



Realtime Log

Natural Formation Evaluation Gamma Ray

Scale: Company: Noble Energy

Well: KIDD LD22-780

Field: Weld County

Region: Continental US Country: United States

Status: Surface Location: Other Services:

Final Print

Latitude: 40° 43' 51.060" N

Longitude: 103° 51' 17.388" W

API Number: 05123415890000

SEC: 22

TWN: 9N

RNG: 58W

Permanent Datum (P.D.): Ground Level Elevation: 4822.00 ft.

Log Measured From: Rig Floor 30.00 ft. Above P.D.

Depth Reference: Driller's Depth

Elevations: N/A

KB: 4852.00 ft.

DF: 4822.00 ft.

Interval Logged Dates Magnetic Field Reference

Top: 711.0 ft. Date From: 03/Sep/2015 Dip Angle: 67.39 ° Azi Reference North: Grid

Bottom: 10444.0 ft. Date To: 07/Sep/2016 Total Mag to Reference

Spud Date: 02/Sep/2015 Field Strength: 52885.2 nT North Correction: 6.95 °

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	765.0 ft.	9.625 in.	36.00 lb/ft	Surface	755.0 ft.
8.750 in.	765.0 ft.	6228.0 ft.	7.000 in.	26.00 lb/ft	Surface	6218.0 ft.
6.125 in.	6228.0 ft.	10500.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	10500.0 ft.	13.500 in.	765.0 ft.	0.0 ° / 0.0 °	1.7 ° / 251.0 °
			8.750 in.	5463.0 ft.	1.7 ° / 251.0 °	87.2 ° / 1.2 °
			6.125 in.	4272.0 ft.	87.2 ° / 1.2 °	89.8 ° / 1.7 °
					/	/
					/	/
					/	/
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig: / Contractor: H&P 326	/ Noble Energy
PATS	6.4.1.34	Job No: 7469123	/ D&E
		District: / Unit: RMD	

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Time (hrs.)
							Top (ft.)	Bottom (ft.)	From (ft.)	To (ft.)	Start	End	
1	1	1	8.750	PDC	3.000	Steerable	711.0	6175.0	765.0	6228.0	03/Sep/2015 08:30	04/Sep/2015 14:18	24.7
2	2	2	6.125	PDC	3.000	Steerable	6175.0	10444.0	6228.0	10500.0	05/Sep/2015 16:30	07/Sep/2015 04:00	32.8

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Austin Small	02/Sep/2015	07/Sep/2015	Nicholas Gerard	02/Sep/2015	07/Sep/2015	Mike Gurnsey	03/Sep/2015	07/Sep/2015
Ken Perry	03/Sep/2015	07/Sep/2015	Terry Marshall	03/Sep/2015	07/Sep/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+
04/Sep/2015 16:00	1	5400.0	Water Based	9.8	43	9.5	N/A	0/92.2	Flow Line	1200	N/A
06/Sep/2015 04:00	2	7729.0	Water Based	10.0	39	10.1	N/A	0/91.4	Flow Line	1600	N/A
07/Sep/2015 04:00	2	10369.0	Water Based	10.1	37	9.4	N/A	0/91.2	Flow Line	1600	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	mins
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	11801247	Directional	56.19	6.750	0.000
1	SRIG	12866799	Gamma	52.77	6.750	3.250
2	DIR	12546339	Directional	60.59	4.750	2.750
2	SRIG	11732967	Gamma	57.17	4.750	2.750

Service and Tool Mnemonics

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

Comments

- (1) Baker Hughes INTEQ run 1 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 8 3/4 inch bit and steerable assembly from 711 feet to 6228 feet MD (711 feet to 5829 feet TVD).
- (2) Baker Hughes INTEQ run 2 utilized 4 3/4 NaviGamma services (Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 6228 feet to 10500 feet MD (5829 to 5797feet TVD).
- (3) Depth measurements are obtained from a depth control system (Pason EDR) not supplied or operated by Baker Hughes Inteq. Due to a lack of control by Baker Hughes Inteq logging engineers, depth calibrations & measurements could not be independtly verified. Unverified depths supplied to Inteq are being used in present logging data.
- (4) A sliding indicator is shown on the left edge of track 1 as a heavy line. The indicator has been depth-shifted to the gamma sensor offset to correspond with gamma data acquired while sliding.

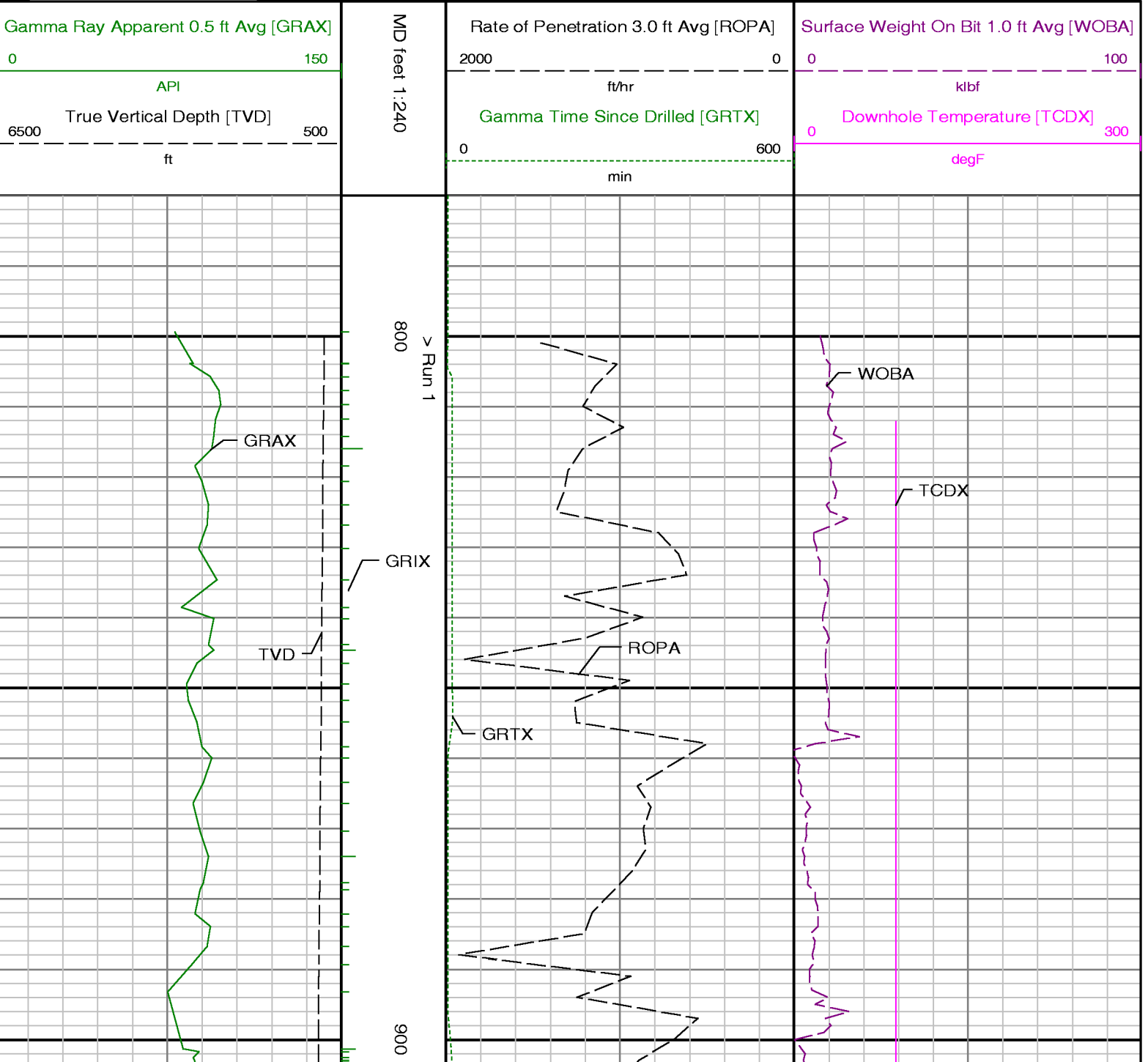
Remarks

Number	Measured	Hole	LWD	Remark
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	Depth (ft.)	Section (in.)	Run No.	
1	6228	8.750	2	The interval from 6175 to 6228 feet MD (5825 to 5829 feet TVD) was logged up to 26 hours after being drilled due to trip out of the hole for casing and cementing operations.
2	10444	6.125	2	The interval from 10444 feet to 10500 feet MD (5797feet TVD) was not logged due to to bit sensor offset at TD.



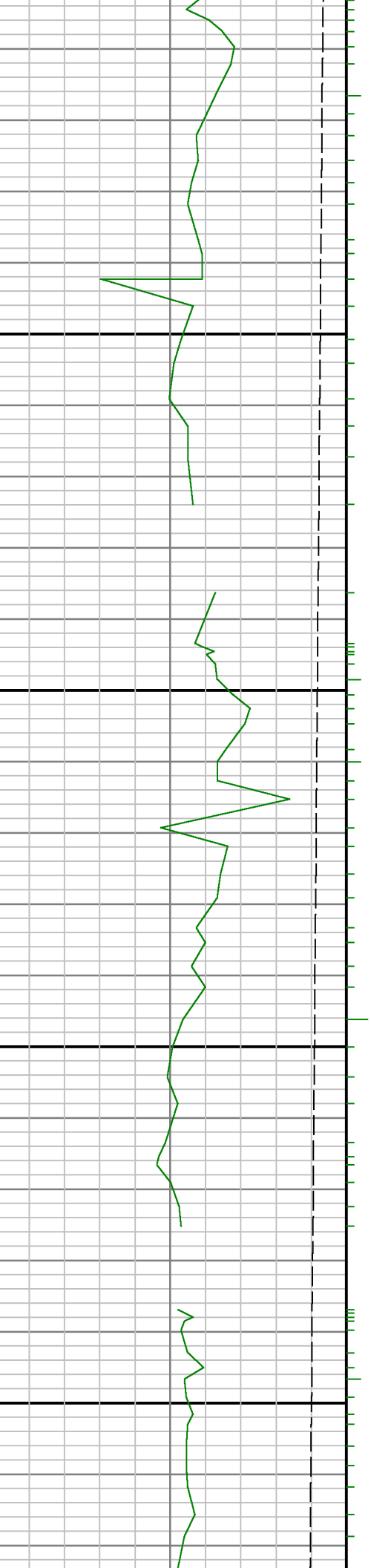
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 Well : KIDD LD22-780
 Interval : 780.00 - 10540.00 feet
 Created : 07/Sep/2015 5:45:55 AM

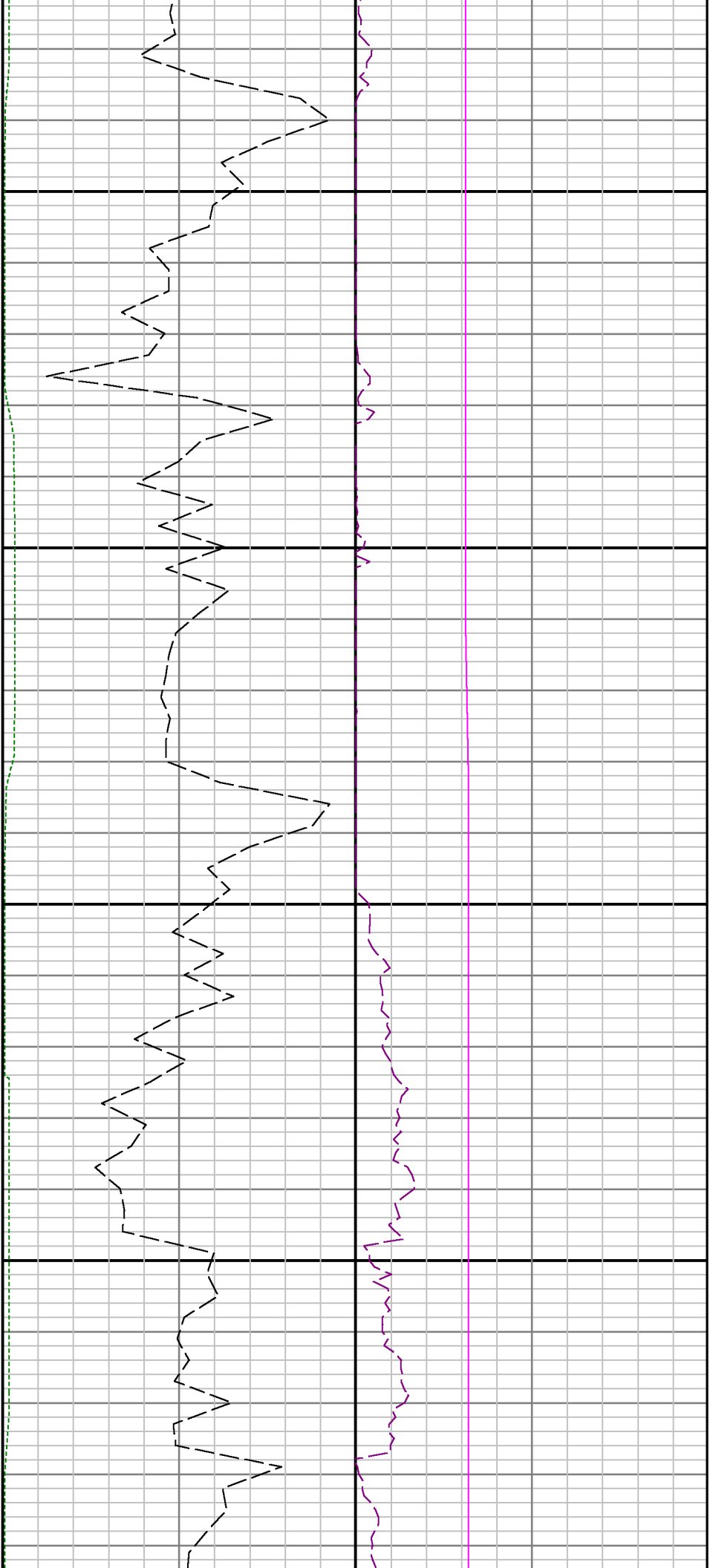




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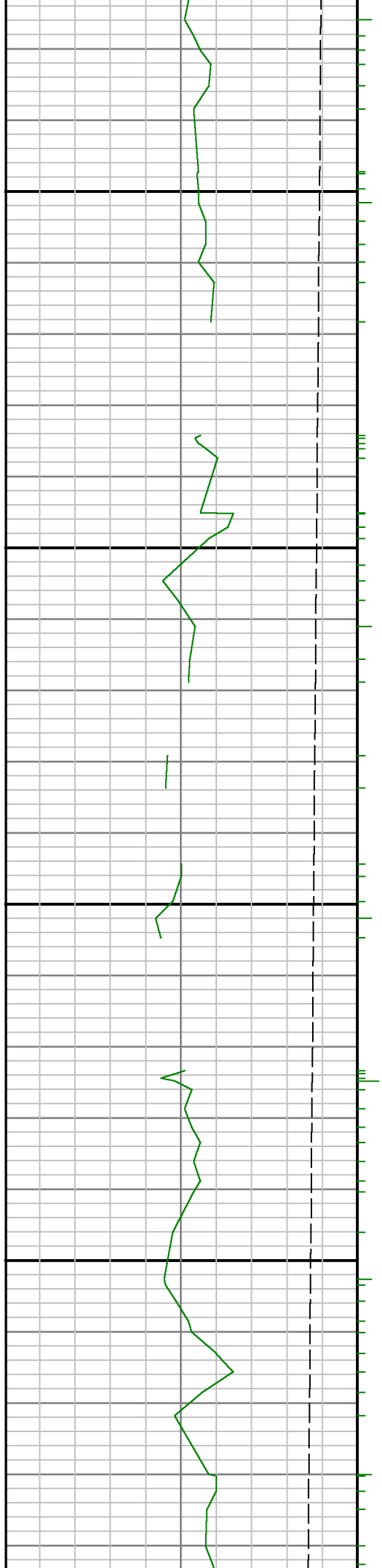
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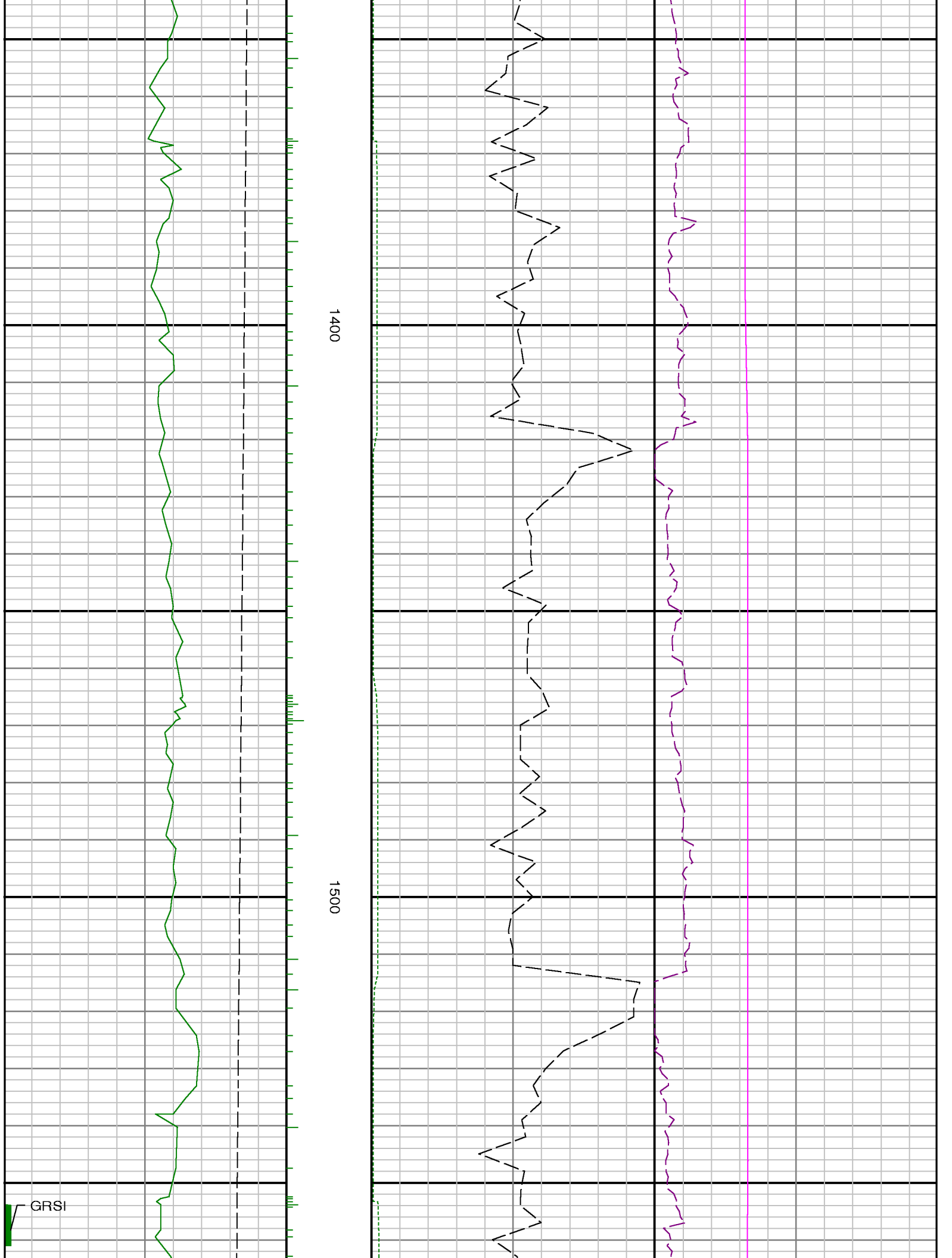


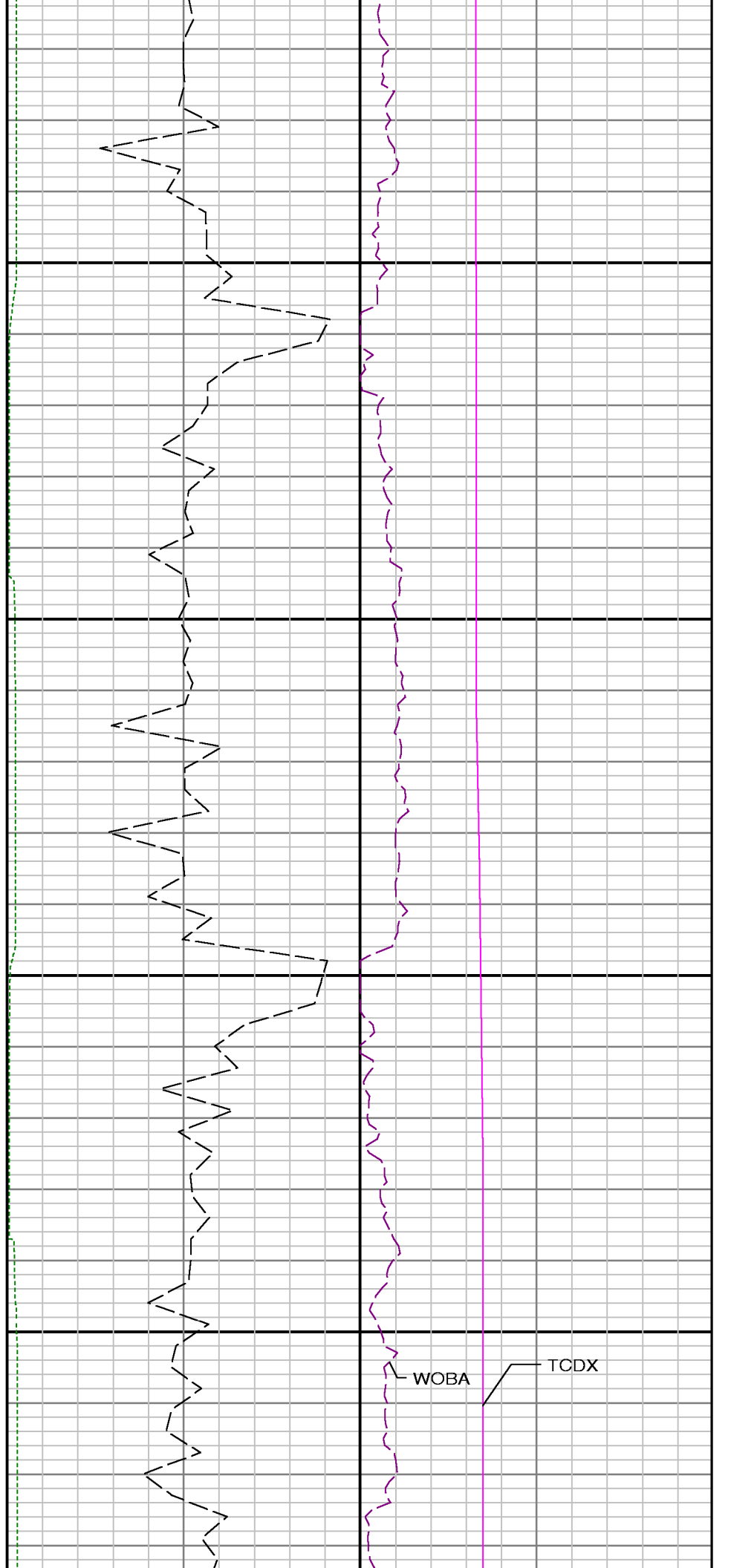
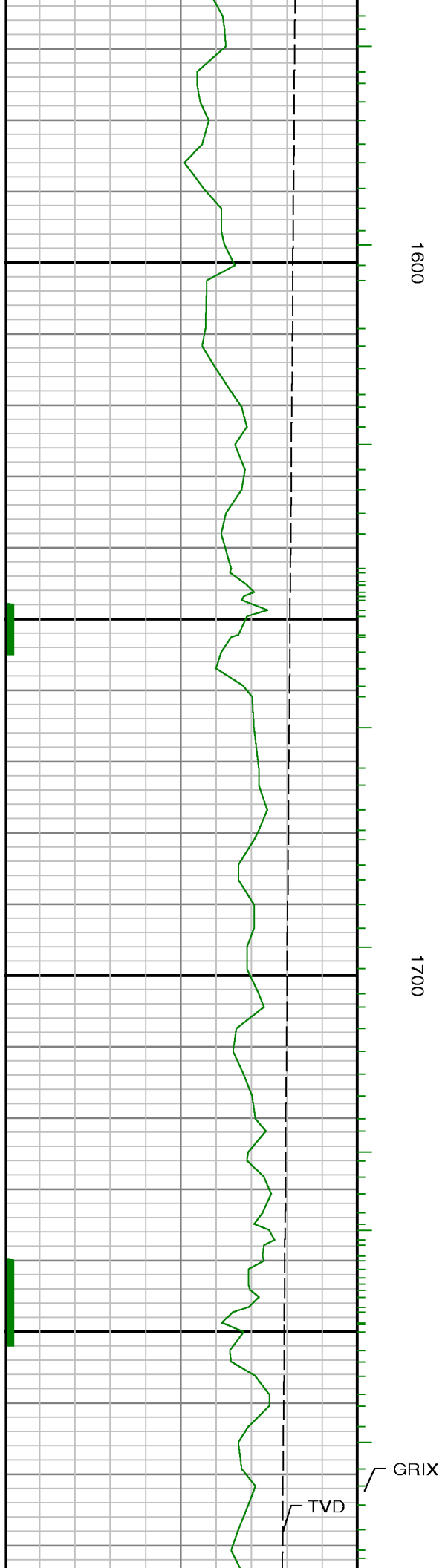


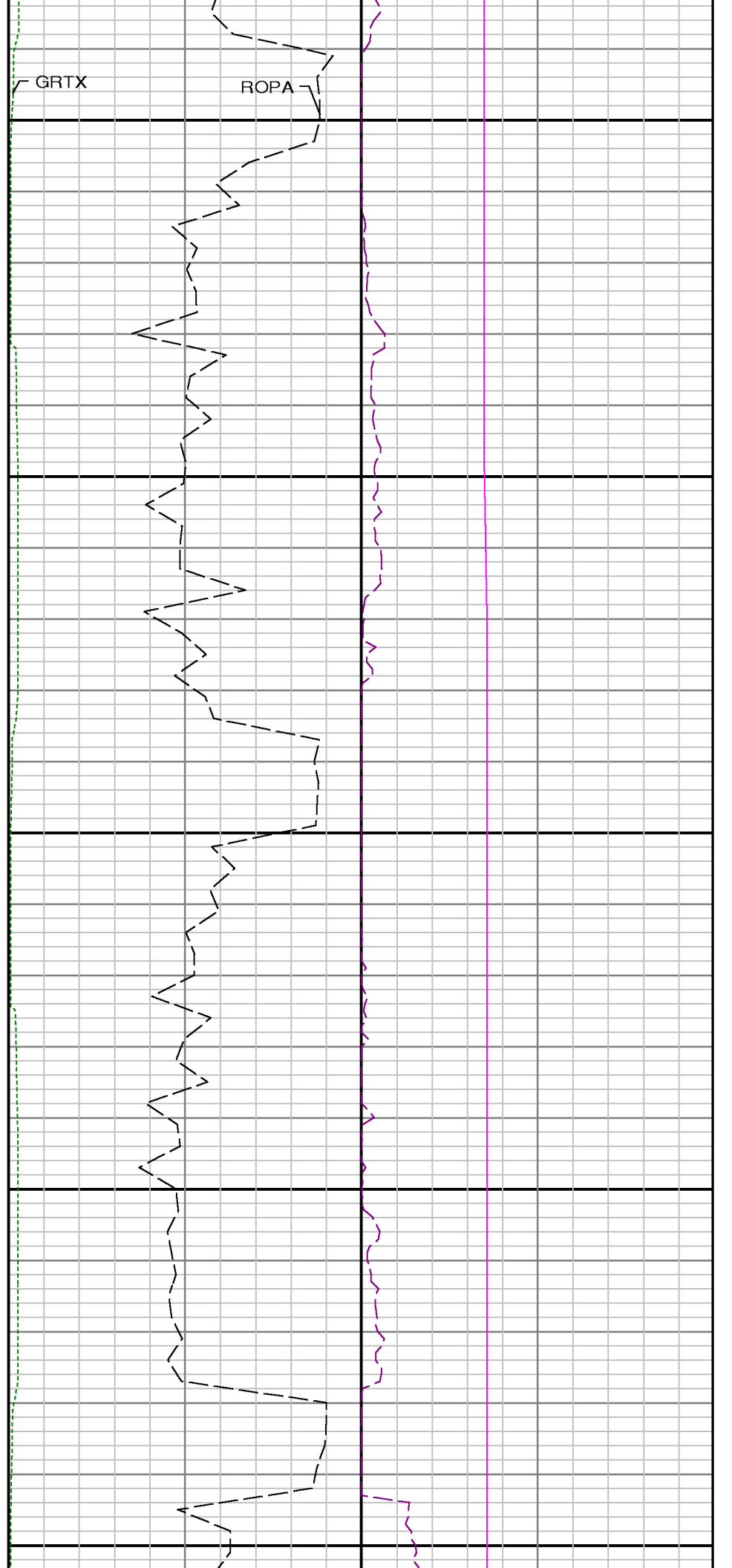
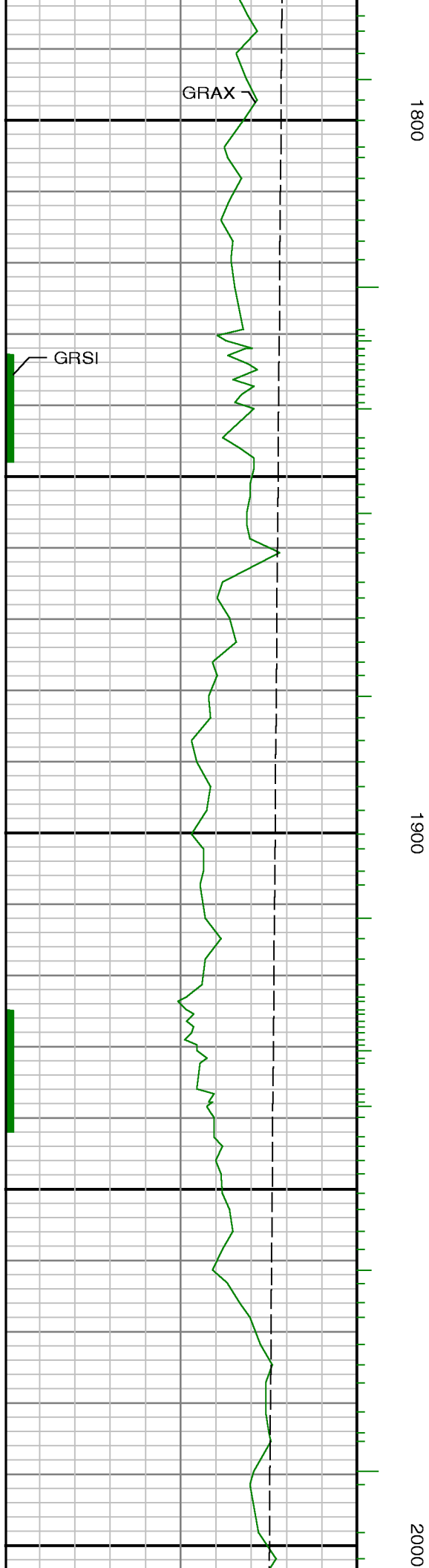
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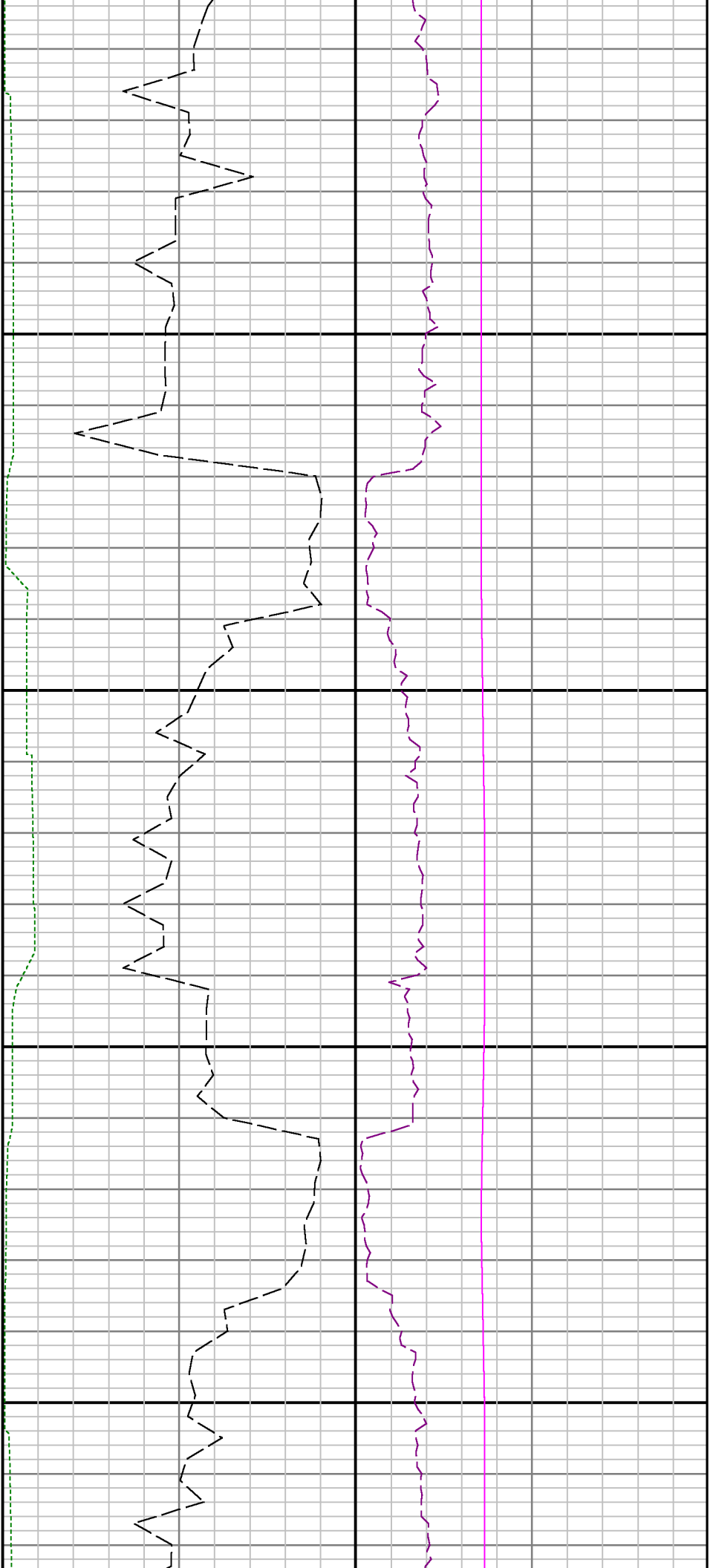
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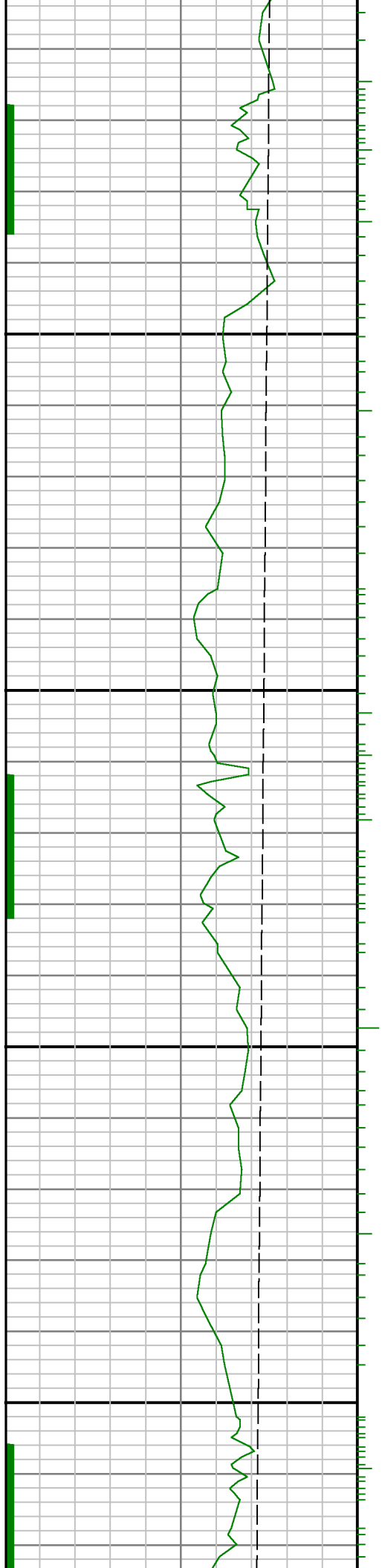






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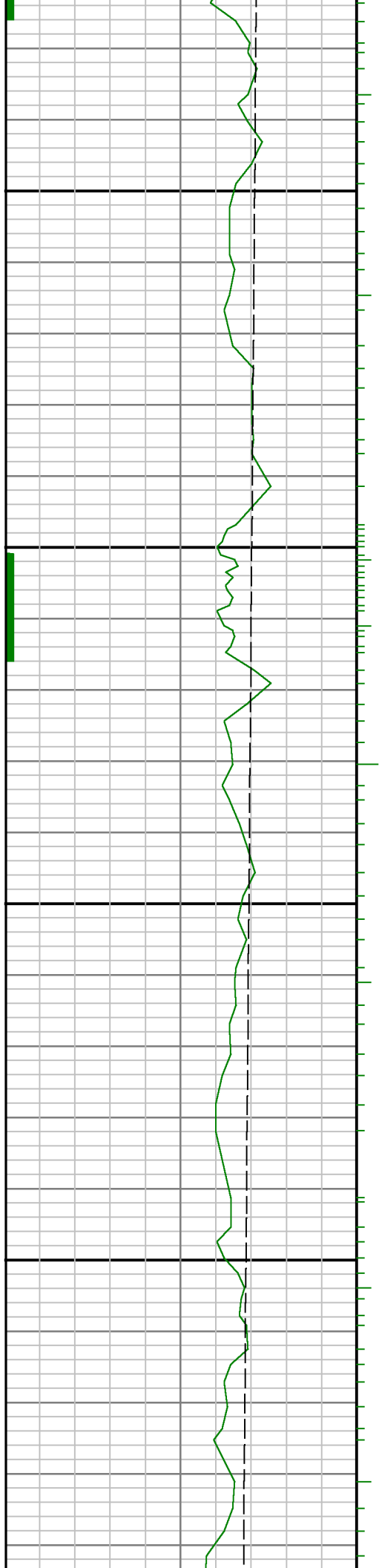
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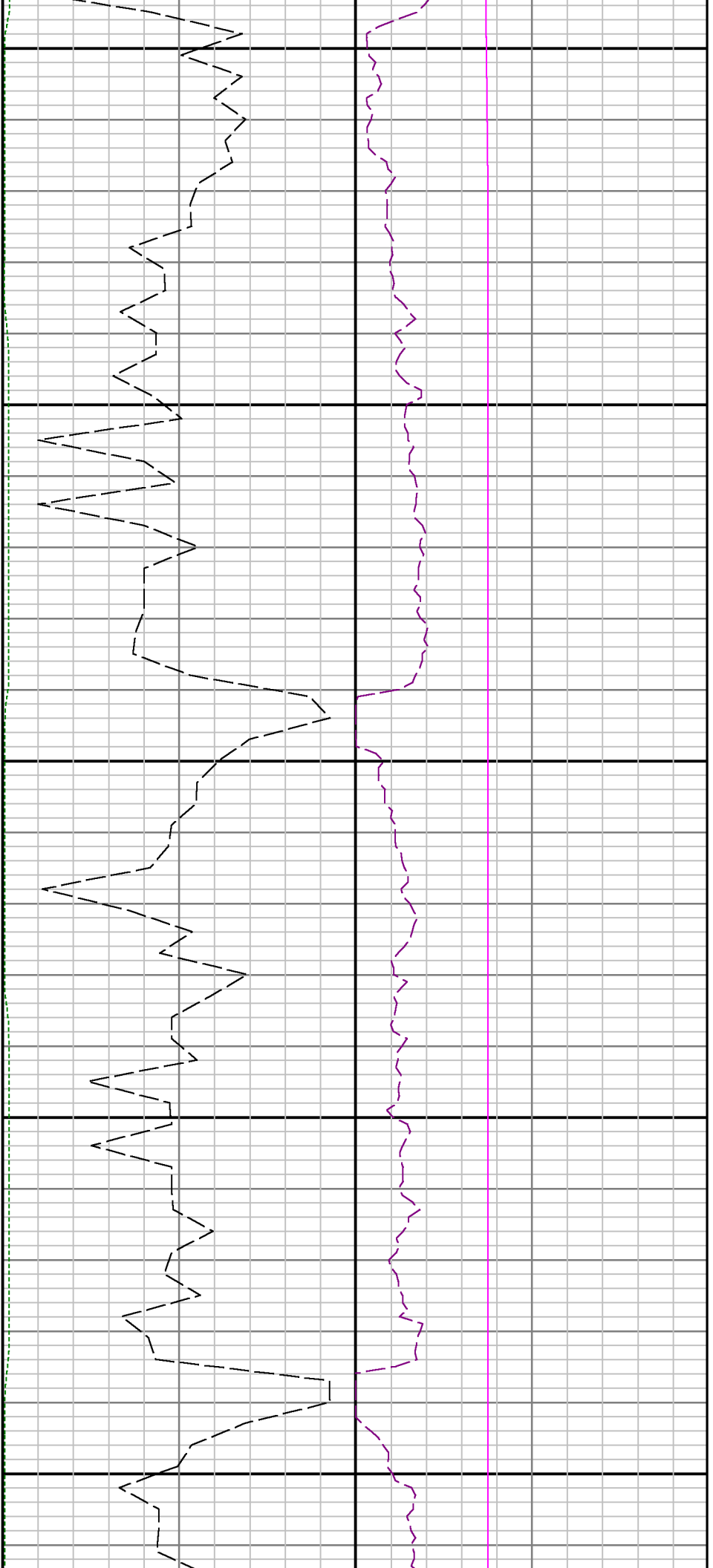




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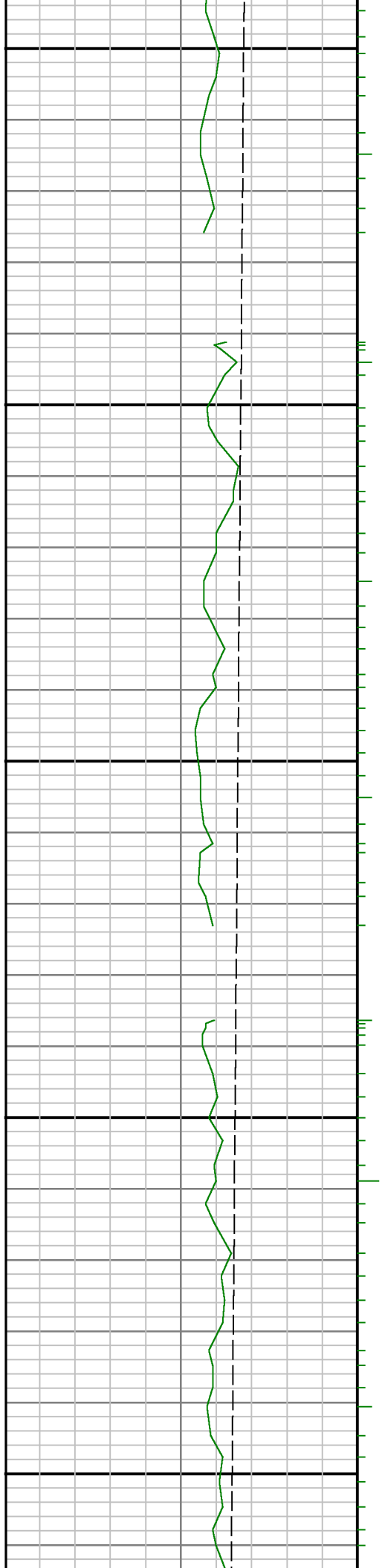
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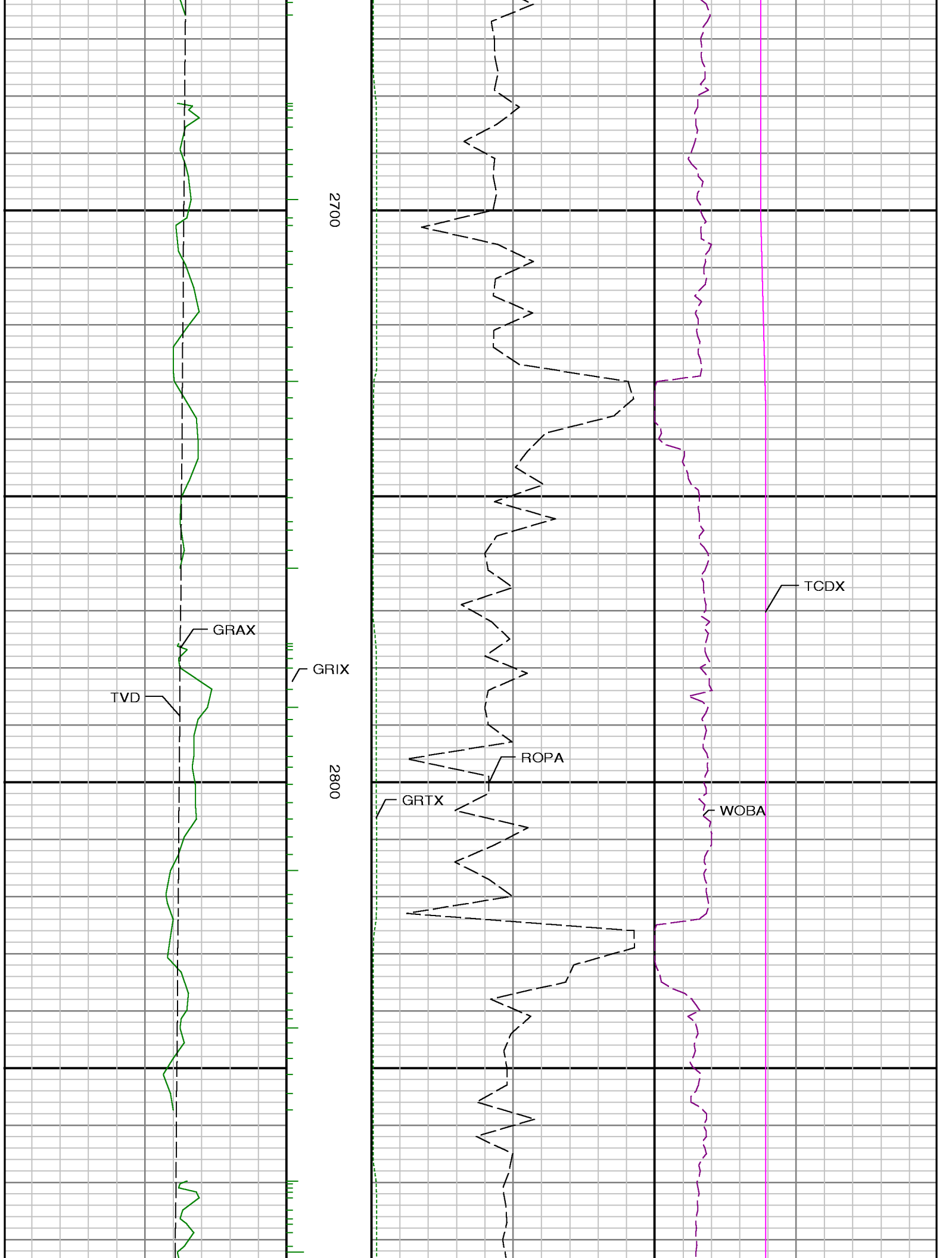


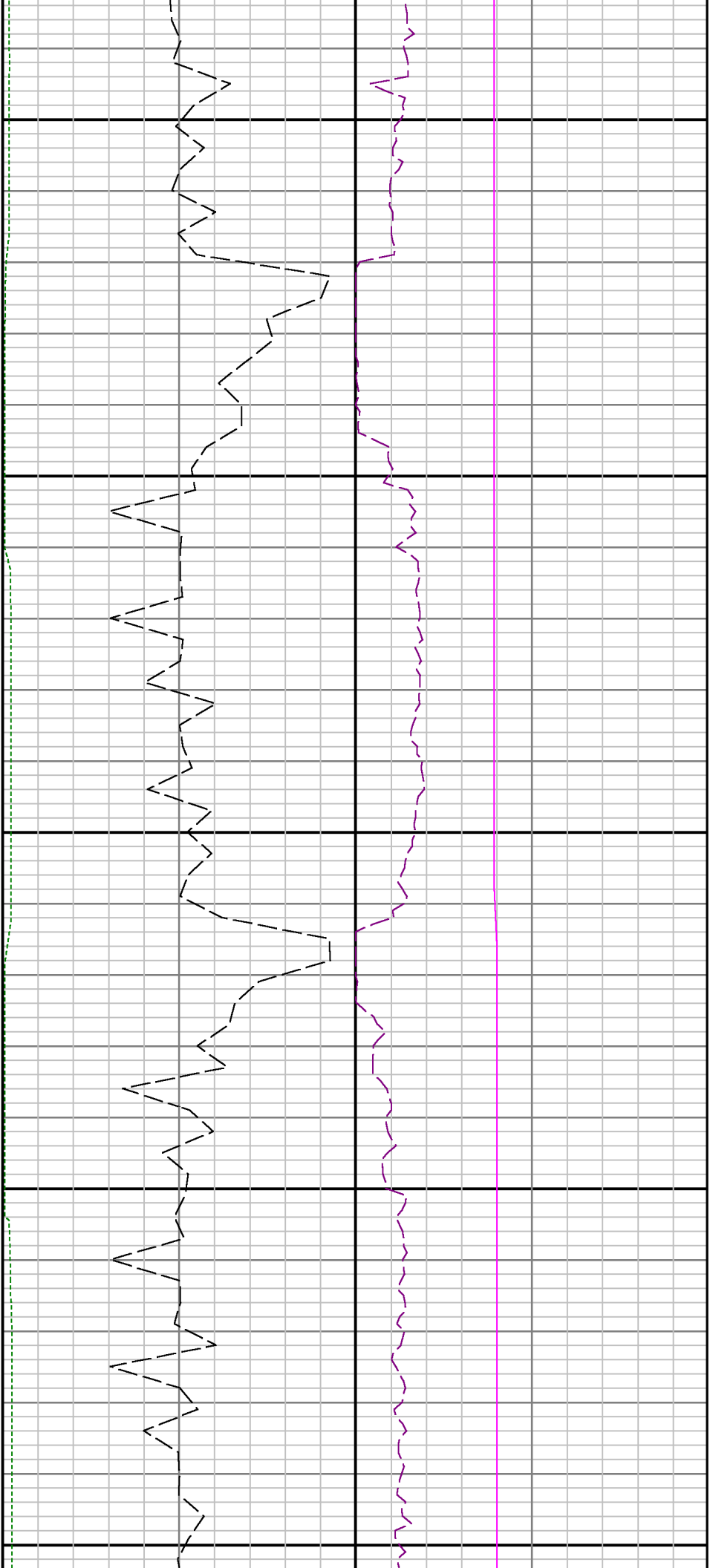


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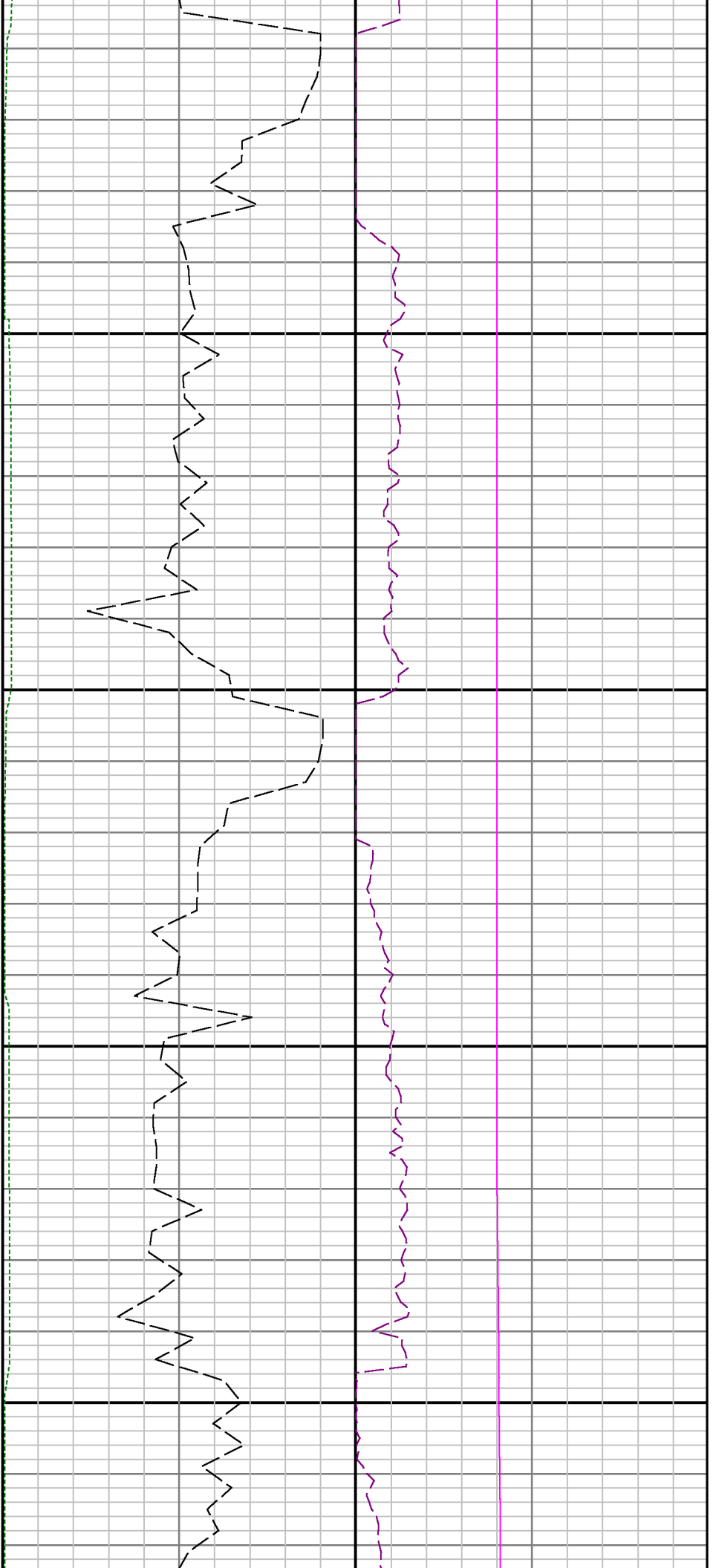


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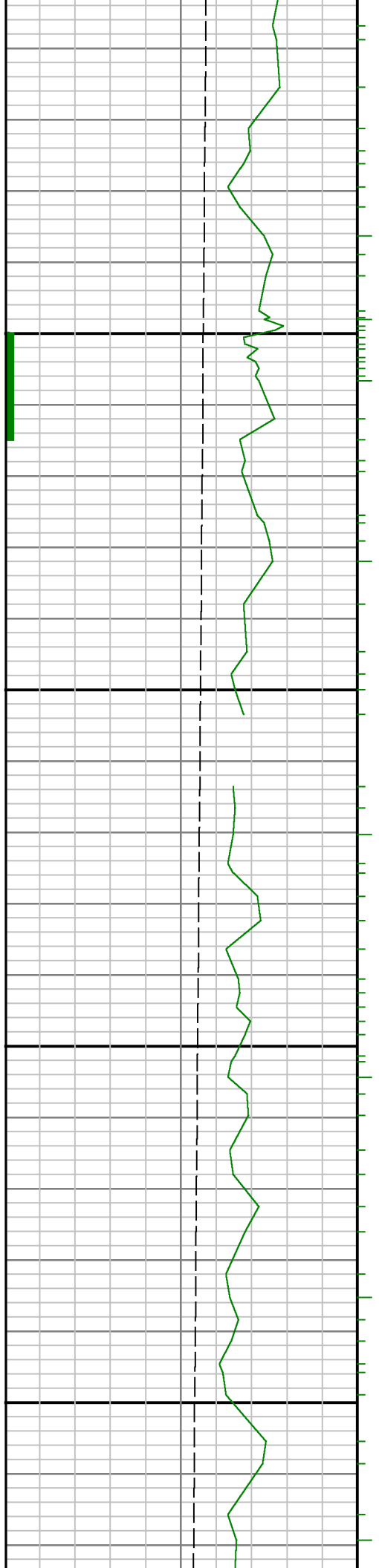
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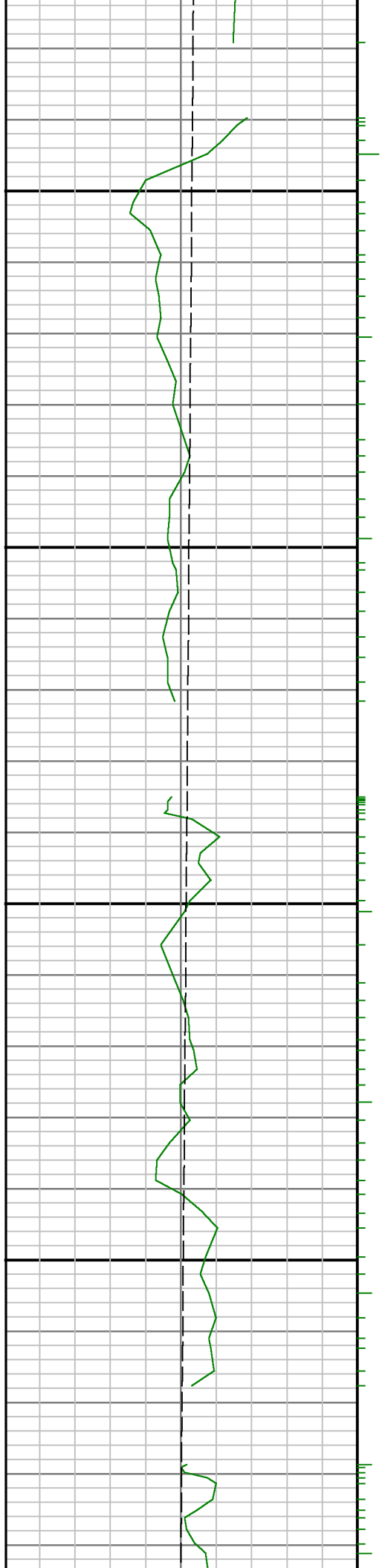
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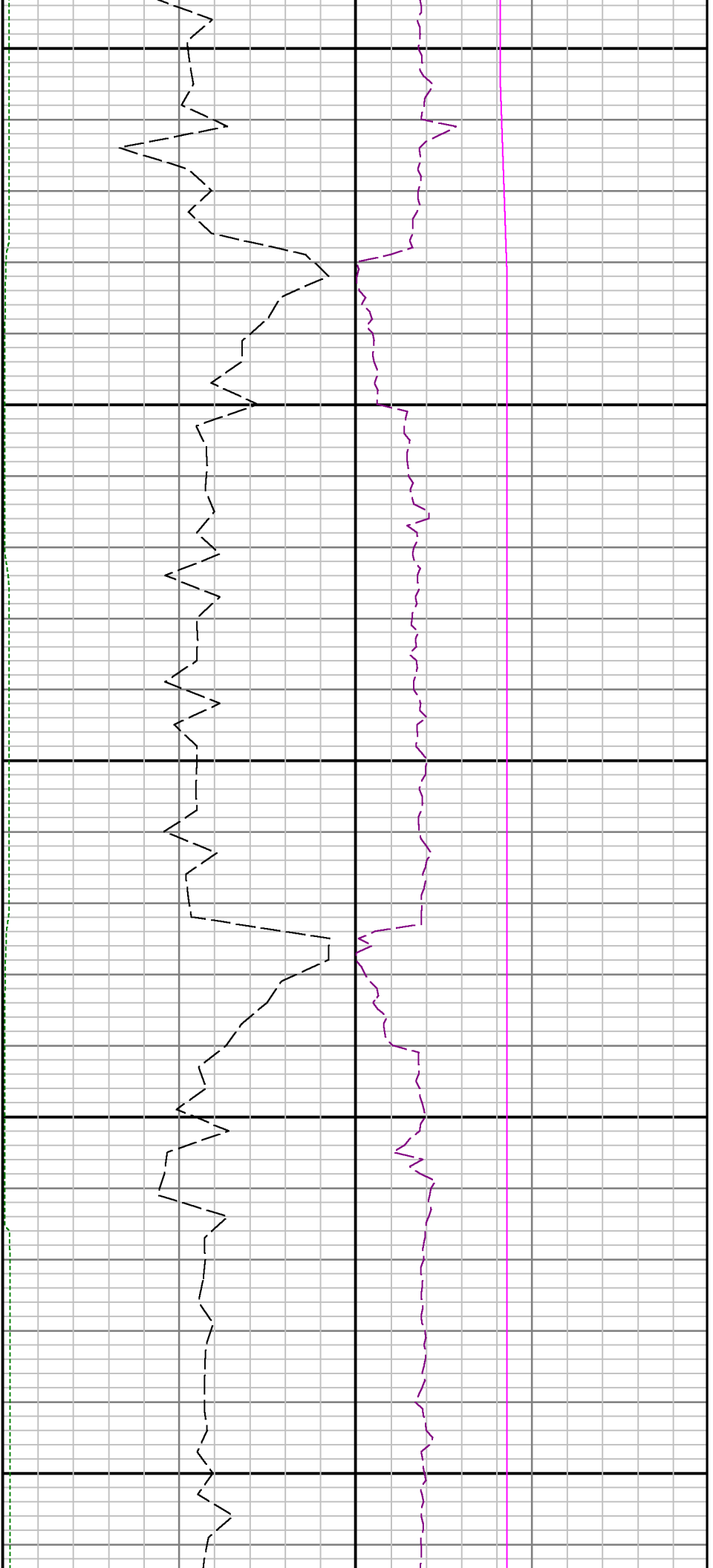




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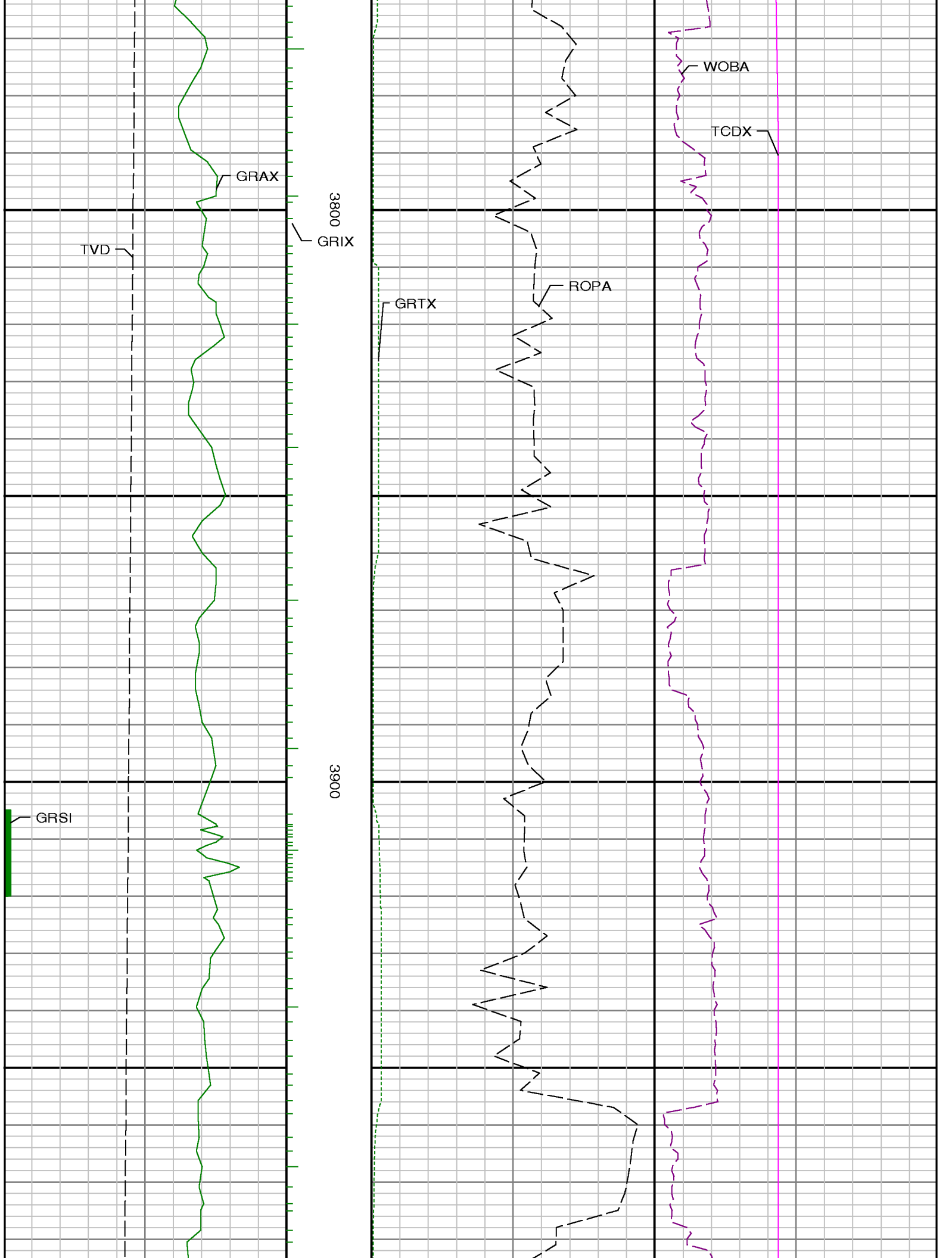
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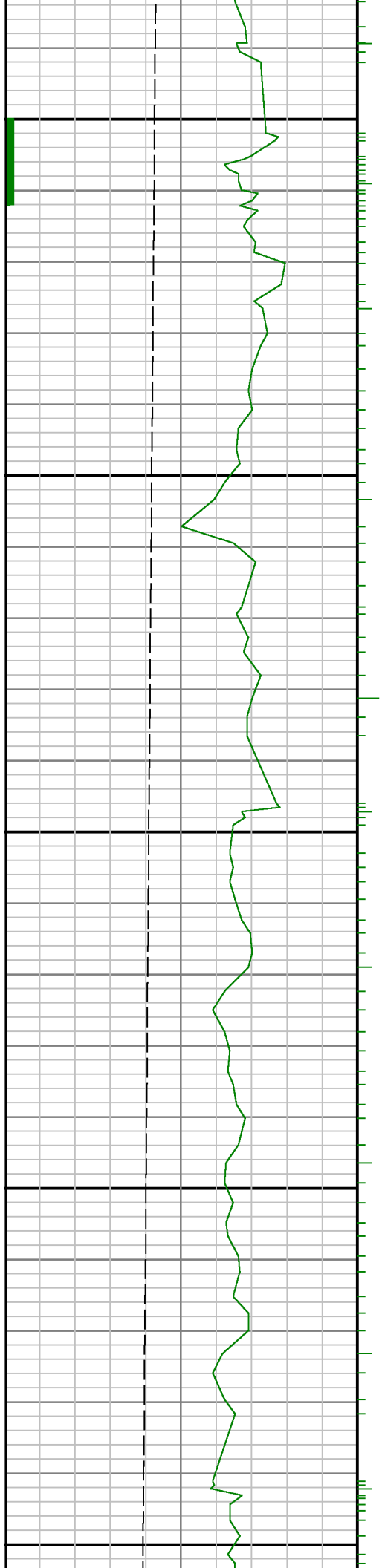




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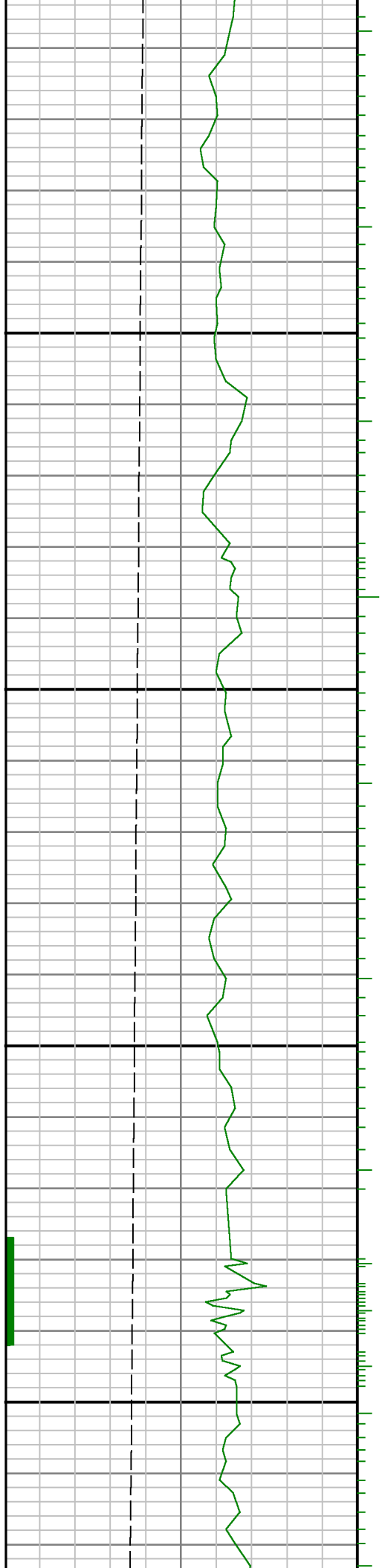
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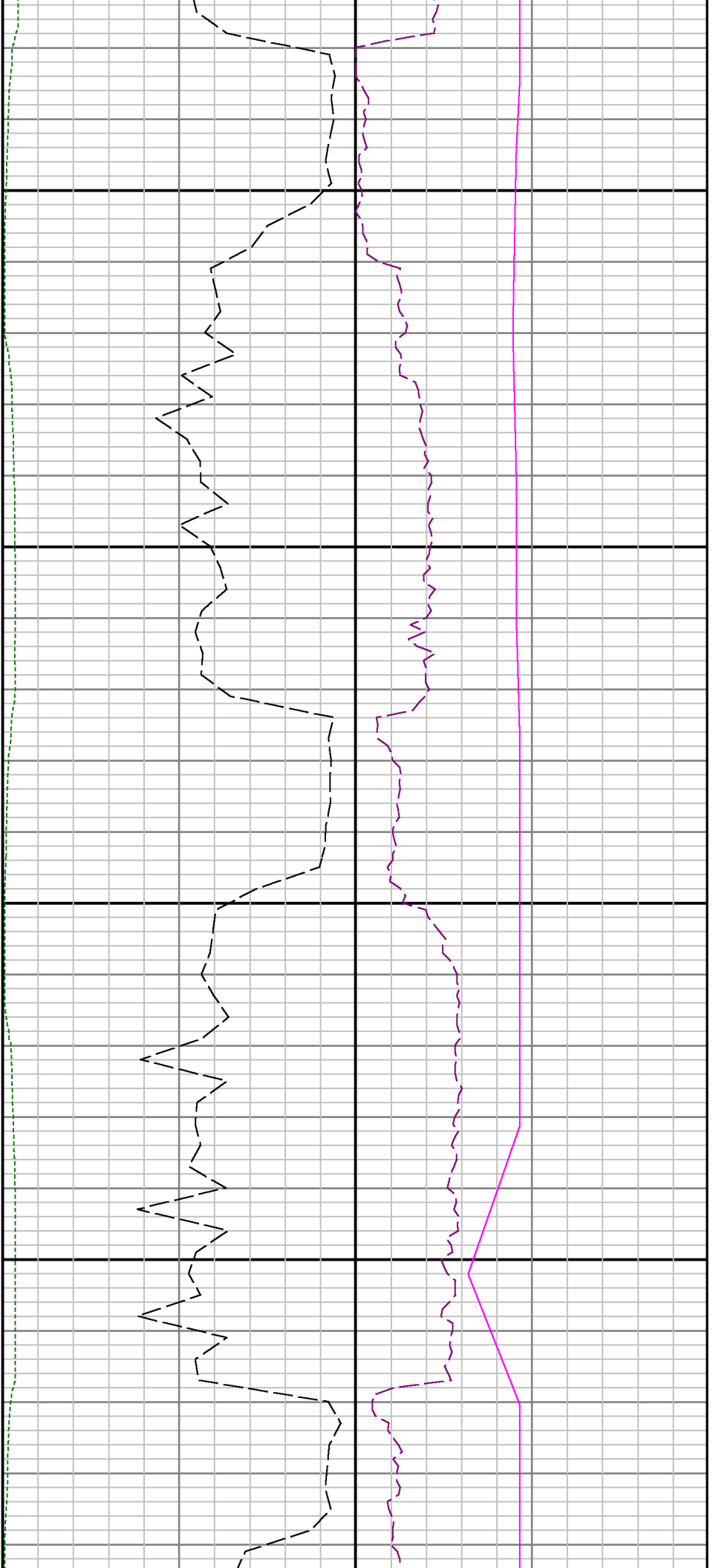




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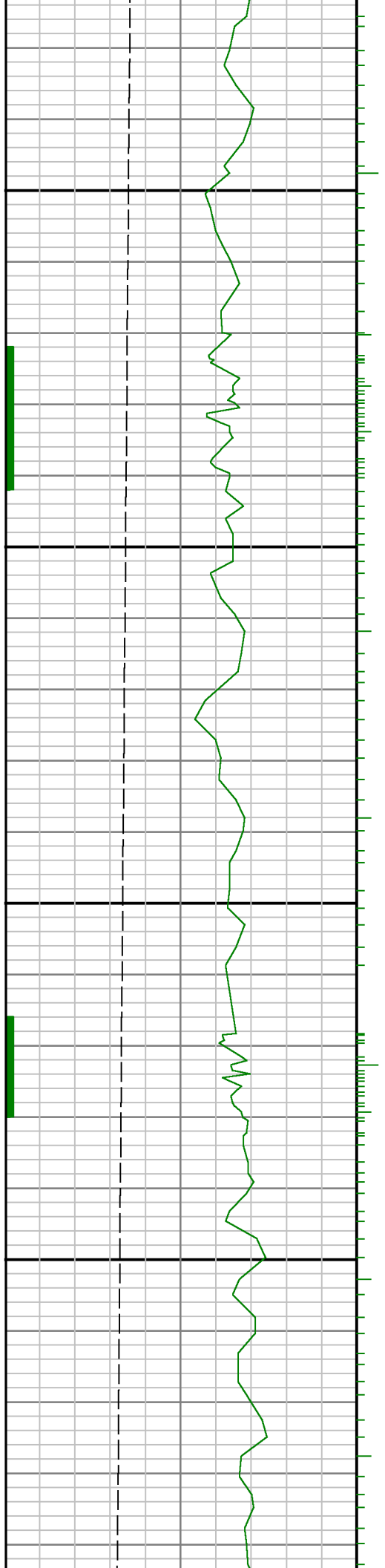
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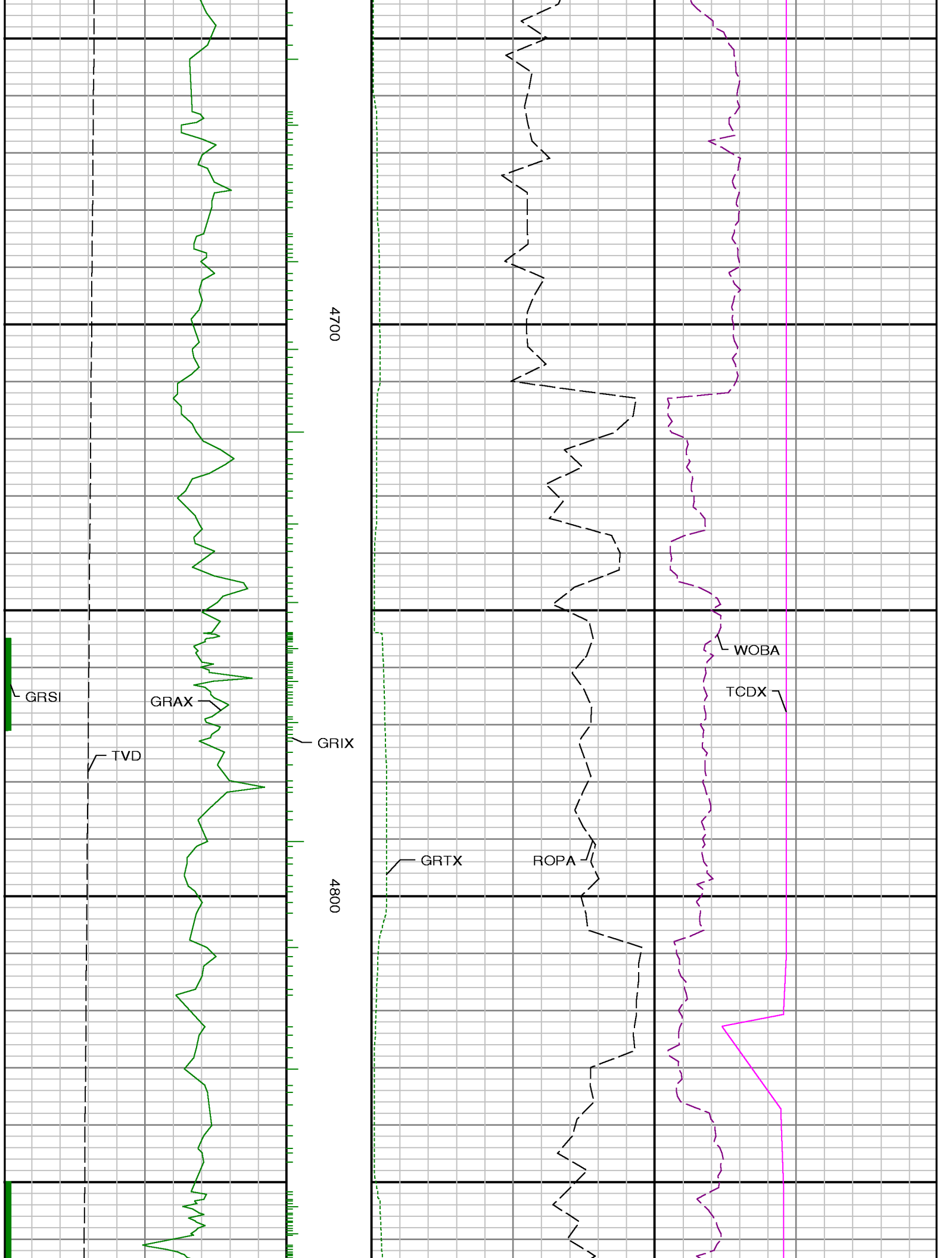


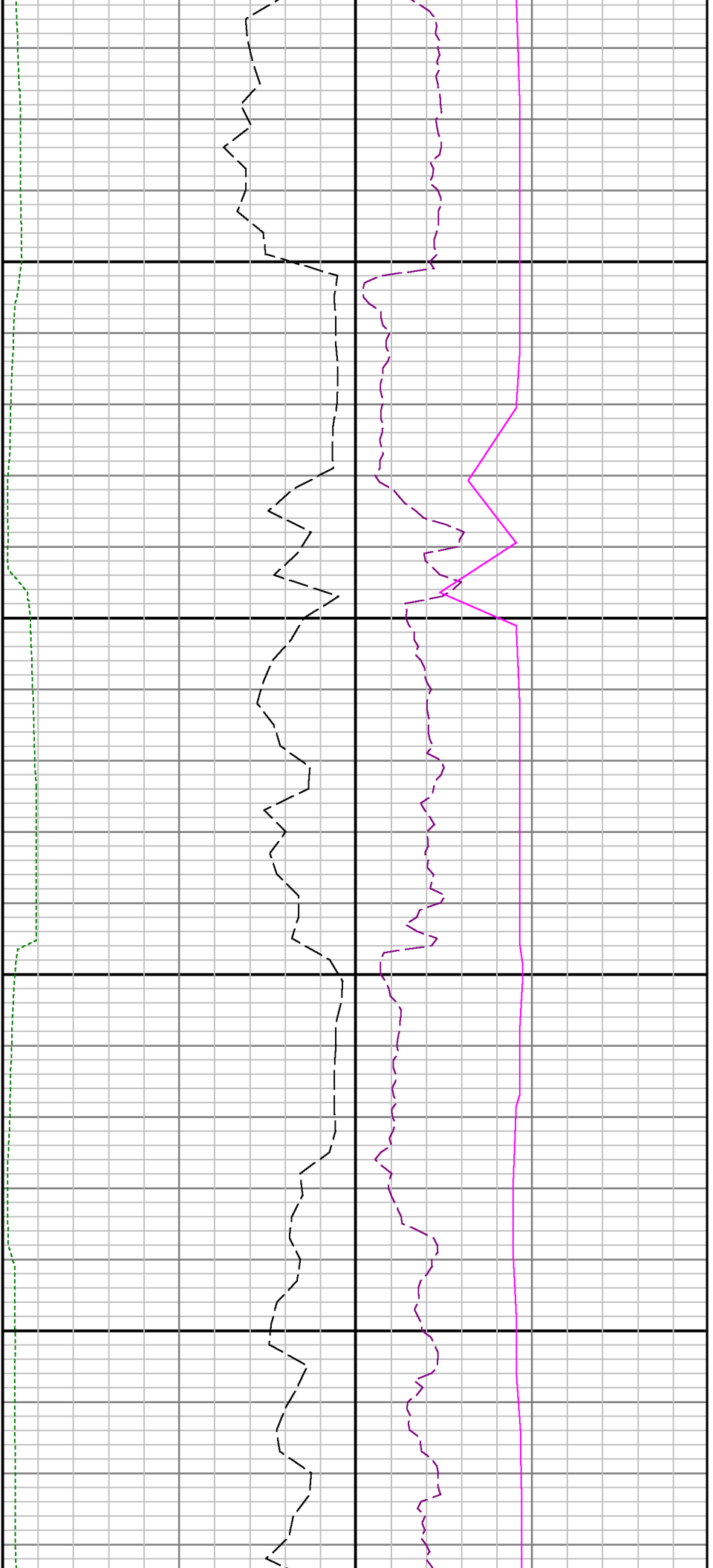


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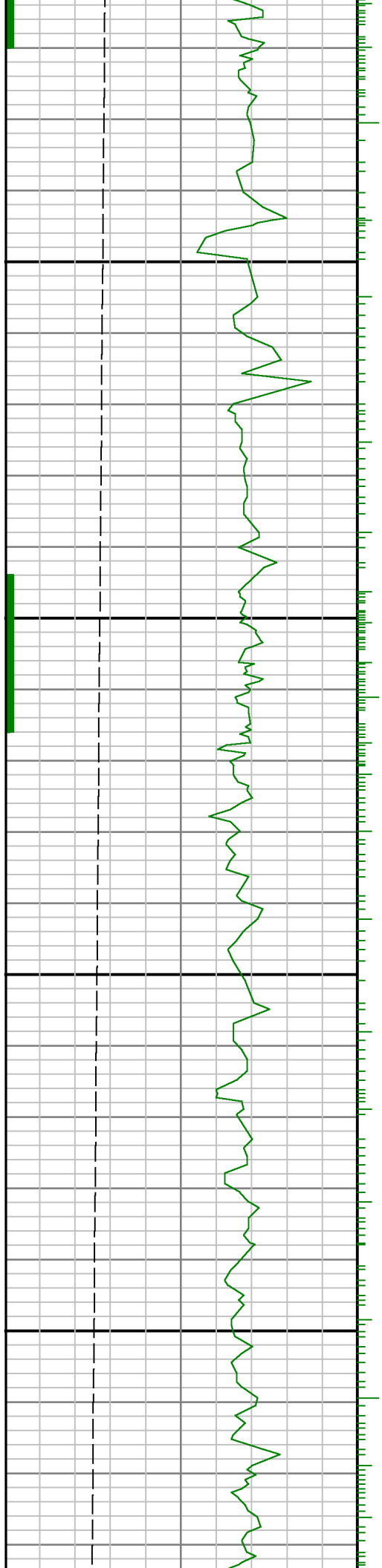


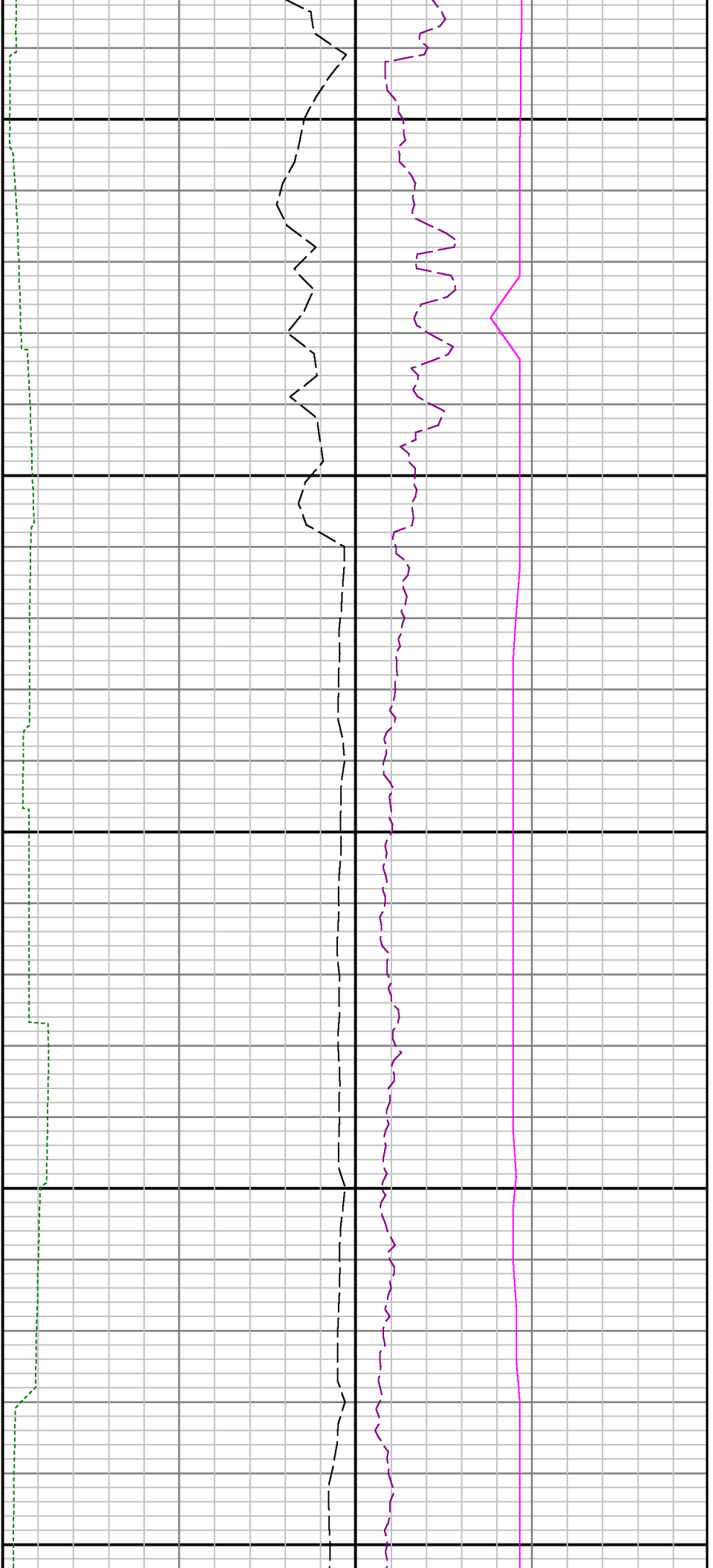




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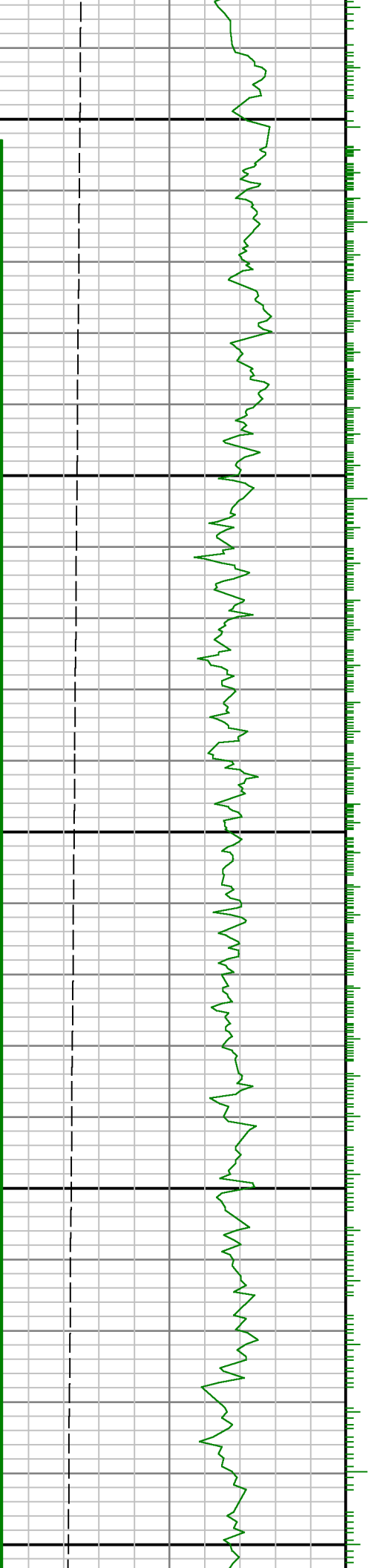


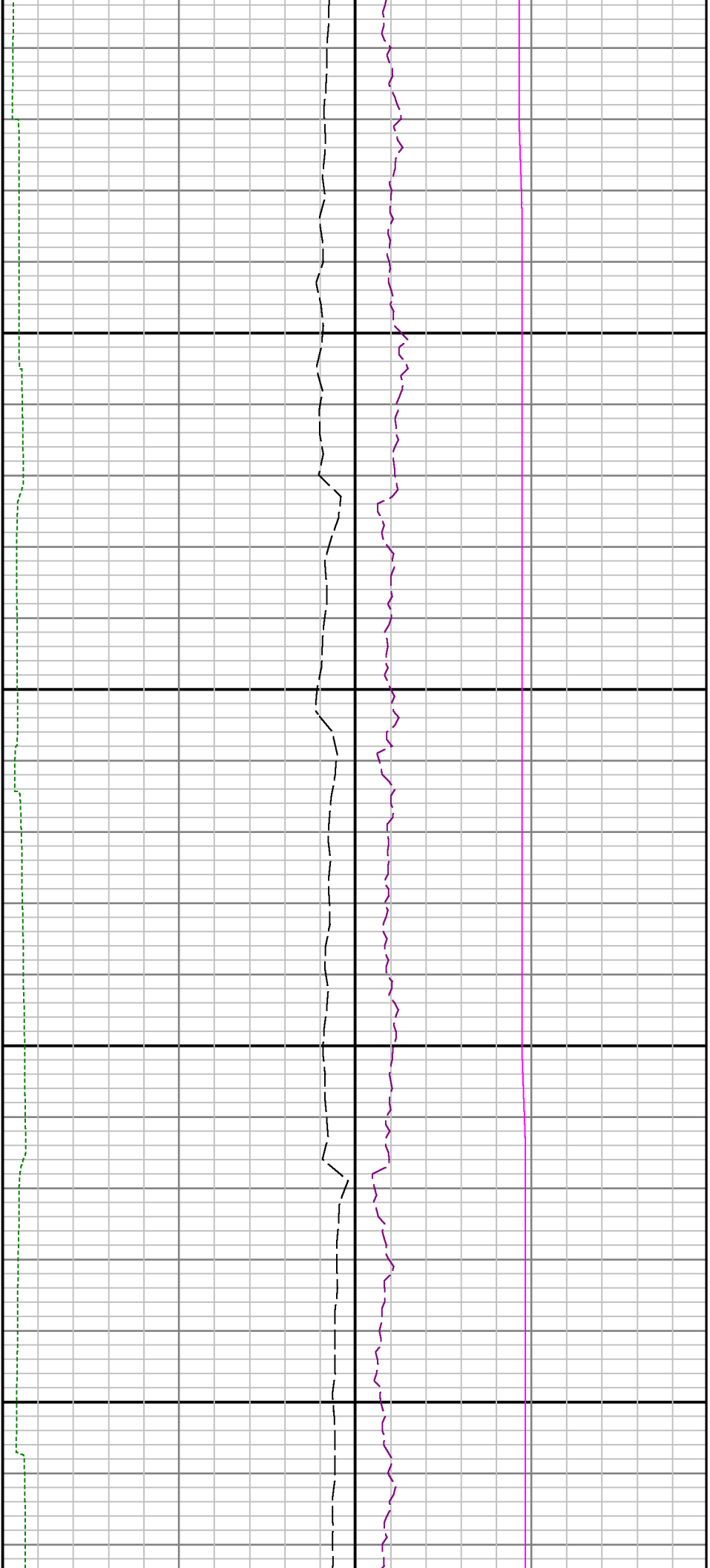


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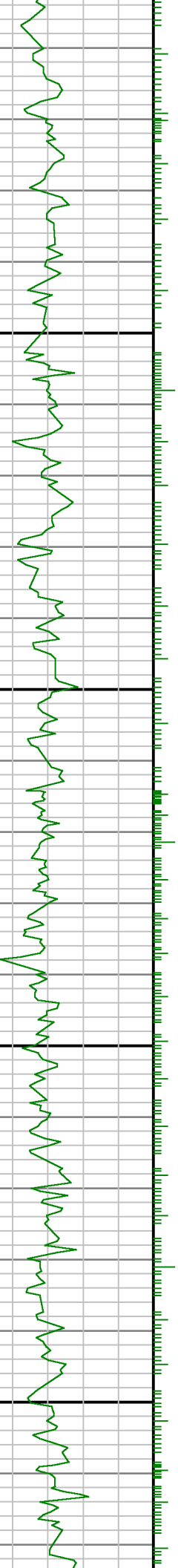
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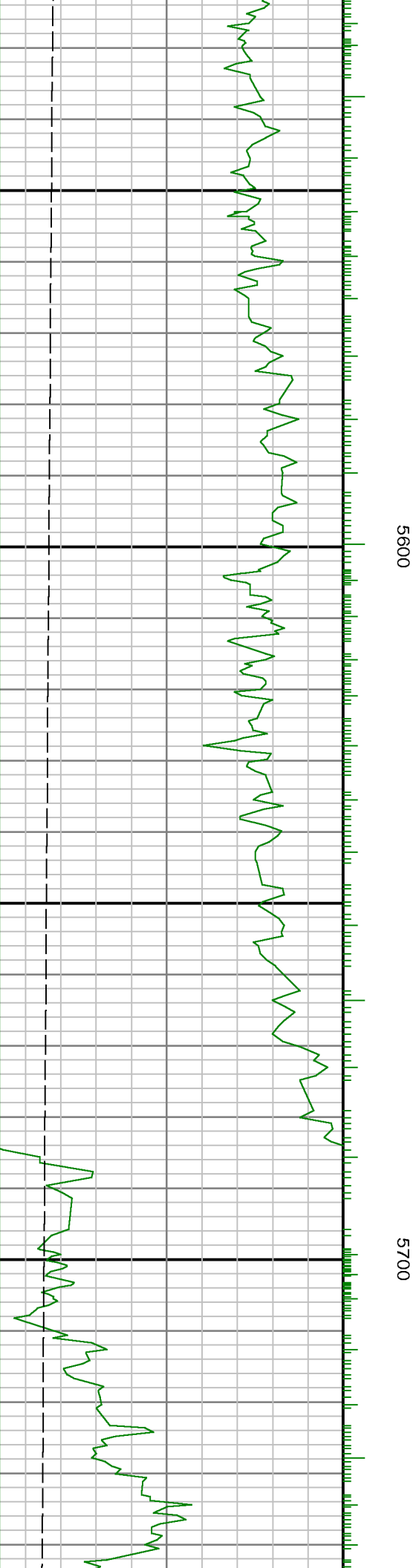
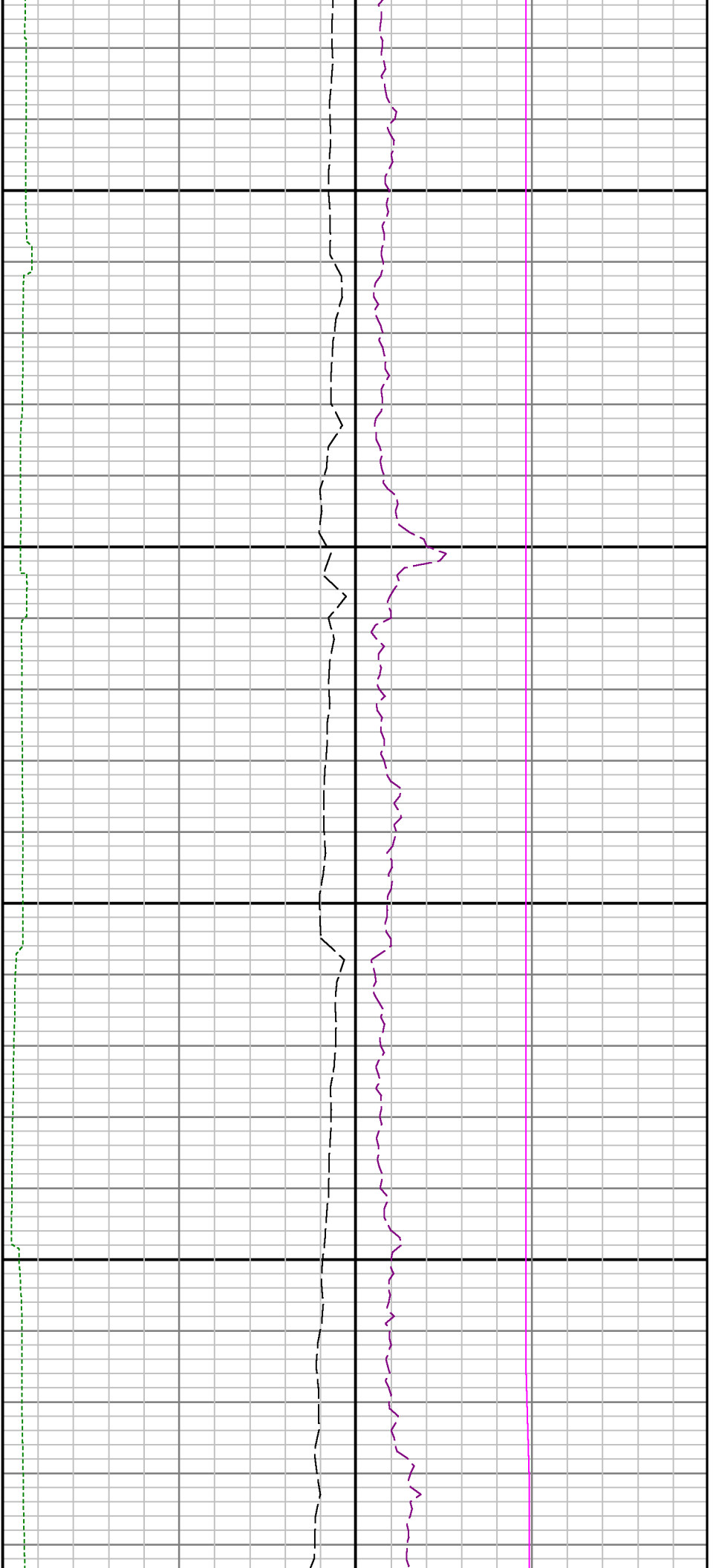


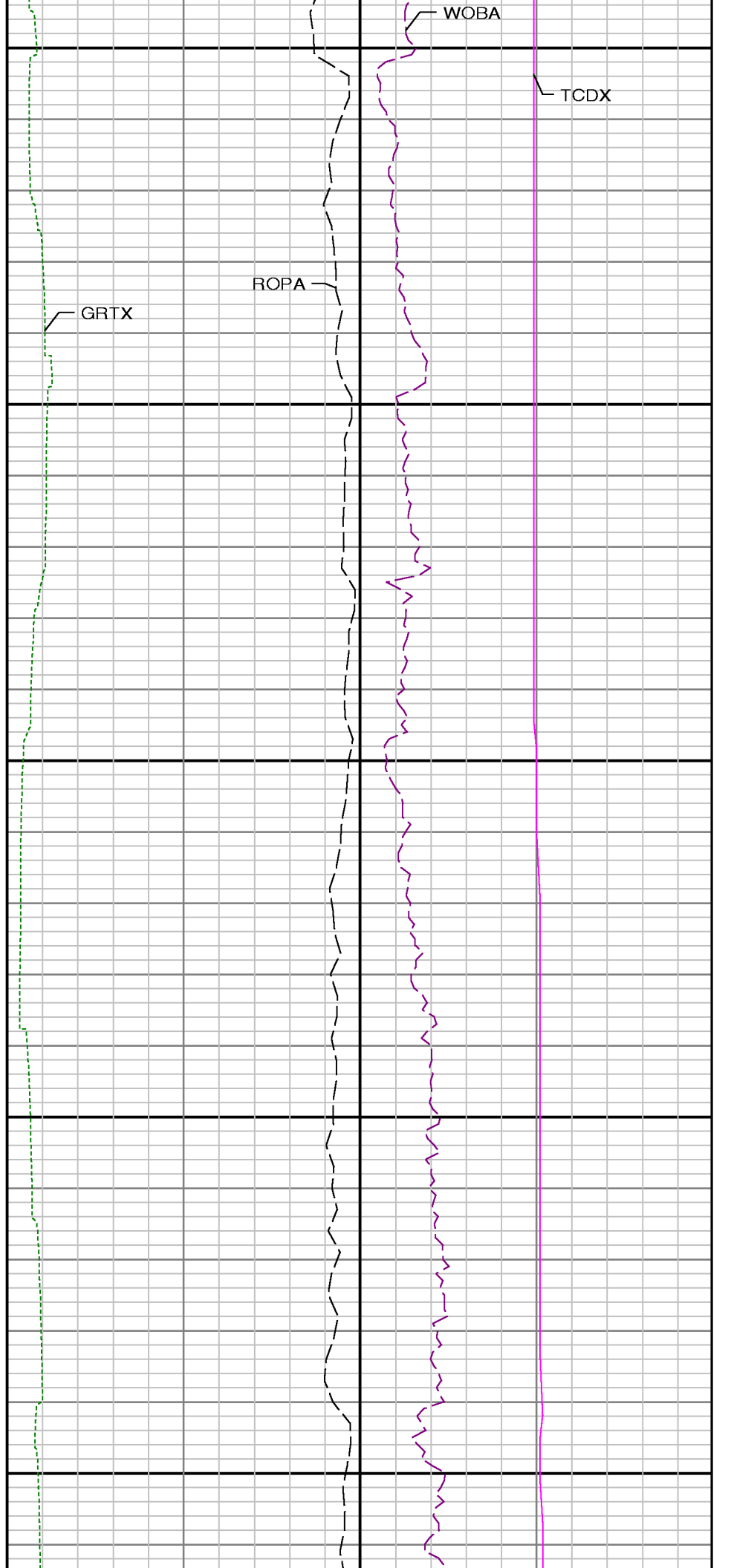
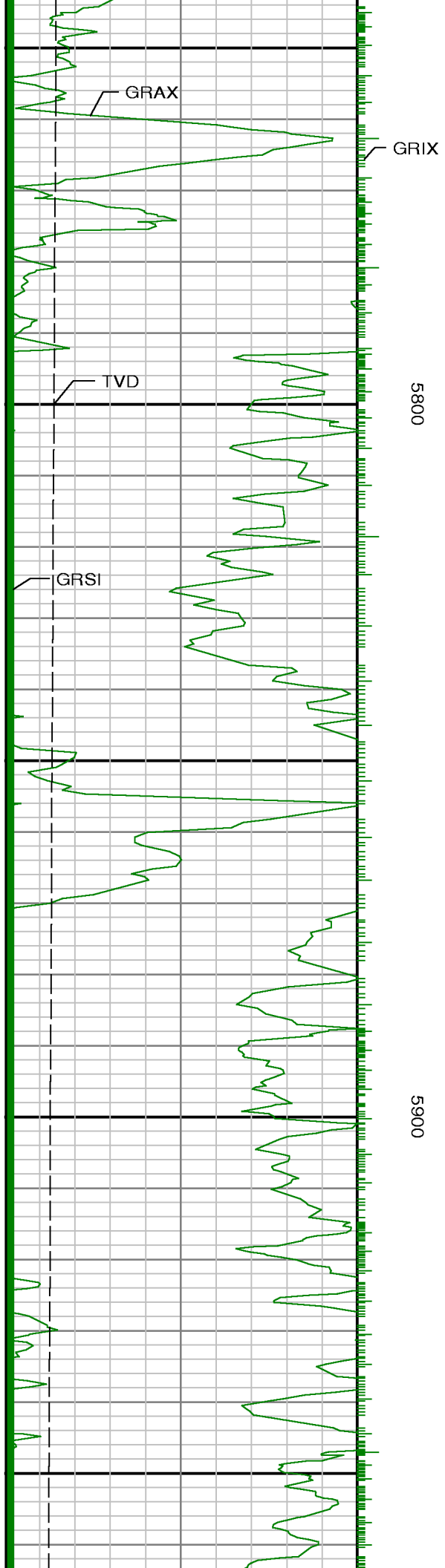


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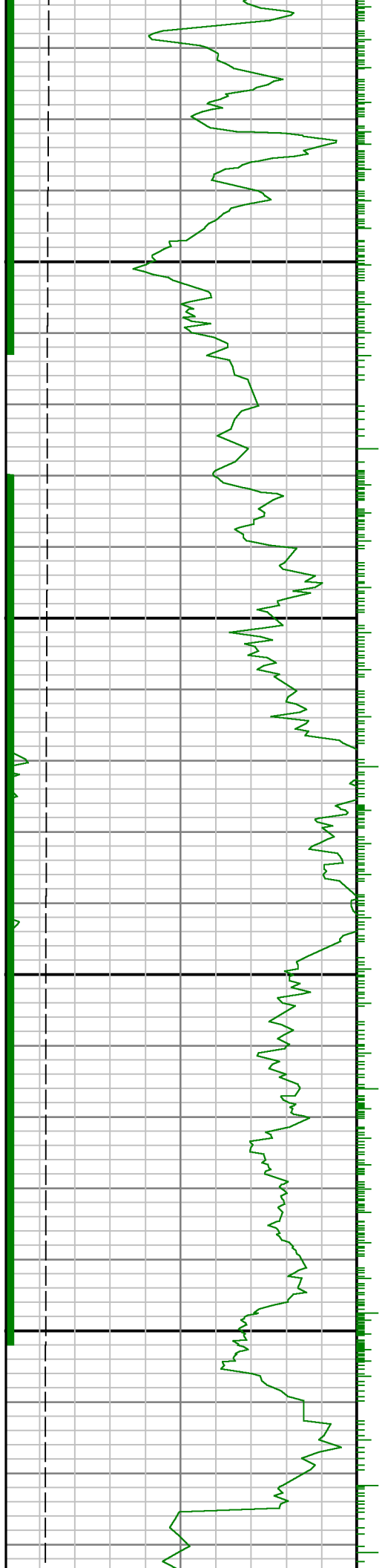






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See Remark 1

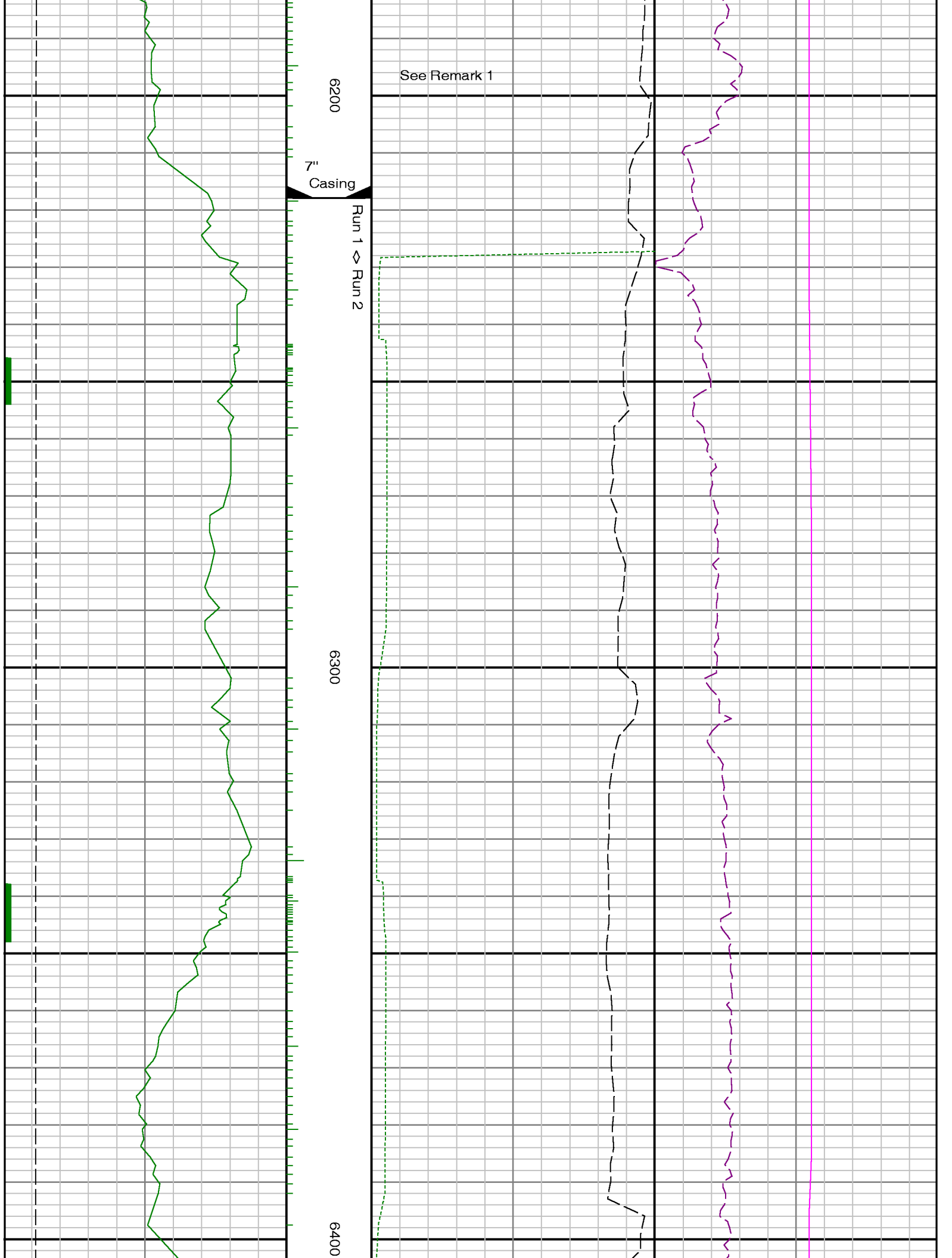
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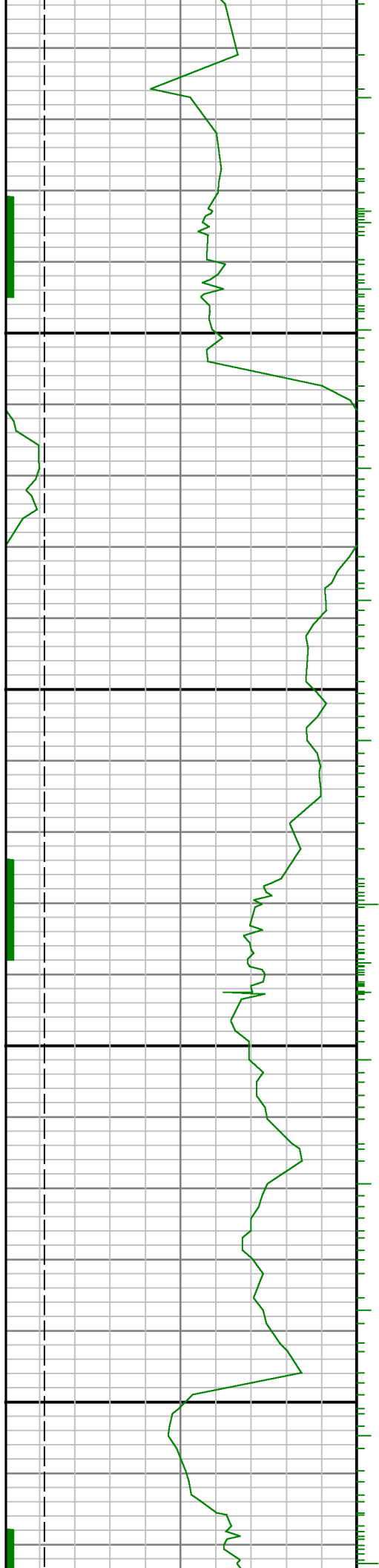
7" Casing

Run 1 \diamond Run 2

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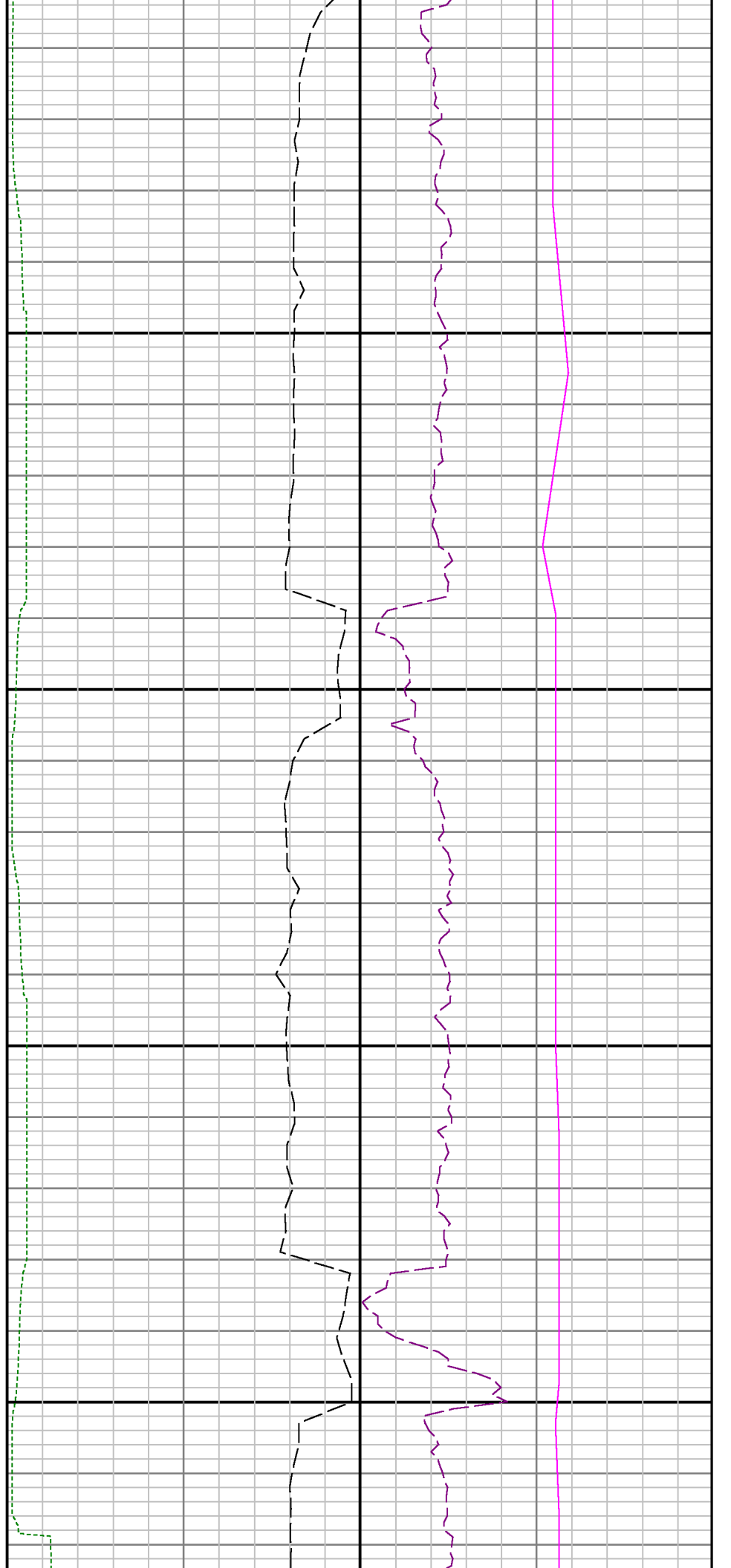
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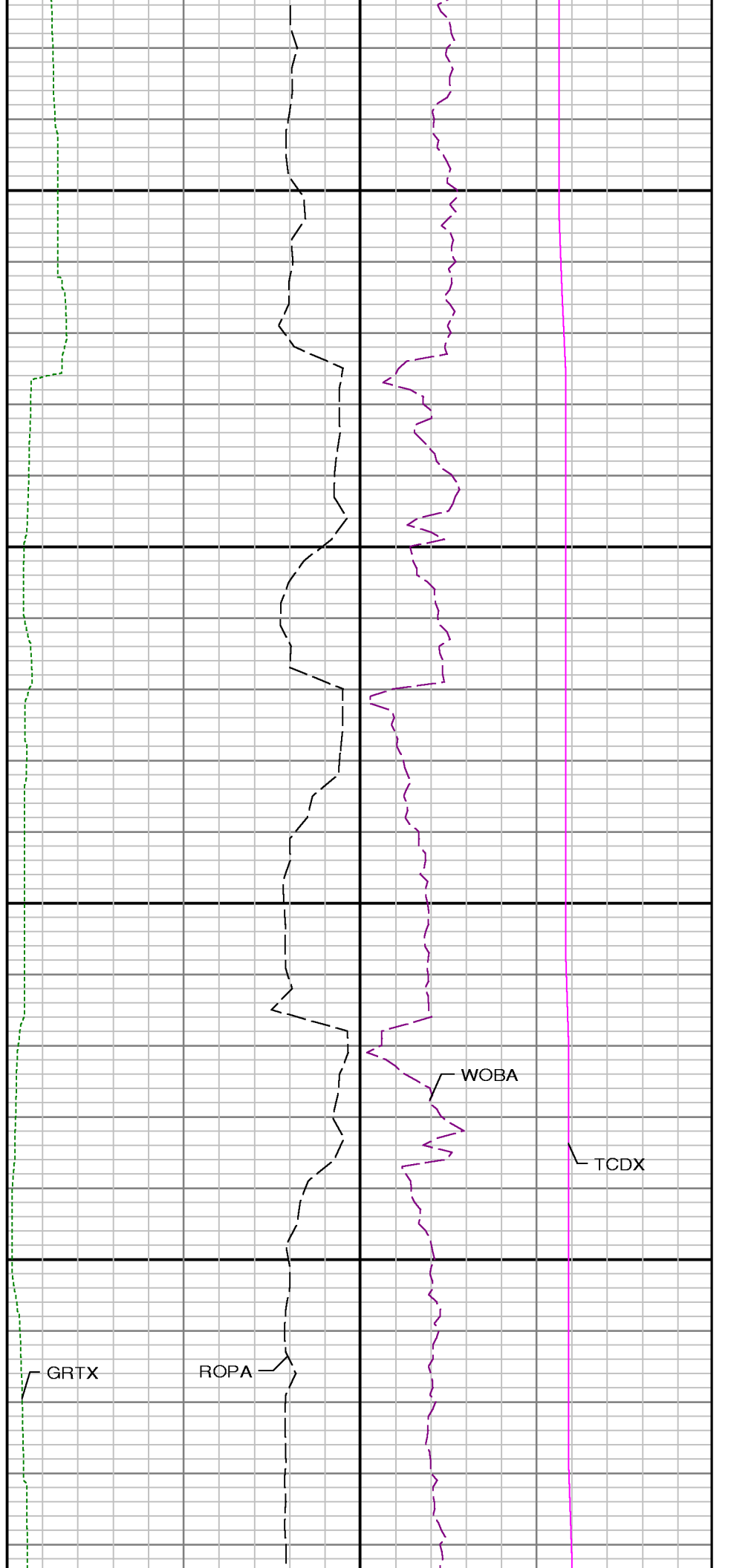
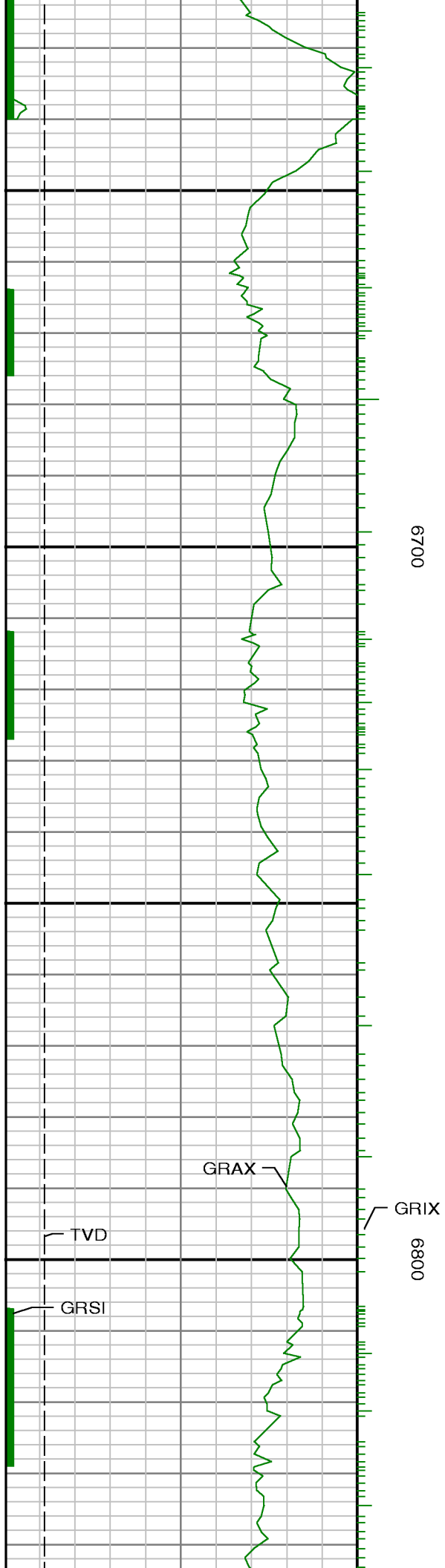


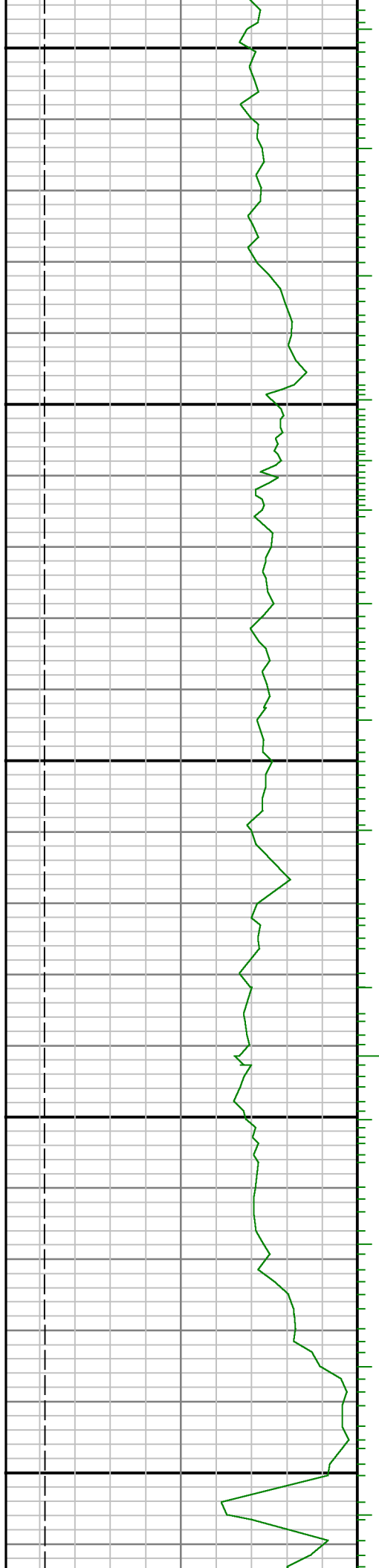


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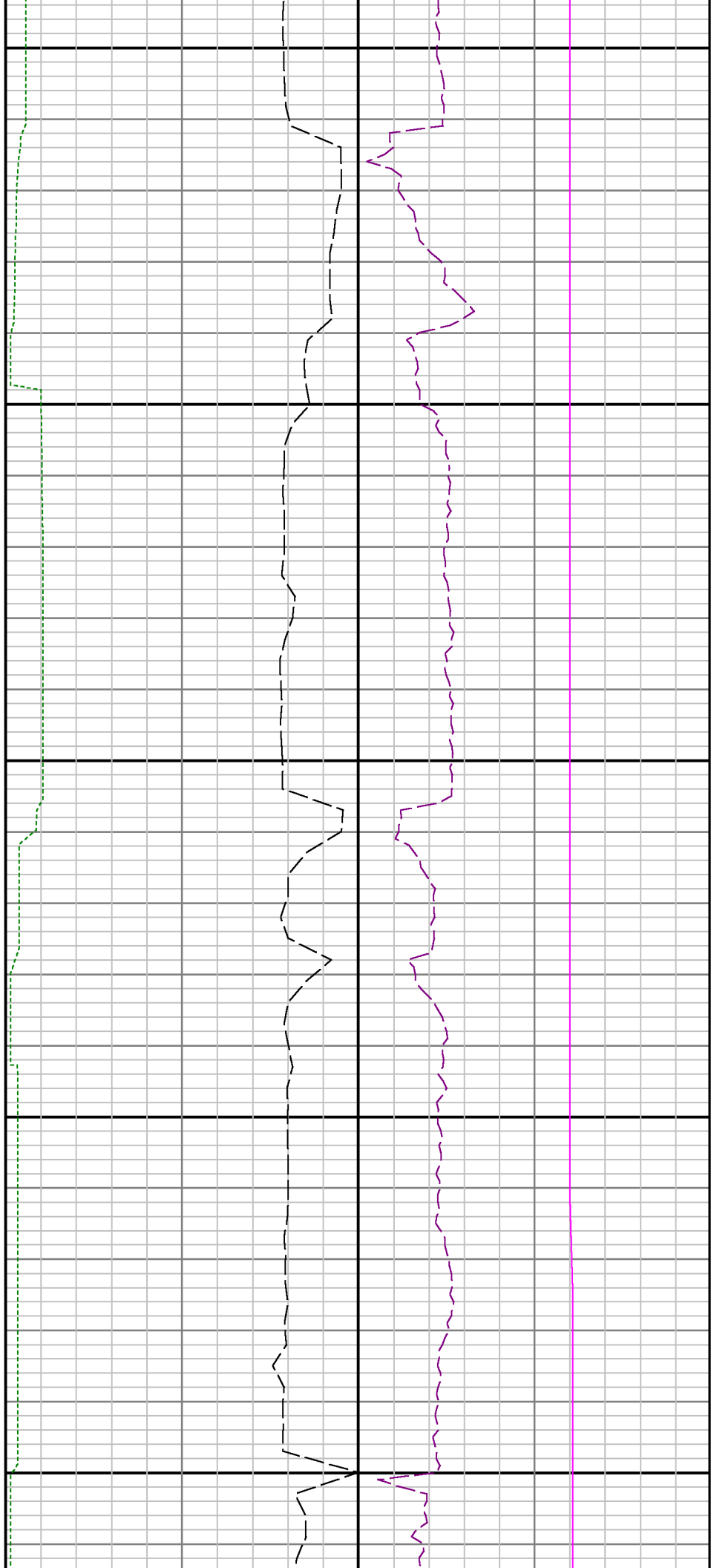


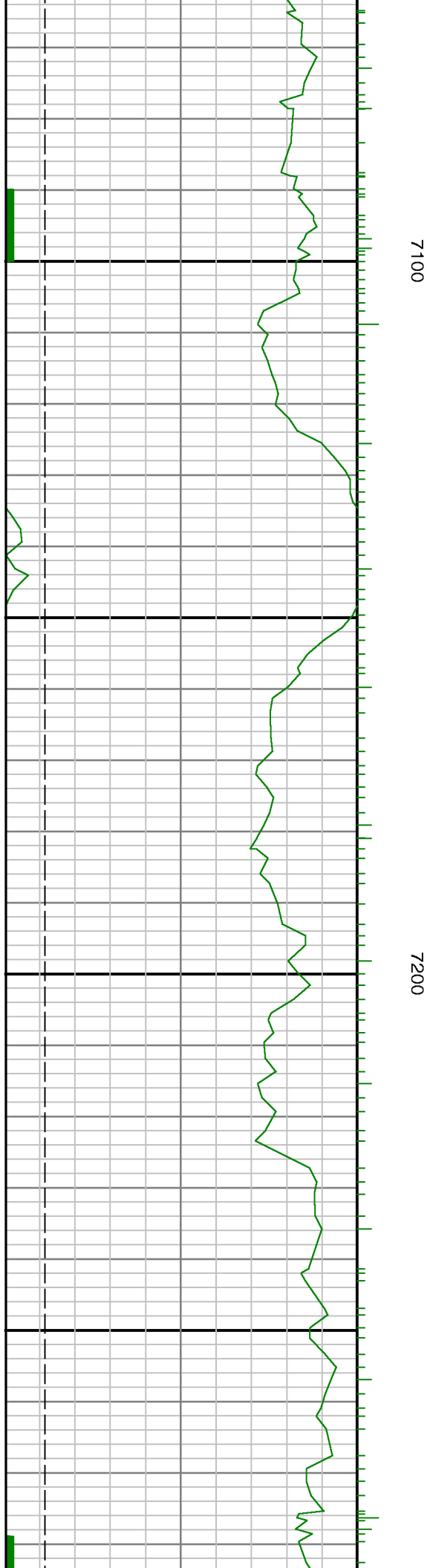
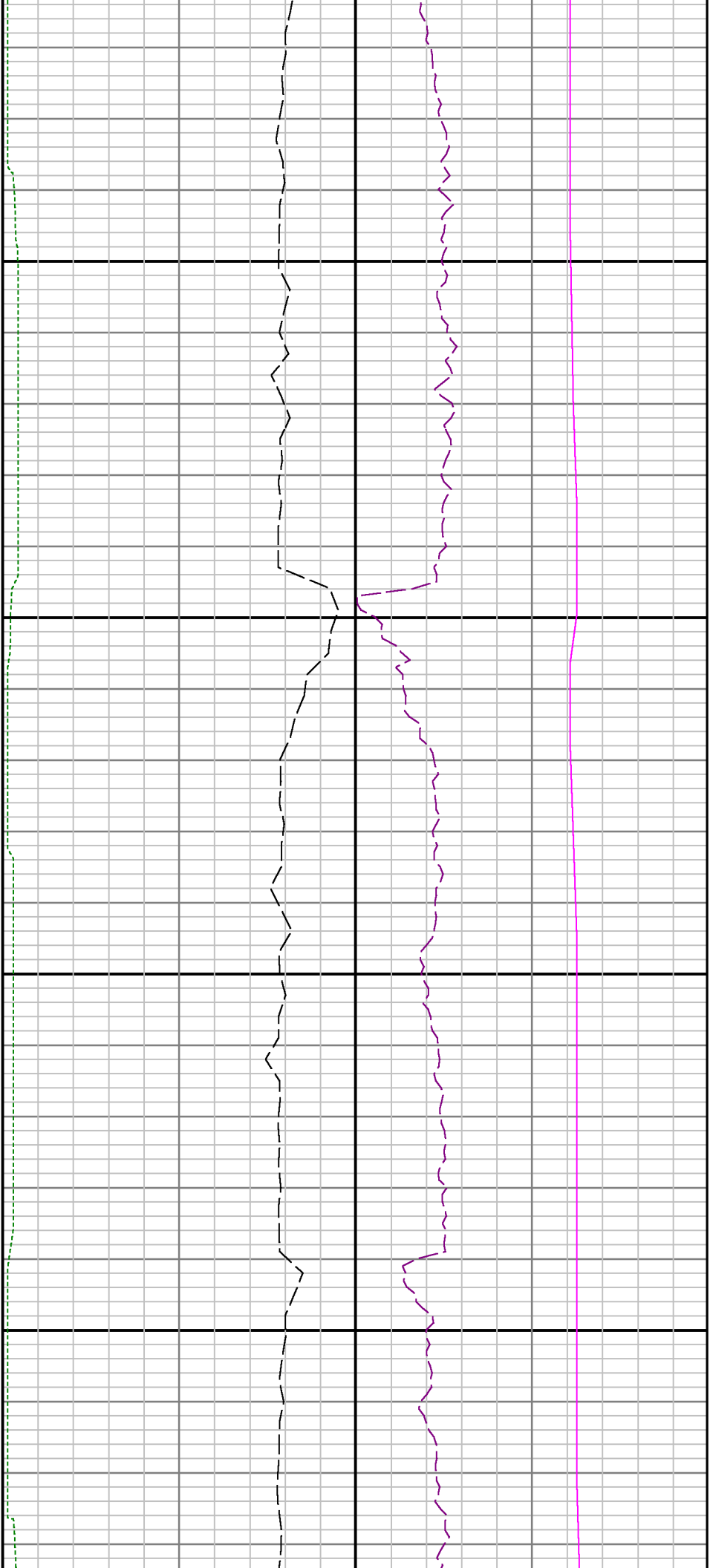


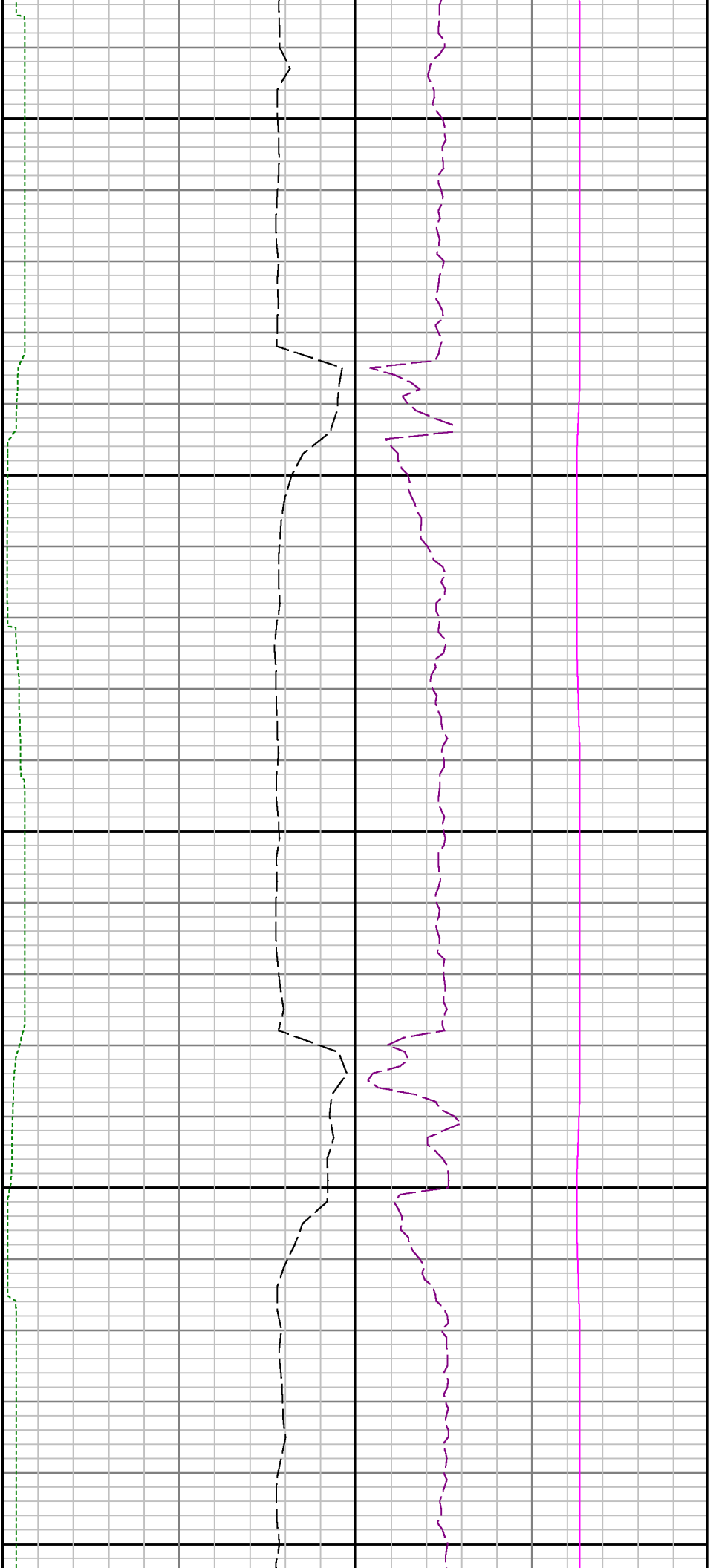


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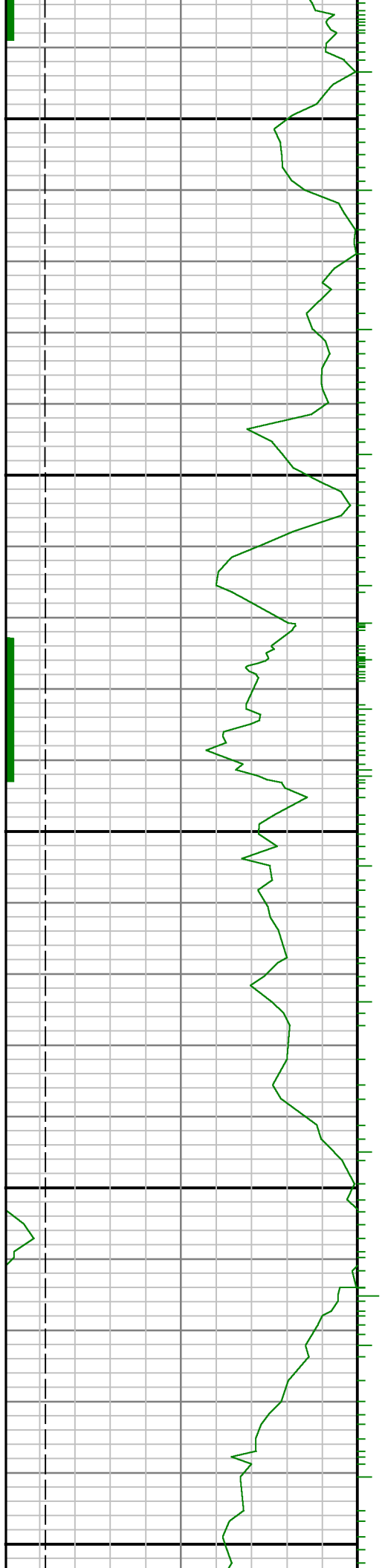


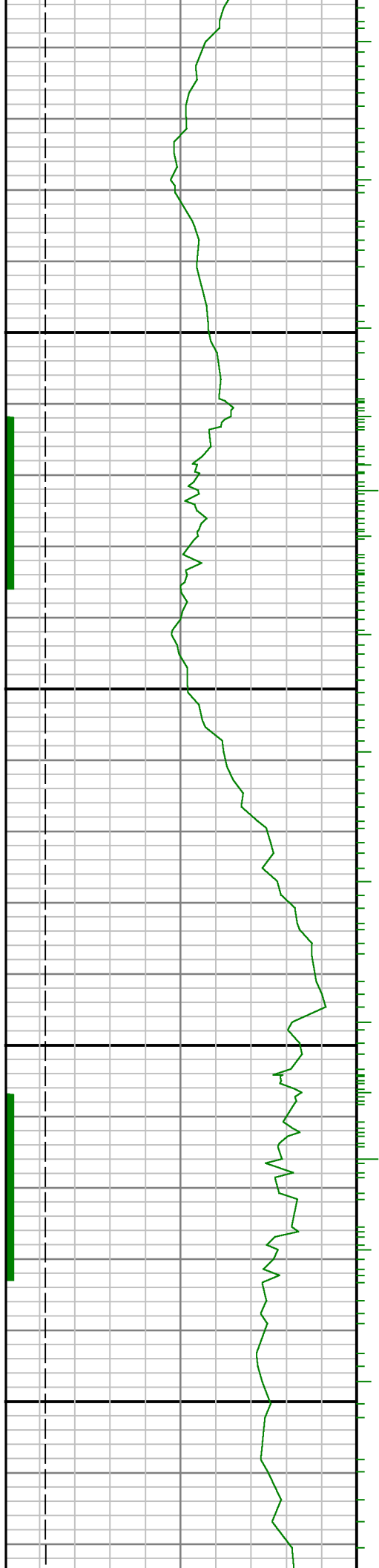


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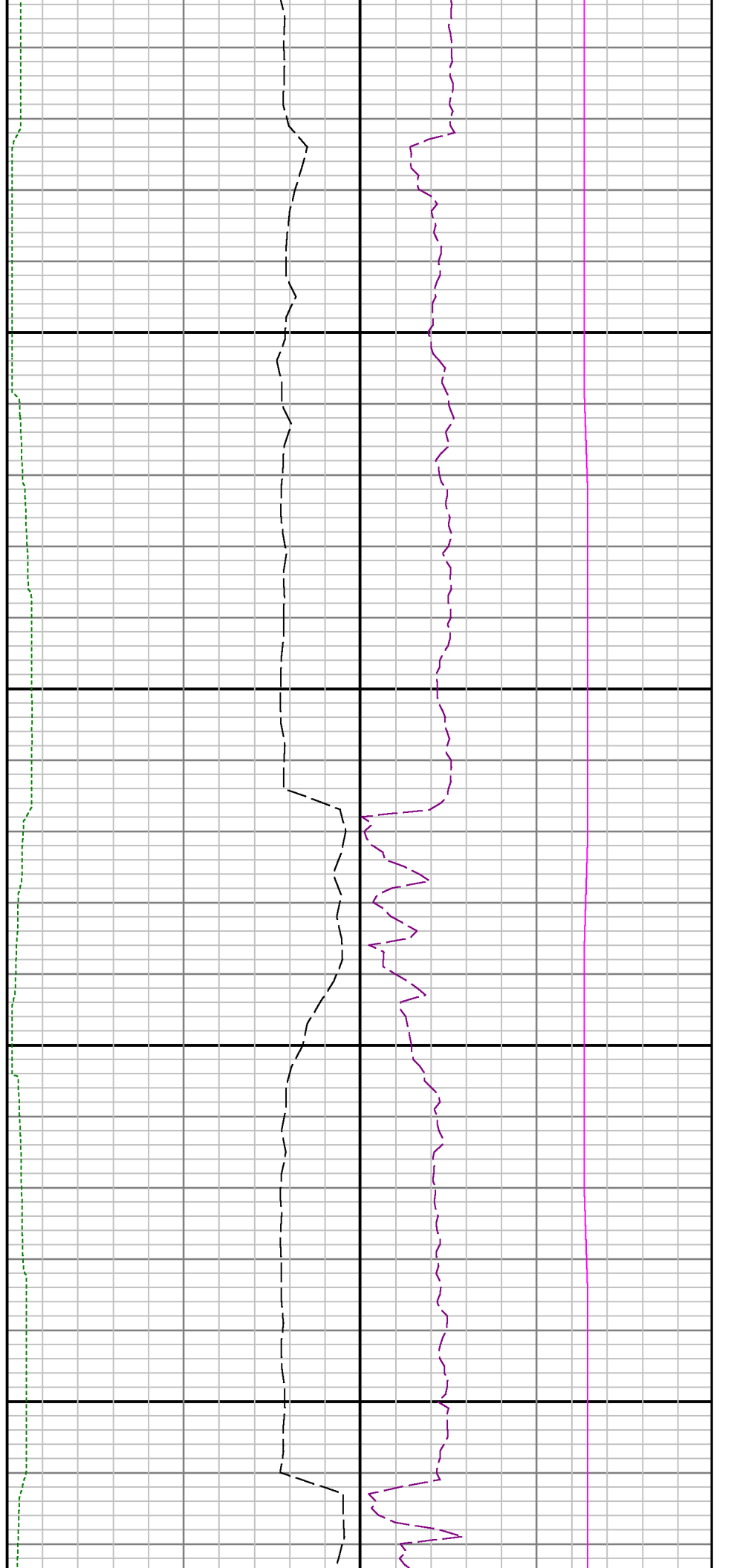
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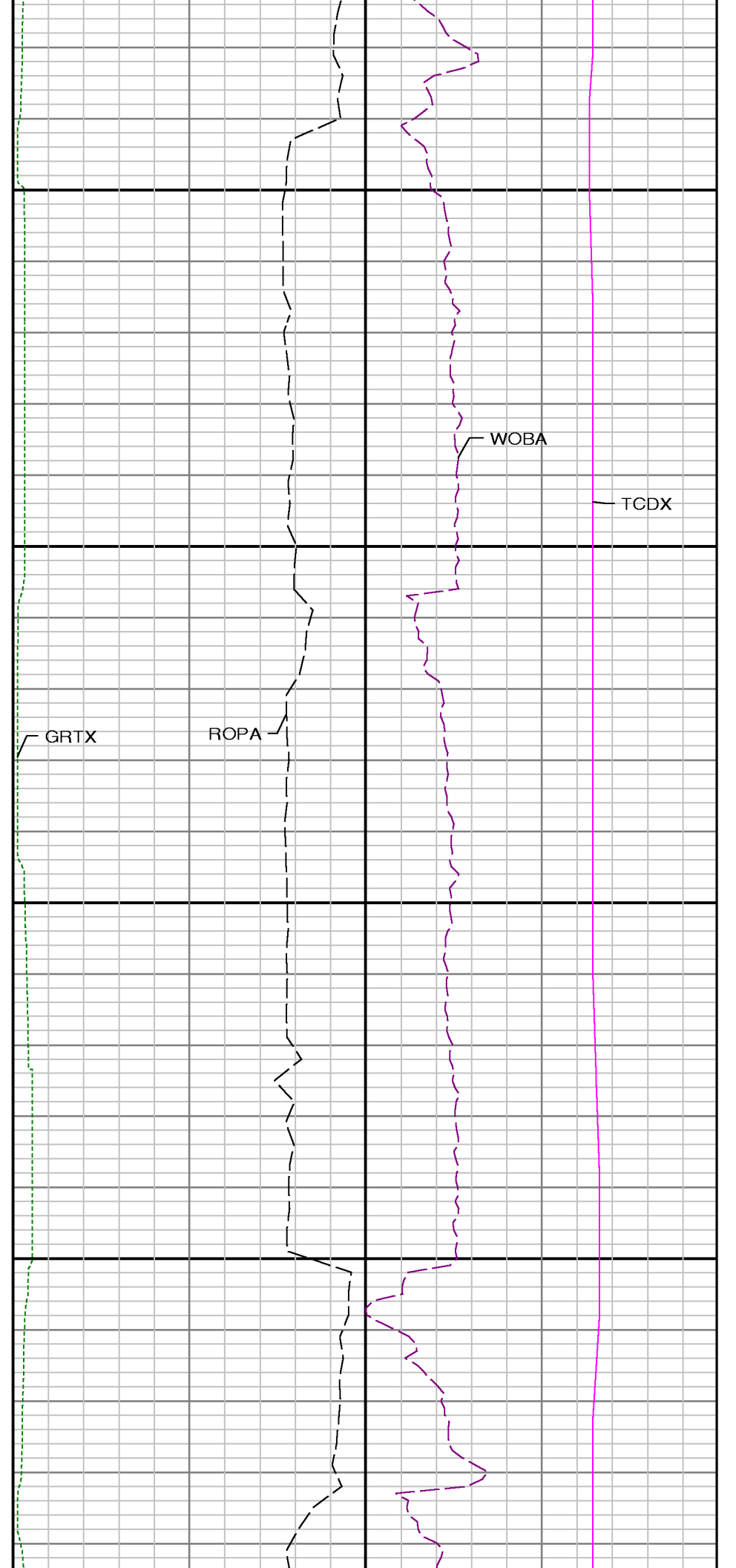
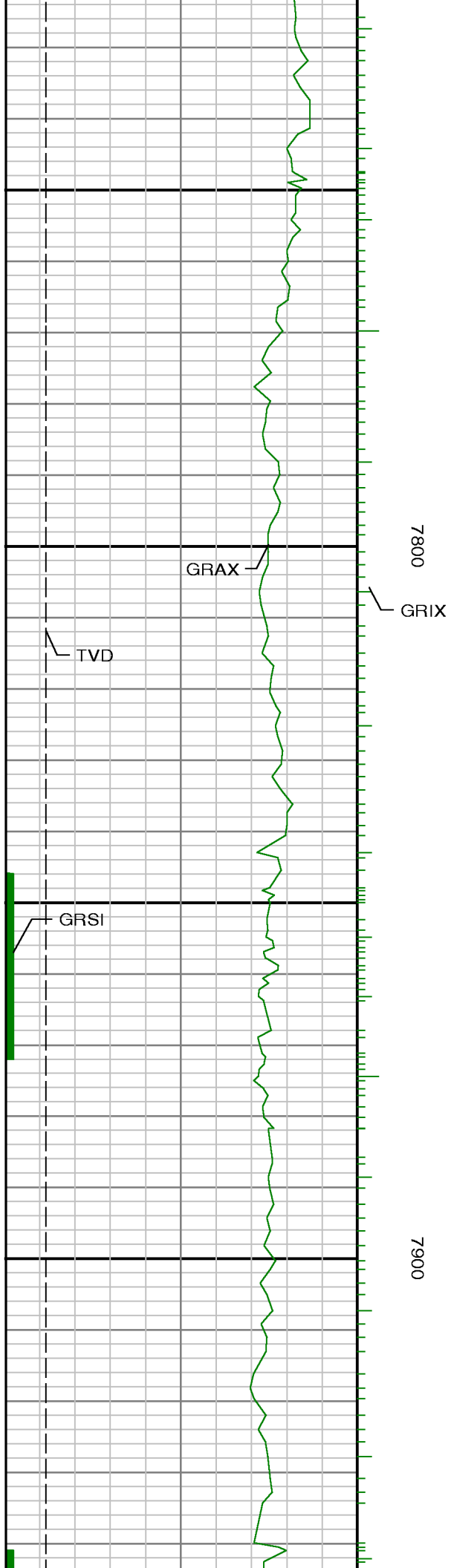




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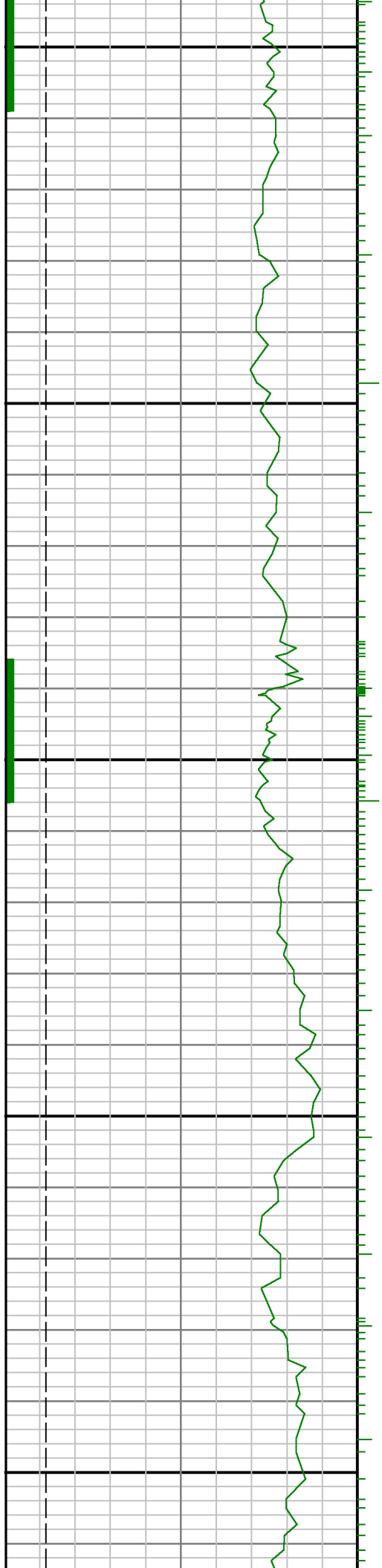


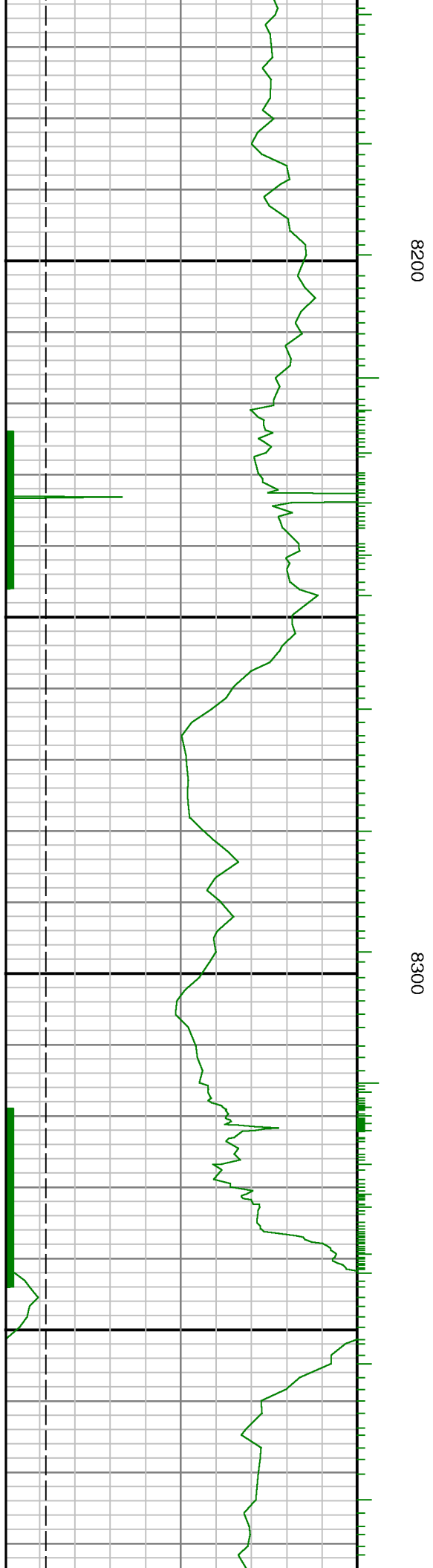
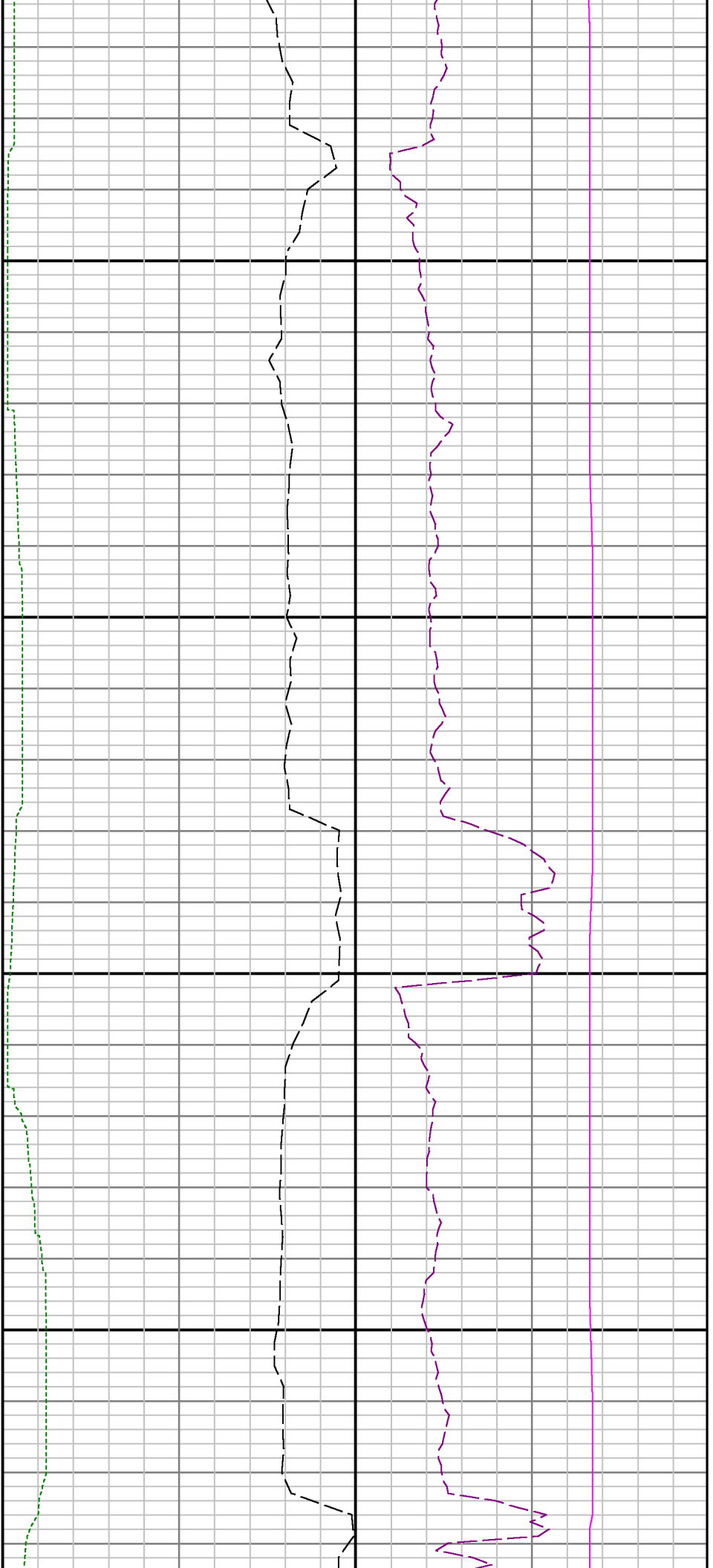


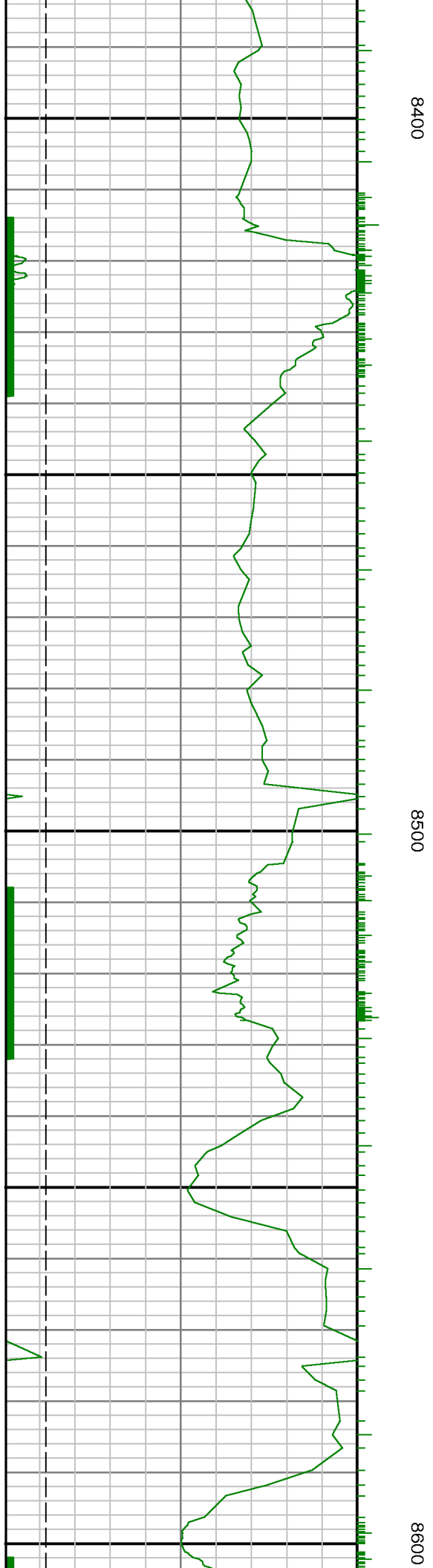
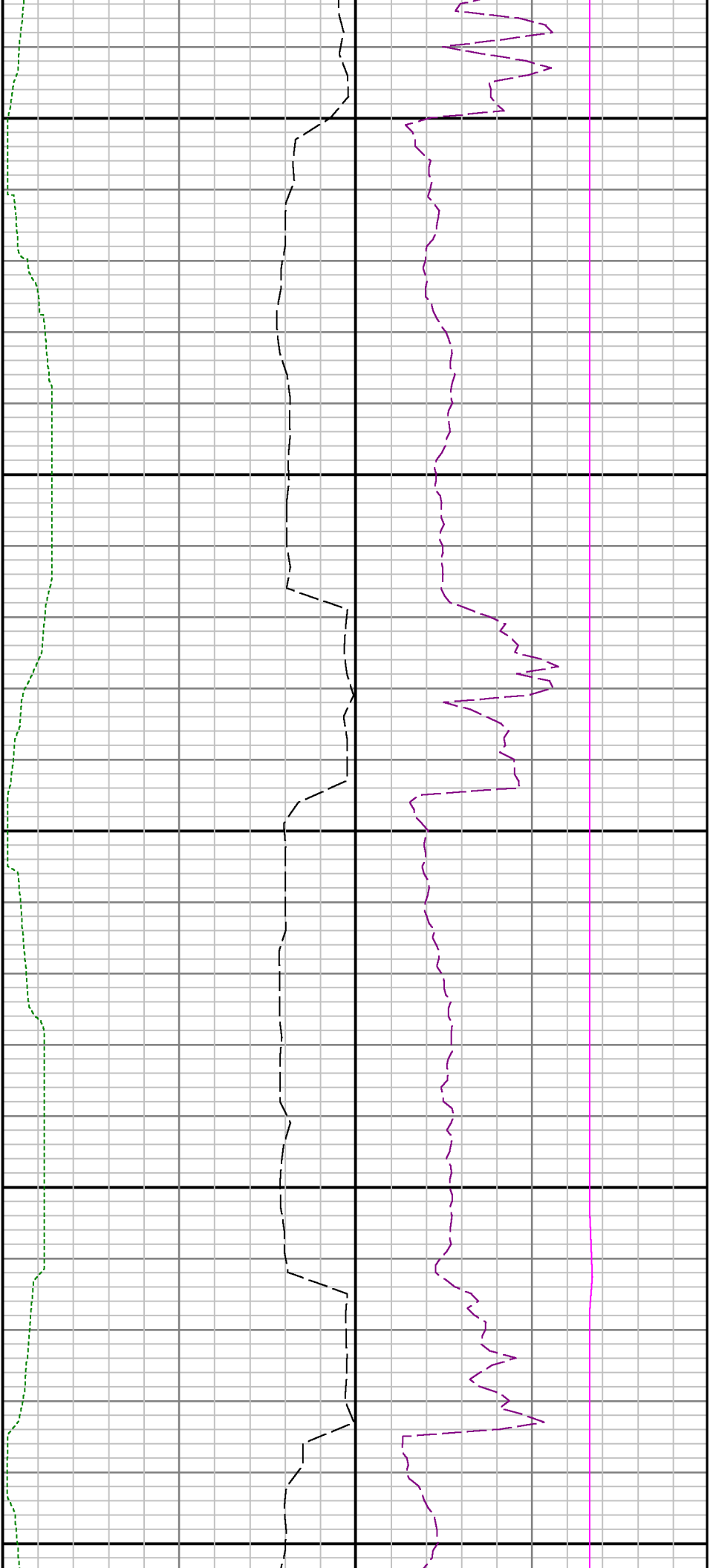


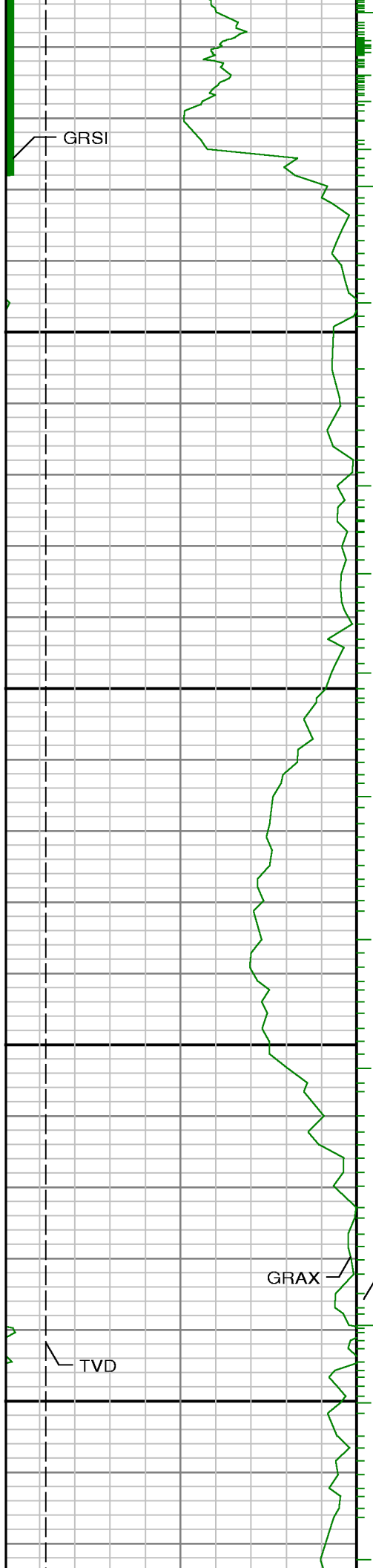
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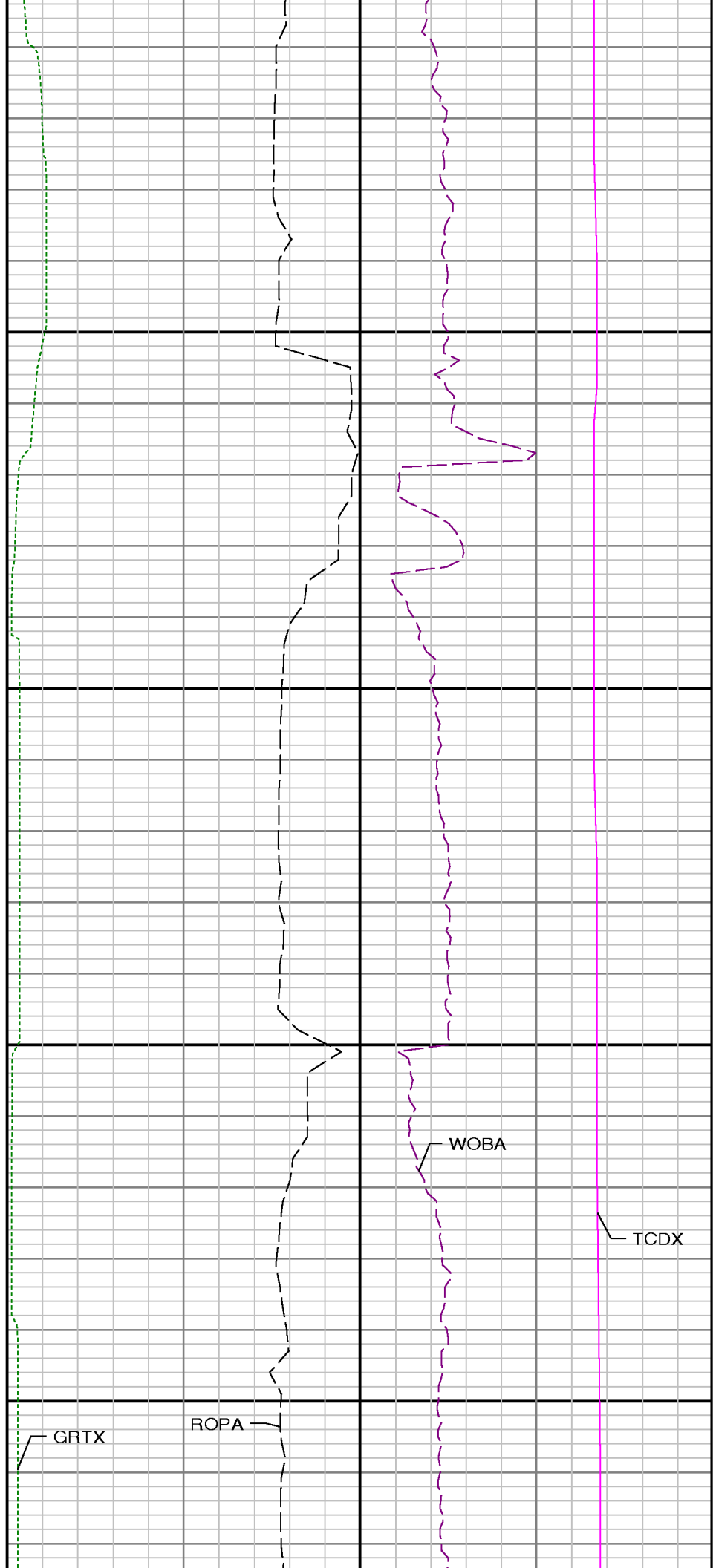






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GRTX

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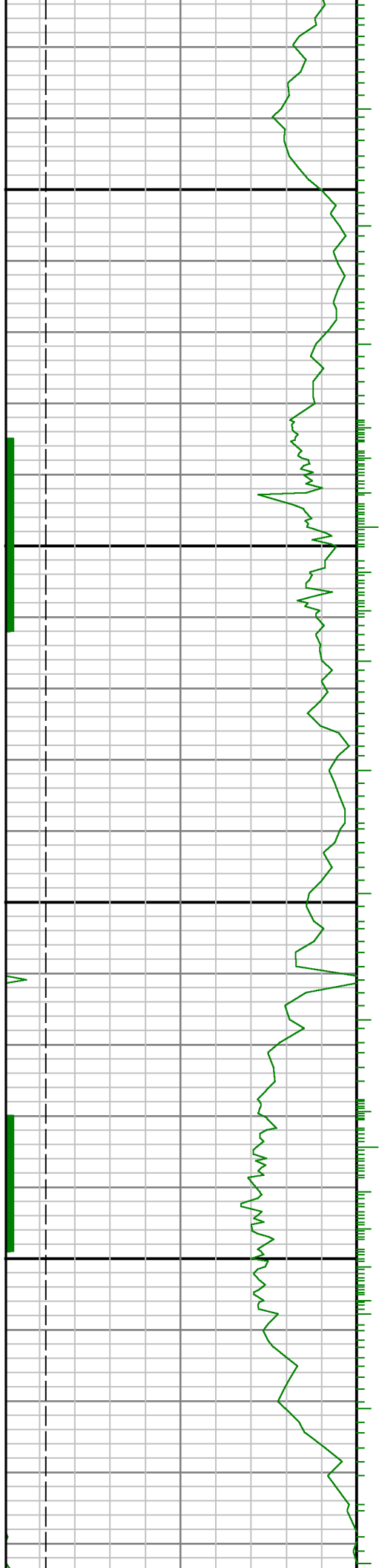
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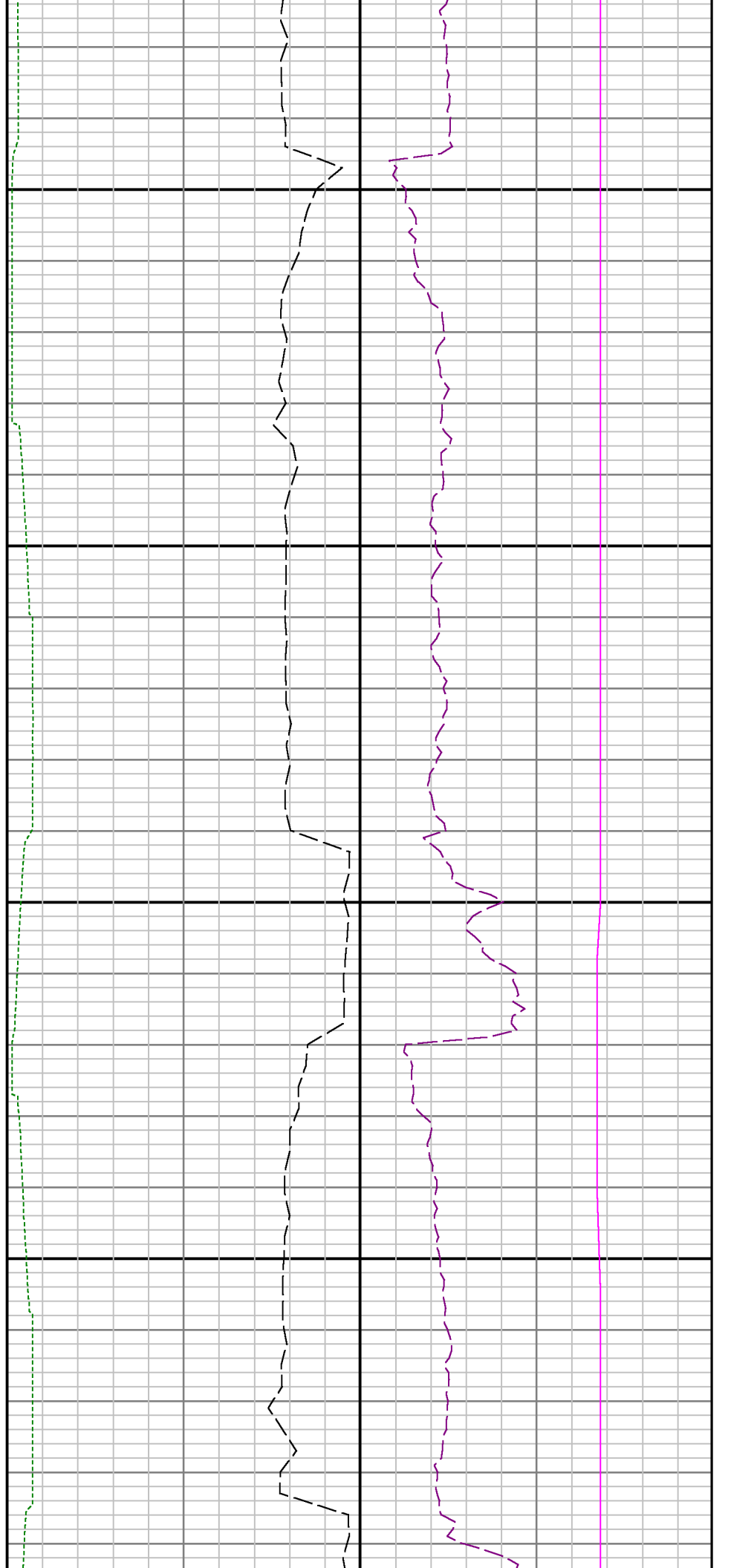
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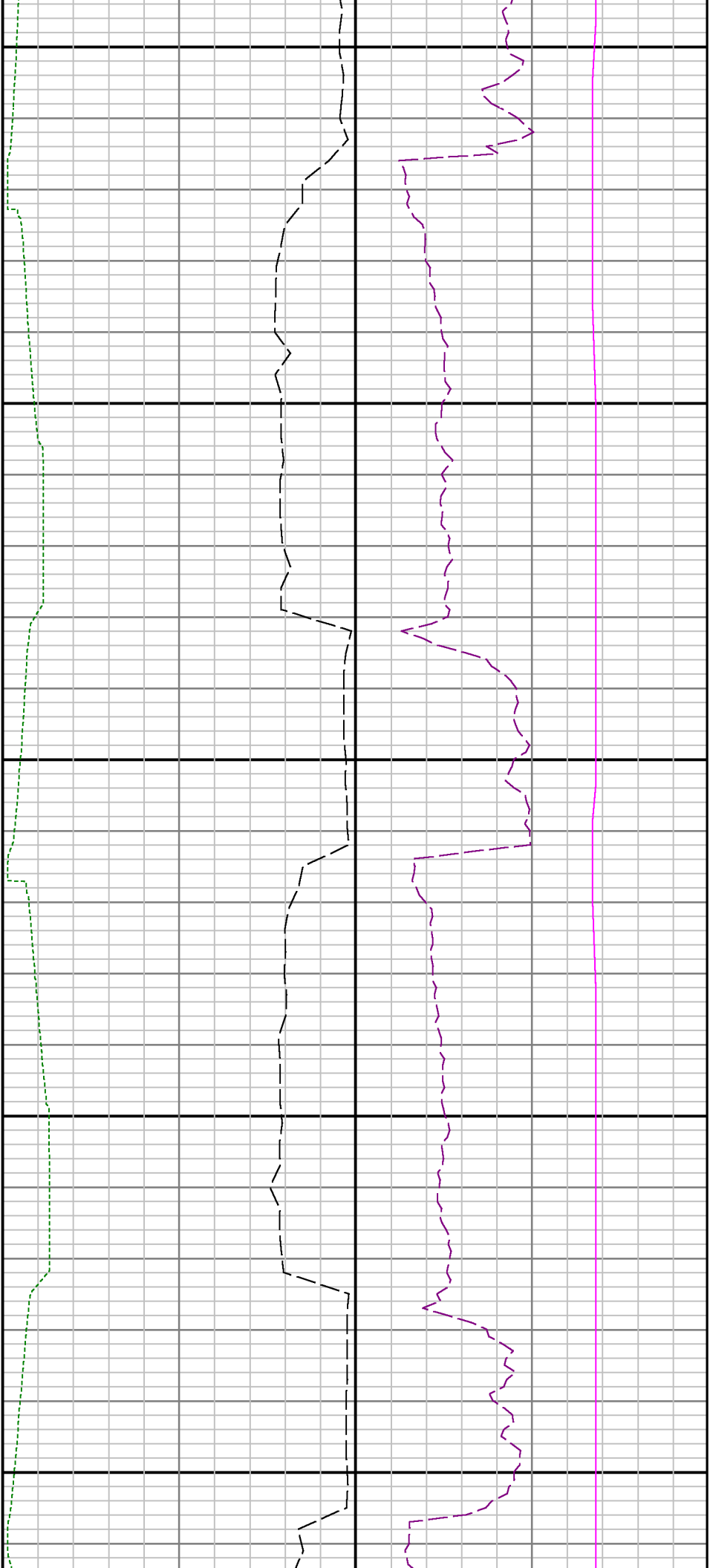
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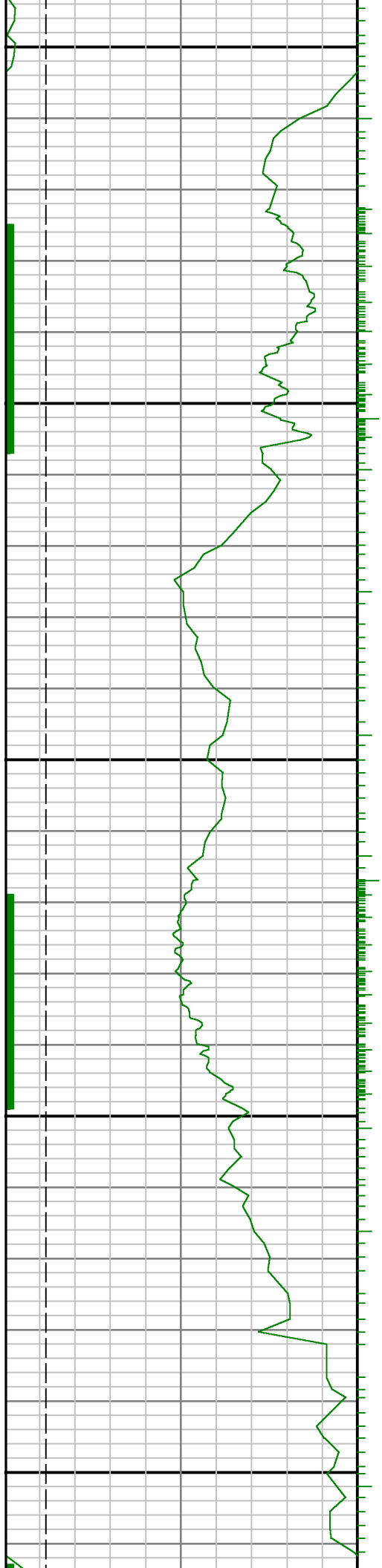
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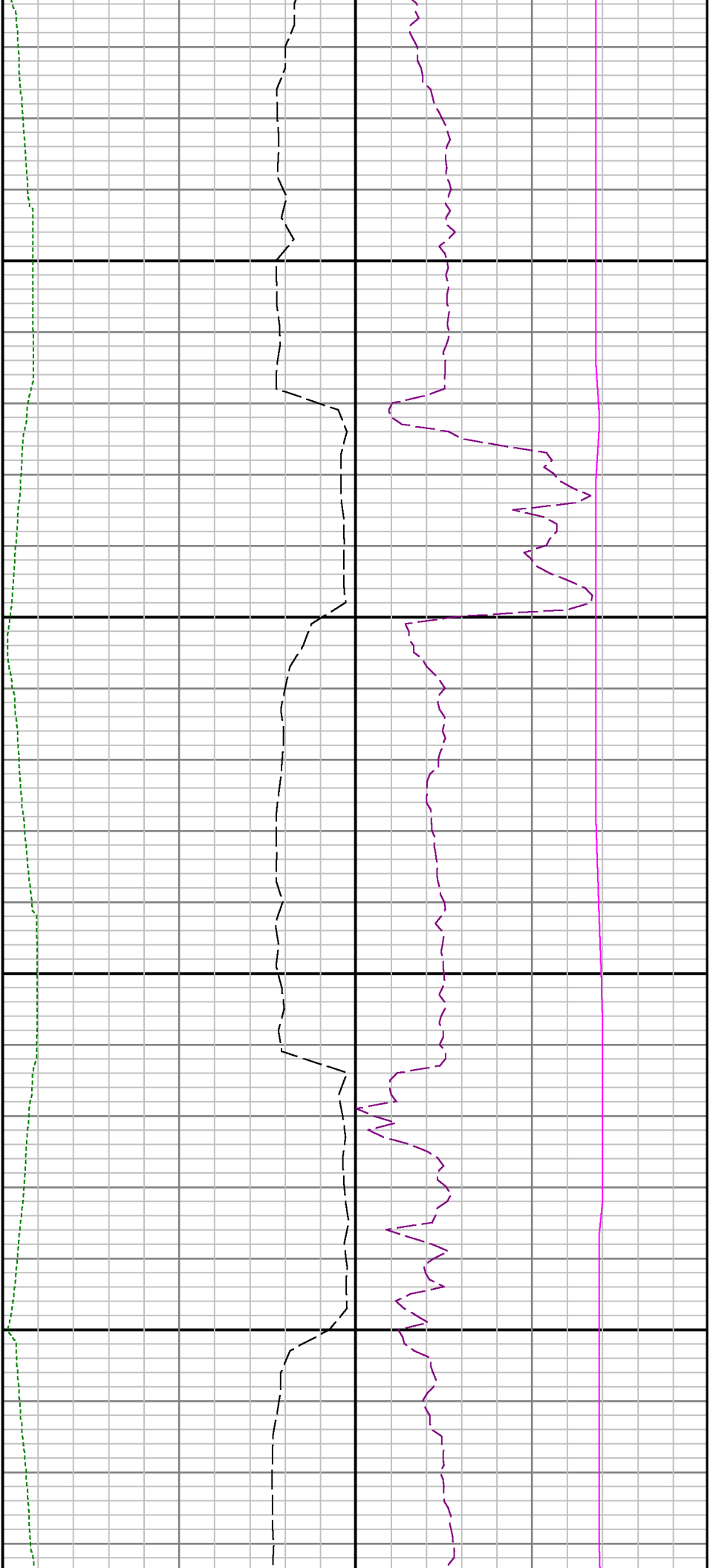




9100

9200





9300

9400

