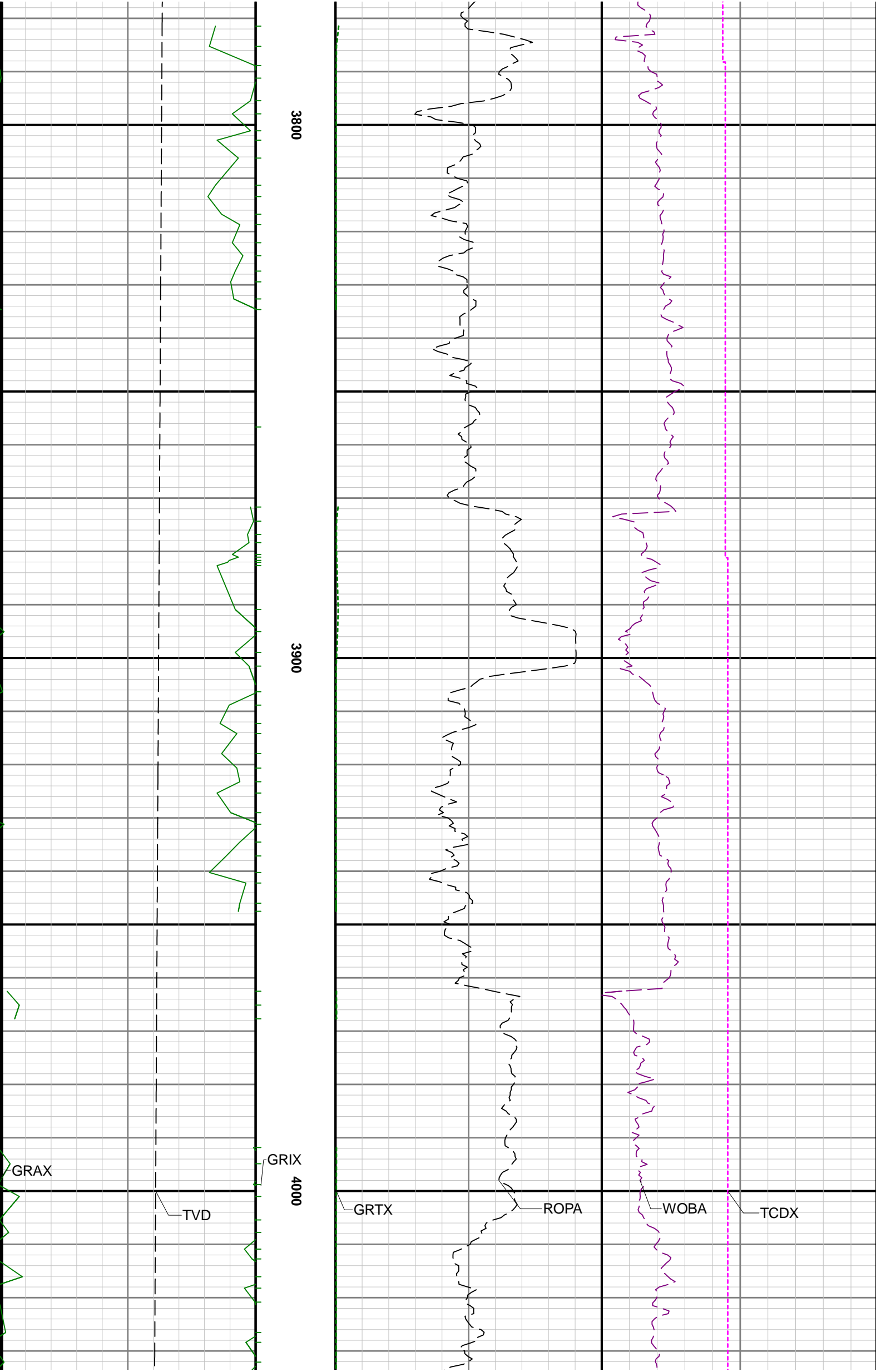
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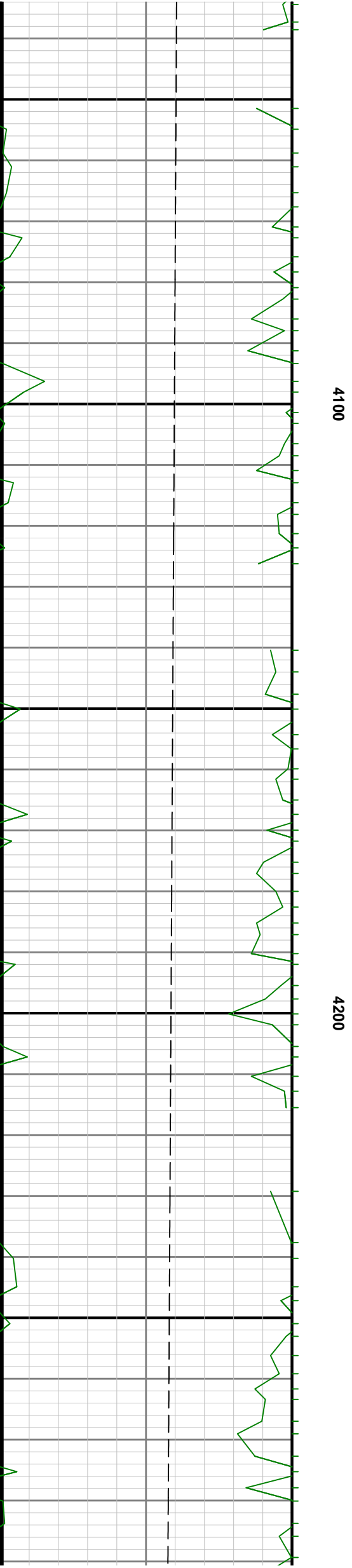
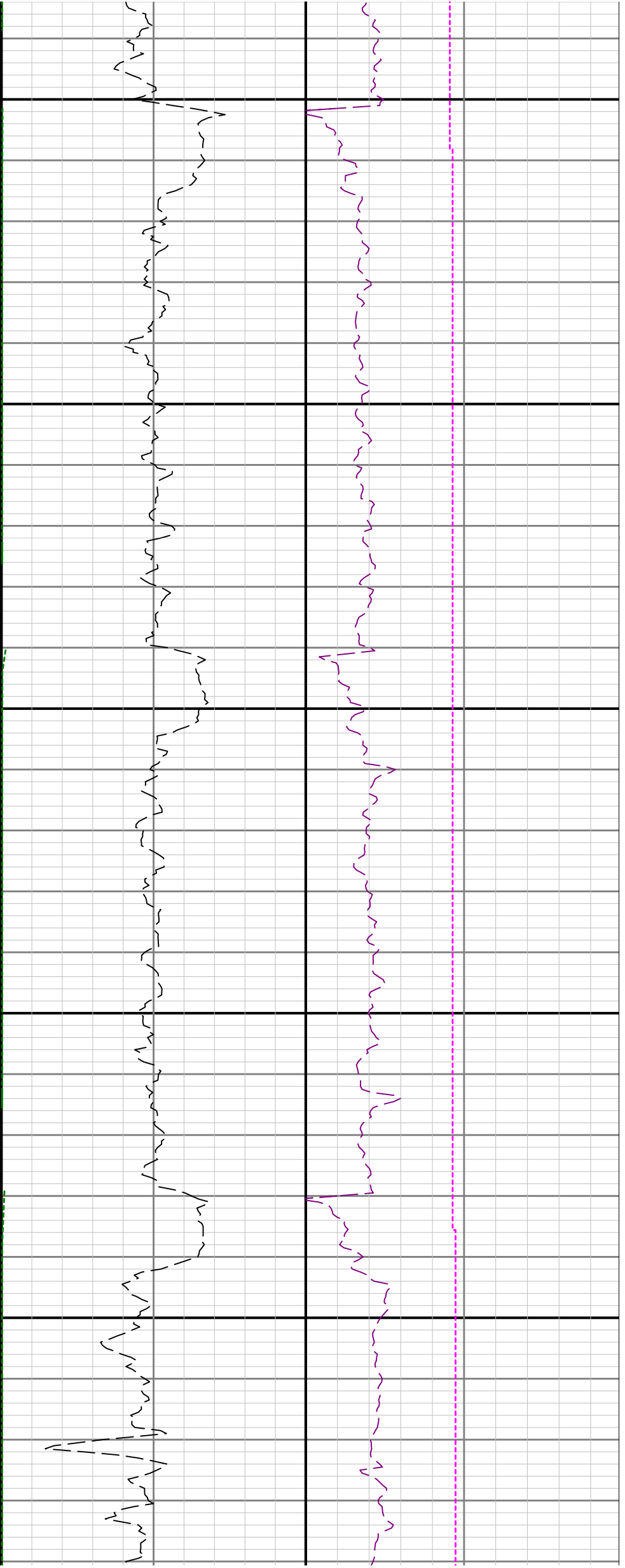


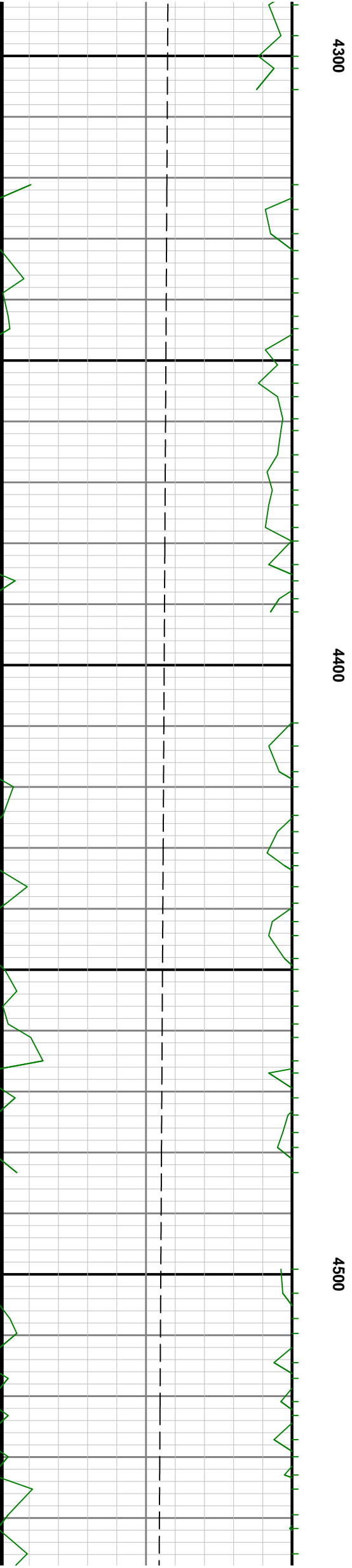
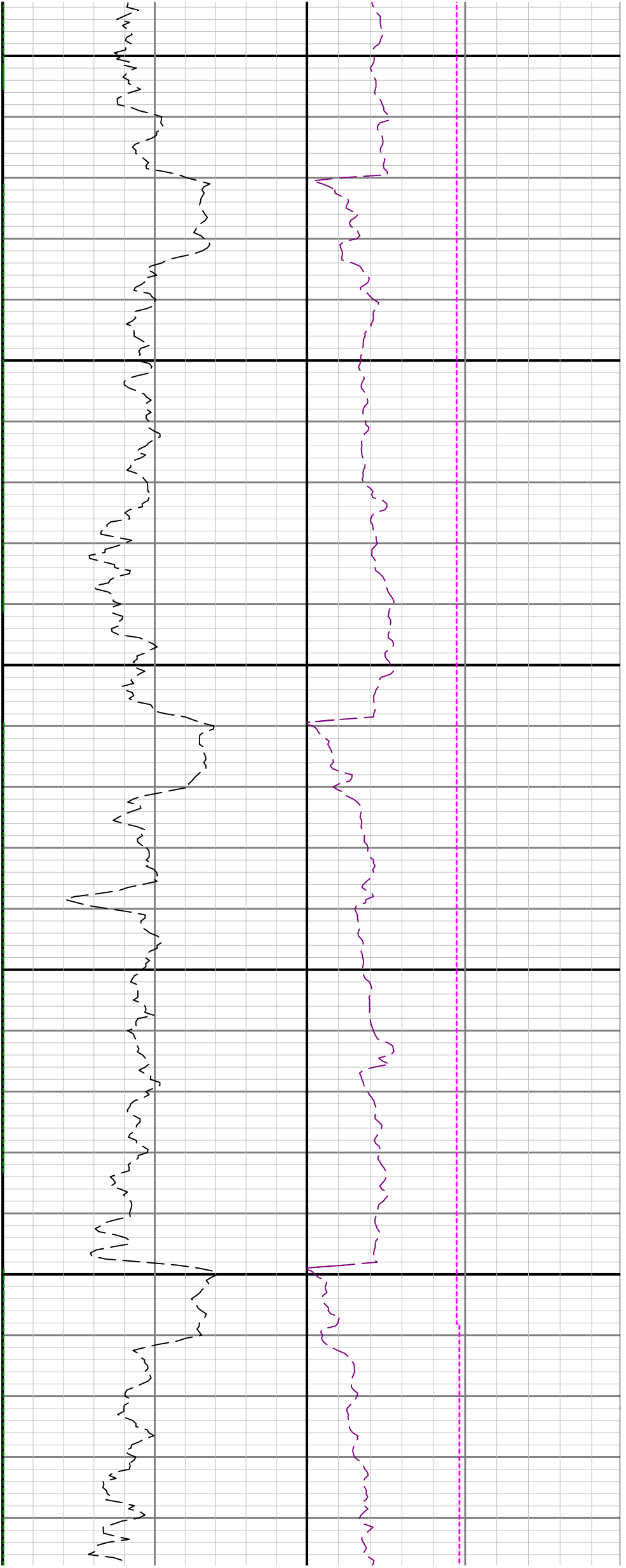


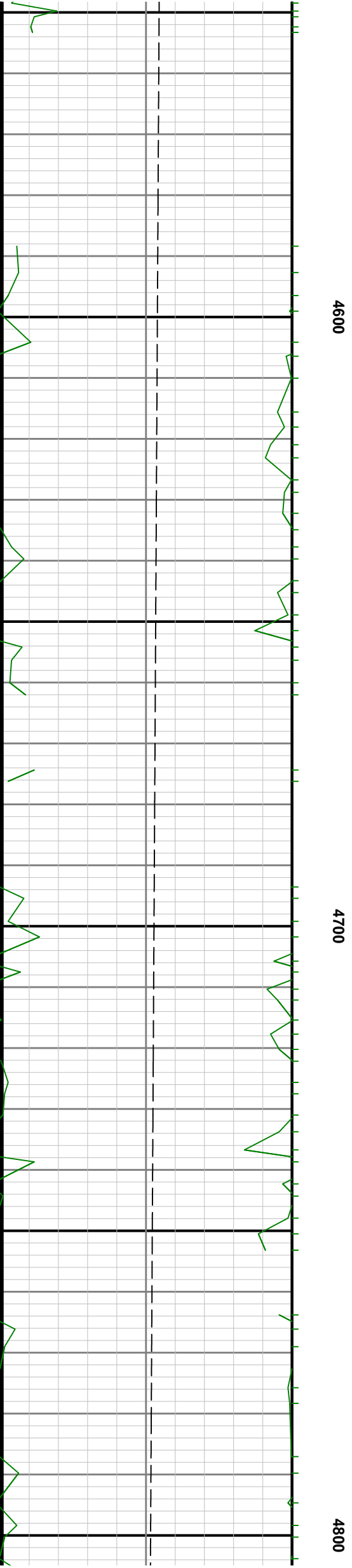
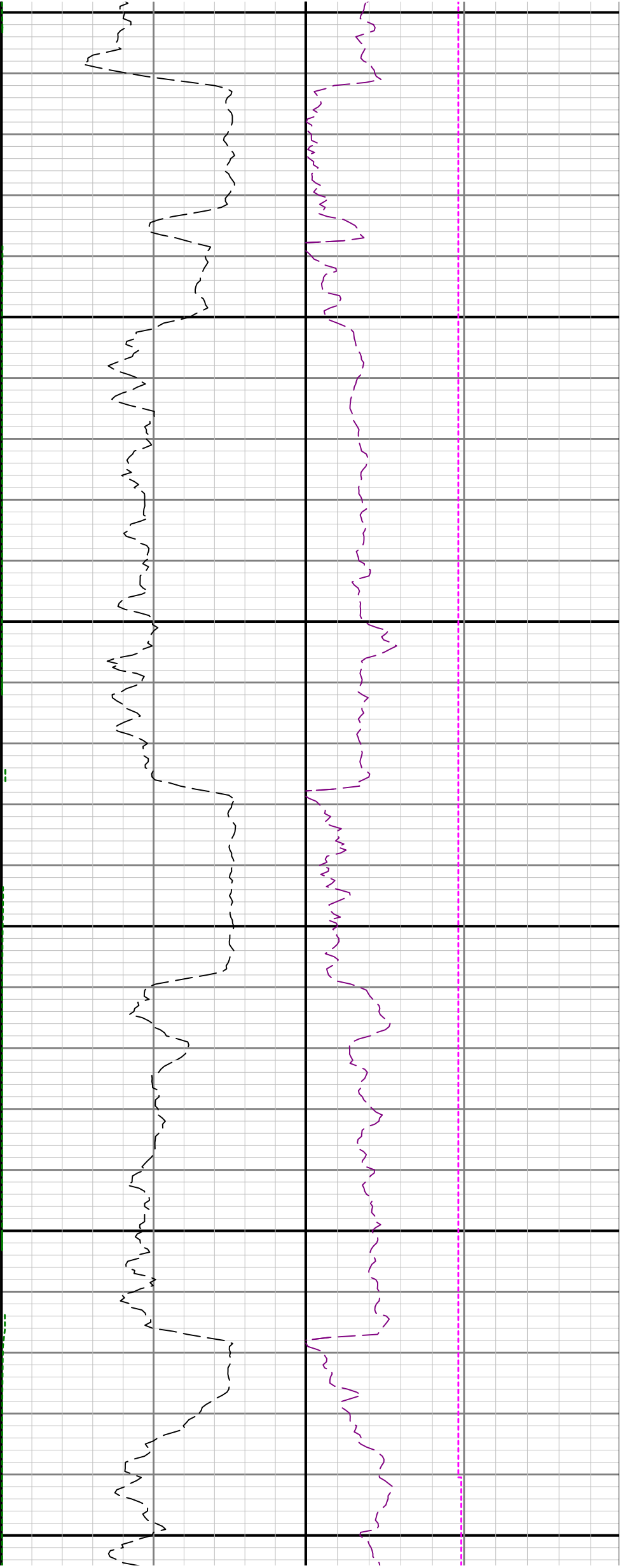


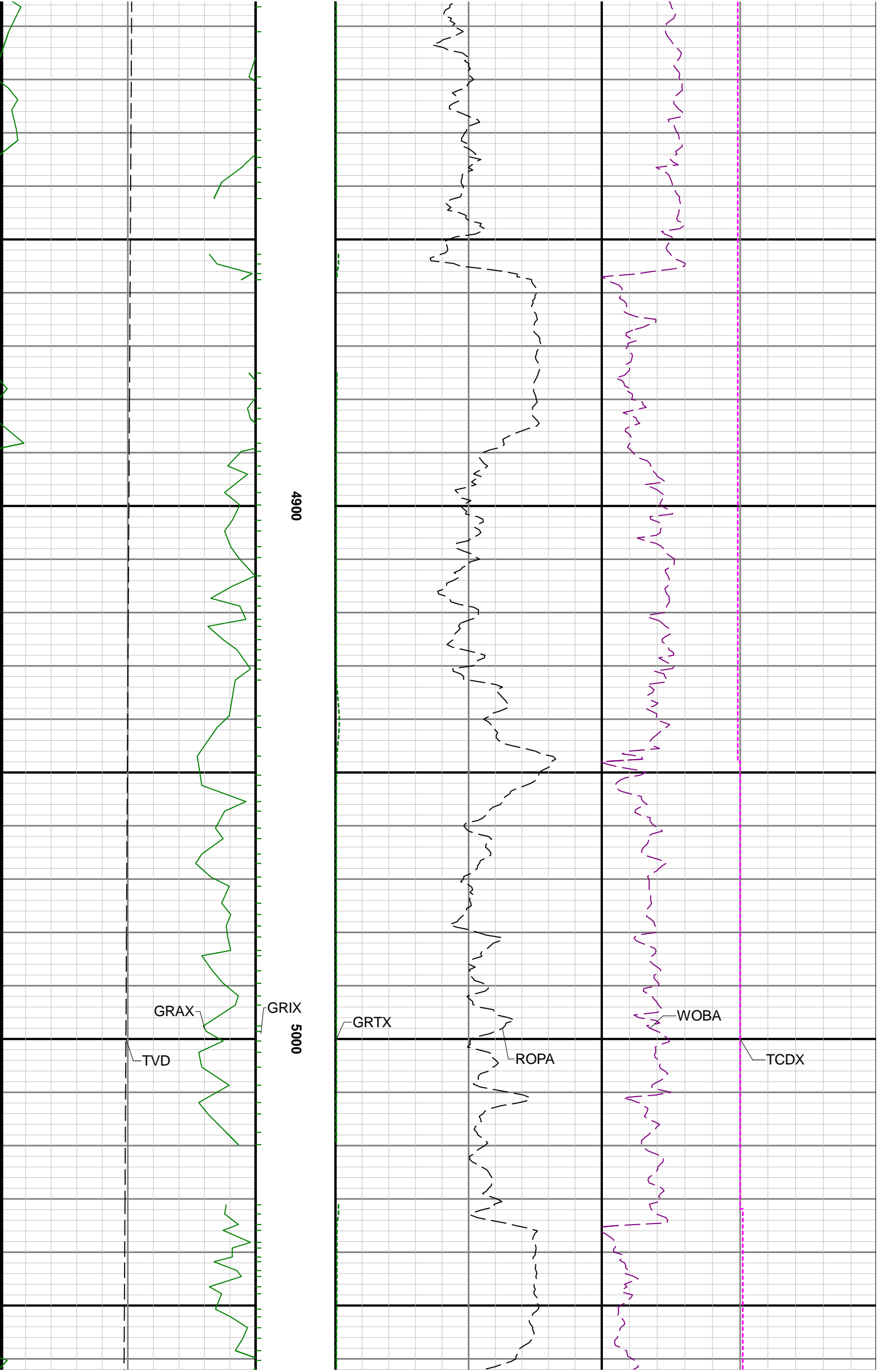


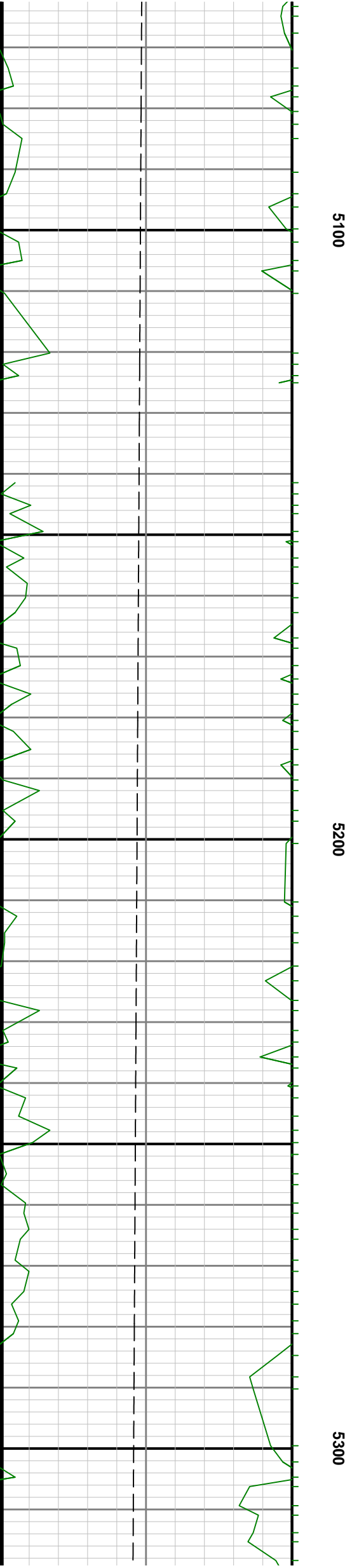
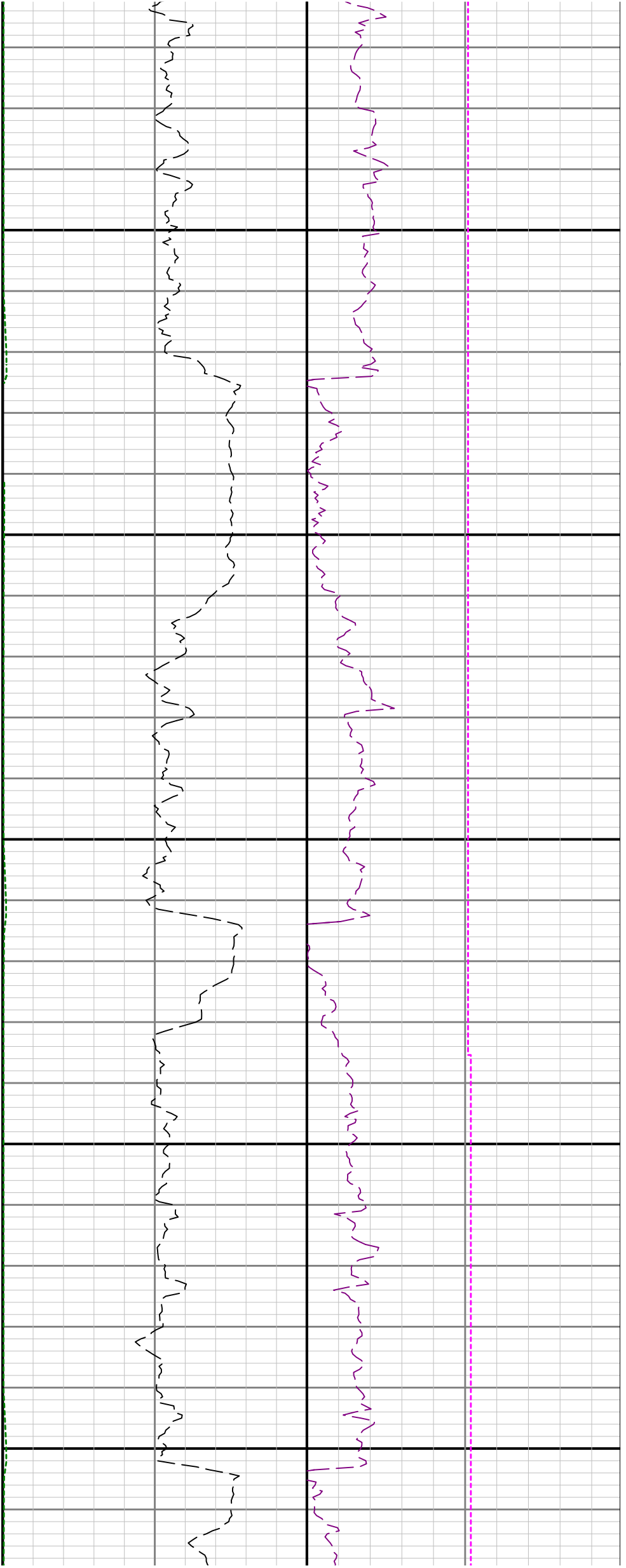




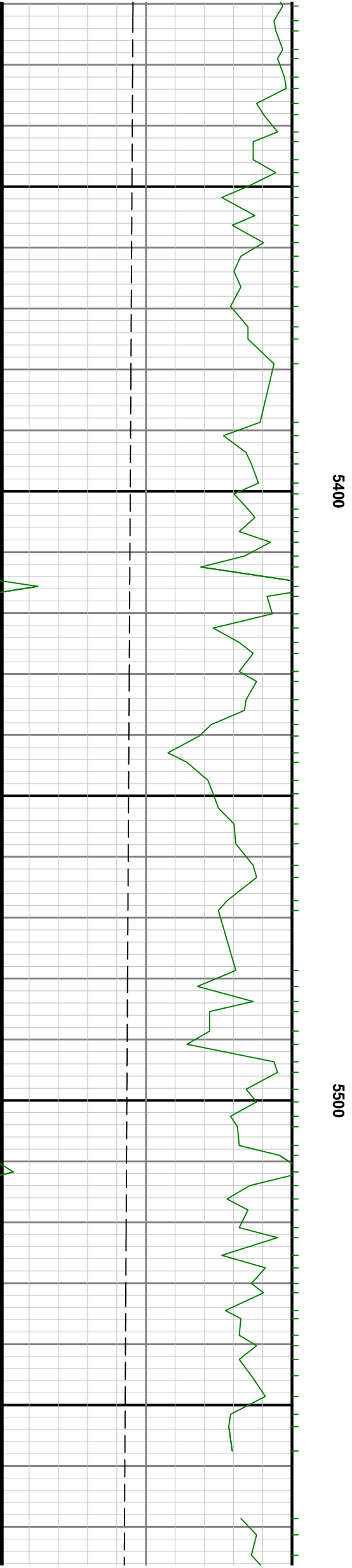
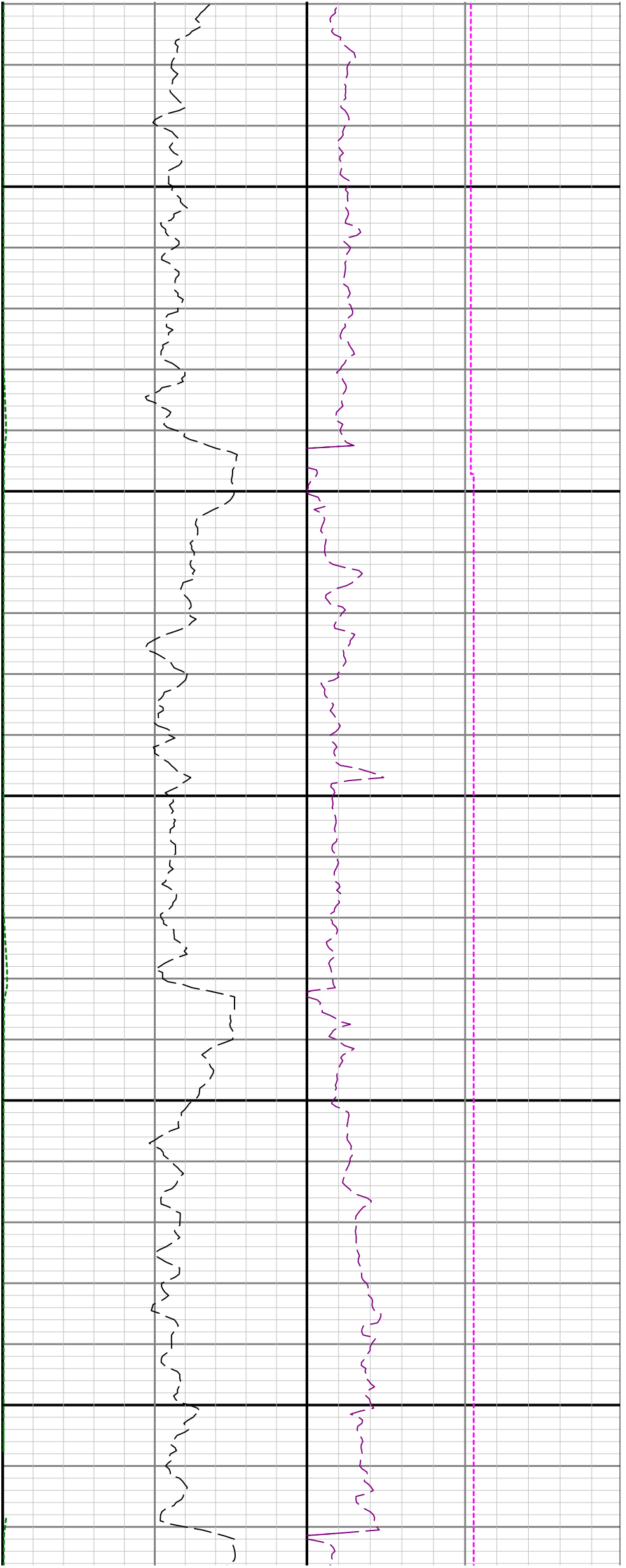


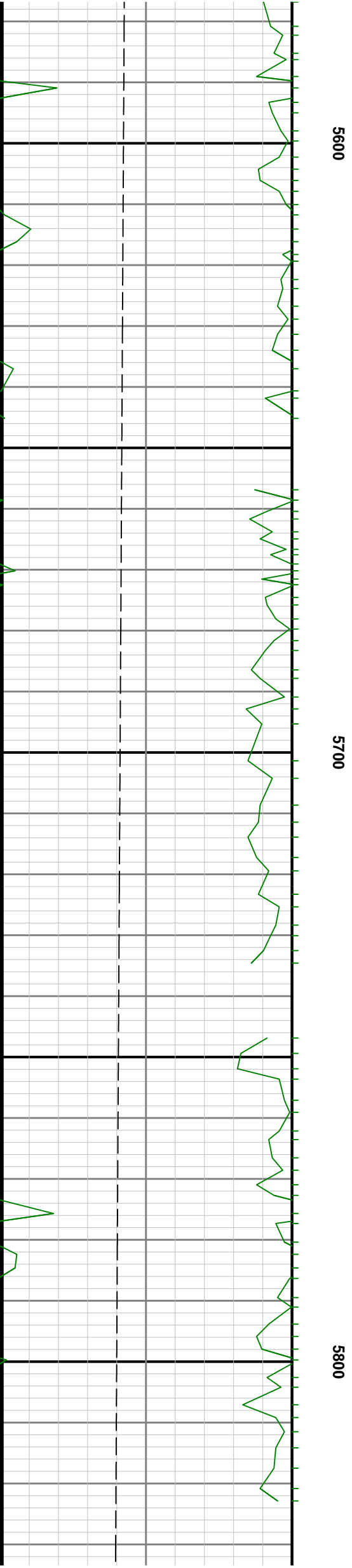
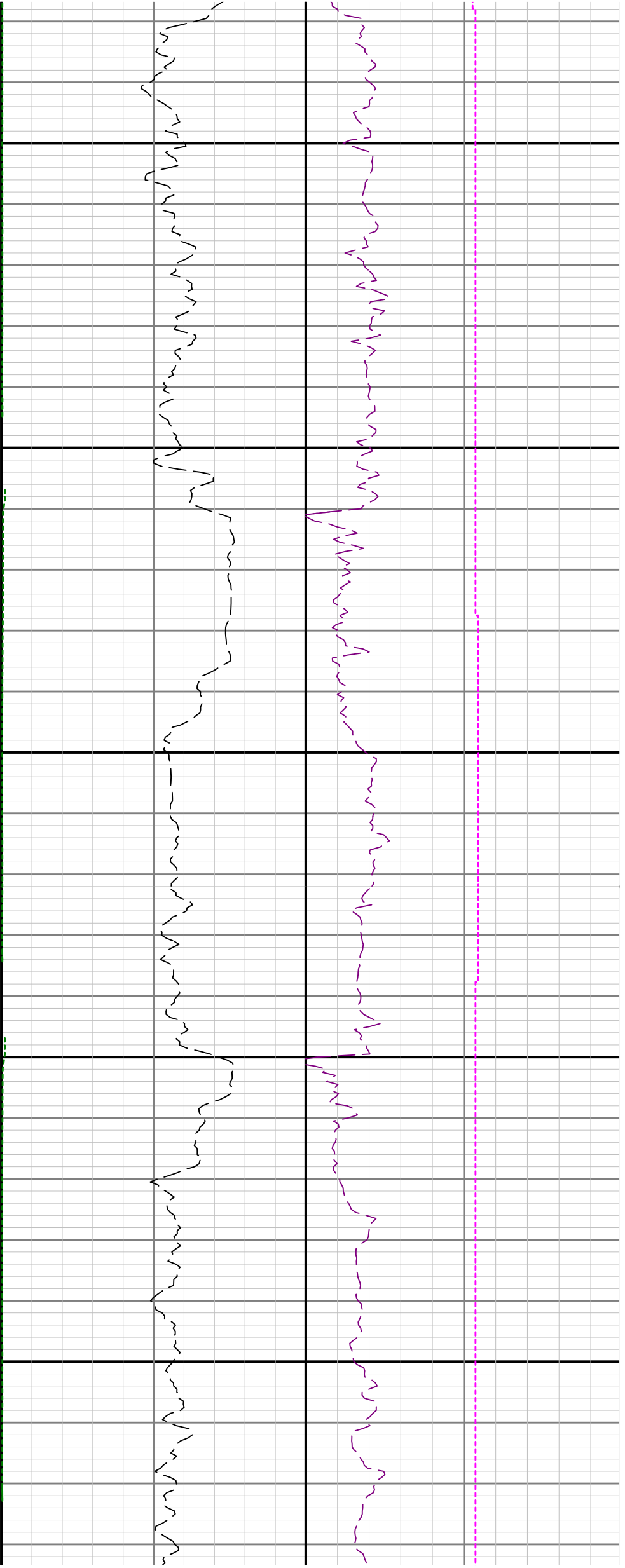


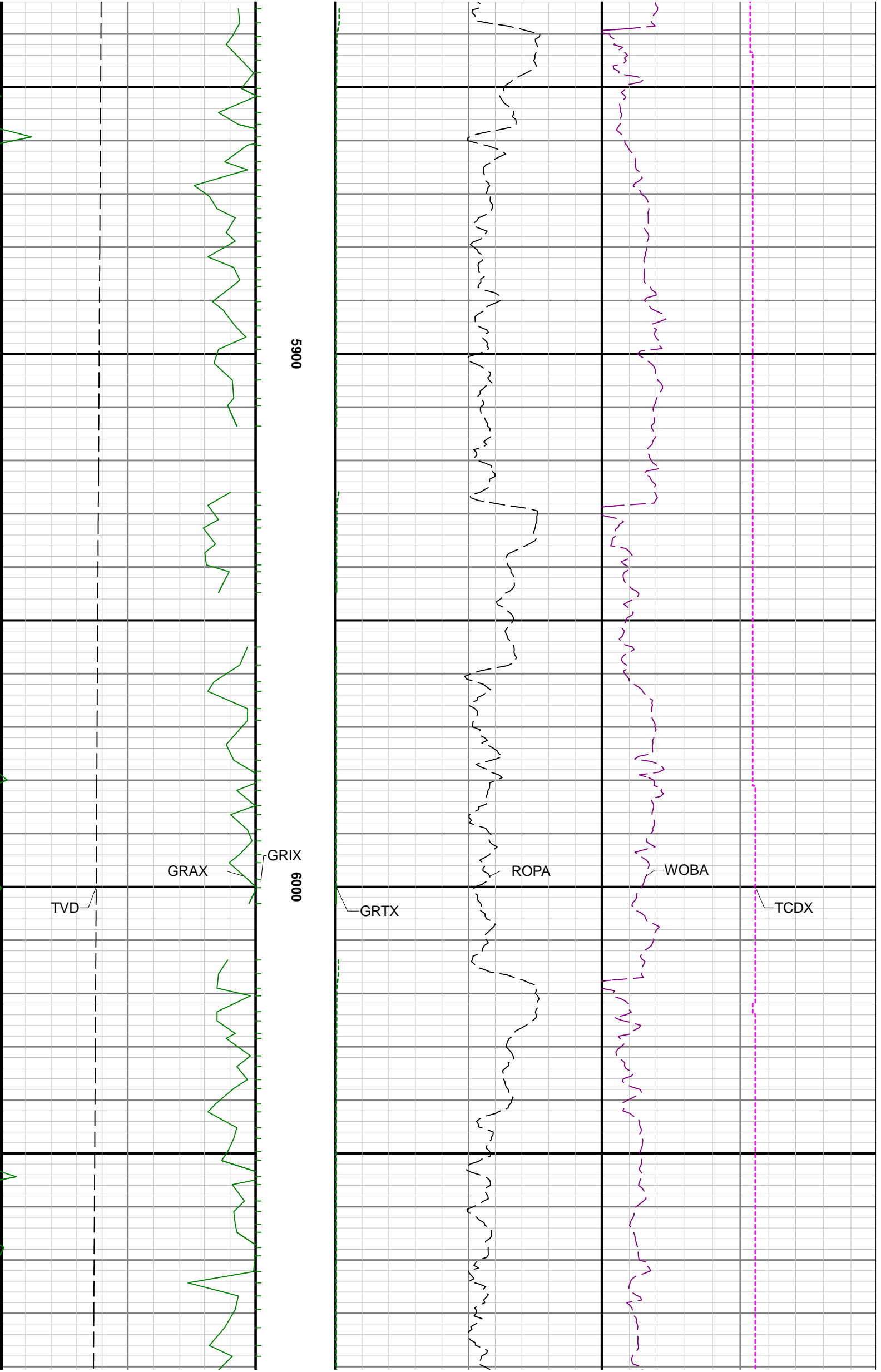


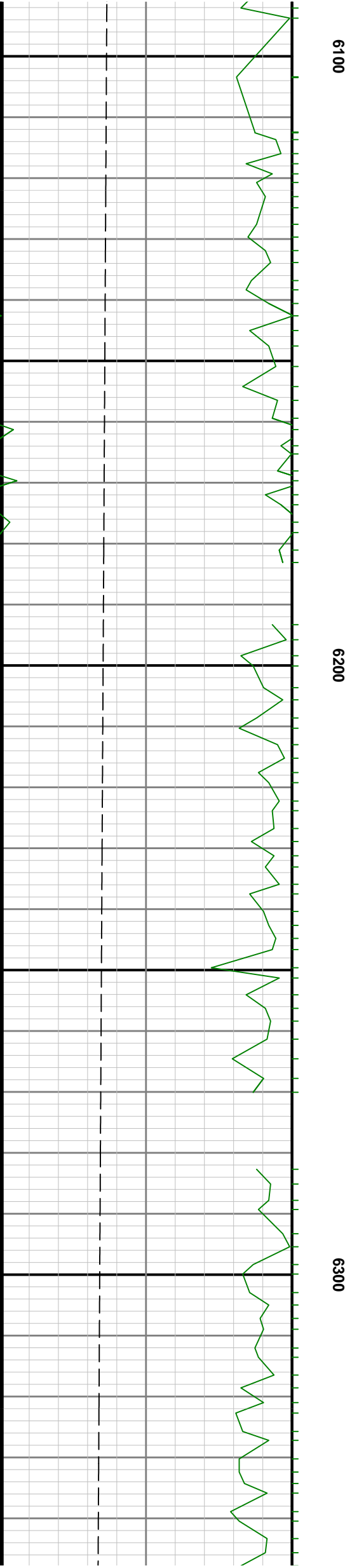
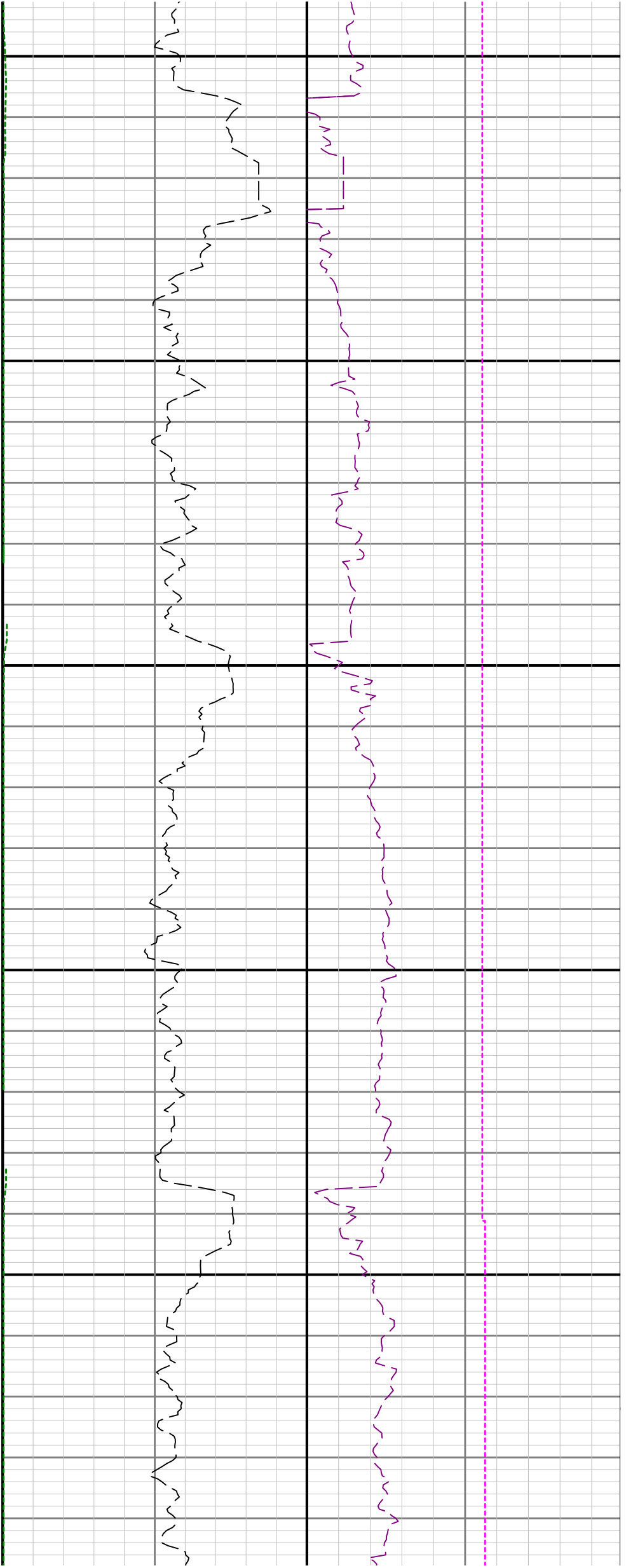


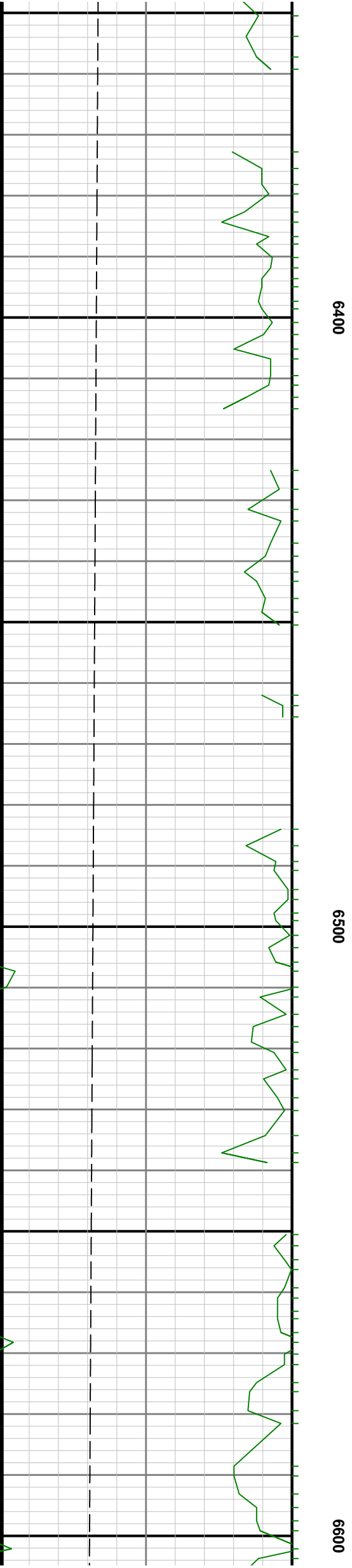
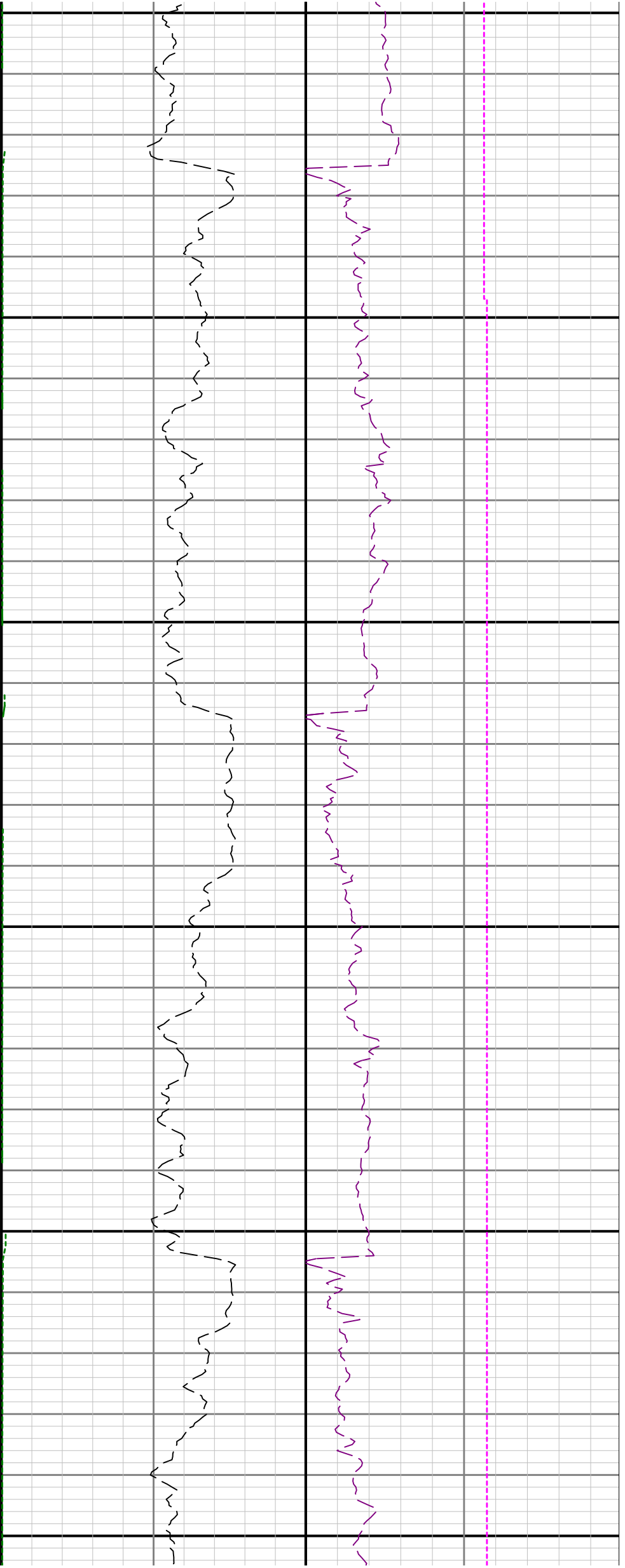


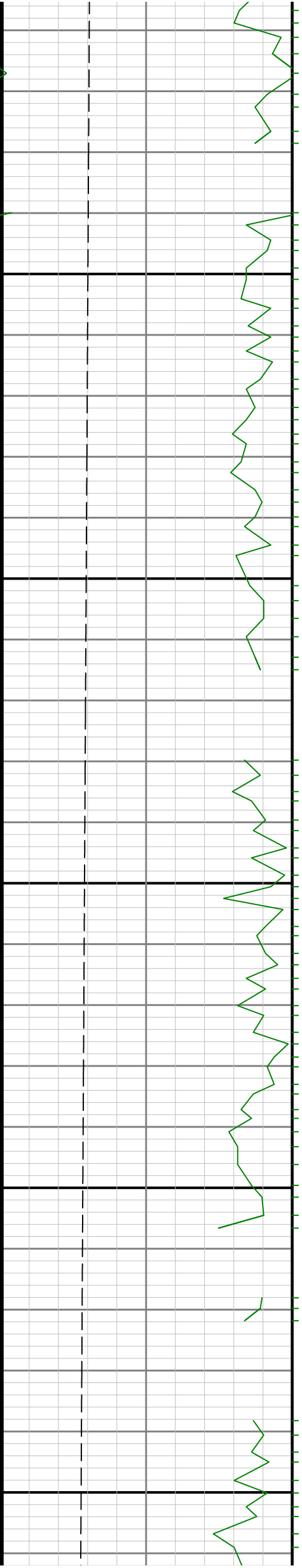






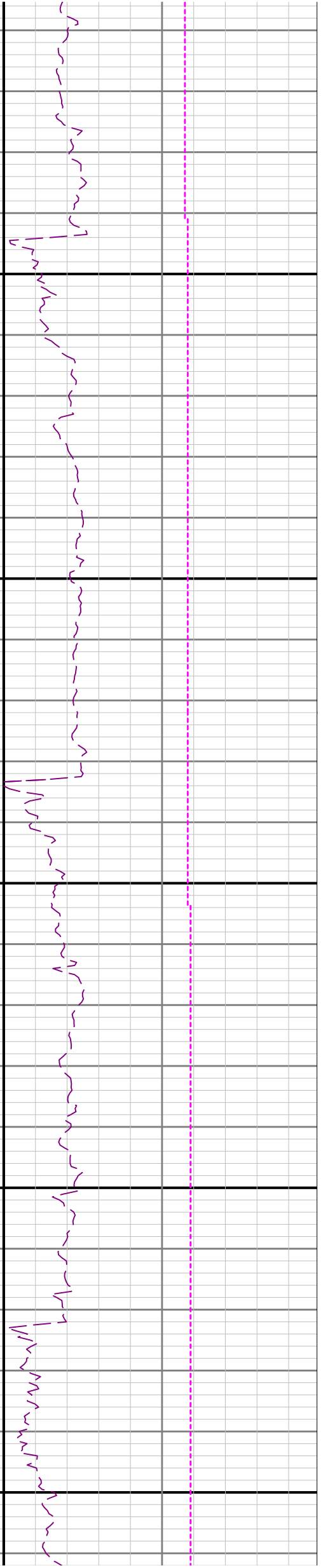
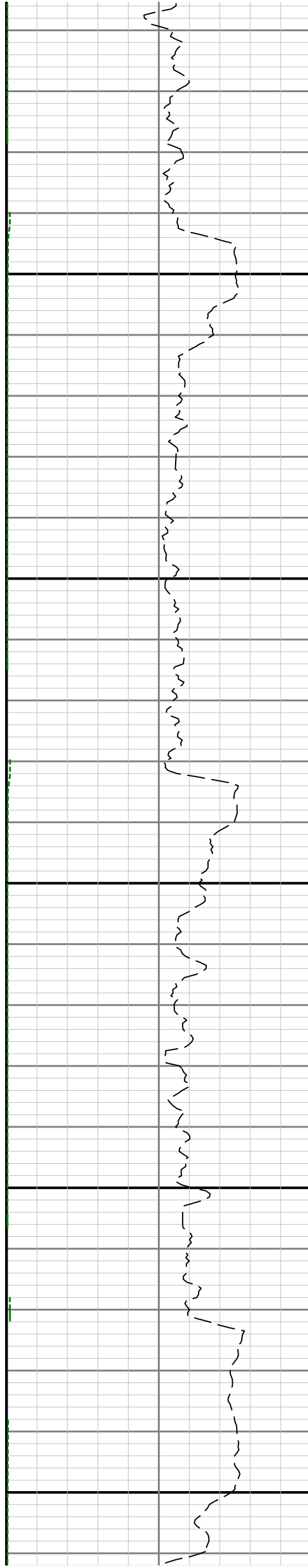


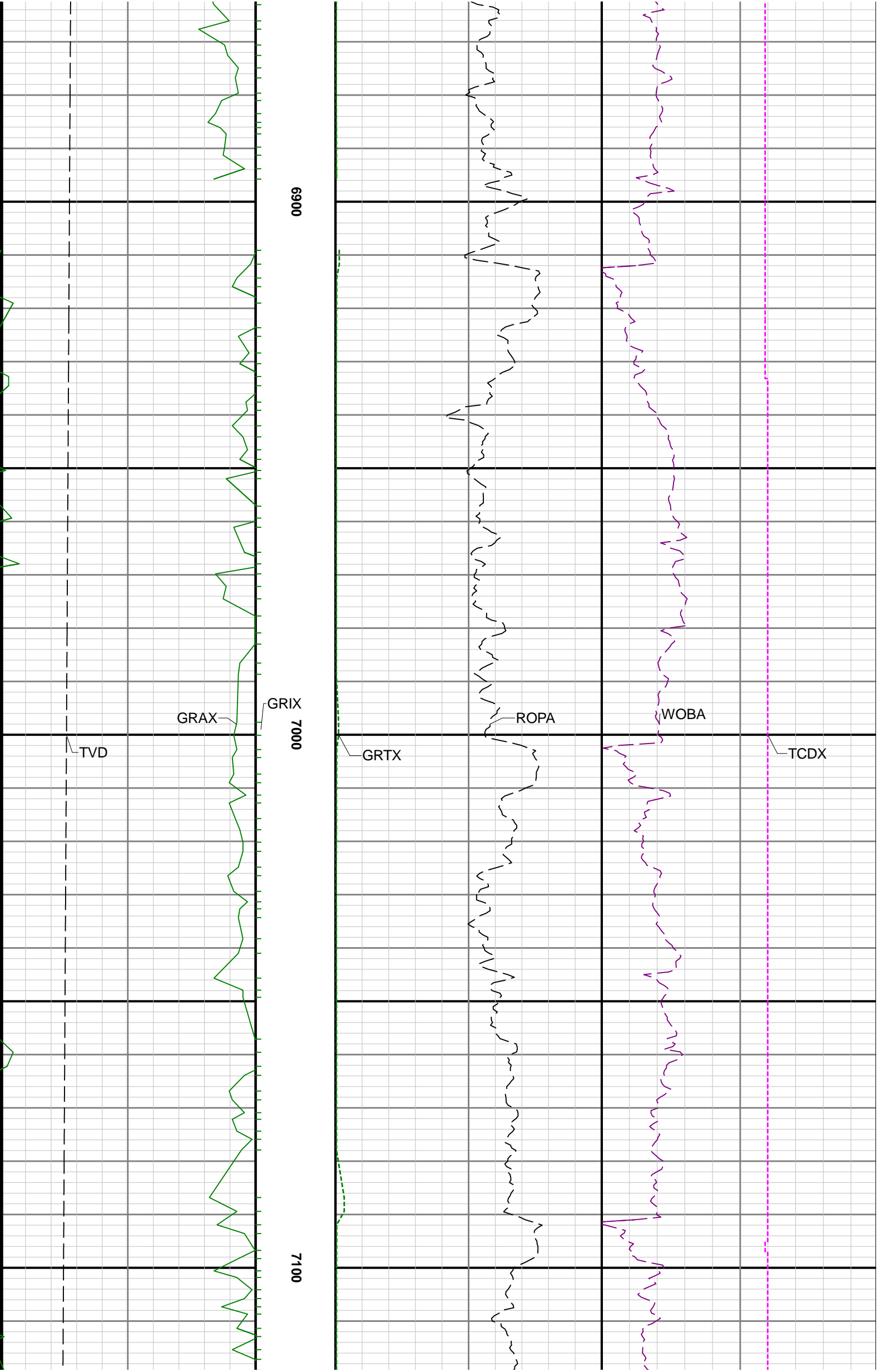


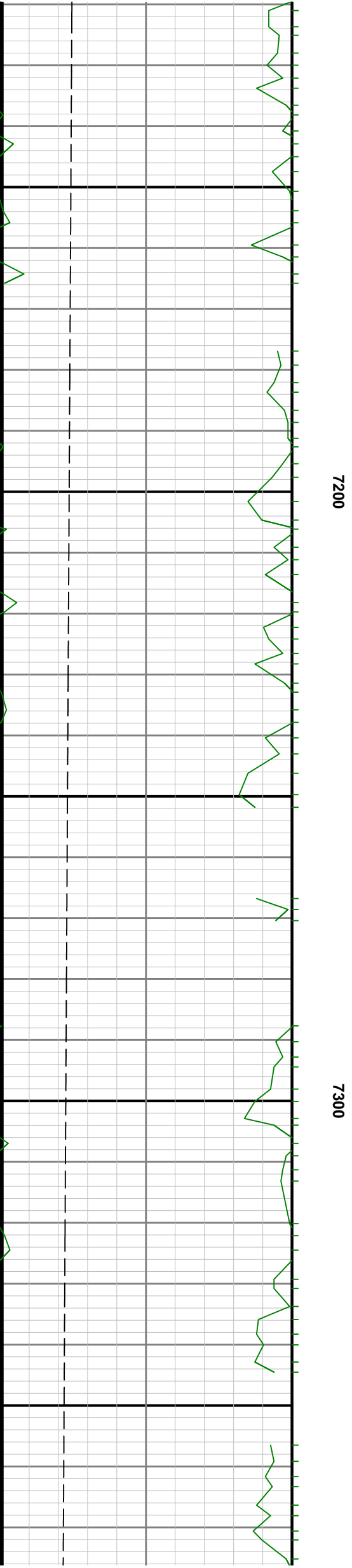
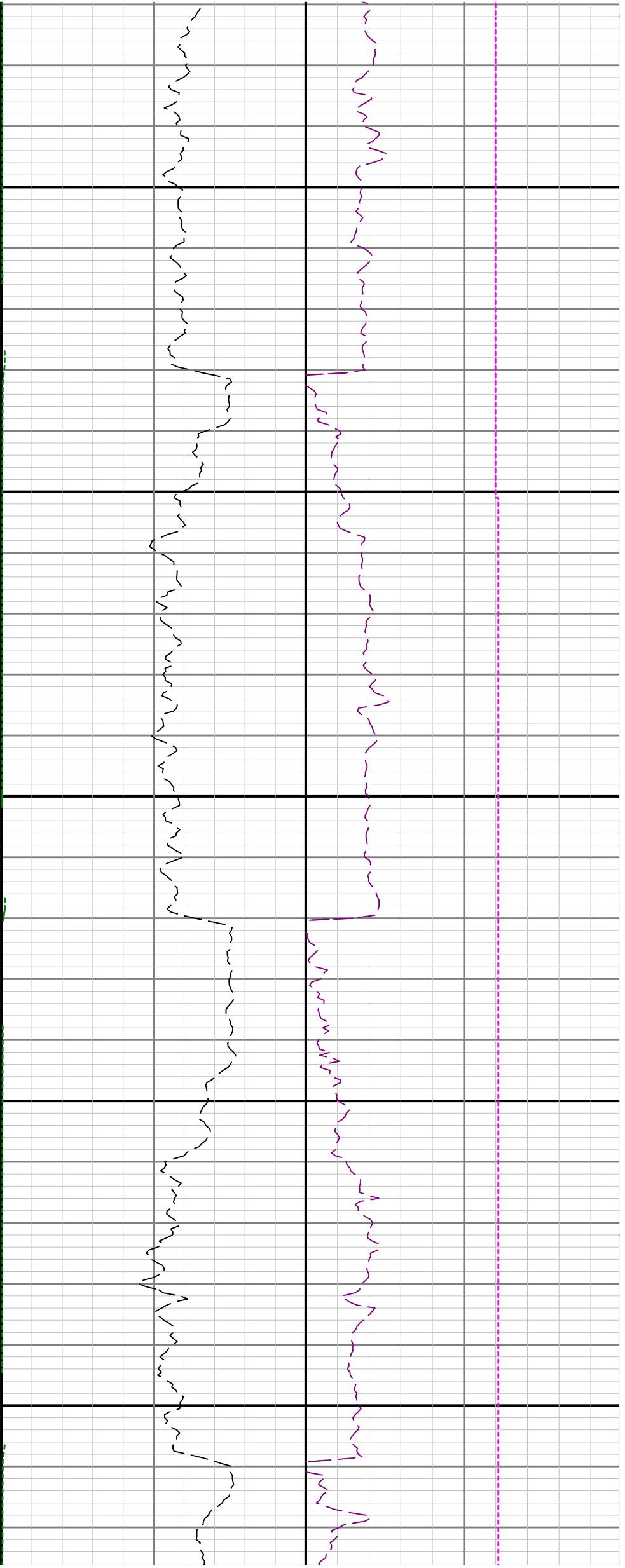


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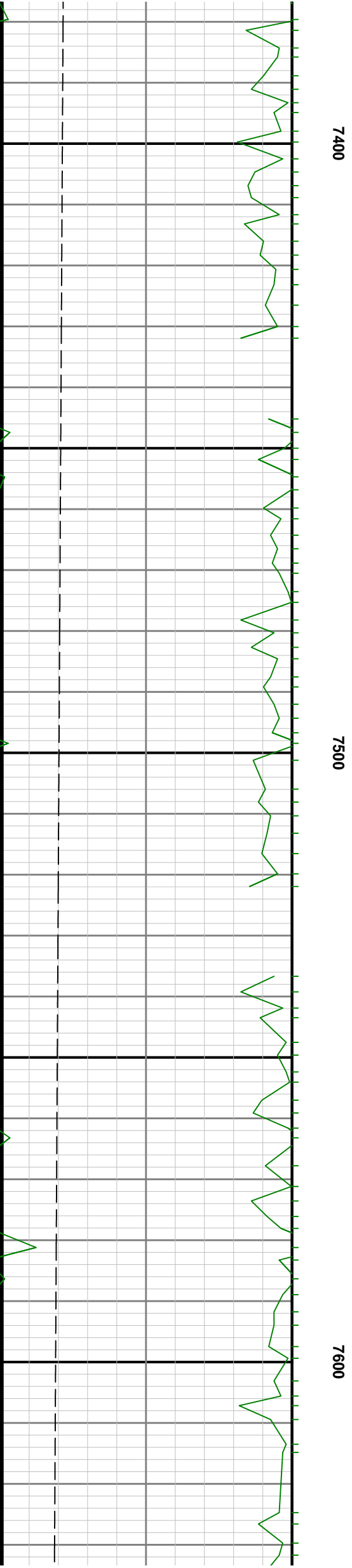
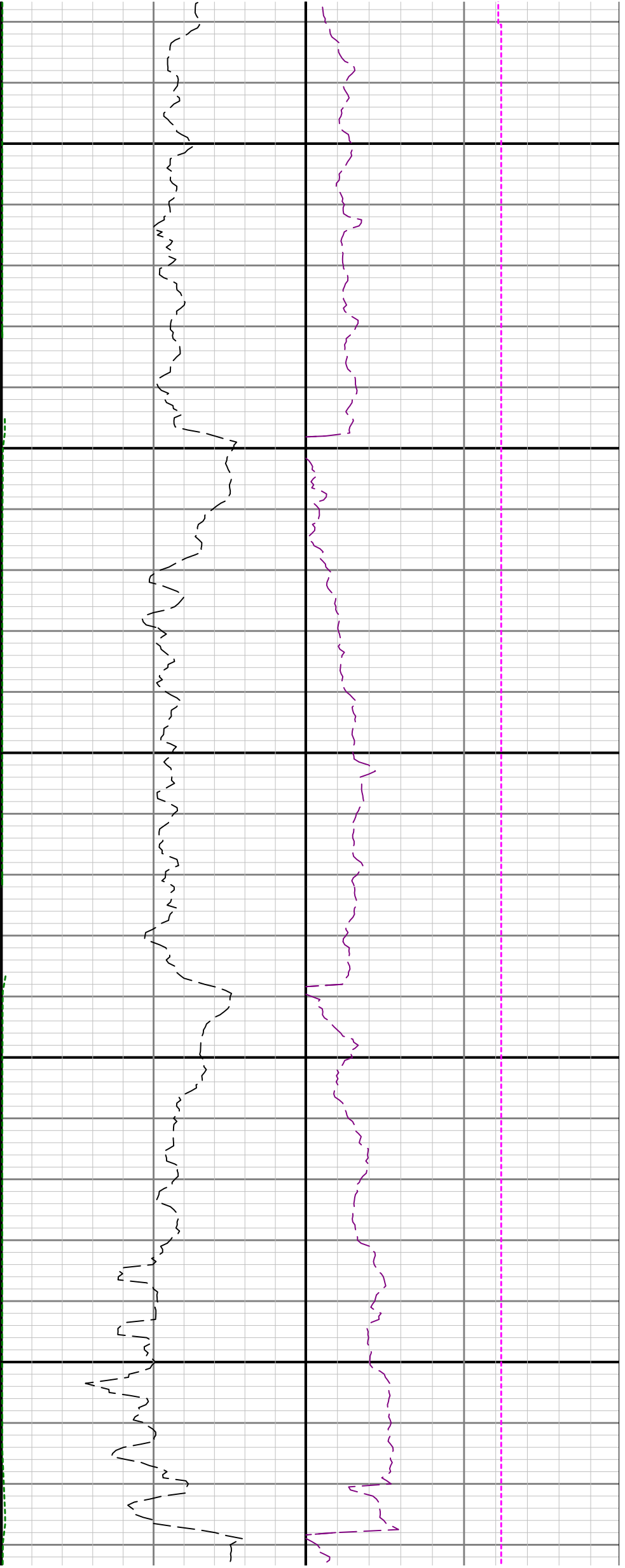
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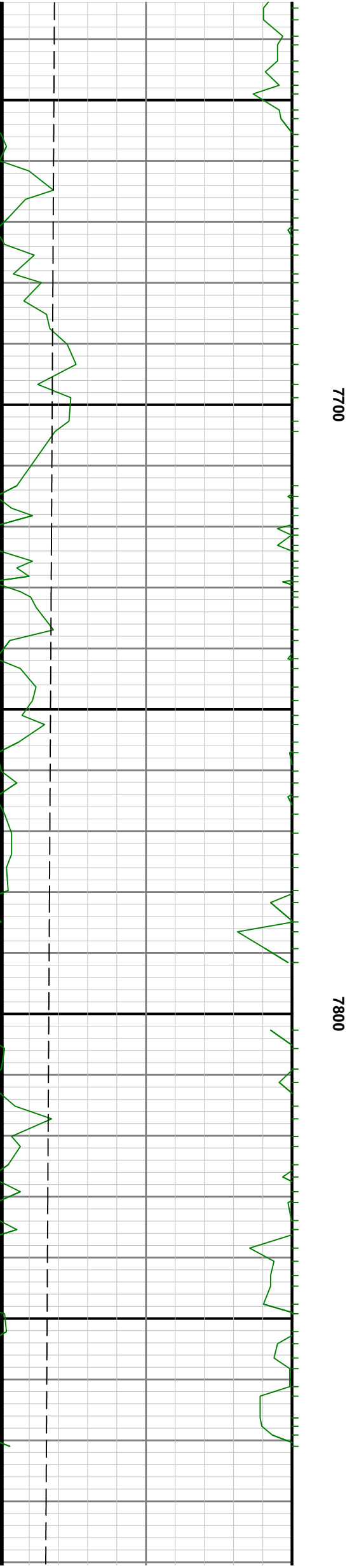
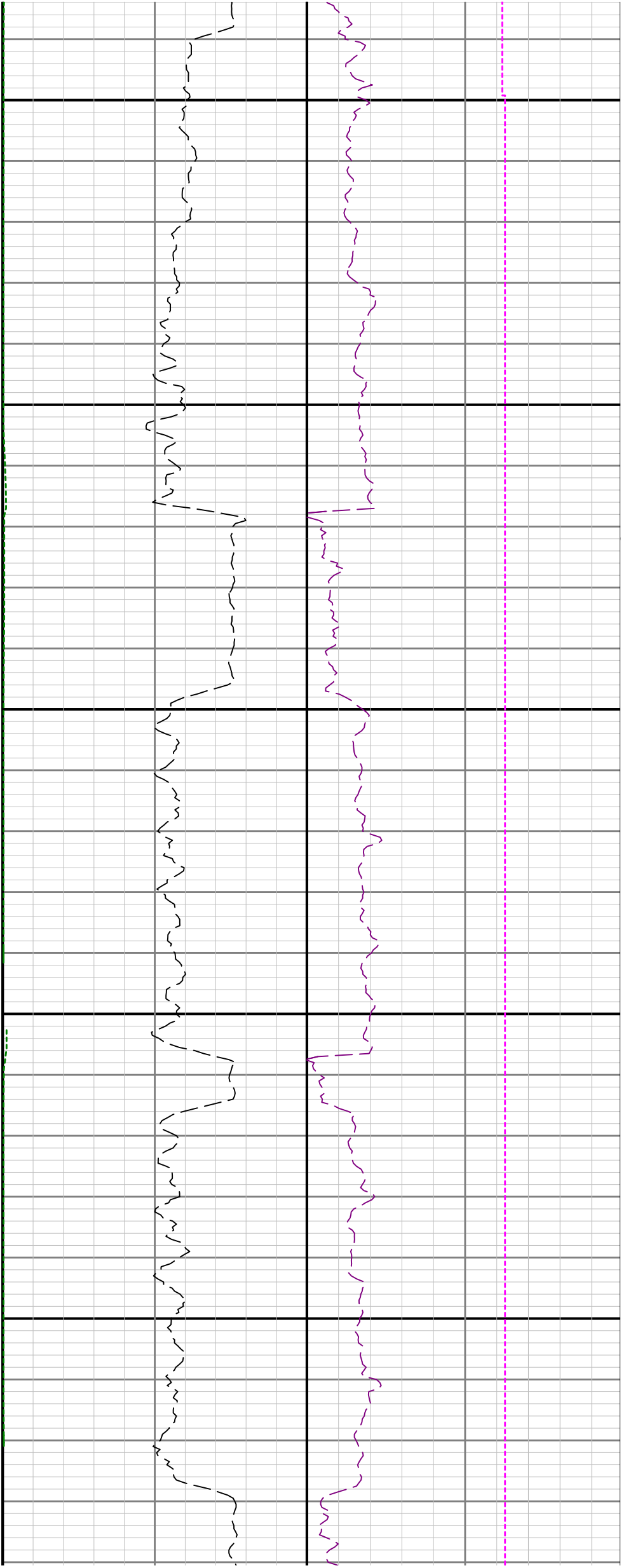


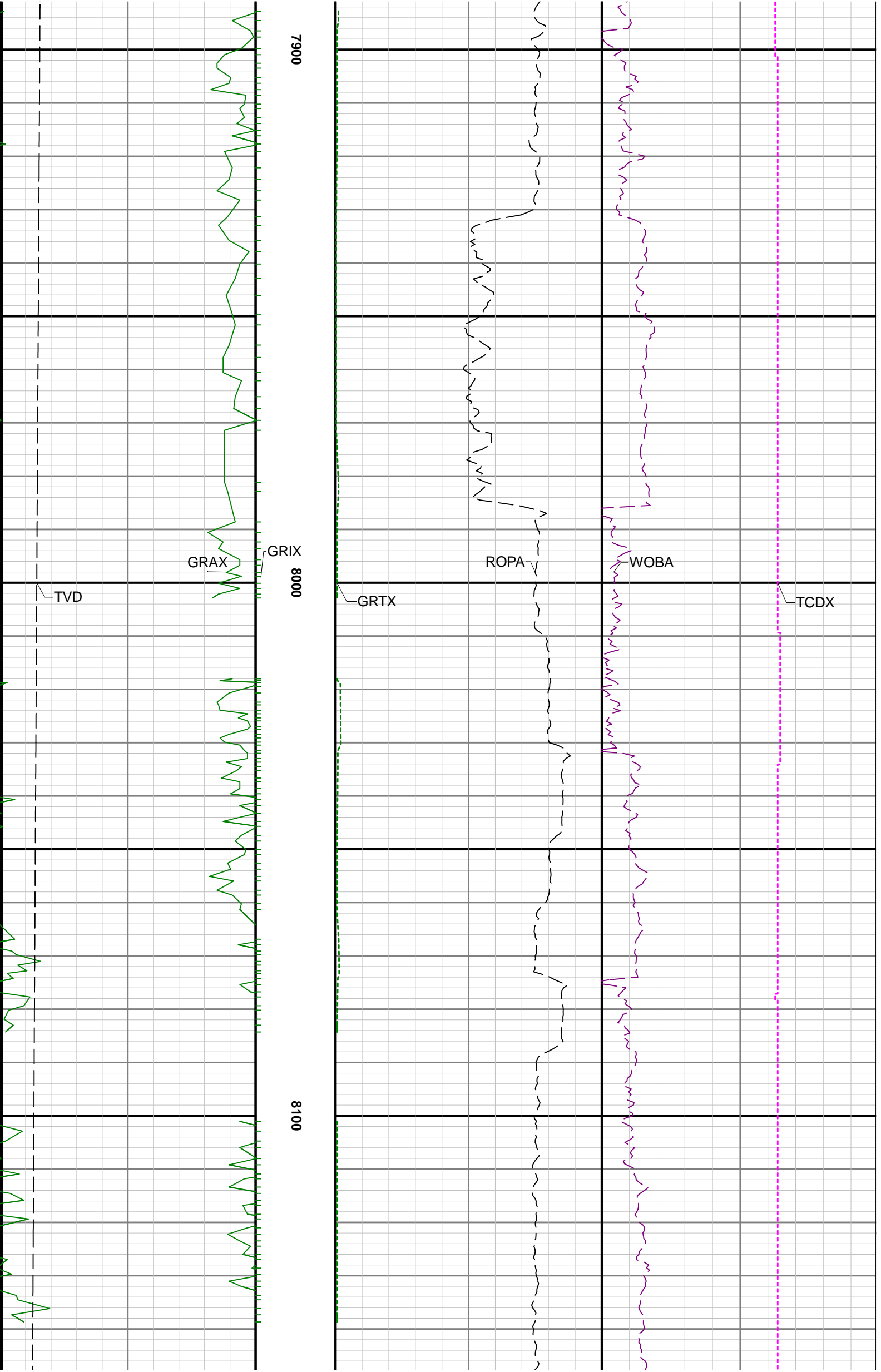


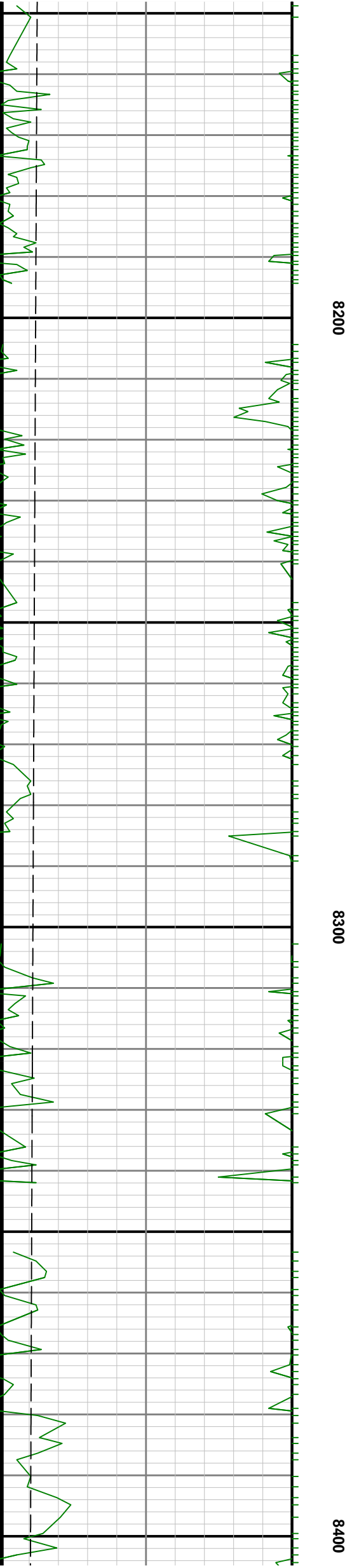


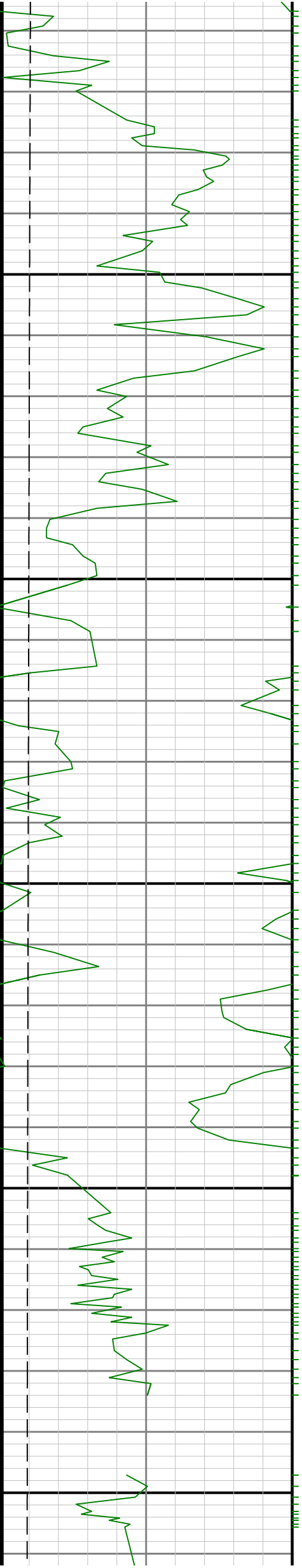






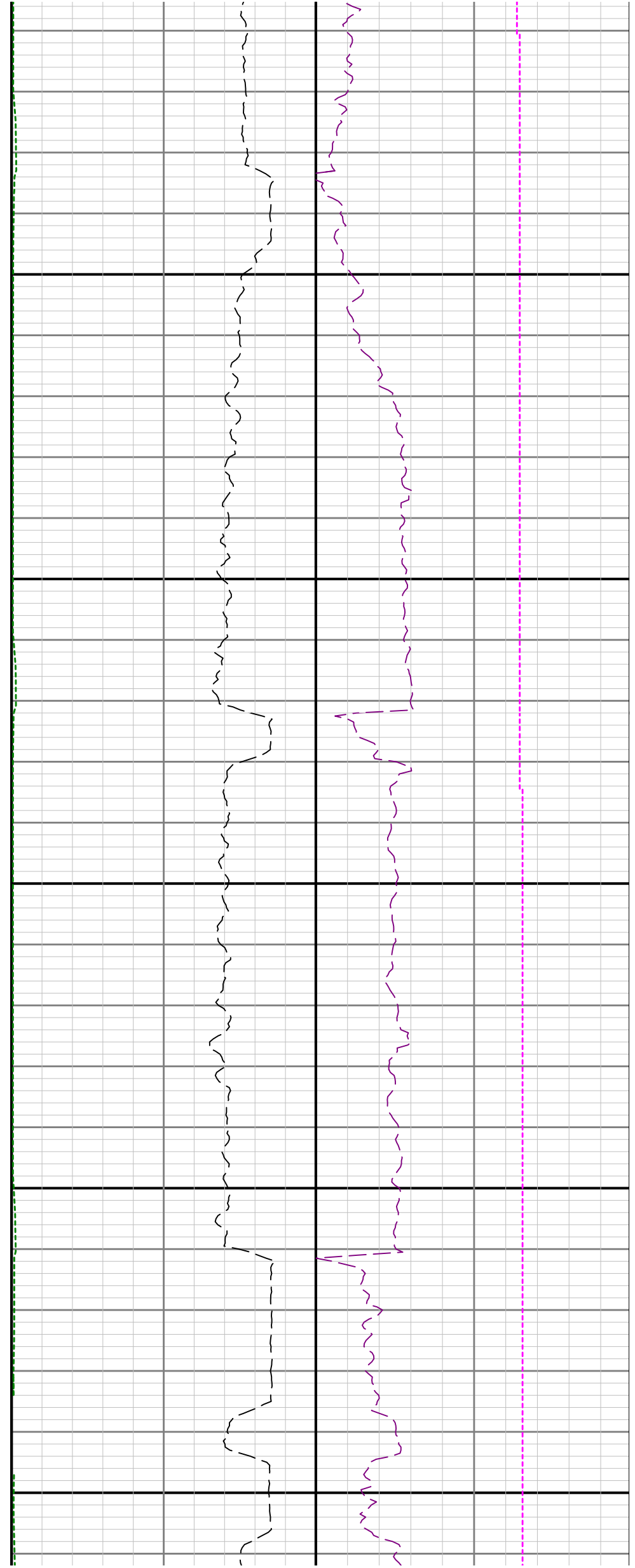


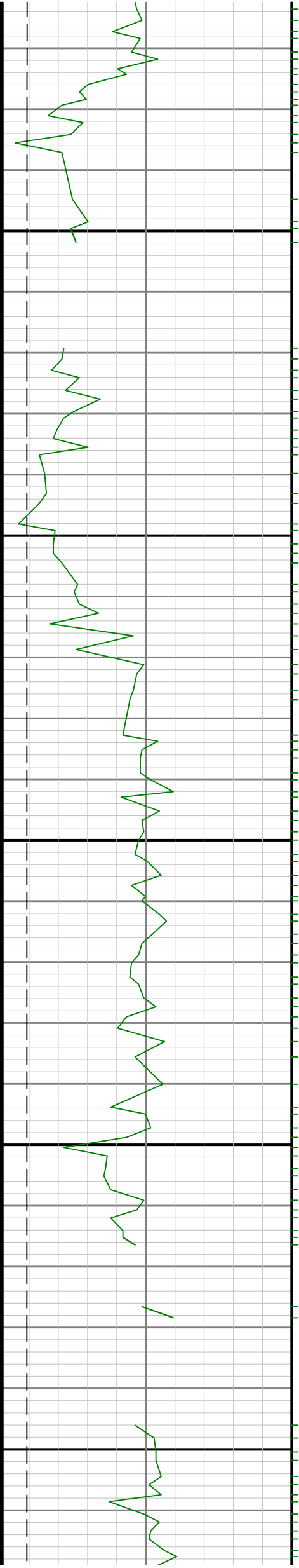




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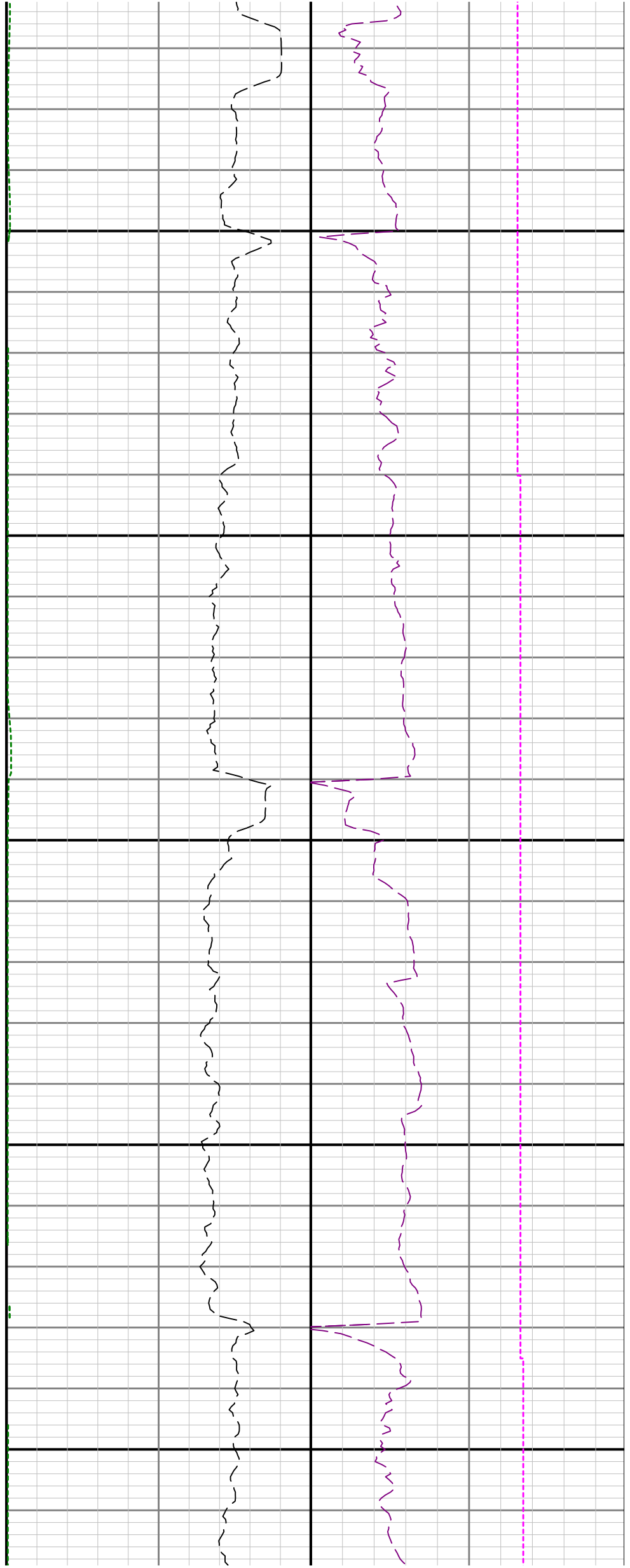


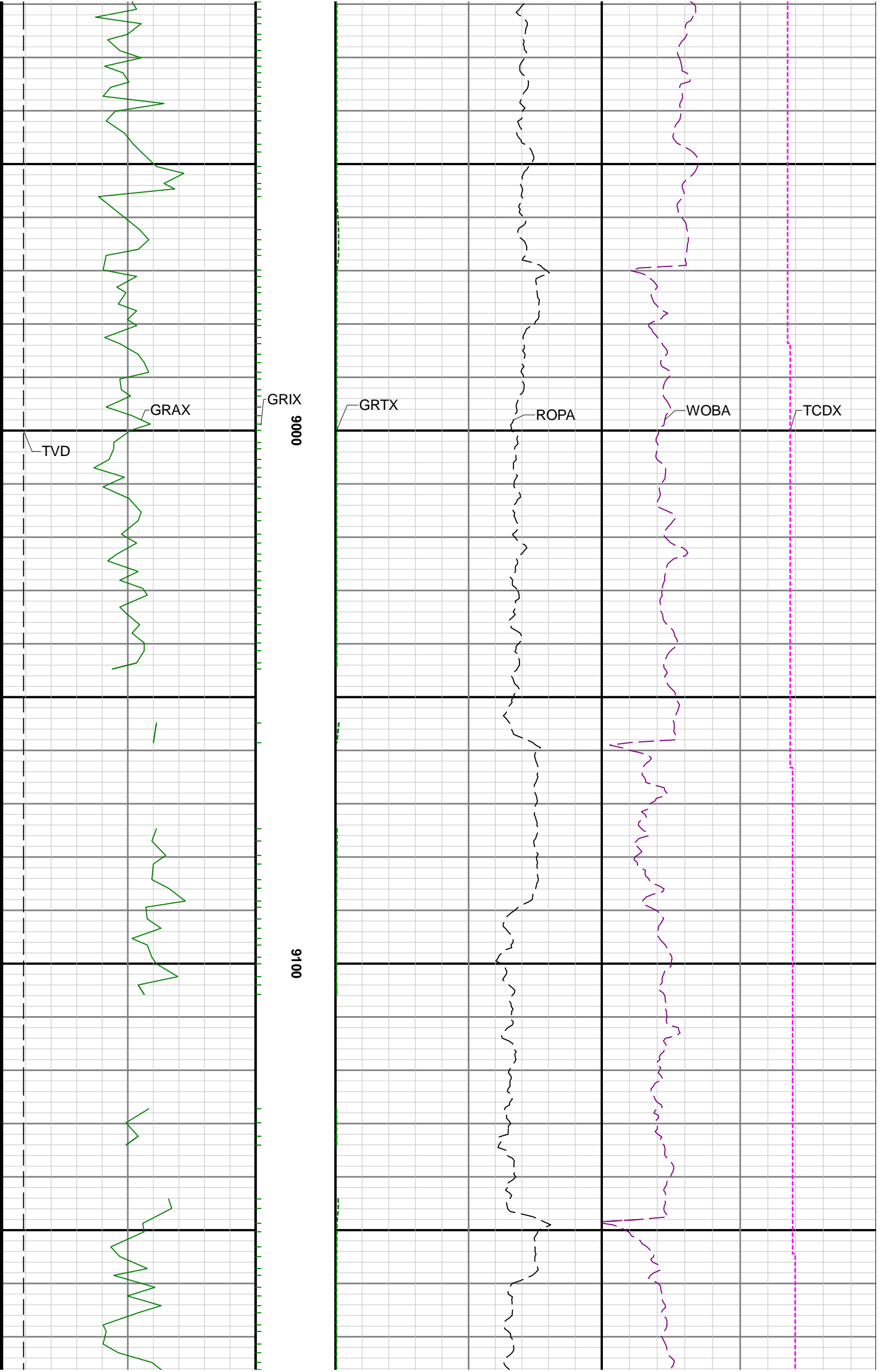


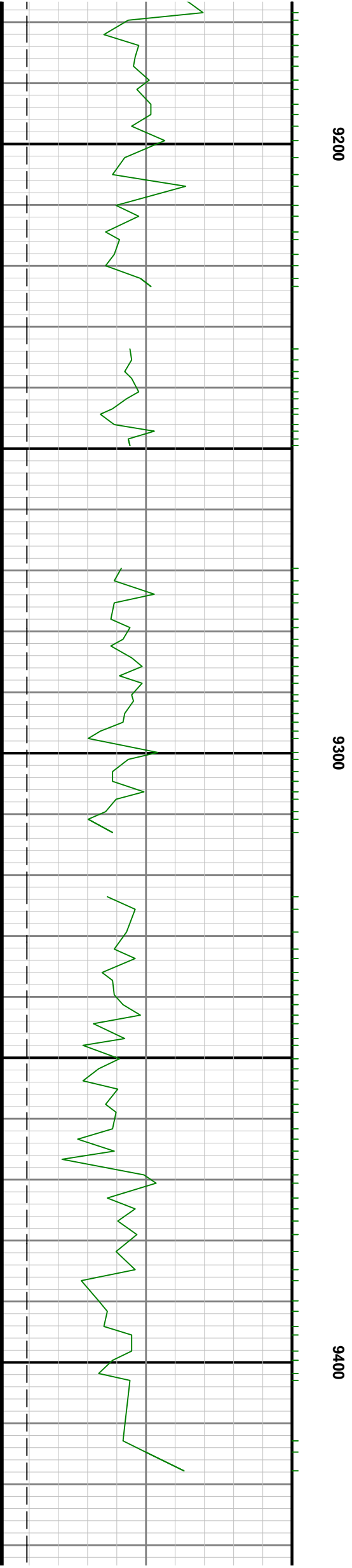
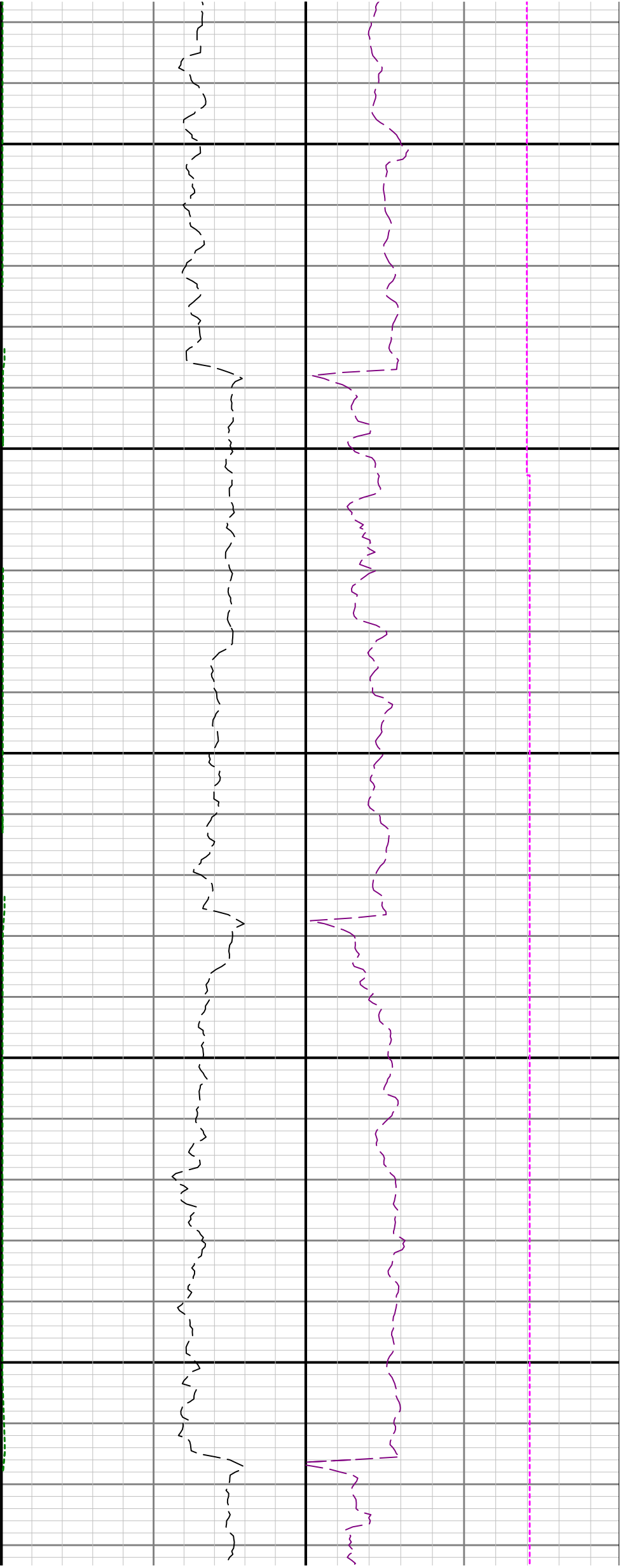
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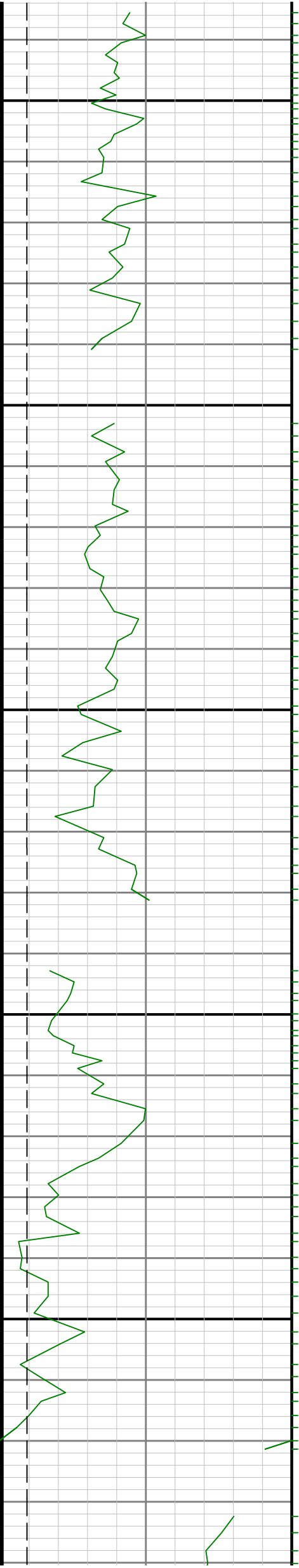
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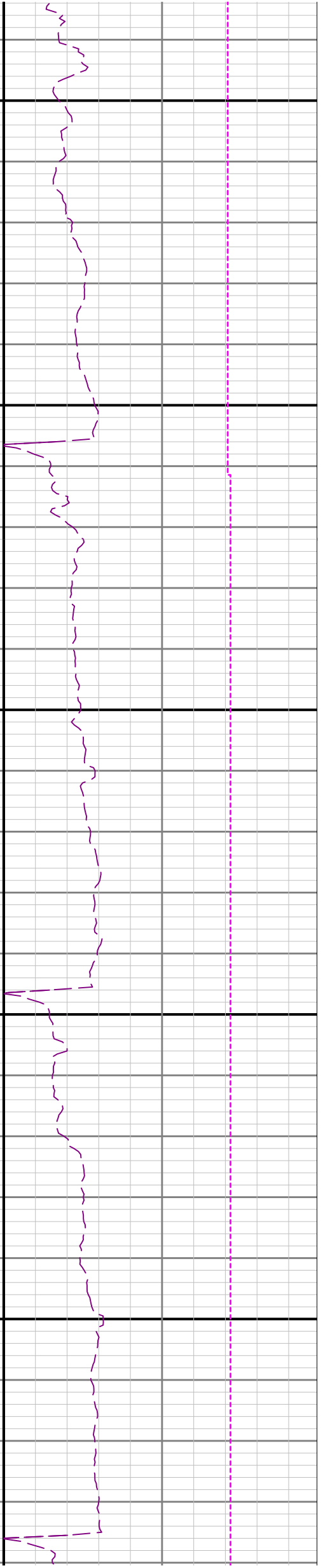
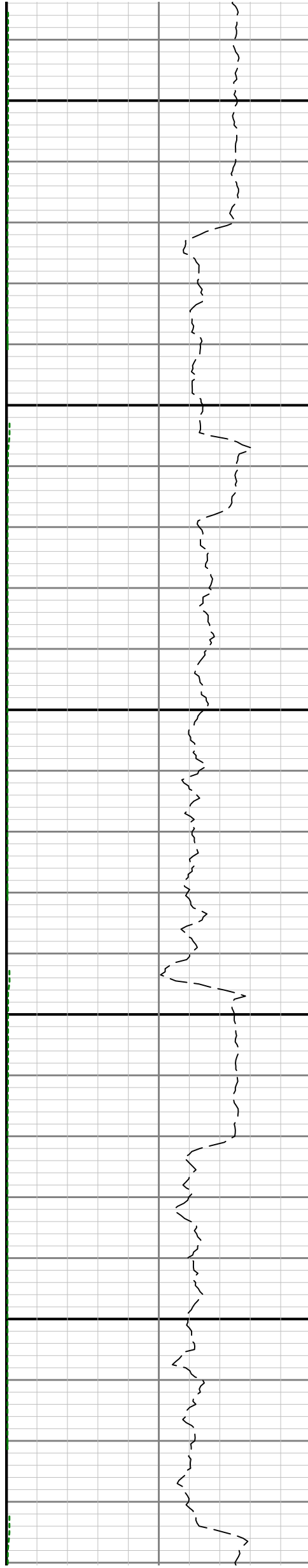


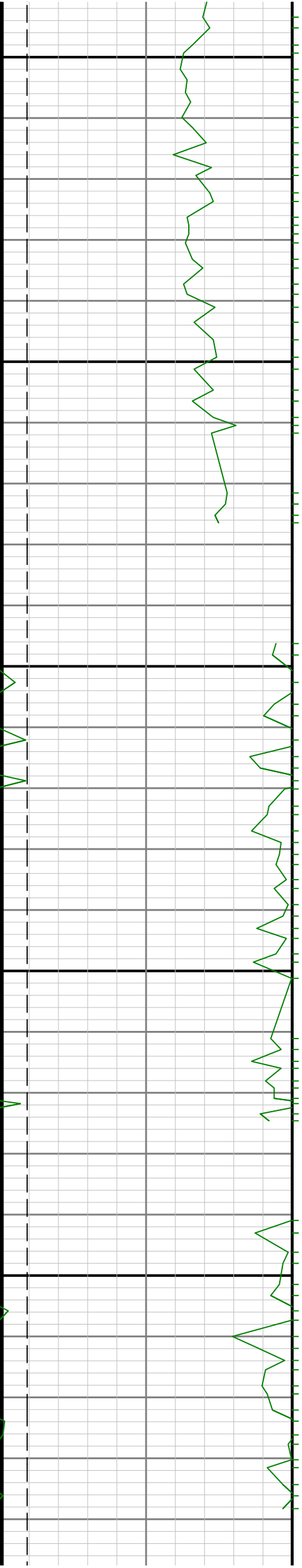




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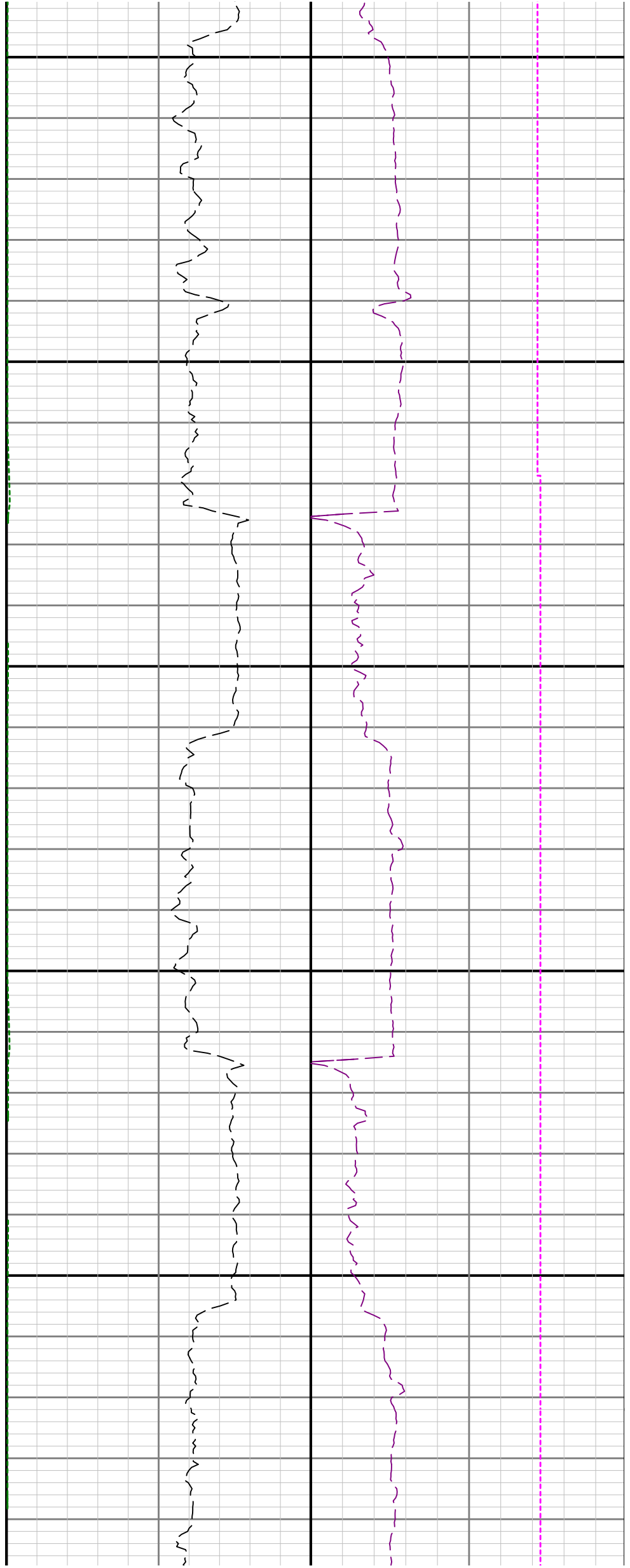


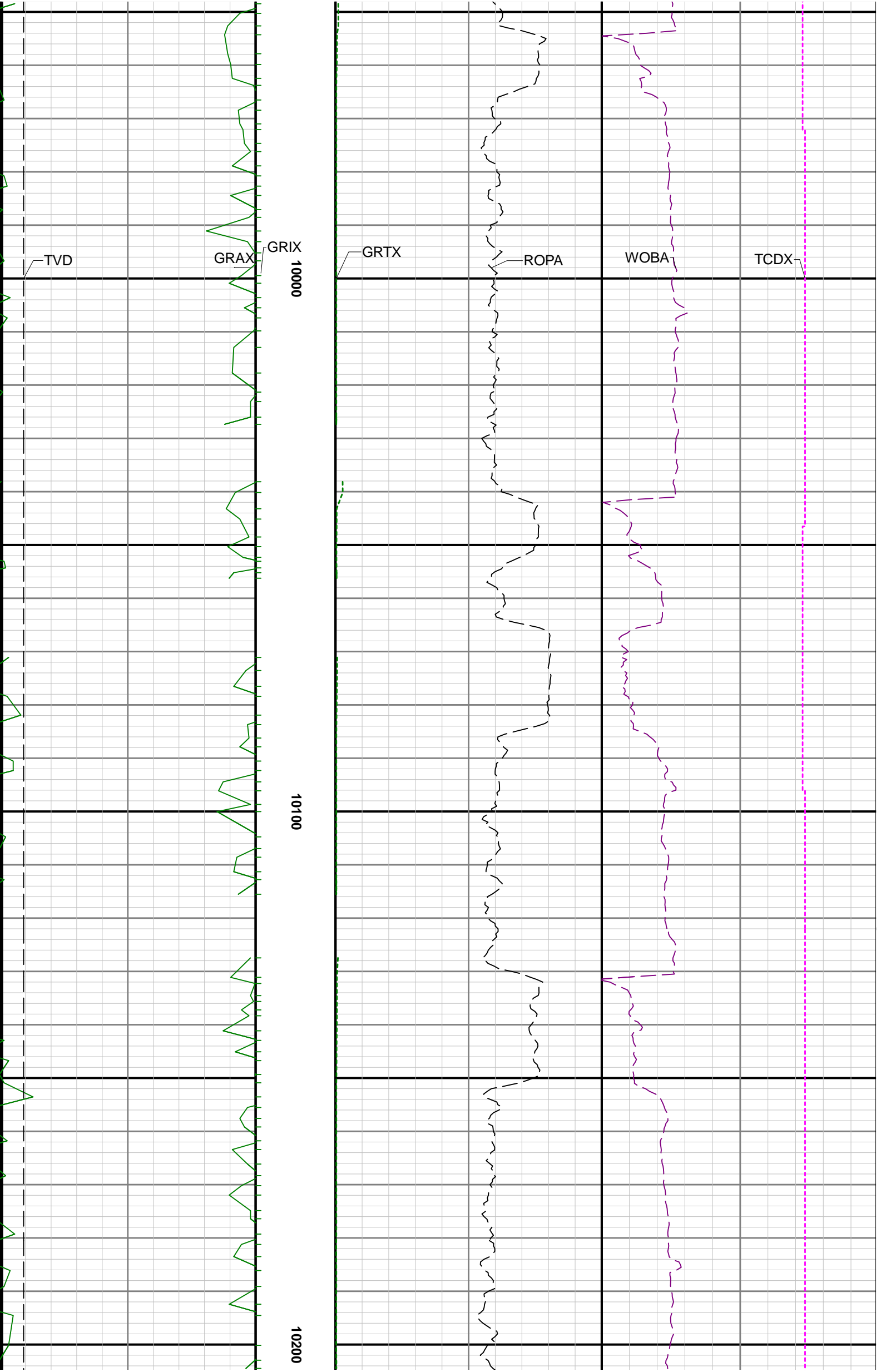


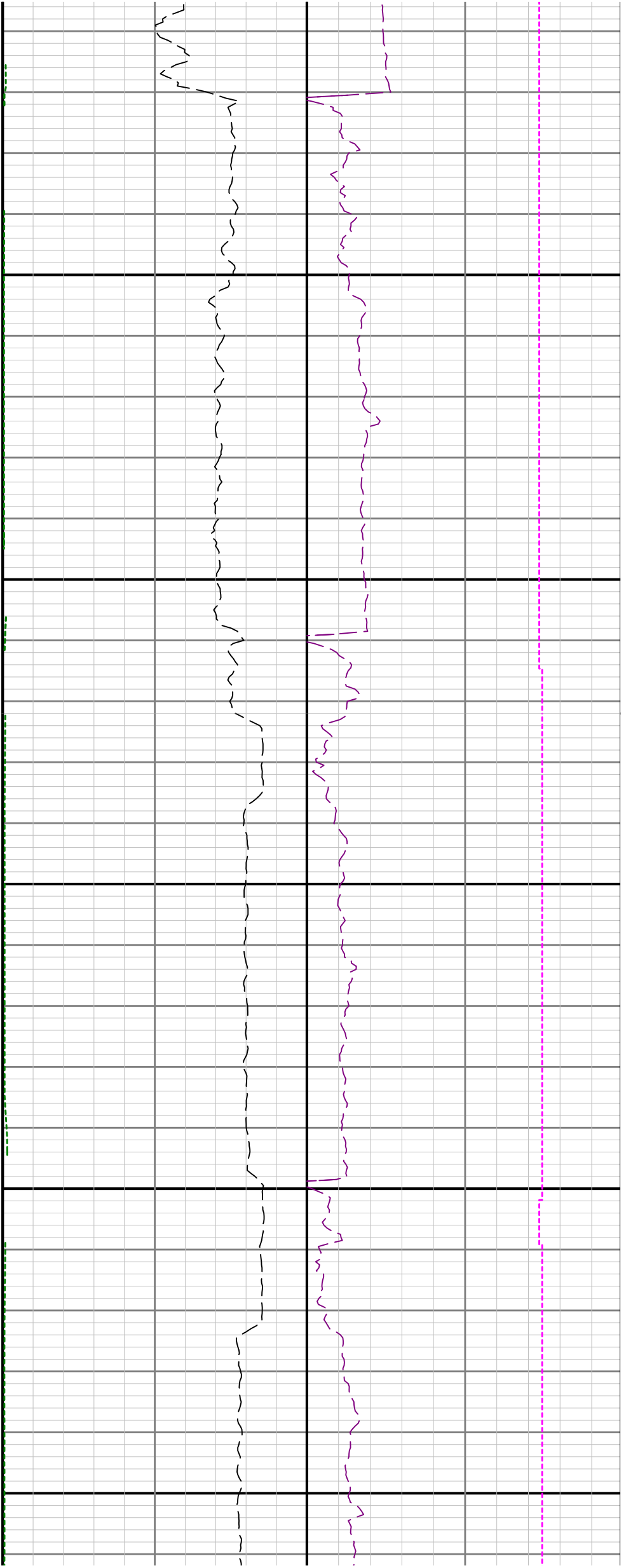
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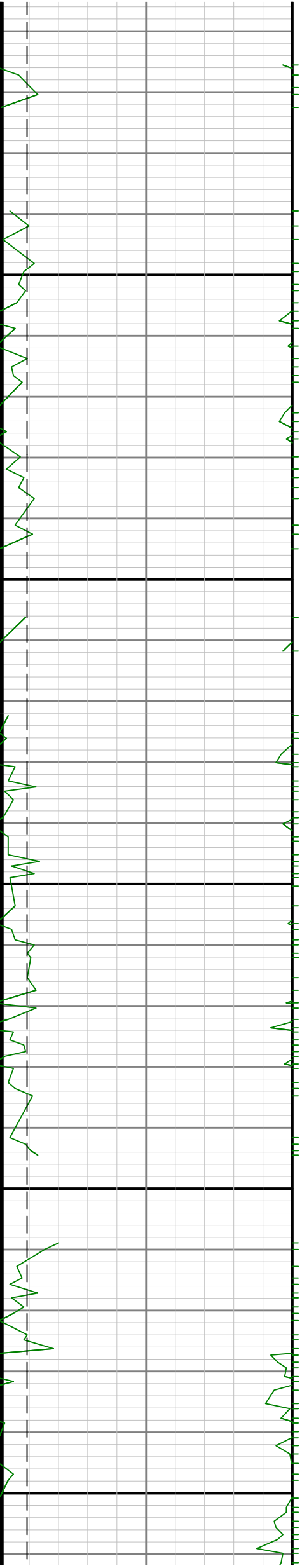


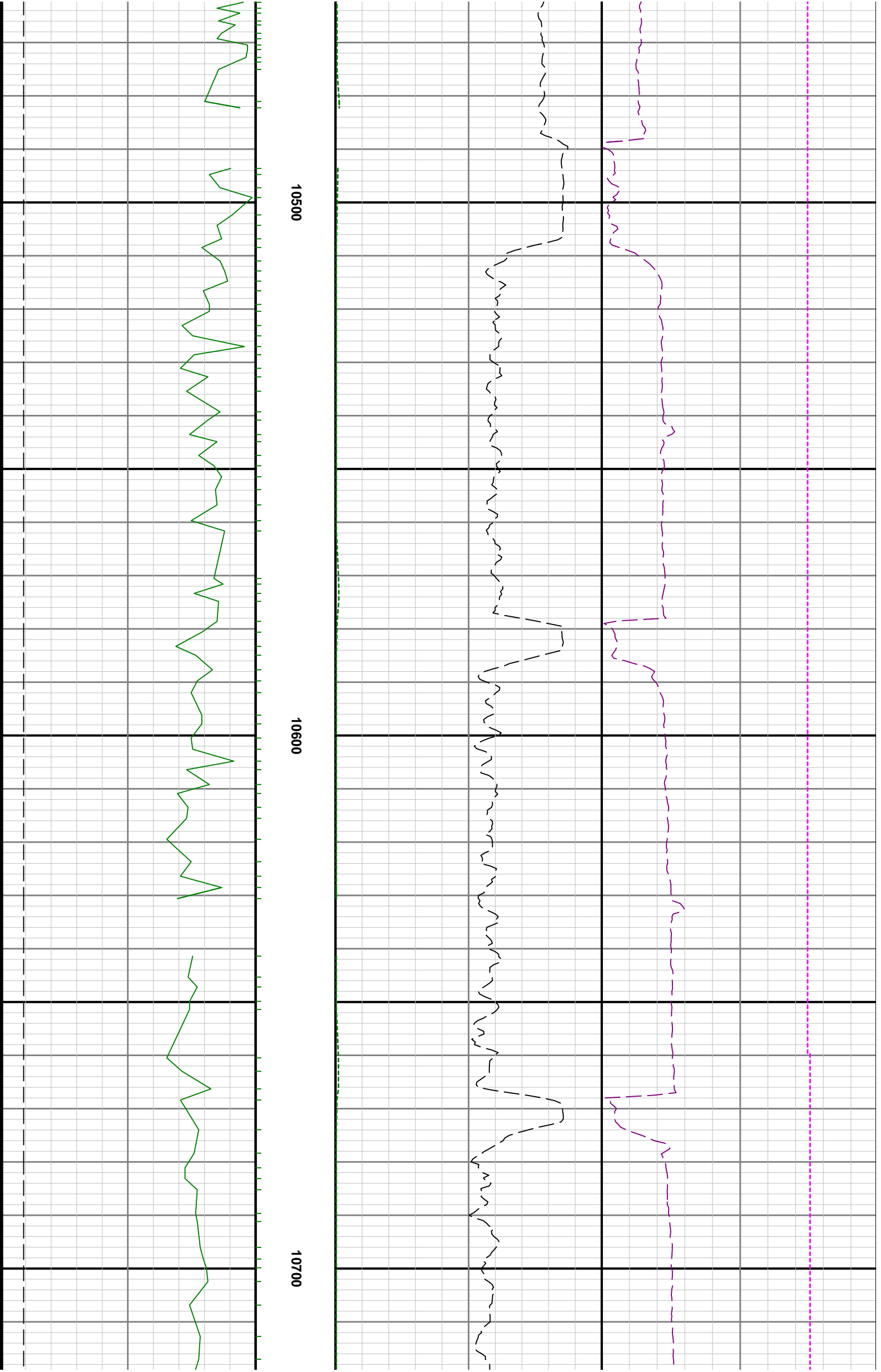


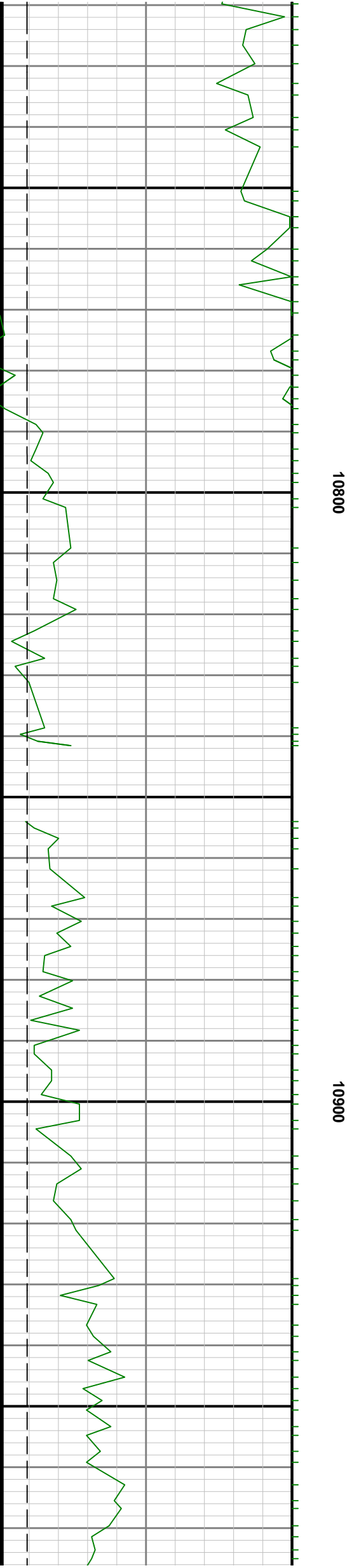


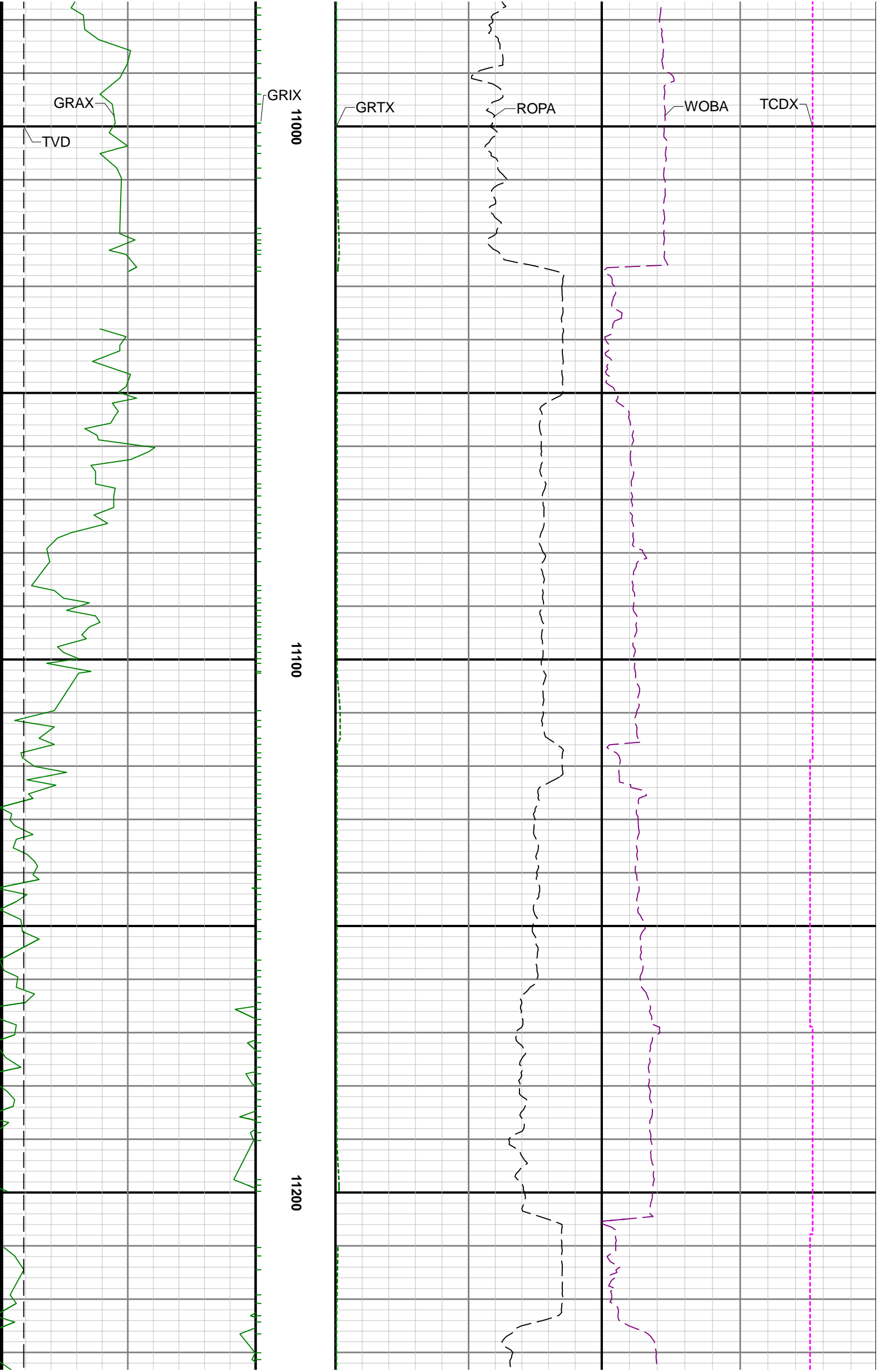
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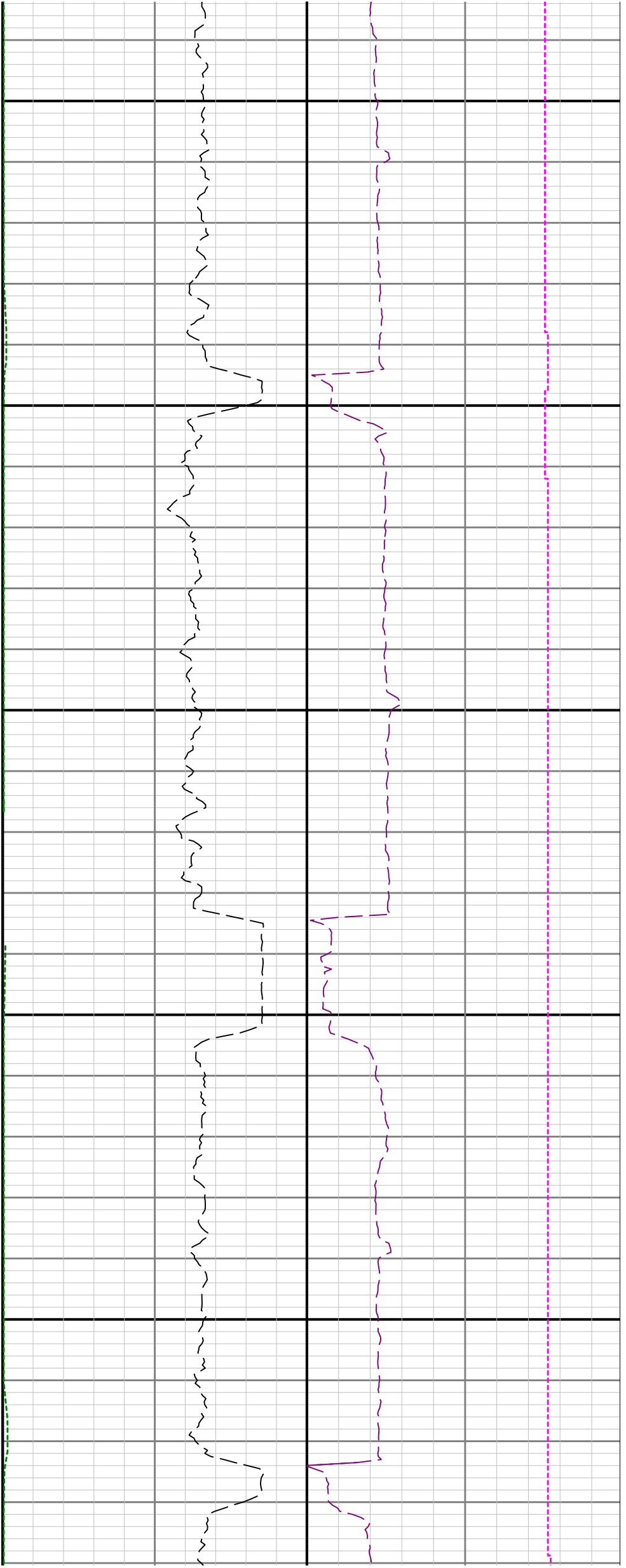
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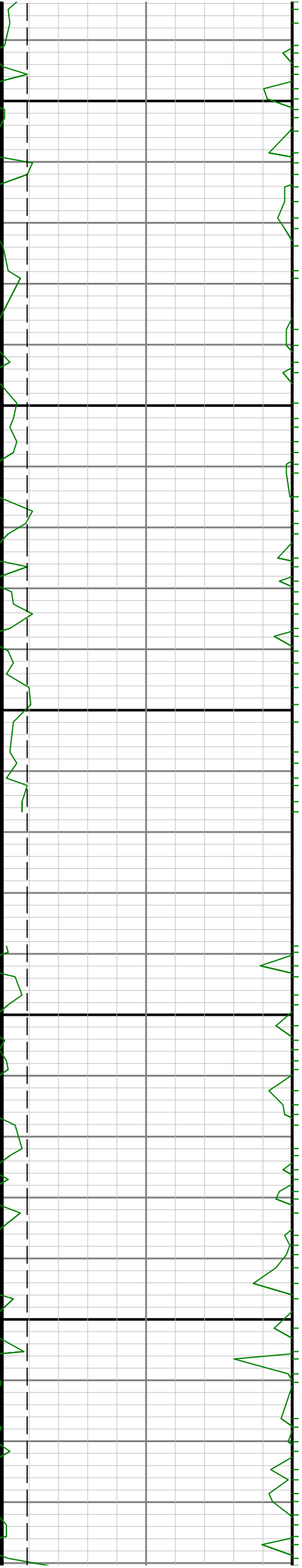




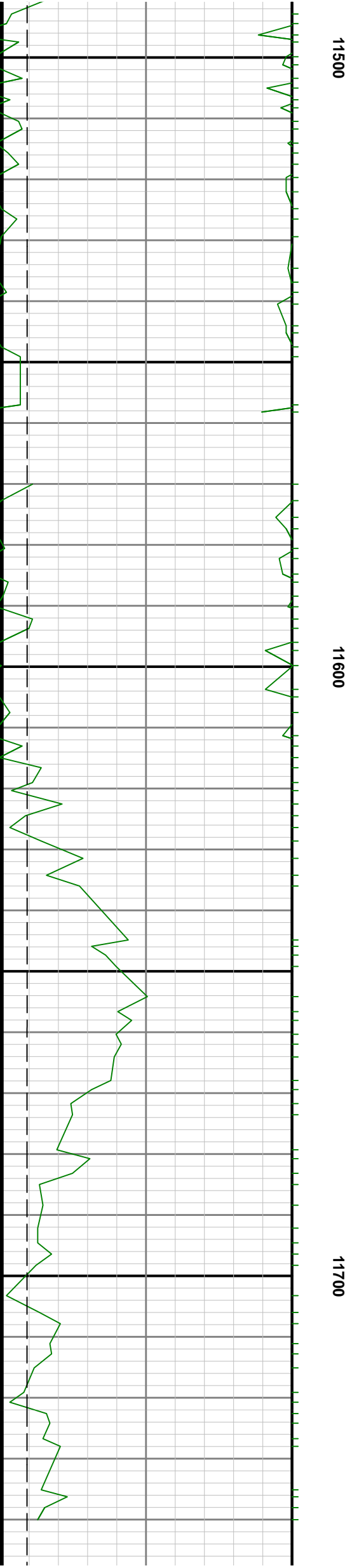
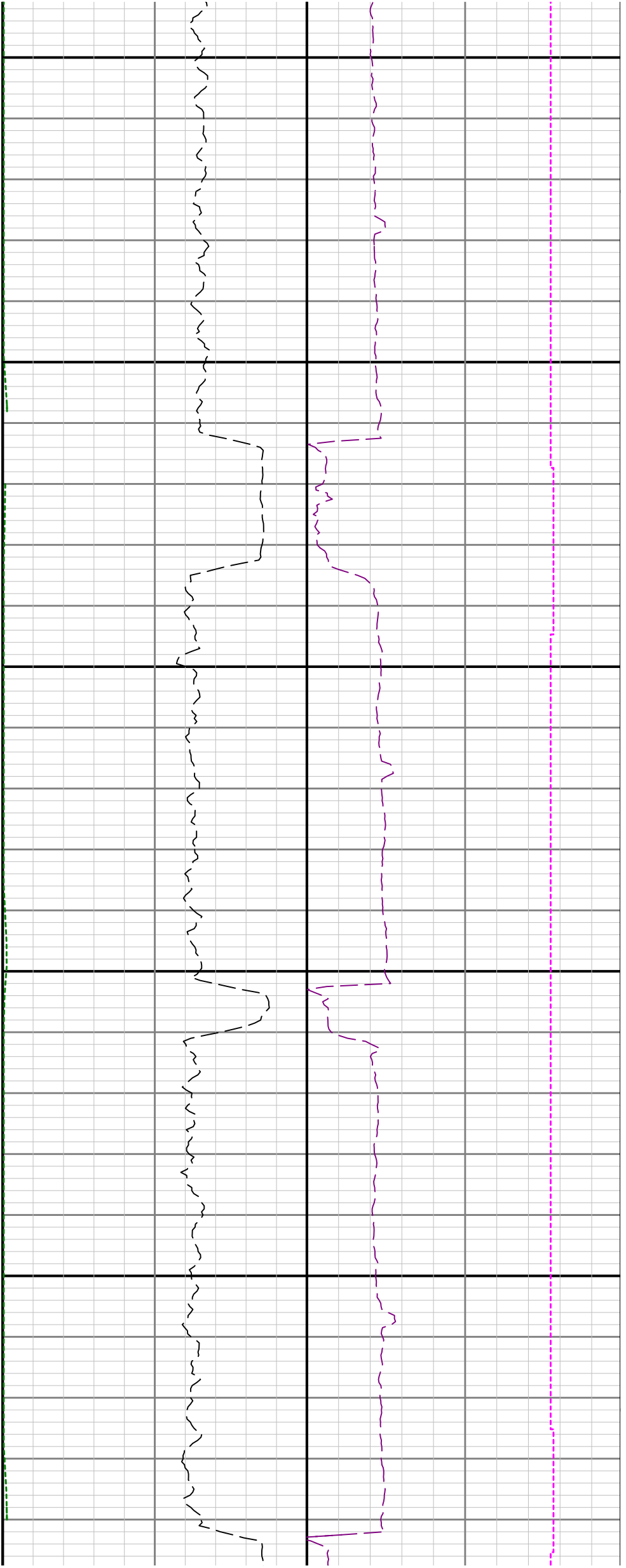


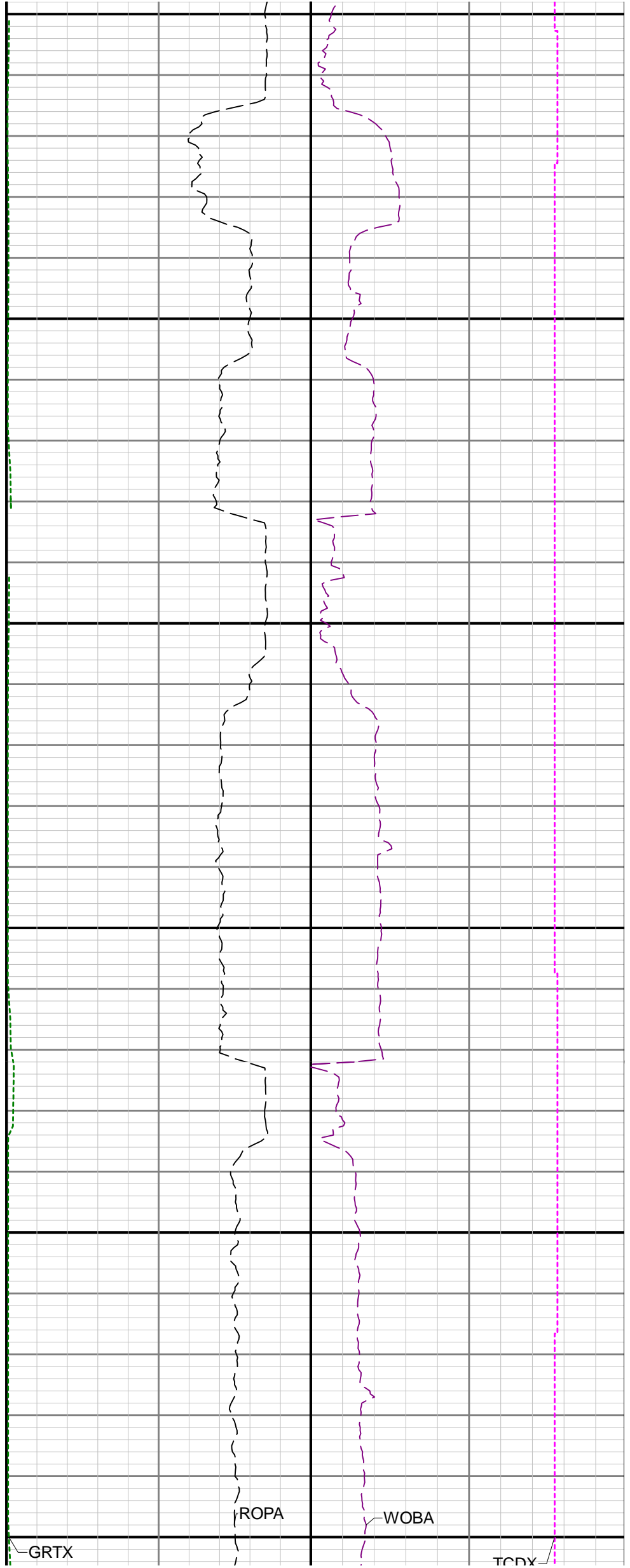
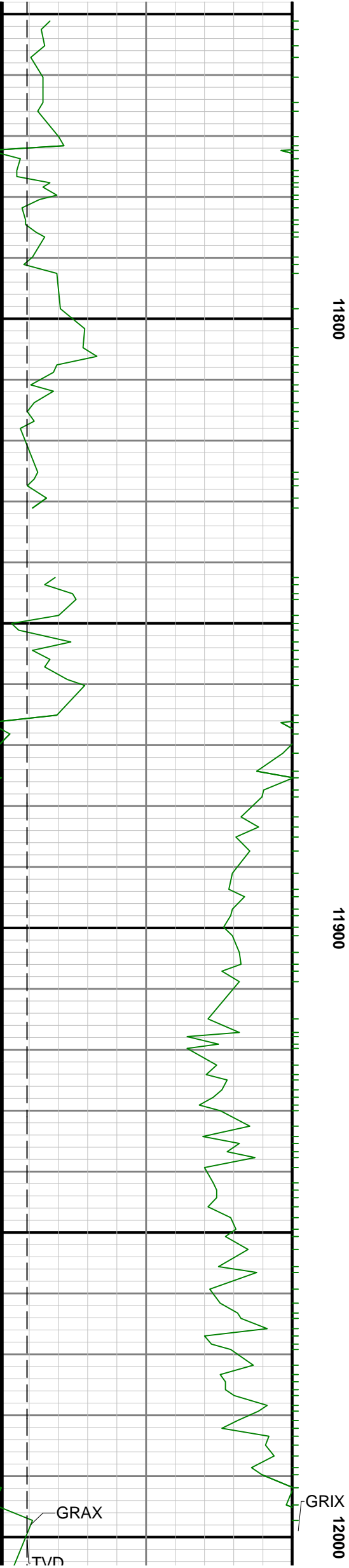
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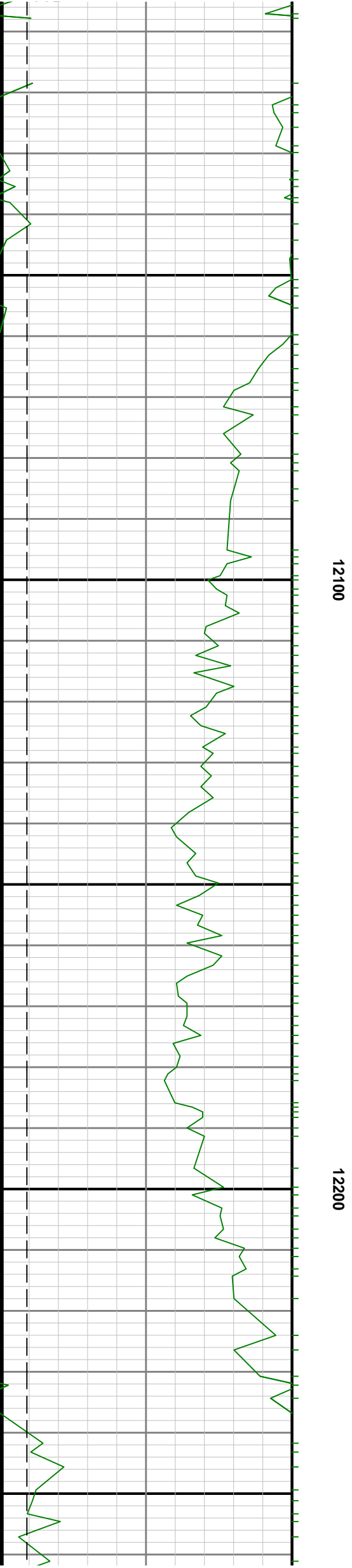
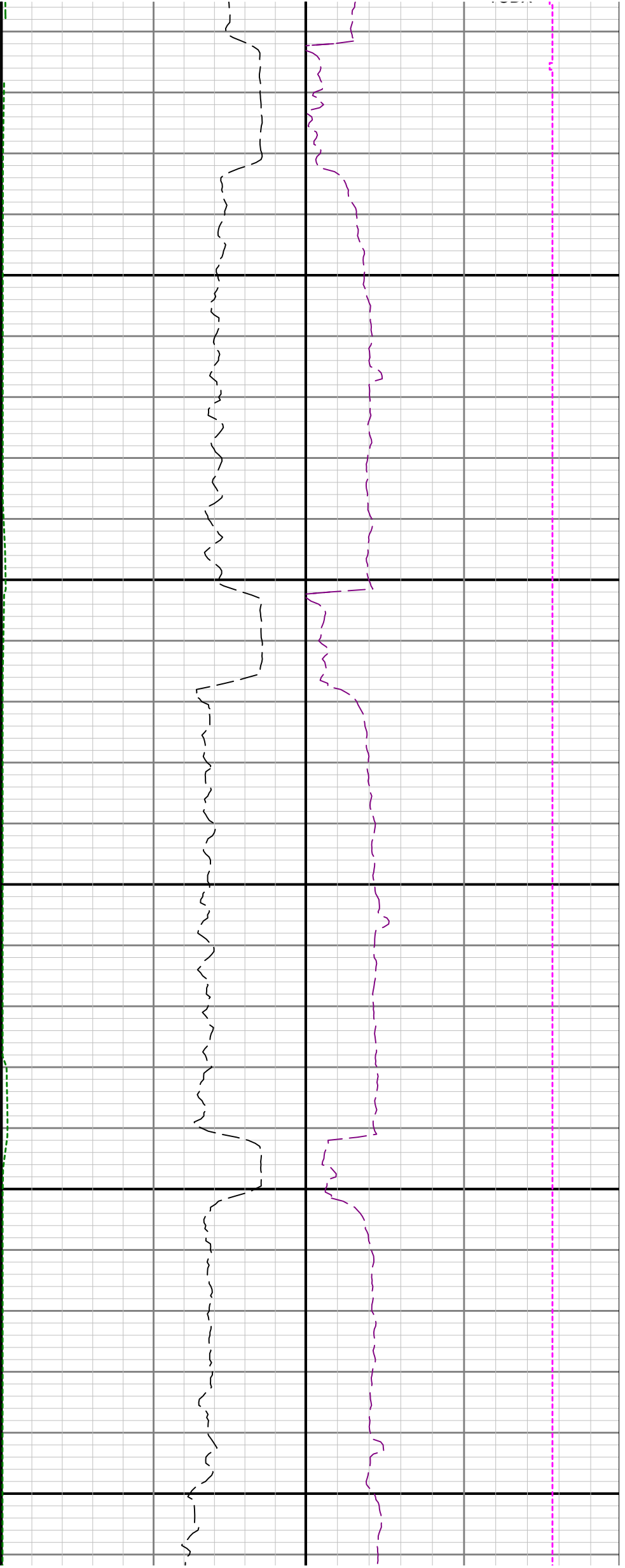
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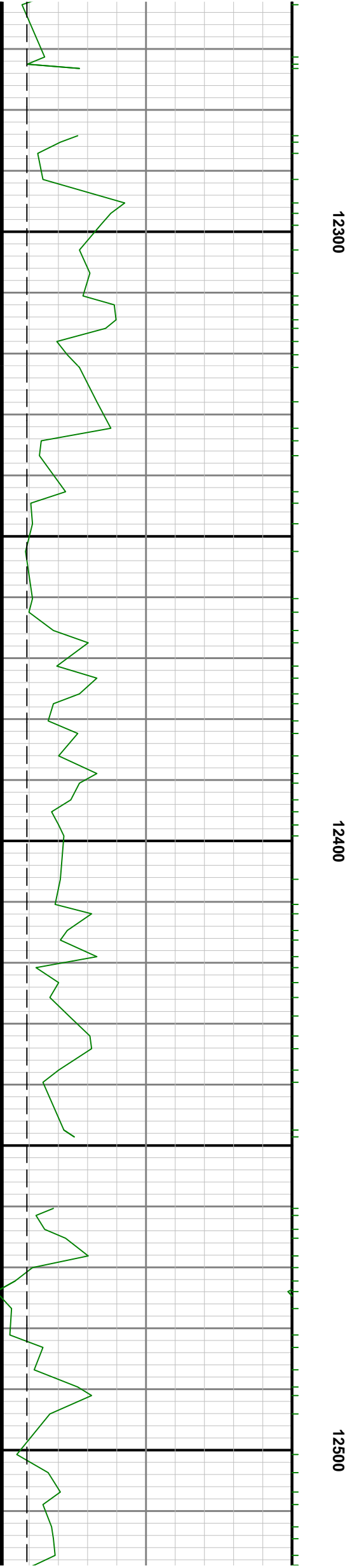
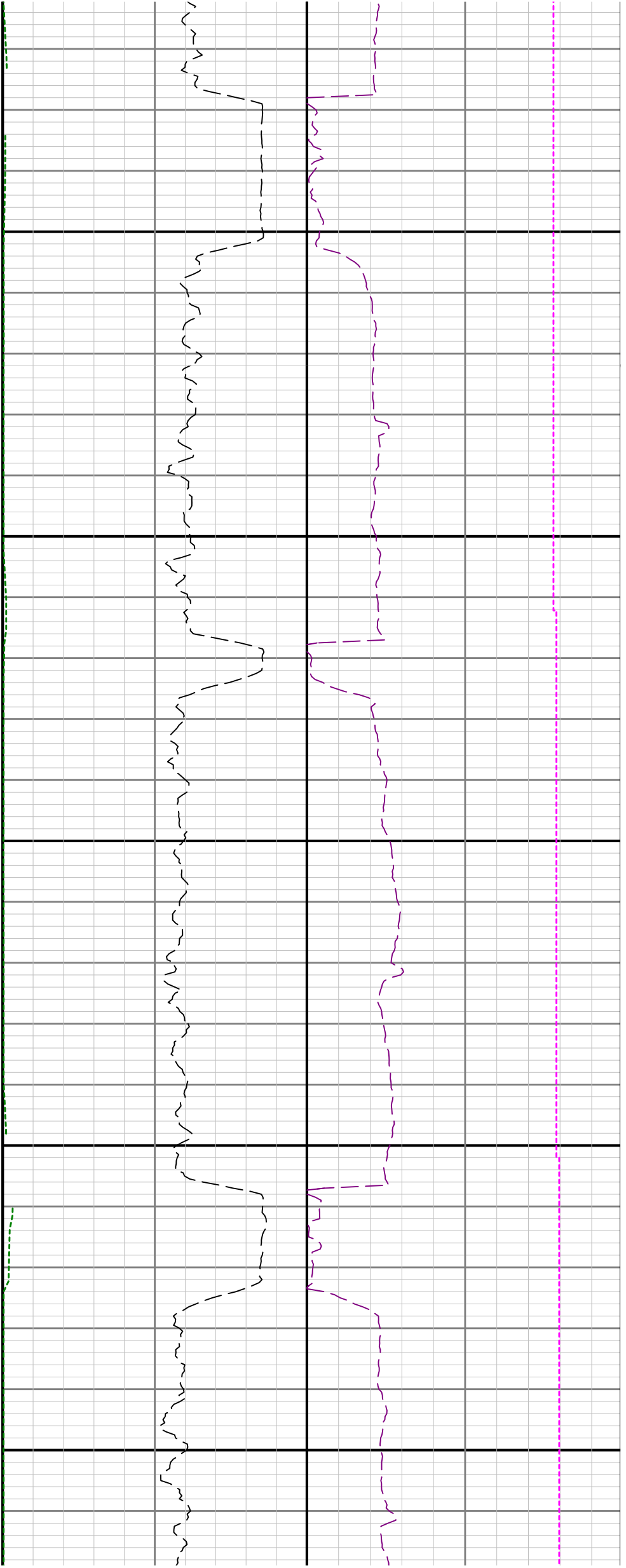


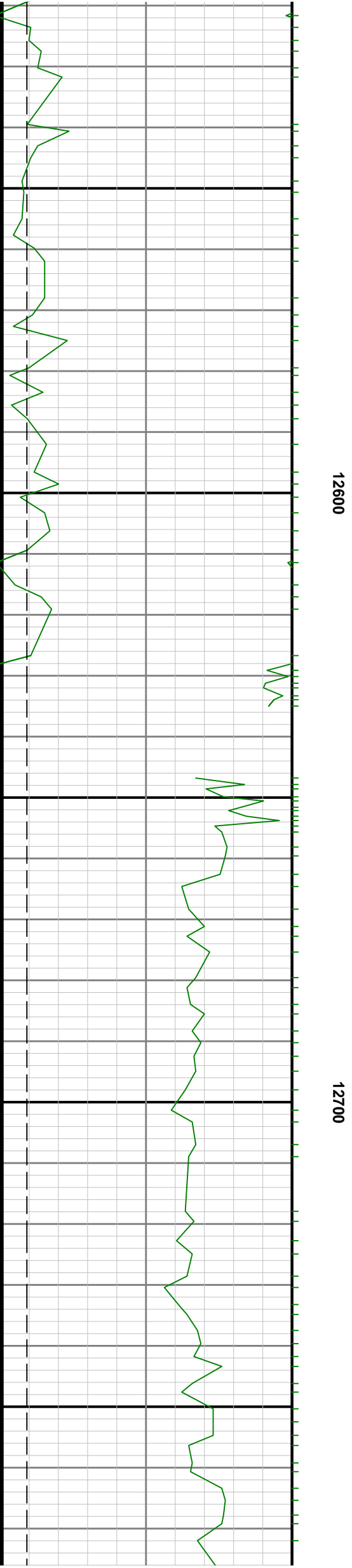


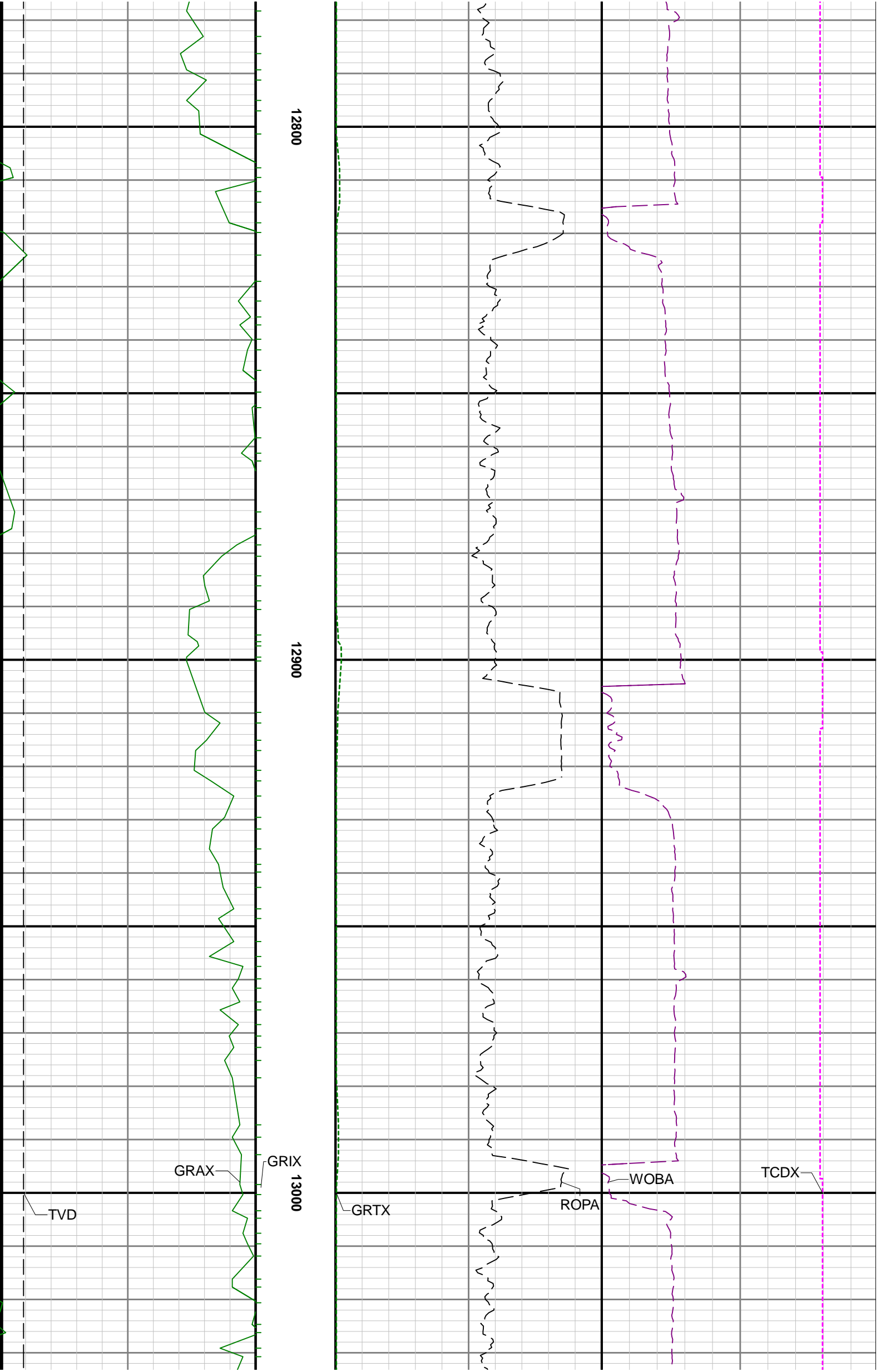


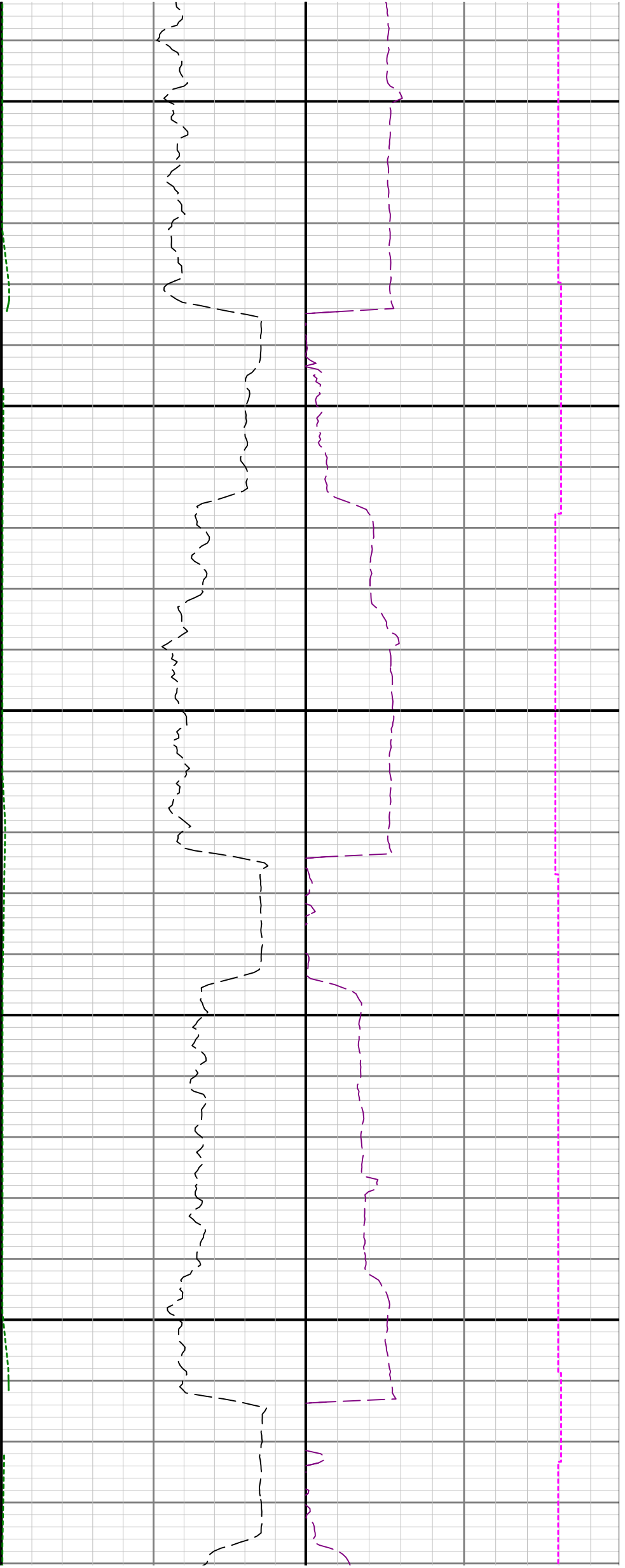












13100

13200

