

	Wellsite	Wellsite		Wellsite	Wellsite			
John Nguyen	11 Aug 14	21 Aug 14				Jason Cross	11 Aug 14	17 Aug 14
Gregory Mouton	11 Aug 14	14 Aug 14				Alexander Janorschke	11 Aug 14	21 Aug 14
Robert G. Klos	15 Aug 14	23 Aug 14				Mark Snyder	17 Aug 14	20 Aug 14
						Ely Danner	20 Aug 14	23 Aug 14
						Mike Bryant	20 Aug 14	23 Aug 14

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (sec/qt)	pH	Fluid Loss (bbl)	Oil / Water	Source	Total Chlorides (mg/l)	K+ (%)
12 Aug 14	22:30	1	7086.0	Water base	9.8	40	9.0	N/A	0/93	Active Suction Line	1800	N/A
14 Aug 14	20:30	1	8262.0	Water base	9.0	44	9.1	N/A	1/89	Active Suction Line	1800	N/A
15 Aug 14	21:30	2	8393.0	Water base	9.2	42	9.3	N/A	1/94	Active Suction Line	1900	N/A
16 Aug 14	21:00	2	10769.0	Water base	9.4	46	9.3	N/A	2/92	Active Suction Line	1900	N/A
17 Aug 14	21:00	2	12703.0	Water base	9.4	52	9.3	N/A	4/89	Active Suction Line	1900	N/A
18 Aug 14	20:00	2	13709.0	Water base	9.5	50	9.3	N/A	4/89	Active Suction Line	1900	N/A
19 Aug 14	09:00	3	13816.0	Water base	9.5	54	9.3	N/A	4/89	Active Suction Line	2200	N/A
20 Aug 14	21:00	4	14004.0	Water base	9.6	50	9.4	N/A	4/88	Active Suction Line	2200	N/A
21 Aug 14	18:00	4	15599.0	Water base	9.7	55	9.3	N/A	4/88	Active Suction Line	2300	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg	API
GRIX	Gamma Ray Data Density	Points
GRSI	Gamma Ray Sliding Indication	Unitless
GRTX	Gamma Ra Time Since Drilled	Mins
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	10170012	Directional	47.14	6.750	0.000
1	SRIG	12416862	Gamma	43.77	6.750	4.750
2	DIR	12188484	Directional	49.45	4.750	2.000
2	SRIG	10662886	Gamma	46.07	4.750	2.000
3	DIR	12093881	Directional	54.78	4.750	2.000
3	SRIG	12023988	Gamma	51.40	4.750	2.000
4	DIR	12456788	Directional	49.94	4.750	2.000

4	SRIG	12613300	Gamma	46.56	4.750	2.000
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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 INTEQ. Due to lack of control by Baker Hughes INTEQ logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to INTEQ are being used to represent logging data.
2. A sliding indicator is 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 with gamma ray data acquired while sliding.
3. Baker Hughes run 1 utilized a 6.75 inch Navigamma (Gamma Ray and Directionl) tool behind a 8.75 inch bit and steerable assembly from 1008 feet to 8261 feet MD (1007.99 feet to 7807.21 feet TVD.)
4. Baker Hughes run 2 through 4 utilized a 4.75 inch Navigamma (Gamma Ray and Directionl) tool behind a 6.125 inch bit and steerable assembly from 8262 feet to 15599 feet MD (7807.28 feet to 7792.17 feet TVD.)

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	8243	8.750	1	Gamma Ray Apparent from 8217 feet to 8262 feet MD (7803.30 feet to 7807.28 feet TVD) was logged 45.03 hours after being drilled due to tripping out of hole to change out BHA for Lateral Tools.
2	8323	8.750	2	Interval from 8308 to 8706 ft MD (7809.94 to 7811.85 ft TVD) has missing WOBA data due to discrepancies
3	13687	6.125	3	Gamma Ray Apparent from 7342 feet to 7388 feet MD (7309.32 feet to 7349.31 feet TVD) was logged 43.1 hours after being drilled due to tripping out of hole to change out MWD Tool.
4	13707	6.125	4	Run 3 has no logging date due to MWD failure
5	15233	6.125	4	Interval from 14700 to 15599 ft. MD (7802.11 to 7792.17 ft. TVD) has inconsistencies in GRAX, GRIX and GRTX due to discrepancies in surface logging systems.
6	15577	6.125	4	Interval from 15547 to 15599 ft. MD (7792.81 to 7792.17 ft. TVD) has no GRAX, GRIX and GRTX due to bit to sensor offset.



Company : Anadarko

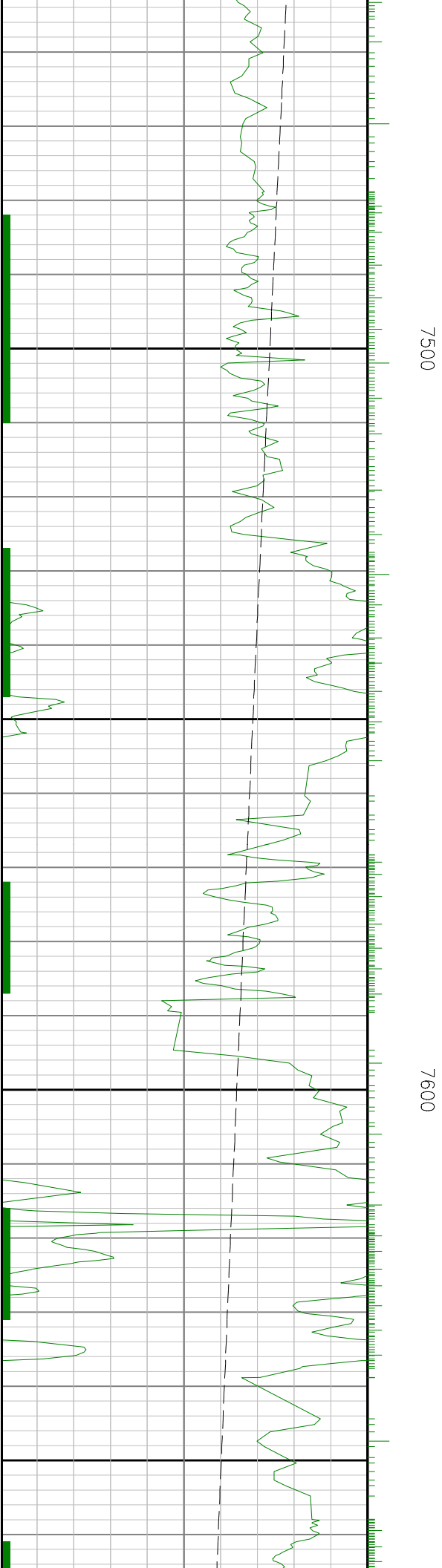
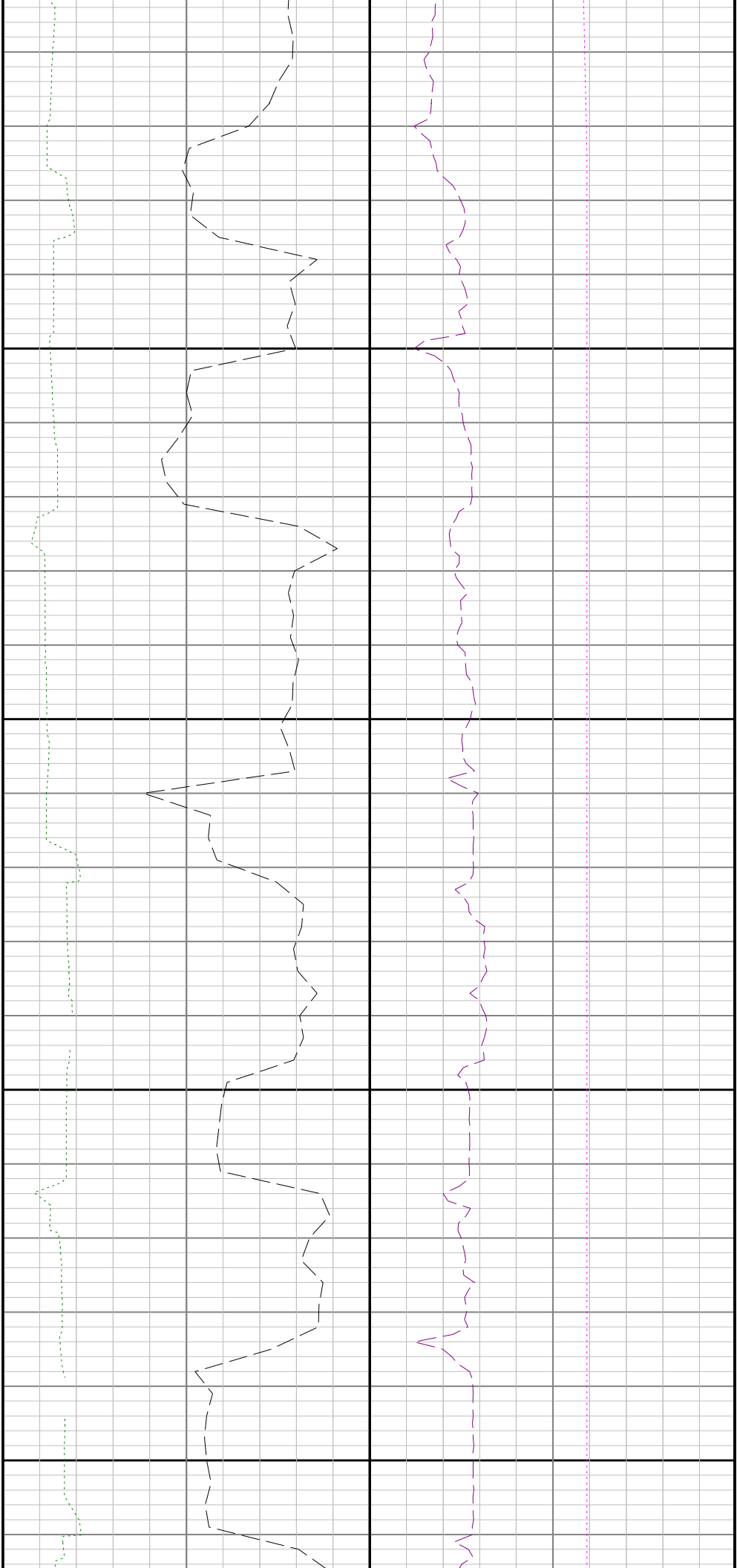
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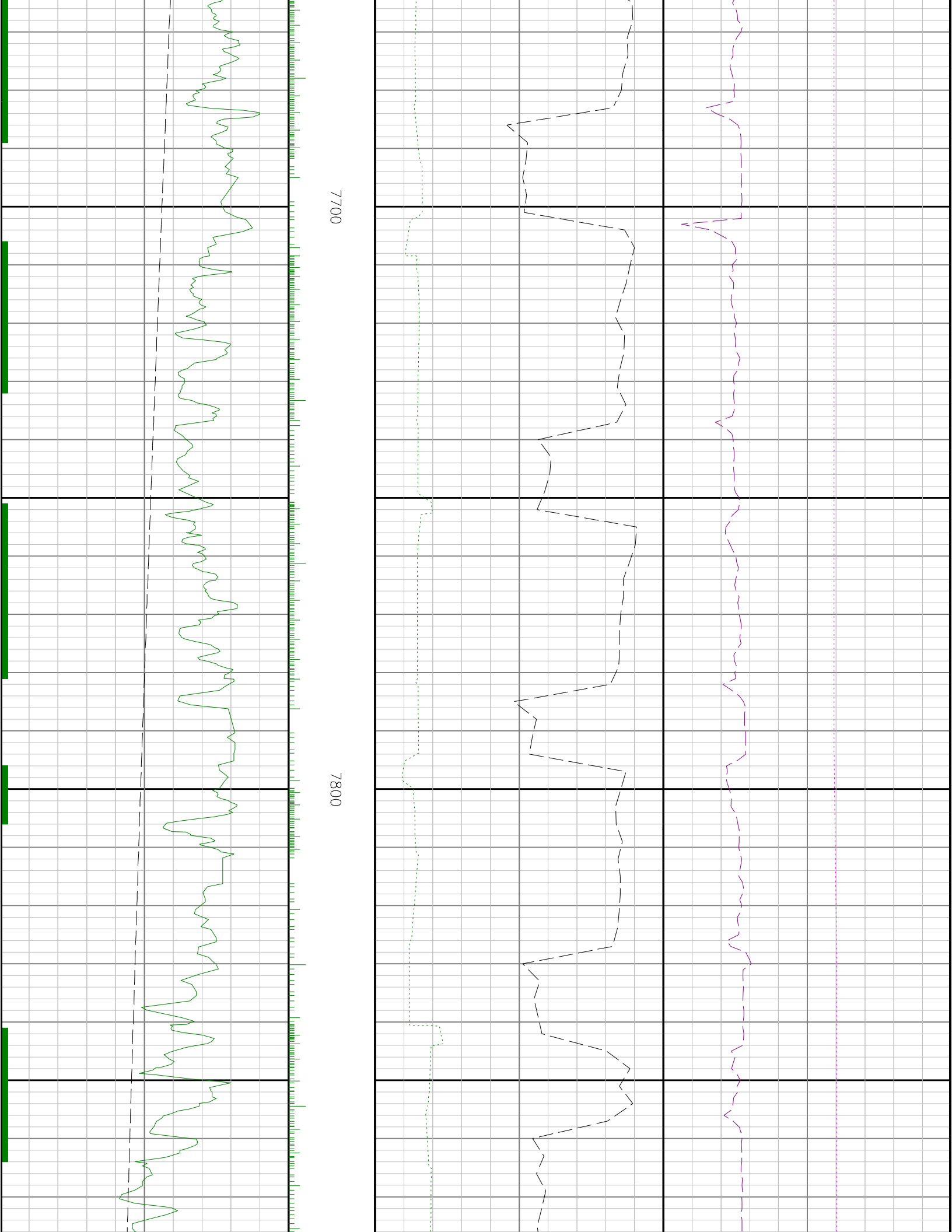
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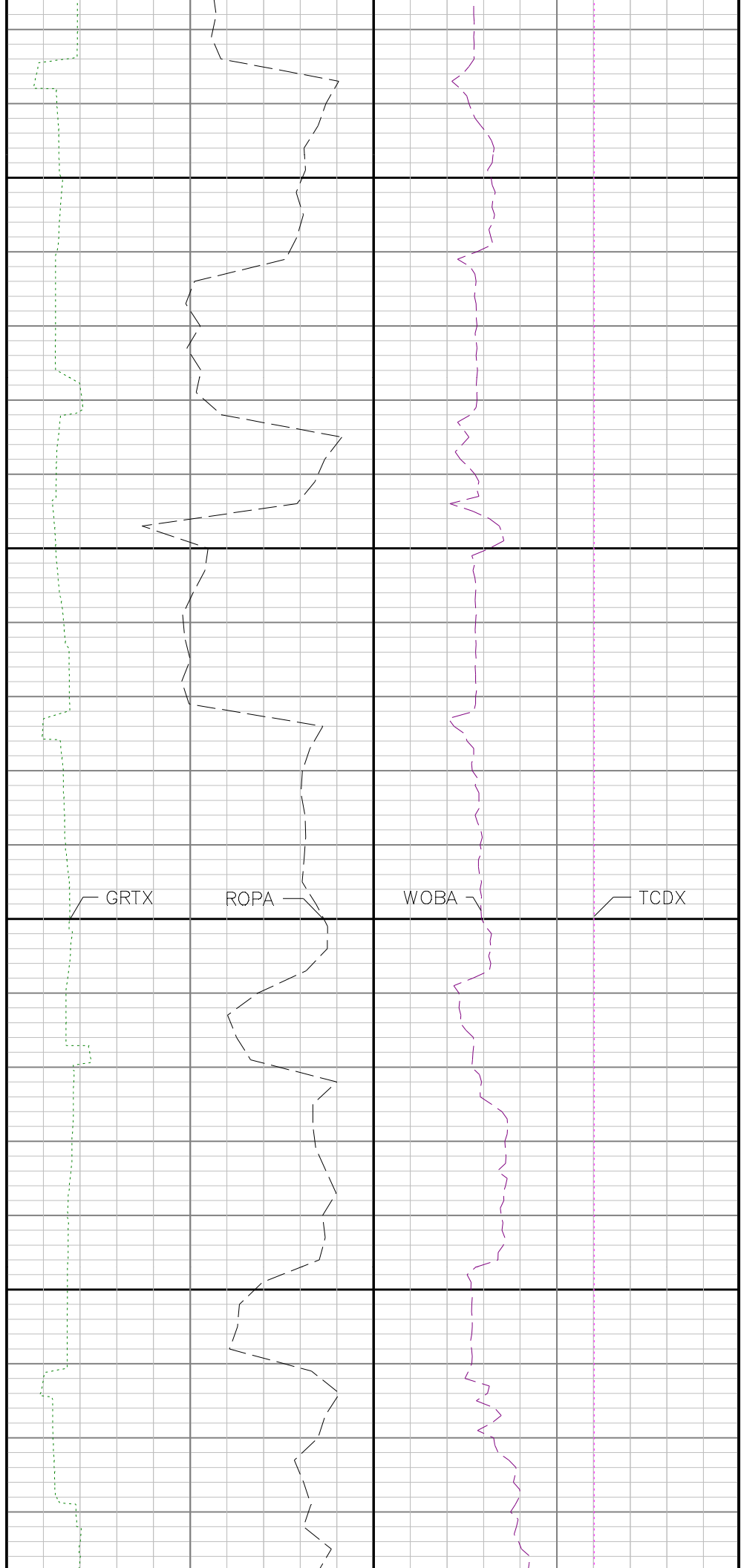
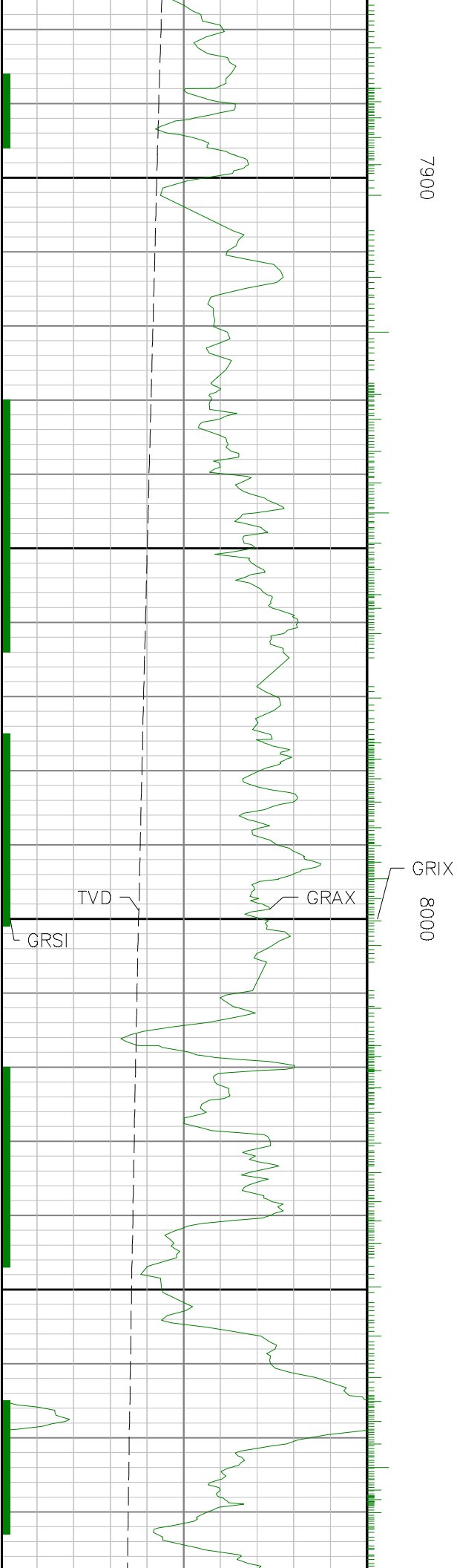
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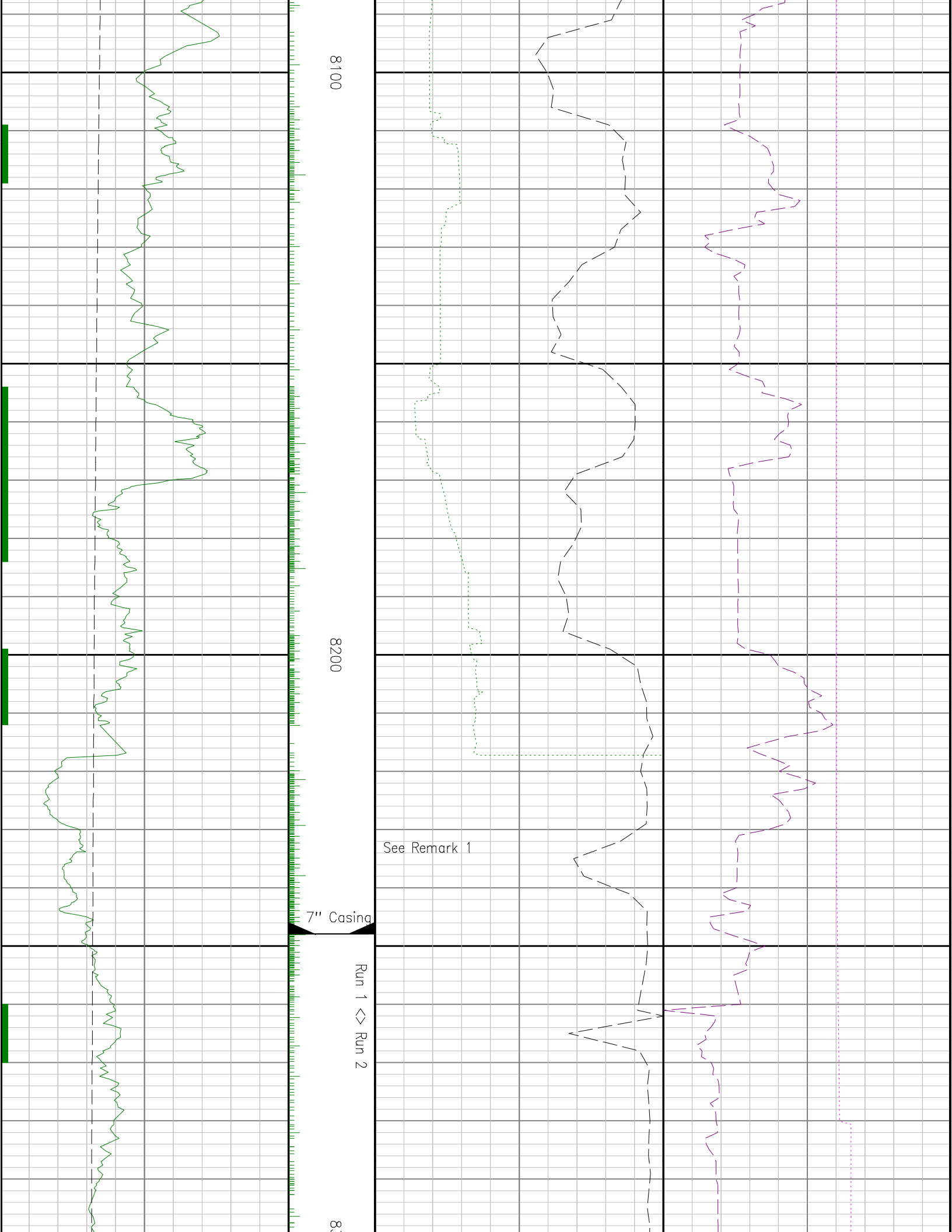
<div>Gamma Ray Apparent 0.5 ft Avg GRAX</div> <div>0200</div> <div>API</div> <div>True Vertical Depth TVD</div> <div>81007175</div> <div>ft</div>	<div>MD feet 1:240</div>	<div>Gamma Time Since Drilled GRTX</div> <div>0300</div> <div>min</div> <div>Rate of Penetration 3.0 ft Avg ROPA</div> <div>5000</div> <div>ft/hr</div>	<div>Surface Weight On Bit 1.0 ft Avg WOBA</div> <div>0100</div> <div>klbf</div> <div>Downhole Temperature TCDX</div> <div>0275</div> <div>degF</div>
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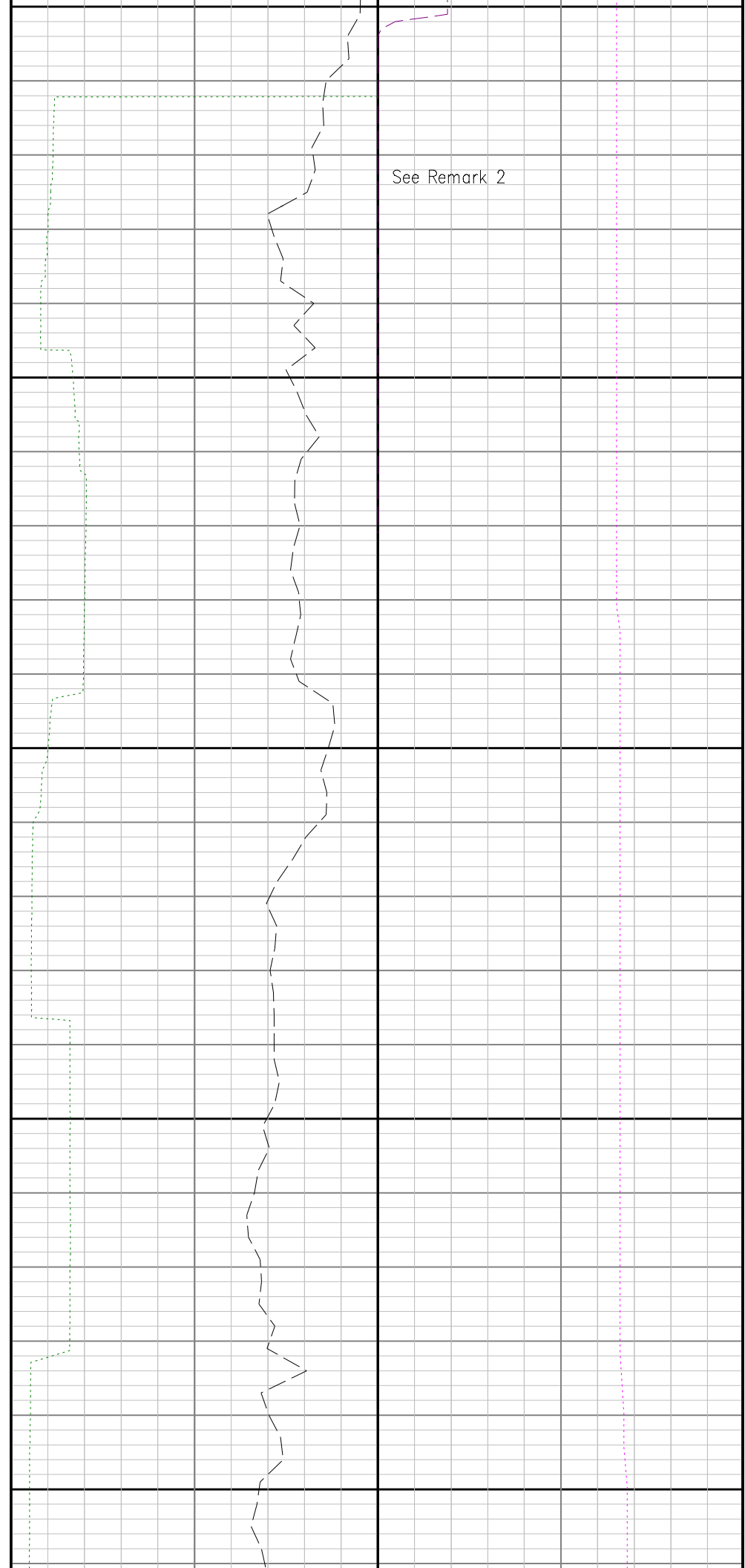
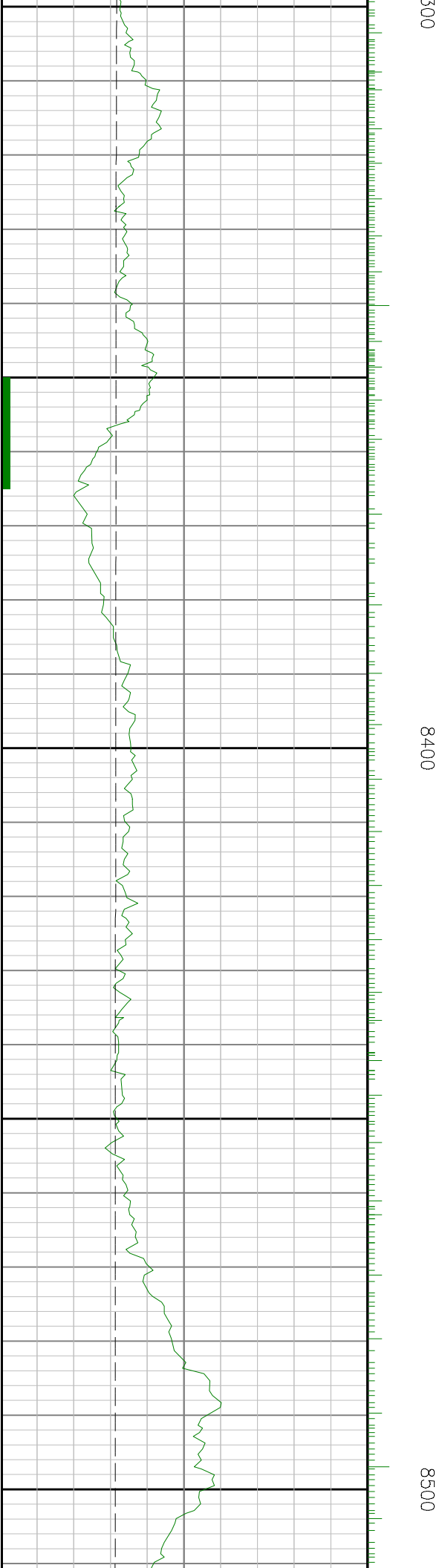


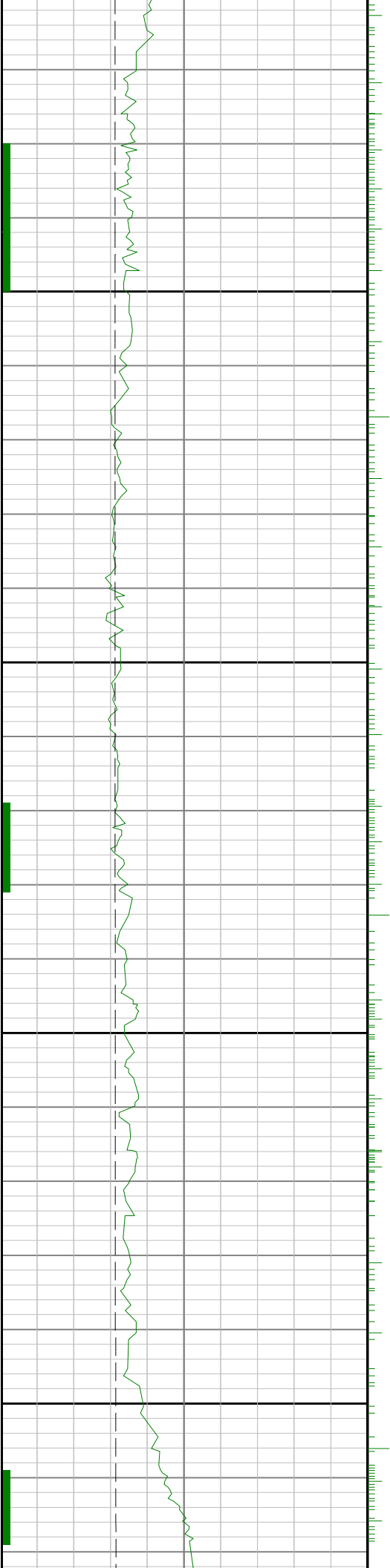






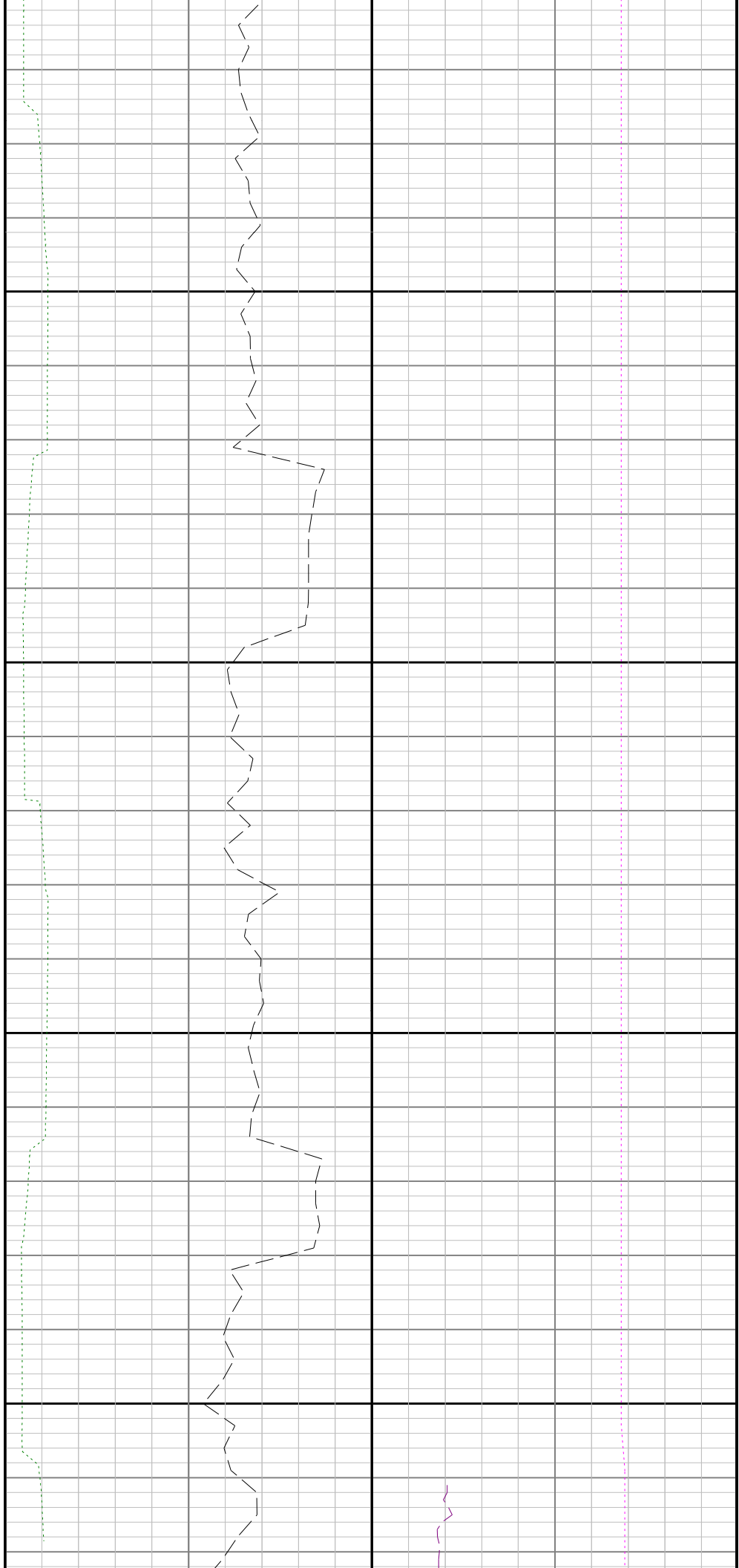


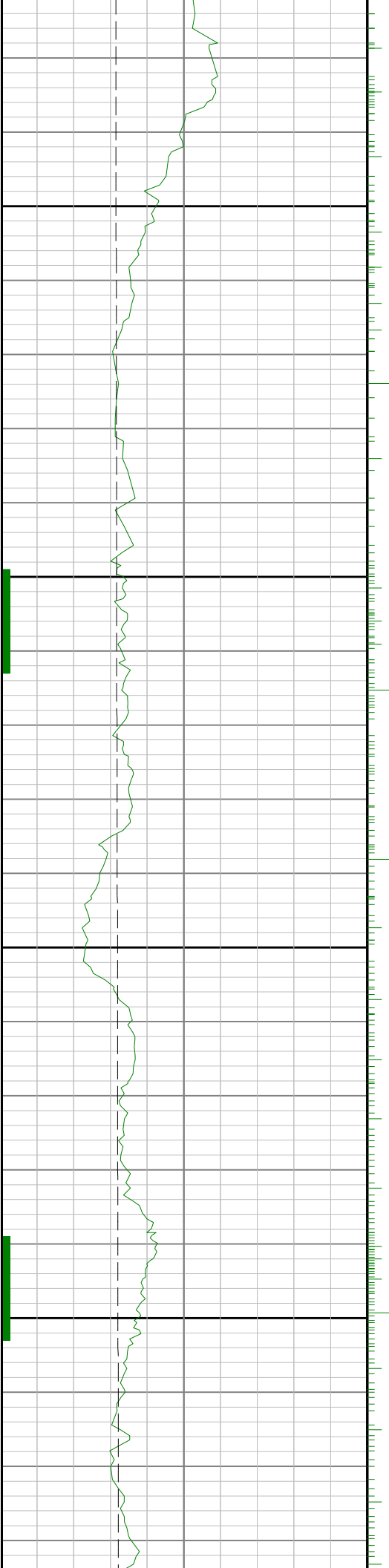




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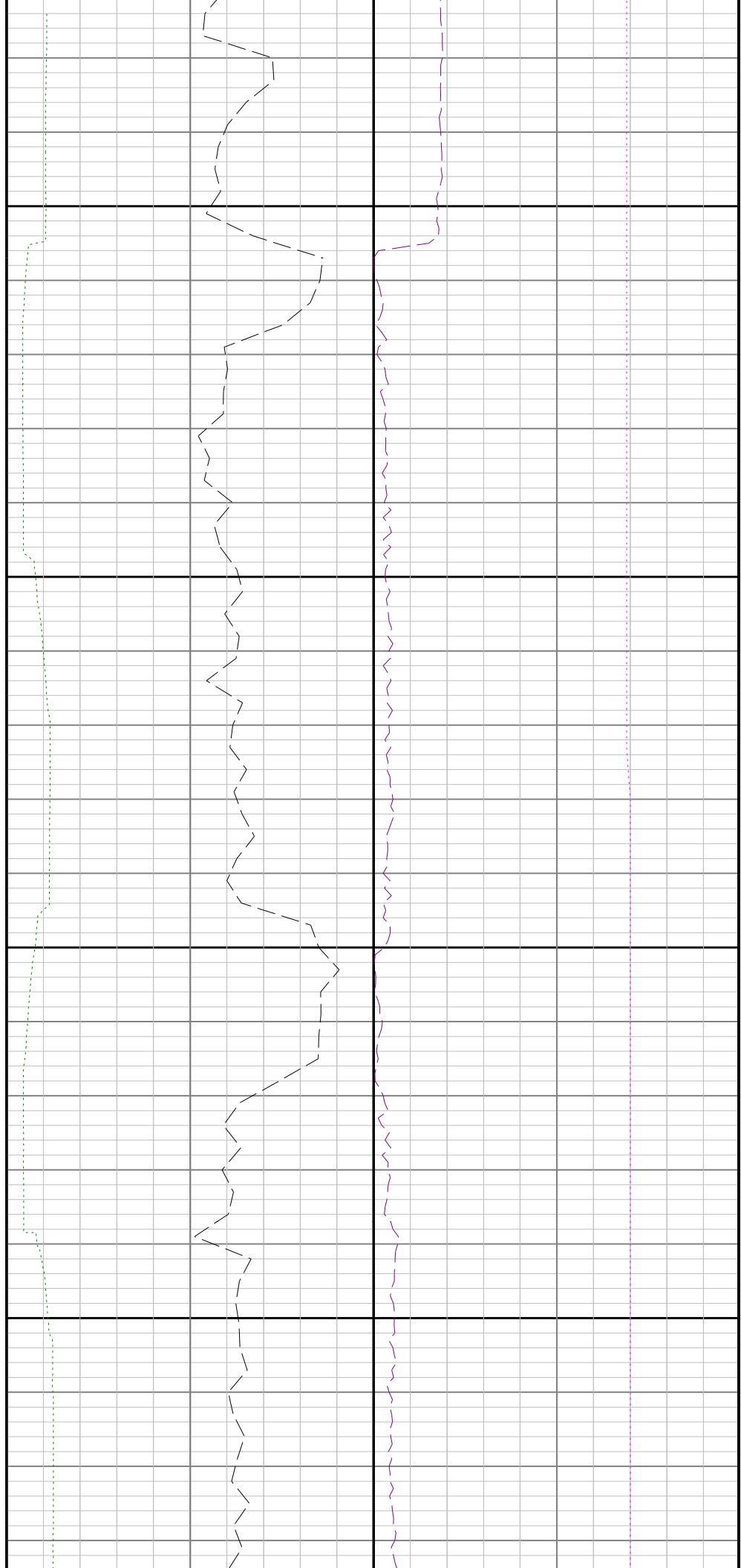
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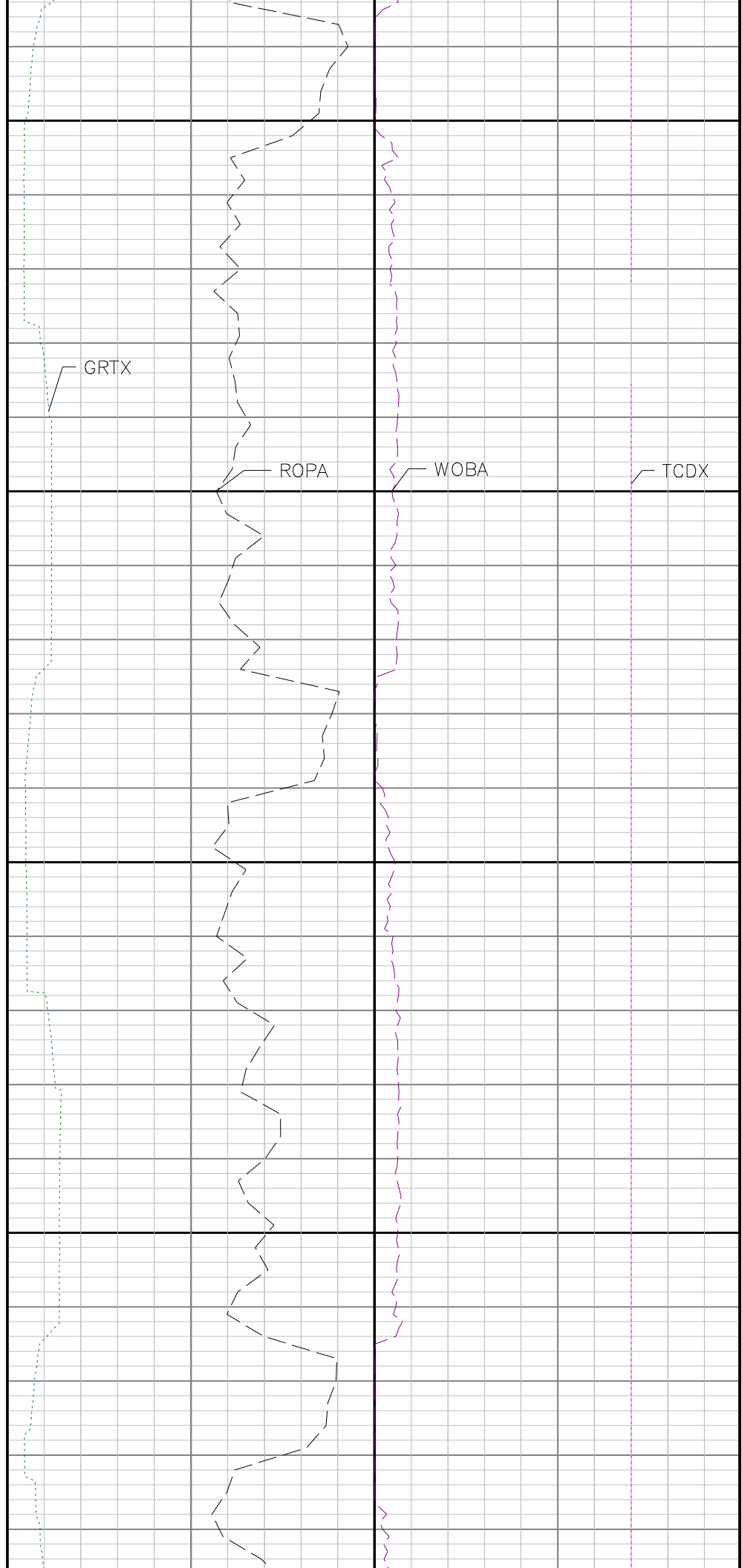
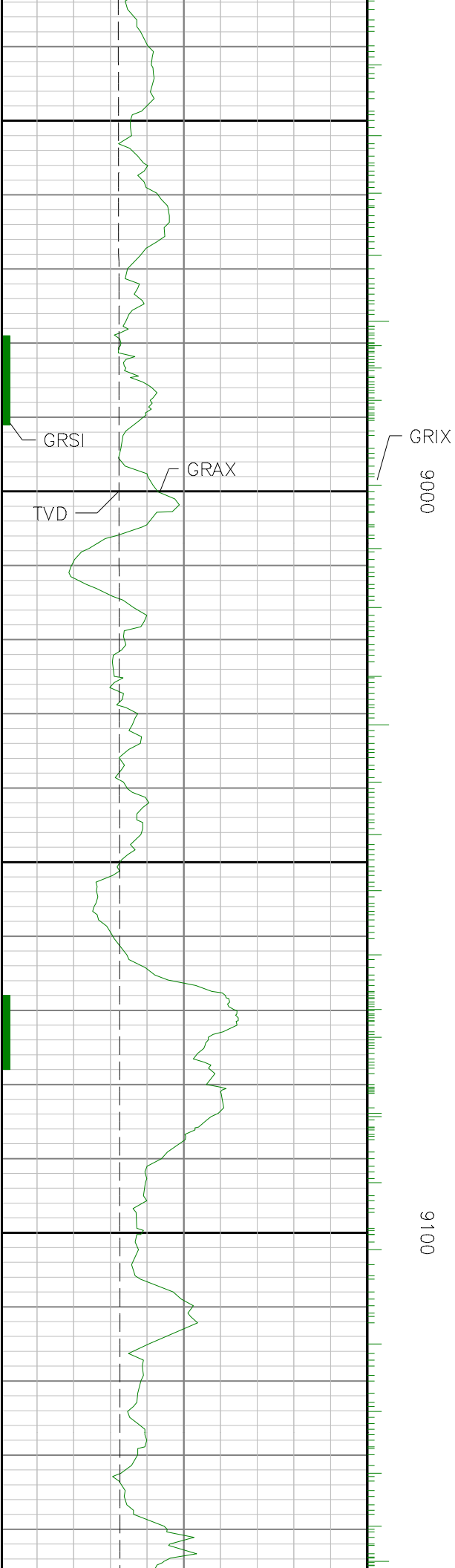


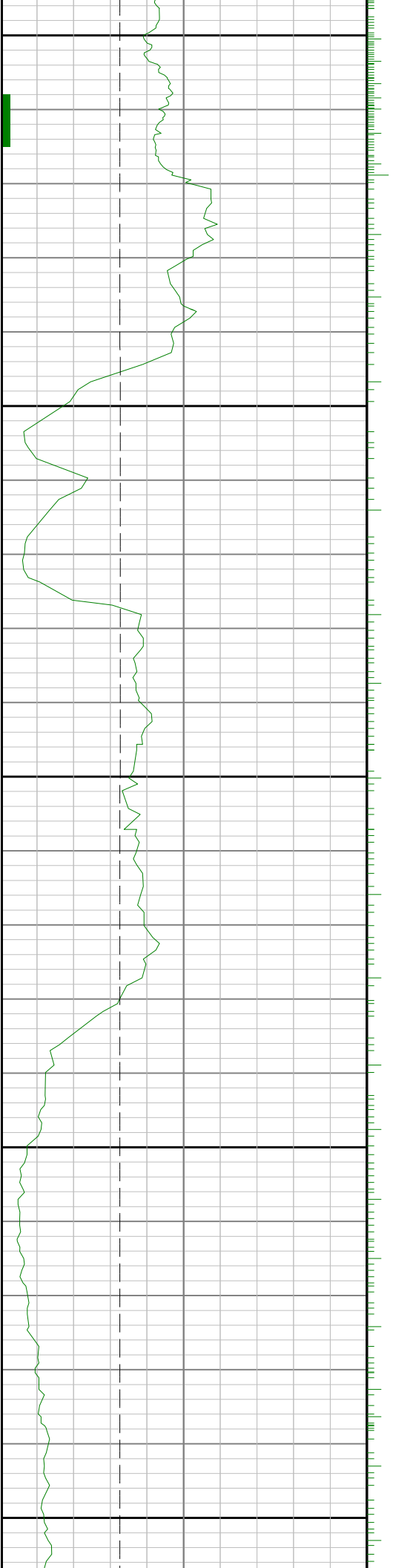


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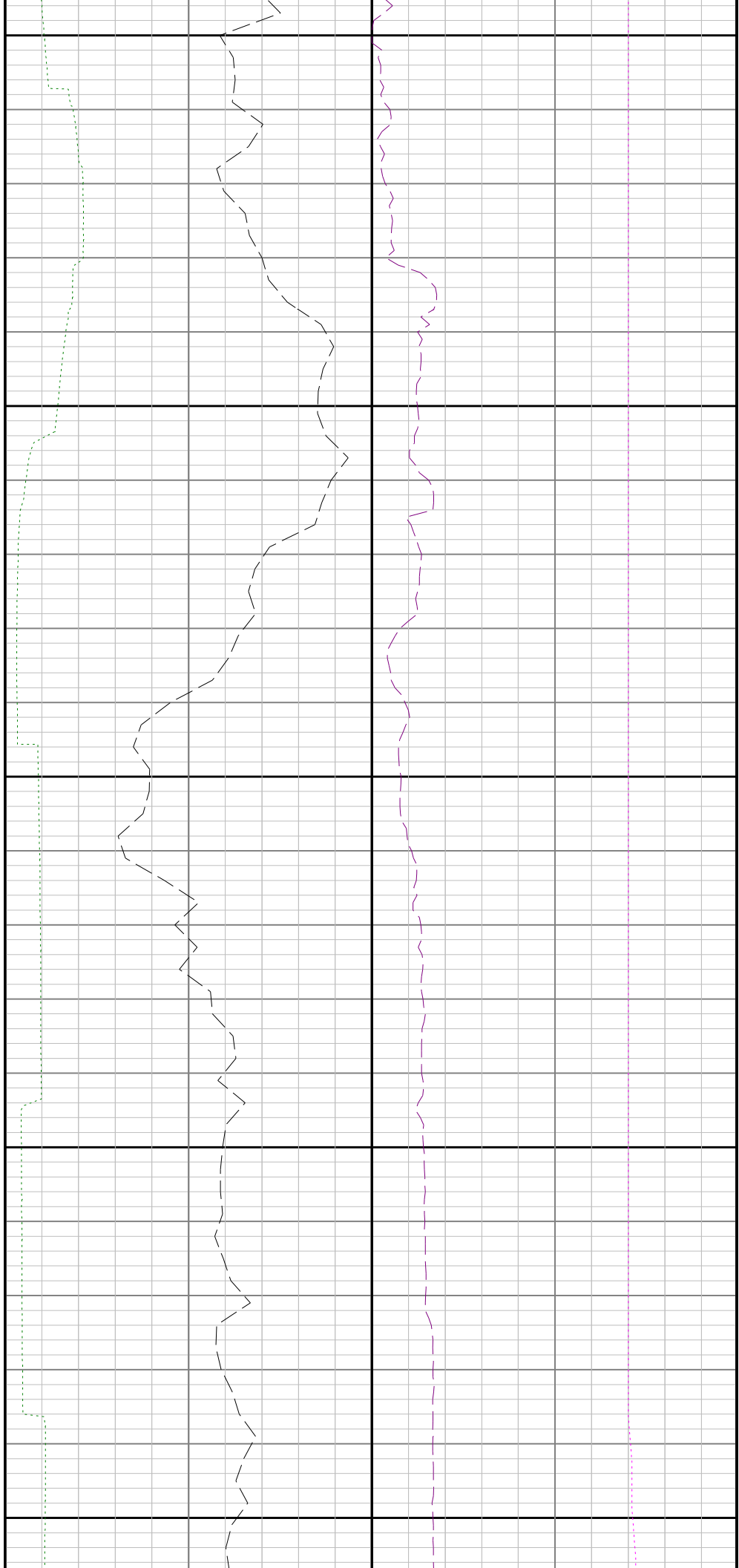


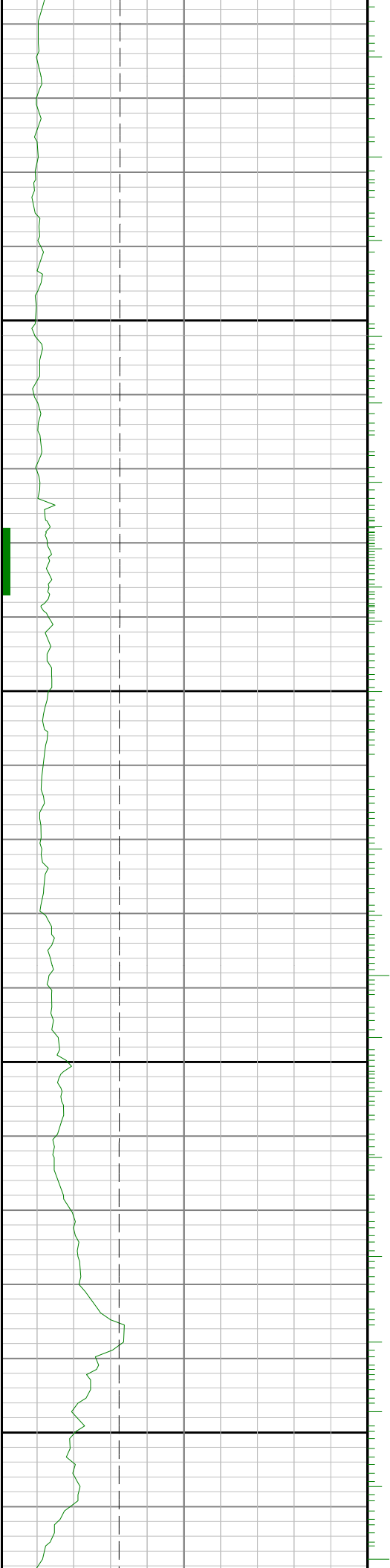




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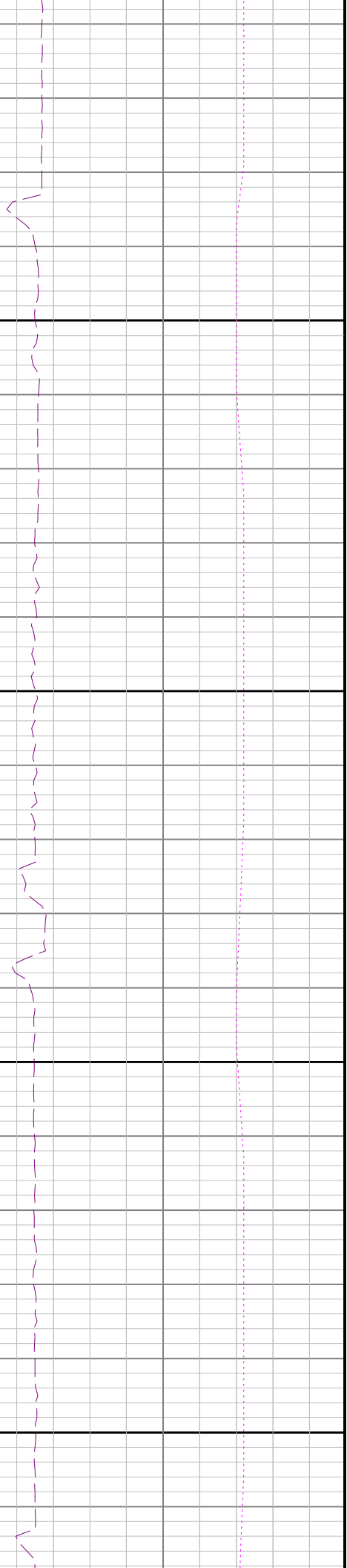
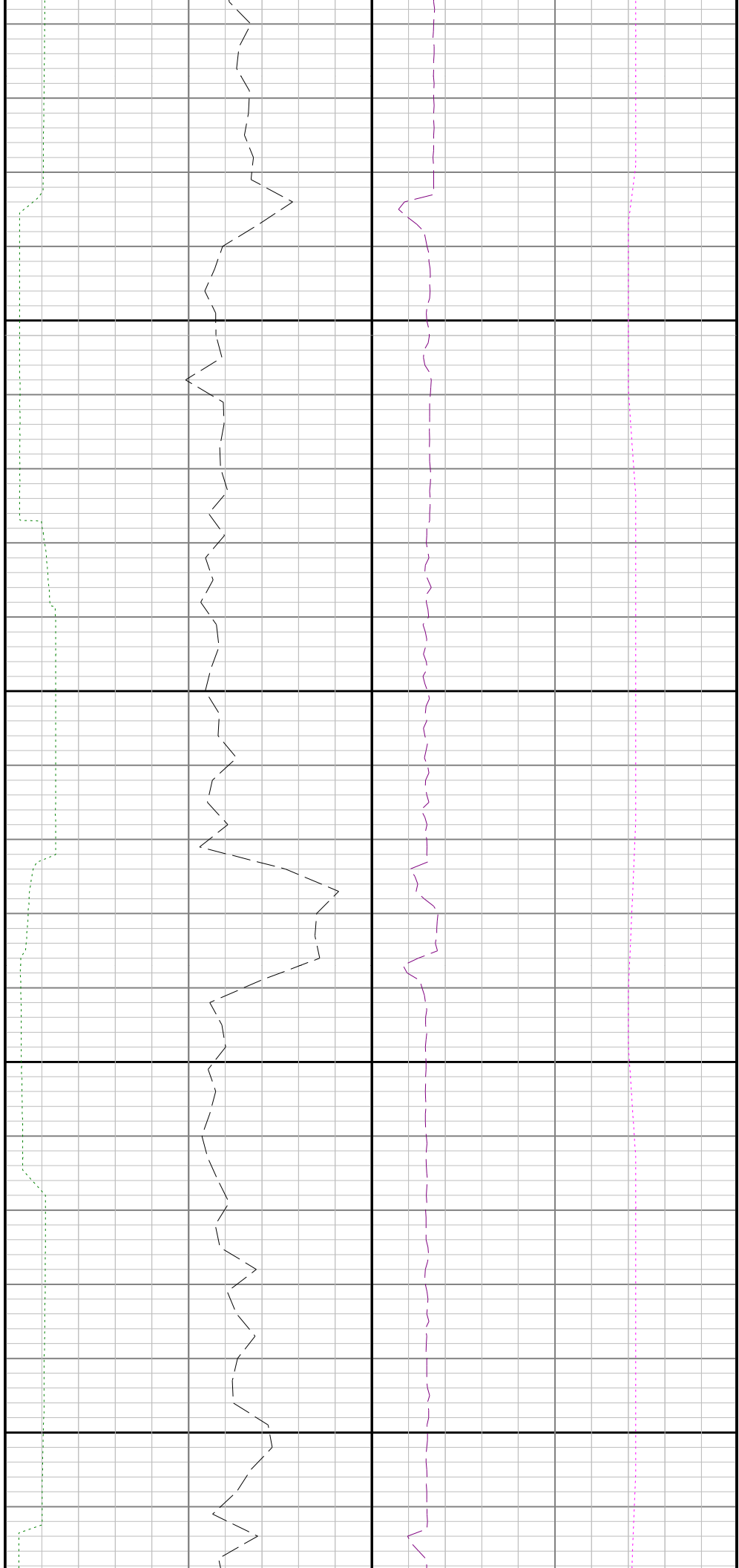
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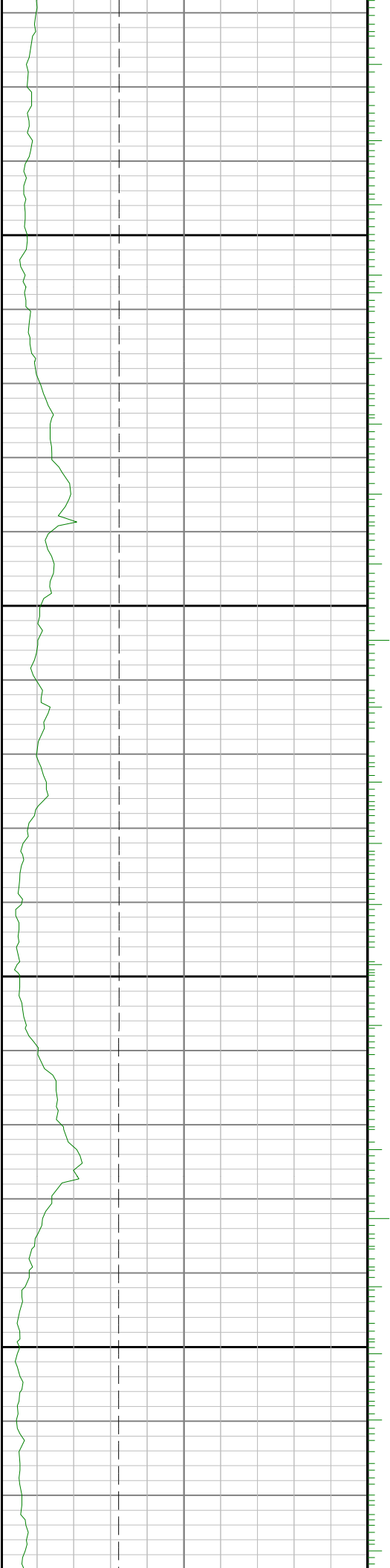




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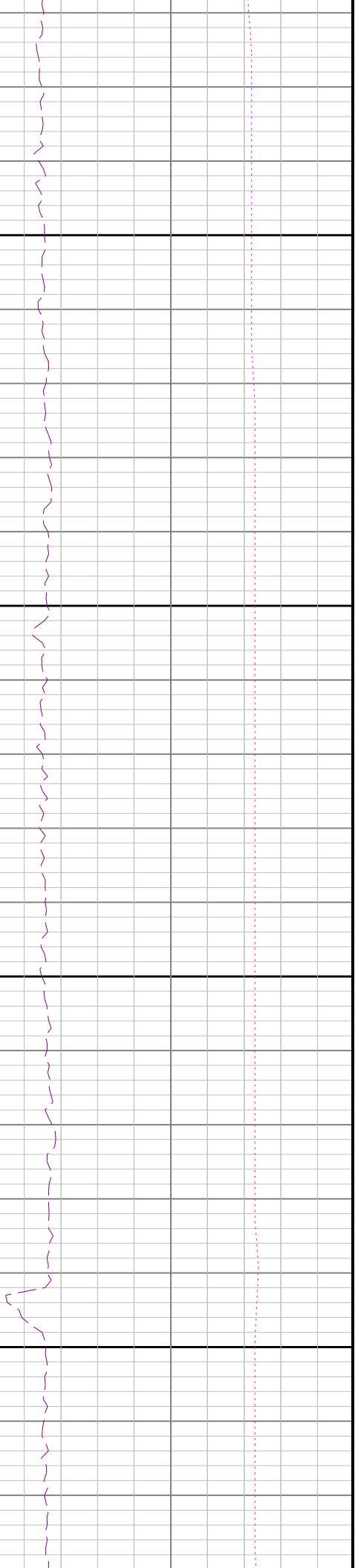
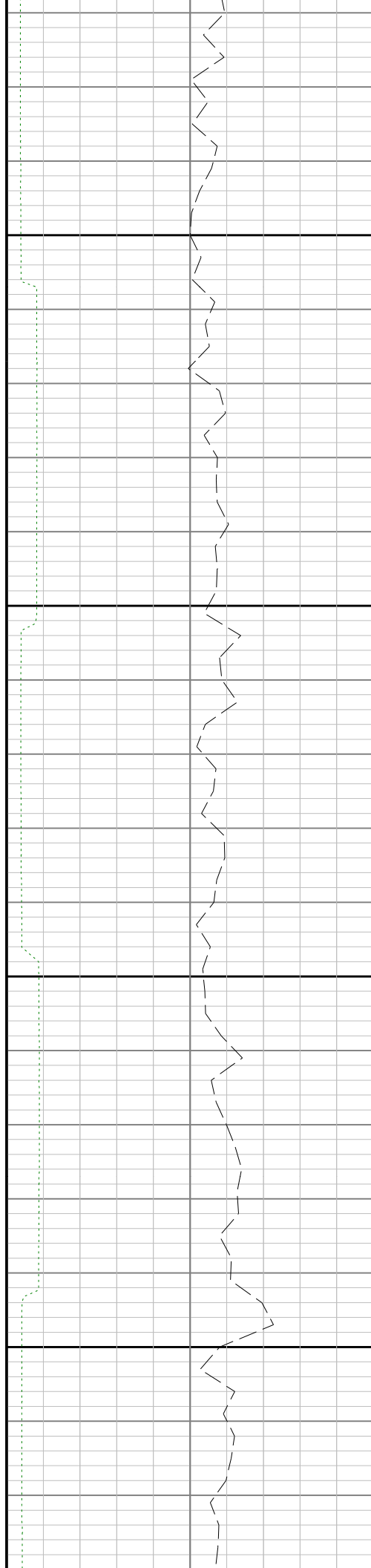
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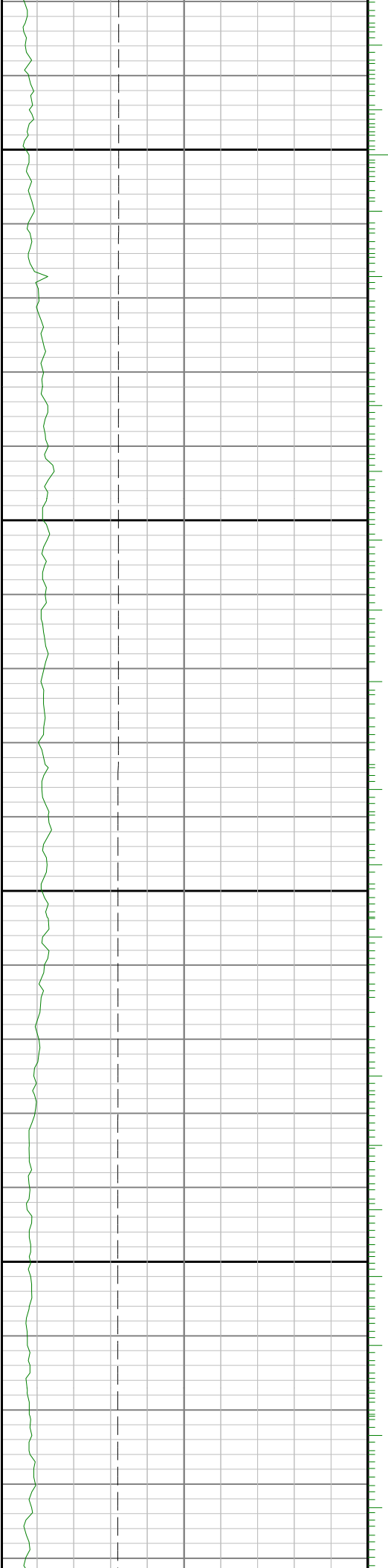




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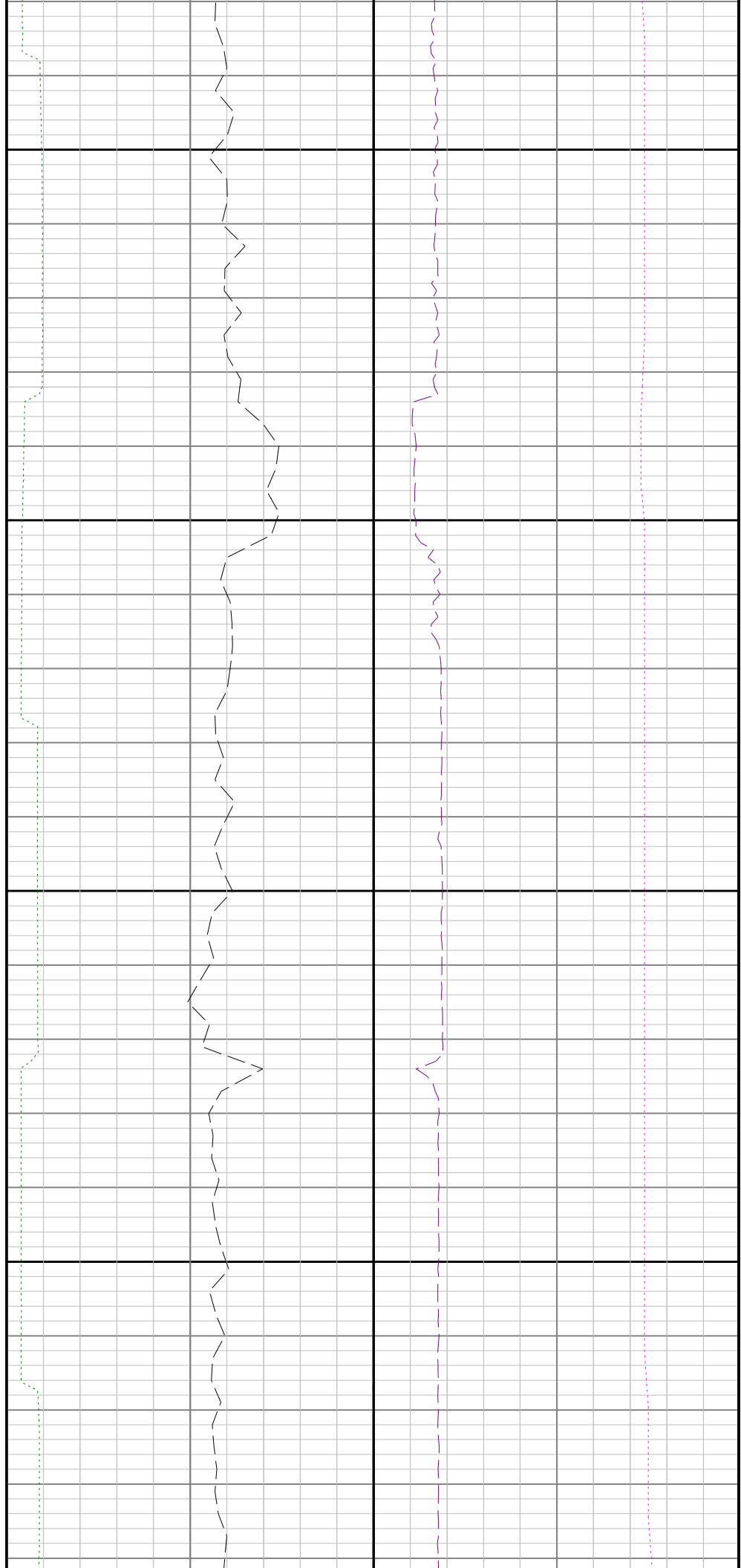
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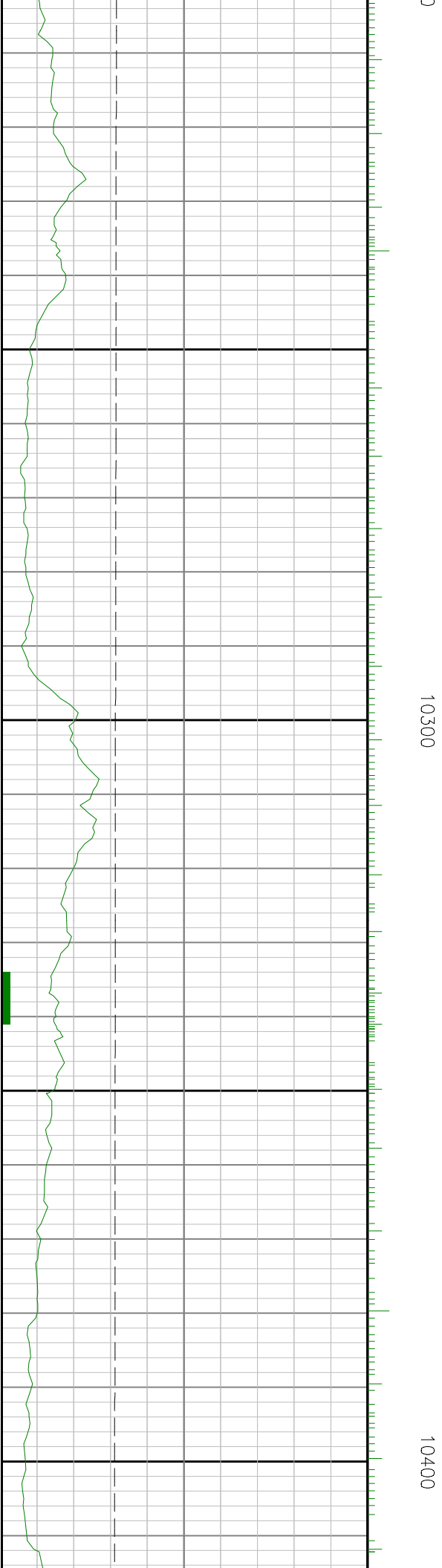
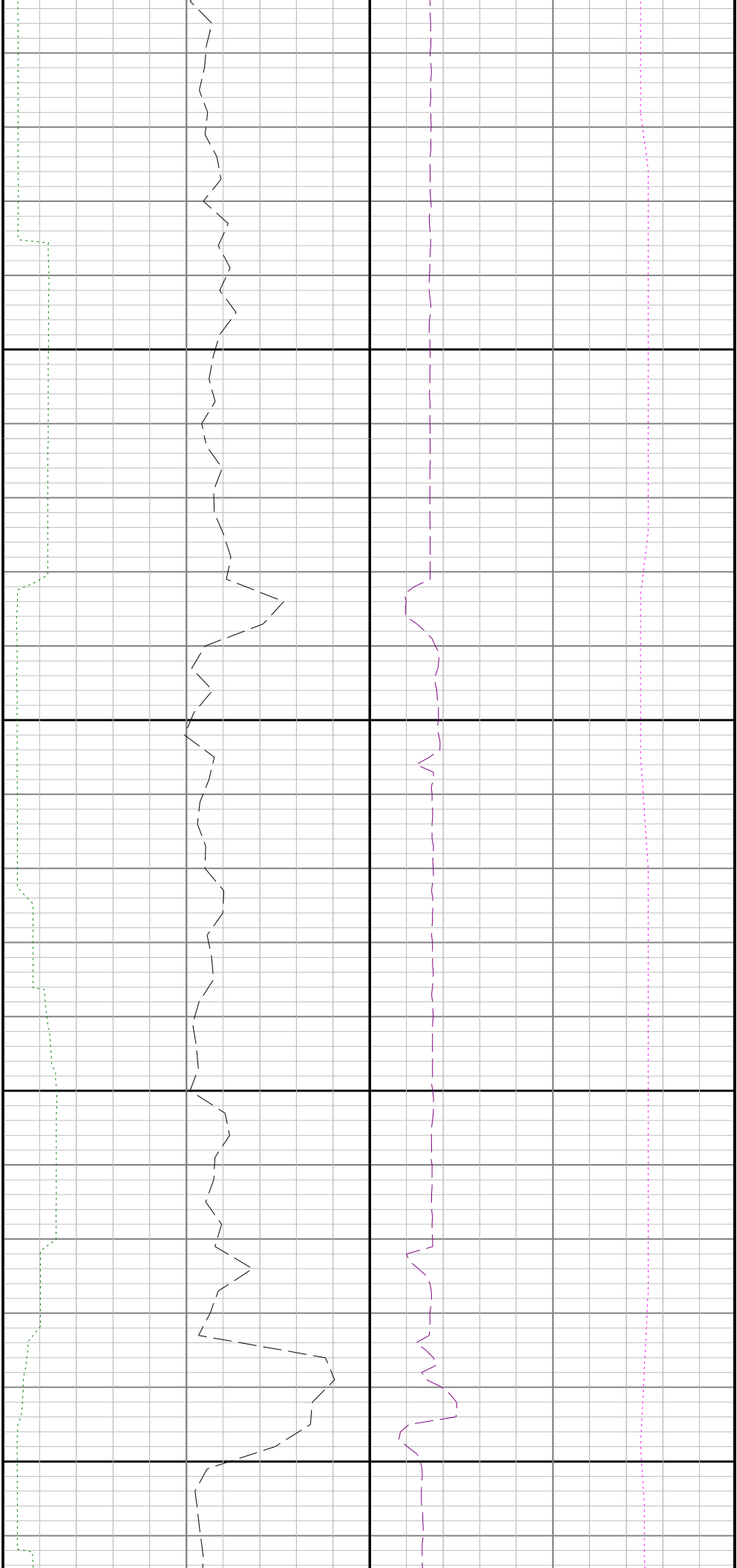


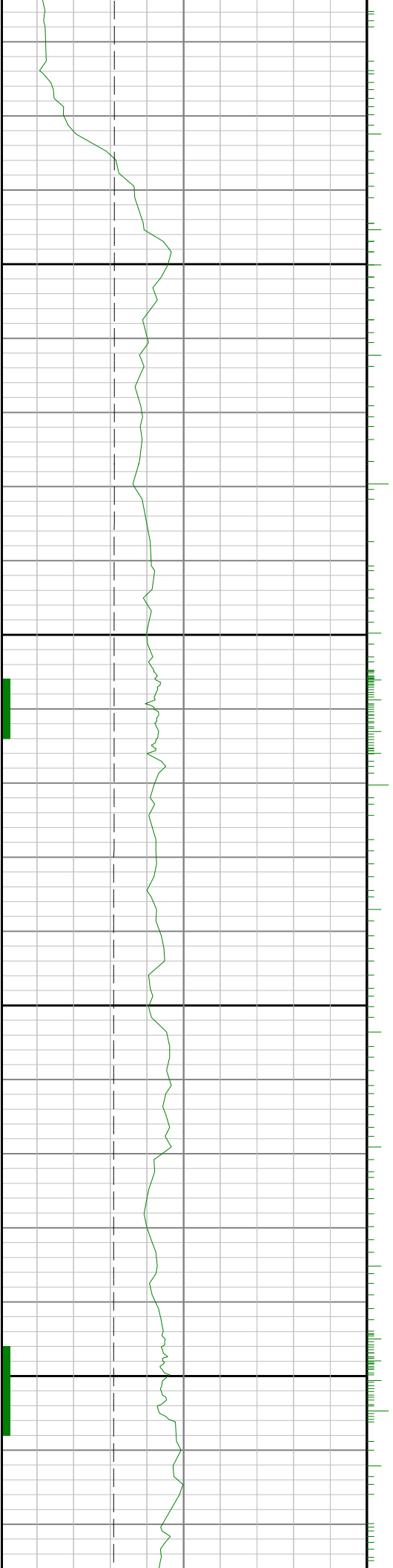
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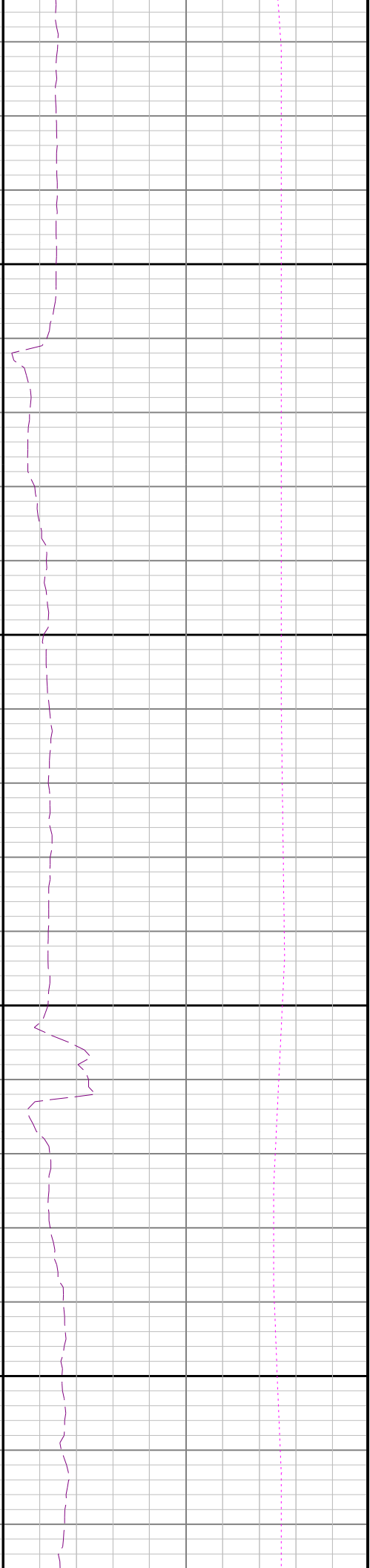
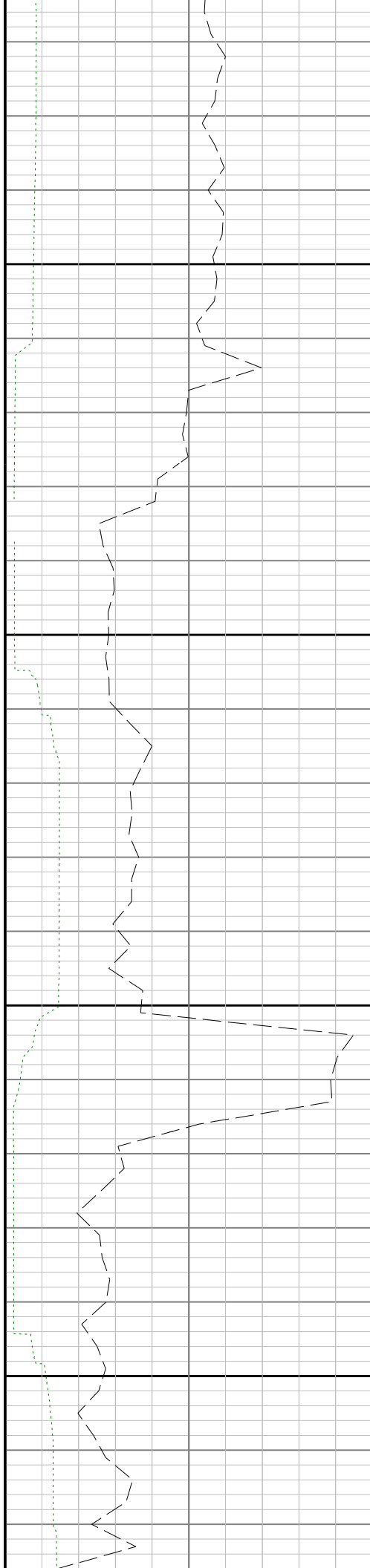


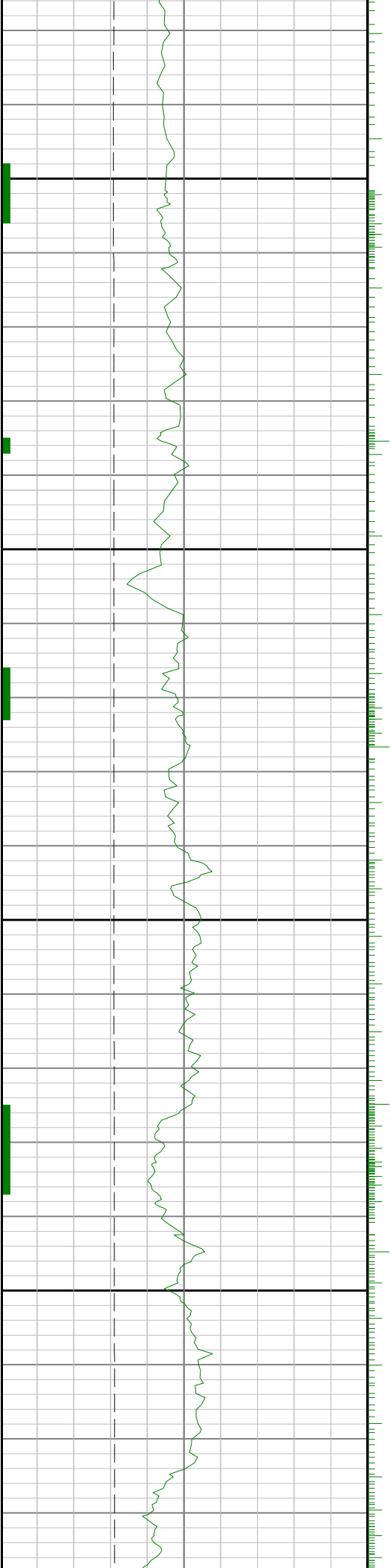




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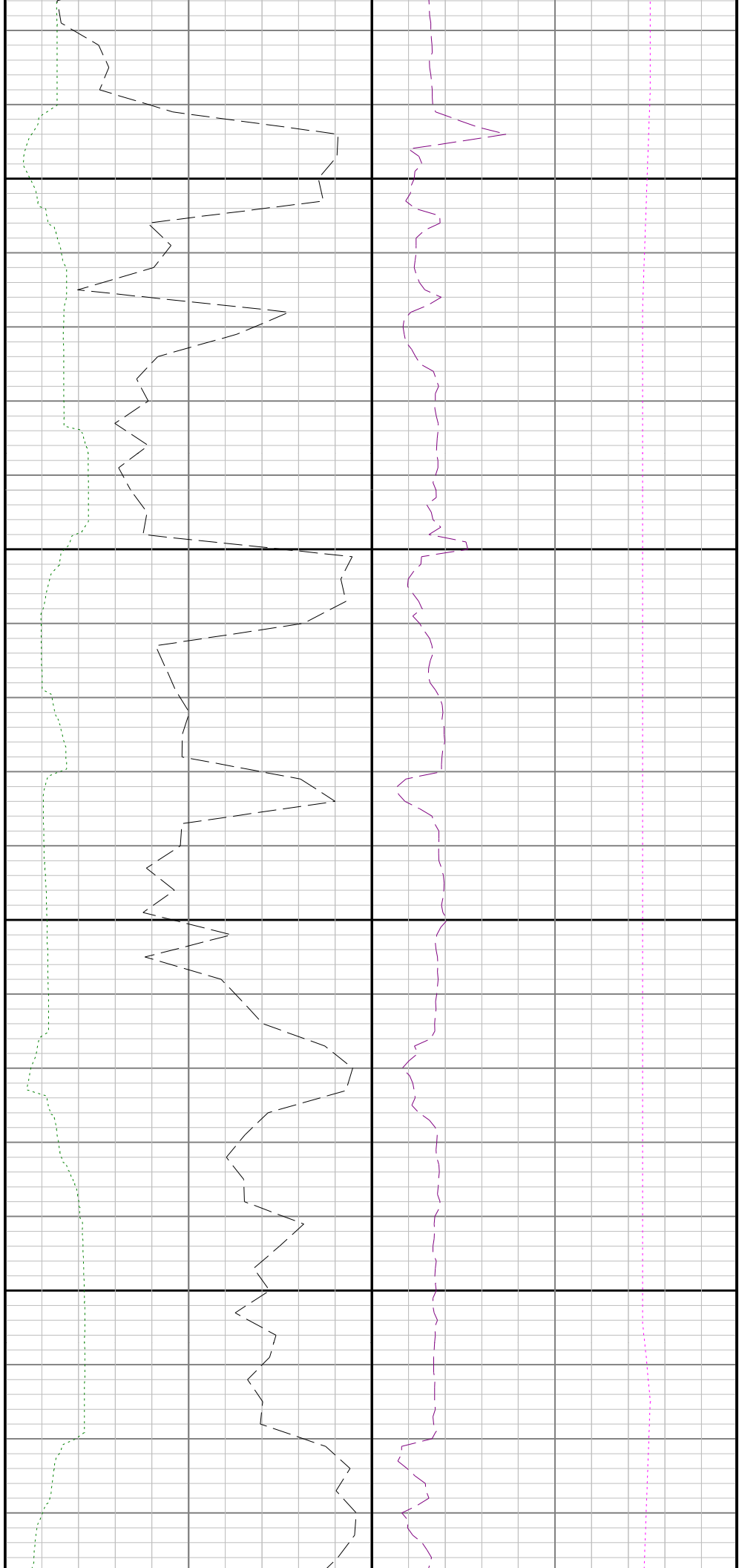
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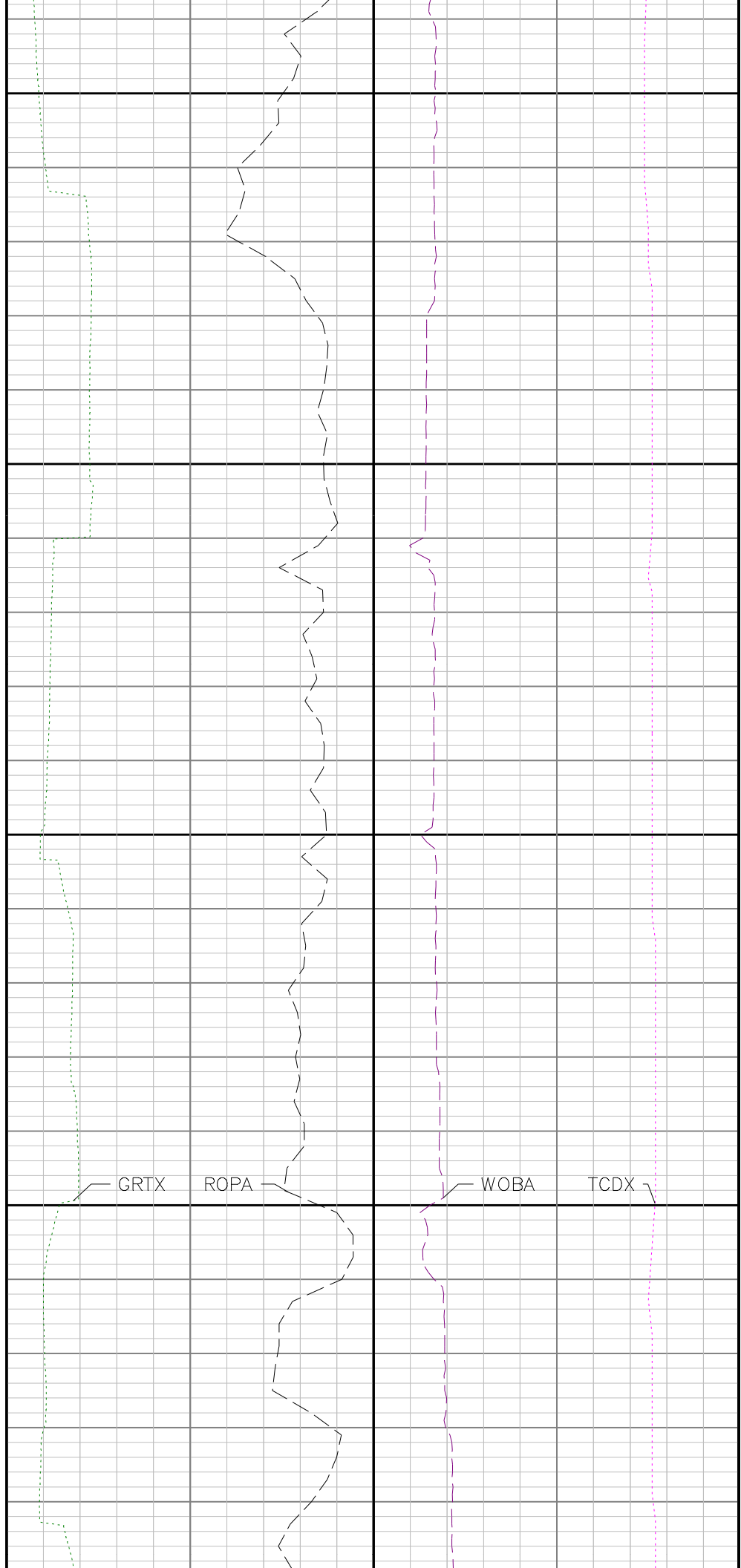
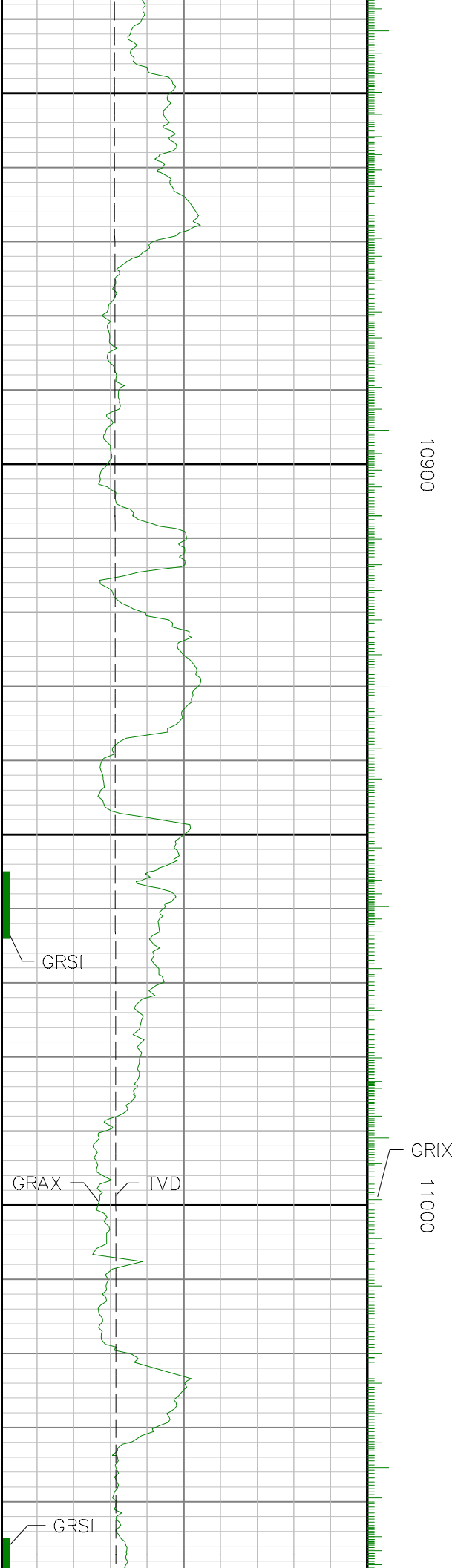


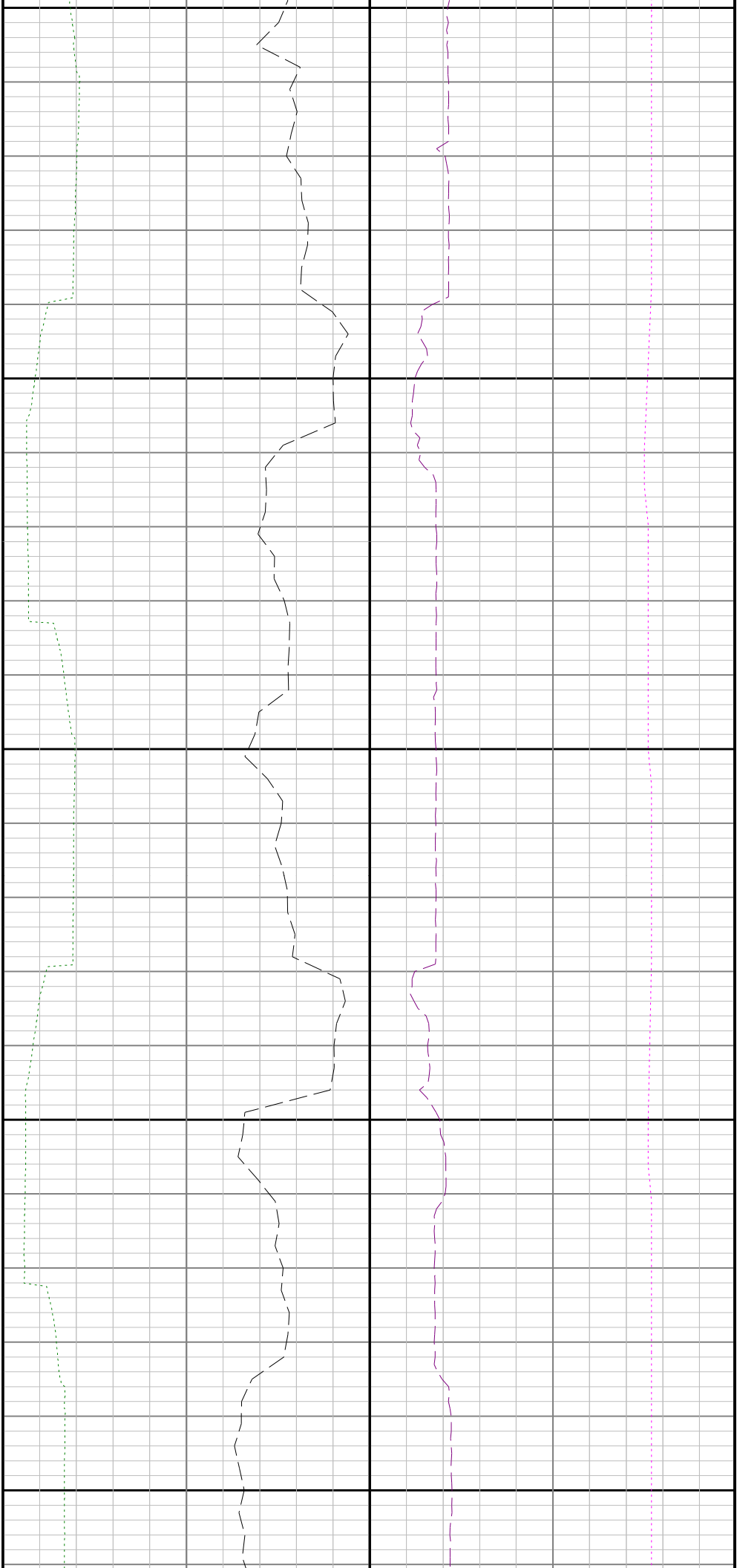


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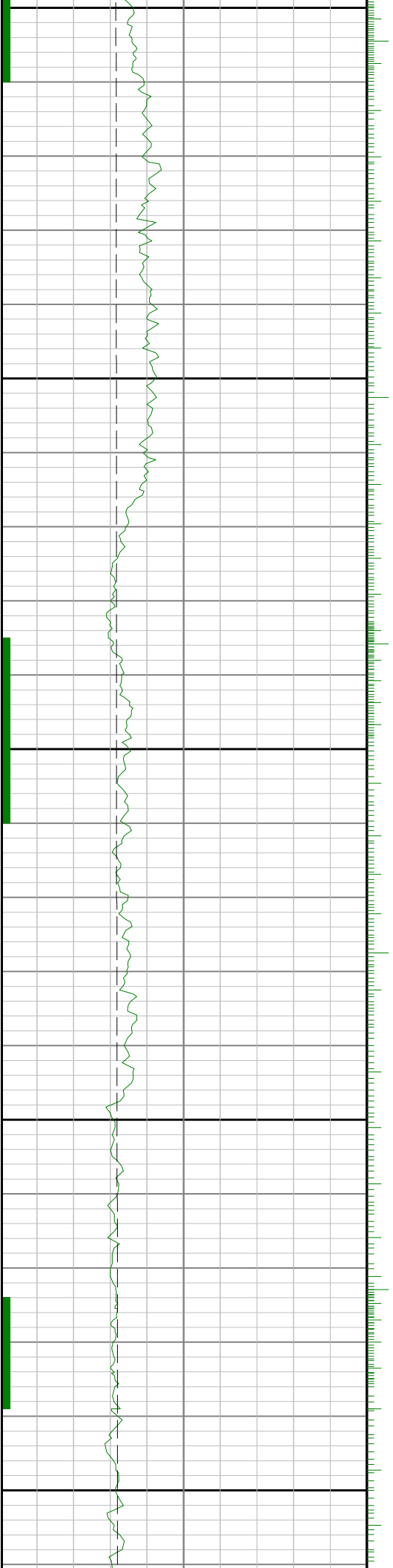


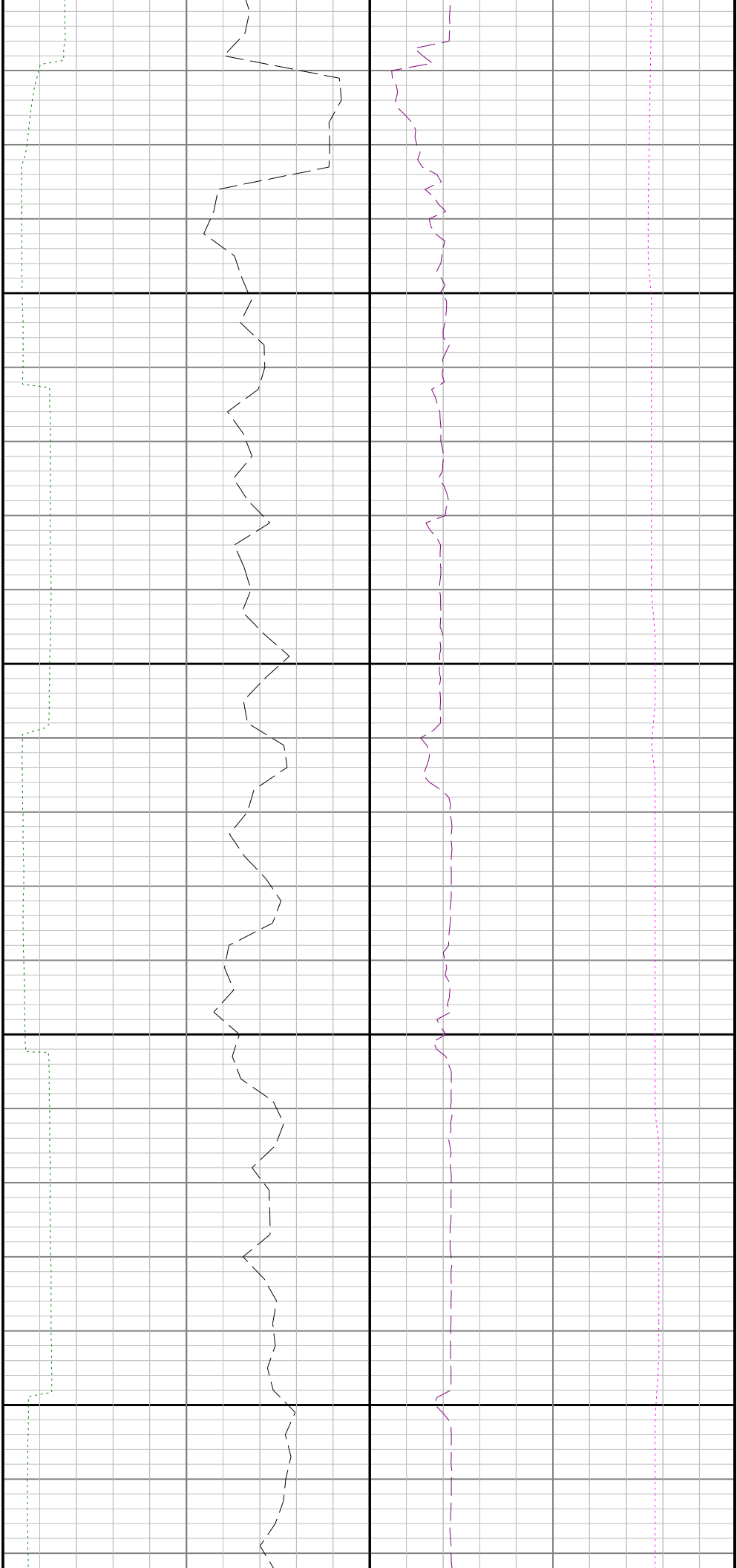




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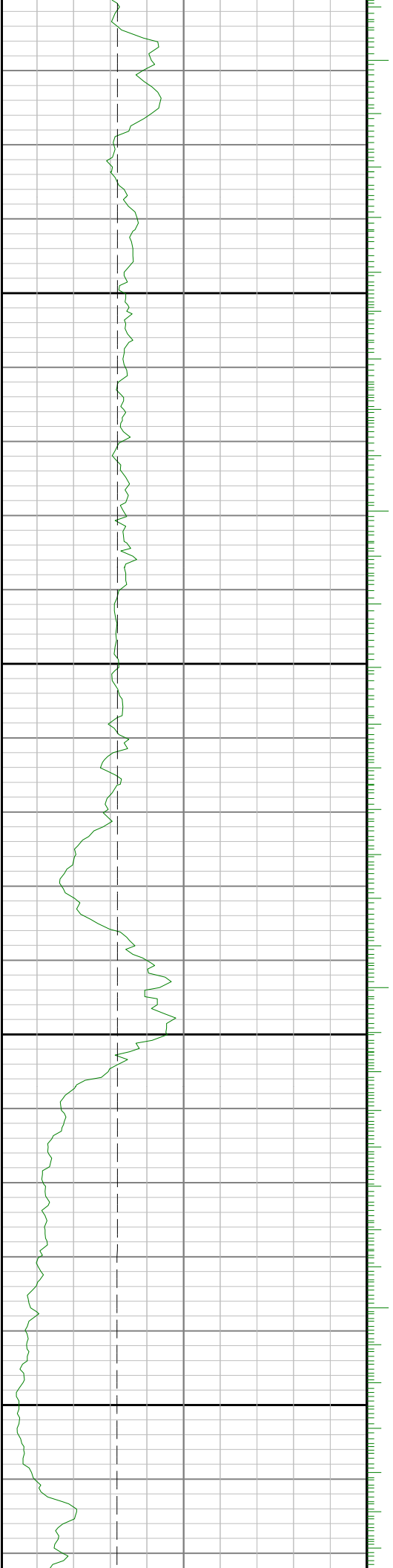
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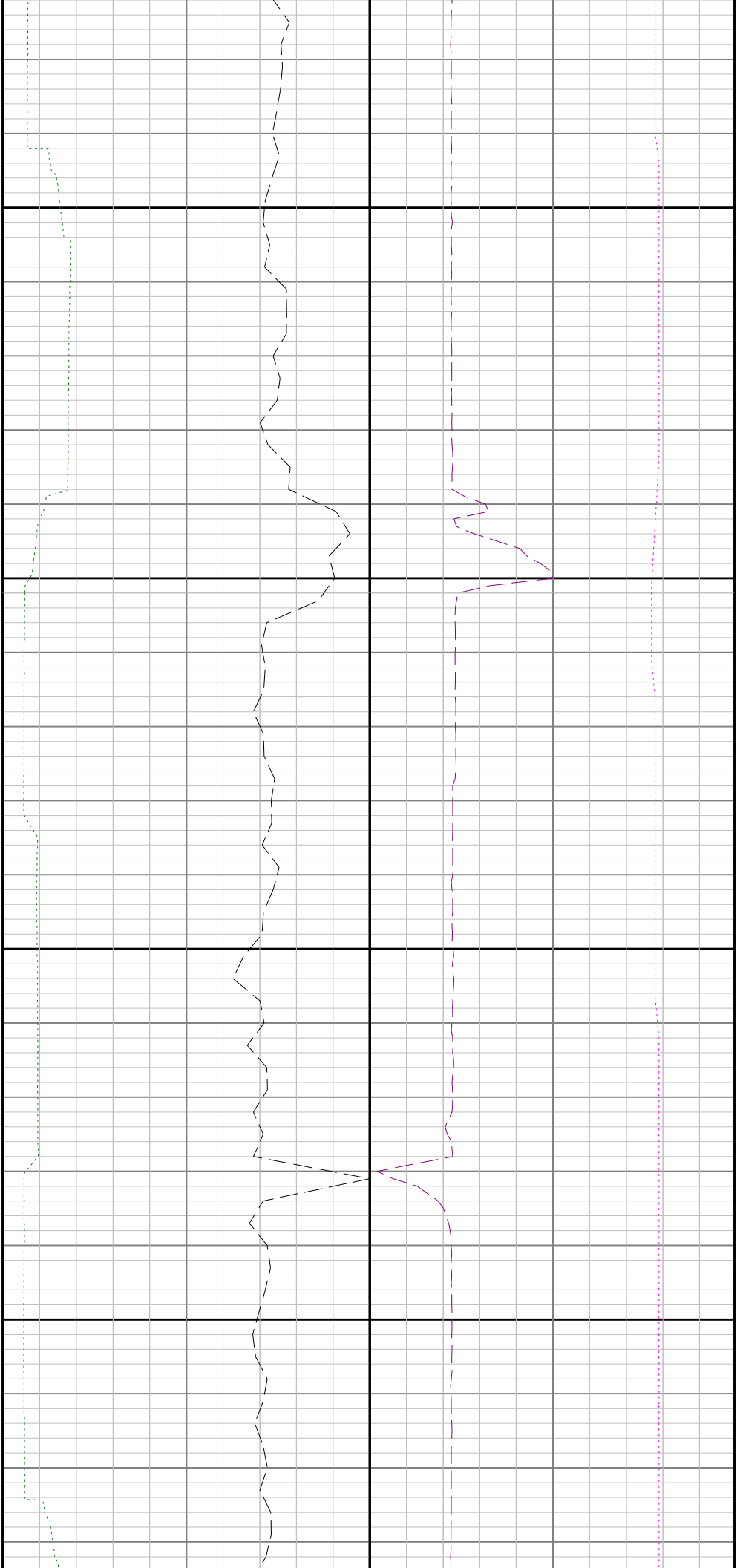




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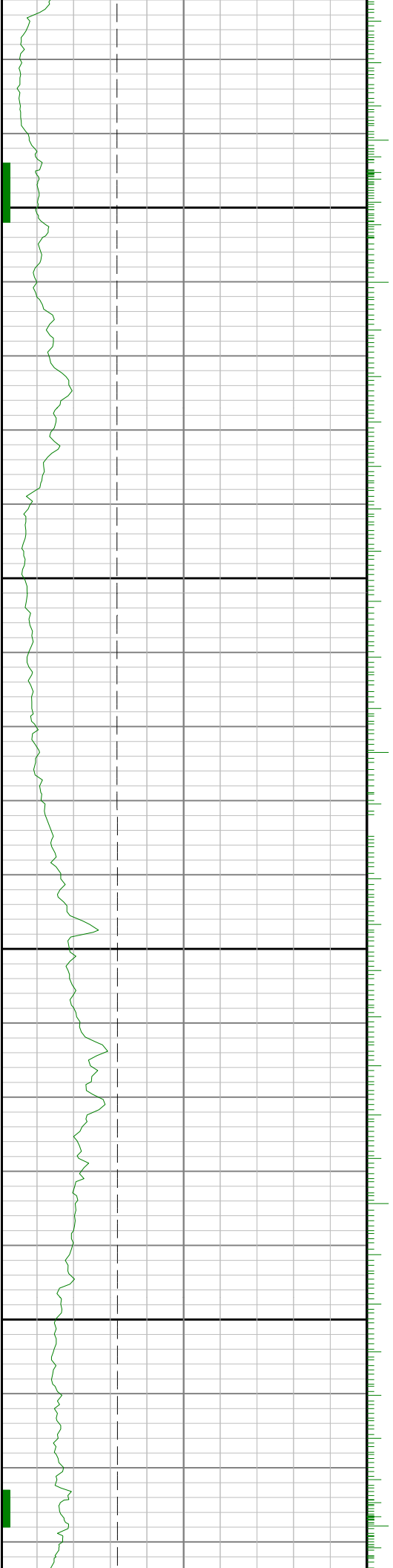
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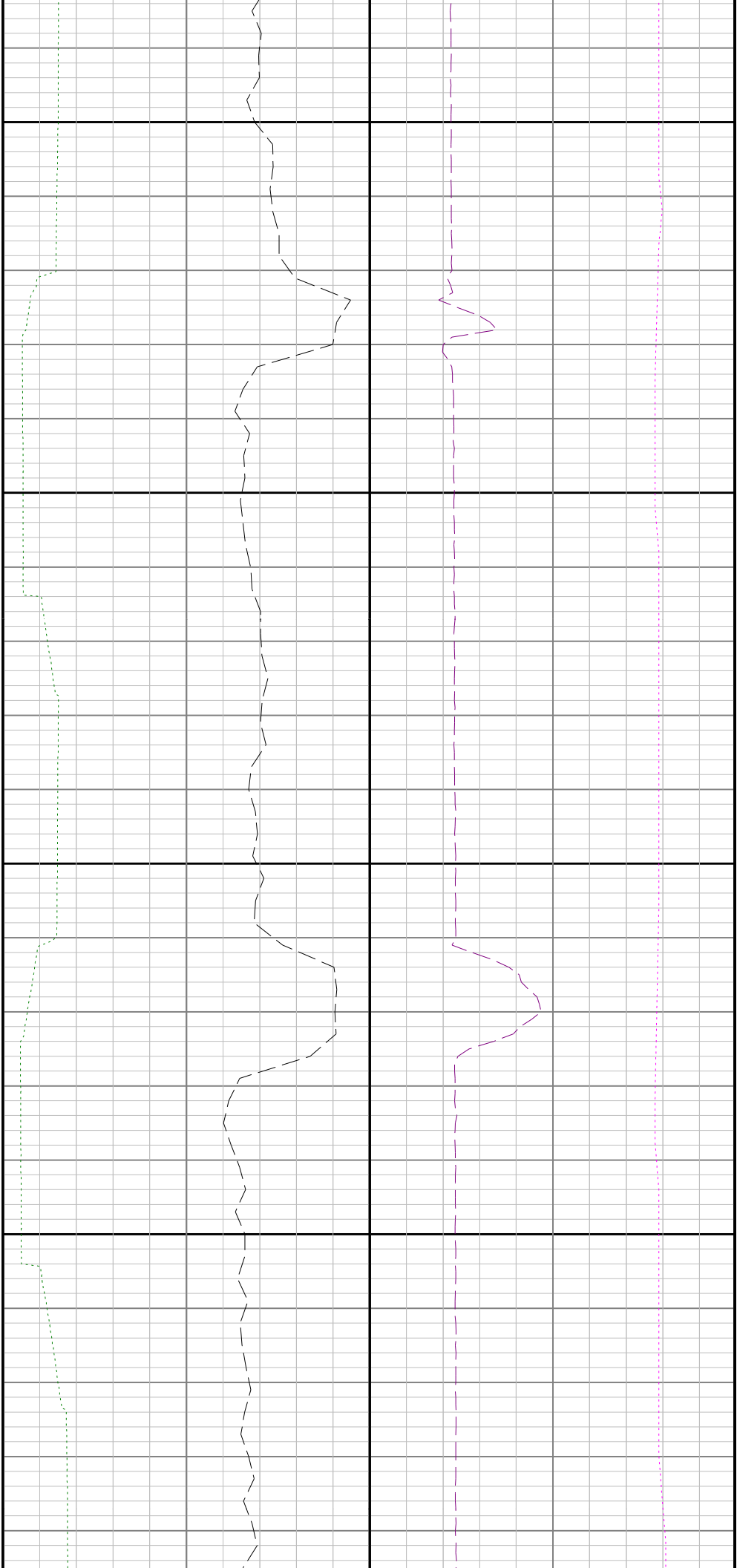




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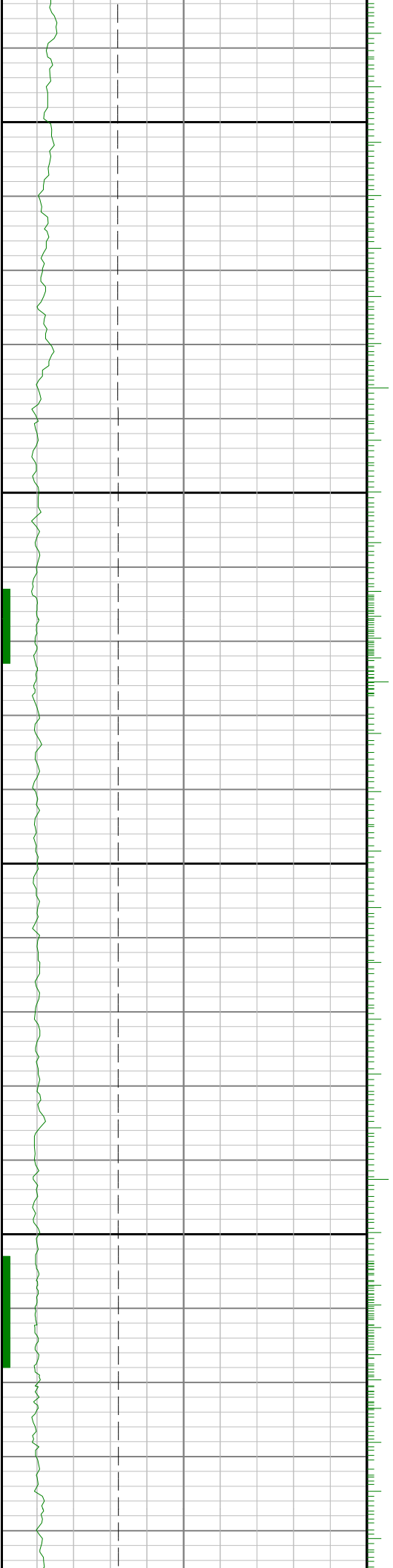
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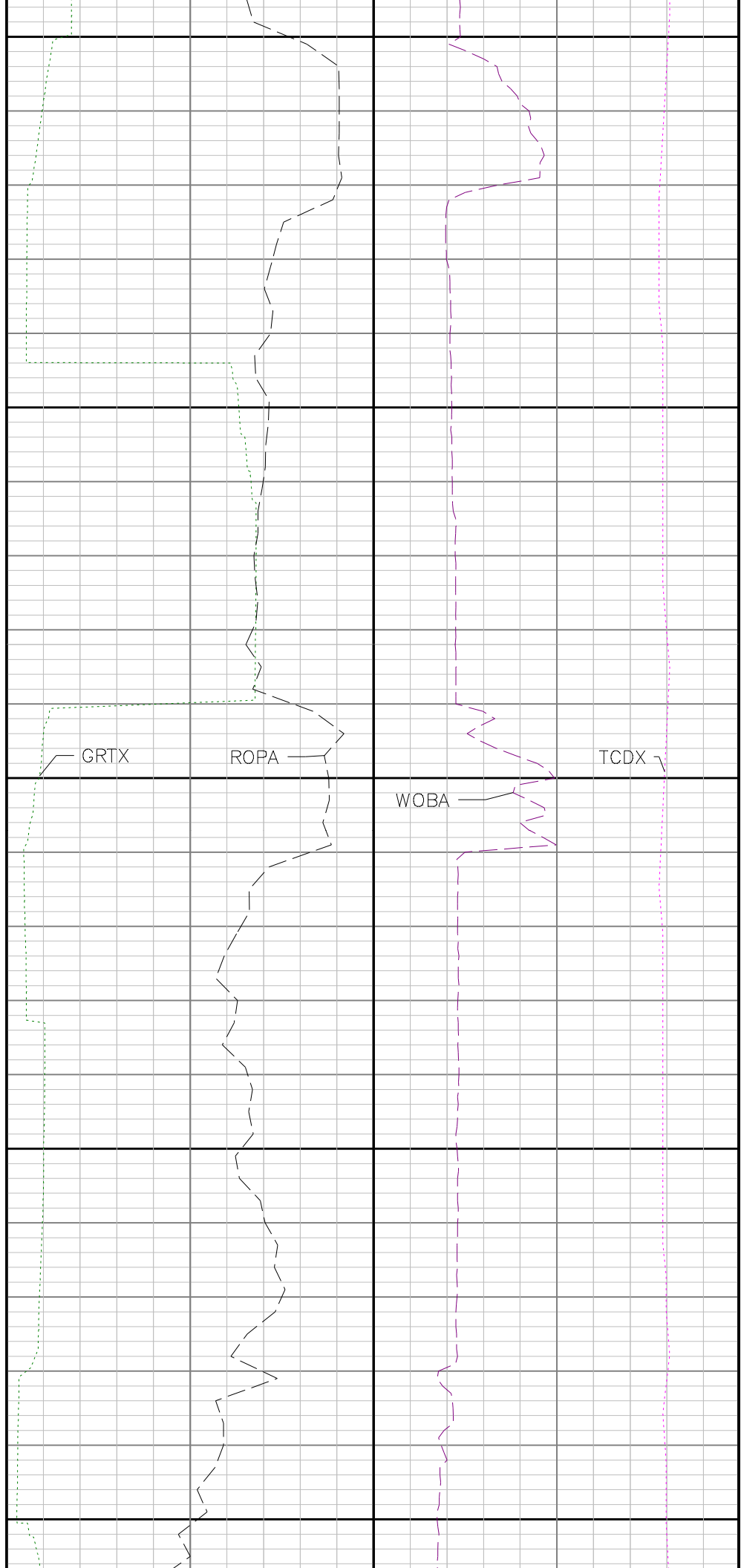
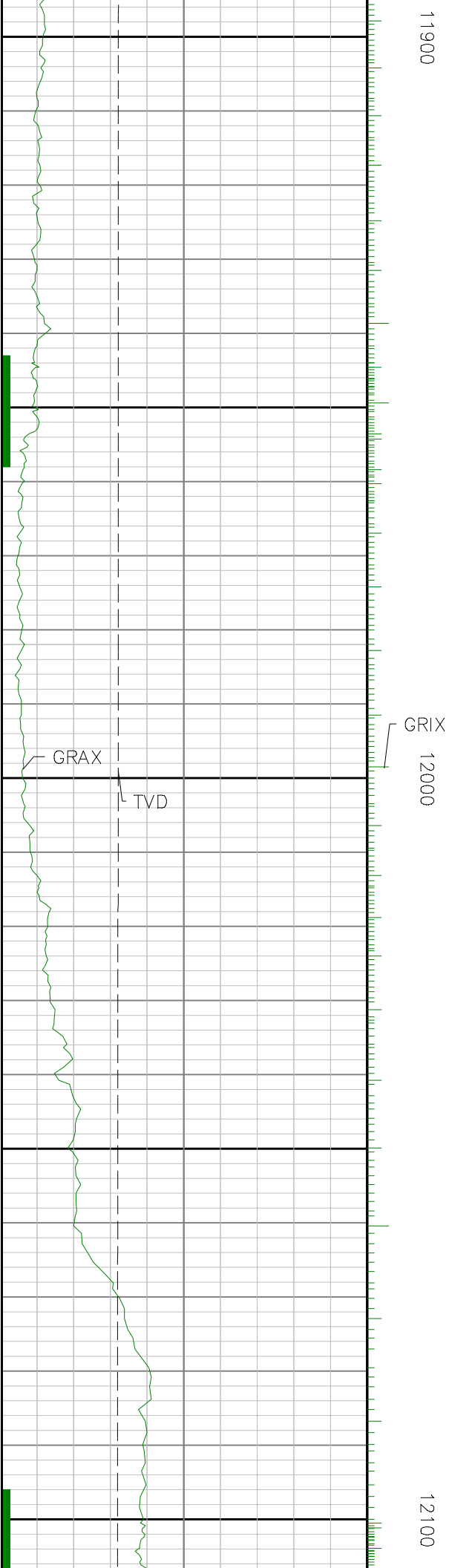


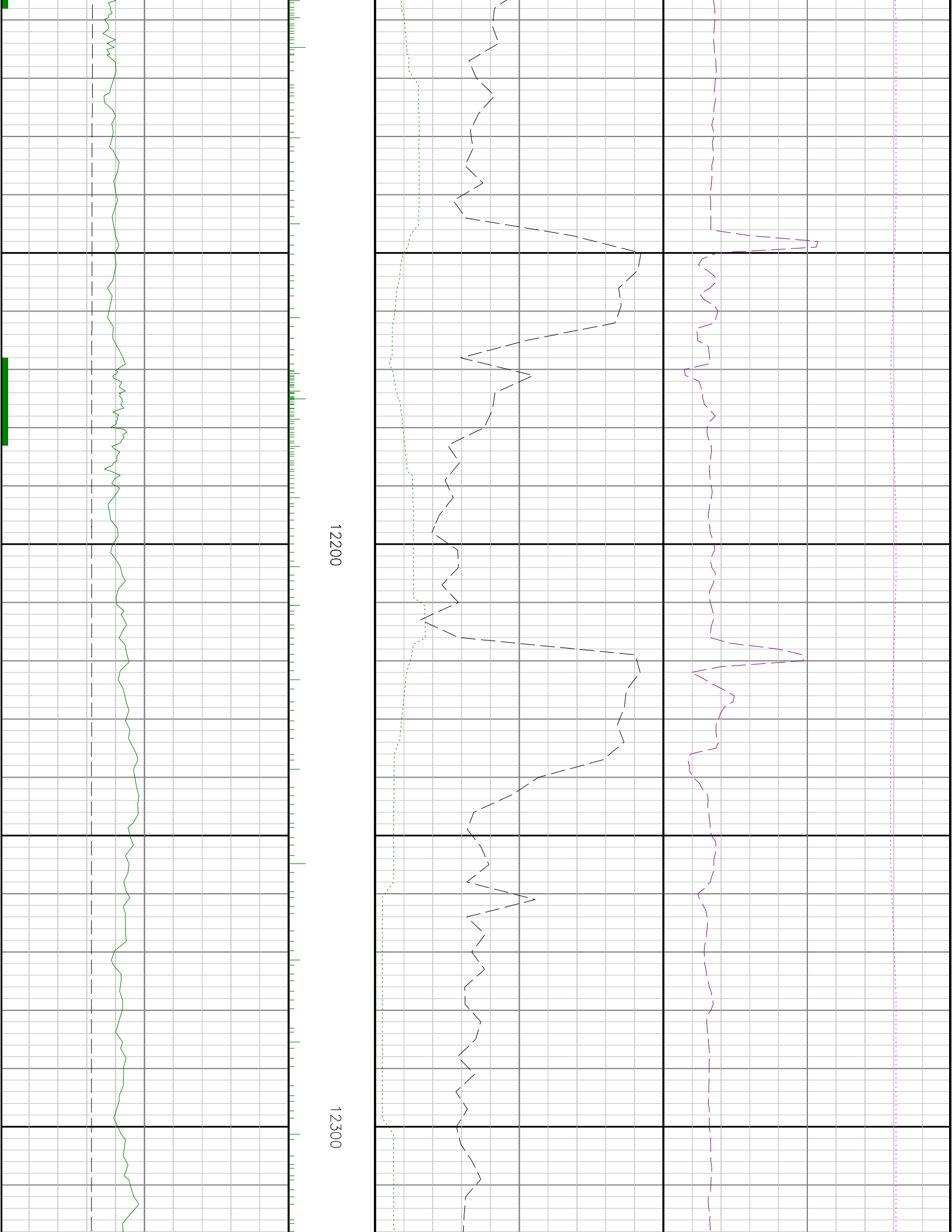


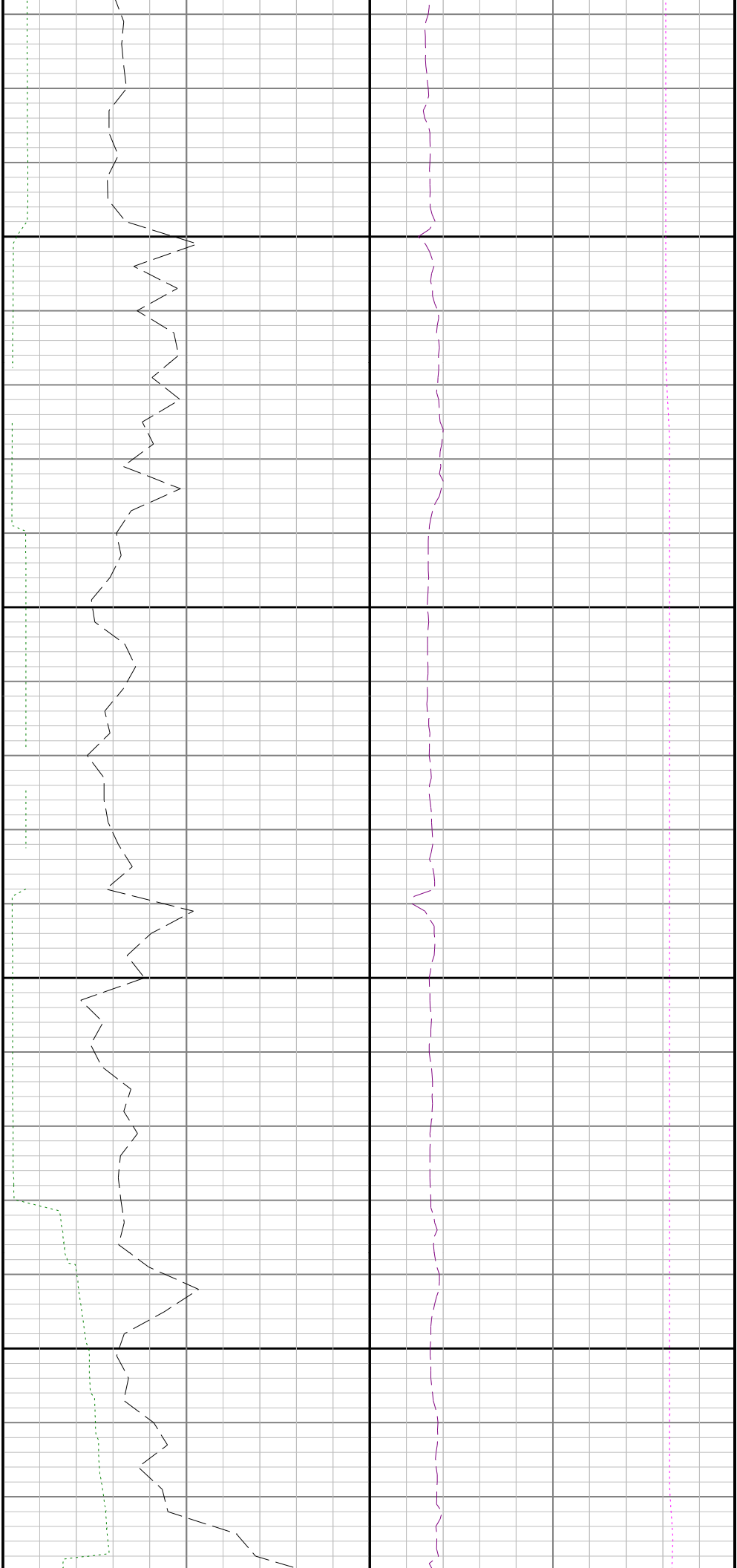
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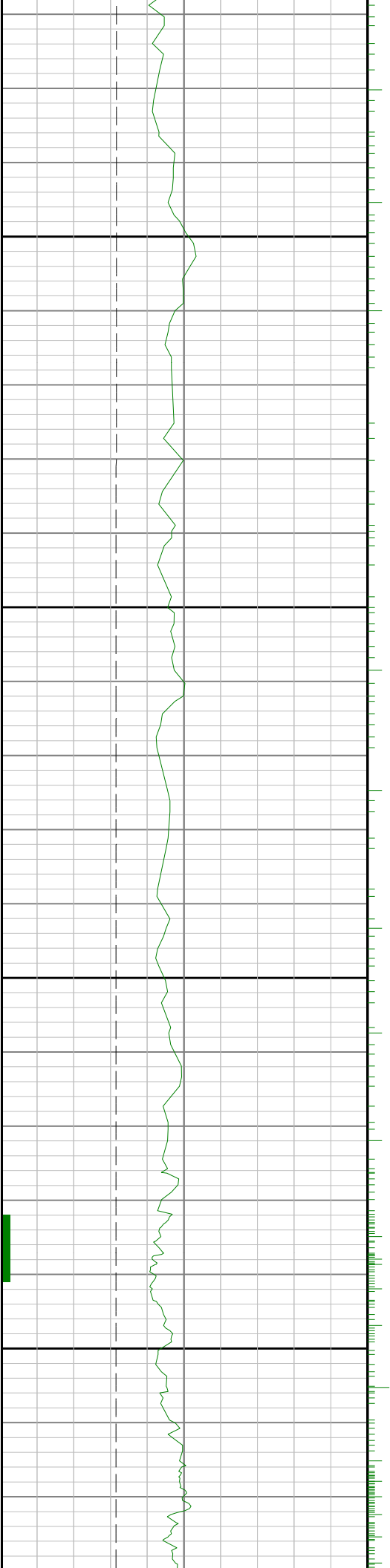


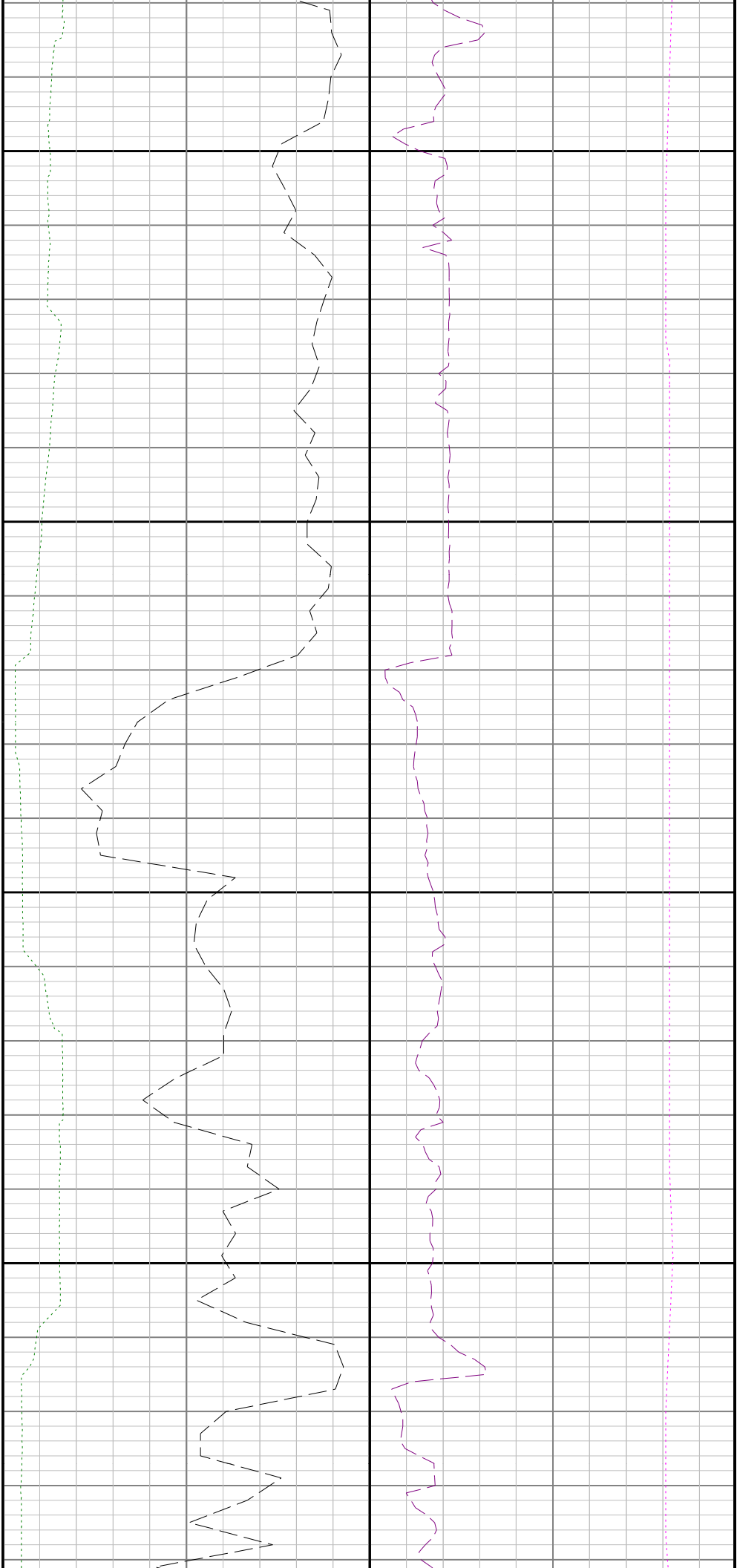




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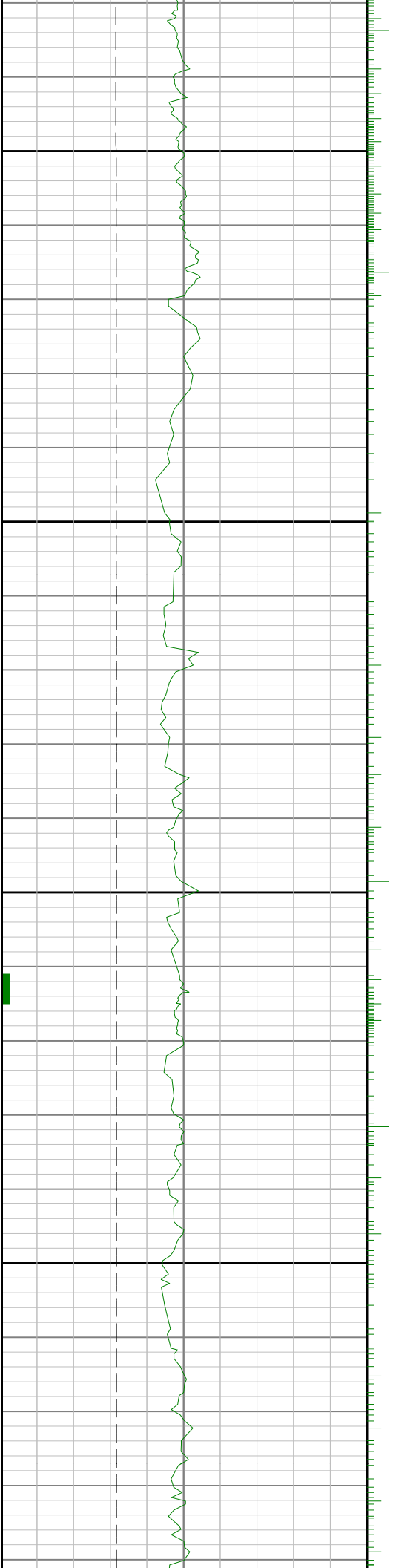
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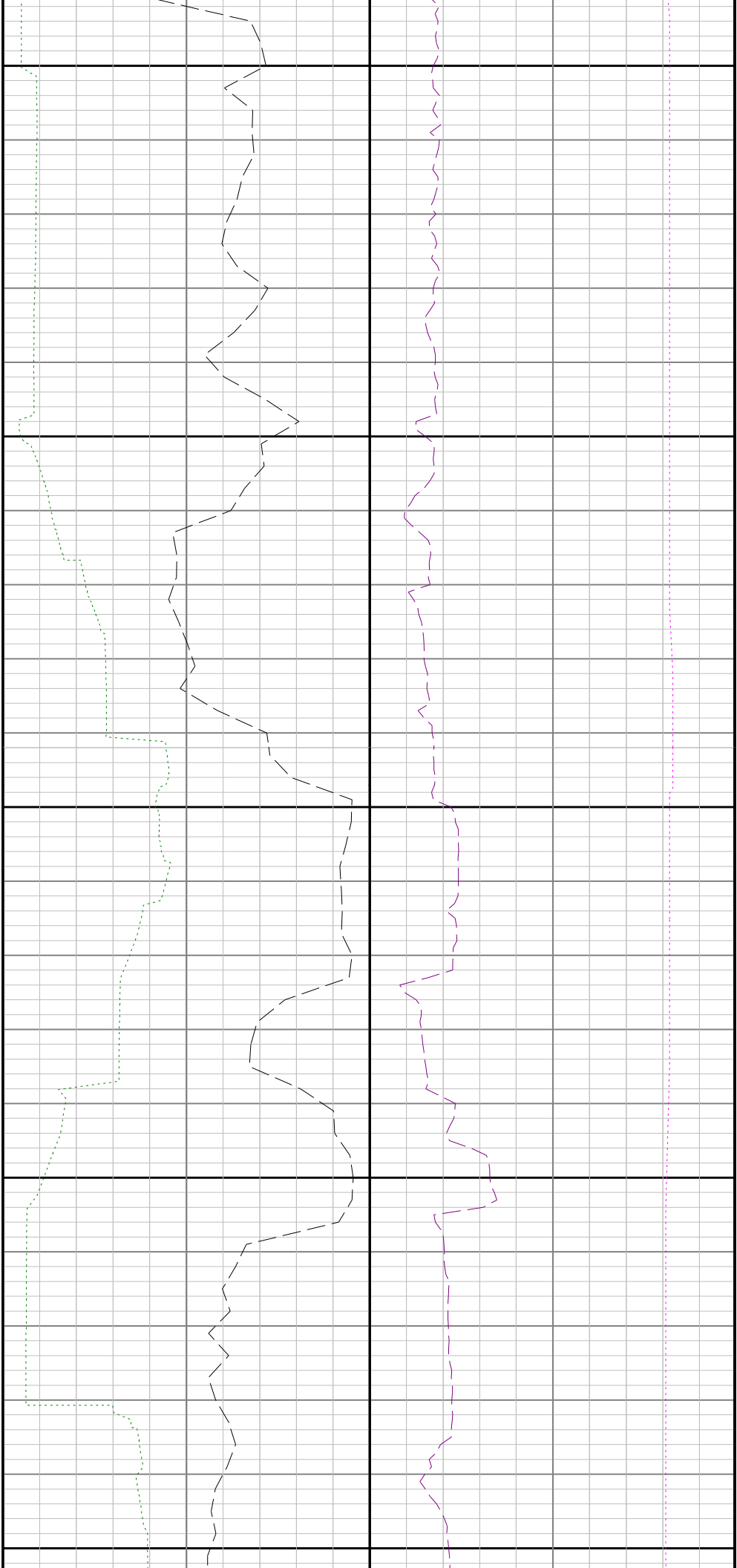




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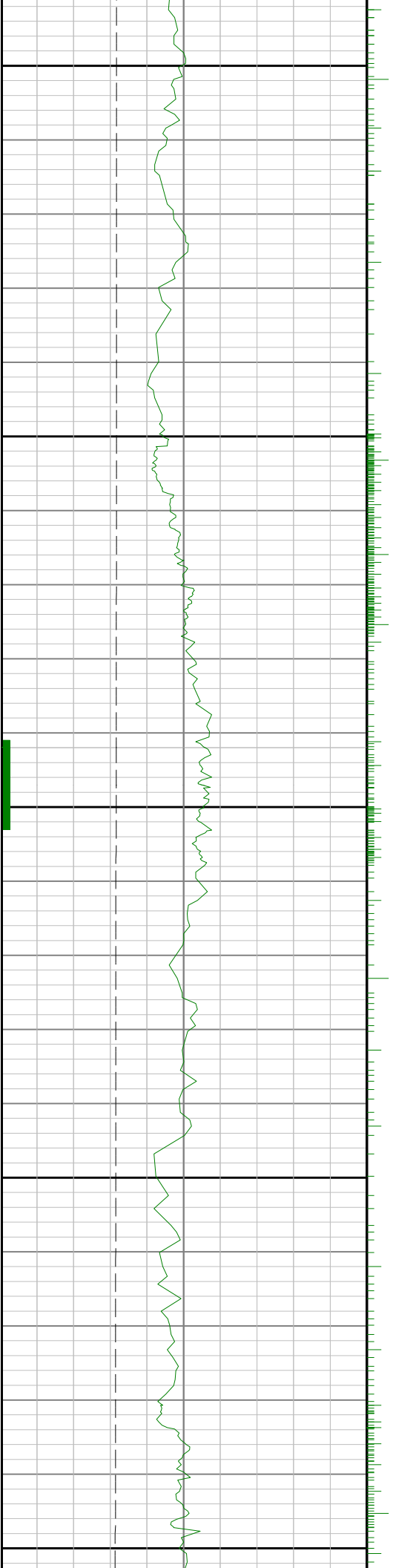
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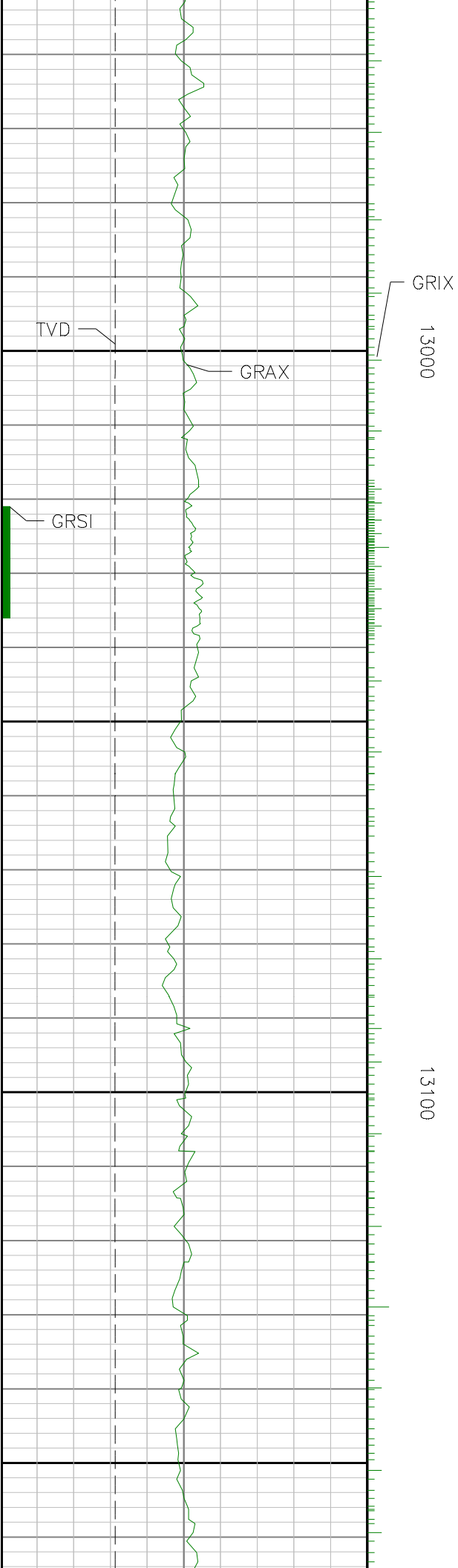




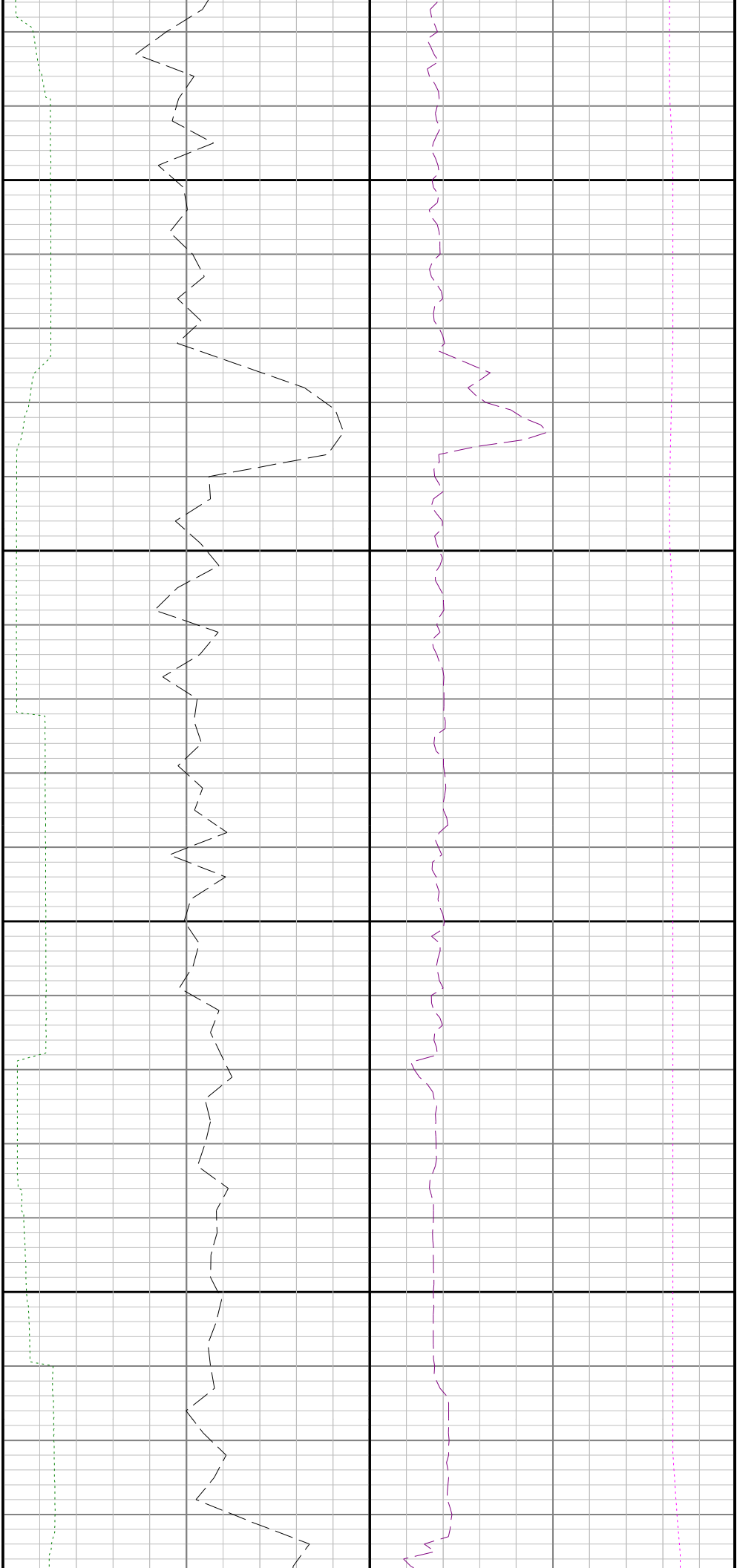
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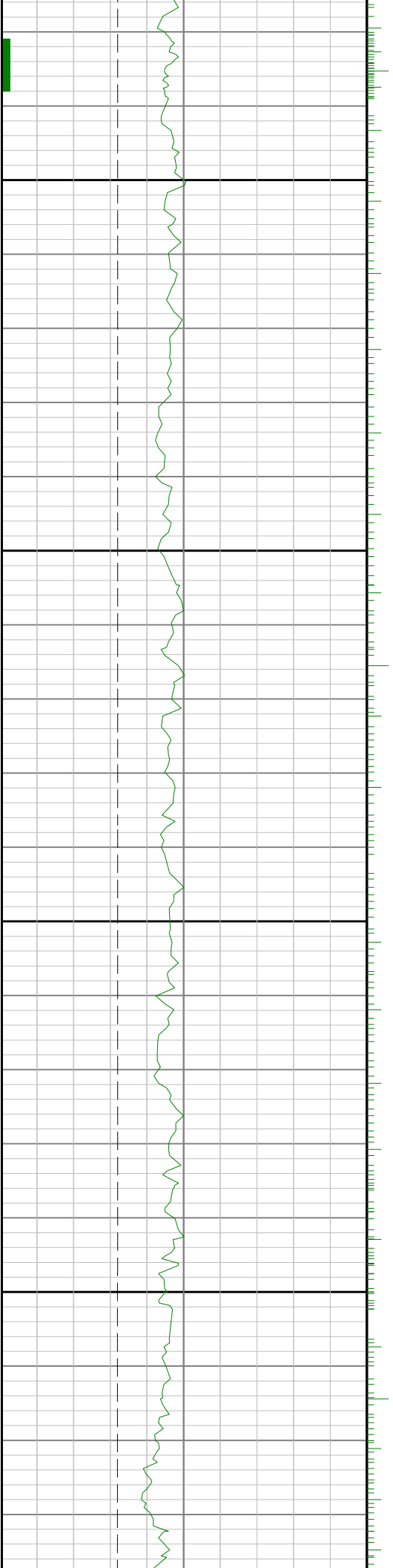


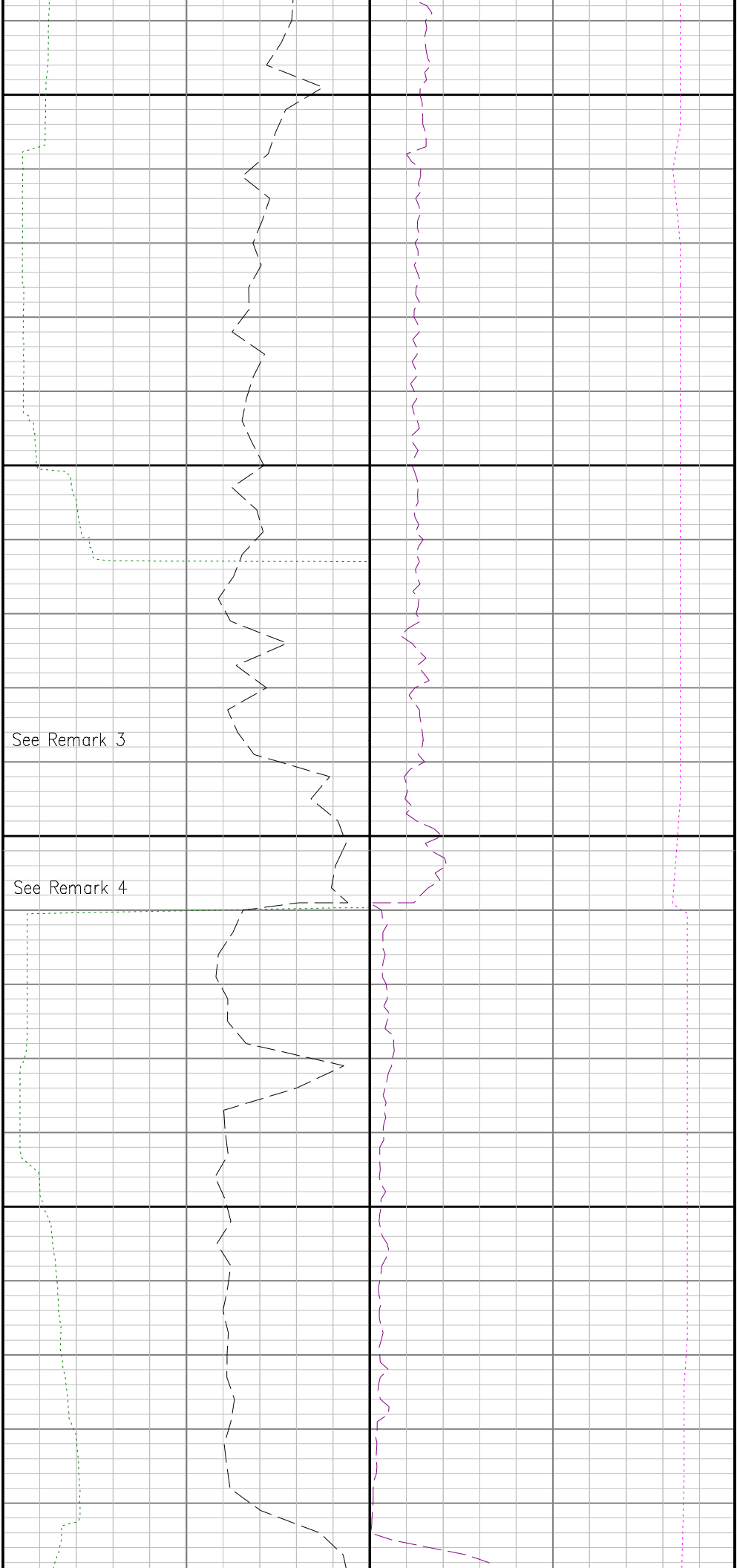




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See Remark 3

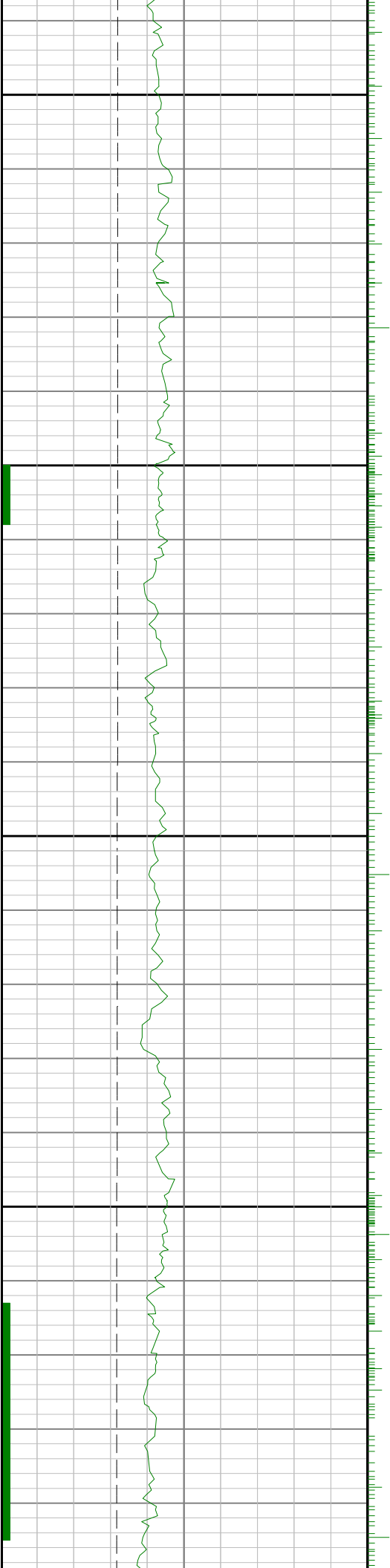
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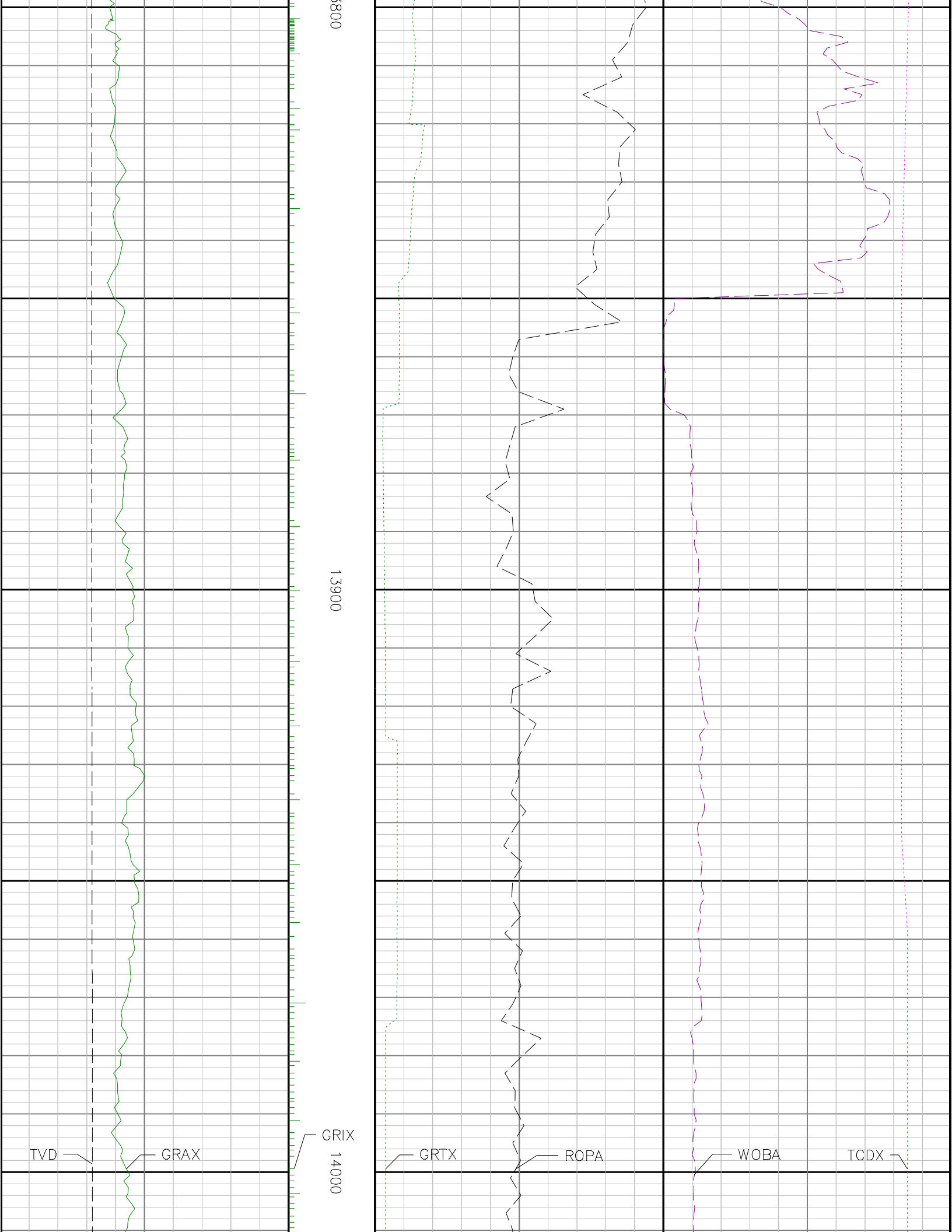
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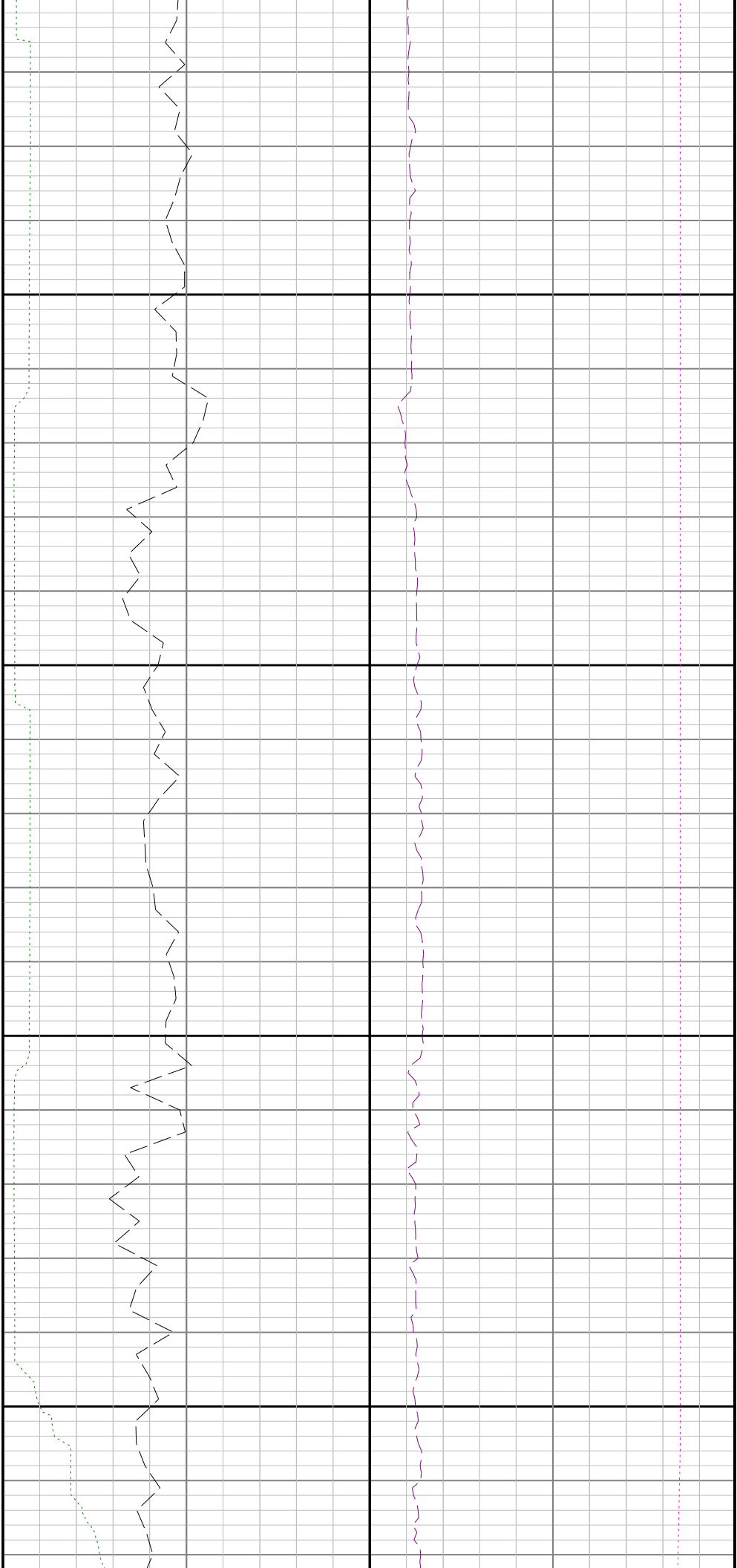
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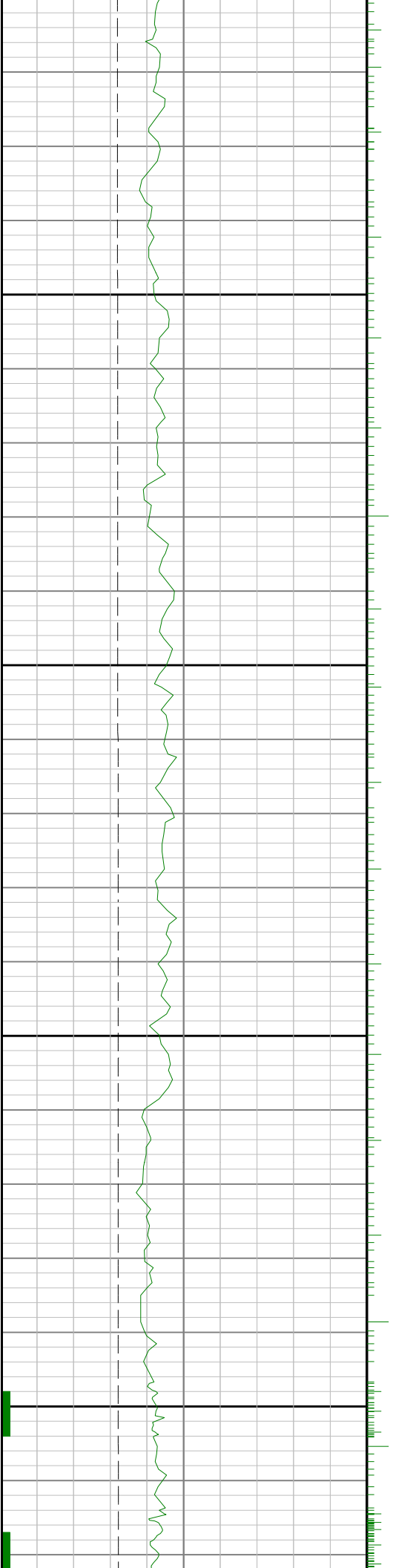


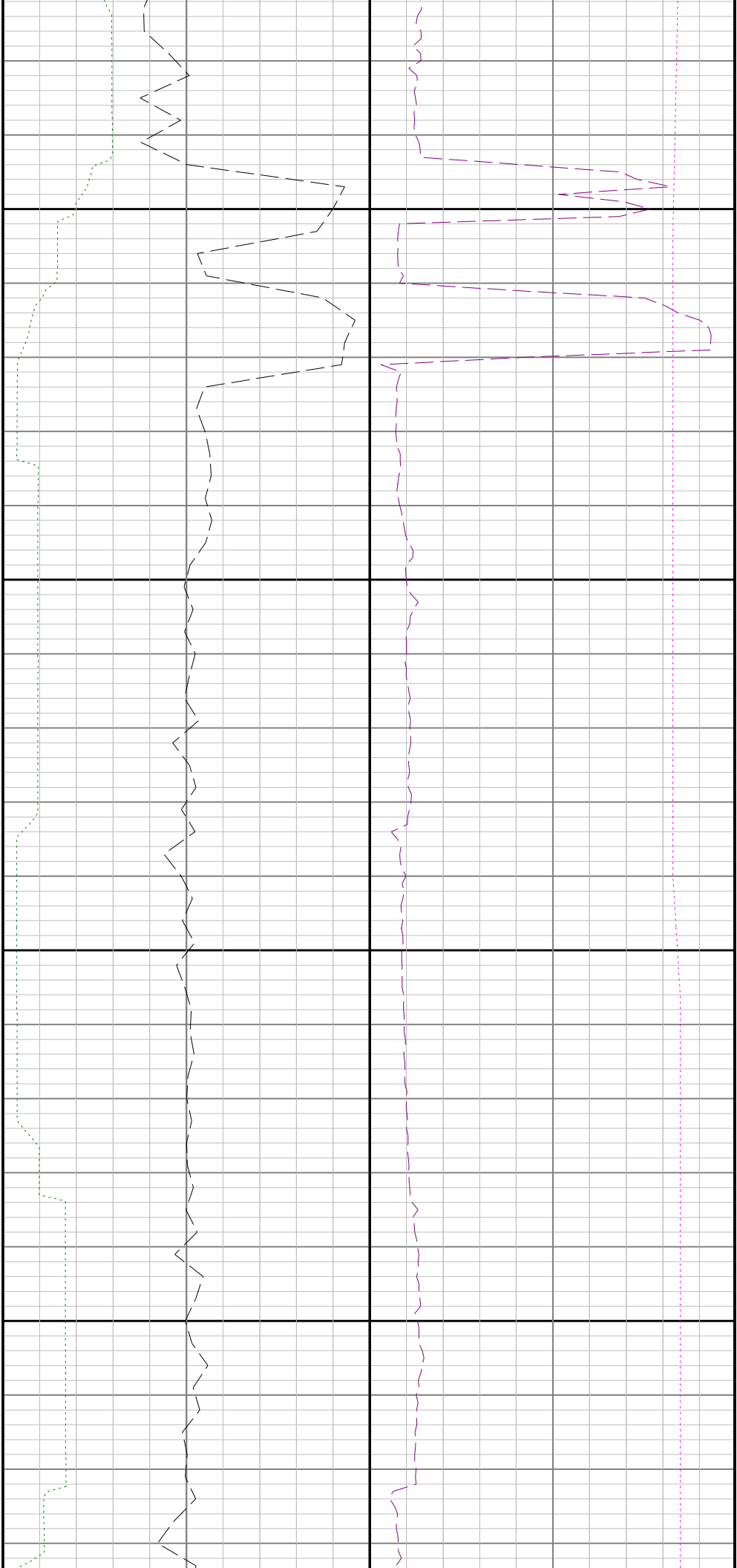




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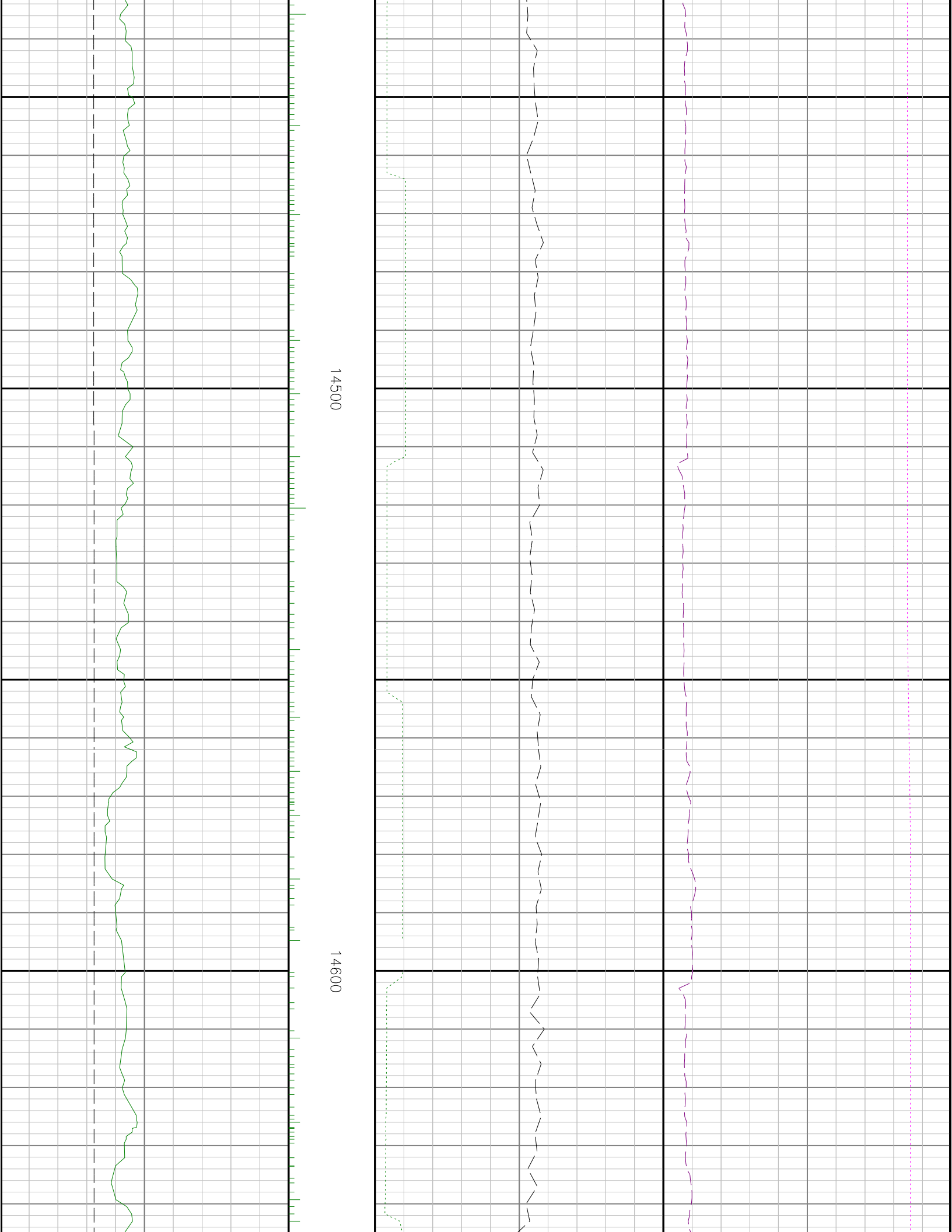
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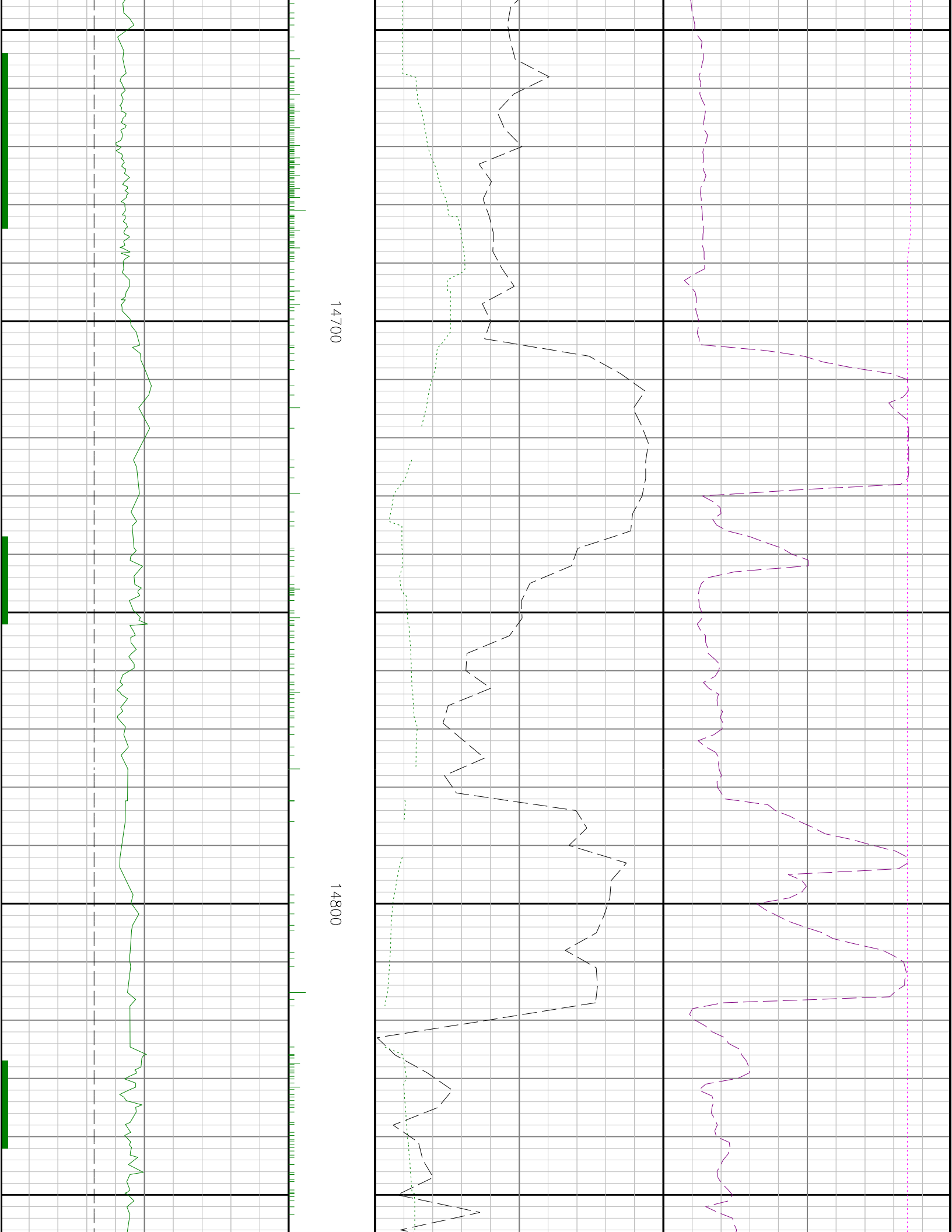




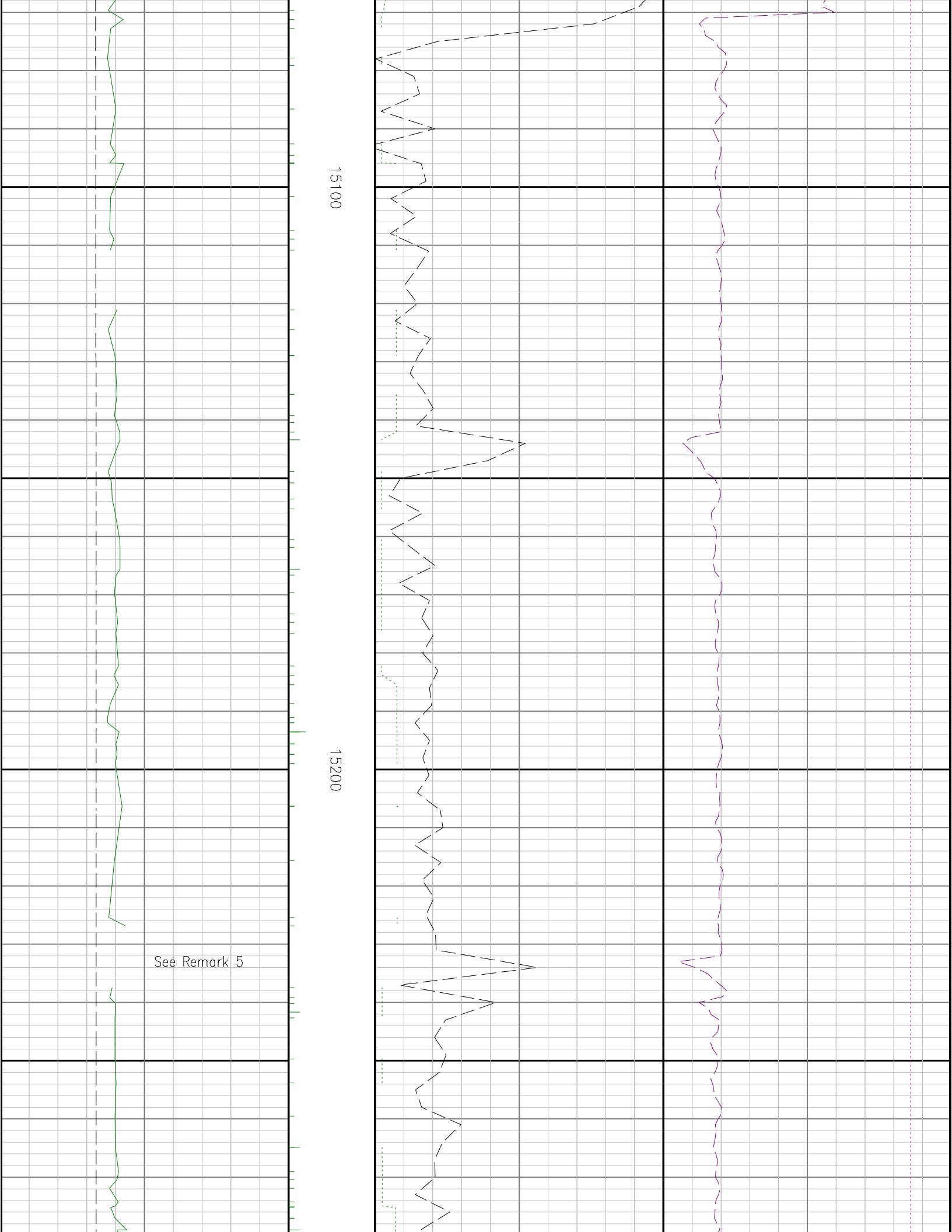
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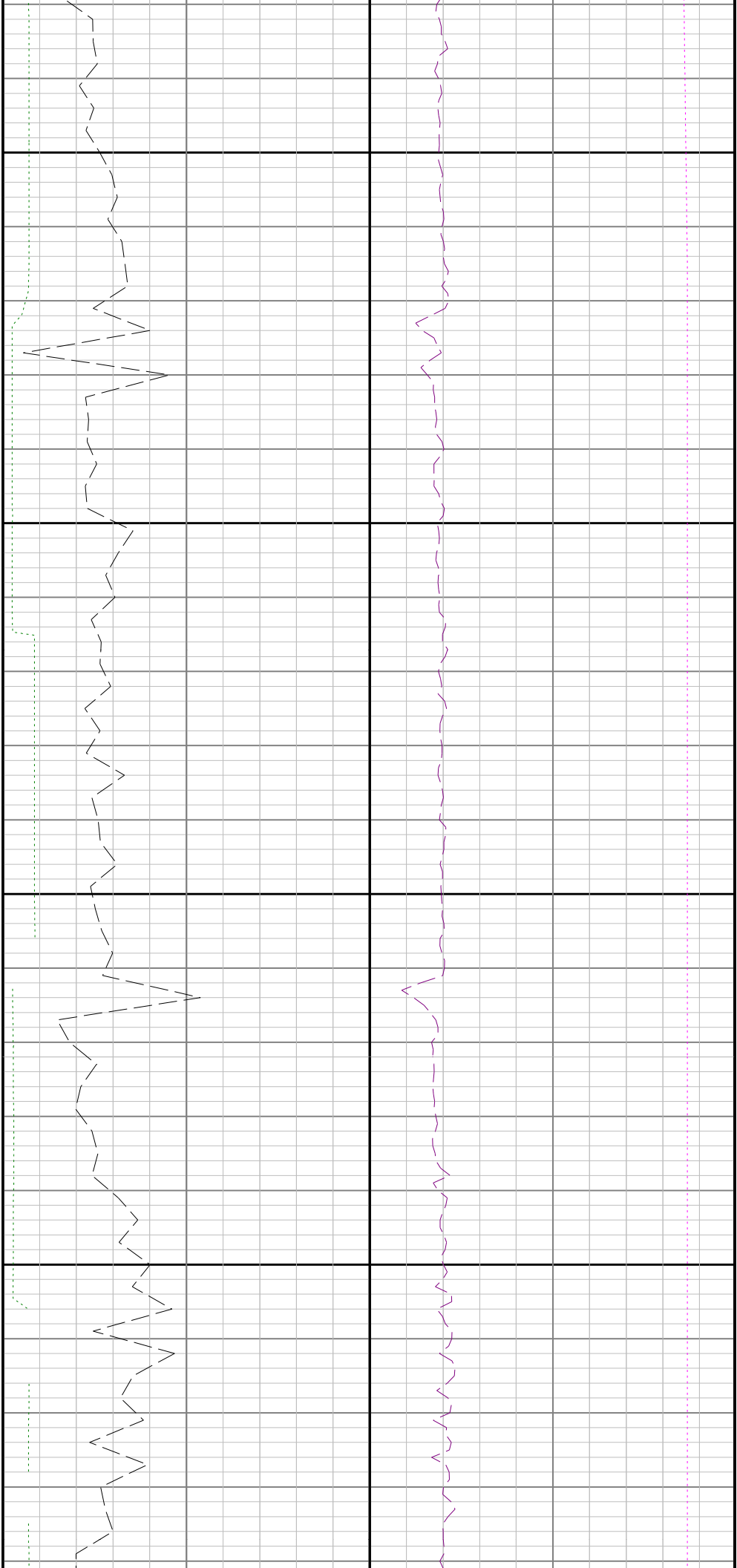
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