



REALTIME LOG

Gamma Ray

REALTIME LOG						
<div>BAKER HUGHES a GE company</div> <div></div>			Gamma Ray			
Scale: 1:240			Company: Anadarko			
Measured Depth			Well: MAB 15-8HZ			
			Field: Wattenburg			
Depth Reference:			County: Weld Country: United States			
Driller's Depth			State: Colorado			
Status: Final Print		Surface Location: Latitude: Longitude:		Other Services: Directional		
API No: 051234924300		SEC: 15 TWN: 1N RGE: 66W				
Job ID: 109687459		Permanent Datum (P.D.): Ground Level		Elev. KB: N/A		
Log Measured From: Rig Floor		Elevation: Above P.D.:		Elev. DF: 5130.00 ft		
				Elev. GL: 5113.00 ft		
Dates		Interval		Magnetic Field Reference		
From: 2019-04-19		Drilled (ft)		Azi Reference North: True Dip Angle: (deg) 66.19		
To: 2019-04-23		Top: 1951.00		Total Magnetic Field Strength: (nT) 52121		
Sput: 2019-04-18		Bottom: 18948.00		Mag to Reference North Correction: (deg) 7.86		
Borehole Record						
Casing Record						
Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
13.500	17.00	1951.00	9.625	25.00	17.00	1941.00
7.875	1951.00	18948.00				
Mud Record						
Devaton Record						
Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
Diesel-Oil Based Mud	1951.00	18948.00	7.875	16997.00	26.36 57.93	90.76 179.72
Acquisition System						
Software Version		Other				
Baker Hughes Cadence	RT 5.1	Rig: Akita 522		Contractor: Akita Drilling		
DeliverableGen	1.0.8304.1	District: RMD		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	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	7.875	PDC	2.00	Steerable	0.00	0.00	0.00	0.00	N/A	N/A	0.76
2	1	7.875	PDC	2.00	Steerable	1951.00	2481.00	1951.00	2527.00	2019-04-20 19:57	2019-04-20 21:40	2.36
3	1	7.875	PDC	2.00	Steerable	2481.00	18898.00	2527.00	18948.00	2019-04-21 02:08	2019-04-23 09:10	68.15

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Joshua Monroe	2019-04-18	2019-04-23	Teni Onafowokan	2019-04-18	2019-04-23			

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+ (%)
2019-04-18 09:07	1	1900.00	Diesel-Oil Based Mud	9.3	19	N/A	N/A	75.3/24.7	Active Pit	34000	0.00
2019-04-19 18:00	2	1951.00	Diesel-Oil Based Mud	9.1	13	N/A	N/A	70/20	Active Pit	32000	0.00
2019-04-20 00:39	3	2535.00	Diesel-Oil Based Mud	9.1	13	N/A	N/A	70/20	Active Pit	32000	0.00
2019-04-21 18:00	3	11787.00	Diesel-Oil Based Mud	8.9	13	N/A	N/A	68/24	Active Pit	34000	0.00
2019-04-22 07:00	3	14375.00	Diesel-Oil Based Mud	9.1	16	N/A	N/A	67/23	Active Pit	35000	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	14718056	Gamma (single)	8.76	46.21	6.500	2.750
1	EvoOne	14718056	Directional (mag)	9.95	47.40	6.500	2.750
2	EvoOne	14718056	Gamma (single)	8.76	46.21	6.500	2.750
2	EvoOne	14718056	Directional (mag)	9.95	47.40	6.500	2.750
3	EvoOne	14718056	Gamma (single)	8.76	49.85	6.500	2.750
3	EvoOne	14718056	Directional (mag)	9.95	51.04	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 by Baker Hughes. Due to lack of control by Baker Hughes logging engineers depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to represent logging data.
- 2
- A sliding indicator is shown on the left side of track 1 as a heavy line. This indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.
- 3
- Baker Hughes Runs 1, 2 and 3 utilized 6 1/2 inch Evo One services (Directional and Gamma Ray) behind a 7 7/8 inch bit and steerable assembly from 1951 to 18948 feet MD (1901 to 7466 feet TVD).
- 4
- Gamma Ray (GRAX) scale is presented from a 0 to 200 API scale at the request of the customer.

Remarks


Number	Depth	Hole Section	Run No.	Remark
	(ft)	(in)		
1	2500.00	7.875	2	The interval from 2480 to 2527 feet MD (2367 to 2409 feet TVD) was logged after 4.3 hours due to downhole motor failure.
2	12541.00	7.875	3	The interval from 12541 to 12553 feet MD (7441 feet TVD) was not logged due to Pason malfunction.
3	18920.00	7.875	3	The interval from 18898 to 18948 feet MD (7466 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
GRSI	Sliding Indicator Flag	unitless

BAKER HUGHES

a GE company



Company

Well

Interval

Created

Anadarko

MAB 15-8HZ

Date From: 2019-04-19 11:35
Date To: 2019-04-23 08:46

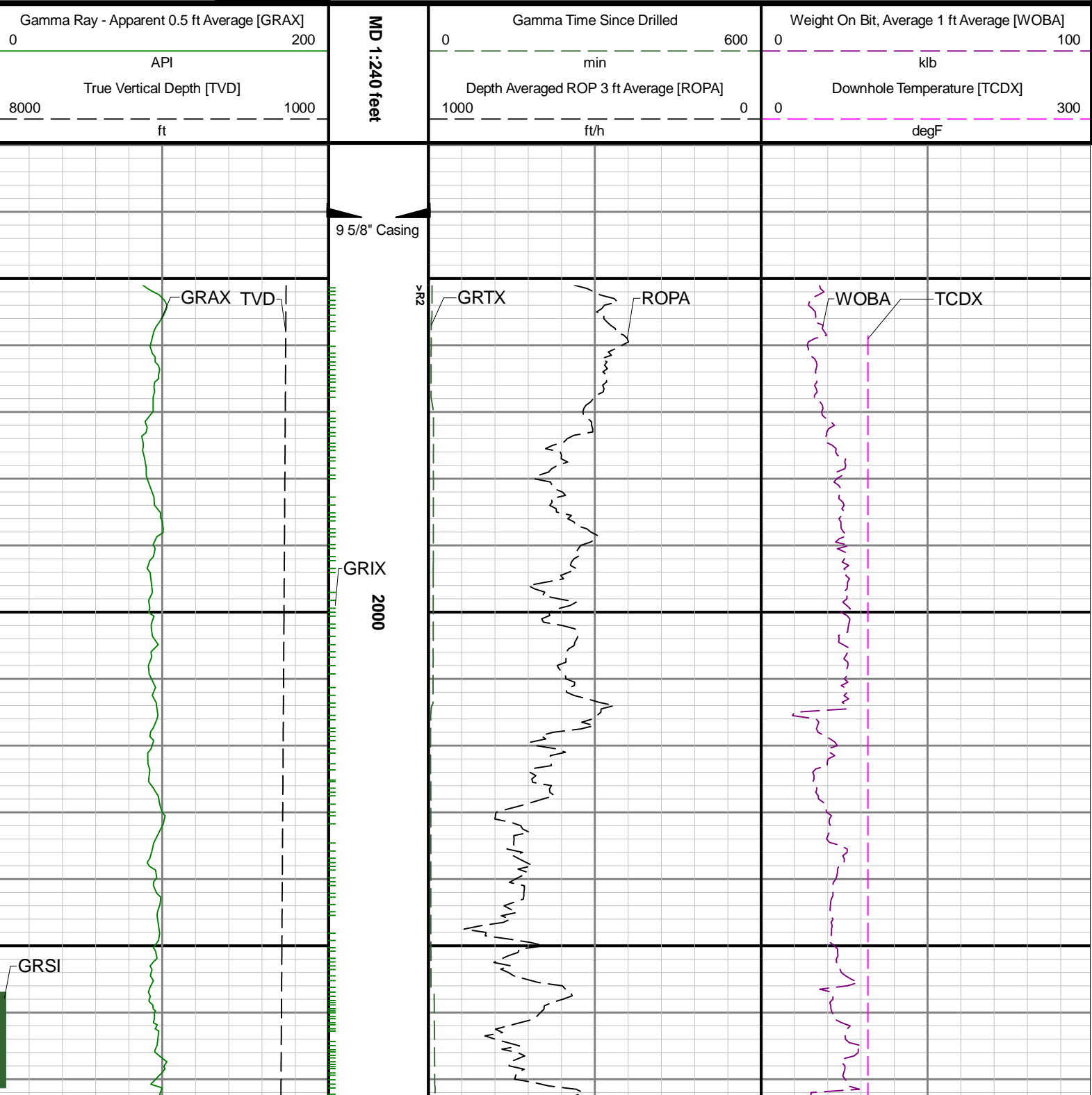
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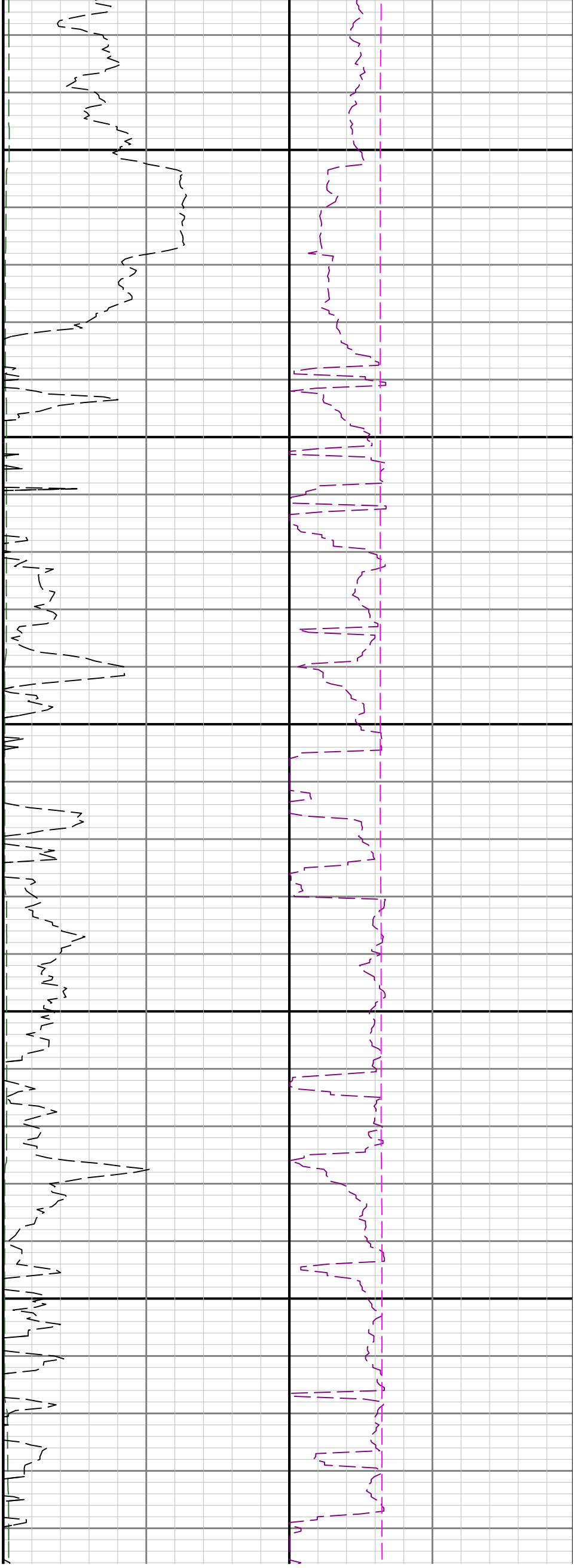
Interval Drilled: (ft)

Interval Logged: (ft)

1951.00 - 18948.00

1951.00 - 18898.00

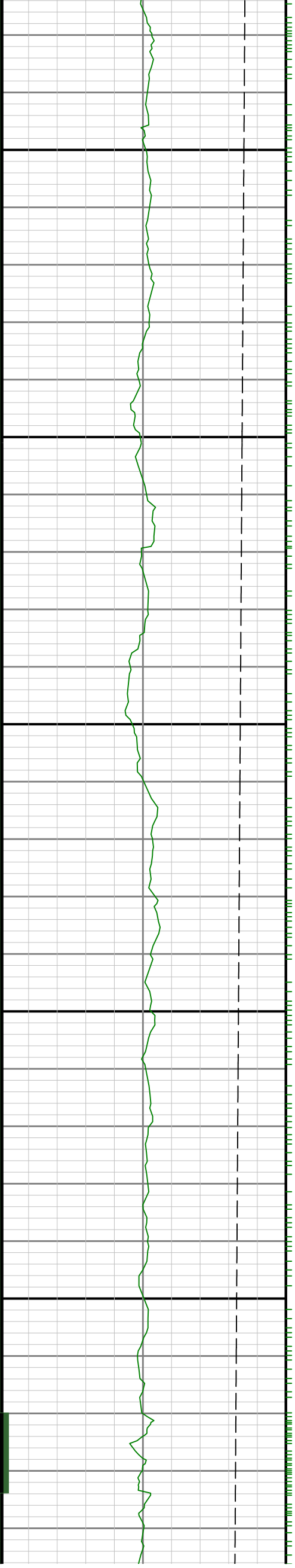


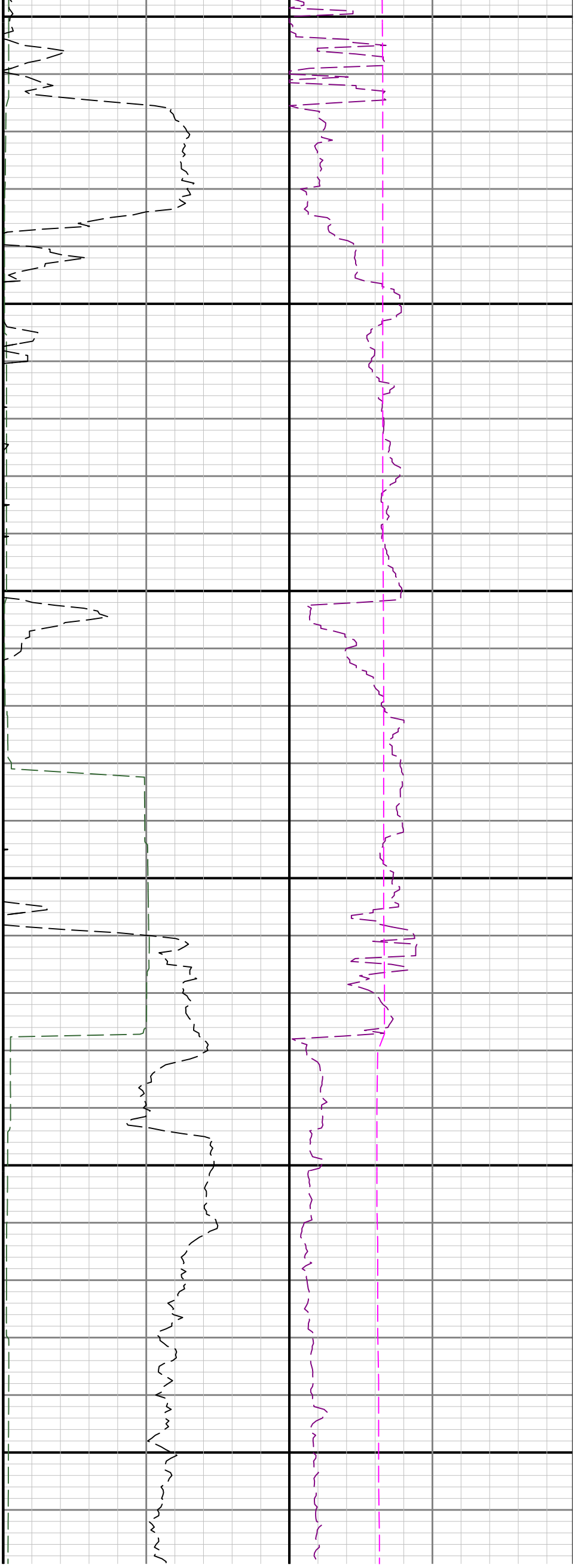


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2200

2300





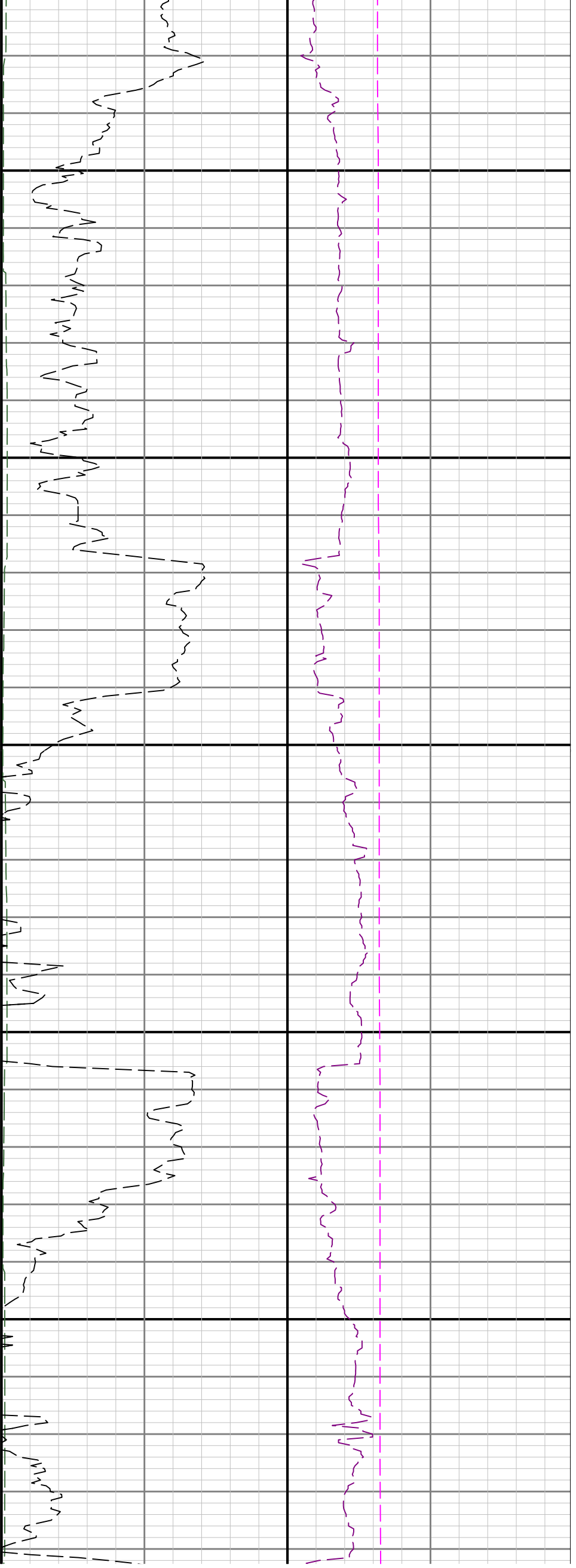
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2500

2600

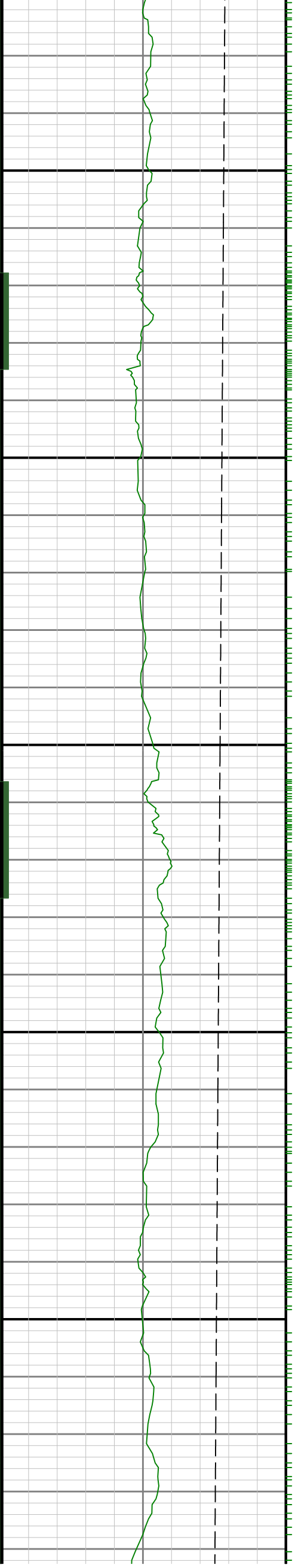
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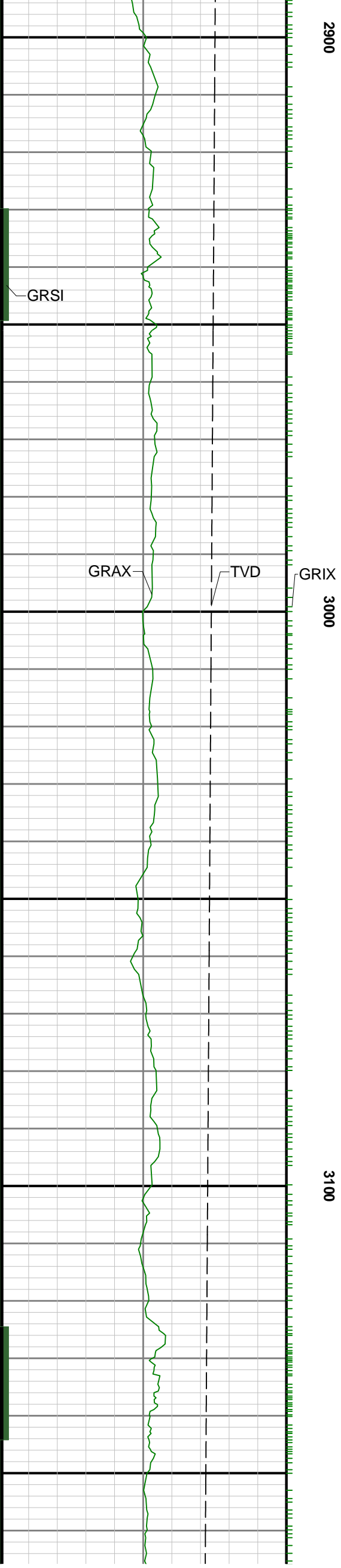
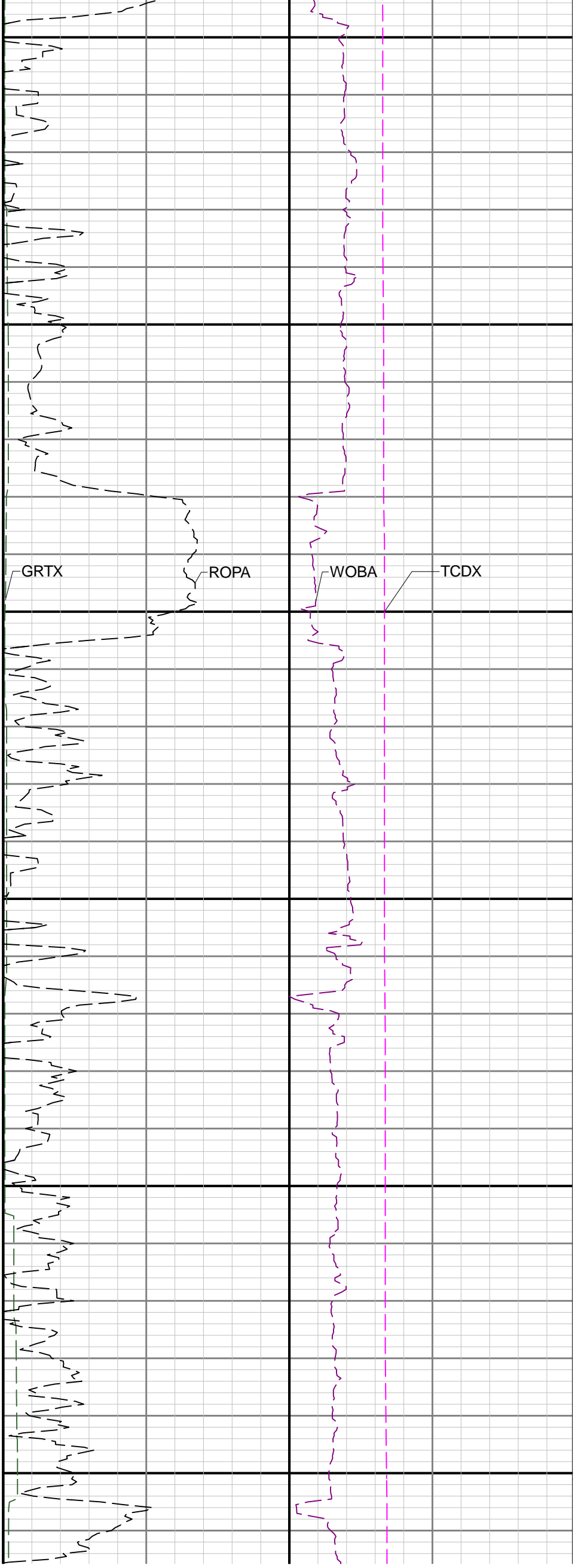
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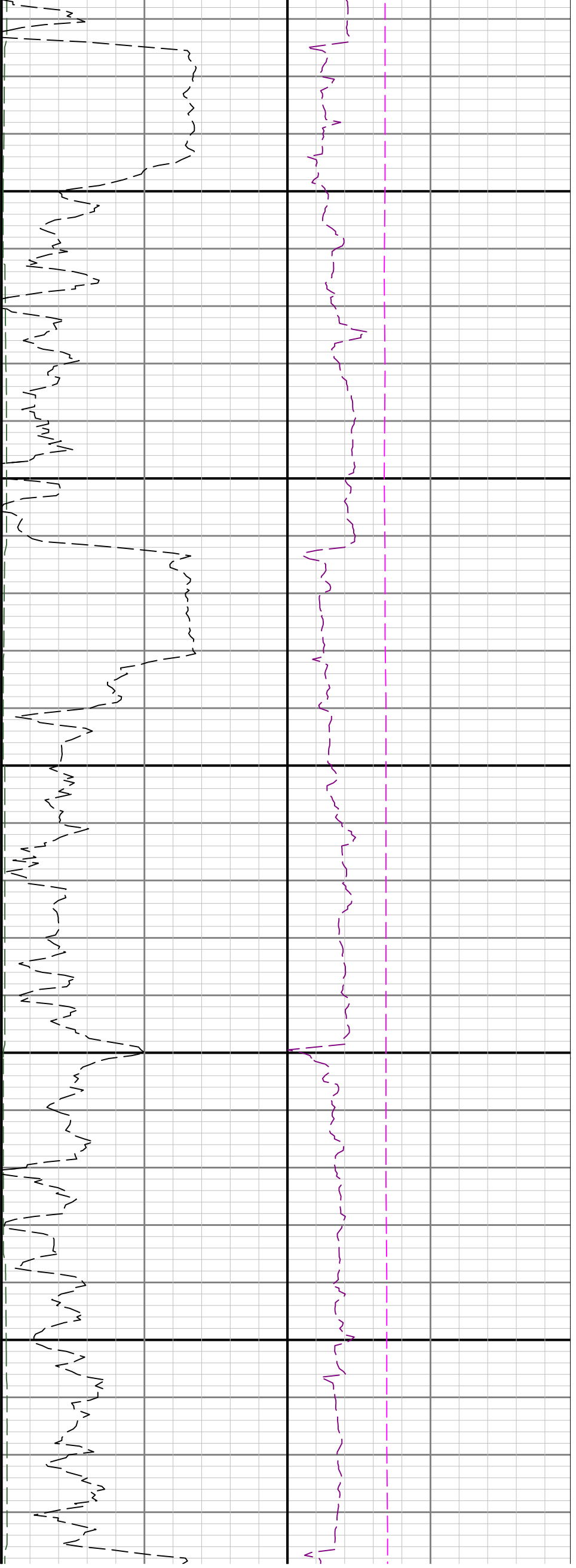


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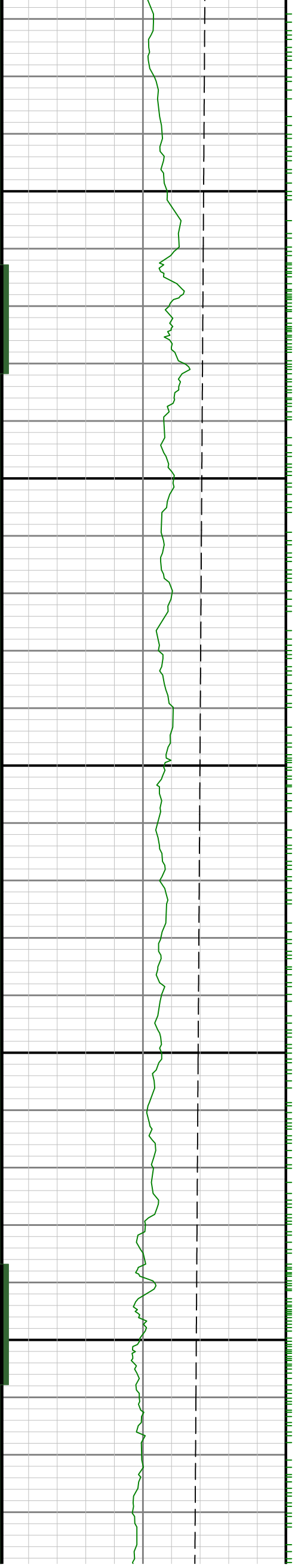


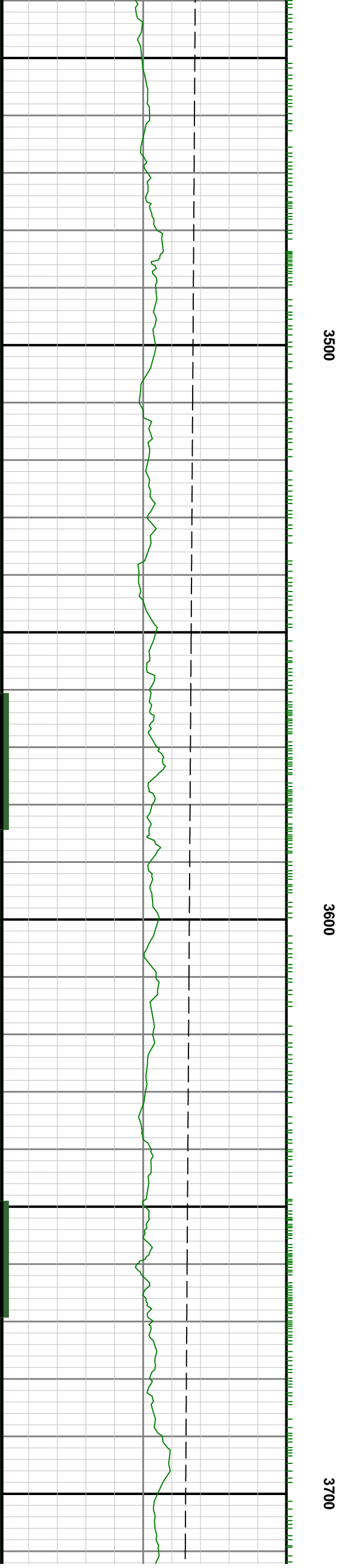
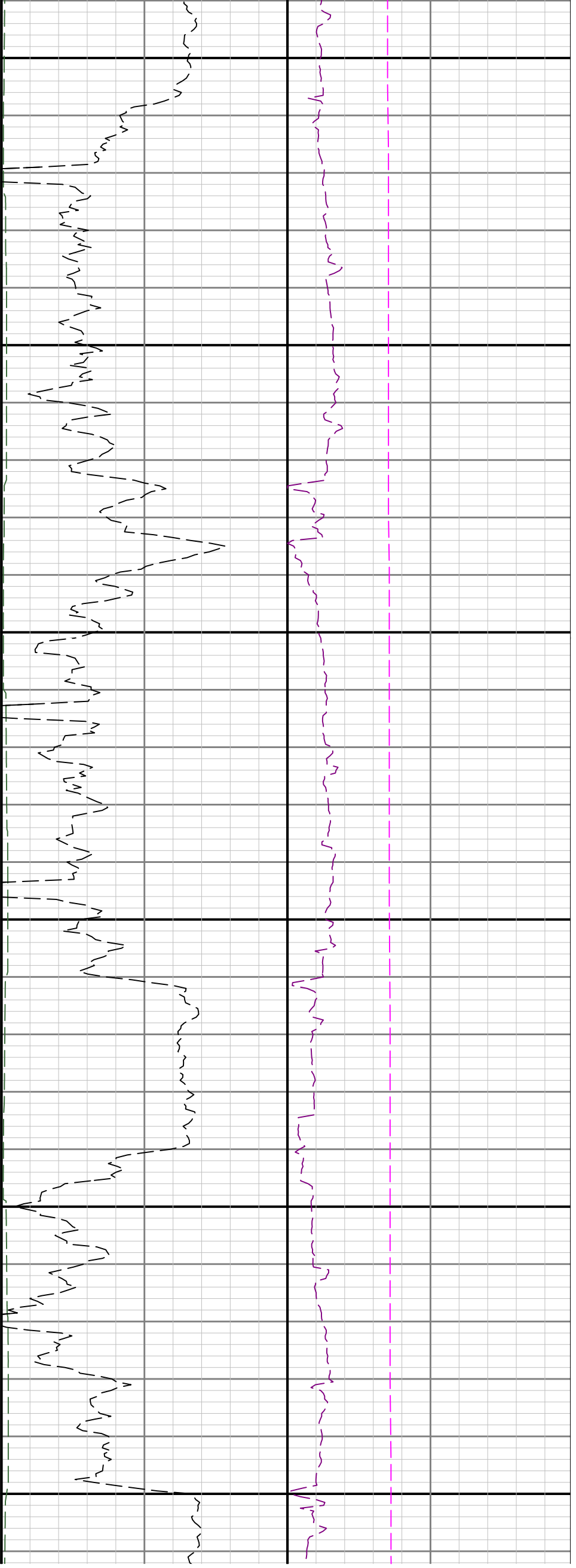


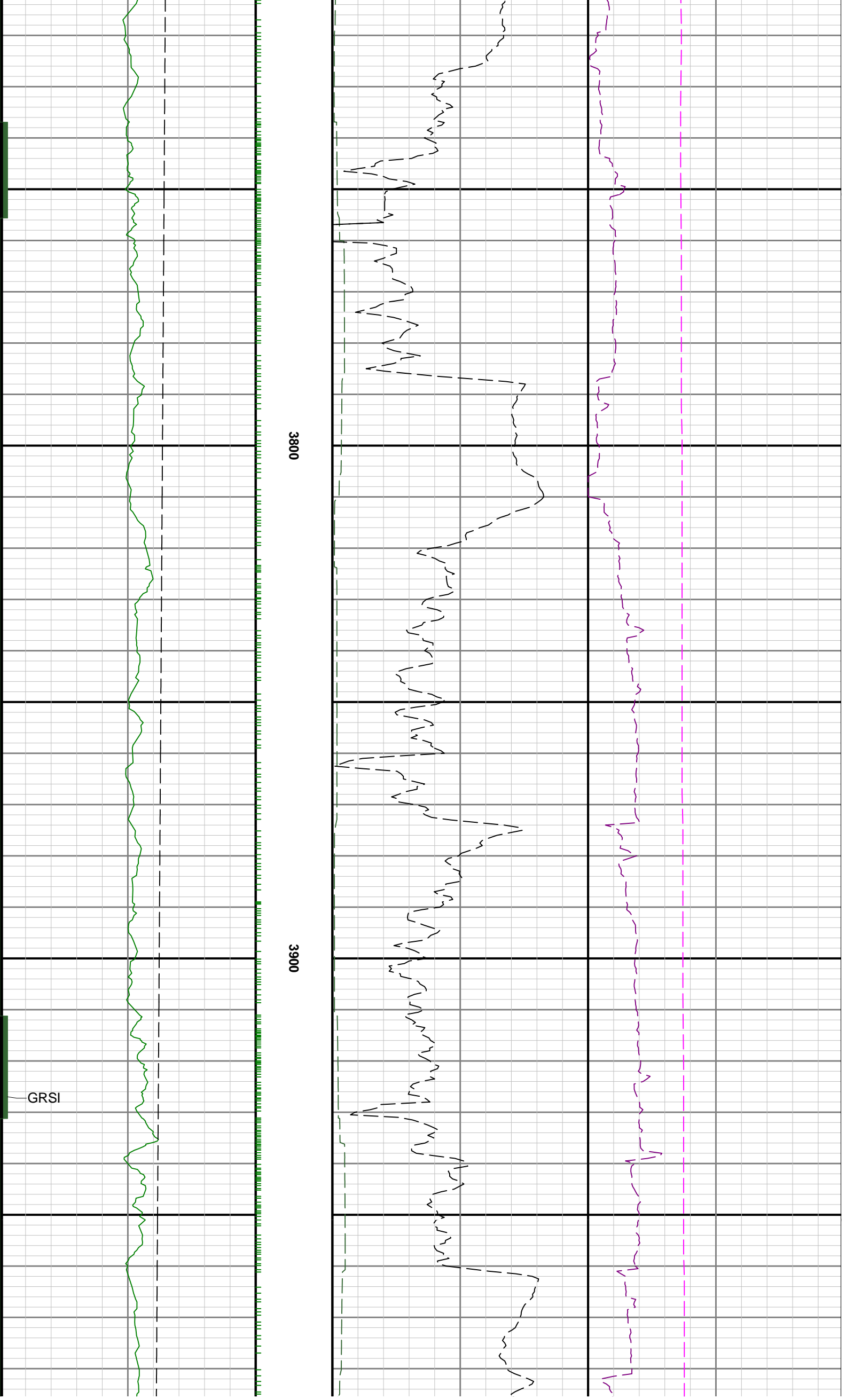
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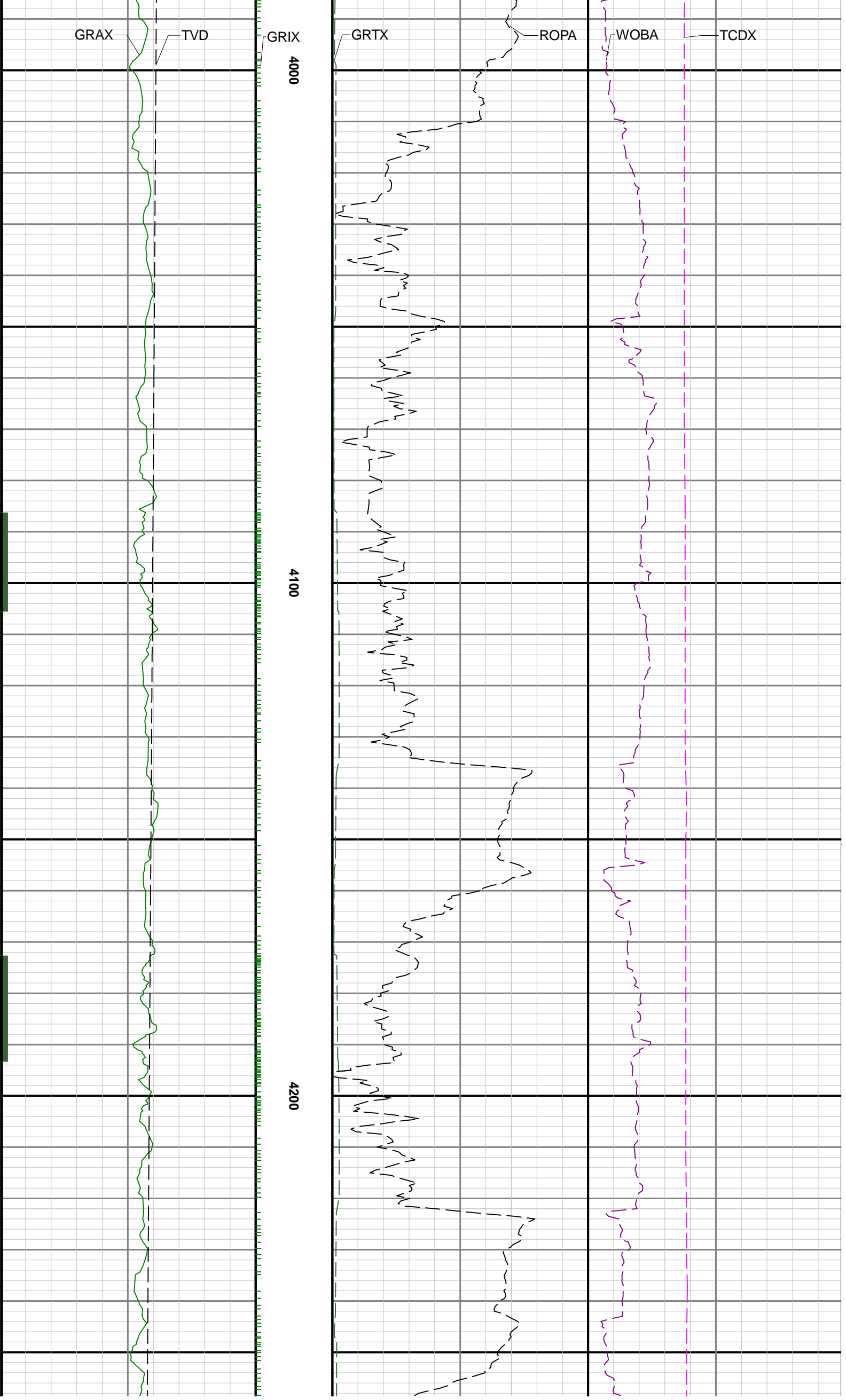
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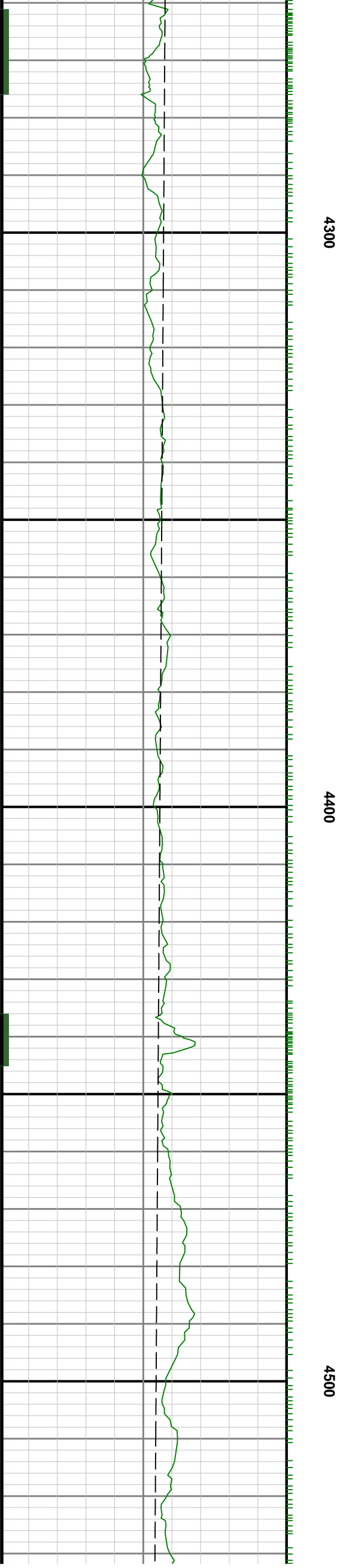
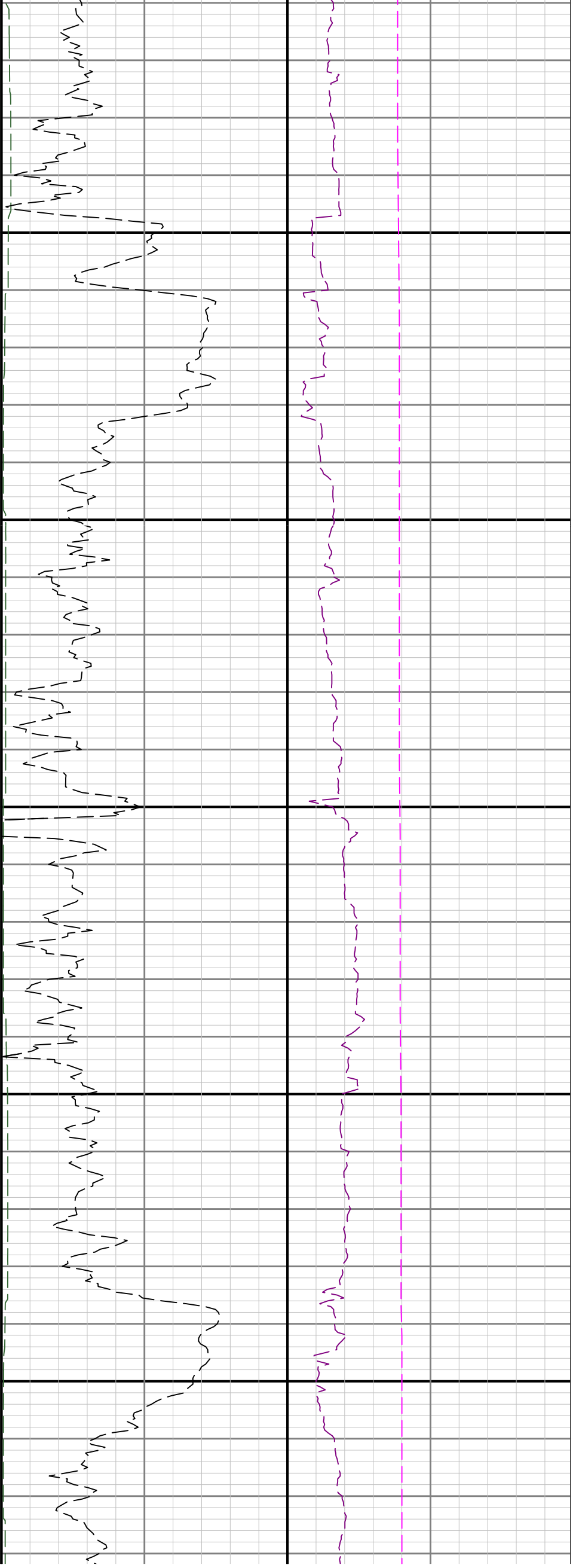
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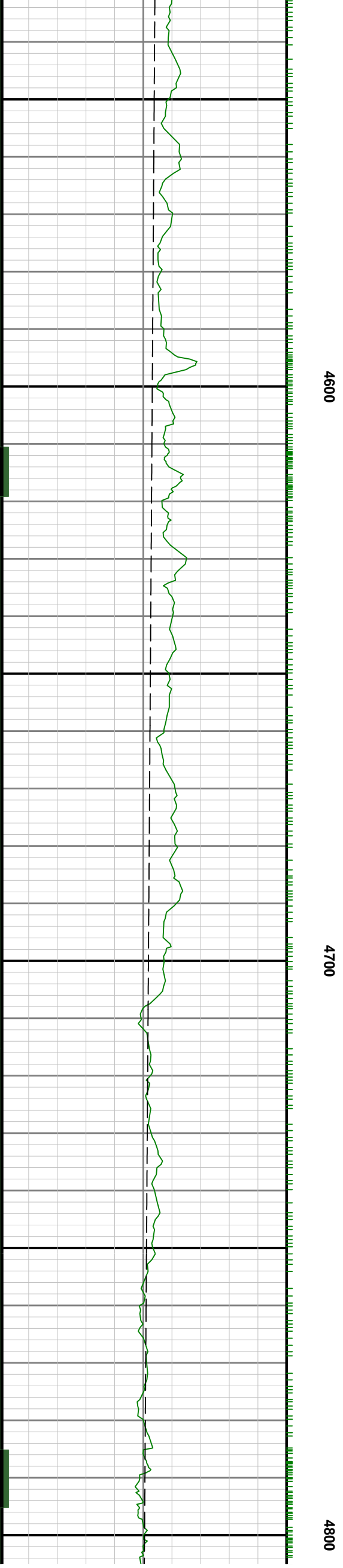
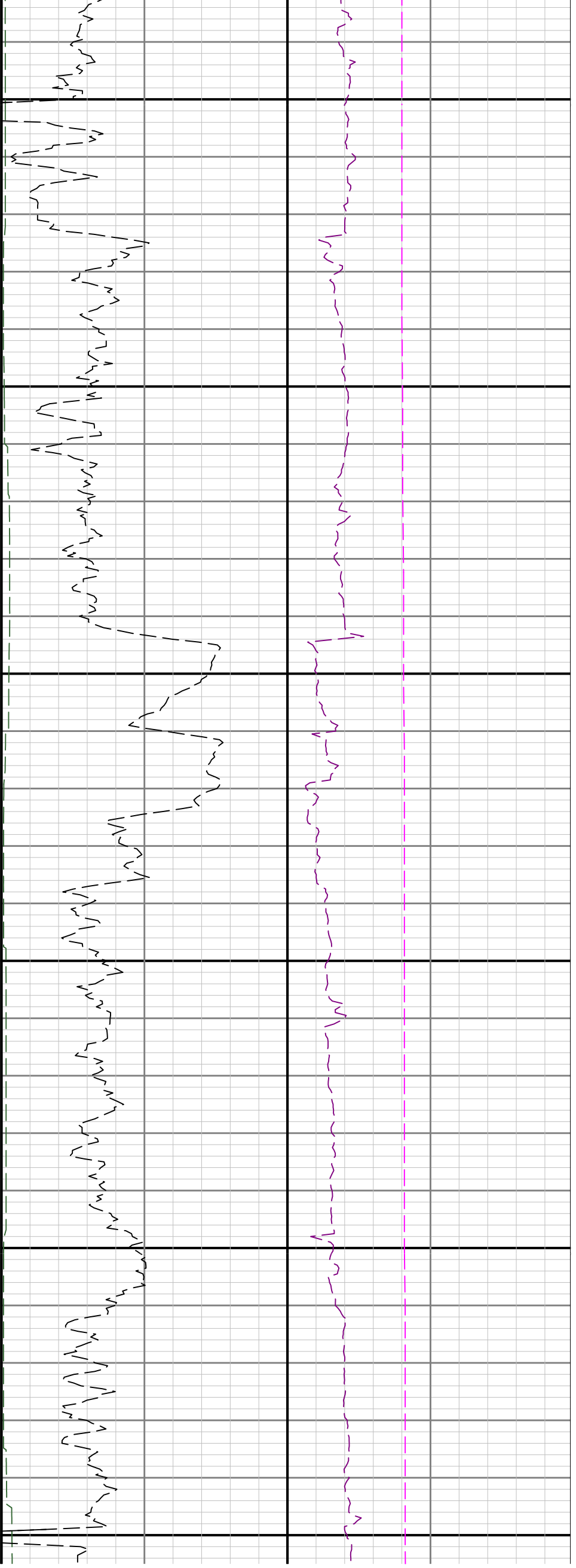


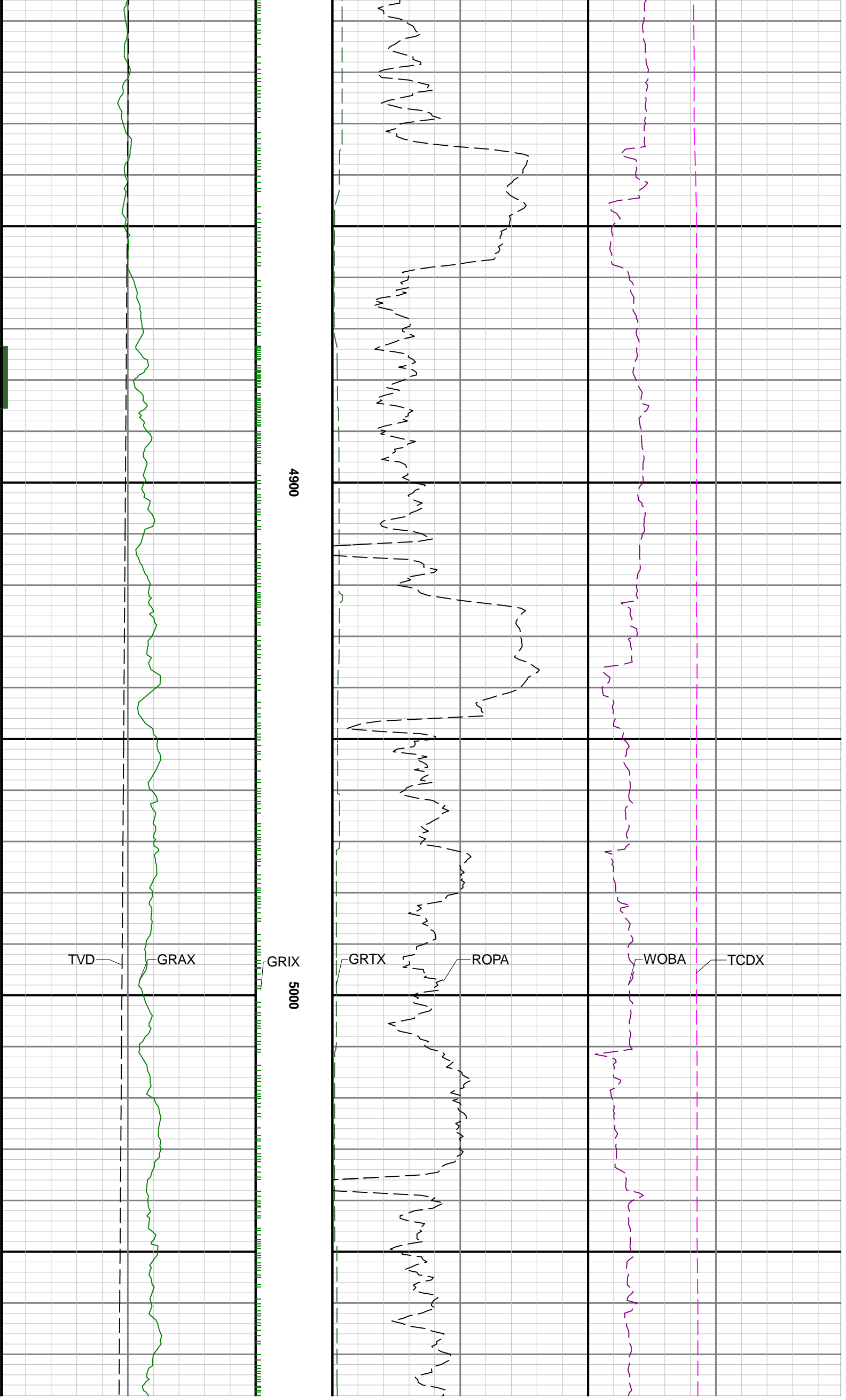


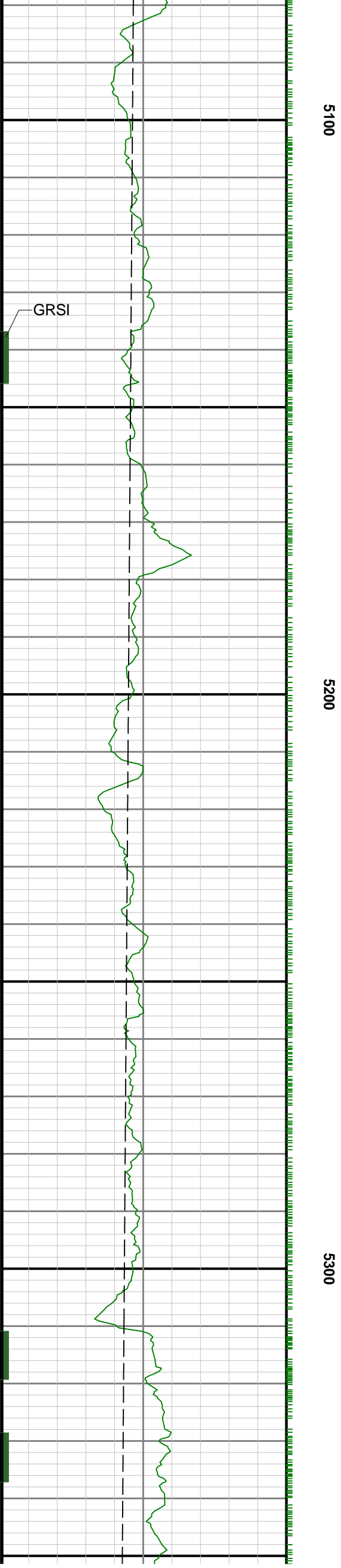
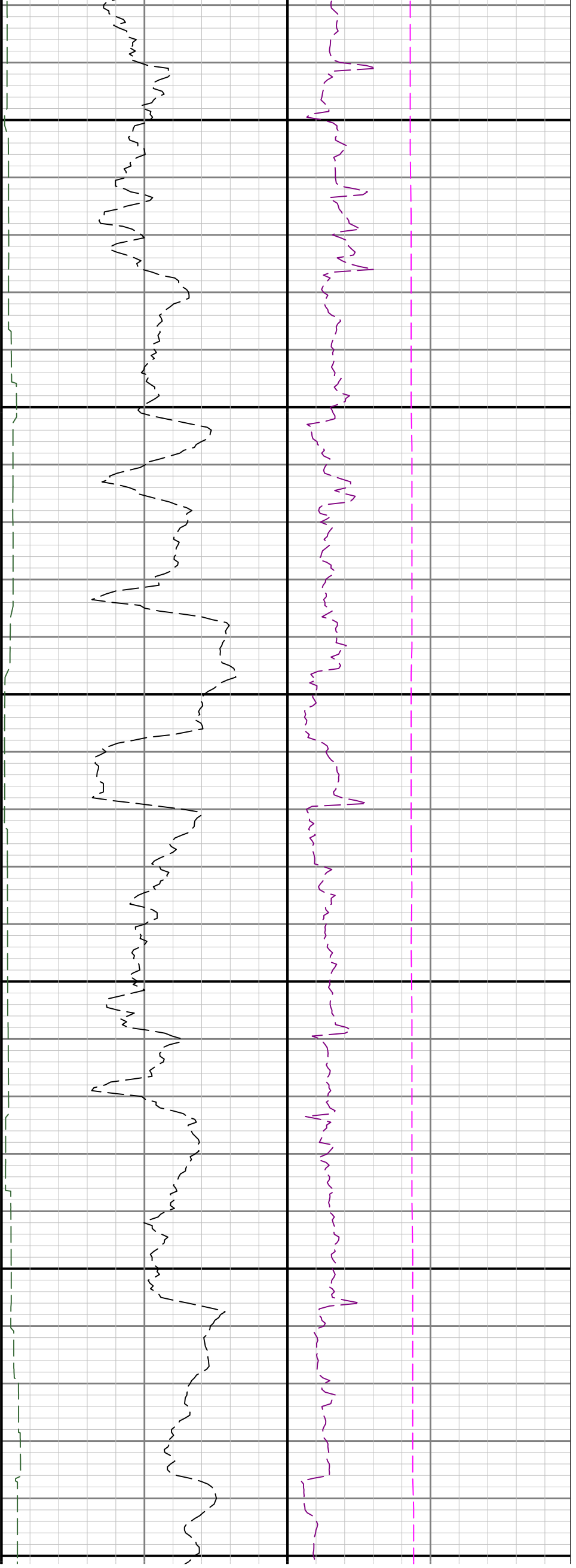


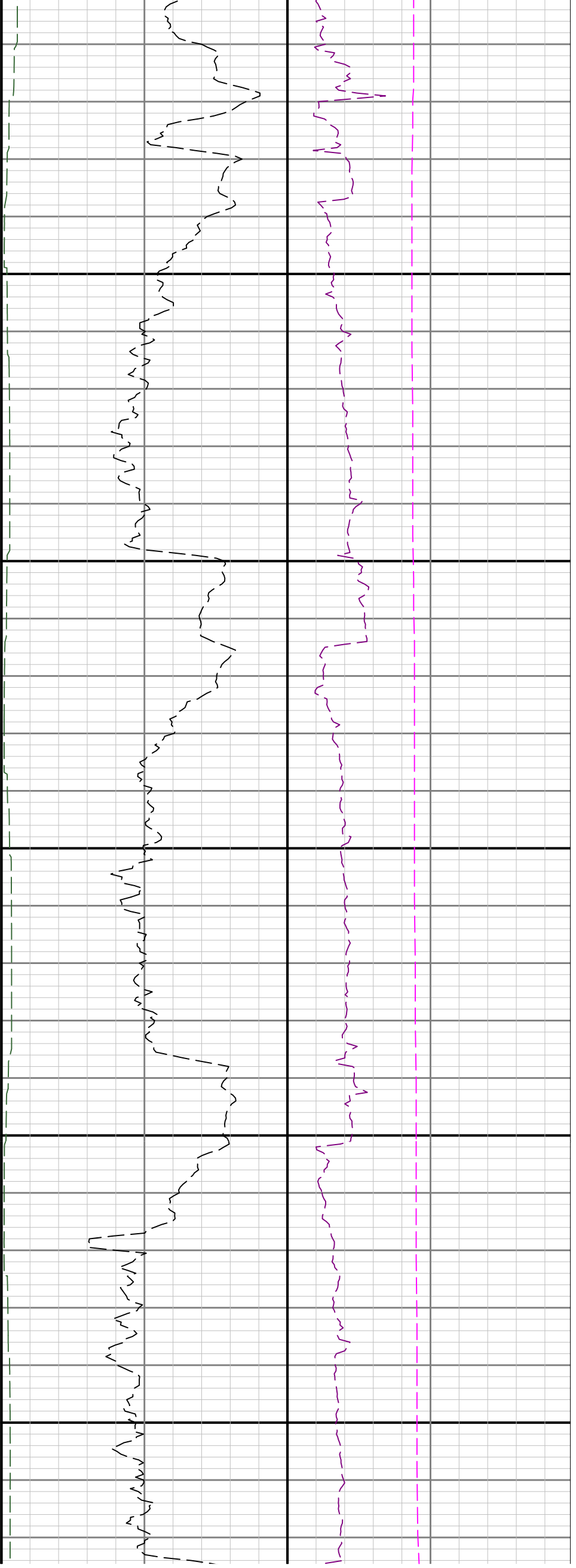








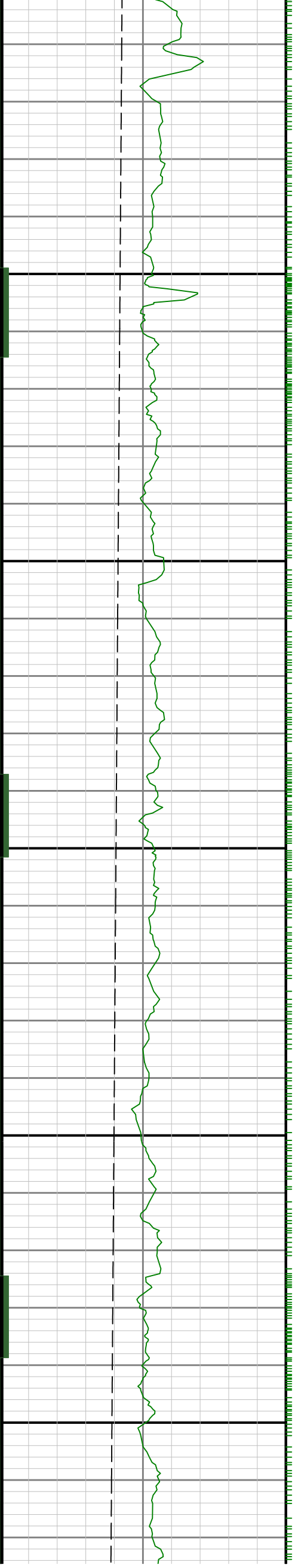


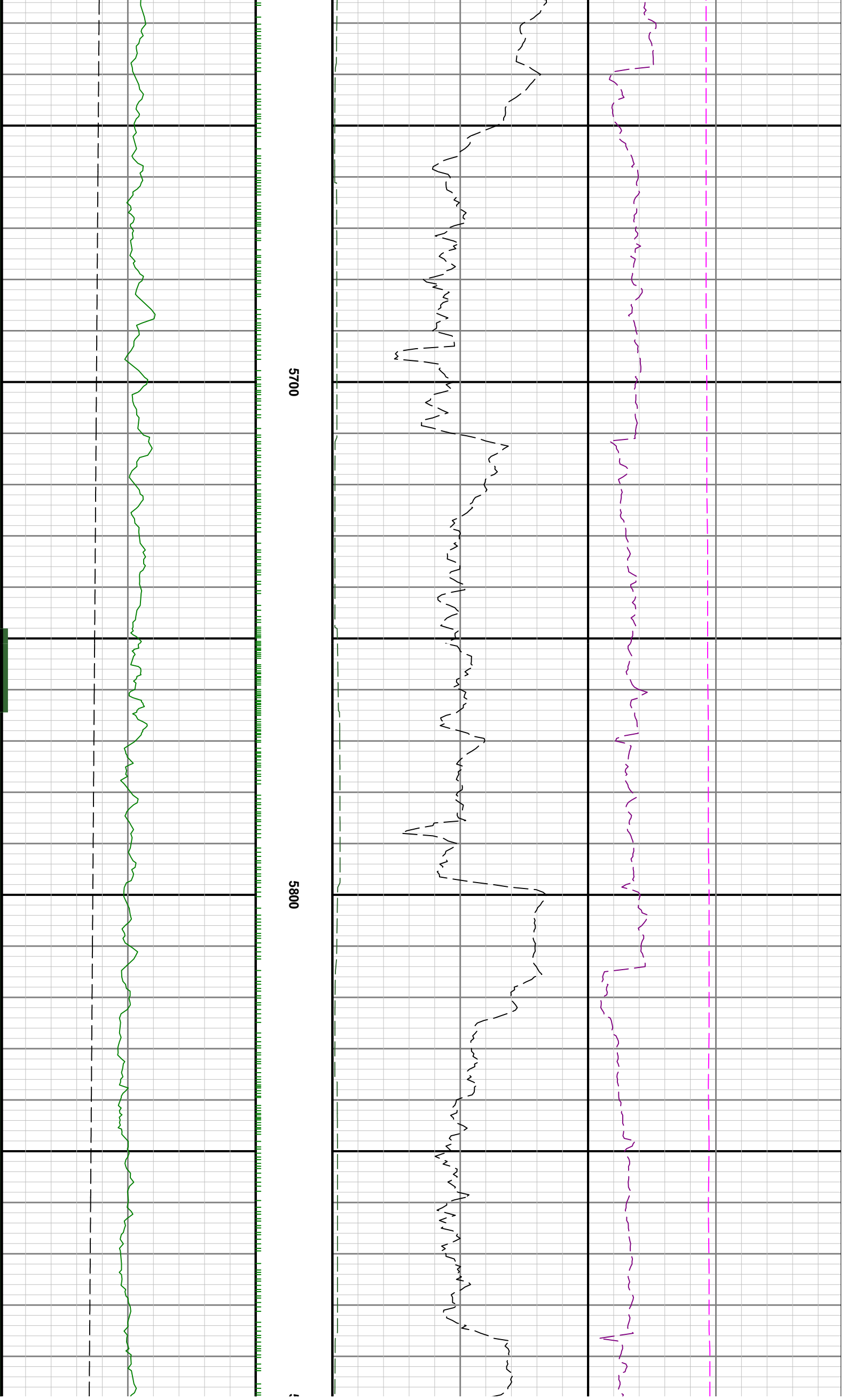


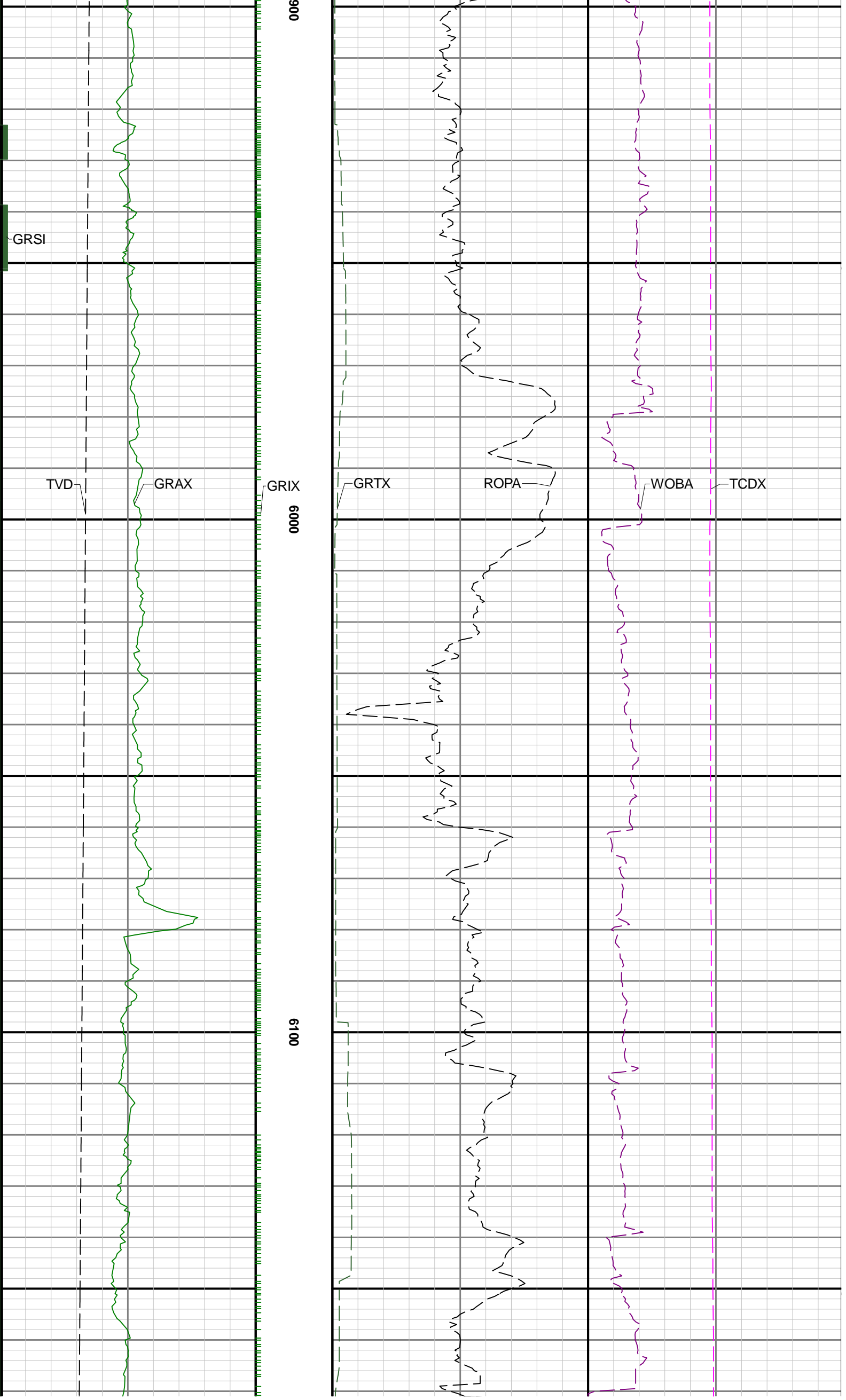
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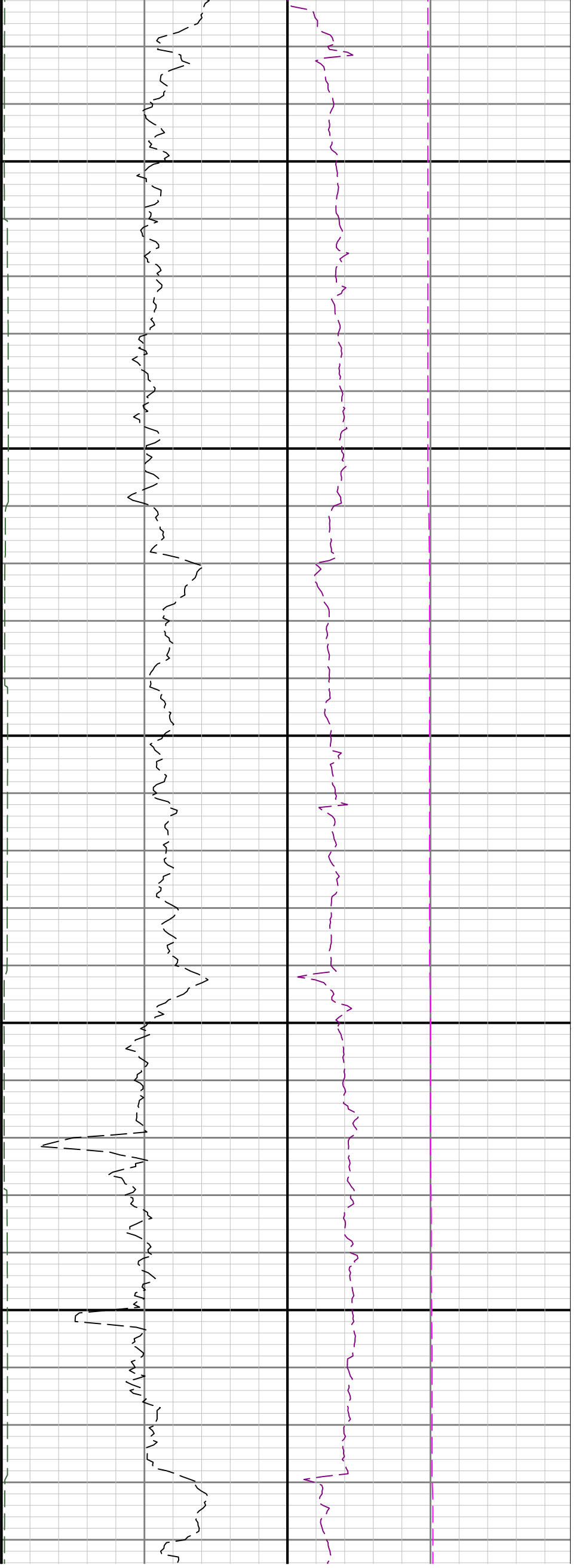
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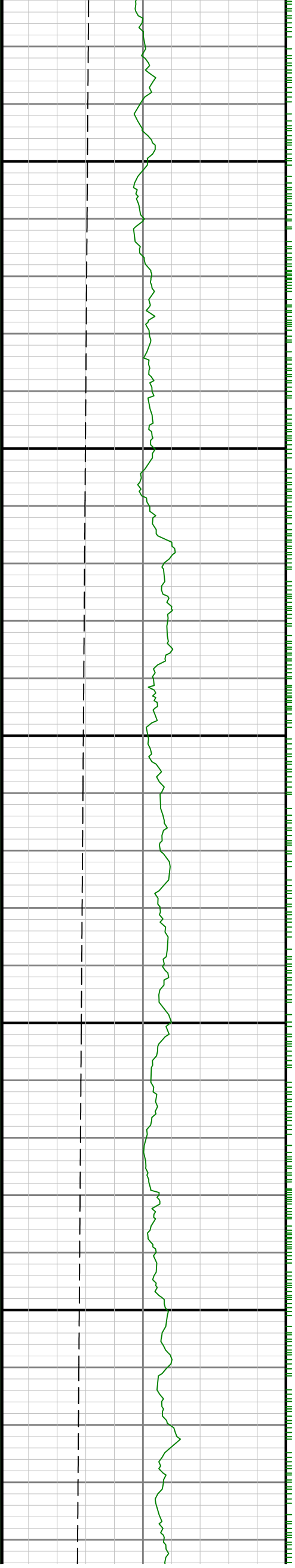


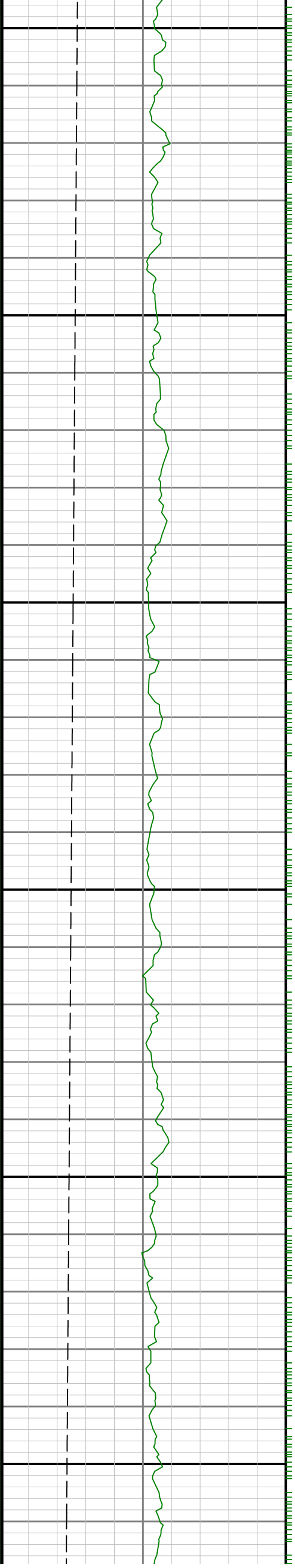


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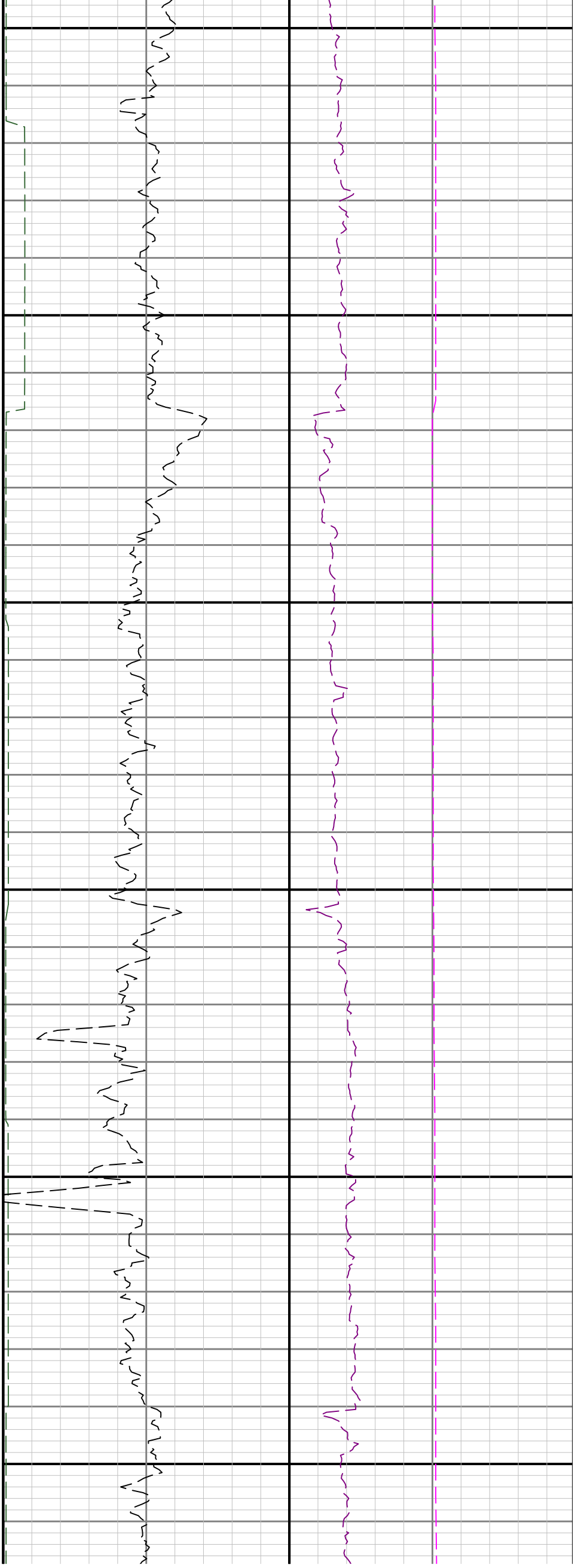


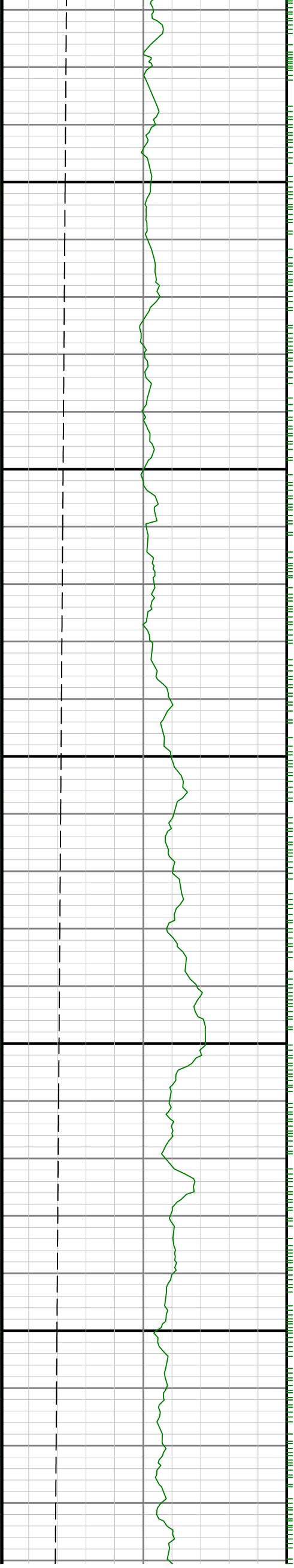


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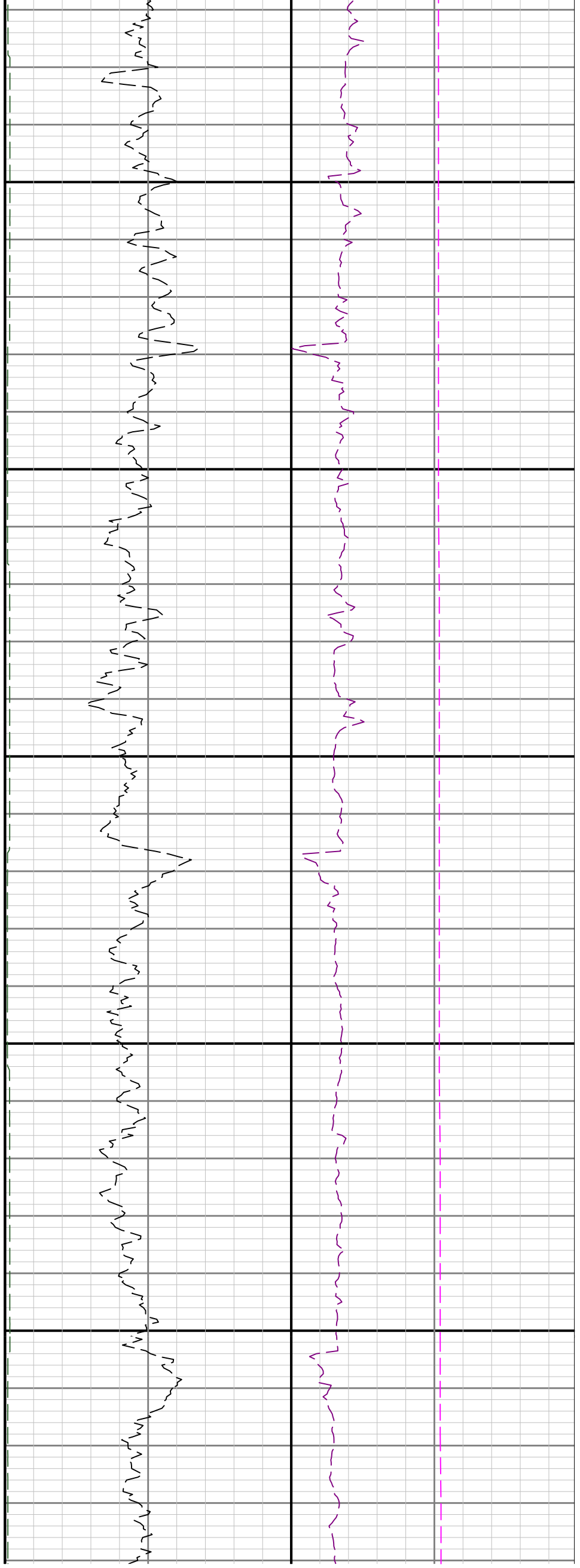
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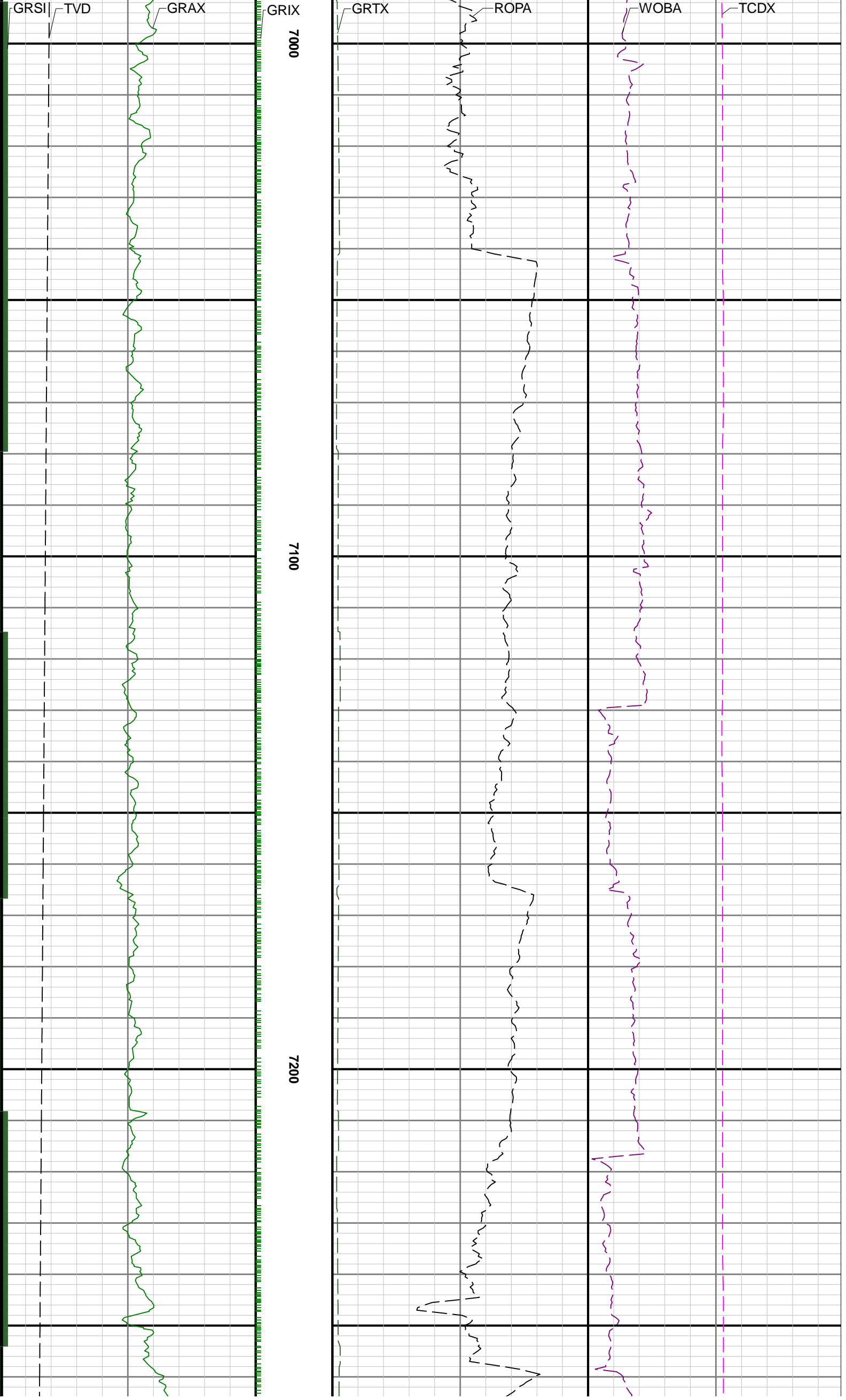


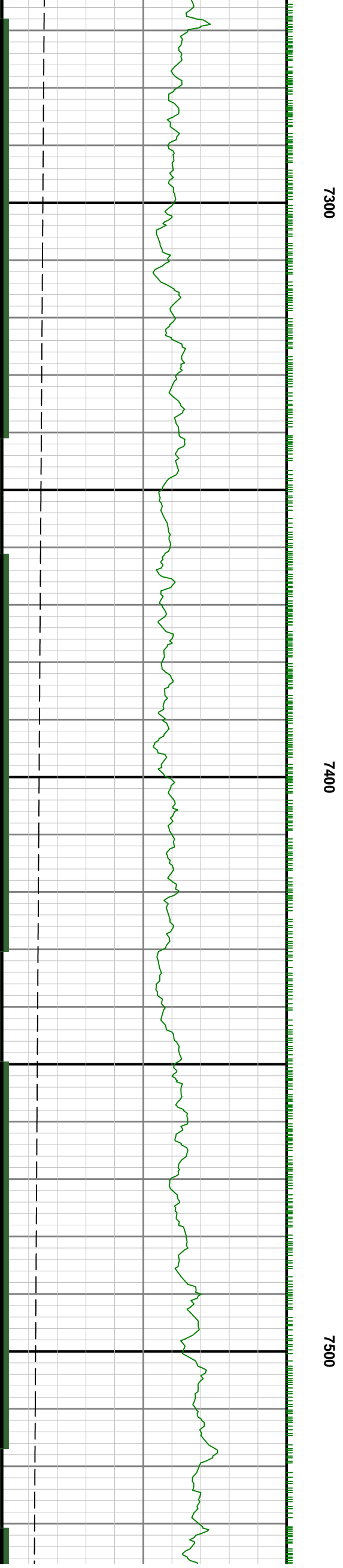
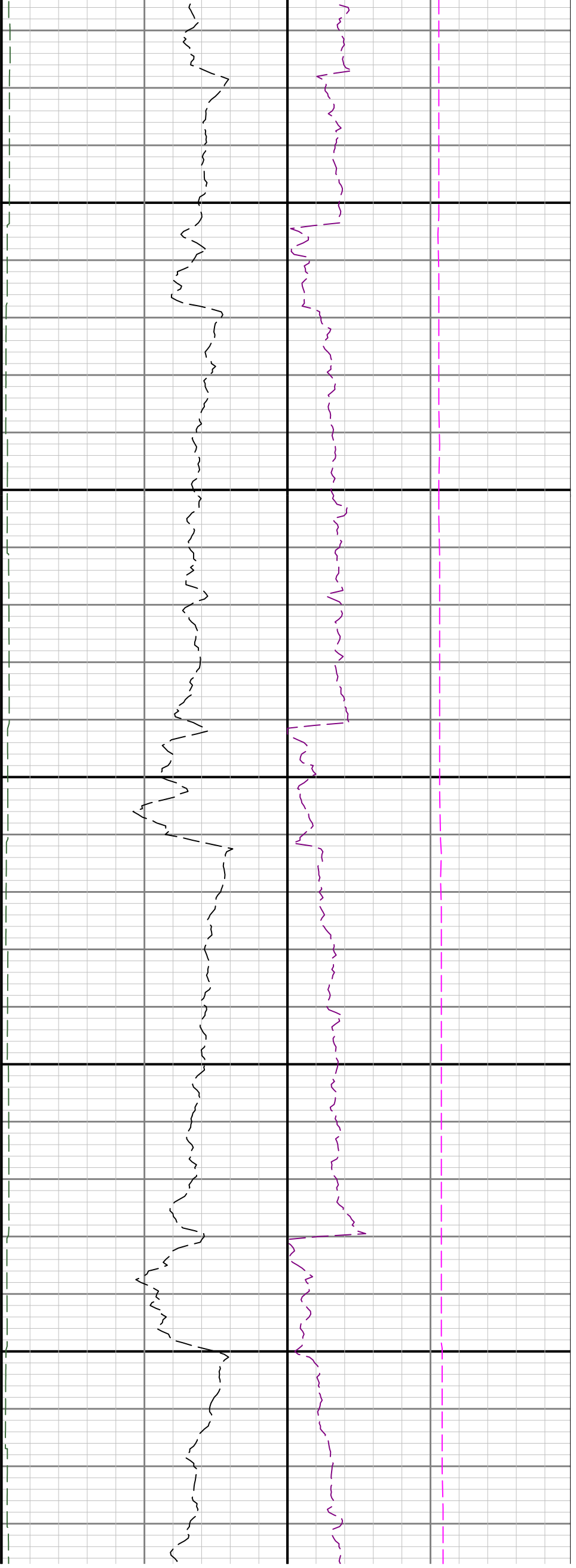


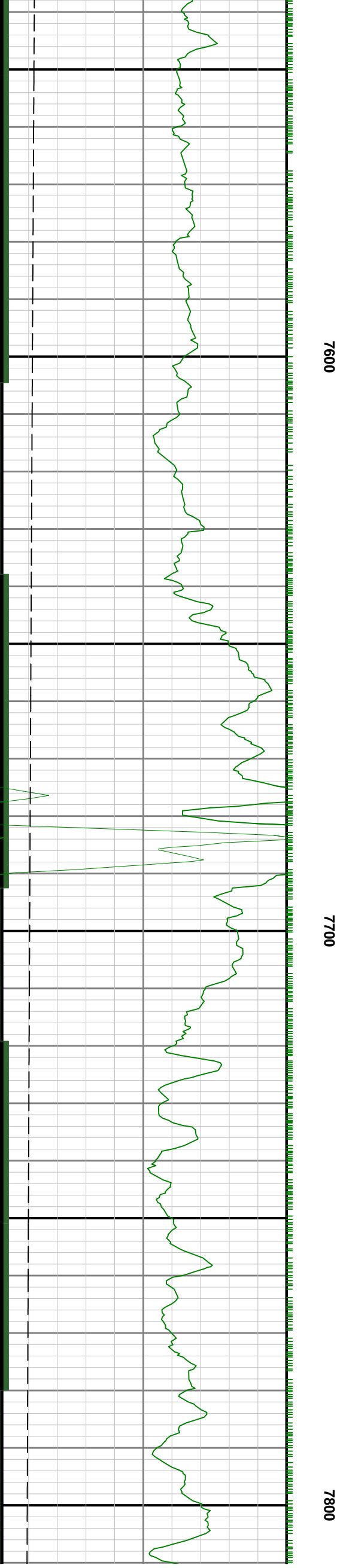
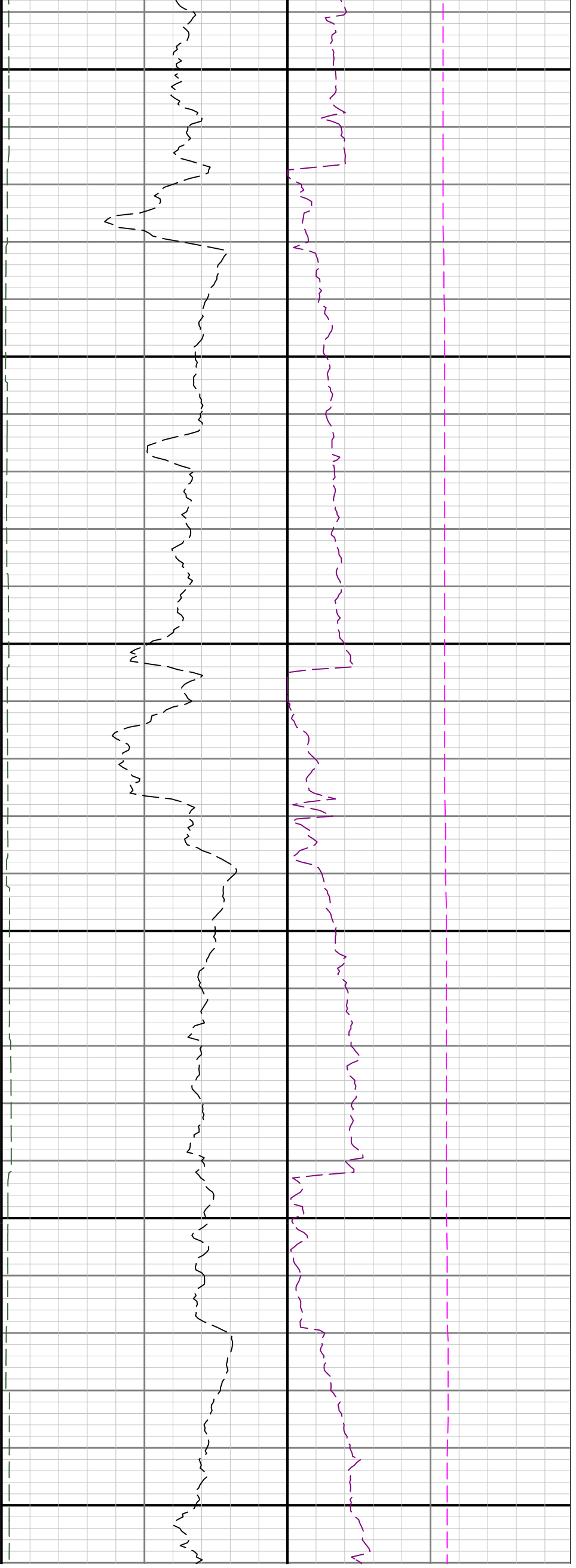
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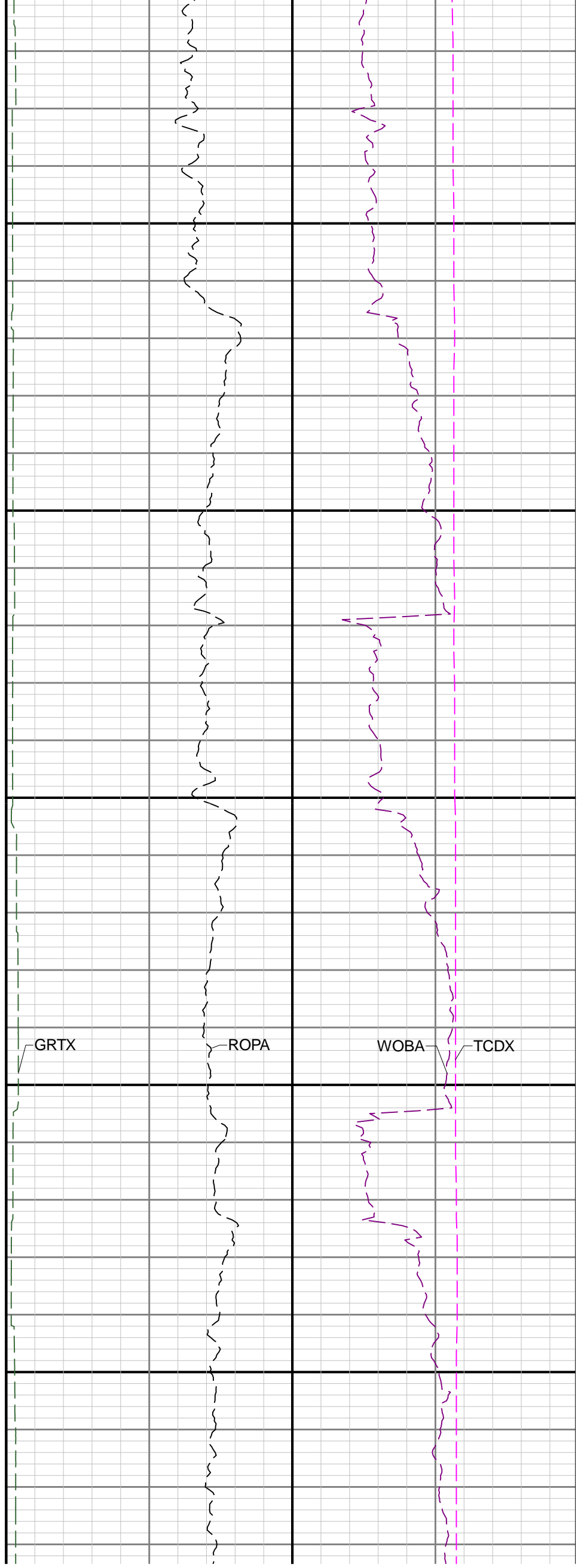
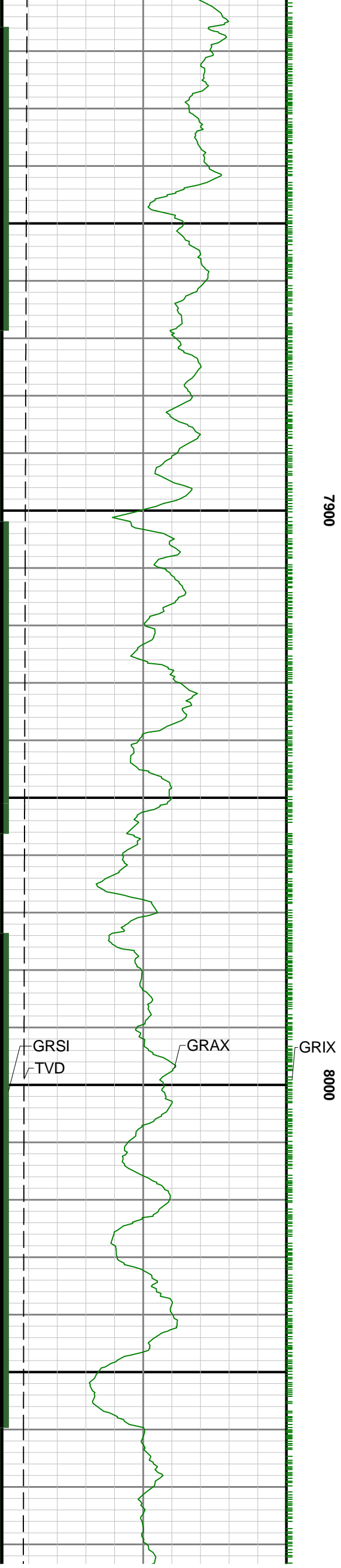
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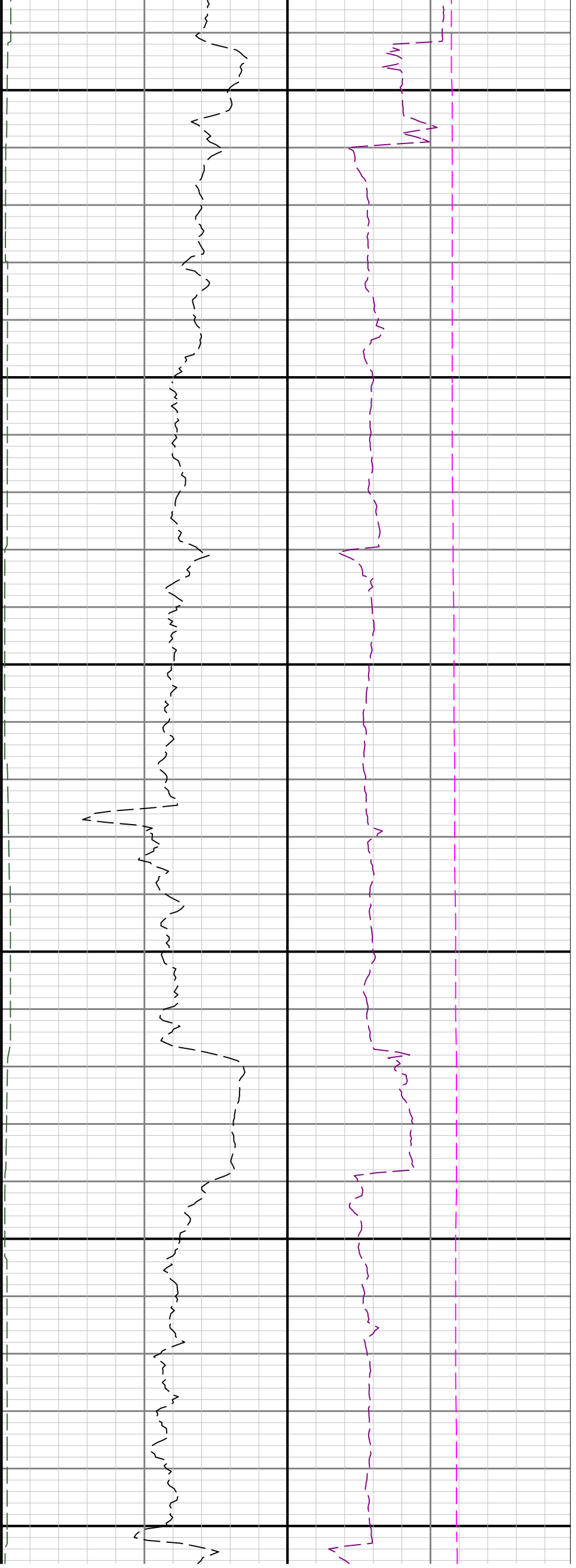








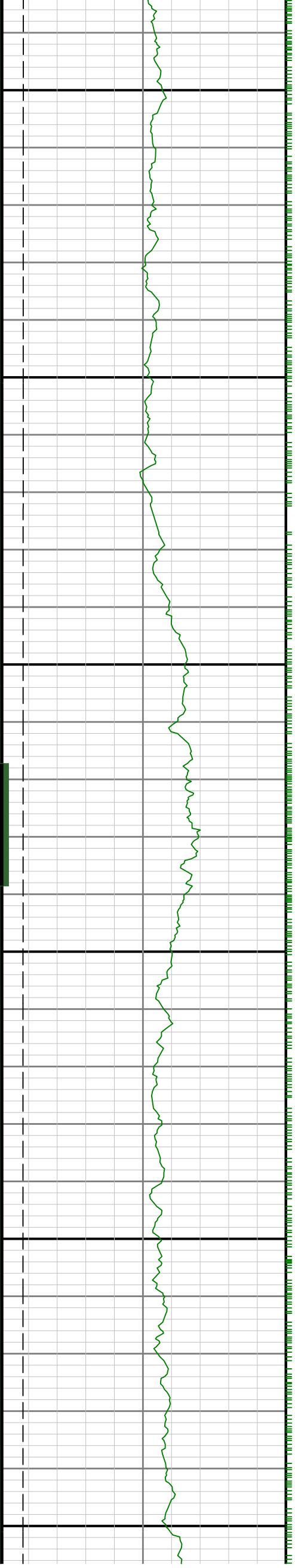


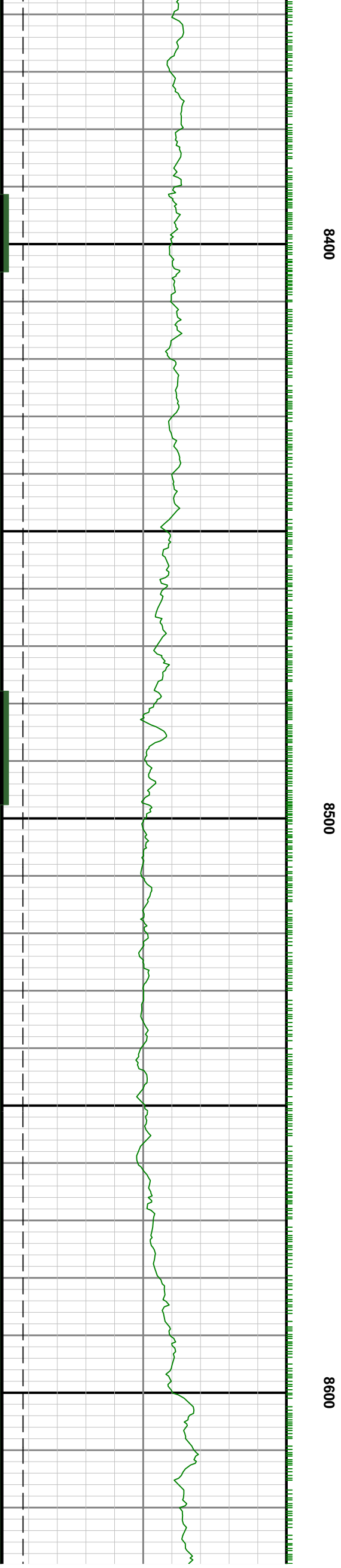
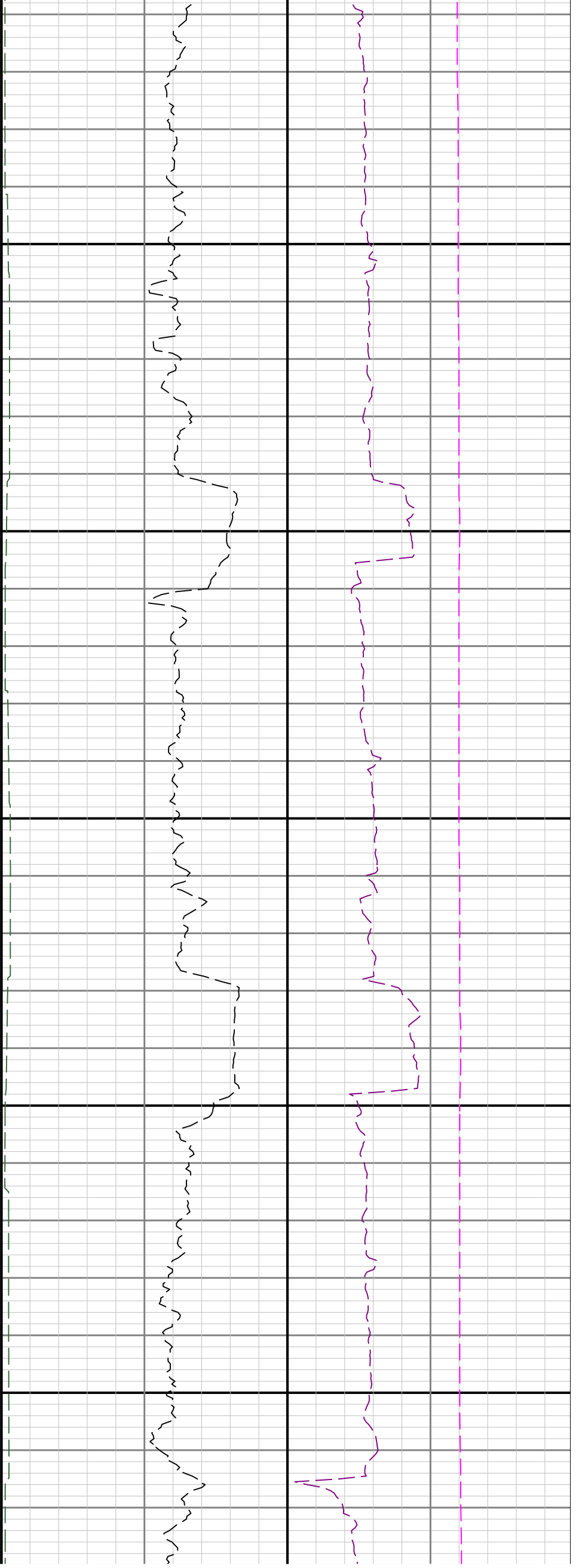


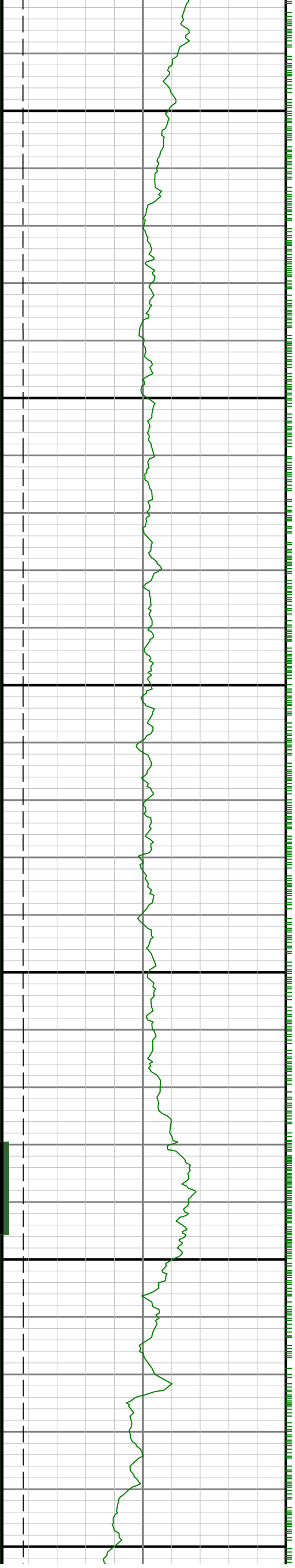
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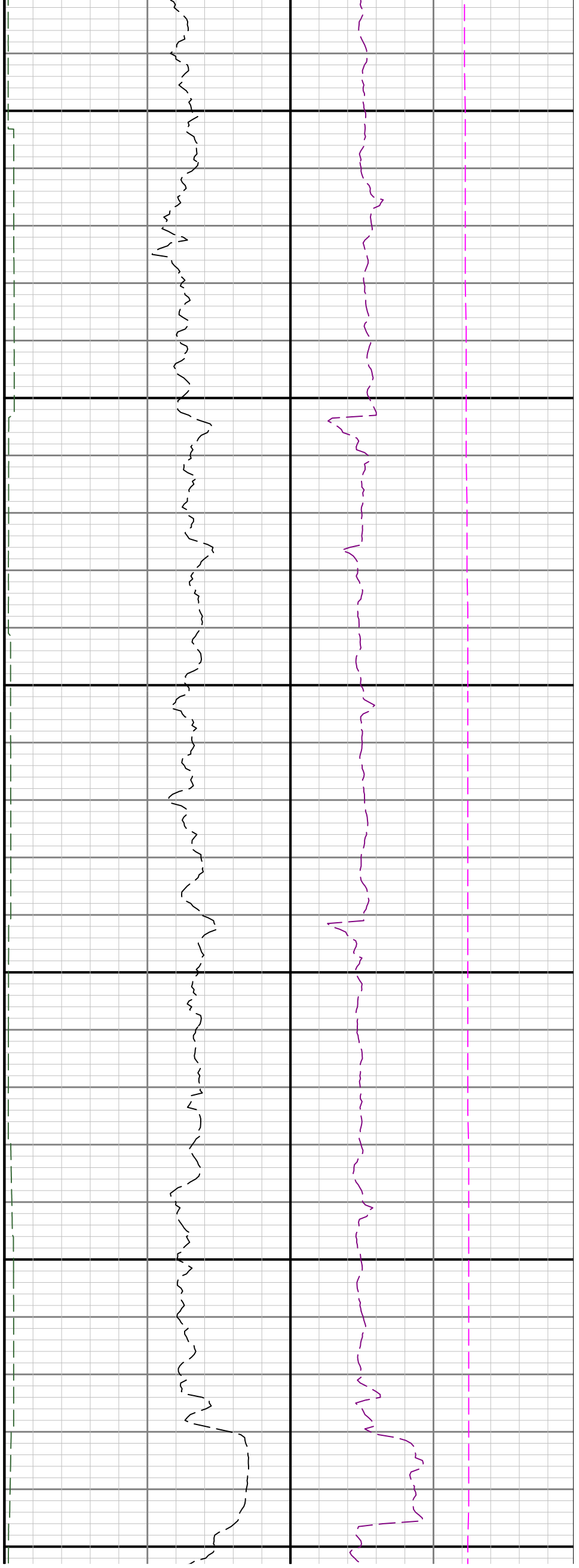


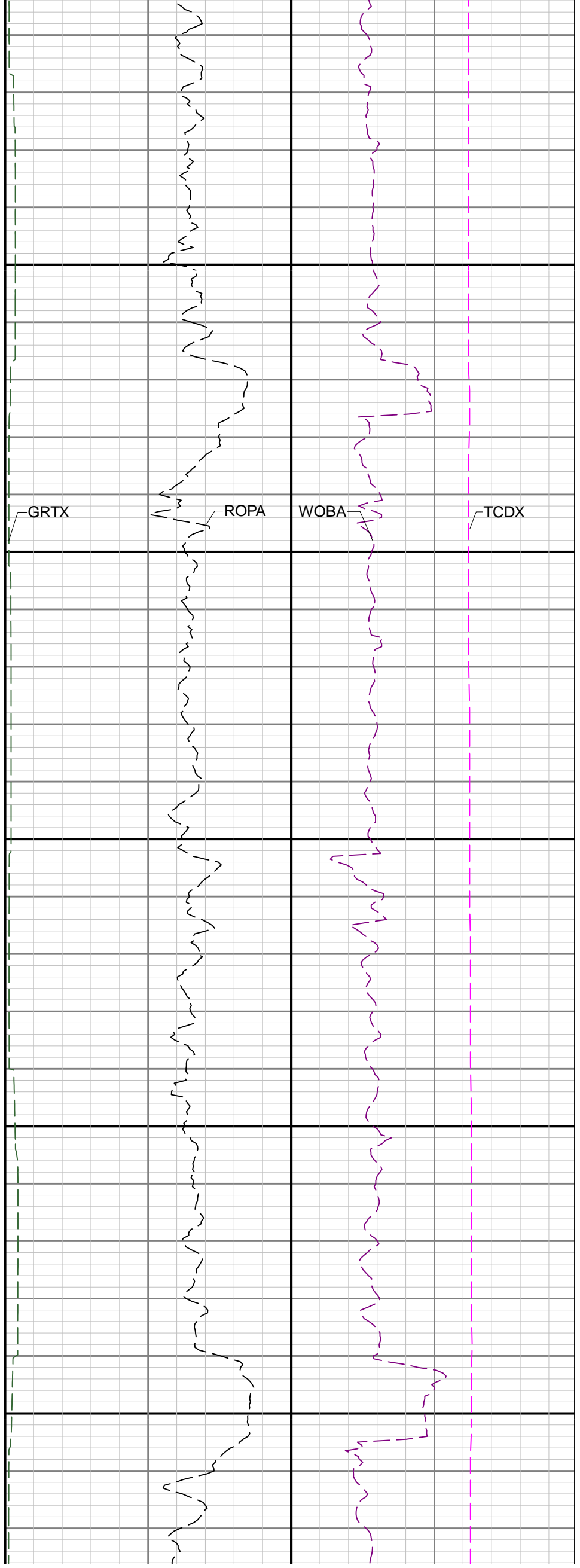
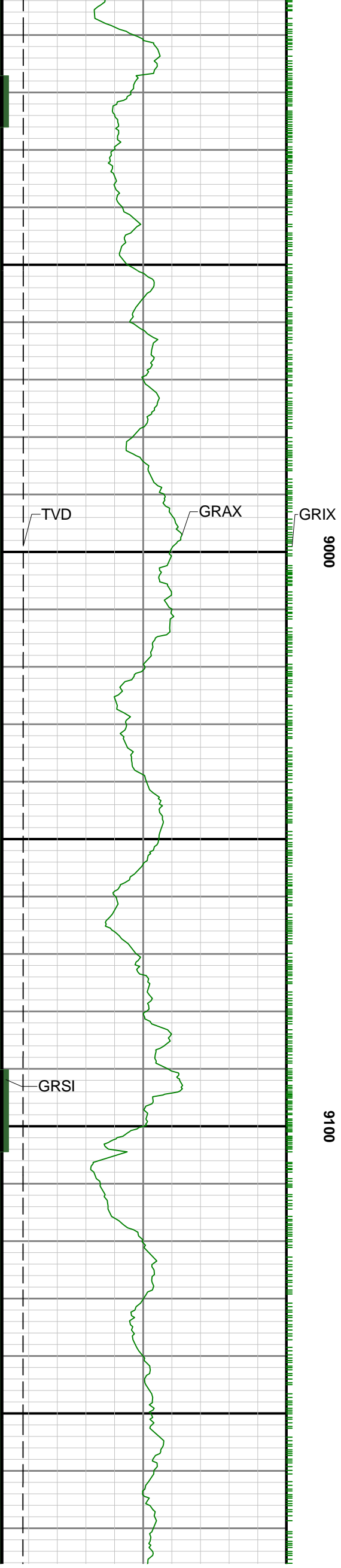


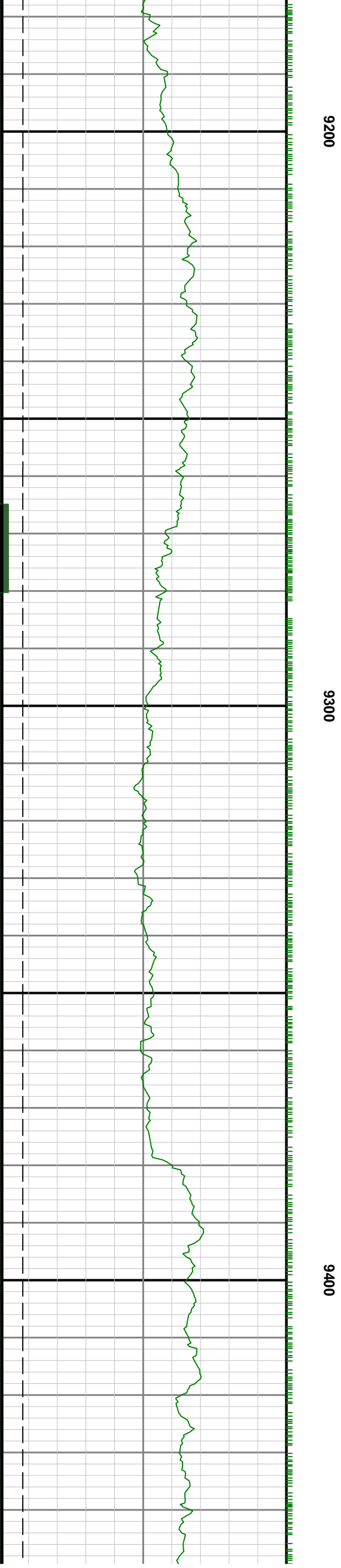
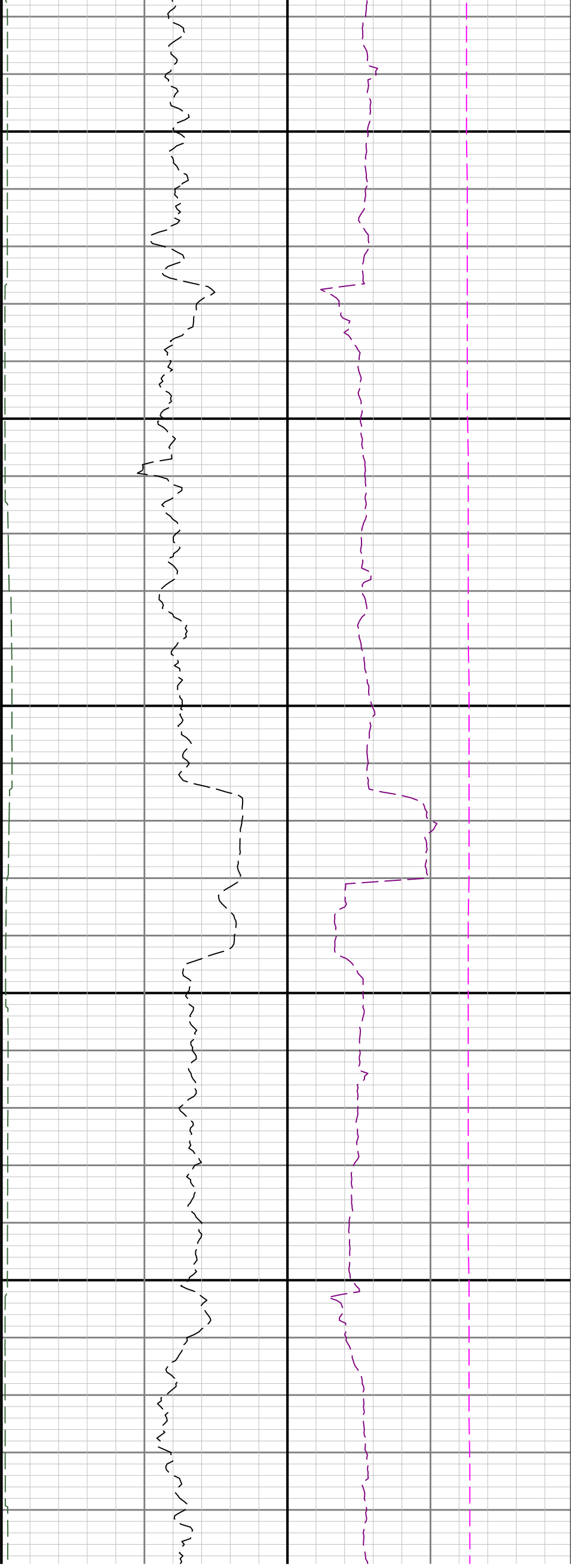
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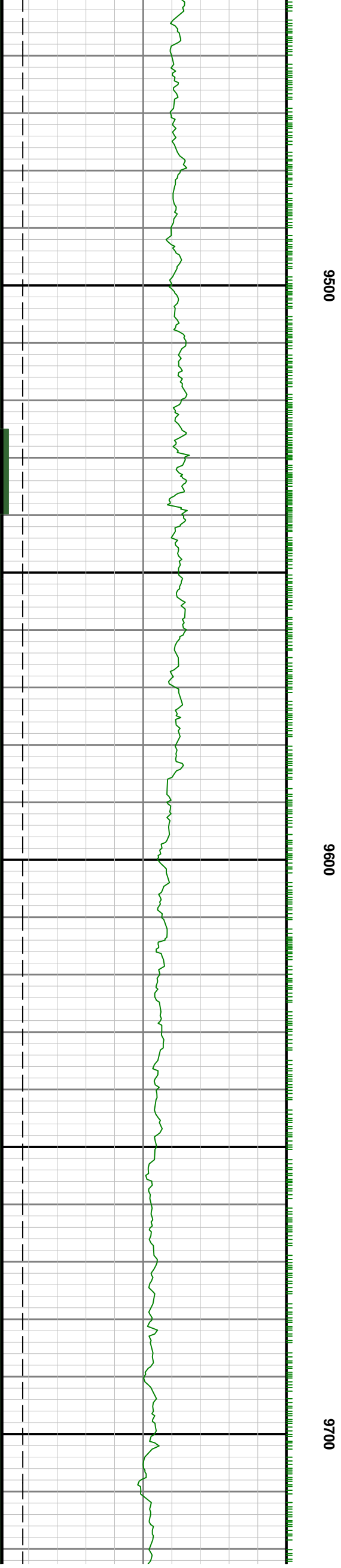
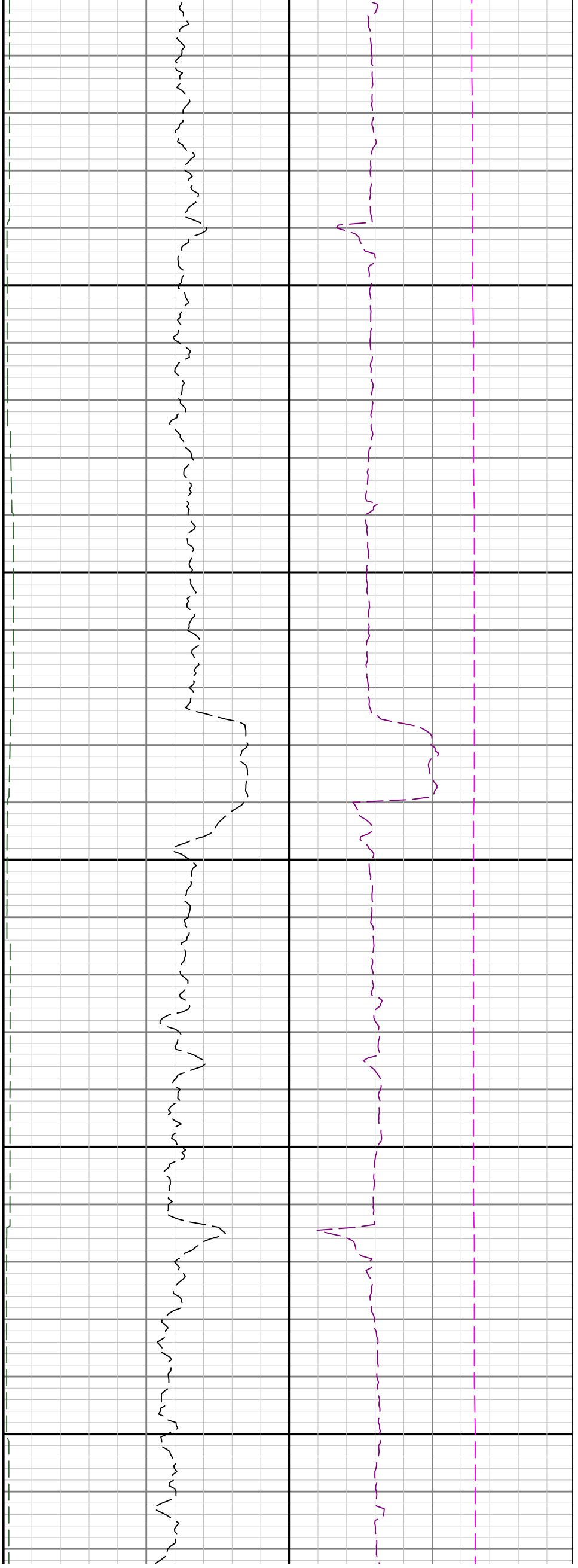
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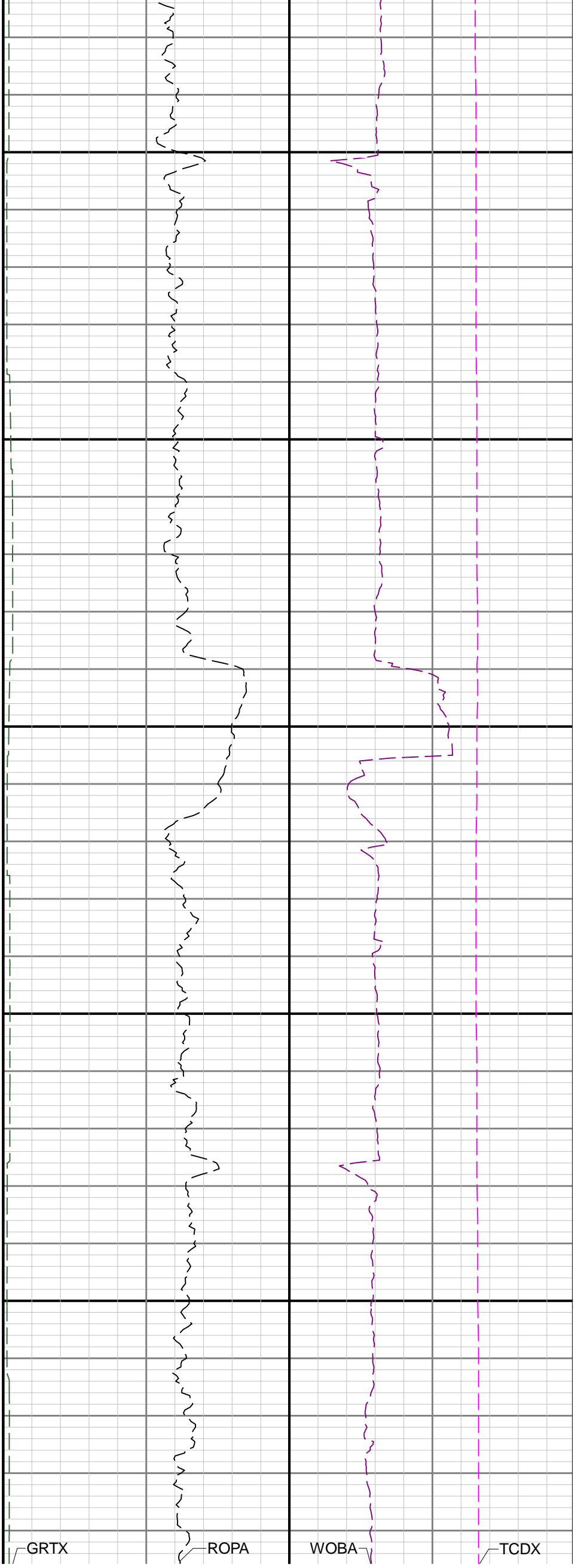
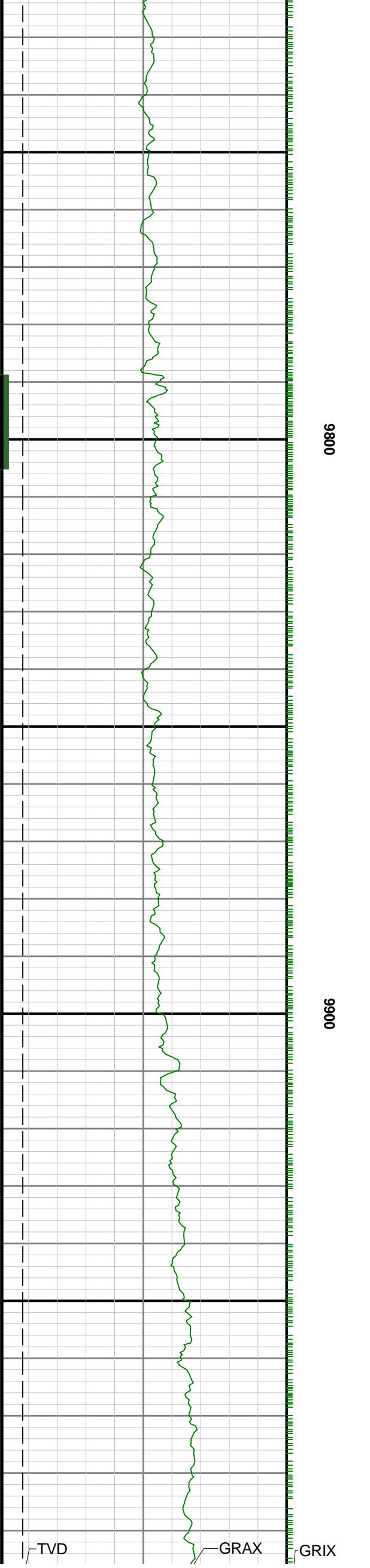
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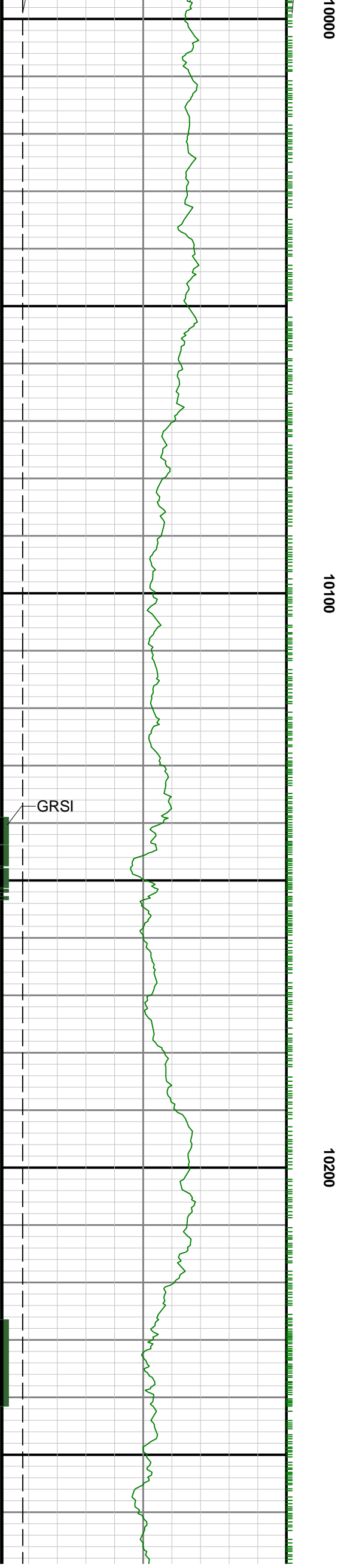
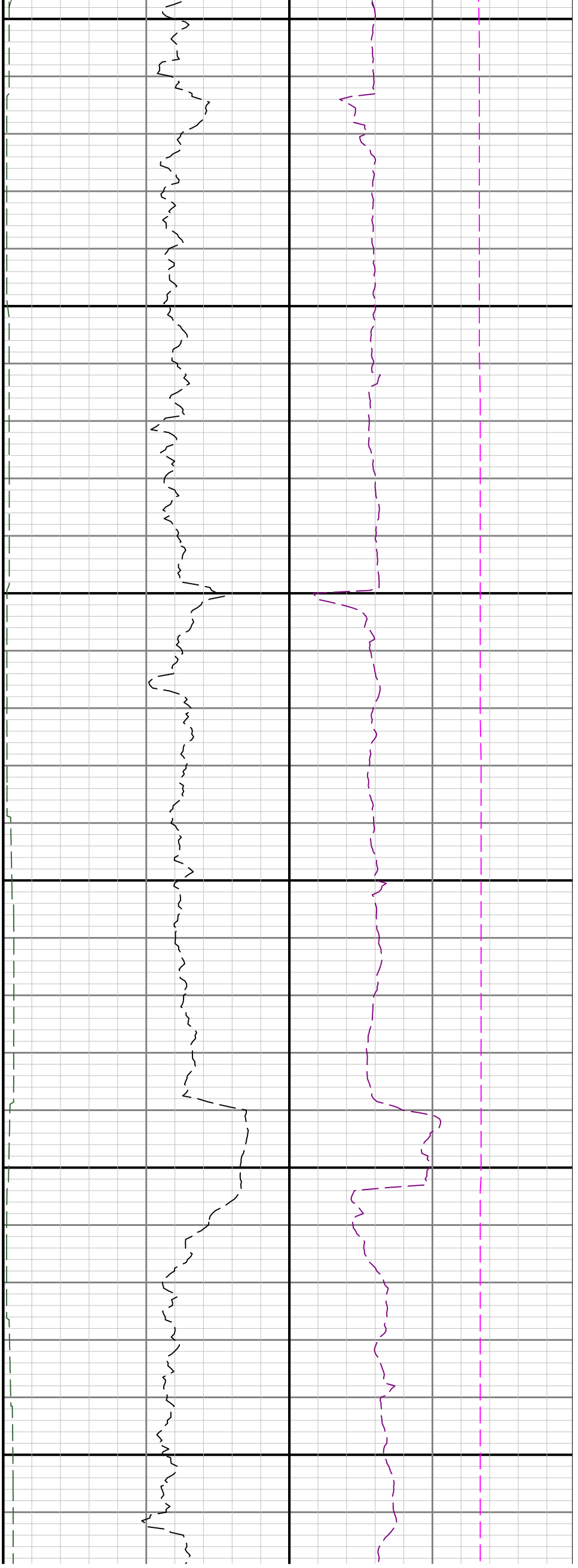


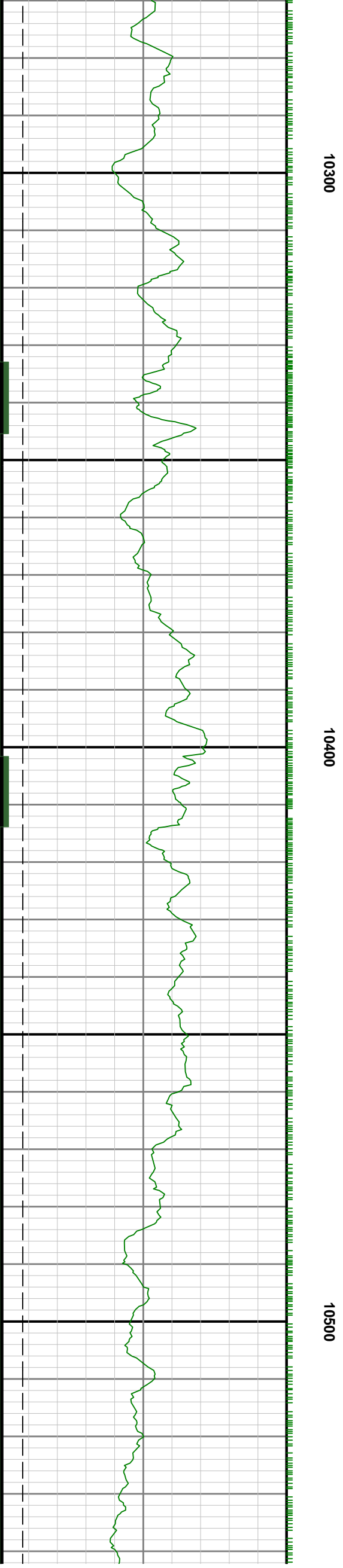
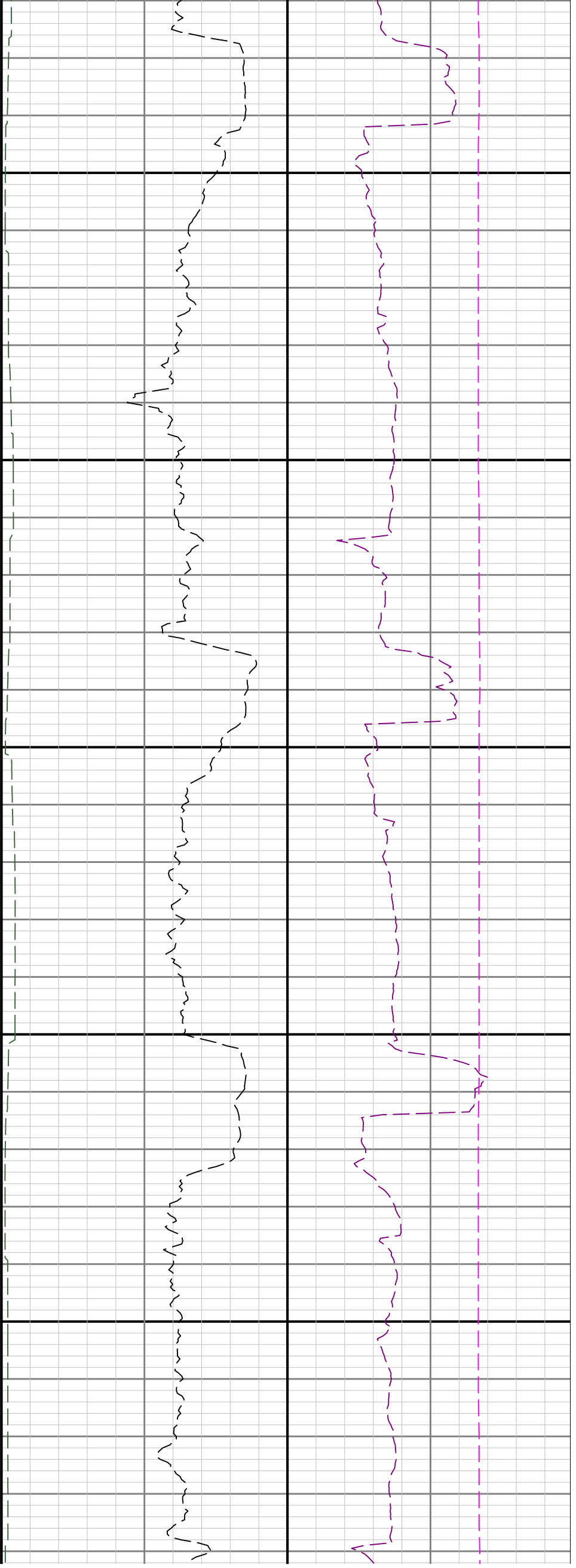


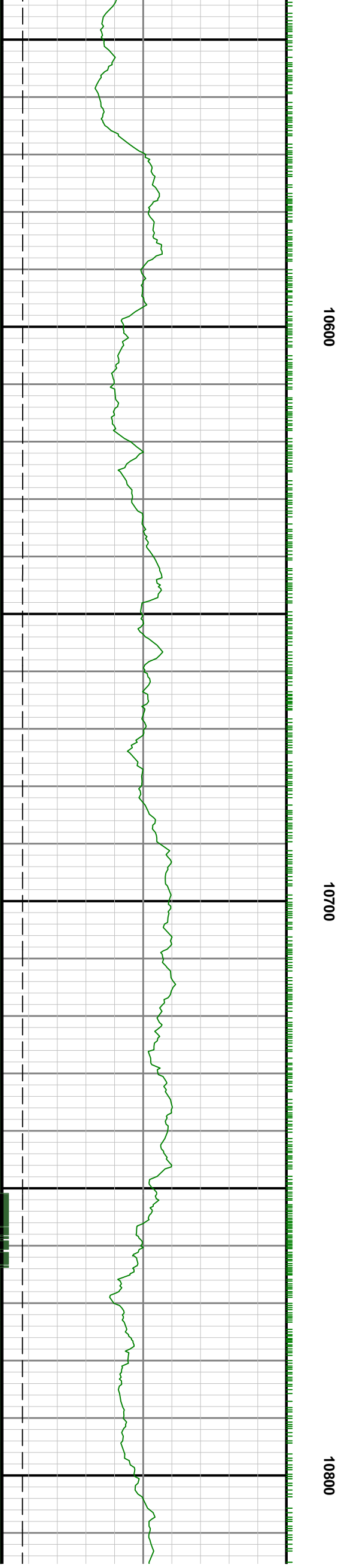
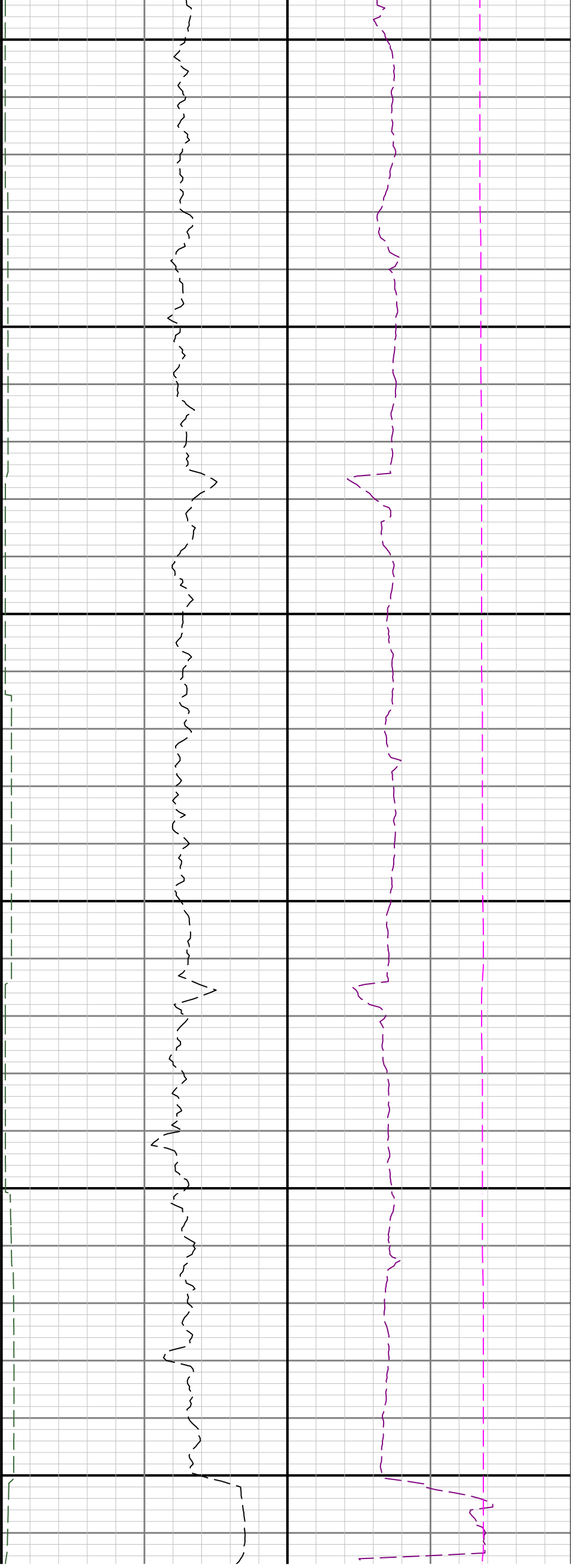


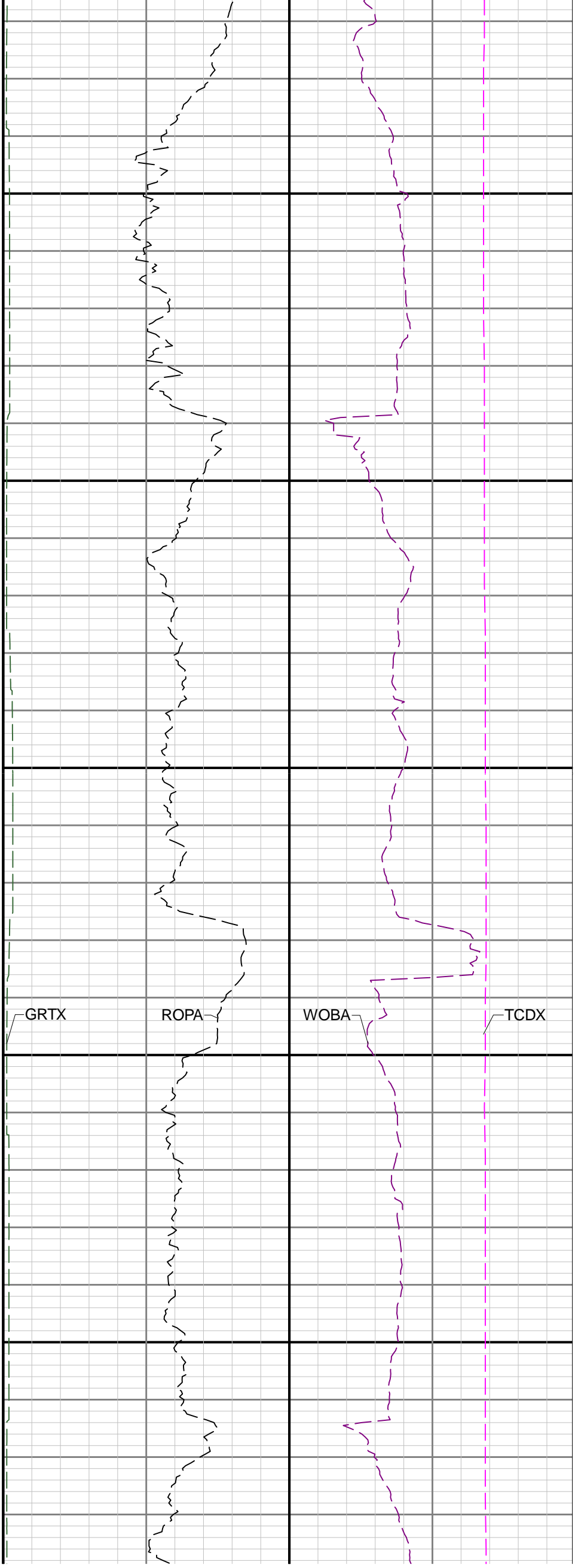
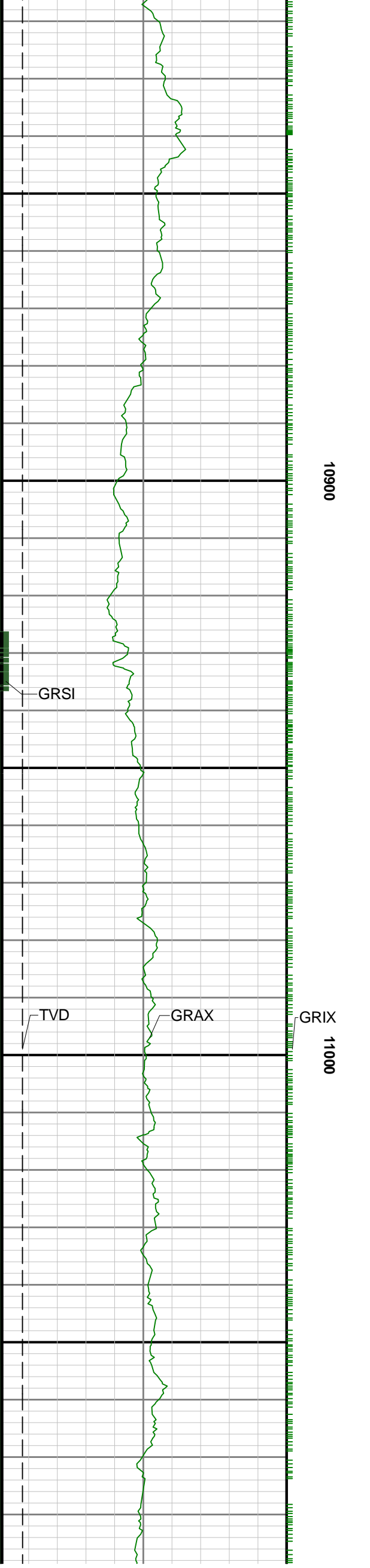


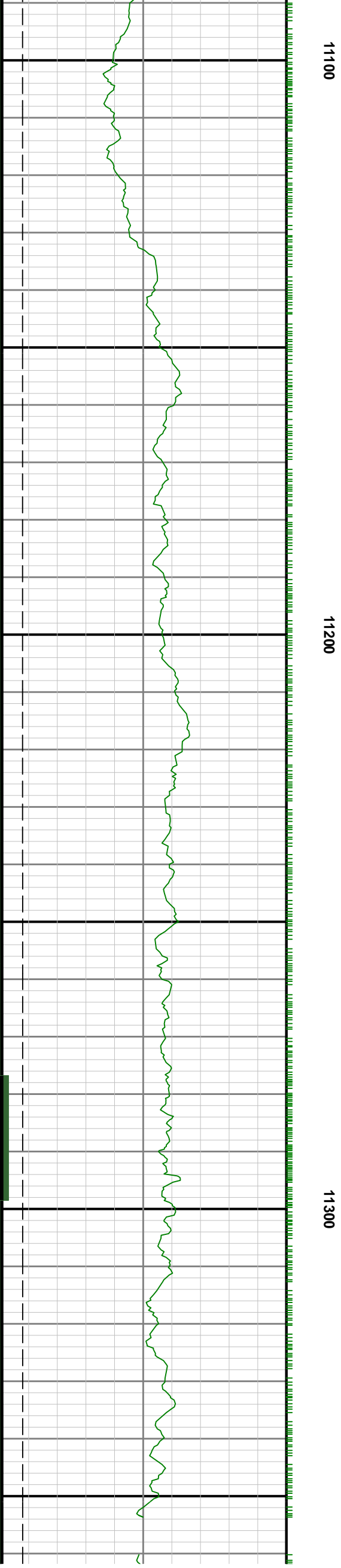
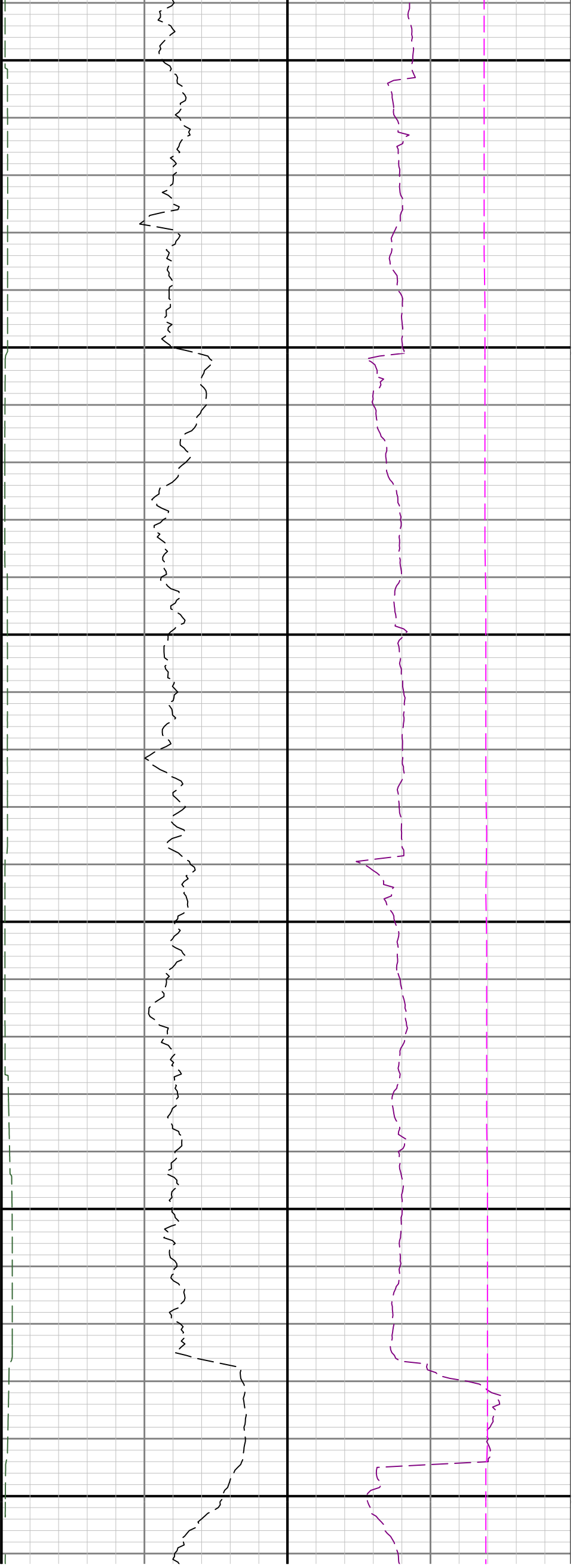


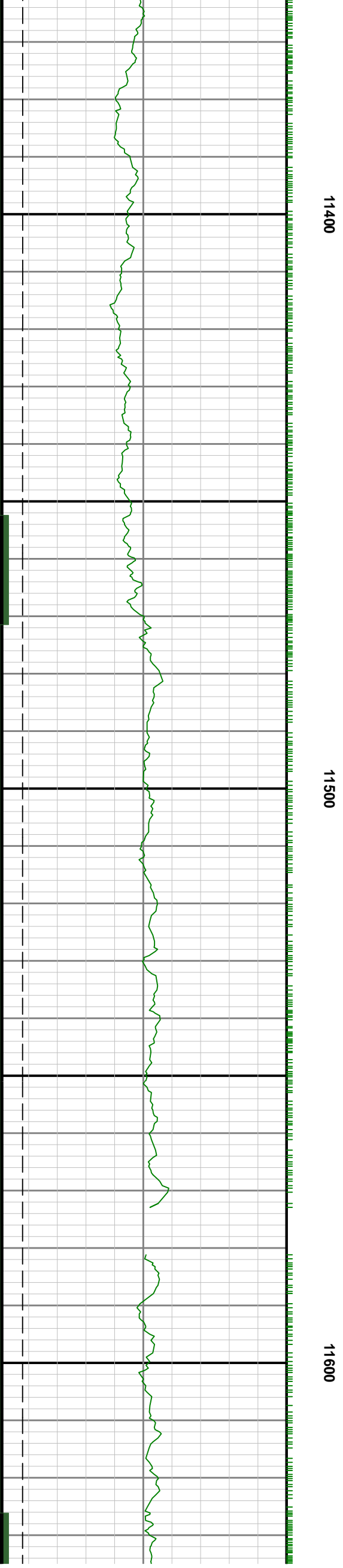
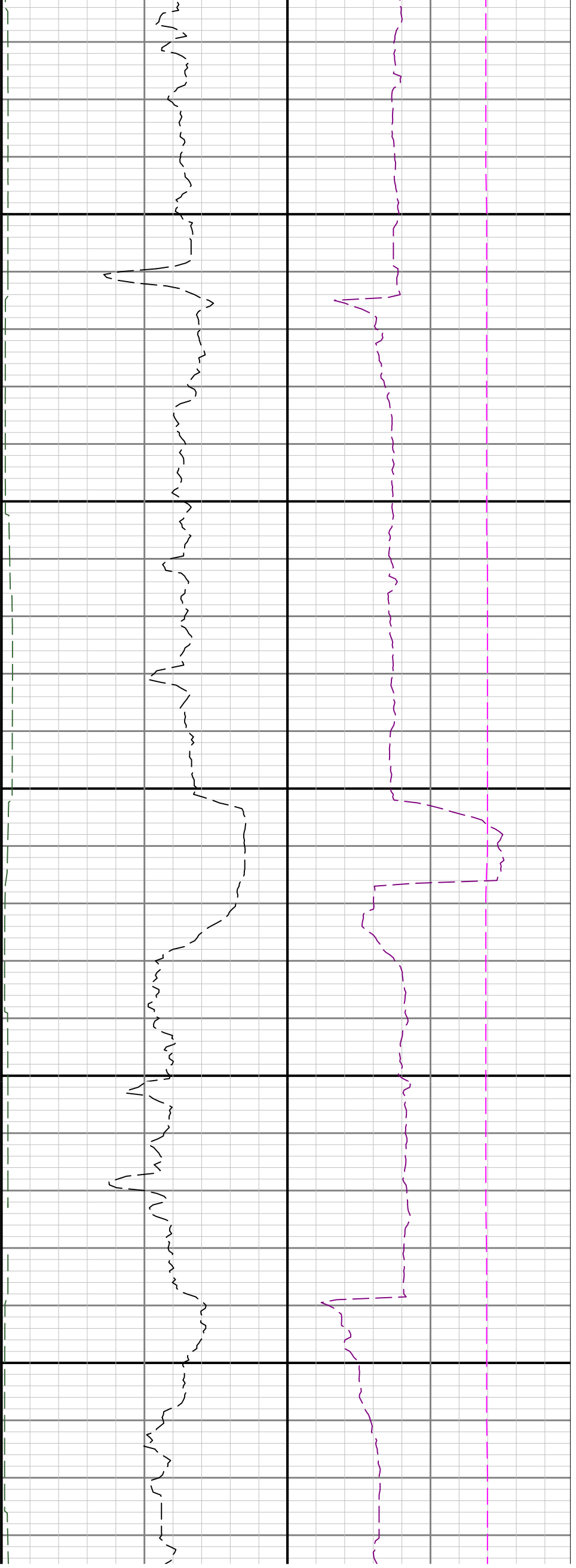


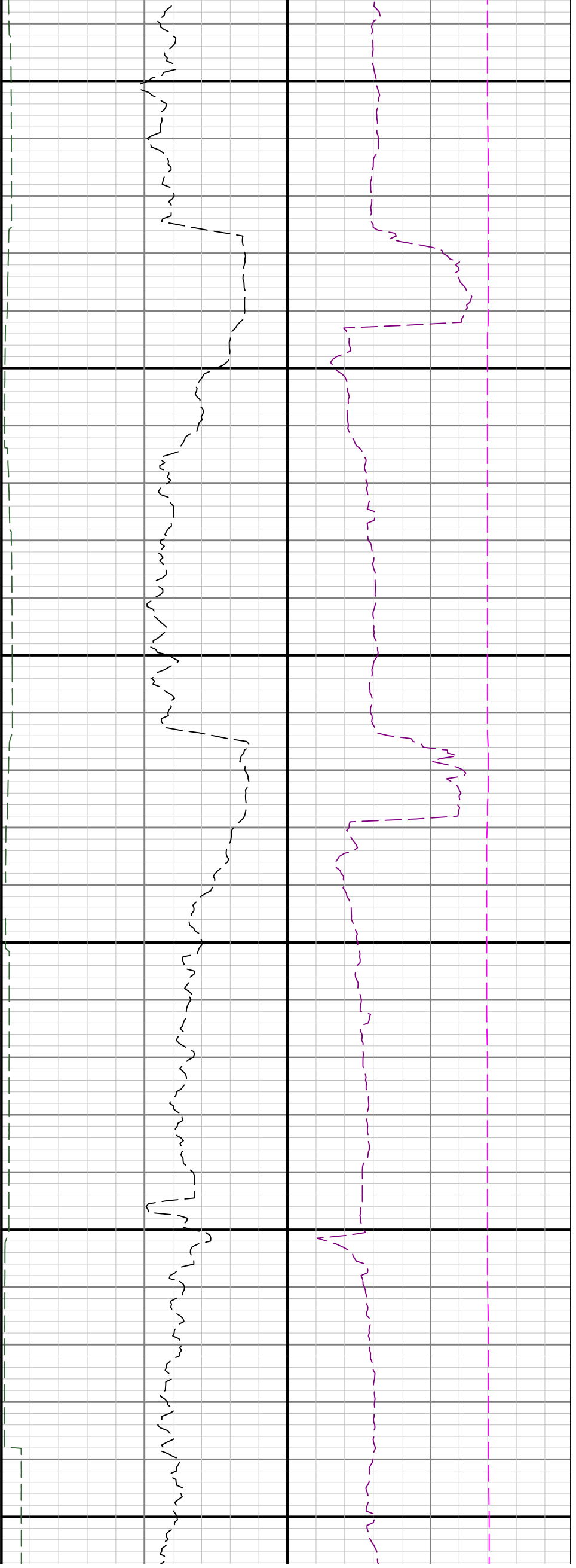








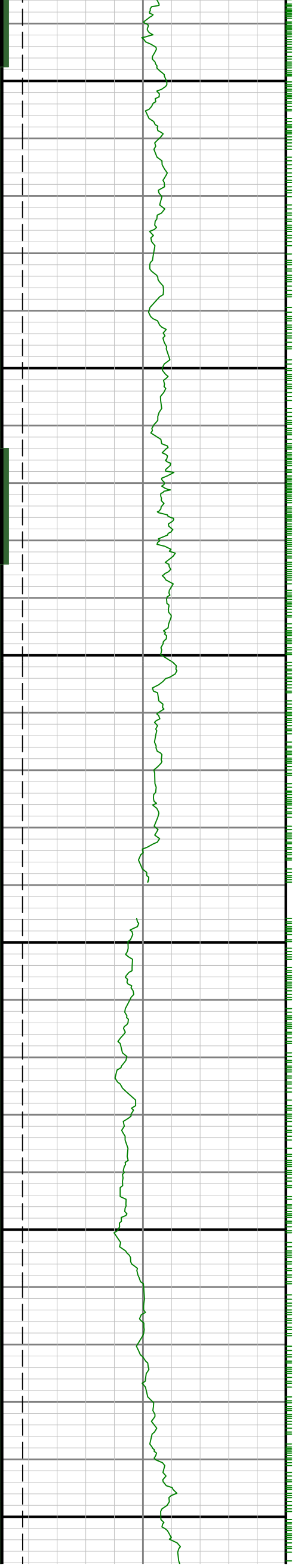


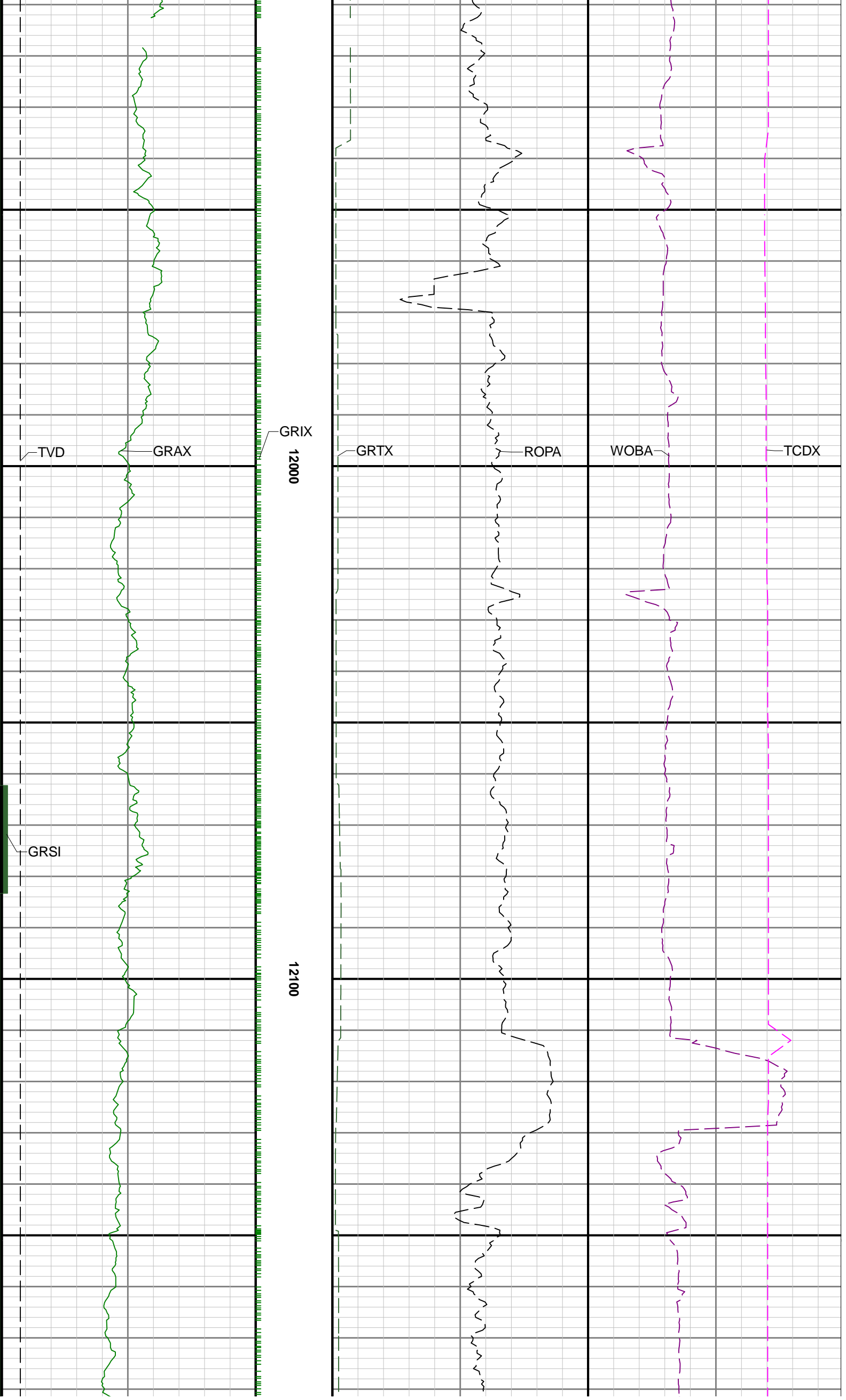


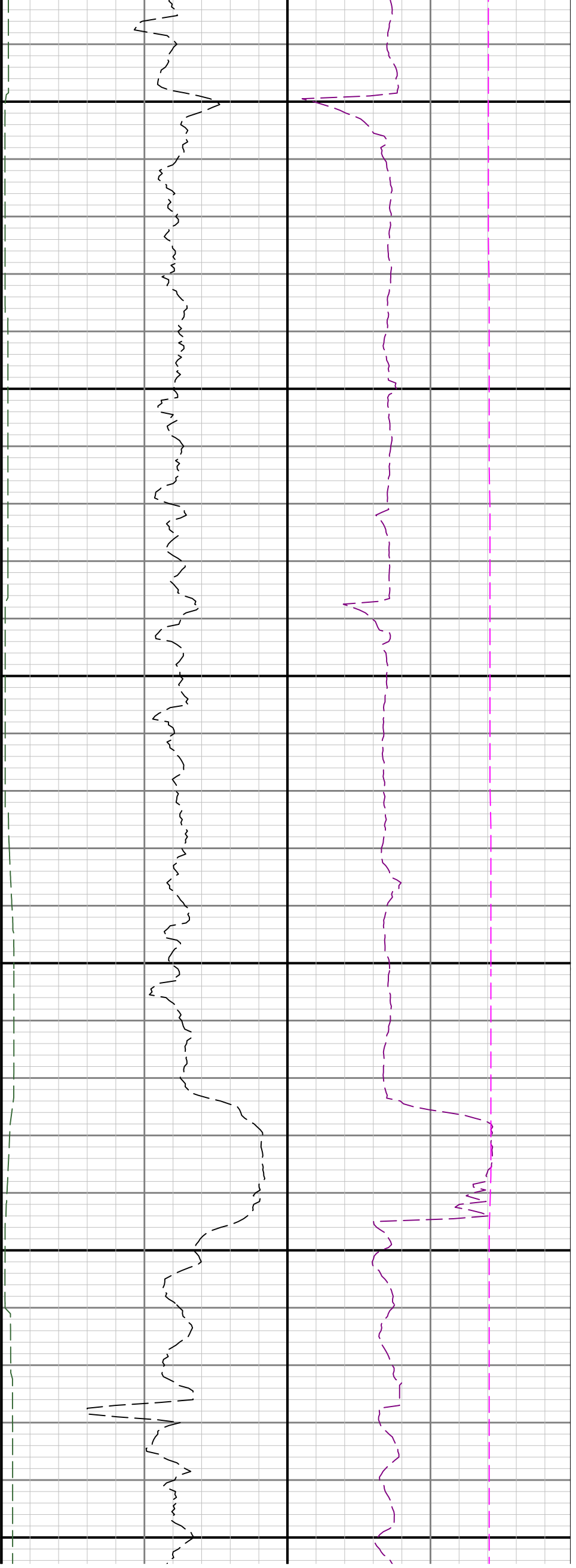
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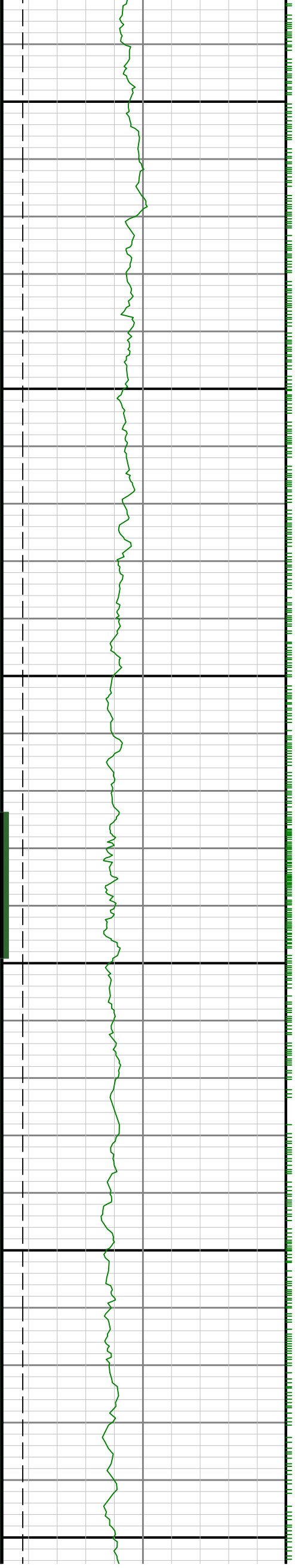


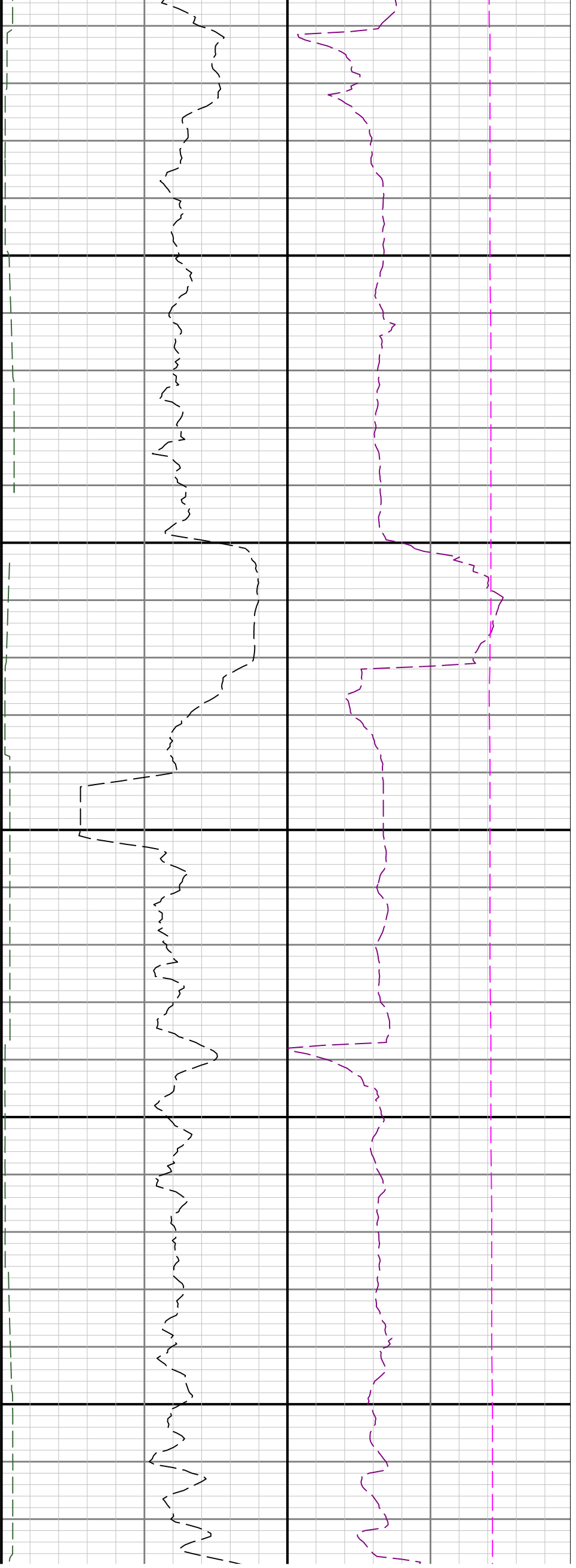


12200

12300

12400



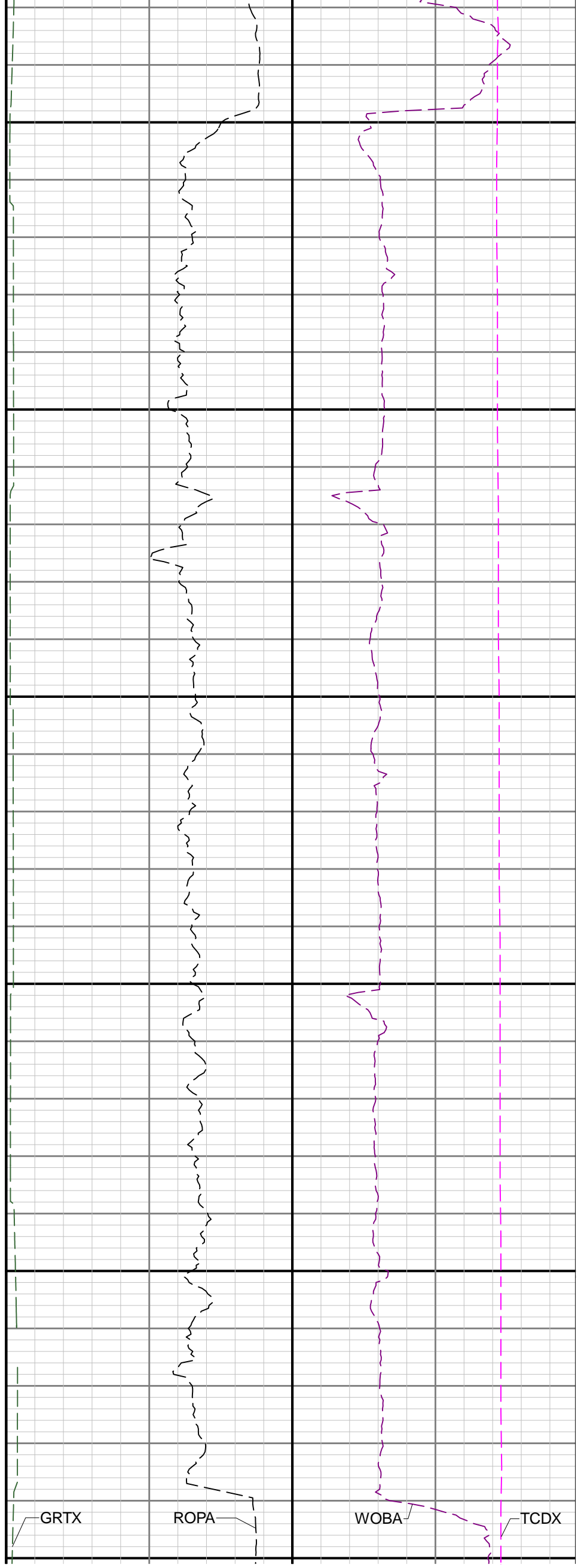
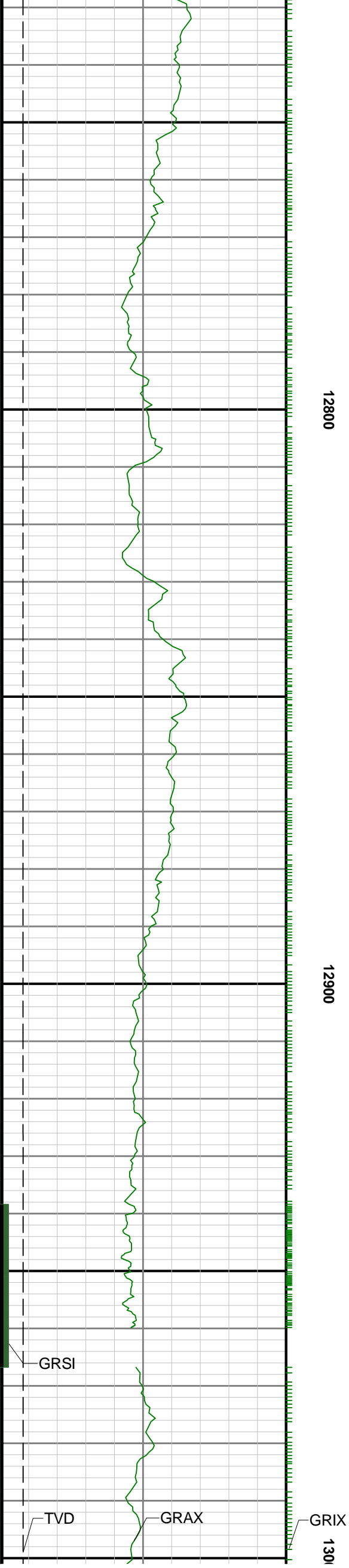


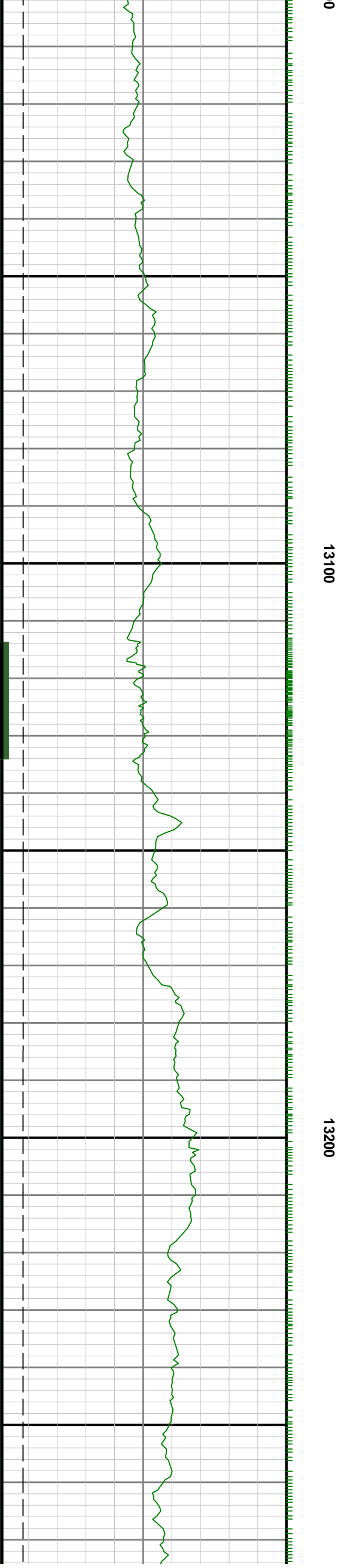
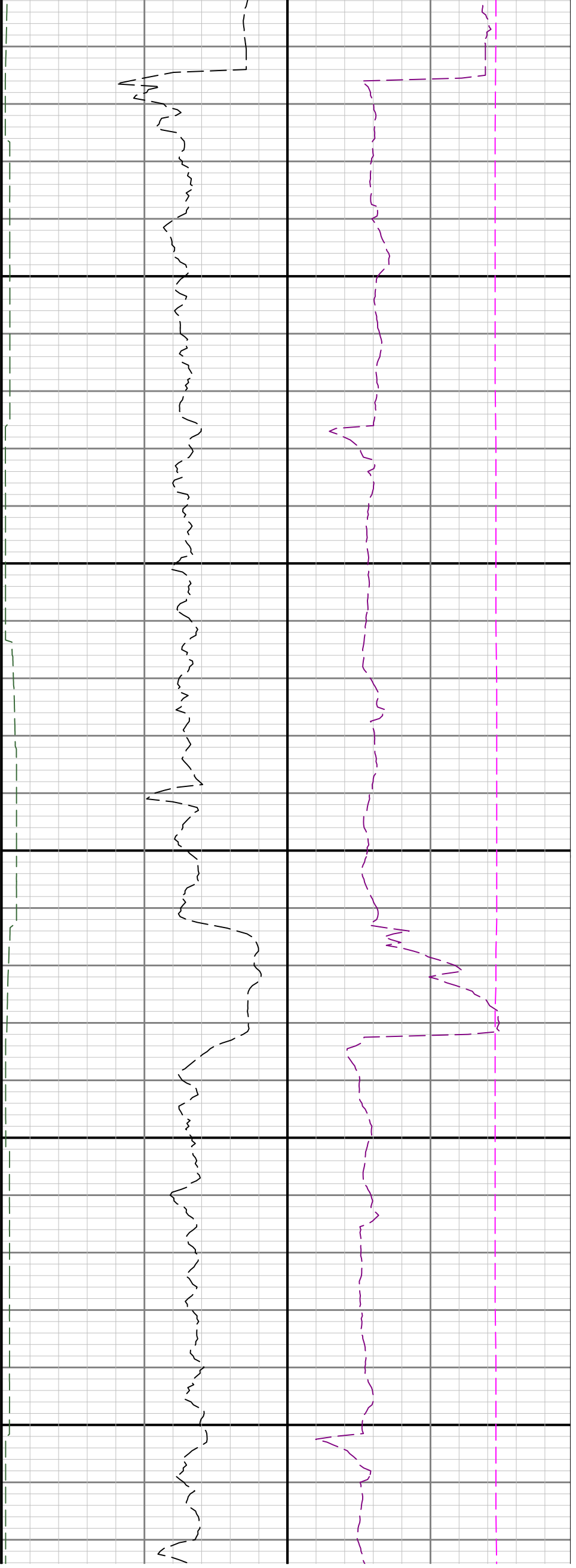
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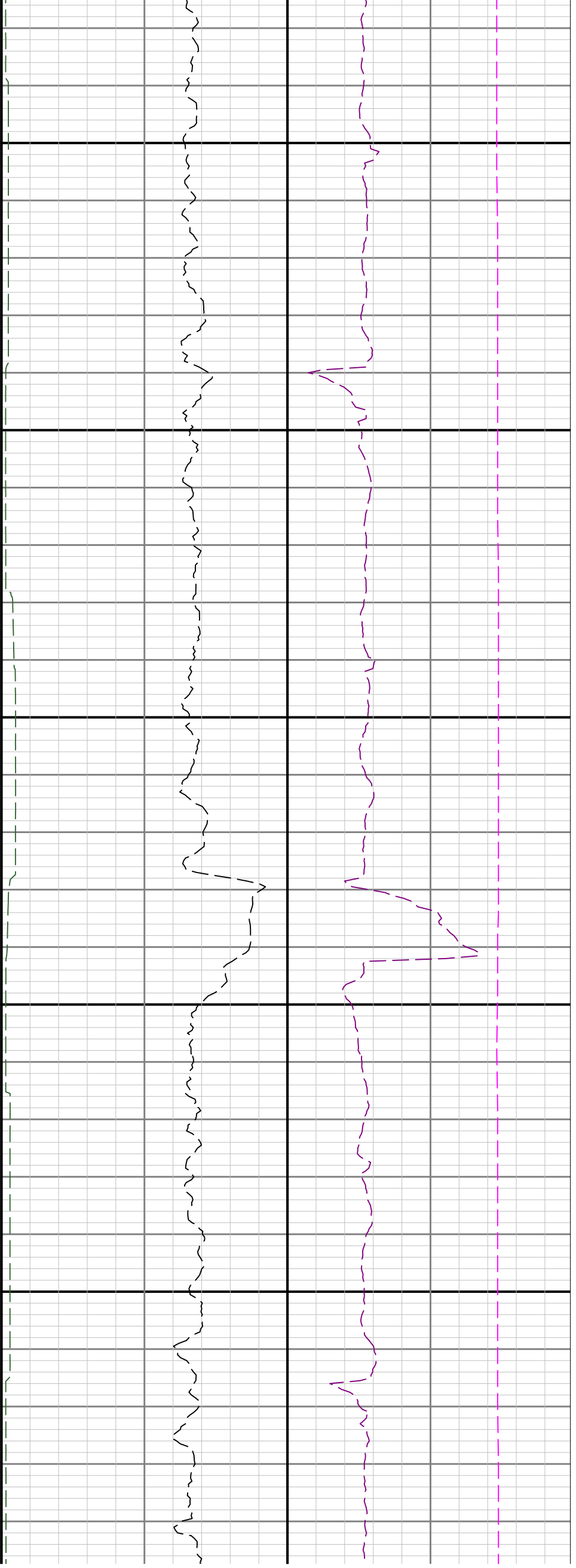
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12700

See Remark 2



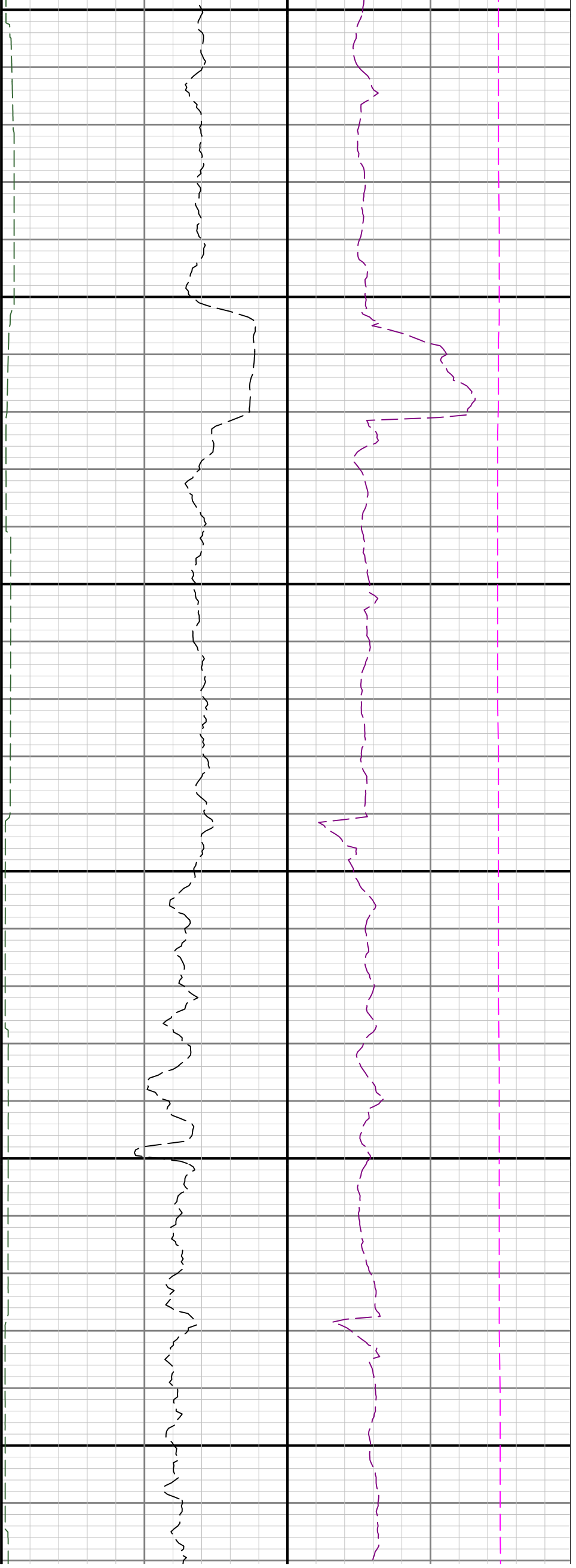




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13400

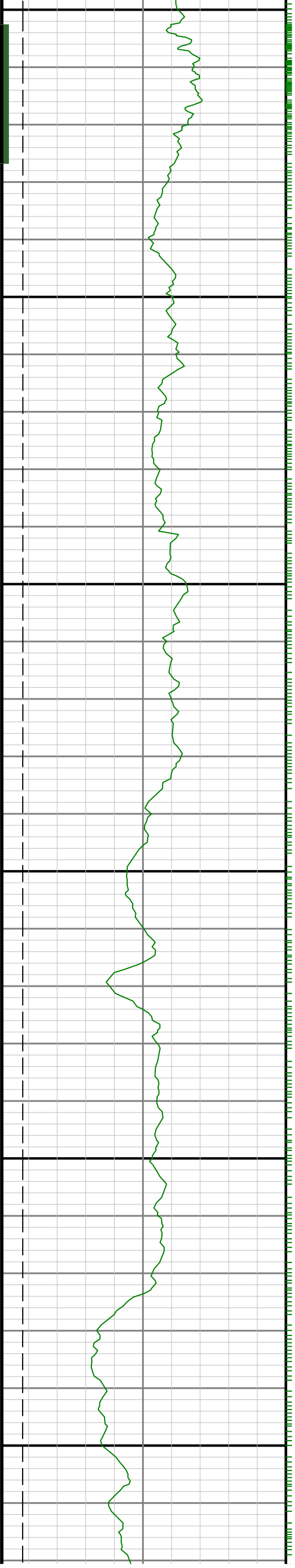
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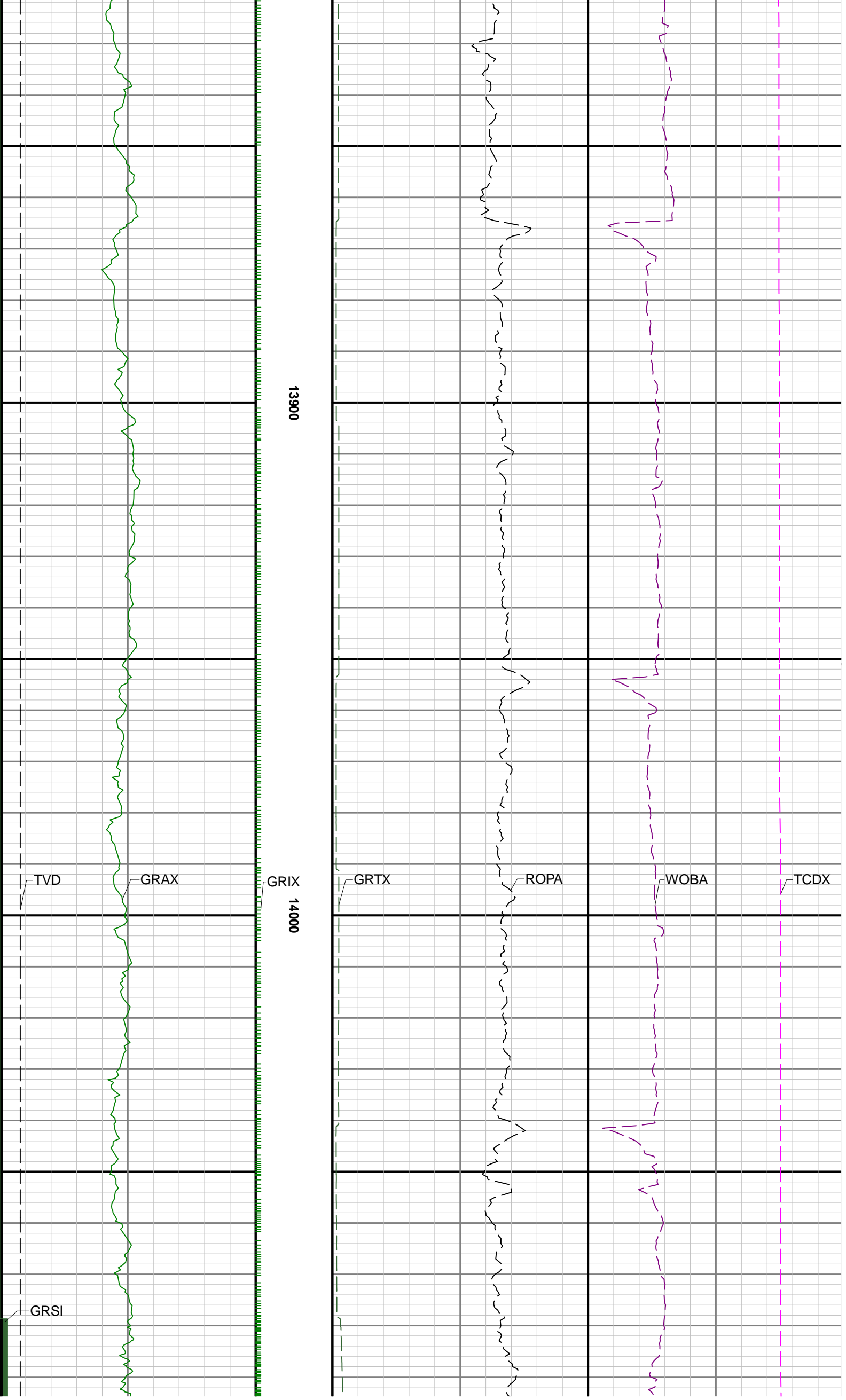


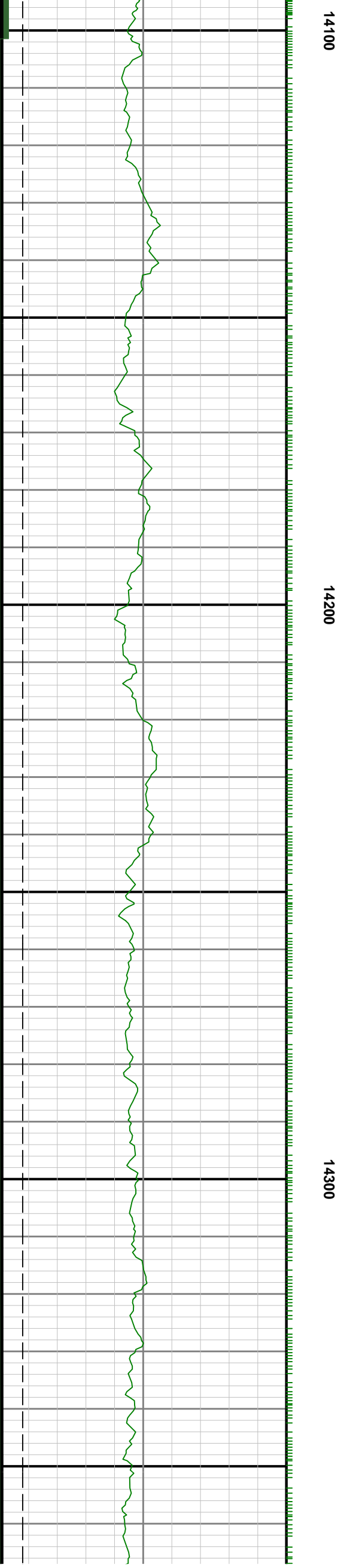
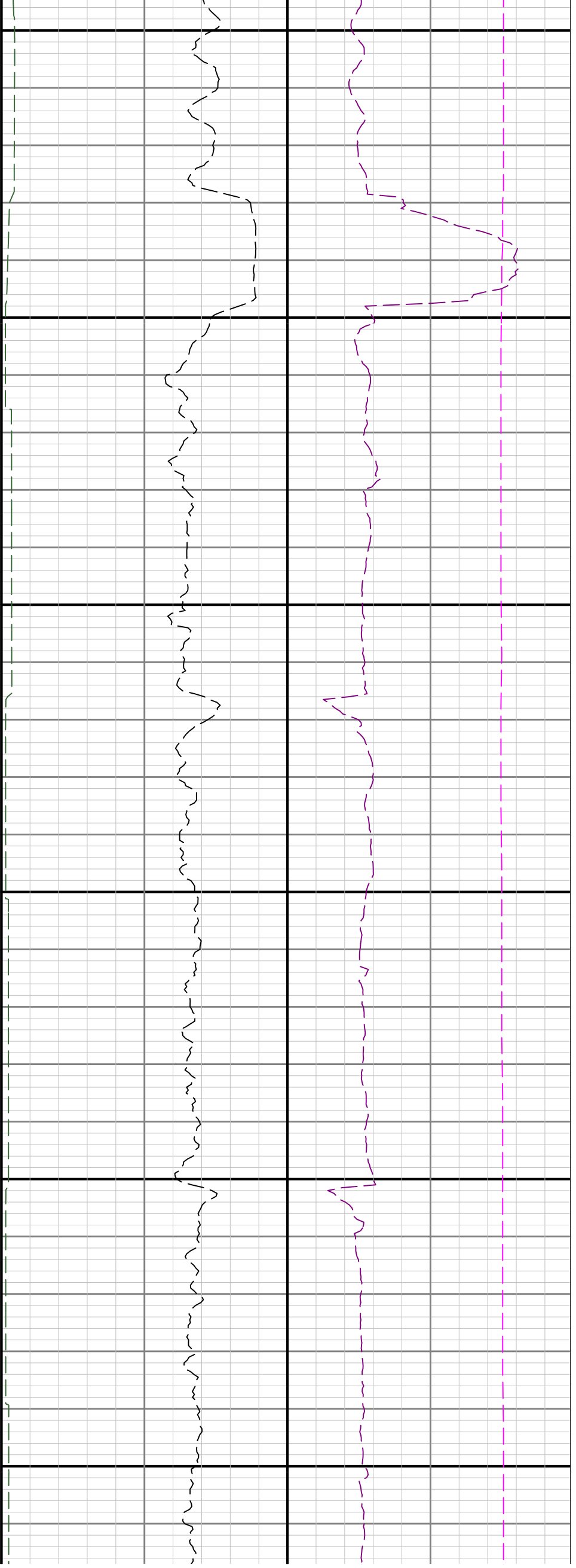
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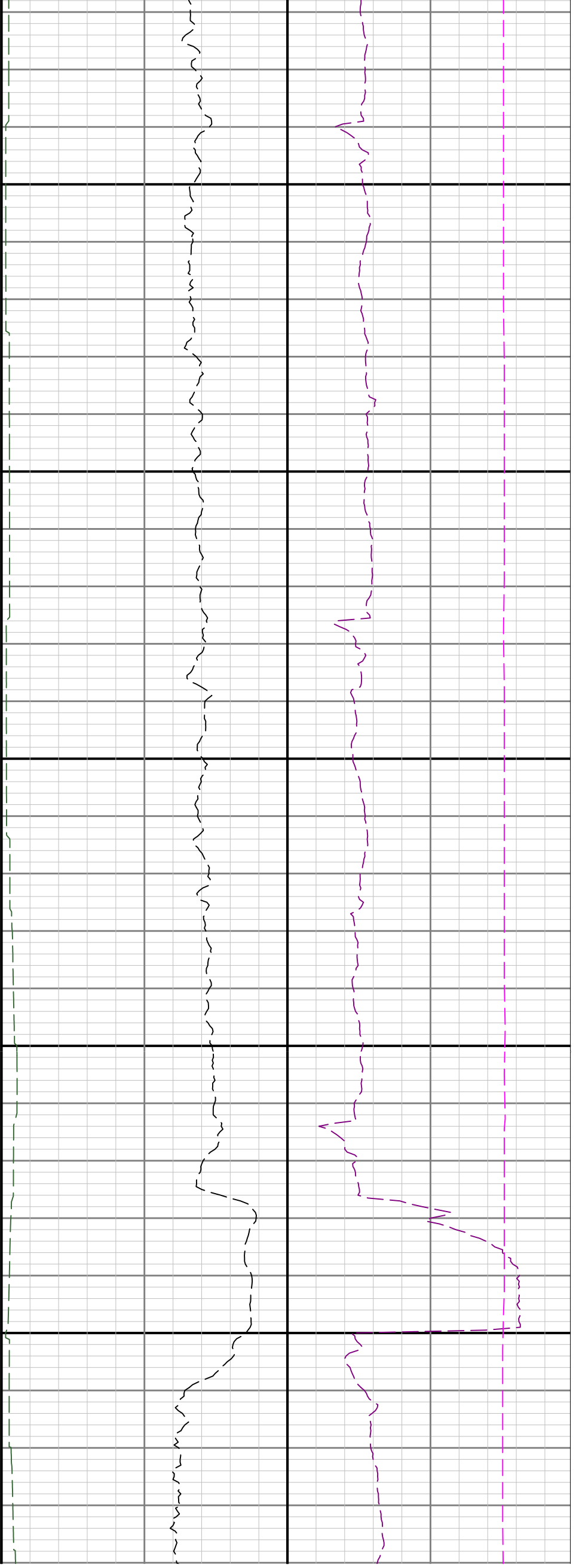
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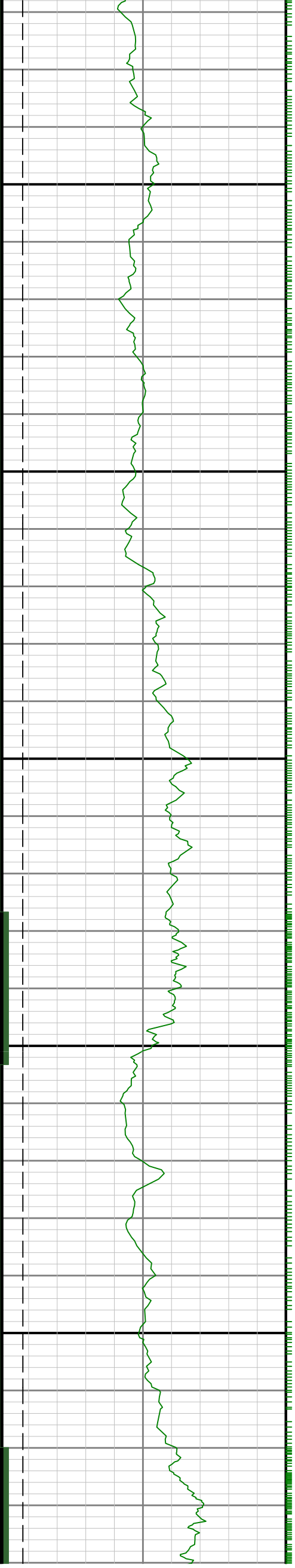


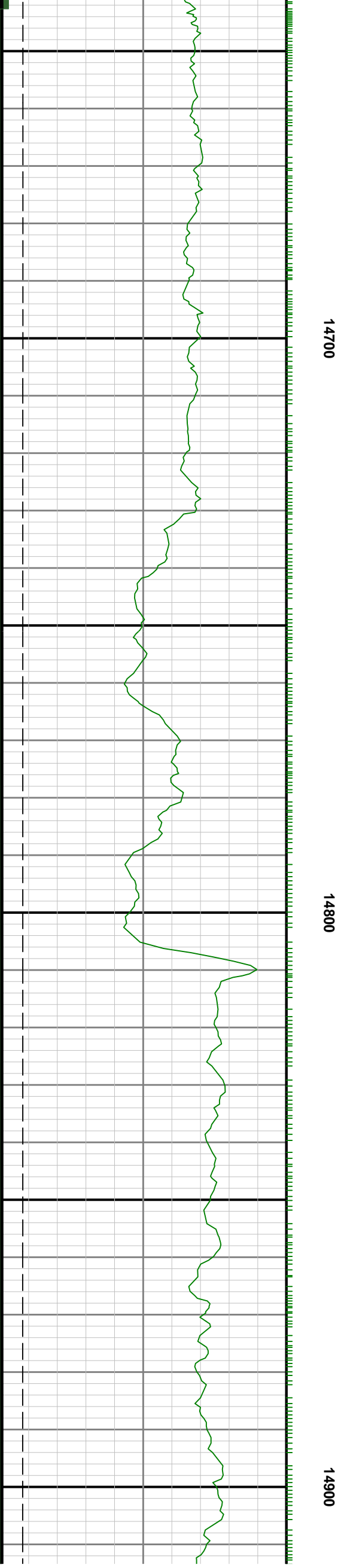
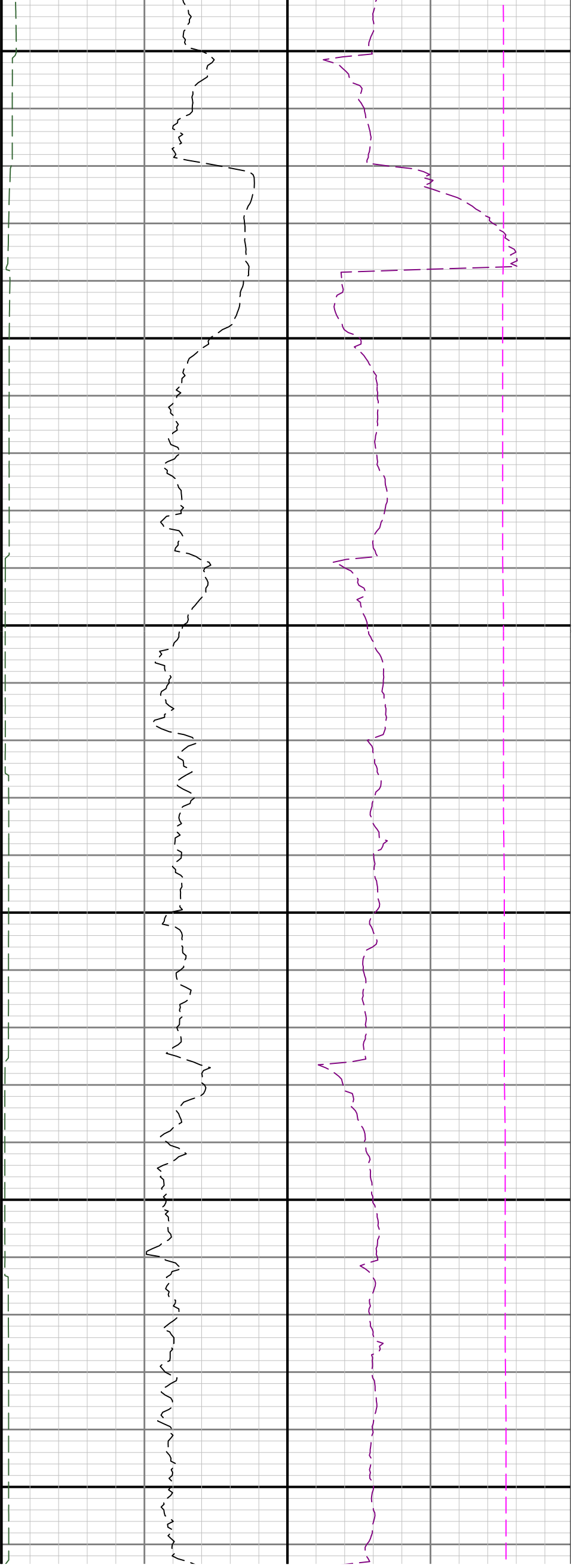


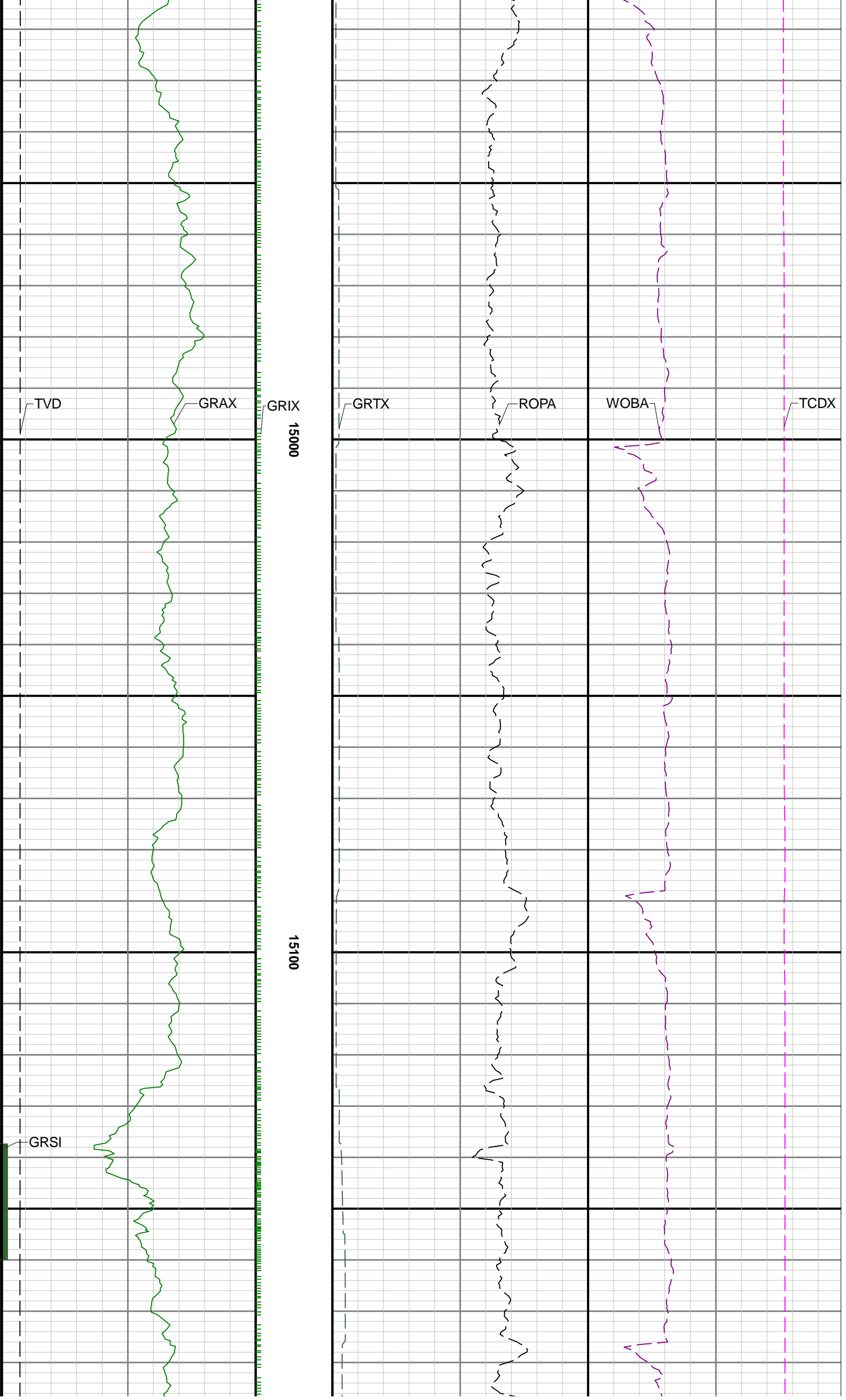
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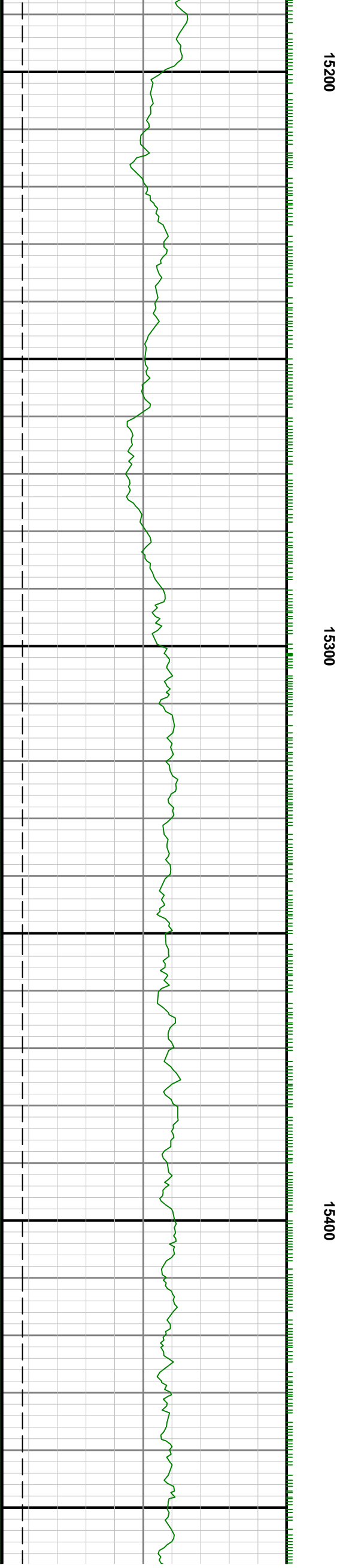
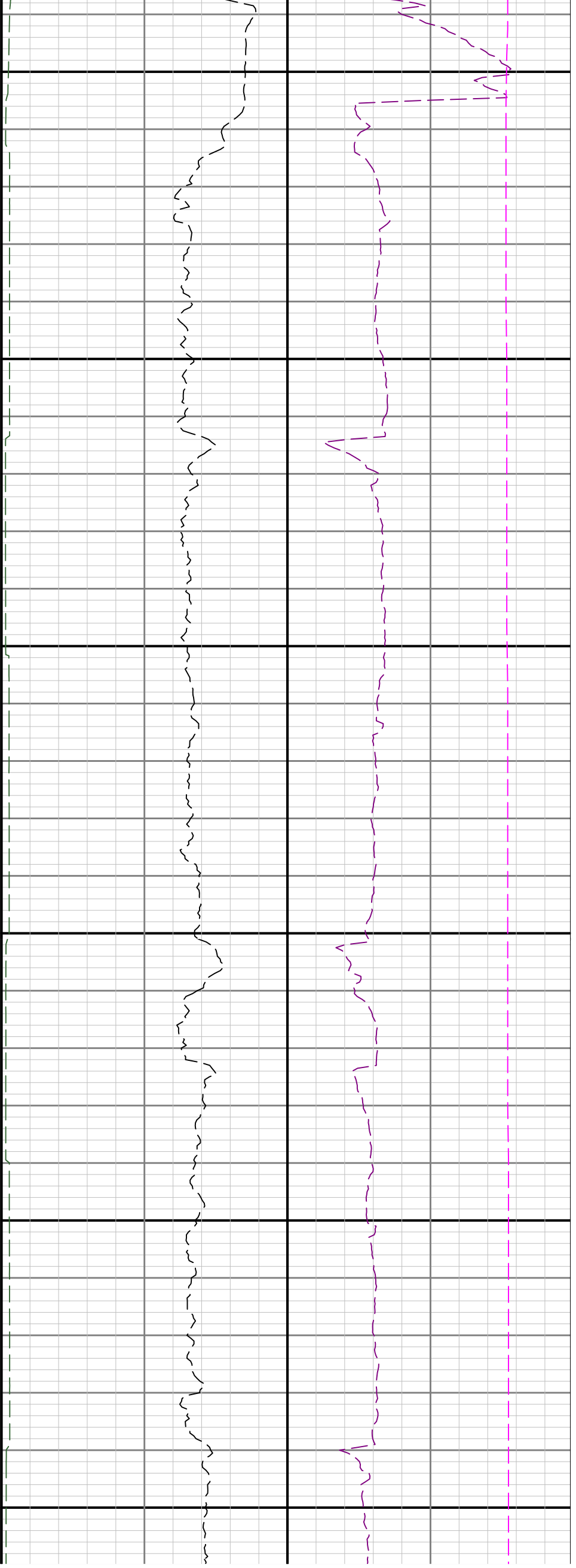
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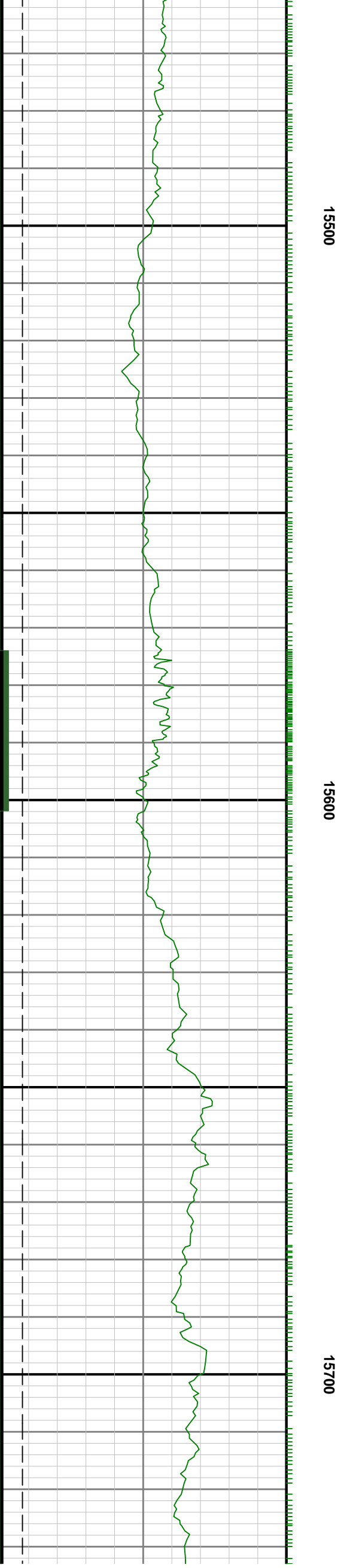
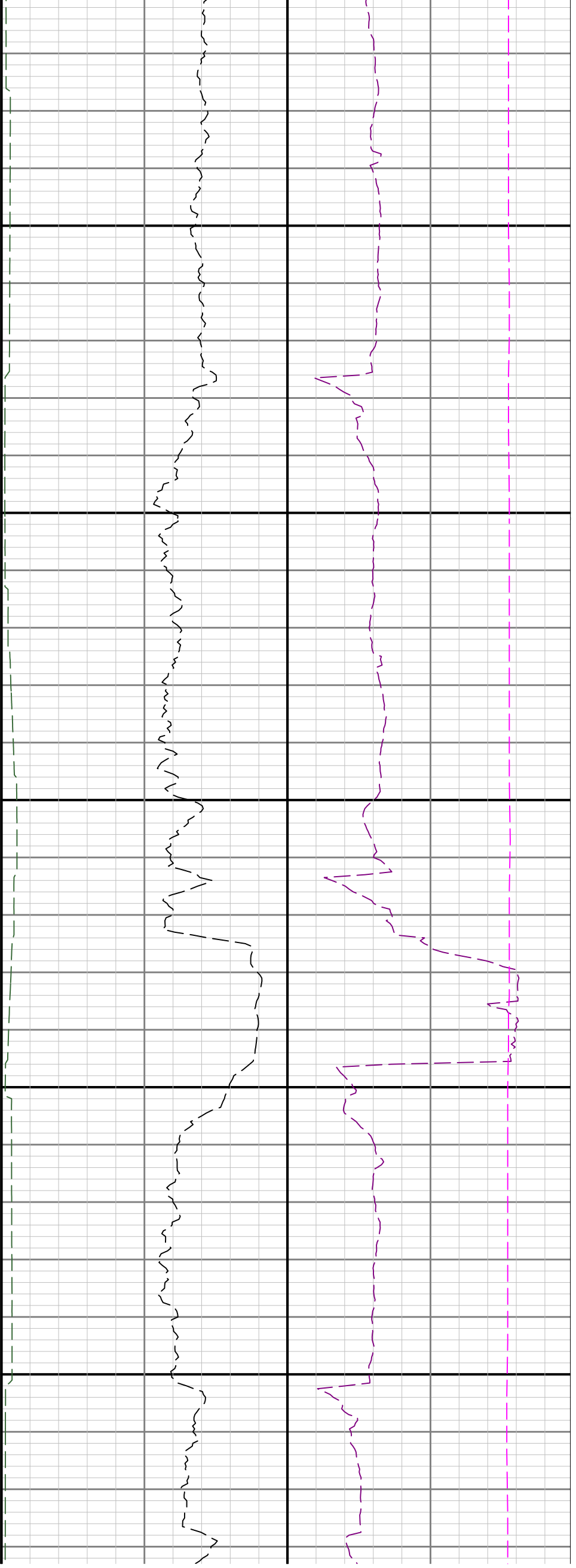
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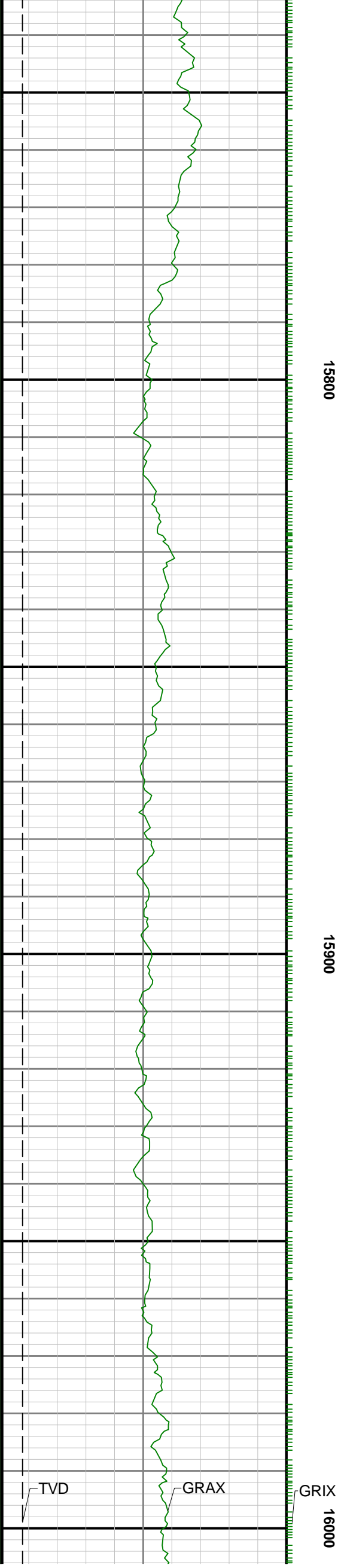
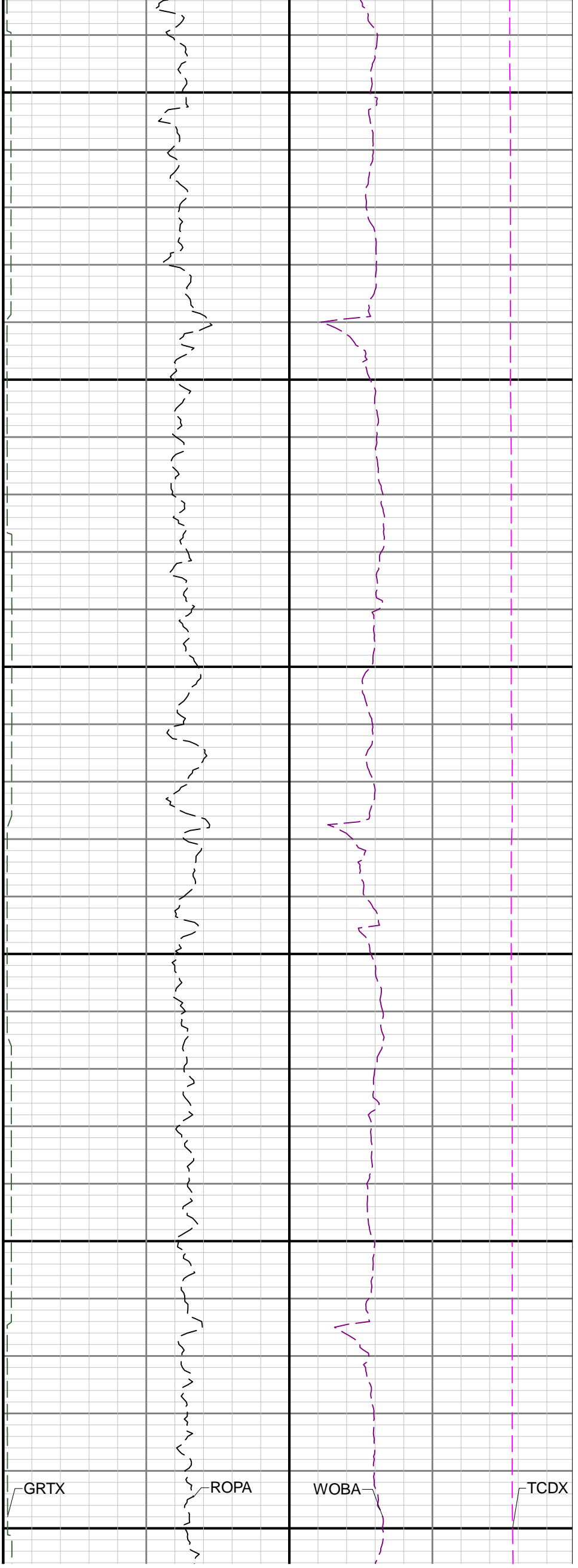


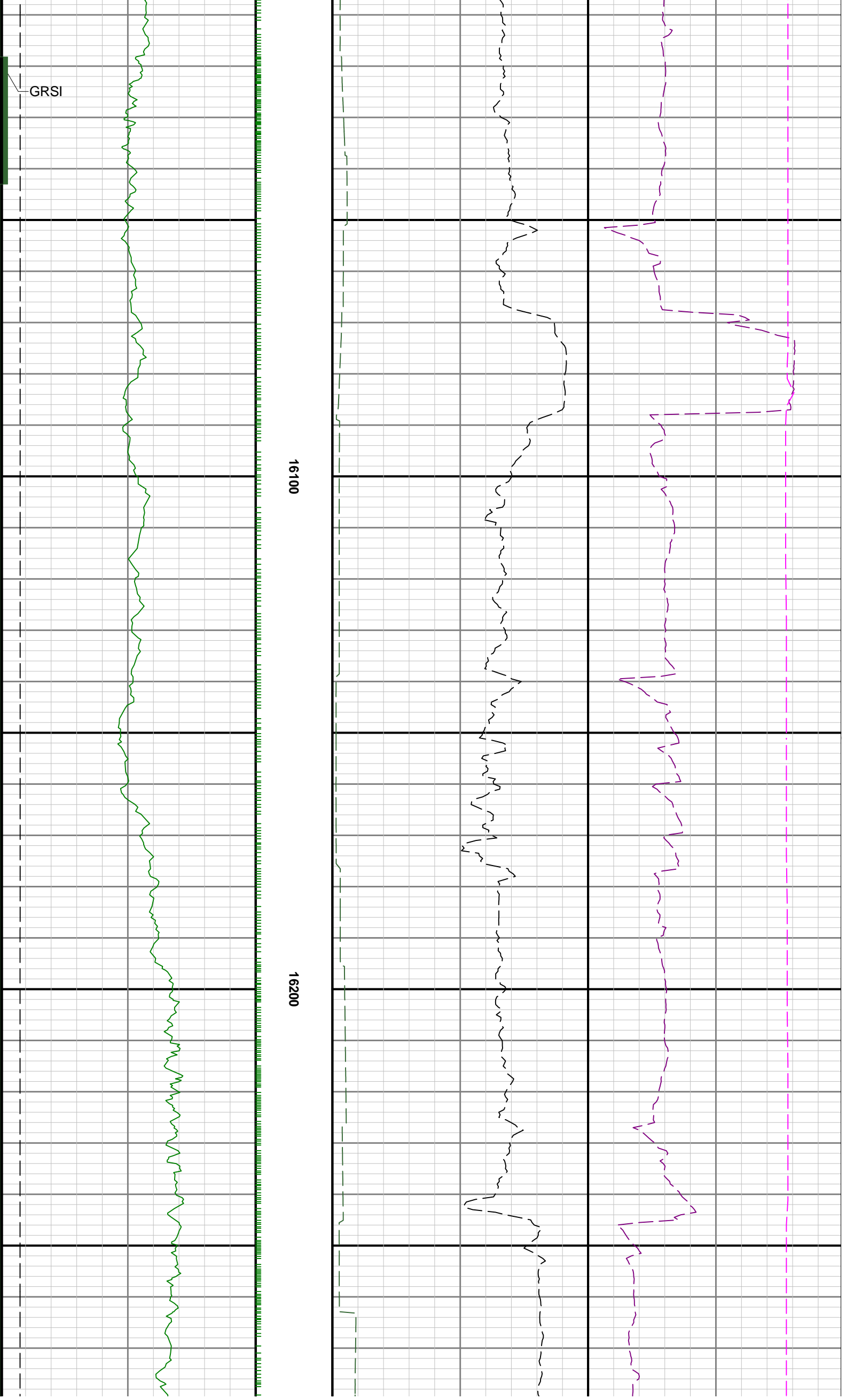


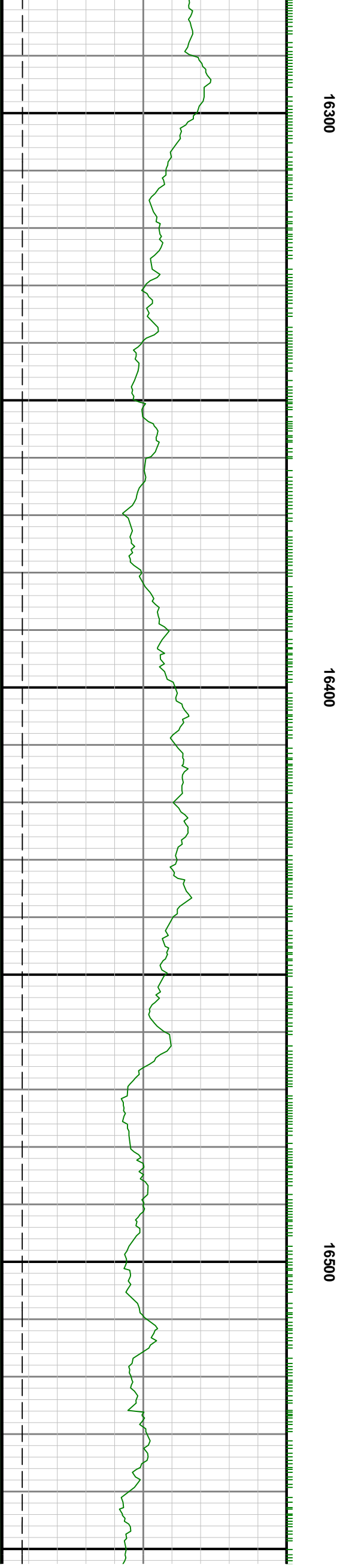
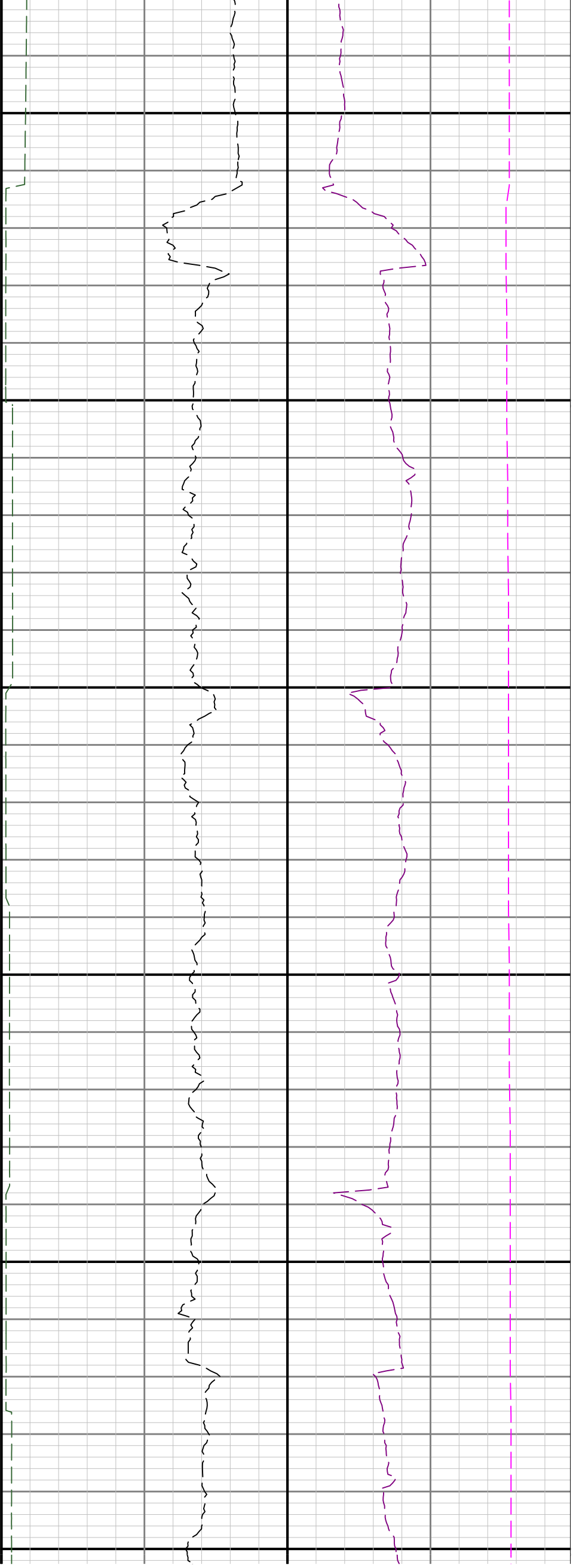


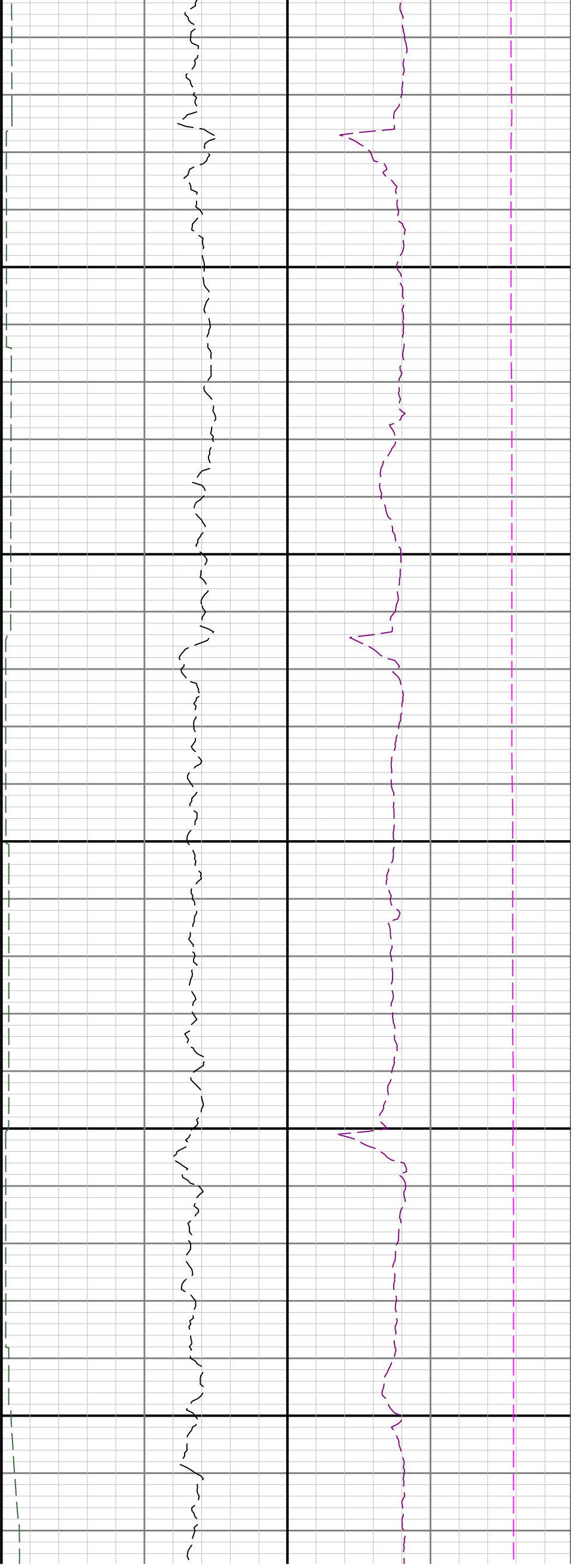












16600

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