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Crew								
Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Ramnik Singh	16 Dec 14	27 Dec 14	Andrew Overbey	24 Dec 14	24 Dec 14	Bryan Severson	16 Dec 14	27 Dec 14

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
16 Dec 14	21:00	1	1349.0	Water Based	8.4	28	8.0	N/A	0/99.4	Active Mud Pit	1600	N/A
17 Dec 14	23:00	1	2419.0	Water Based	8.5	28	8.0	N/A	0/99.3	Active Mud Pit	1700	N/A
18 Dec 14	23:00	2	5593.0	Water Based	9.4	38	9.5	N/A	0/95.5	Active Mud Pit	1200	N/A
19 Dec 14	23:00	2	8003.0	Water Based	10.4	45	9.0	N/A	2/88.5	Active Mud Pit	1800	N/A
20 Dec 14	22:30	2	8200.0	Water Based	10.4	44	9.5	N/A	2/88.5	Active Mud Pit	1700	N/A
21 Dec 14	22:30	3	8200.0	Water Based	10.4	46	9.3	N/A	2/88.5	Active Mud Pit	1700	N/A
22 Dec 14	23:00	3	9070.0	Water Based	10.1	45	9.4	N/A	2/90.0	Active Mud Pit	1800	N/A
23 Dec 14	23:00	3	12141.0	Water Based	10.0	47	9.4	N/A	2.5/89.5	Active Mud Pit	1900	N/A
23 Dec 14	23:00	3	13919.0	Water Based	10.0	49	9.6	N/A	3/89.0	Active Mud Pit	2200	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparant, 0.5 ft. Avg.	API
GRSI	Gamma Ray Sliding Indicator	Unitless
GRIX	Gamma Ray Data Density	Unitless
TVD	True Vertical Depth	ft
GRTX	Gamma Ray Time Since Drilled	mins
ROPA	Rate of Penetration, 3.0 ft. Avg.	ft/hr
WOBA	Surface Weight on Bit, 1.0 ft. Avg	klbf
TCDX	Downhole Temperature	degF

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	46.48	6.750	3.313
1	SRIG	12816077	Gamma	43.10	6.750	3.313
2	DIR	12142328	Directional	47.49	6.750	3.313
2	SRIG	10266573	Gamma	44.11	6.750	3.313
3	DIR	11924683	Directional	52.59	4.750	2.250
3	SRIG	12606956	Gamma	49.21	4.750	2.250

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.) 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 LWD logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to present logging data.

2.) Baker Hughes LWD run 1 utilized 6 1/2 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and conventional motor assembly from 1349 to 2451 ft MD (1349 to 2440 ft TVD).

3.) Baker Hughes LWD run 2 utilized 6 1/2 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and conventional motor assembly from 2451 to 8200 ft MD (2440 to 7824 ft TVD).

4.) Baker Hughes LWD run 3 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and conventional motor assembly from 8200 to 15352 ft MD (7824 to 7829 ft TVD).

5.) A sliding indicator shown on the left side of track 1 as a heavy line. This indicator has been shifted to the Gamma Ray sensor offset to correspond to Gamma Ray data acquired while sliding.

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	7050	8.750	2	Gamma Ray logging operations began at 7050 ft MD (7034 ft TVD) as per company's request.
2	8190	6.125	3	Gamma ray was logged inside casing from 8155 to 8190 ft MD (7822 to 7825 ft TVD) due to sensor offset.
3	8200	6.125	3	Gamma ray was logged 52.3 hours after being drilled from 8155 to 8200 ft MD (7822 to 7825 ft TVD) due to casing operations.
4	15352	6.125	3	There is no gamma ray data from 15303 to 15352 ft MD (7828 to 7829 ft TVD) due to sensor offset.



Company : Anadarko

Well : Front Range Farms 37C-14HZ

Interval : 7010.00 - 15370.00 feet DOWN

Created : 25/Dec/2014 3:13:32 PM

Gamma Ray Apparent 0.5 ft Avg [GRAX]

0 200

API

True Vertical Depth [TVD]

7900 7000

ft

MD feet 1:240

Rate of Penetration, 3.0 ft Avg [ROPA]

500 0

ft/hr

Gamma Time Since Drilled [GRTX]

0 600

min

Surface Weight On Bit 1.0 ft Avg [WOBA]

0 100

klbf

Downhole Temperature [TCDX]

100 250

degF

See Remark 1

TVD
GRAX

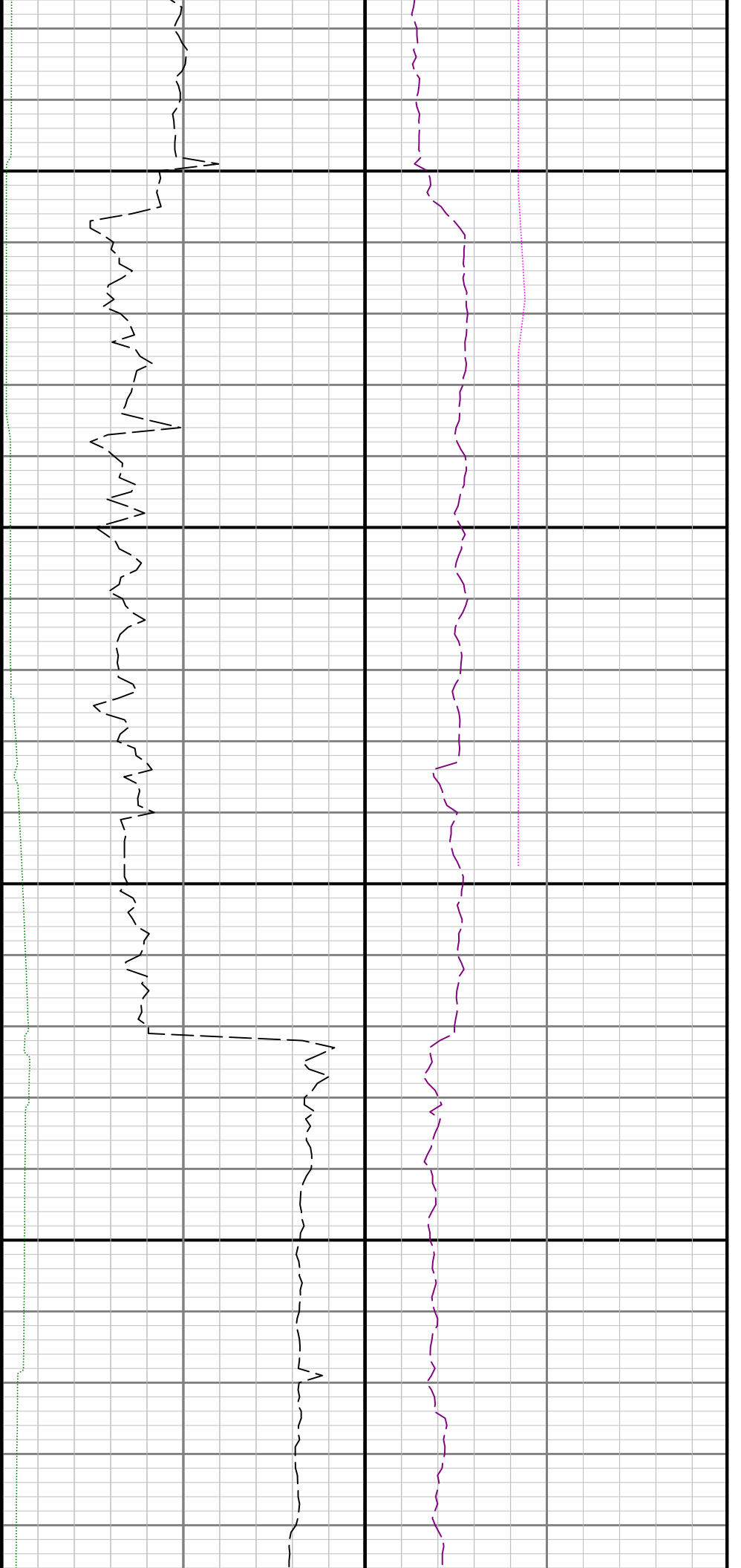
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GRTX

ROPA

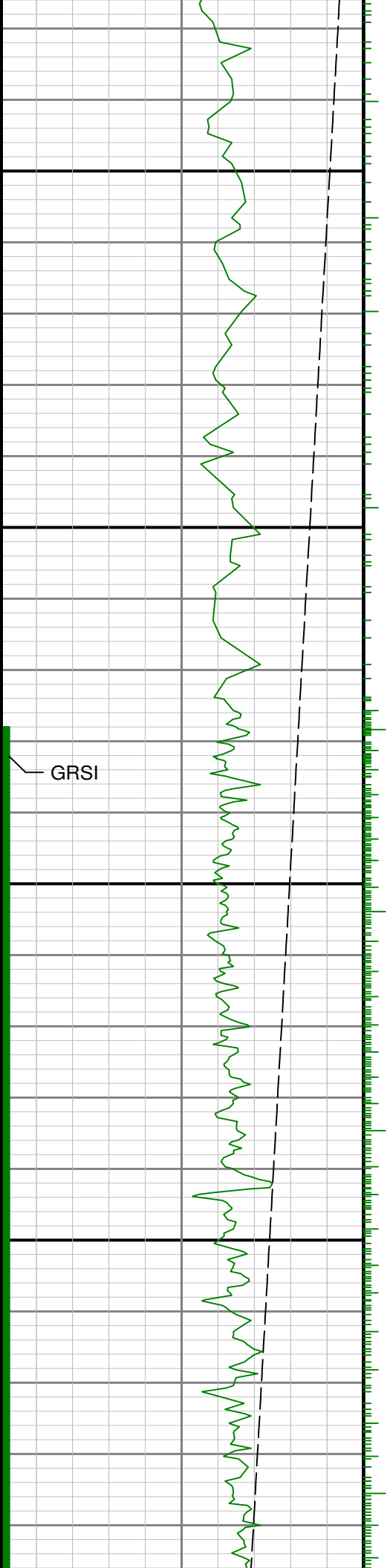
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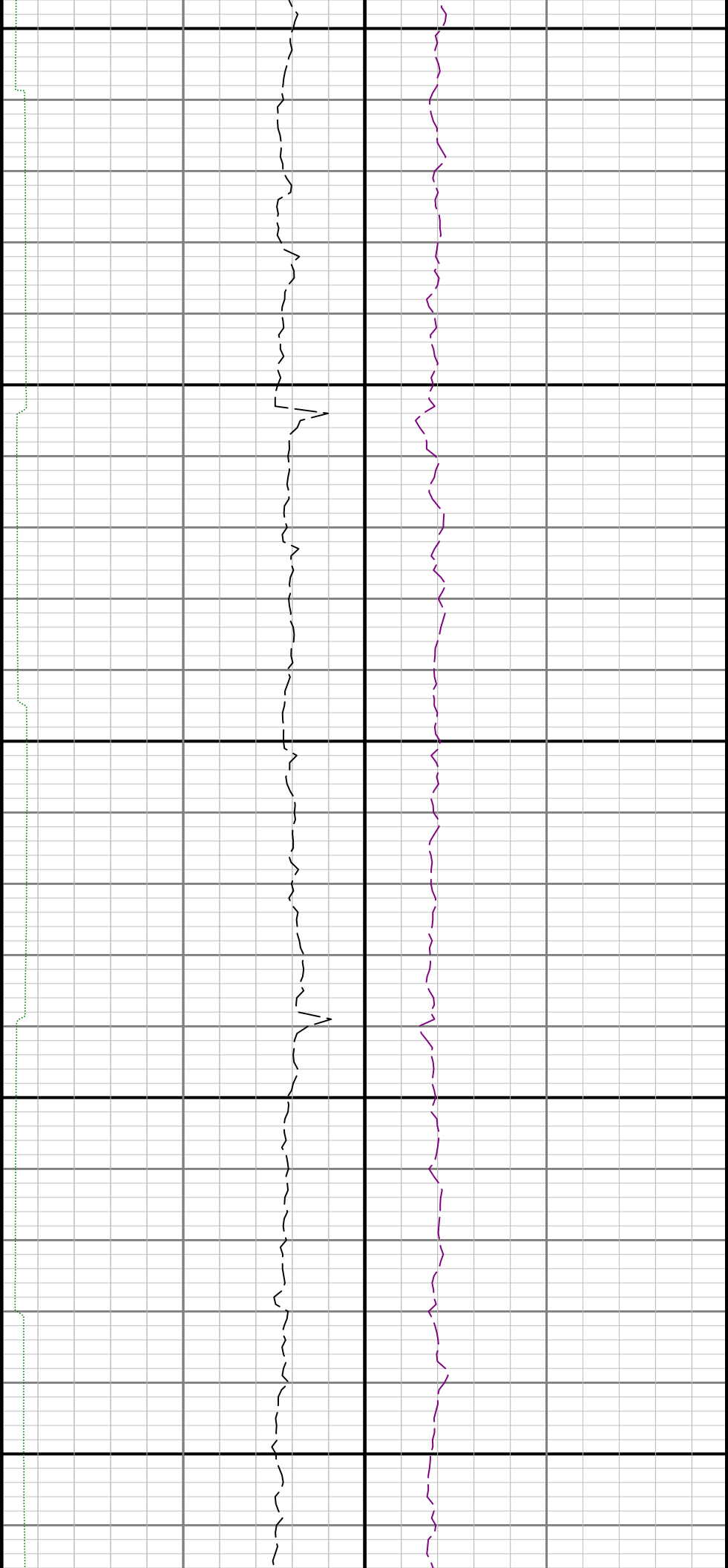


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7200



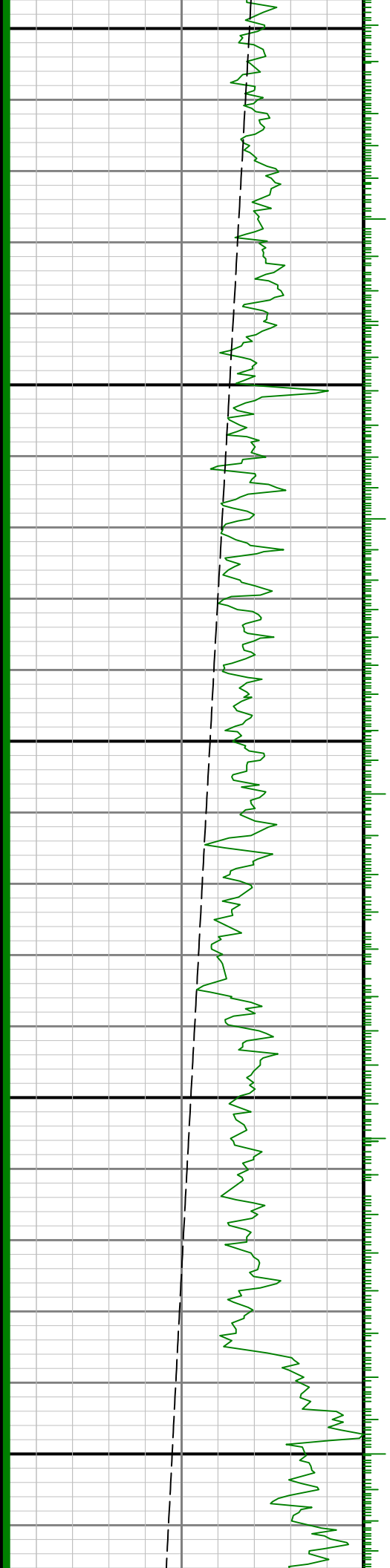
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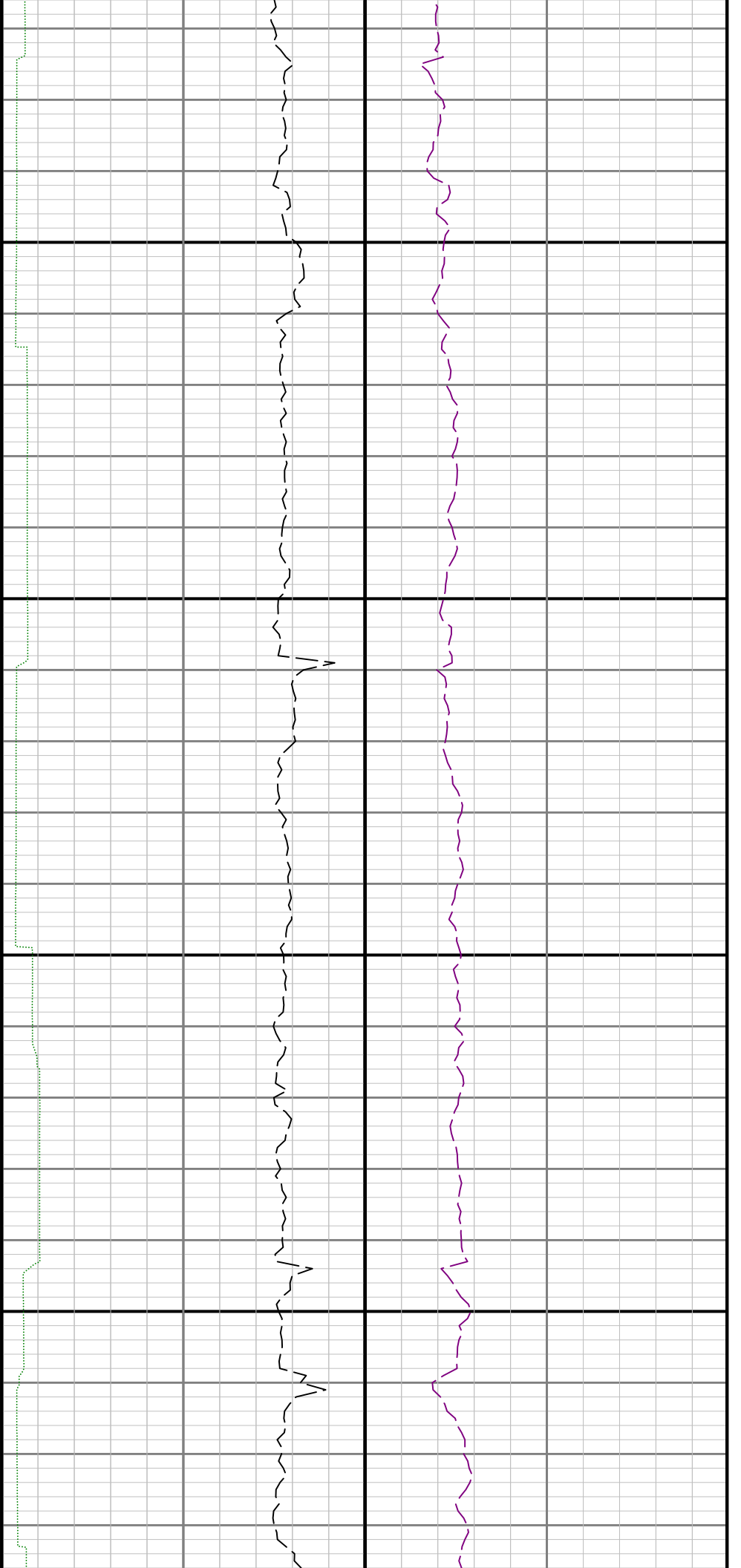


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7400

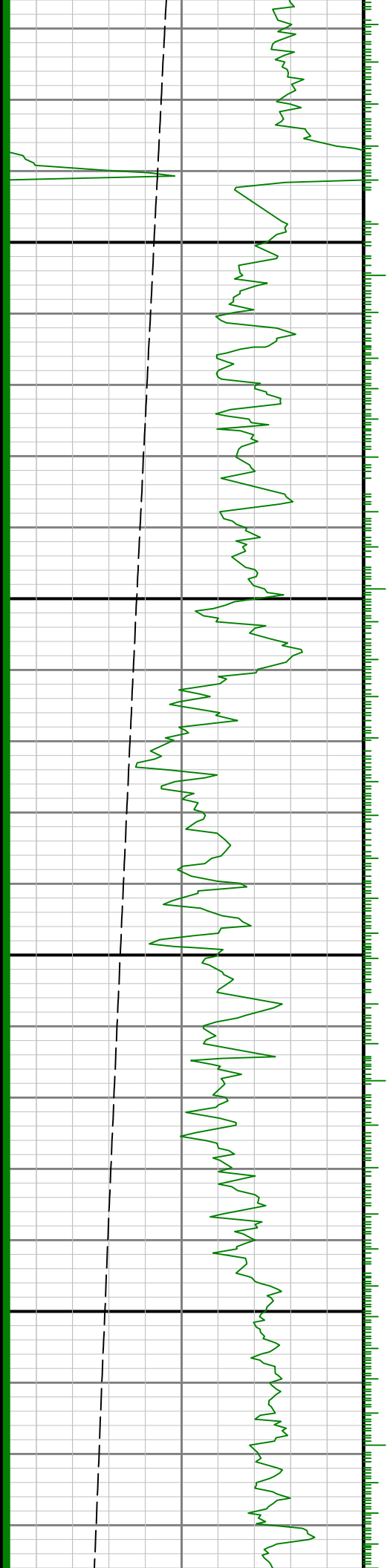
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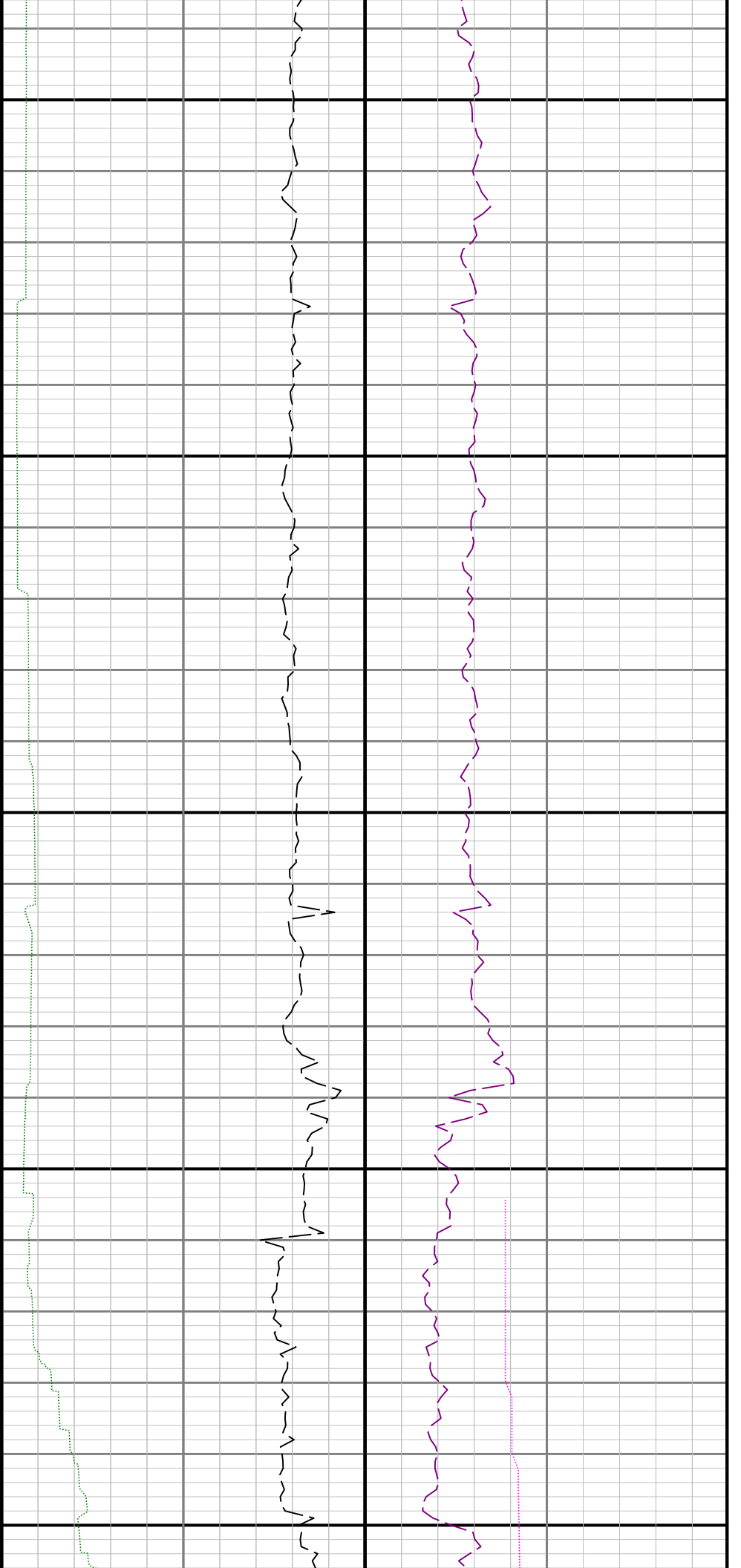




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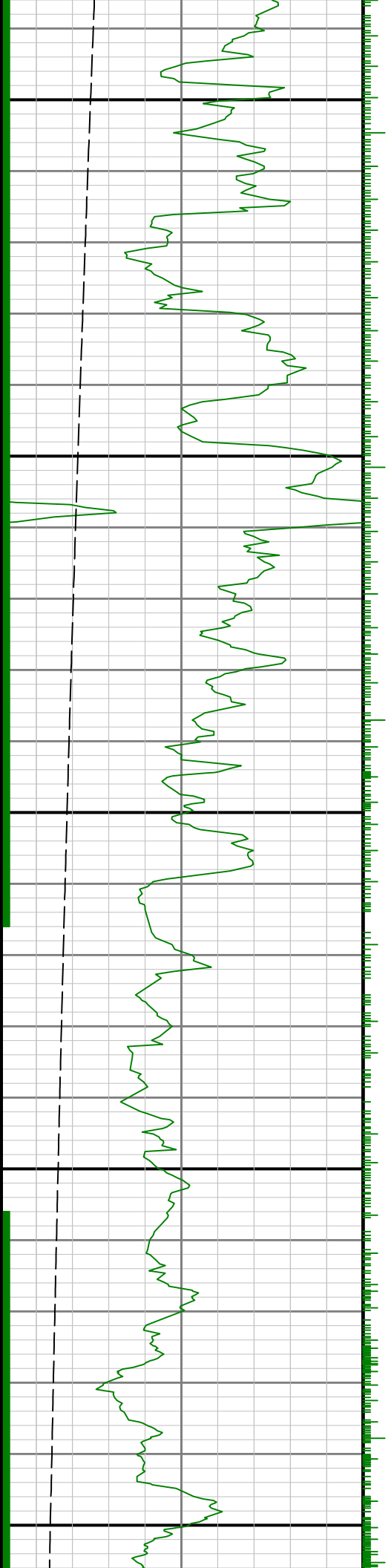
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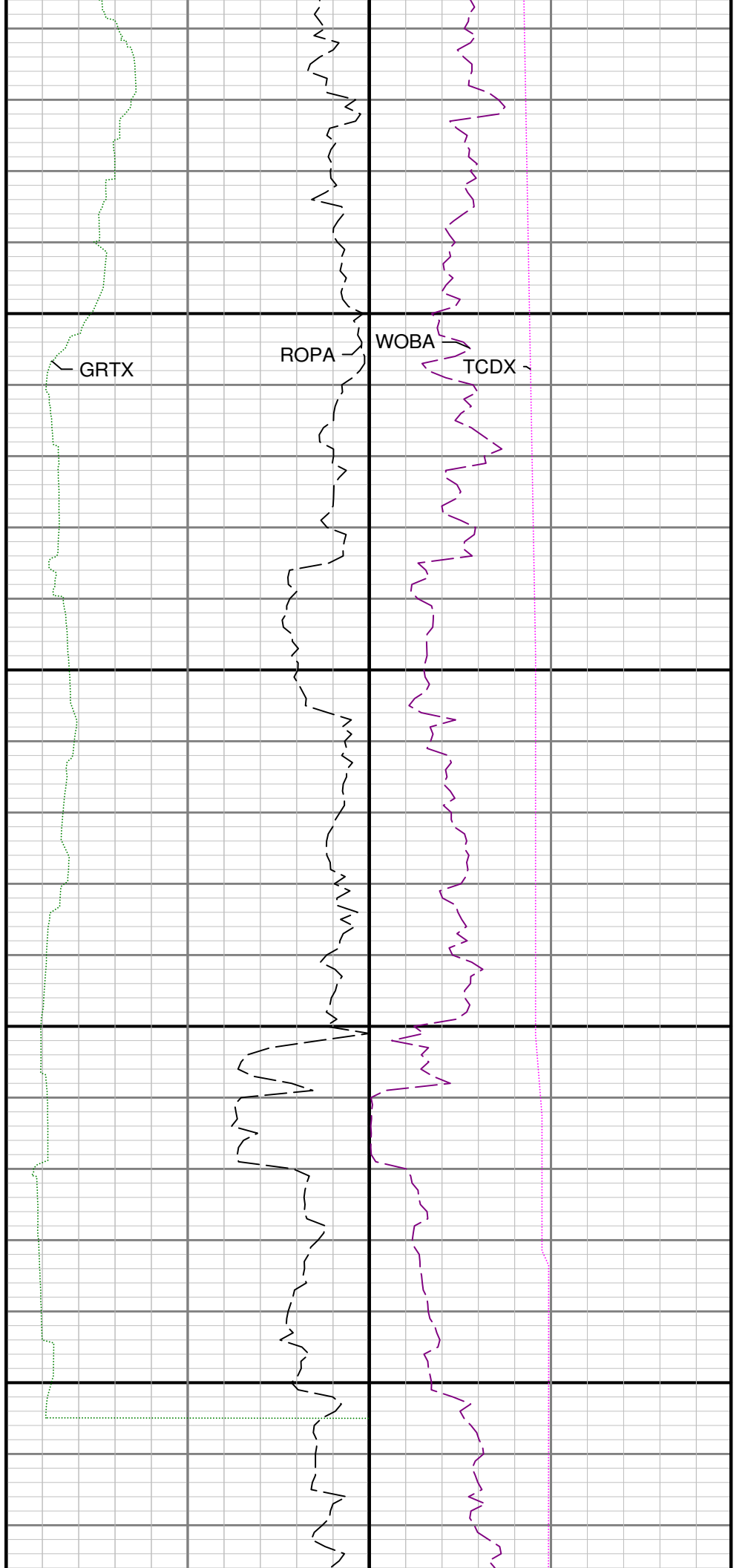
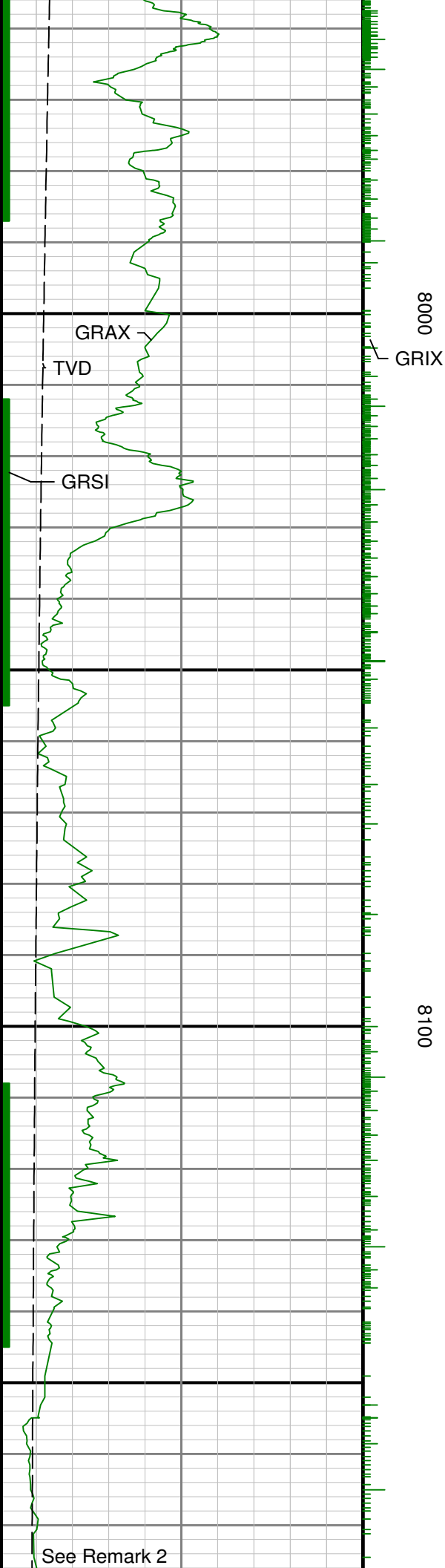




7800

7900





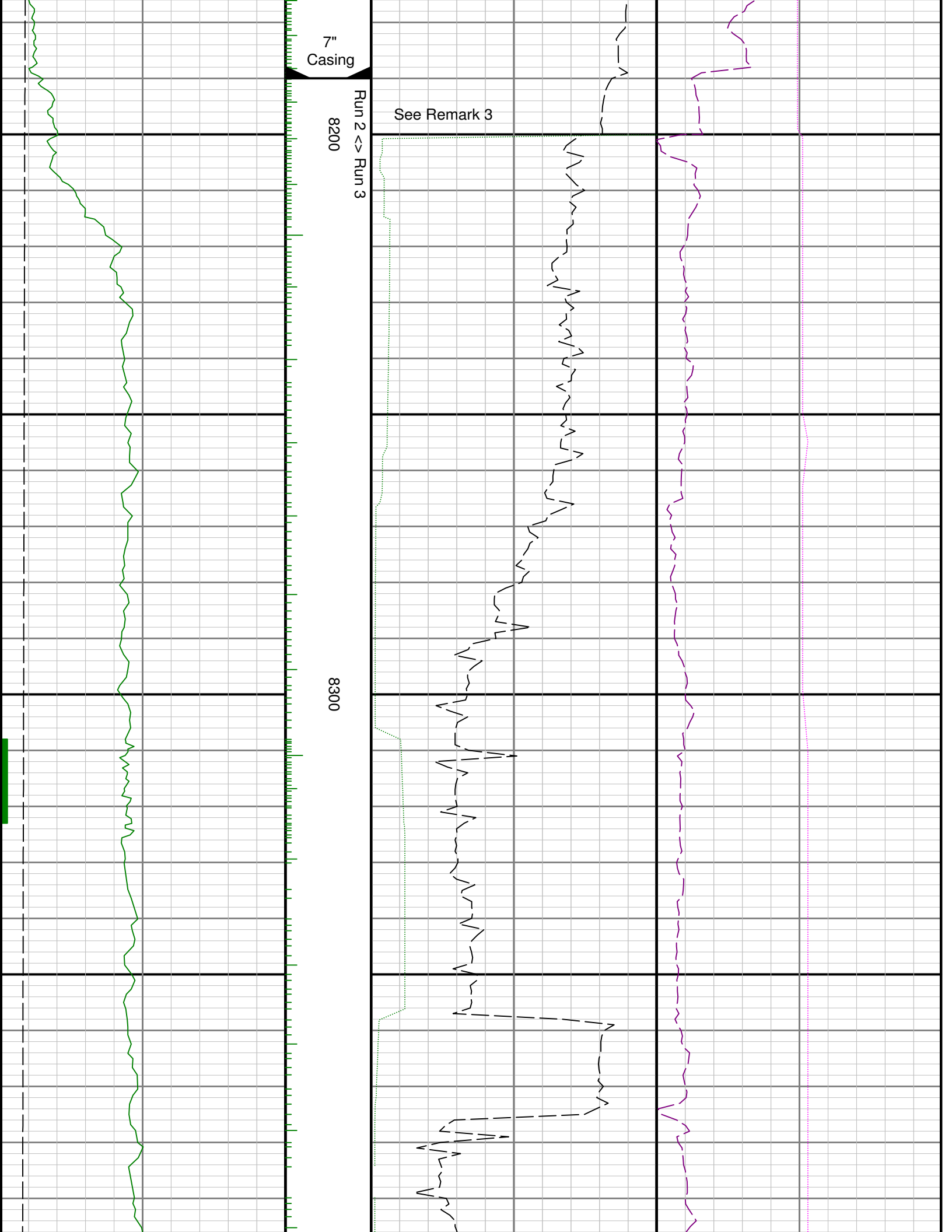
7"
Casing

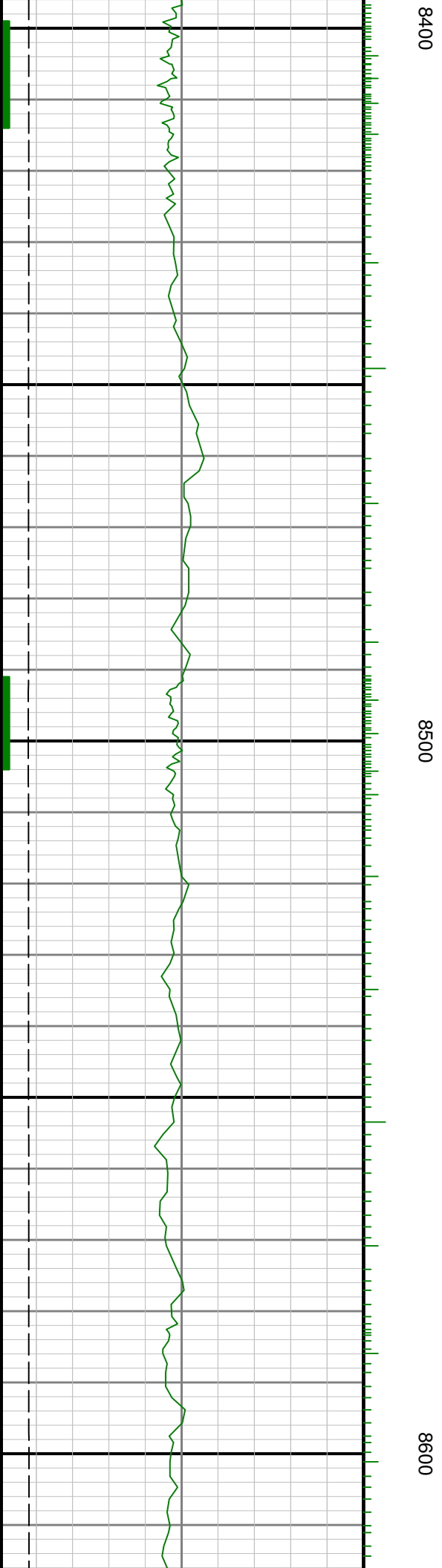
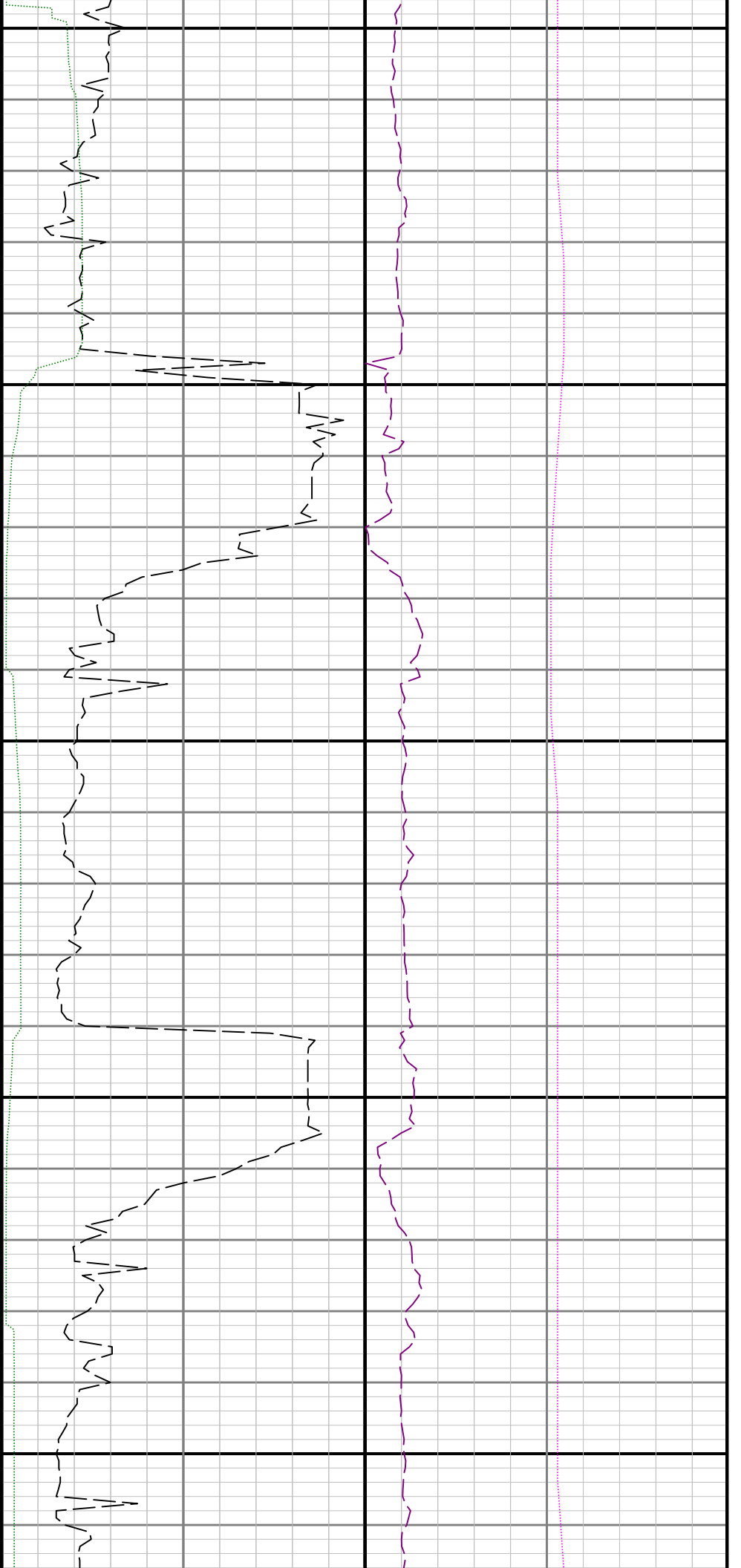
Run 2 <> Run 3

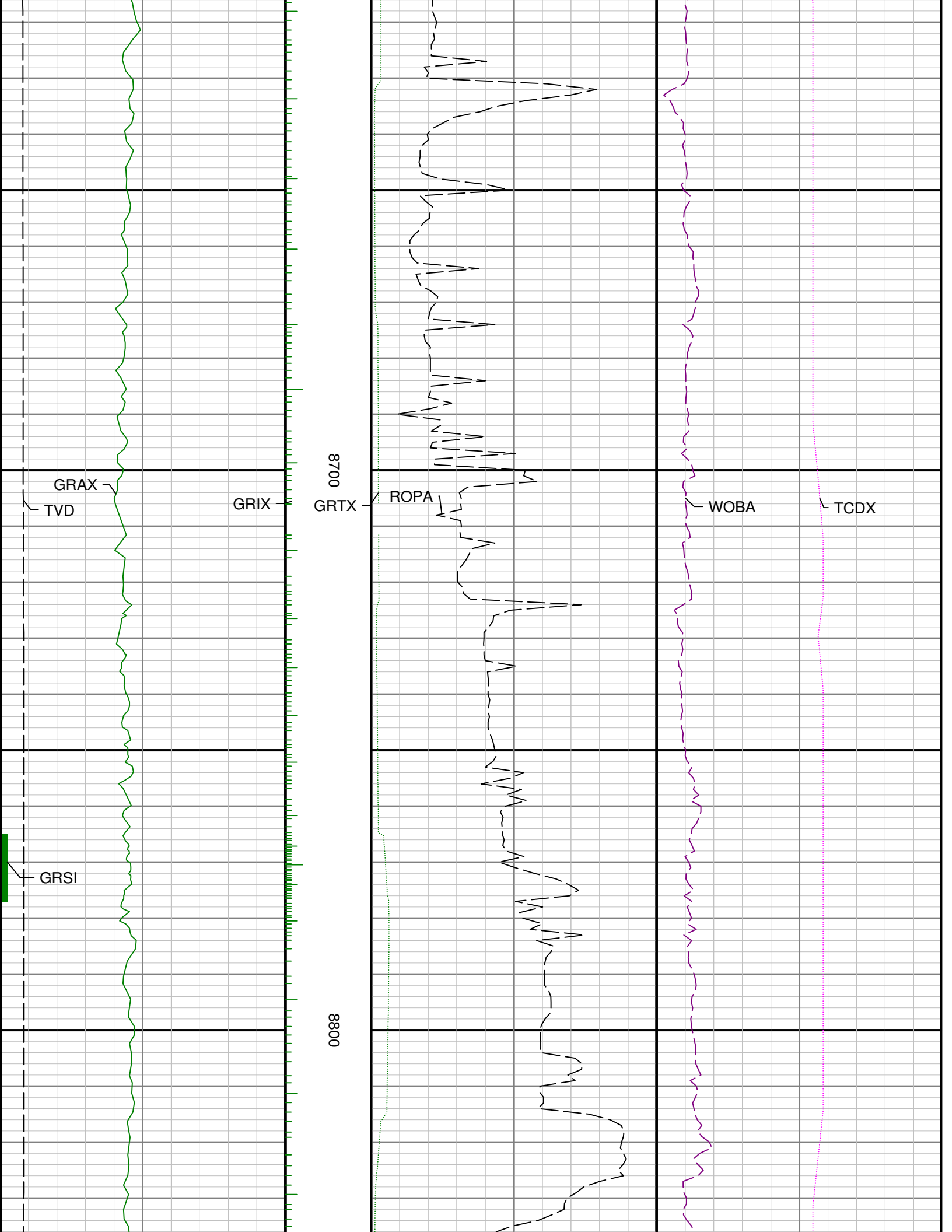
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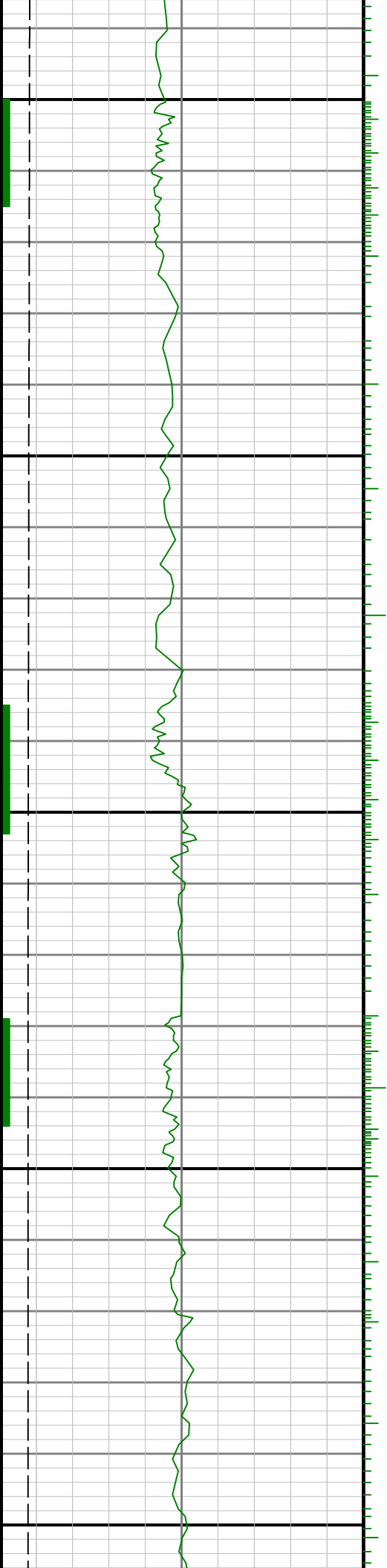
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See Remark 3



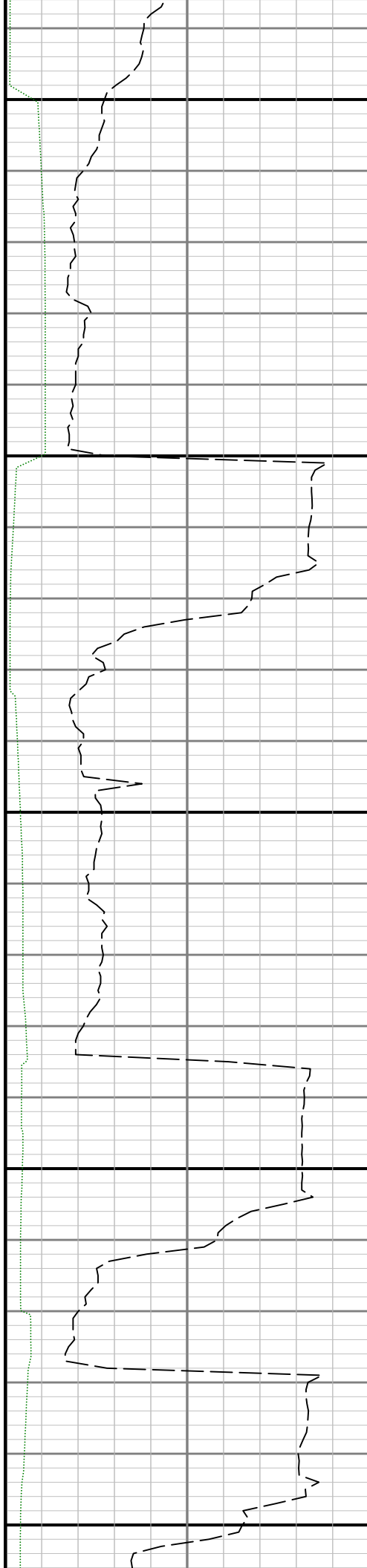


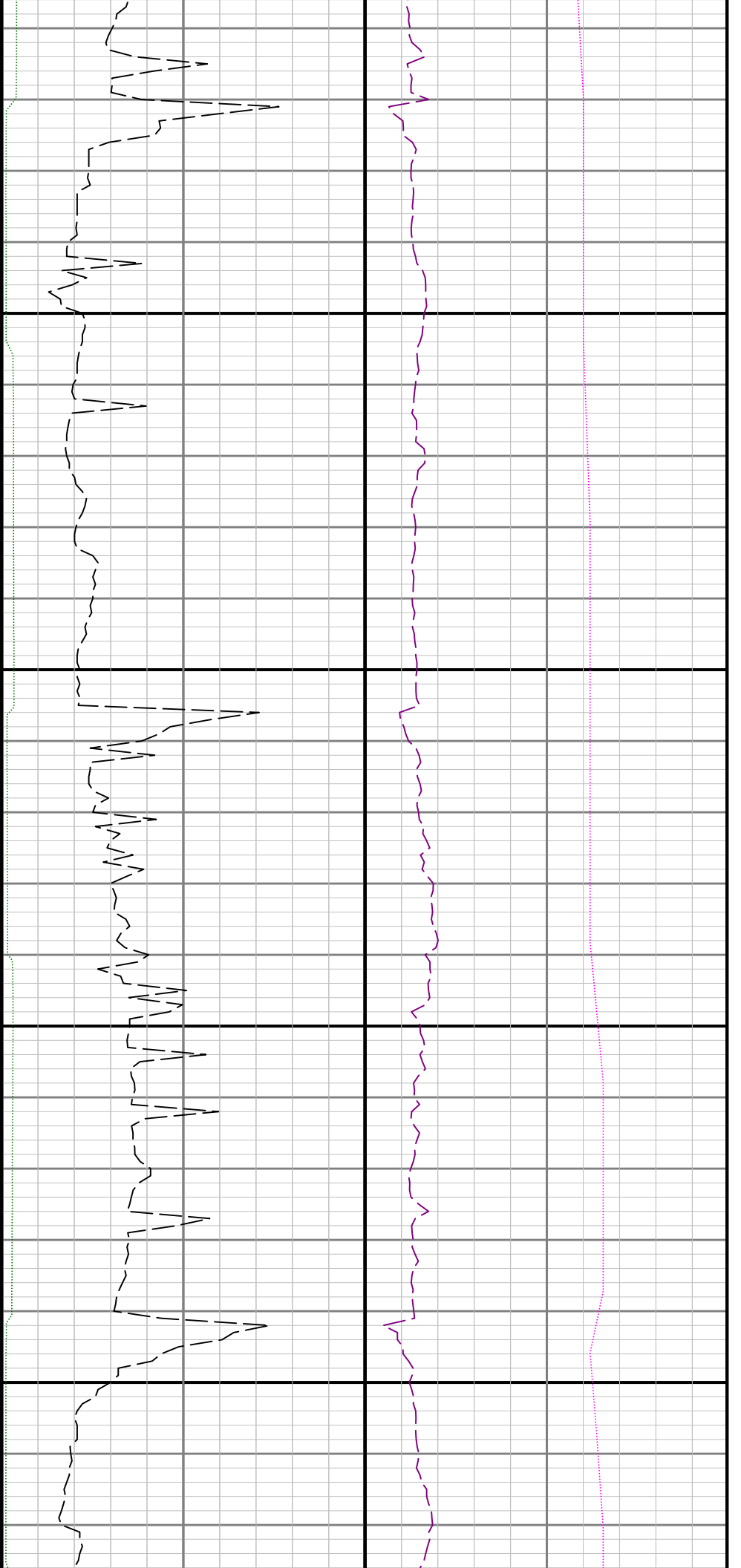




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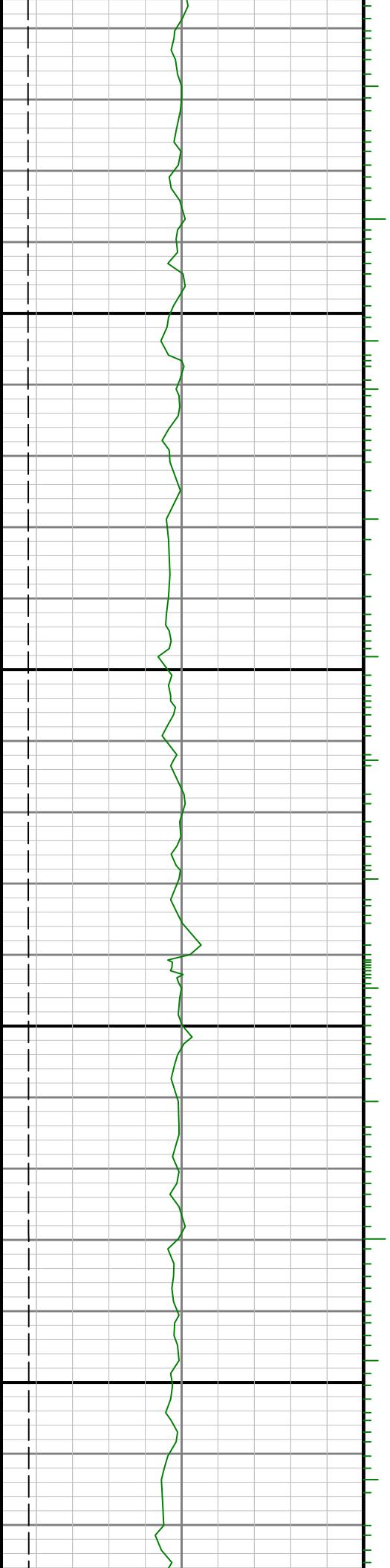
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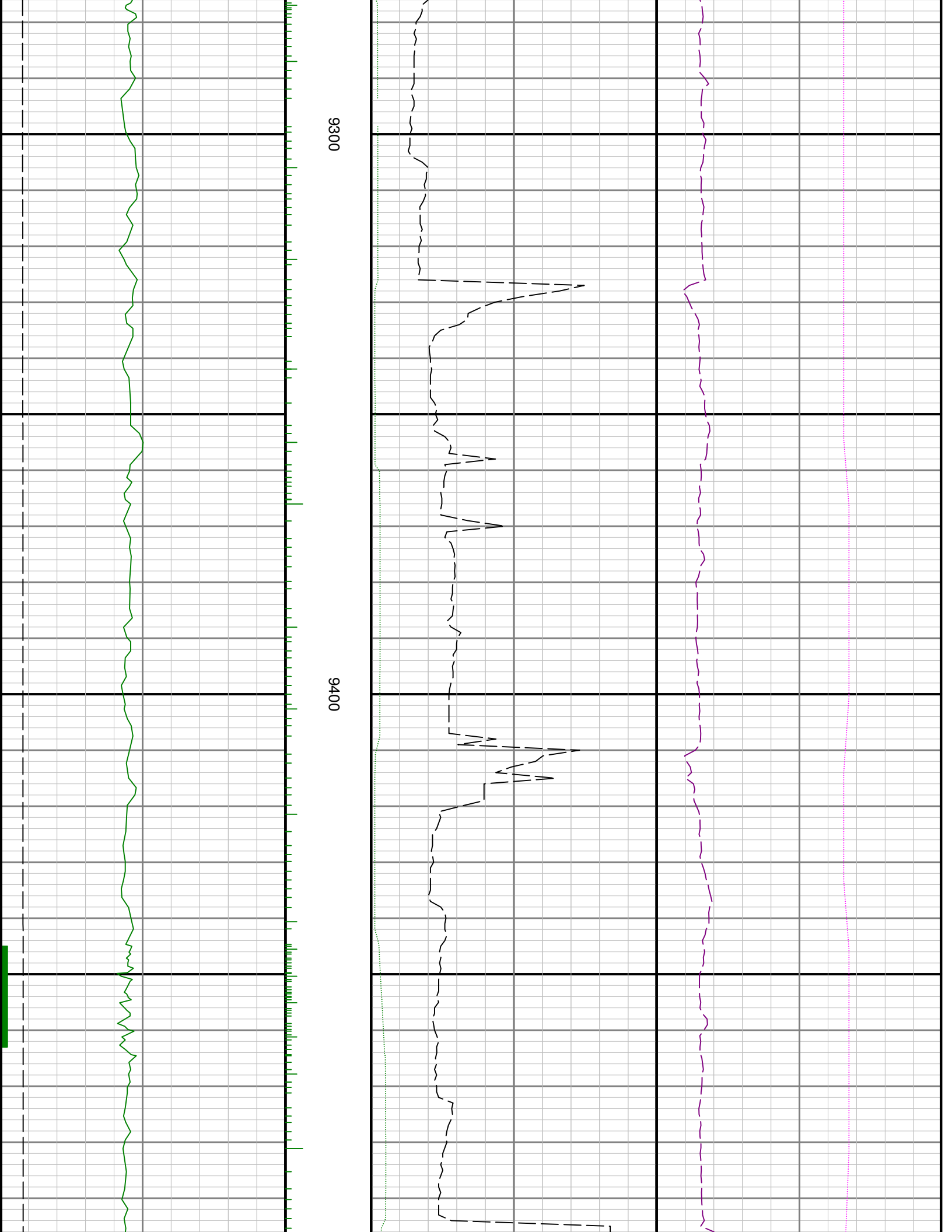


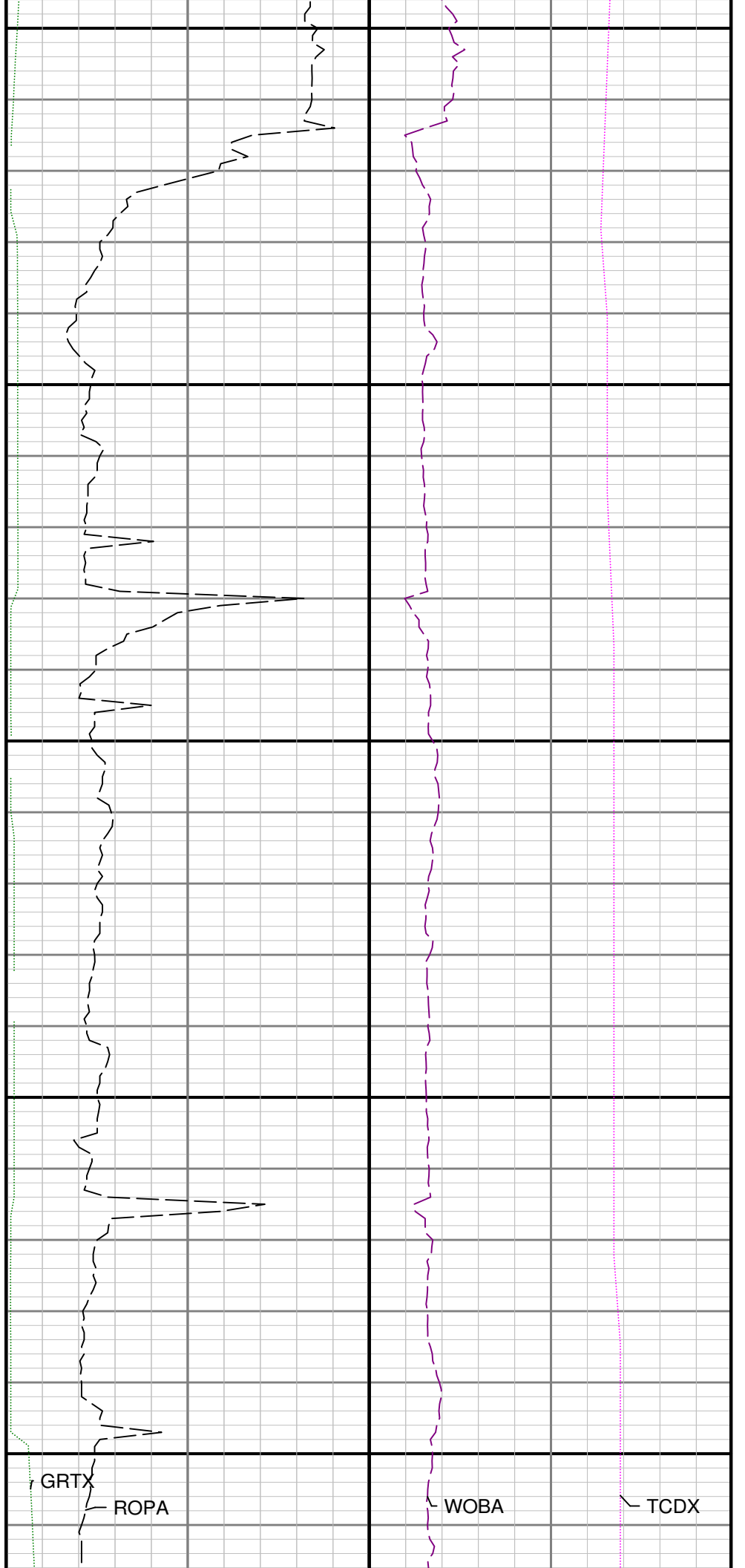
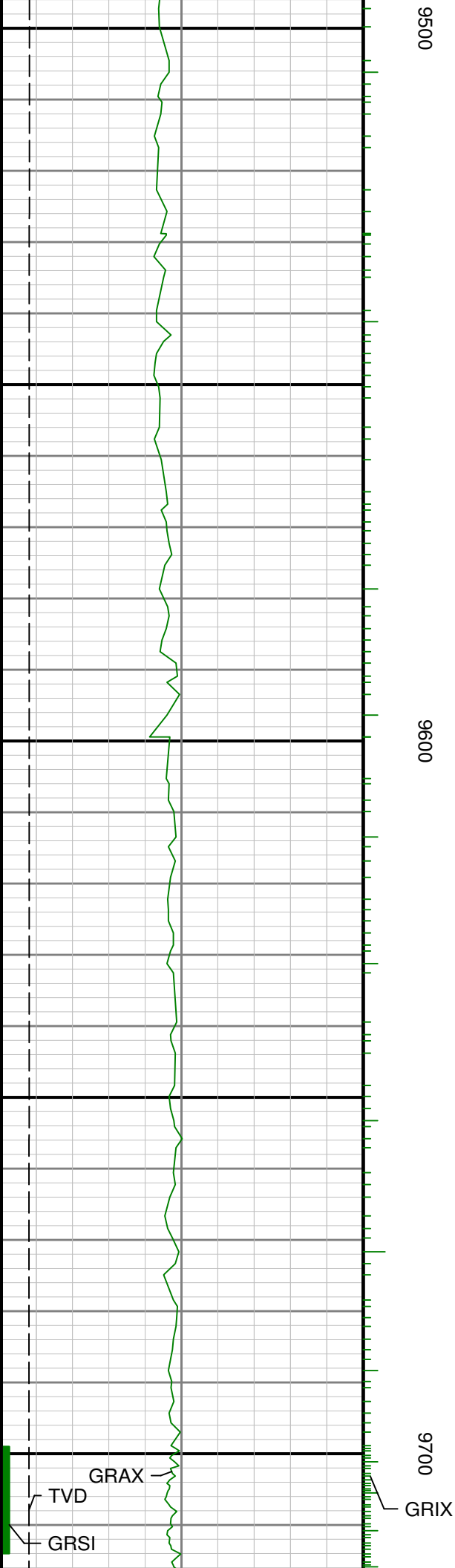


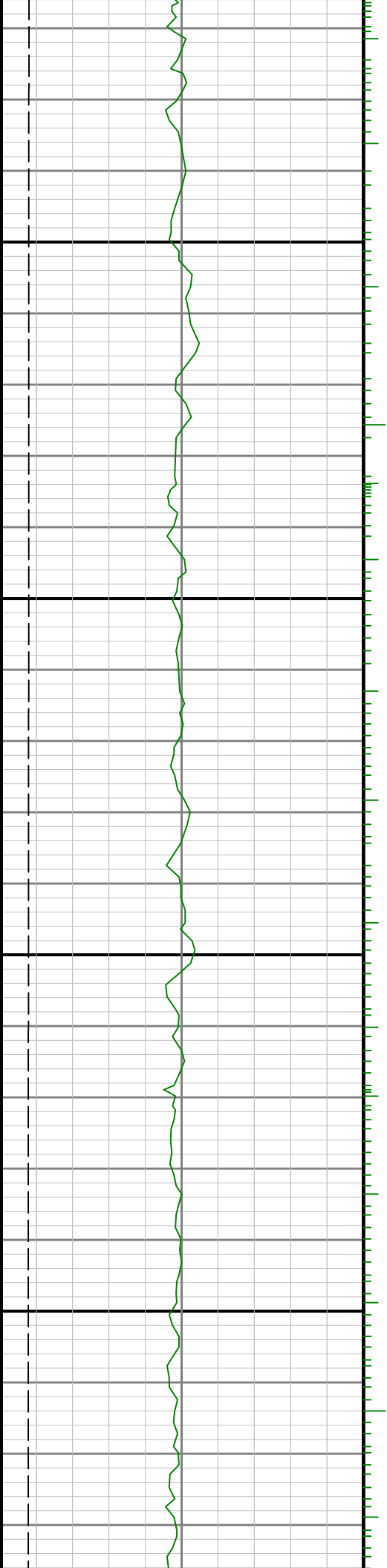
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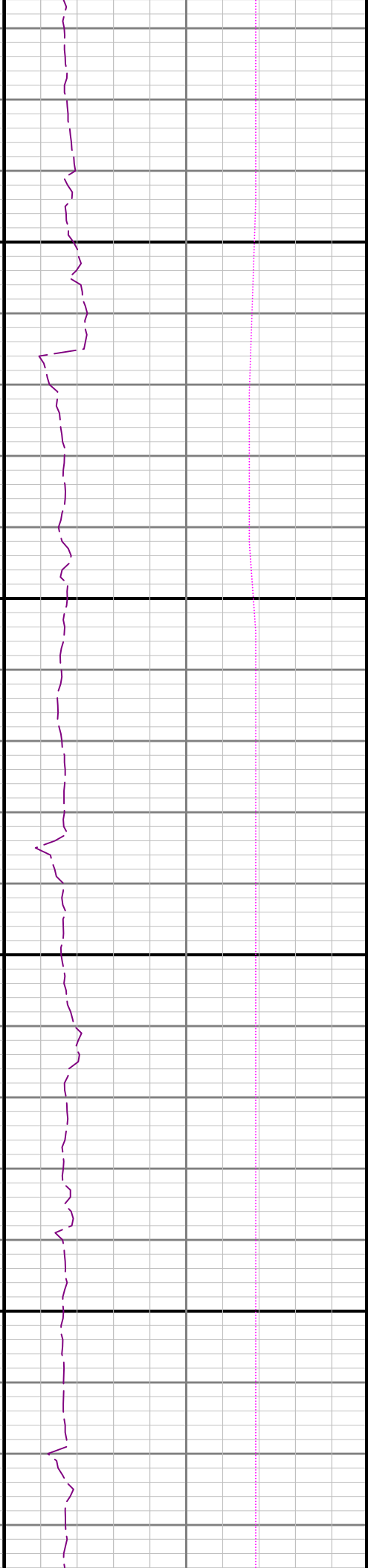
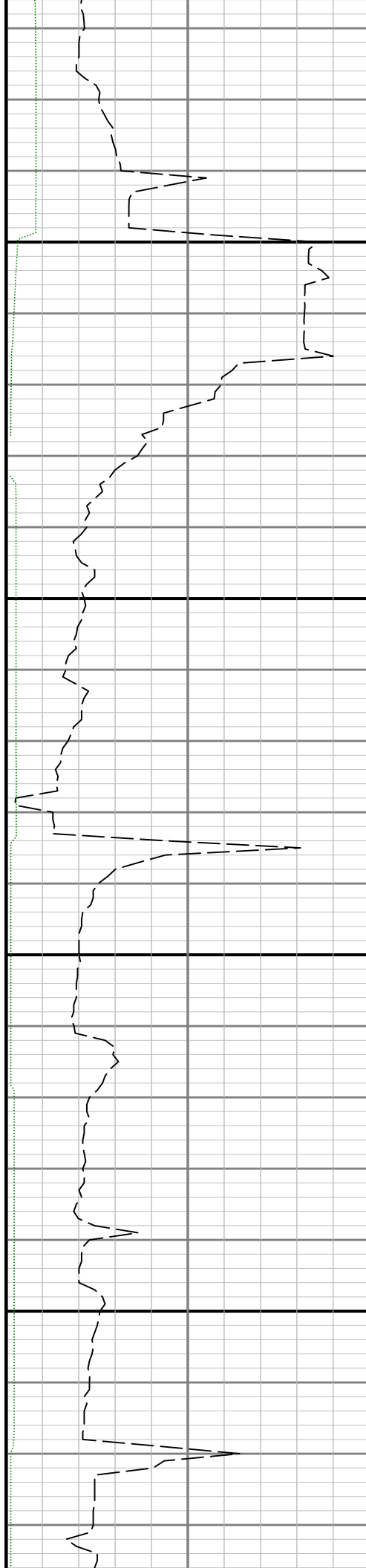


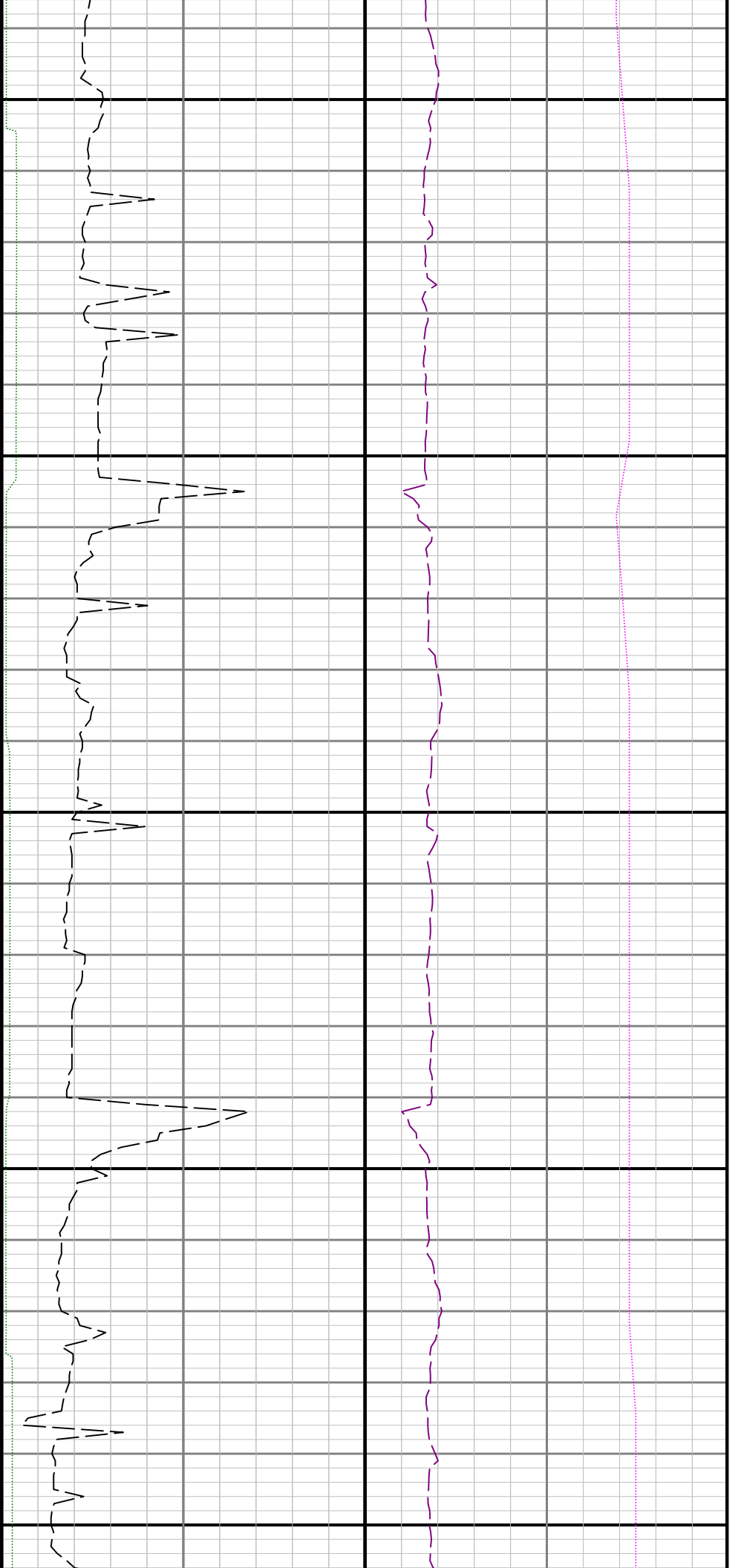




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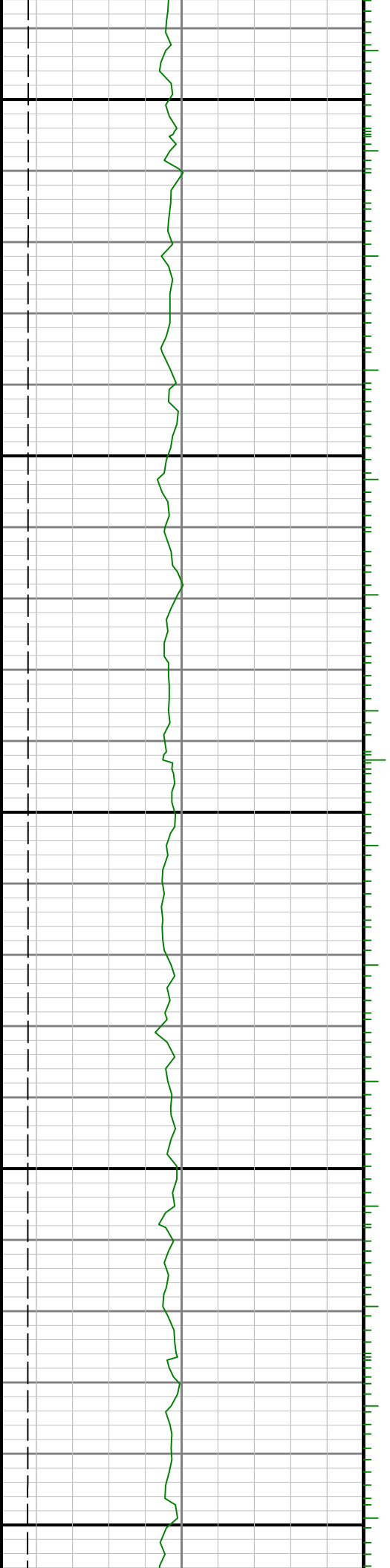
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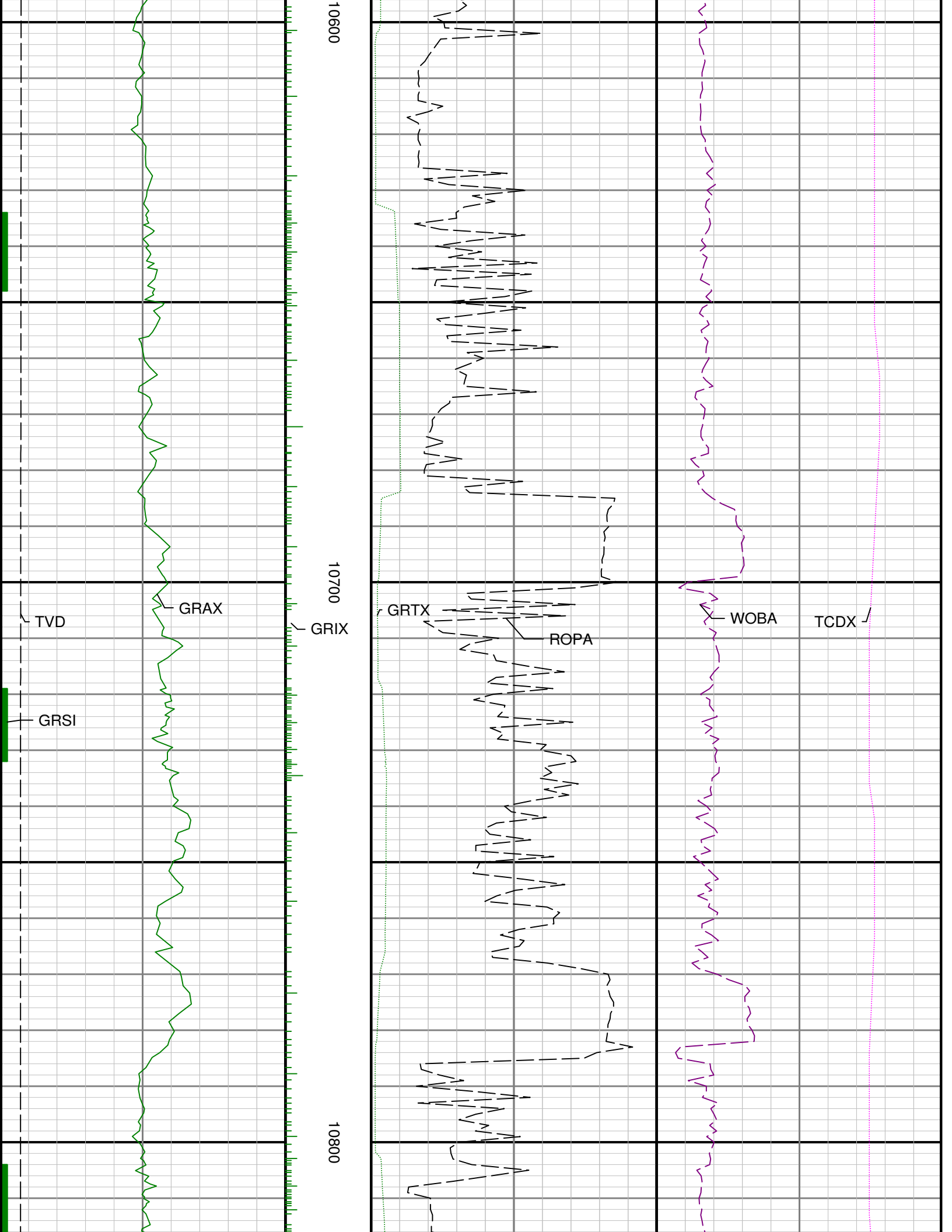


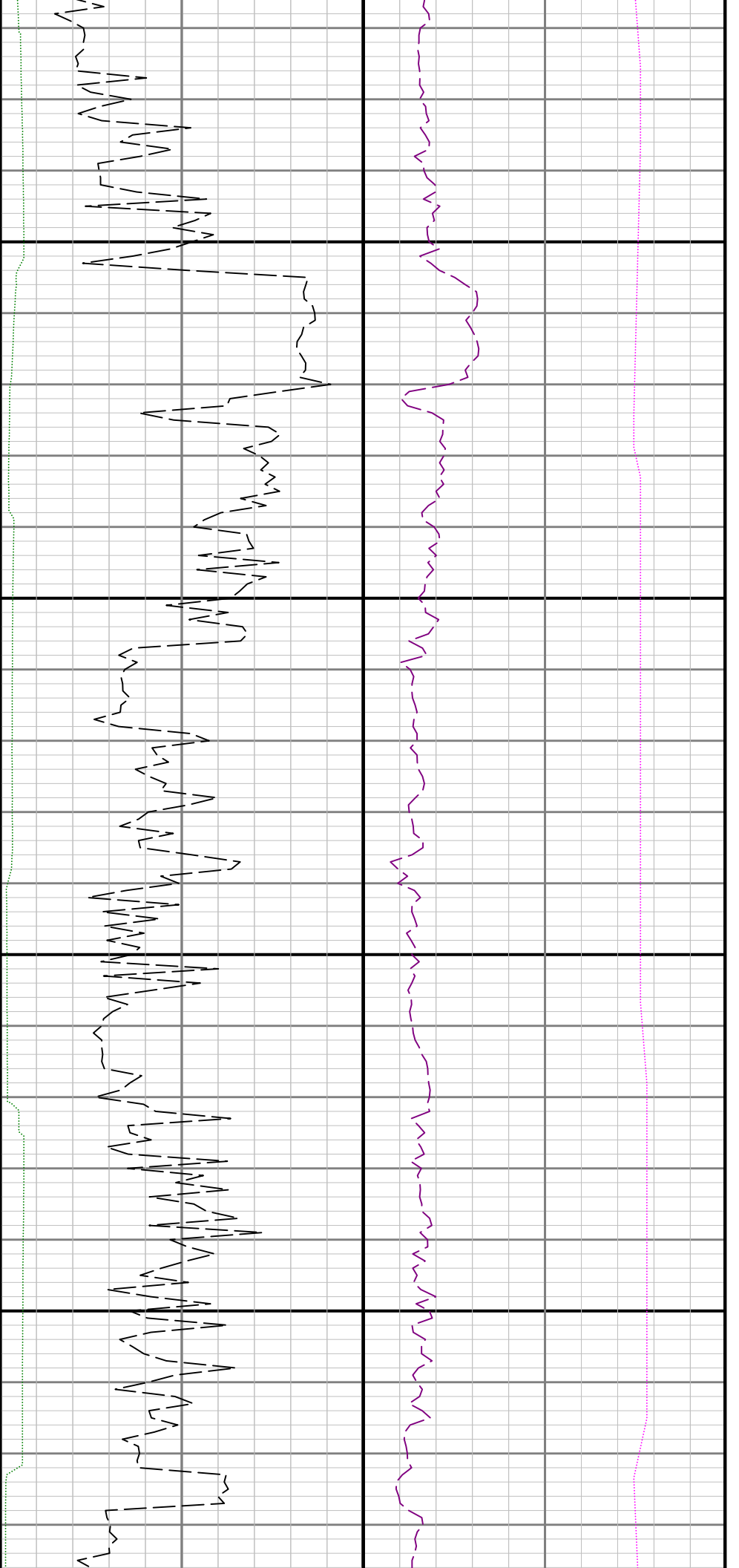
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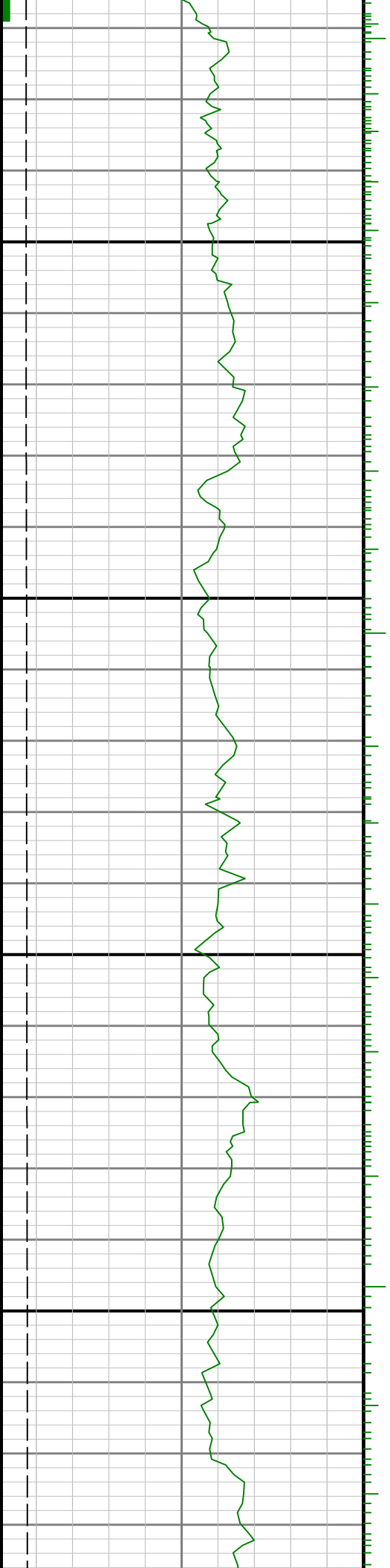


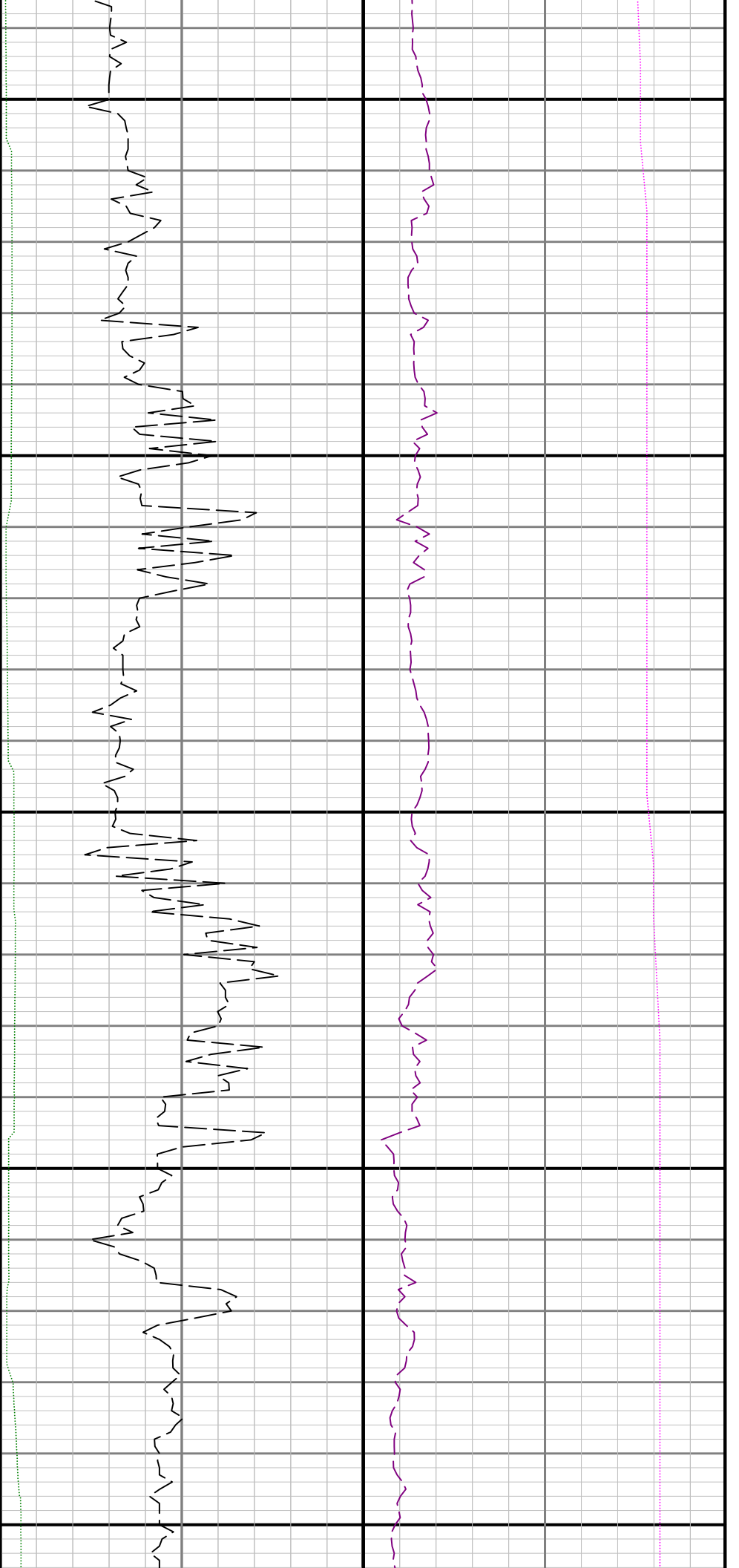




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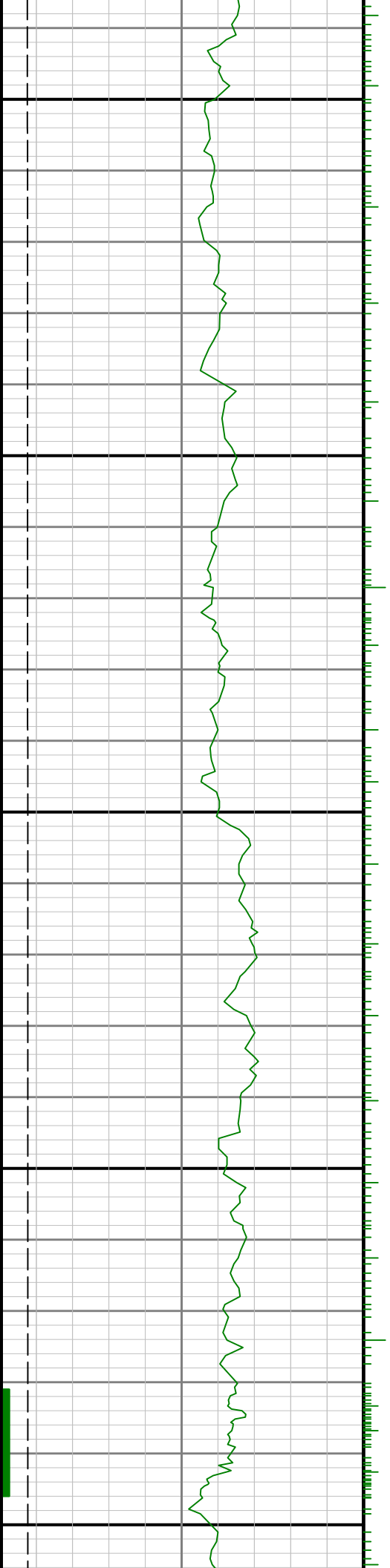
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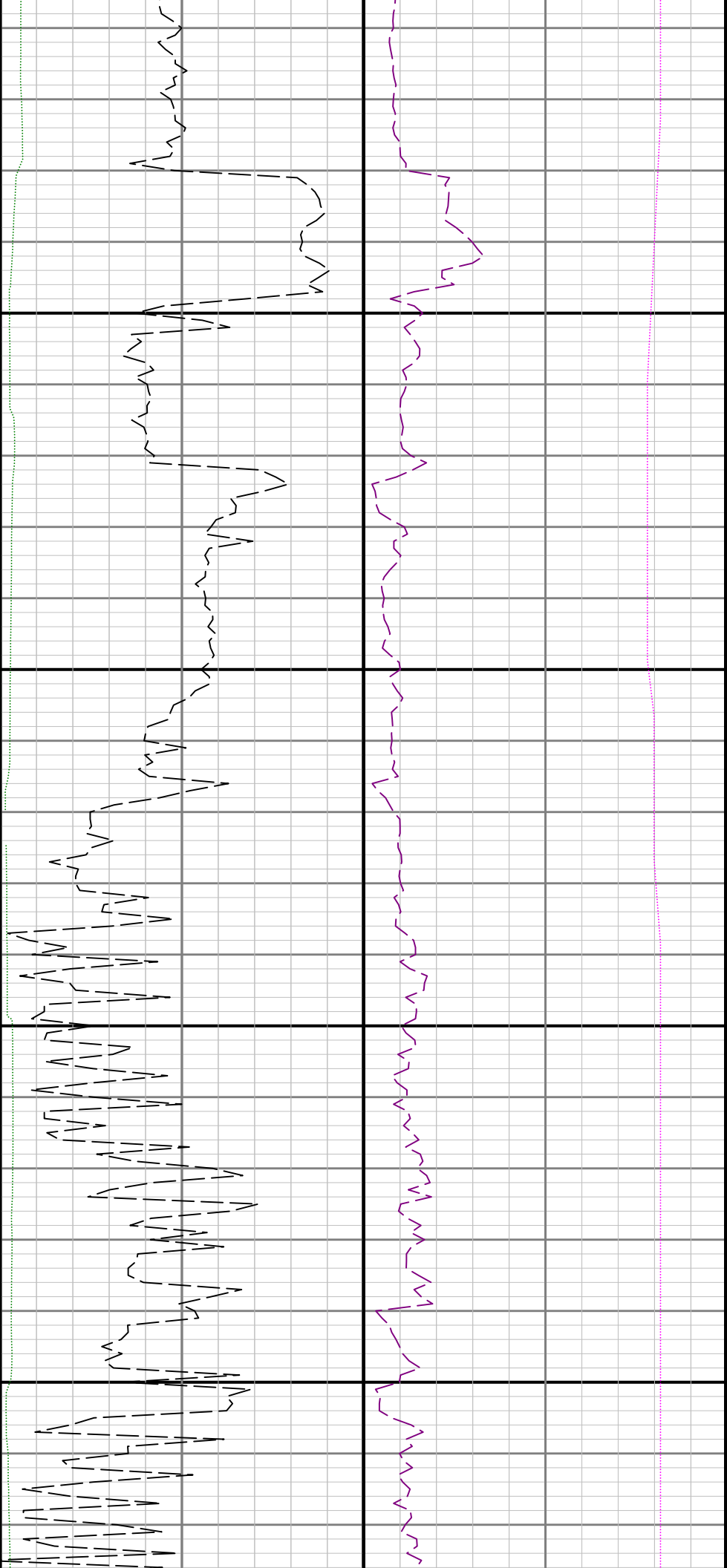




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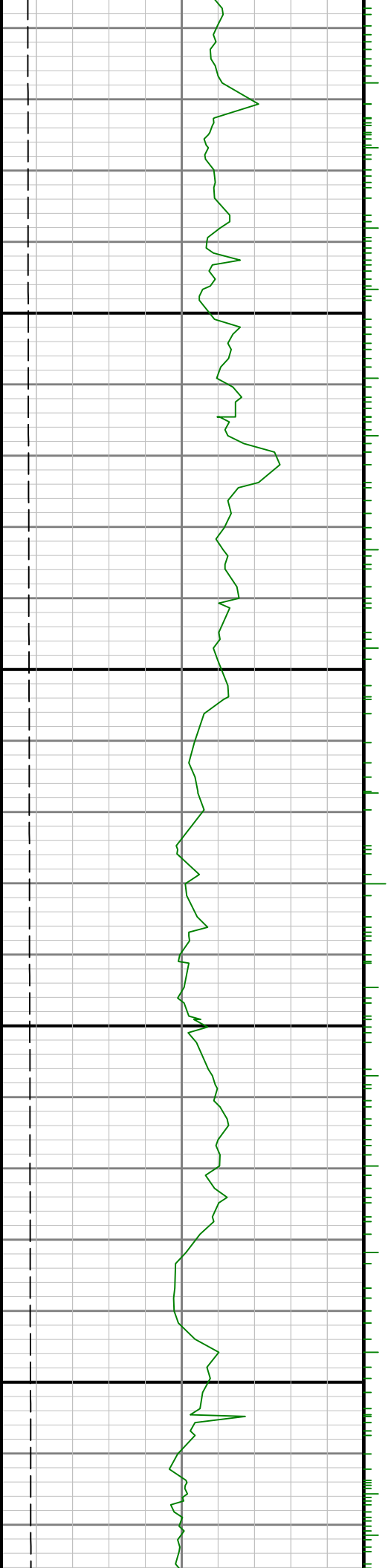
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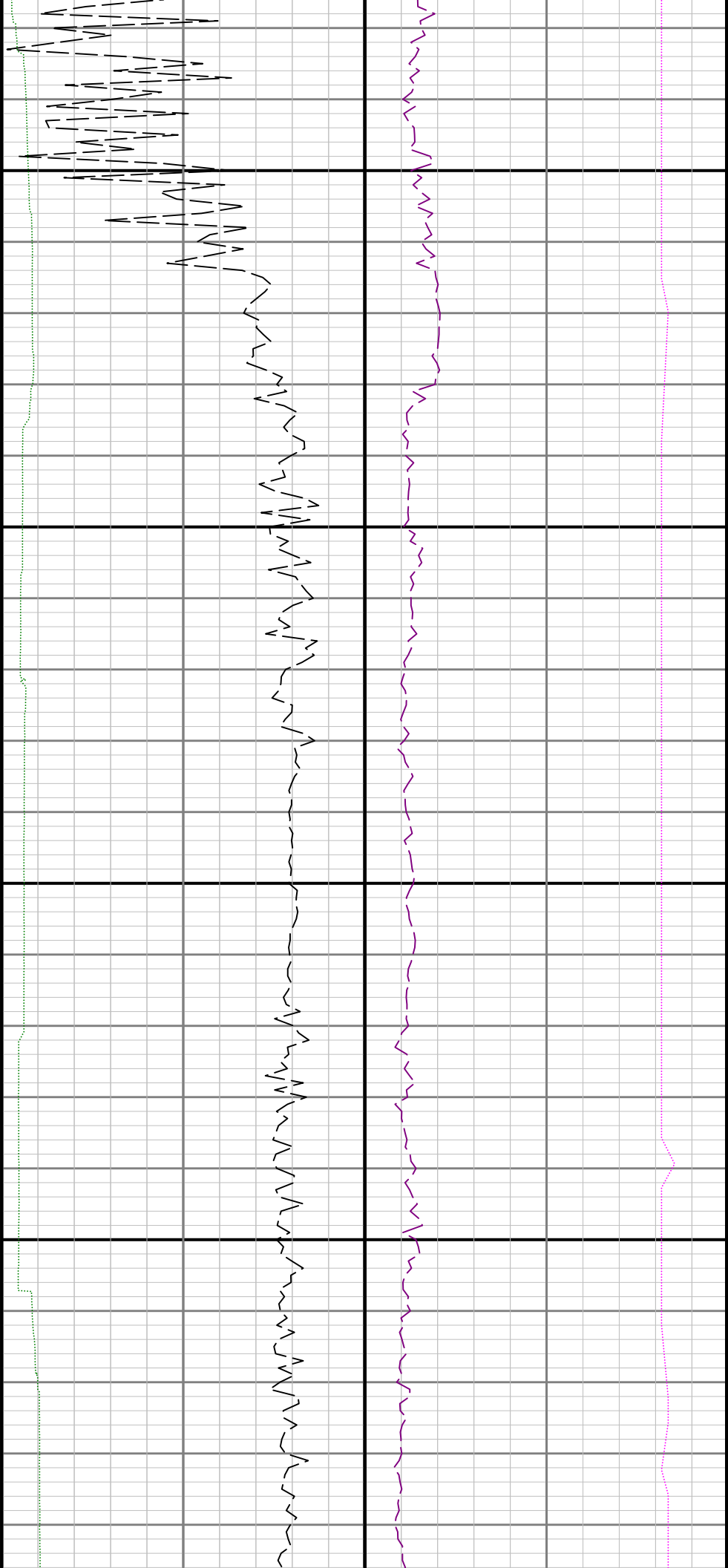




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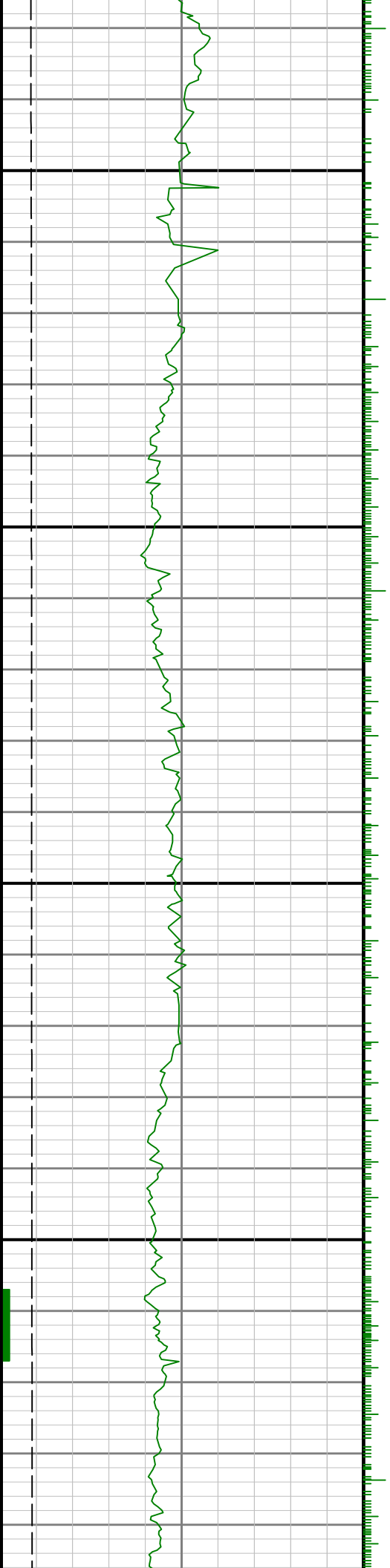
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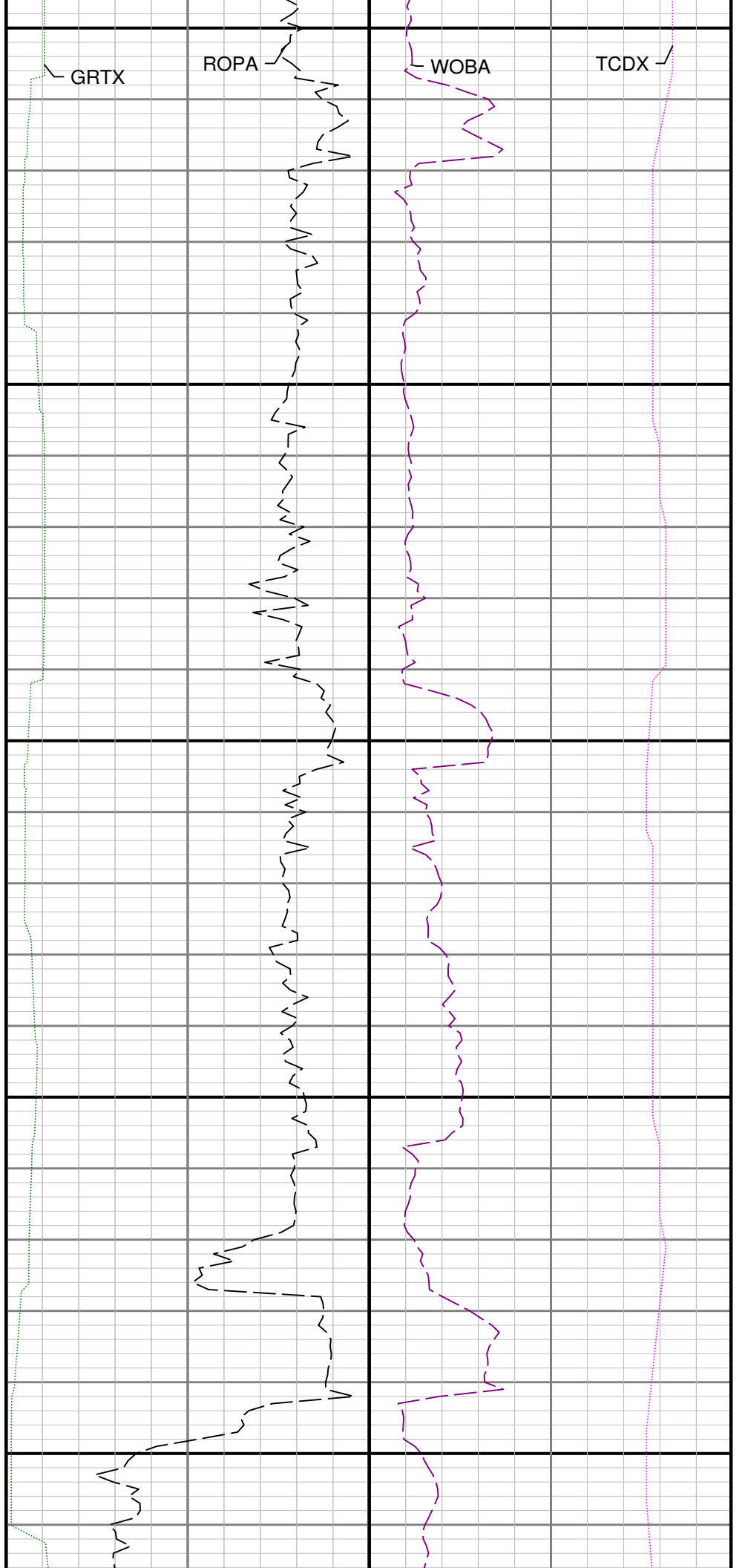
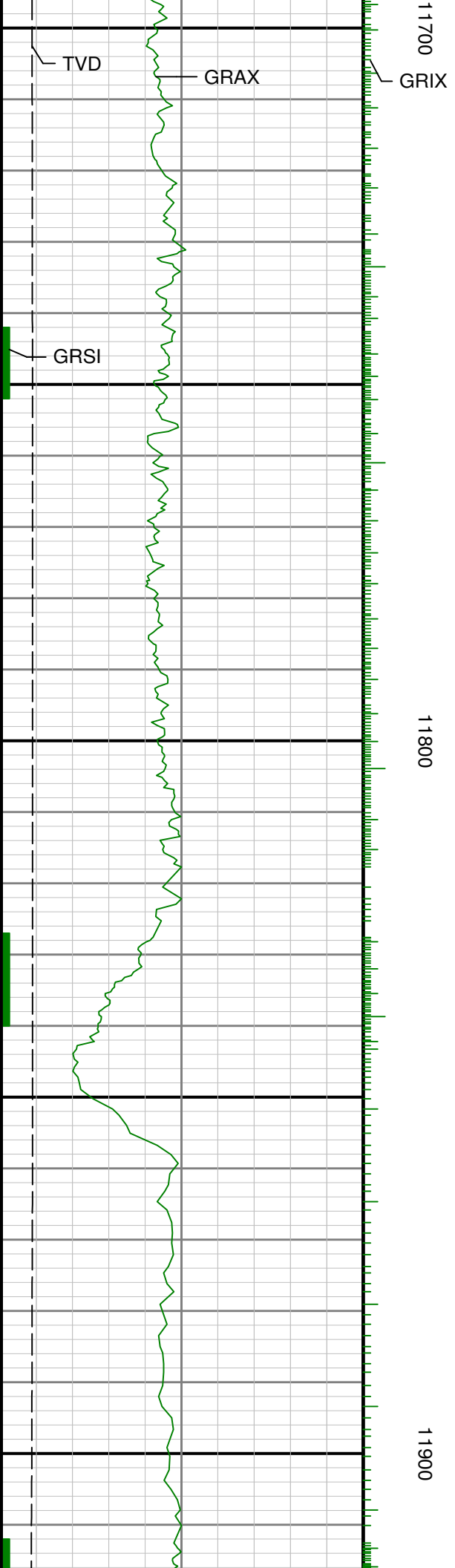


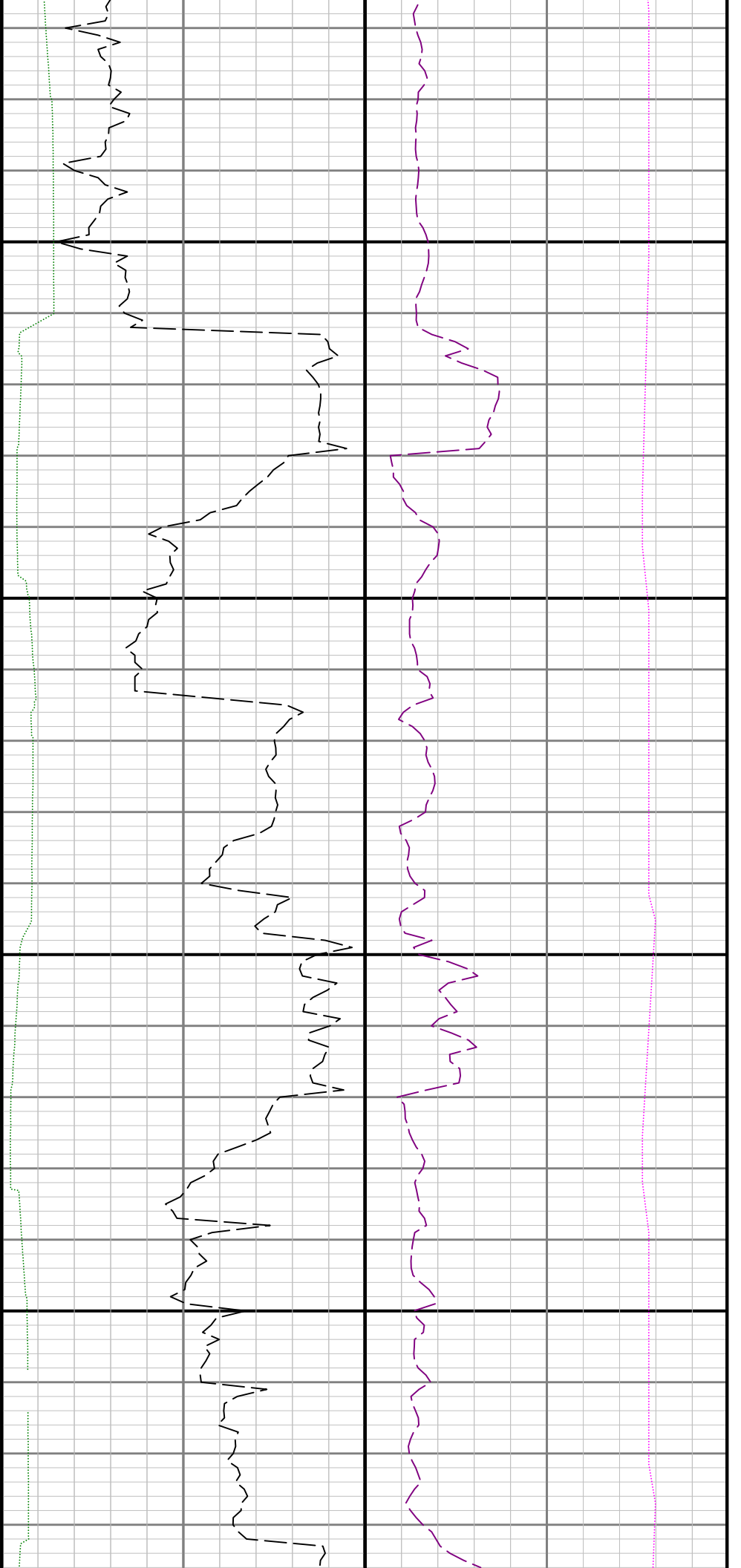


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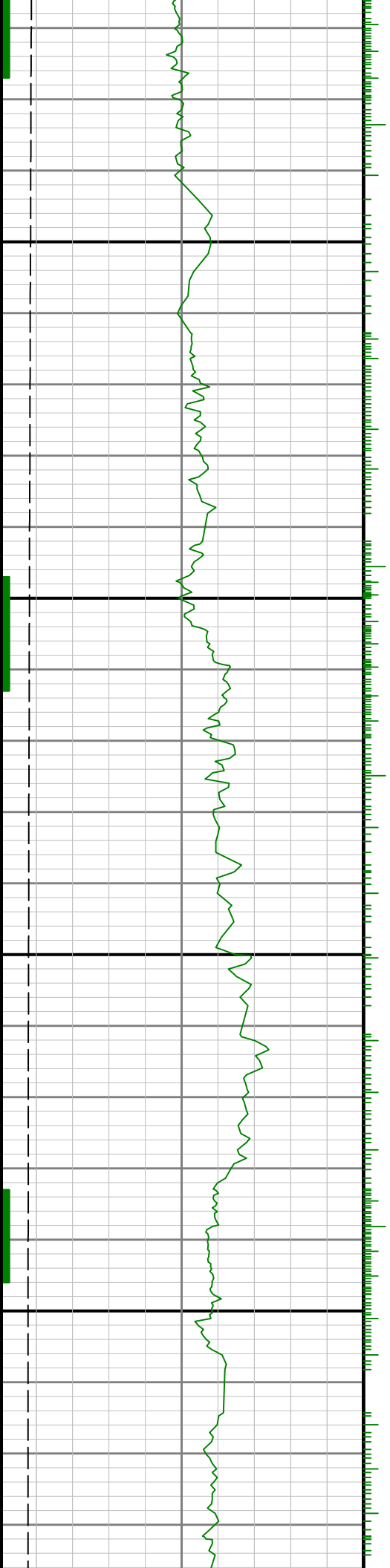


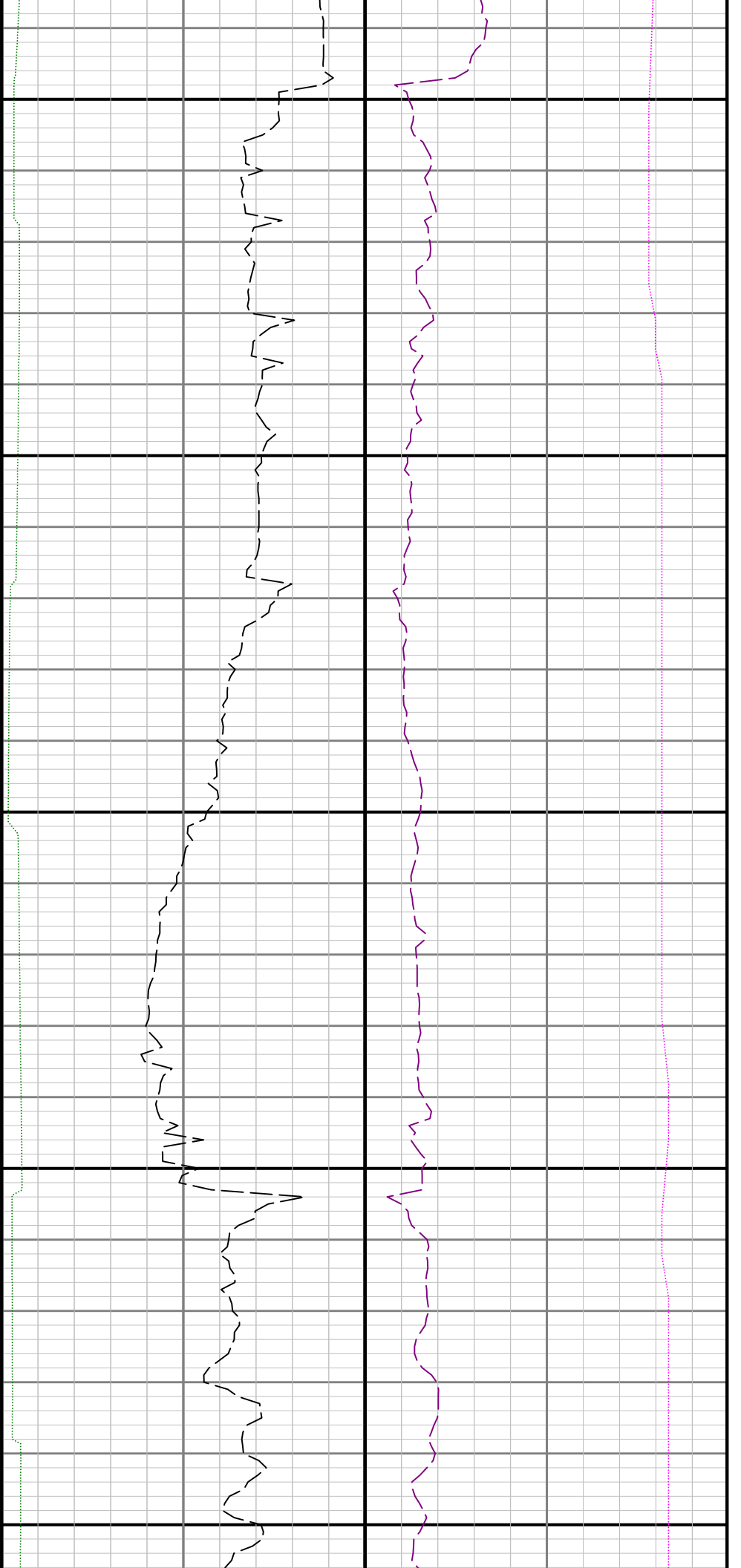




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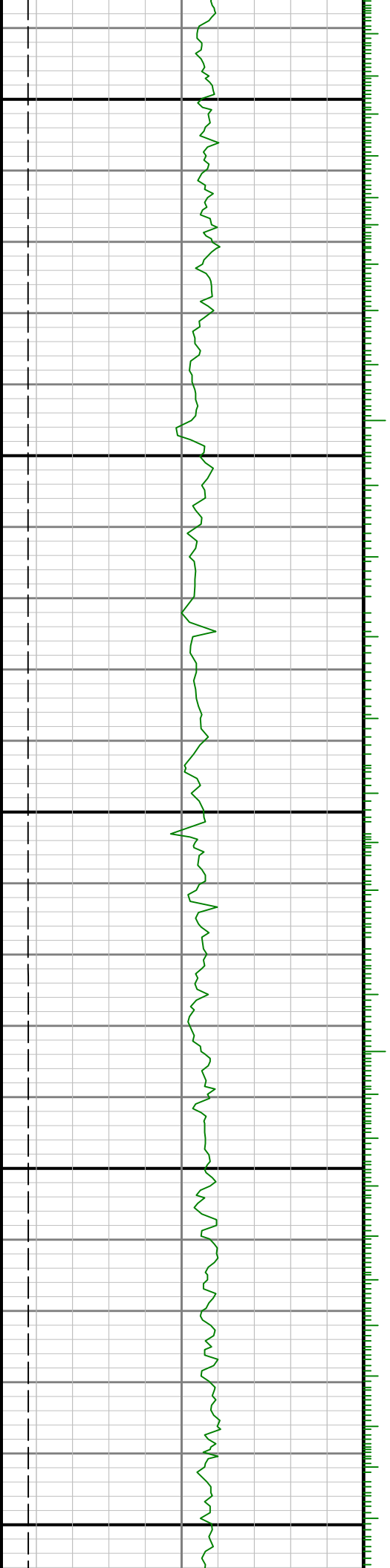
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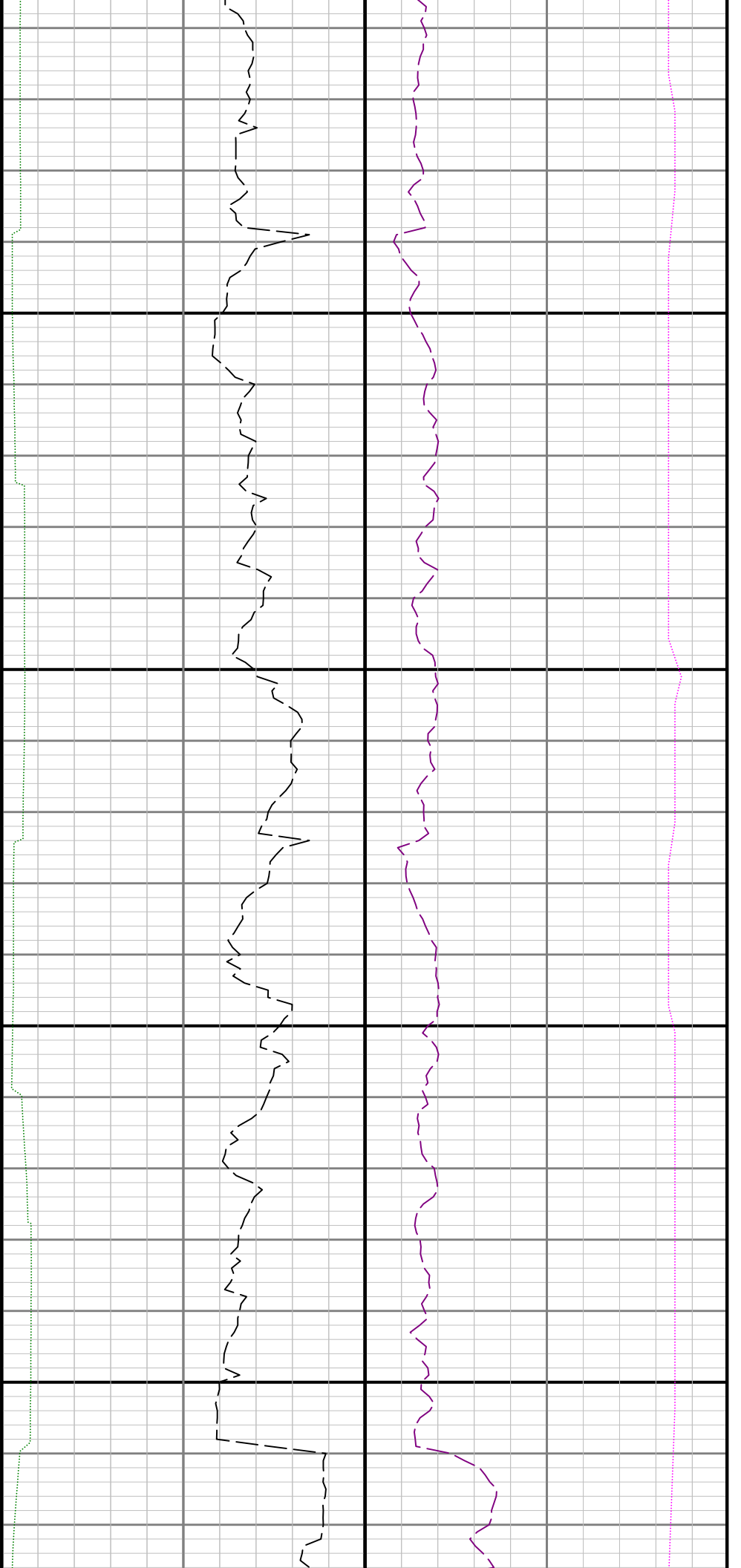




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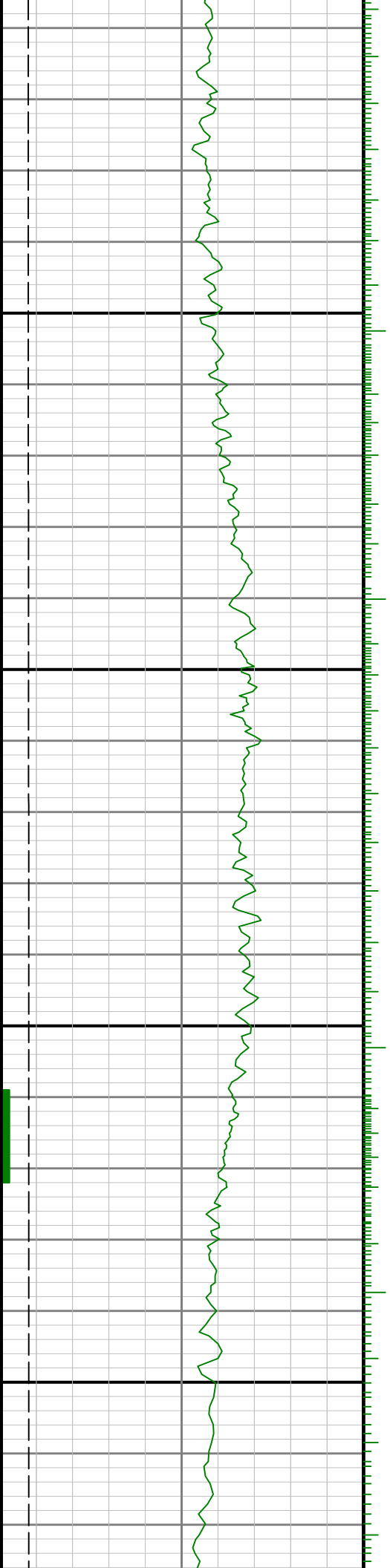
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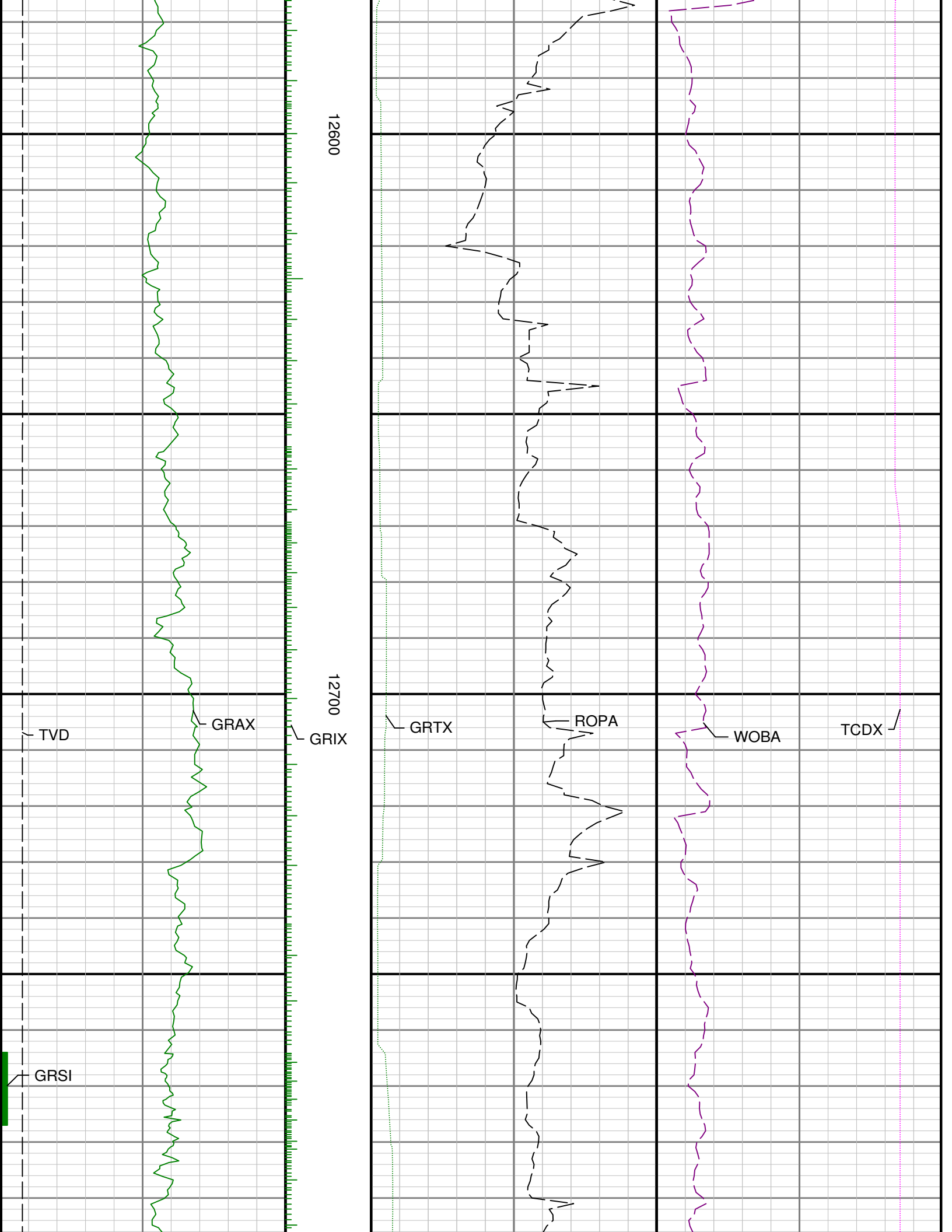


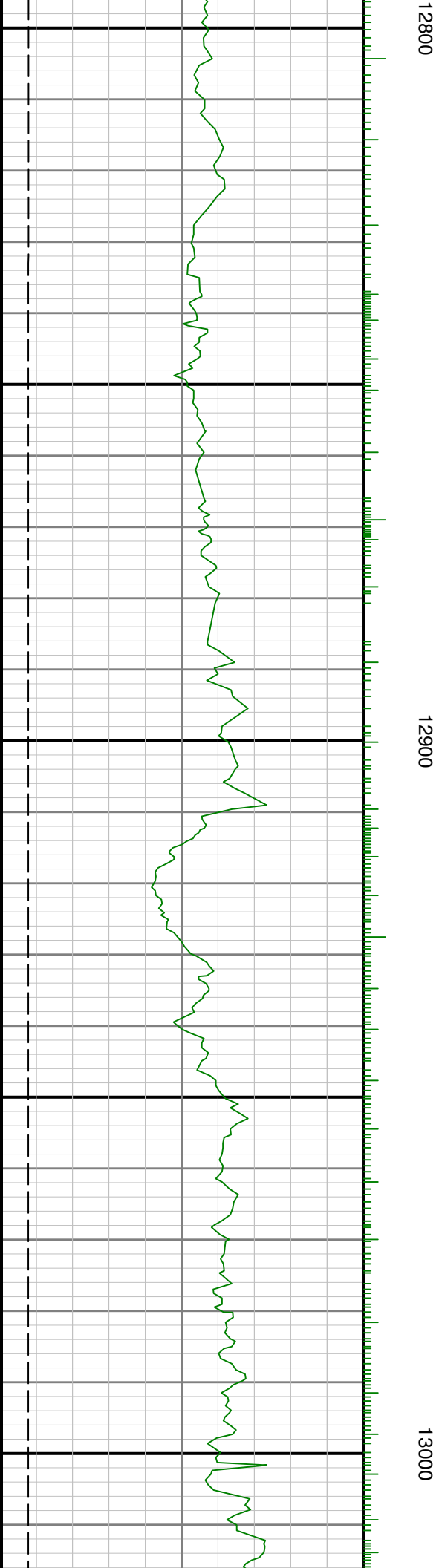
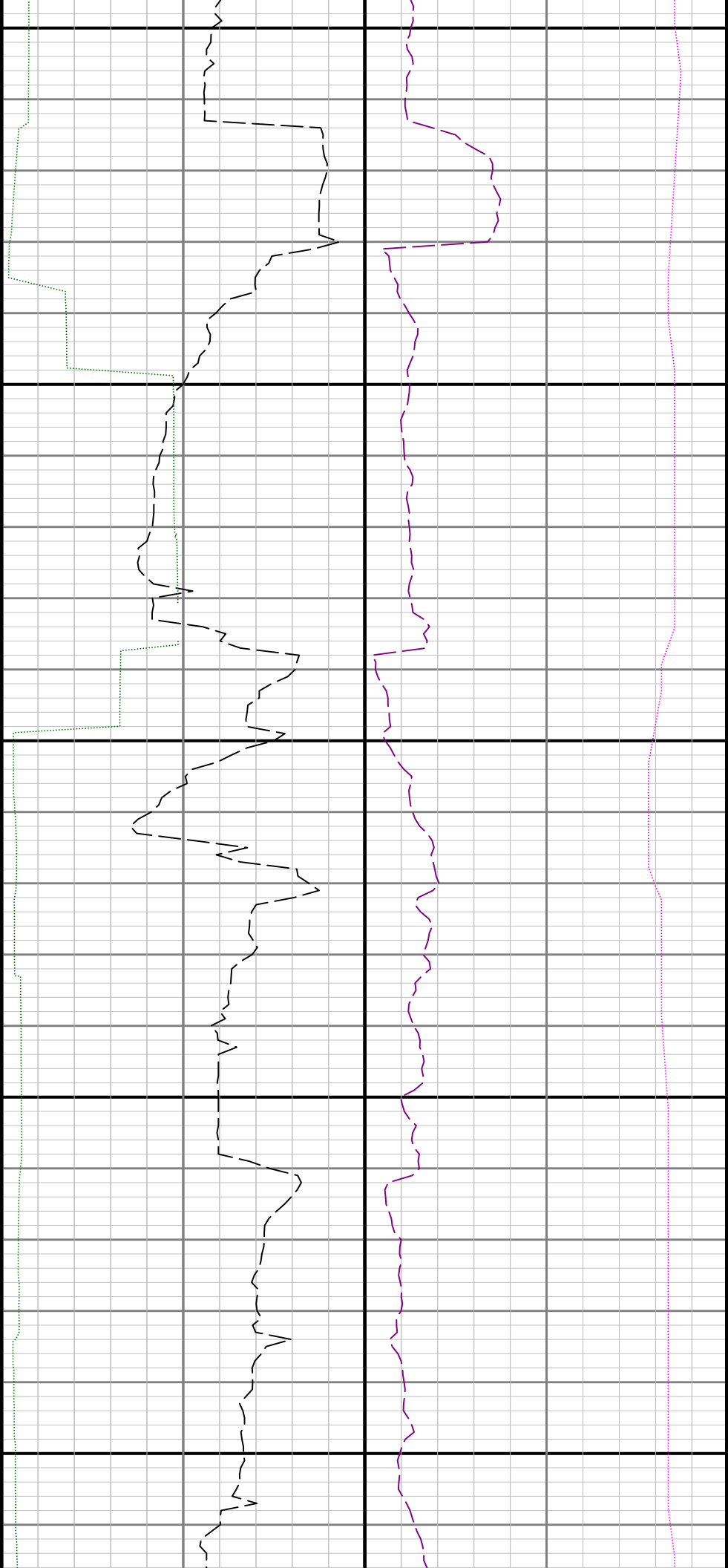


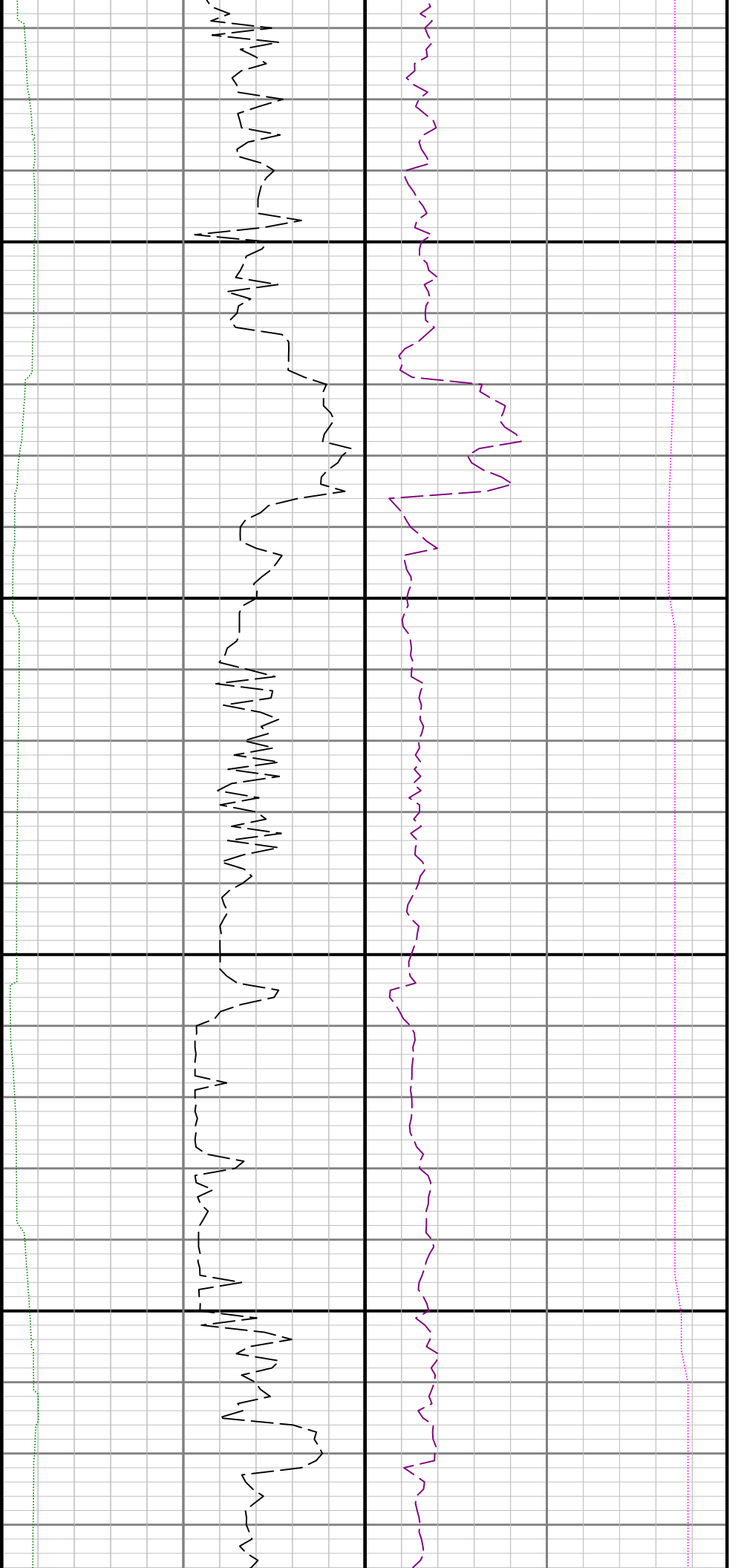
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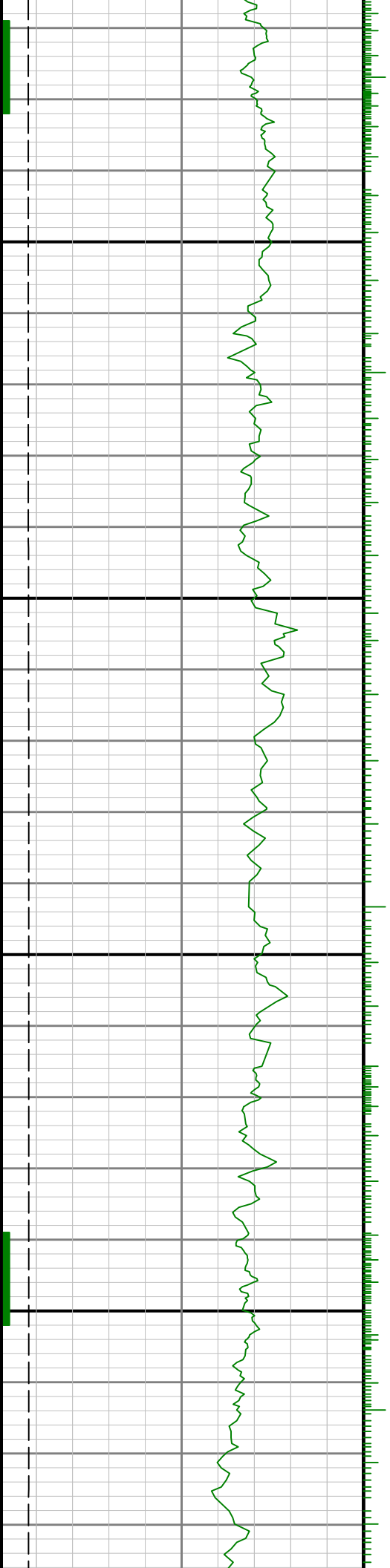


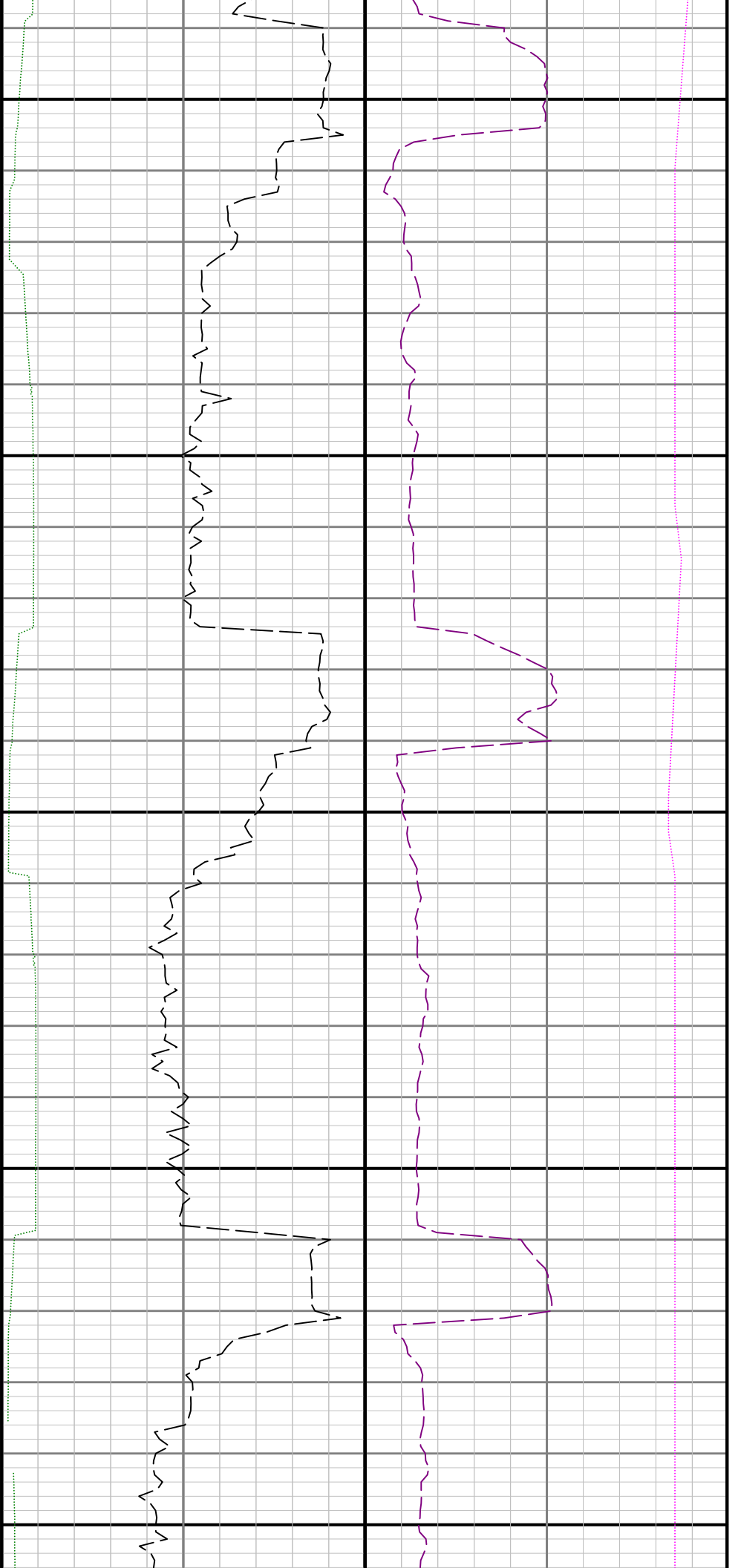




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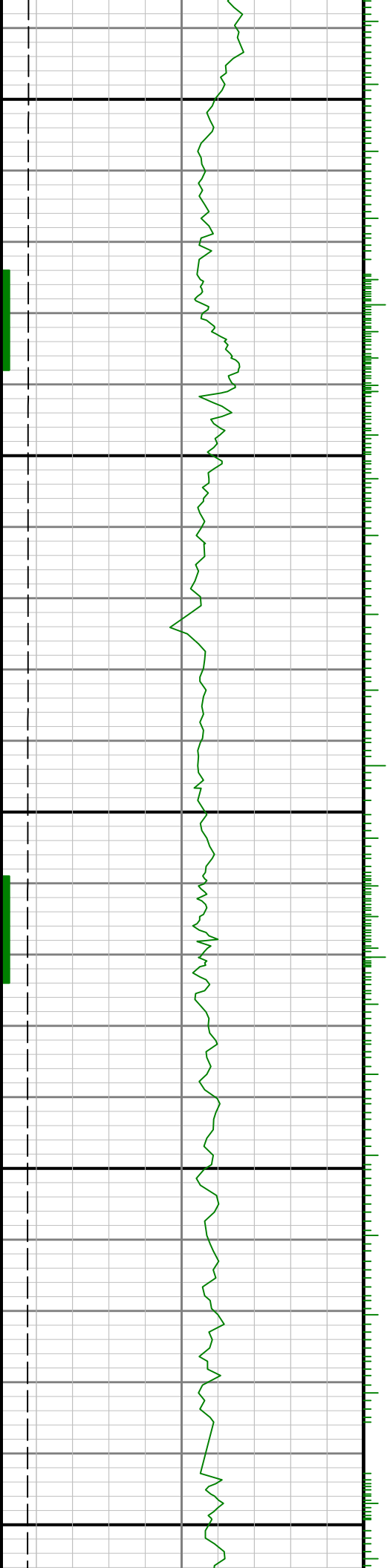
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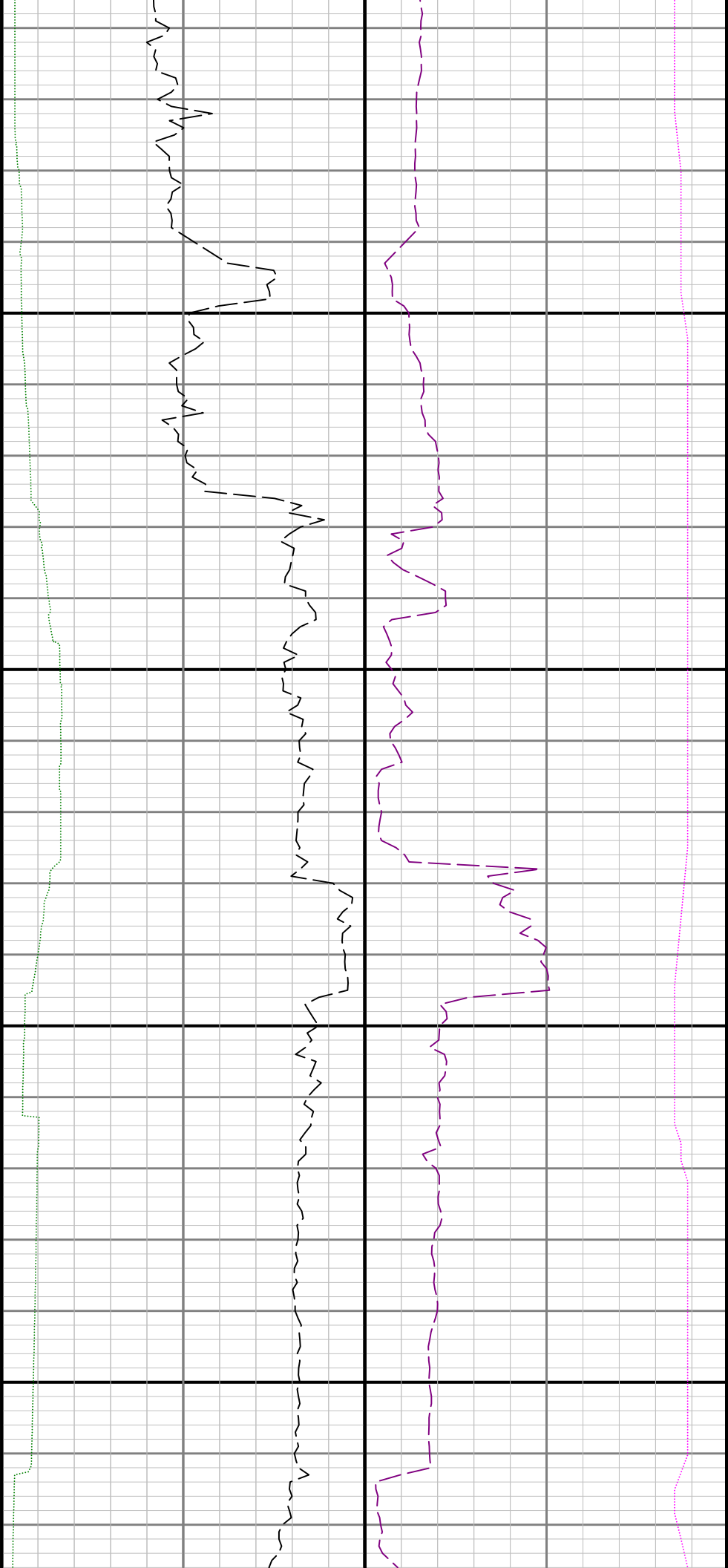




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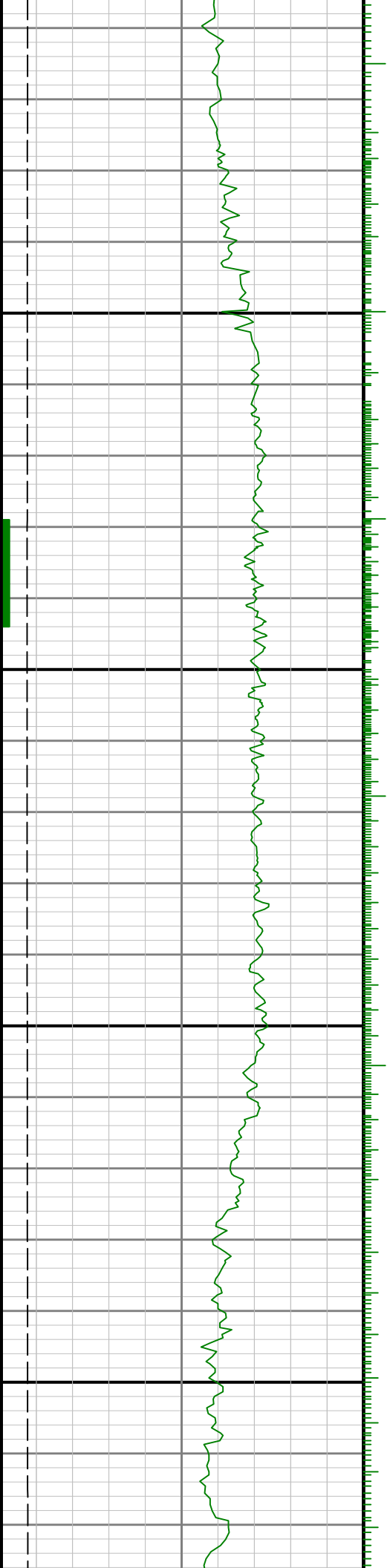
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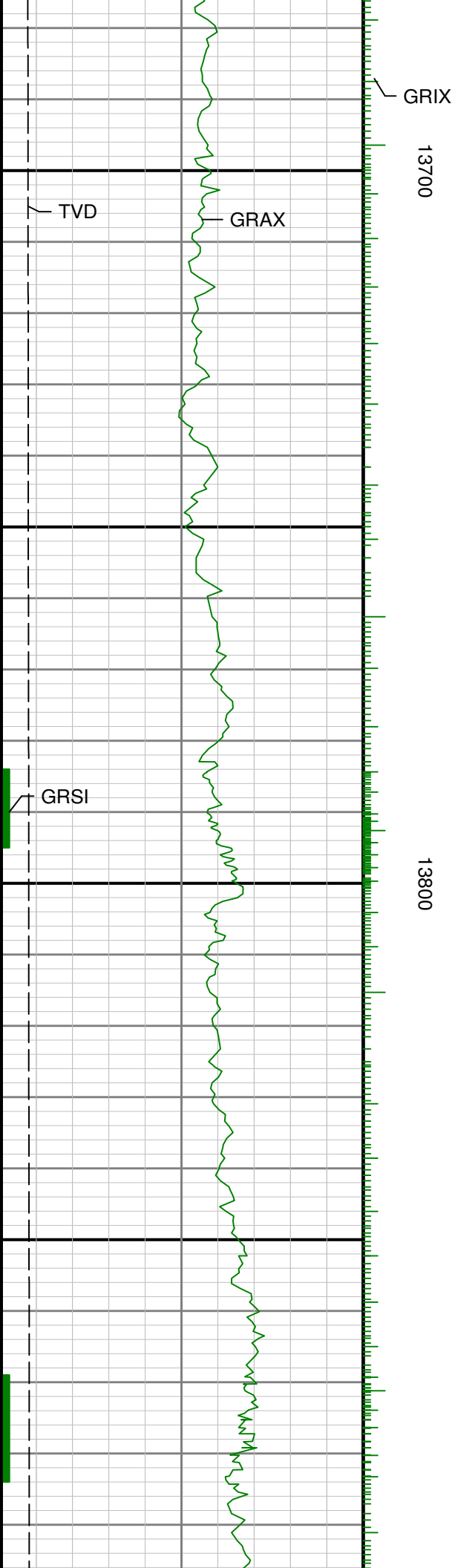


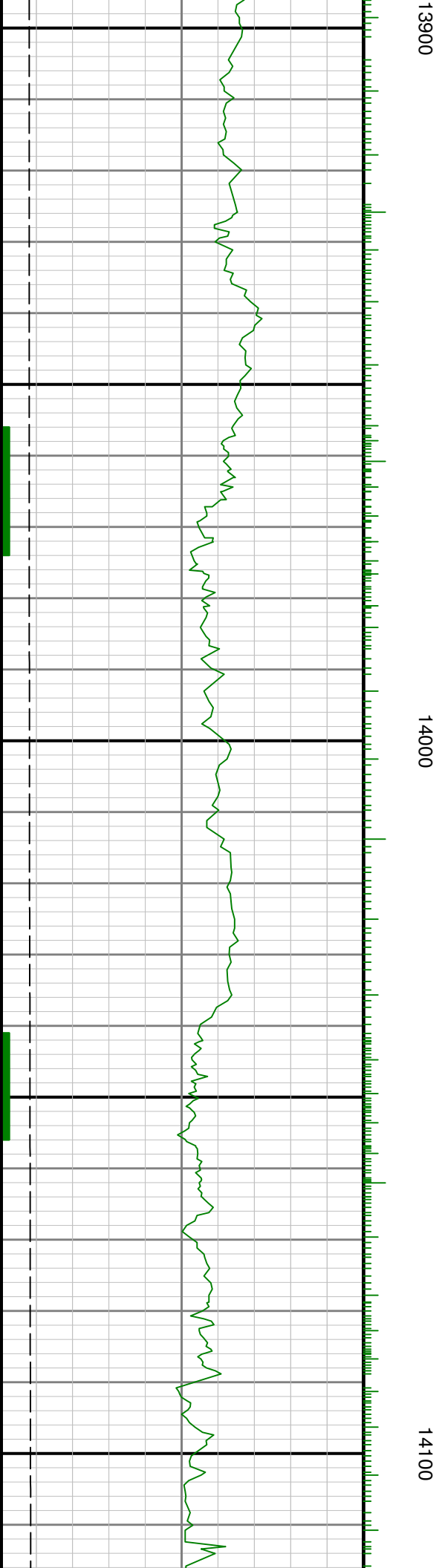
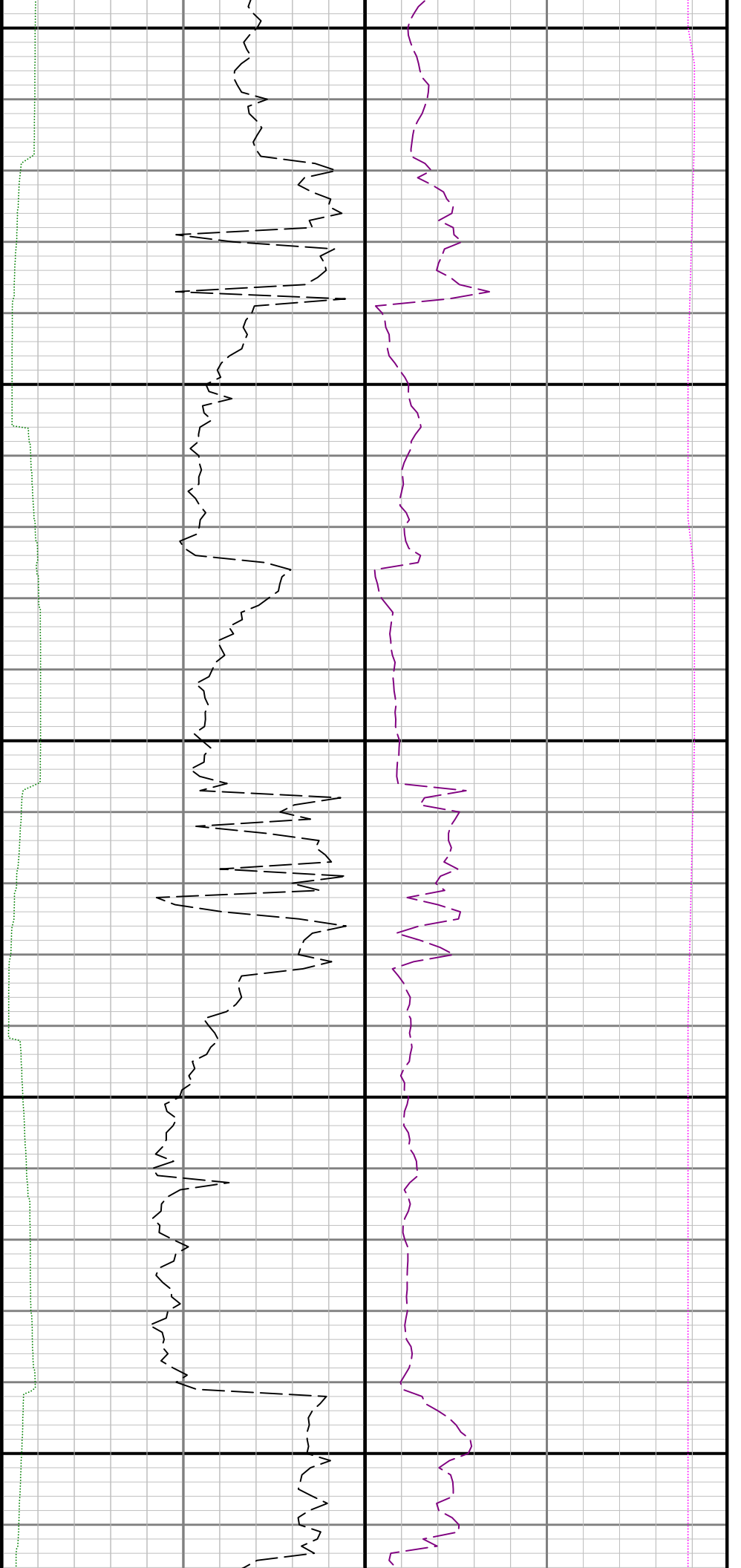


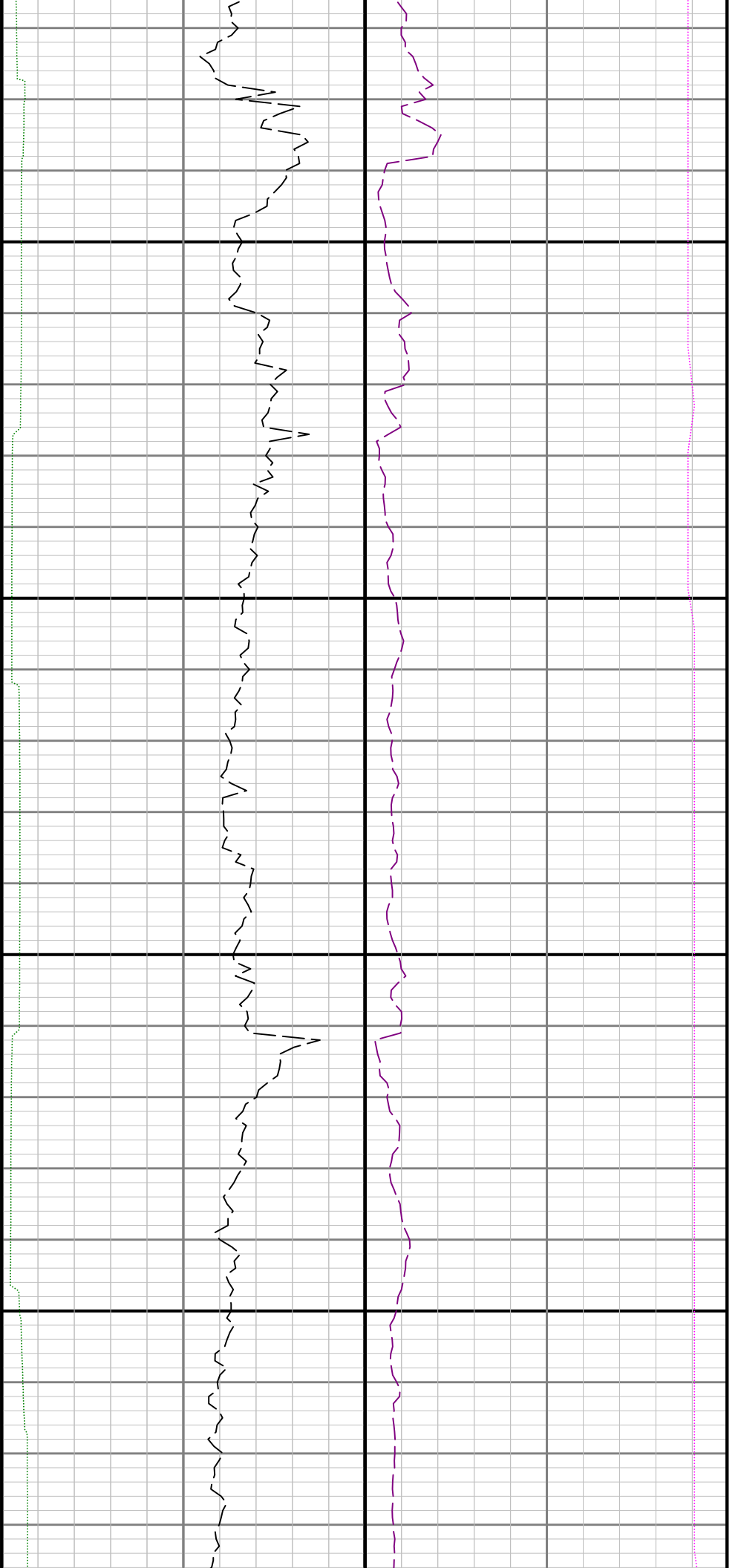
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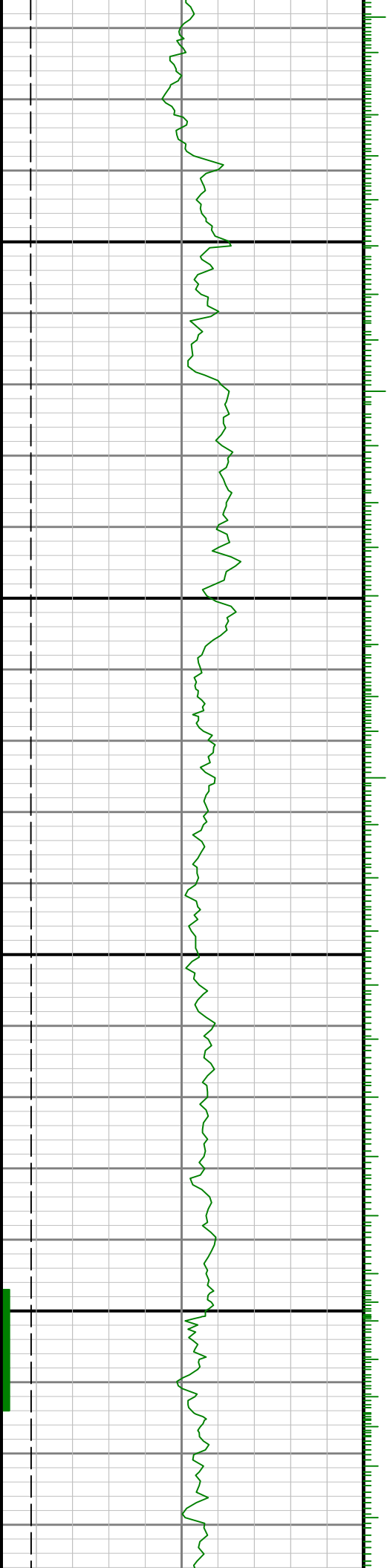


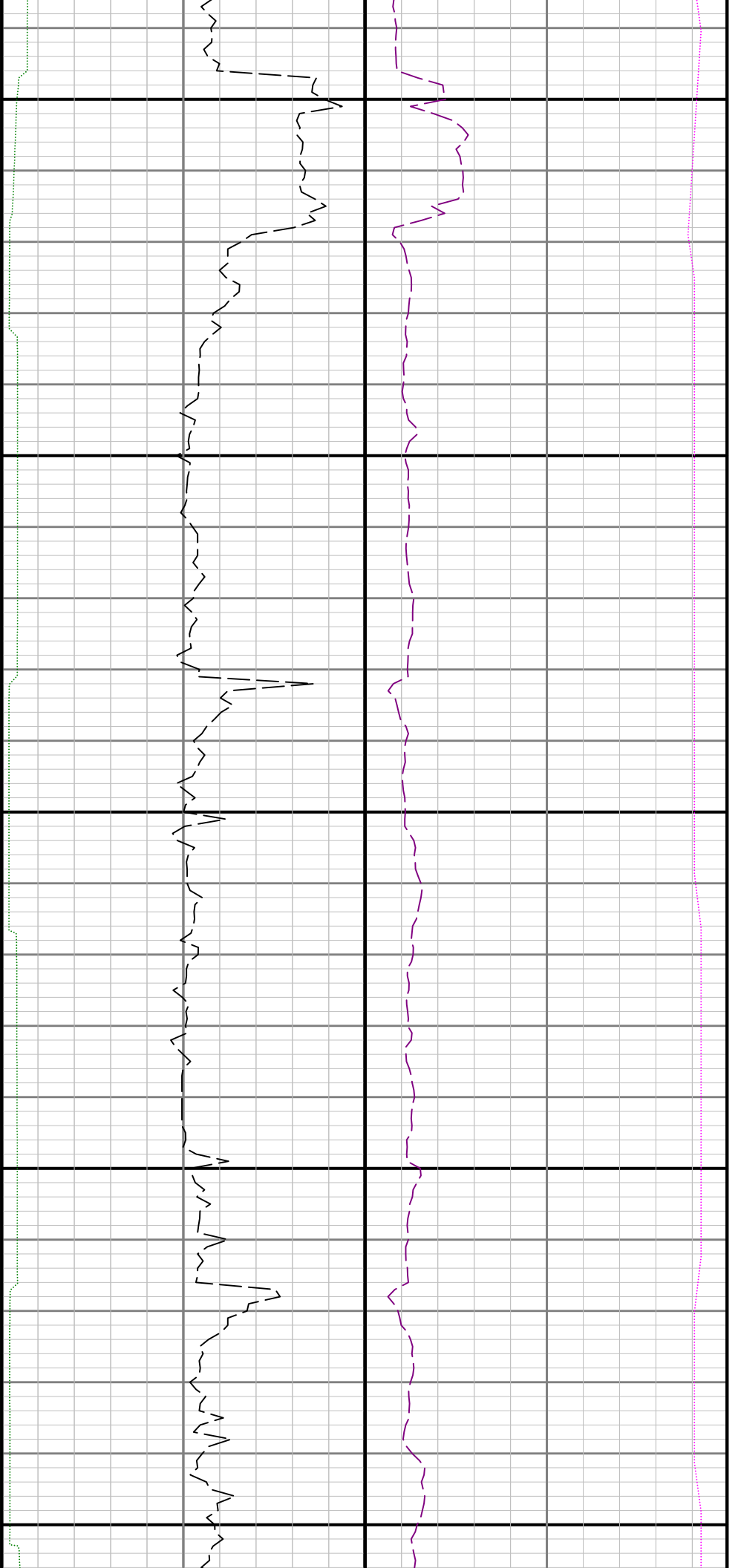




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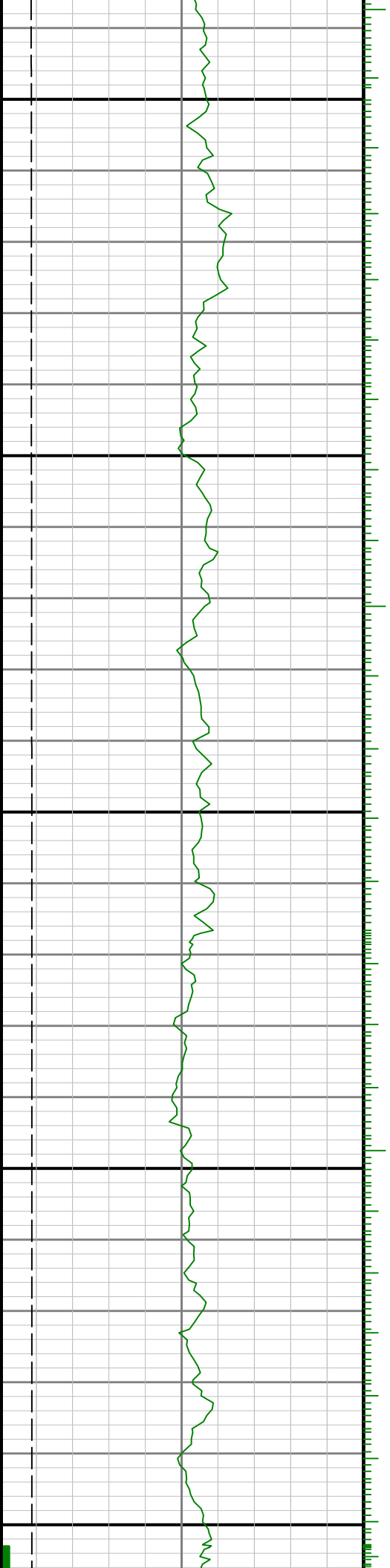
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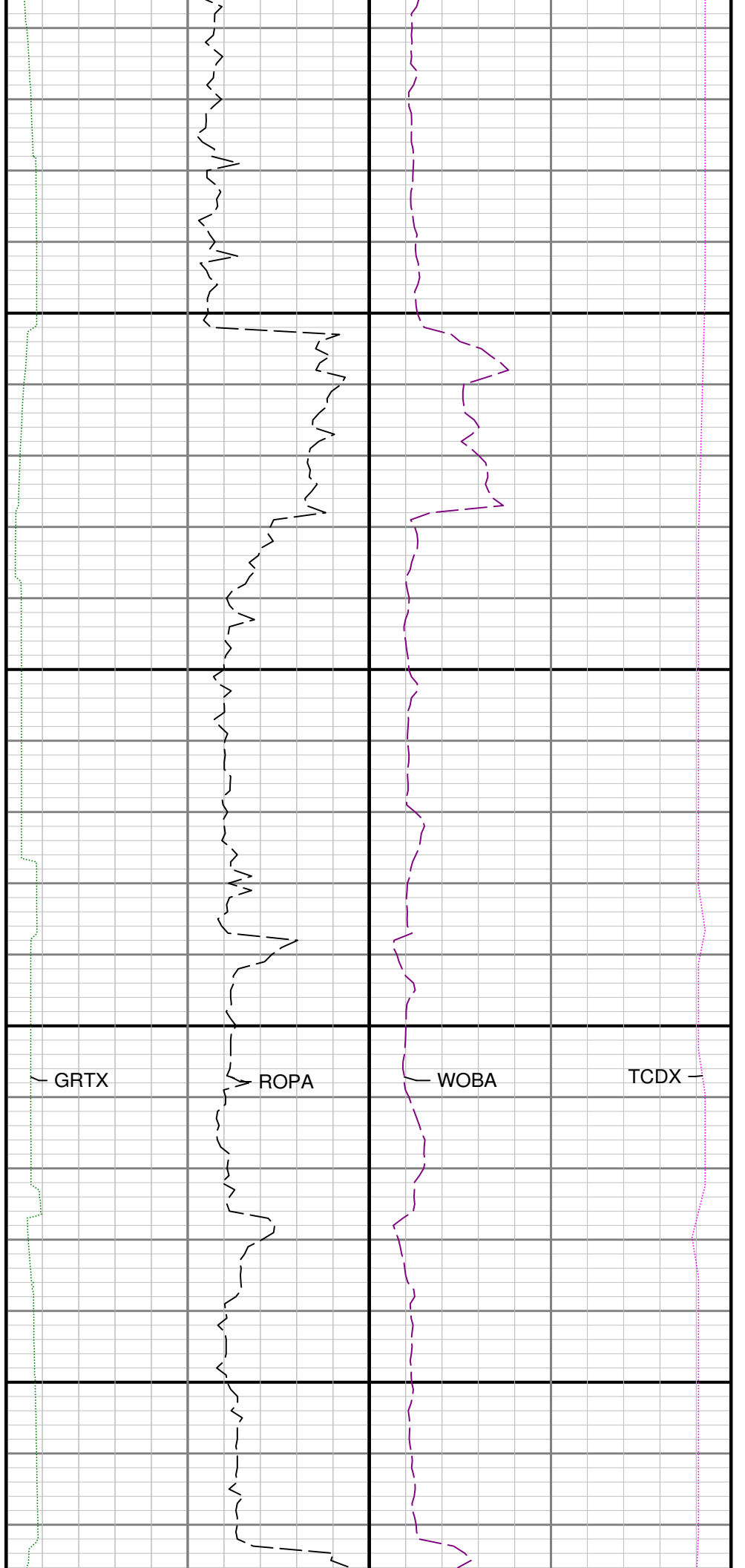
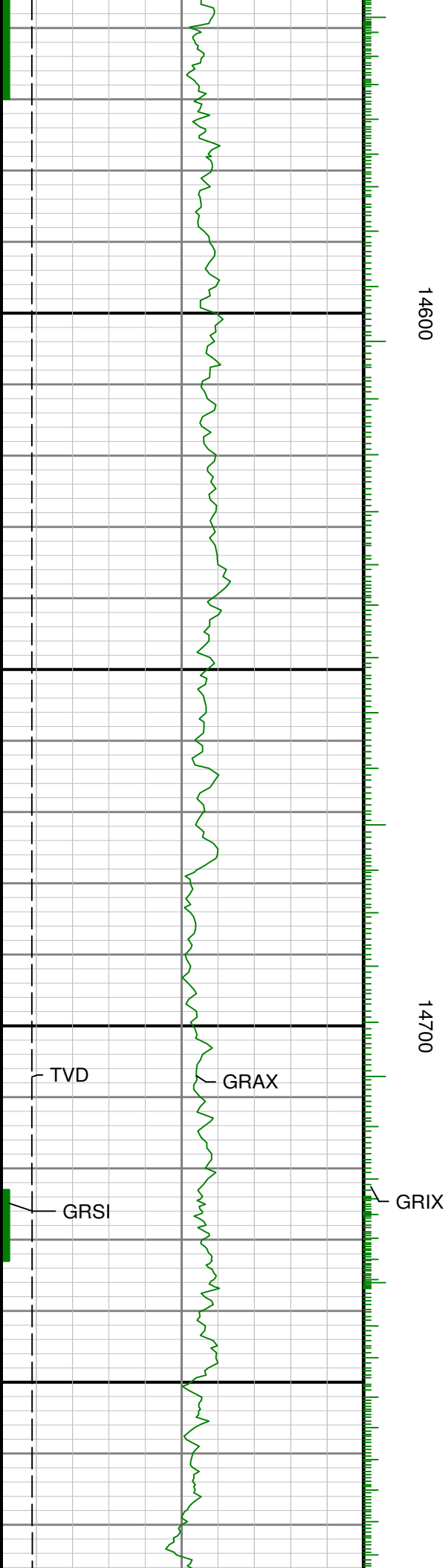


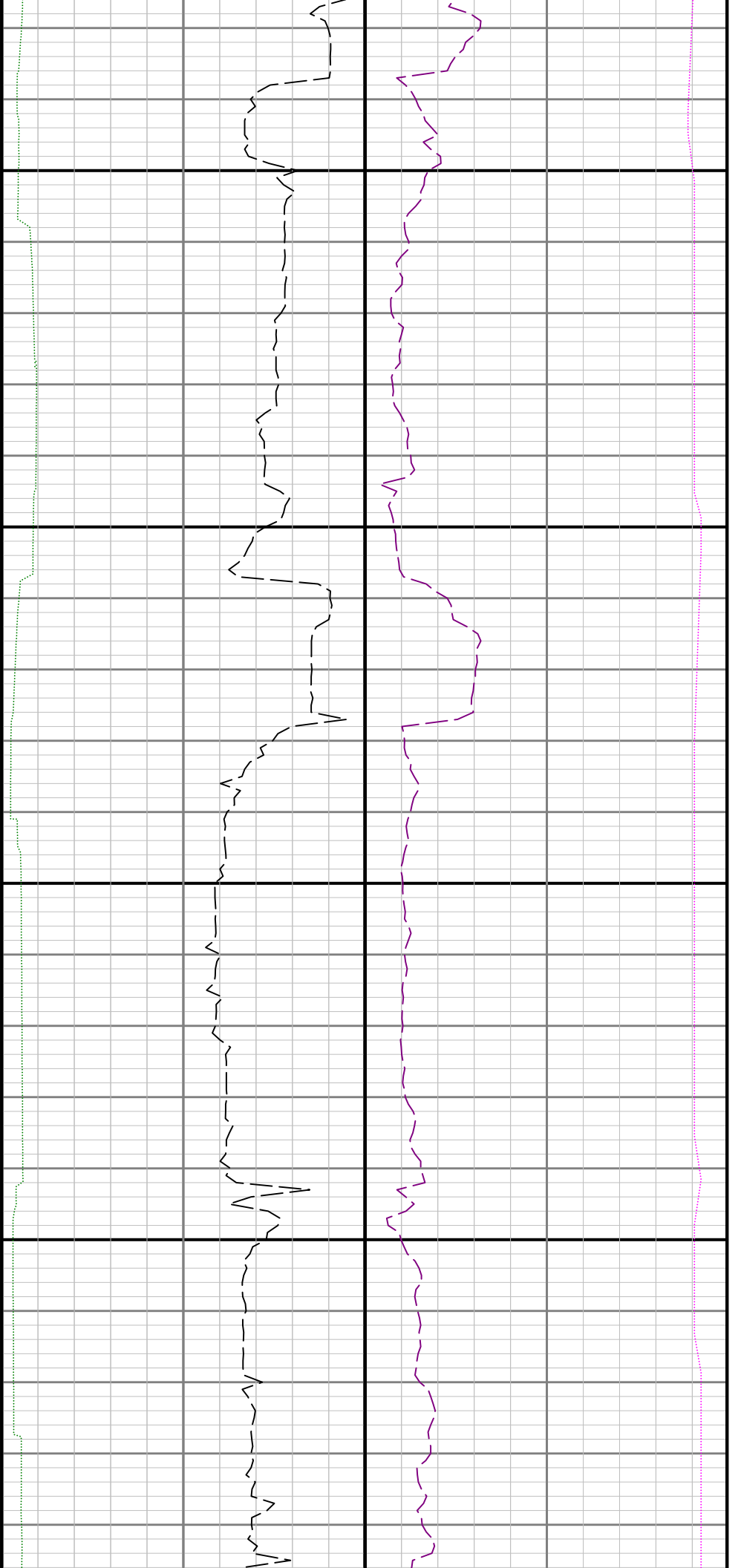


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