

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Adam Schlenz	02/Jun/14	06/Jun/14	David Campbell	28/May/14	03/Jun/14	Greg Dore	03/Jun/14	06/Jun/14

Witness

Name	LWD Run Number
Marvin Hackeworth	1,2,3
Tim Walker	1,2,3
Wade Mullican	3
Charlie Daigle	3

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 (mg/L)	K+ (%)
29/May/14 22:00	1	7153.0	Water Based	9.9	13	9.0	5.2	1.5/90.3	Active Mud Pit	1400	N/A
30/May/14 10:00	1	7673.0	Water Based	10.0	13	9.2	4.8	2.5/88.5	Active Mud Pit	1500	N/A
30/May/14 22:00	1	7719.0	Water Based	10.3	13	9.3	4.6	3.0/87.1	Active Mud Pit	1500	N/A
31/May/14 10:00	1	7719.0	Water Based	10.3	13	9.3	5.0	3.0/87.1	Active Mud Pit	1500	N/A
31/May/14 22:00	1	7719.0	Water Based	9.7	12	9.2	4.2	2.5/90.0	Active Mud Pit	1800	N/A
01/Jun/14 22:00	2	8767.0	Water Based	9.7	13	9.3	4.4	2.5/89.5	Active Mud Pit	1500	N/A
02/Jun/14 10:00	2	9320.0	Water Based	9.7	13	9.3	4.3	3.0/89.0	Active Mud Pit	1700	N/A
02/Jun/14 22:00	3	9688.0	Water Based	9.8	14	9.3	4.3	3.0/88.6	Active Mud Pit	1800	N/A
03/Jun/14 10:00	3	11006.0	Water Based	9.7	15	9.4	4.4	3.0/88.5	Active Mud Pit	1900	N/A
03/Jun/14 22:00	3	11855.0	Water Based	9.7	14	9.5	4.3	3.0/88.6	Active Mud Pit	2000	N/A
04/Jun/14 10:00	3	13071.0	Water Based	9.6	15	9.5	4.6	3.0/89.5	Active Mud Pit	1900	N/A
04/Jun/14 22:00	3	14275.0	Water Based	9.5	14	9.4	4.6	3.0/90.0	Active Mud Pit	1800	N/A

Mnemonics

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

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12440860	Directional	63.23	6.750	3.250
1	SRIG	11602059	Gamma	60.19	6.750	3.250
2	DIR	12592552	Directional	65.48	4.750	2.810
2	SRIG	12606956	Gamma	62.10	4.750	2.810
3	DIR	12592552	Directional	65.46	4.750	2.810
3	SRIG	12606956	Gamma	62.08	4.750	2.810

Service and Tool Mnemonics

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

Comments

<p>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.</p> <p>2.) The solid line on the left side of the gamma ray track indicates the interval over which data was collected while not rotating.</p> <p>3.) Baker Hughes LWD run 1 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1364 to 7719 feet MD (1364 to 7308 feet TVD).</p> <p>4.) Baker Hughes LWD run 2 and 3 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and steerable assembly from 7719 to 14544 feet MD (7308 to 7275 feet TVD).</p>

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	6575	8.750	1	Gamma ray logging operations began at 6575 feet MD (6568 feet TVD).
2	7719	8.750	1	The interval from 7660 to 7719 feet MD (7304 to 7308 feet TVD) was logged more than 10 hrs after being drilled due to a trip out of the hole for casing and cement operations.
3	9320	6.125	2	The interval from 9257 to 9320 feet MD (7300 feet TVD) was logged more than 10 hrs after being drilled due to a trip out of the hole for a trip out of the hole to pick up a new mud motor and bit.
4	14544	6.125	3	No sensor data logged from 14481 to 14544 feet MD (7275 feet TVD) due to sensor to bit offset at well TD.

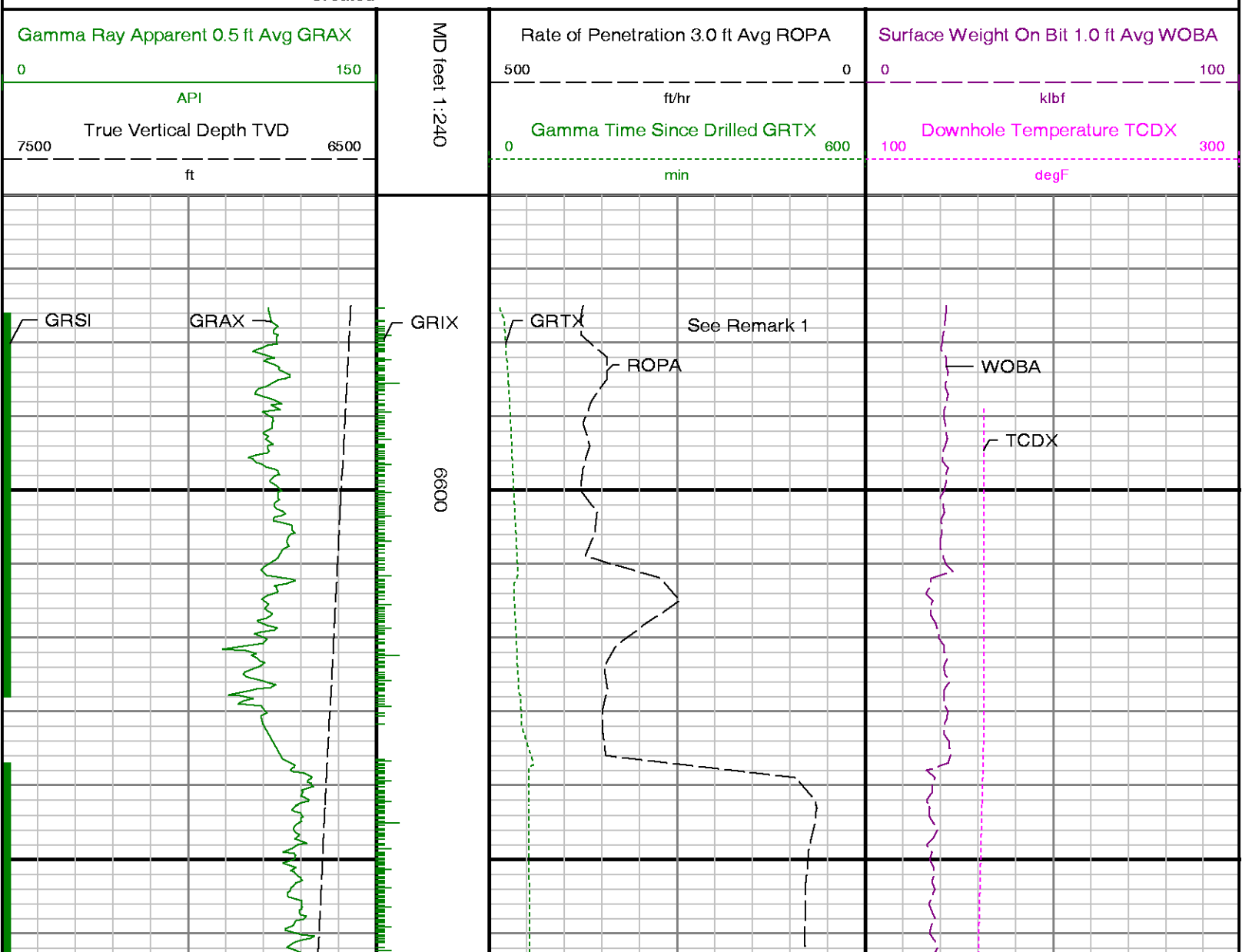


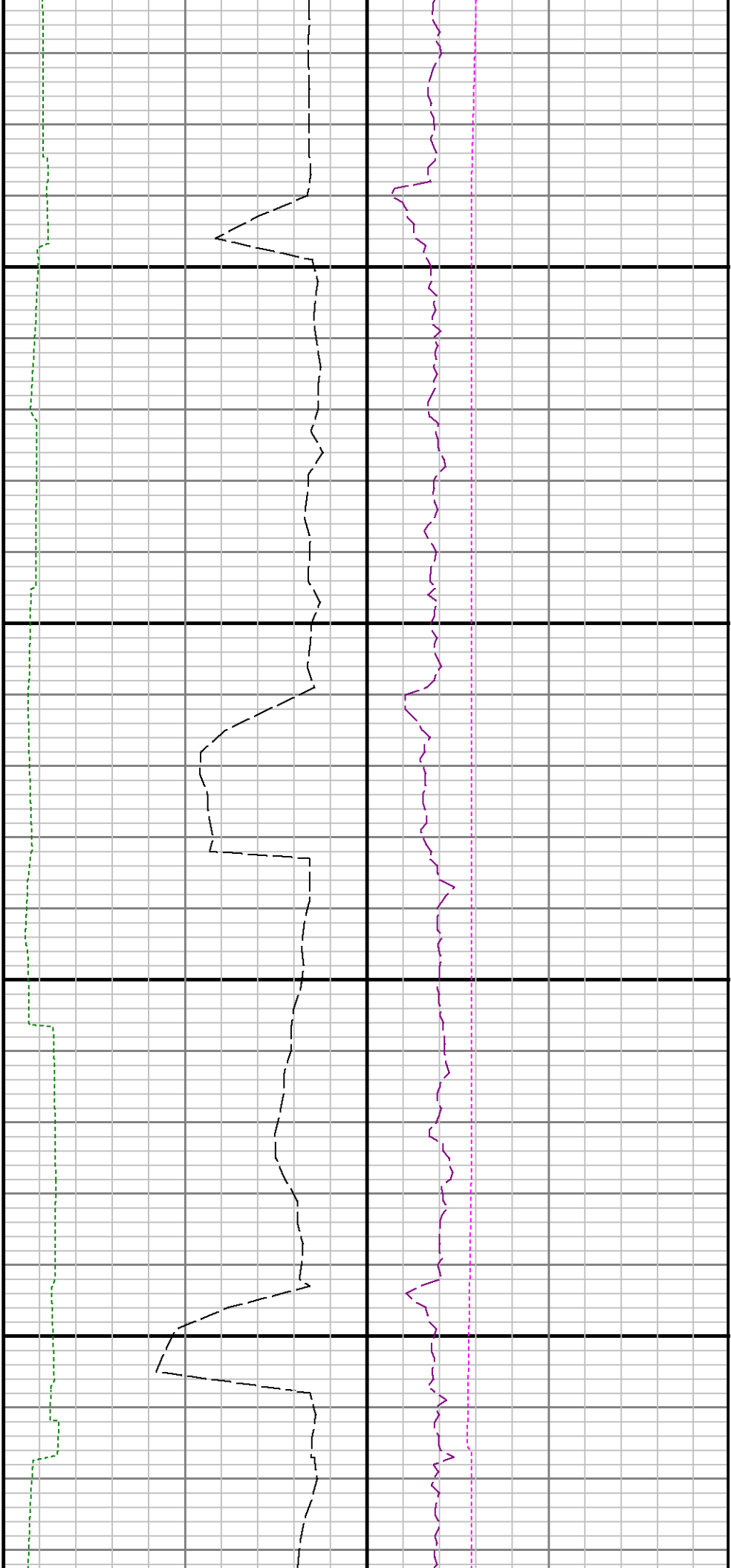
Company : Kerr-McGee Oil & Gas Onshore LP

Well : Reynolds Cattle 3C-19HZ

Interval : 6560.00 - 14560.00 feet

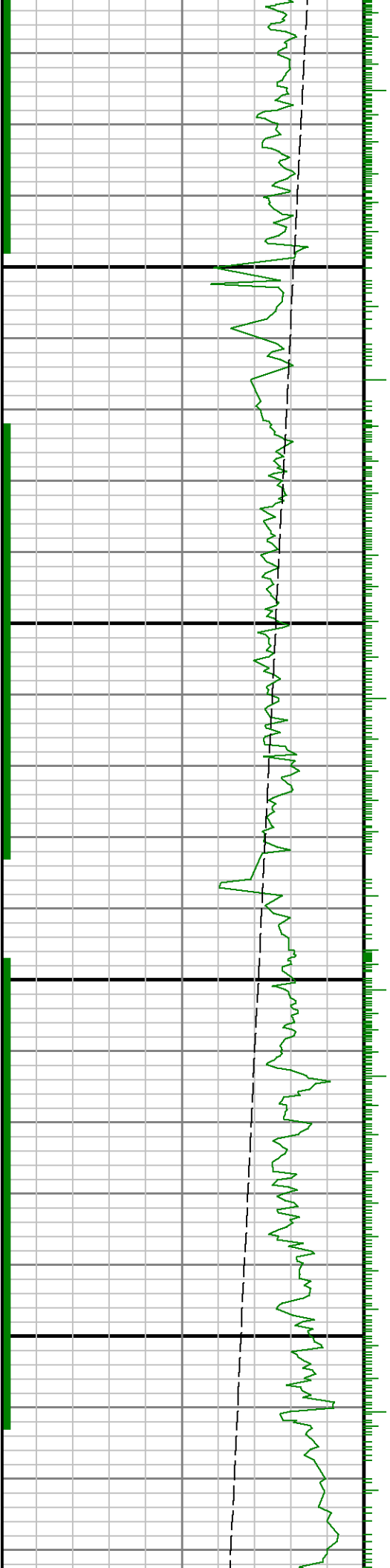
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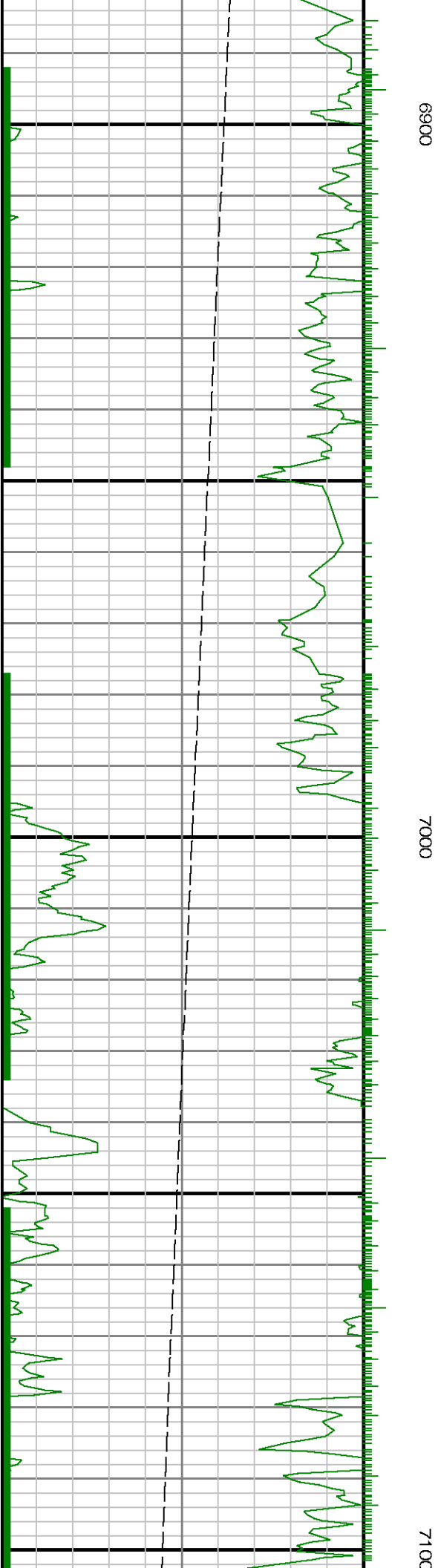


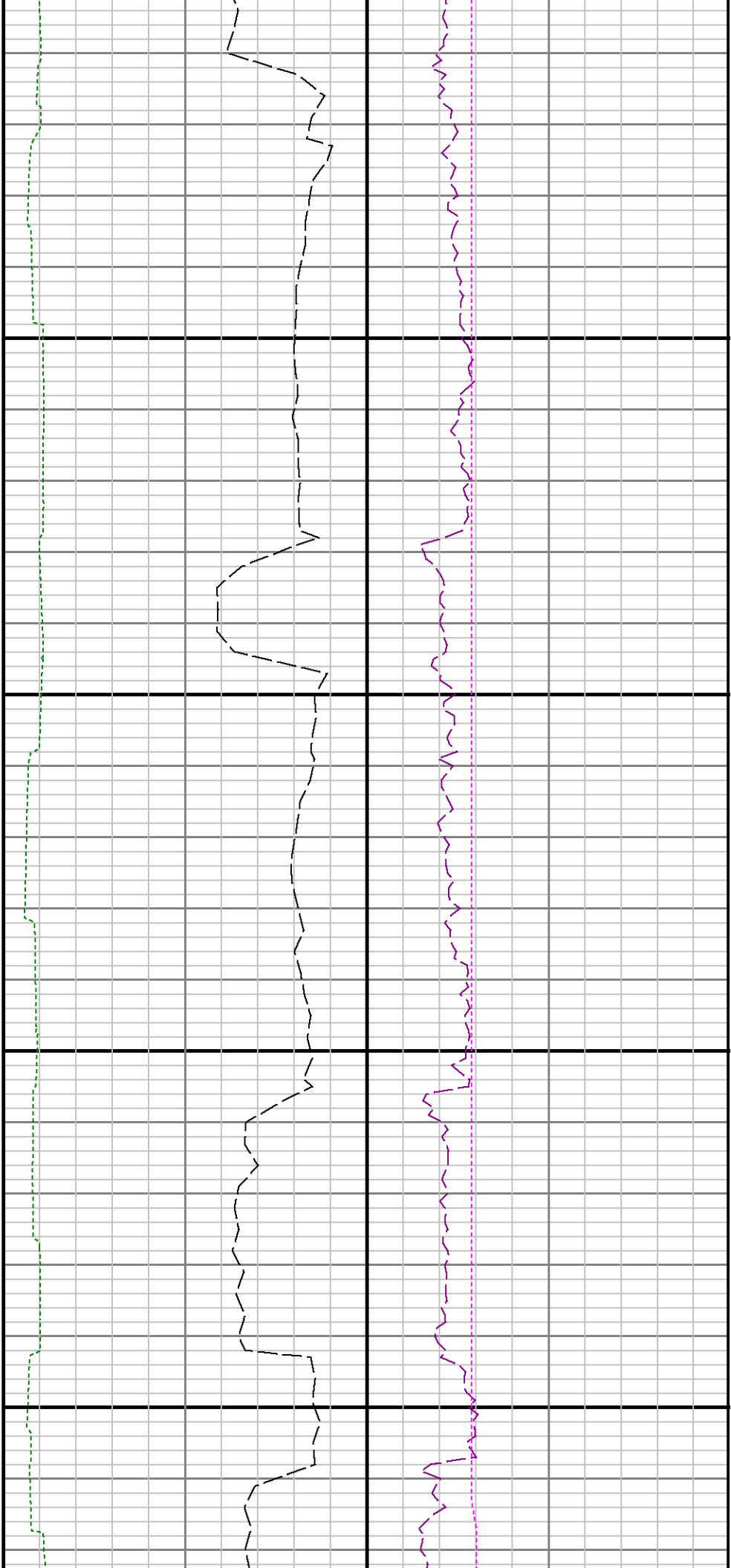


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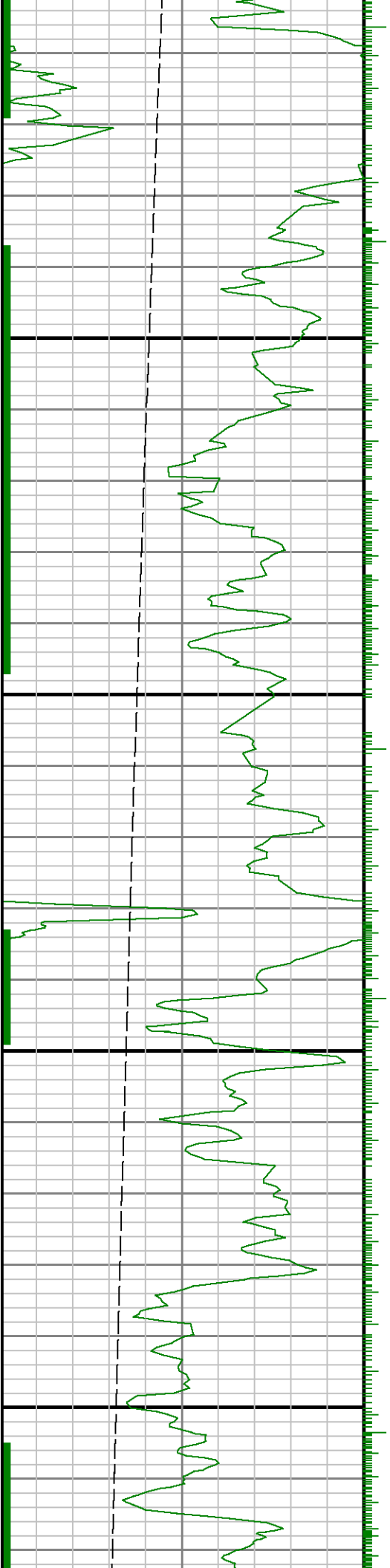


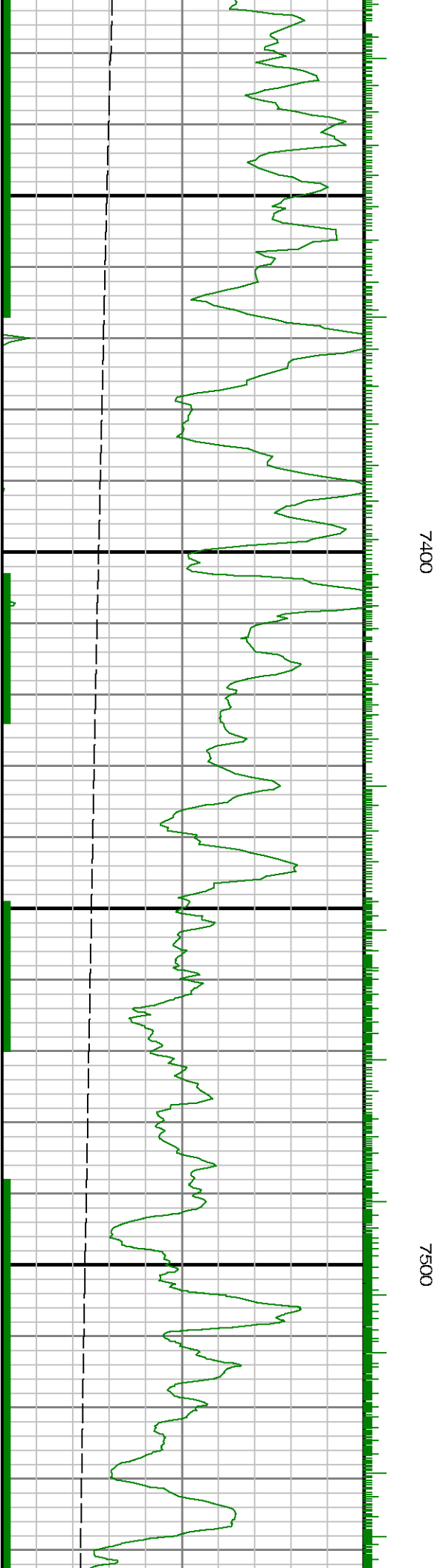
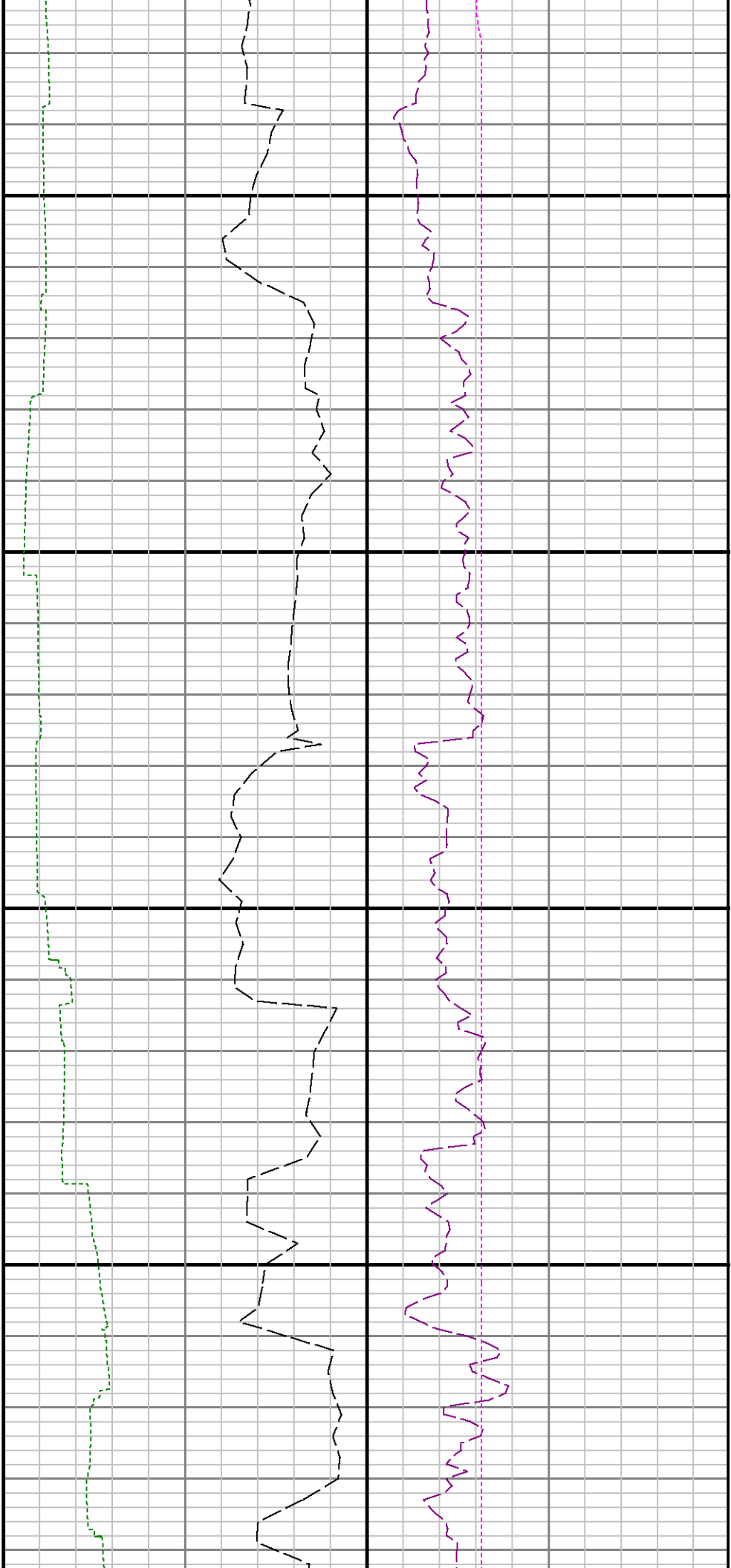


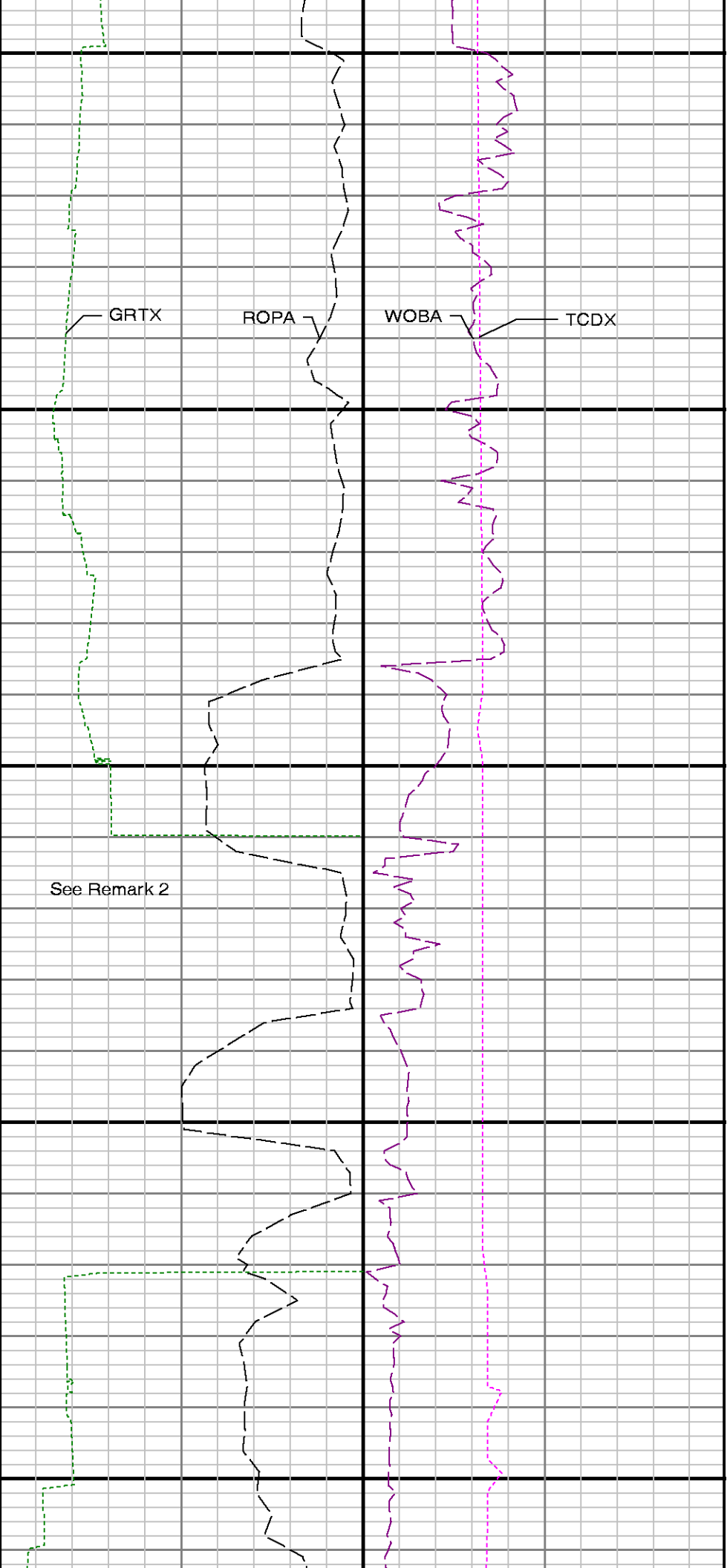
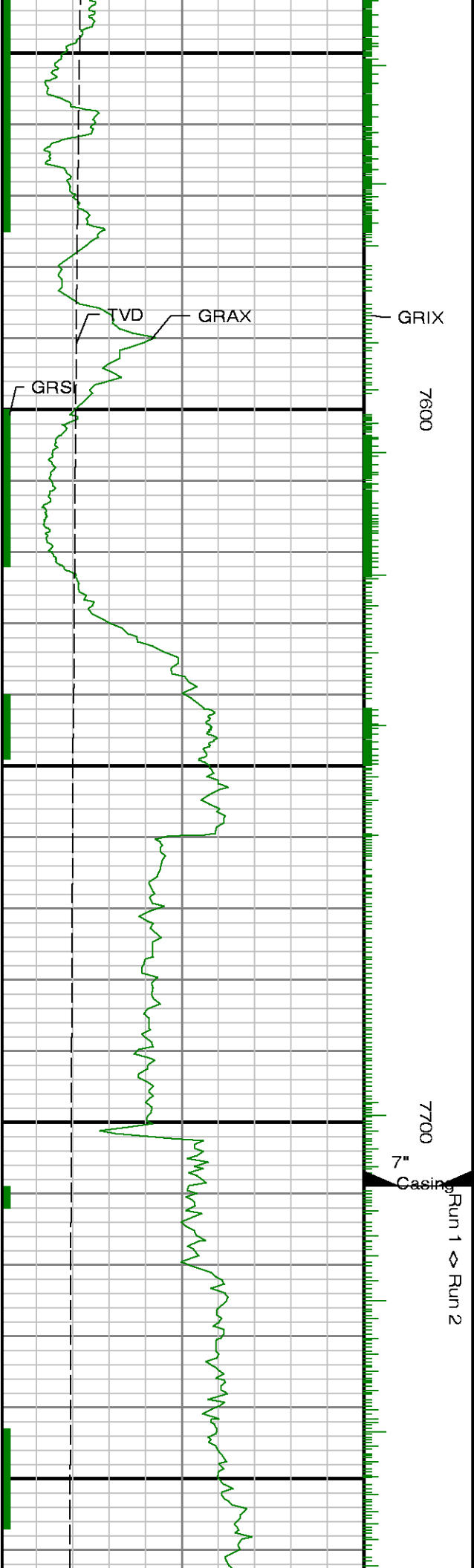


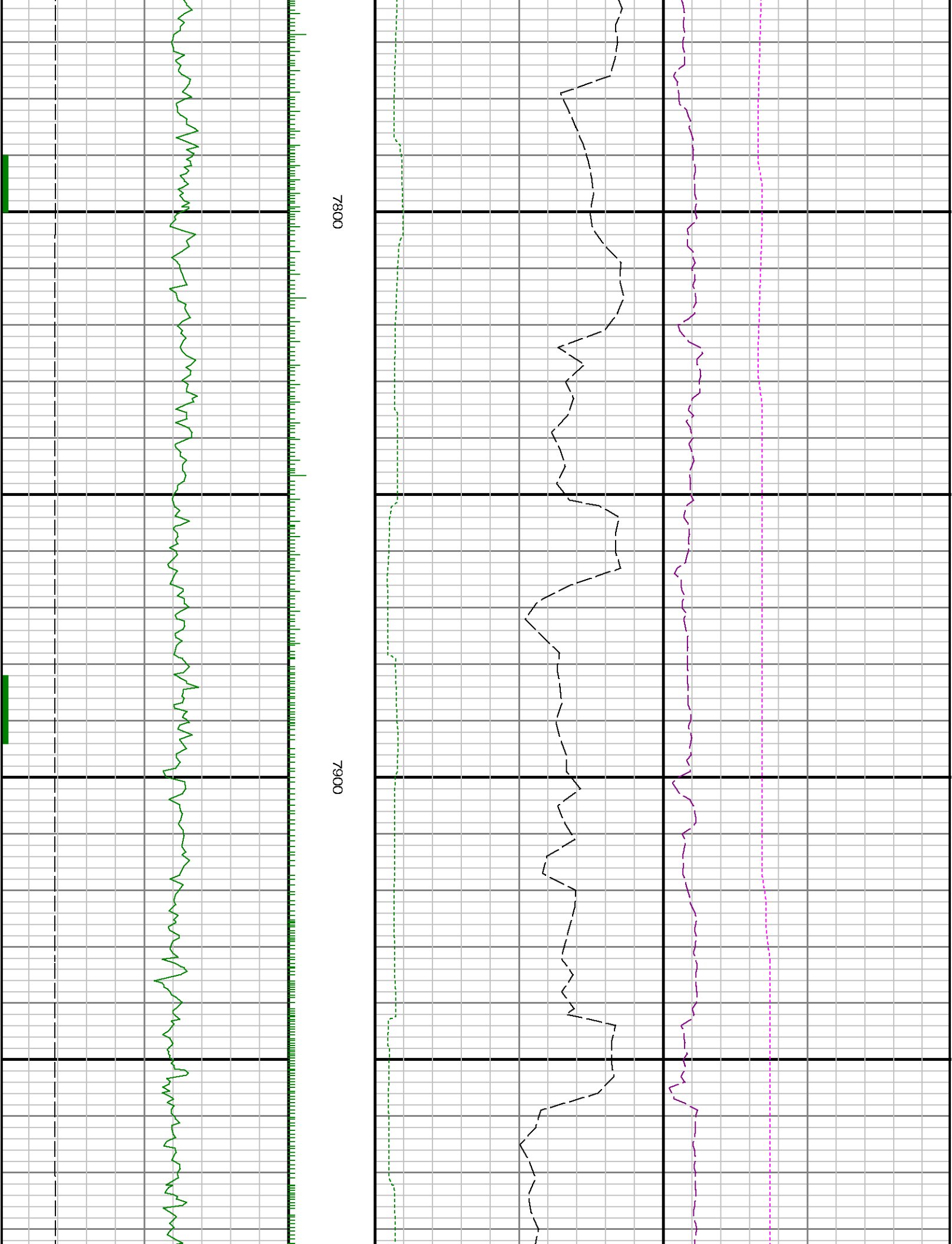
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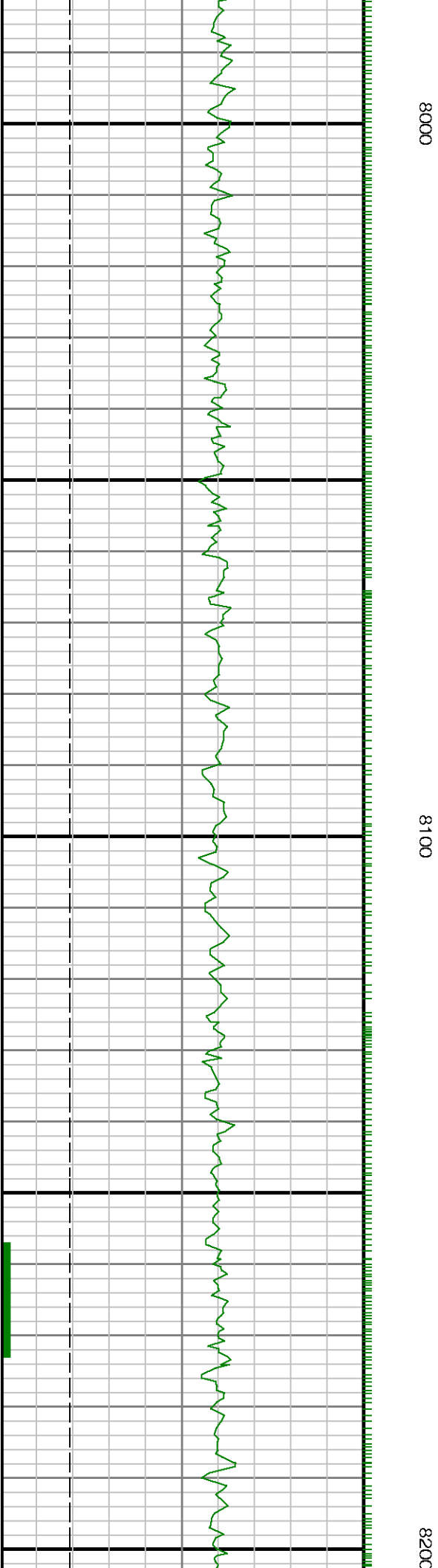
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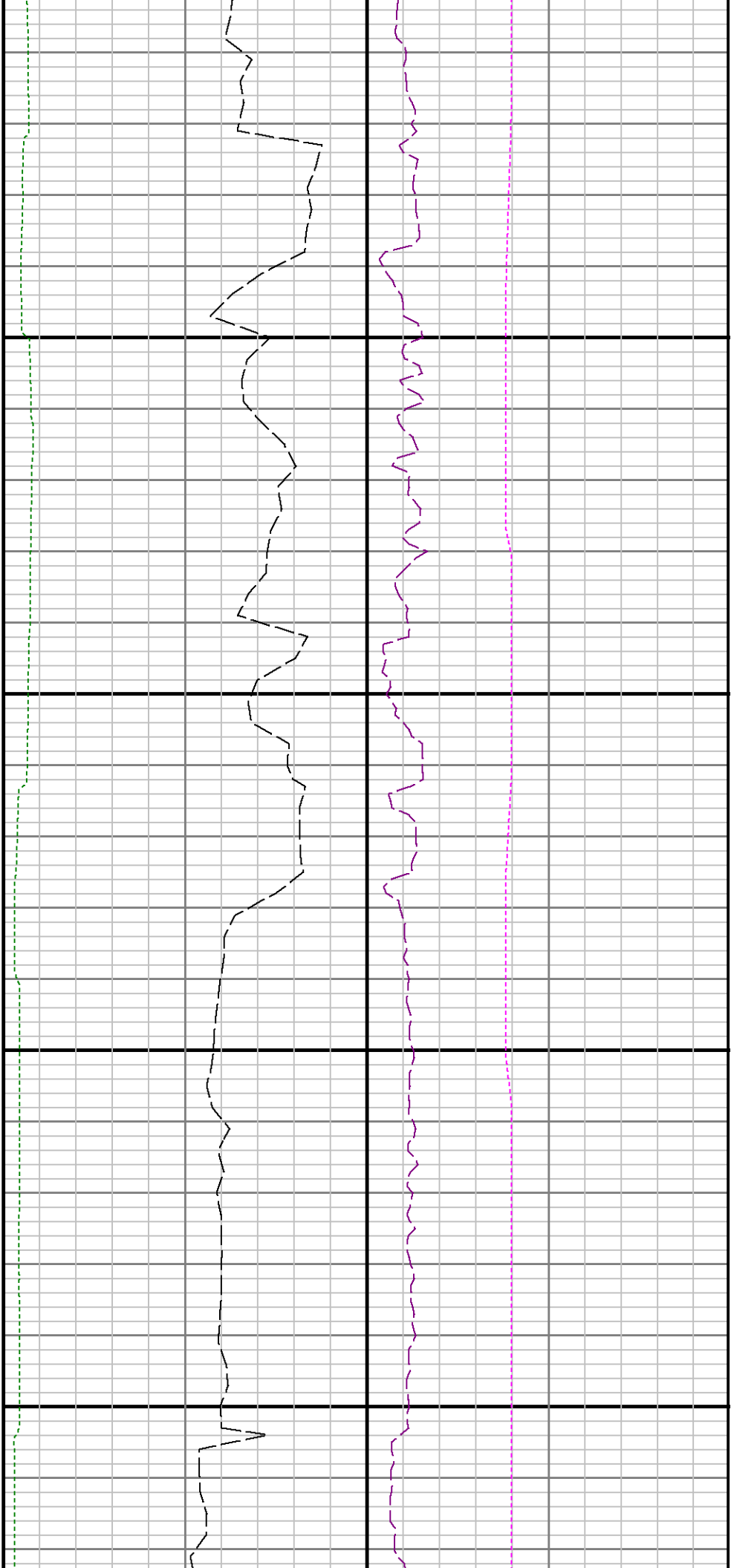






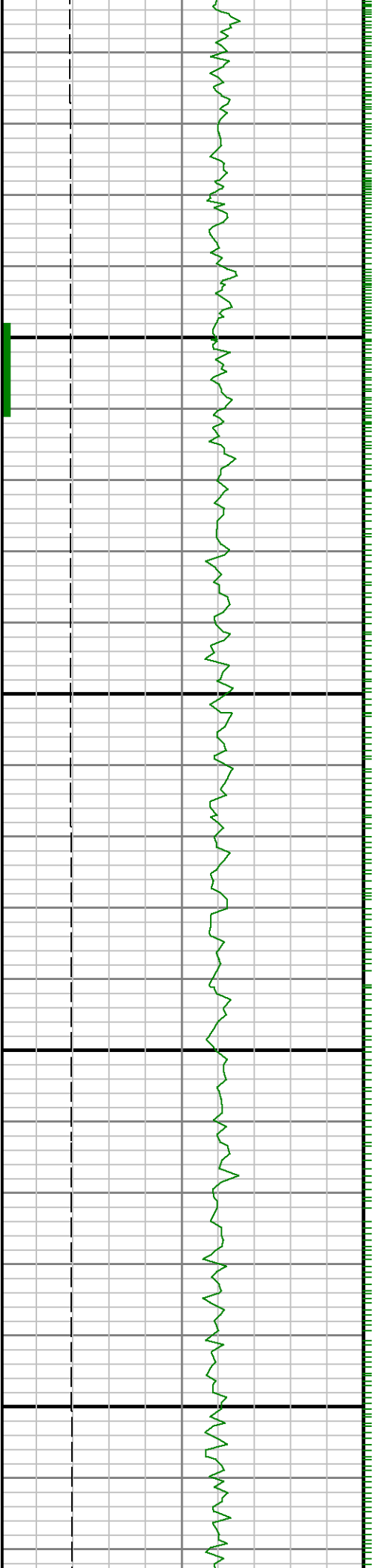


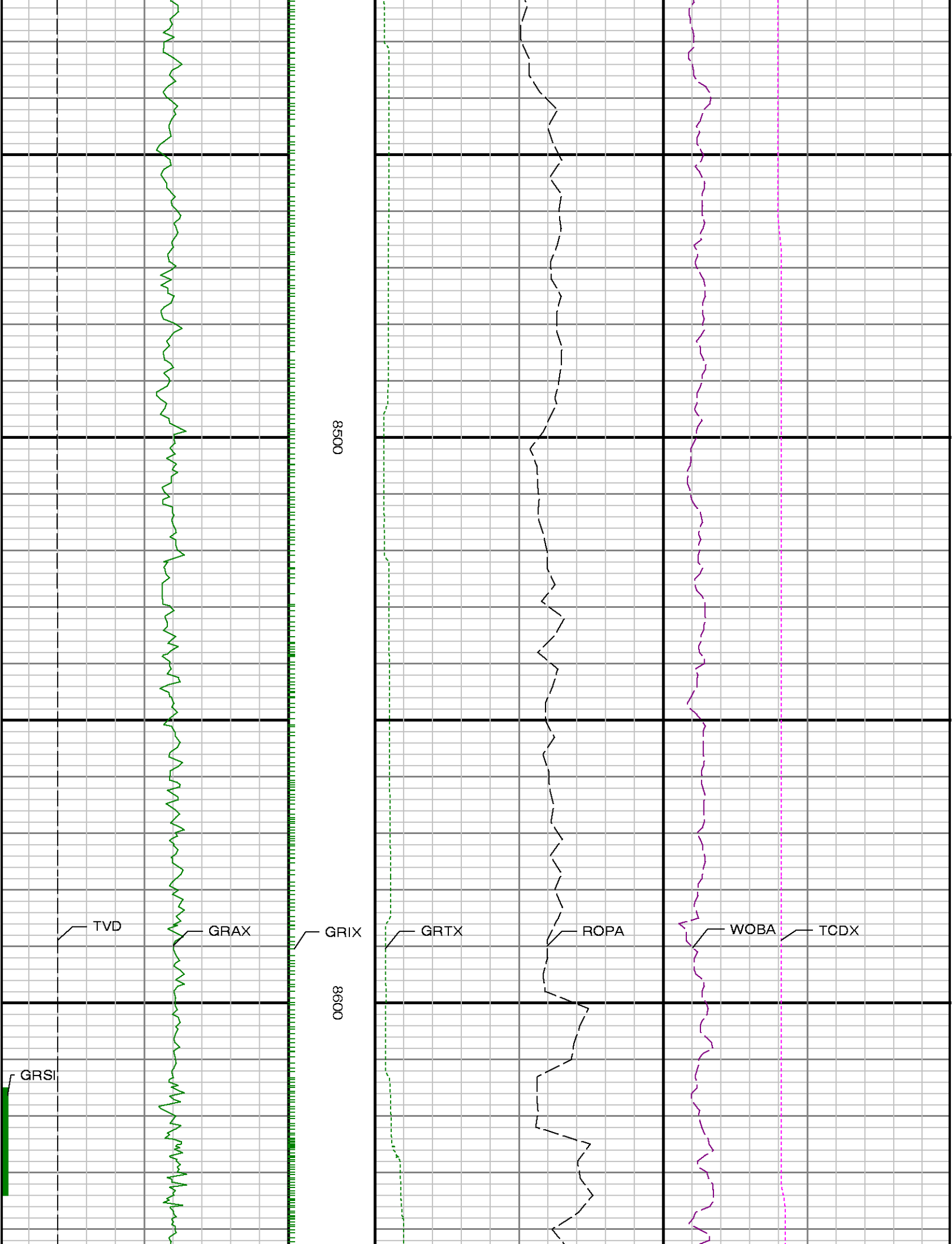


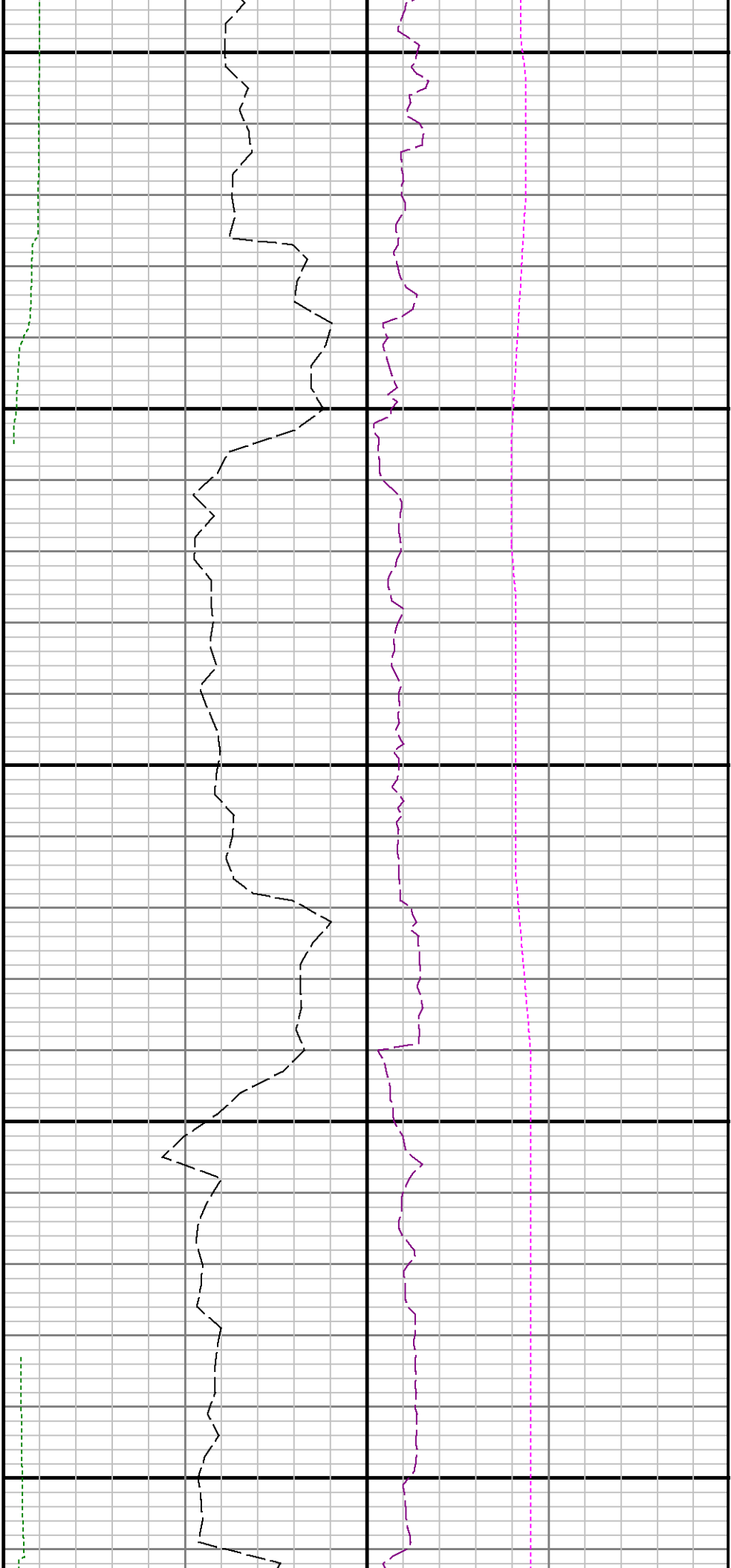


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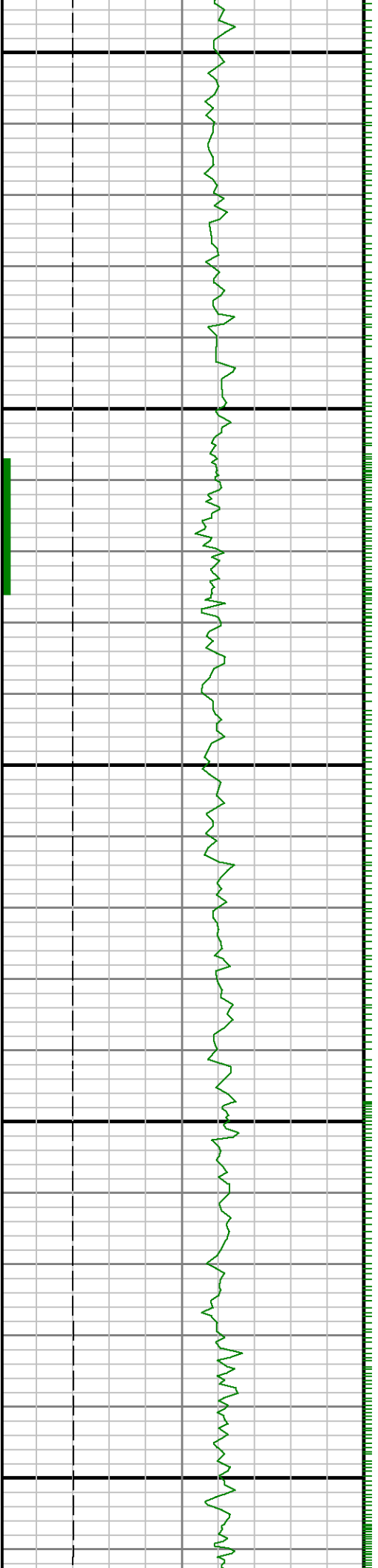


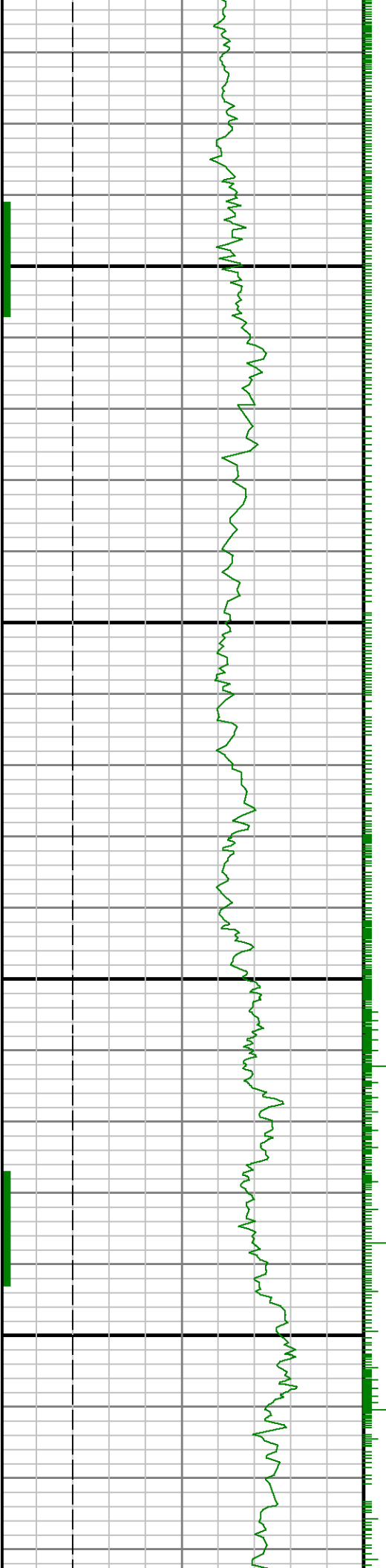




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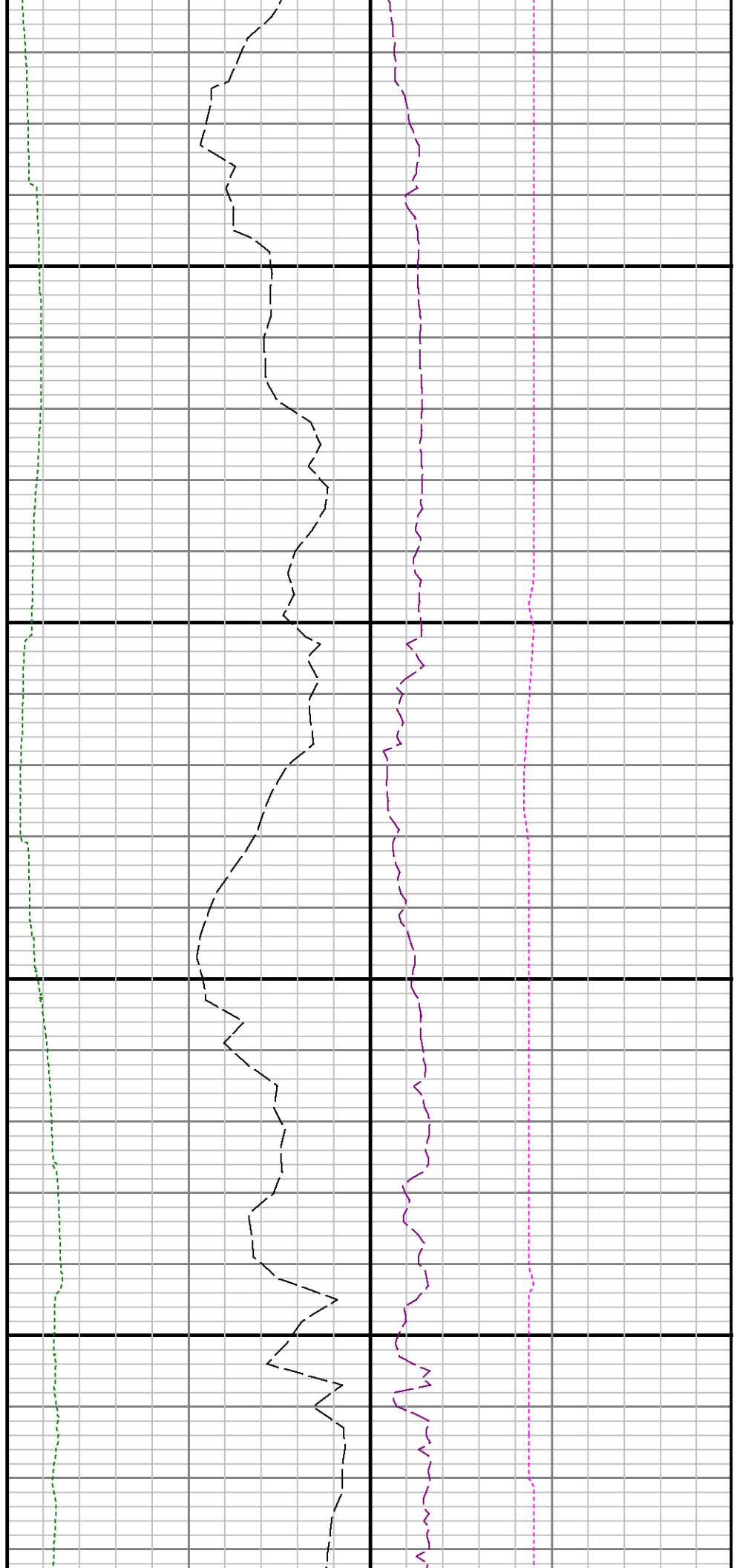
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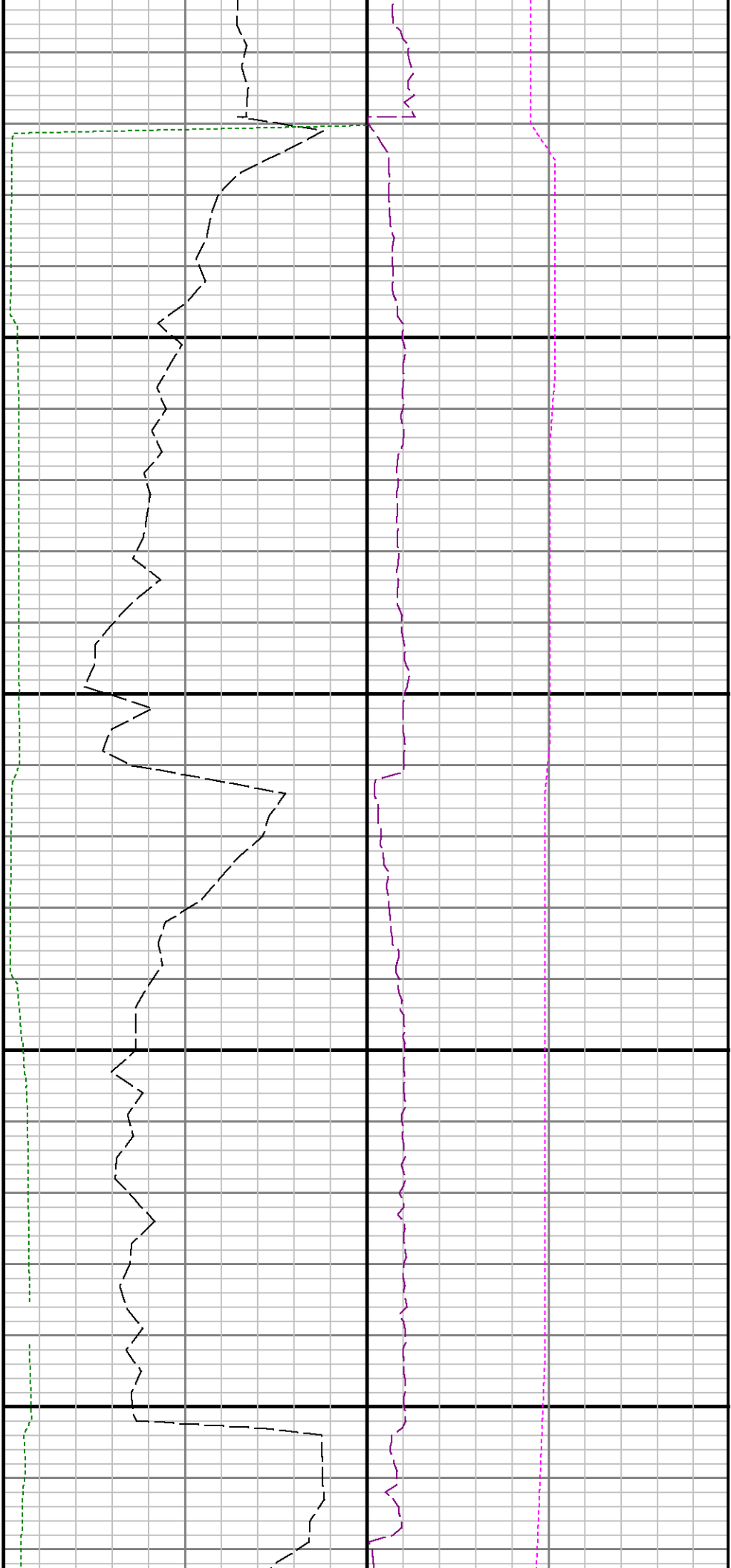


See Remark 3

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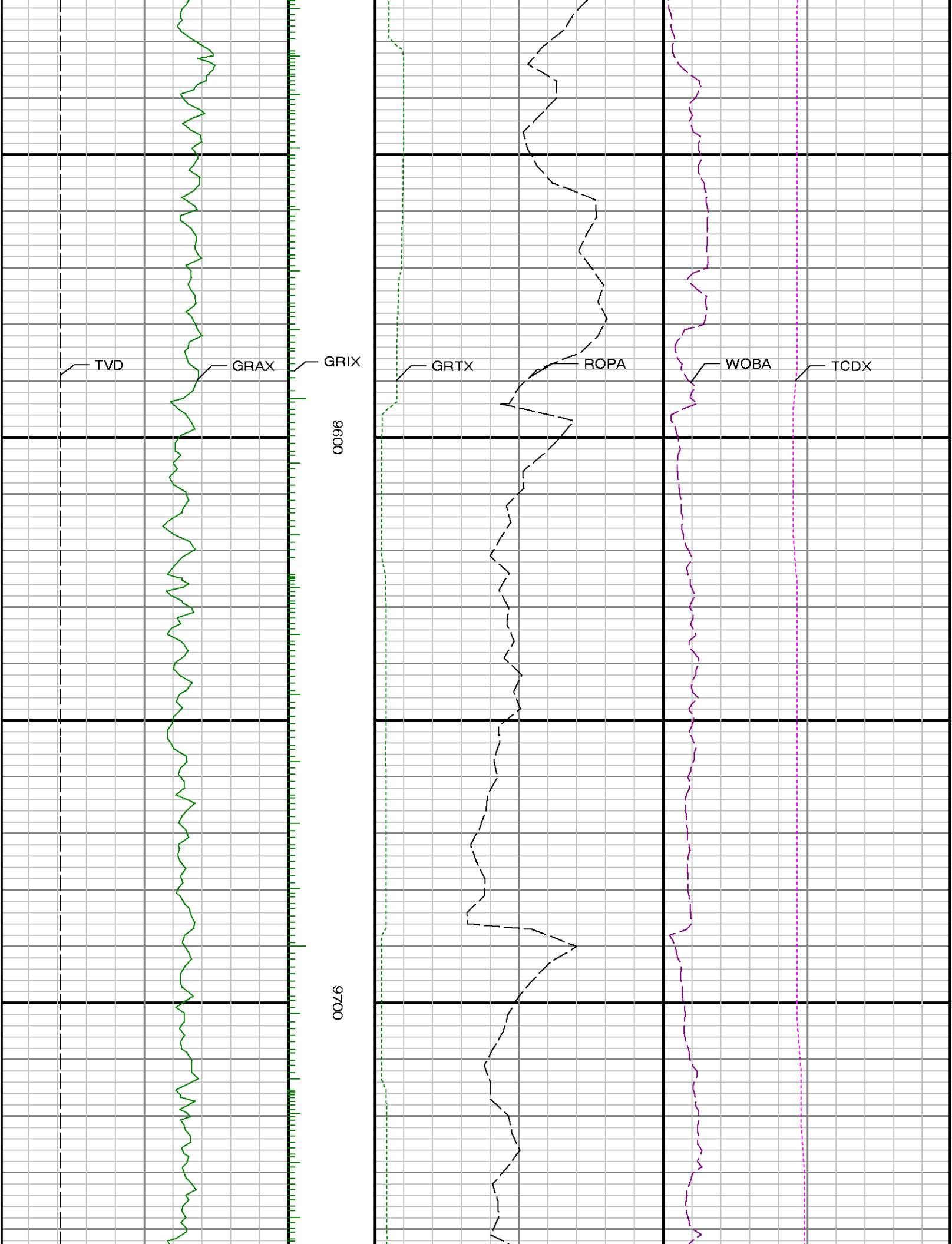
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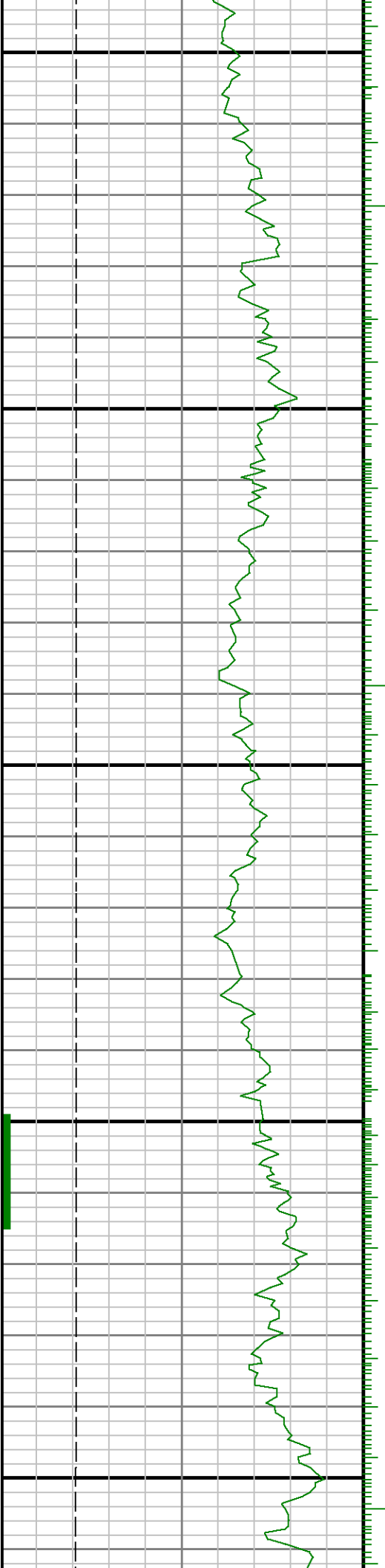


Run 2 \diamond Run 3

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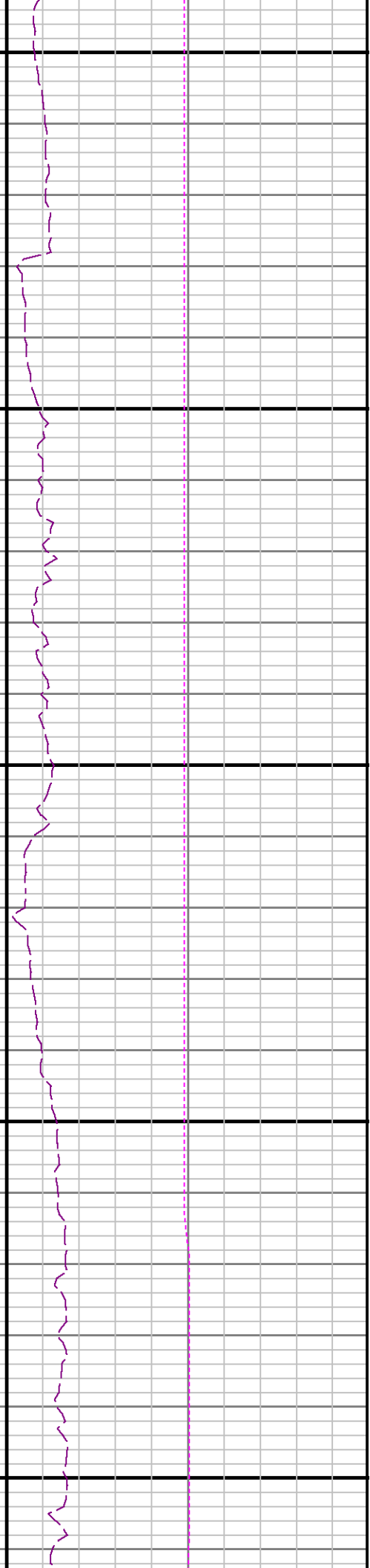
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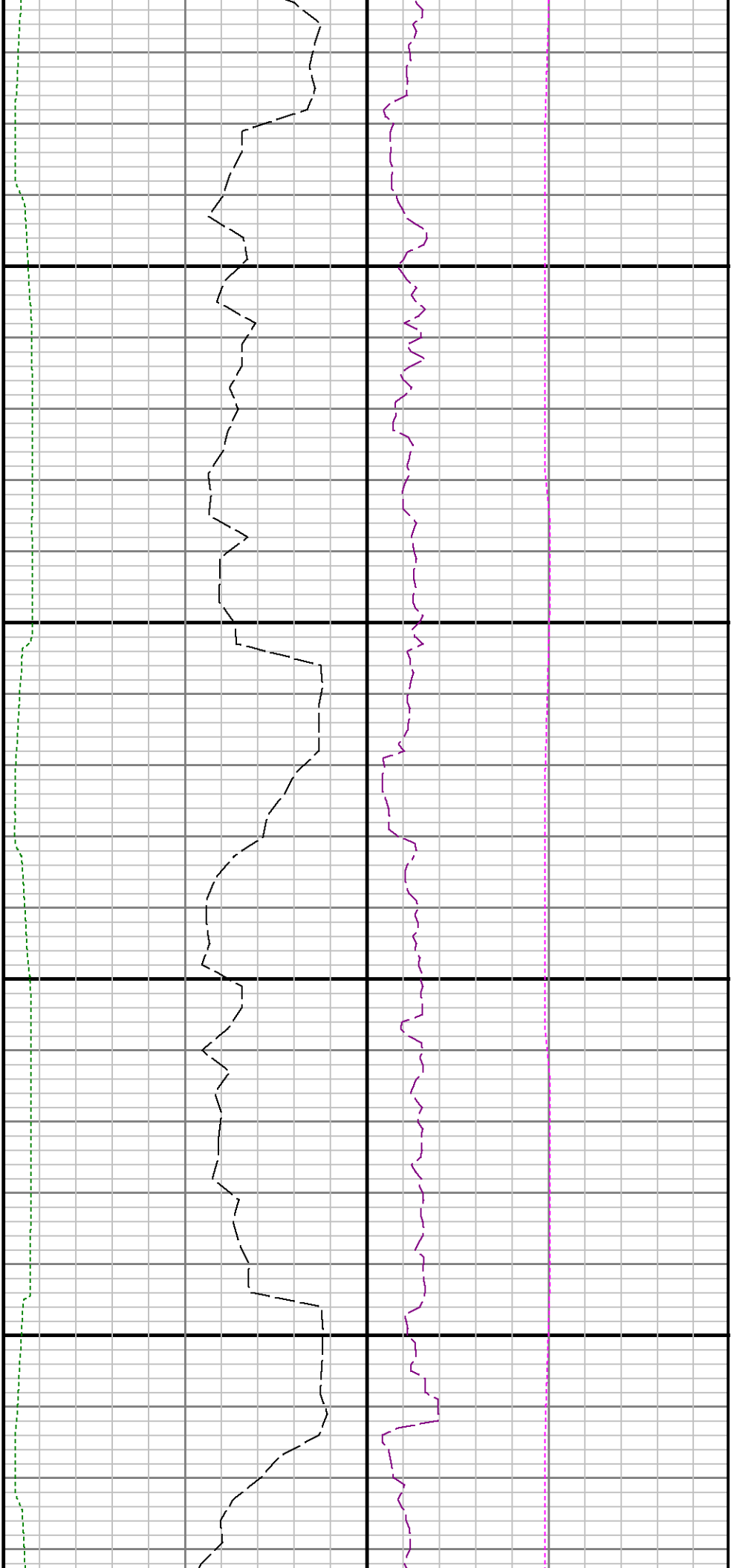




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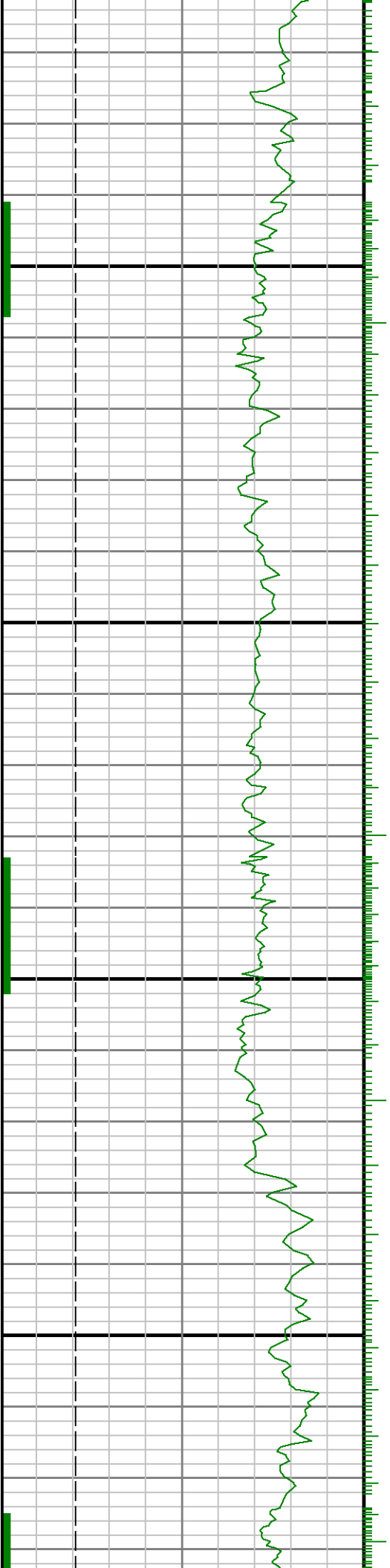
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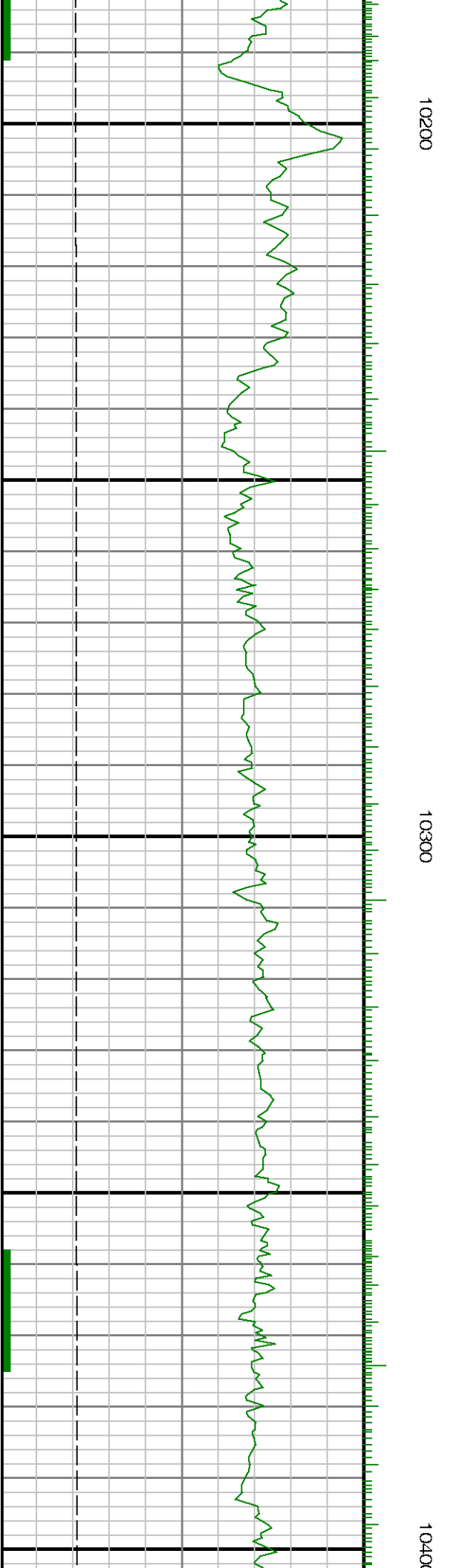
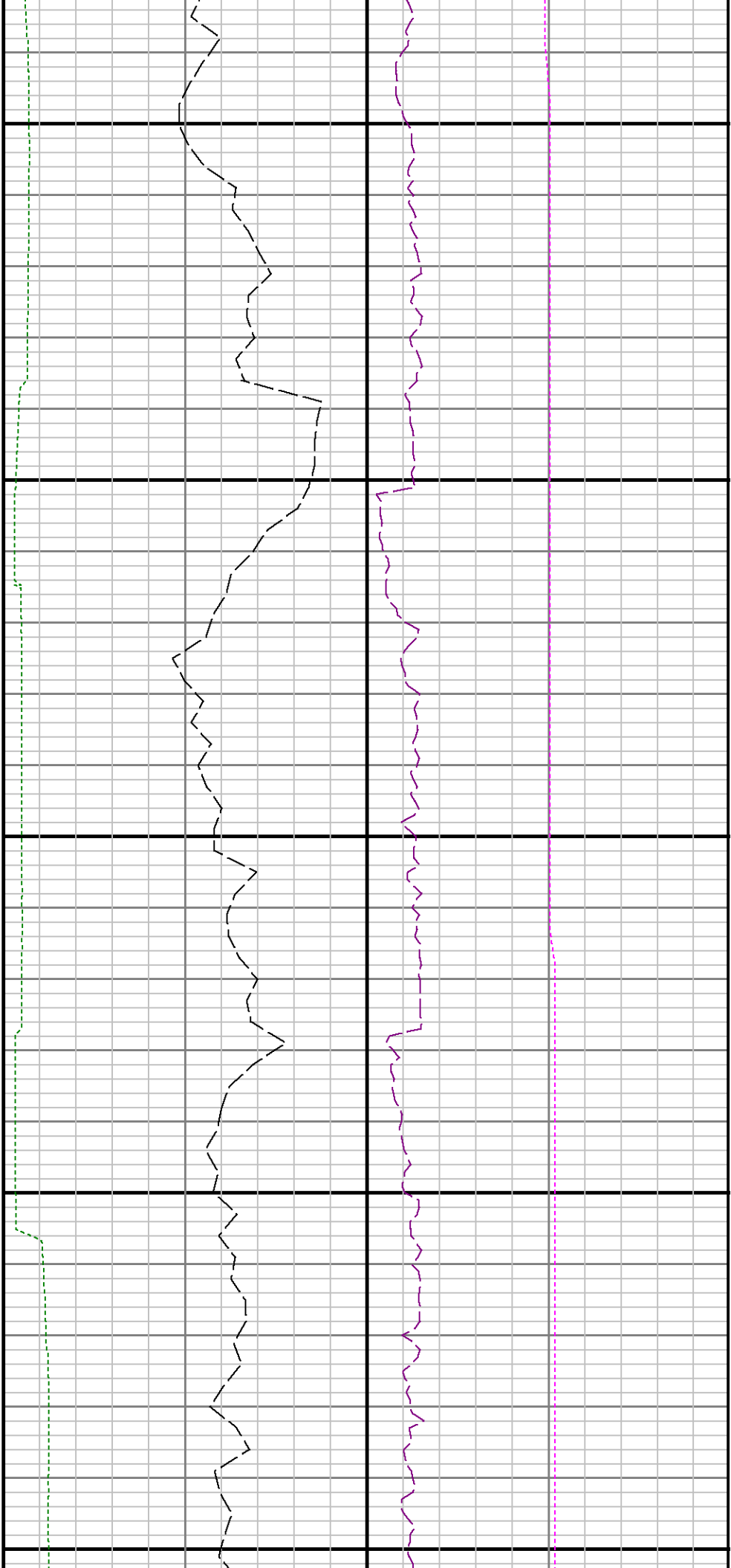


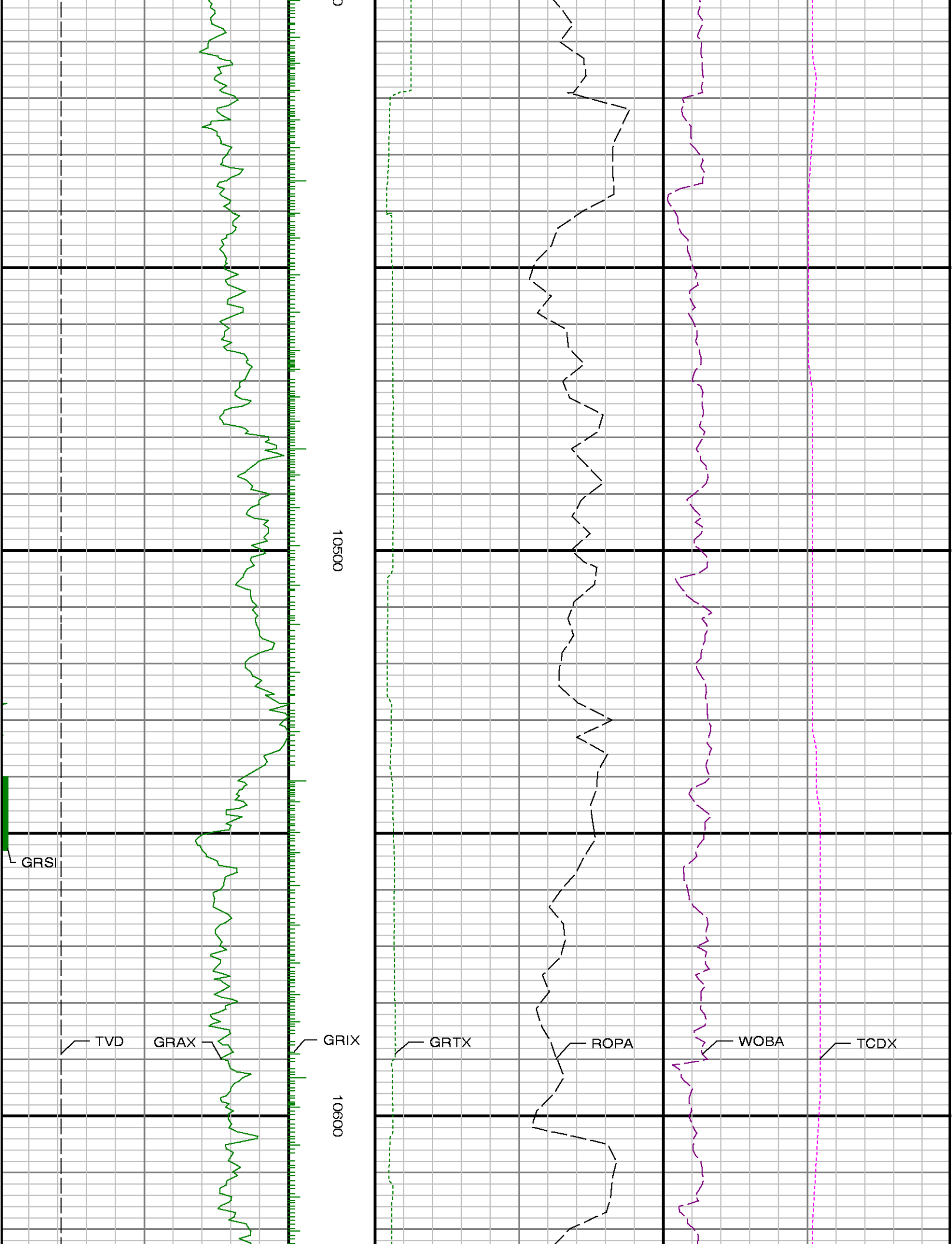


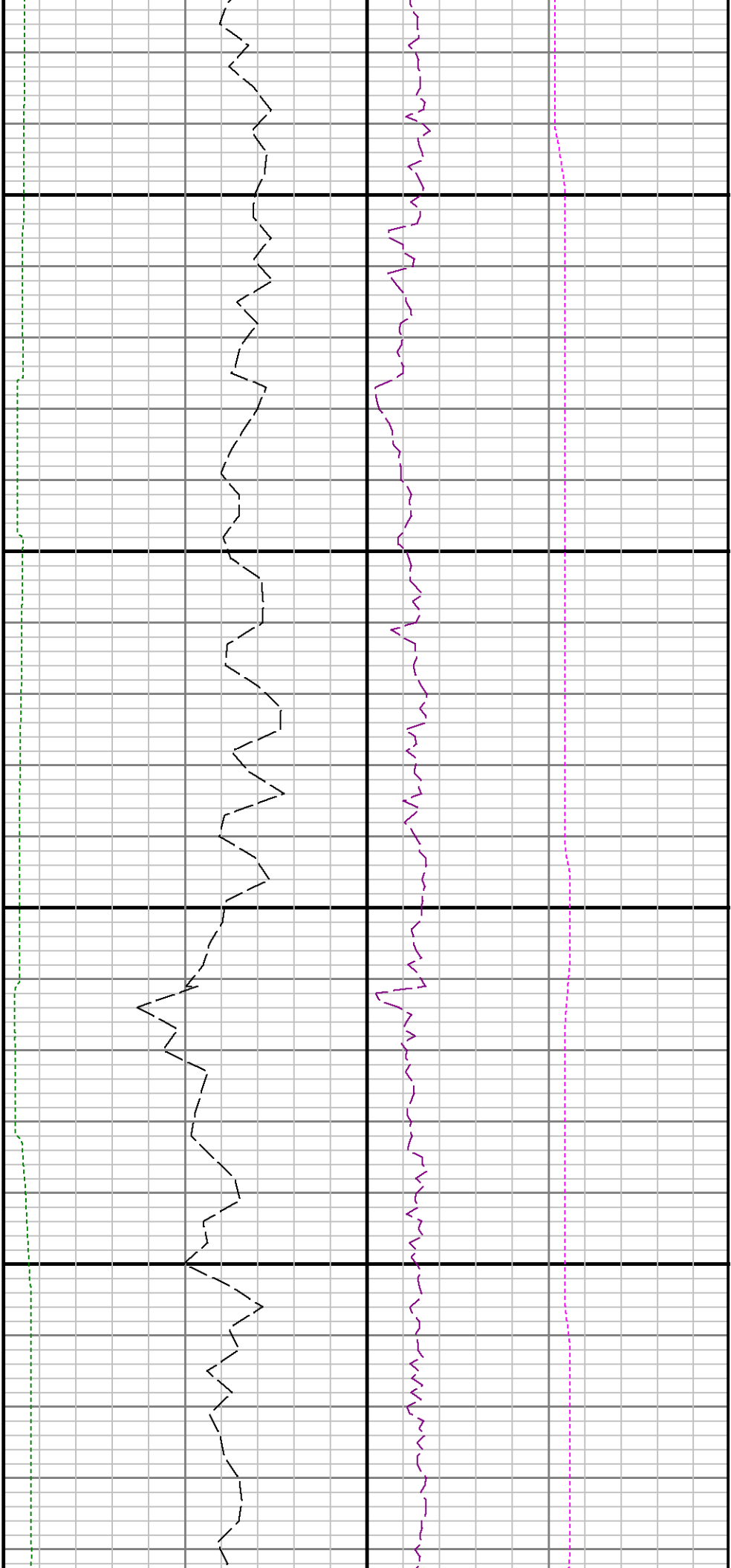
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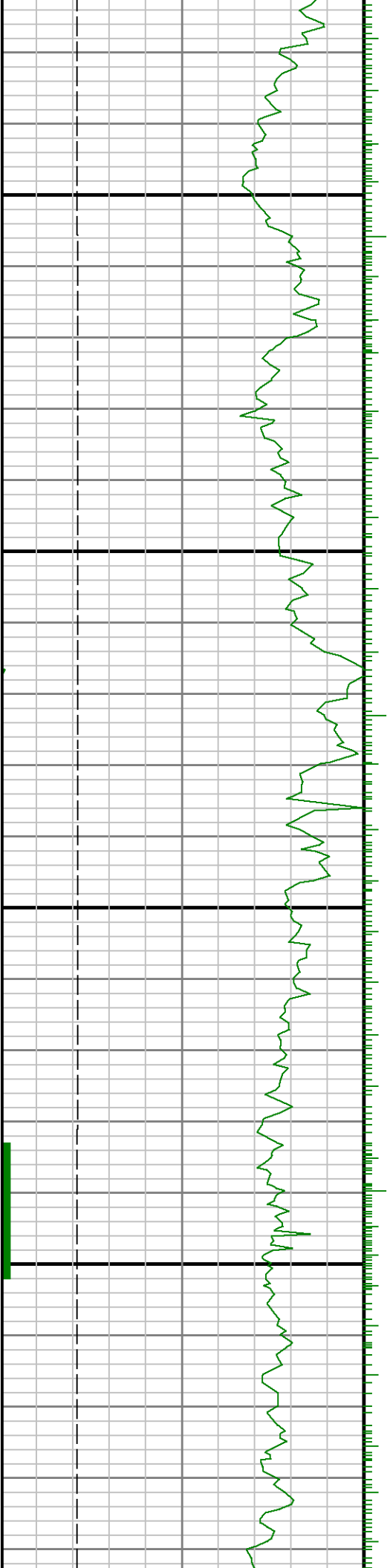


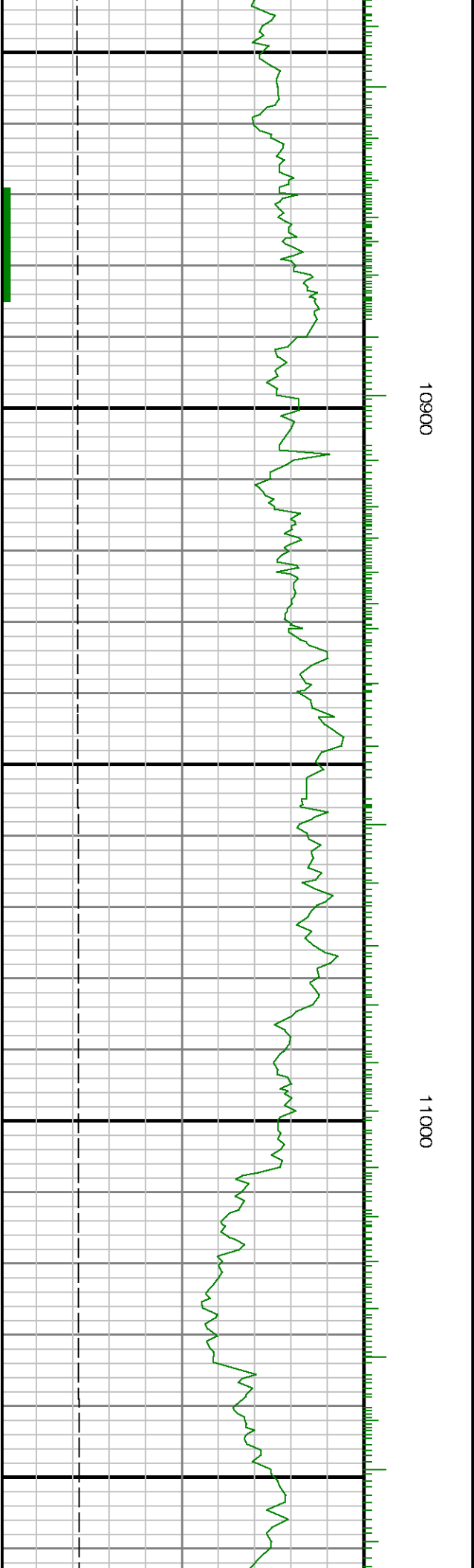
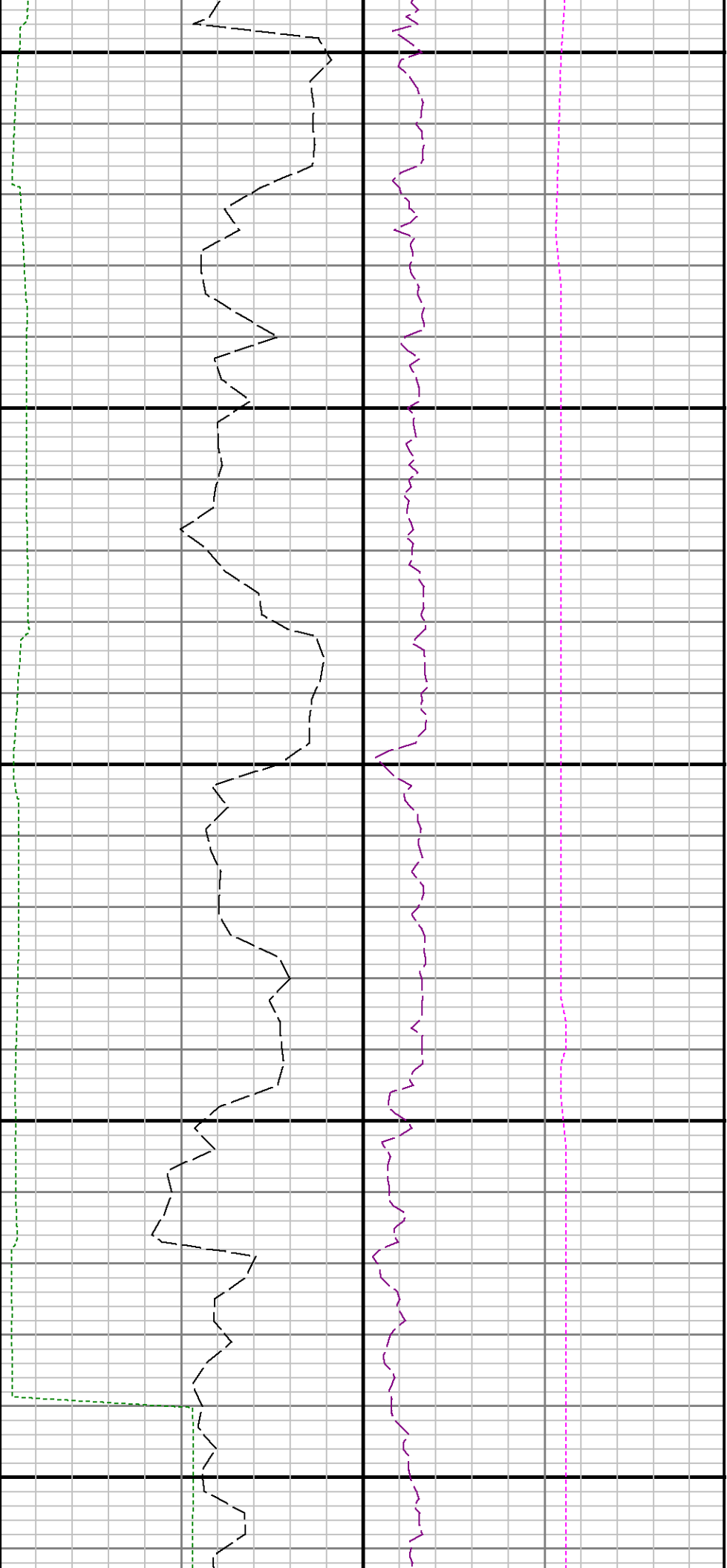




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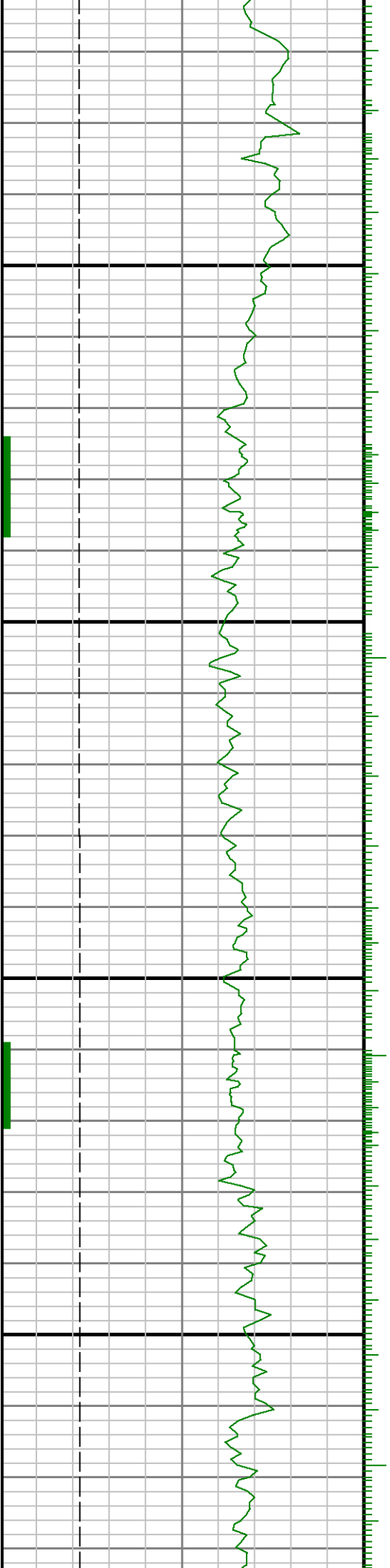






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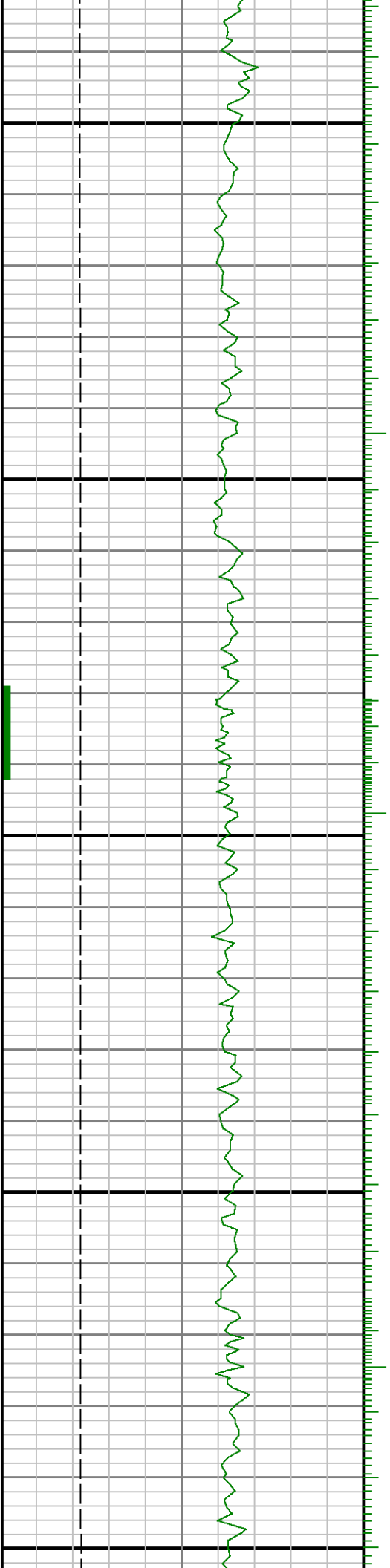


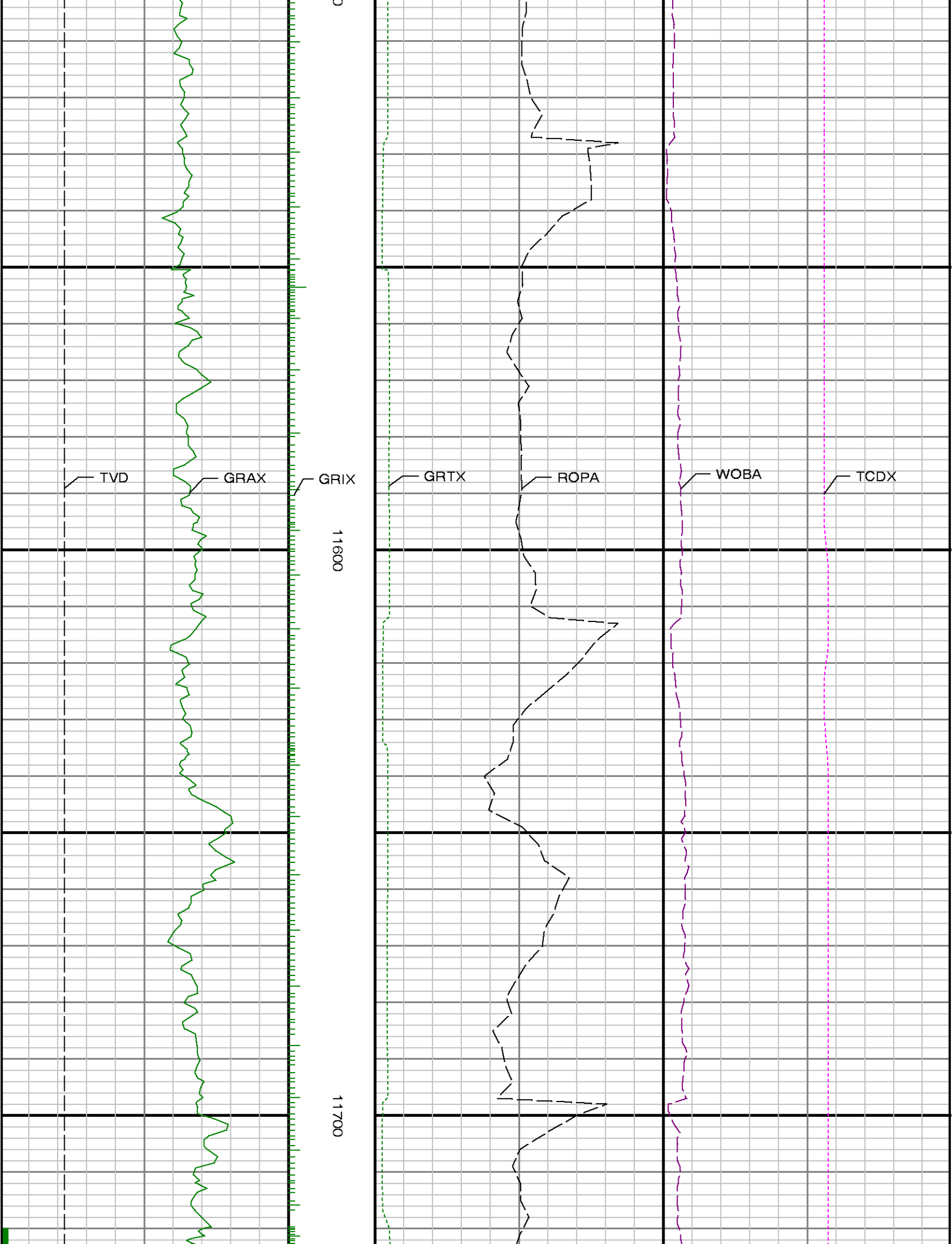


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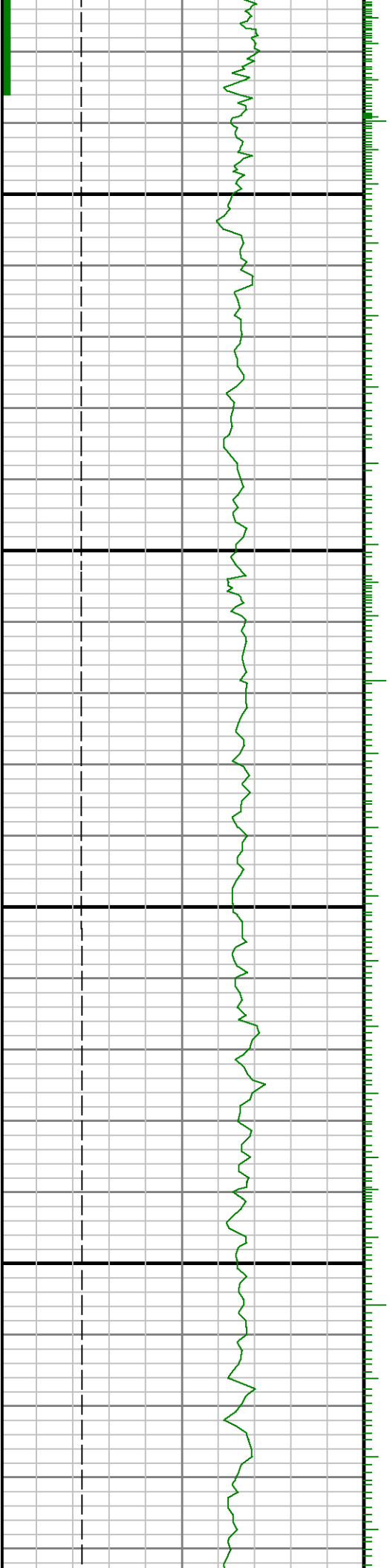


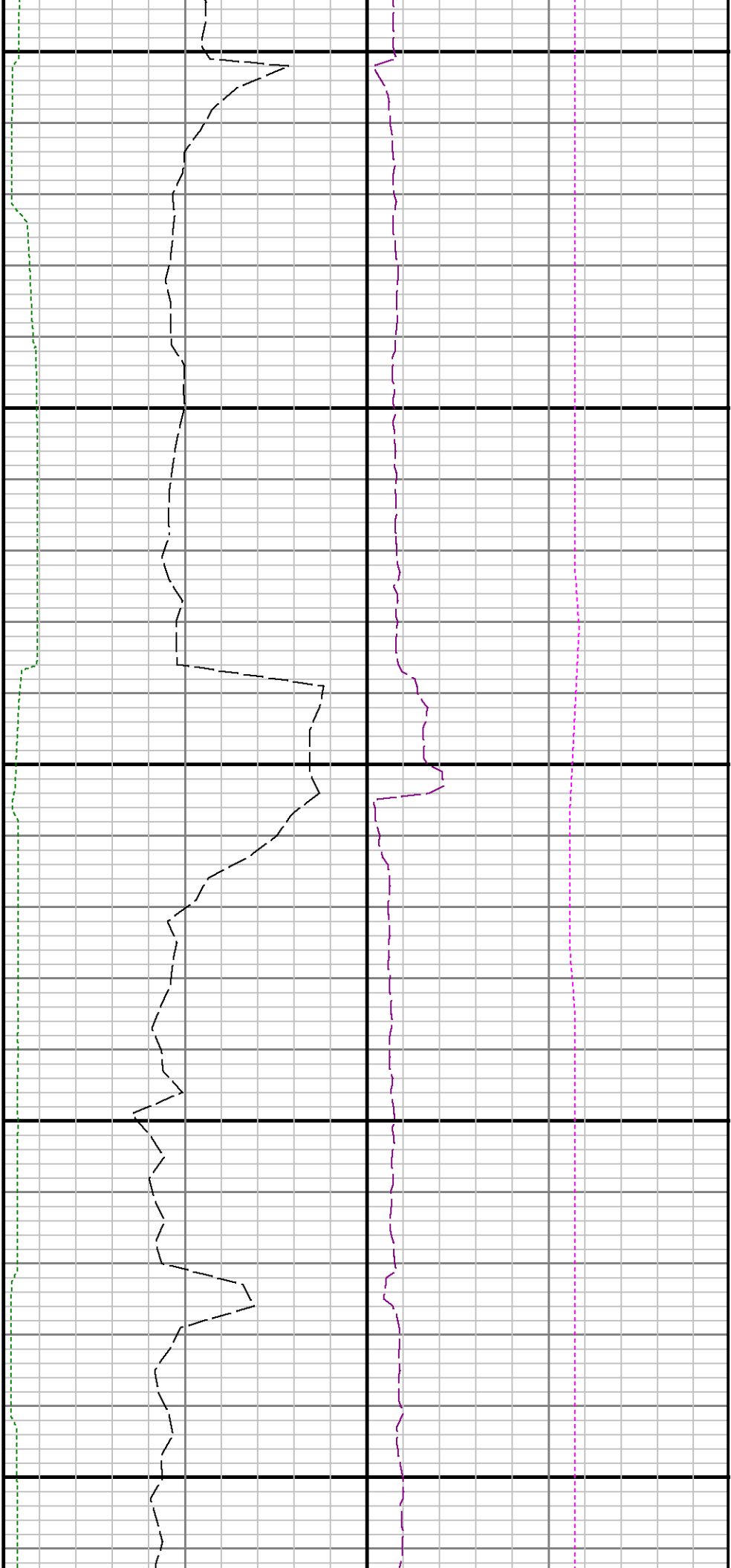




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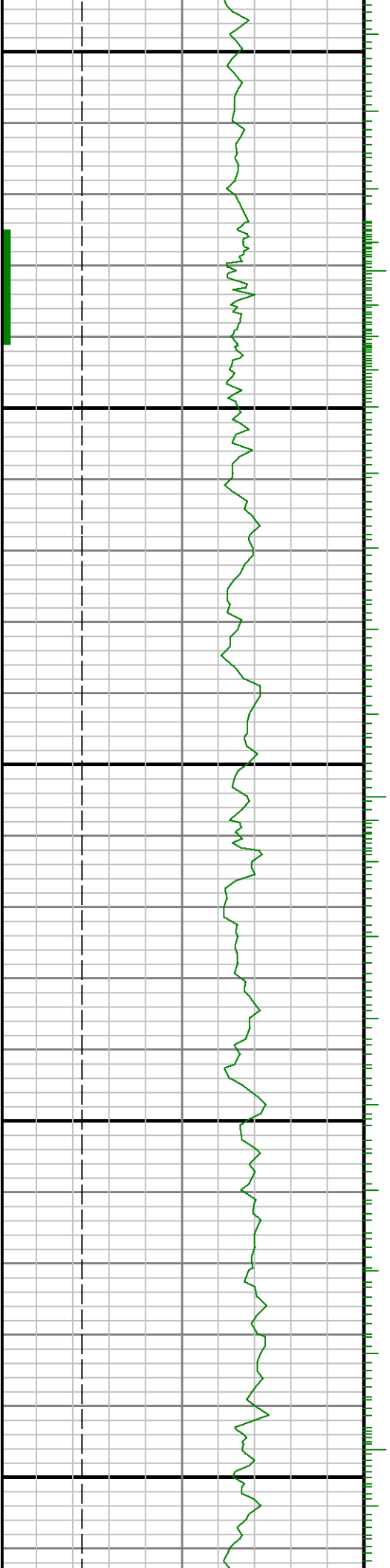
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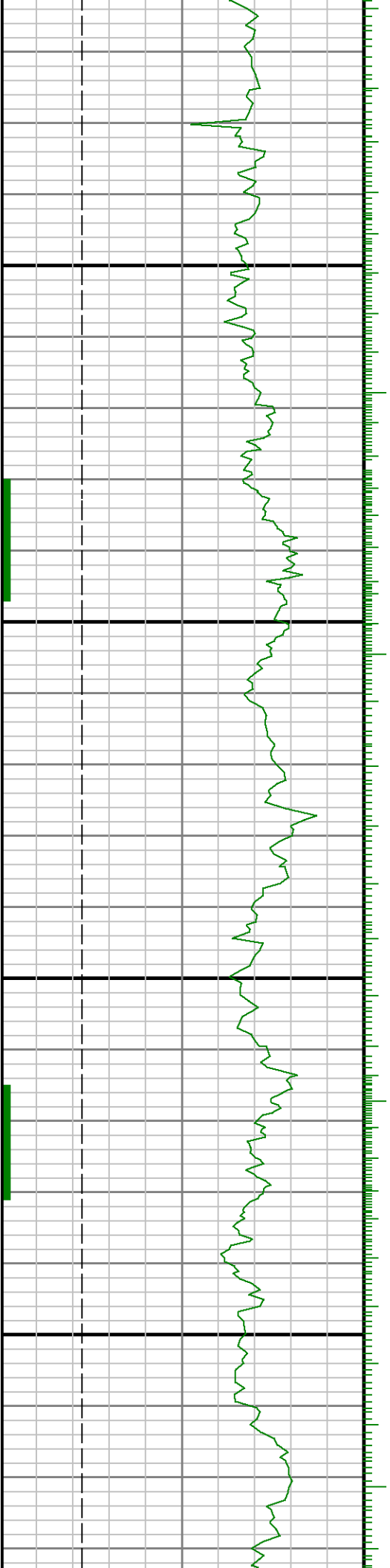
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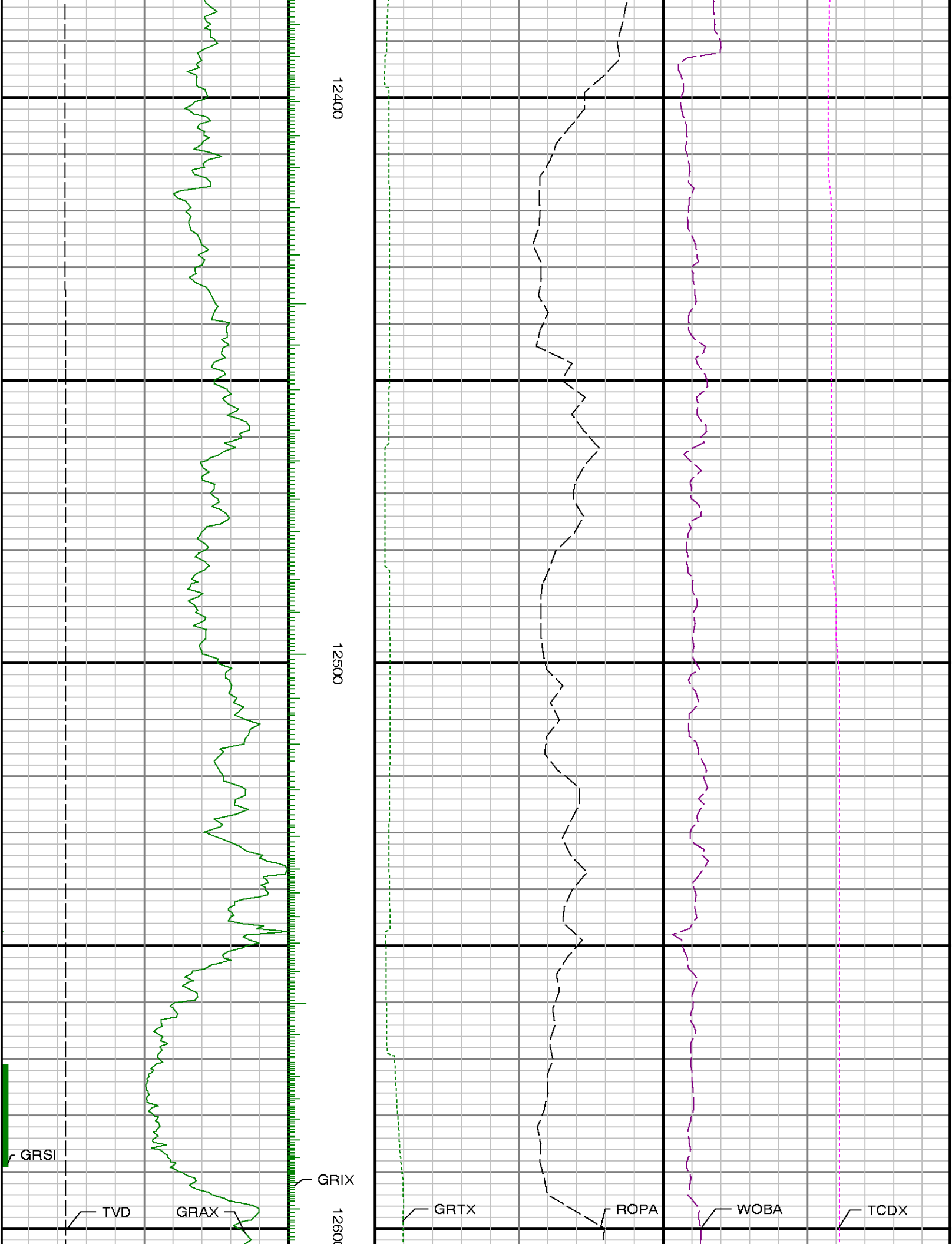


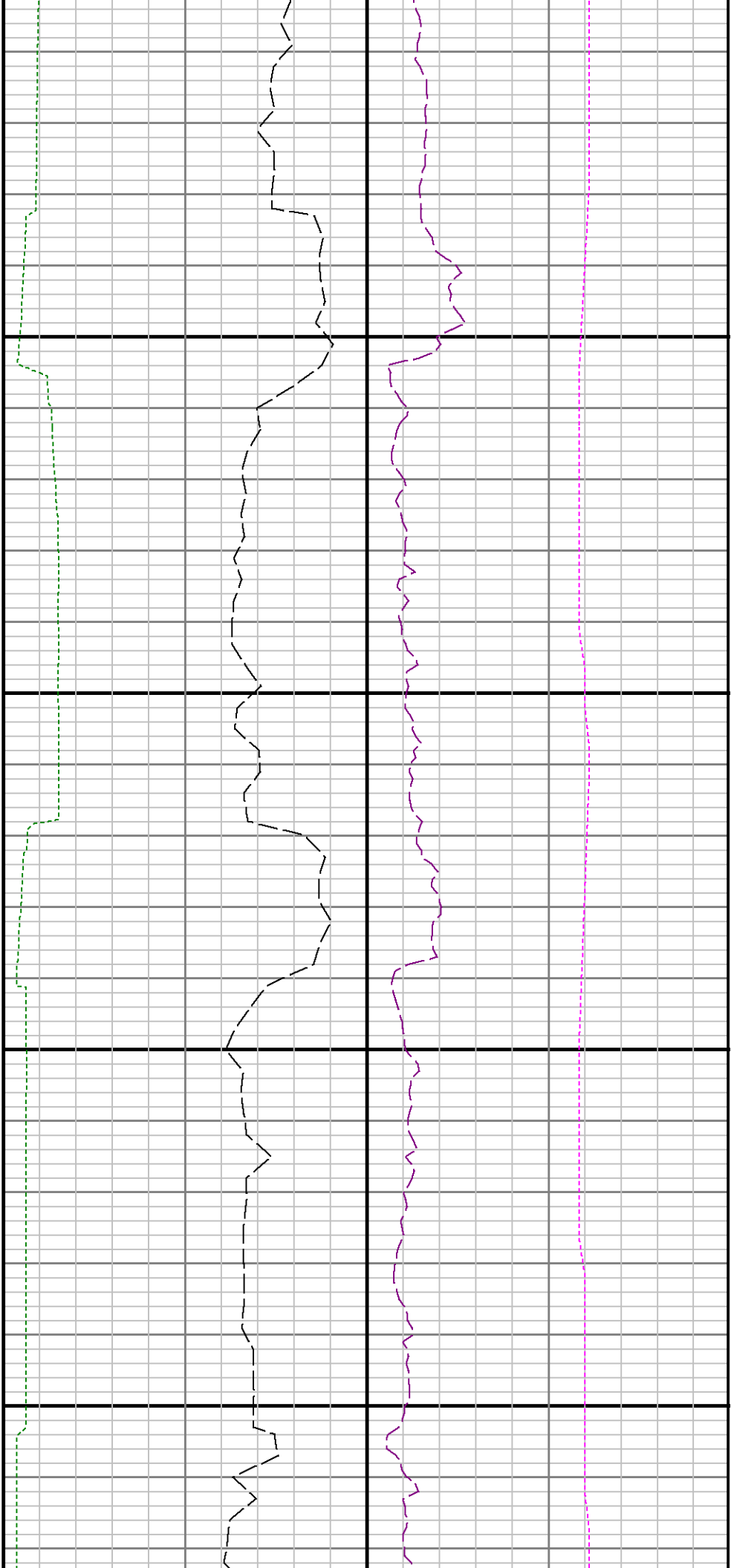


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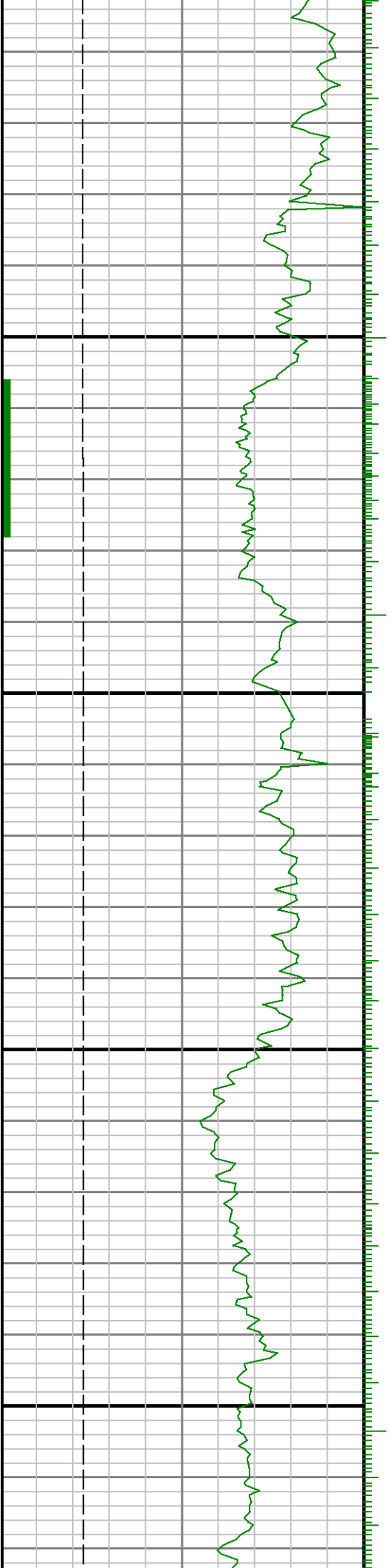






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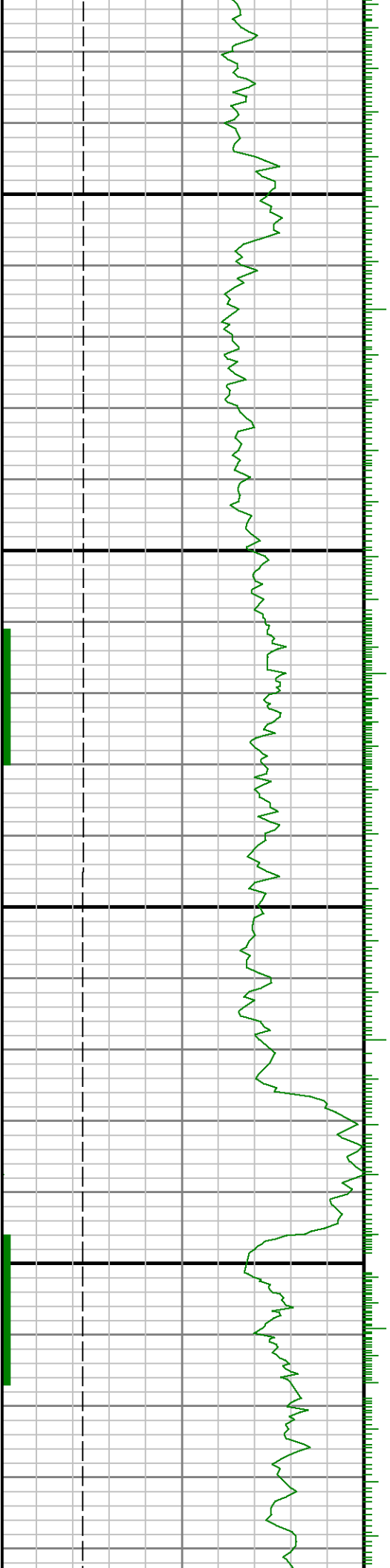
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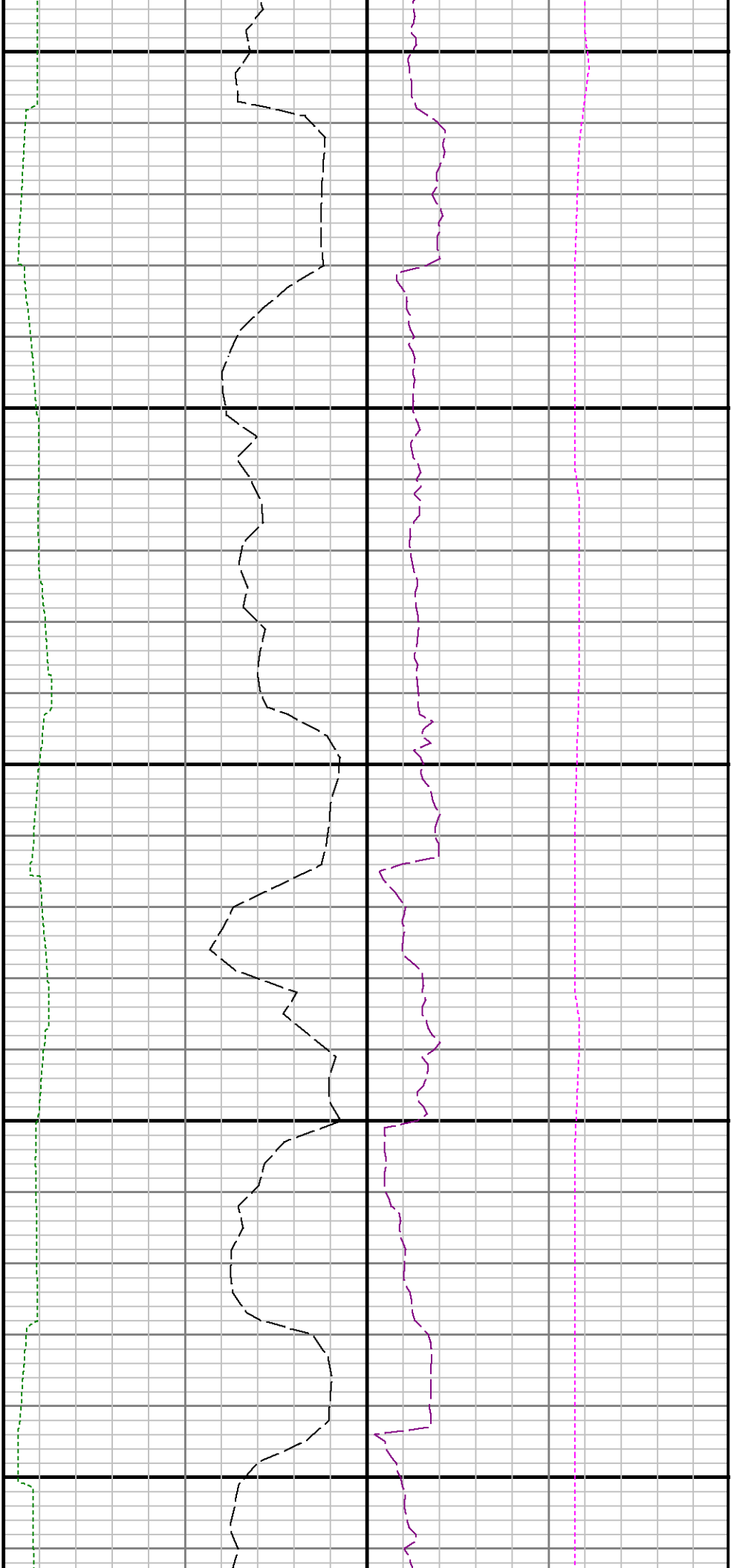




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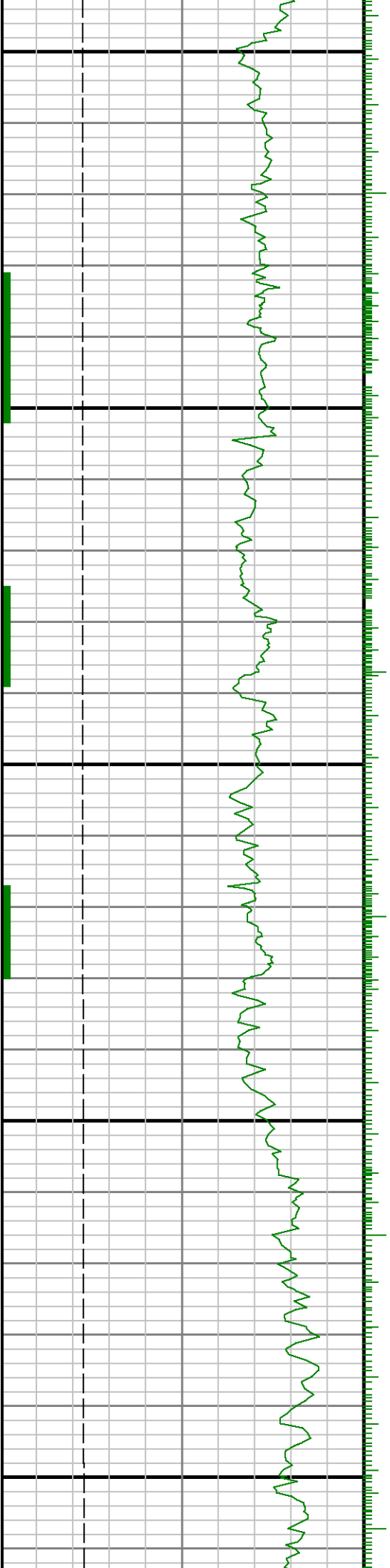
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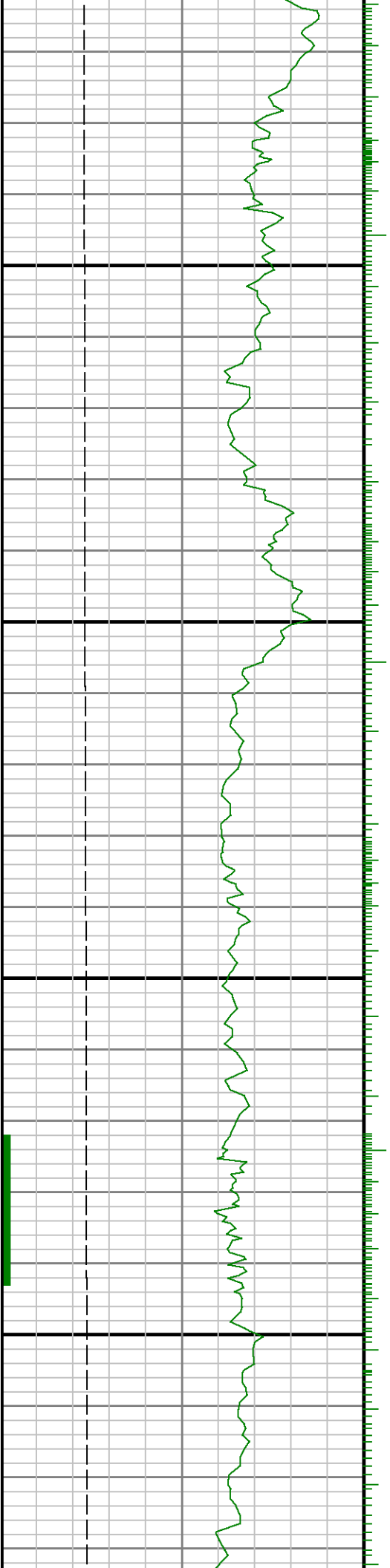
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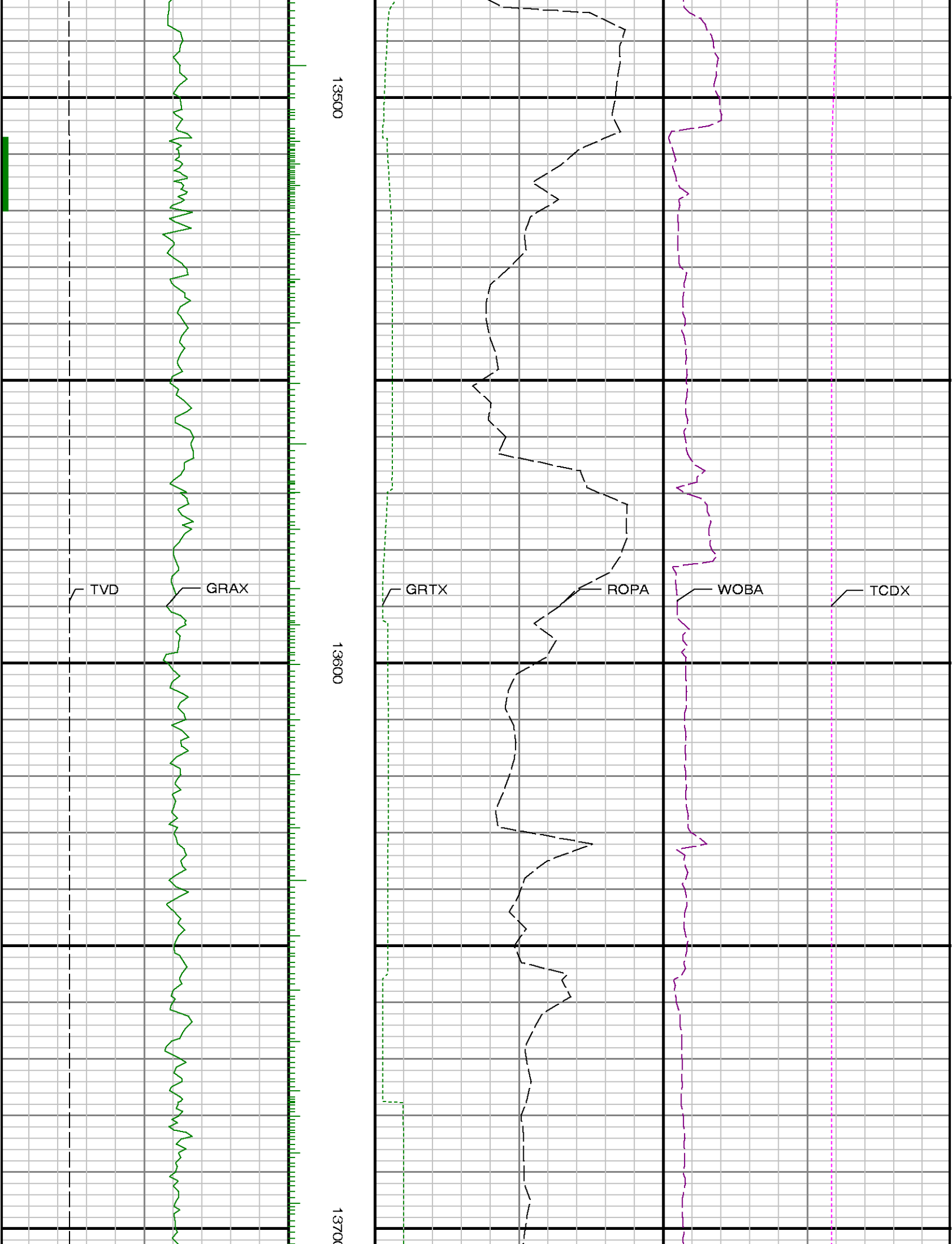


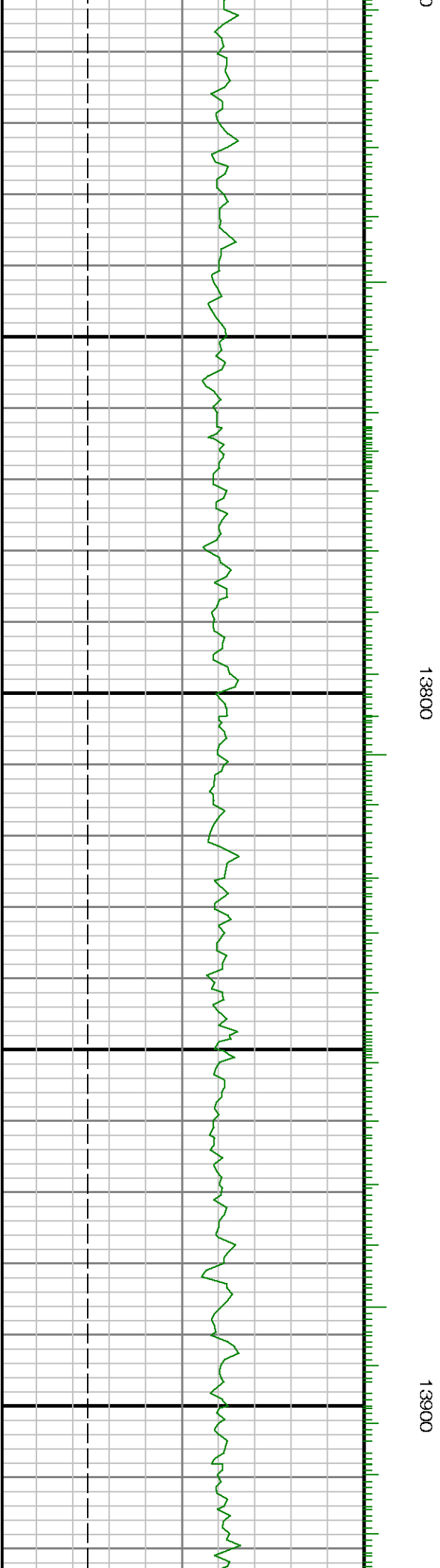
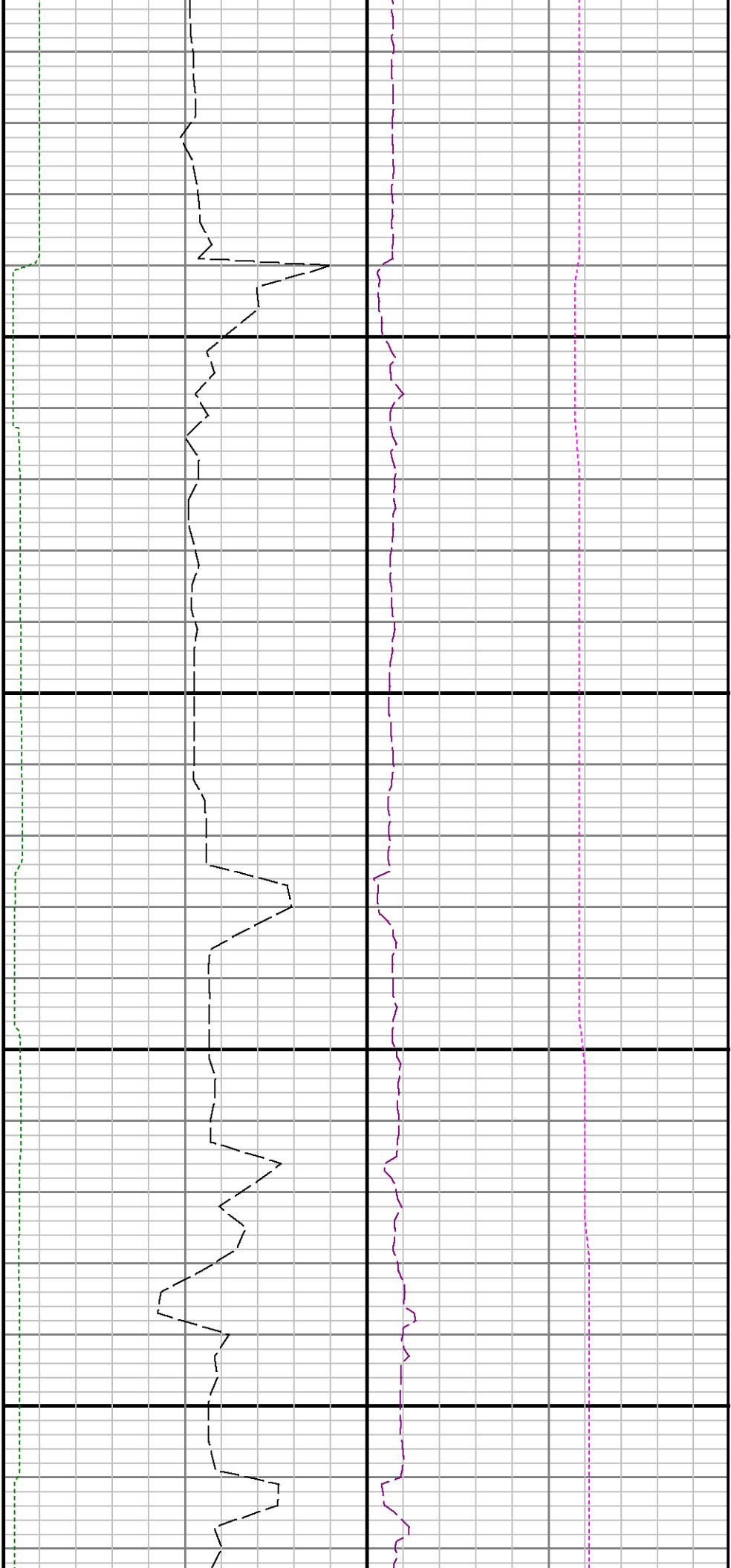


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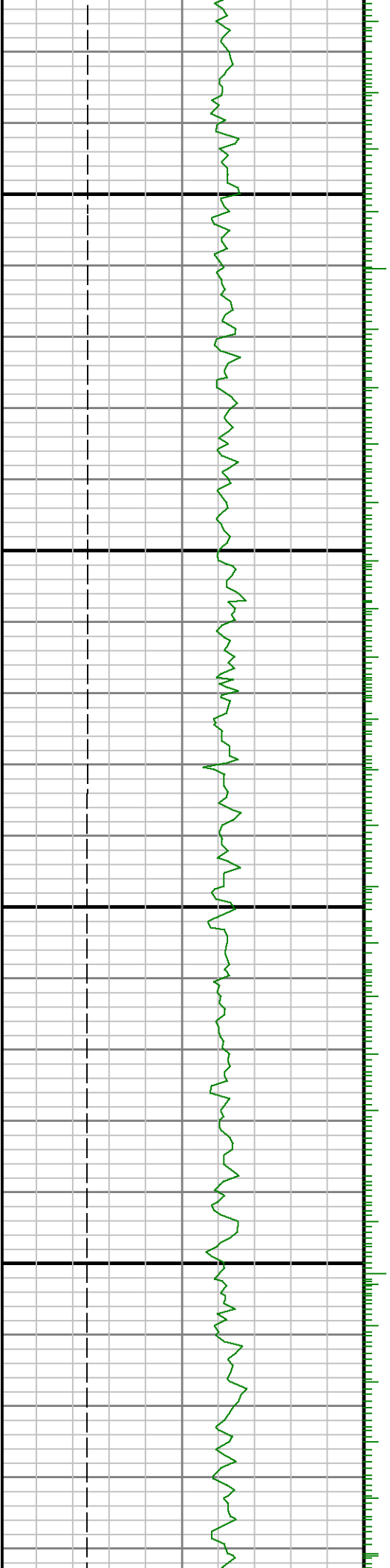


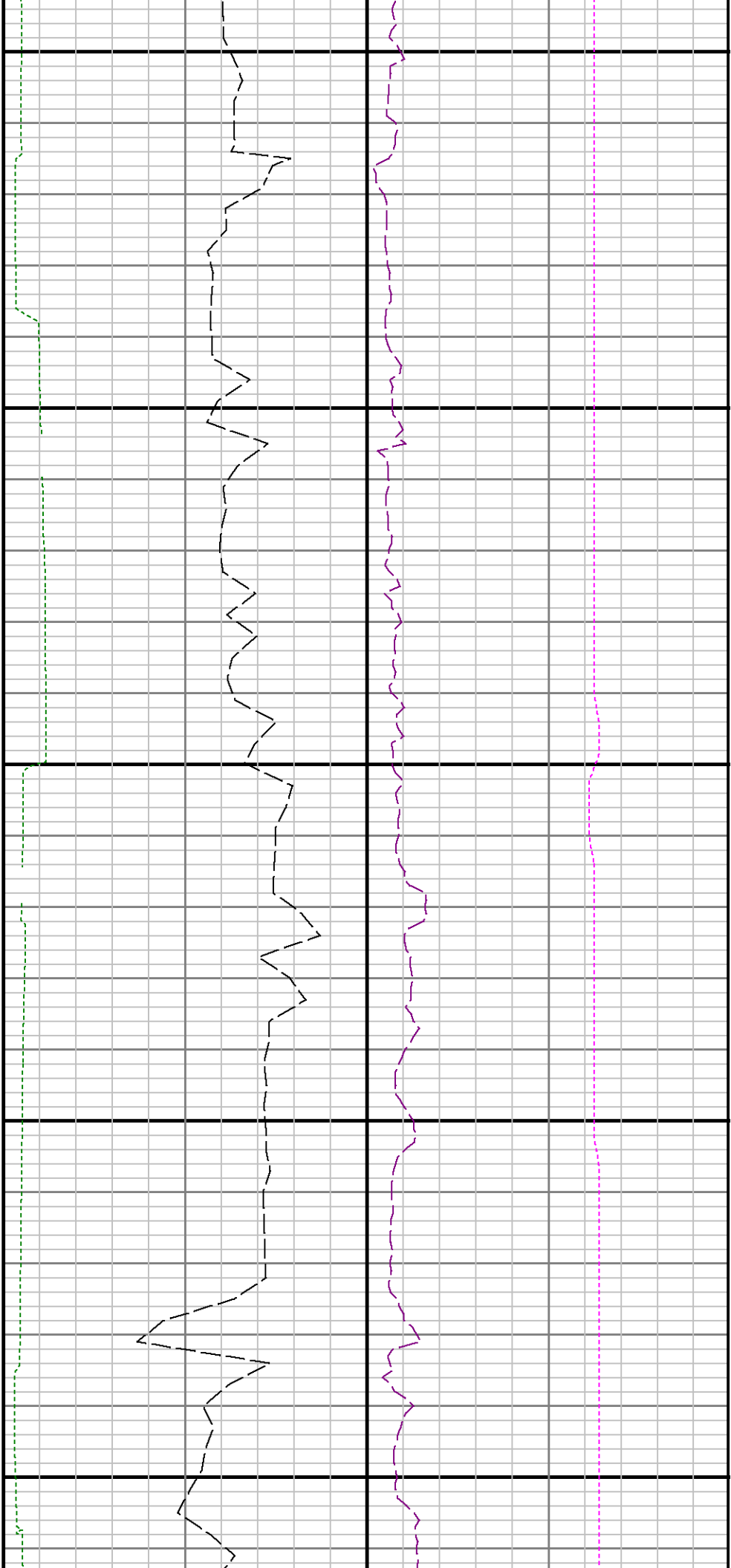




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