



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+ (%)
2016-09-29 08:00	1	1937.00	Water Based Mud	8.5	28	0	0.0	0/1	Active Pit	0	0.00
2016-09-29 20:00	1	3141.66	Oil Based Mud	9.6	52	0	28.2	0.7/0.3	Active Pit	22500	0.00
2016-09-30 08:00	1	5897.68	Oil Based Mud	9.6	45	0	19.6	0.74/0.26	Active Pit	24500	0.00
2016-10-01 08:00	1	11087.07	Oil Based Mud	9.8	44	0	19.4	0.75/0.25	Active Pit	22000	0.00
2016-08-30 20:00	1	8261.62	Oil Based Mud	9.8	42	0	17.2	0.74/0.26	Active Pit	23500	0.00
2016-10-01 20:00	1	13866.72	Oil Based Mud	9.9	45	0	21.2	0.73/0.27	Active Pit	20500	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	12828355	Near Bit VSS	5.93	6.73	7.000	4.330
1	ATC_SU	12828355	Near Bit Inclination	5.93	6.73	7.000	4.330
1	ATC_MWD	12118937	Gamma (single)	2.72	12.90	7.000	3.250
1	ATC_MWD	12118937	Directional (mag)	12.24	22.42	7.000	3.250

Comments


- 1 Baker Hughes Run 1 utilized a 6.75 inch AutoTrak Curve Rotary Steerable assembly tool behind a 8.50 inch bit from 1937 to 16070 ft MD ( 1937 to 5733 ft TVD).
- 2 Depth measurements 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.

Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	1930.00	8.500	1	Gamma ray logging services begin at 1924 ft MD (1924 ft TVD).
2	1980.00	8.500	1	The interval from 1974 to 1991 ft MD (1974 to 1991 ft TVD) has no gamma data due to WITS communication issue.
3	16070.00	8.500	1	Gamma ray logging services end at 16057 ft MD (5733 ft TVD).

Curve Mnemonics

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



Company Well

Interval

Created

Noble Energy

Ellie LD26-635

Date From: 2016-09-29 16:48:58

Date To: 2016-10-02 05:53:15

2016-10-02 15:14

Top: 1924.00

Bottom: 16070.00

Gamma Ray - Apparent 0.5 ft Average GRAM

0150

API

True Vertical Depth TVD

MD 1:240

Rate of Penetration 3 ft Average ROPA

10000

ft/h

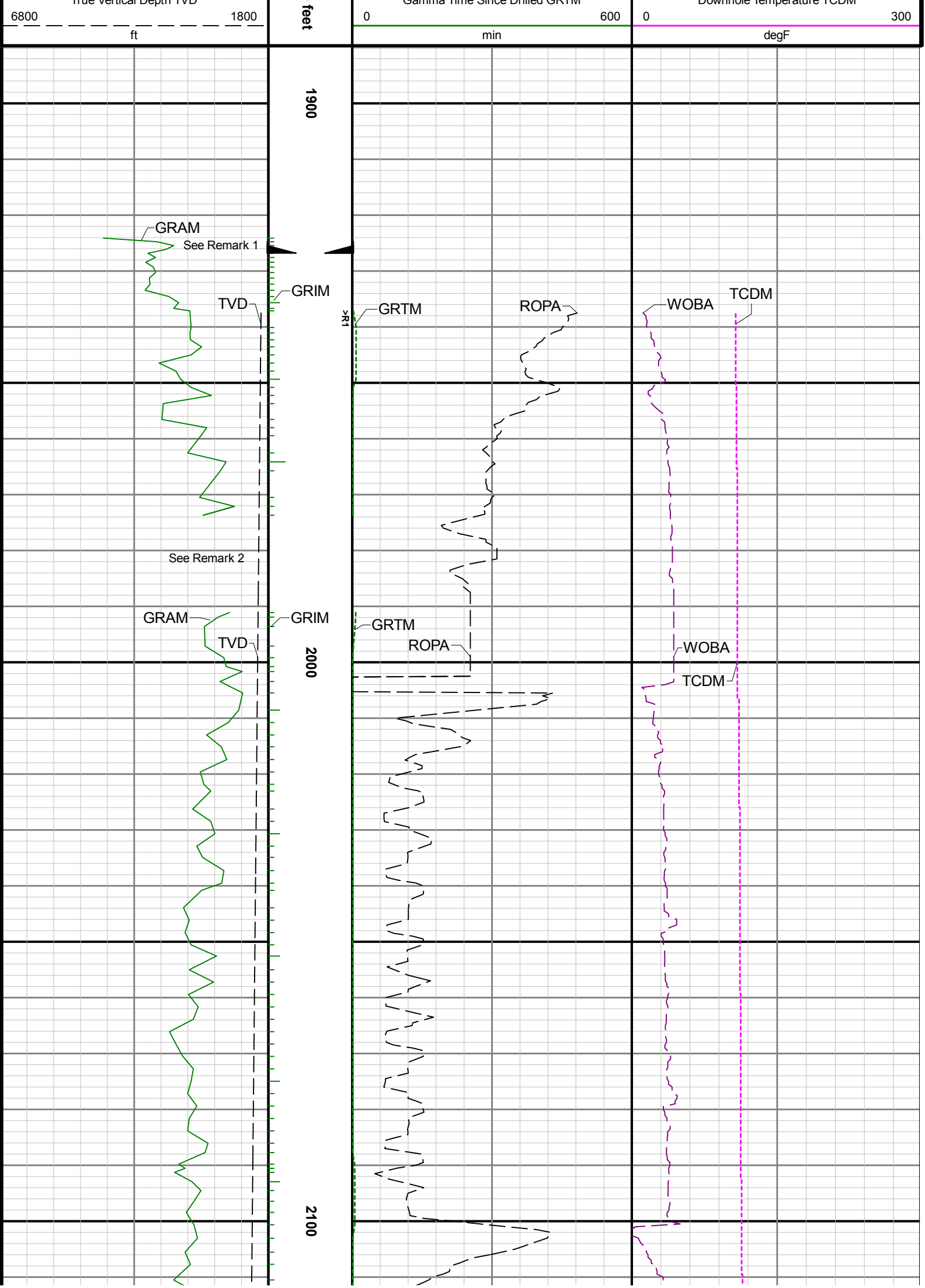
Gamma Time Since Drilled GRTM

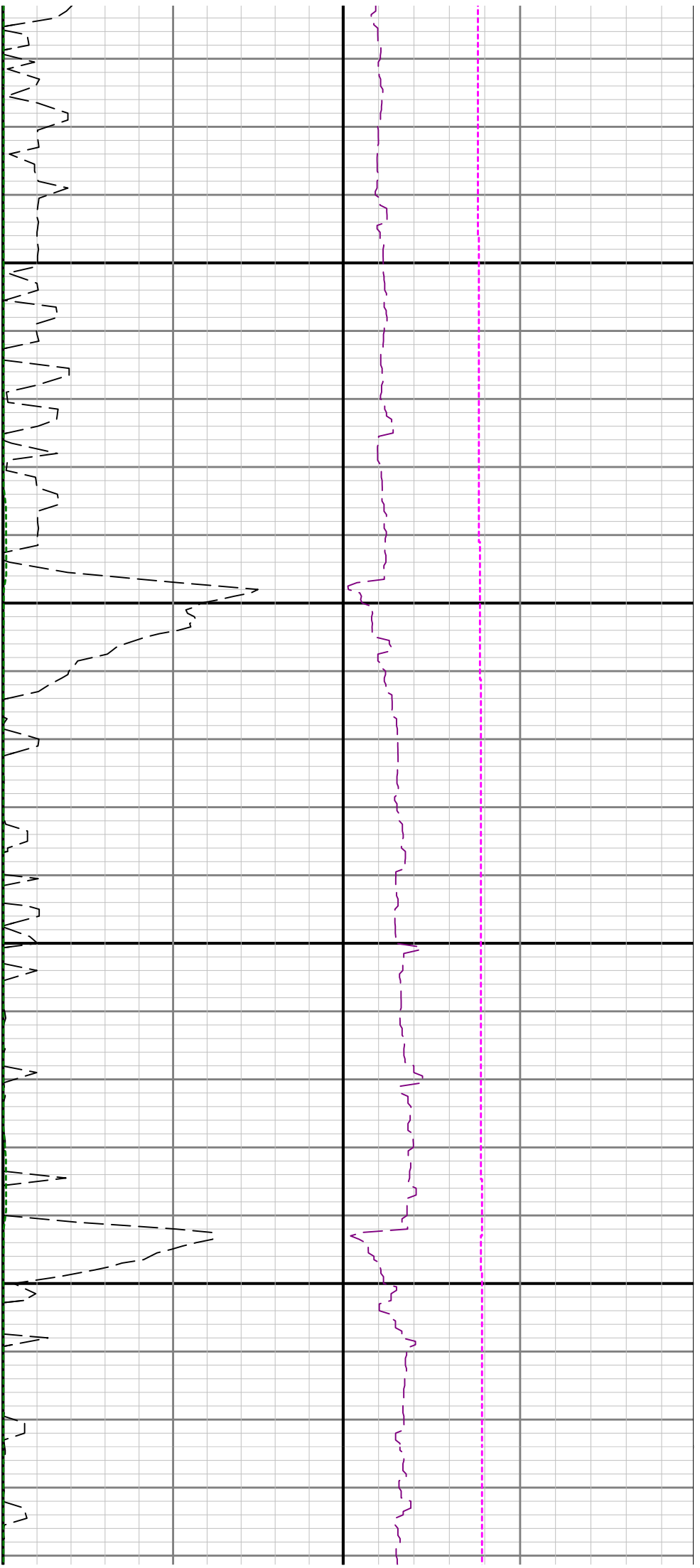
Surface Weight On Bit 1 ft Average WOBA

0100

klb

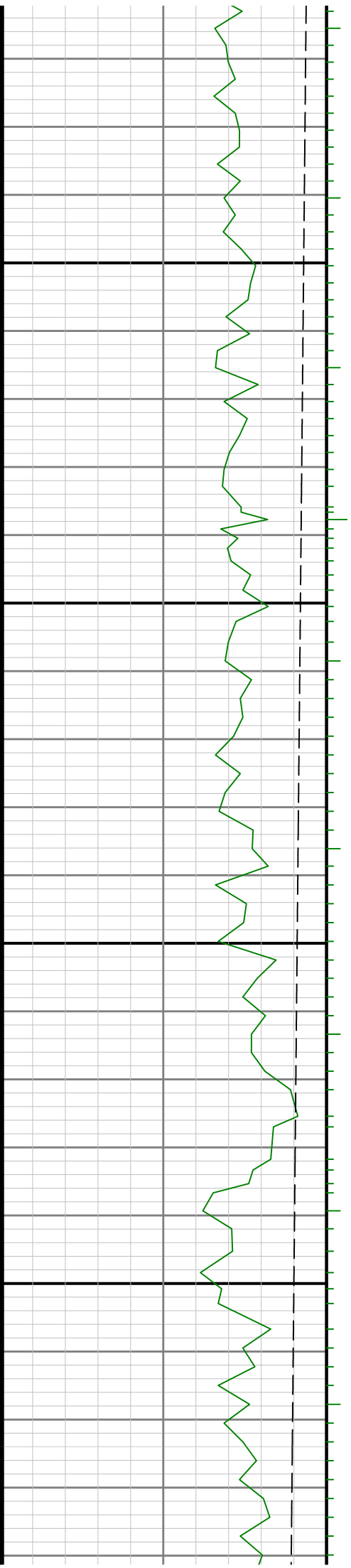
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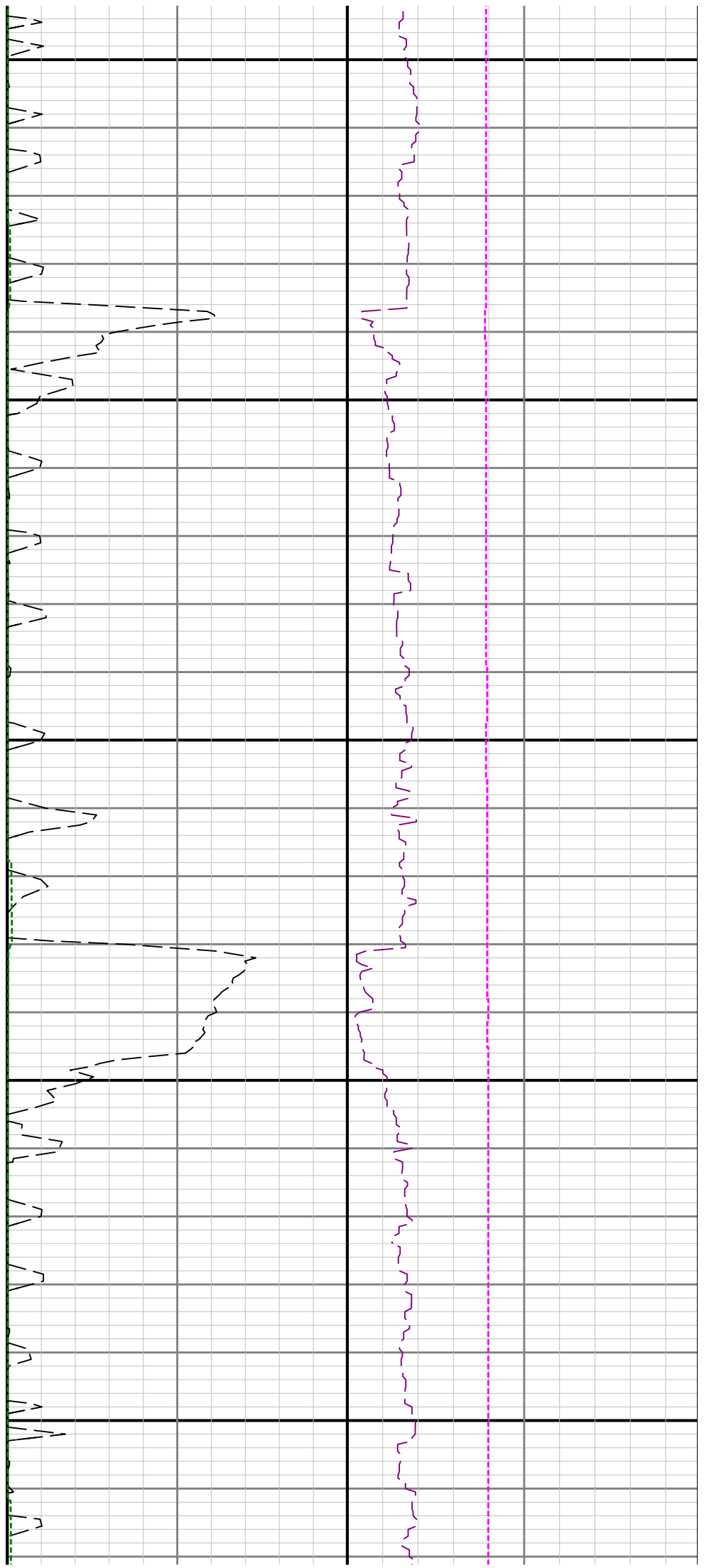




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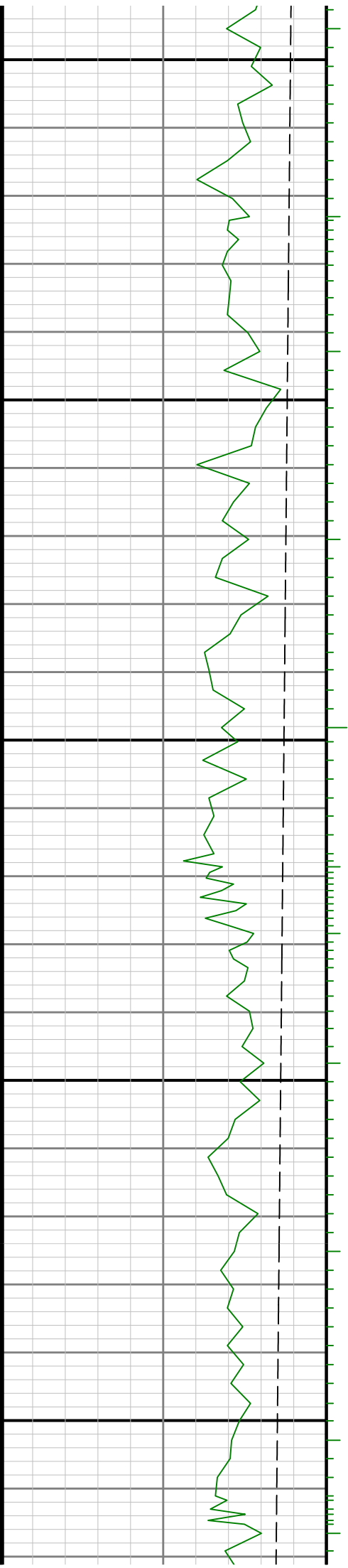
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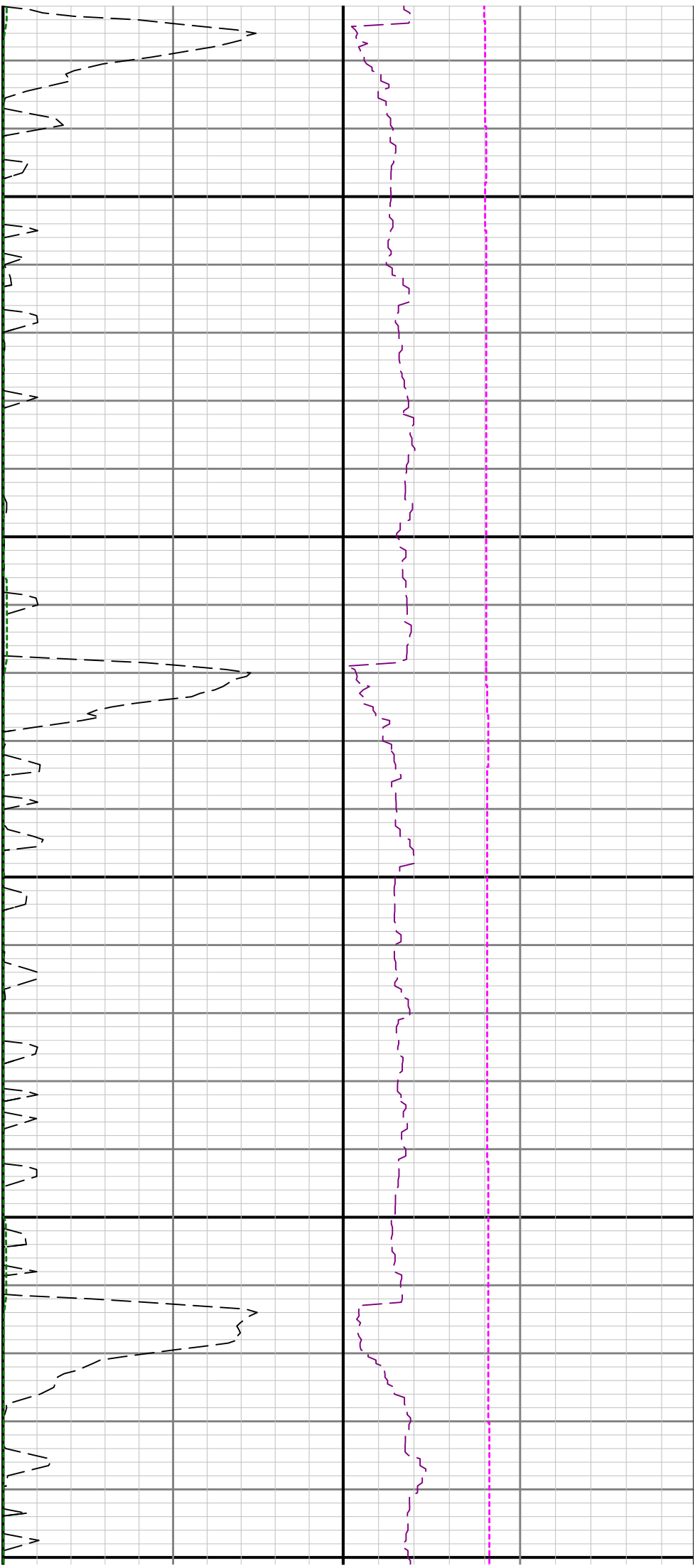




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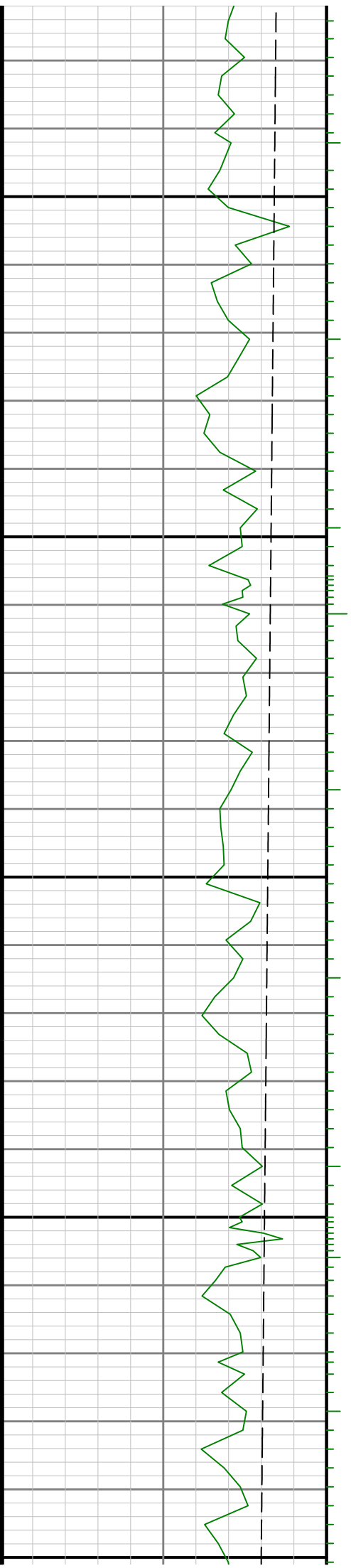


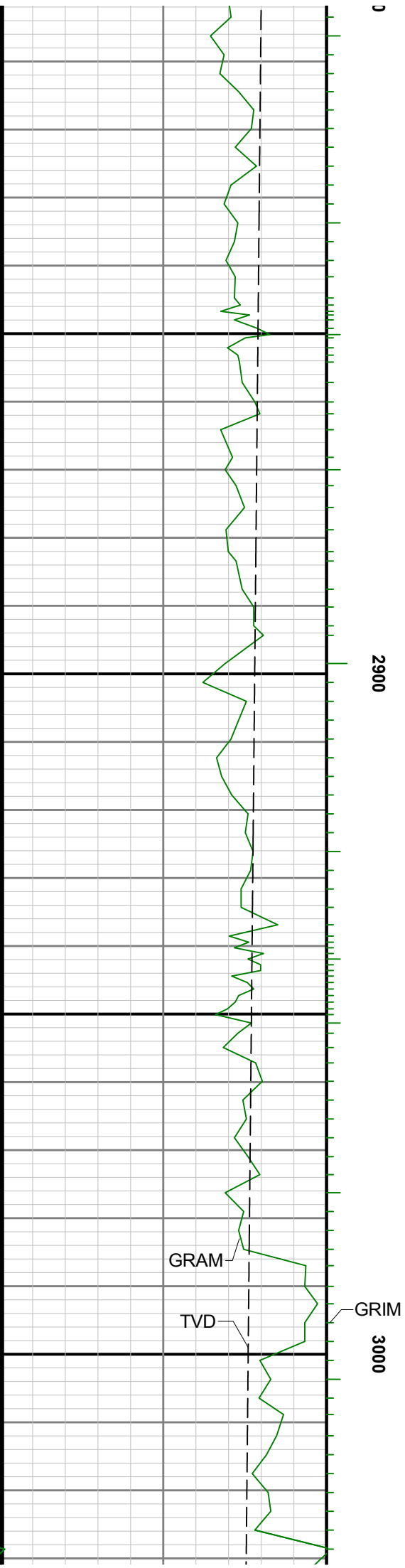
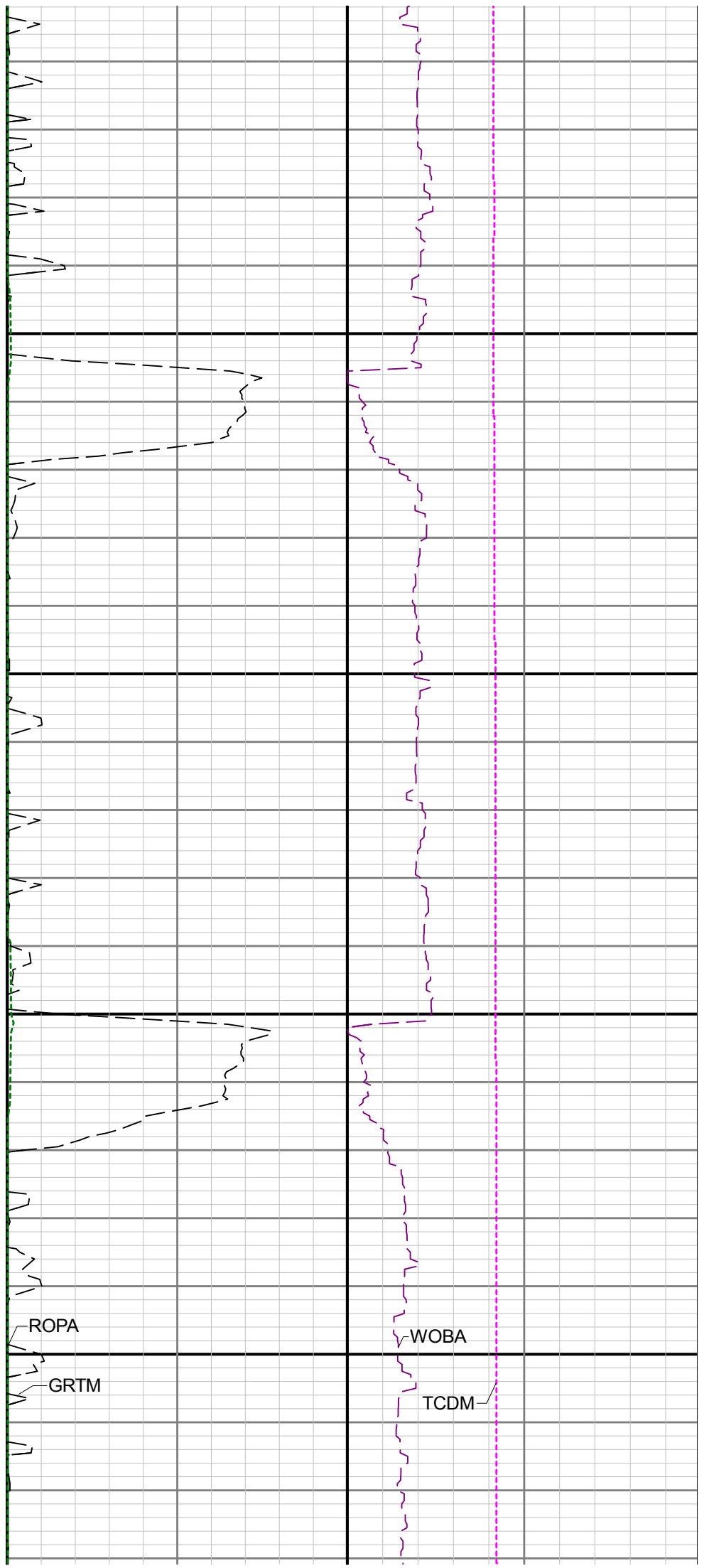


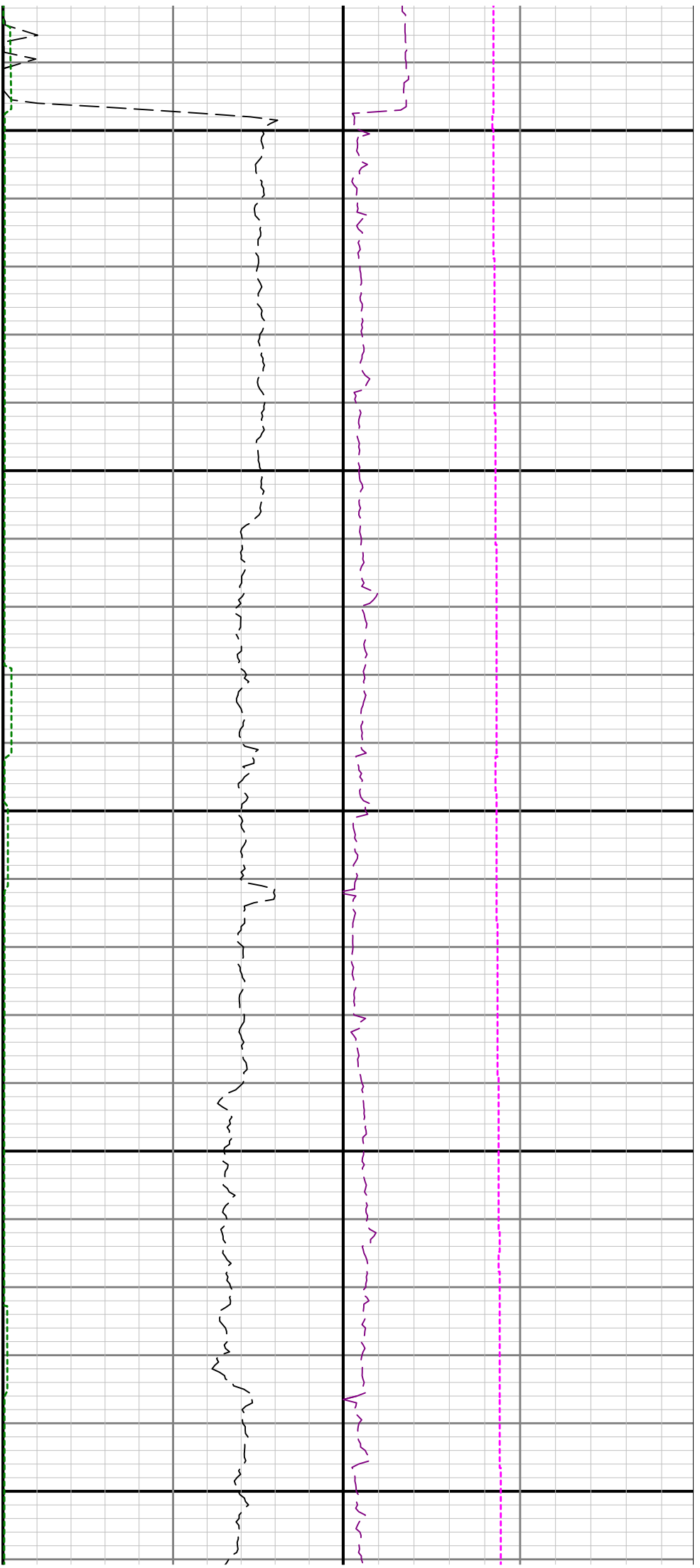
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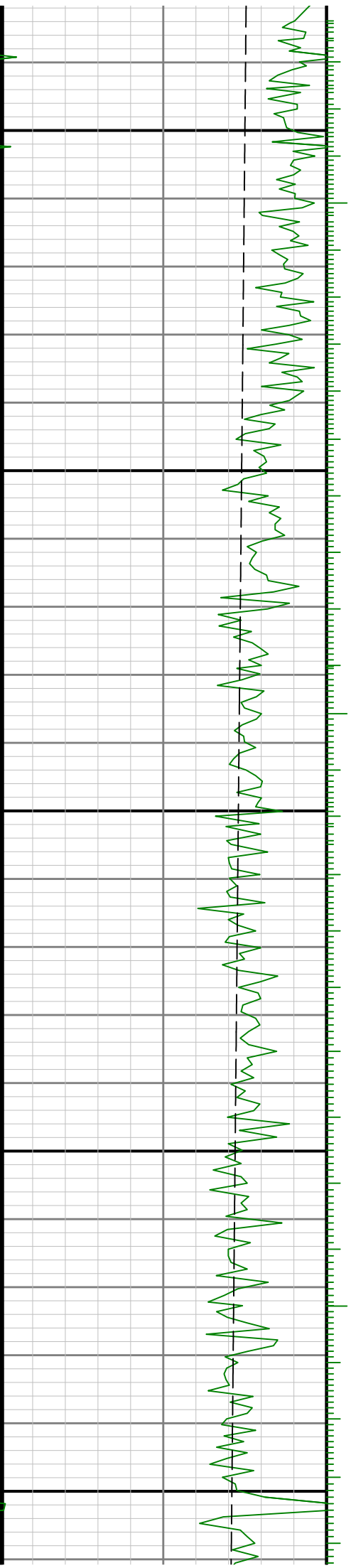




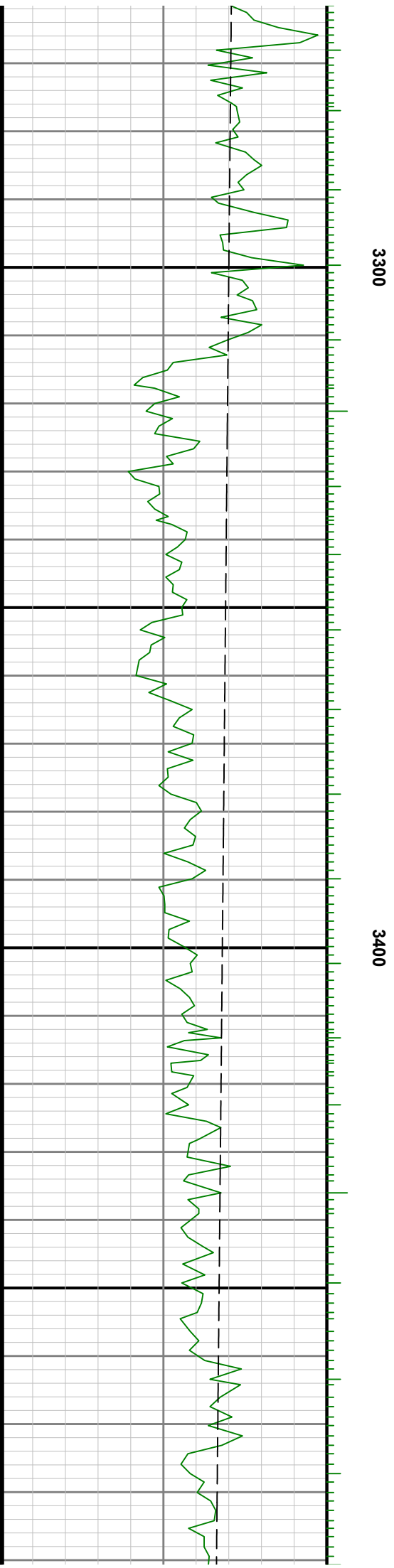


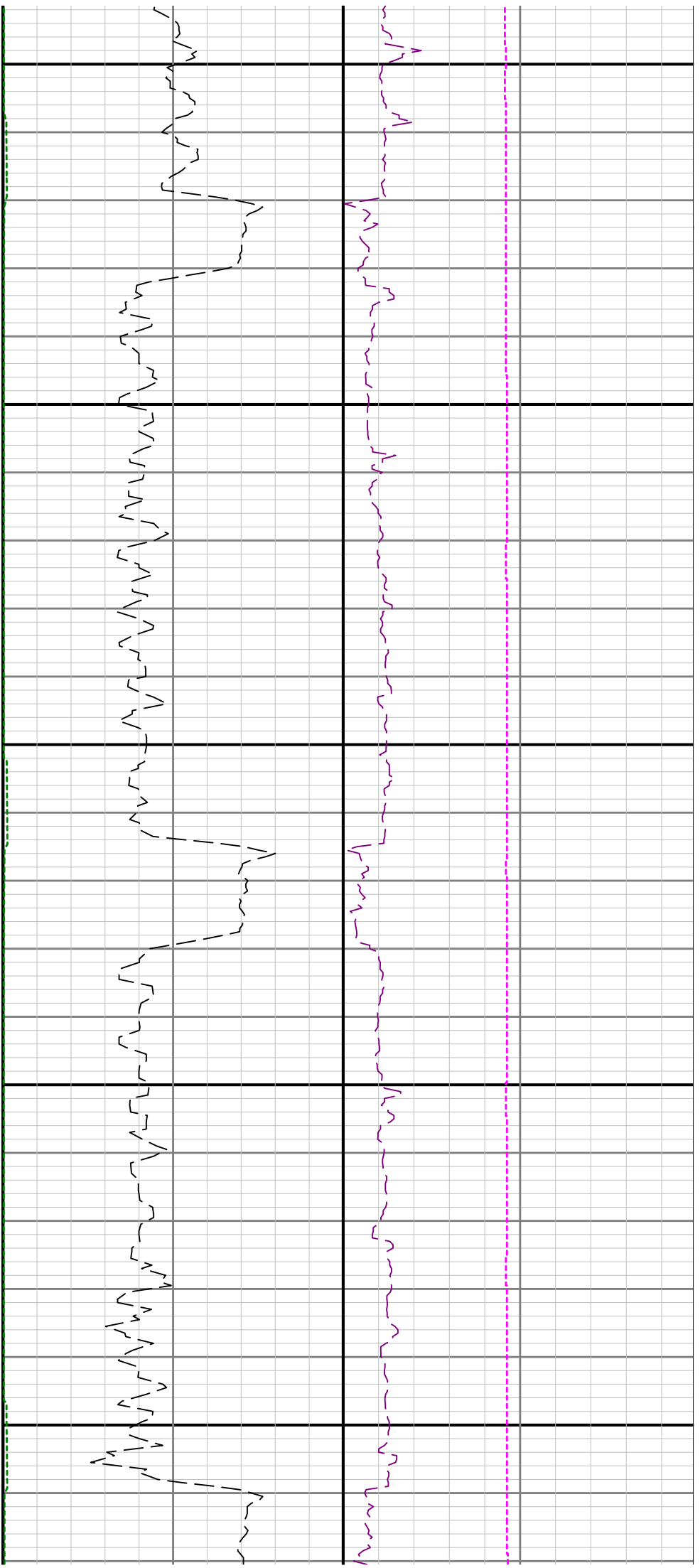
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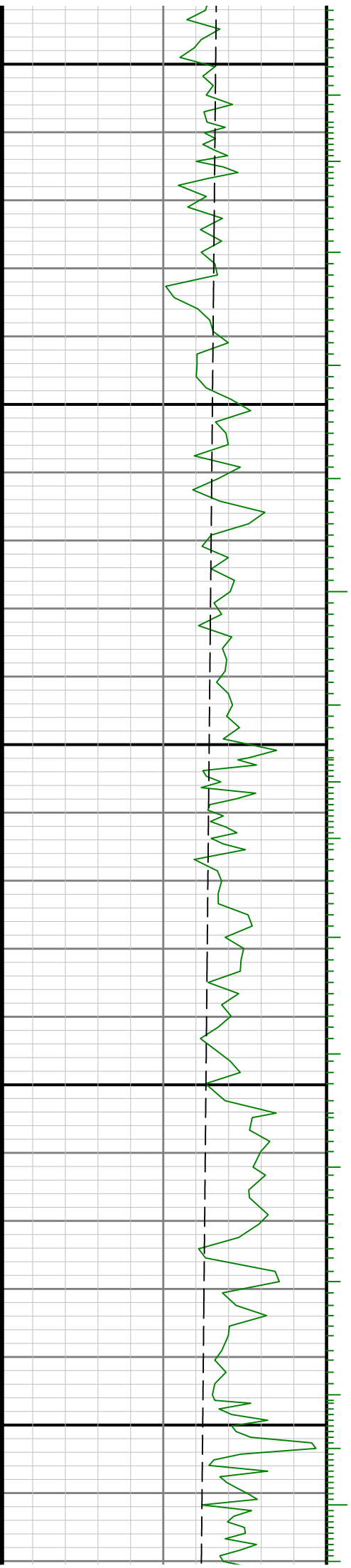


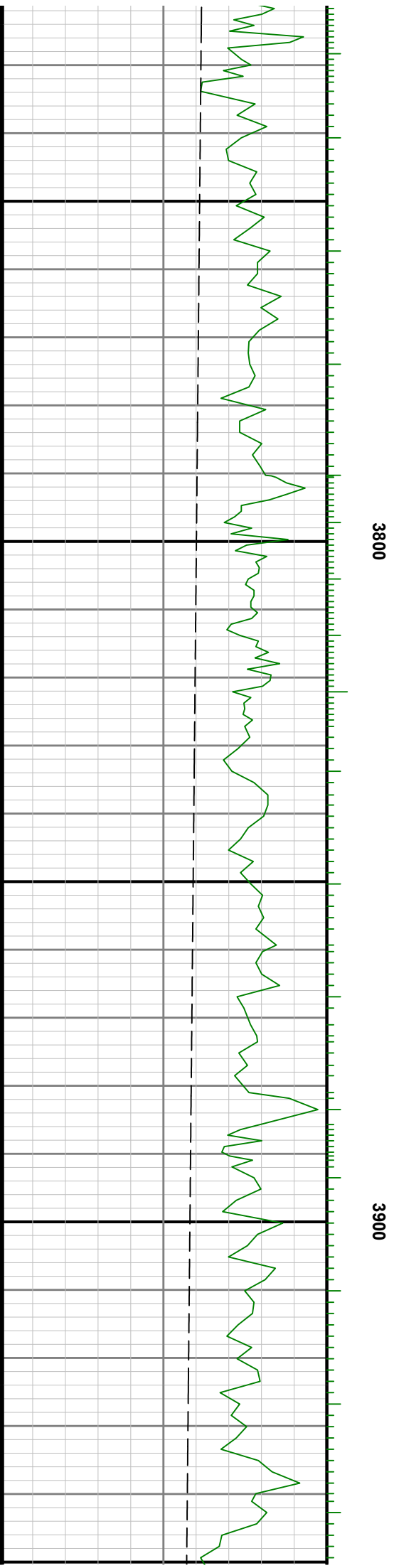


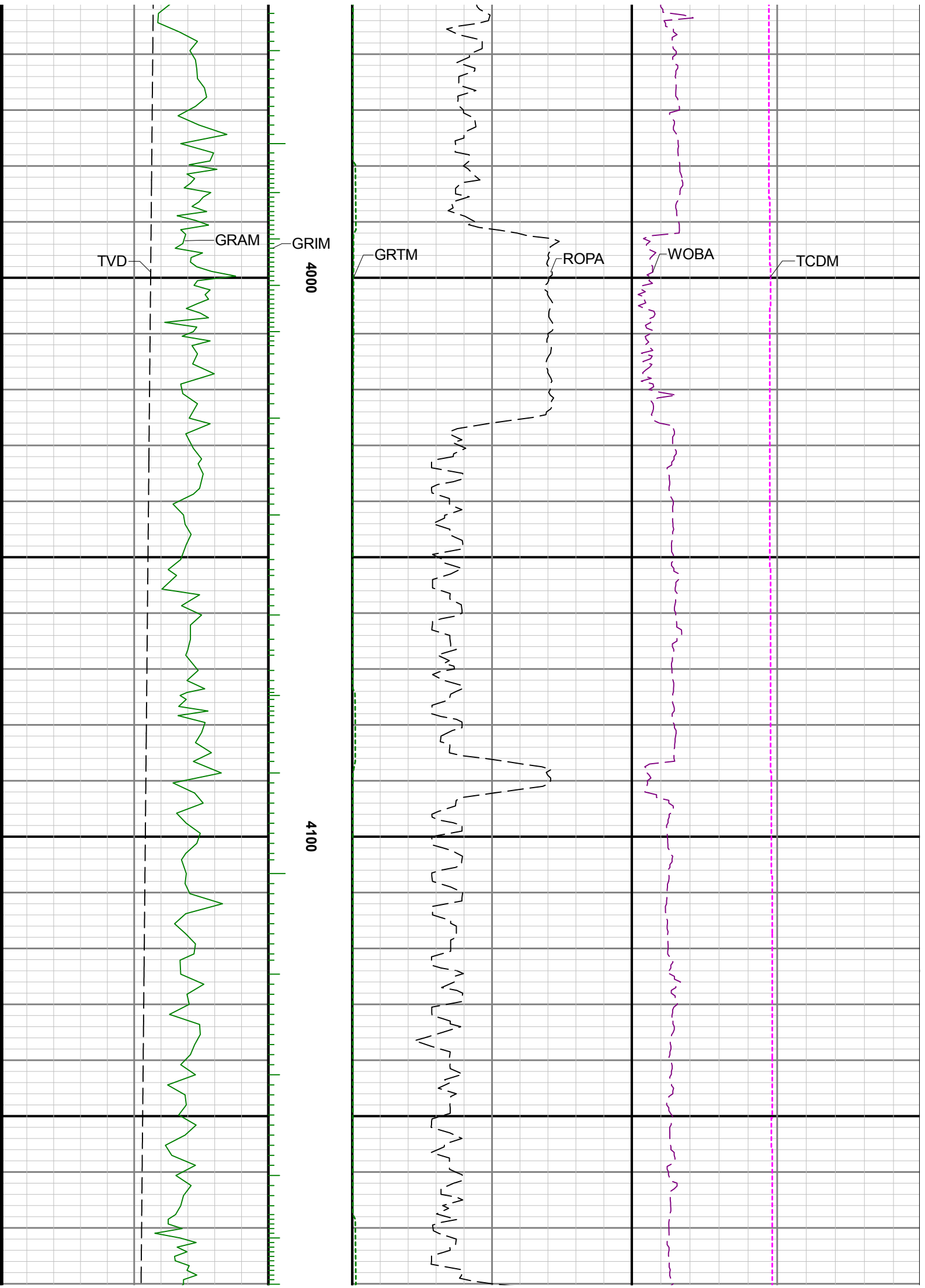
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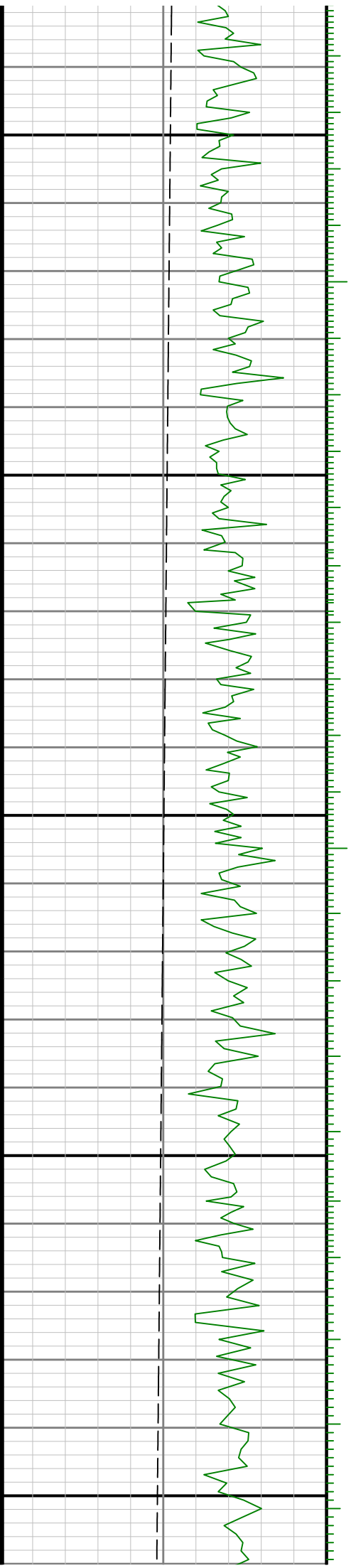


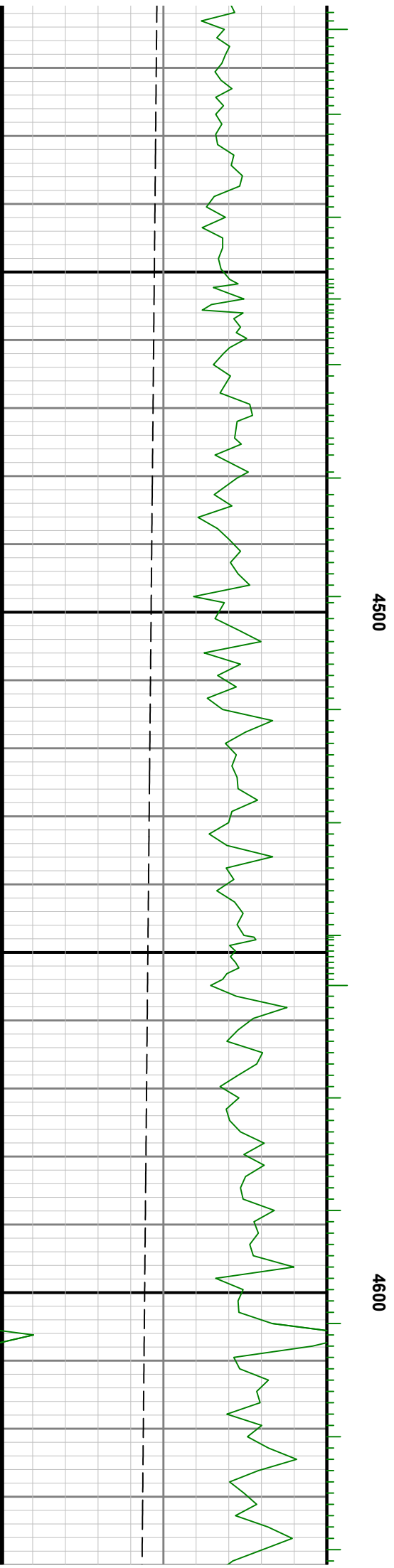
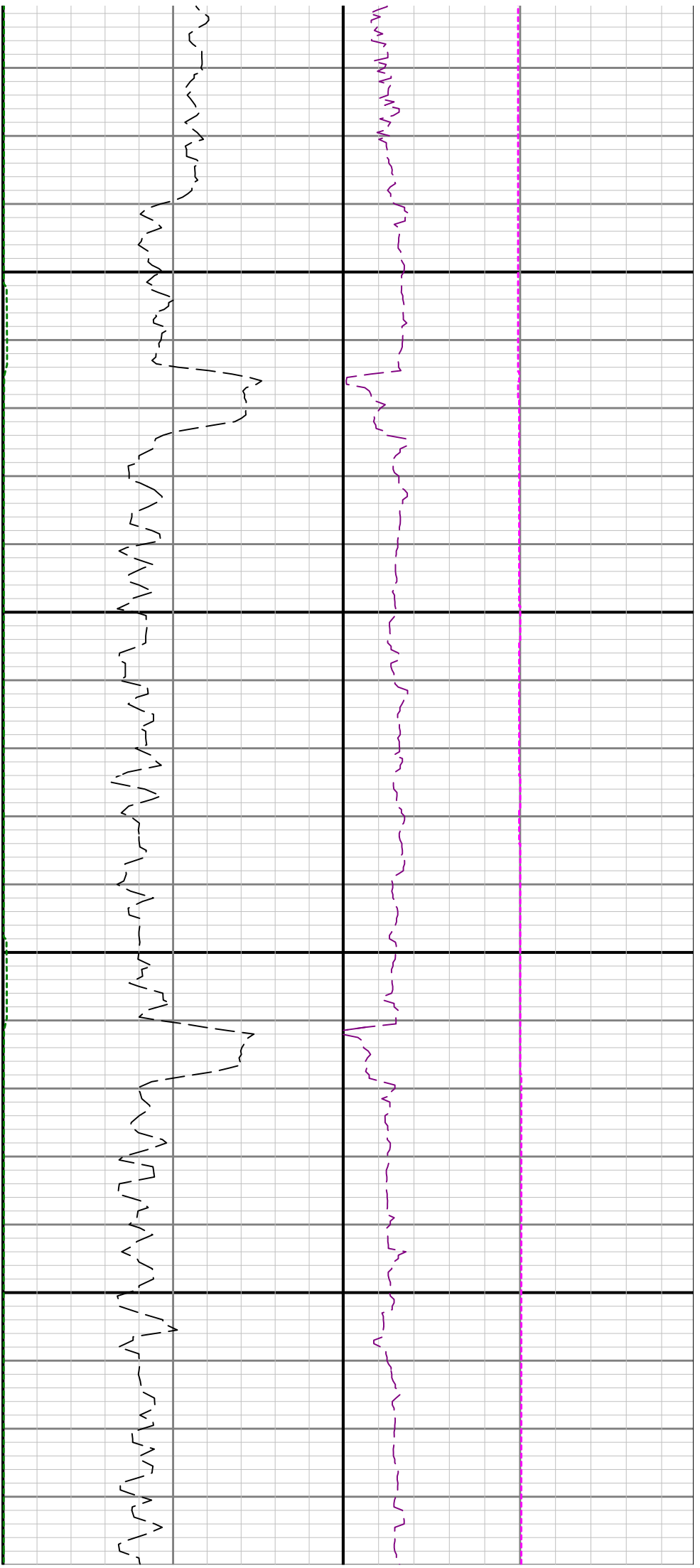


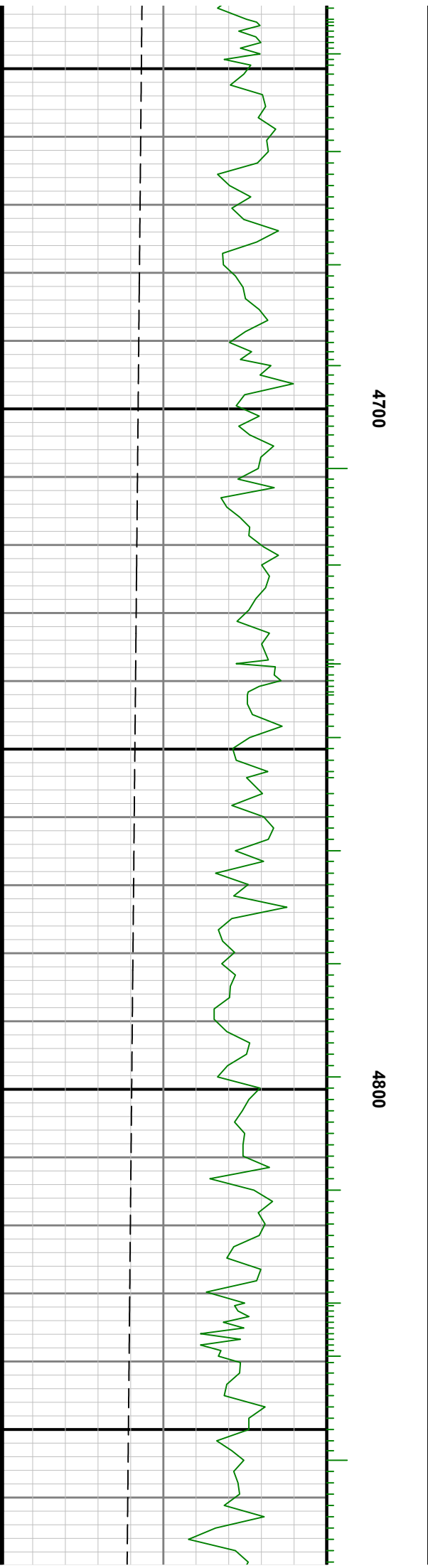
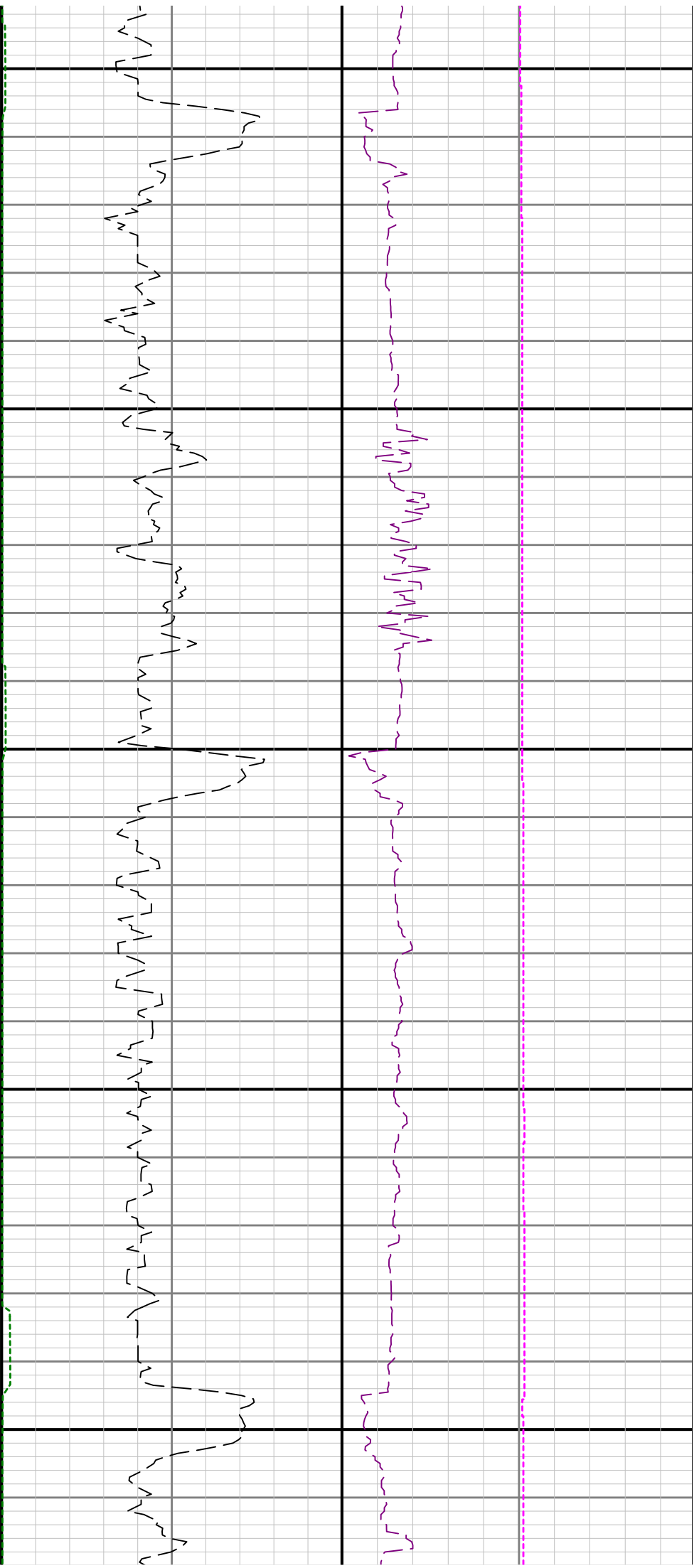
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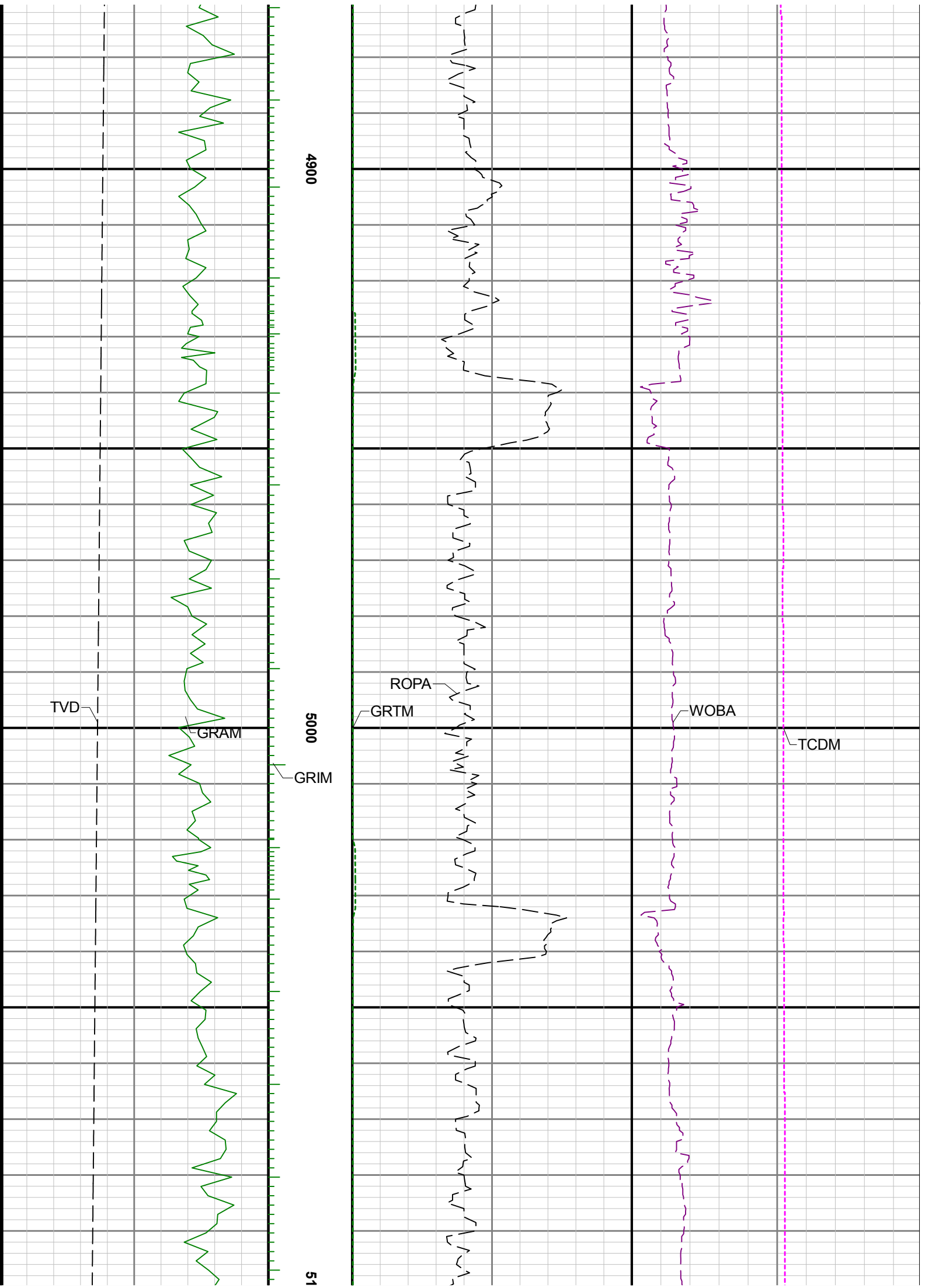
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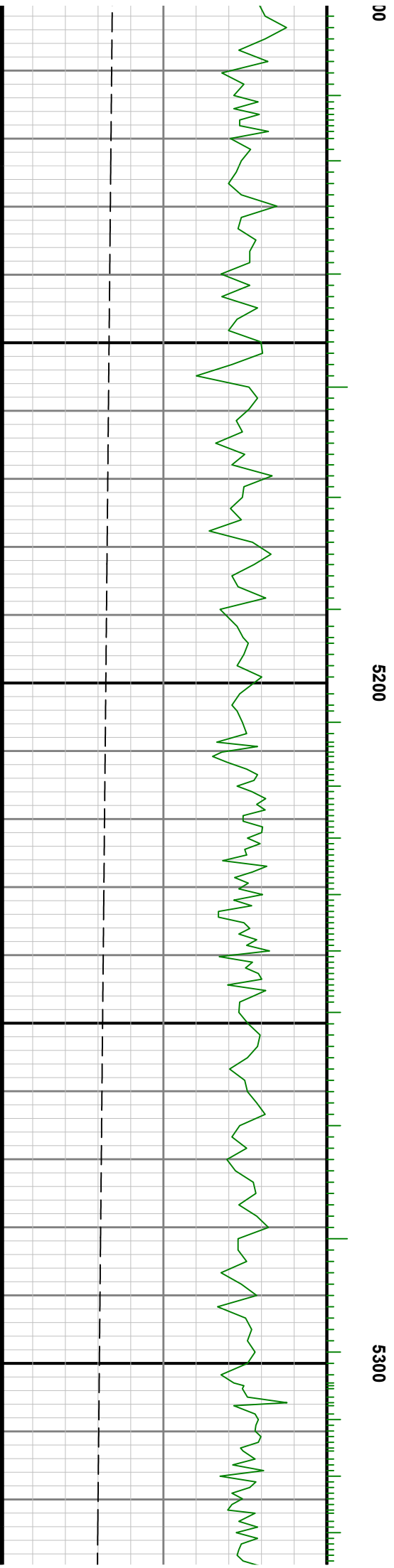
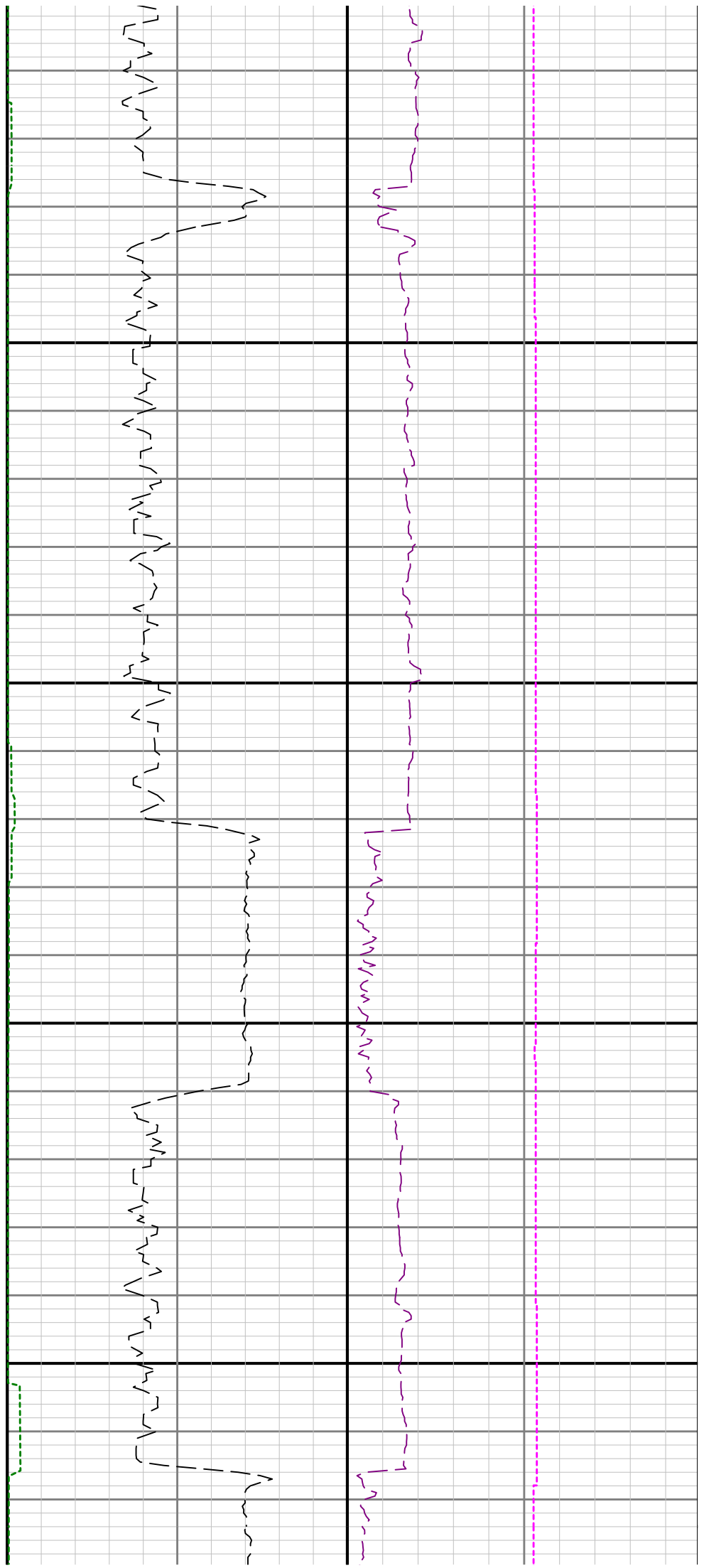








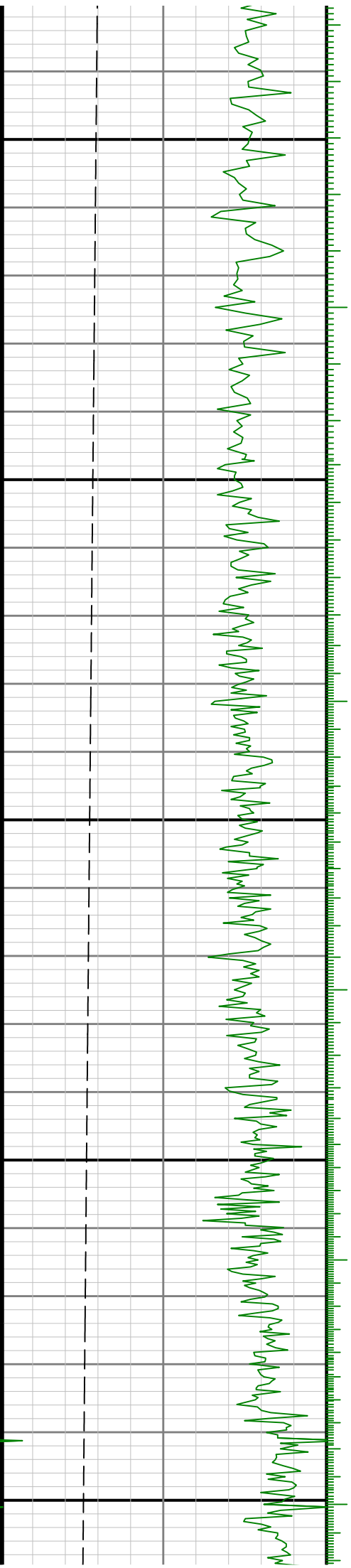


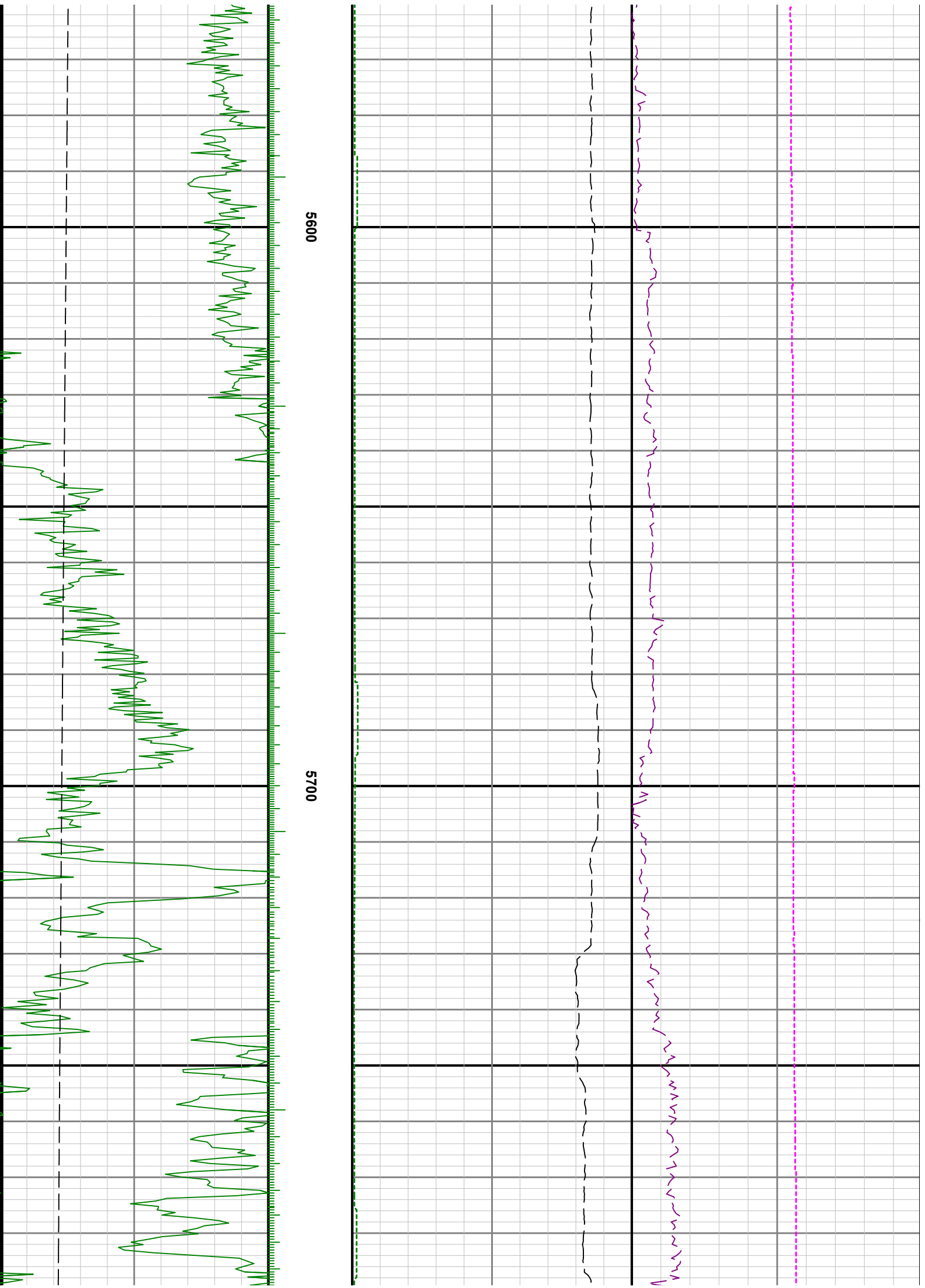


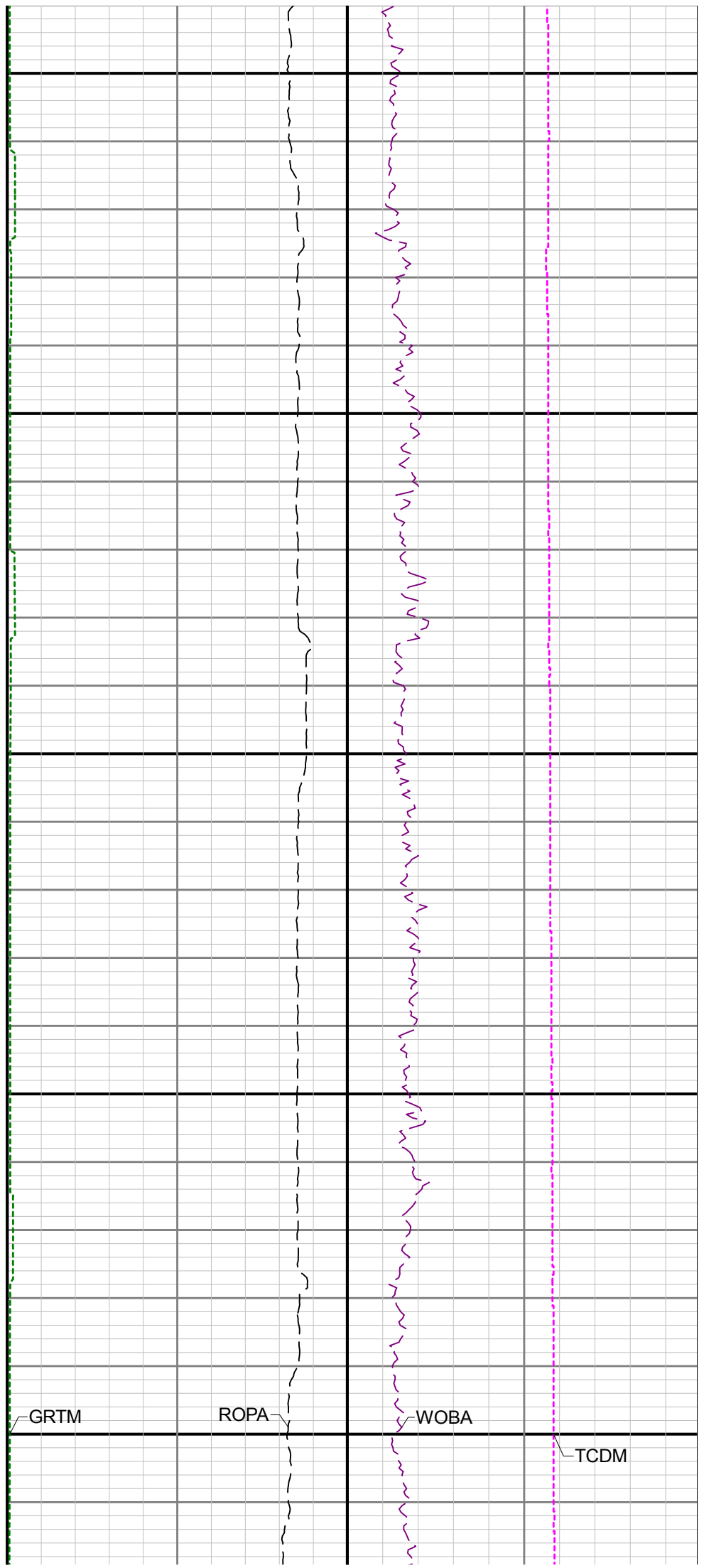
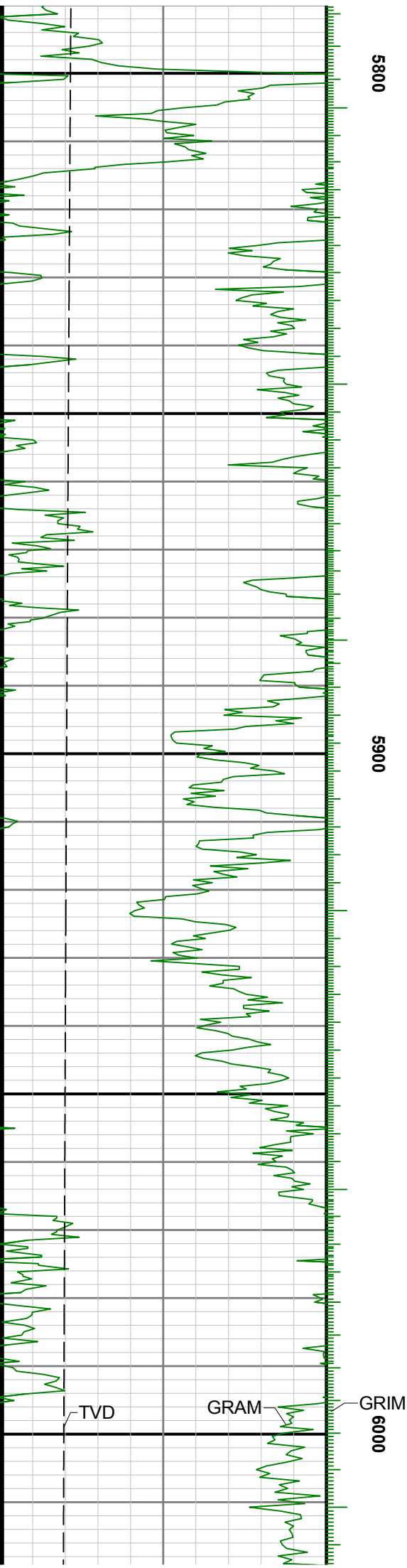


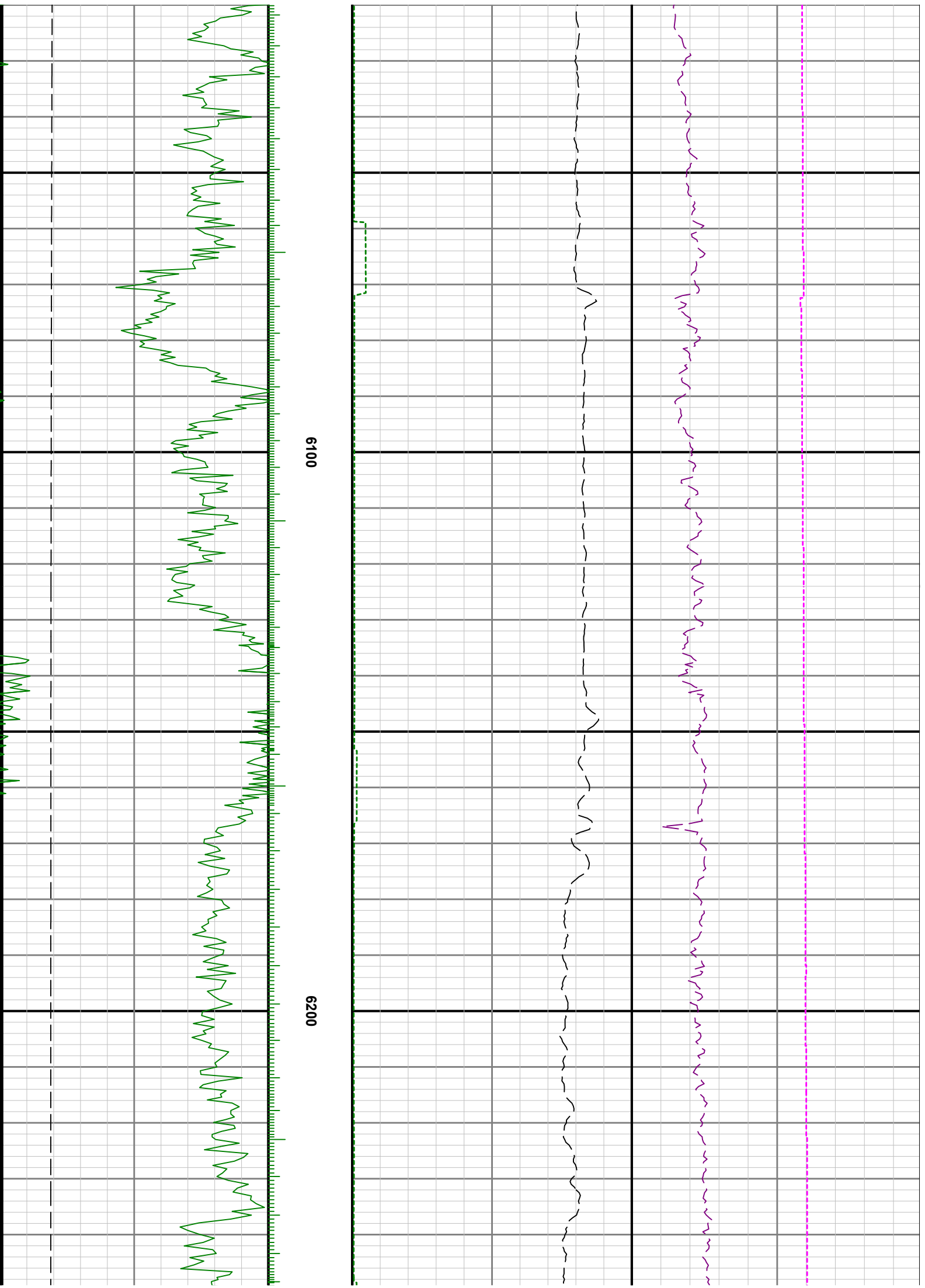
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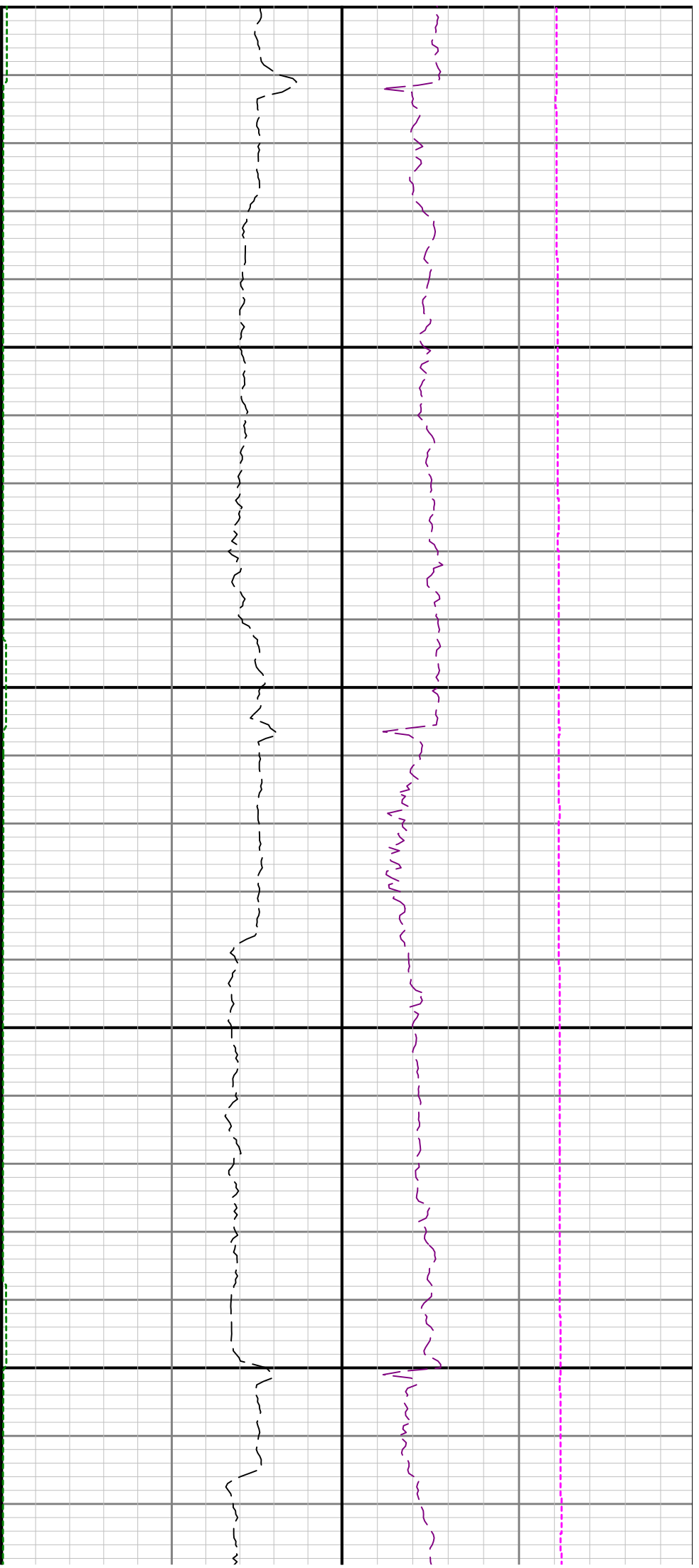
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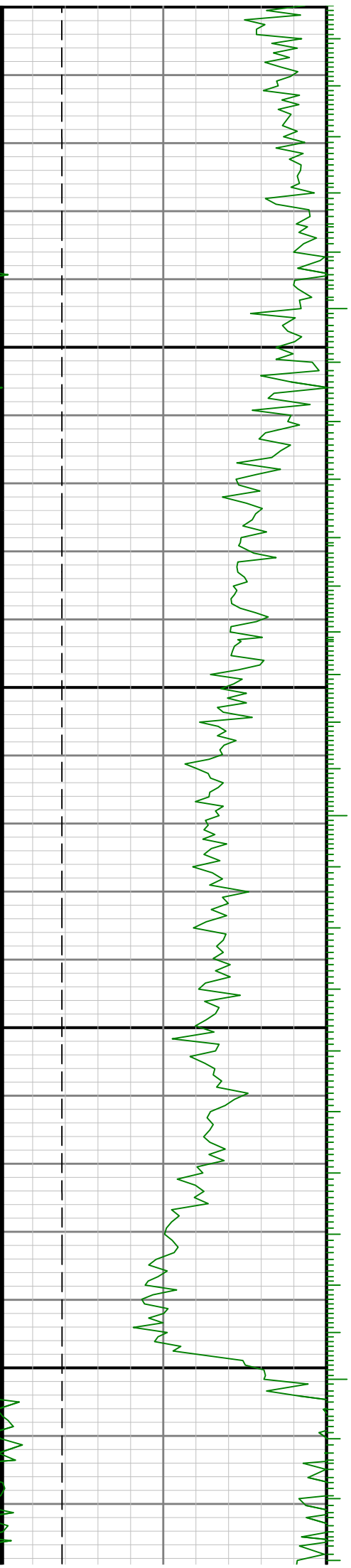


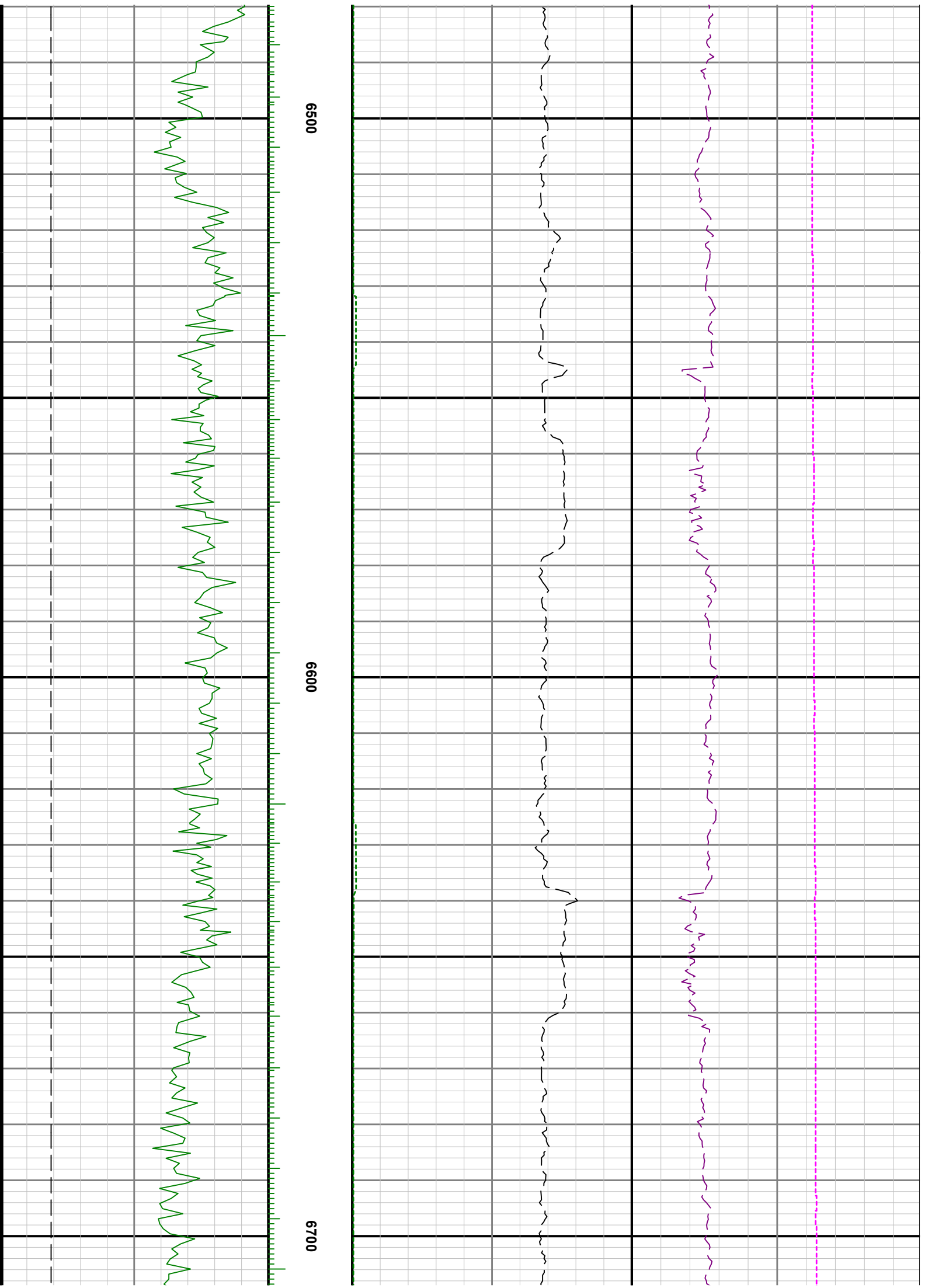


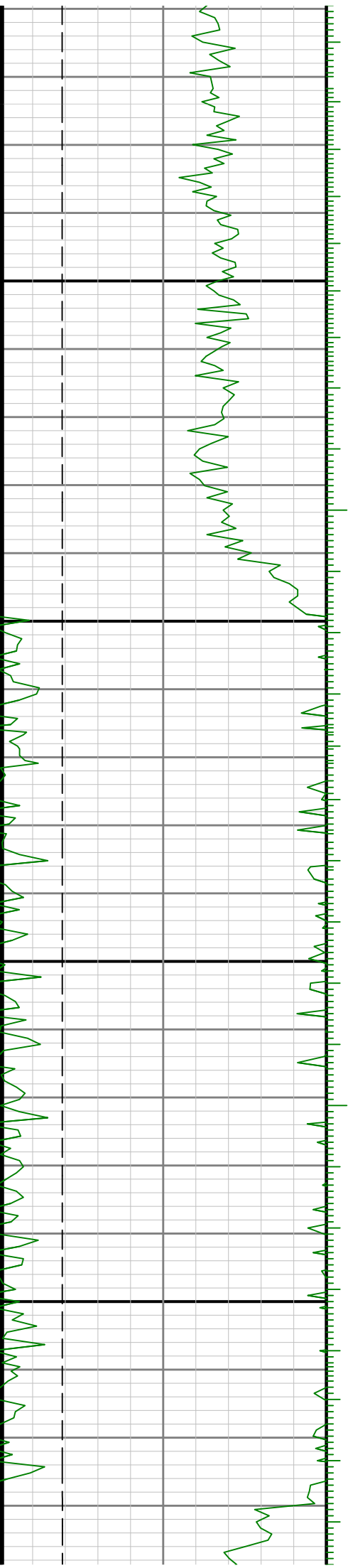


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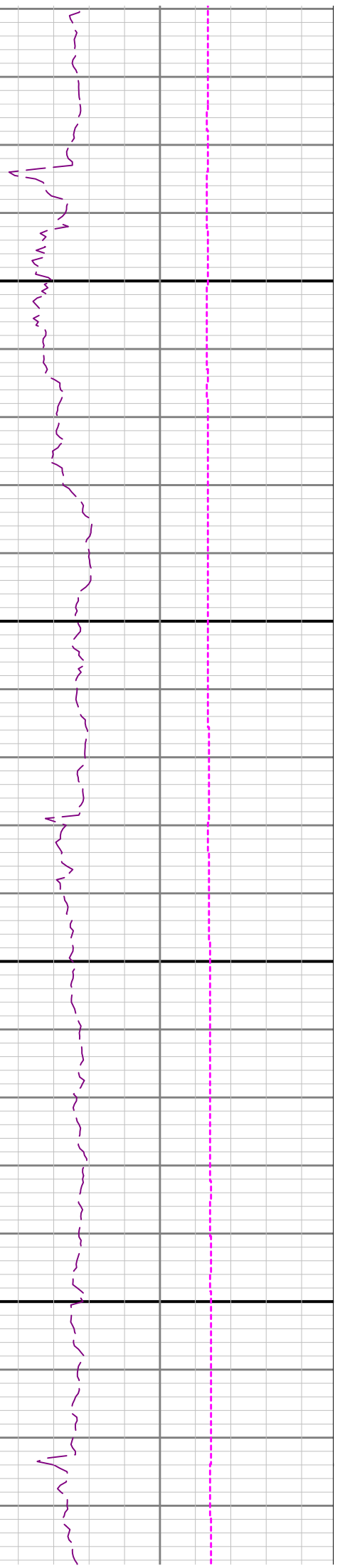
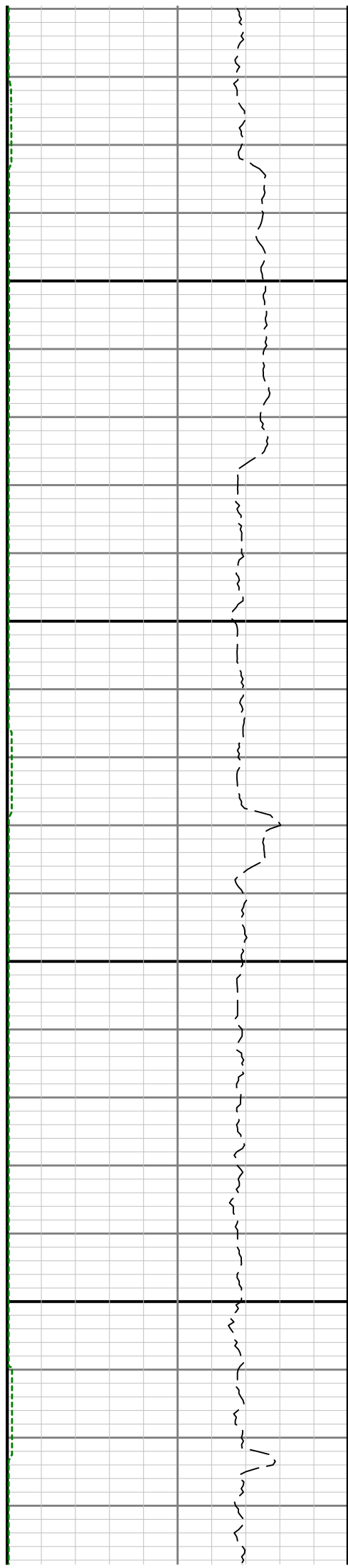




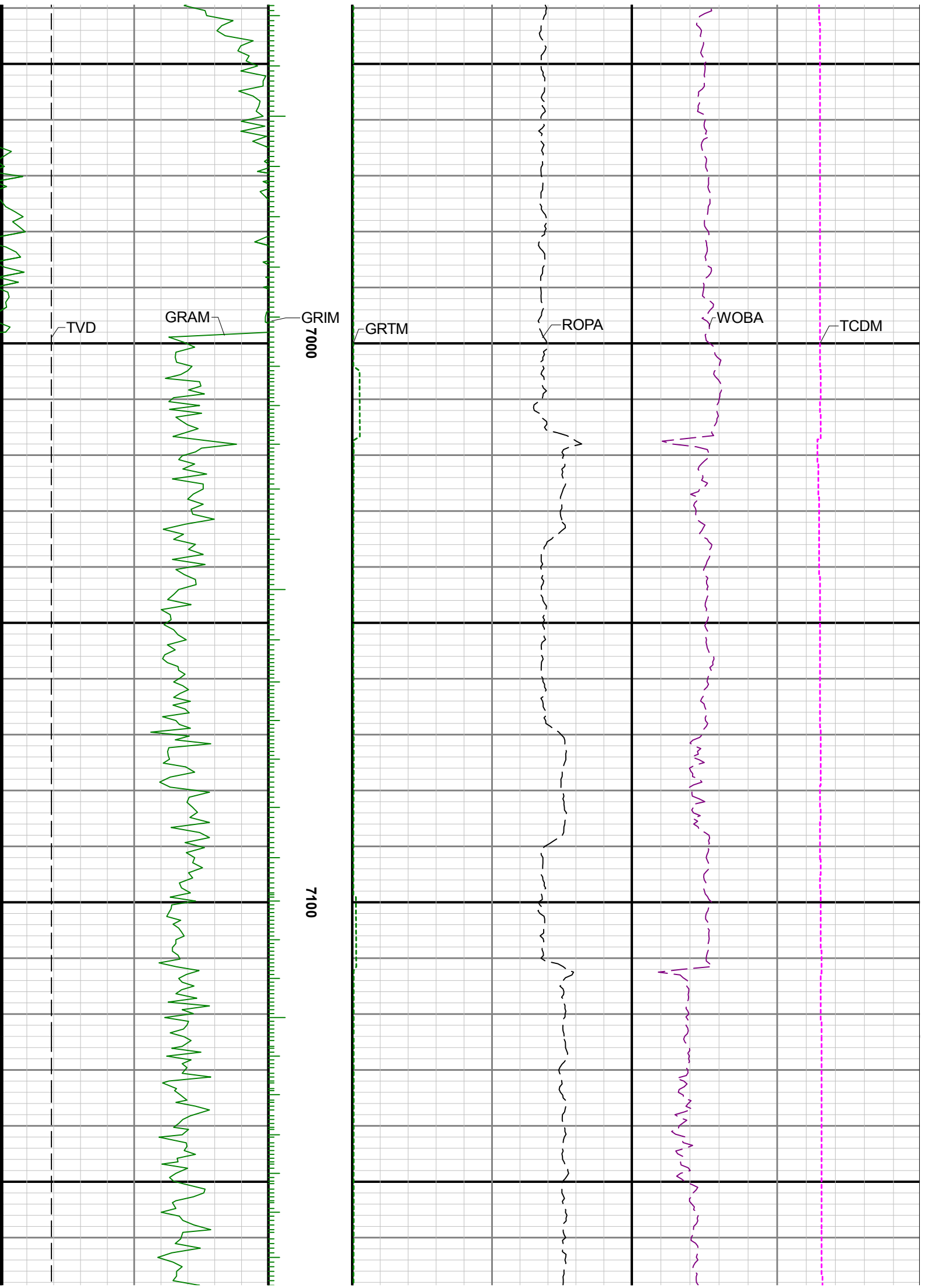


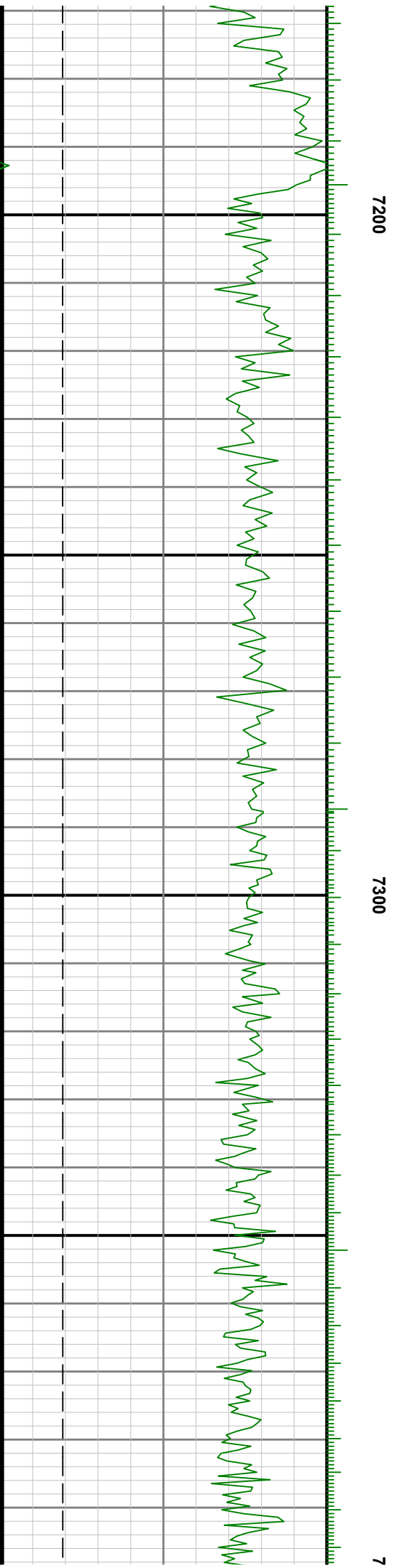
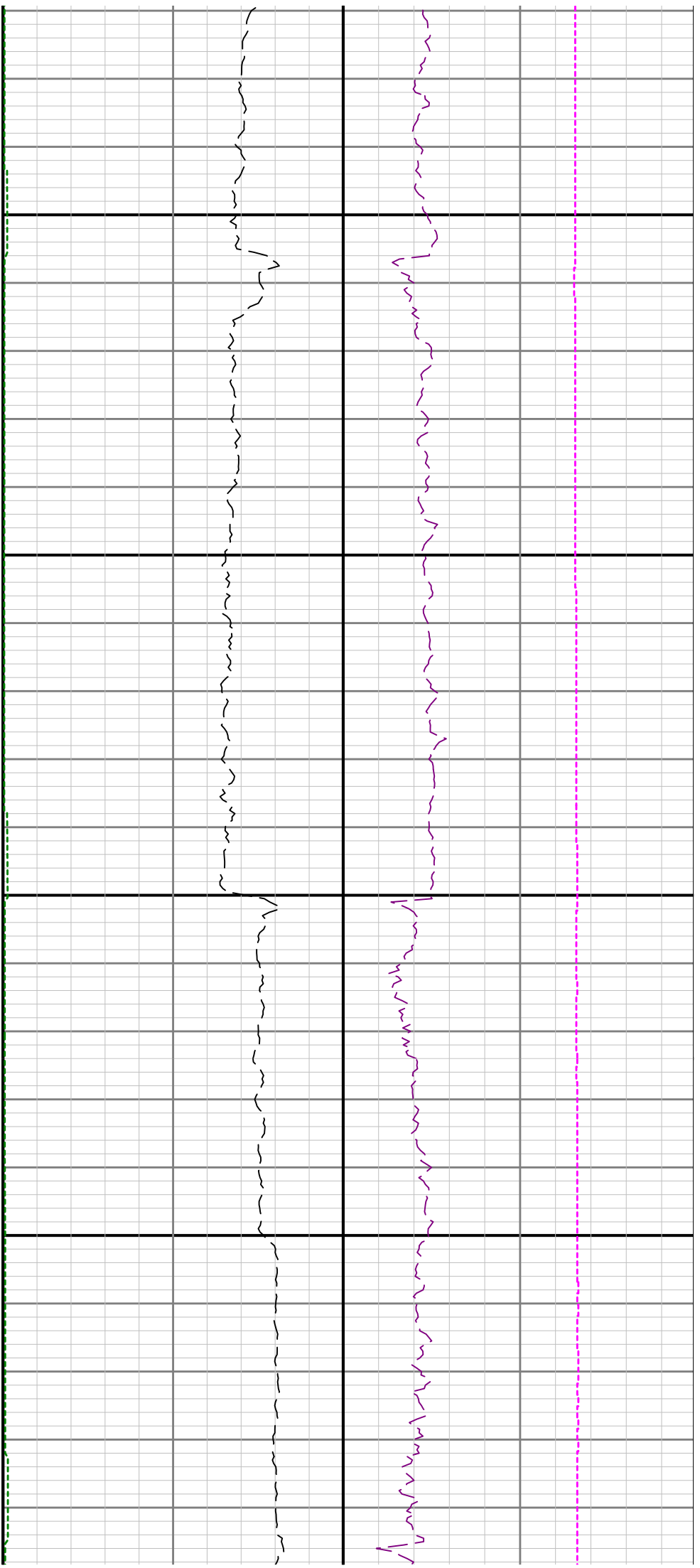
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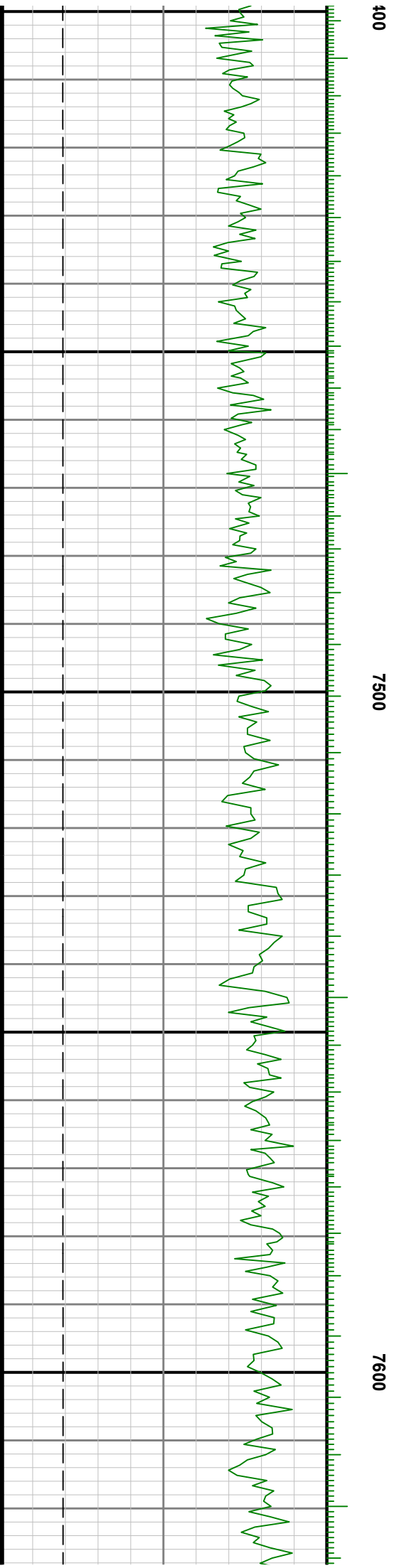
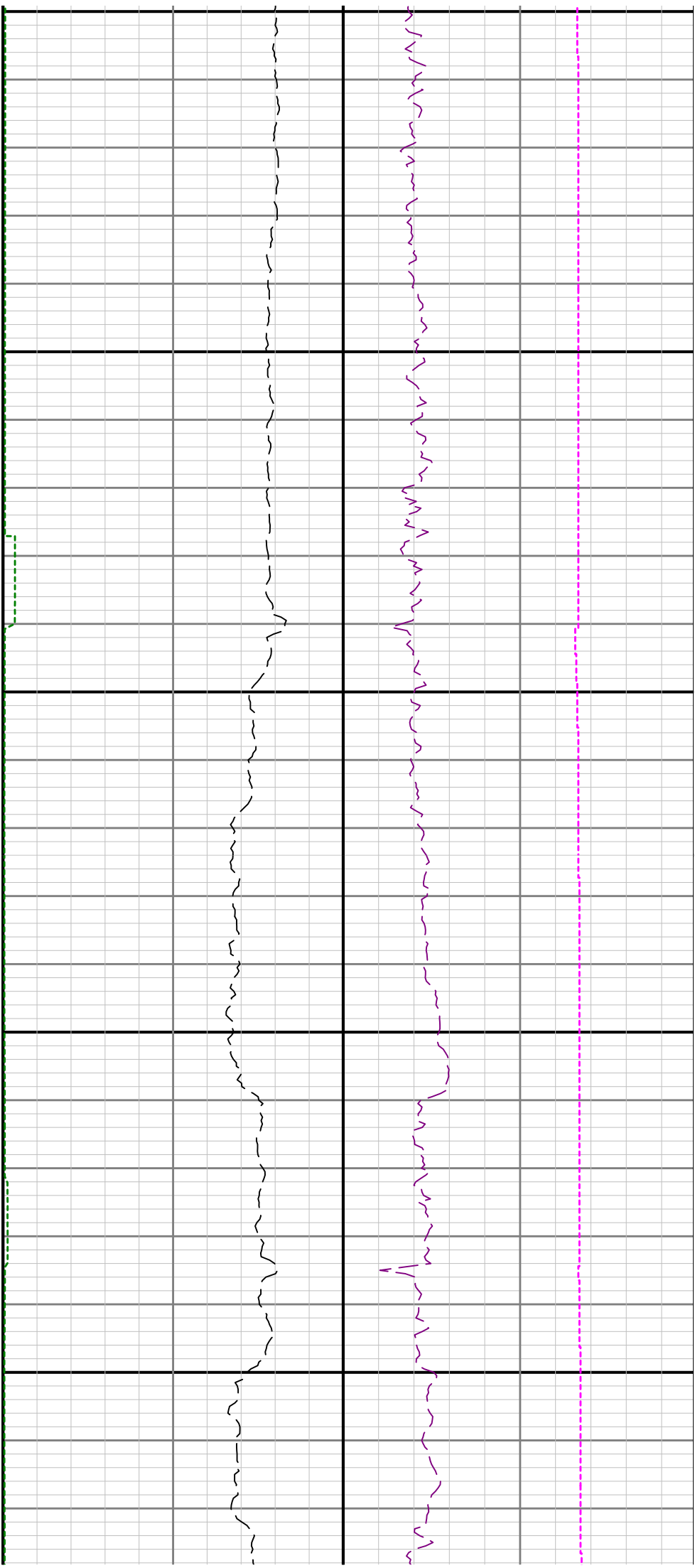
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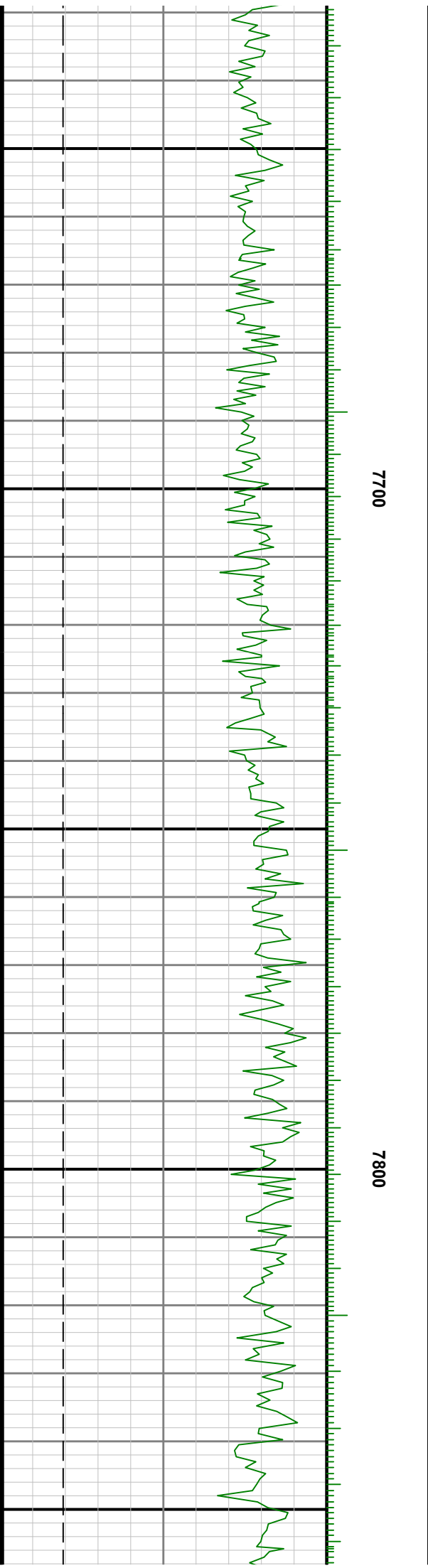
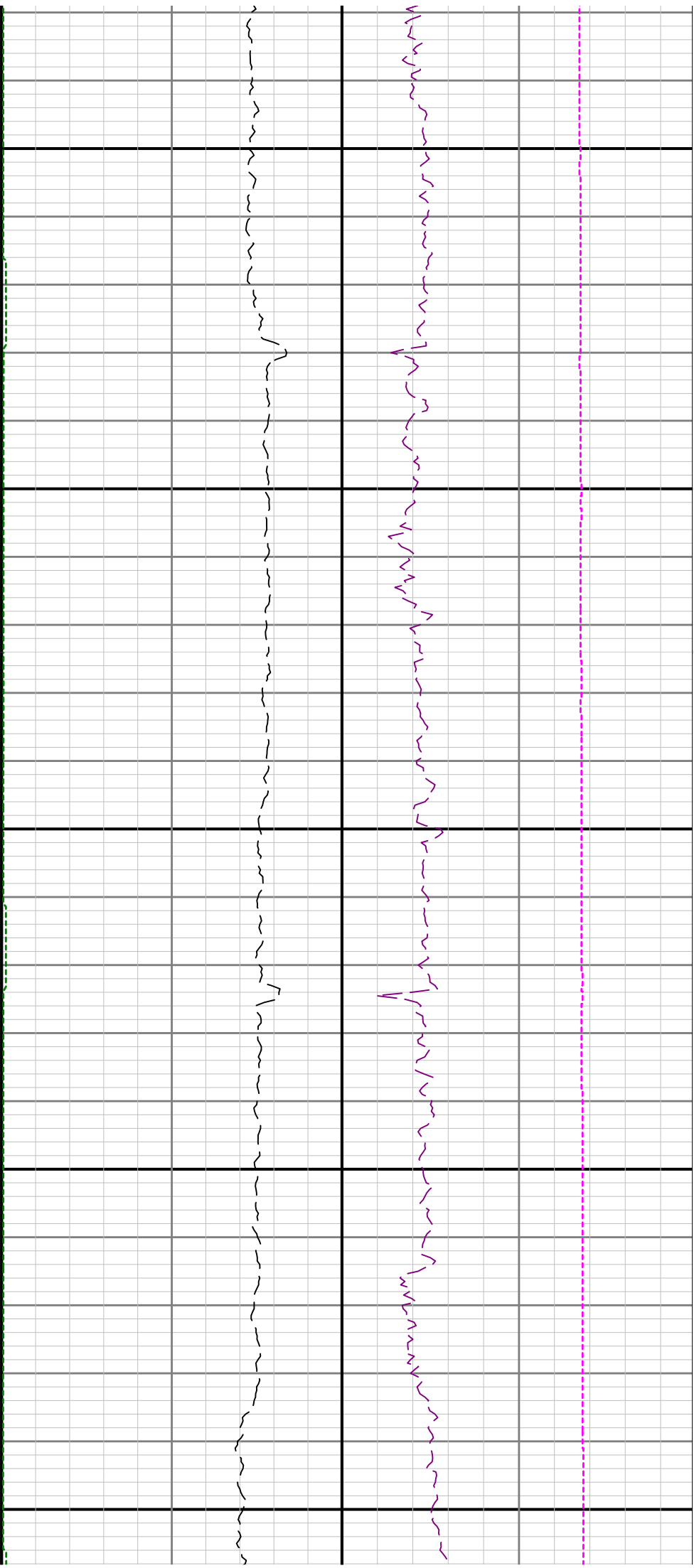


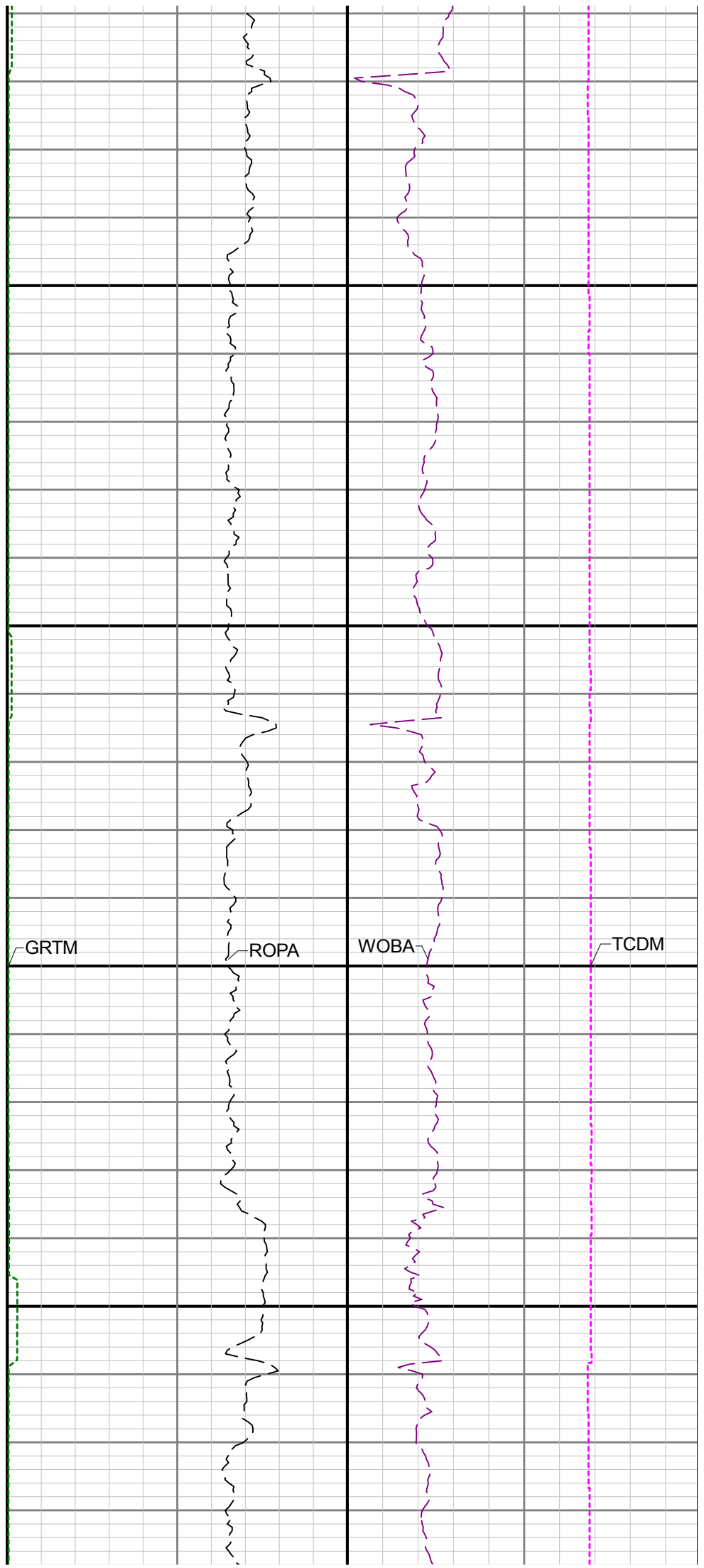
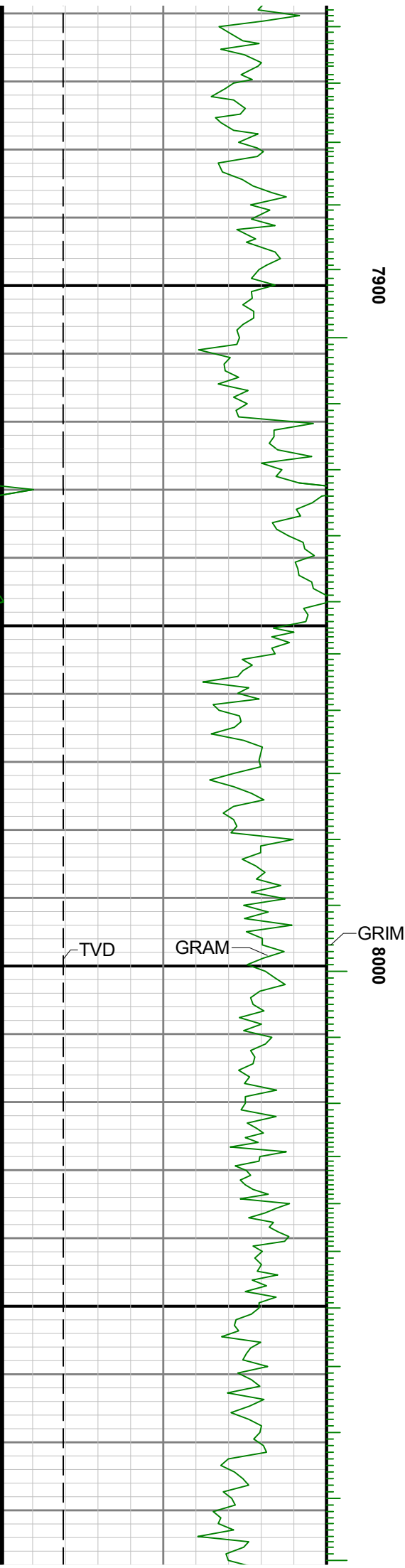


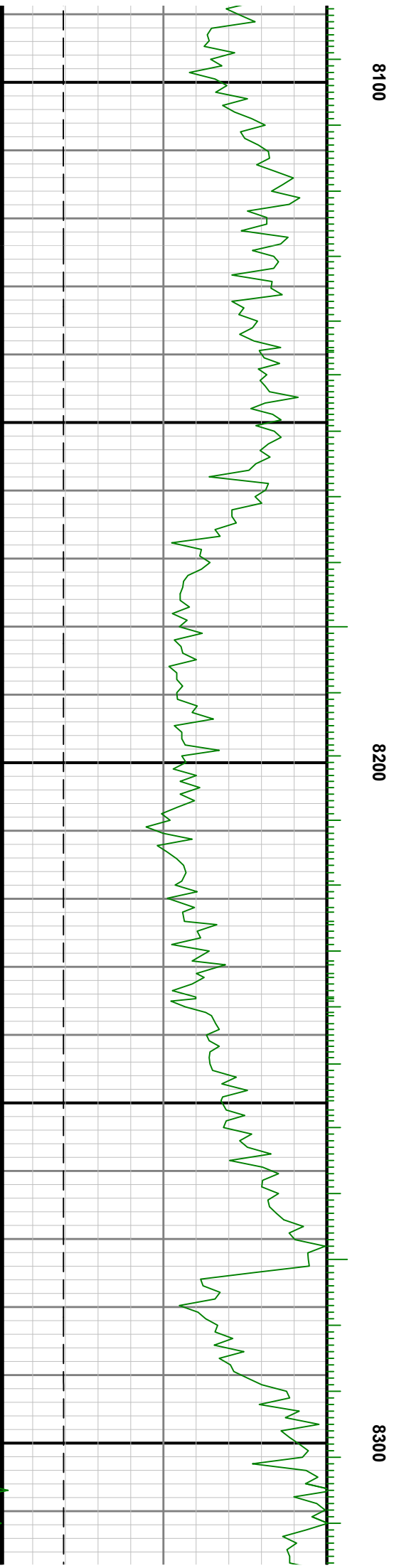
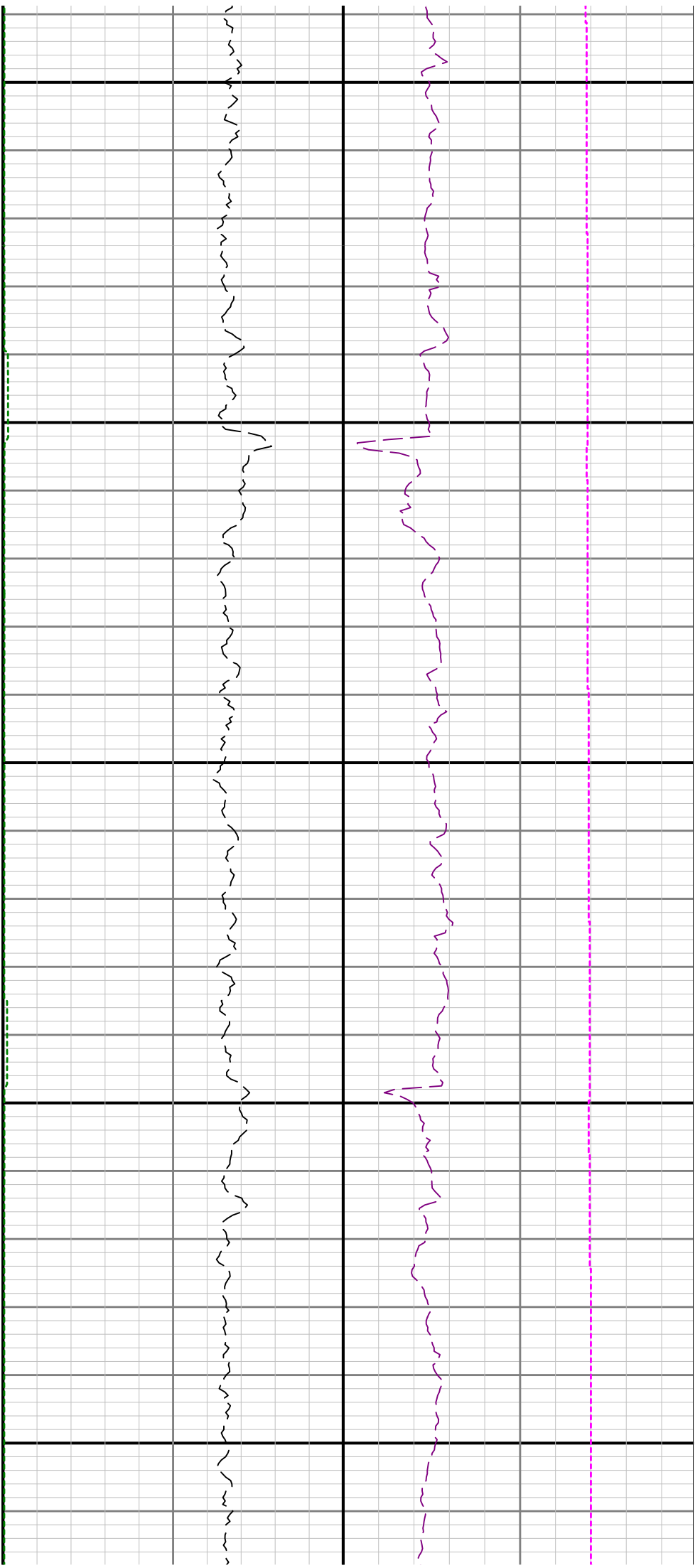


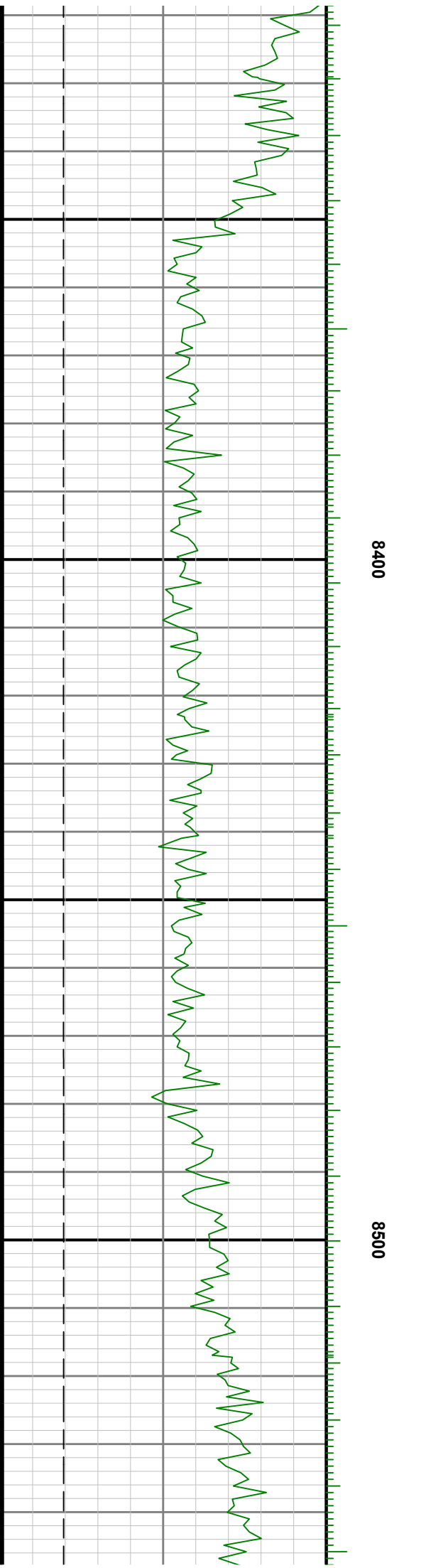
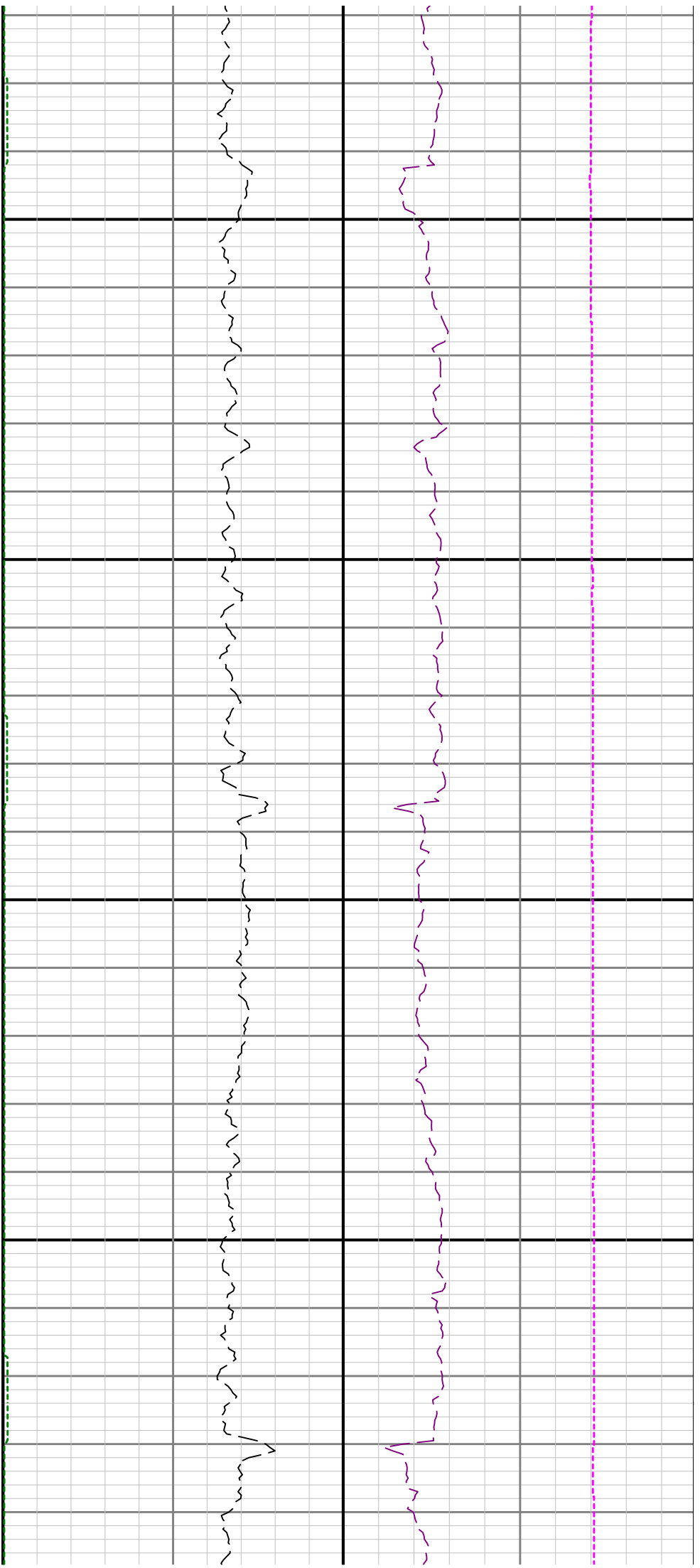


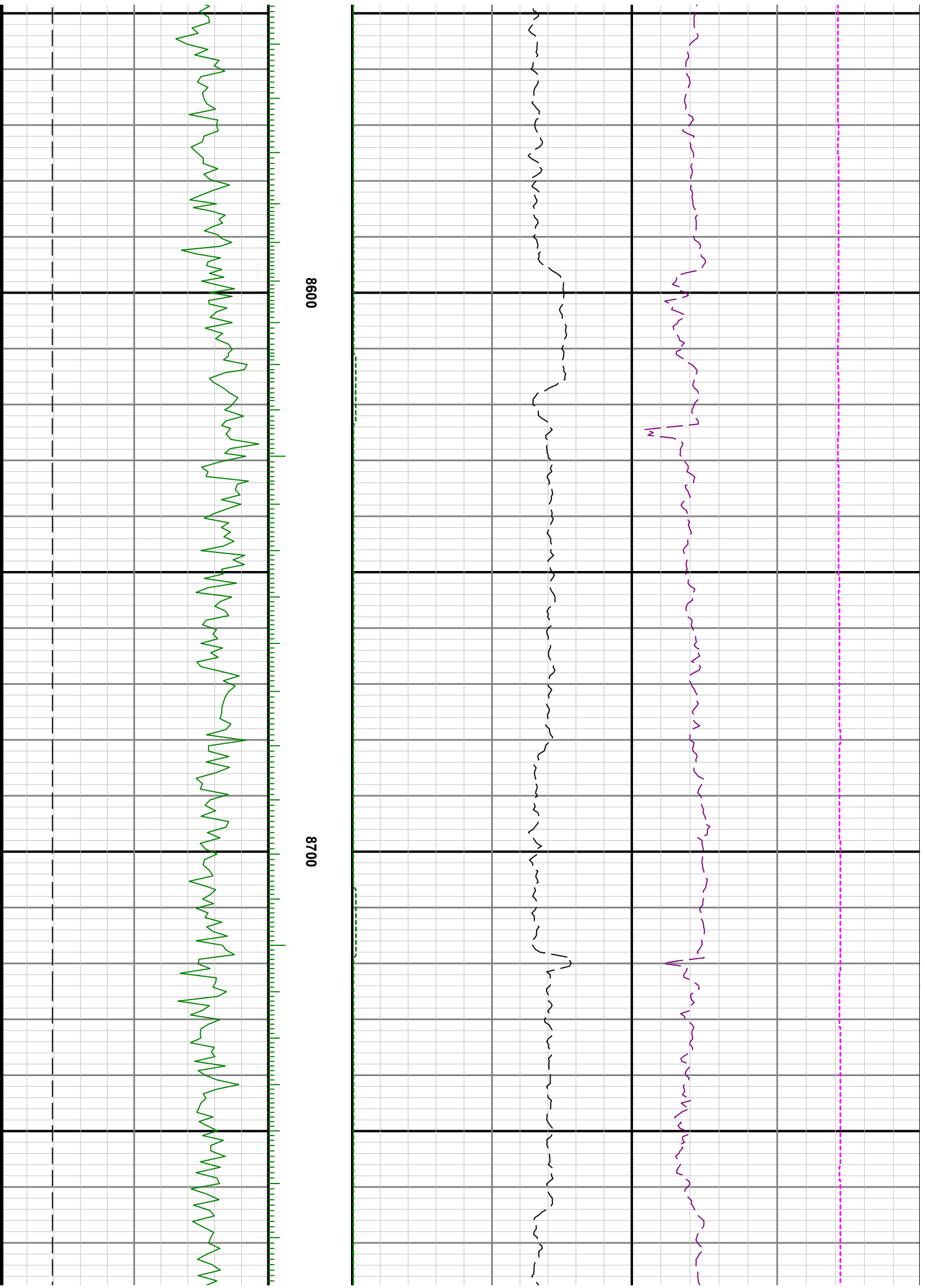




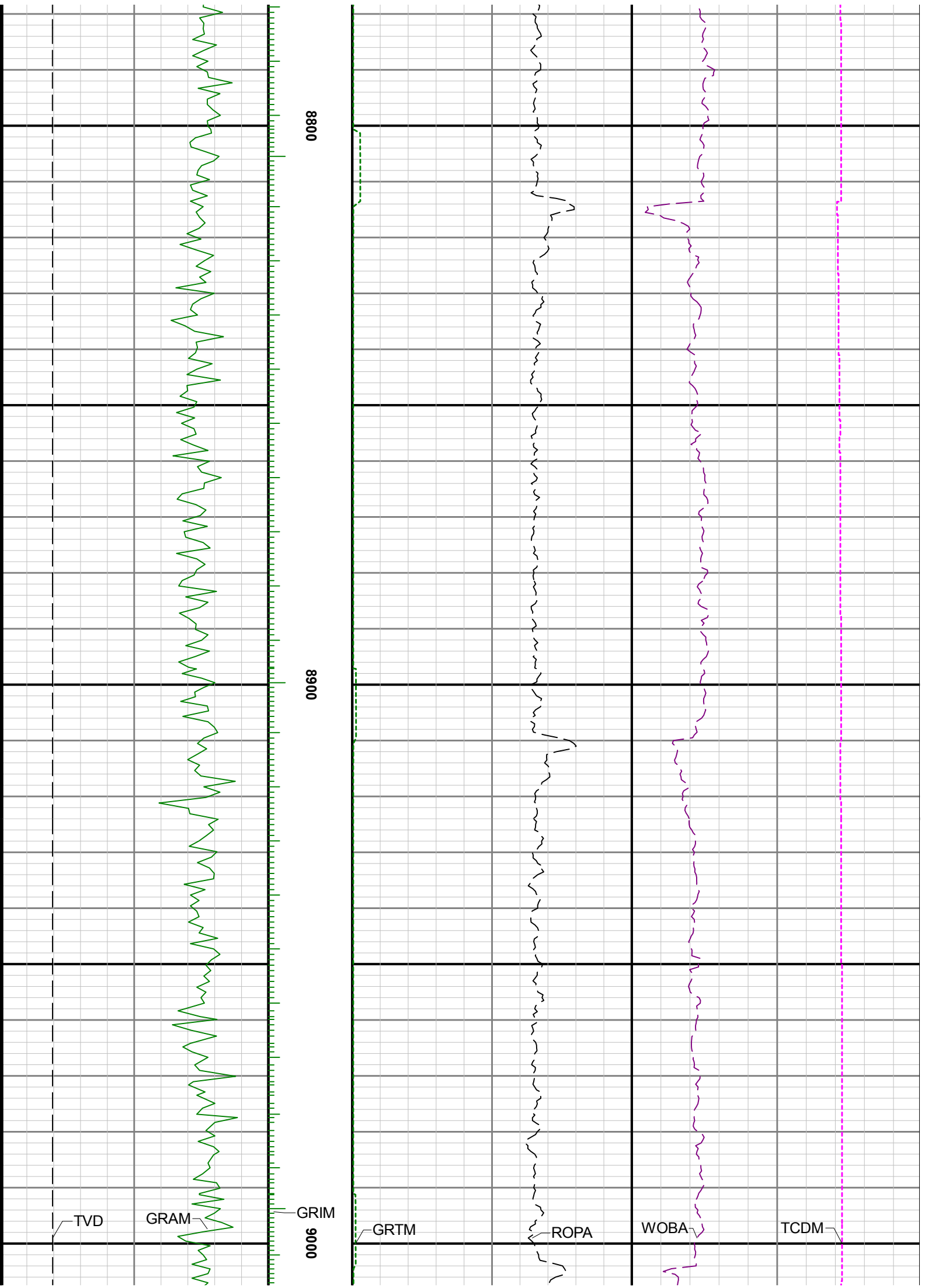


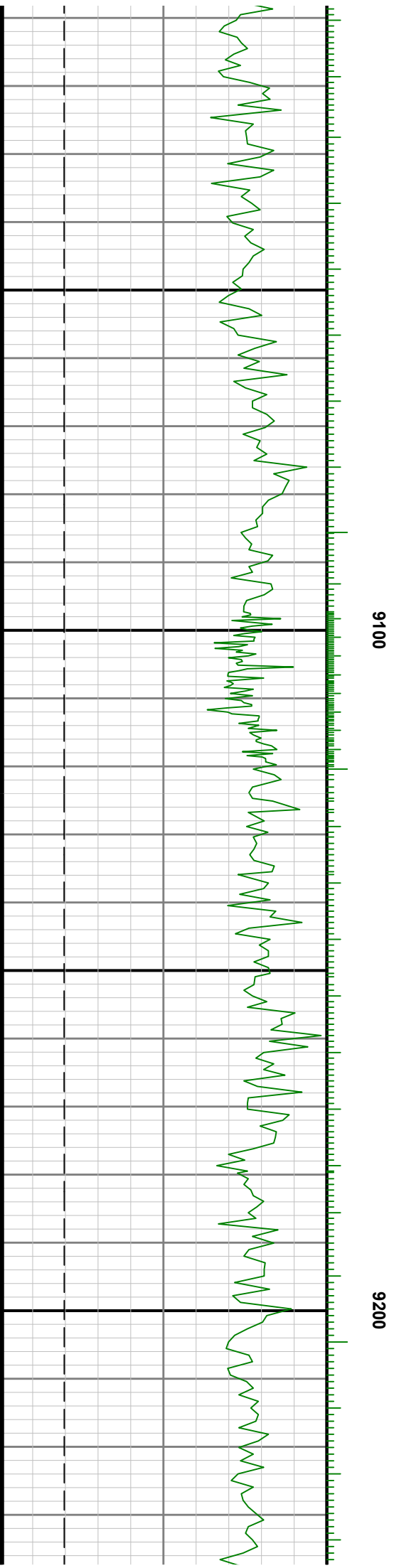
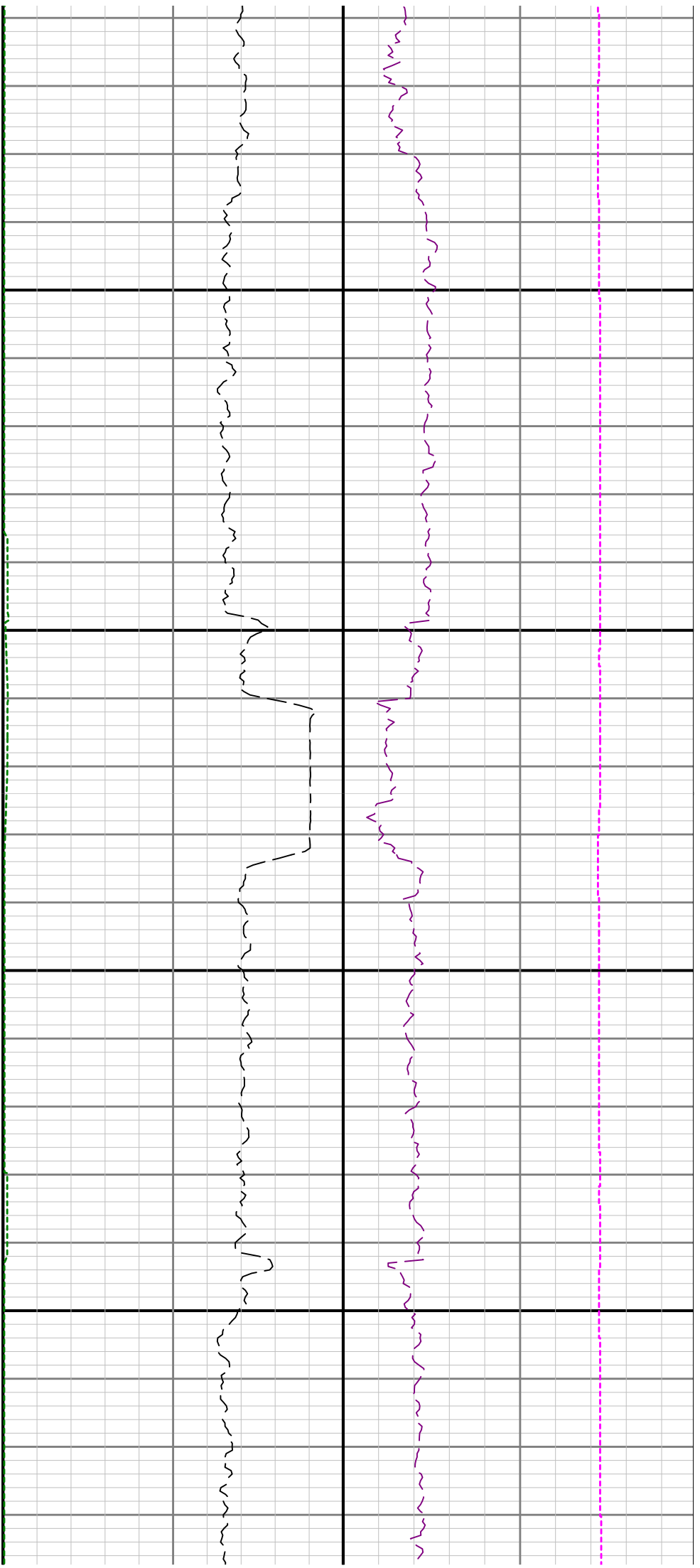


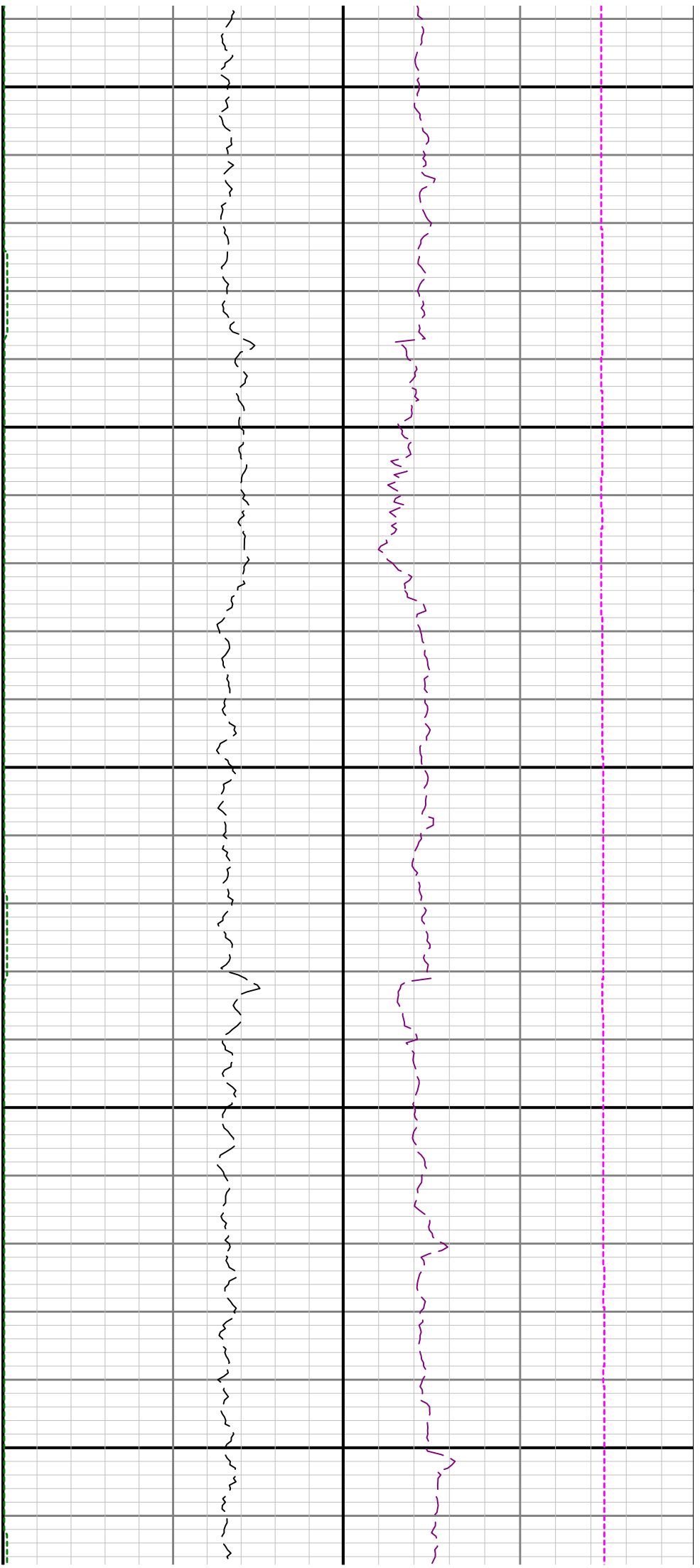






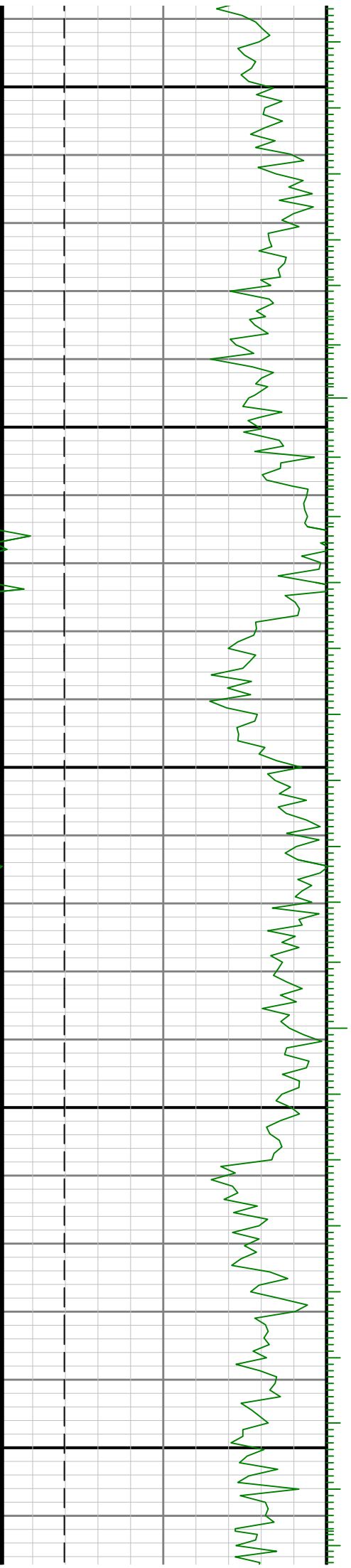


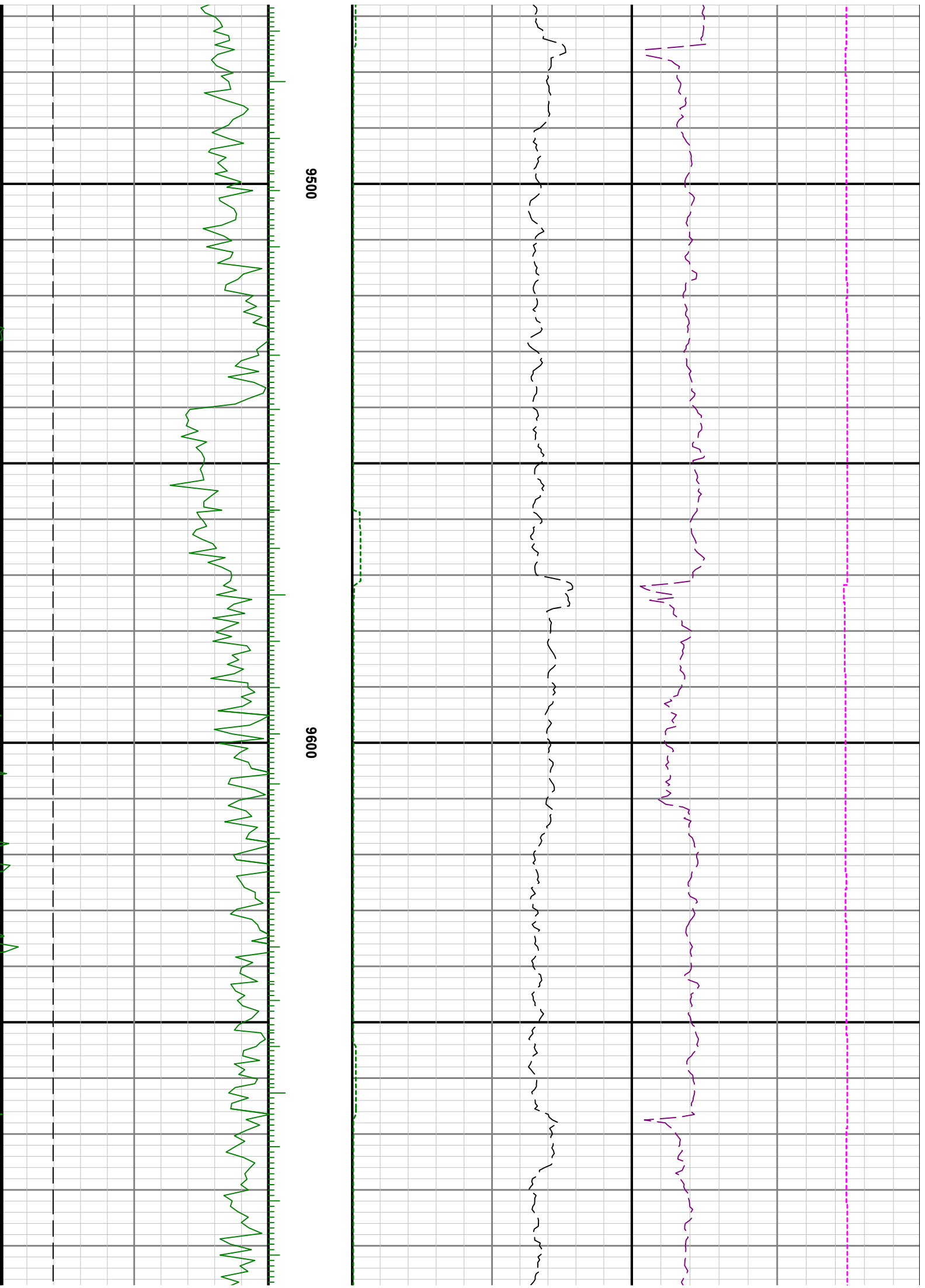


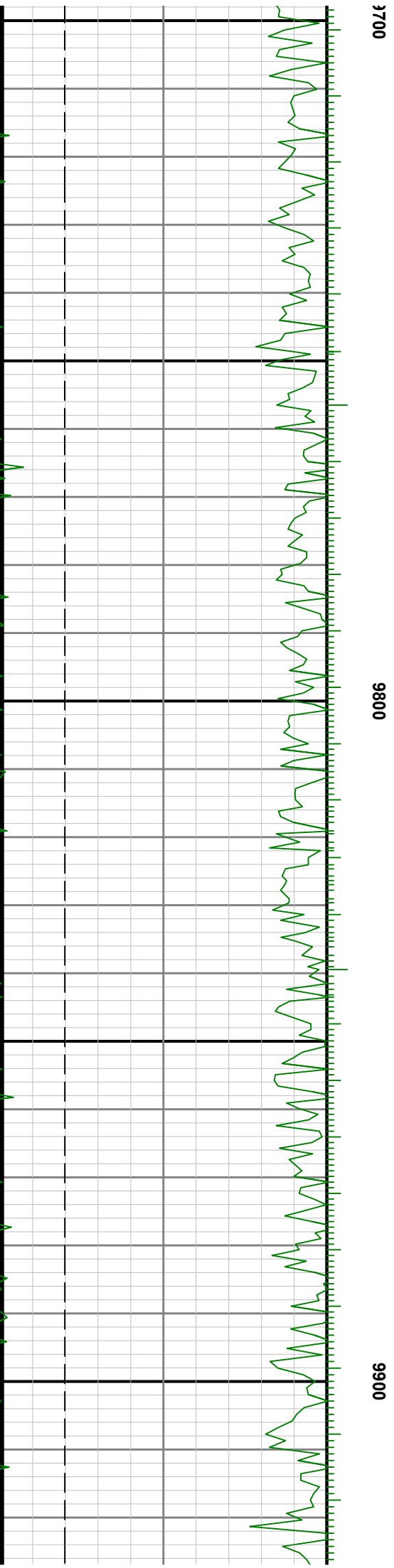
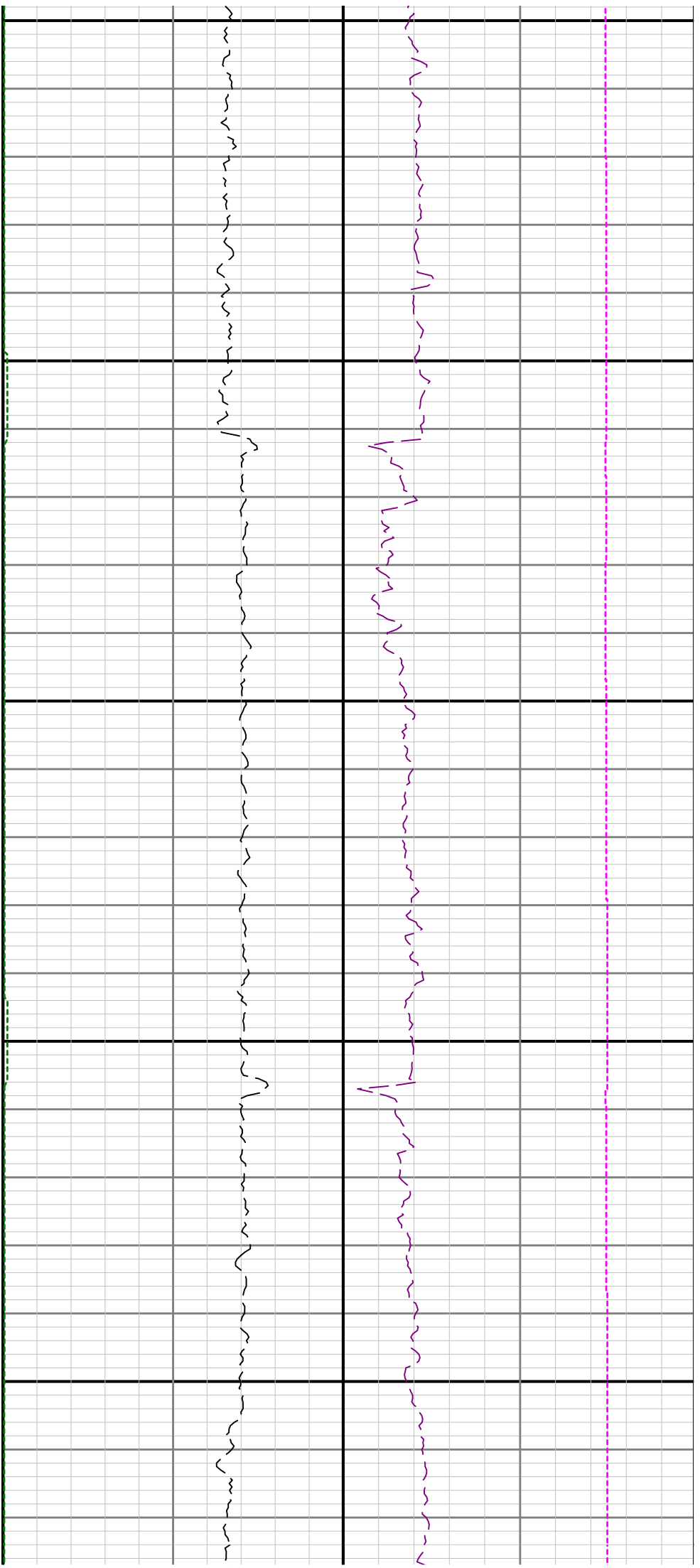


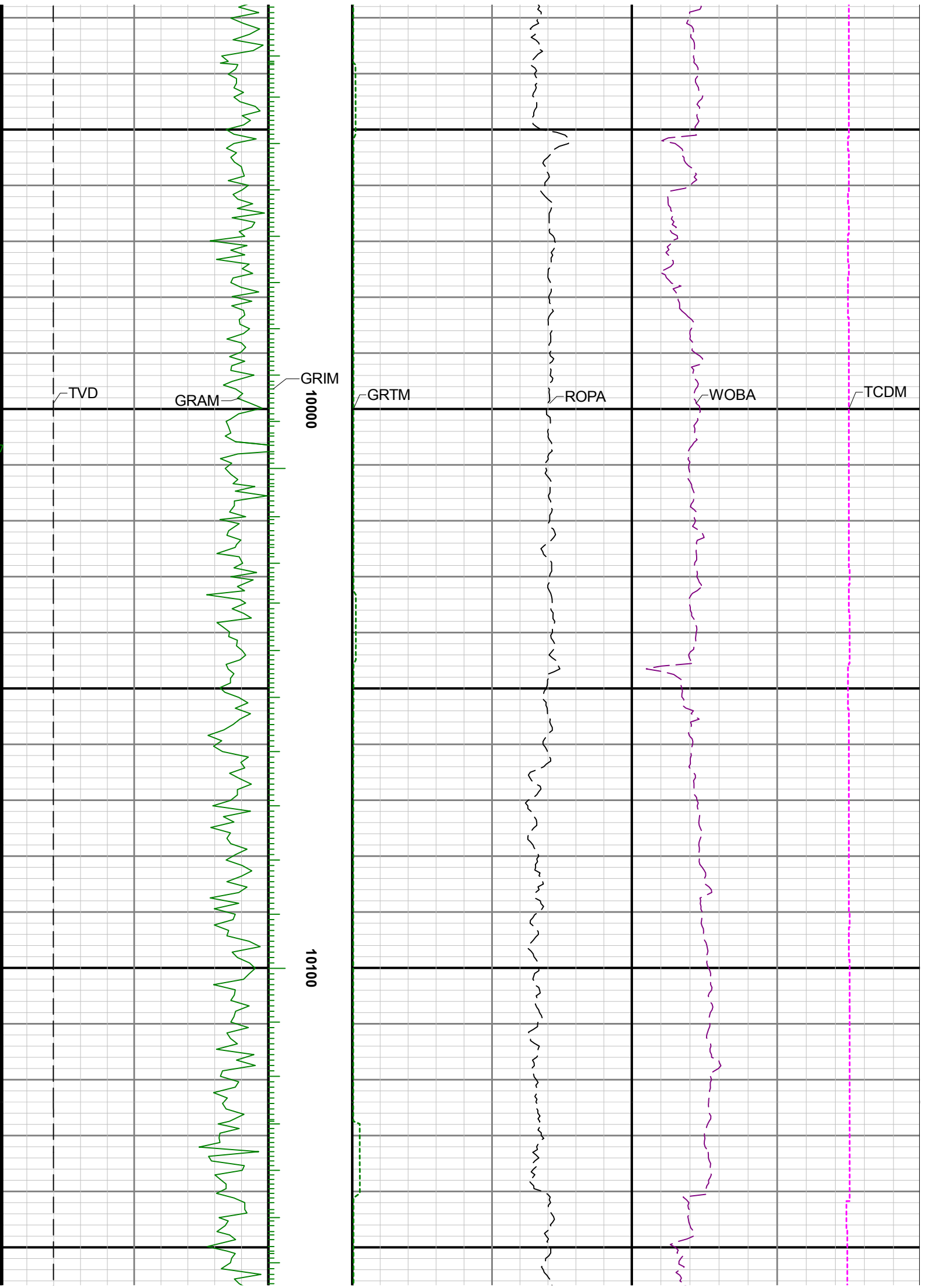
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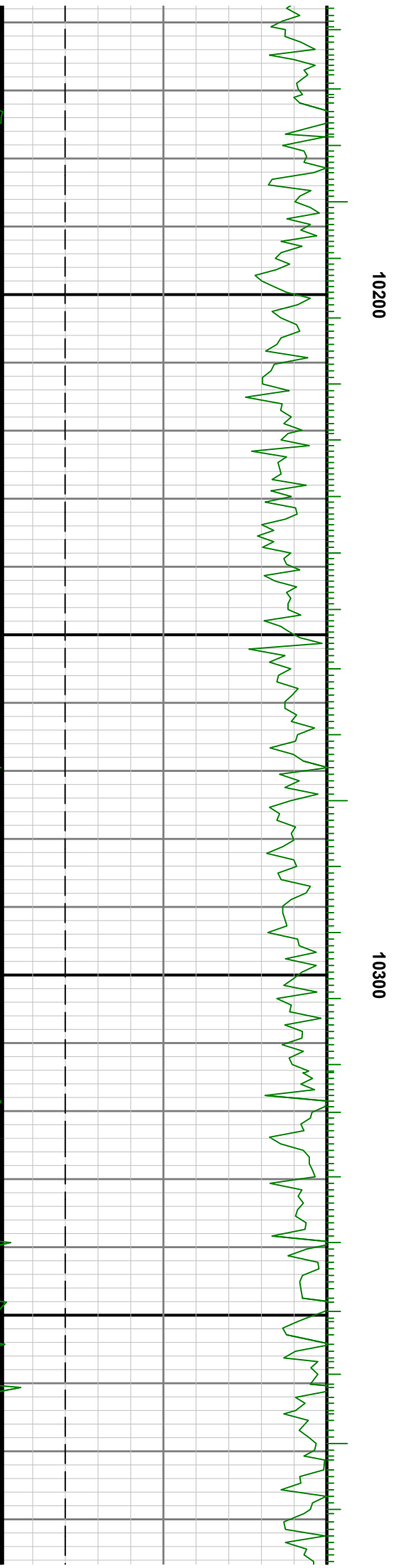
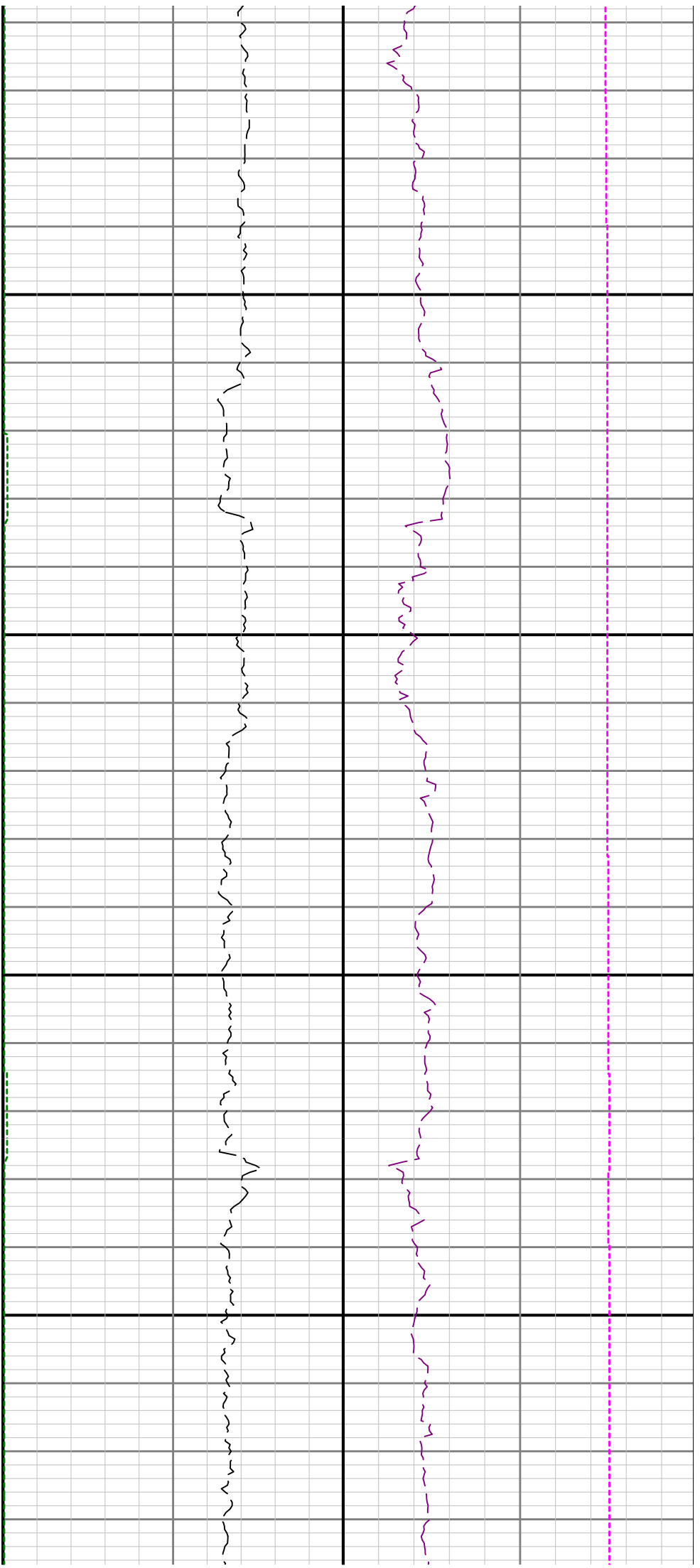
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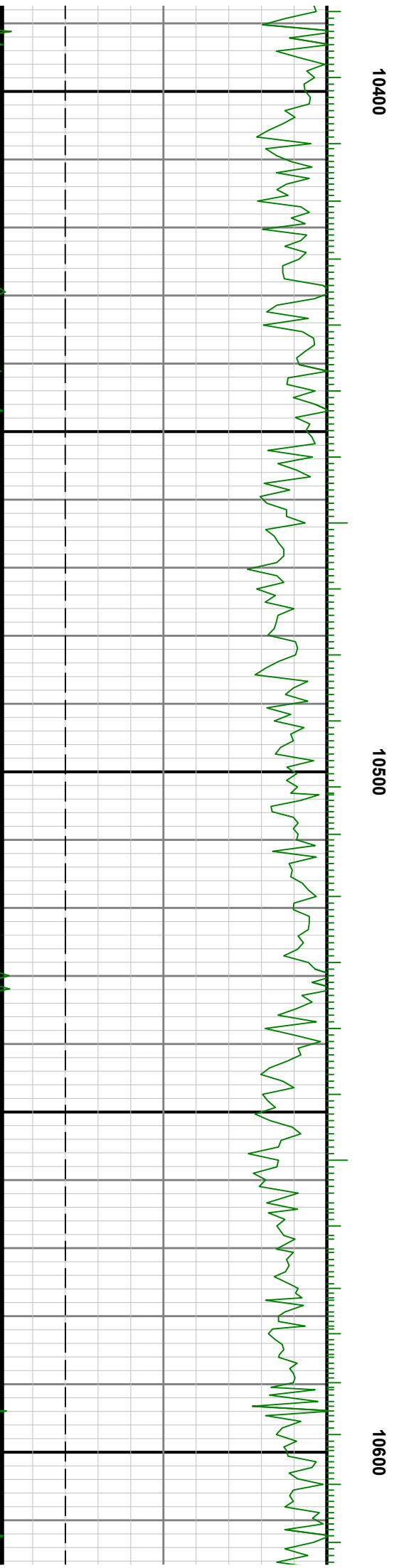




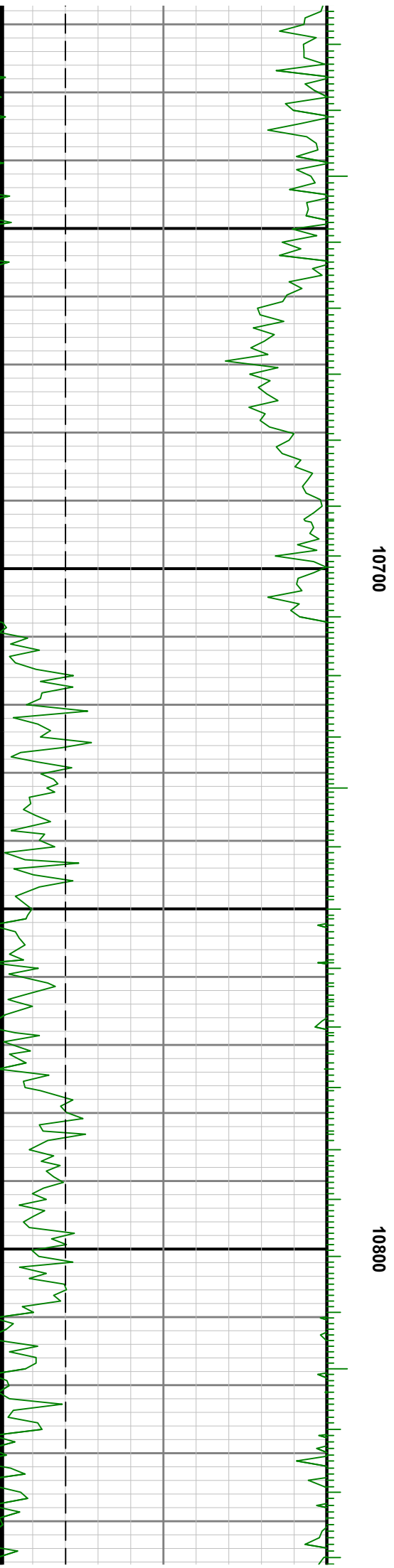
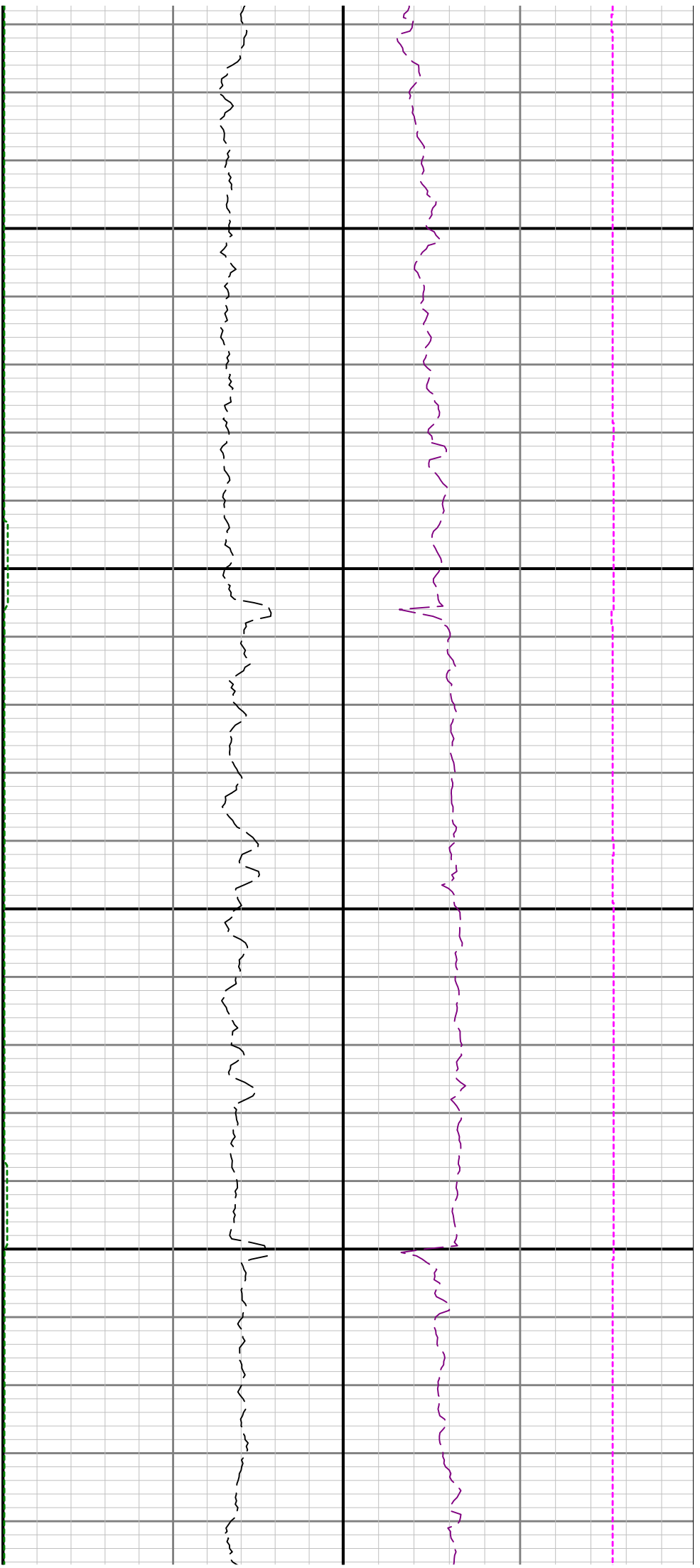


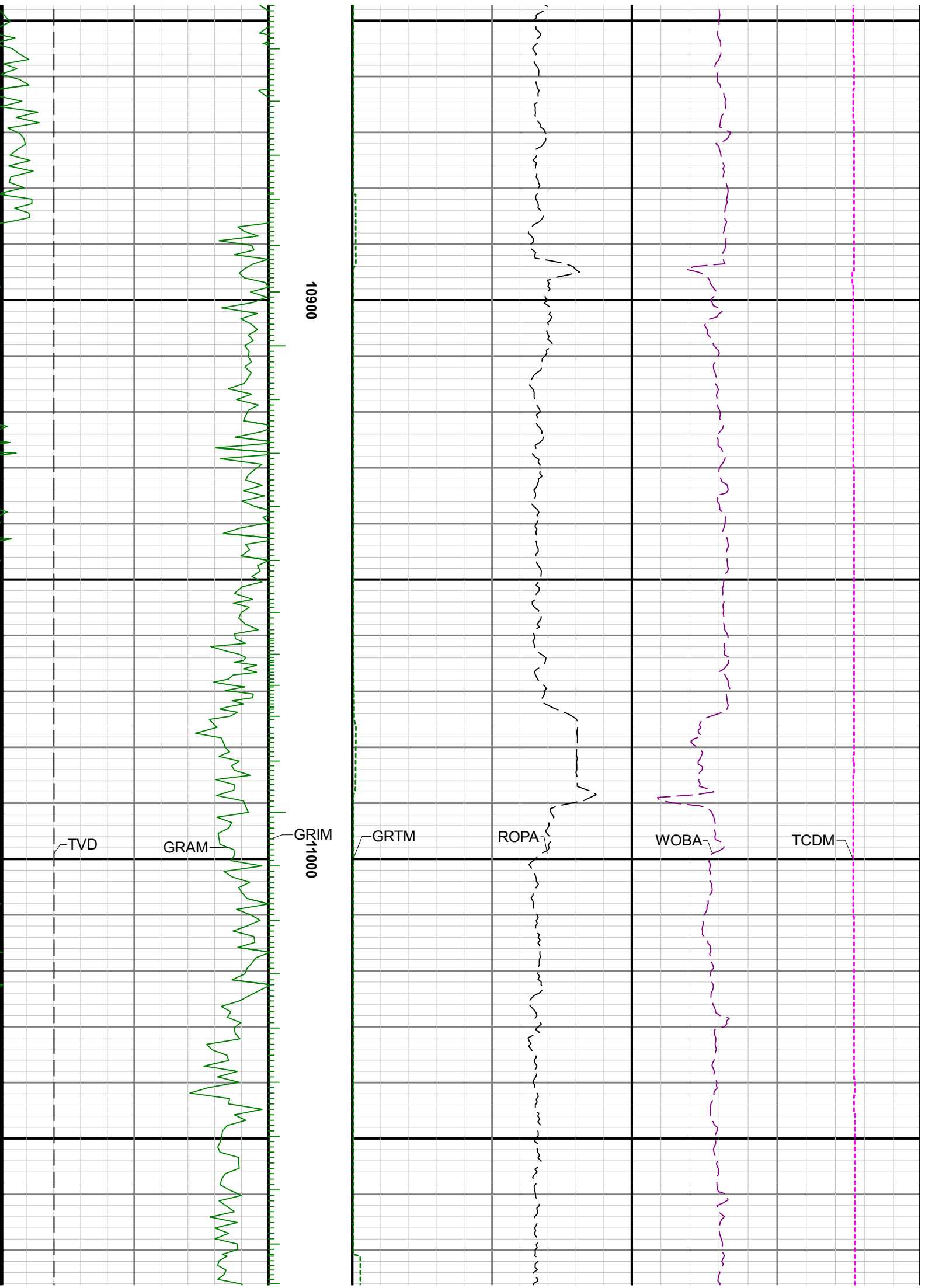


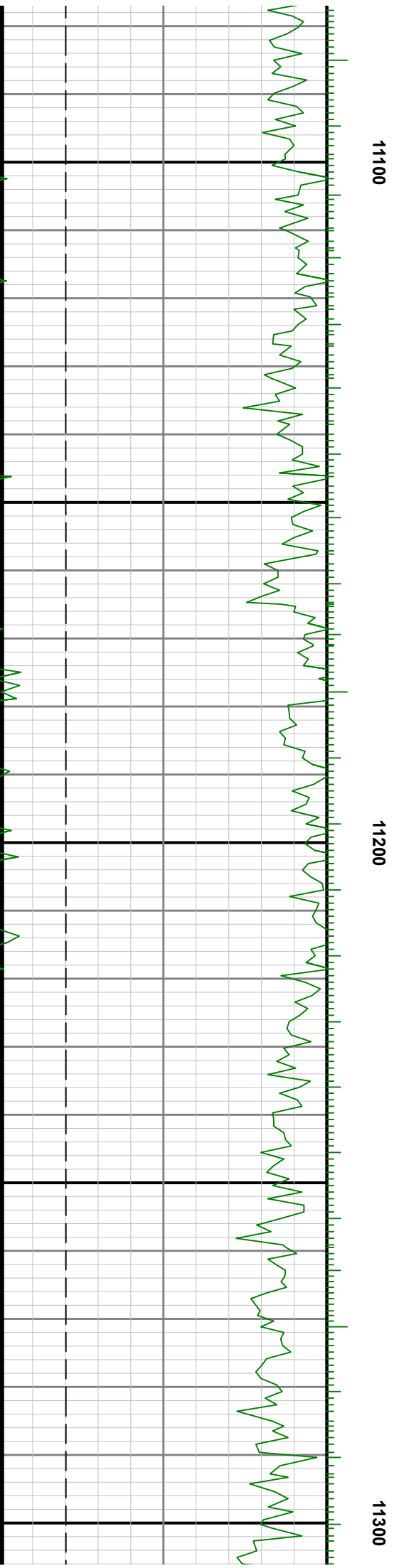
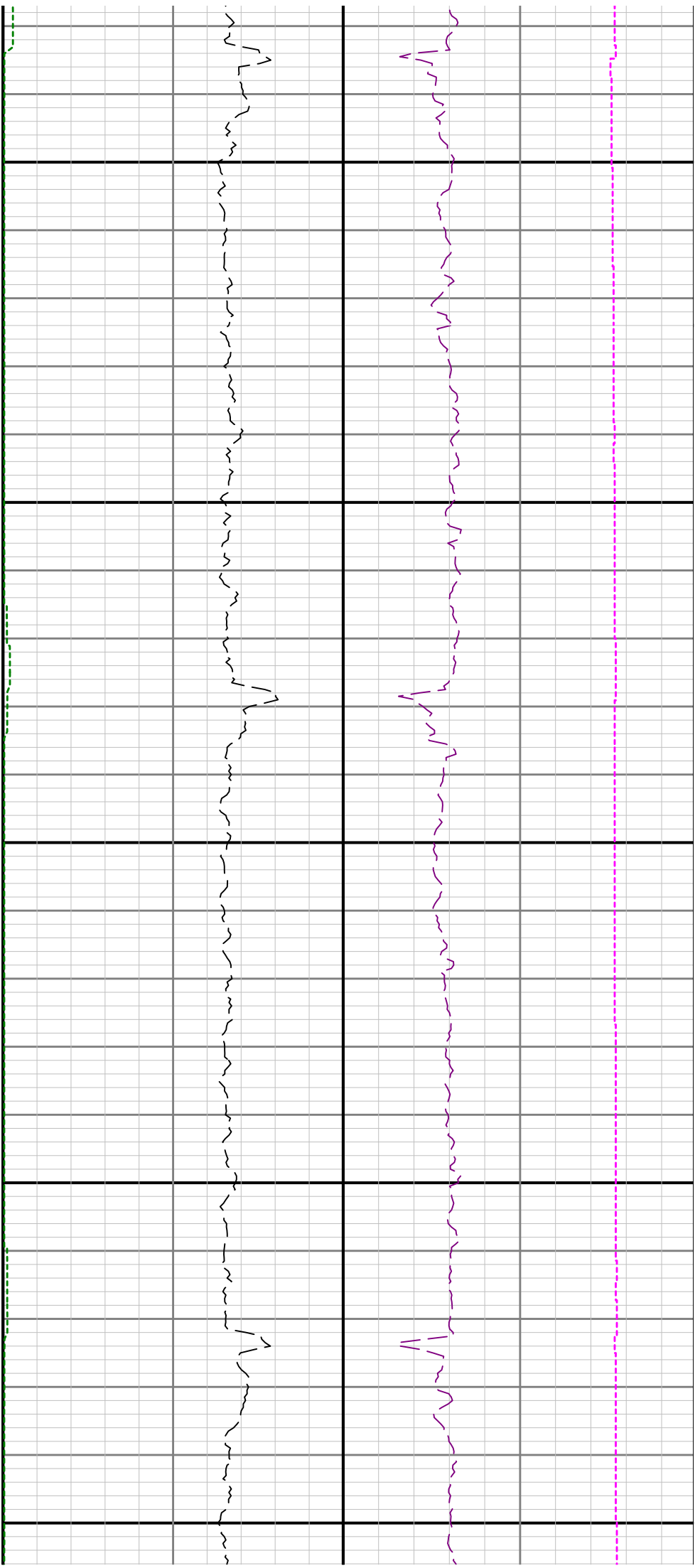


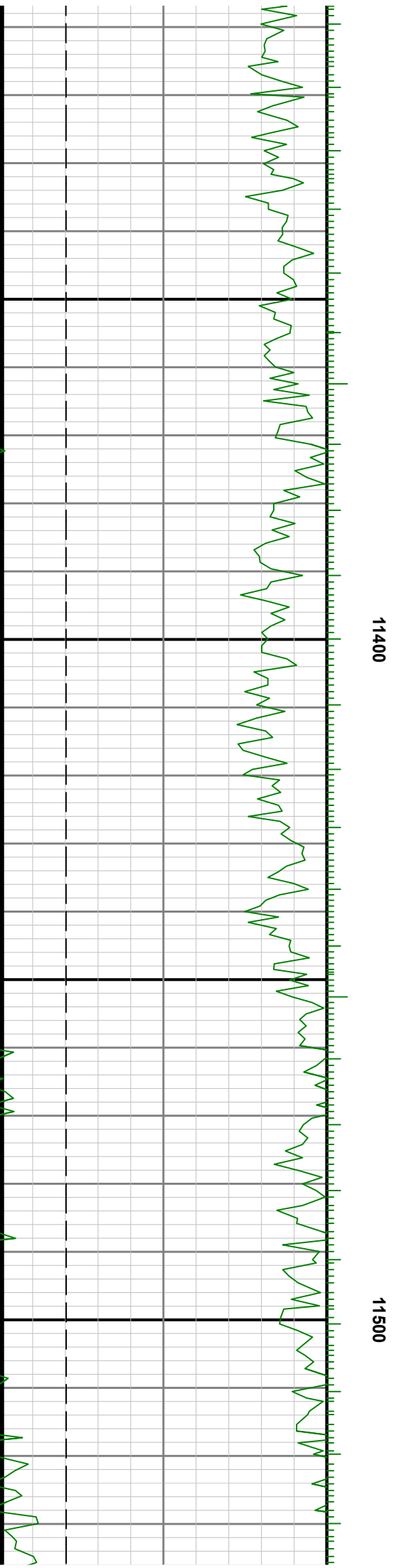
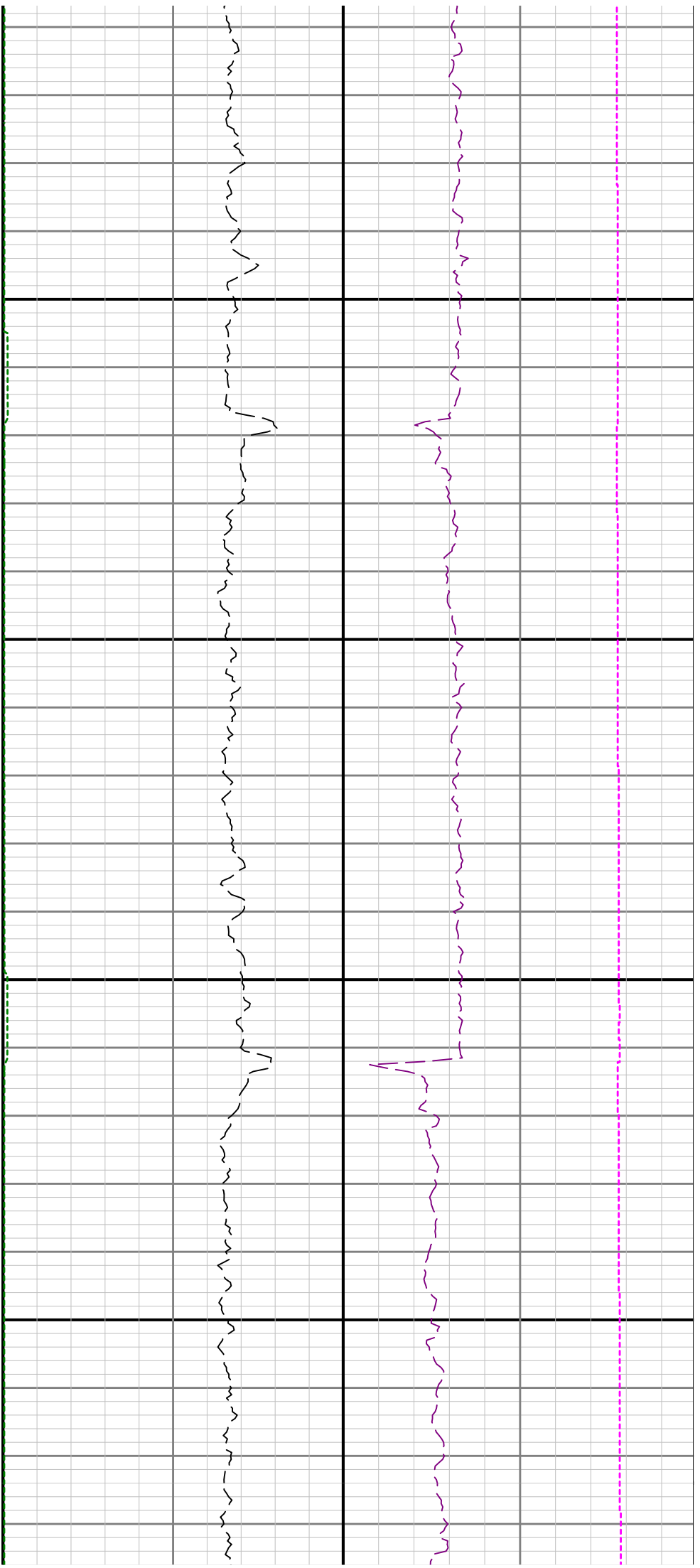


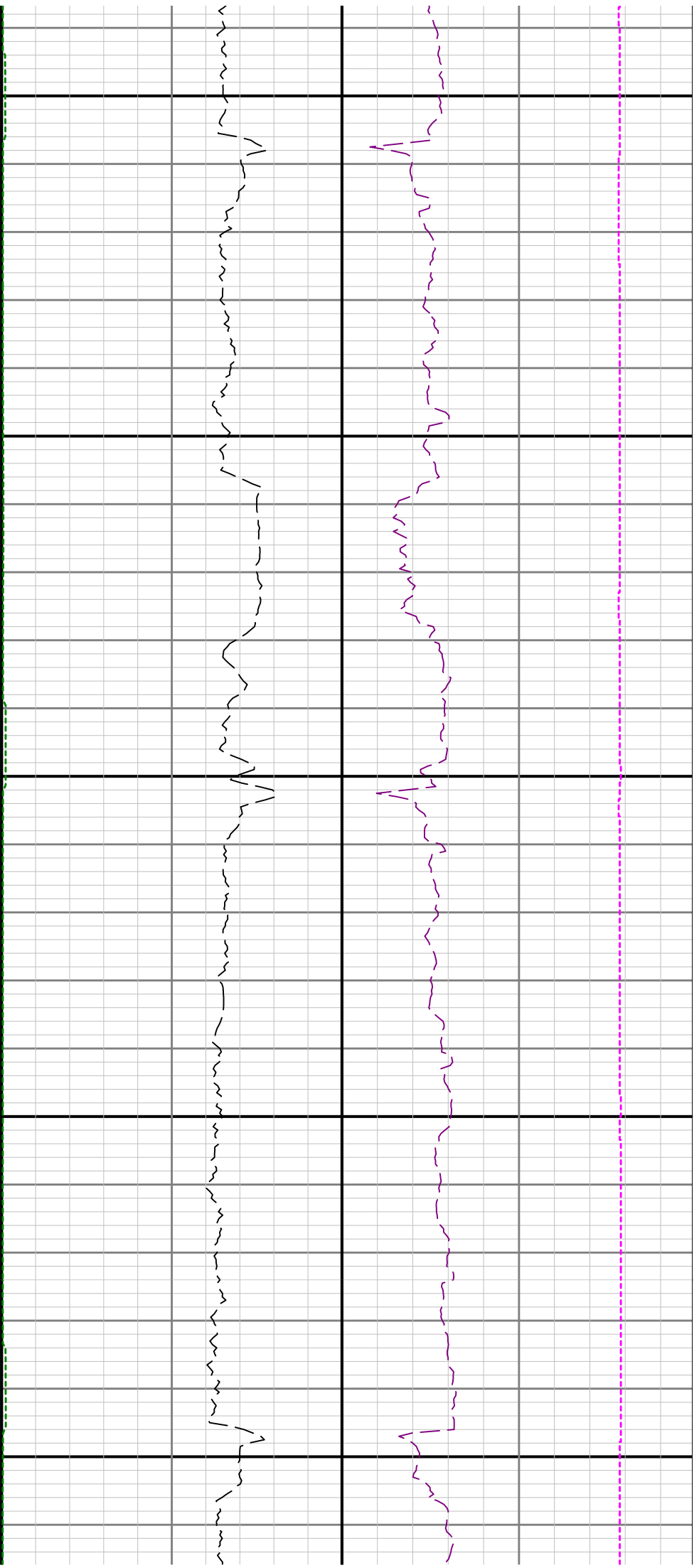






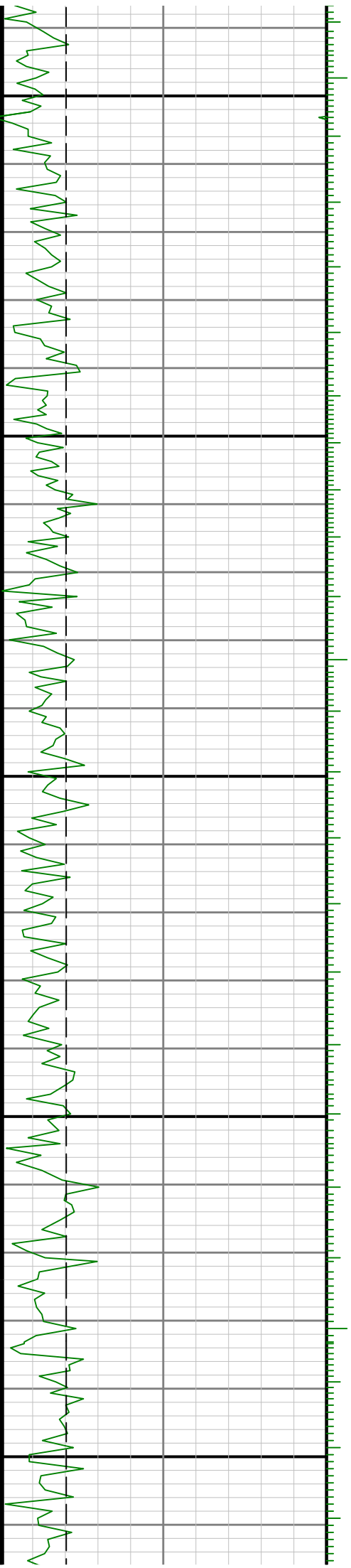


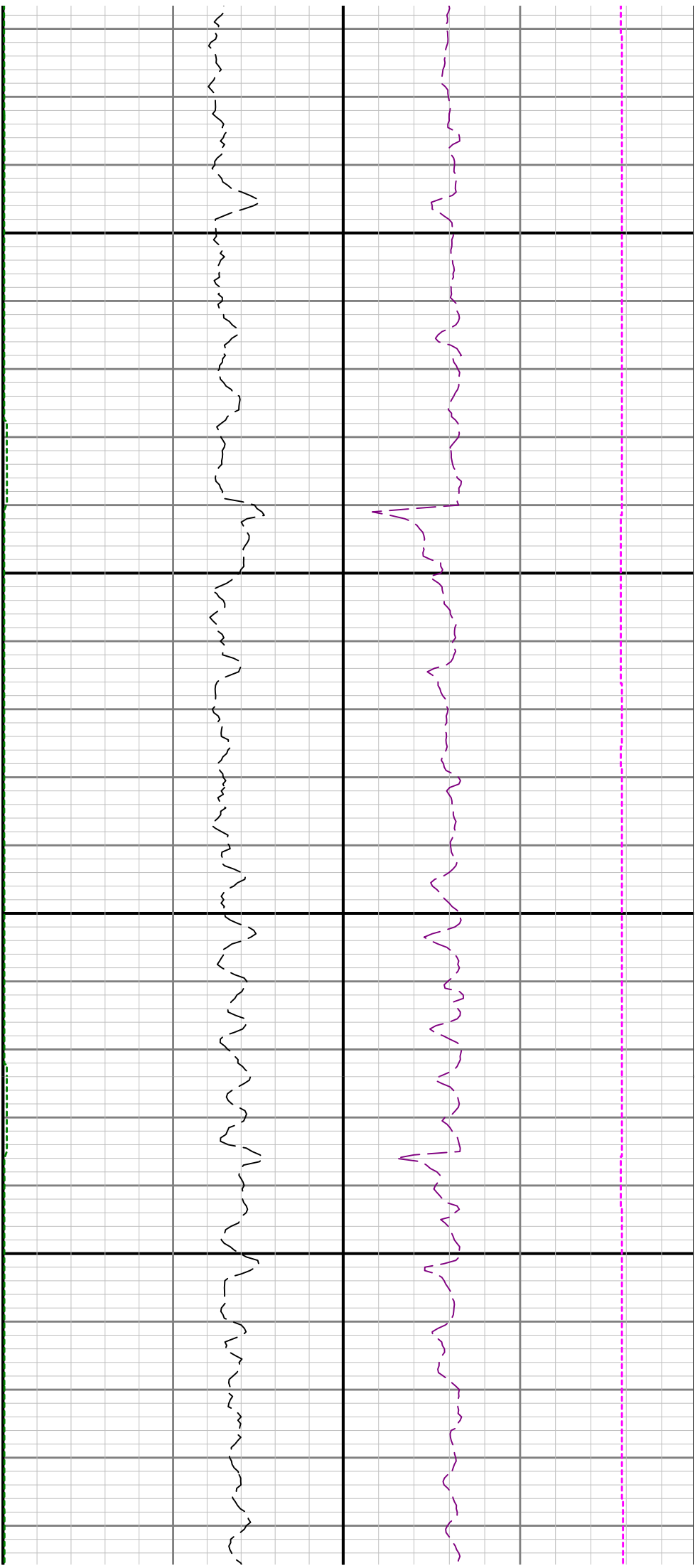




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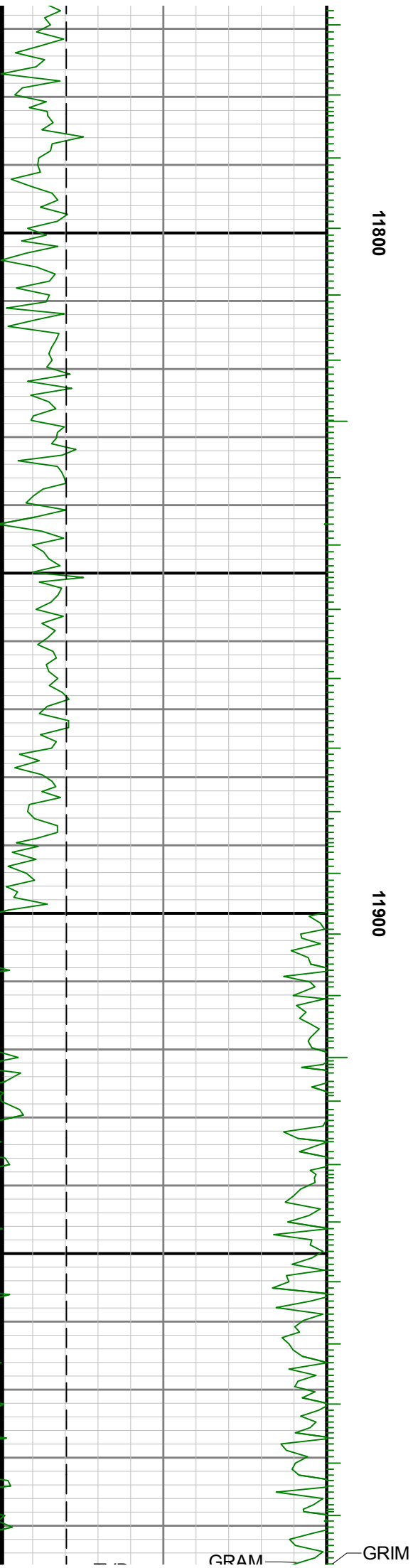
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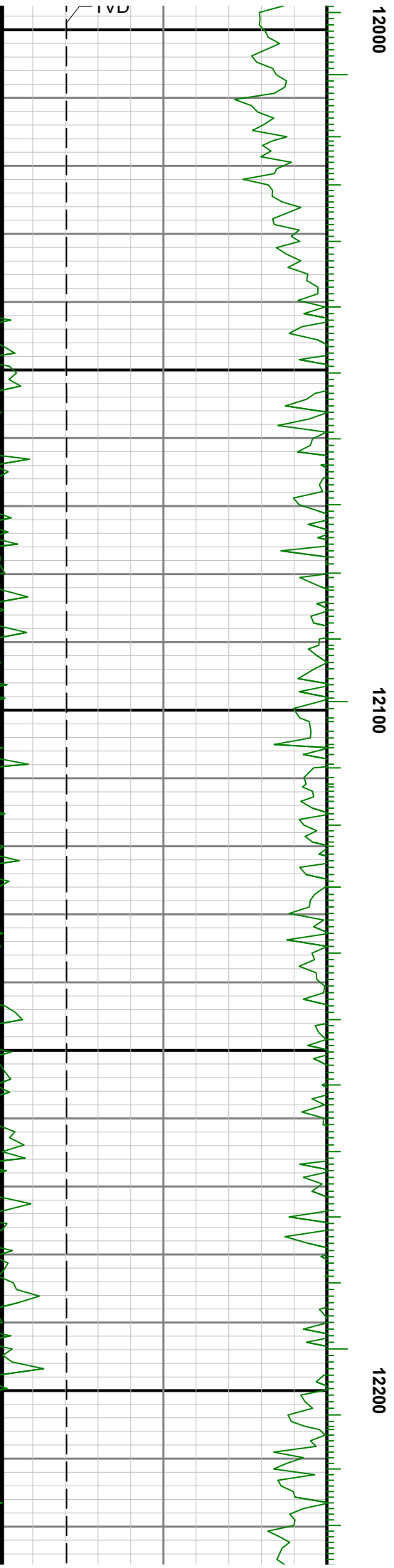
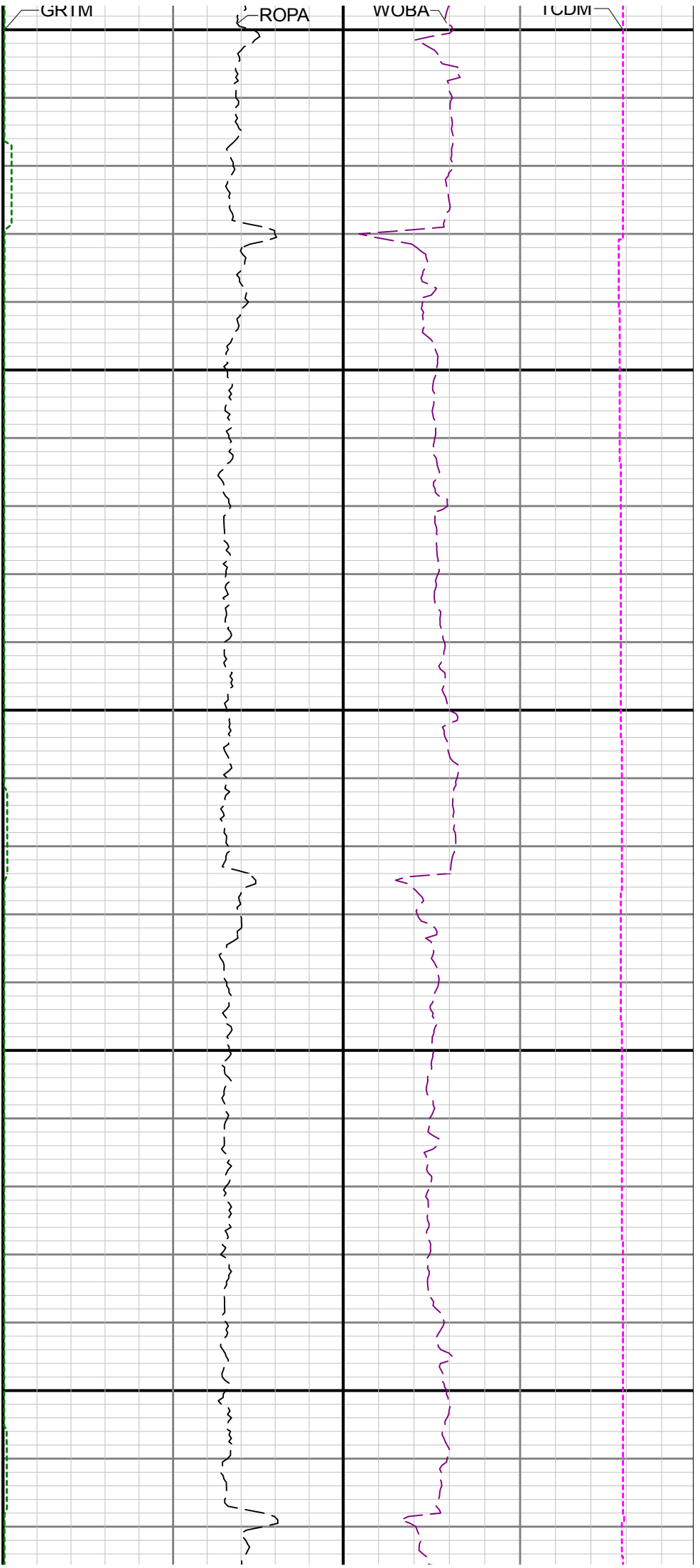


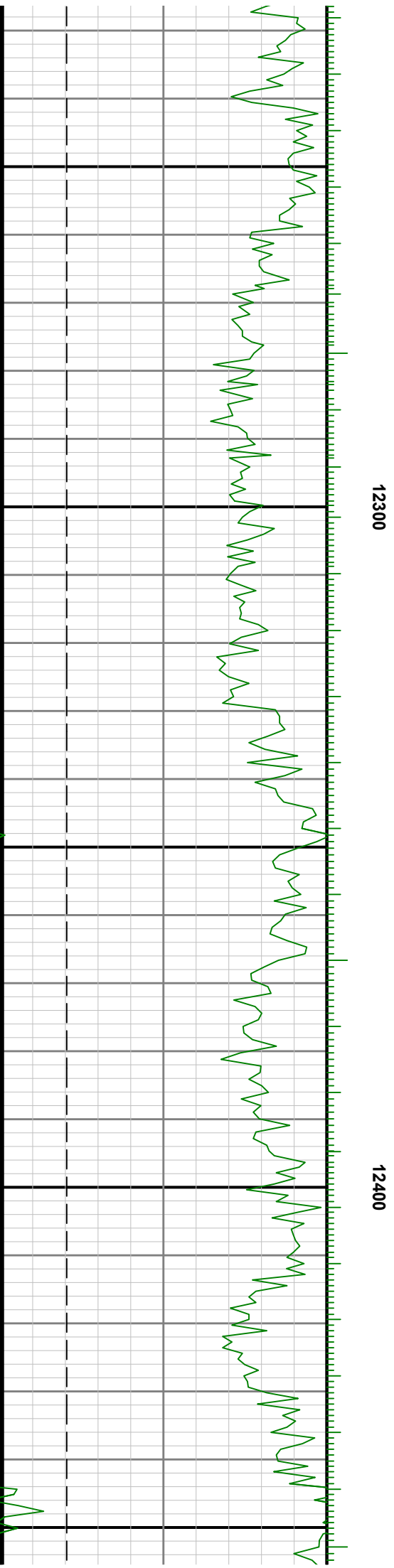
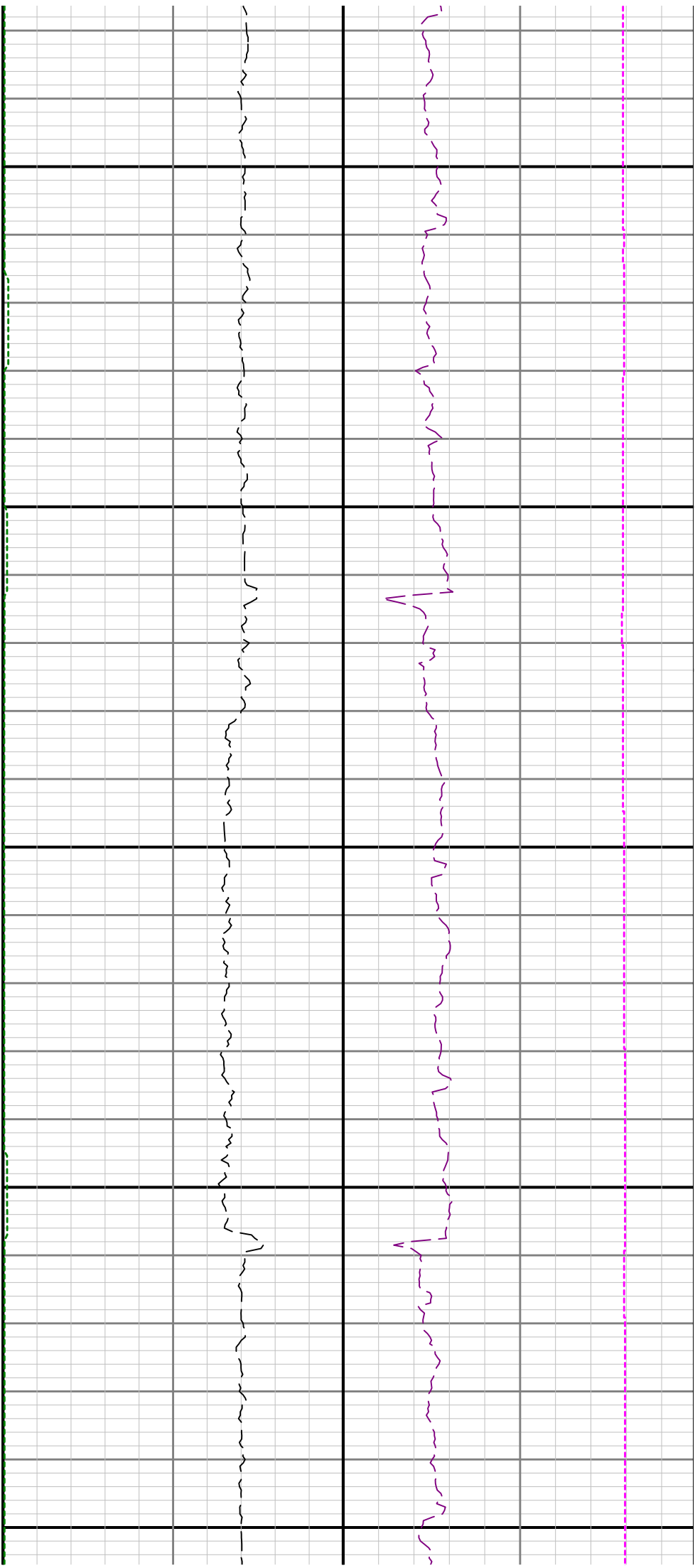


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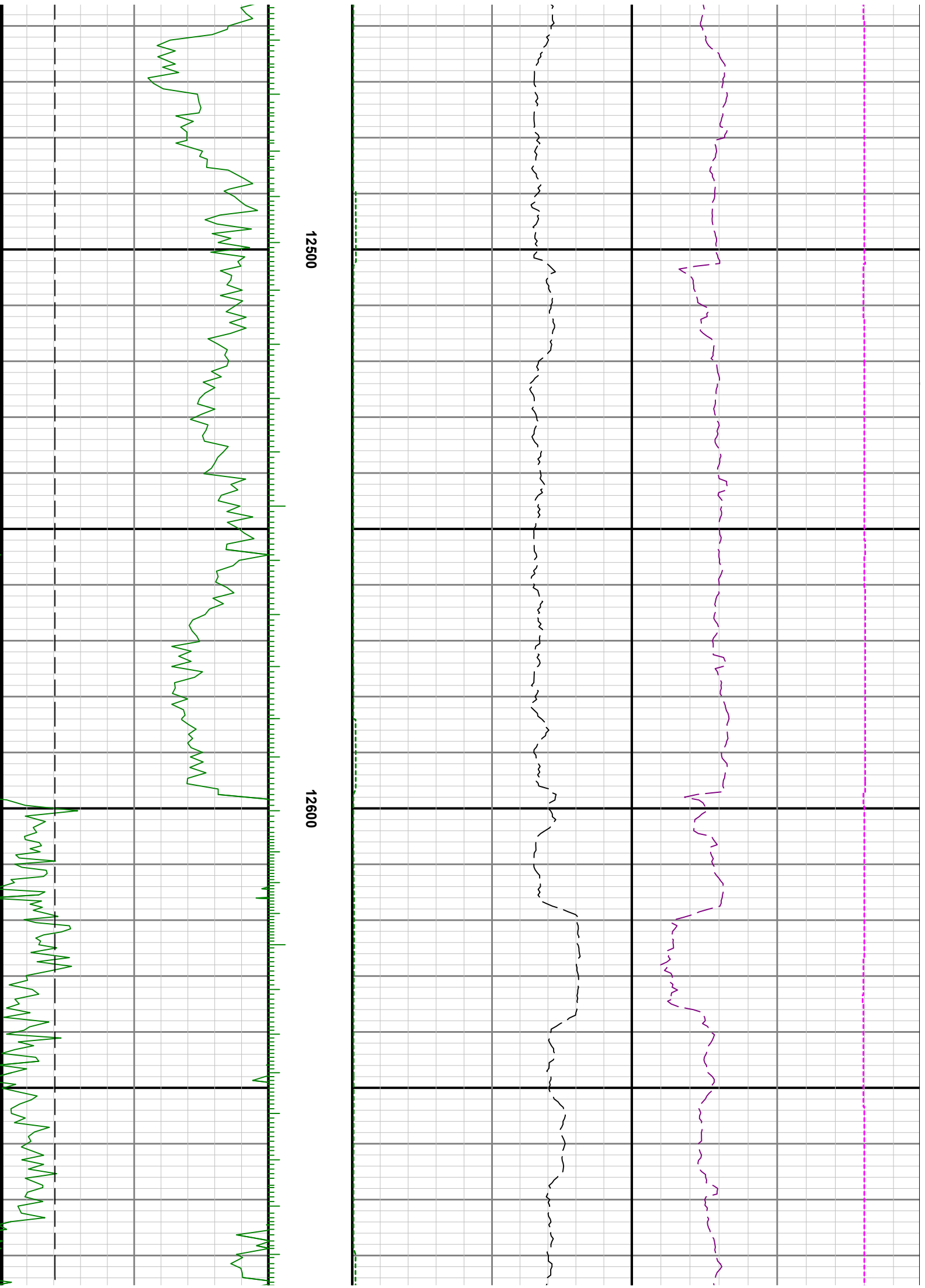
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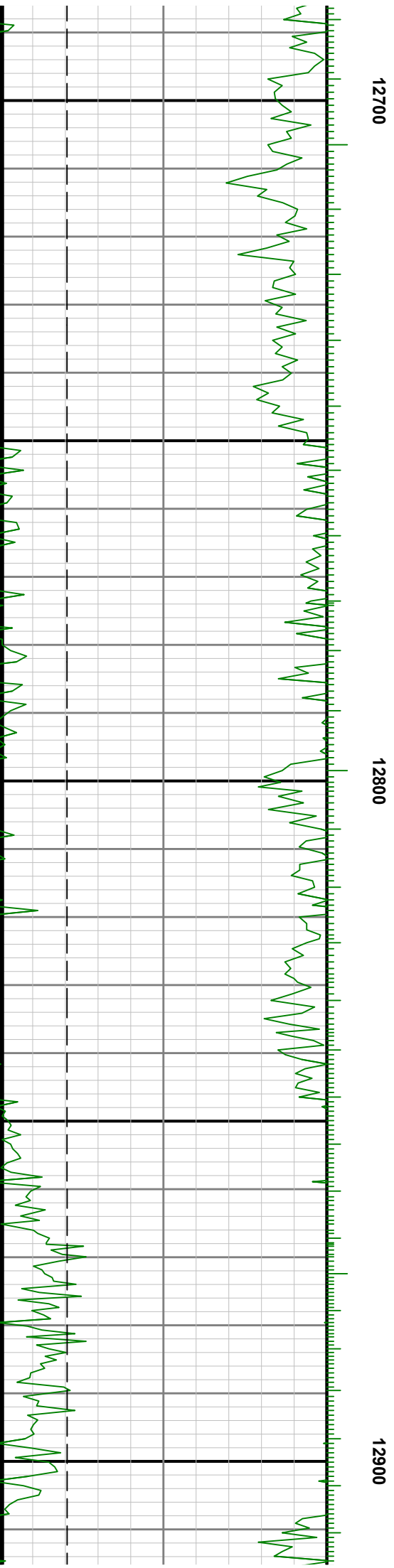
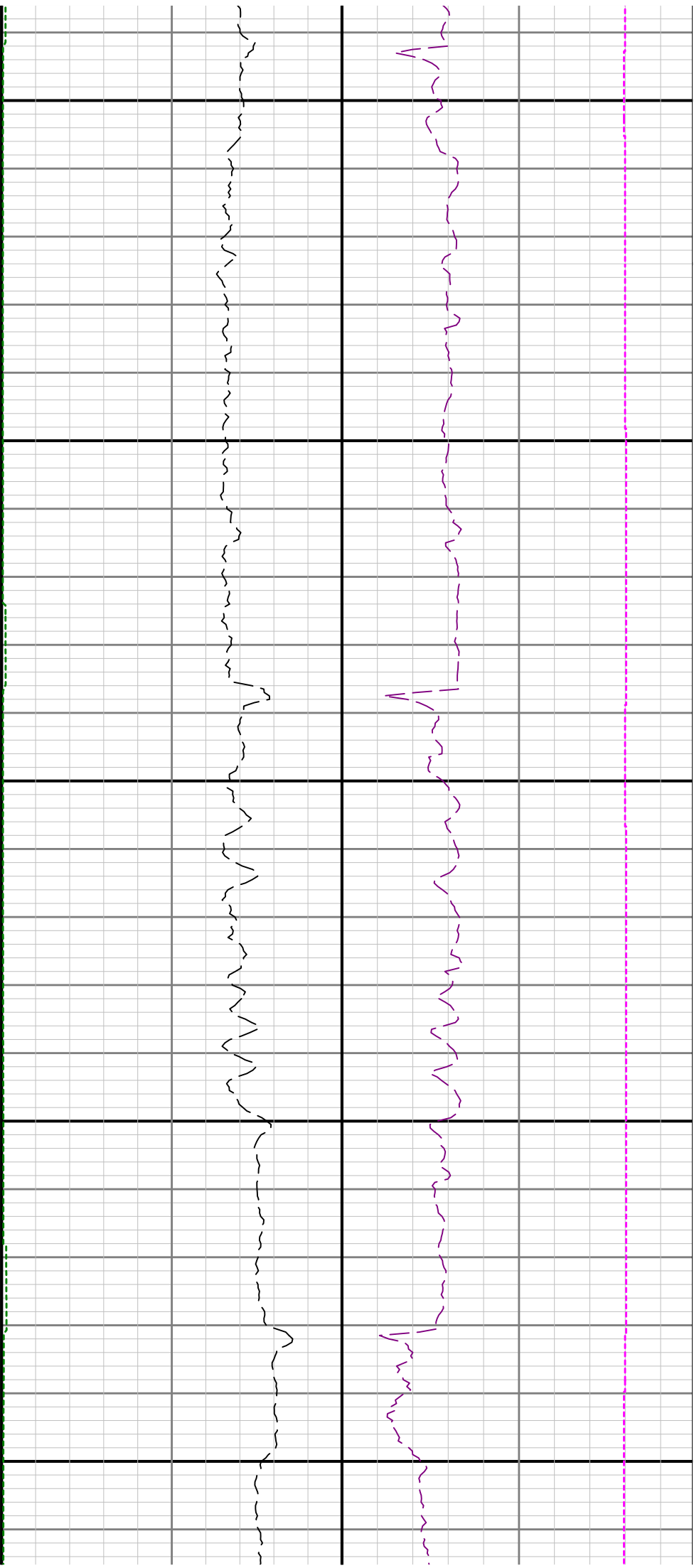


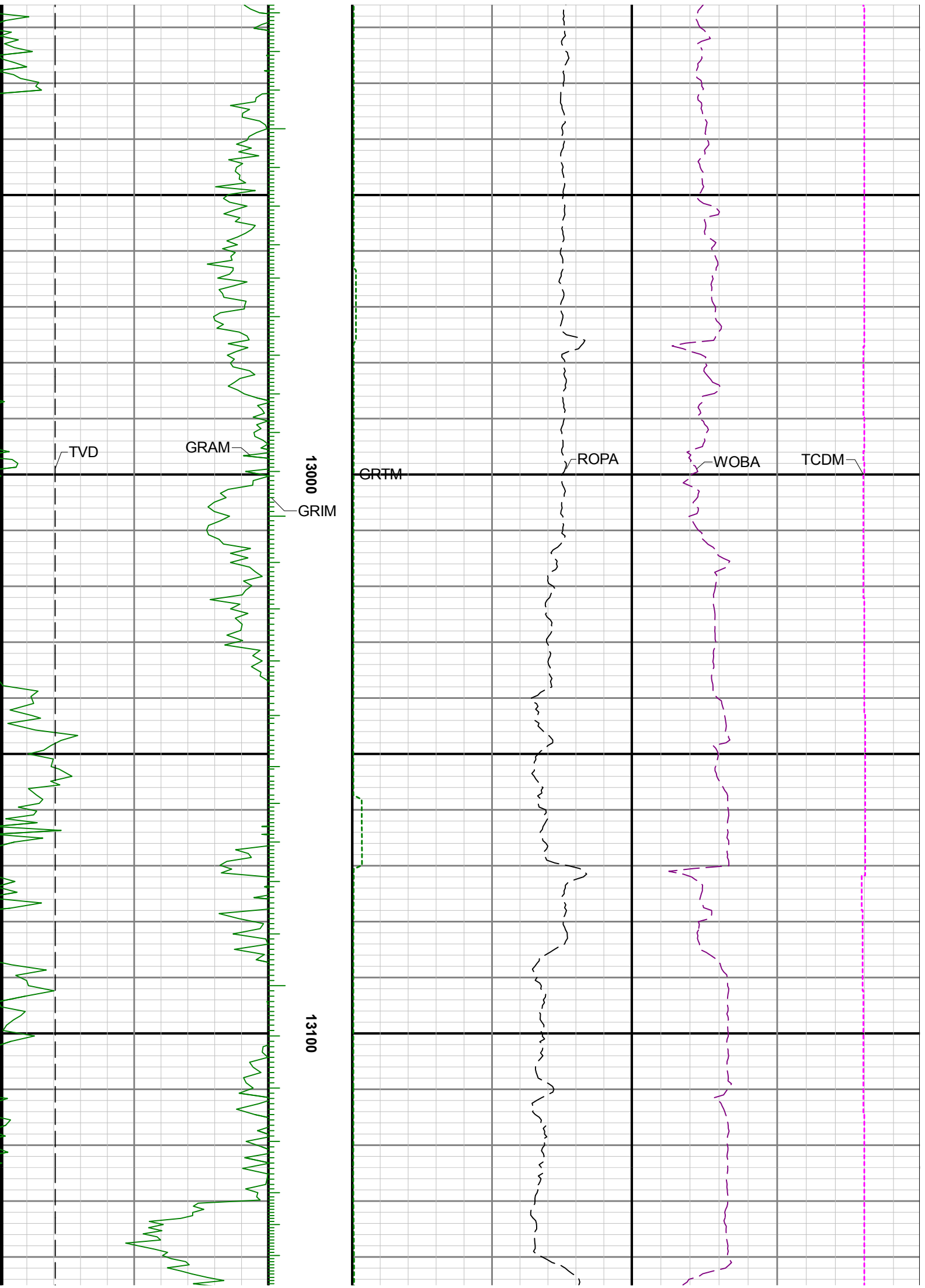


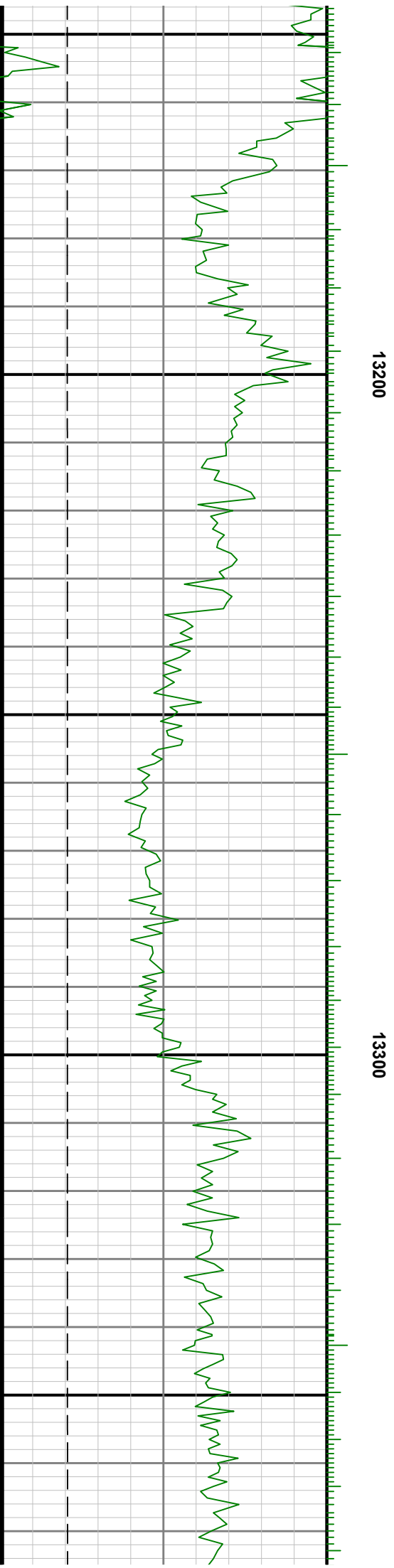
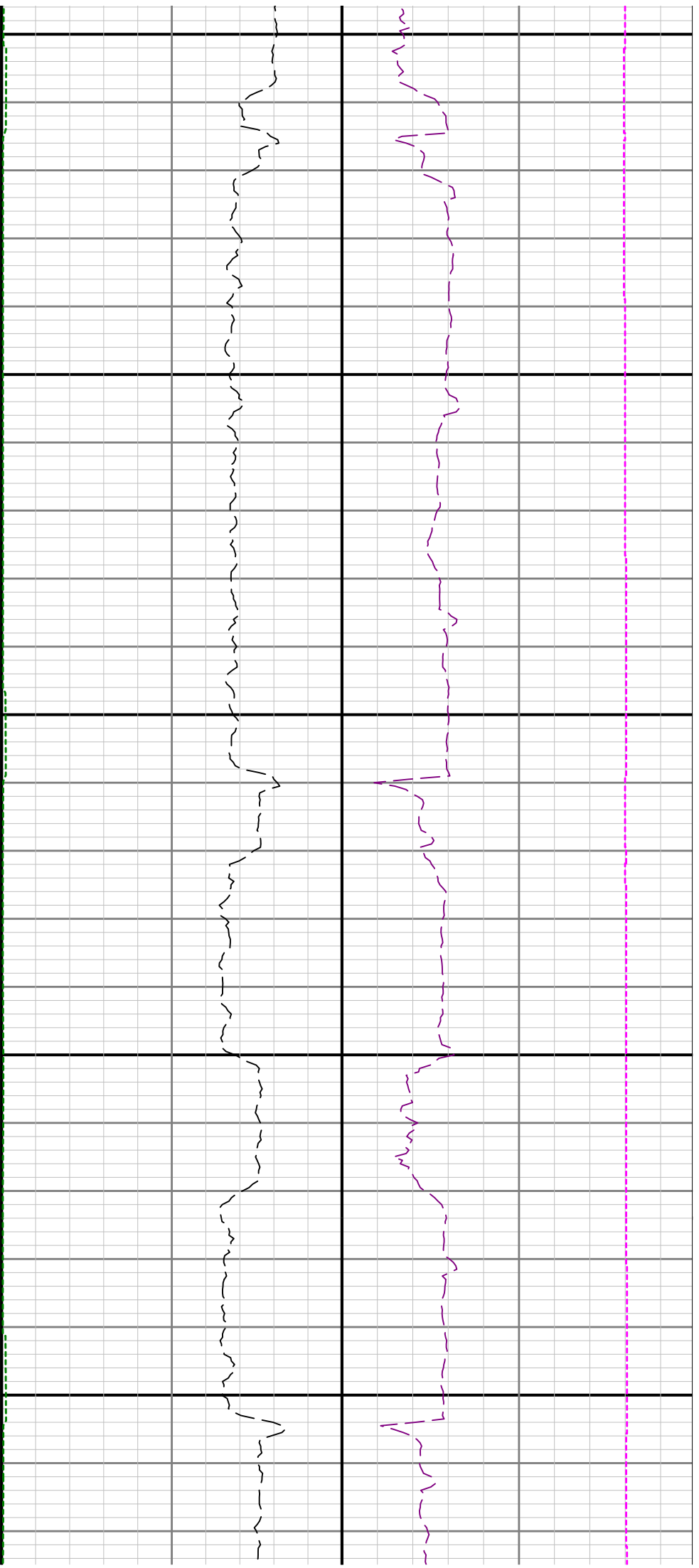


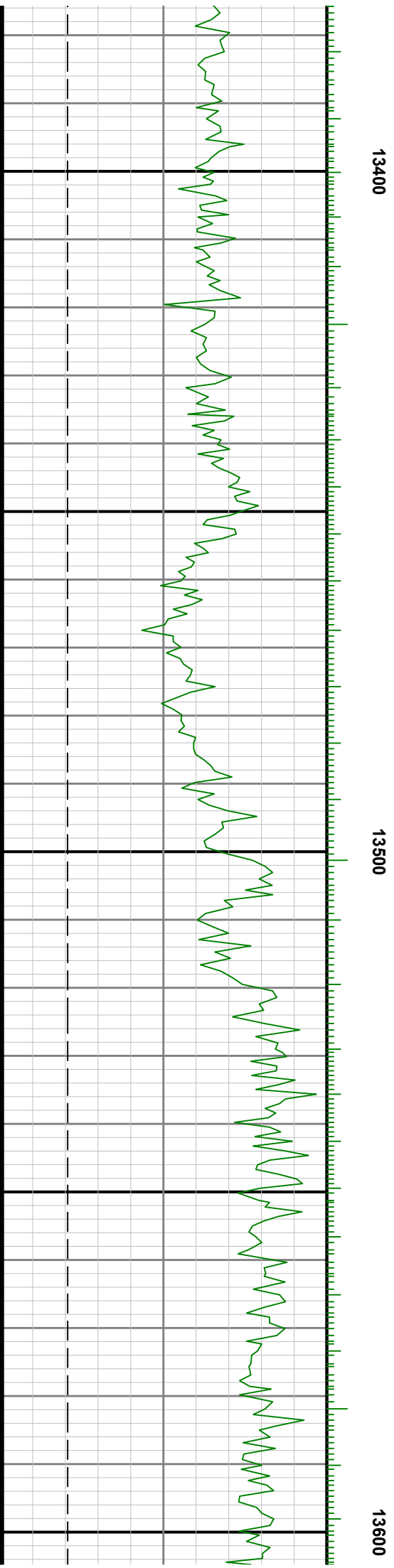
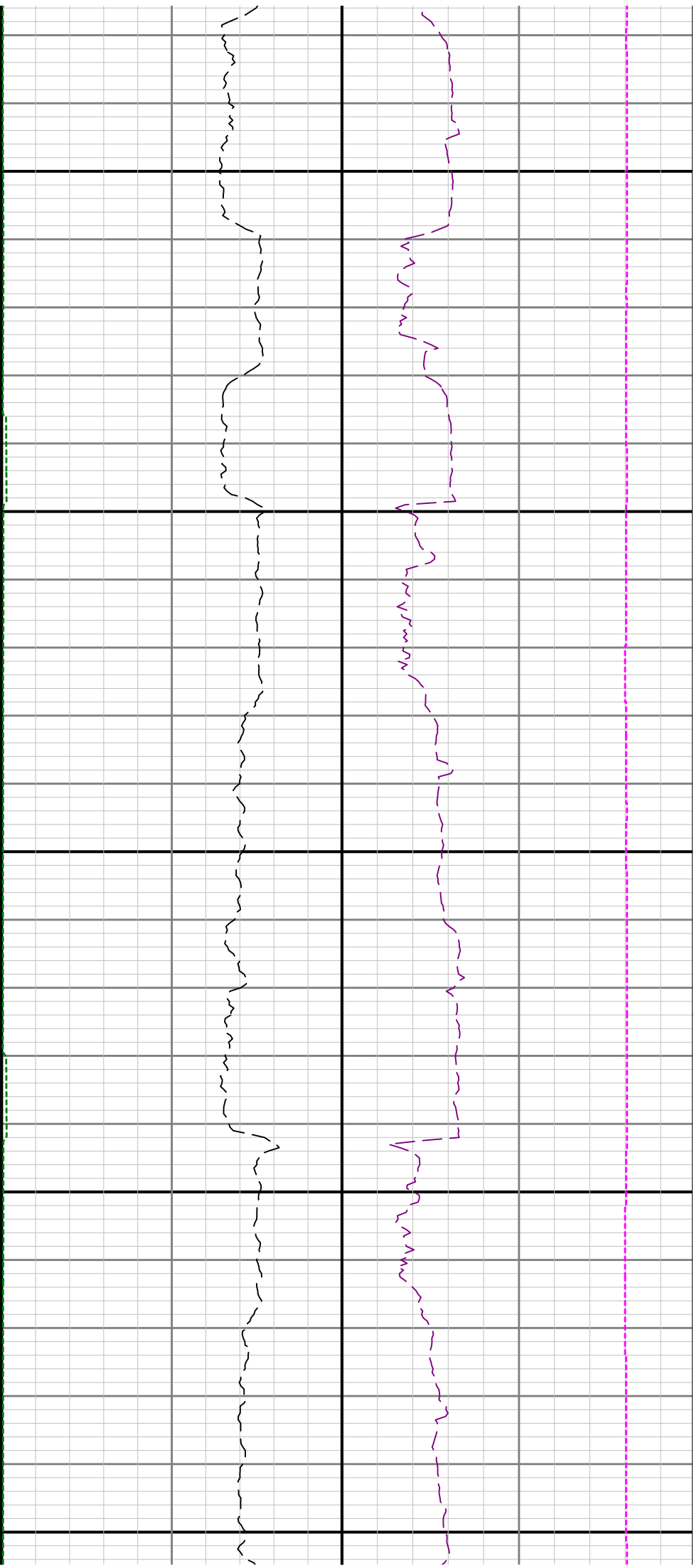


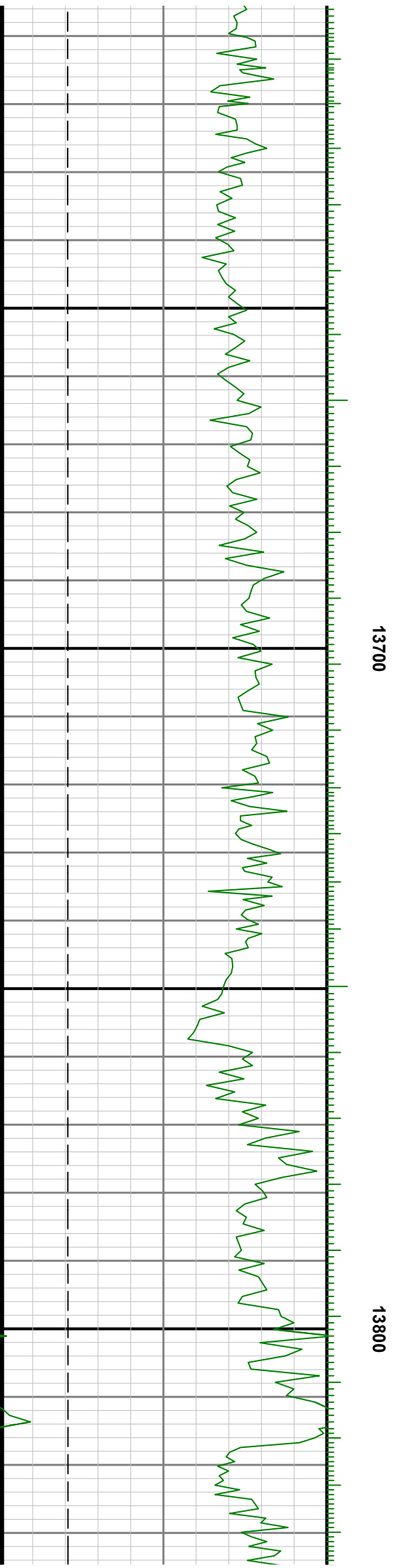
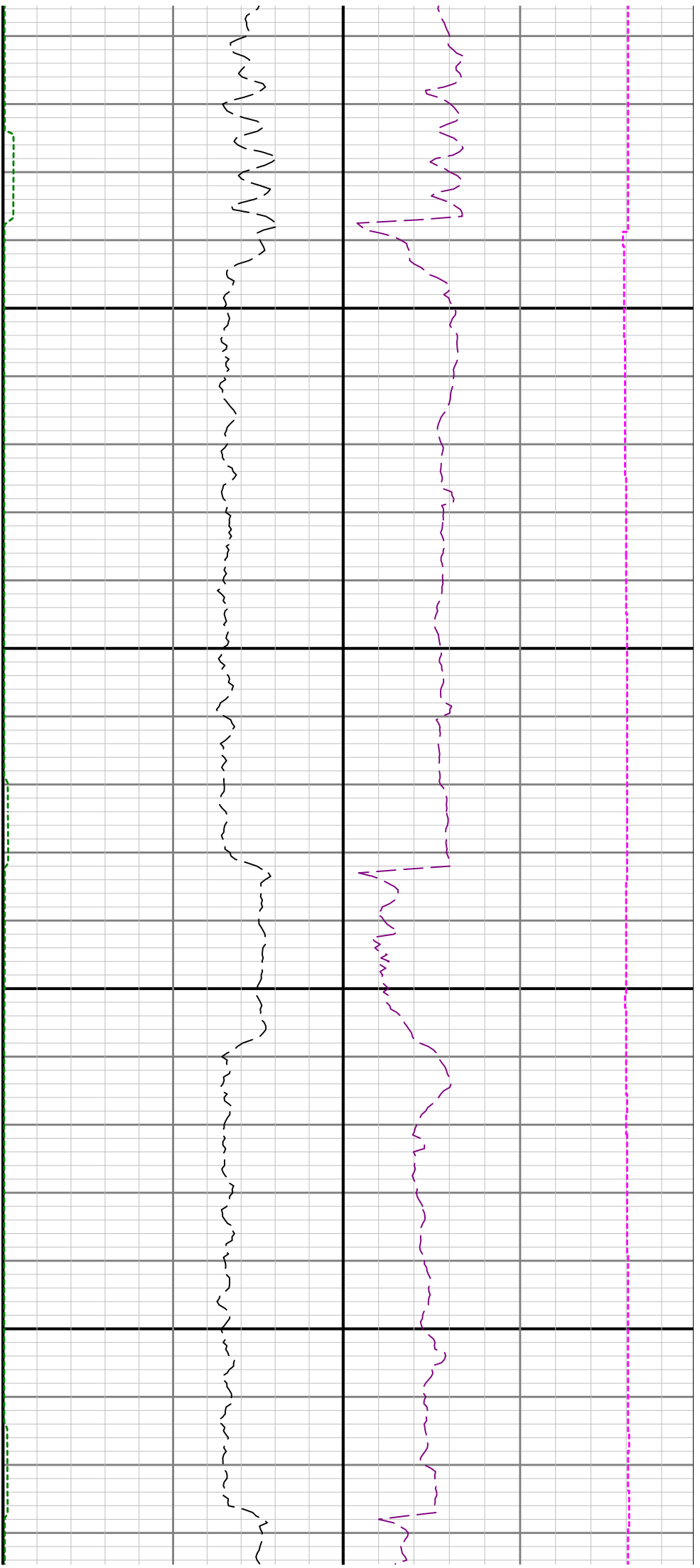


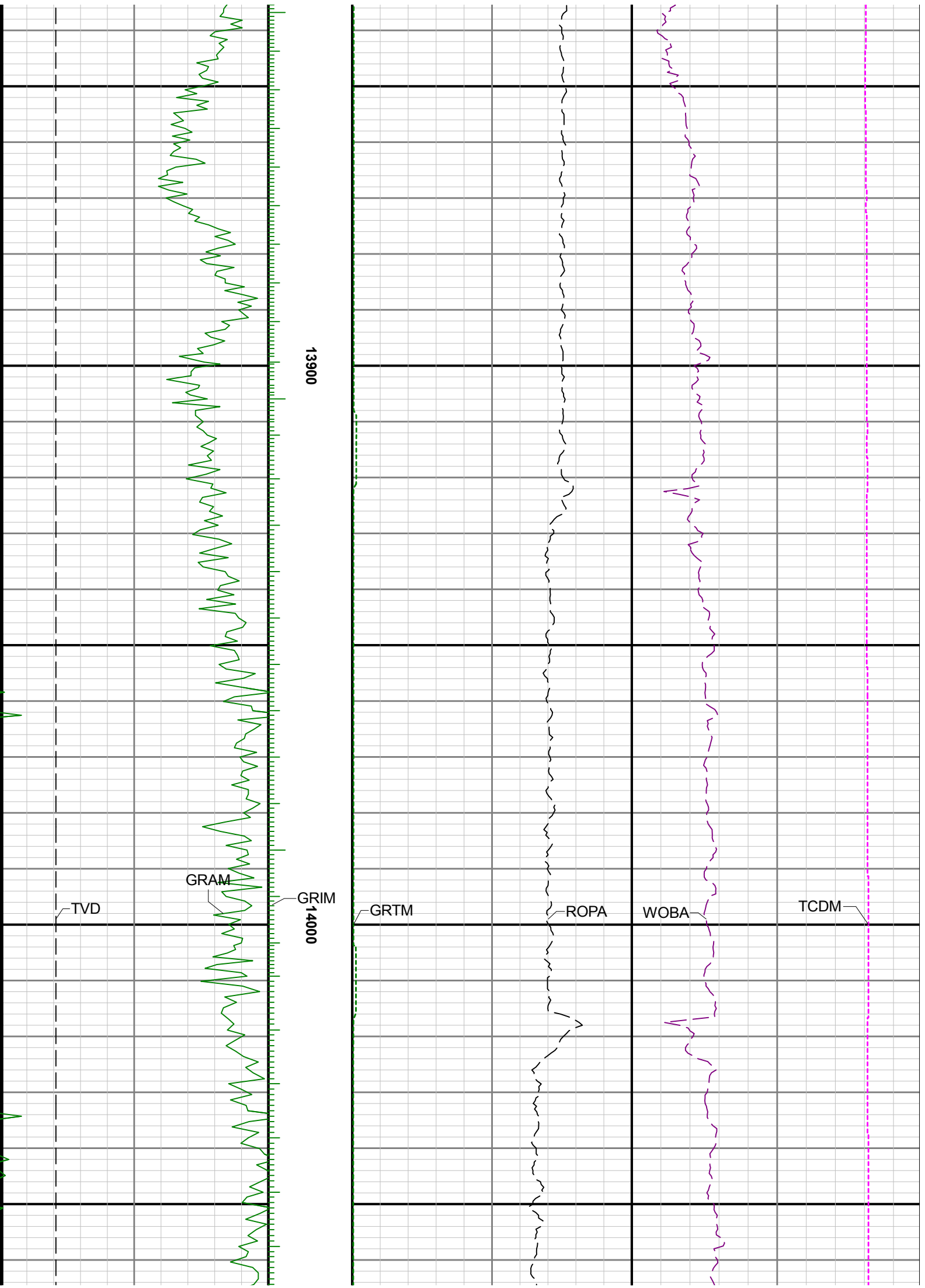


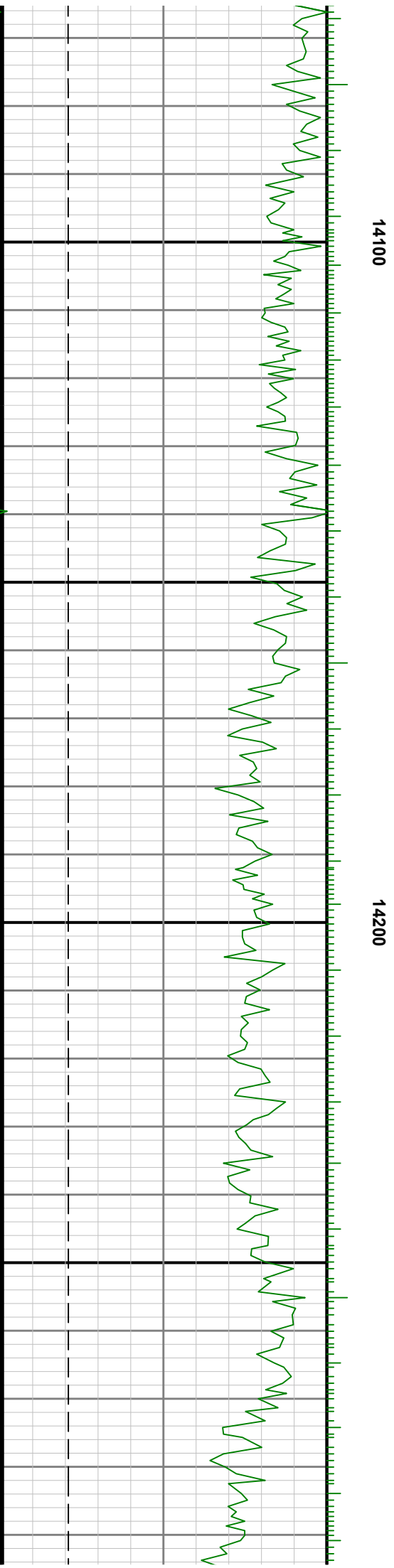
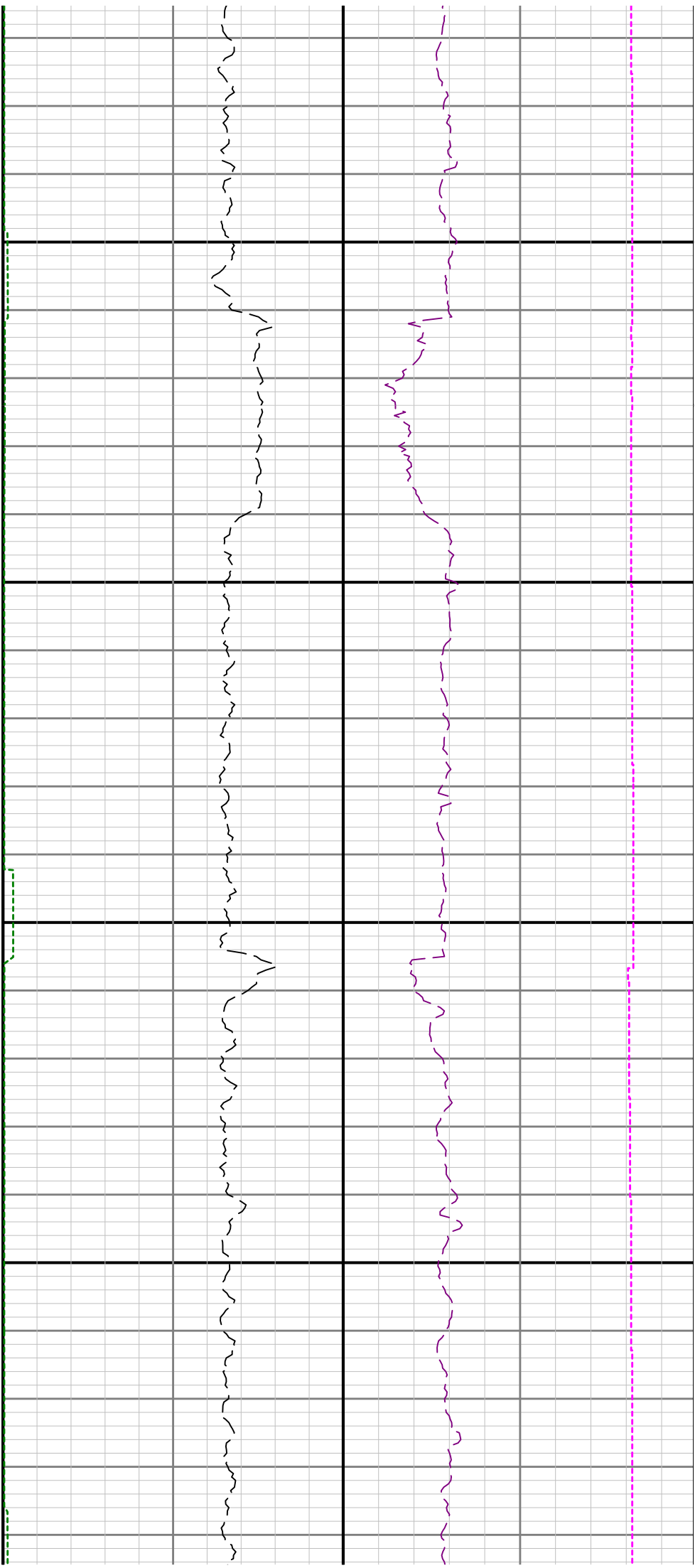




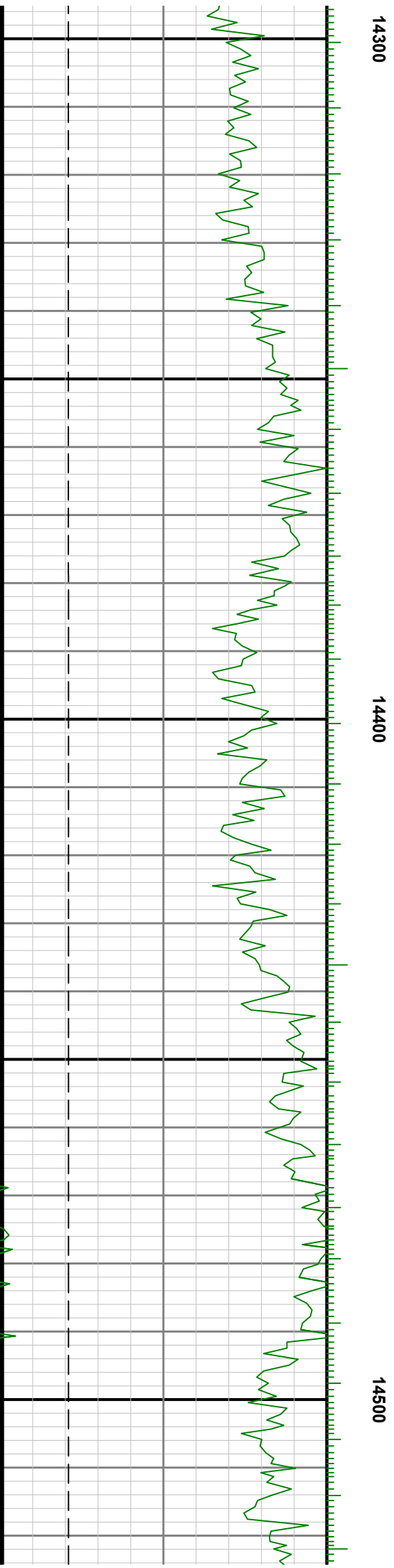
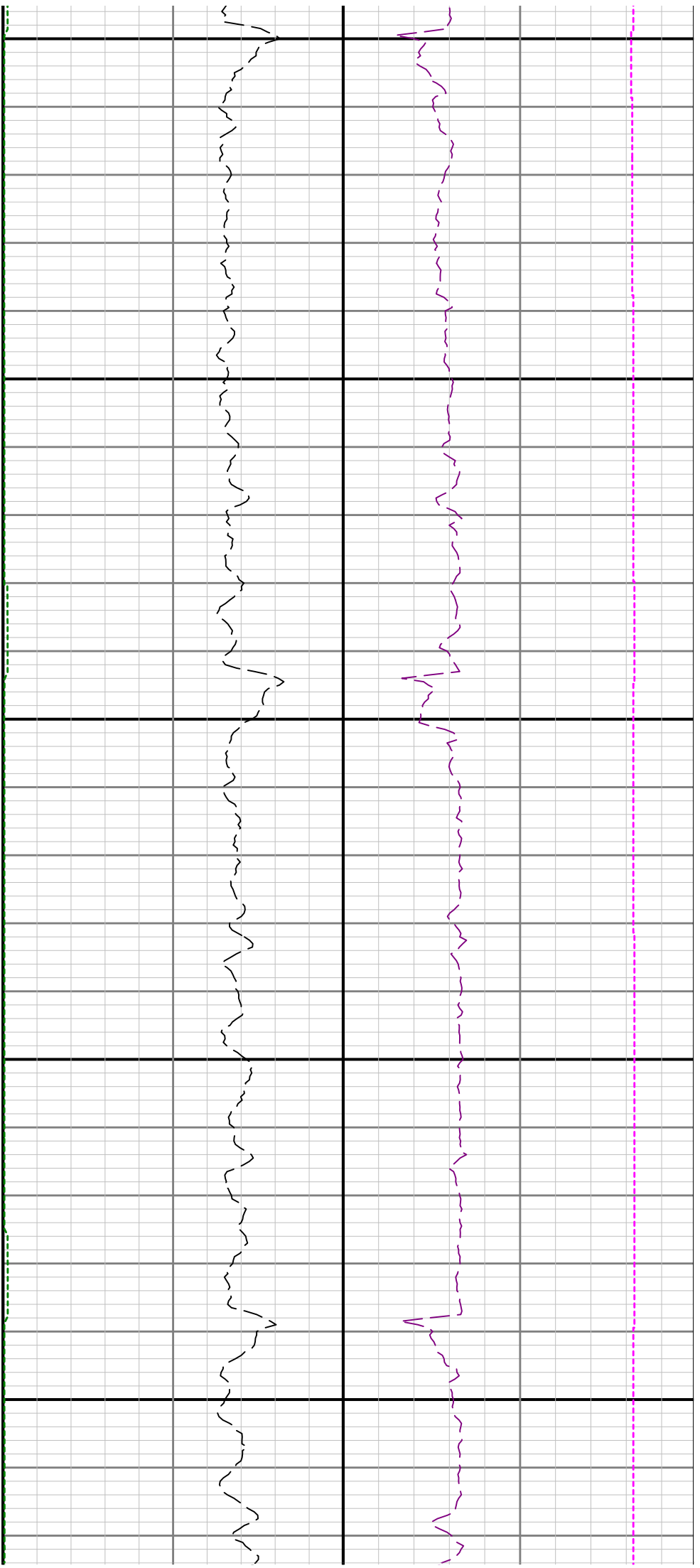


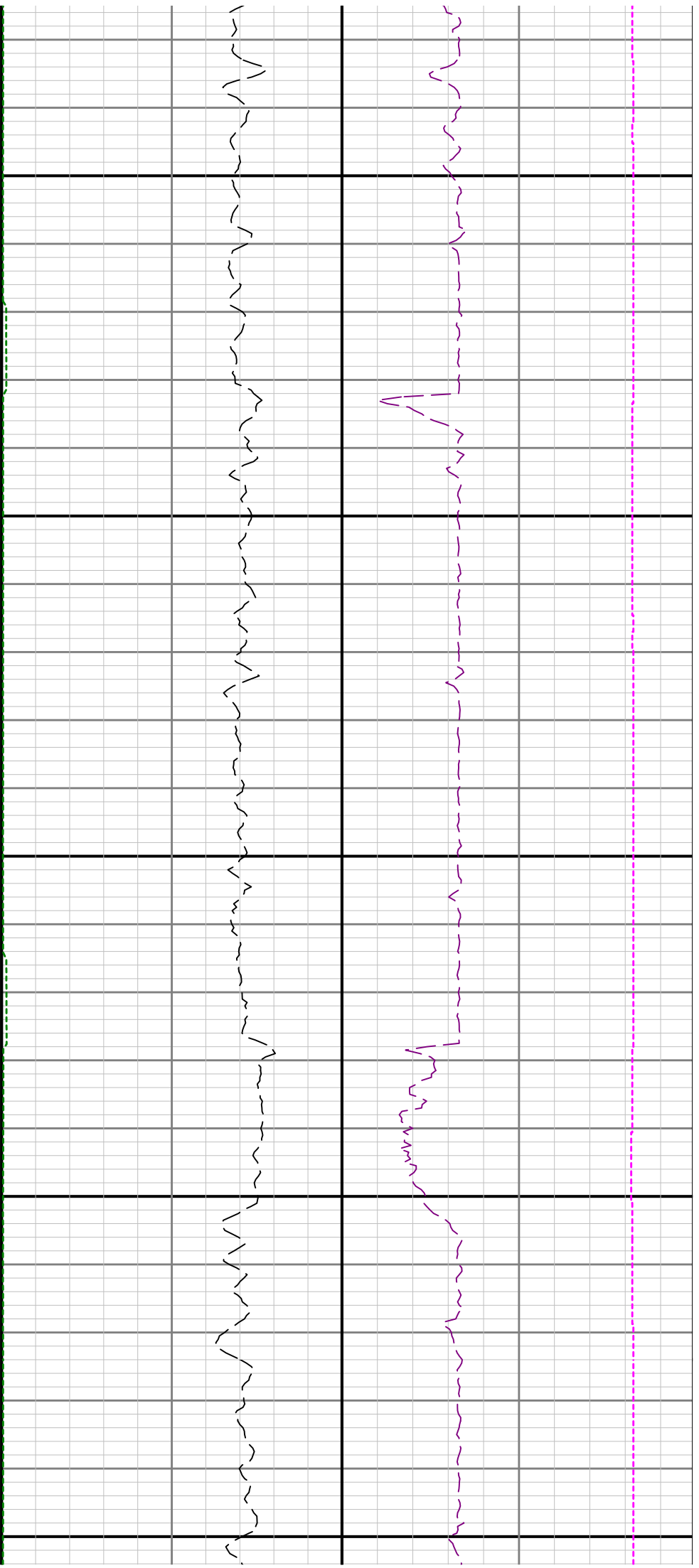






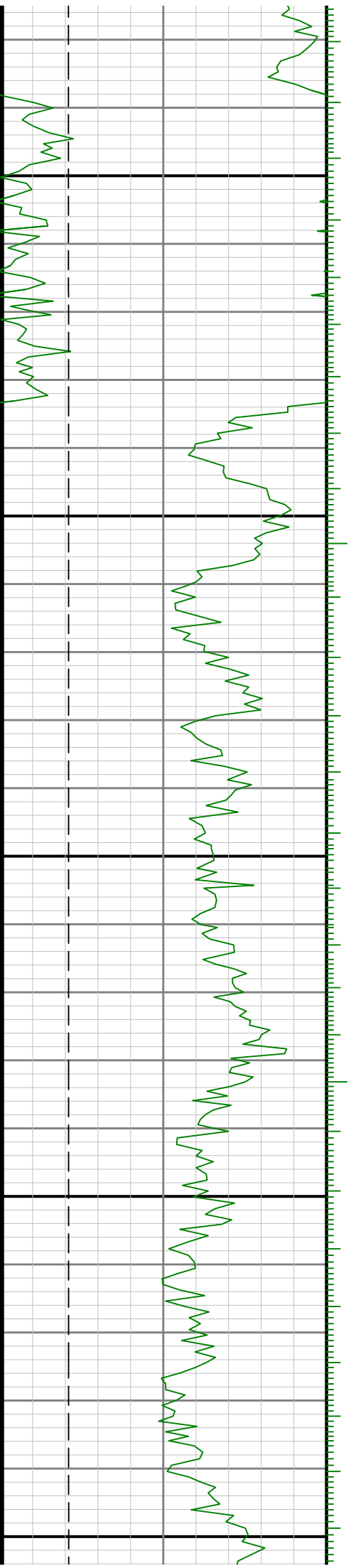


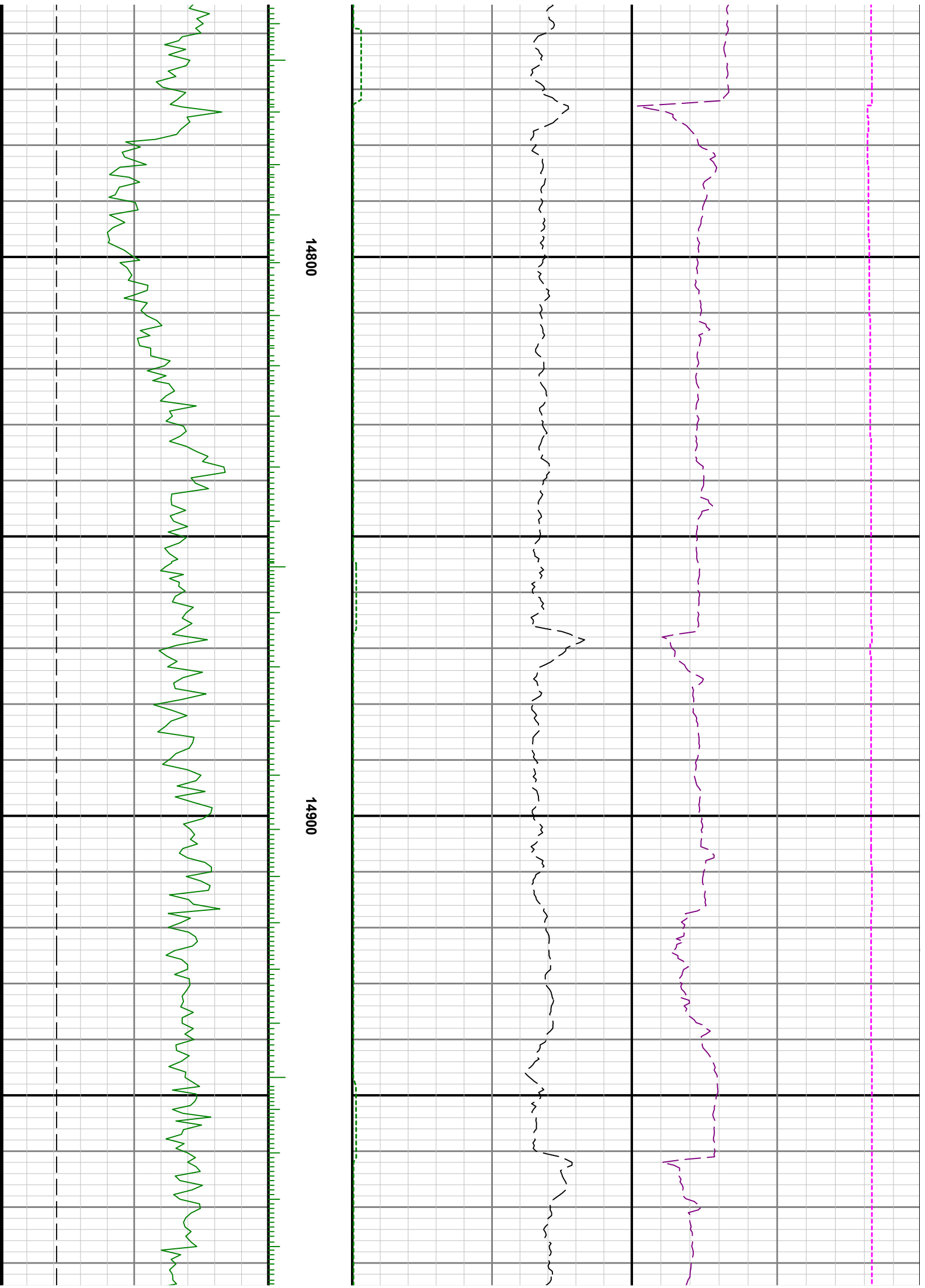


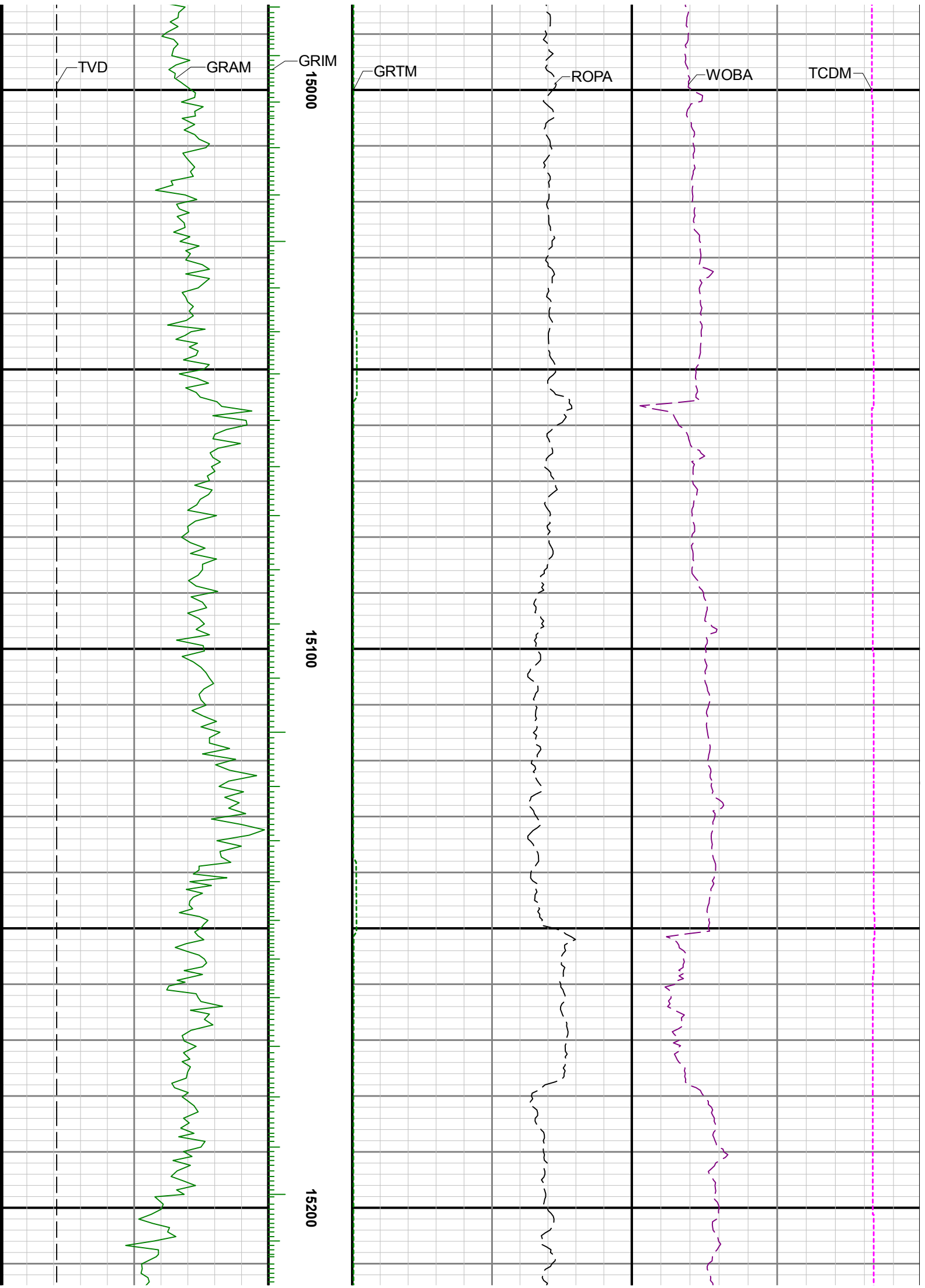


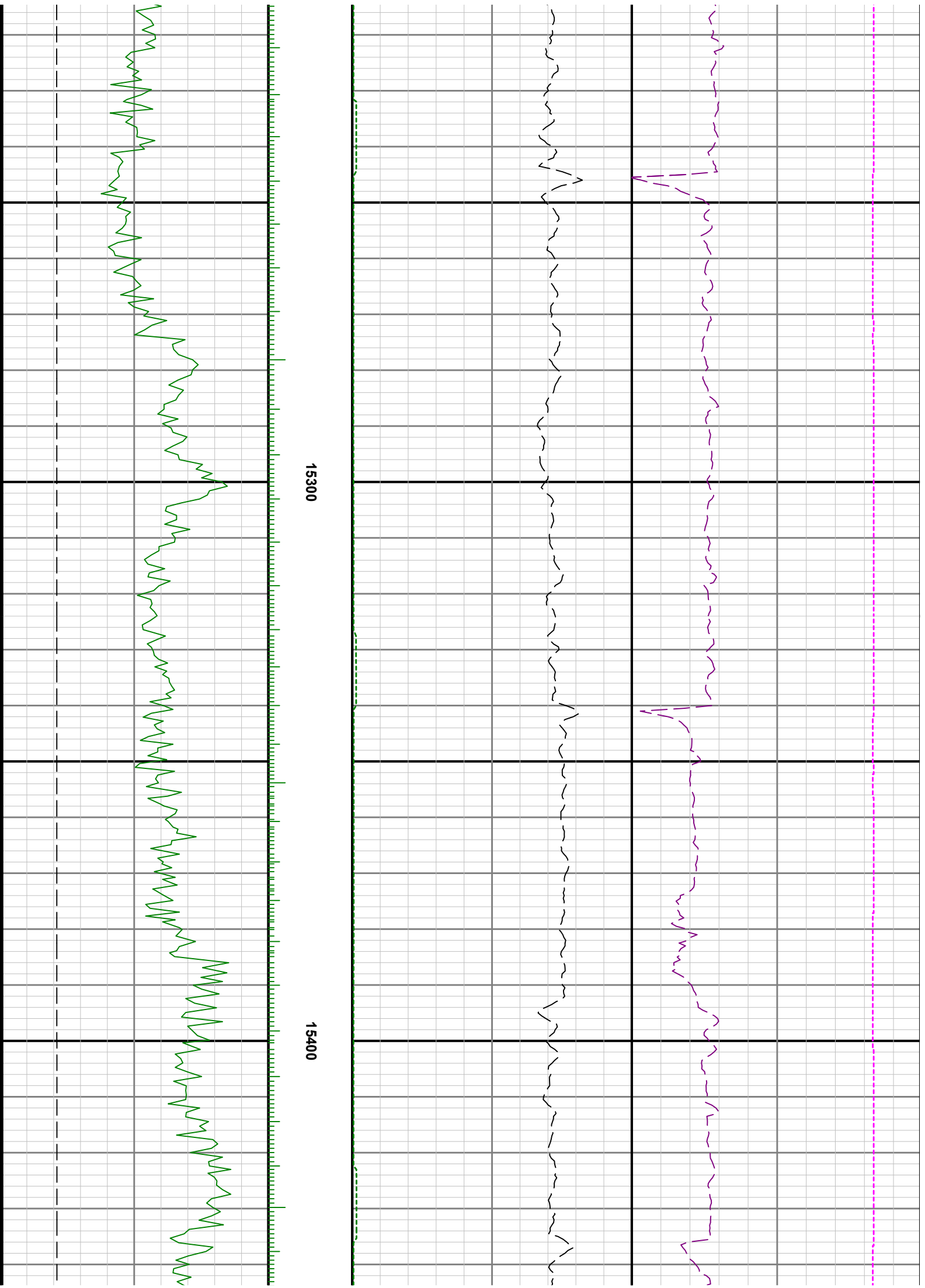
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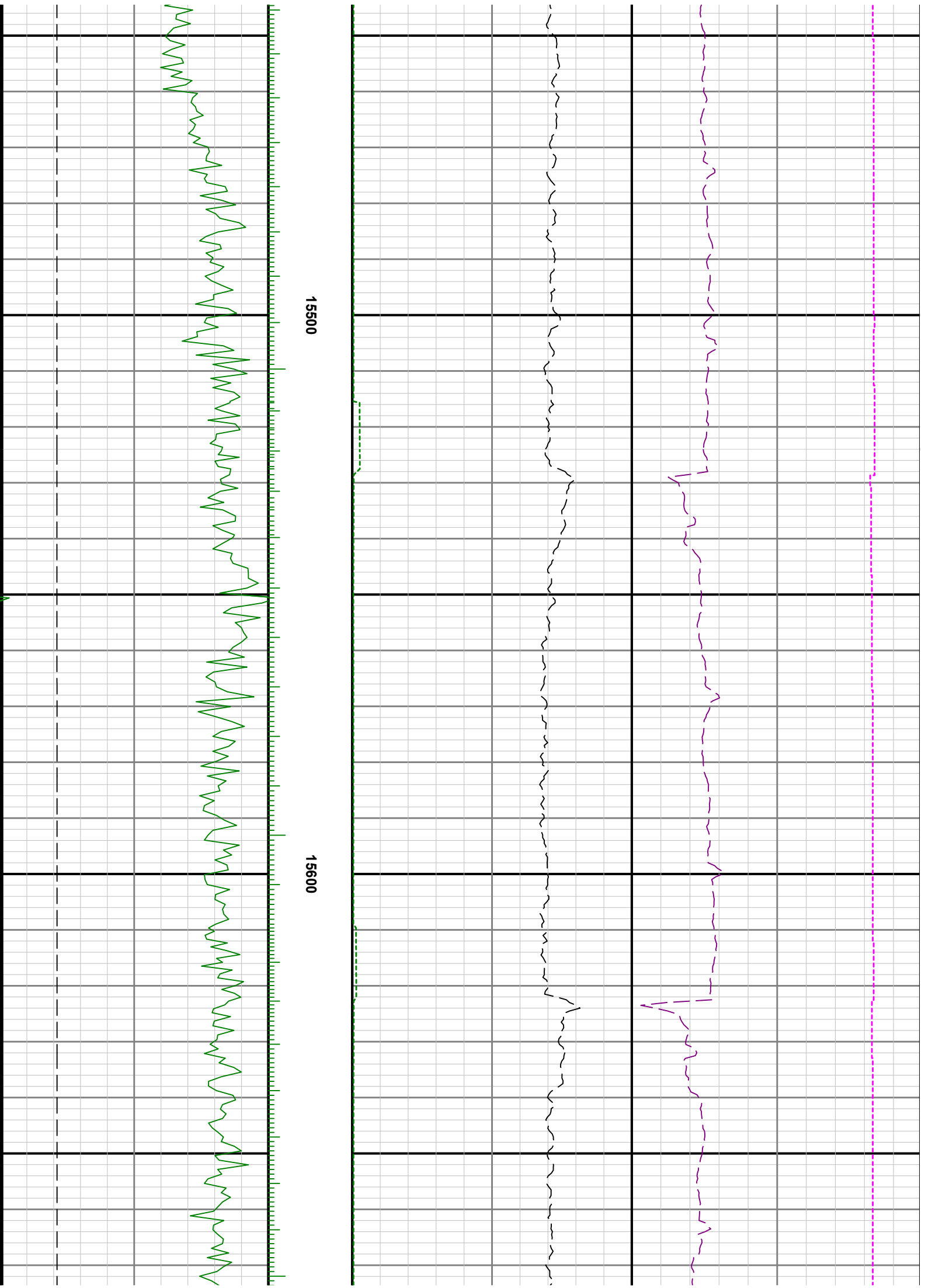
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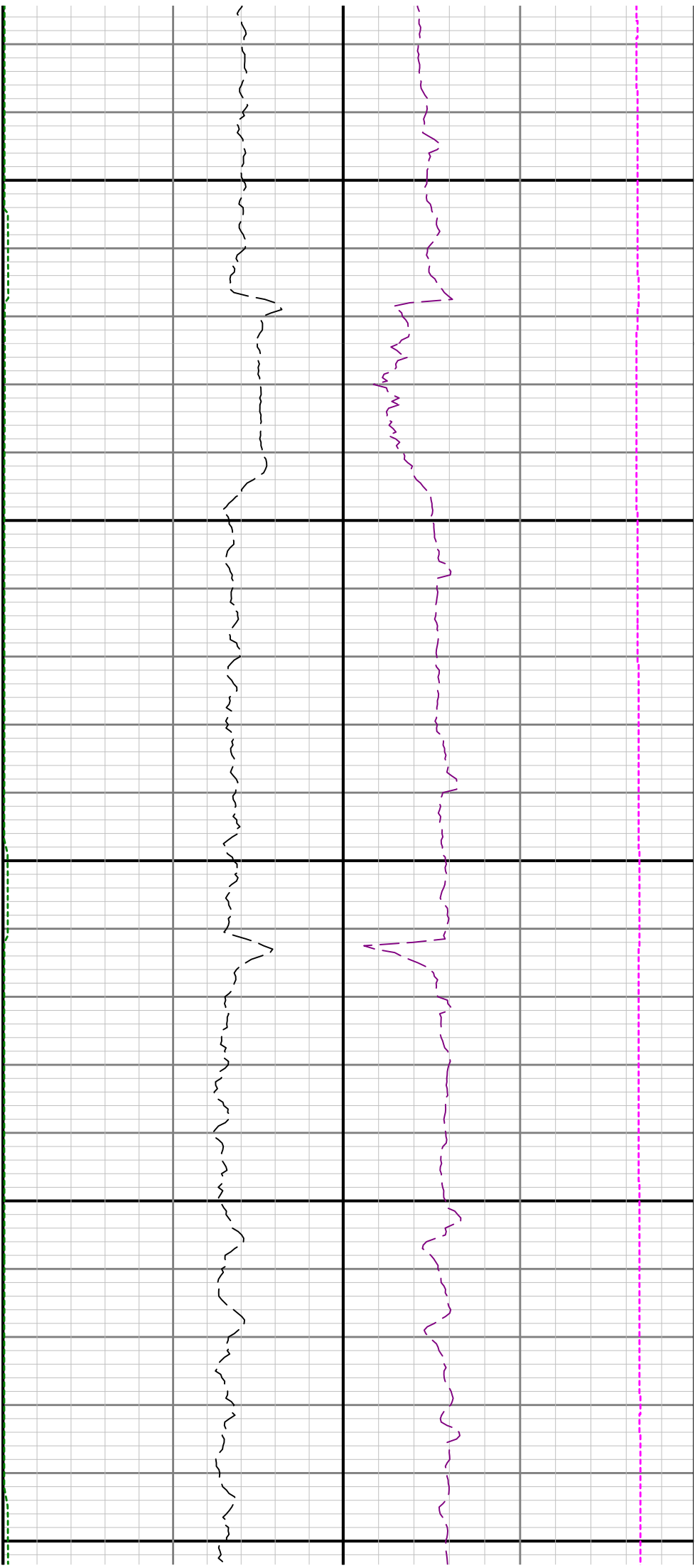












15700

15800

15900

