



Real Time Log

Natural Formation Evaluation
Gamma Ray

Scale:

Company: Anadarko

1:240

Well: BARCLAY 28C-11HZ

Measured Depth

Field: WELD COUNTY (KERR MCGEE)

Region: Continental US Country: United States

Status:

Final Print

Surface Location:

Latitude: 40° 7' 56.658" N

Longitude: 104° 51' 22.792" W

Other Services:

Directional
VSS

API Number:
05123390580000

Section14

TWN: 2N

Range67E

Permanent Datum (P.D.): Mean Sea Level

Elevation: 4948.00 ft.

Elevations:

Log Measured From:

Rig Floor

4964.00 ft.

Above P.D.

KB:

DF:

GL:

N/A

Depth Reference:

Driller's Depth

GL:

4648.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 6950.0 ft. Date From: 30/Mar/15

Dip Angle: 66.90°

Azi Reference North: True

Bottom: 17290.0 ft. Date To: 06/Apr/15

Total

Mag to Reference

Spud Date: 28/Mar/15 Field Strength: 52707.0 nT North Correction: 8.55°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
8.750 in.	1105.0 ft.	7911.0 ft.	9.625 in.	N/A	Surface	1099.0 ft.
6.125 in.	7911.0 ft.	17339.0 ft.	7.000 in.	26.00 lb/ft	Surface	7901.0 ft.

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based Mud	Surface	17339.0 ft.	8.750 in.	6802.0 ft.	0.7° / 9.3°	87.1° / 3.7°
			6.125 in.	9428.0 ft.	87.1° / 3.7°	91.5° / 356.5°
					/	/
					/	/
					/	/
					/	/
					/	/
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage 2.20U4 Rtg / Contractor: XTREME 23 / ANADARKO

PATS 6.4.1.34 Job No: 7086469 / D&E

District / Unit: RMD

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Log Run Summary

LWD	BHA	Bit	Bit	Bit	Bit	Assembly	Logged Interval		Bit Depth Interval		Date / Time				Circ.
Run	Run	Run	Size	Type	Gauge	Type	Top	Bottom	From	To	Start		End		Time
No.	No.	No.	(in.)		(in.)		(ft.)	(ft.)	(ft.)	(ft.)					(hrs.)
1	1	1	8.750	PDC	3.000	Steerable	6950.0	7869.3	6992.0	7913.0	30/Mar/2015 11:29	01/Apr/2015 10:06			32.4
2	2	2	6.125	PDC	3.000	Steerable	7869.3	17290.0	7913.0	17339.0	02/Apr/2015 14:42	06/Apr/2015 04:47			80

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Andrew Clancy	30/March/2015	07/April/2015	Sumanth Belawadi	30/March/2015	07/April/2015			

Mud Properties Record

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+ (%)
30/March/2015 06:00	1	6133.0	Water Based Mud	9.1	32	8.0	N/A	1.0/93.3	Halliburton	5700	N/A
04/April/2015 06:00	2	16237.0	Water Based Mud	9.5	45	8.0	N/A	2.5/89.5	Halliburton	5700	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

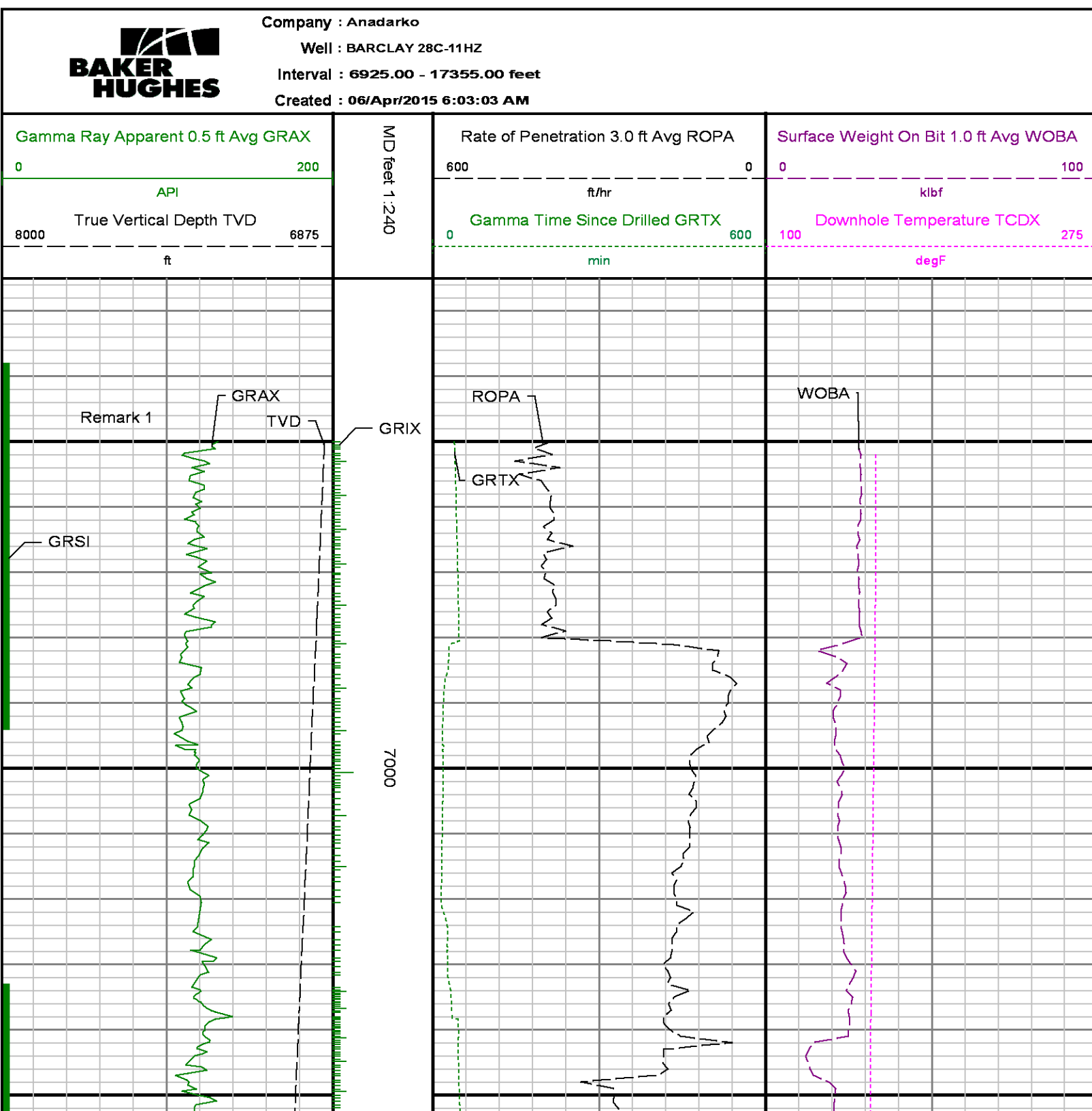
Equipment and Service Data						
LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	10427973	Directional	46.83	6.750	3.250
1	SRIG	11801241	Gamma	43.45	6.750	3.250
2	DIR	12479870	Directional	52.14	4.750	2.688
2	SRIG	12380940	Gamma	48.72	4.750	2.688

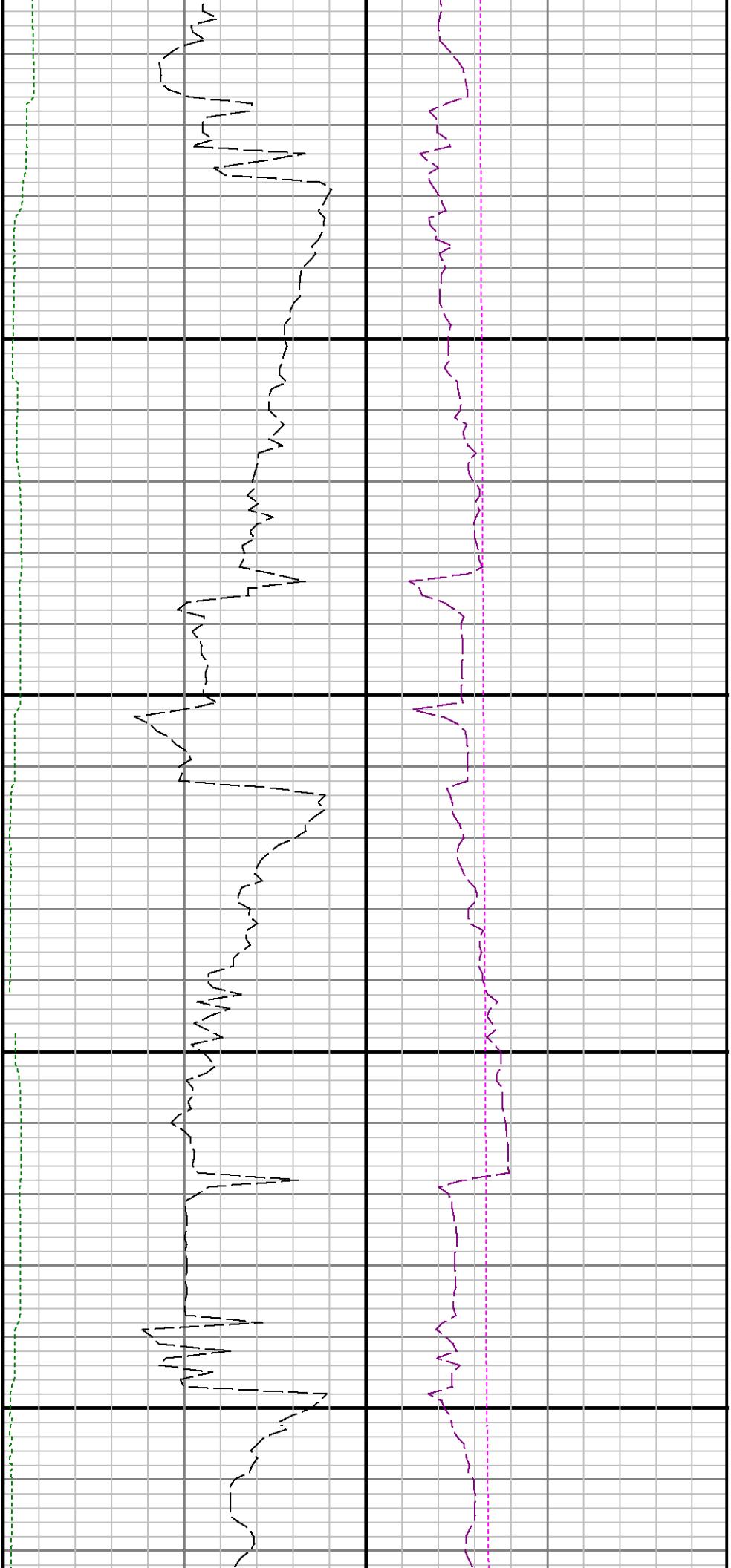
Service and Tool Mnemonics		
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

Comments
<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 1105 to 7911 feet MD (1105 to 7515.54 feet TVD).</p> <p>3.) Baker Hughes Runs 2 utilized a 4 3/4 inch NaviGamma (Directional and Gamma Ray) tool behind a 6 1/8 inch bit and steerable assembly from 7912 to 17339 feet MD (7515.54 to 7457.69 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

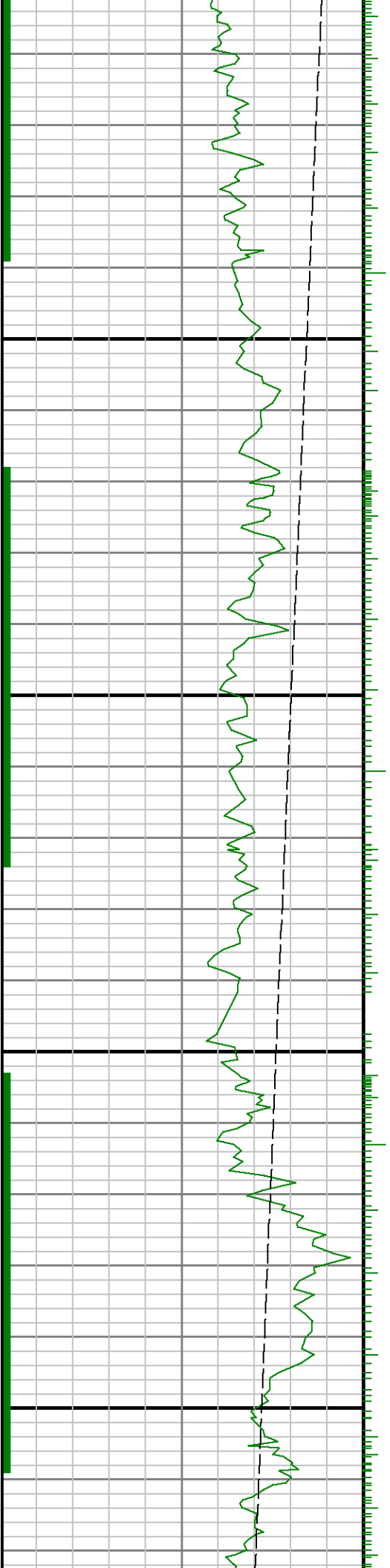
1	6950	8.750	1	Logging services began at 6950. No logging data prior to 6950 feet MD(6902.40 feet TVD) as per client request.
2	7300	8.750	1	The high GRAX readings appears to be from passing through the Sharon Springs to the Niobrara and is not an error in decoding the mud pulse signal on the LWD surface gear.
3	7875	8.750	1	The interval from 7869 to 7913feet MD (7514.48 to 7515.55 feet TVD) was logged up to 32 hours after being drilled due to casing operations.
4	17337	6.125	2	The interval from 17290 to 17339 feet MD (7459.05 to 7457.69 feet TVD) was not logged due to gamma sensor offset to bit at TD.

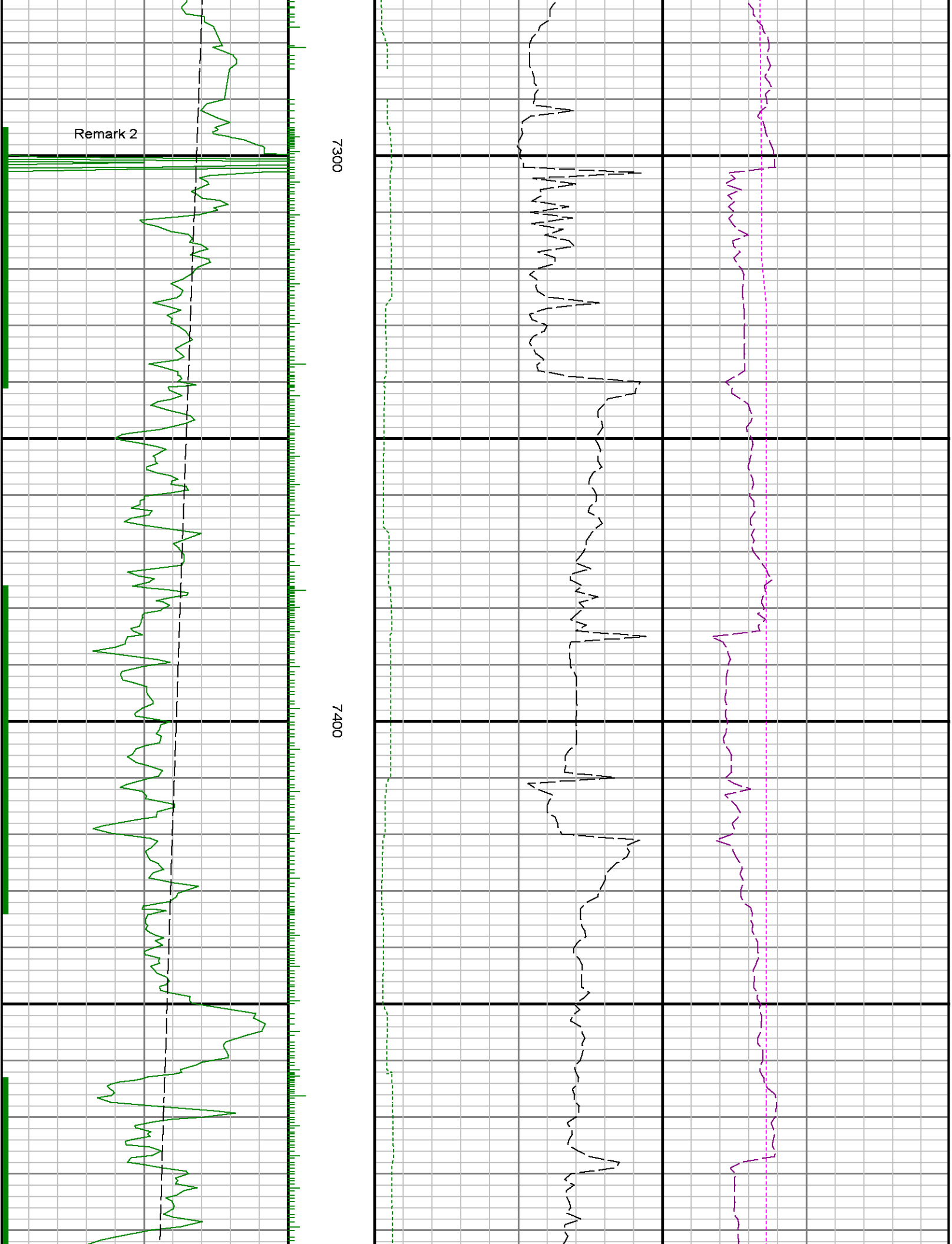


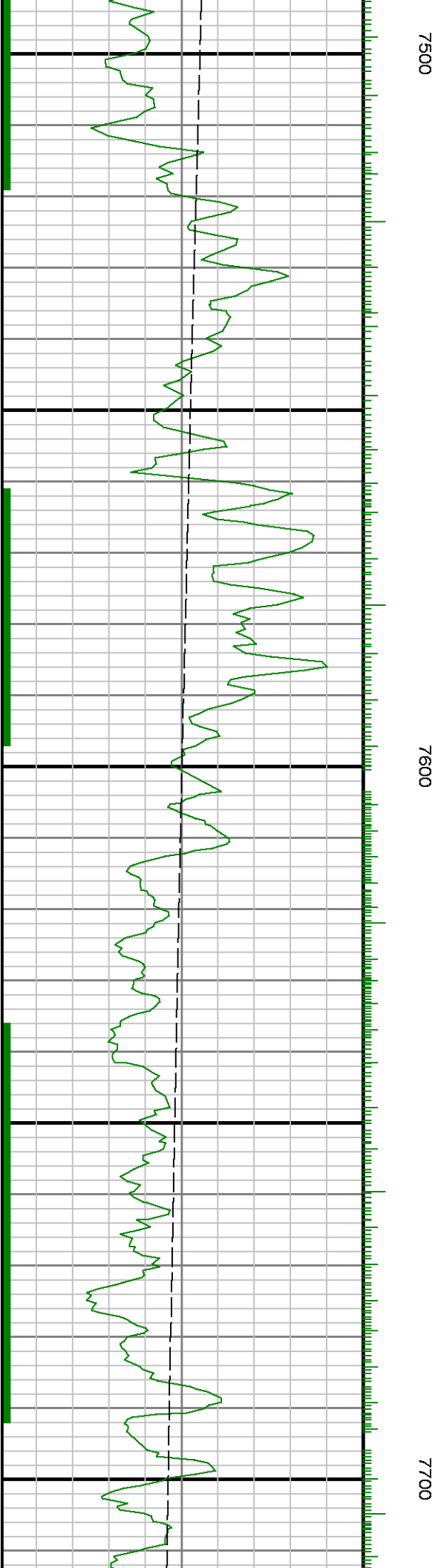
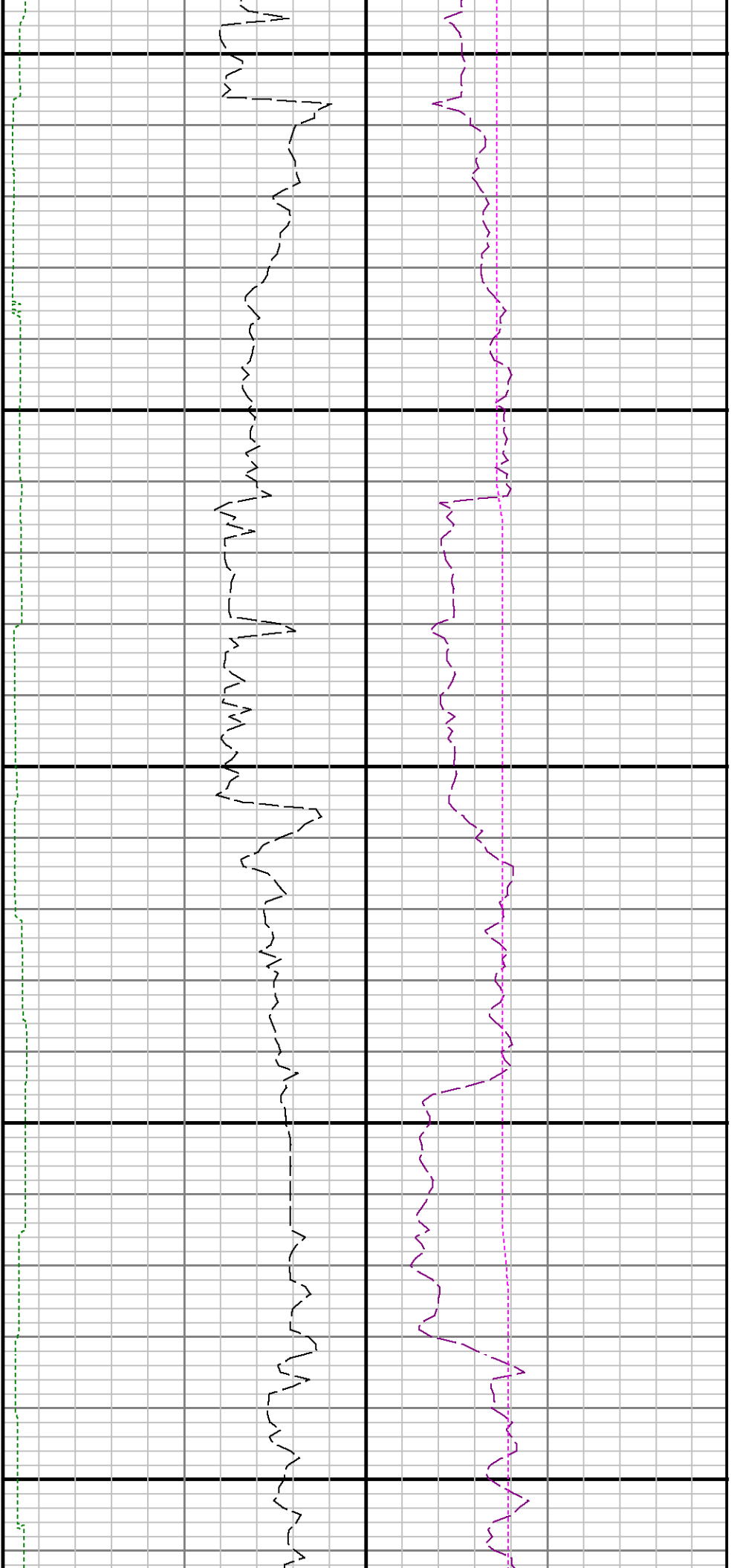


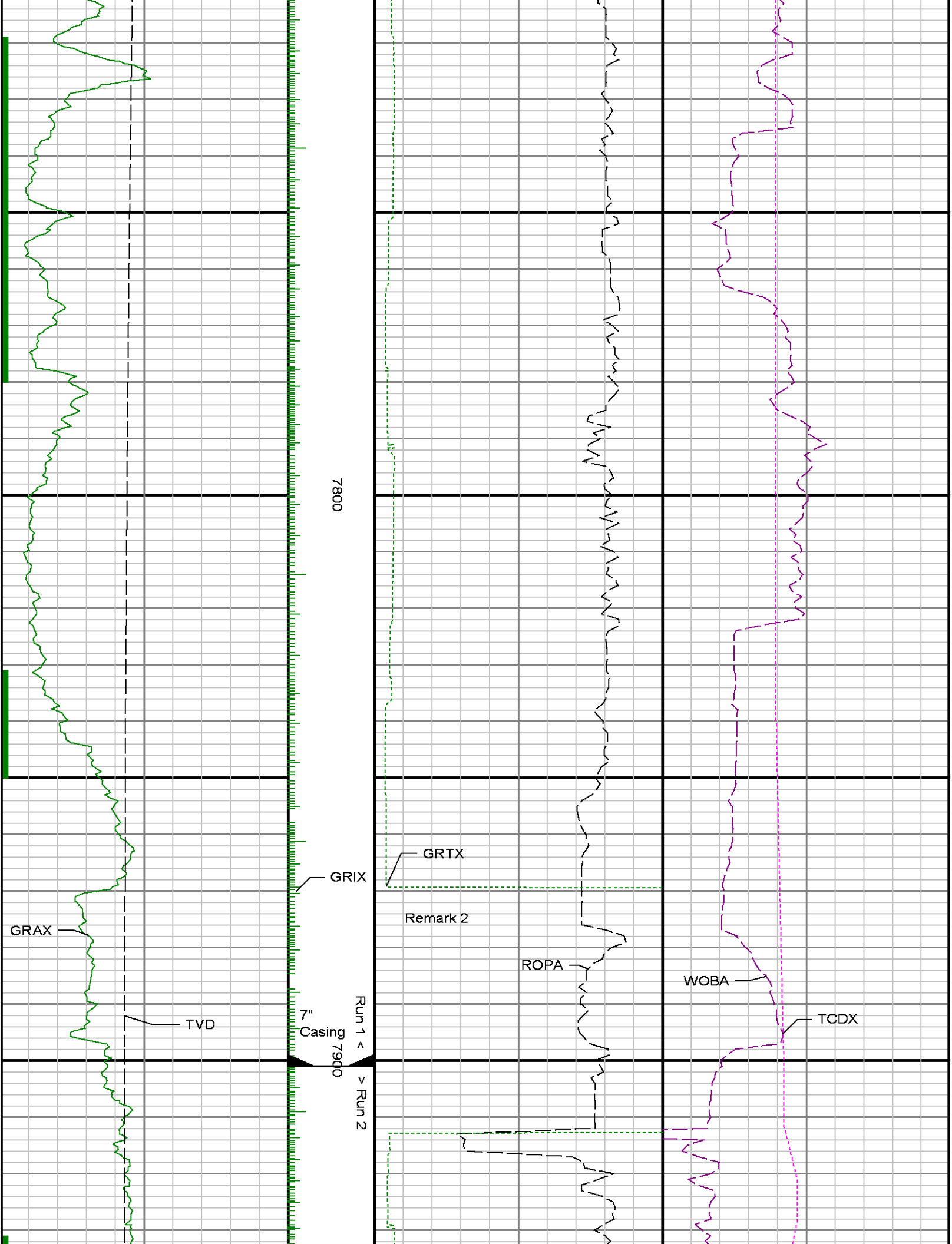
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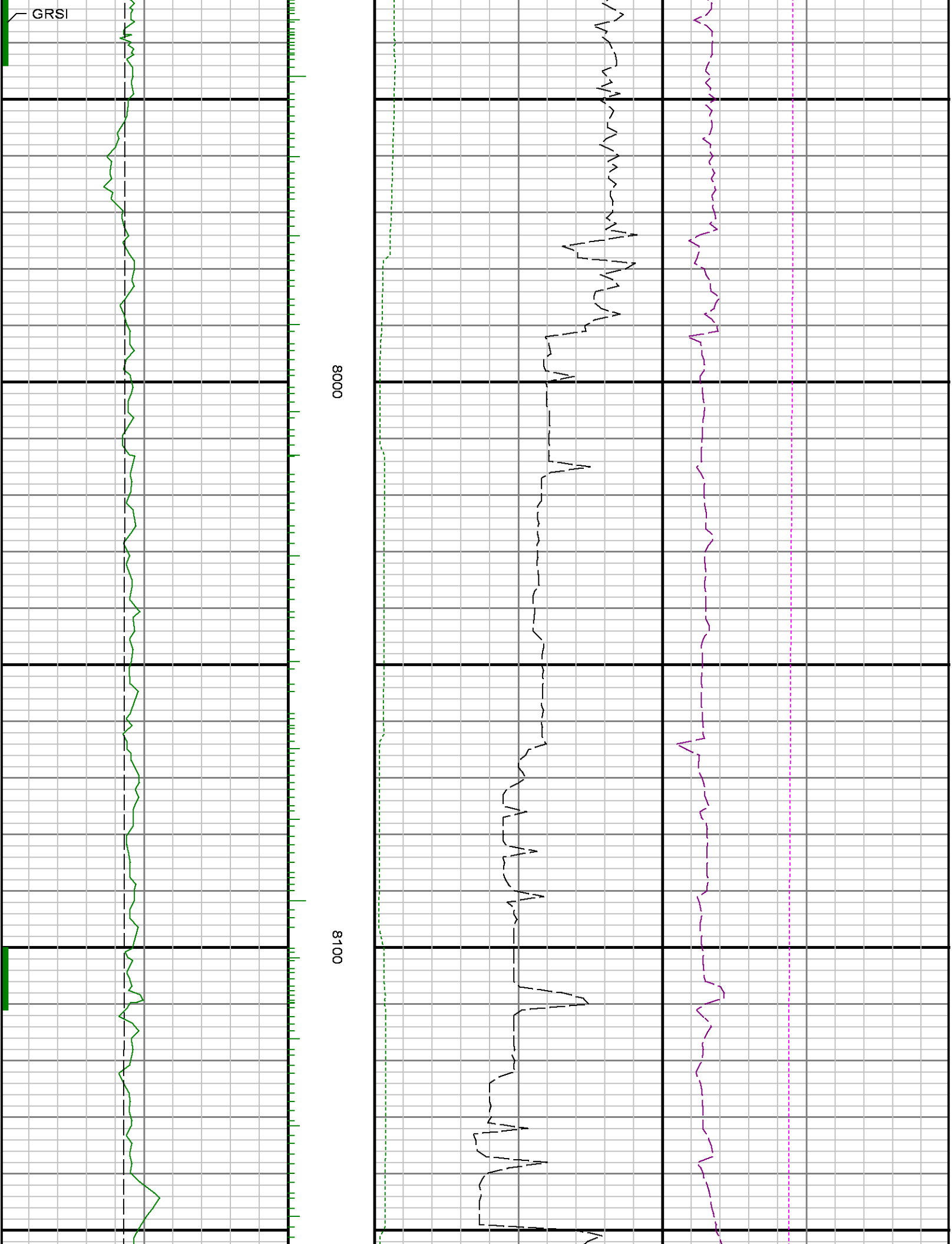
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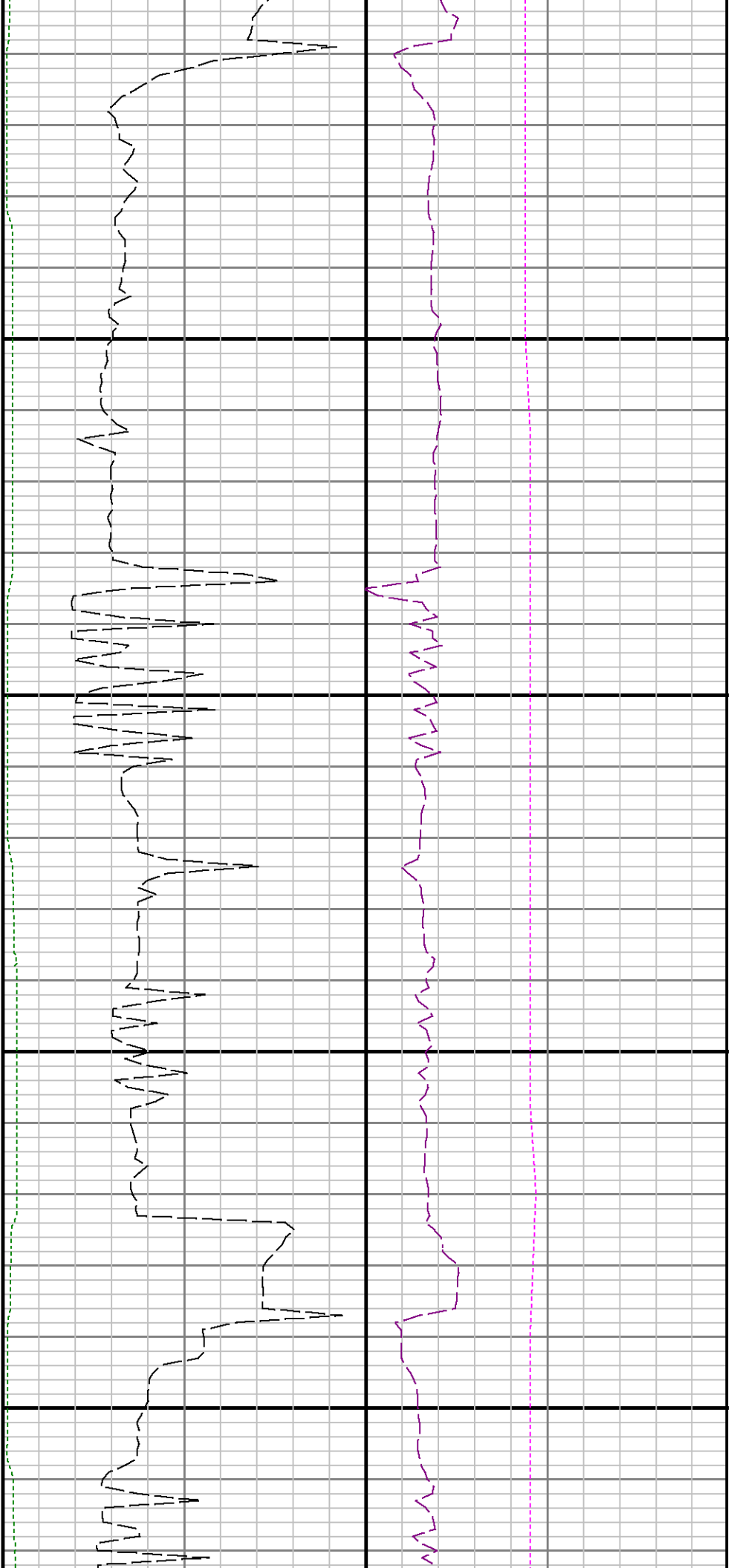






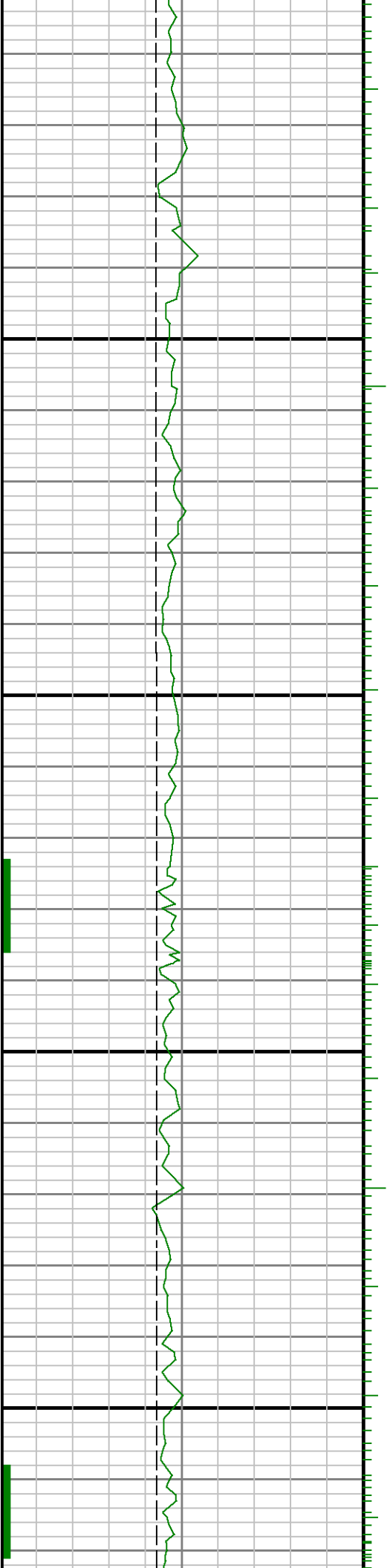






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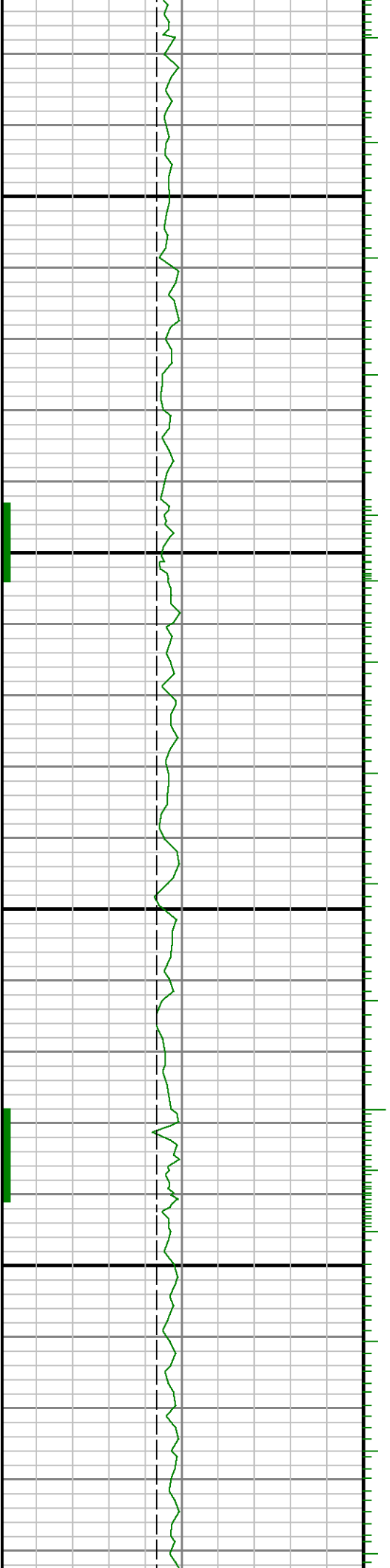
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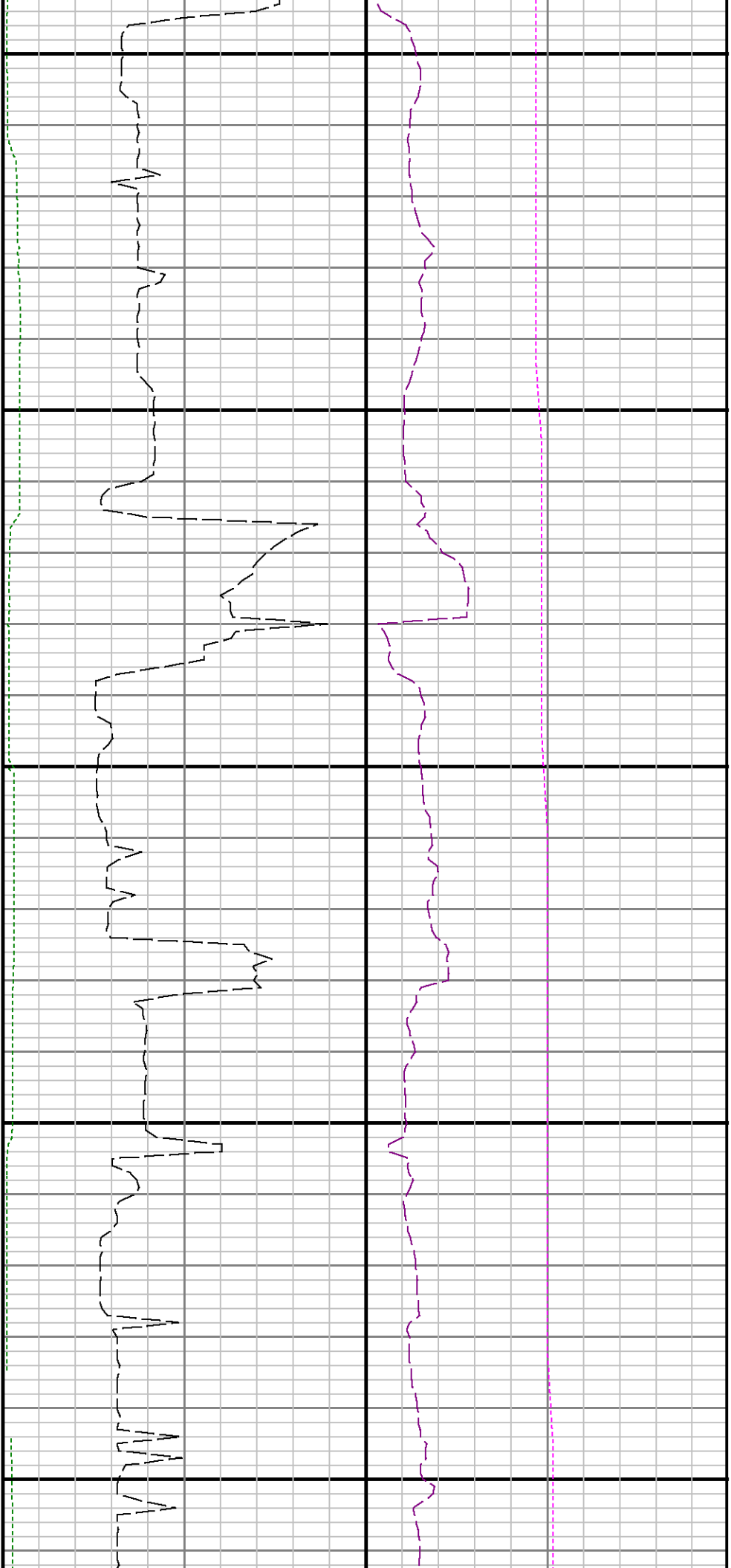




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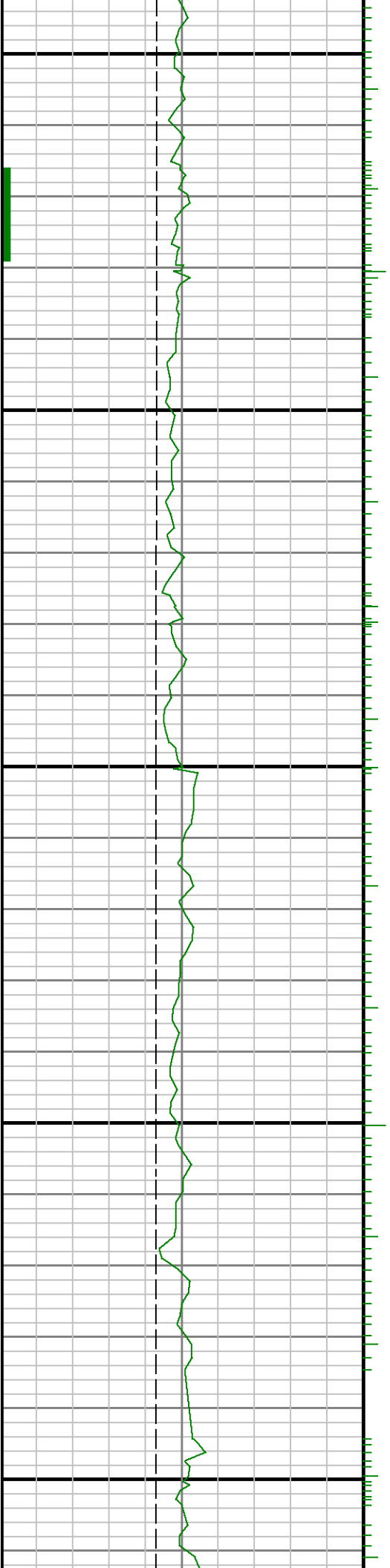


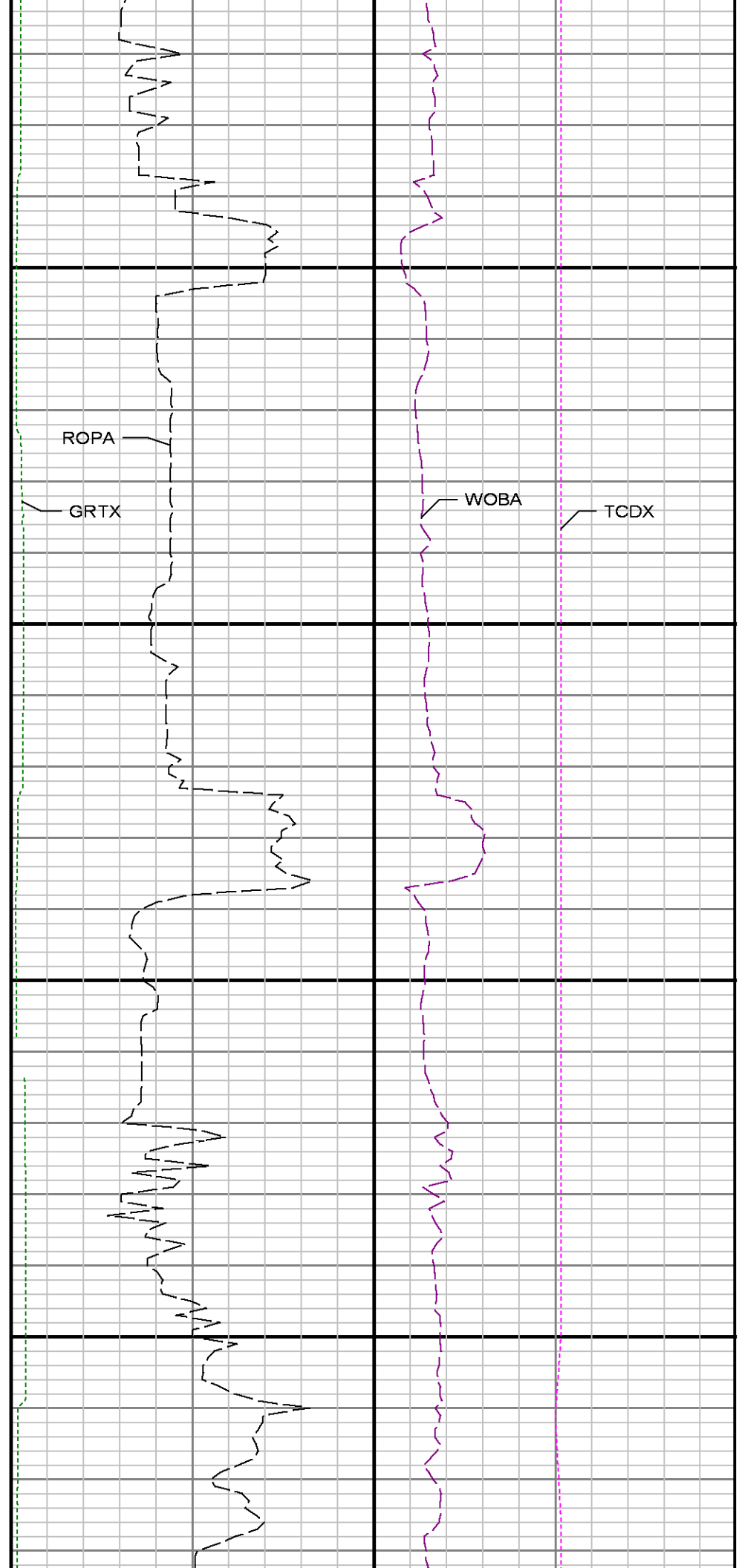
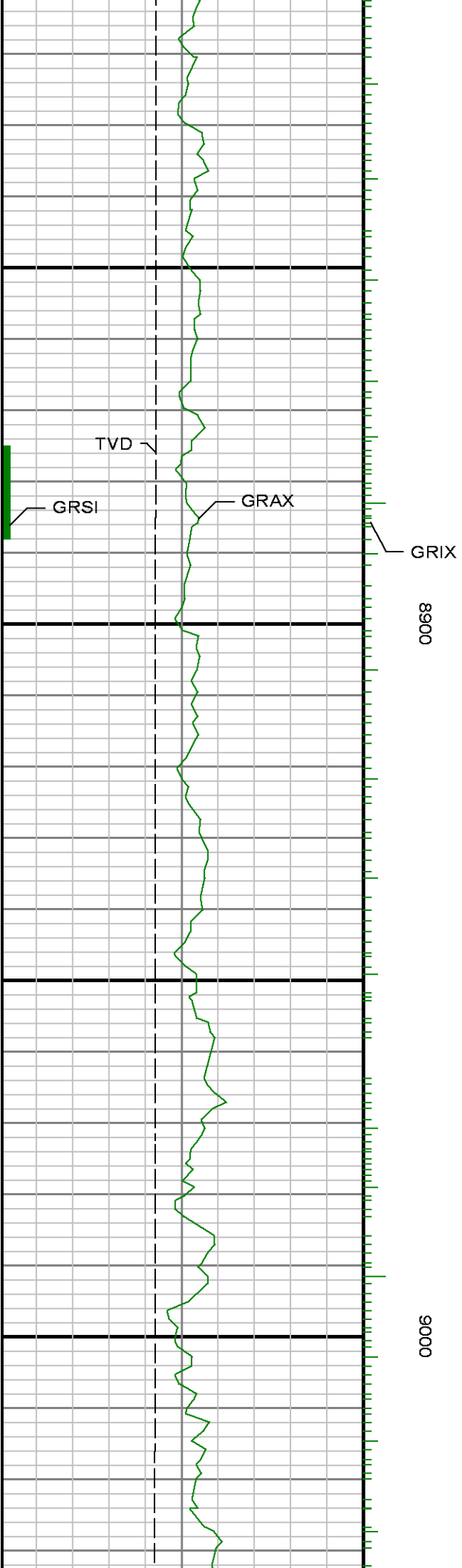


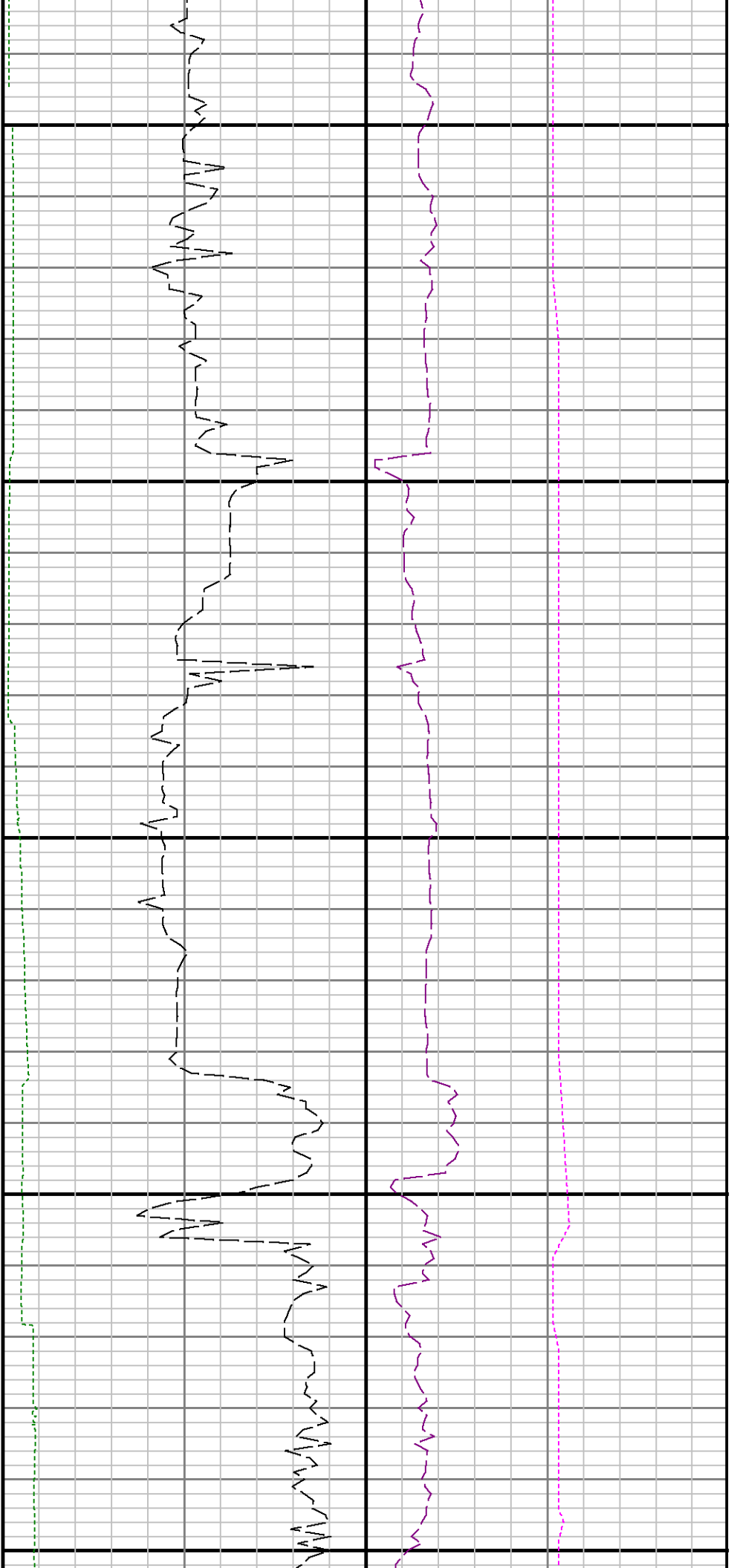
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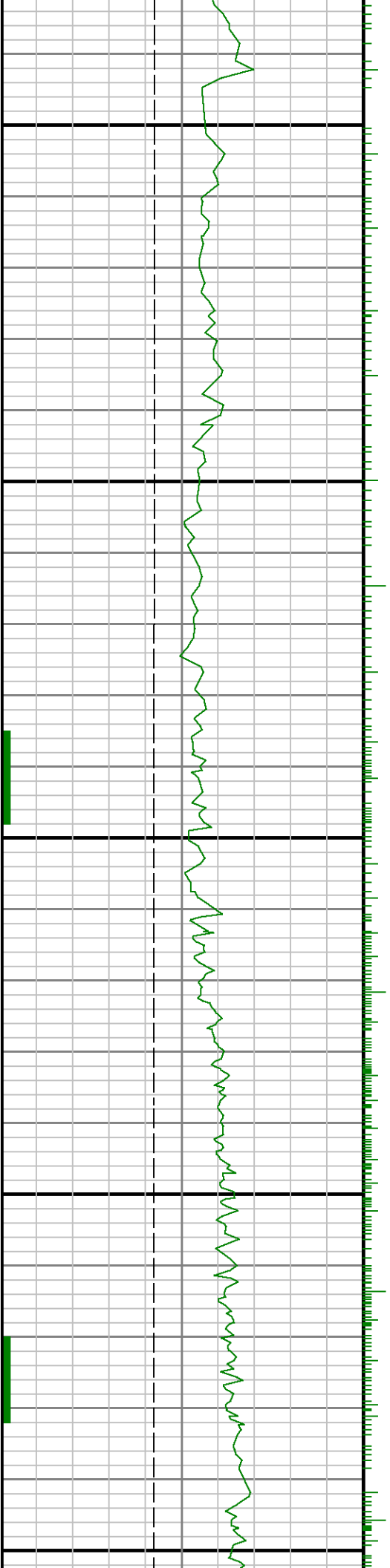


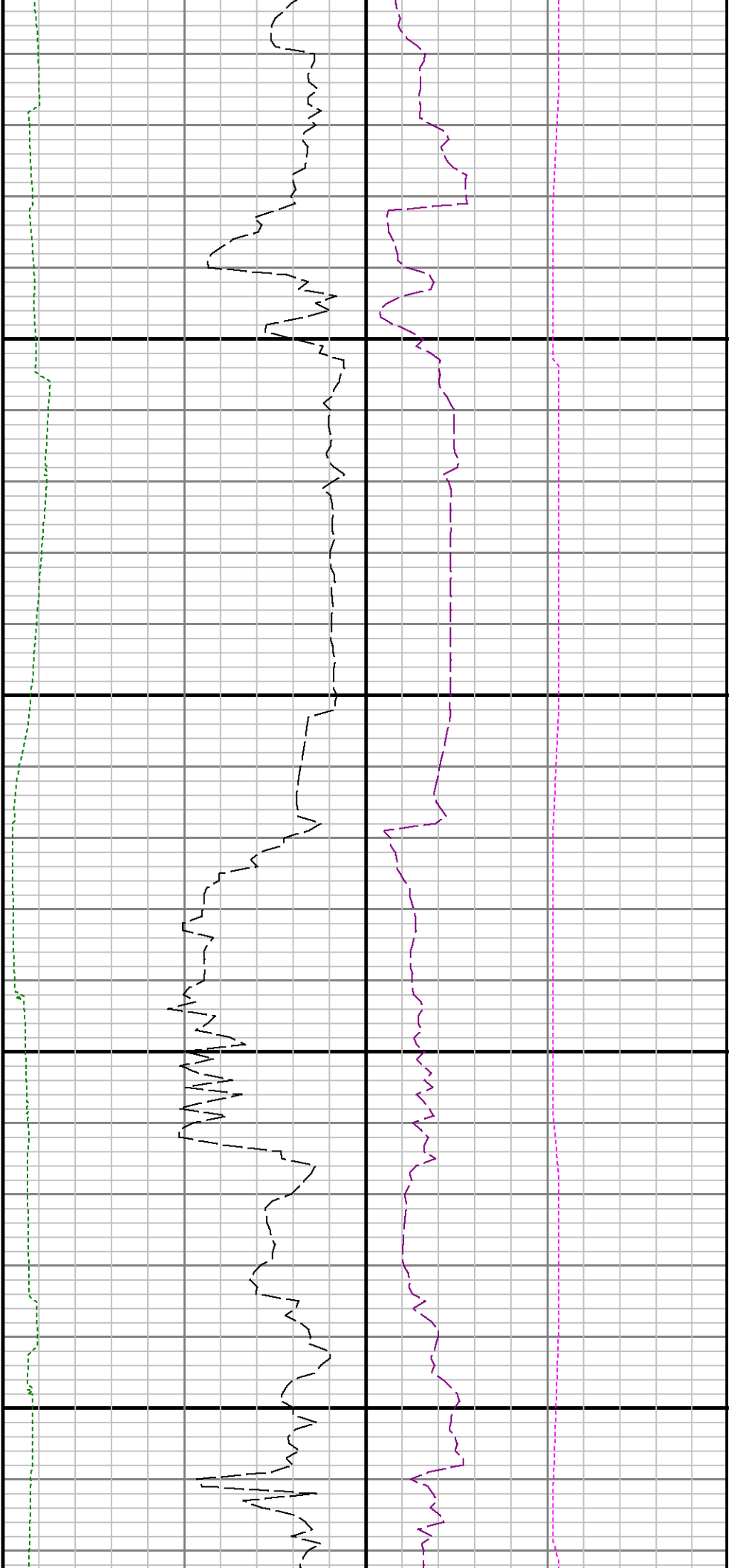




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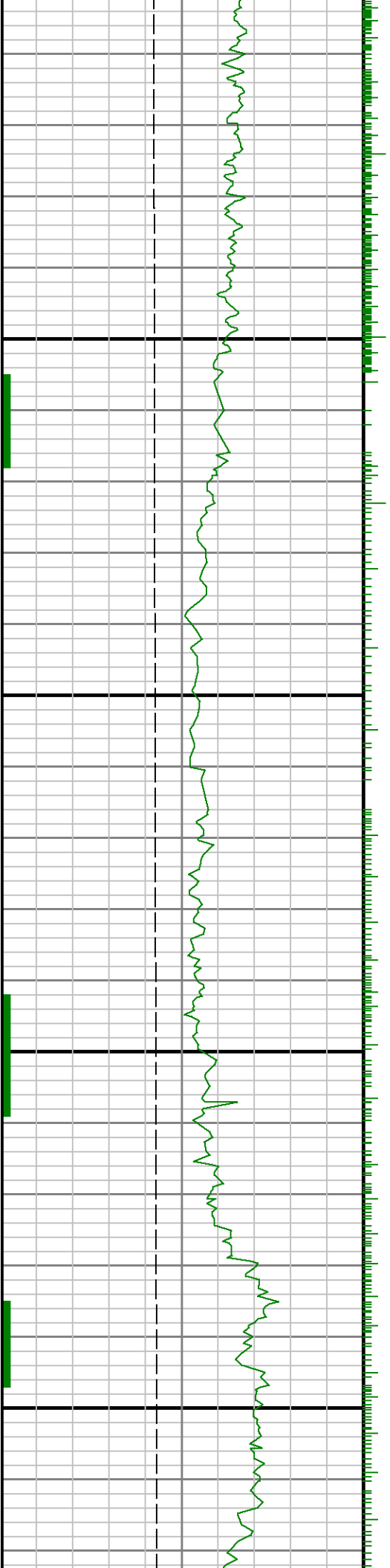
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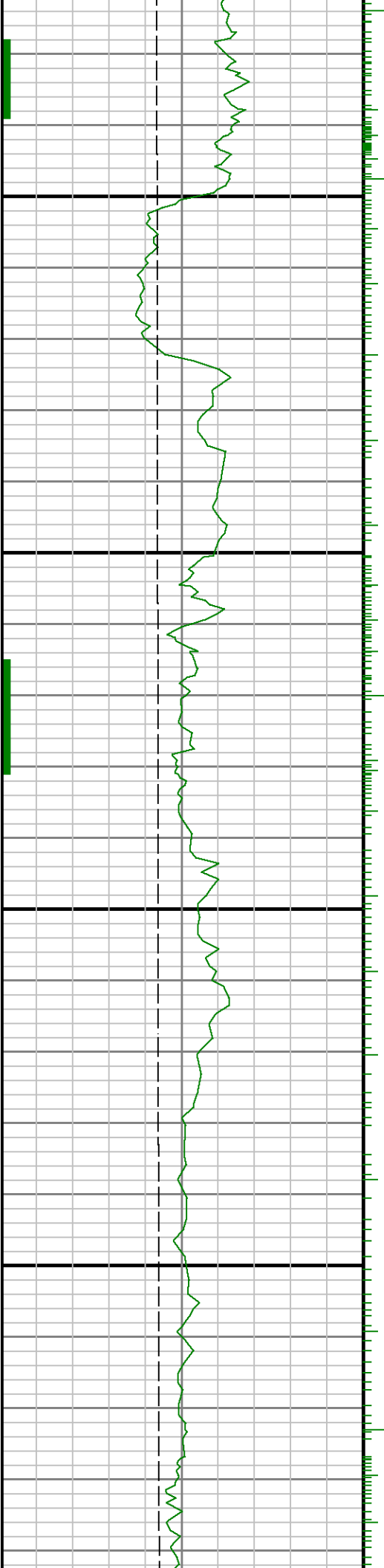




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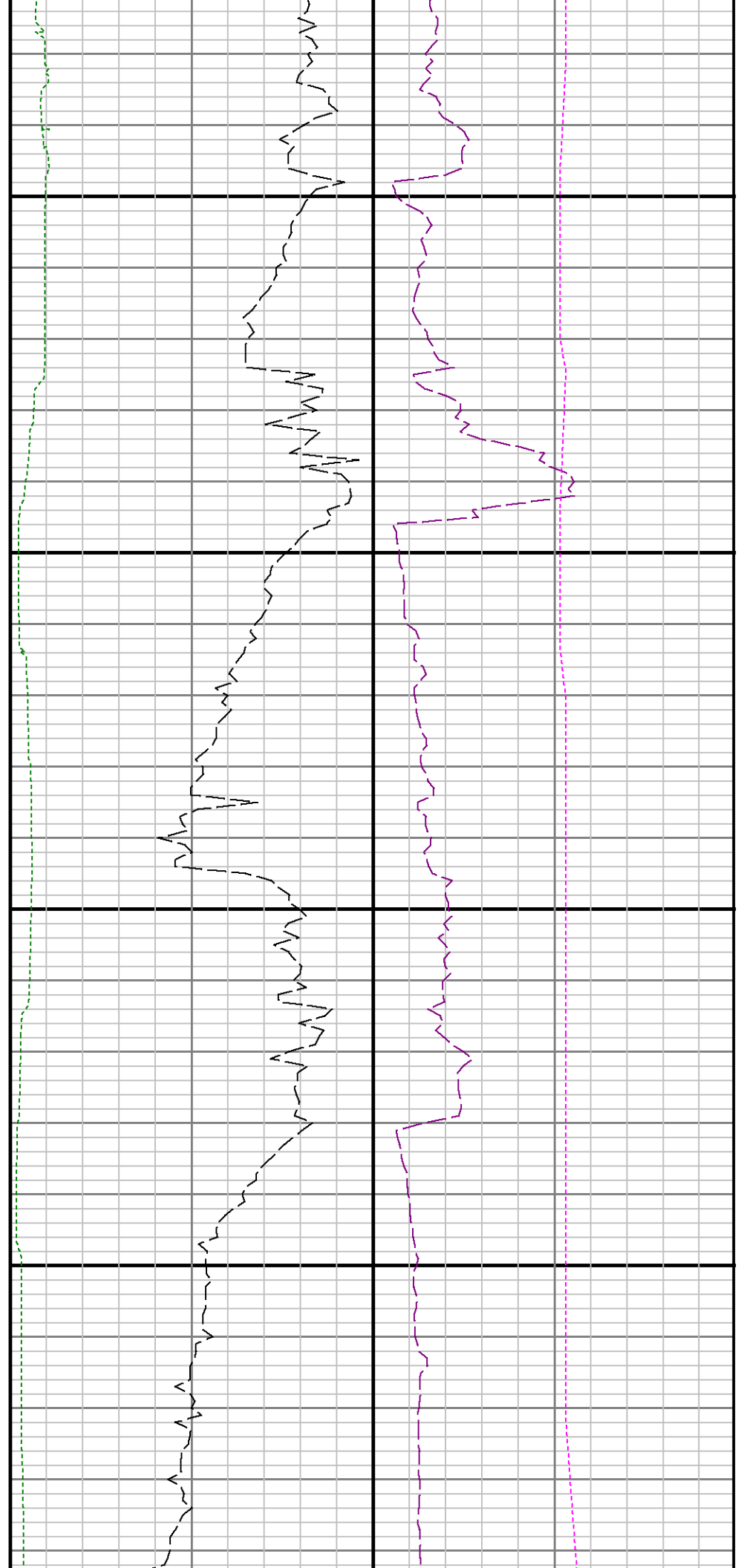
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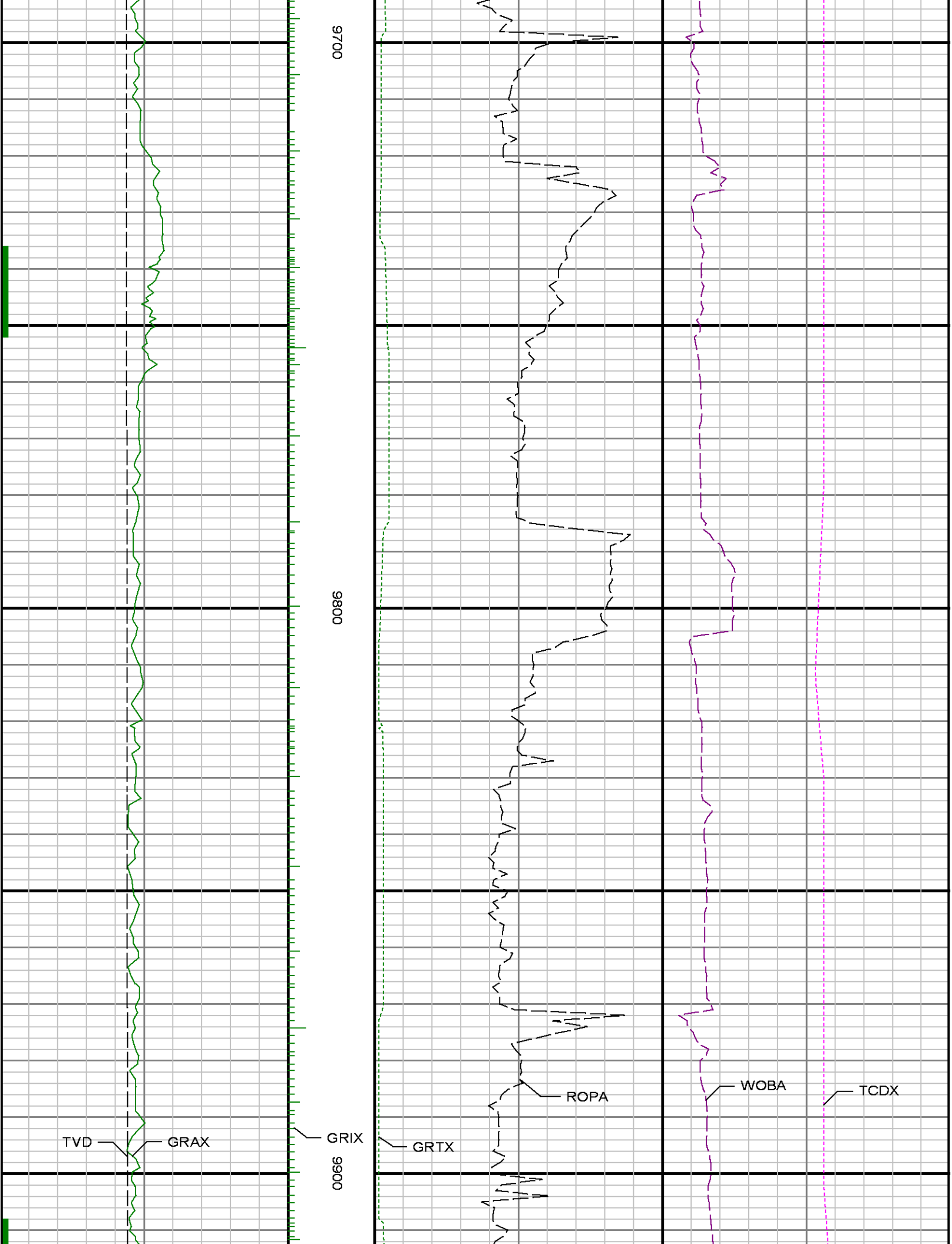


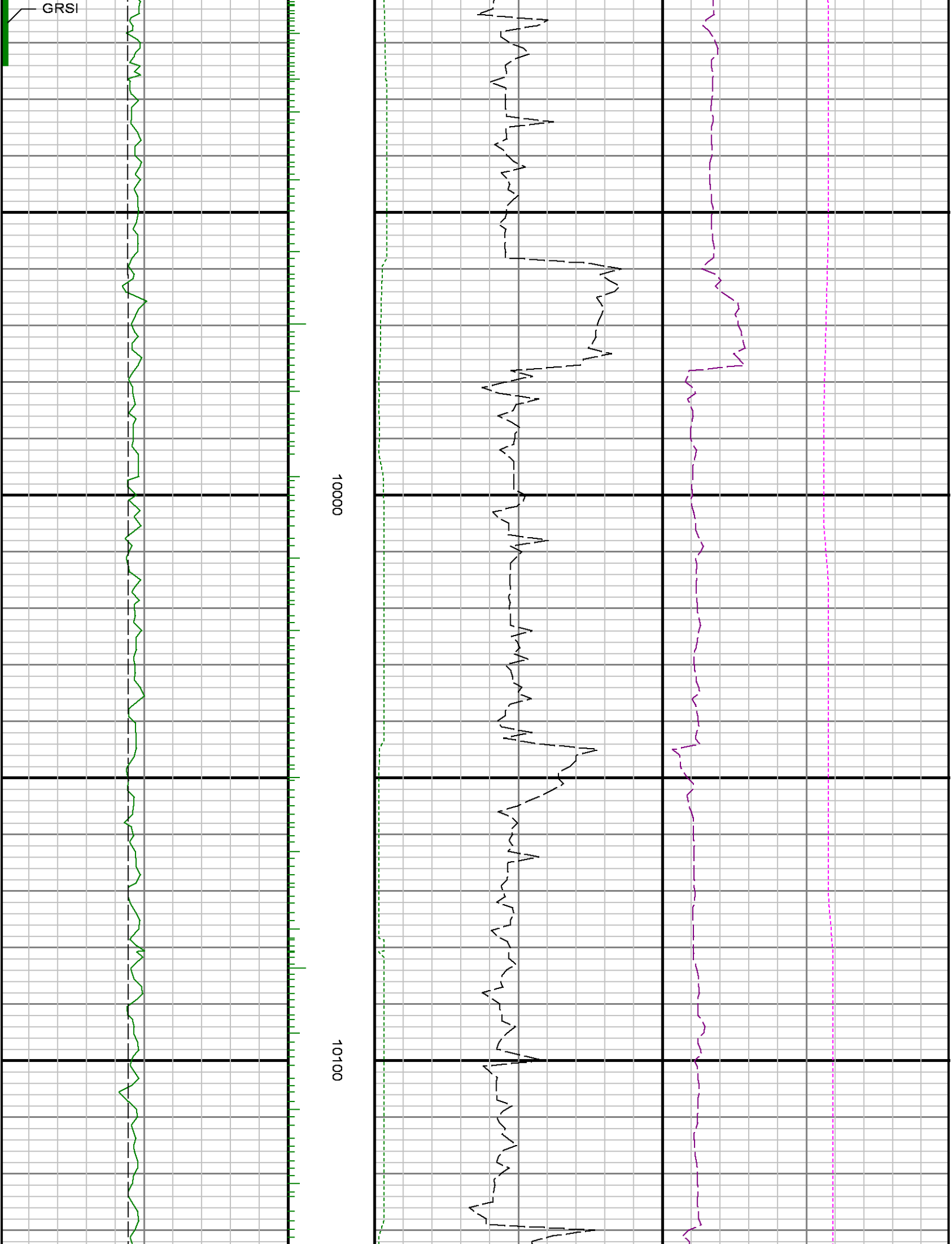


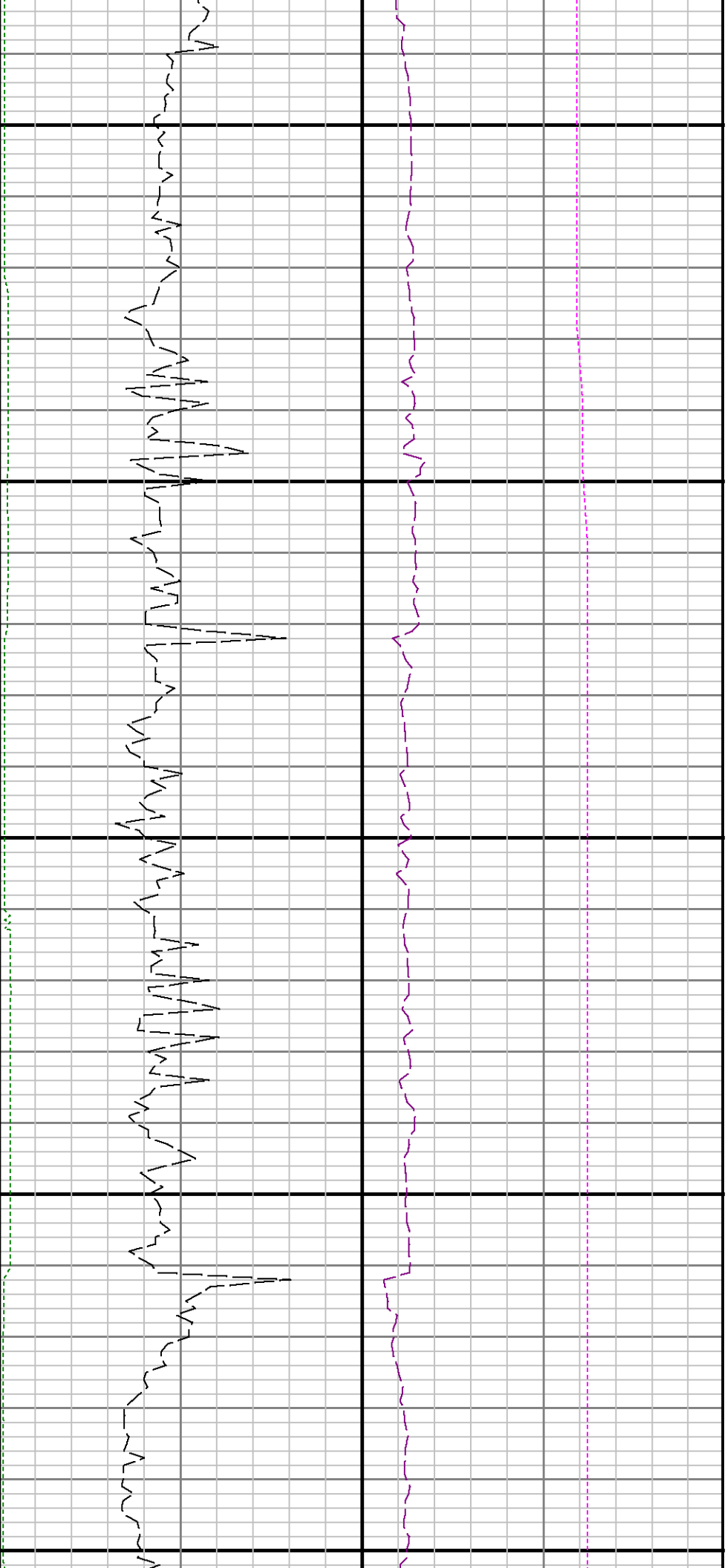
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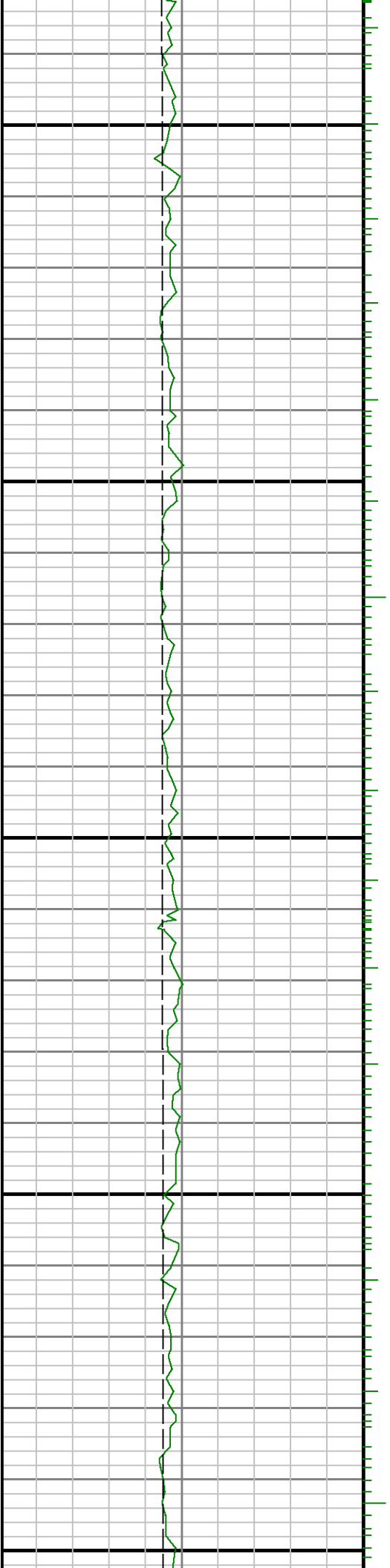


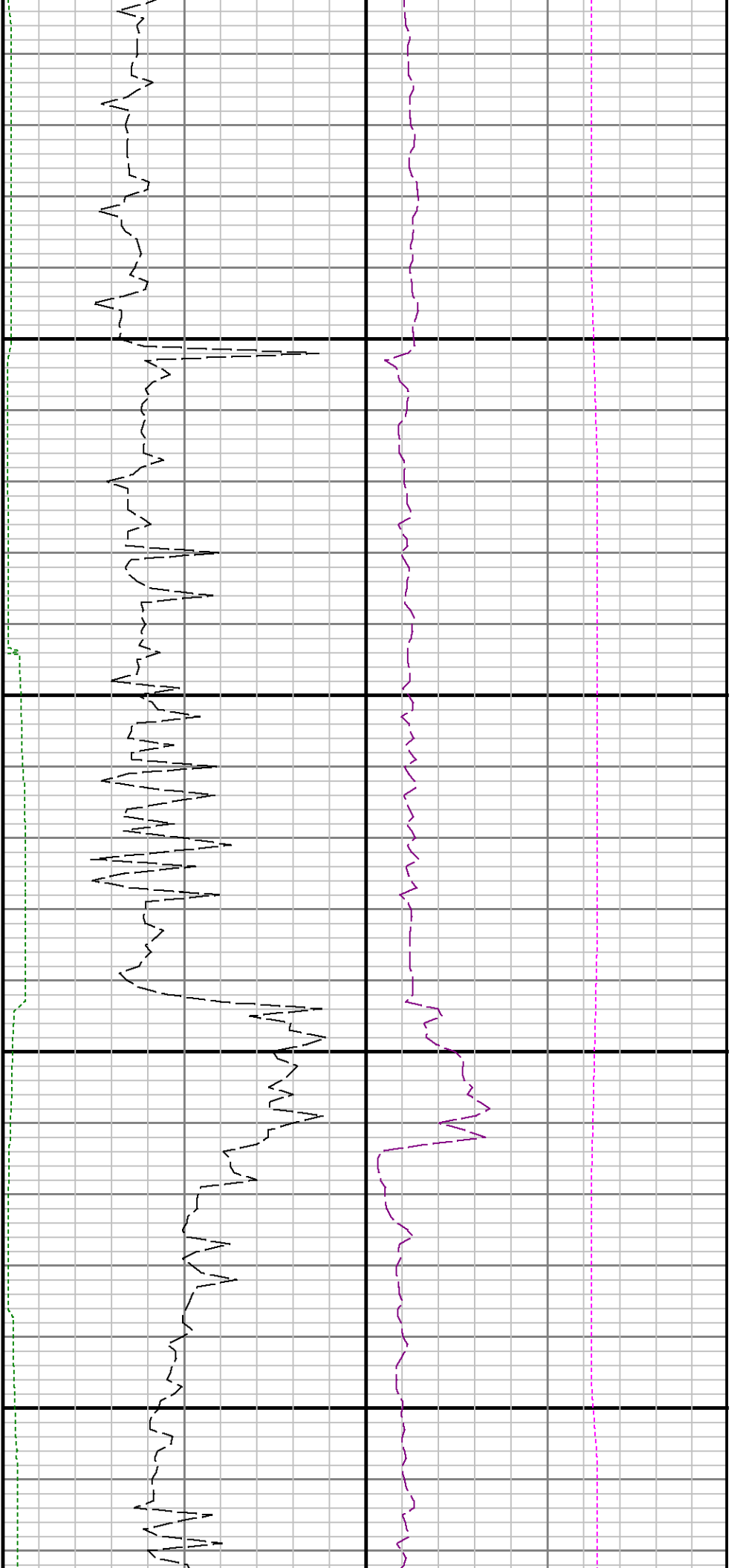




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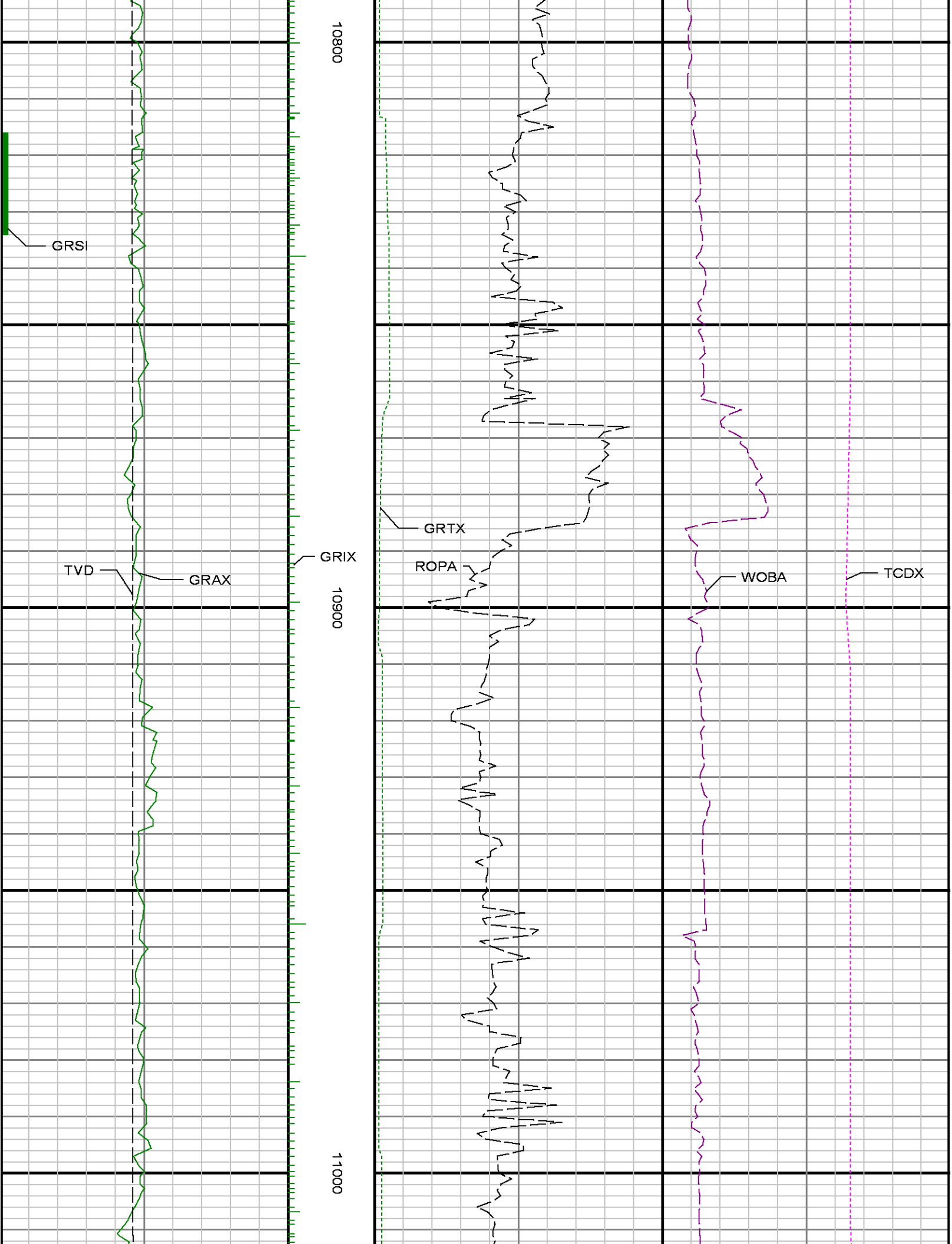
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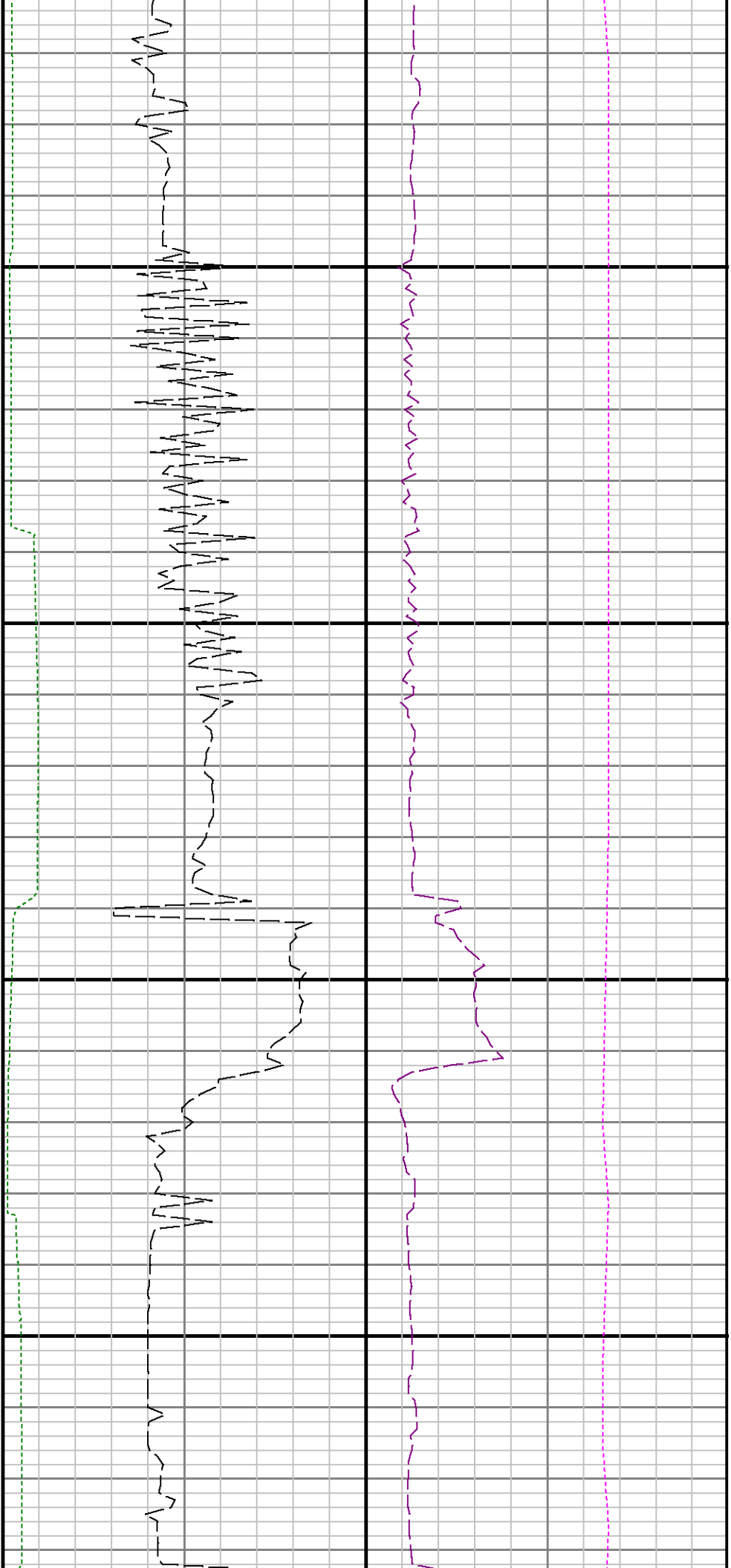




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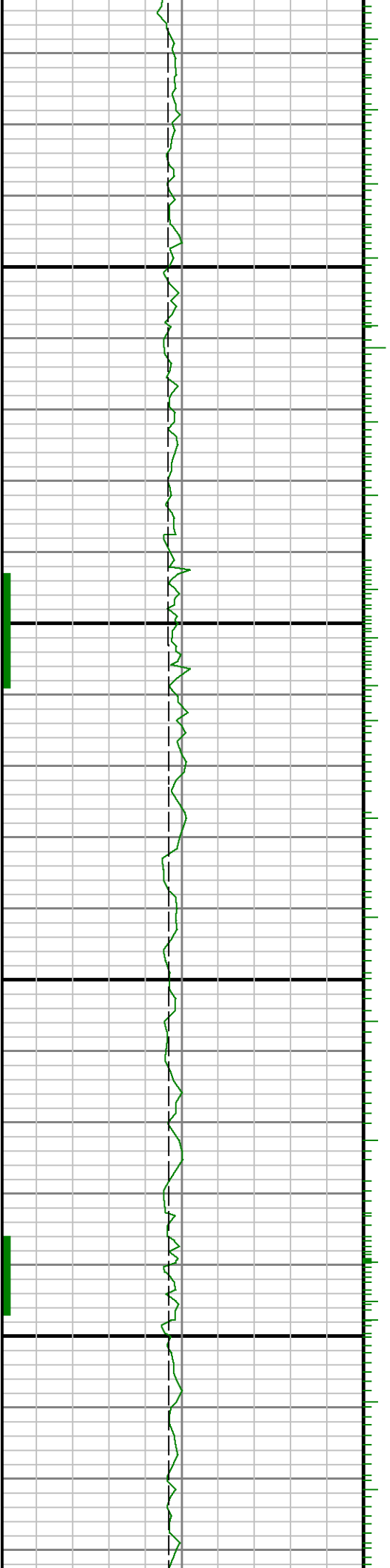
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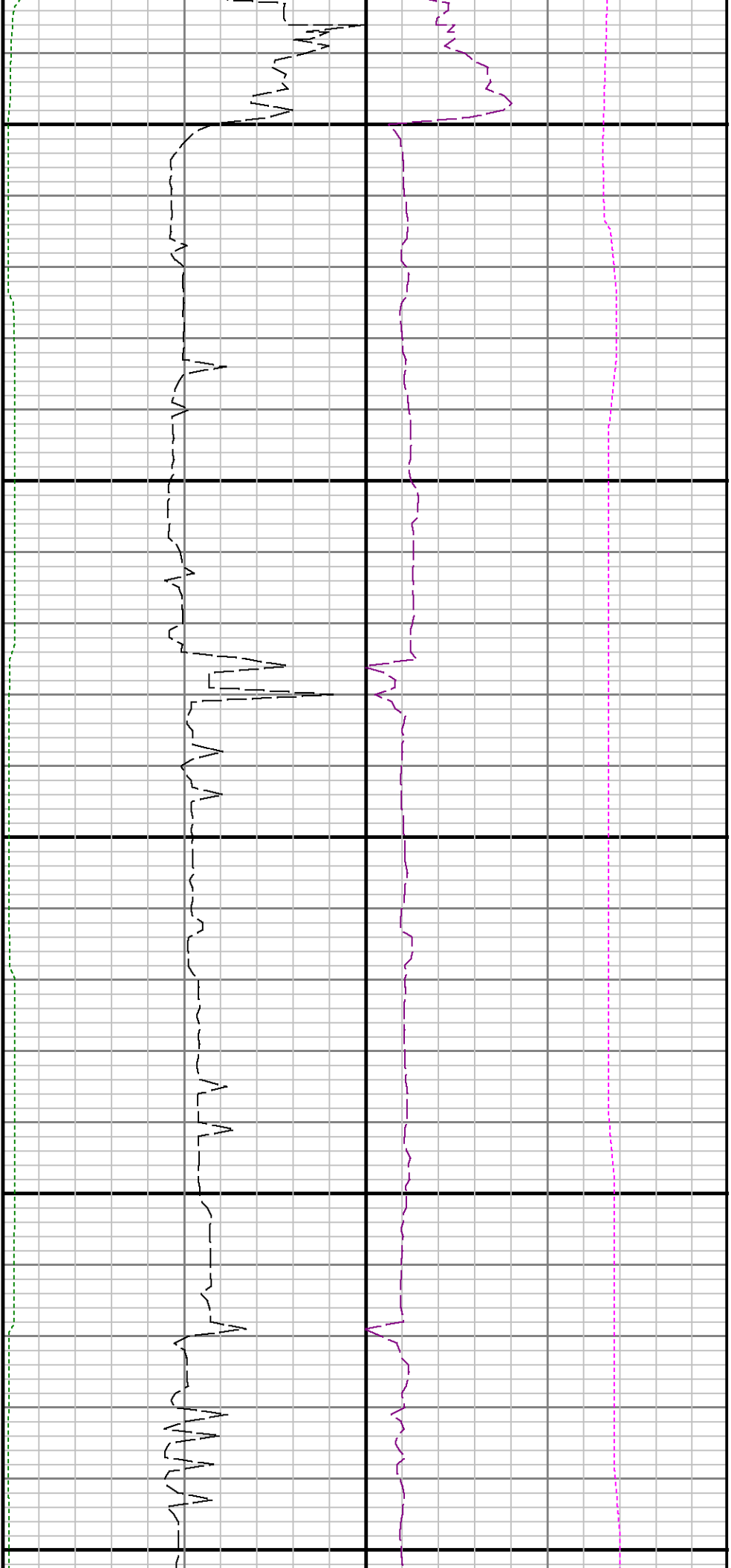




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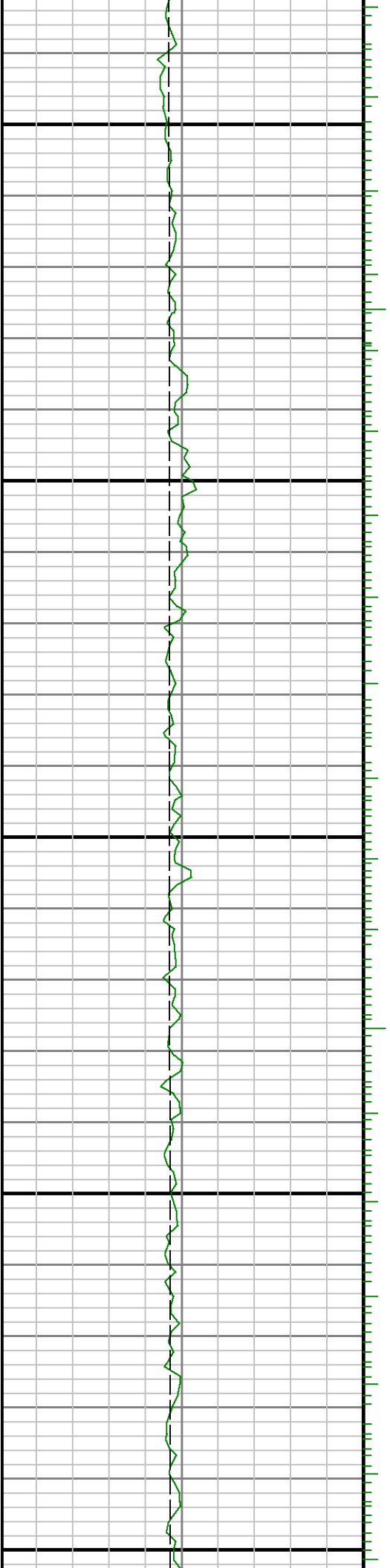
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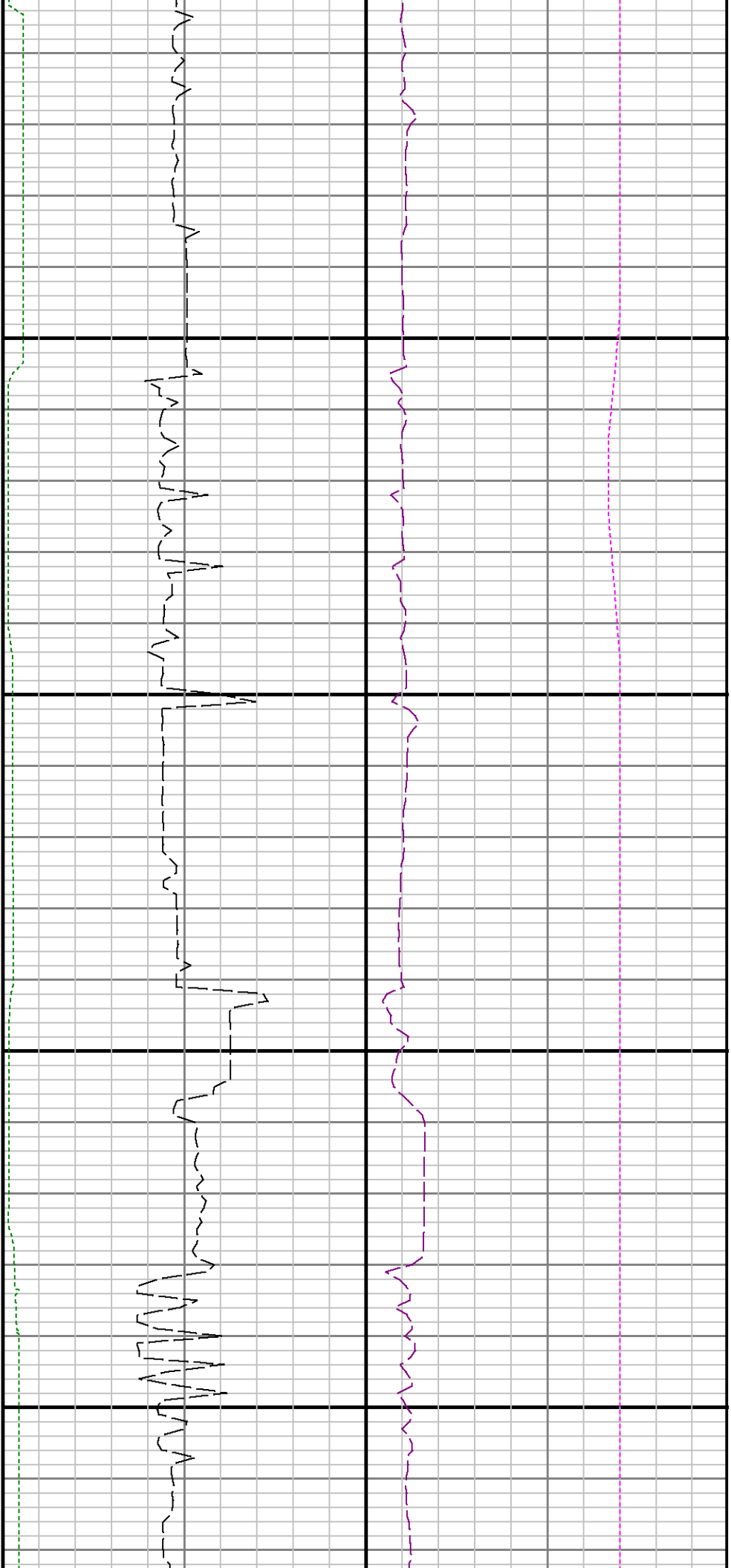




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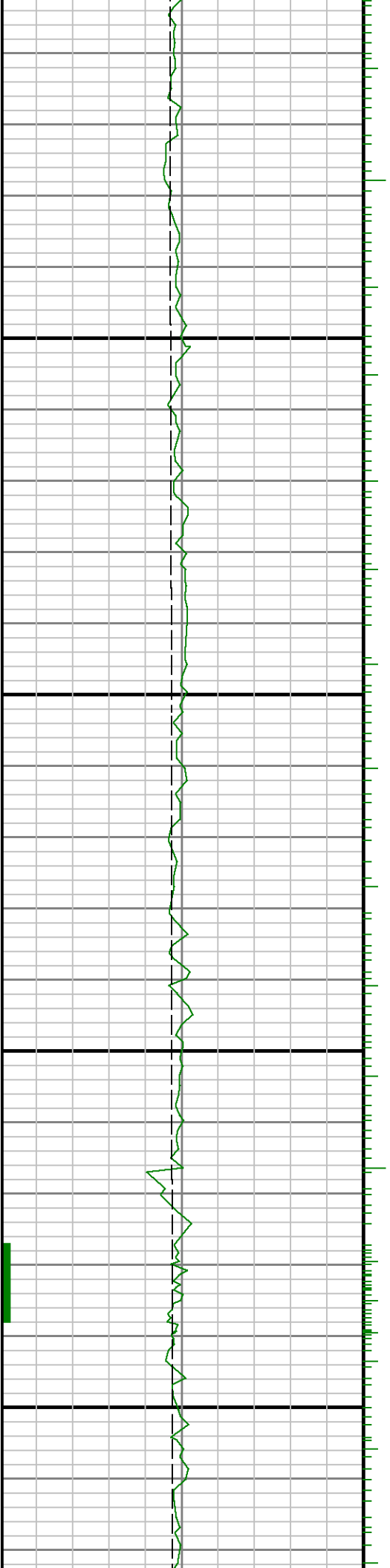
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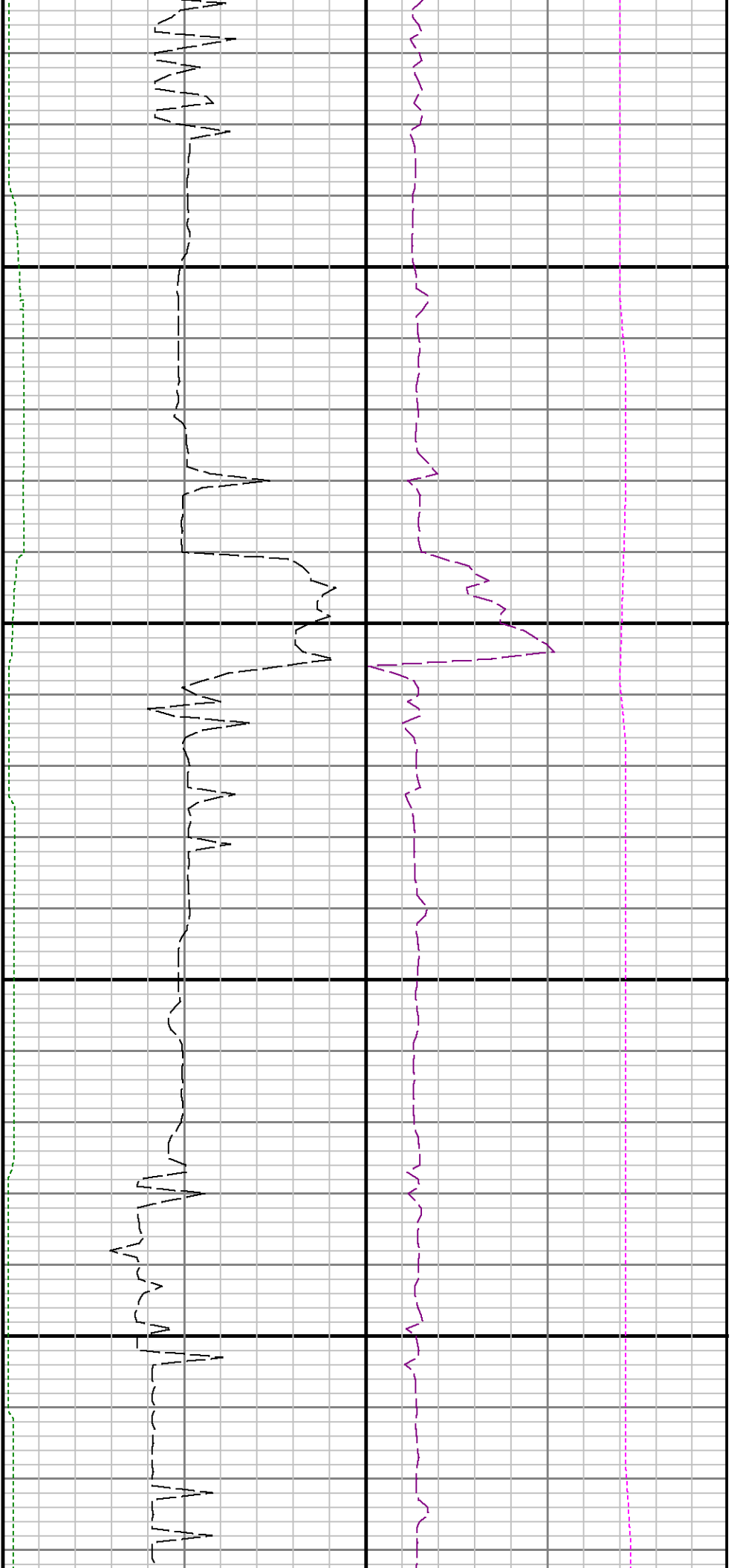
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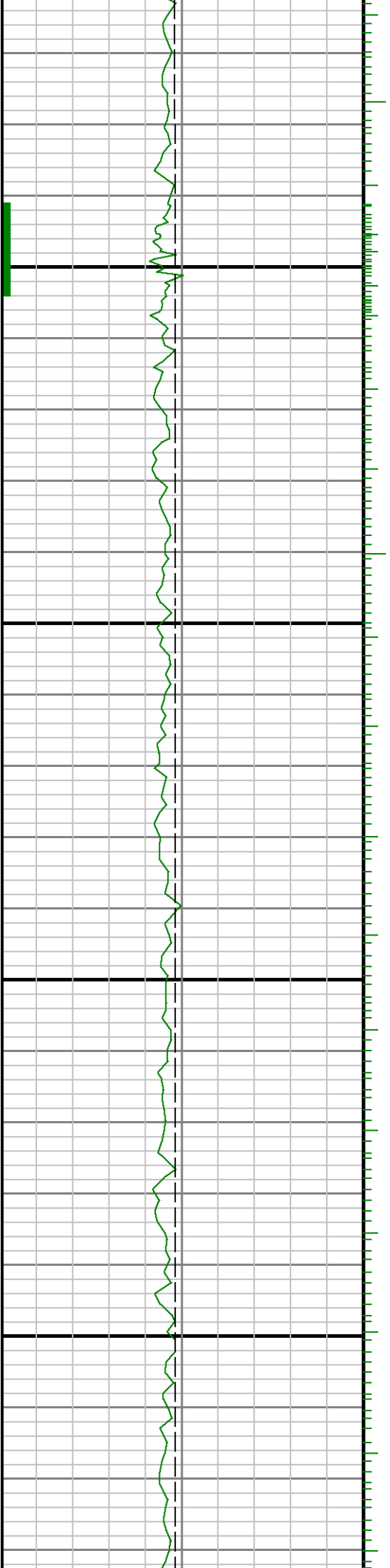


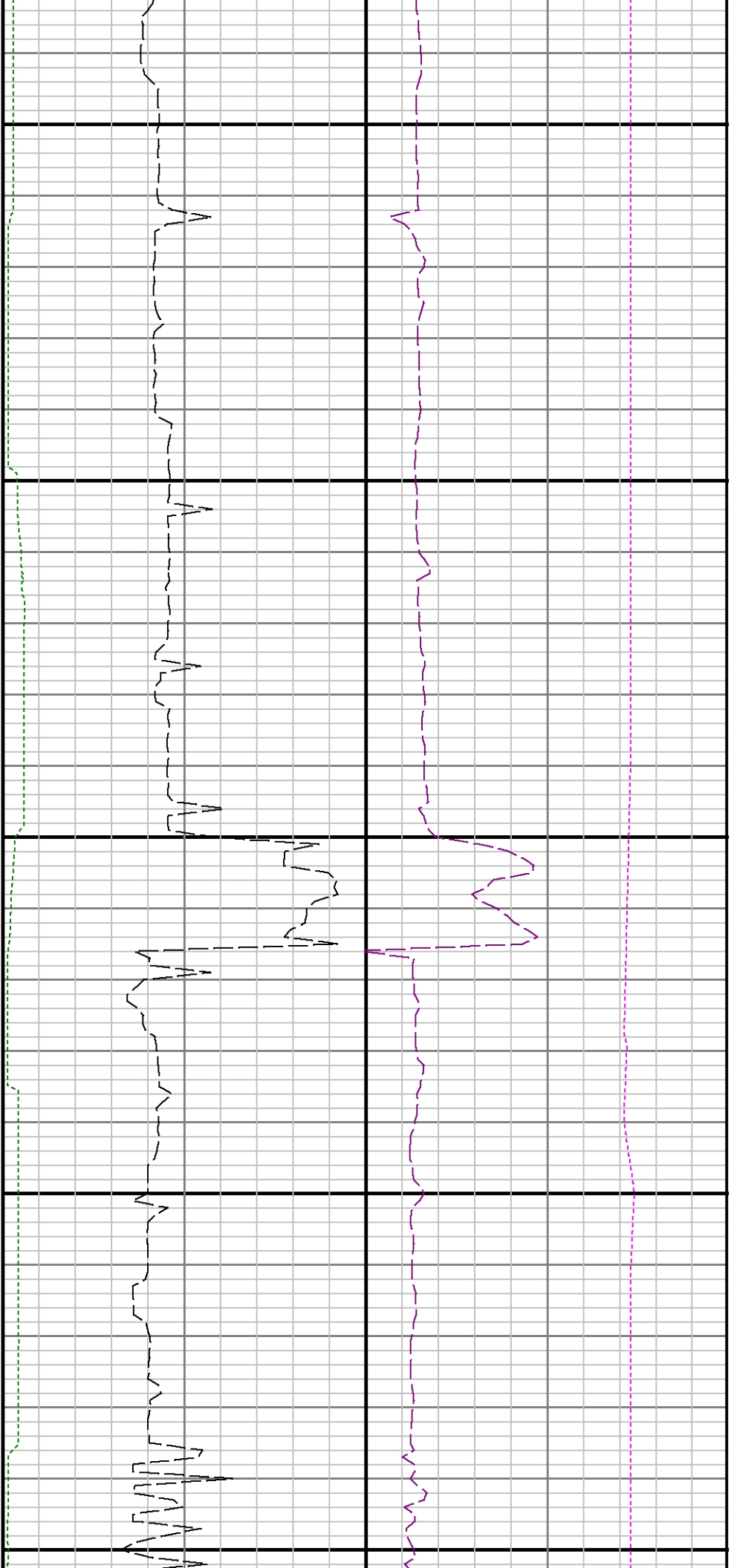




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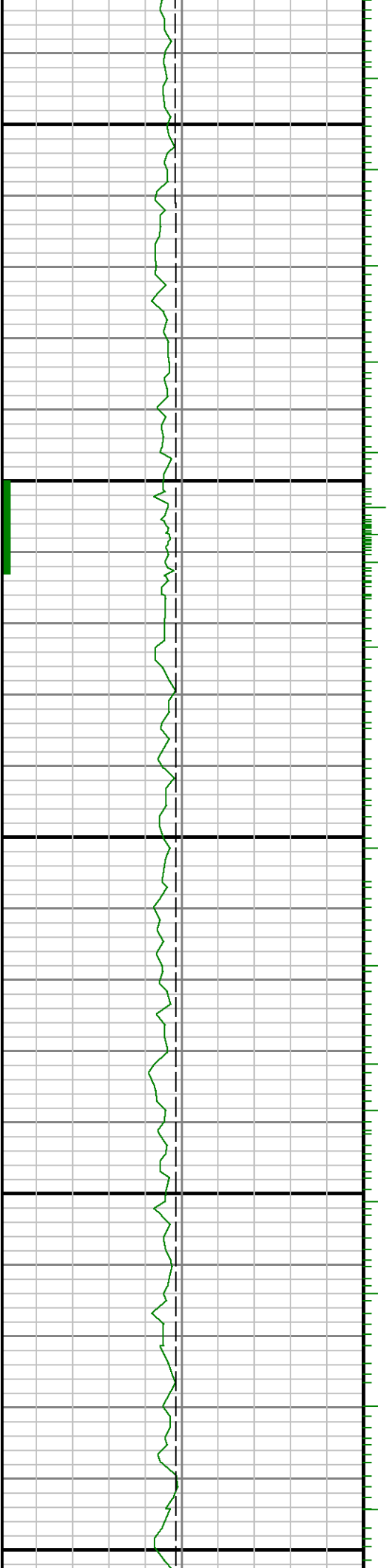
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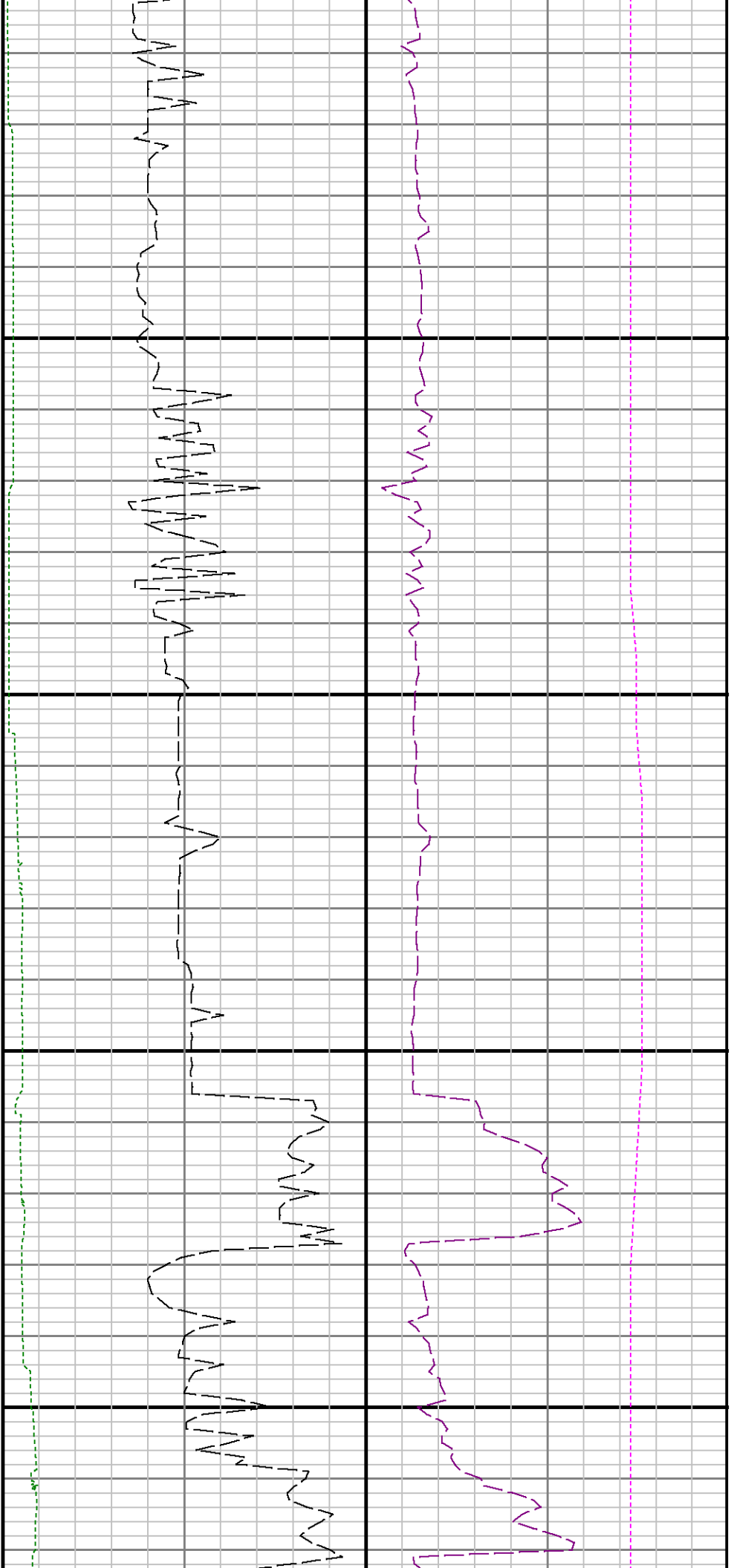




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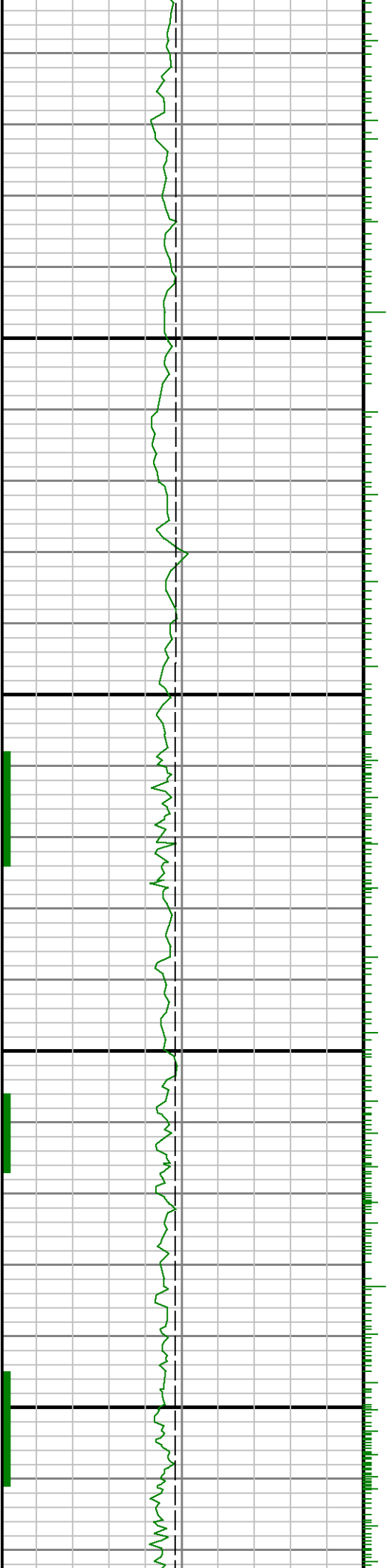
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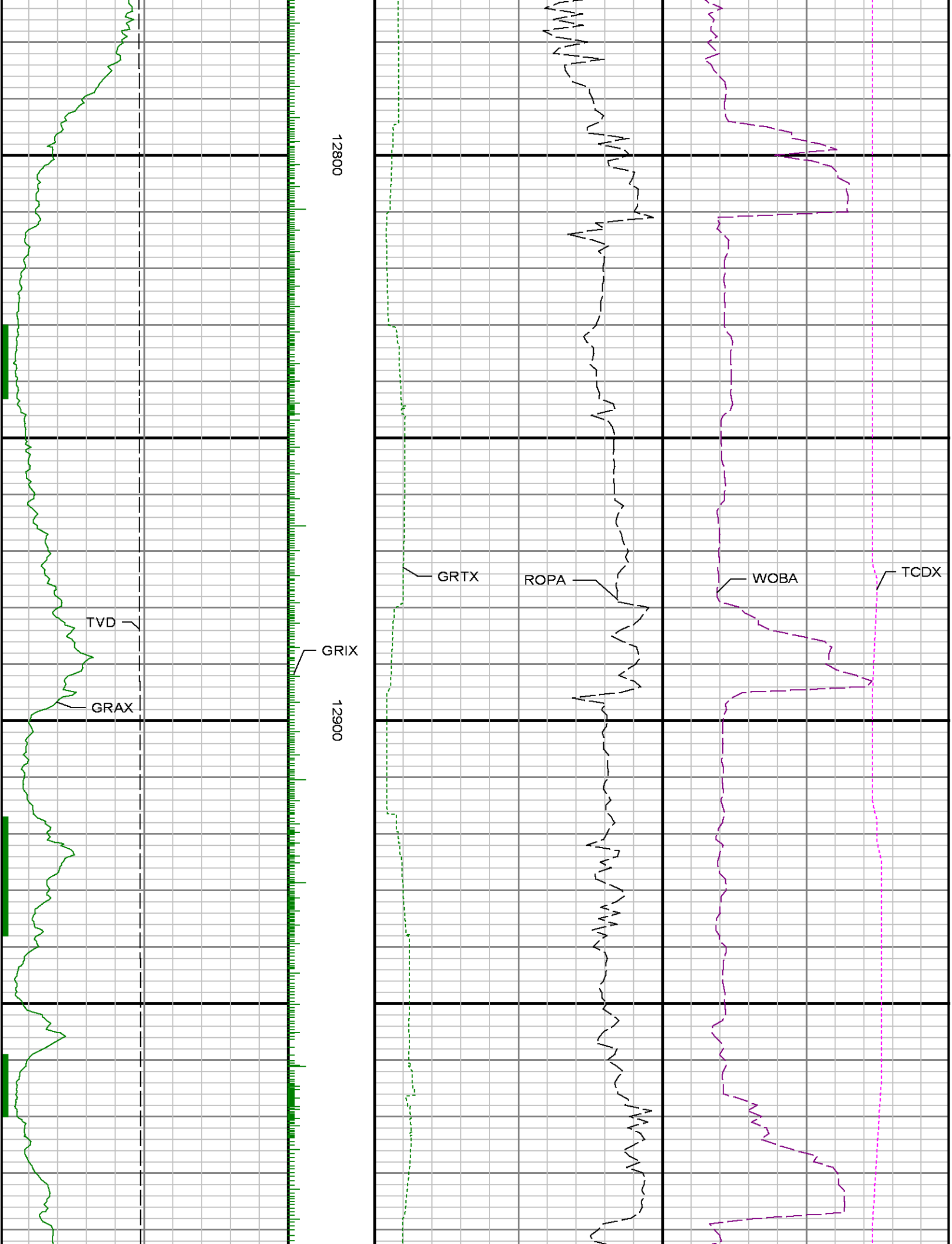


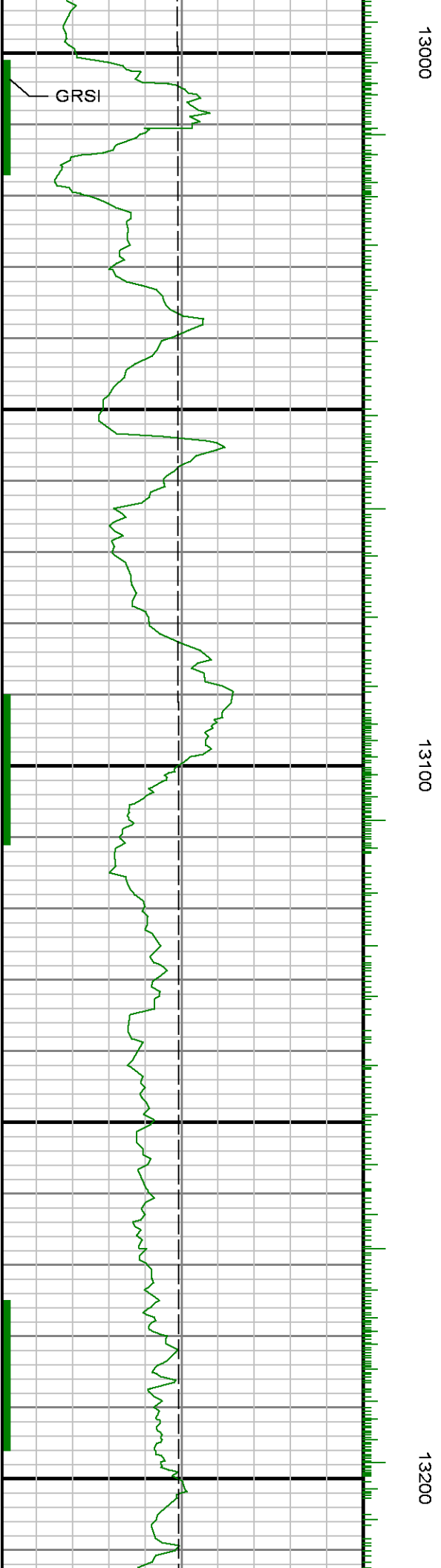
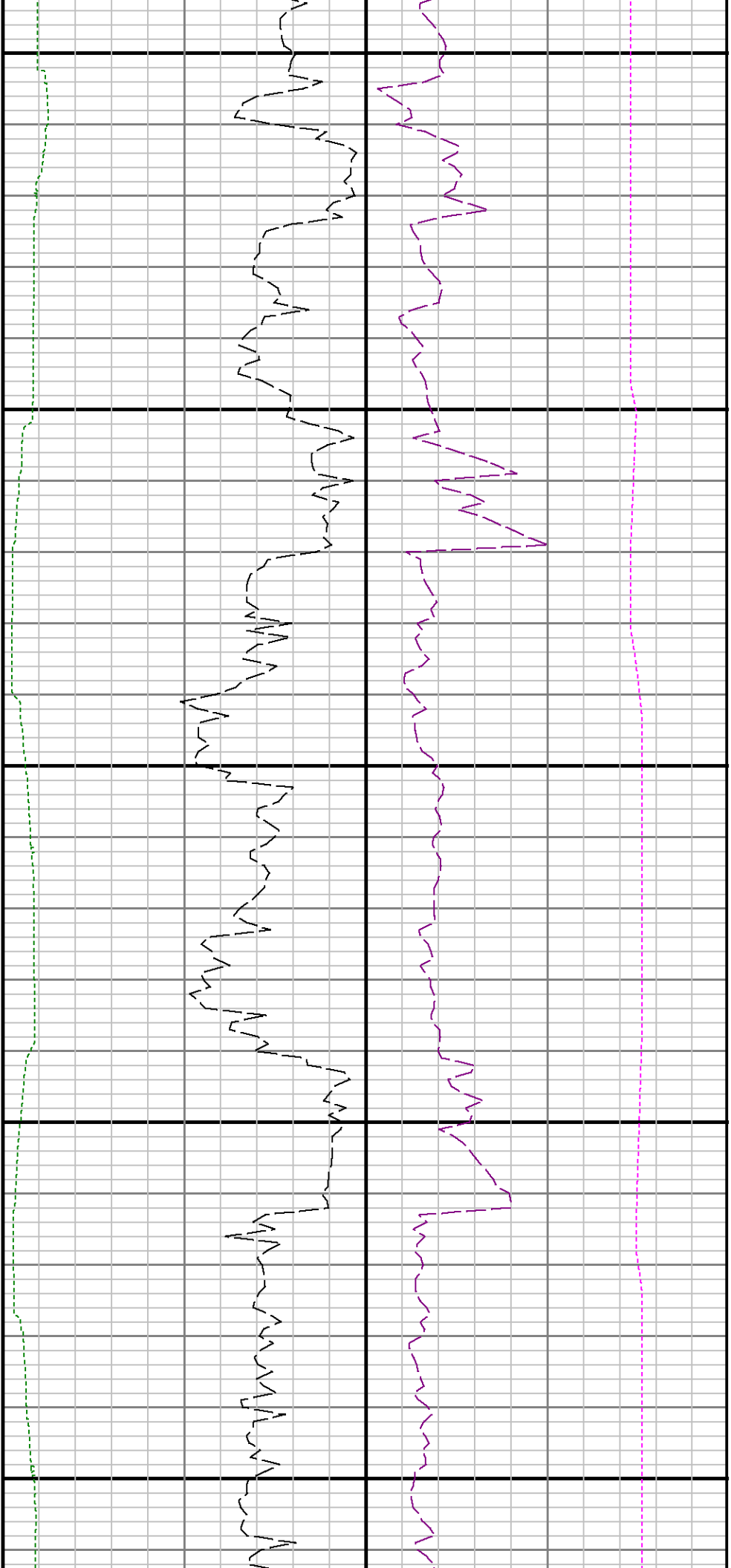


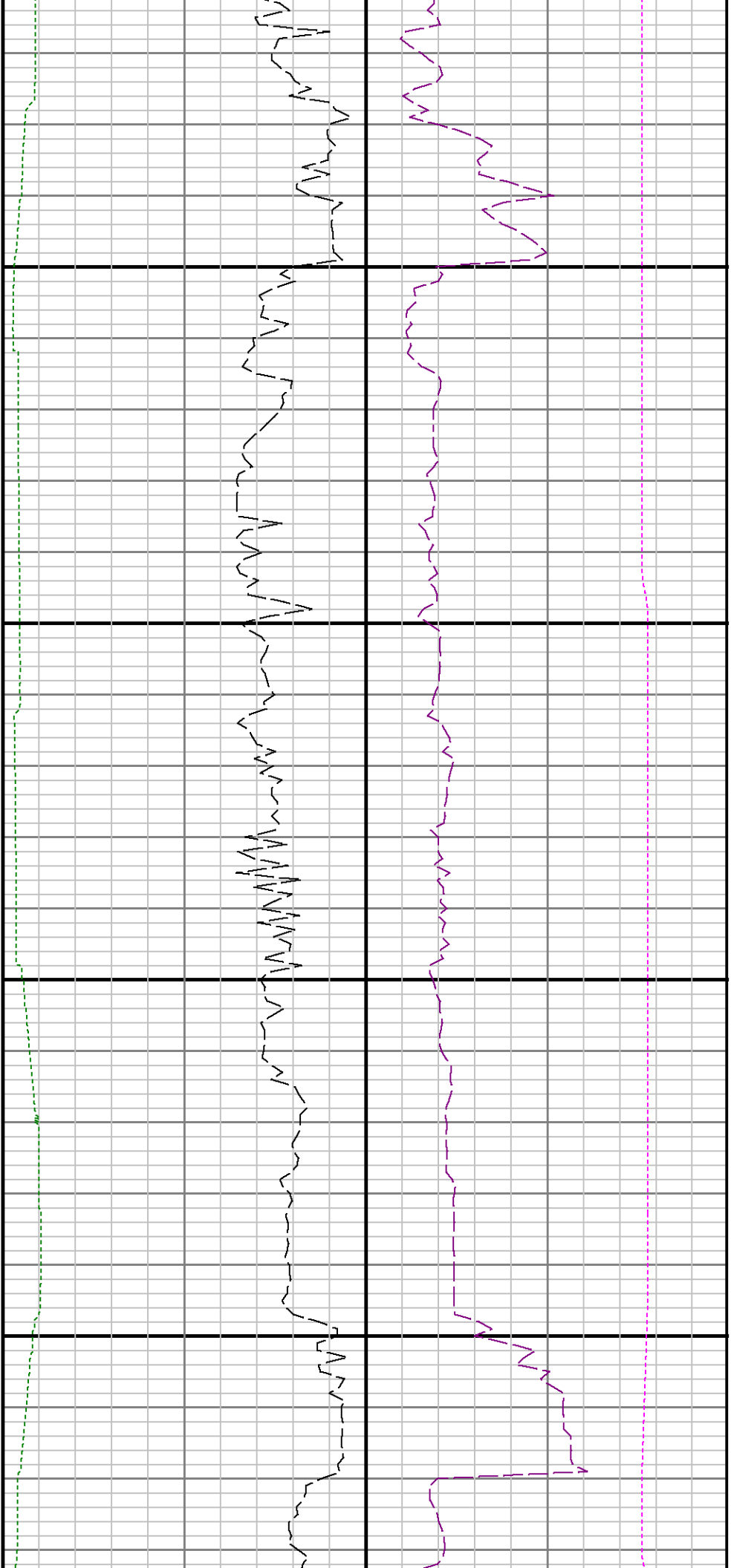
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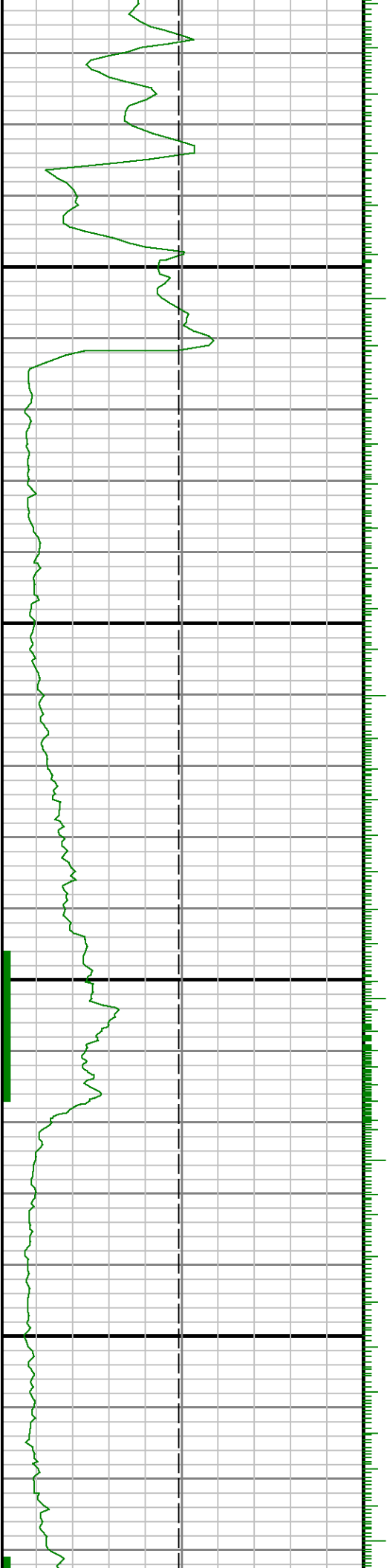






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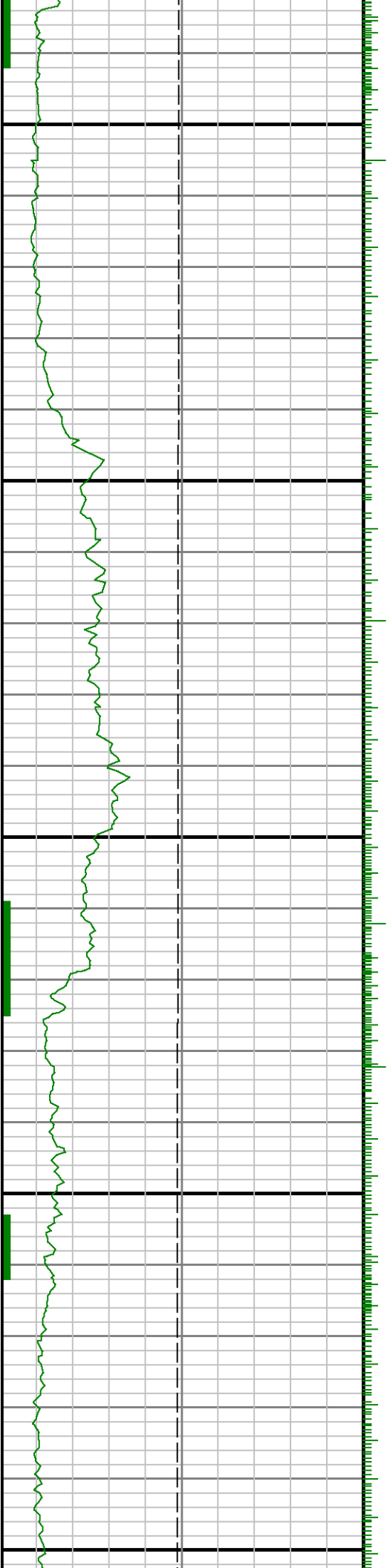
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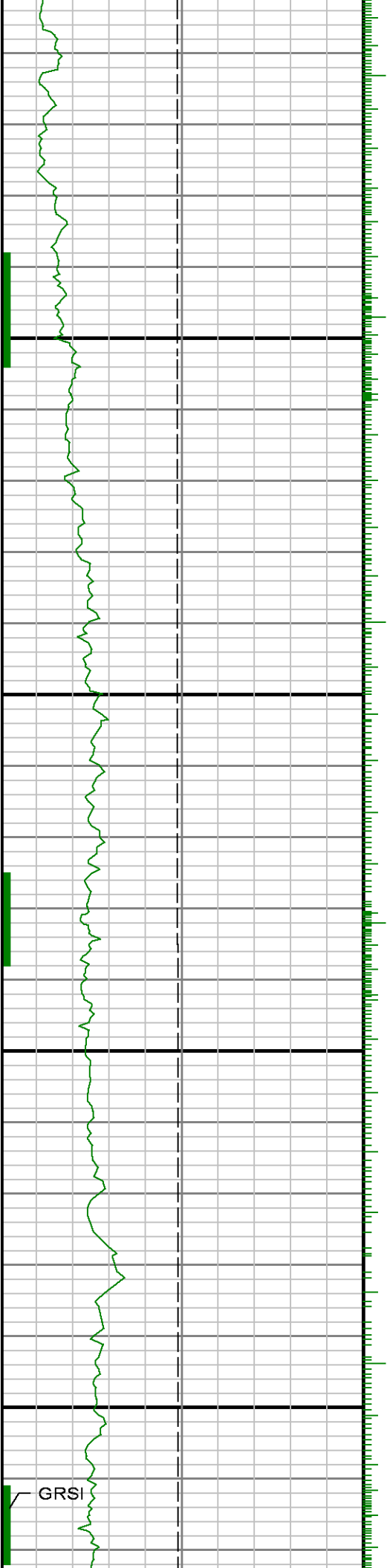
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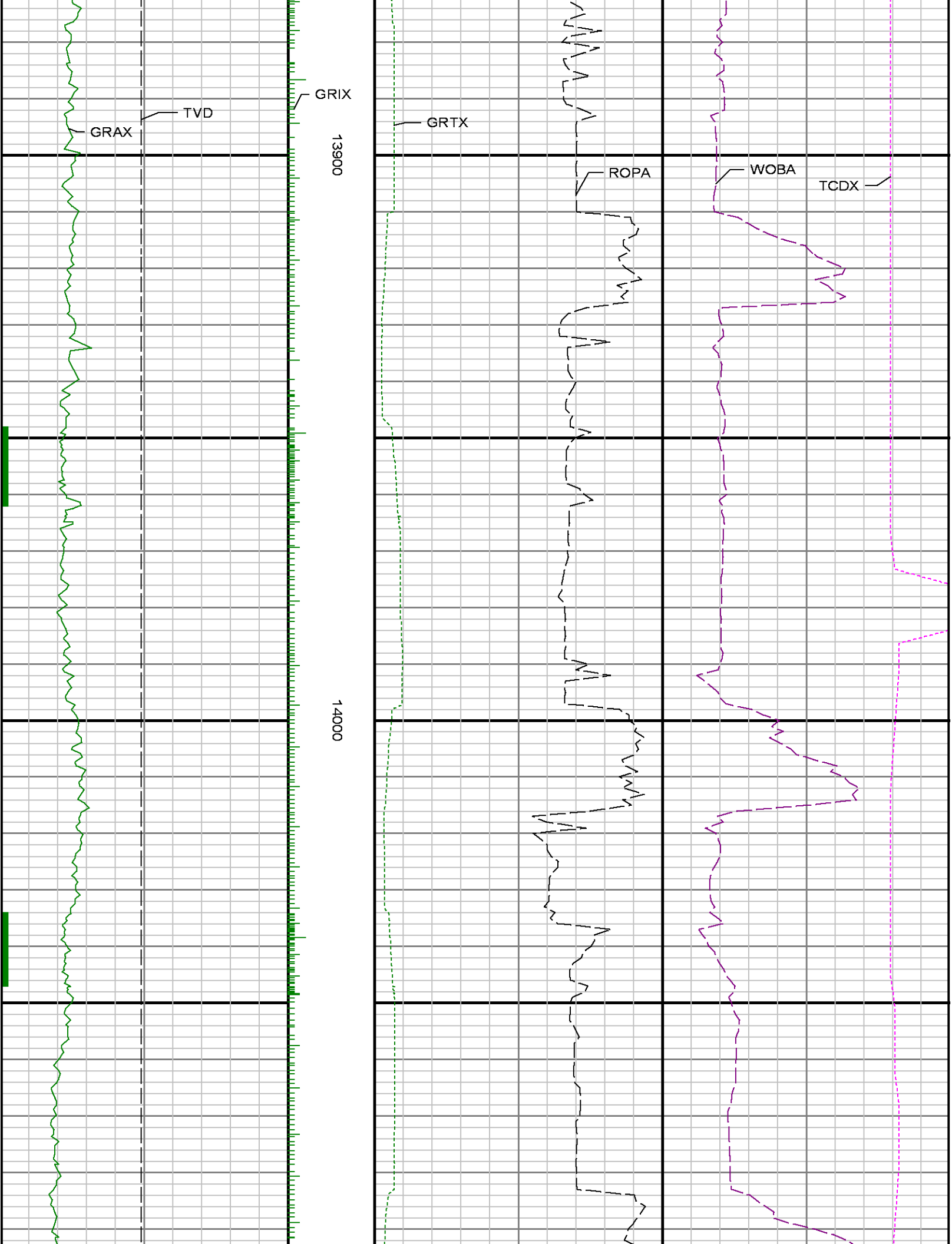


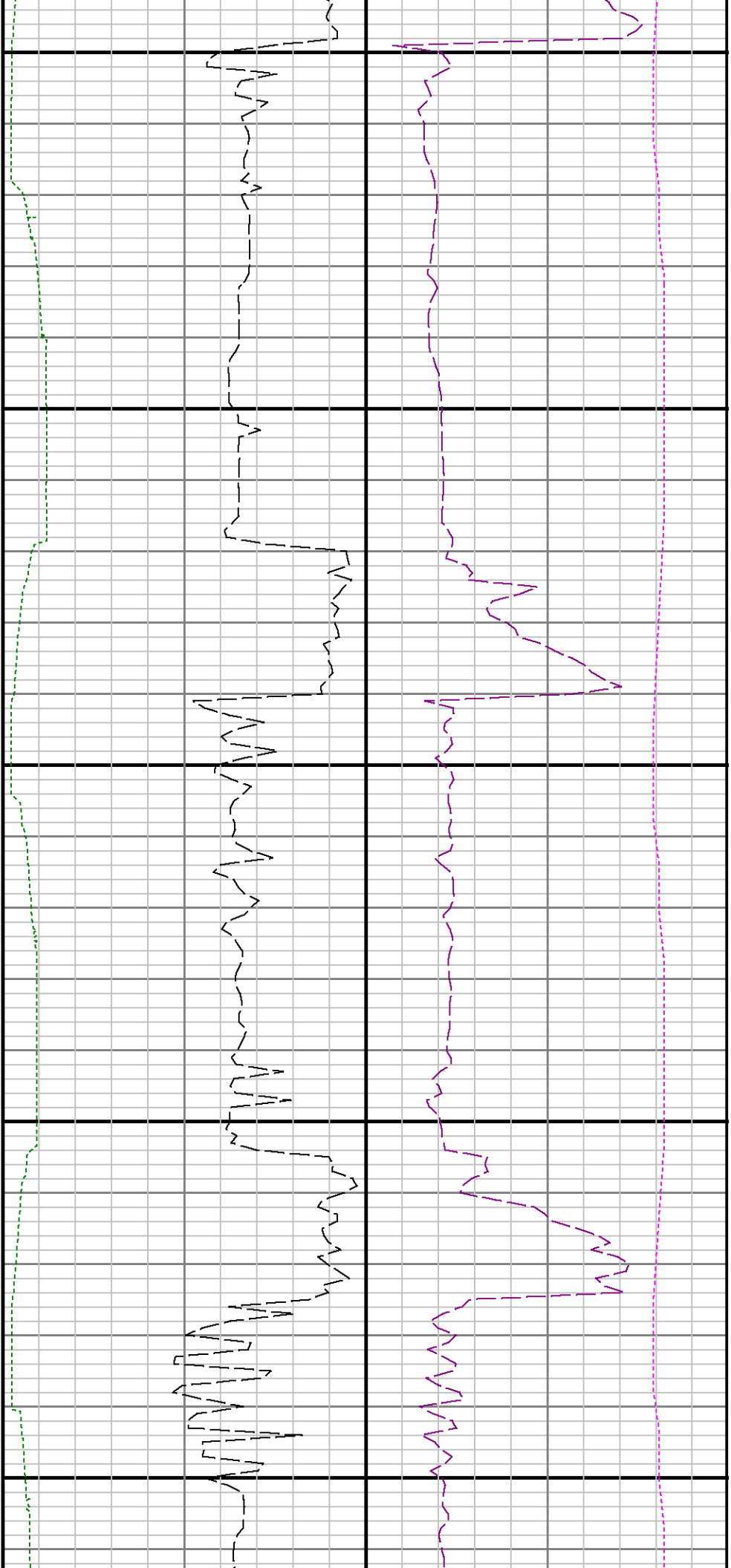
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GRSI

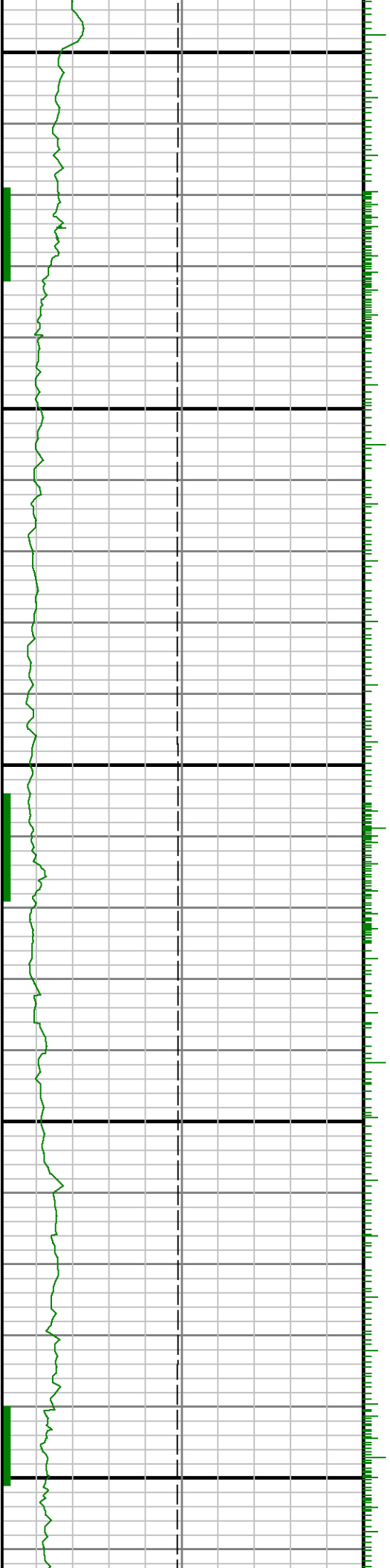


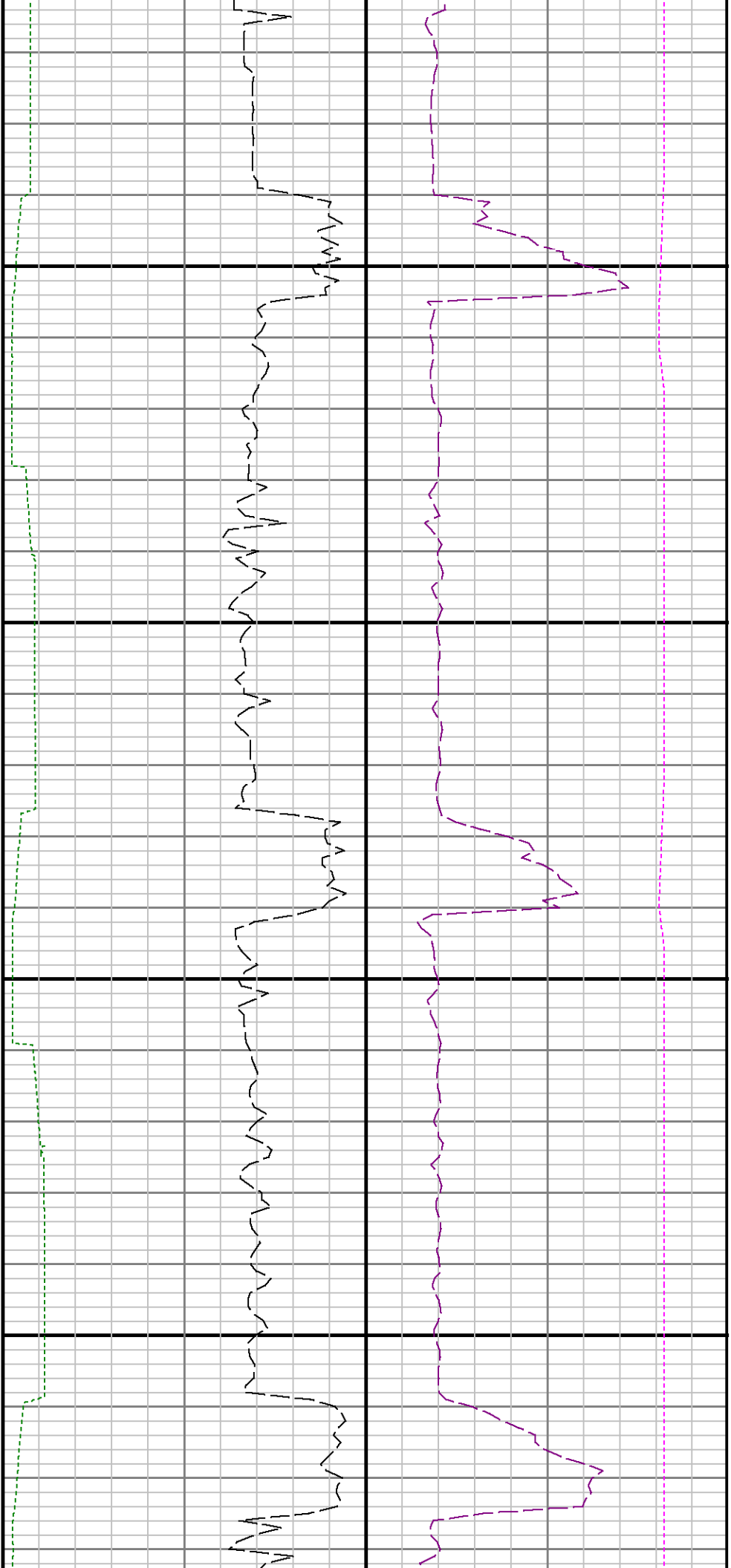


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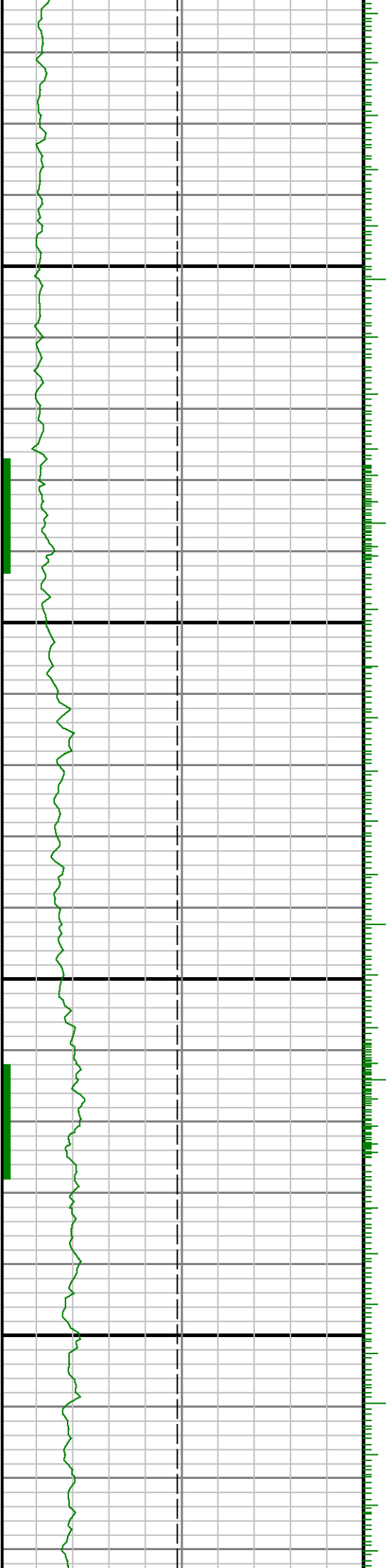
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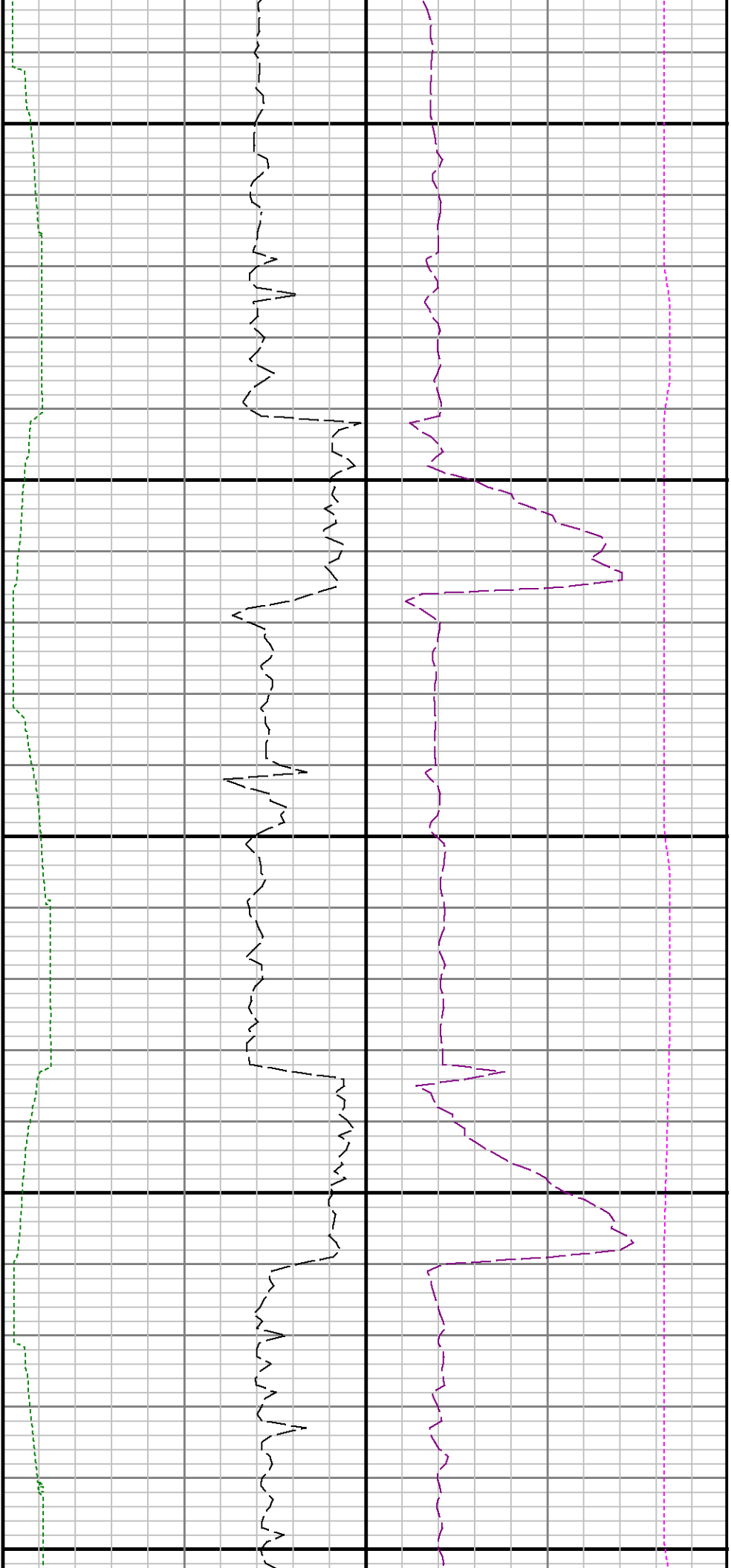




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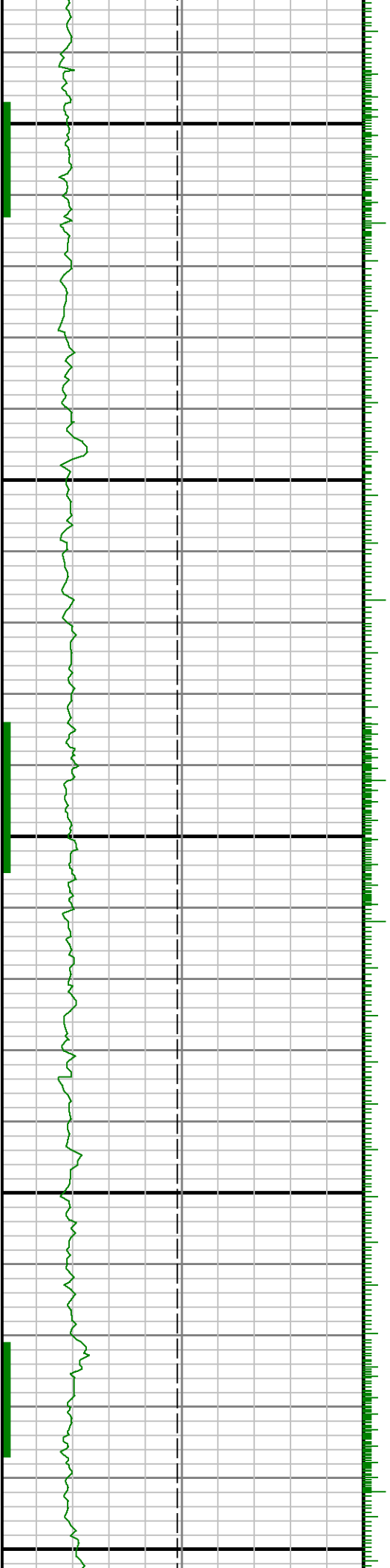
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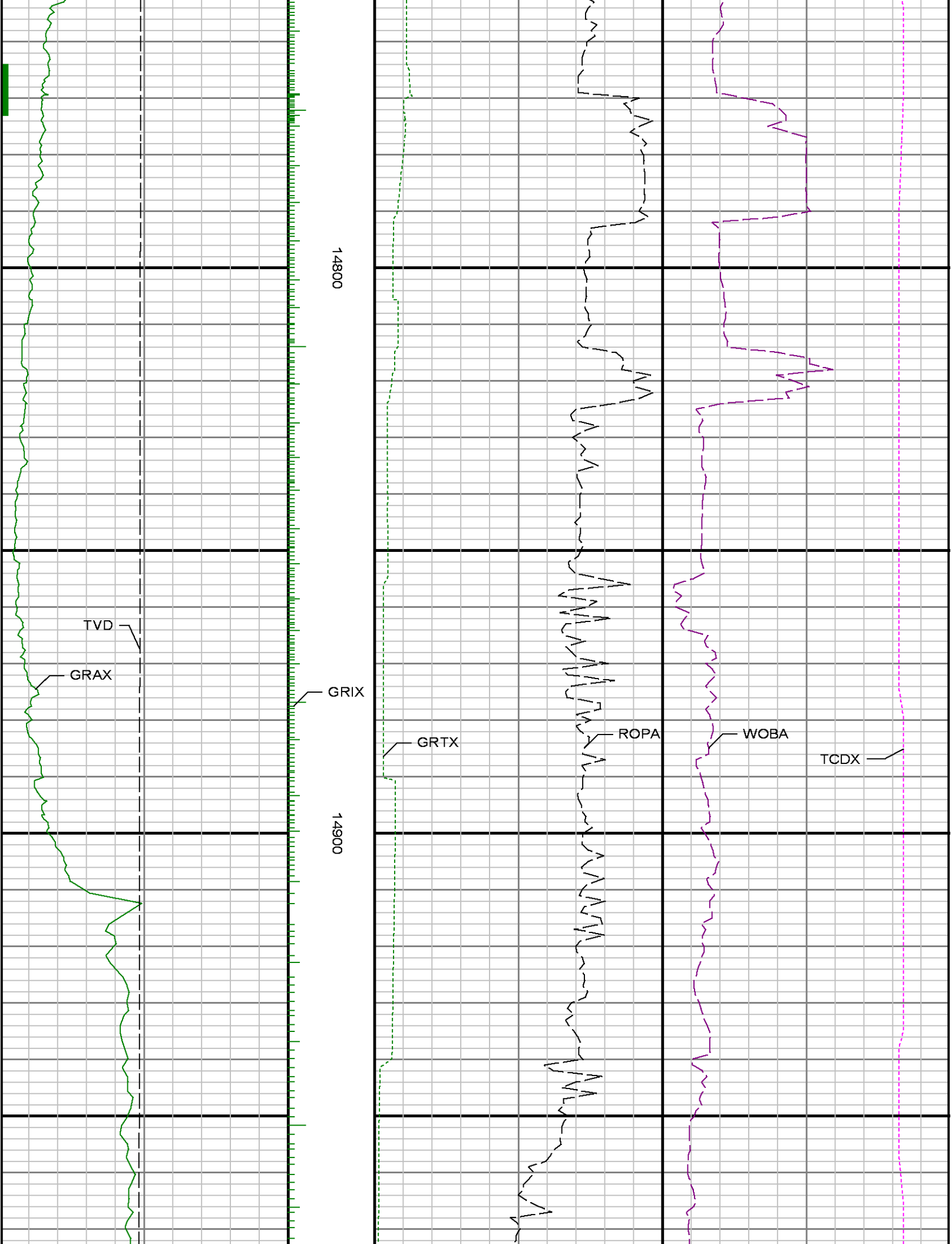


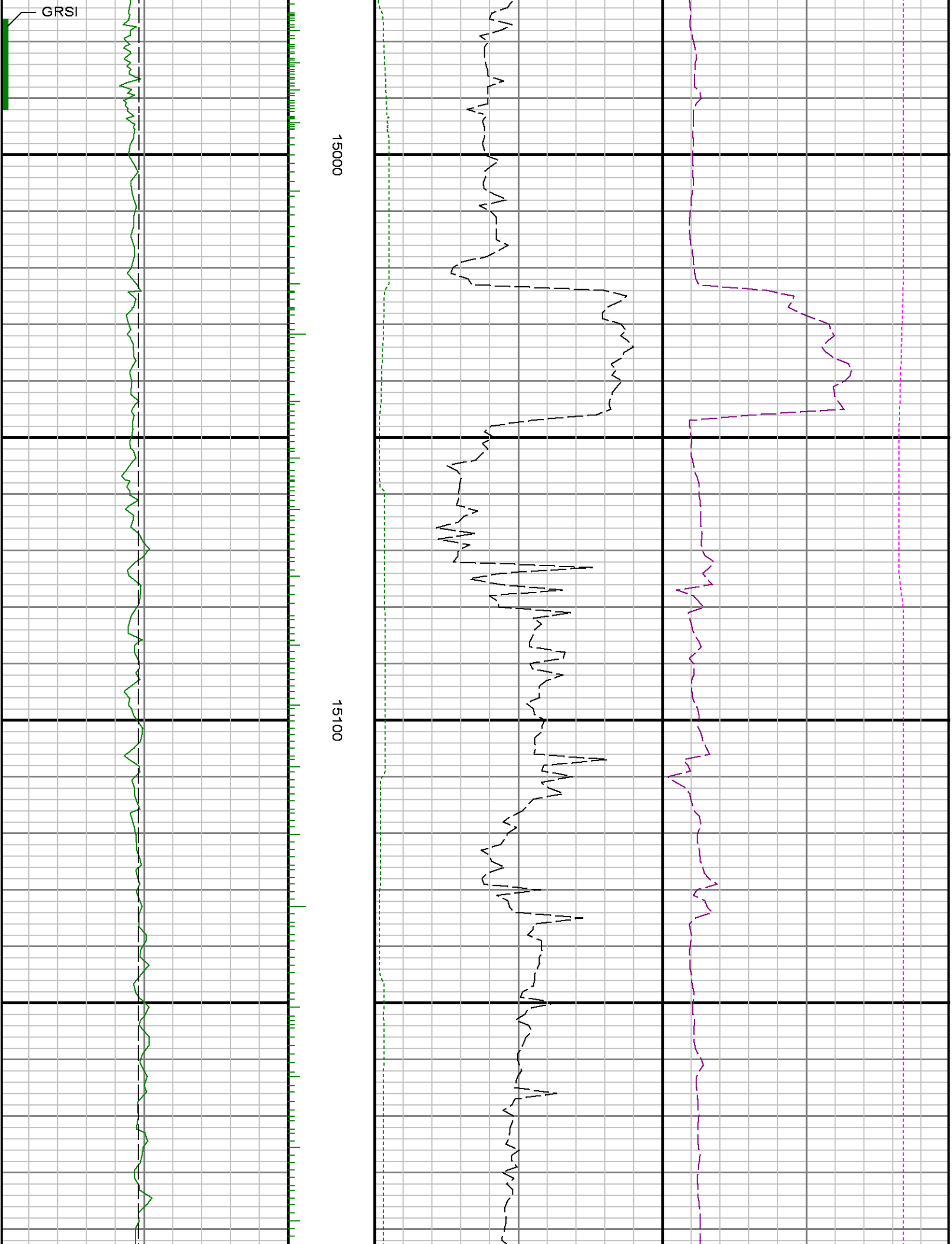


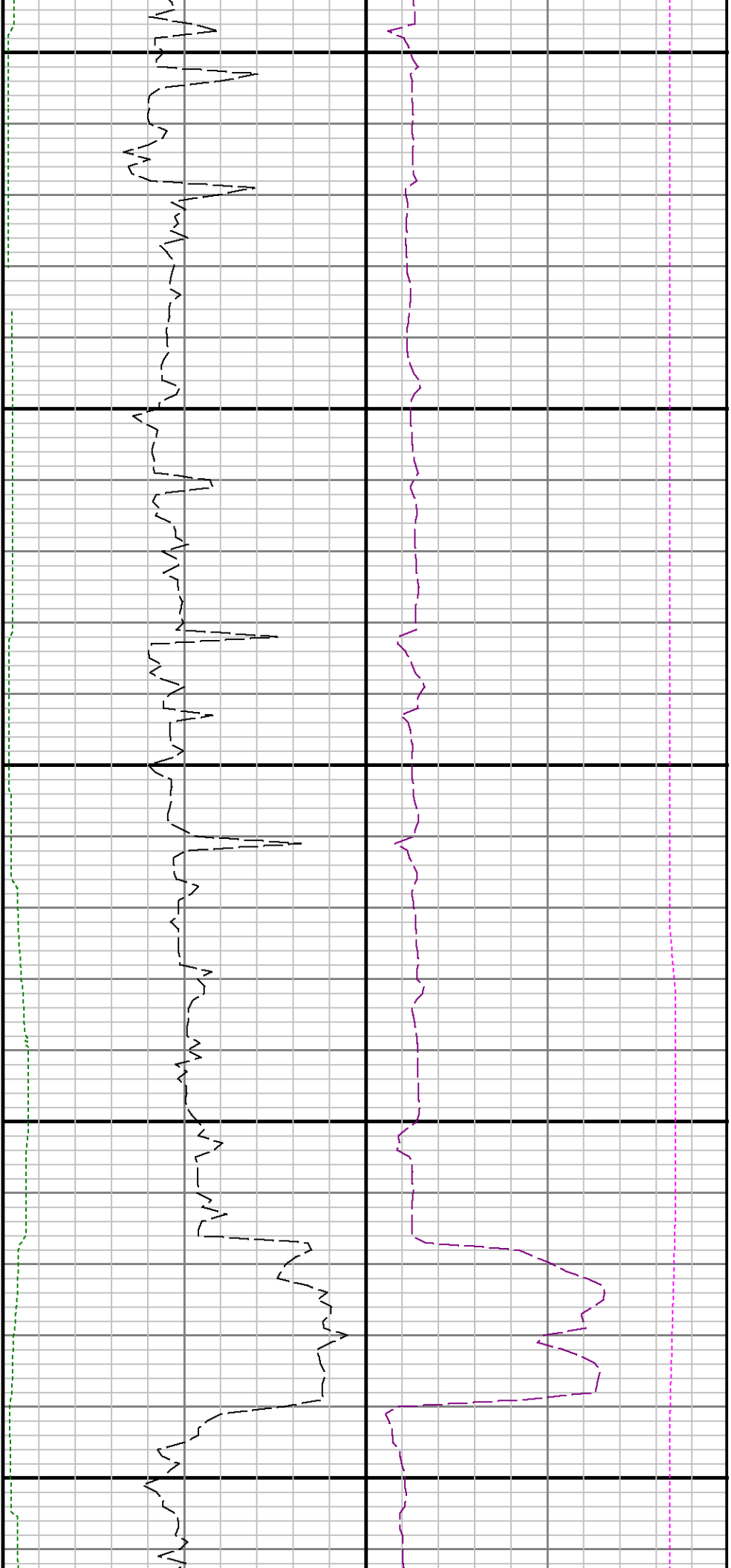
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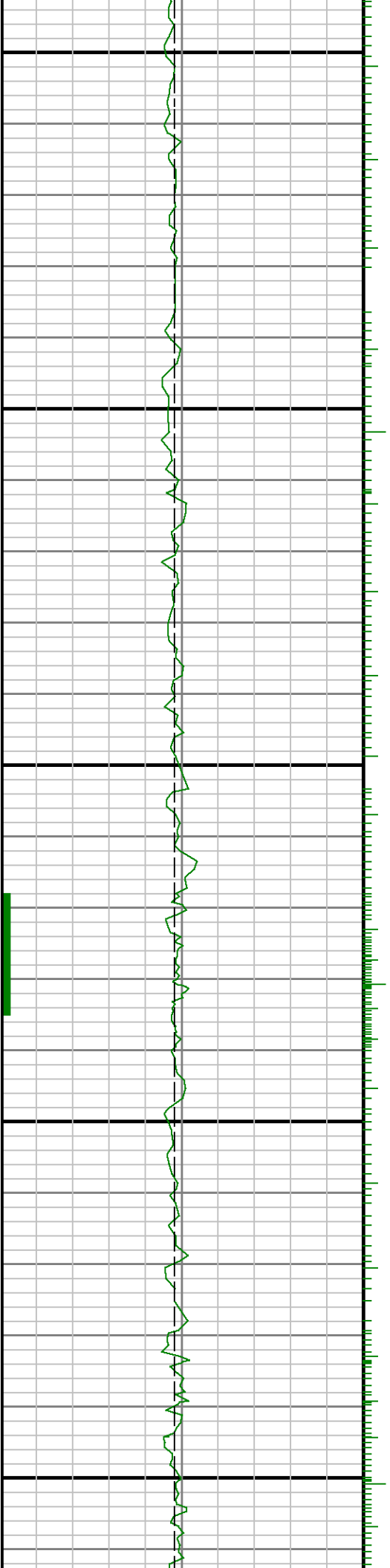


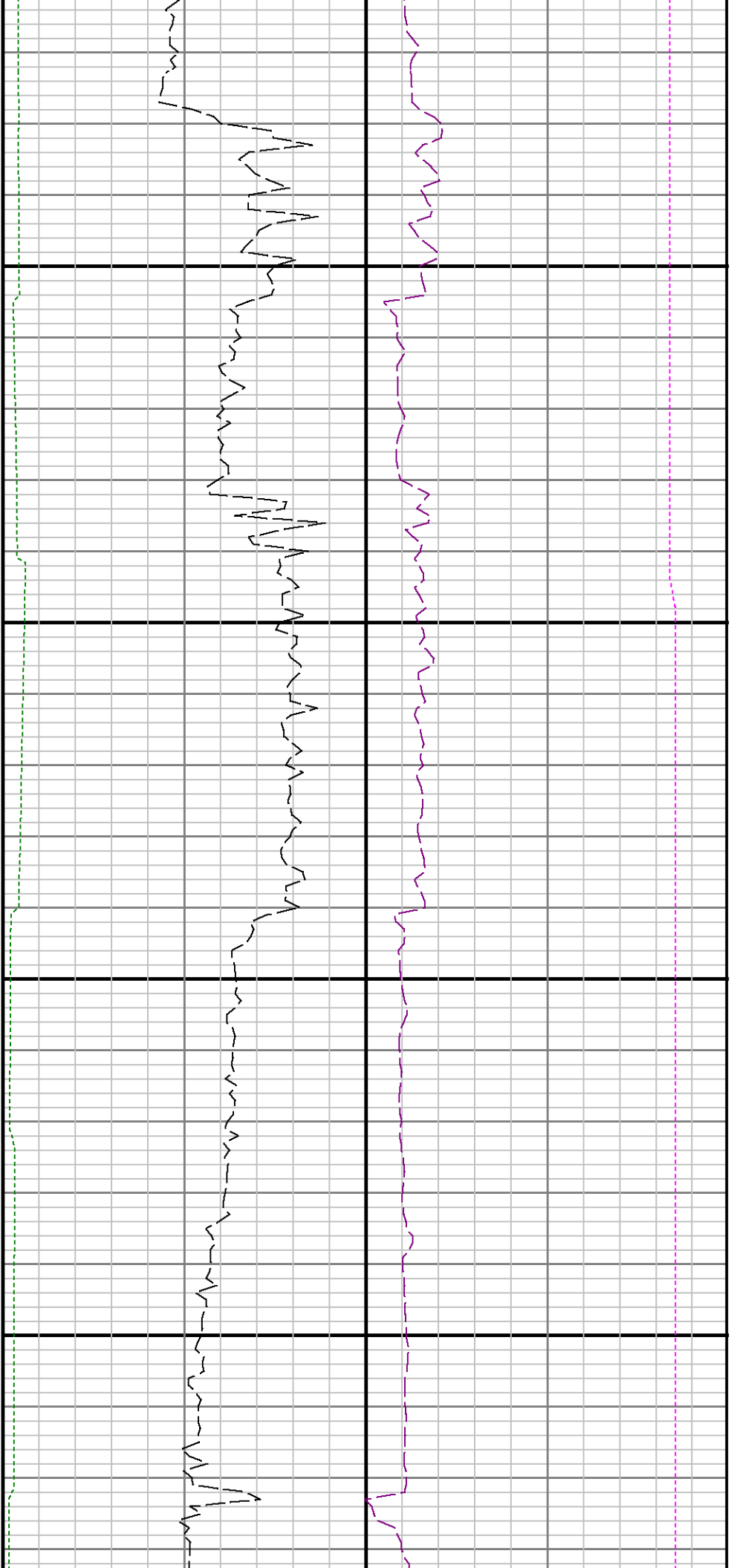


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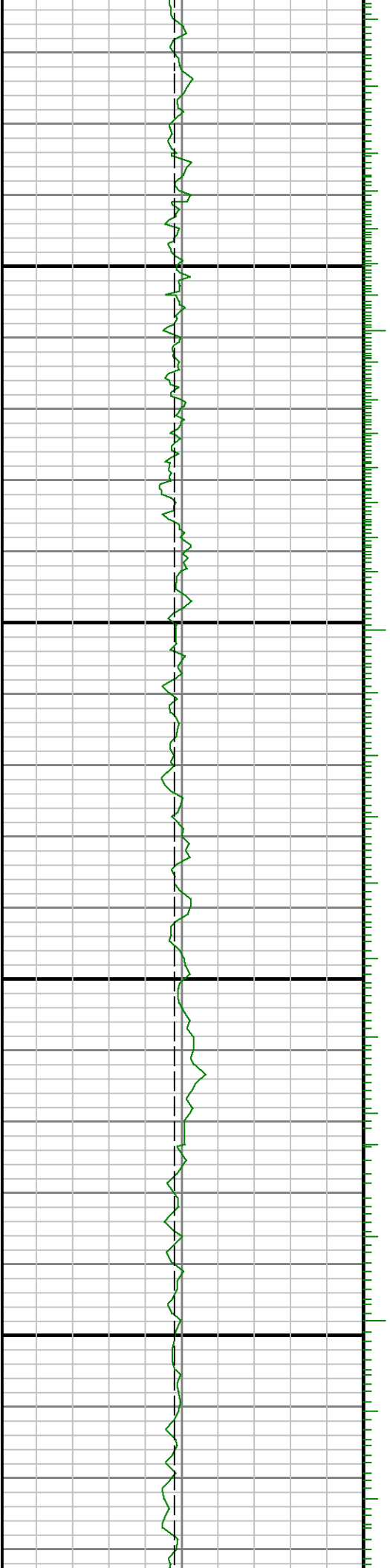
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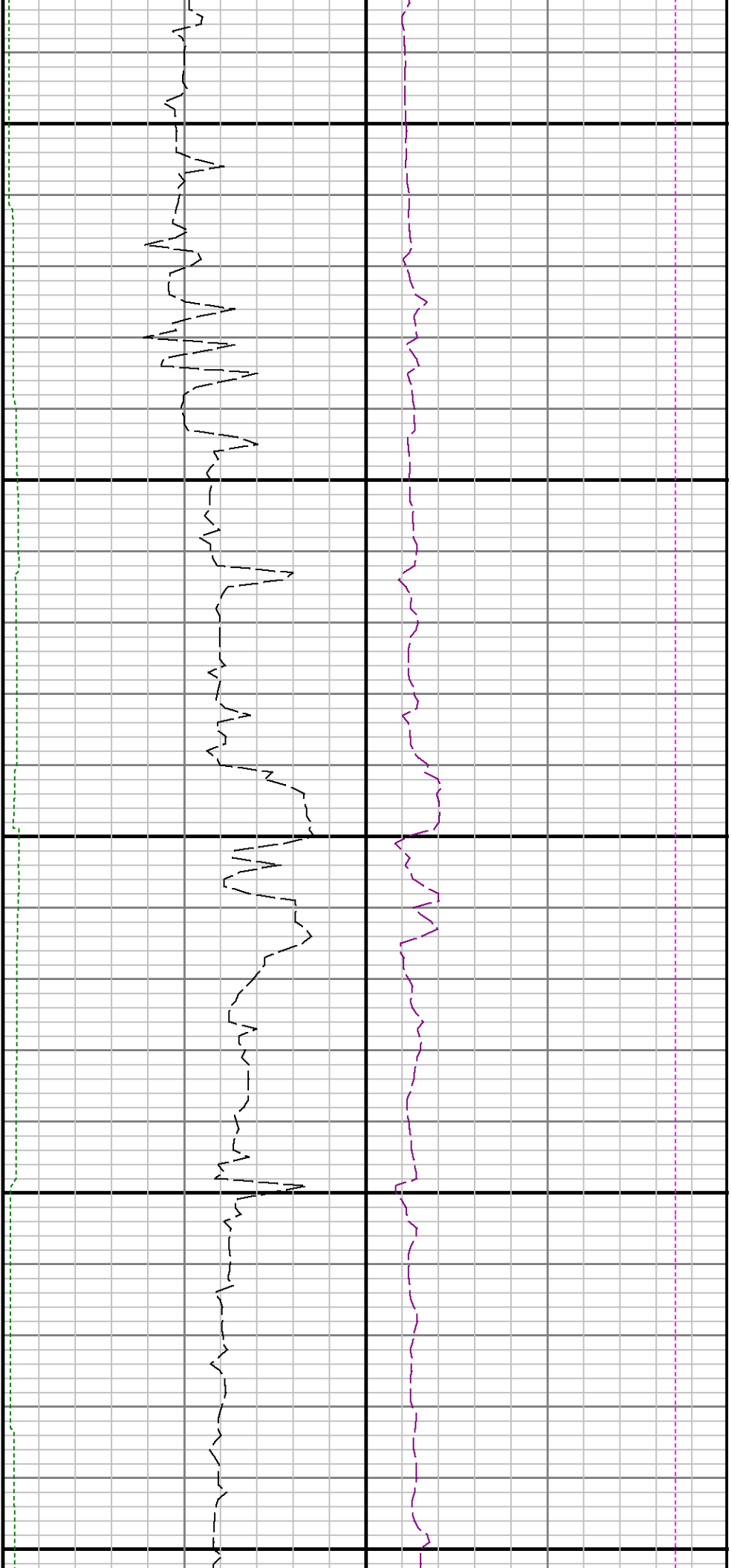




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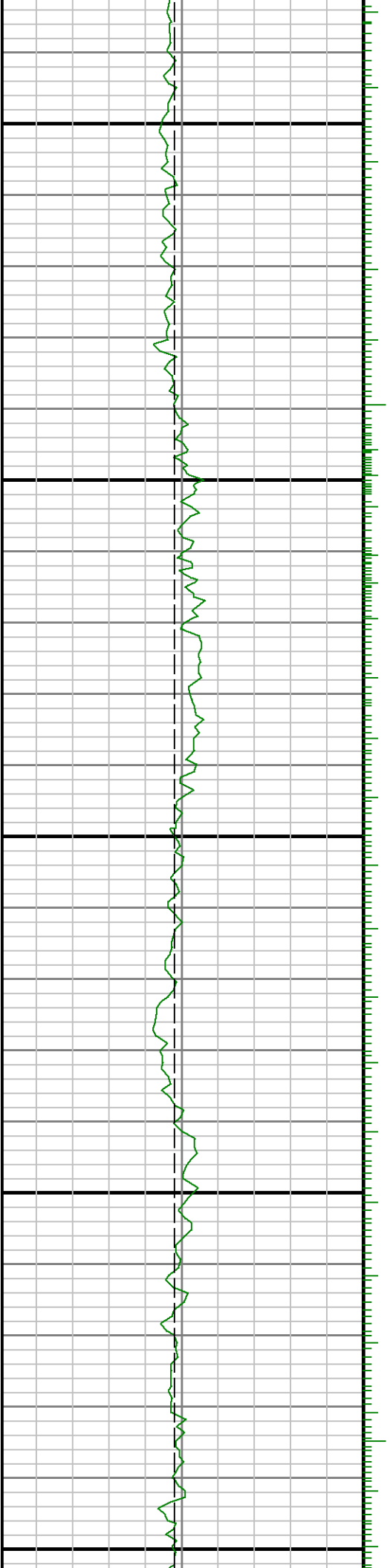
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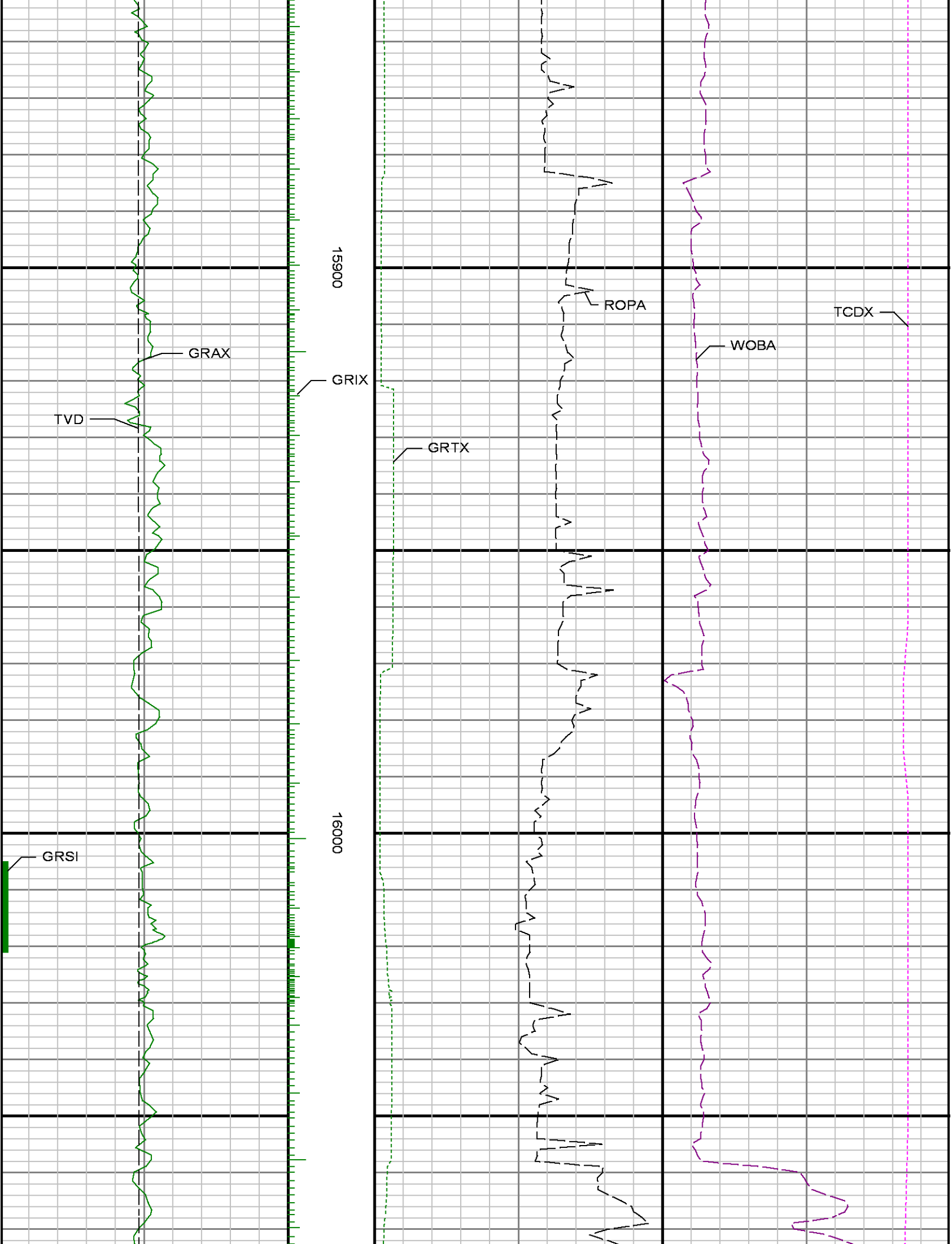


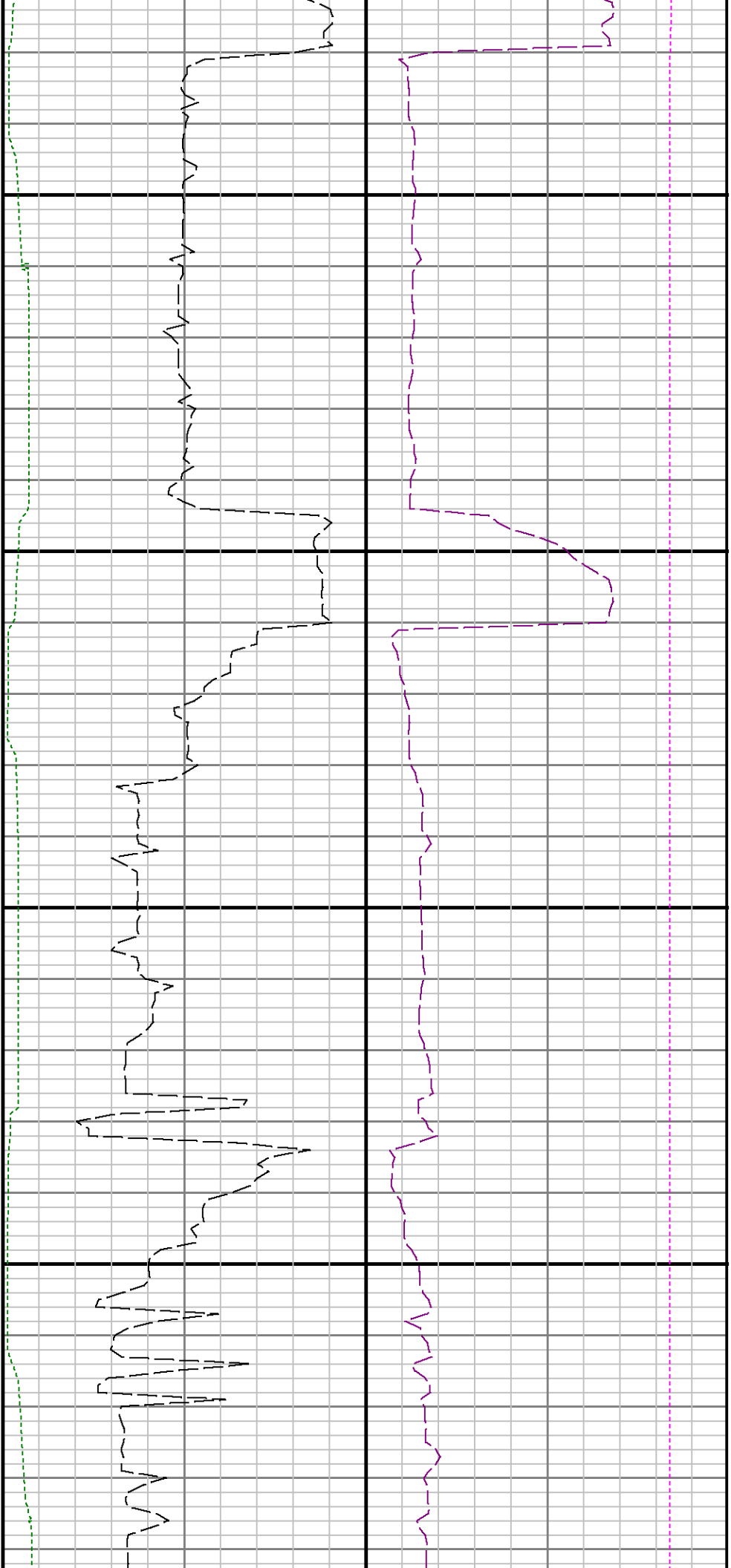


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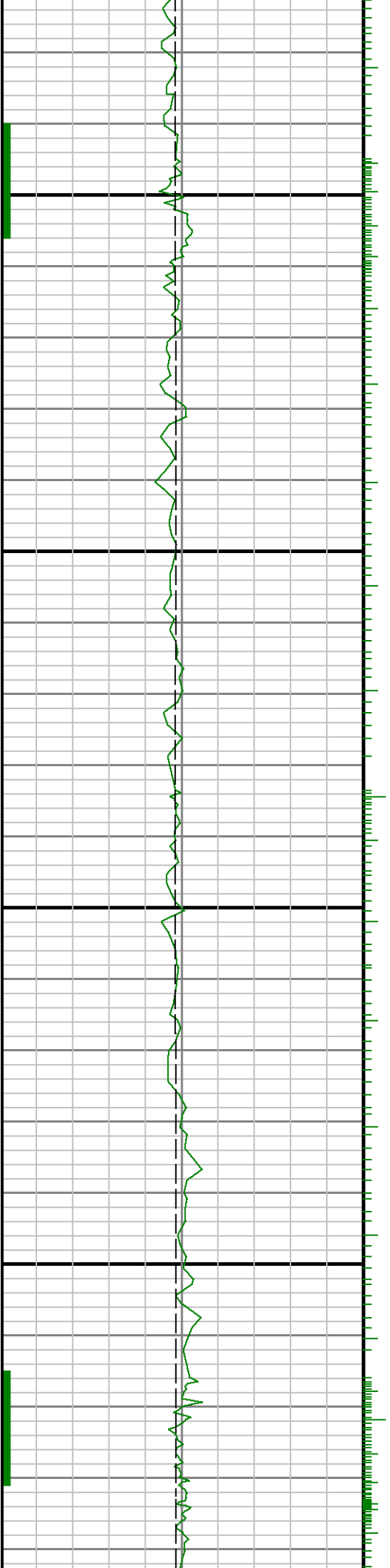


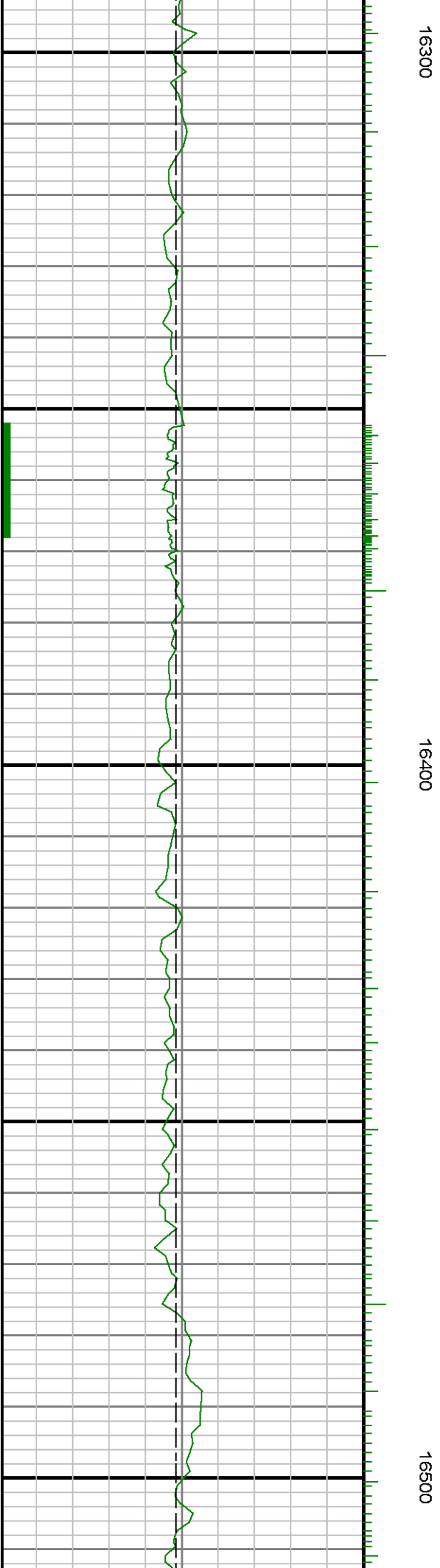
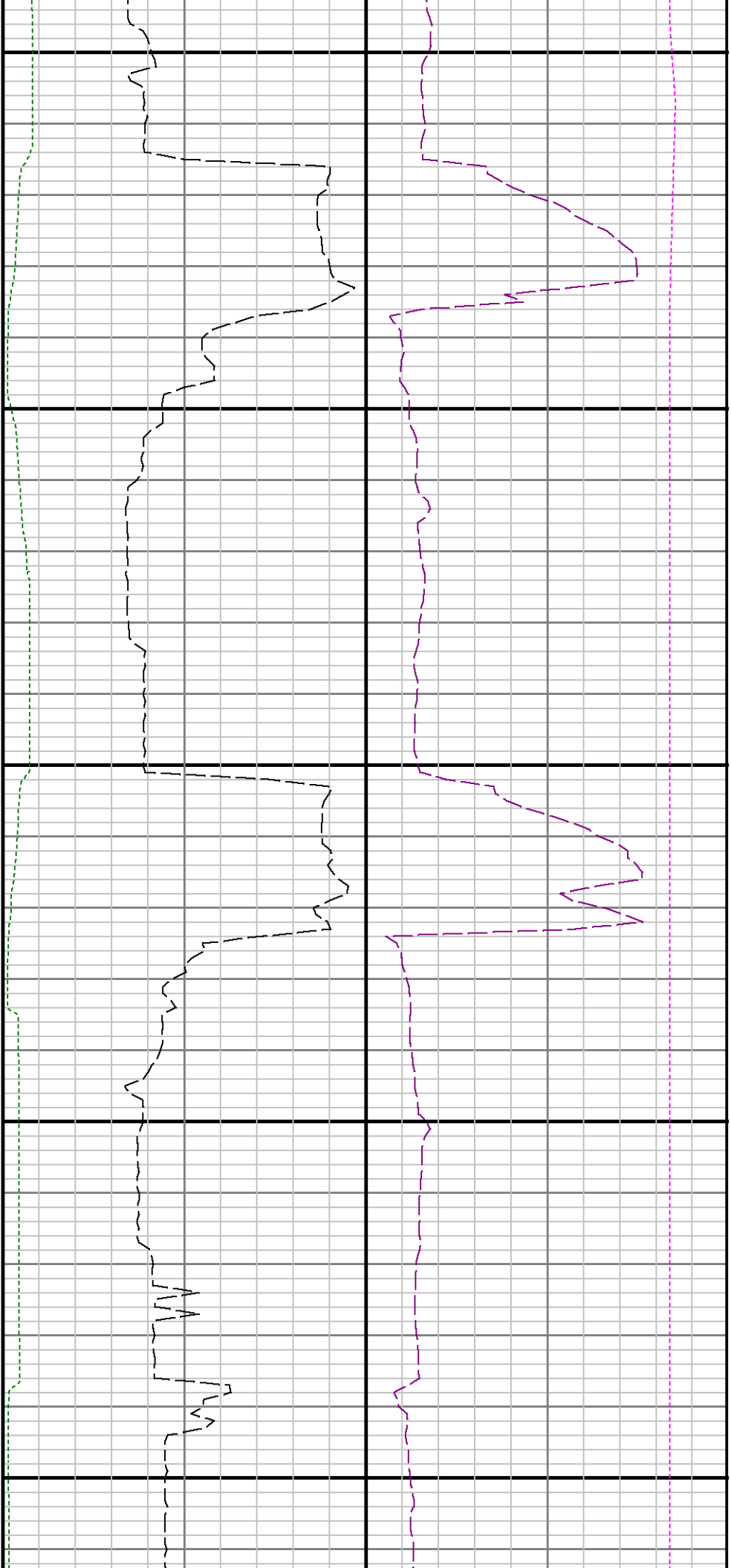


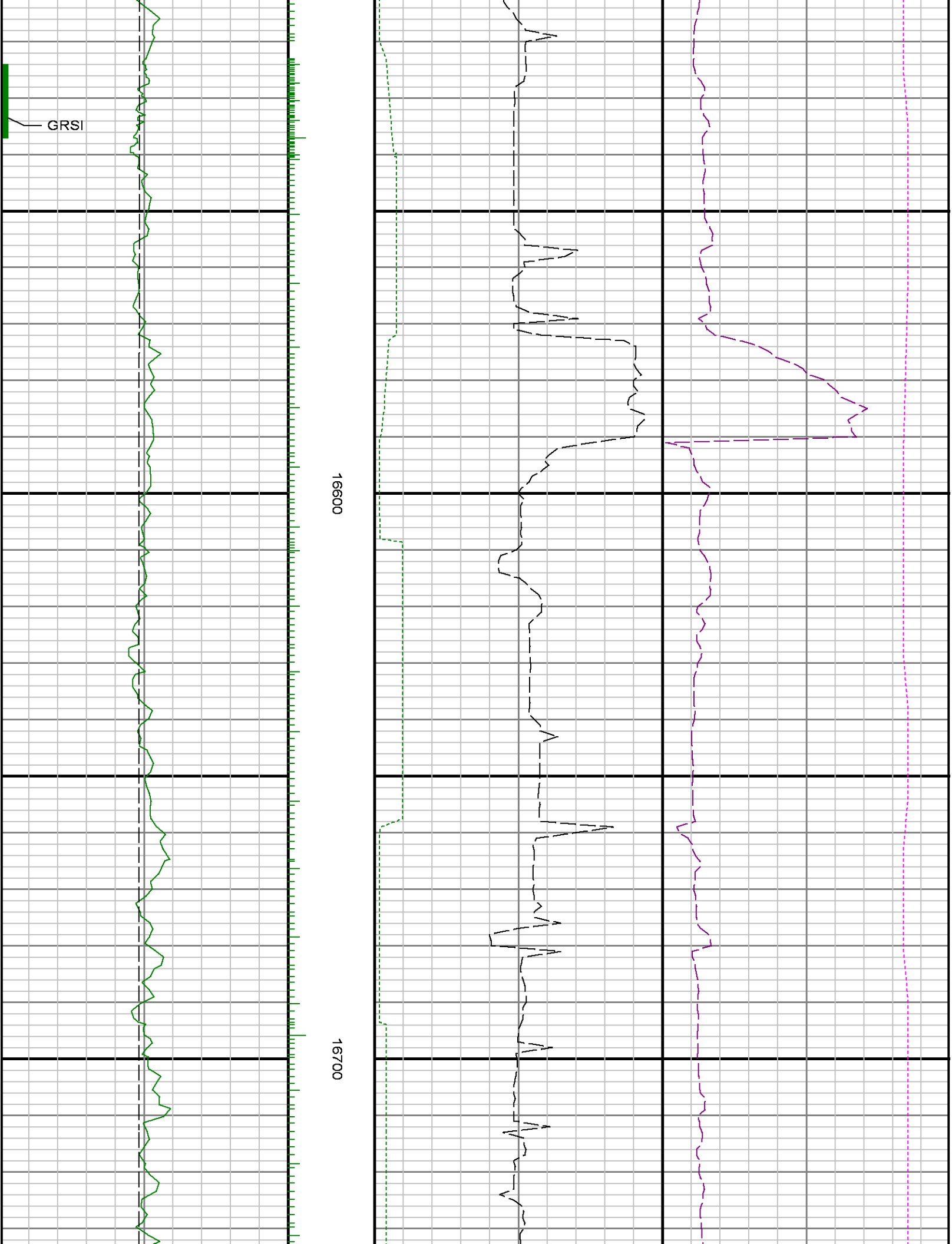


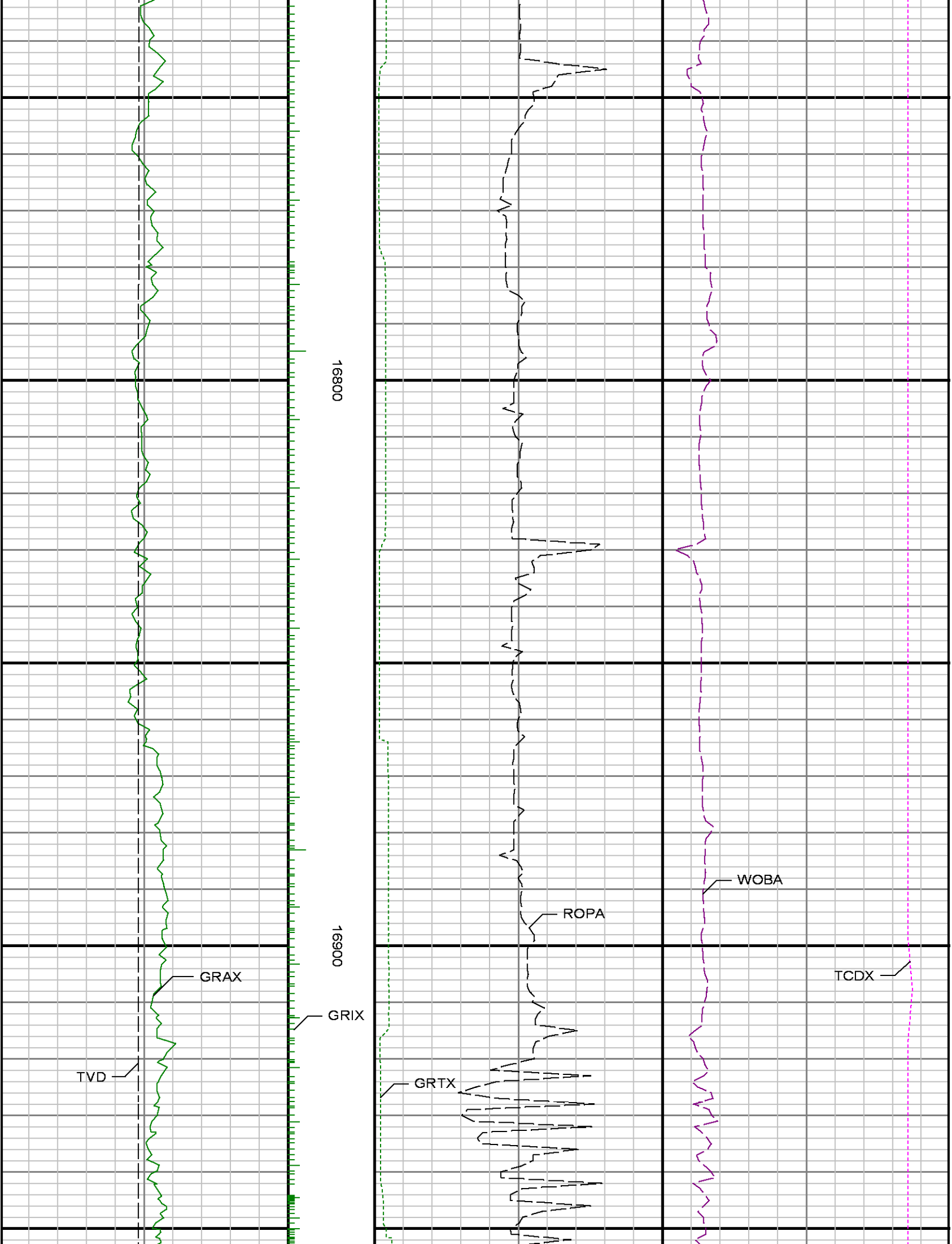
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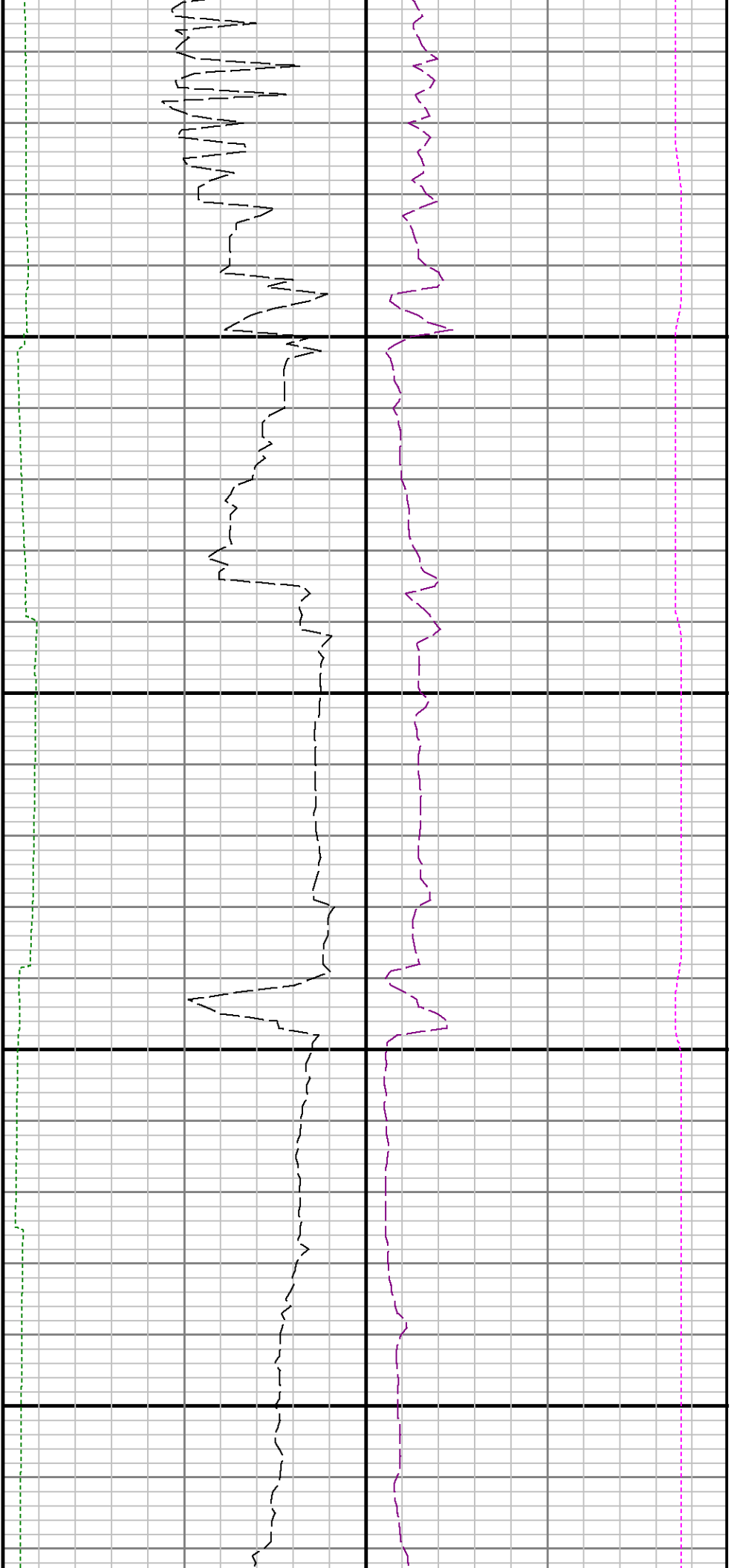
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17000

17100

