



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+ (%)
2016-09-24 08:00	1	1941.00	Fresh Water	8.5	27	8.3	0.0	0/1	Active Pit	1000	0.00
2016-09-24 20:00	1	2095.76	Oil Based Mud	9.6	74	0	21.6	0.75/0.25	Active Pit	30000	0.00
2016-09-25 08:00	1	5506.20	Oil Based Mud	9.3	46	0	22.0	0.74/0.26	Active Pit	22500	0.00
2016-09-25 20:00	1	8182.89	Oil Based Mud	9.5	42	0	21.2	0.82/0.18	Active Pit	20000	0.00
2016-09-26 08:00	1	10895.26	Oil Based Mud	9.7	42	0	19.6	0.74/0.26	Active Pit	22500	0.00
2016-09-26 20:00	1	13342.39	Oil Based Mud	9.6	40	0	21.6	0.75/0.25	Active Pit	22500	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	12077516	Near Bit VSS	5.98	6.78	7.000	4.330
1	ATC_SU	12077516	Near Bit Inclination	5.98	6.78	7.000	4.330
1	ATC_MWD	12178891	Gamma (single)	2.74	13.21	7.000	3.250
1	ATC_MWD	12178891	Directional (mag)	12.27	22.74	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 1931 to 15980 ft MD ( 1931 to 5679.7 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	The interval from 1929 to 1941 ft MD (1929 to 1941 ft TVD) has no surface data due to the Gamma Ray sensor to bit offset.
2	1985.00	8.500	1	The interval from 1979 to 1990 ft MD (1979 to 1990 ft TVD) has no gamma data due to a WITS issue.
3	15970.00	8.500	1	The interval from 15967 to 15980 ft MD (5679.7 to 5679.6 ft TVD) has no gamma data due to sensor to bit offset.

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 LD26-625

Date From: 2016-09-24 19:22:55

Date To: 2016-09-27 07:45:34

2016-09-27 18:44

Top: 1929.00

Bottom: 15980.00

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

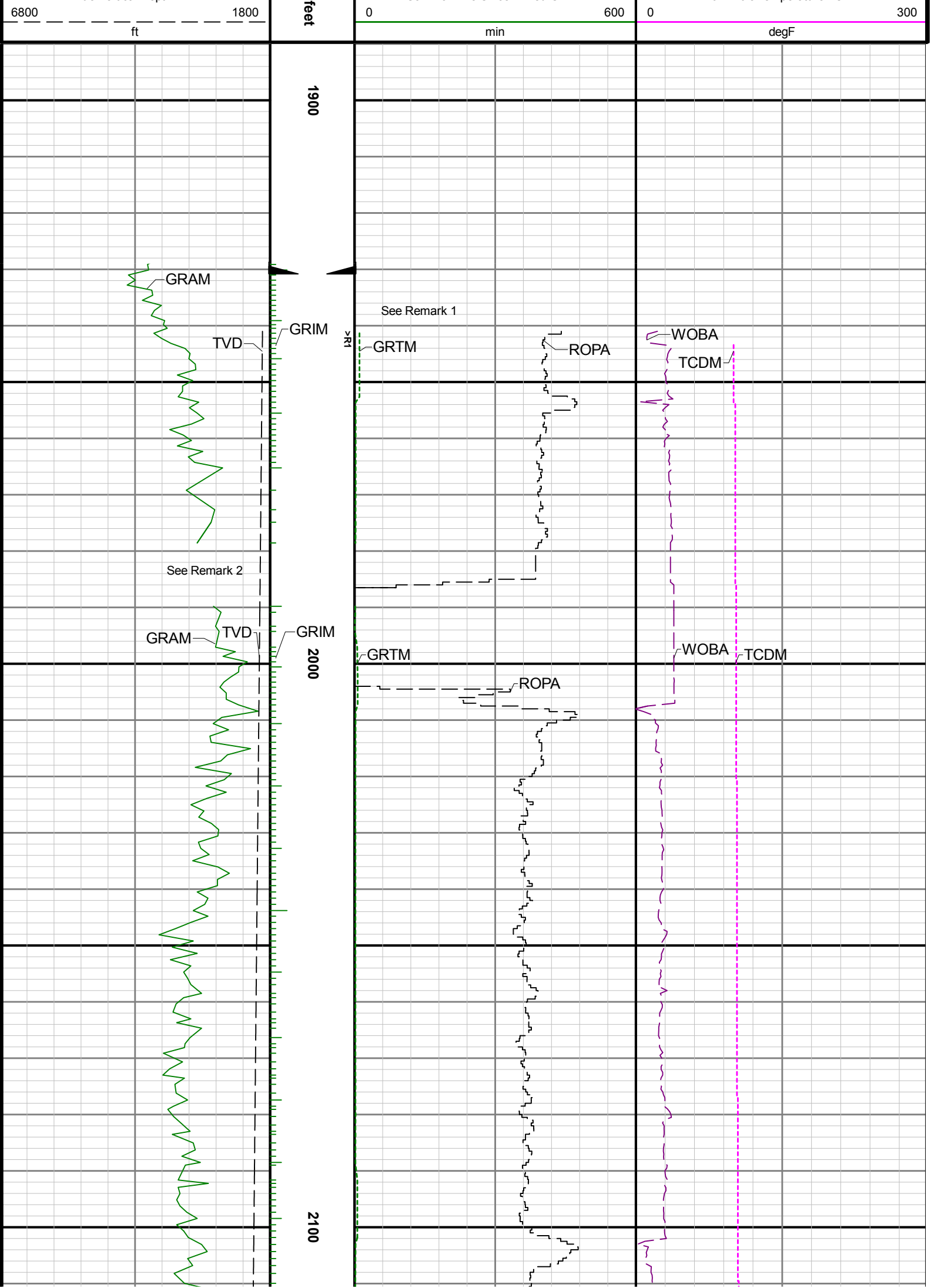
Gamma Time Since Drilled GRTM

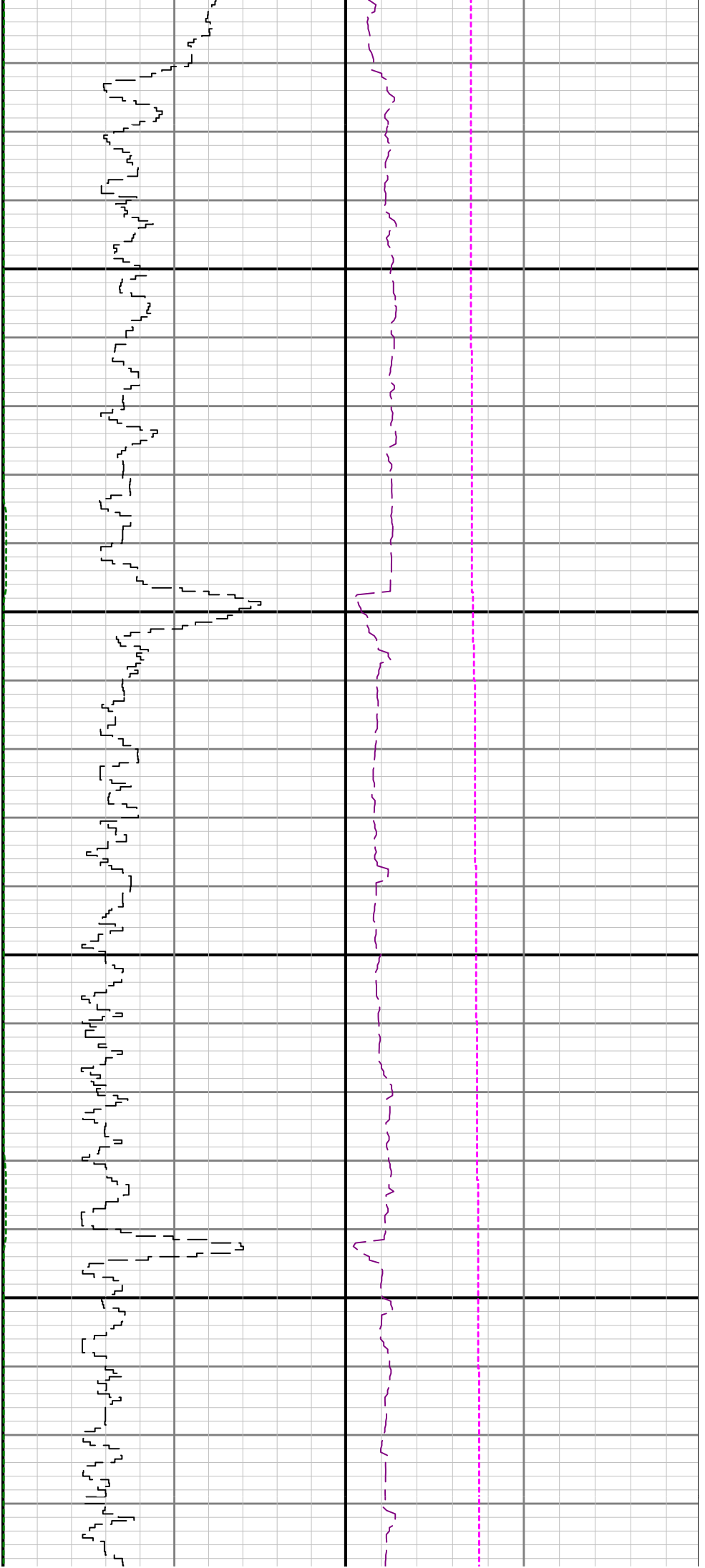
Surface Weight On Bit 1 ft Average WOBA

0100

klb

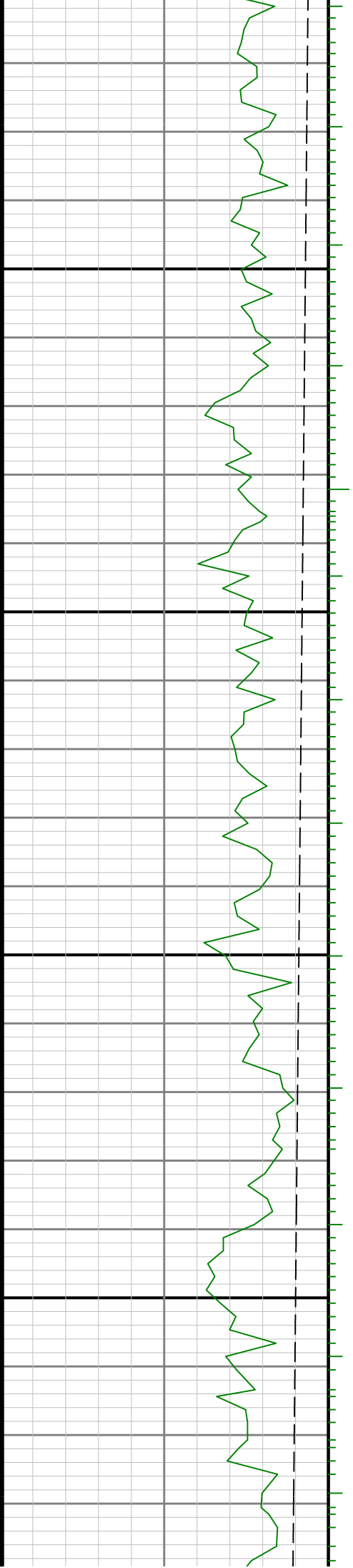
Downhole Temperature TCDM

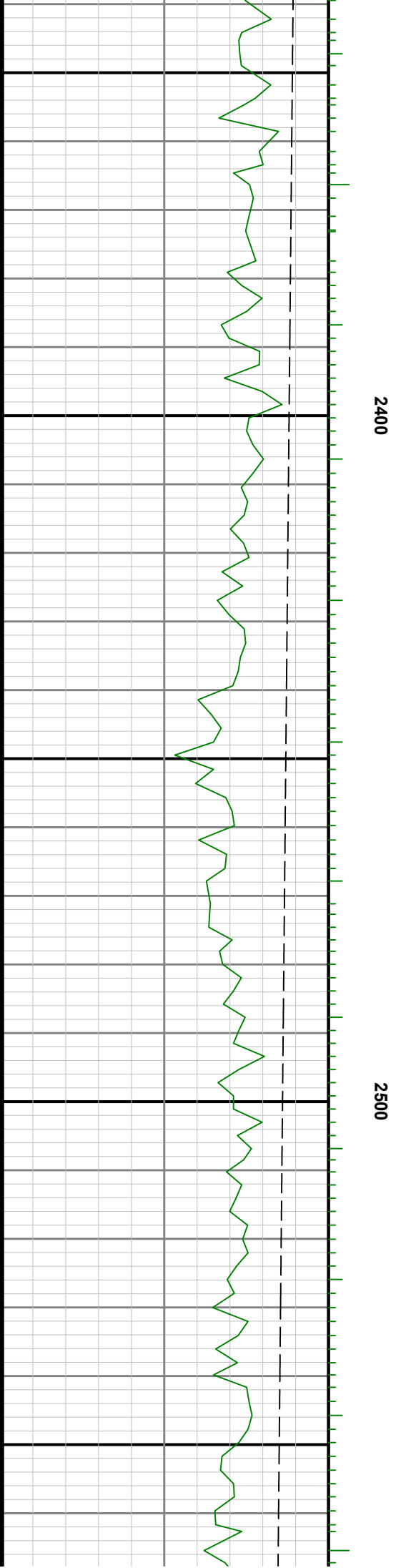
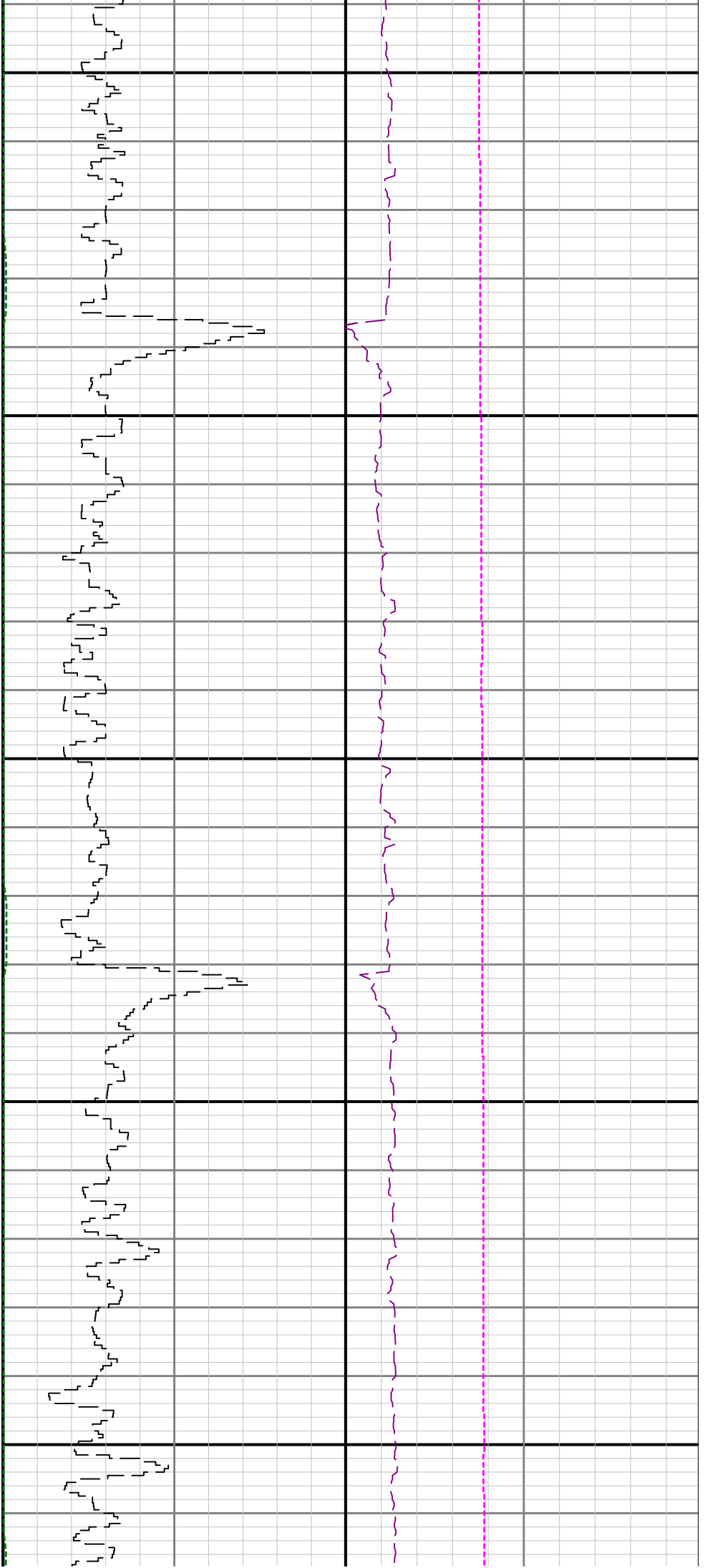


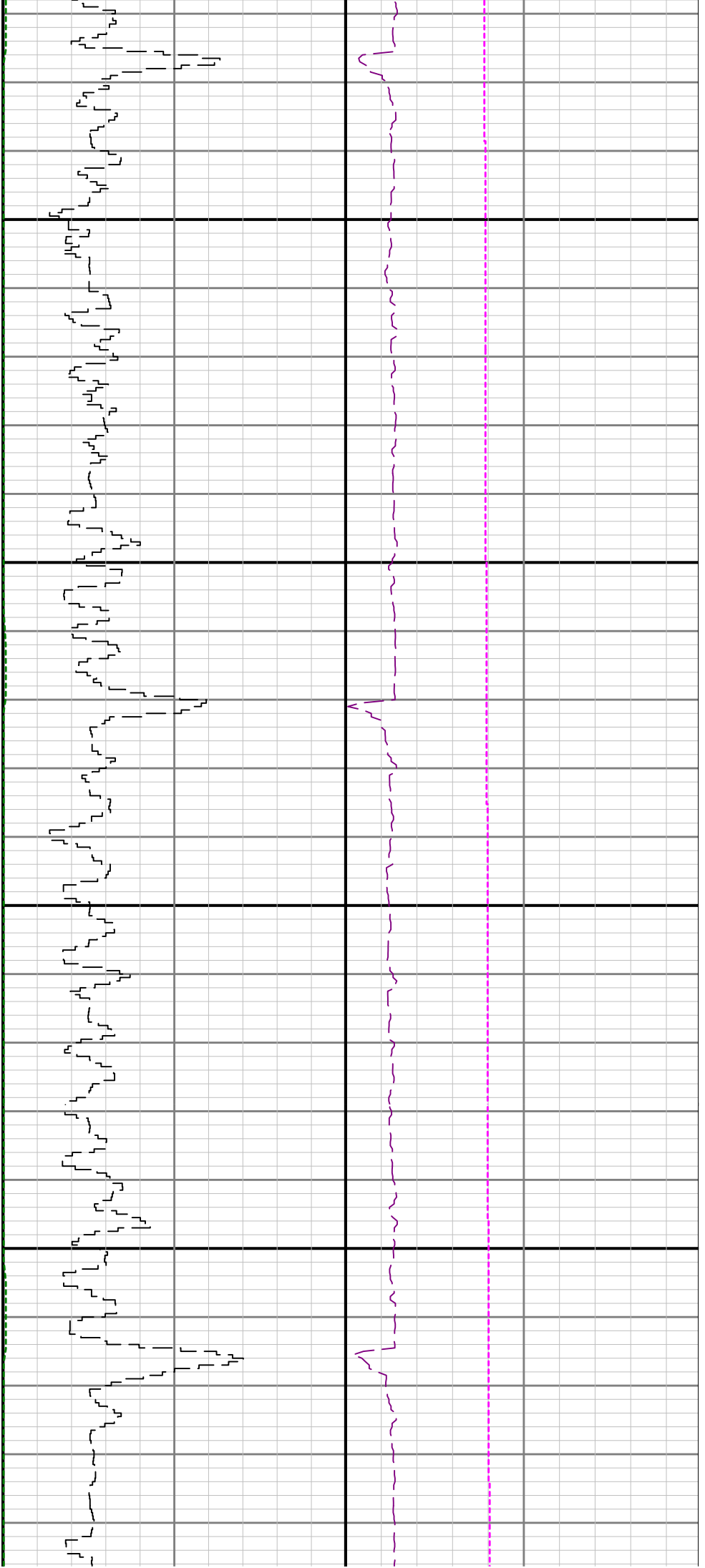


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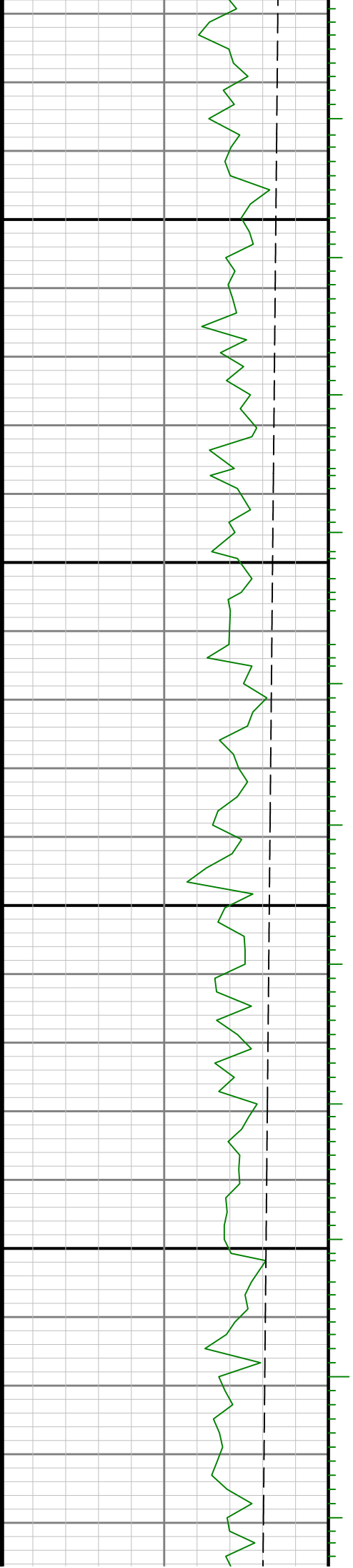


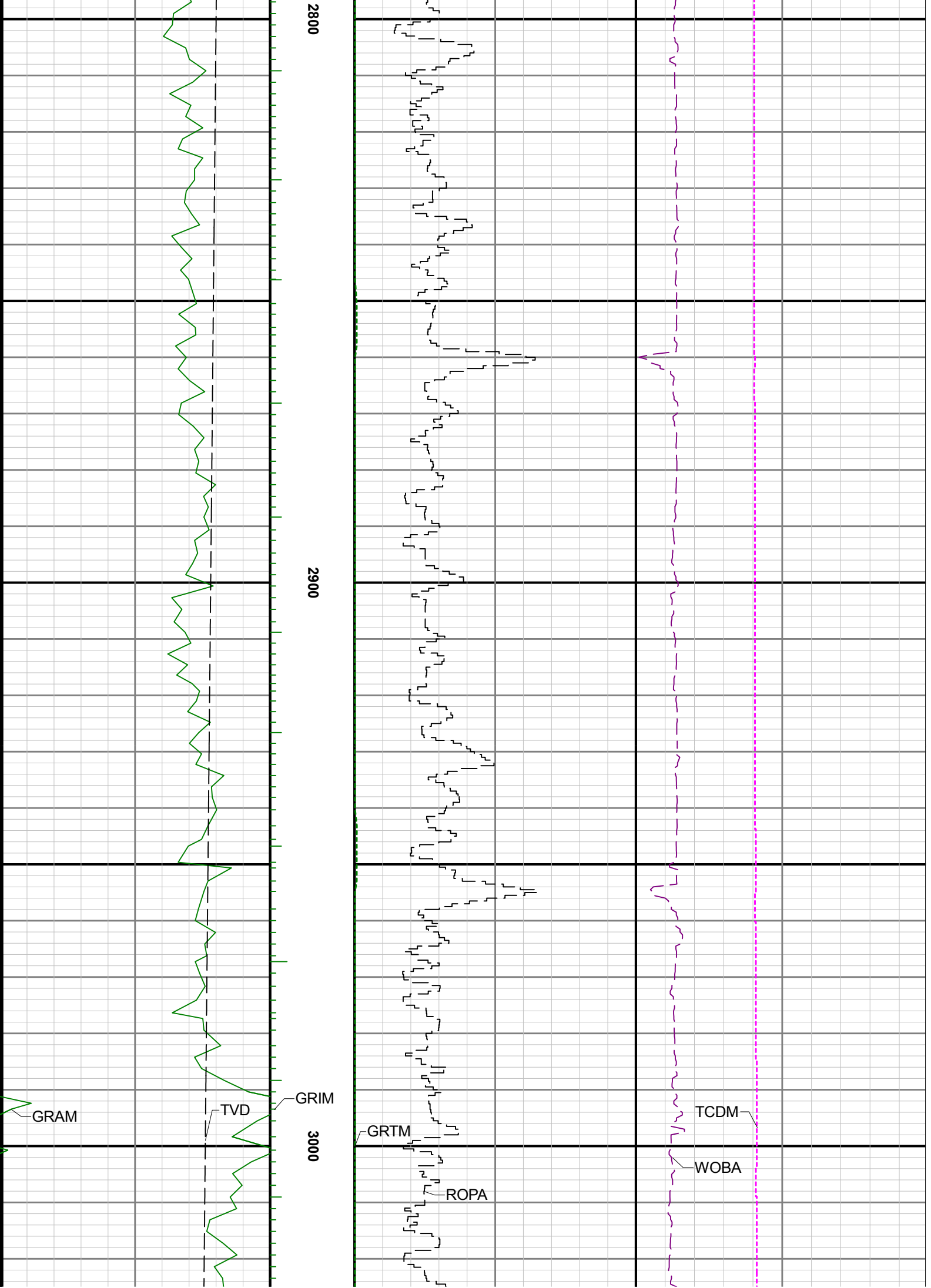


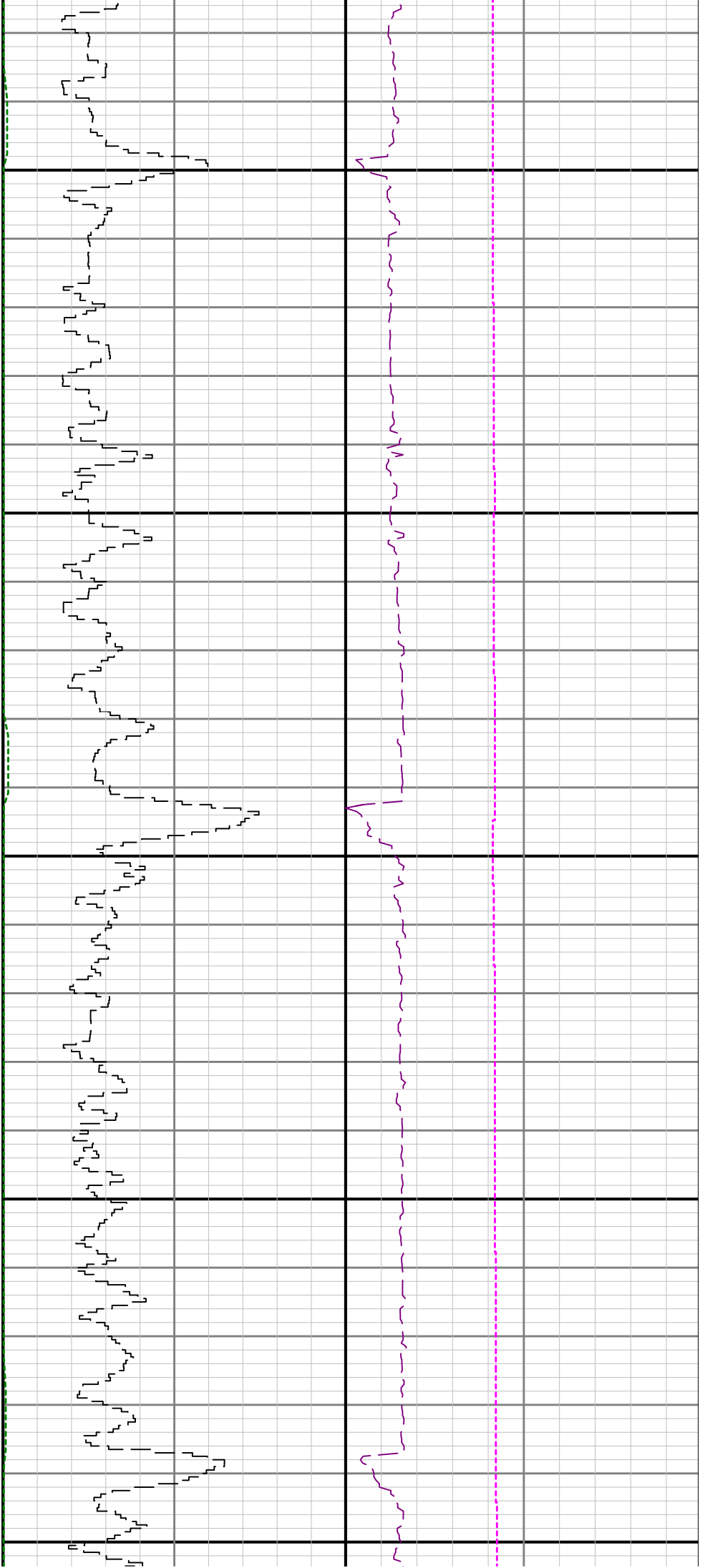


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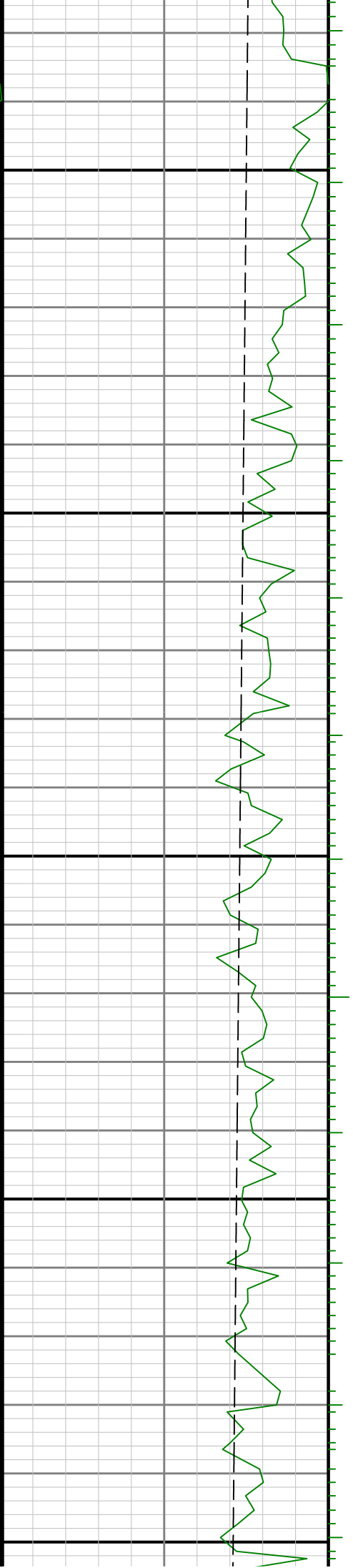




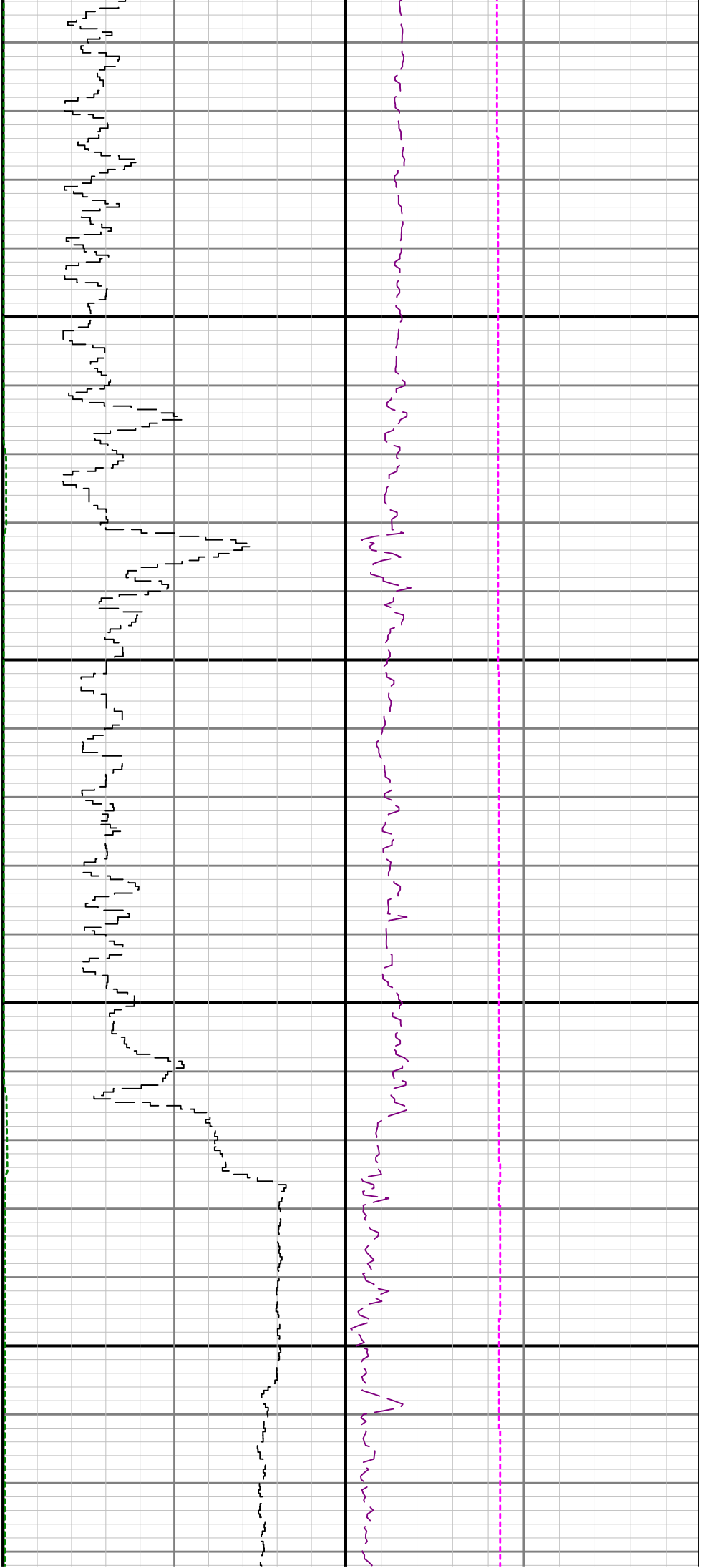


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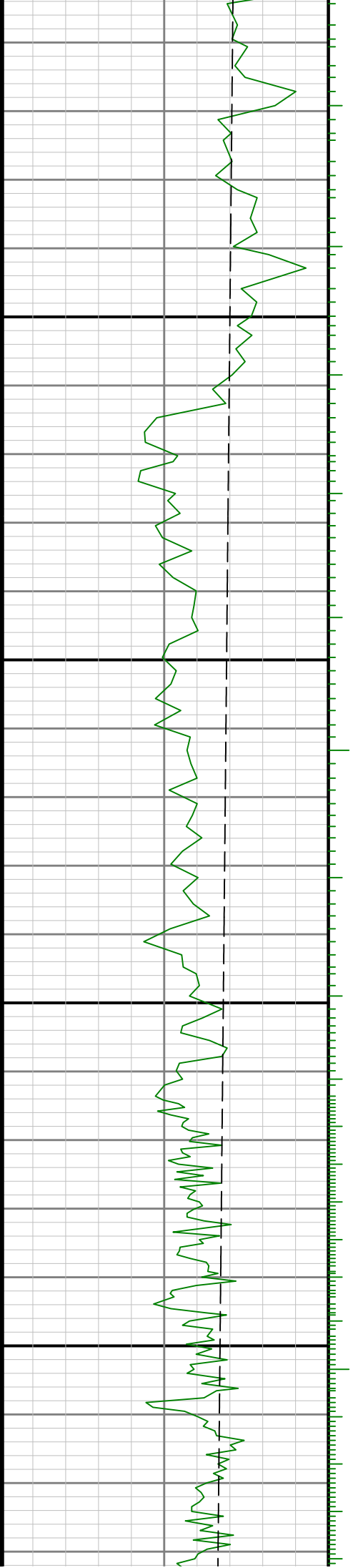


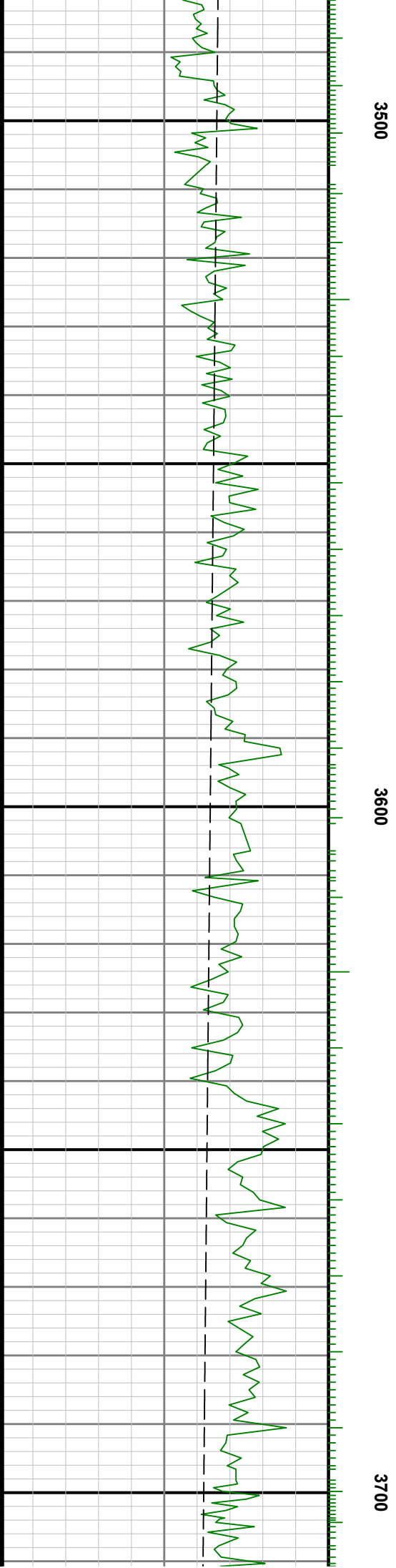
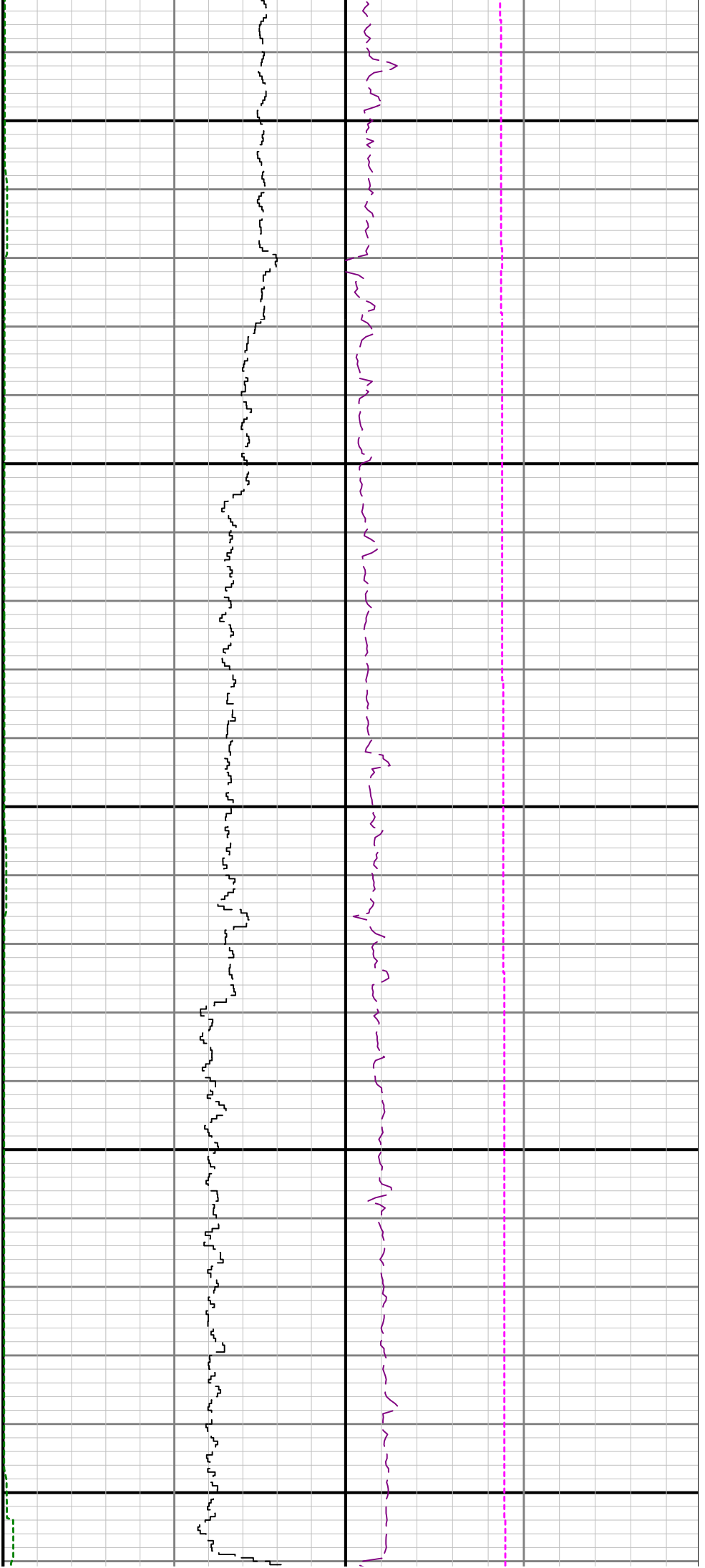




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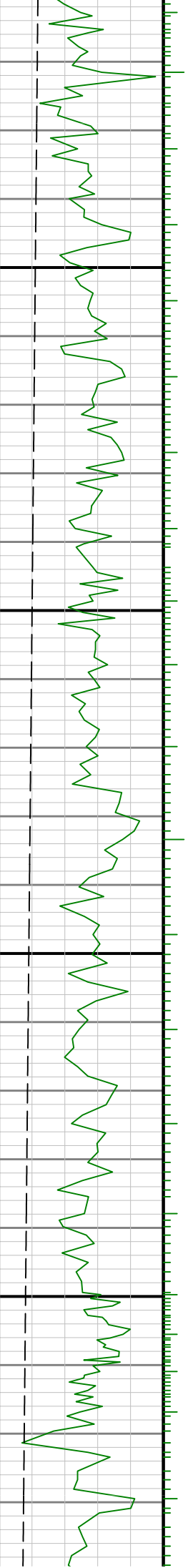


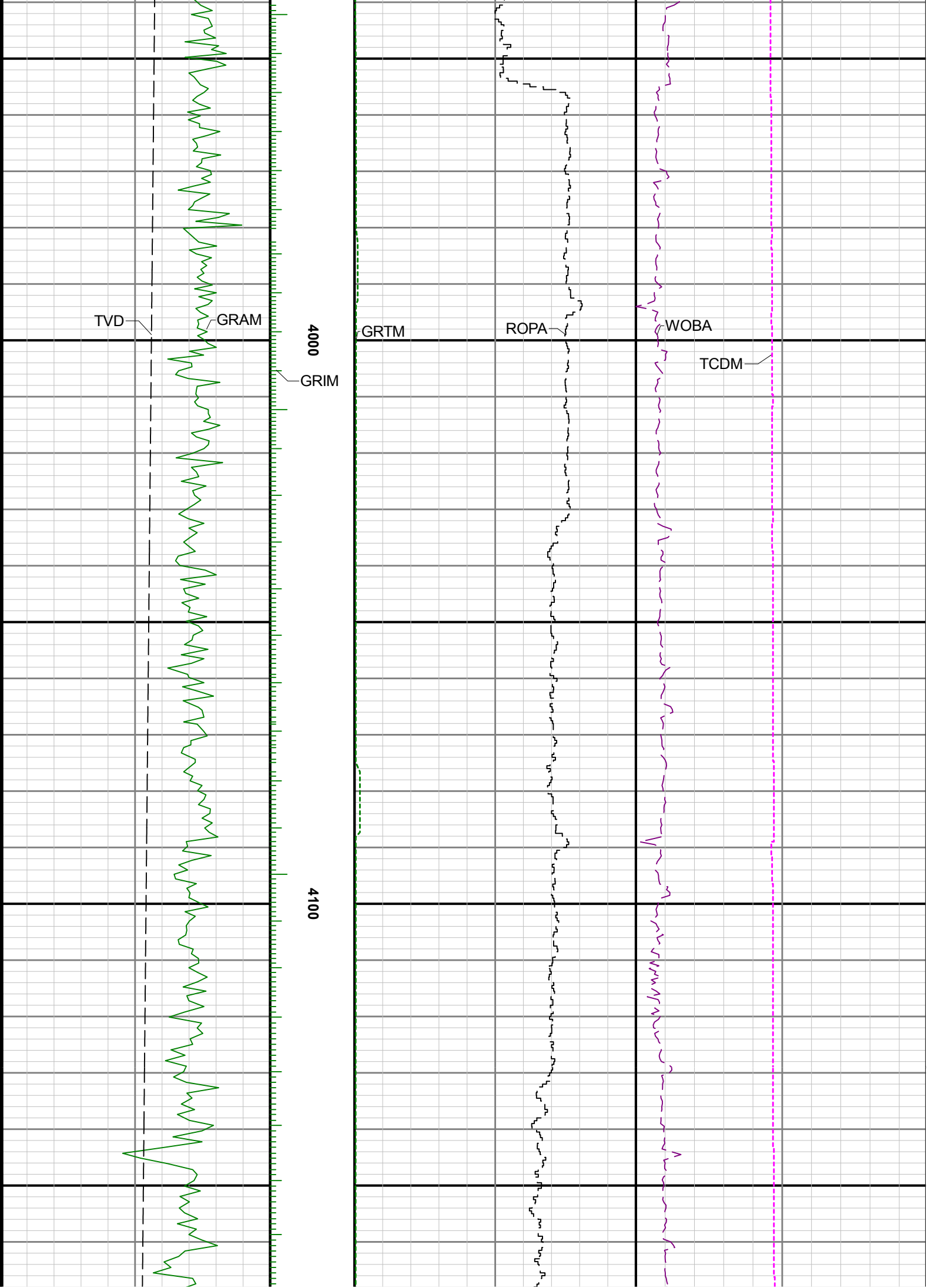




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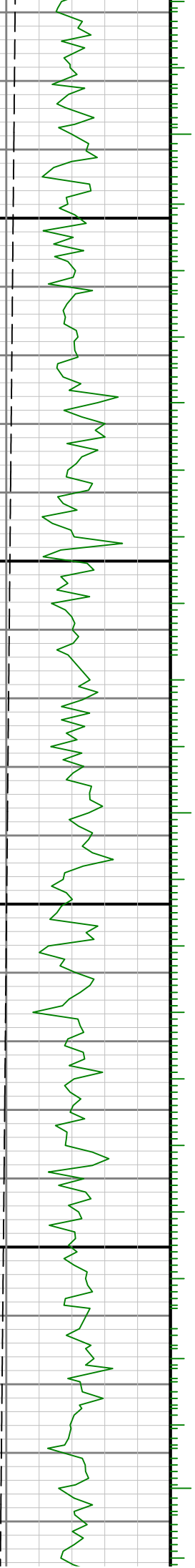


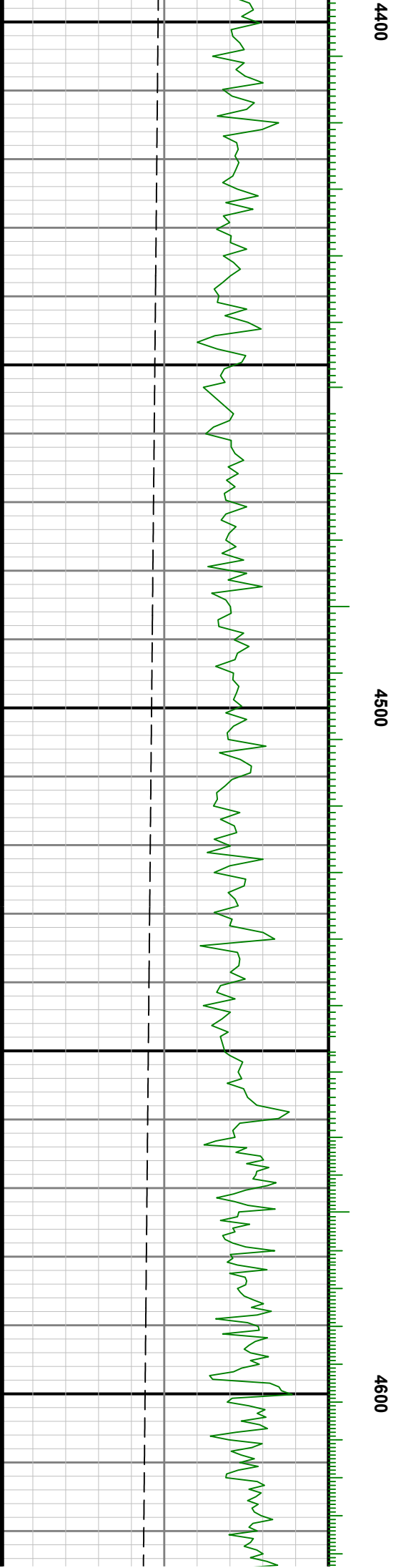
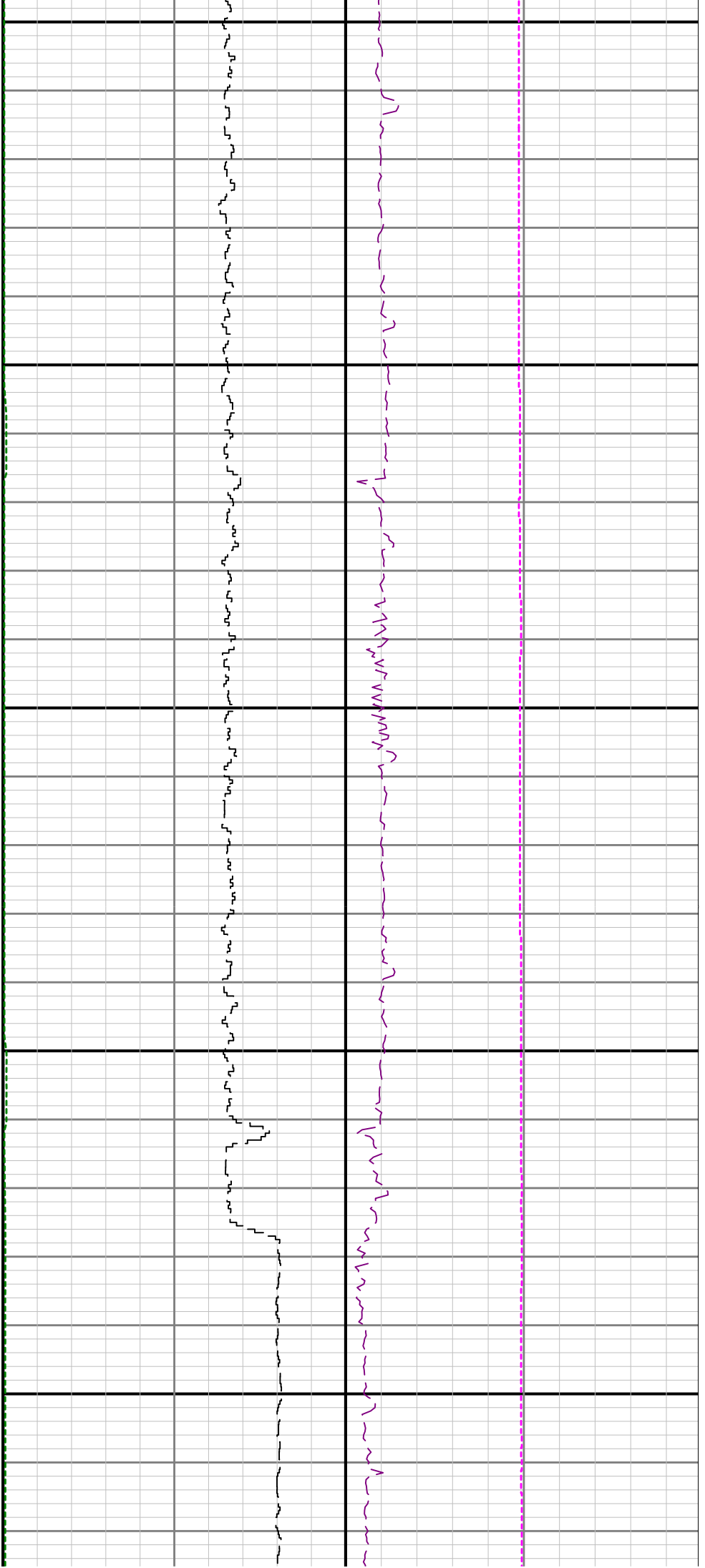


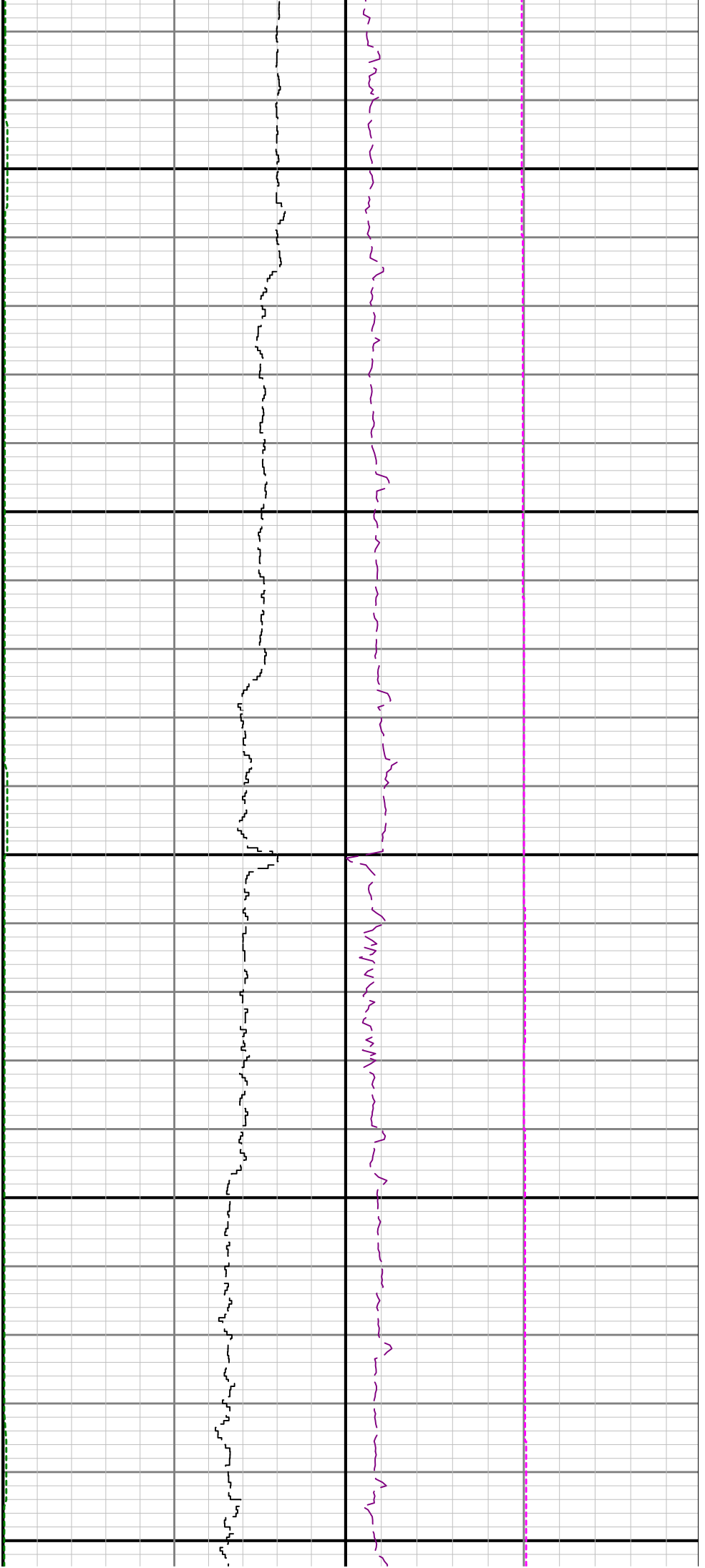


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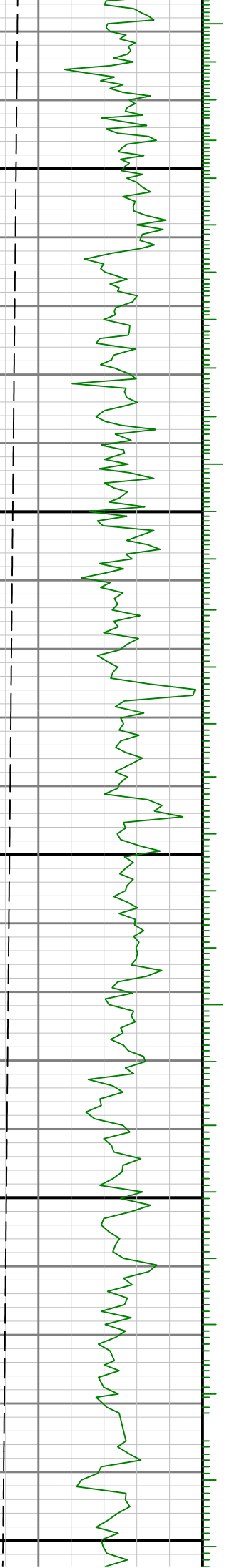


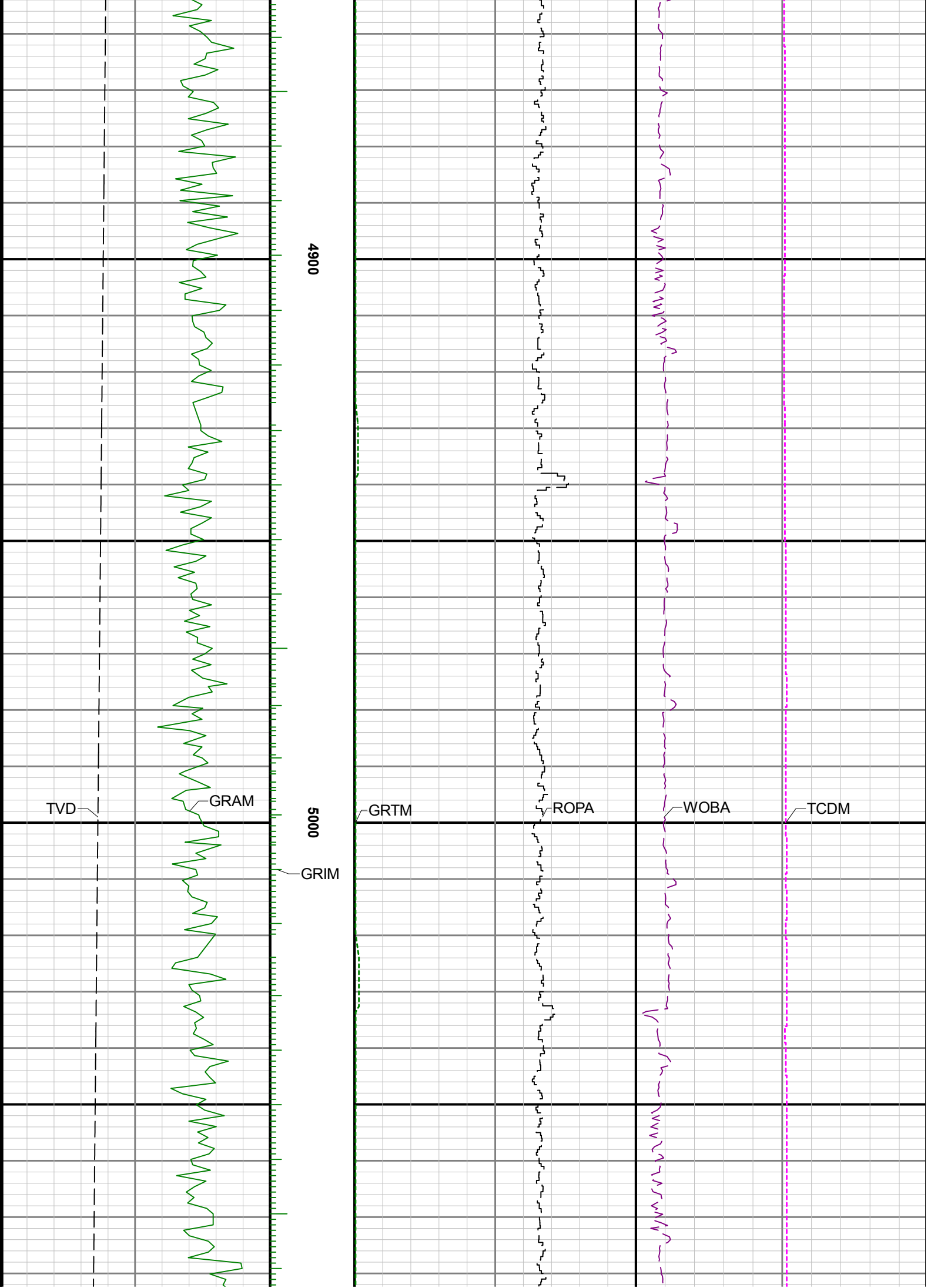




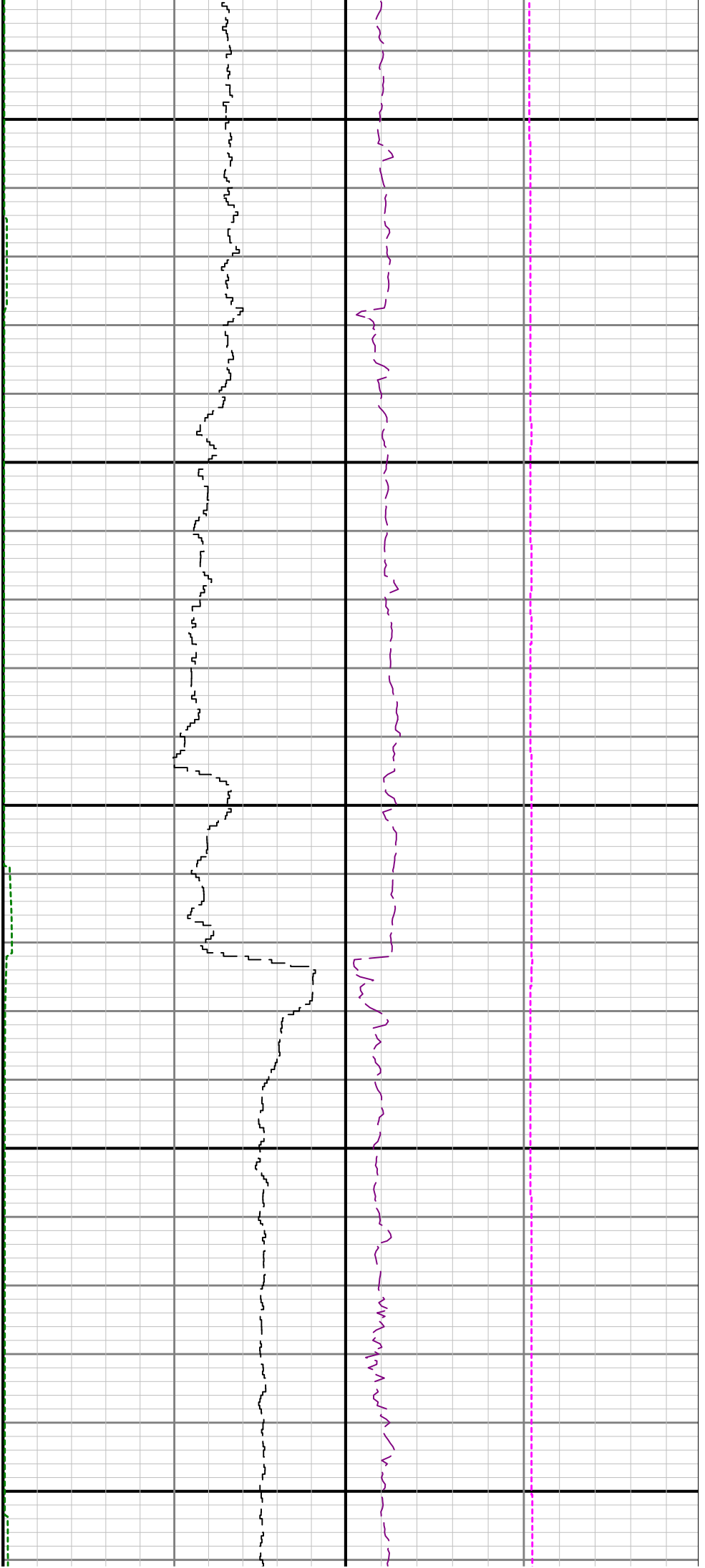
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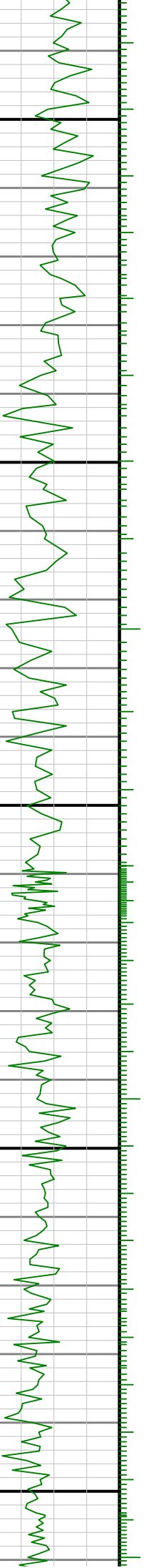


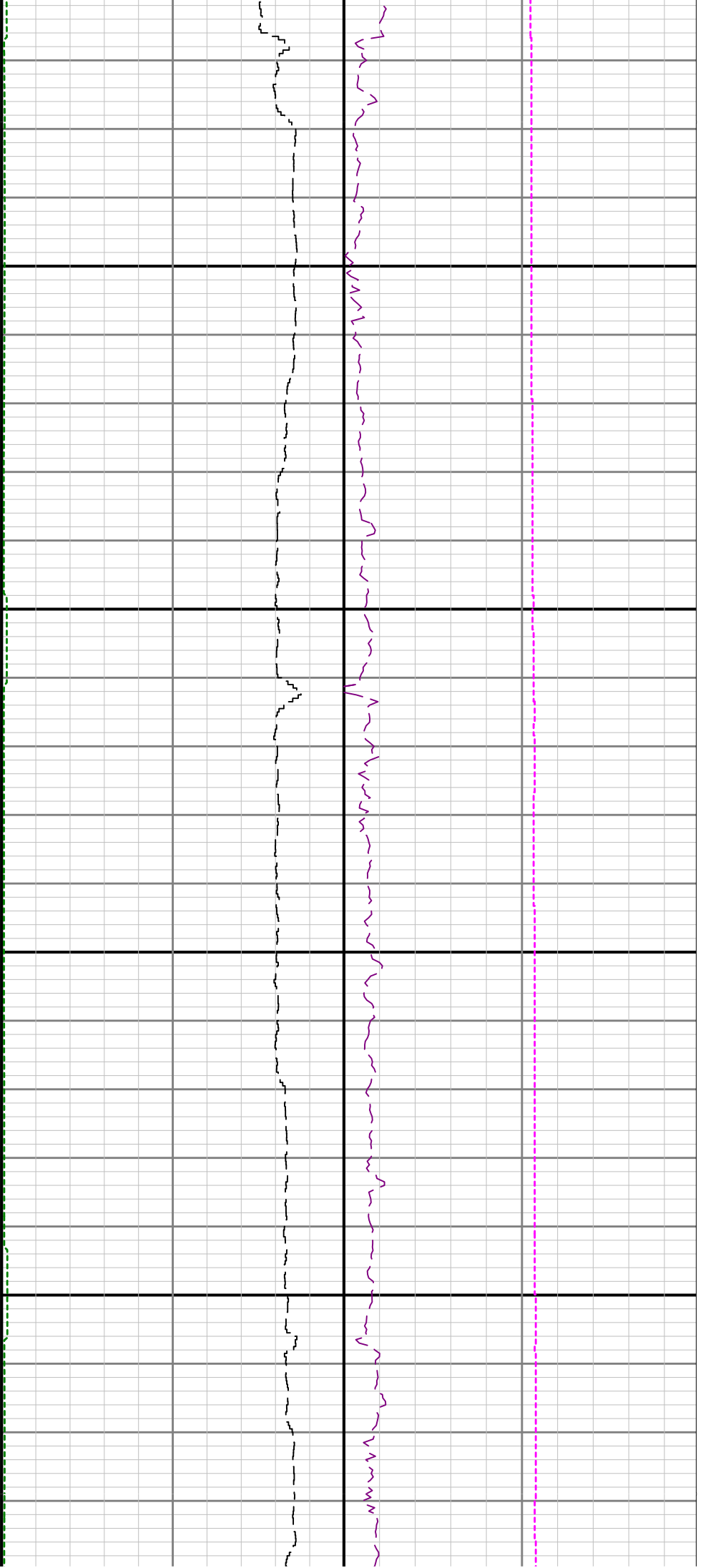


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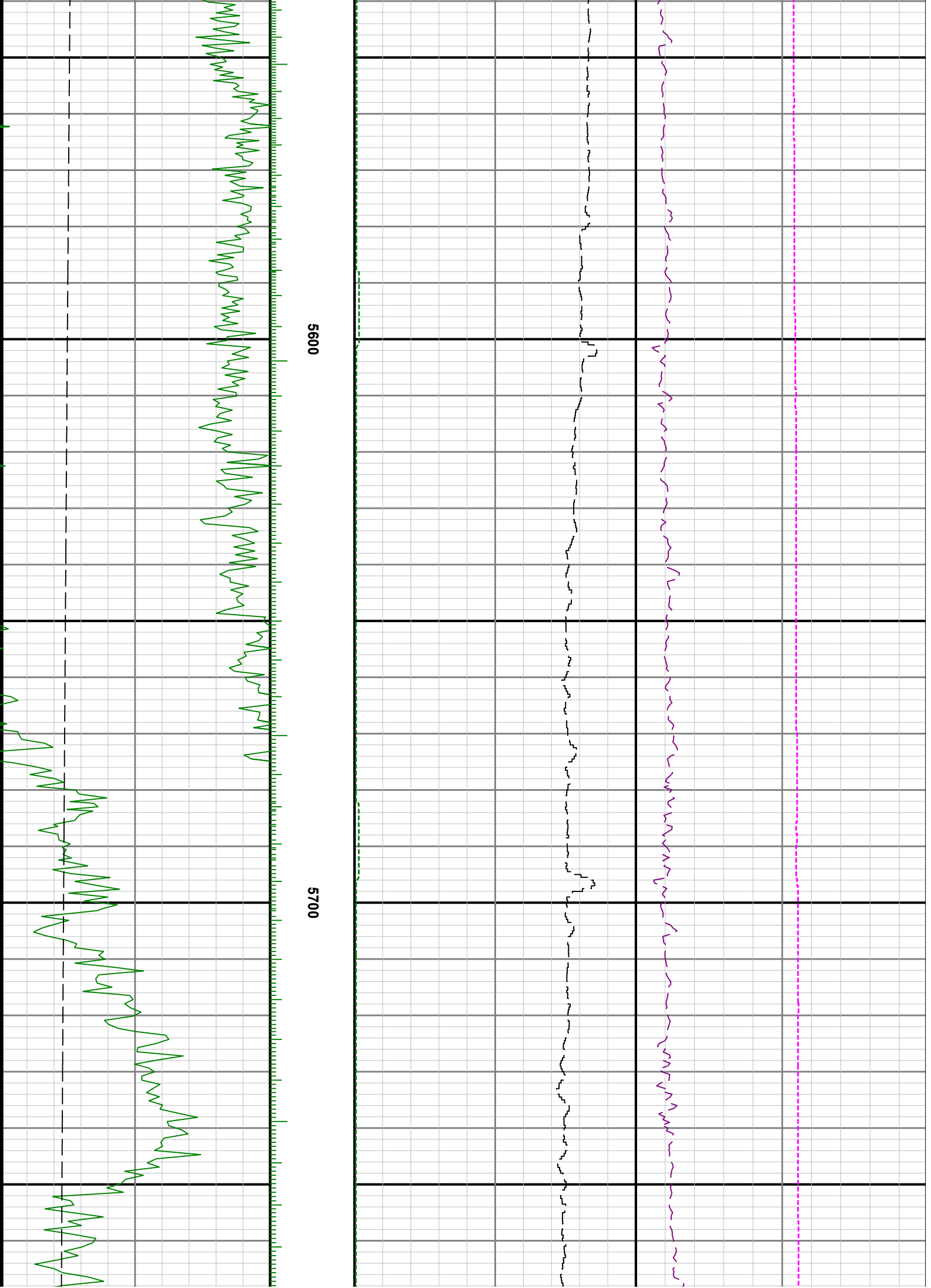


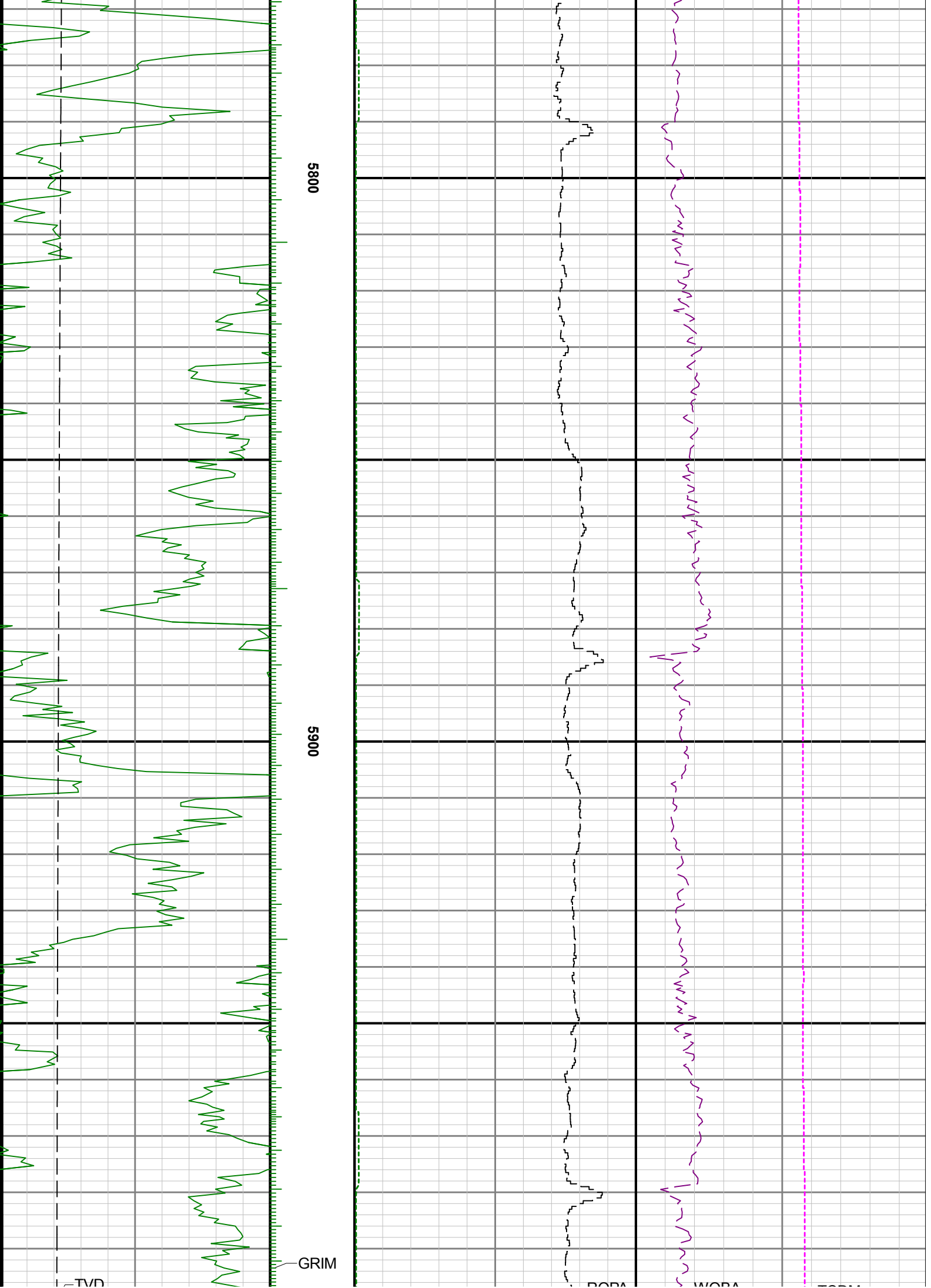


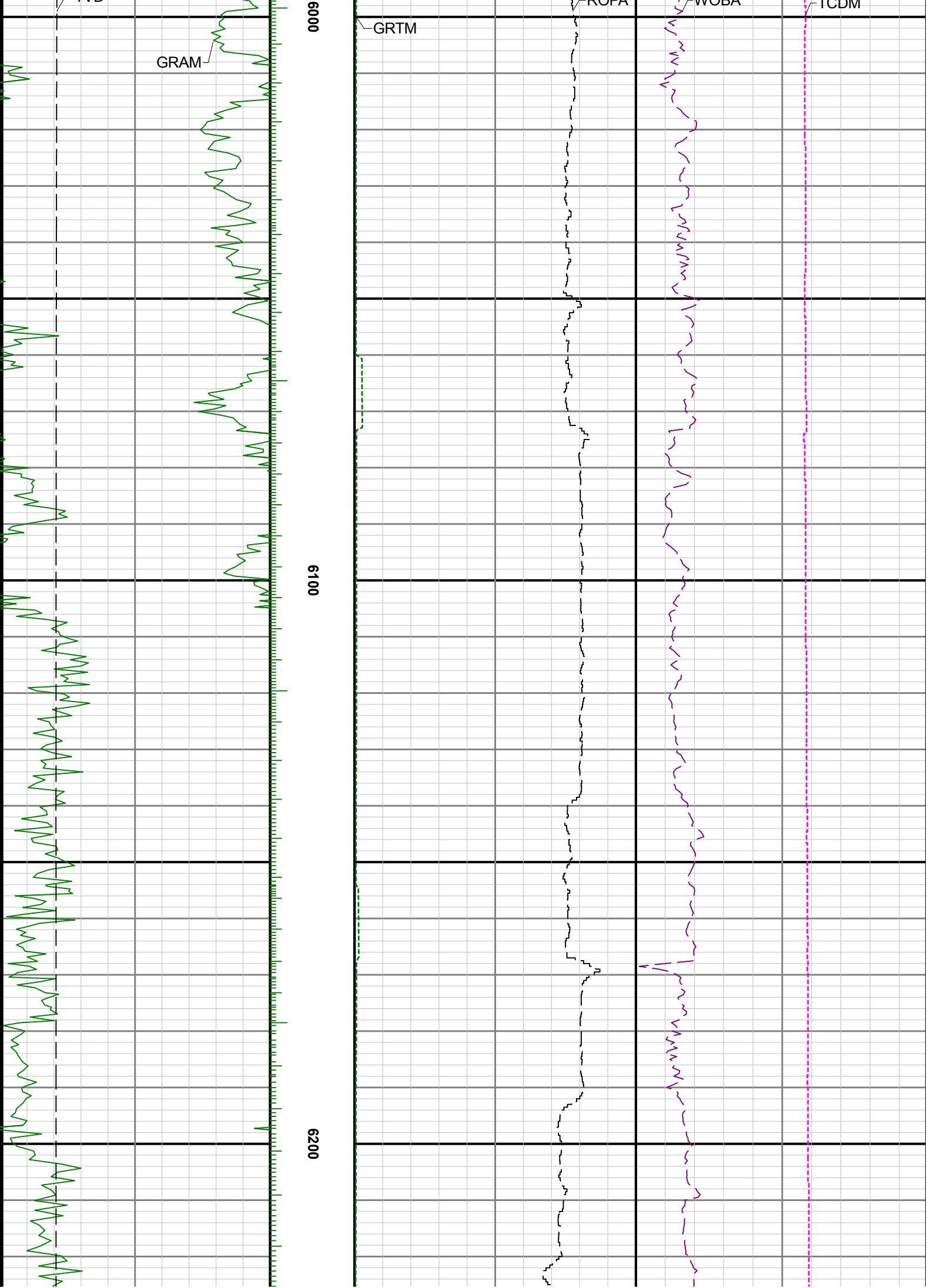
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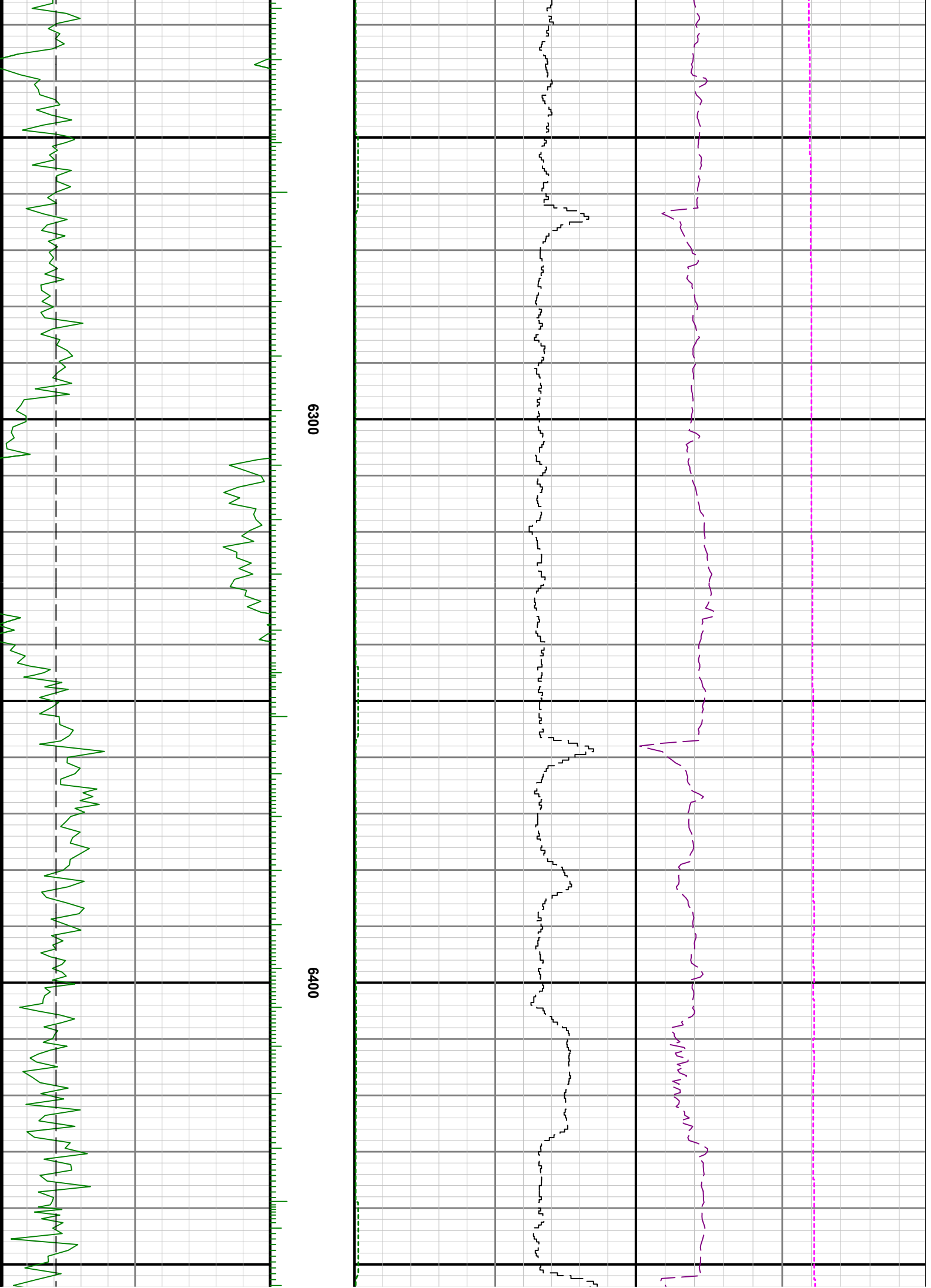
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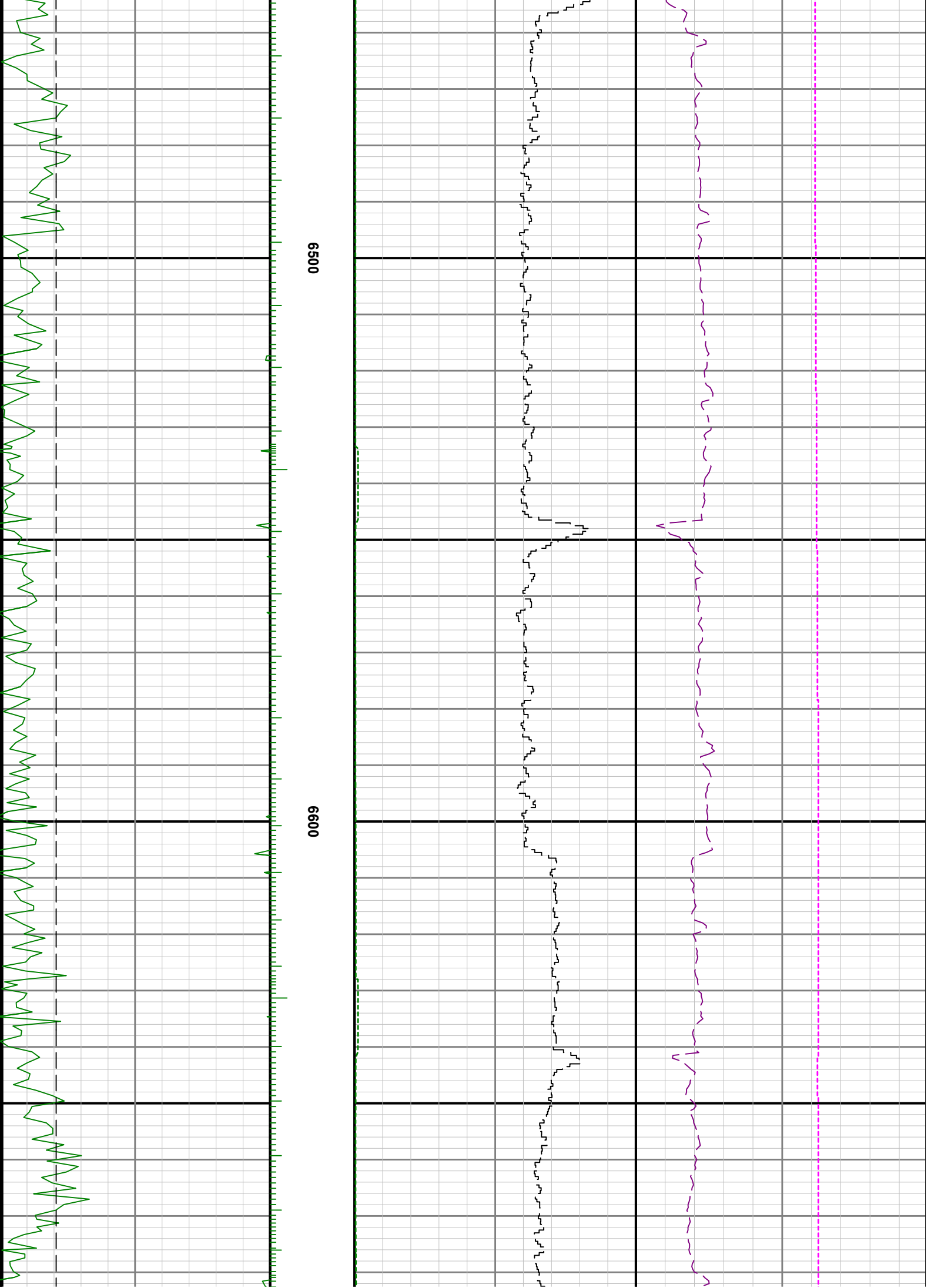


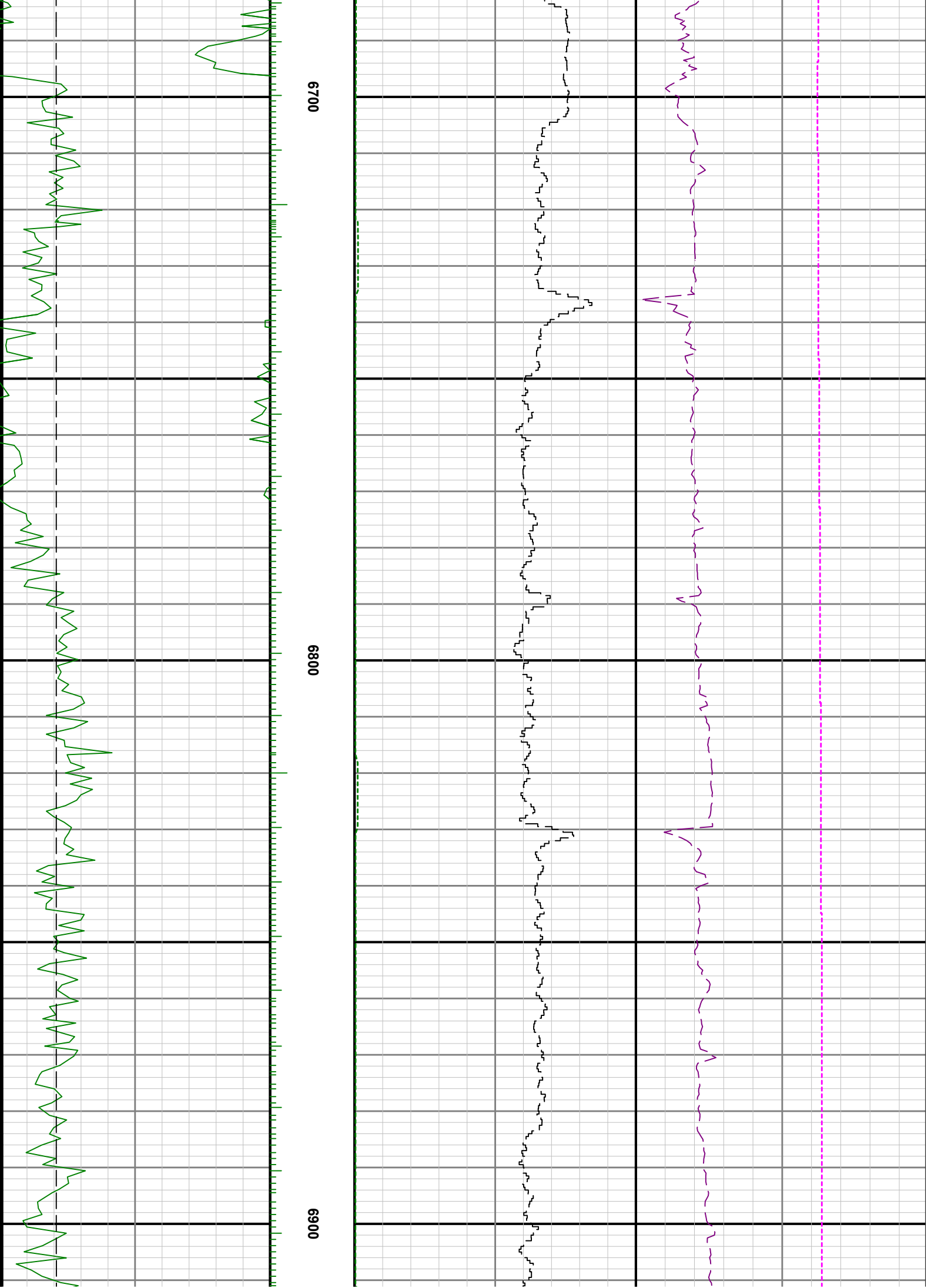




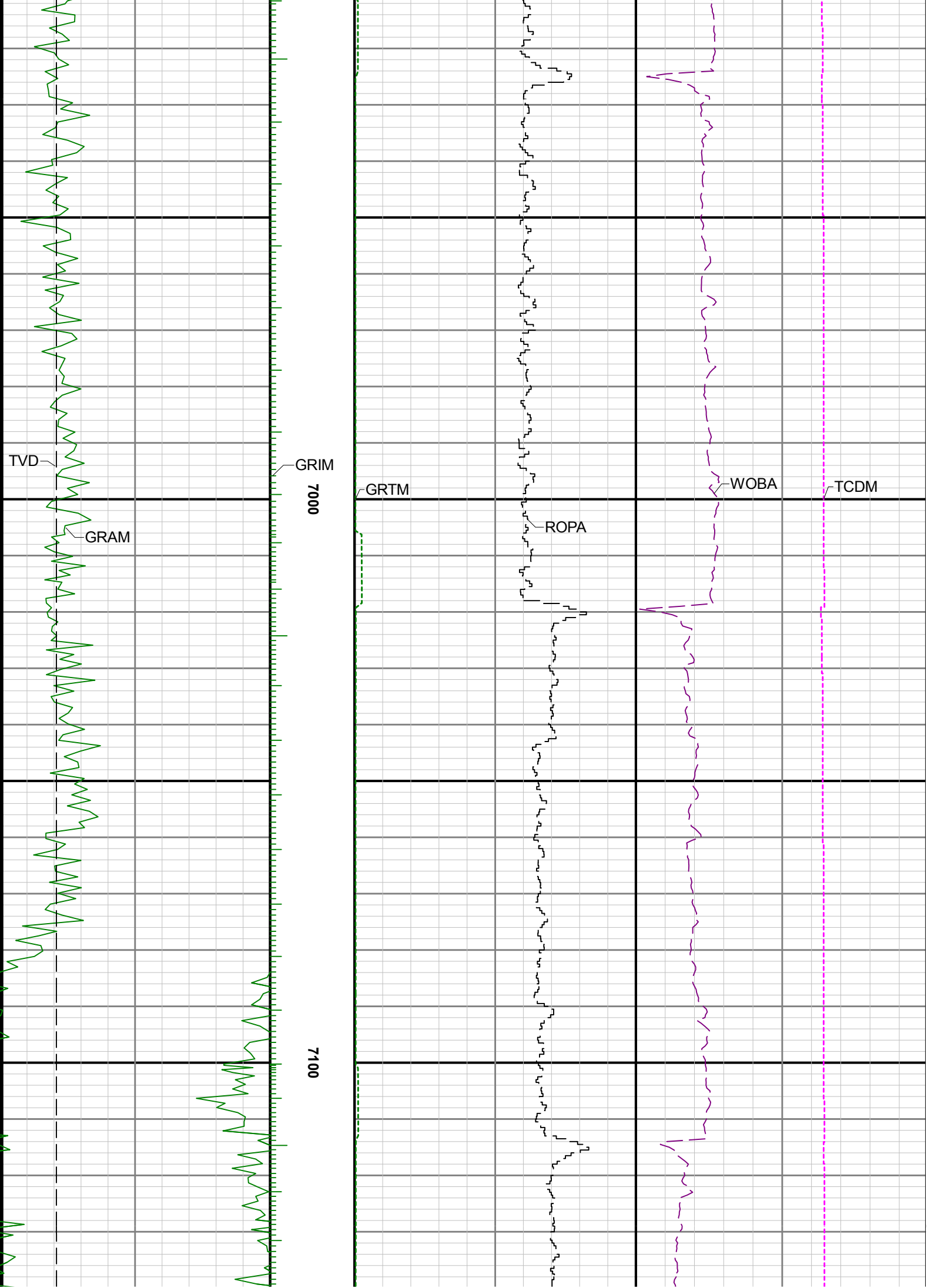


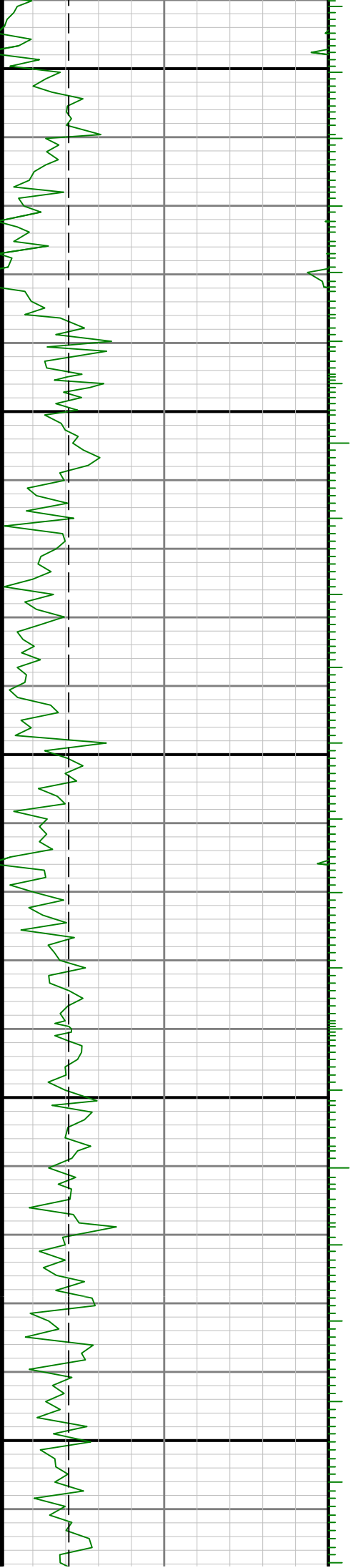
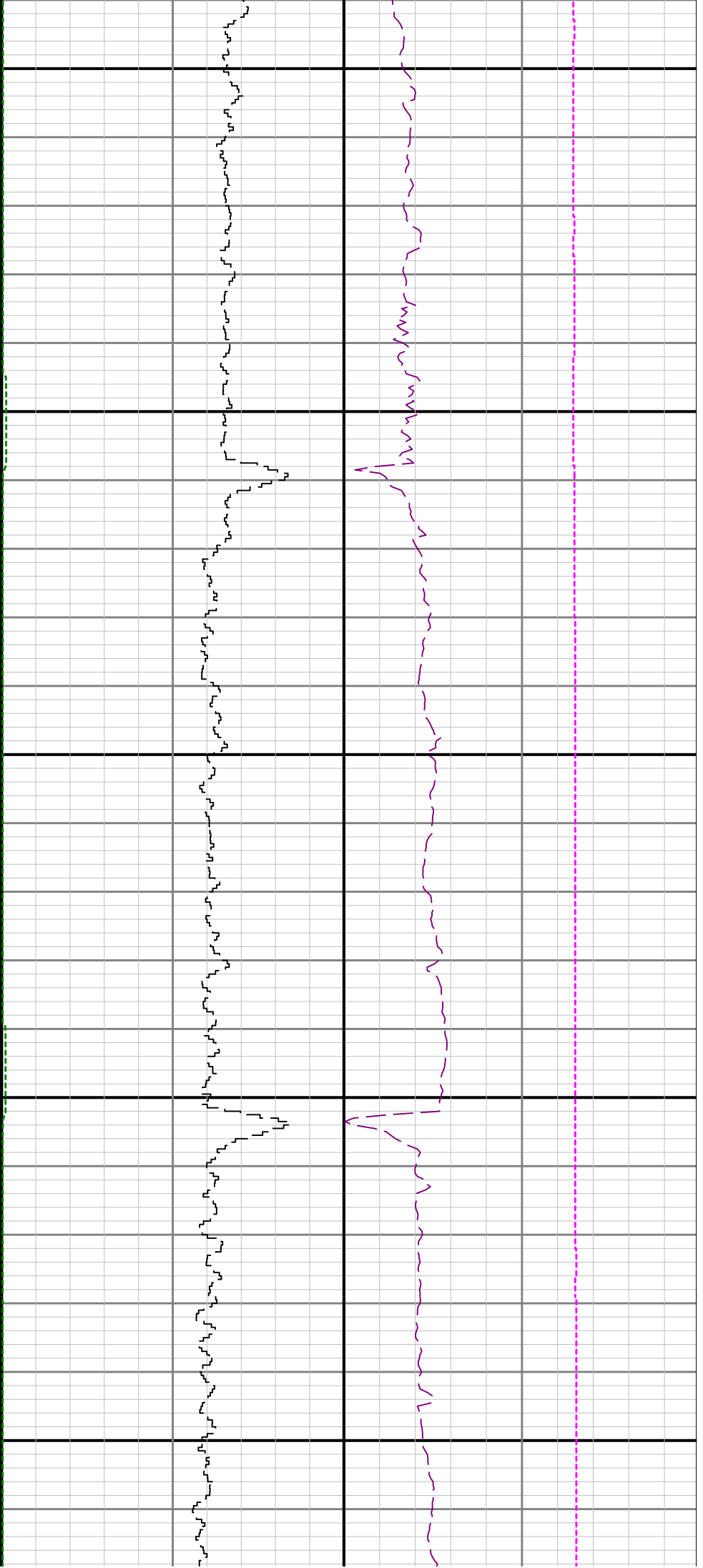


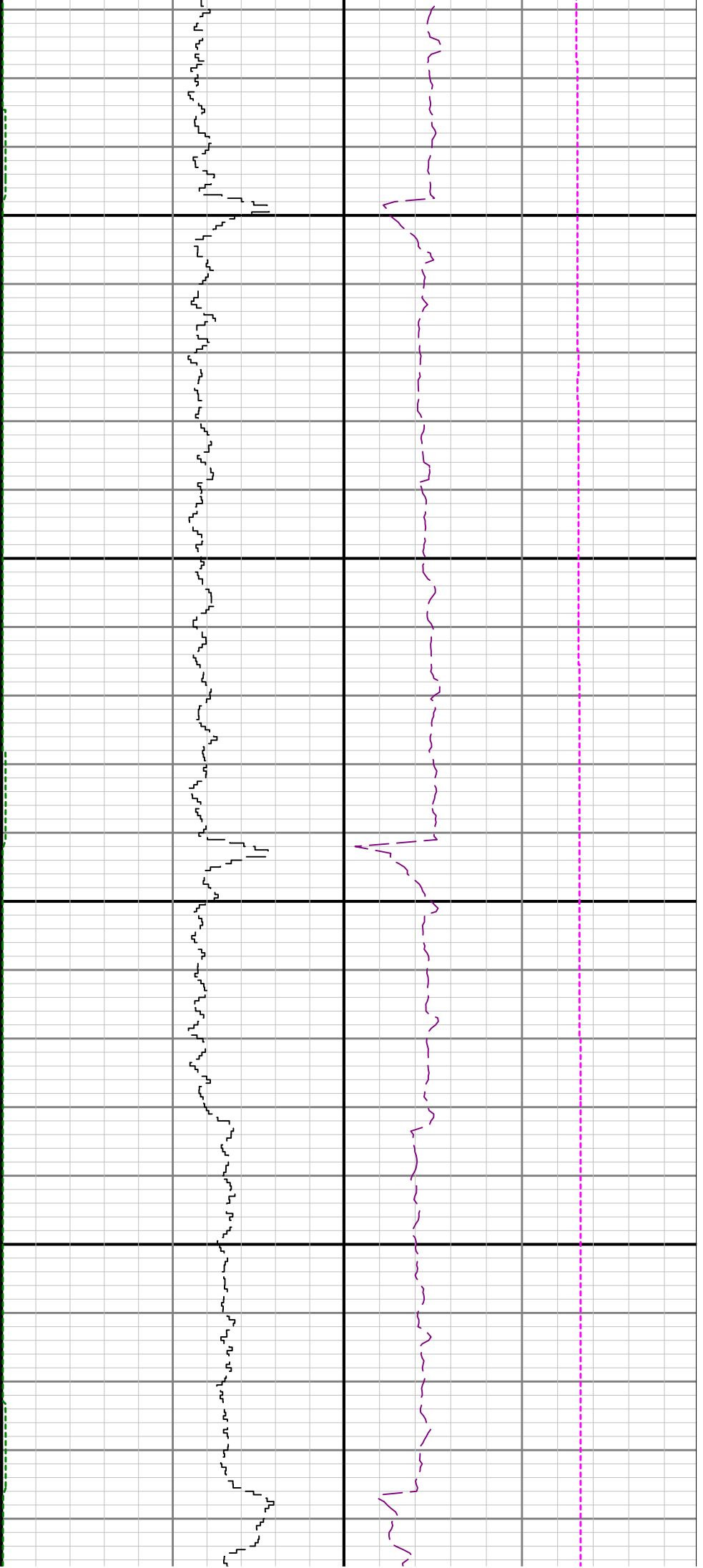






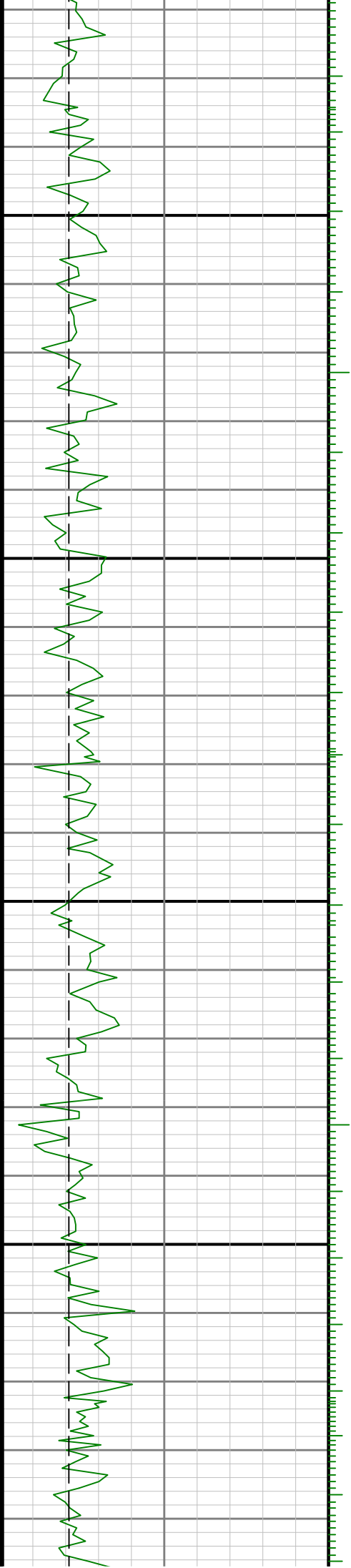


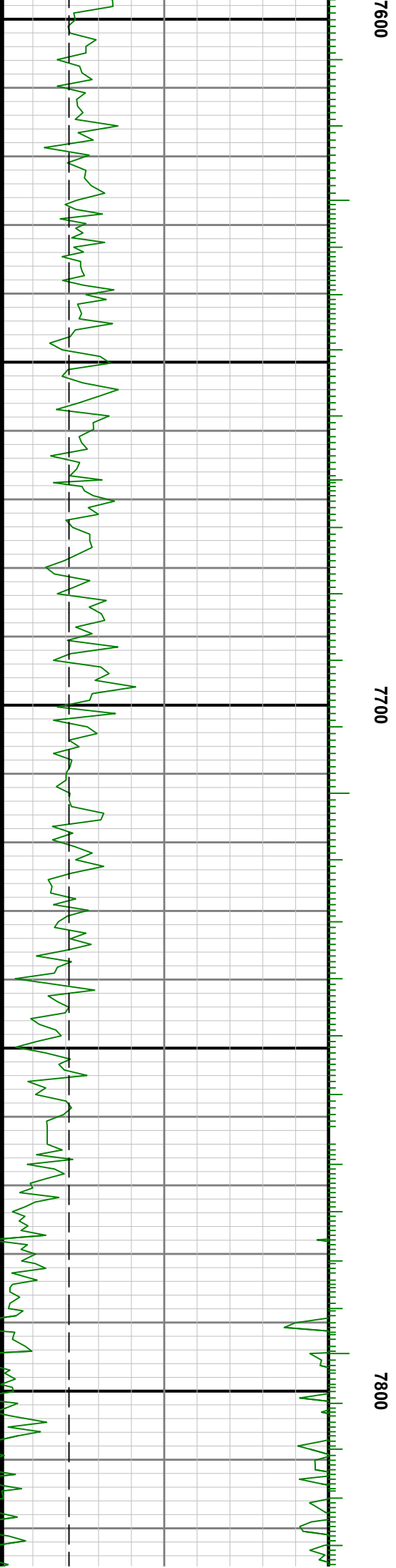
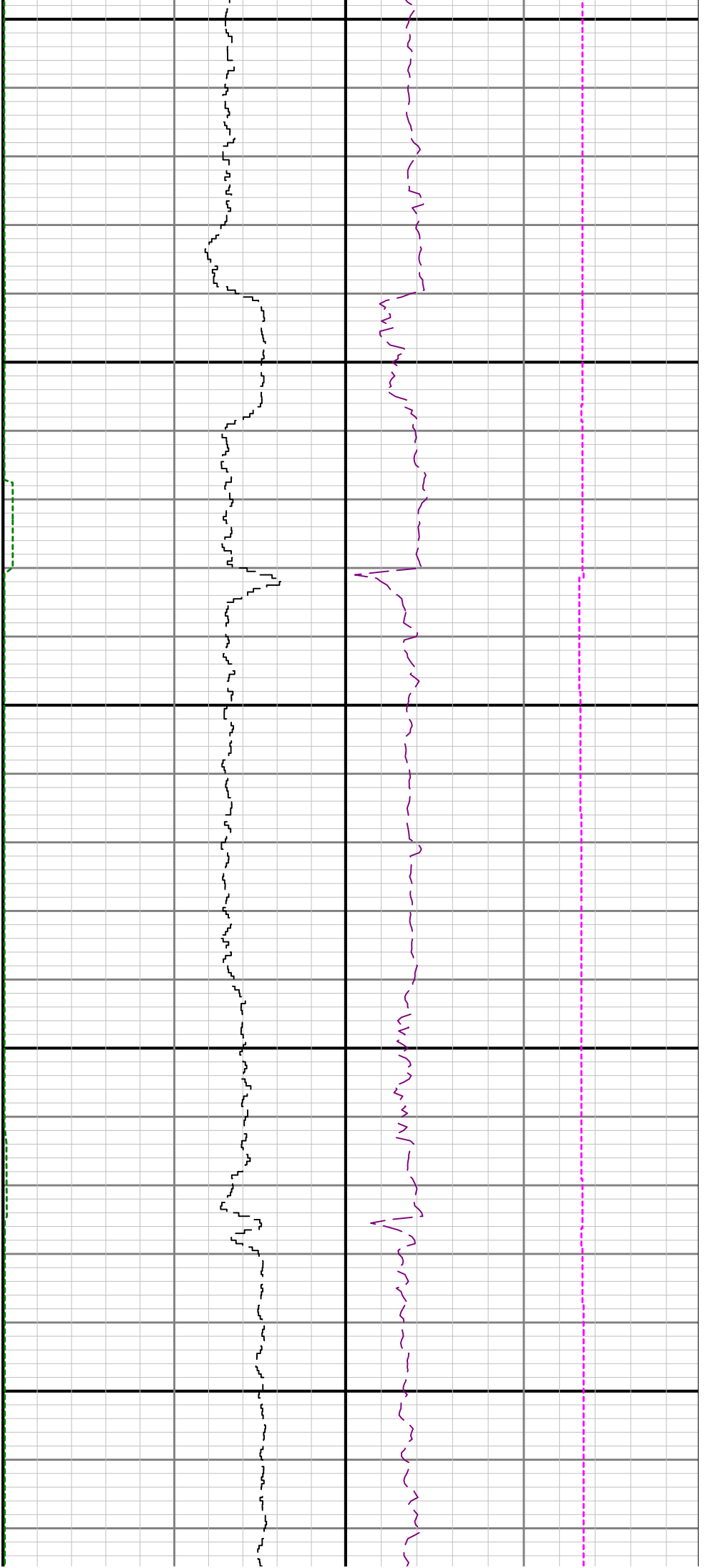


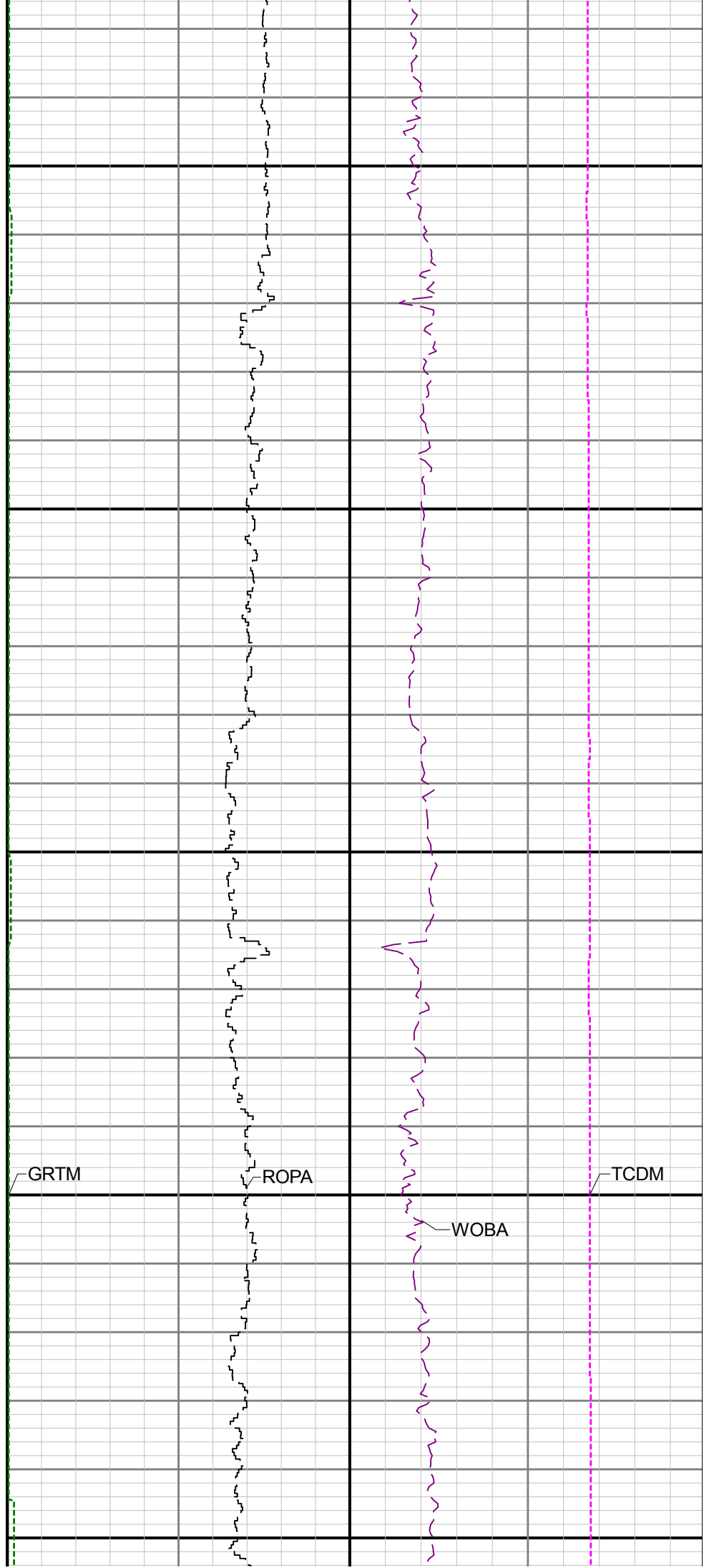
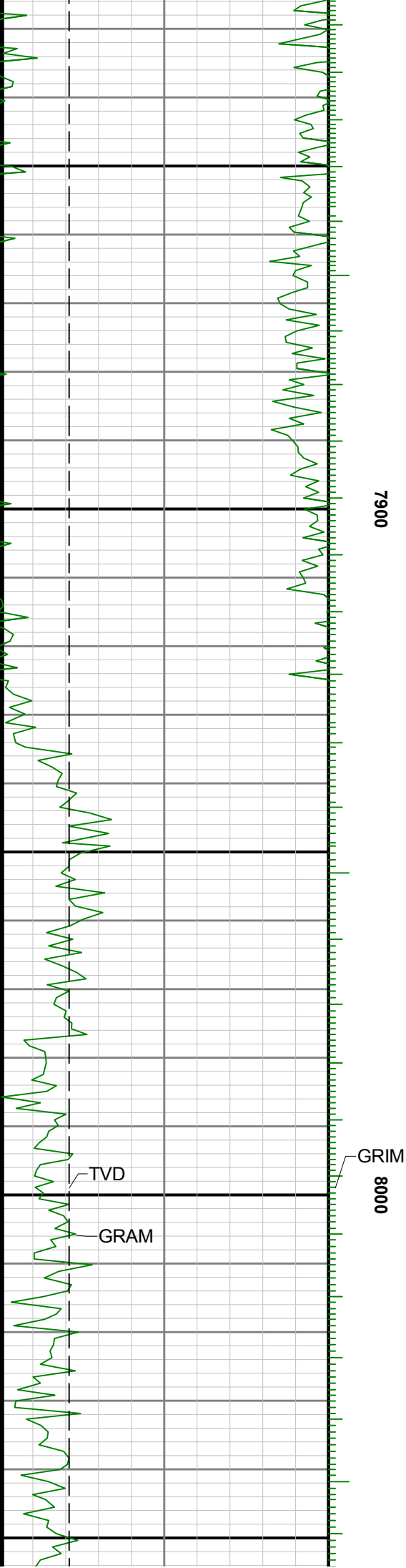


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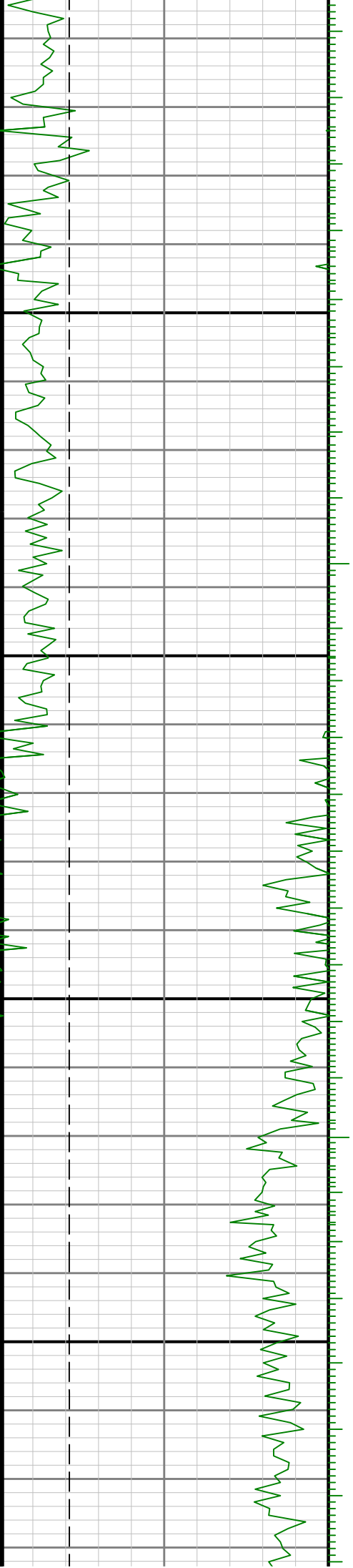


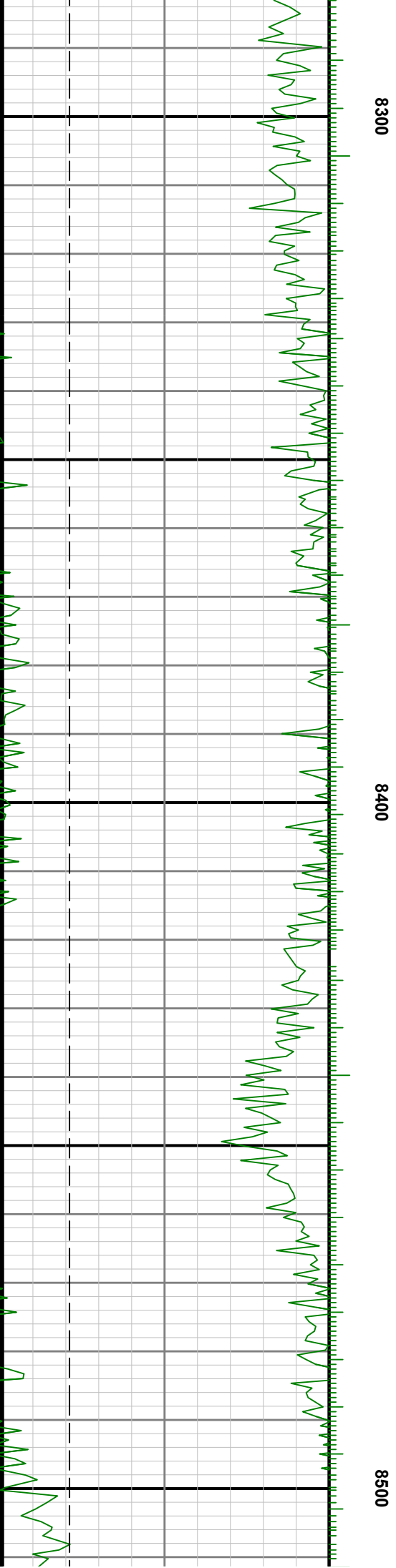
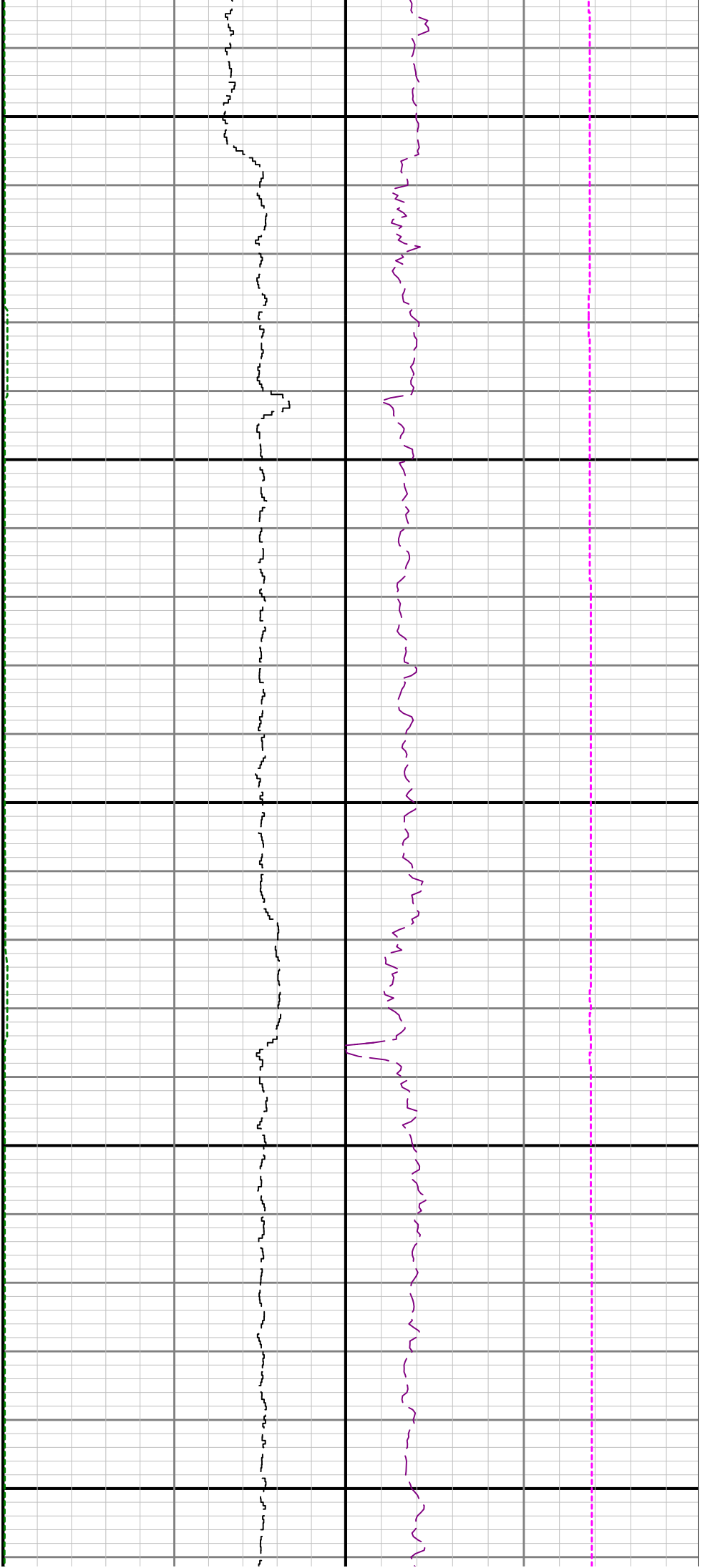


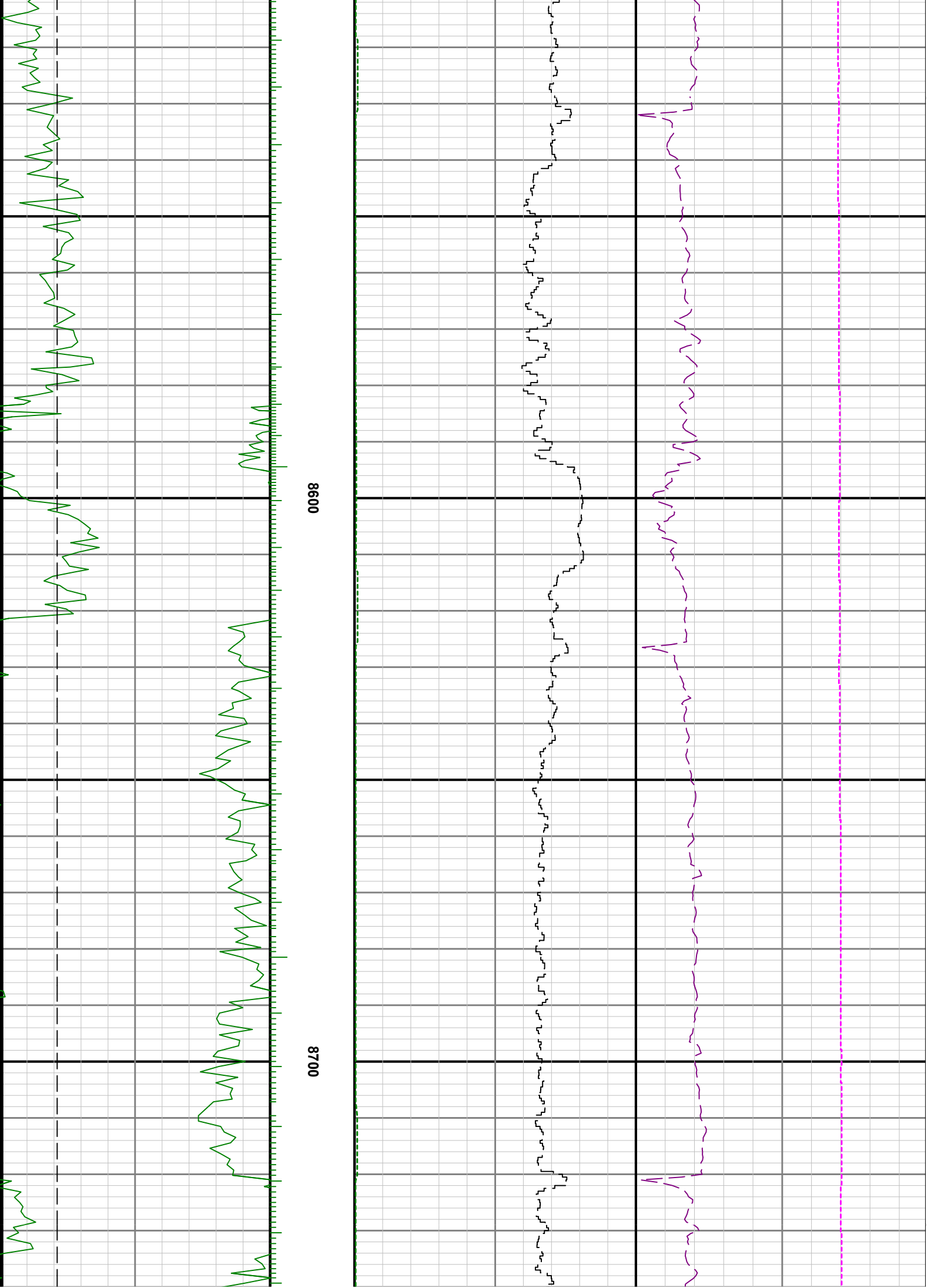


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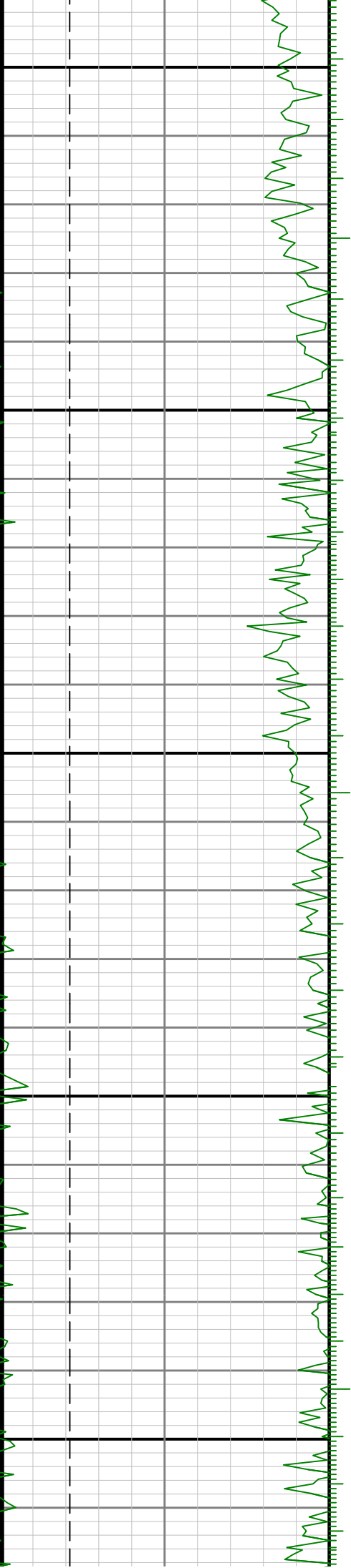
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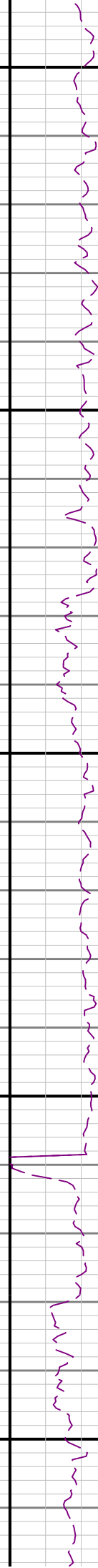
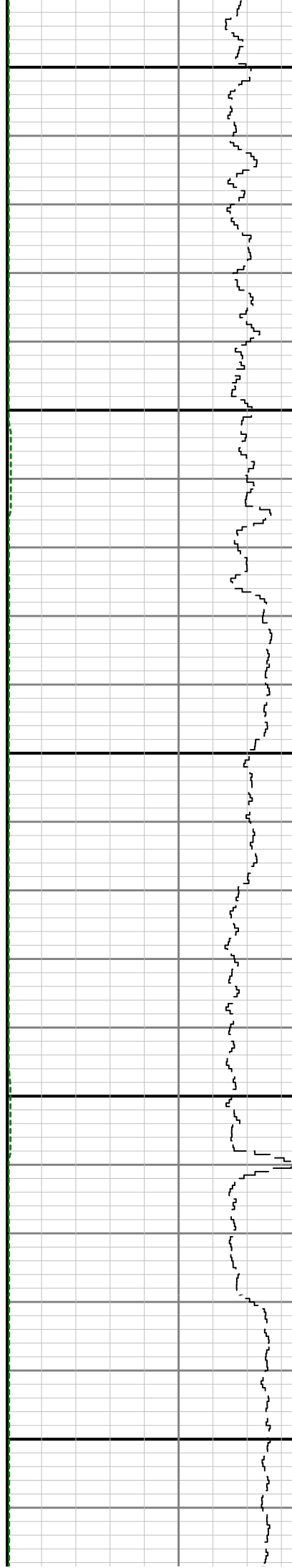


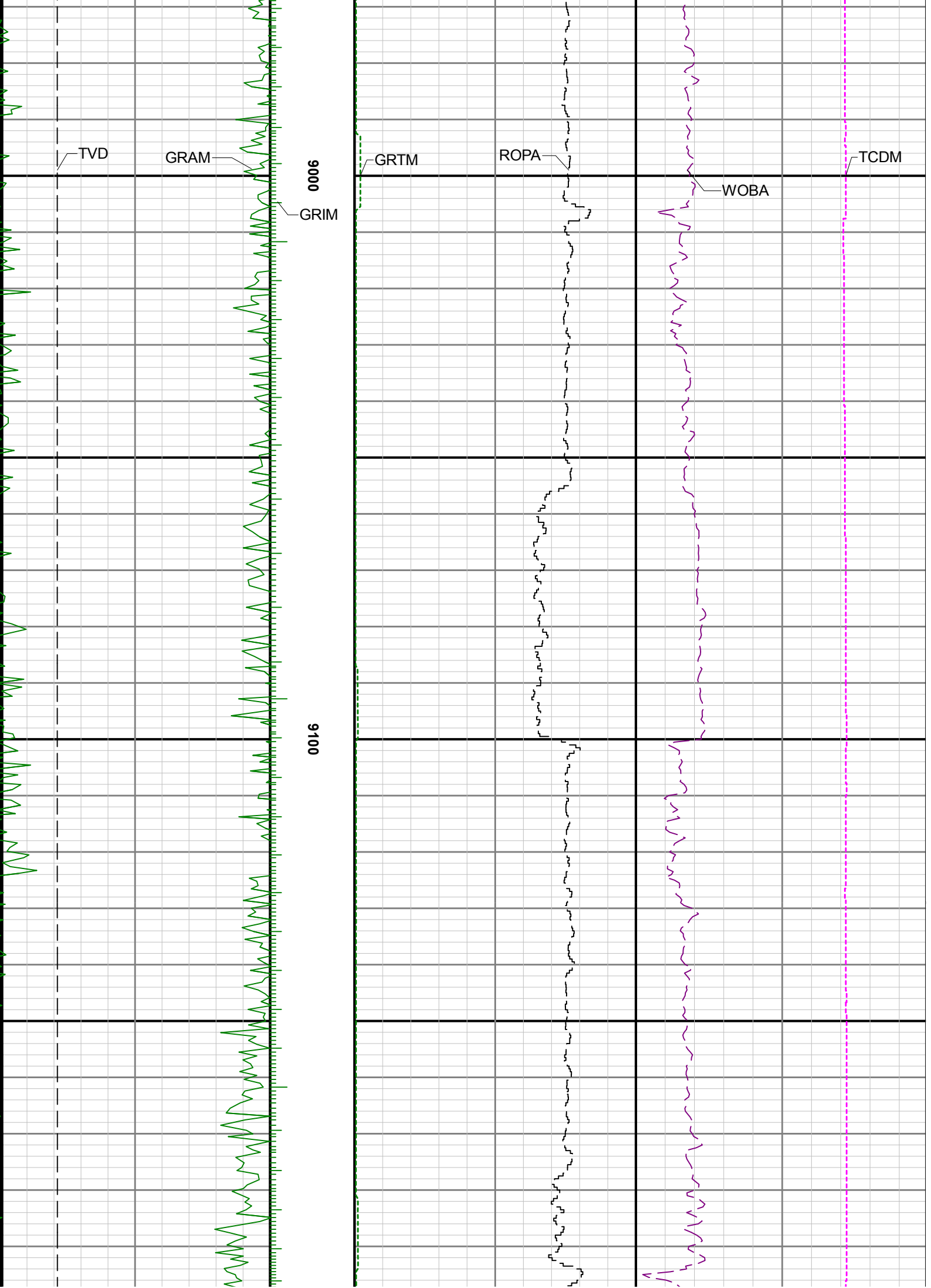


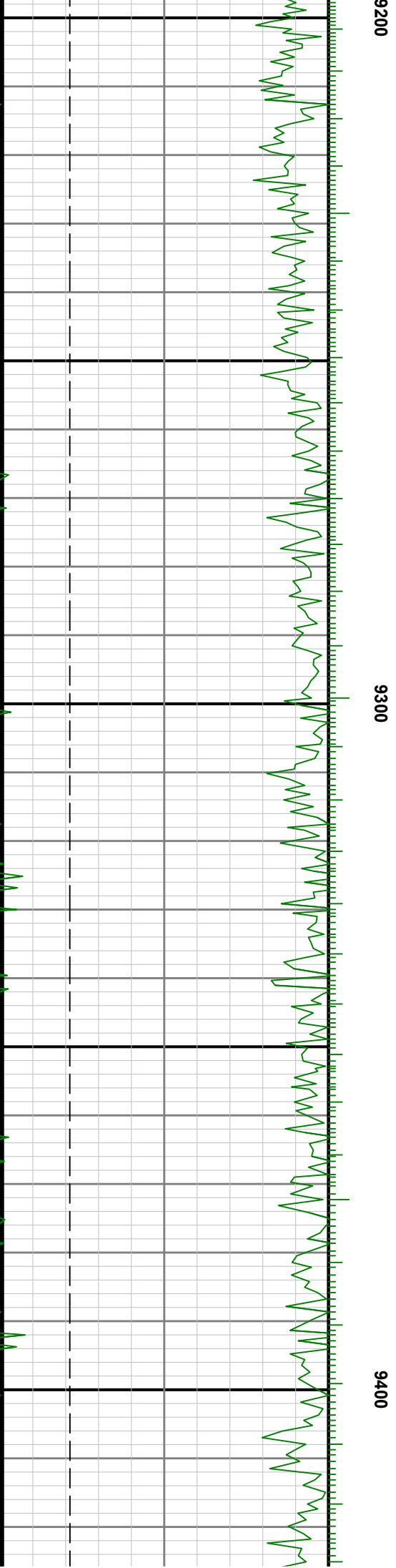
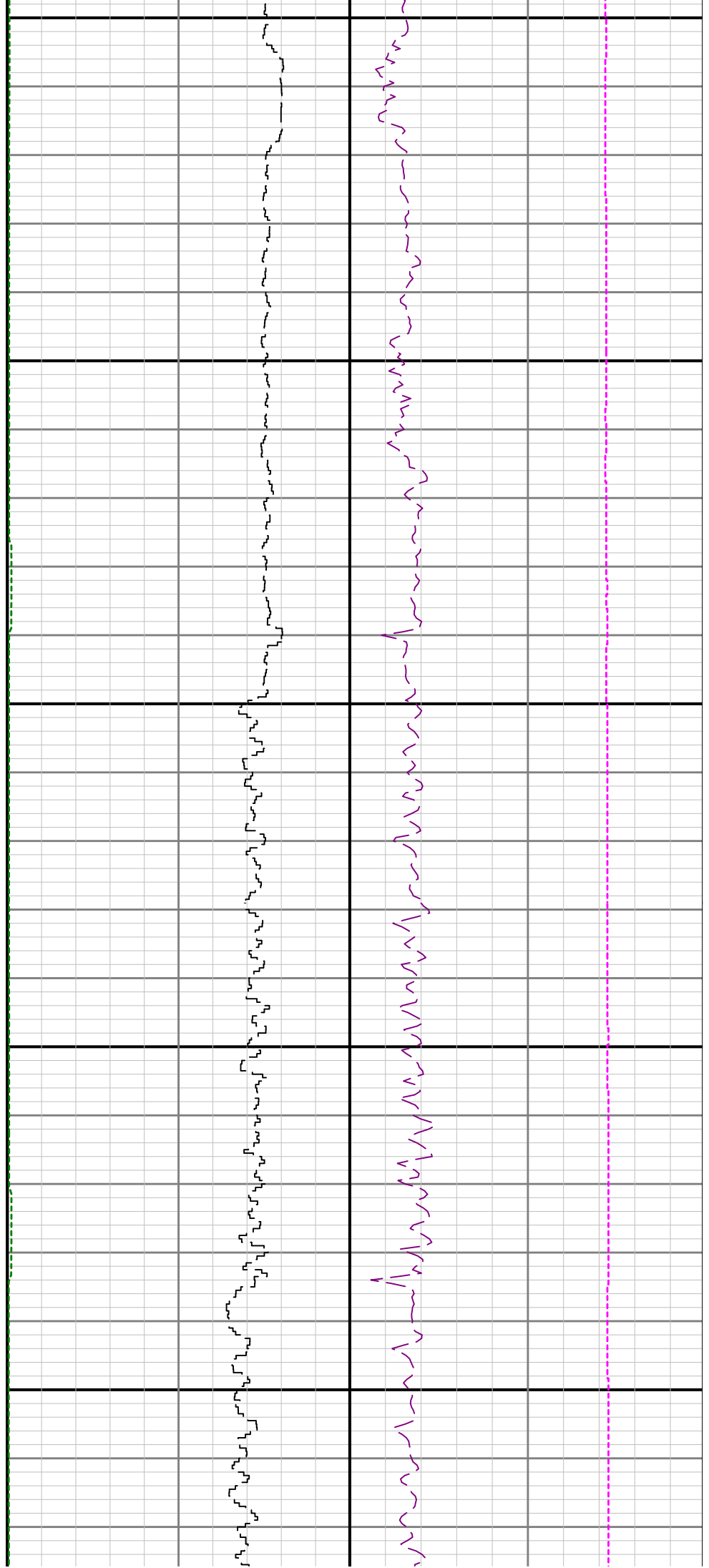


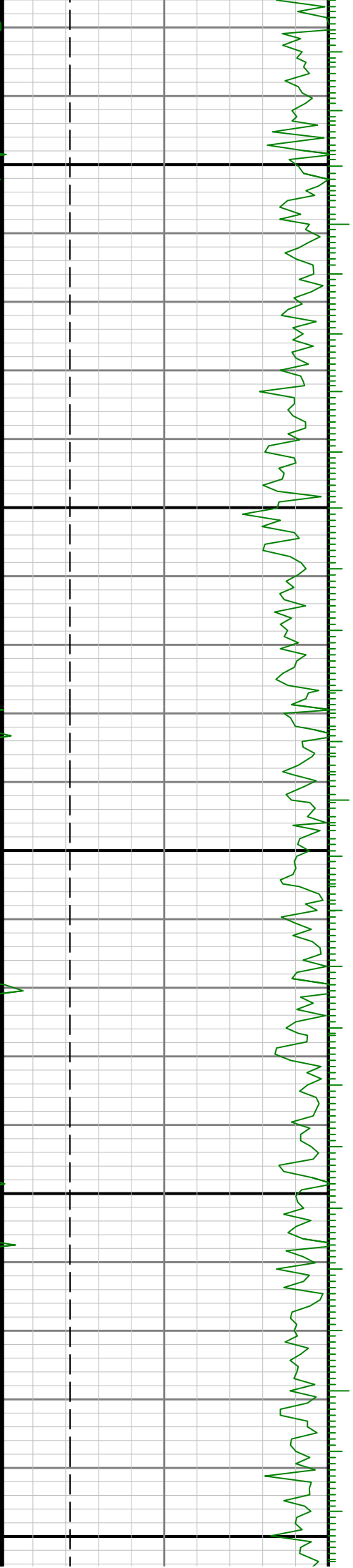
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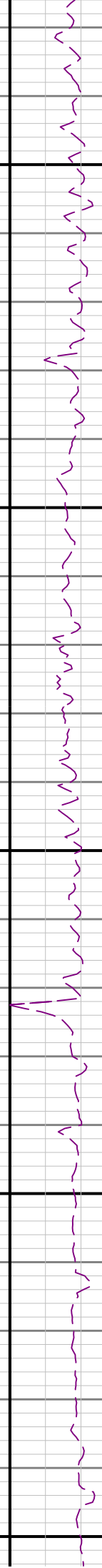
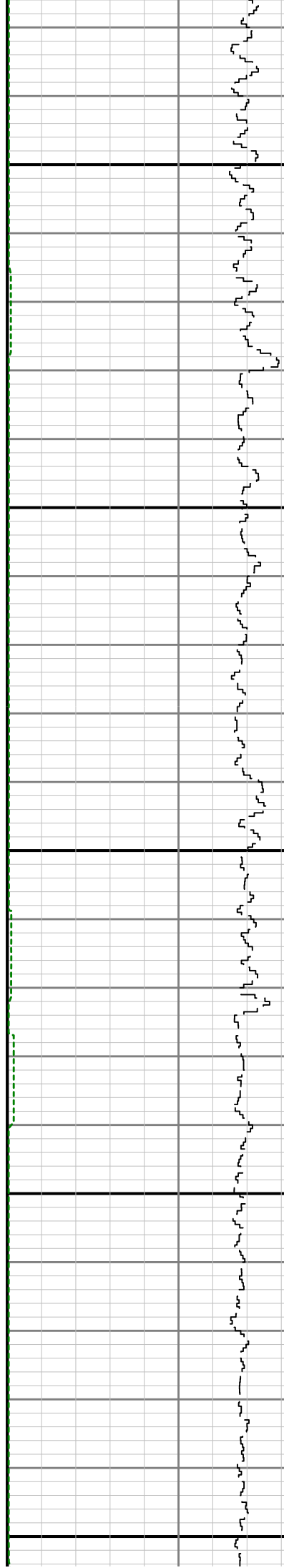


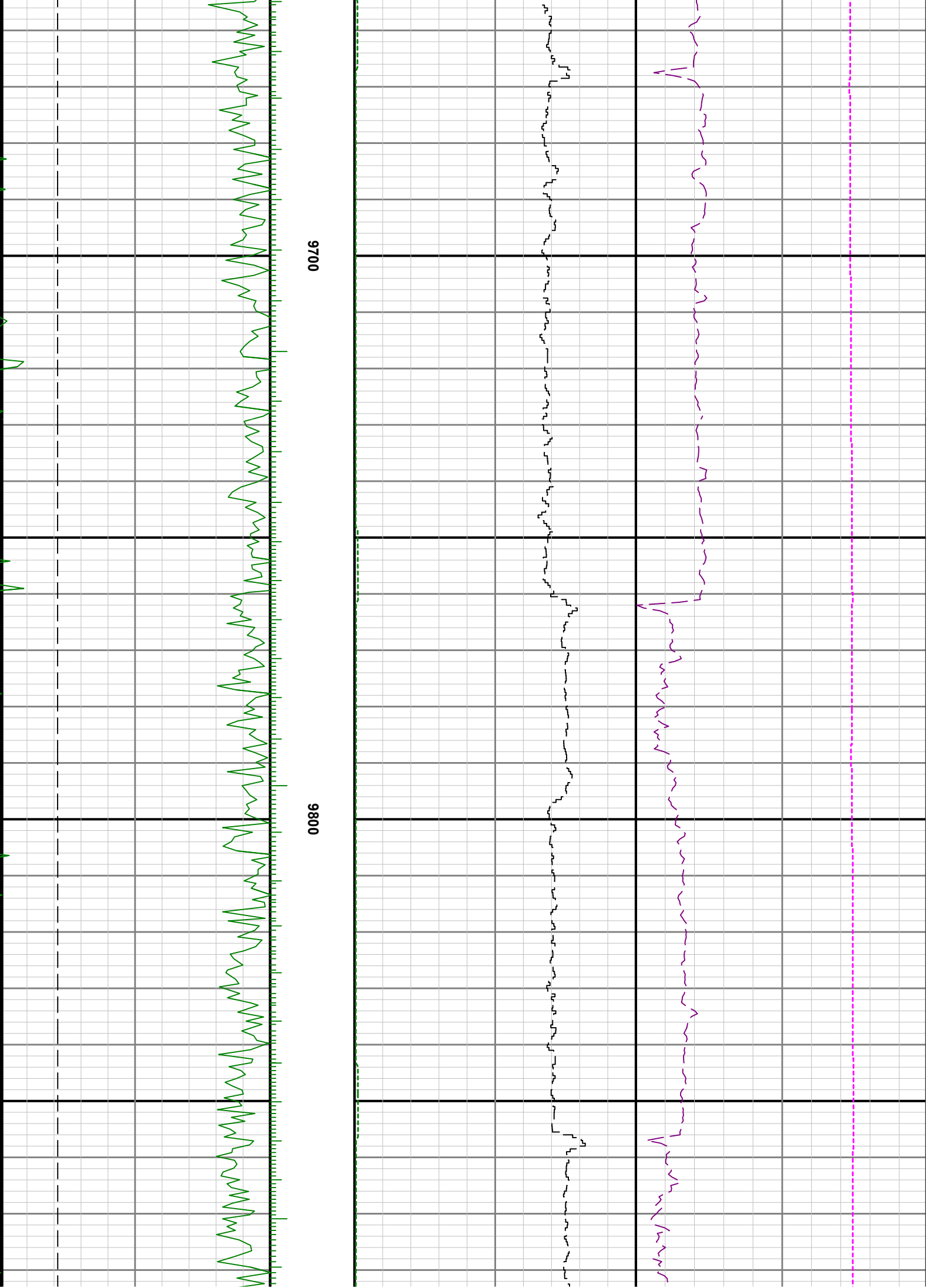


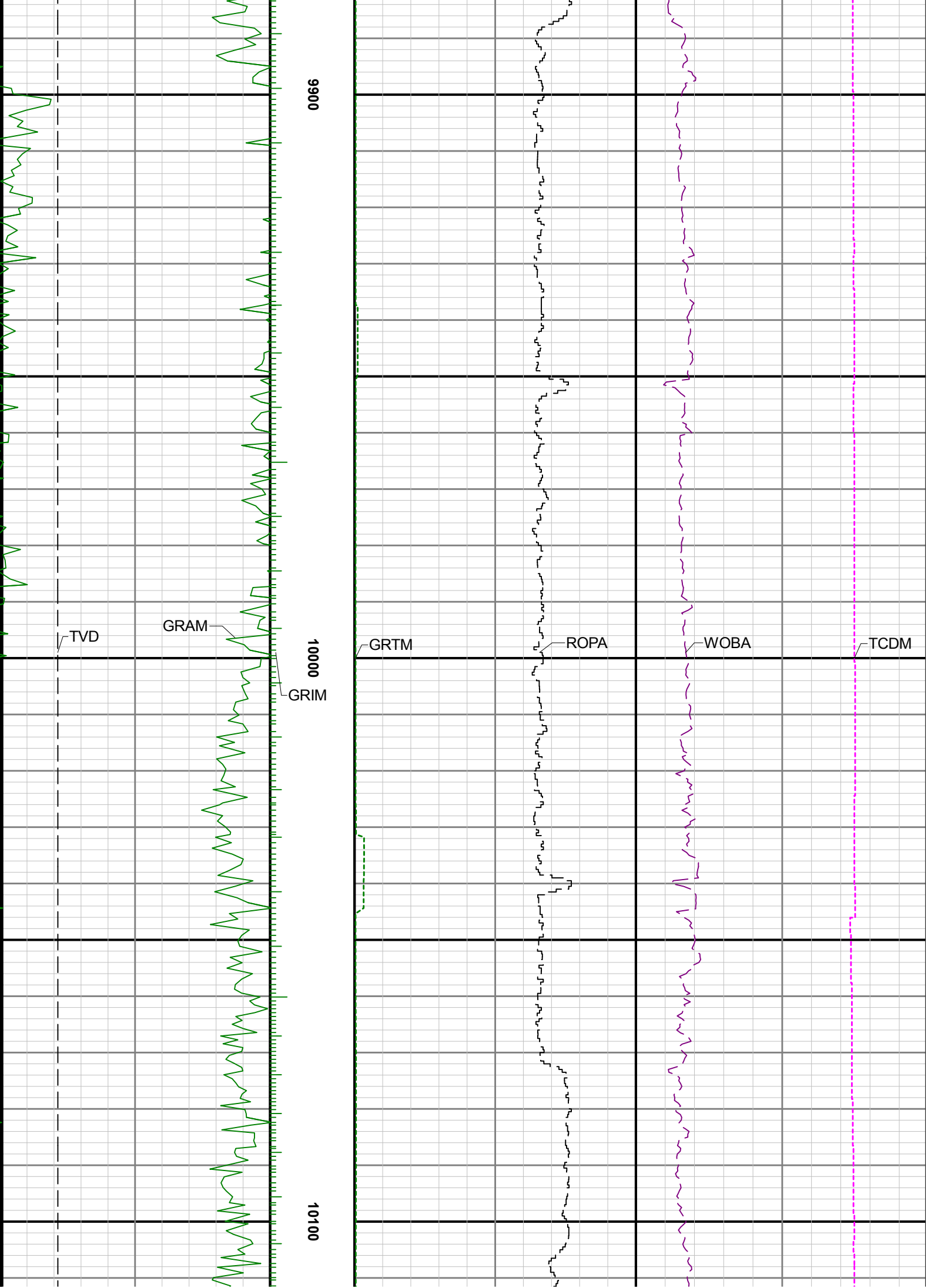


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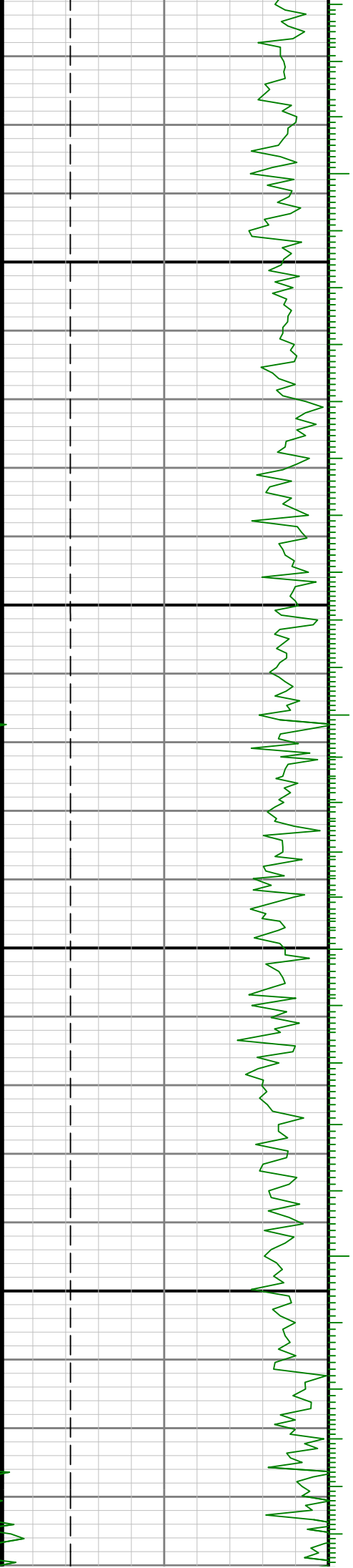


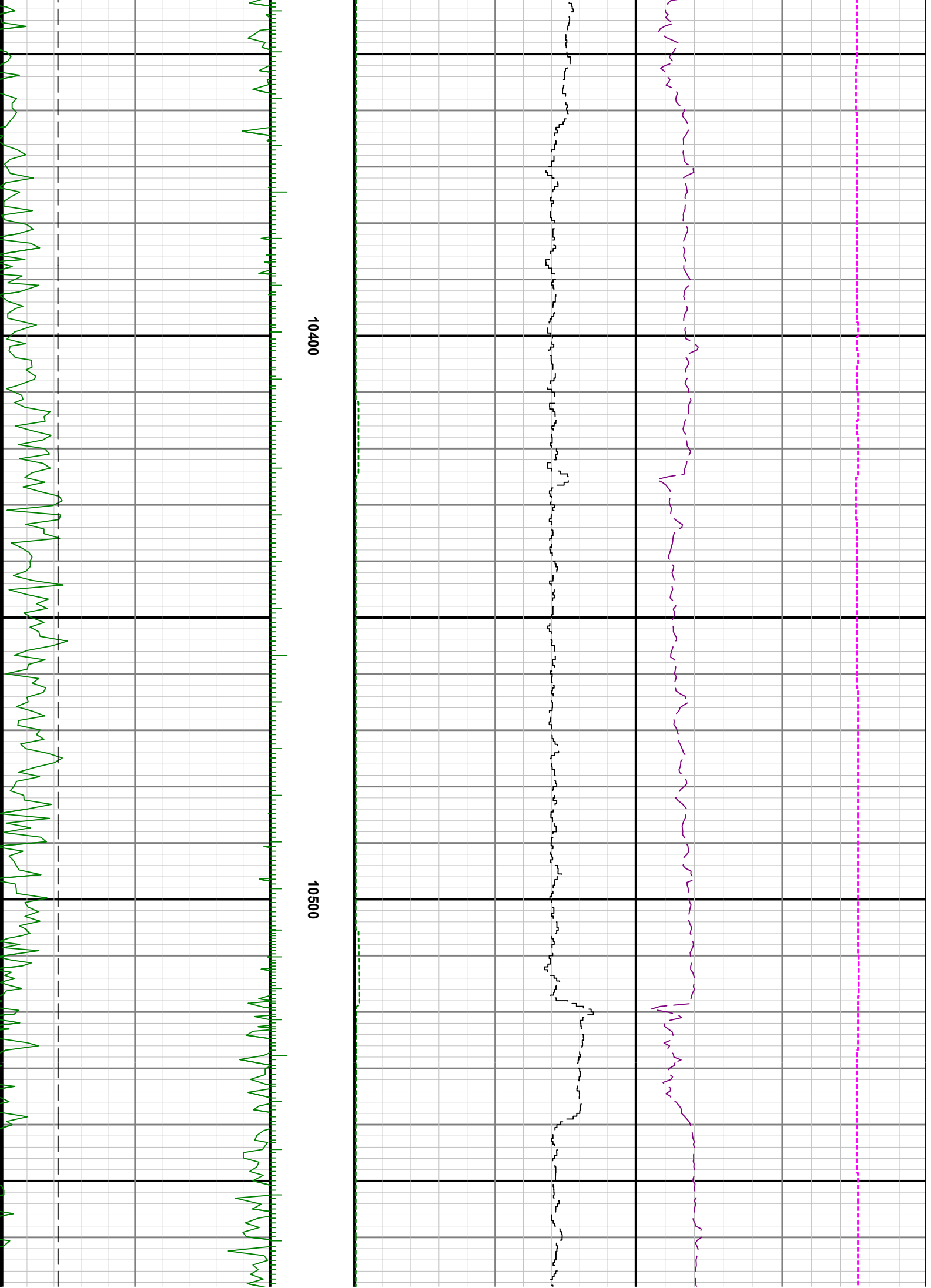




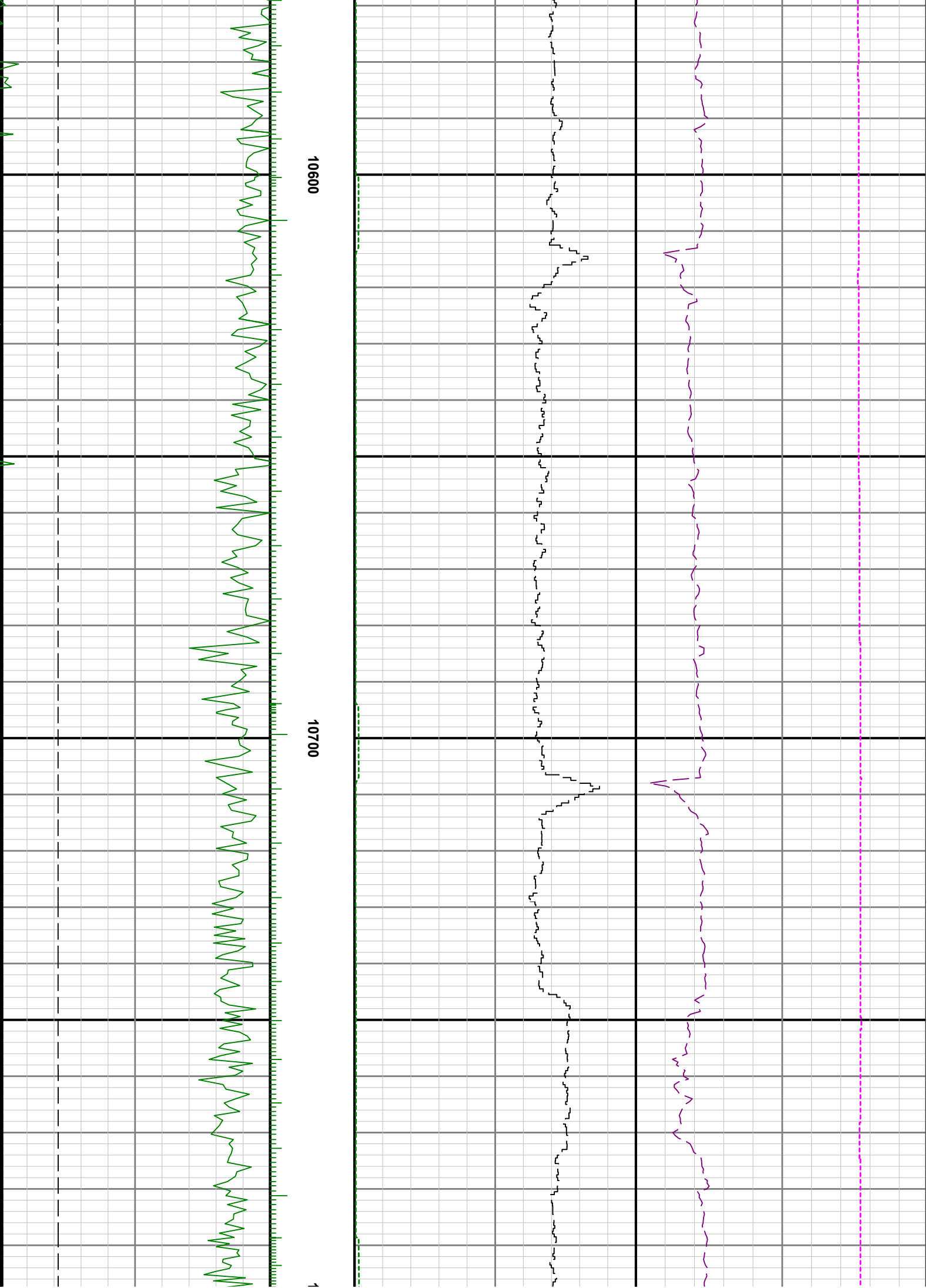
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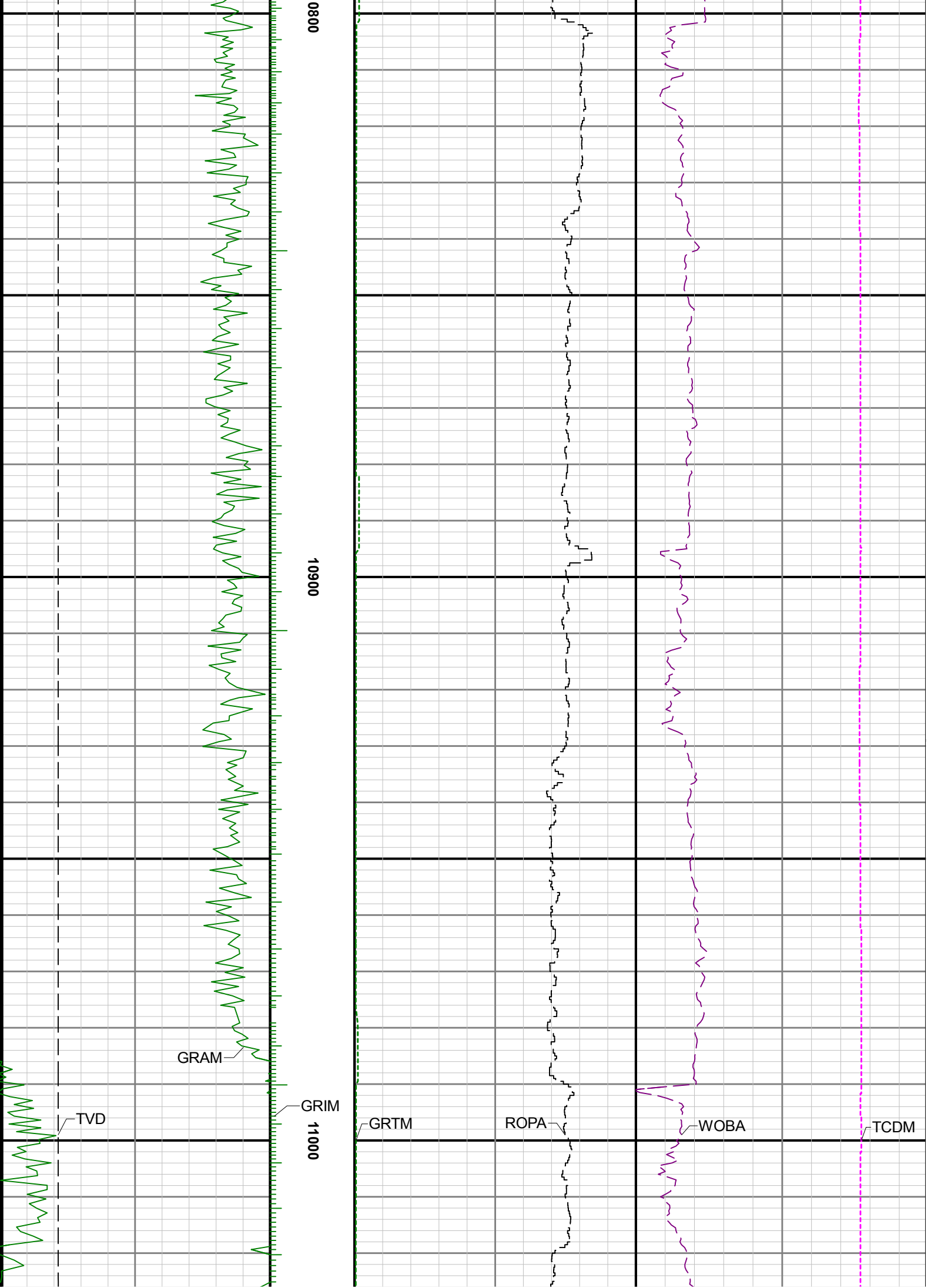
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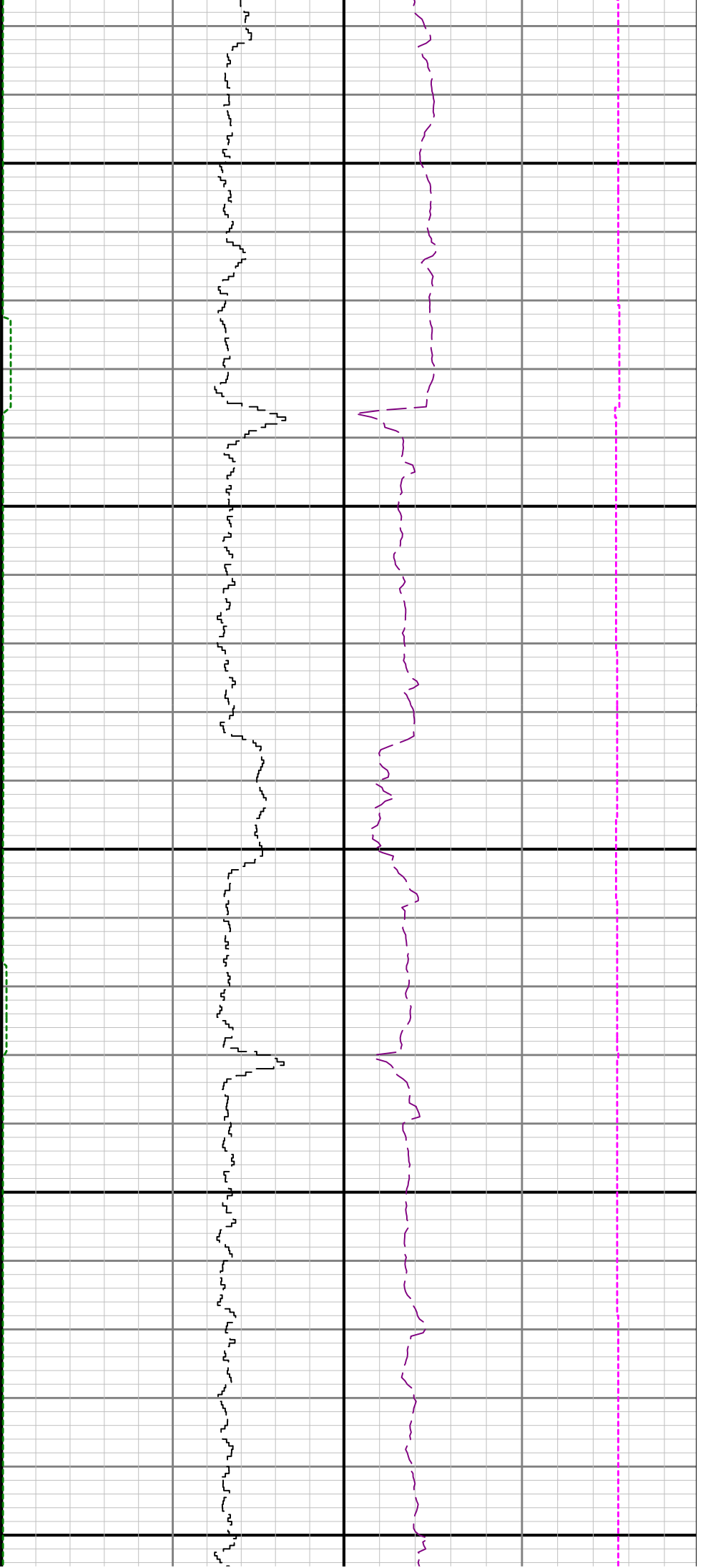






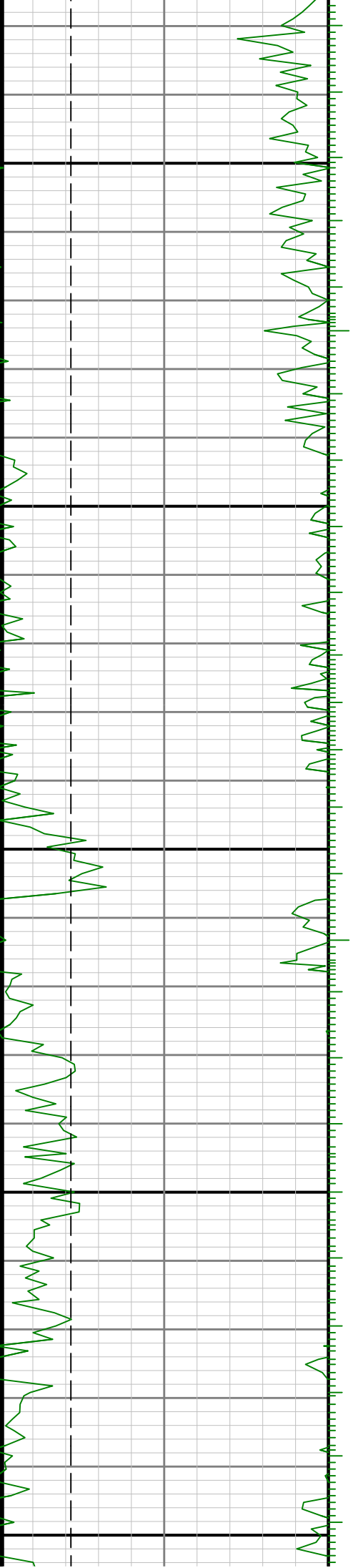


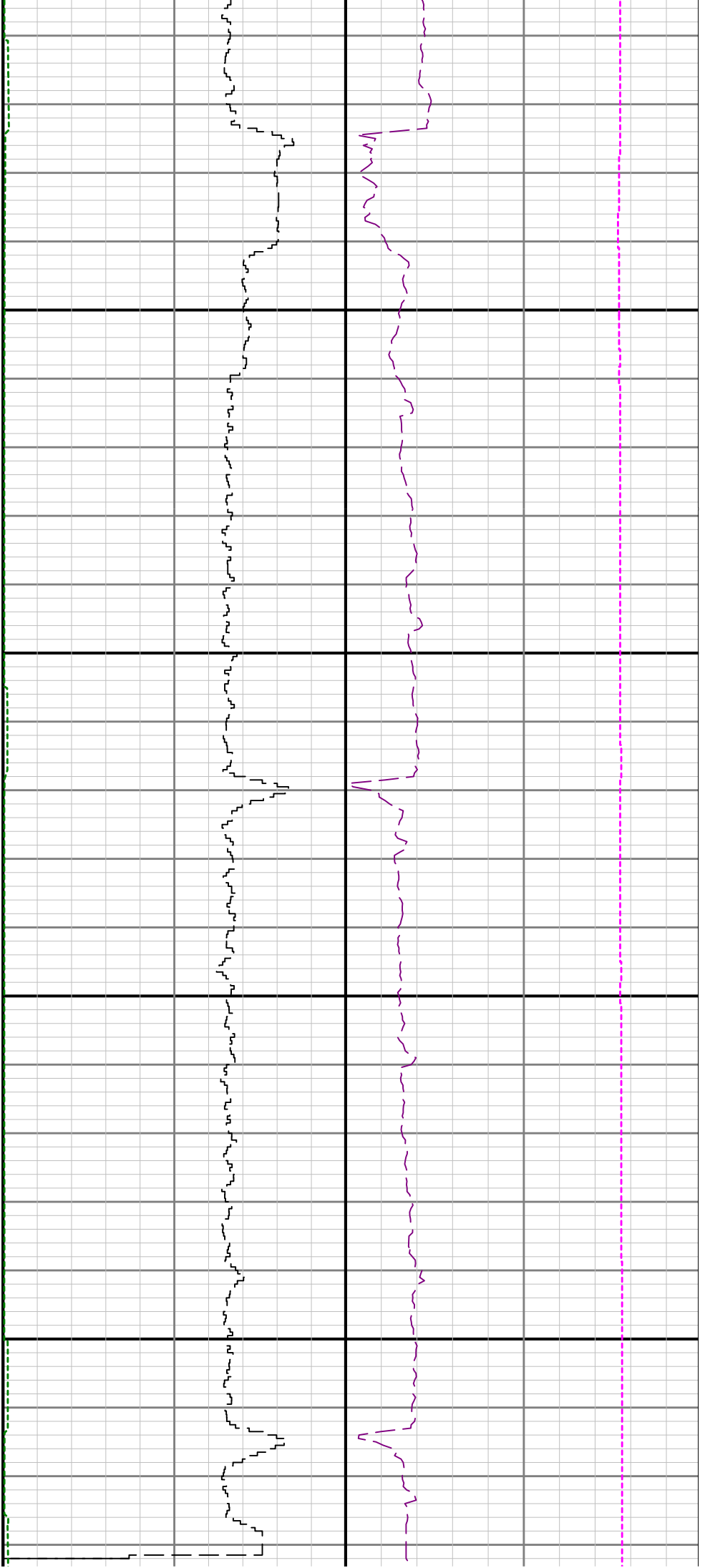




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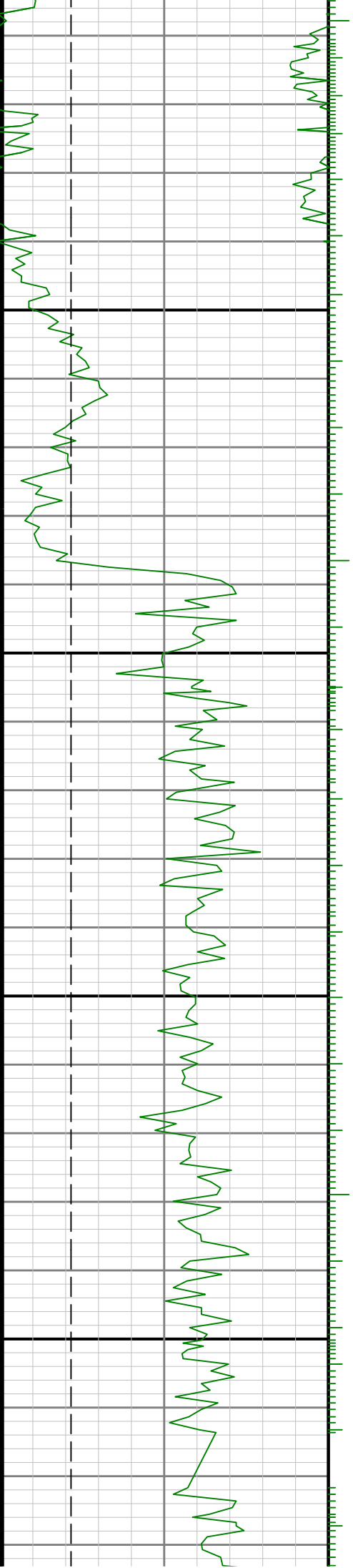
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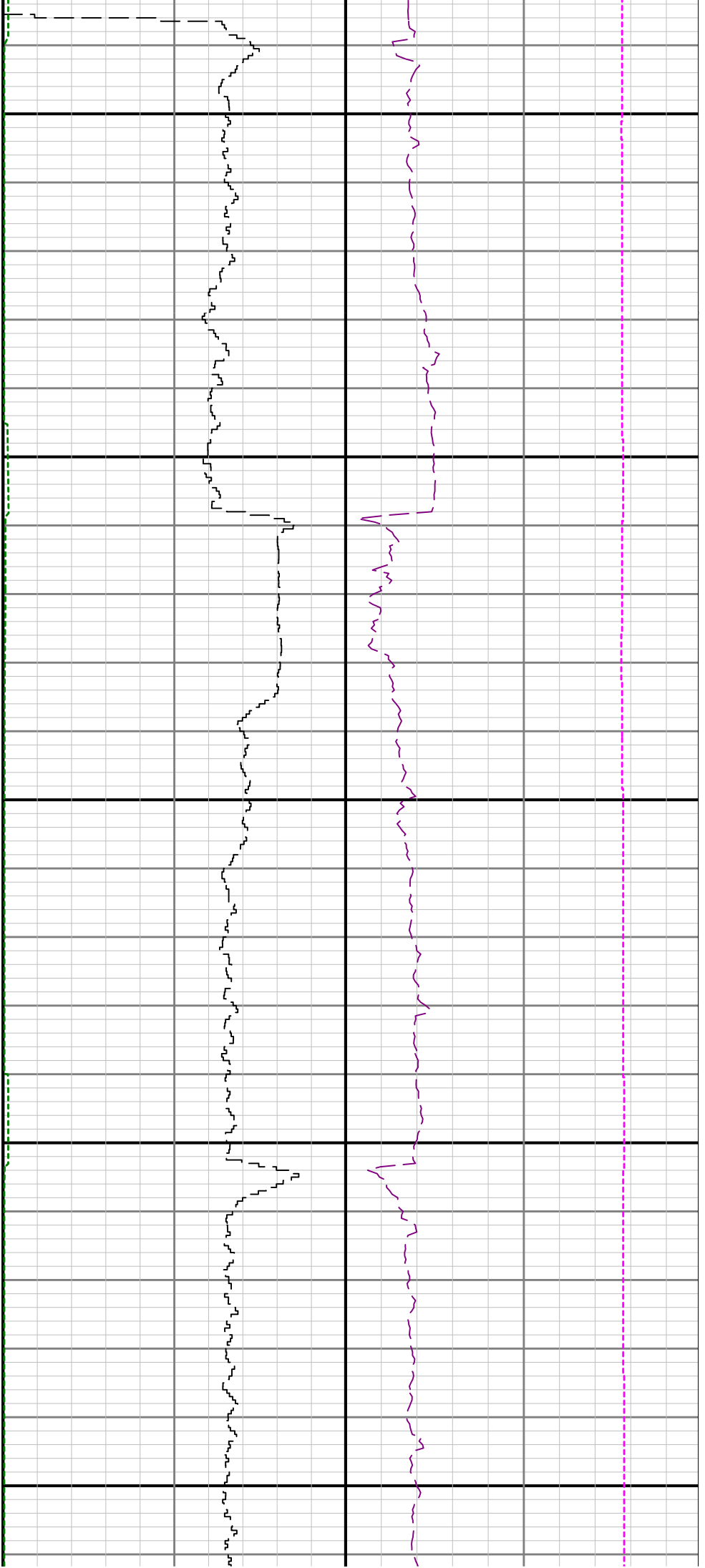




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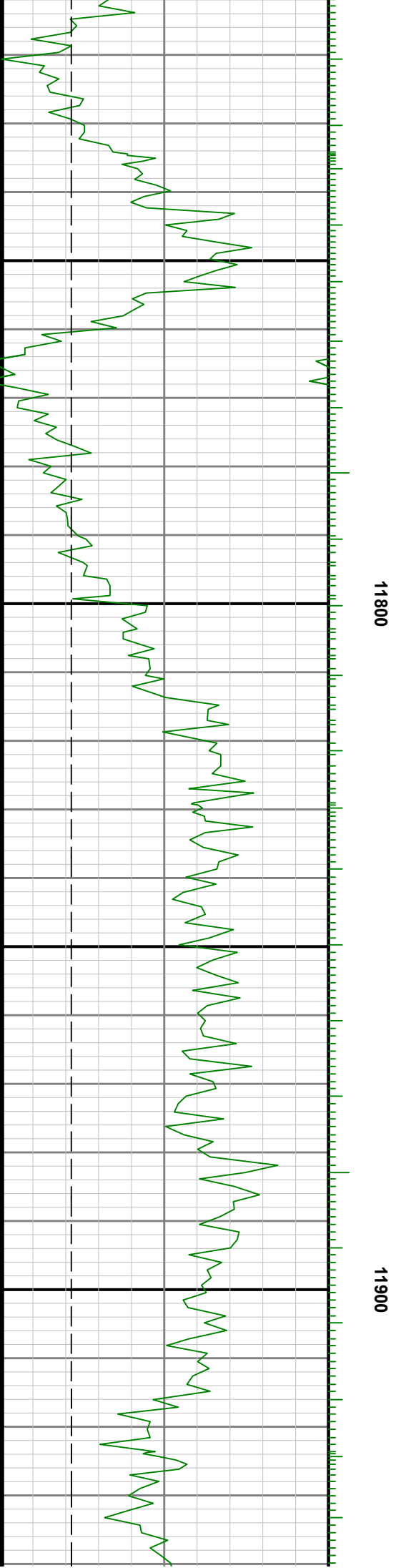
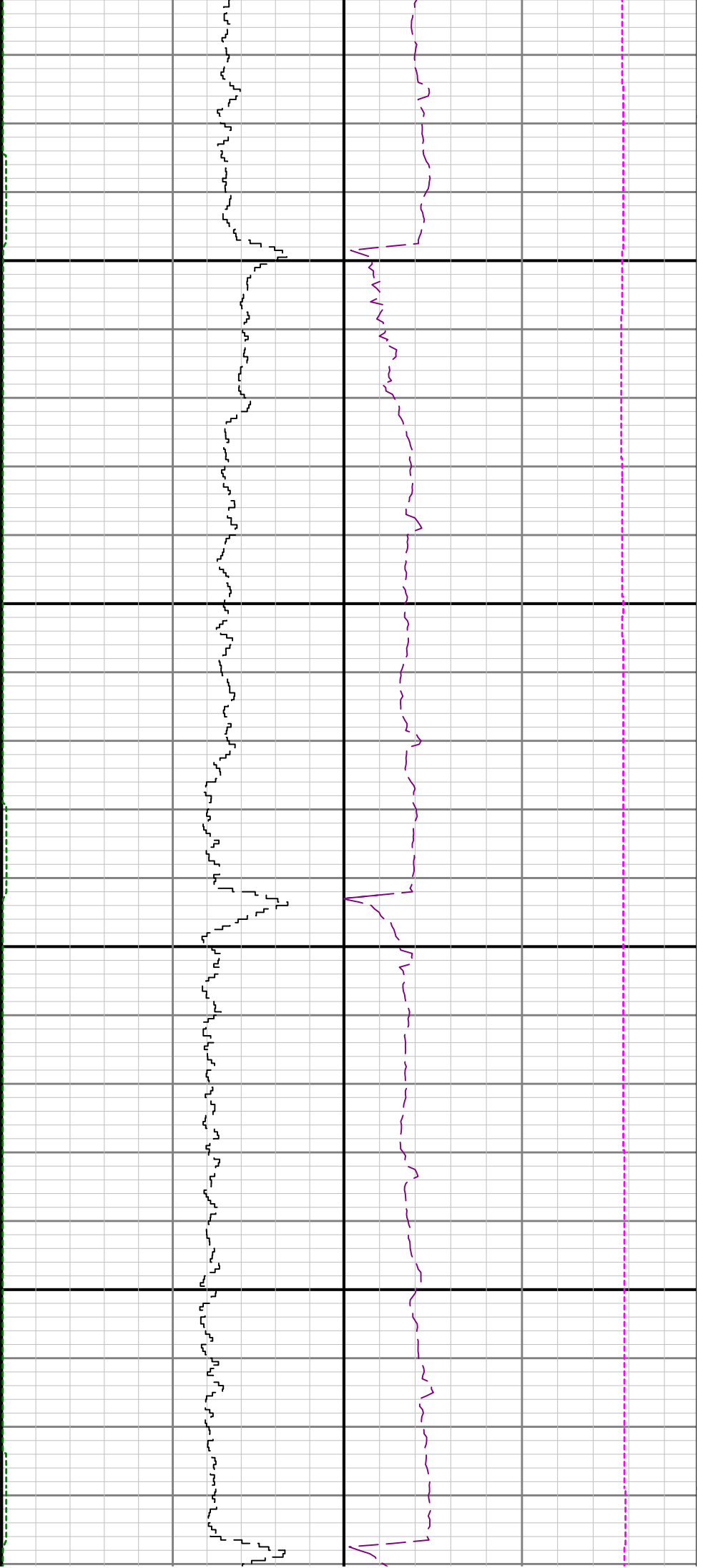


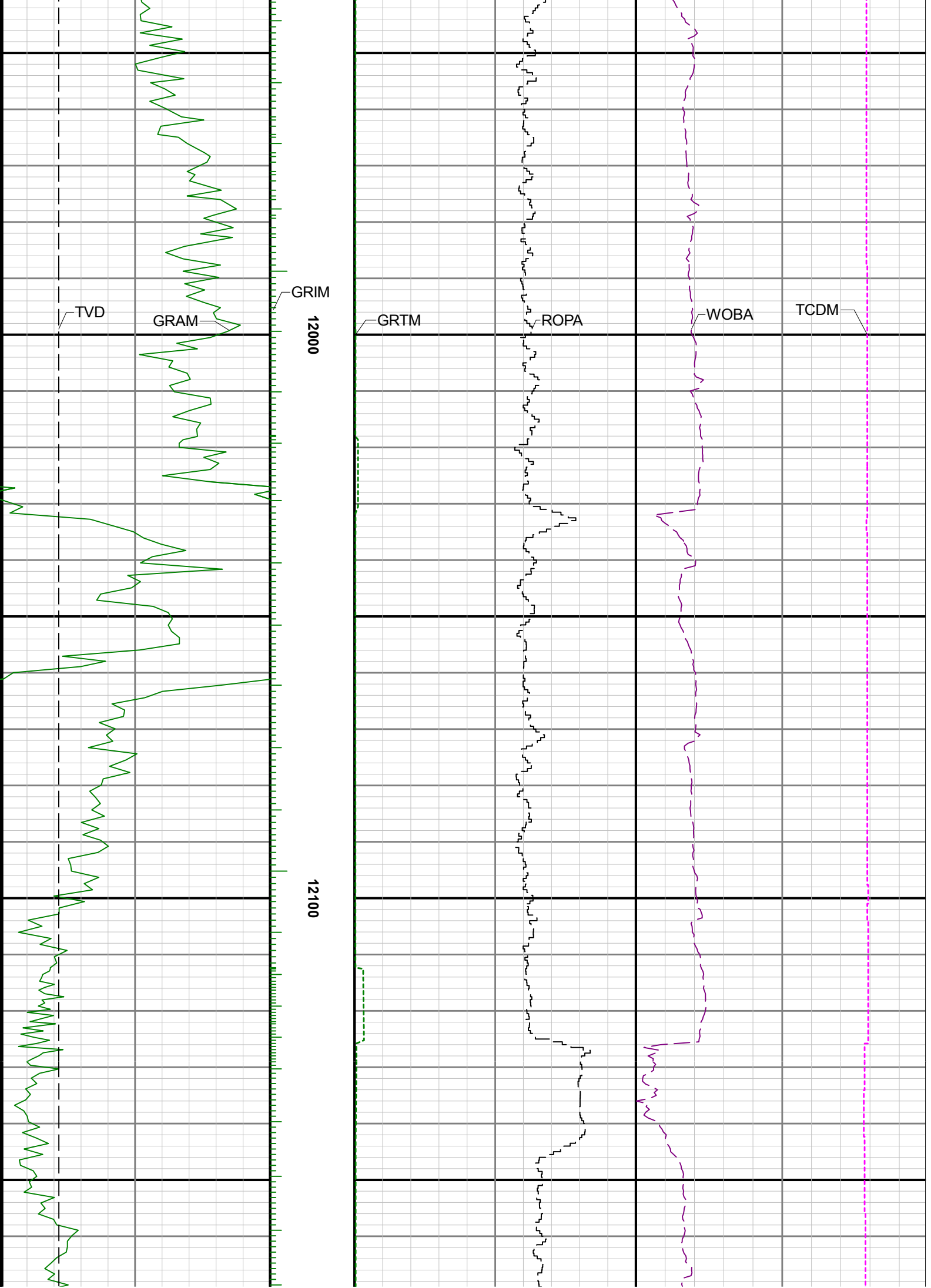


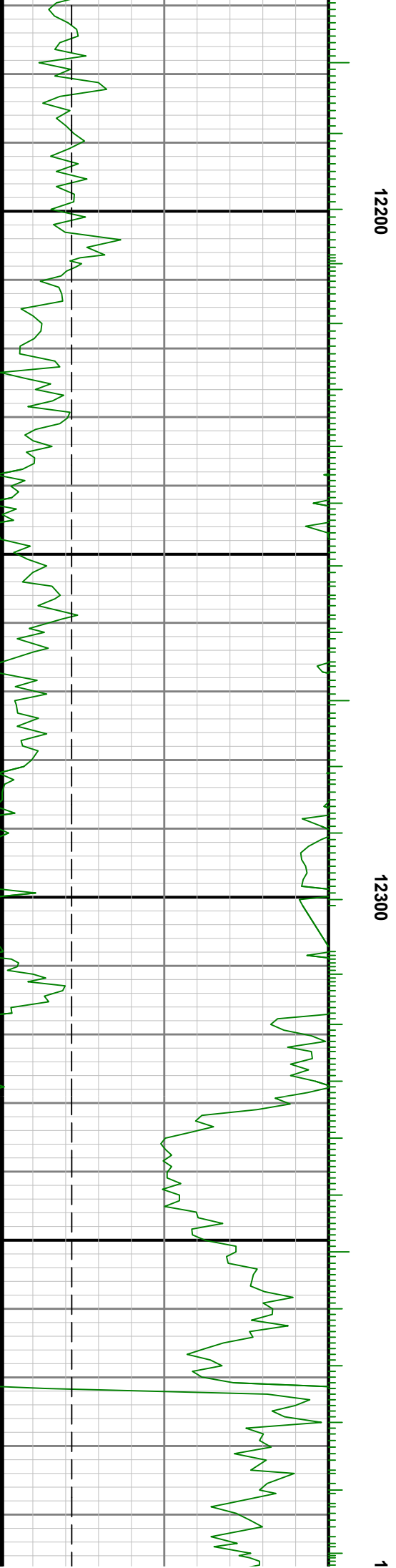
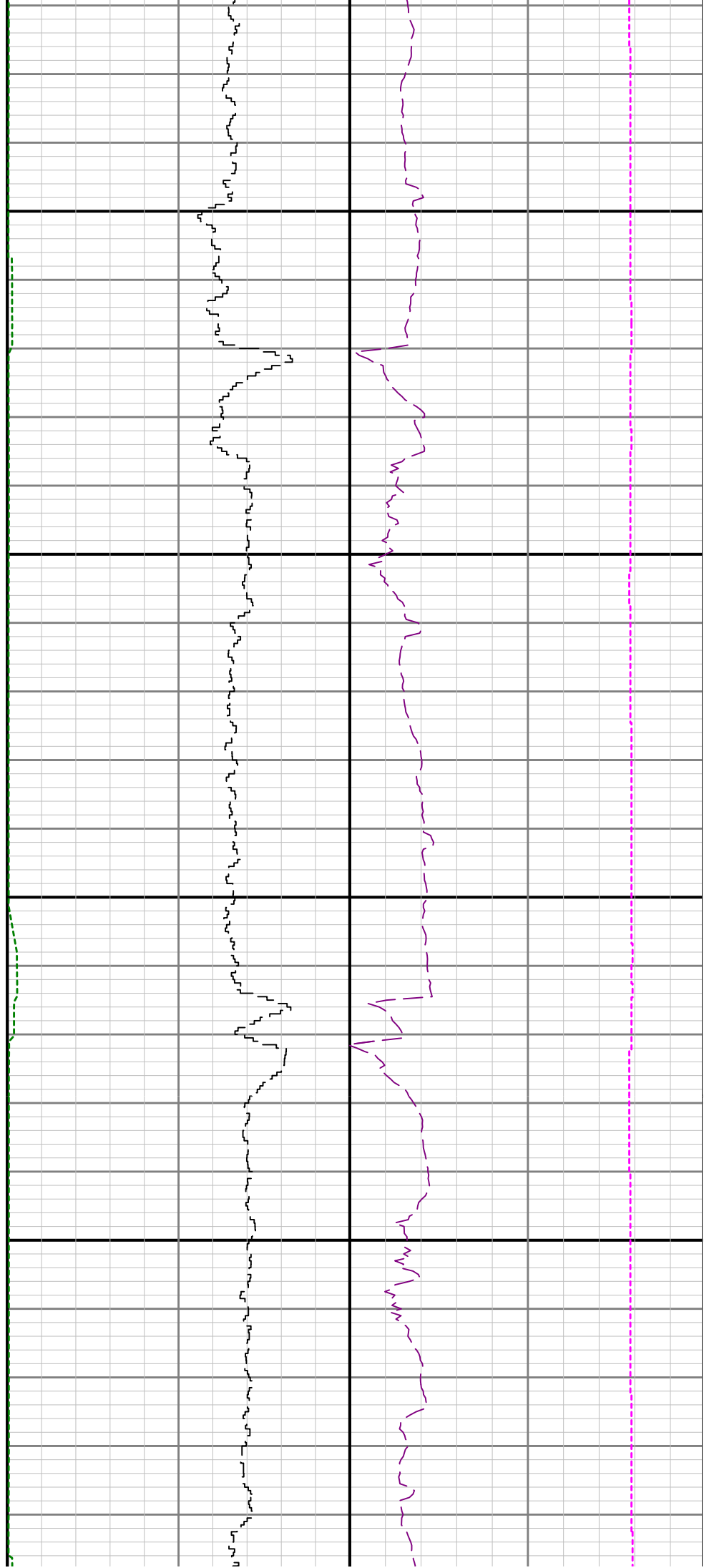
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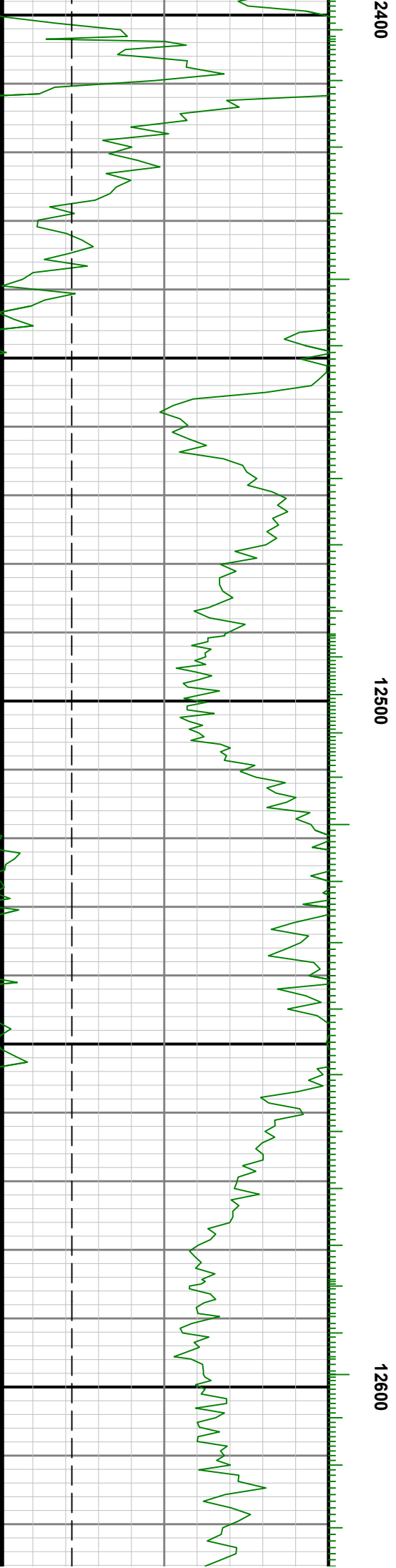
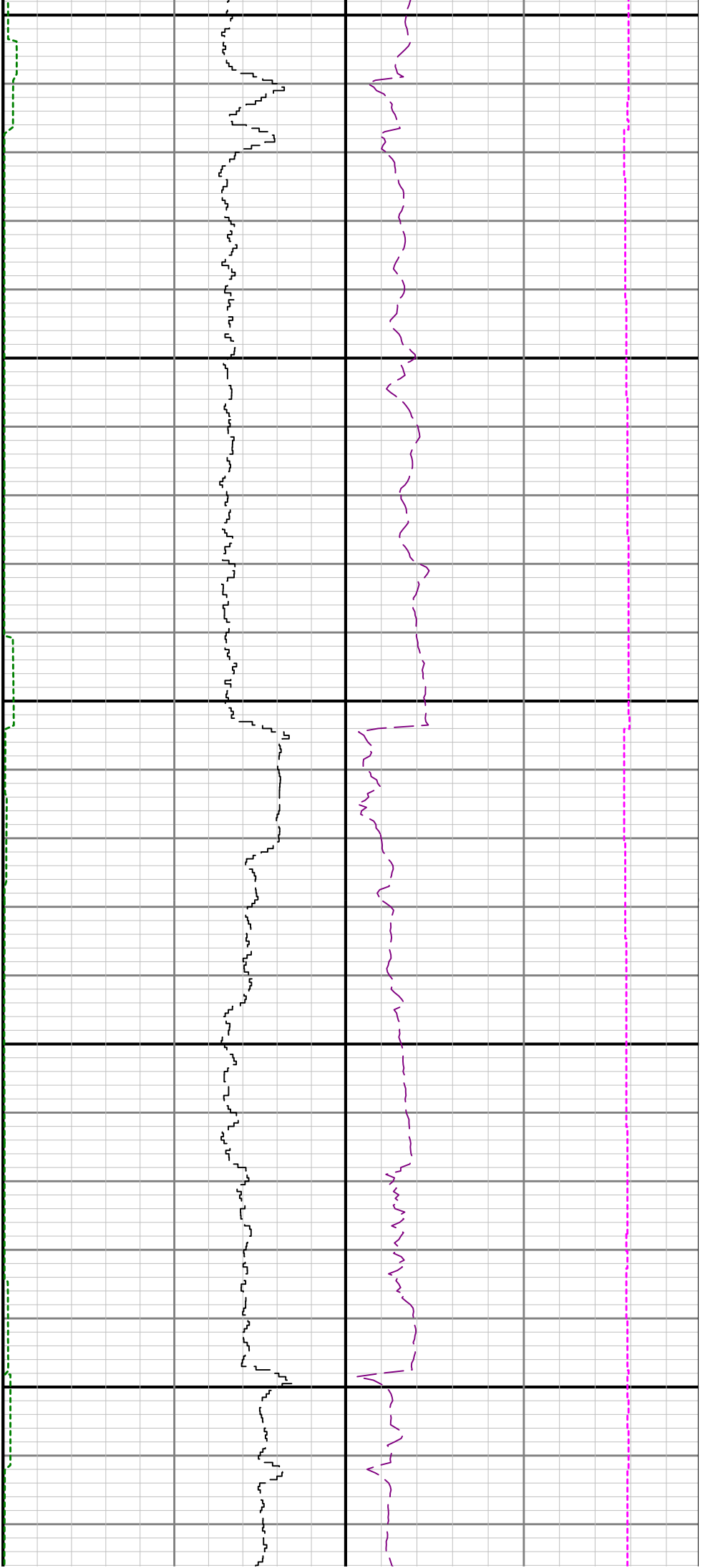
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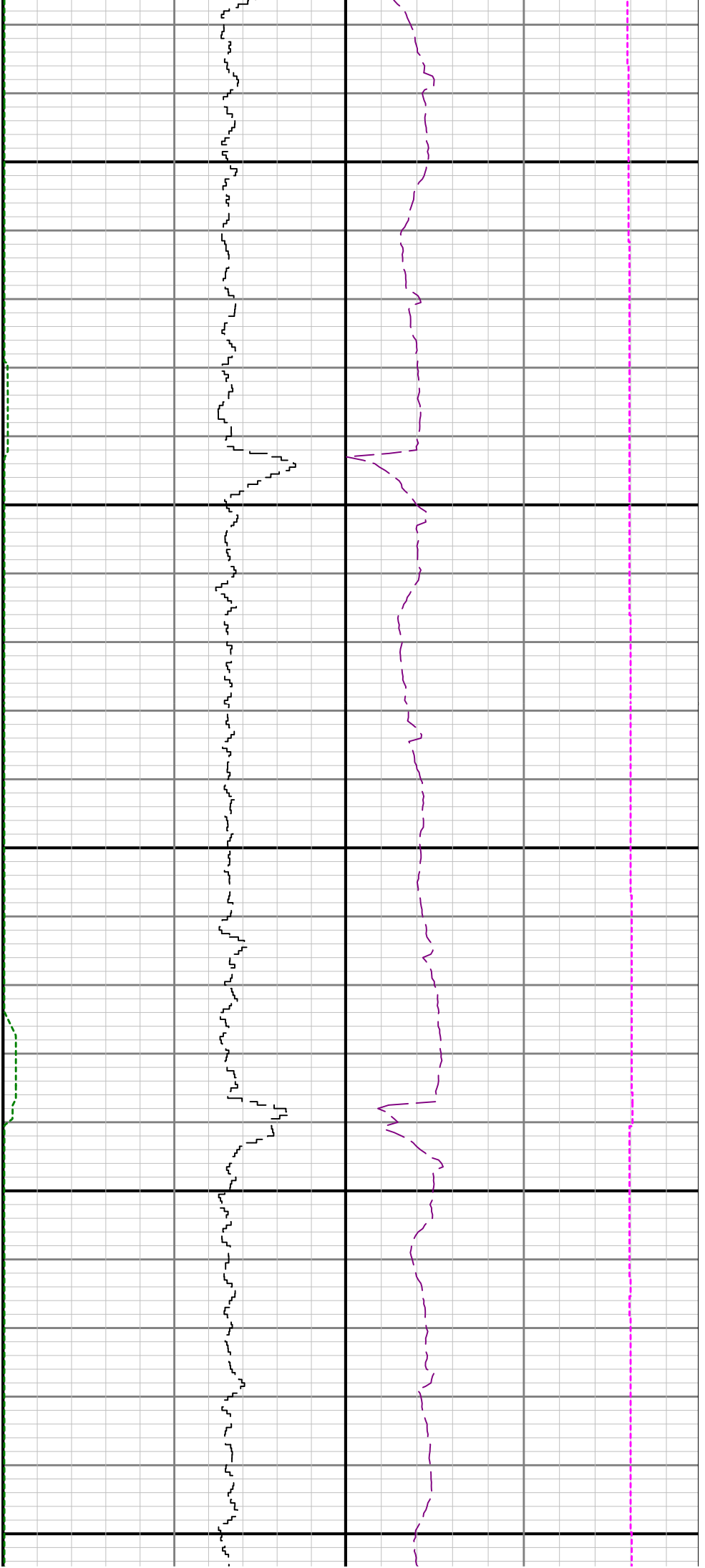






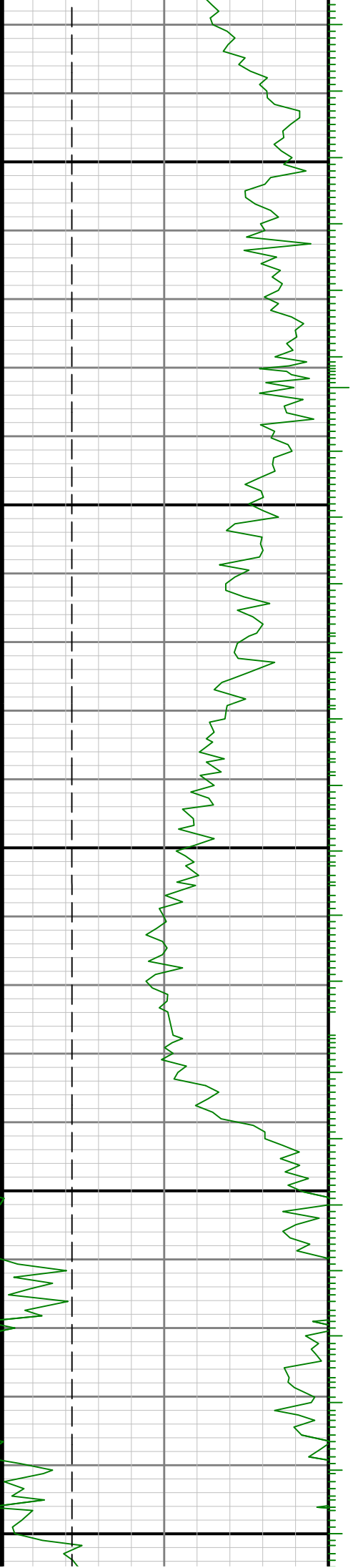


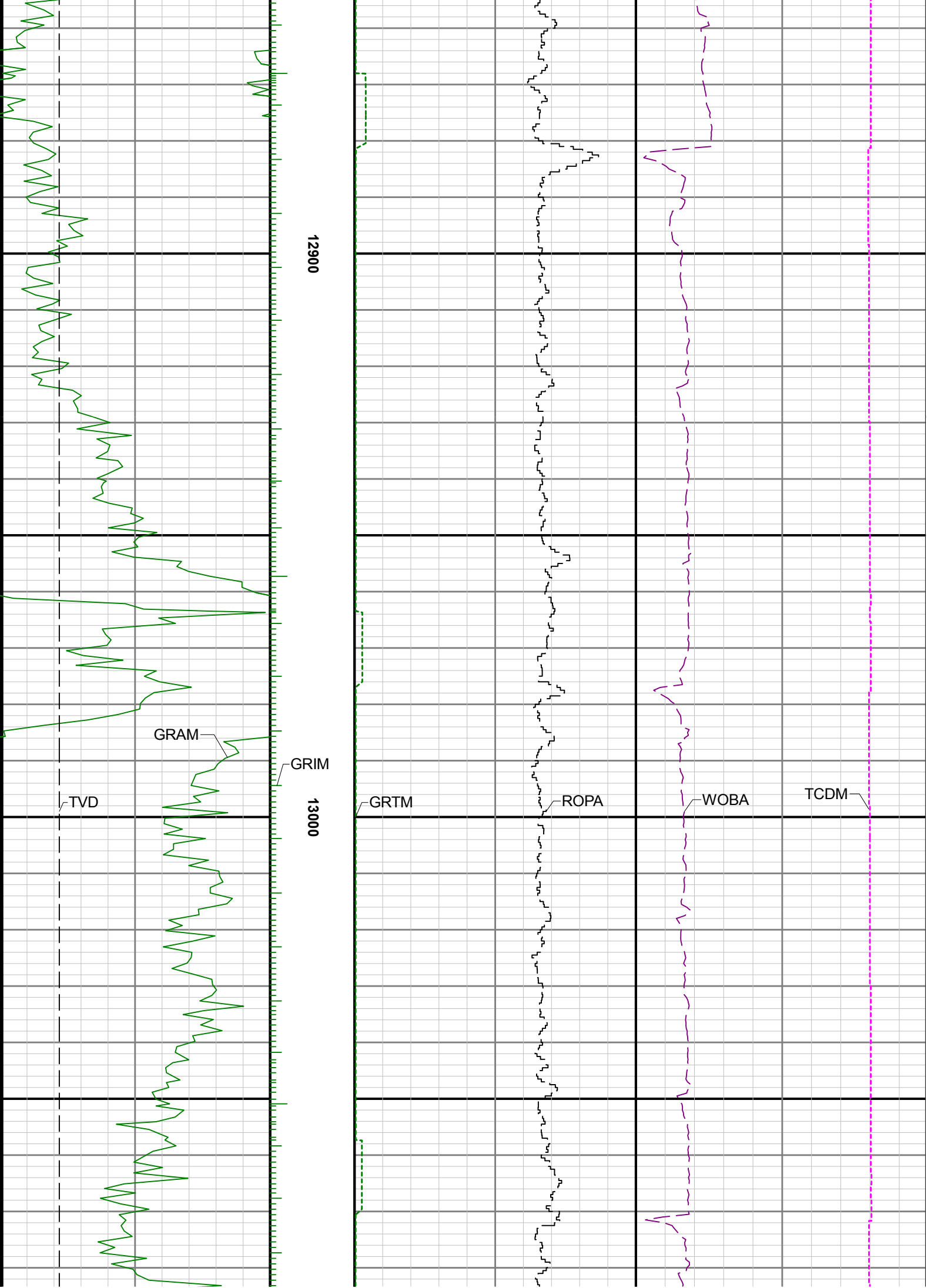


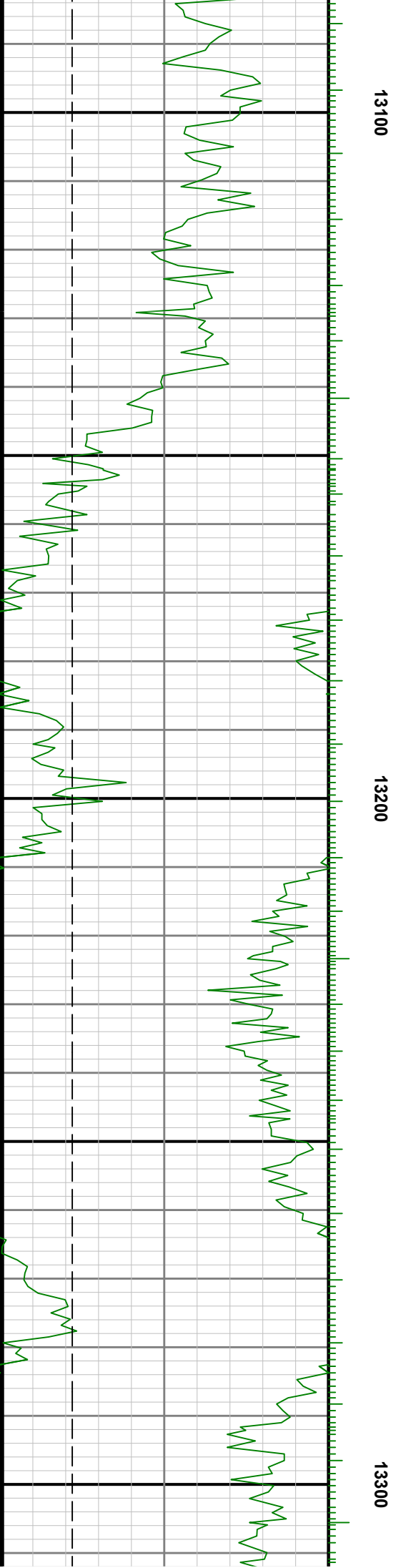
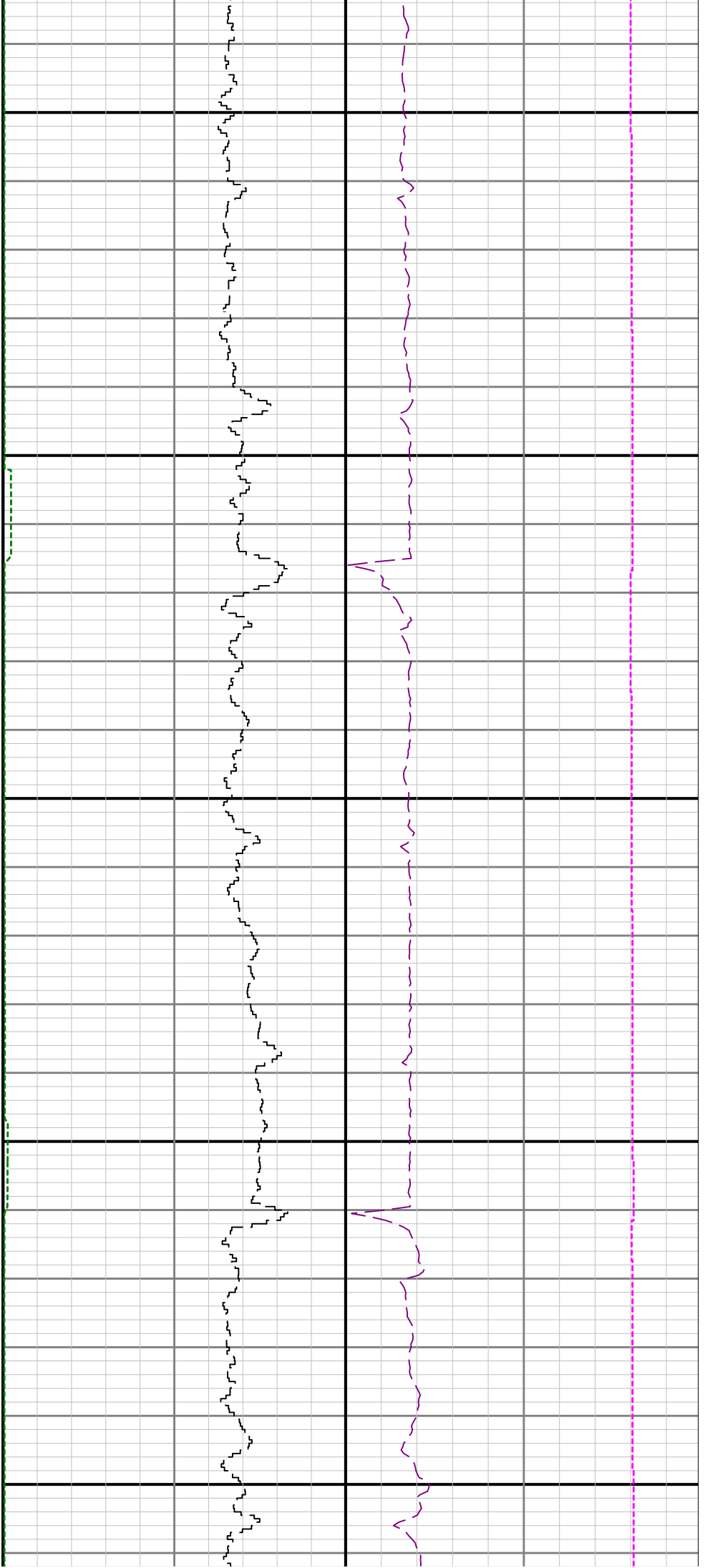


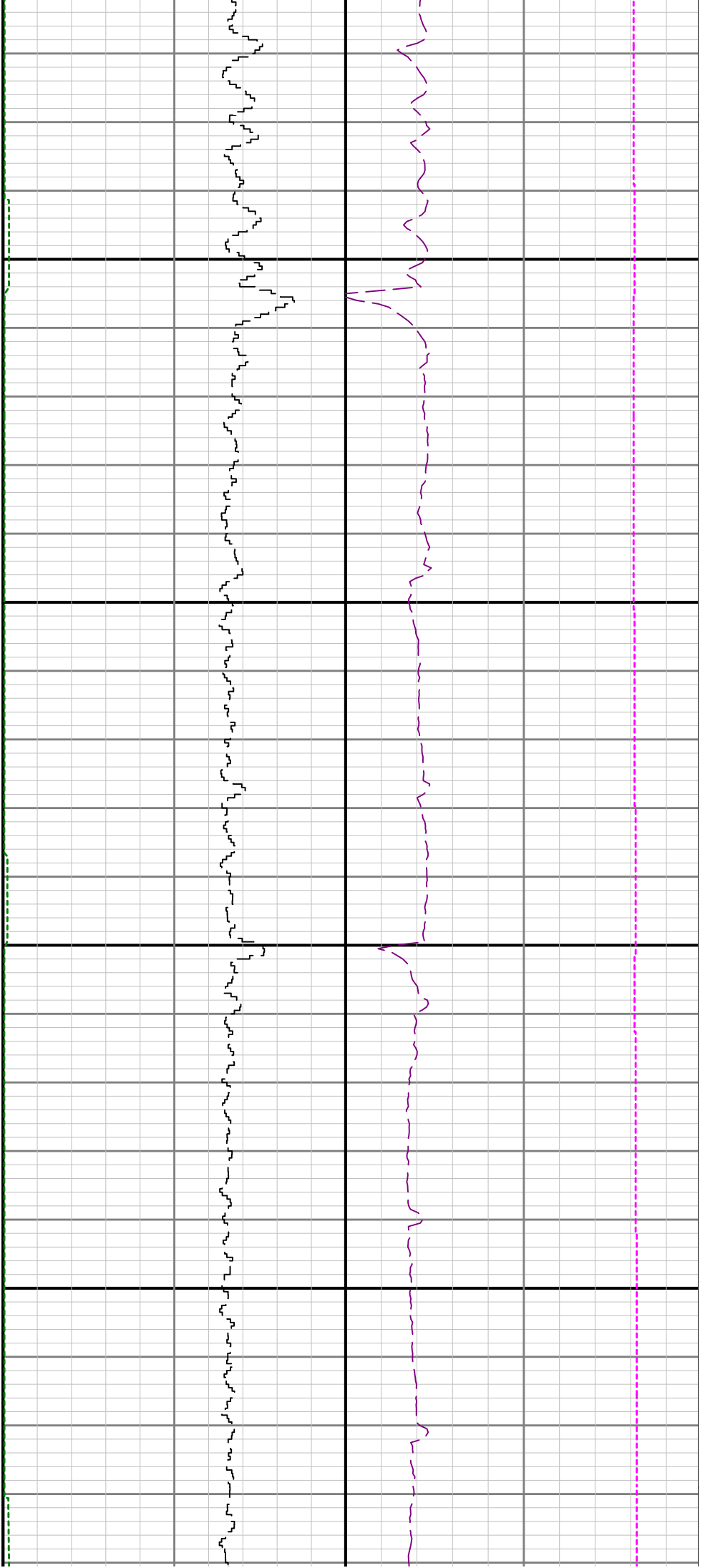
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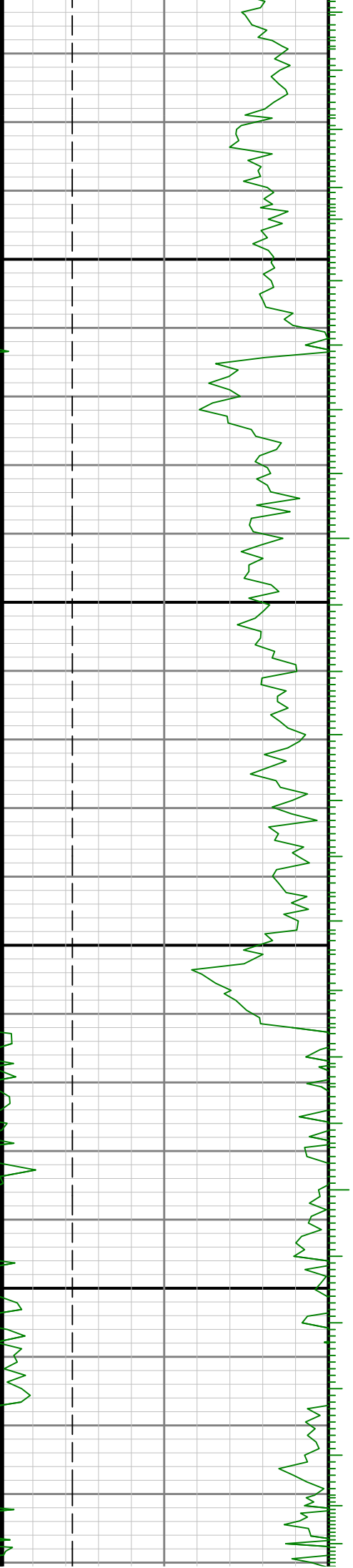


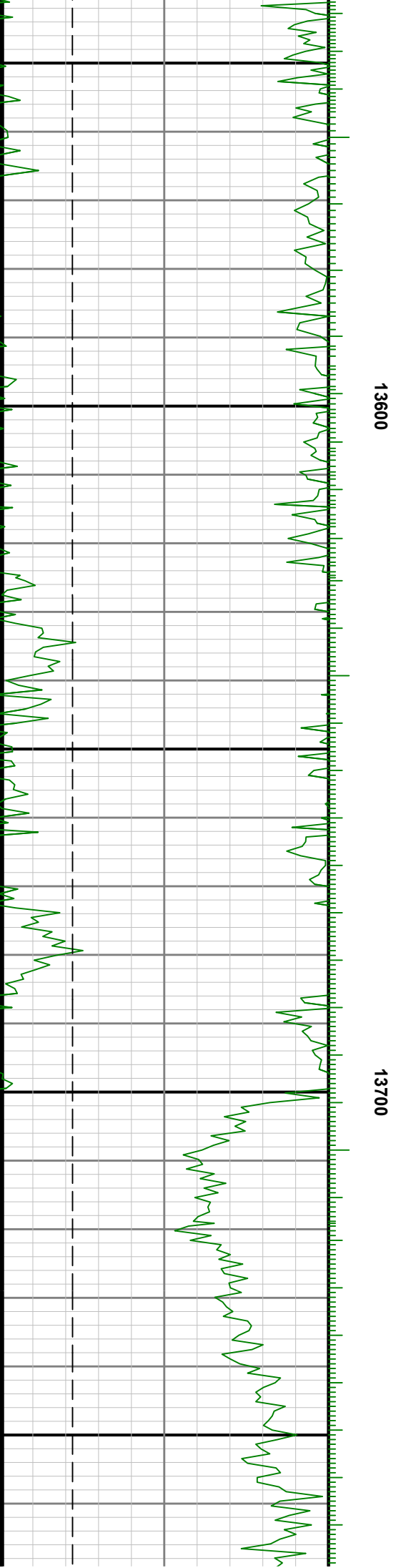
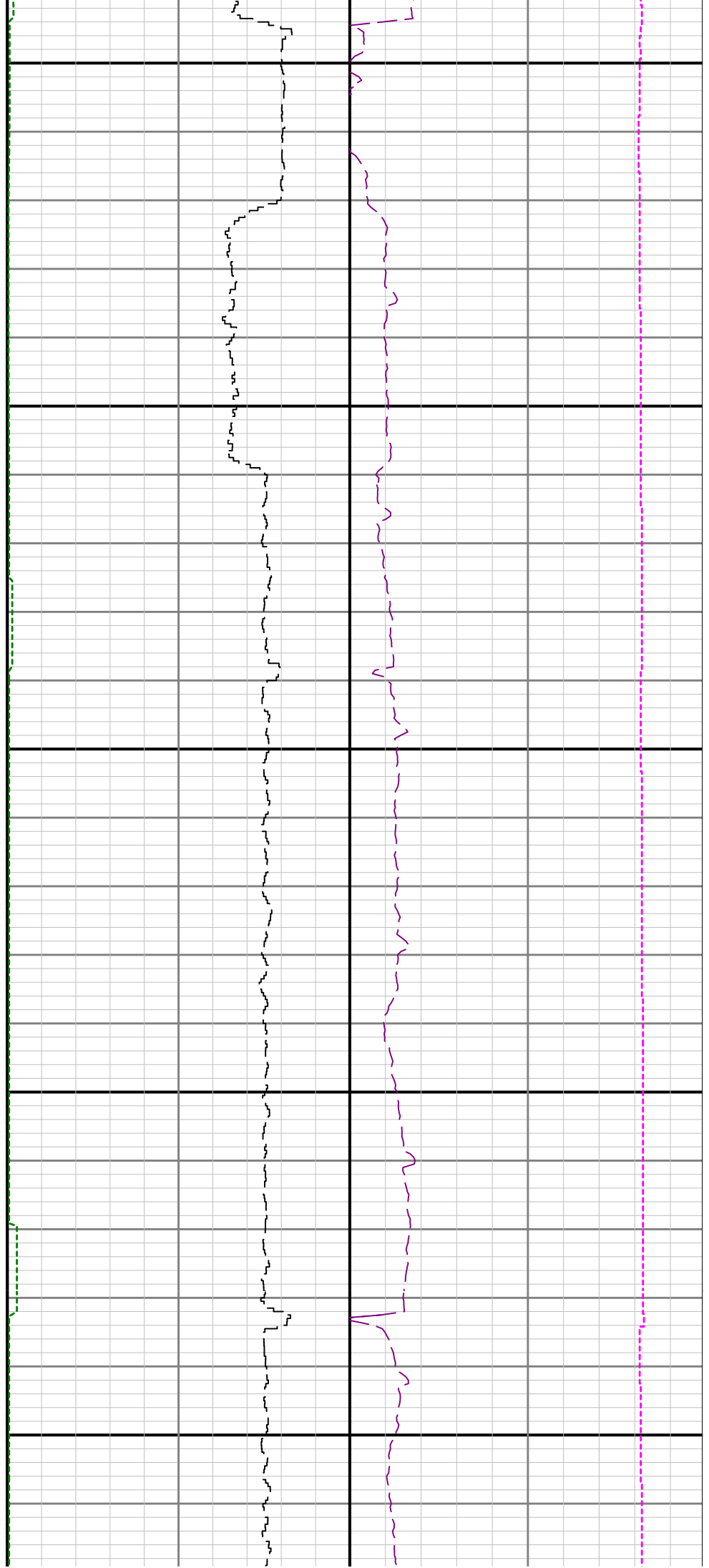


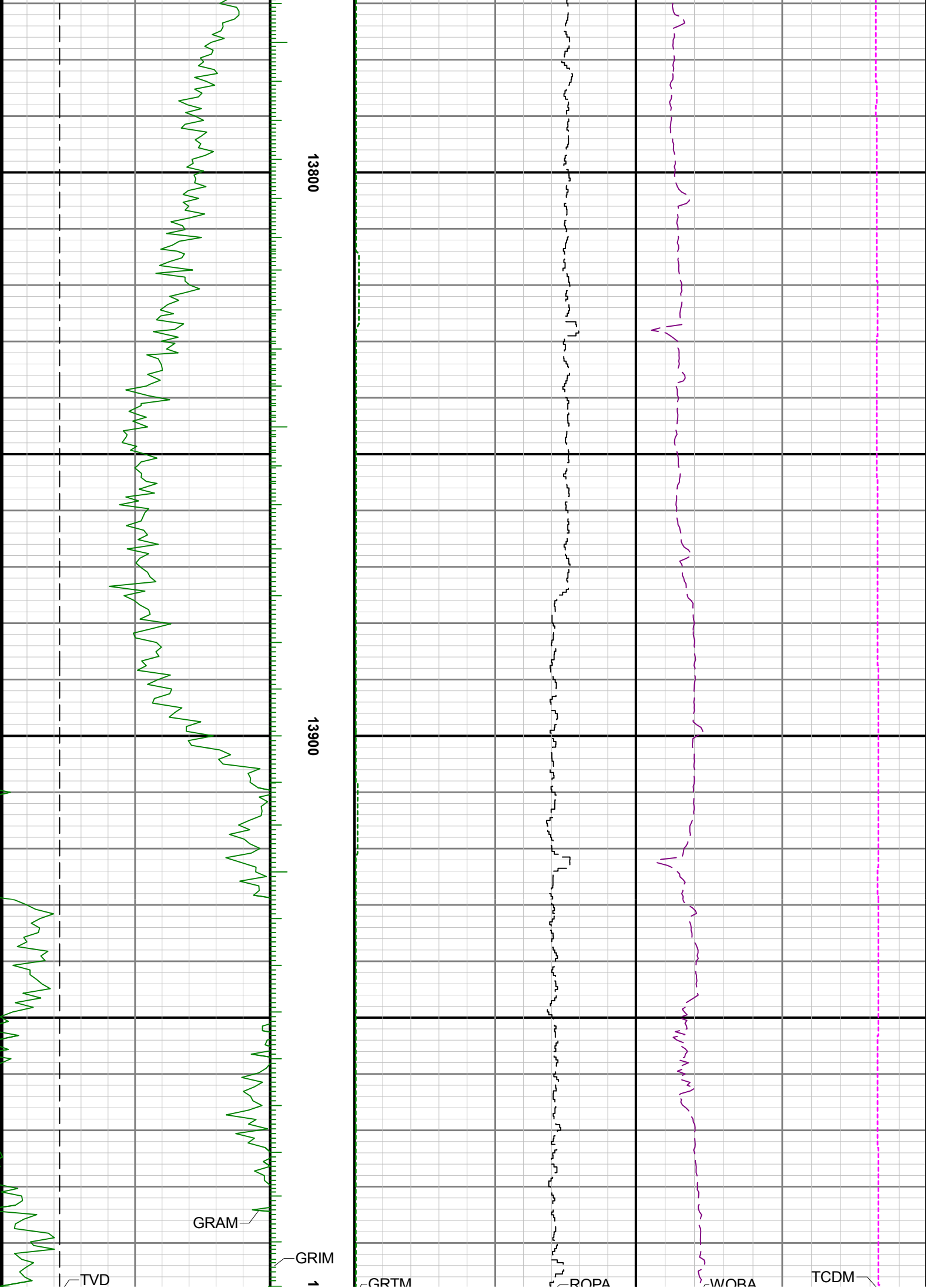


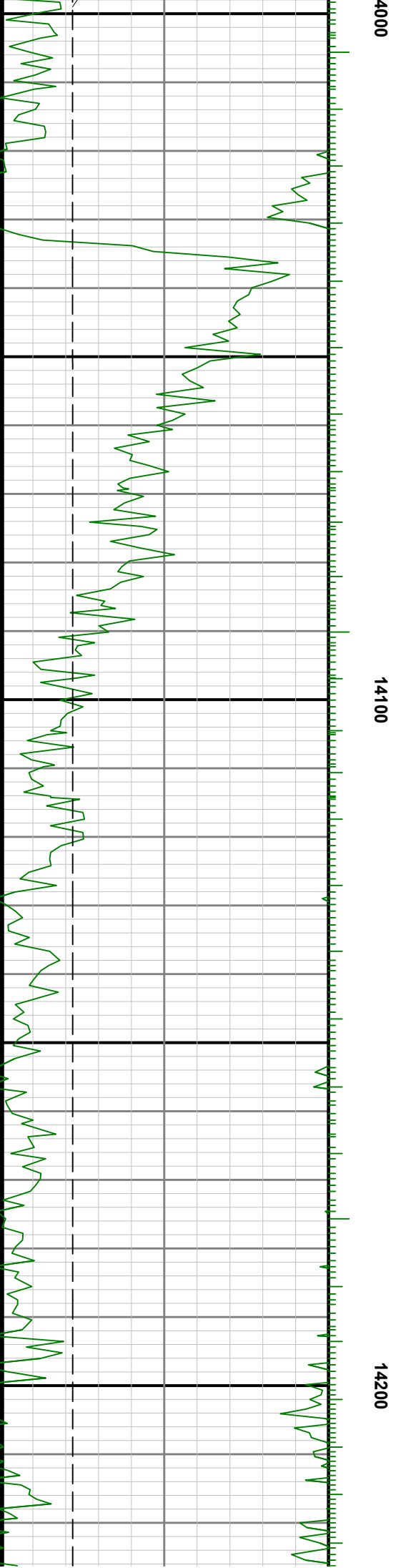
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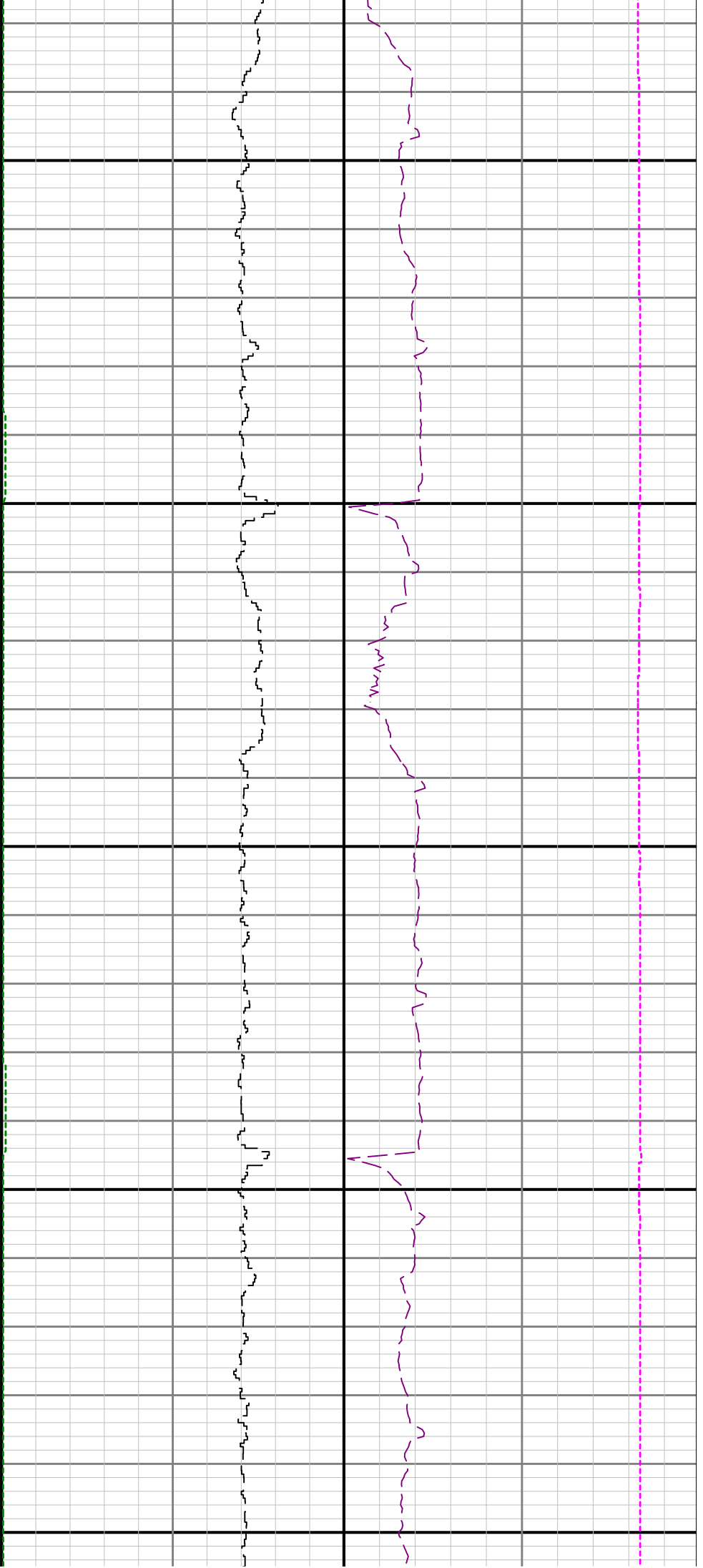






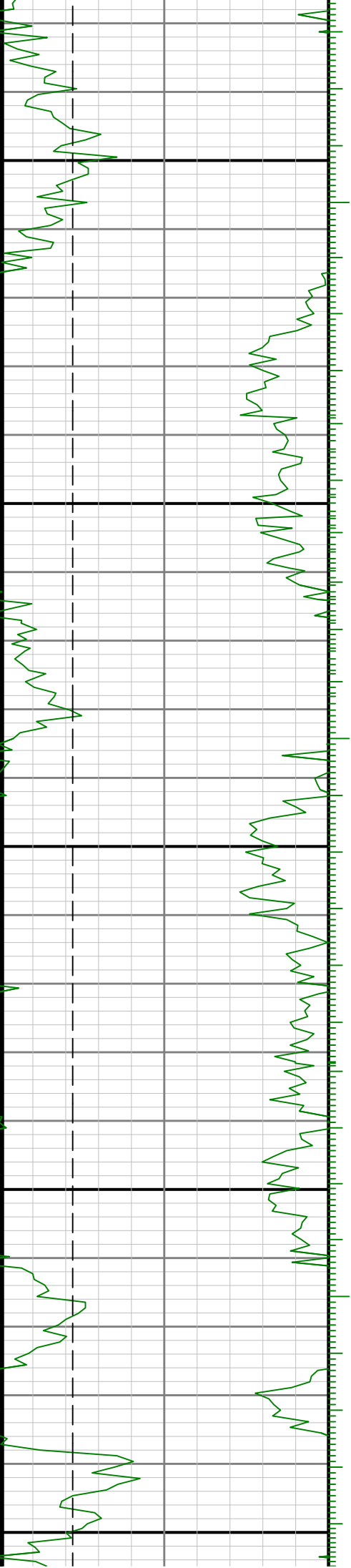


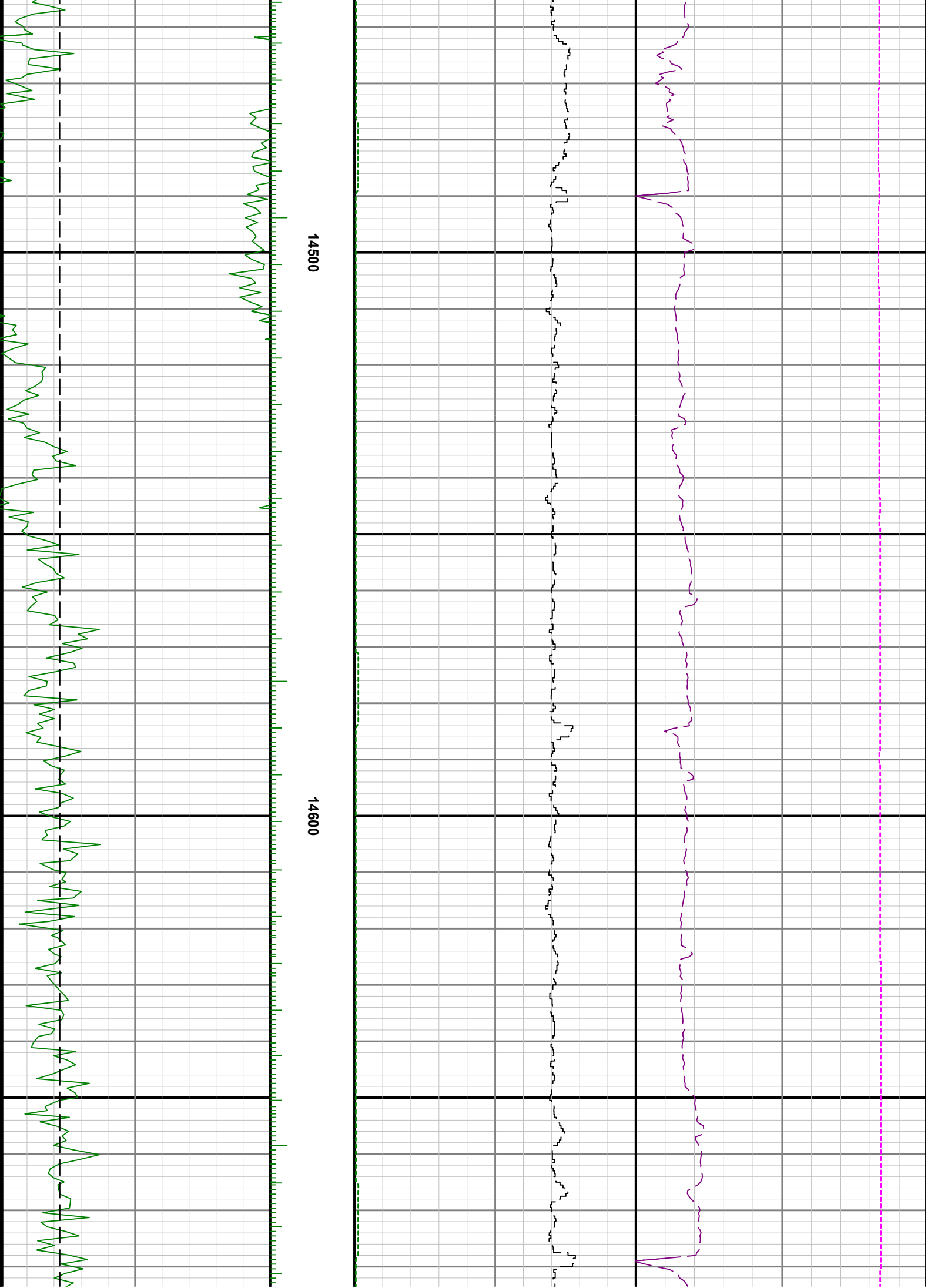


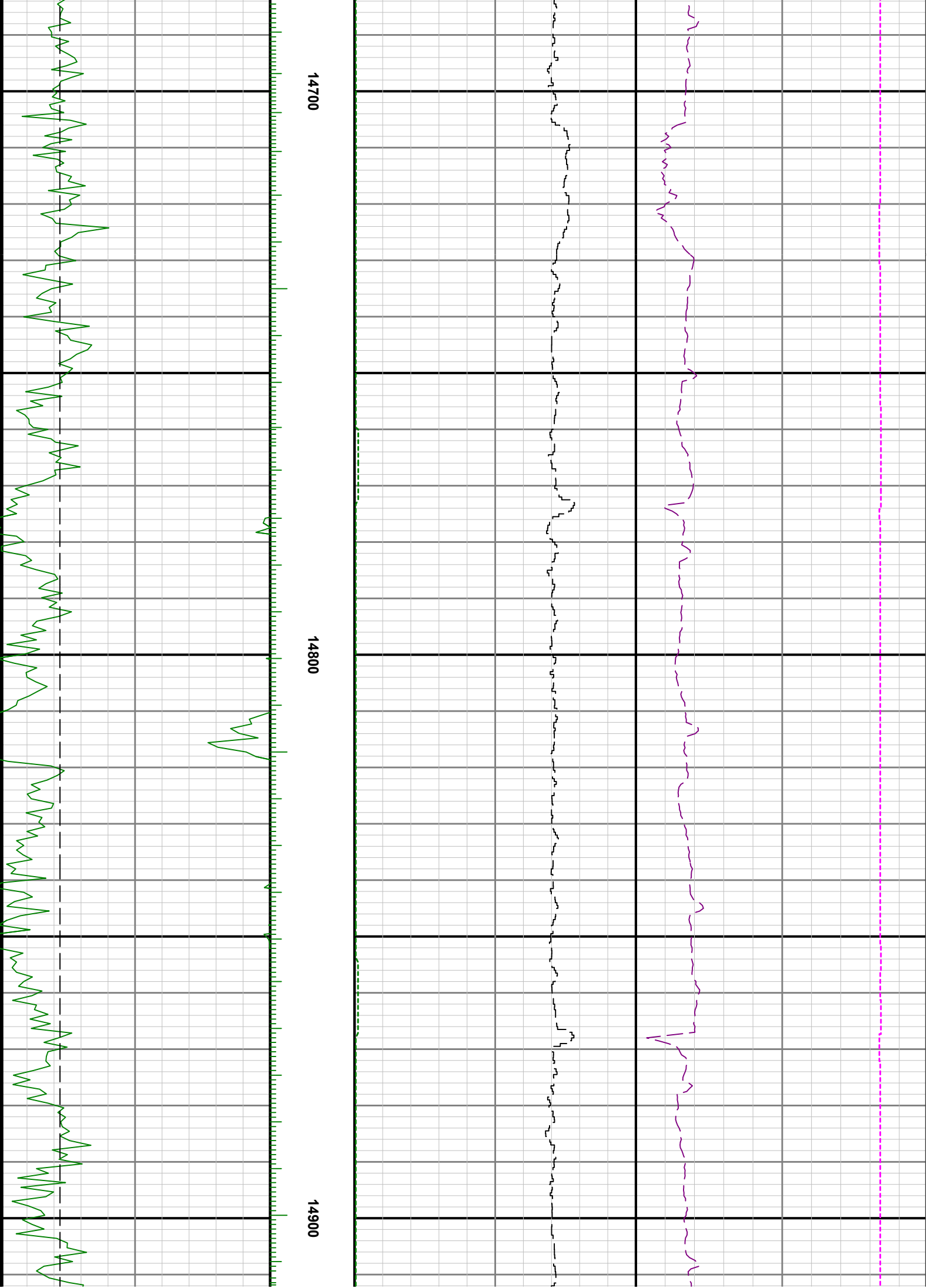


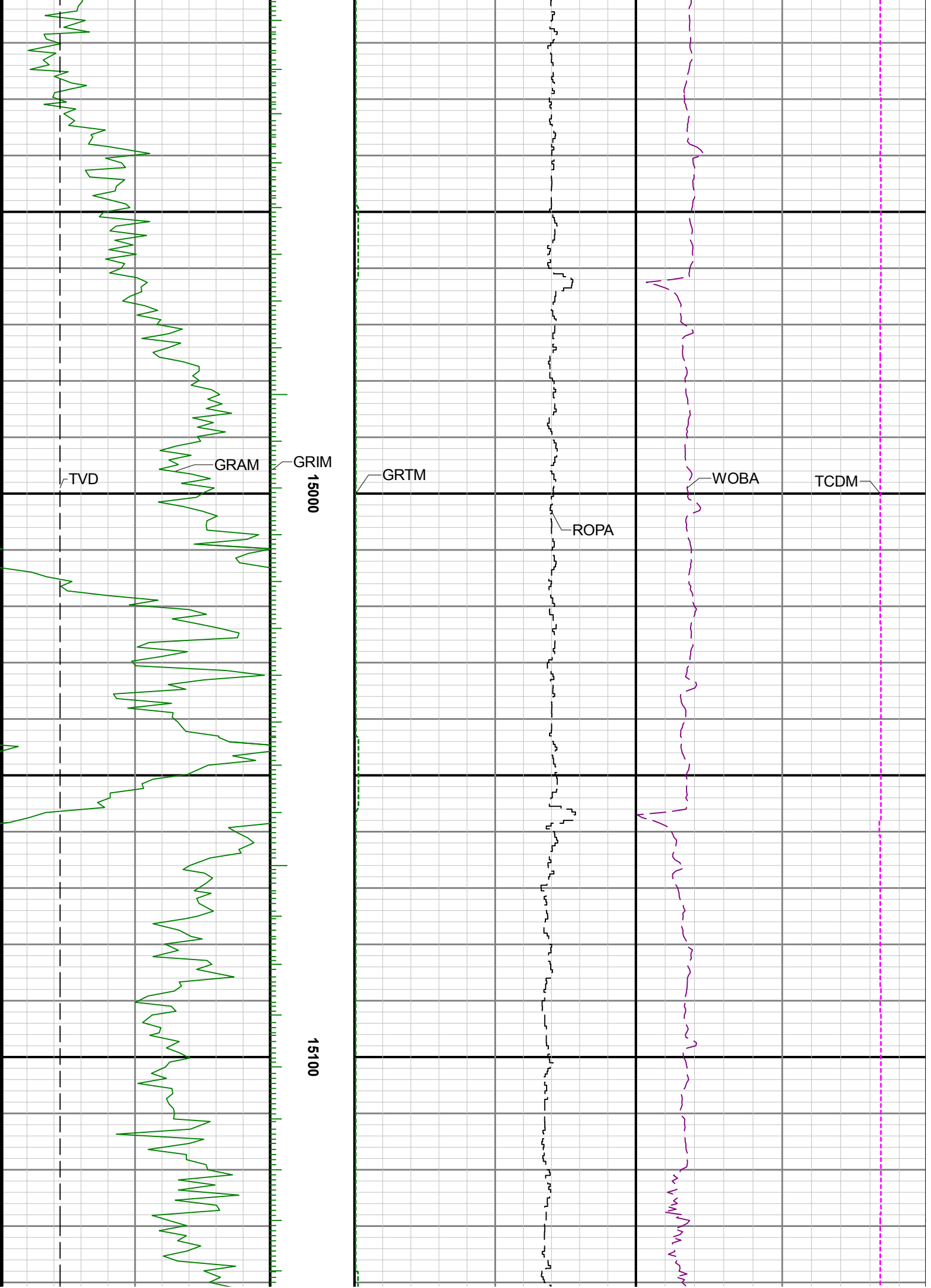
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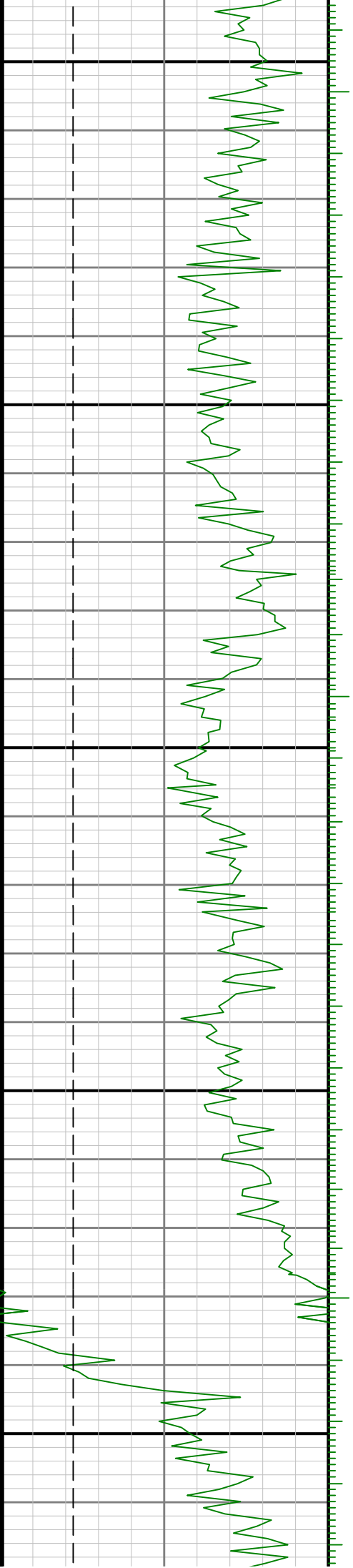


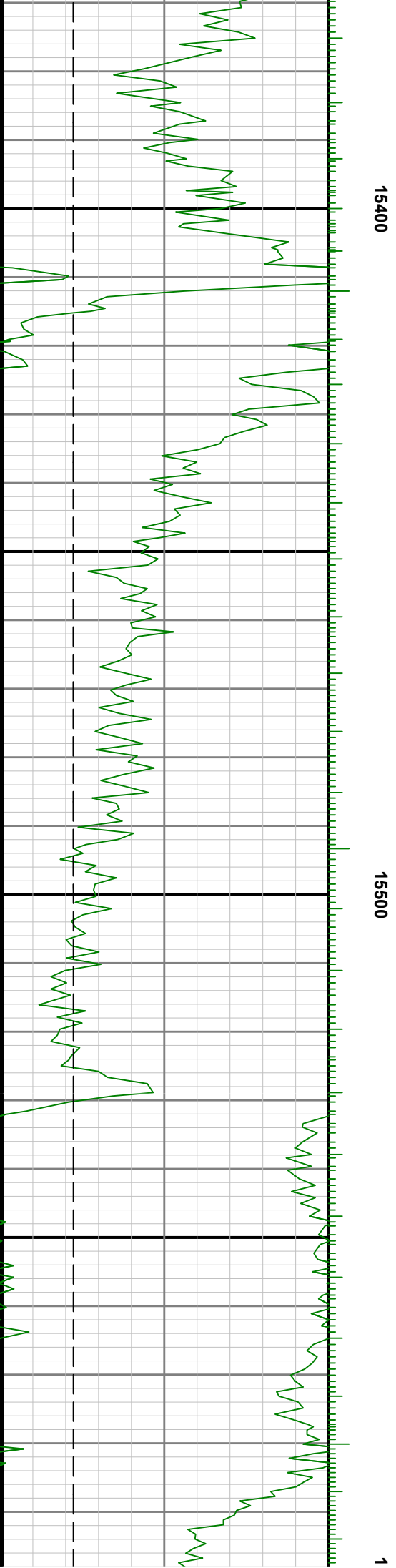
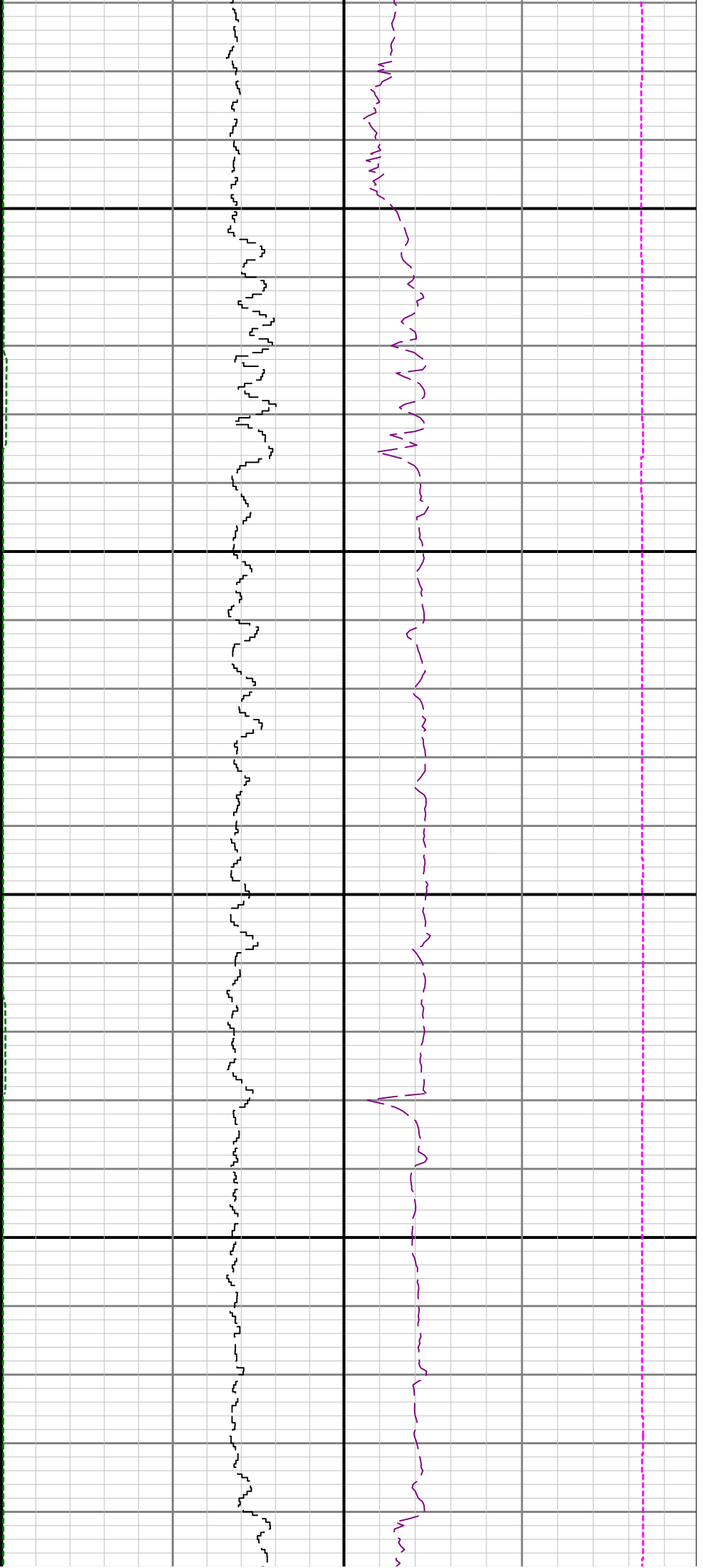


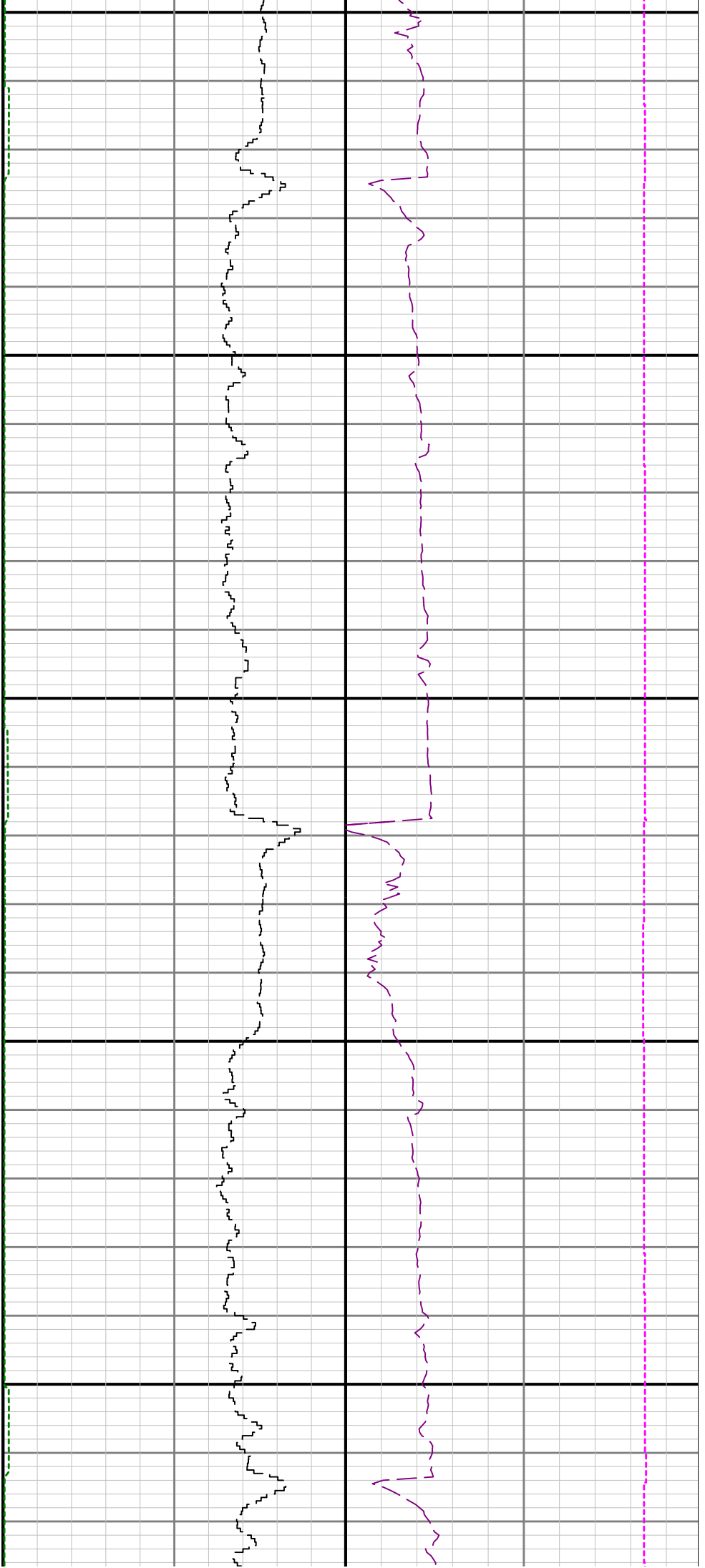


15200

15300







15600

15700

15800

