



Realtime Log

Natural Formation Evaluation  
Gamma Ray

Scale:

Company: Anadarko

Well: Goodin 15N-A6HZ

Field: Weld County (KERR MCGEE)

Region: Continental US State: Colorado

1:240

MEASURED DEPTH

Status: Surface Location: Other Services:

Final Print

Latitude: 40° 3' 35.449" N

Longitude: 104° 42' 9.446" W

API Number:

05123407460000

Section: 7 TWN: 1N Range 65E

Directional  
VSS

Permanent Datum (P.D.): Mean Sea Level Elevation: 4979.00 ft.

Elevations: N/A

Log Measured From: Rig Floor 25.00 ft. Above P.D.

KB: 5004.00 ft.  
DF: 4979.00 ft.  
GL:

Depth Reference: Driller's Depth

Interval Logged Dates Magnetic Field Reference

Top: 6600 ft. Date From: 22/Mar/15 Dip Angle: 66.55° Azi Reference North: True

Bottom: 13320 ft. Date To: 27/Mar/15 Total Mag to Reference

Spud Date: 21/Mar/15 Field Strength: 52749.0 nT North Correction: 8.04°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
8.750 in.	1600 ft.	7719 ft.	9.600 in.	36.00 lb/ft	Surface	1600 ft.
6.125 in.	7719 ft.	13320 ft.	7.000 in.	26.00 lb/ft	Surface	7709 ft.

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	13320 ft.	8.750 in.	7719 ft.	0.7 / 25.9°	81.1° / 358.1°
			6.125 in.	13320 ft.	87.8° / 359.6°	89.8° / 357.5°
					/	/
					/	/
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig / Contractor:	H&P 307	/ Helmerich & Payne Drilling
PAIS	6.4.1.34	Job No:	7134781	/ D & E
		District / Unit:	RMD	

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Log Run Summary

LWD	BHA	Bit	Bit	Bit	Bit	Assembly	Logged Interval		Bit Depth Interval		Date / Time				Circ.
							Top	Bottom	From	To	Start		End		
Run	Run	Run	Size	Type	Gauge	Type									
No.	No.	No.	(in.)		(in.)		(ft.)	(ft.)	(ft.)	(ft.)					(hrs.)
1	1	1	8.750	PDC	3.500	Mud Motor	6600	7673	1600	7719	22/Mar/15	10:11	24/Mar/15	05:44	41.1
2	2	2	6.125	PDC	6.500	Mud Motor	7729	13021	7719	13320	24/Mar/15	19:39	24/Mar/15	11:01	34.4

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Andy King	22/Mar/2015	27/Mar/2015	Jake Miller	22/Mar/2015	27/Mar/2015	Mike Gurnsey	22/Mar/2015	26/Mar/2015
Bill Herbers	22/Mar/2015	27/Mar/2015	Edward Beatty	26/Mar/2015	27/Mar/2015			

Mud Properties Record

Date / Time	LWD Run No.	Measured Depth (ft.)	Mud Type	Density (lb/gal)	Viscosity (s/qt)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
23/Mar/2015	1	7118	Poly-Plus	10.2	48	9.7	0.0	3/88	Active Pit	2500	0.0
26/Mar/2015	2	11595	Poly-Plus	9.6	44	9.7	0.0	3/91	Active Pit	2200	0.0

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg.	API
GRTX	Gamma Ray Time Since Drilled	Min.
GRIX	Gamma Ray Density, Points	unitless
GRSI	Gamma Ray Slide Indicator	unitless
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.	K. lbs.

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (m.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	11710701	Directional	46.52	6.750	2.750
1	SRIG	10392040	Gamma	43.15	6.750	2.750
2	DIR	12456788	Directional	52.74	6.750	2.750
2	SRIG	ZSGM5324	Gamma	49.32	6.750	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

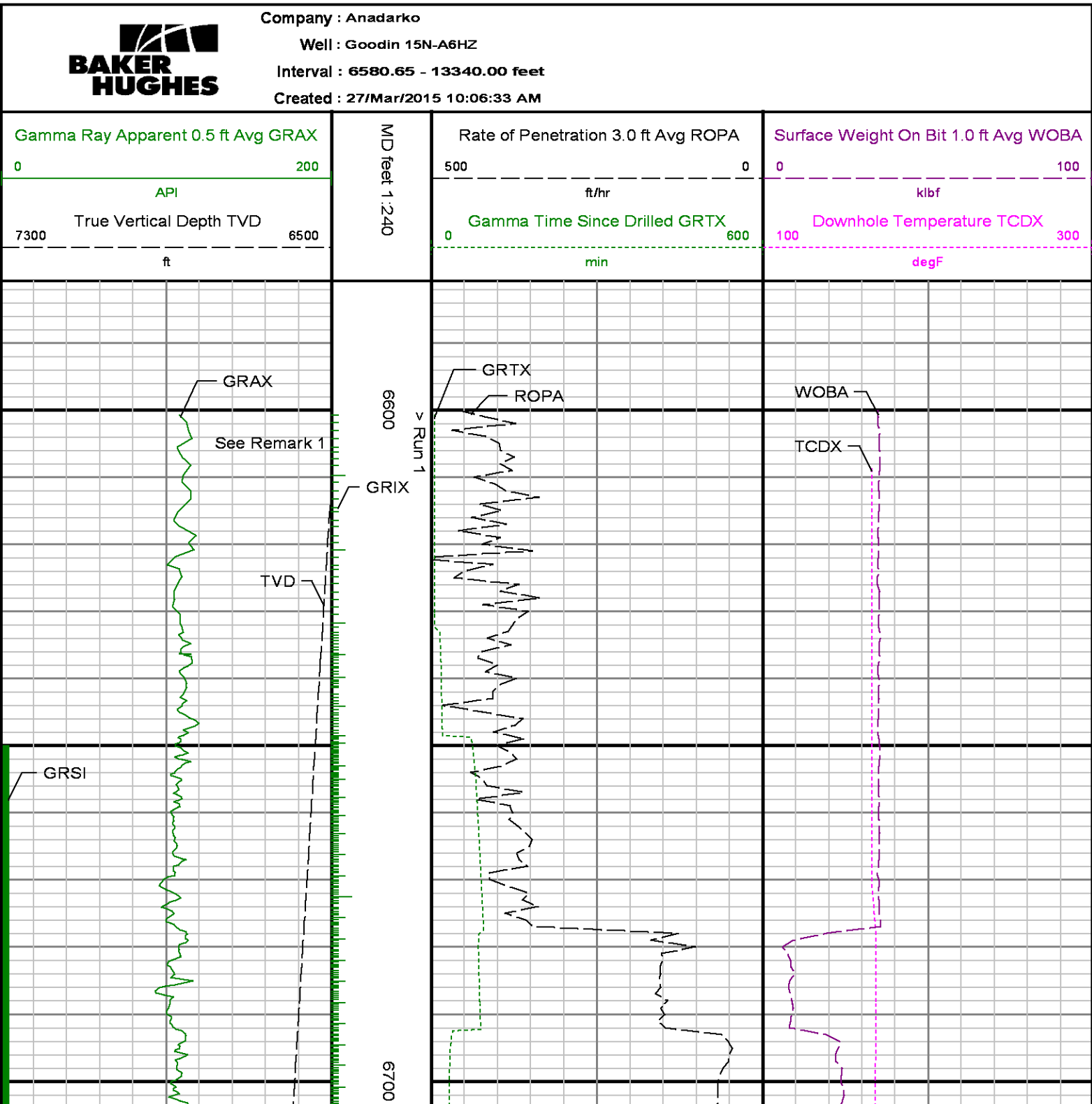
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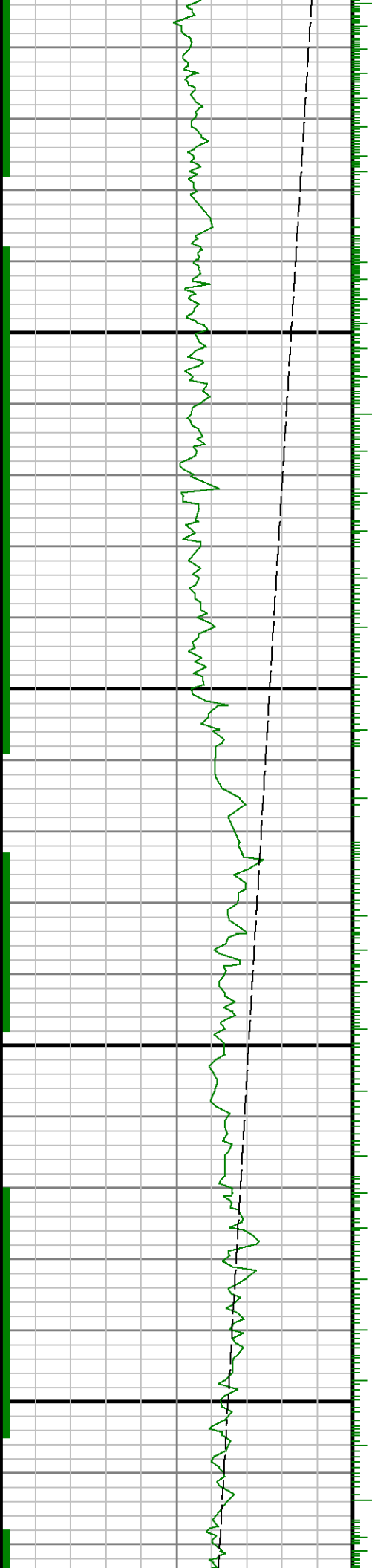
<p>(1) Baker Hughes LWD Run 1 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1600 to 7719 ft MD (1596 to 7210 ft TVD).</p> <p>(2) Baker Hughes LWD Run 2 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 7719 to 13320 ft MD (7210 to 7244 ft TVD).</p> <p>(3) 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 logging engineers, depth calibrations and measurements could not be independently verified.</p> <p>(4) A sliding indicator is shown on the left edge 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>
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Remarks

Number	Measured Depth	Hole Section	LWD Run No.	Remark
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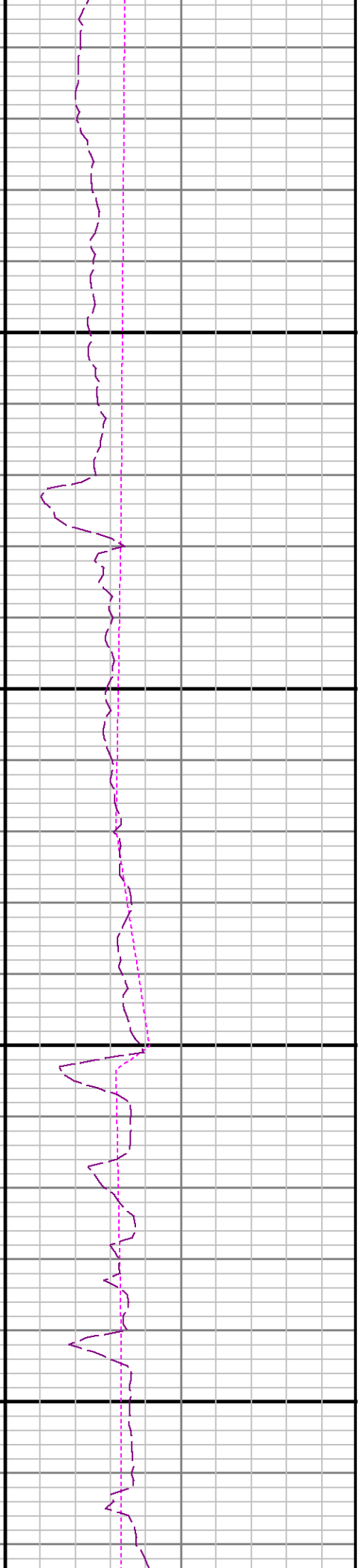
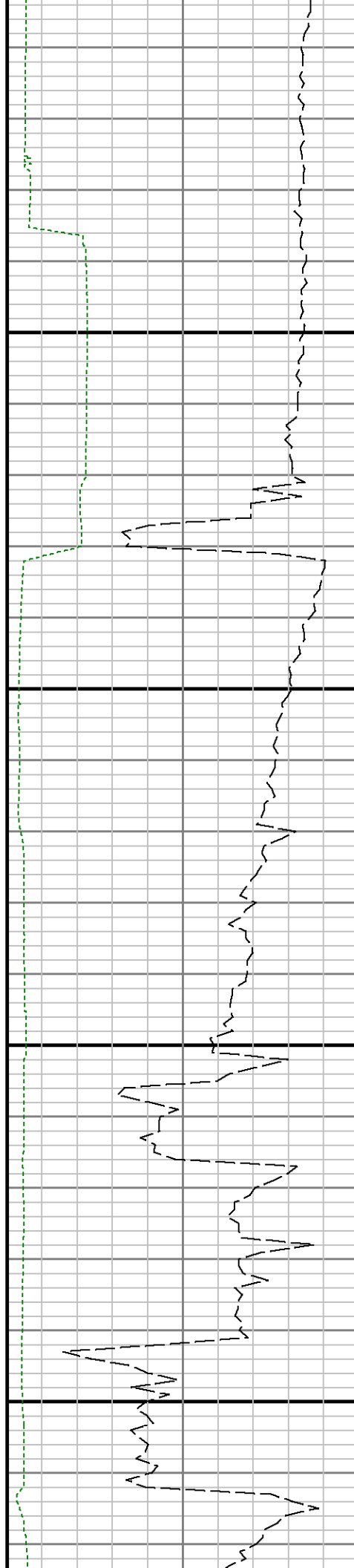
	(m.)	(in.)		
1	6600	8.750	1	Began logging Gamma above Build Section at 6600 ft MD (6489 ft TVD).
2	7680	6.125	2	The interval from 7673 to 7719 ft MD (7221 to 7227 ft TVD) was logged up to 38 hours after being drilled due to a trip out of hole for casing and cement operations and to pick up Lateral BHA.
3	7690	6.125	2	The interval from 7673 to 7729 ft MD (7221 to 7728 ft TVD) contains no logging data due to sensor offset from bit at the end of run 1, as well as decoding issues resulting from agitator effects while drilling out of casing shoe.
4	13040	6.125	2	No logging data is shown from 13021 to 13320 ft MD (7244 ft TVD) due to a gamma sensor malfunction.

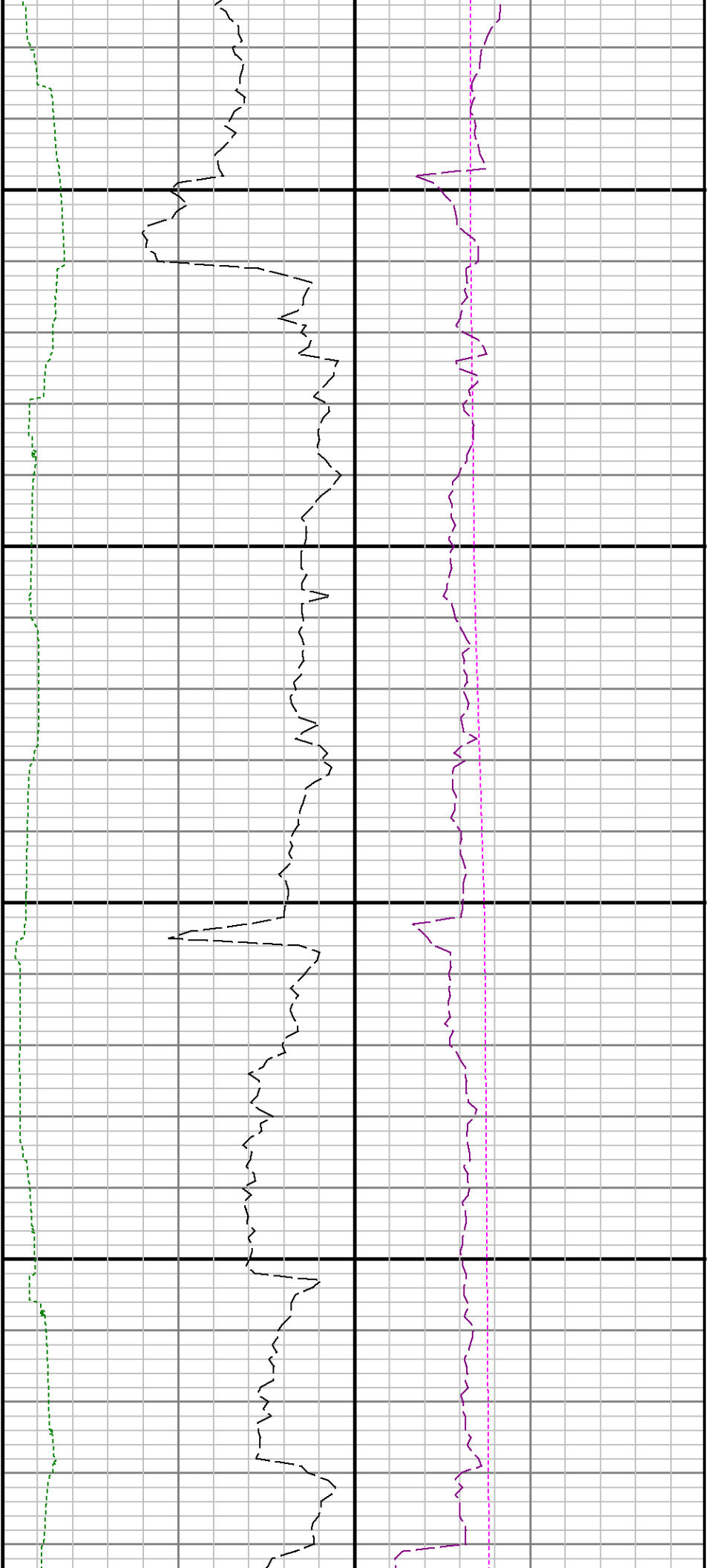




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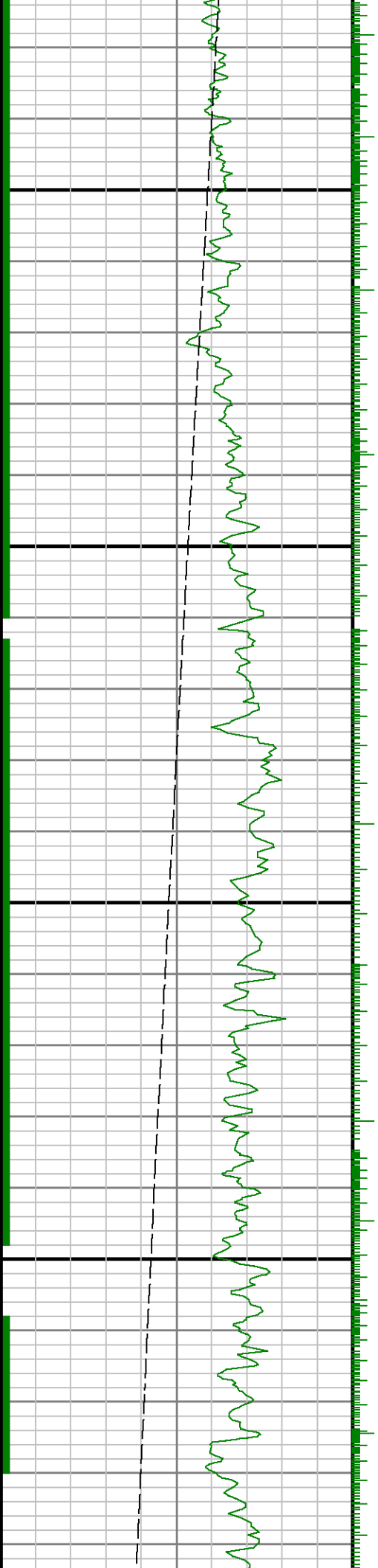
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7000

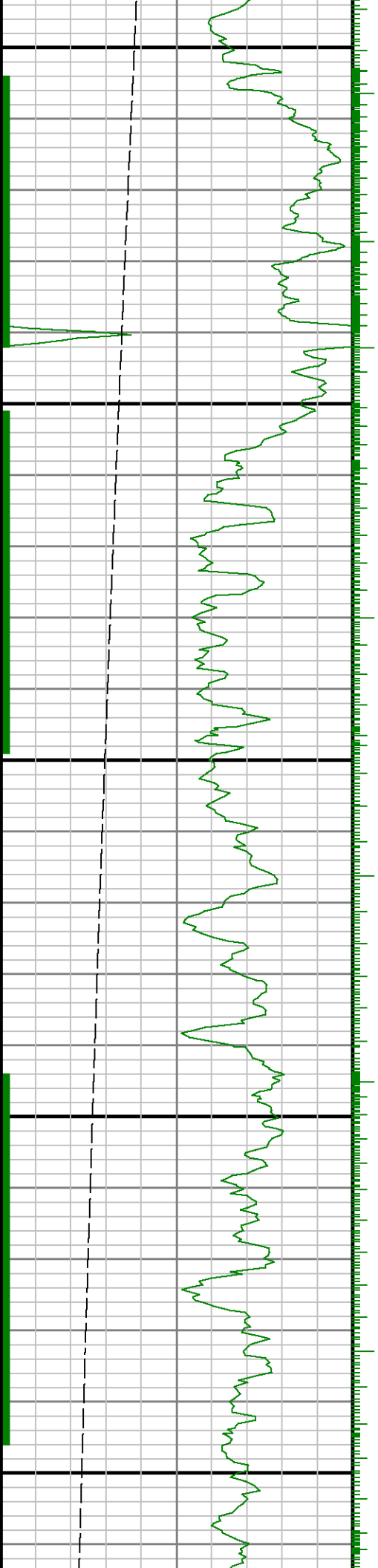
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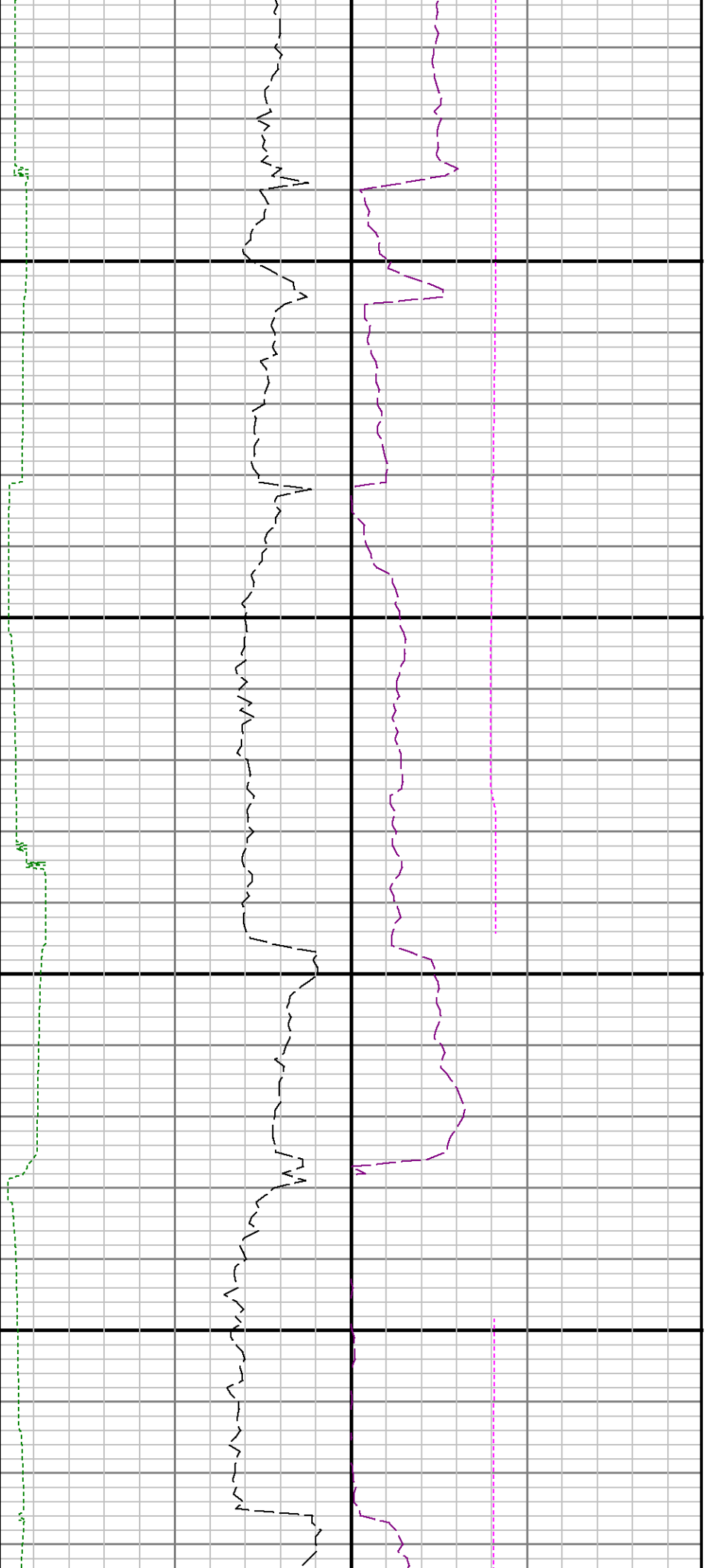




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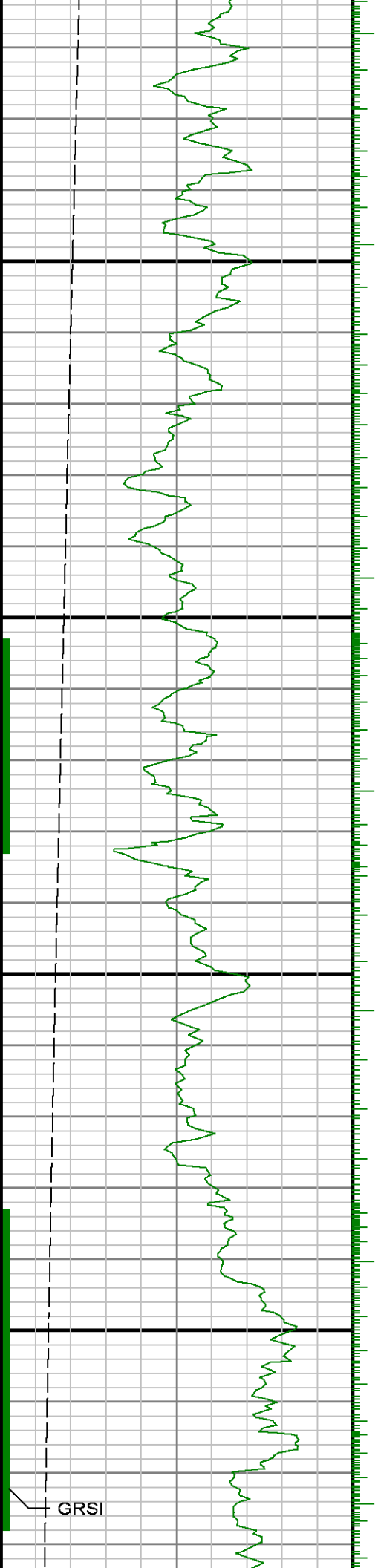
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7400

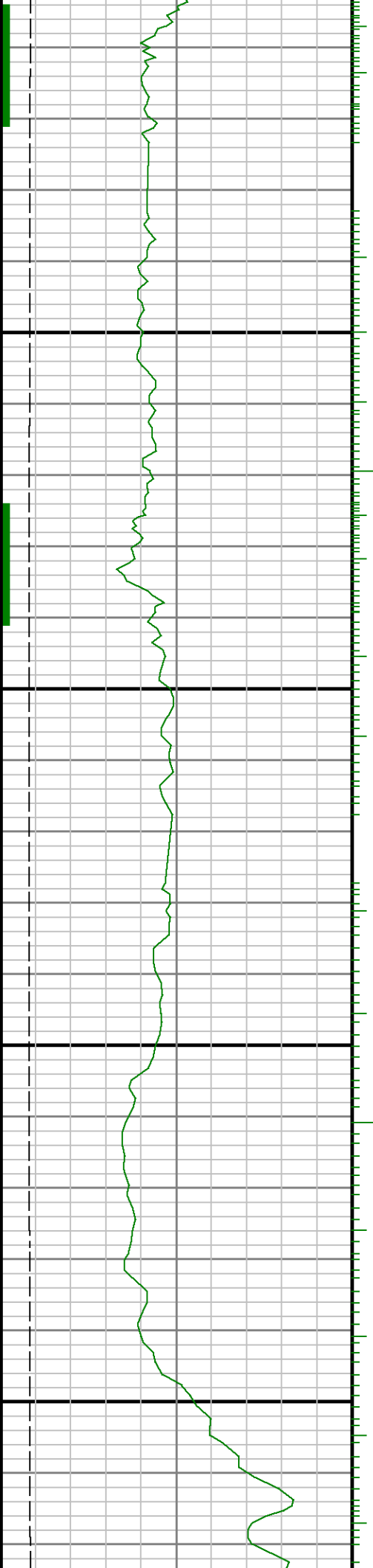
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GRSI

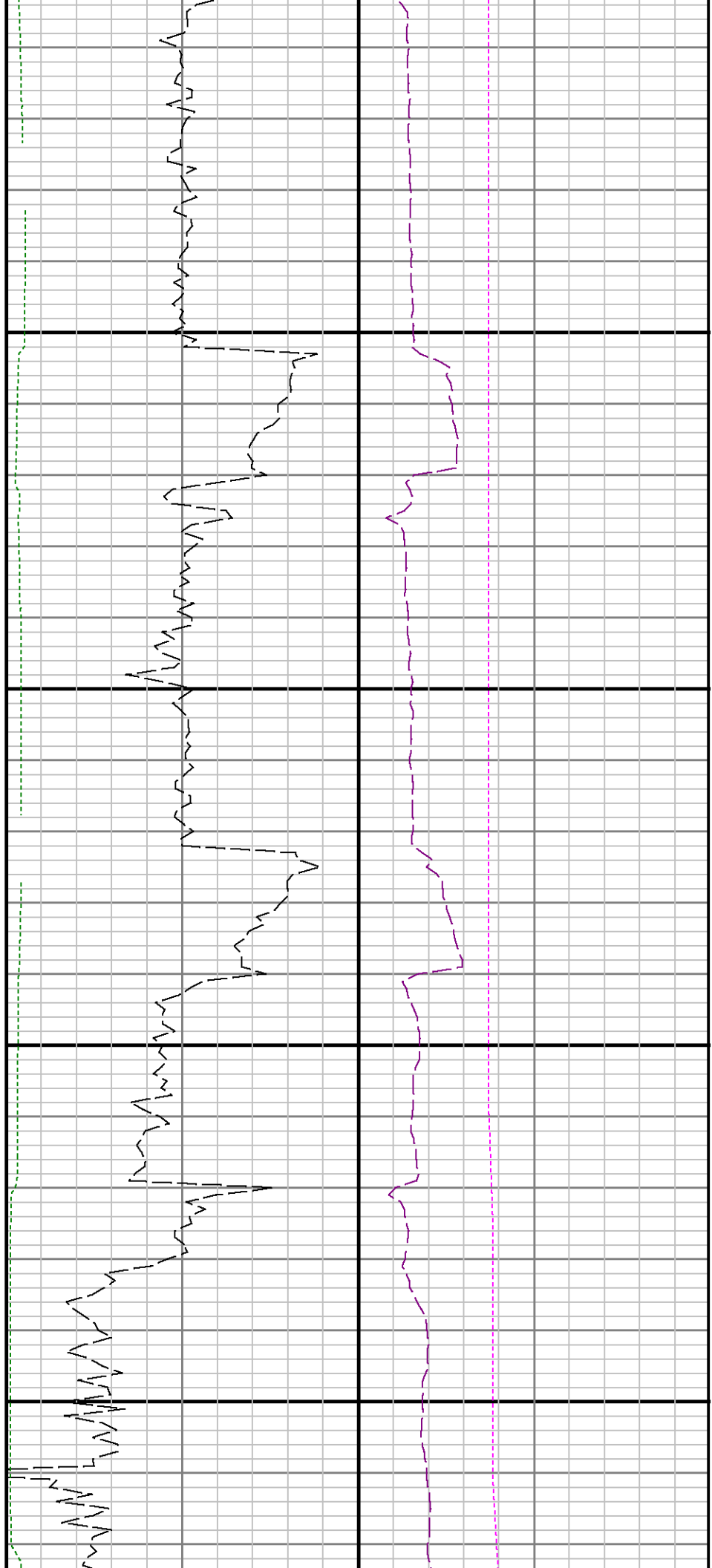


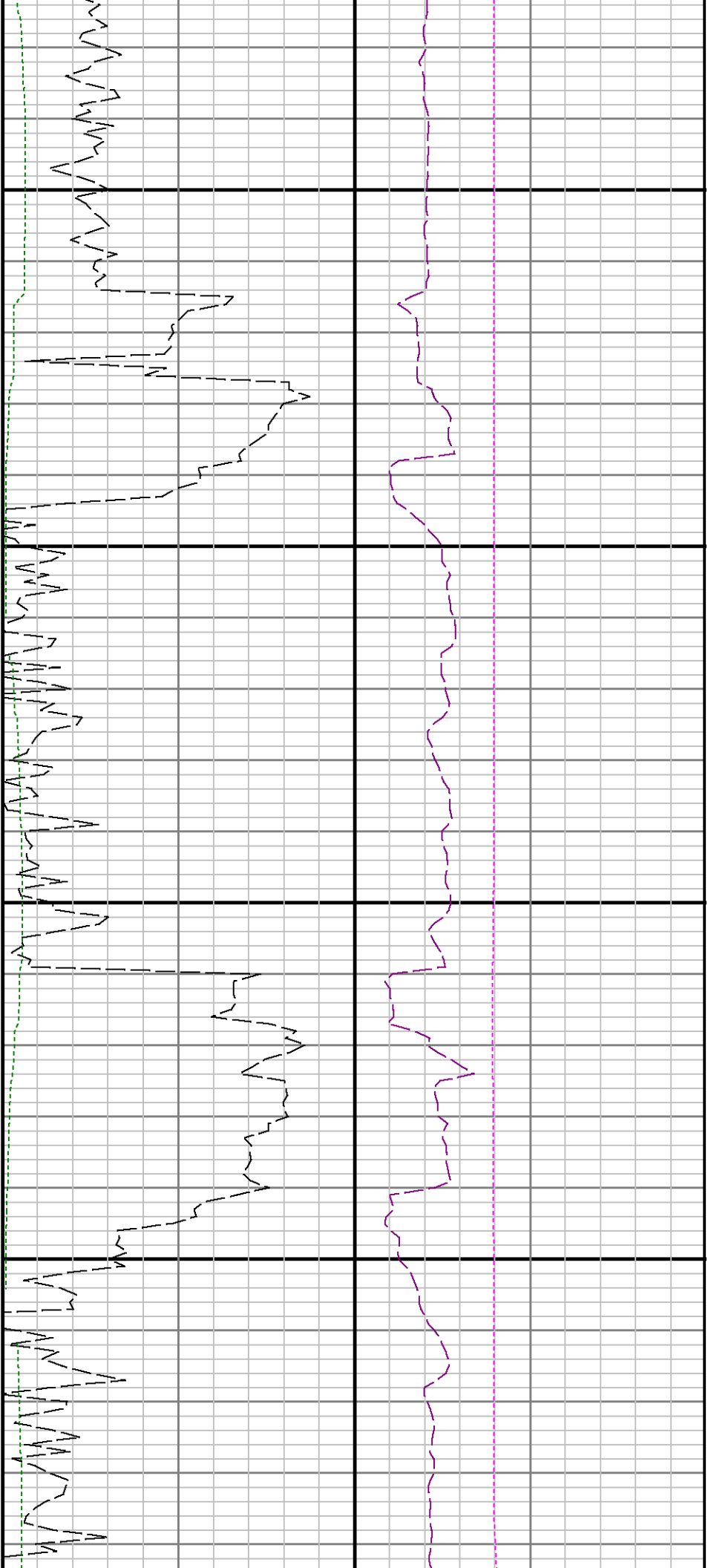




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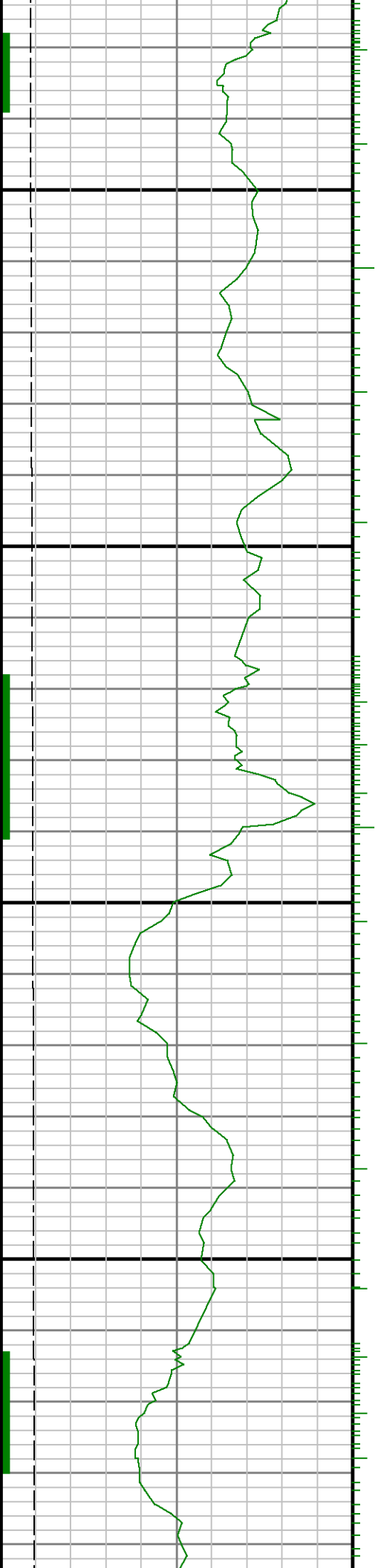
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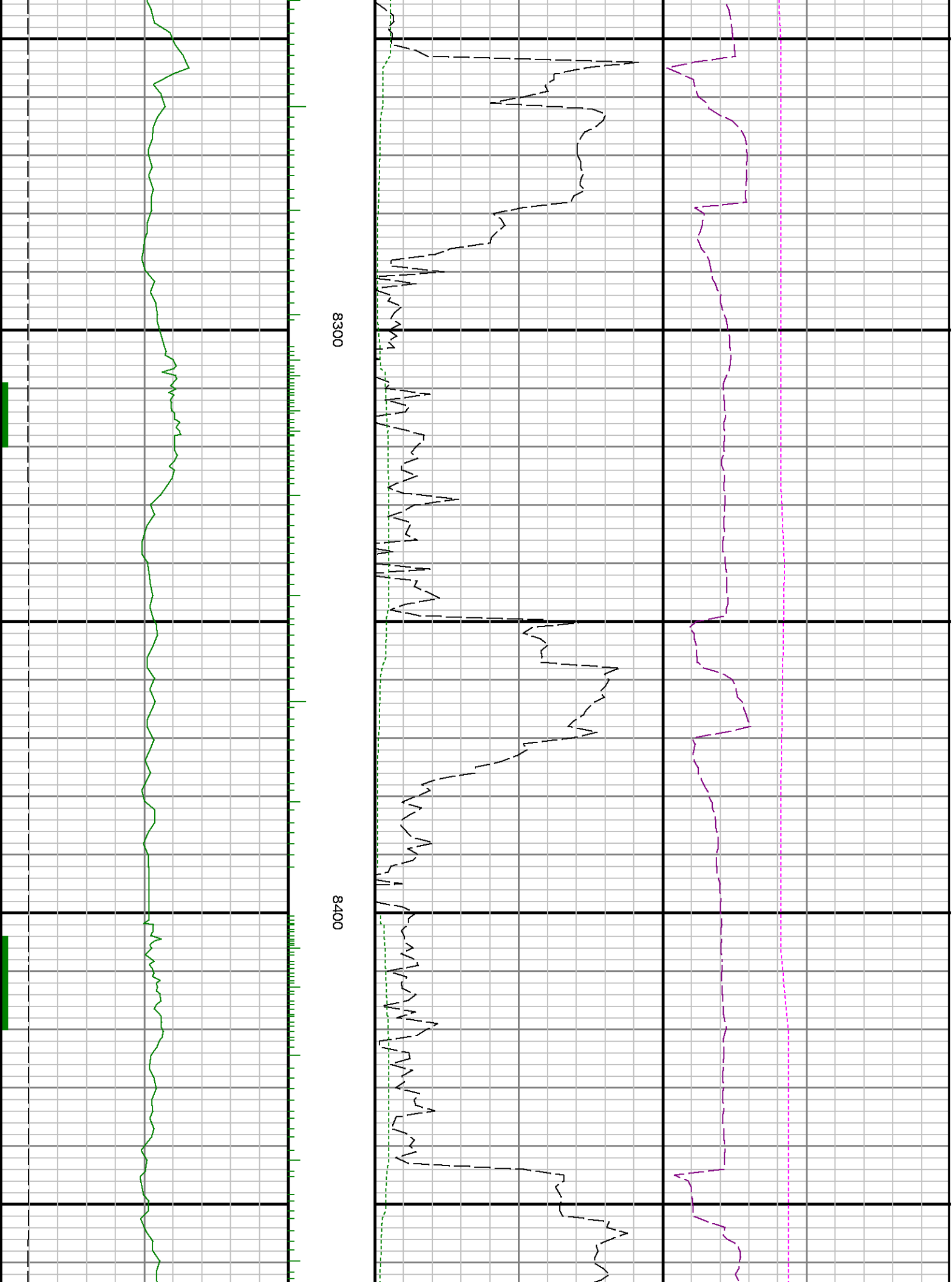


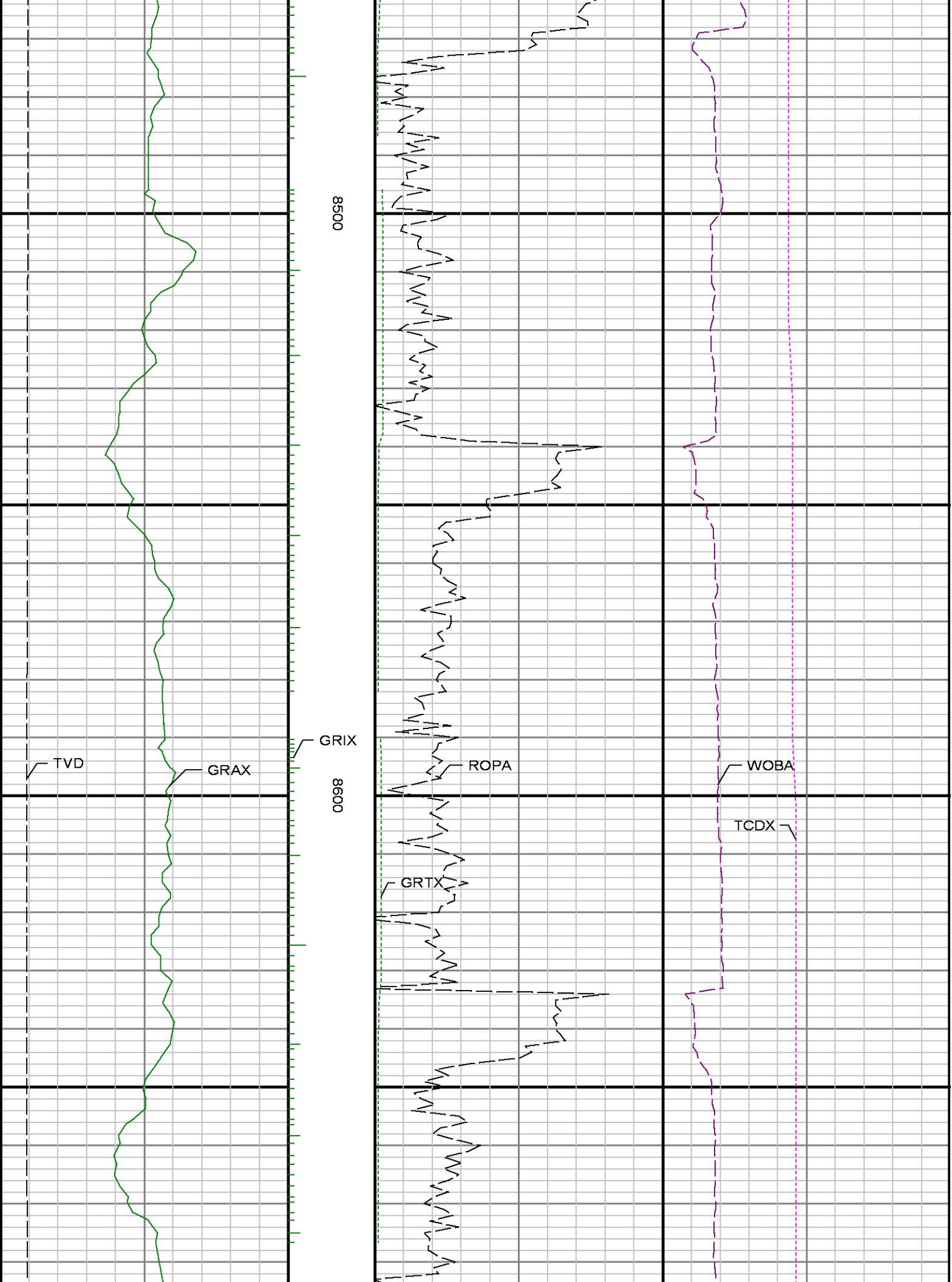


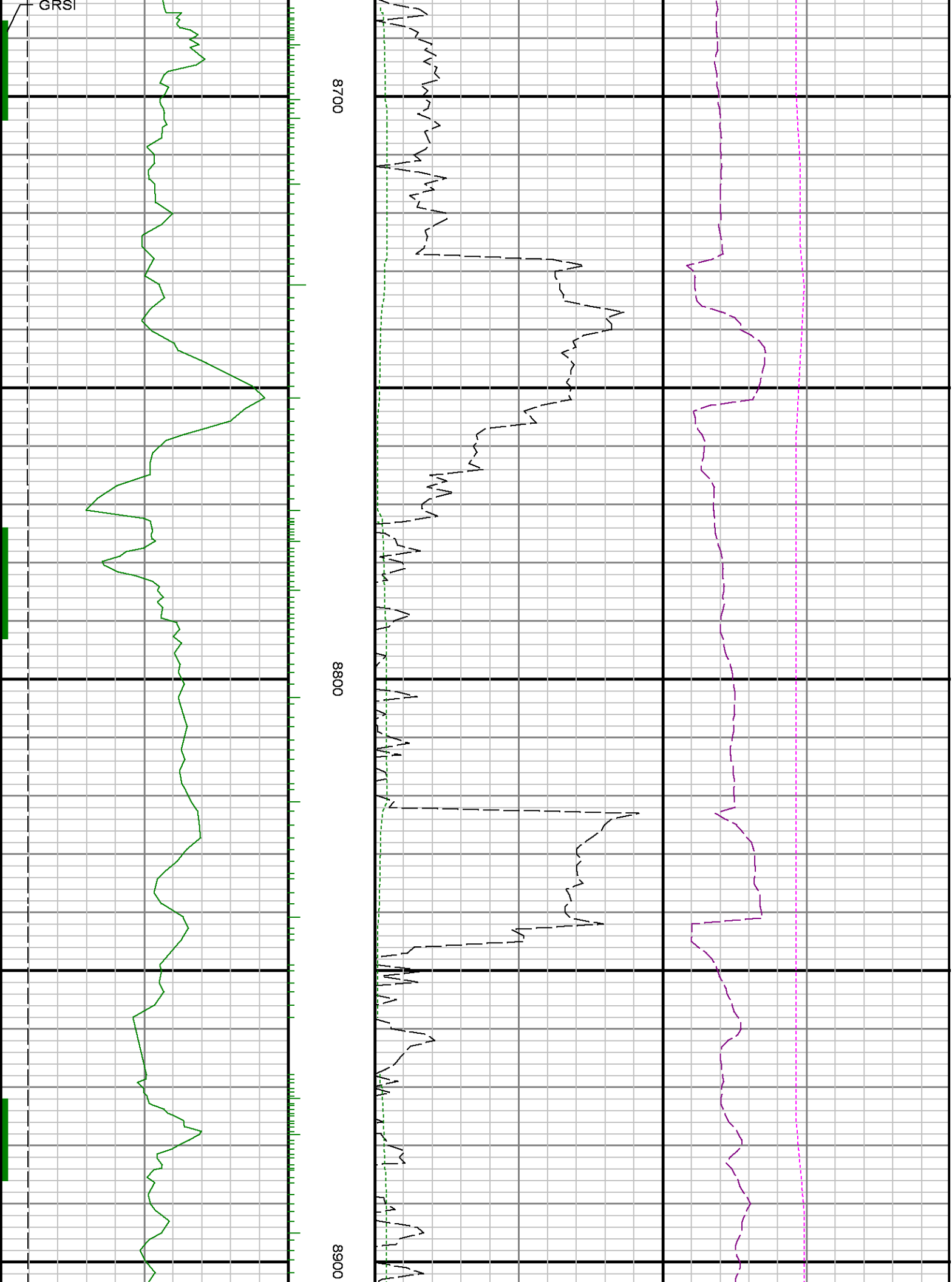
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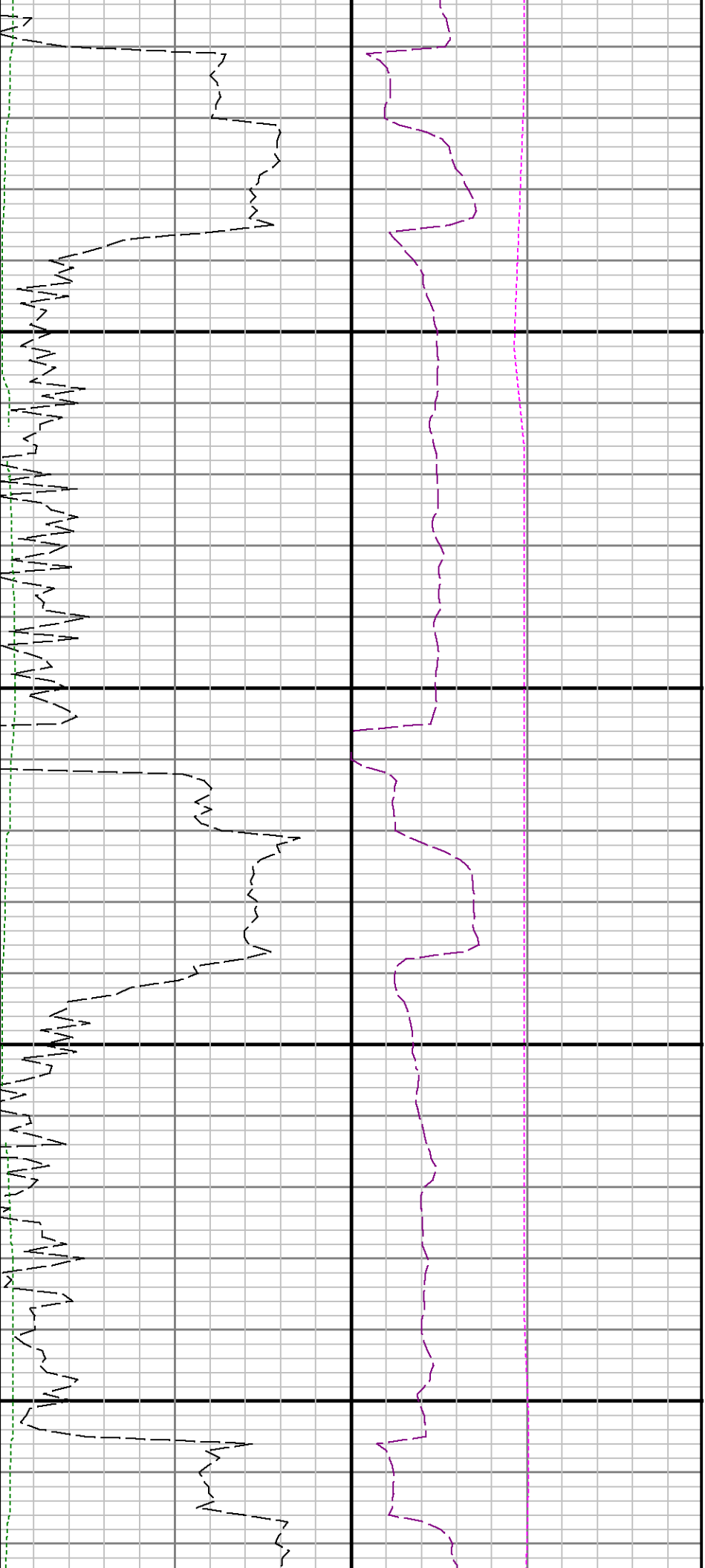
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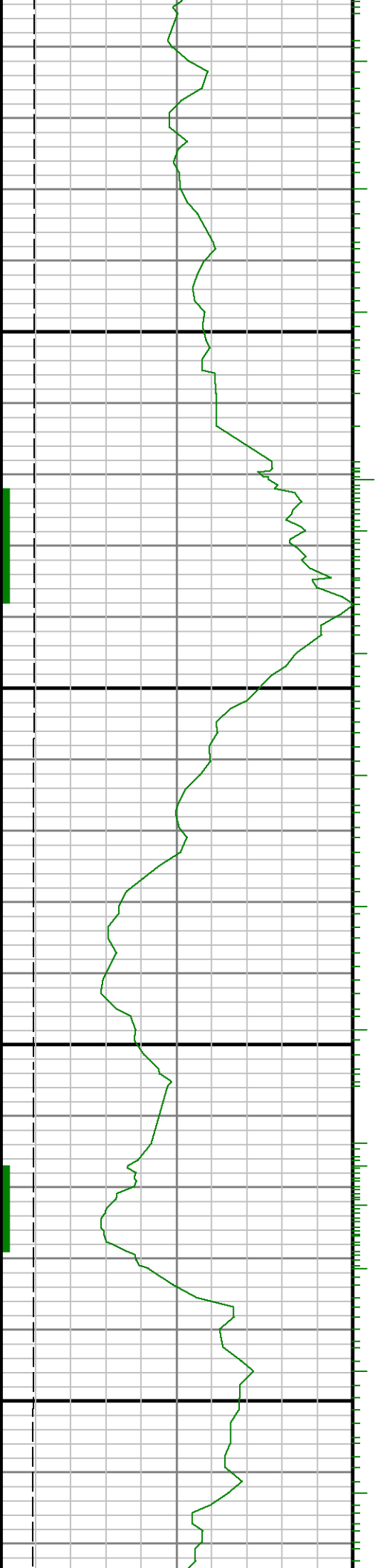


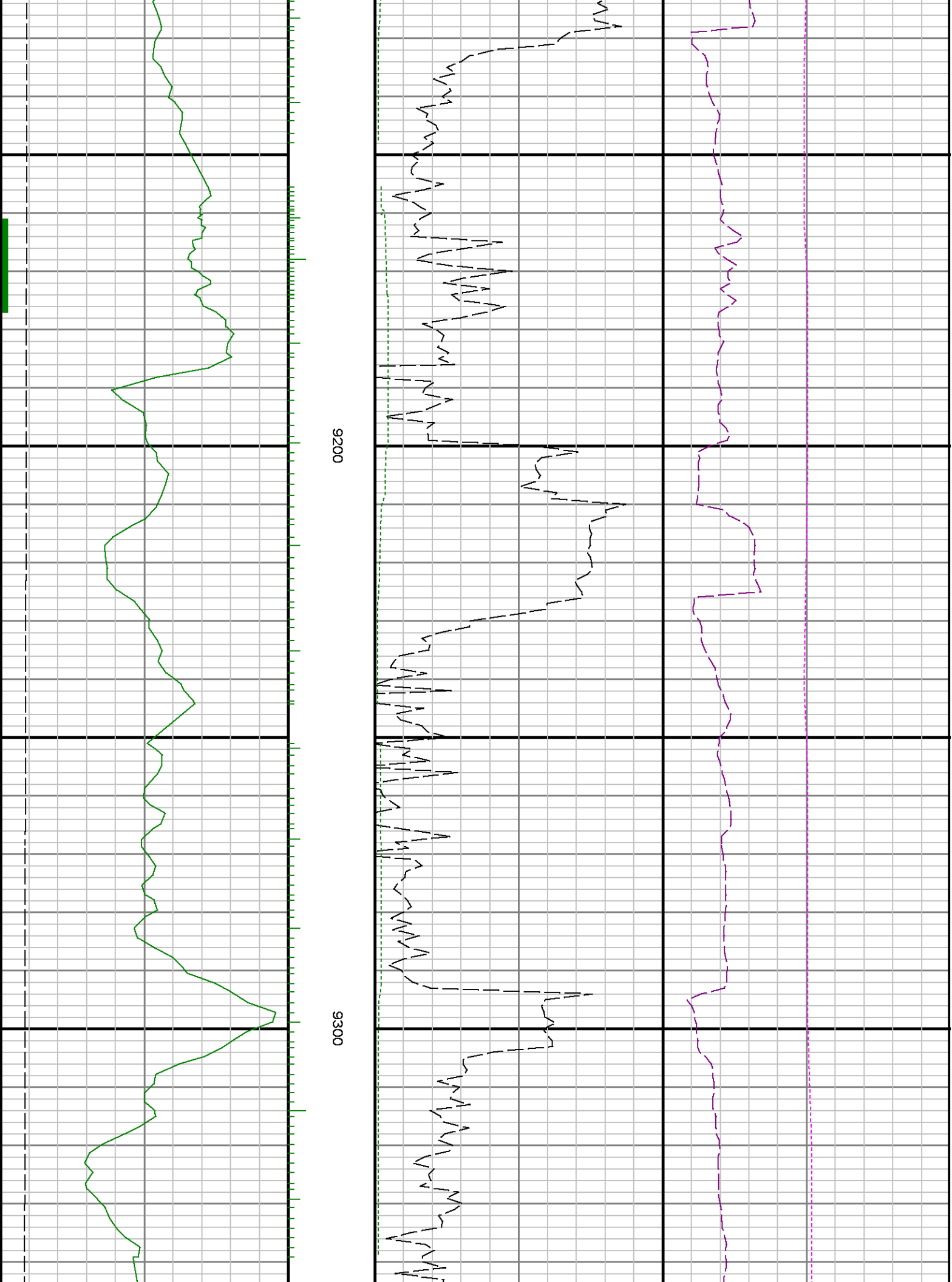


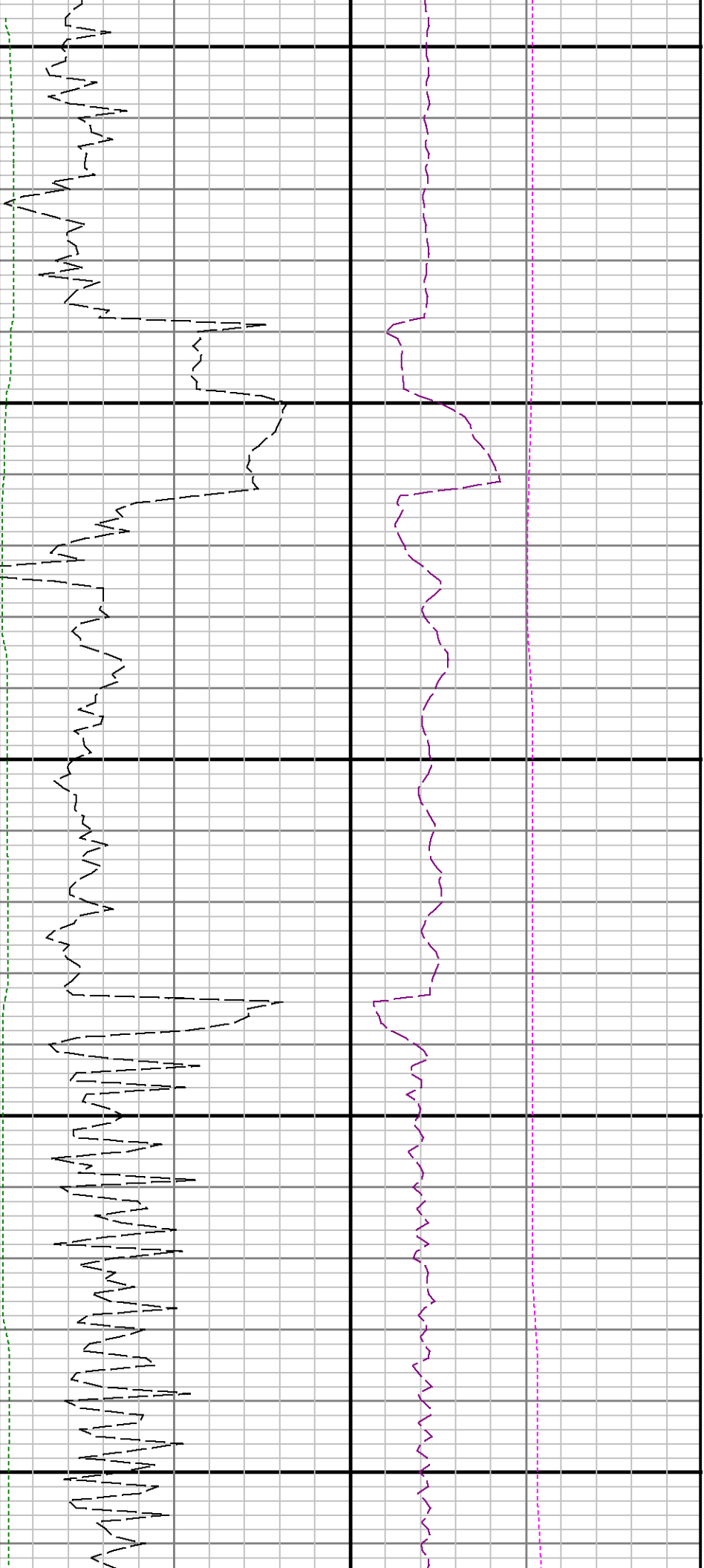


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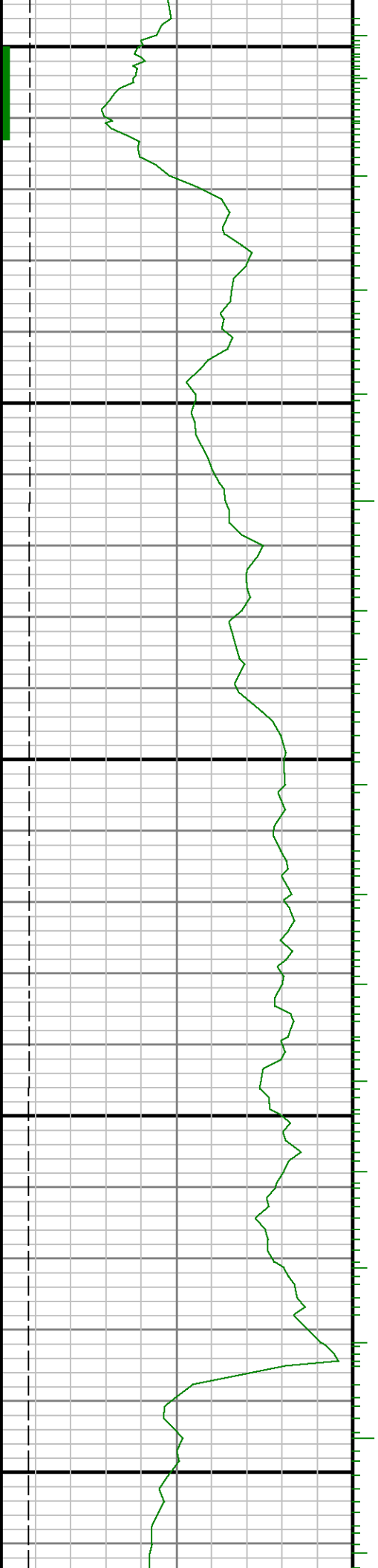




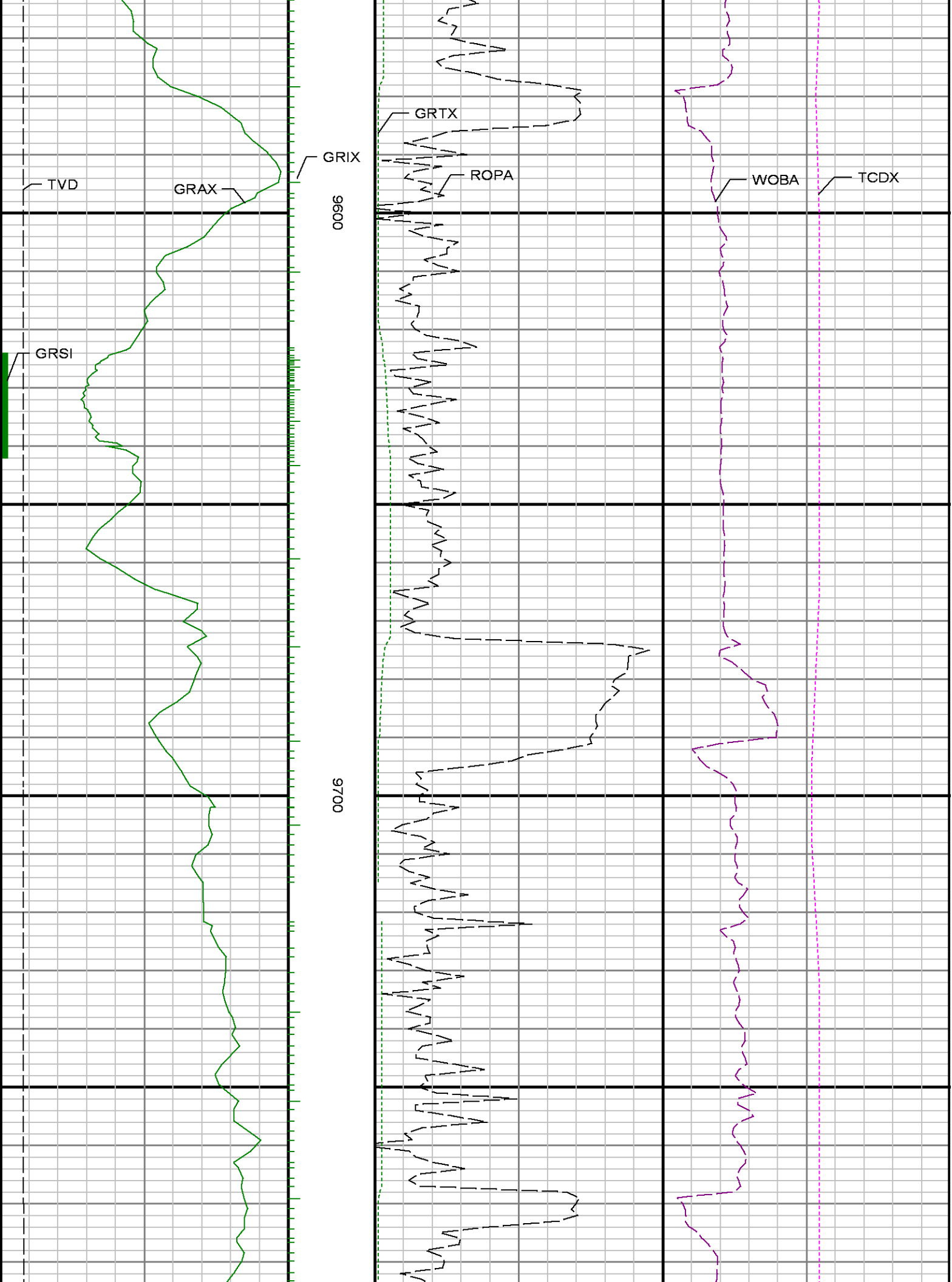


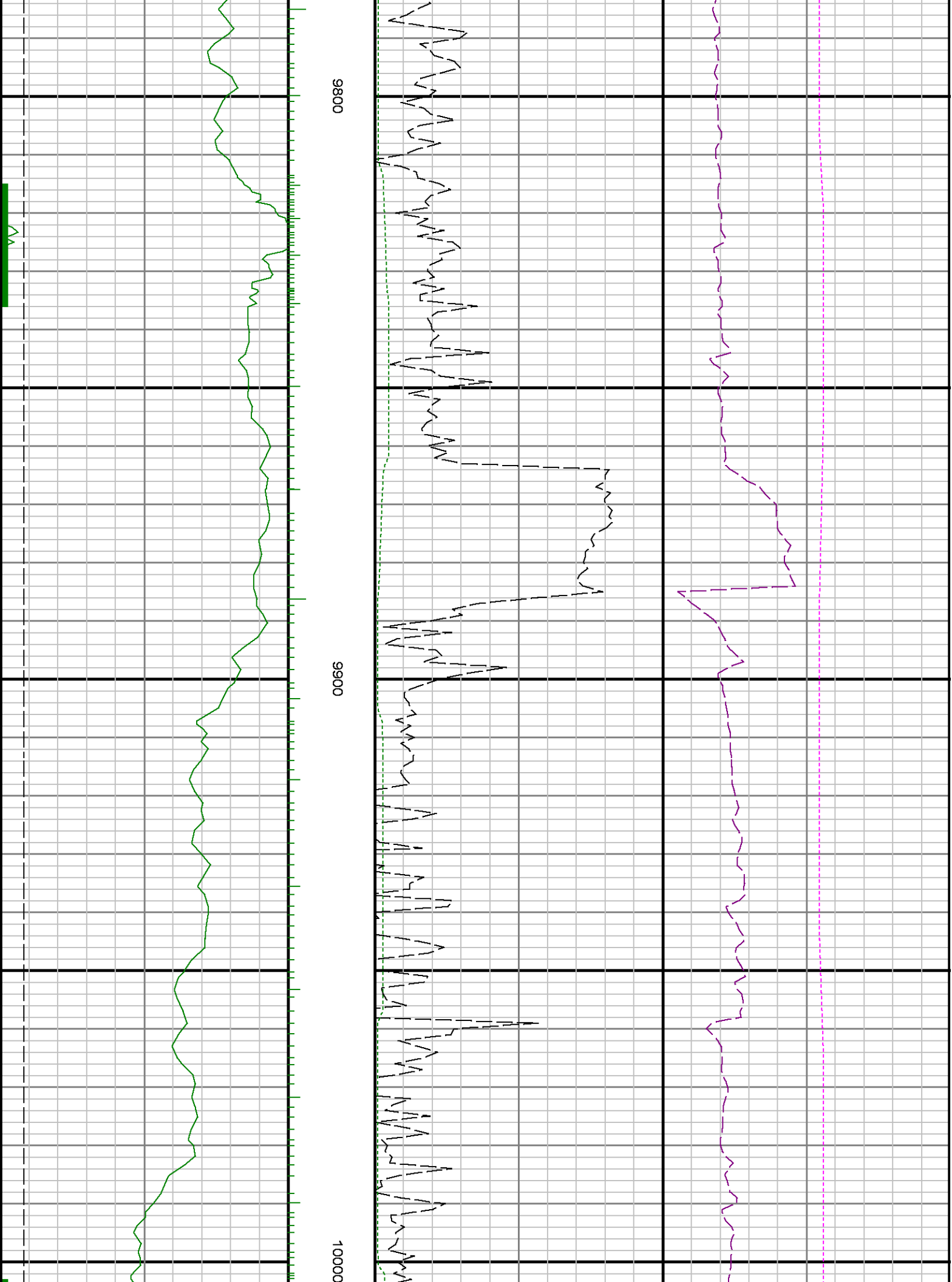
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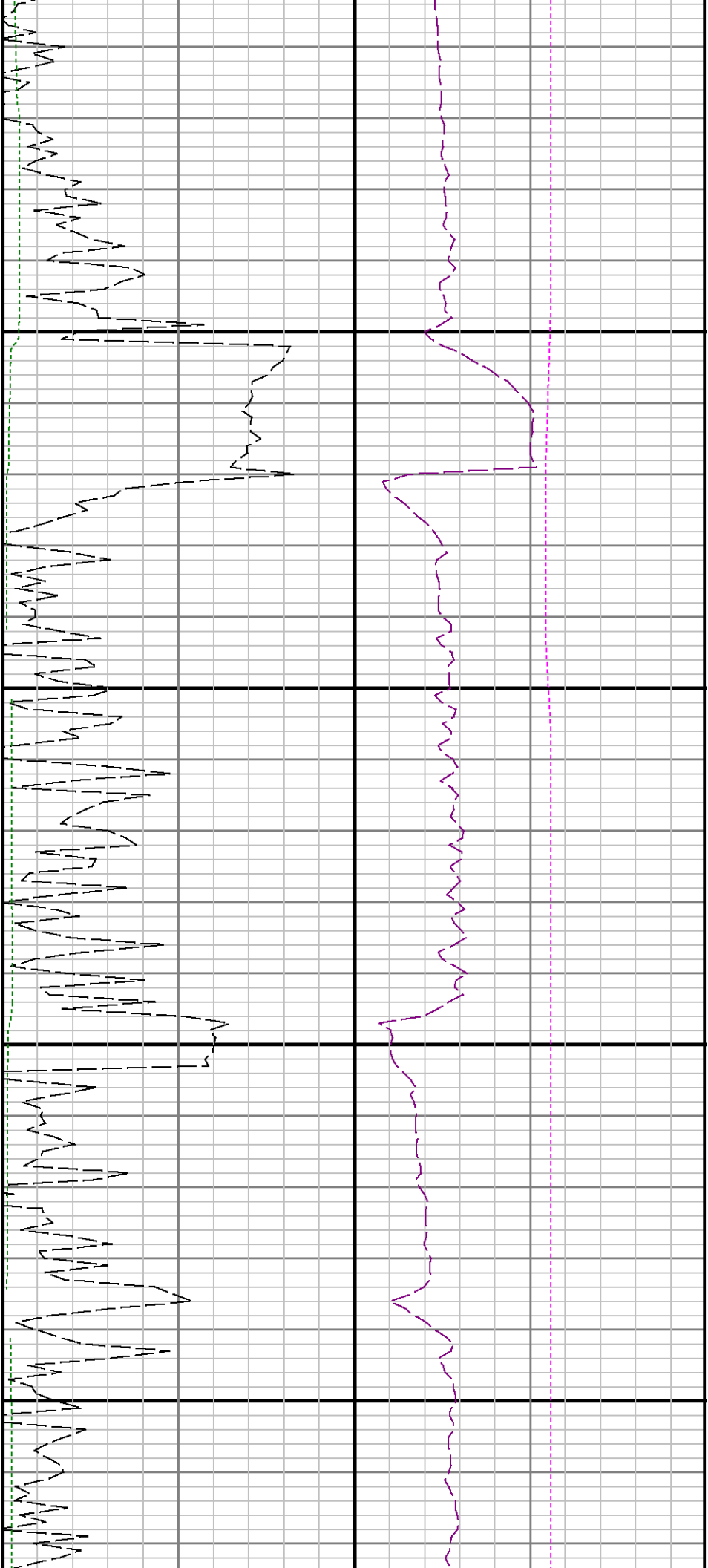
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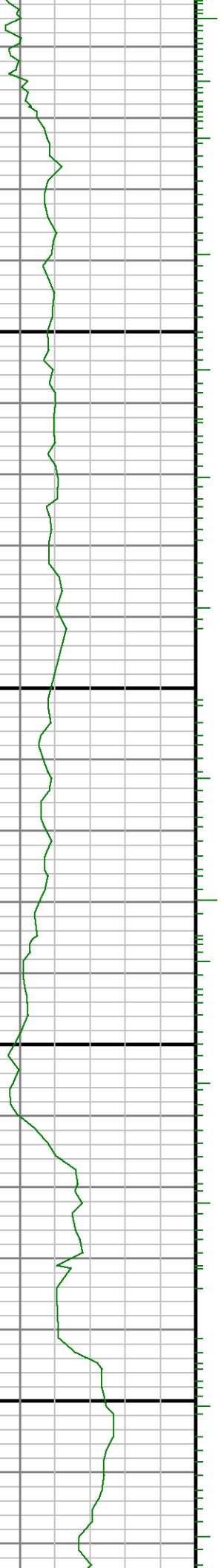




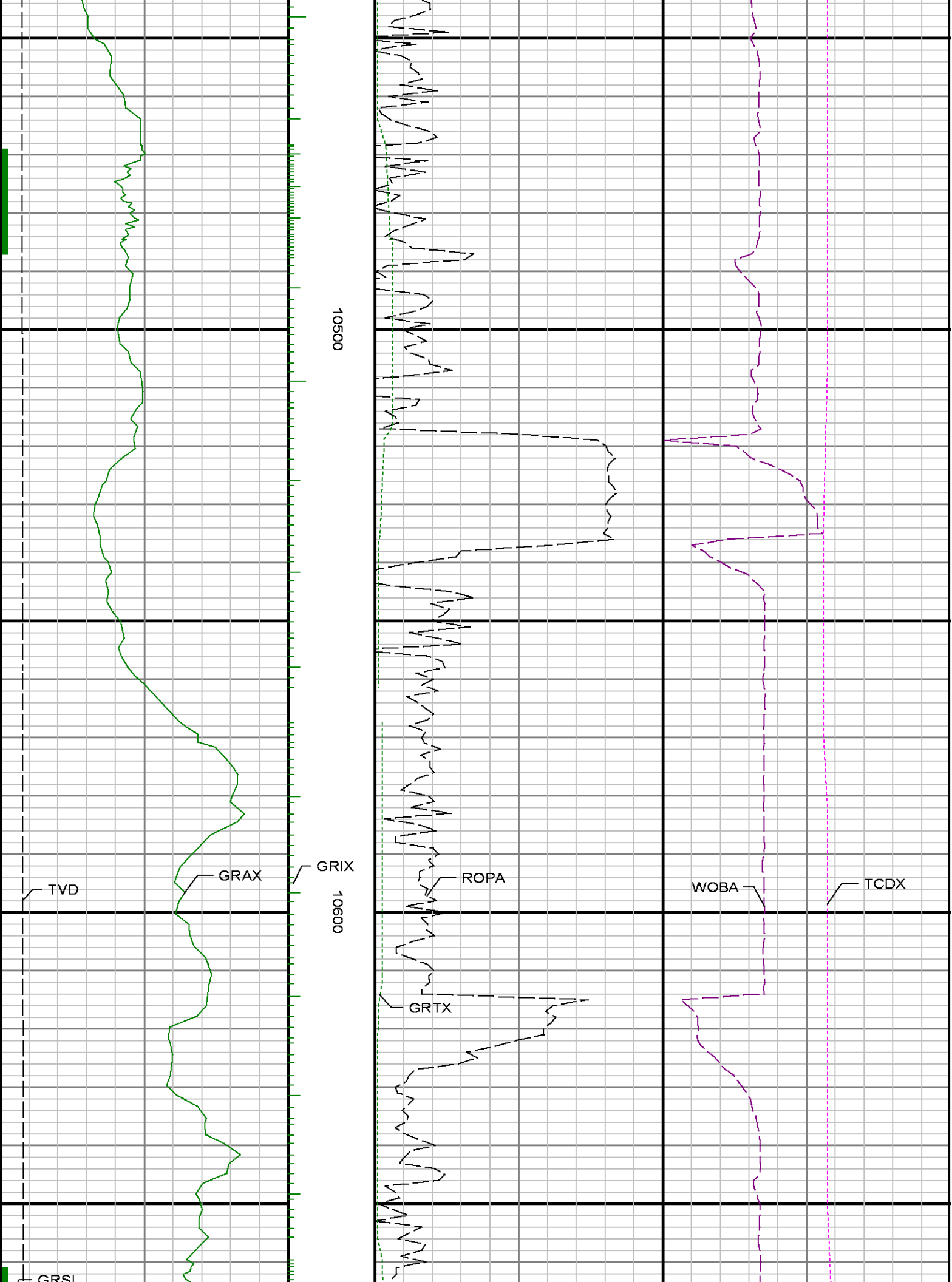


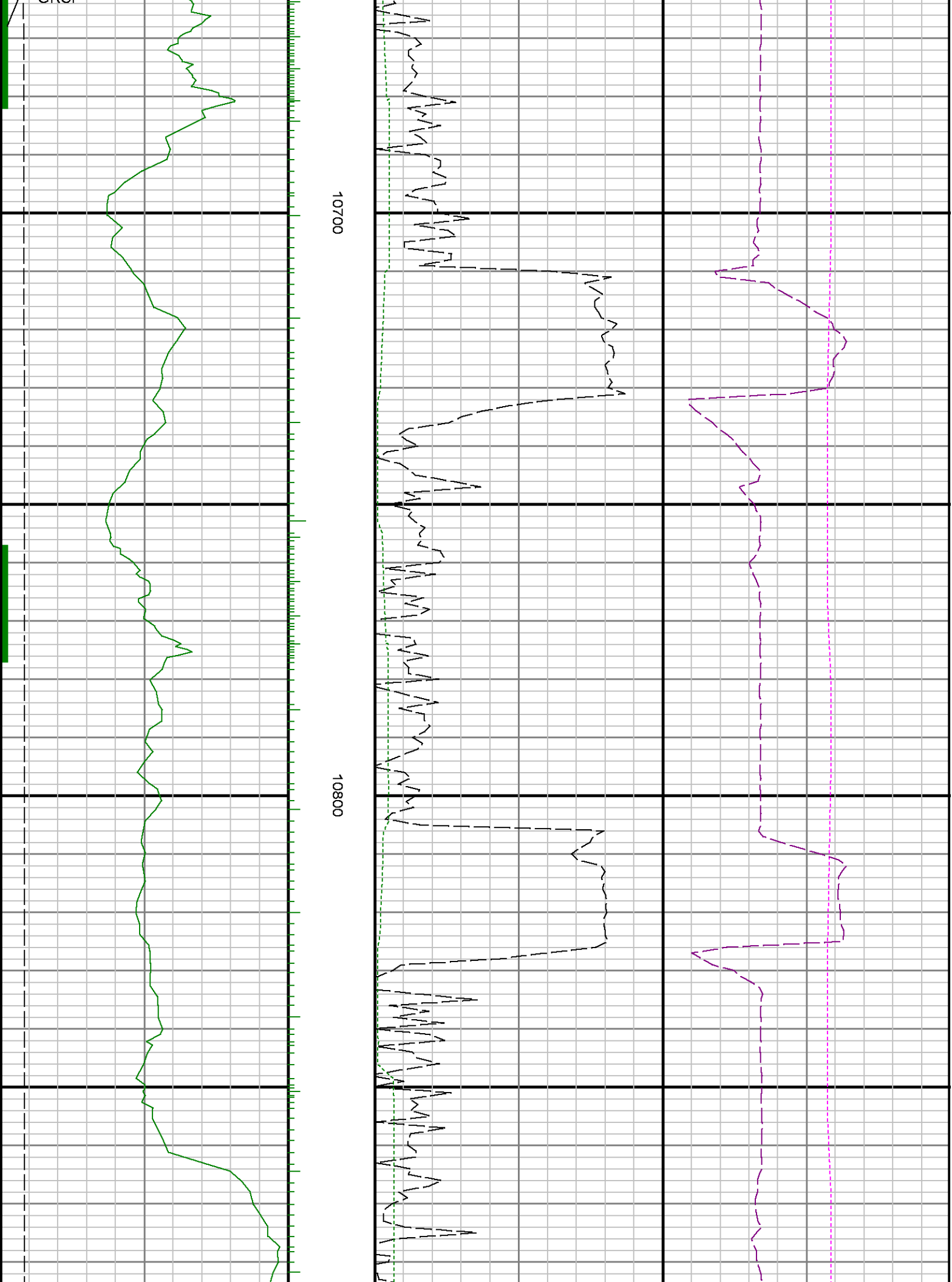
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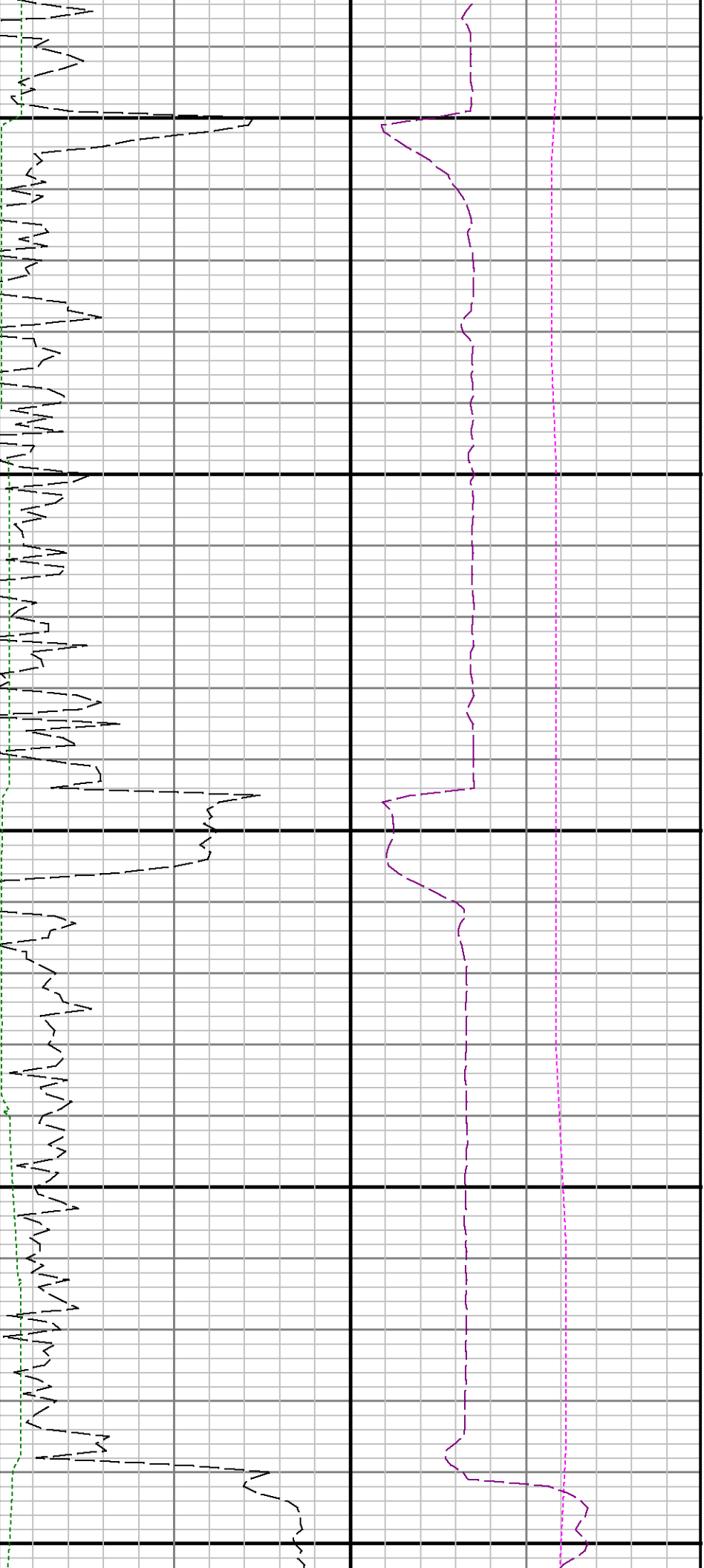
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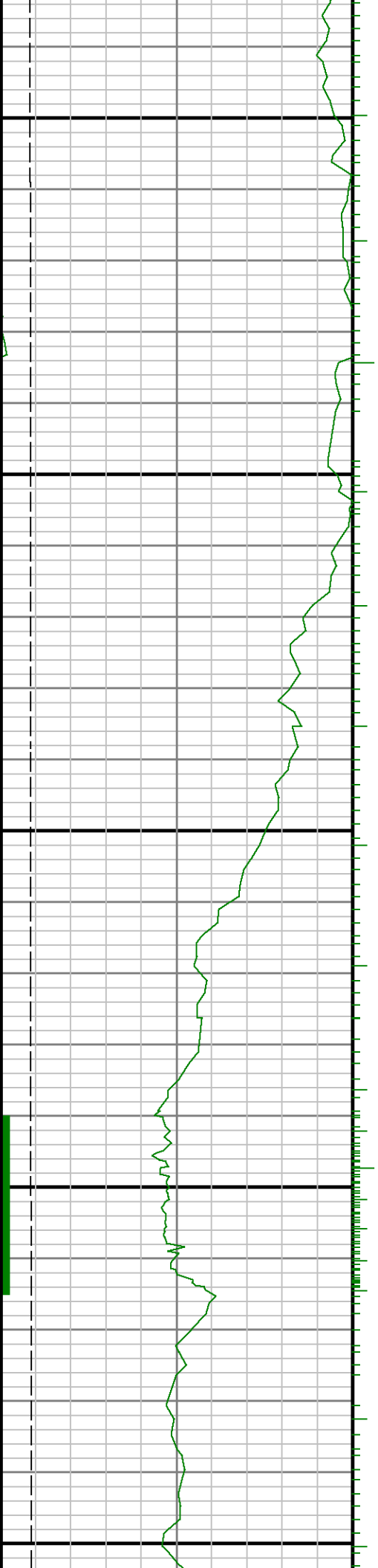


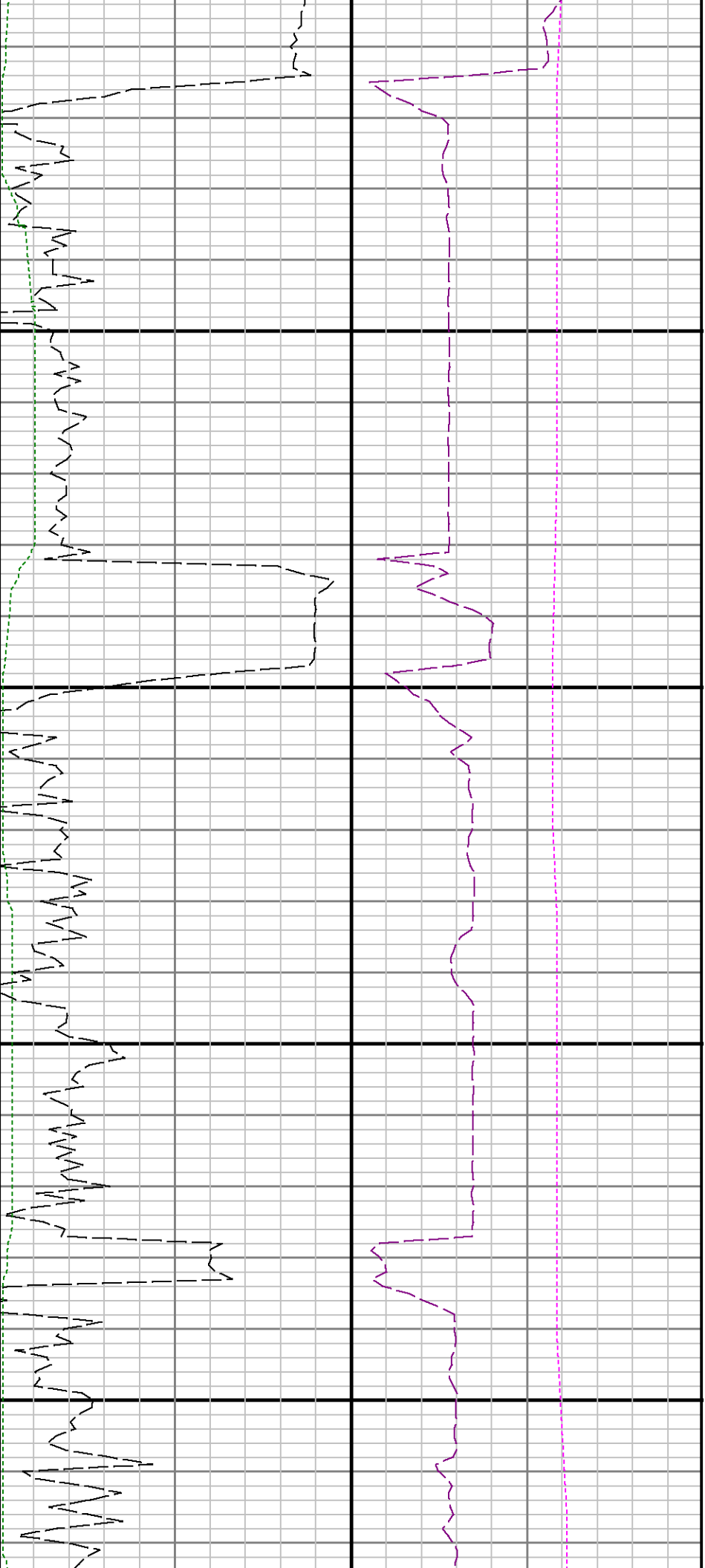


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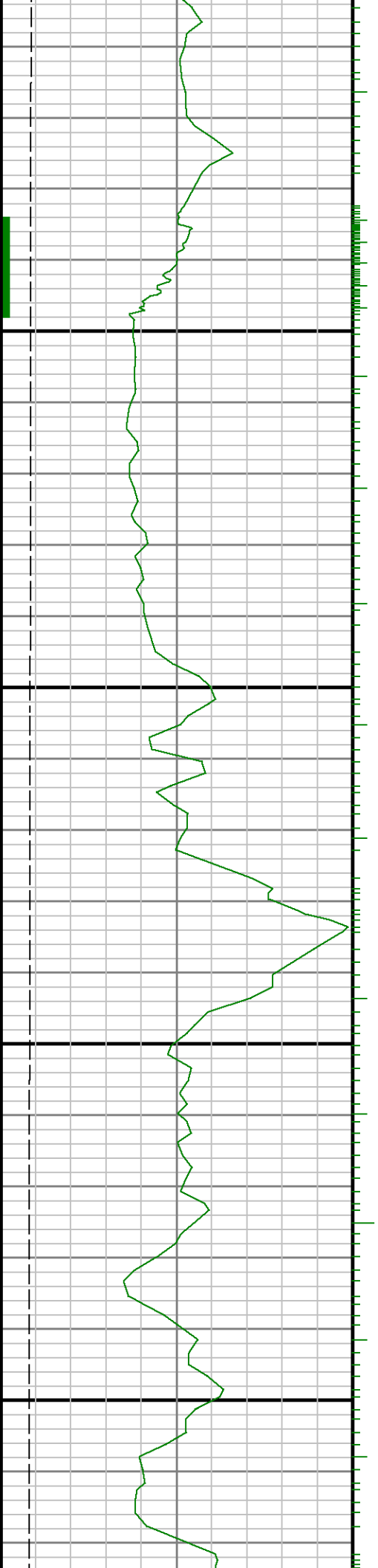
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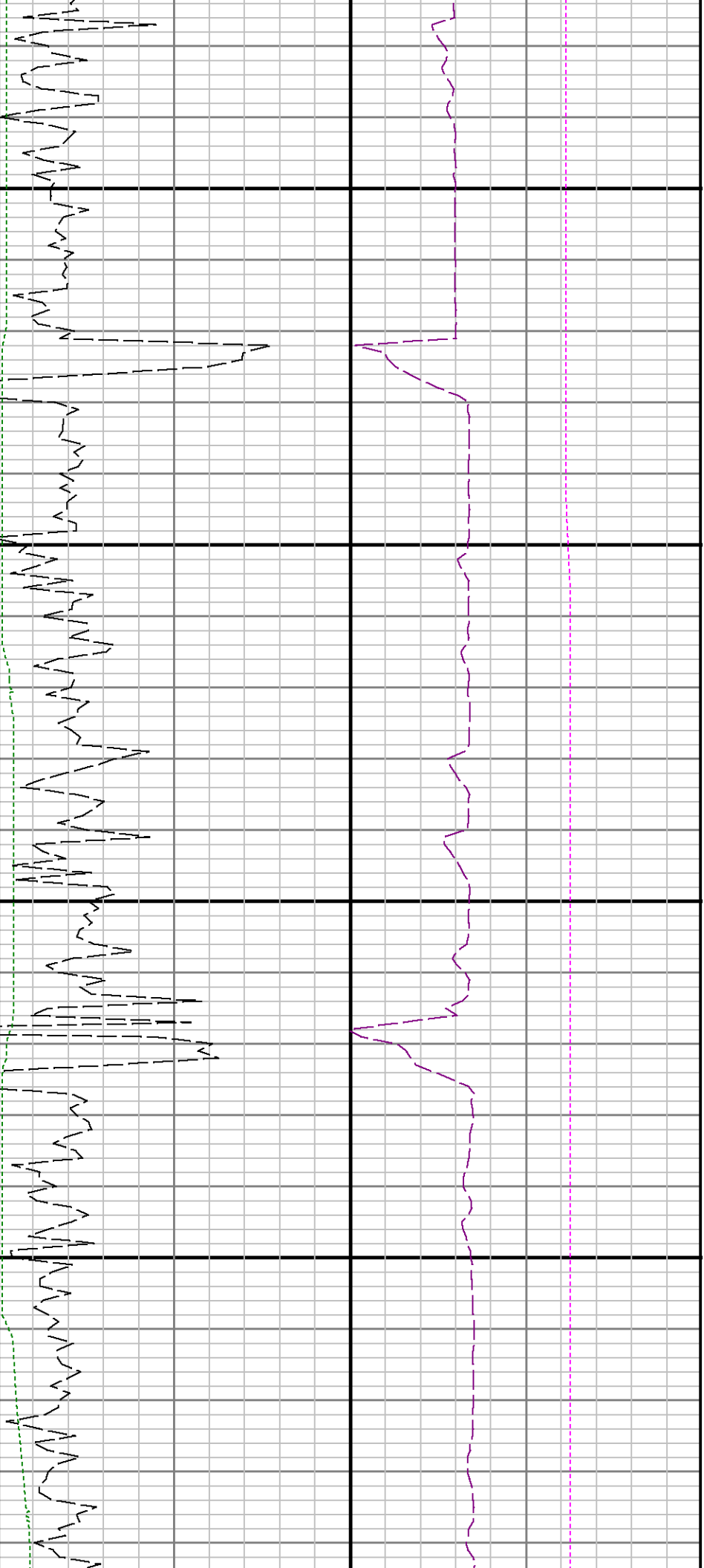


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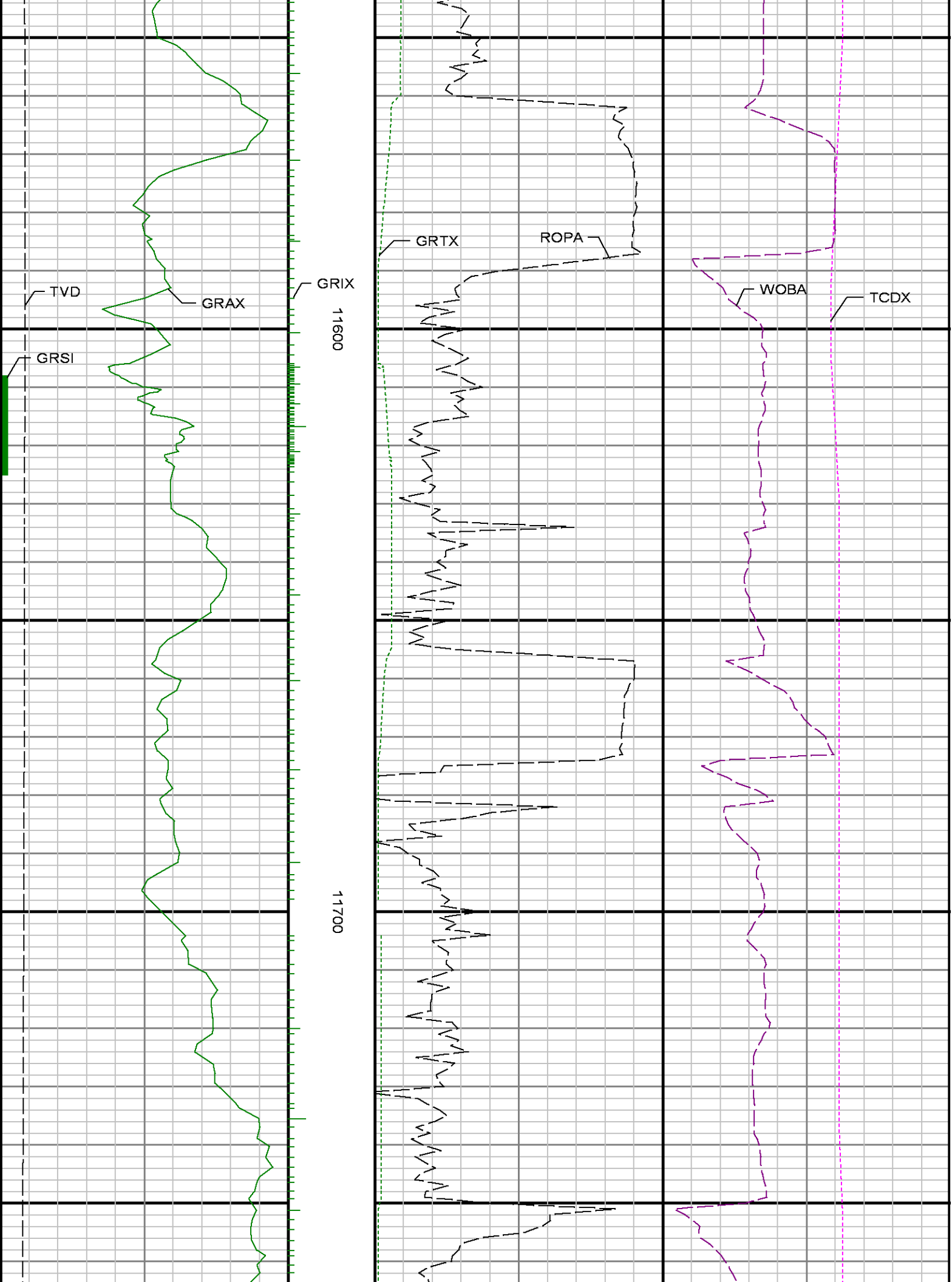


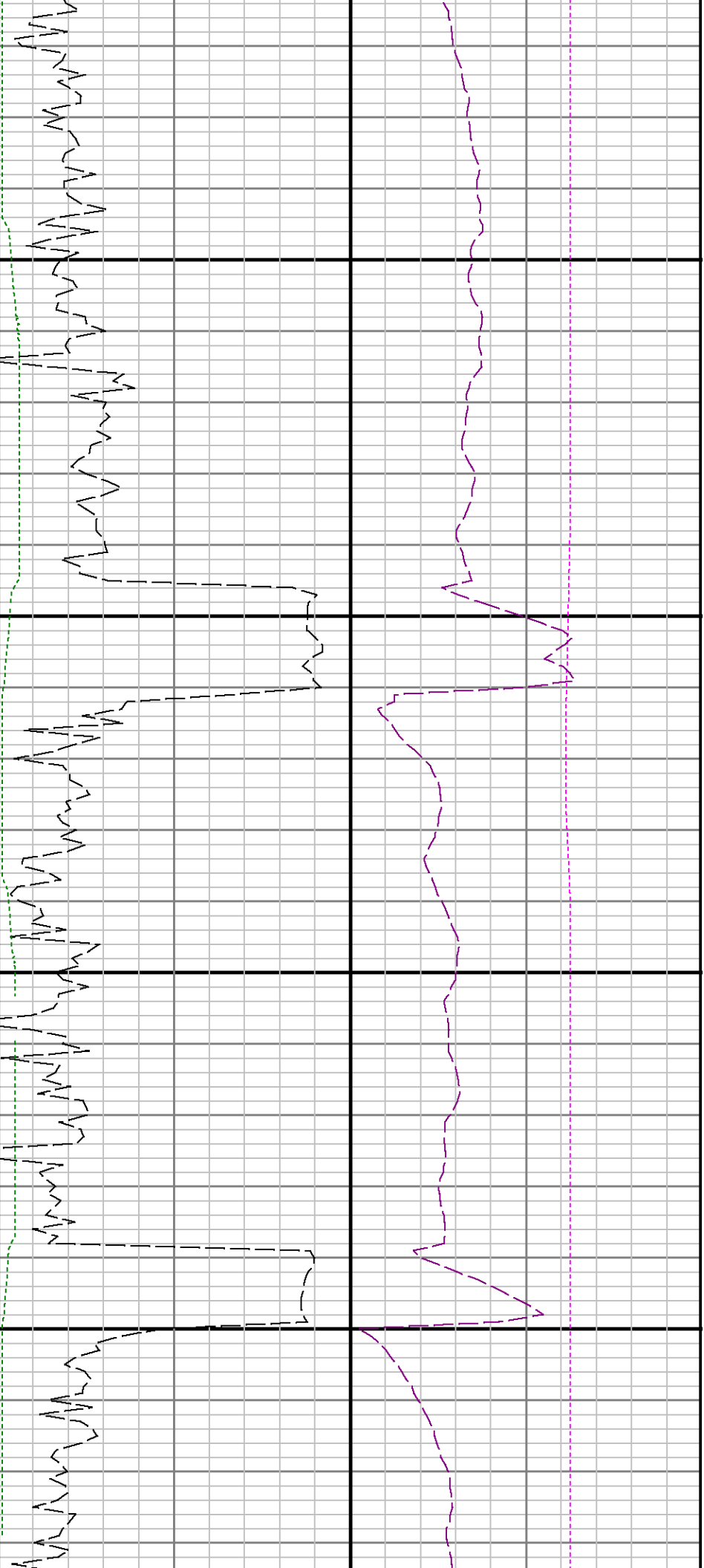


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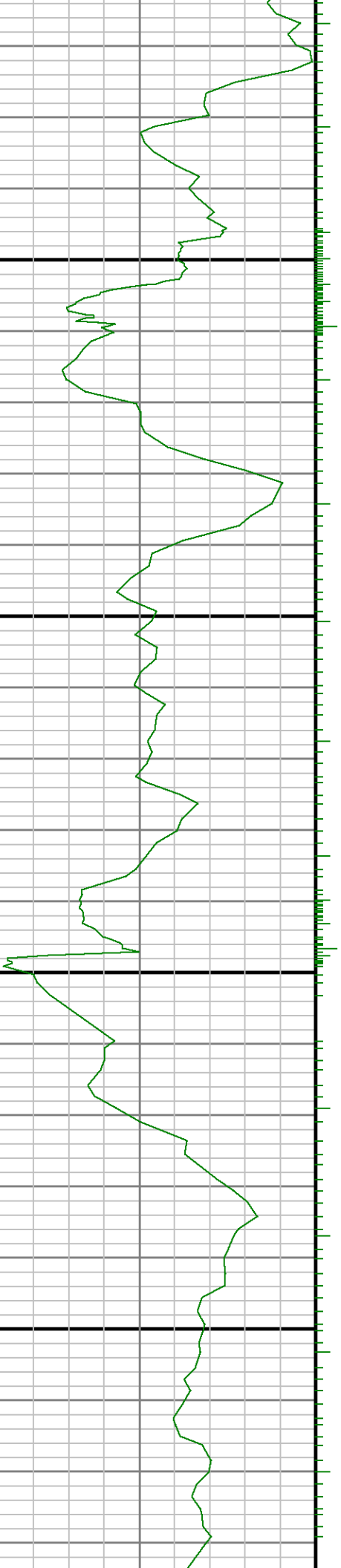


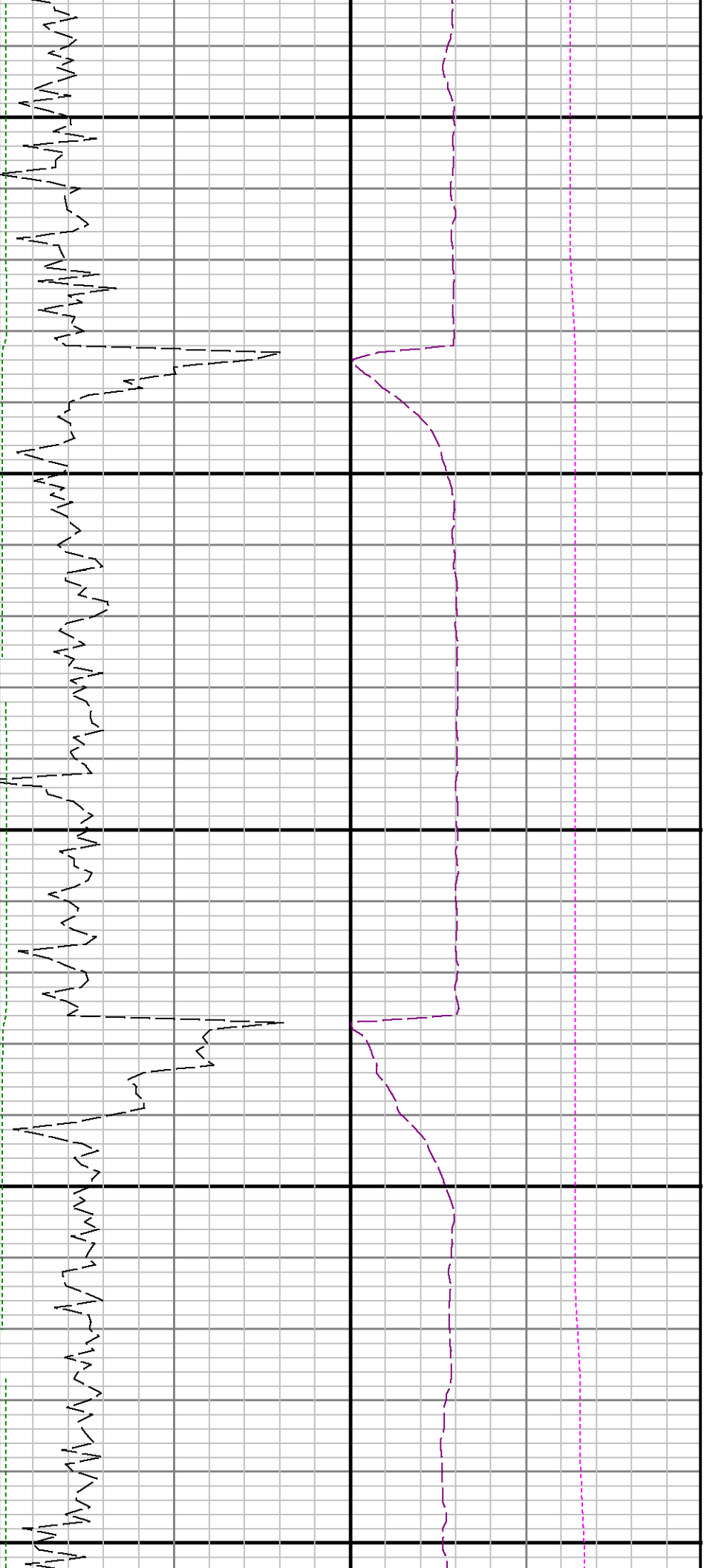




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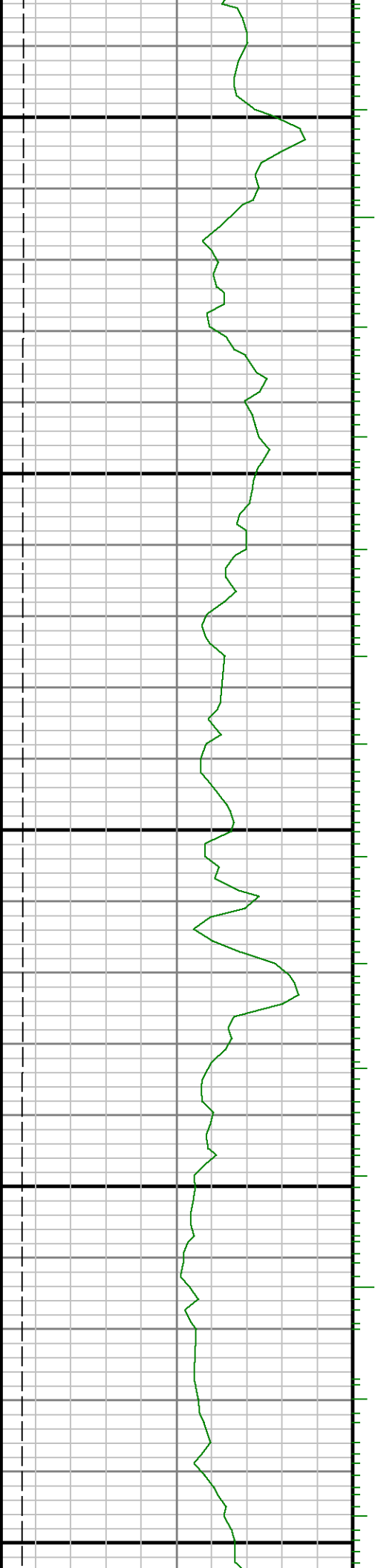




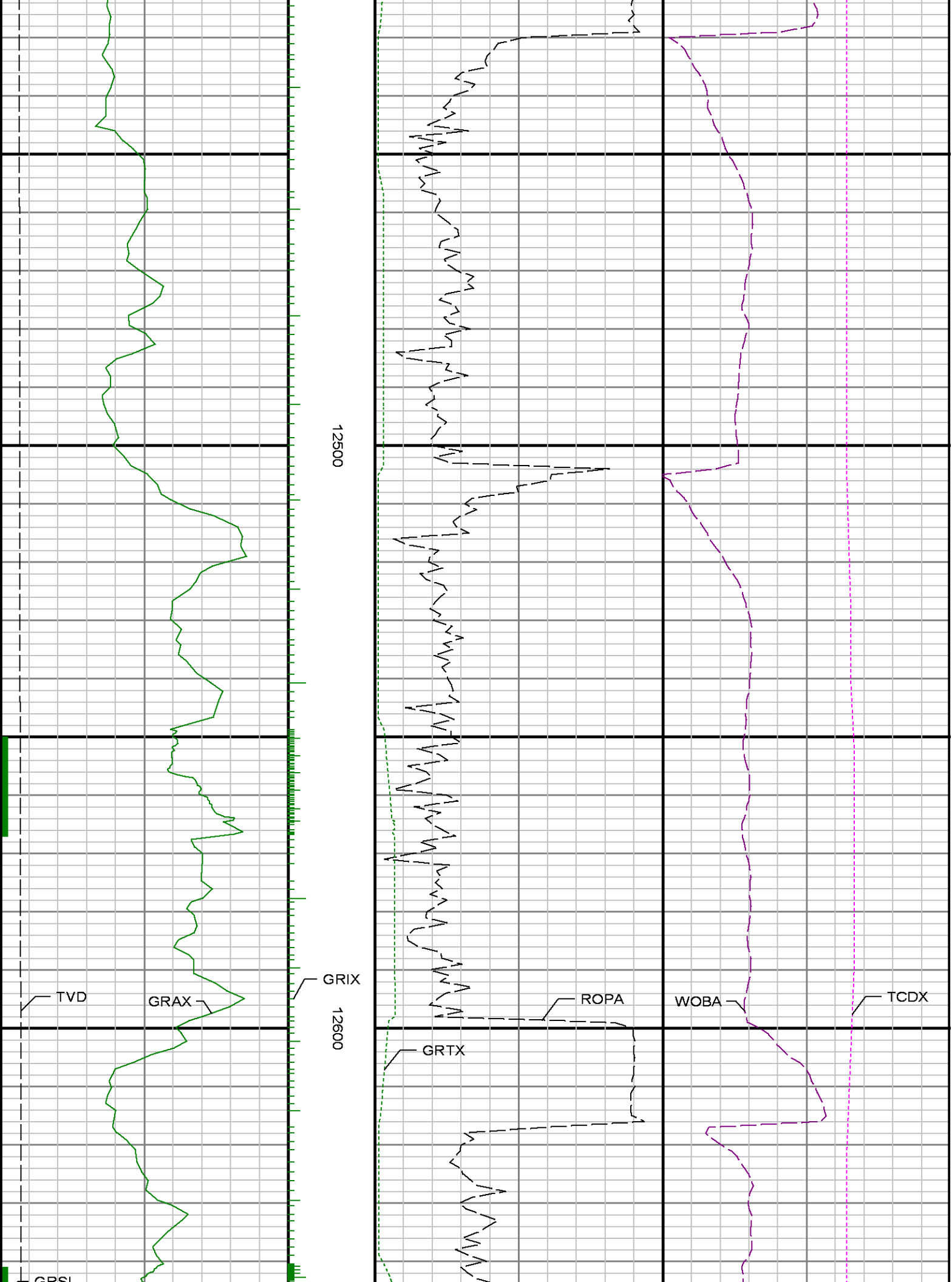
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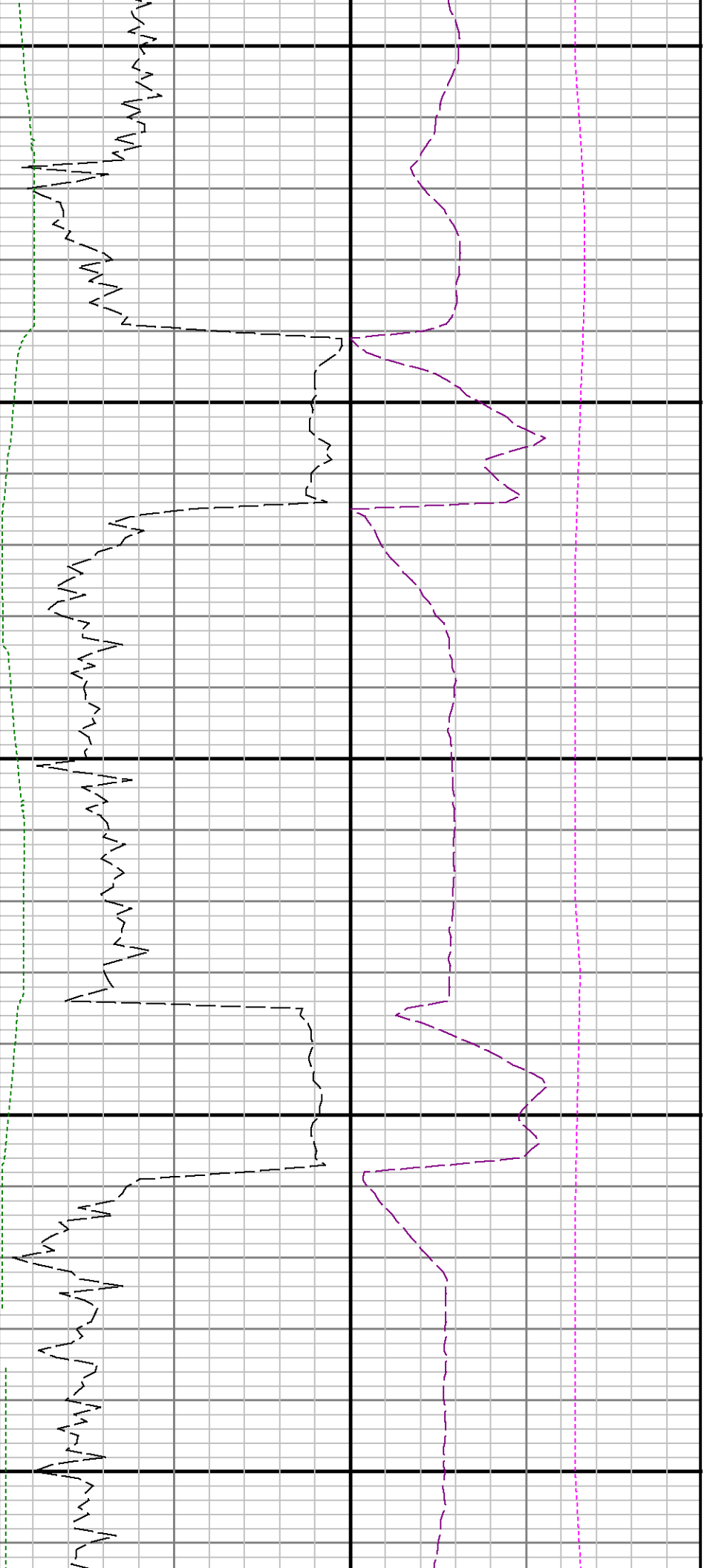
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