

Crew								
Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite

Ahmed Bani-Saad	14 Oct 14	On site	ALAN MALAKOWSKY	14 Oct 14	28 Oct 14	SCOTT SANFORD	14 Oct 14	On site
						Jason Weltin	14 Oct 14	28 Oct 14

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density  (sg)	Viscosity  (cp)	pH	Fluid Loss  (cc)	Oil / Water	Source	Total Chlorides  (ppm)	K+  (%)
16 Oct 14	05:00	1	824.0	LSND	8.5	3	7.5	60.0	0/98.8	SUCTION	400	N/A
17 Oct 14	05:00	2	9450.5	LSND	9.4	7	8.5	20.0	0/92.05	SUCTION	300	N/A
18 Oct 14	05:00	2	6027.0	LSND	9.3	13	7.5	18.4	0/92.8	SUCTION	400	N/A
19 Oct 14	05:00	2	7348.0	LSND	10.2	22	9.0	4.8	4/86.7	SUCTION	500	N/A
21 Oct 14	05:00	3	8354.0	LSND	9.4	8	9.0	7.2	3/91.7	SUCTION	500	N/A
23 Oct 14	05:00	4	13564.0	LSND	9.5	14	9.0	6.4	4/90.2	SUCTION	400	N/A
24 Oct 14	05:00	4	15635.0	LSND	9.4	13	9.0	6.4	5/89.7	SUCTION	400	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent 0.5 Avg	API
GRIX	Gamma Ray Density	Points
GRSI	Gamma Ray Slide 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	klbf

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset  (ft.)	Max O.D.  (in.)	Min I.D.  (in.)
1	DIR	12617359	Directional	65.11	6.750	2.750
1	SRIG	12622667	Gamma	61.74	6.750	2.750
2	DIR	12617359	Directional	55.45	6.750	2.750
2	SRIG	12622667	Gamma	52.08	6.750	2.750
3	DIR	12592568	Directional	62.79	4.750	0.000
3	SRIG	10266573	Gamma	59.41	4.750	2.875
4	DIR	12497617	Directional	61.14	4.750	2.750
4	SRIG	12679499	Gamma	57.76	4.750	2.750
5	DIR	12497617	Directional	59.46	4.750	2.750
5	SRIG	12679499	Gamma	56.08	4.750	2.750

Service and Tool Mnemonics

Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey

## Comments

- 1) Depth measurements were obtained from a depth control system that was 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
- 2) The slide 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 GammaRay data acquired while sliding
- 3) Baker Hughes INTEQ run 1 utilized 6 3/4 NaviGamma (Gamma Ray and Directional) behind a 13 1/2 inch bit and rotary steerable assembly from 88 feet to 824 feet MD (88 ft to 823.9 ft TVD).
- 4) Baker Hughes INTEQ run 2 utilized 6 3/4 NaviGamma (Gamma Ray and Directional) behind a 6.125 inch bit and rotary steerable assembly from 824 feet to 7349 feet MD (823.9 ft to 6953.22 ft TVD).
- 5) Baker Hughes INTEQ run 3 utilized 6 3/4 NaviGamma (Gamma Ray and Directional) behind a 6.125 inch bit and rotary steerable assembly from 7349 feet to 8820 feet MD (6953.22 ft to 6970.88 ft TVD).
- 6) Baker Hughes INTEQ run 4 utilized 4 3/4 NaviGamma (Gamma Ray and Directional) behind a 6.125 inch bit and rotary steerable assembly from 8820 feet to 16443 feet MD (6970.88 ft to 6978.28ft TVD).
- 7) Baker Hughes INTEQ run 4 utilized 4 3/4 NaviGamma (Gamma Ray and Directional) behind a 6.125 inch bit and rotary steerable assembly from 16443 feet to 16740 feet MD (6978.28 ft to 6990.48ft TVD).

## Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	5000	6.125	2	GRAX logging started at 5000 feet MD (4967 feet TVD) per customer request.
2	6338	6.125	3	Start Curve section
3	7296	6.125	4	The interval from 7296 to 7351 feet MD (6948.84 to 6953.25 feet TVD) was logged up to 18 hours after drilling due to tripping from Run 2 to Run 3.
4	8760	6.125	4	The interval from 8760 to 8820 feet MD (6970.28 to 6970.70 feet TVD) was logged up to 18 hours after drilling due to tripping from Run 3 to Run 4.
5	13080	6.125	4	No Gamma required, due to the MWD start reading 0.0 gamma. the co. man made a decision not to re-log the missing 30 feet of gamma
6	16380	6.125	5	The interval from 16380 to 16440 feet MD (6975.86 to 6978.25 feet TVD) was logged up to 18 hours after drilling due to tripping from Run 3 to Run 4.
7	16684	6.125	5	The interval from 16684 to 16740 feet MD (6987.87 to 6990.52 feet TVD) was not logged due to sensor to bit offset, TD well



Company : Extraction Oil &amp; Gas

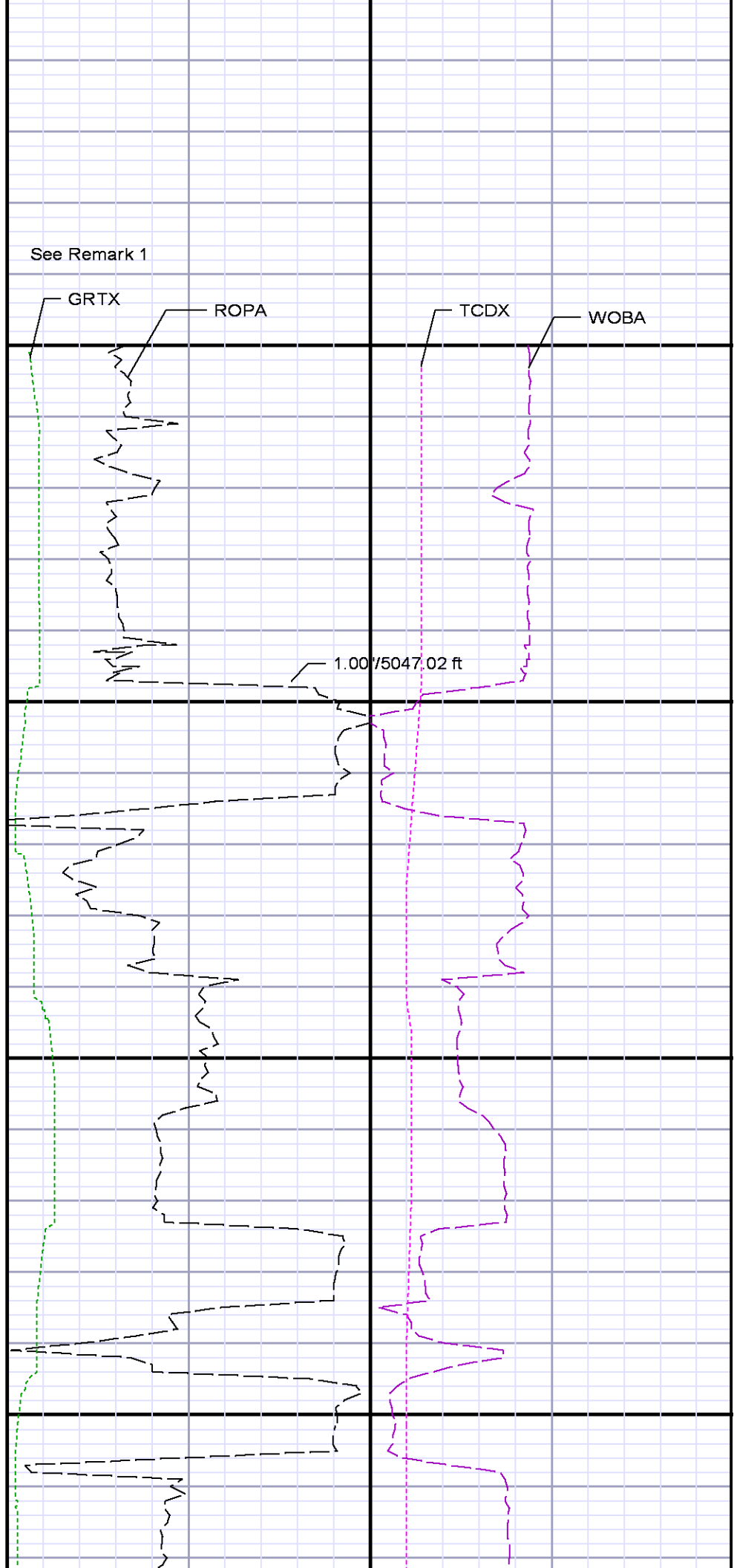
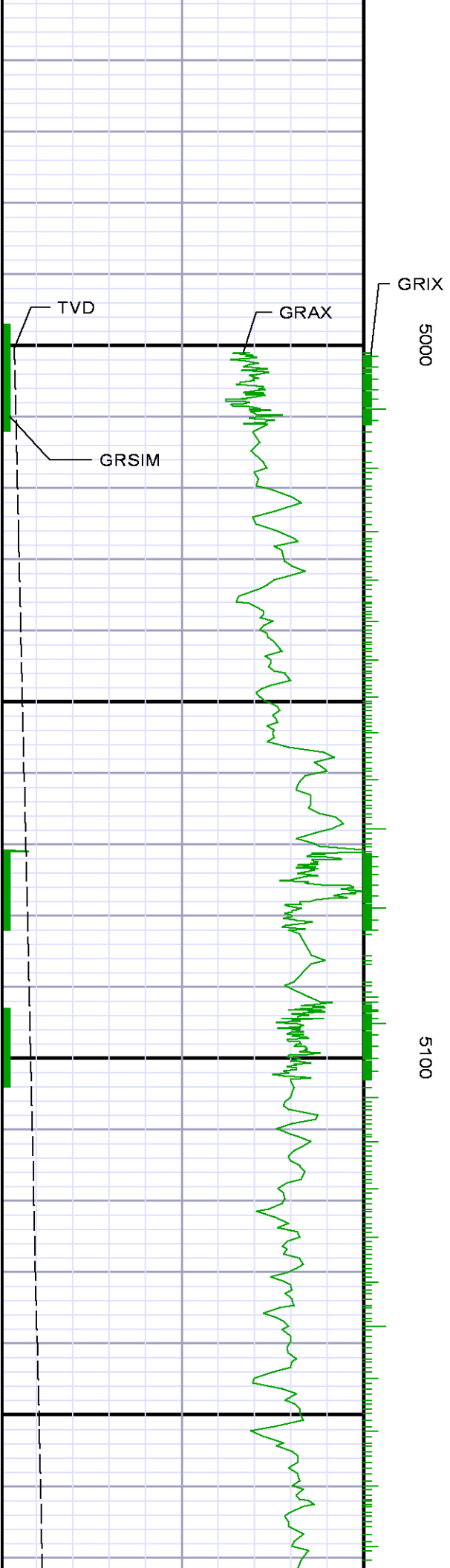
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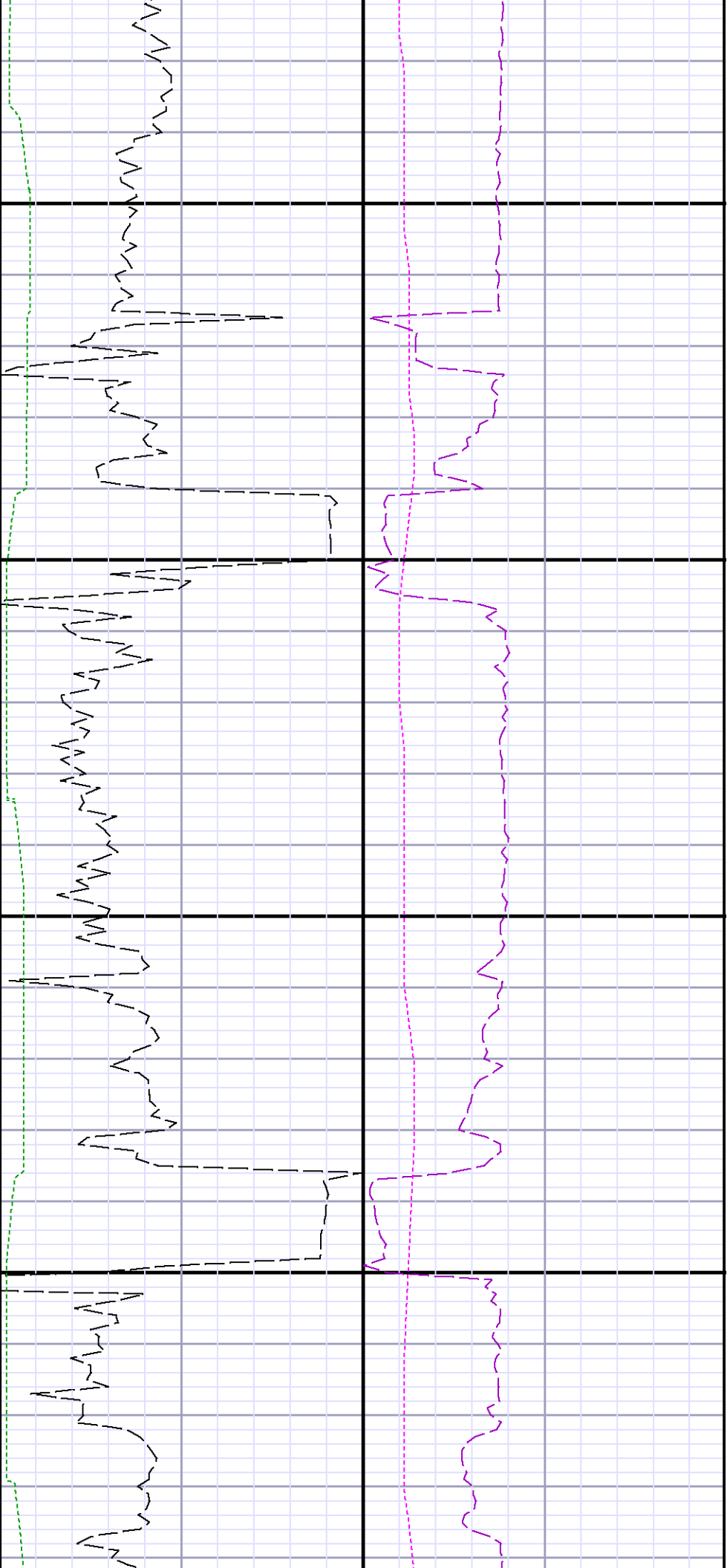
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Created : 29/Oct/2014 1:30:04 AM

INTEQ

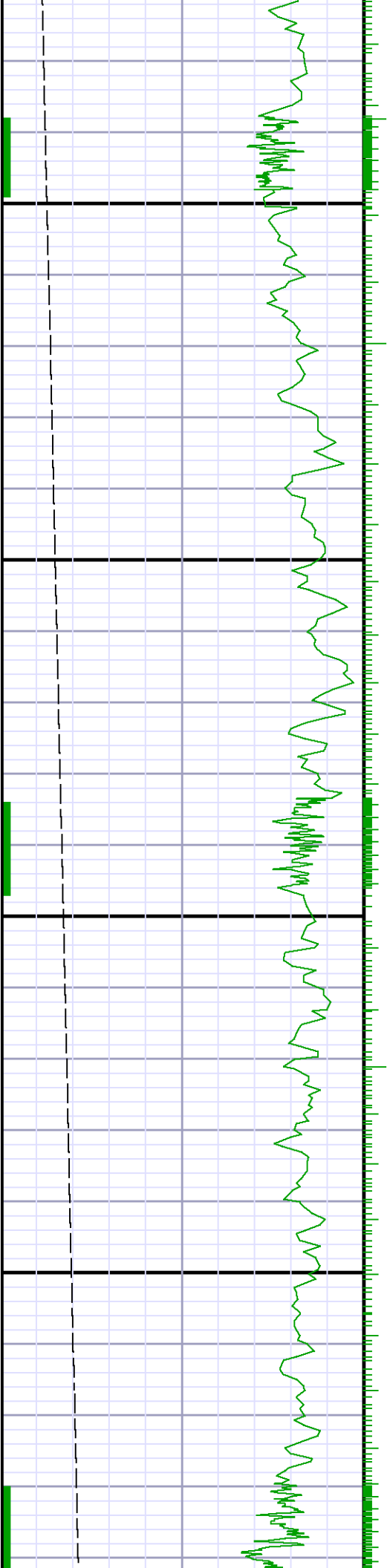
Gamma Ray Apparent 0.5 ft Avg GRAX	MD feet 1:240	Rate of Penetration 3.0 ft Avg ROP_AVG	Surface Weight On Bit 1.0 ft Avg WOB_AVG
0 150		400 0	0 100
API		ft/hr	klbf
True Vertical Depth TVD		Gamma Time Since Drilled GRTX	Downhole Temperature TCDX
4900 7100		0 600	100 300
ft		min	degF

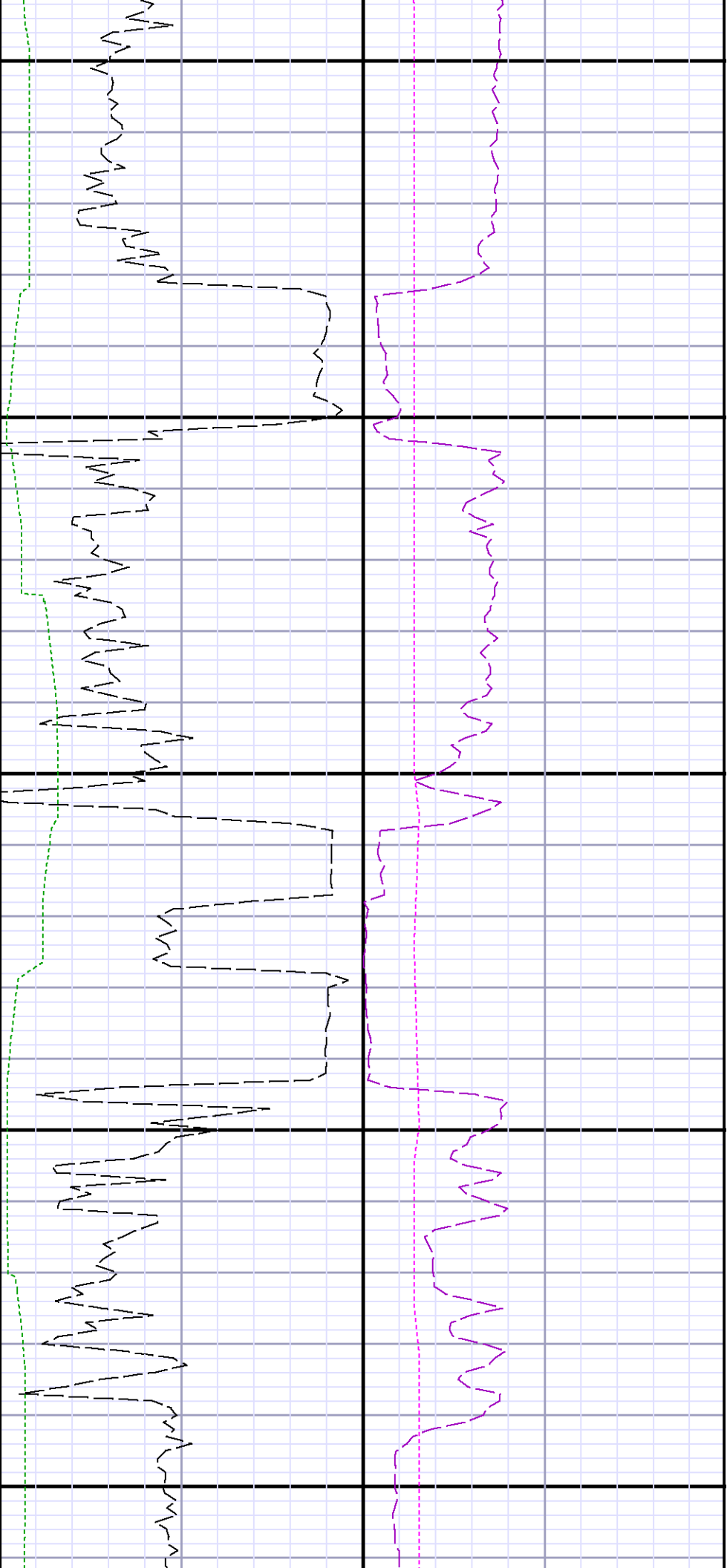




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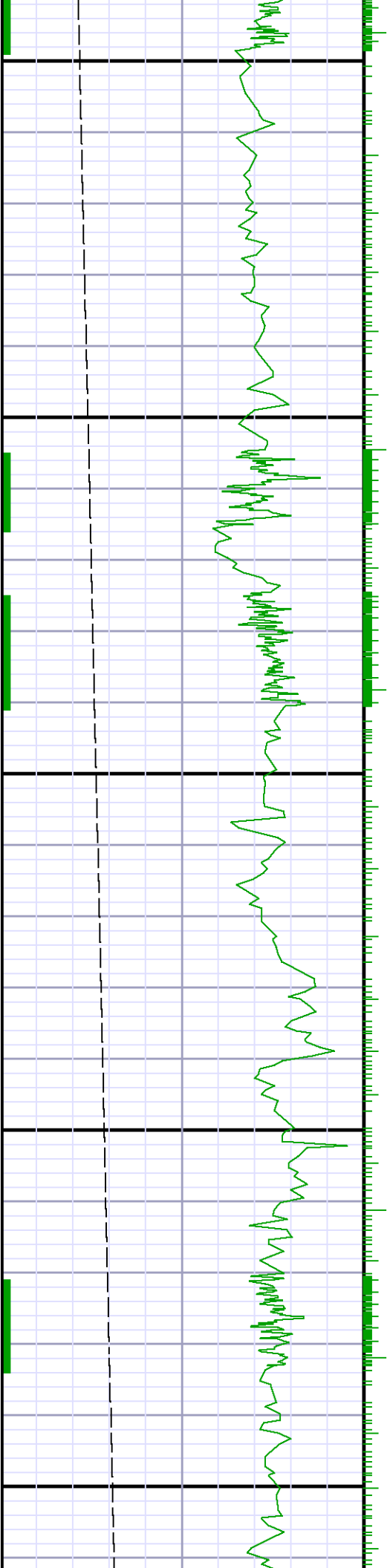


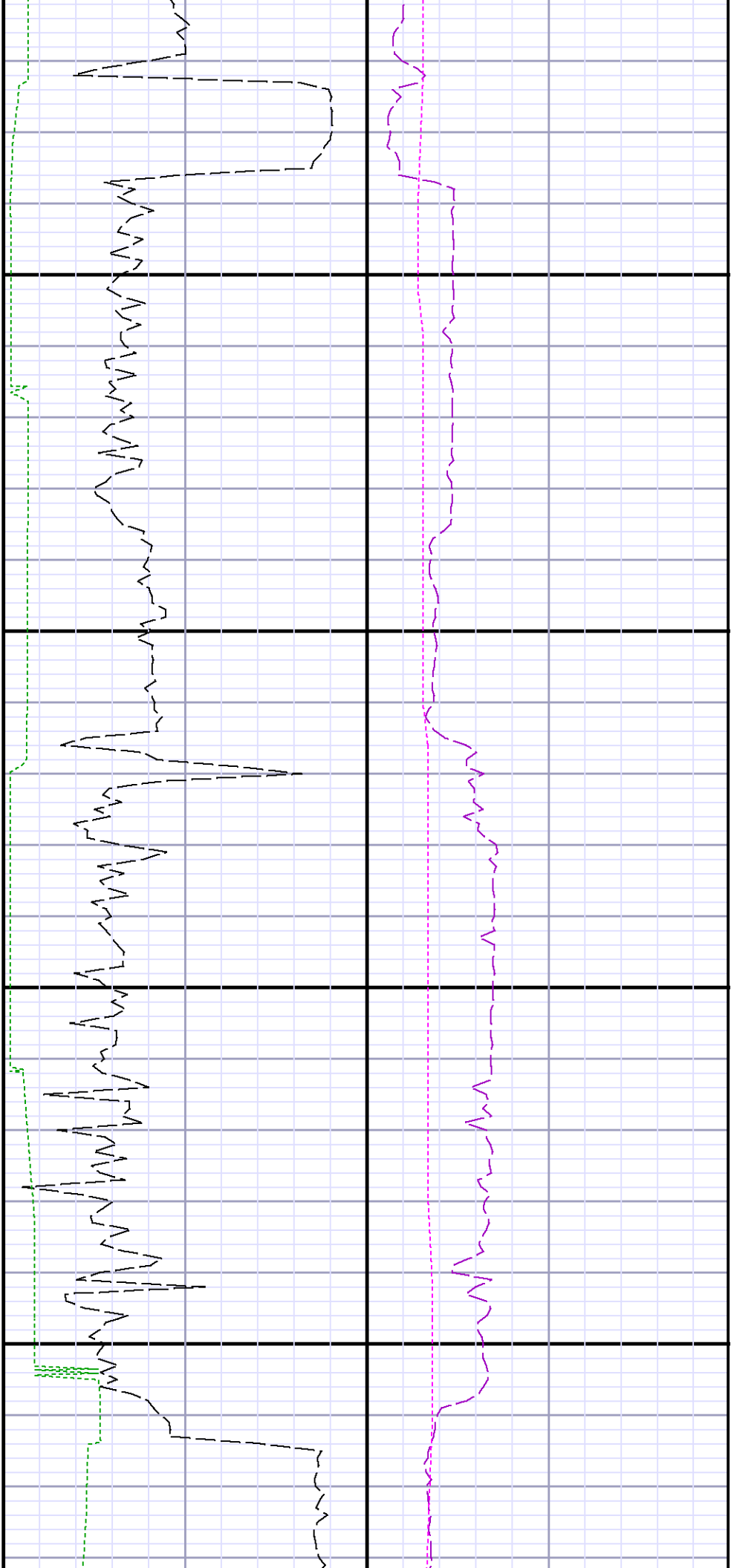


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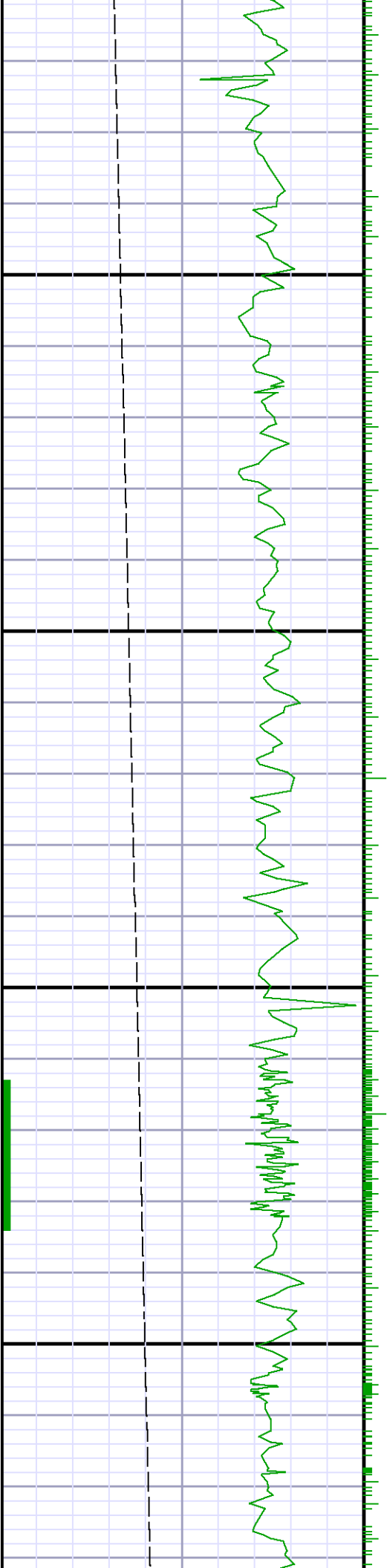
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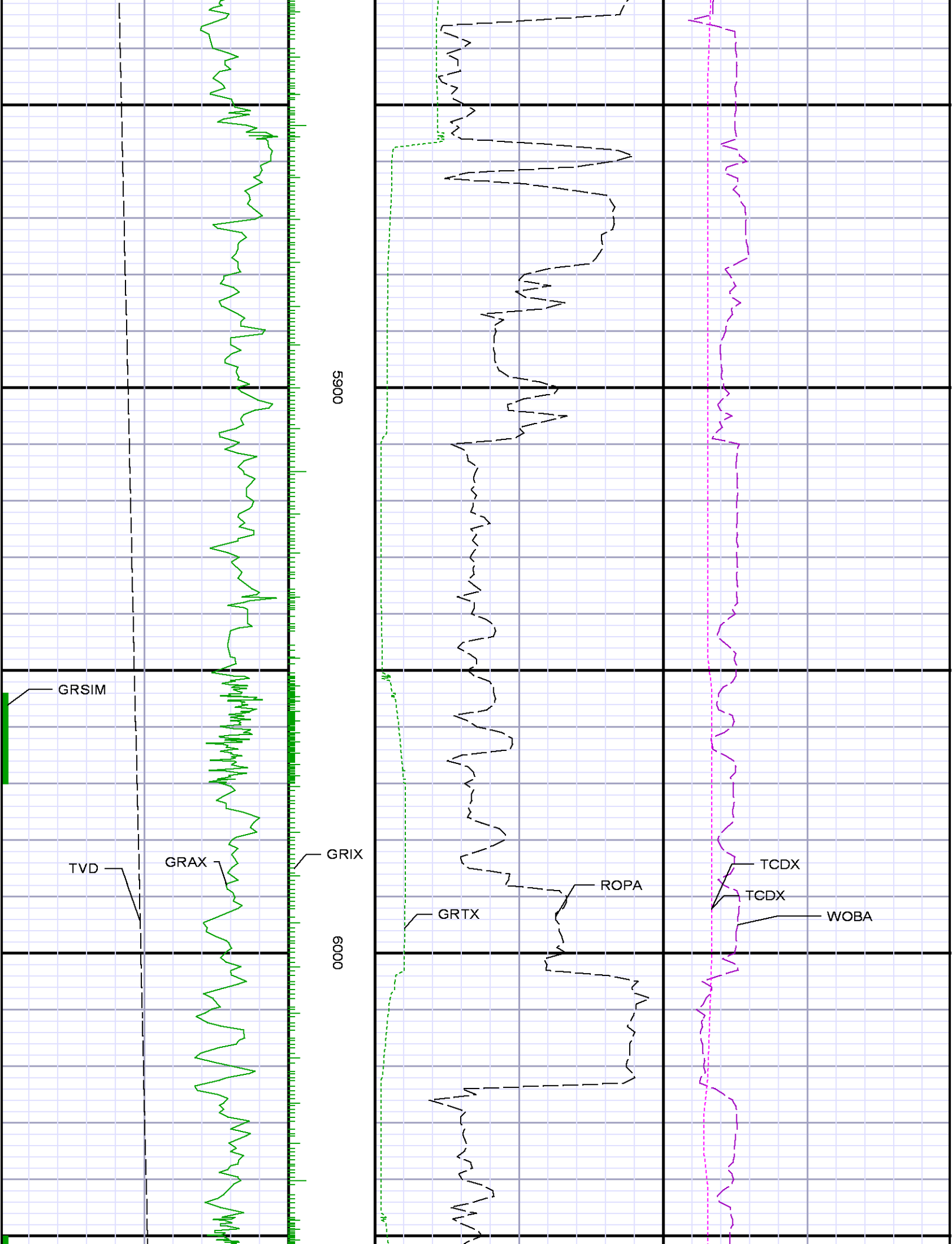




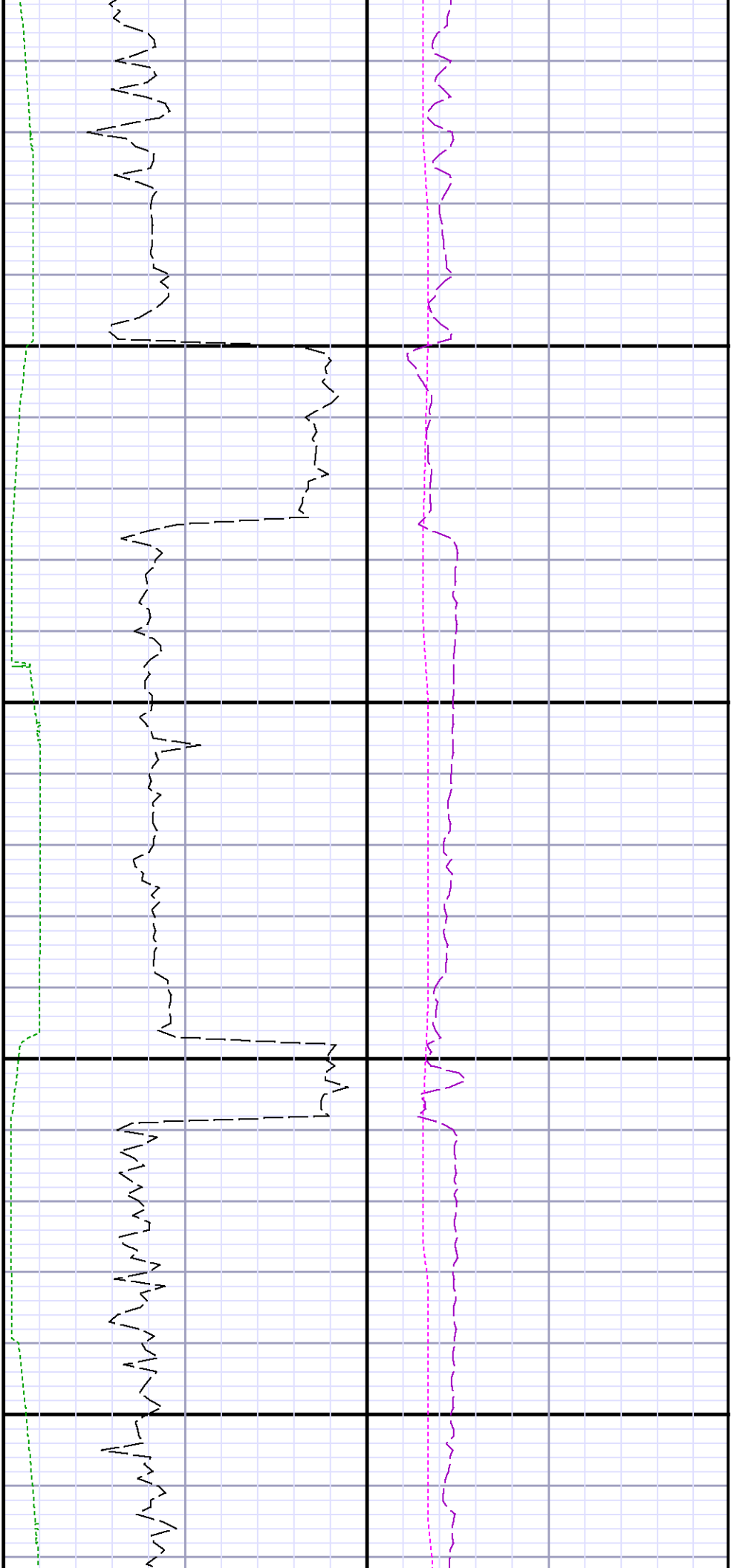
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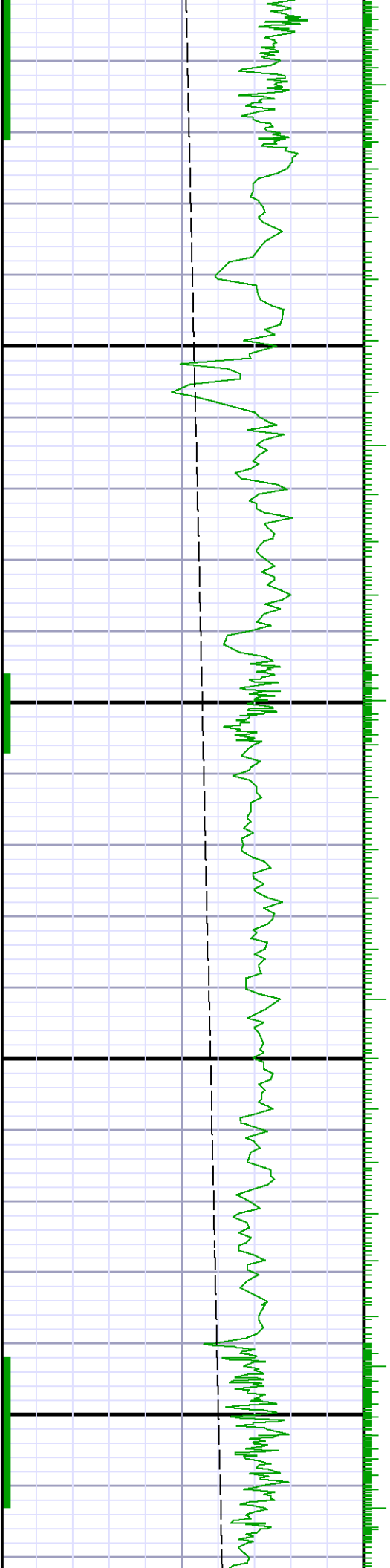


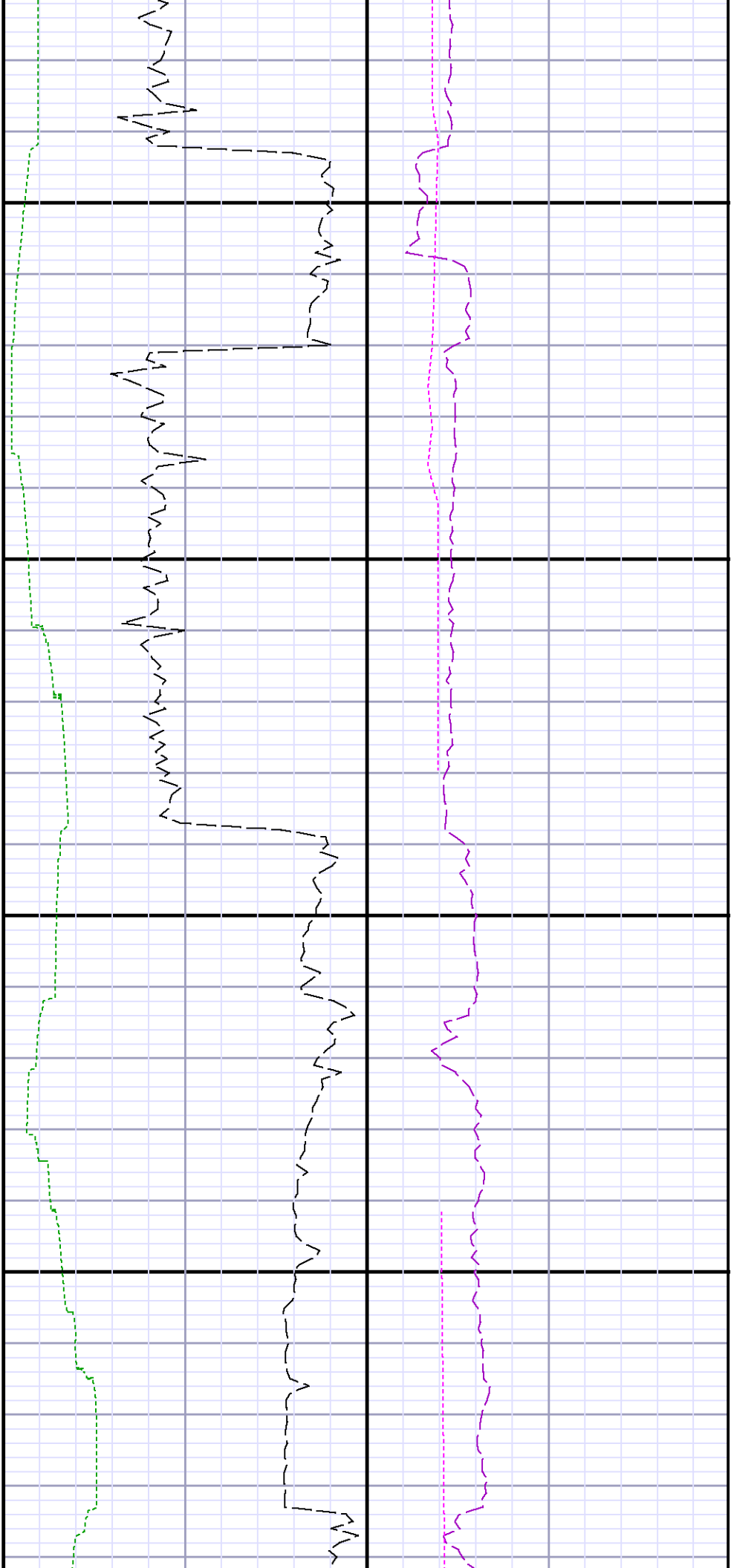




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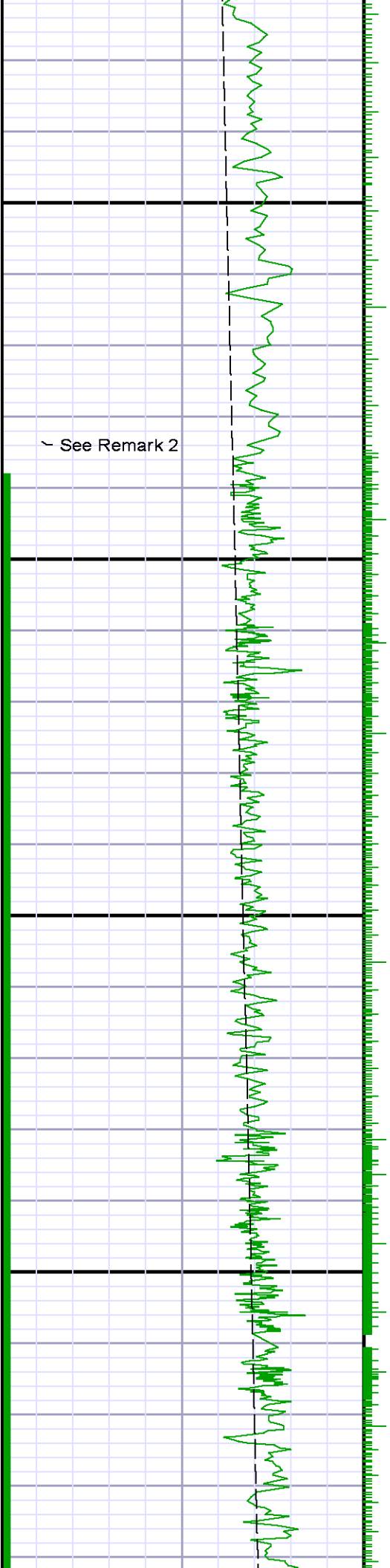


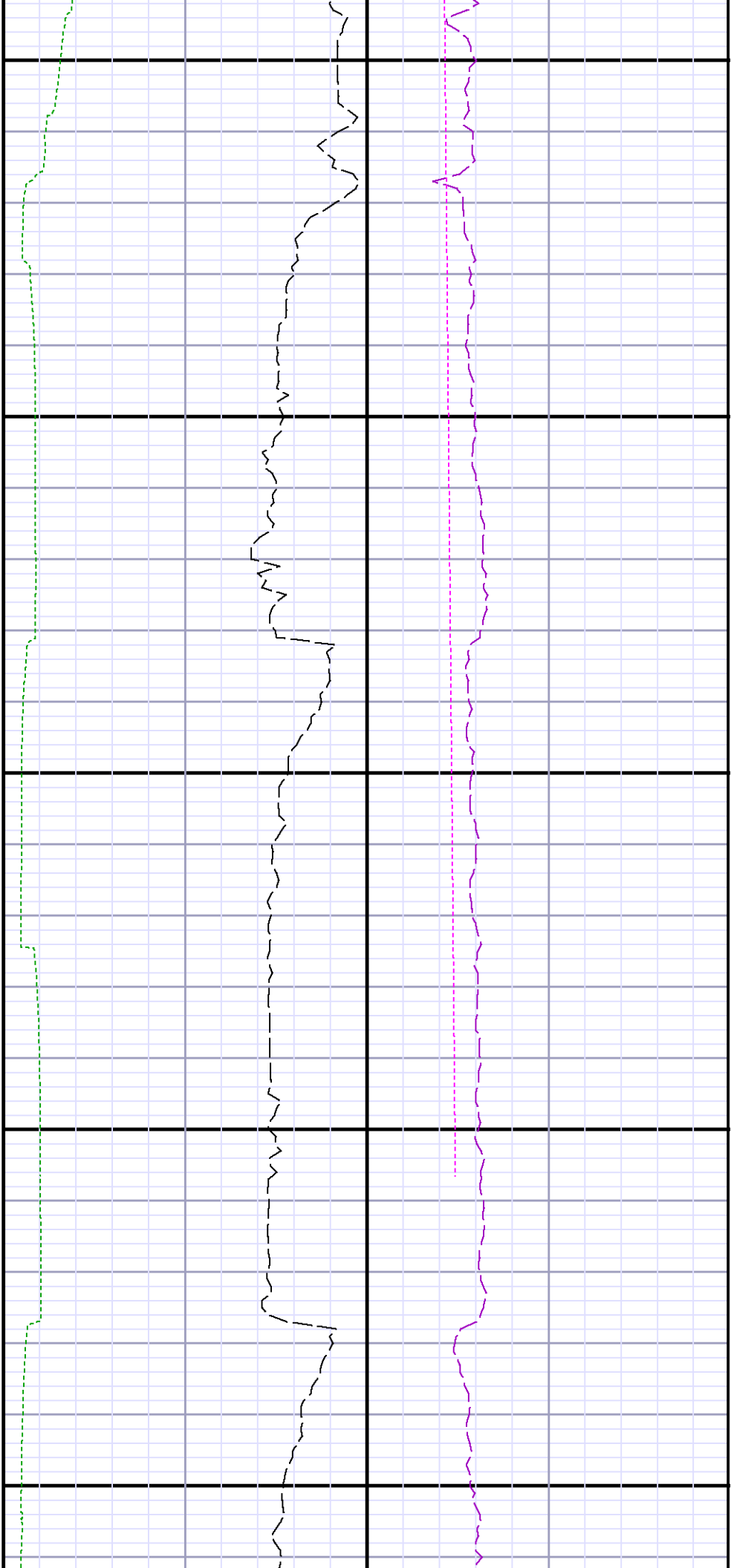


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~ See Remark 2

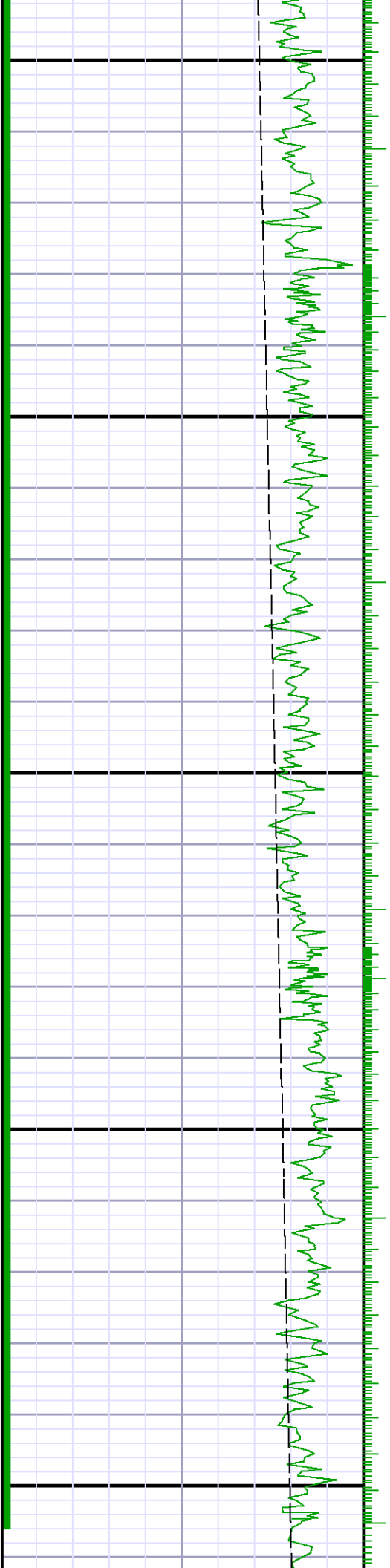


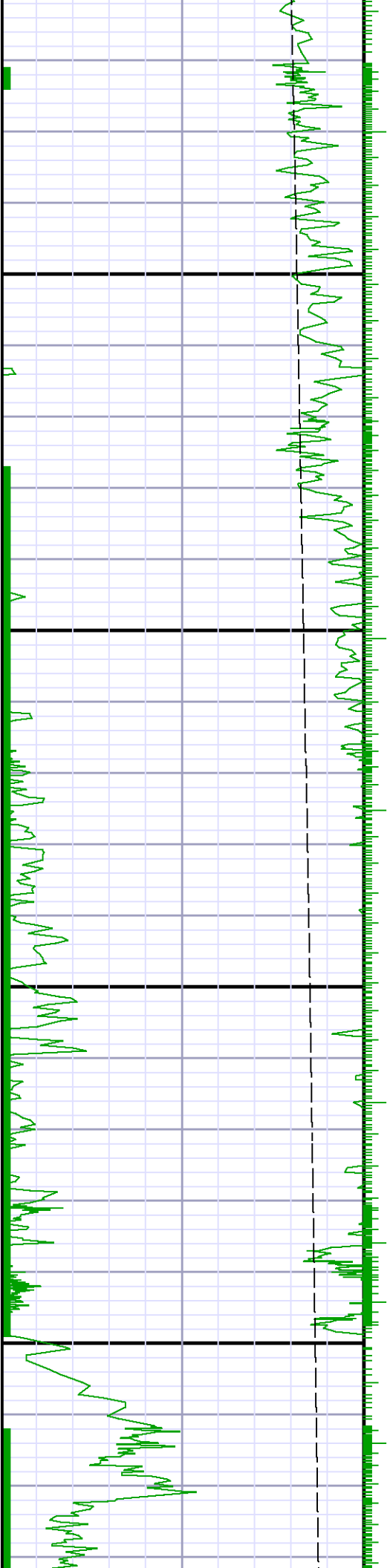


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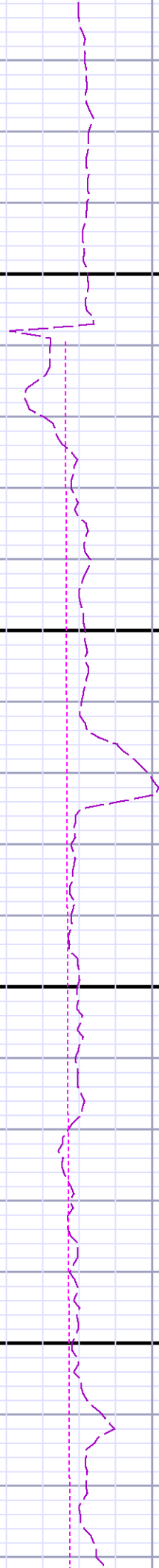
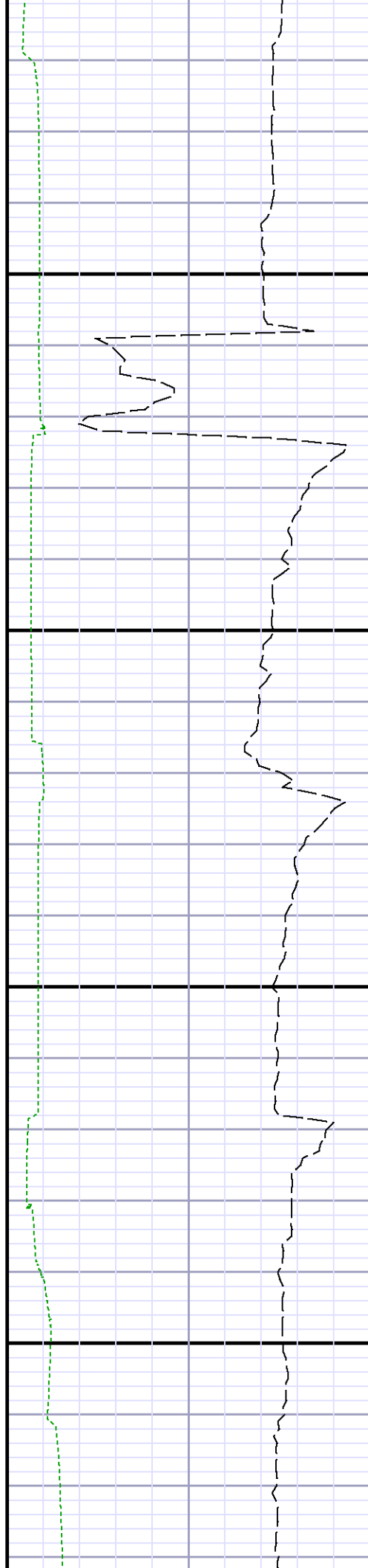
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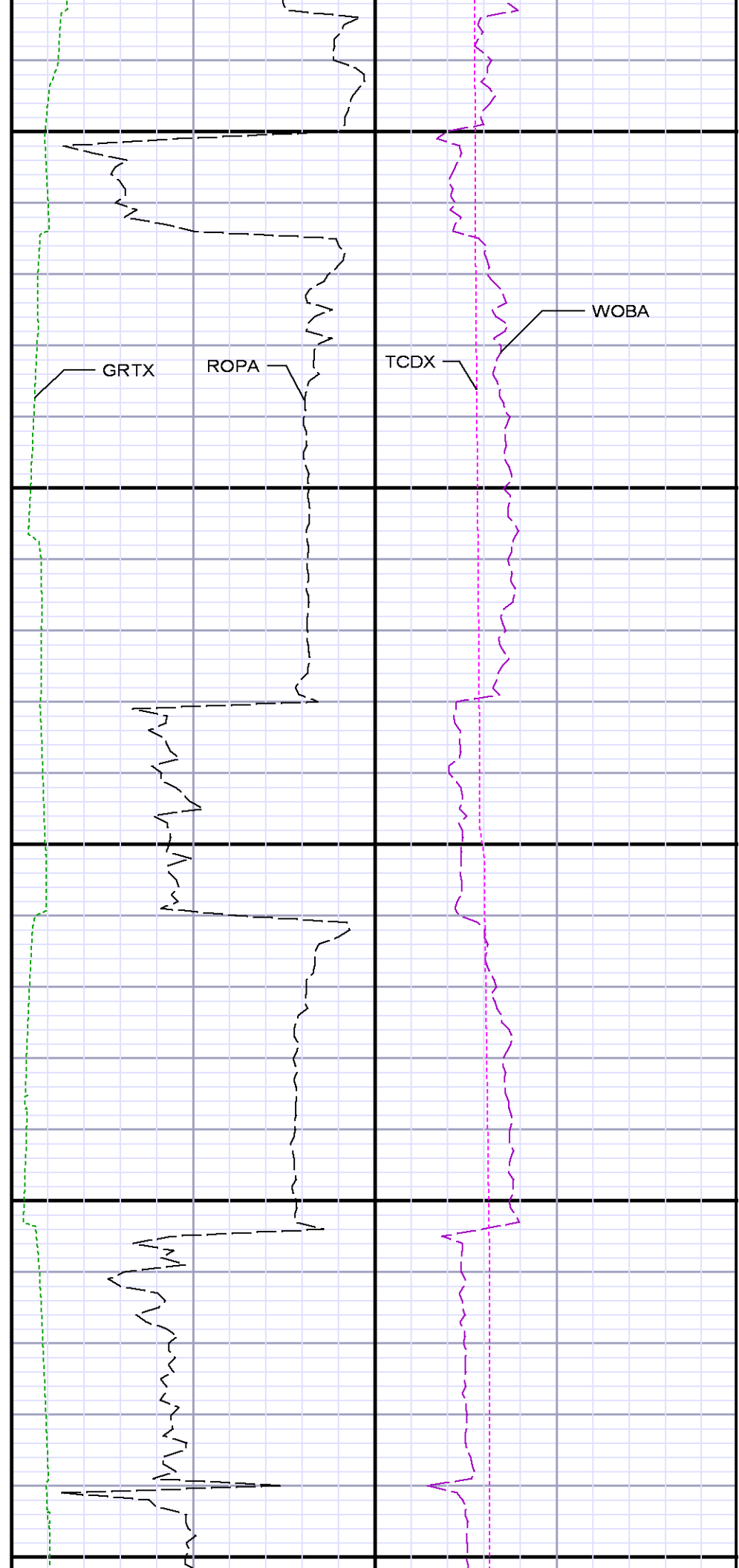
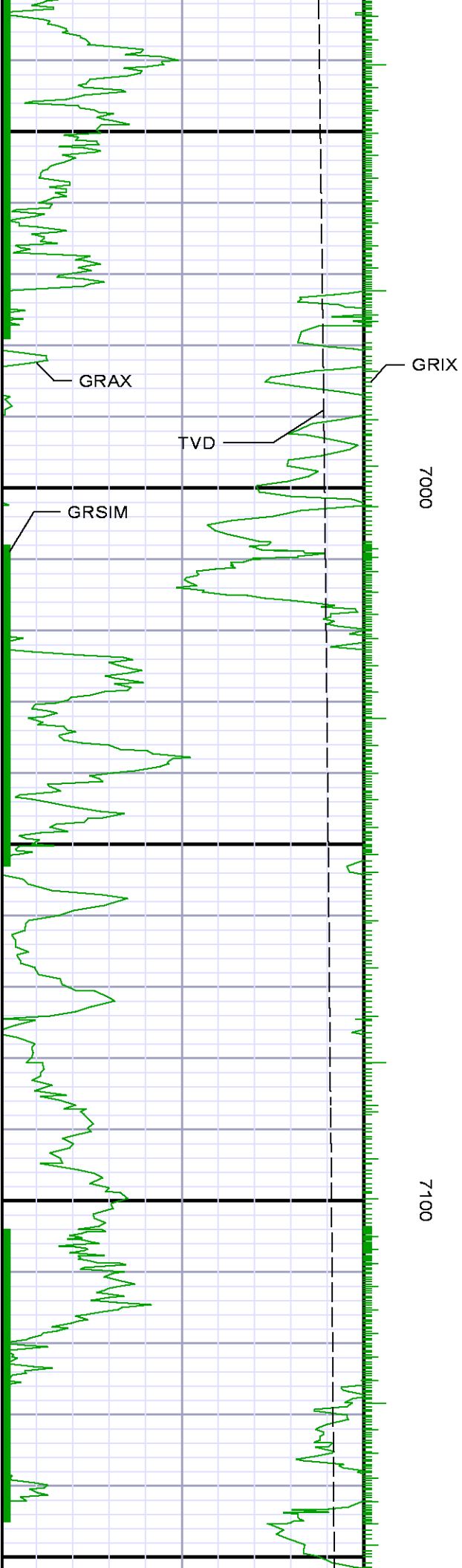


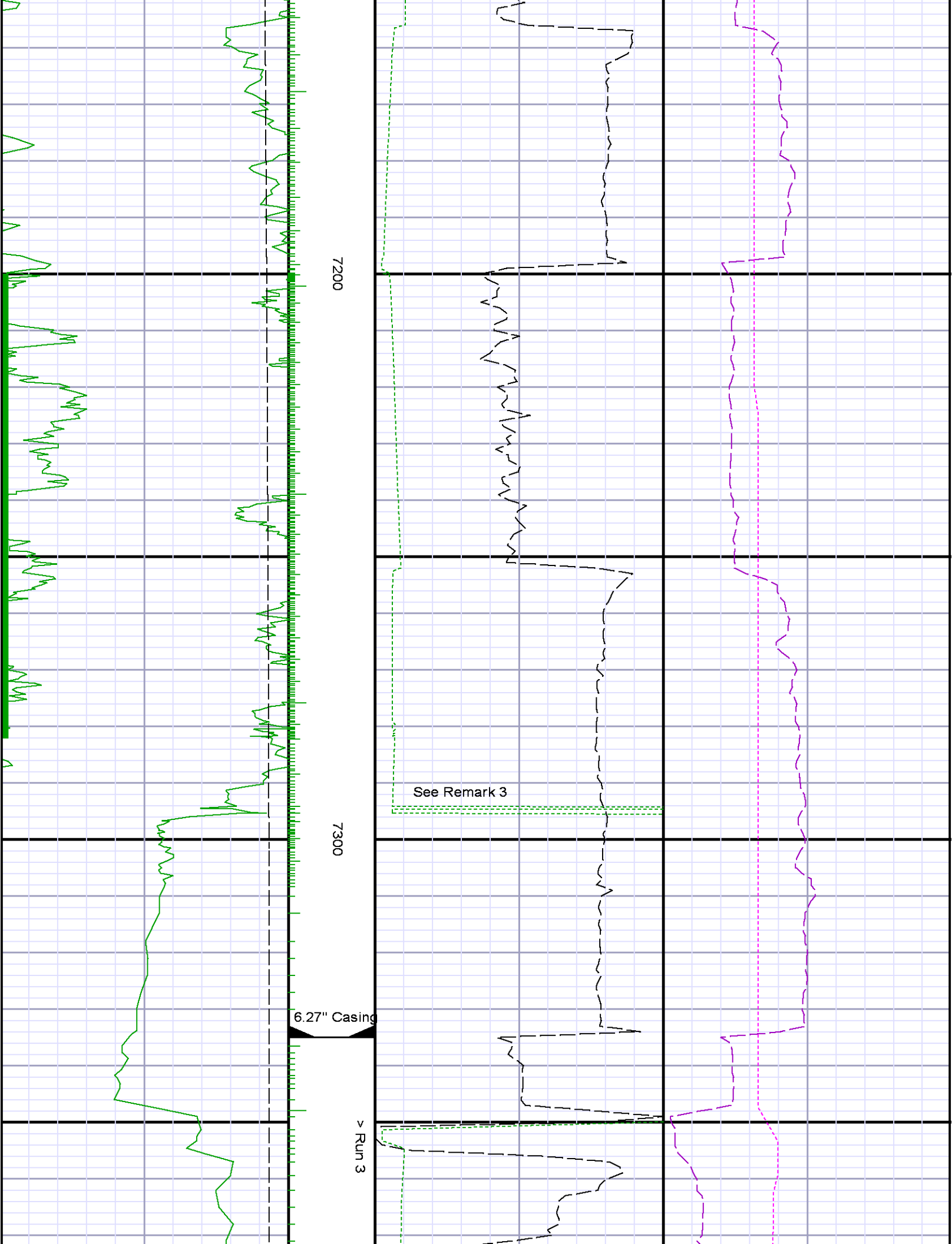


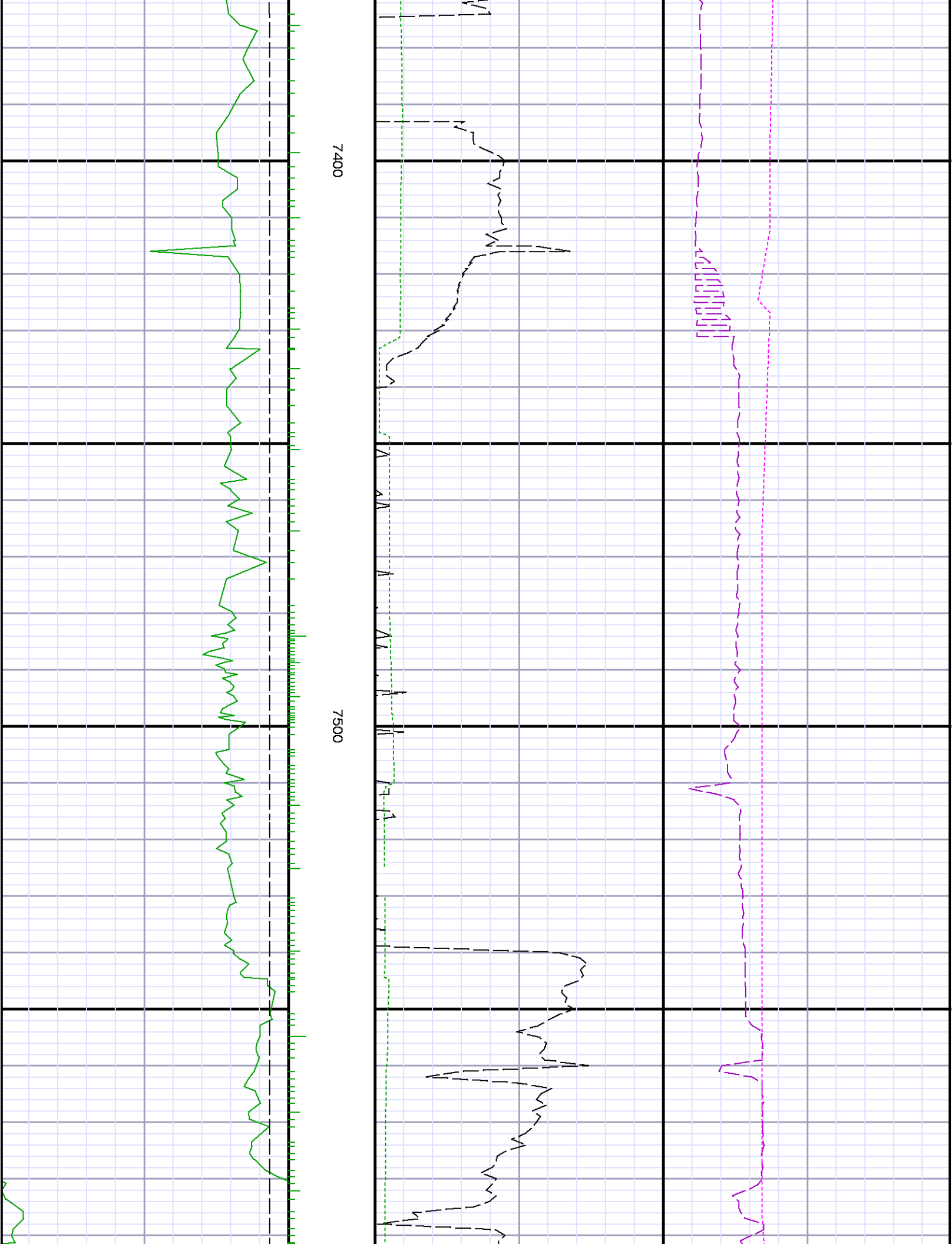
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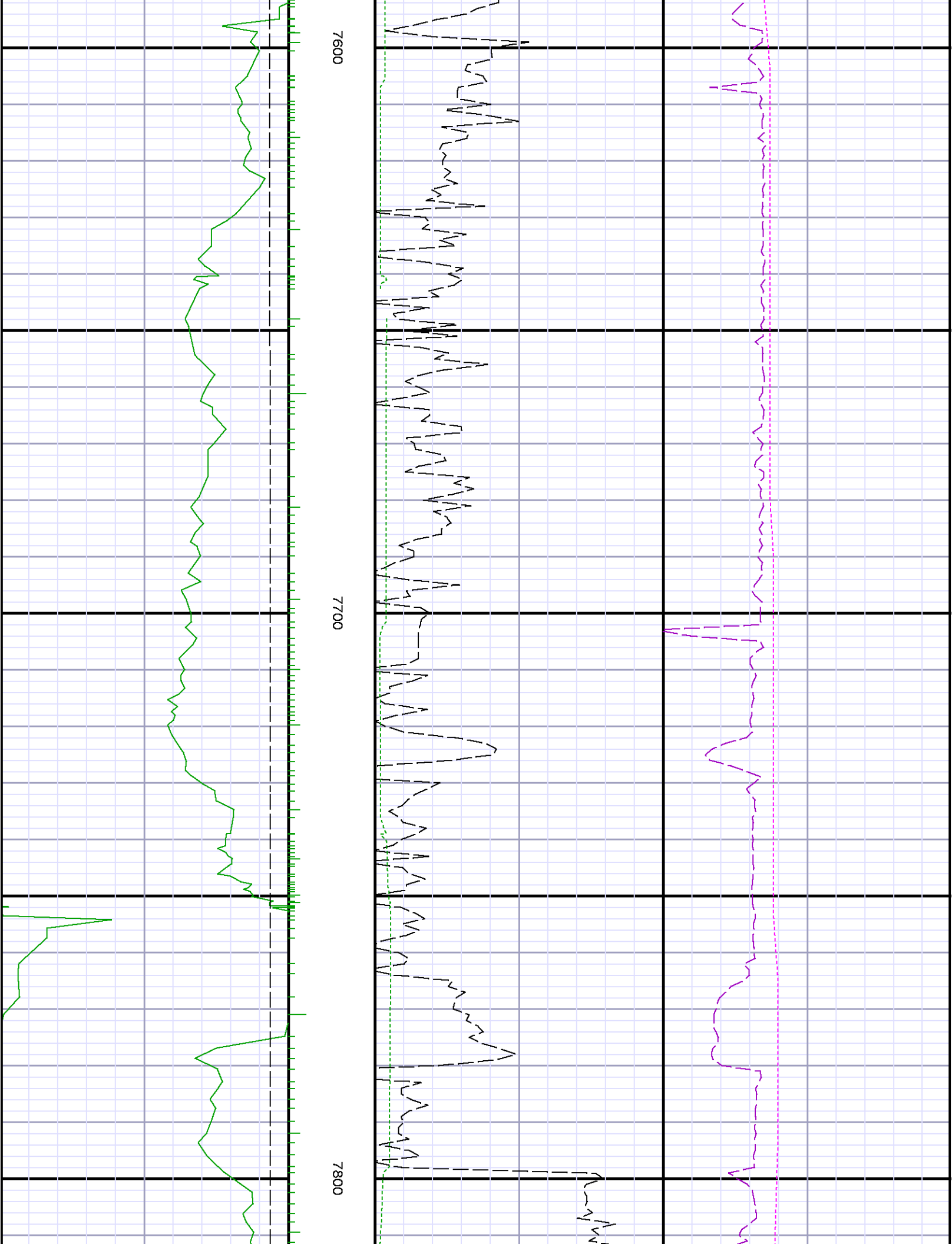
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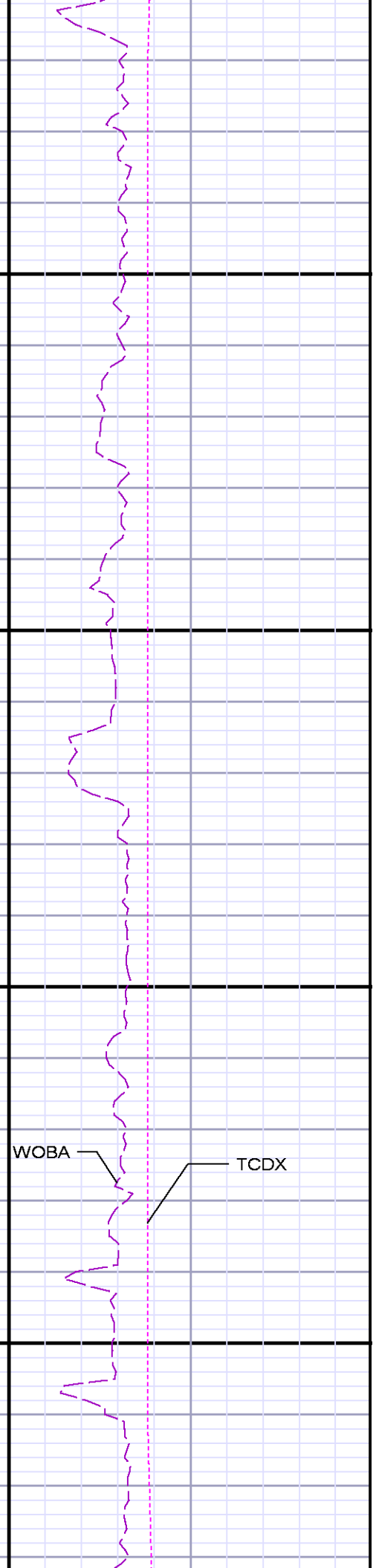
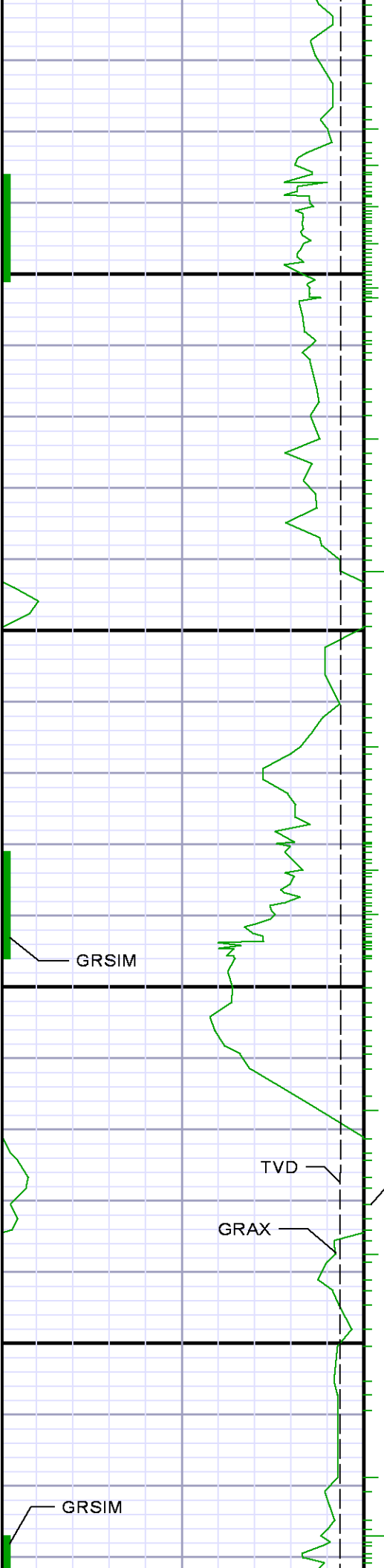


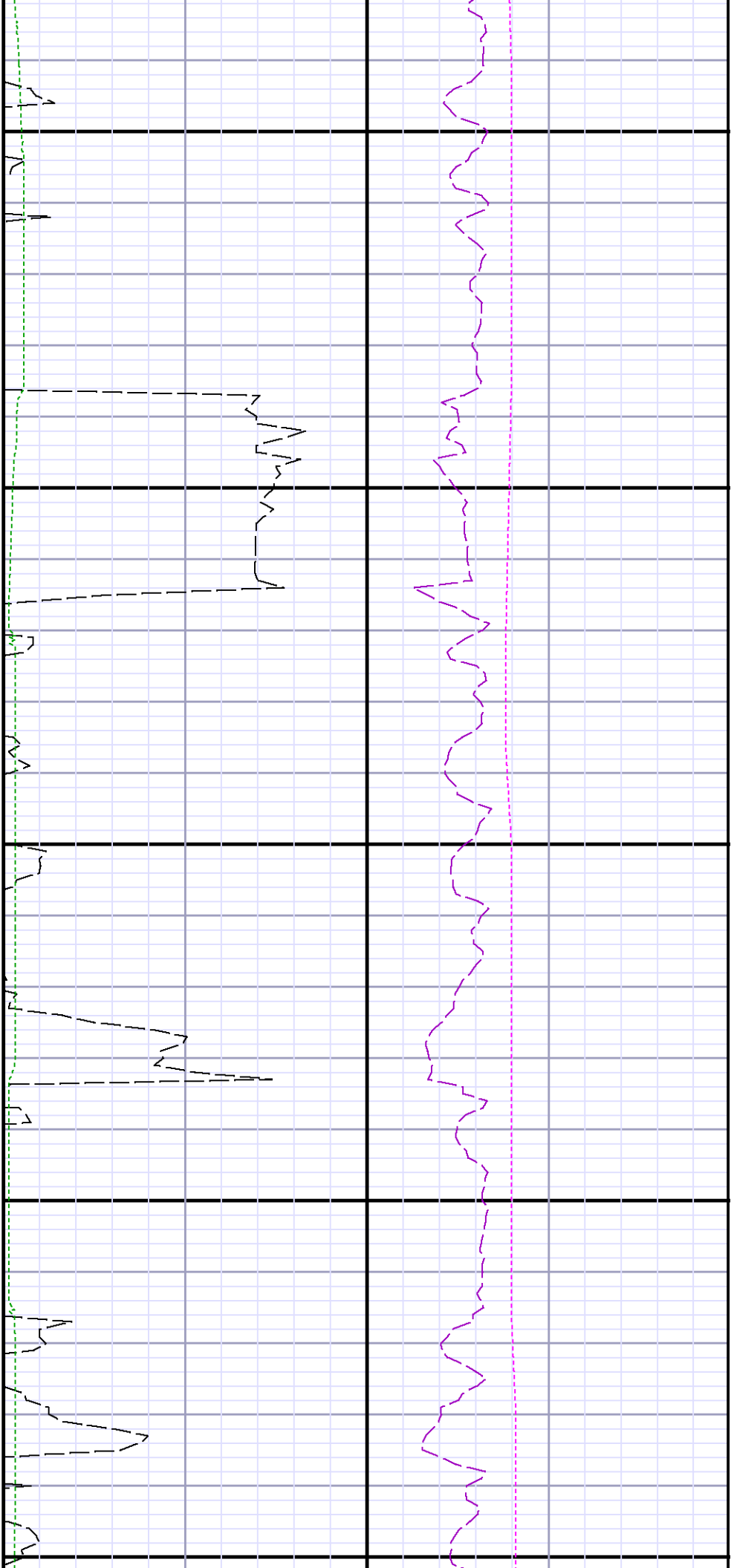






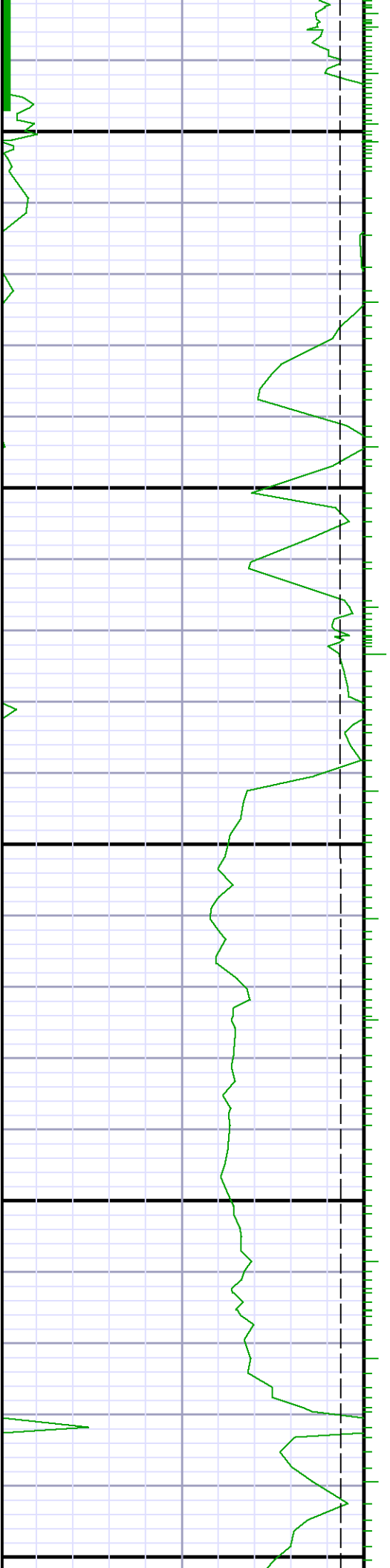


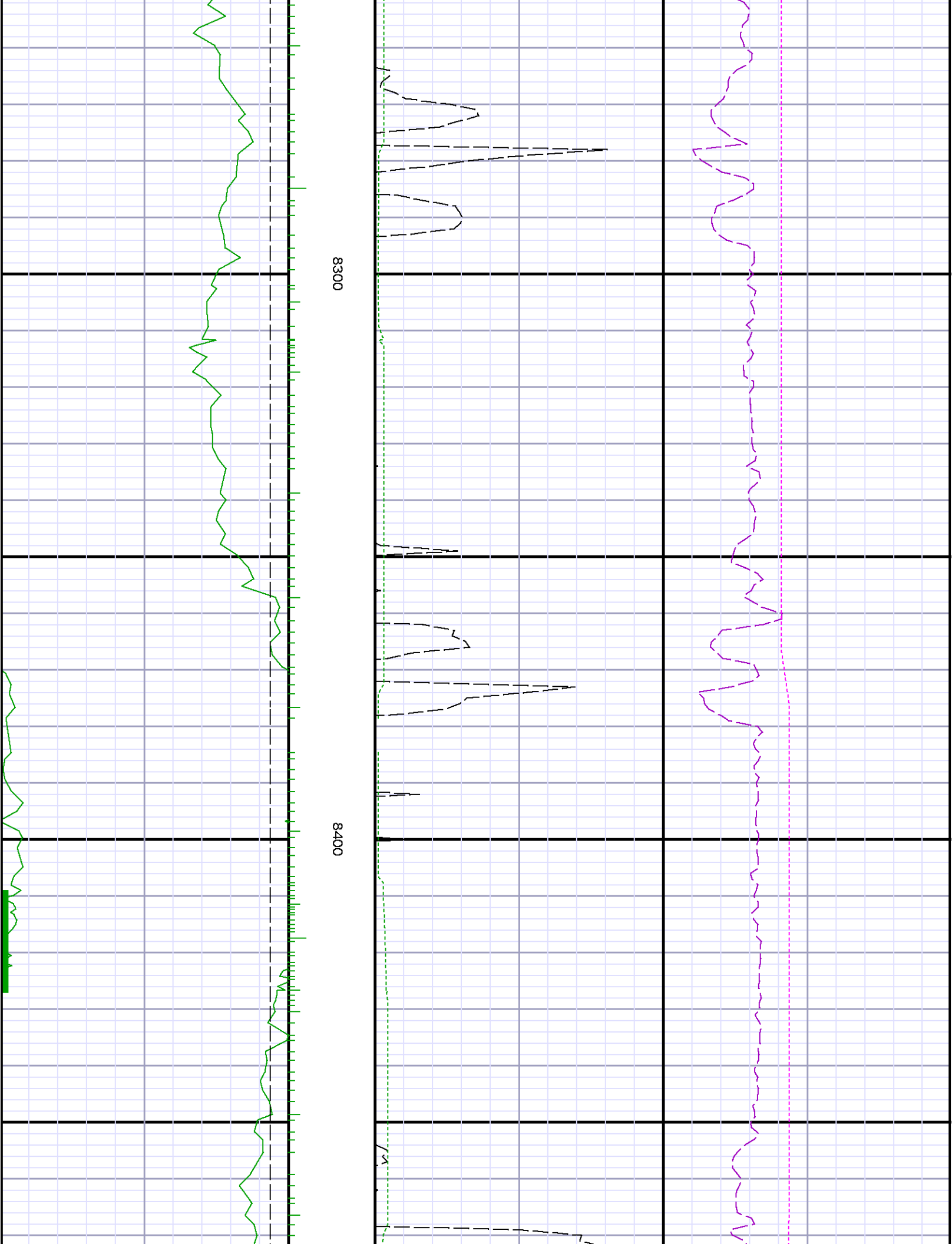


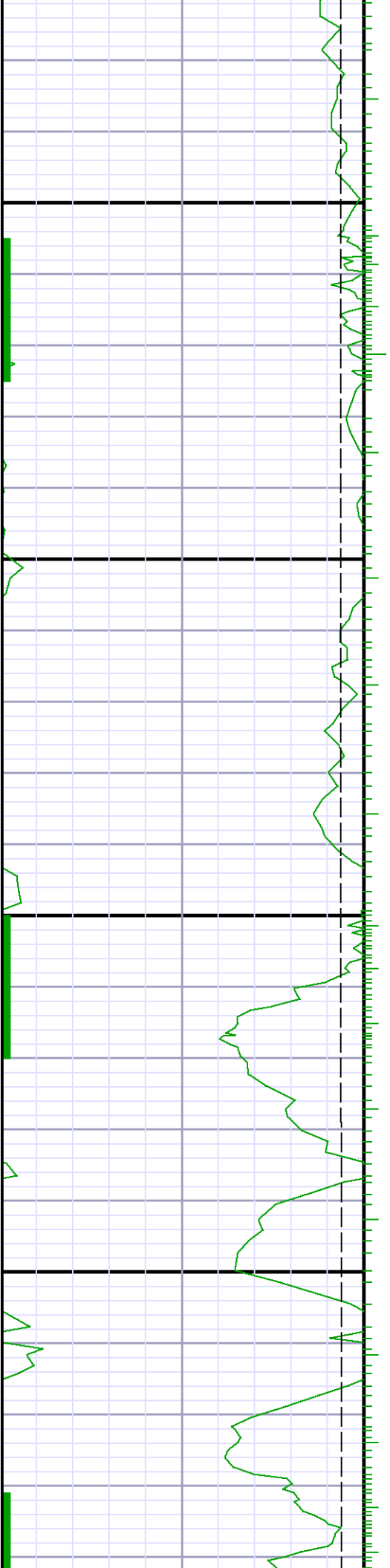


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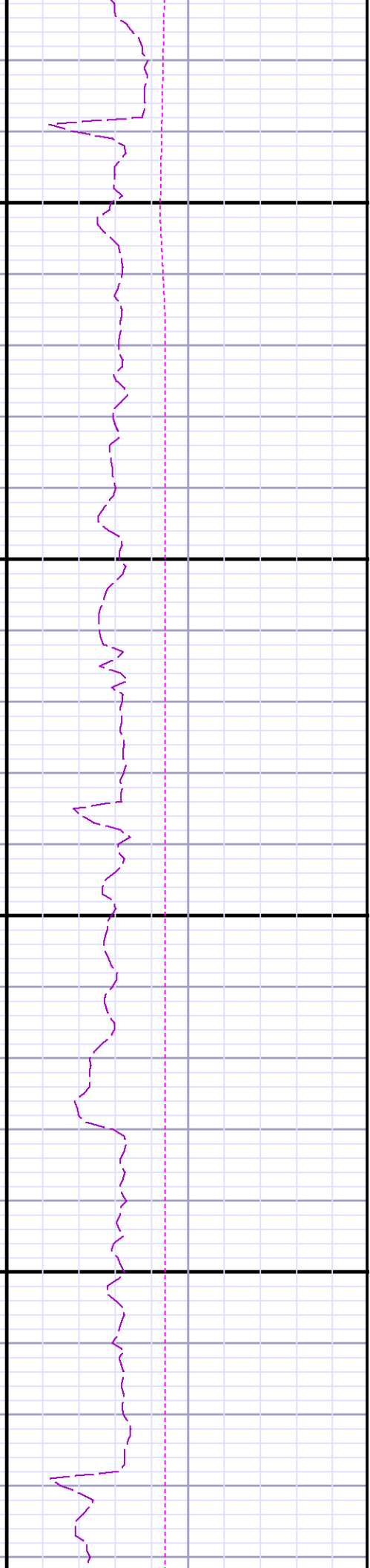


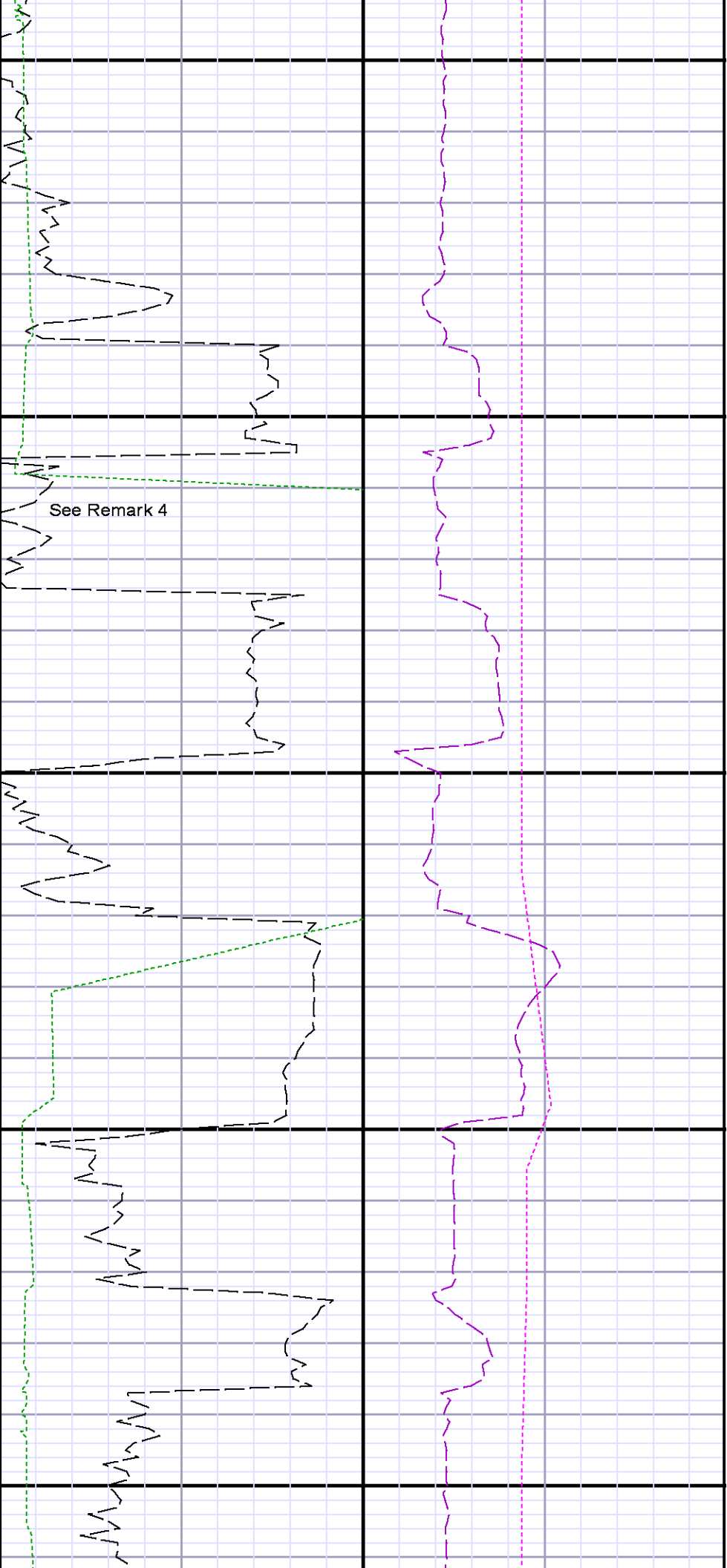




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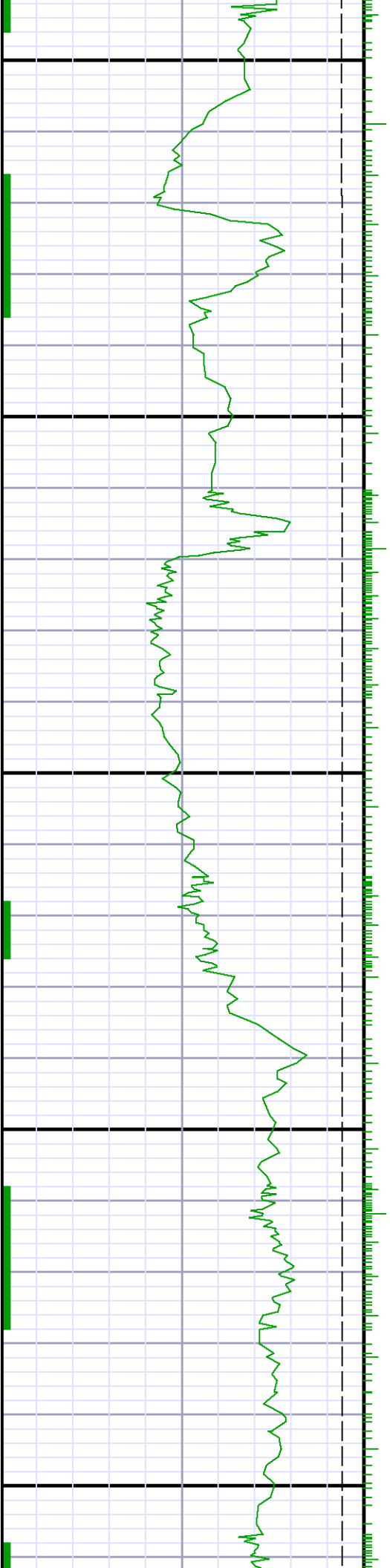


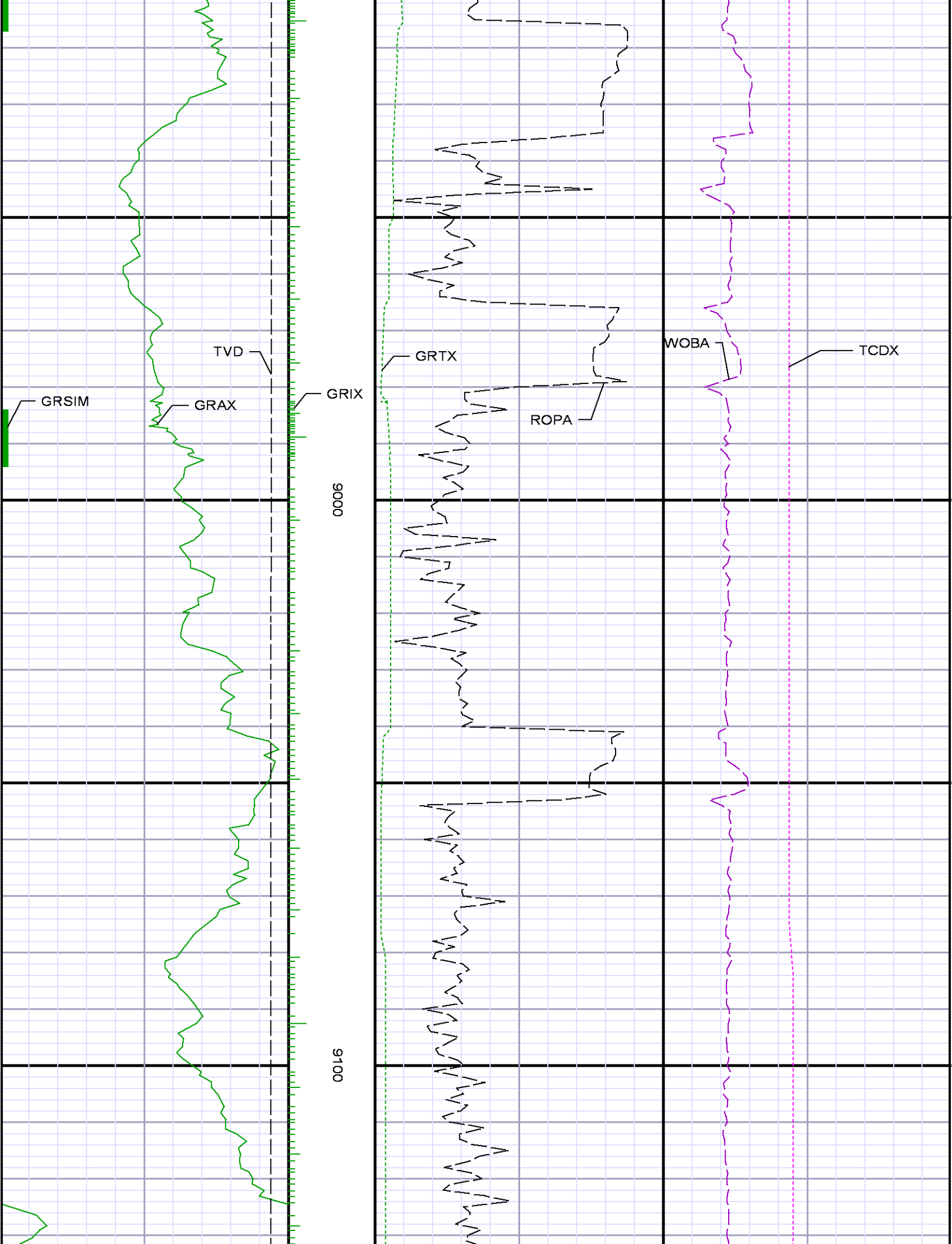
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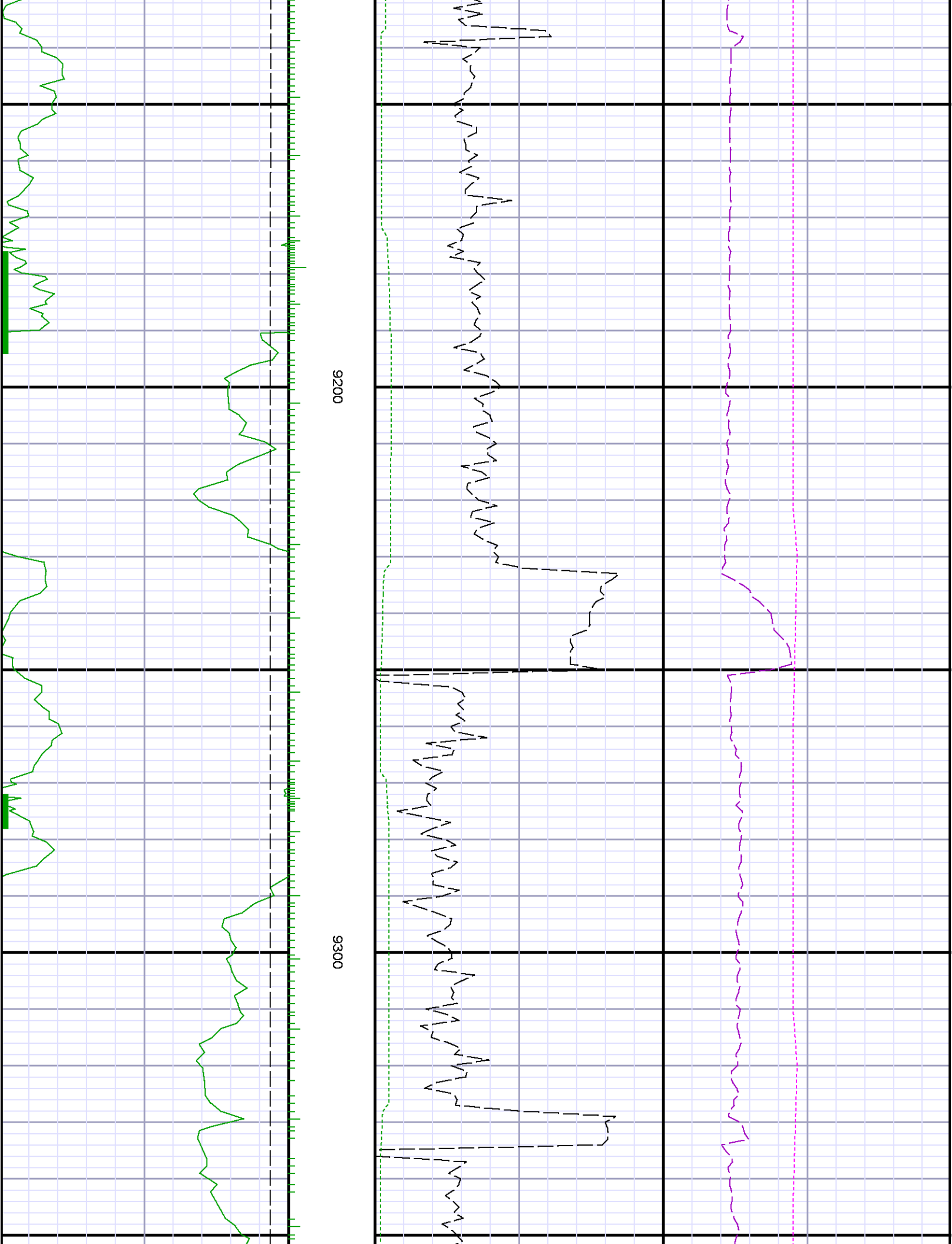
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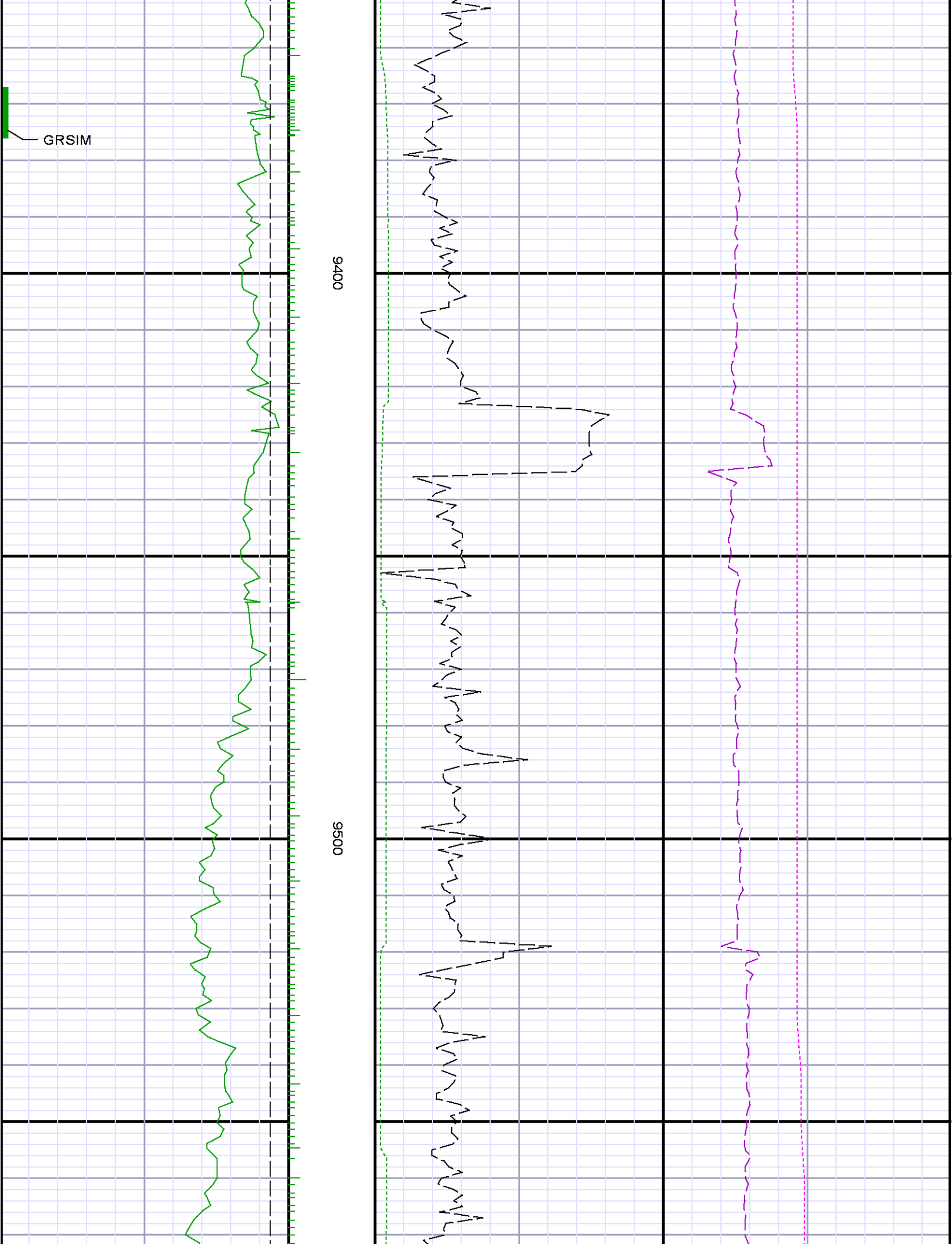
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Run 3 <> Run 4

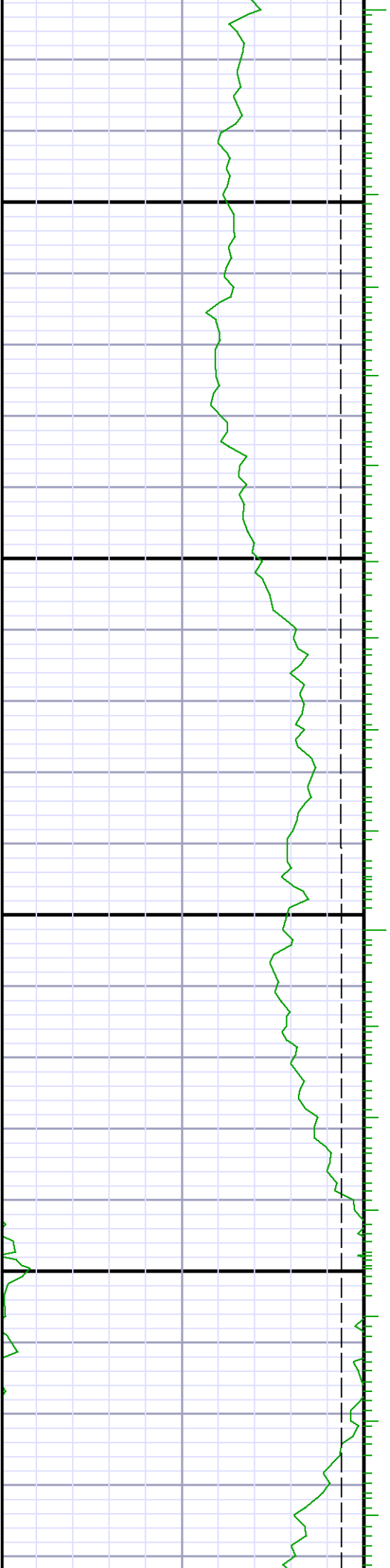






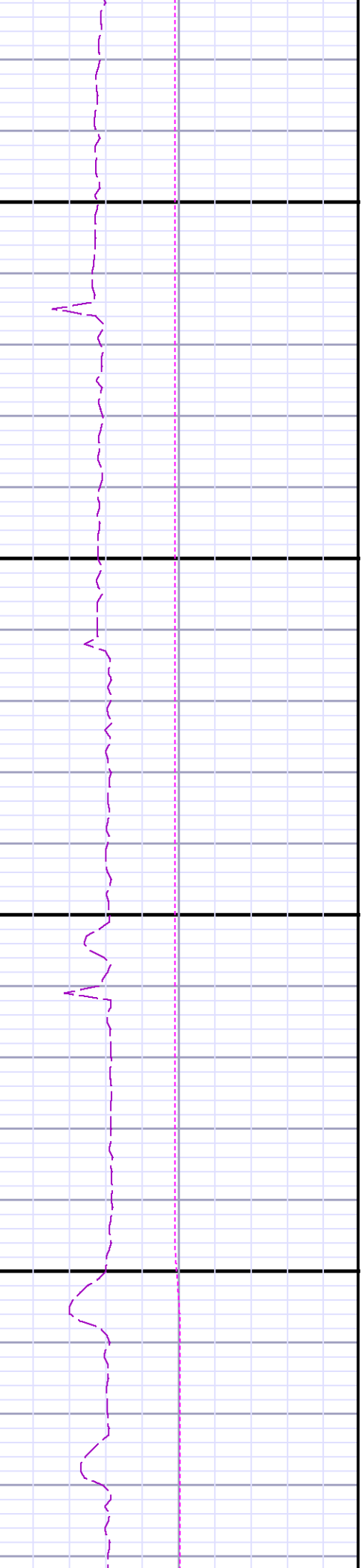
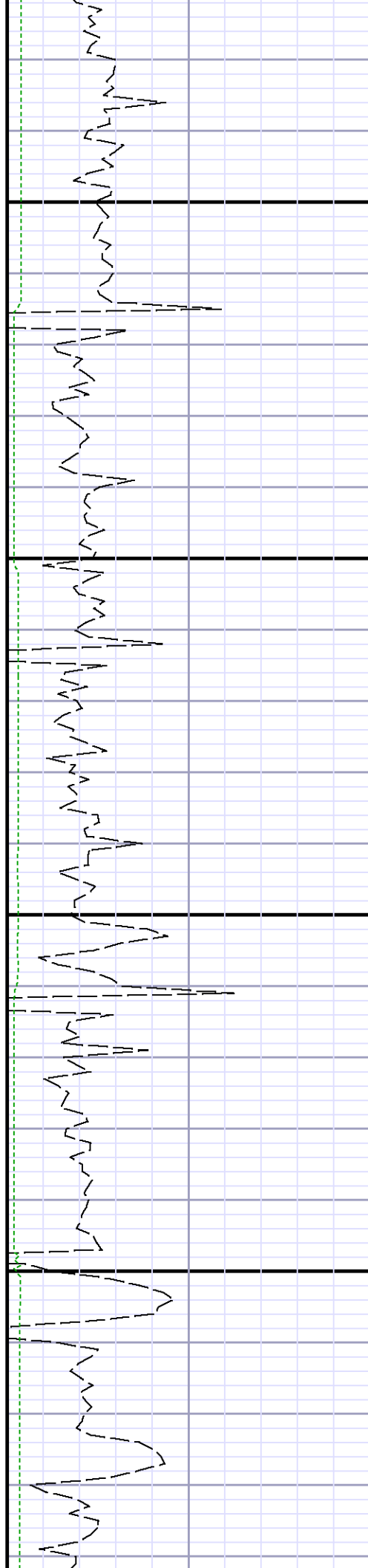


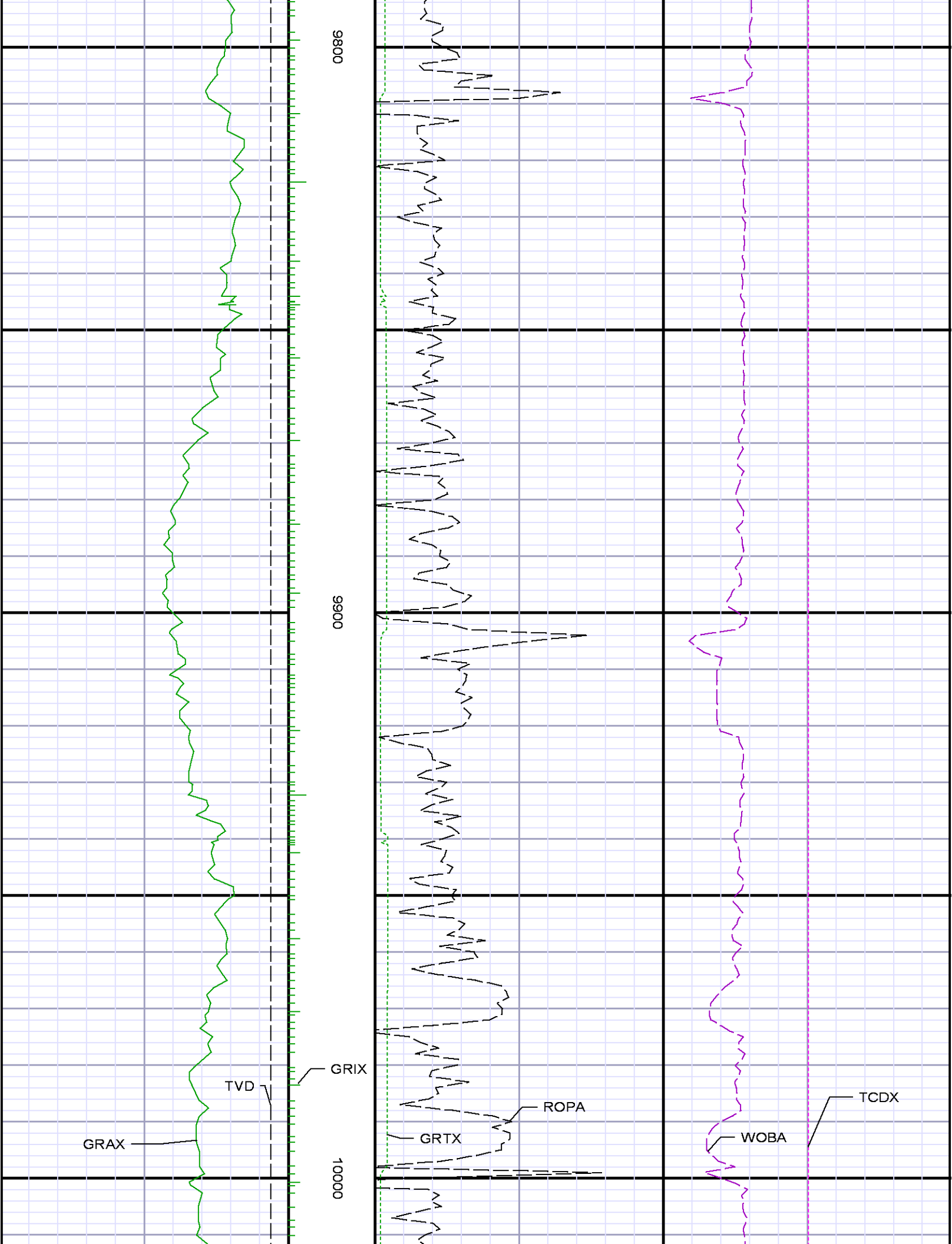


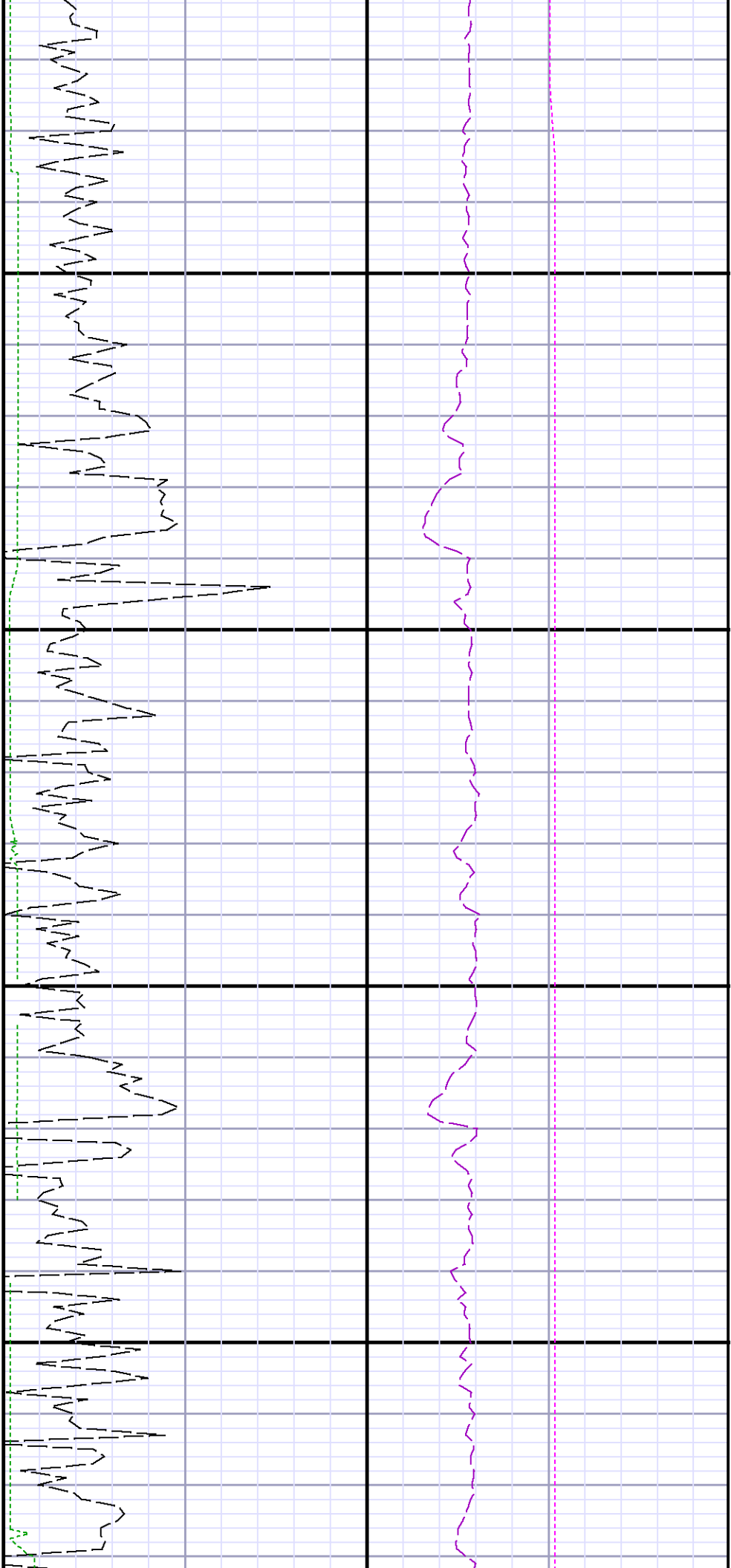


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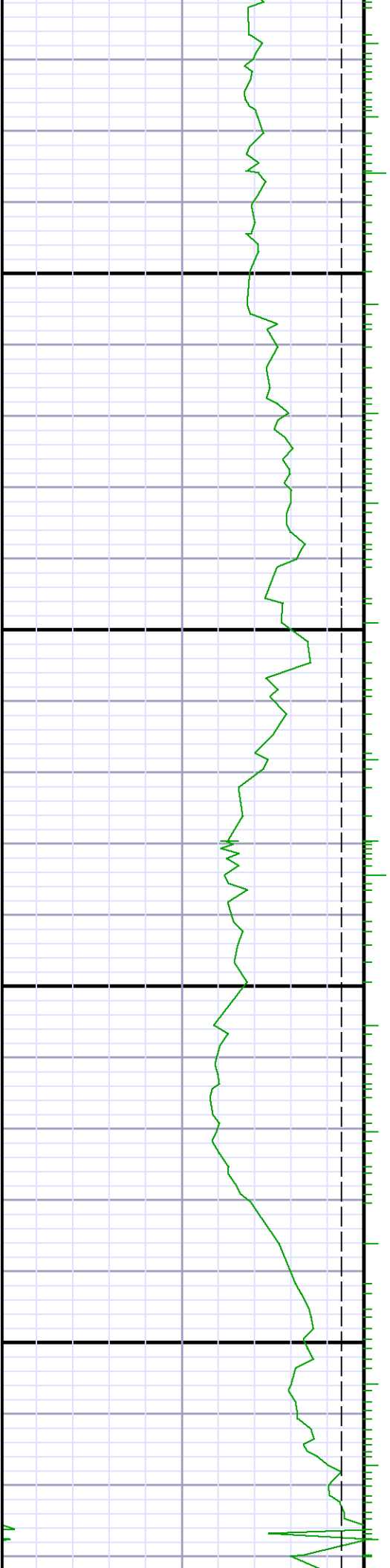


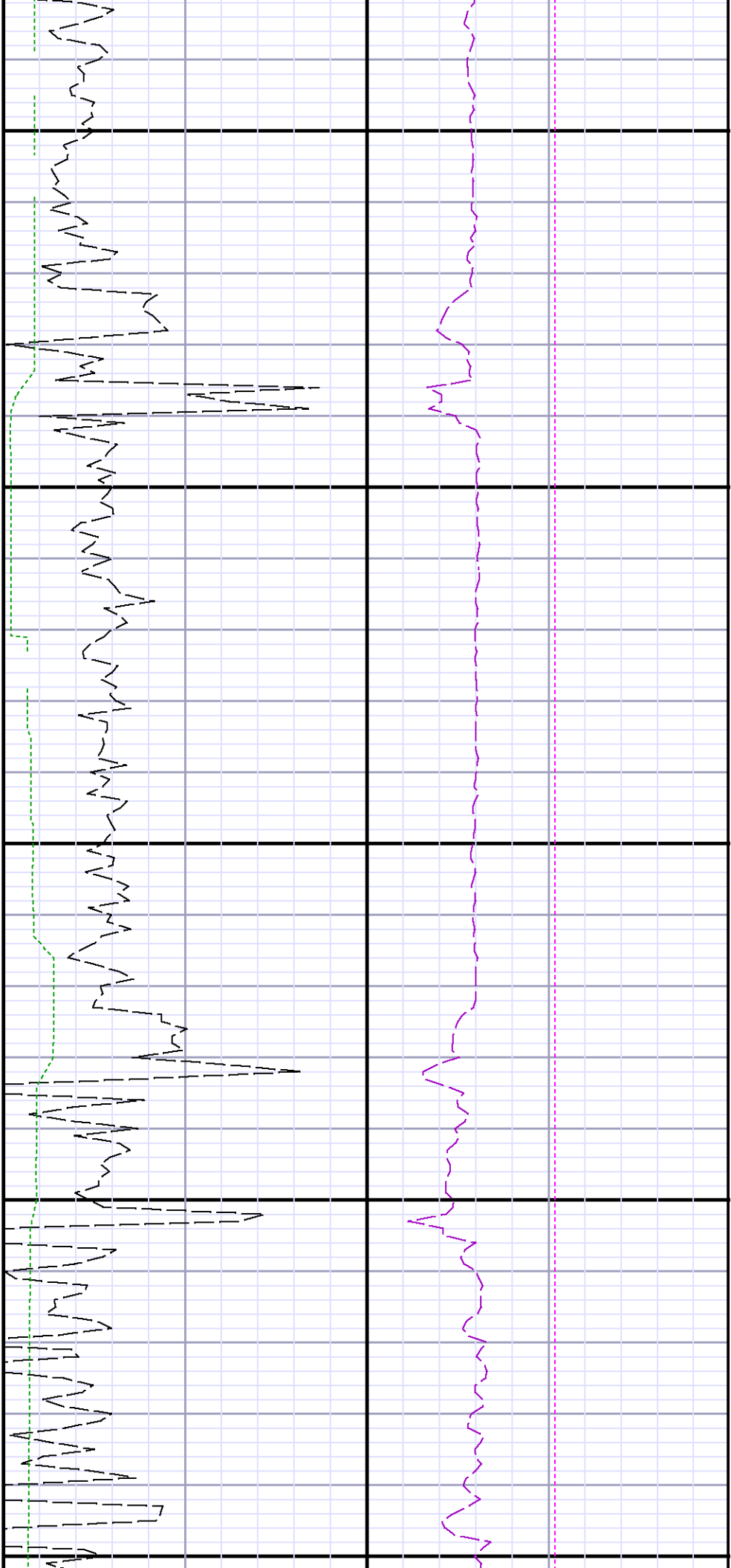




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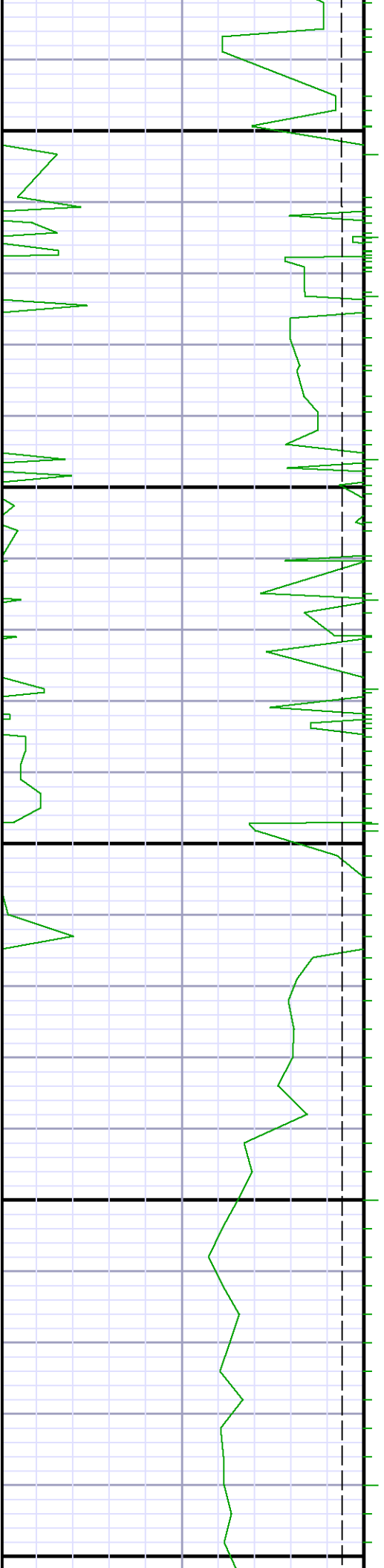
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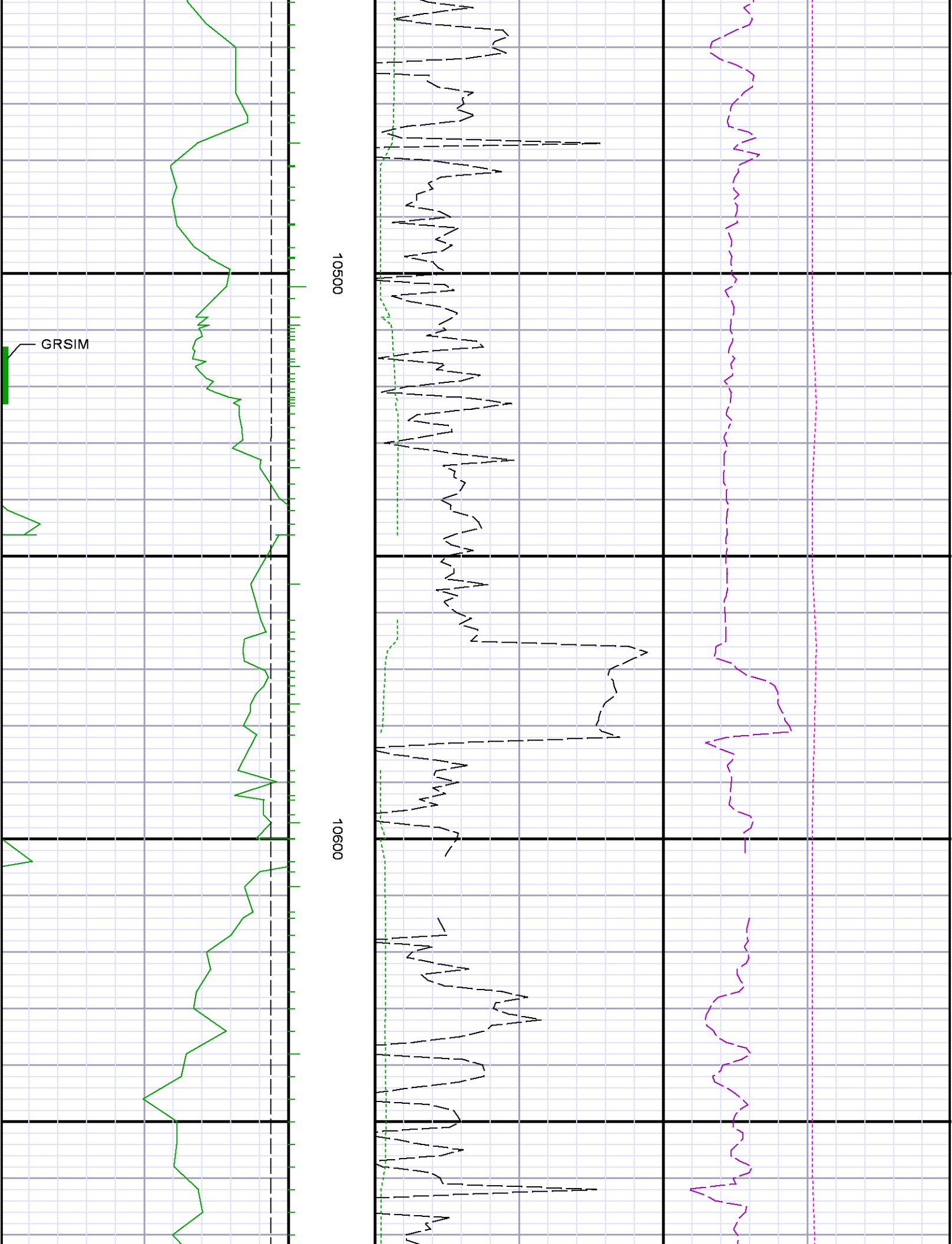


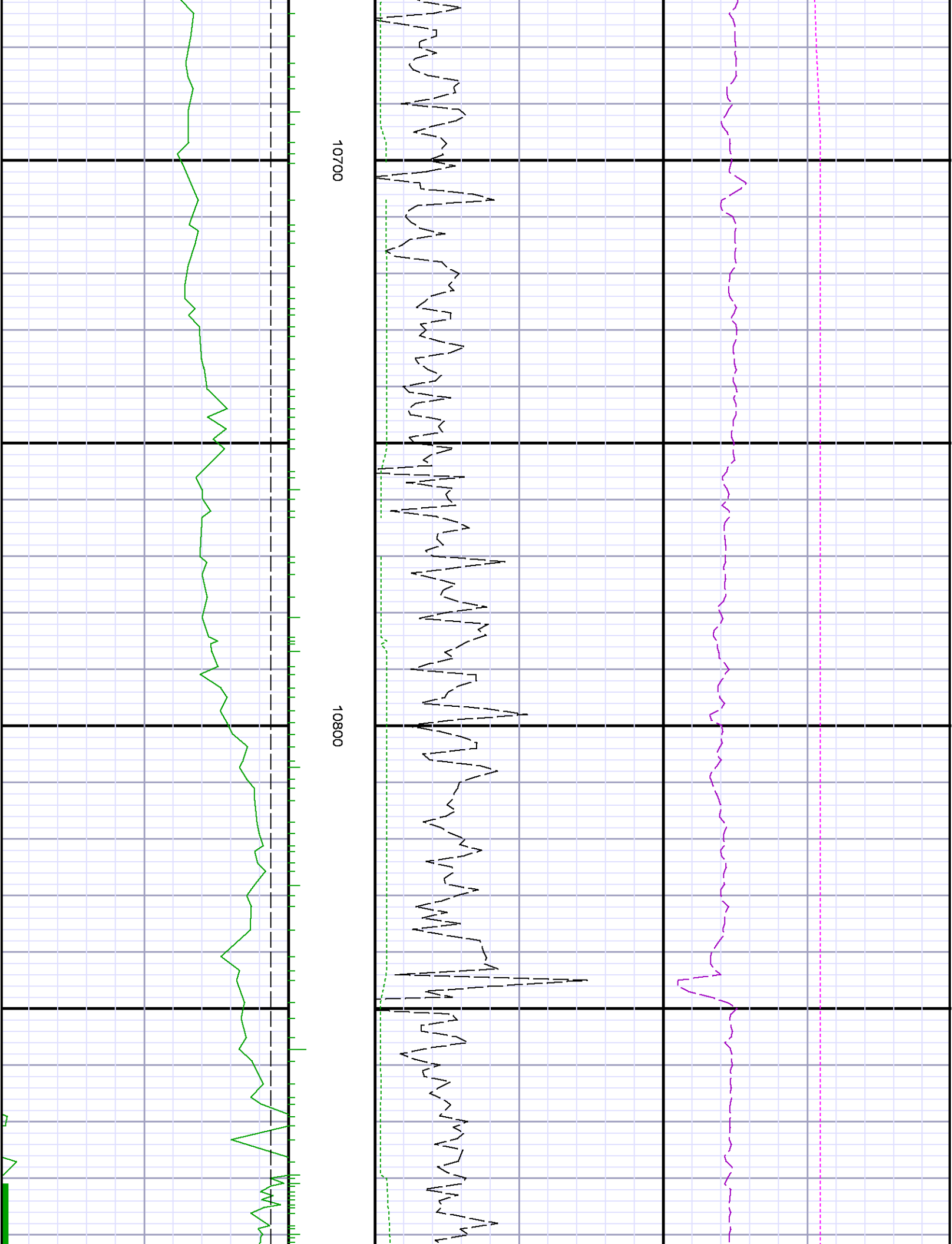


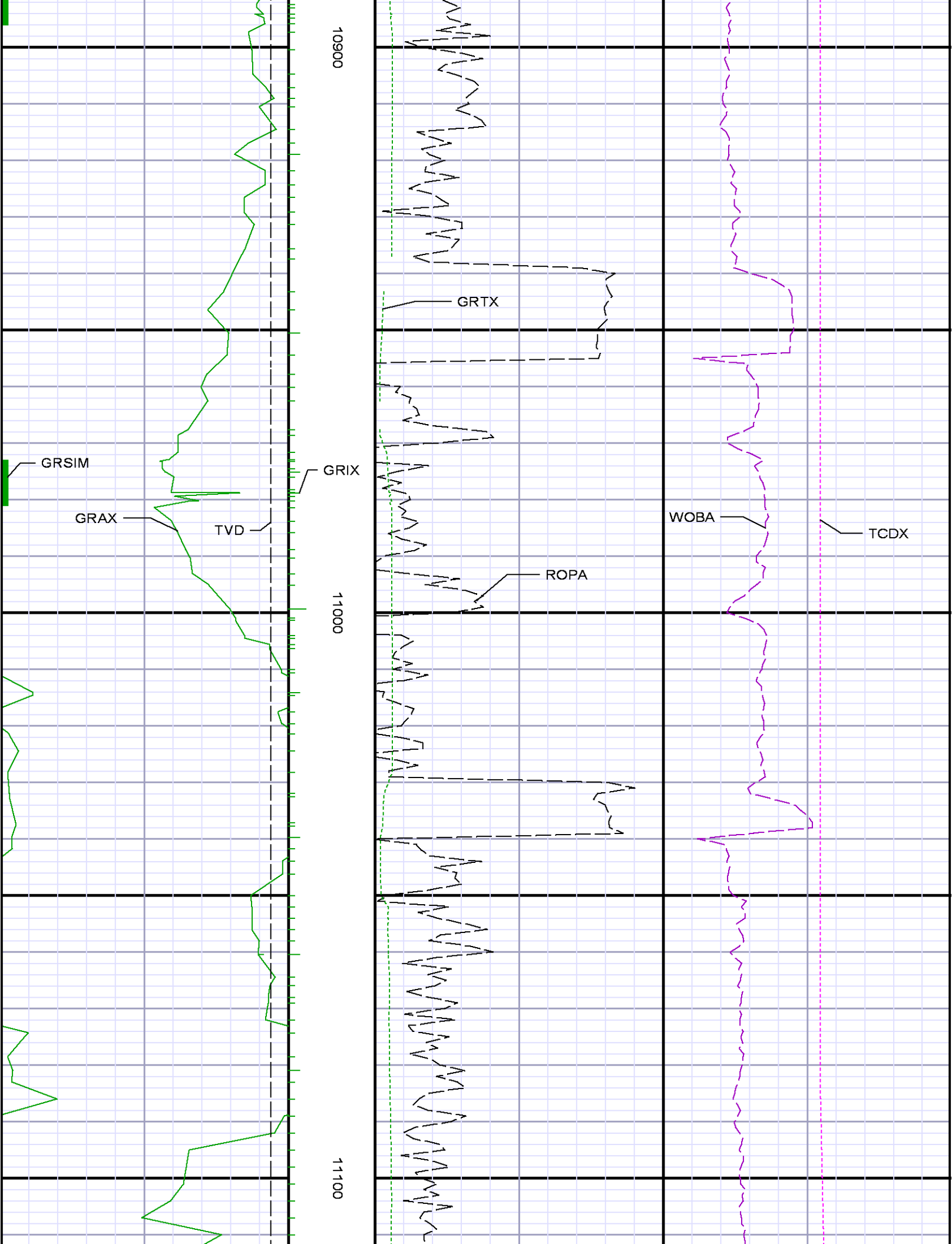
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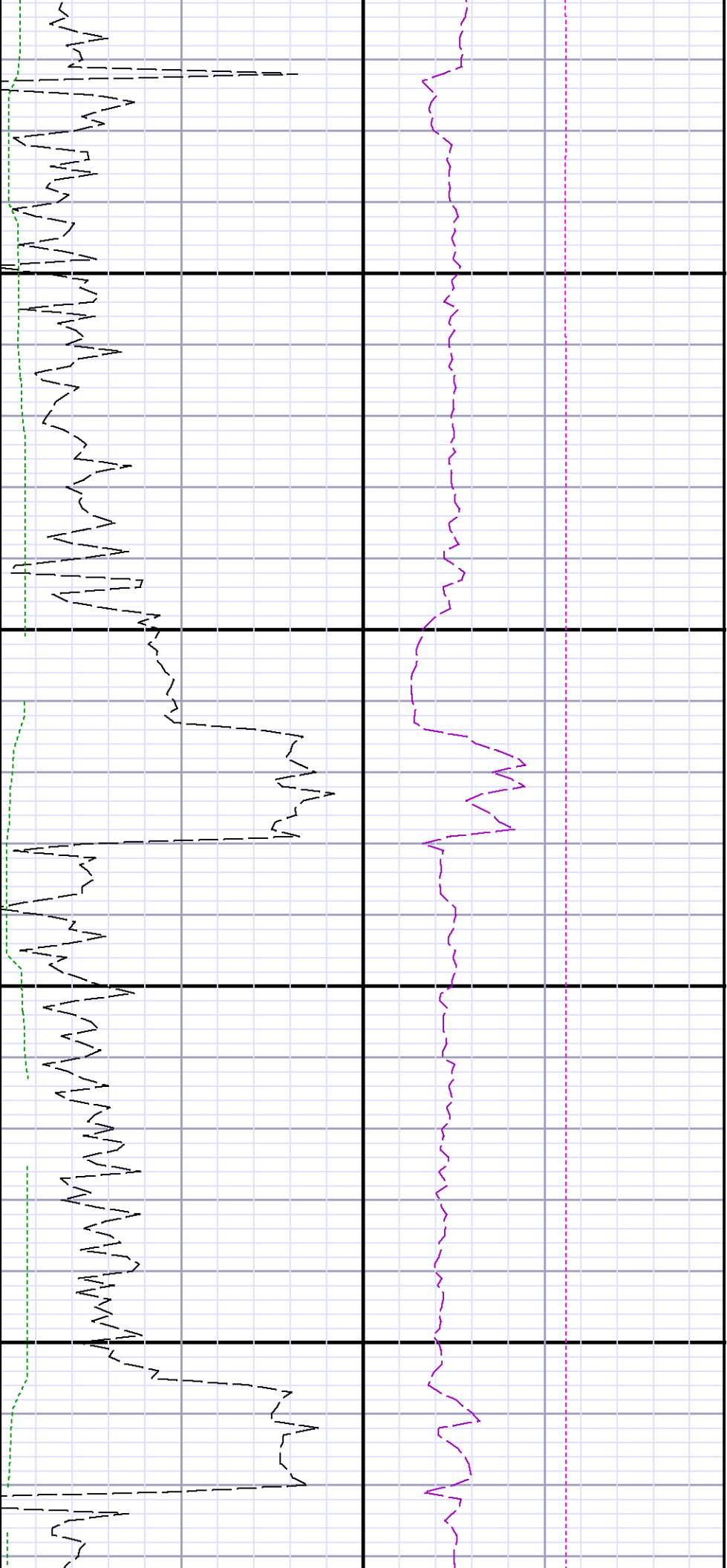
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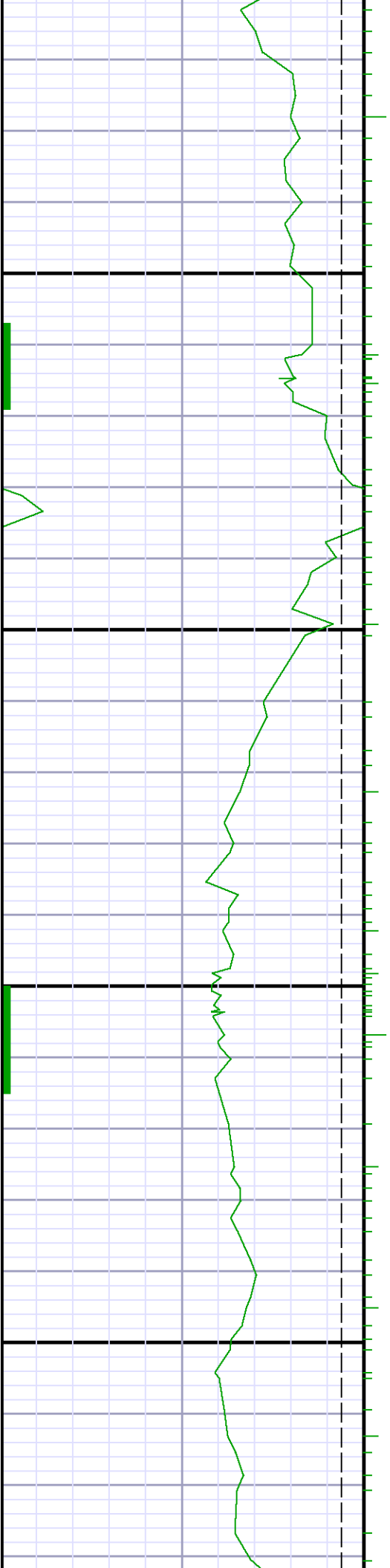




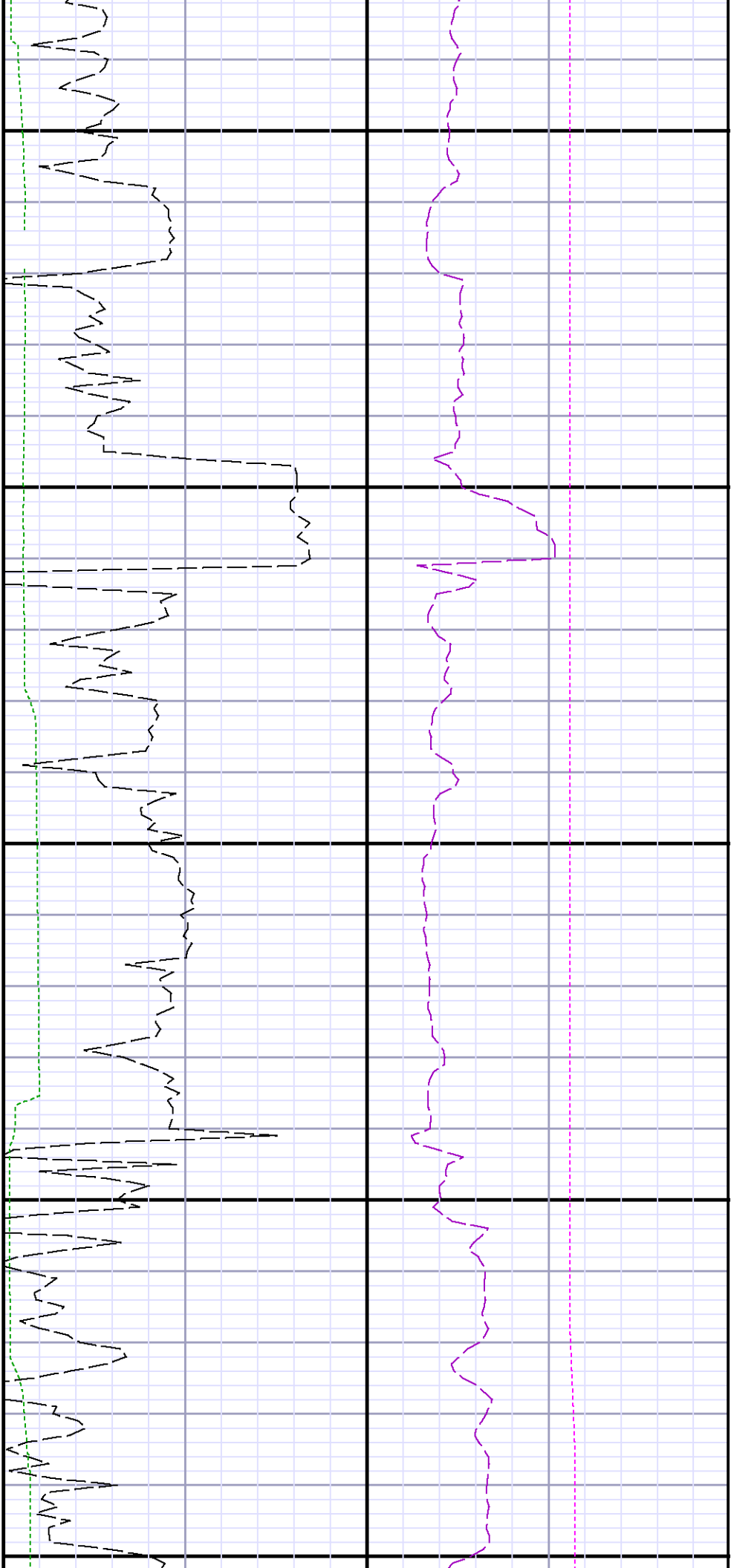


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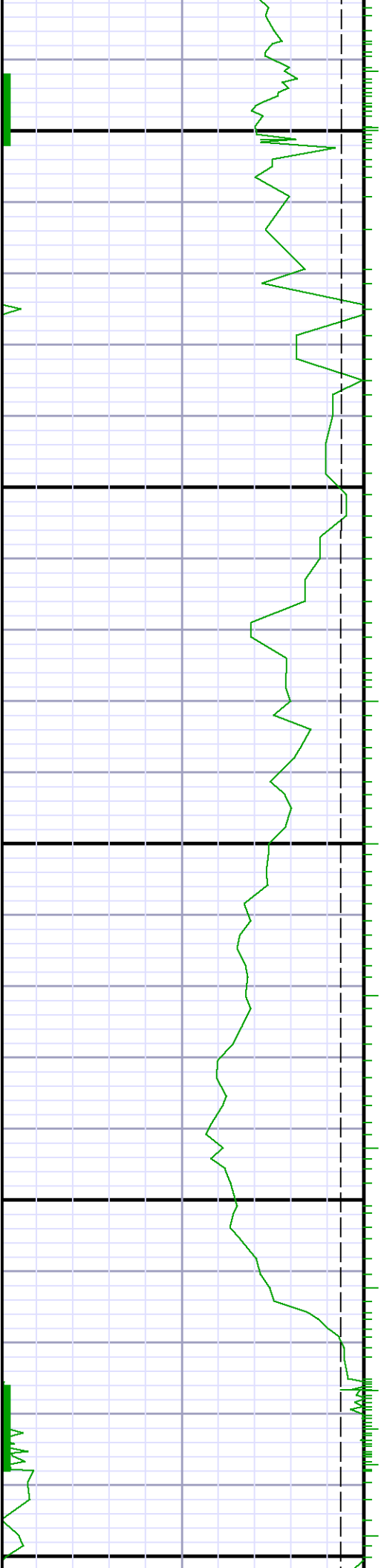


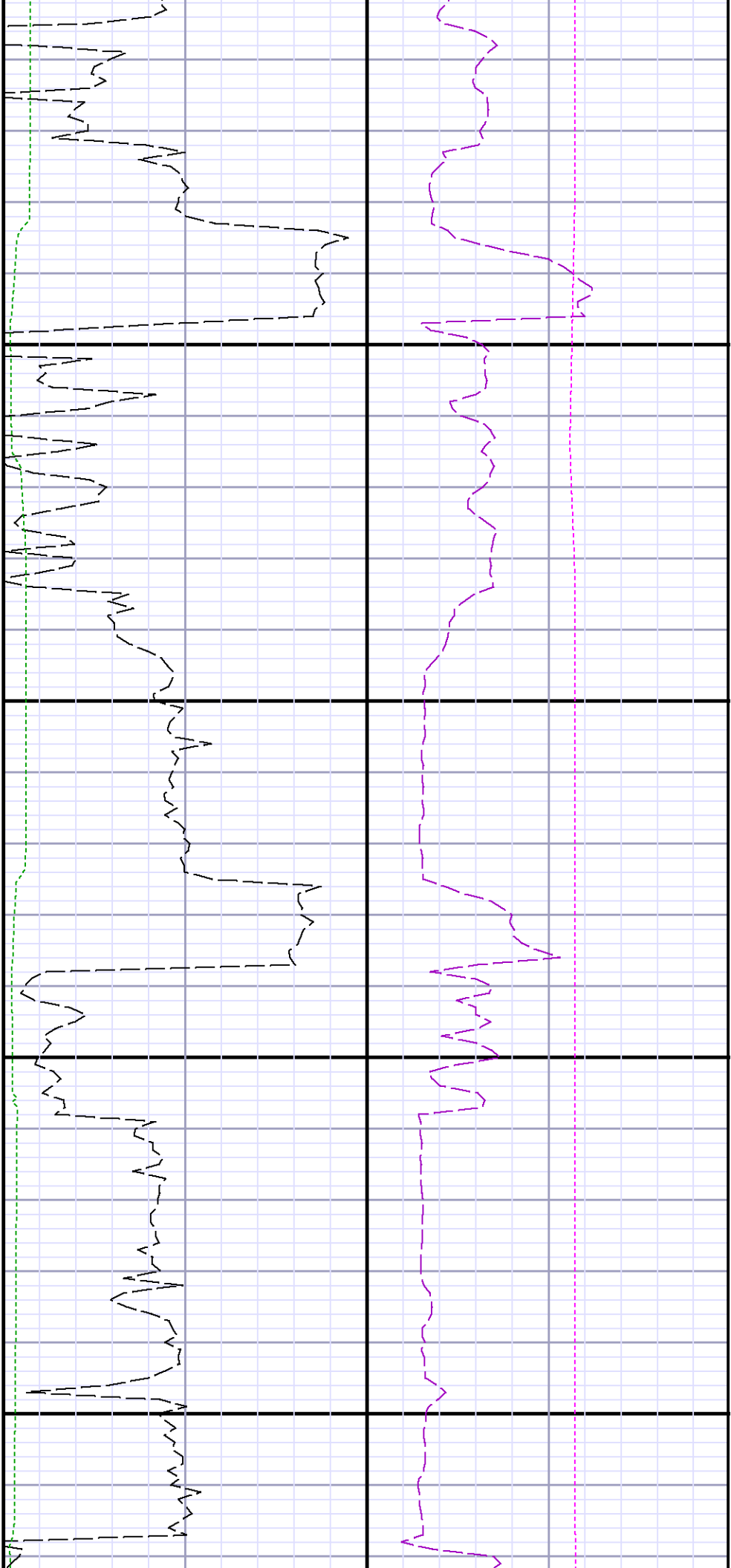




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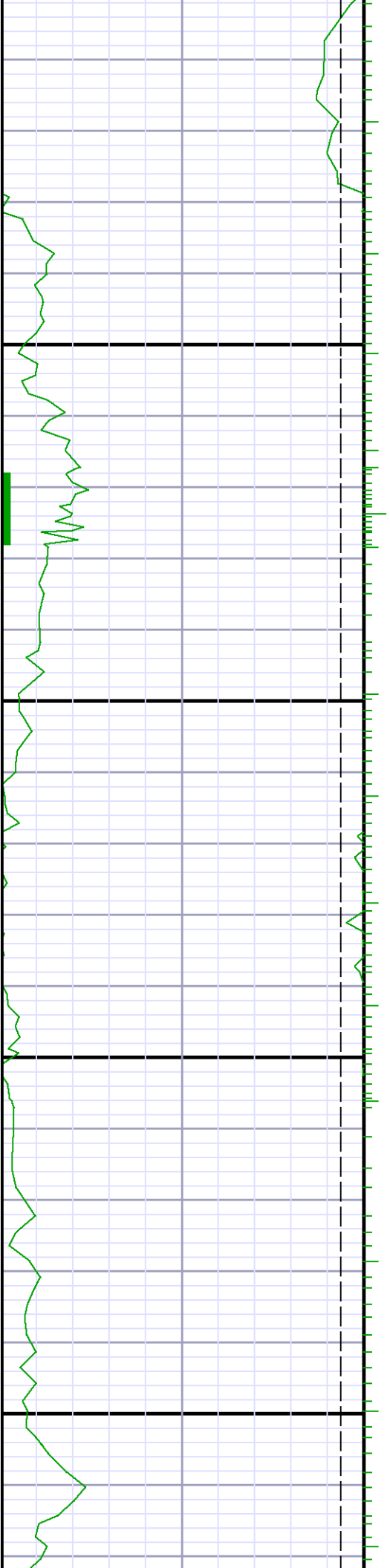
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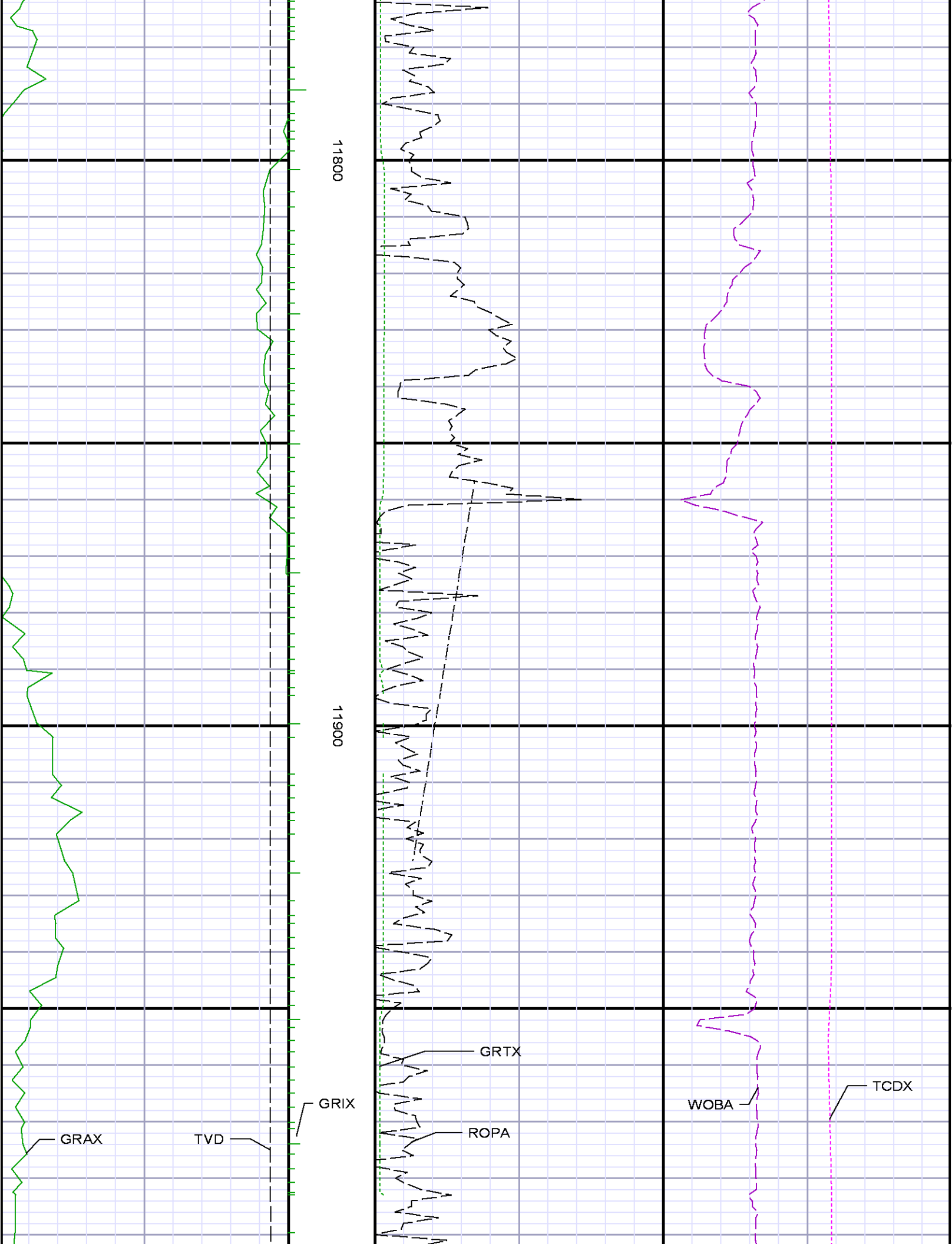


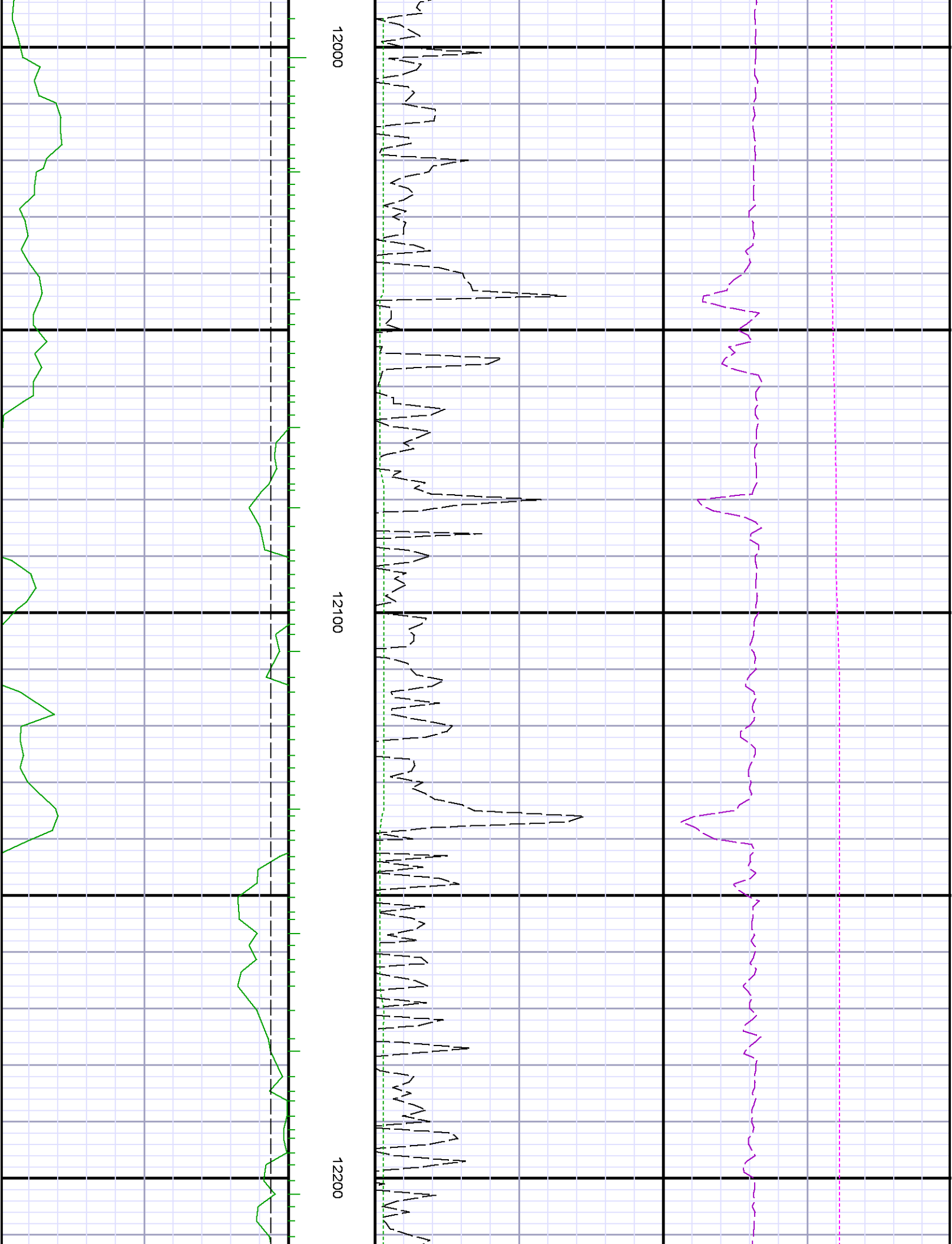


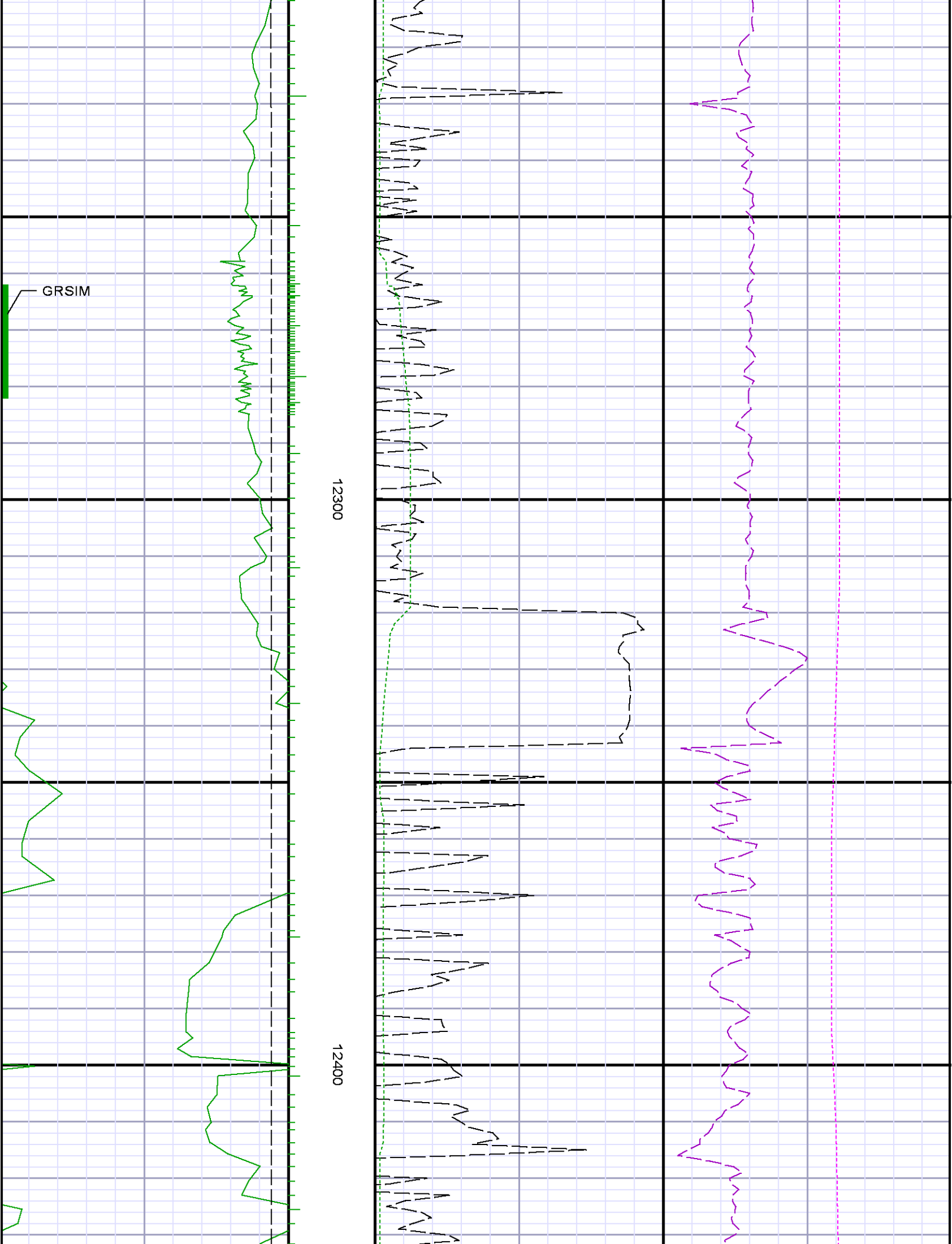
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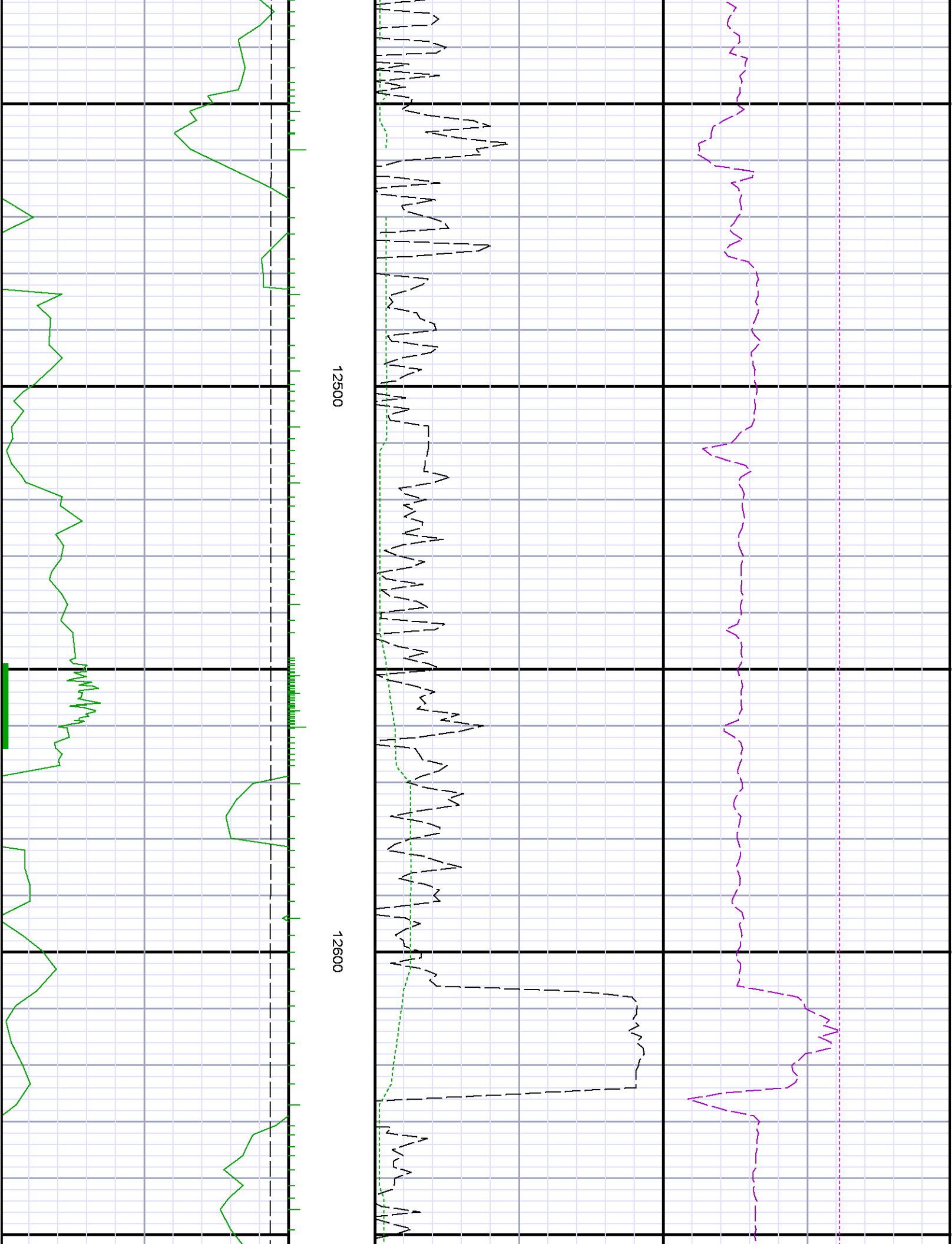
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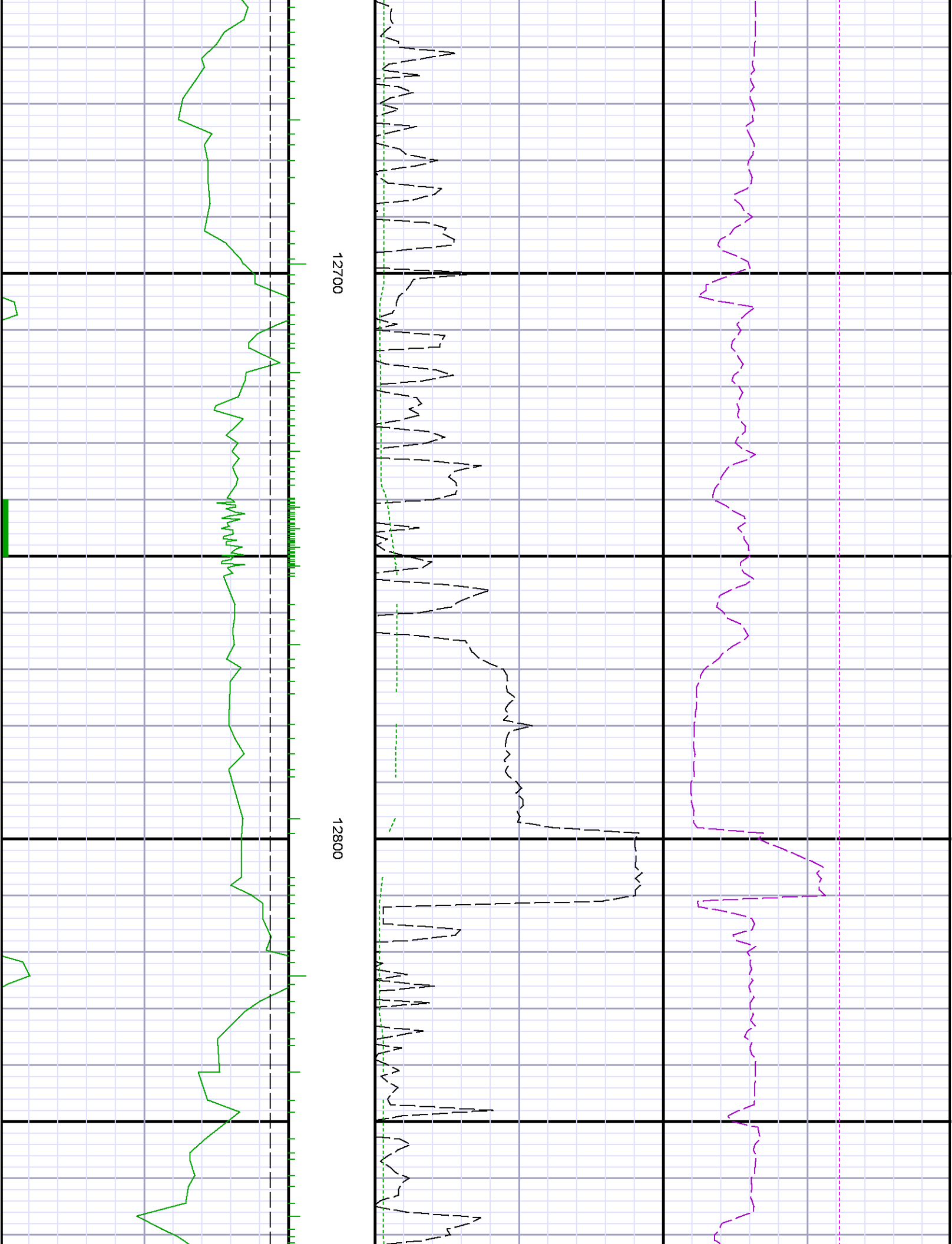


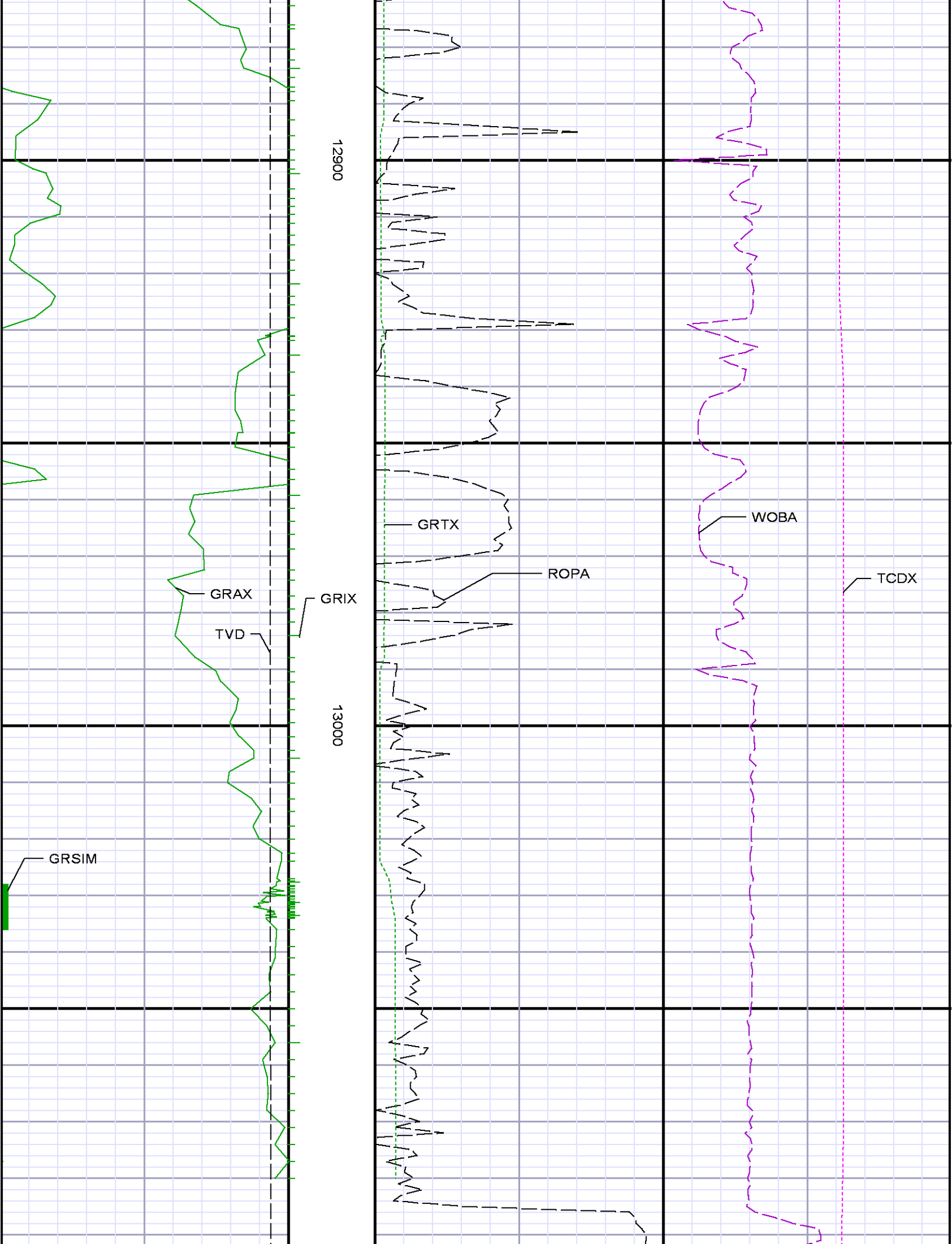












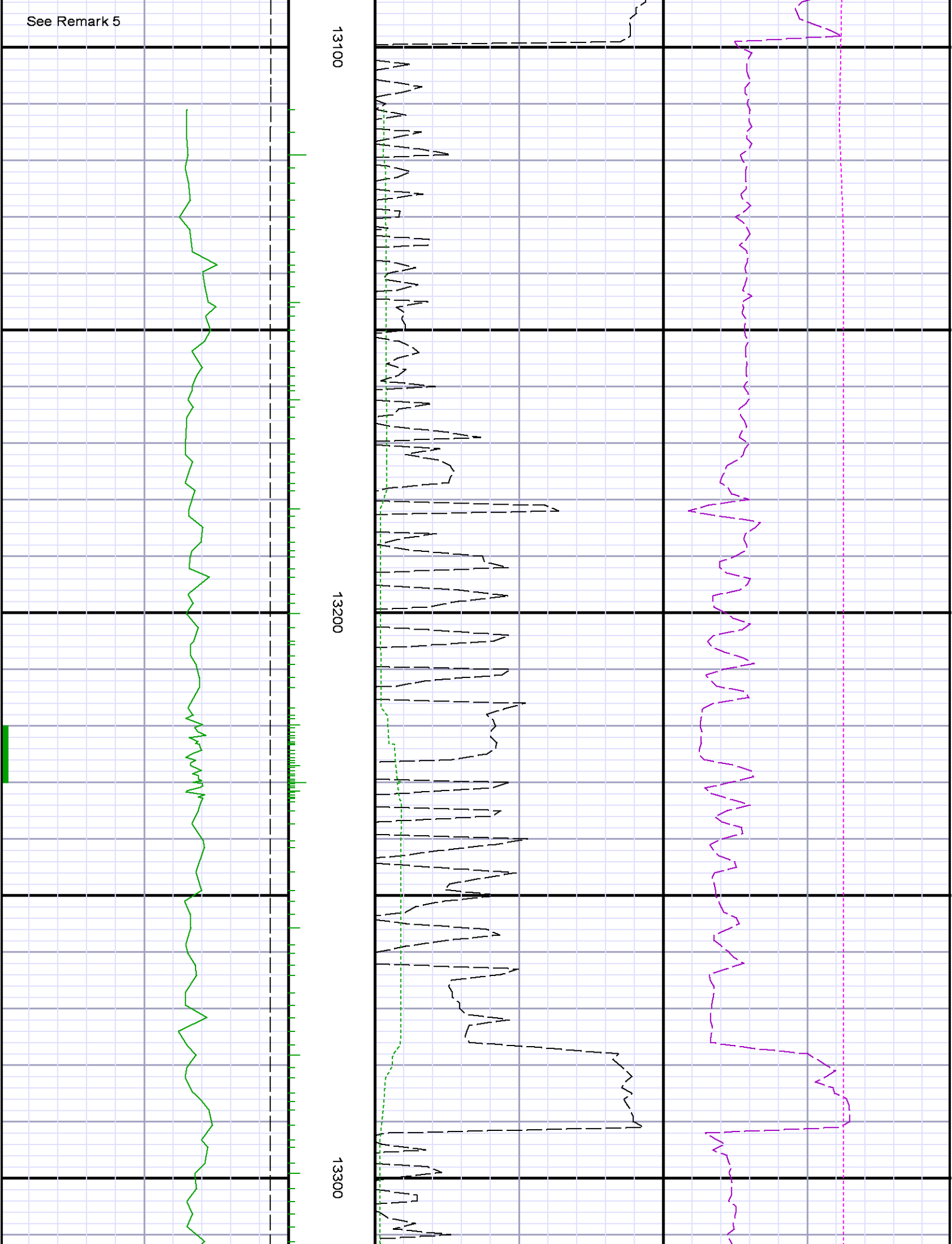


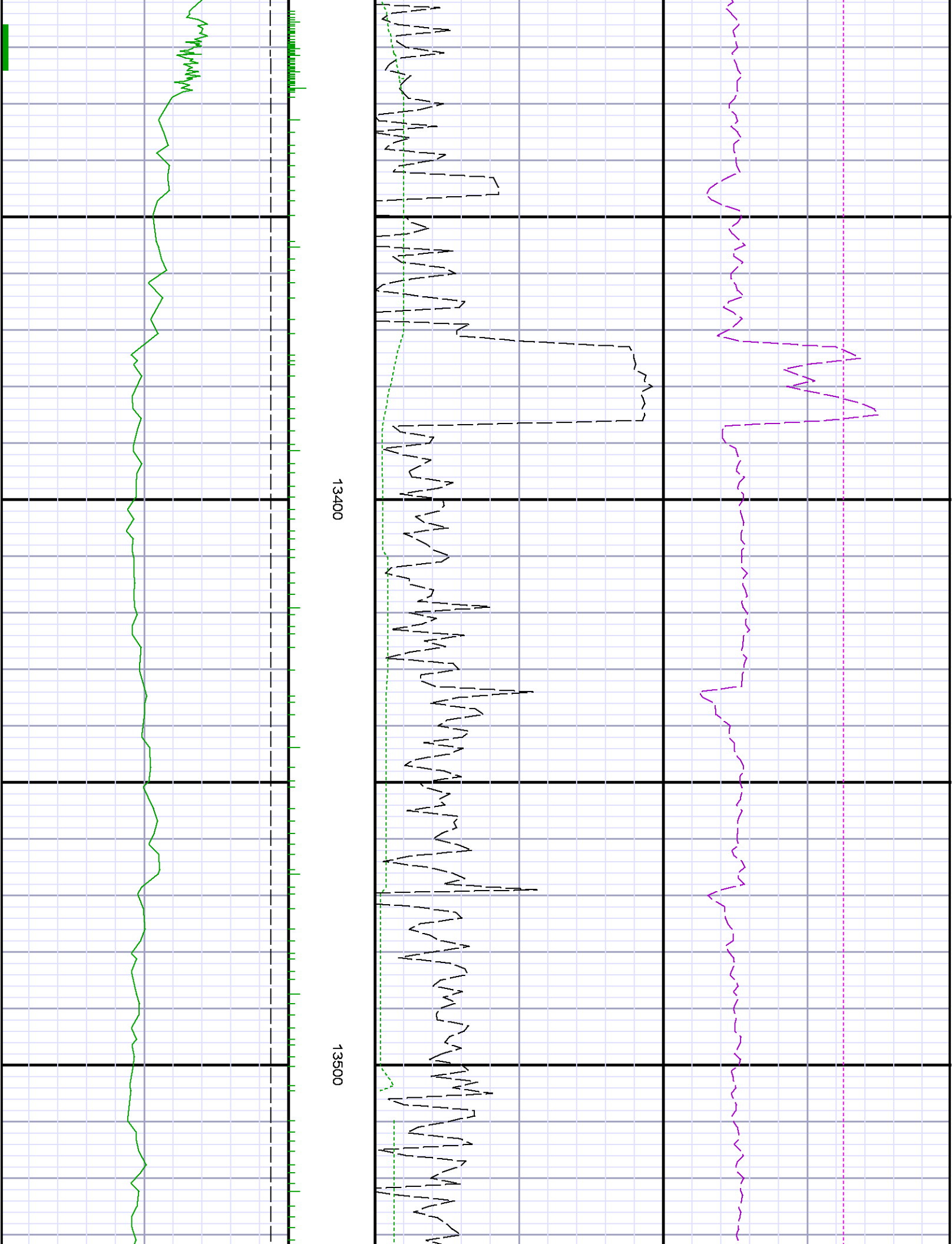
See Remark 5

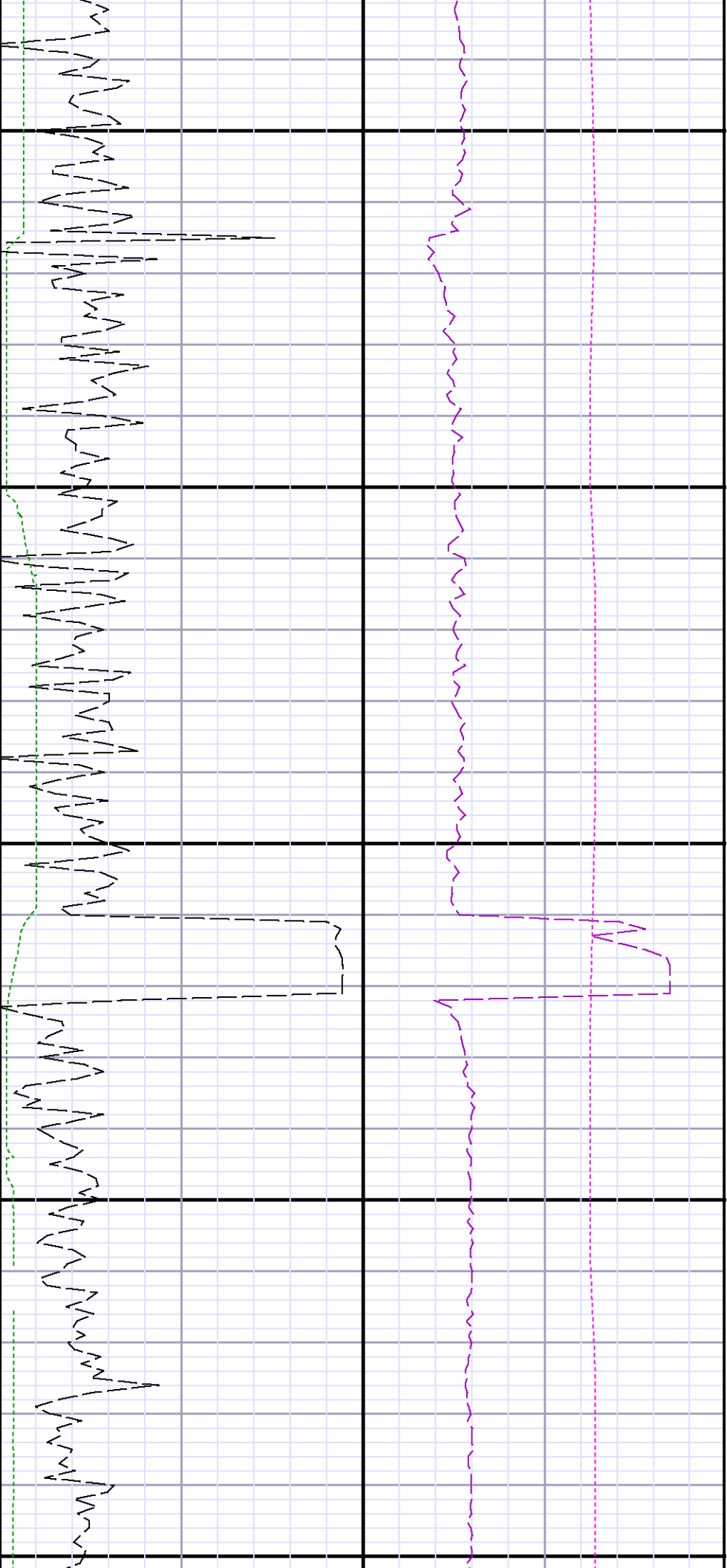
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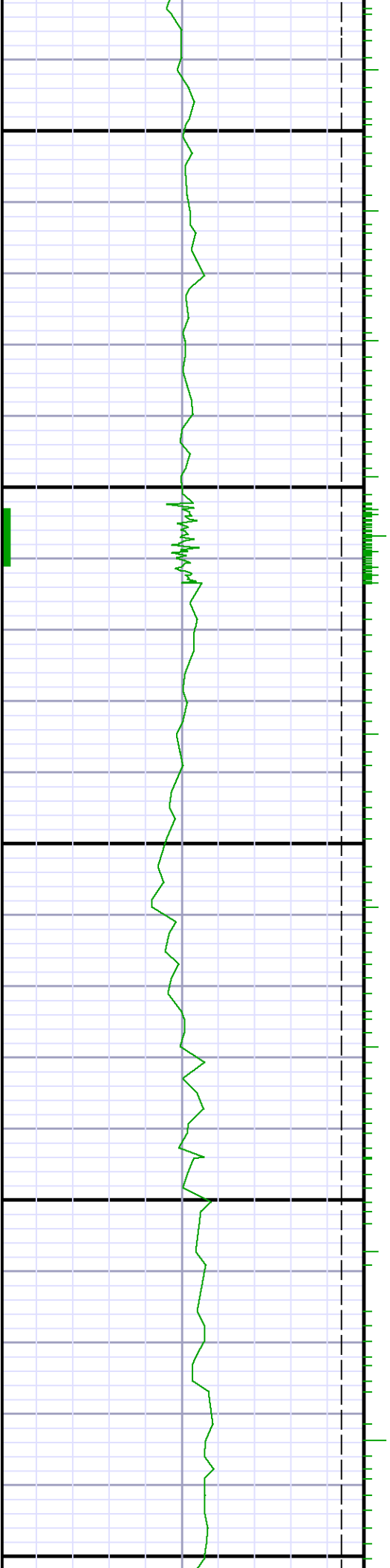


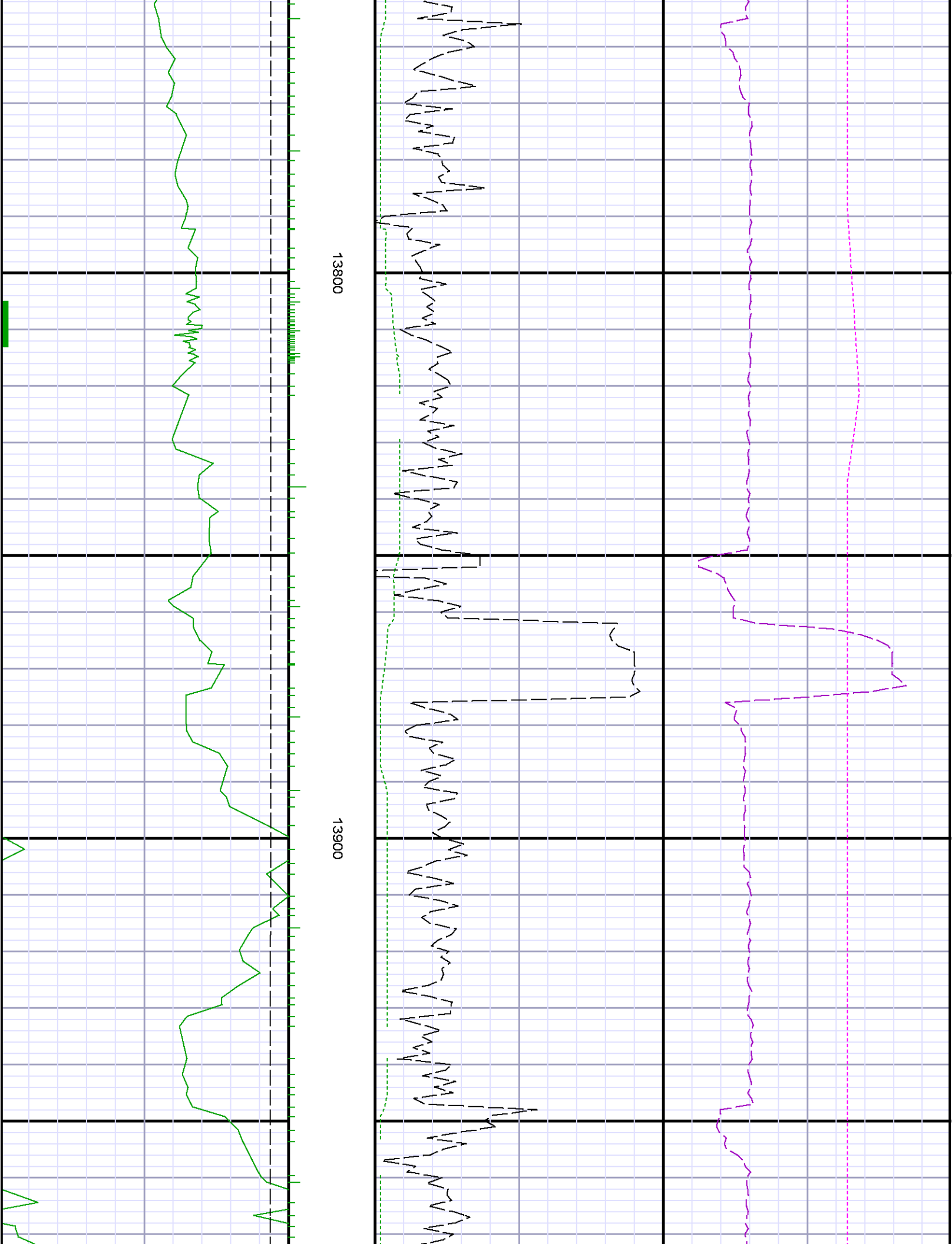


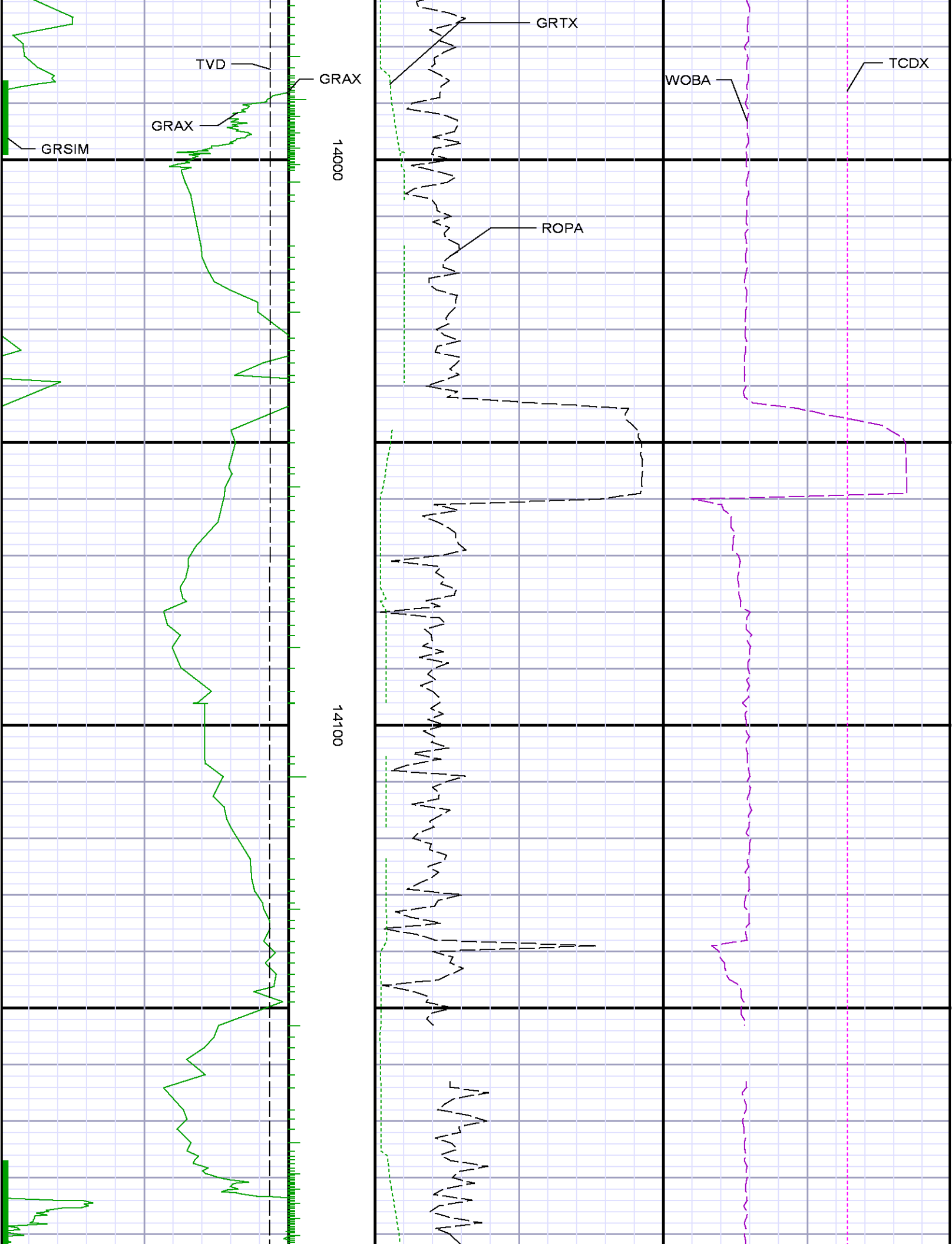


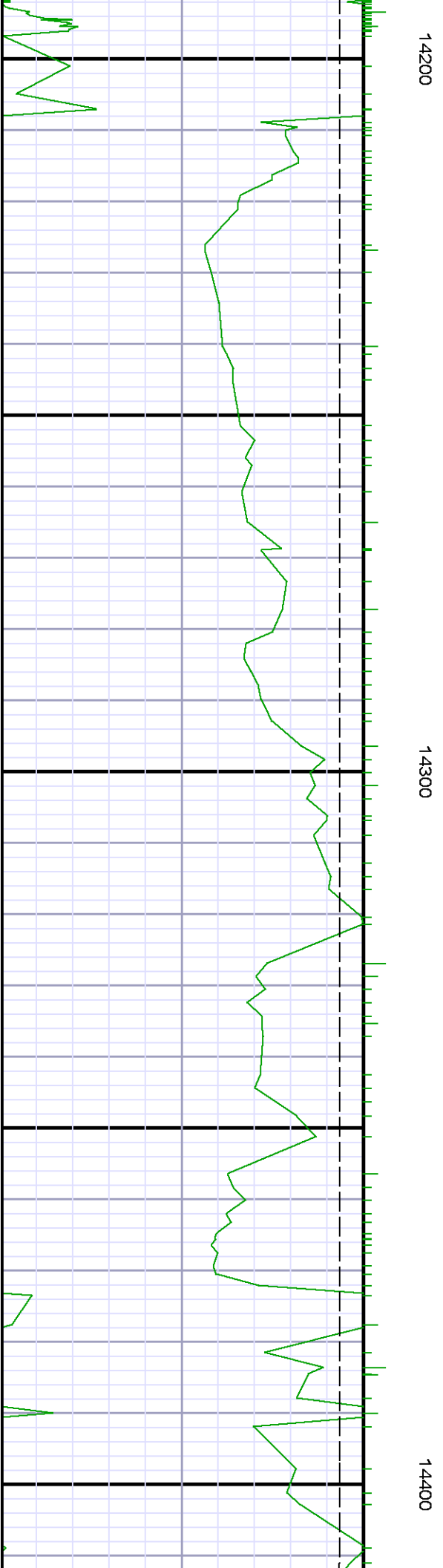
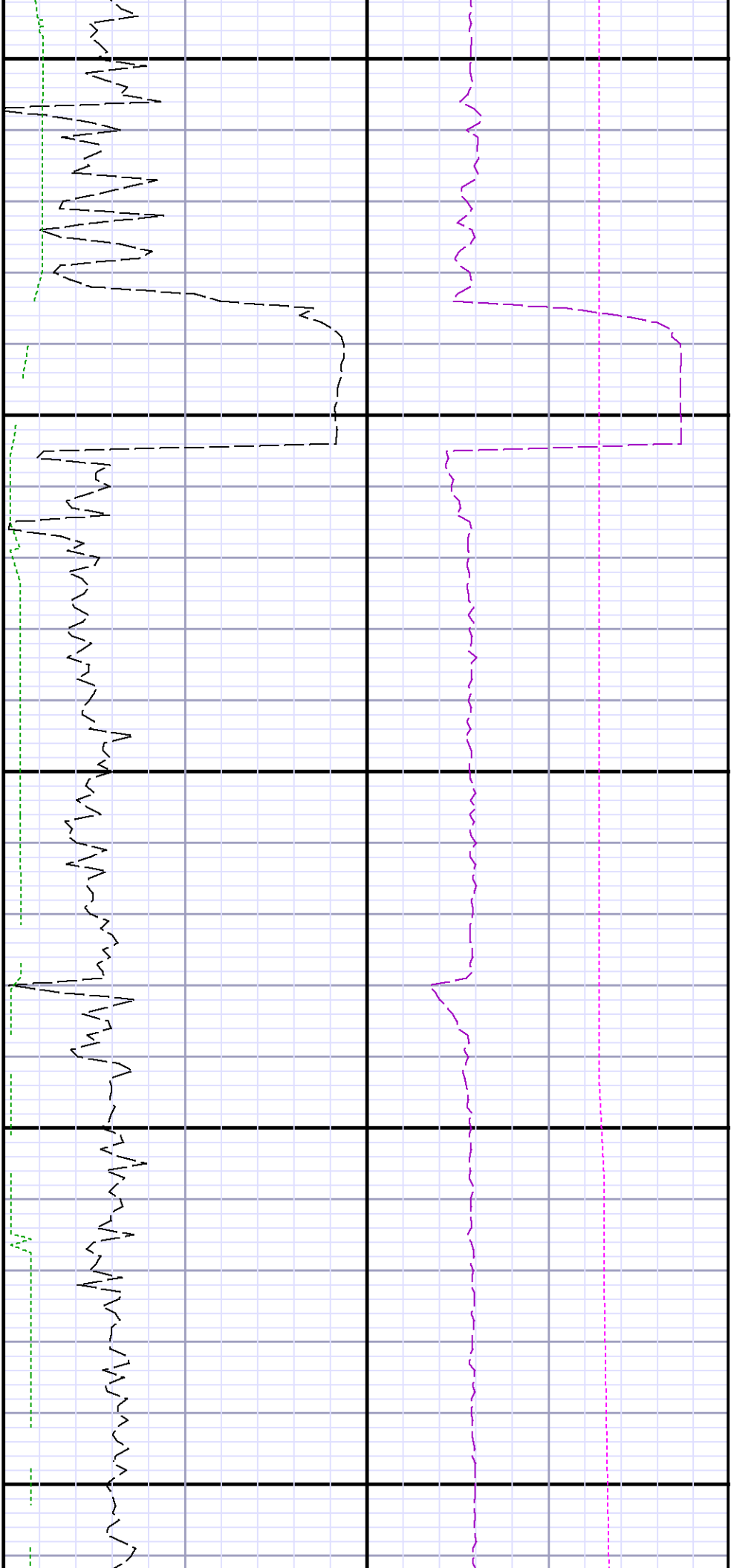
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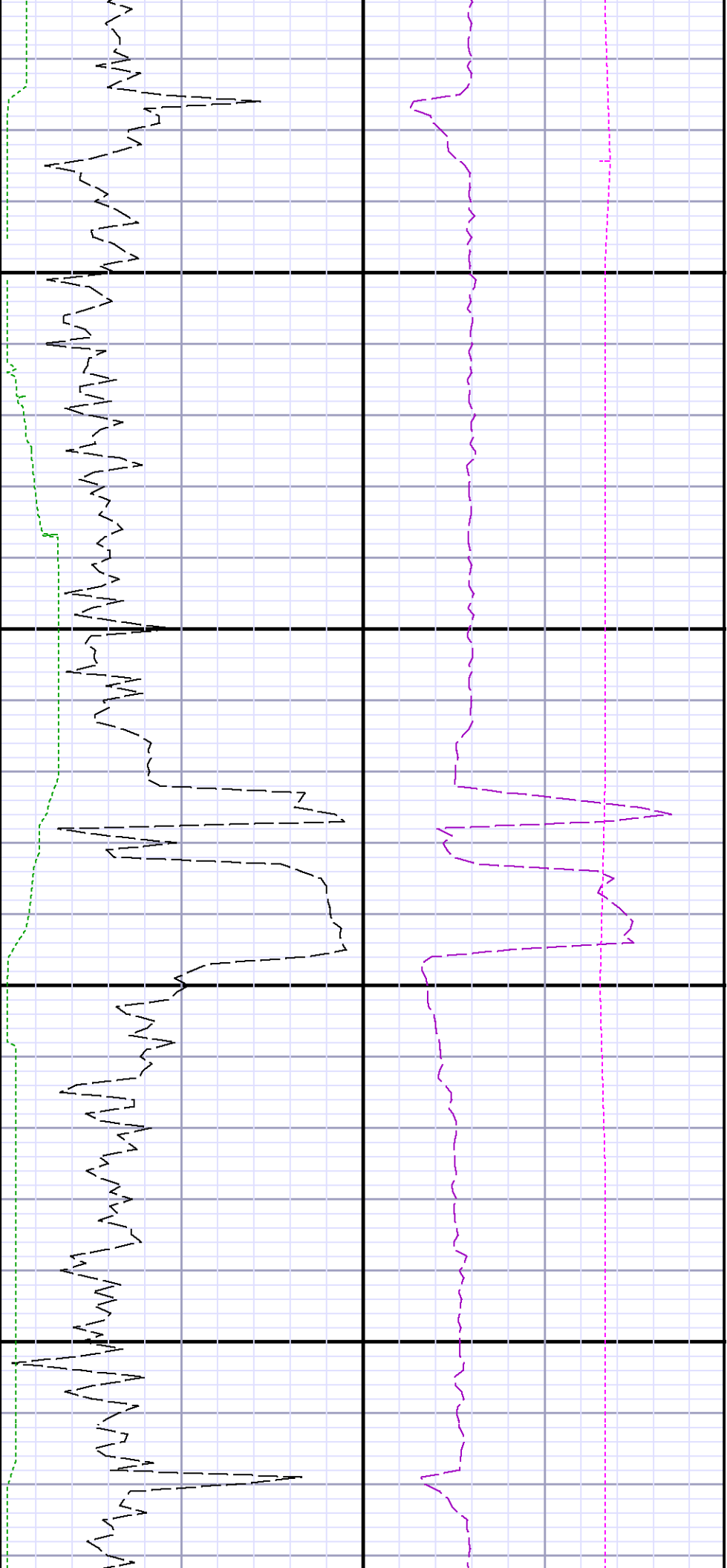
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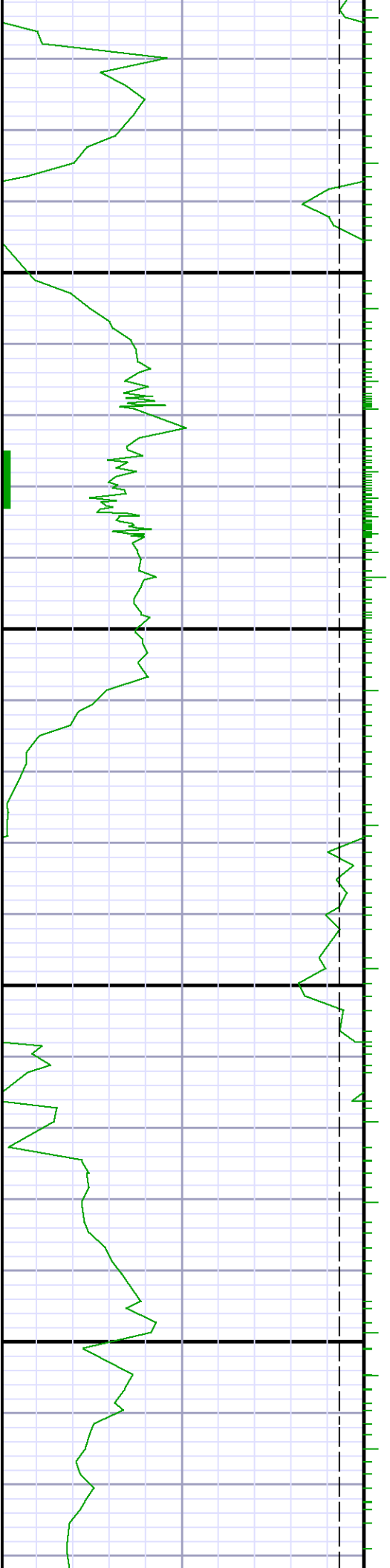


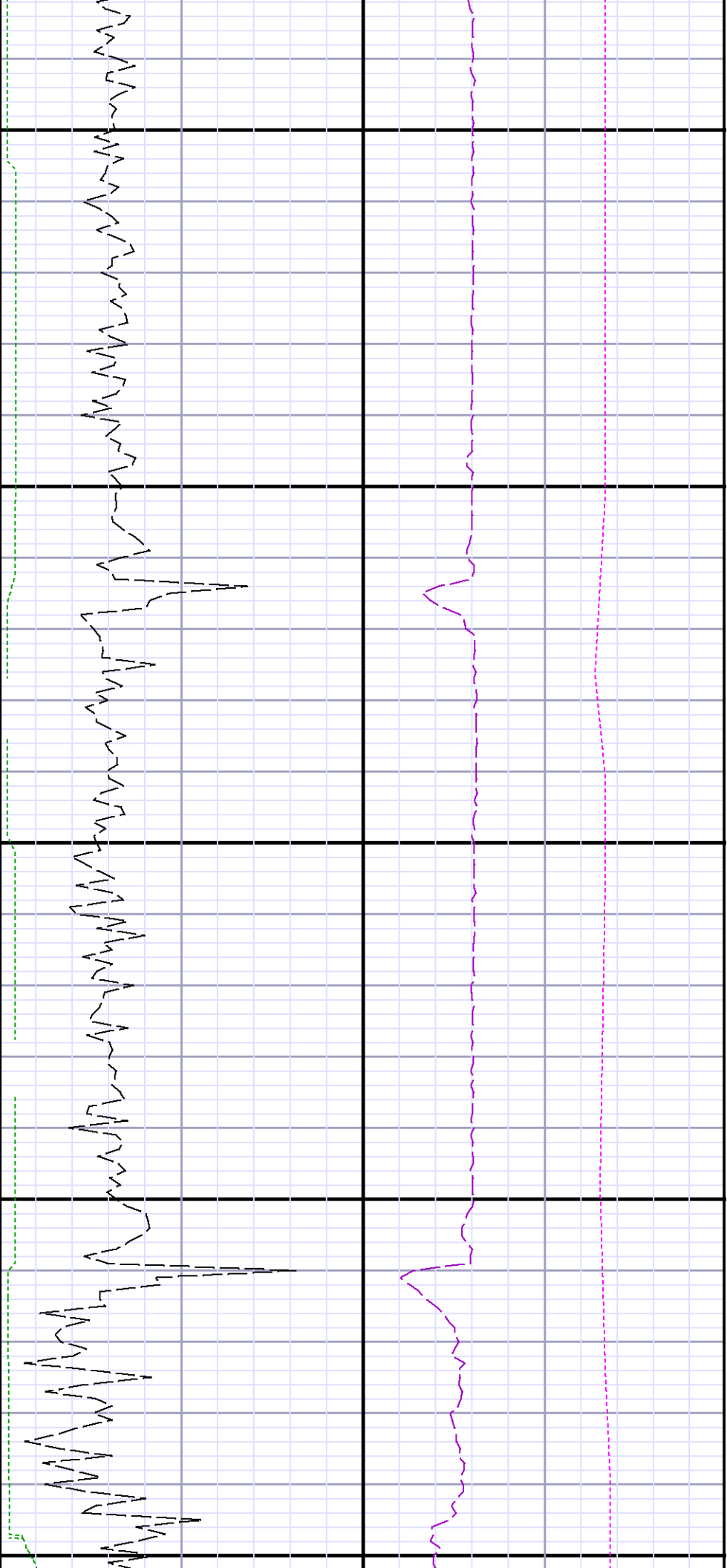




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14600



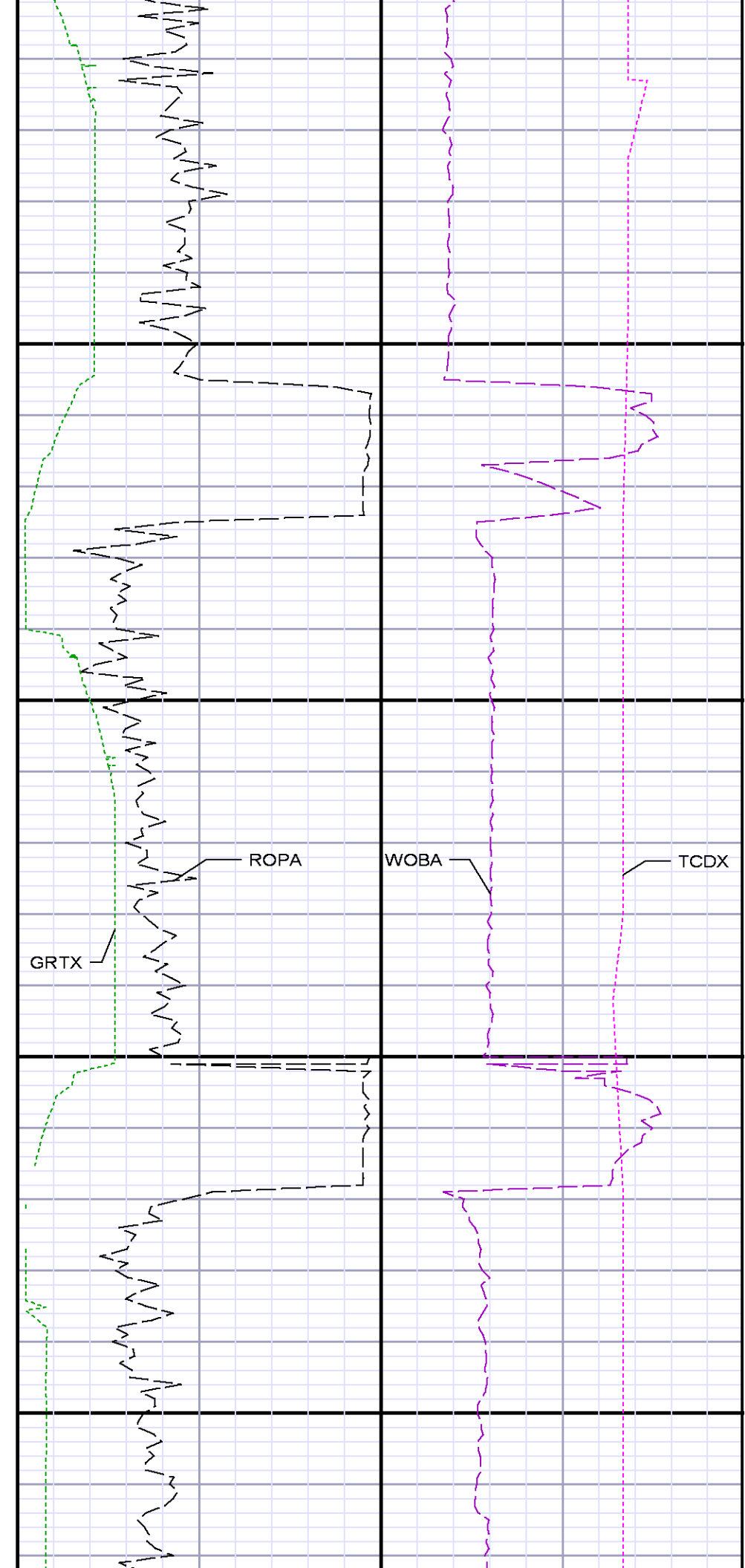
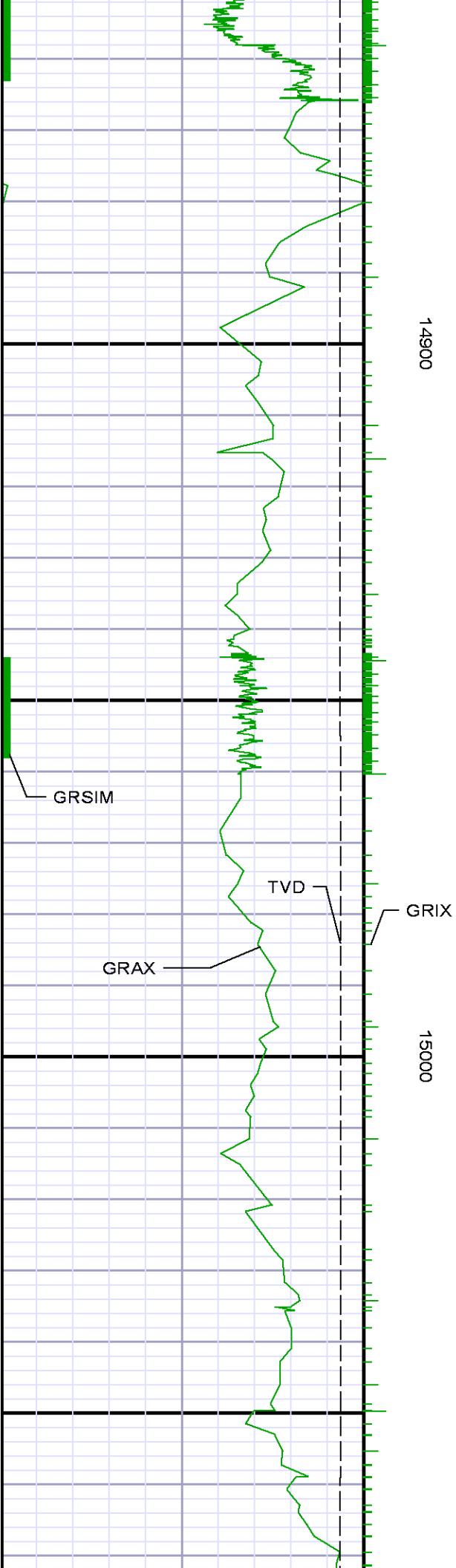


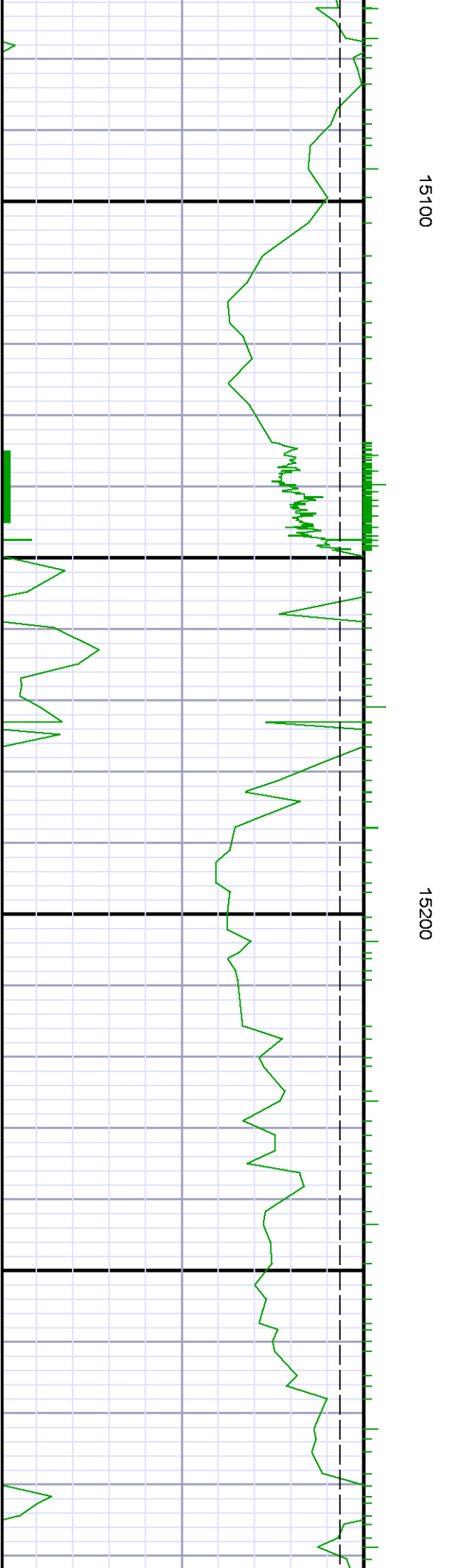
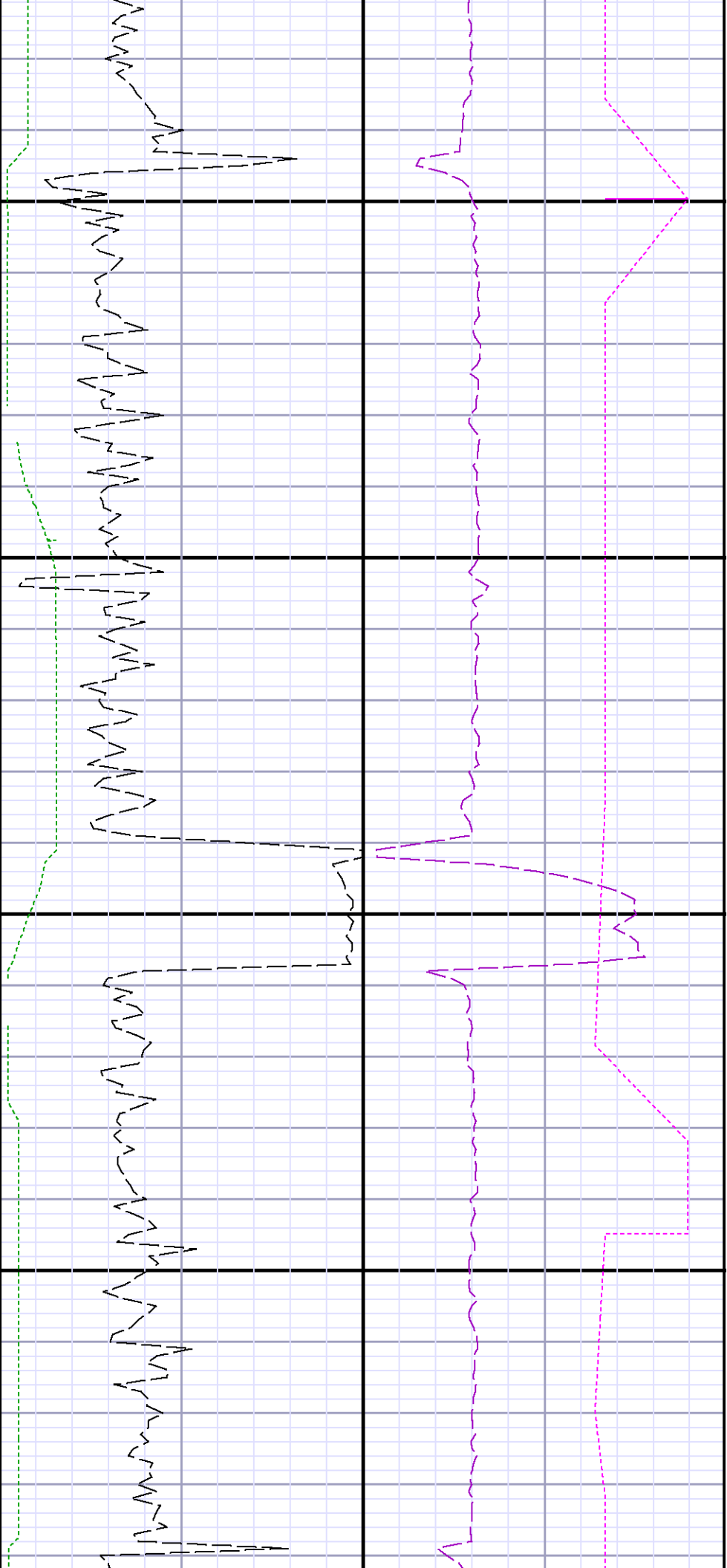
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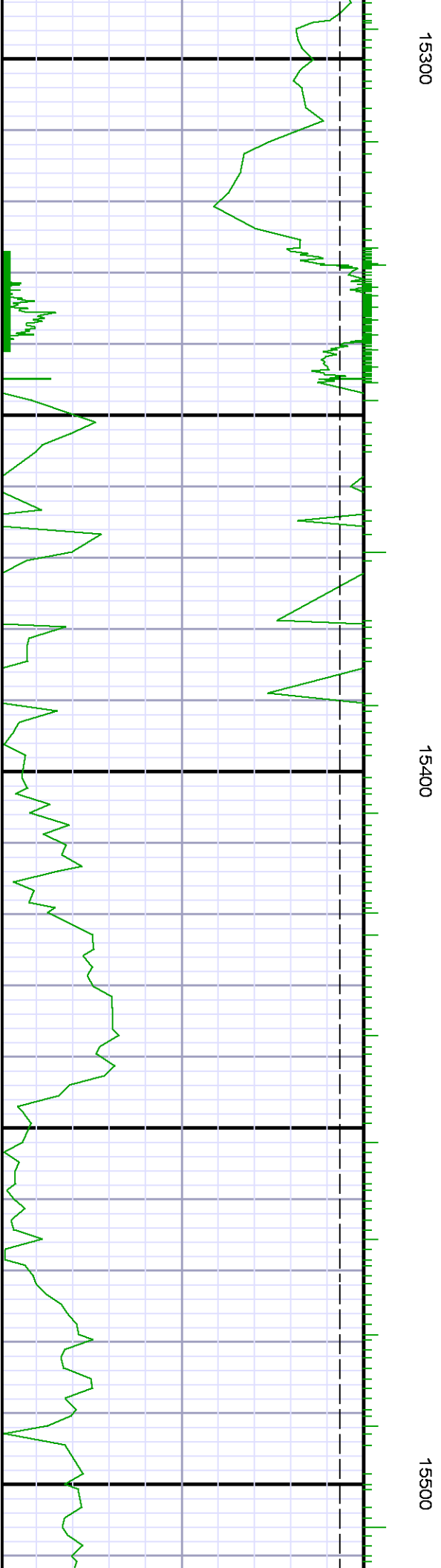
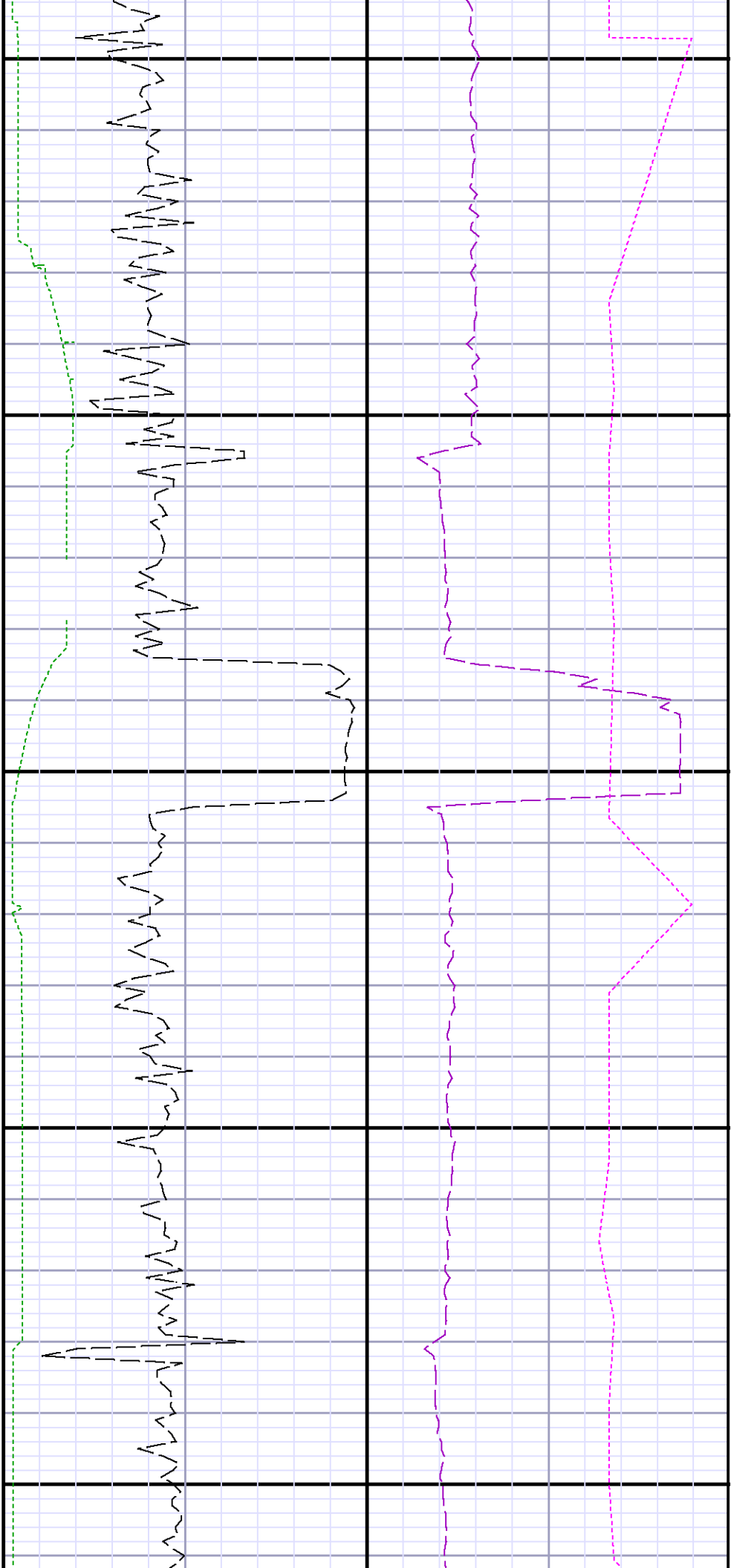
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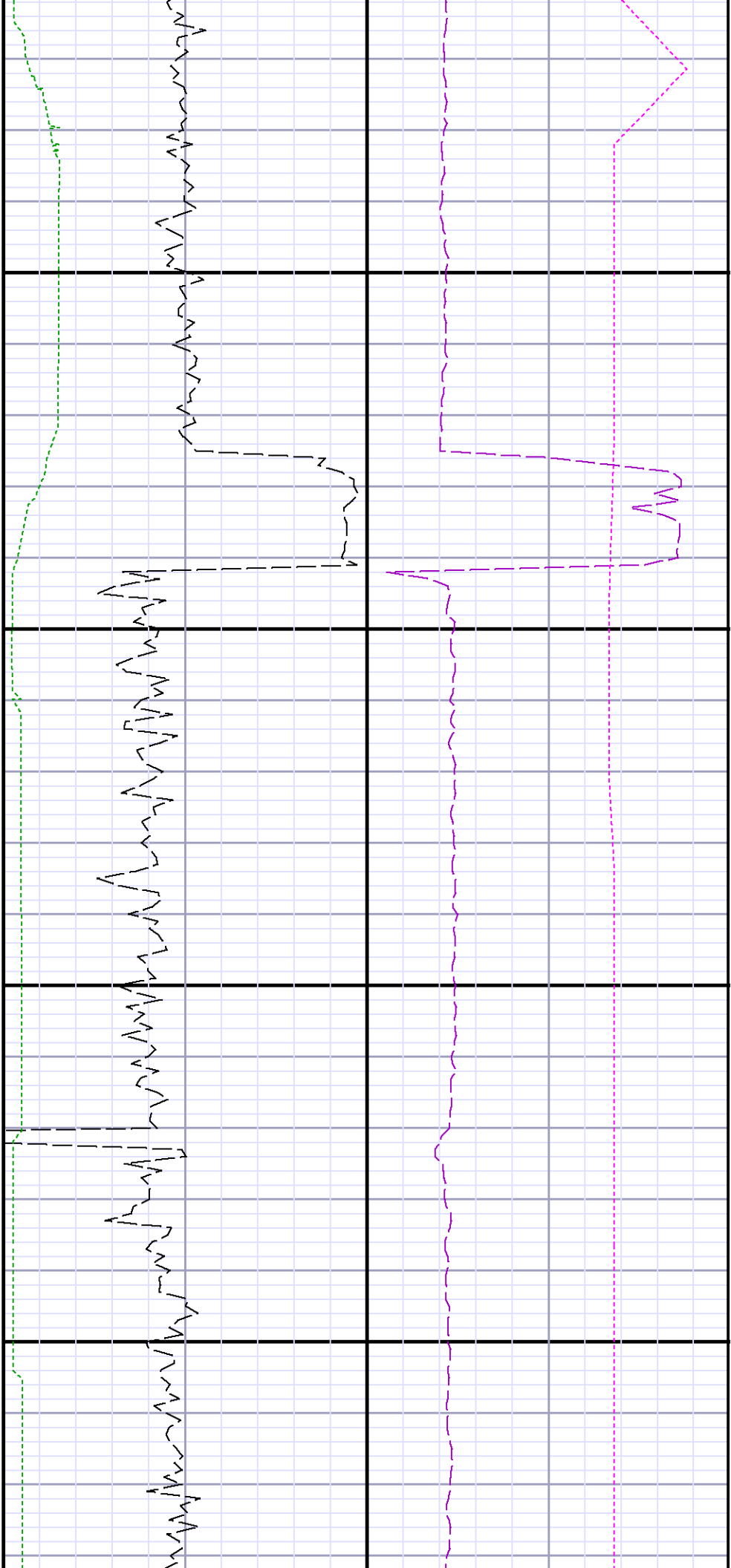






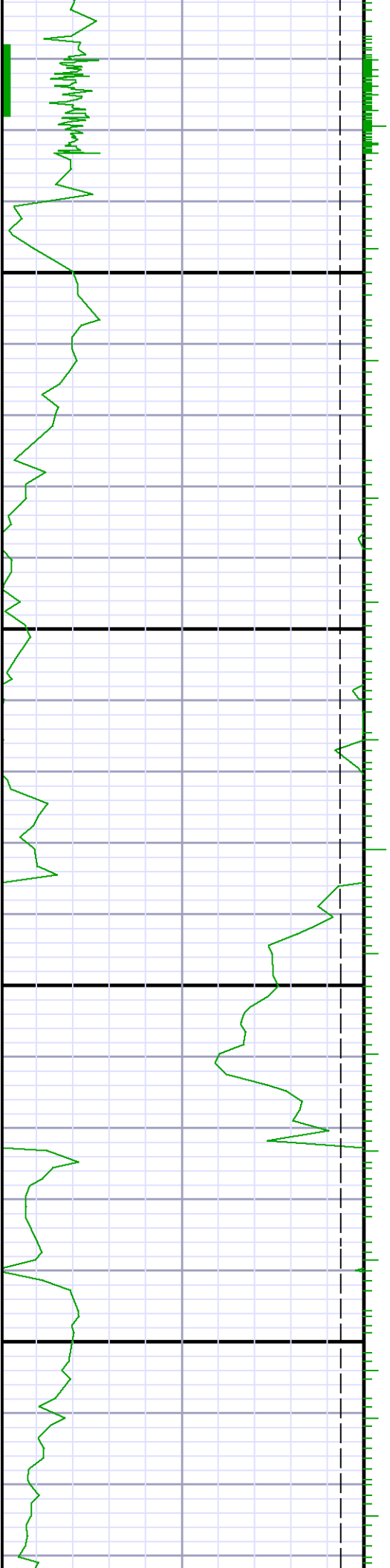


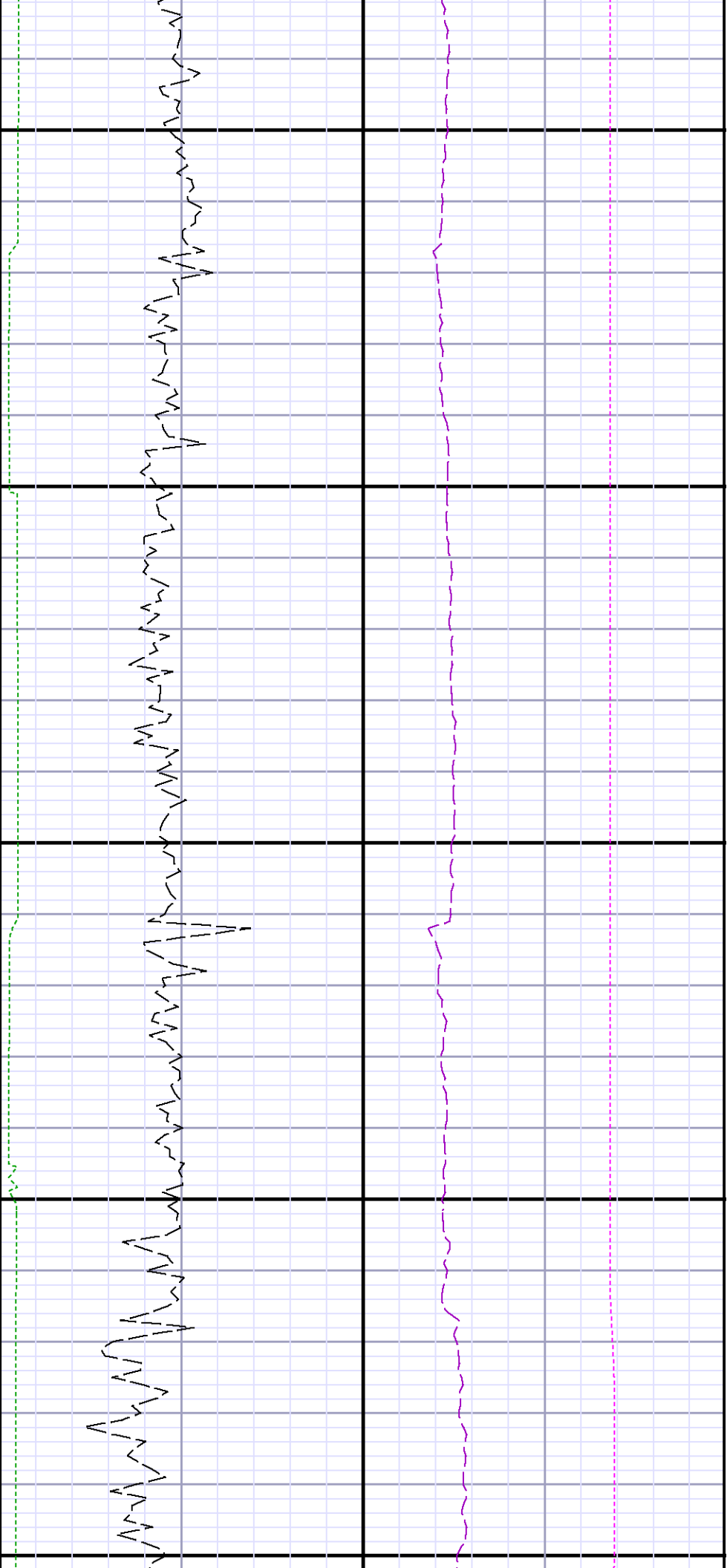




15600

15700

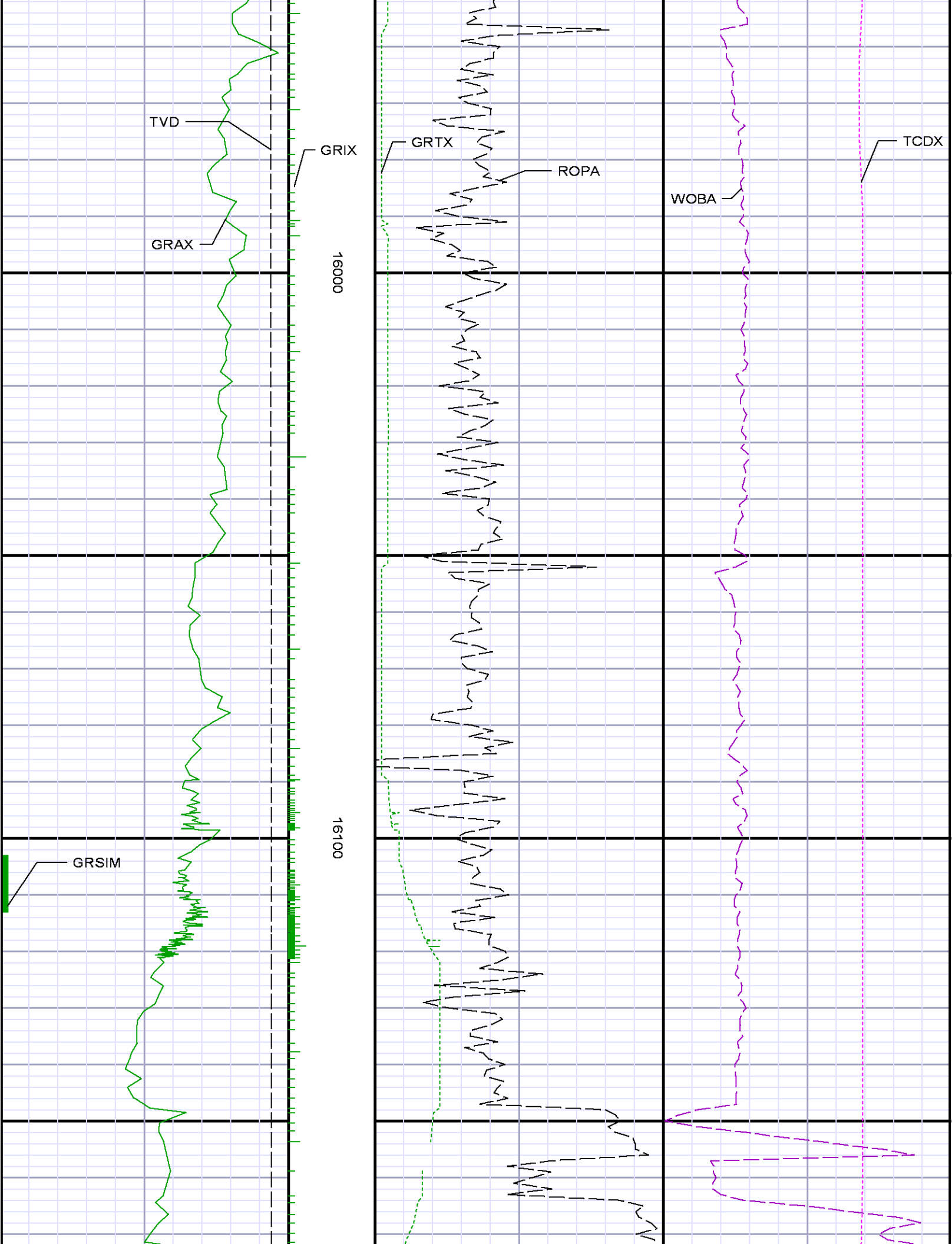


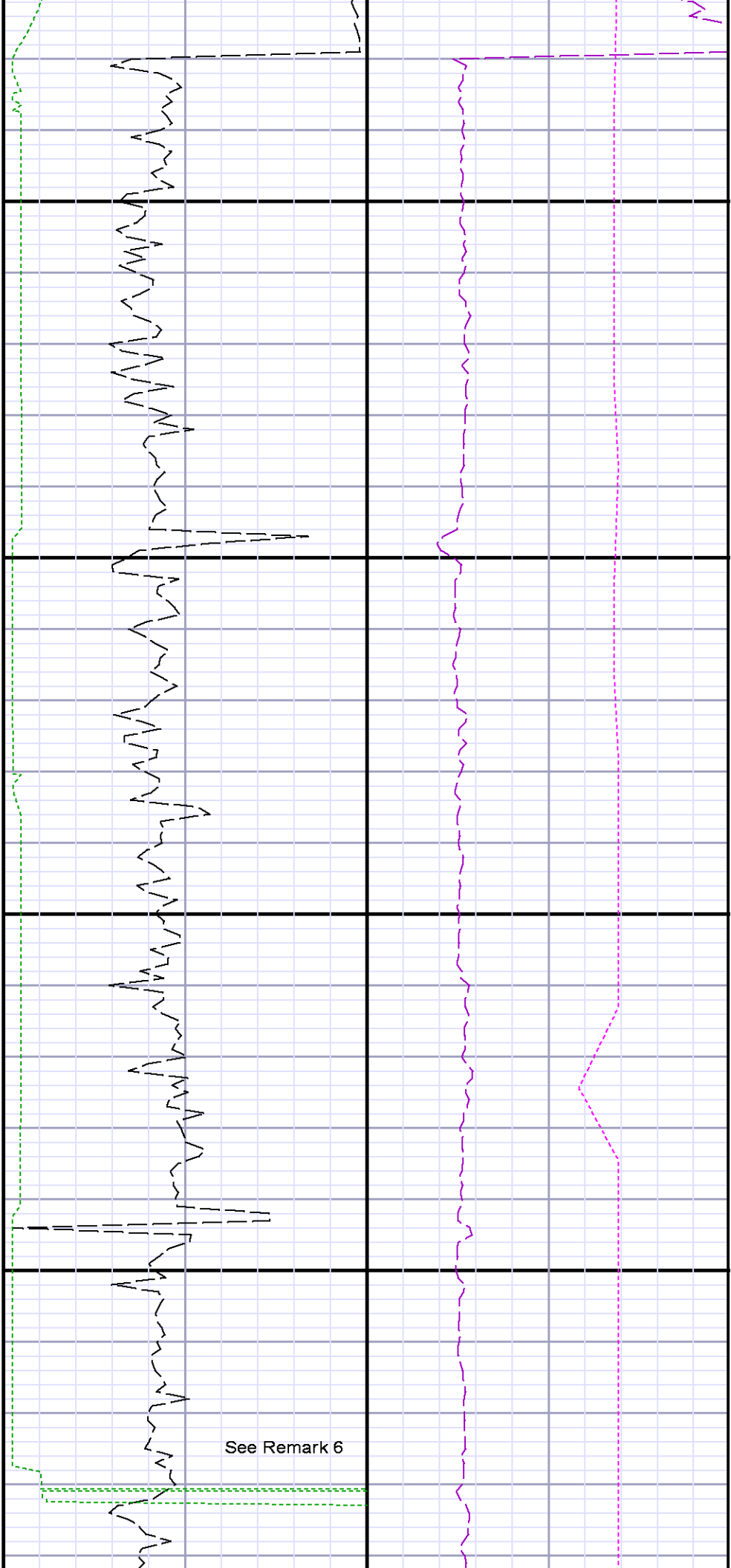


15800

15900



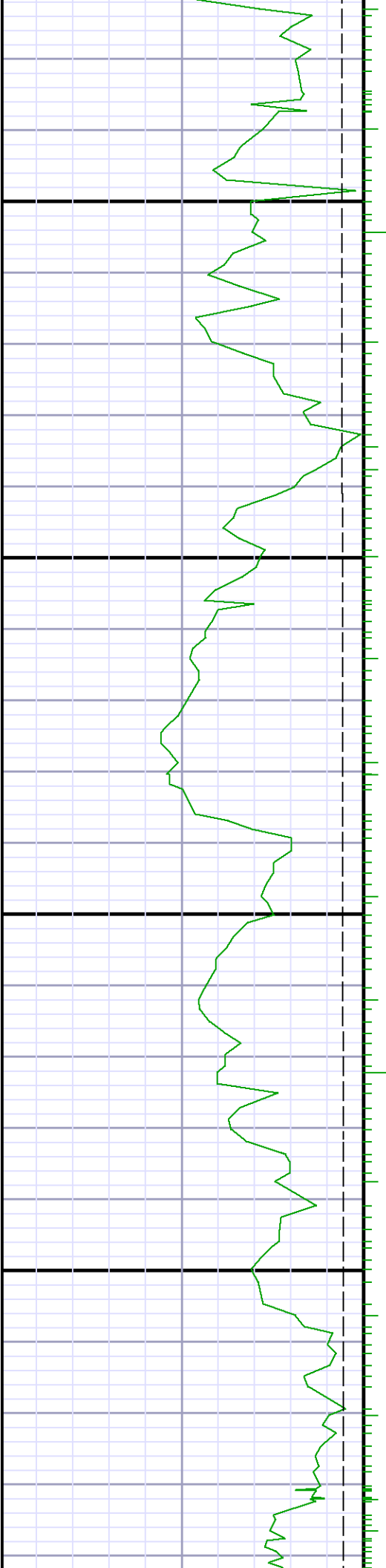


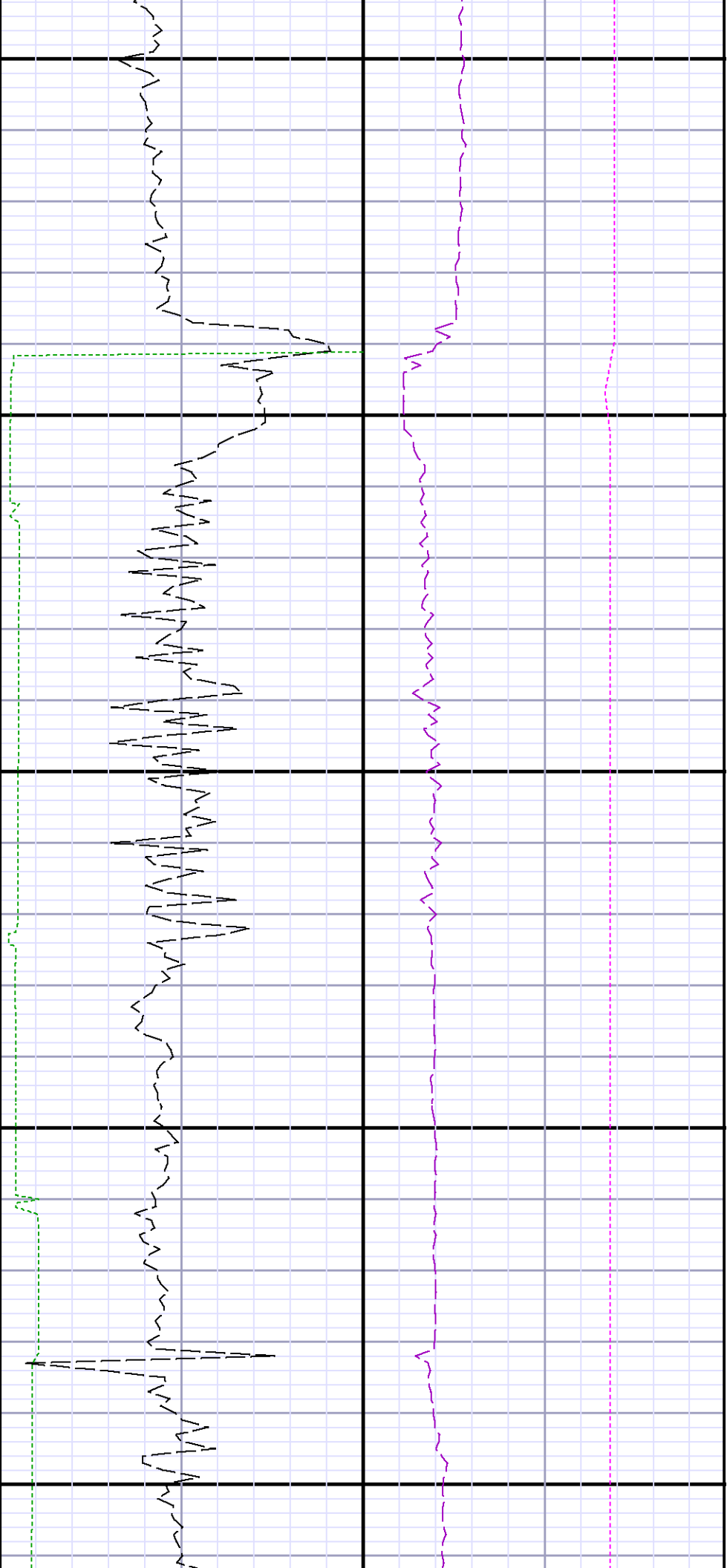


See Remark 6

16200

16300





Run 4 <> Run 5

16400

16500

16600

