



Realtime Log

Natural Formation Evaluation
Gamma Ray

Scale: Company: Anadarko

1:240 Well: HUNZIKER 1C-28HZ

Measured Depth Field: Weld County (Kerr Mc Gee)

Region: Continental US Country: United States

Status: Surface Location: Other Services:

Final Print Latitude: 40 ° 06' 11.621" N

API Number: 05123408930000 Longitude: 104 ° 53' 31.049" W

Section: 28

TWN: 2N Range: 67W

Permanent Datum (P.D.): Ground Level Elevation: 5069.00 ft.

Log Measured From: Rig Floor 20.00 ft. Above P.D.

Depth Reference: Driller's Depth Elevations: N/A 0.00 ft. 5049.00 ft.

Interval Logged Dates Magnetic Field Reference

Top: 7247.0 ft. Date From: 11 Mar 15 Dip Angle: 66.74 ° Azi Reference North: True

Bottom: 12888.0 ft. Date To: 18 Mar 15 Total Mag to Reference

Spud Date: 11 Mar 15 Field Strength: 52740.3 nT North Correction: 8.60 °

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13,500 in.	Surface	1333.0 ft.	9,600 in.	36.00 lb/ft	Surface	1323.0 ft.
8,750 in.	1333.0 ft.	8135.0 ft.	7,000 in.	36.00 lb/ft	Surface	8125.0 ft.
6,125 in.	8135.0 ft.	12888.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Base	Surface	12888.0 ft.	13,500 in.	1333.0 ft.	0.0 ° / 0.0 °	0.2 ° / 210.0 °
			8,750 in.	6802.0 ft.	0.4 ° / 176.7 °	81.9 ° / 3.5 °
			6,125 in.	4753.0 ft.	89.2 ° / 7.6 °	90.3 ° / 0.1 °
					/	/
					/	/
					/	/
					/	/

Acquisition System Software Version

Other

Advantage	2.20U4	Rig: / Contractor:	Precision #406	/ Precision Drilling
PAITS	6.4.1.34	Job No:	7055548	
		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.)		(in.)		(ft.)	(ft.)	(ft.)	(ft.)					(hrs.)
1	1	1	8.750	PDC Core	N/A	Mud Motor	7197.0	7944.0	1330.0	7994.0	11 Mar 15	07:10	13 Mar 15	13:00	35.75
2	2	2	6.125	Tricone	N/A	Mud Motor	7944.0	8091.0	7994.0	8135.0	13 Mar 15	15:00	14 Mar 15	18:25	9
3	3	3	6.125	PDC Core	N/A	Mud Motor	8091.0	12828.0	8135.0	12888.0	15 Mar 15	22:55	18 Mar 15	10:00	46.3

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Adewale Adedeji	10 Mar 15	11 Mar 15	Shirley Arimah	11 Mar 15	19 Mar 15	Bryan Severson	11 Mar 15	19 Mar 15

Mud Properties Record												
Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (sg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
11 Mar 15	19:00	1	3206.0	Water-Based	8.5	29	9.0	18.0	N/A	Active Pits	2800	N/A
12 Mar 15	19:00	1	7094.0	Water-Based	10.0	40	9.5	5.6	0/94	Active Pits	3700	N/A
13 Mar 15	19:00	2	7994.0	Water-Based	10.2	42	9.0	5.0	0/95	Active Pits	3800	N/A
16 Mar 15	19:00	3	9294.0	Water-Based	9.7	40	9.3	4.8	1/94	Active Pits	3700	N/A
17 Mar 15	19:00	3	11686.0	Water-Based	9.8	45	9.0	4.8	1/94	Active Pits	4000	N/A

Mnemonics		
Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. avg.	API
GRIX	Gamma Ray Density	Points
ROP_AVG	Rate of Penetration, 3.0 ft. avg.	ft/hr
TCDX	Downhole Temperature	deg F
TVD	True Vertical Depth	ft.
WOB_AVG	Surface Weight On Bit, 1.0 ft. avg.	klbf

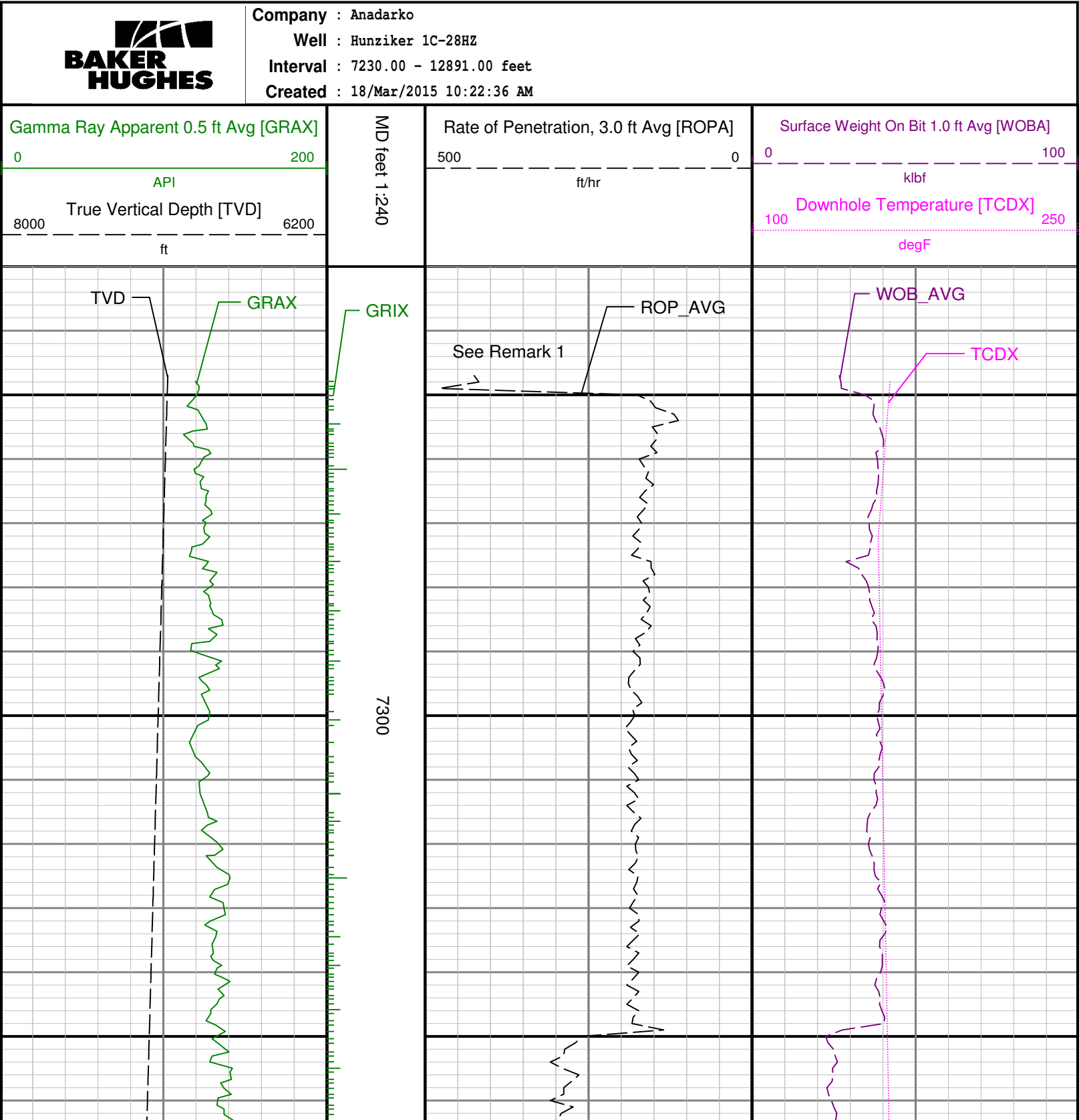
Equipment and Service Data						
LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12323368	Directional	54.21	6.750	3.250
1	SRIG	12131373	Gamma	50.84	6.750	3.250
2	DIR	11801247	Directional	47.70	6.750	3.250
2	SRIG	12131401	Gamma	44.32	6.750	3.250
3	DIR	11991886	Directional	65.15	4.750	2.750
3	SRIG	12041109	Gamma	61.73	4.750	2.750

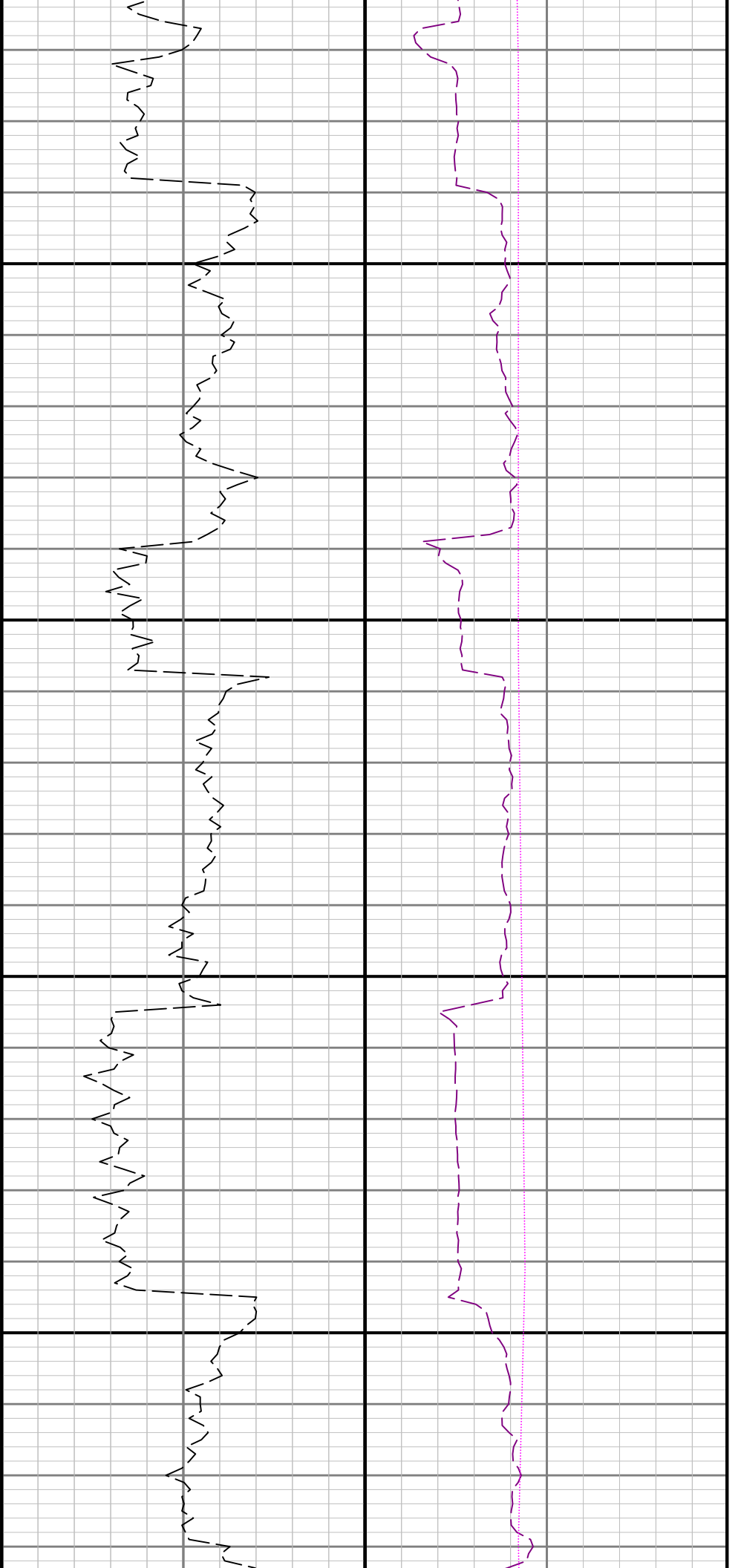
Service and Tool Mnemonics		
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

Comments	
1) Baker Hughes INTEQ run 1 & 2 utilized a 6.5 inch NaviGamma (Gamma Ray and Directional) tool behind a 8 3/4inch bit and steerable assembly from 1333 to 8135 ft. MD (1332 to 7707 ft. TVD).	
2) Baker Hughes INTEQ run 2 utilized a 4.75 inch NaviGamma (Gamma Ray and Directional) tool behind a 6 1/8 inch bit and steerable assembly from 8135 to 12888 ft. MD (7707 to 7677 ft. TVD).	

Remarks				
Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark

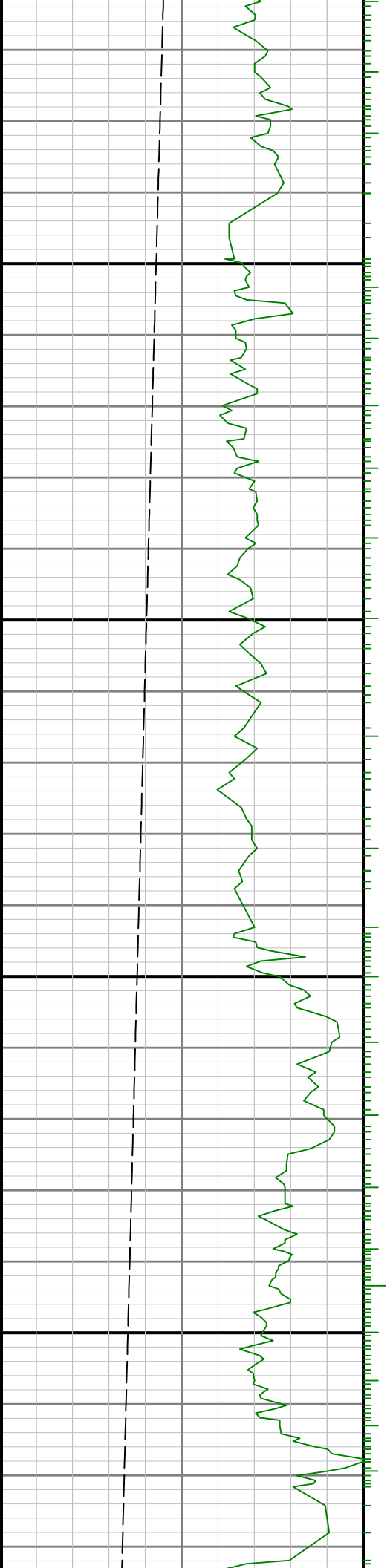
	(ft.)	(in.)		
1	7247	8.750	1	The interval from surface to 7247 feet MD (7079 feet TVD) was not logged due to gamma logging services beginning at the start of the curve.
2	8125	8.750	2	The interval from 8125 to 8175 feet MD (7706 to 7707 feet TVD) was logged up to 28.5 hours after drilling due to tripping out of the hole for a reaming run of the wellbore, casing, cement operations.Gamma data is attenuated due to logging behind casing.
3	12828	6.125	3	The interval from 12828 to 12888 feet MD (7677 to 7677 feet TVD) was not logged due to sensor offsets to bit at TD.

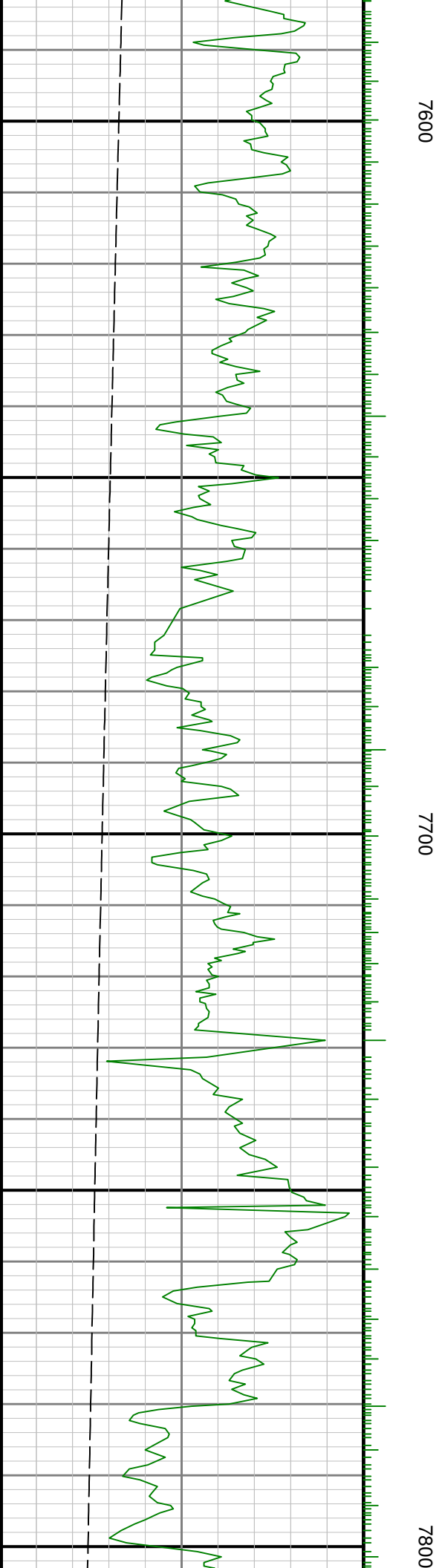
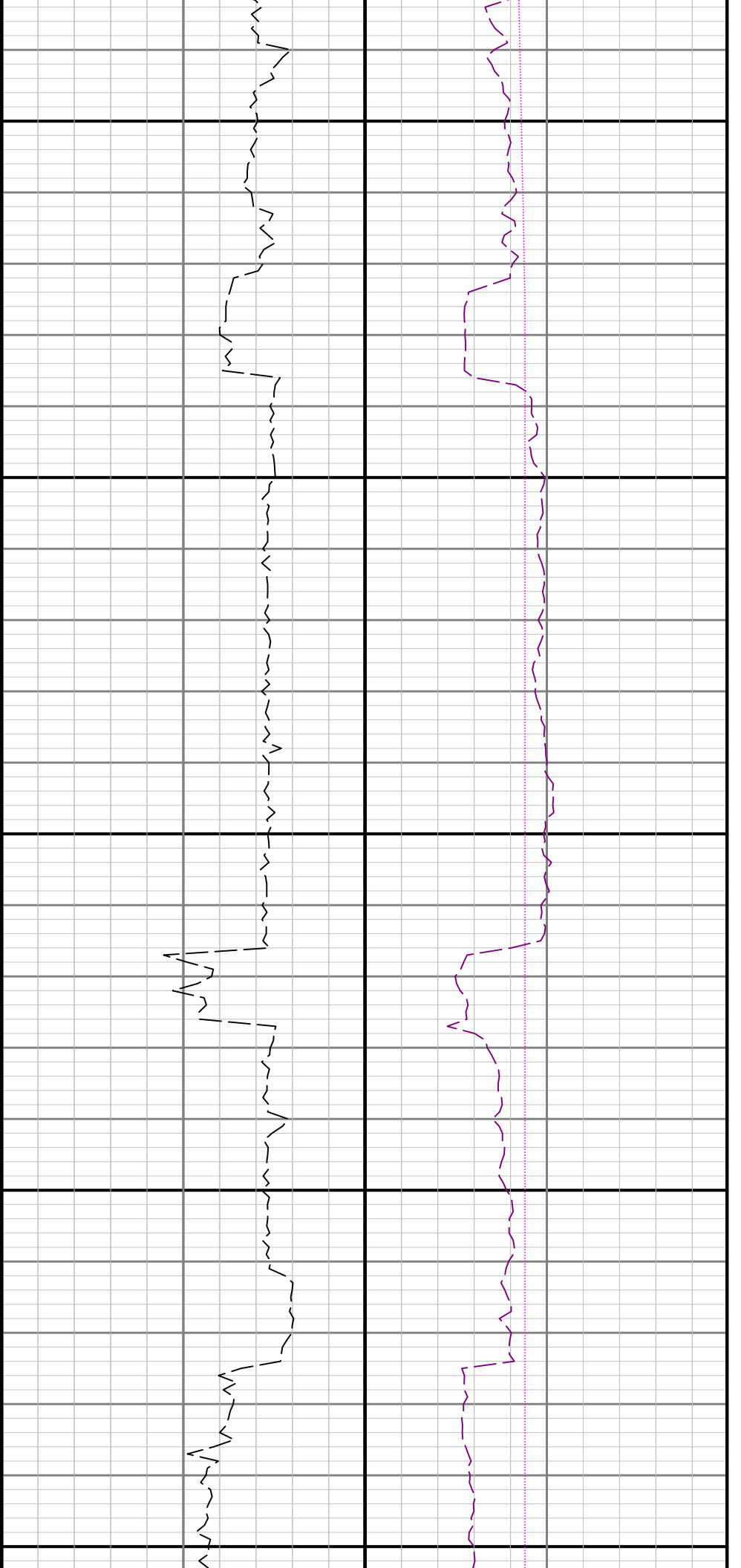


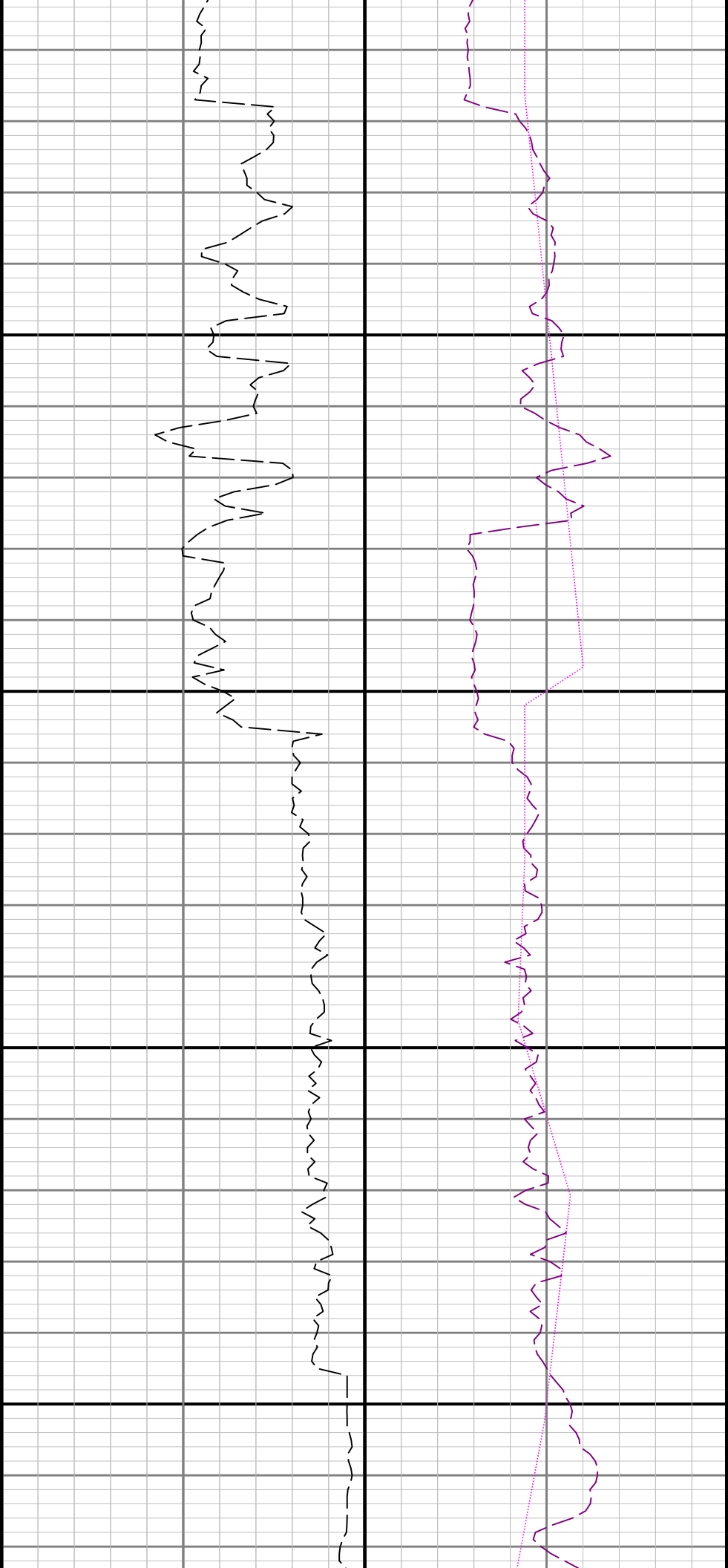


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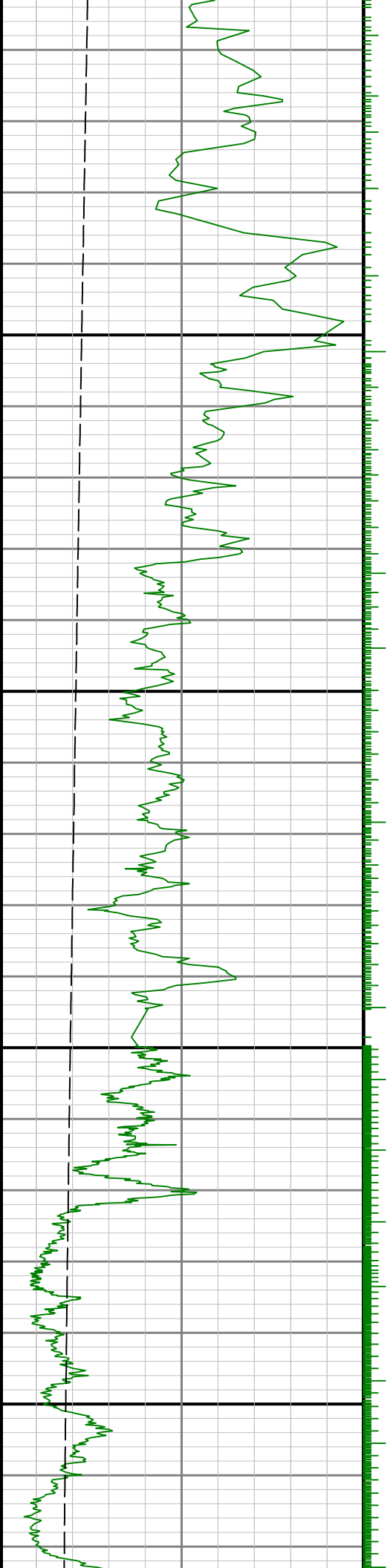


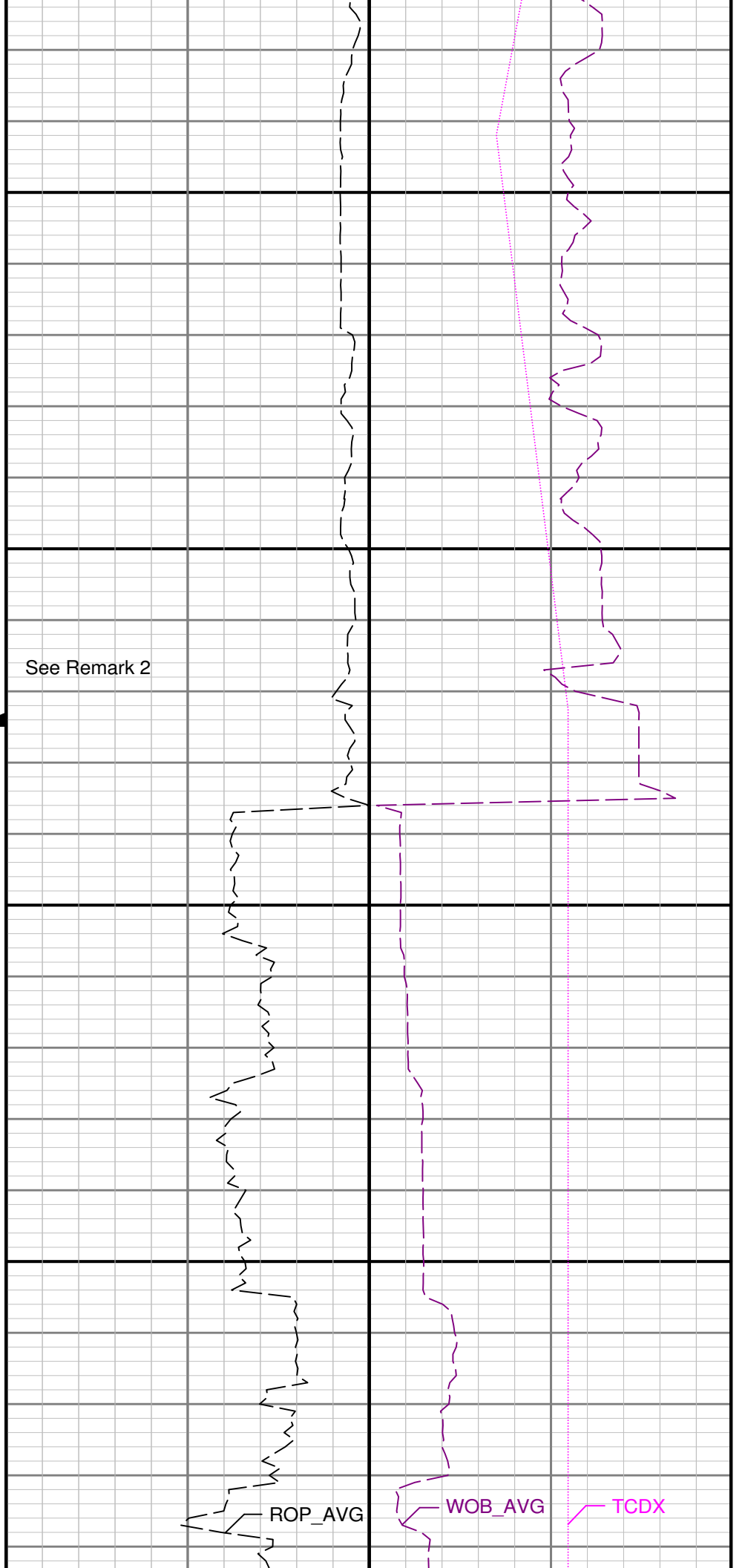
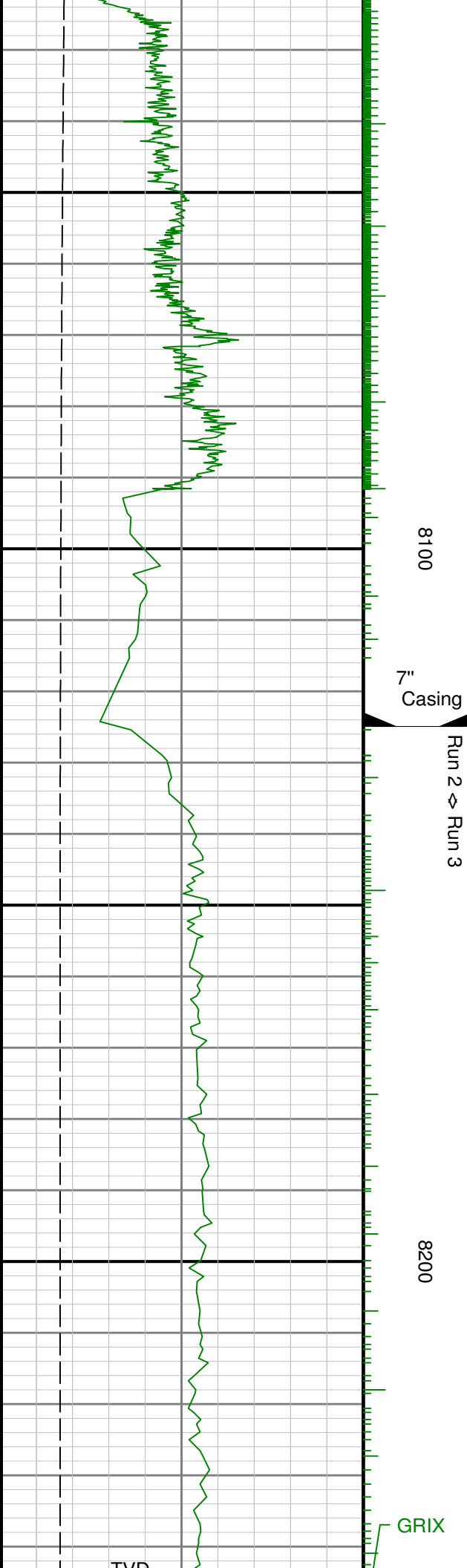


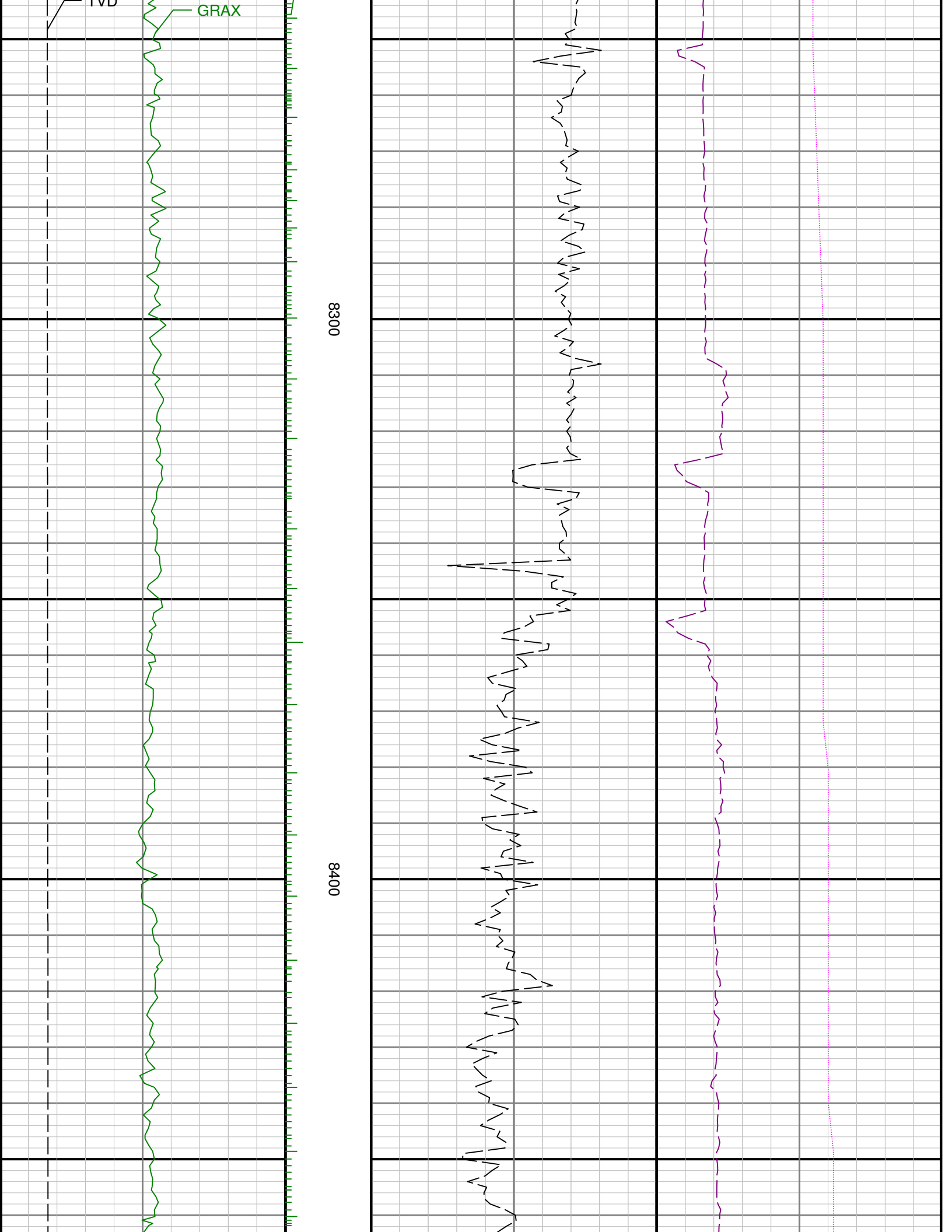


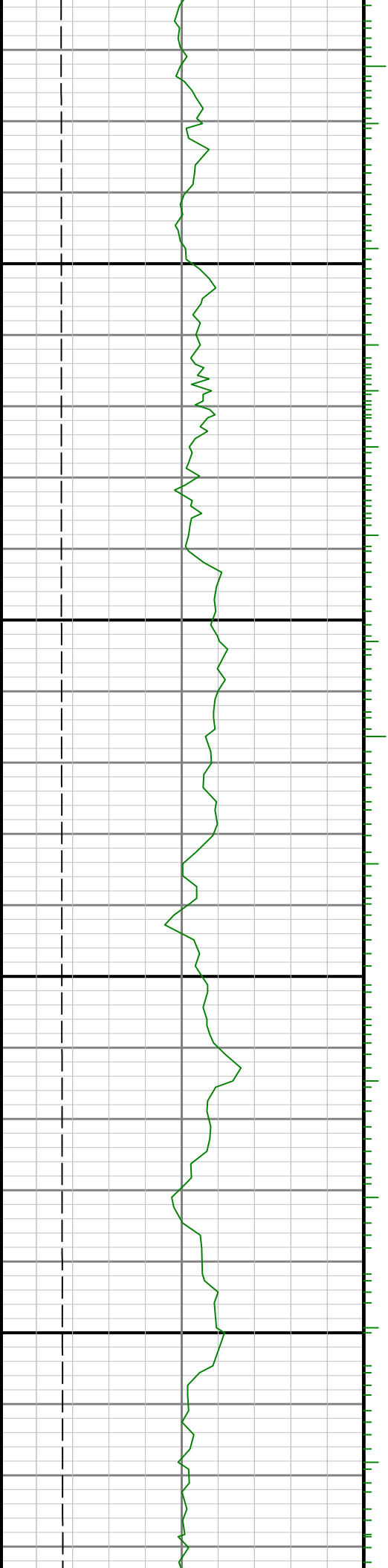
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Run 1 ⇔ Run 2
8000



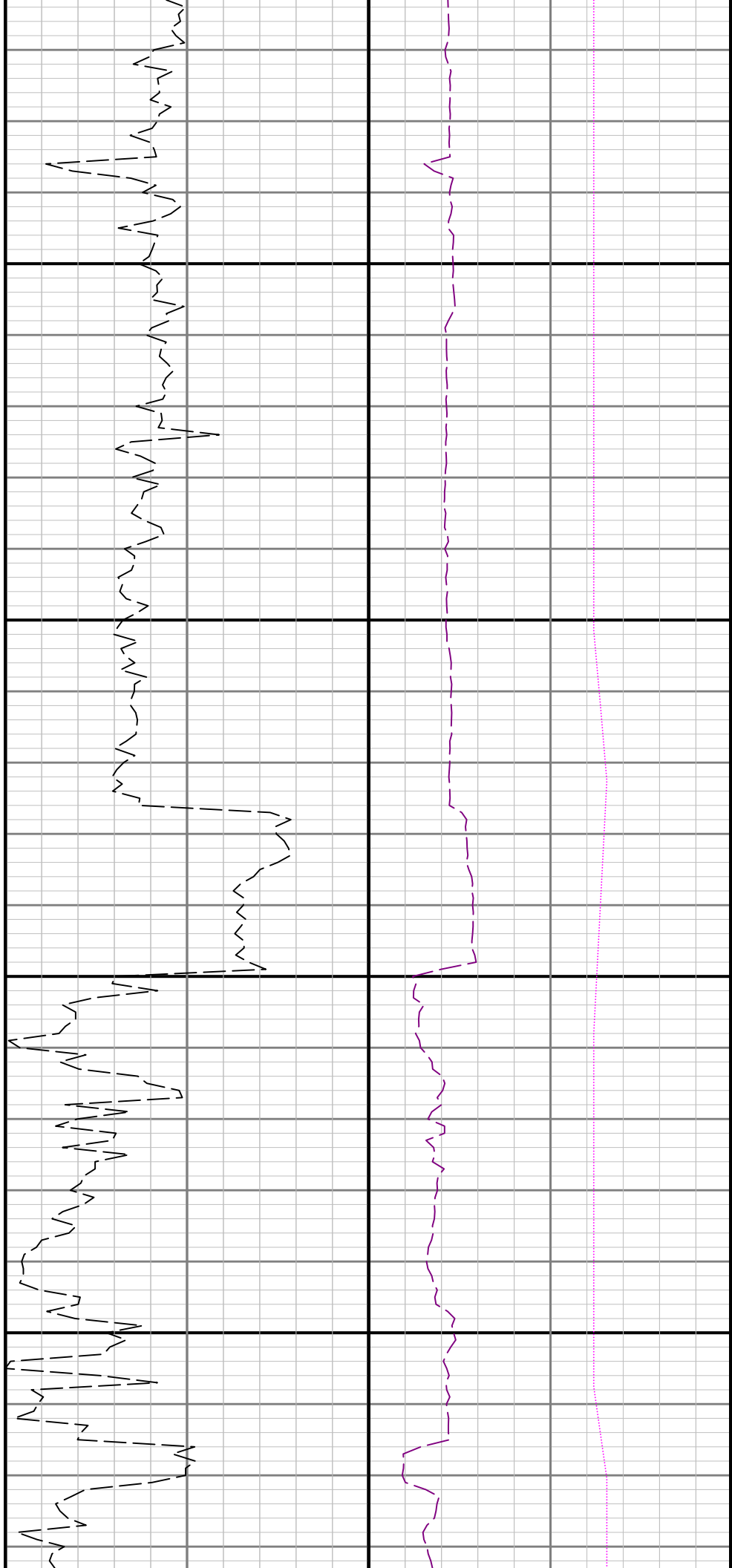


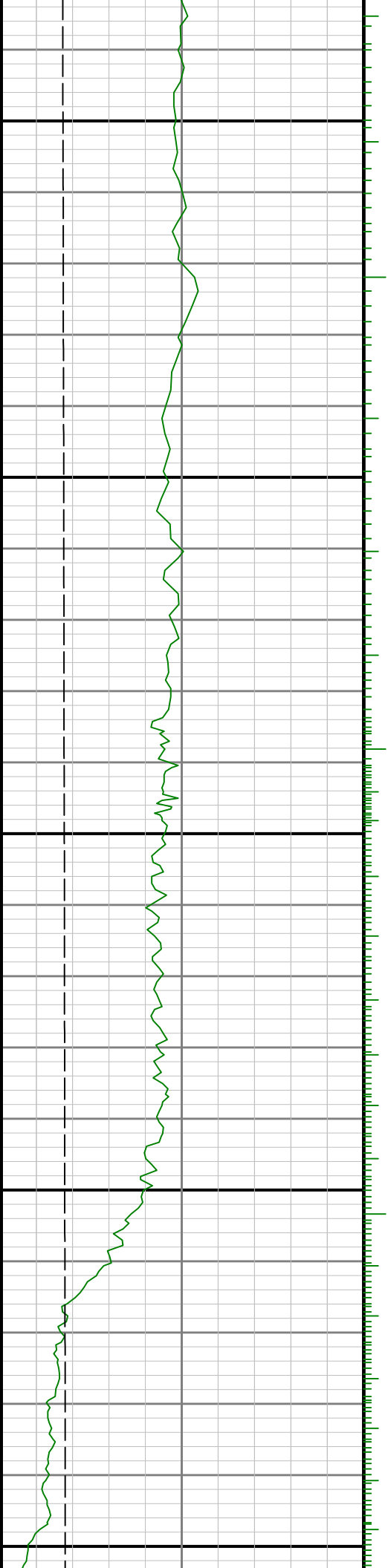




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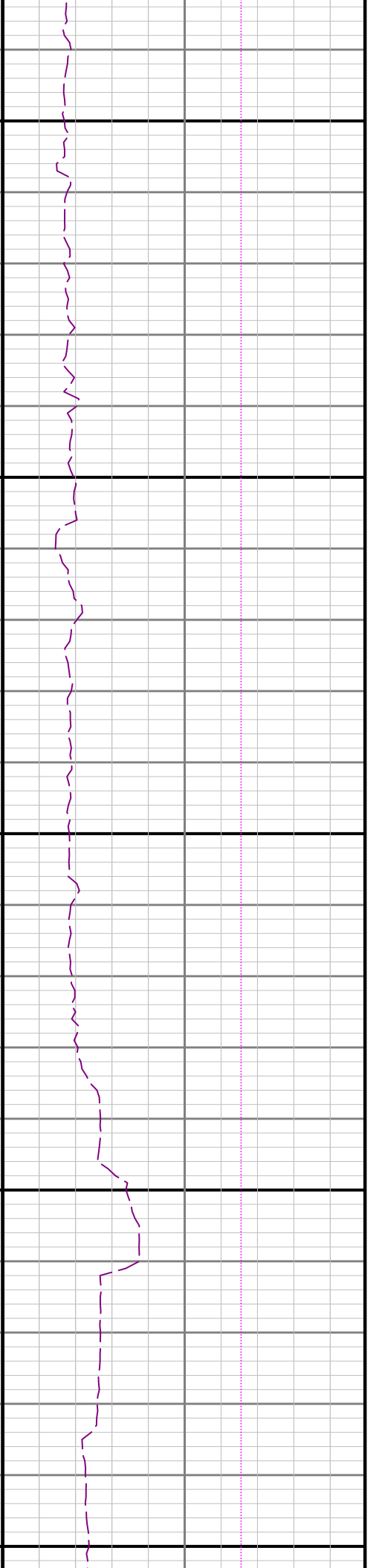
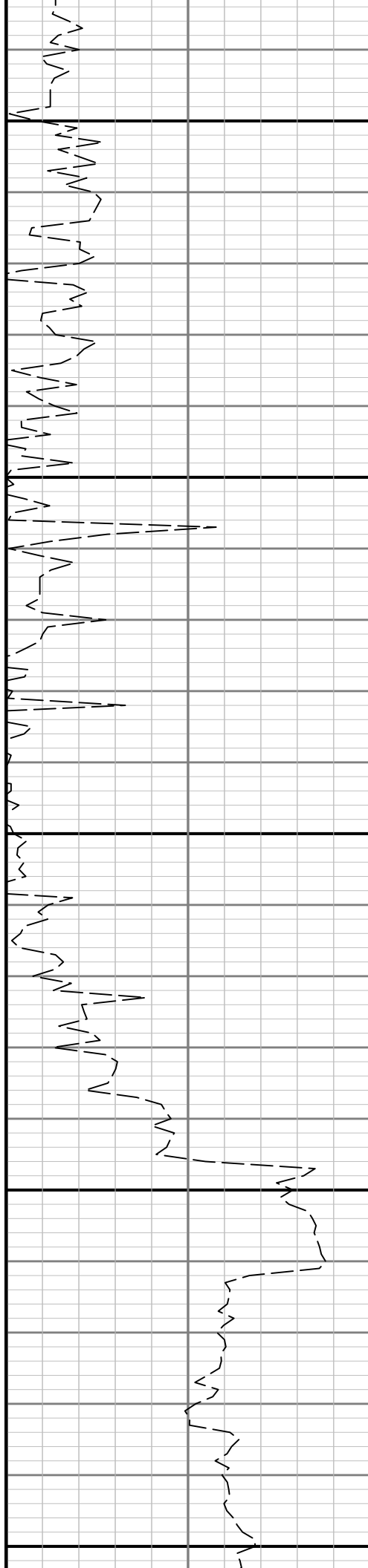


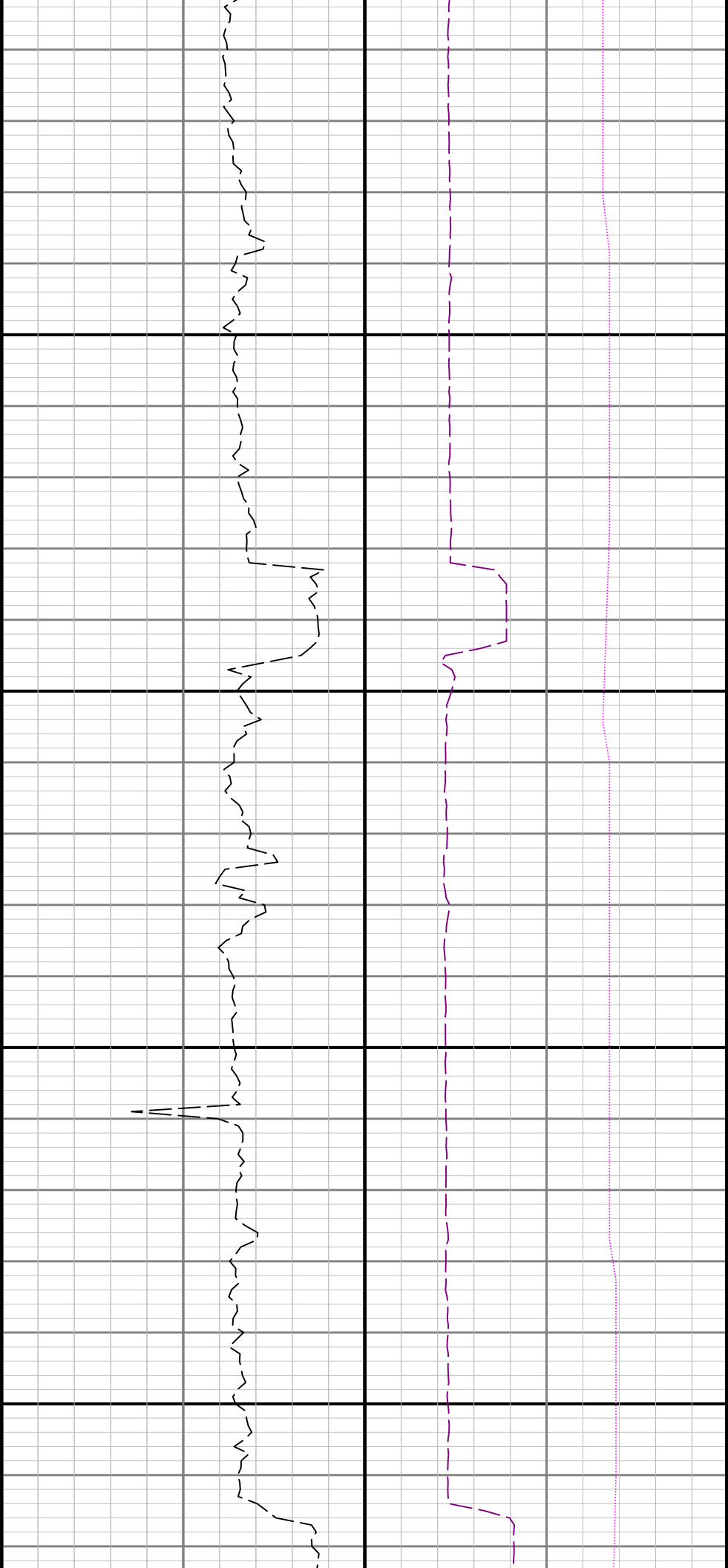


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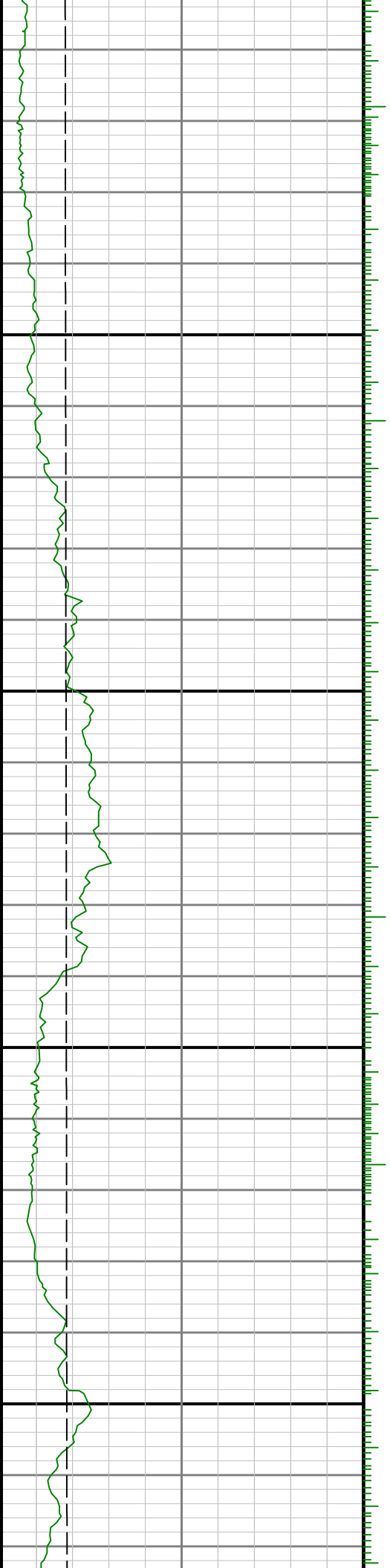
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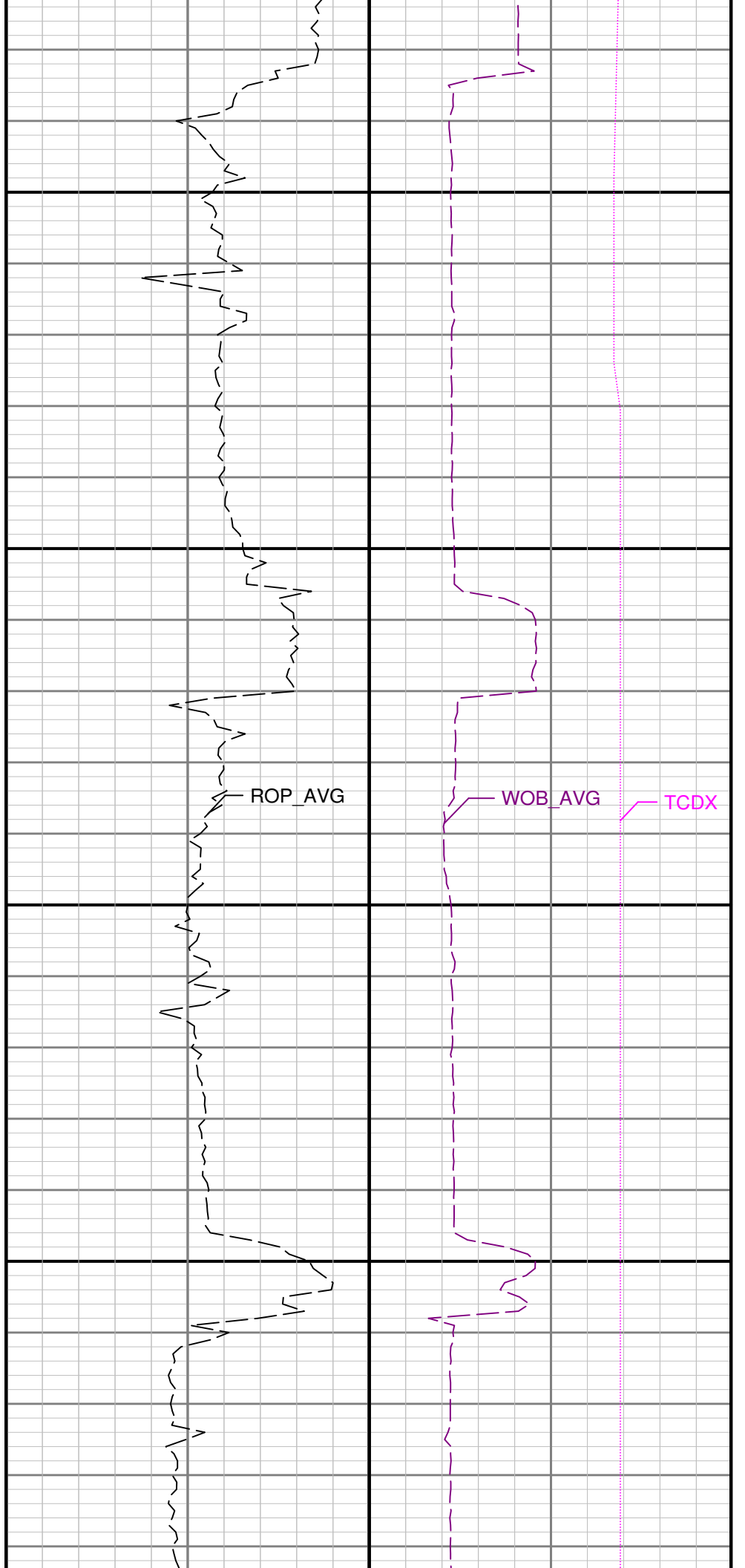
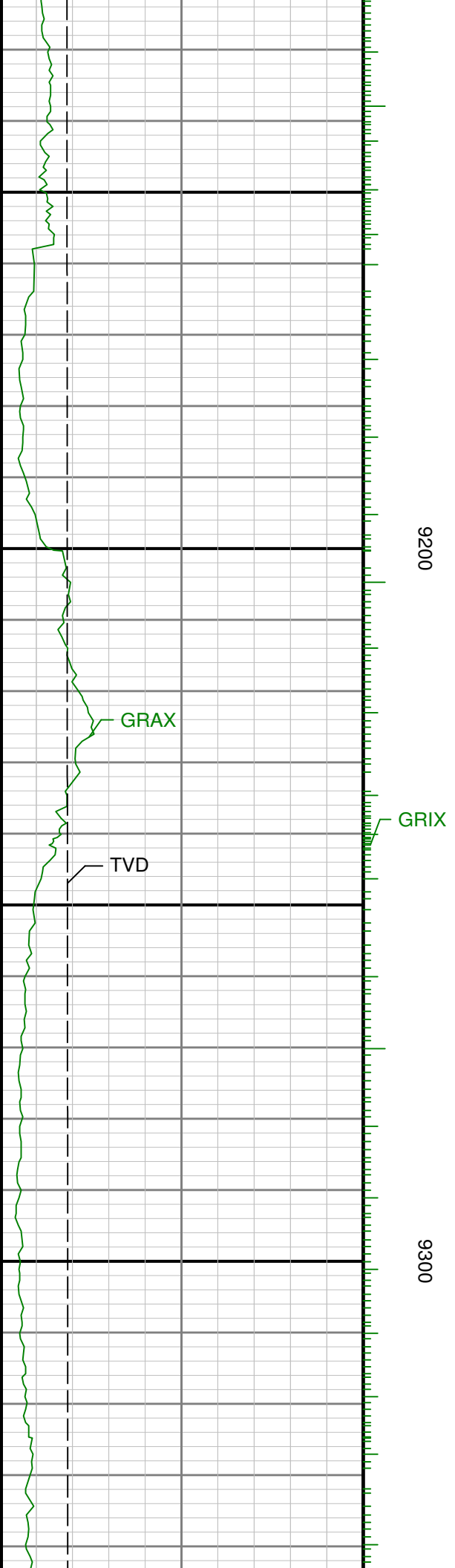


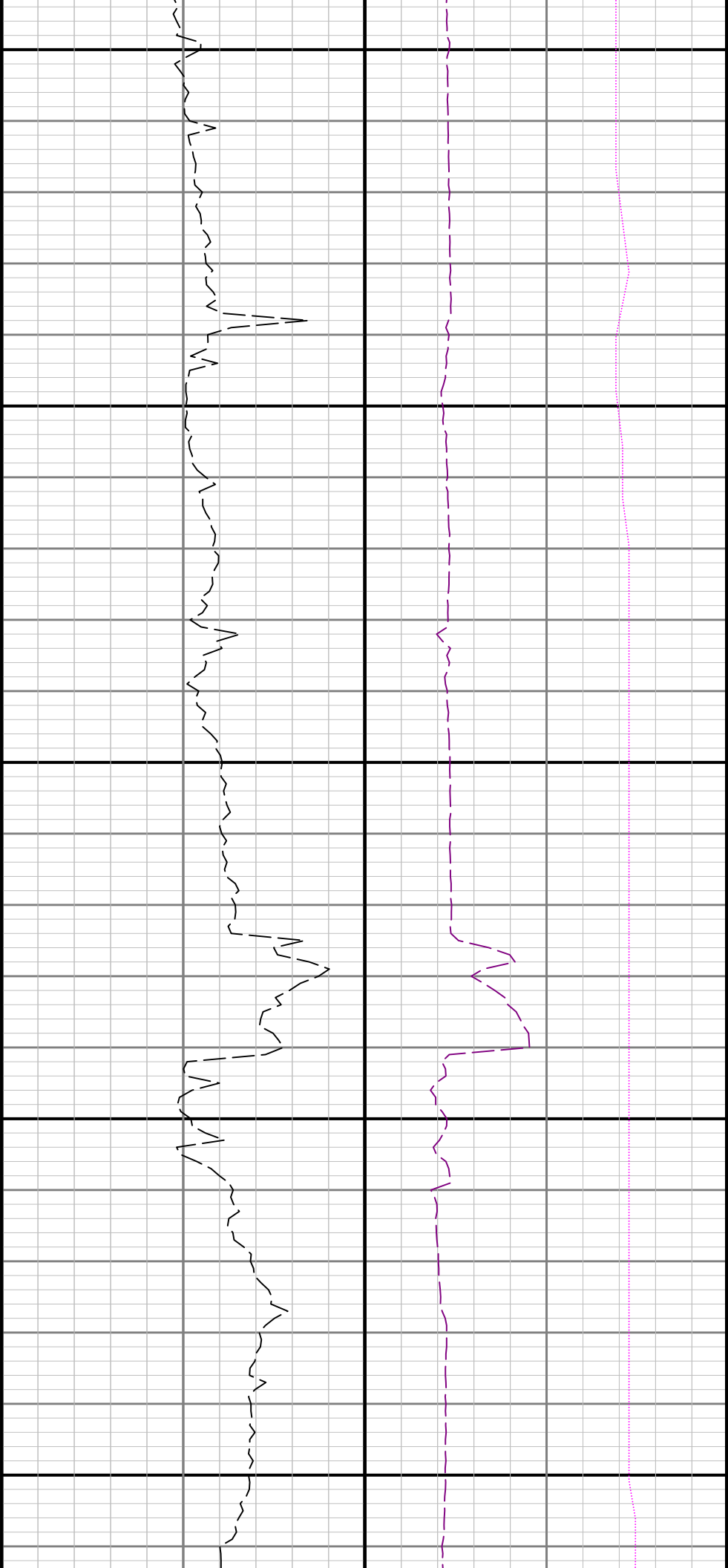


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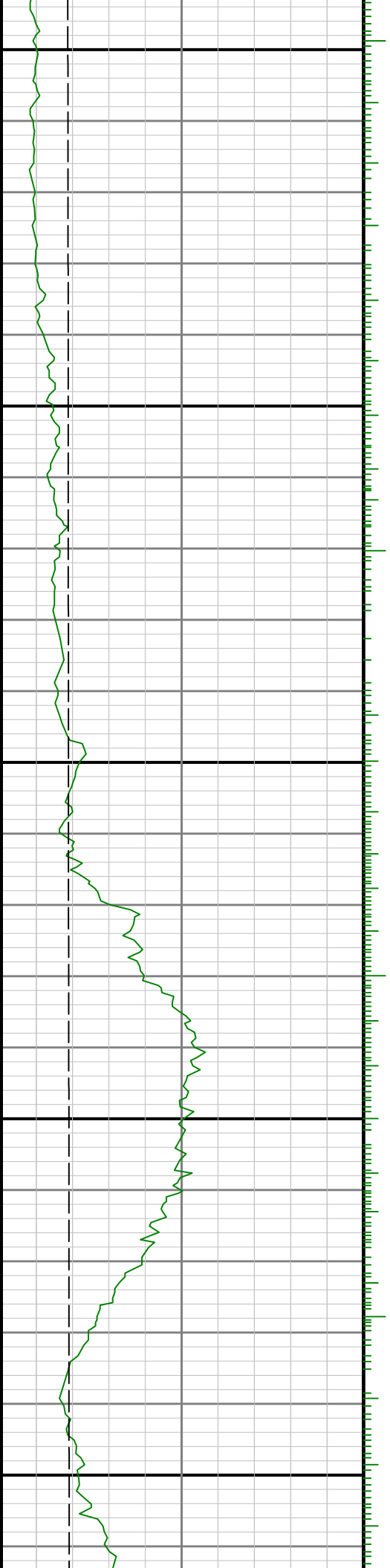


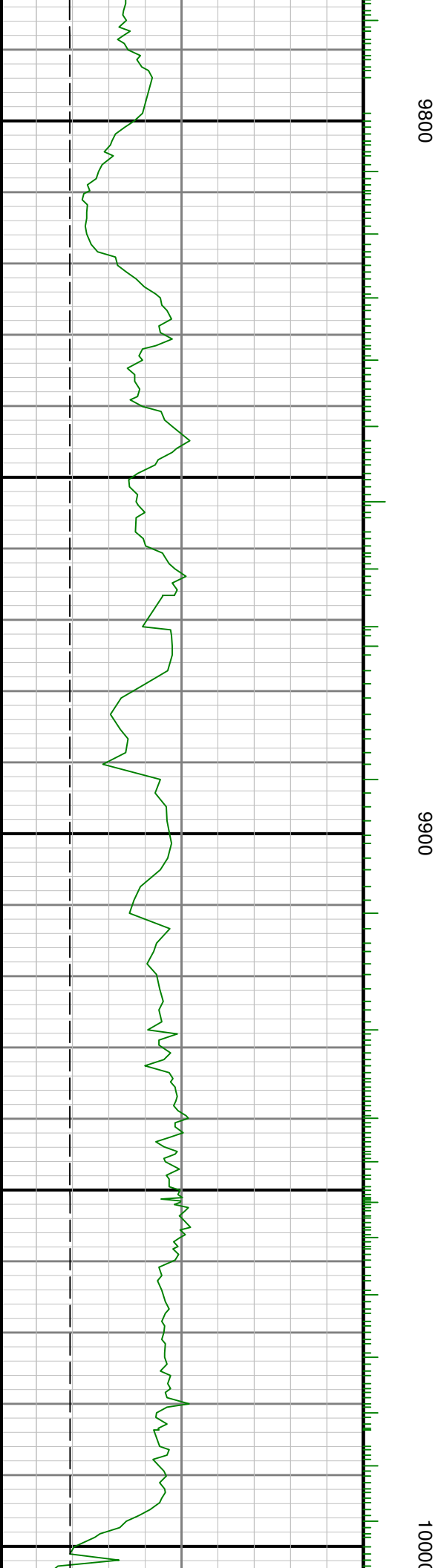


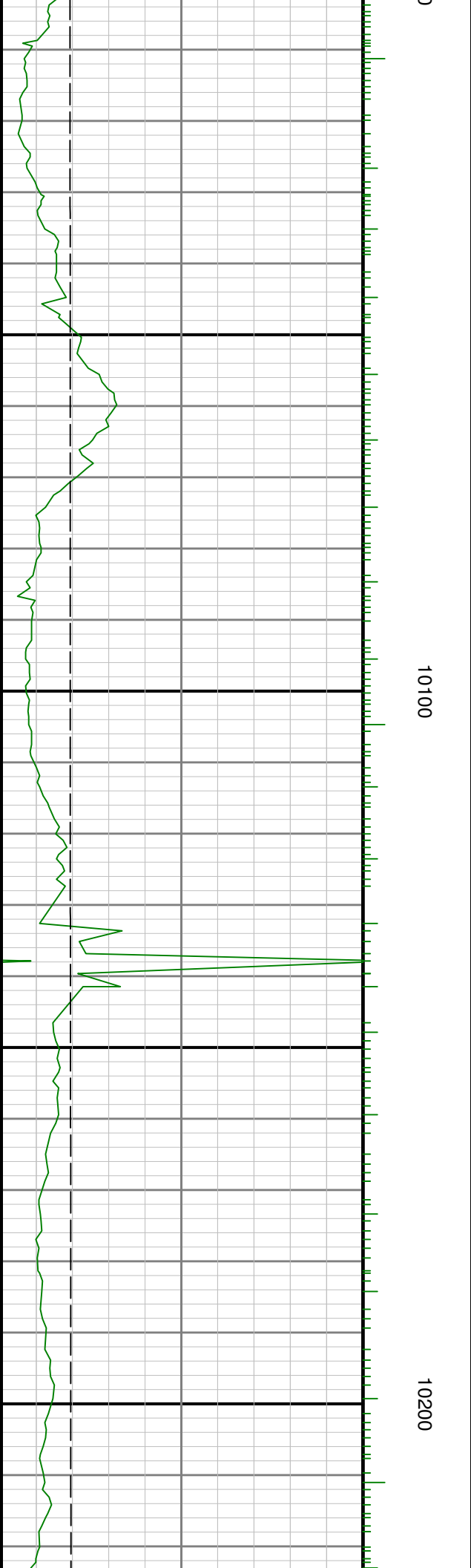
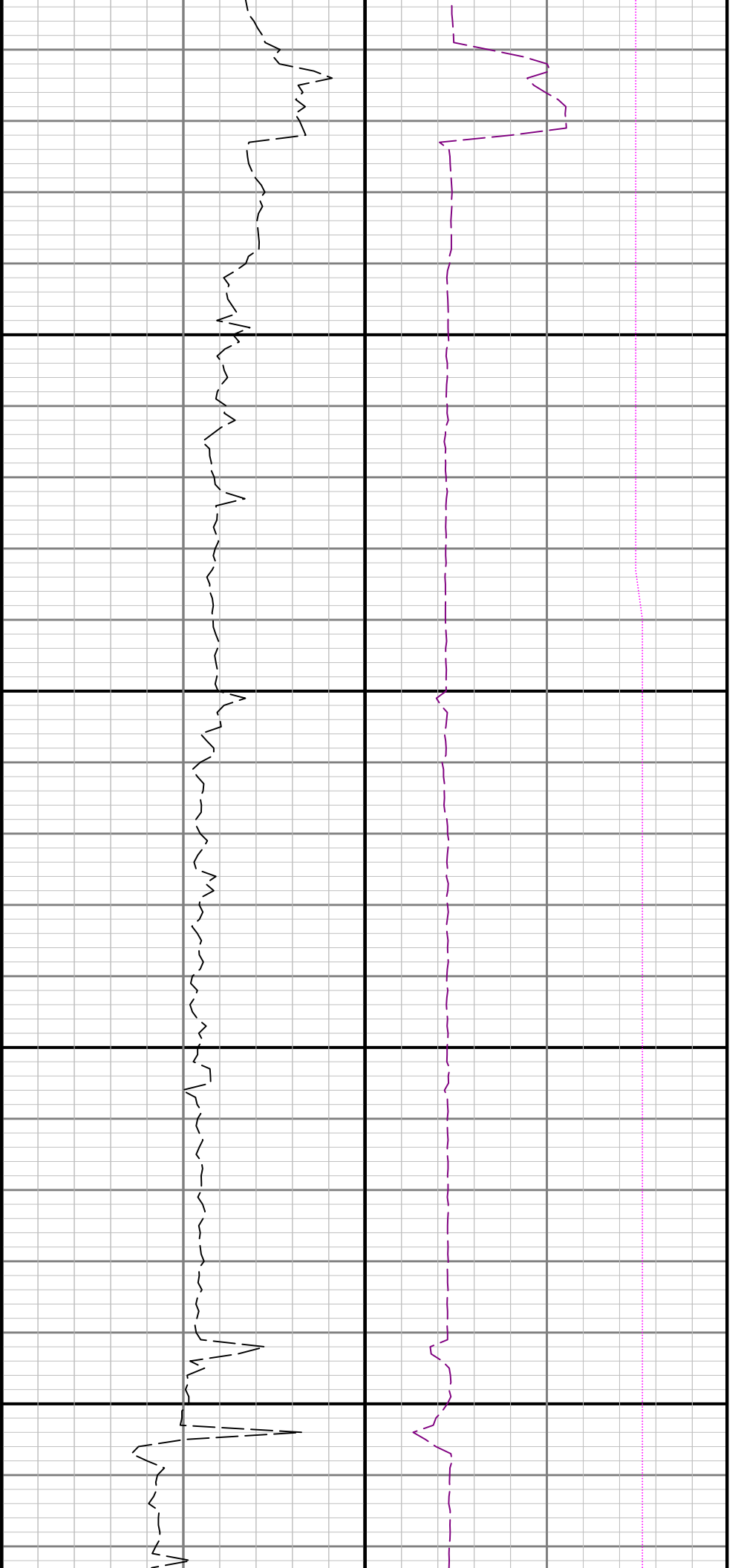


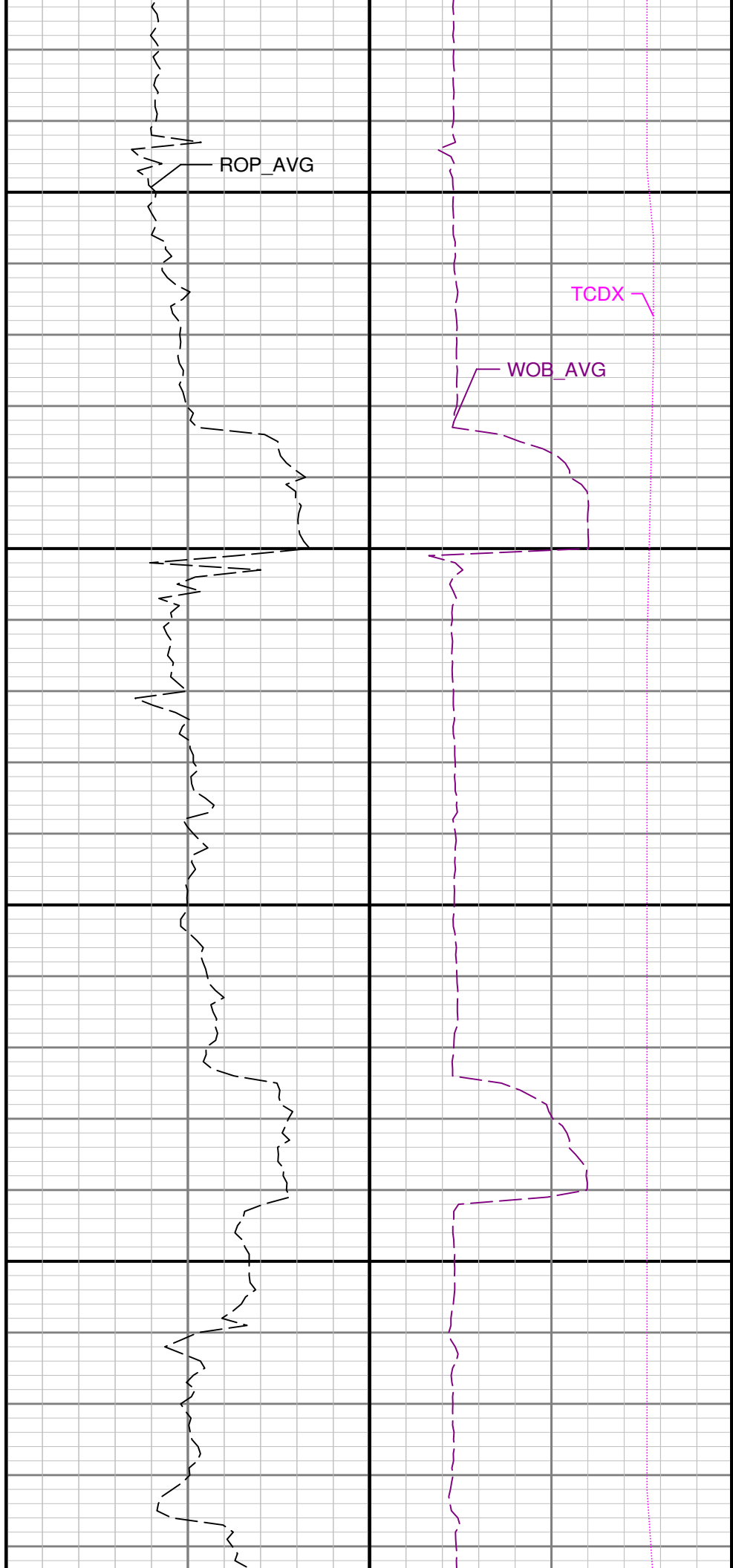
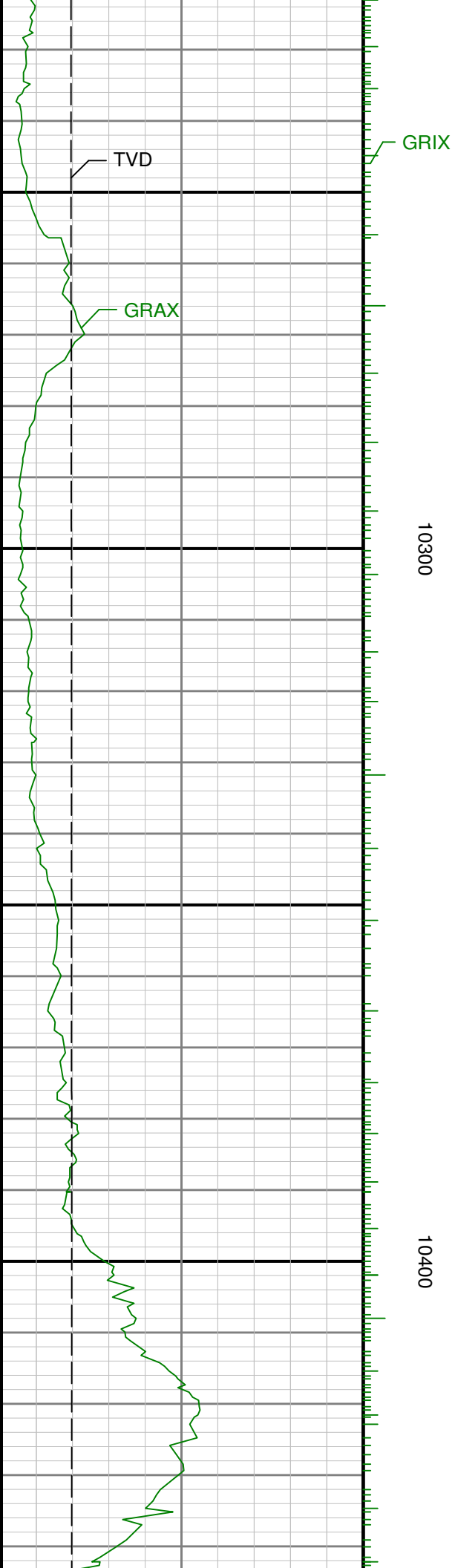
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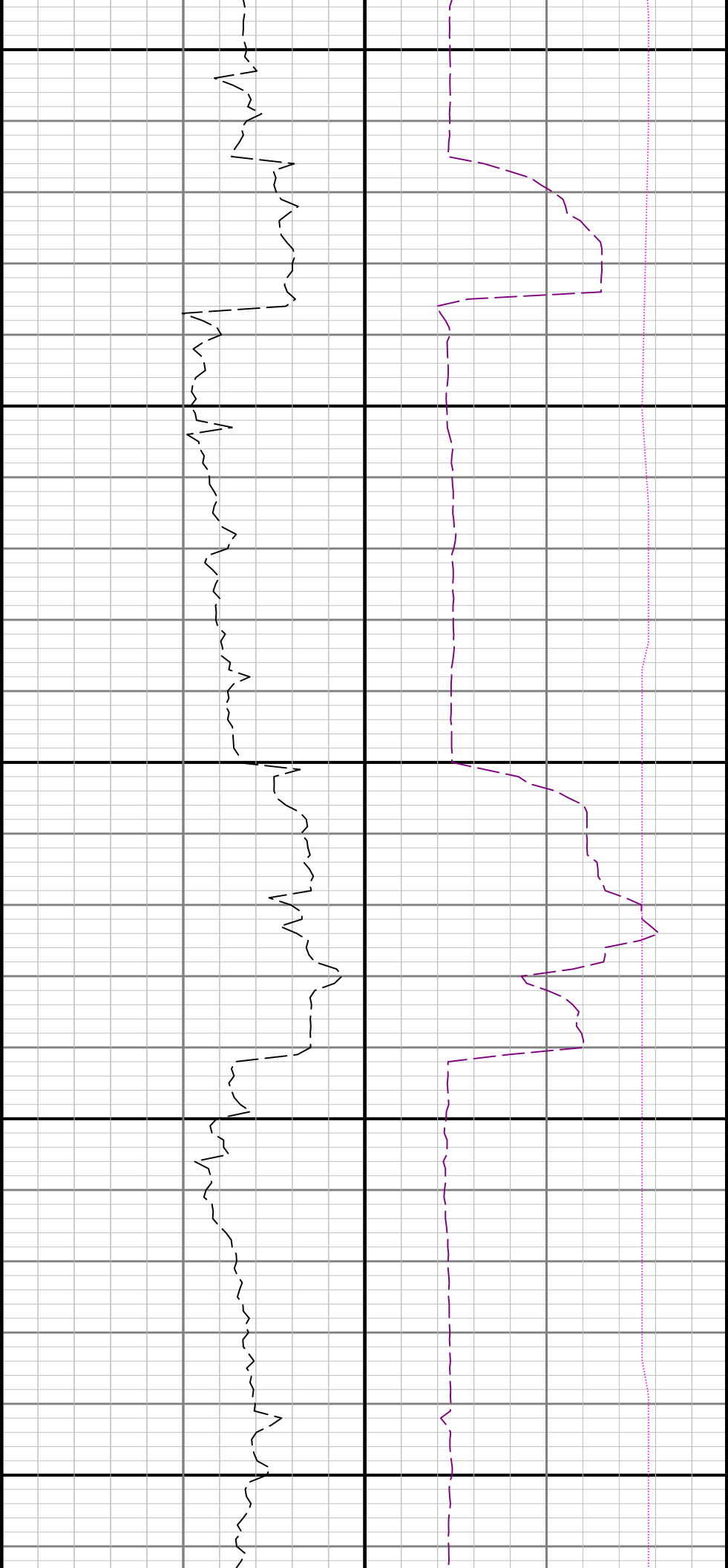
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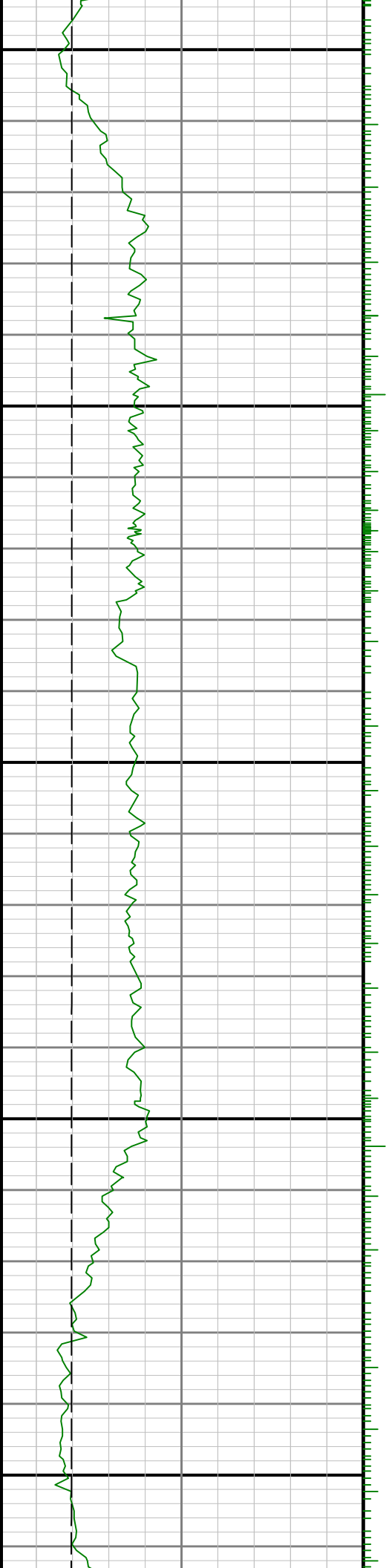


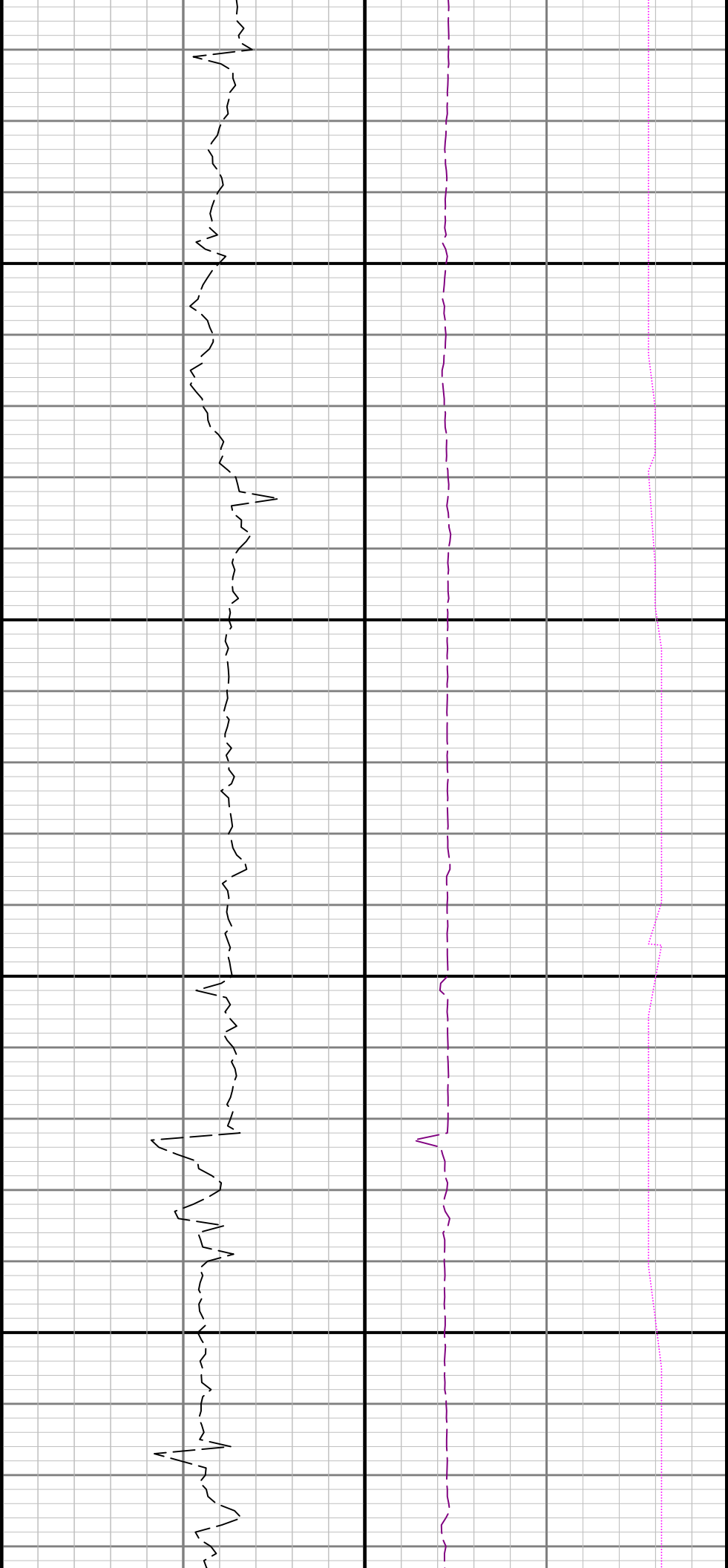




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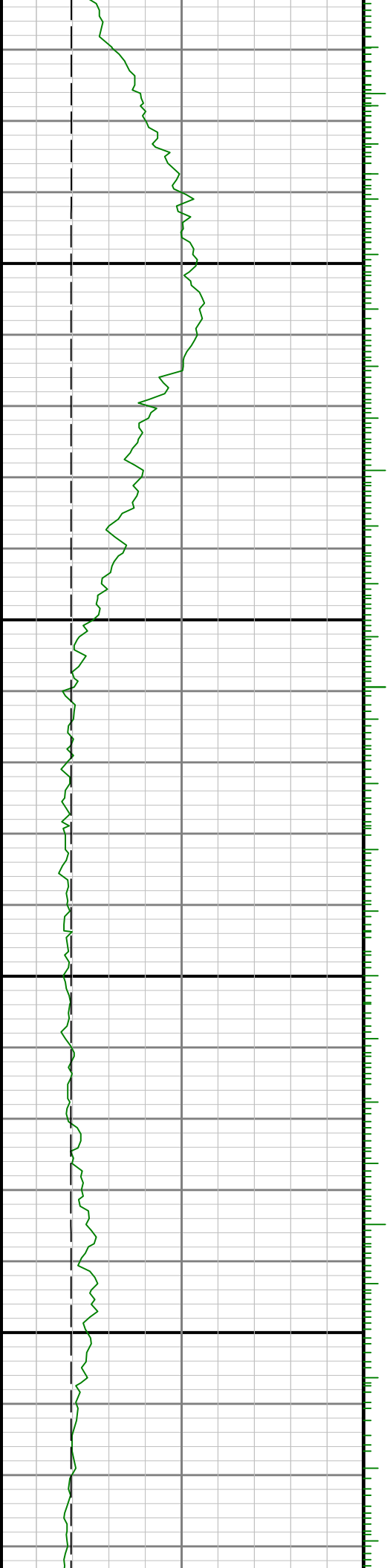
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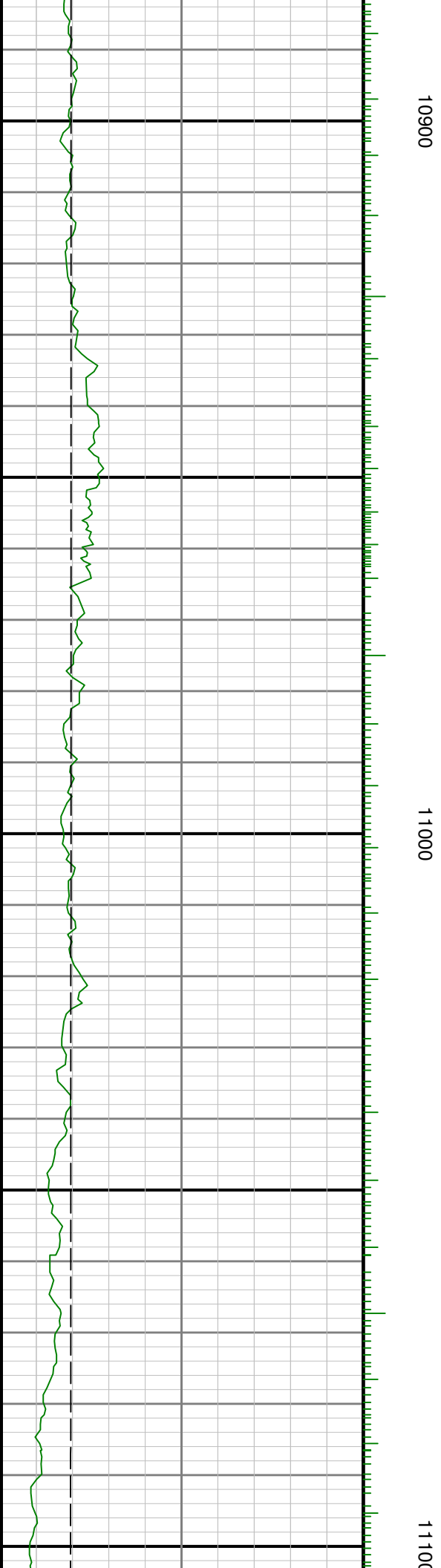
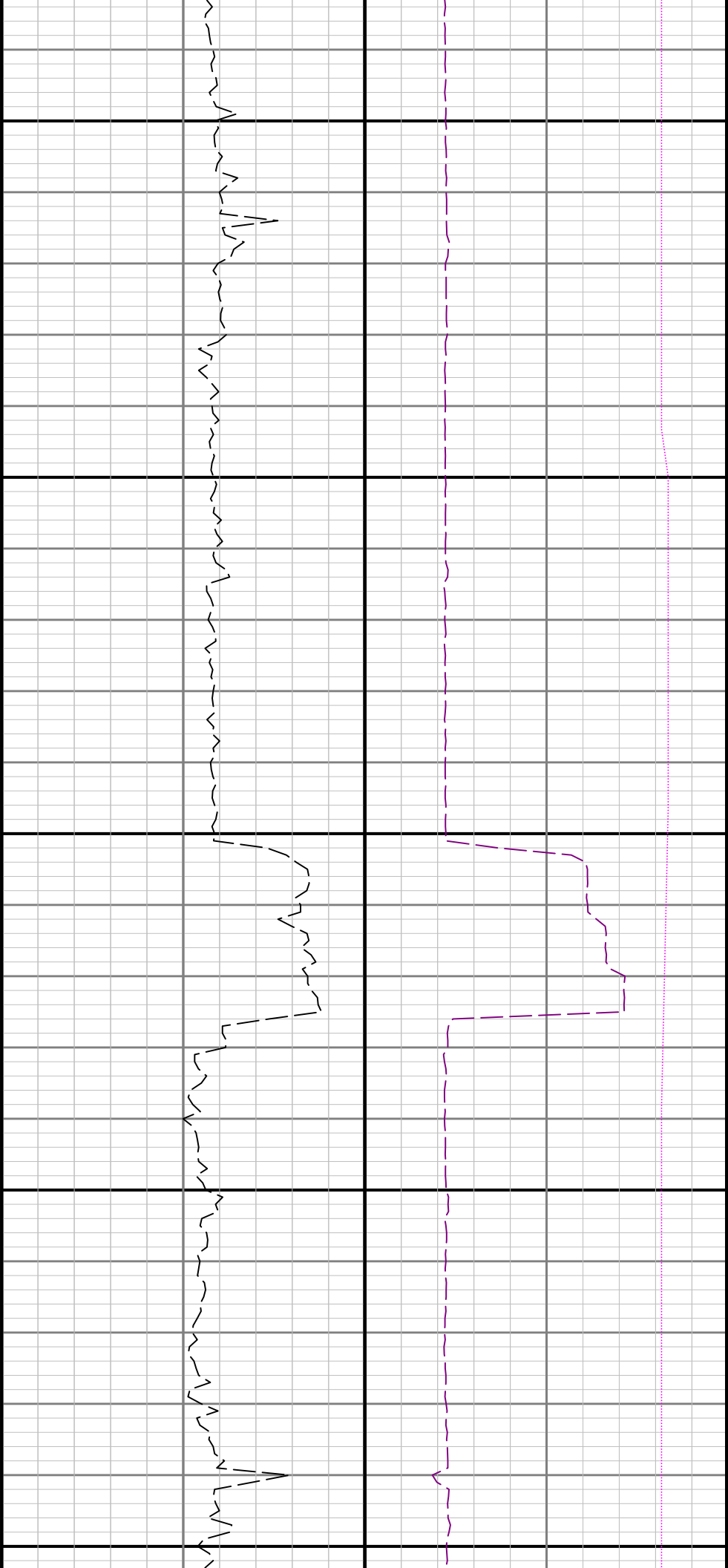


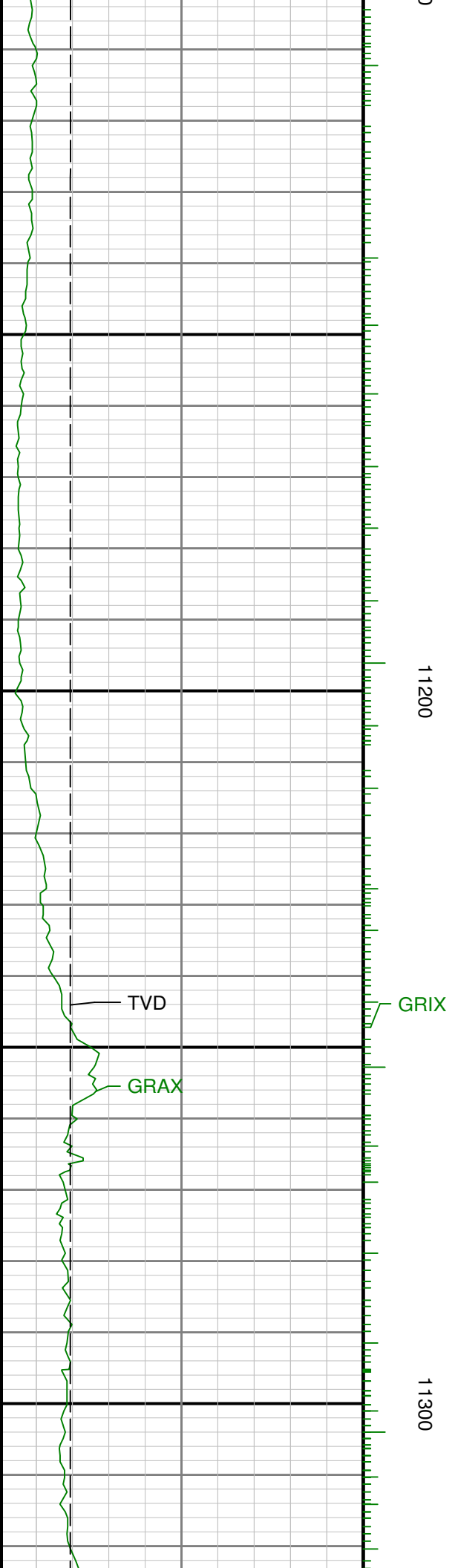
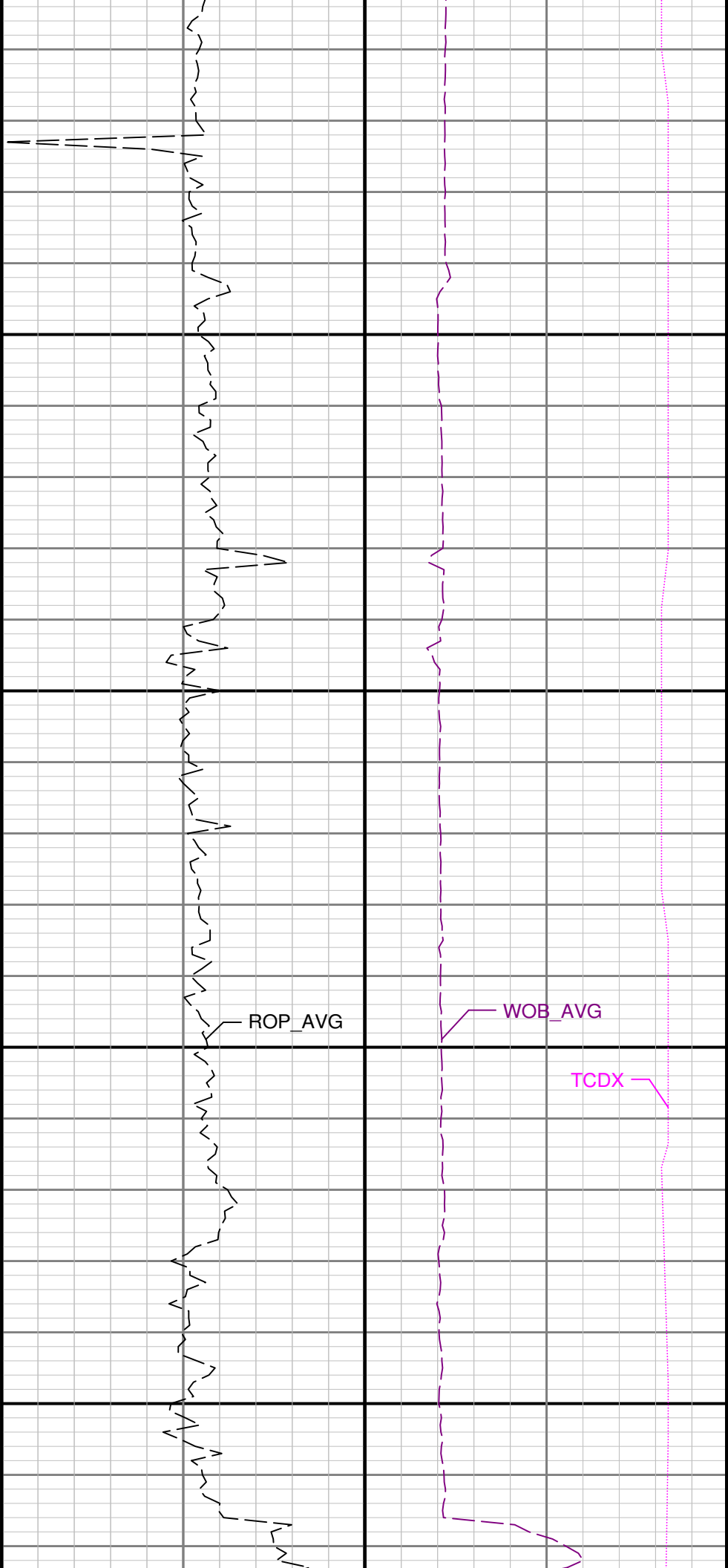


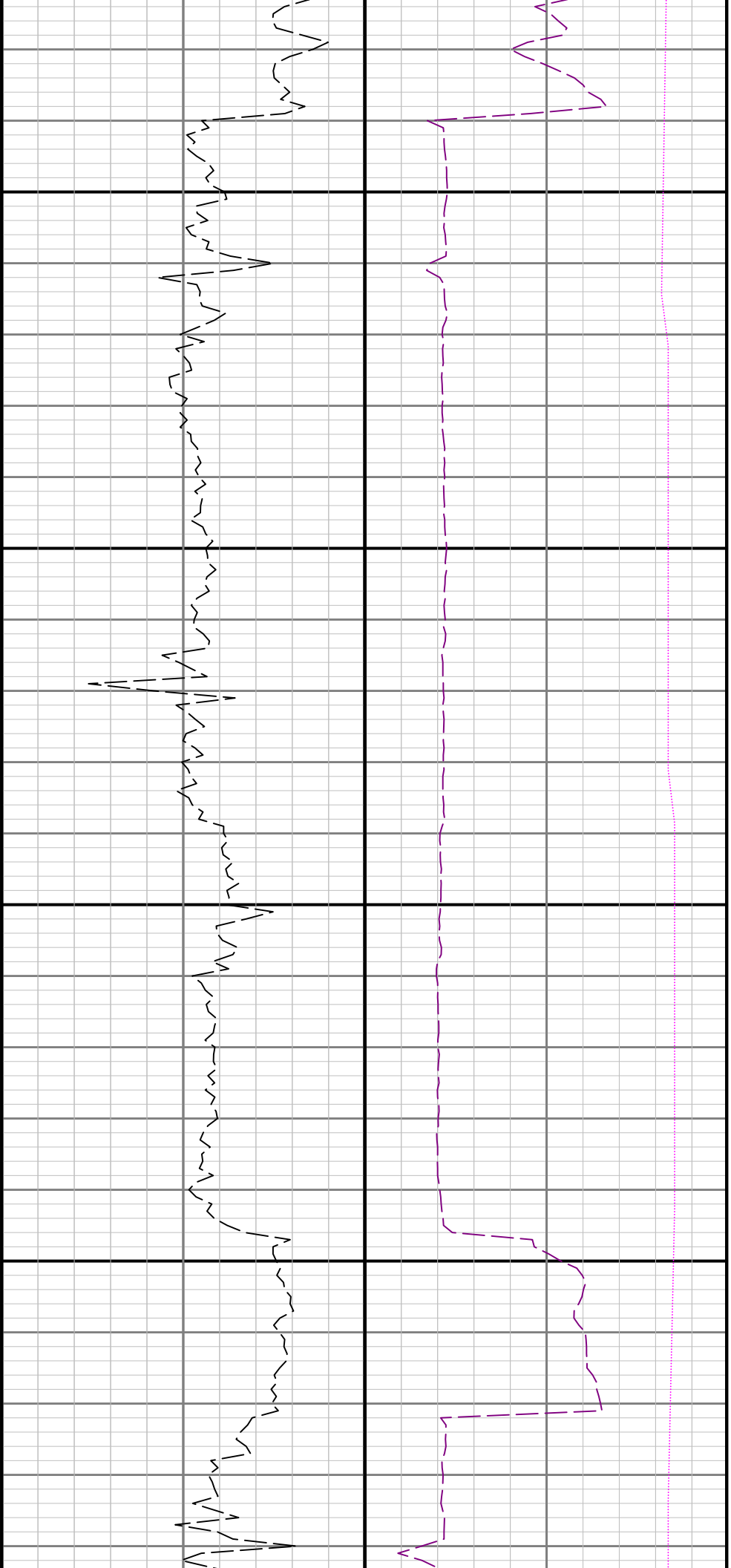
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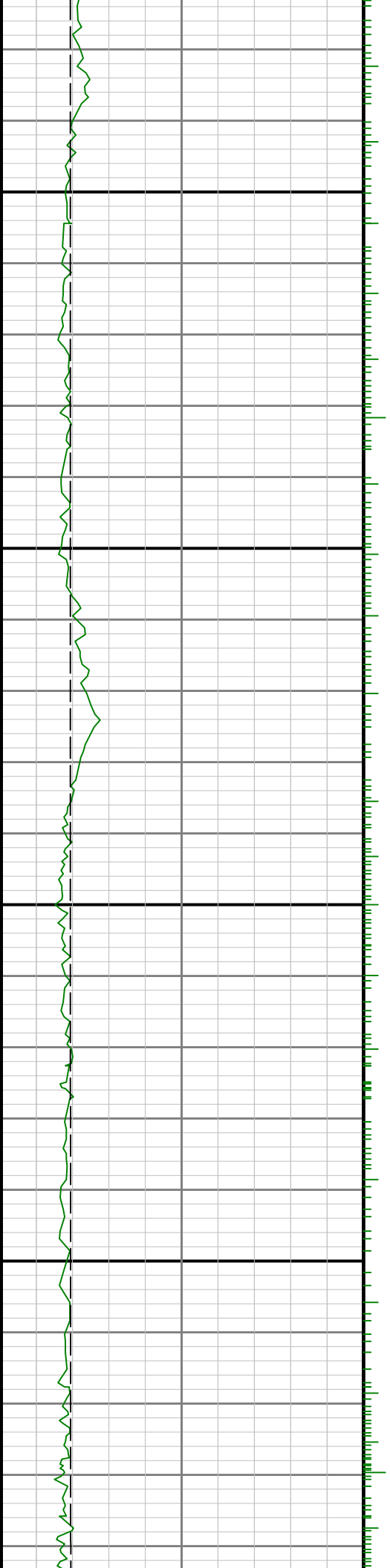


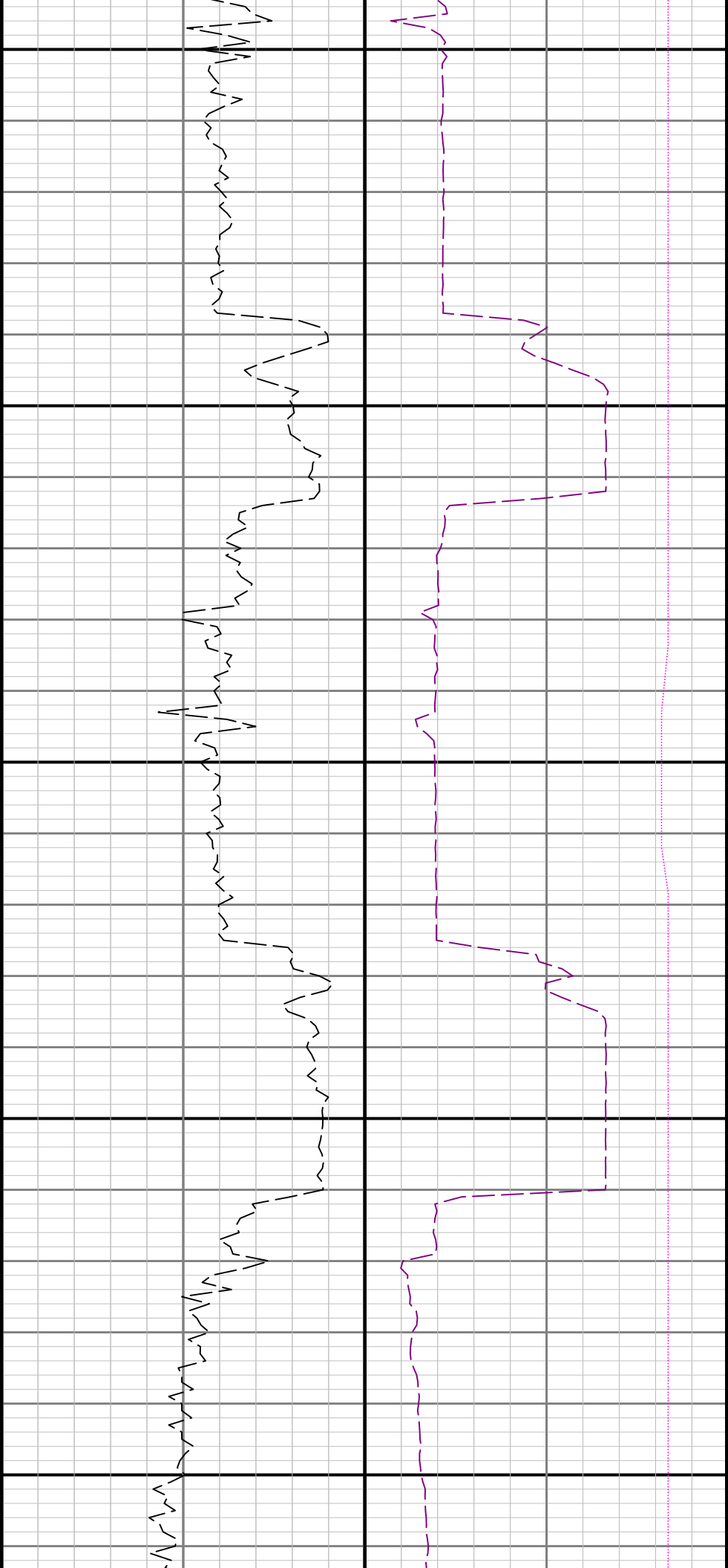




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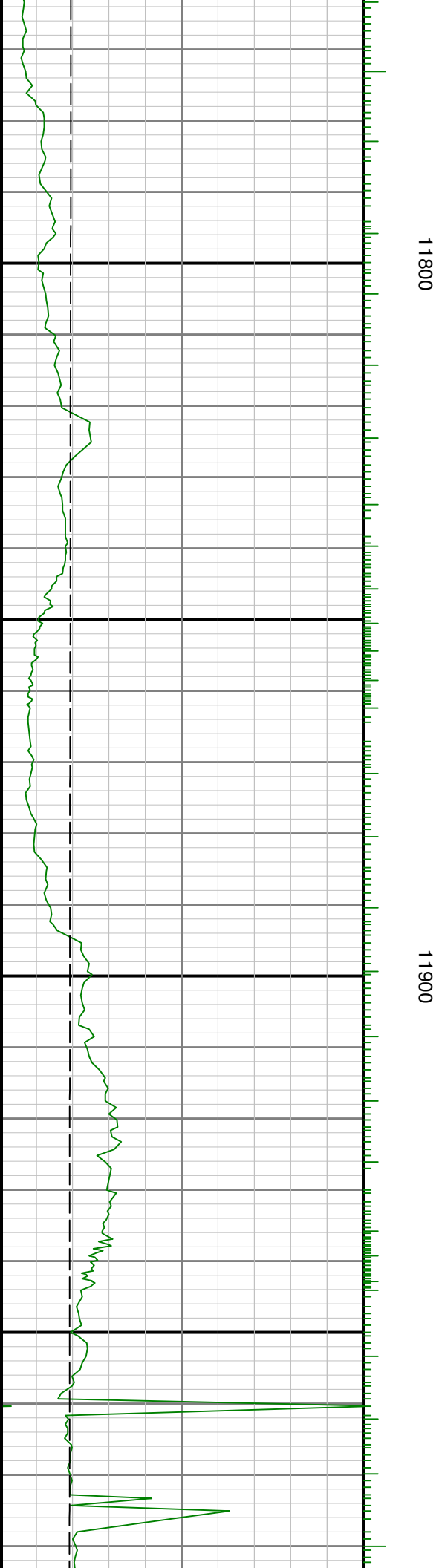
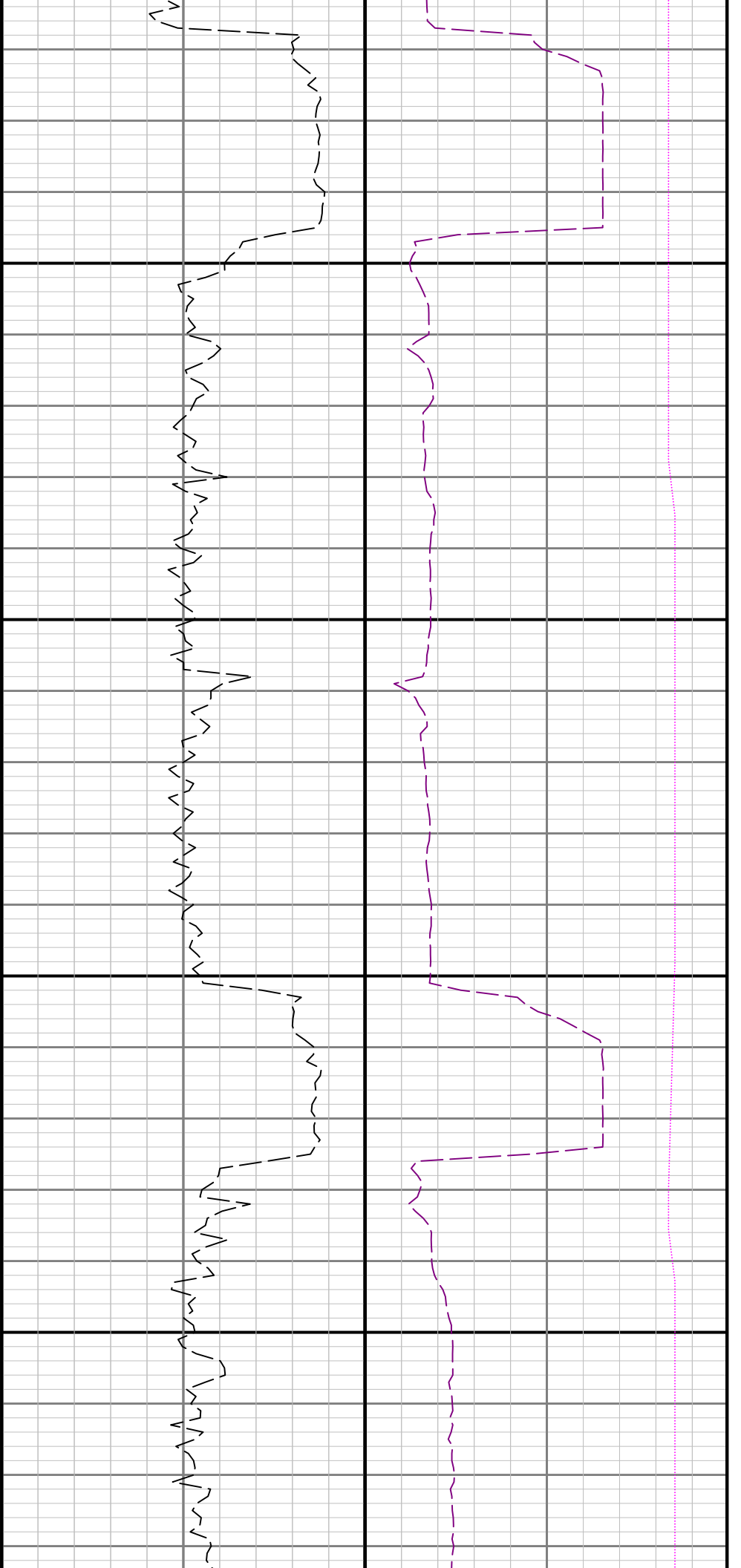
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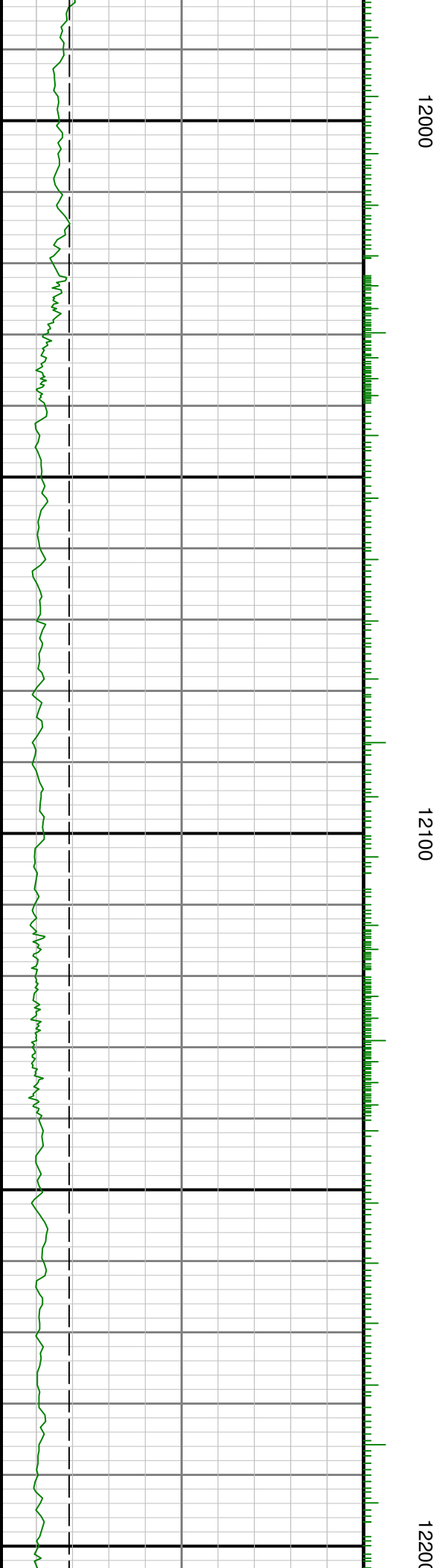
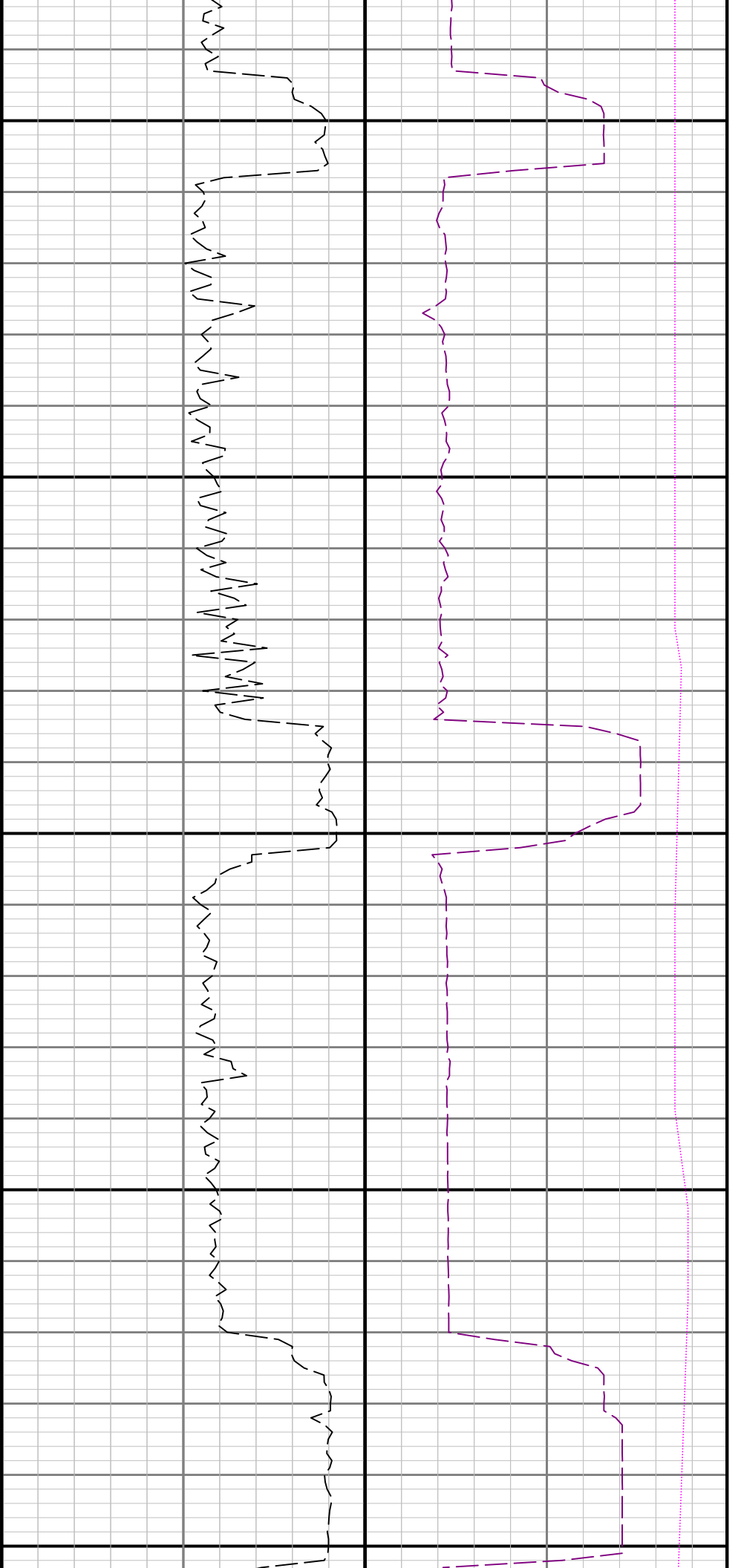


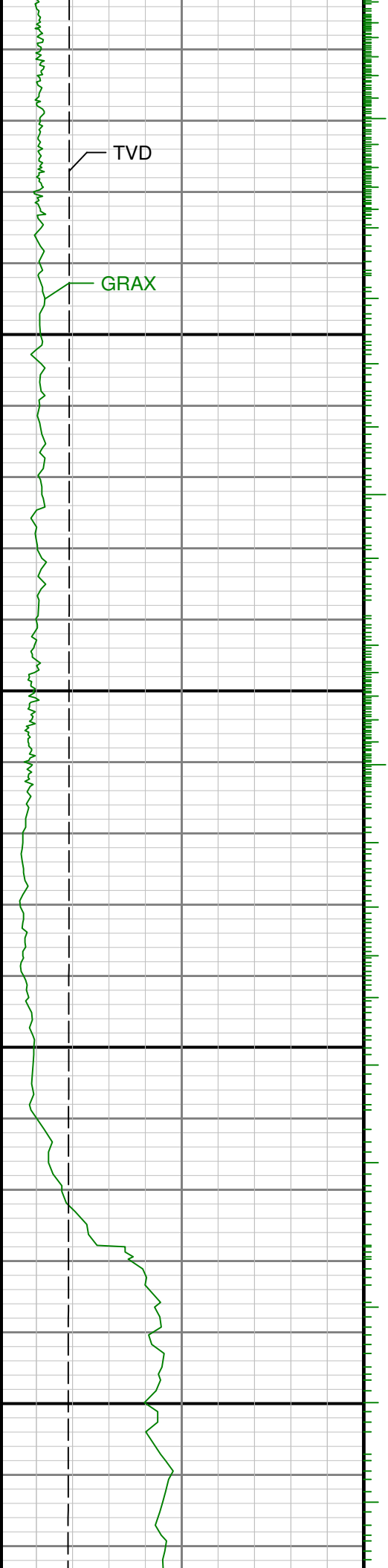


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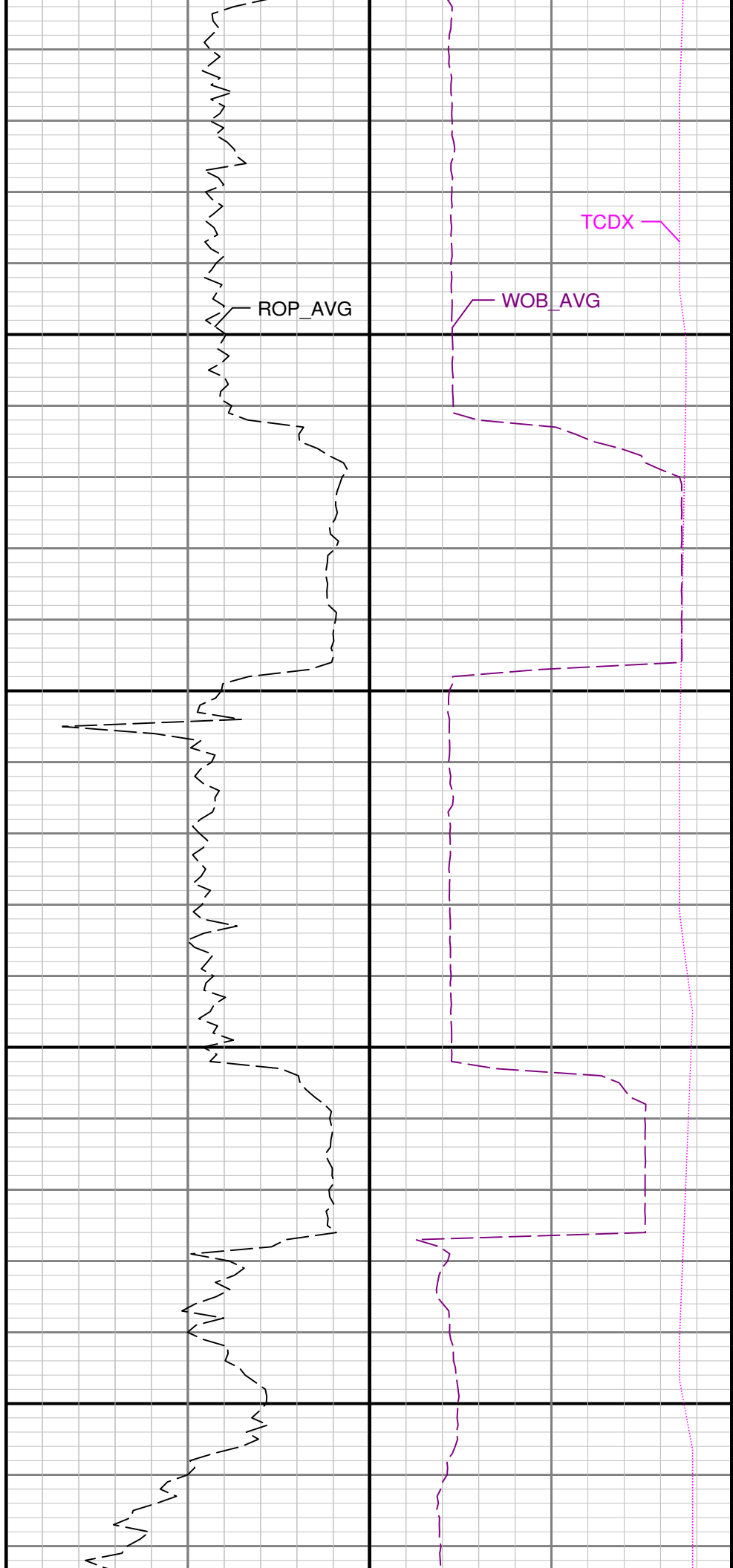
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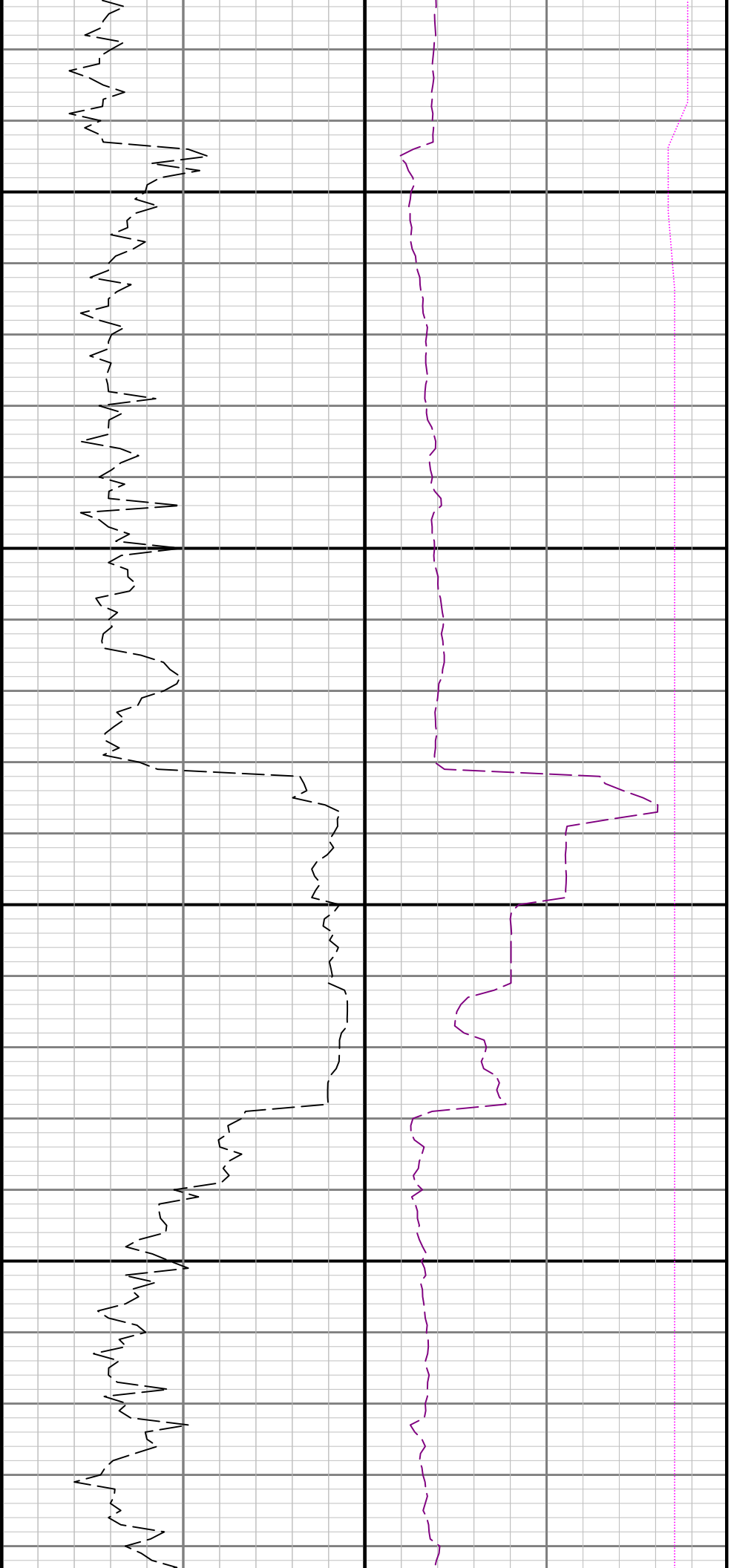






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12500

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