



Real Time Log

Natural Formation Evaluation
Gamma Ray

Scale: **Company: Anadarko**

1:240
Well: Barclay 2N-11HZ

Measured Depth
Field: Weld County (Kerr McGee)

Status: Final Print
Region: Continental US Country: United States

API Number: 051233906000
Surface Location:
Latitude: 40° 7' 56.656" N
Longitude: 104° 51' 22.406" W
Other Services:
Directional VSS

Permanent Datum (P.D.): Mean Sea Level
Elevation: 4948.00 ft.
Log Measured From: Rig Floor
Elevation: 4964.00 ft.
Above P.D.
Depth Reference: Driller's Depth
Elevations:
KB: N/A
DF: 4964.00 ft.
GL: 4948.00 ft.

Interval Logged
Dates
Magnetic Field Reference
Top: 6830.0 ft. Date From: 10 Apr 15 Dip Angle: 66.90° Azi Reference North: True
Bottom: 17160.0 ft. Date To: 14 Apr 15 Total Mag to Reference
Spud Date: 08 Apr 15 Field Strength: 52701.0 nT North Correction: 8.54°

Borehole Record			Casing Record		
Hole Size	From	To	Size	Weight	From To
8.750 in.	1125.0 ft.	7780.0 ft.	7.000 in.	26.00 lb/ft	Surface 7770.0 ft.
6.125 in.	7780.0 ft.	17160.0 ft.			

Mud Record			Deviation Record			
Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based Mud	Surface	17160.0 ft.	8.750 in.	6655.0 ft.	0.1 / 251.1°	84.6° / 1.3°
			6.125 in.	9380.0 ft.	84.6° / 1.3°	92.7° / 357.8°
					/	/
					/	/
					/	/
					/	/
					/	/

Acquisition System		Software Version		Other	
Advantage	2.20U4	Rig / Contractor:	Xtreme 23	/ Advance Drilling	
PATS	6.4.1.34	Job No:	7086361	/ D&E	
		District / Unit:	RMD		

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Log Run Summary															
LWD	BHA	Bit	Bit	Bit	Bit	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time				Circ. Time (hrs.)
Run	Run	Run	Size	Type	Gauge Length (in.)		Top (ft.)	Bottom (ft.)	From (ft.)	To (ft.)	Start		End		
No.	No.	No.													
1	1	1	8.750	PDC	3.000	Steerable	6800.0	7736.0	6800.0	7780.0	10 Apr 15	00:42	10 Apr 15	14:46	14
2	2	2	6.125	PDC	3.000	Steerable	7736.0	17111.0	7780.0	17160.0	12 Apr 15	02:33	14 Apr 15	23:05	67

Crew								
Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Jason Williams	10 Apr 15	14 Apr 15	Sumanth Belawadi	10 Apr 15	14 Apr 15			

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
04 Apr 2015	06:00	1	7098.0	Water Based Mud	10.0	48	9.3	N/A	0.5/90.0	Halliburton	7200	N/A
13 Apr 2015	06:00	2	12022.0	Water Based Mud	9.2	52	8.7	N/A	0.8/93.3	Halliburton	9300	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg	API
GRIX	Gamma Ray Data Density	points
GRSI	Gamma Ray Sliding Indicator	unitless
GRTX	Gamma Ray Time Since Drilled	min
ROPA	Rate of Penetration, 3.0 ft. Avg	ft/hr
TCDX	Downhole Temperature	degF
TVD	True Vertical Depth	ft.
WOBA	Surface Weight on Bit, 1.0 ft. Avg.	klbs

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	11677608504	Directional	45.47	6.750	3.188
1	SRIG	10662886	Gamma	42.10	6.750	3.188
2	DIR	11700519	Directional	51.83	4.750	2.625
2	SRIG	10266573	Gamma	48.41	4.750	2.625

Service and Tool Mnemonics

Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

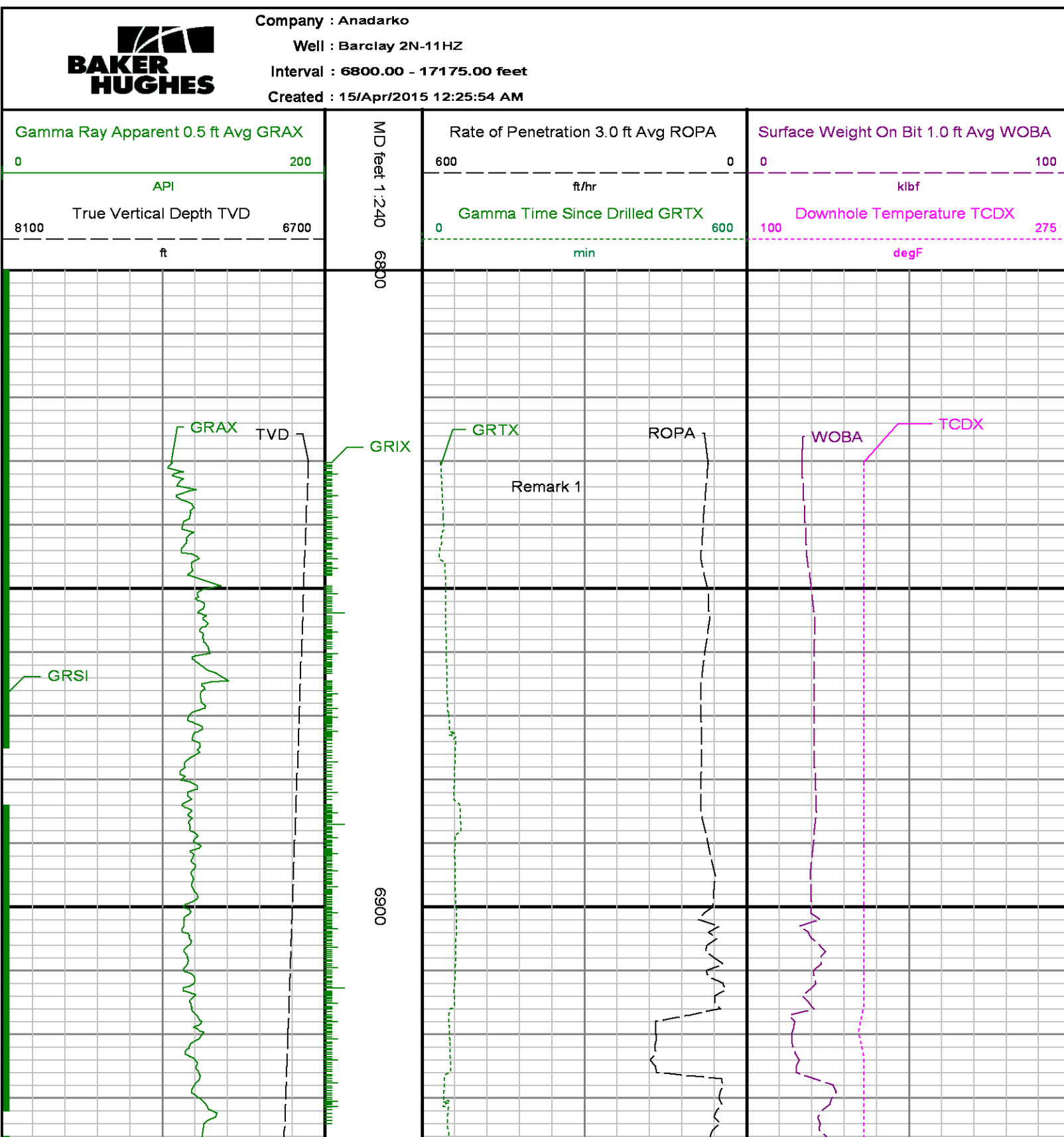
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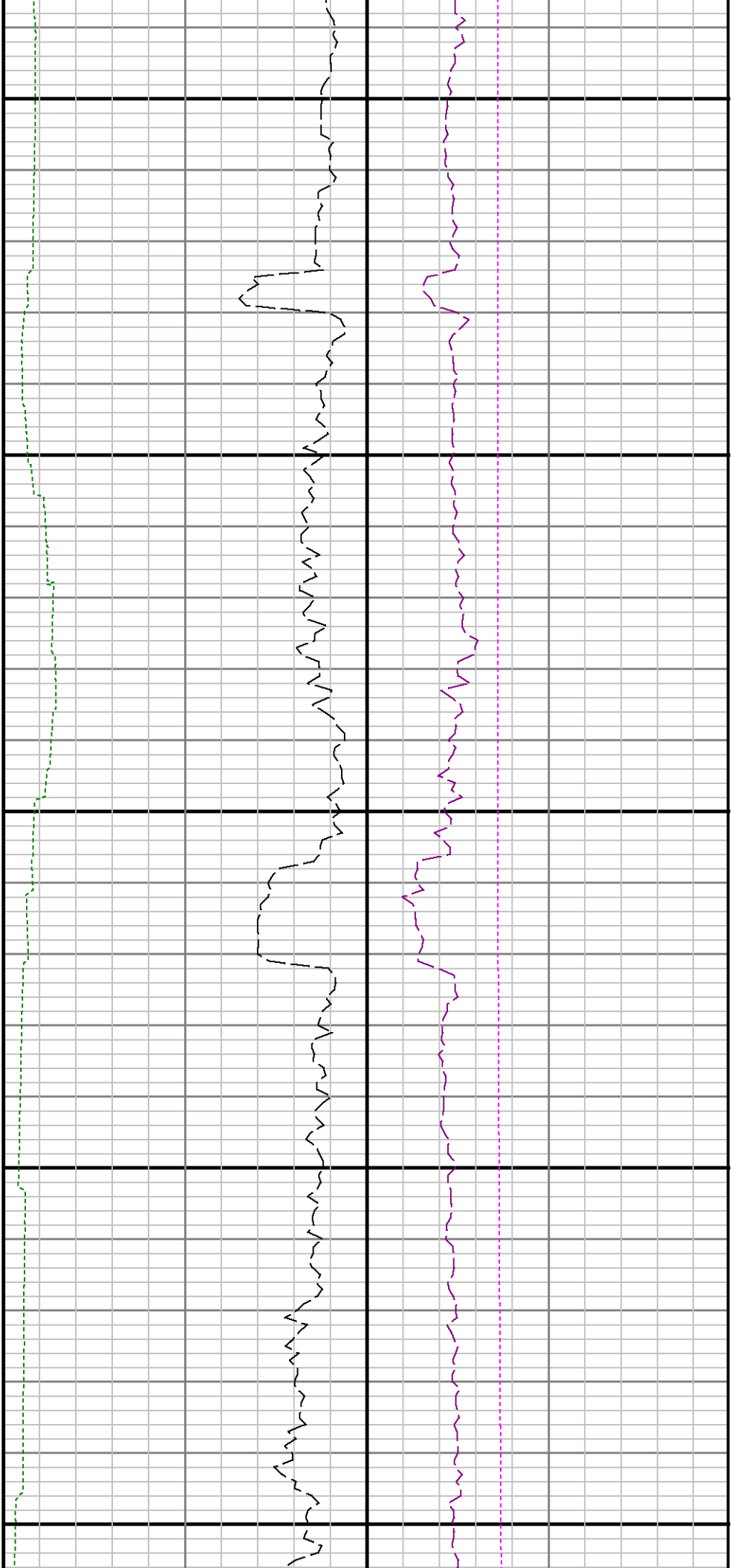
<p>1.) Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to represent logging data.</p> <p>2.) Baker Hughes Run 1 utilized a 6 3/4 inch NaviGamma (Directional and Gamma Ray) tool behind an 8 3/4 inch bit and steerable assembly from 6800 to 7780 feet MD (6739.84 to 7354.76 feet TVD).</p> <p>3) Baker Hughes Run 2 utilized a 4 3/4 inch NaviGamma (Directional and Gamma Ray) tool behind an 6 1/8 inch bit and steerable assembly from 7780 to 17160 feet MD (7354.76 to 7309.24 feet TVD).</p> <p>4.) 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.</p>

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
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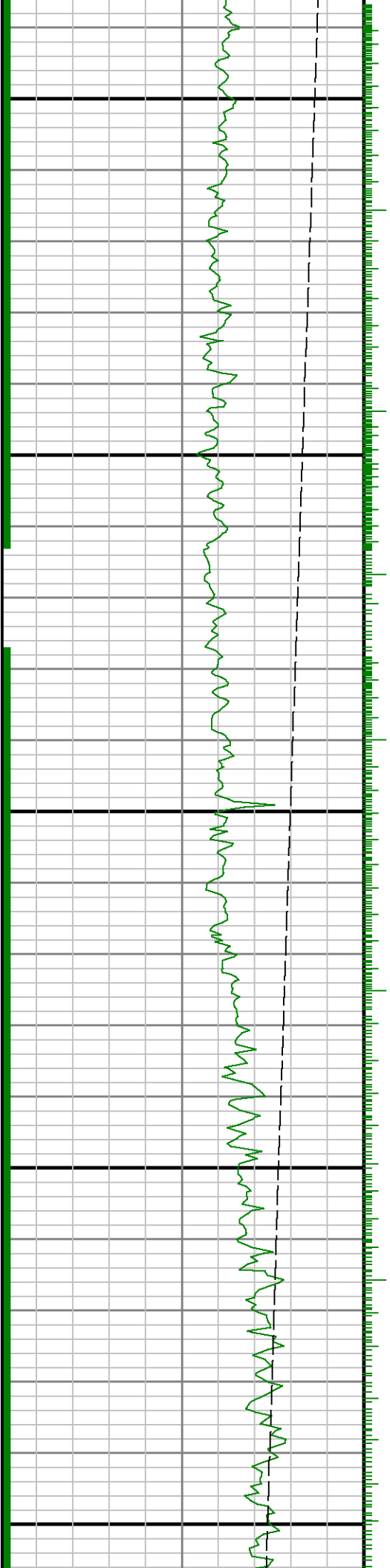
1	6800	8.750	1	Logging services began at 6830. No logging data prior to 6830 feet MD (6769.84 feet TVD) as per client request.
2	7736	8.750	1	The interval from 7736 to 7780 feet MD (7351.25 to 7354.84 feet TVD) was logged up to 36 hours after being drilled due to casing operations
3	17160	6.125	2	The interval from 17111 to 17160 feet MD (7311.68 to 7309.24 feet TVD) was not logged due to gamma sensor offset to bit at TD





7000

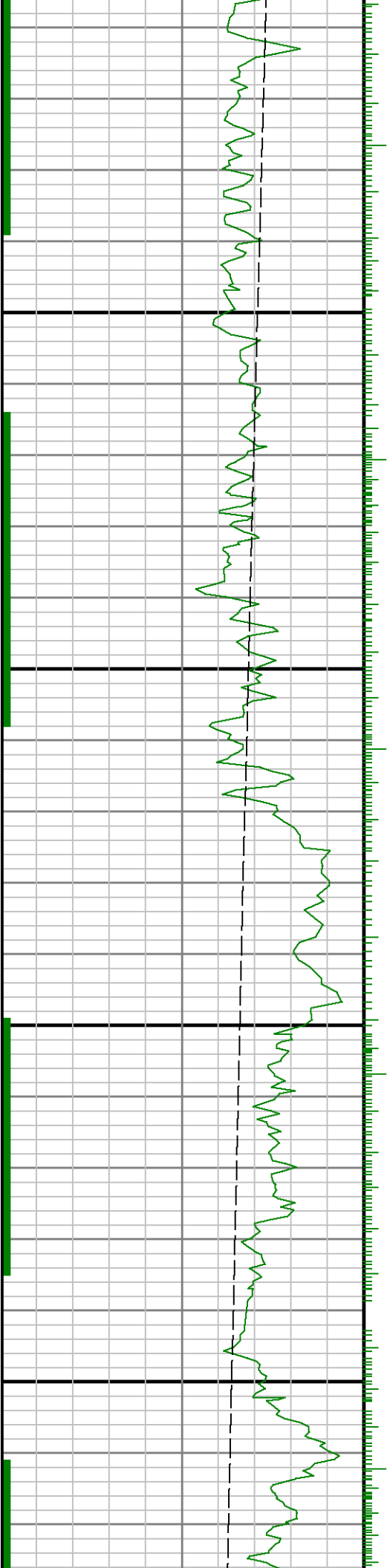
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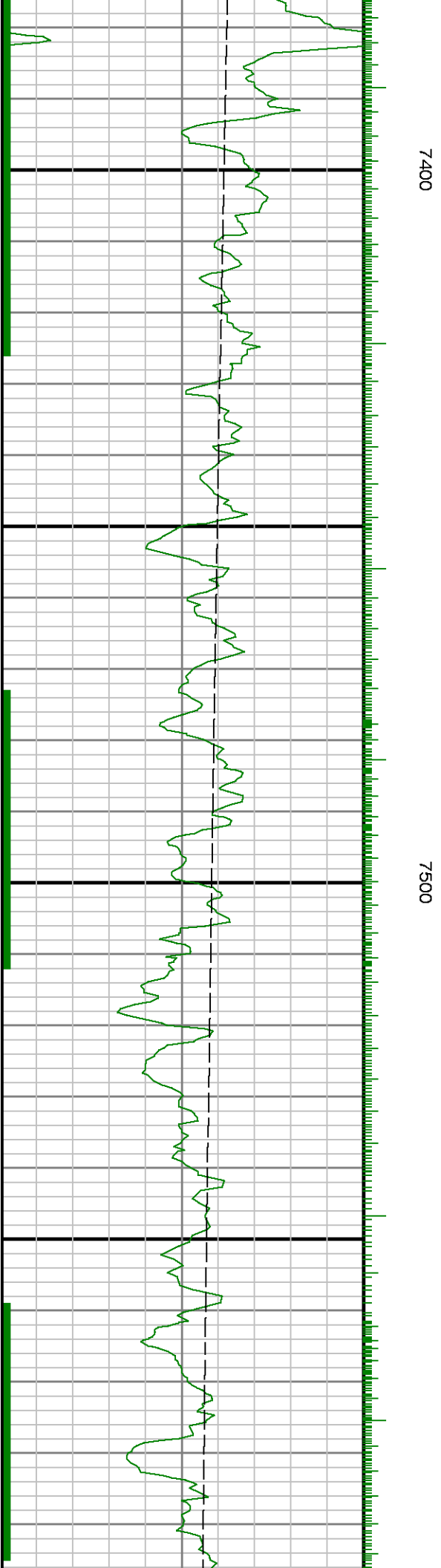
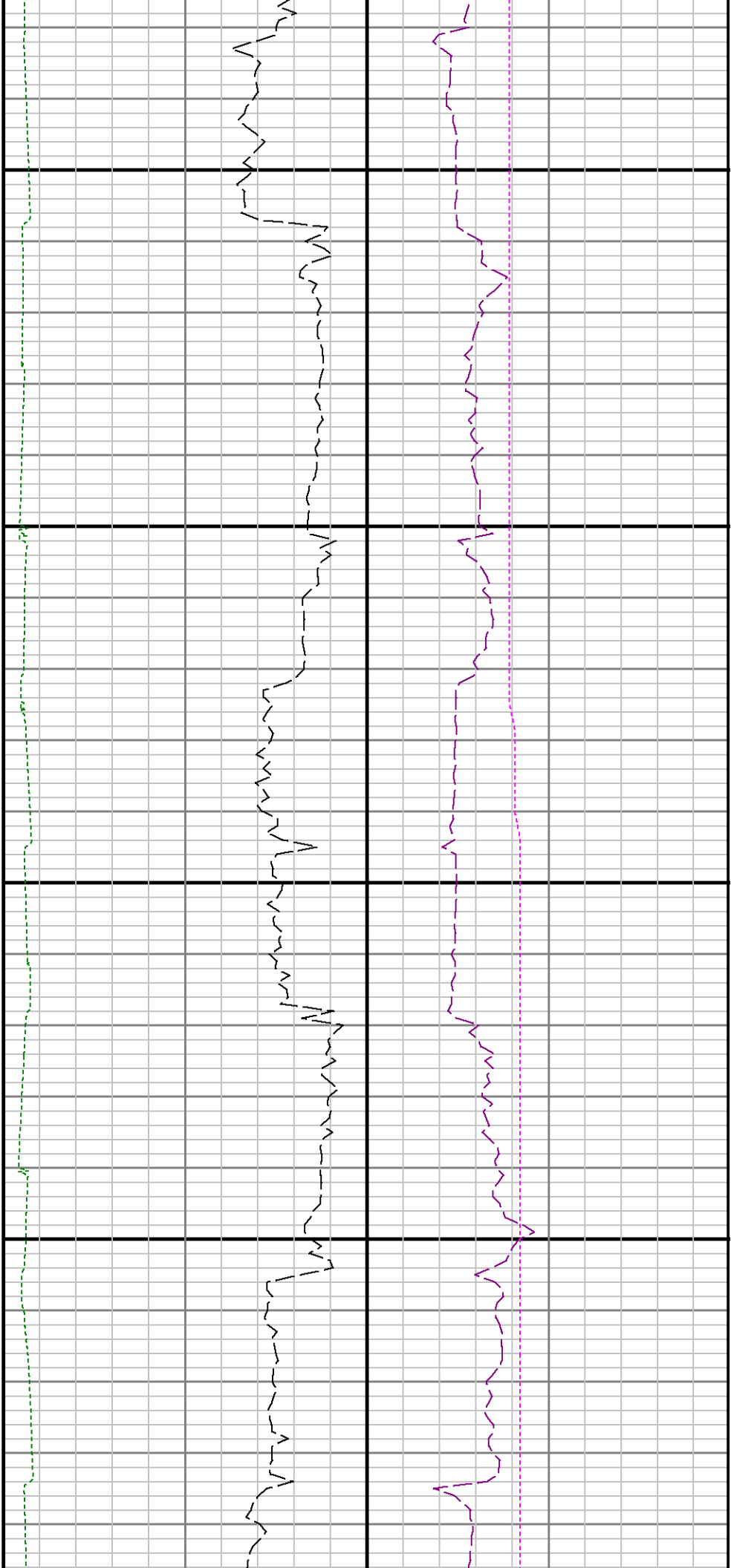


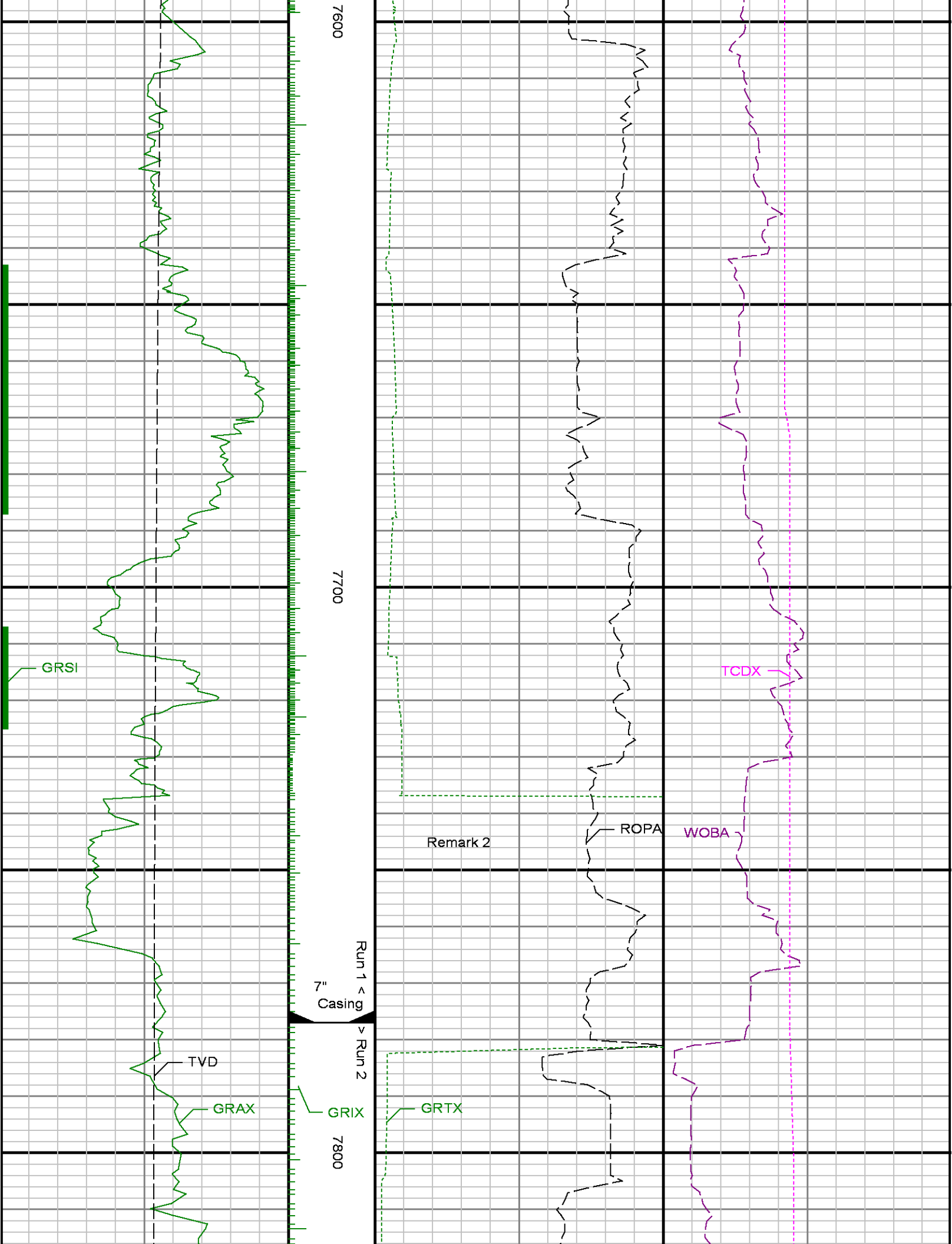


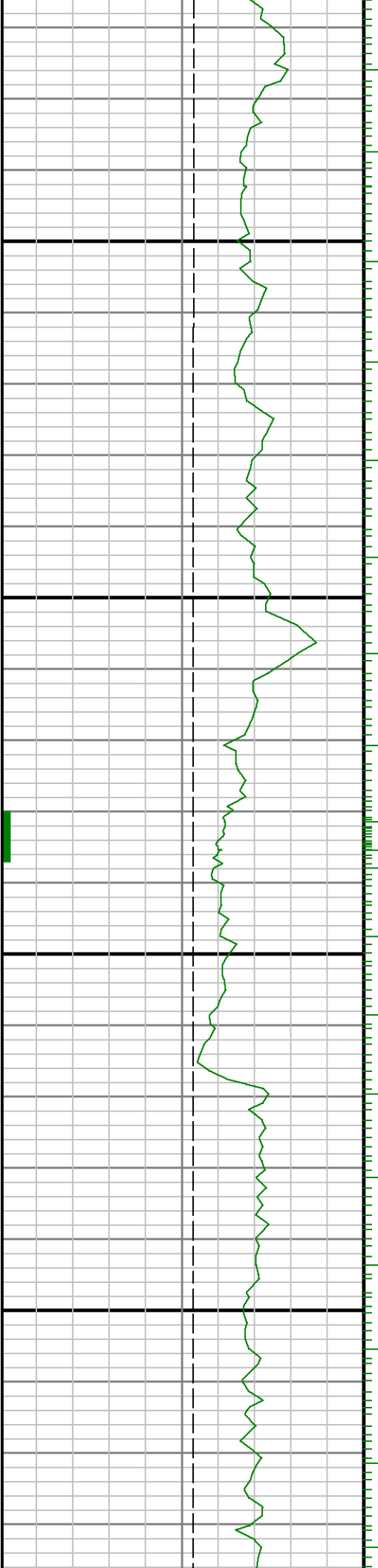
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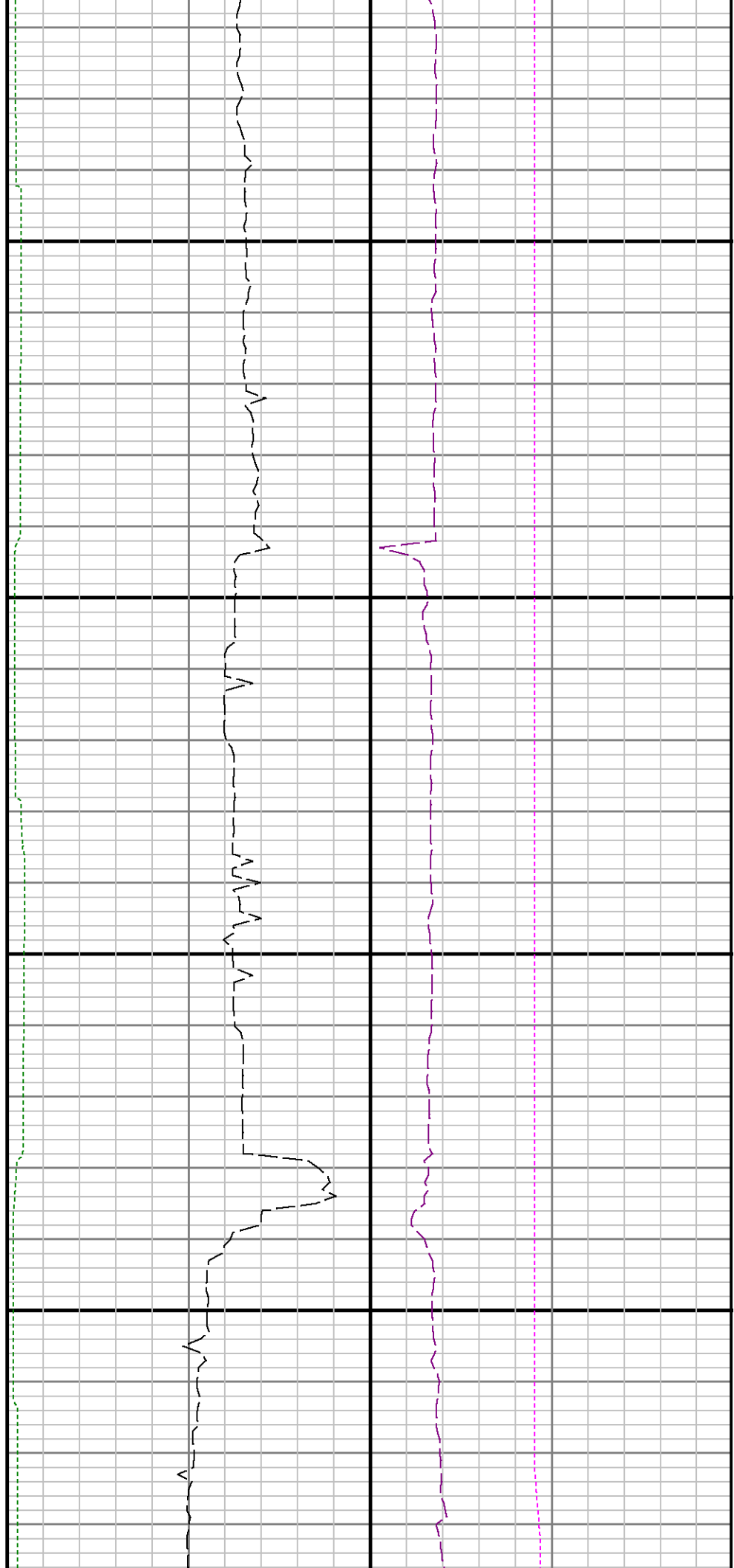


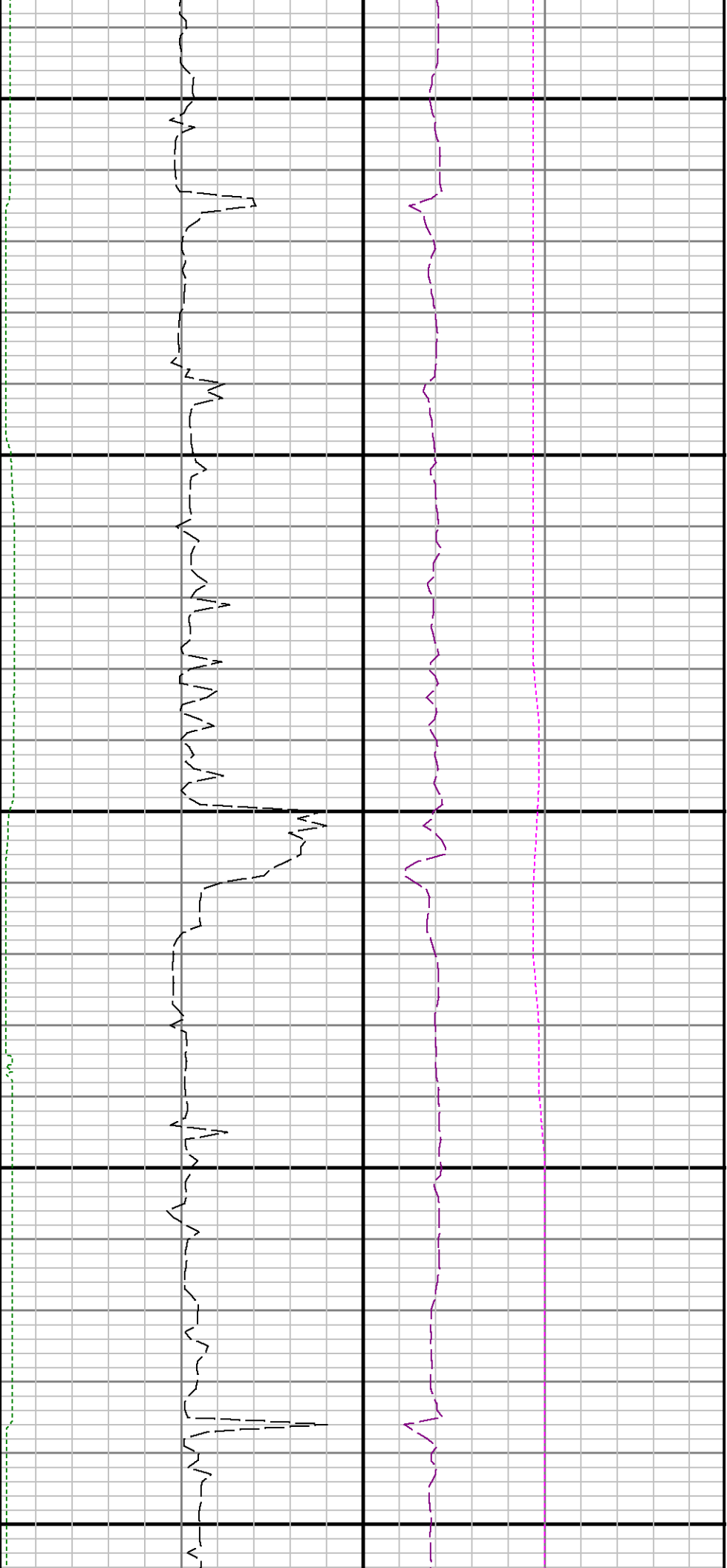




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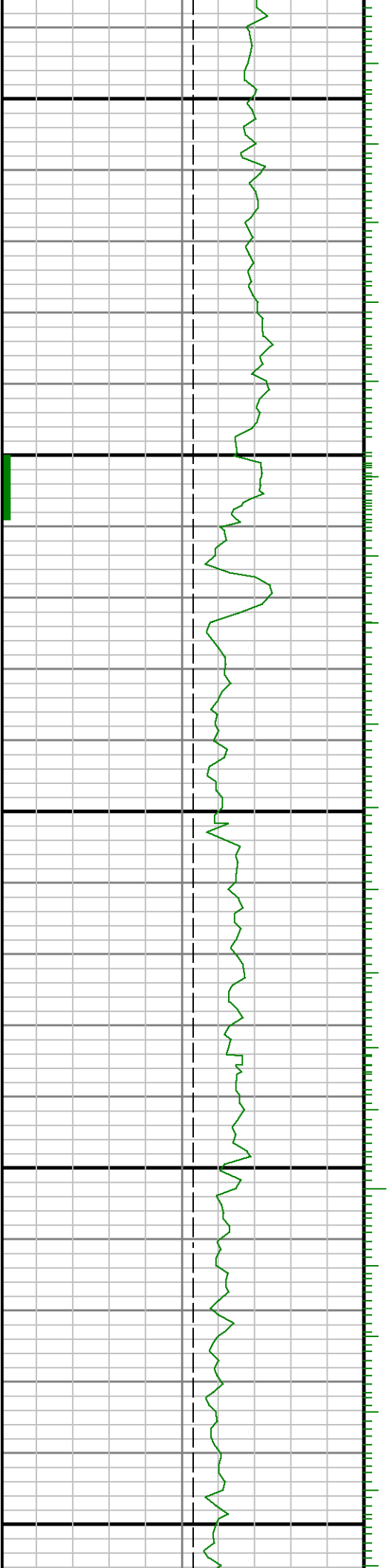
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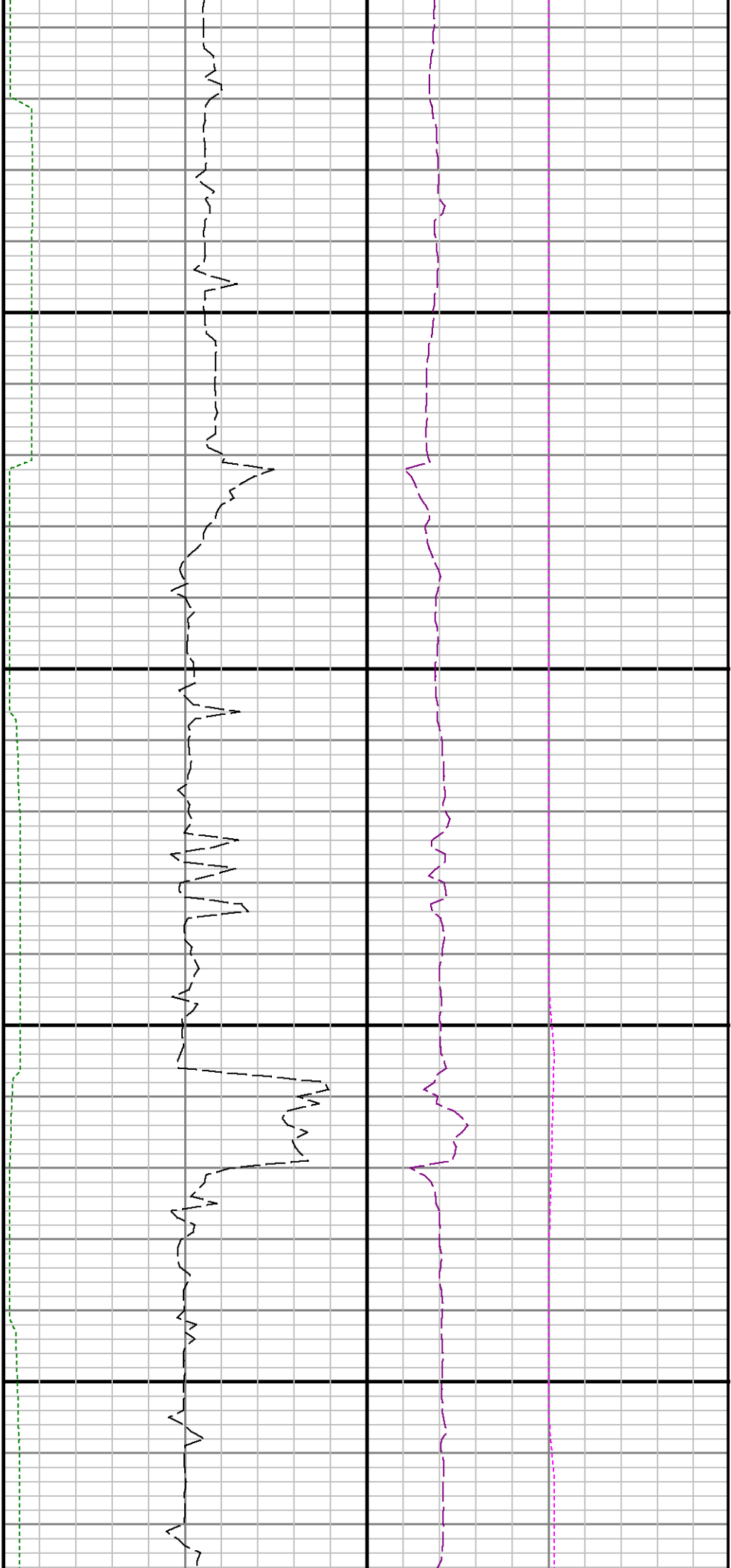




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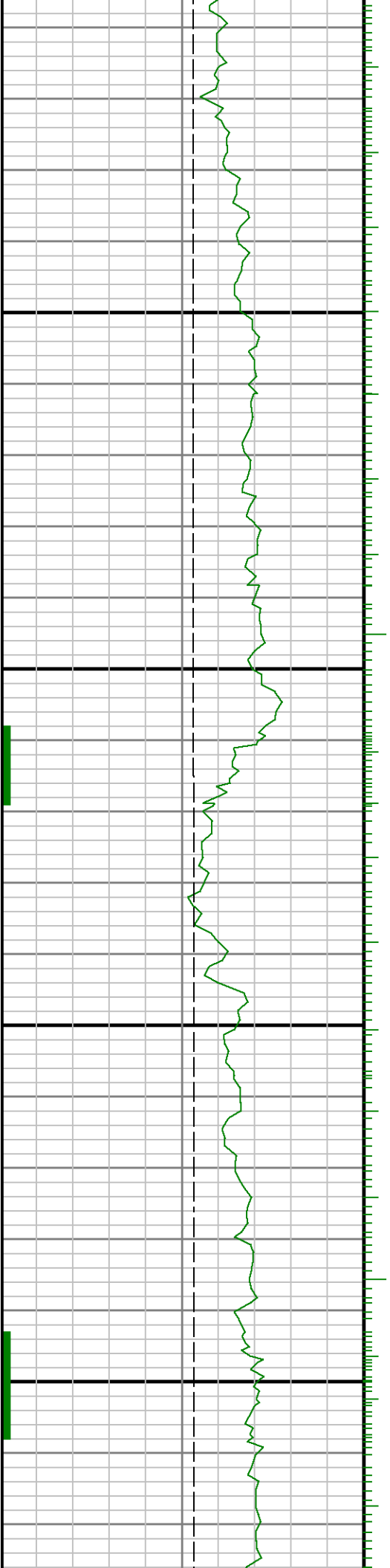
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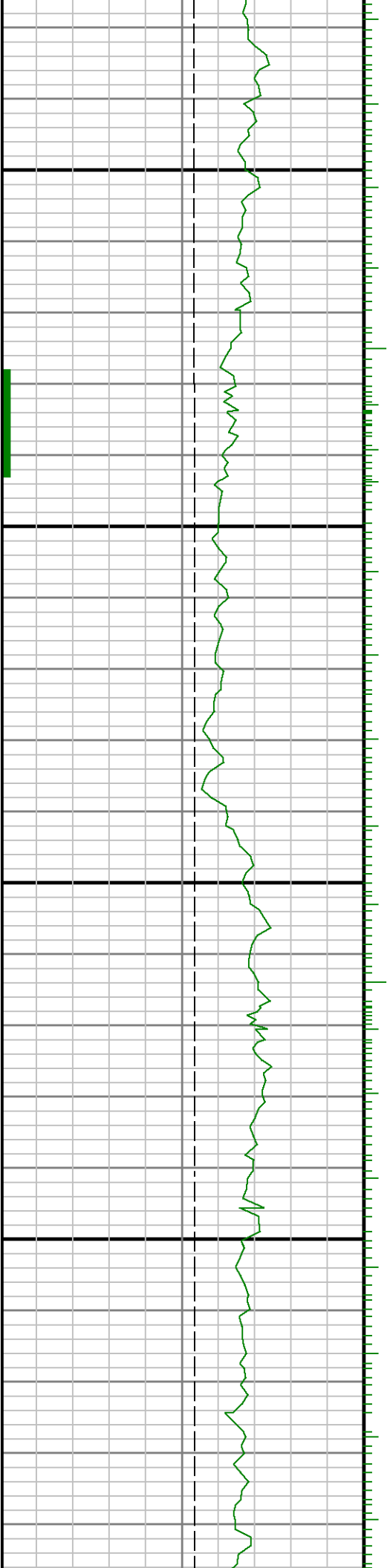




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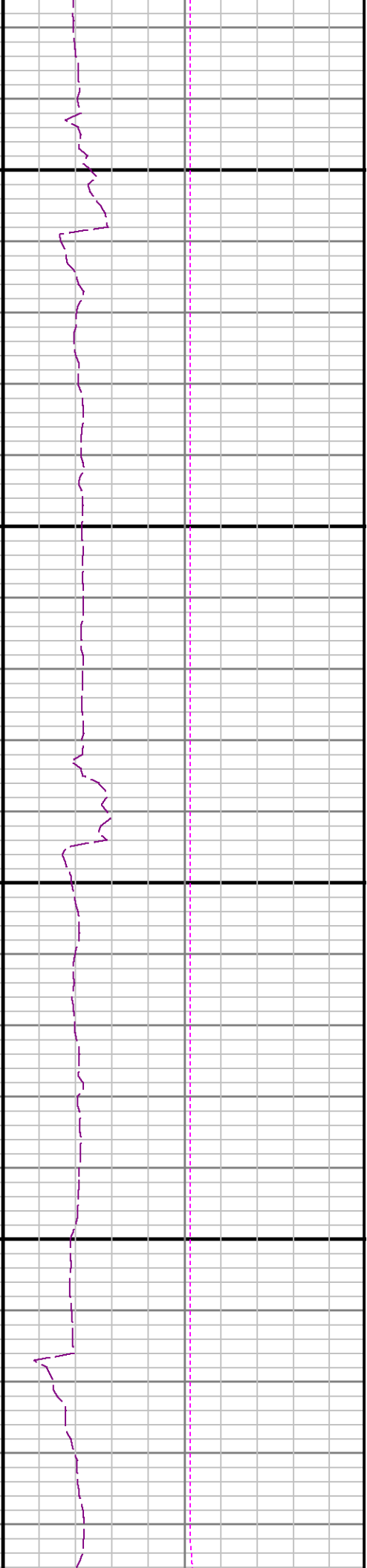
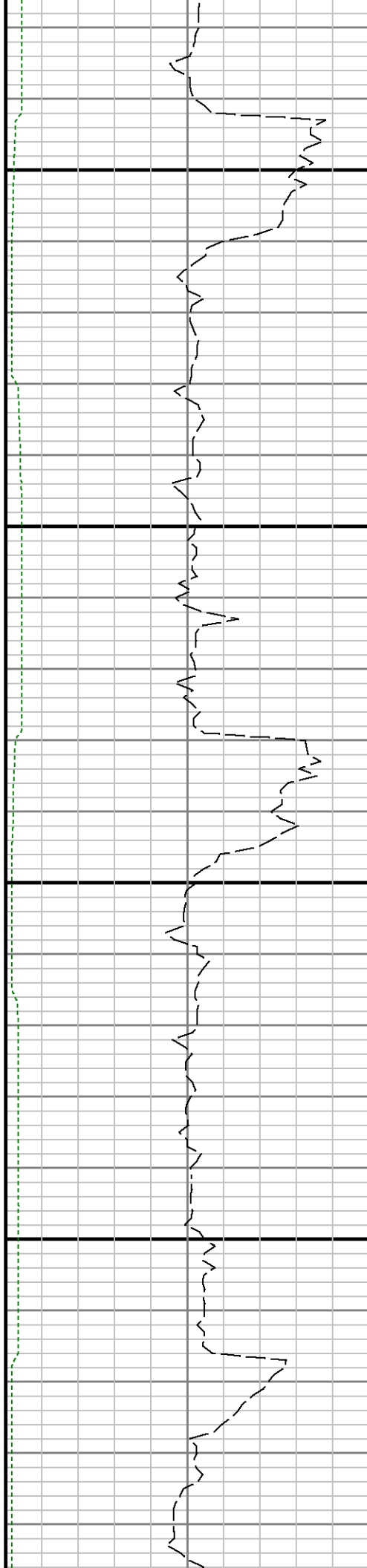
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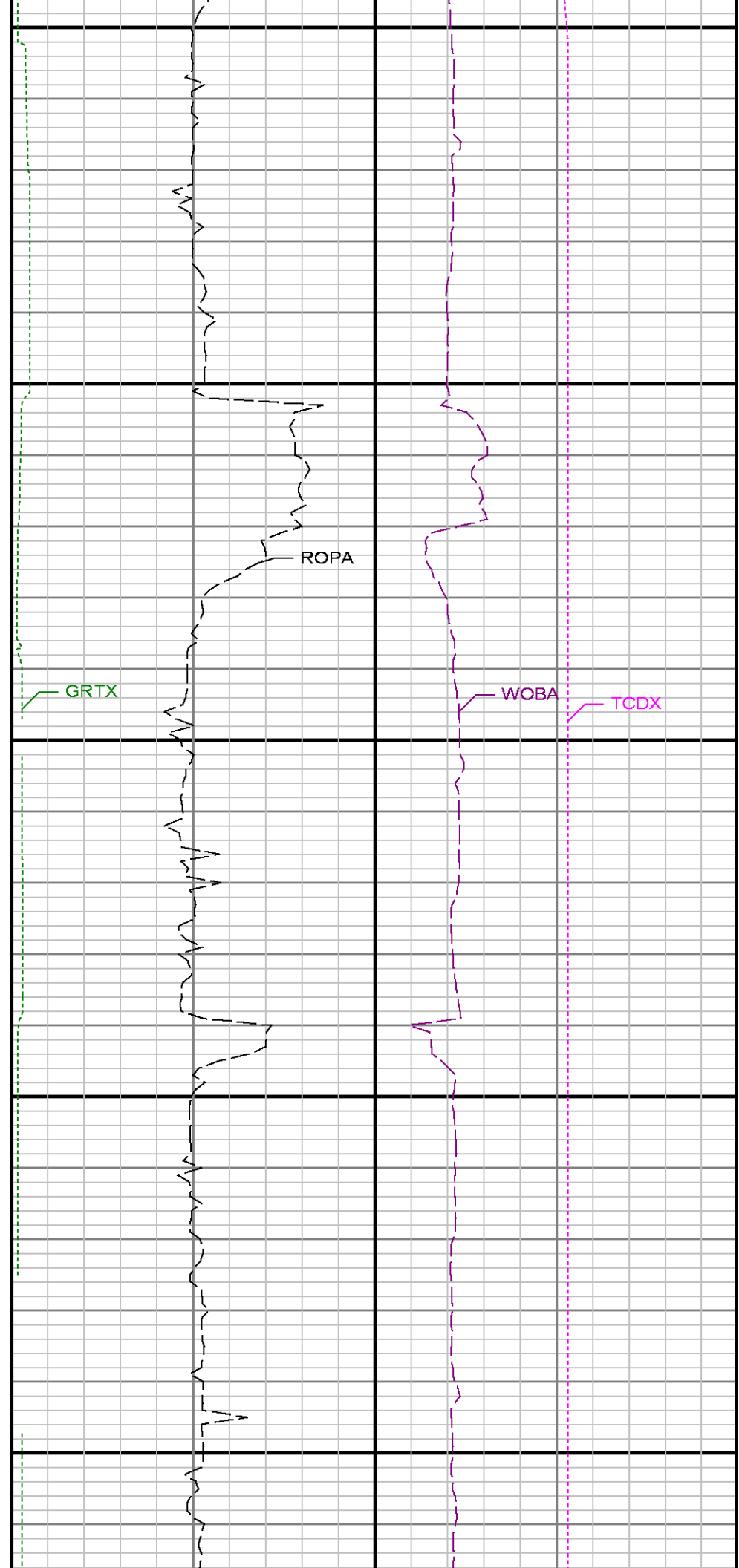
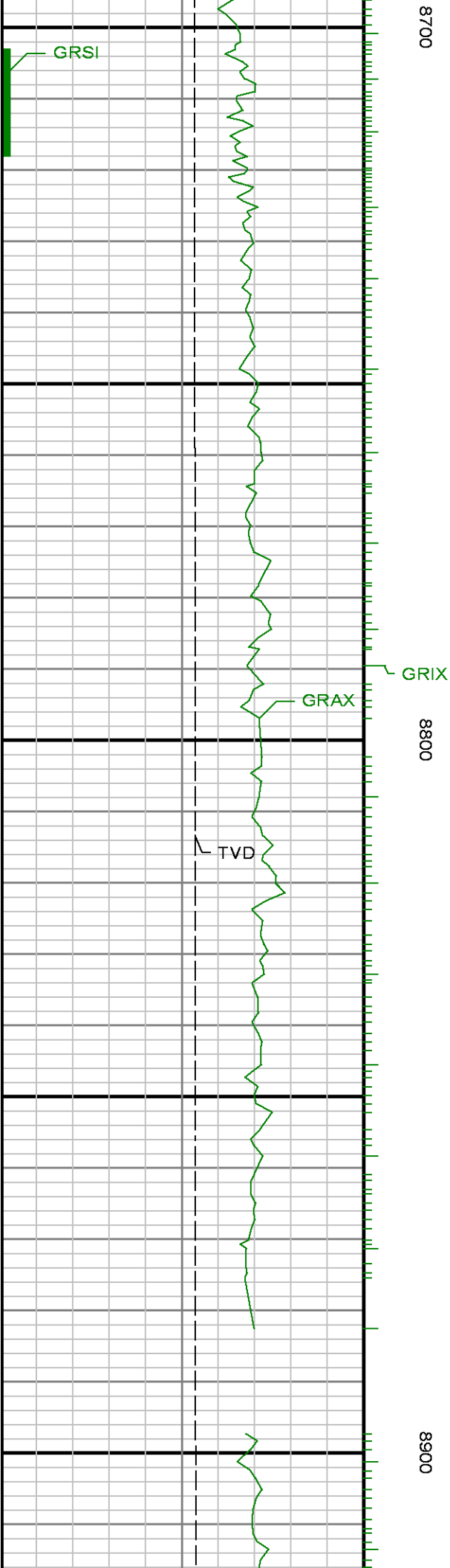




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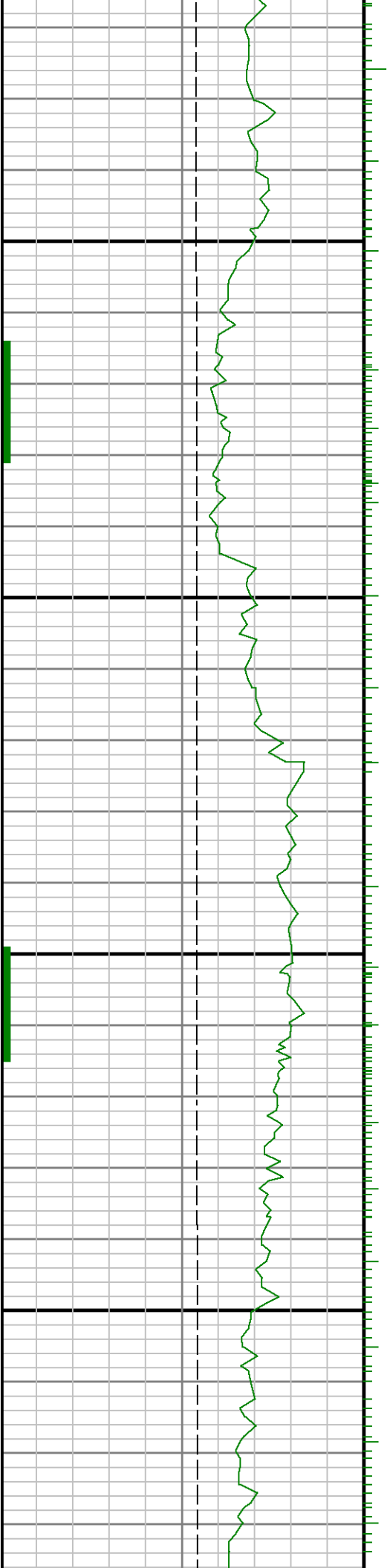


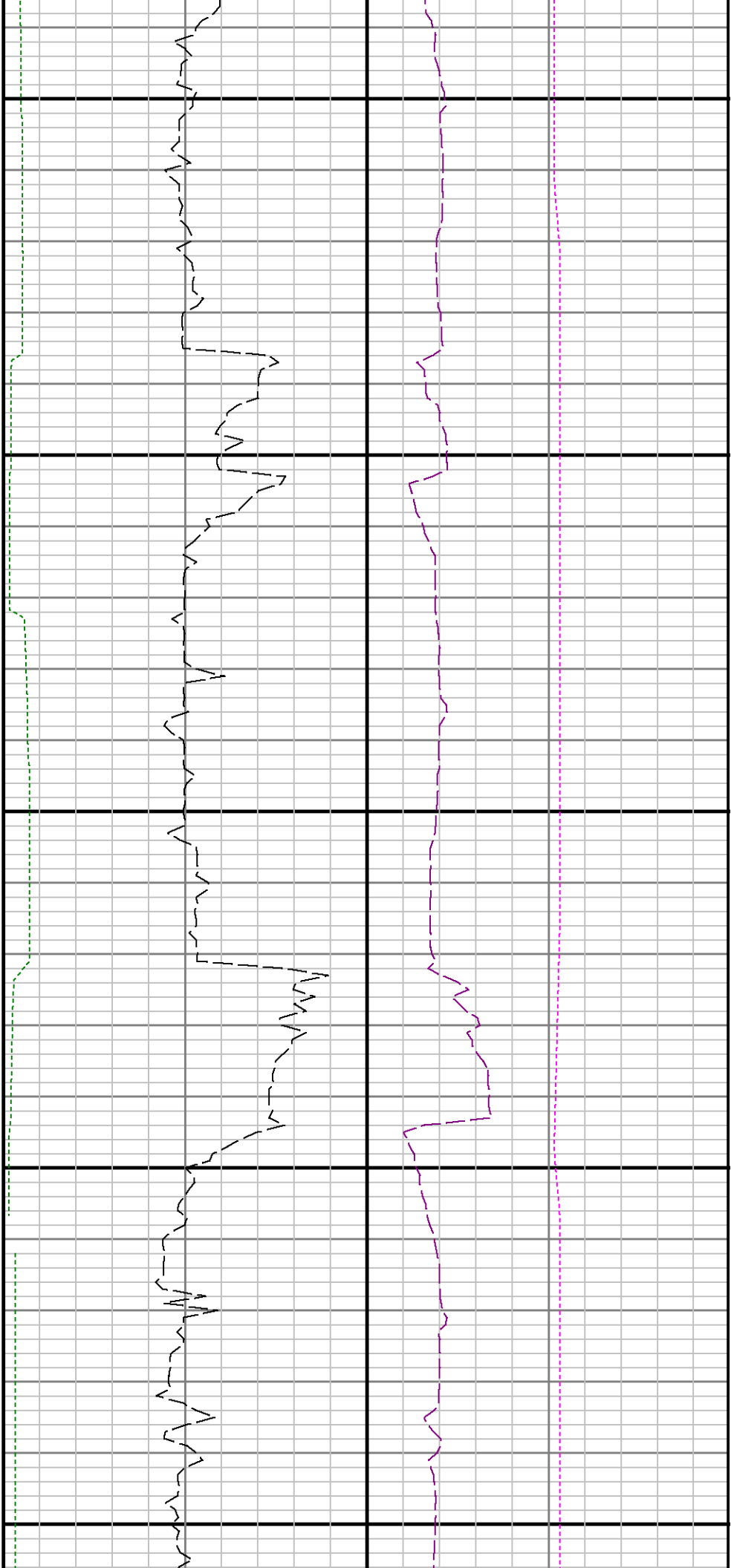




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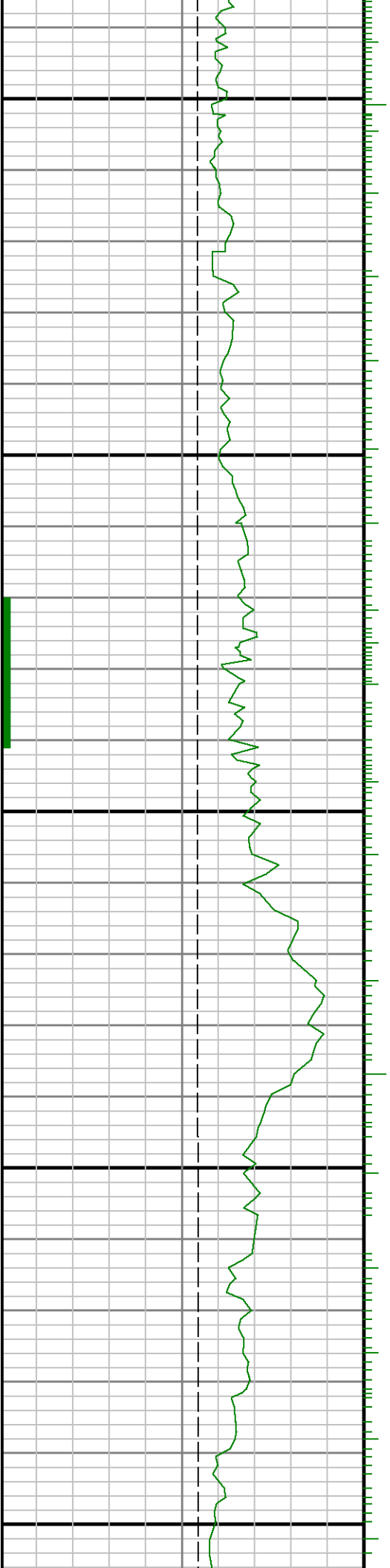
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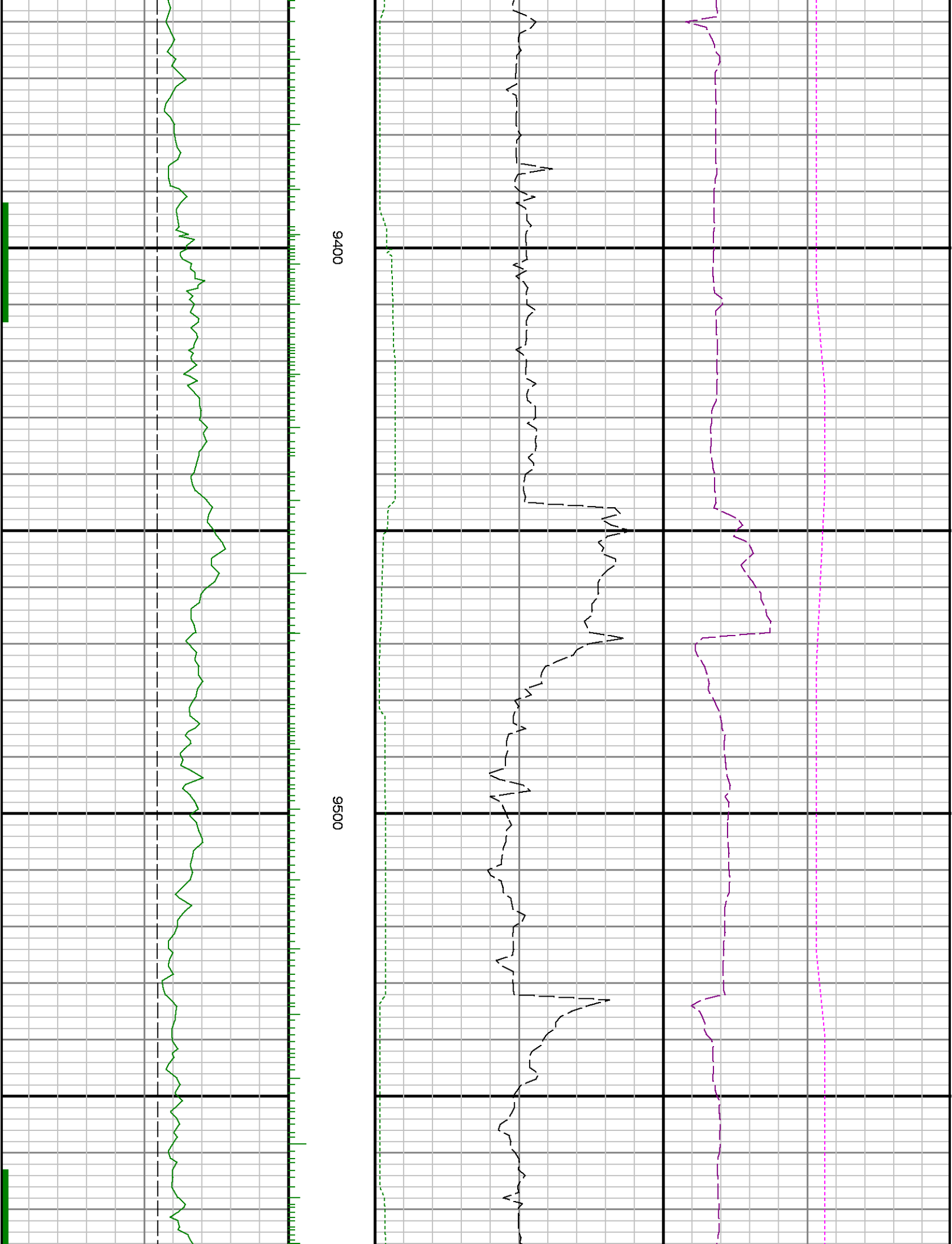


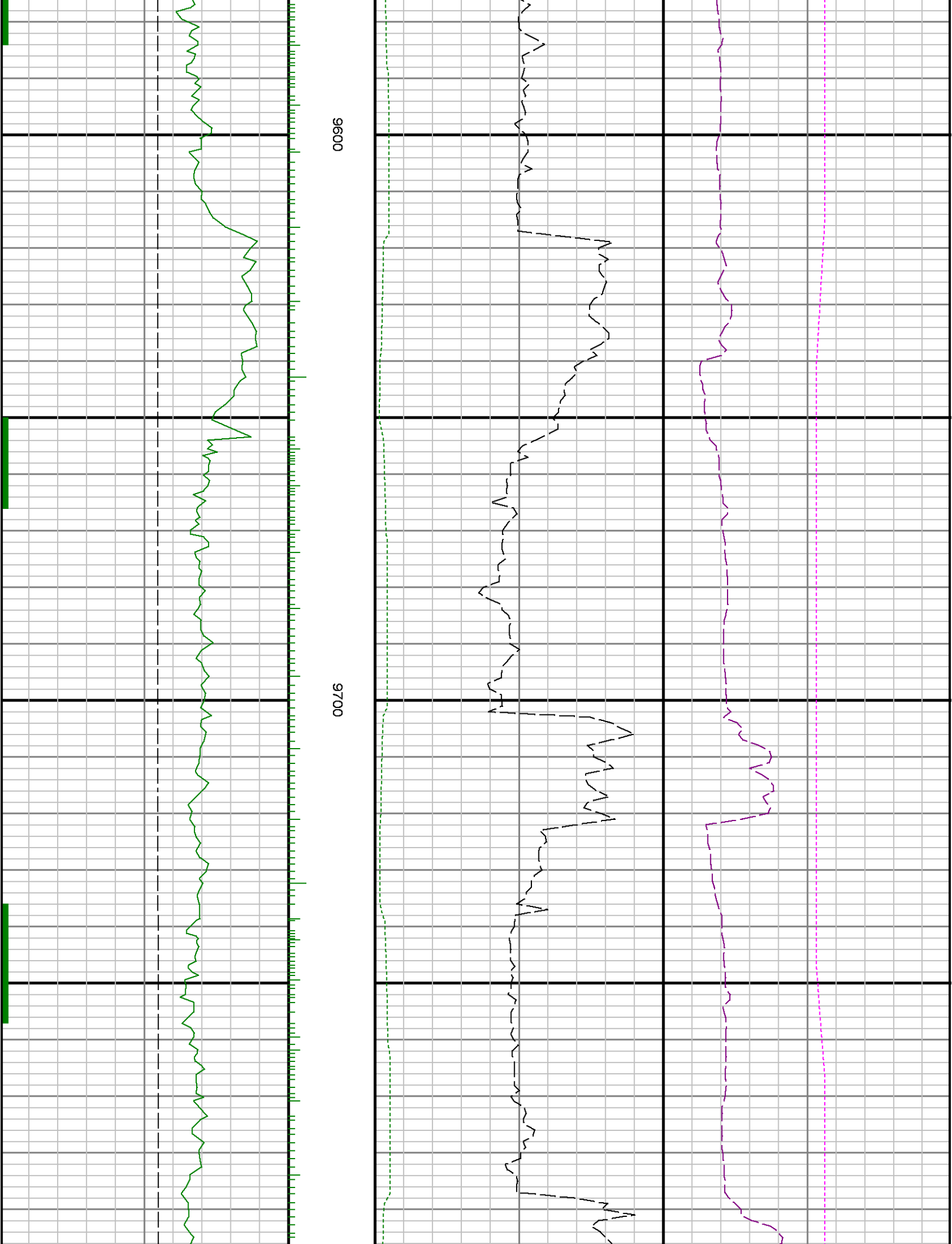


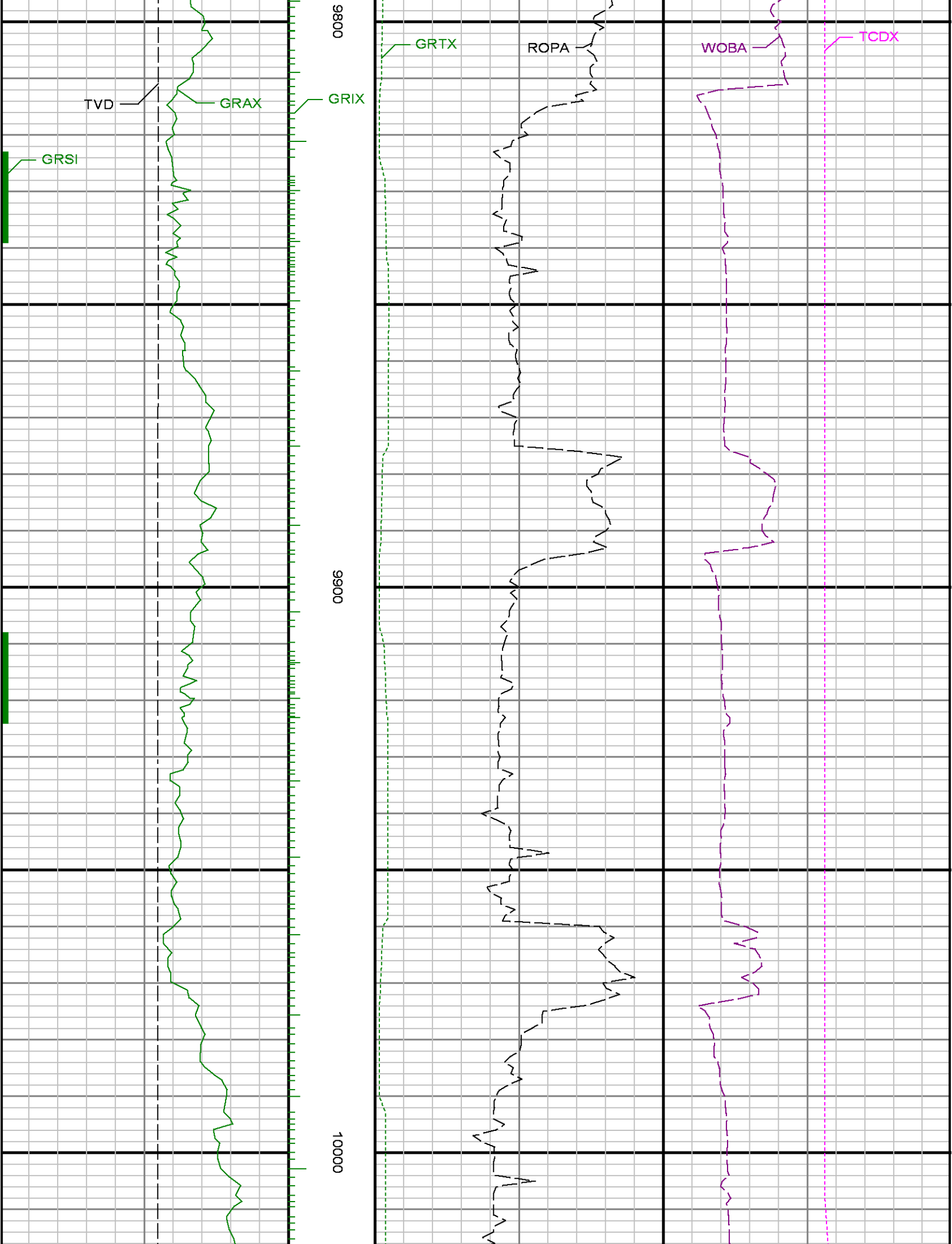
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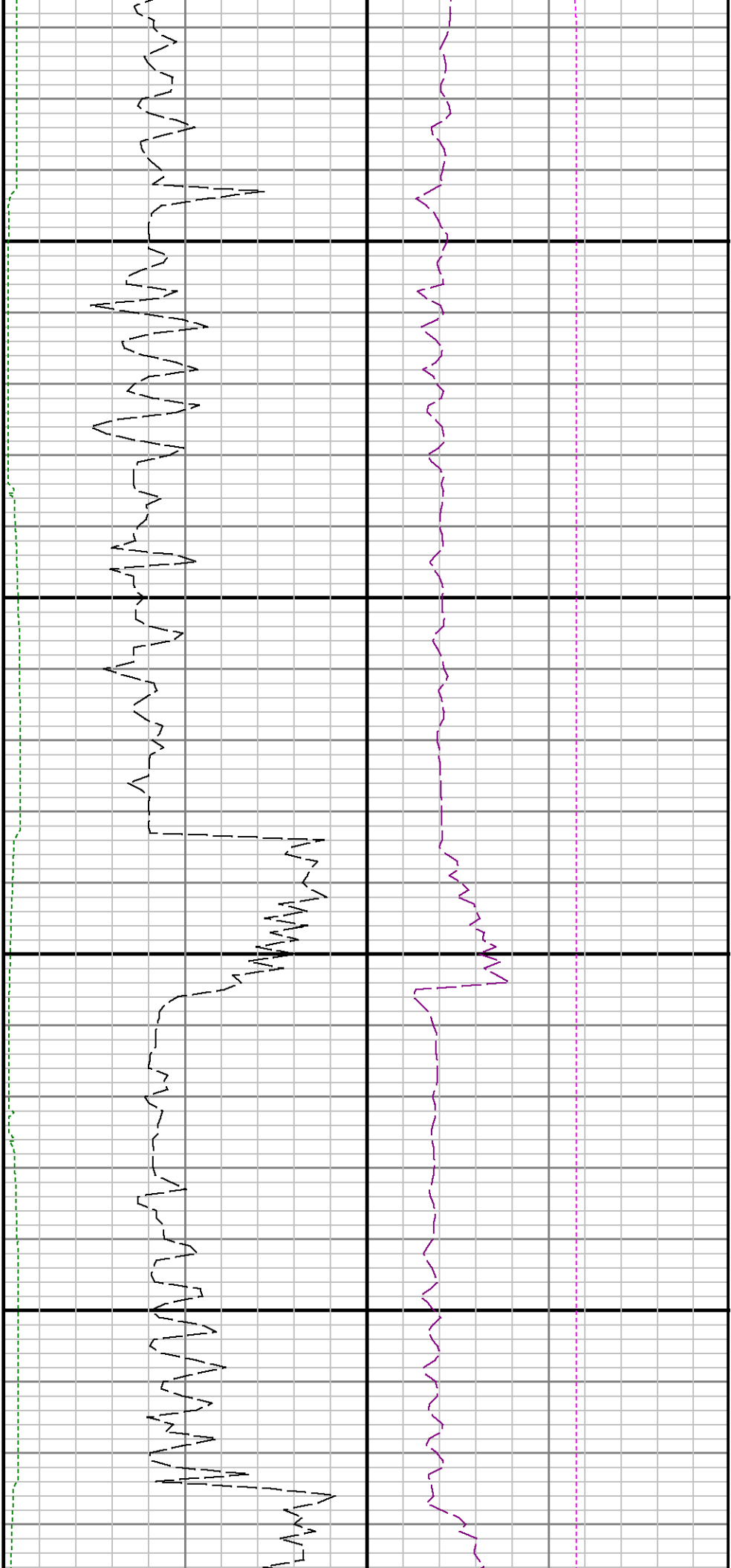
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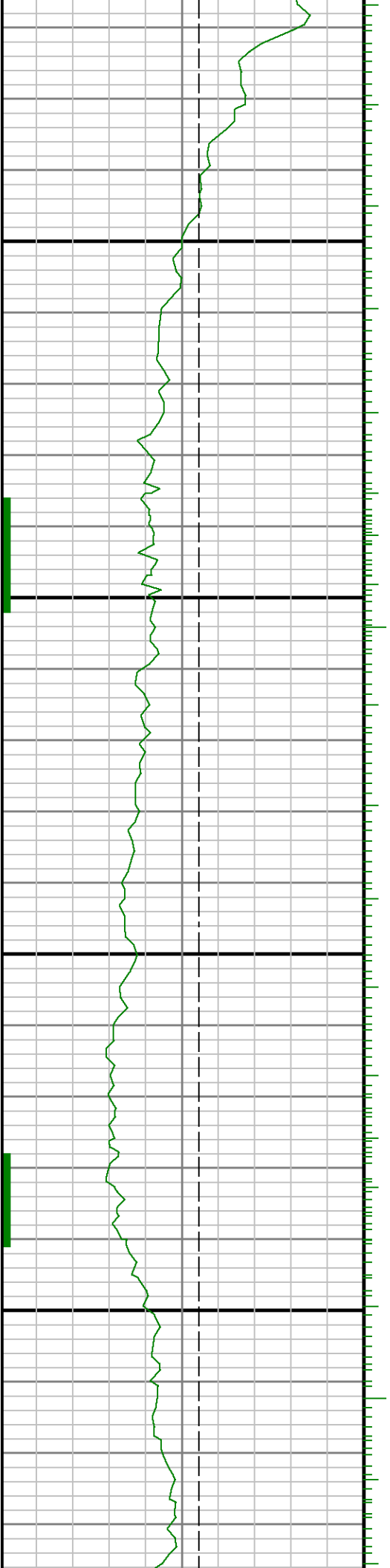


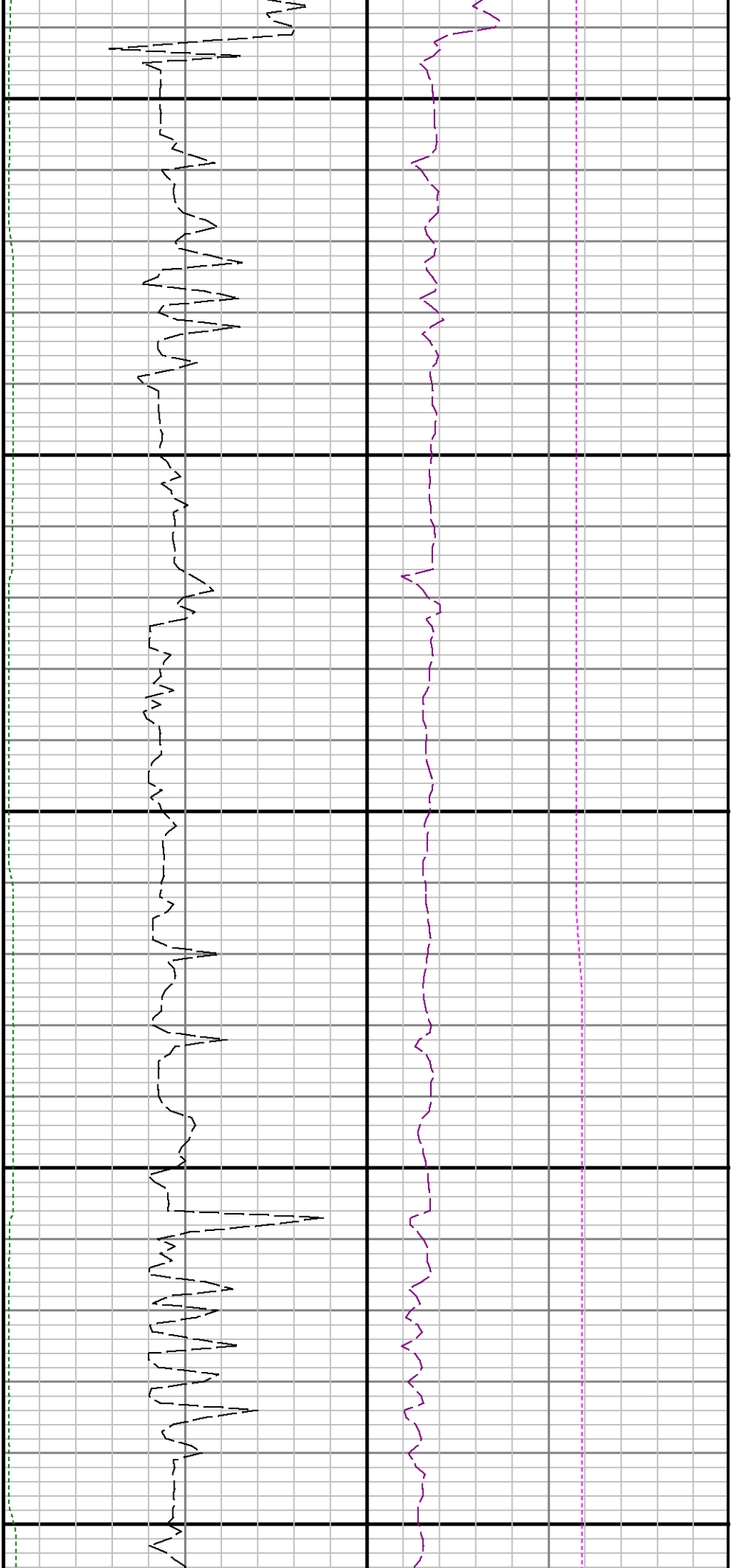




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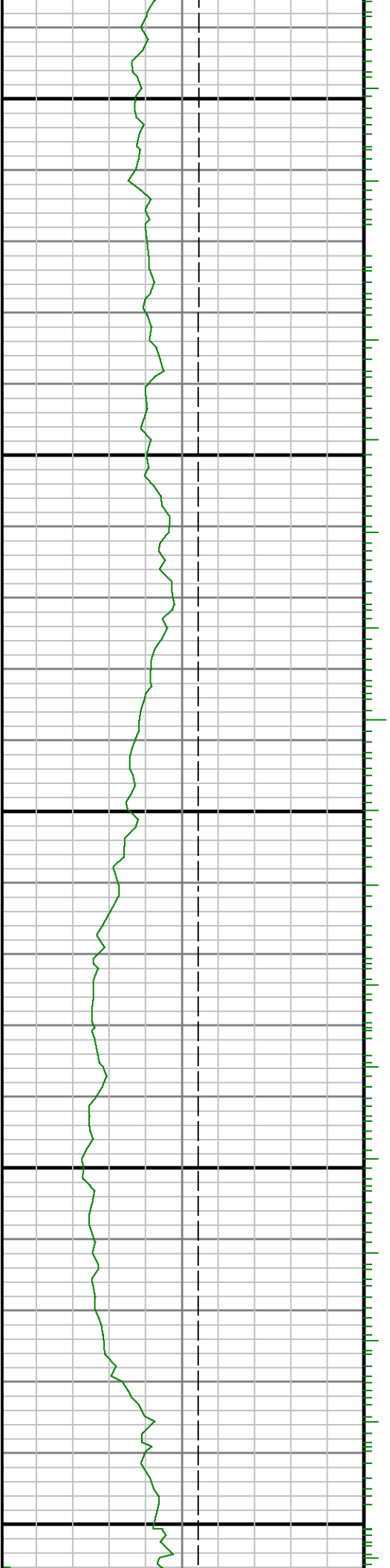
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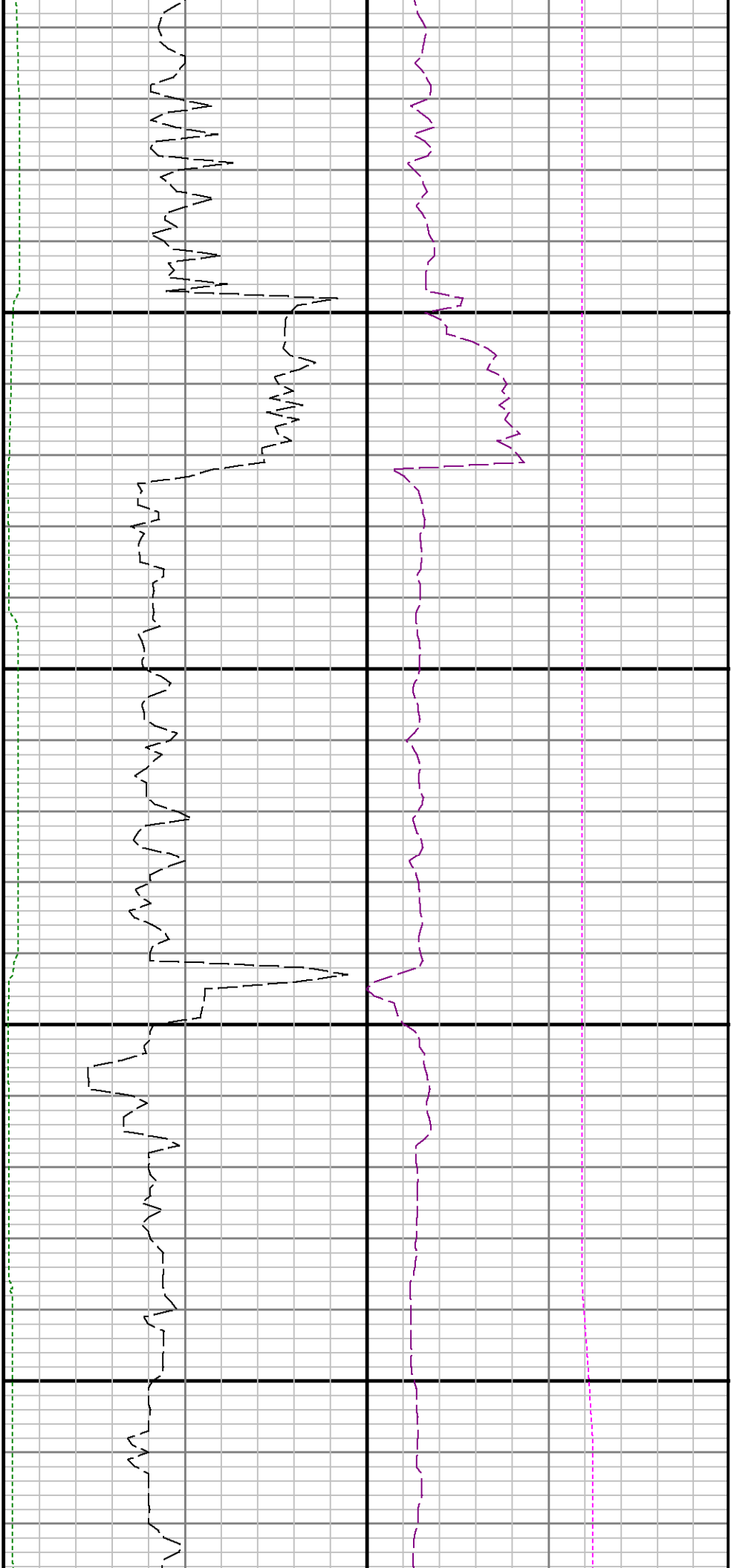




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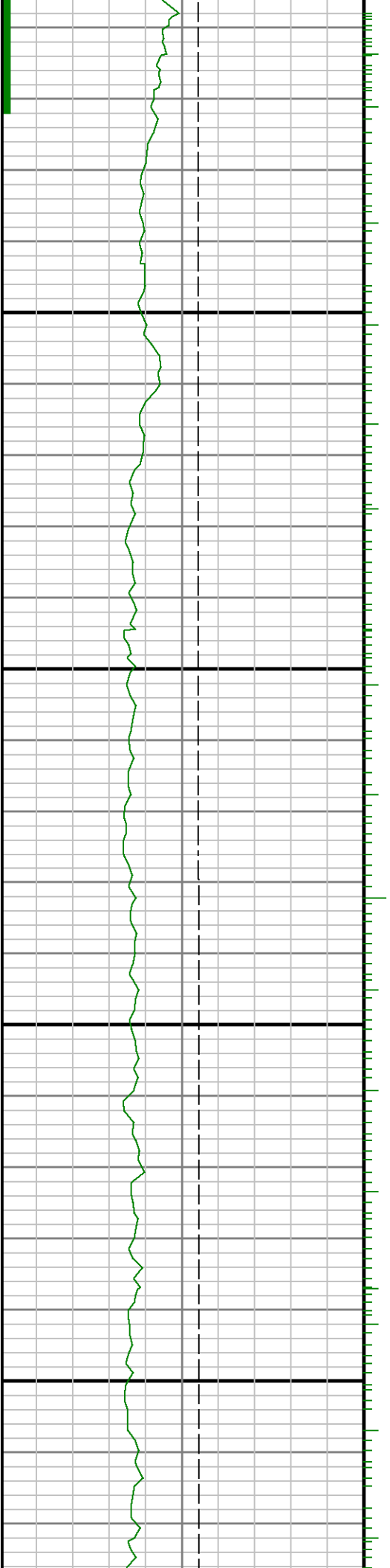
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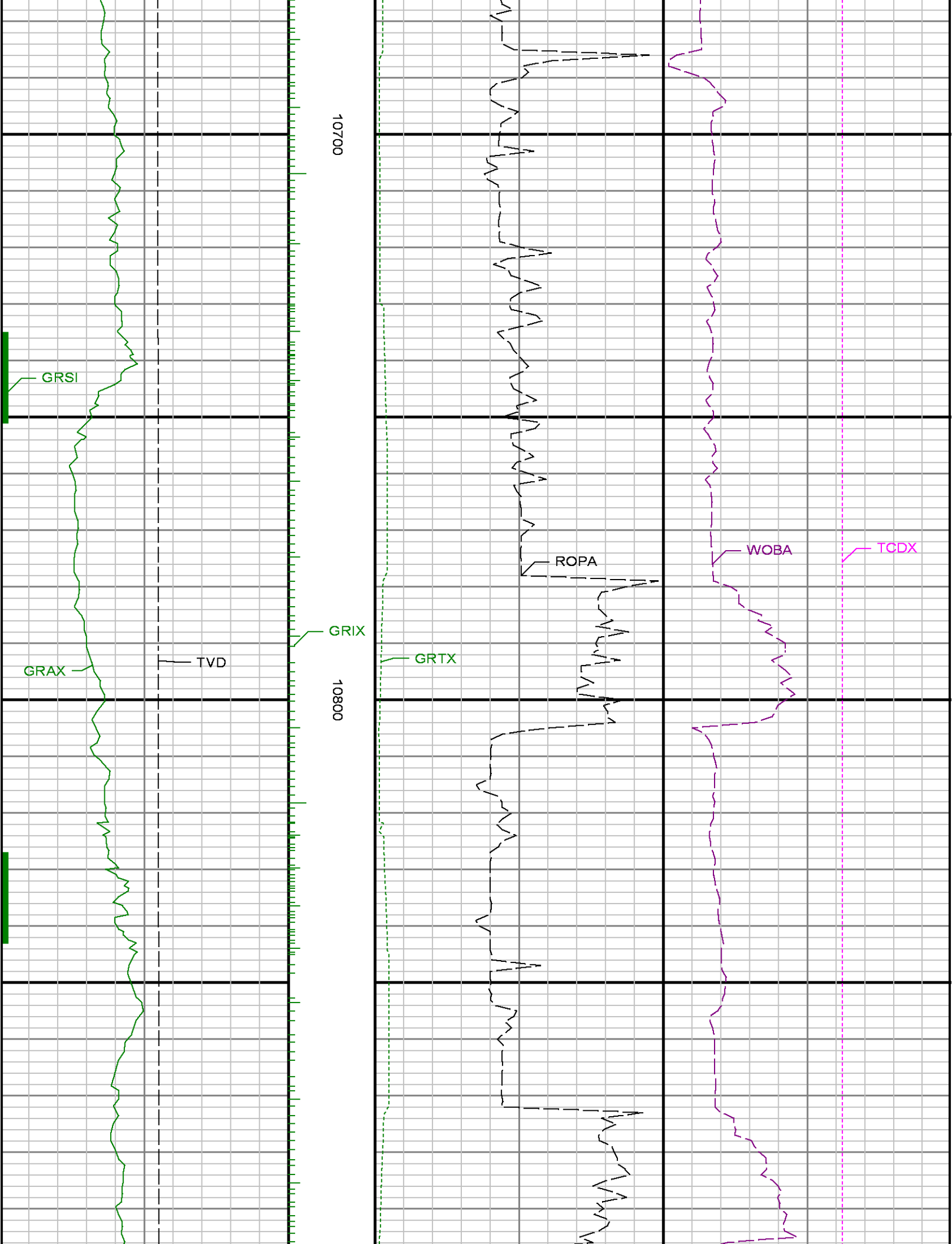


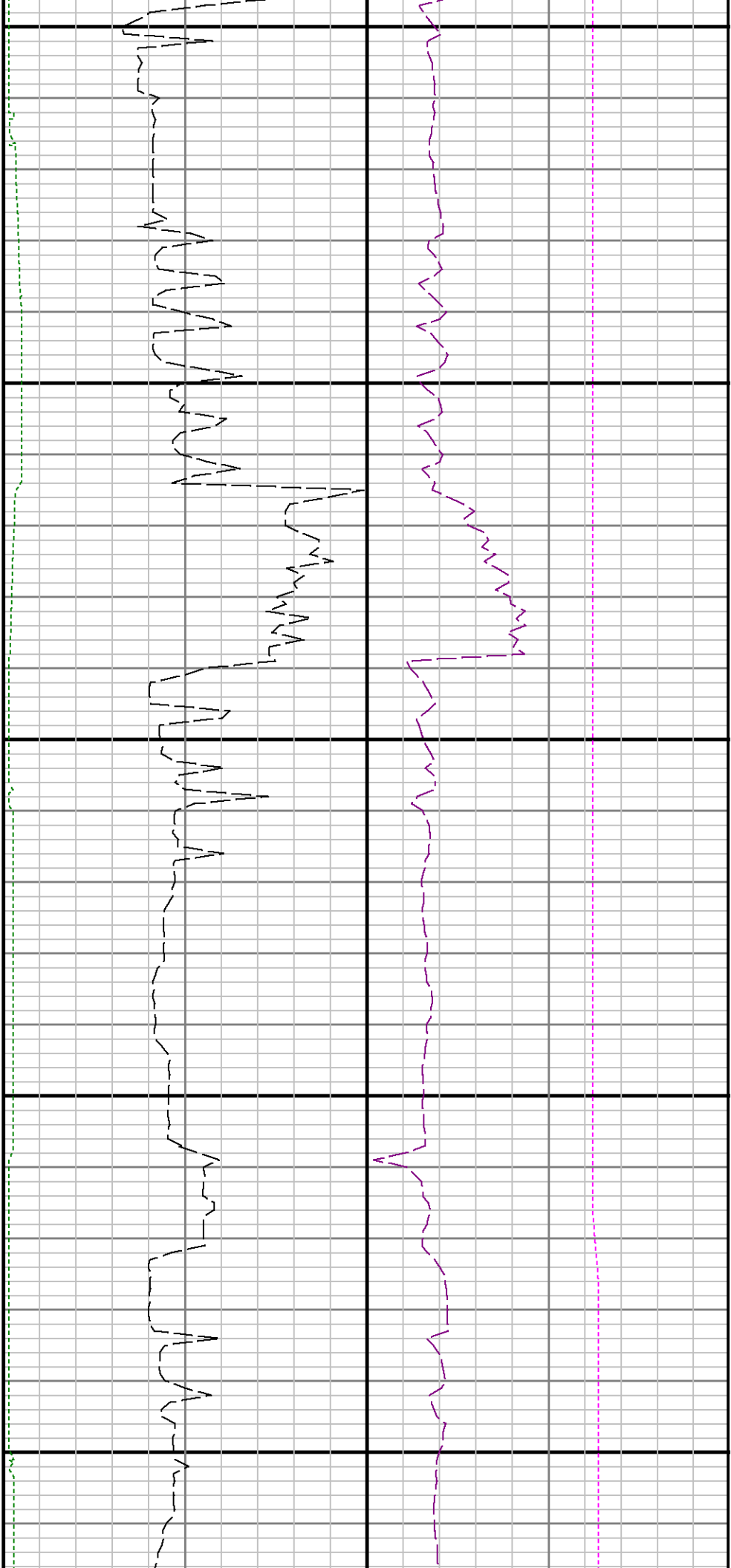


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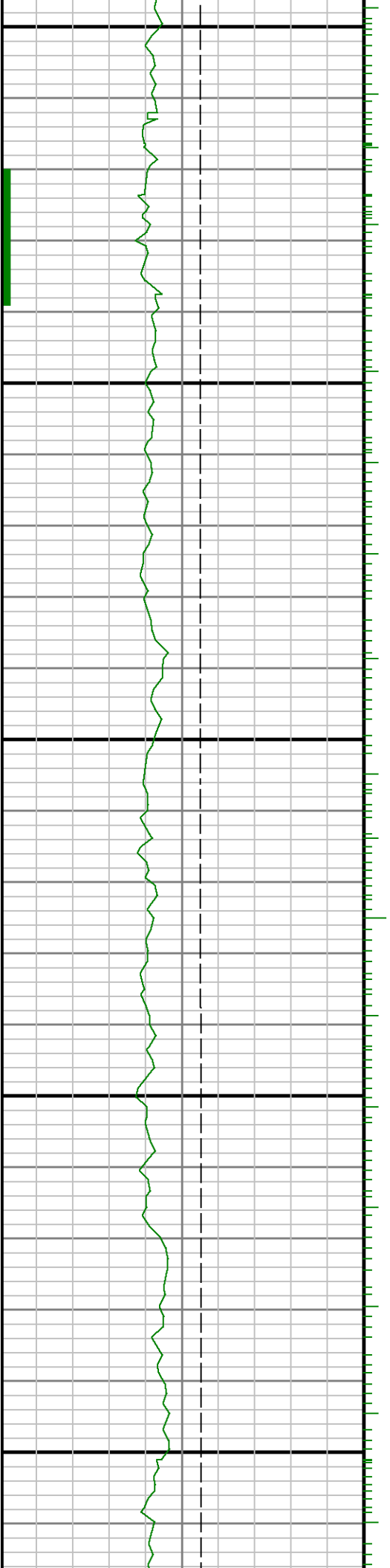


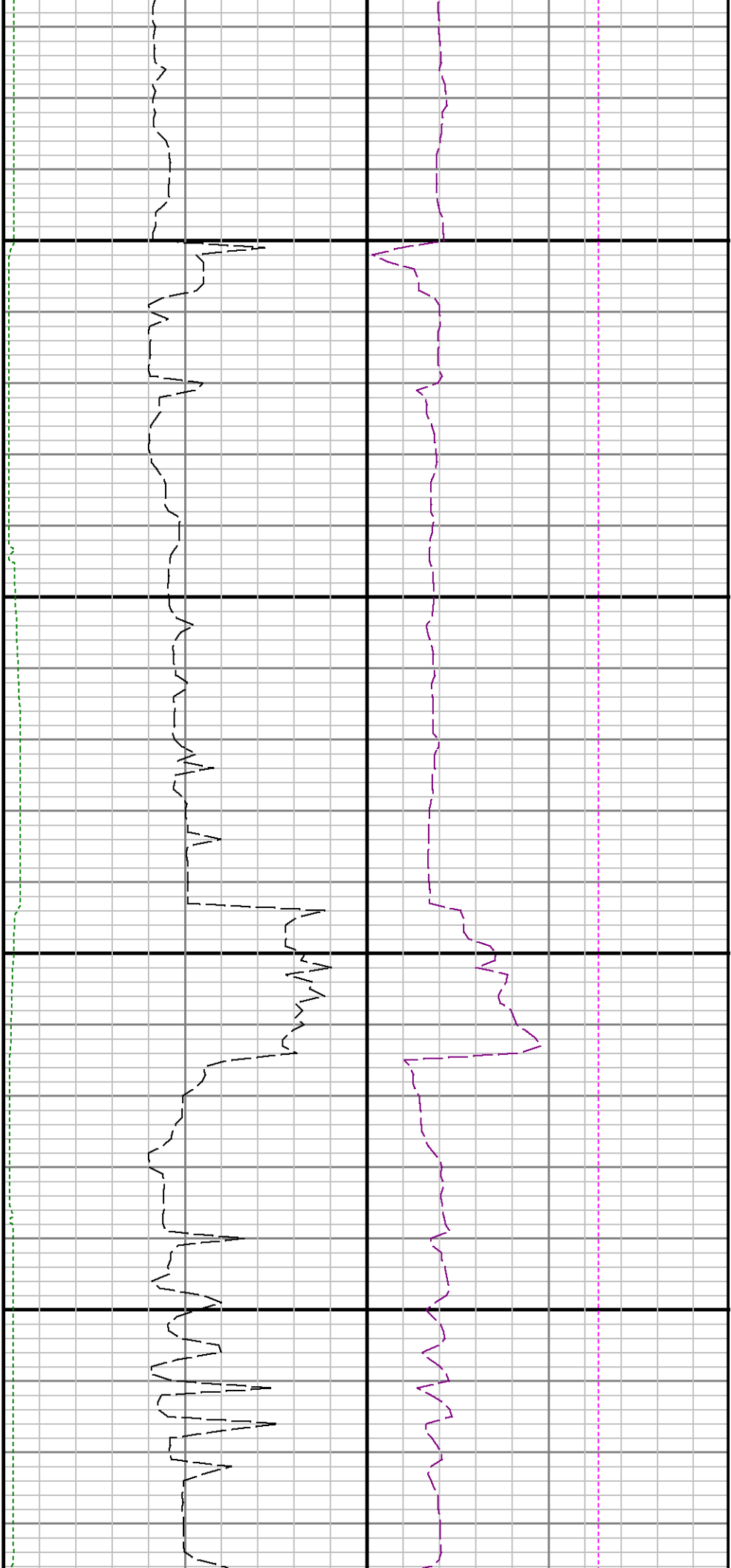


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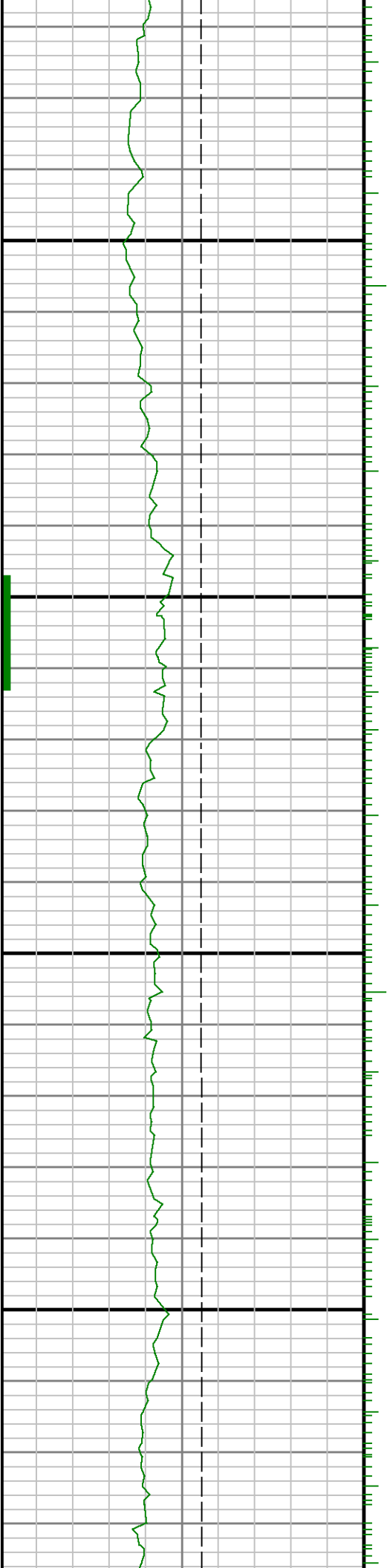
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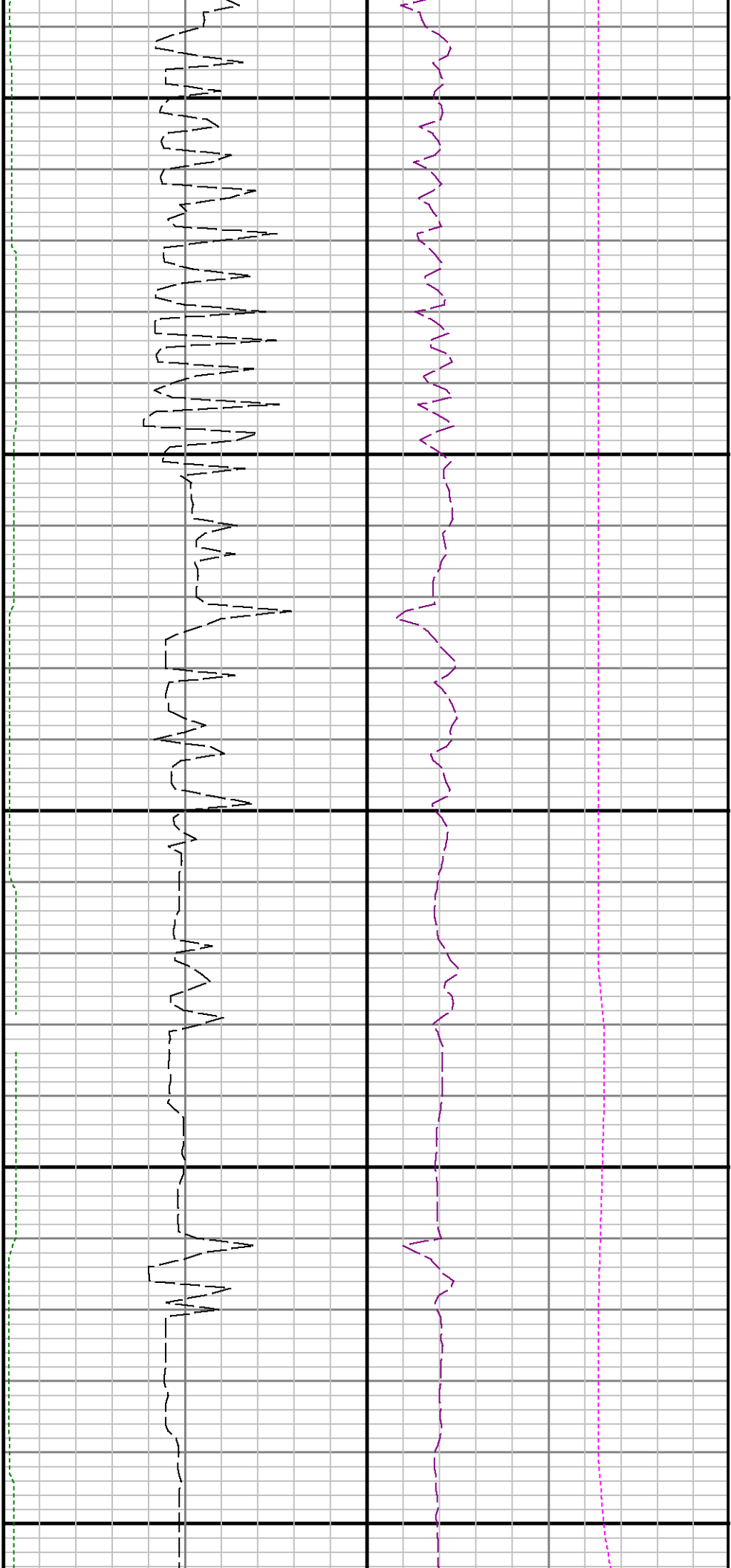




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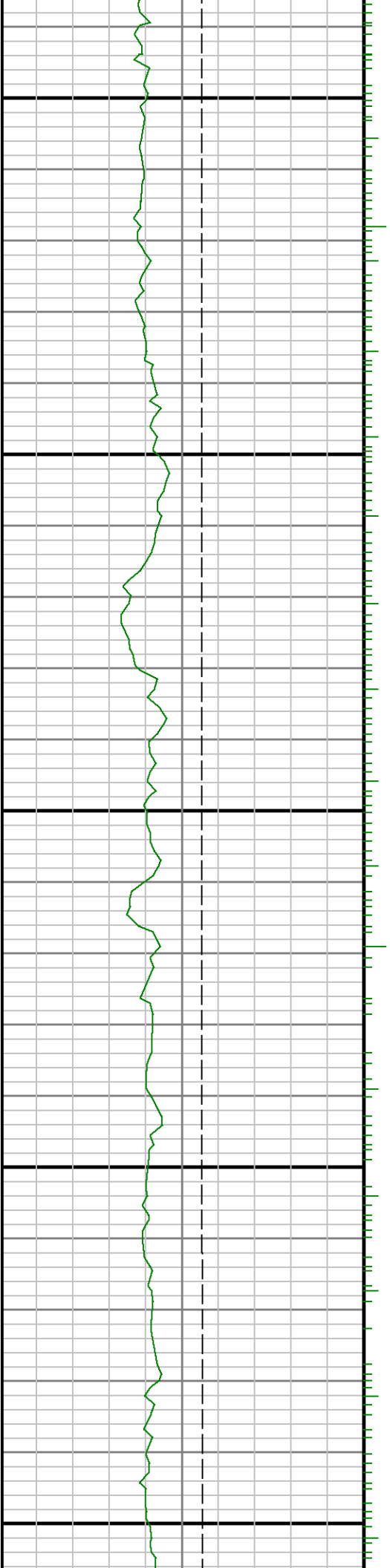
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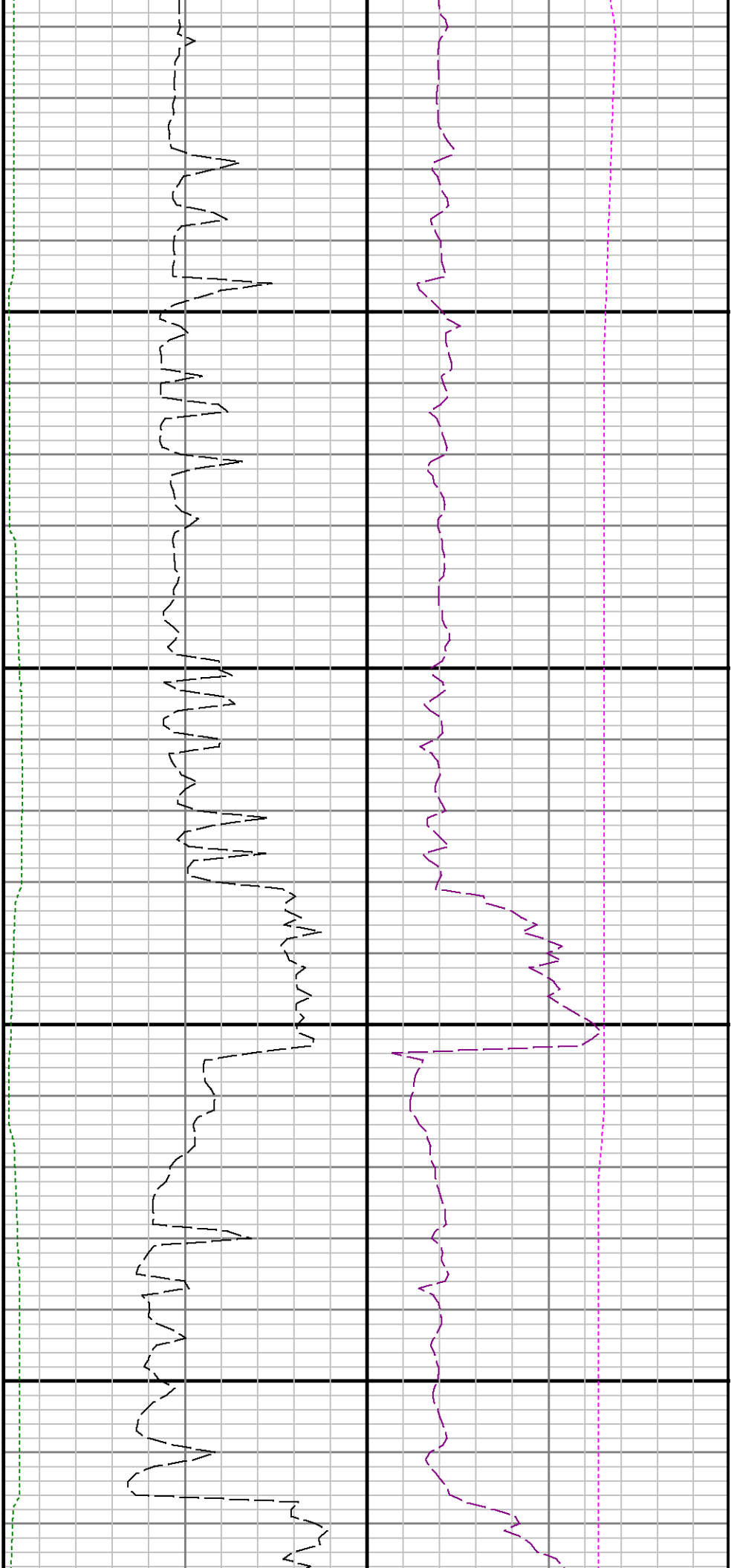




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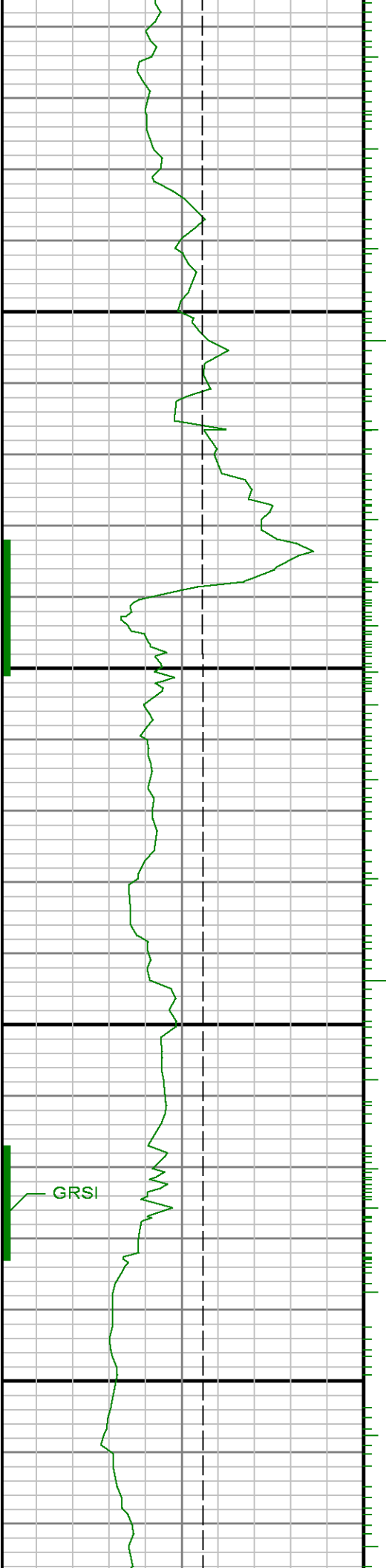
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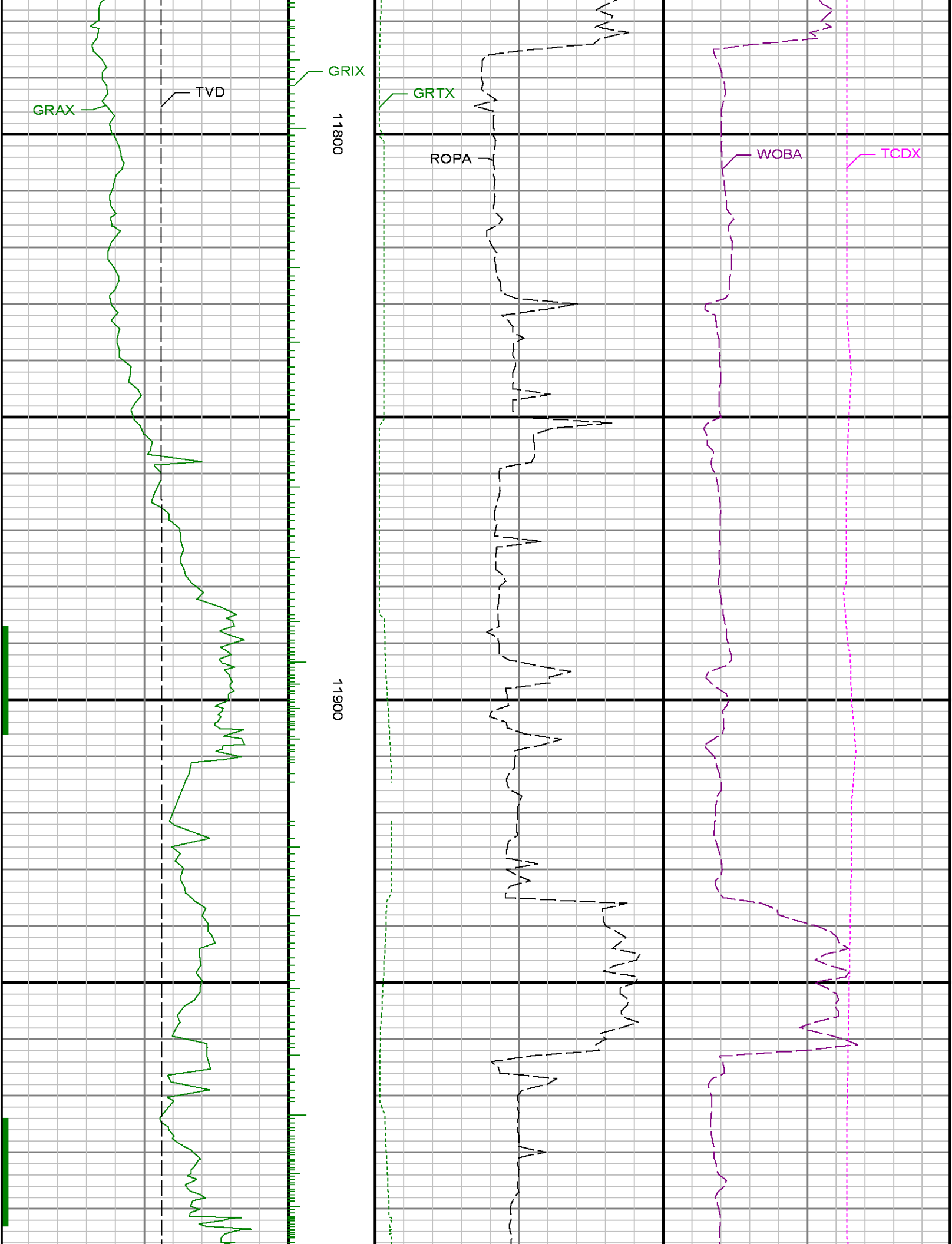


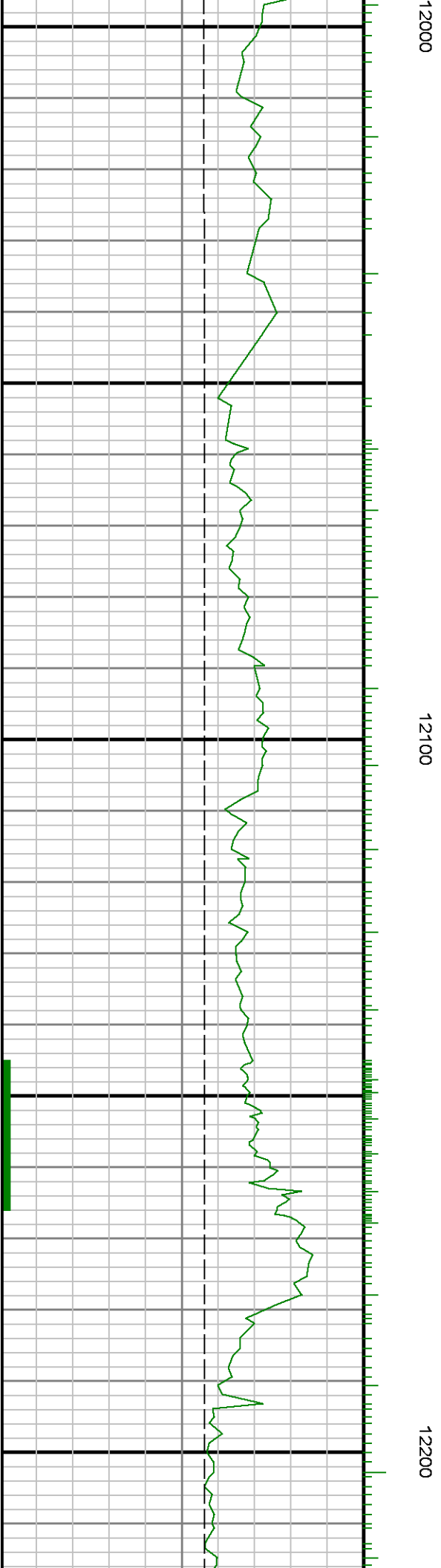
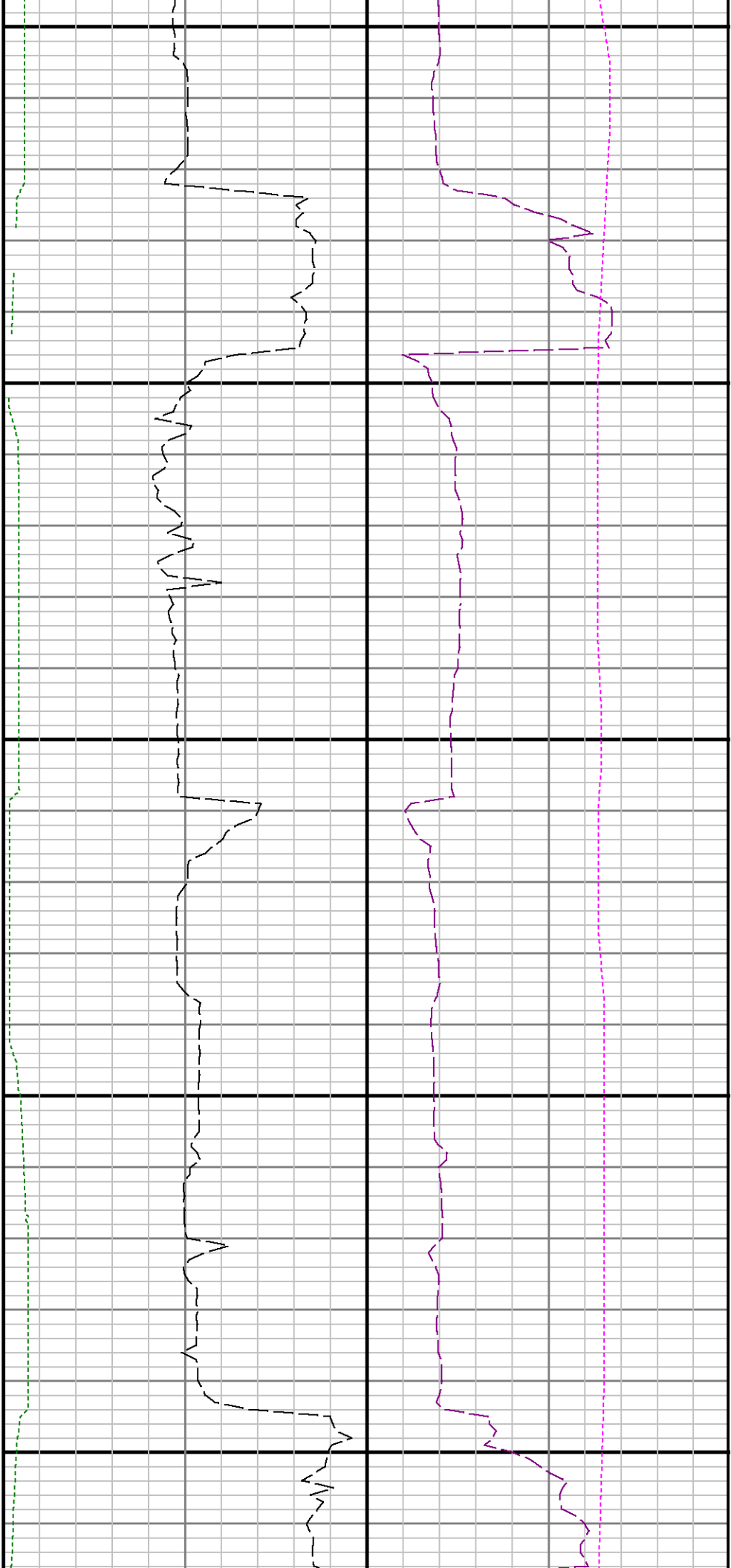
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GRSI

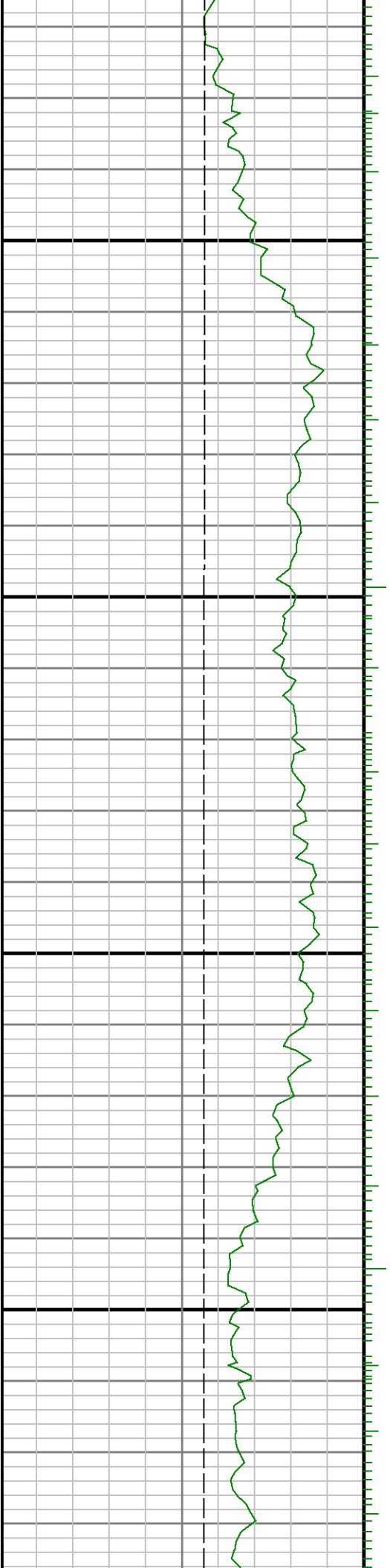






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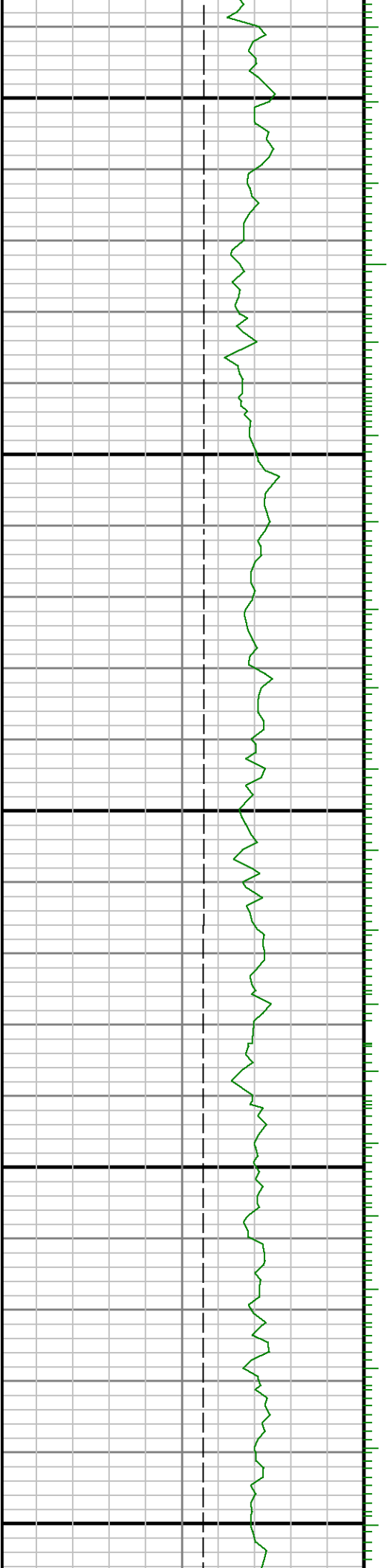
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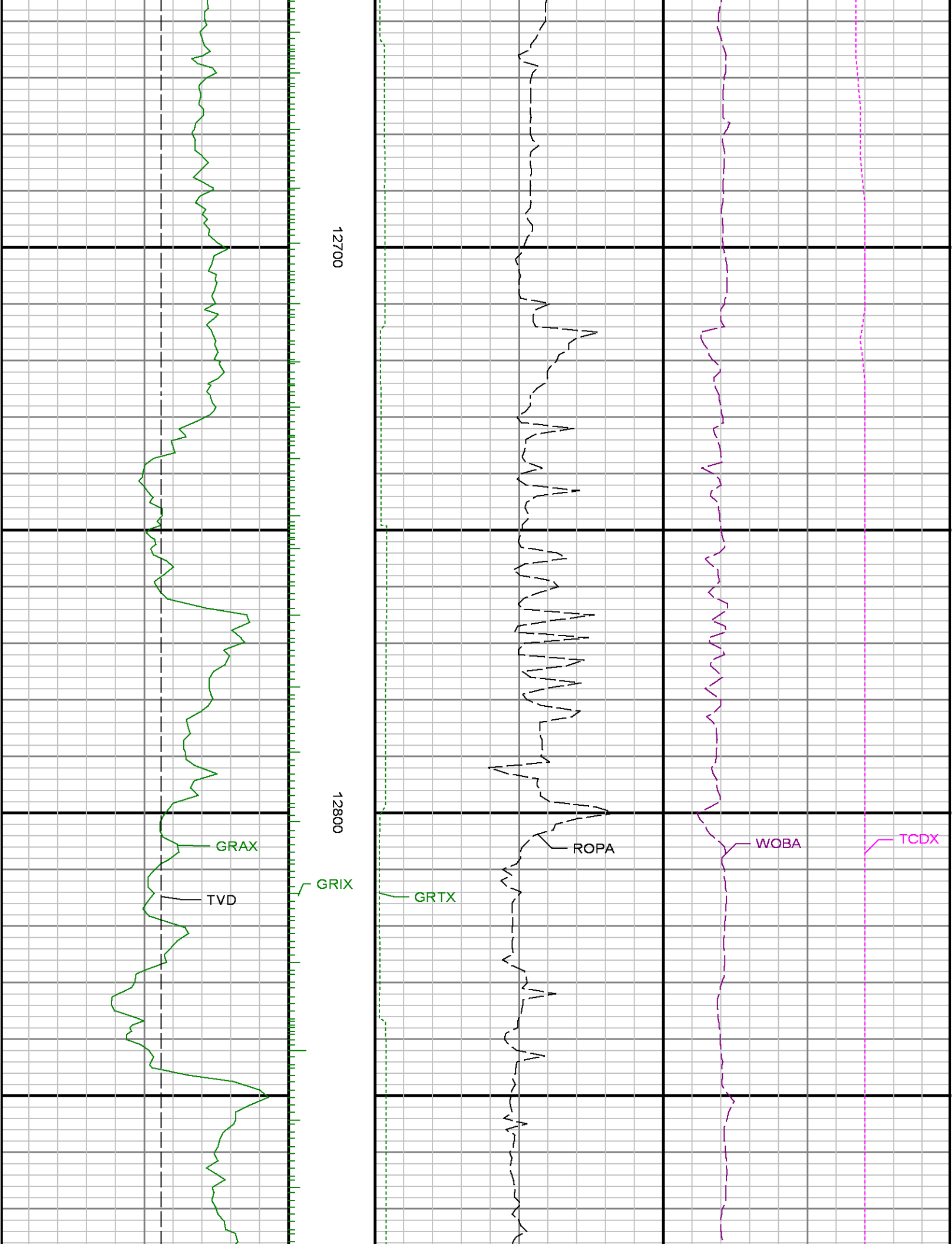




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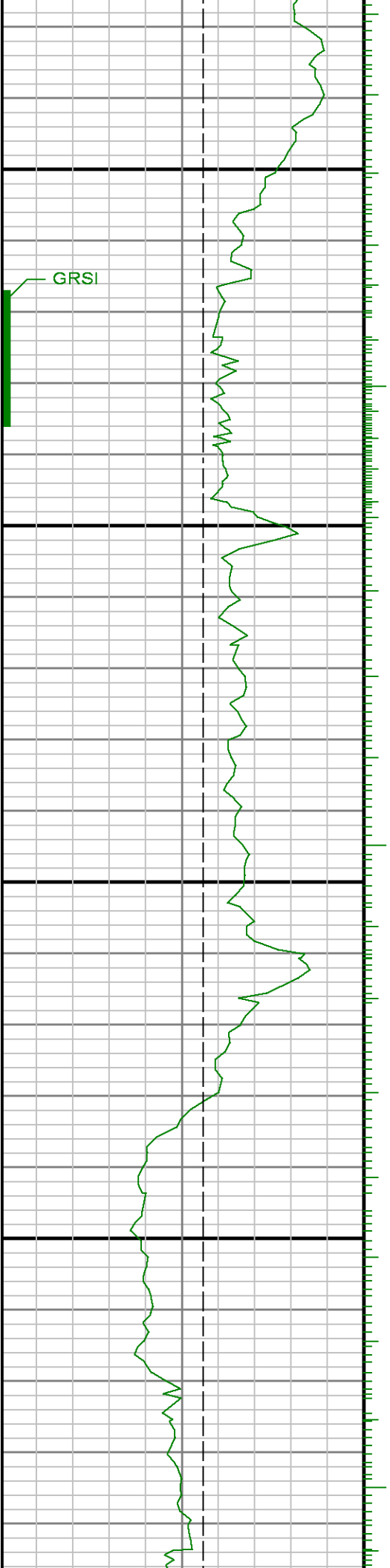




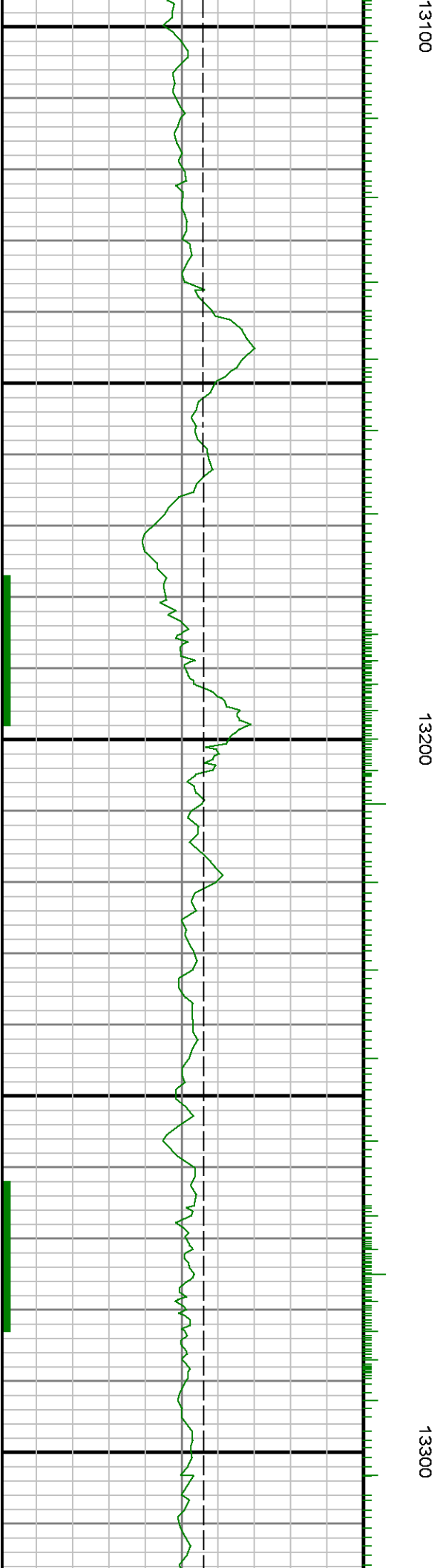
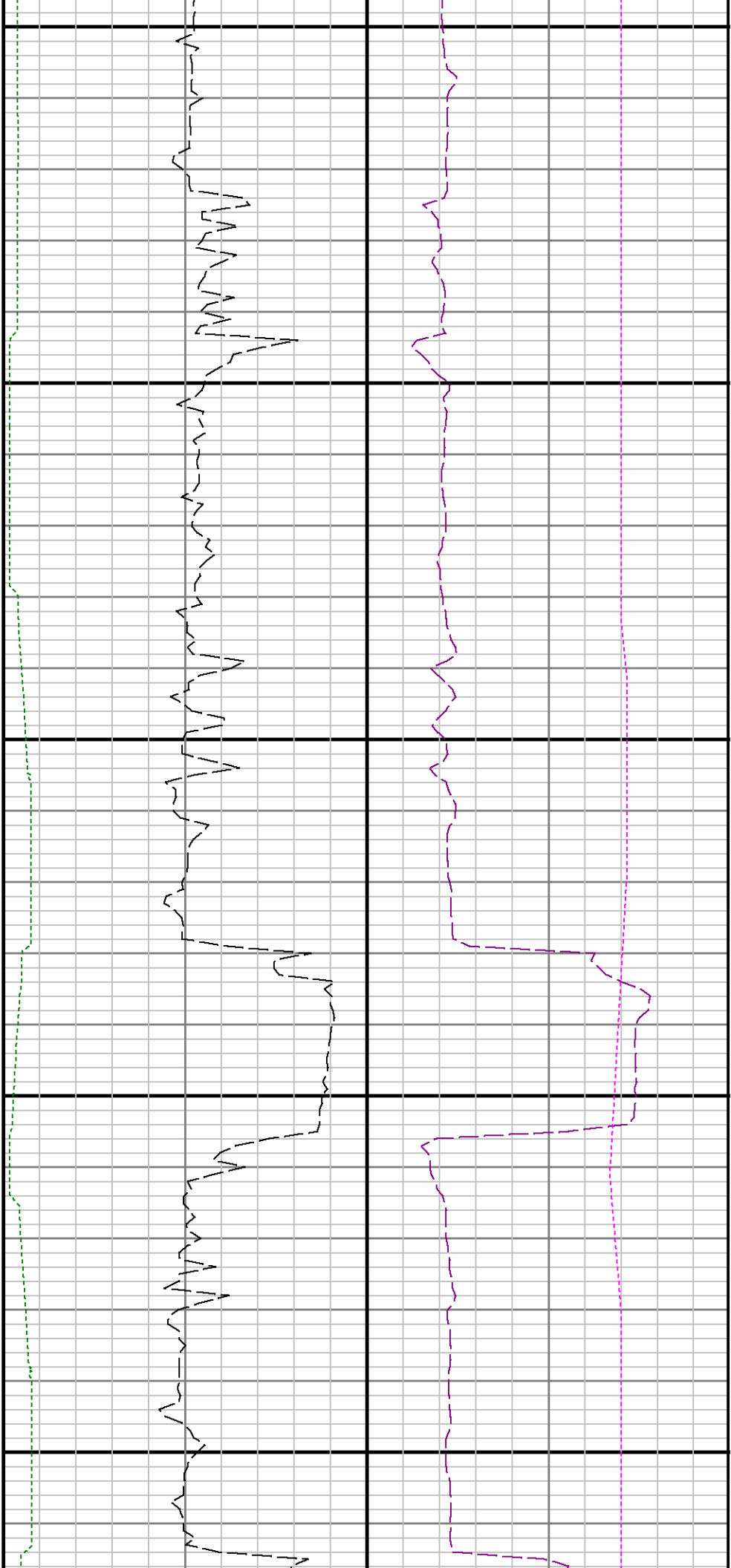


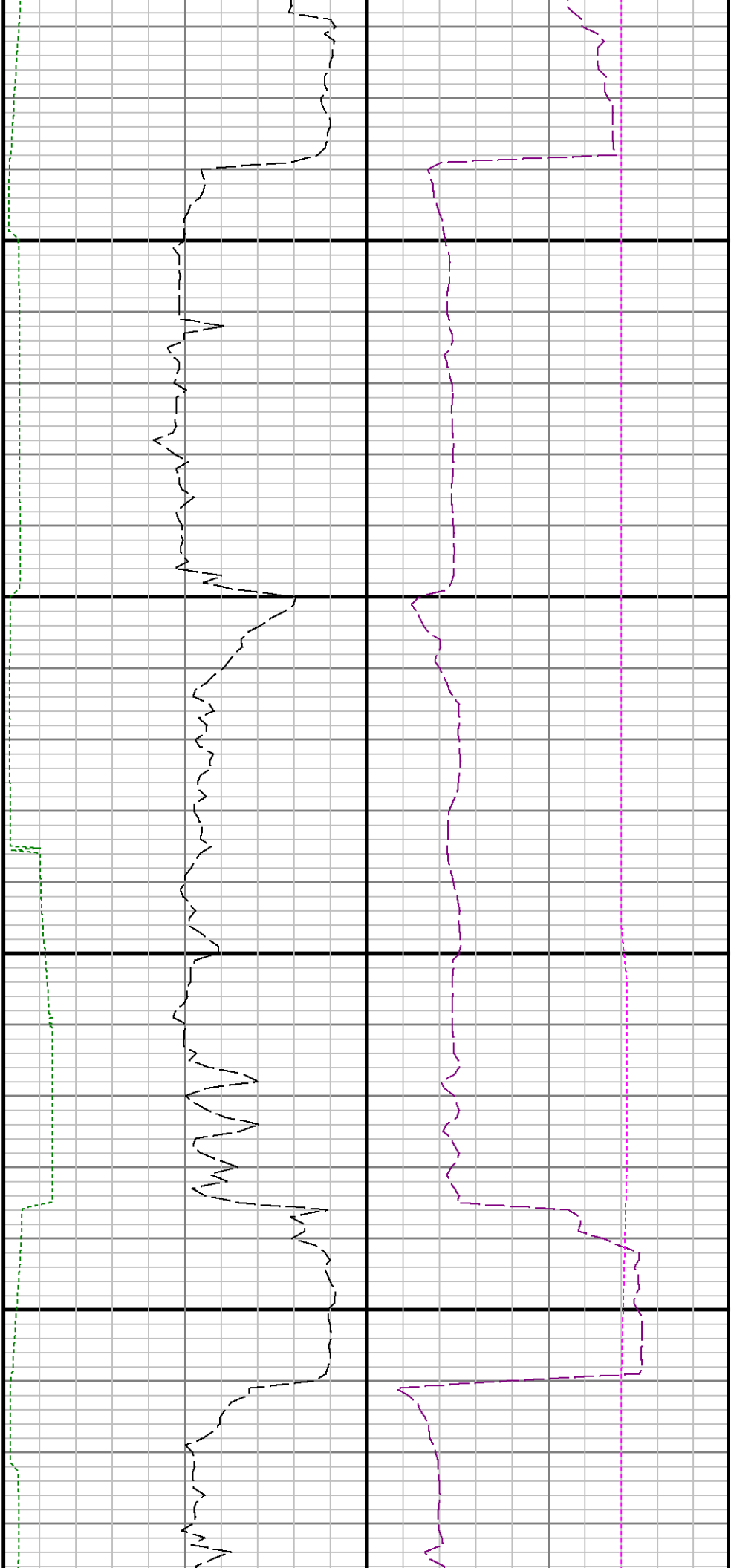
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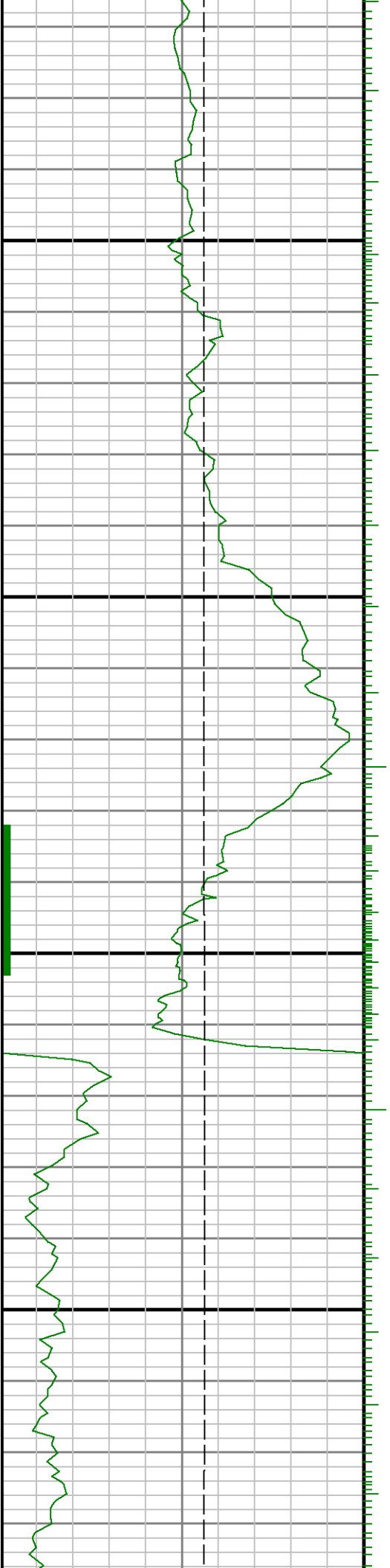
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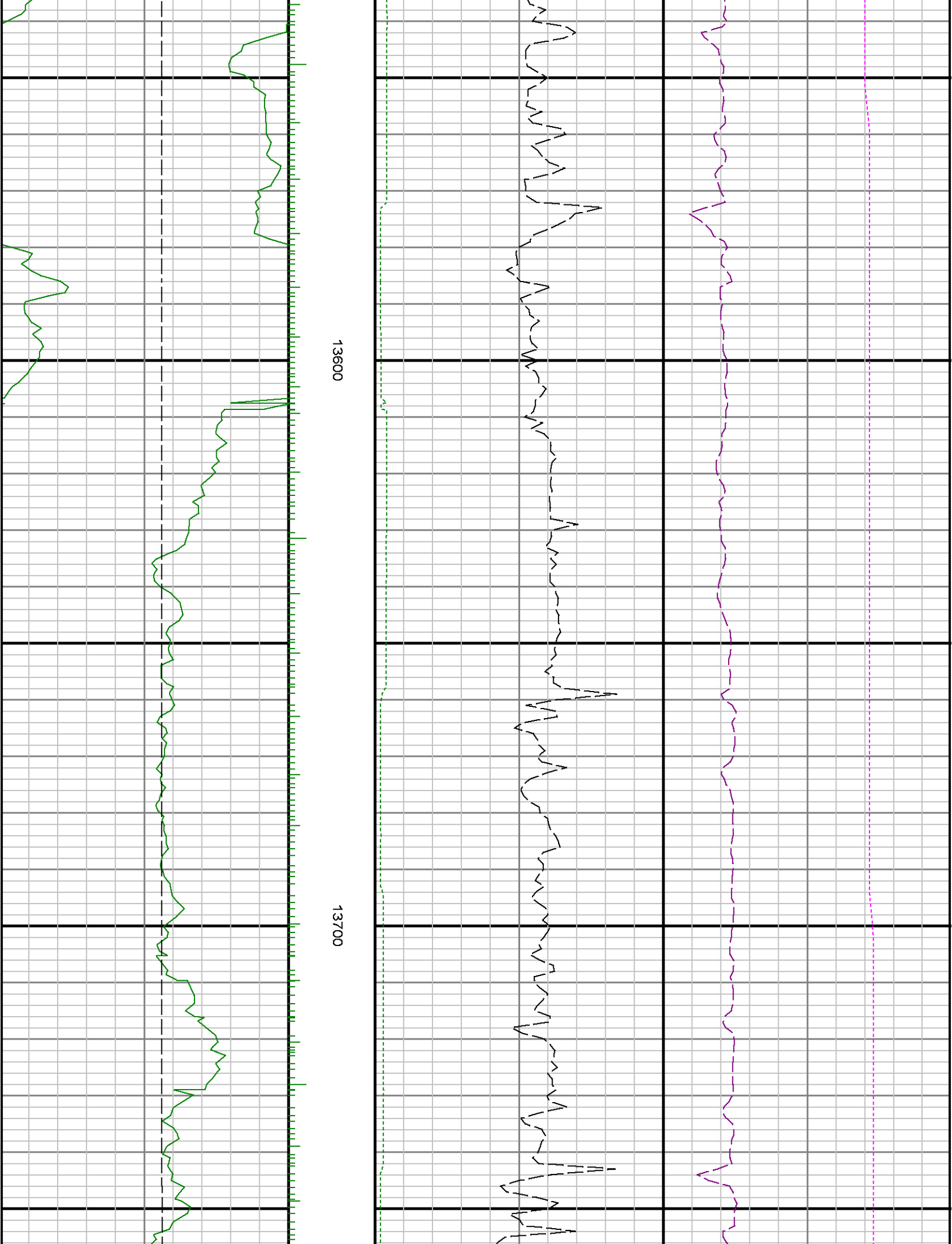


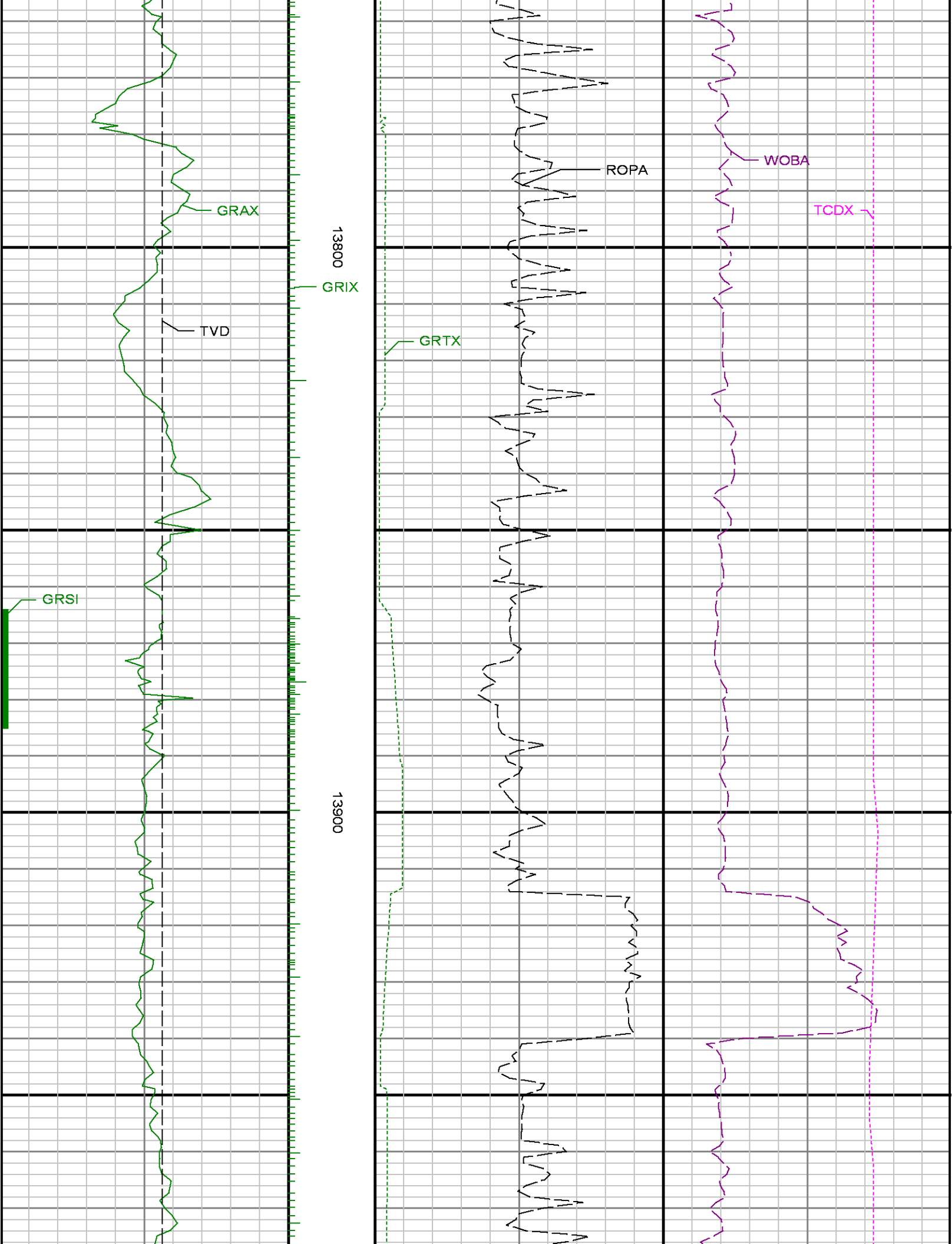


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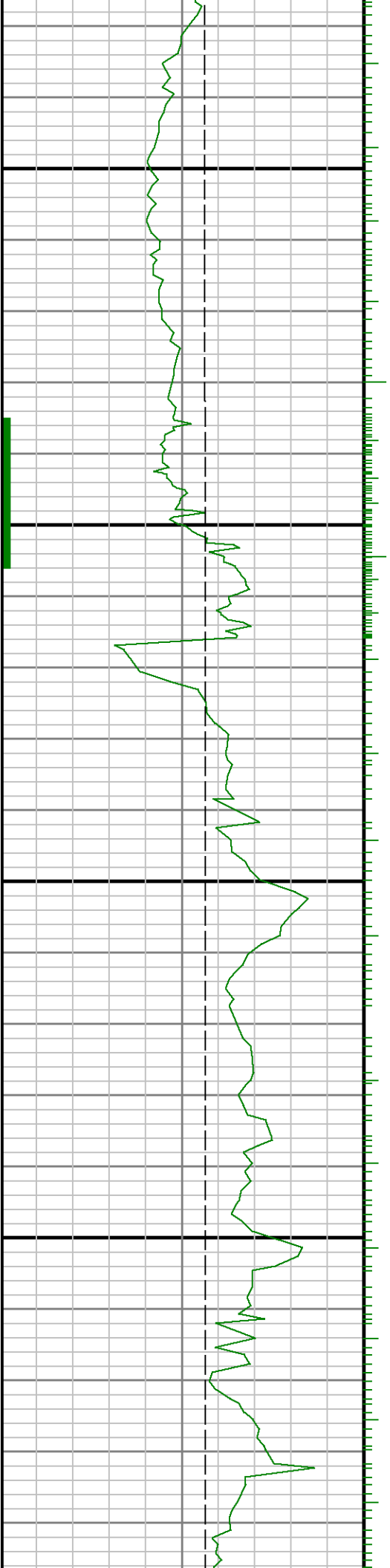


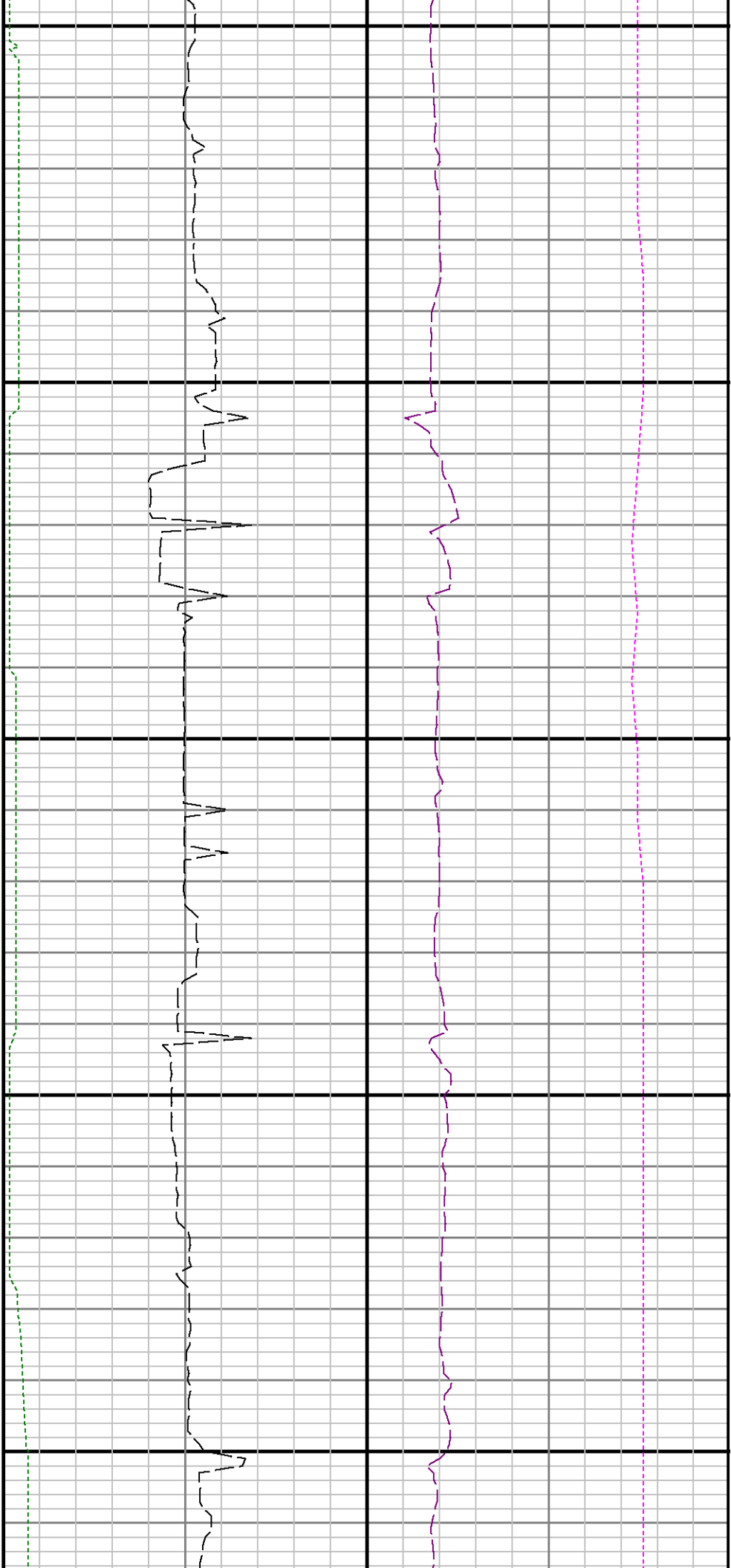




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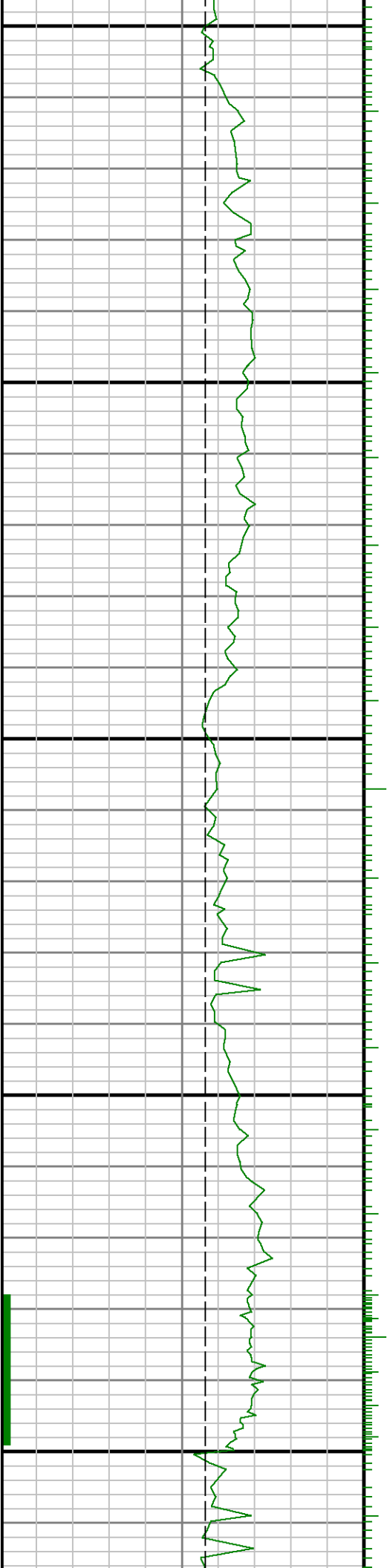




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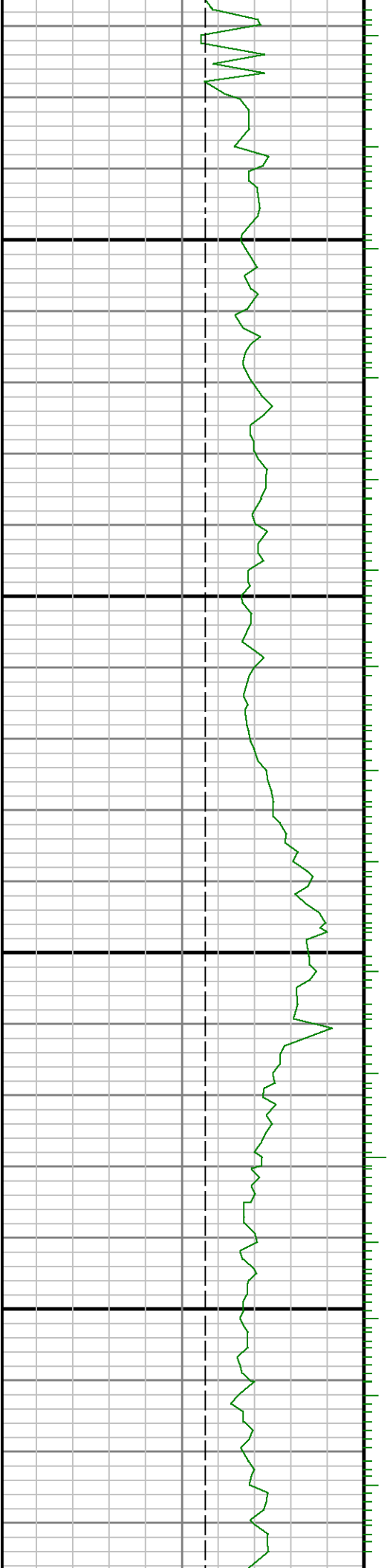
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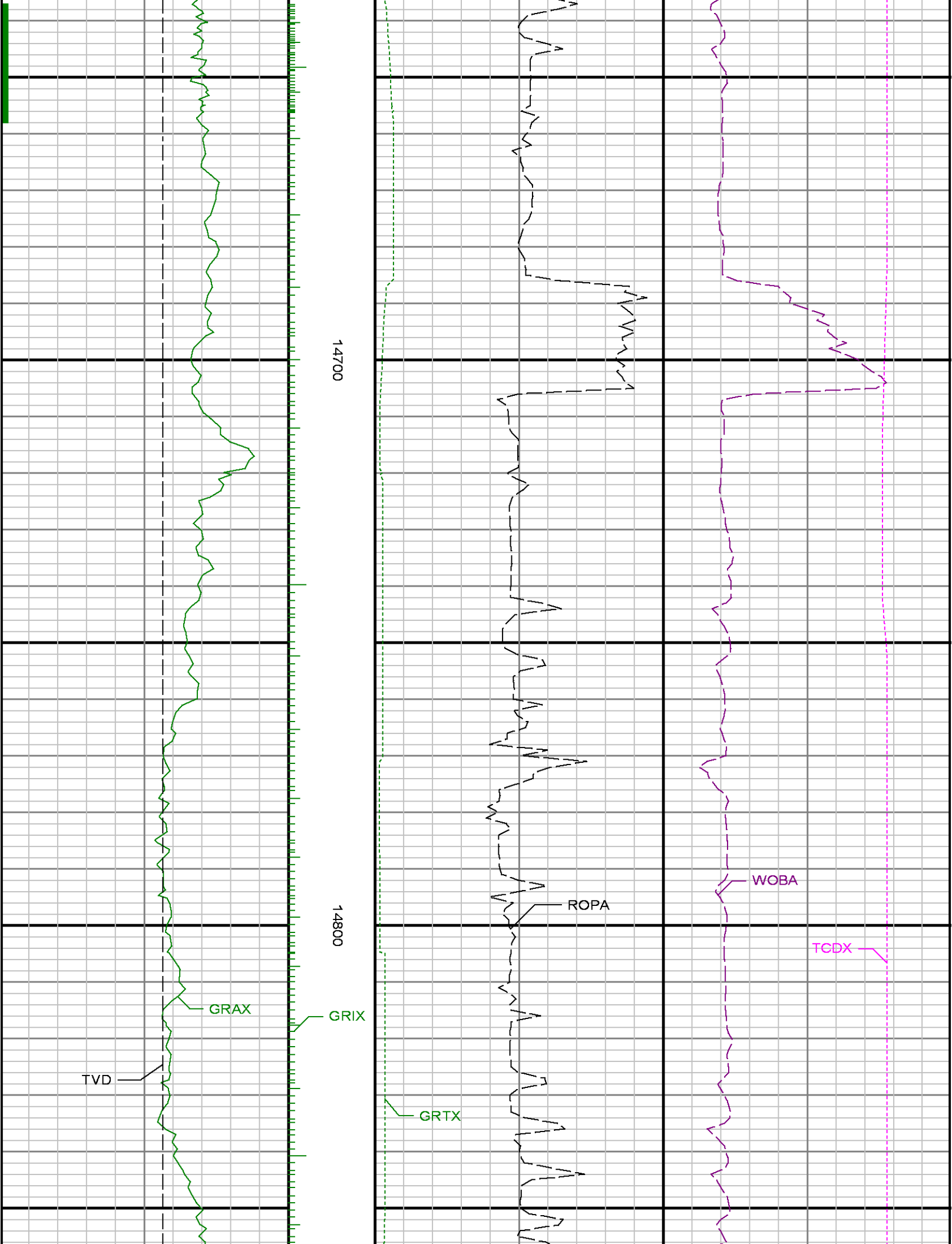


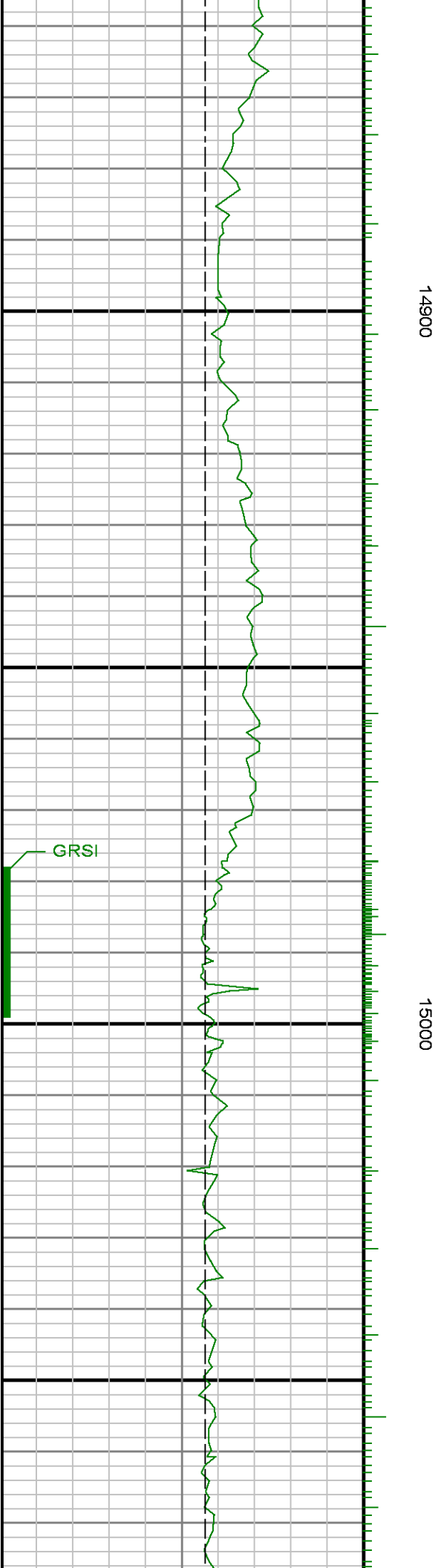
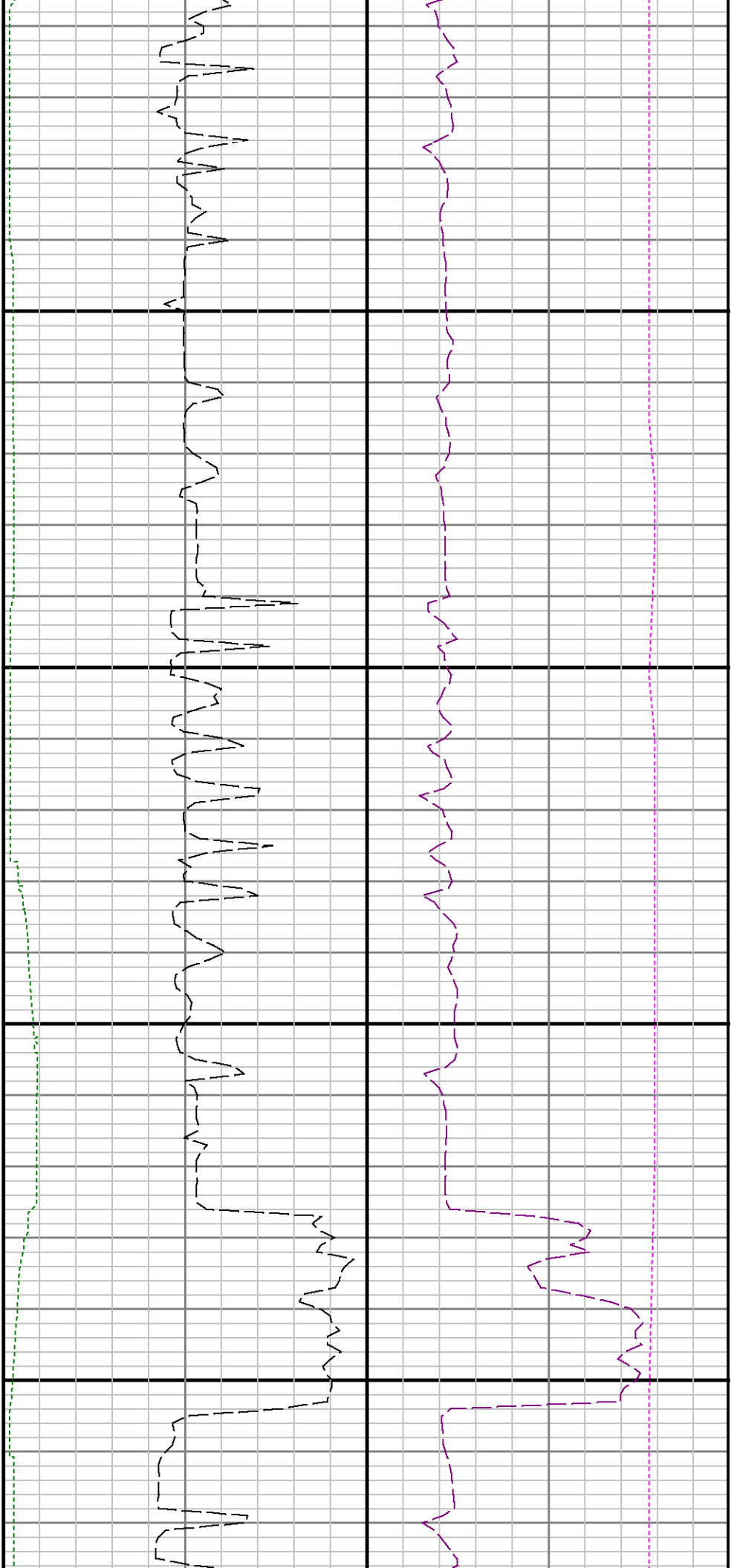


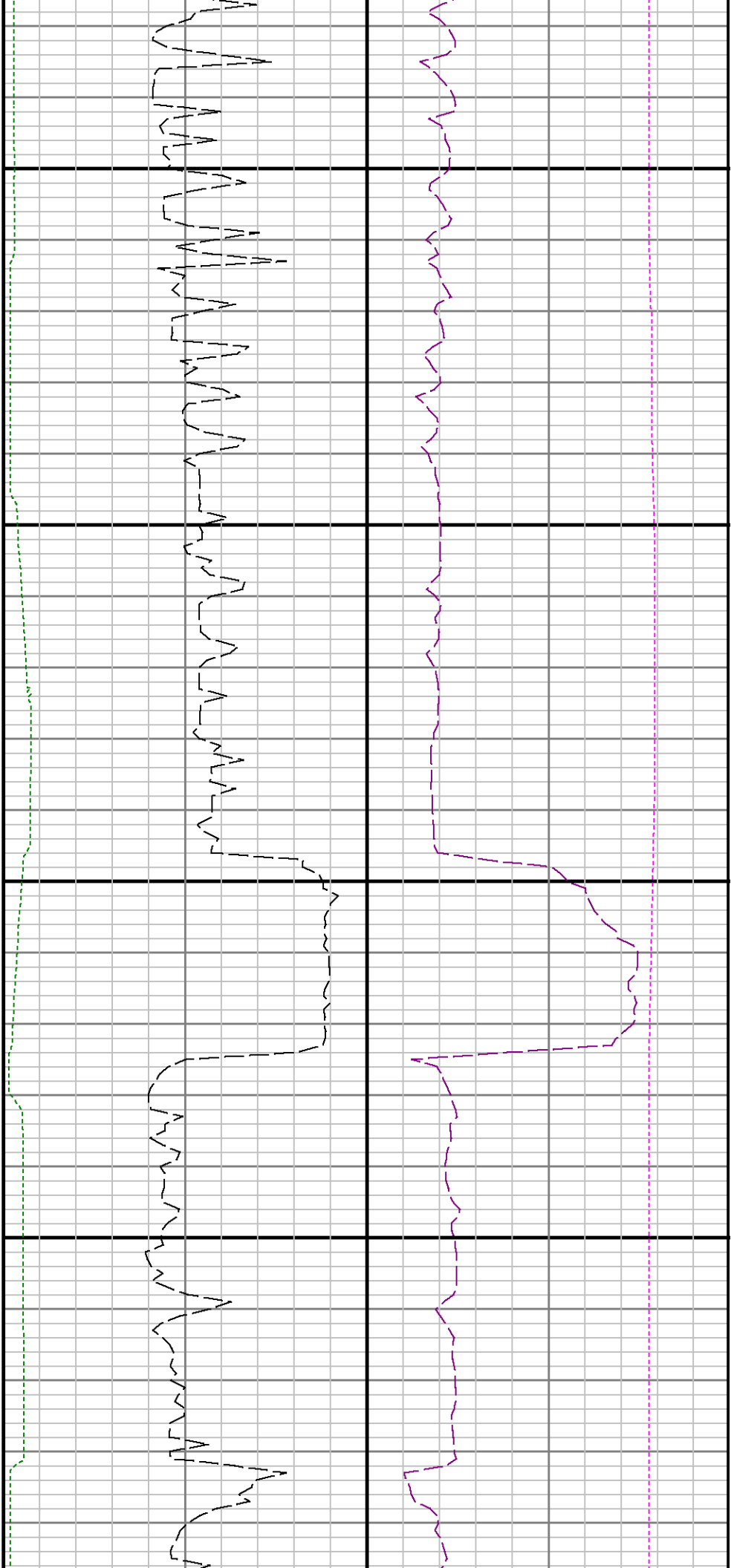
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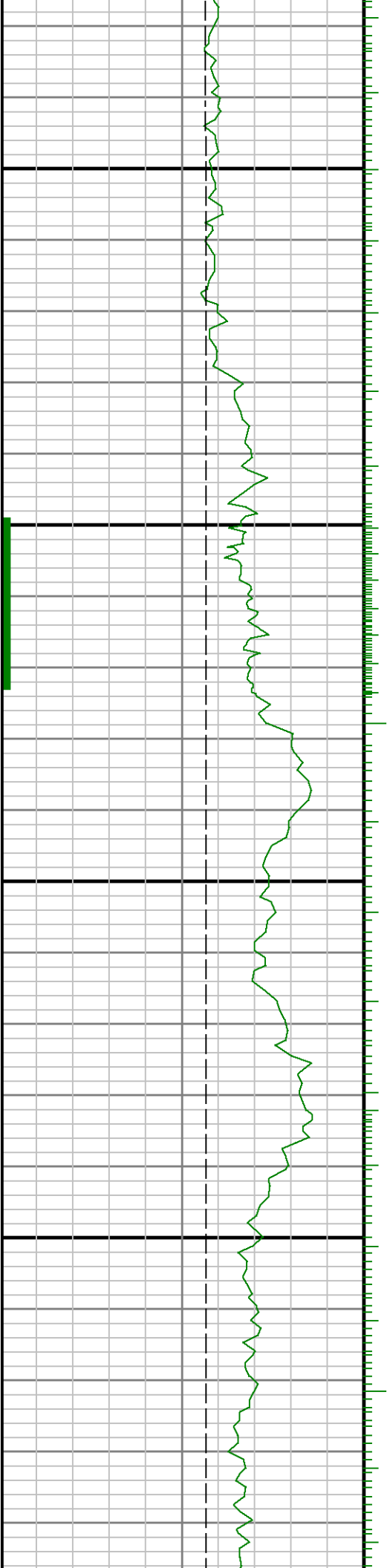


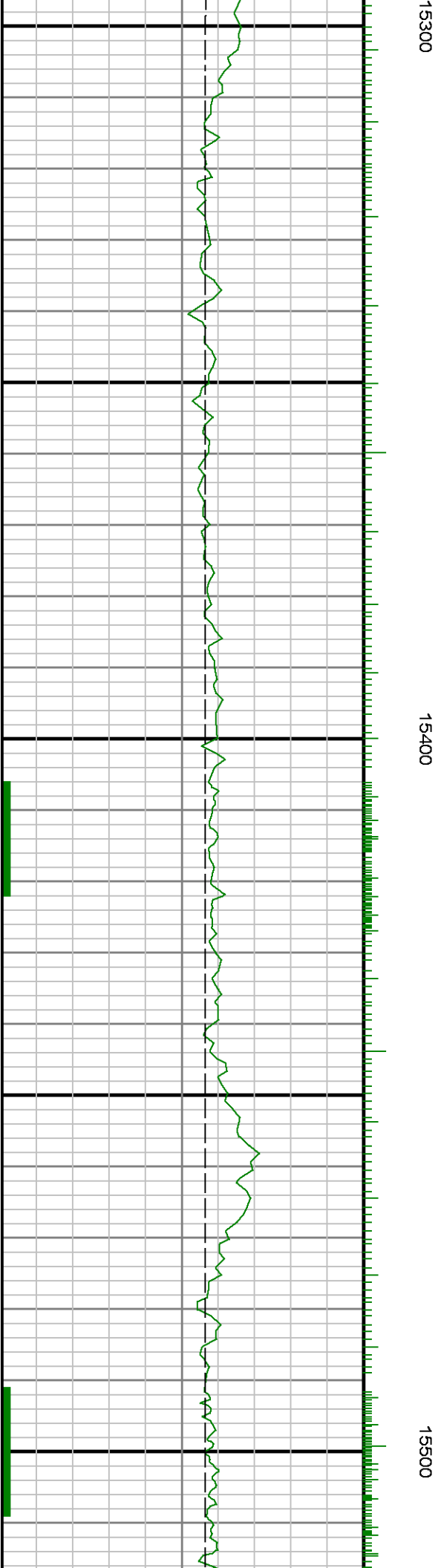
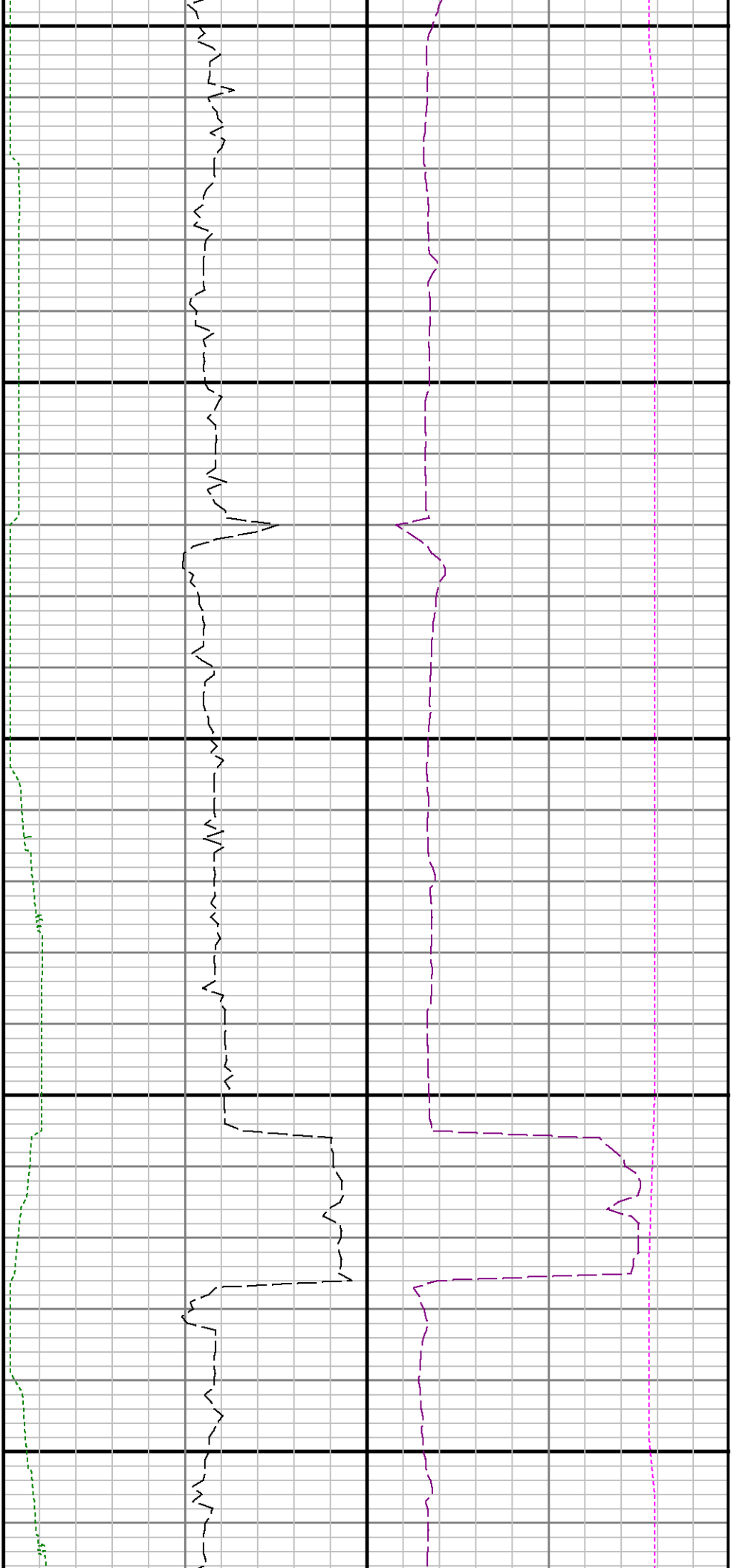


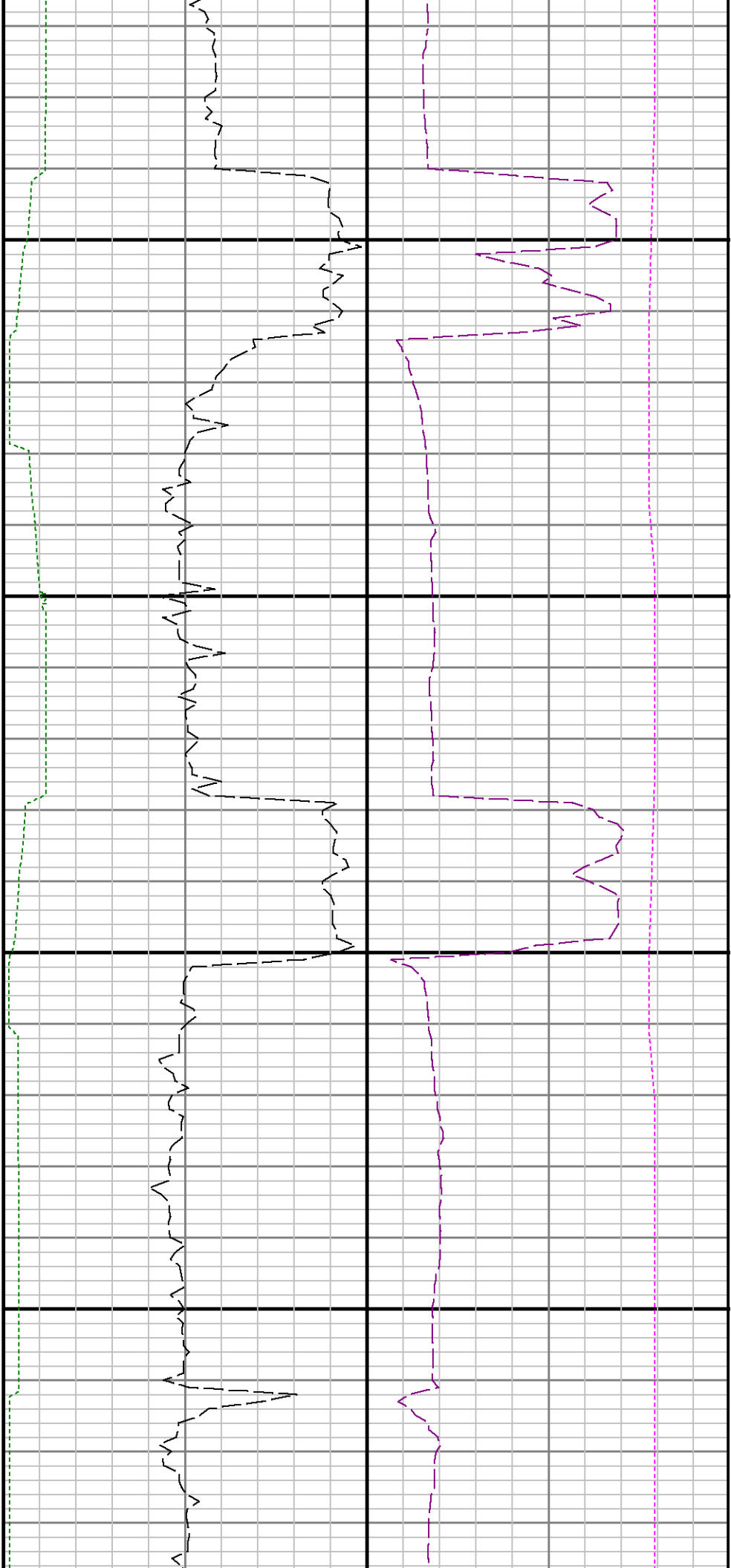


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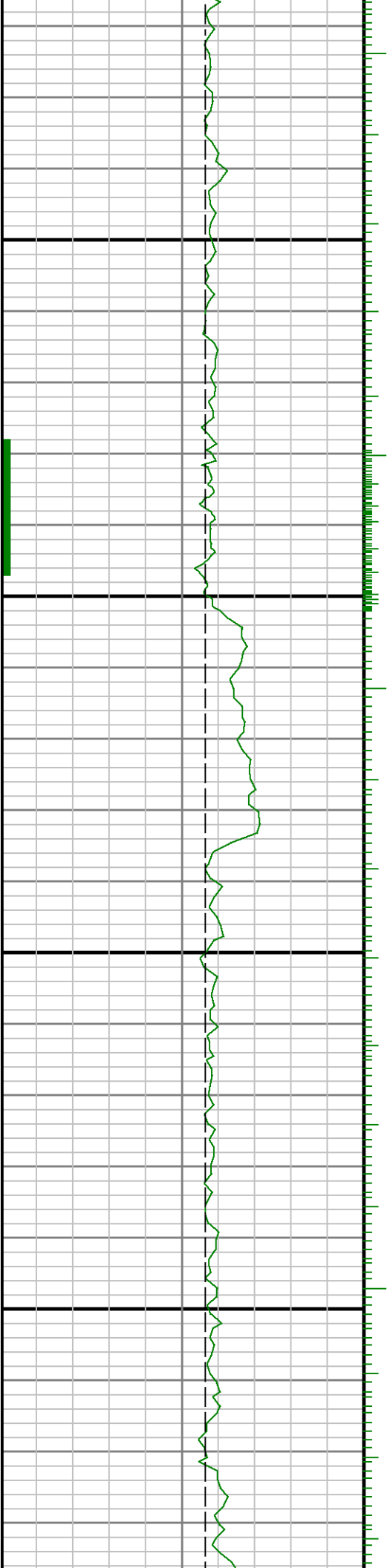


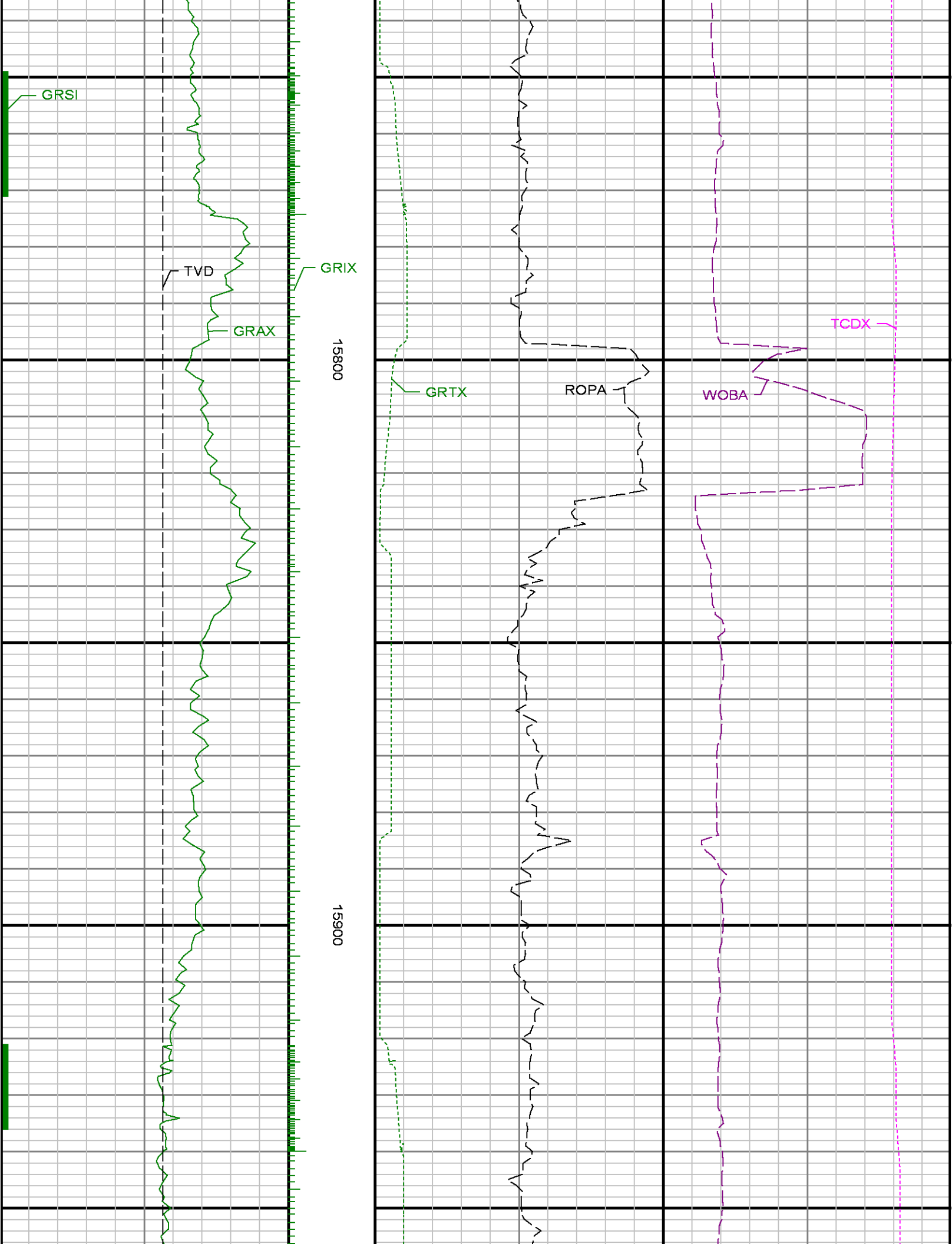




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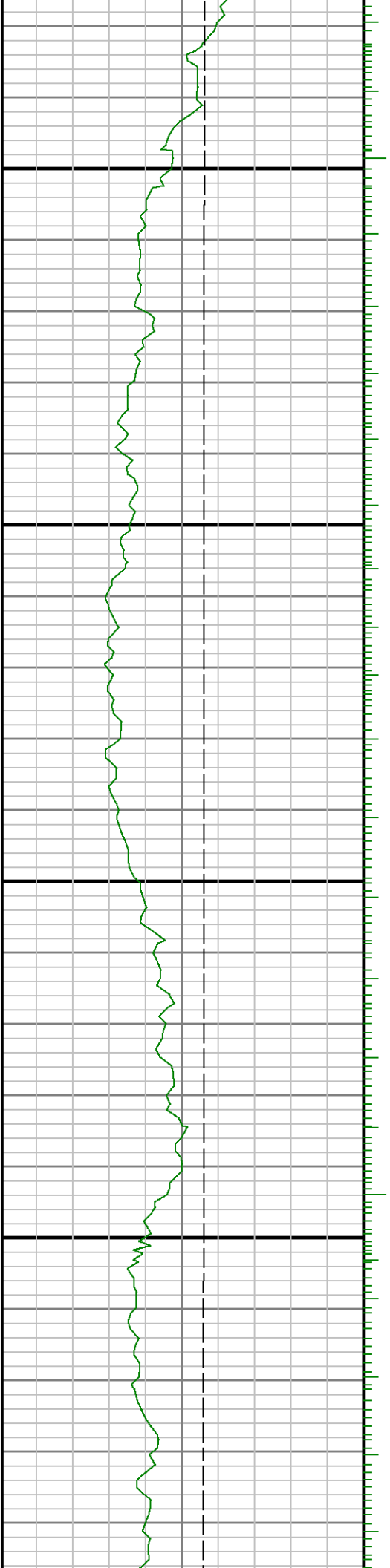
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GRSI



16200

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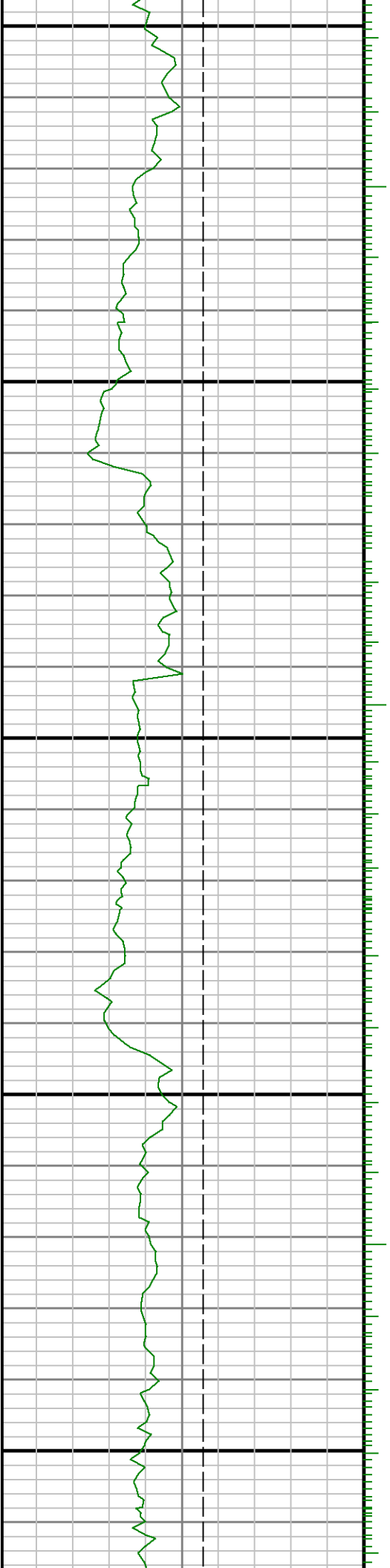


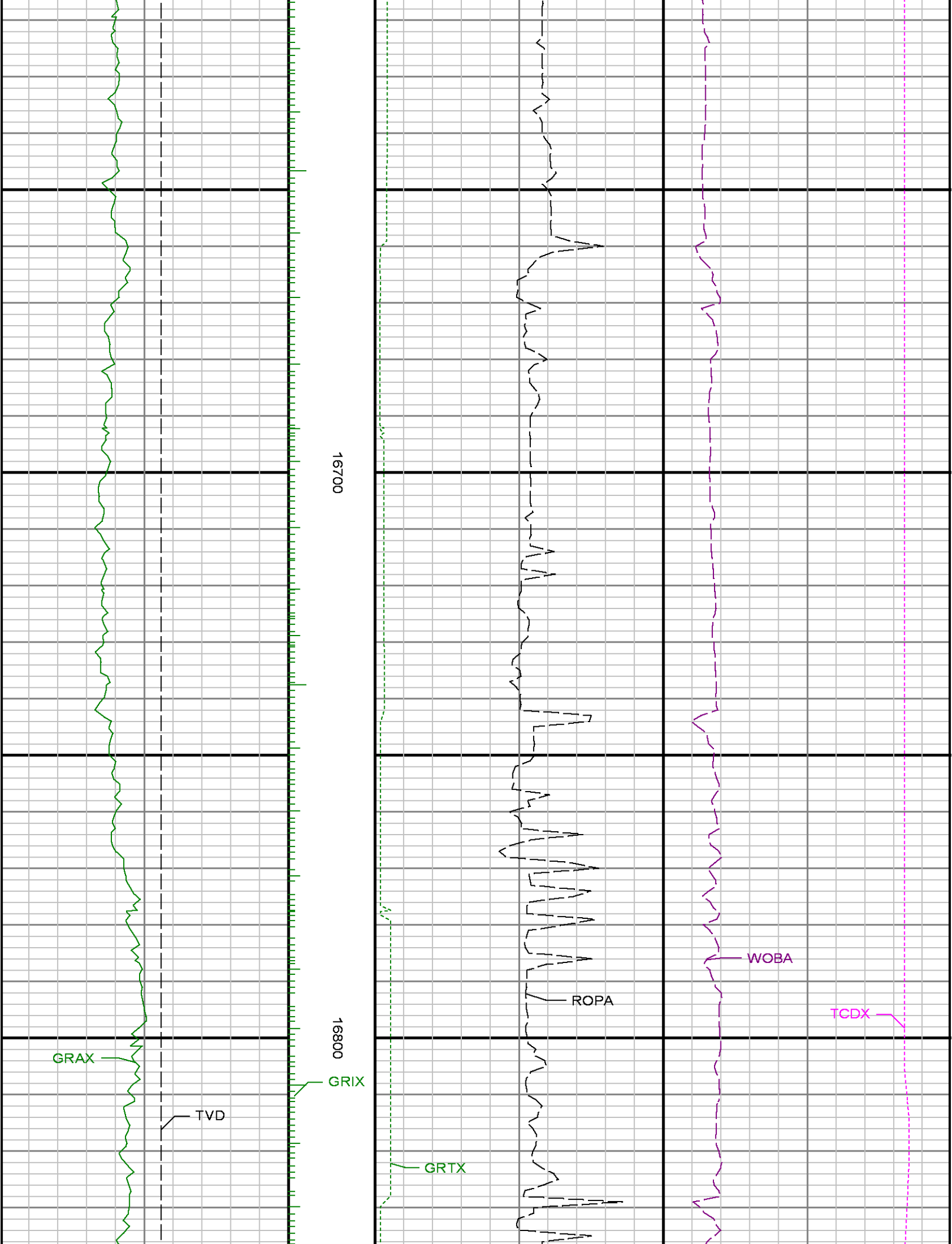


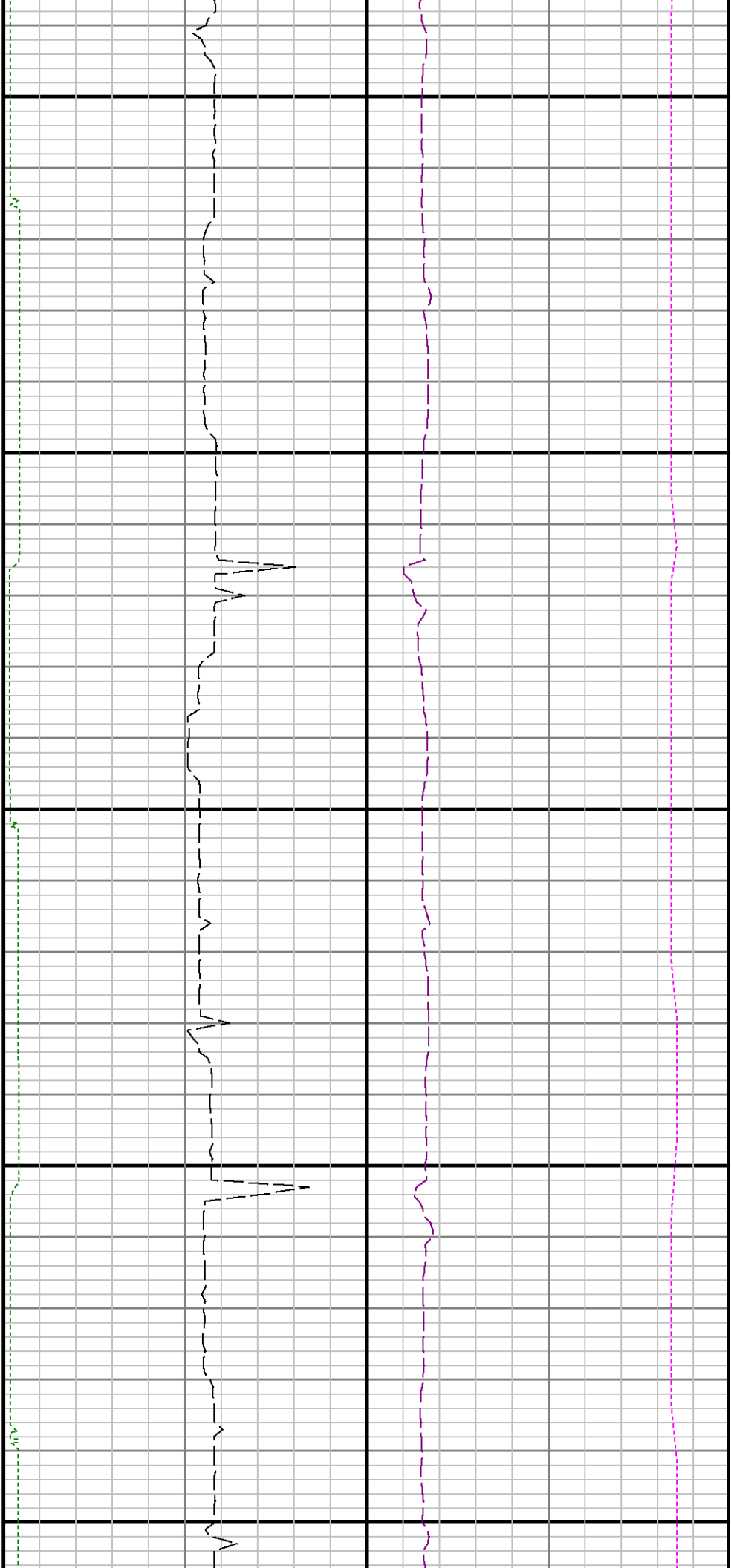
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16500

16600







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17000

