

Crew								
Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Adam Schlenz	14/Apr/2014	23/Apr/2014	Greg Dore	14/Apr/2014	22/Apr/2014			

Witness	
Name	LWD Run Number
Charlie Daigle	1,2,3,4
Wade Mullican	1,2,3,4

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+ (%)
18/Apr/2014	12:00	2	7667.0	Water Based	10.2	13	9.5	N/A	1.3/89.2	Active Mud Pit	700	N/A
18/Apr/2014	22:00	2	7789.0	Water Based	10.0	12	9.5	N/A	1.3/90	Active Mud Pit	800	N/A
19/Apr/2014	08:00	3	7789.0	Water Based	10.1	11	9.3	N/A	2/89.2	Active Mud Pit	800	N/A
19/Apr/2014	22:00	3	7789.0	Water Based	10.1	12	9.4	N/A	2.4/88.6	Active Mud Pit	1000	N/A
20/Apr/2014	08:00	3	7955.0	Water Based	10.2	13	9.4	N/A	2.8/87.1	Active Mud Pit	1000	N/A
20/Apr/2014	22:00	3	7955.0	Water Based	10.2	14	9.4	N/A	2.8/86.7	Active Mud Pit	1000	N/A
21/Apr/2014	11:00	4	8301.0	Water Based	9.8	13	9.5	N/A	3/88.1	Active Mud Pit	1000	N/A
21/Apr/2014	22:00	4	10343.0	Water Based	9.9	14	9.6	N/A	3.2/88.1	Active Mud Pit	1000	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	1256686	Directional	46.69	6.750	2.875
1	SRIG	12622668	Gamma	43.31	6.750	2.875
2	DIR	1256686	Directional	40.10	6.750	2.875
2	SRIG	12622668	Gamma	36.72	6.750	2.875
3	DIR	1256686	Directional	40.10	6.750	2.875

3	SRIG	12622668	Gamma	36.72	6.750	2.875
4	DIR	12617354	Directional	52.29	4.750	2.750
4	SRIG	11892058	Gamma	48.91	4.750	2.750

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.) Baker Hughes LWD runs 1,2,3 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1251 to 7955 feet MD (1251 to 7434 feet TVD).
- 2.) Baker Hughes LWD run 4 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 6 1/8 inch bit and steerable assembly from 7955 to 12641 feet MD (7434 to 7424 feet TVD).
- 3.) The solid line on the left side of the gamma ray track indicates the interval over which data was collected while not rotating.
- 4.) 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.

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	7070	8.750	1	Gamma ray logging operations began at 7070 feet MD (6814 feet TVD).
2	7667	8.750	1	The interval from 7623 to 7667 feet MD (7309 to 7338 feet TVD) was logged more than 10 hrs after being drilled due to a trip out of the hole for a new mud motor and bit.
3	7789	8.750	2	The interval from 7752 to 7789 feet MD (7384 to 7401 feet TVD) was logged more than 10 hrs after being drilled due to a trip out of the hole to change the AKO setting on the mud motor and pick up a new bit.
4	7955	8.750	3	The interval from 7919 to 7955 feet MD (7431 to 7434 feet TVD) was logged more than 10 hrs after being drilled due to a trip out of the hole for casing and cement operations.
5	12589	6.125	4	No sensor data logged from 12589 to 12641 feet MD (7424 feet TVD) due to sensor to bit offset at well TD.



Company : Anadarko E&P Company LP
Well : Lansdown State 3C-21HZ
Interval : 7050.00 - 12660.00 feet
Created : 23/Apr/2014 8:33:50 AM

Gamma Ray Apparent 0.5 ft Avg GRAX

0 200

API

True Vertical Depth TVD

7500 6500

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

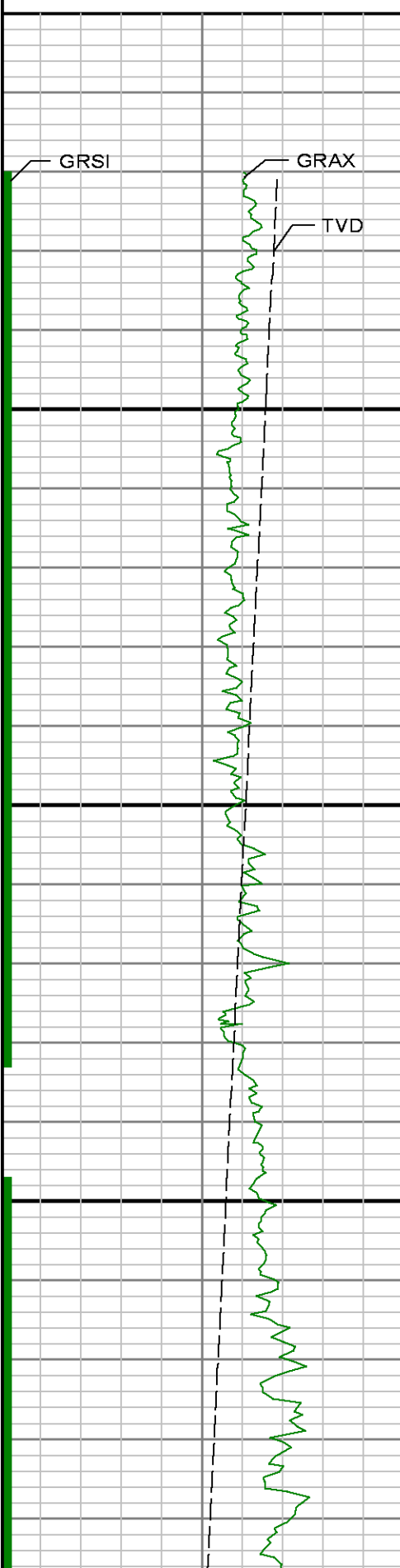
0 100

klbf

Downhole Temperature TCDX

100 300

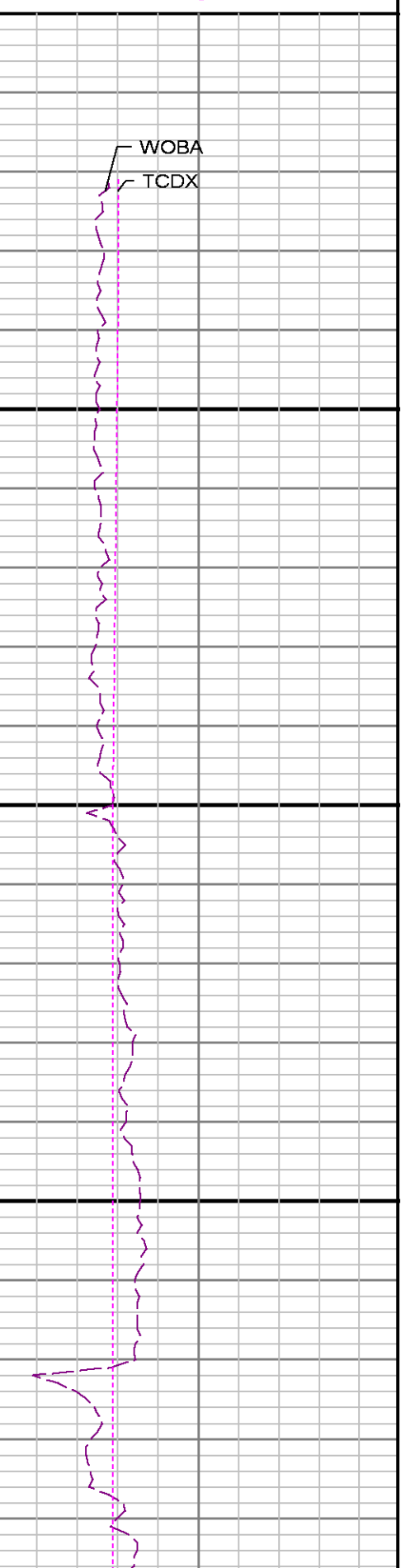
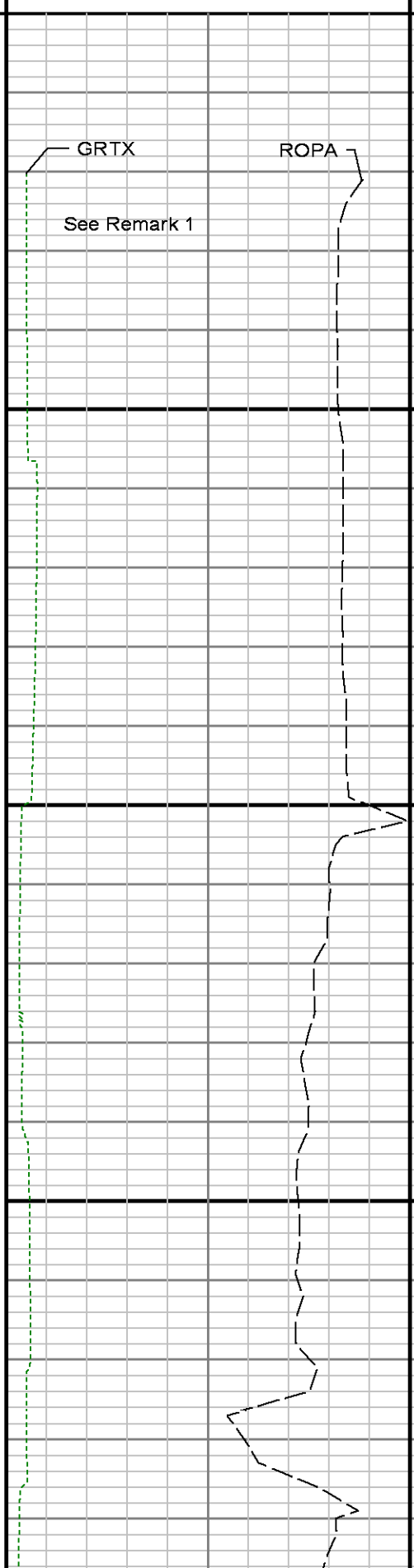
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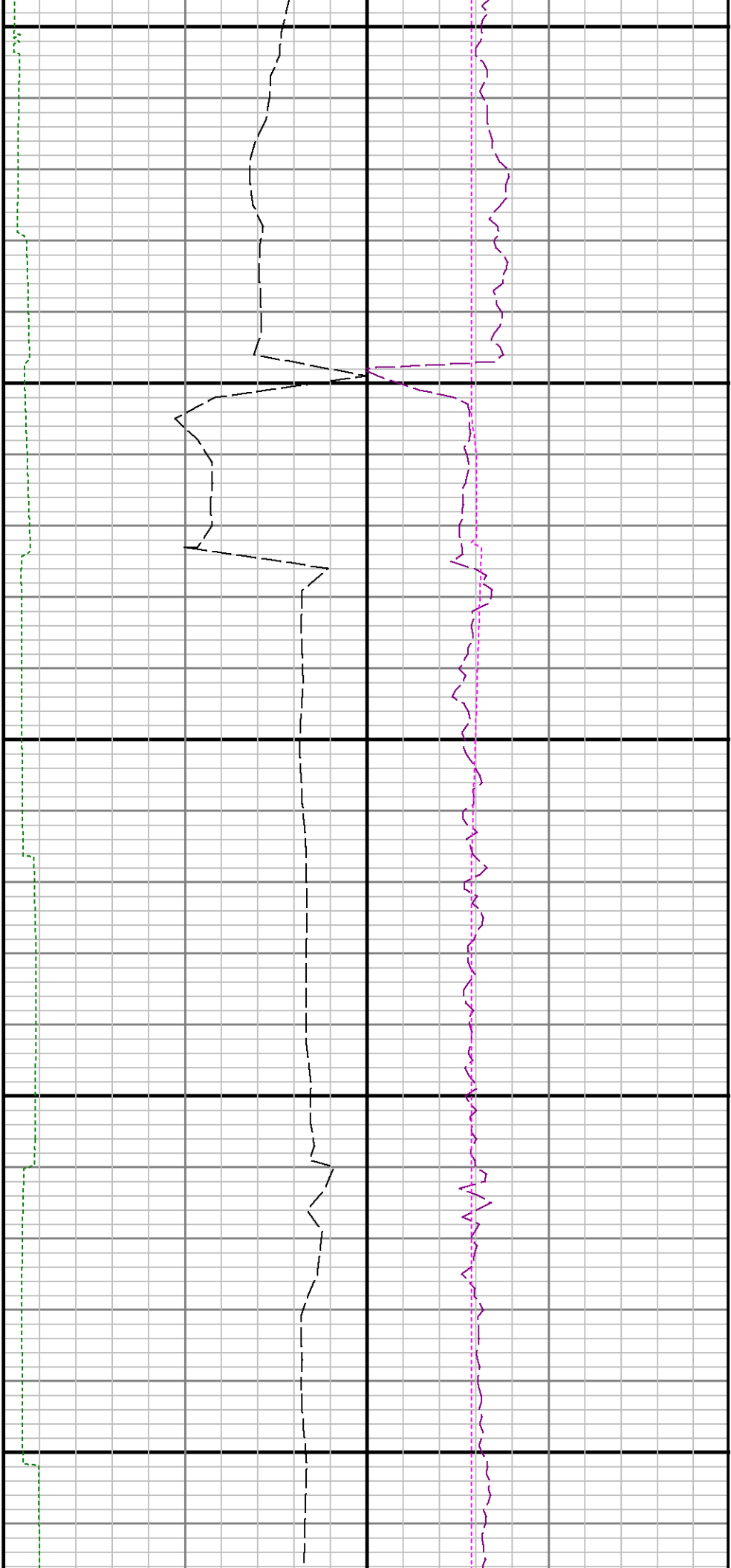


GRIX

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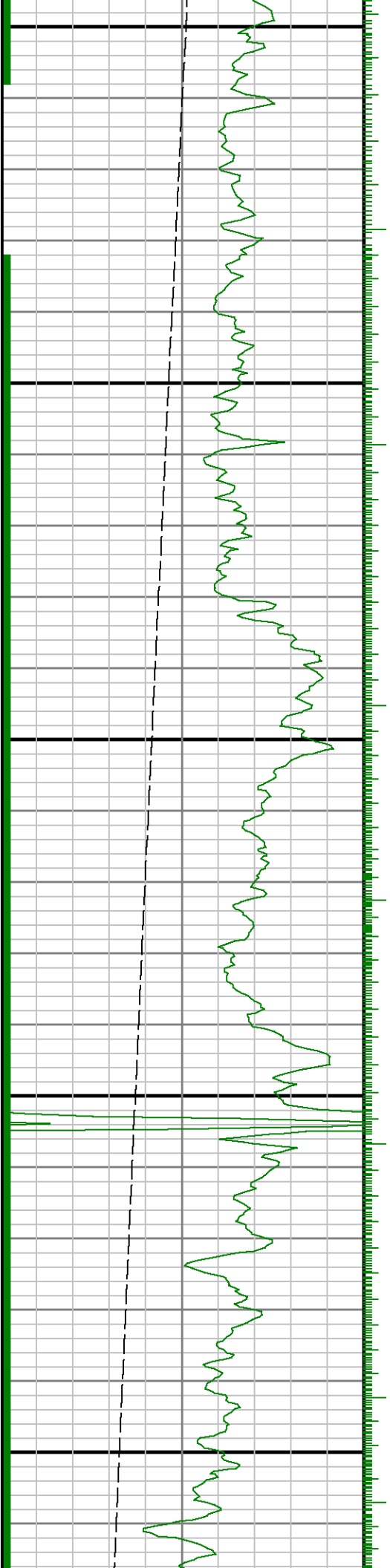
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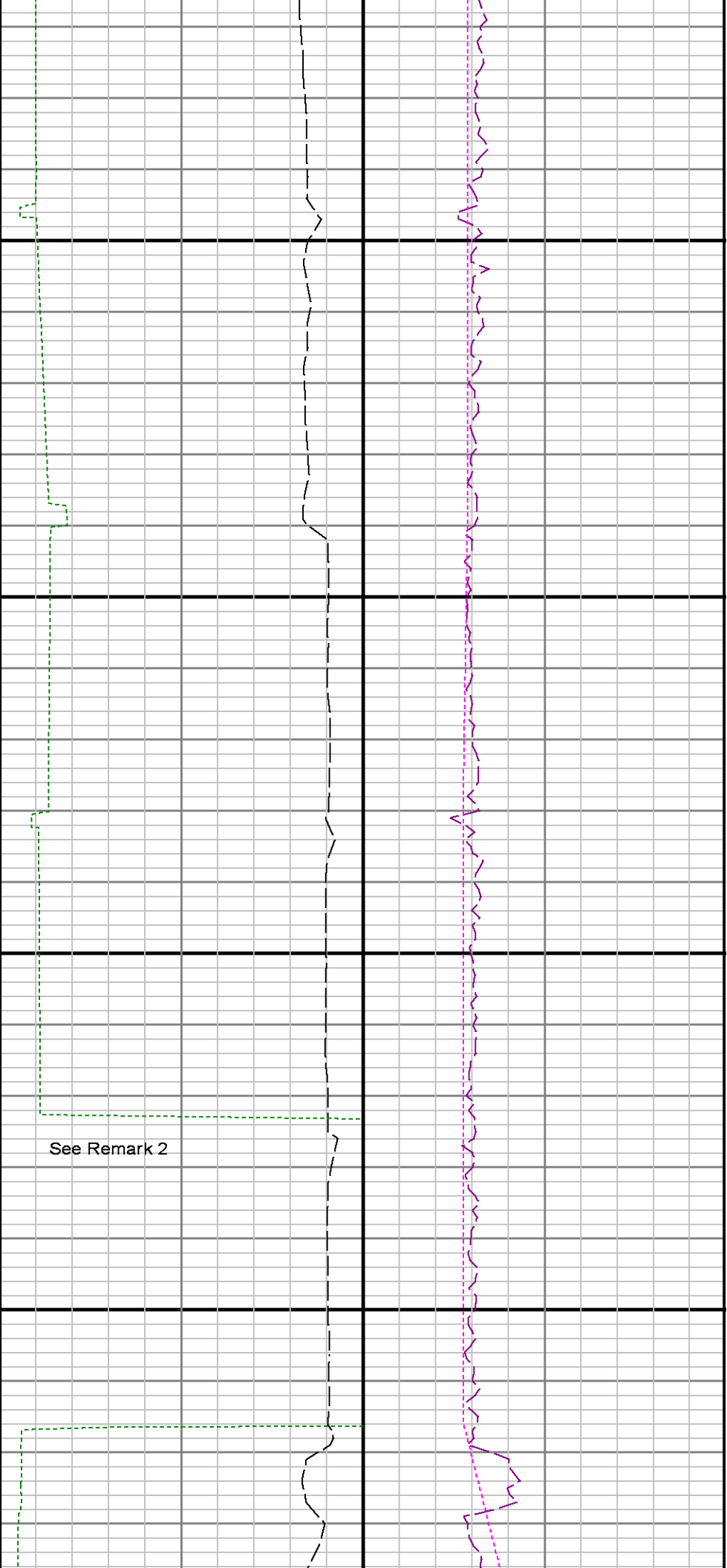




7300

7400



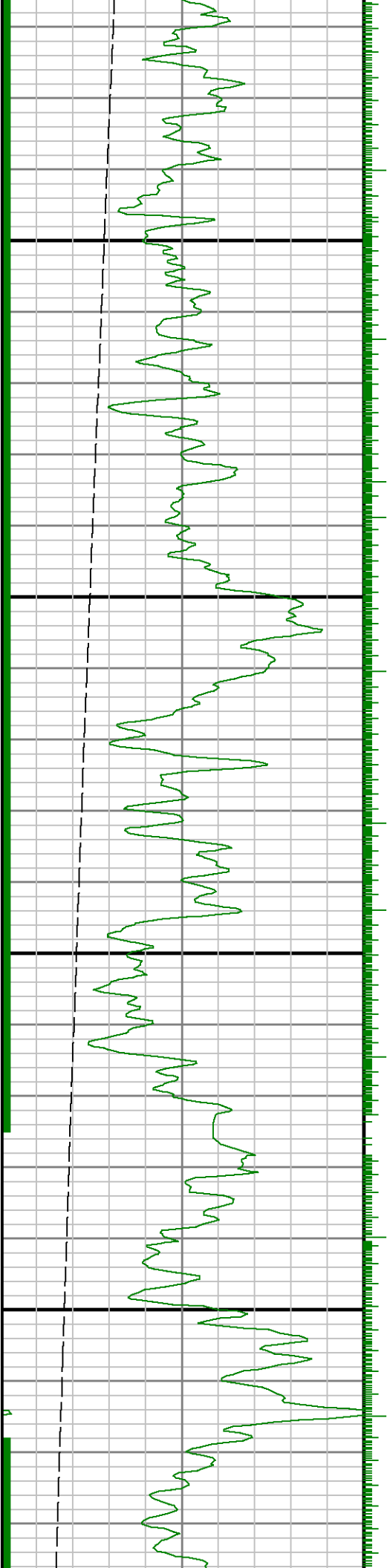


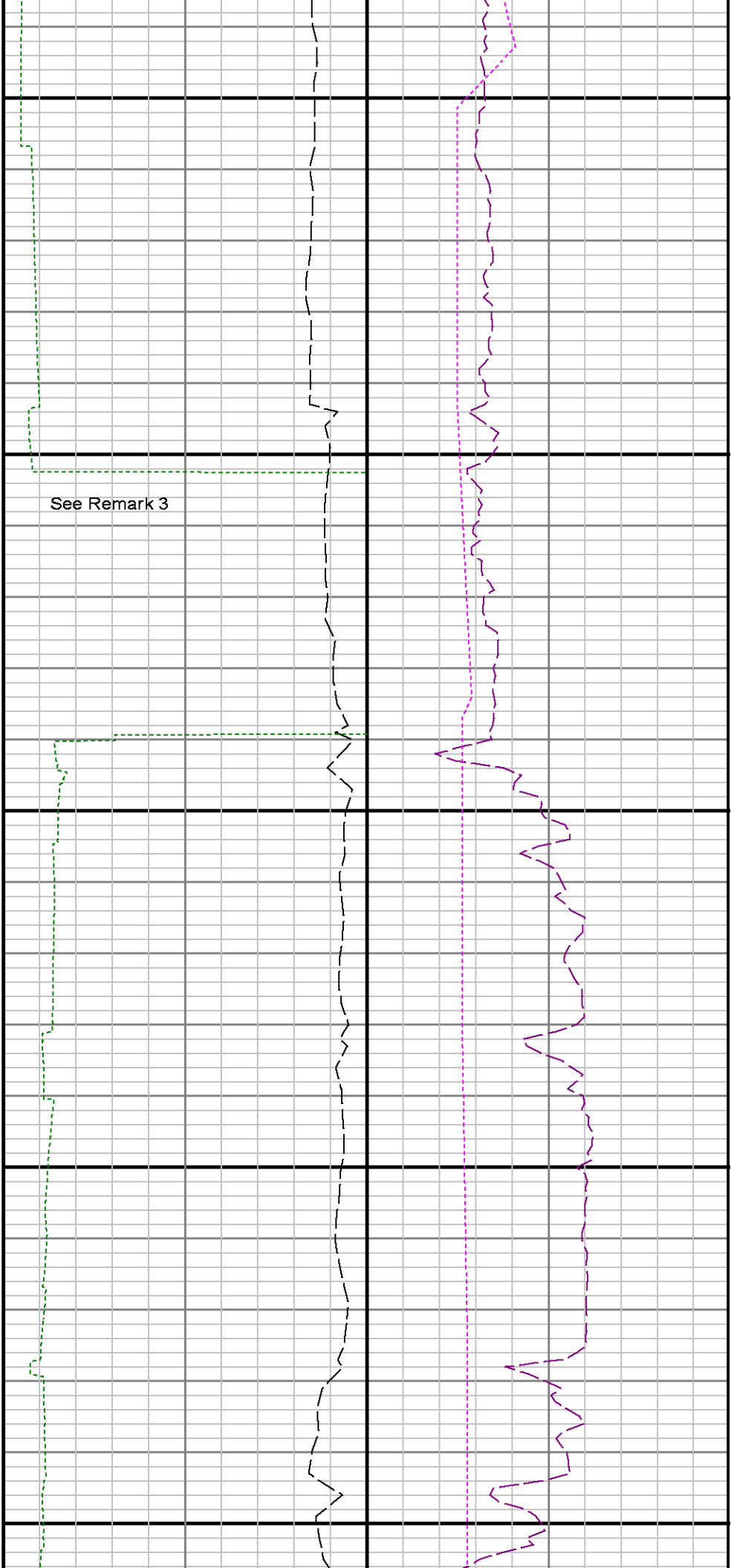
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7600

See Remark 2

Run 1 \diamond Run 2



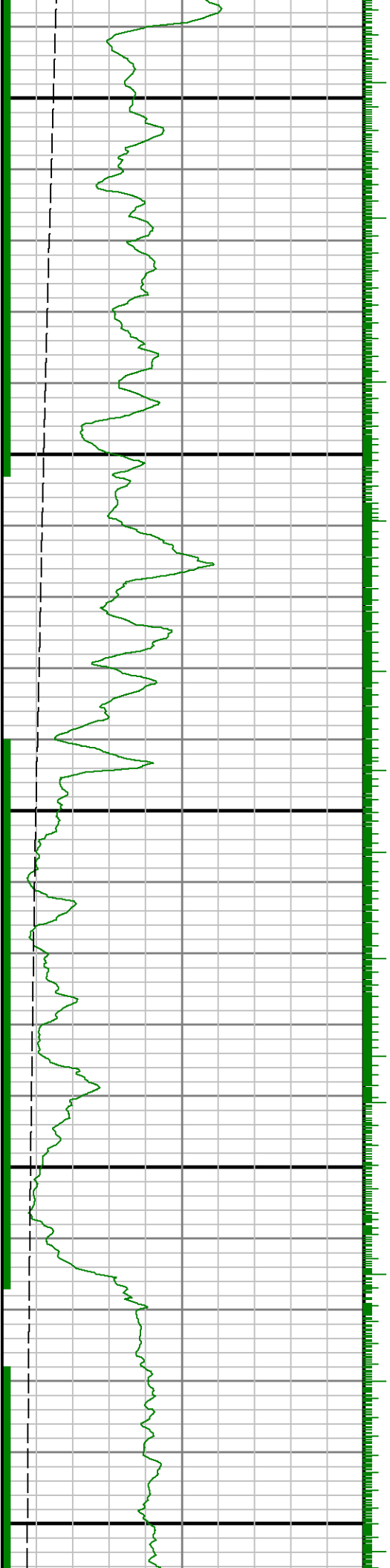


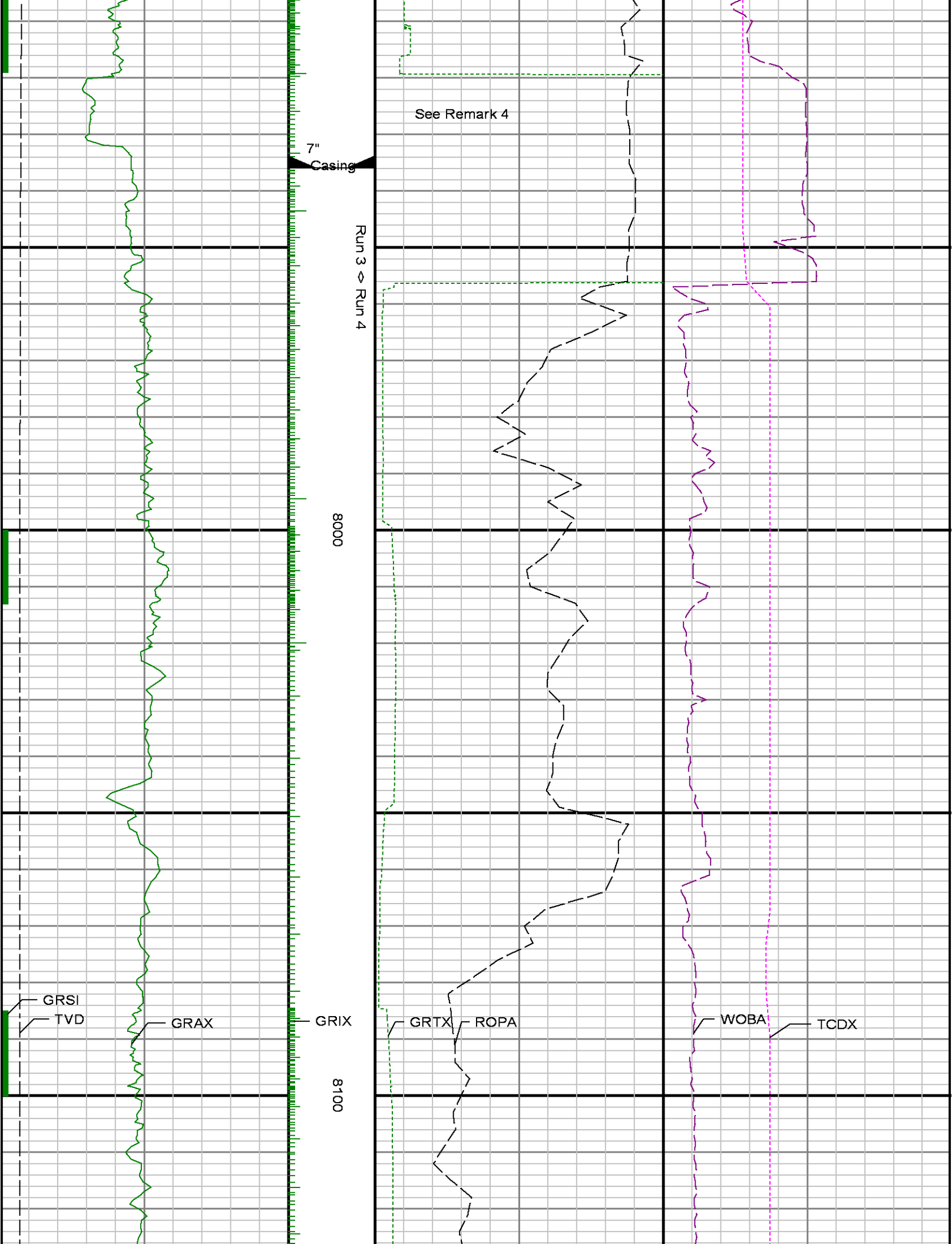
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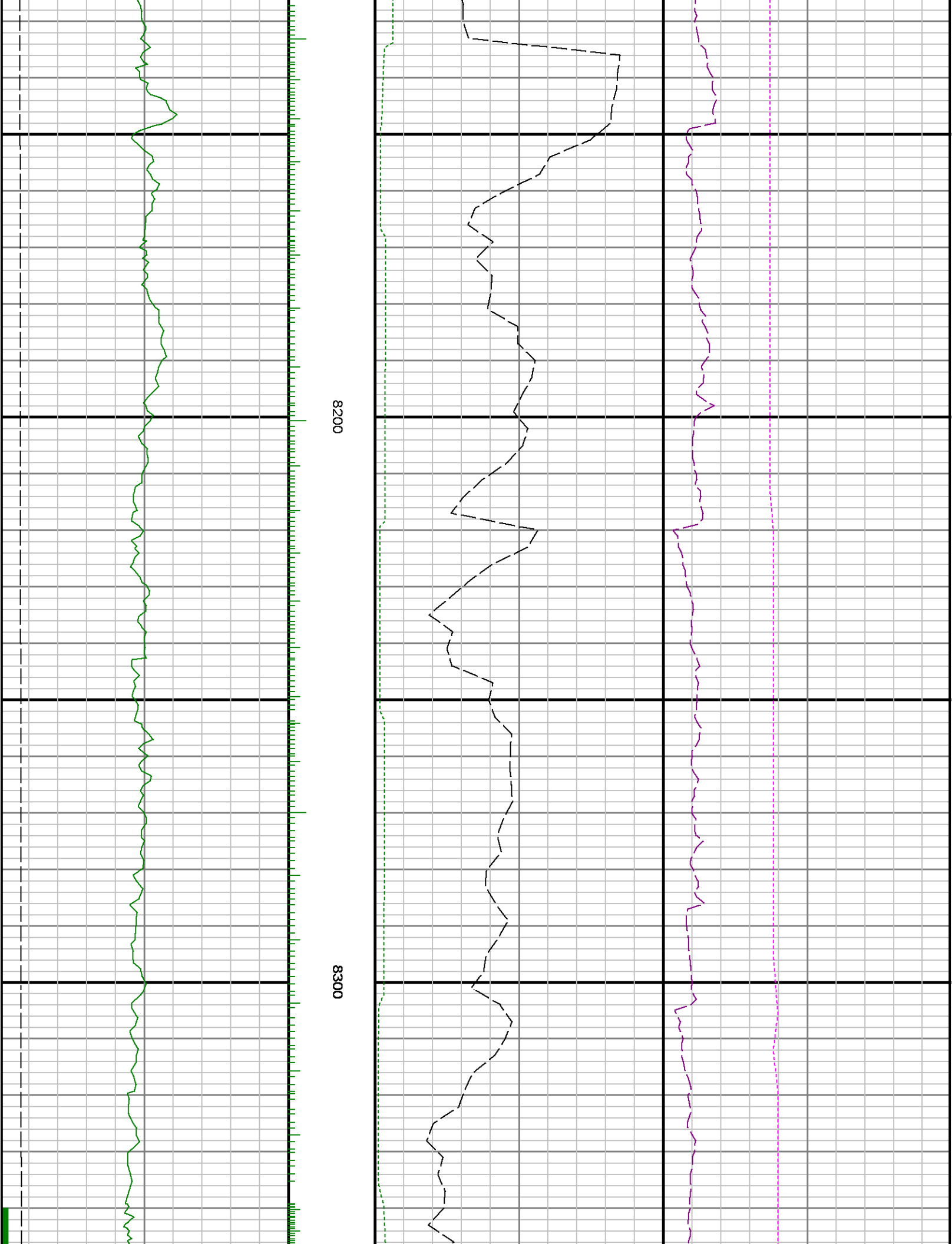
Run 2 \diamond Run 3

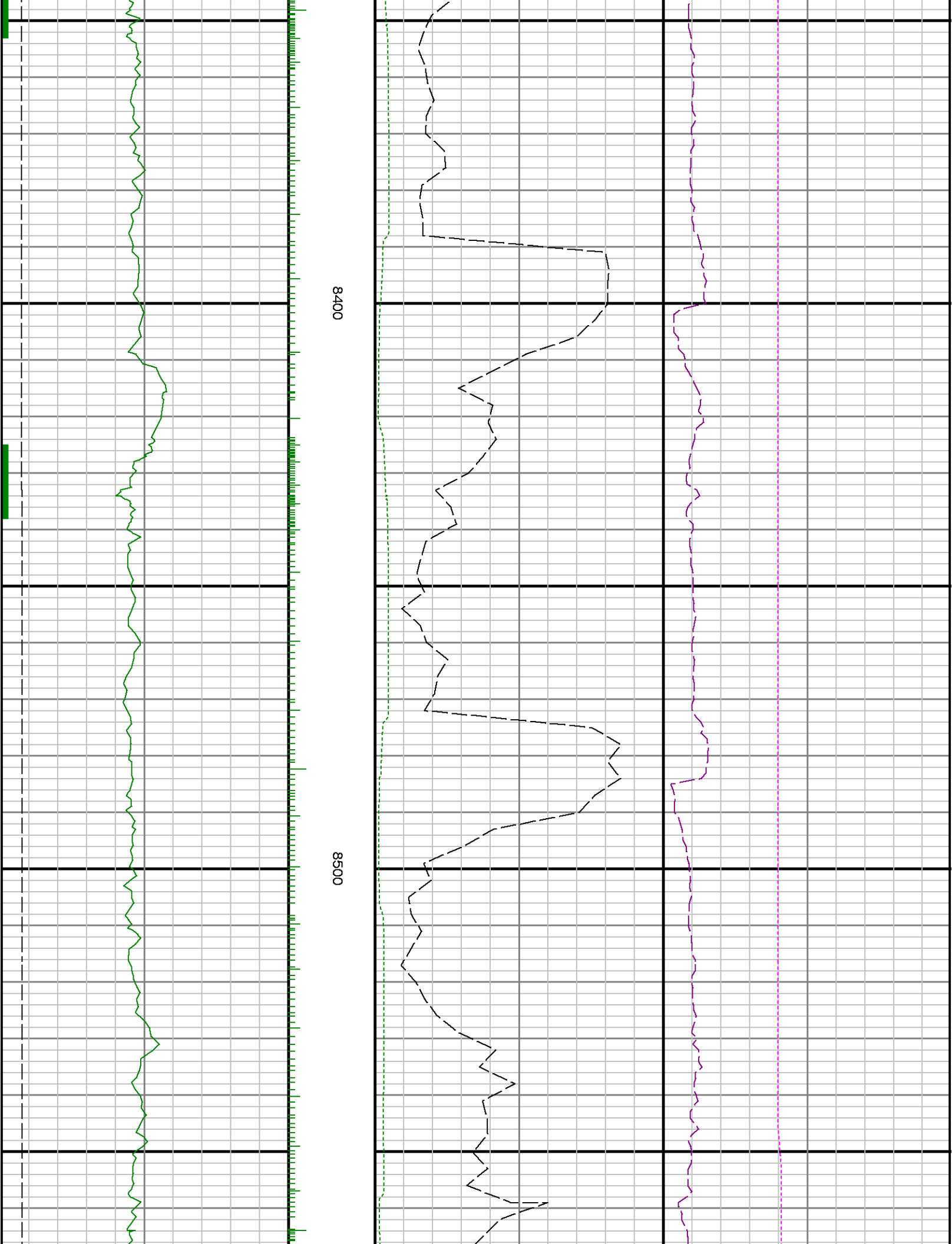
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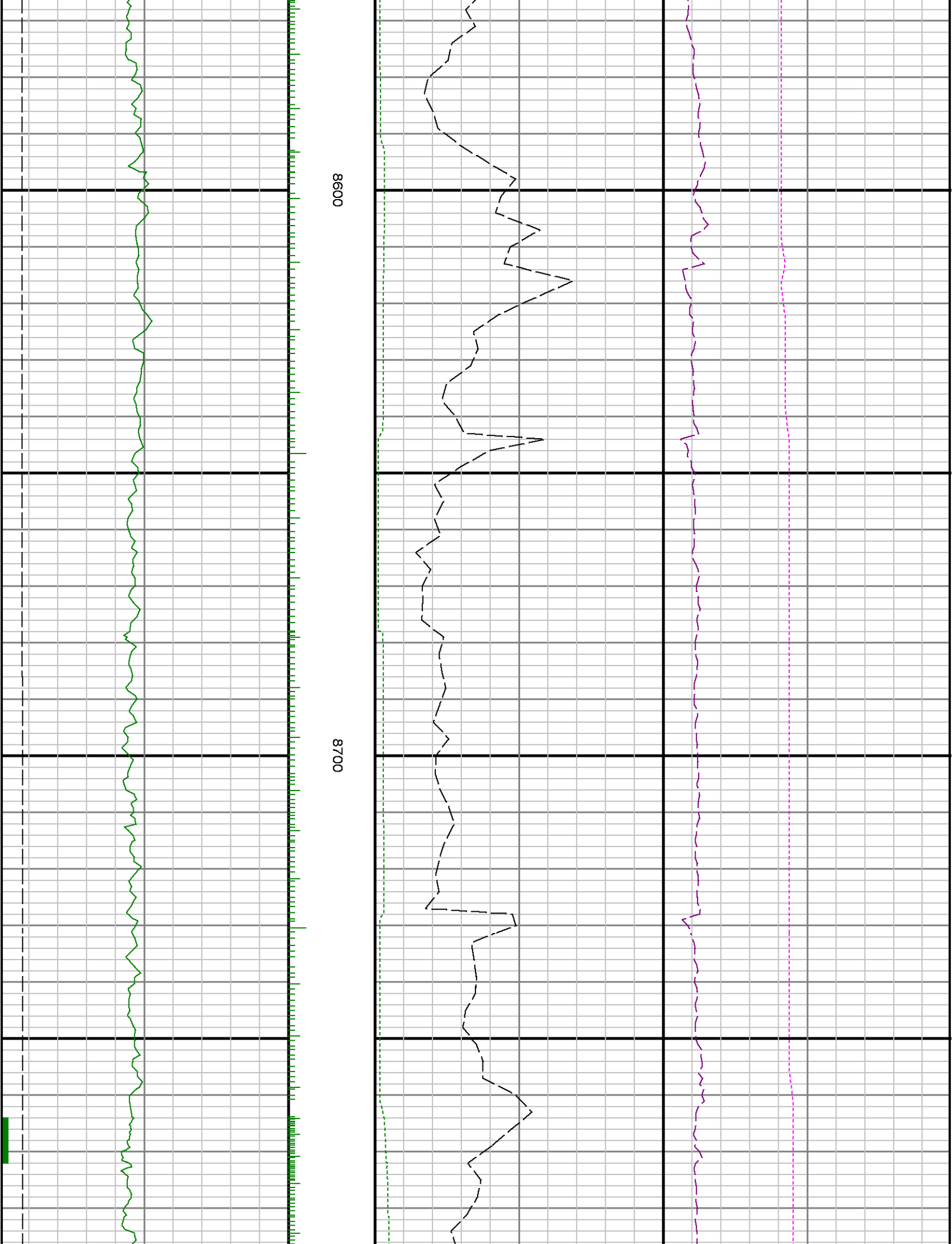
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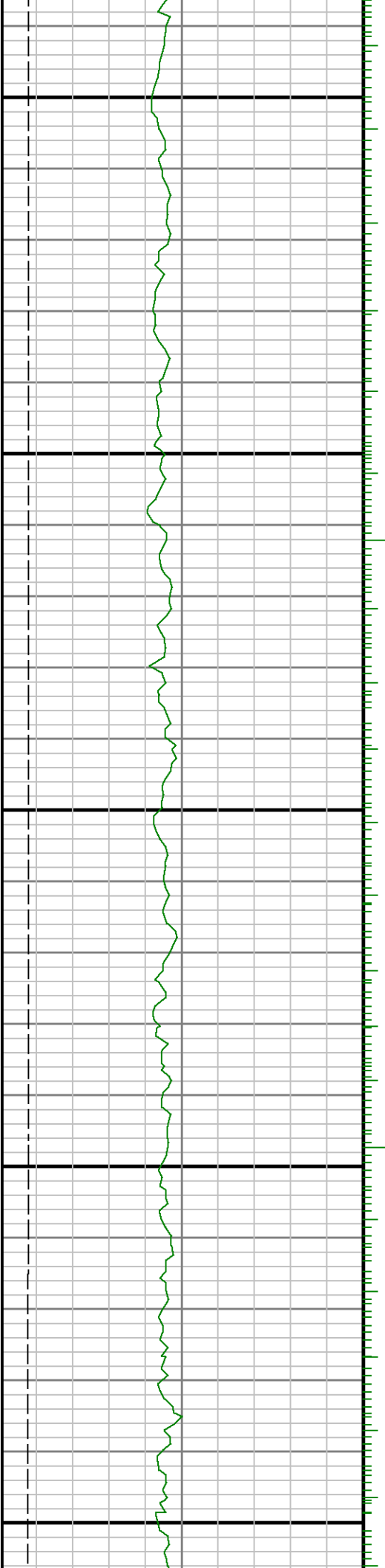








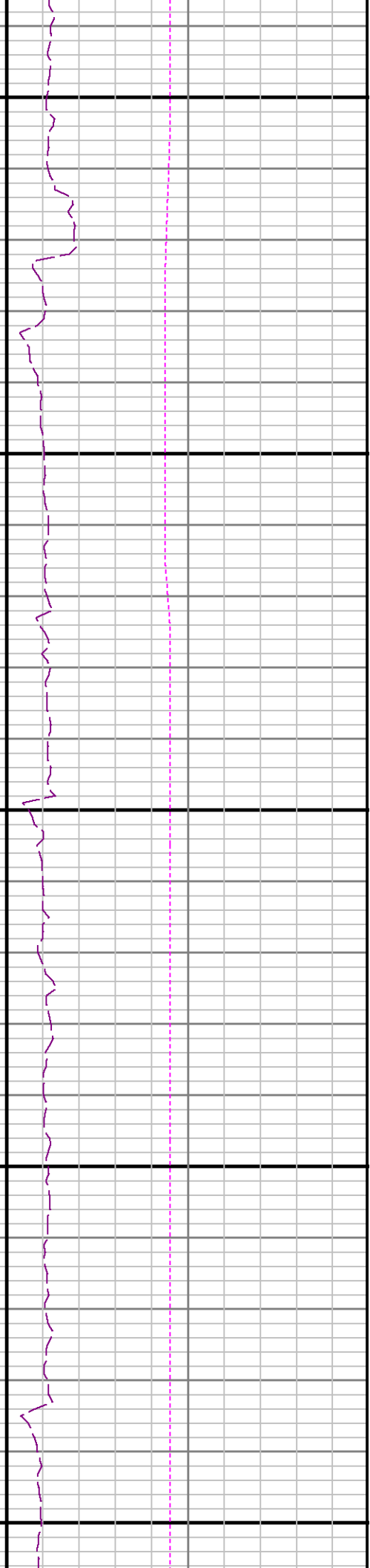
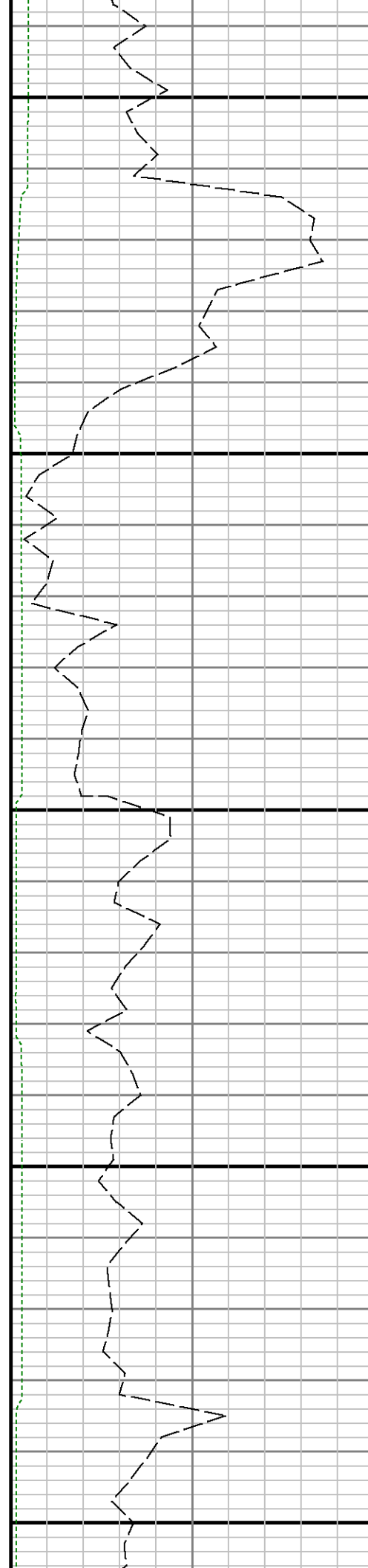


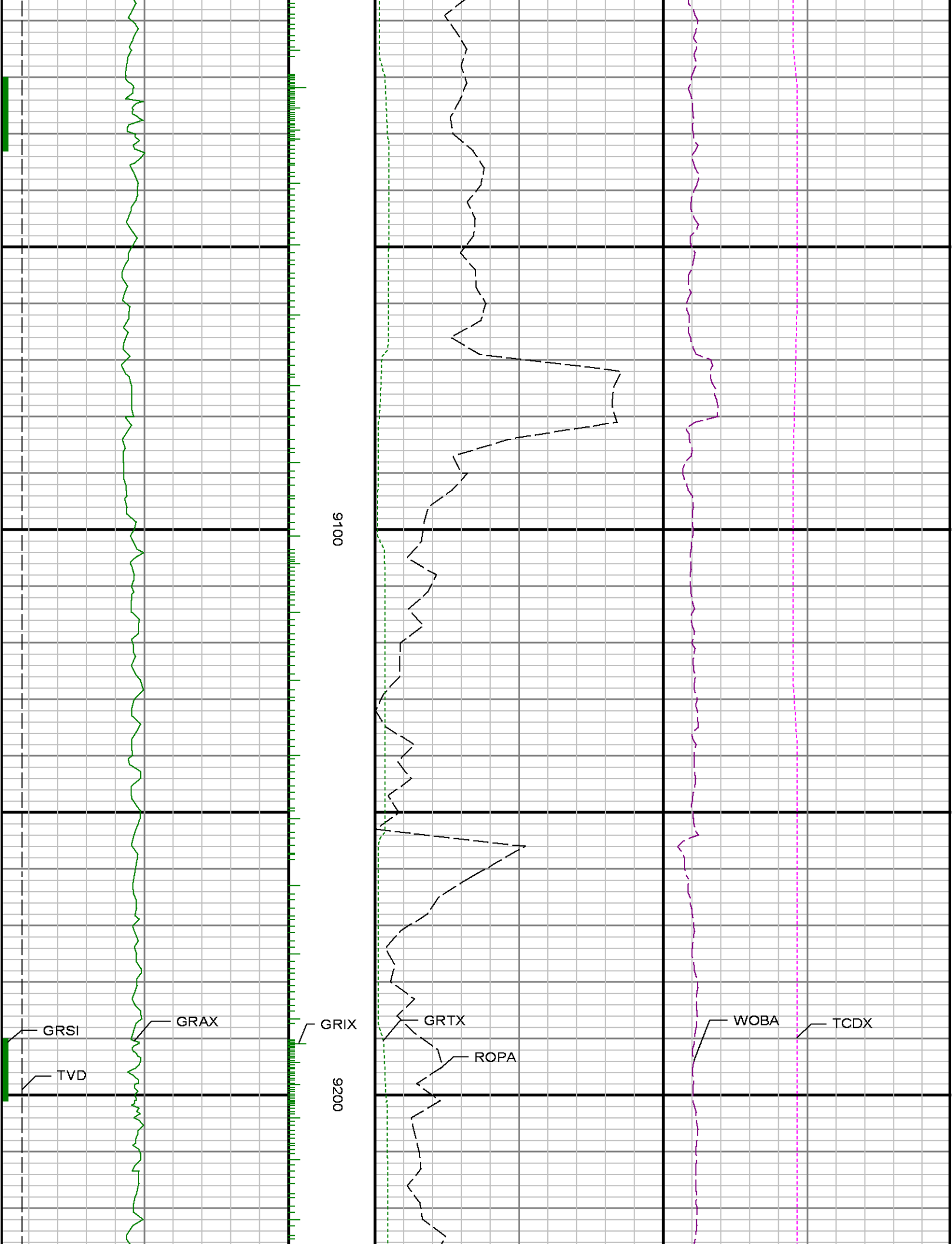


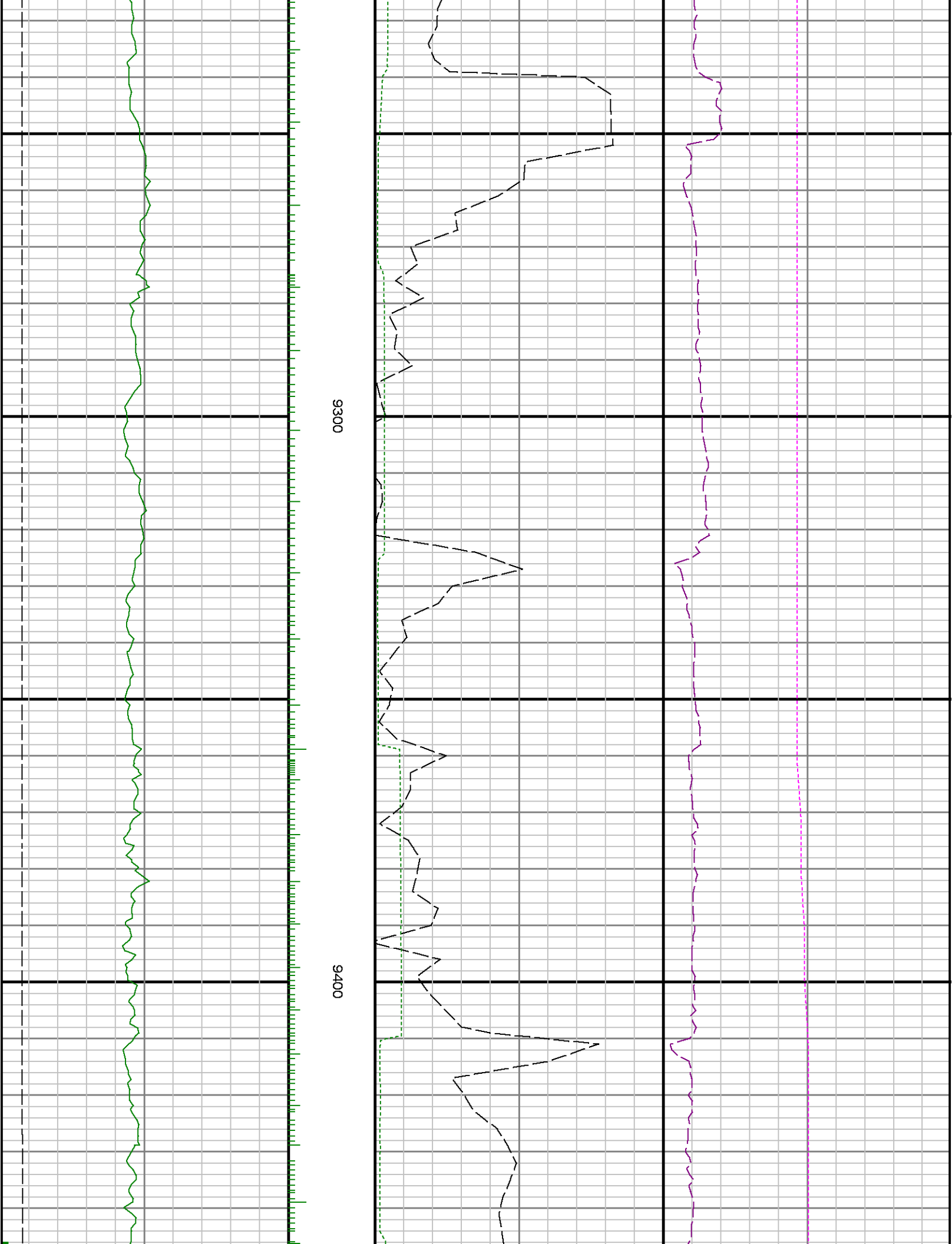
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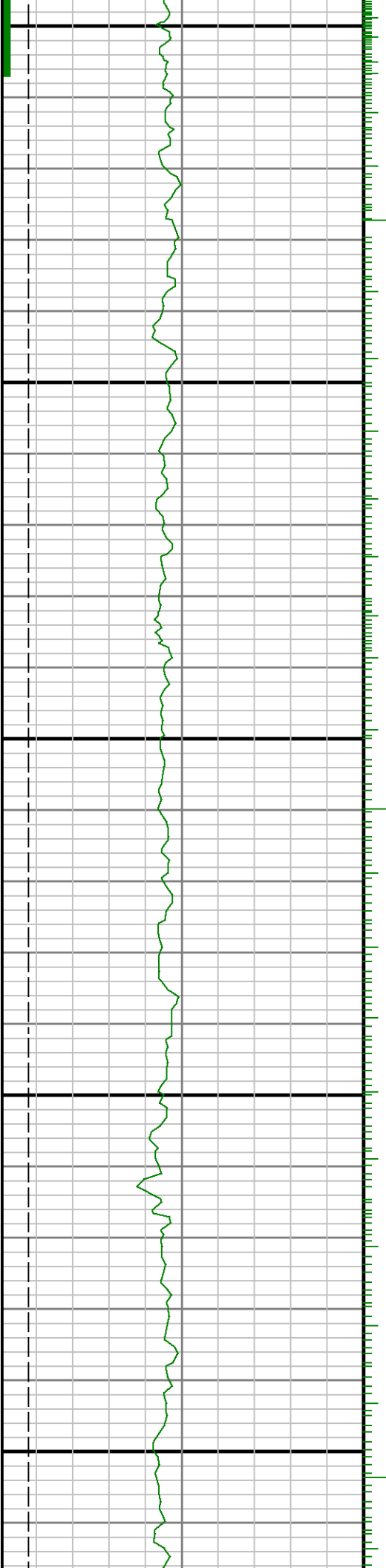
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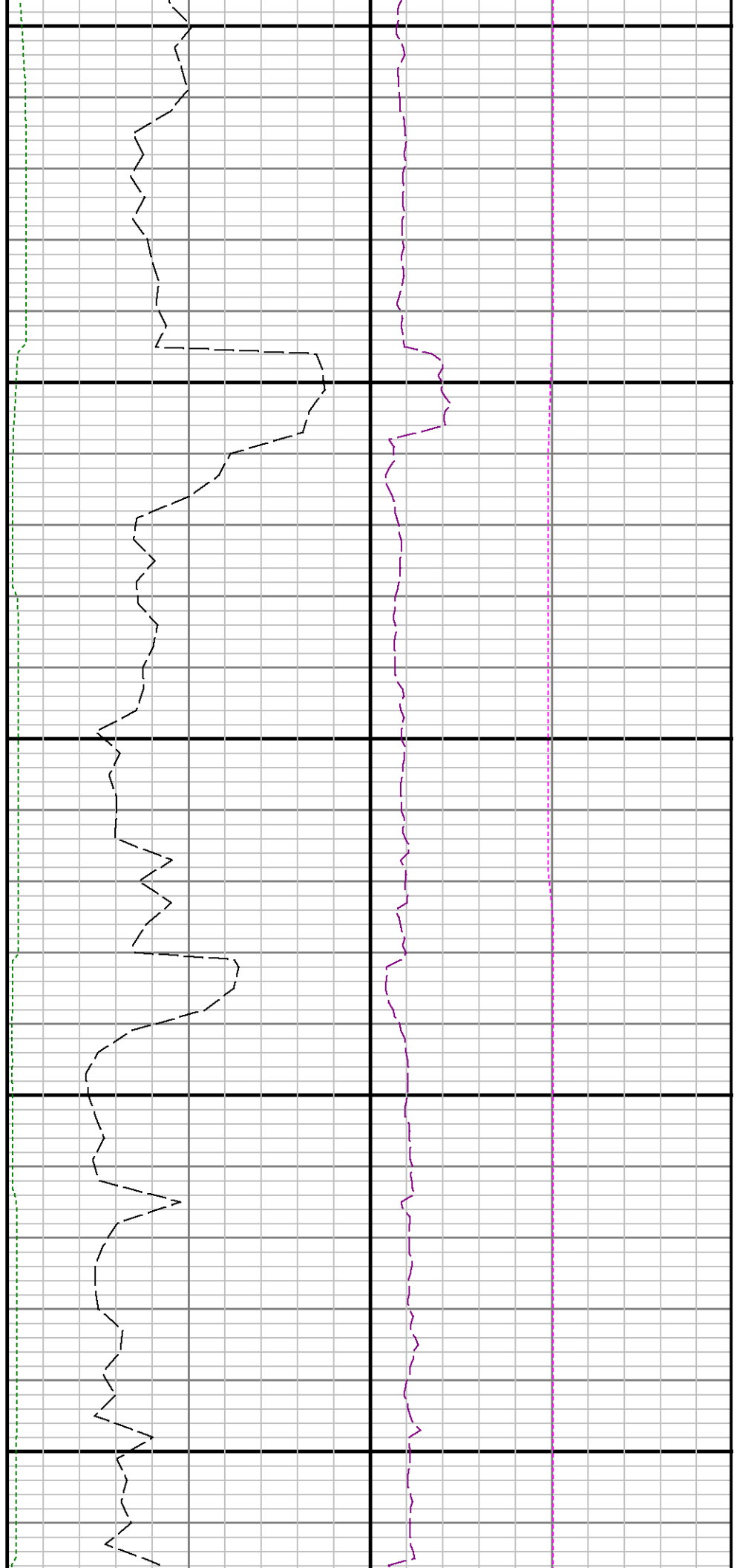


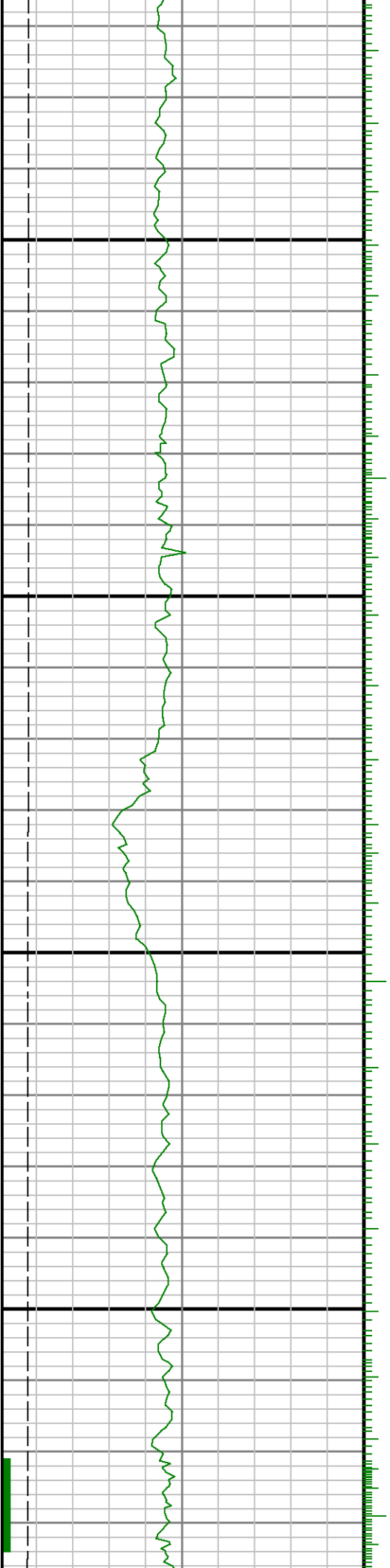




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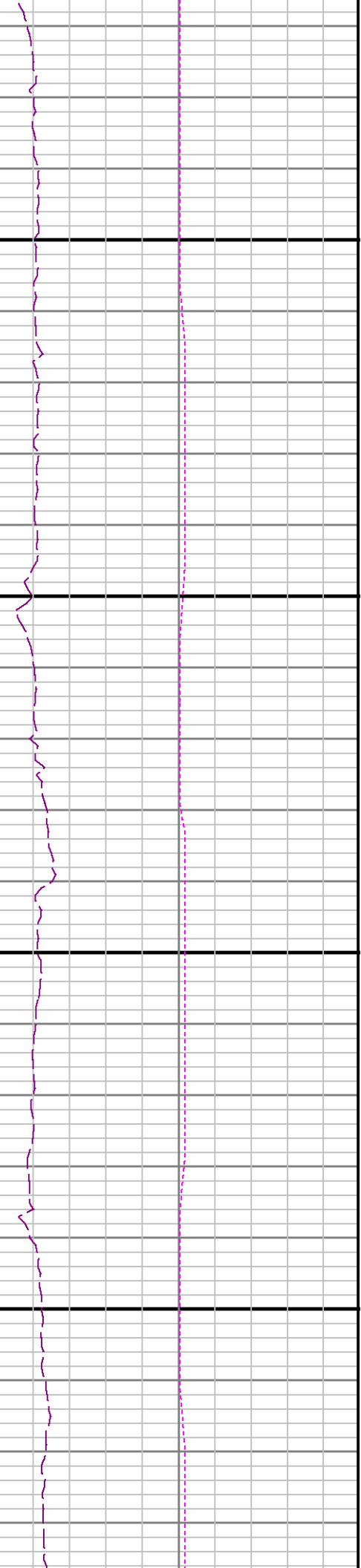
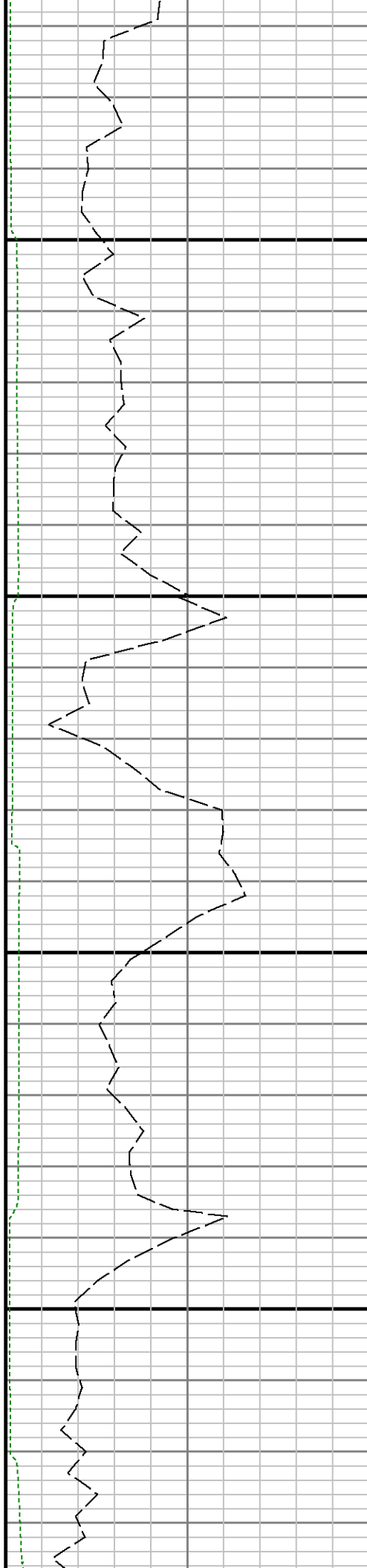
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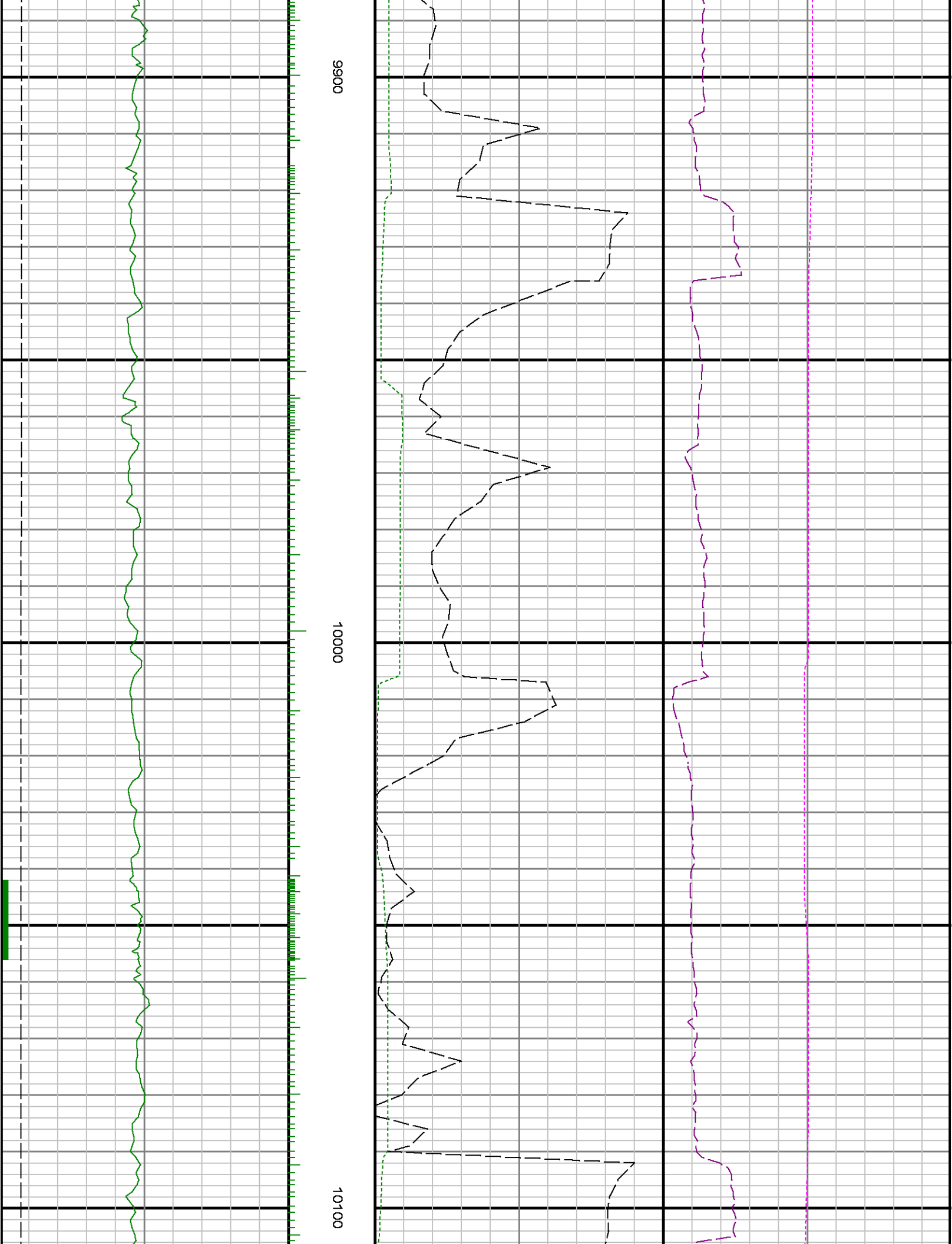


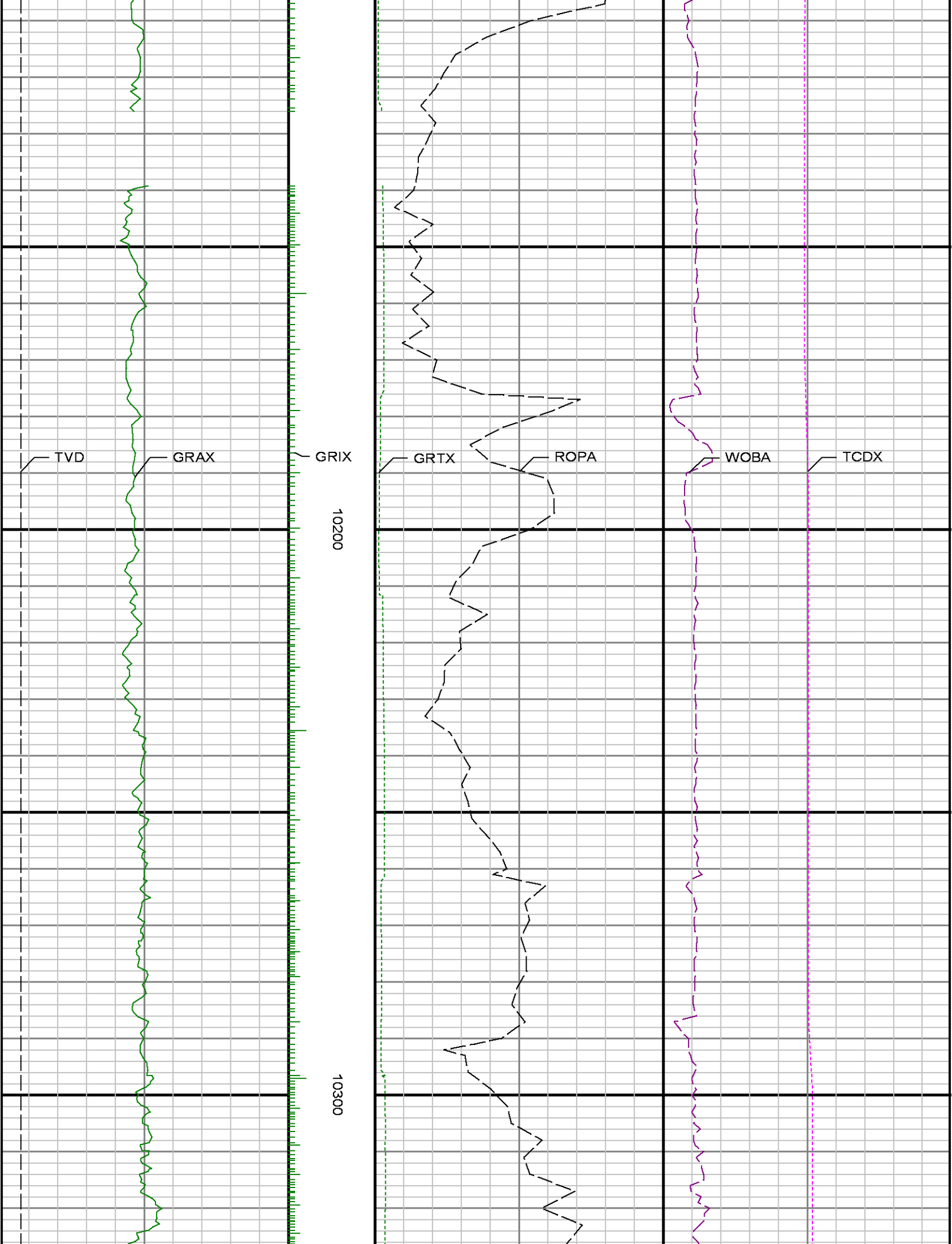


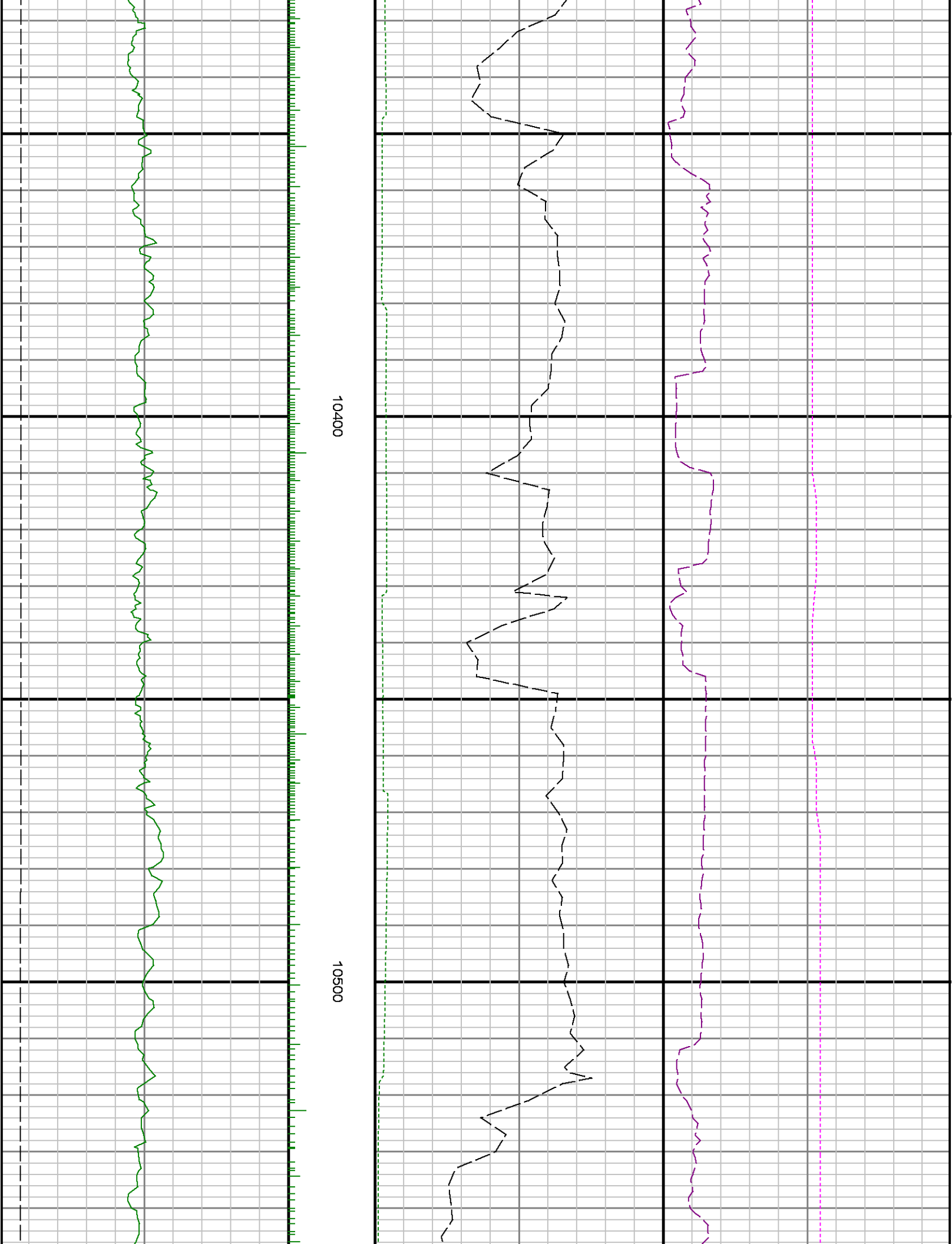
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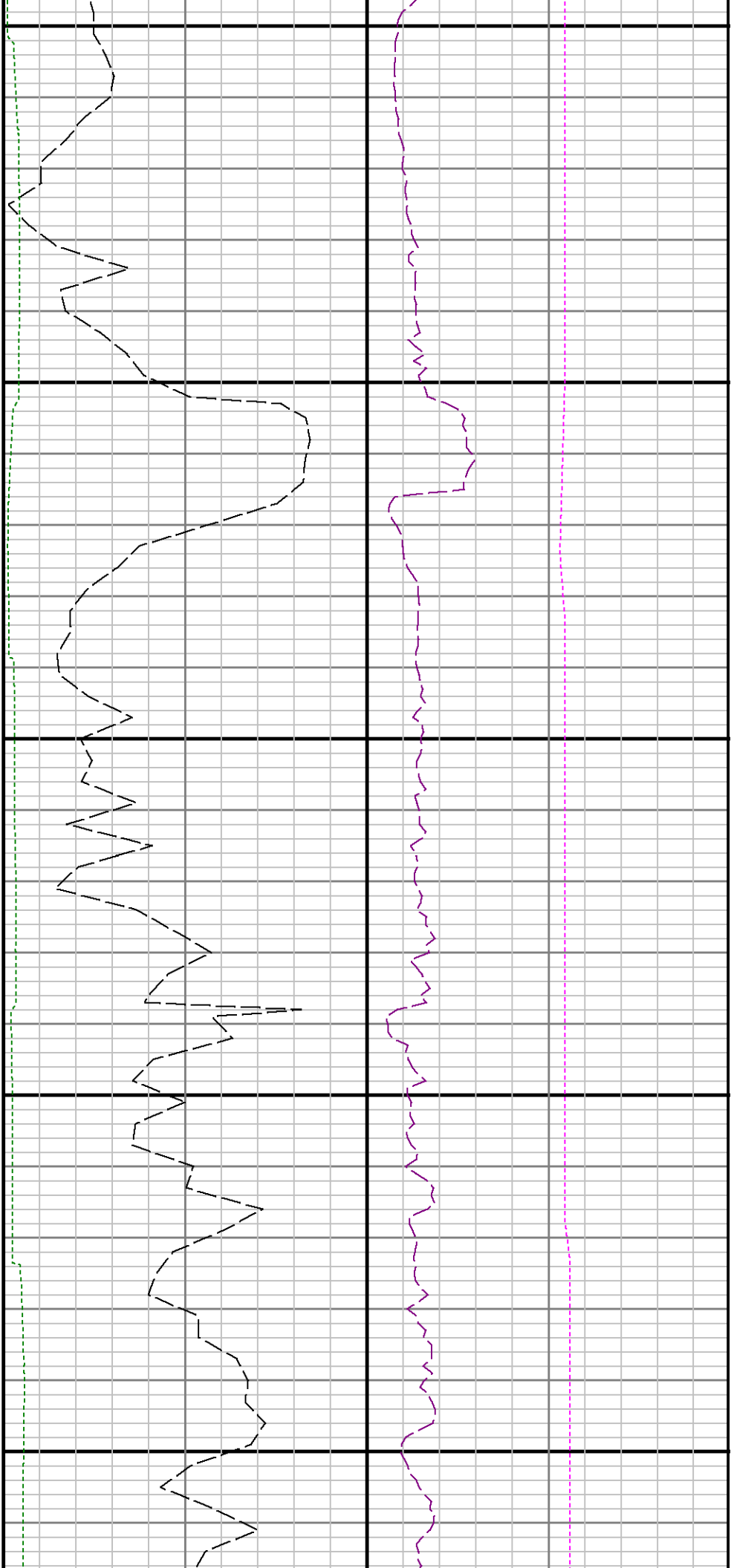
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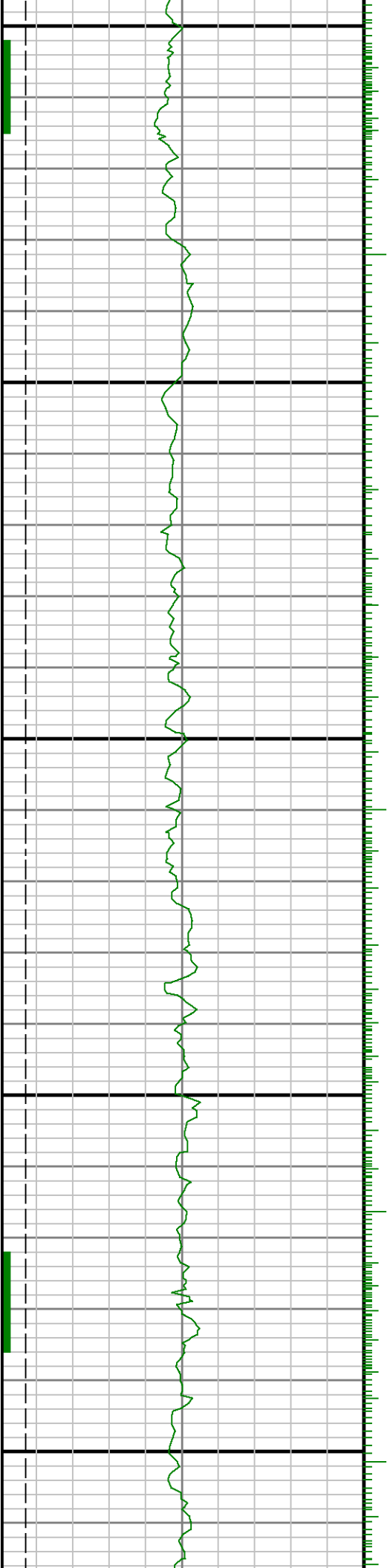


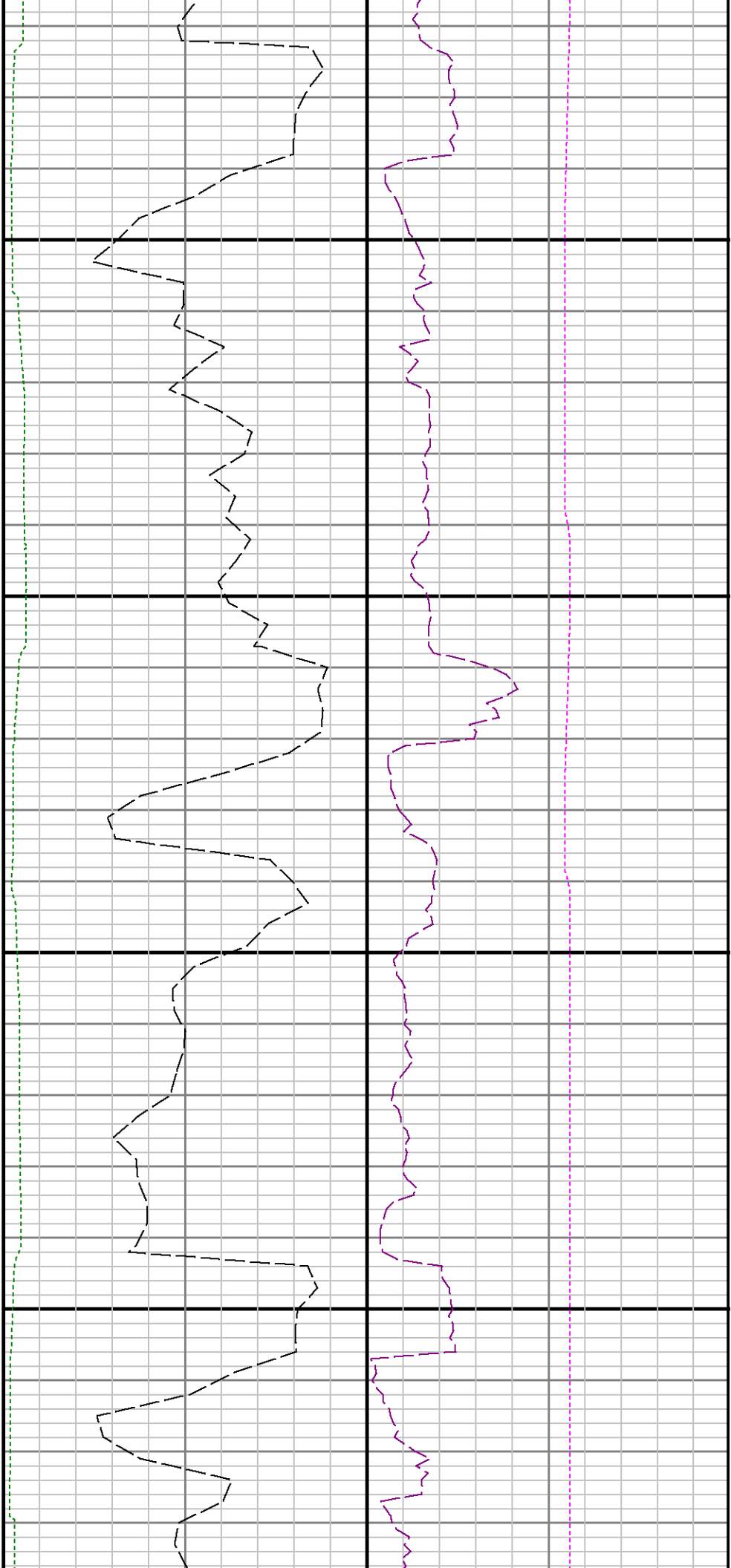




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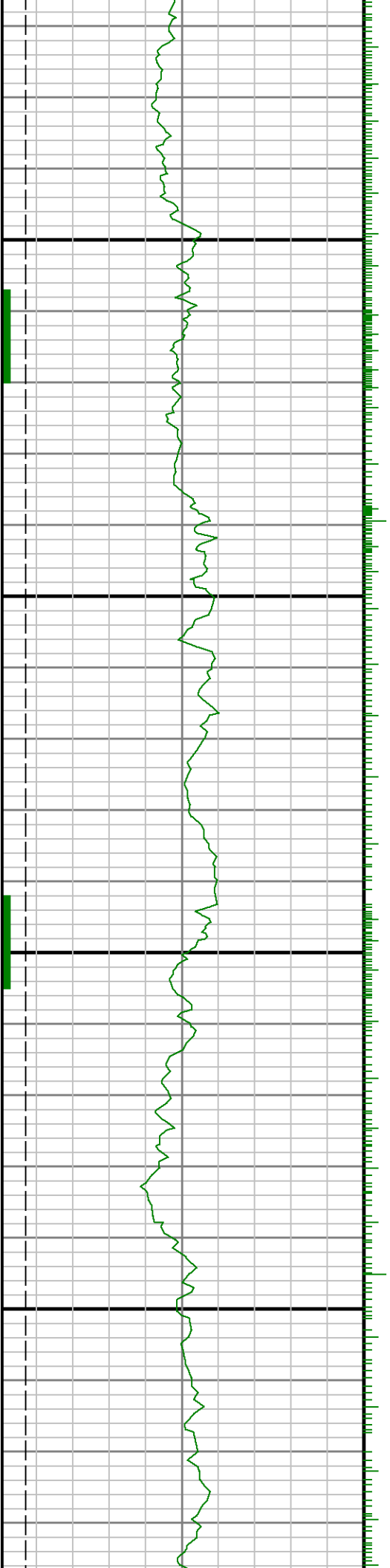
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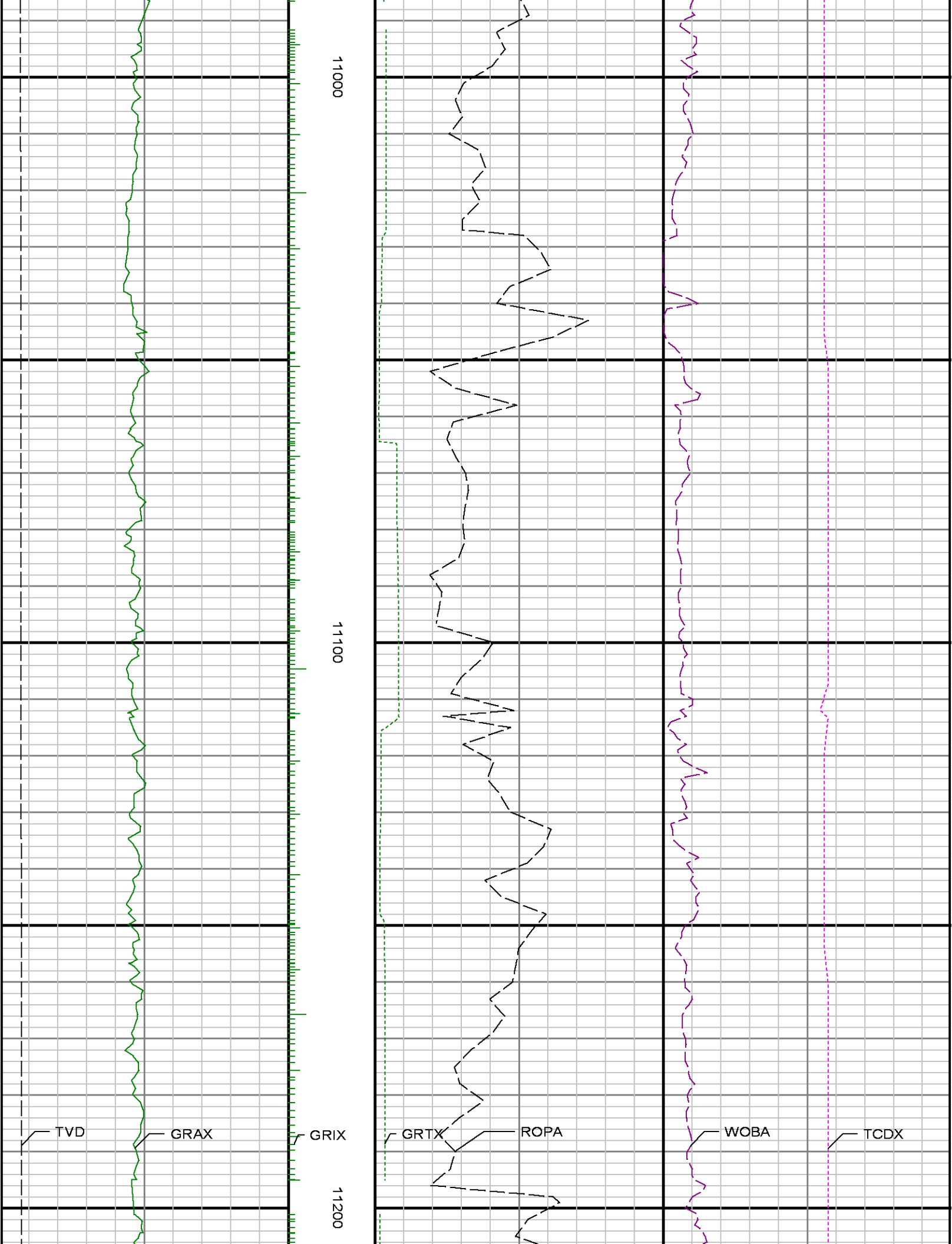


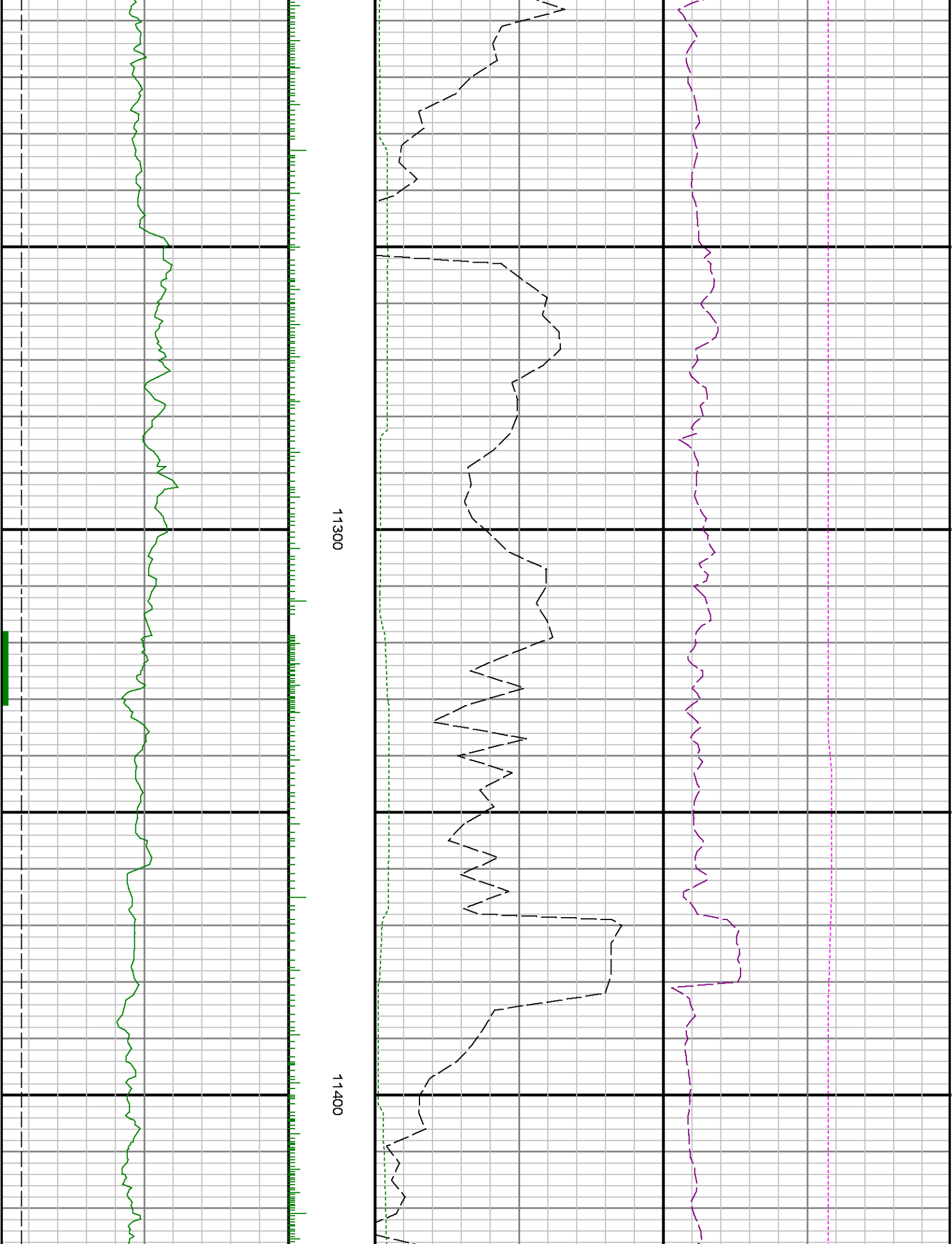


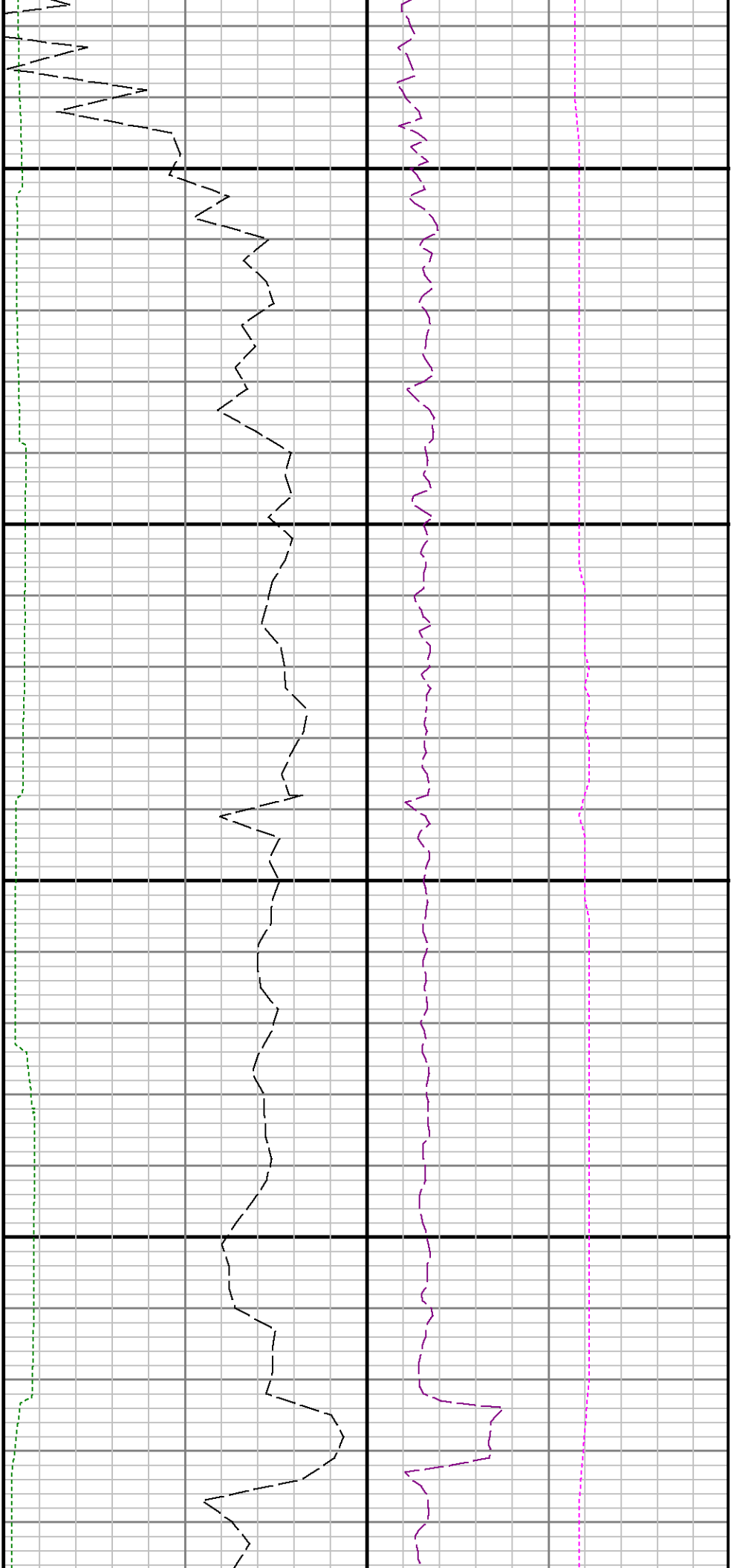
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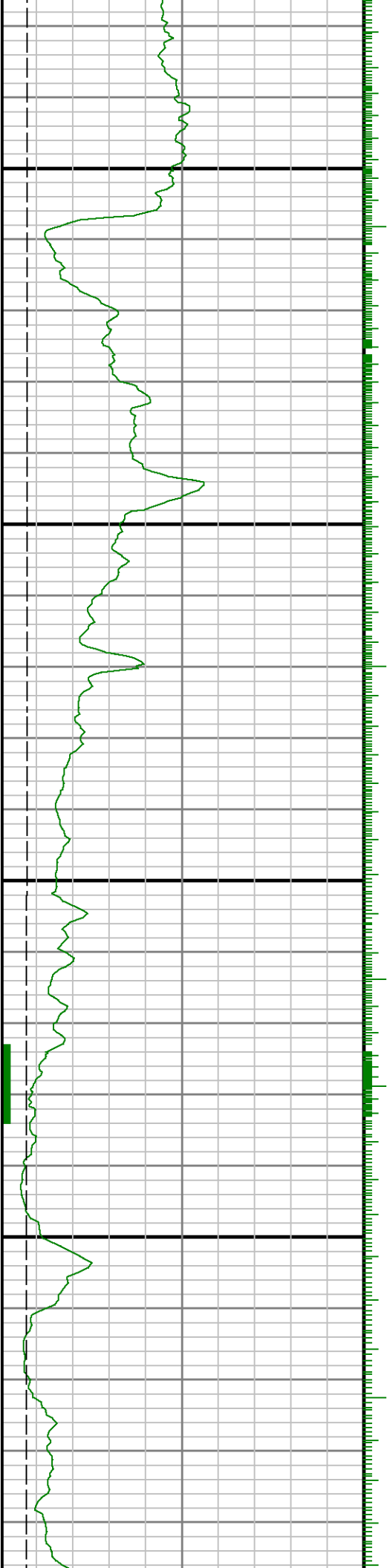


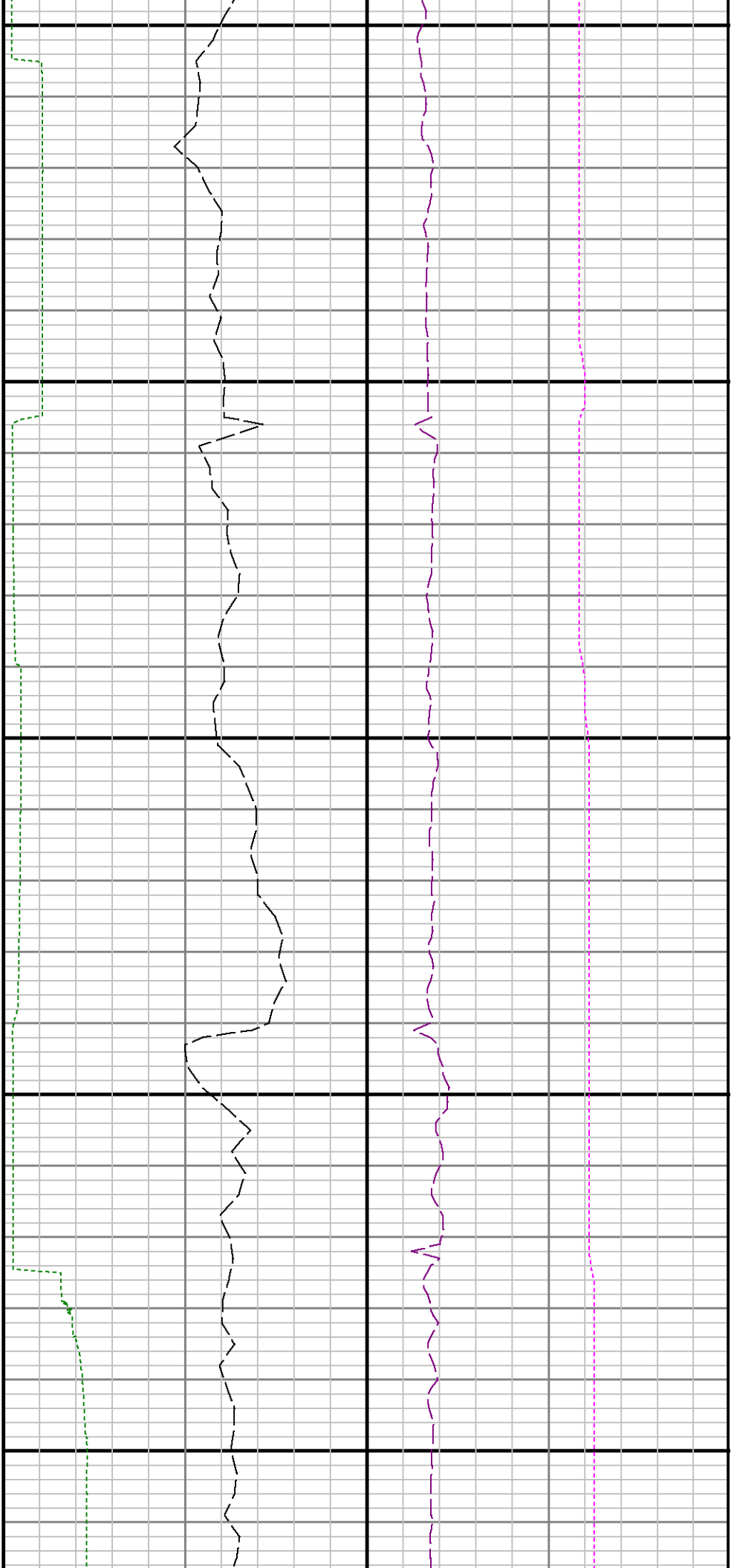




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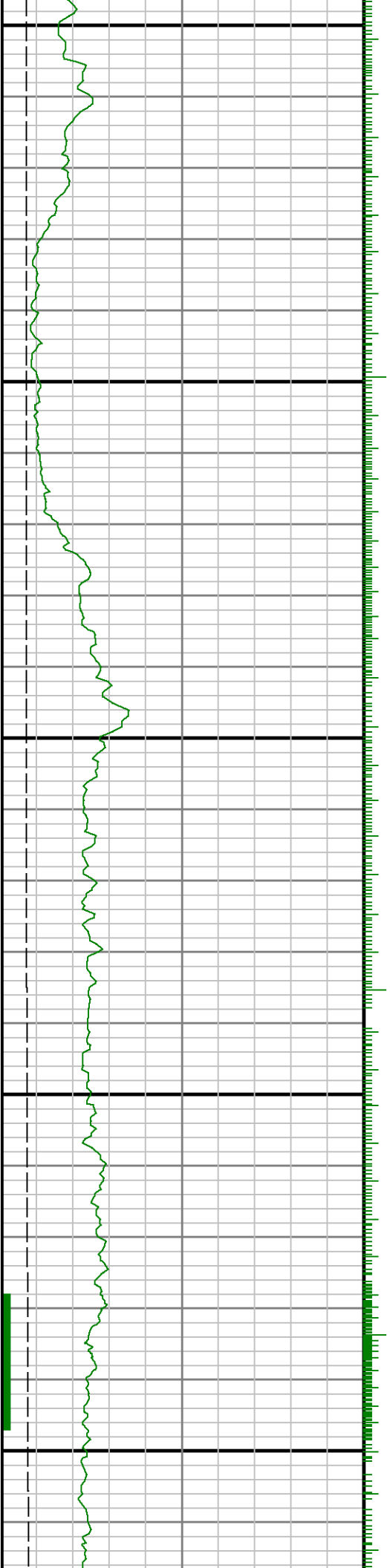
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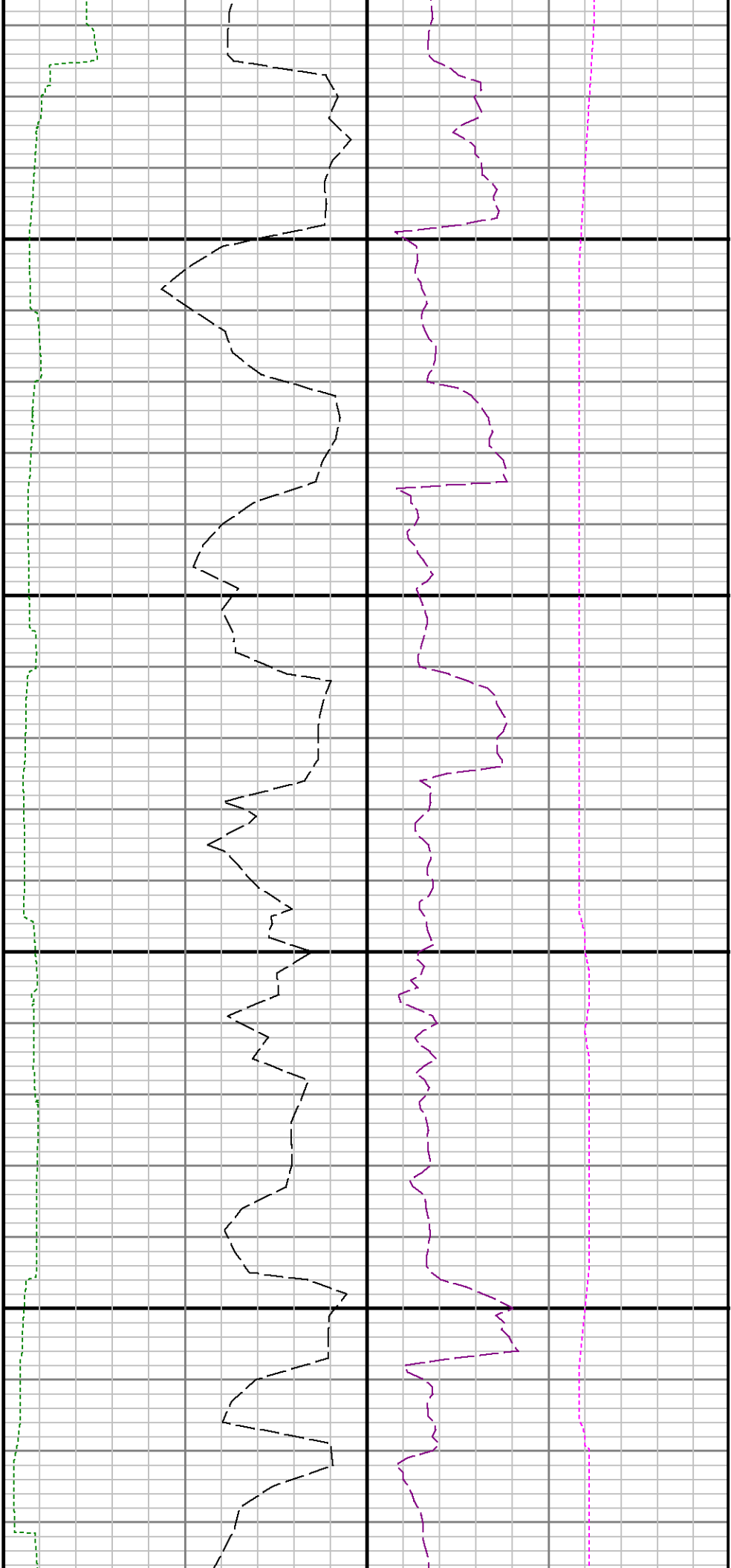




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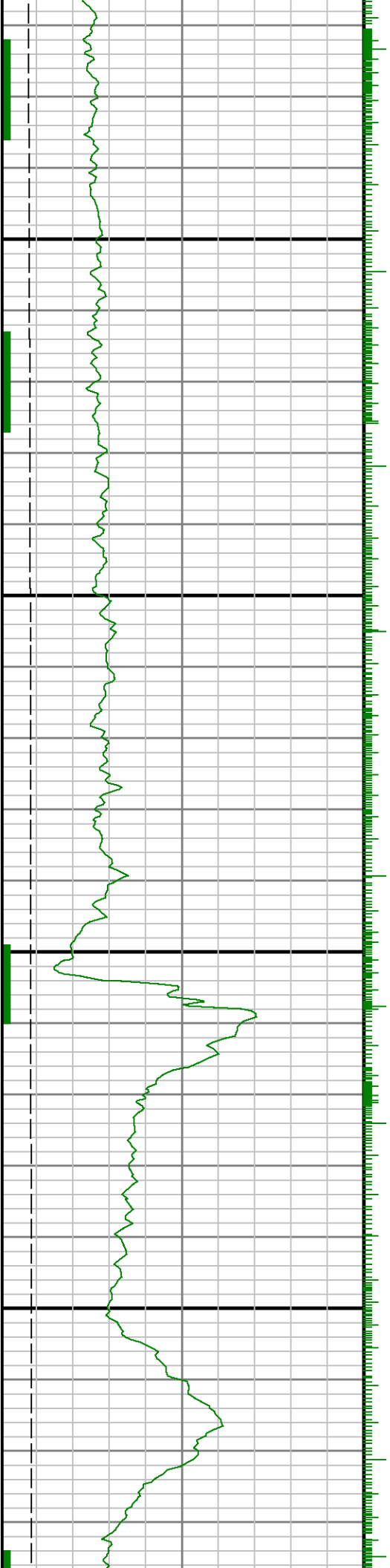
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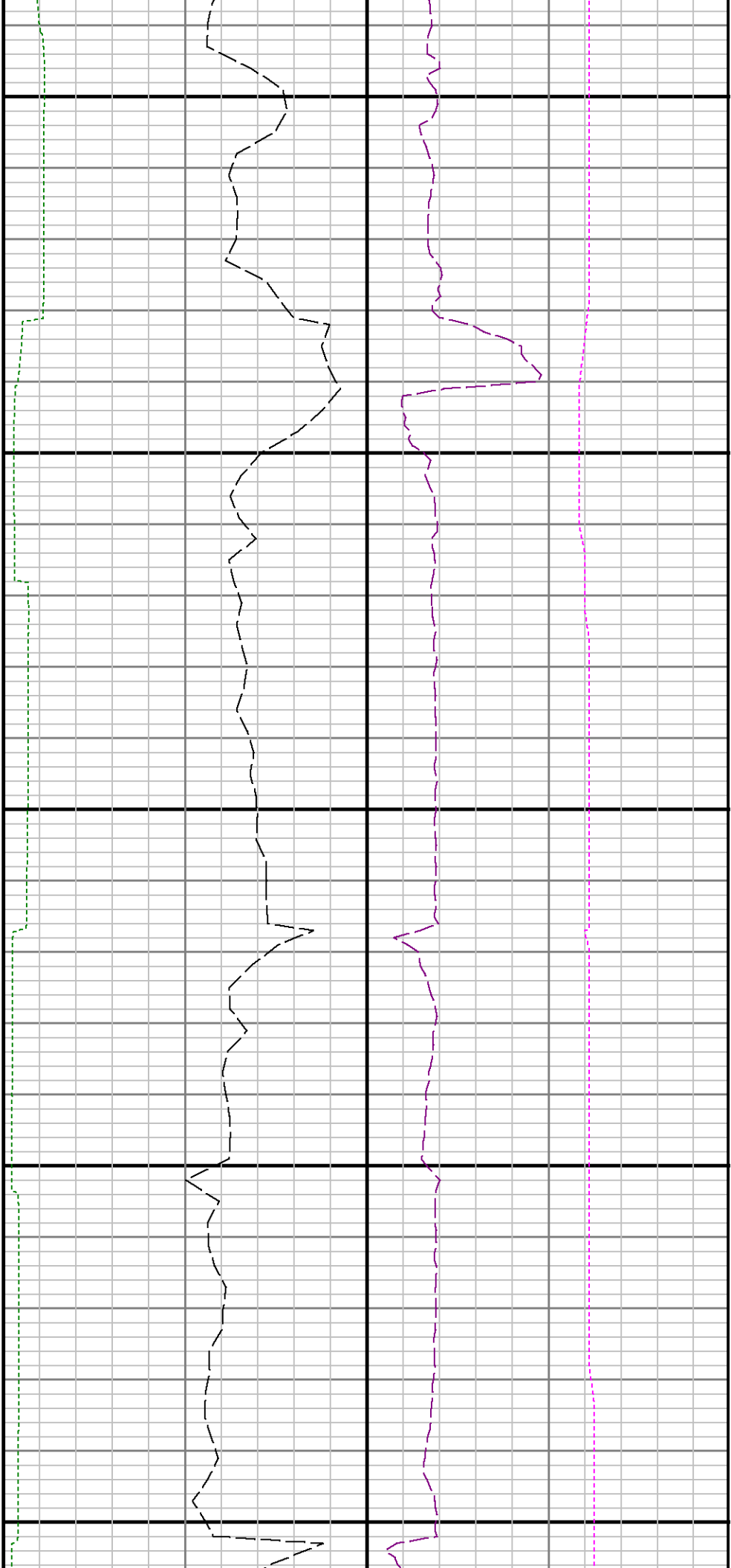




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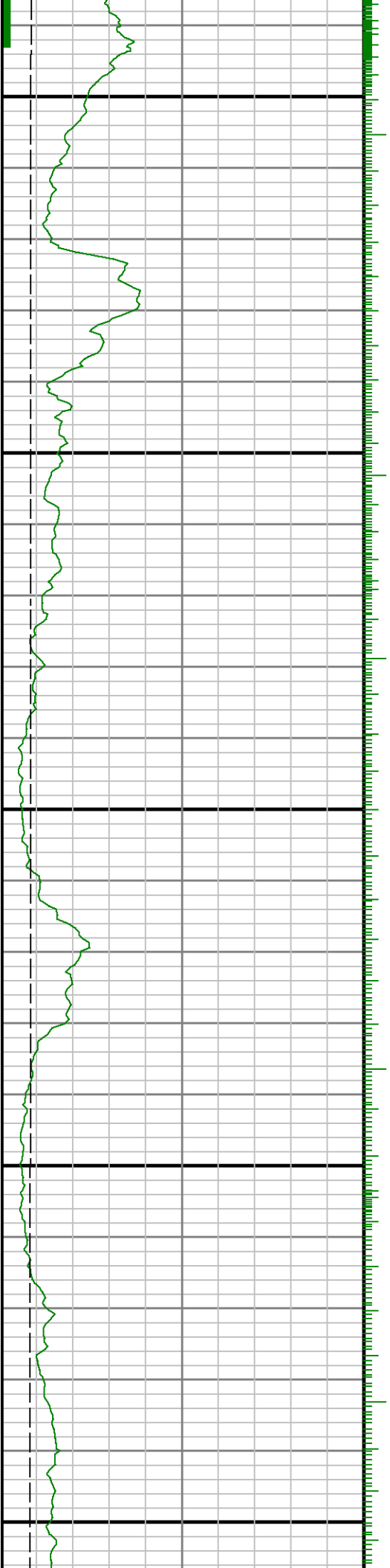




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12200

12300





12400

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