



LWD REALTIME LOG

Gamma Ray

Scale:

1:240 MD

Depth Reference:

Driller's Depth

Status:

Final Print

AP|No: 05-123-44684-00

Job ID: 8544835

Permanent Datum (P.D.): Mean Sea Level

–og Measured From: Rtg Floor

Dates

Date From: 2017-06-08 Top: (ft) 1575.00

Date To: 2017-06-11 Bottom: (ft)

Spud Date: 2017-05-

Borehole Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)
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8.500	1575.00	16937.00	9.625	36.00	25.00	1575.00
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Mud Record Deviation Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
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Diesel-Oil Based Mud	1575.00	16937.00	8.500	16937.00	0.00	278.25	89.82	263.52
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Acquisition System	Software Version	Other
...

Baker Hughes Cadence

4.0.7570.8

District:	RMA	Unit:	D&E
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"These interpretations and analyses ("Interpretations") are opinions provided by Baker Hughes Oilfield Operations, Inc ("Baker Hughes"), based upon industry practice, empirical relationships, assumptions and measurements, (many of which may be provided by the customer). The Interpretations are not infallible and may be subject to different opinions. Vjwu."Dcmgt"JwiJgu"fqgu"pqv"ycttcpv"vjgkt"ceewtce{"."eqttgevpguu."qt"eqornvgvpguu."qt"vjcv"vjg"ewuvqogtøu"cpflqt"cp{" vjktf"rctv{øu"tgnkcpv"qp"uwej"Kpvgtgtgvcvkpu"yknn"ceeqornku"cp{"rctvkewnct"tguwnvu0"Vjg"ewuvqogt"cuuwogu"hwnn" responsibility for the use of the Interpretations and for decisions based thereon and the customer agrees to release, defend and indemnify Baker Hughes, its parent, subsidiaries and affiliated or related entities, and subcontractors, together with its and their officers, directors, employees, agents and invitees against, any and all claims, losses, damages, or expenses sustained by the customer or any third party arising out of reliance upon or use of the Interpretations, without regard to the cause(s) thereof, including without limitation any form of negligence on the part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and qdnkicvkqpu"ujcnn"dg"igxgtpgf"d{"Dcmgt"JwiJgu"Kpeqtrgtcvgføu"Yqtnfykfg"Vgtou"cpf"Eqpfkvkqpu0\$""

Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours (h)
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	3.00	AutoTrak Curve	1575.00	16925.00	1575.00	16937.00	2017-06-08 14:36	2017-06-11 22:54	68.10

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Byran Severson	2017-06-08	2017-06-12	Emuobosan Onosu	2017-06-08	2017-06-12			

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2017-06-07 19:06	1	1575.00	Diesel-Oil Based Mud	10.0	56	N/A	0.0	64/36	Active Pit	20000	0.00

2017-06-09 05:21	1	5340.00	Diesel-Oil Based Mud	10.0	57	N/A	0.0	64/36	Active Pit	23000	0.00
2017-06-10 09:42	1	10136.00	Diesel-Oil Based Mud	10.0	54	N/A	0.0	64/36	Active Pit	19000	0.00
2017-06-11 04:21	1	13554.00	Diesel-Oil Based Mud	10.0	53	N/A	0.0	63/37	Active Pit	19000	0.00

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	ATC_SU	11994997	Near Bit VSS	5.93	6.73	7.000	4.330
1	ATC_SU	11994997	Near Bit Inclination	5.93	6.73	7.000	4.330
1	ATC_MWD	12161072	Gamma (single)	2.28	12.37	7.000	3.250
1	ATC_MWD	12161072	Directional (mag)	12.20	22.29	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

Comments

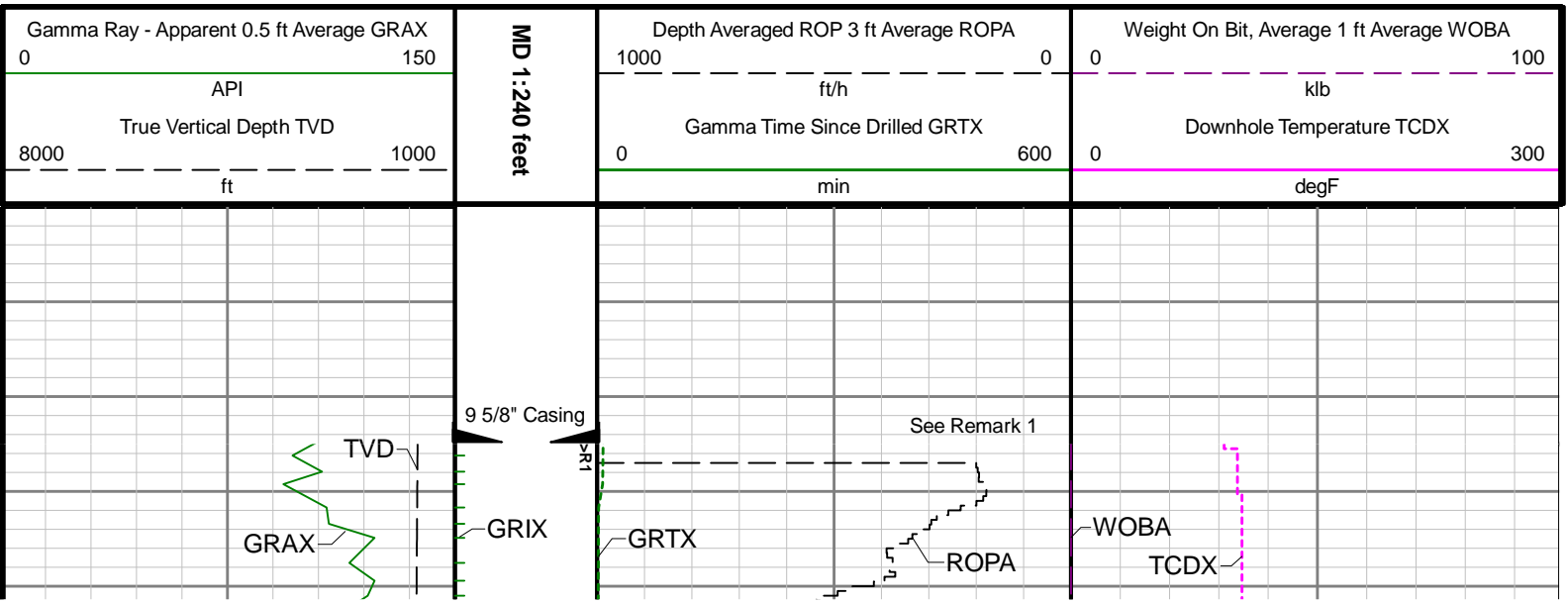
1	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
2	On 6/11/17, the well was drilled to a depth of 16937 feet MD (1575 to 6839 feet TVD).
3	Numerous gaps in Real Time Gamma Ray data are present throughout the log due to downlinking while drilling.

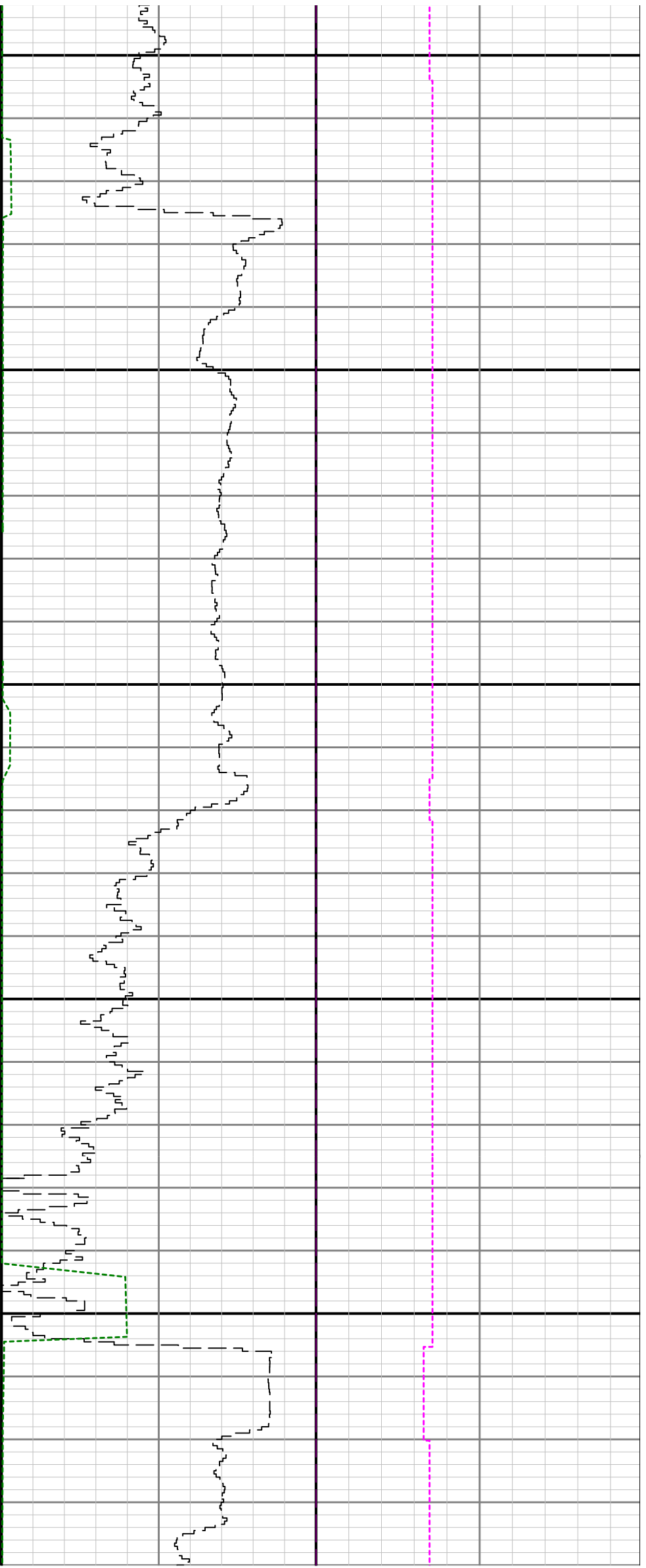
Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	1575.00	8.500	1	No Weight On Bit (WOB) data presented from 1575 to 4665 feet MD (1575 to 4663 feet TVD).
2	16925.00	8.500	1	The interval from 16925 to 16937 feet MD (6839 feet TVD) was not logged due to sensor to bit offset at well TD.

Curve Mnemonics

Presented Curves	Description	Units
TCDX	Downhole Temperature	degF
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD	True Vertical Depth	ft
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAX	Gamma Ray - Apparent 0.5 ft Average	API
GRIX	Gamma Ray - Data Point Indicator	unitless
GRTX	Gamma Time Since Drilled	min



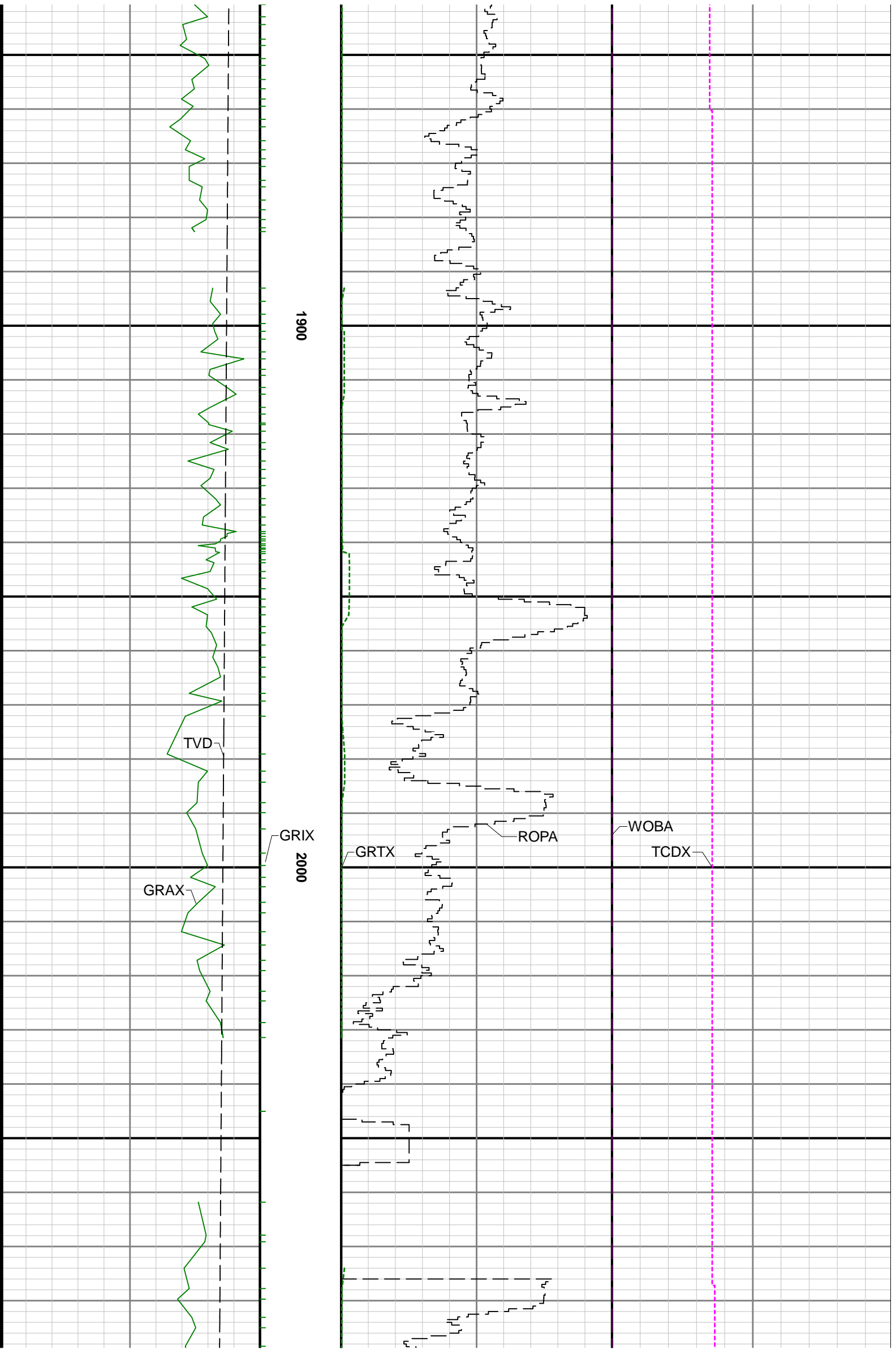


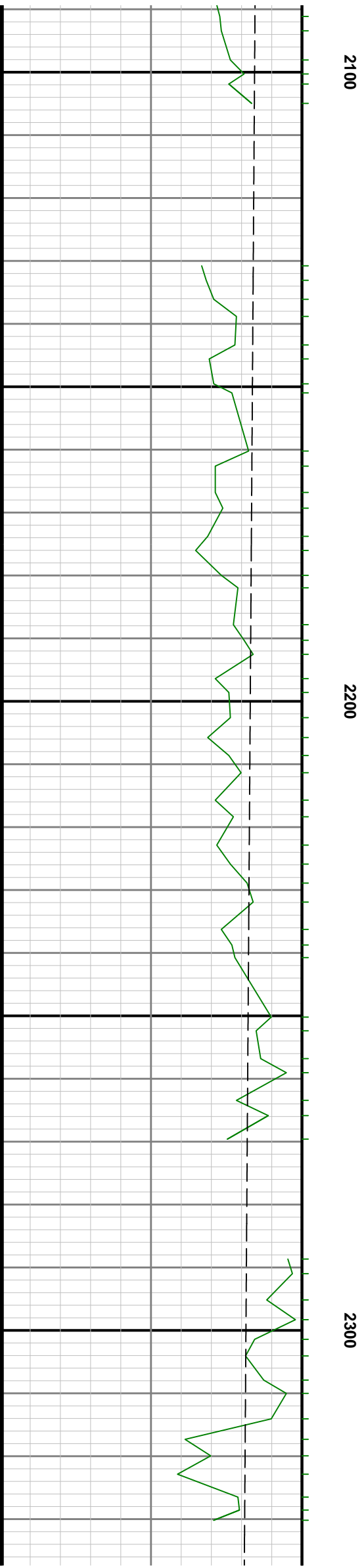
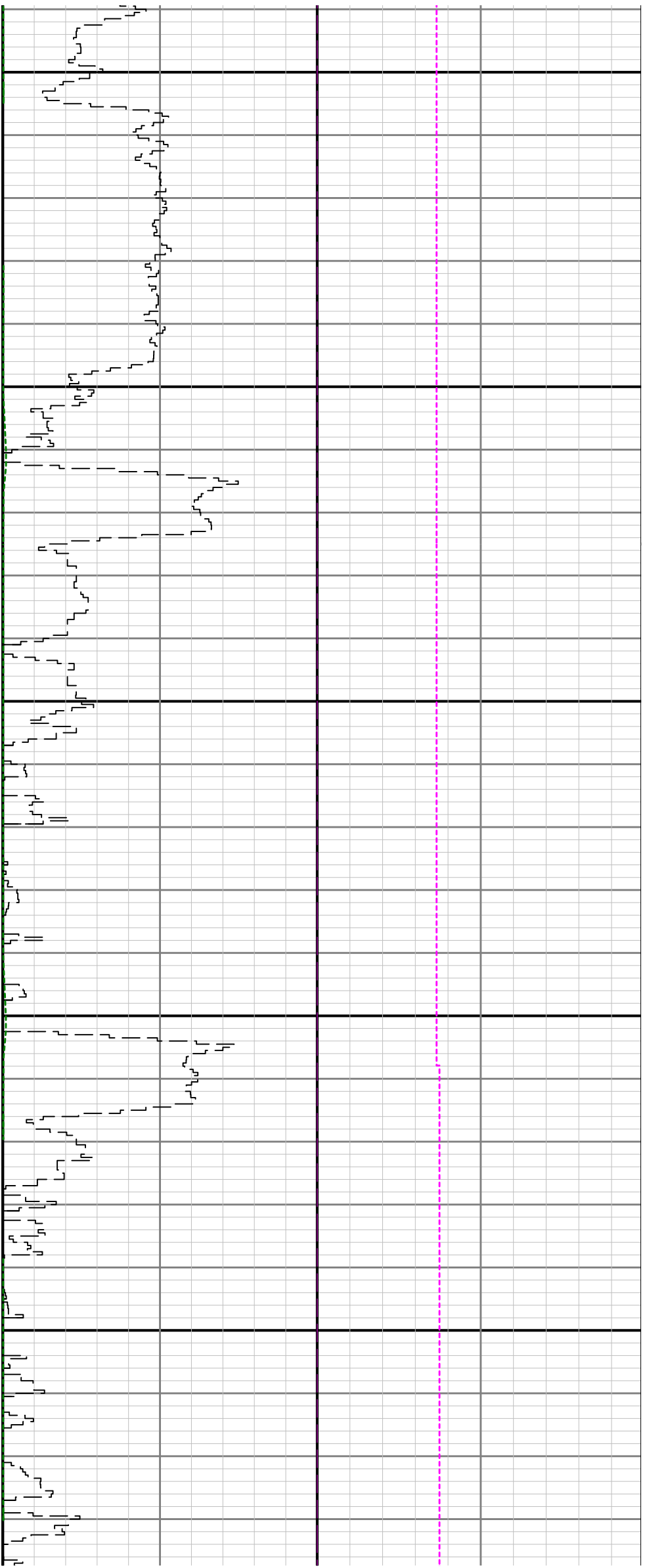
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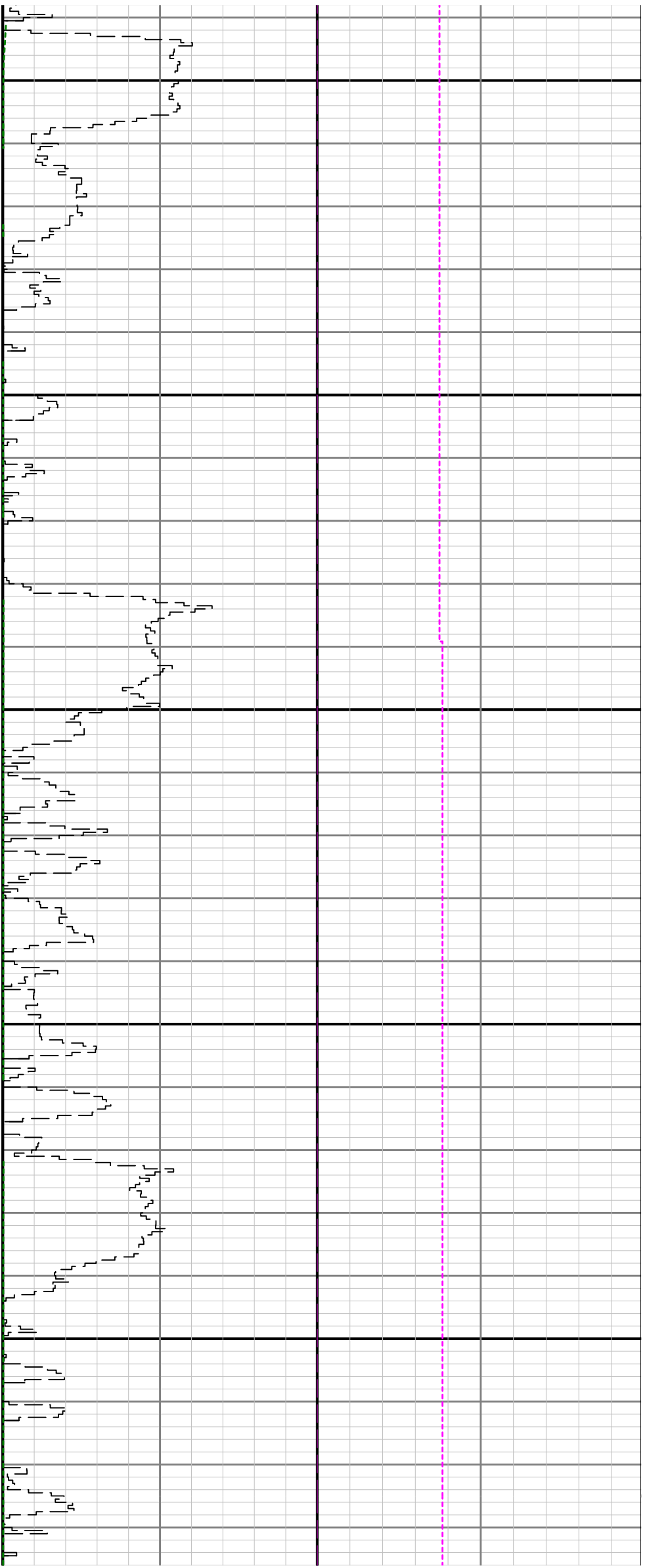
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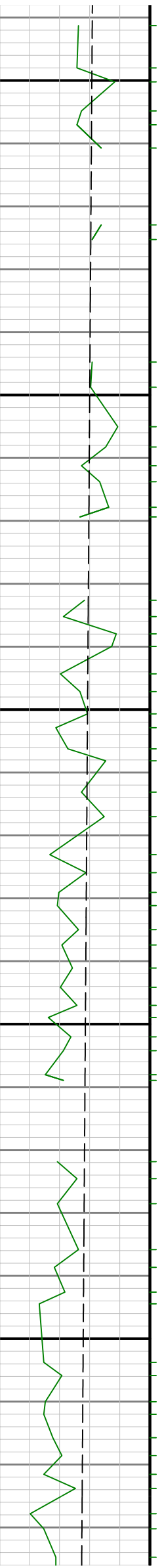


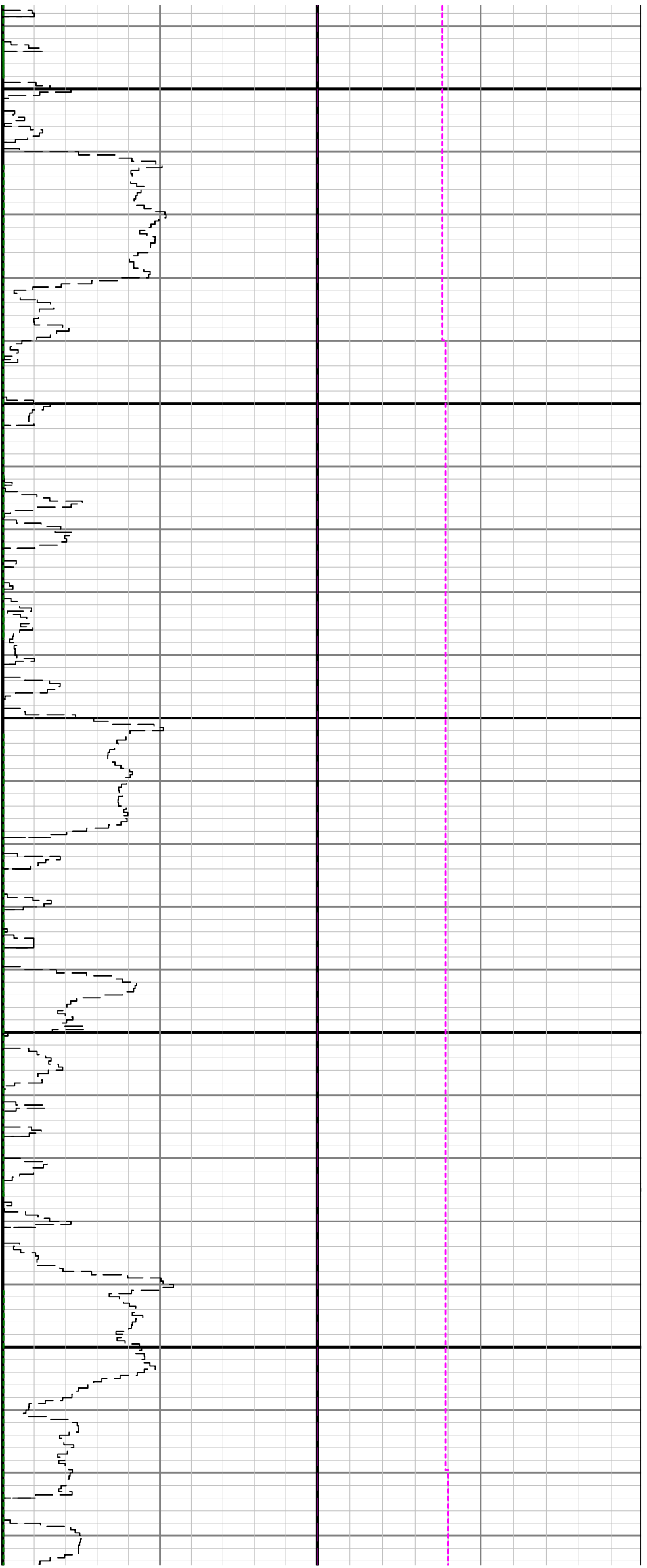




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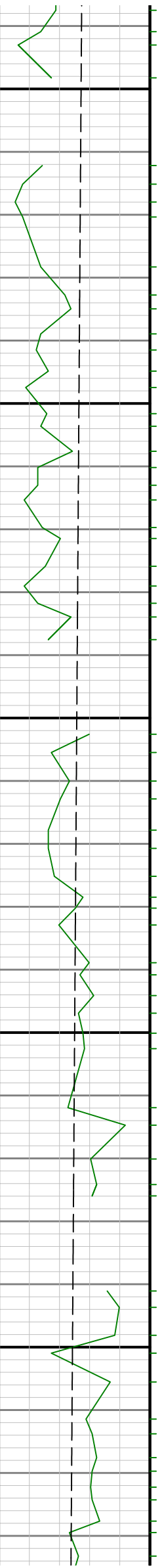


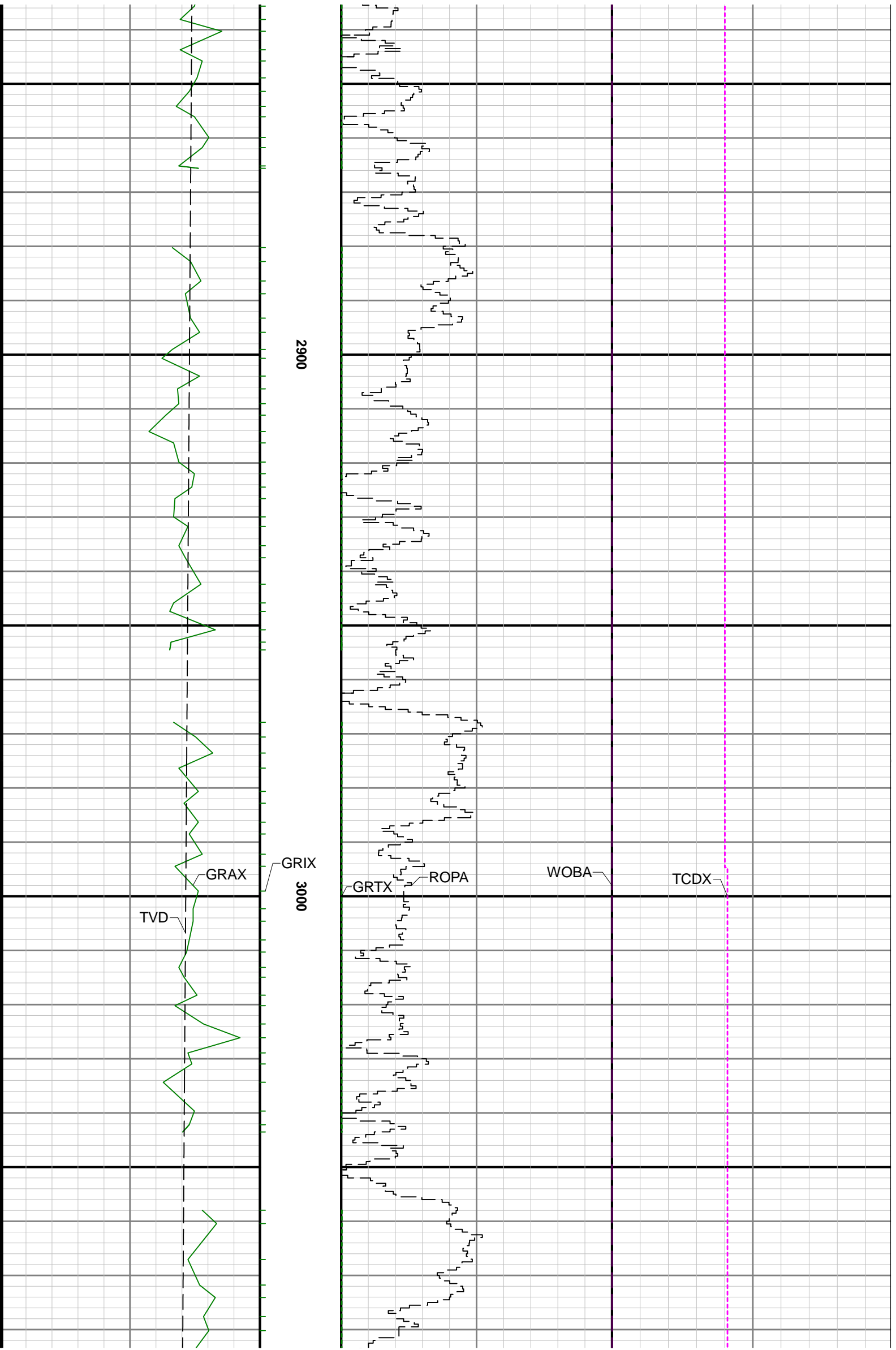


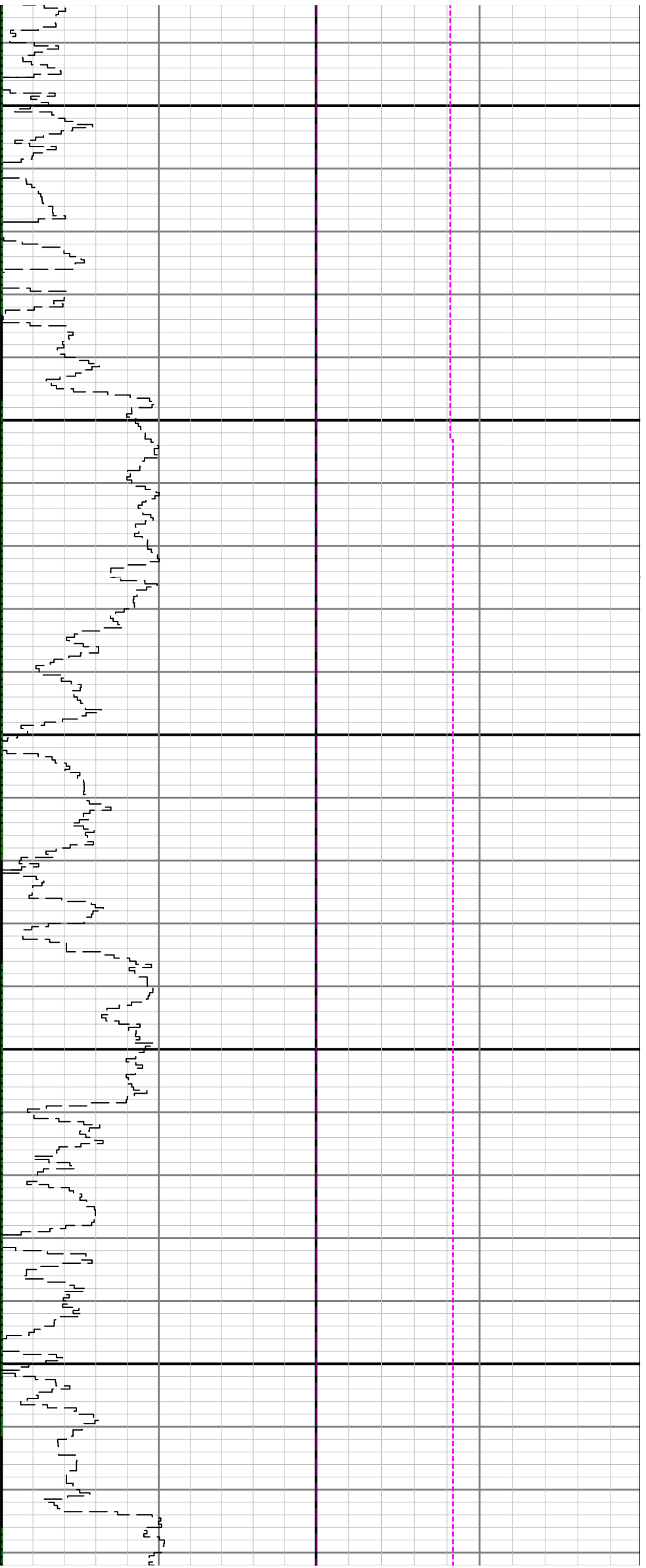
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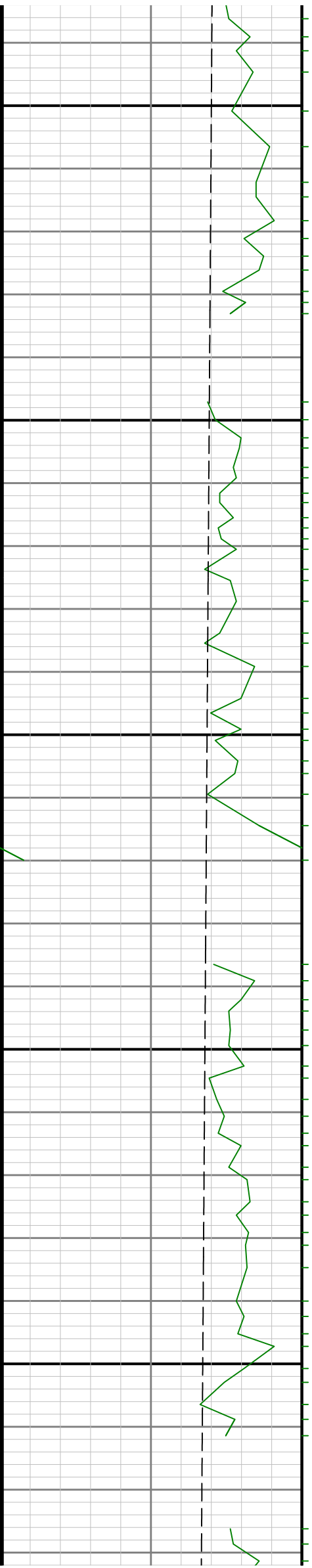


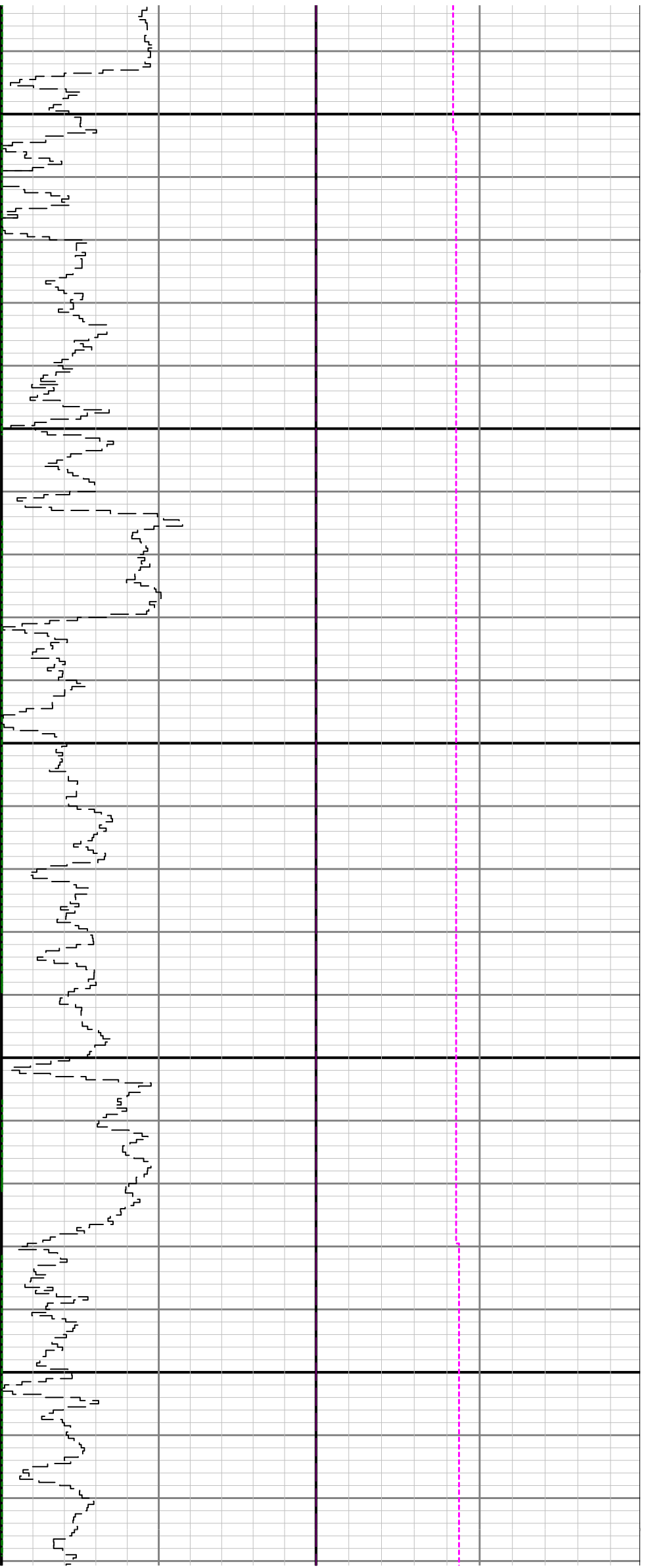


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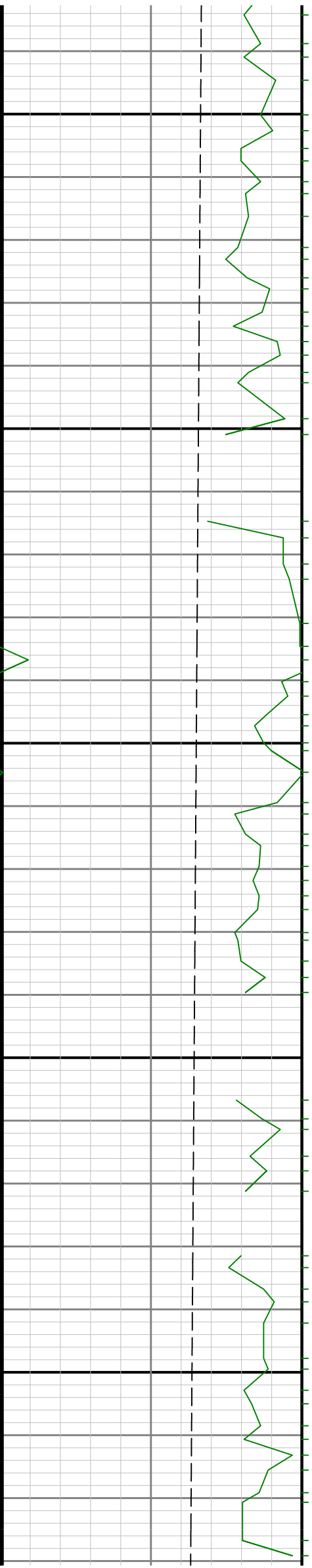
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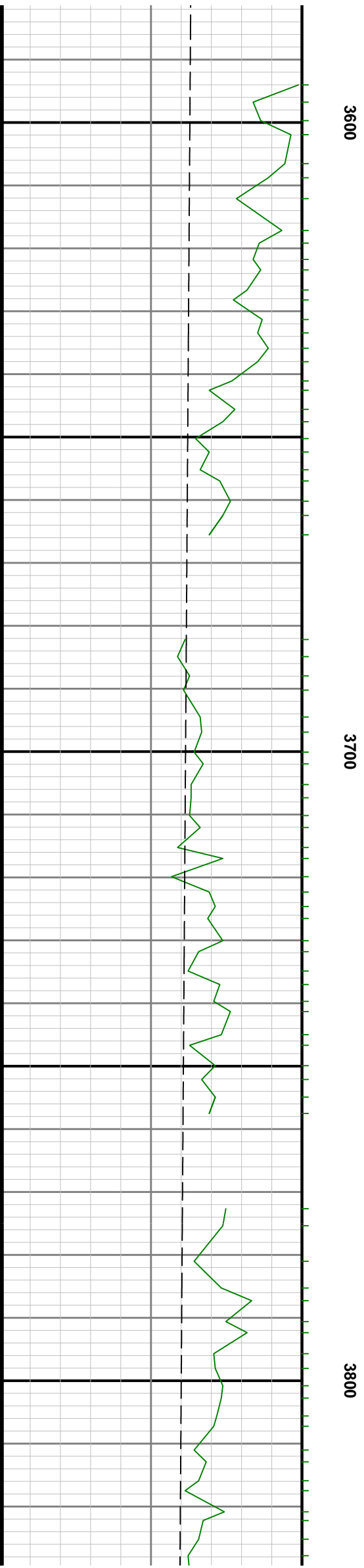
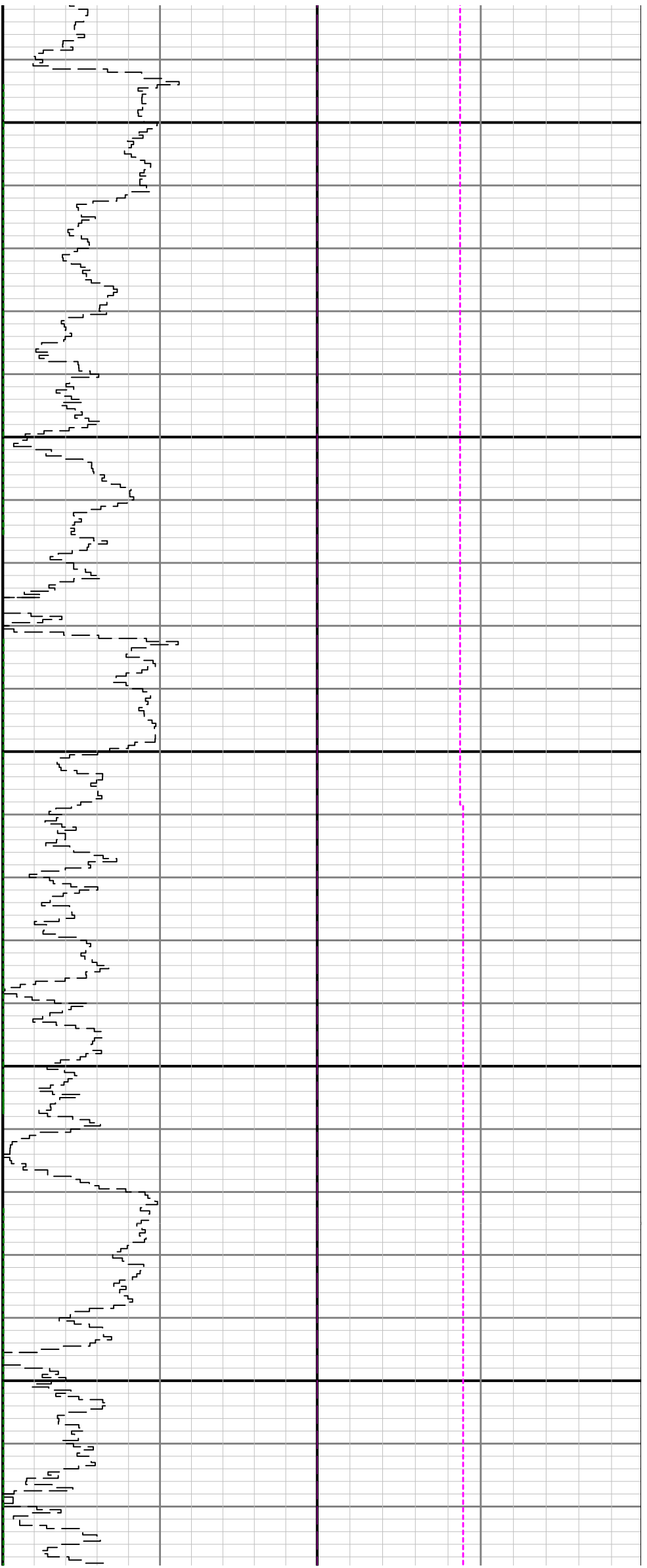


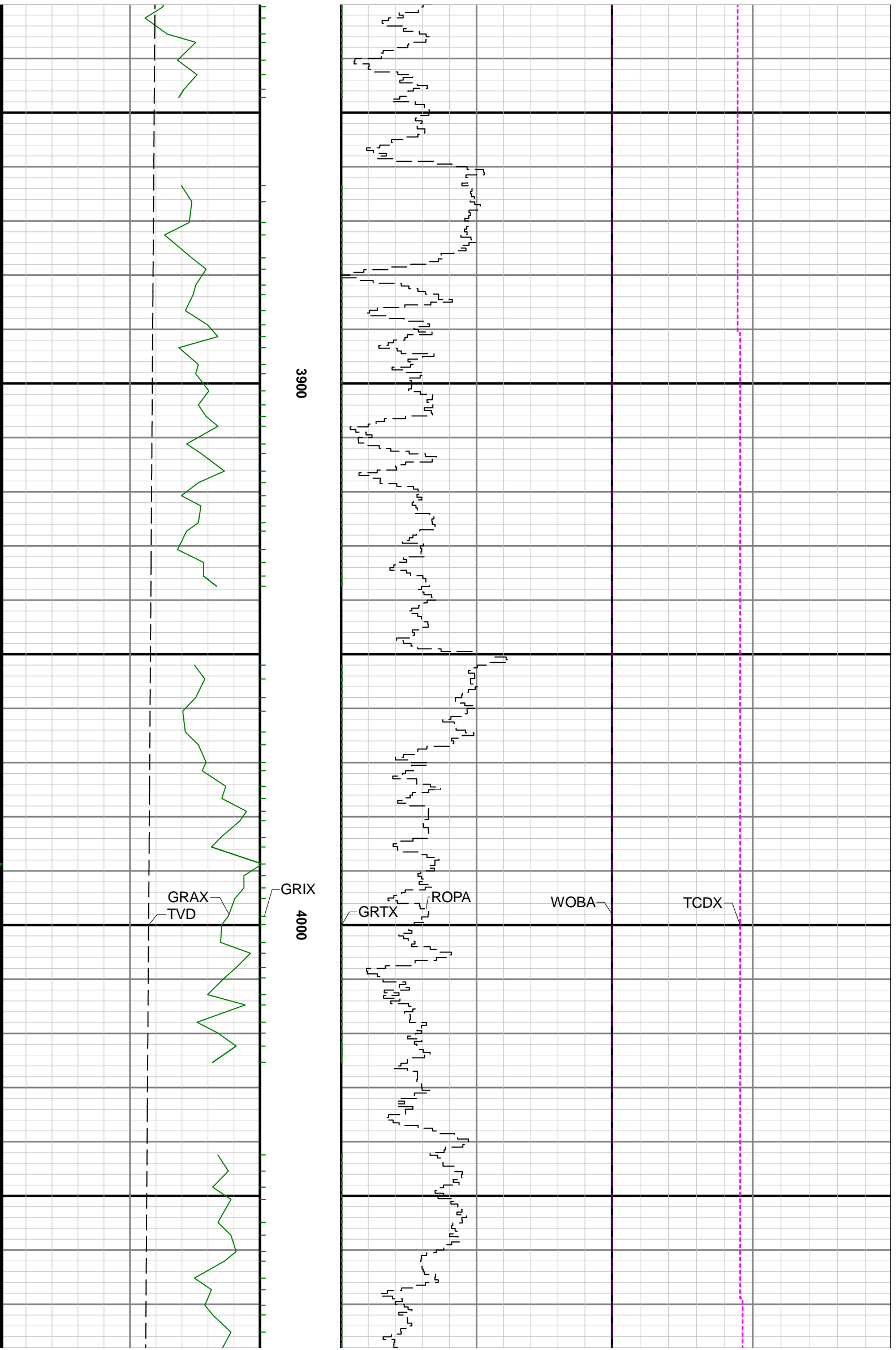


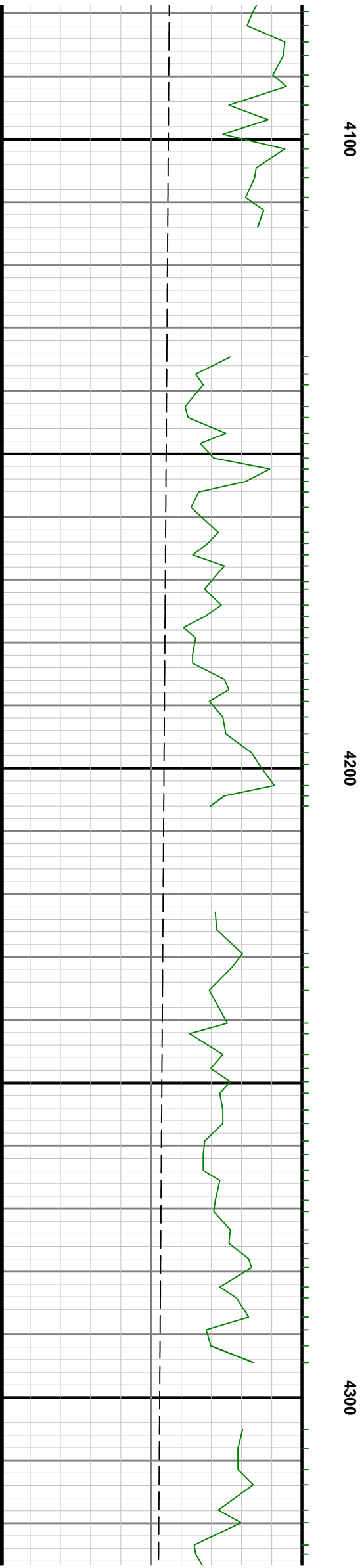
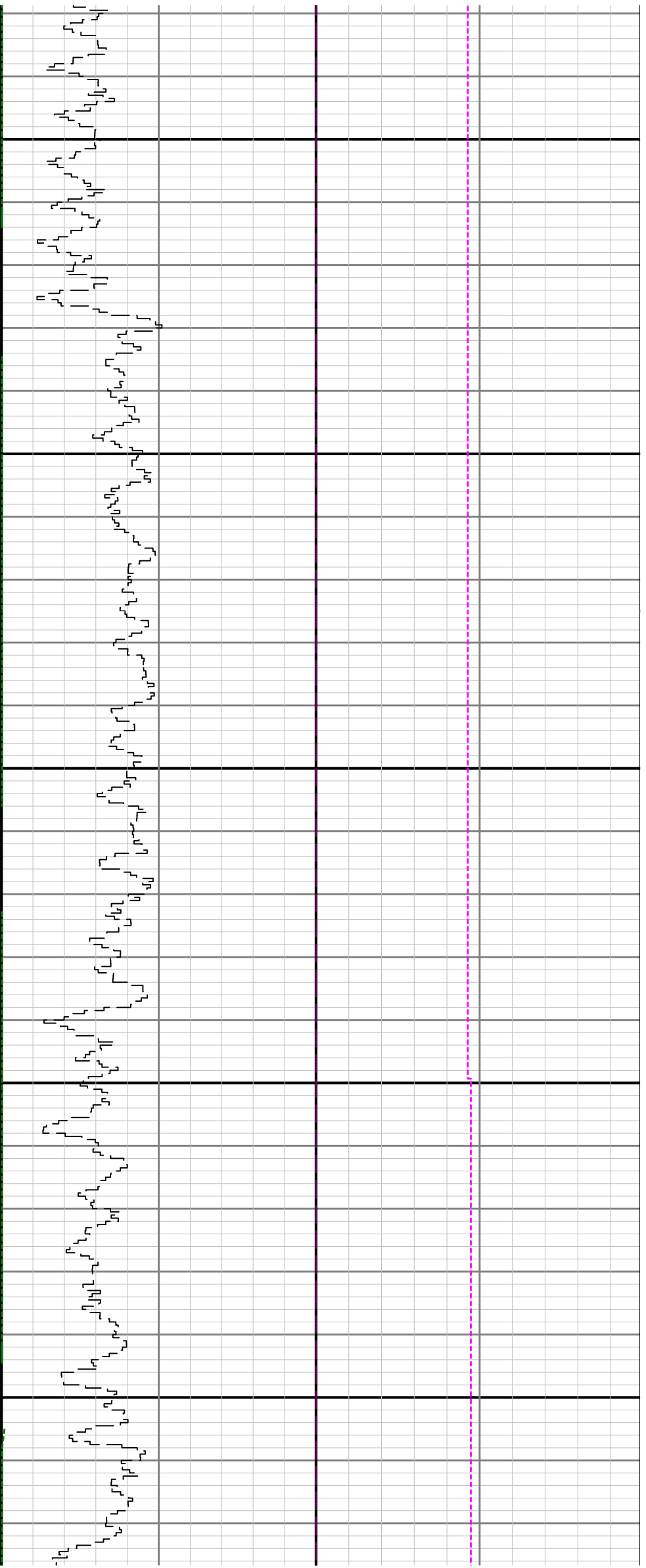
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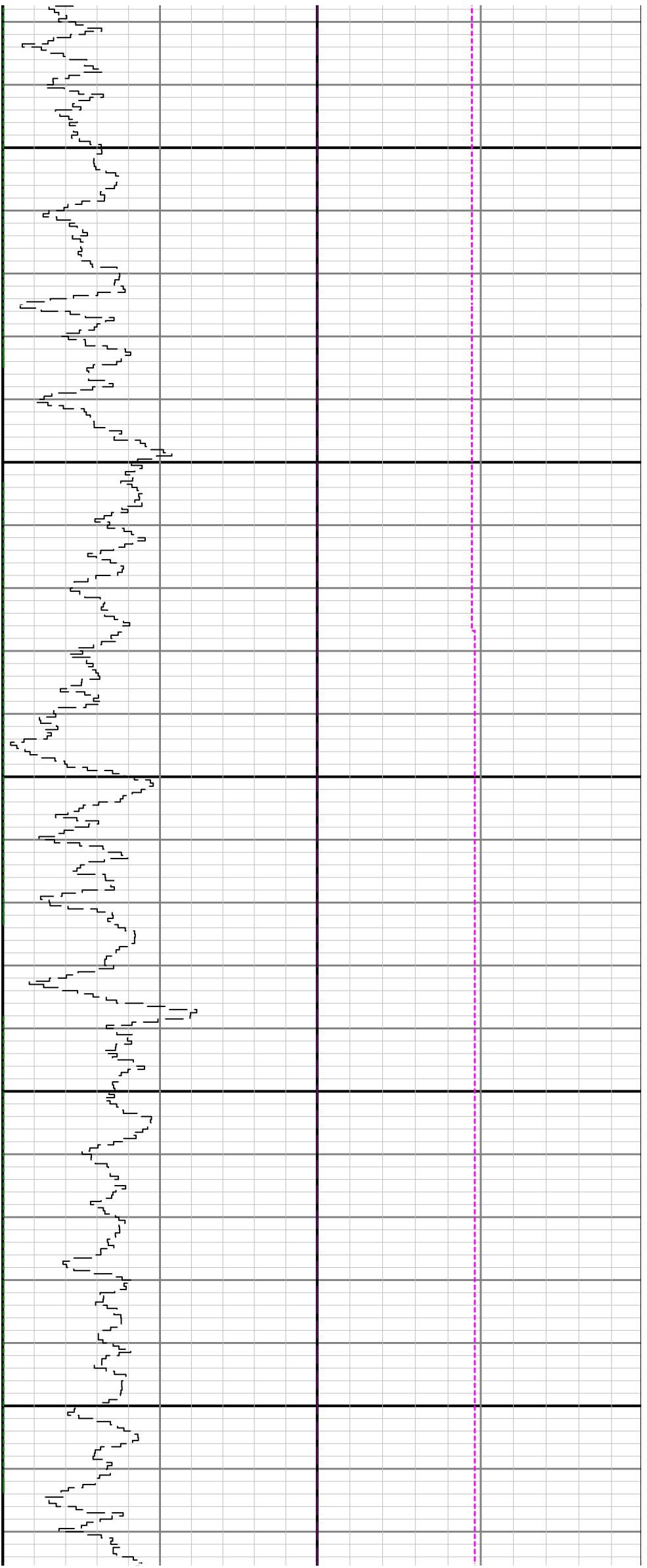
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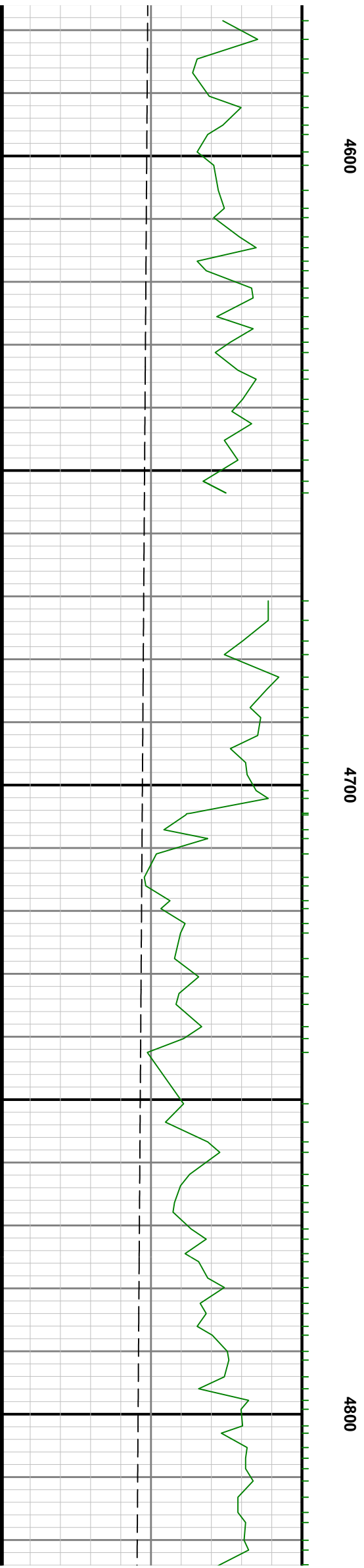
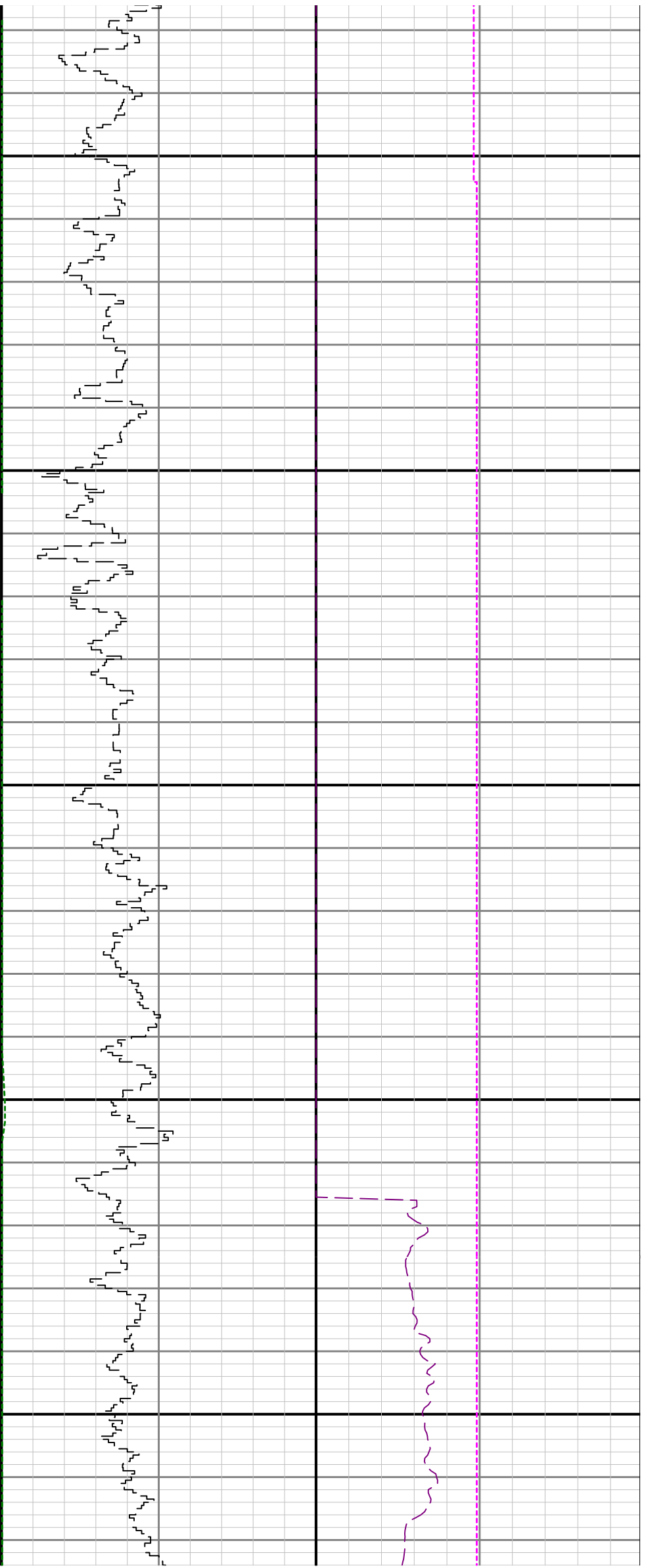


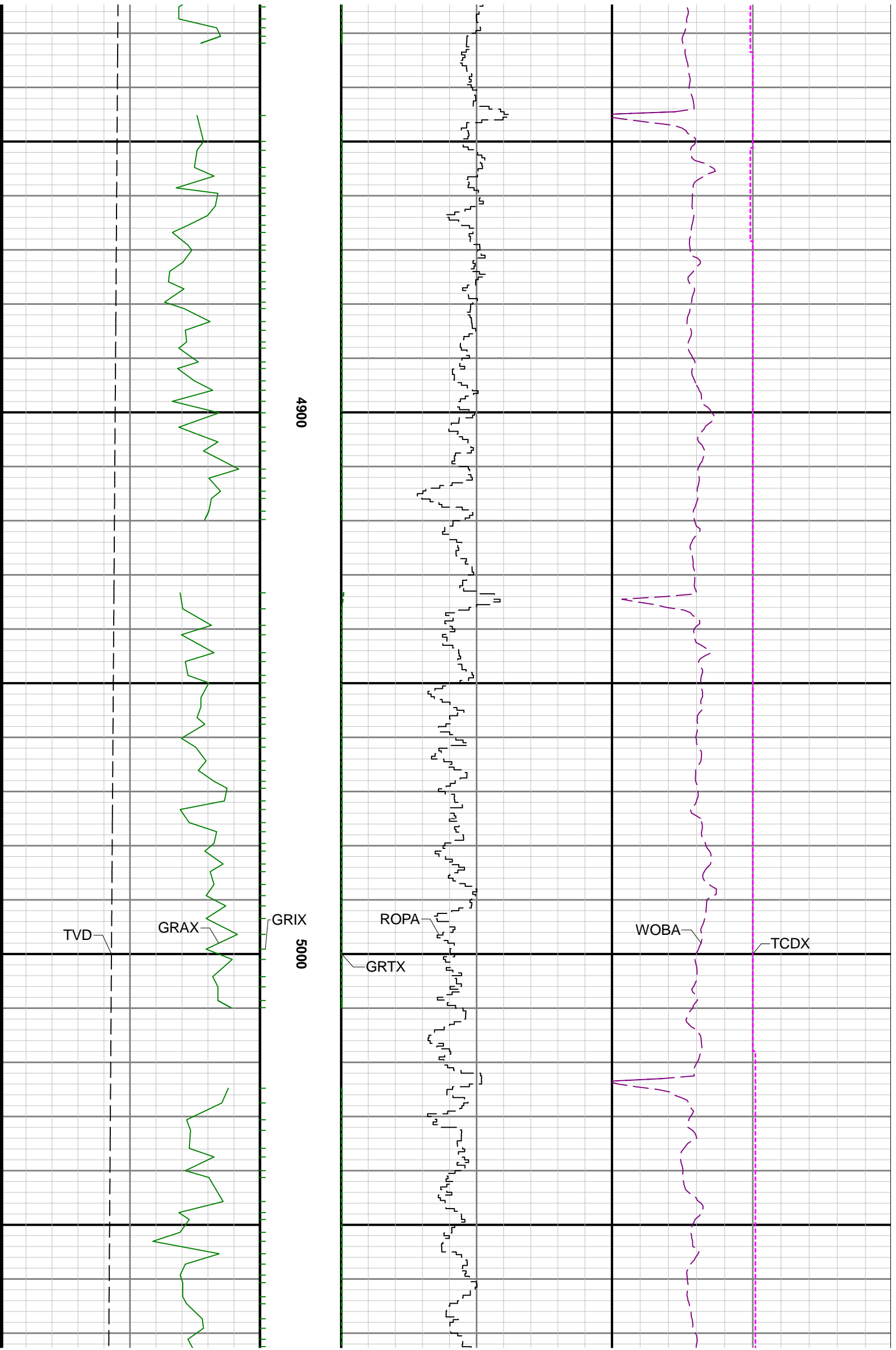


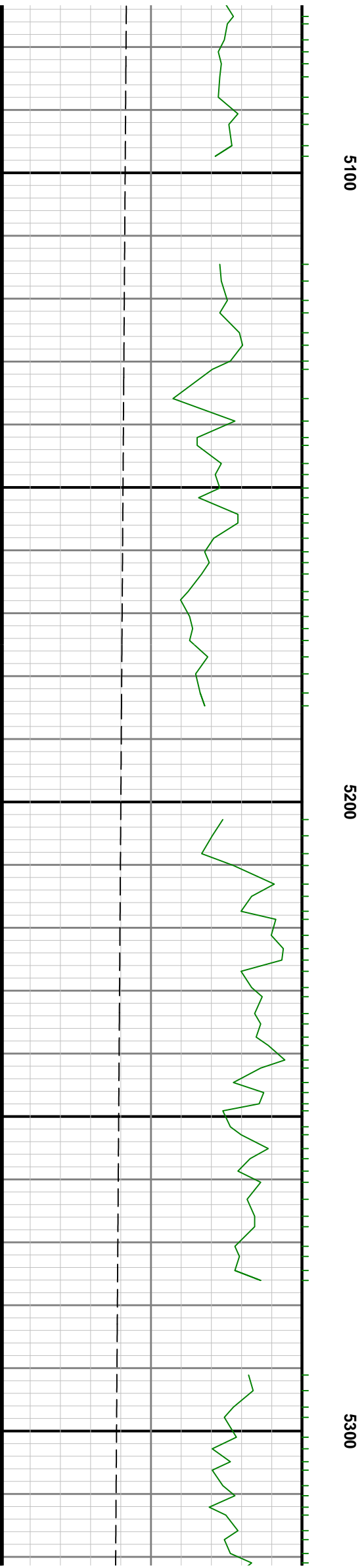
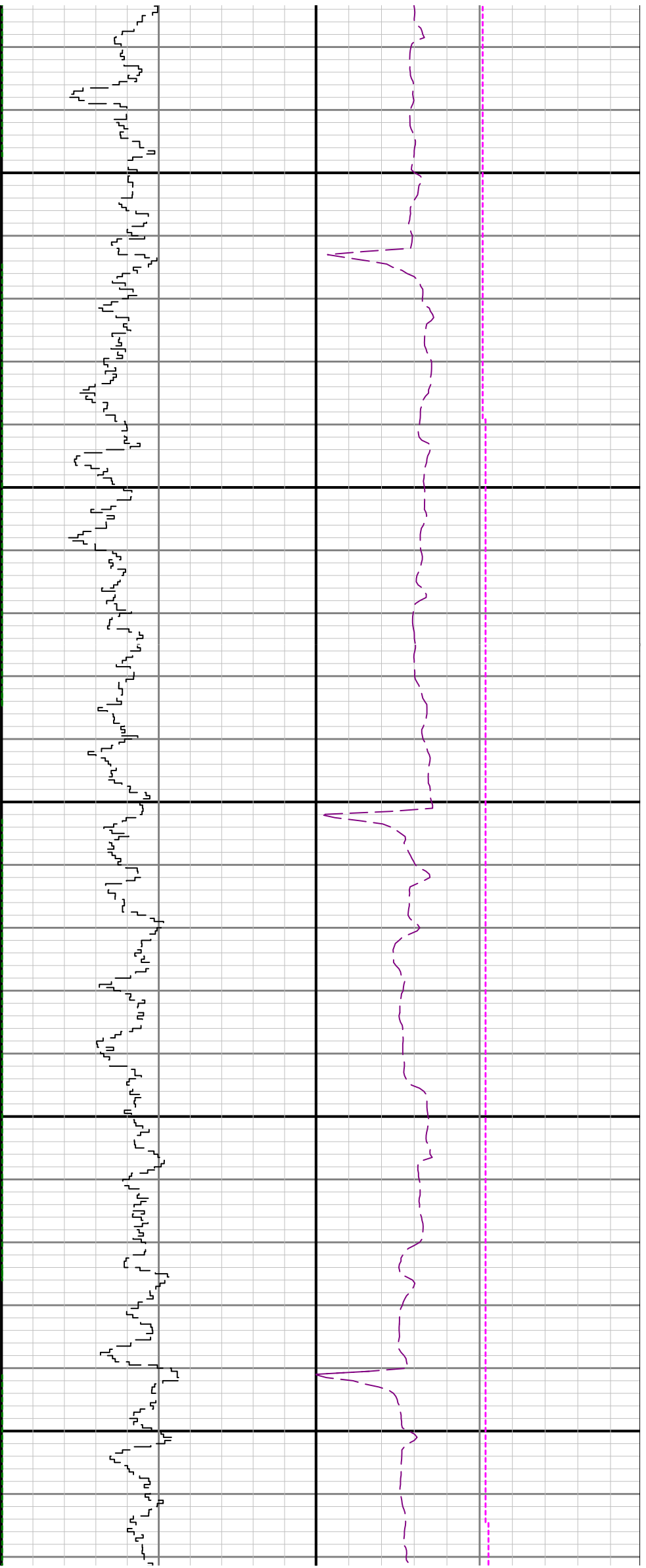


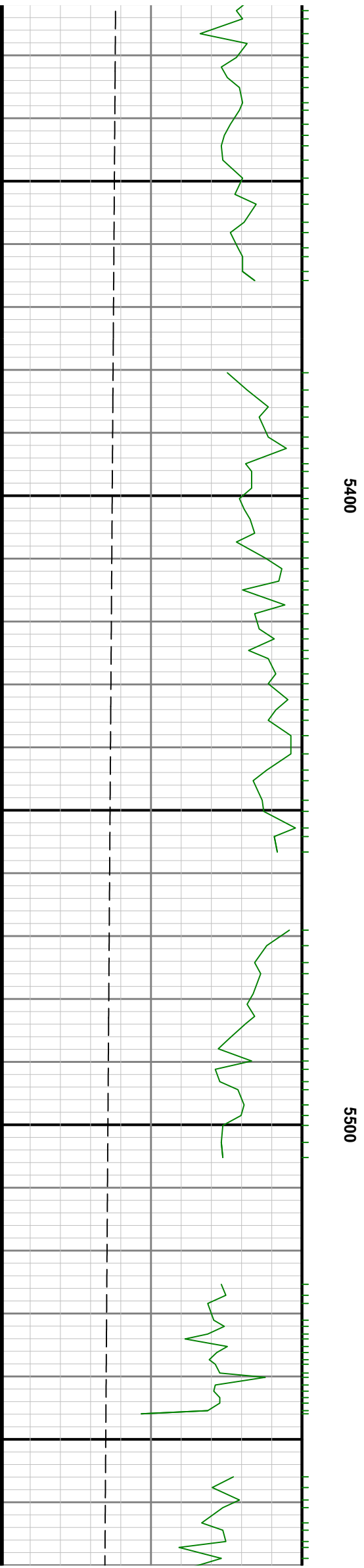
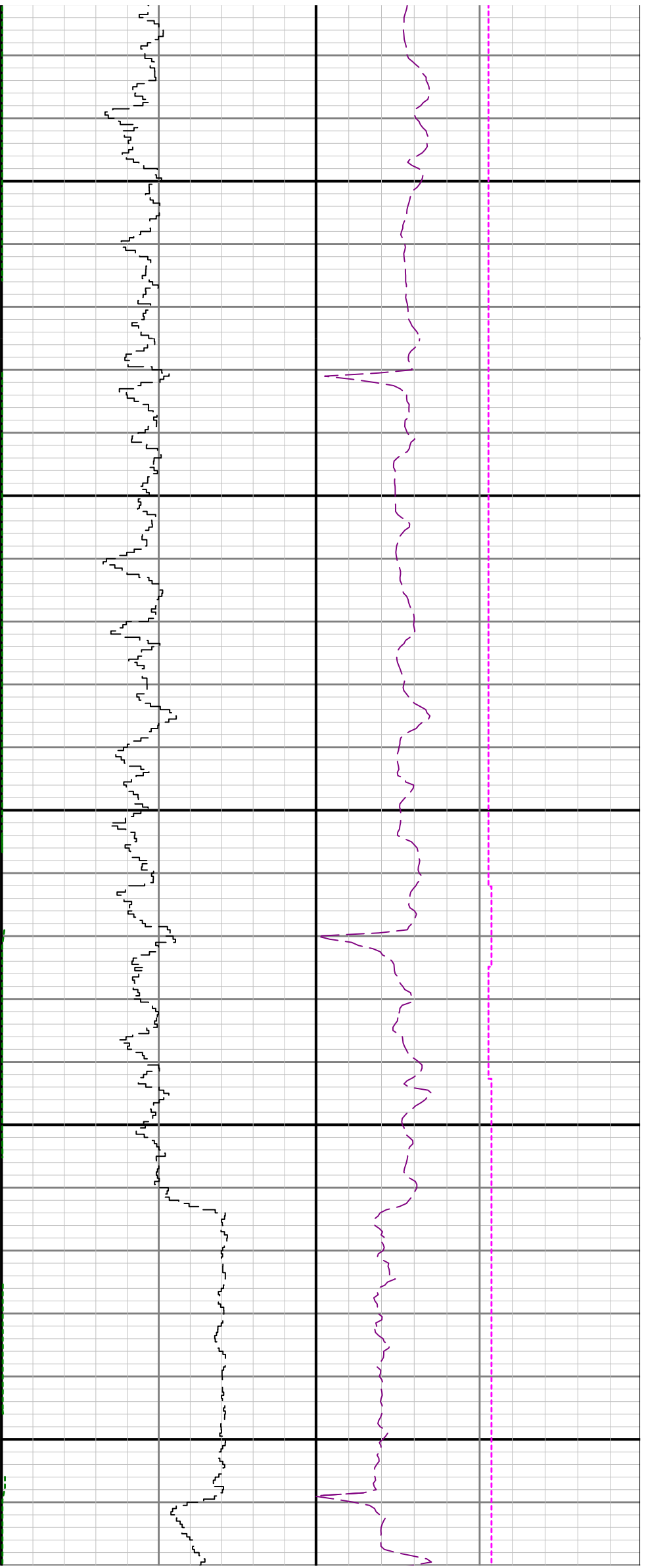


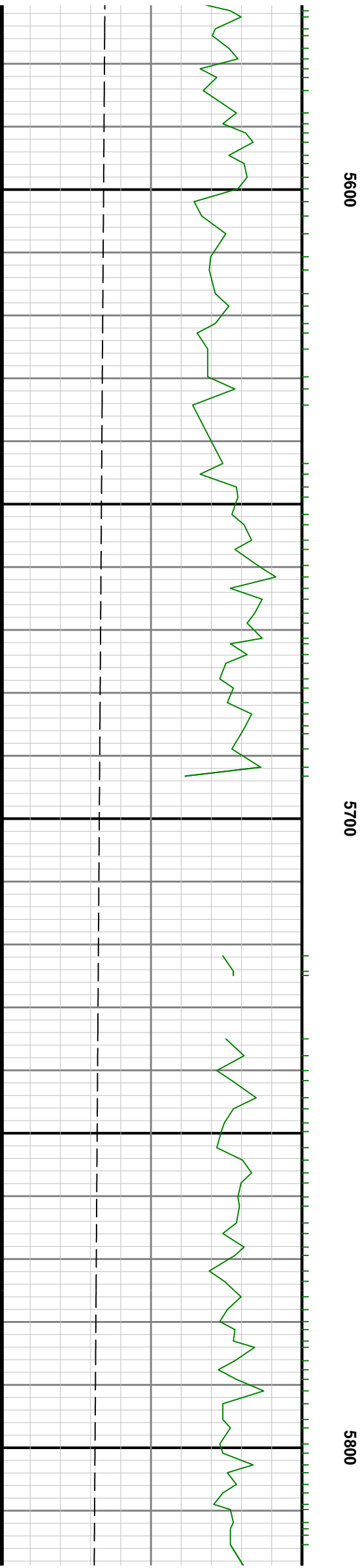
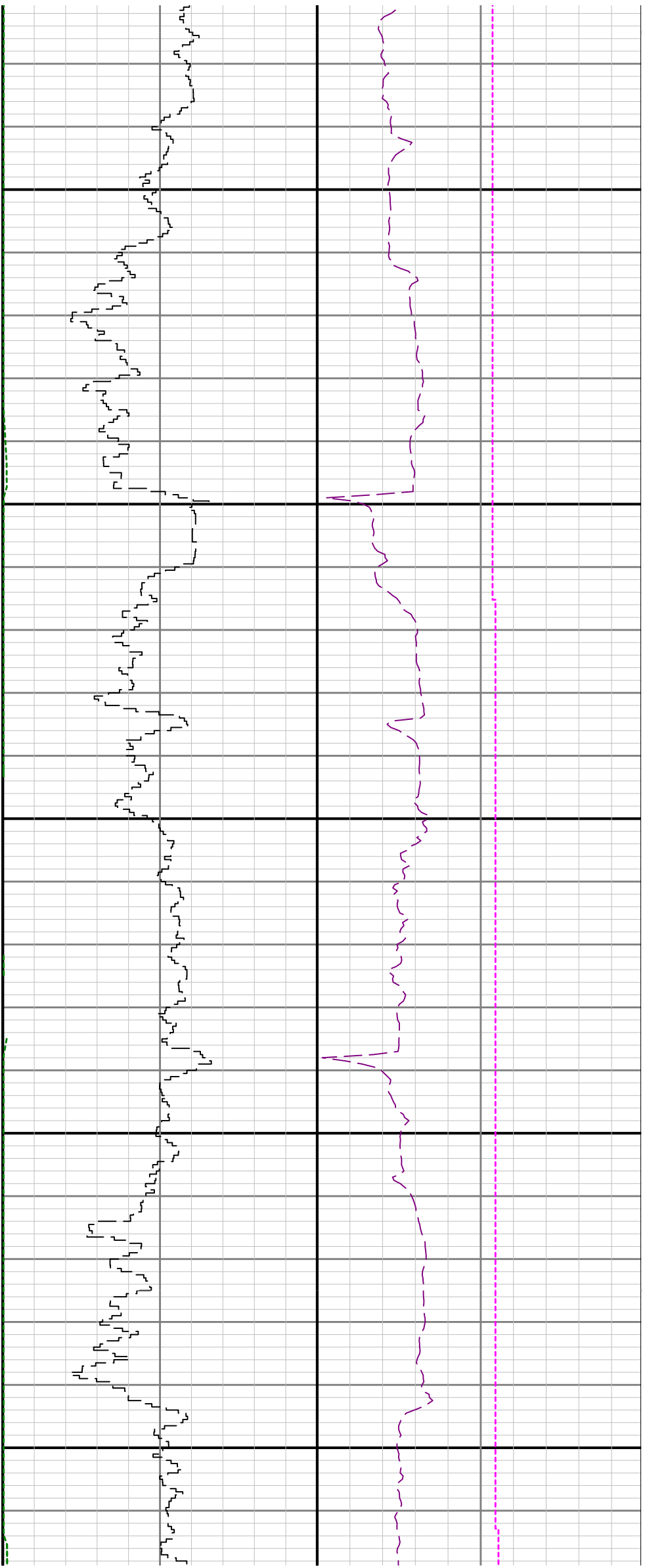


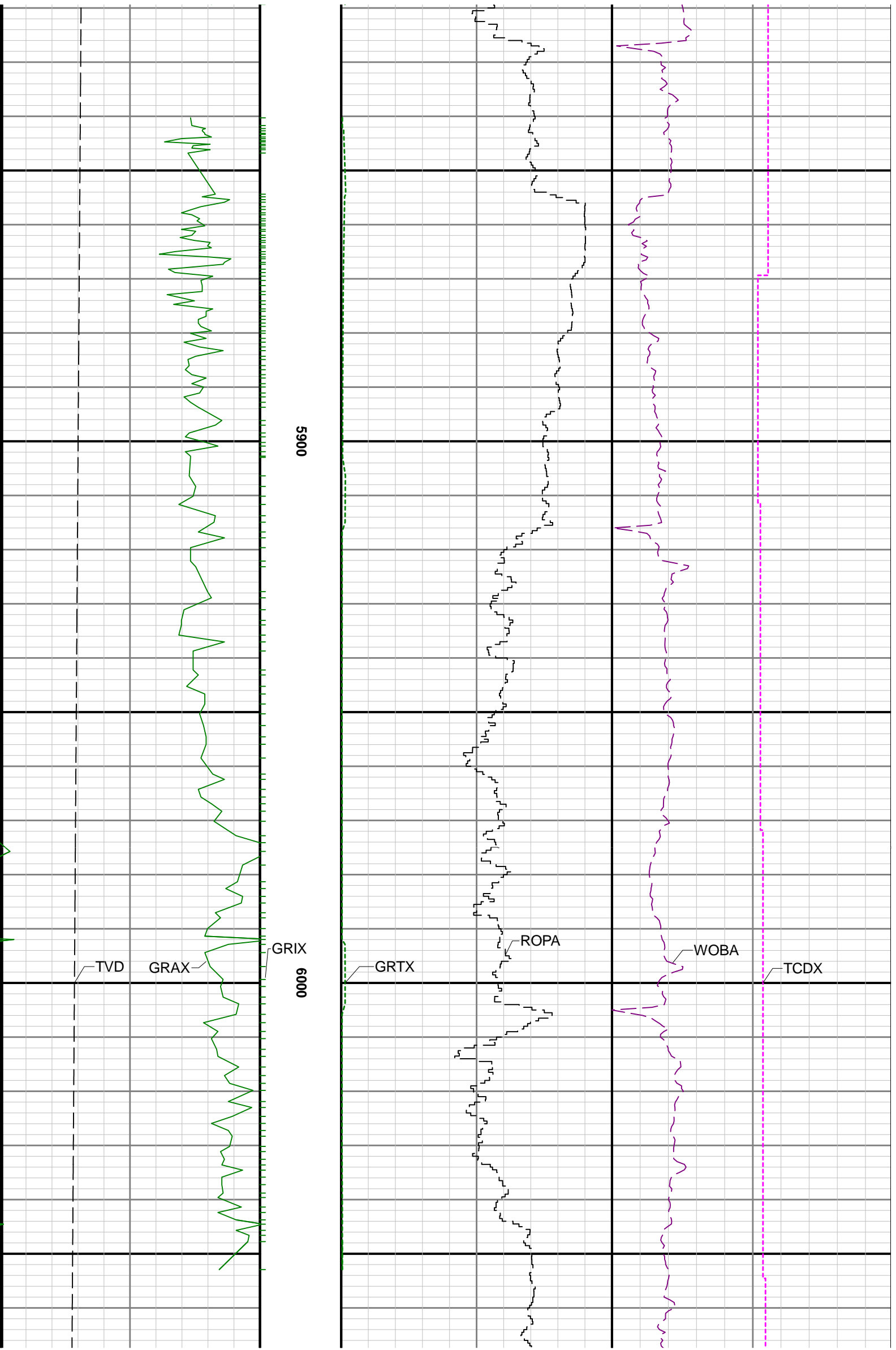


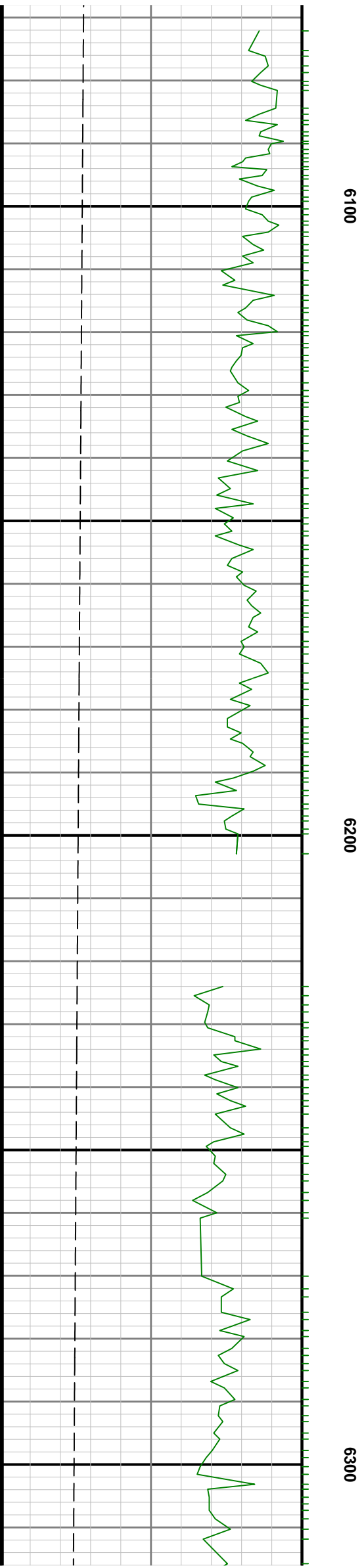
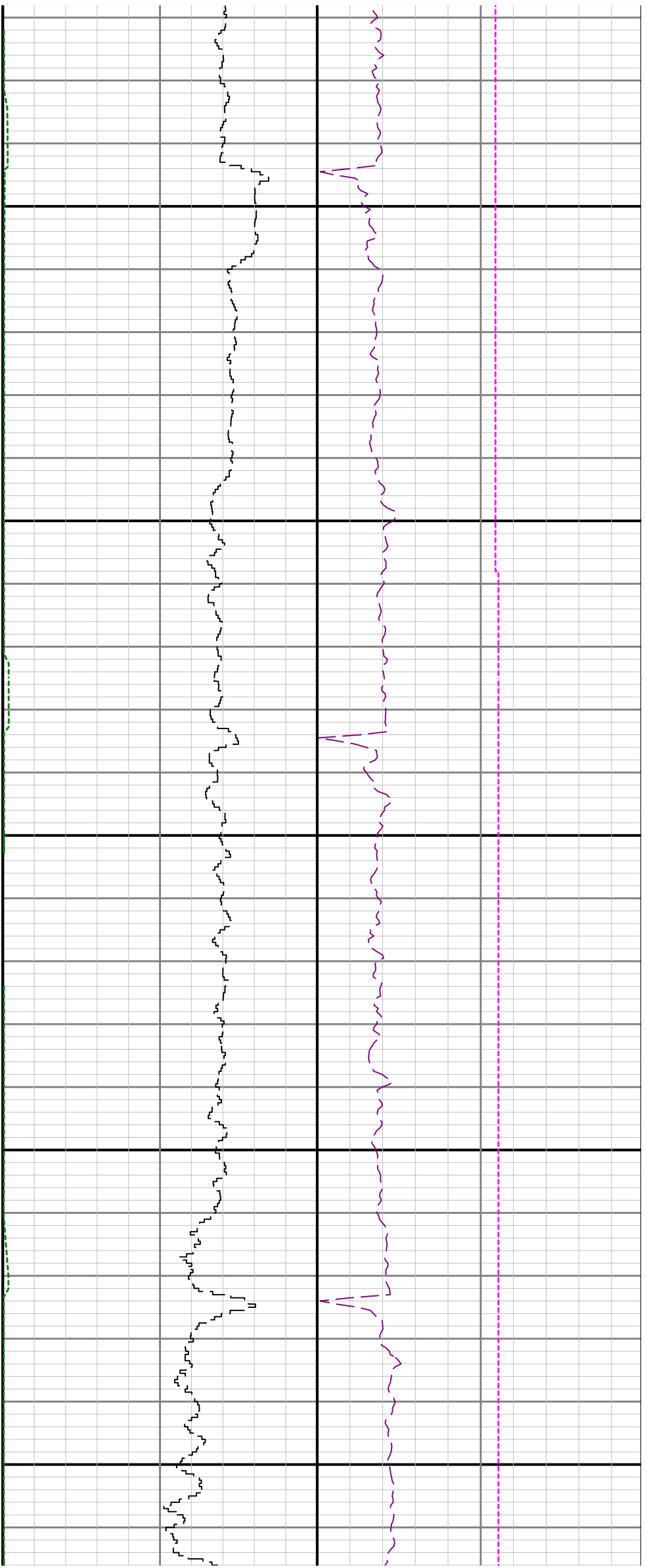


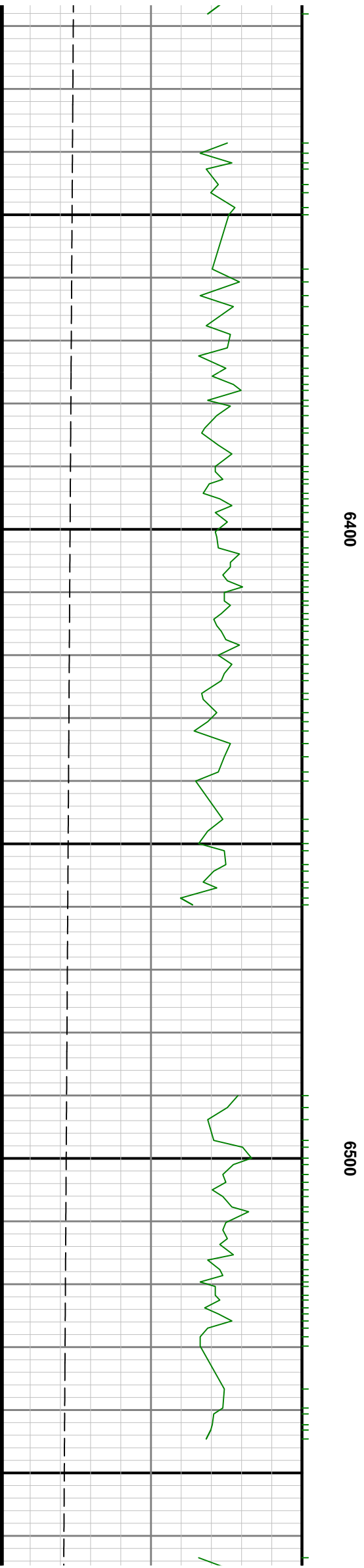
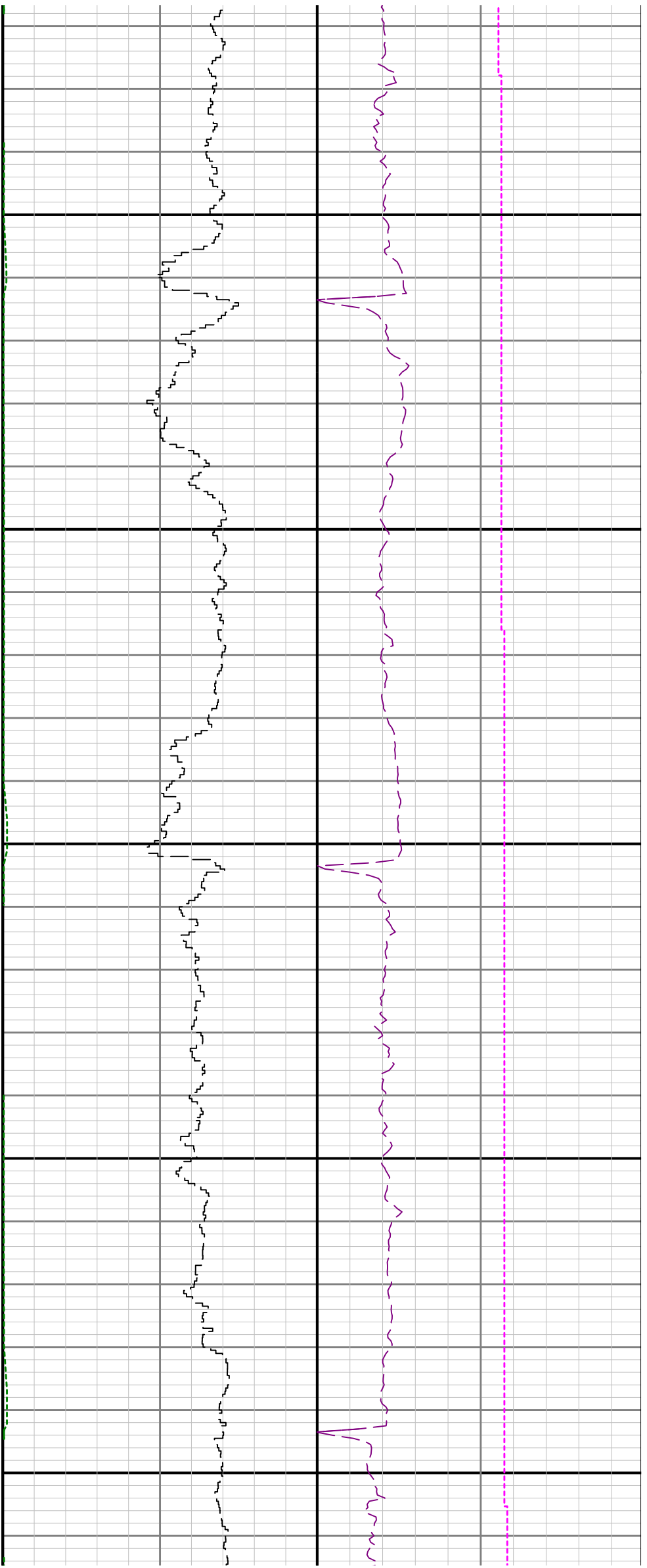


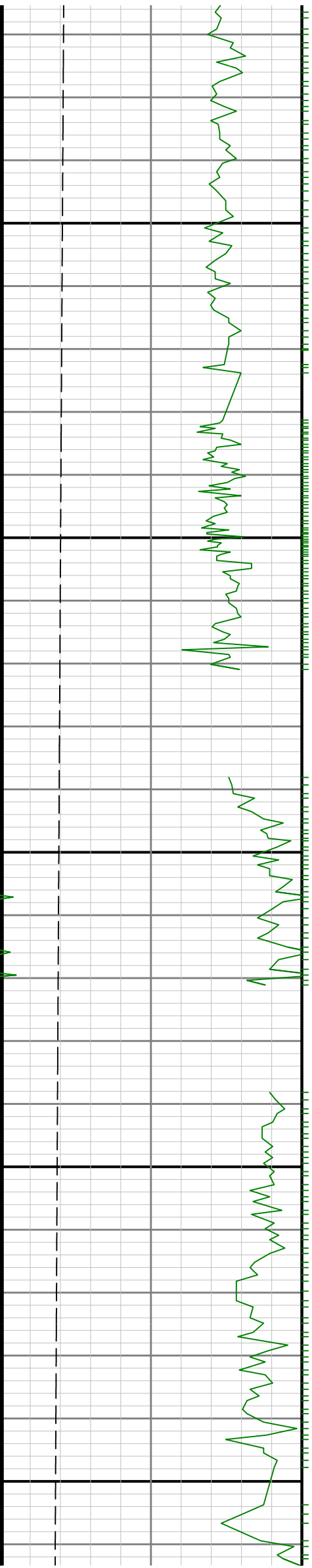








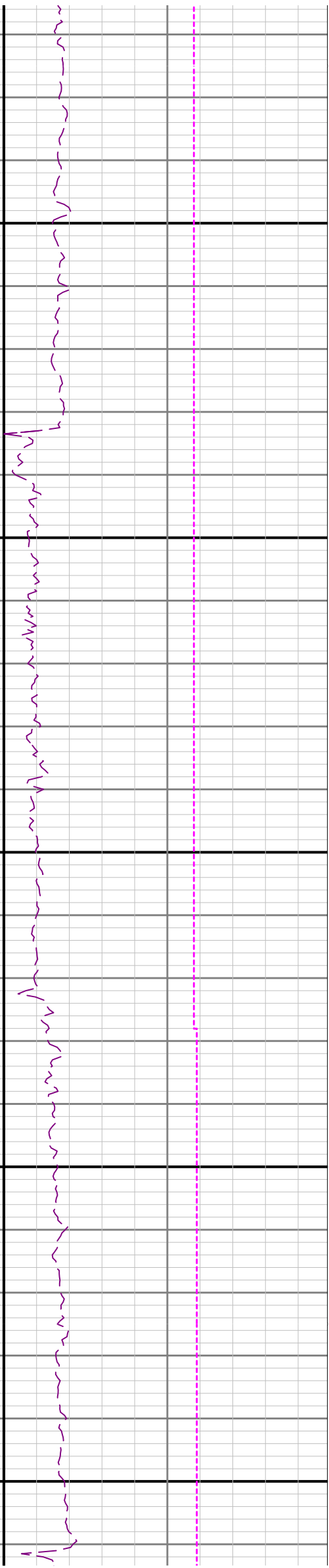
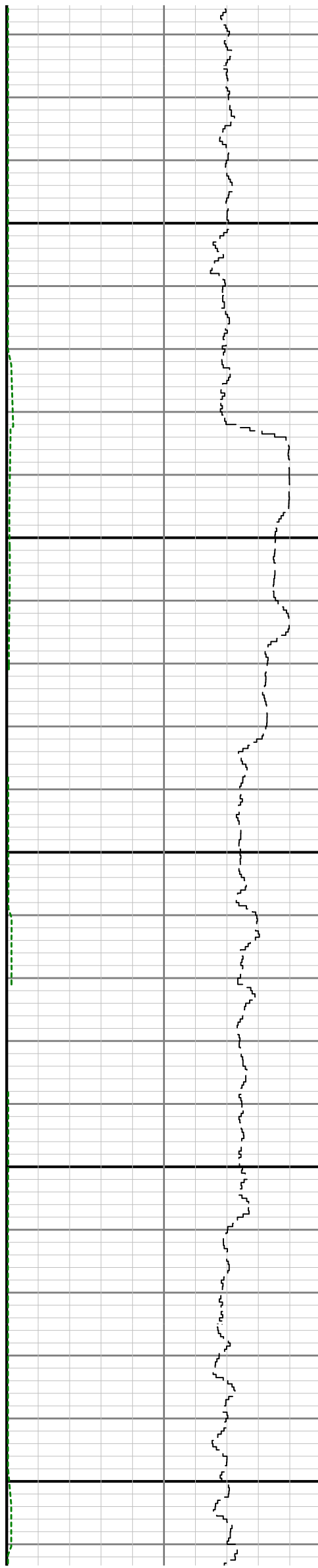


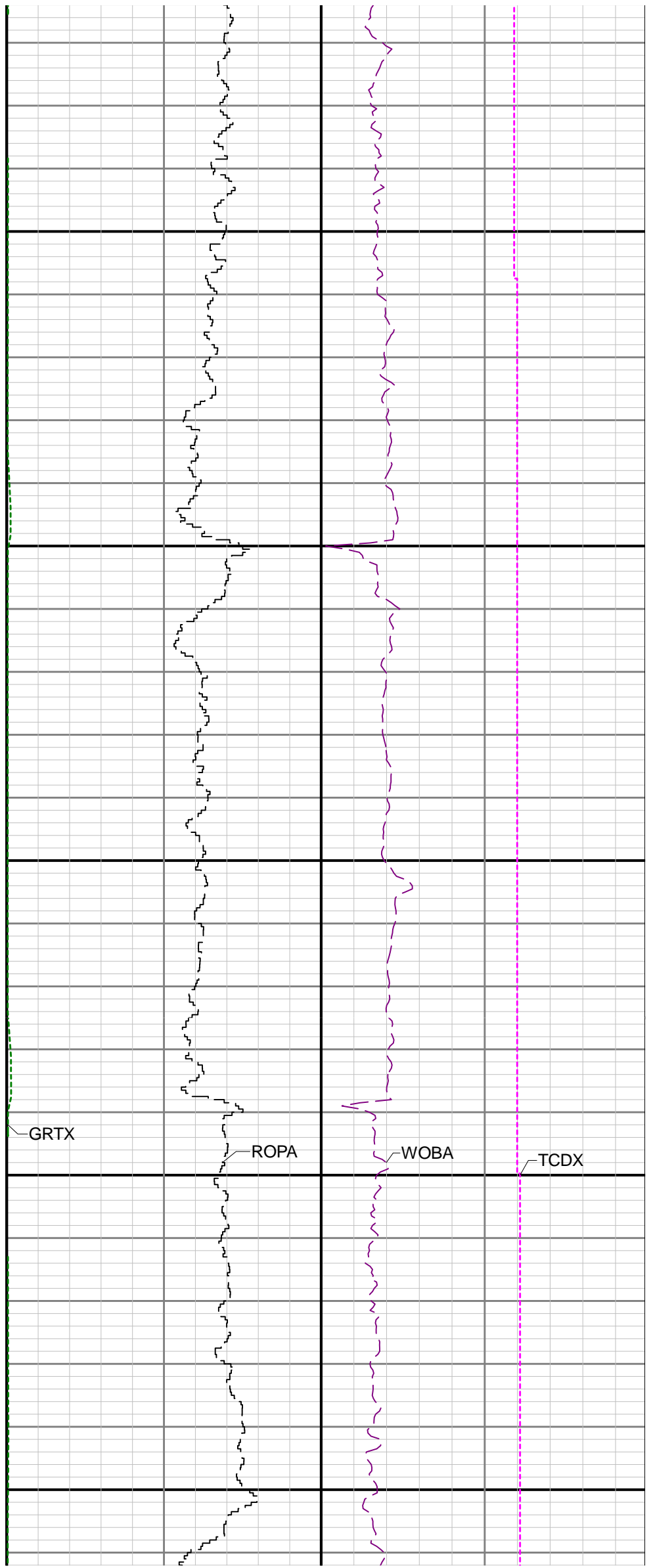
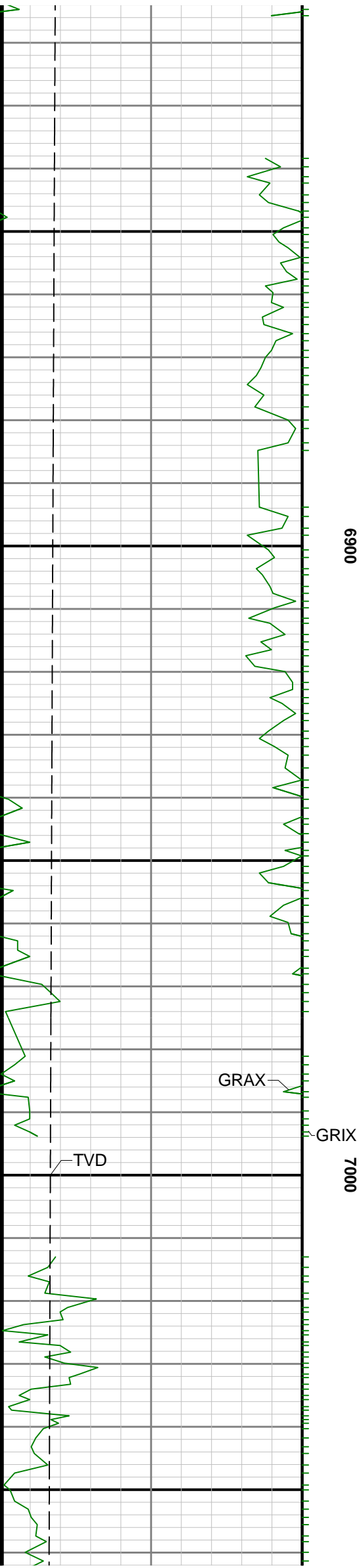


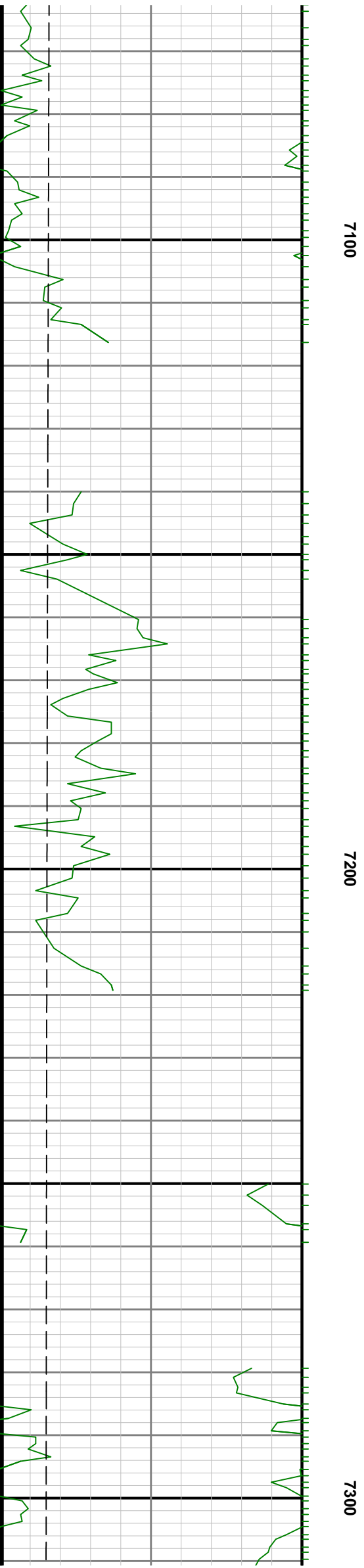
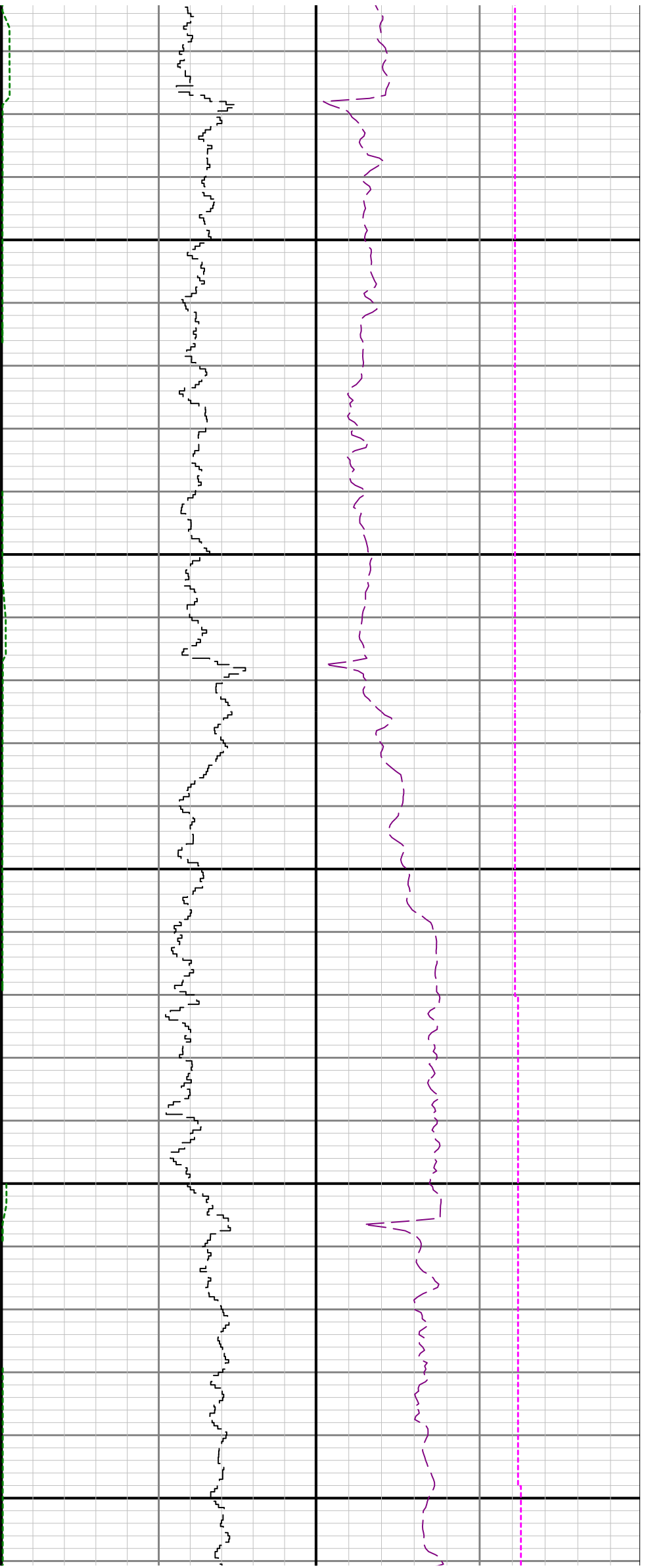
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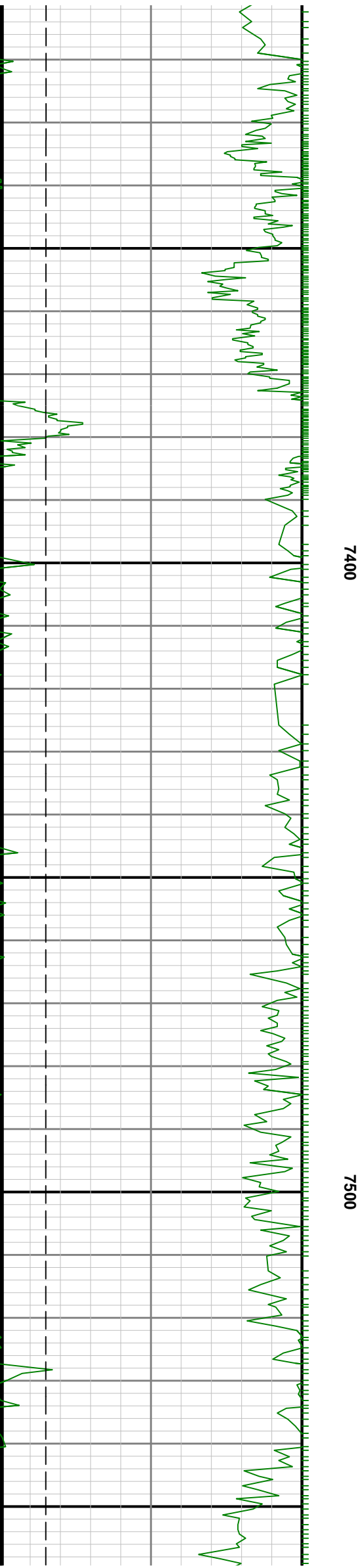
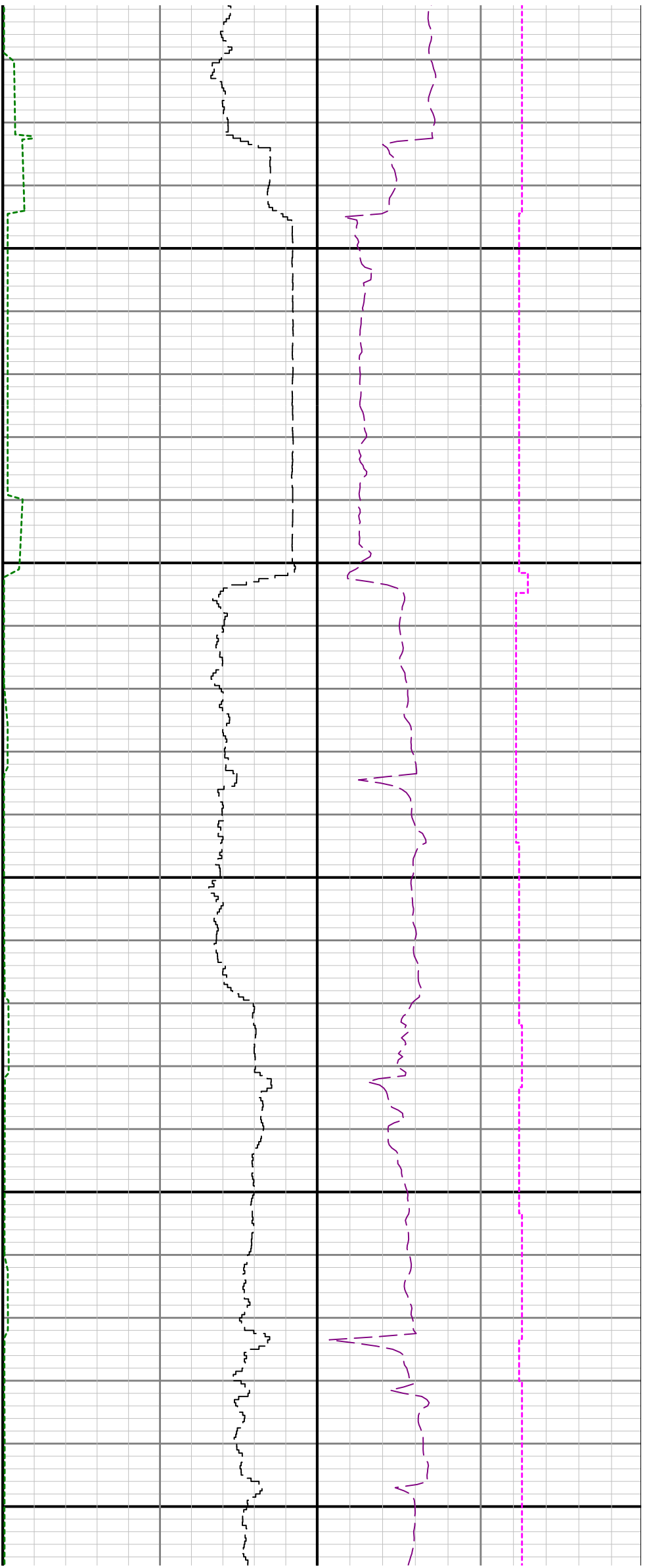
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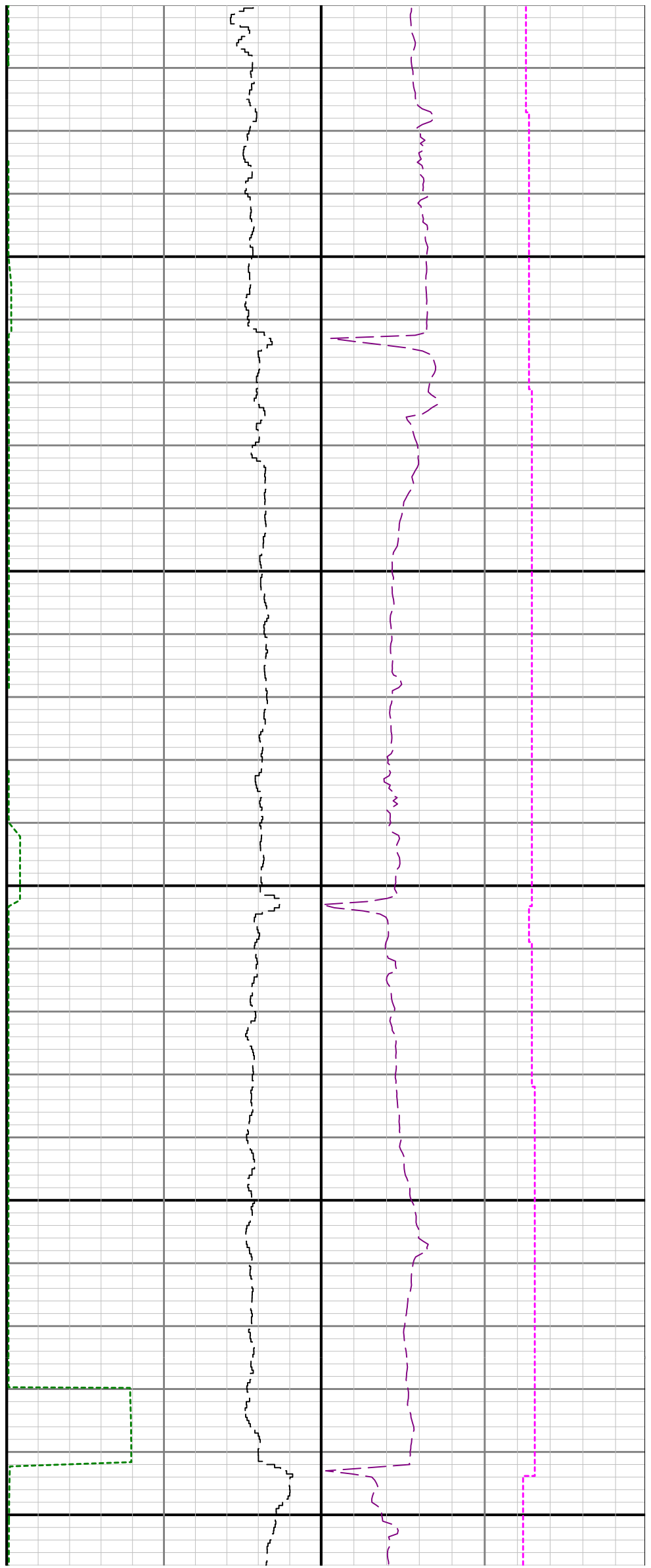
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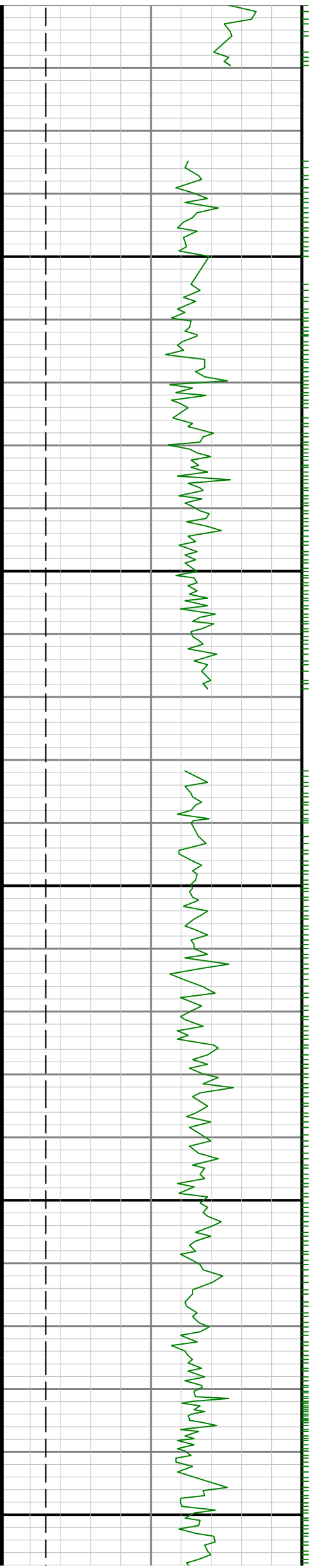


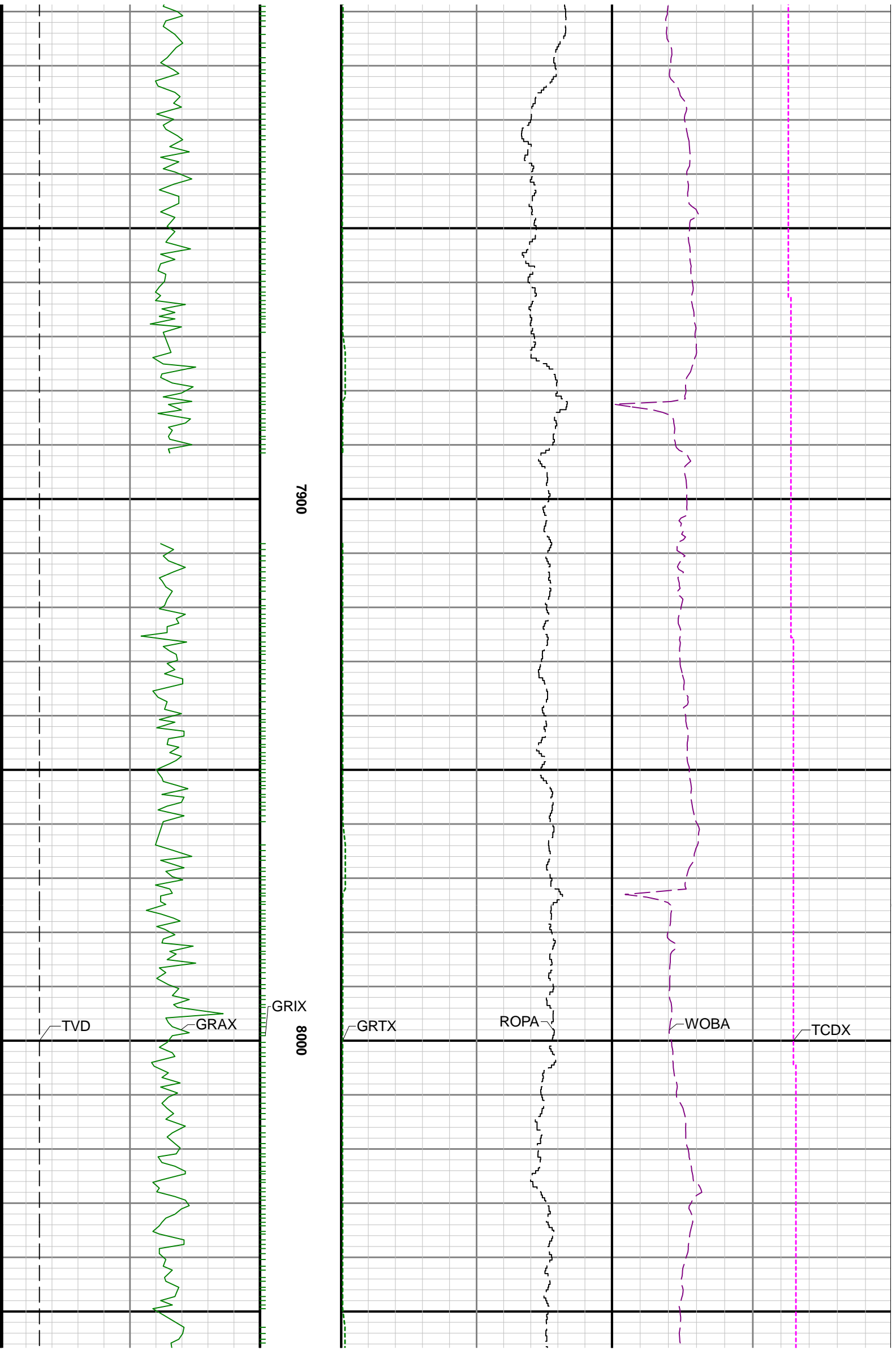


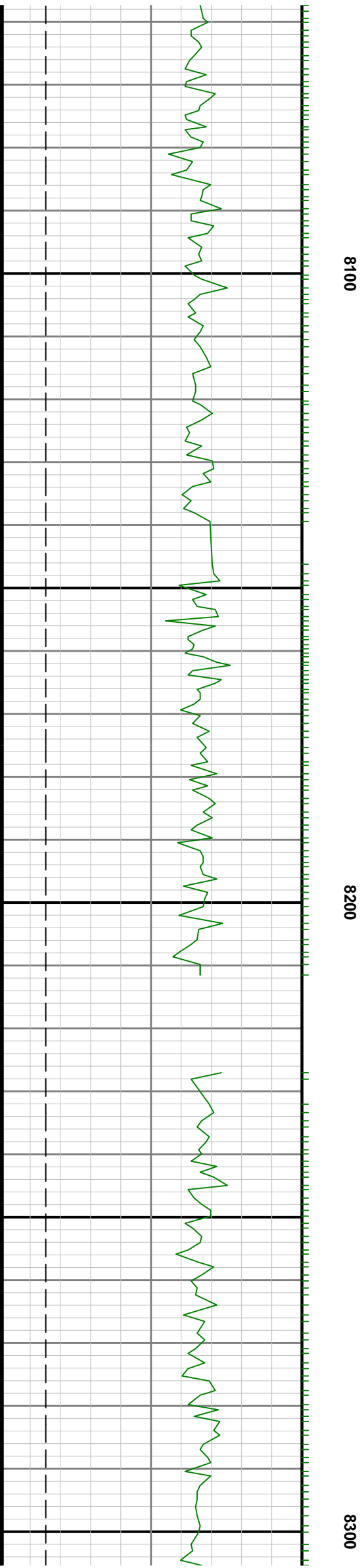
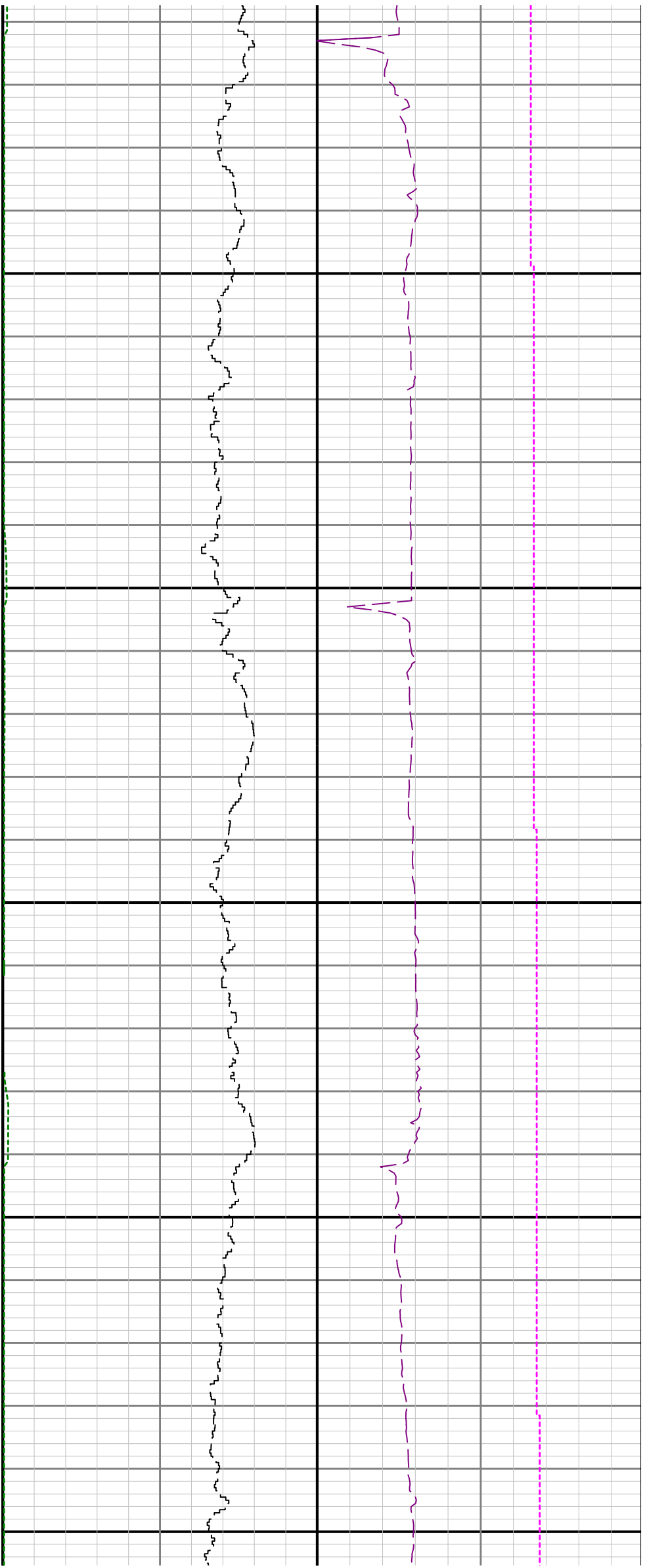
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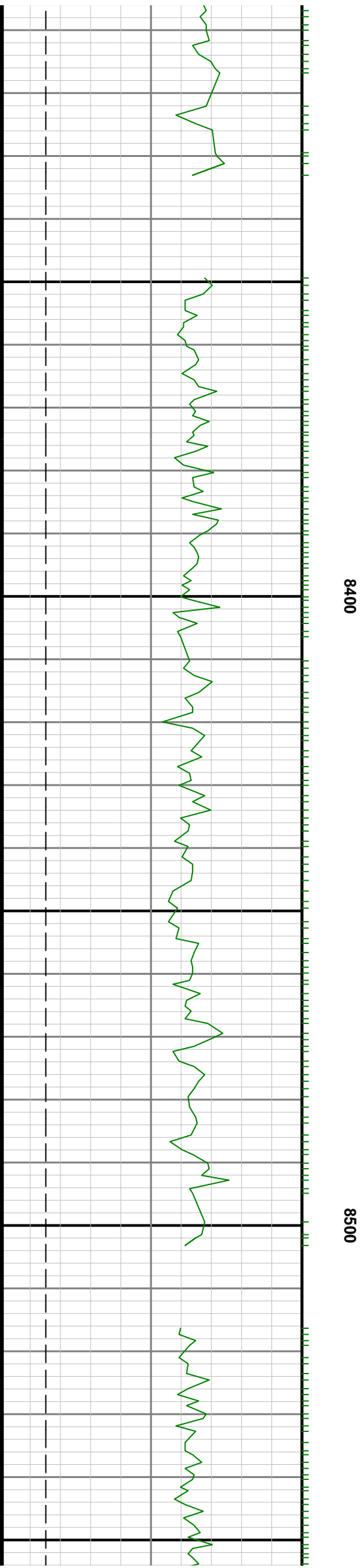
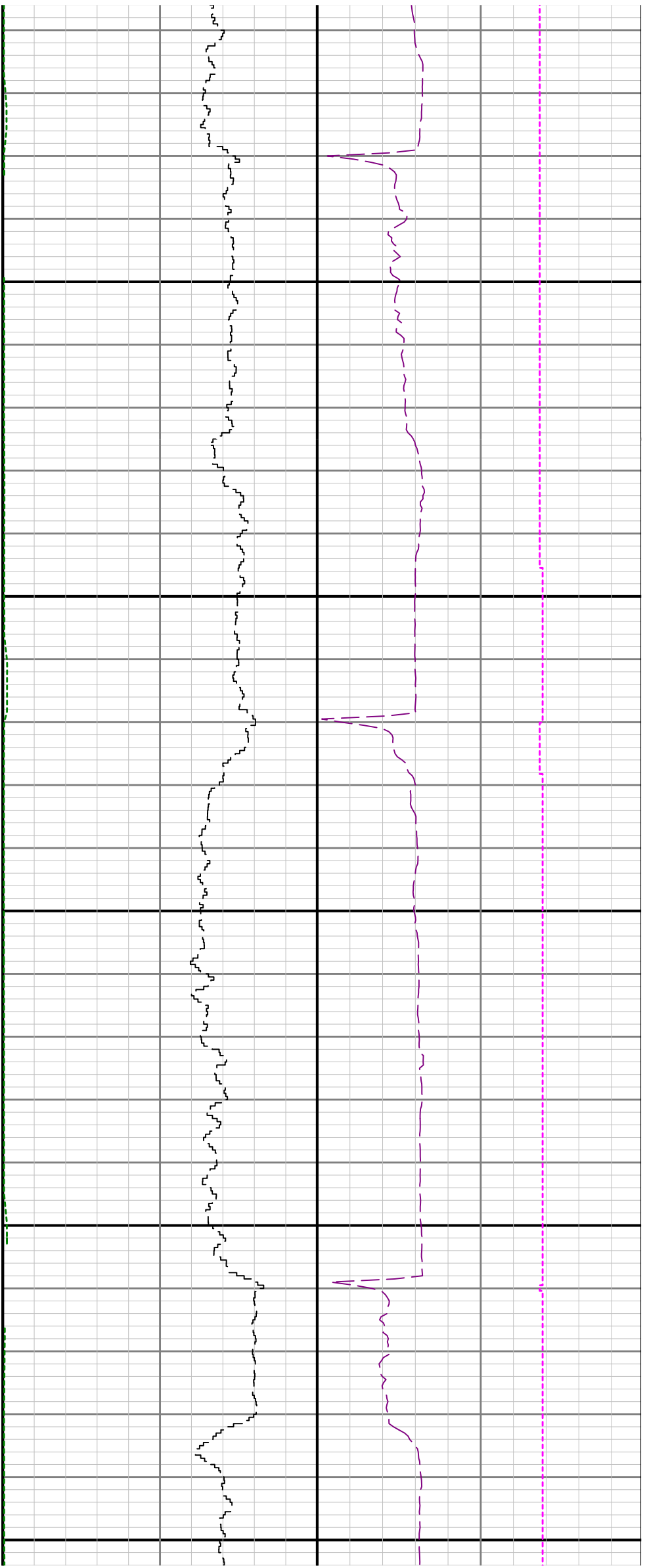
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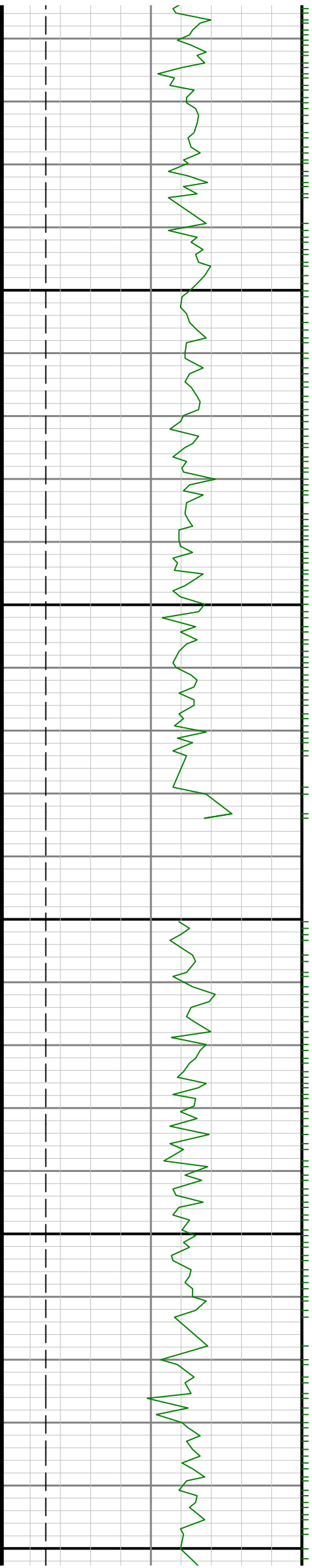
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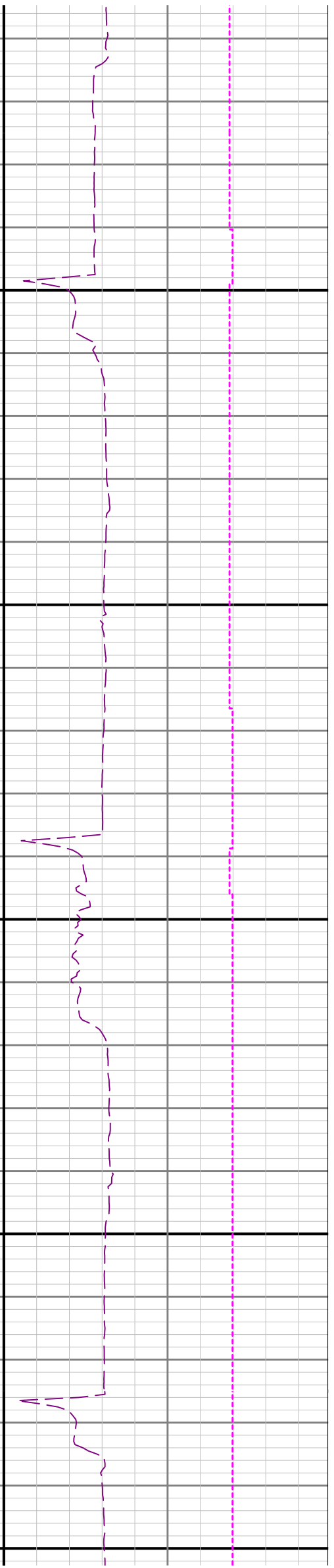
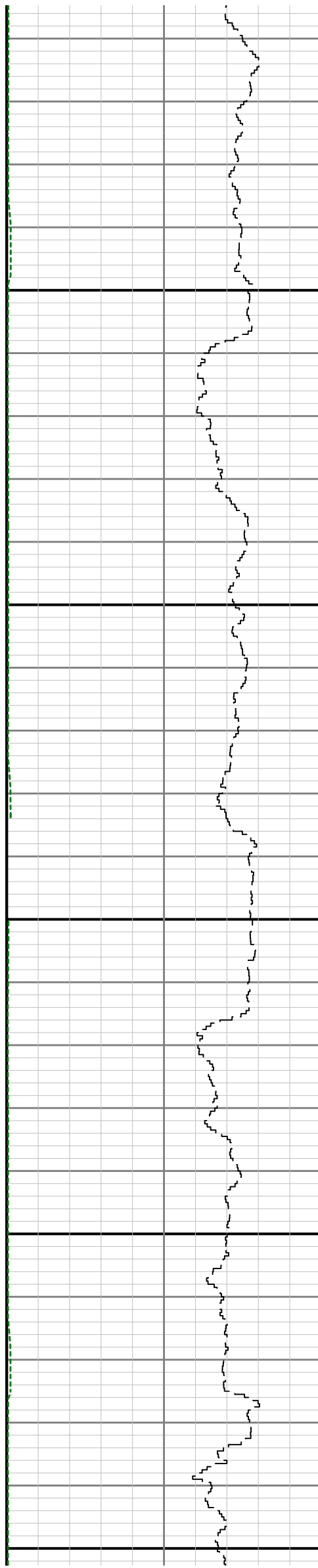


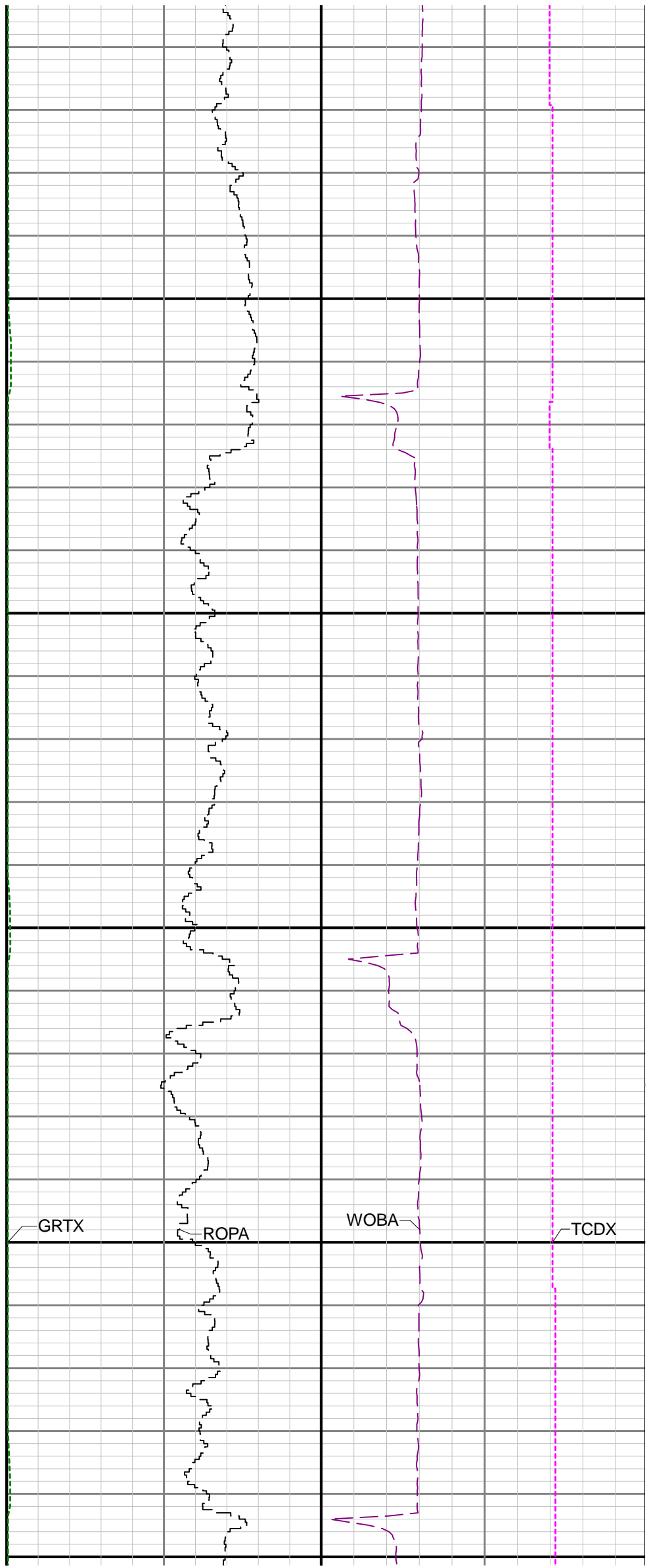
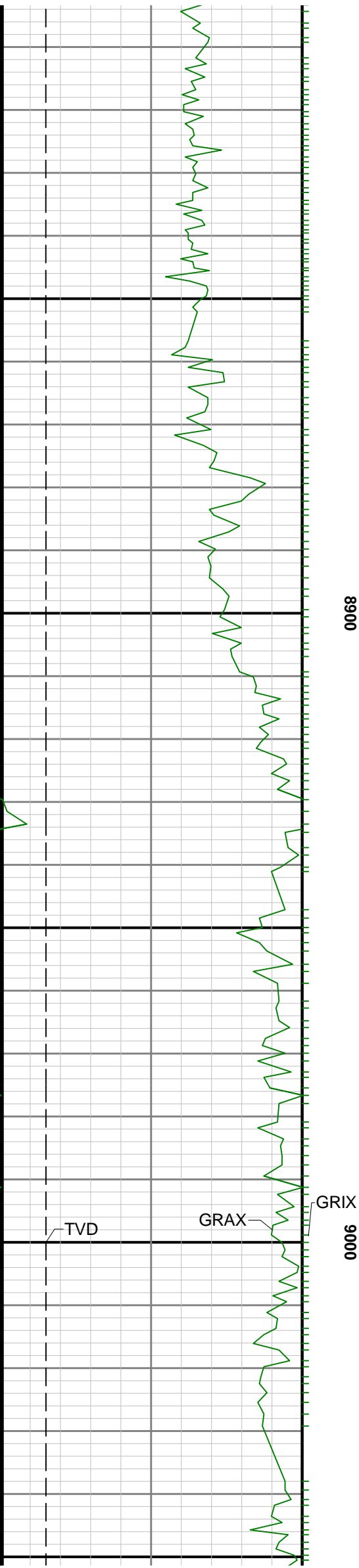


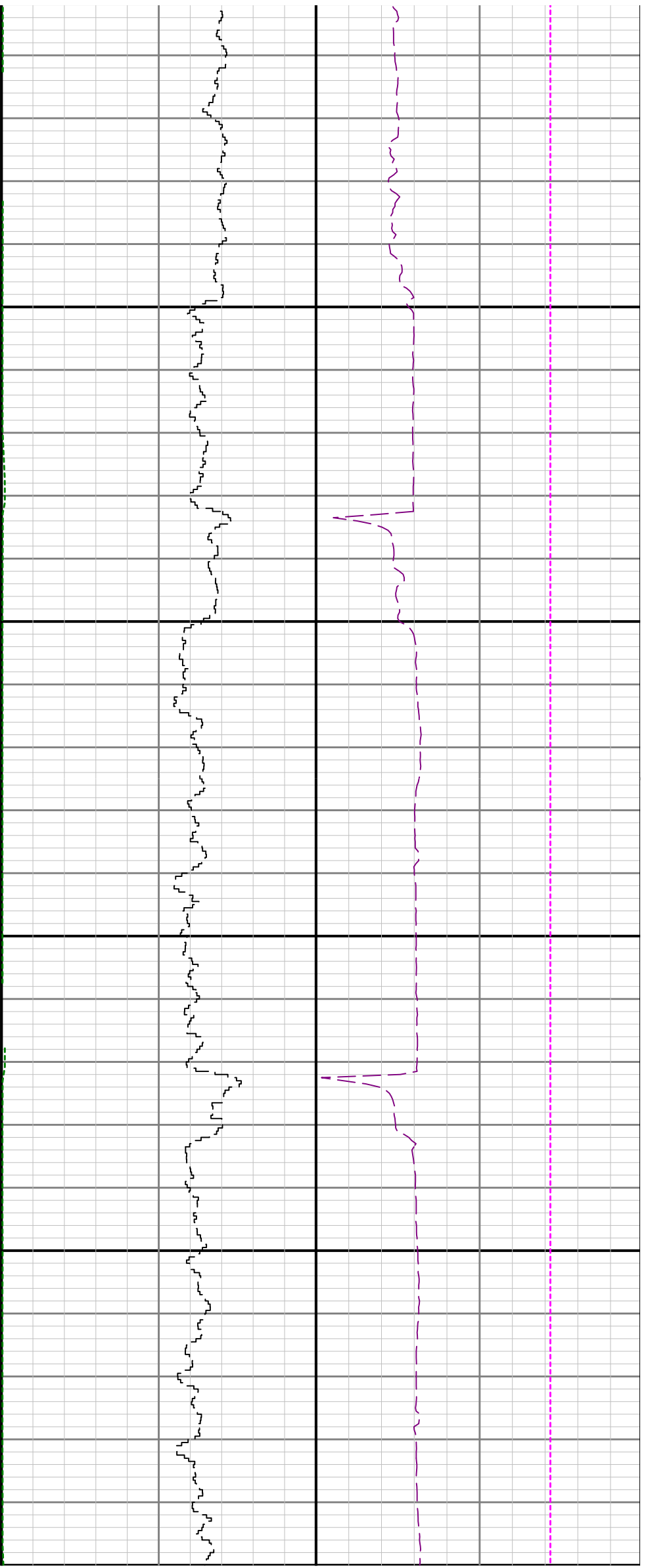
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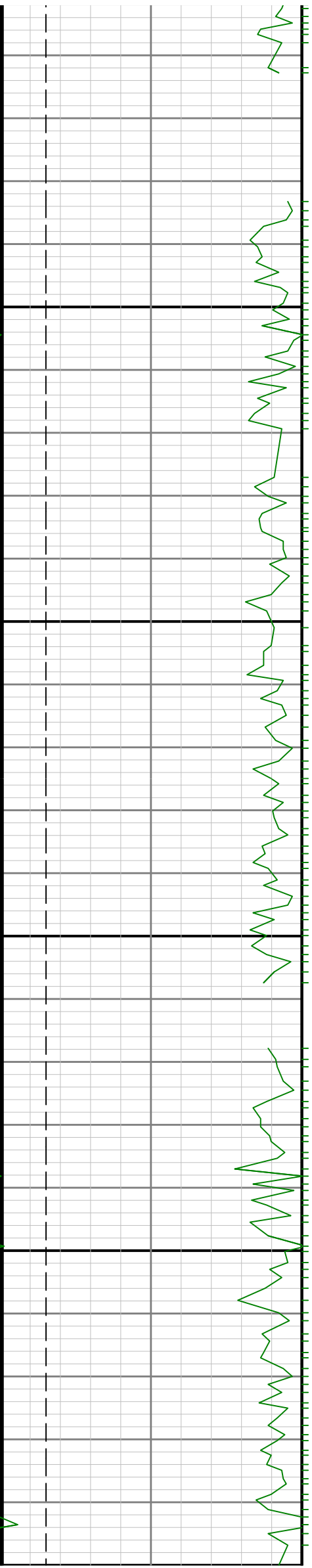


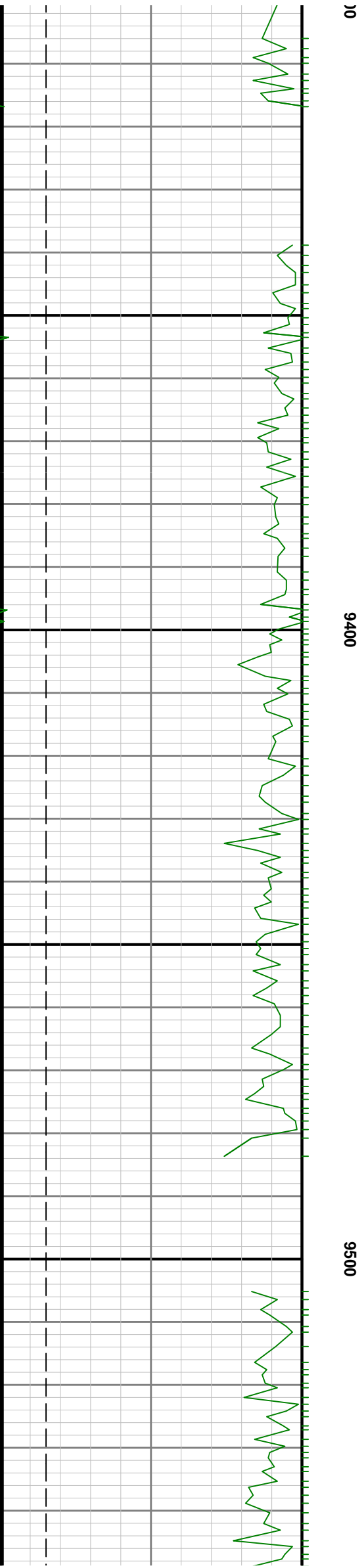
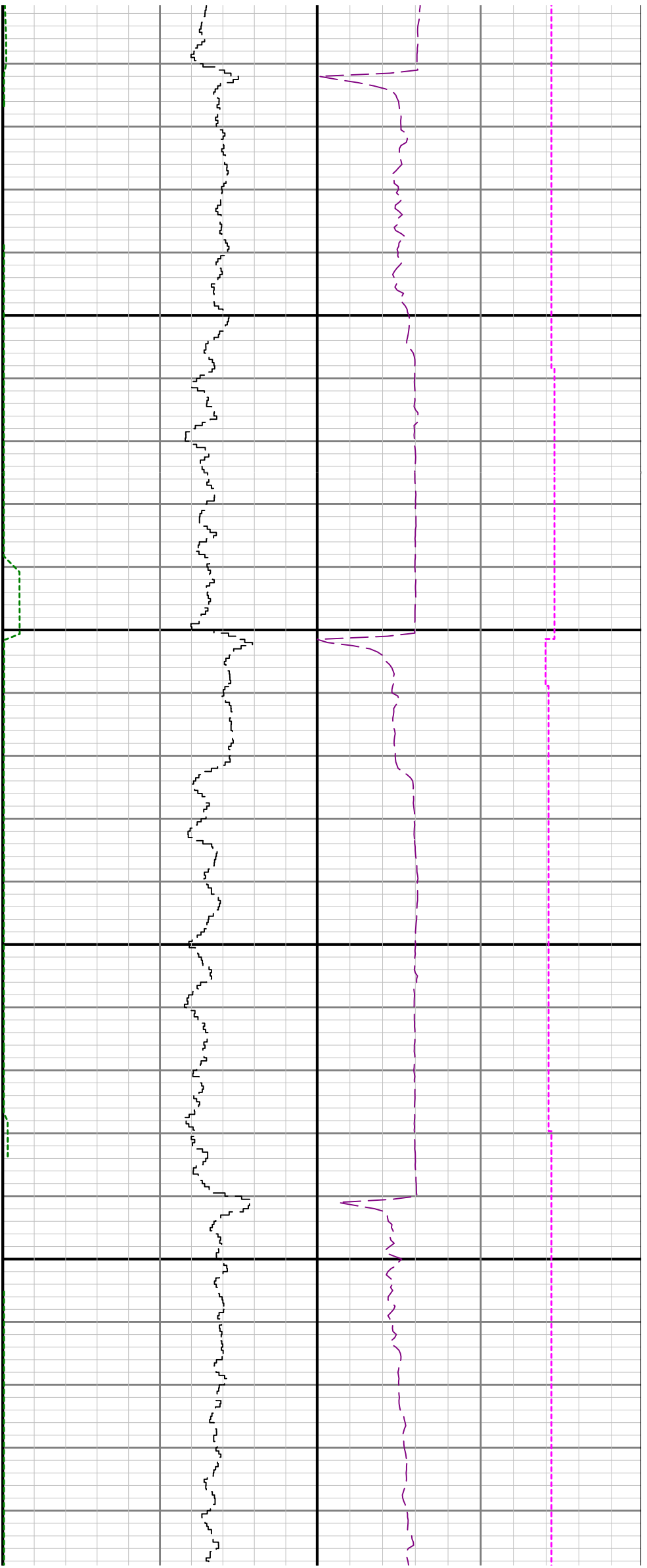


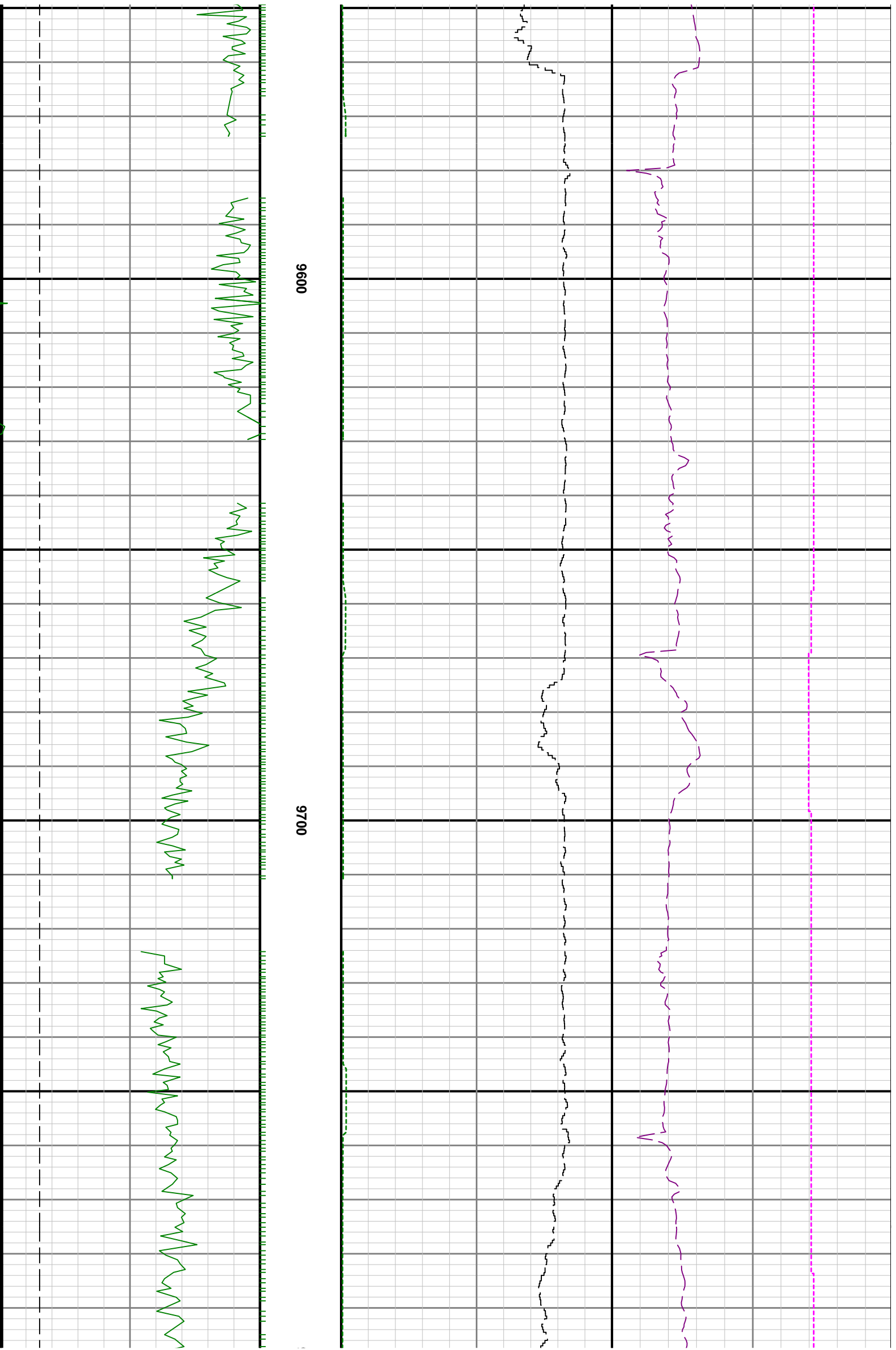
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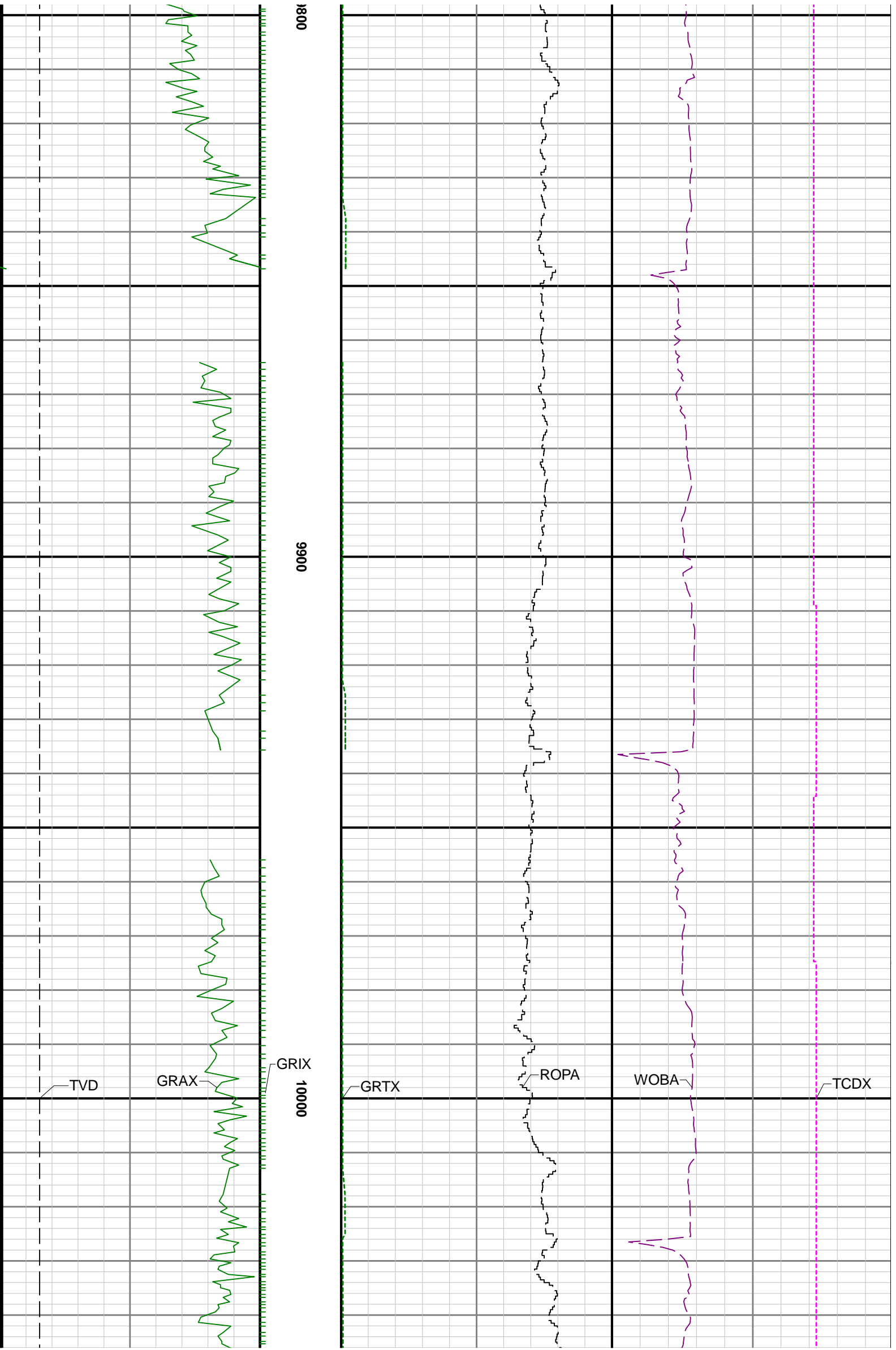
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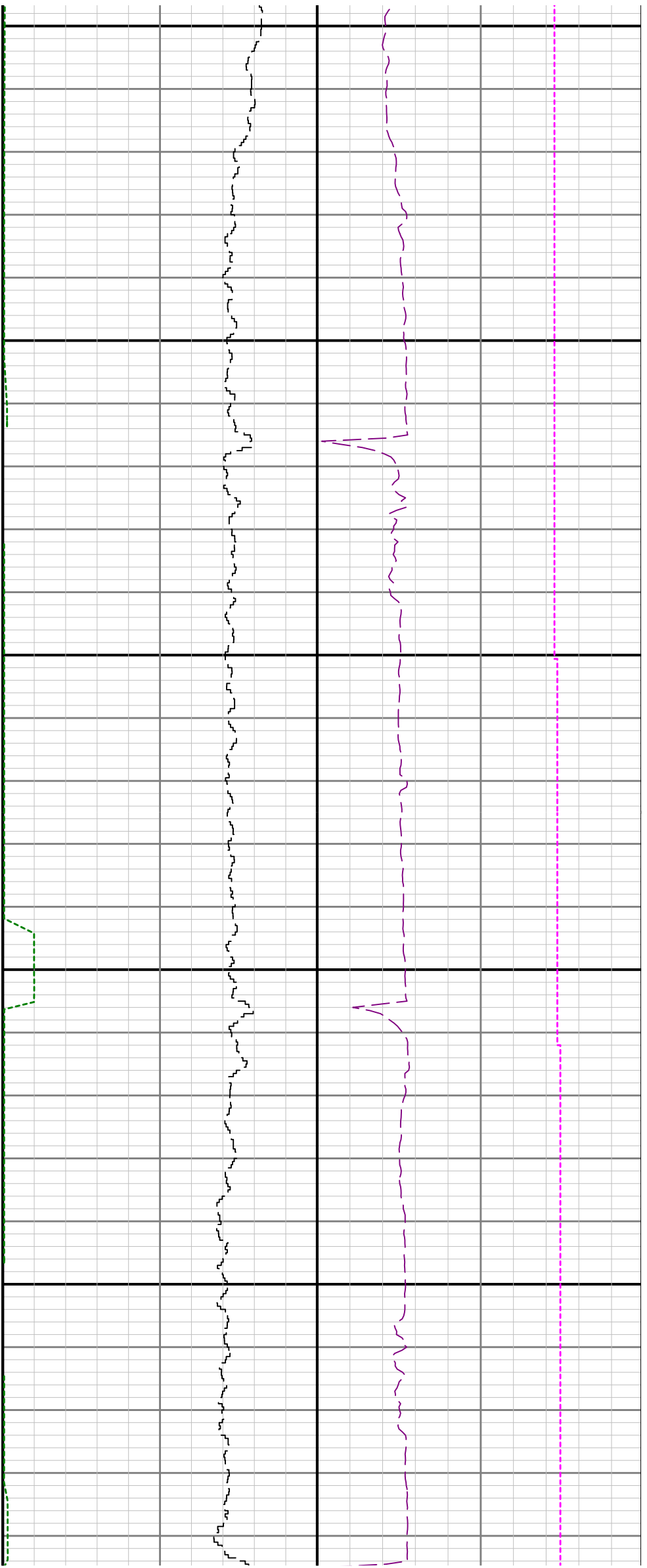
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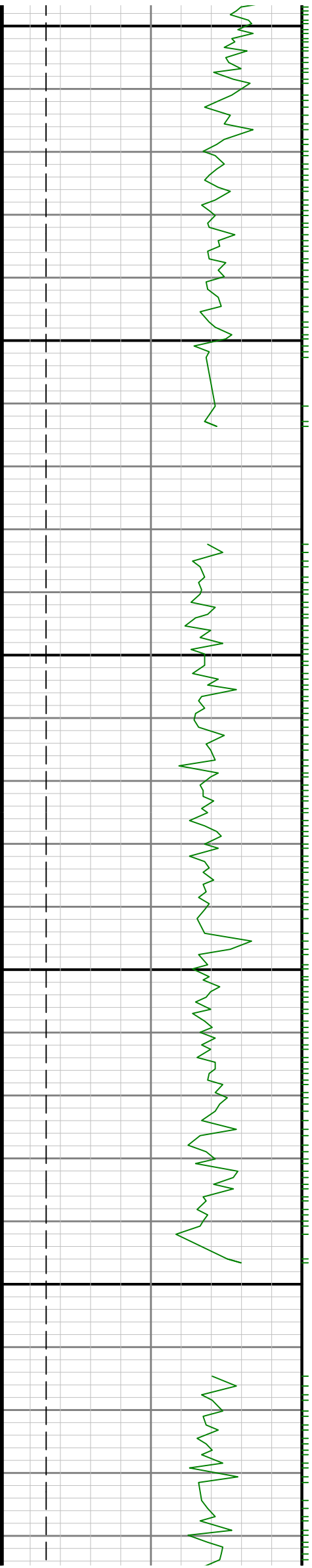


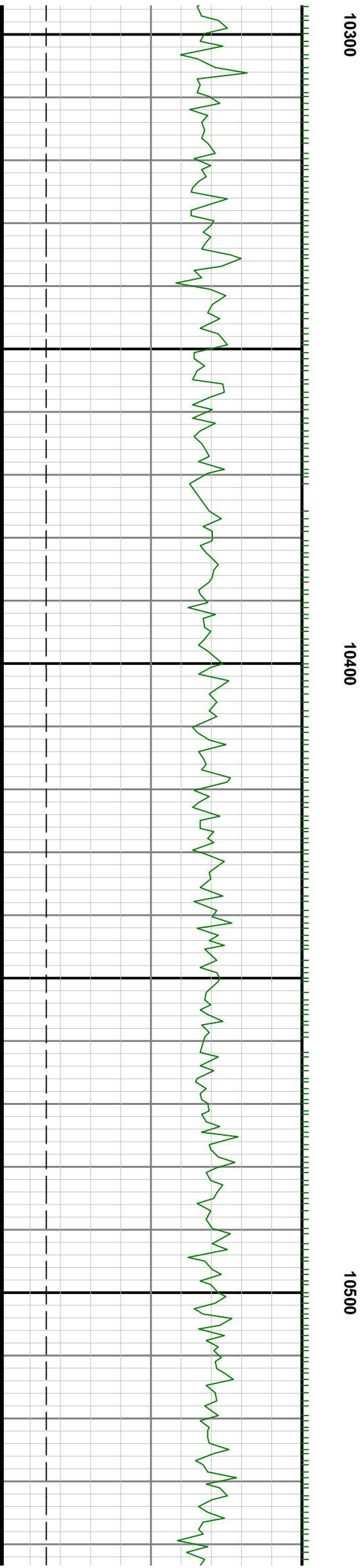
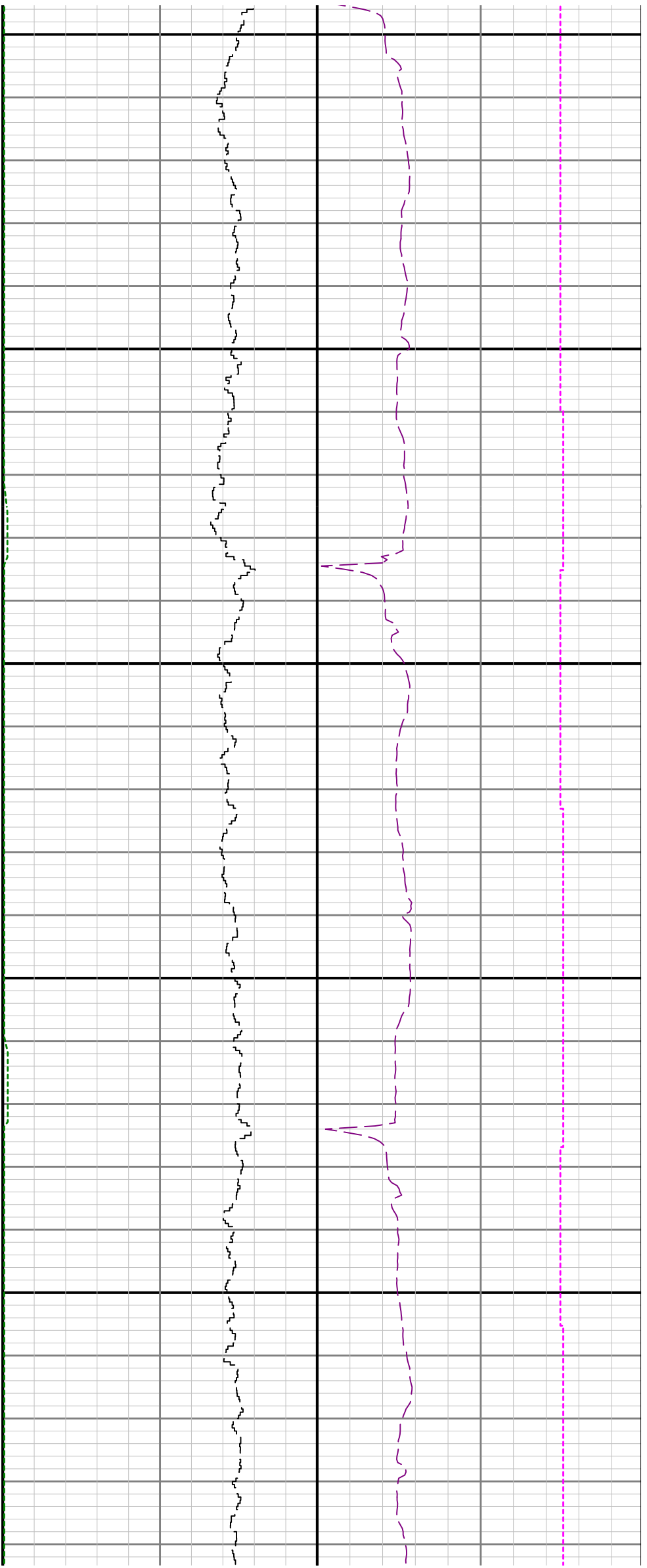


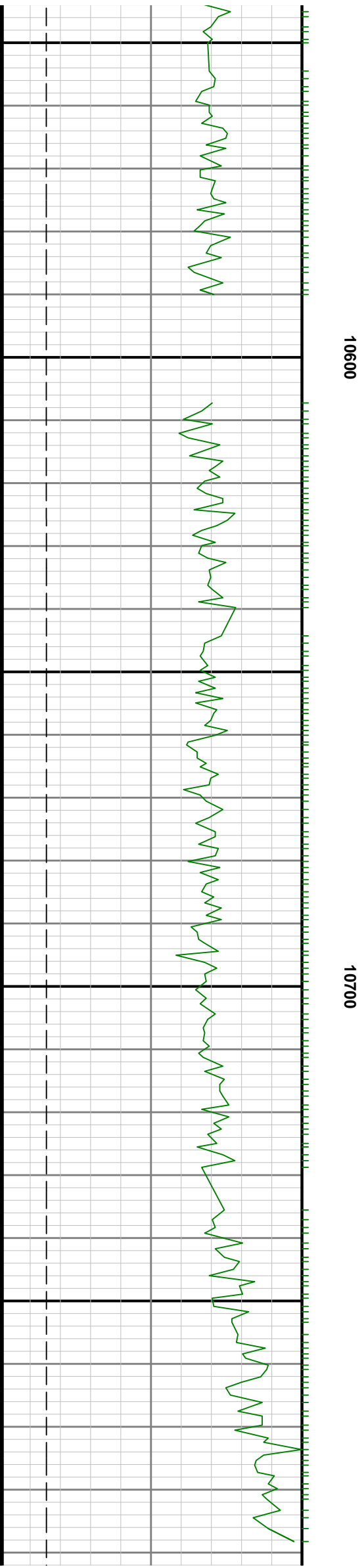
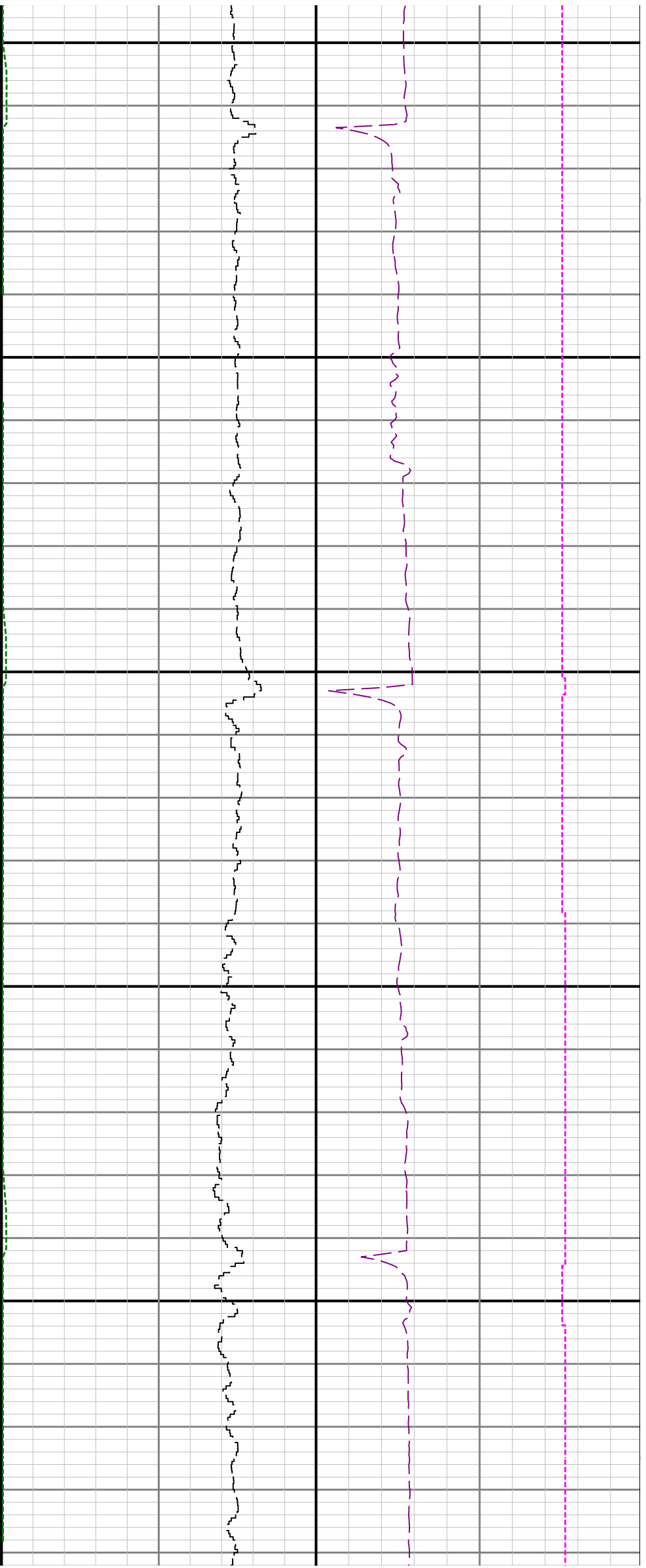


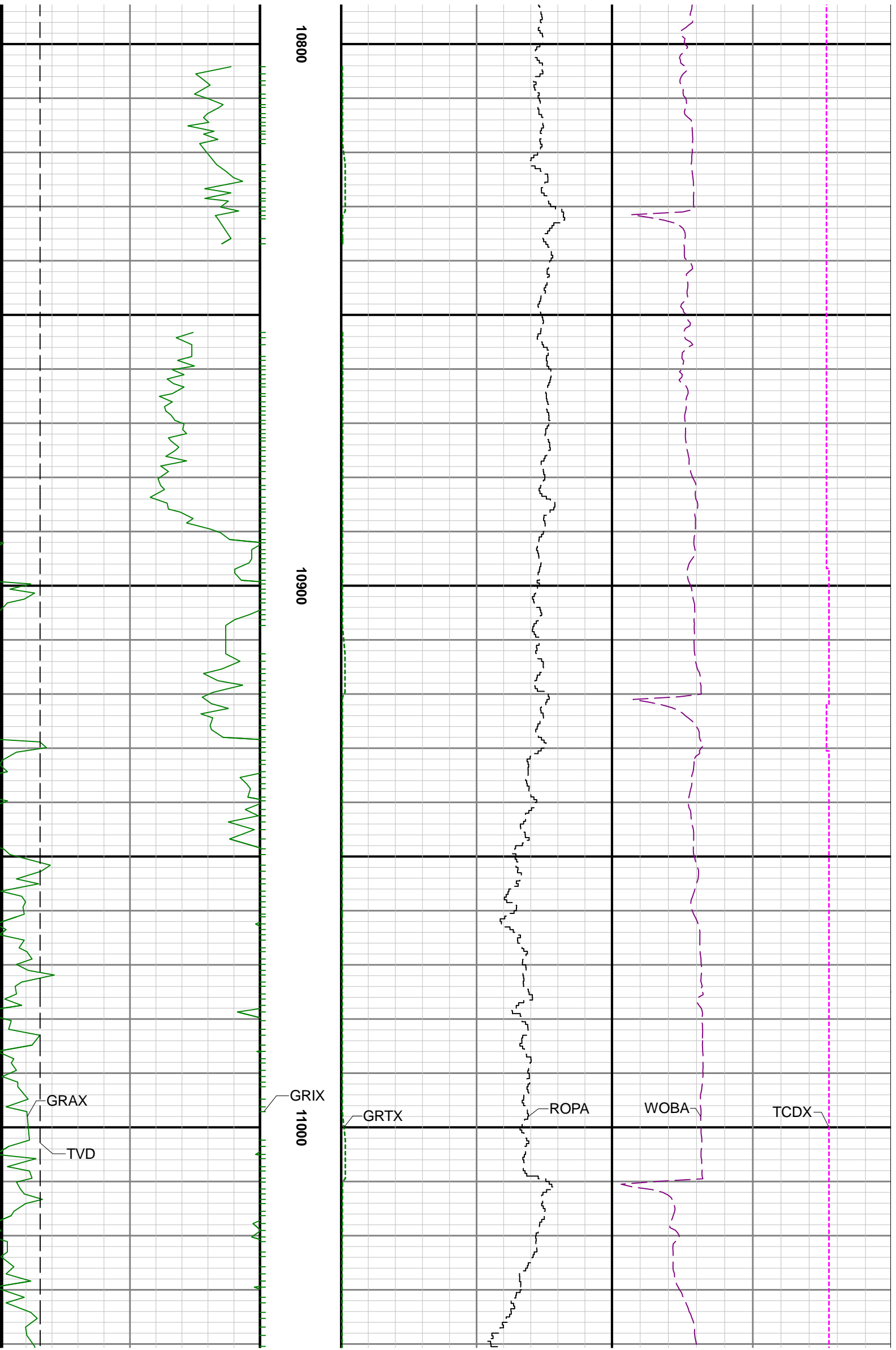
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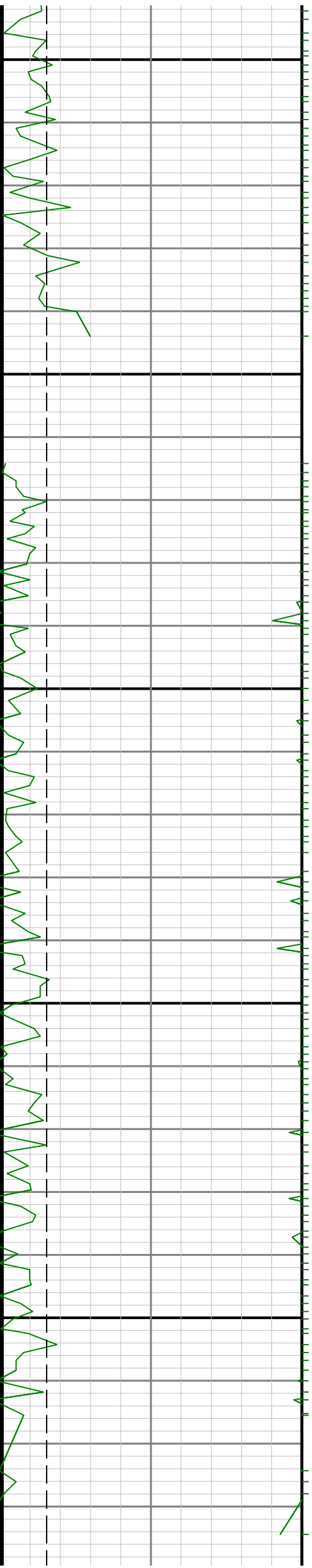


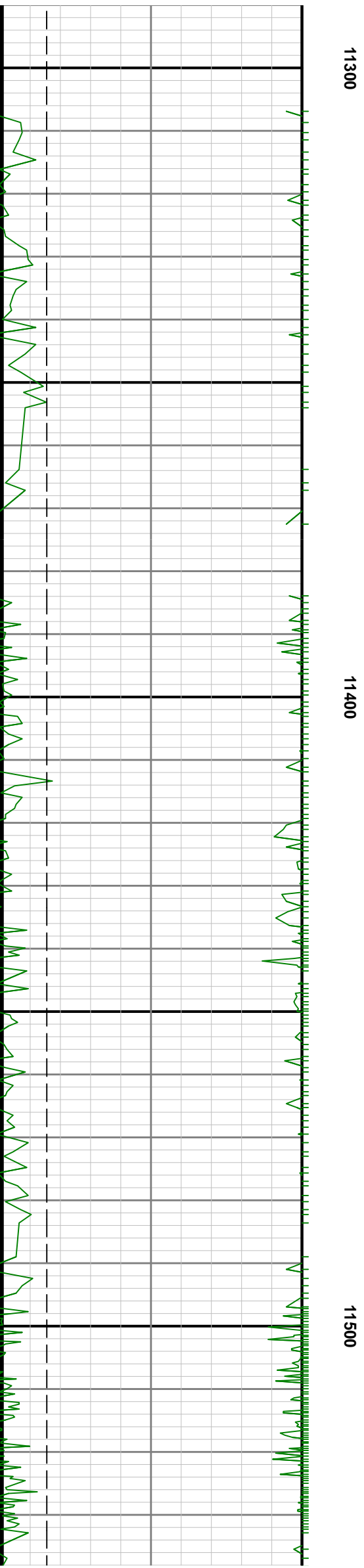
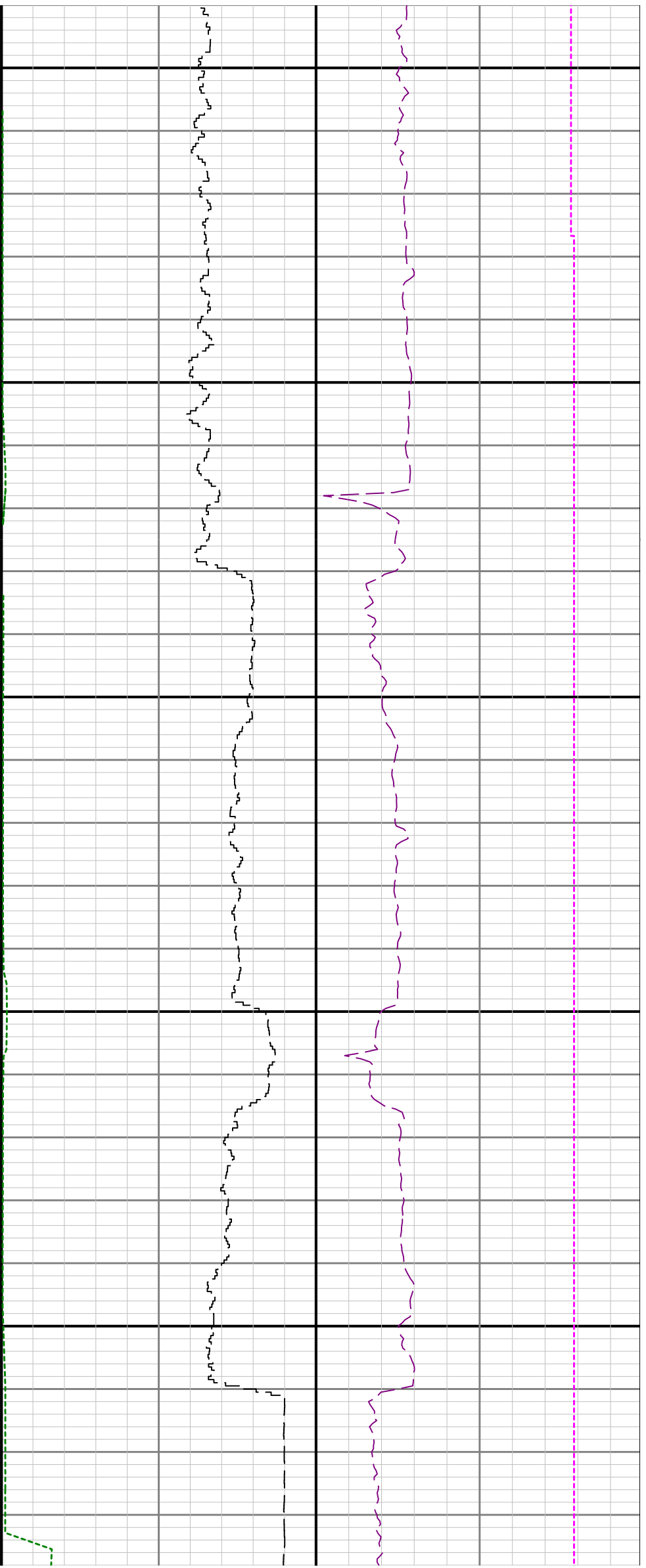


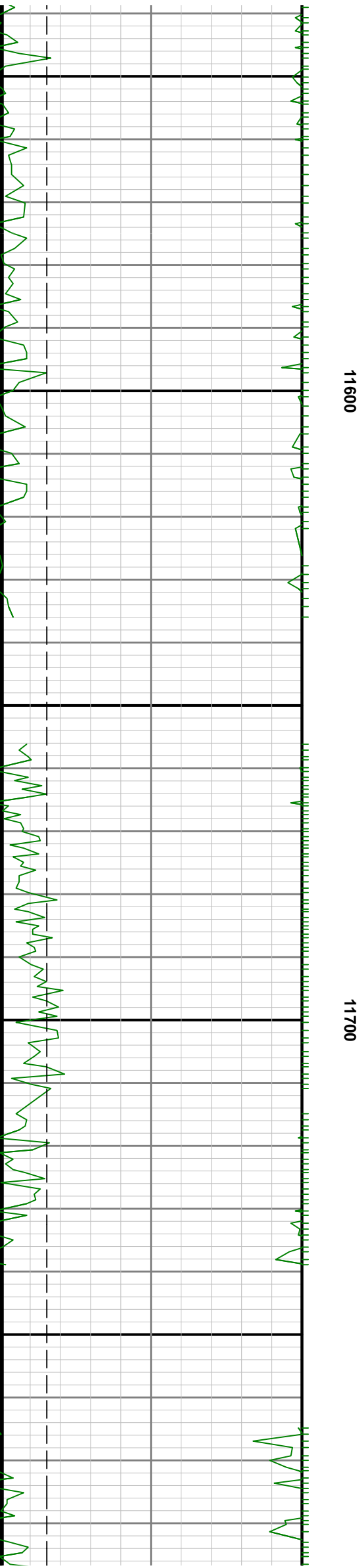
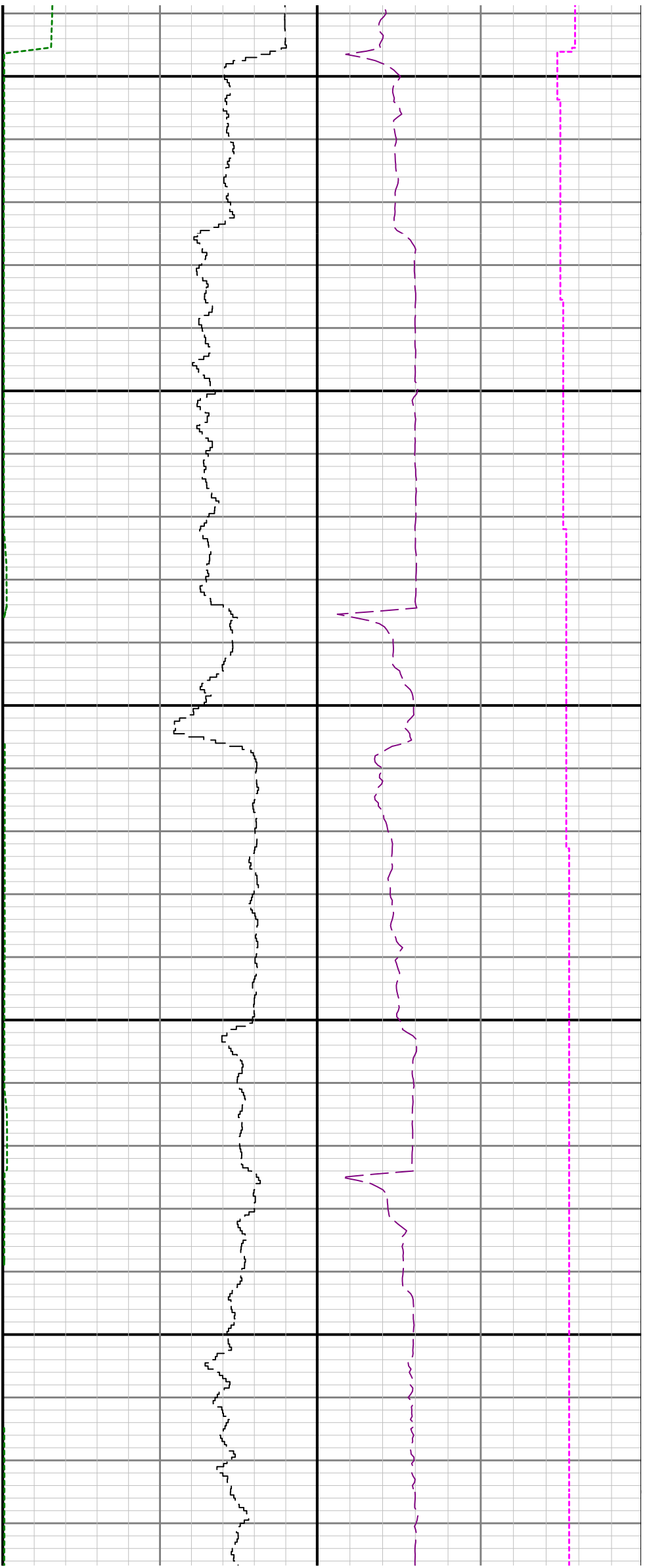


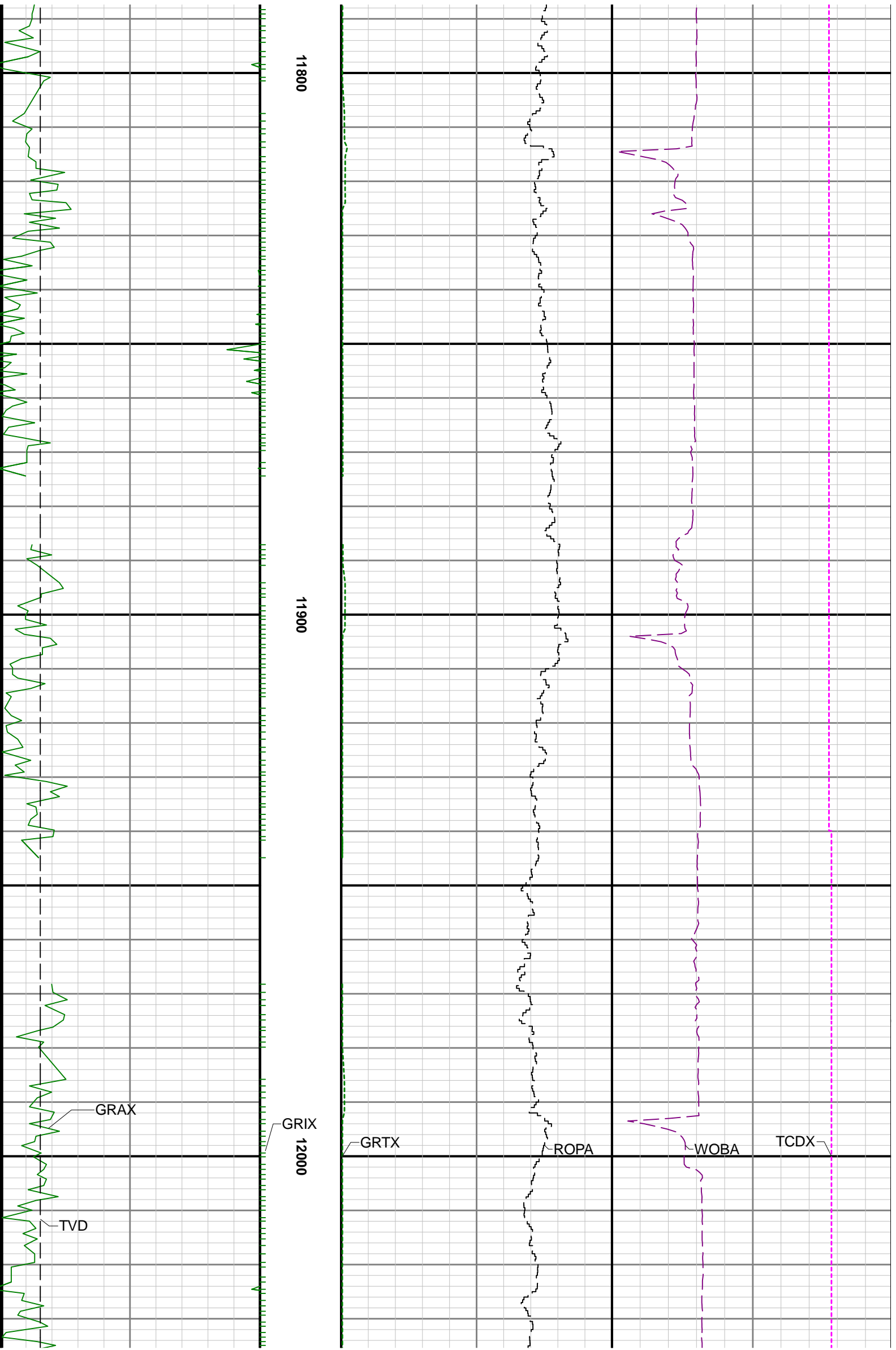
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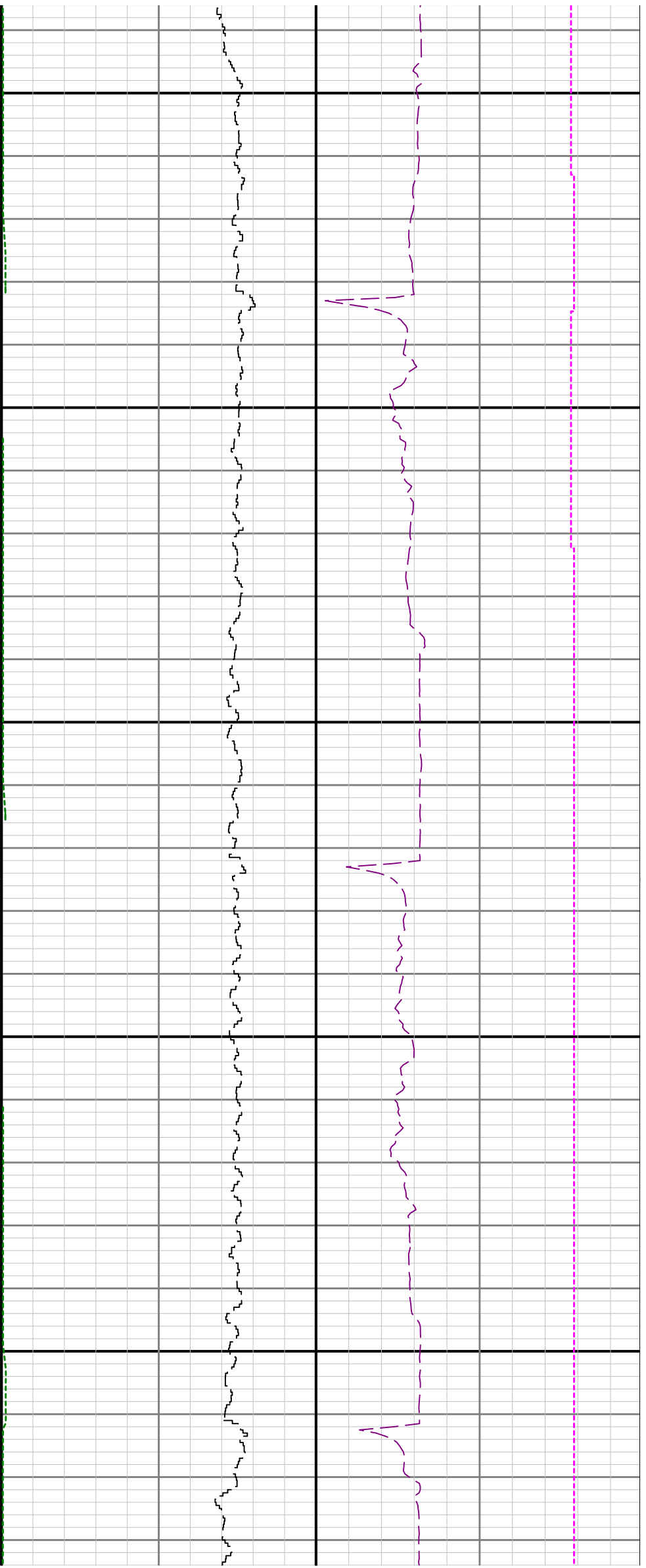
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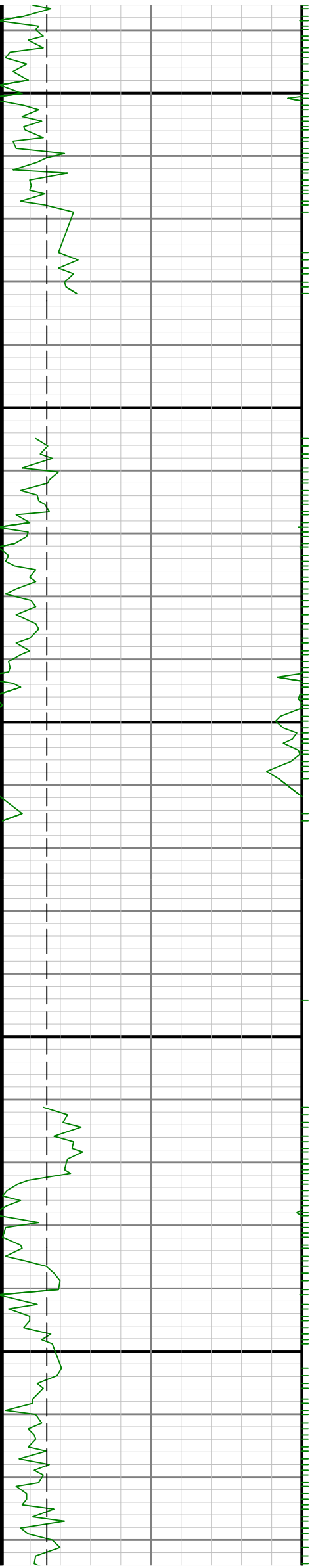


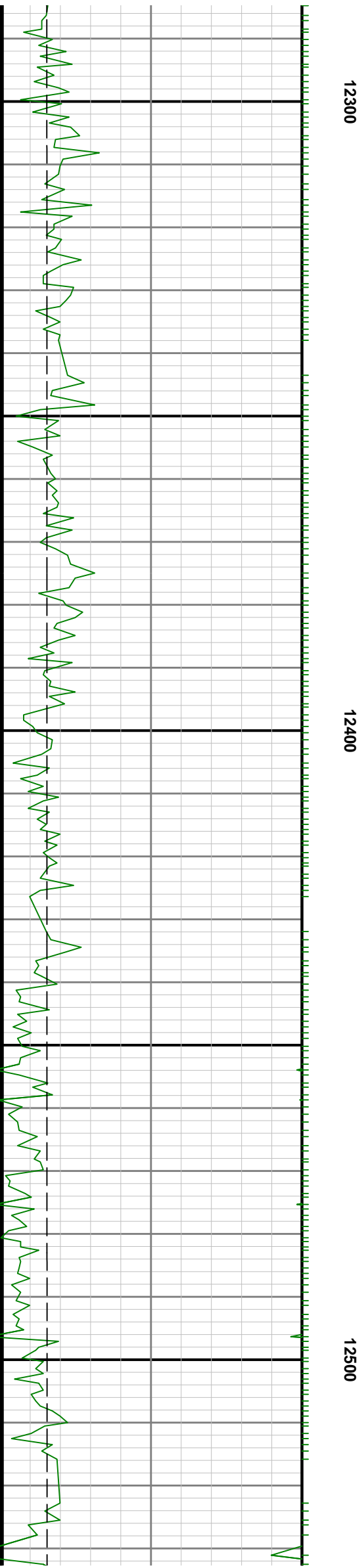
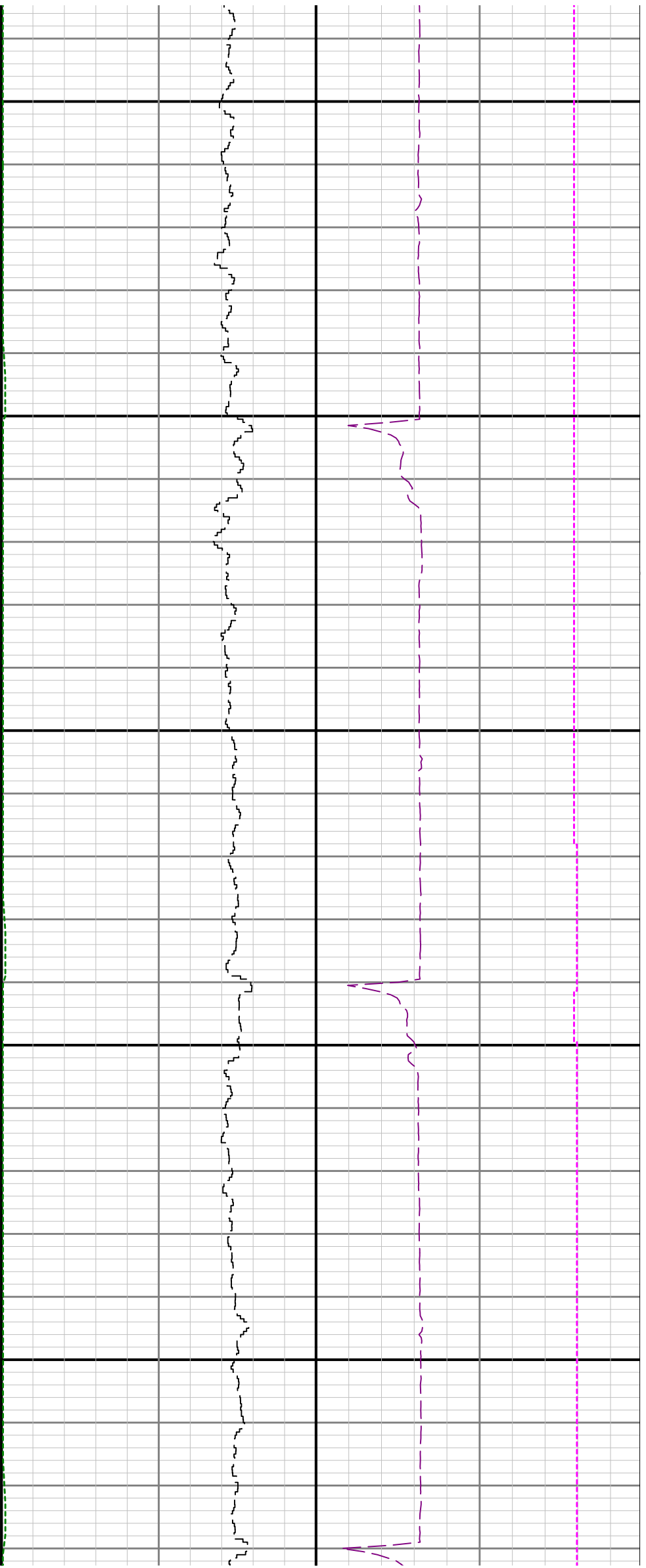


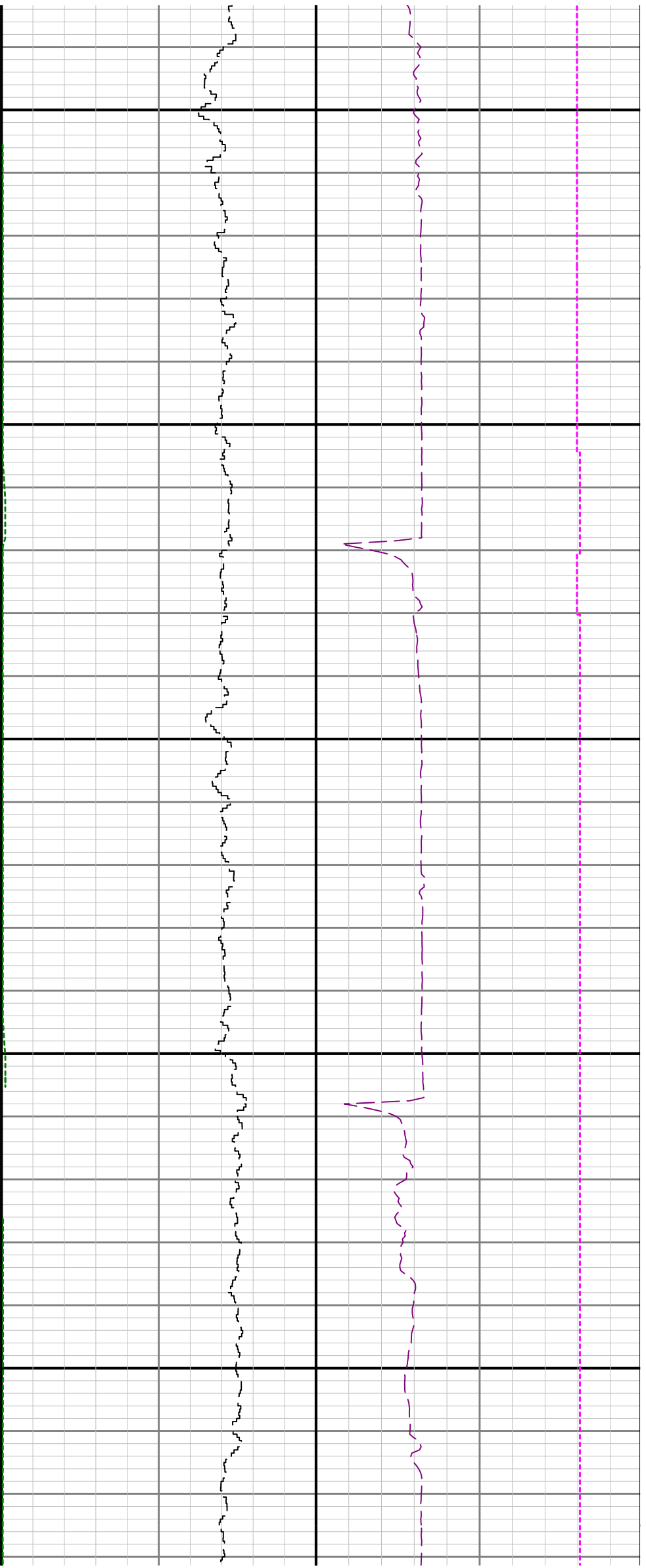


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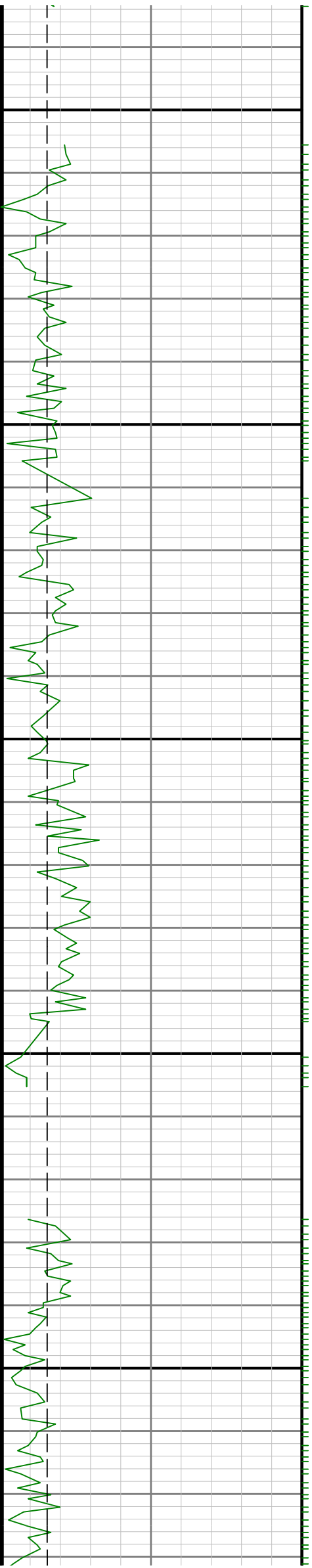




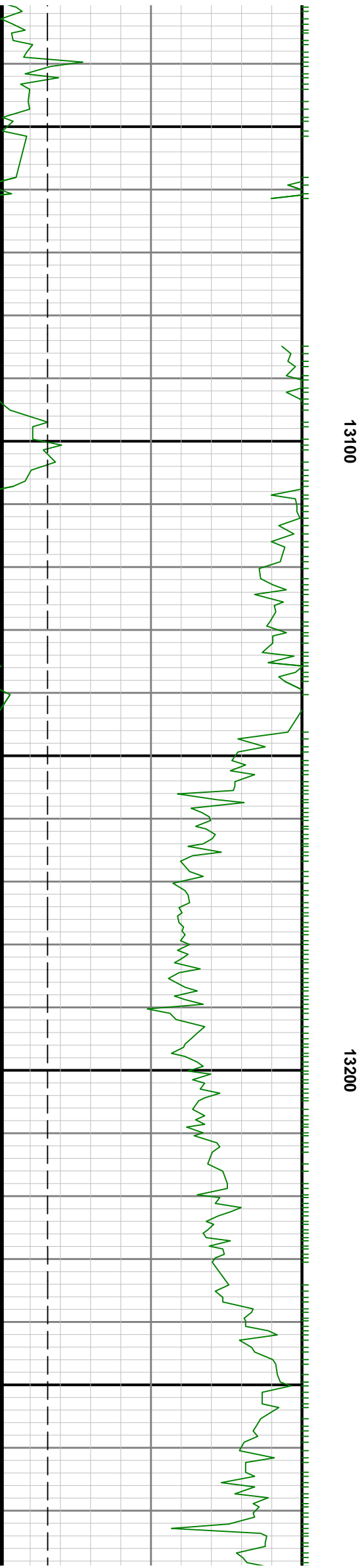
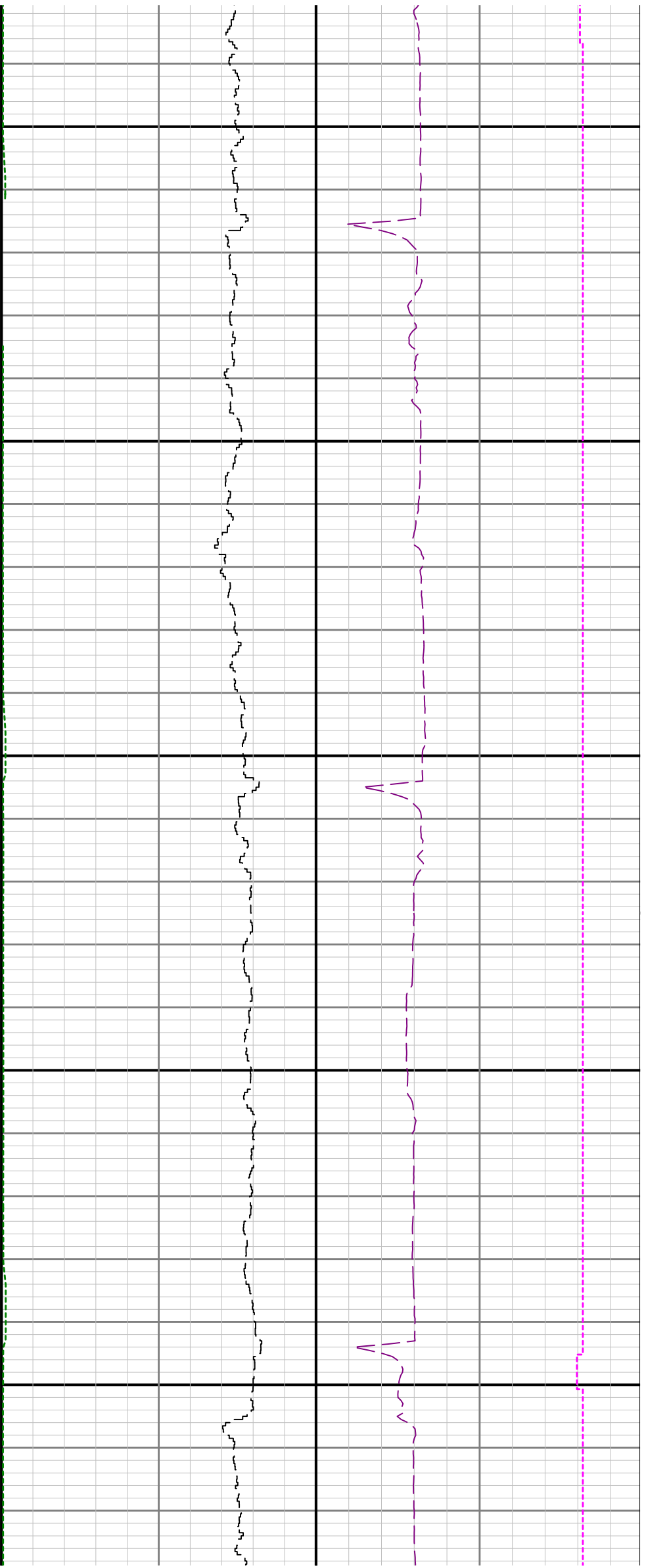


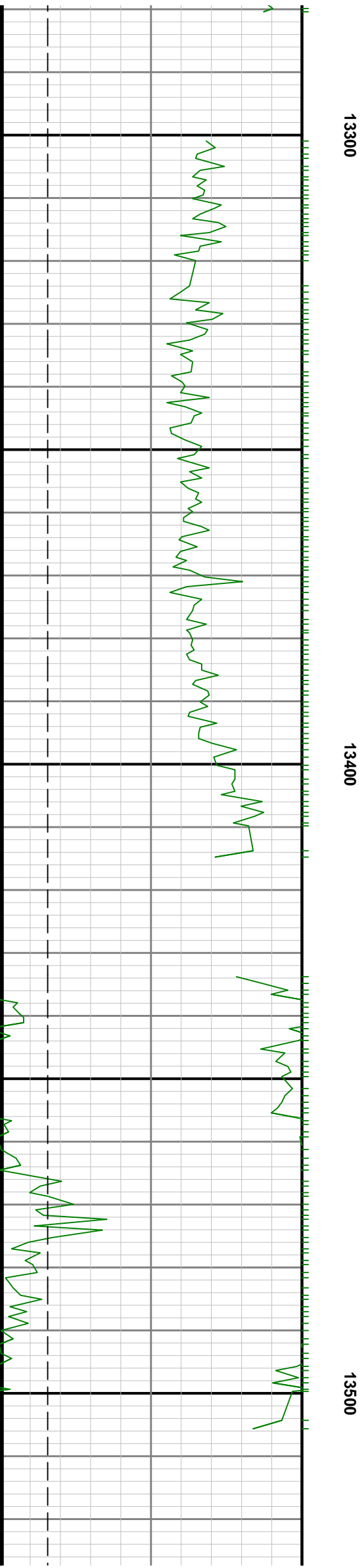
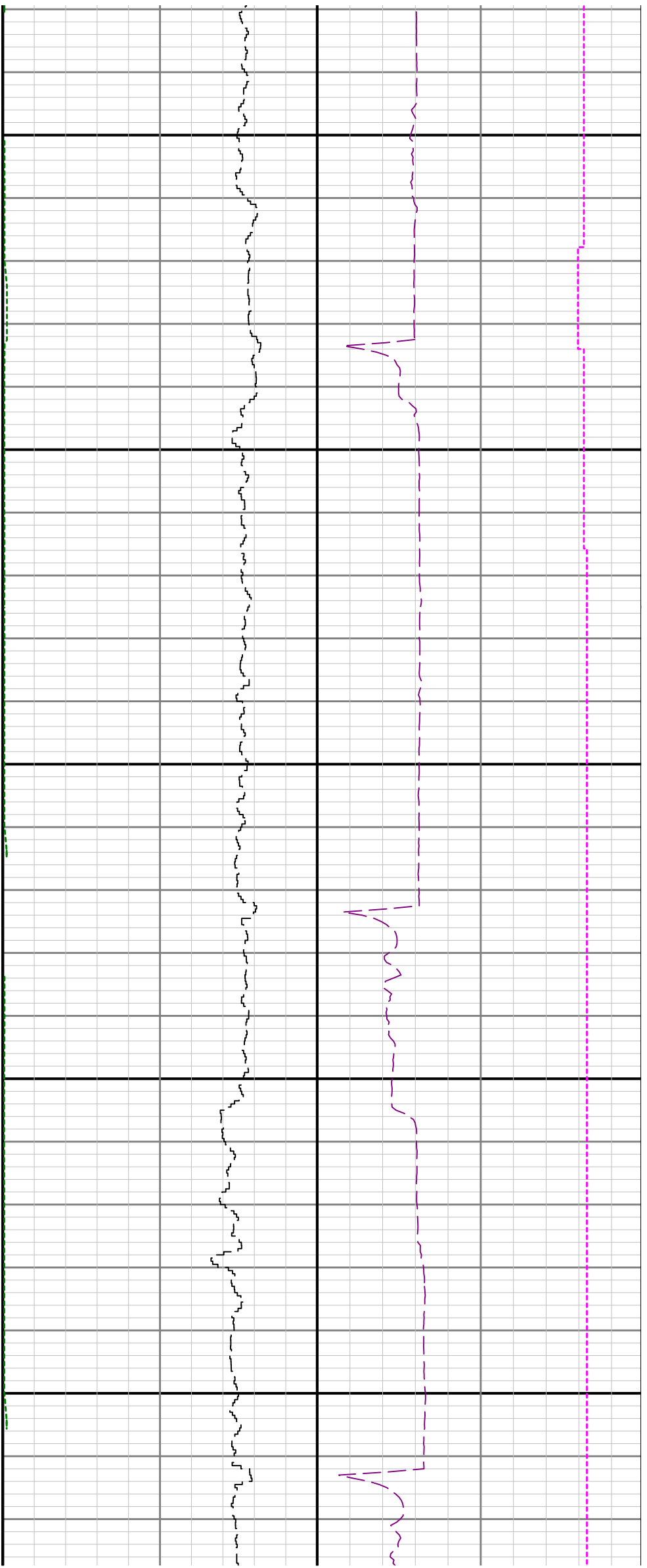
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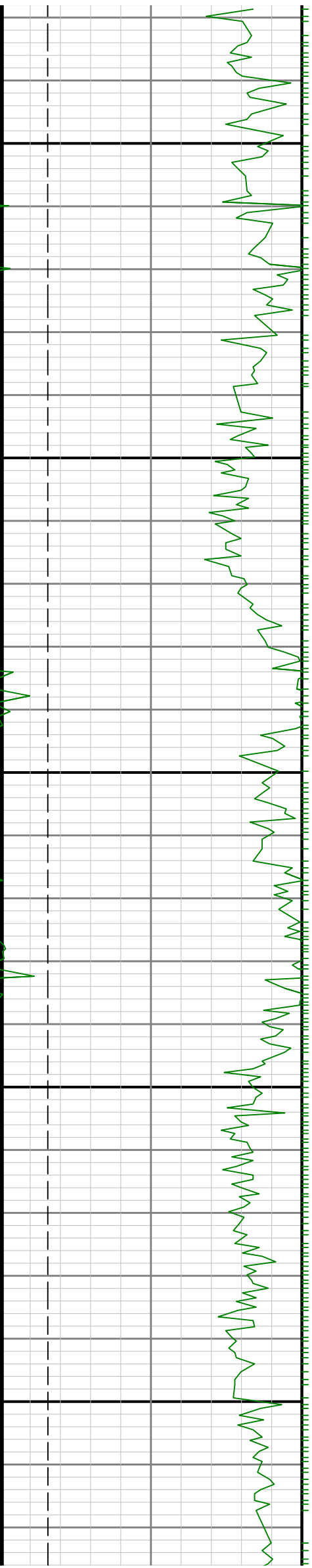


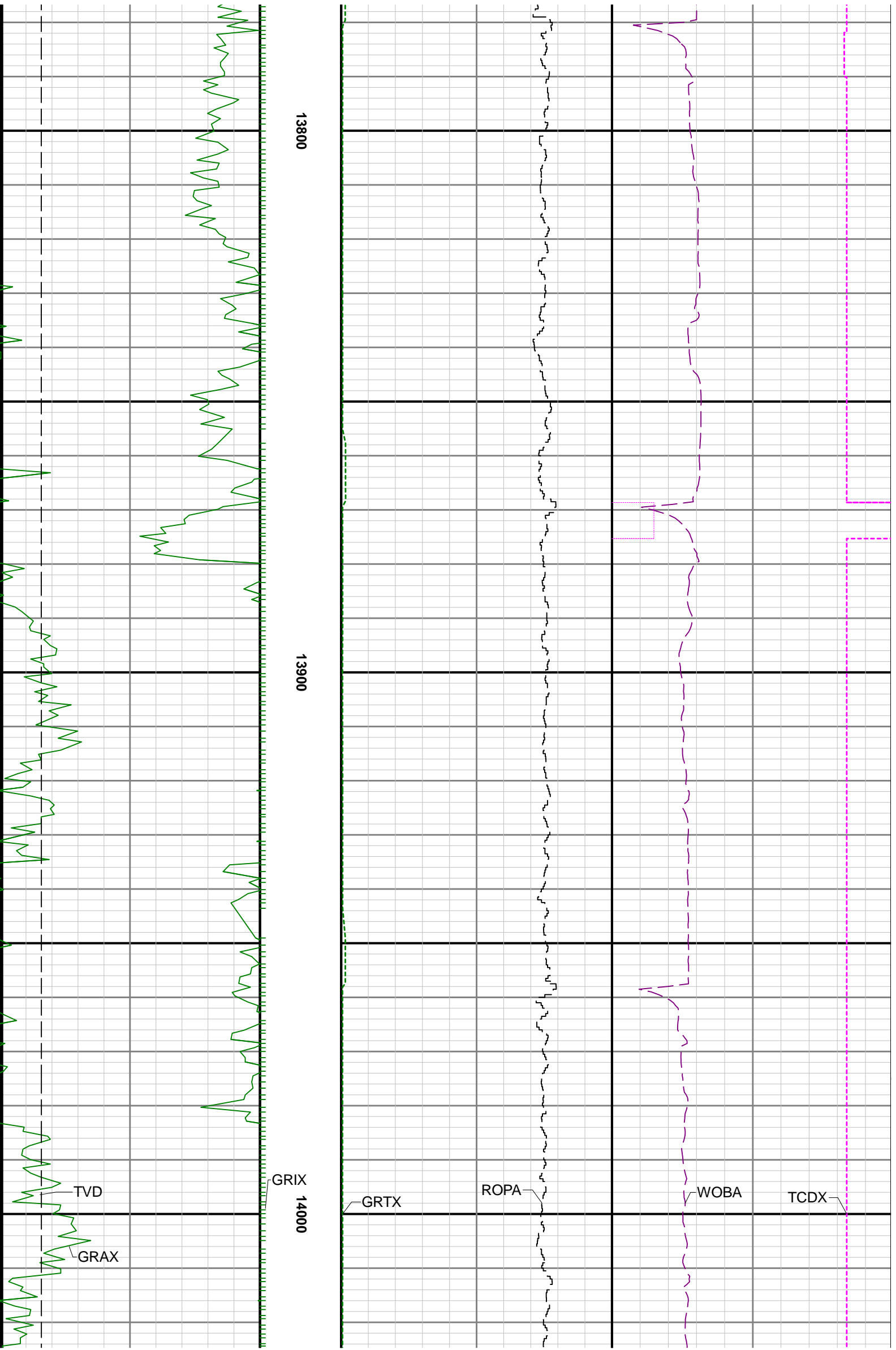


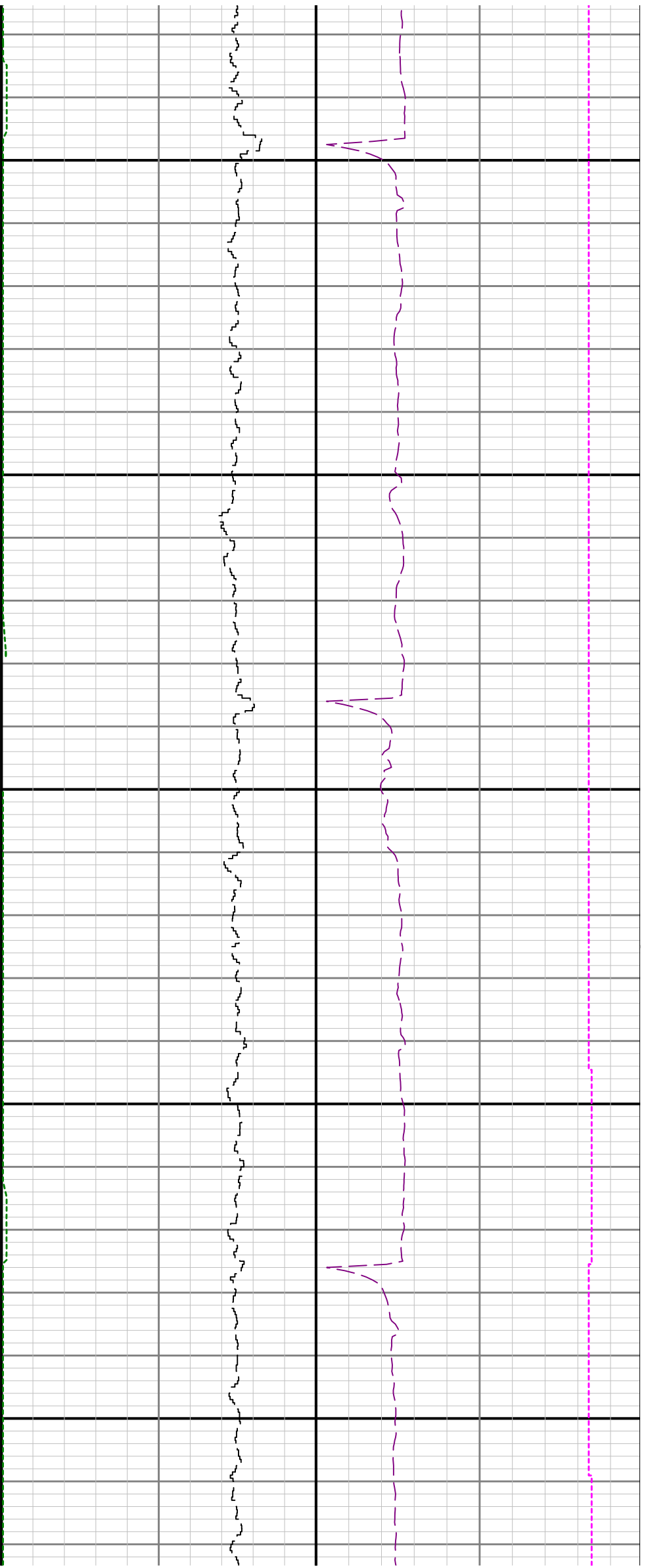


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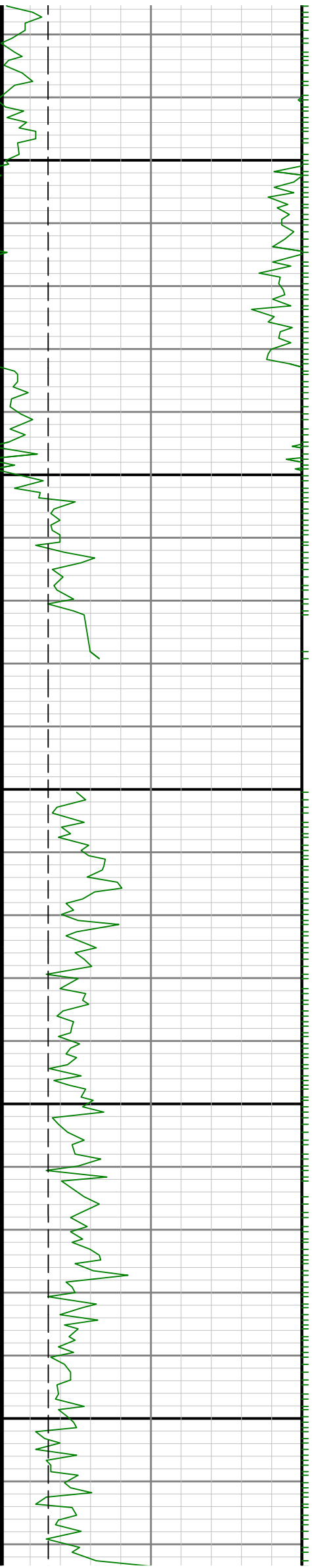


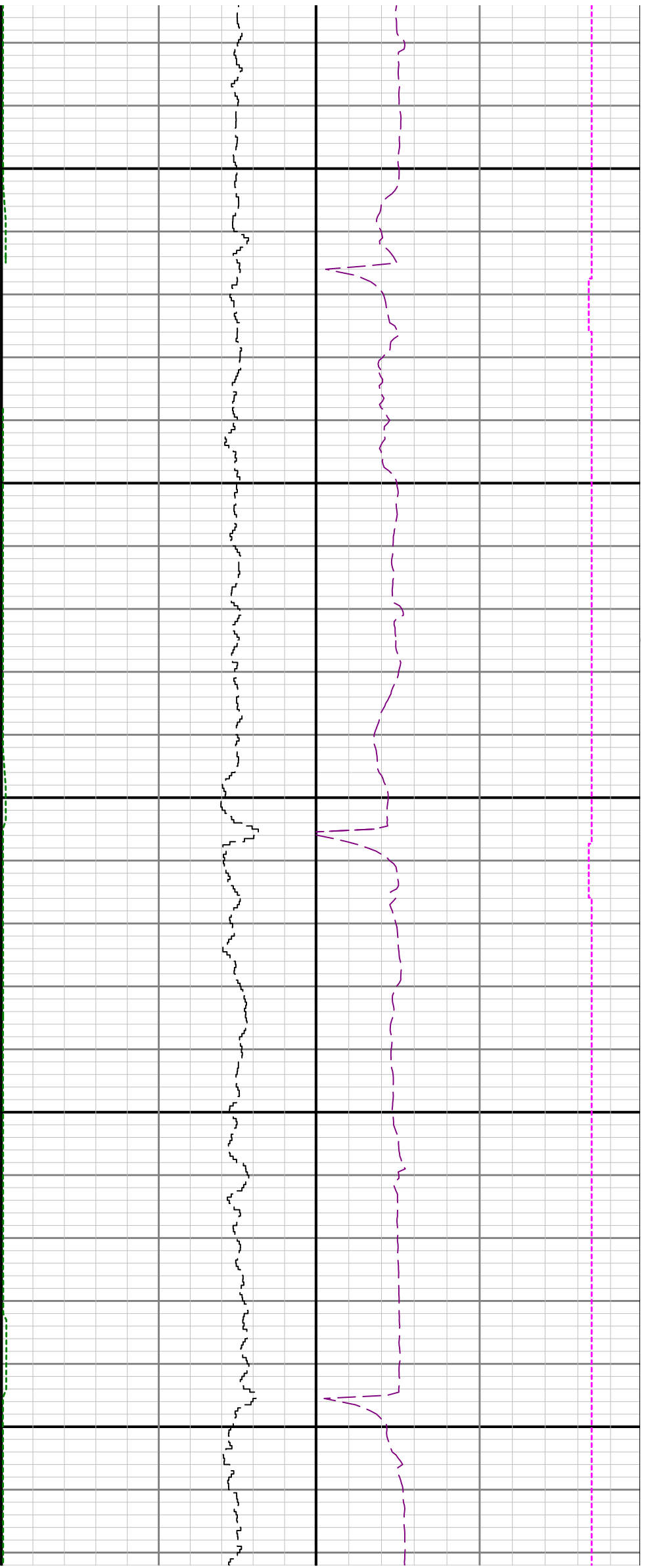




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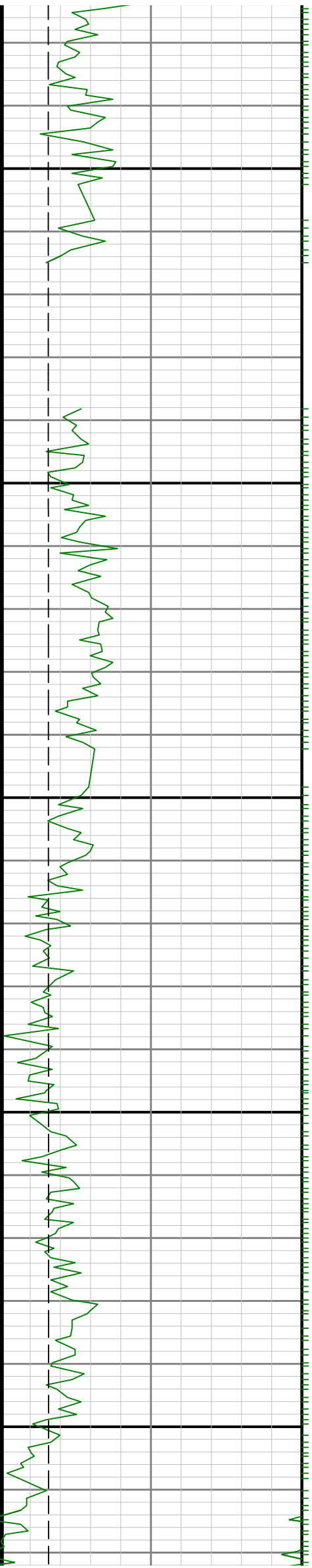


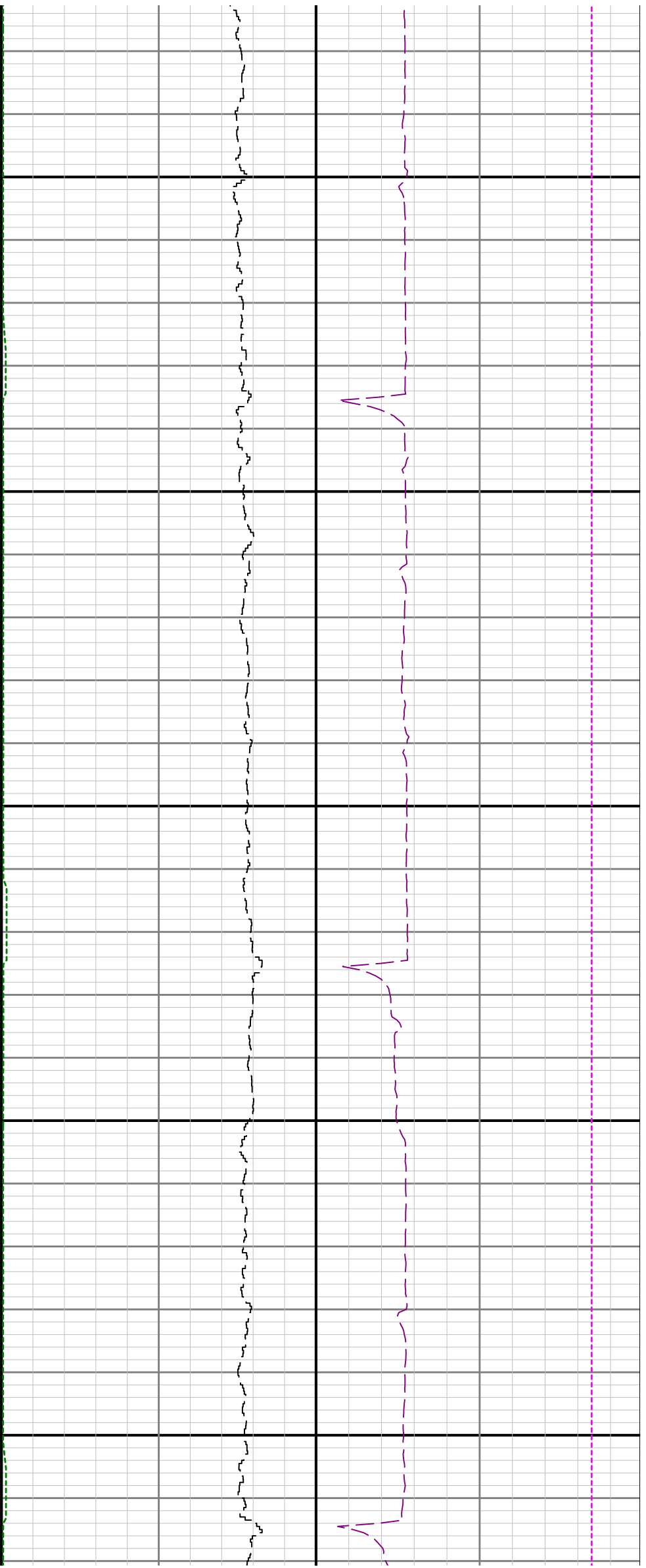


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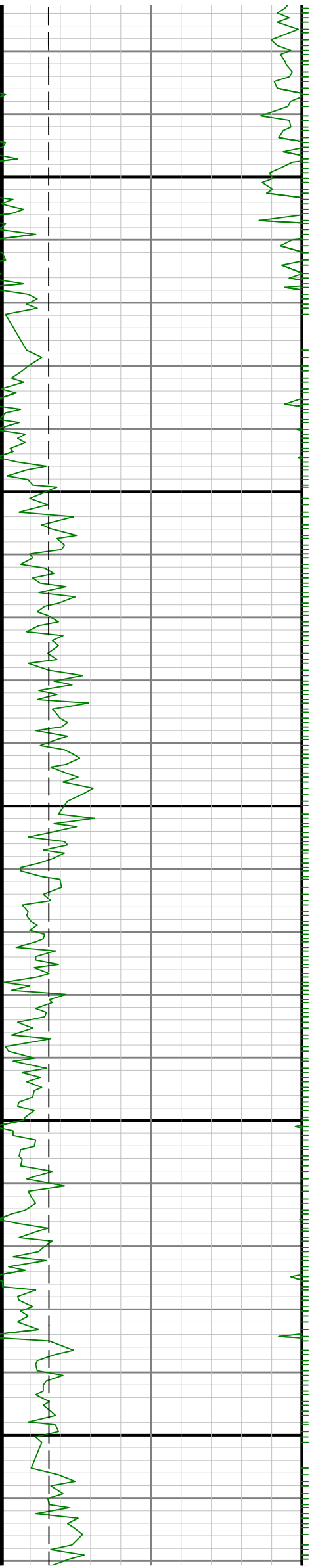
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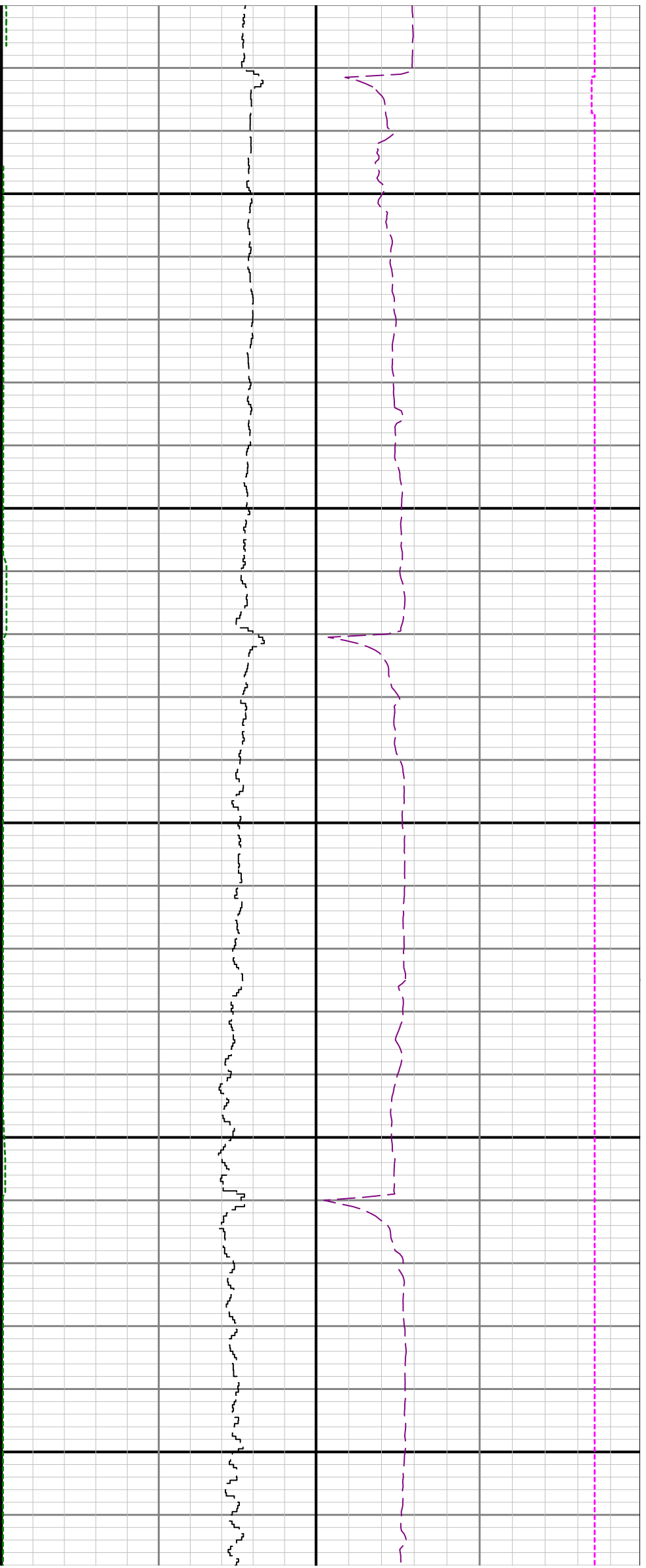


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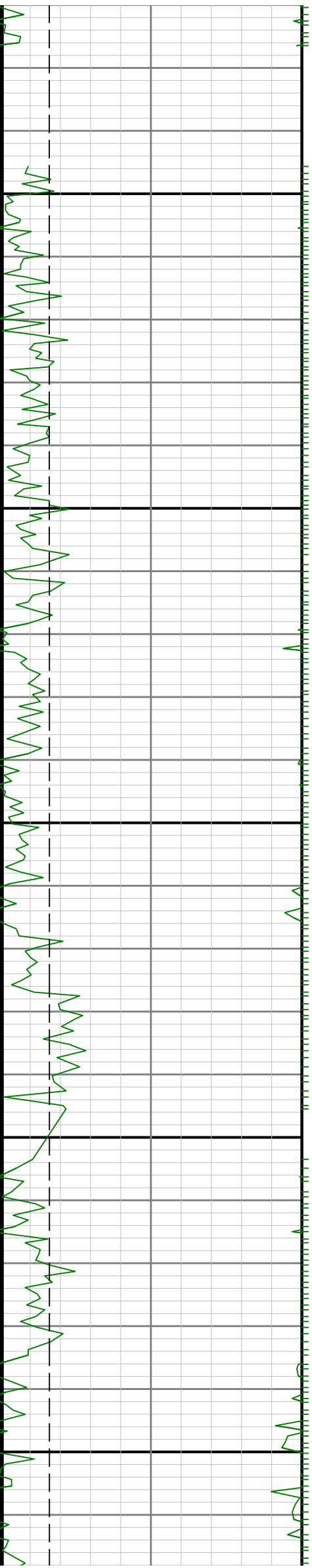


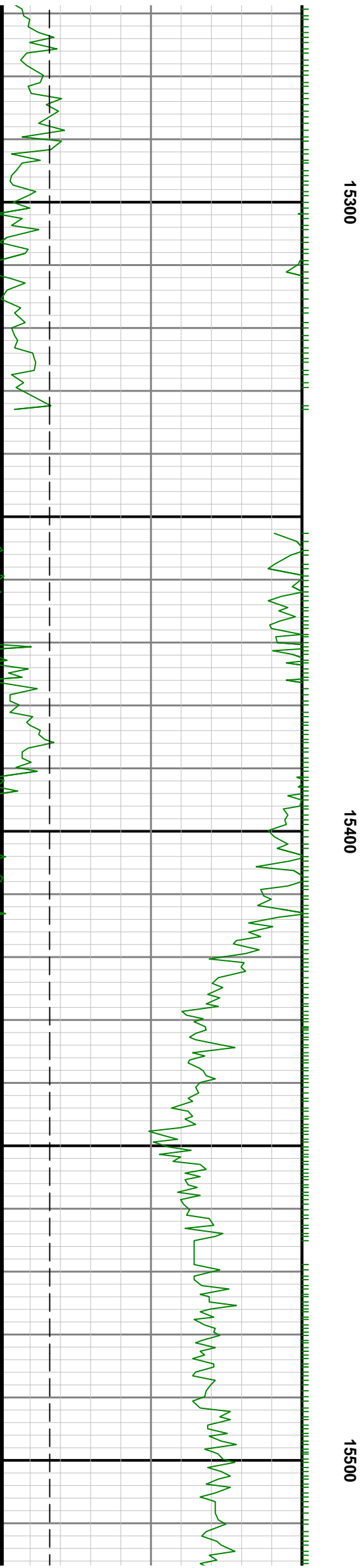
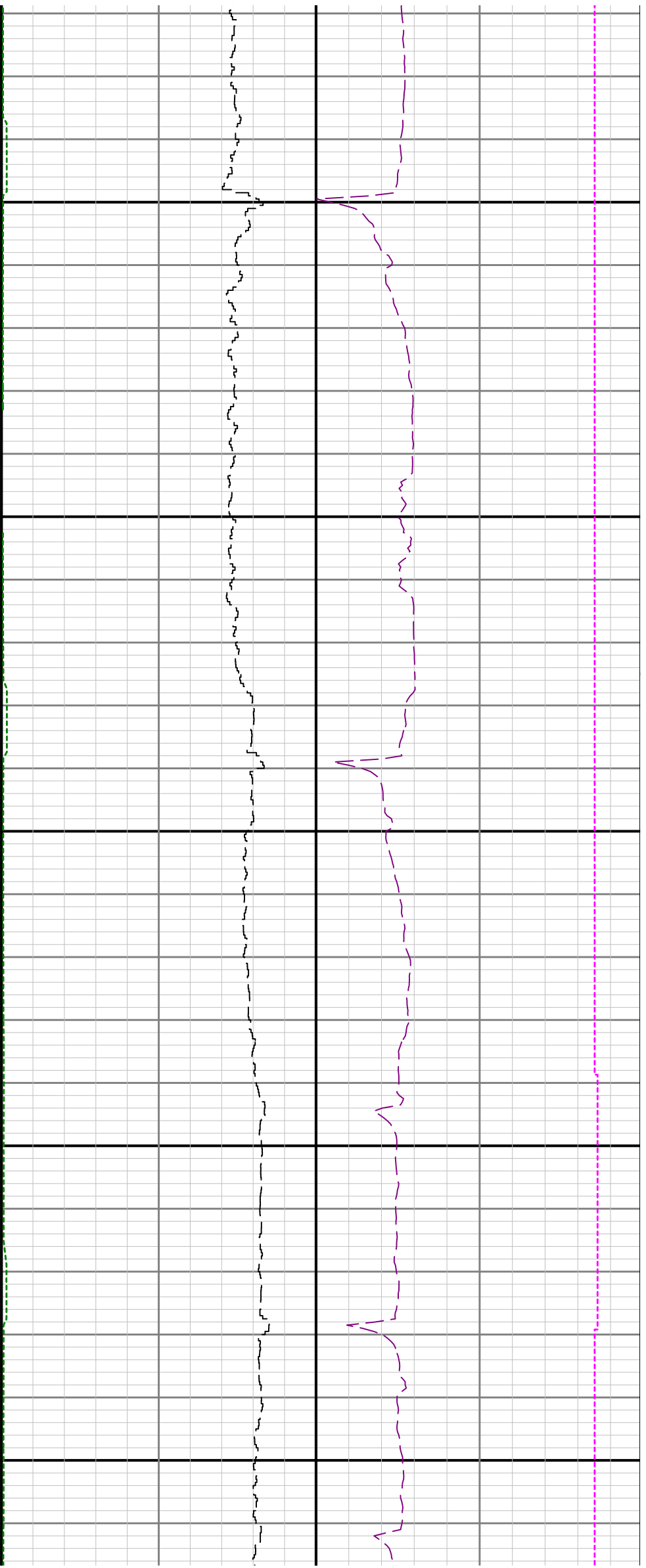


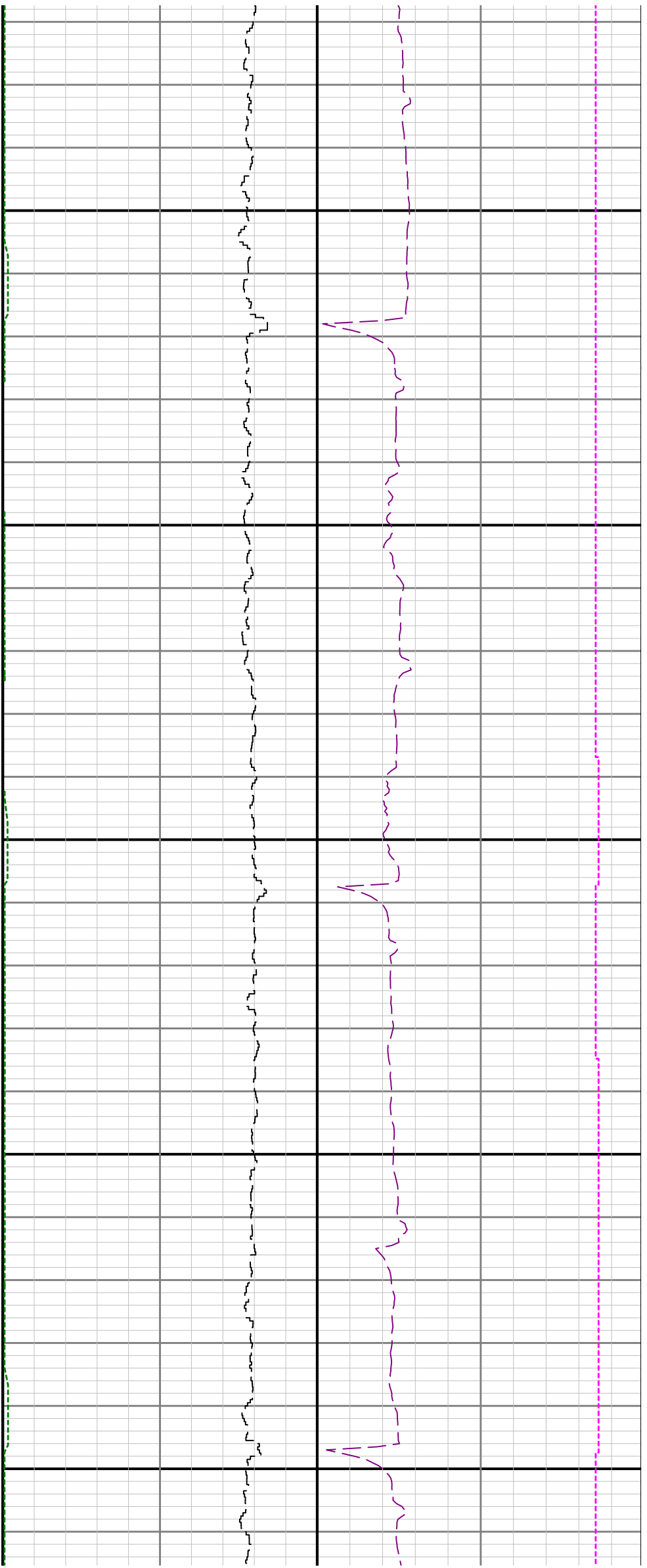


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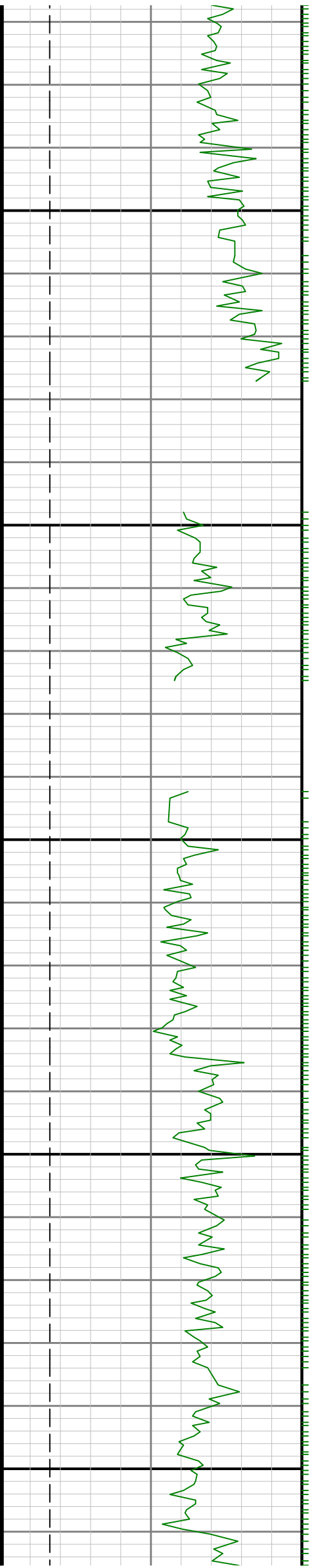


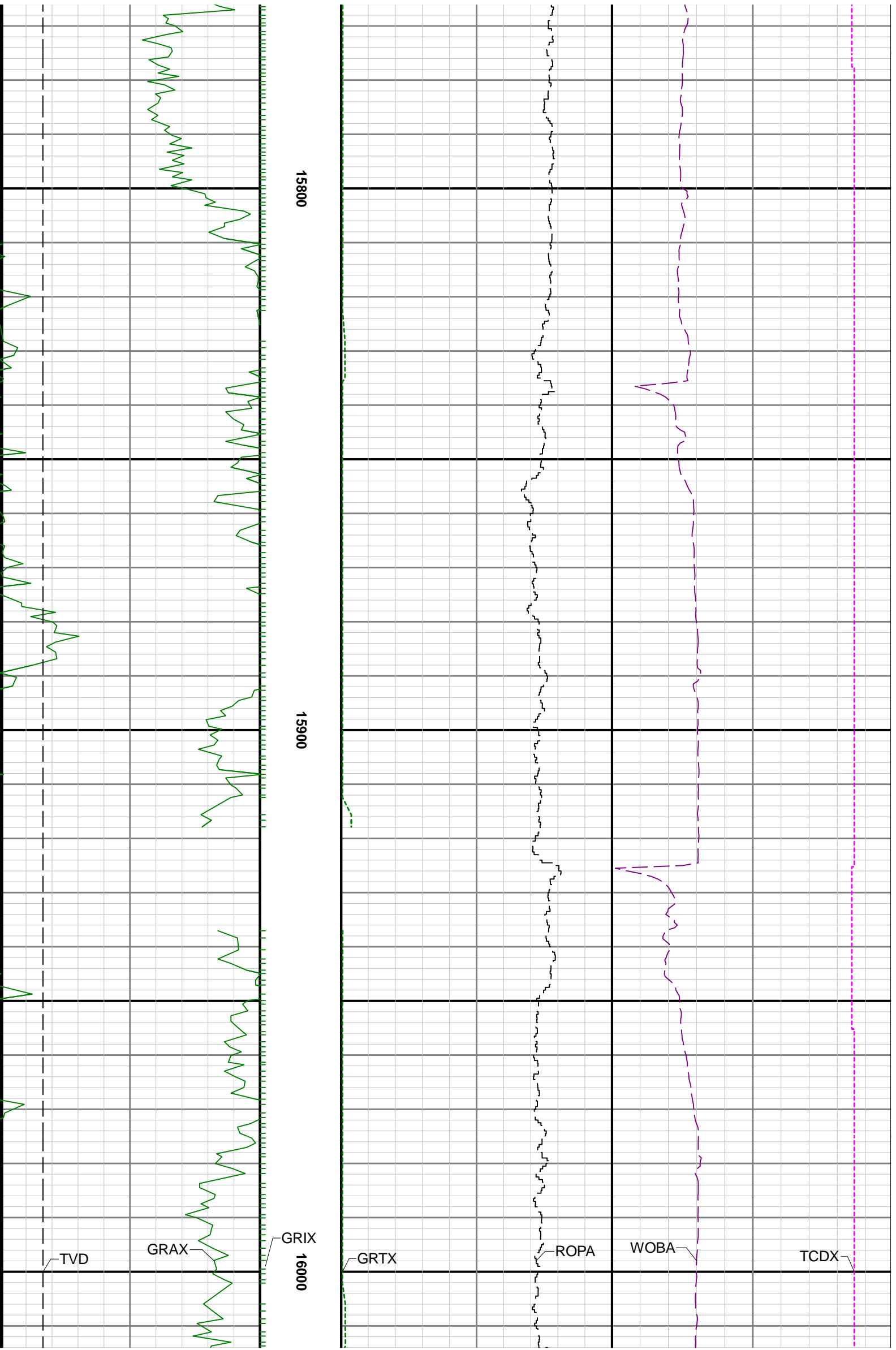


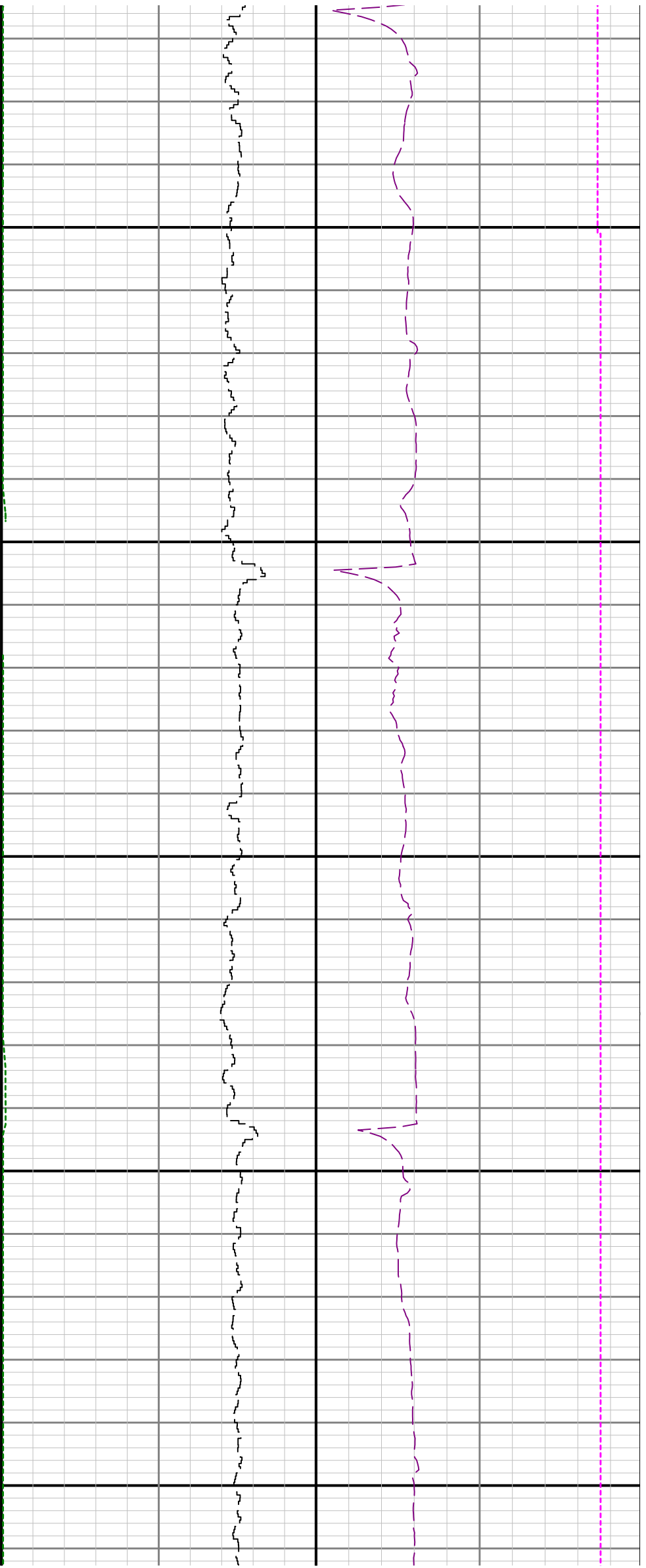


15600

15700







16100

16200

