



Realtime Log

Gamma Ray

Scale:

Company: Anadarko

1:240

Well: DOUTHIT 39N-27HZ

Measured Depth

Field: Weld County (Kerr McGee)

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

Status:

FINAL PRINT

Surface Location:

Latitude: 40°11'39.613"N

Longitude: 104°57'43.632"W

Other Services:

Wellbore Survey

API Number:  
05-123-395870000

Section 36

TWN: 3N

Range68W

Permanent Datum (P.D.): Ground Level

Elevation: 4957.00 ft.

Elevations:

Log Measured From:

Rig Floor

16.00 ft.

Above P.D.

N/A

Depth Reference:

Driller's Depth

GL: 4941.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 6400.0 ft. Date From: 09 Oct 14 Date To: 16 Oct 14

Dip Angle: 66.85 °

Azi Reference North: True

Bottom: 13127.0 ft. Date To: 16 Oct 14 Total

Mag to Reference

Spud Date: 09 Oct 14 Field Strength: 52642.4 nT North Correction: 8.67 °

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	1250.0 ft.	9.625 in.	36.00 lb/ft	Surface	1239.0 ft.
8.670 in.	1250.0 ft.	7605.0 ft.	7.000 in.	26.00 lb/ft	Surface	7595.0 ft.
6.125 in.	7605.0 ft.	13127.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	131xx	13.500 in.	1250.0 ft.	0.0 ° / 0.0 °	0.2 ° / 283.0 °
			8.750 in.	6355.0 ft.	0.8 ° / 292.0 °	91.1 ° / 270.4 °
			6.125 in.	5522.0 ft.	93.1 ° / 272.7 °	90.4 ° / 269.2 °
					/	/
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig / Contractor:	Xtreme 20	/ Xtreme Coil Drilling
PATS	6.4.1.34	Job No:	6659596	
		District / Unit:	RMD	/ 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.  Time  (hrs.)
							Top	Bottom	From	To	Start		End		
							(ft)	(ft)	(ft)	(ft)					
1	1	1	8.750	PDC	3.000	Steerable	6400.0	7547.0	1250.0	7605.0	10 Oct 14	04:12	11 Oct 14	21:59	37.9
2	2	2	6.125	PDC	4.000	Steerable	7547.0	13063.0	7605.0	13127.0	13 Oct 14	17:32	15 Oct 14	17:15	47

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
------	--------	--------	------	--------	--------	------	--------	--------

	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Bryan Severson	09 Oct 14	16 Oct 14				Donald Delay	09 Oct 14	16 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+ (%)
09 Oct 14 23:30	1	1250.0	Water Based	8.4	28	9.1	N/A	0/99.5	Active Mud Pit	2200	N/A
10 Oct 14 22:00	1	4591.0	Water Based	8.4	28	9.2	N/A	0/99.5	Active Mud Pit	2000	N/A
11 Oct 14 22:30	1	7605.0	Water Based	10.2	44	9.3	N/A	2/88.6	Active Mud Pit	2000	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	13134419	Directional	61.69	6.750	3.250
1	SRIG	12041110	Gamma	58.31	6.750	3.250
2	DIR	11730419	Directional	67.35	4.750	2.688
2	SRIG	10585205	Gamma	63.97	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

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 1250 to 7605 ft MD (1249 to 7127 ft TVD).

3.) Baker Hughes LWD run 2 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and steerable assembly from 13063 to 13127 ft MD (7118 to 7118 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 (6275 ft TVD).
2	7605	8.750	2	The GRTX range from 7547 to 7605 ft MD (7132 to 7127 ft TVD) was logged 43 hours after being drilled due to casing operations.
3	13063	6.125	2	There is no gamma ray data from 13063 to 13127 ft MD (7118 to 7118 ft TVD) due to sensor offset.

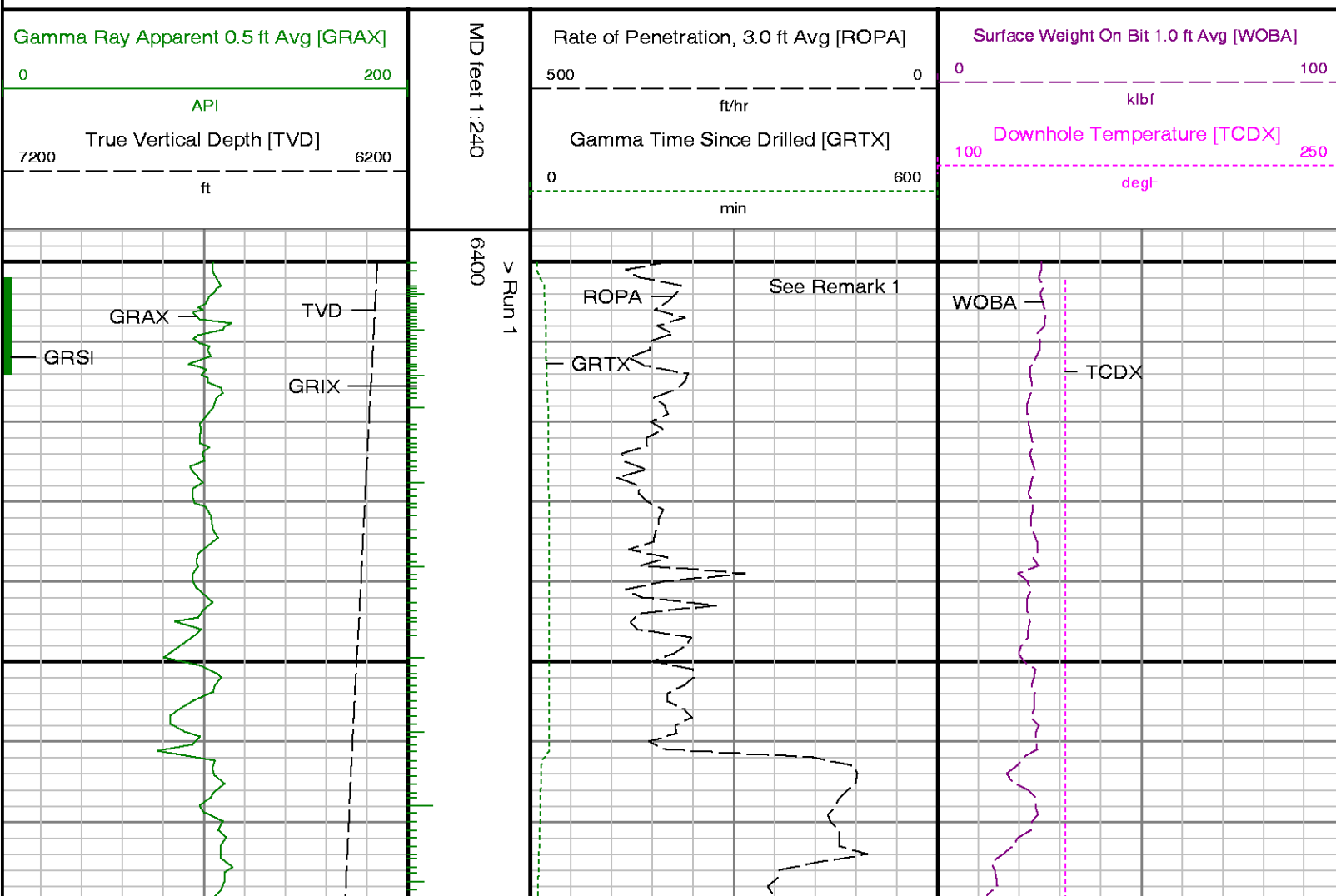


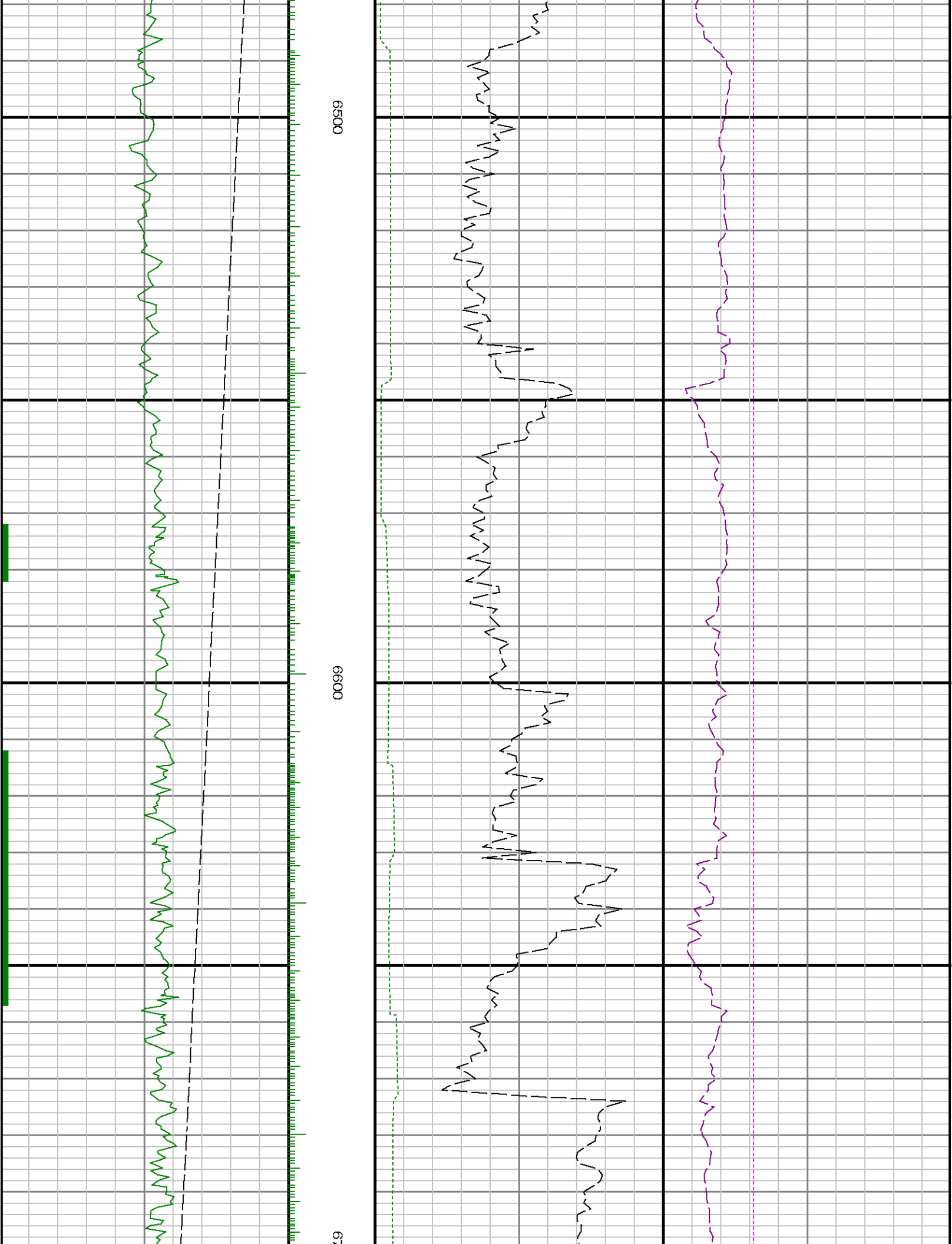
Company : Anadarko

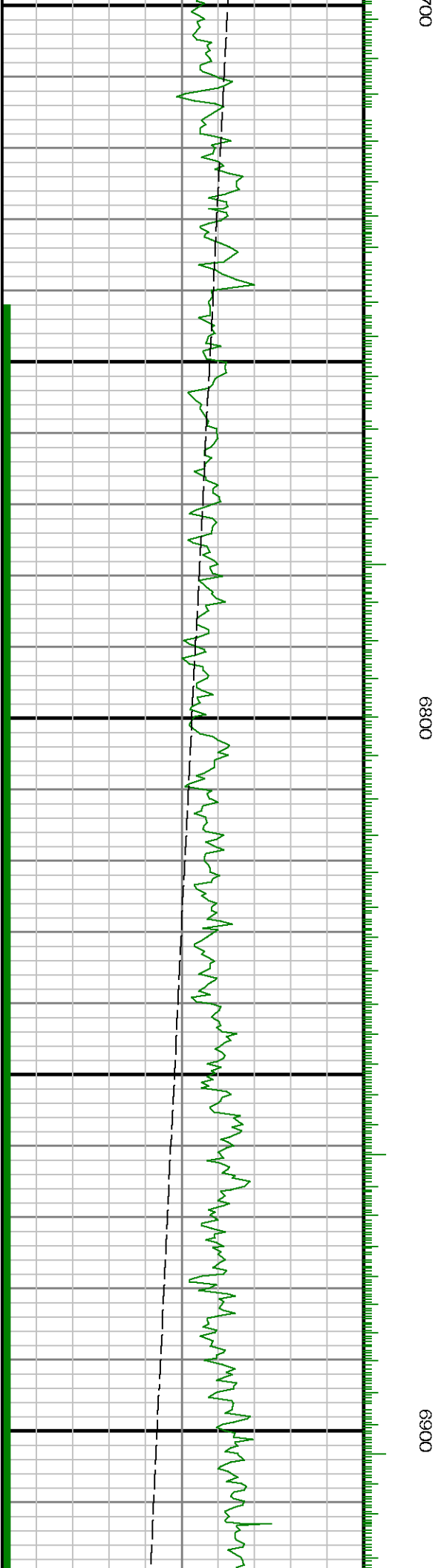
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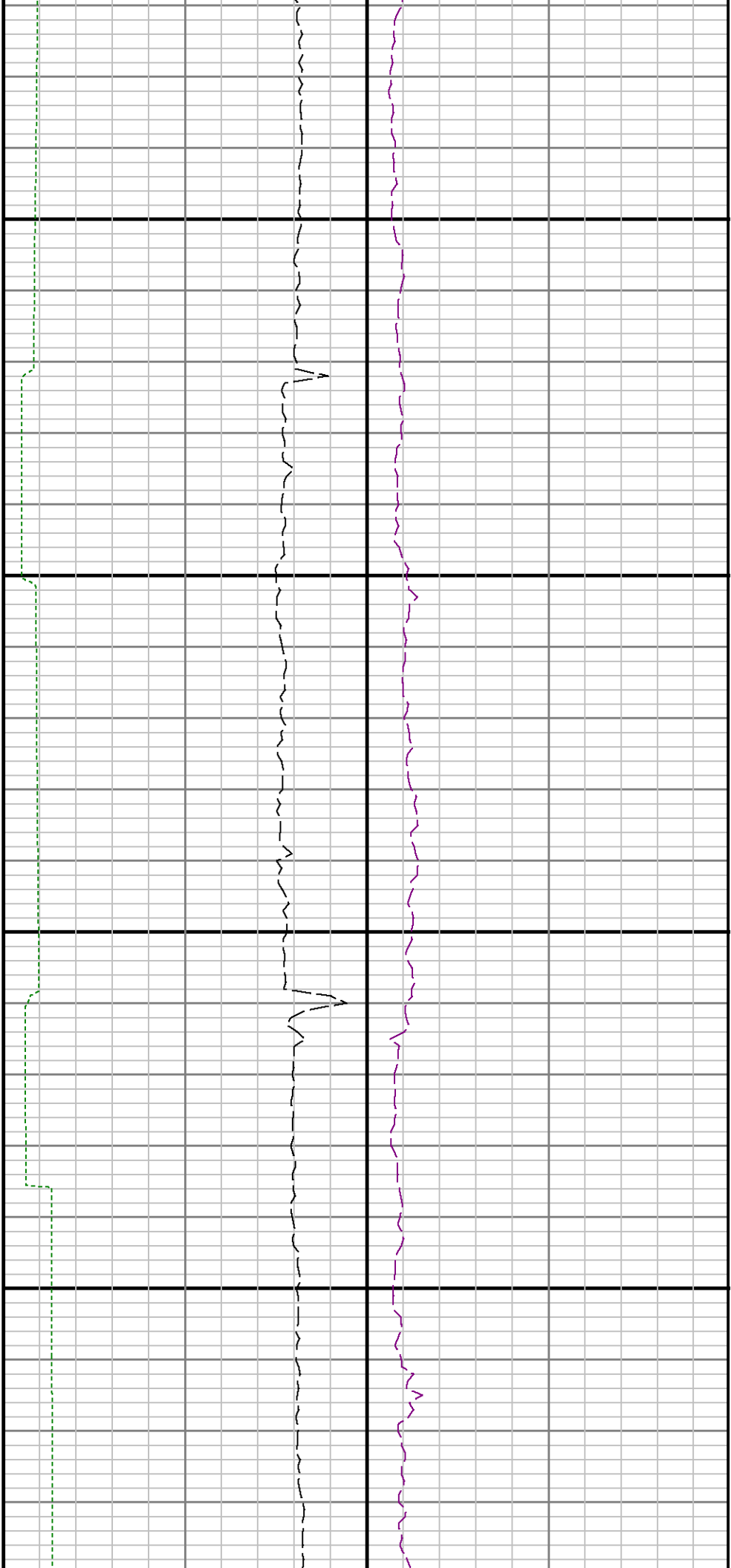
Interval : 6396.00 - 13127.00 feet

Created : 13/Oct/2014 12:17:19 PM



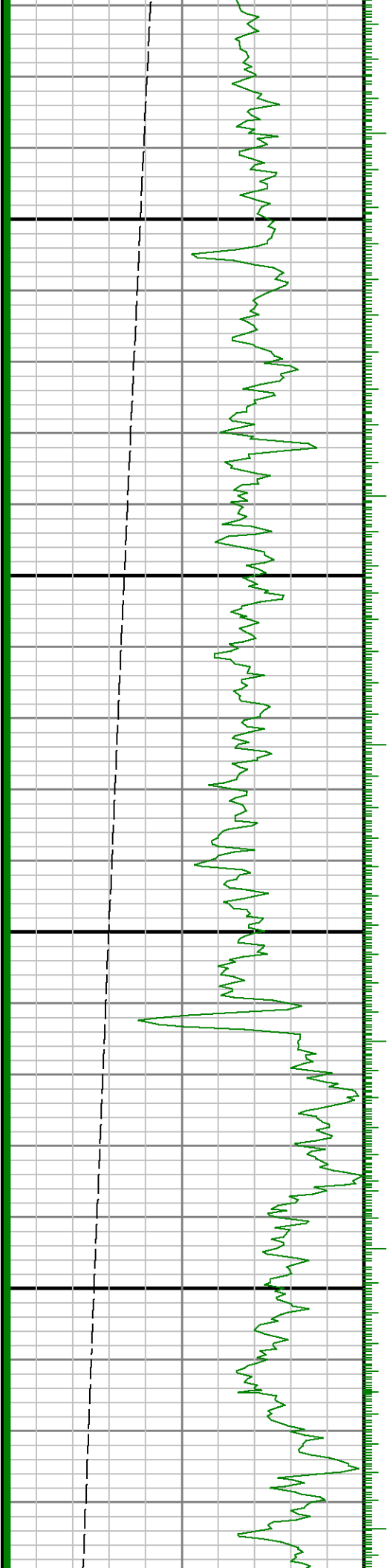


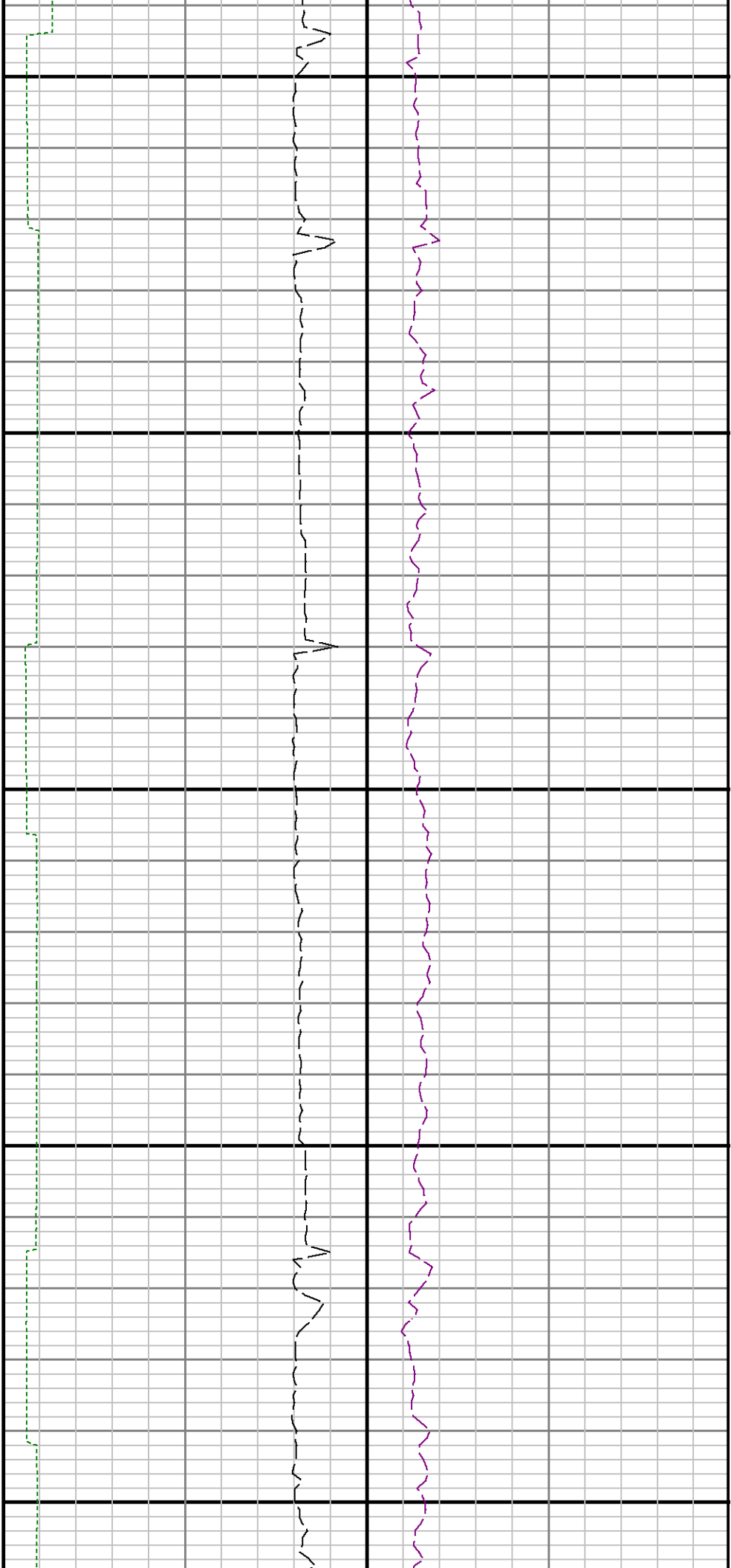




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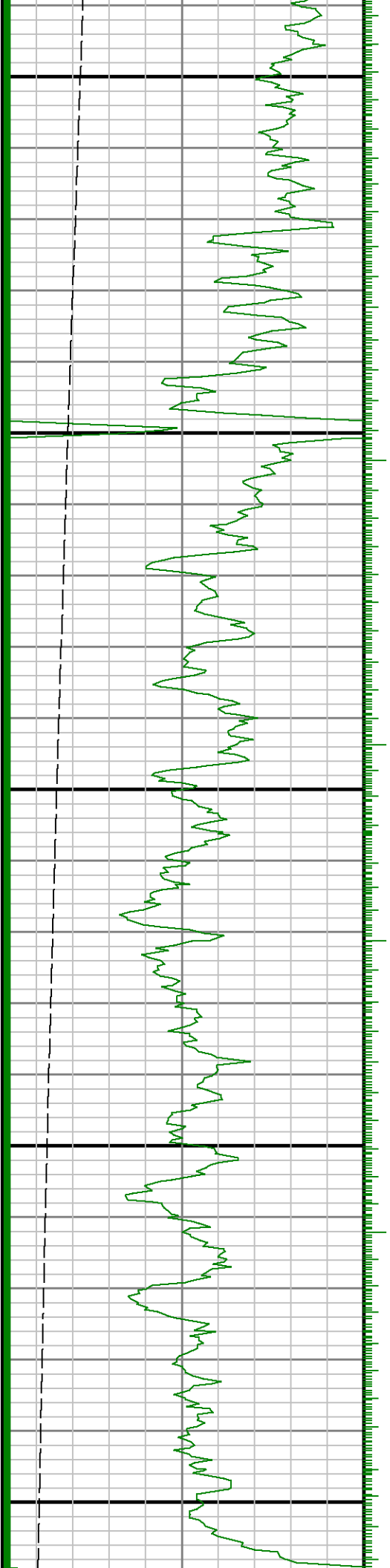
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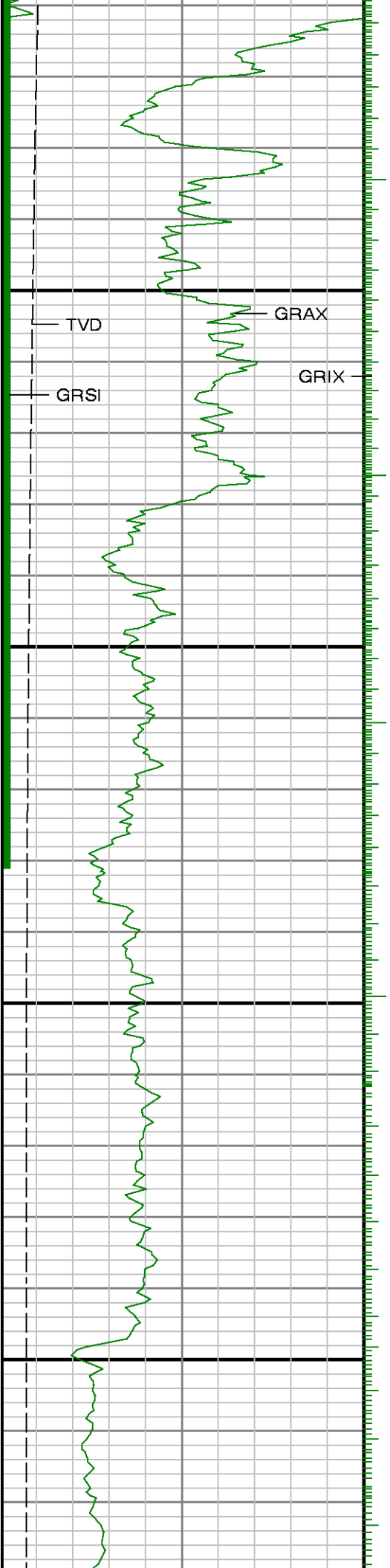




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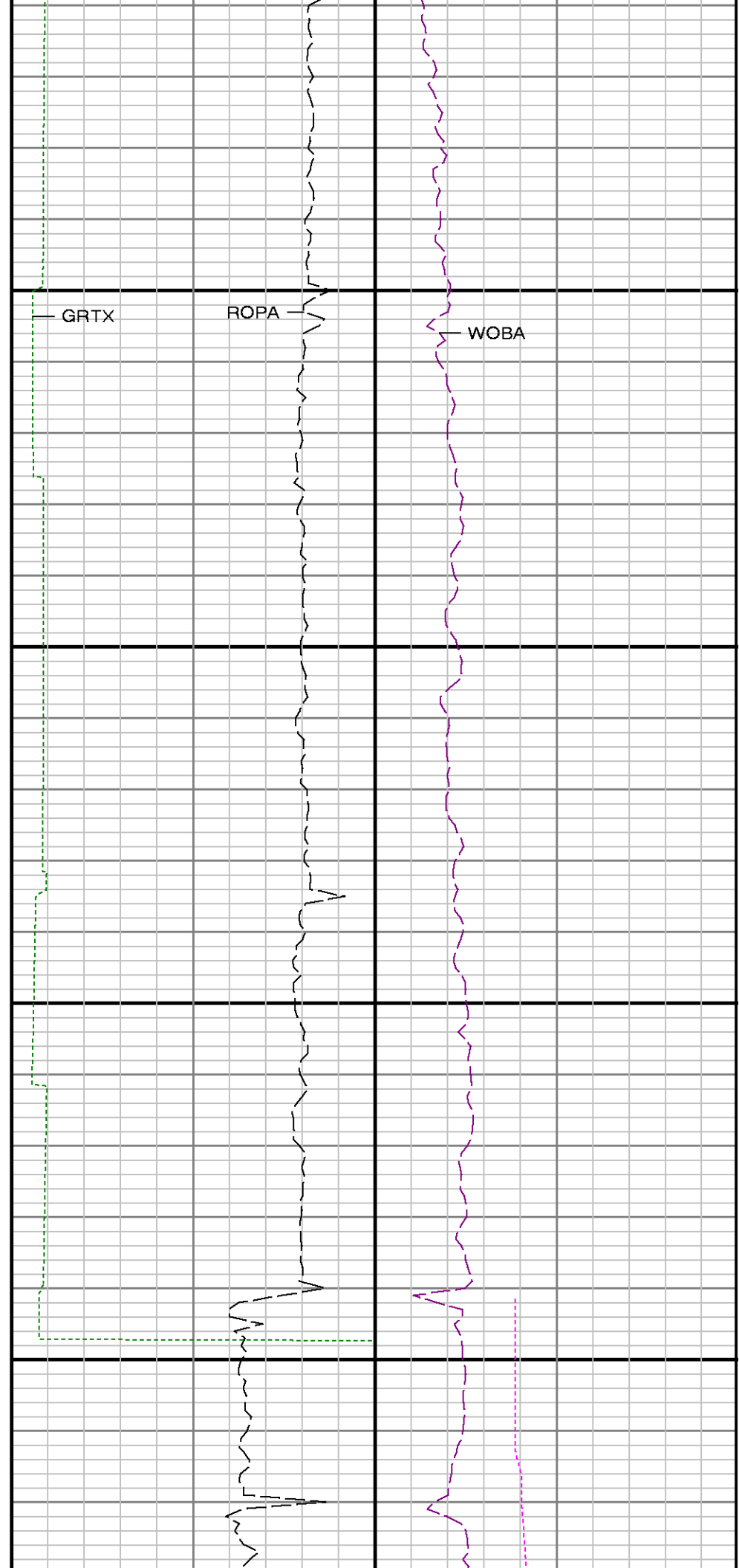
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7400

7500

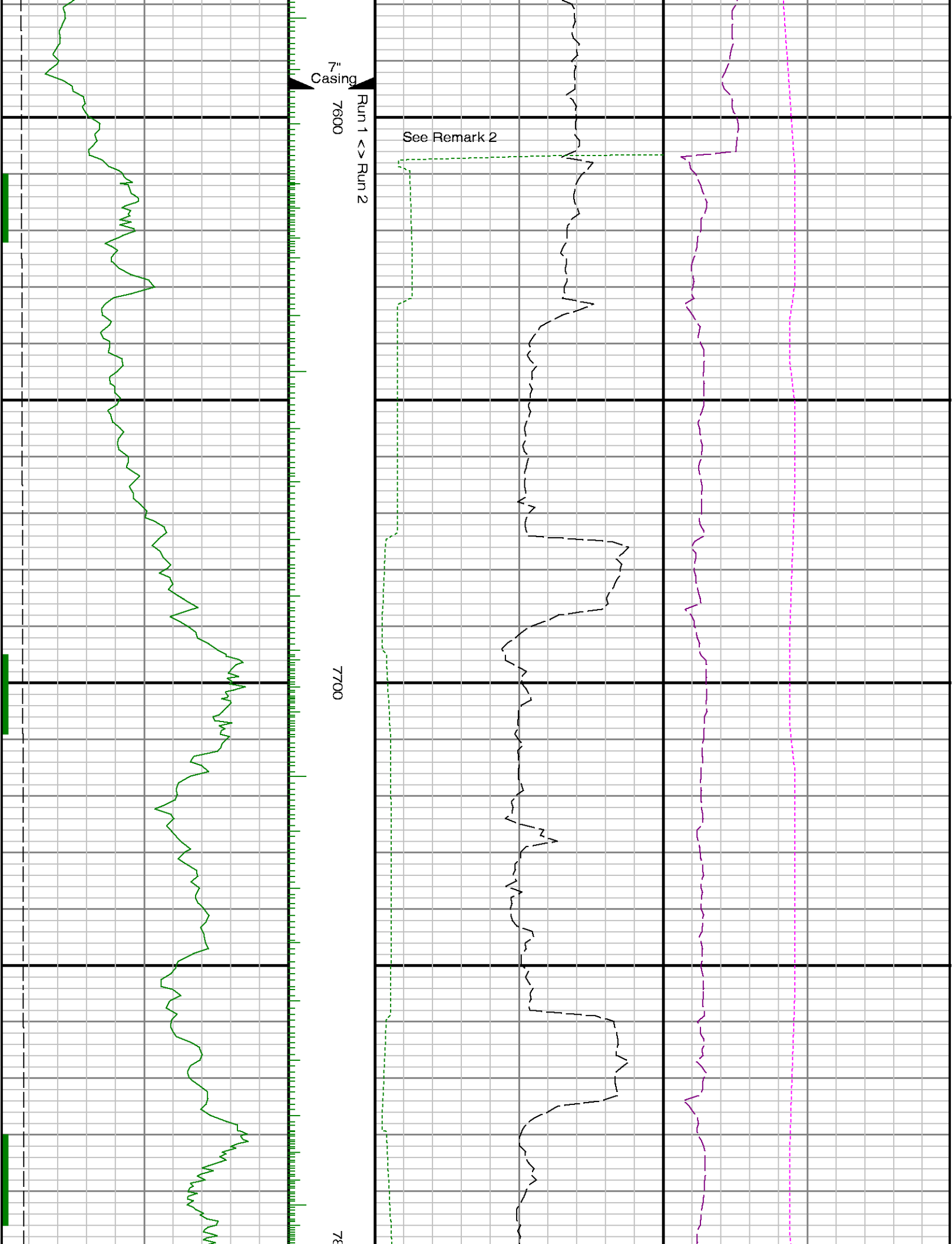


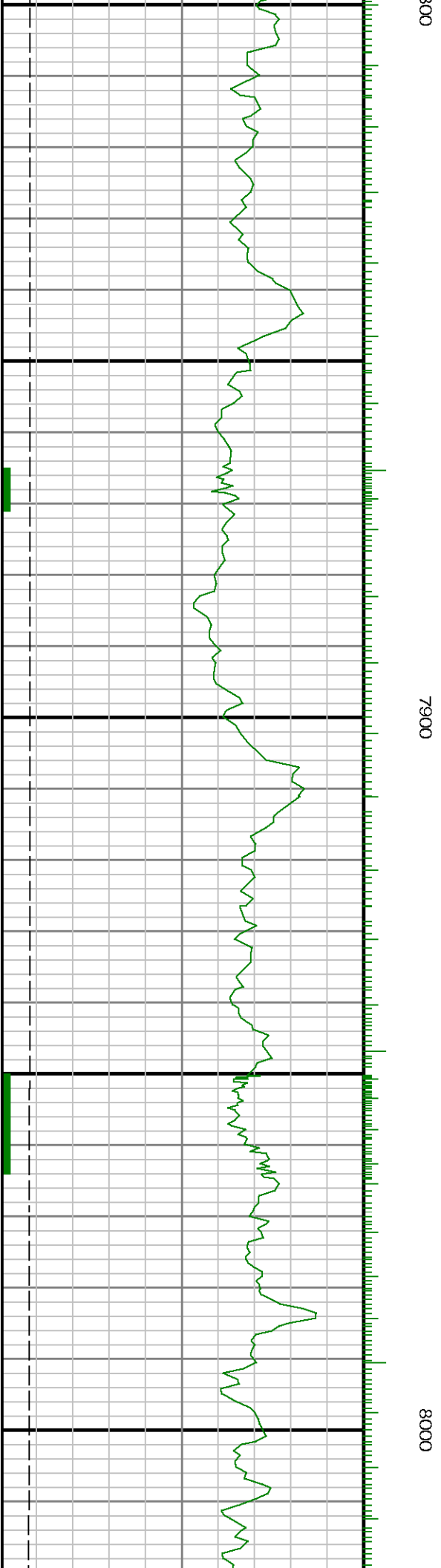
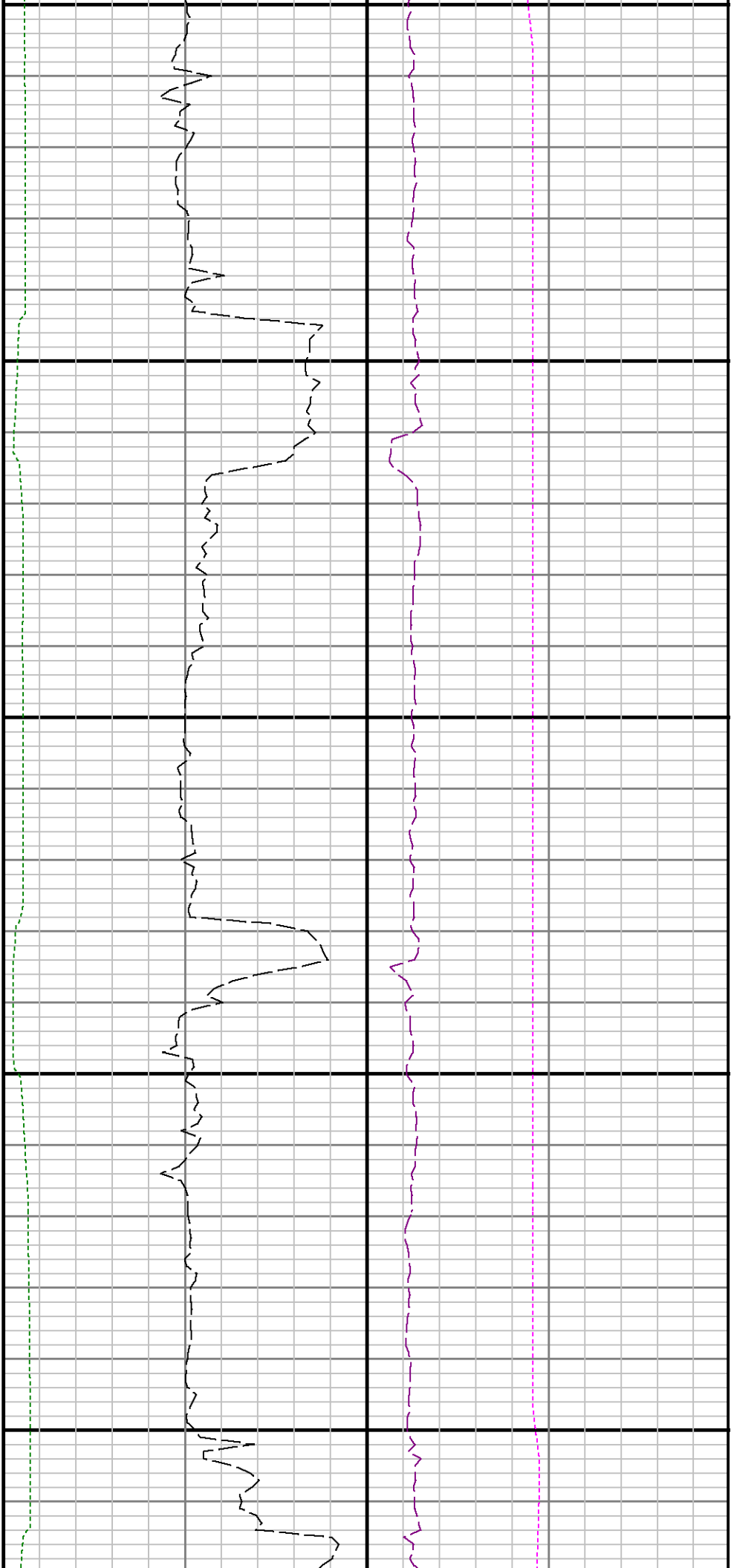
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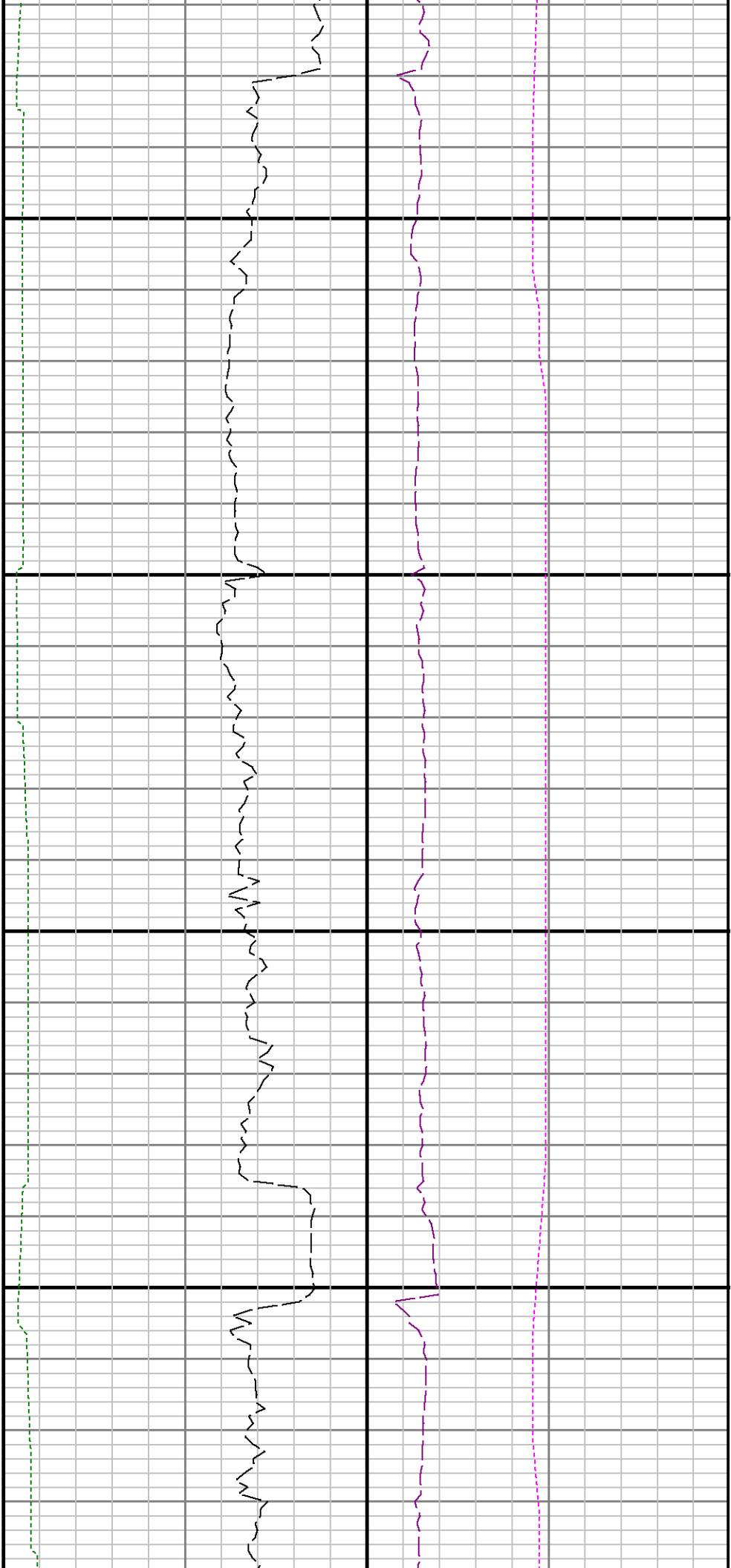
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WOBA



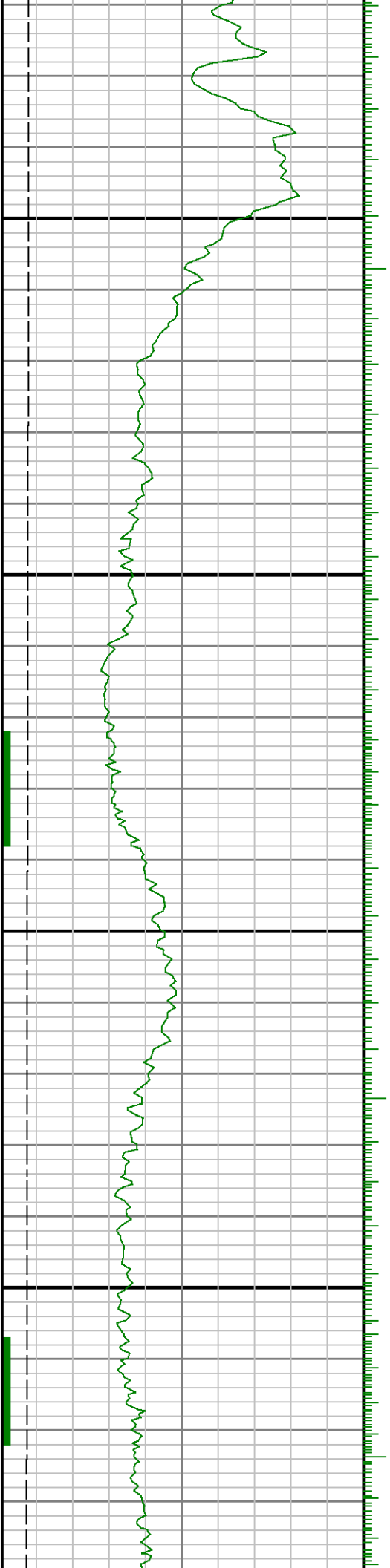


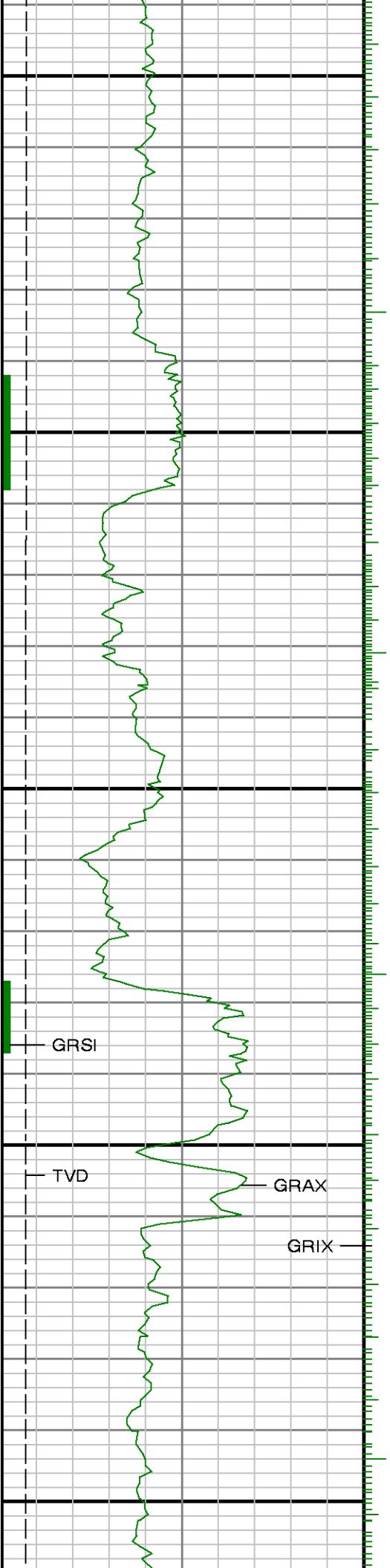




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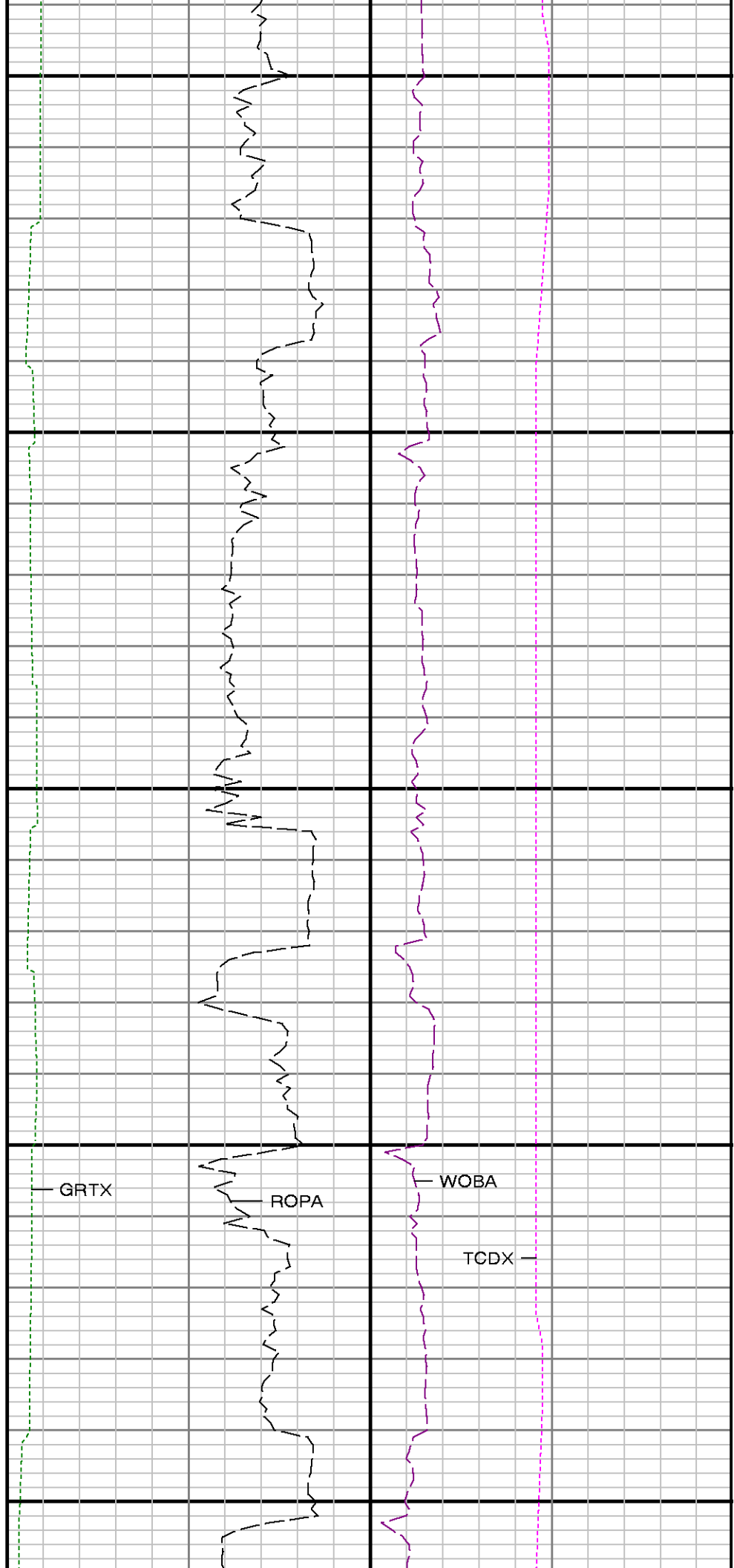
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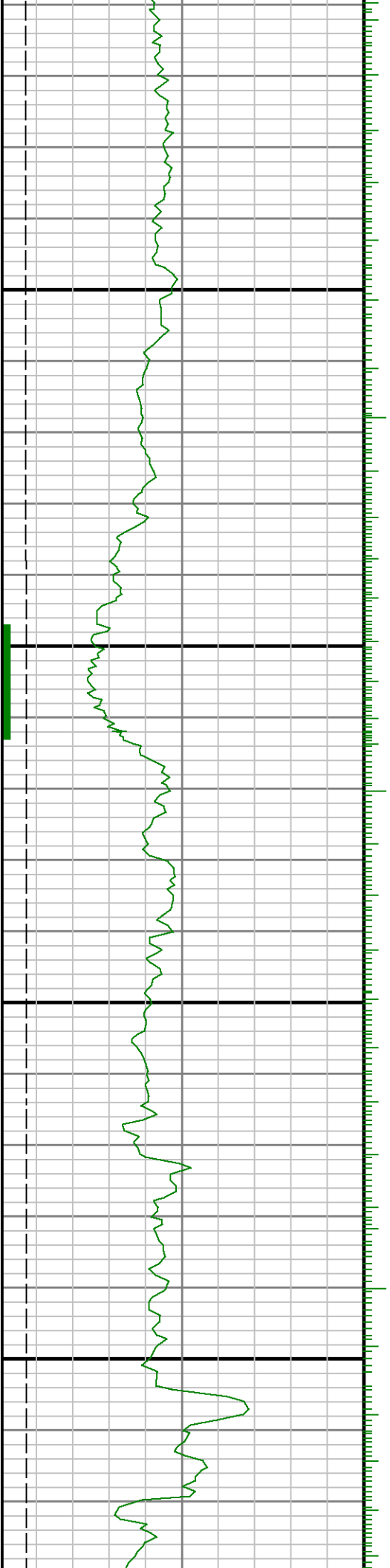




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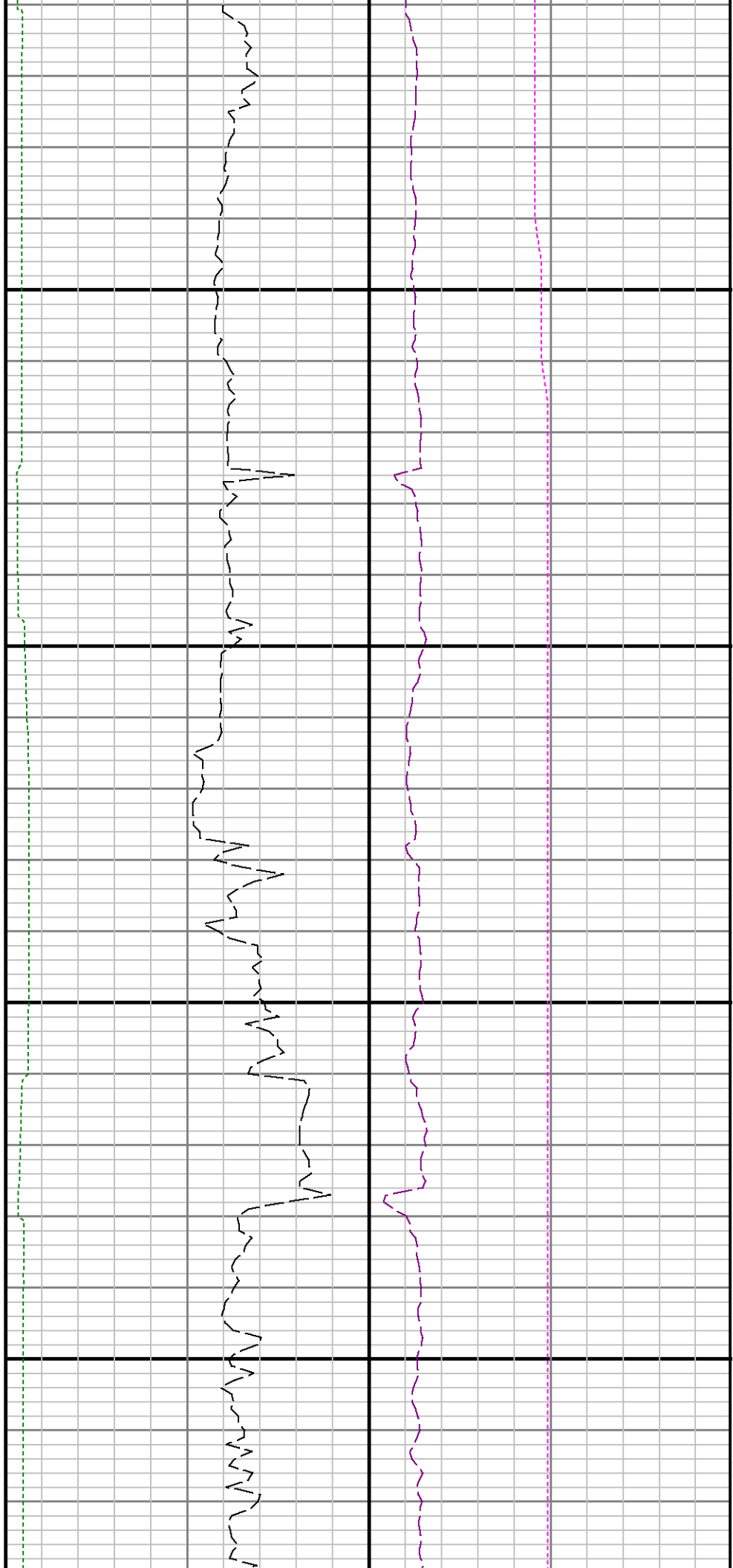
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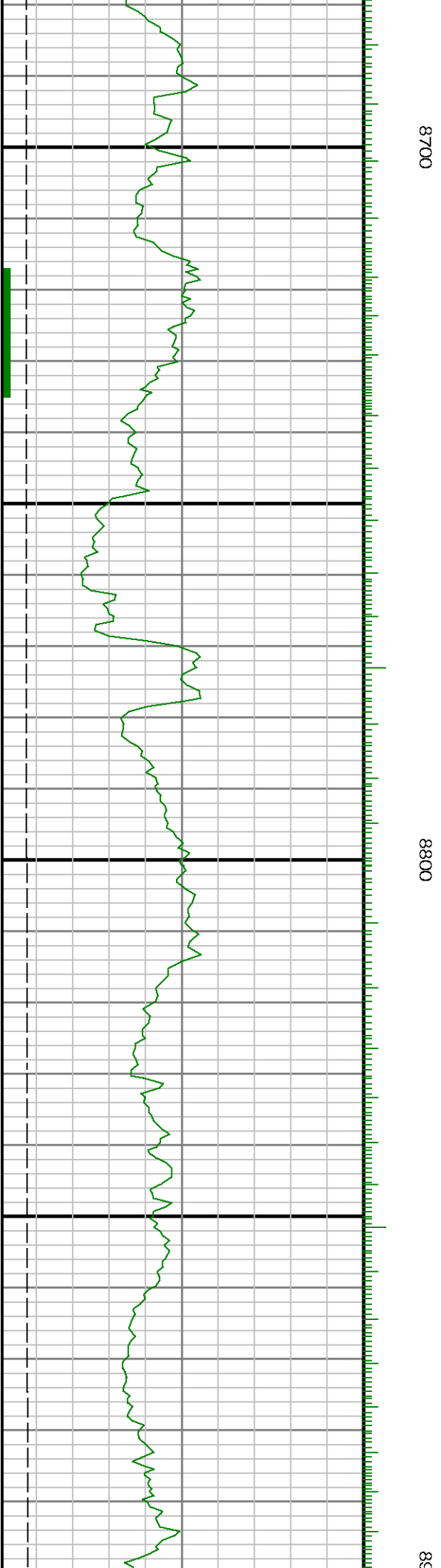
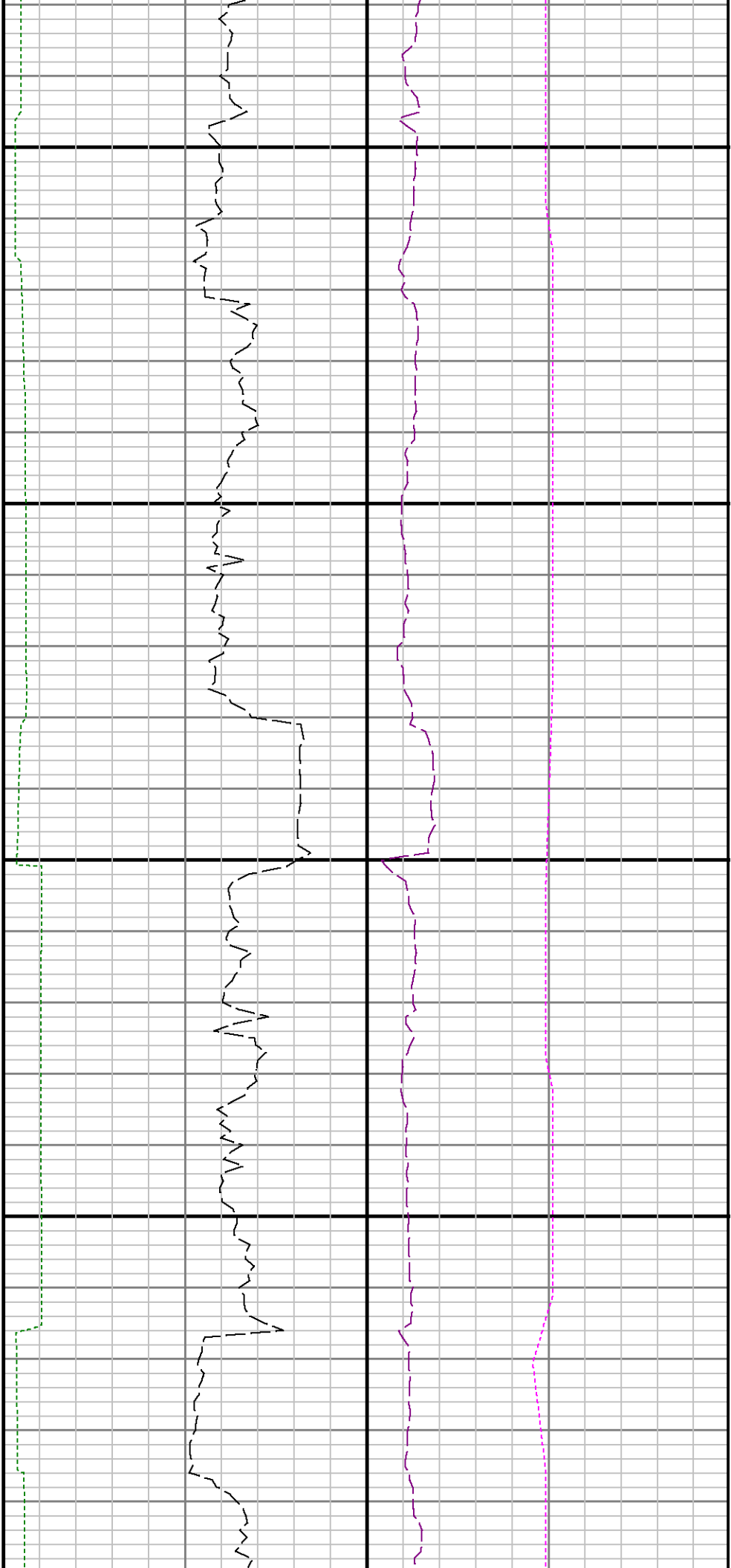


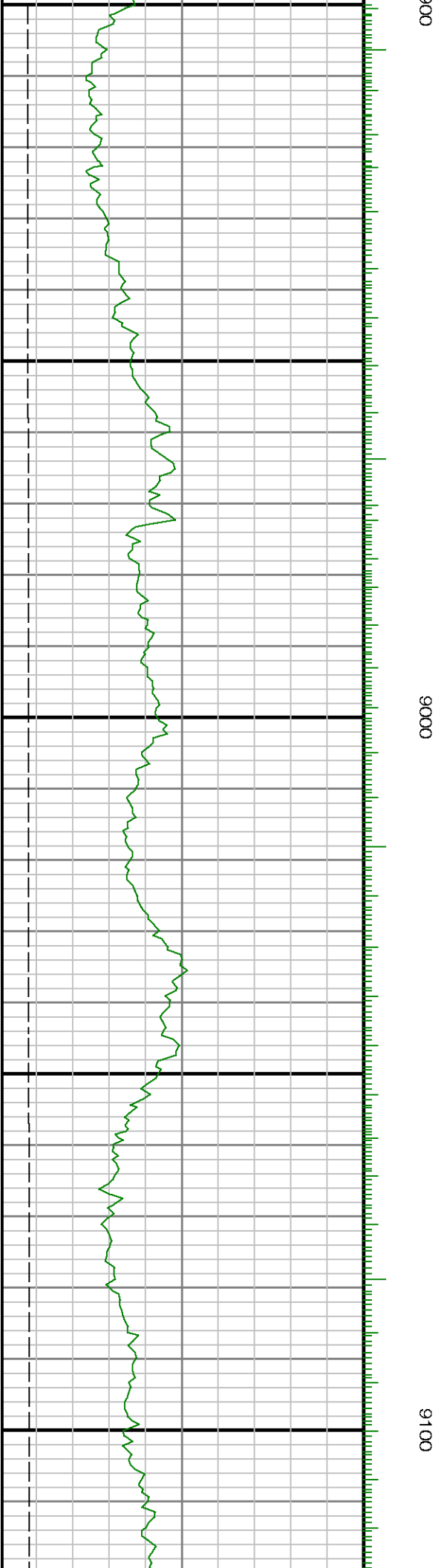
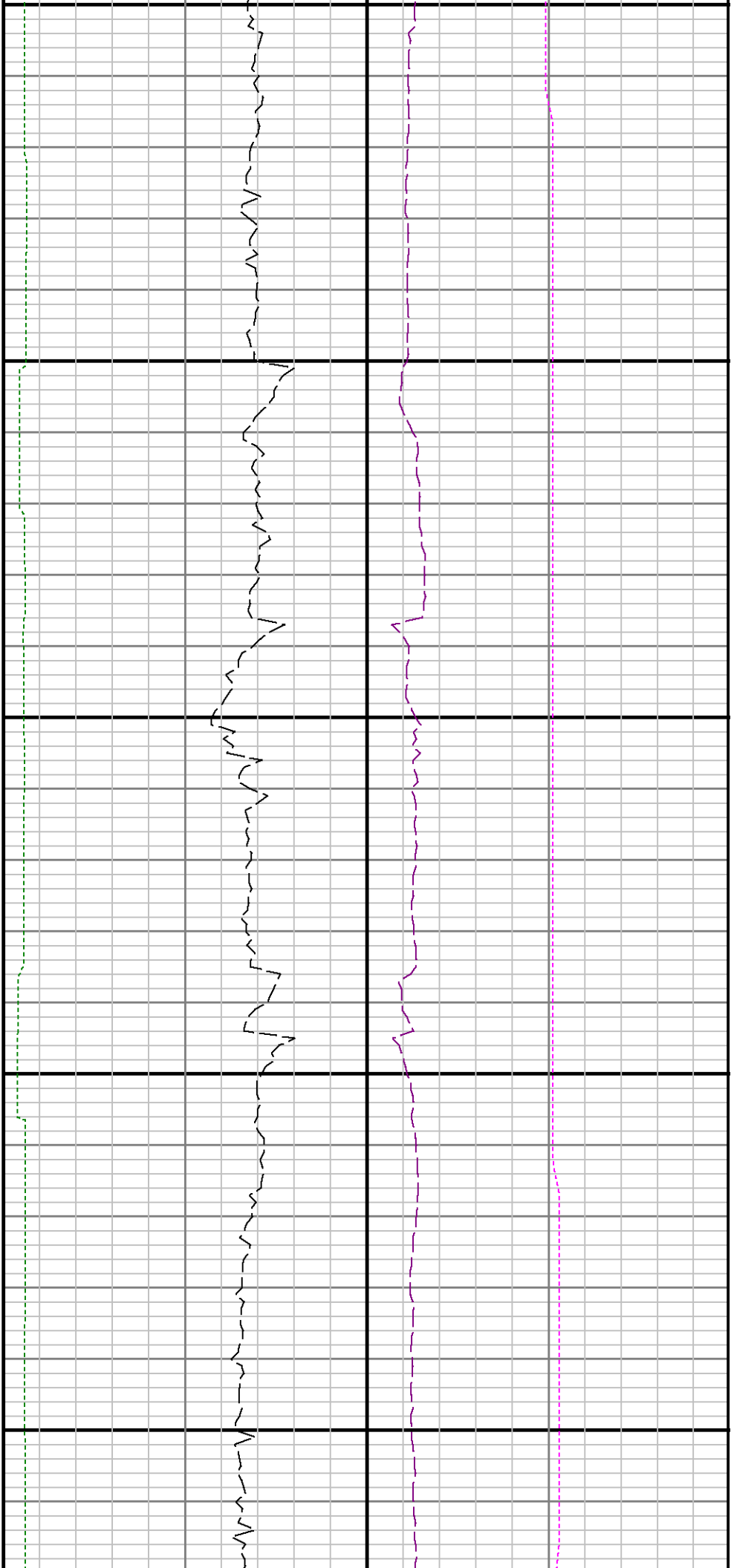


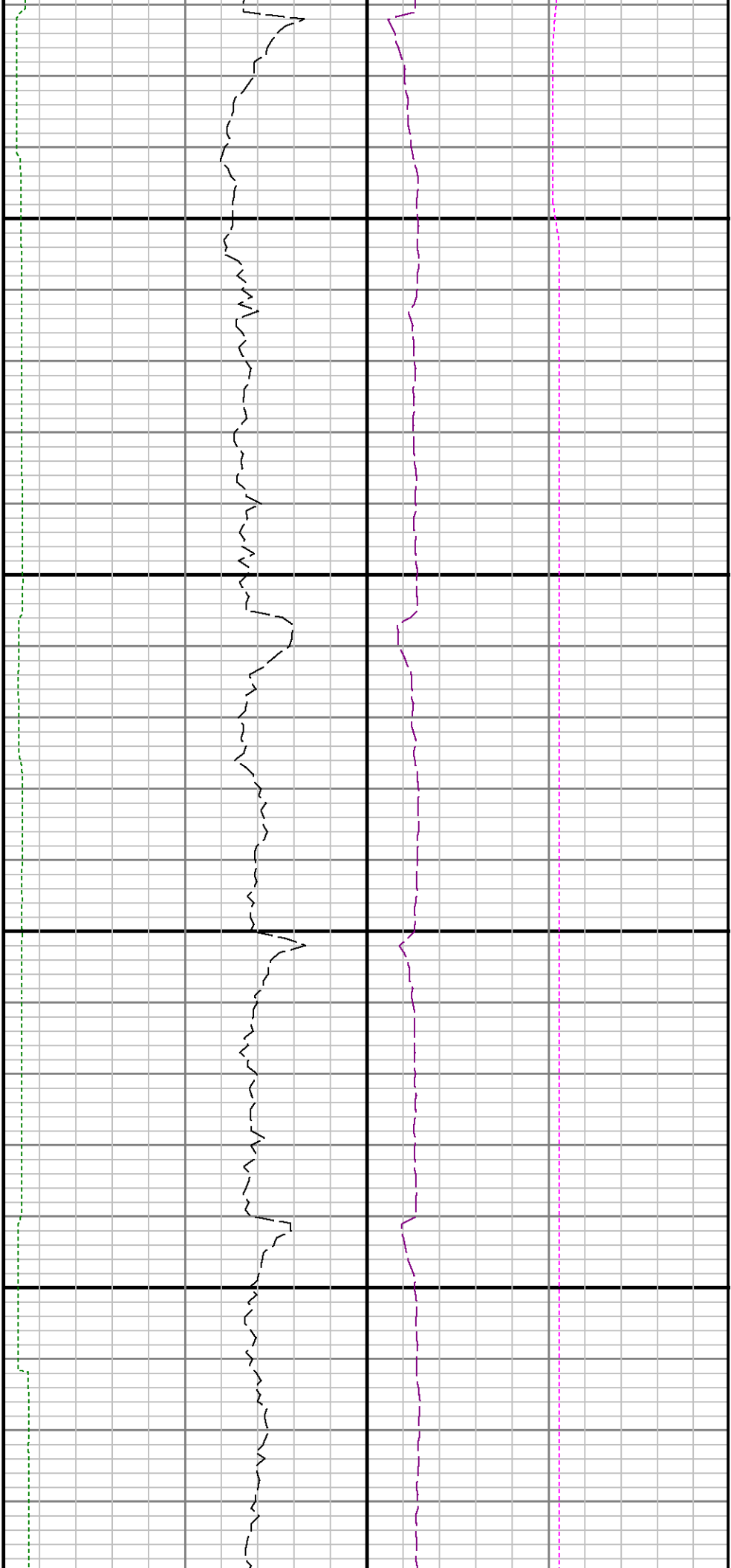
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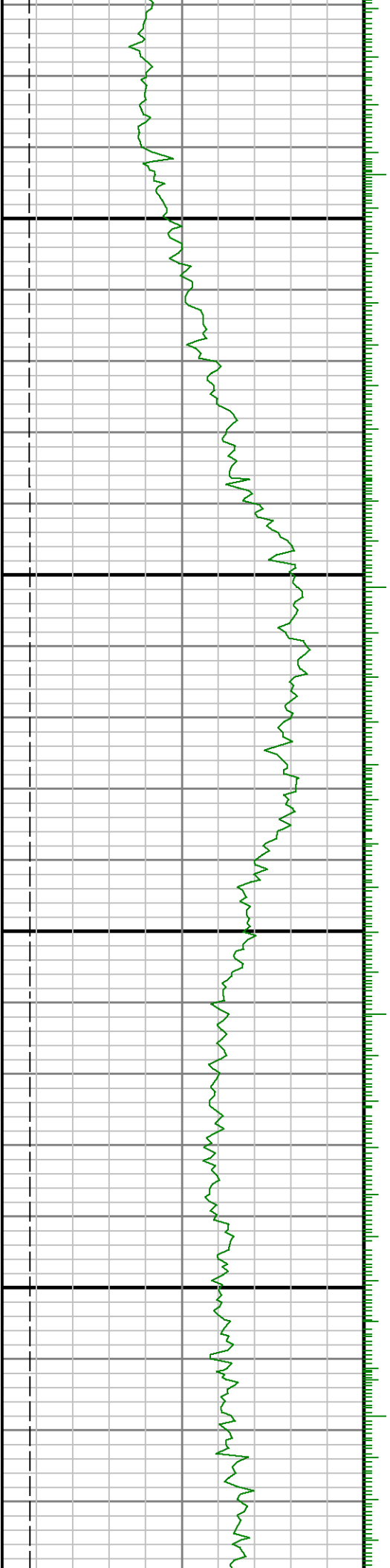




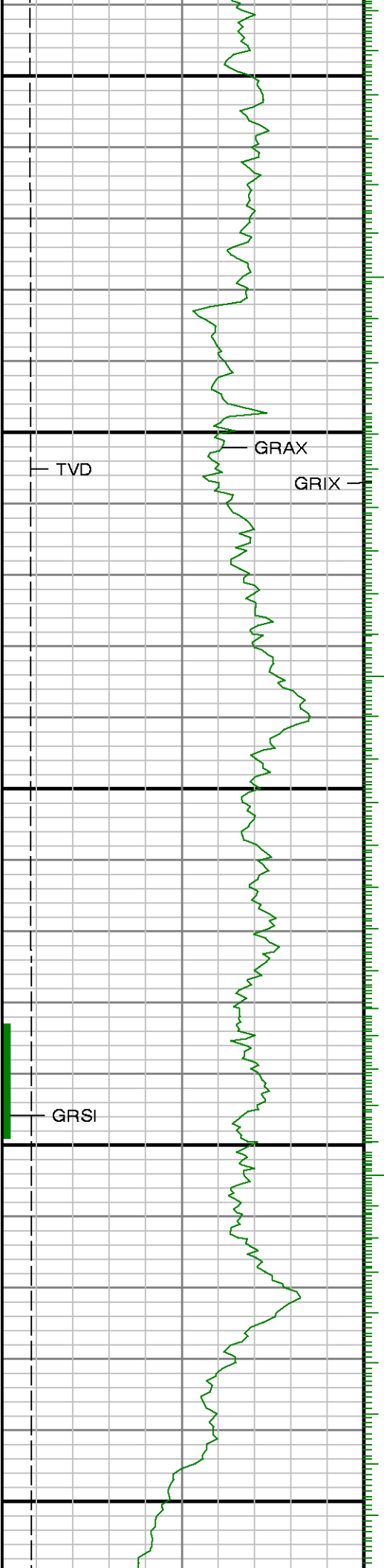


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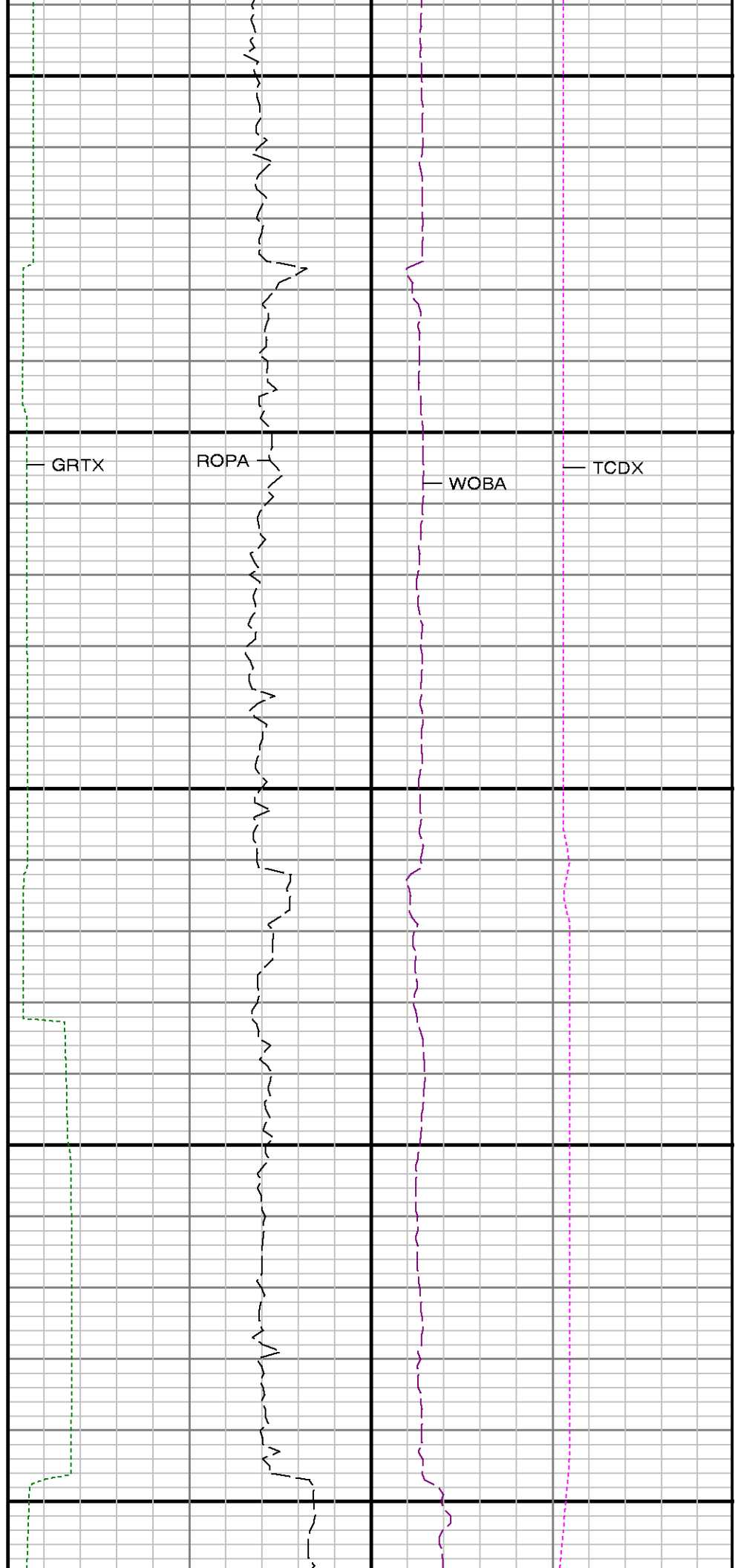


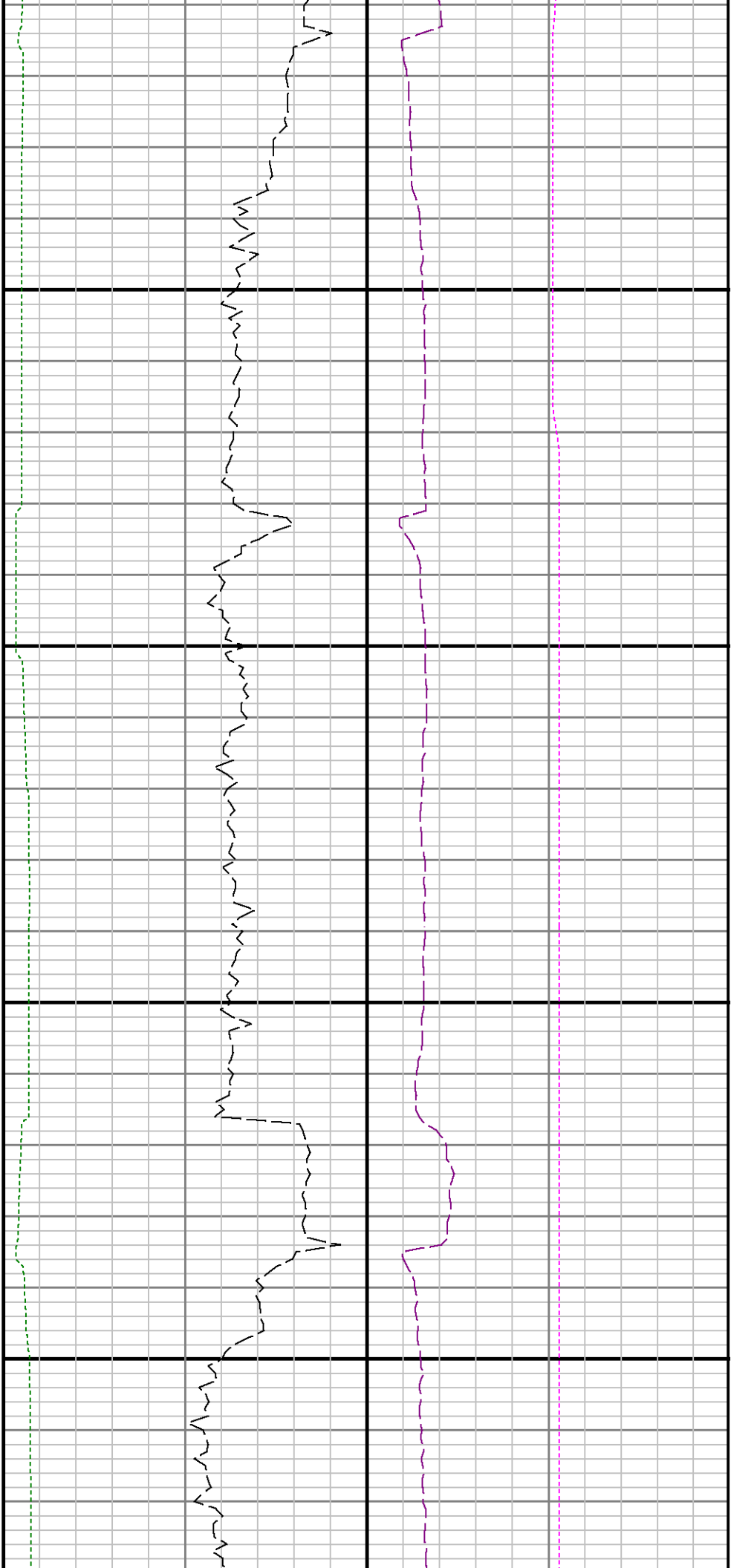




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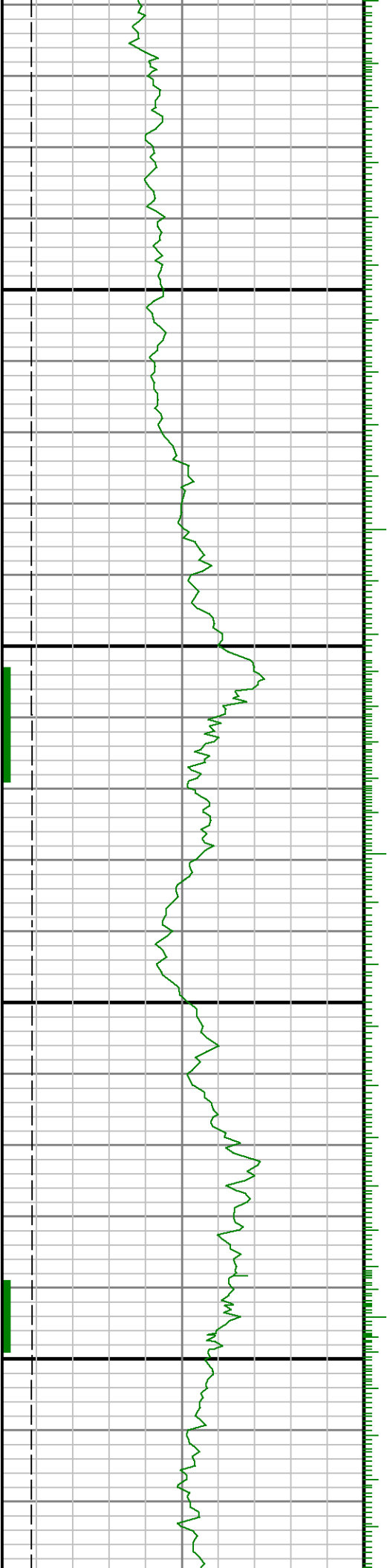
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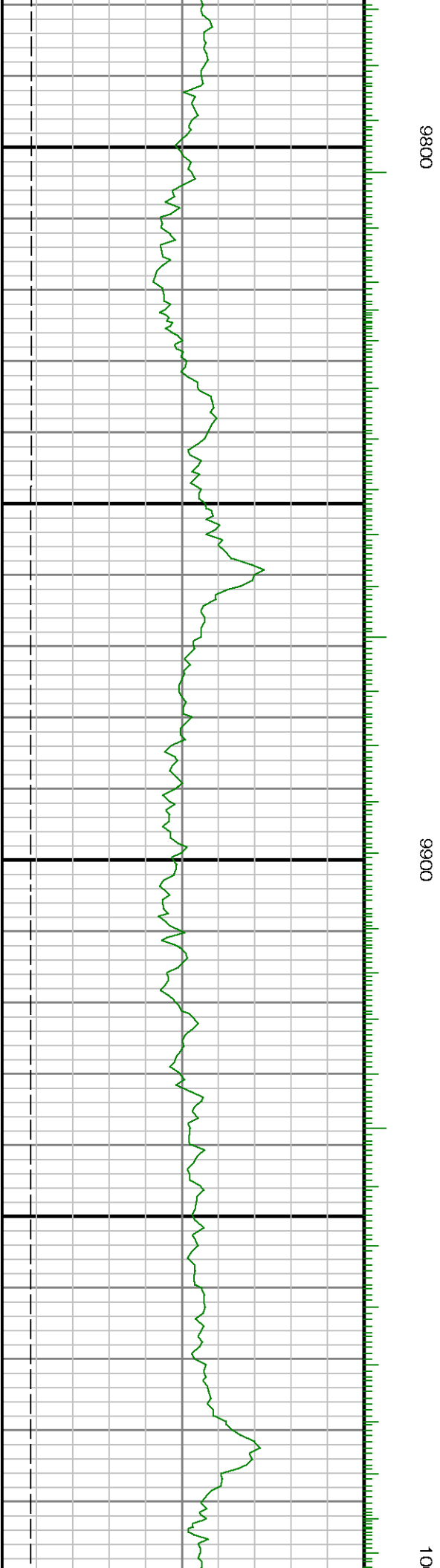
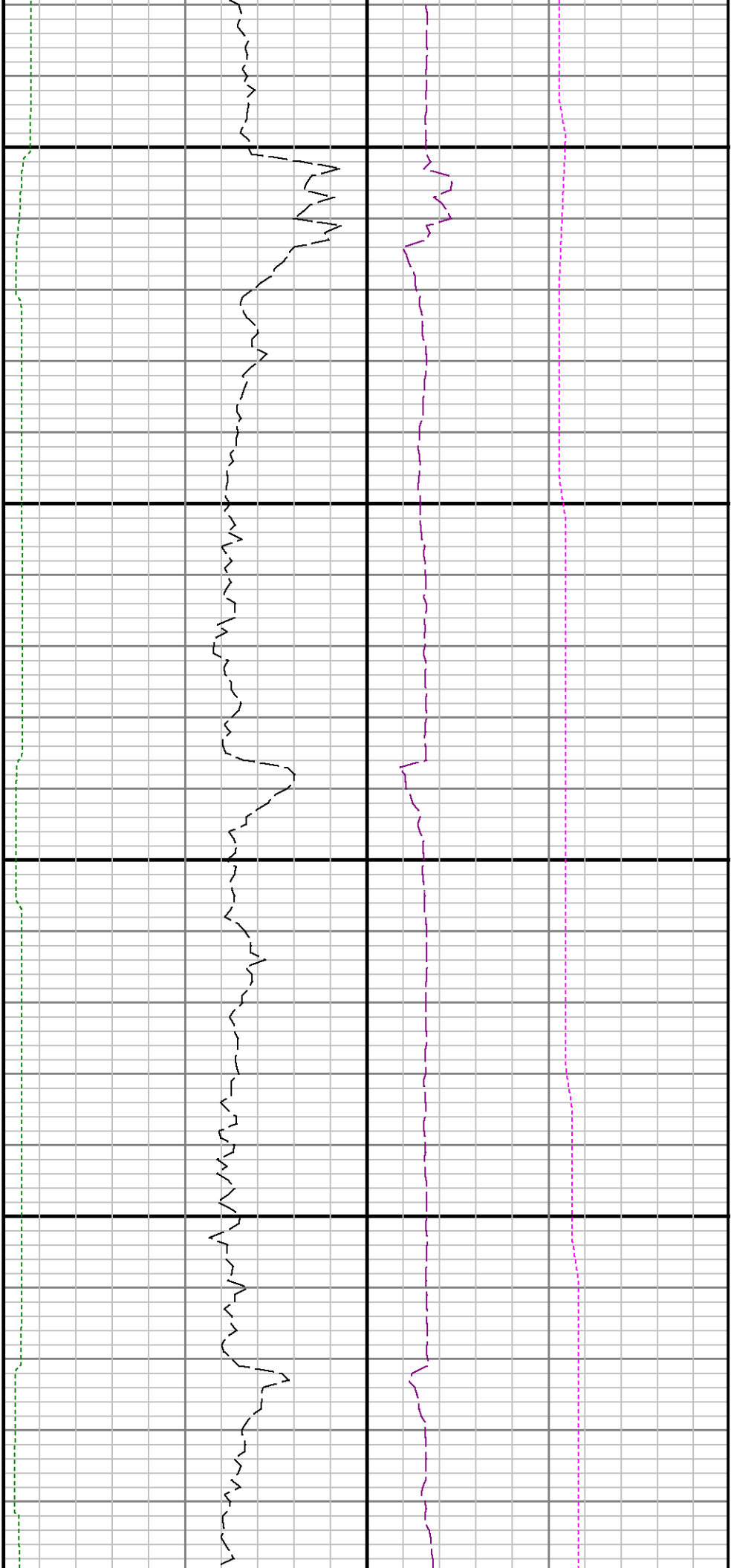


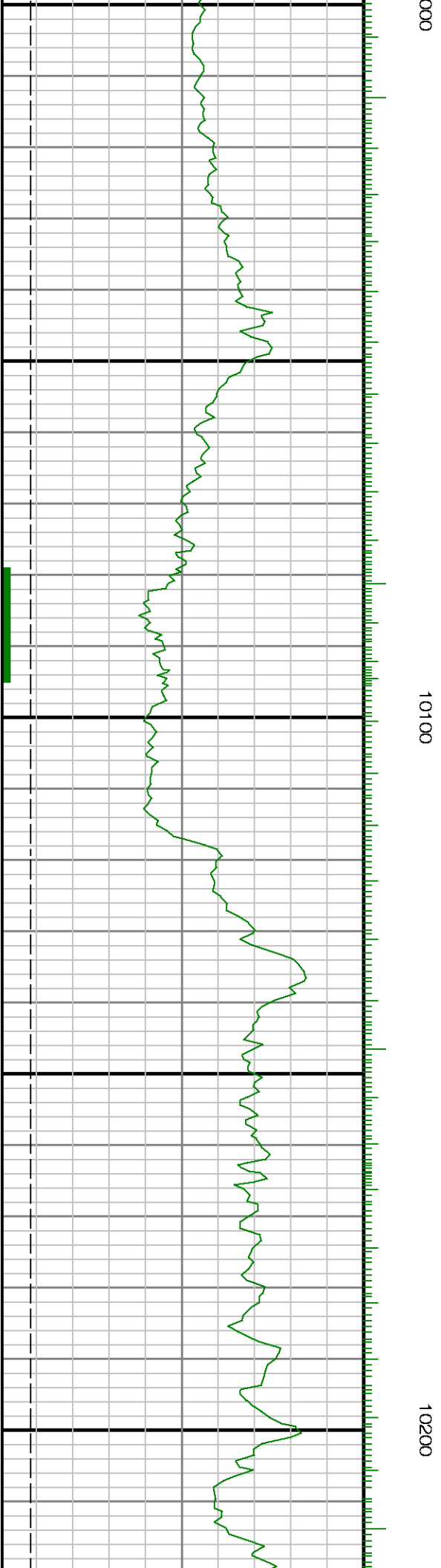
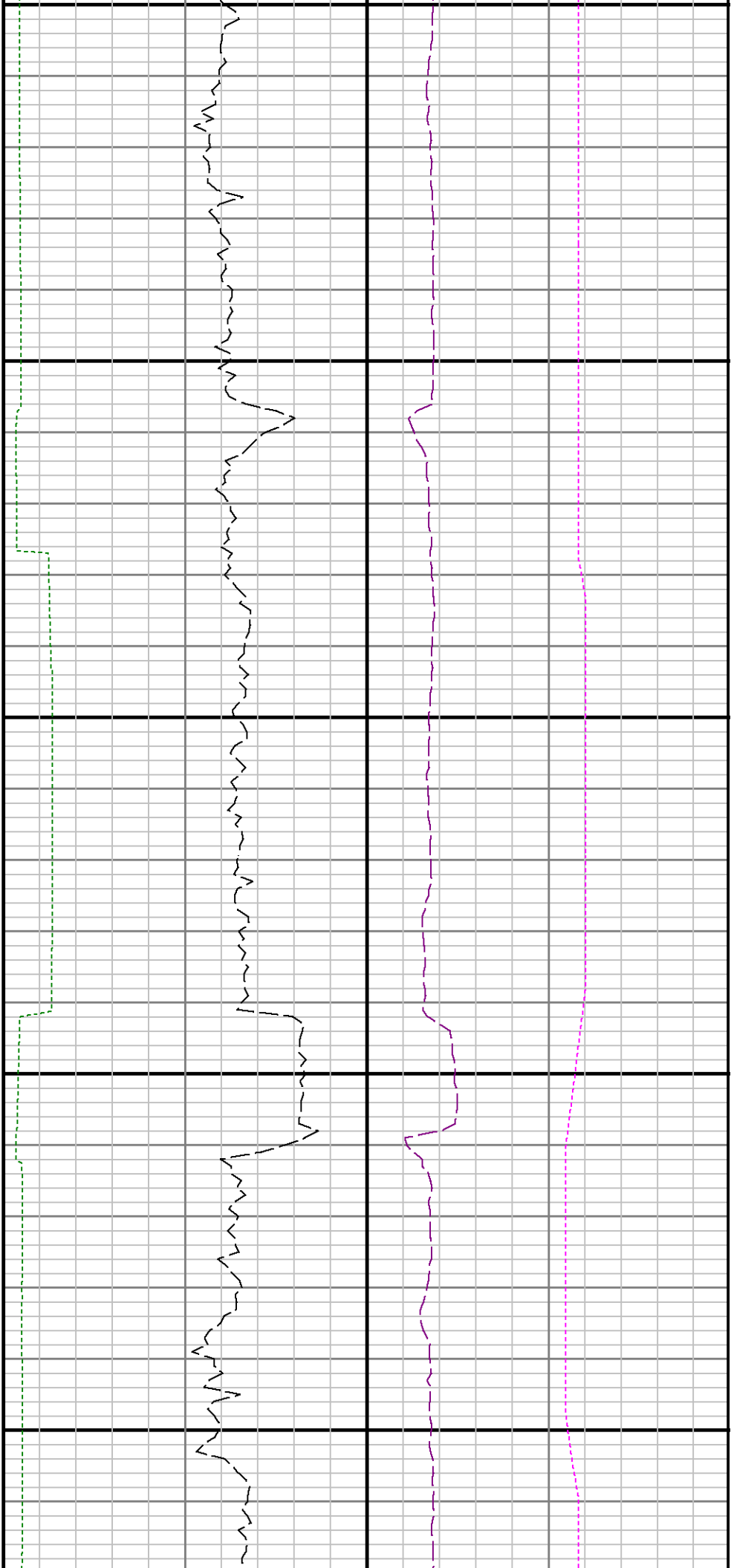


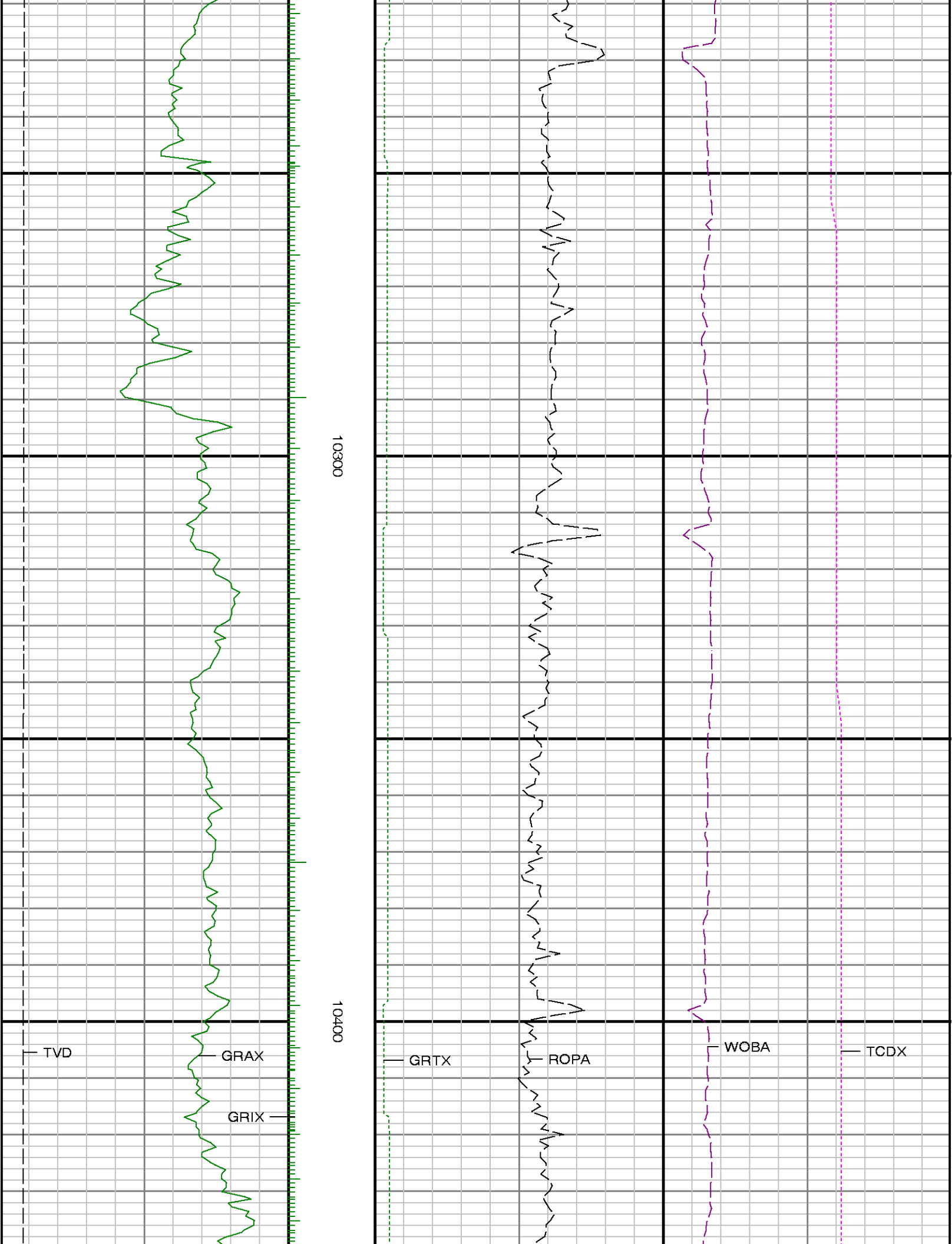
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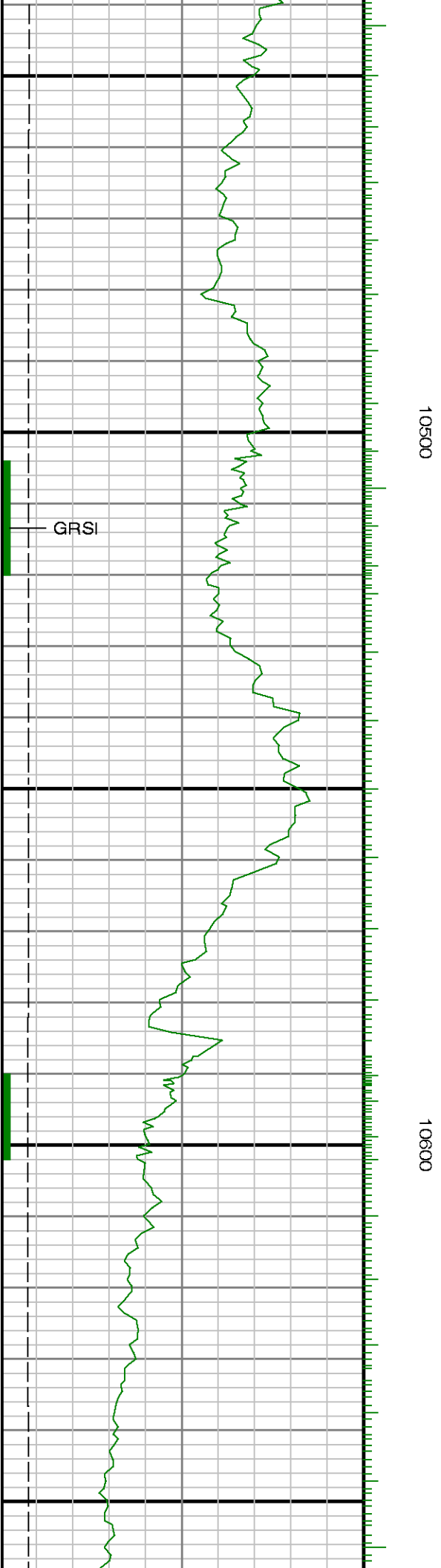
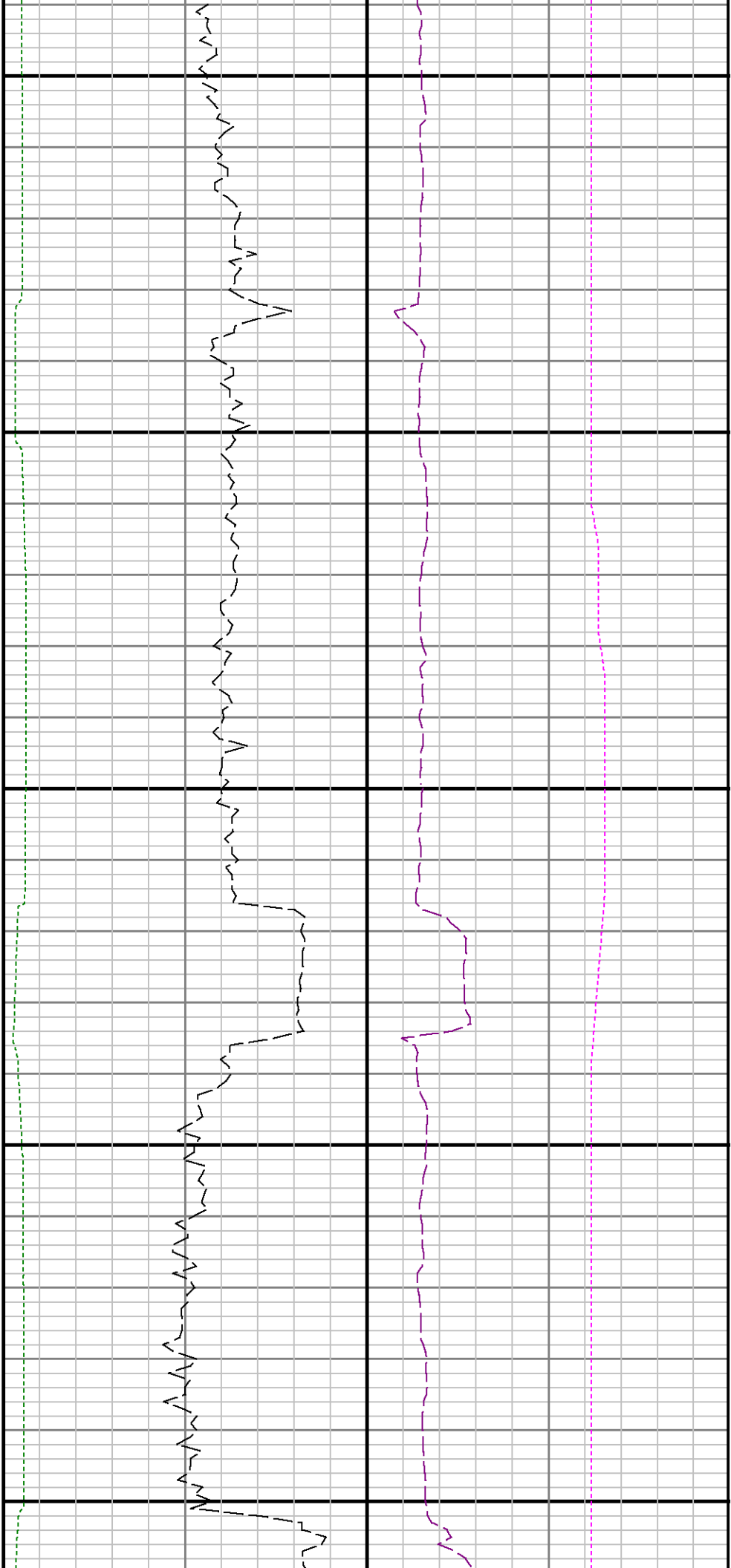
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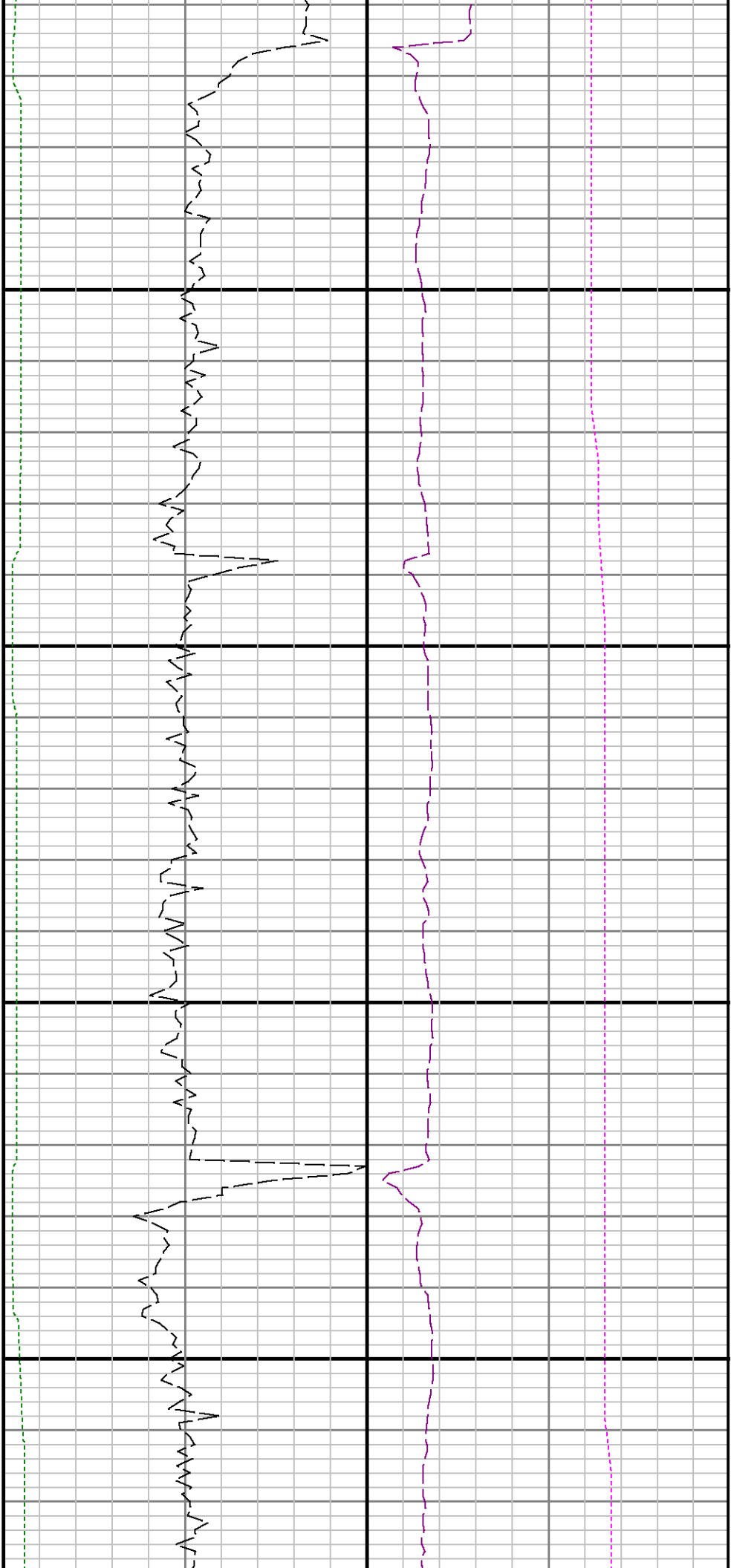






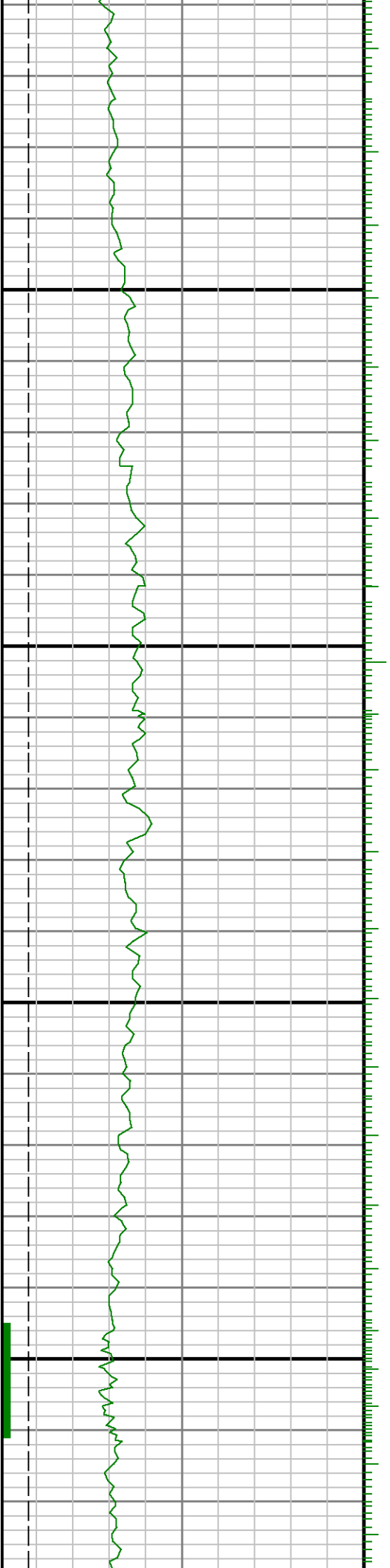


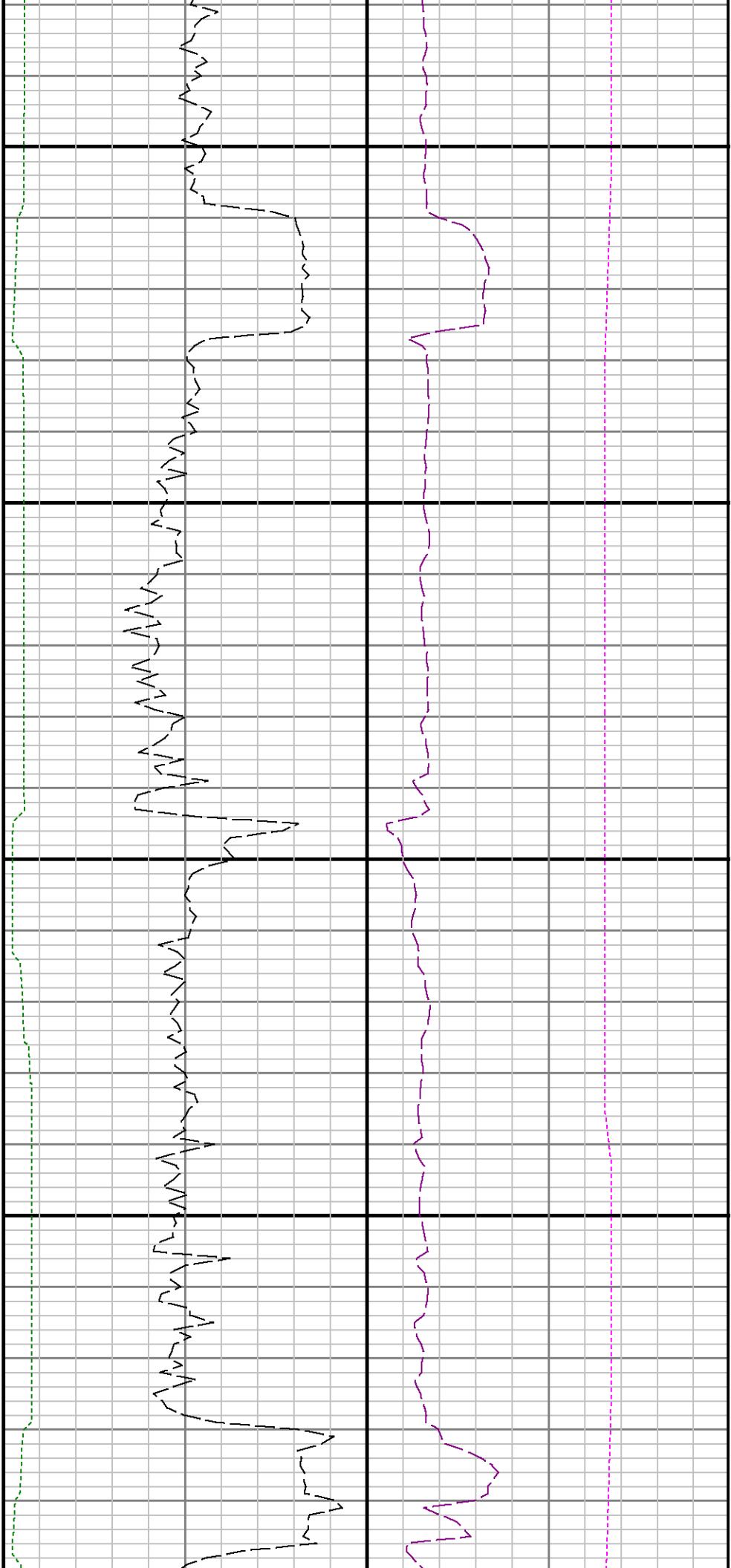




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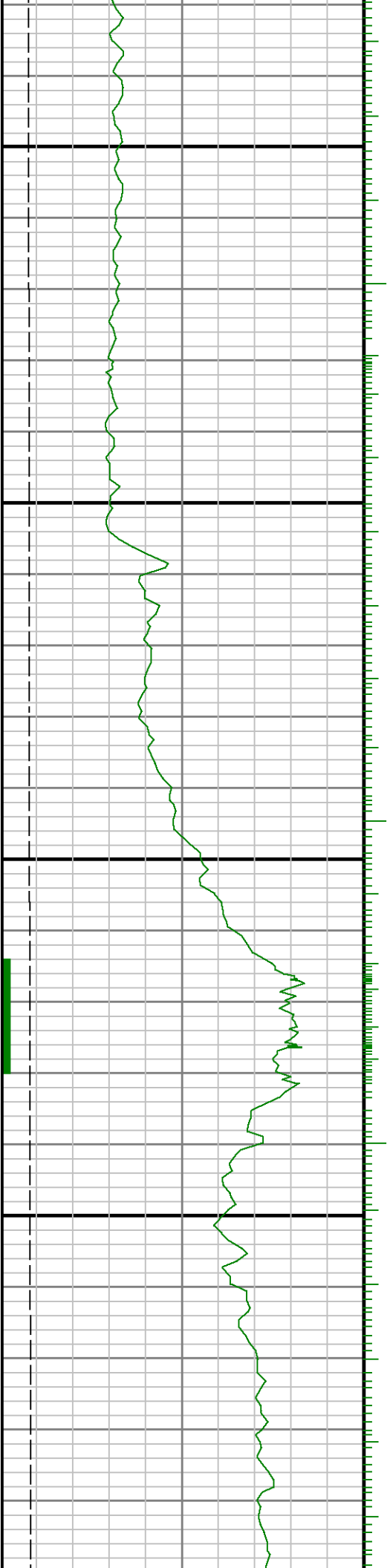




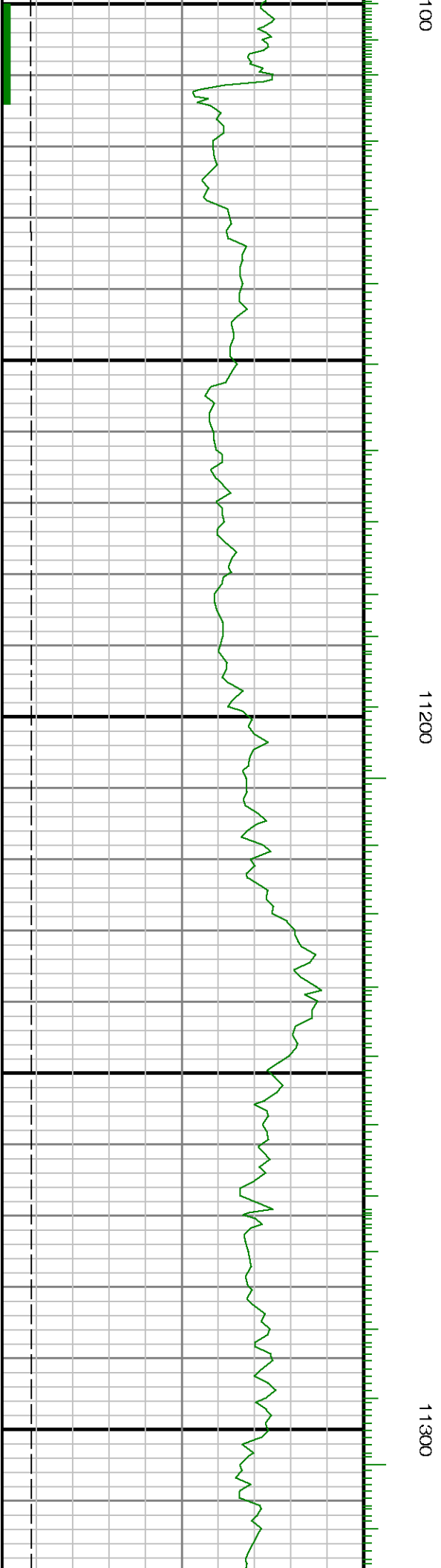
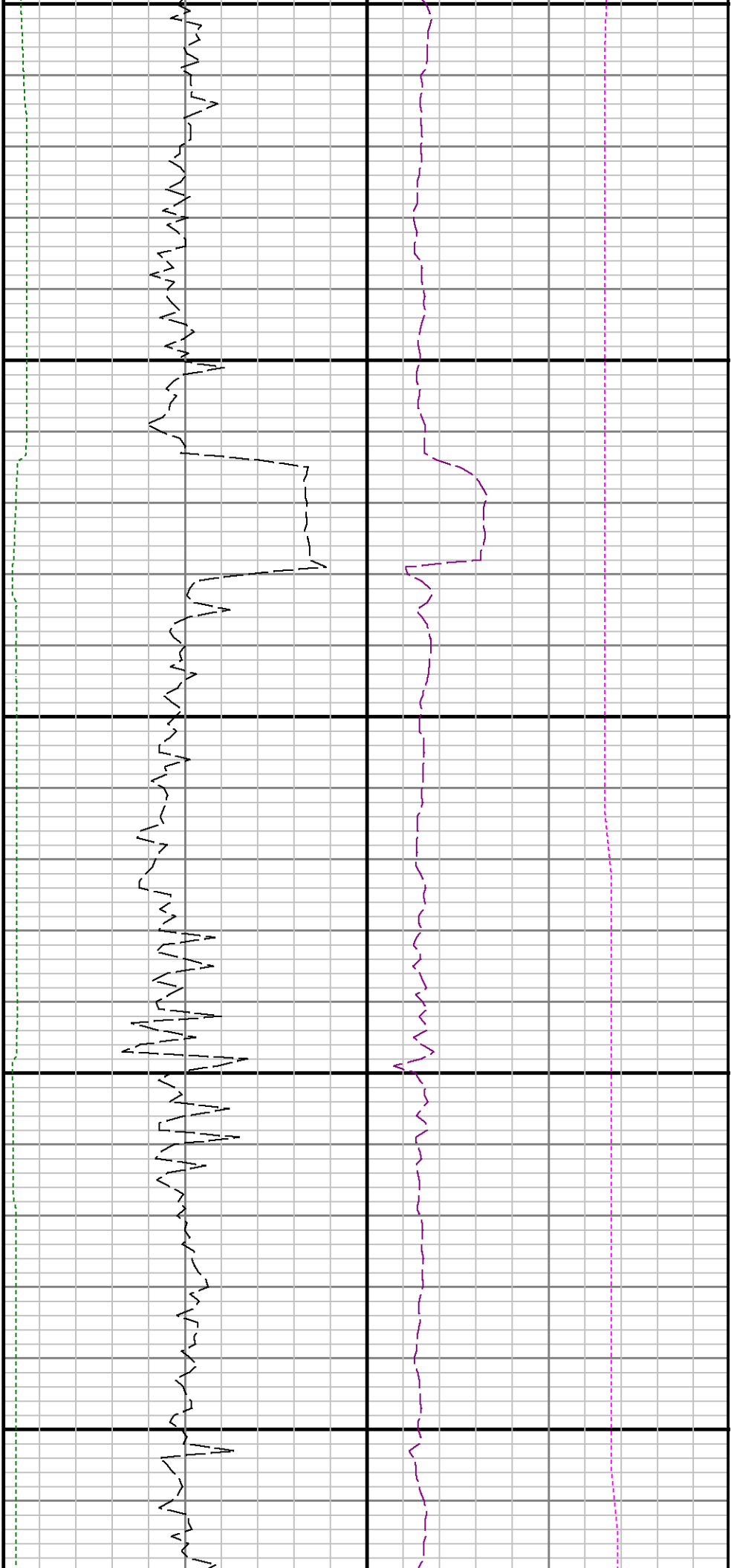
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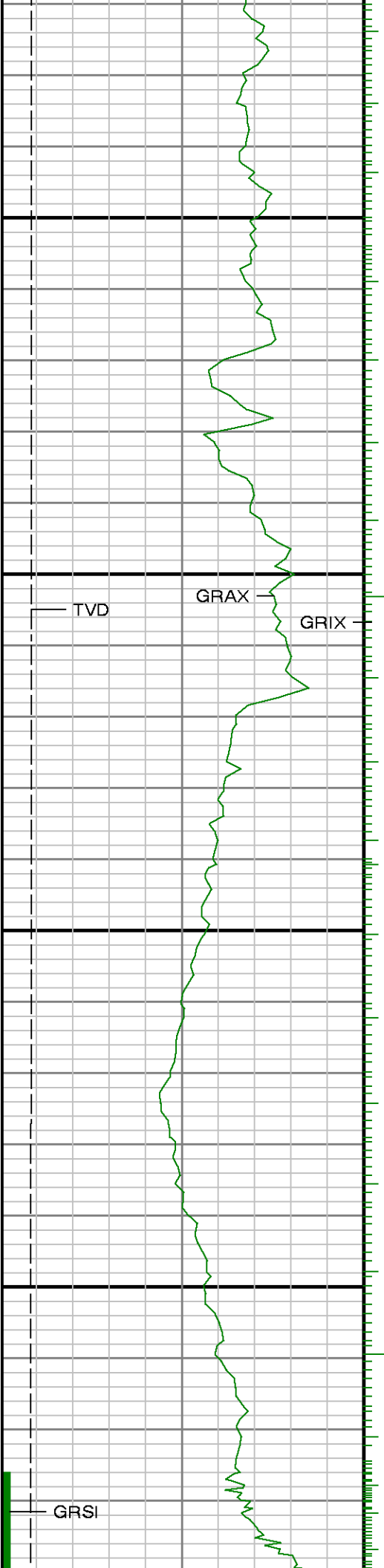
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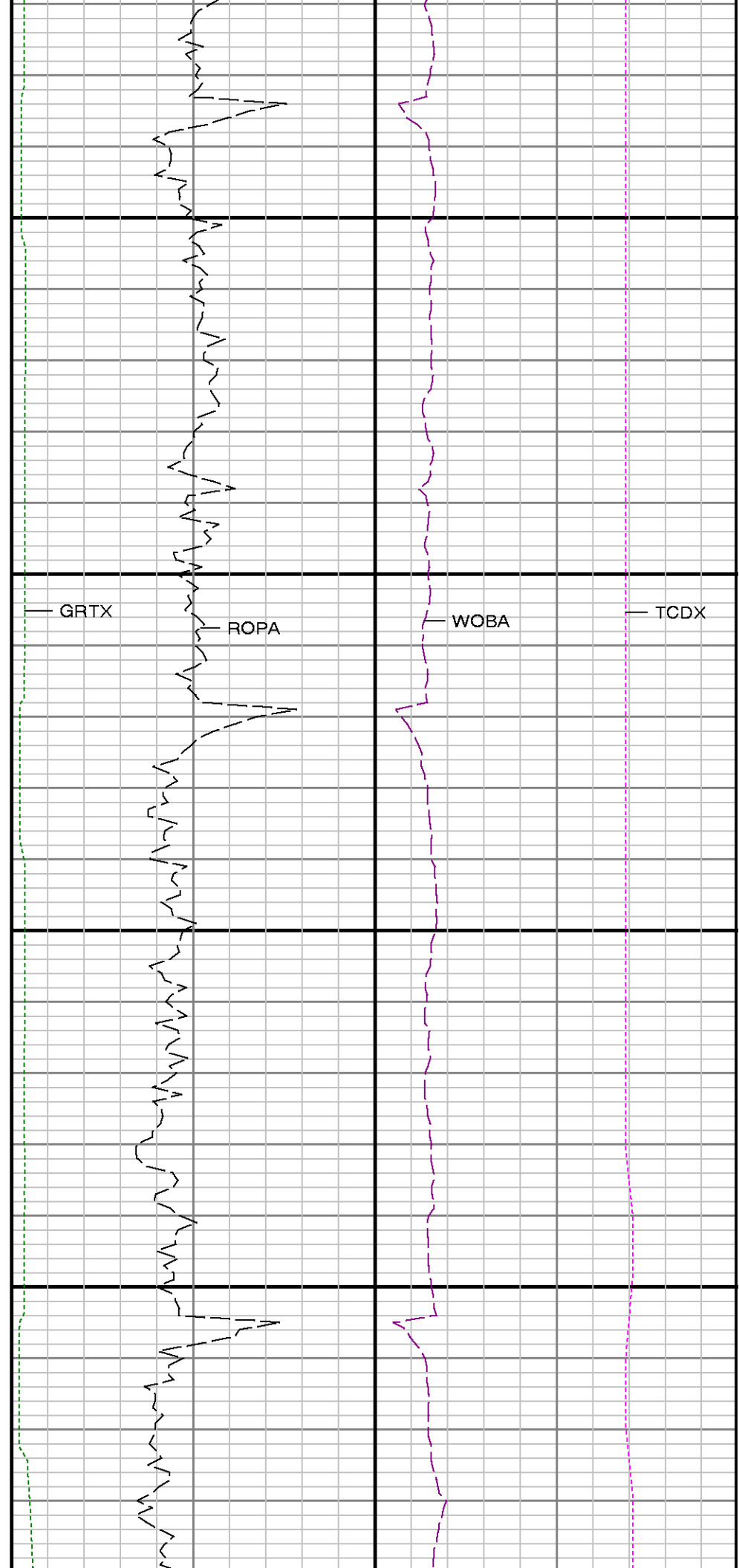


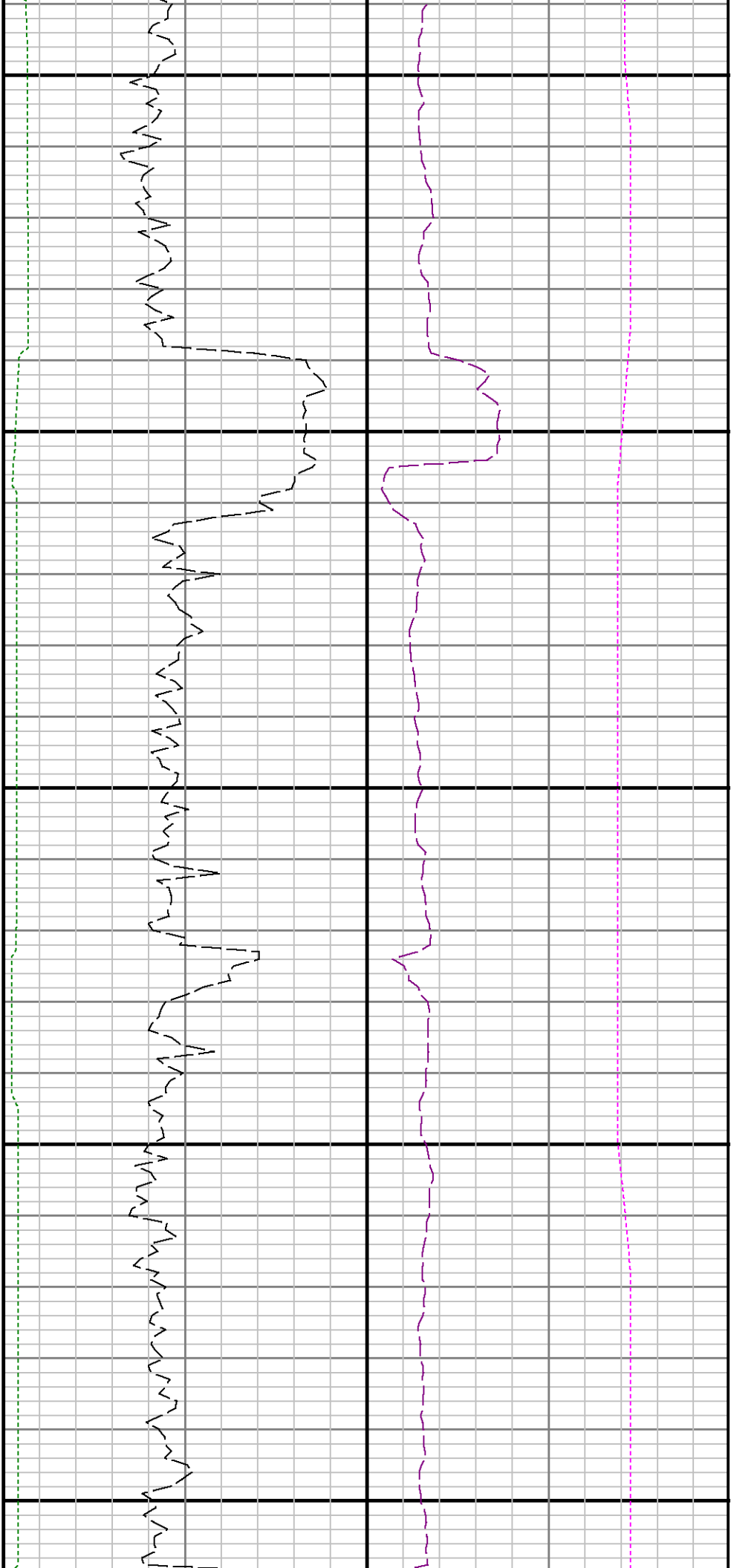




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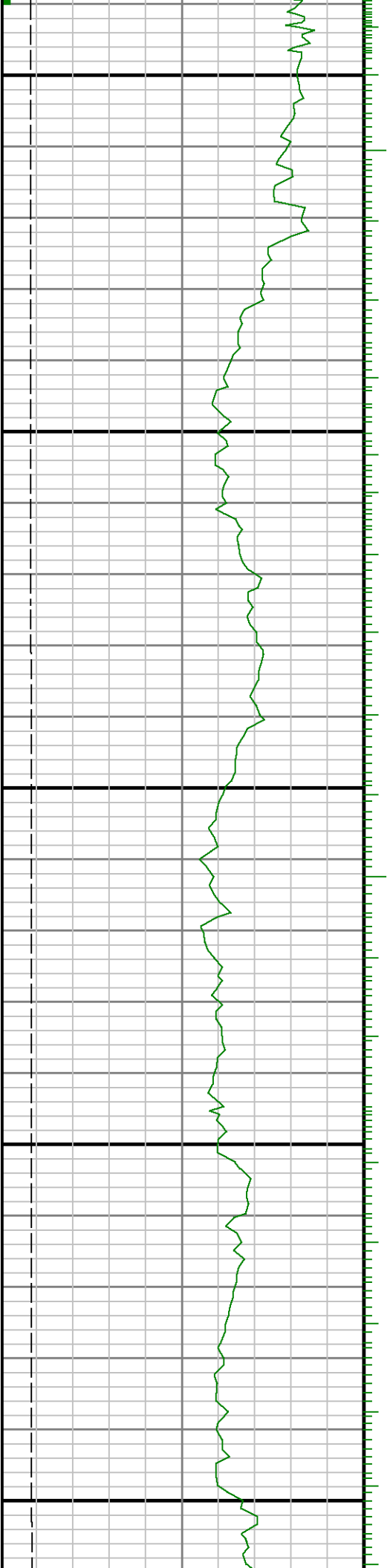
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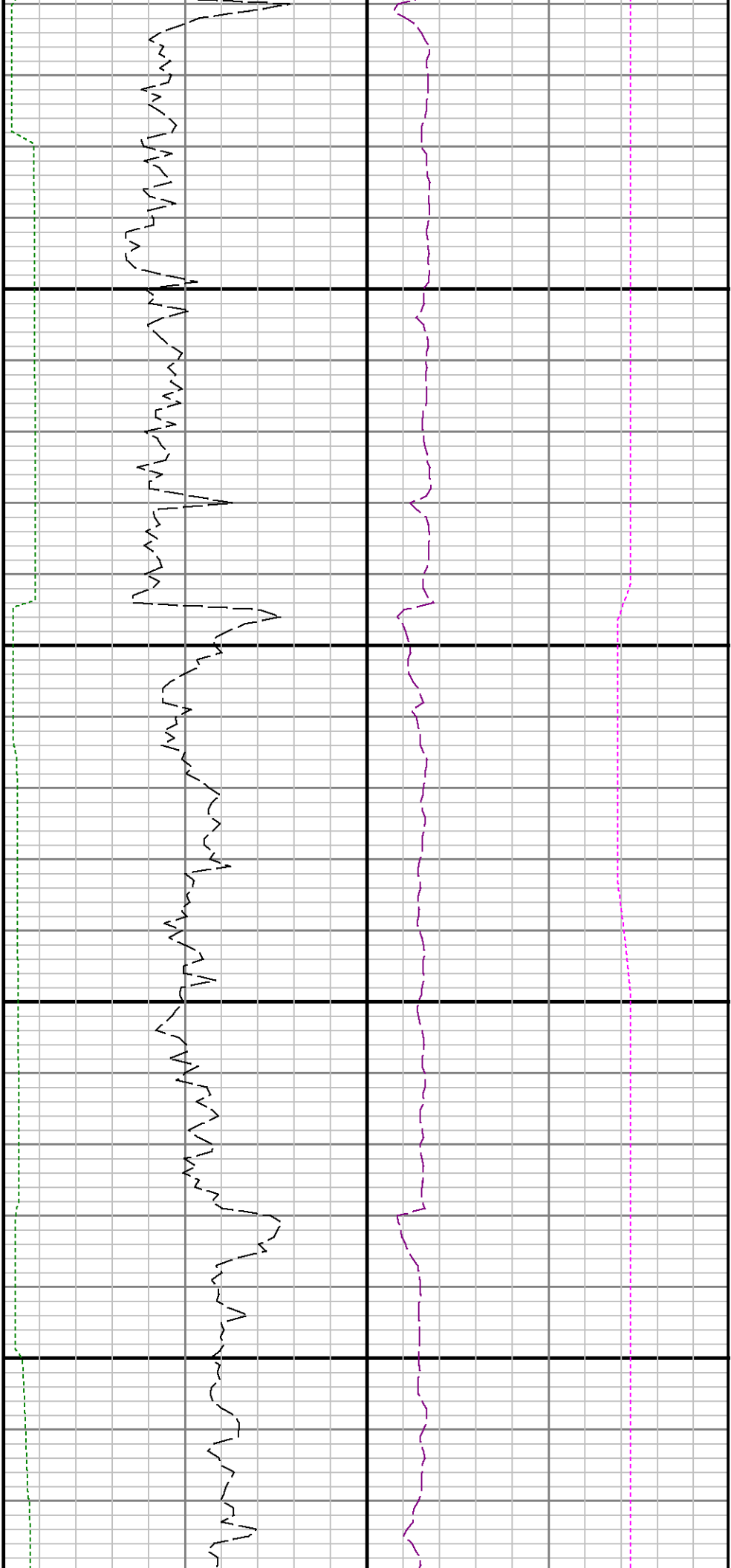




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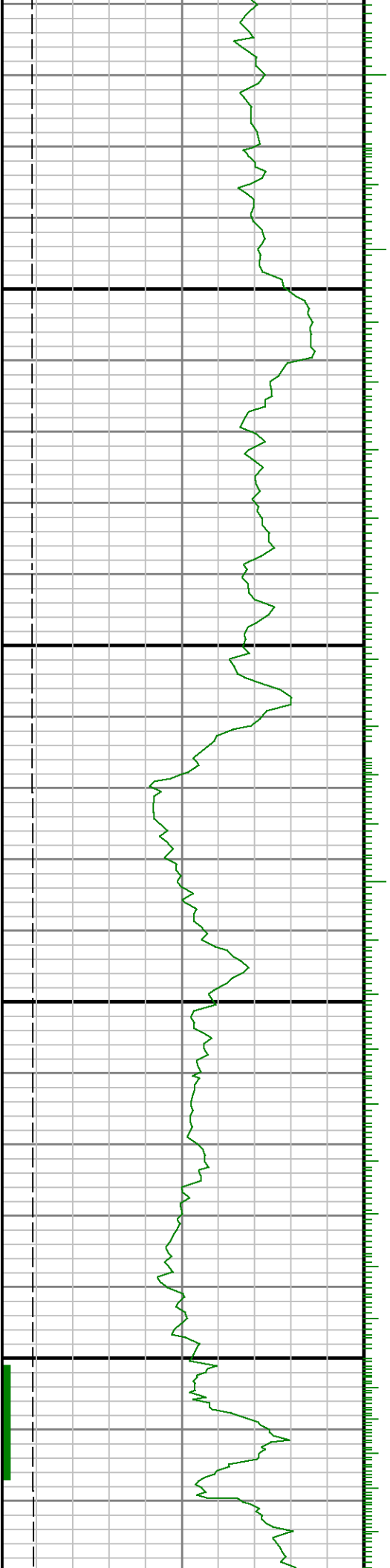
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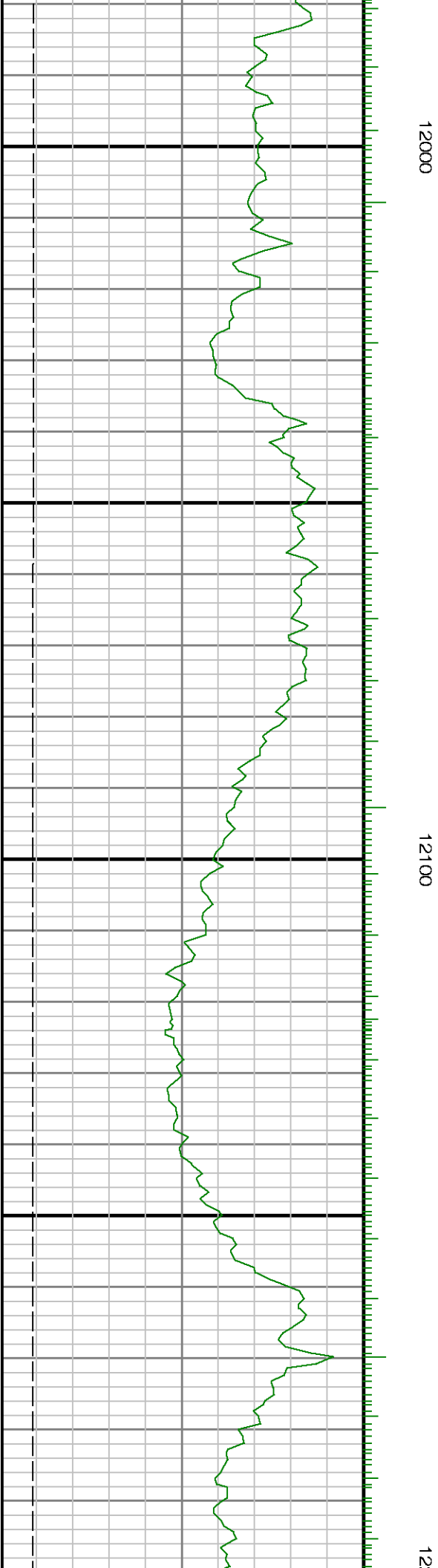
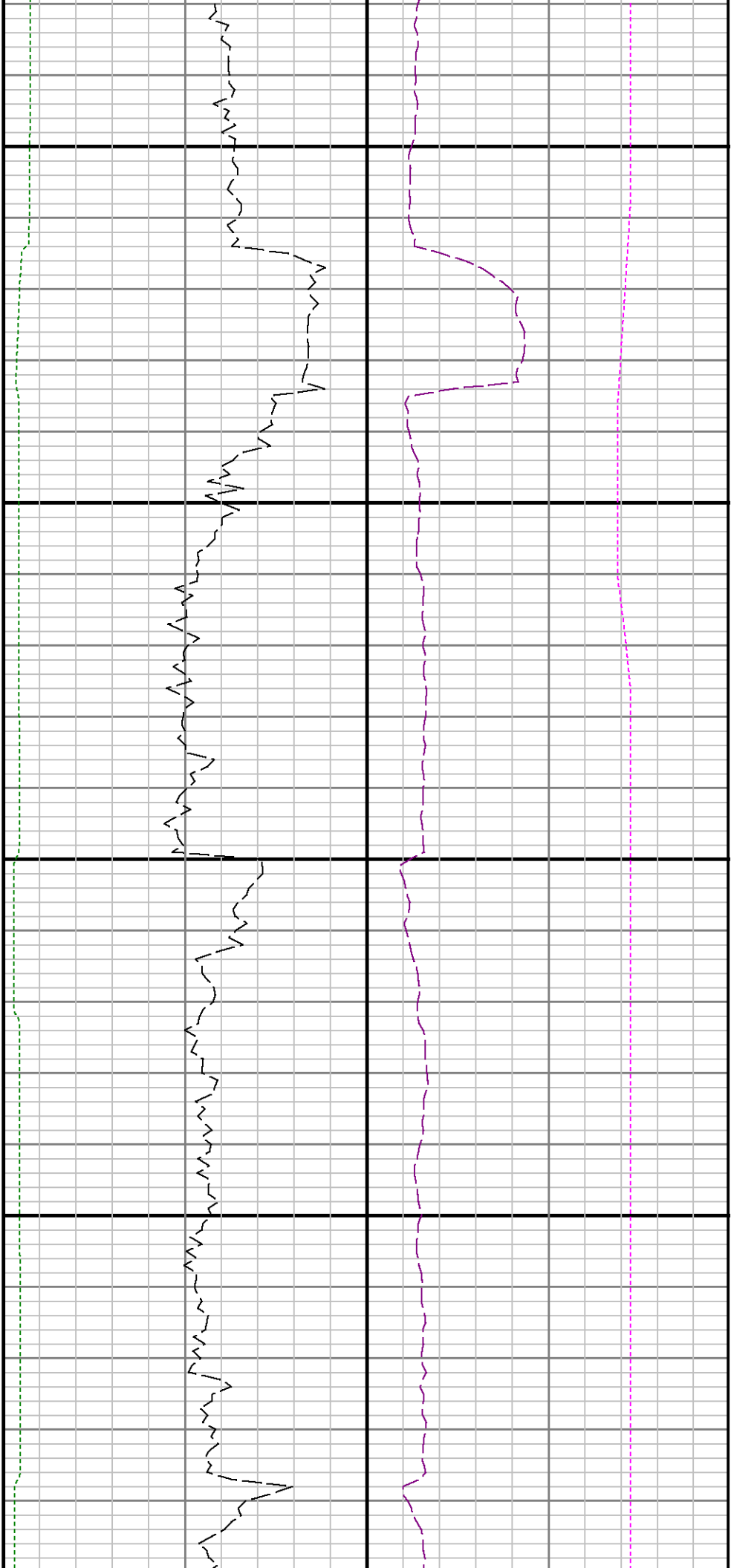


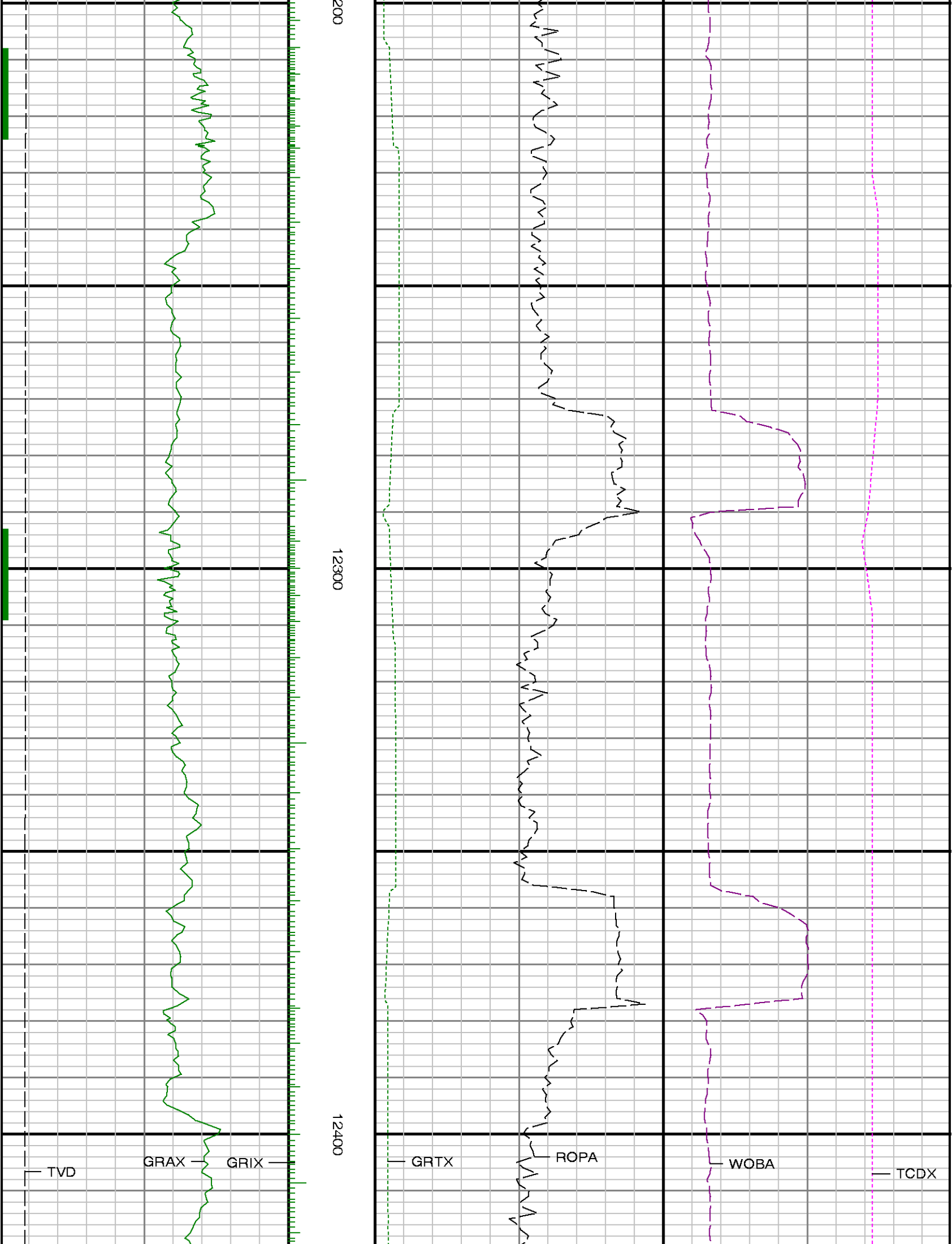


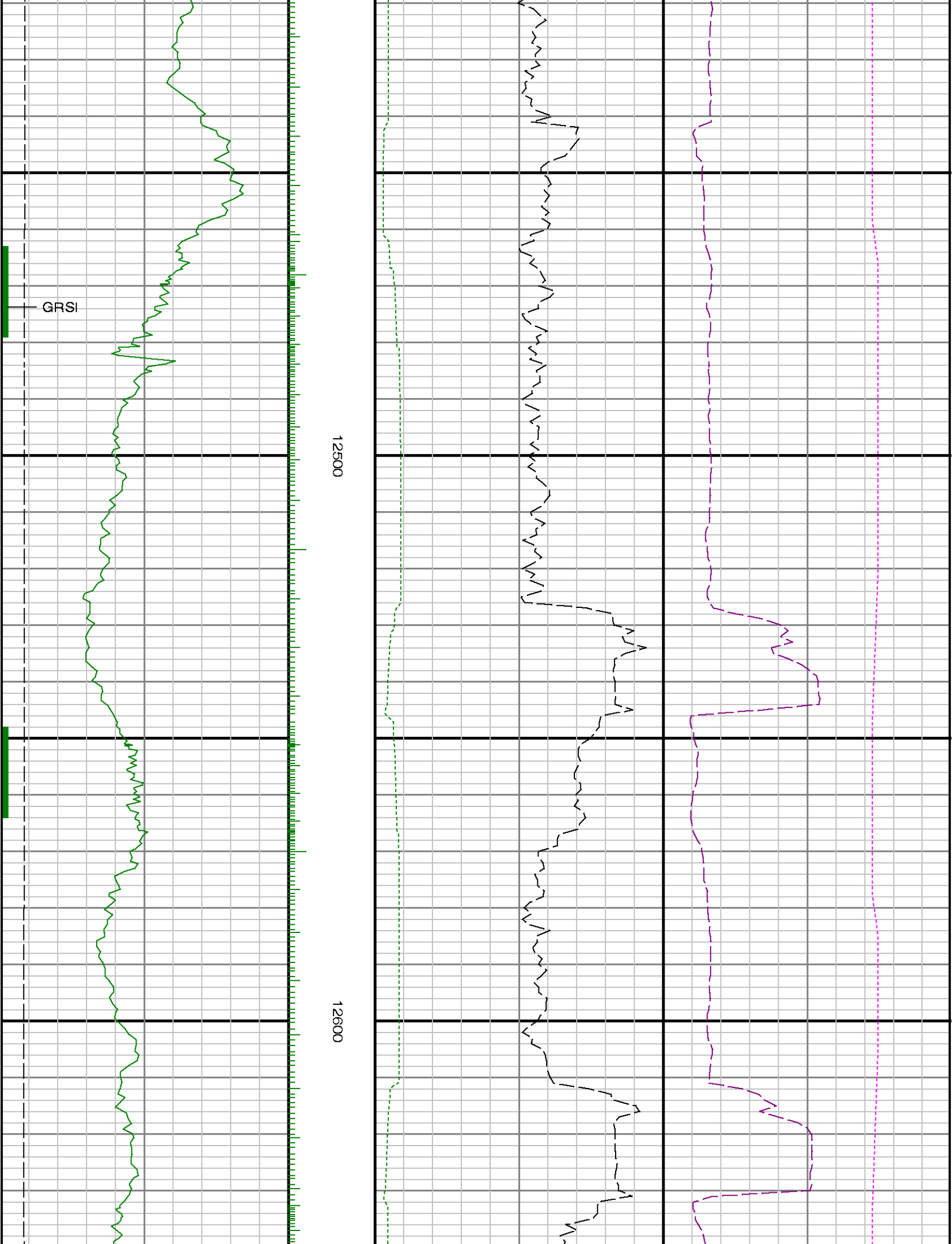
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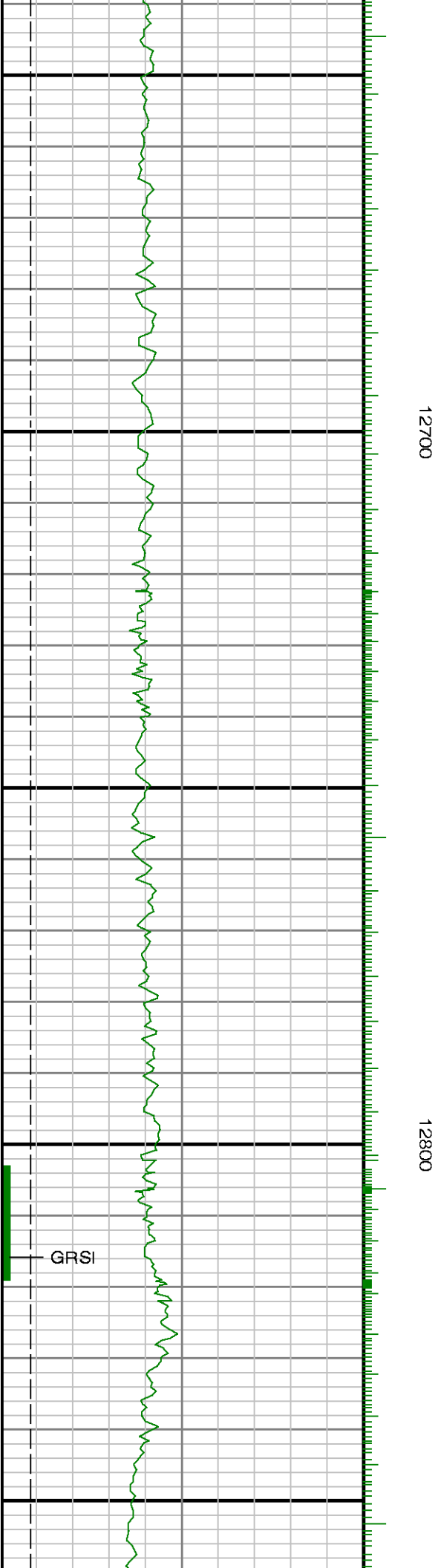
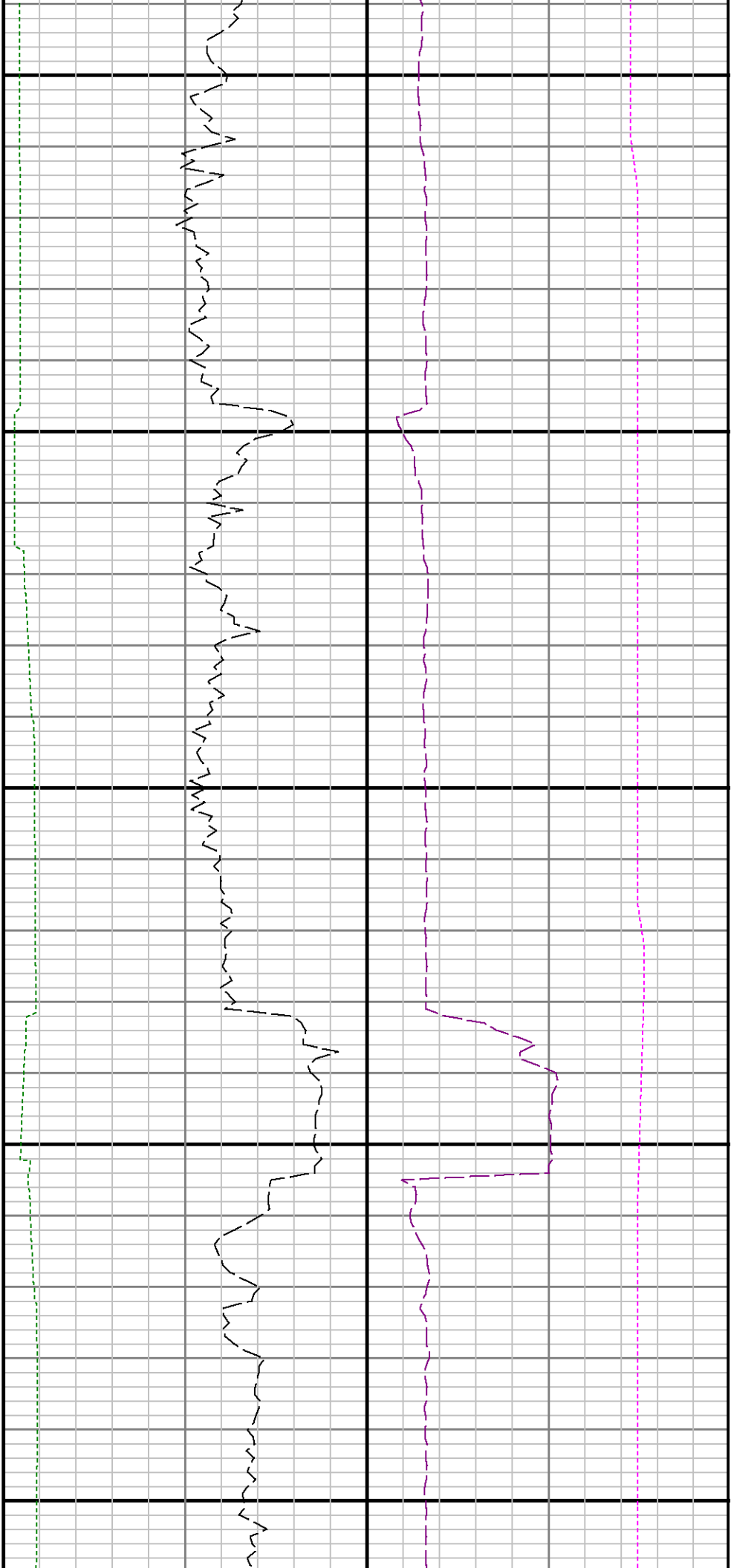
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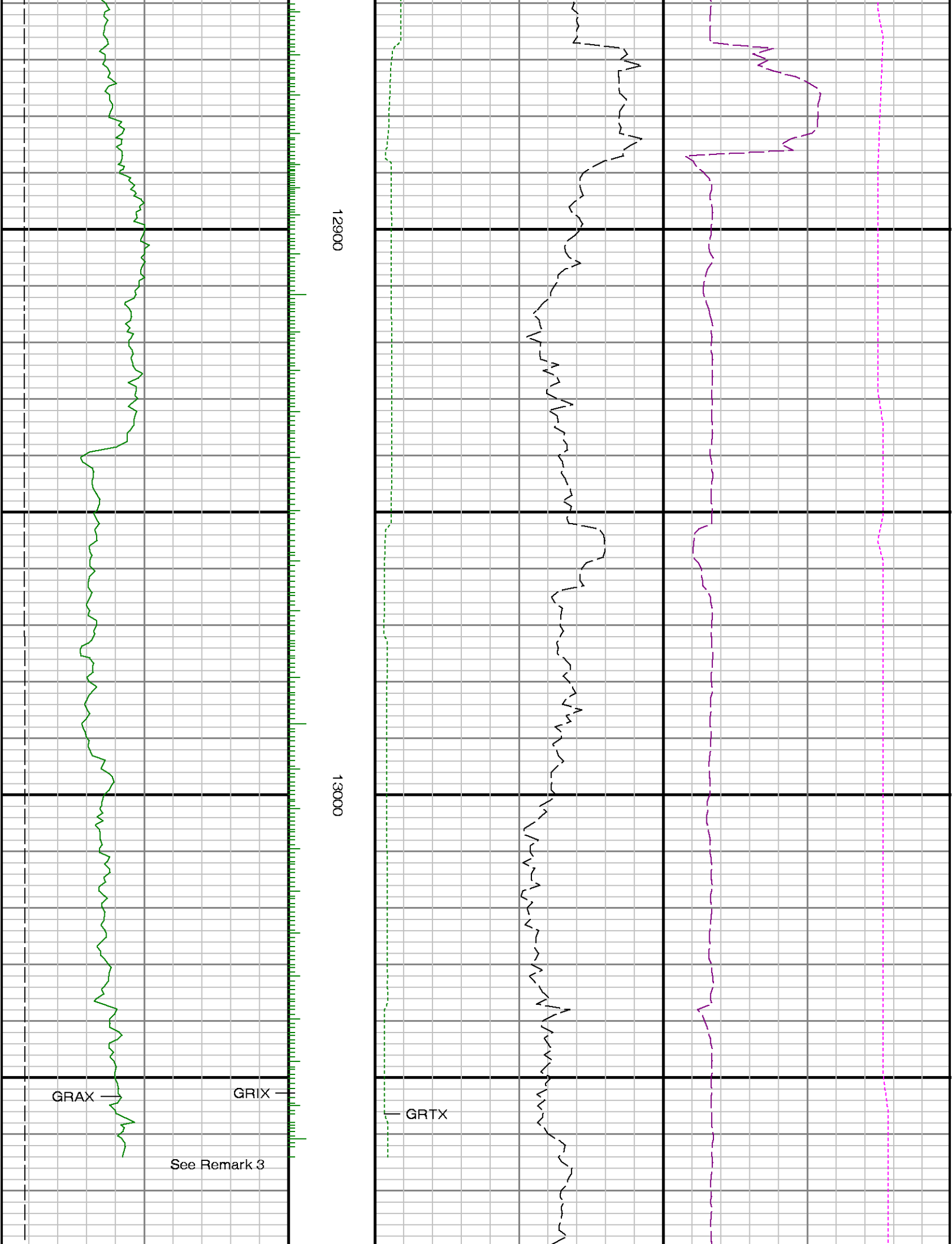












12900

13000

GRAX

GRIX

GRTX

See Remark 3

