



Realtime Log

Gamma Ray

Scale:

Company: Kerr-McGee Oil & Gas Onshore LP

1:240 MEASURED DEPTH

Well: Lansdown State 4C-21HZ

Field: Wattenberg

Region: Continental US Country: U.S.A.

Status:

FINAL PRINT

Surface Location:

Latitude: 40° 7' 7.936" N

Longitude: 104° 47' 22.110" W

Other Services:

Wellbore Survey

API Number: 05-123-39043-00

Section 21

TWN: 2N

Range 66 W

Permanent Datum (P.D.): Ground Level

Elevation: 4934.00 ft.

Elevations:

Log Measured From:

Rig Floor

16.00 ft.

Above P.D.

KB:

DF:

N/A

Depth Reference:

Driller's Depth

GL:

4934.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 6925.0 ft. Date From: 05/May/14 Date To: 11/May/14

Dip Angle: 66.88 °

Azi Reference North: True

Bottom: 12456.0 ft. Date To: 11/May/14 Total

Mag to Reference

Spud Date: 05/May/14 Field Strength: 52855.0 nT North Correction: 8.48 °

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	1252ft.	9.625 in.	36.00 lb/ft	Surface	1242.0 ft.
8.670 in.	1252.0 ft.	7879.0 ft.	7.000 in.	26.00 lb/ft	Surface	7870.0 ft.
6.125 in.	7879.0 ft.	12510.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	12510.0 ft.	13.500 in.	1252.0 ft.	0.0 ° / 0.0 °	0.5 ° / 345.9 °
			8.750 in.	6627.0 ft.	0.5 ° / 345.9 °	85.8 ° / 359.5 °
			6.125 in.	4631.0 ft.	85.8 ° / 359.5 °	87.3 ° / 358.3 °
					/	/
					/	/
					/	/
					/	/

Acquisition System

Software Version

Other

Advantage	2.20U4	Rig: / Contractor:	Xtreme 20	/ Kerr-McGee oil & Gas Onshore LP		
PATS	6.4.1.34	Job No:	6304640	/ 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	2	8.750	PDC	2.000	Steerable	6925.0	7838.0	1252.0	7879.0	05/May/2014 07:45	07/May/2015 06:50	44.3
2	2	2	6.125	PDC	4.000	Steerable	7838.0	12456.0	7879.0	12510.0	08/May/2014 22:50	10/May/2014 22:00	45.5

Crew

Name			Arrive			Depart		
Wellsite			Wellsite			Wellsite		

Adam Schlenz	05/May/14	11/May/14	David Campbell	04/May/14	05/May/14	Greg Dore	04/May/14	10/May/14
Jake Miller	05/May/14	07/May/14						

Witness

Name	LWD Run Number
Marvin Hackeworth	1
Tim Walker	1
Wade Mullican	2
Charlie Daigle	2

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 (mg/L)	K+ (%)
05/May/14 22:00	1	4584.0	Water Based	8.5	2	8.4	N/A	0/98	Active Mud Pit	3600	N/A
06/May/14 22:00	1	7487.0	Water Based	9.8	13	8.6	N/A	2/89	Active Mud Pit	2900	N/A
07/May/14 22:00	1	7879.0	Water Based	10.0	14	8.5	N/A	2/98	Active Mud Pit	2700	N/A
08/May/14 22:30	2	7879.0	Water Based	10.1	13	8.5	N/A	2/88	Active Mud Pit	2600	N/A
08/May/14 22:00	2	10163.0	Water Based	9.6	13	8.6	N/A	4/88	Active Mud Pit	2000	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg.	API
GRIX	Gamma Ray Data Density	point
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	12479870	Directional	45.50	6.750	2.870
1	SRIG	10473320	Gamma	42.12	6.750	2.870
2	DIR	12546344	Directional	53.12	4.750	2.750
2	SRIG	10242199	Gamma	49.74	4.750	2.750

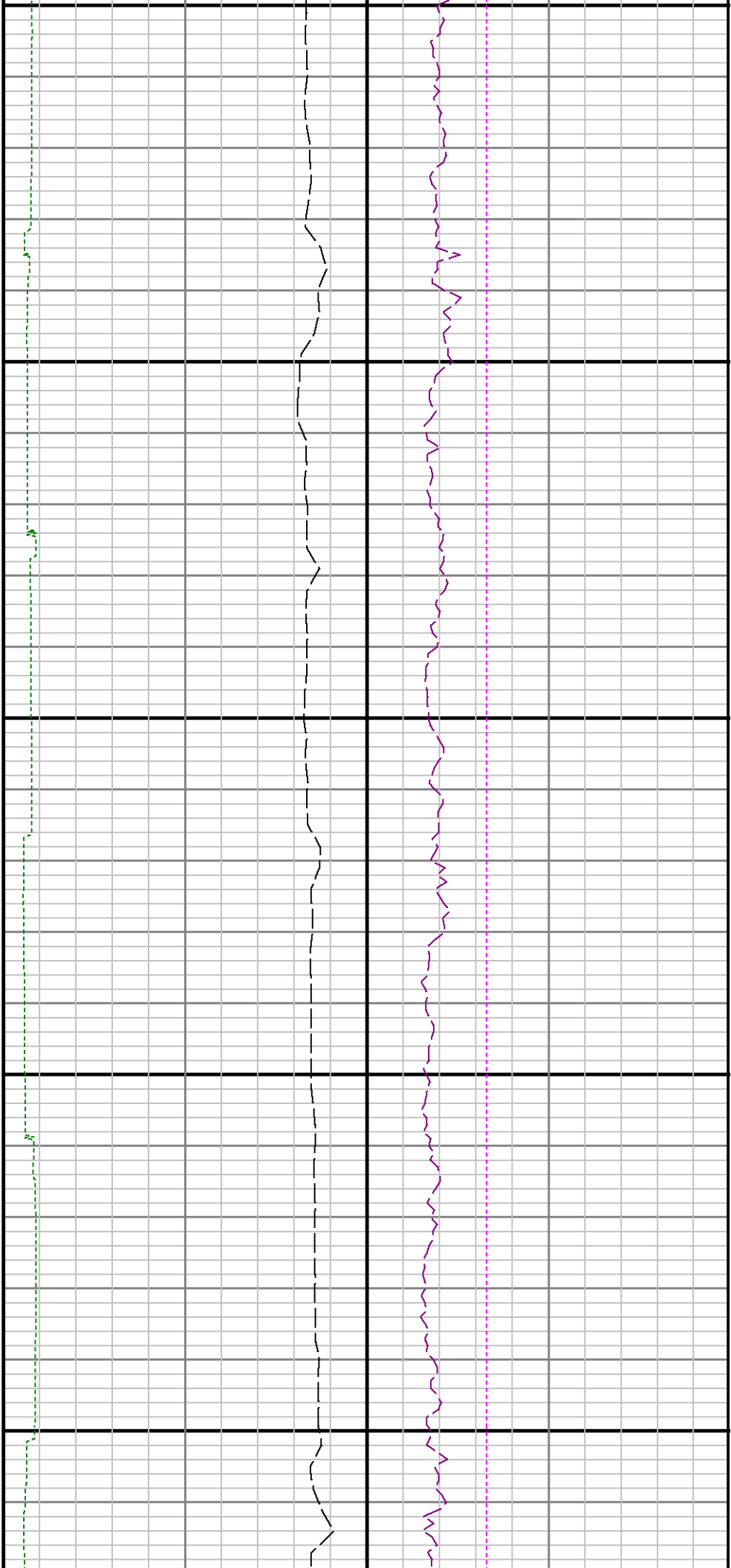
Service and Tool Mnemonics

Mnemonic	Name	Description
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Comments

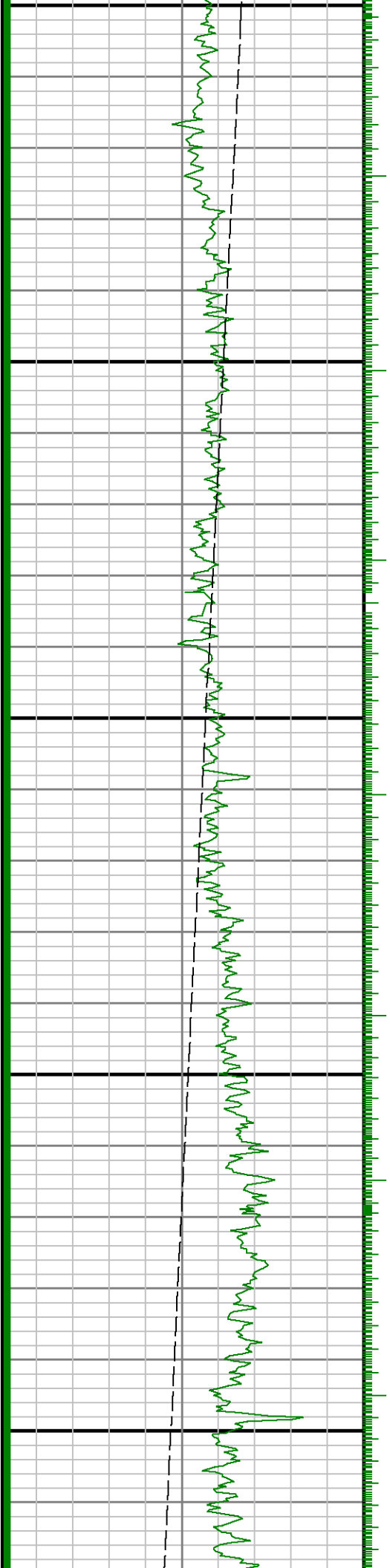
Remarks				
Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	6925	8.750	1	Gamma ray logging operations began at 6925 feet MD (6812 feet TVD).
2	7879	8.750	1	The interval from 7837 to 7879 feet MD (7431 to 7433 feet TVD) was logged more than 10 hrs after being drilled due to a trip out of the hole for casing and cement operations.
3	12456	6.125	2	No sensor data logged from 12456 to 12510 feet MD (7456 feet TVD) due to sensor to bit offset at well TD.

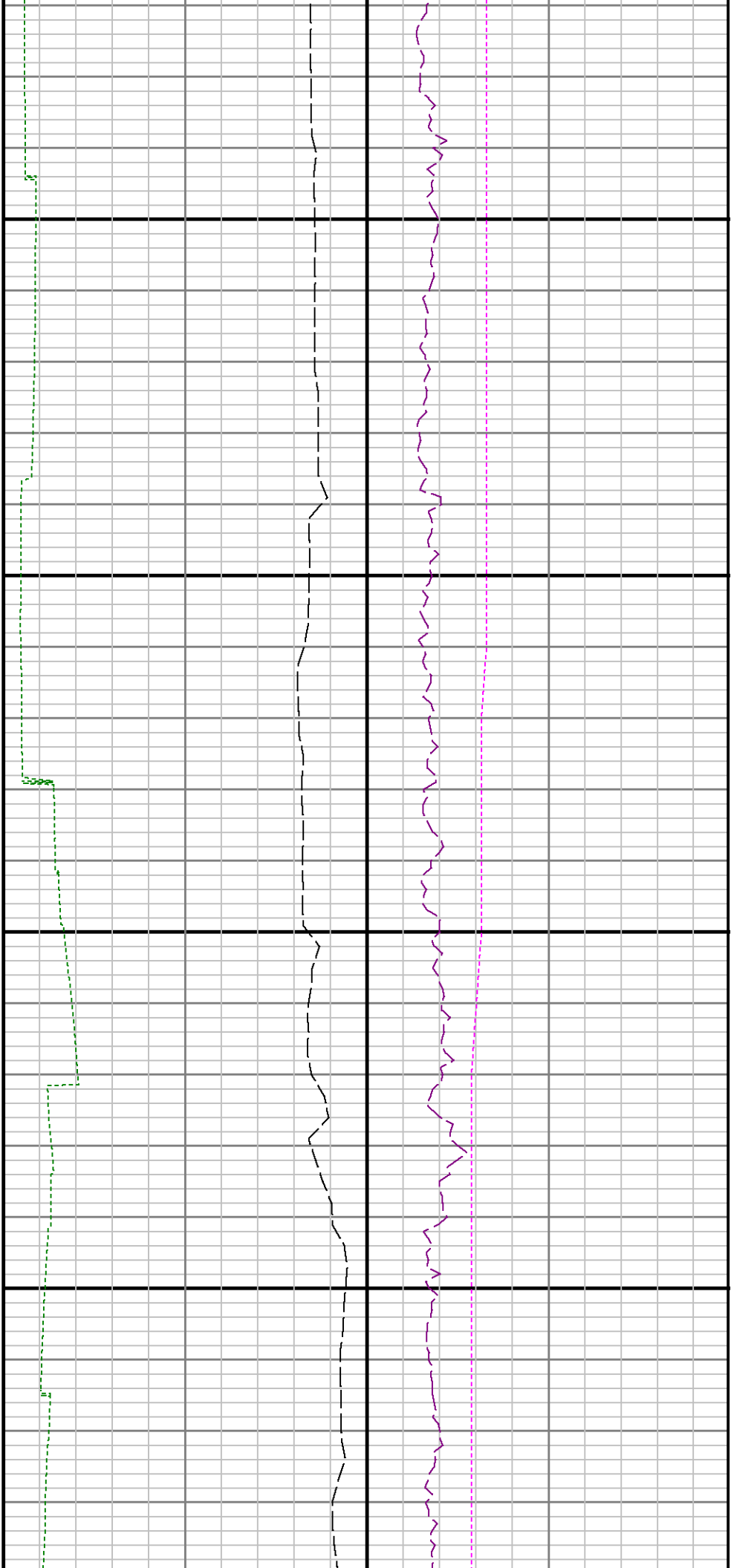
<div>  <div> Company : Kerr-McGee Oil & Gas Onshore LP Well : Lansdown State 4C-21HZ Interval : 6910.00 - 12520.00 feet Created : 10/May/2014 11:14:21 PM </div> </div>						
<div> <div>Gamma Ray Apparent 0.5 ft Avg GRAX</div> <div> 0200 </div> <div>API</div> <div>True Vertical Depth TVD</div> <div>75006500</div> <div>ft</div> </div>		<div>MD feet 1:240</div>	<div> <div>Rate of Penetration 3.0 ft Avg ROPA</div> <div>5000</div> <div>ft/hr</div> <div>Gamma Time Since Drilled GRTX</div> <div>0600</div> <div>min</div> </div>		<div> <div>Surface Weight On Bit 1.0 ft Avg WOBA</div> <div>0100</div> <div>klbf</div> <div>Downhole Temperature TCDX</div> <div>100300</div> <div>degF</div> </div>	
<div> <div>GRSI GRAX</div> <div>TVD</div> <div>GRIX</div> </div>		<div>See Remark 1</div> <div> <div>GRTX</div> <div>ROPA</div> </div>		<div> <div>WOBA</div> <div>TCDX</div> </div>		



7000

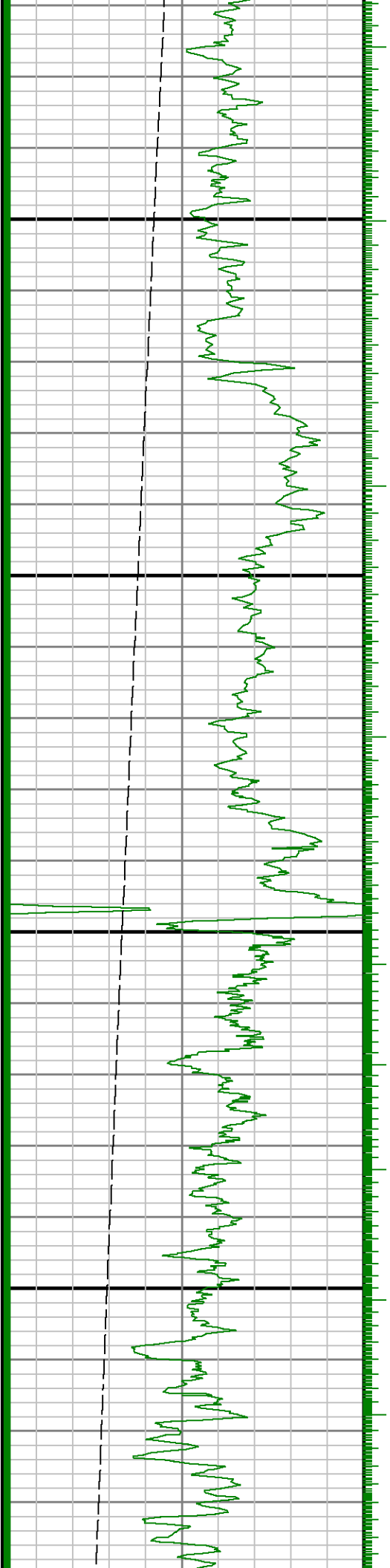
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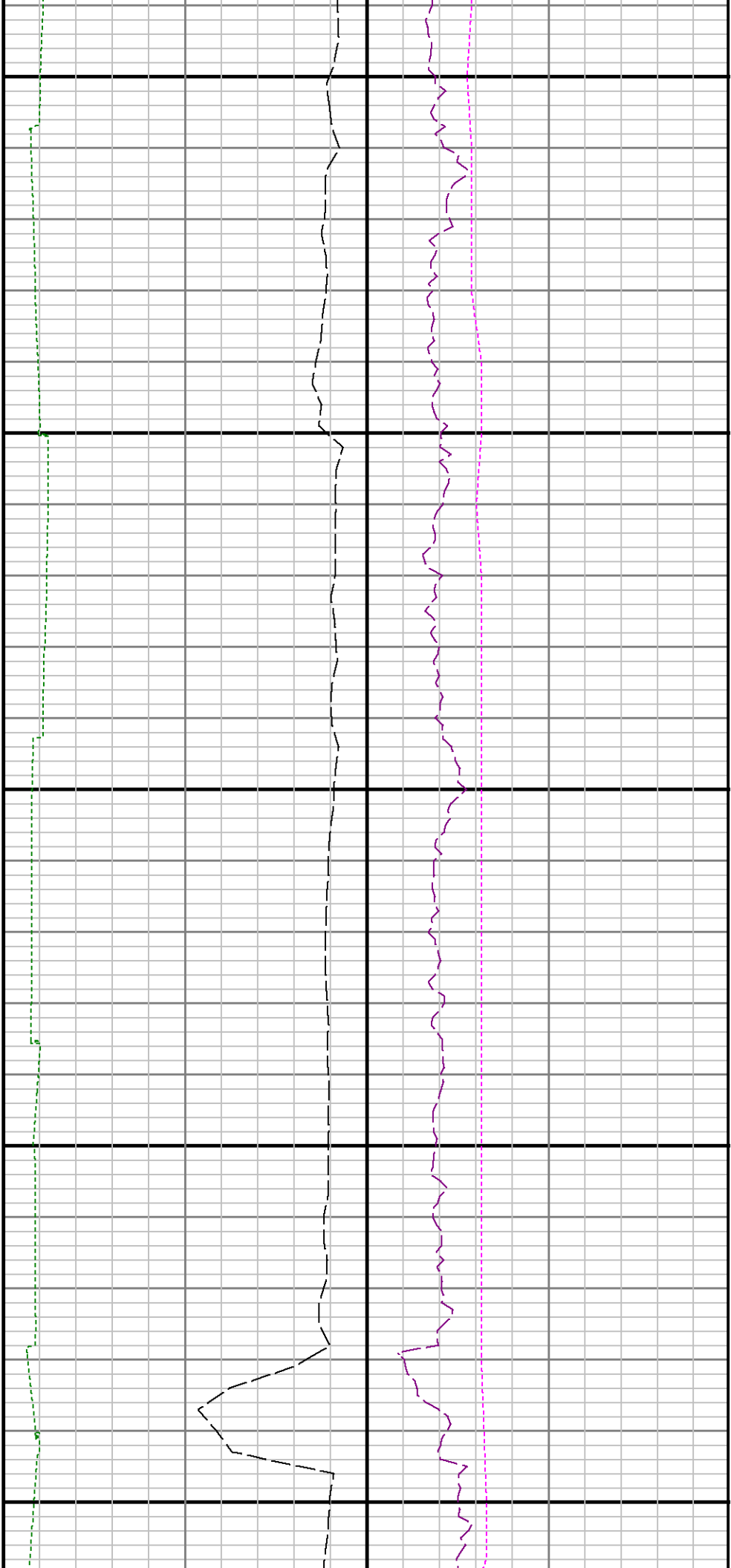




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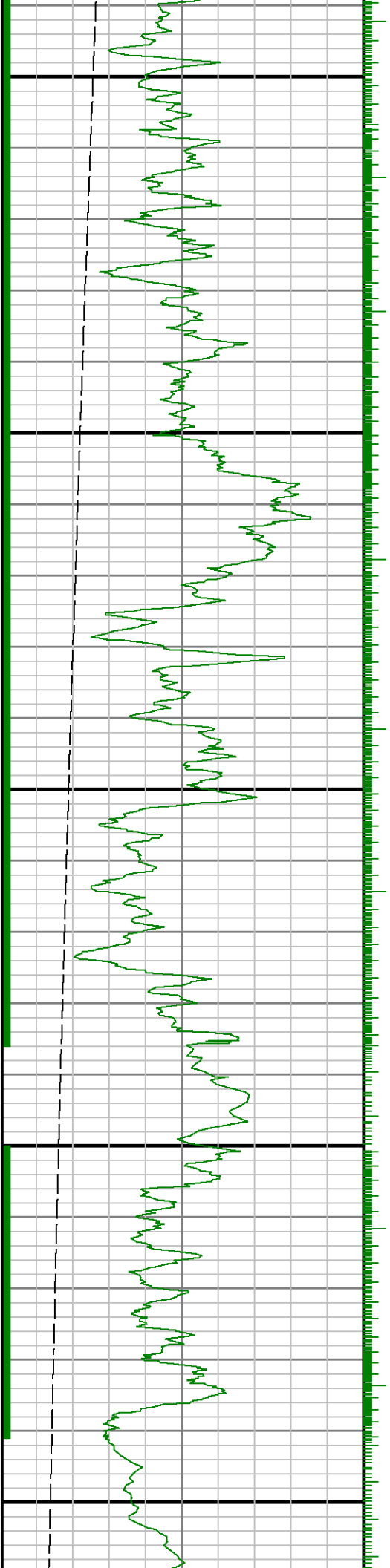


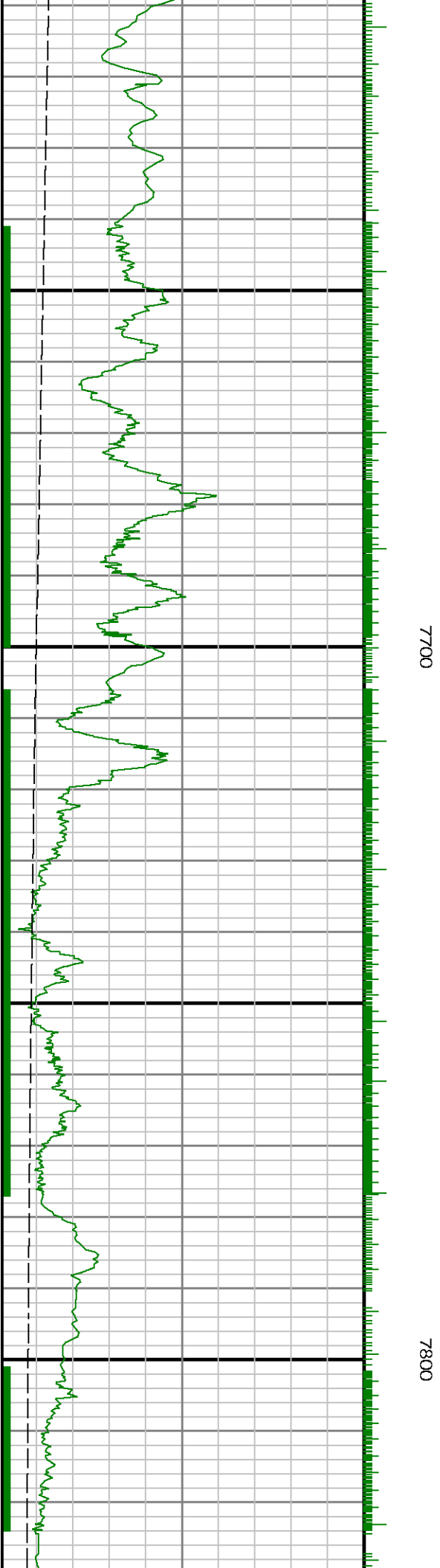
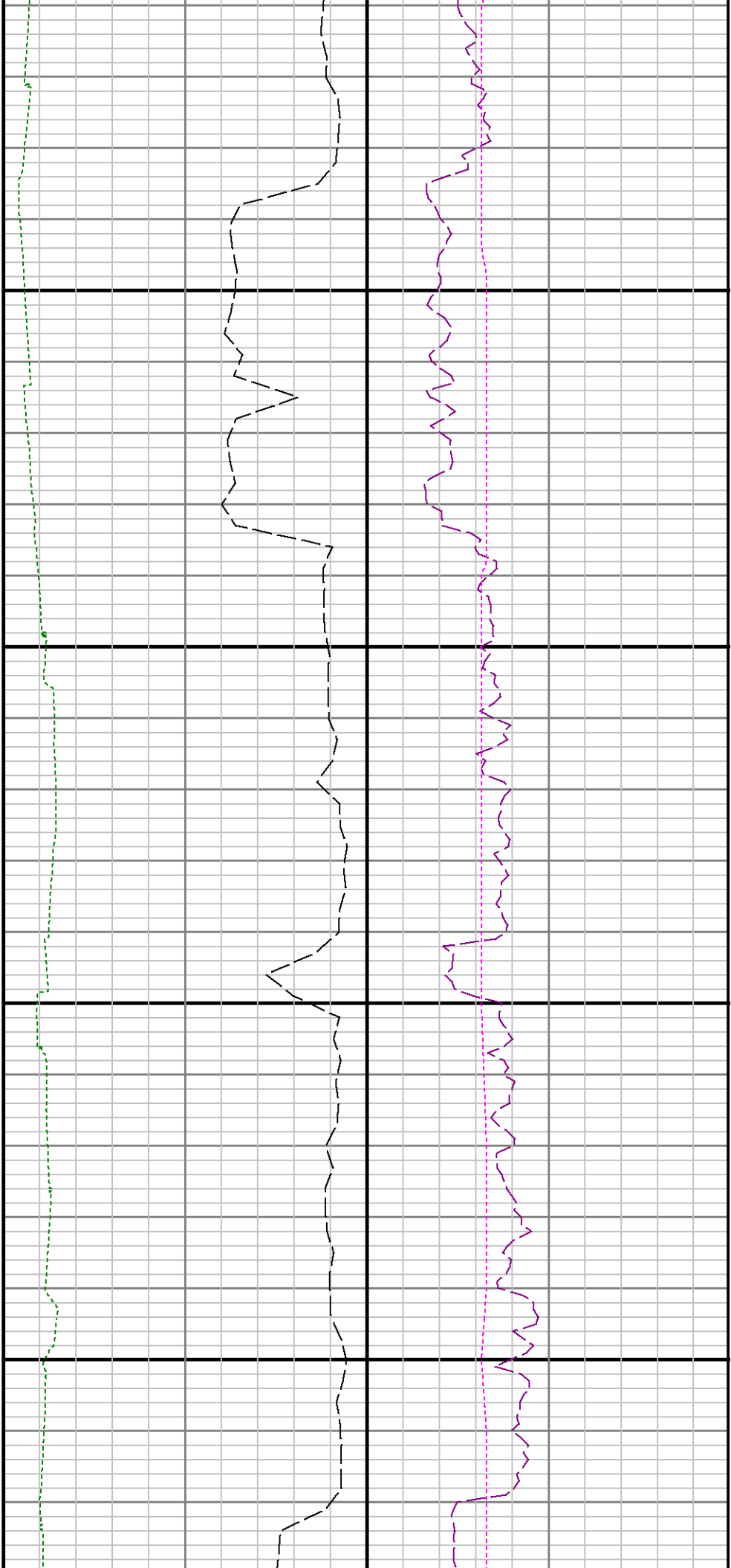


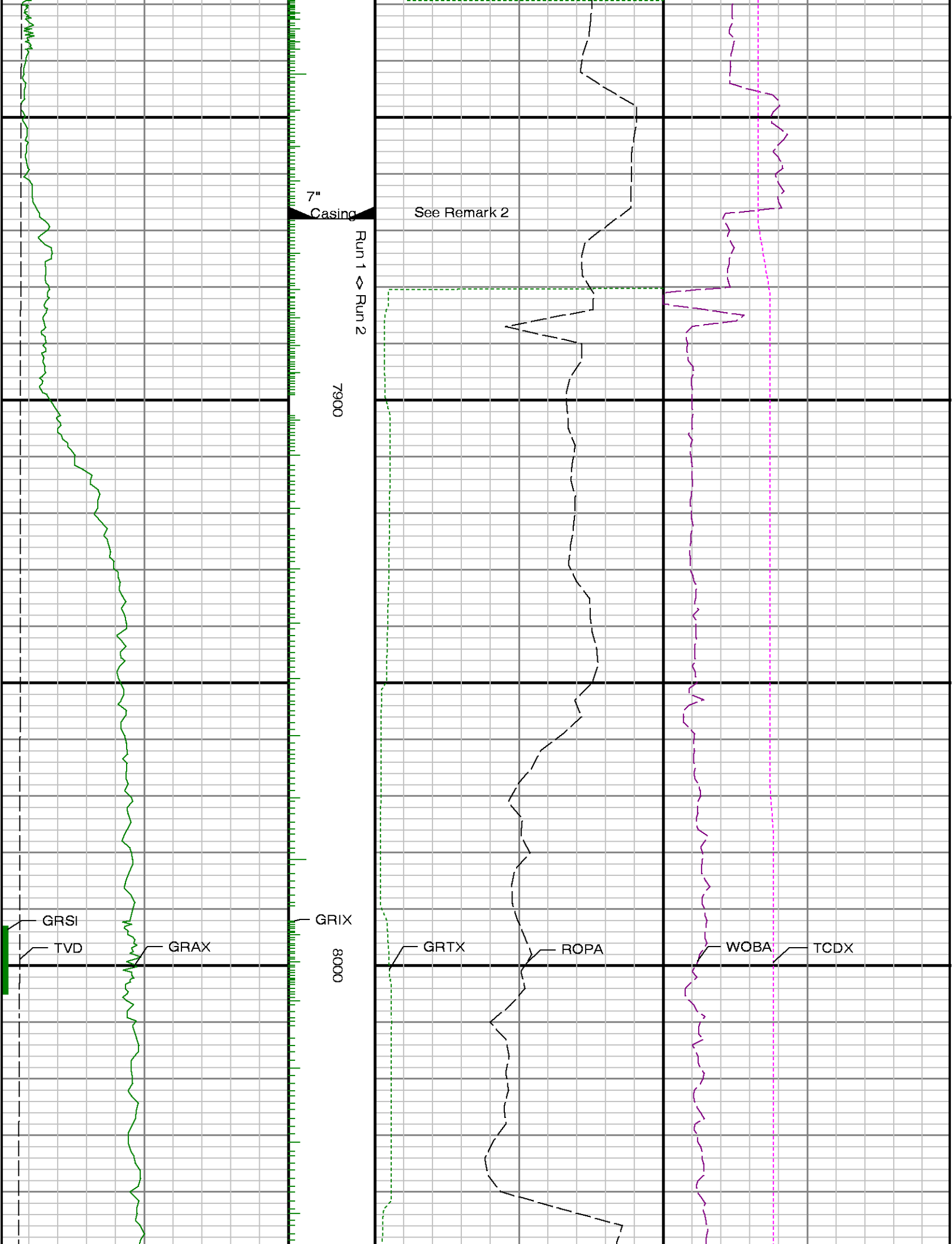
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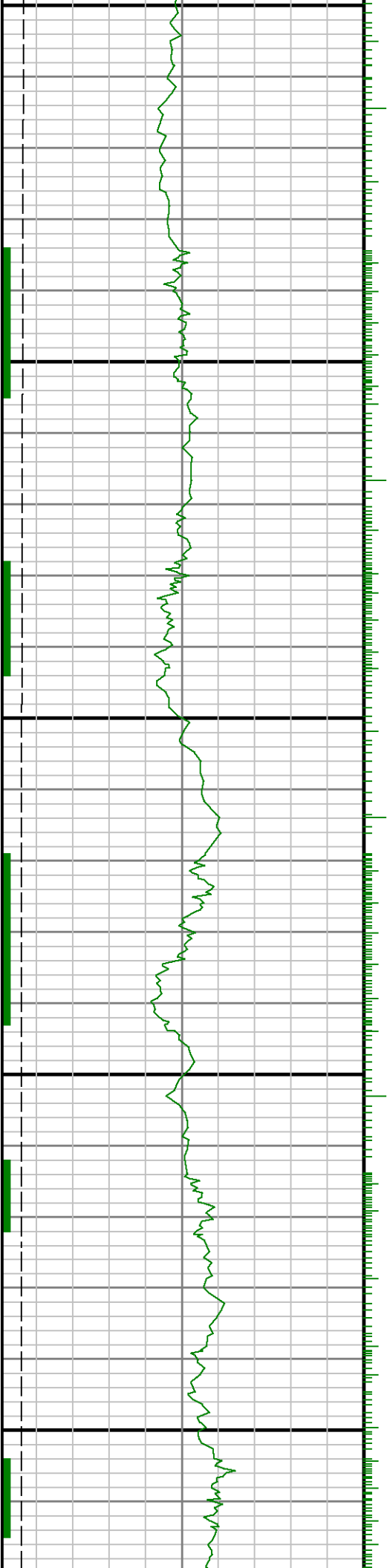


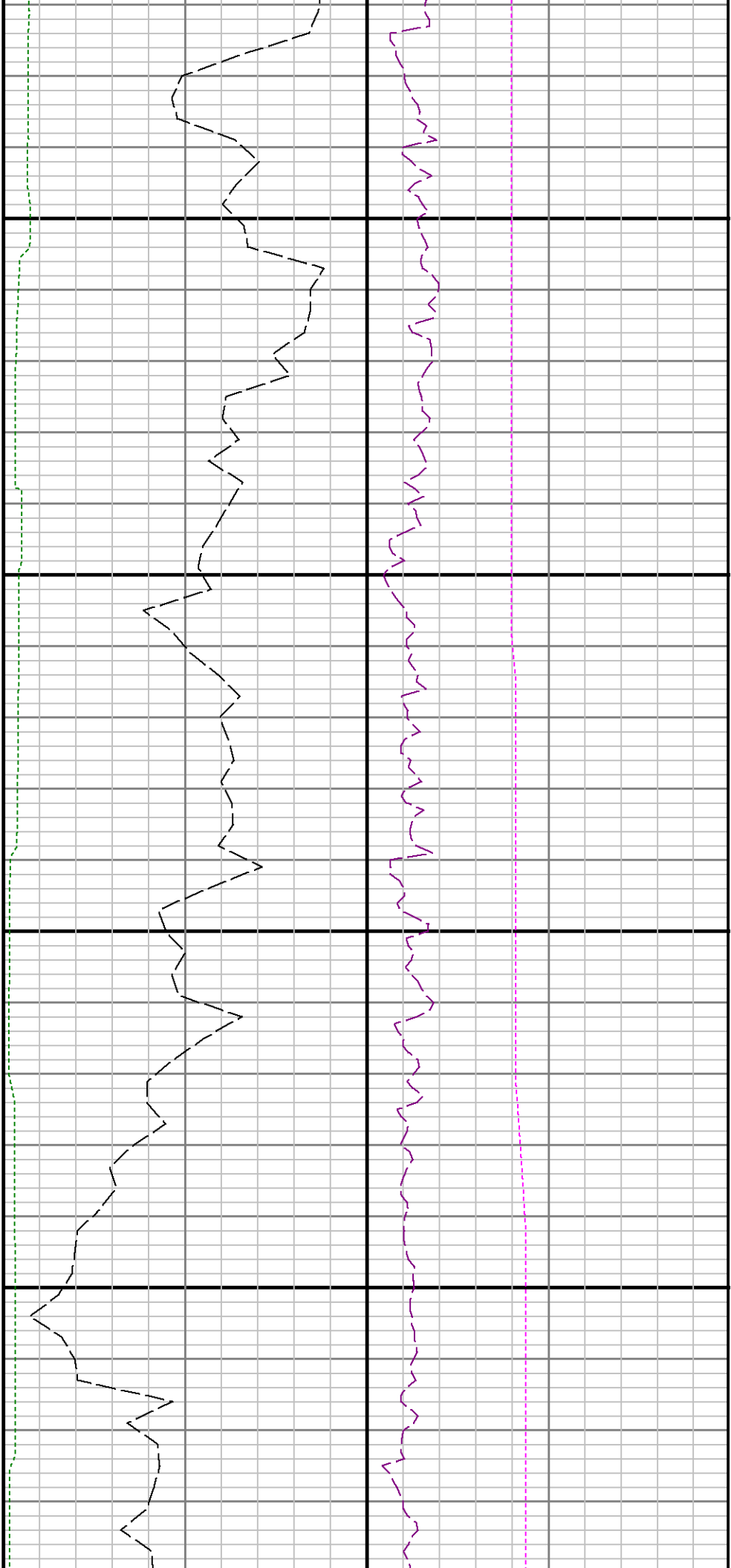




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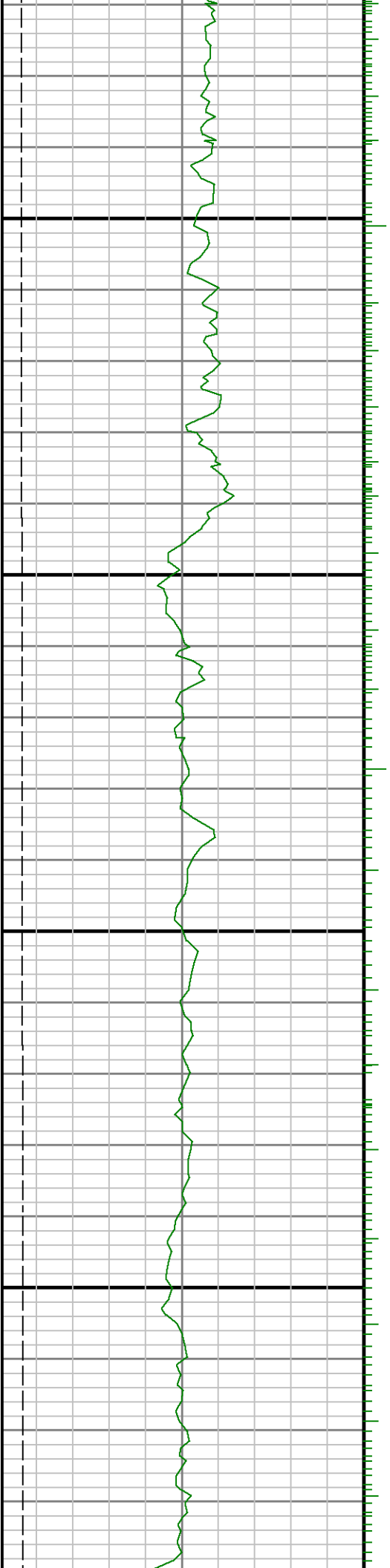
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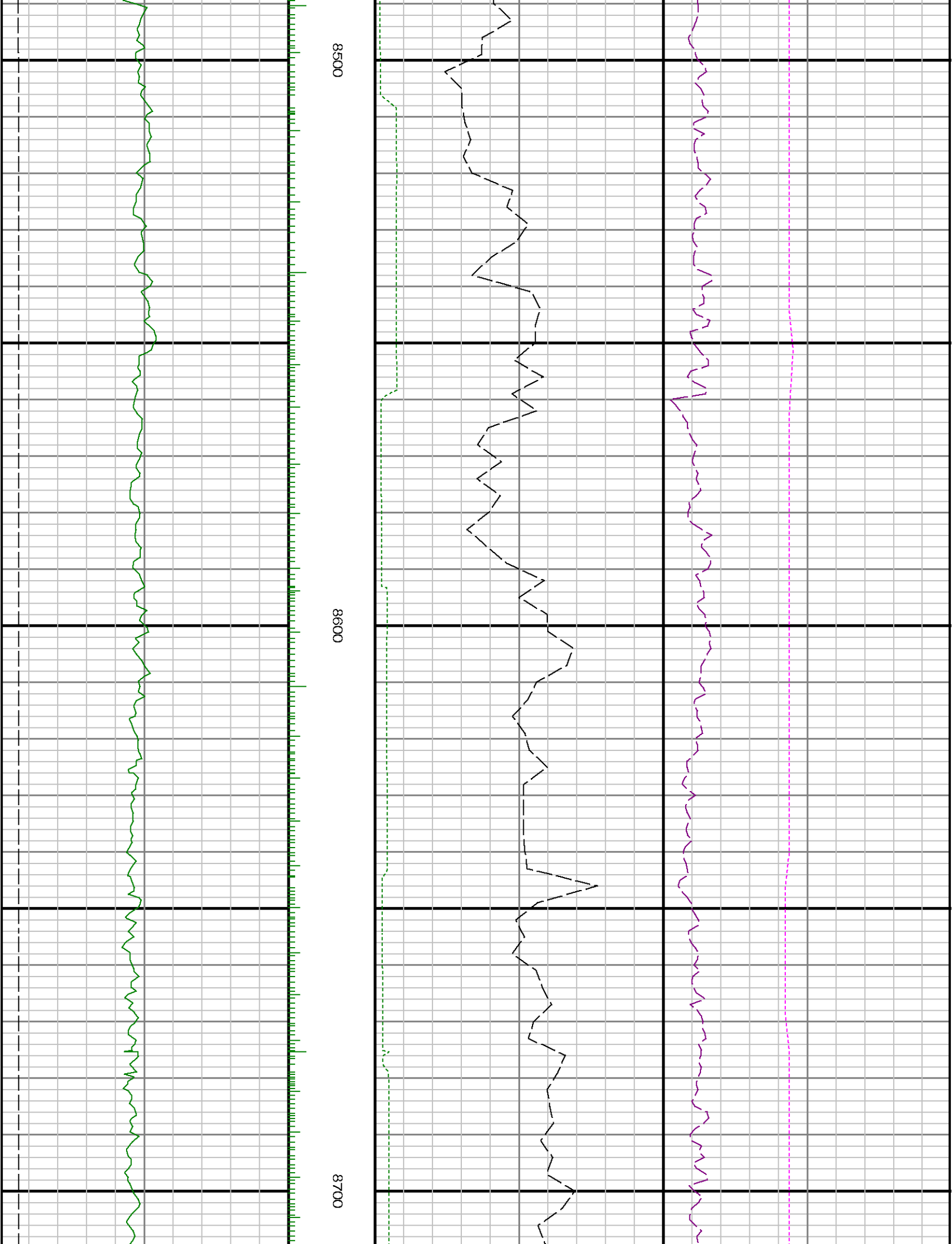


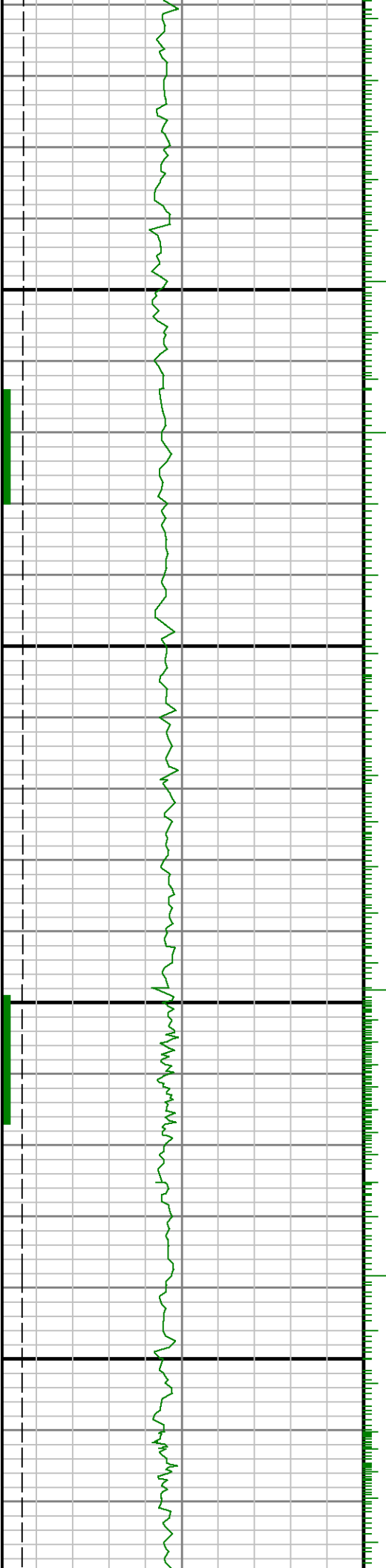


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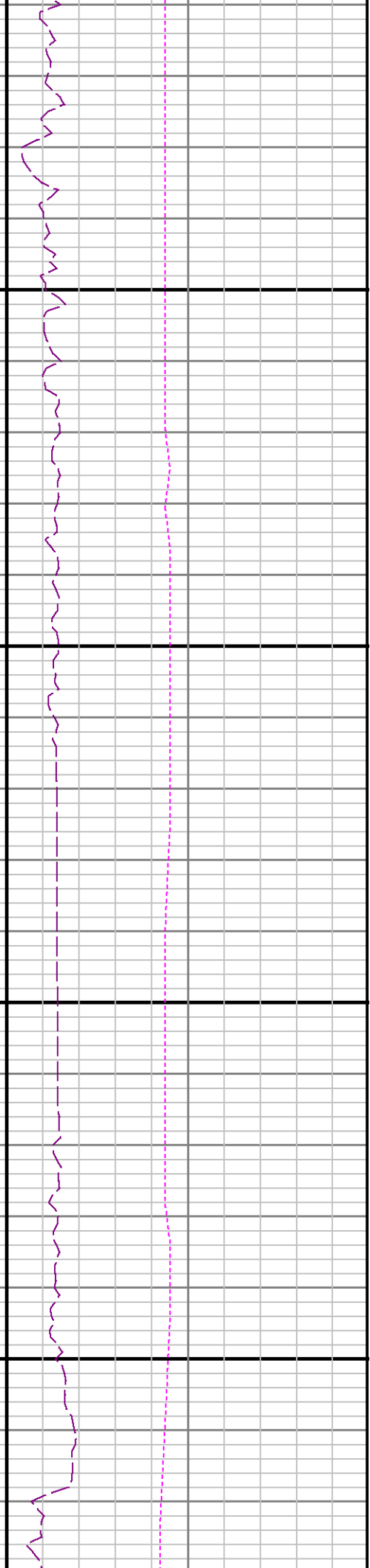


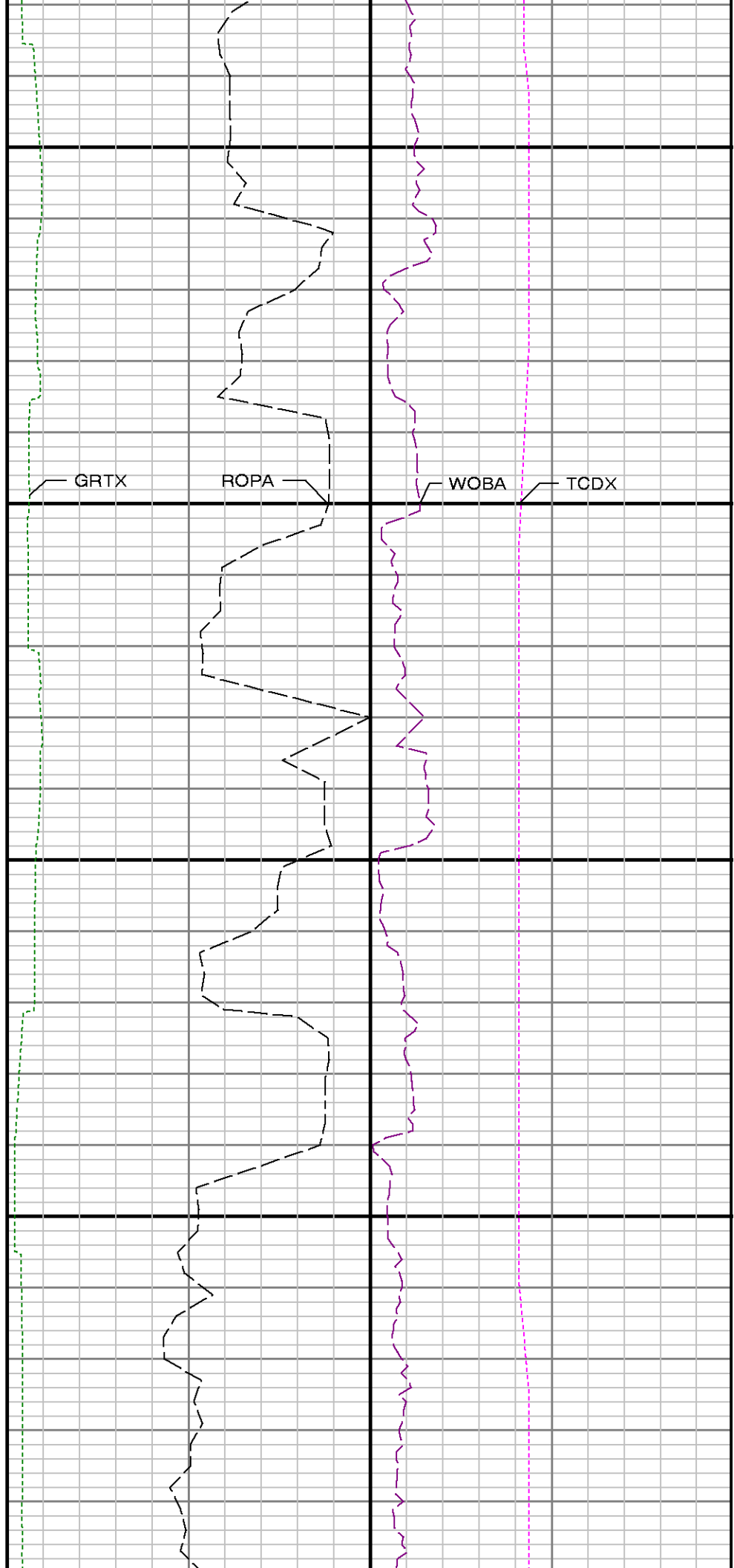
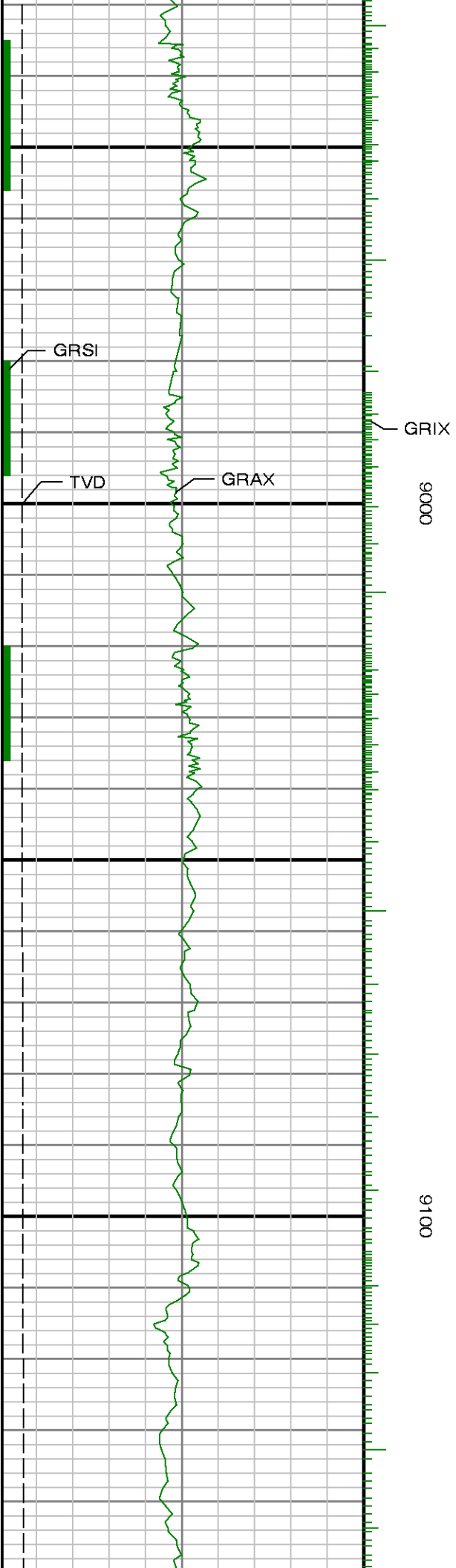




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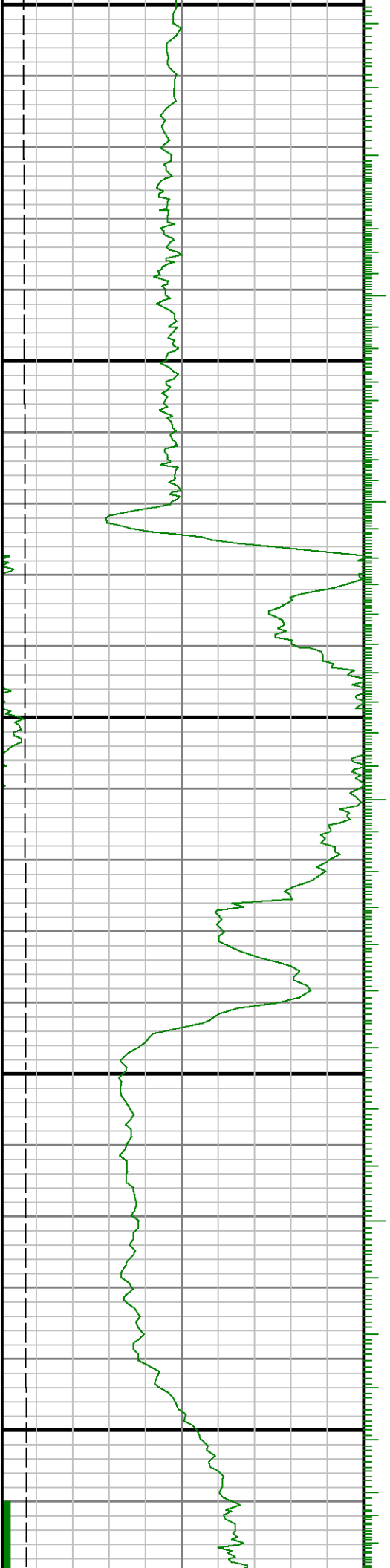


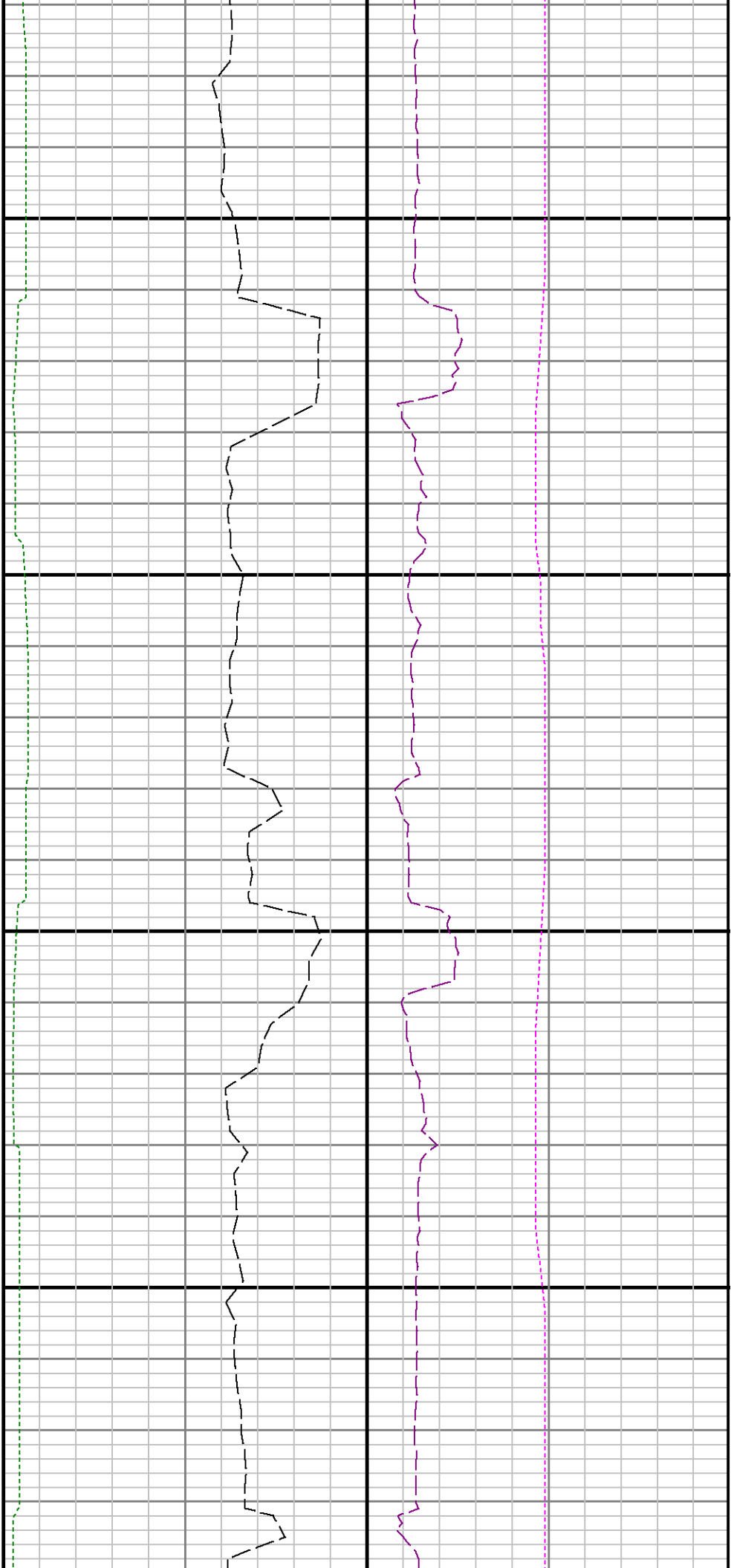




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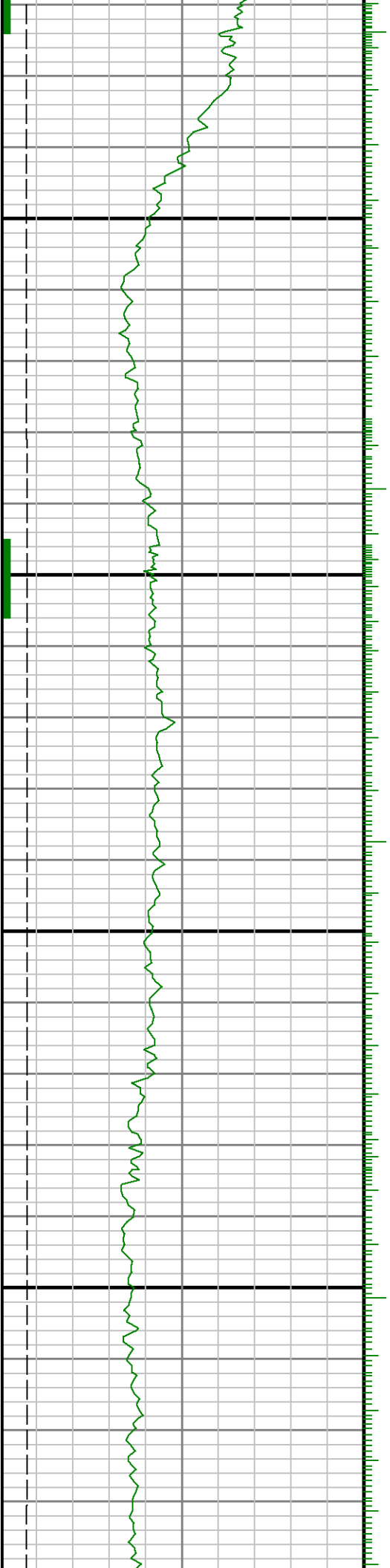
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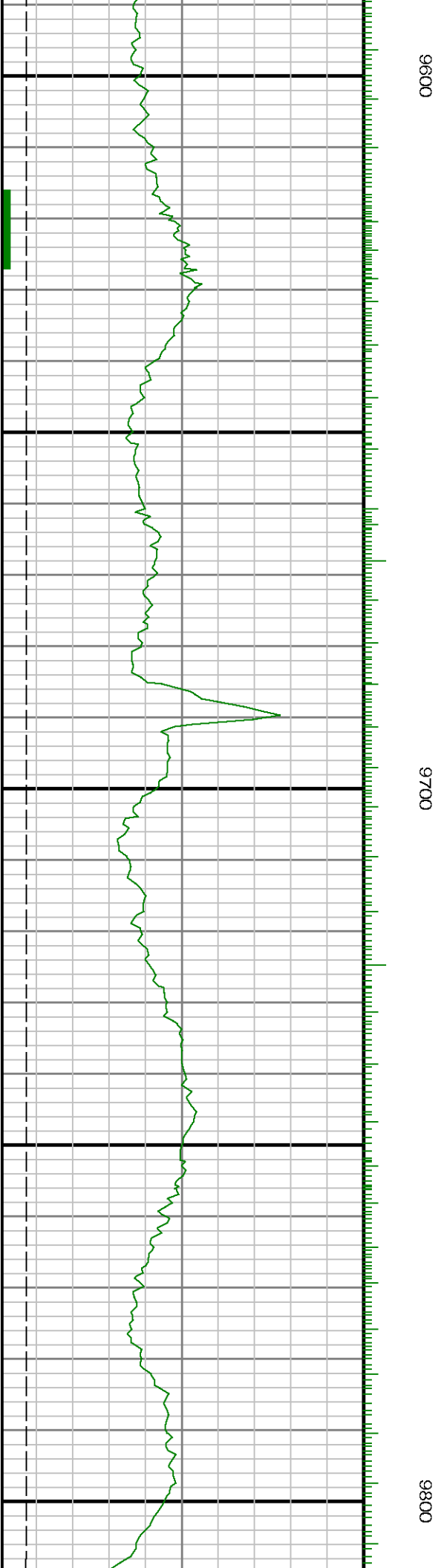
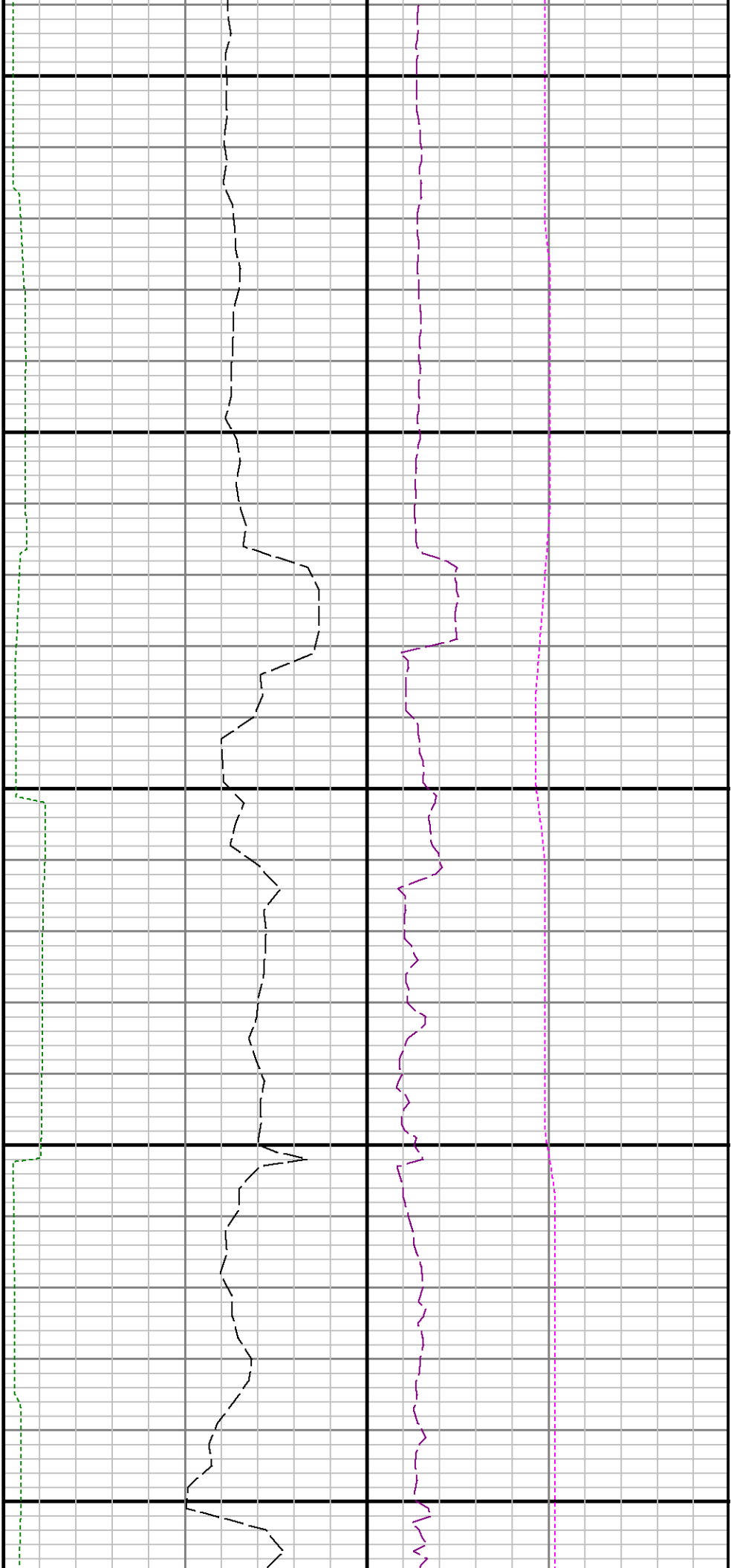


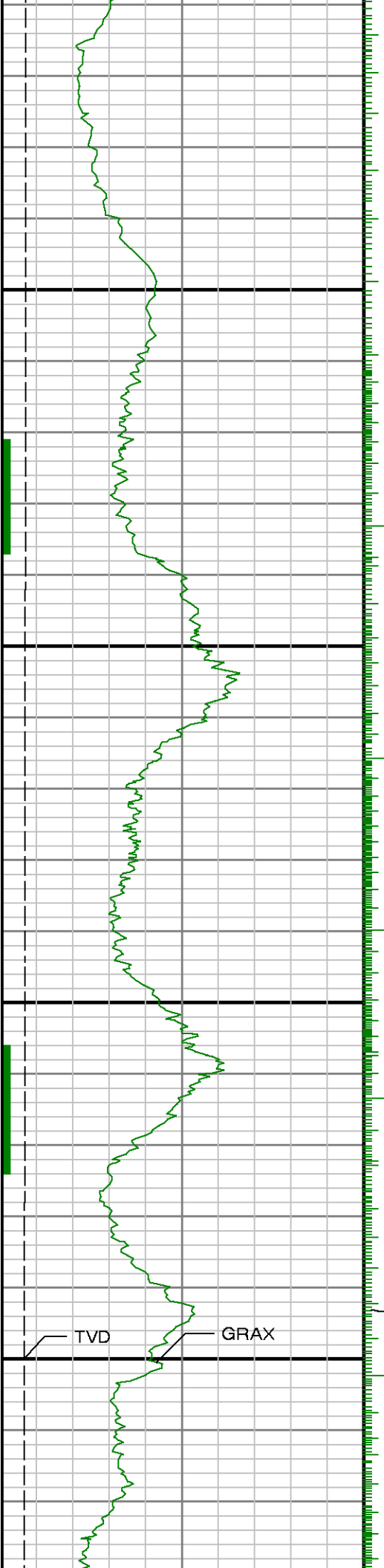


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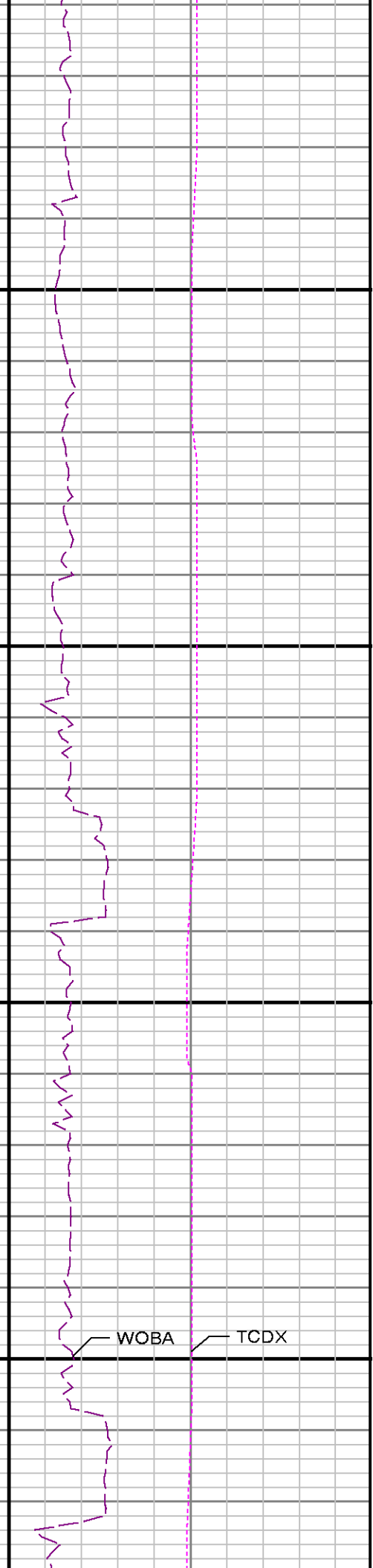
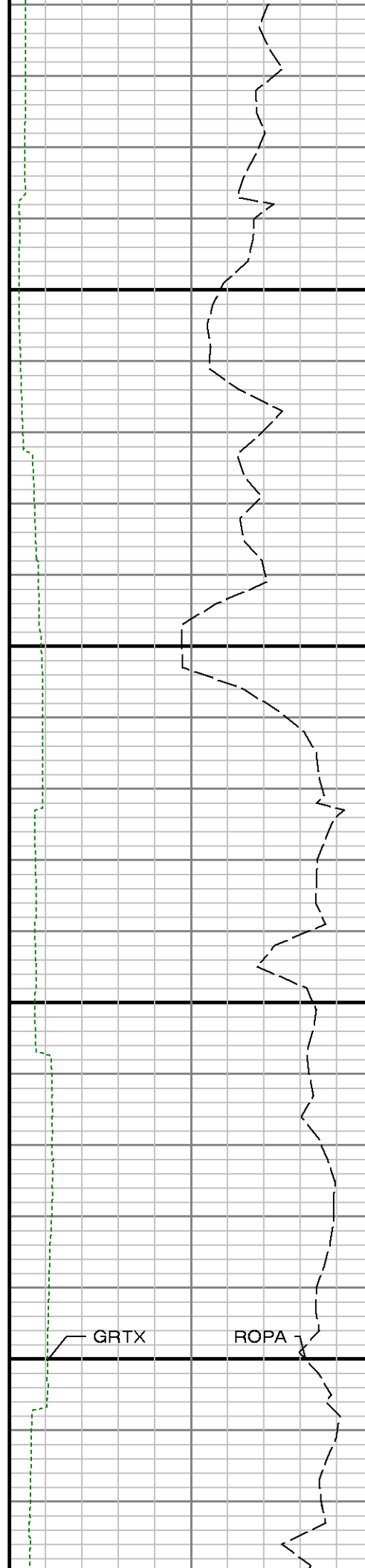
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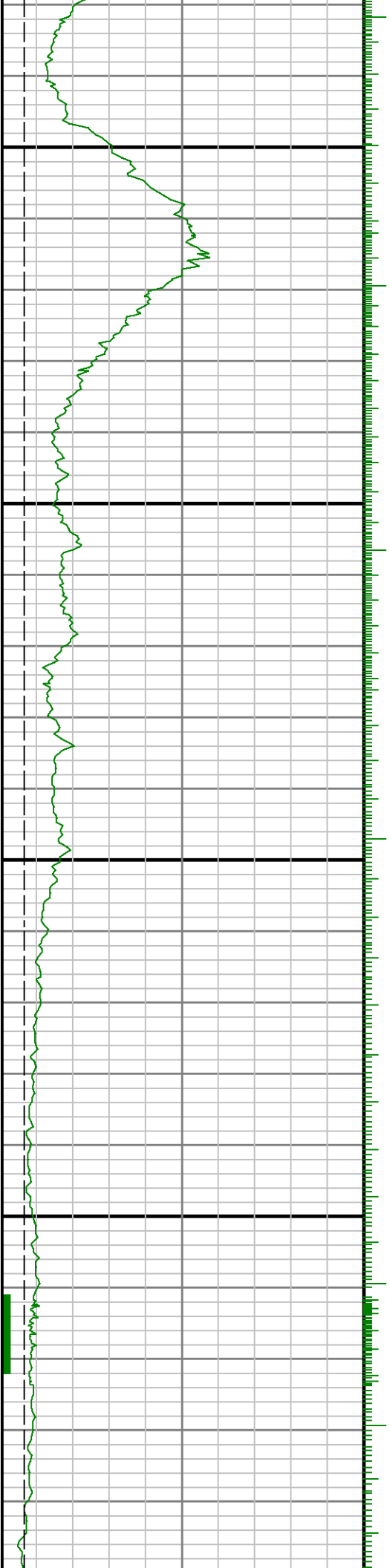
GRAX 10000 9900





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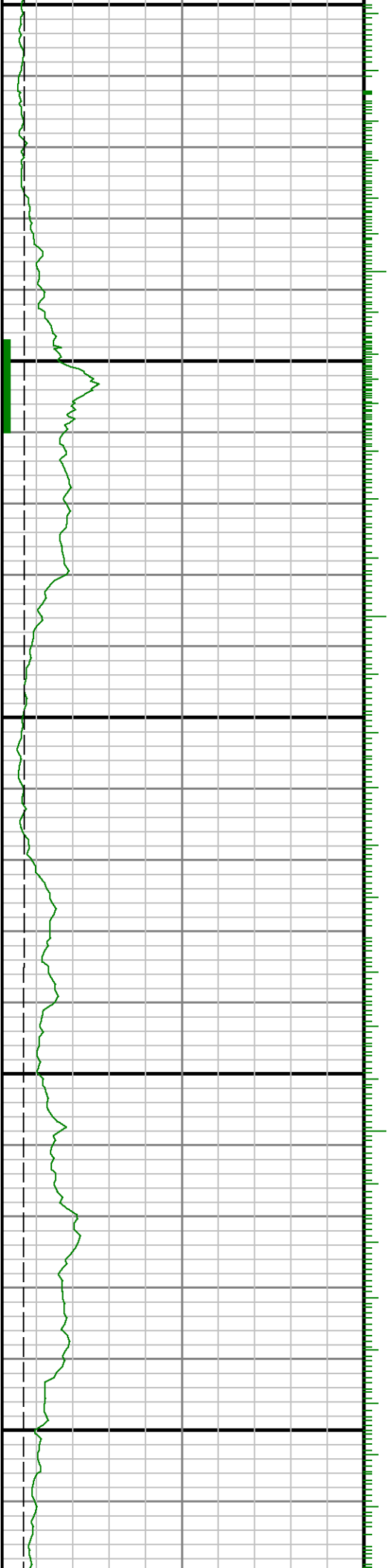
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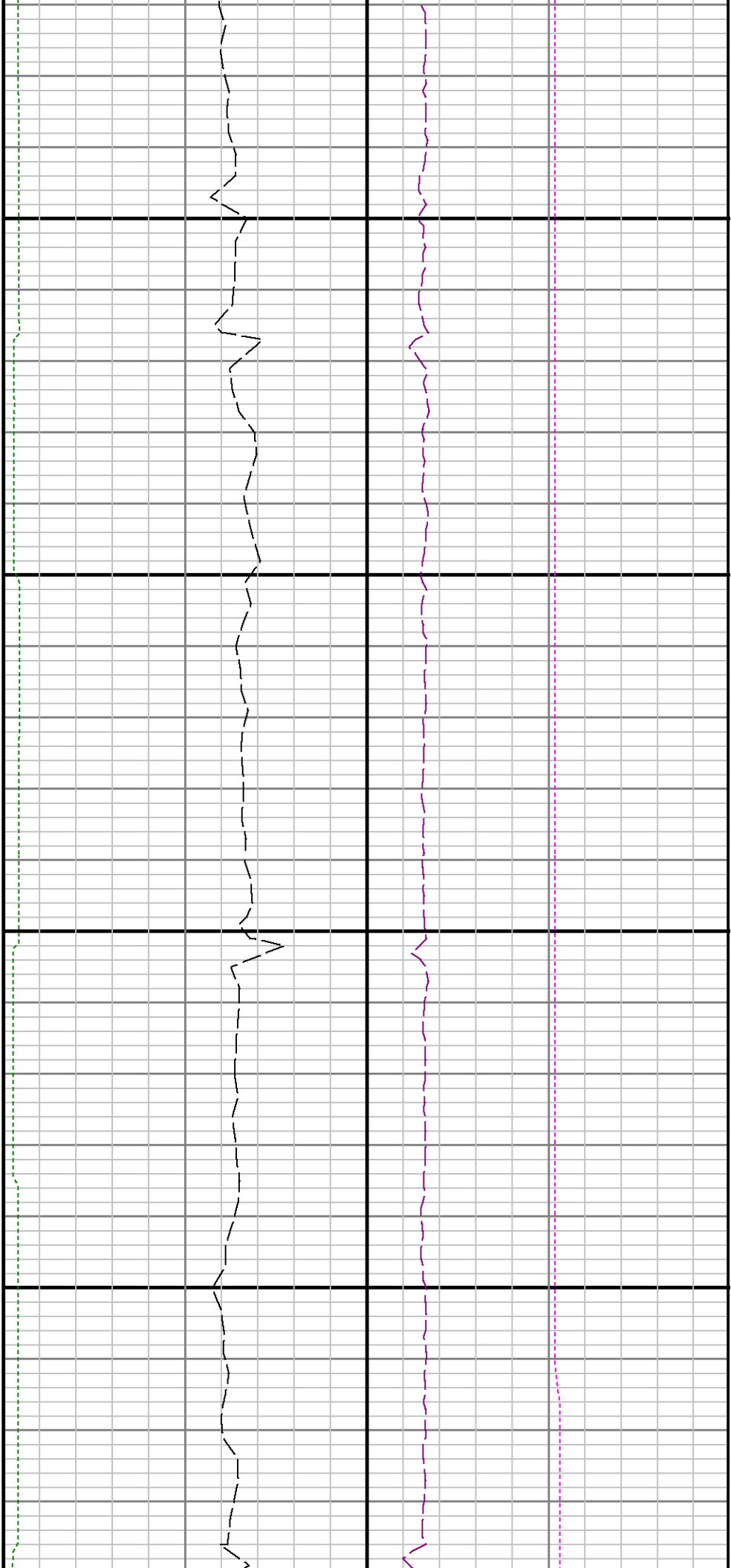




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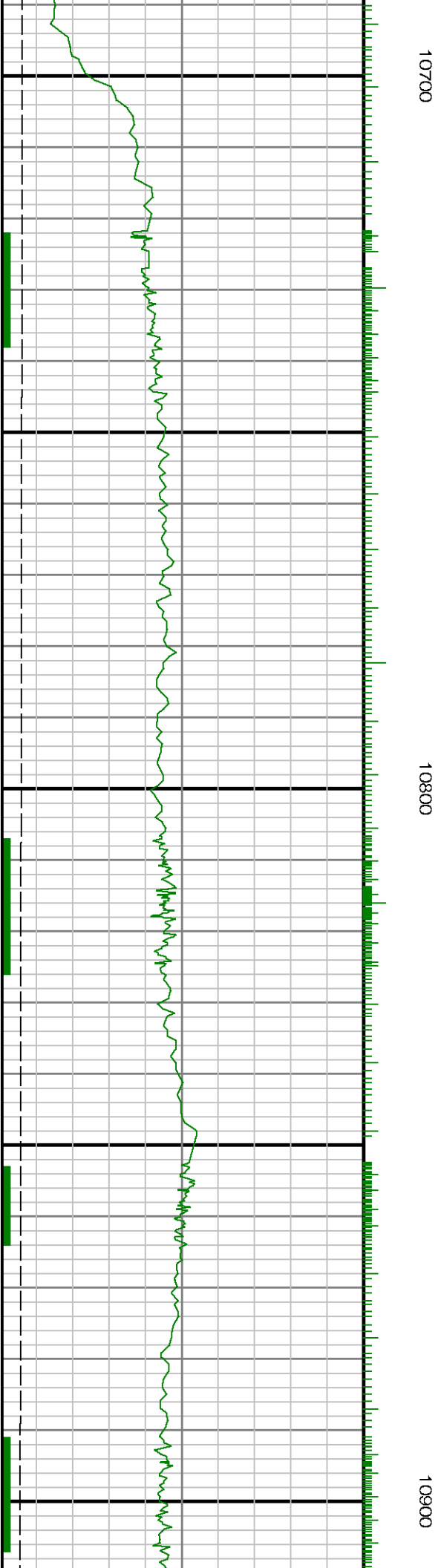
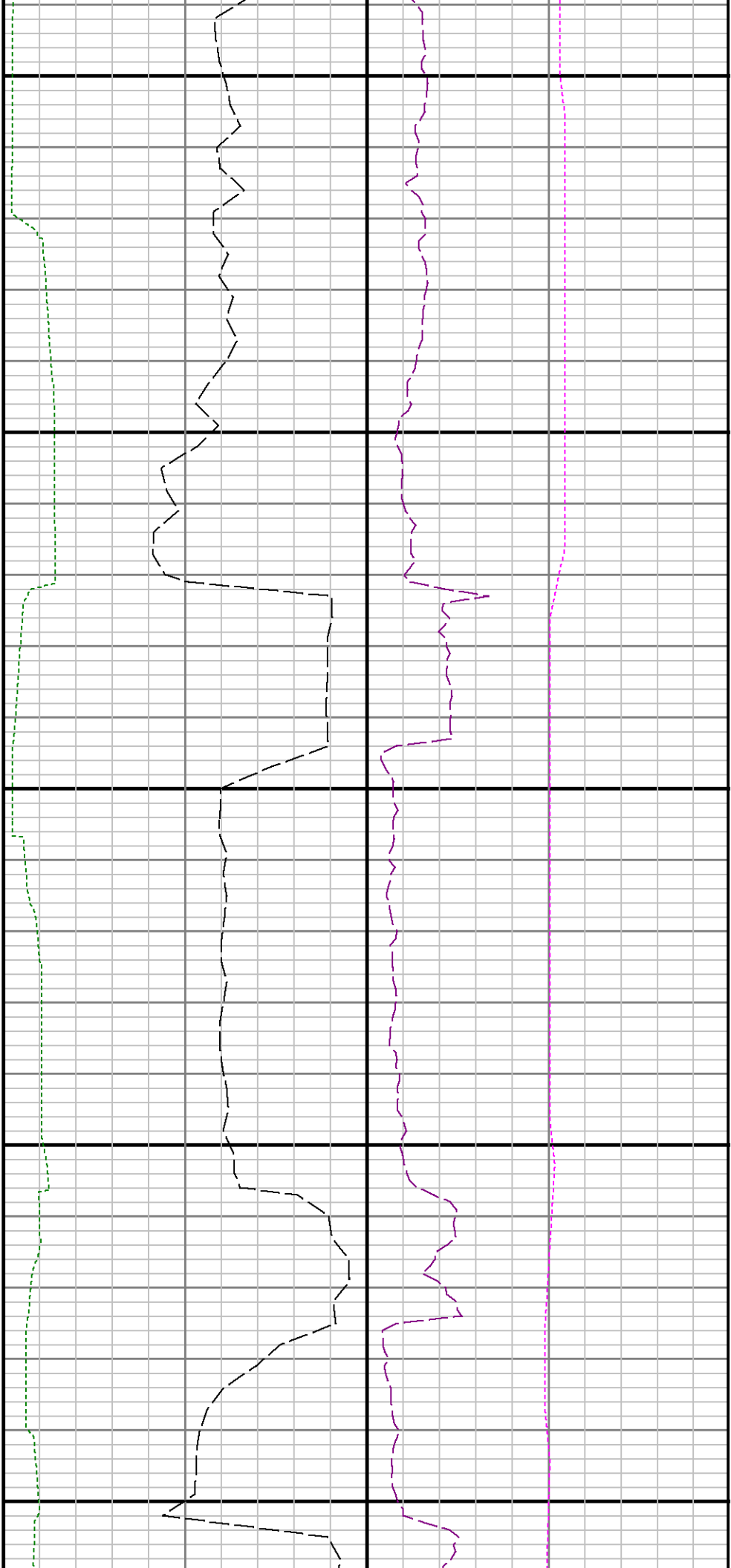
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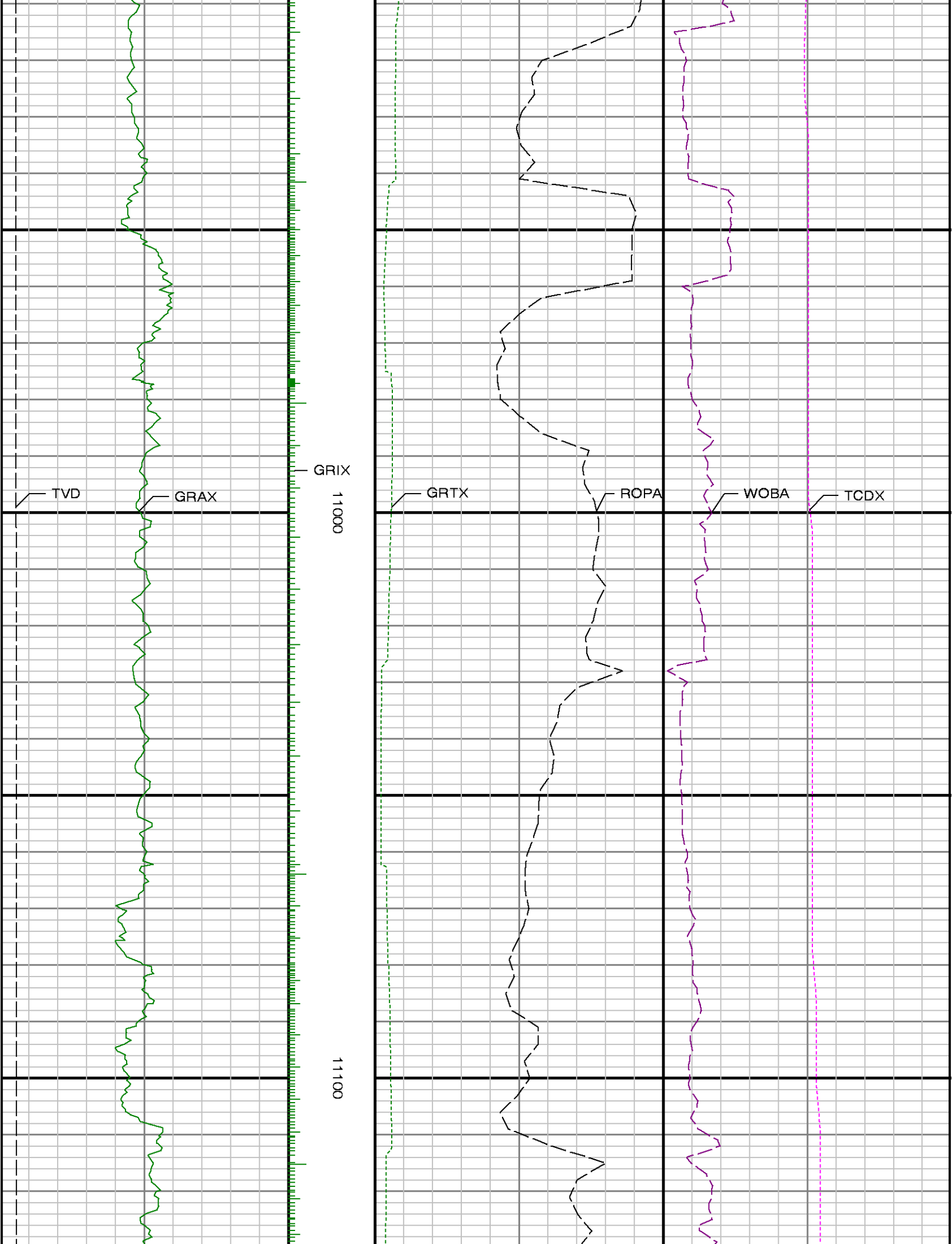


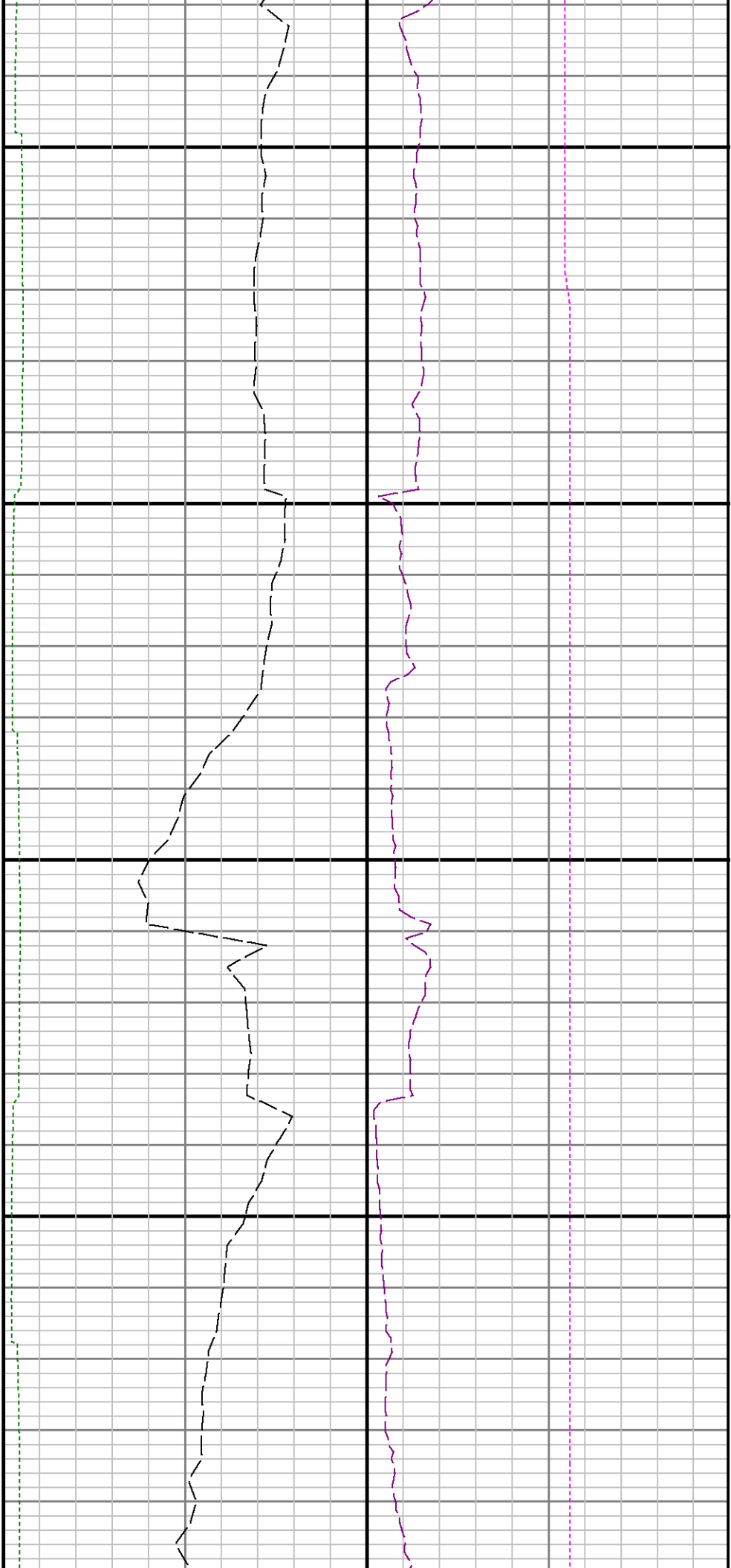


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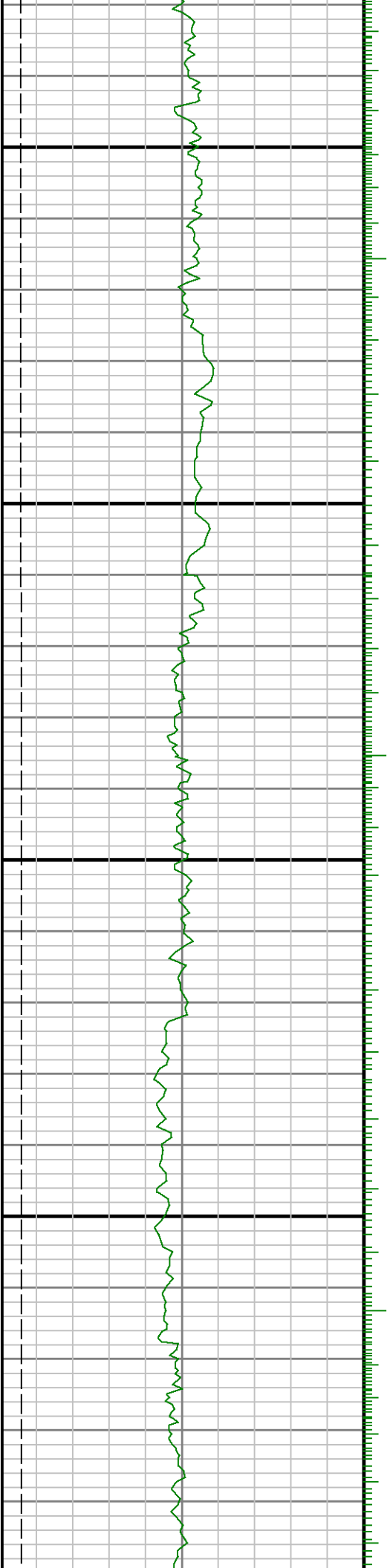


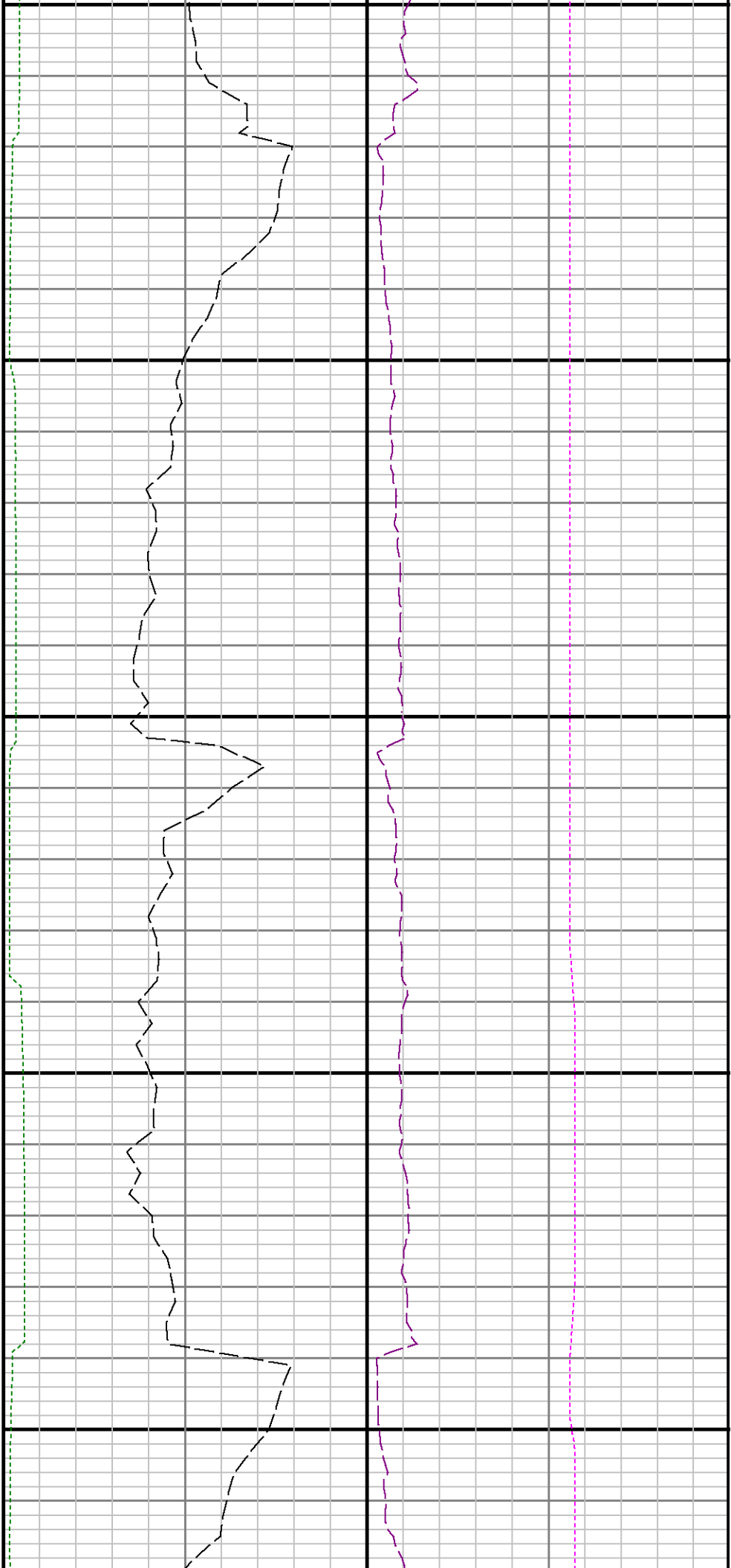




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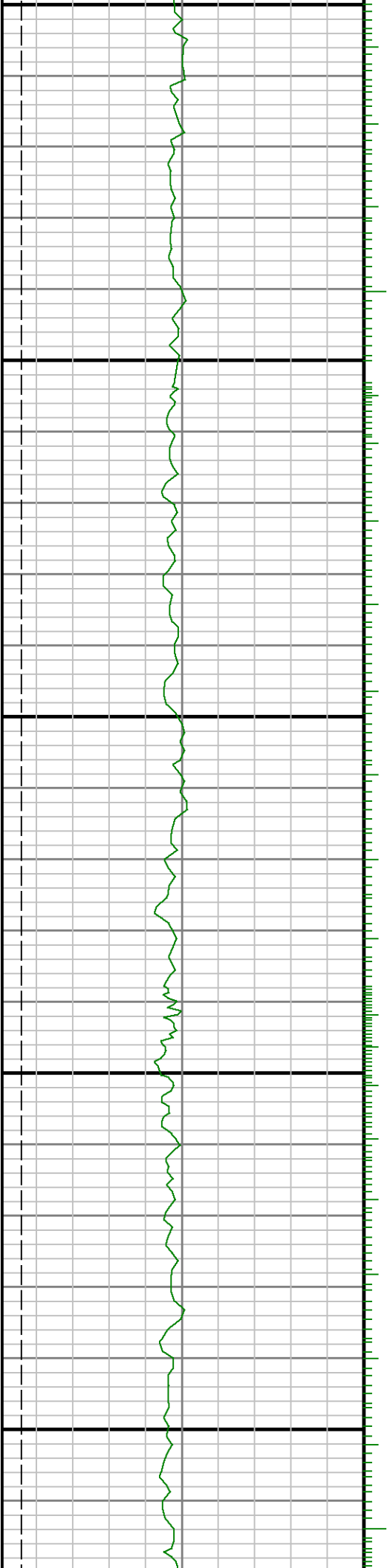
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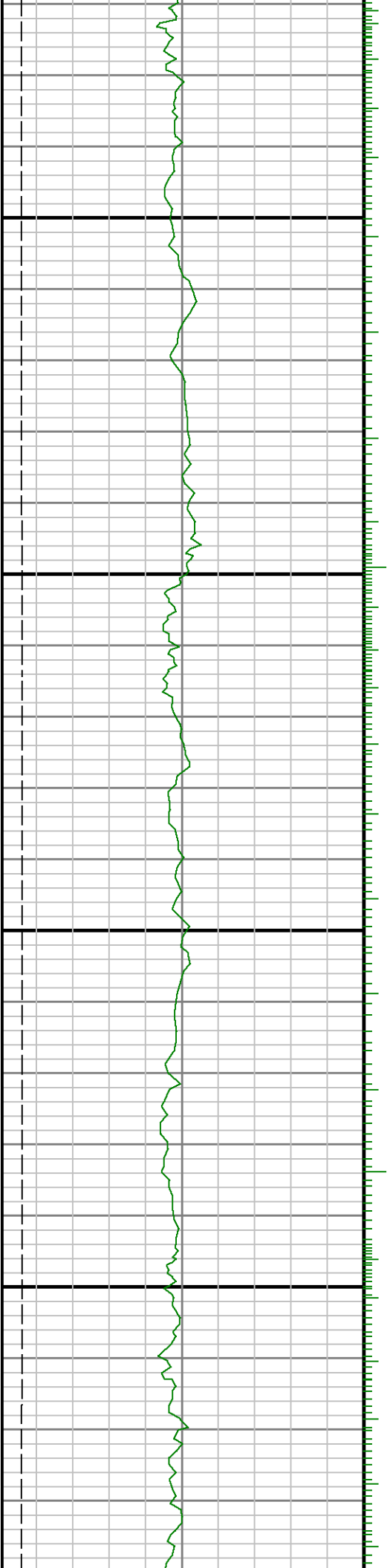
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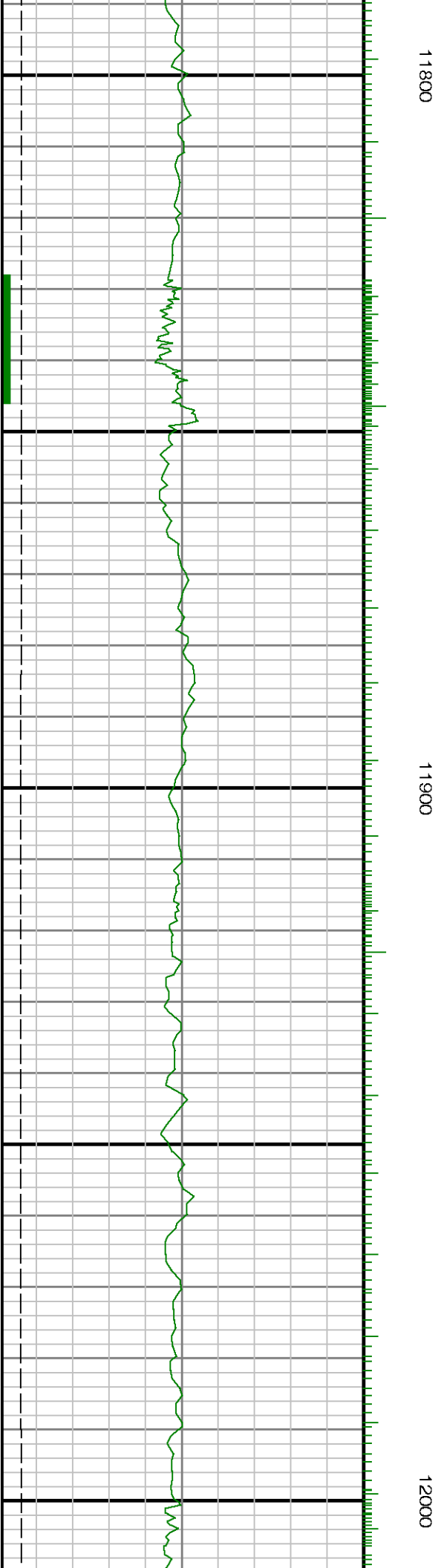
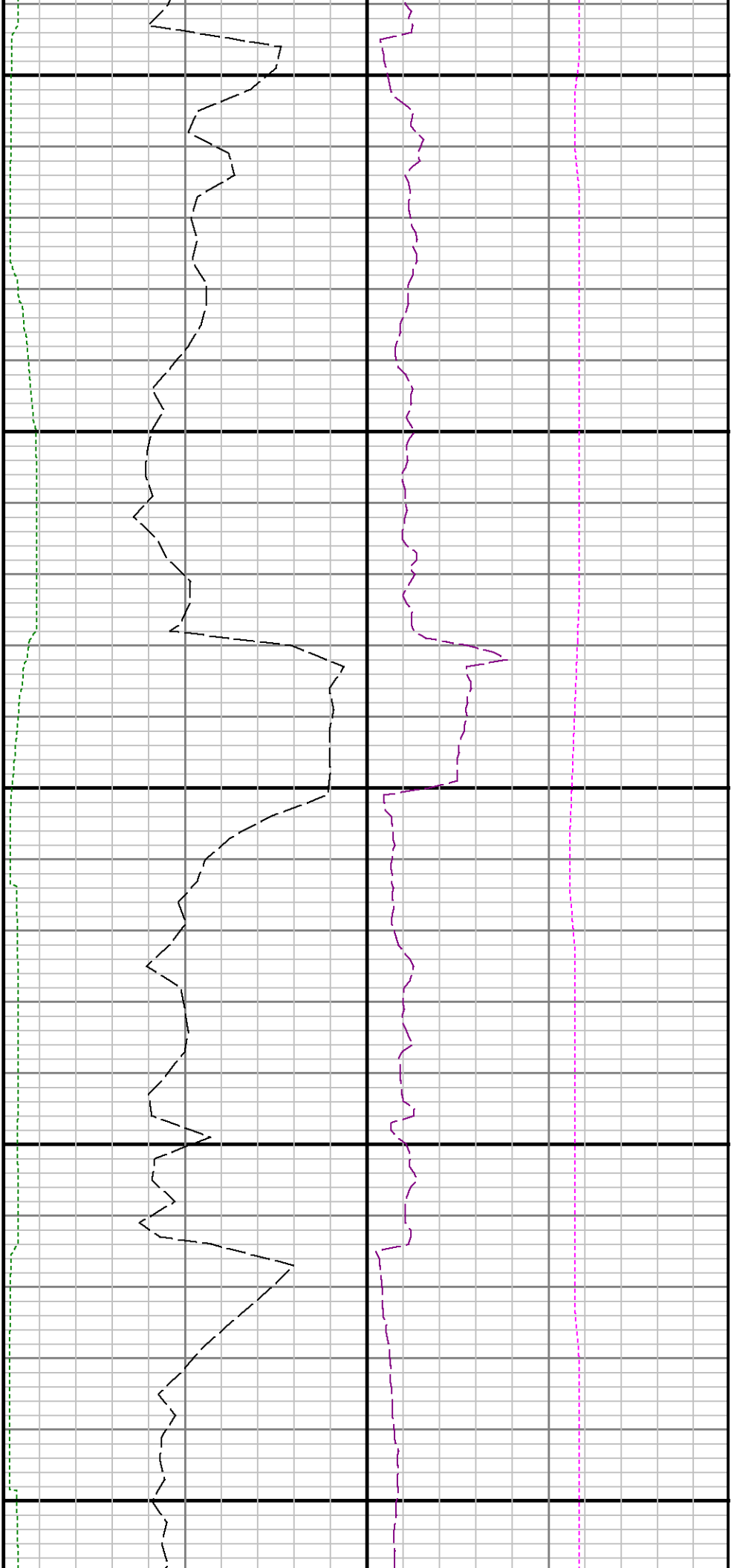


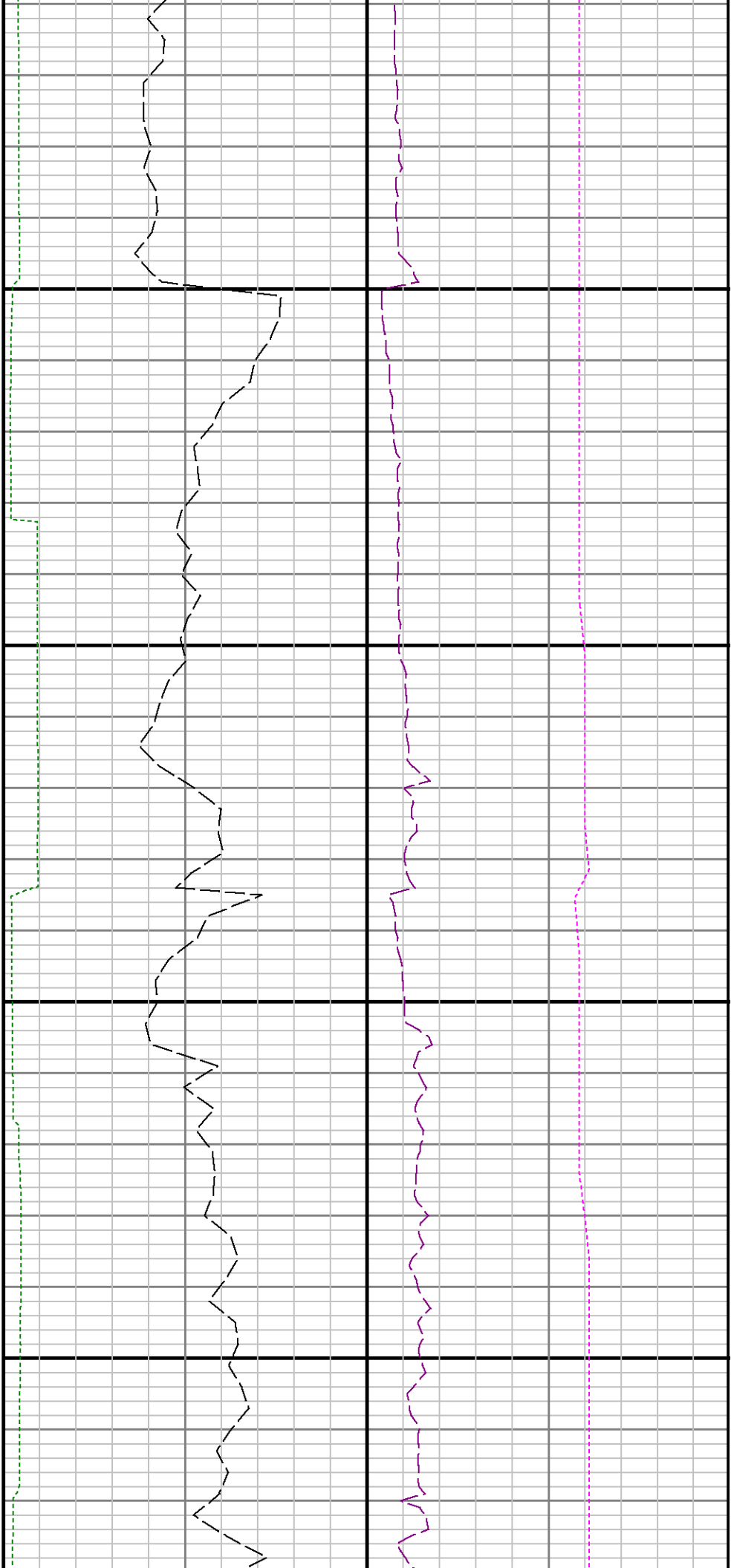


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