

BAKER HUGHES				Realtime Log			
				Gamma Ray			
Scale:	Company: Anadarko						
1:240	Well: DOUTHIT 16C-27HZ						
Measured Depth	Field: Weld County (Kerr McGee)						
	Region: Continental US			Country: U.S.A.			
Status:	Surface Location:			Other Services:			
FINAL PRINT	Latitude: 40°11'39.314"N			Wellbore Survey			
API Number: 05-123-395840000	Longitude: 104°57'43.632"W						
	Section 36	TWN: 3N	Range68W				
Permanent Datum (P.D.):	Ground Level	Elevation:	4957.00 ft.	Elevations: N/A			
Log Measured From:	Rig Floor	16.00 ft.	Above P.D.	KB: 4957.00 ft.			
Depth Reference:	Driller's Depth			DF: 4941.00 ft.			
				GL:			
Interval Logged		Dates		Magnetic Field Reference			
Top: 6400.0 ft.	Date From: 30 Sept 14	Dip Angle: 66.84 °	Azi Reference North: True				
Bottom: 12949.0 ft.	Date To: 07 Oct 14	Total	Mag to Reference				
	Spud Date: 30 Sept 14	Field Strength: 52647.0 nT	North Correction: 8.67 °				
Borehole Record				Casing Record			
Hole Size	From	To	Size	Weight	From	To	
13,500 in.	Surface	1244.0 ft.	9.625 in.	36.00 lb/ft	Surface	1233.0 ft.	
8,670 in.	1244.0 ft.	7753.0 ft.	7.000 in.	26.00 lb/ft	Surface	7743.0 ft.	
6,125 in.	7753.0 ft.	12949.0 ft.					
Mud Record				Deviation Record			
Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)	
Water Based	Surface	12949.0 ft.	13,500 in.	1244.0 ft.	0.0 ° / 0.0 °	0.2 ° / 240.7 °	
			8,750 in.	6509.0 ft.	0.1 ° / 302.9 °	81.2 ° / 268.6 °	
			6,125 in.	6440.0 ft.	91.2 ° / 267.7 °	89.6 ° / 270.6 °	
					/	/	
					/	/	
					/	/	
Acquisition System				Software Version			
Advantage	2.20U4	Rig: / Contractor:	Xtreme 20	Other			
PATS	6.4.1.34	Job No:	6661594	/ Xtreme Coil Drilling			
		District: / Unit:	RMD	/ D&E			

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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.)		Length (in.)		(ft)	(ft)	(ft)	(ft)					(hrs.)
1	1	1	8.750	PDC	3.000	Steerable	6400.0	7692.0	1244.0	7753.0	01 Oct 14	03:38	02 Oct 14	18:37	34.9
2	2	2	6.125	PDC	5.000	Steerable	7692.0	11524.0	7753.0	11589.0	04 Oct 14	19:42	06 Oct 14	01:22	27.9
3	3	3	6.125	PDC	4.000	Steerable	11524.0	12886.0	11589.0	12949.0	06 Oct 14	20:45	07 Oct 14	04:00	11.1

Crew										
Name	Arrive	Depart		Name	Arrive	Depart		Name	Arrive	Depart

	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Bryan Severson	30 Sept 14	08 Oct 14				Emily Cazzell	01 Oct 14	08 Oct 14

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (bbls)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
30 Sept 14	22:05	1	1244.0	Water Based	8.4	29	8.6	N/A	0/99.9	Active Mud Pit	1900	N/A
01 Oct 14	23:30	1	5318.0	Water Based	8.9	32	9.1	N/A	0.4/96.6	Active Mud Pit	2900	N/A
02Oct 14	22:00	1	7753.0	Water Based	10.5	44	9.3	N/A	2/87.2	Active Mud Pit	2600	N/A
03 Oct 14	22:30	1	7753.0	Water Based	10.6	51	9.2	N/A	2/87	Active Mud Pit	2700	N/A
04 Oct 14	22:00	2	7949.0	Water Based	10.2	46	9.3	N/A	2/88.3	Active Mud Pit	2600	N/A
05 Oct 14	22:00	2	11096.0	Water Based	10.0	51	9.3	N/A	2.5/88.5	Active Mud Pit	2100	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	Pointless
GRTX	Gamma Ray Time Since Drilled	min
ROPA	Rate of Penetration, 3.0 ft. Avg.	ft/hr
TCDX	Downhole Temperature	deg/F
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	12497605	Directional	64.53	6.750	3.313
1	SRIG	12600751	Gamma	61.16	6.750	3.313
2	DIR	12456790	Directional	67.02	4.750	2.750
2	SRIG	12578114	Gamma	63.64	4.750	2.750
3	DIR	12042368	Directional	66.00	4.750	2.750
3	SRIG	12622668	Gamma	62.62	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.) Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes LWD logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to present logging data.

2.) Baker Hughes LWD run 1 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1244 to 7753 ft MD (1243 to 7254 ft TVD).

3.) Baker Hughes LWD run 2 and 3 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and steerable assembly from 7753 to 12949 ft MD (7254 to 7244 ft TVD).

4.) The solid line on the far left track is the sliding indicator.

# Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	6400	8.750	1	Gamma ray logging operations began at 6400 ft MD (6251 ft TVD).
2	7753	8.750	1	The GRTX range from 7692 to 7753 ft MD (7249 to 7254 ft TVD) was logged 48 hours after being drilled due to casing operations.
3	11589	6.125	2	The GRTX range from 11524 to 11589 ft MD (7251 to 7251 ft TVD) was logged 18 hours after being drilled due to changing of motor, mwd and bit
4	12886	6.125	3	There is no gamma ray data from 12886 to 12949 ft MD (7244 to 7244 ft TVD) due to sensor offset.



Company : Anadarko

Well : DOUTHIT 16C-27HZ

Interval : 6395.00 - 12952.00 feet

Created : 05/Oct/2014 7:19:08 PM

Gamma Ray Apparent 0.5 ft Avg [GRAX]

0 200

API

True Vertical Depth [TVD]

7300 6200  
ft

MD feet 1:240

Gamma Time Since Drilled [GRTX]

0 600

min

Rate of Penetration 3.0 ft Avg [ROPA]

500 0  
ft/hr

Surface Weight On Bit 1.0 ft Avg [WOBA]

0 100

klbf

Downhole Temperature [TCDX]

100 250  
degF

See Remark 1

GRAX

TVD

GRIX

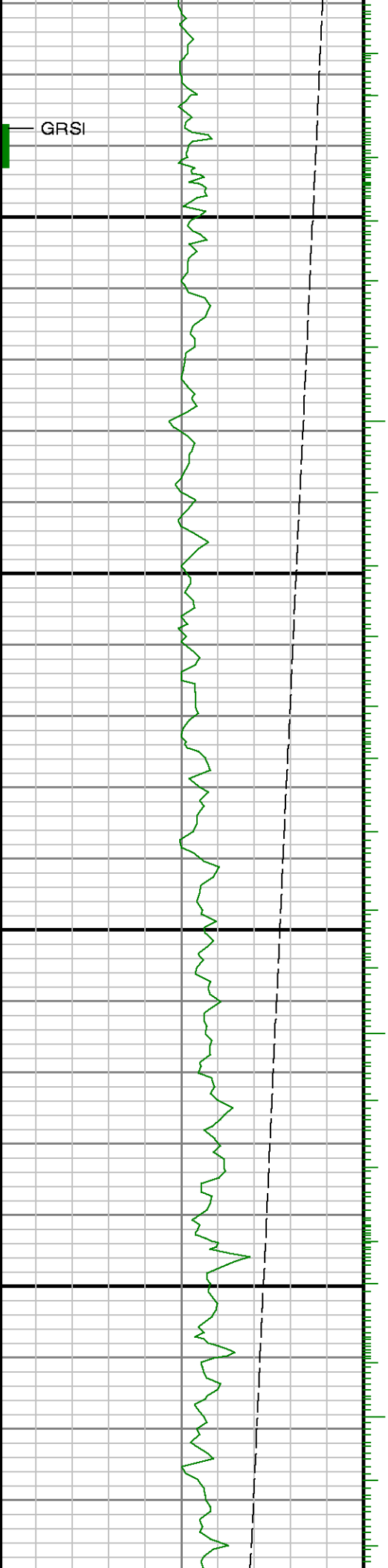
GRTX

ROPA

WOBA

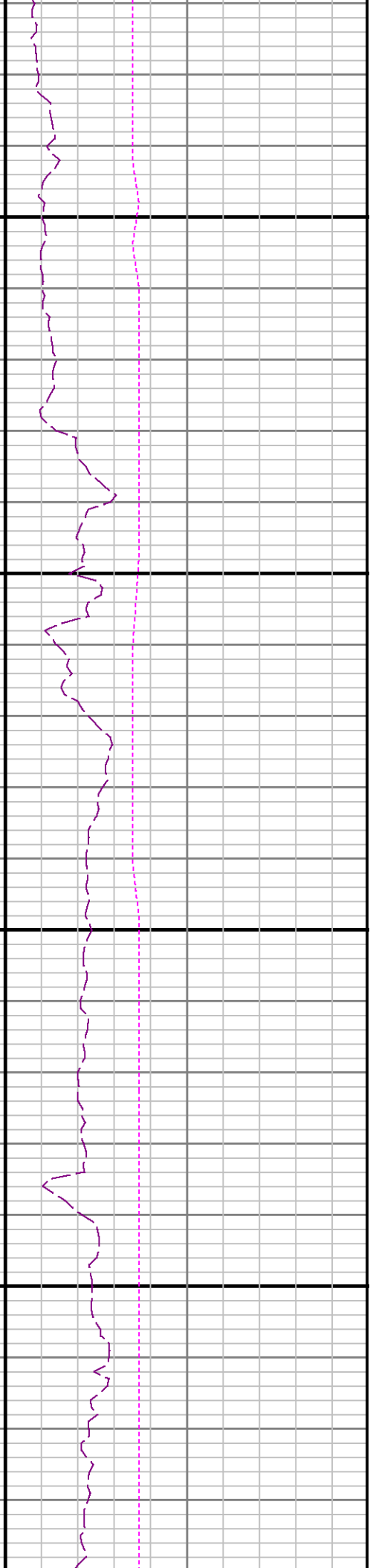
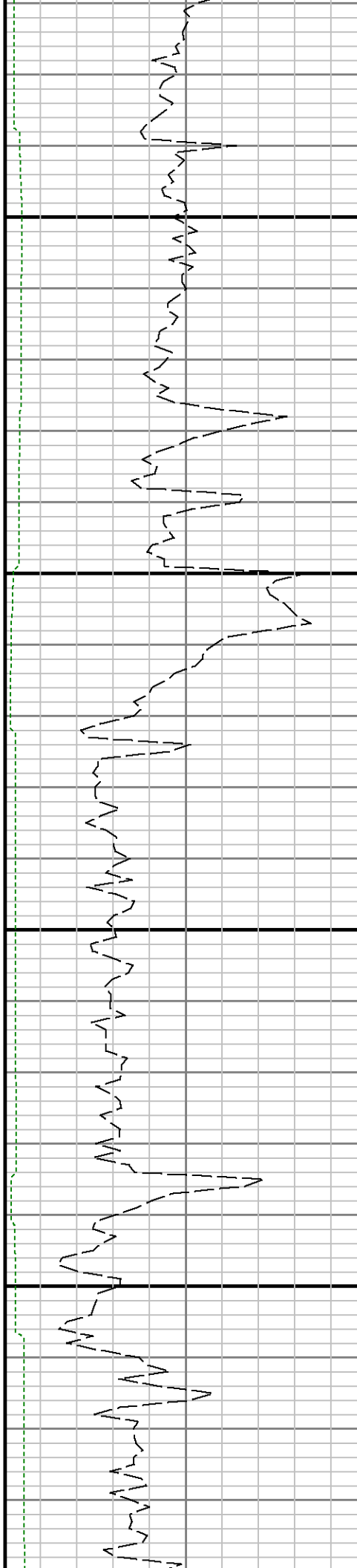
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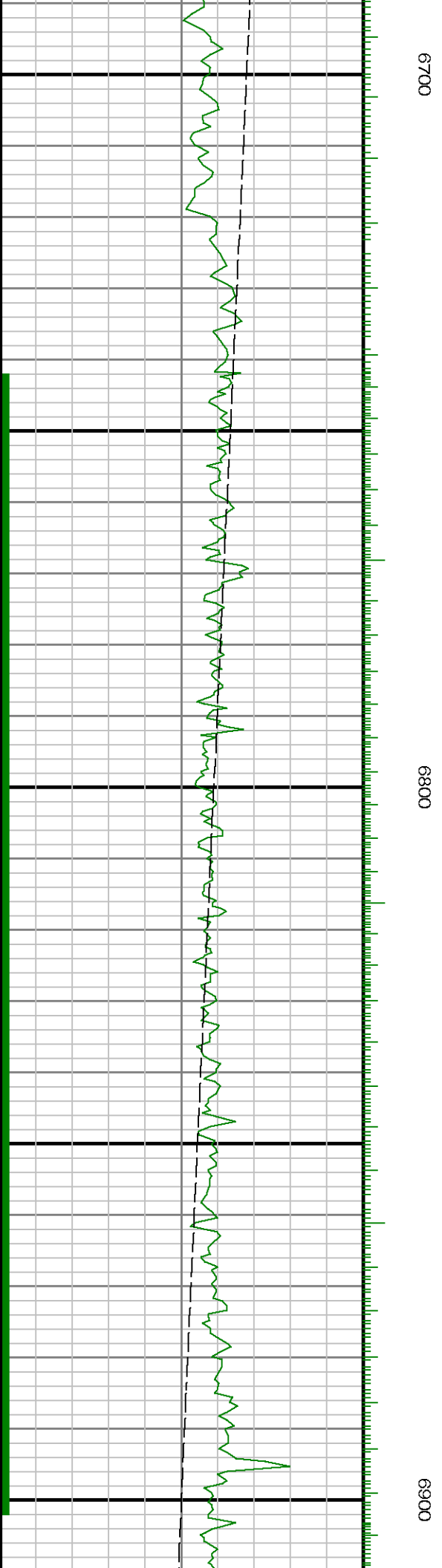
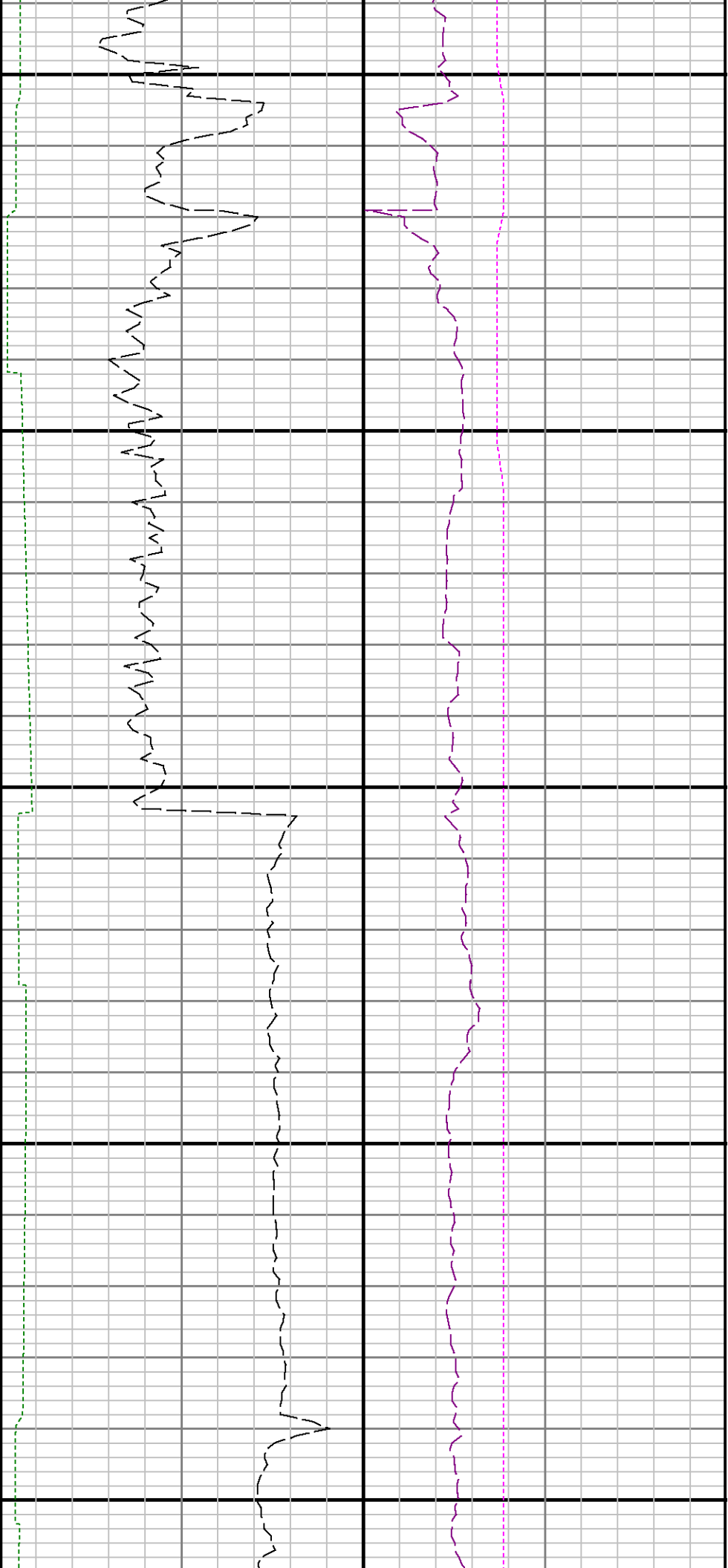
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> Run 1

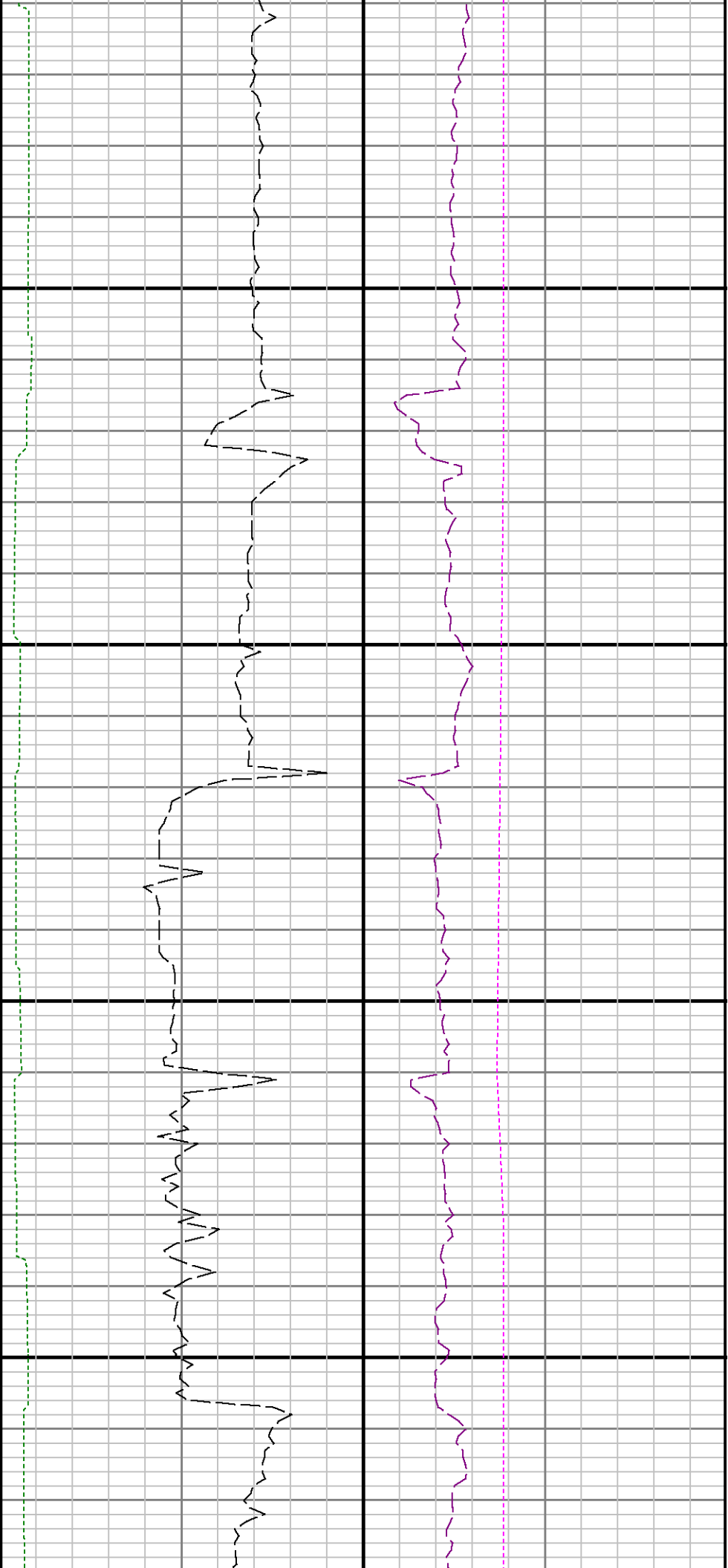


00500

00600

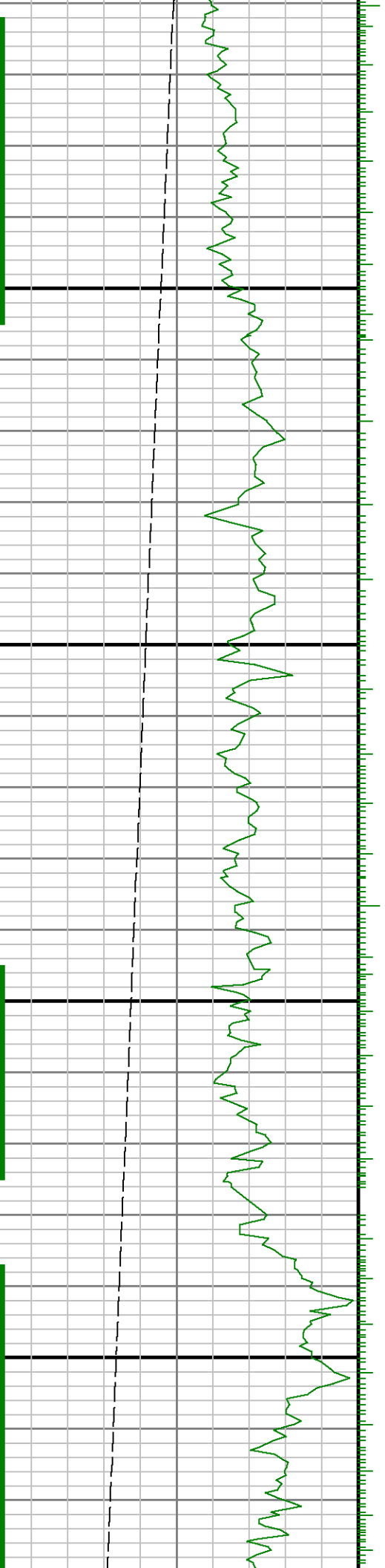


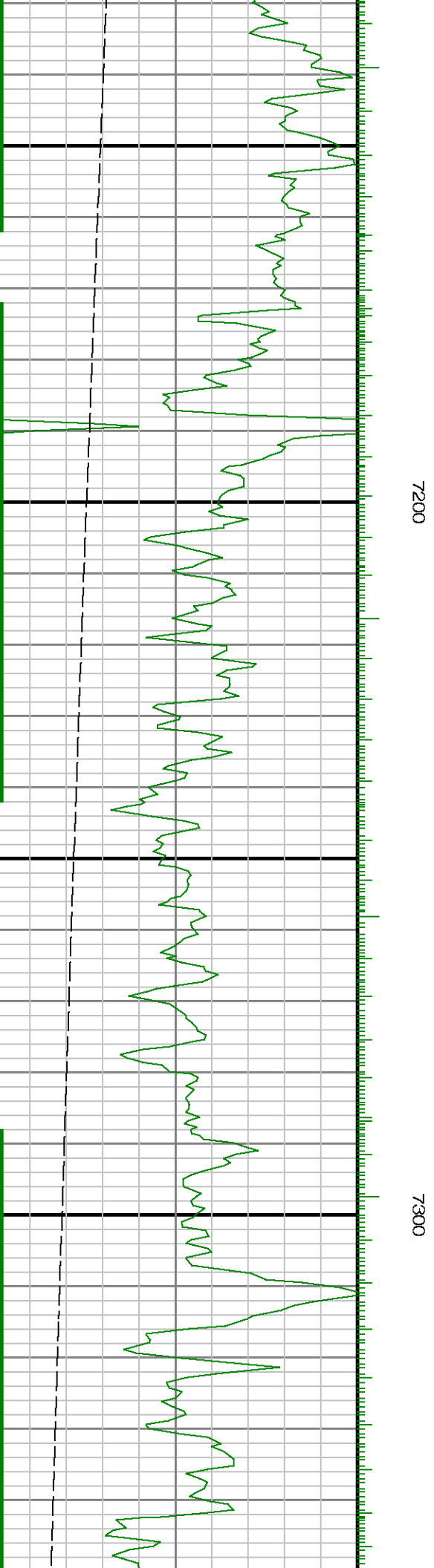
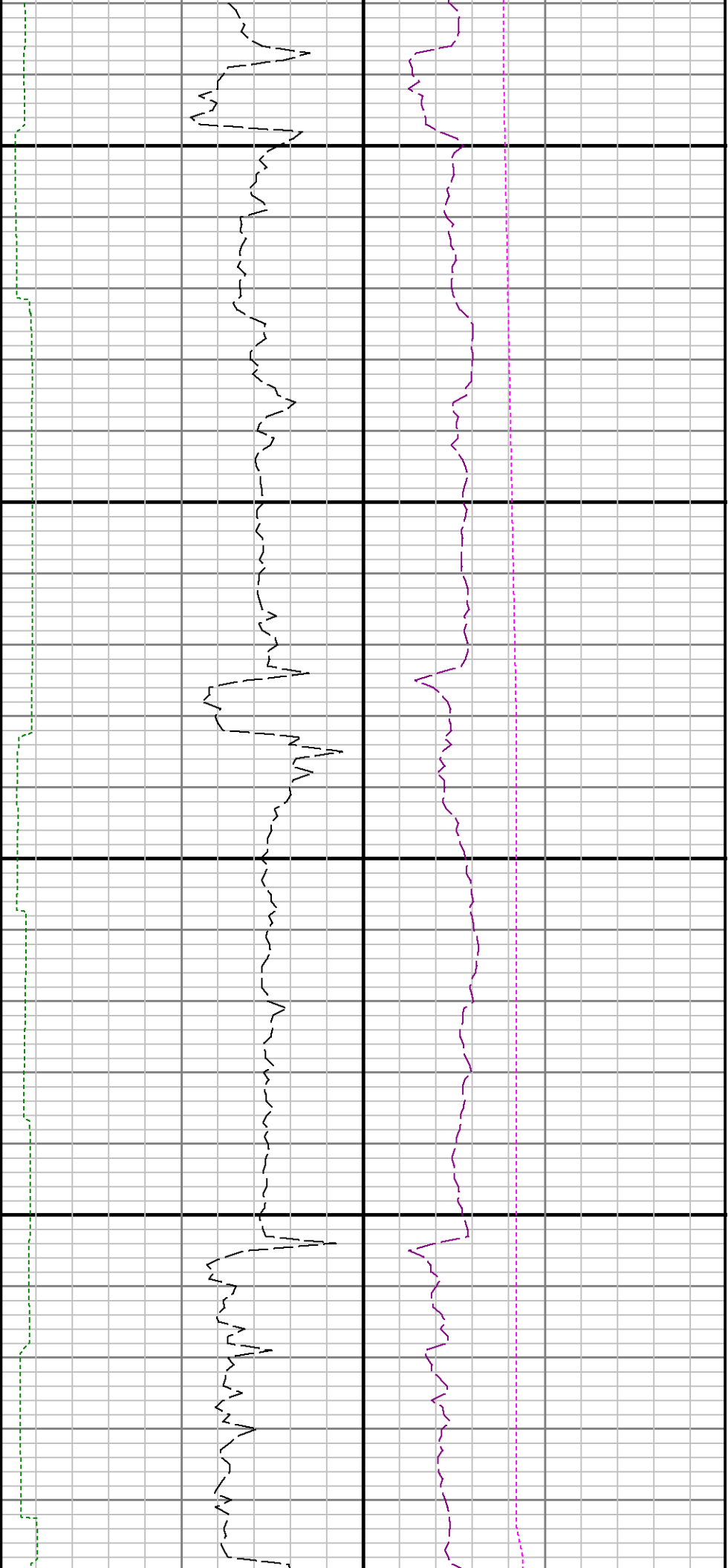


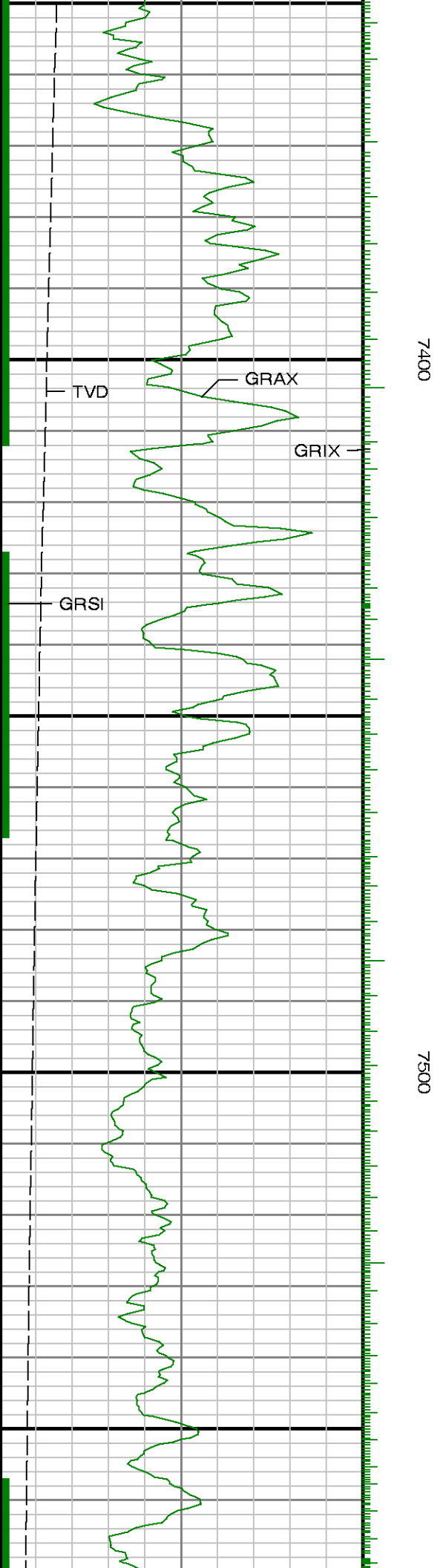
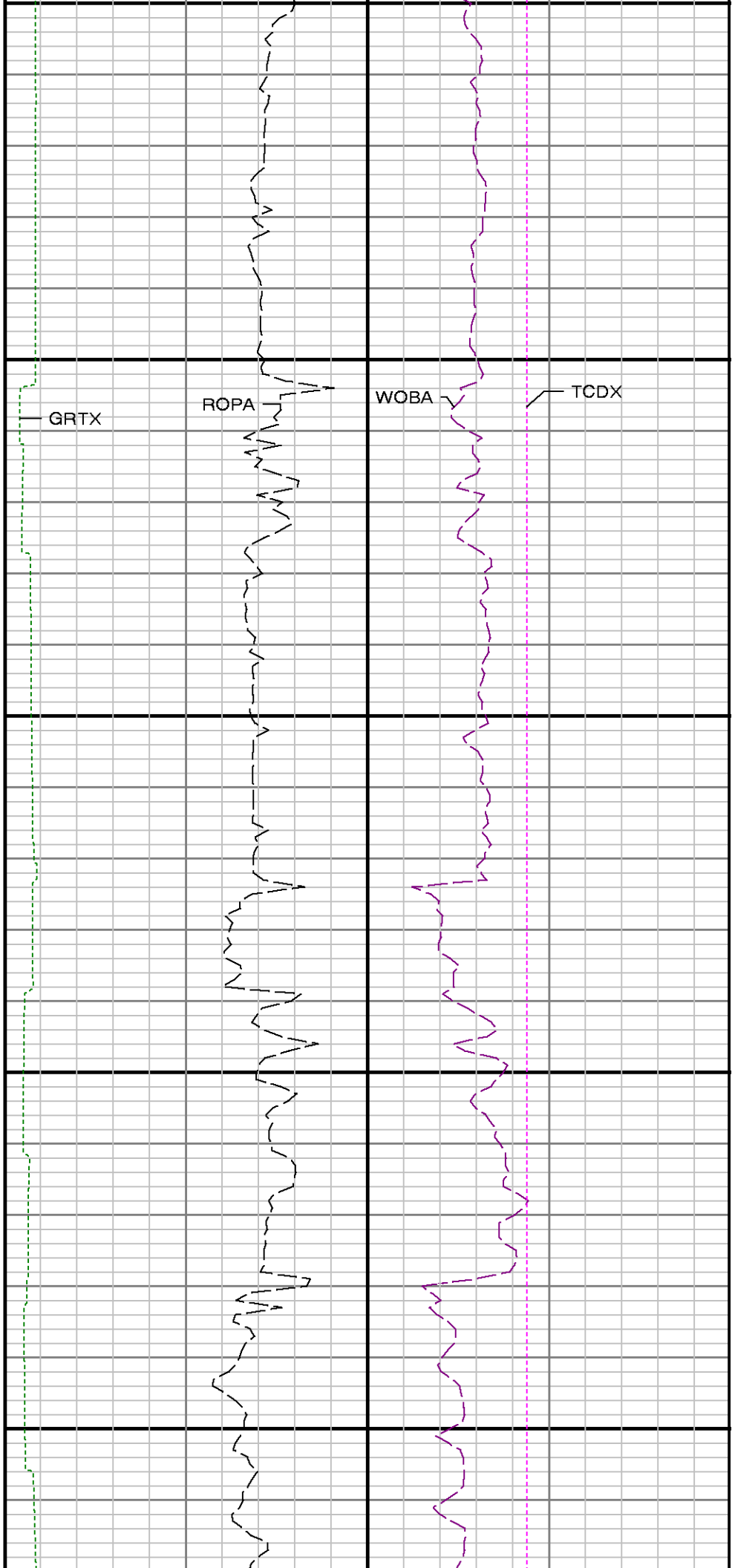


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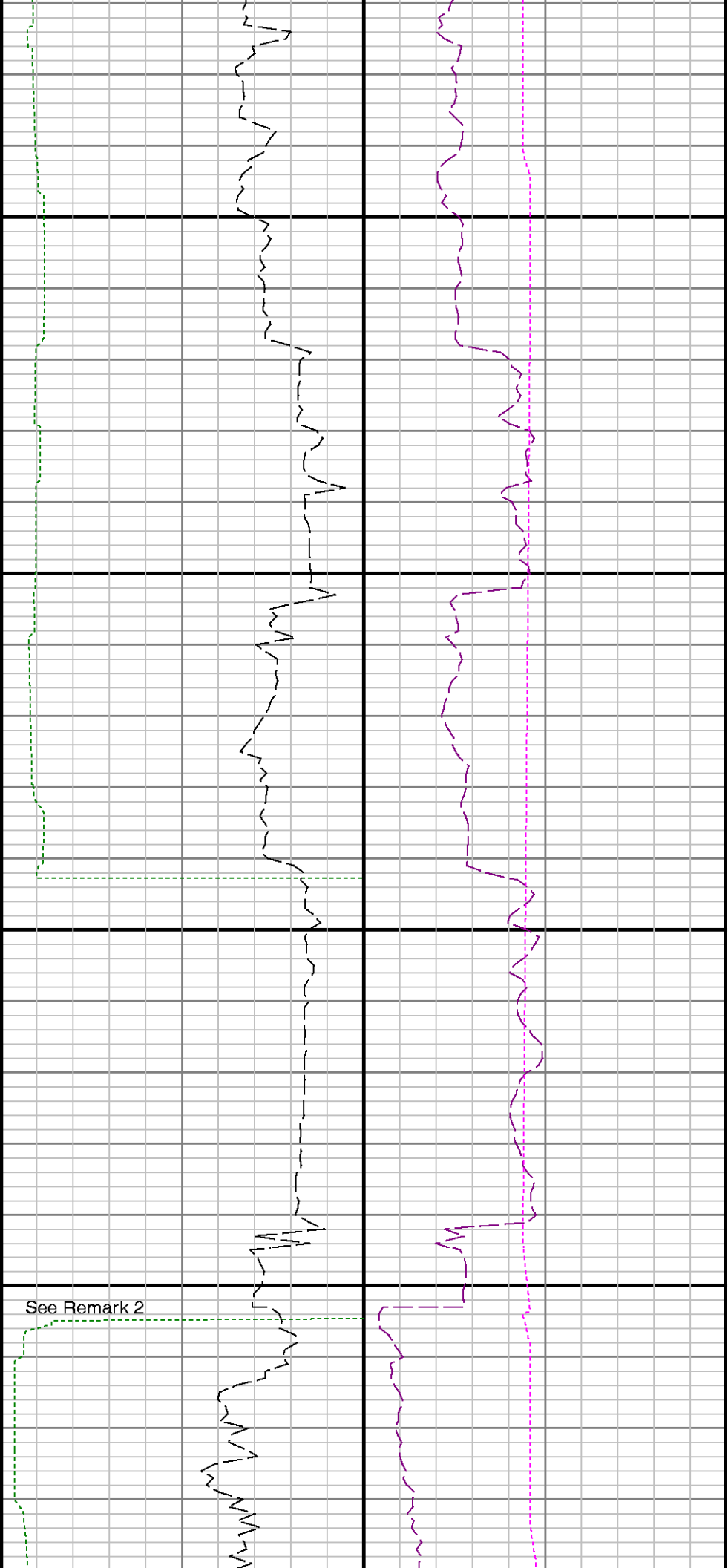
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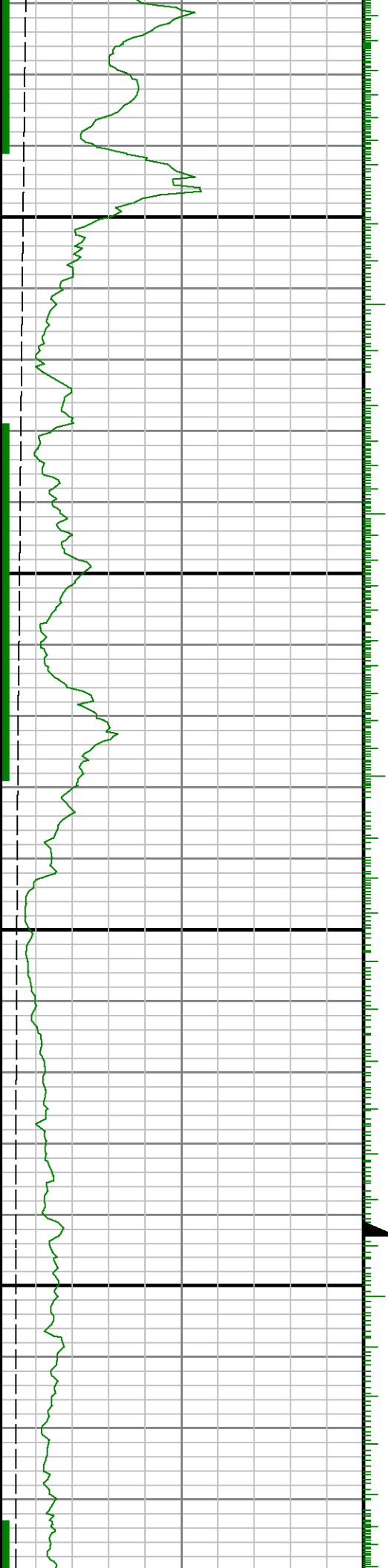
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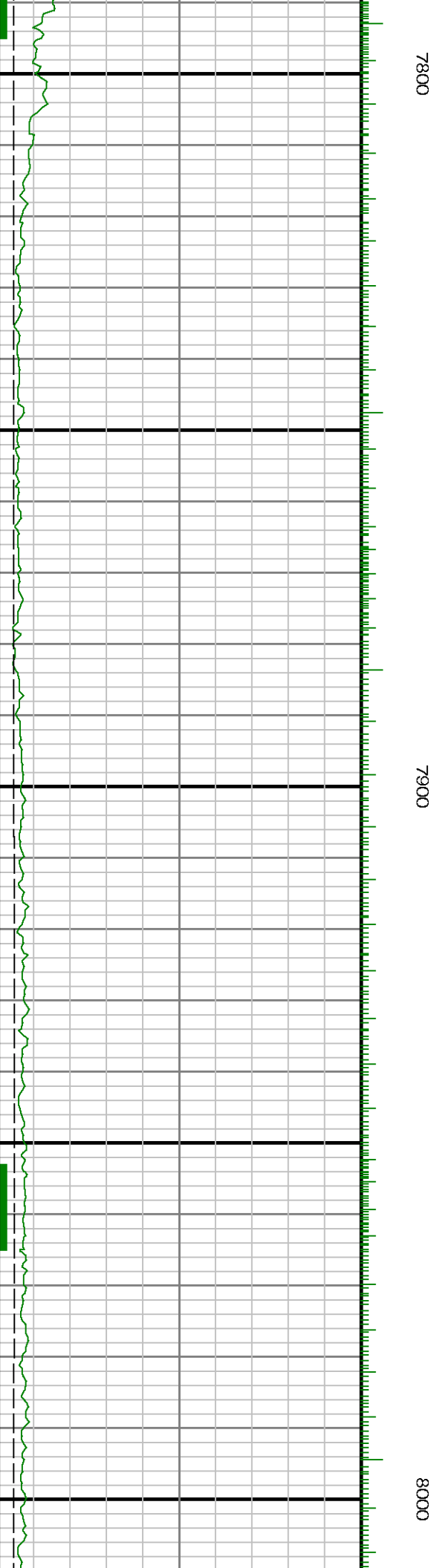
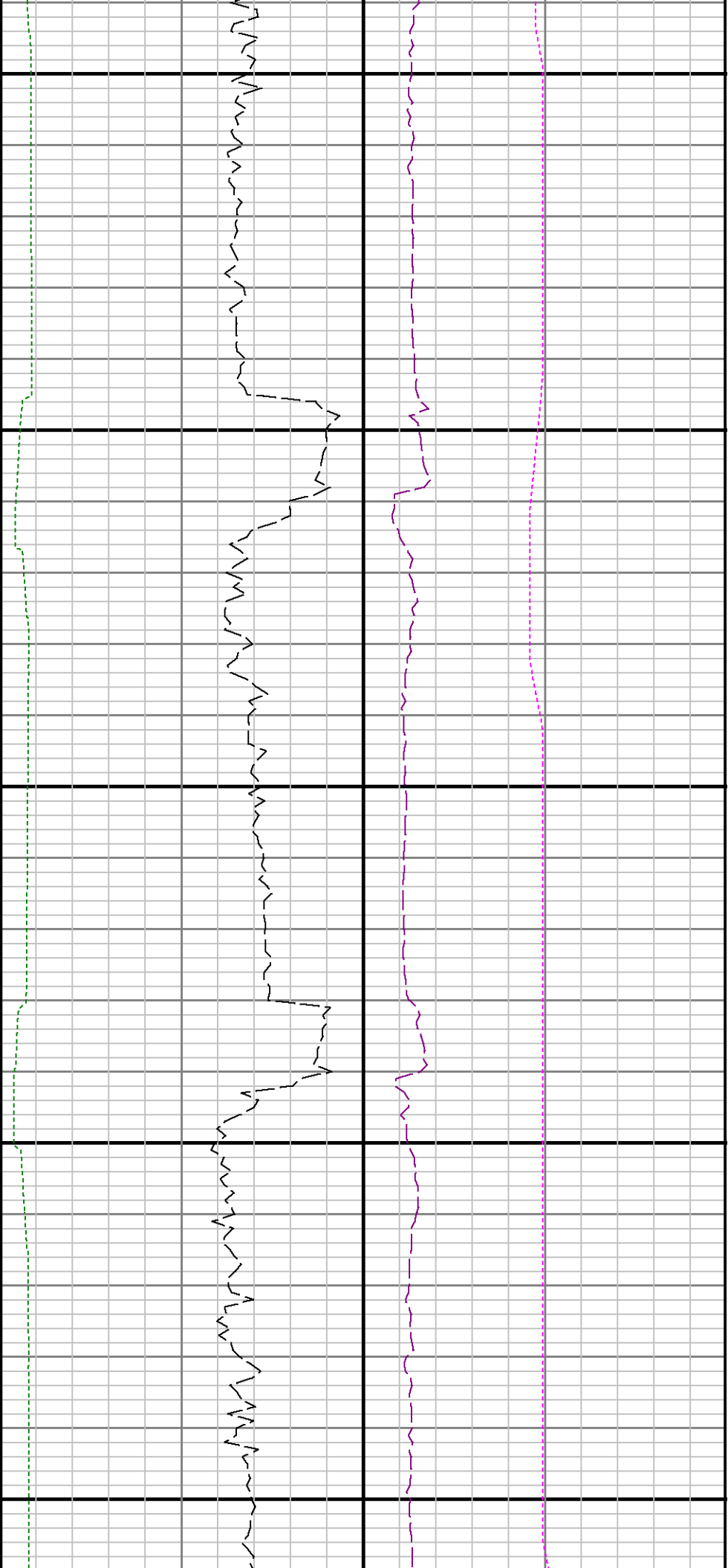
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7" Casing

Run 1  $\diamond$  Run 2

See Remark 2

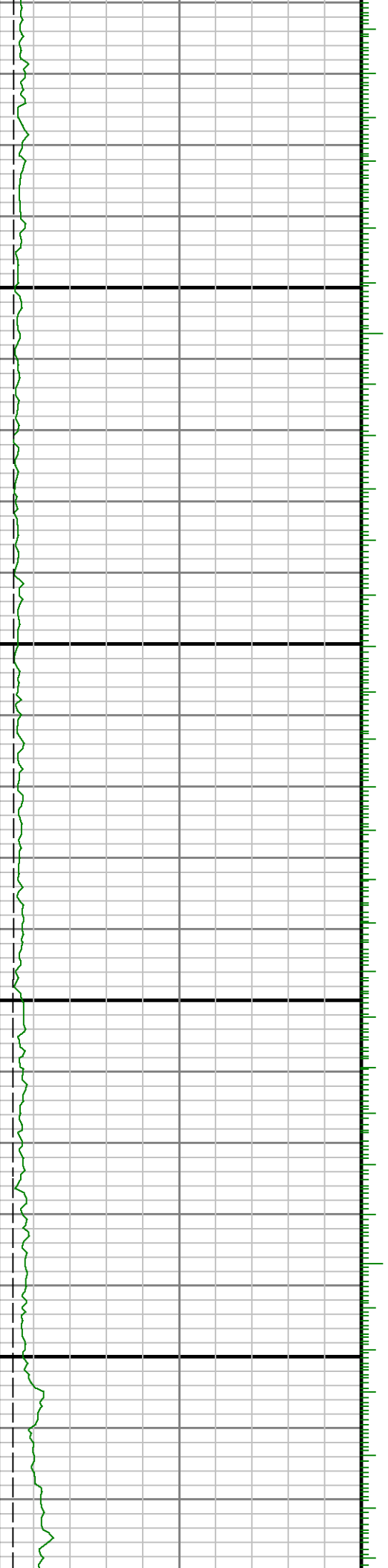


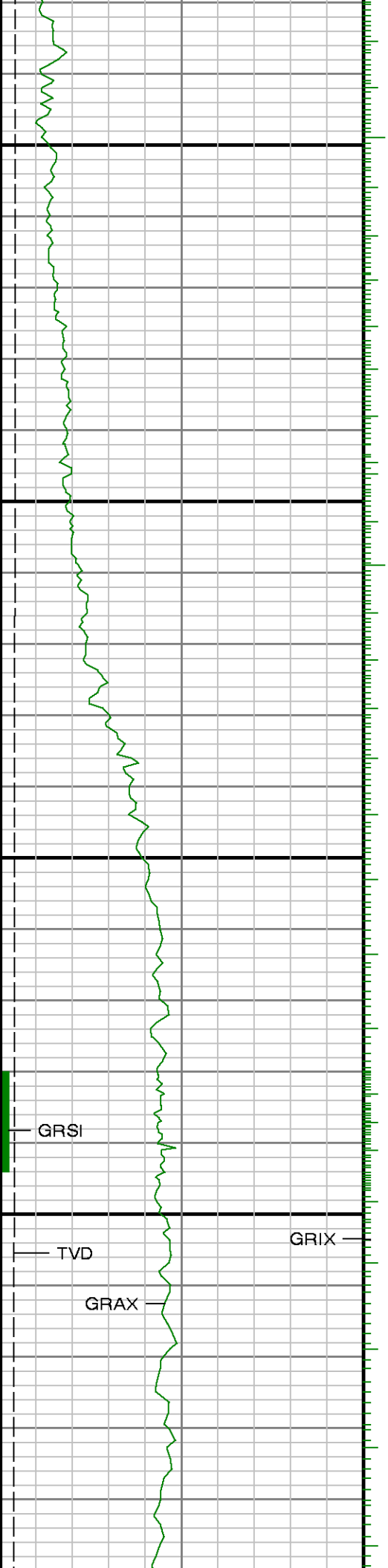




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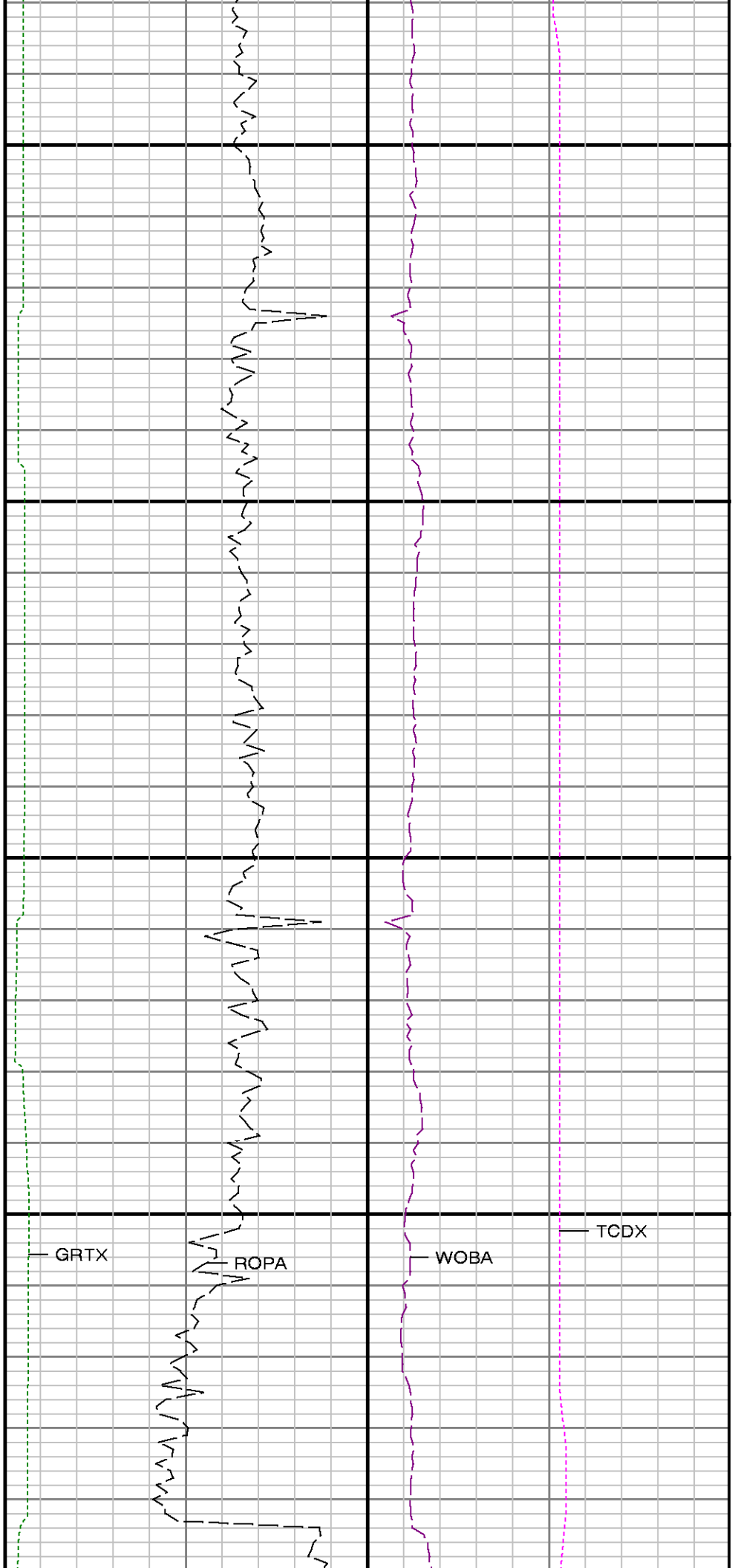
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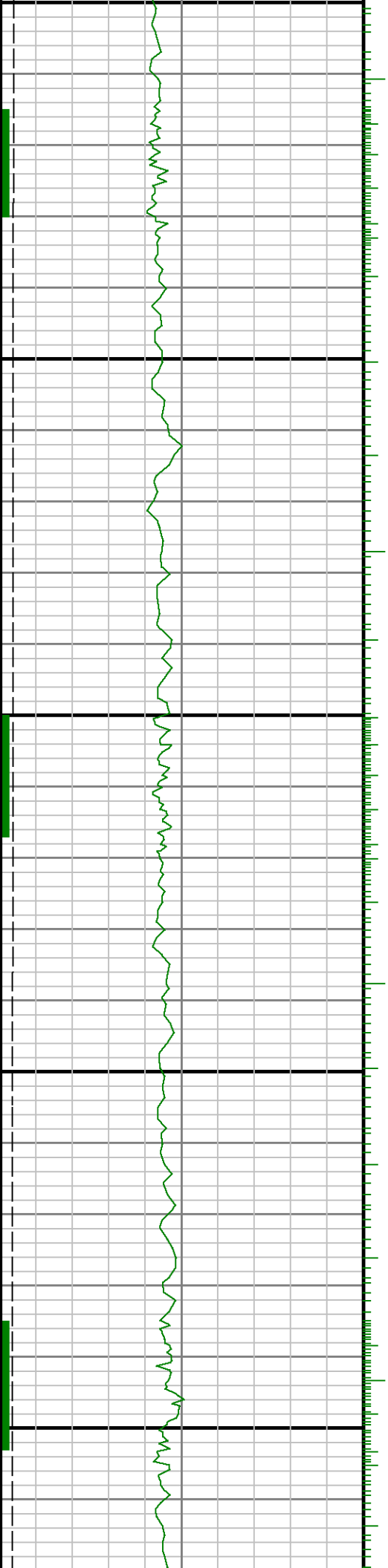




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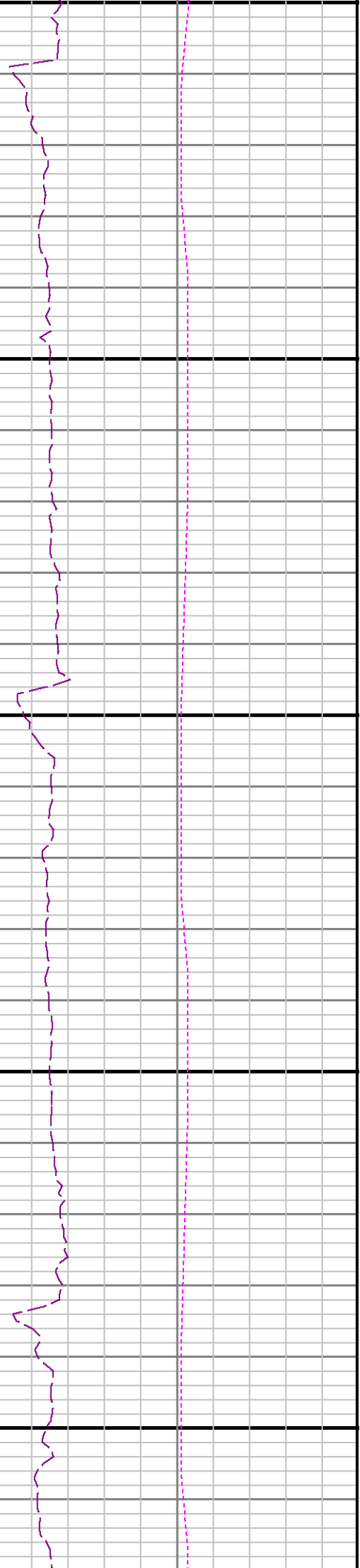
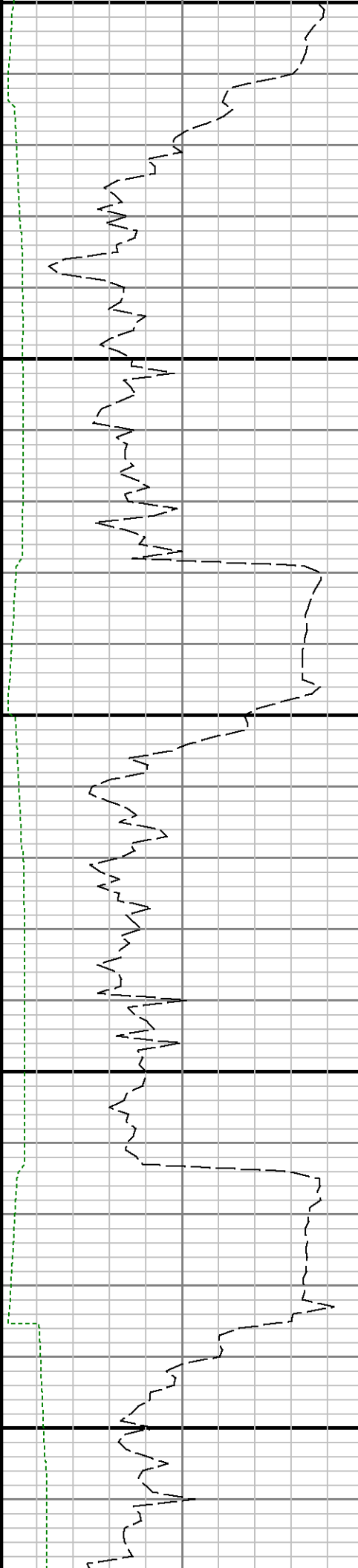
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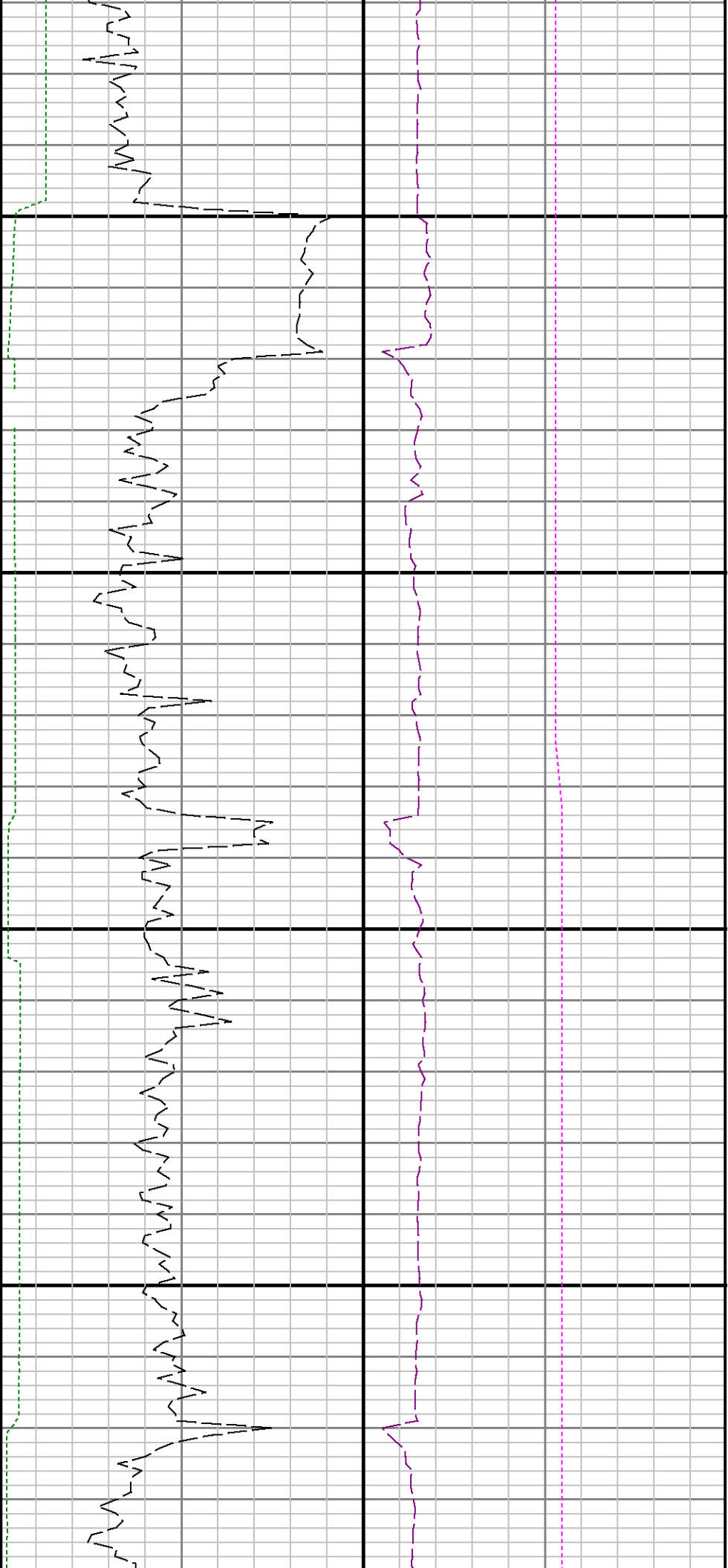




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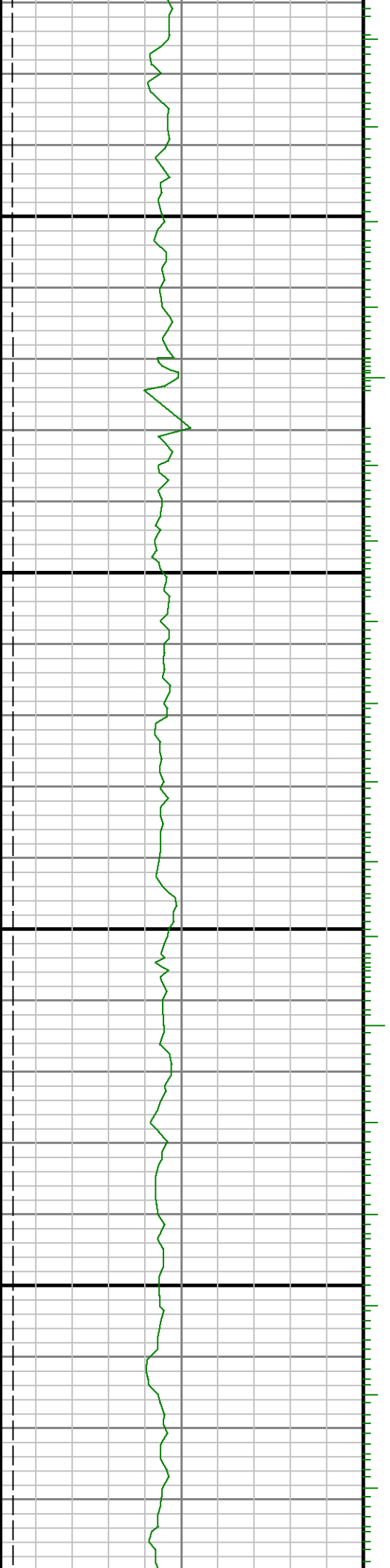
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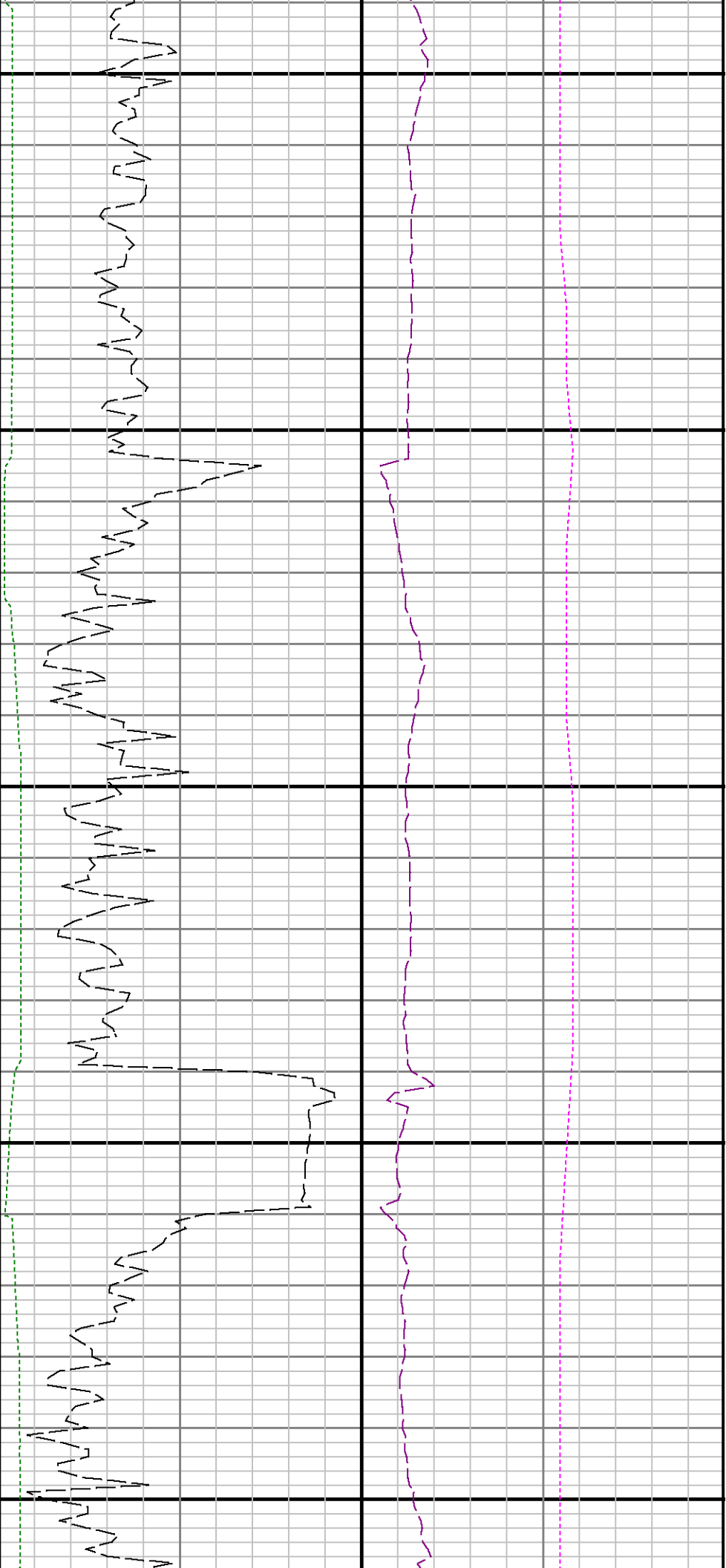




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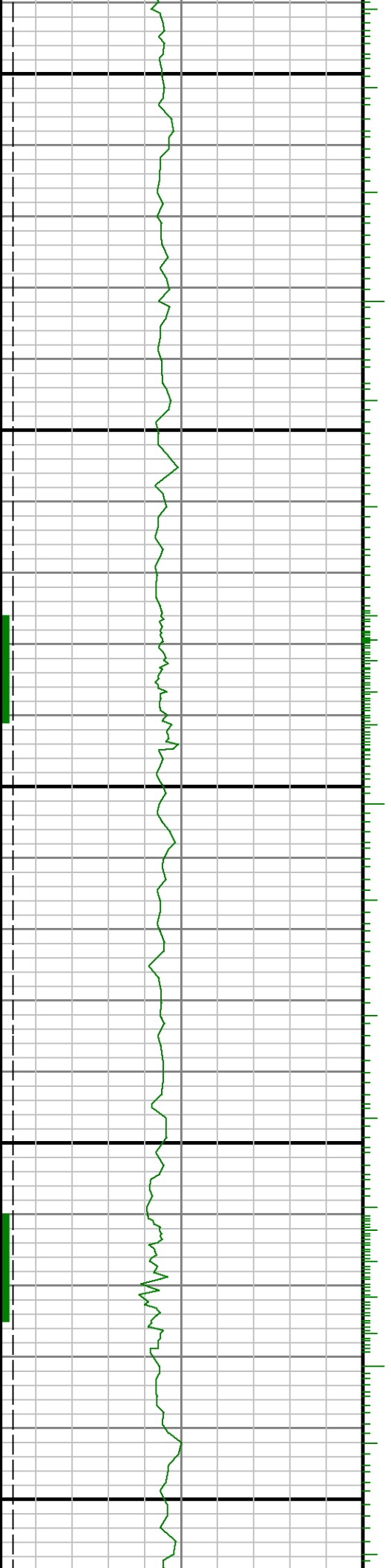


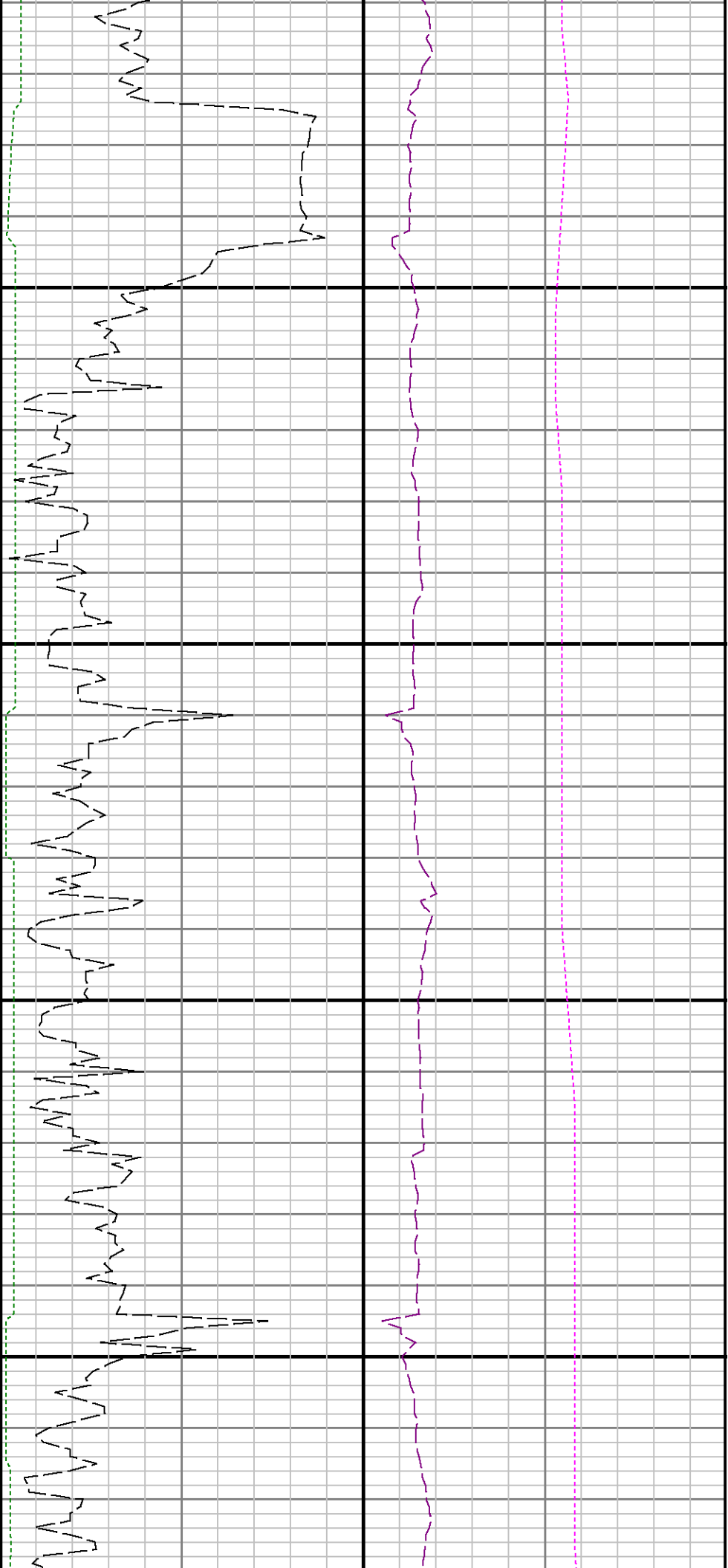


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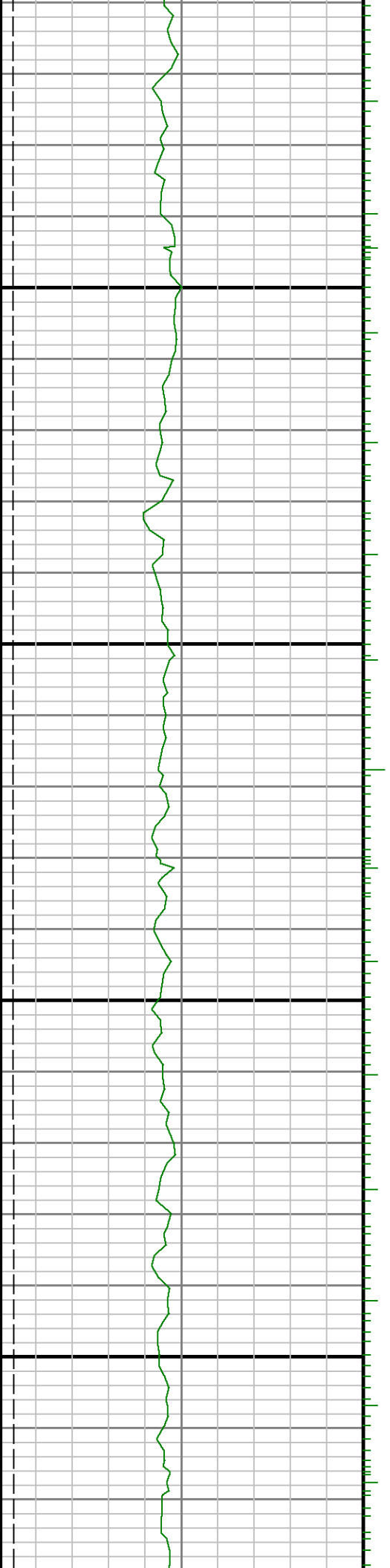
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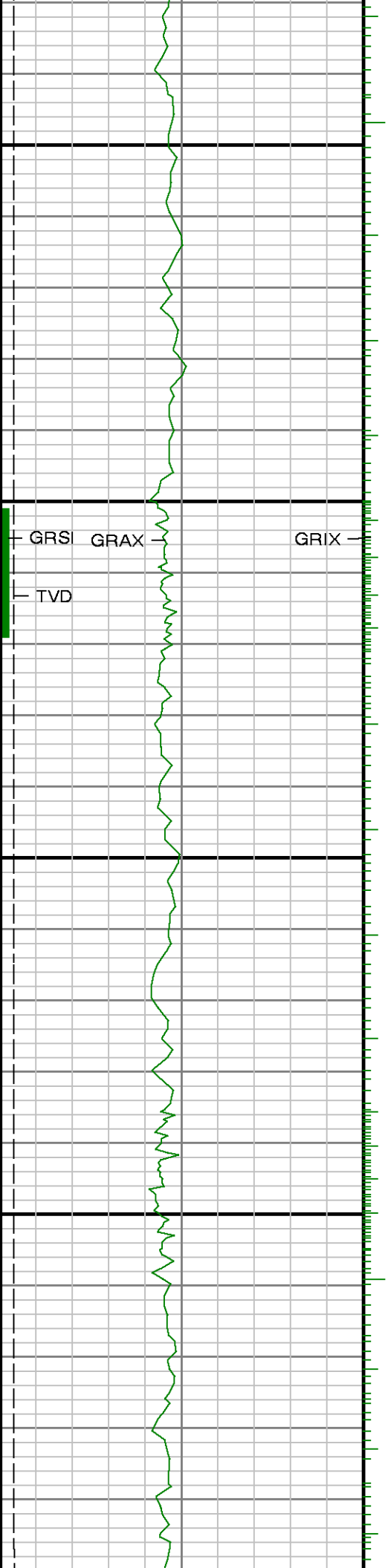


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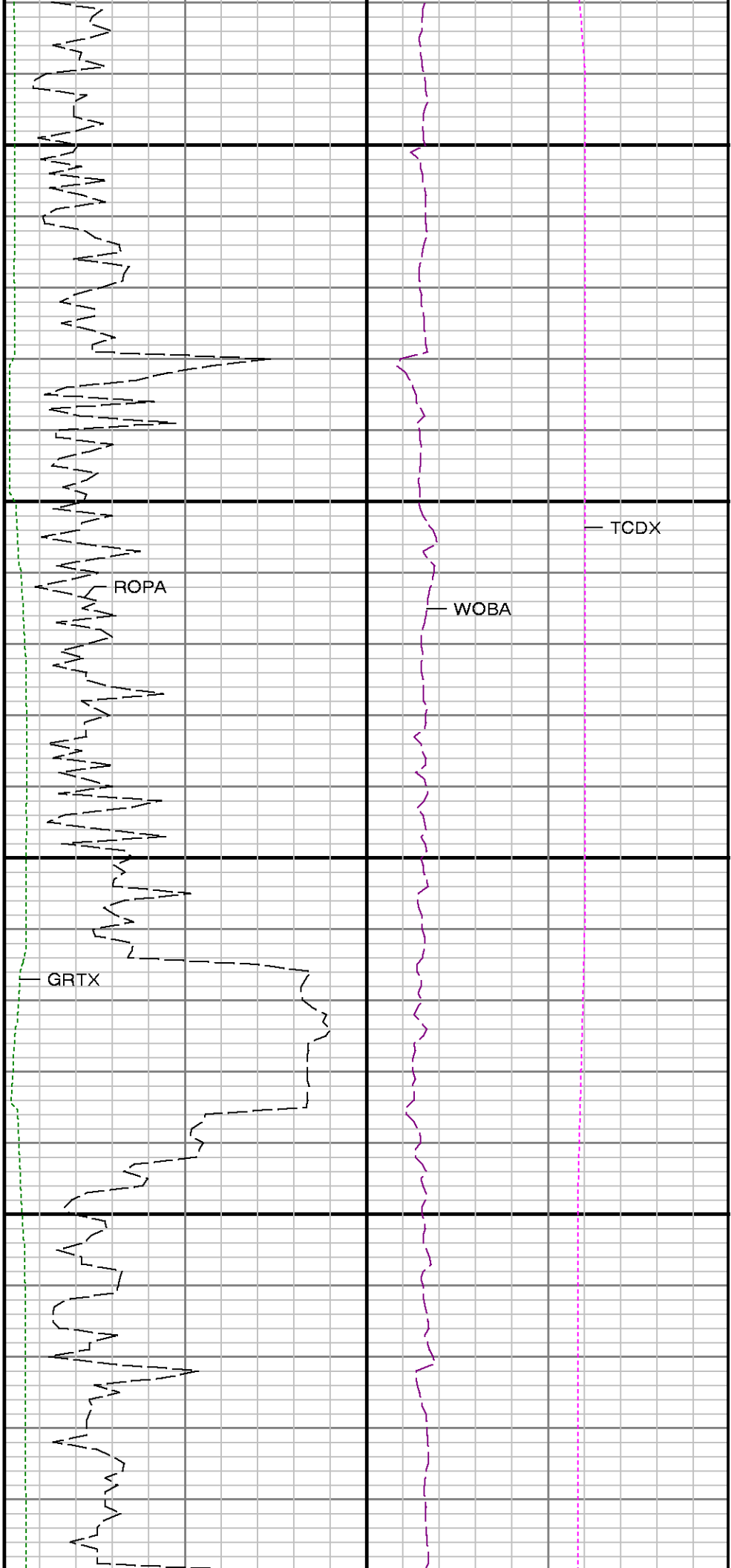


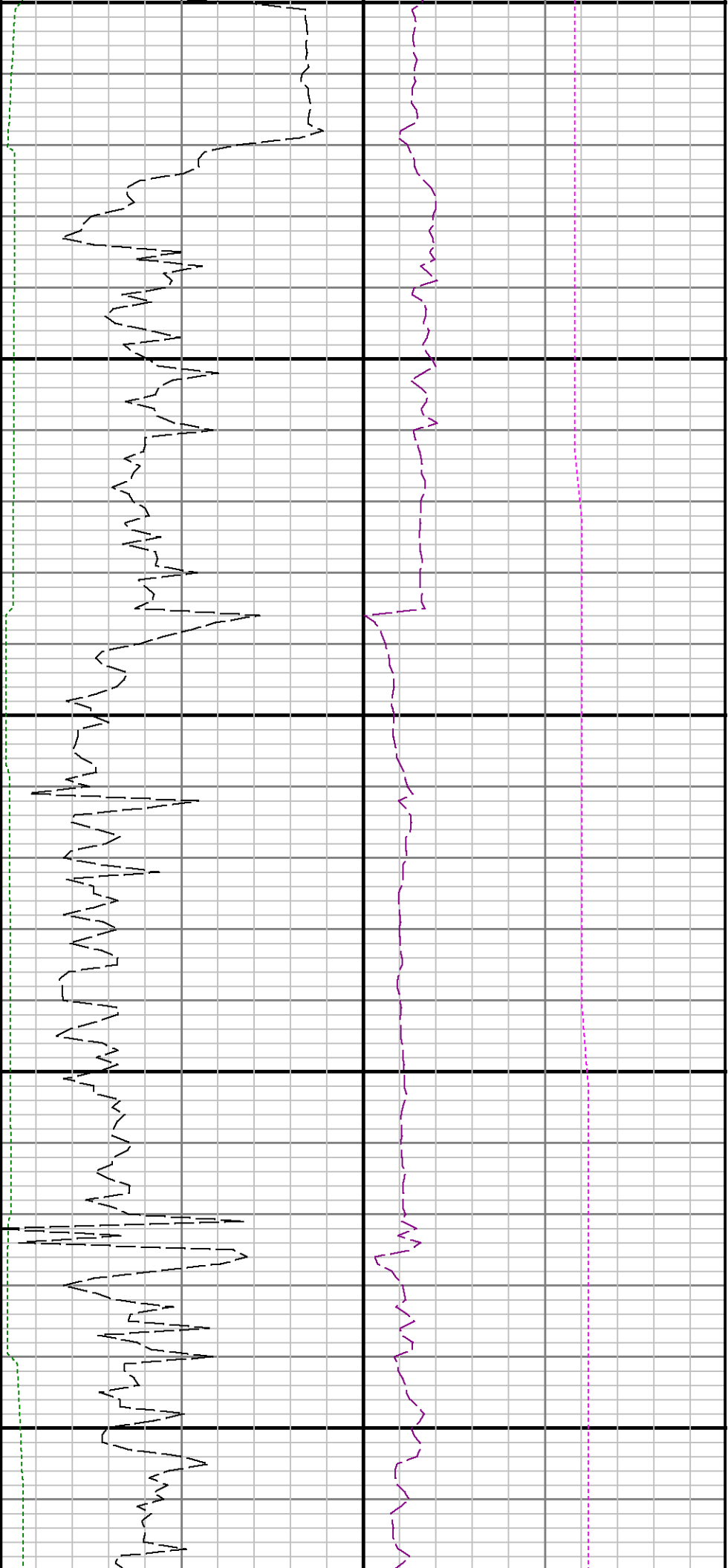




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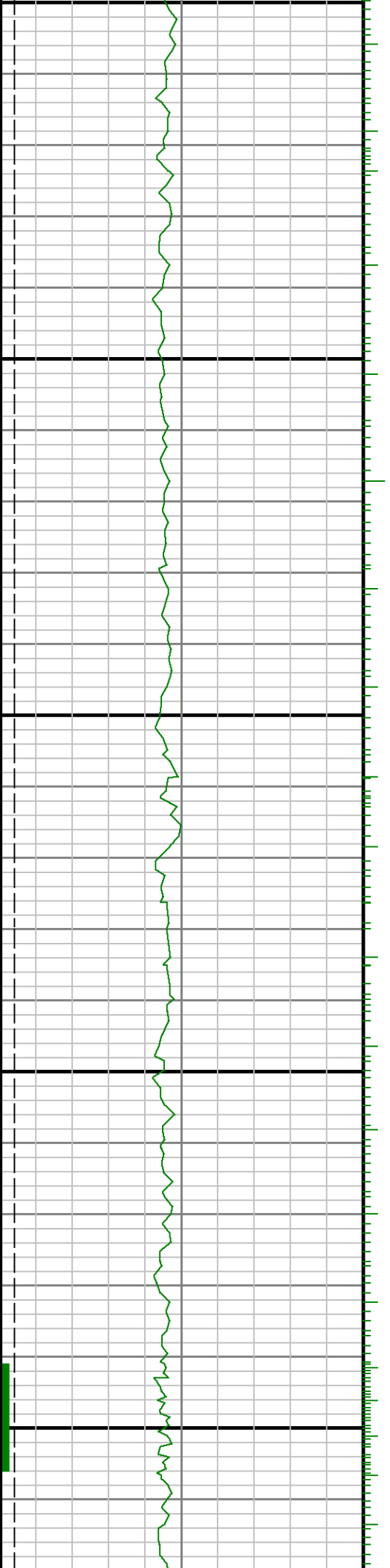
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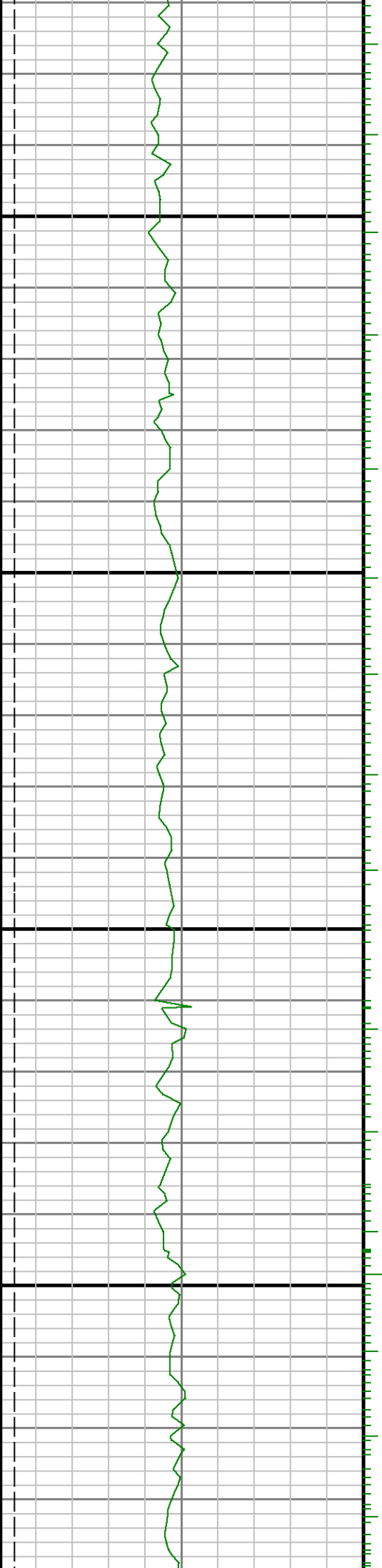




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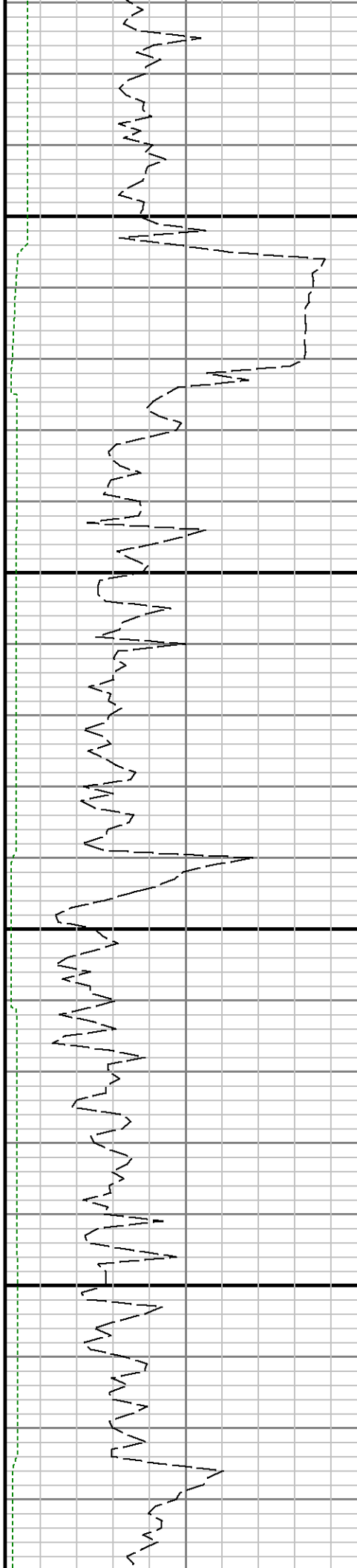
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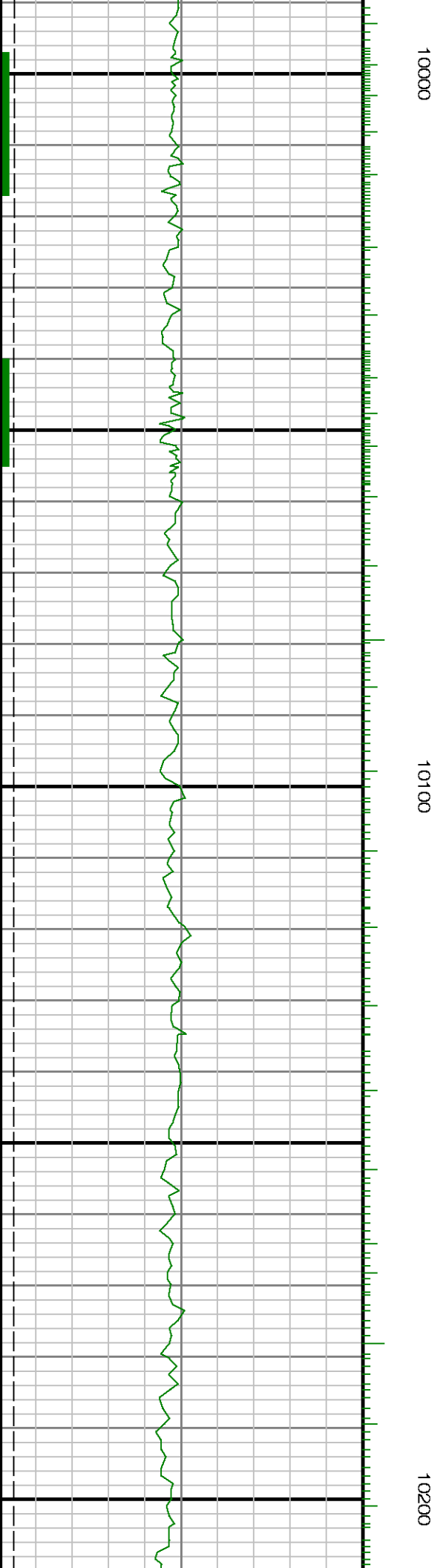
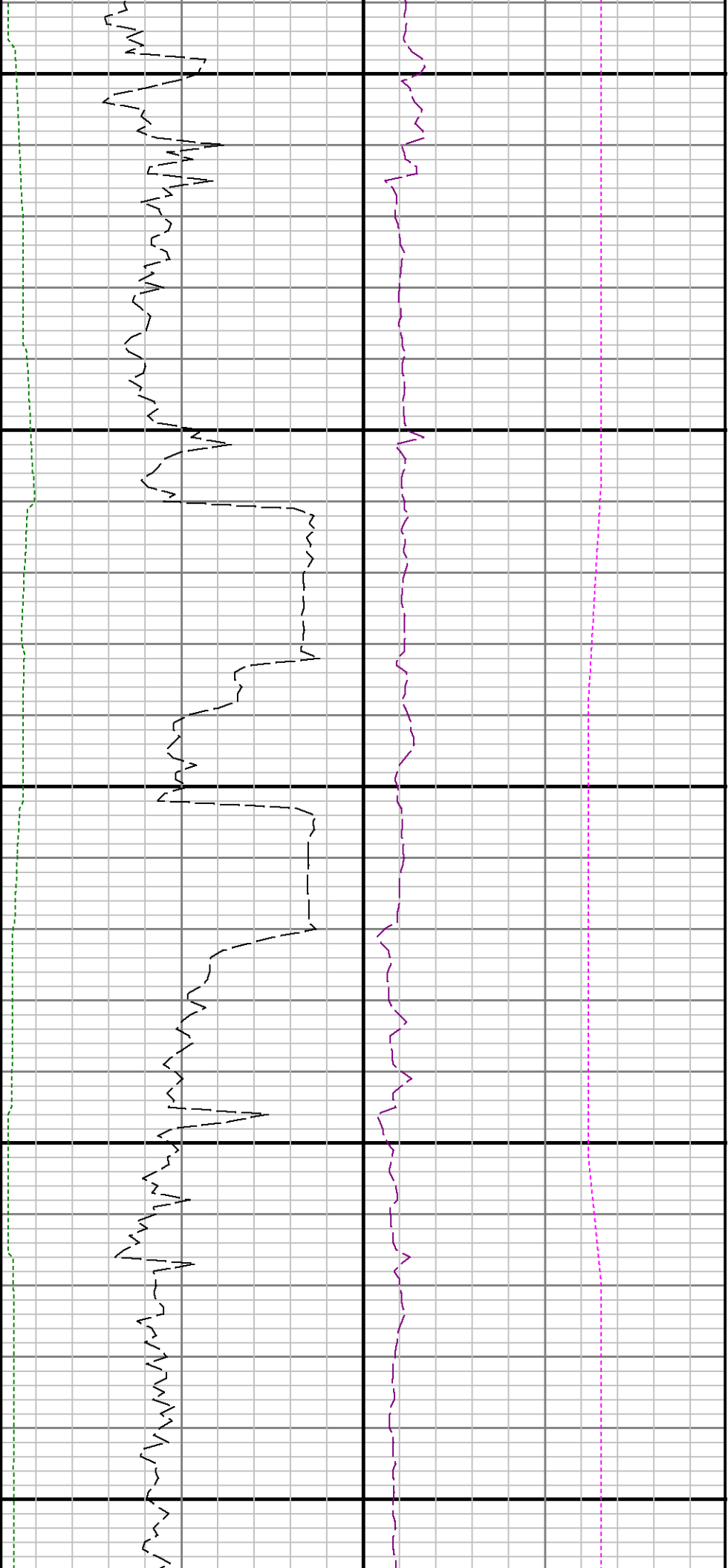


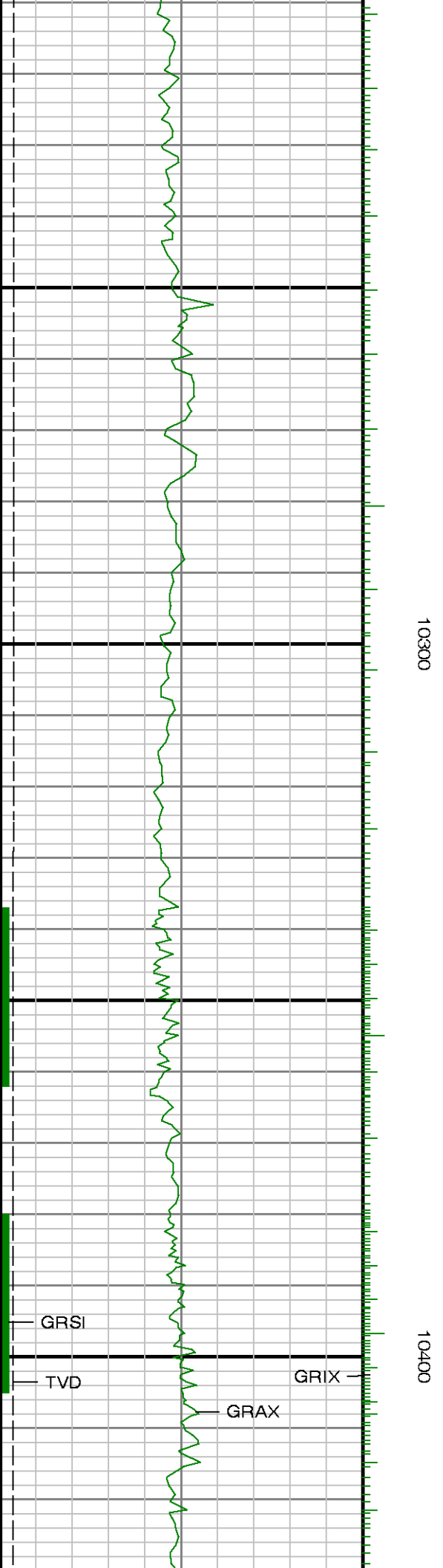
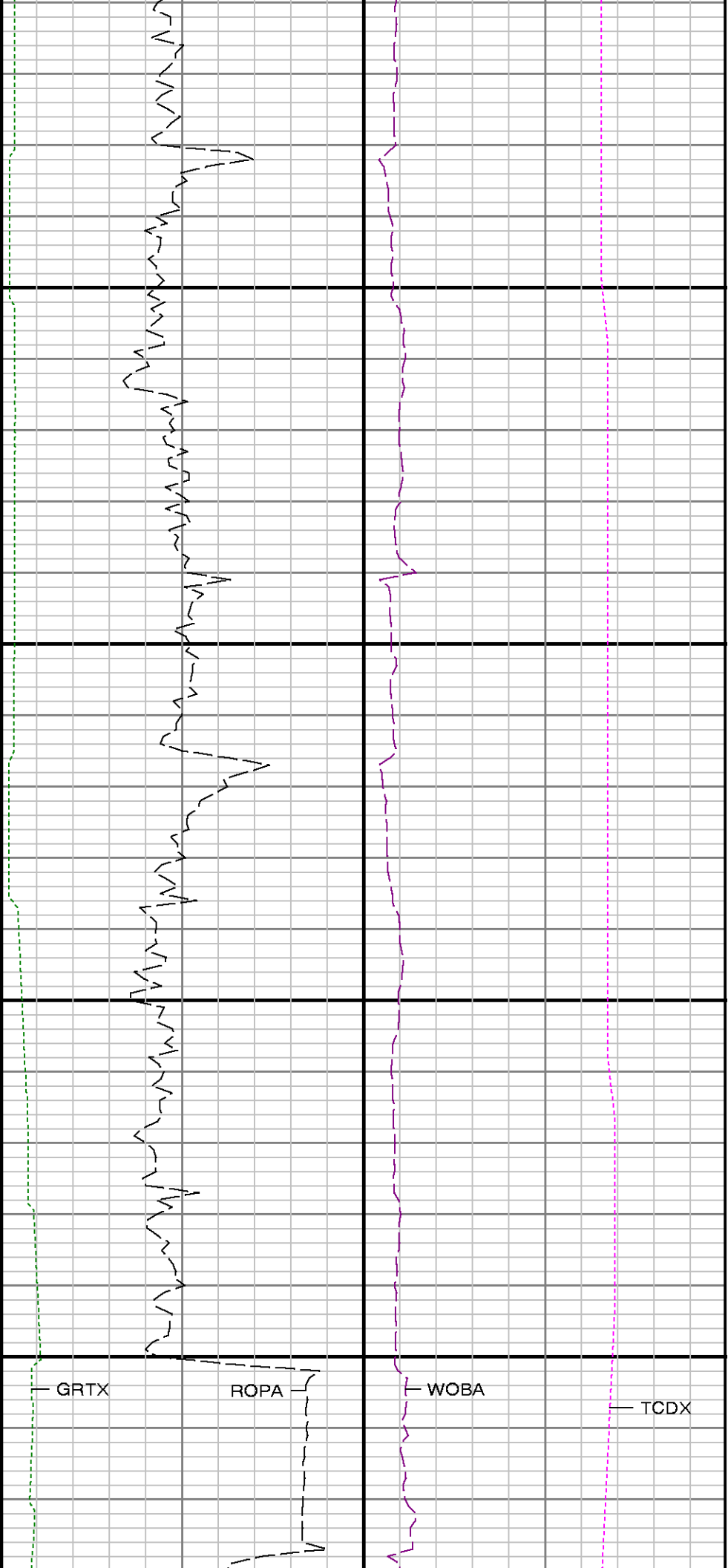


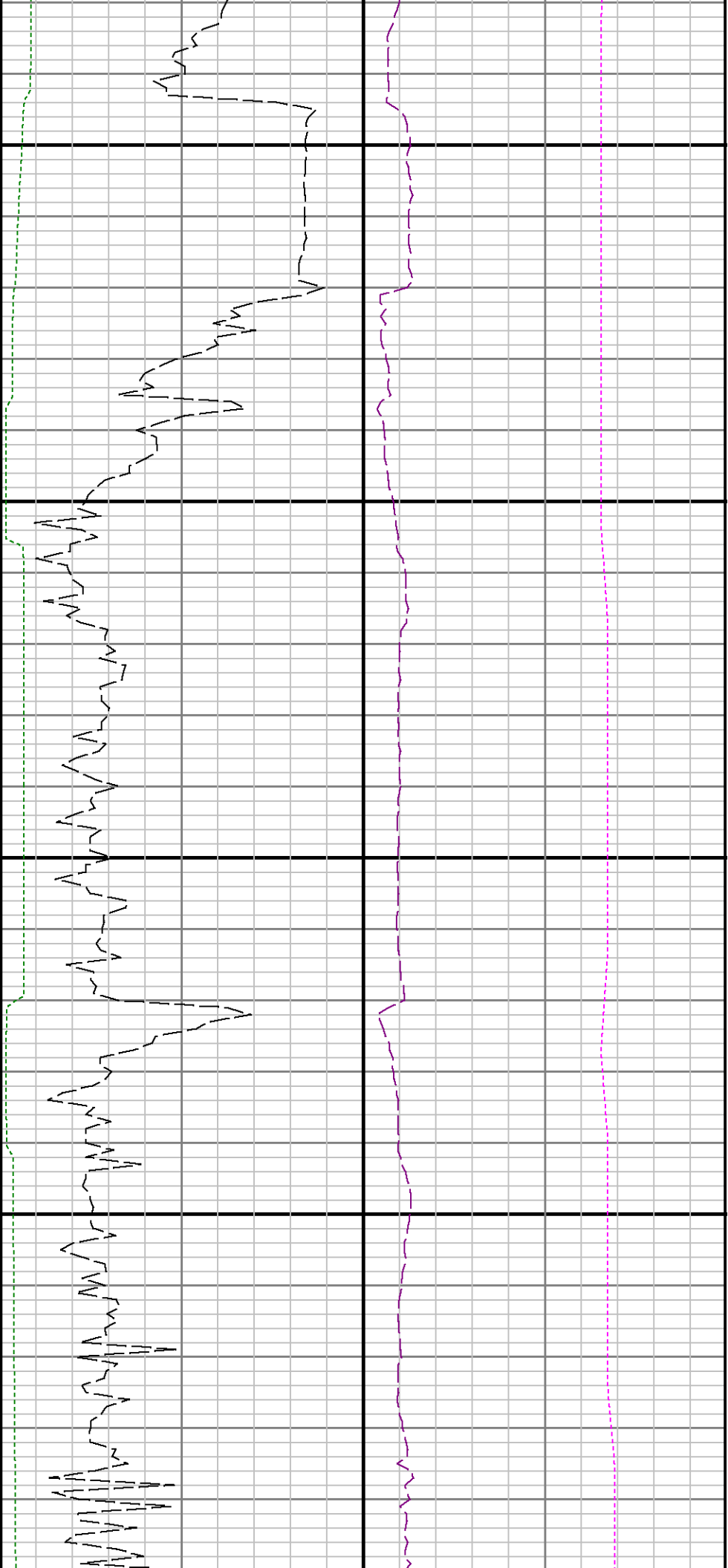
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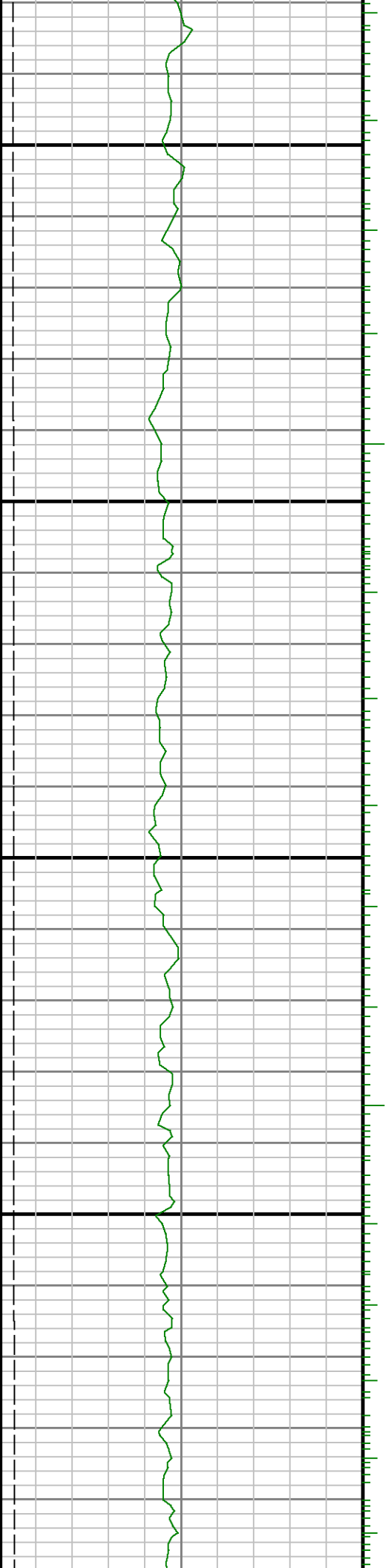


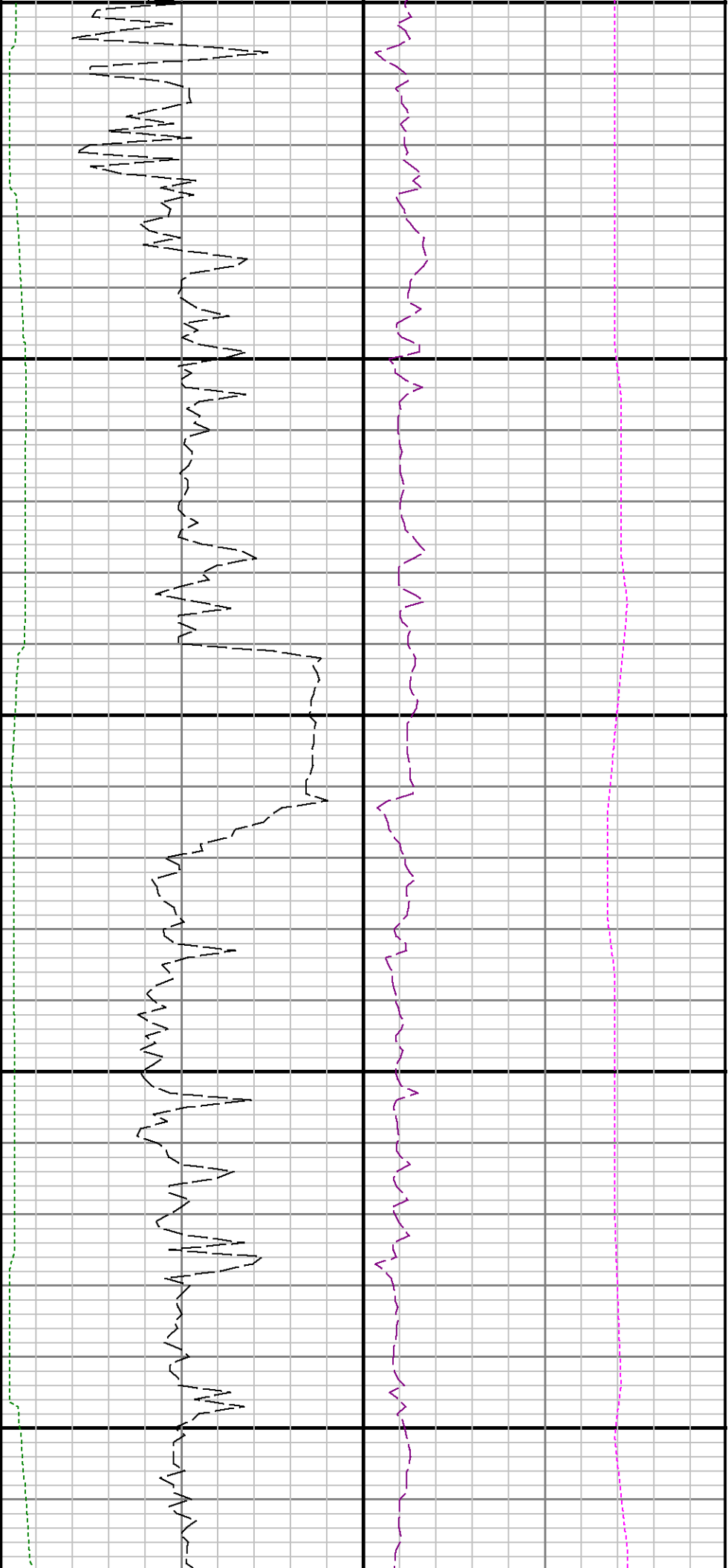




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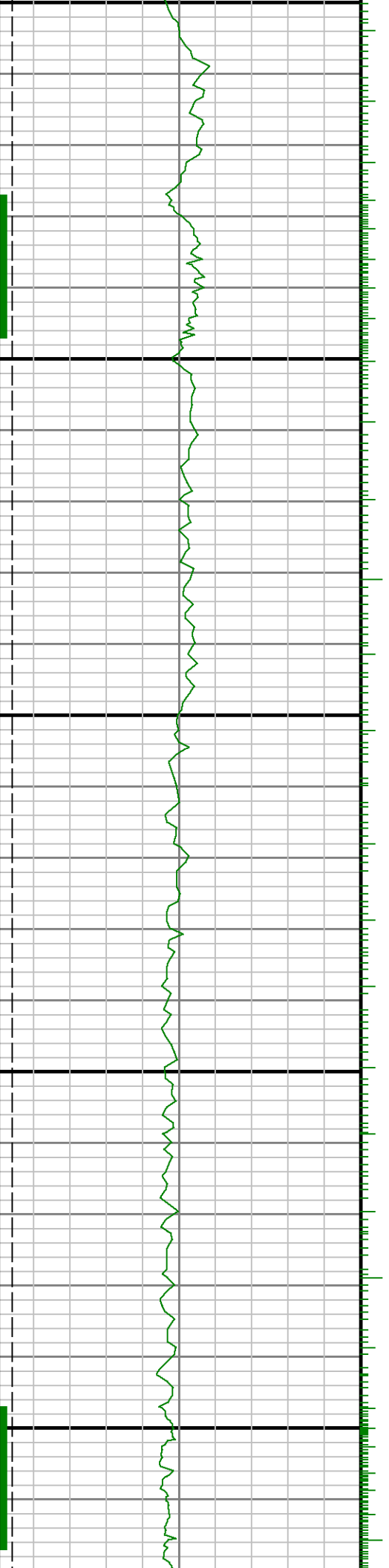
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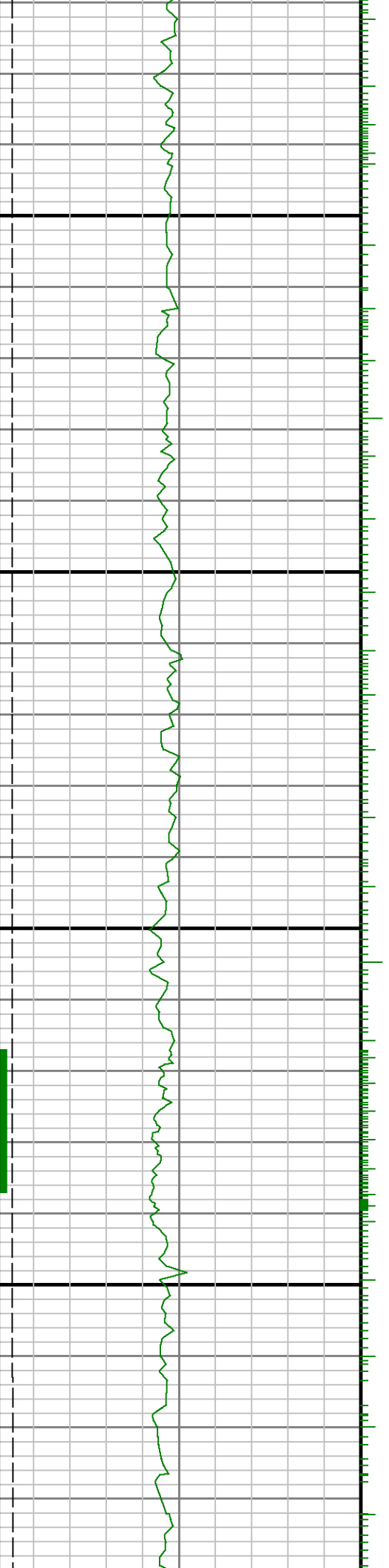
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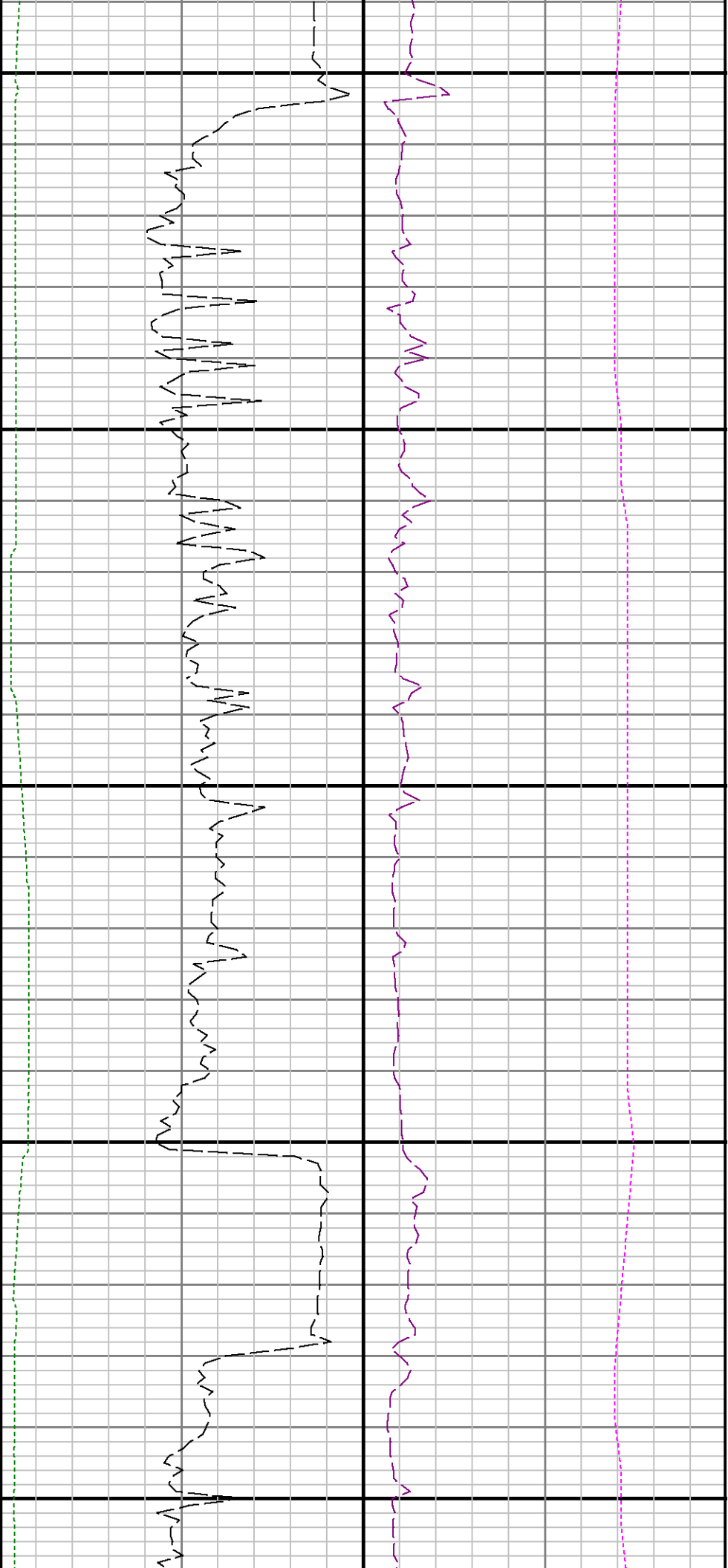


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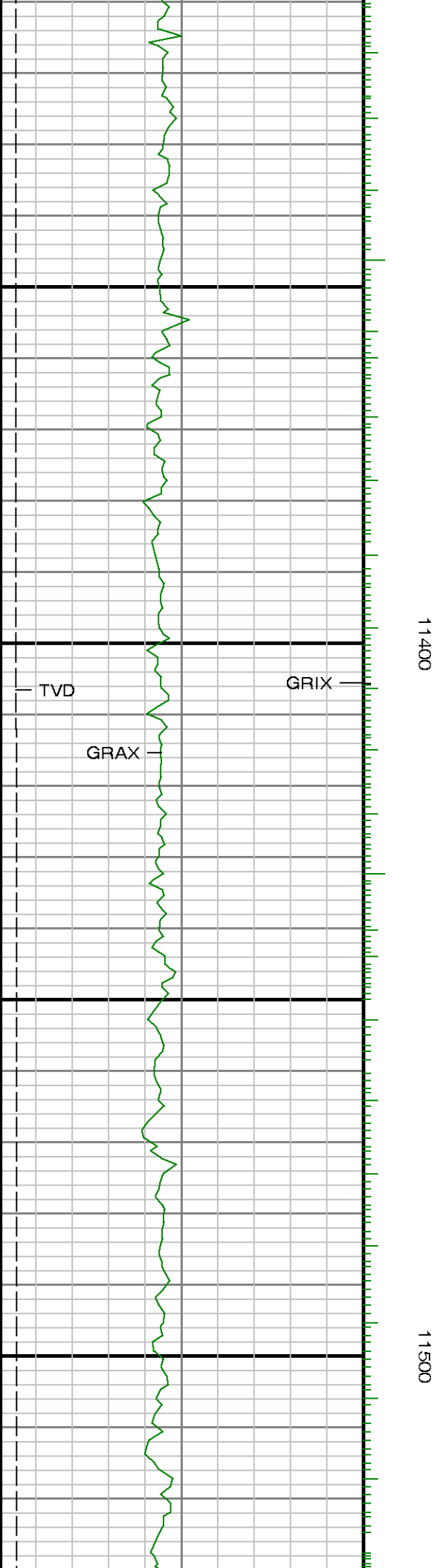
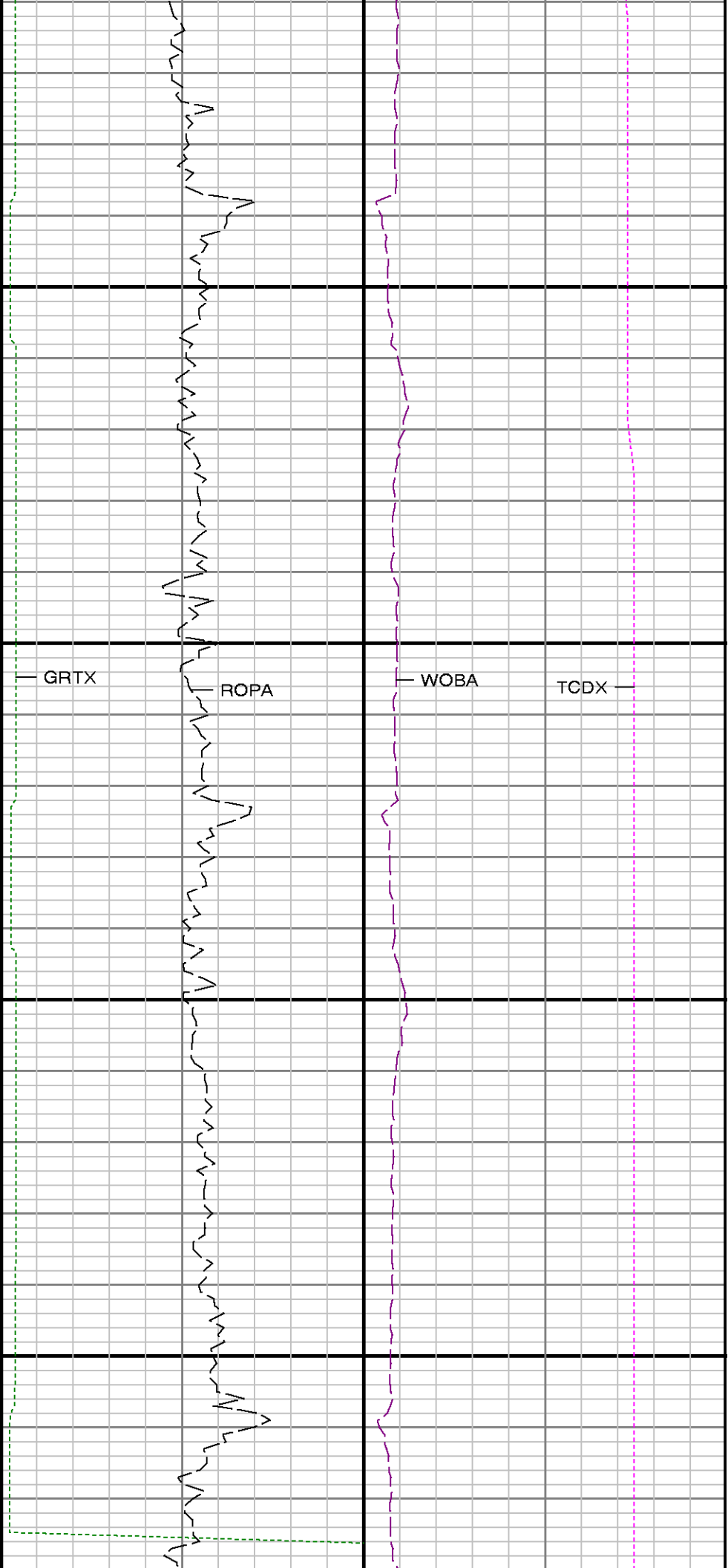


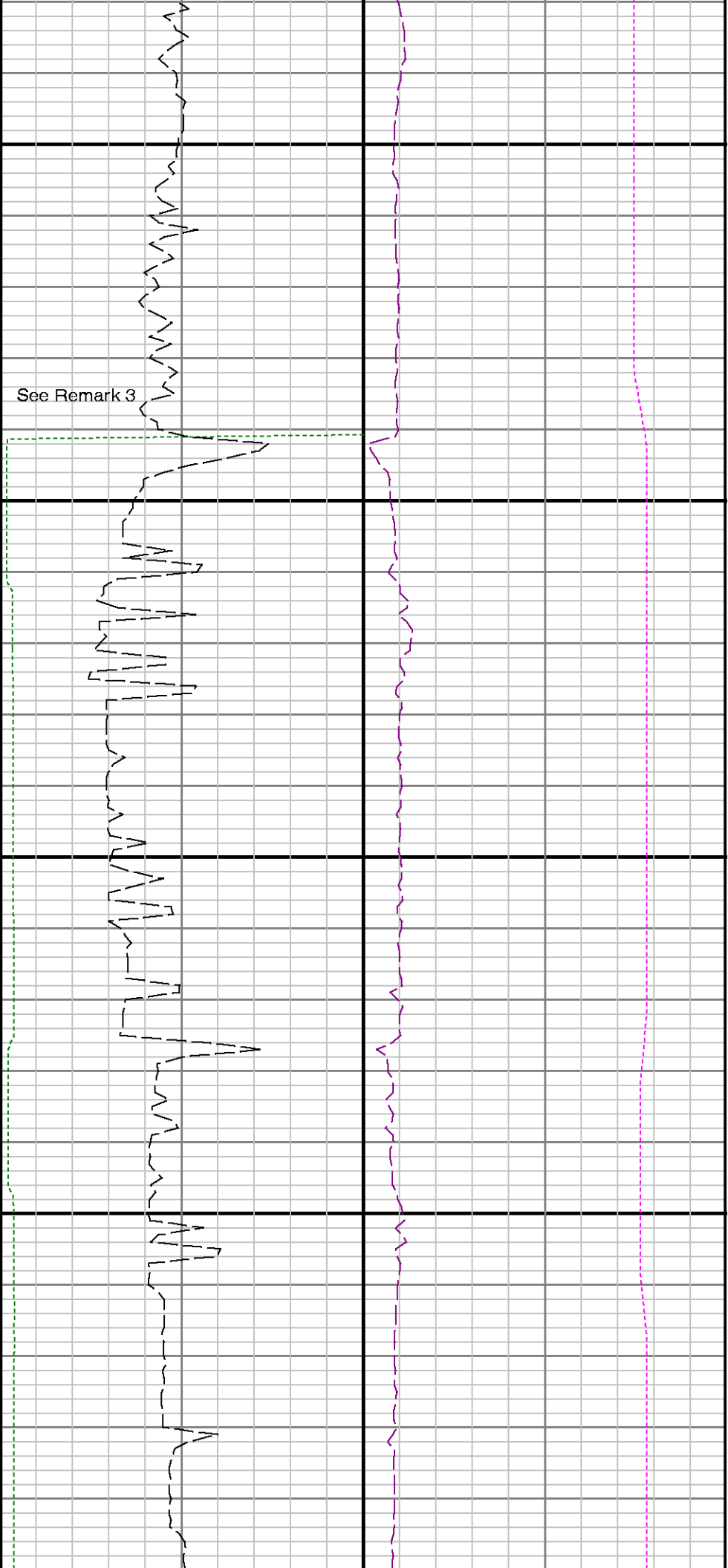
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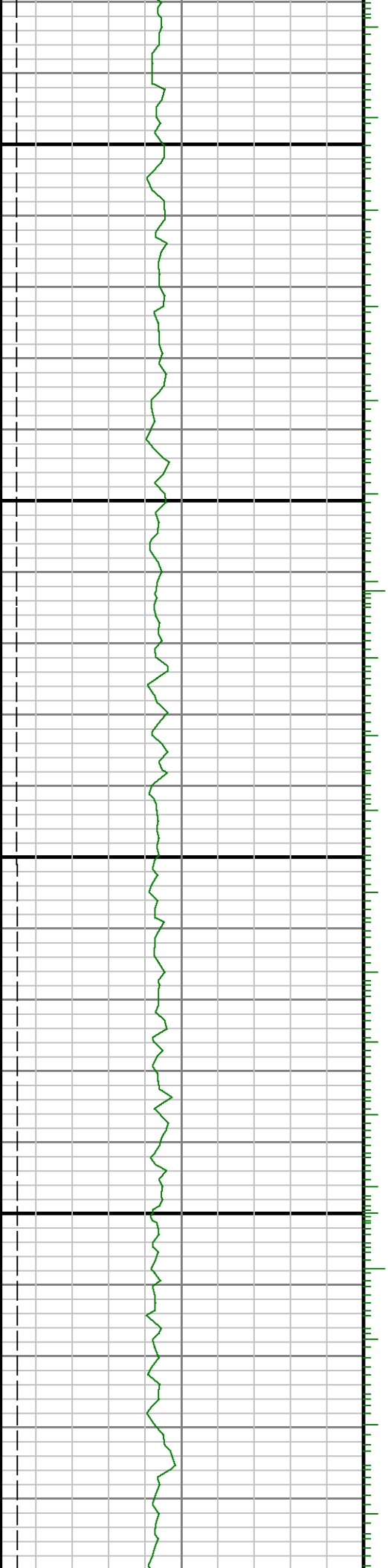


See Remark 3

Run 2 < > Run 3

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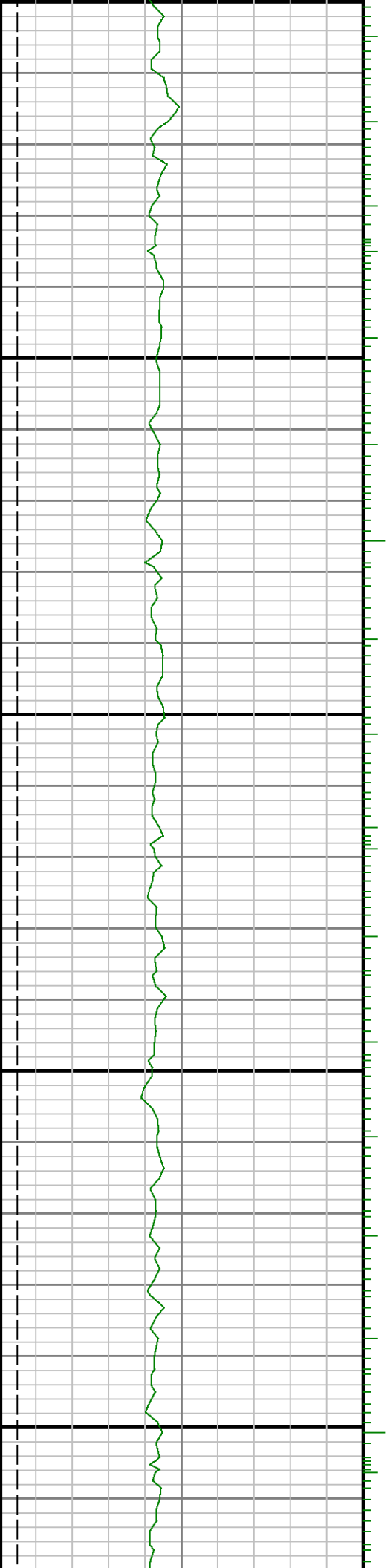
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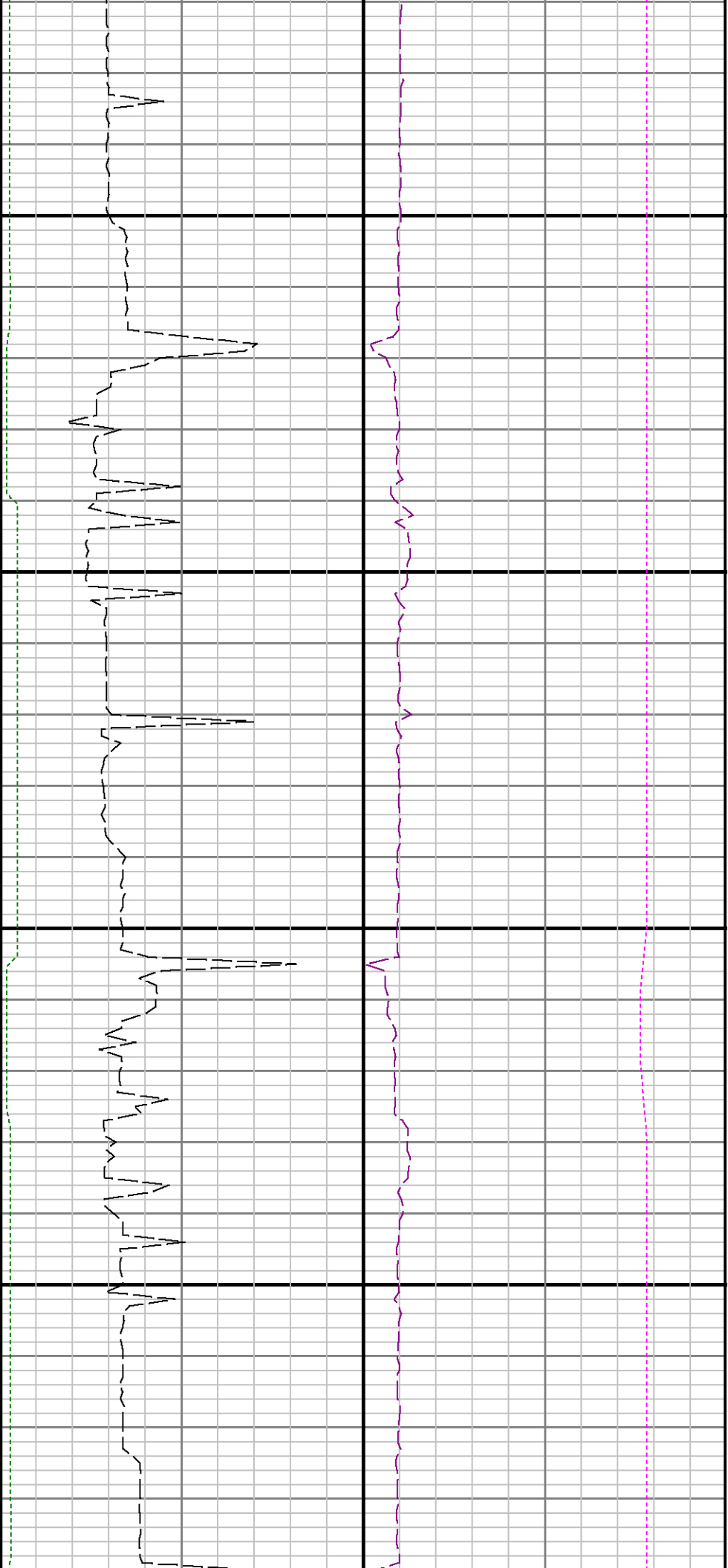




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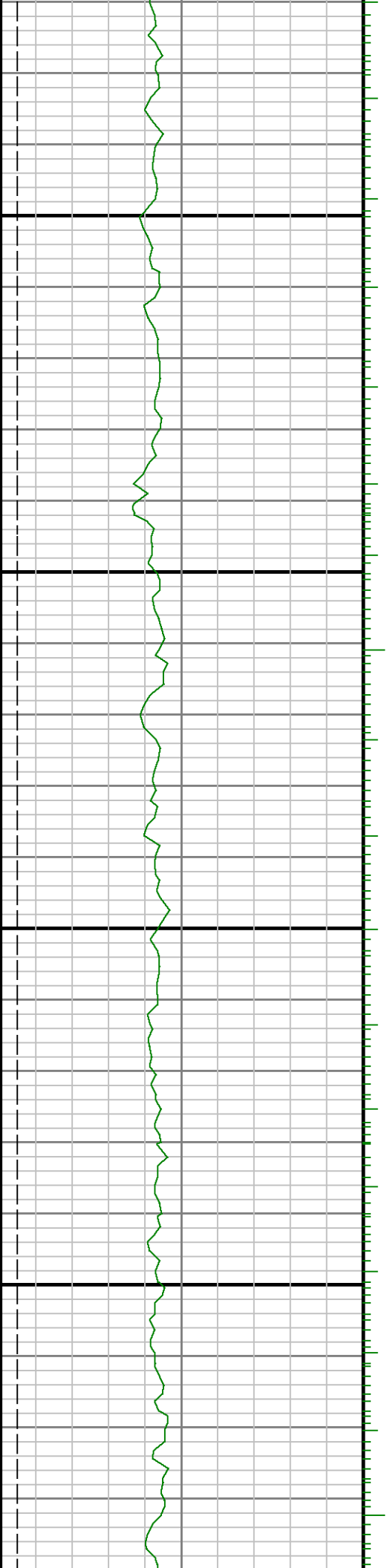
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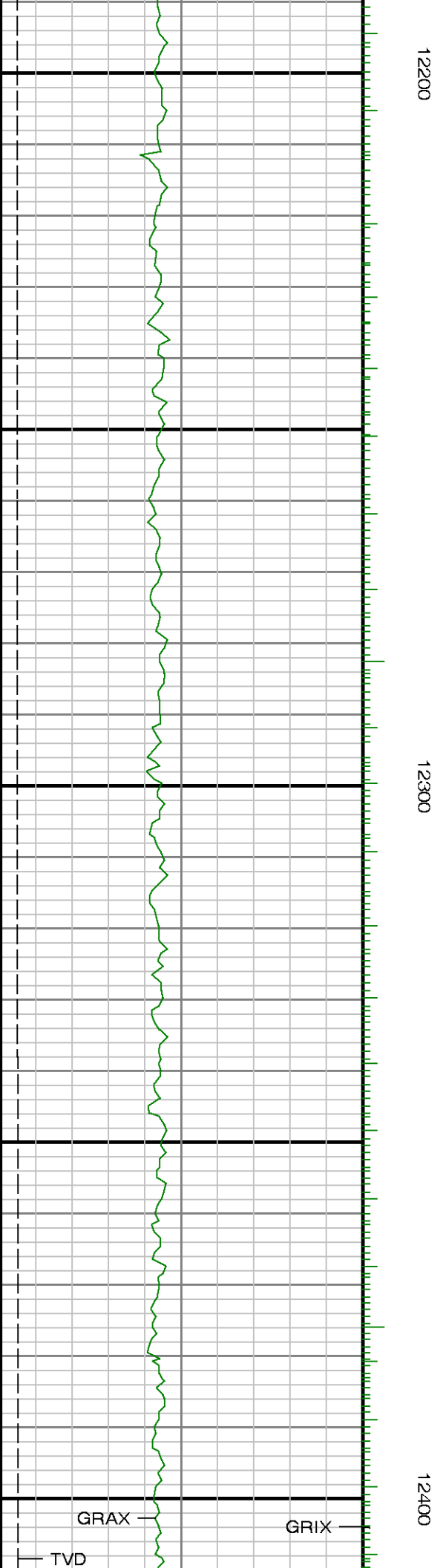
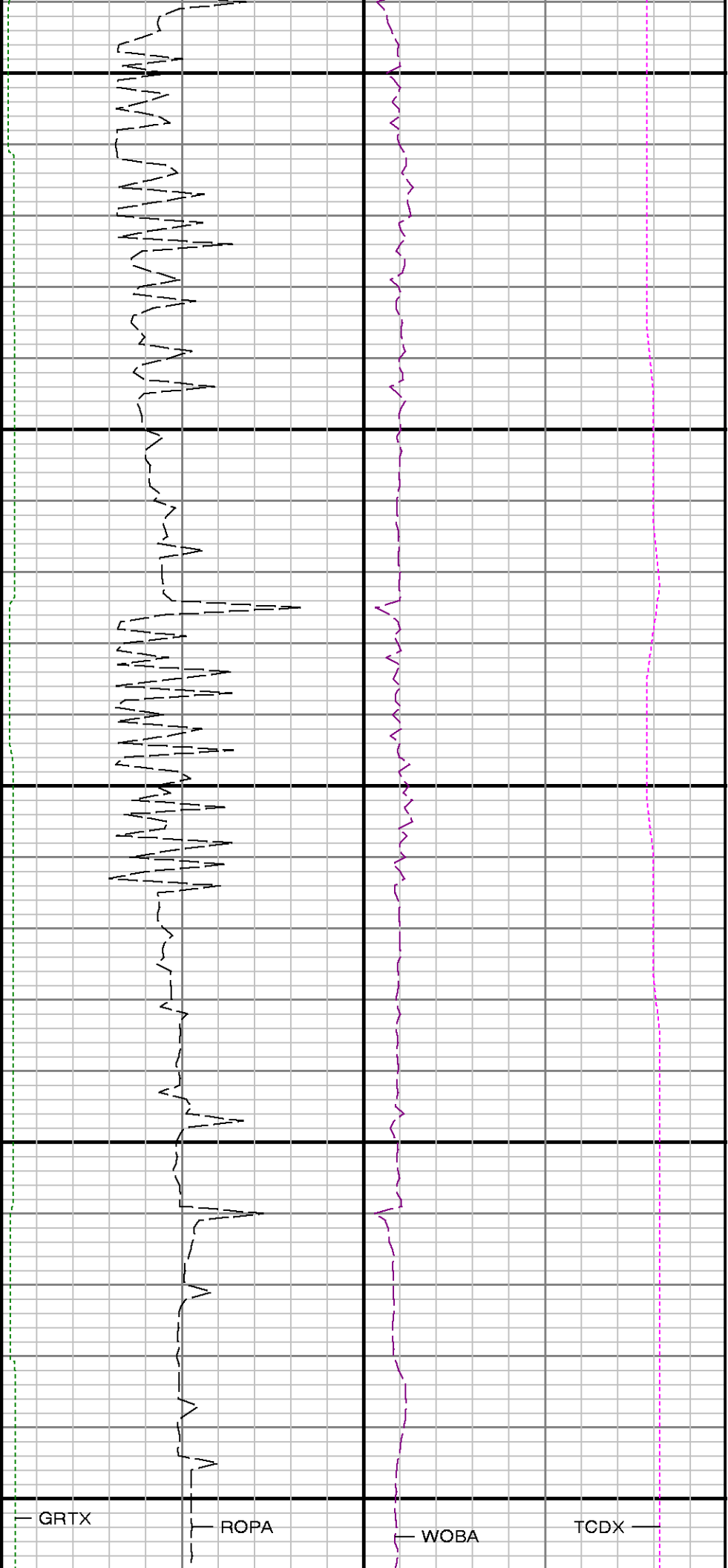


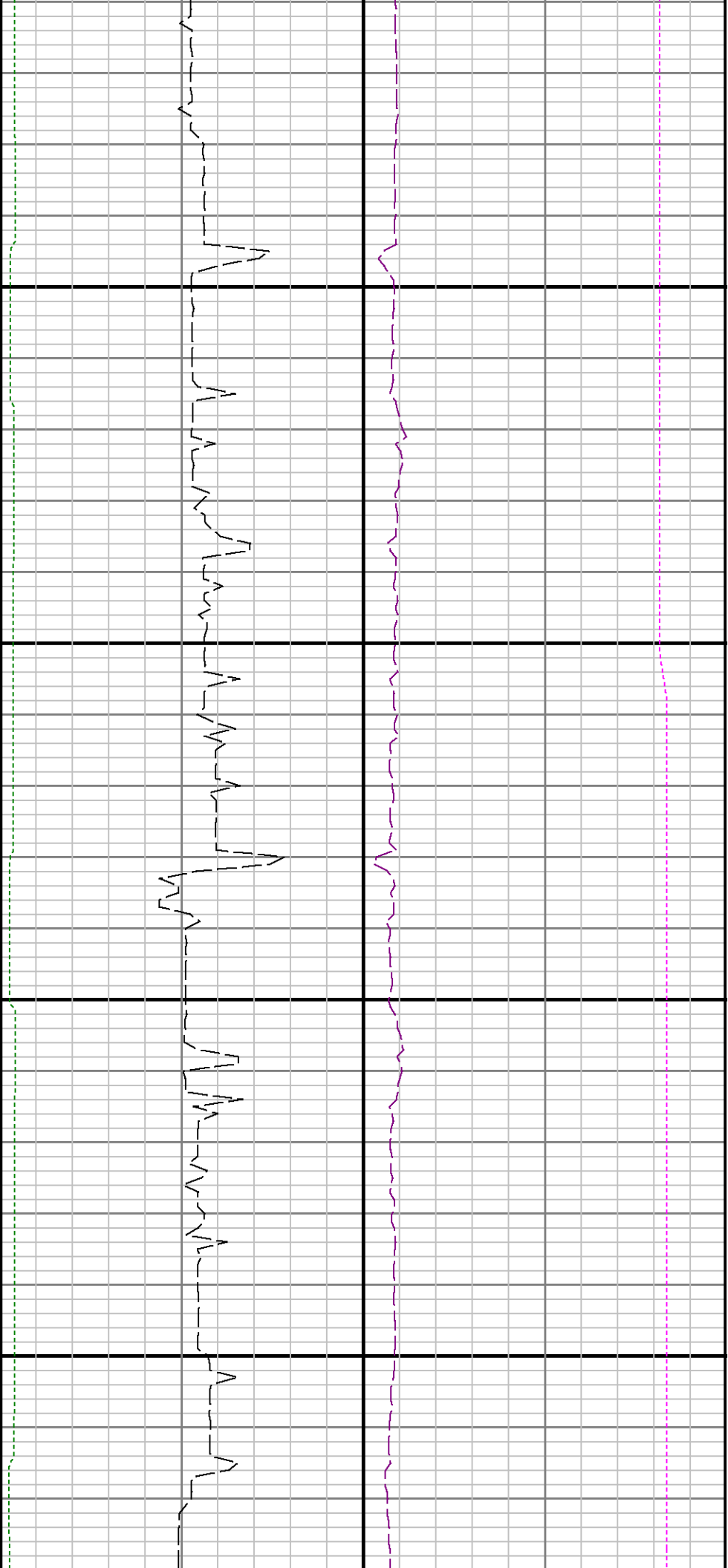


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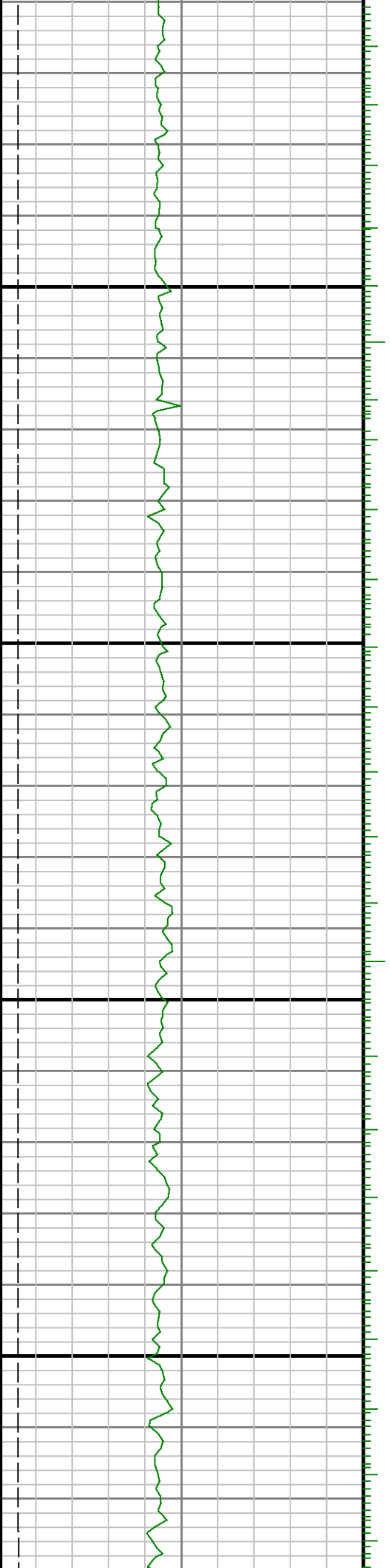






12500

12600





12700

12800

GRSI



