



Realtime Log

Natural Formation Evaluation
Gamma Ray

Scale: 1:240

Measured Depth

Company: Anadarko

Well: NRC 26C-4HZ

Field: Weld County (Kerr McGee)

Region: Continental US Country: United States

Status: Final Print

API Number: 05123389980000

Surface Location:

Latitude: 40° 3' 32.404" N

Longitude: 104° 53' 18.935" W

Other Services:

Directional
VSS

Permanent Datum (P.D.): Ground Level Elevation: 5046.00 ft.

Log Measured From: Rig Floor 16.00 ft. Above P.D.

Elevations: N/A

Depth Reference:

Driller's Depth

KB: N/A
DF: 5062.00 ft.
GL: 5046.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 7054.0 ft. Date From: 17/Apr/14 Date To: 25/Apr/14 Dip Angle: 66.56° Azi Reference North: True

Bottom: 17344.0 ft. Date To: 25/Apr/14 Total Field Strength: 52846.0 nT North Correction: 8.52°

Spud Date: 18/Apr/14

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
8.750 in.	1077.0 ft.	8055.0 ft.	9.265 in.	36.00 lb/ft	Surface	1050.0 ft.
6.125 in.	8055.0 ft.	17396.0 ft.	7.000 in.	26.00 lb/ft	Surface	8055.0 ft.

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Drill Water	Surface	8055.0 ft.	8.750 in.	85.0 ft.	0.5° / 37.3°	1.8° / 183.9°
LSND	8055.0 ft.	17396.0 ft.	8.750 in.	42.0 ft.	1.8° / 183.9°	82.3° / 356.8°
			6.125 in.	85.0 ft.	82.3° / 356.8°	90.6° / 358.3°
					/	/
					/	/
					/	/

Acquisition System

Software Version

Other

Advantage 2.20U4 Rig / Contractor: Xtreme 24 / Advance Drilling

PATS 6.4.1.34 Job No: 6262148 / D & E

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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.
							Top	Bottom	From	To	Start		End		Time
							(ft.)	(ft.)	(ft.)	(ft.)					
1	1	1	8.750	PDC	2.000	Steerable	7054.0	8002.0	7107.0	8055.0	18/Apr/14	09:00	20/Apr/15	03:00	28.7
2	2	2	6.125	PDC	6.000	Steerable	8003.0	17344.0	8055.0	17396.0	20/Apr/14	03:00	25/Apr/14	16:00	86.6

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Osagie Otoikhine	17/Apr/14	26/Apr/14	Trey Smith	17/Apr/14	26/Apr/14			

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+ (%)
18/Apr/14	18:00	1	2110.0	Drill Water	8.5	3	8.6	N/A	0.0/98.5	Active Pits	1400	N/A
21/Apr/14	18:00	2	9290.0	LSND	9.2	11	9.1	N/A	0.0/93.8	Active Pits	1800	N/A
22/Apr/14	18:00	2	11335.0	LSND	9.3	15	9.7	N/A	0.2/93.3	Active Pits	1700	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	12235763	Directional	56.80	6.750	2.810
1	SRIG	11703937	Gamma	53.43	6.750	2.810
2	DIR	12422317	Directional	54.92	4.750	2.810
2	SRIG	11734840	Gamma	51.54	4.750	0.000

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.) Baker Hughes Run 1 utilized a 6 1/2 inch NaviGamma (Directional and Gamma Ray) tool behind an 8 3/4 inch bit and steerable assembly from 7054 feet to 8055 feet MD (7016 feet to 7704 feet TVD).</p> <p>2.) Baker Hughes Run 2 utilized a 4 3/4 inch NaviGamma (Directional and Gamma Ray) tool behind a 6 1/8 inch bit and steerable assembly from 8055 feet to 17396 feet MD (7704 feet to 7715 feet TVD).</p> <p>3.) 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	7021	8.750	1	The interval from surface to 7054 feet MD (7016 feet TVD) was not logged since logging services began at kick off point.

	7021	8.750	1	The interval from surface to 7034 feet MD (7070 feet TVD) was not logged since logging services began at rock on point.
2	7820	8.750	1	The Interval from 8002 feet to 8057 feet MD (7698 feet to 7704 feet TVD) was logged more than 10 hours after drilling due to tripping for casing and picking up lateral BHA.
3	17101	6.125	2	The interval from 17344 feet to 17396 feet MD (7716 feet to 7715 feet TVD) was not logged due to bit sensor offset at TD.

Curve Mnemonics

Curve	Description	Units
GRAX	Gamma Ray - Apparent	API
GRIX	Gamma Ray - Data Point Indicator	unitless
GRSI	Gamma Slide Ind.	unitless
GRTX	Gamma Ray Time Since Drilled GRTX	min
ROP_AVG	Depth Averaged ROP	ft/hr
TCDX	Downhole Temperature	degF
TVD	True Vertical Depth TVD	ft
WOB_AVG	AVERAGE Weight On Bit	klbf

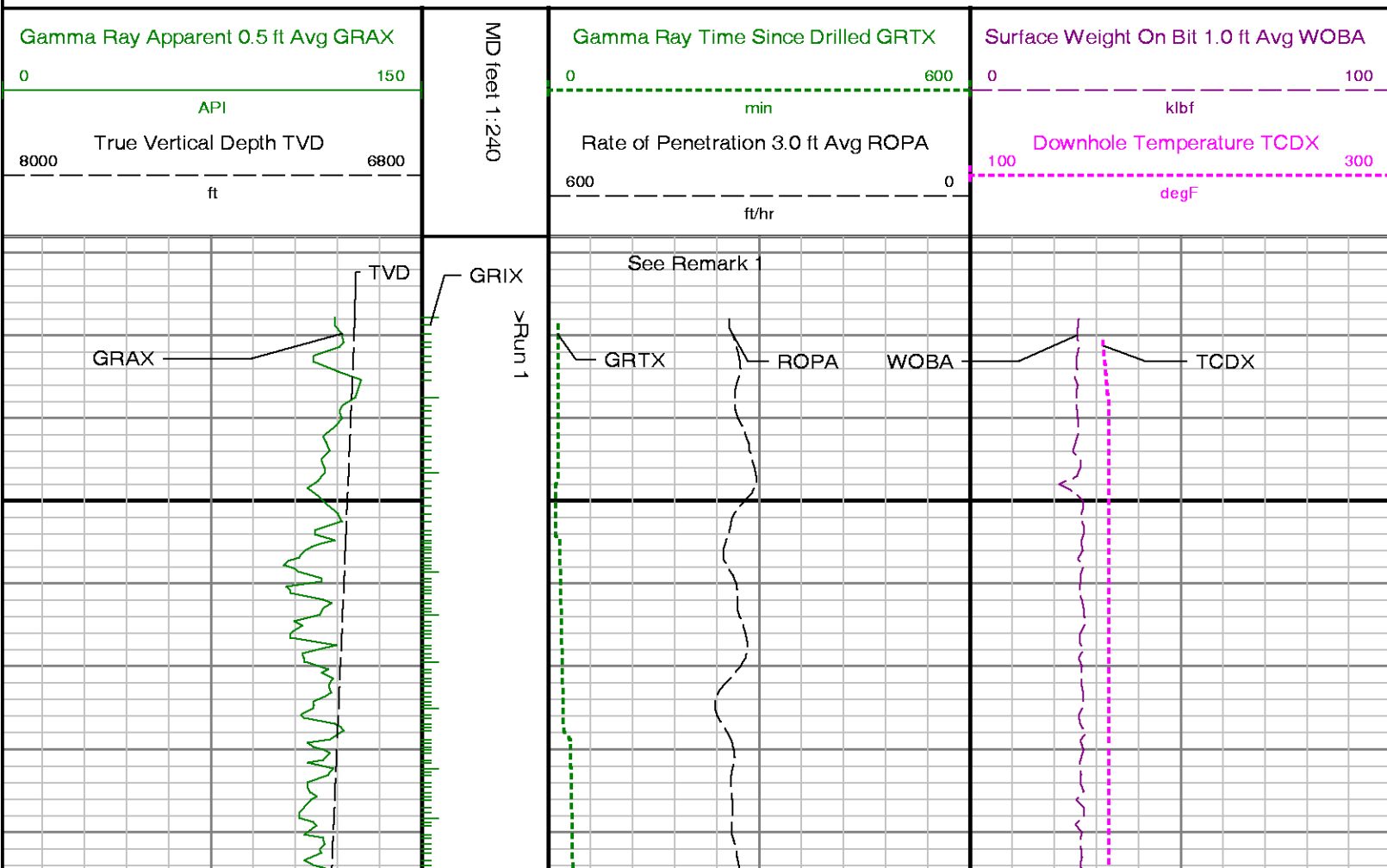


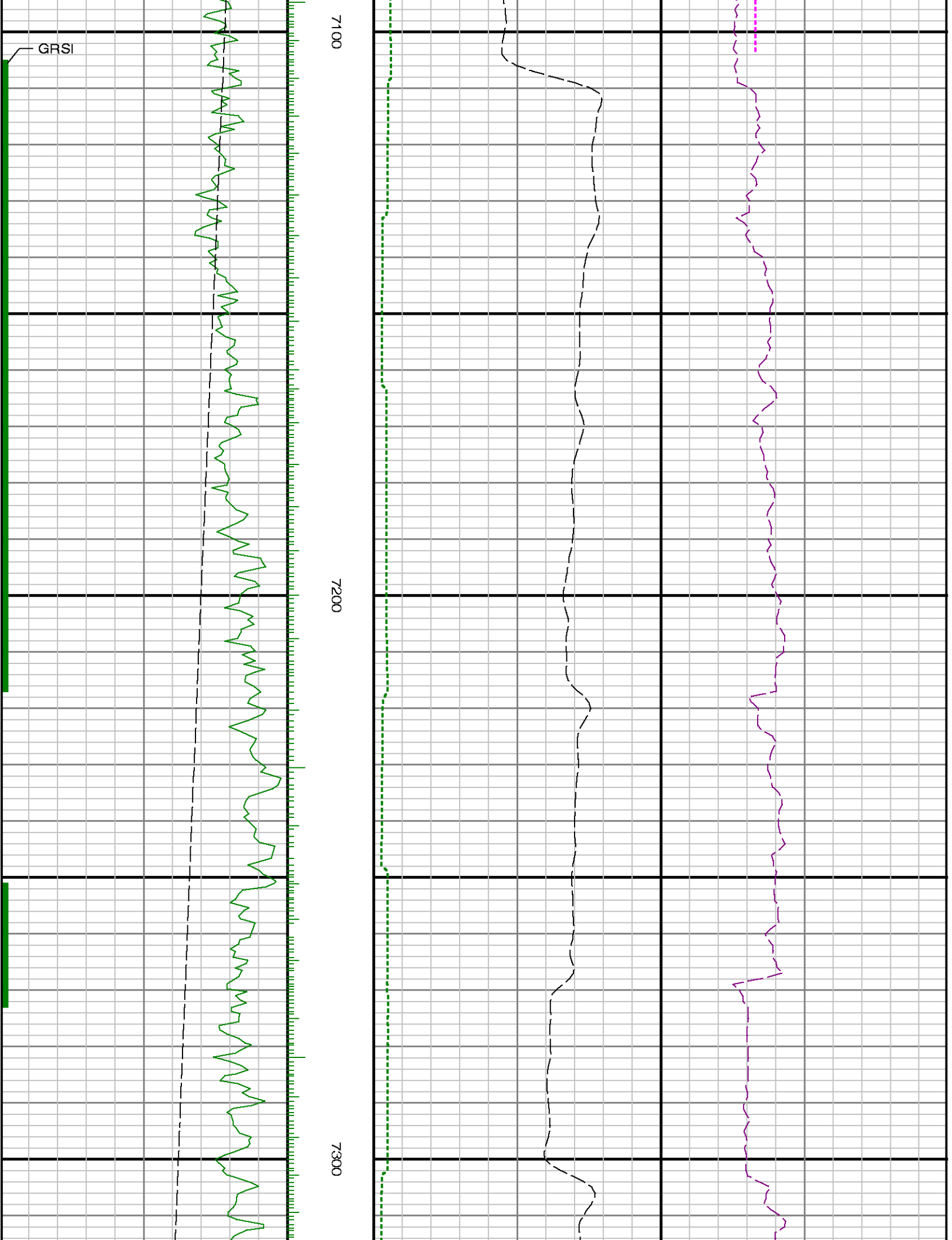
Company : Anadarko

Well : NRC 26C-4HZ

Interval : 7018.00 - 17420.00 feet

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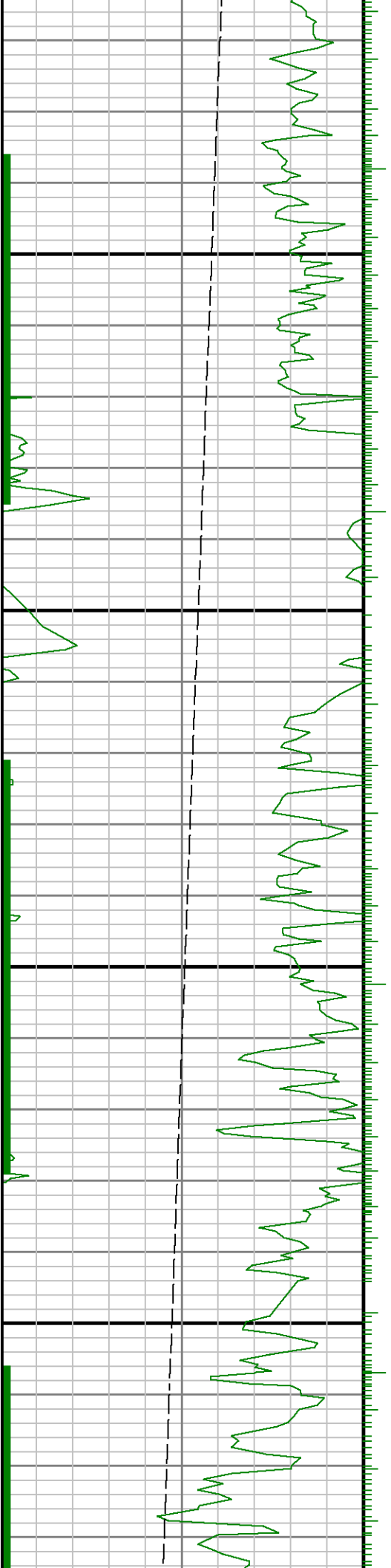


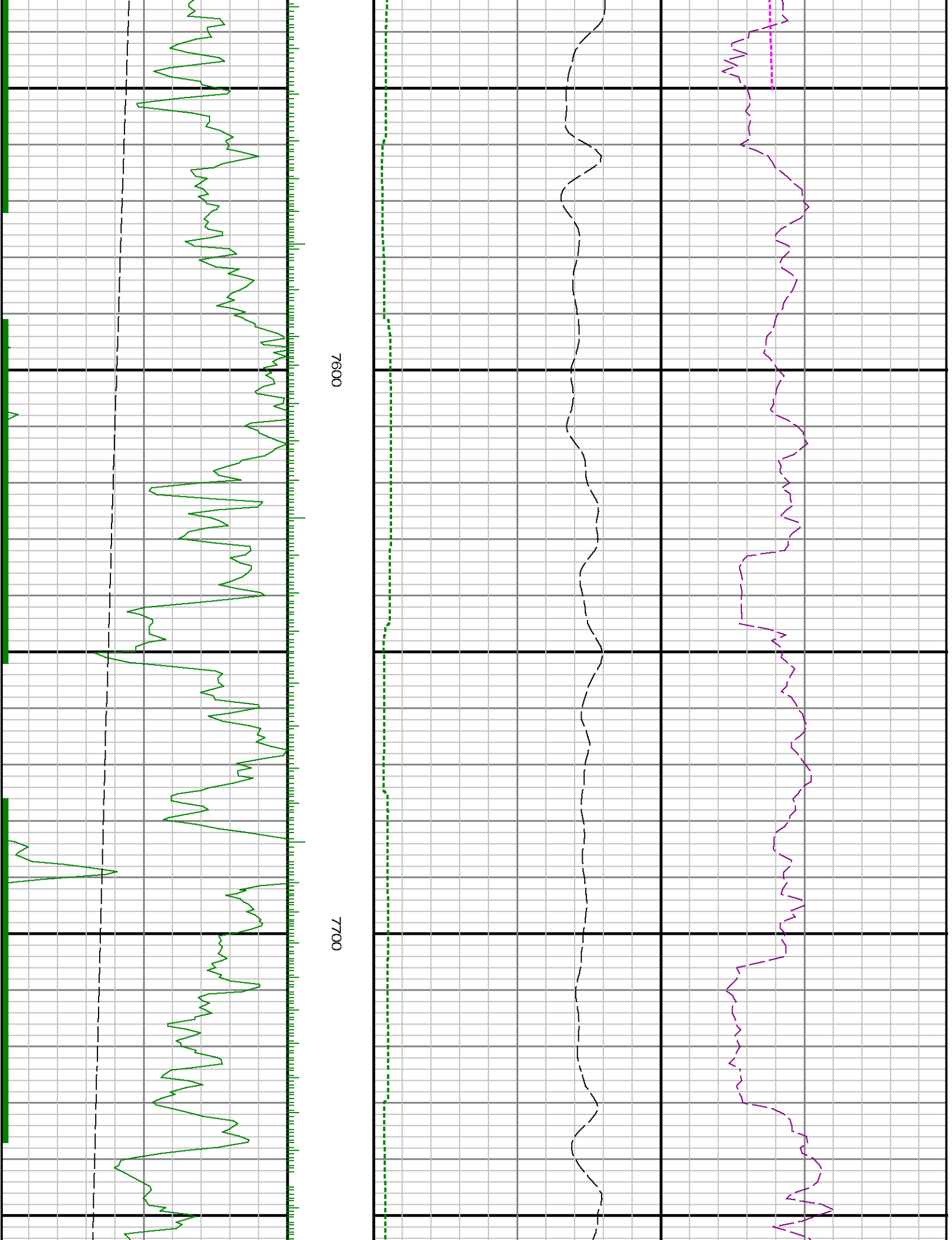


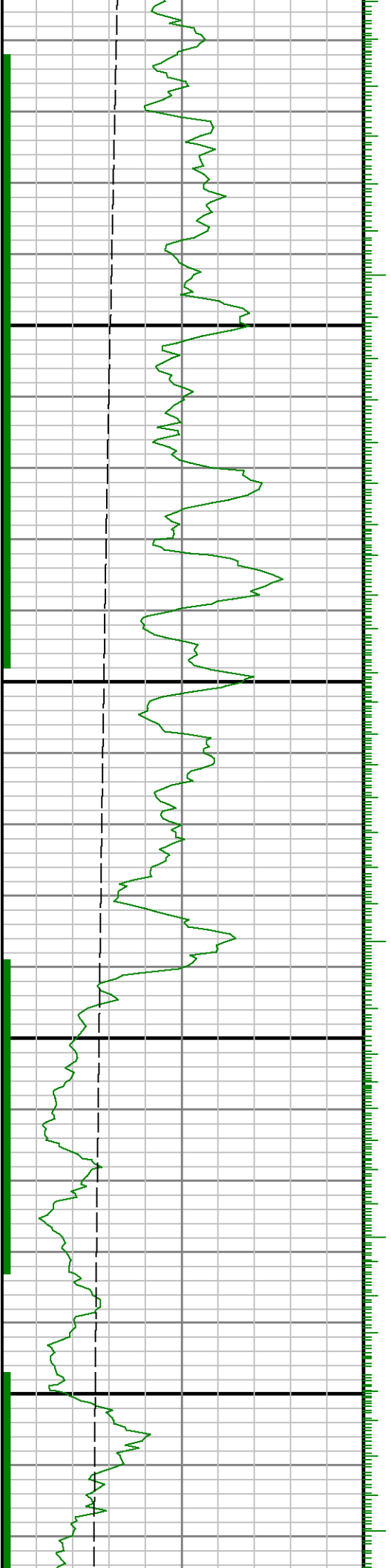


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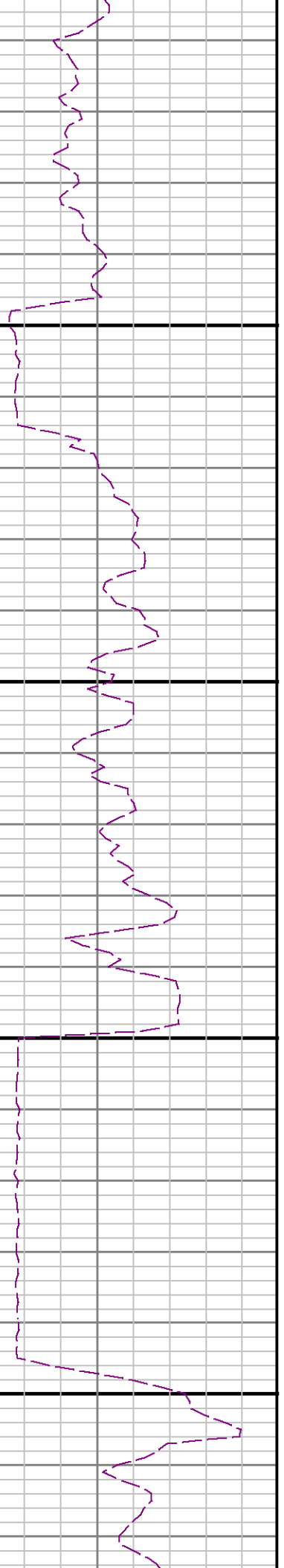
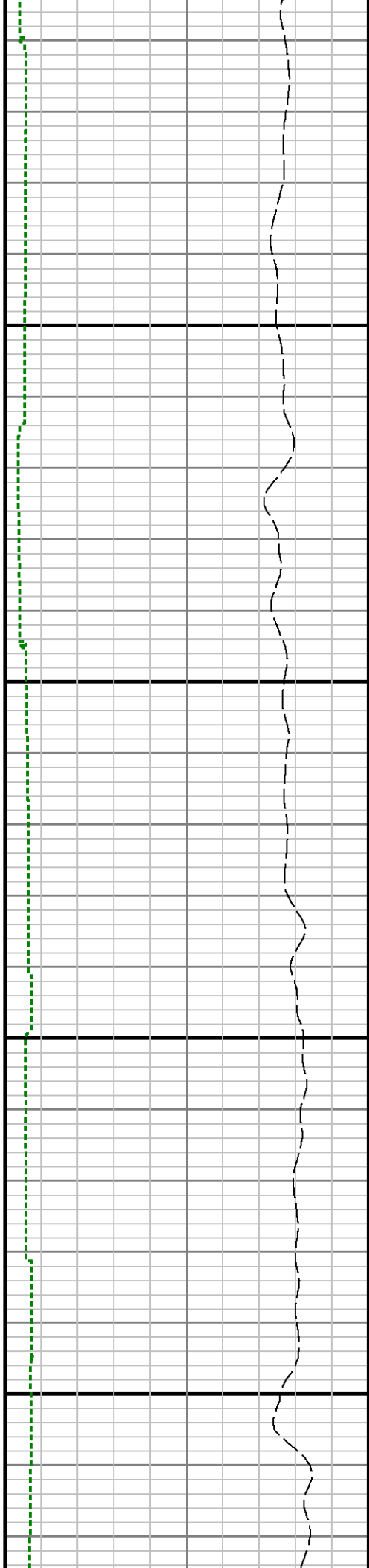


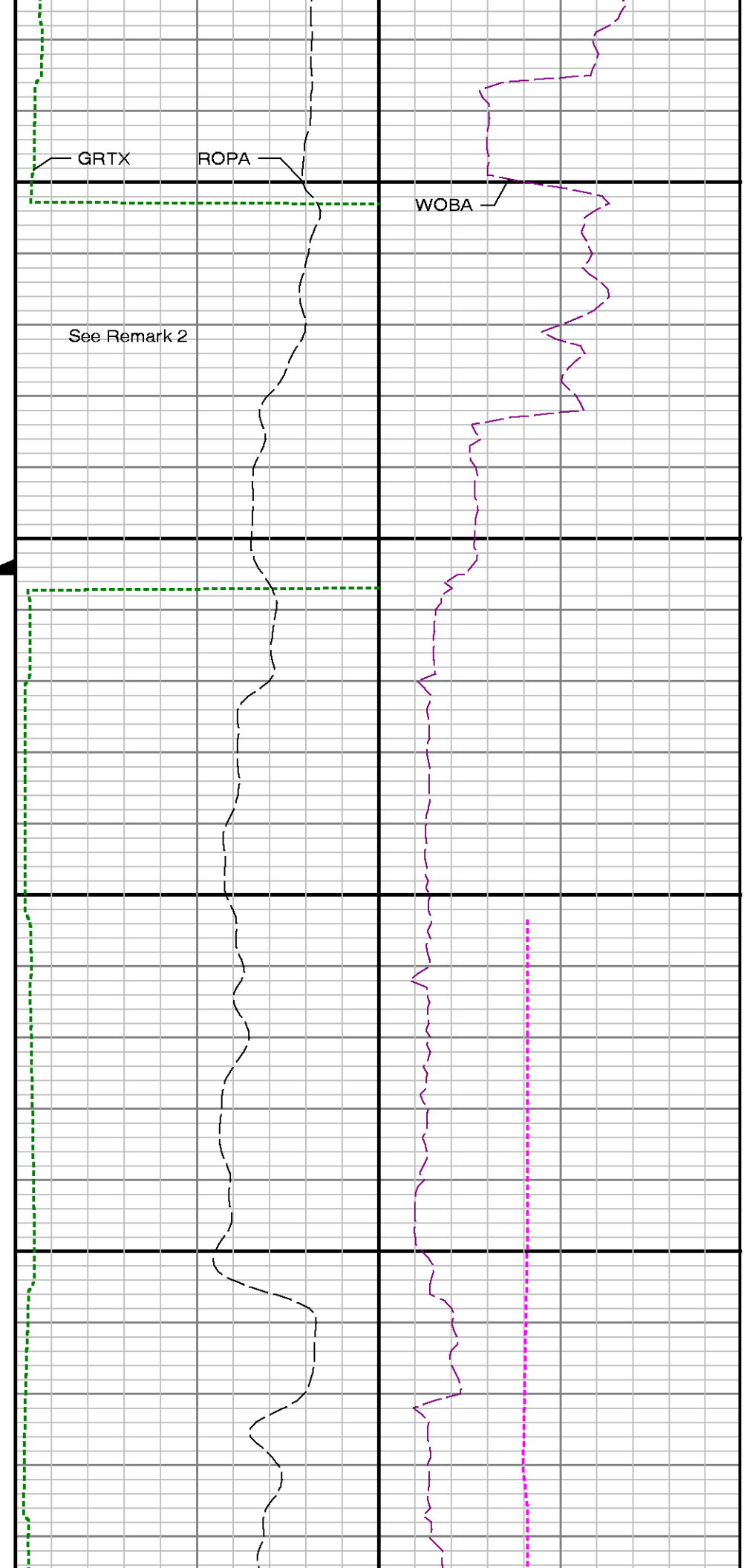
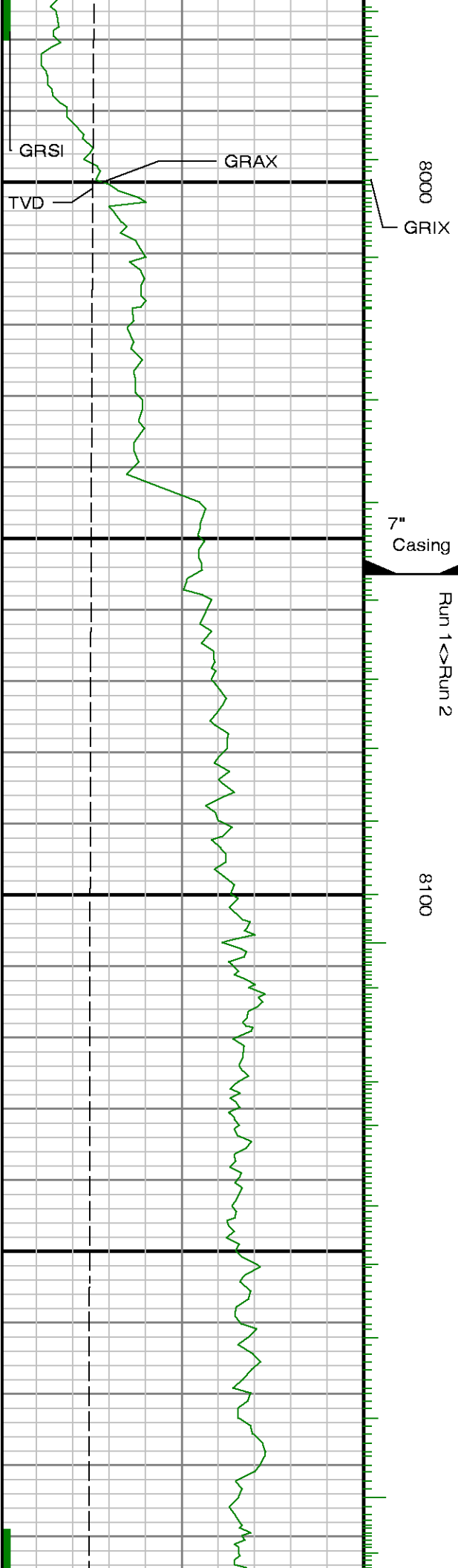


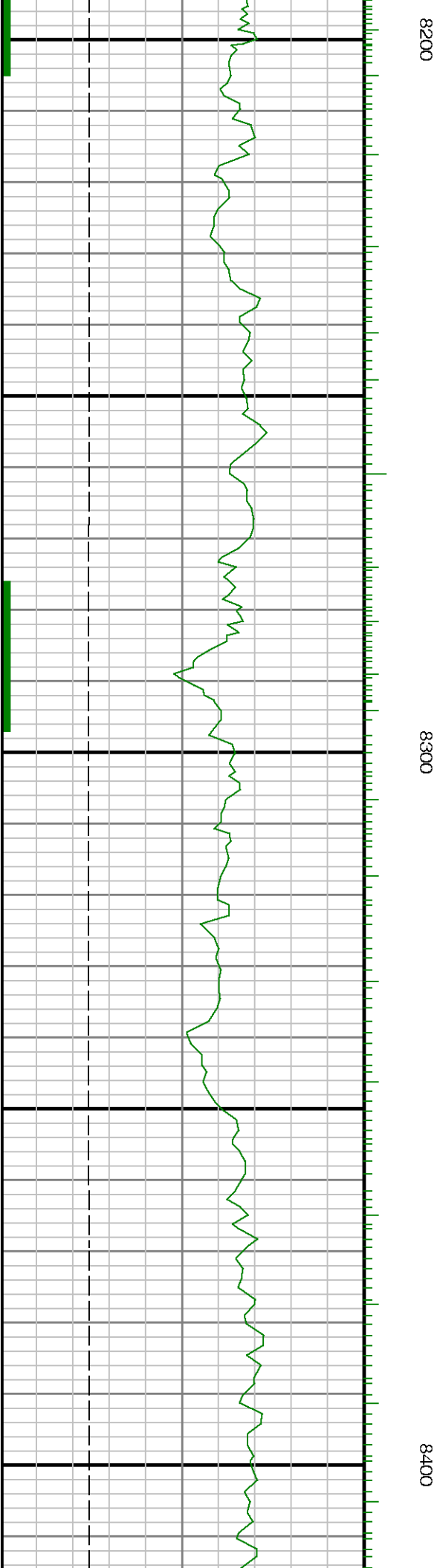


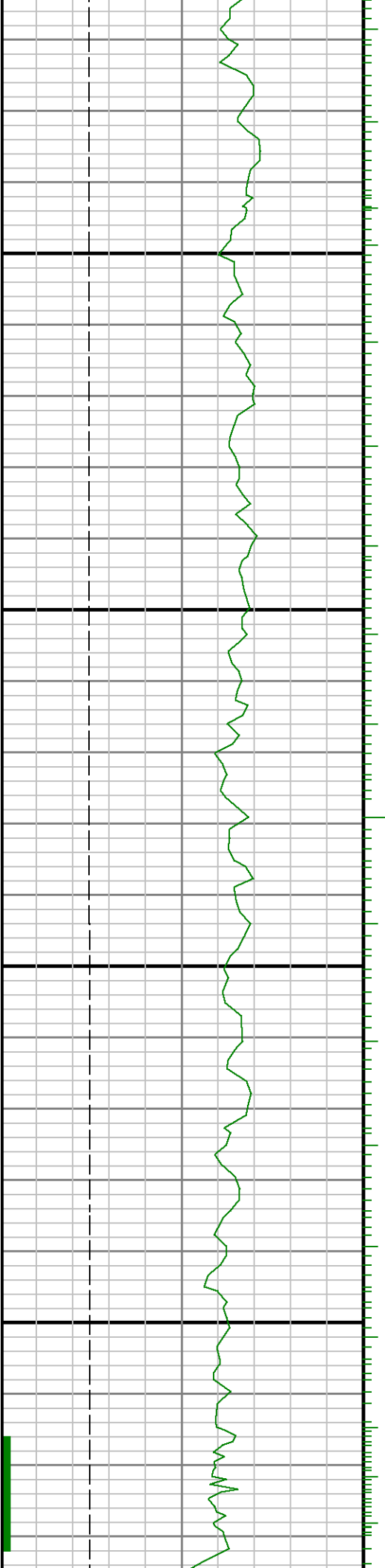
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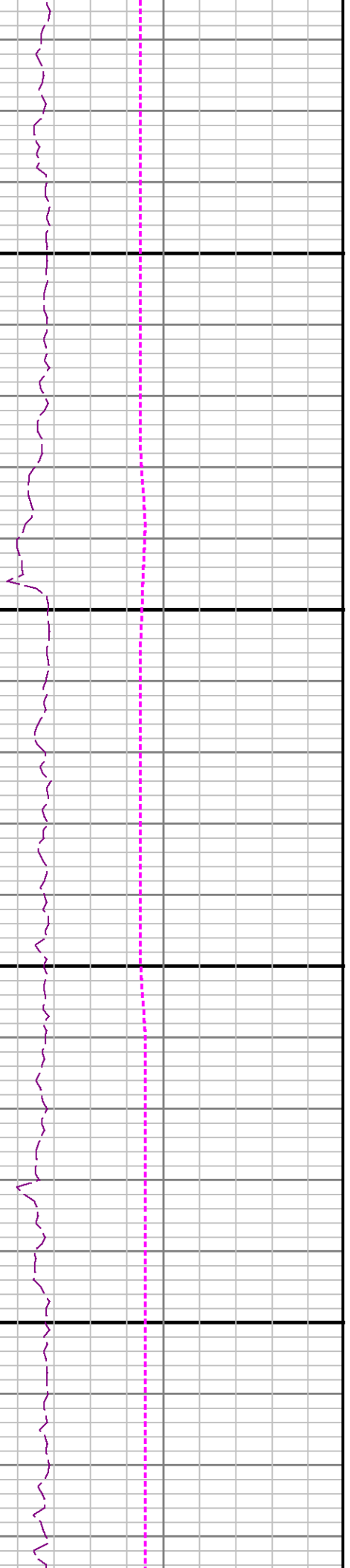
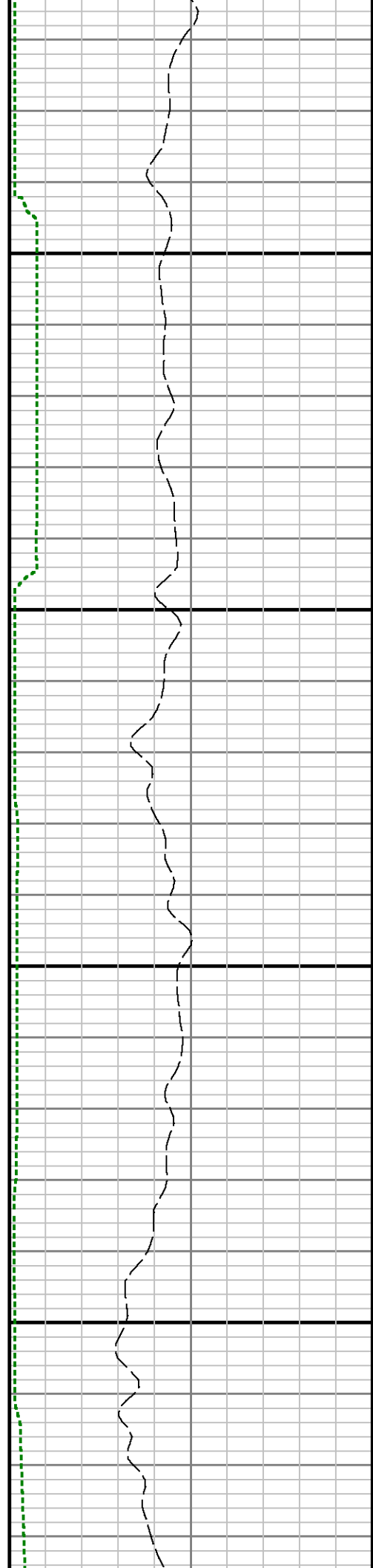


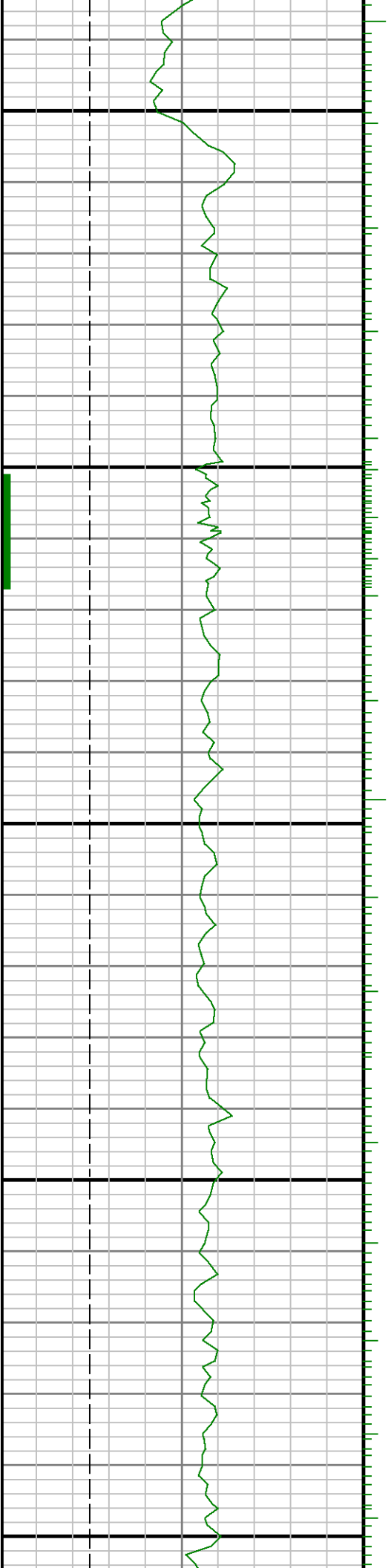




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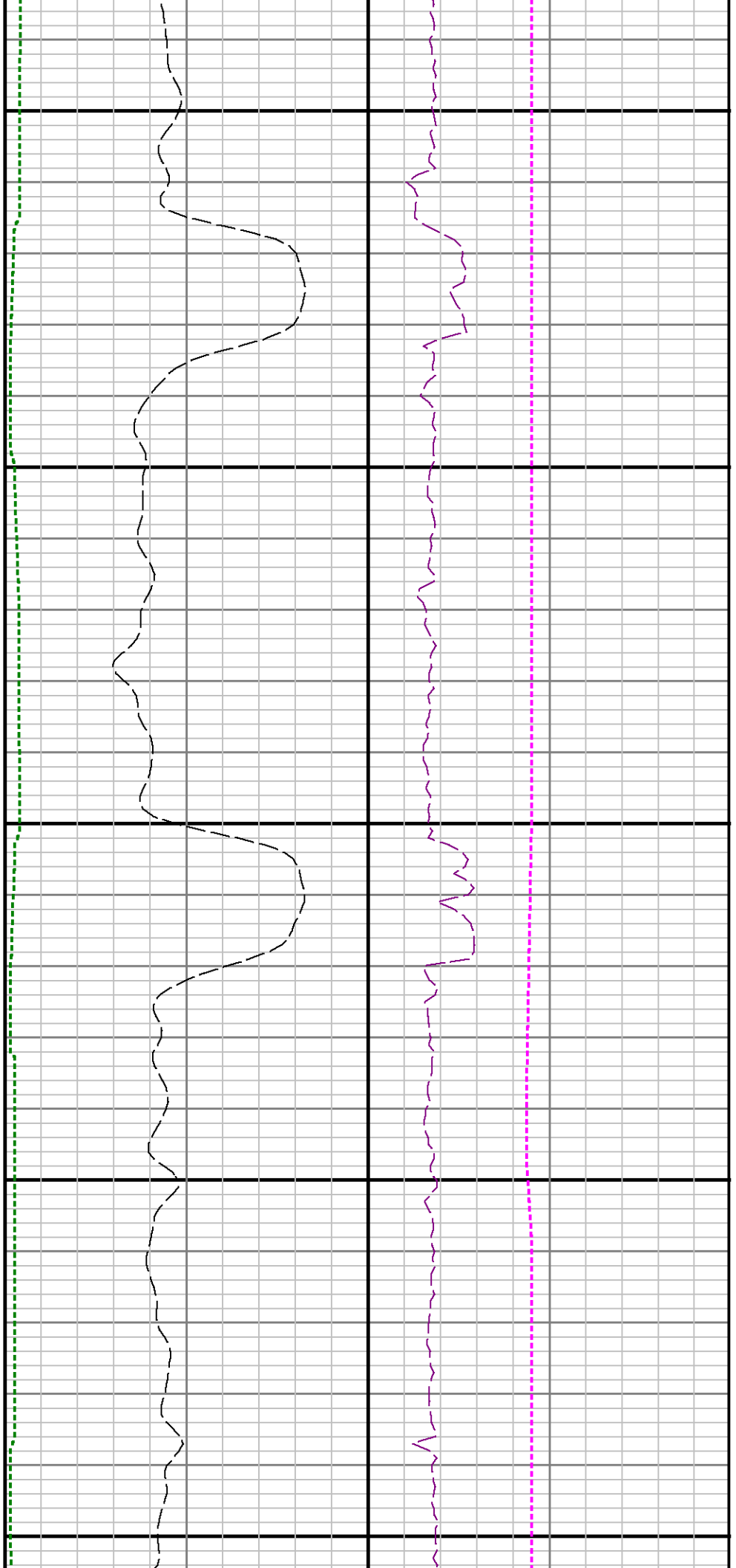
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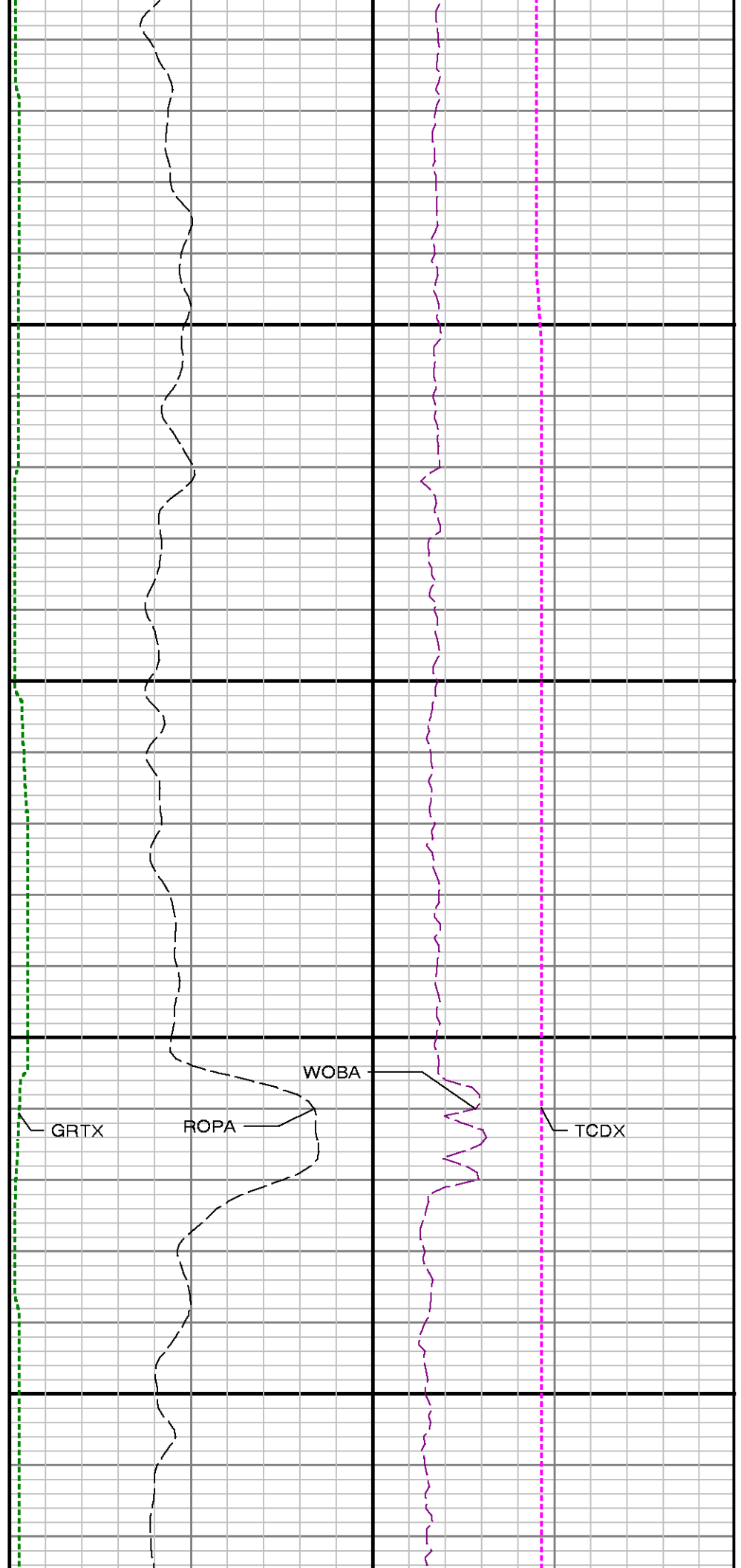
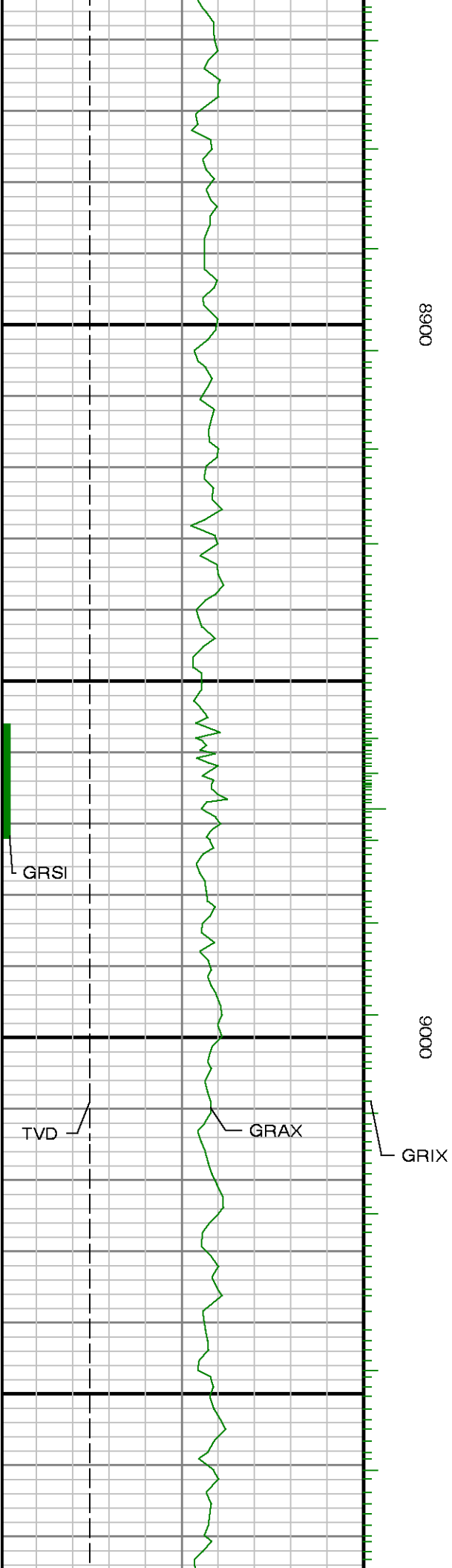


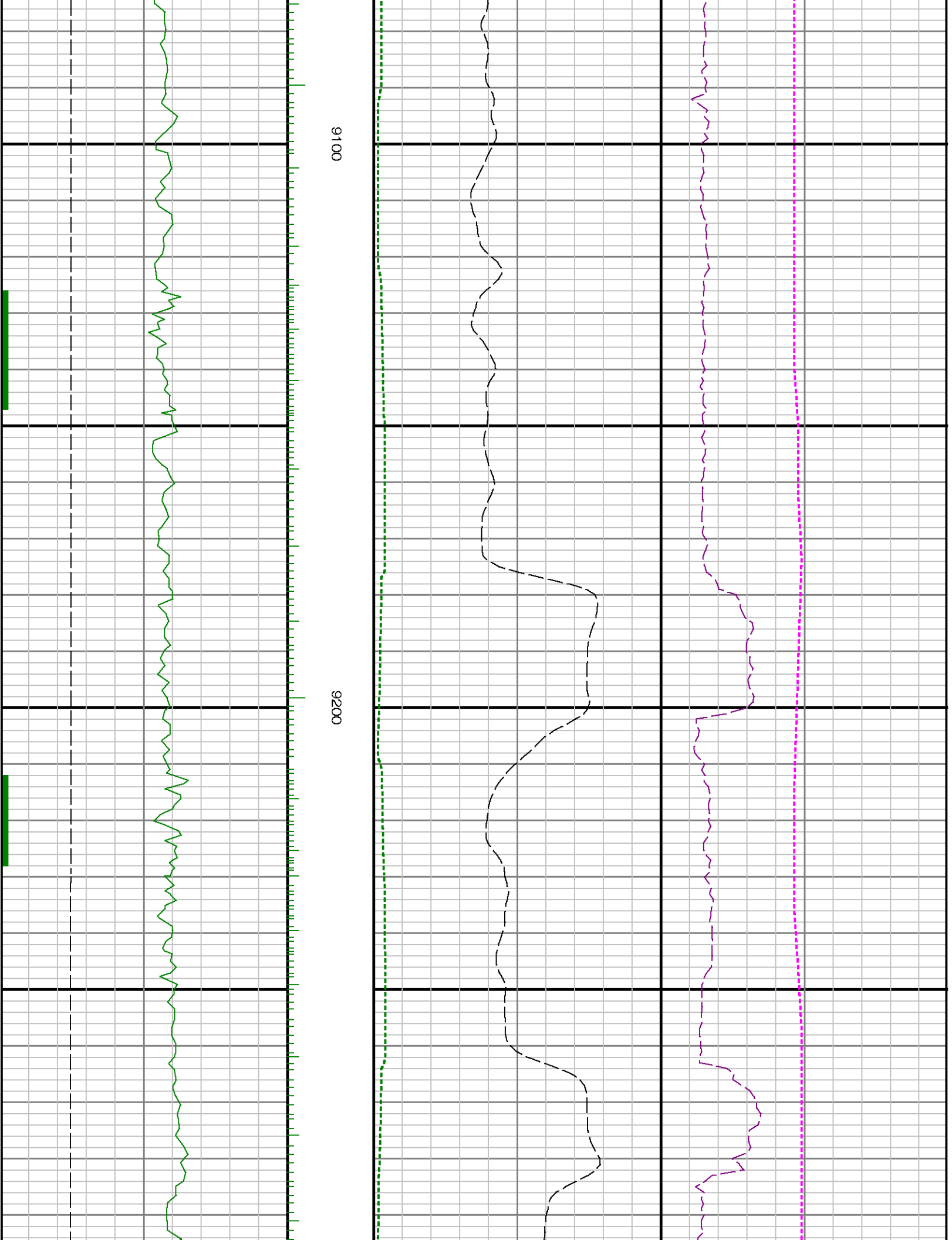


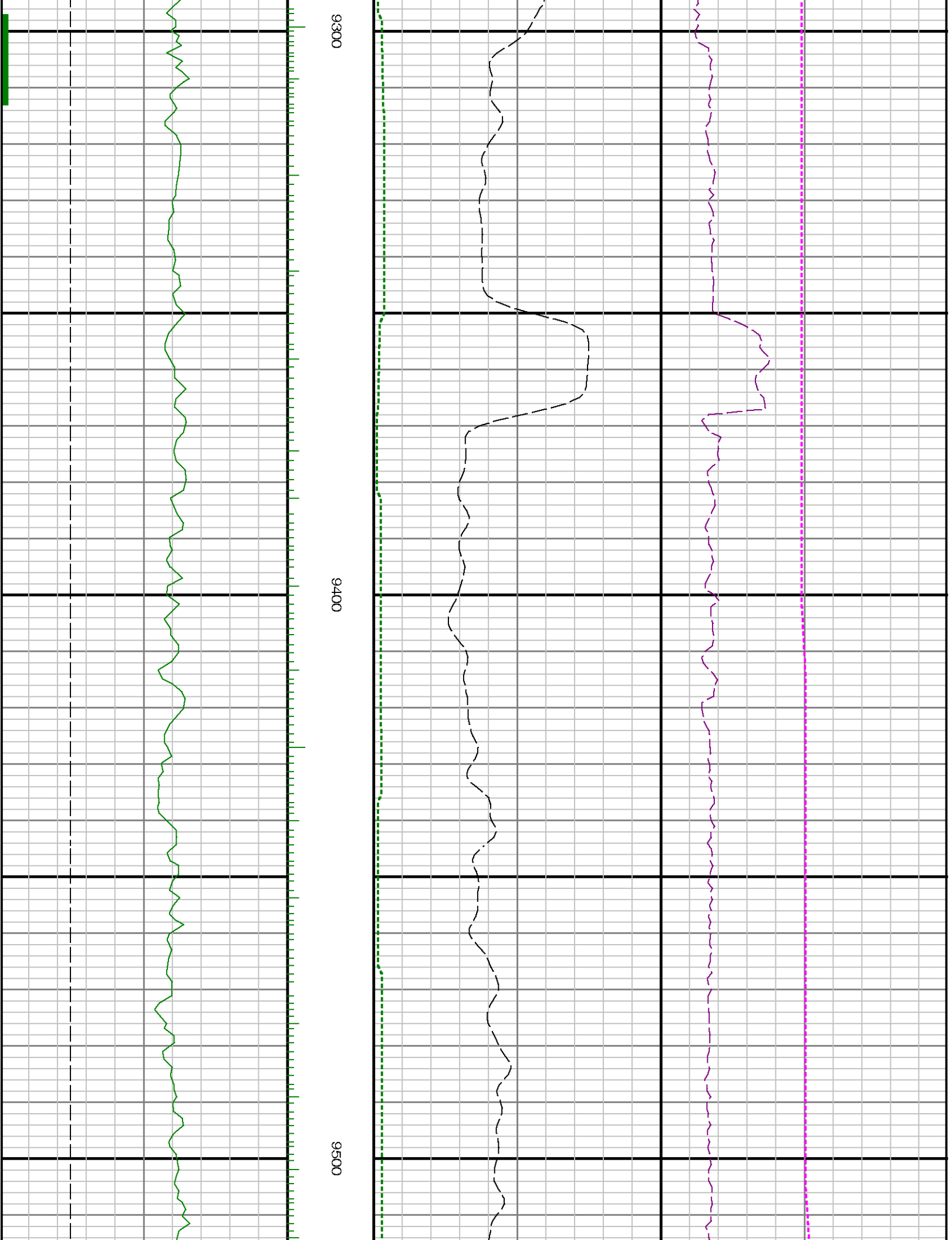
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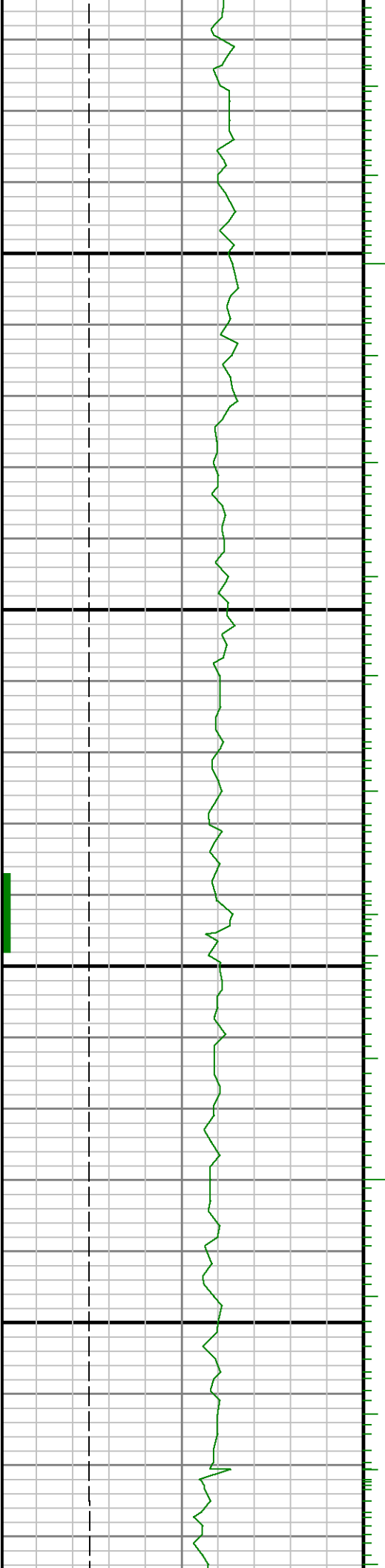
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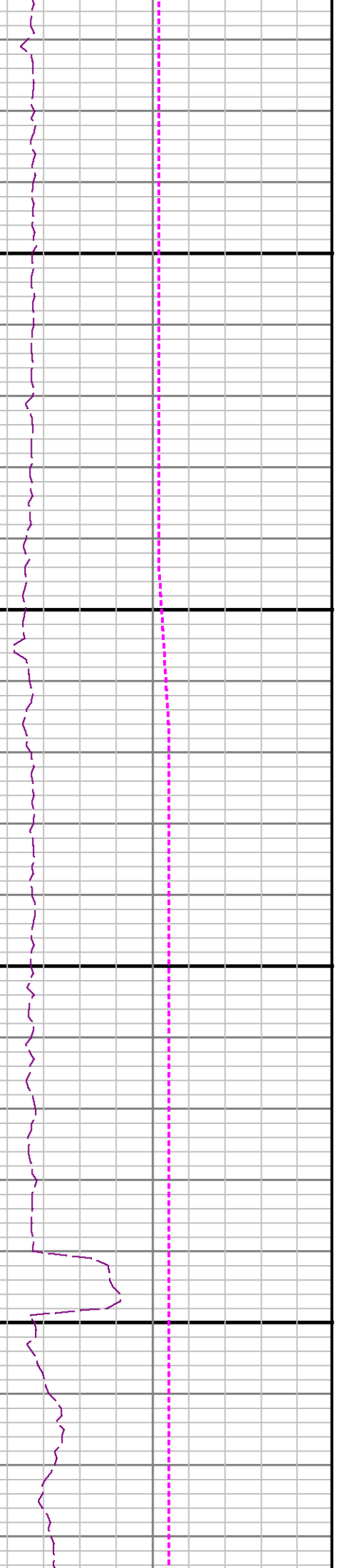
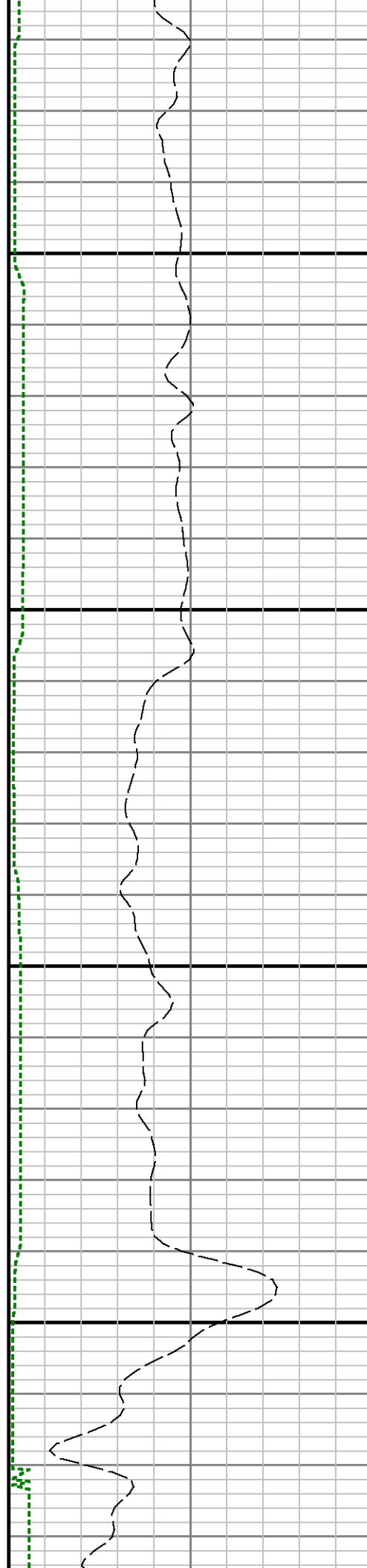


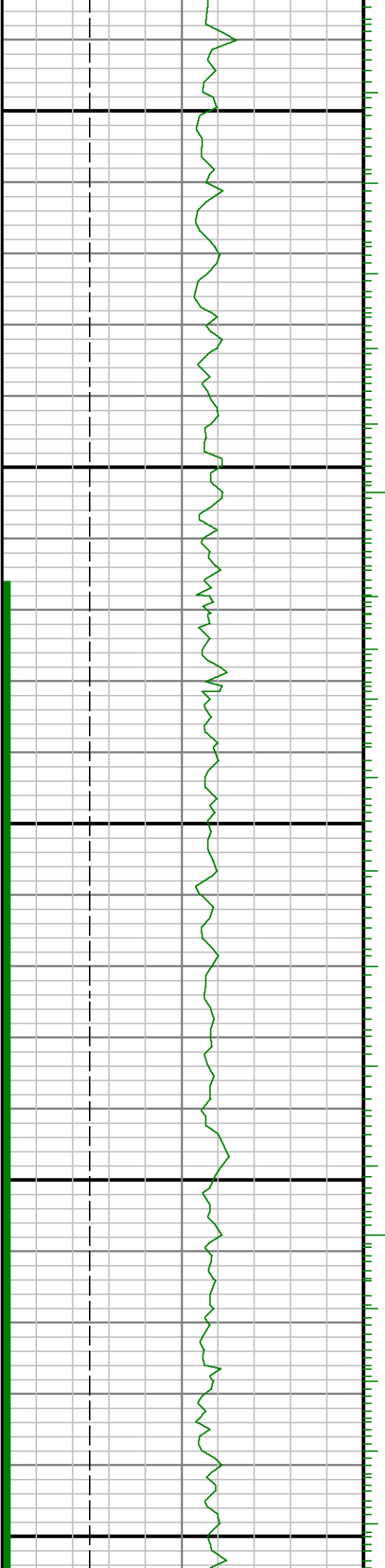




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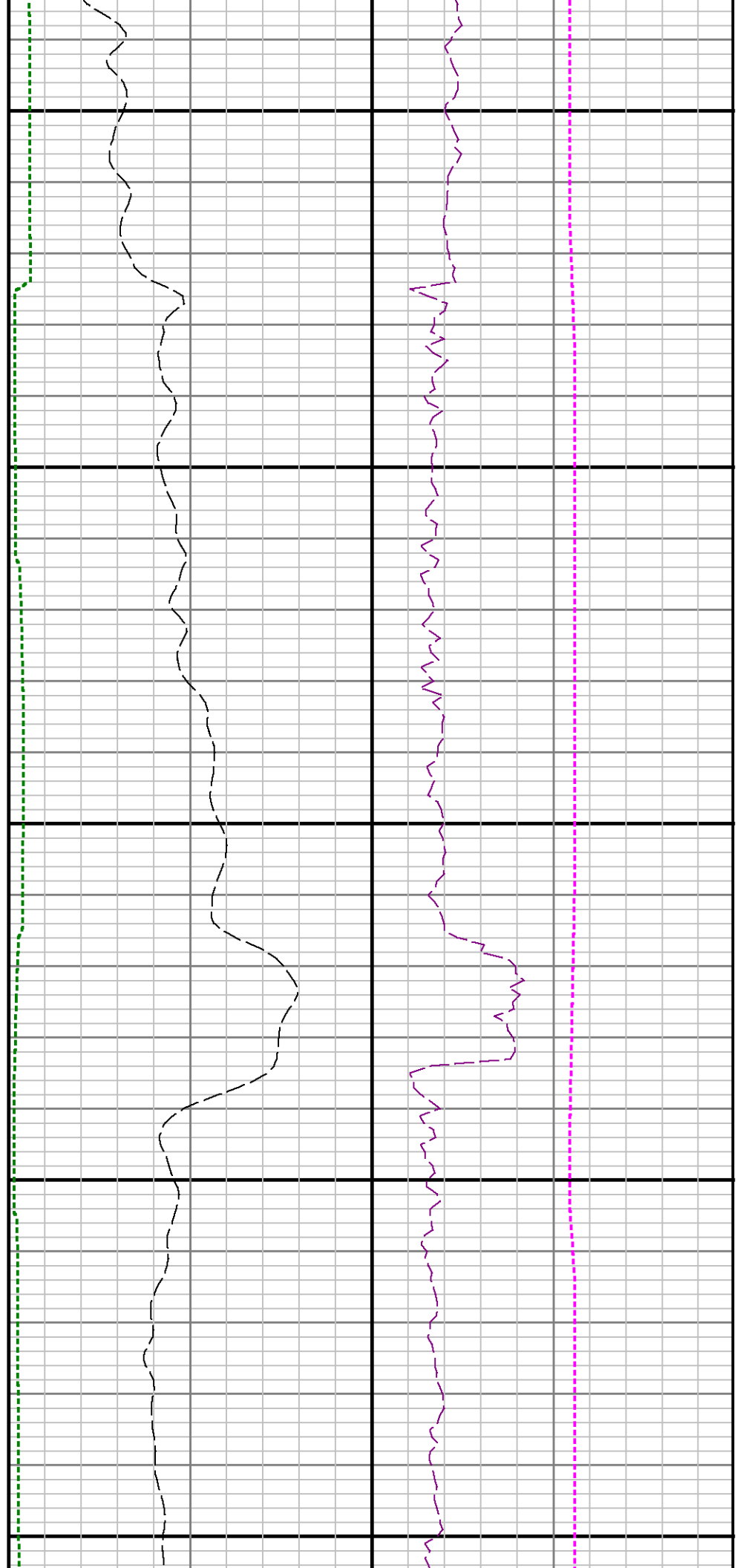
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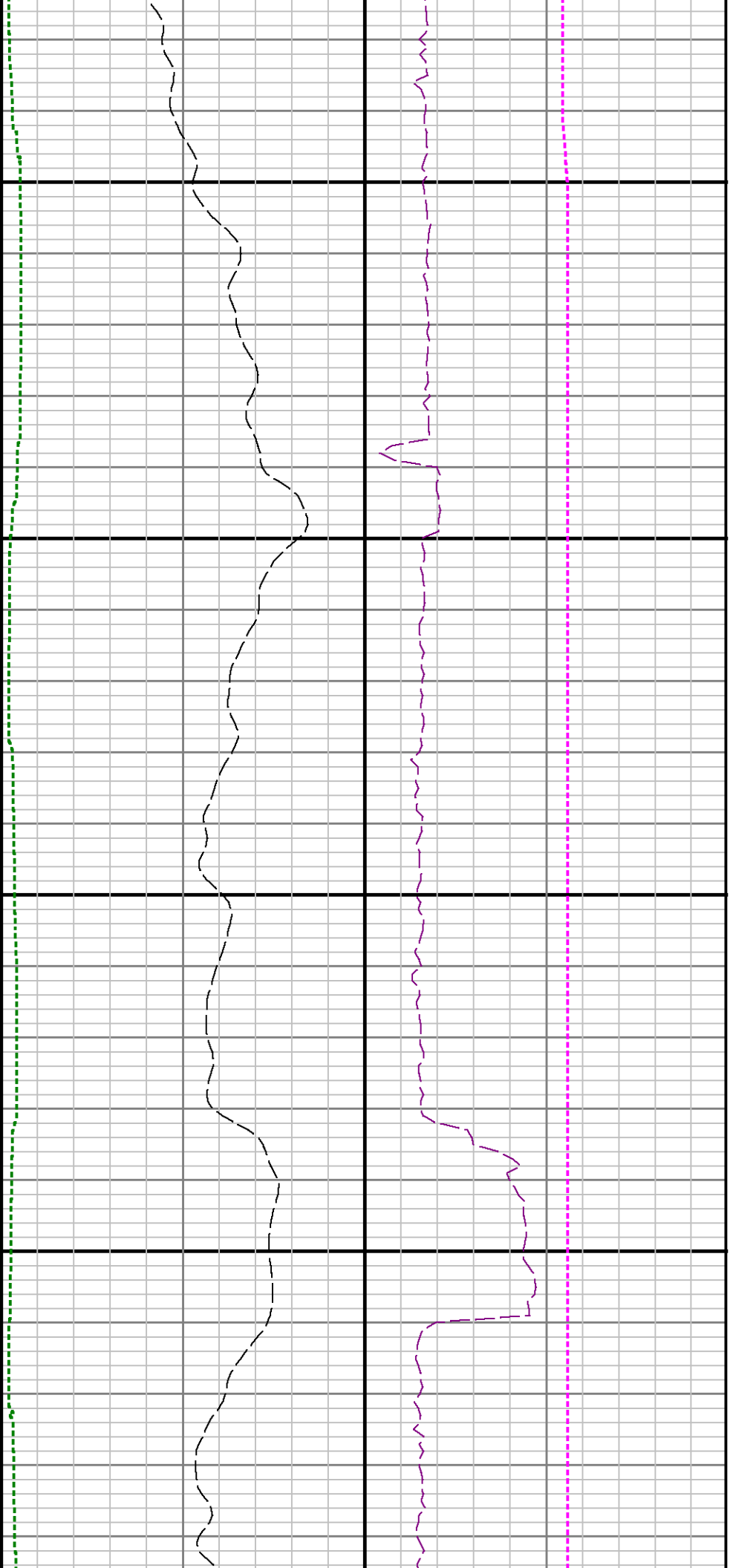


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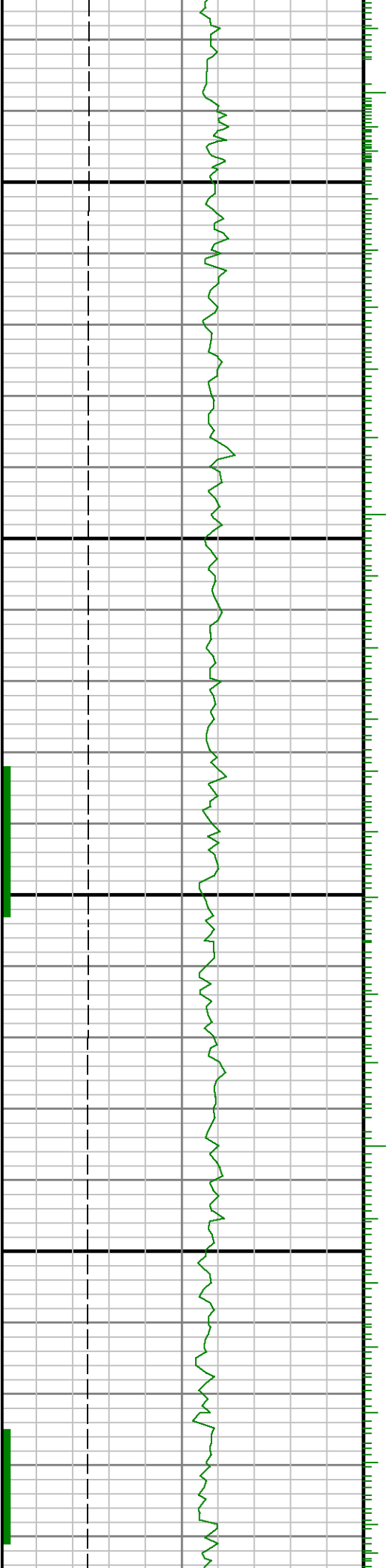


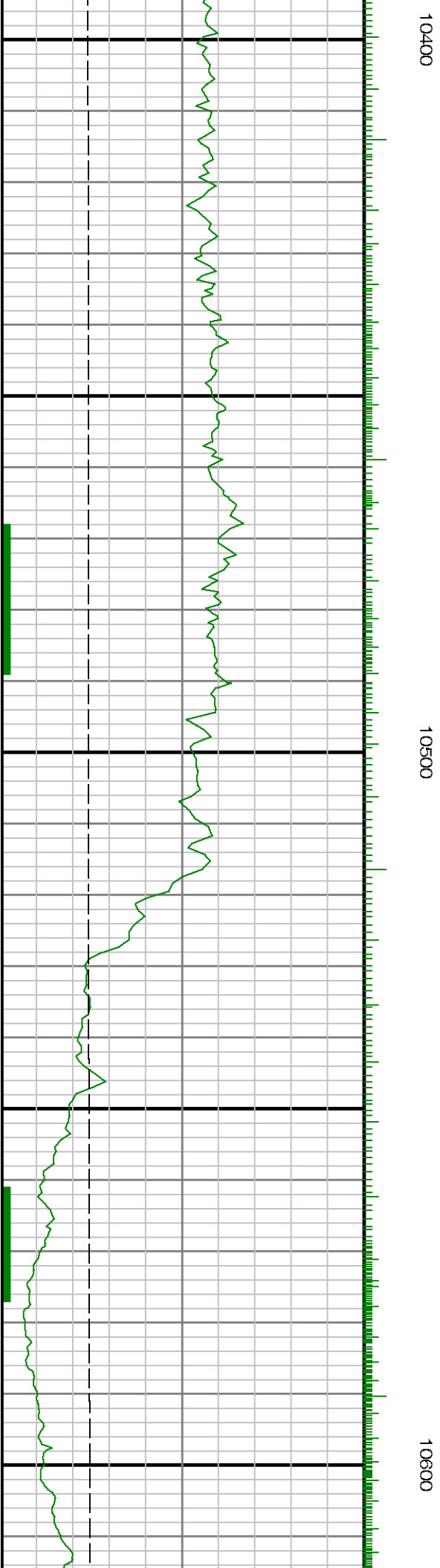
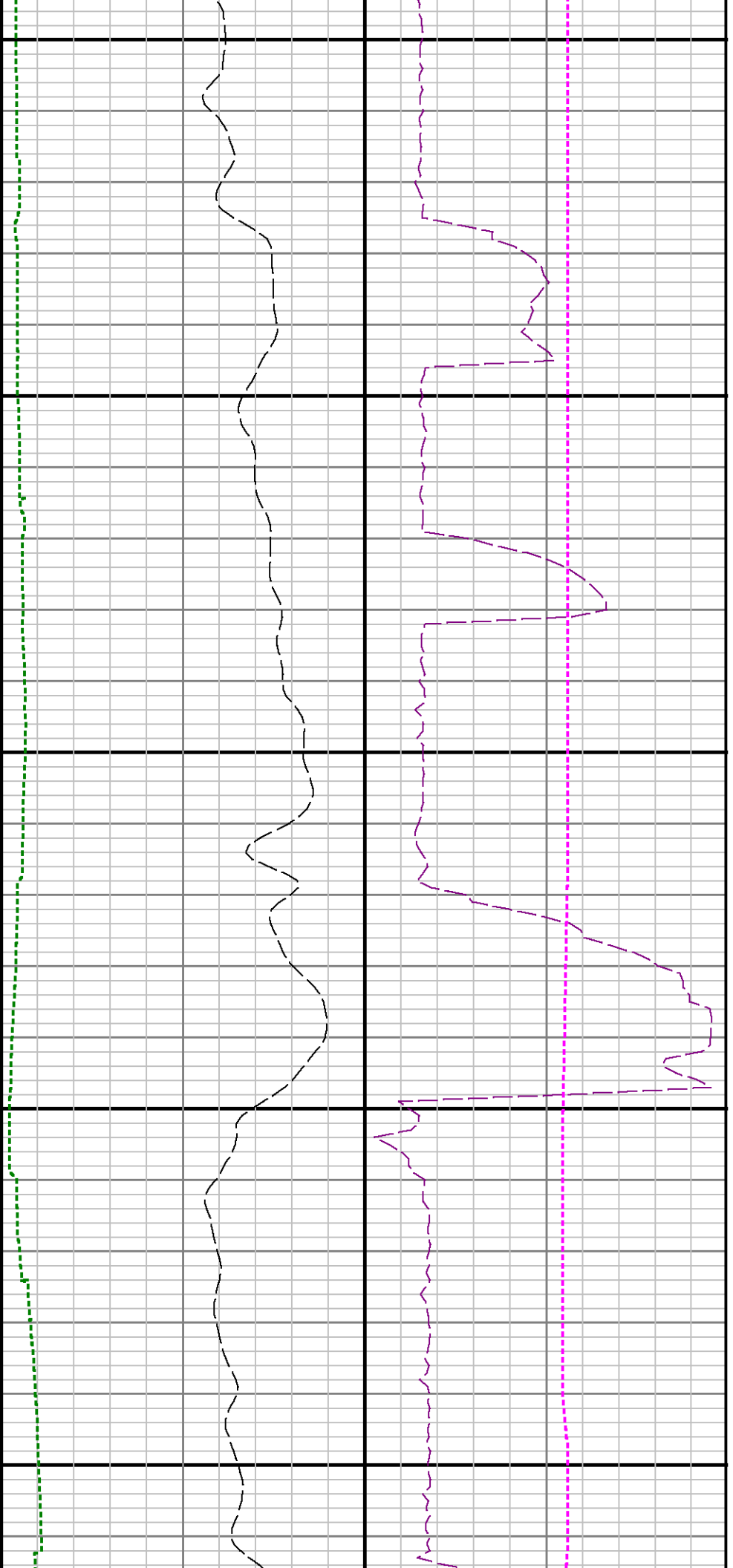


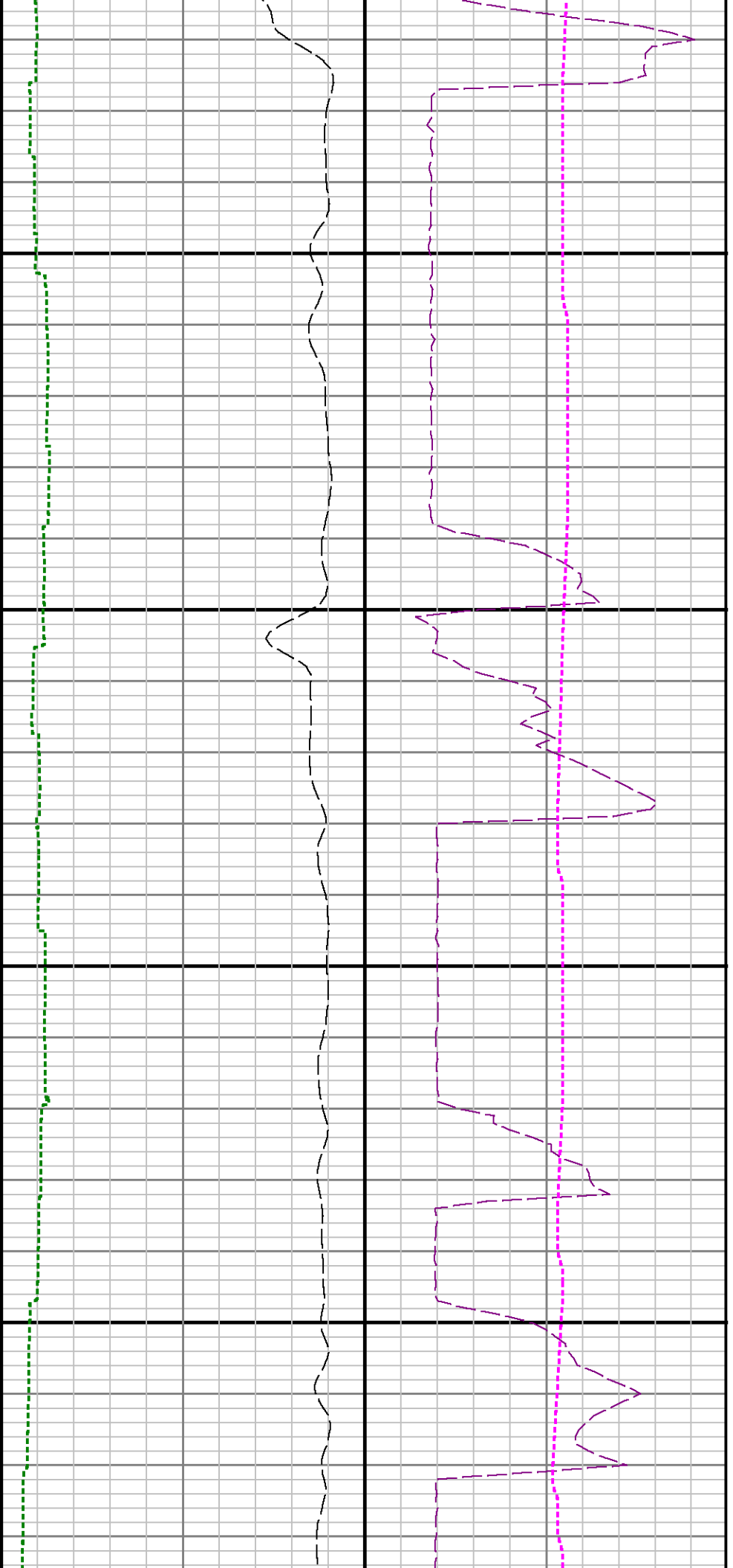


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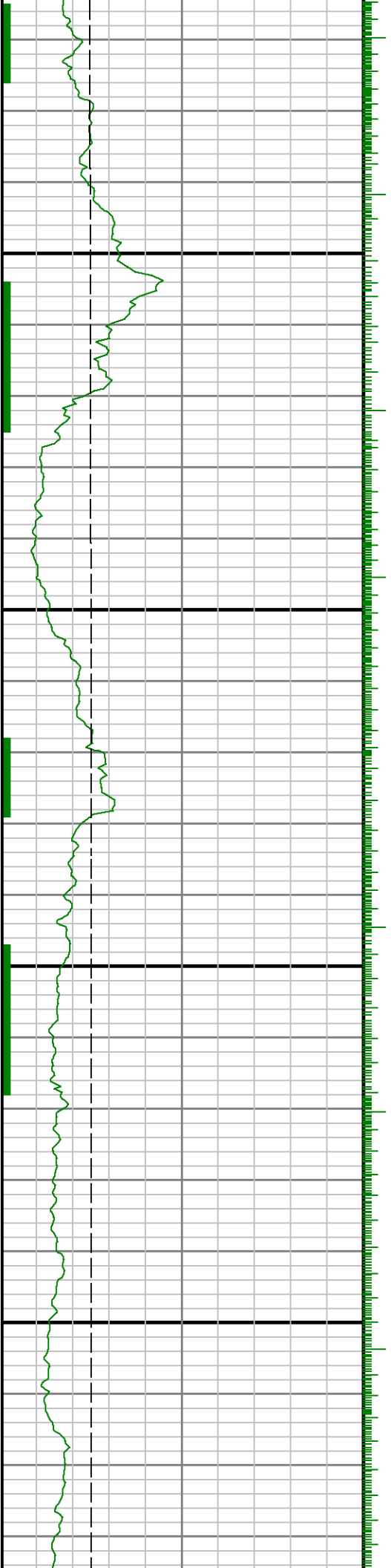


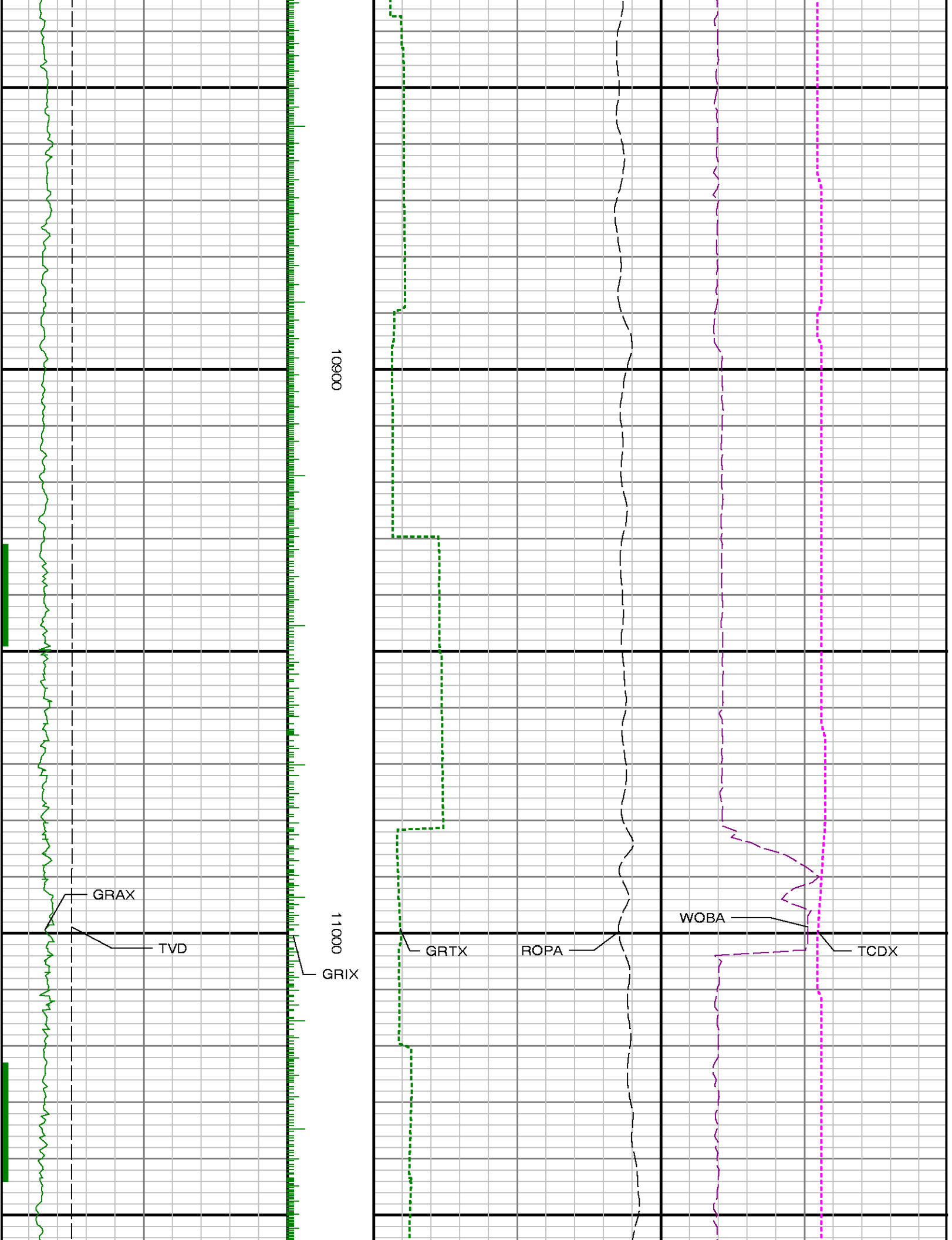


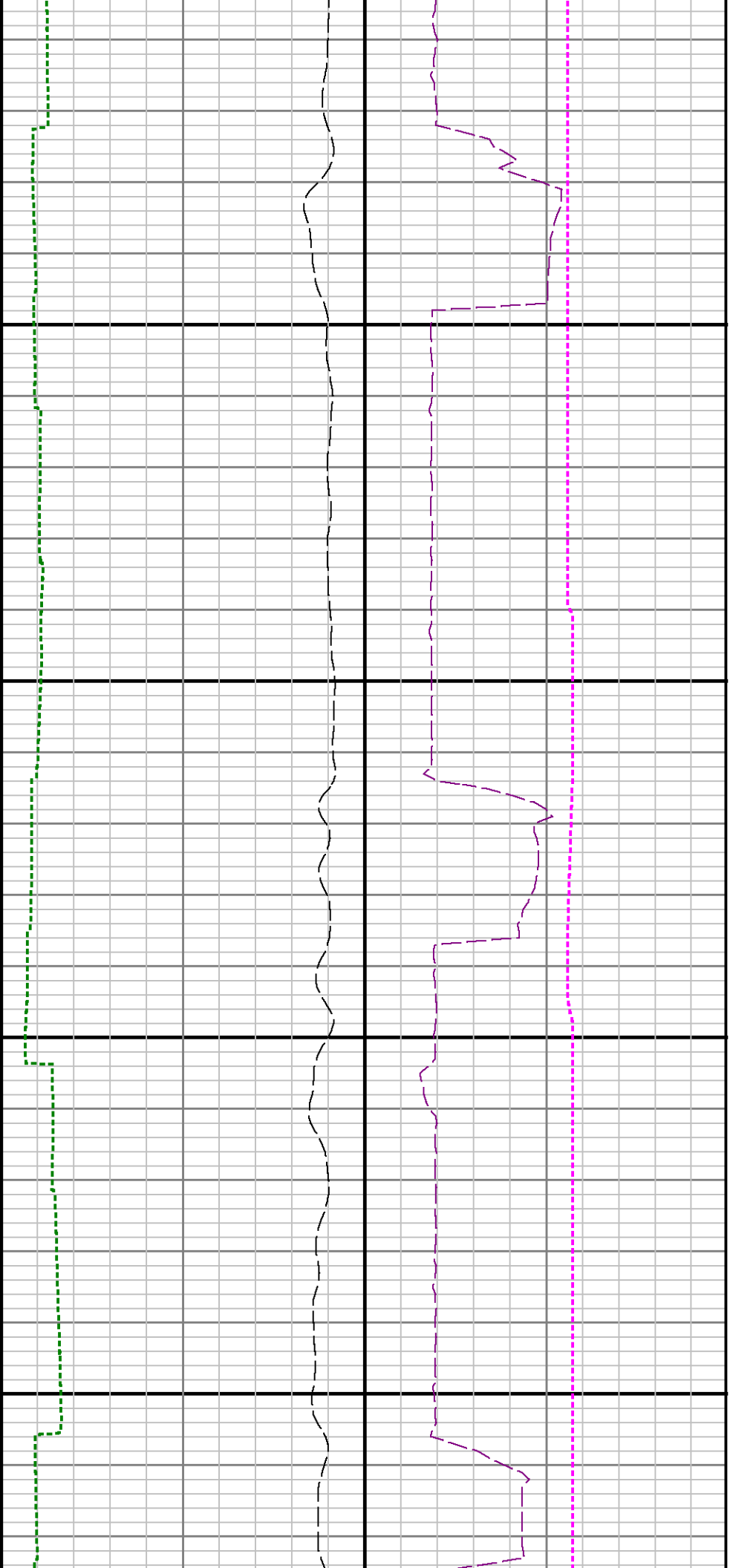


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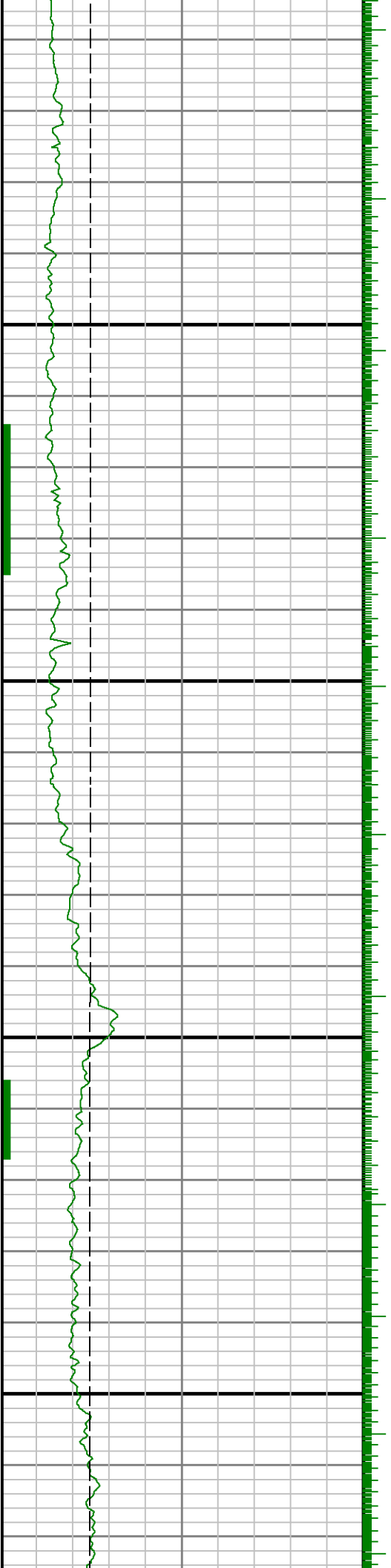


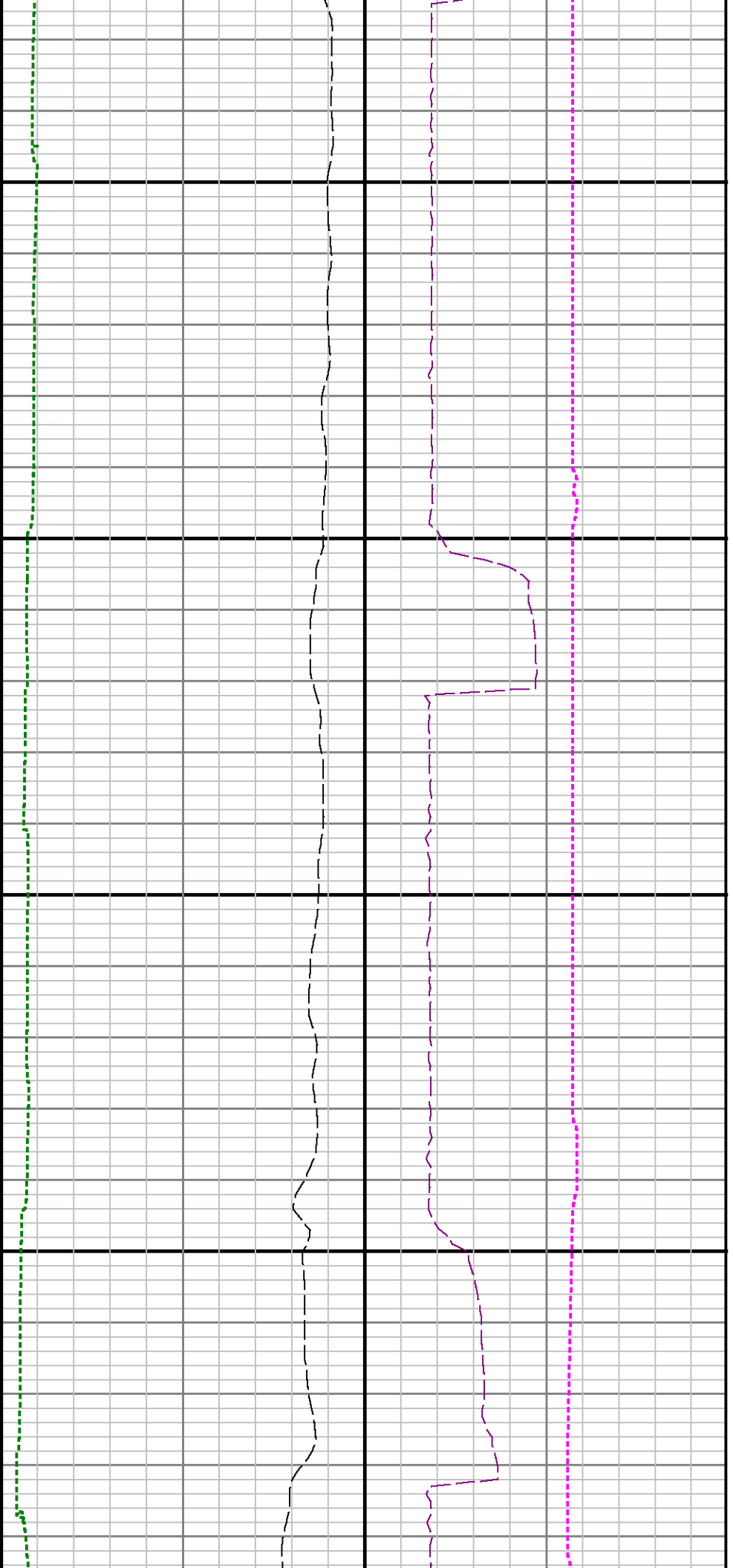




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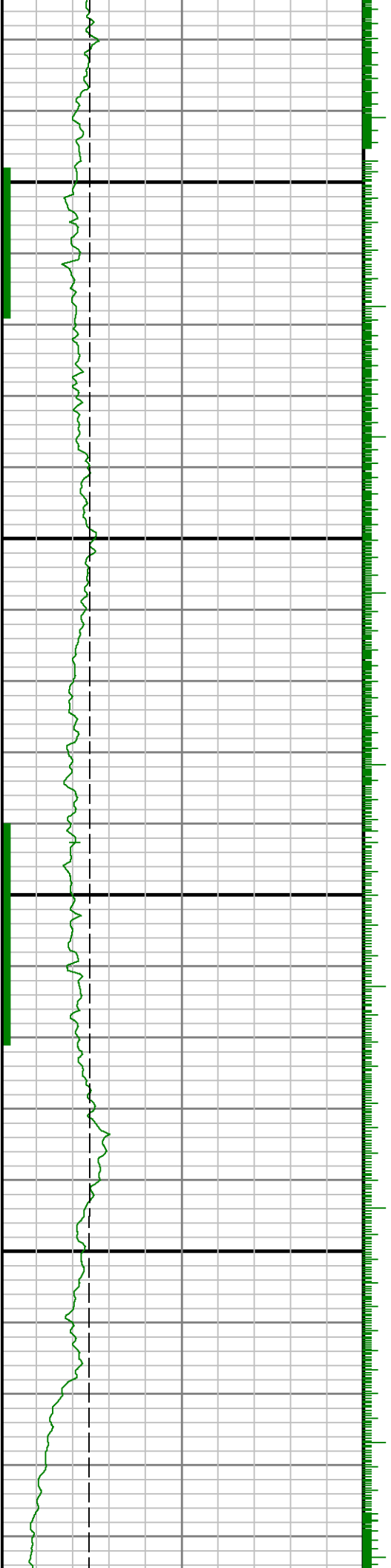
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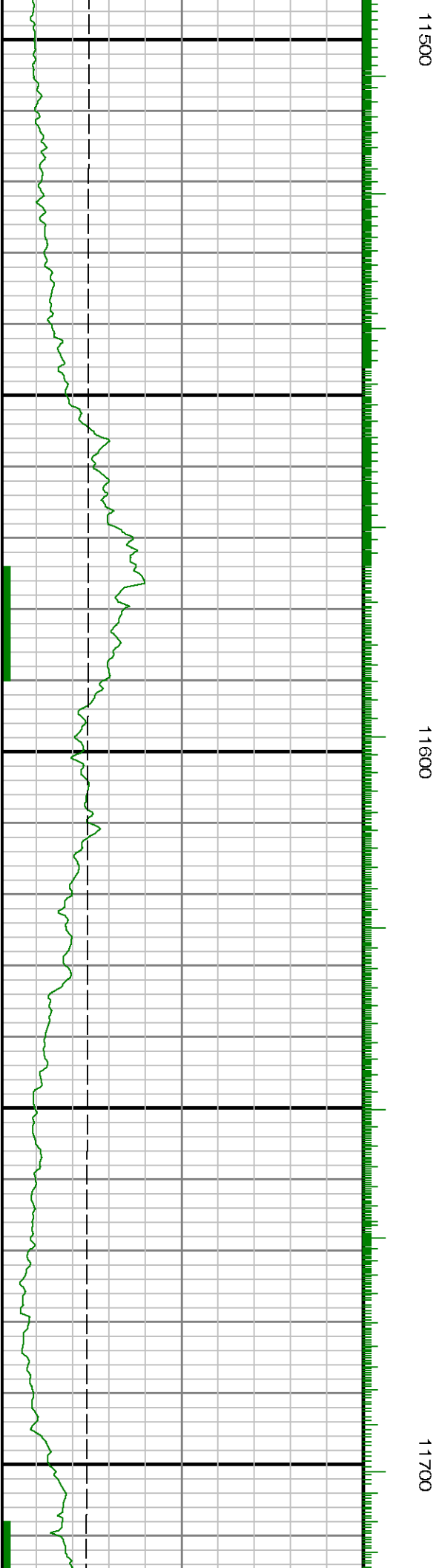
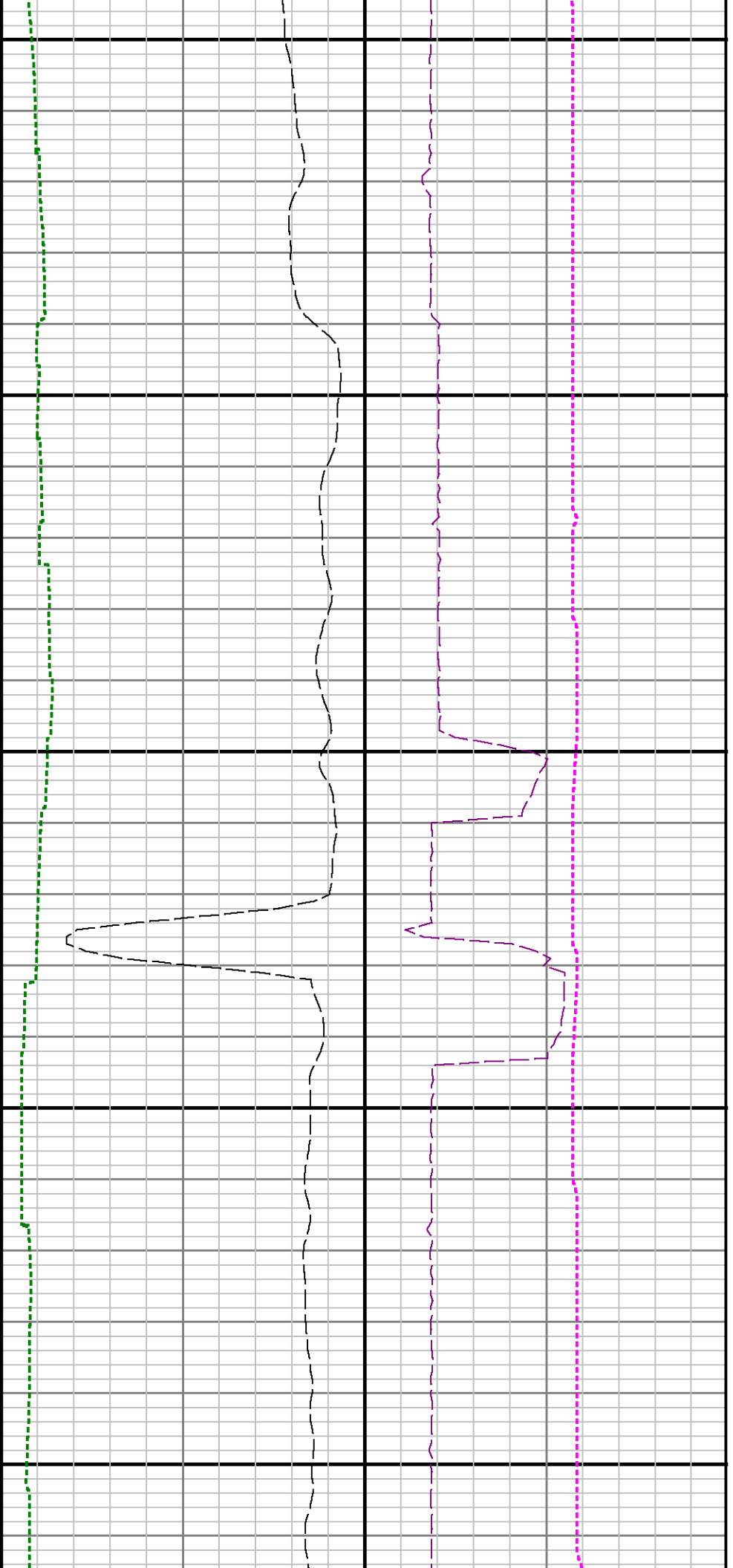


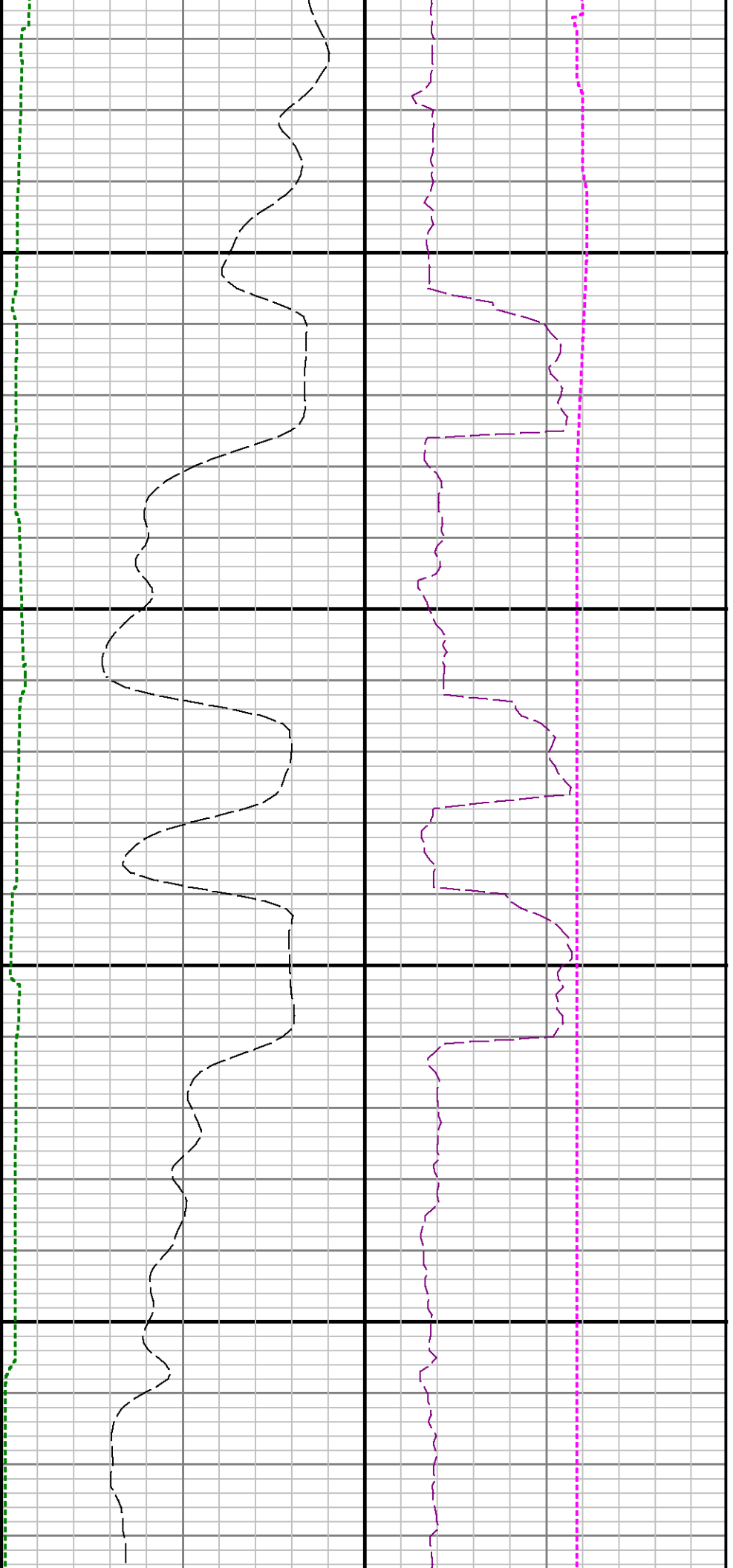


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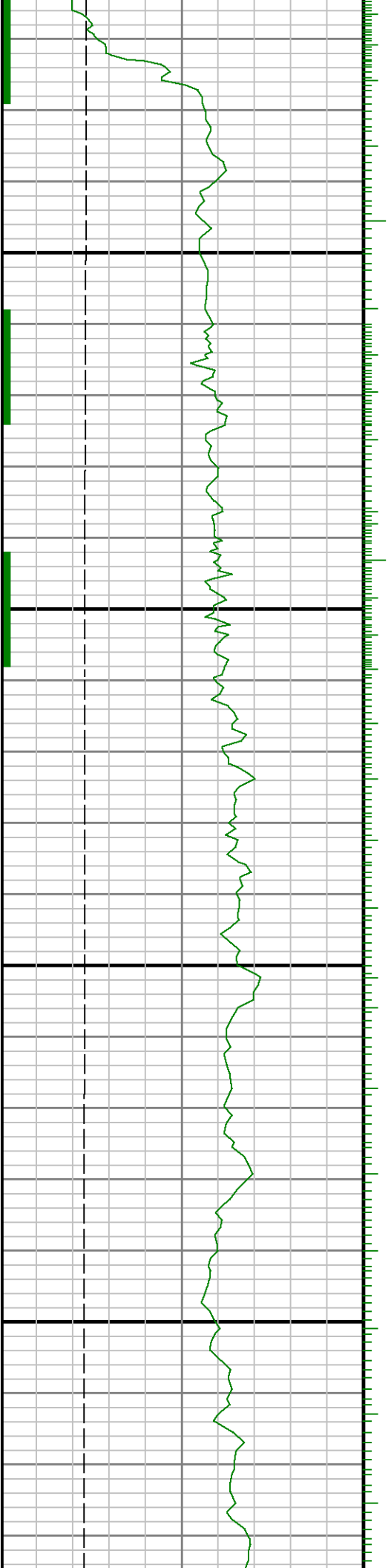


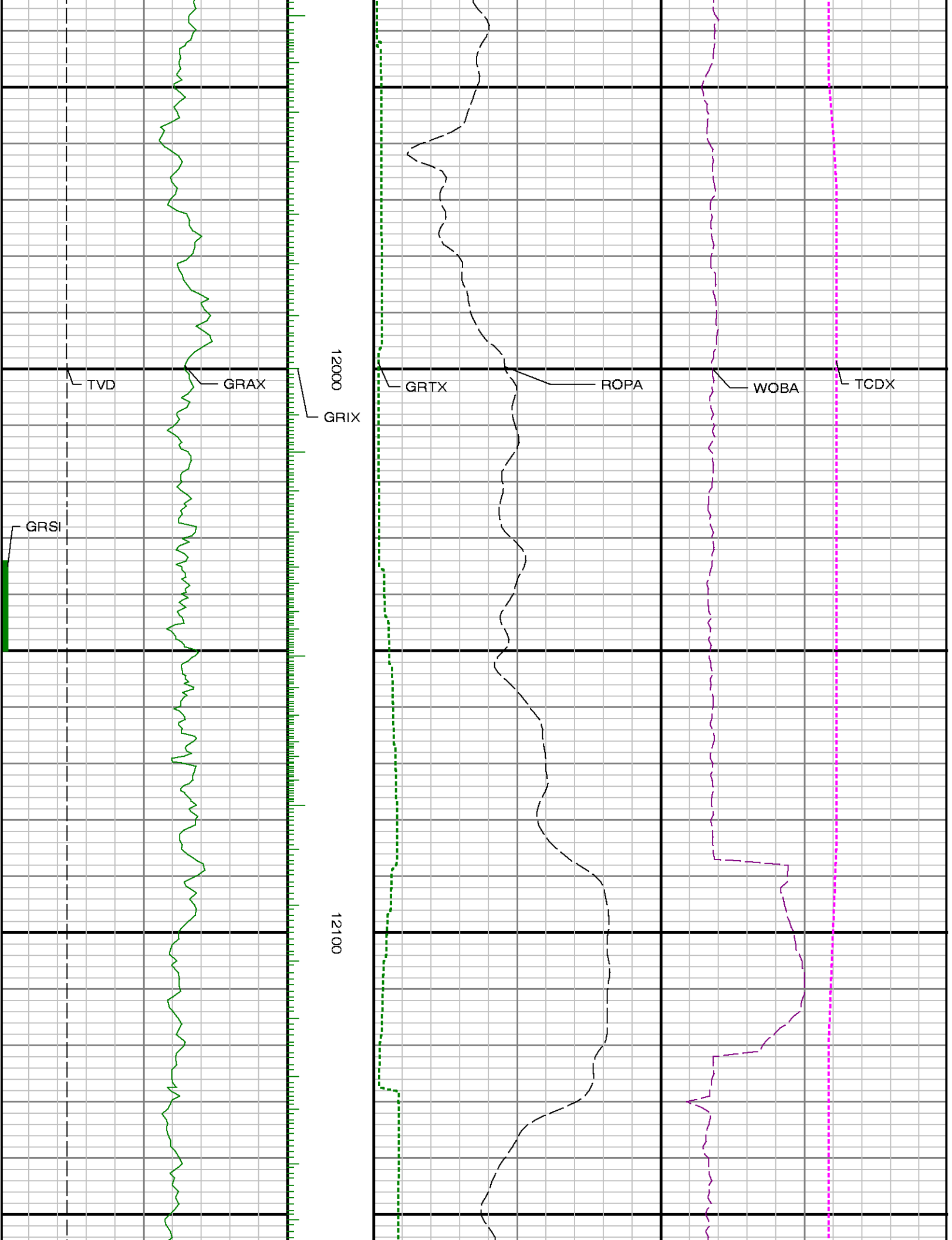


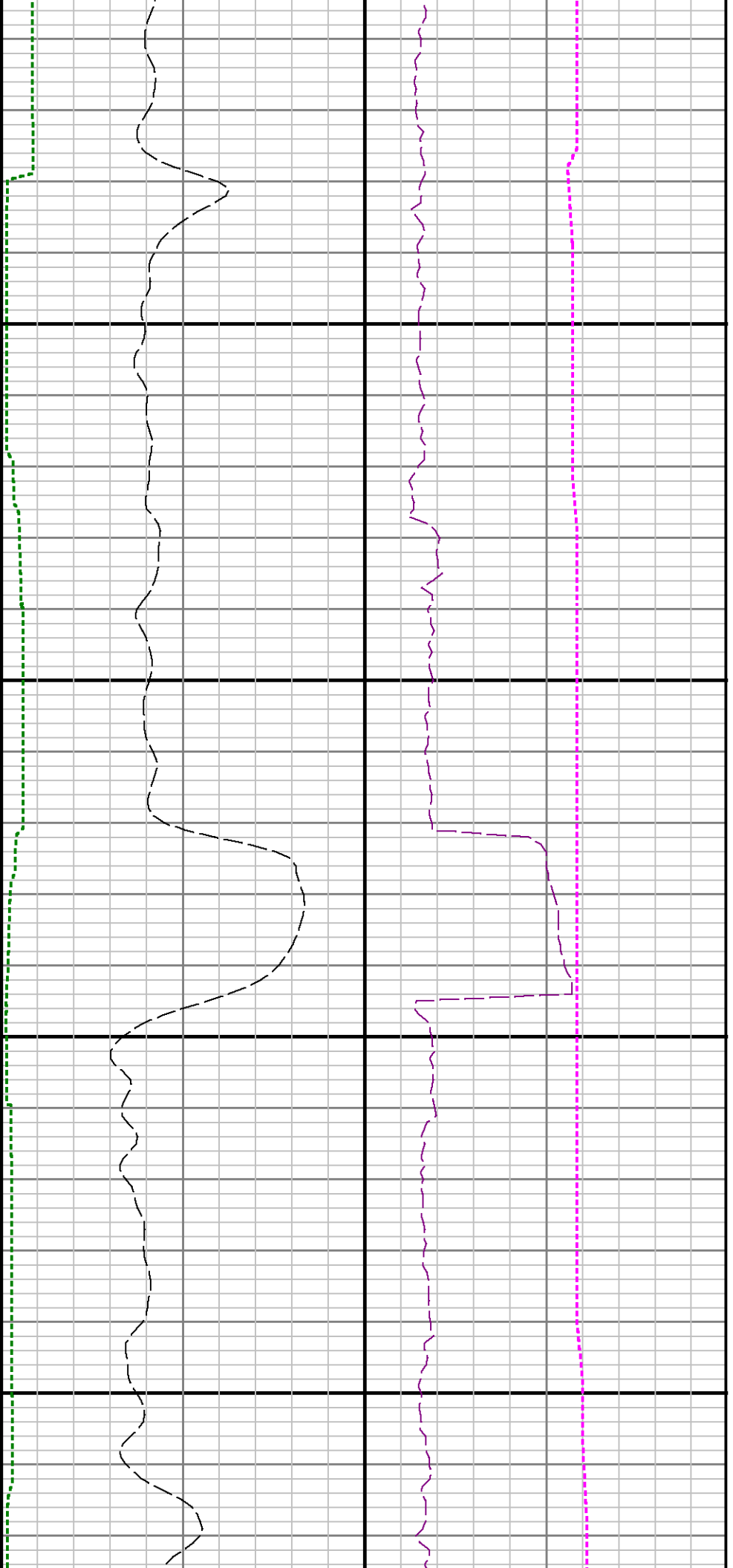


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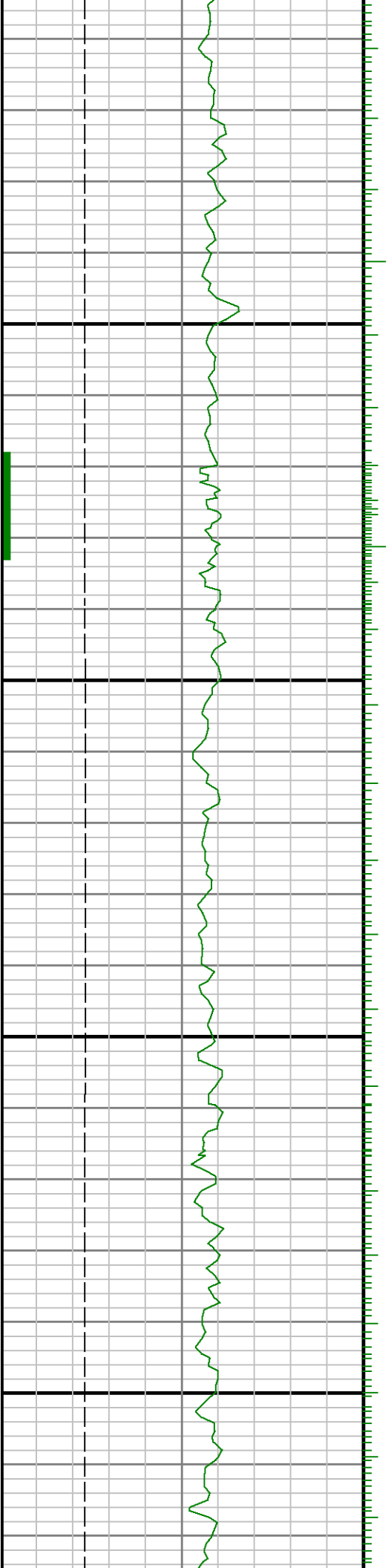






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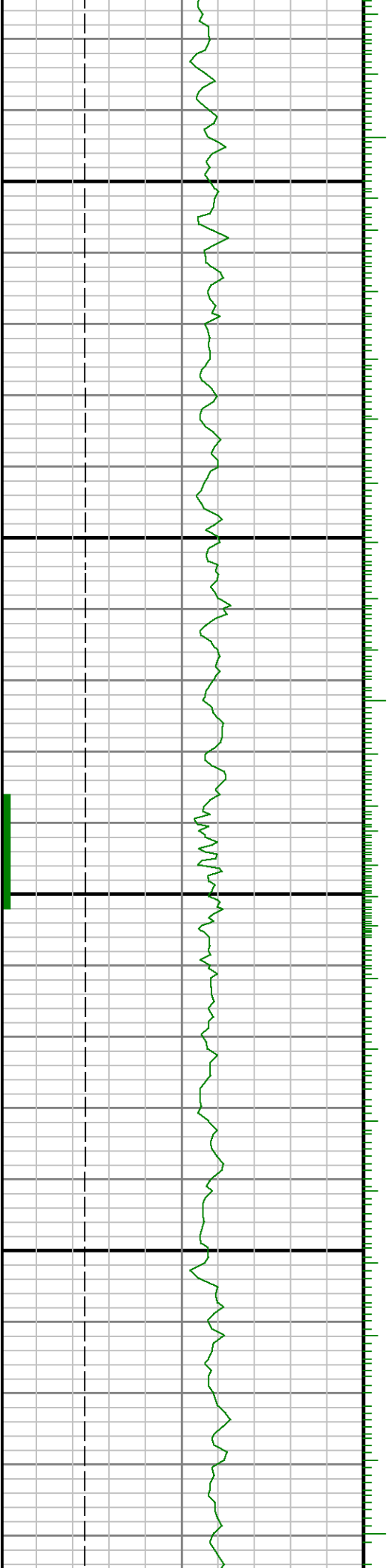
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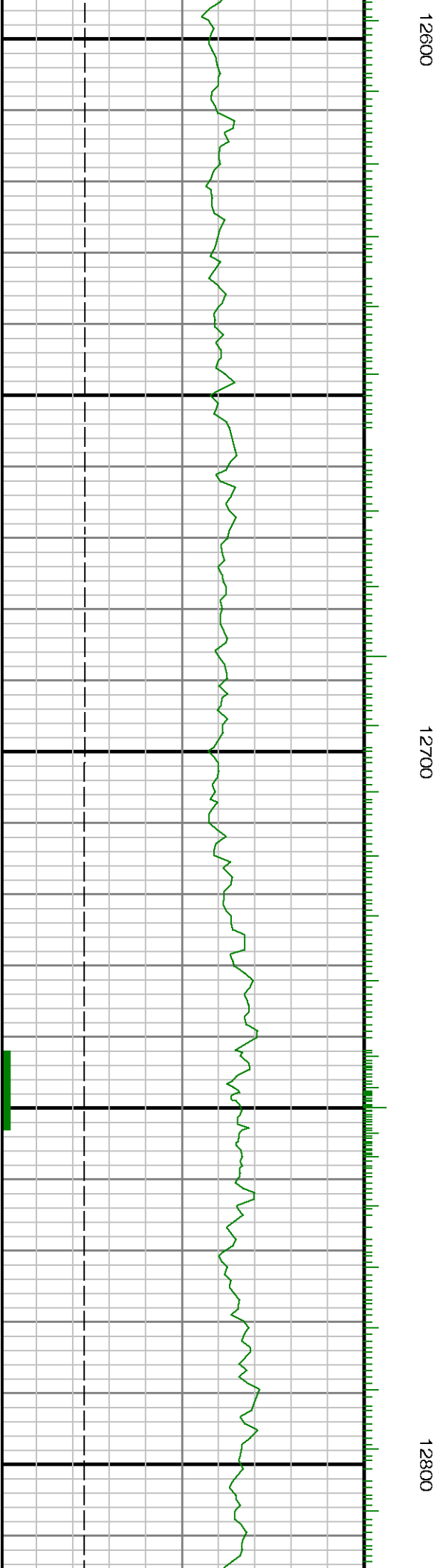


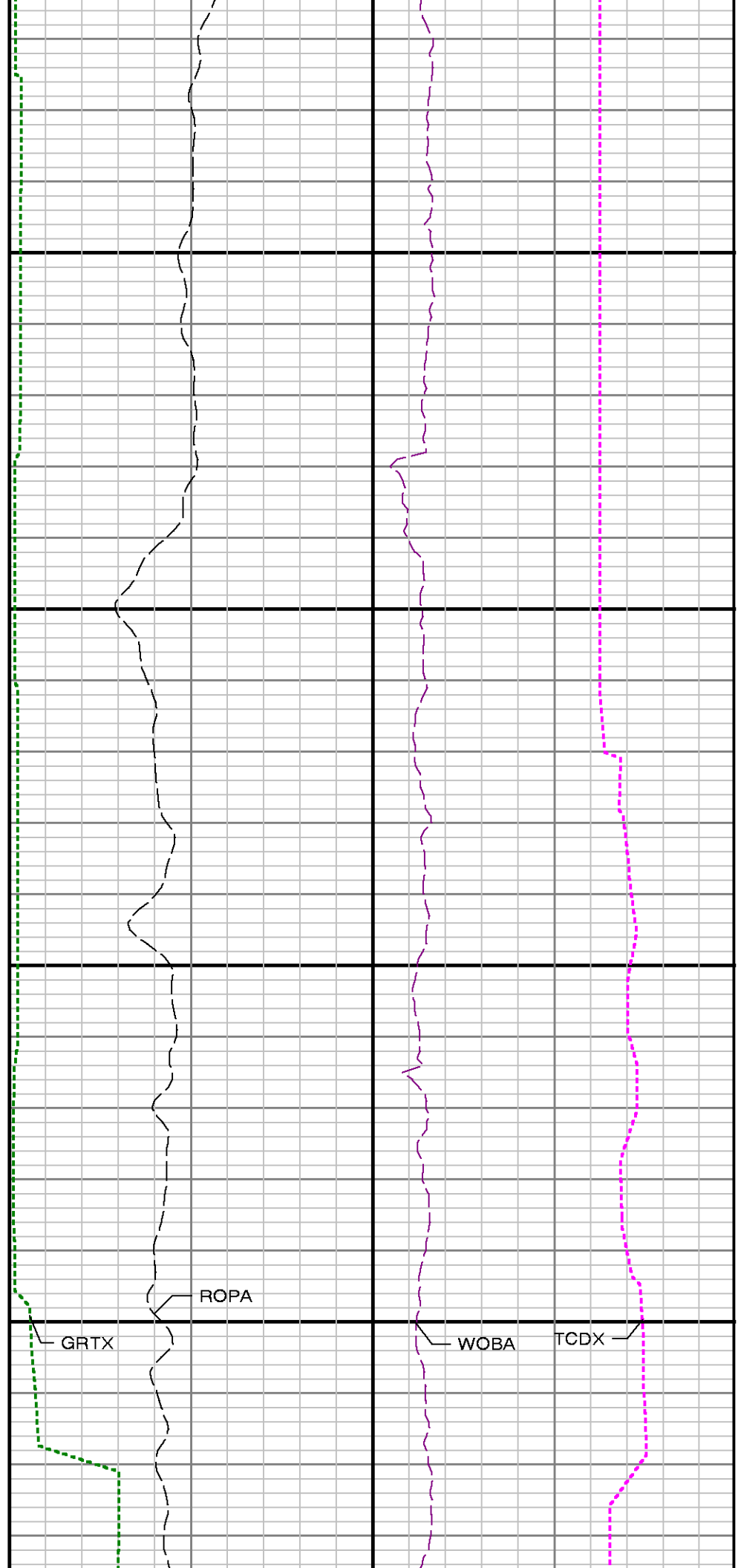
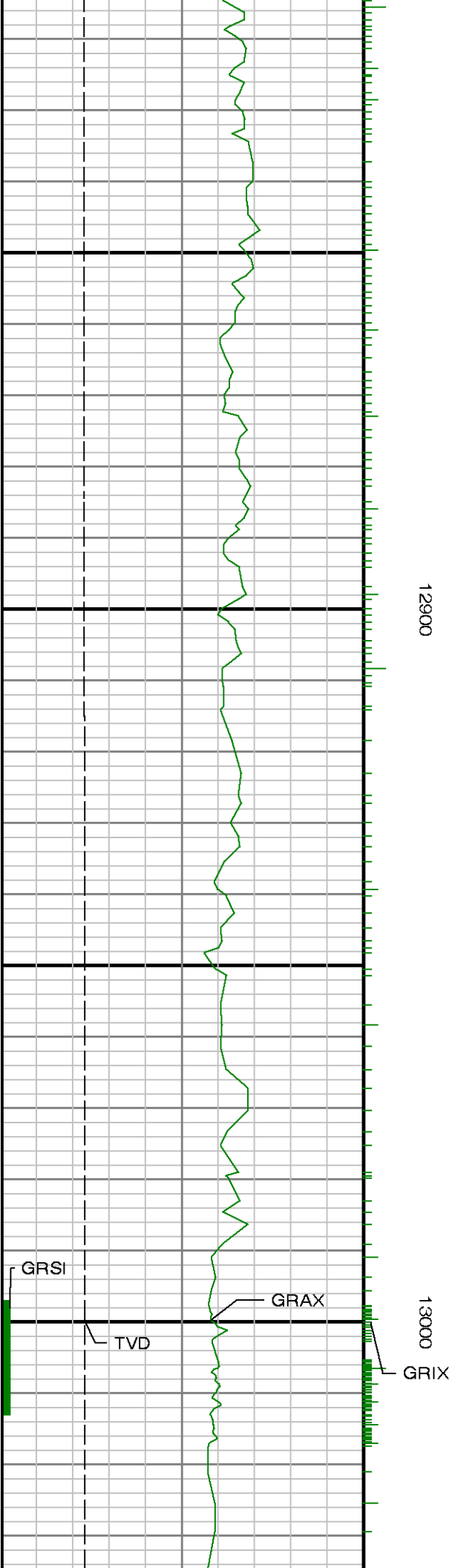


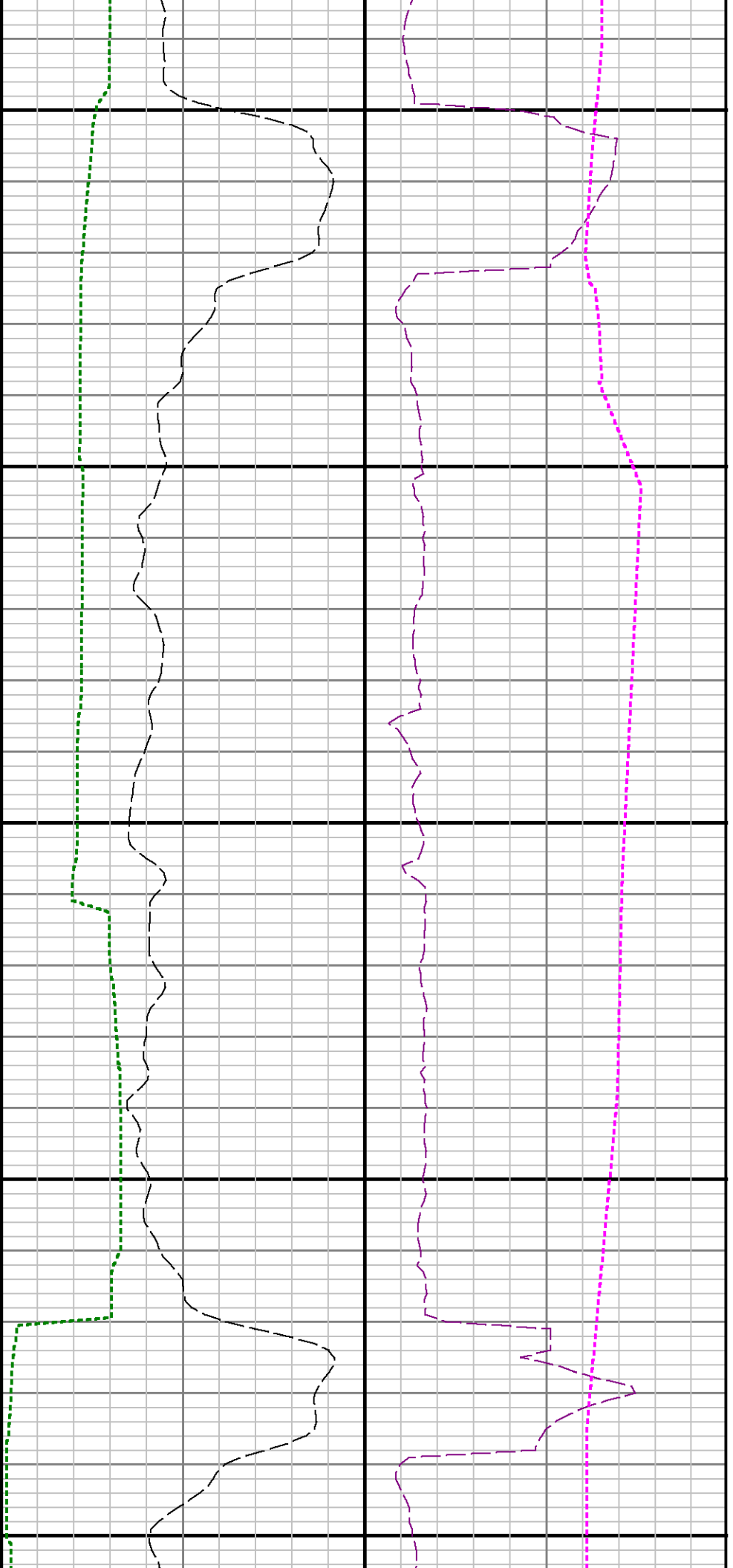
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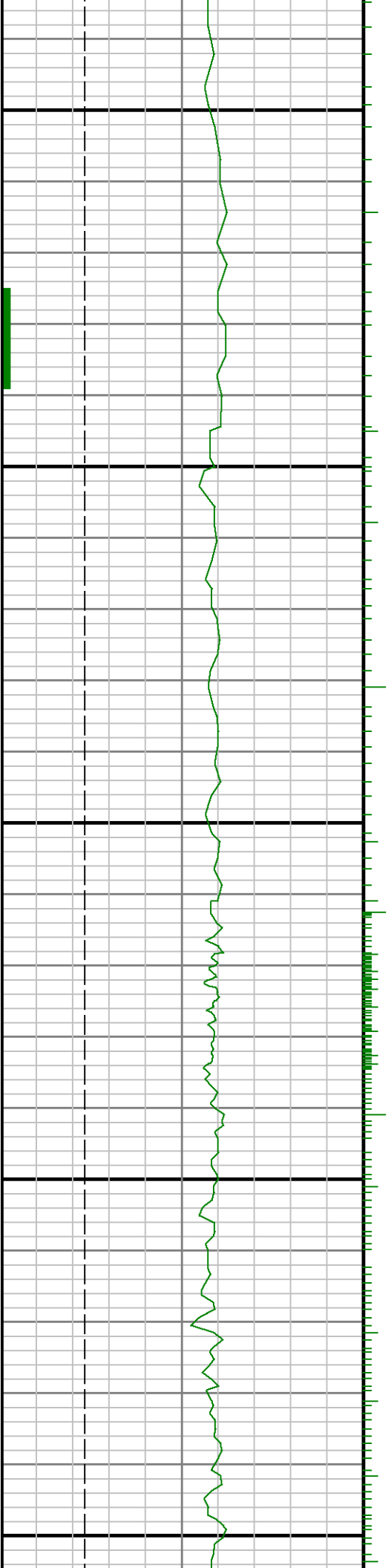


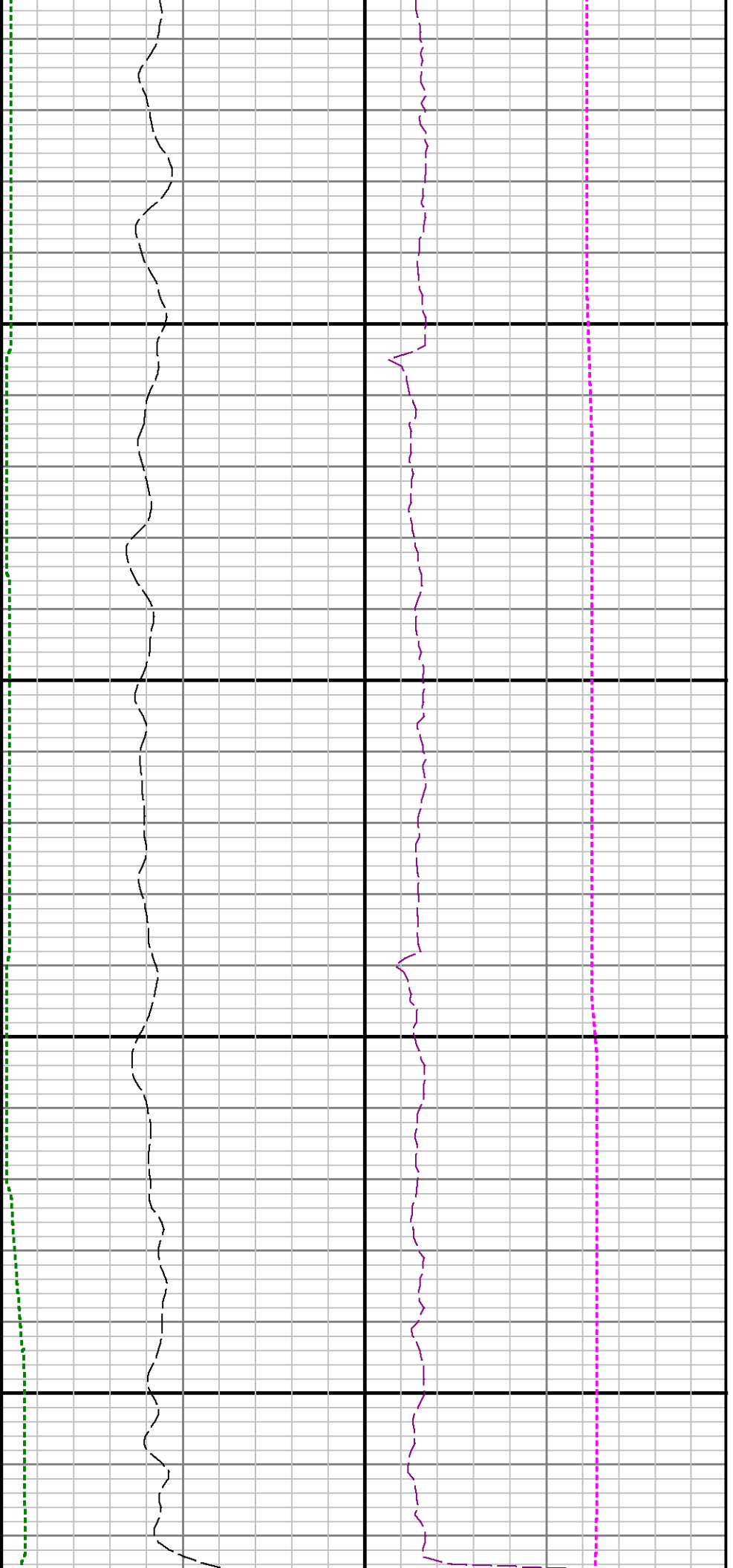




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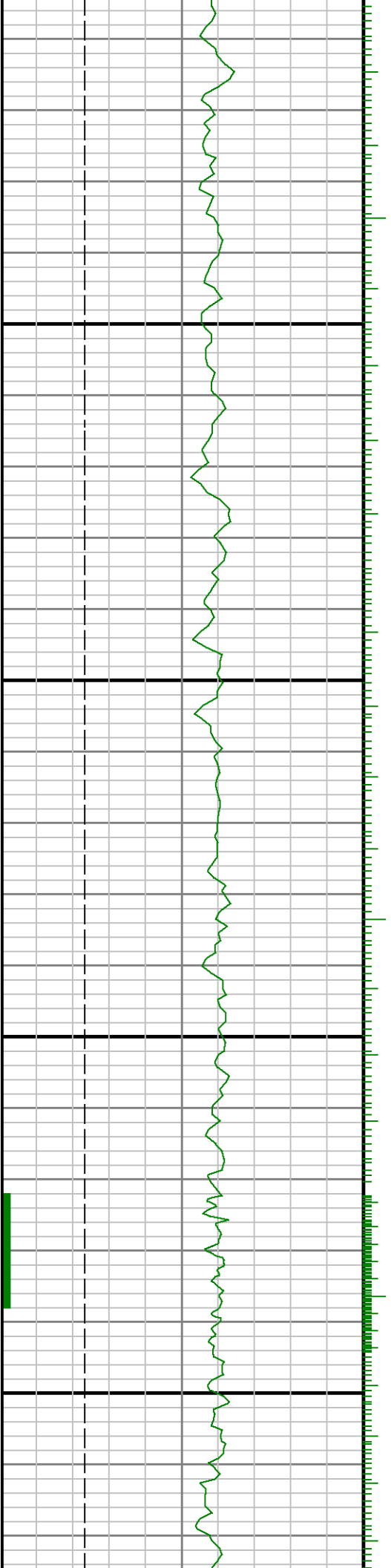
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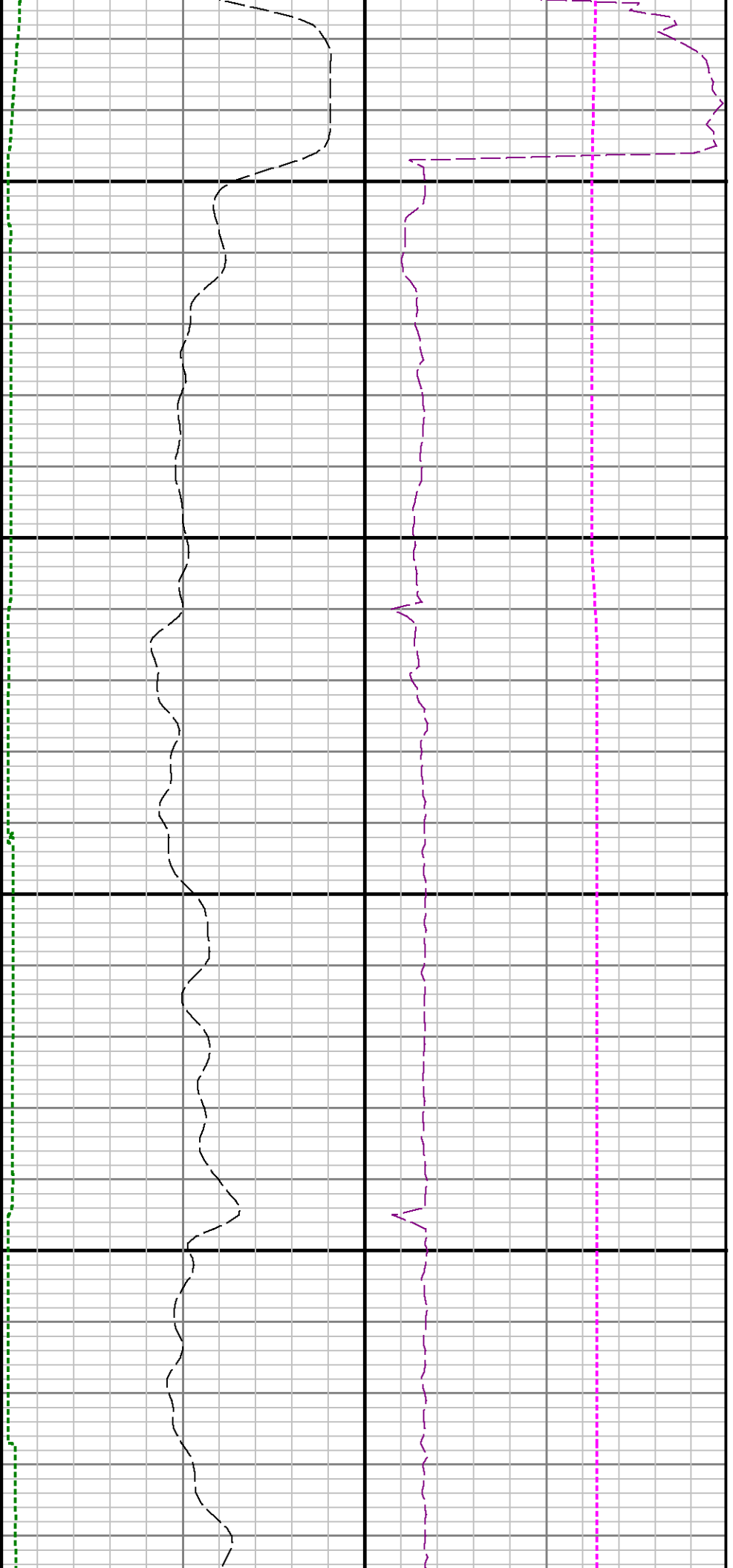




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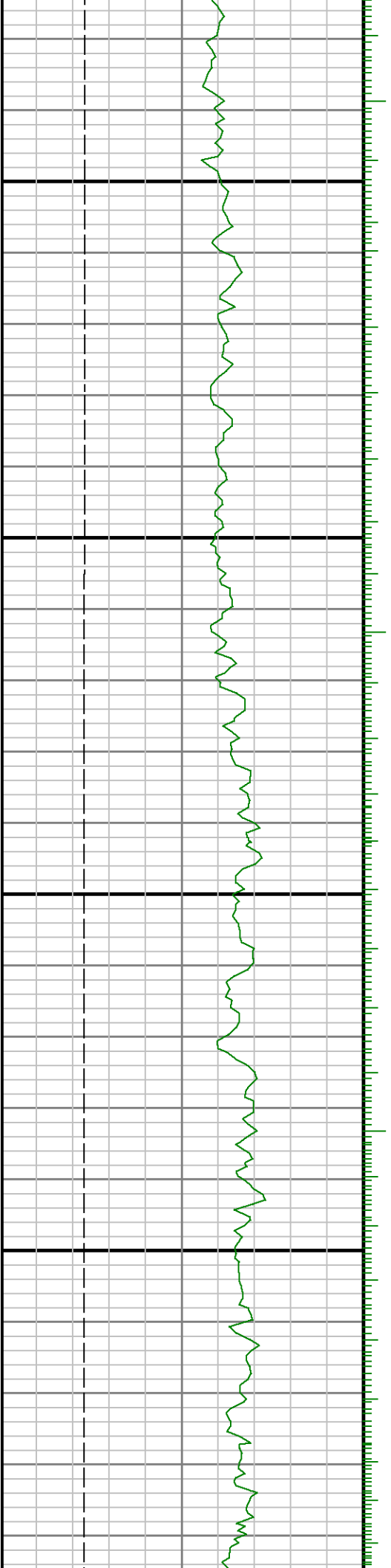
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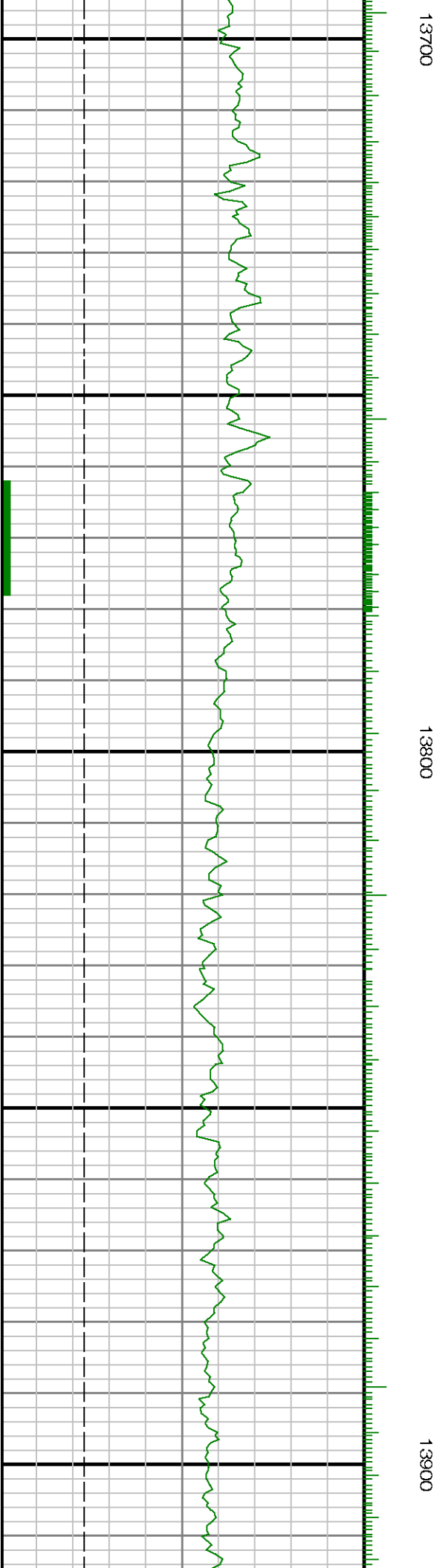
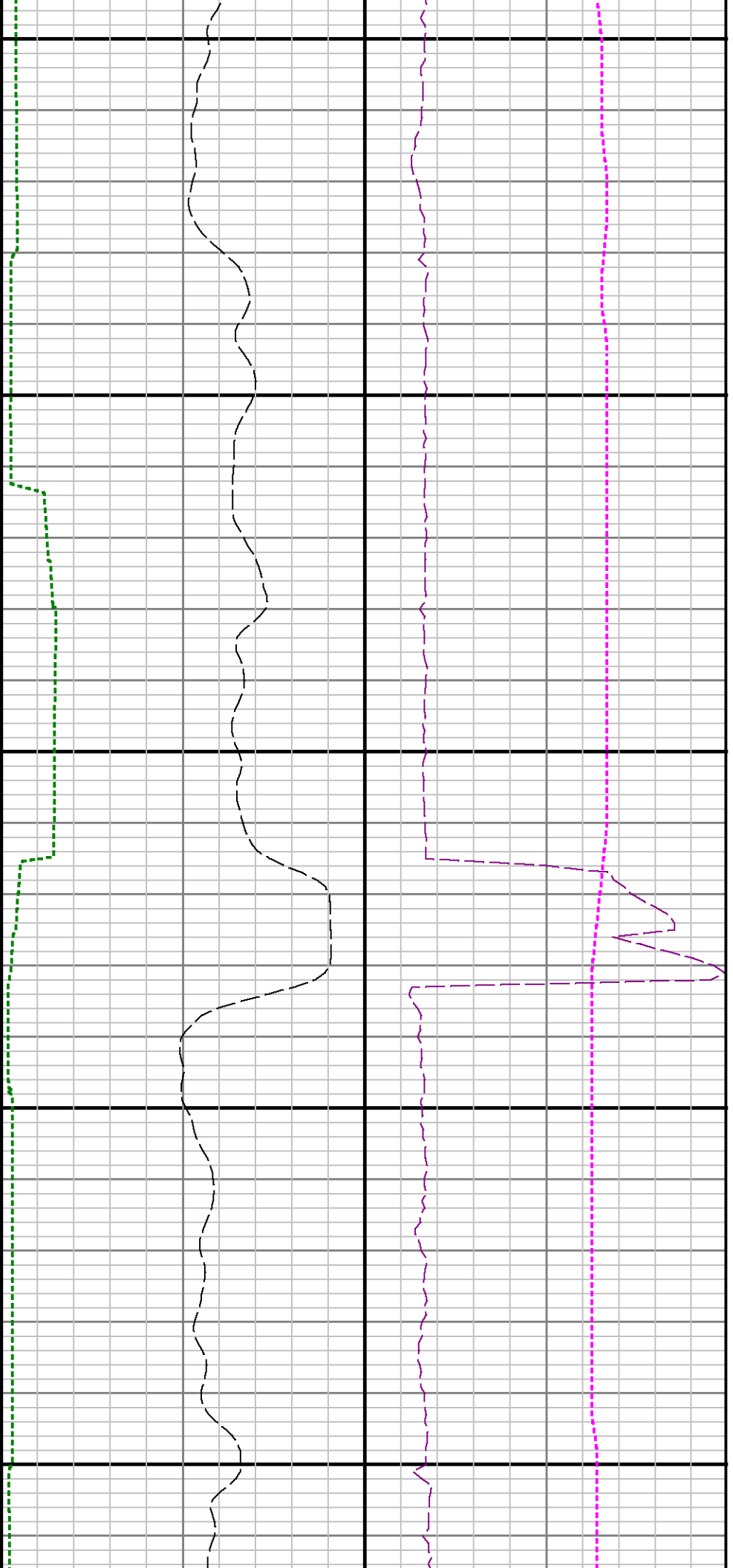




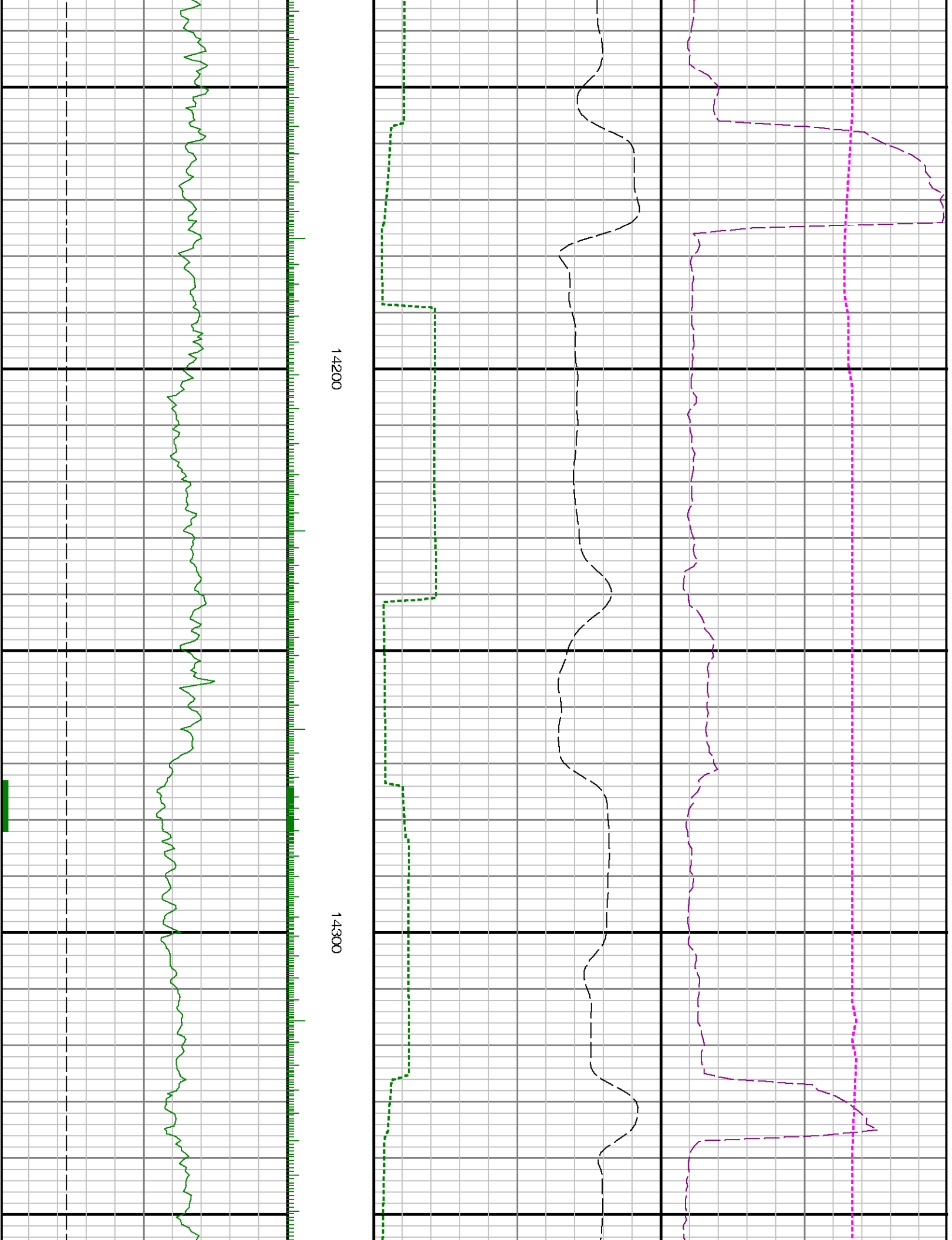
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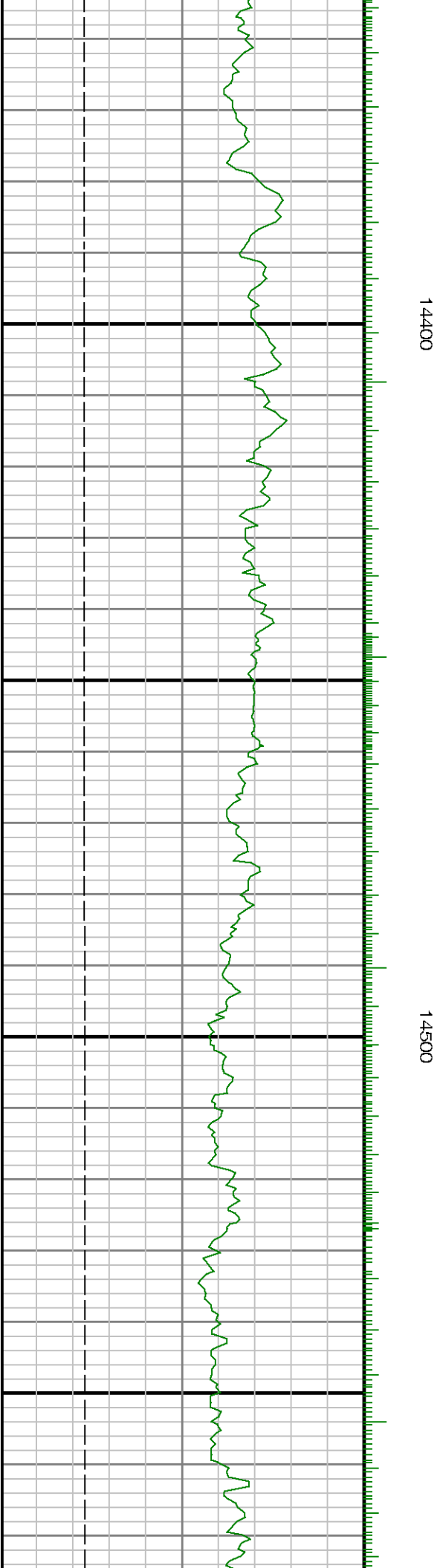
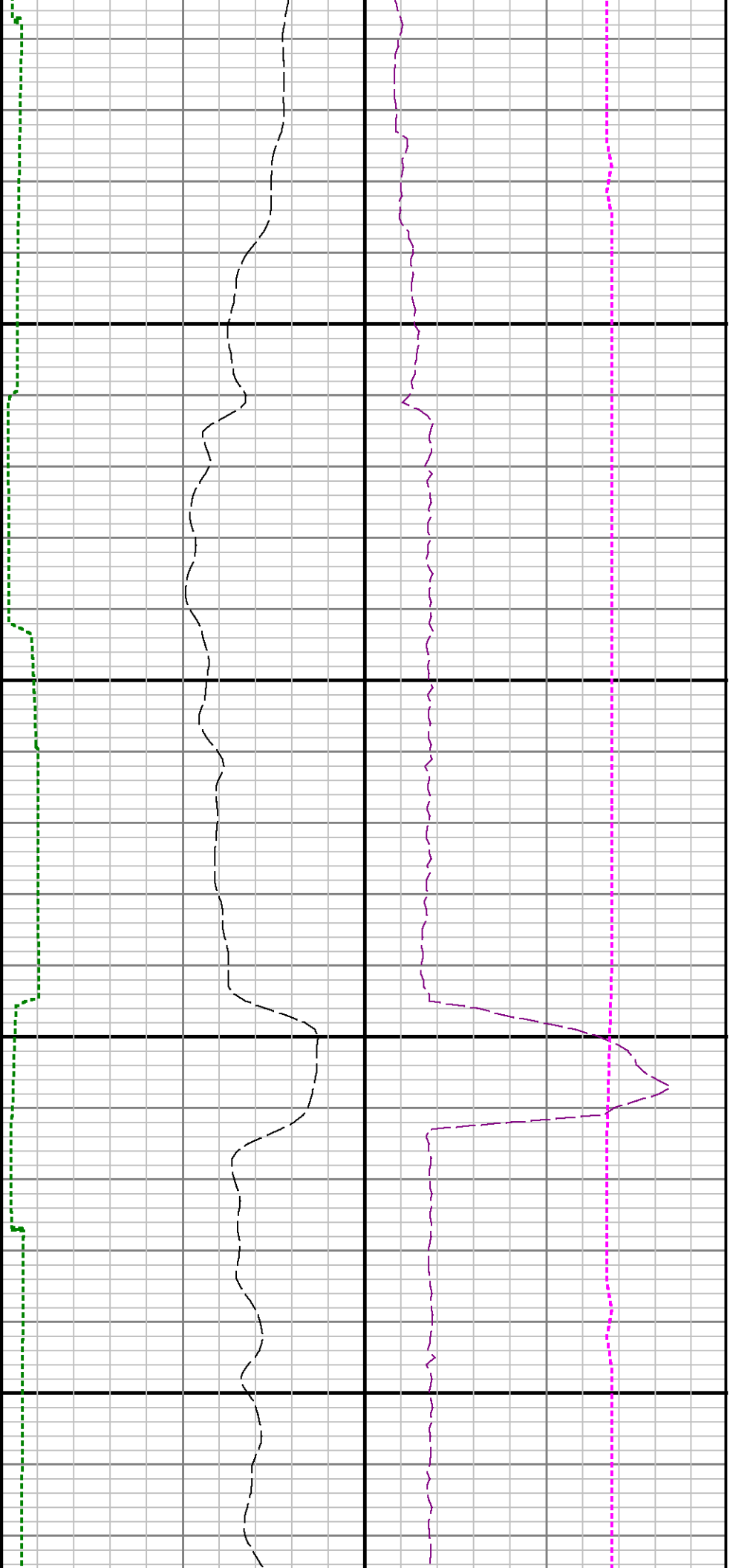
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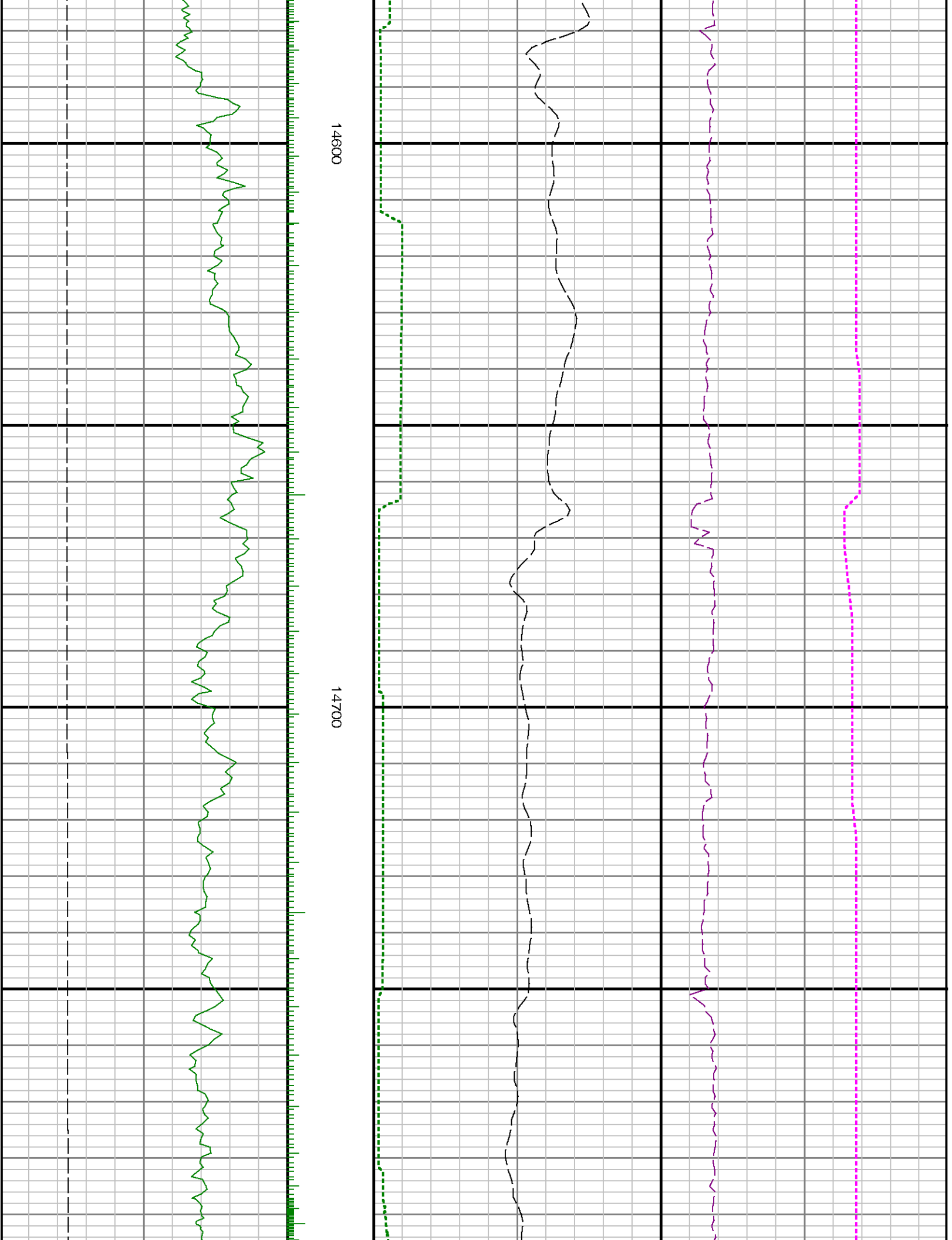


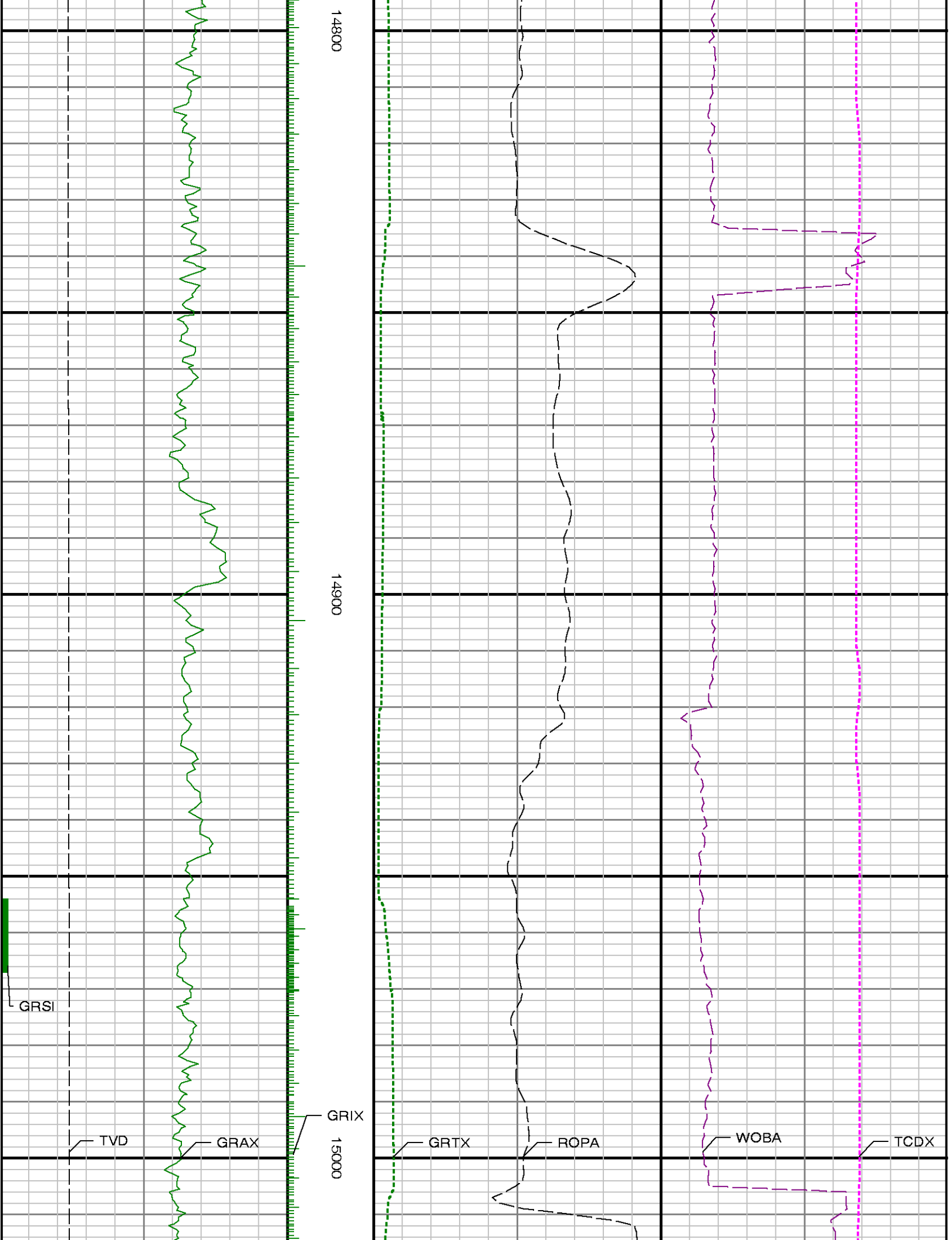


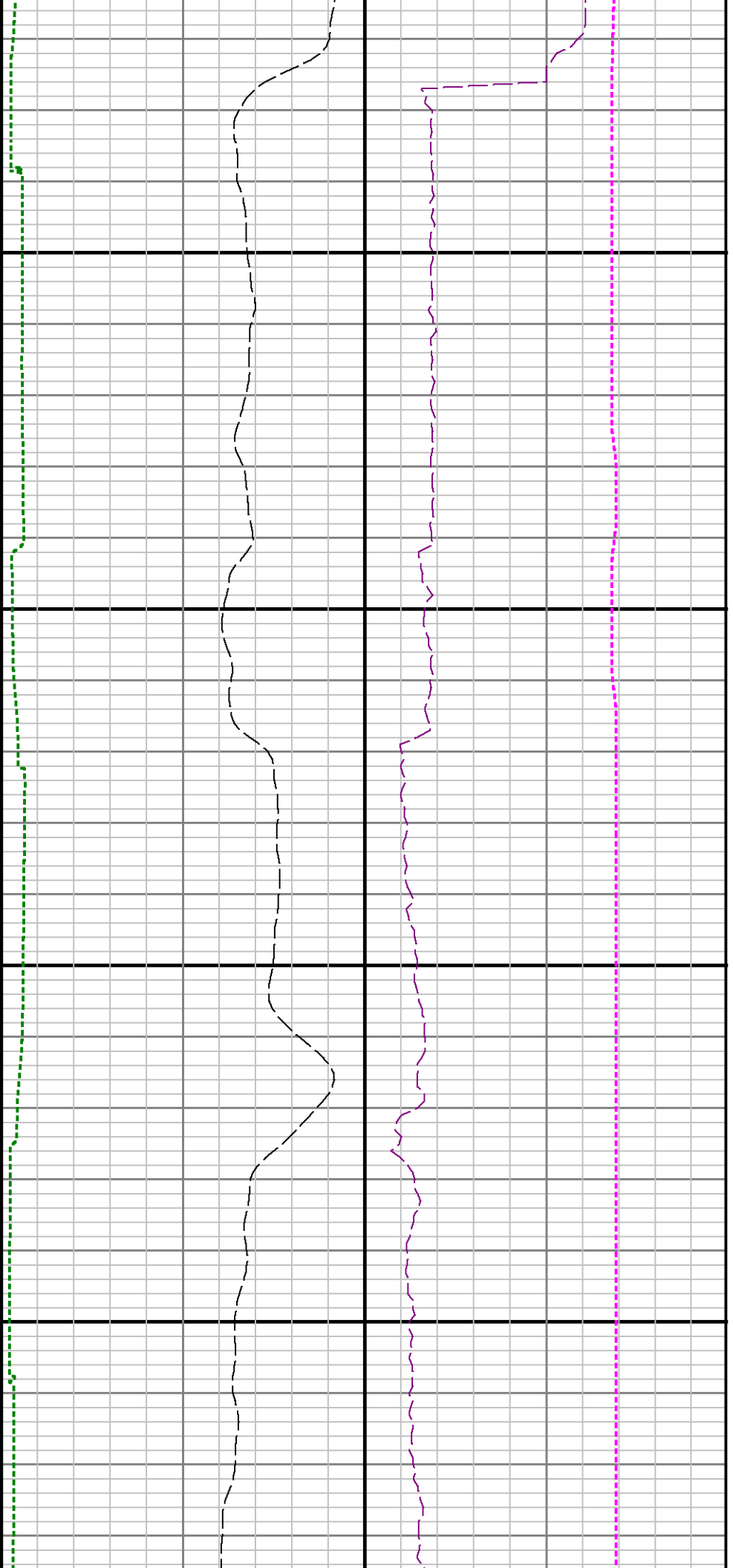






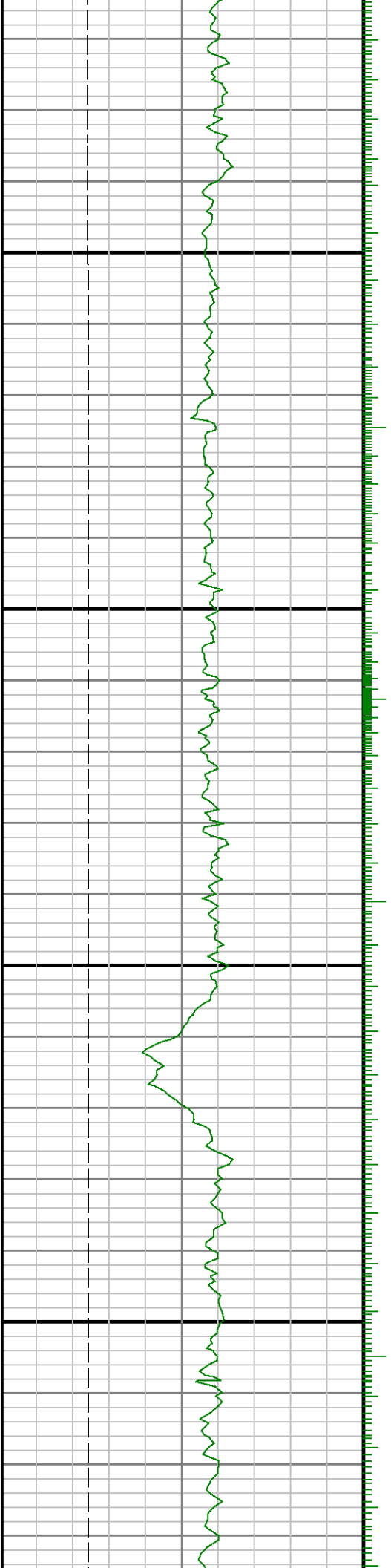


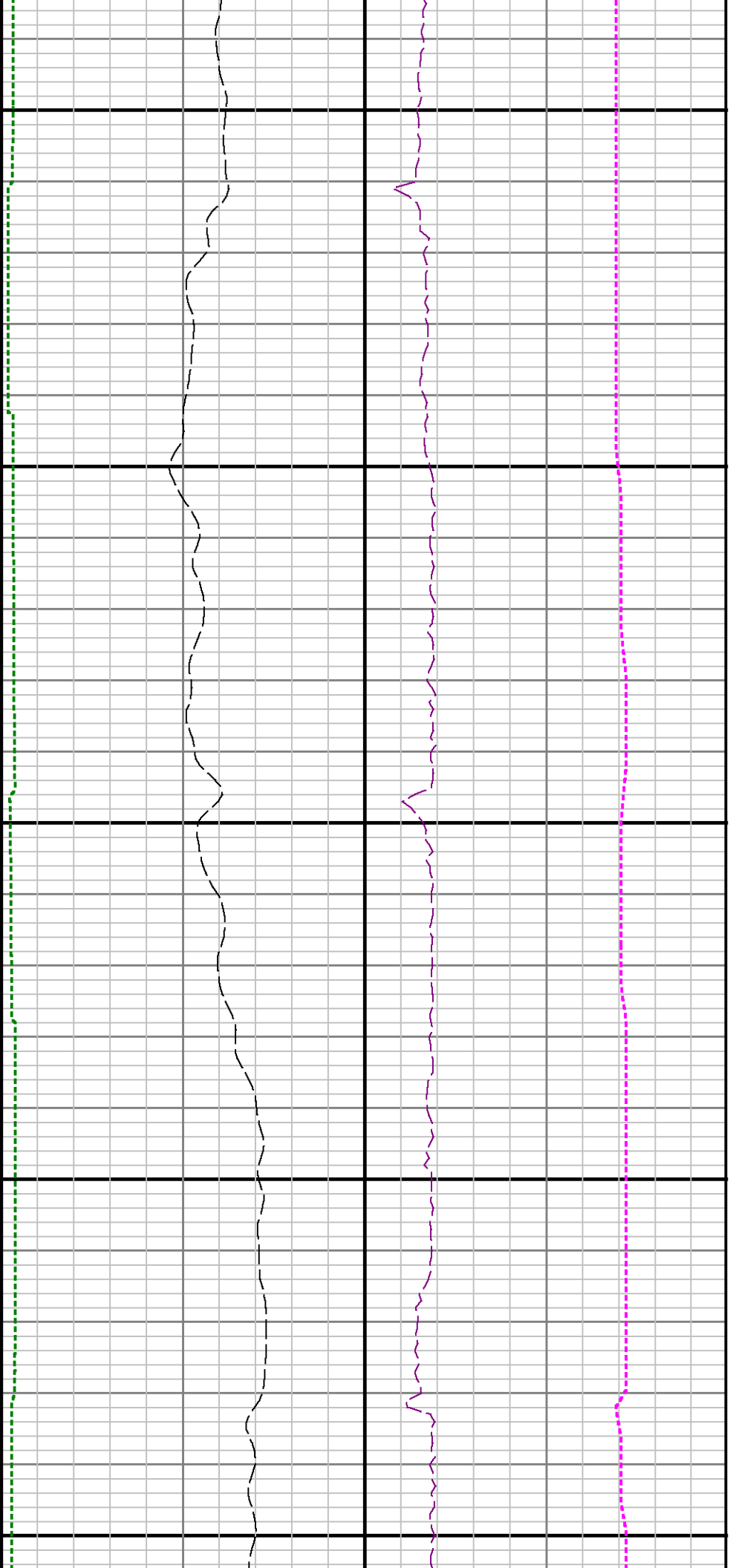




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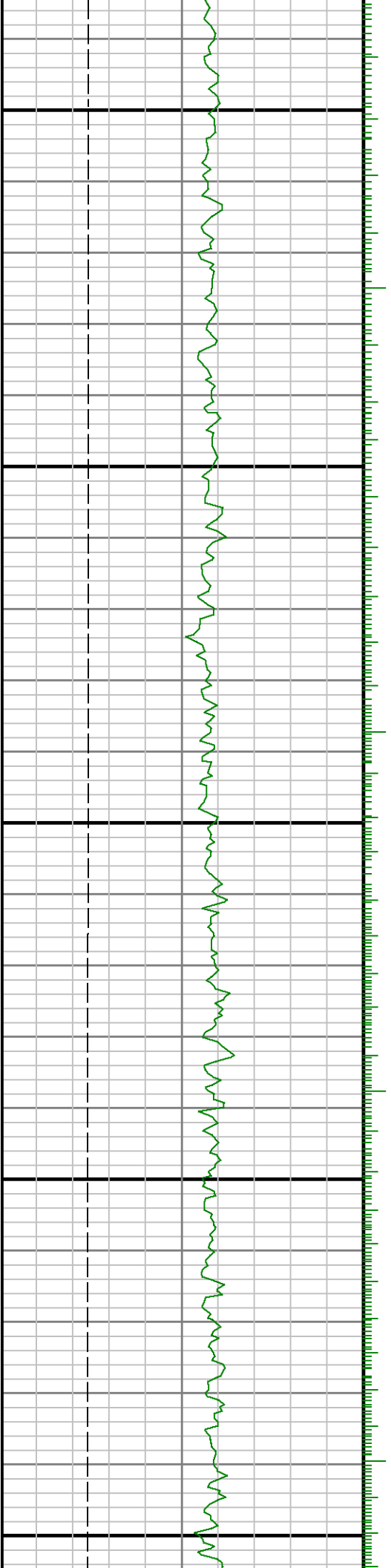
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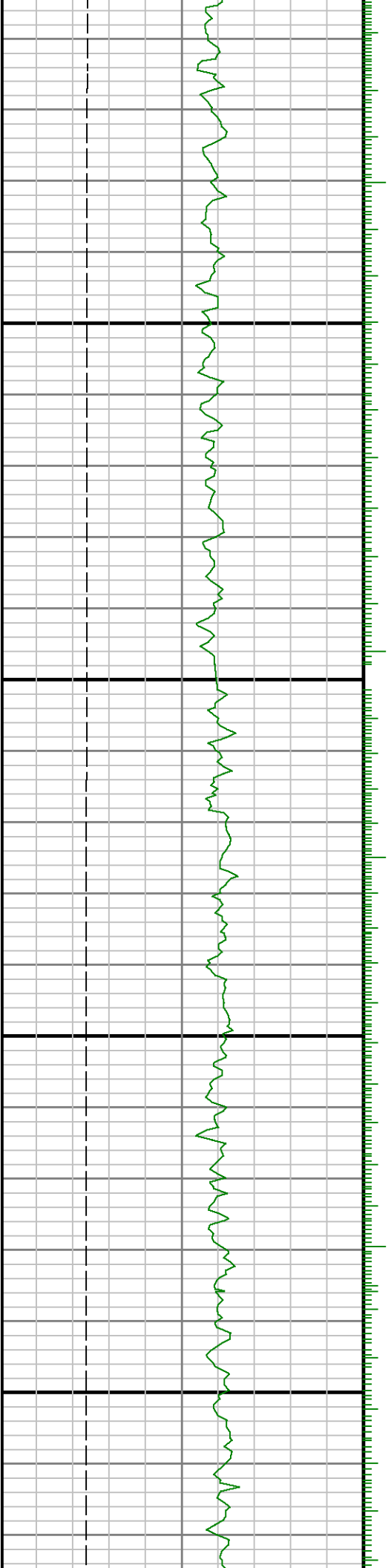
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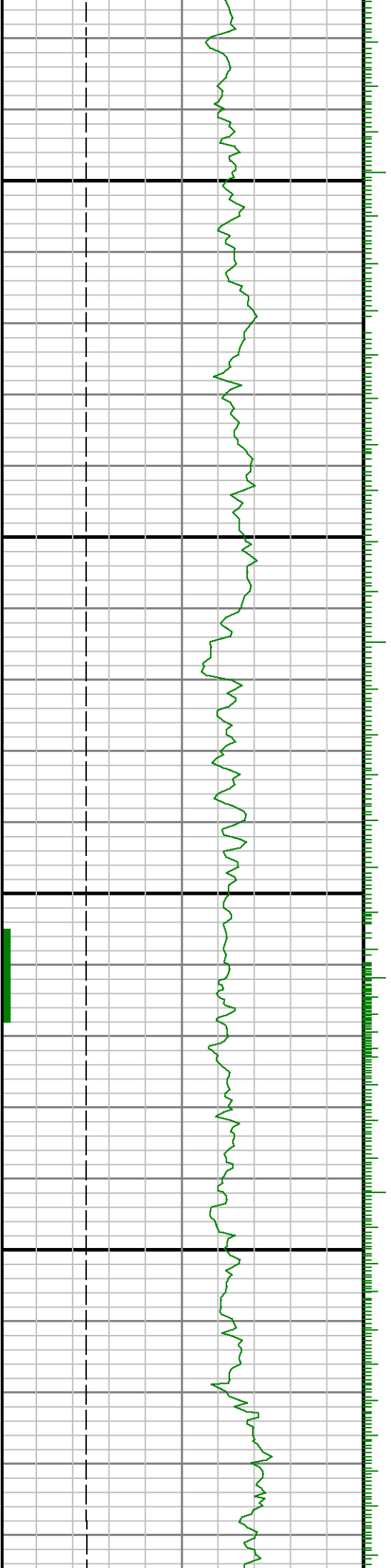
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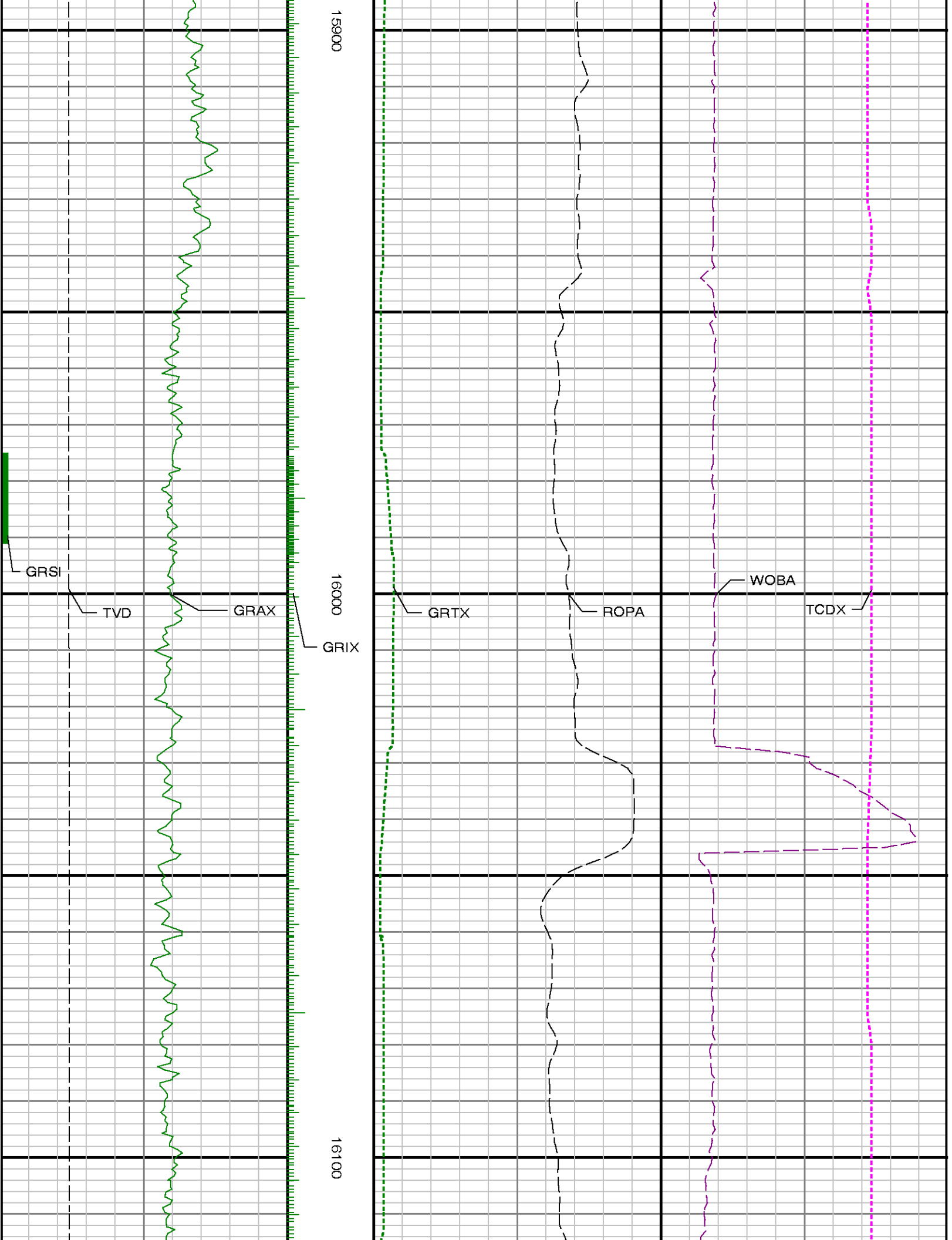


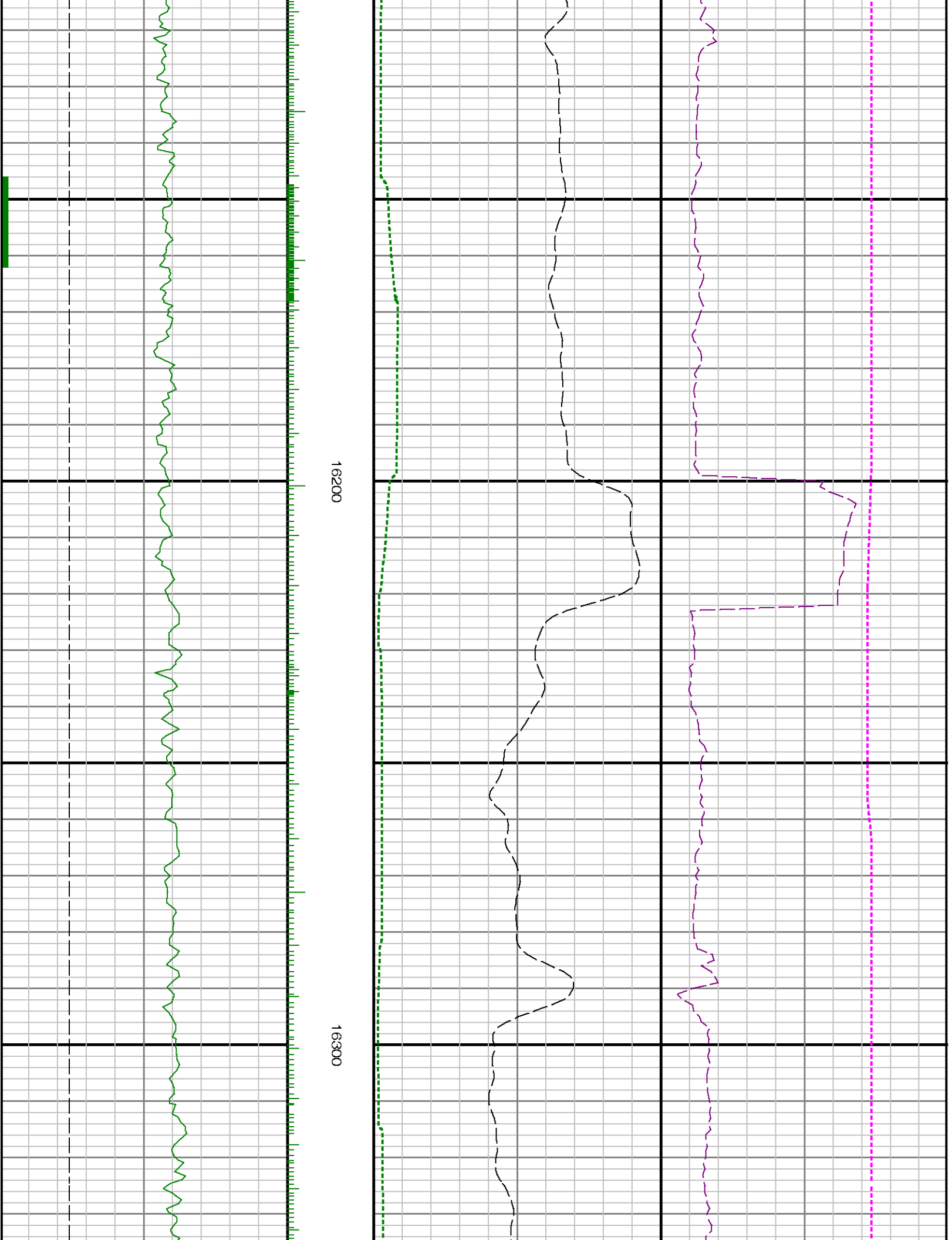


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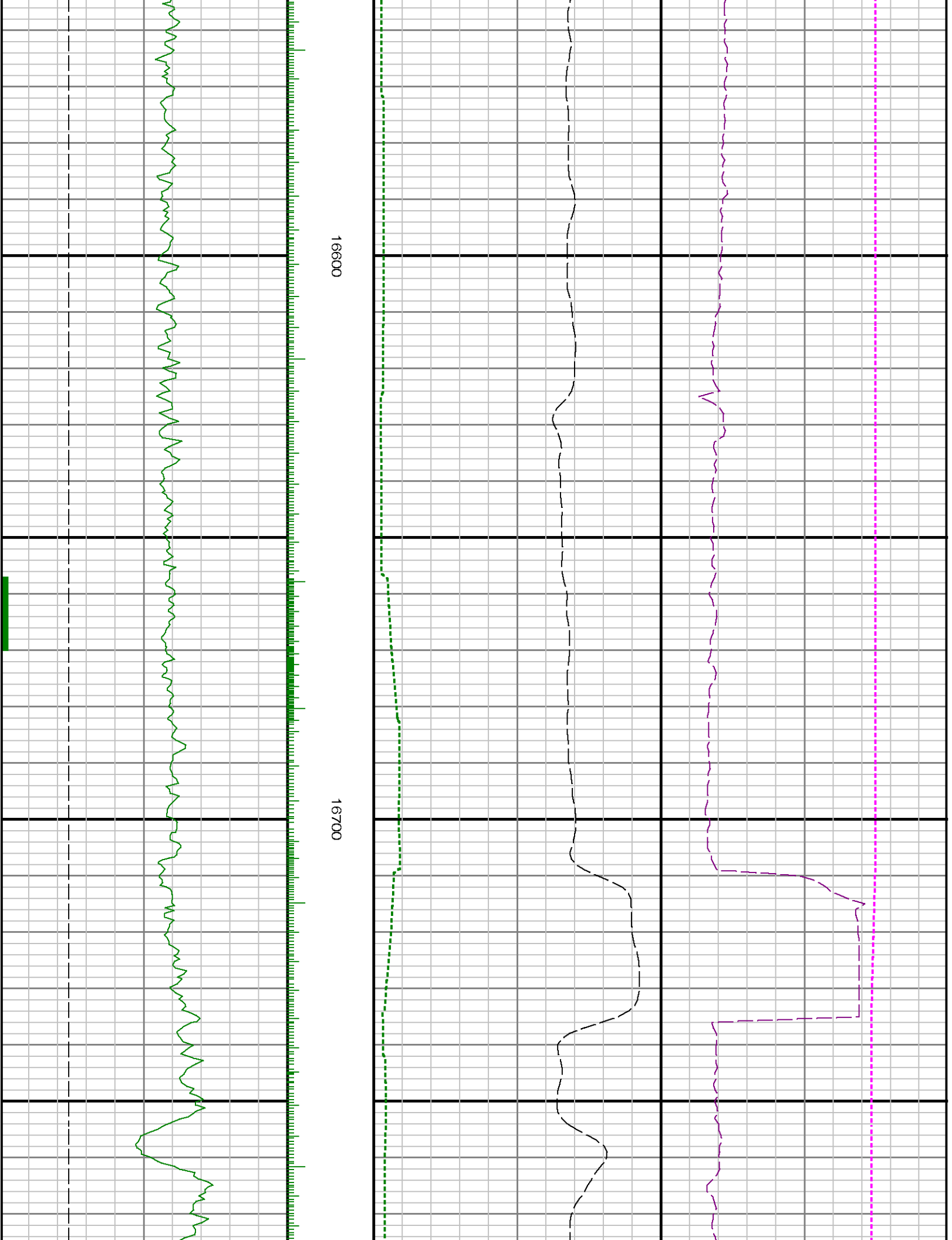
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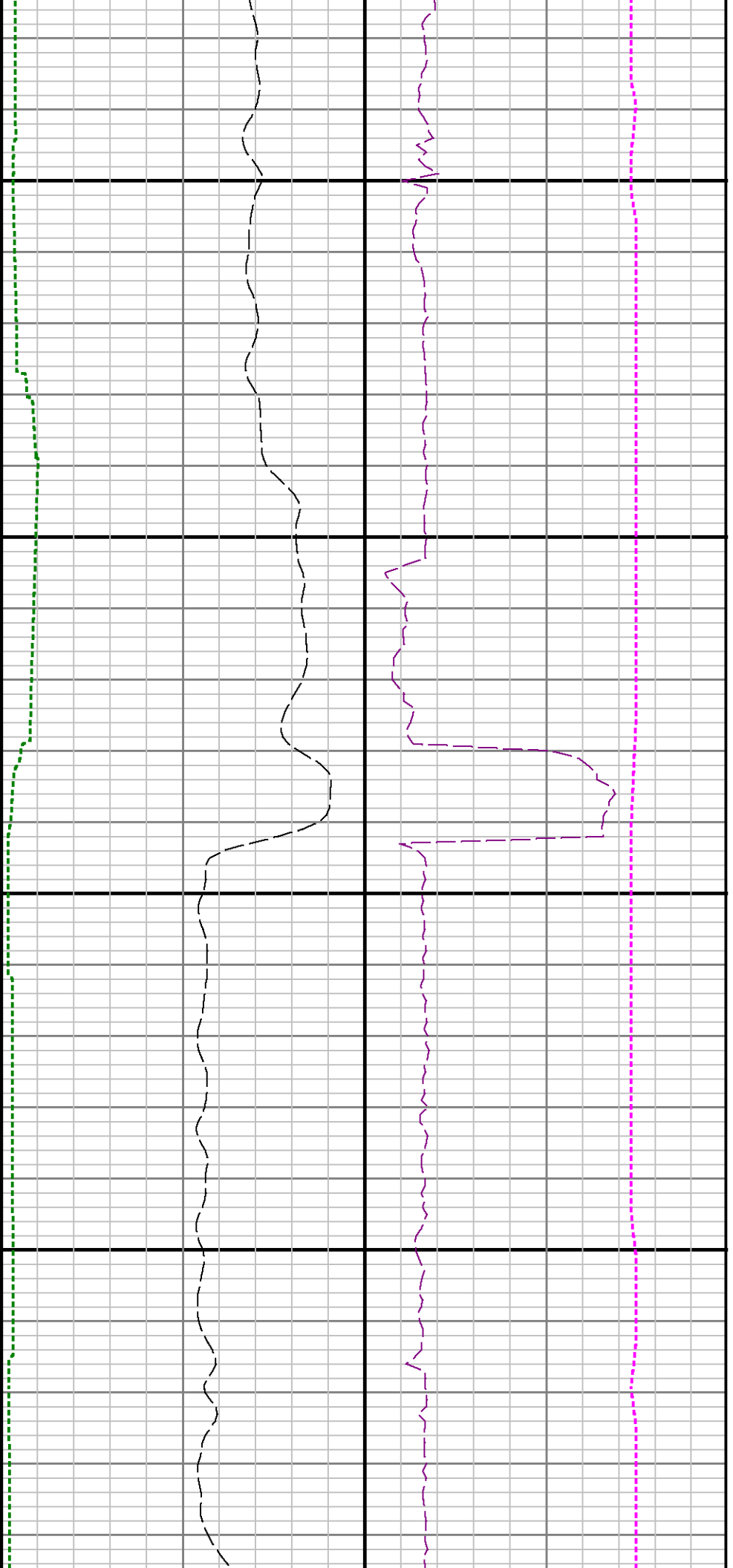






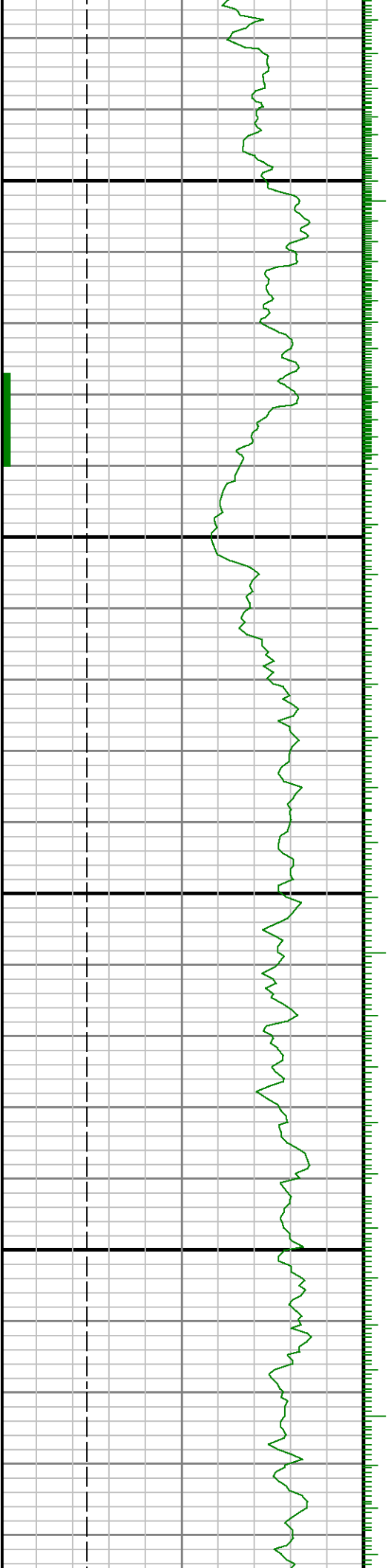


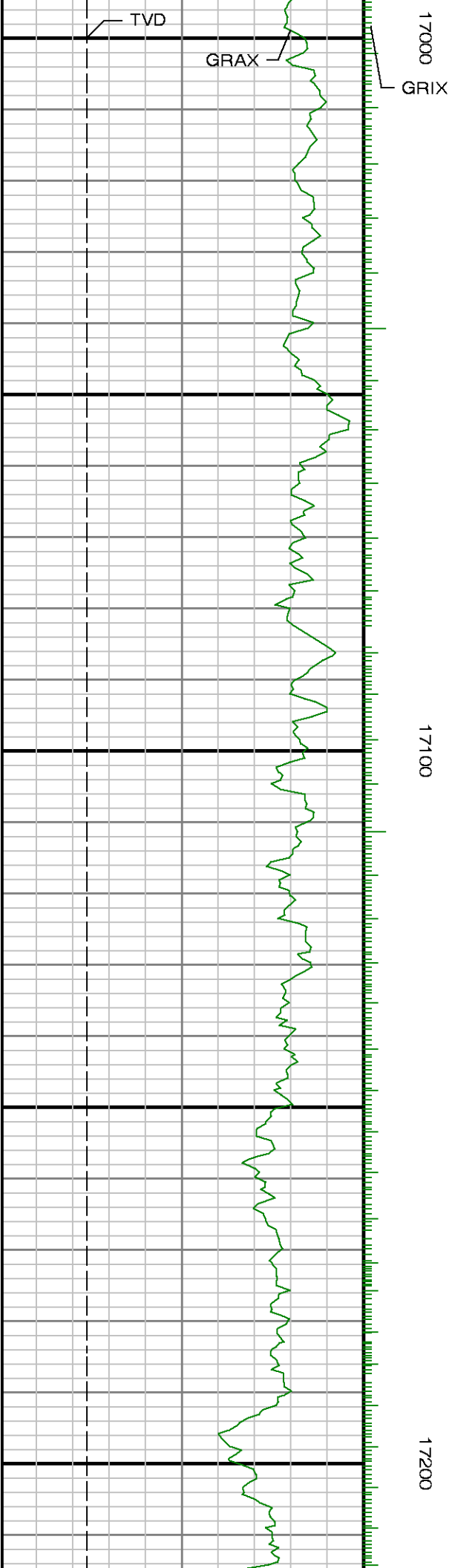


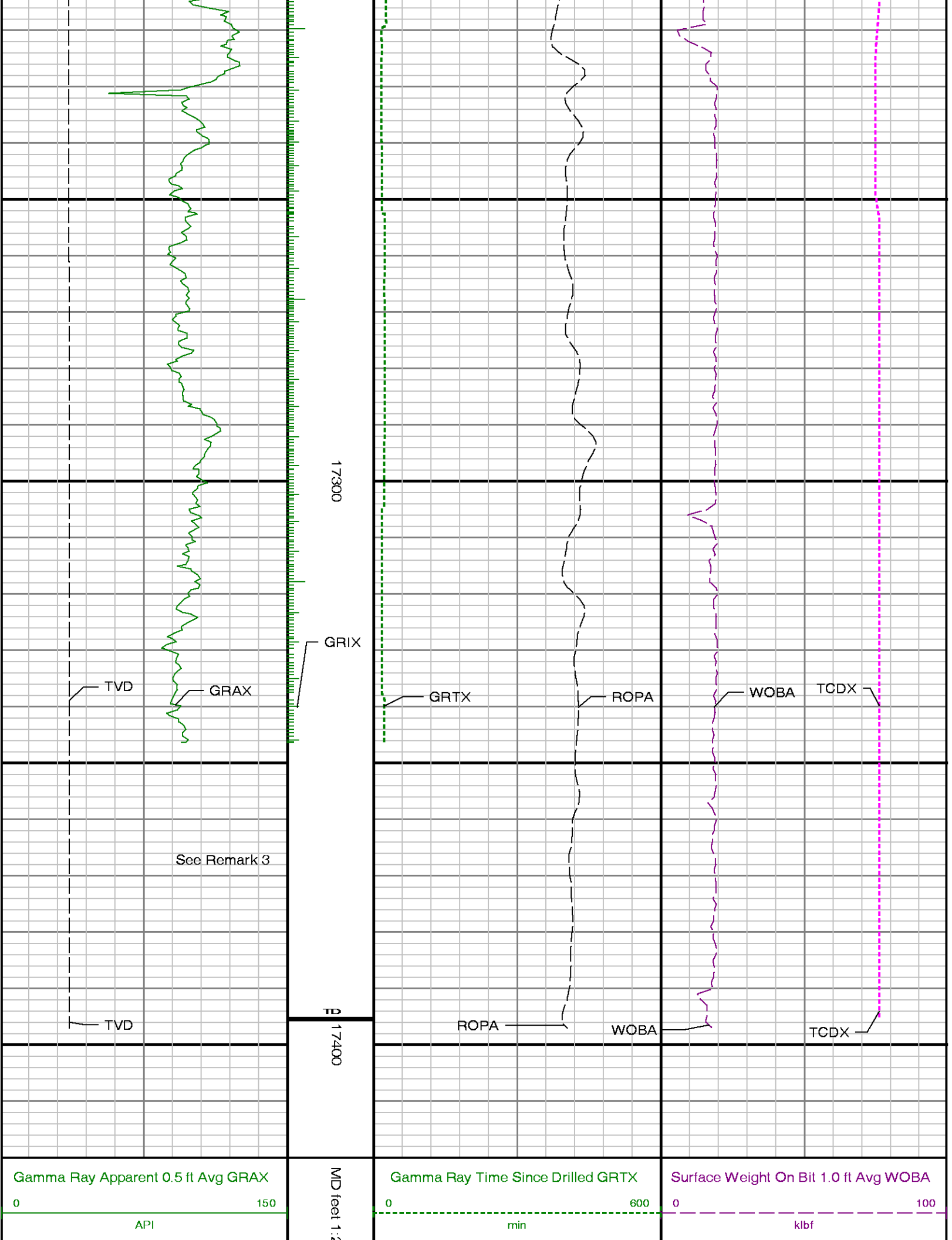


16800

16900







<div>8000</div> <div>True Vertical Depth TVD</div> <div>6800</div> <div>ft</div>	<div>240</div>	<div>600</div> <div>Rate of Penetration 3.0 ft Avg ROPA</div> <div>0</div> <div>ft/hr</div>	<div>100</div> <div>Downhole Temperature TCDX</div> <div>300</div> <div>degF</div>
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