



Real Time Log

Natural Formation Evaluation
Gamma Ray

Scale:

Company: Anadarko

1:240

Well: GRENEMYER 16N-3HZ

Measured Depth

Field: WELD COUNTY (KERR MCGEE)

Region: Rocky Mountains State: Colorado

Status:

Final Print

Surface Location:

Latitude: 40° 0' 48.344" N

Longitude: 104° 52' 10.258" W

Other Services:

API Number:

051 23384200000

SEC: 34

TWP: 1N

RNG: 67W

Directional

Permanent Datum (P.D.): Ground Level

Elevation:

5055.00 ft.

Elevations:

Log Measured From:

Rig Floor

16.00 ft.

Above P.D.

KB:

DF:

GL:

5071.00 ft.
5055.00 ft.

Depth Reference:

Driller's Depth

GL:

GL:

GL:

GL:

GL:

GL:

GL:

GL:

GL:

GL:

GL:

GL:

Interval Logged

Dates

Dates

Dates

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Top: 6943.0 ft.

Date From: 23/Jan/14

Dip Angle: 66.27°

Azi Reference North:

True

Bottom: 15259.0 ft.

Date To: 30/Jan/14

Total

Mag to Reference

Spud Date: 23/Jan/14

Field Strength: 52564.0 nT

North Correction:

8.48°

Borehole Record

Casing Record

Hole Size

From

To

Size

Weight

From

To

8.750 in.

1027.0 ft.

7890.0 ft.

9.625 in.

36.00 lb/ft

Surface

1042.0 ft.

6.125 in.

7890.0 ft.

15307.0 ft.

7.000 in.

26.00 lb/ft

Surface

7880.0 ft.

Mud Record

Deviation Record

Type

From

To

Hole Size

Interval

Inc / Az (Start)

Inc / Az (End)

LSND

Surface

7890.0 ft.

8.750 in.

85.0 ft.

0.1° / 86.1°

10.2° / 90.1°

Innovert

7890.0 ft.

15307.0 ft.

8.750 in.

43.0 ft.

10.2° / 90.1°

84.3° / 178.8°

6.125 in.

85.0 ft.

84.3° / 178.8°

91.5° / 179.0°

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Acquisition System

Software Version

Other

Advantage

2.20U4

Rig:

Xtreme 24

/ Advance Drilling

PATS

6.4.1.34

Job No:

6057193

/ D & E

RMD

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time				Circ. Time (hrs.)
							Top	Bottom	From	To	Start		End		
							(ft.)	(ft.)	(ft.)	(ft.)					
1	1	2	8.750	PDC	2.000	Steerable	6944.0	7836.0	6998.0	7890.0	23/Jan/14	14:40	26/Jan/14	02:30	37.5
2	2	2	6.125	PDC	6.000	Steerable	7843.0	15259.0	7890.0	15307.0	27/Jan/14	02:00	30/Jan/14	05:30	68.1

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Osagie Otoikhine	22/Jan/14	31/Jan/14	Steven Cano	22/Jan/14	26/Jan/14	Marcus Boucher	27/Jan/14	31/Jan/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+ (%)
26/Jan/14	18:00	1	7890.0	LSND	9.8	13	9.1	N/A	0.0/91.0	Flowline	1200	N/A
27/Jan/14	18:00	2	8850.0	Innovert	9.6	27	N/A	16.0	58.9/41.1	Flowline	78000	N/A
29/Jan/14	18:00	2	14008.0	Innovert	9.3	50	N/A	N/A	62.5/37.5	Flowline	78000	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent 0.5 ft. 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	deg F
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	10264844	Directional	57.70	6.750	2.750
1	SRIG	12679499	Gamma	54.28	6.750	2.750
2	DIR	10152197	Directional	50.77	4.750	2.813
2	SRIG	12600748	Gamma	47.39	4.750	2.813

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) Baker Hughes INTEQ run 1 utilized 6 1/2 inch NaviGamma(Gamma Ray and Directional) behind a 8 3/4 inch bit and steerable assembly from 6998 feet to 7890 feet MD (6980 feet to 7553 feet TVD).</p> <p>2) Baker Hughes INTEQ run 2 utilized 4 3/4 inch NaviGamma(Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 7890 feet to 15307 feet MD (7553 feet to 7538 feet TVD).</p> <p>3) A sliding indicator is shown to the left edge of track 1 as a heavy line. The indicator has been depth-shifted to the gamma sensor offset to correspond with gamma data acquired while sliding.</p>
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Remarks

Number	Measured Depth (ft)	Hole Section (in.)	LWD Run No.	Remark
1	6840	8.750	1	The interval from surface to 6844 feet MD (6827 feet TVD) was not logged since logging services began at kick off point

6840

8.750

1

The interval from surface to 6844 feet MD (6827 feet TVD) was not logged since logging services began at kick on point.

2

7890

8.750

1

Interval from 7831 feet to 7890 feet MD (7549 feet to 7553 feet TVD) was logged more than 37 hours after drilling due to tripping for casing and cementing operations and picking up lateral BHA.

3

15307

6.125

2

Interval from 15259 feet to 15307 feet MD (7539 feet to 7538 feet TVD) was not logged due to gamma ray sensor offset at well TD.



Company : Anadarko

Well : GRENNYER 16N-3HZ

Interval : 6825.00 - 15330.00 feet

Created : 30/Jan/2014 3:59:30 PM

Gamma Ray Apparent 0.5 ft Avg [GRAX]

0 150

API

True Vertical Depth [TVD]

8000 6700

ft

MD feet 1:240

Rate of Penetration 3.0 ft Avg [ROPA]

650 0

ft/hr

Gamma Time Since Drilled GRTX

0 600

min

Surface Weight On Bit 1.0 ft Avg [WOBA]

0 150

klbf

Downhole Temperature [TCDX]

100 300

degF

GRAX

TVD

GRIX

> Run 1

6900

GRTX

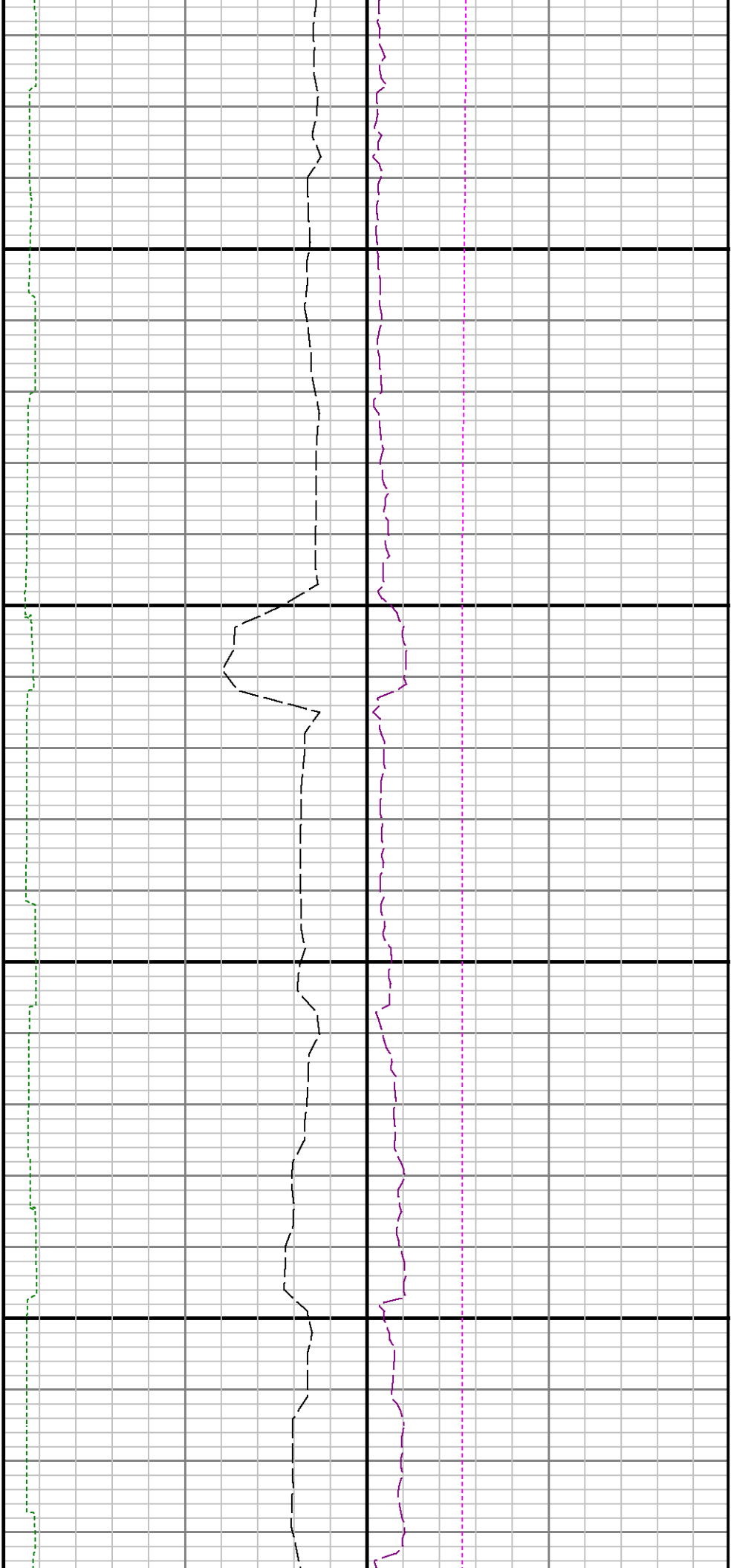
ROPA

WOBA

TCDX

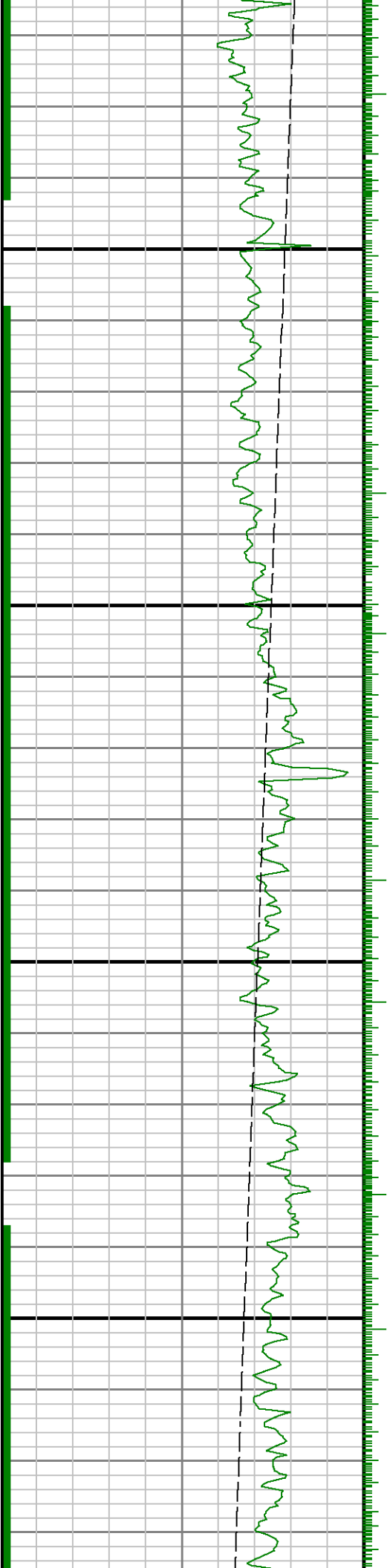
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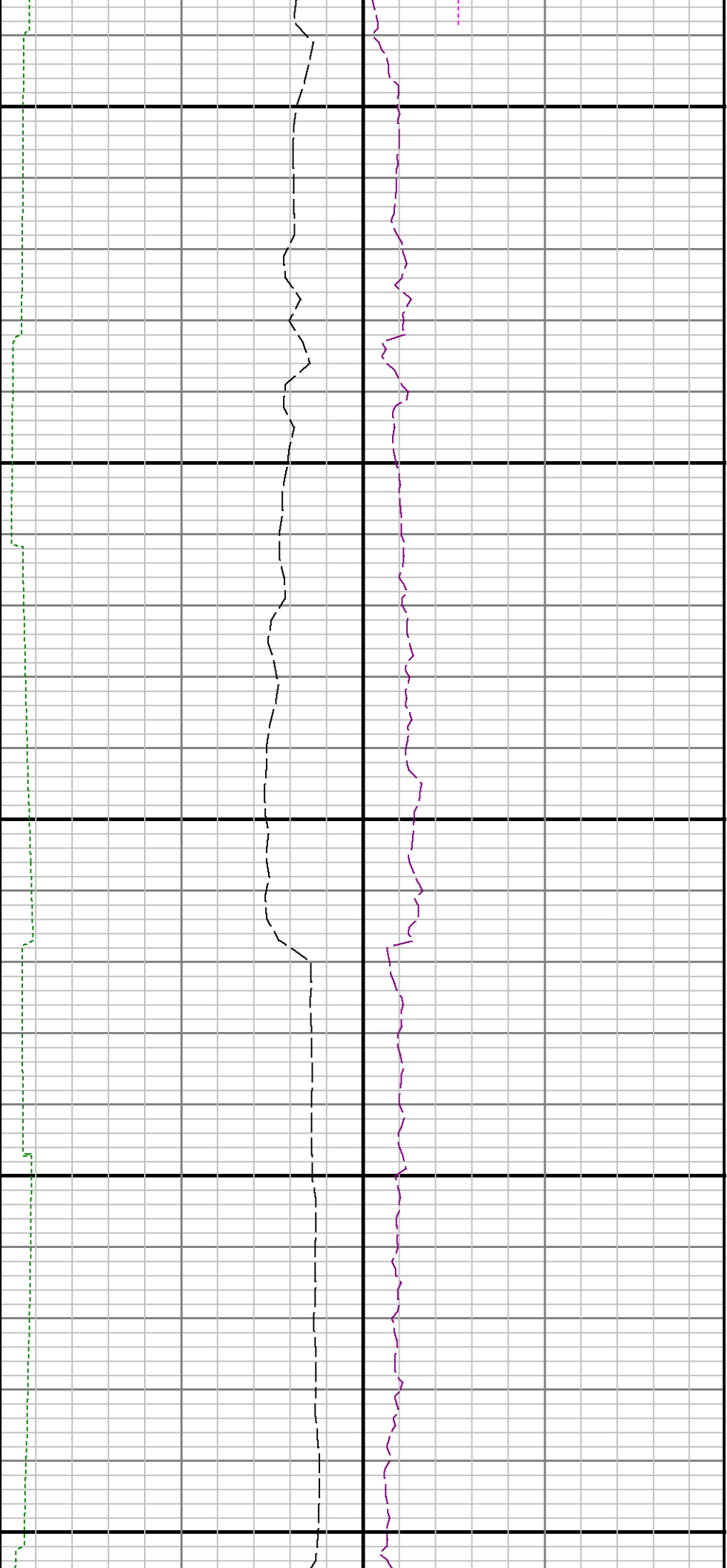
GRSI



7000

7100

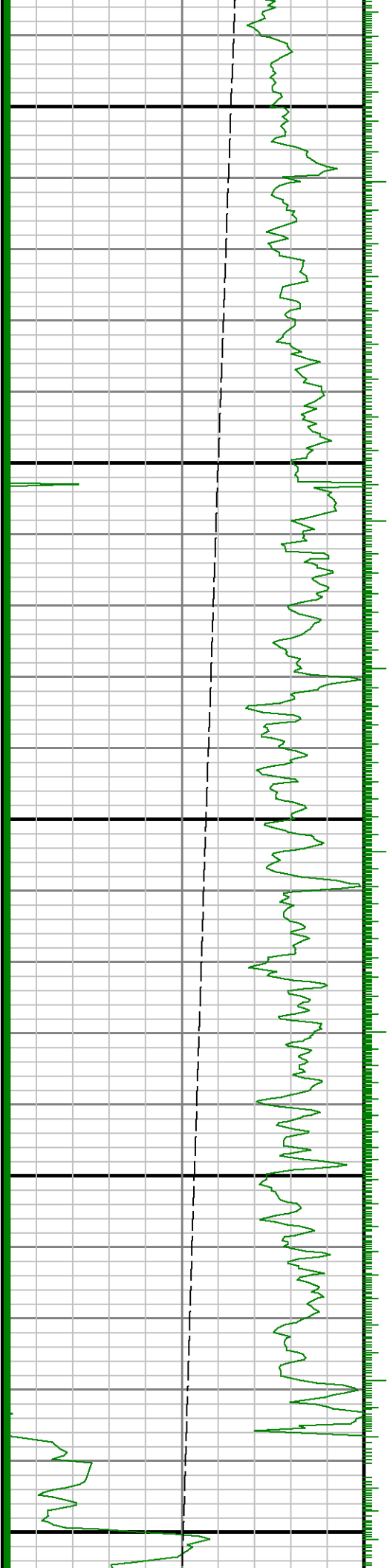


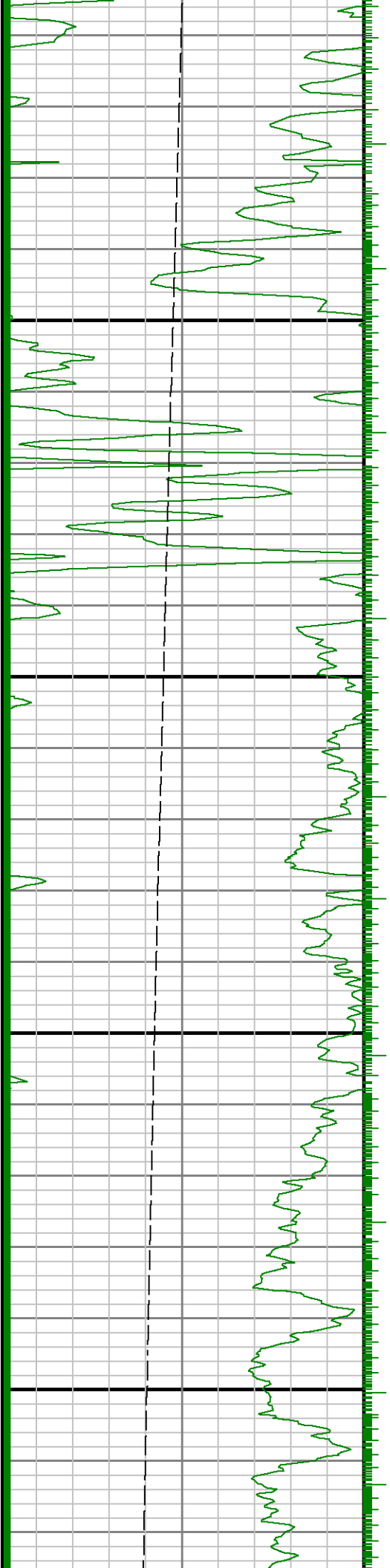


7200

7300

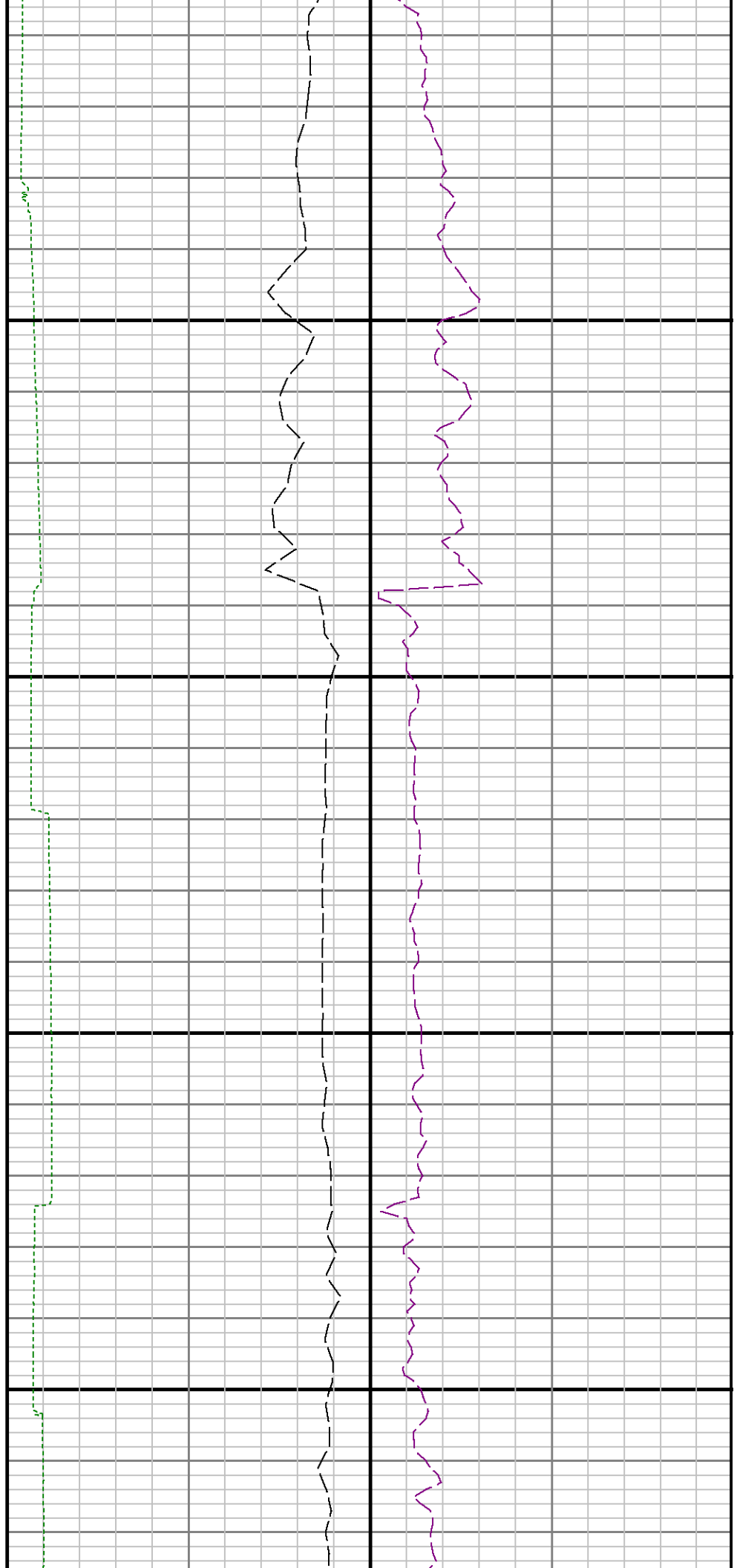
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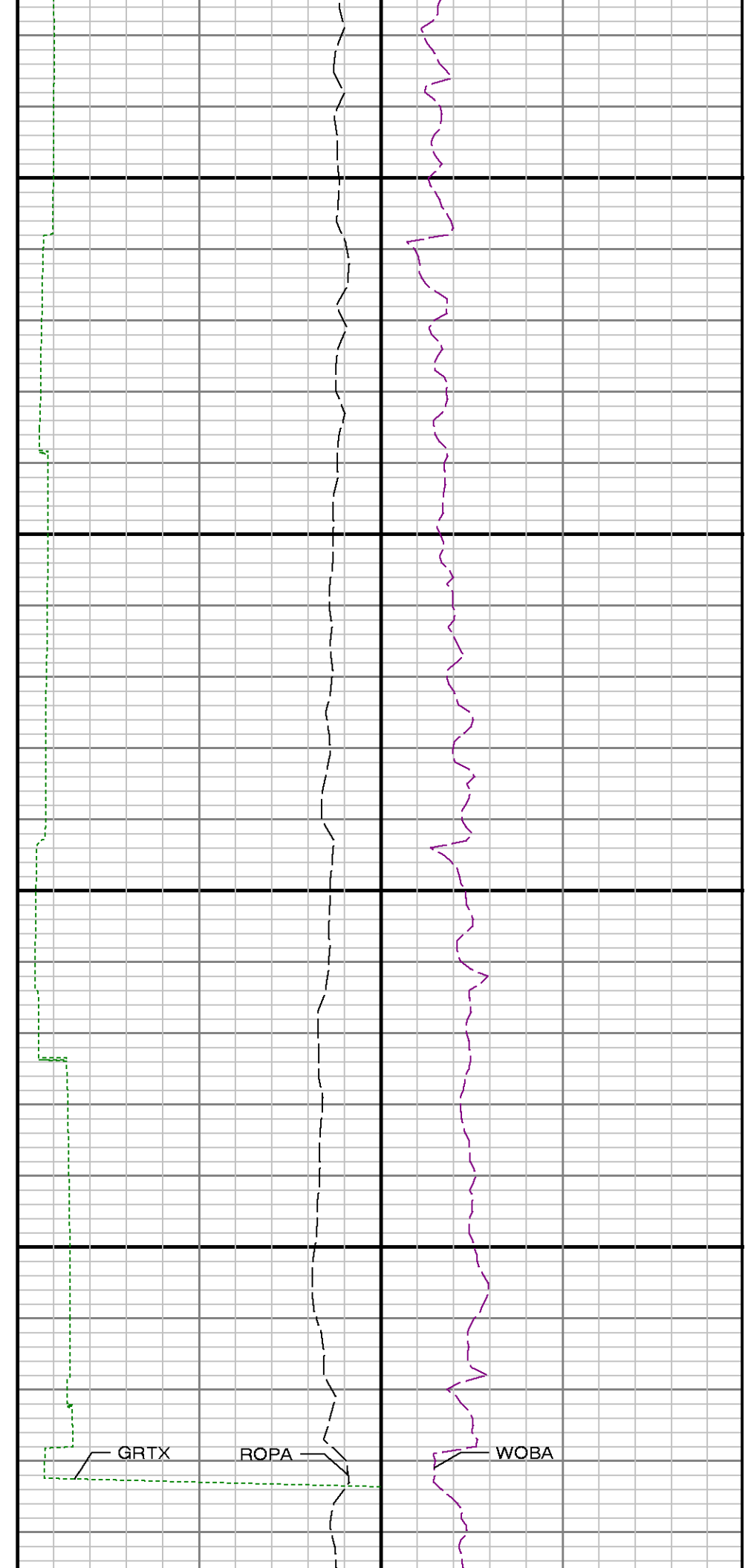
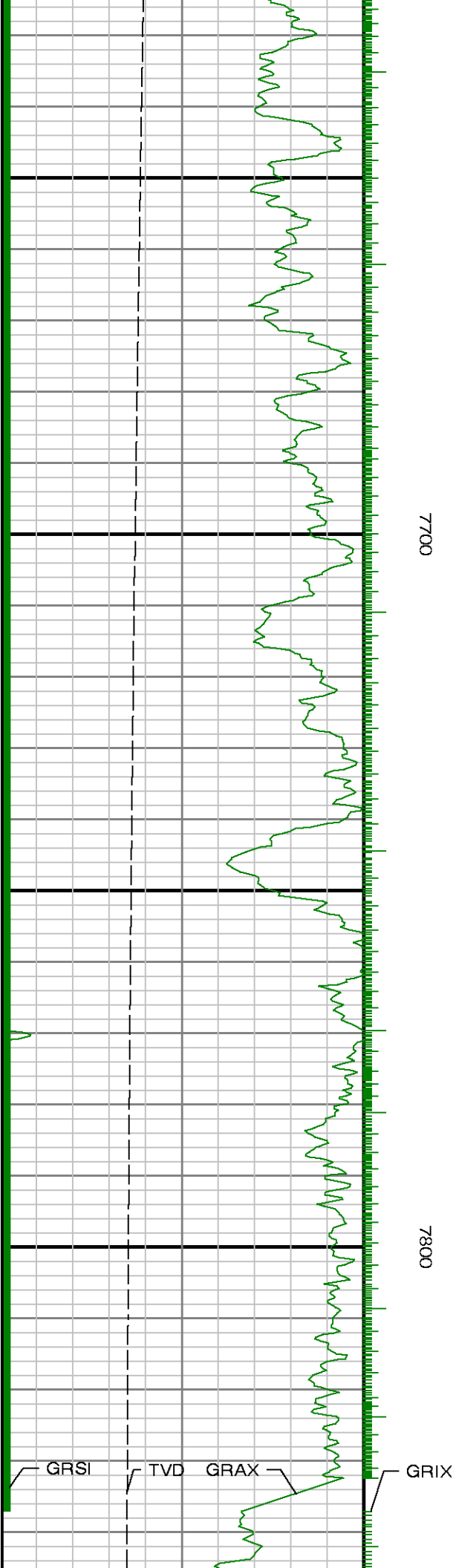


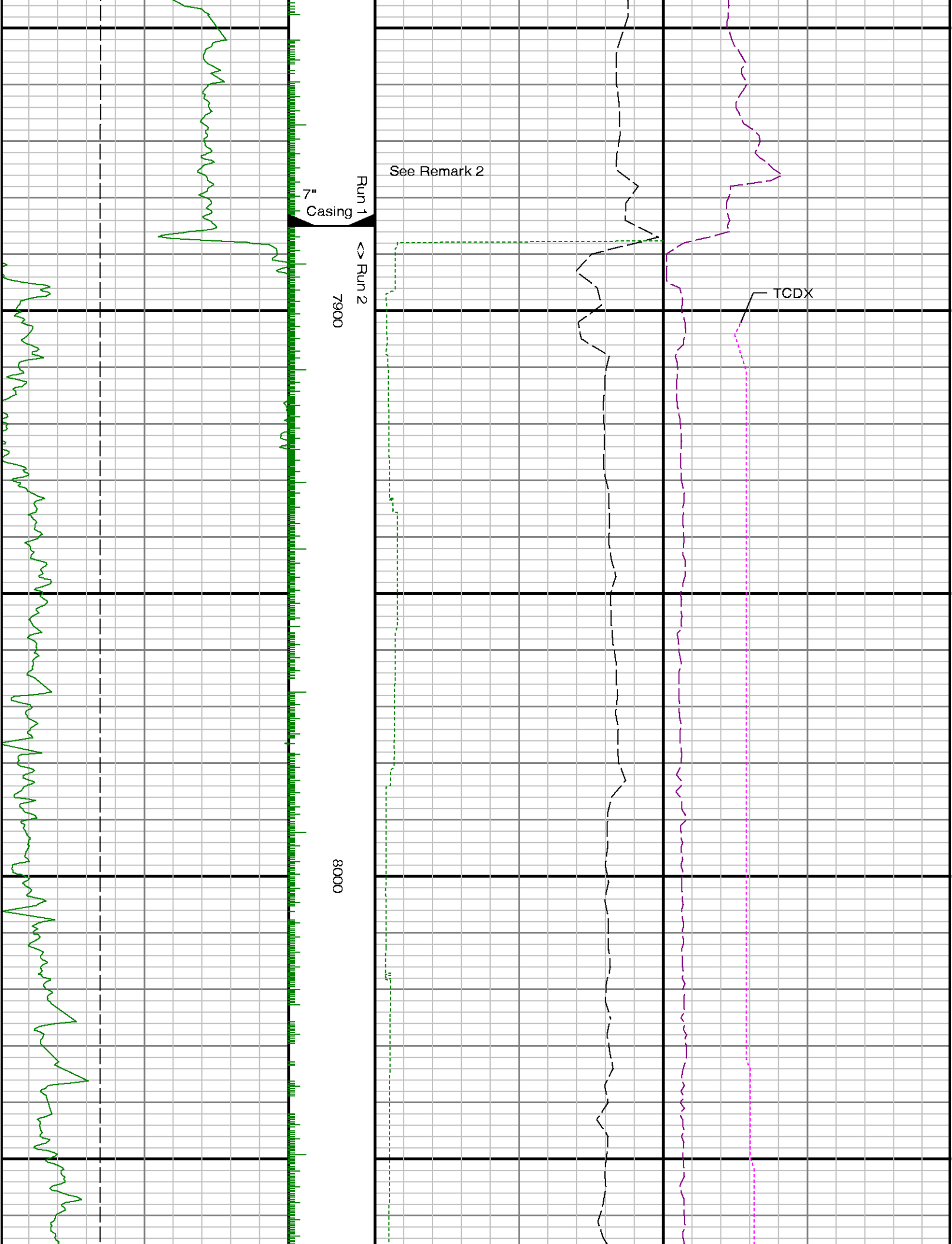


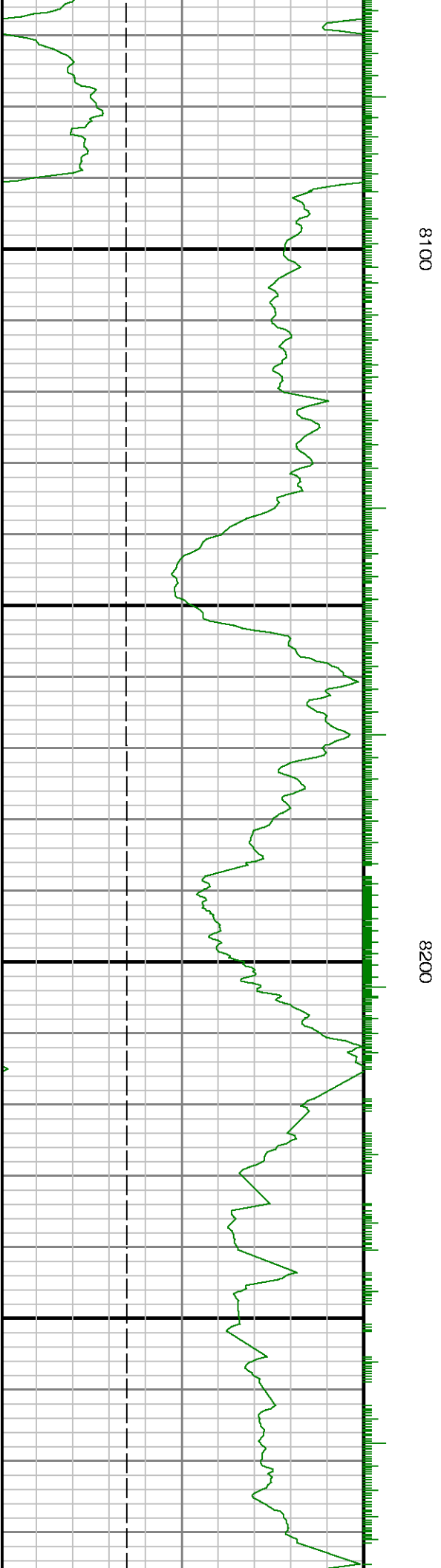
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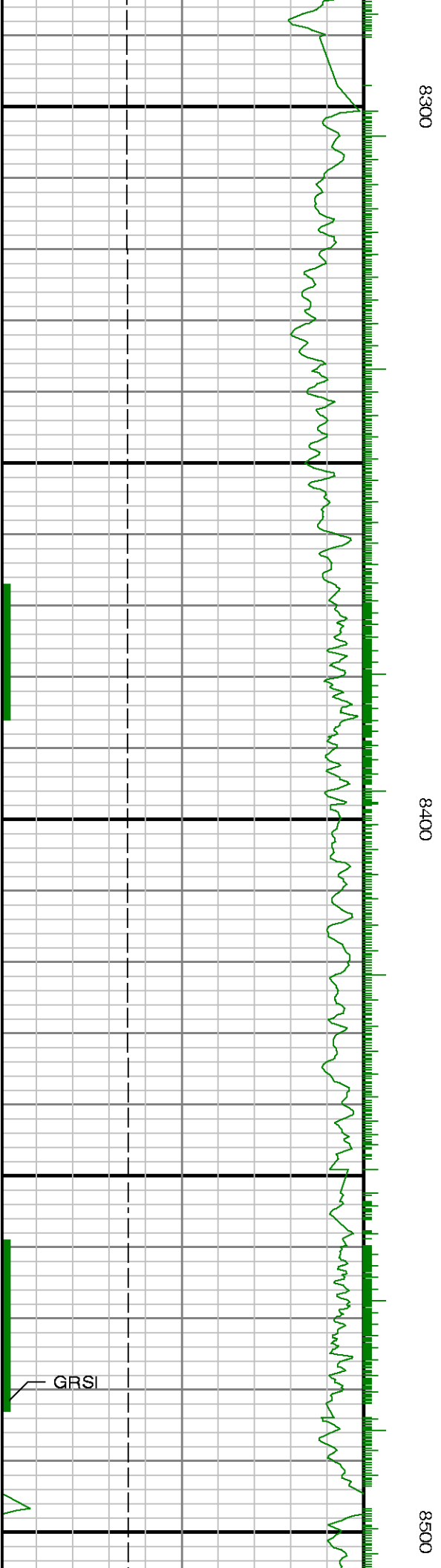
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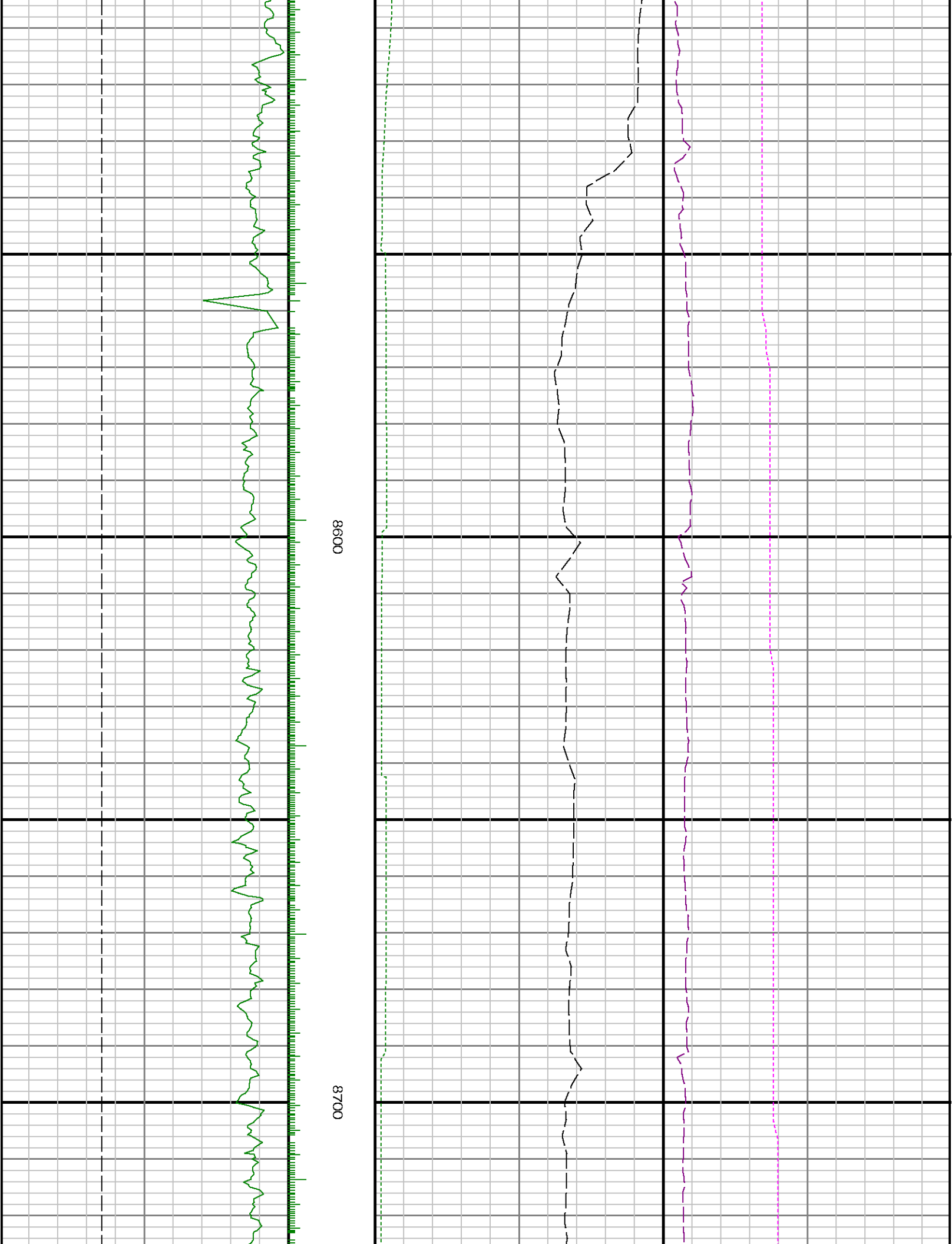


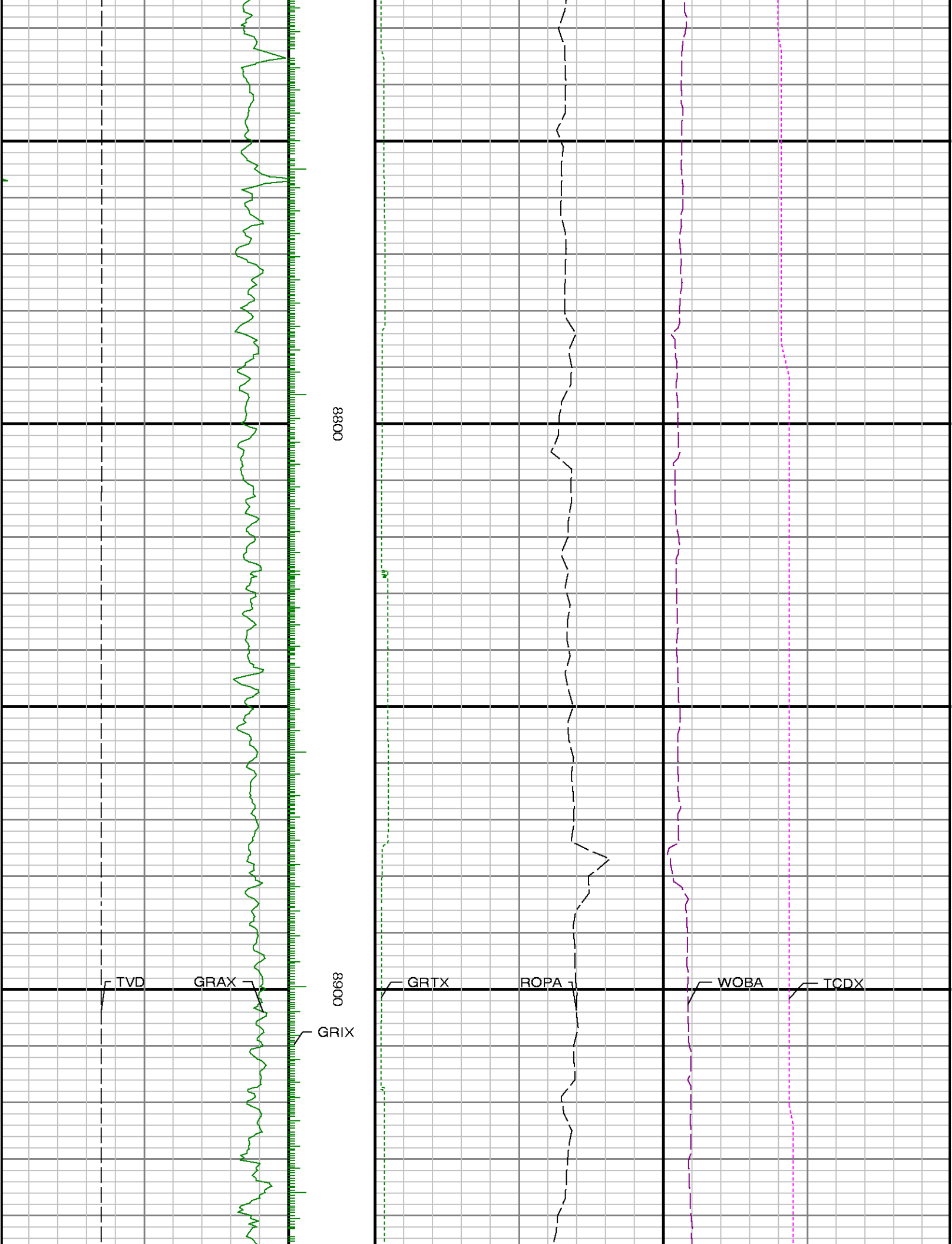


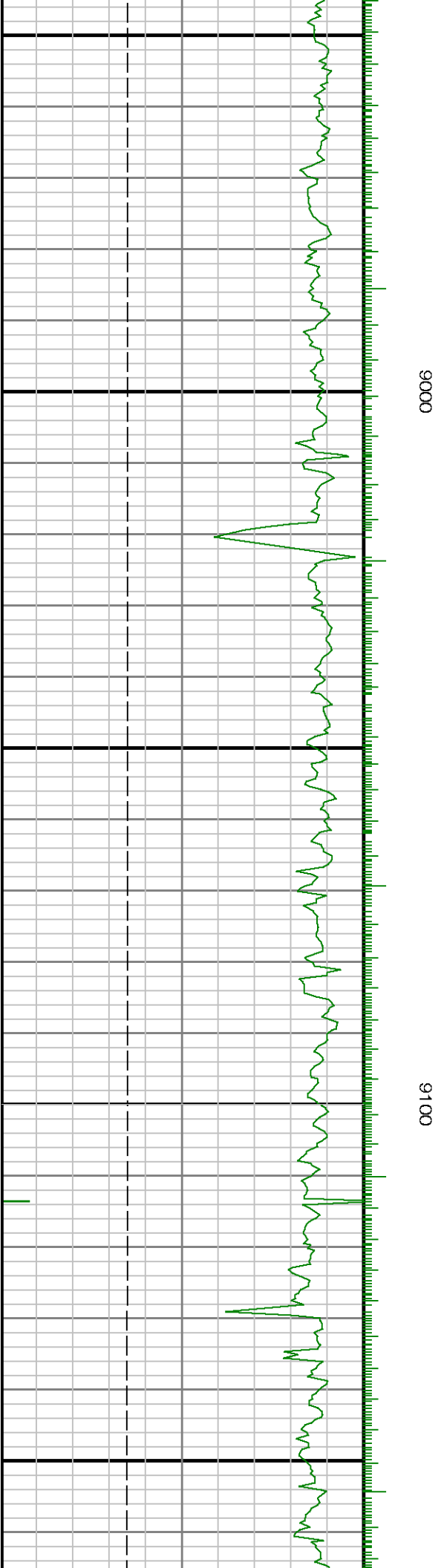


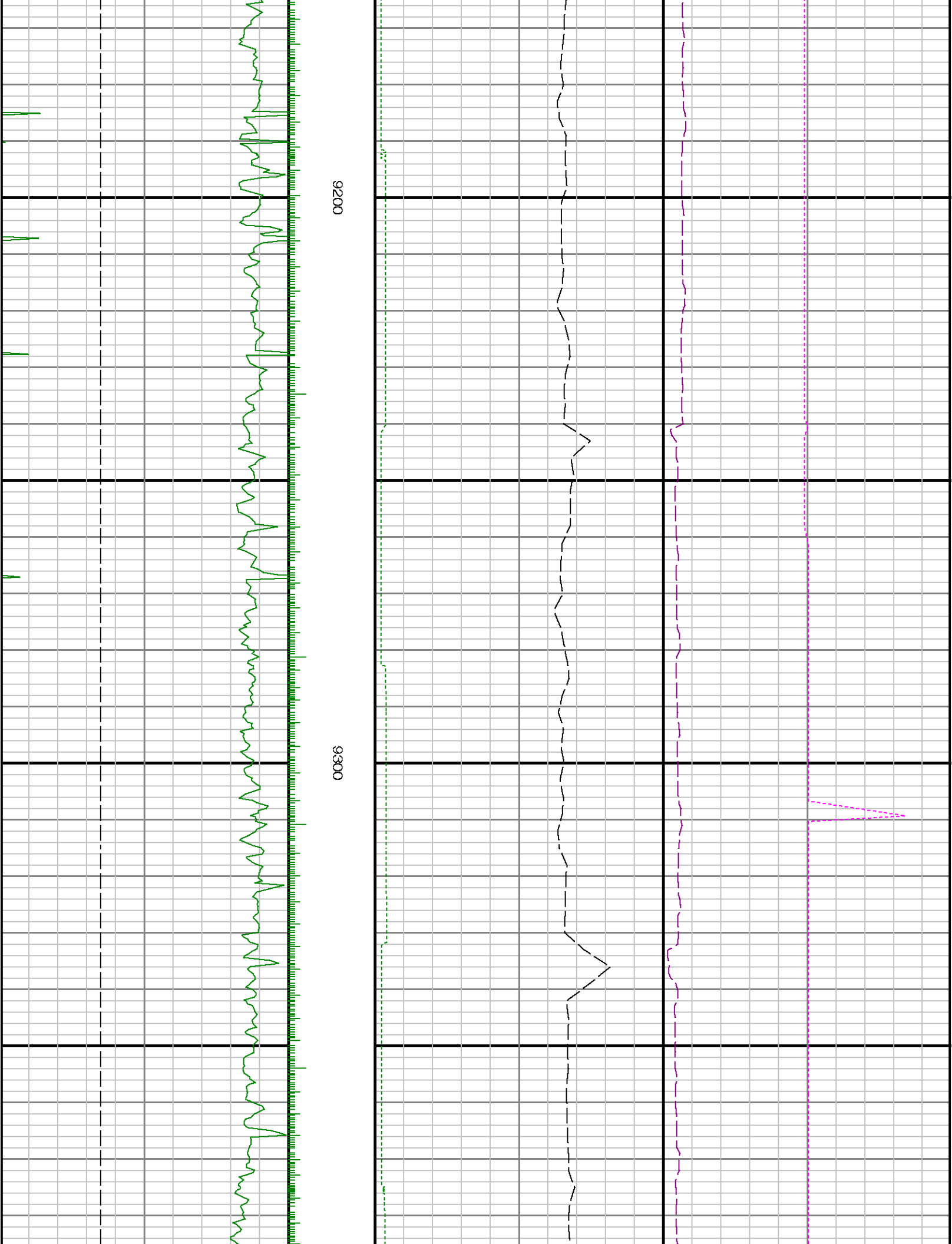










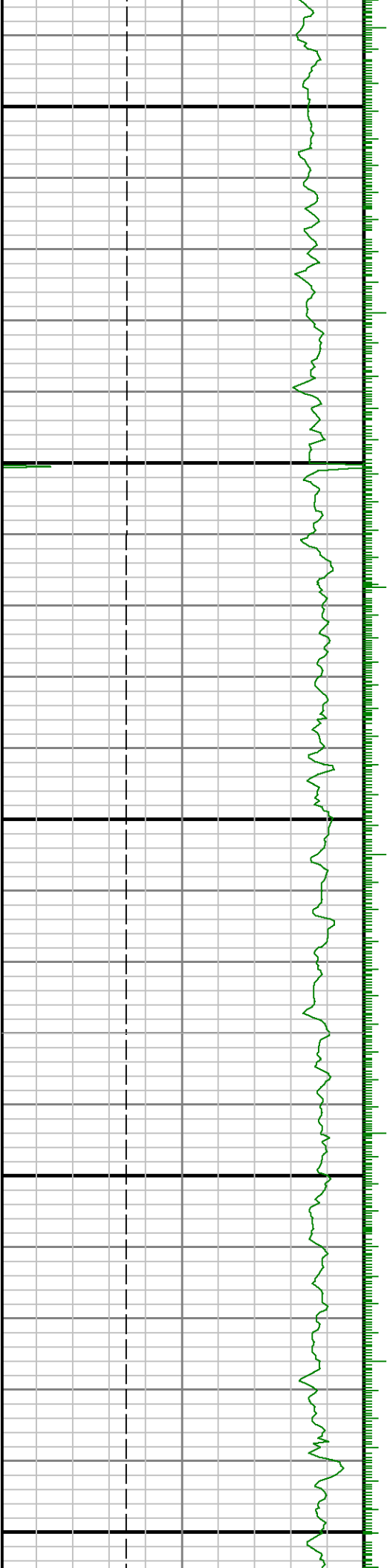


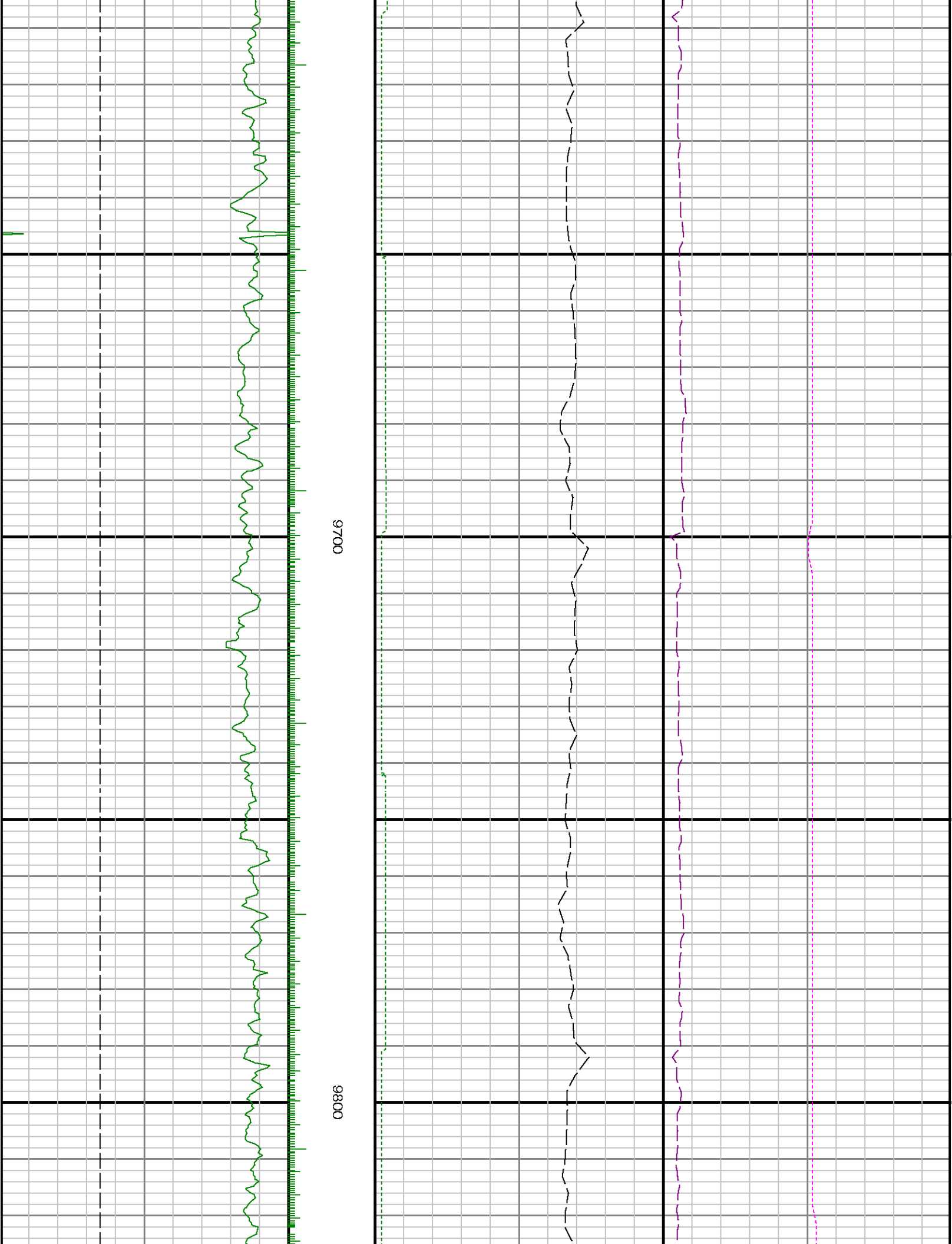


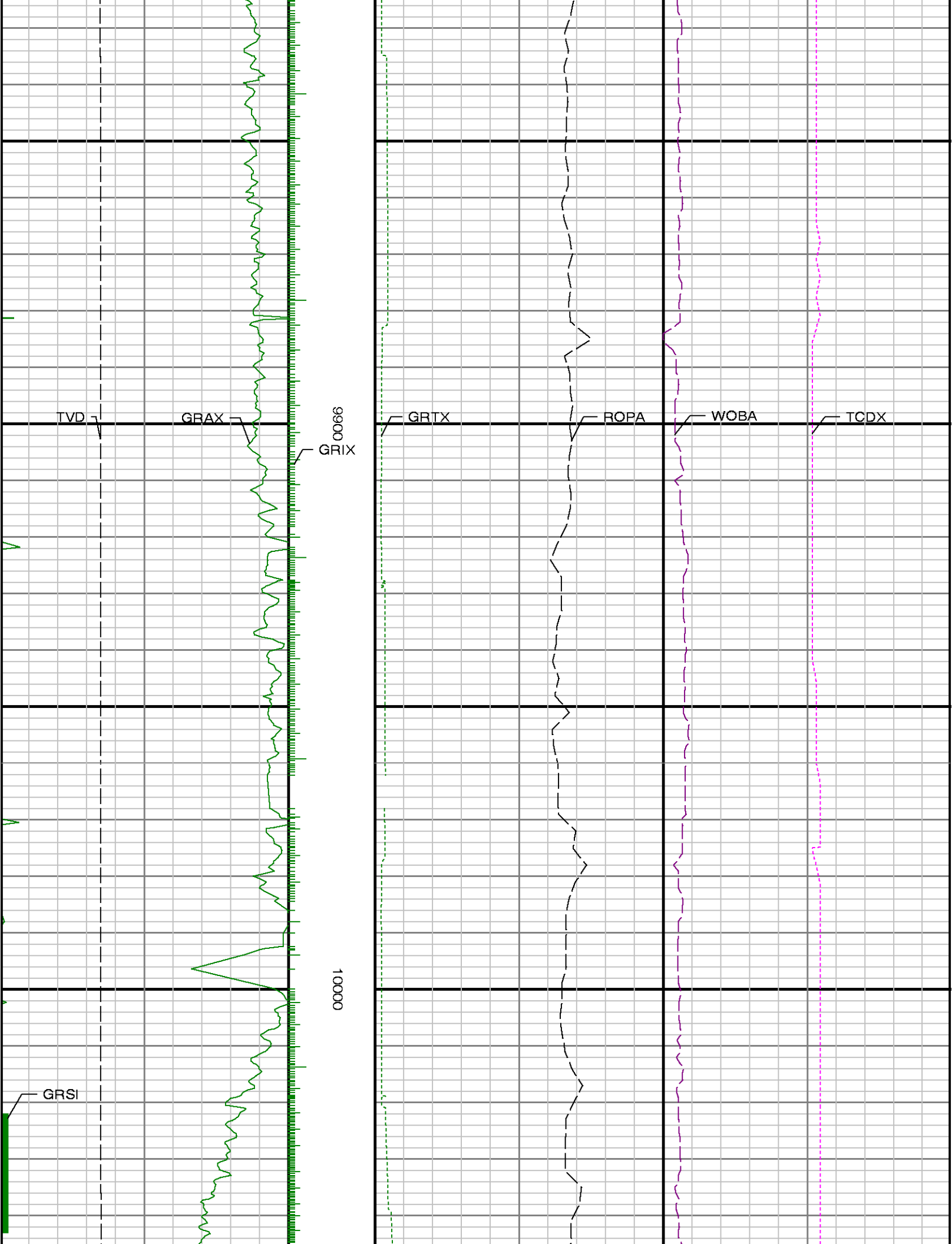
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9500

9600



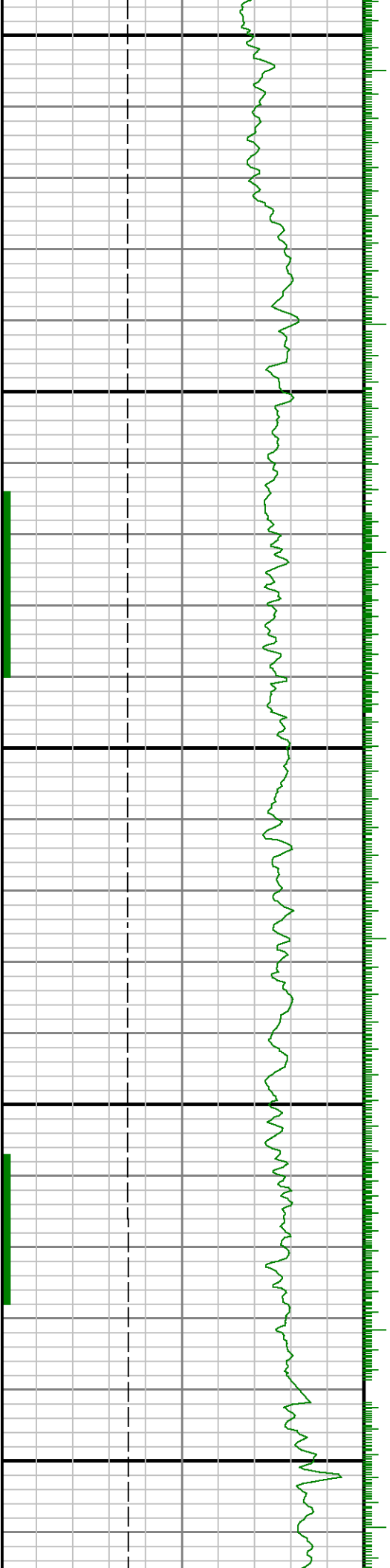






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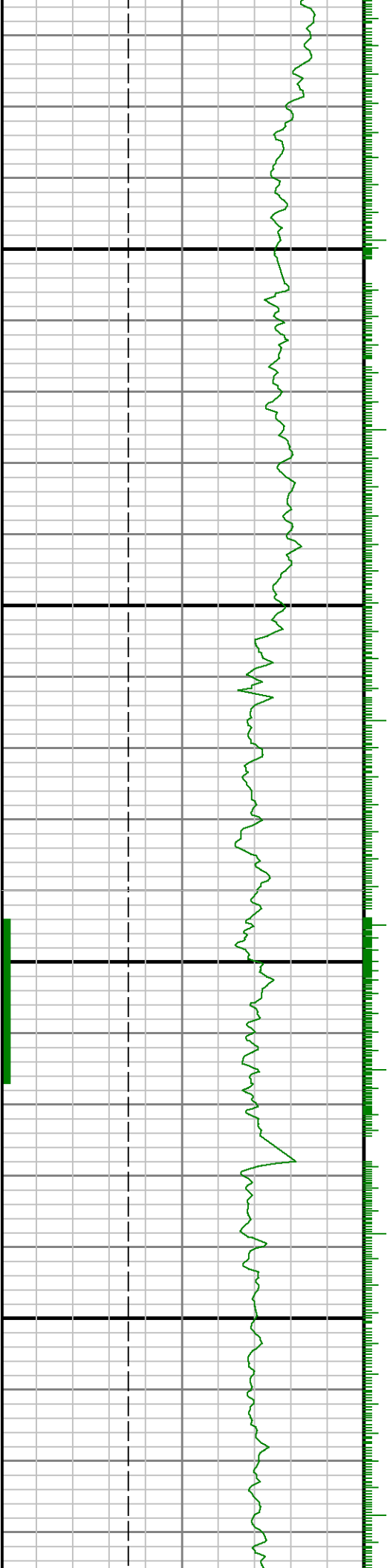
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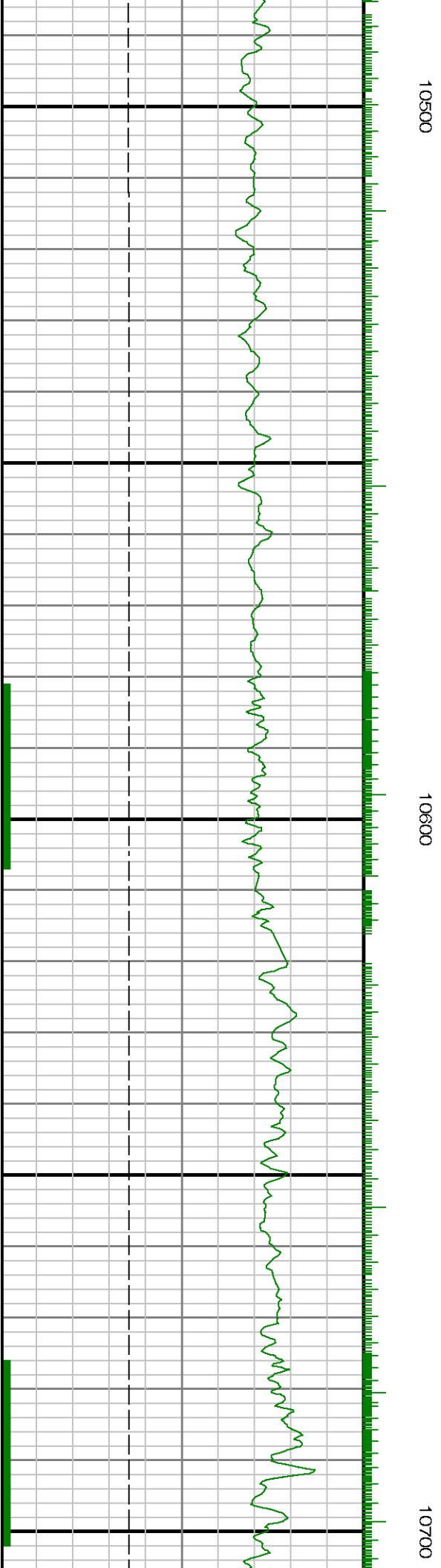


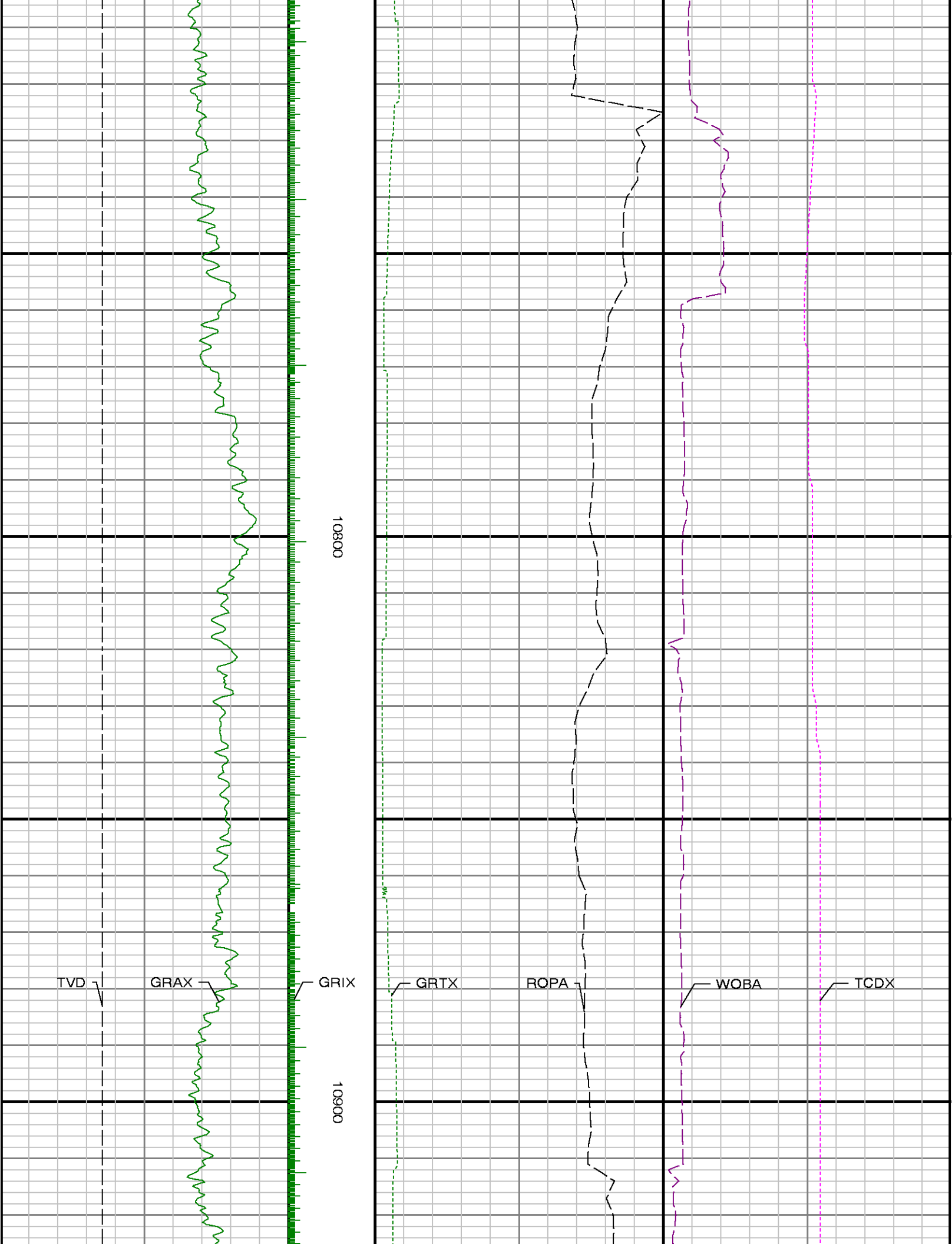


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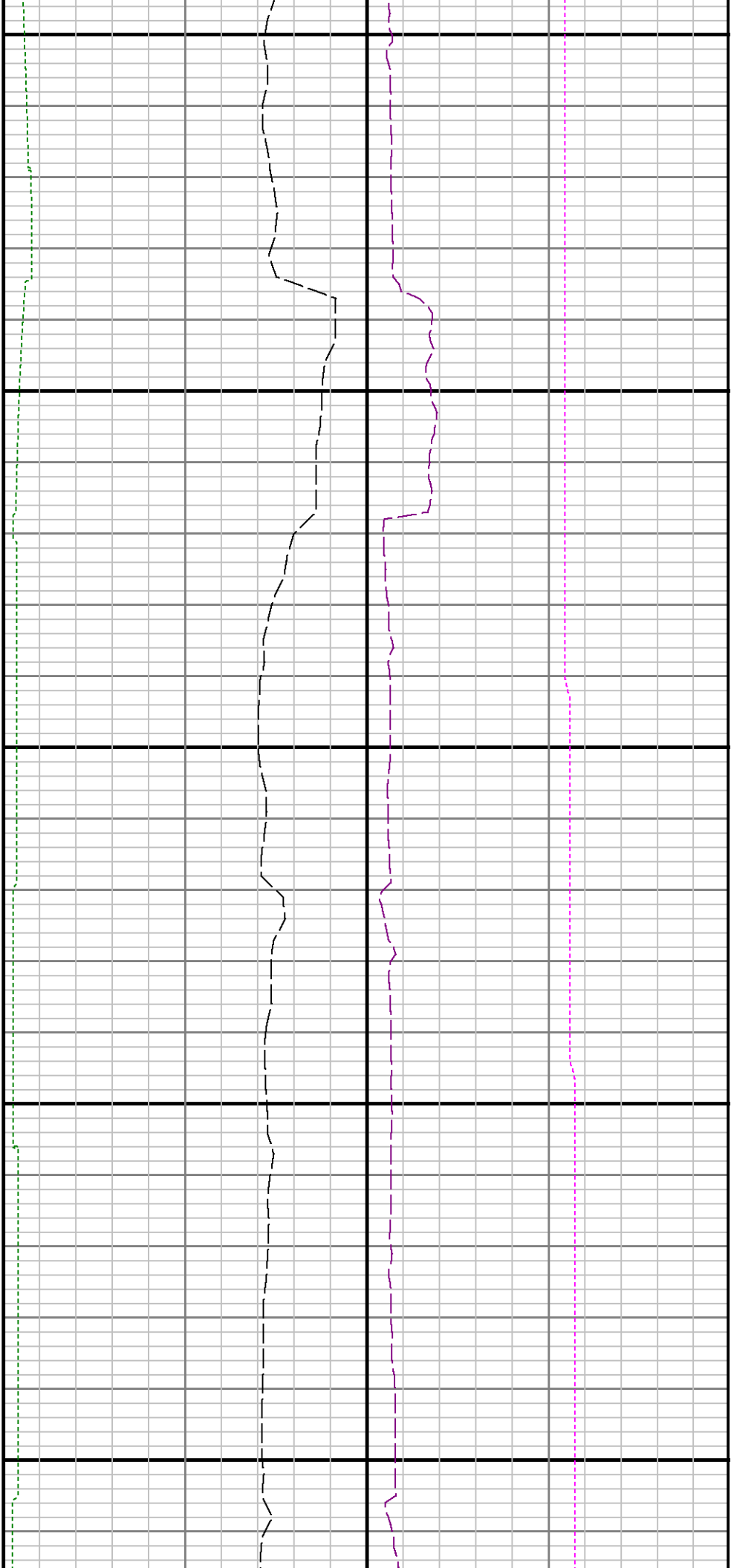
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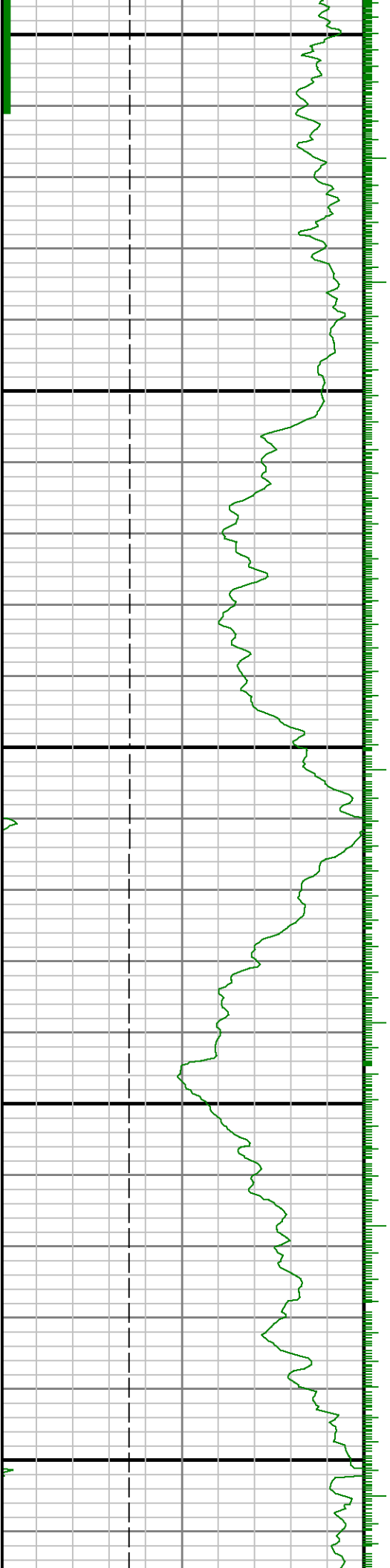






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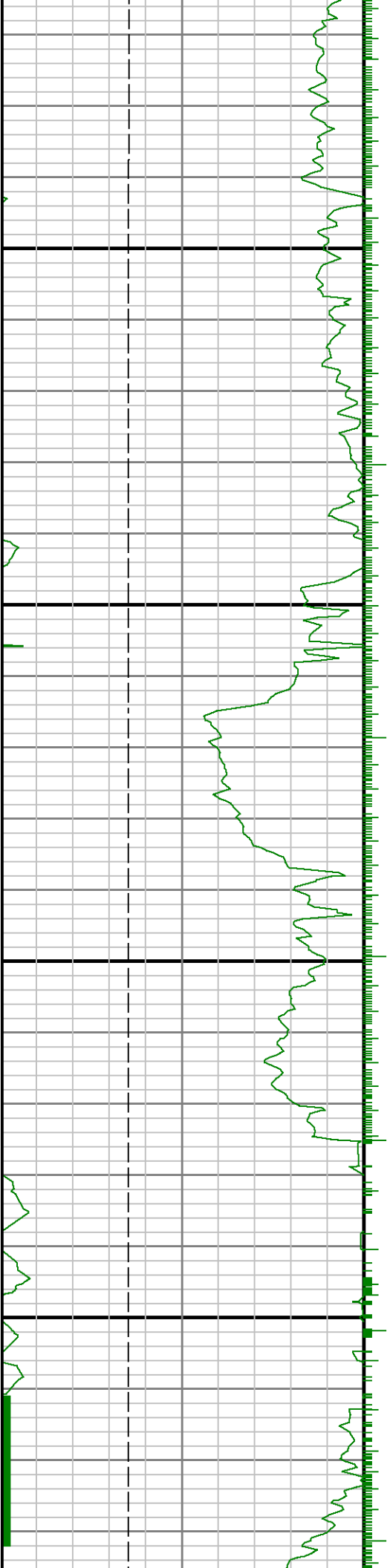
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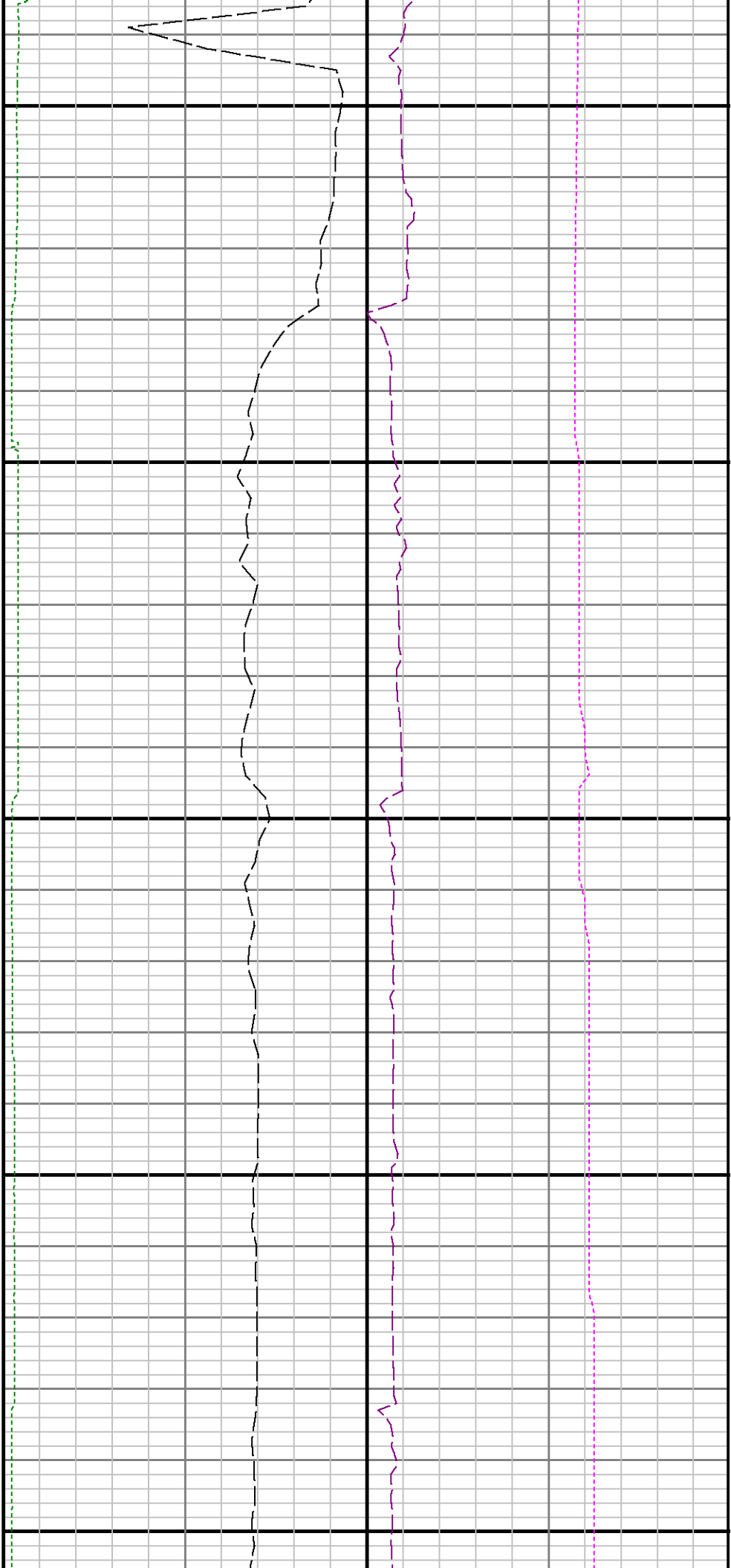




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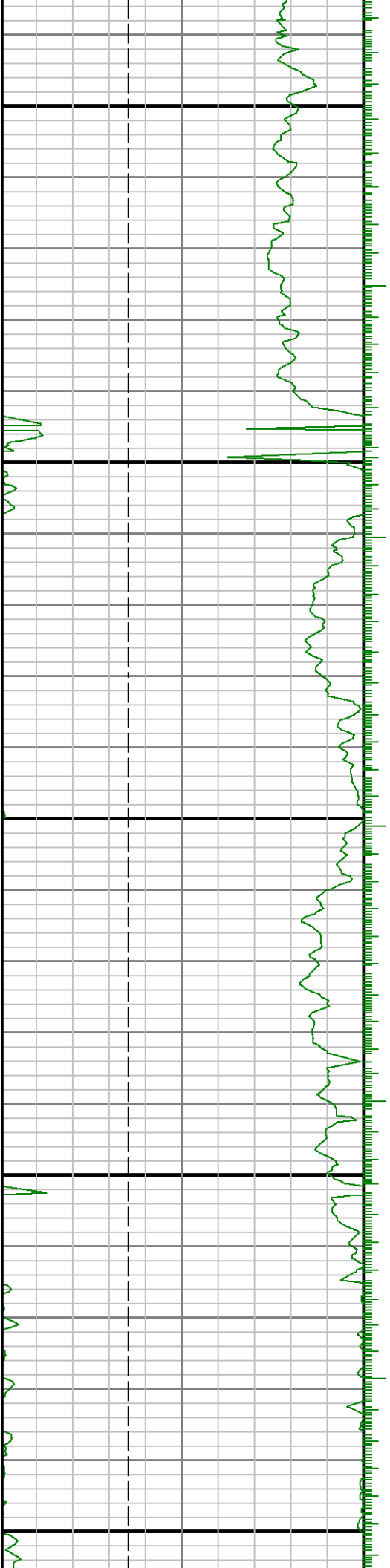


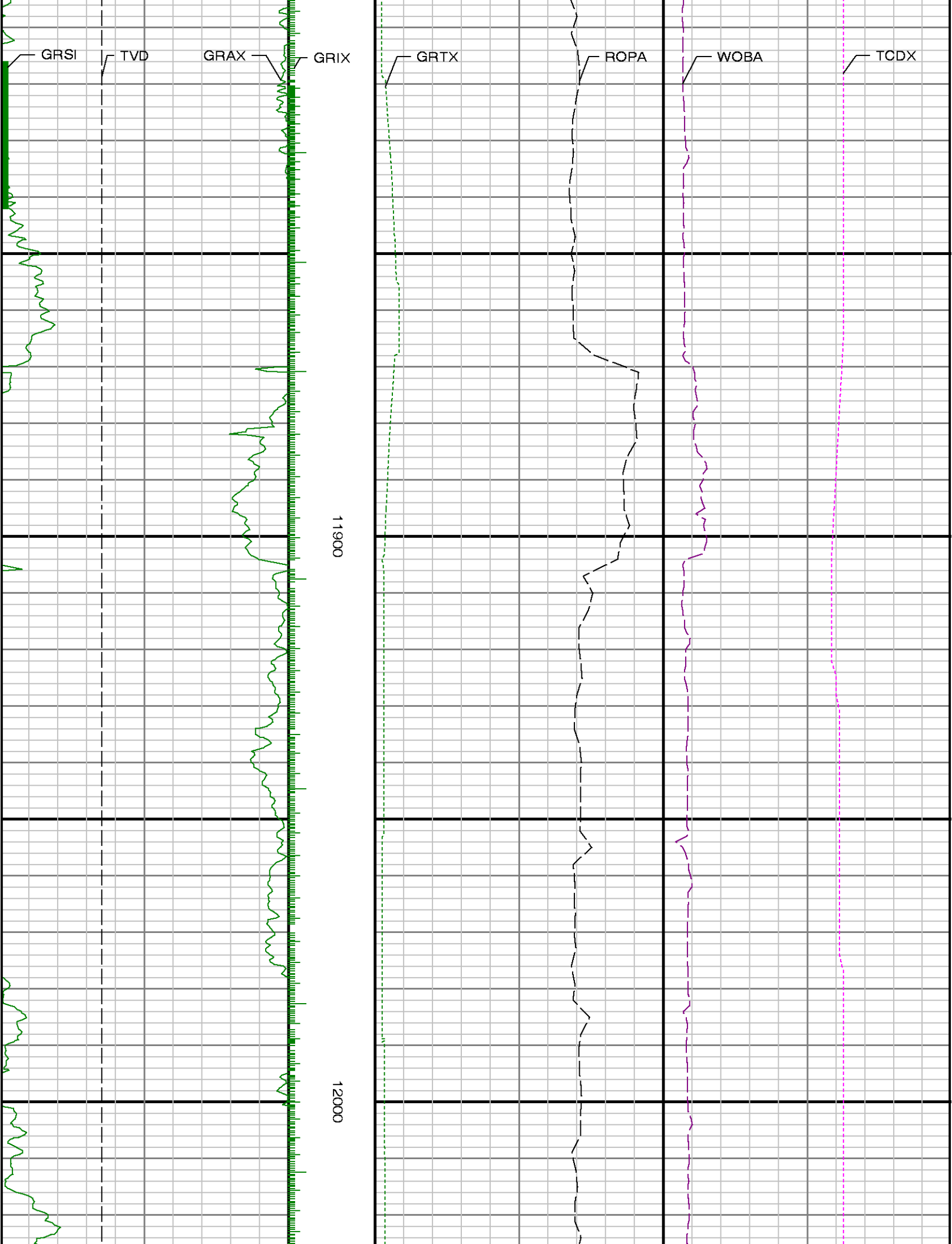


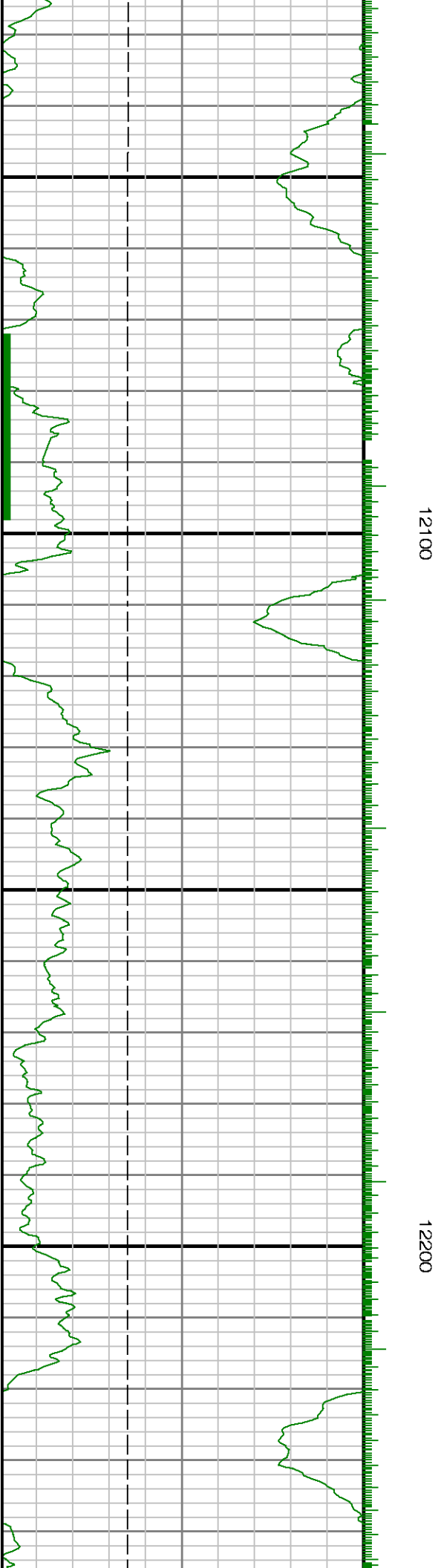
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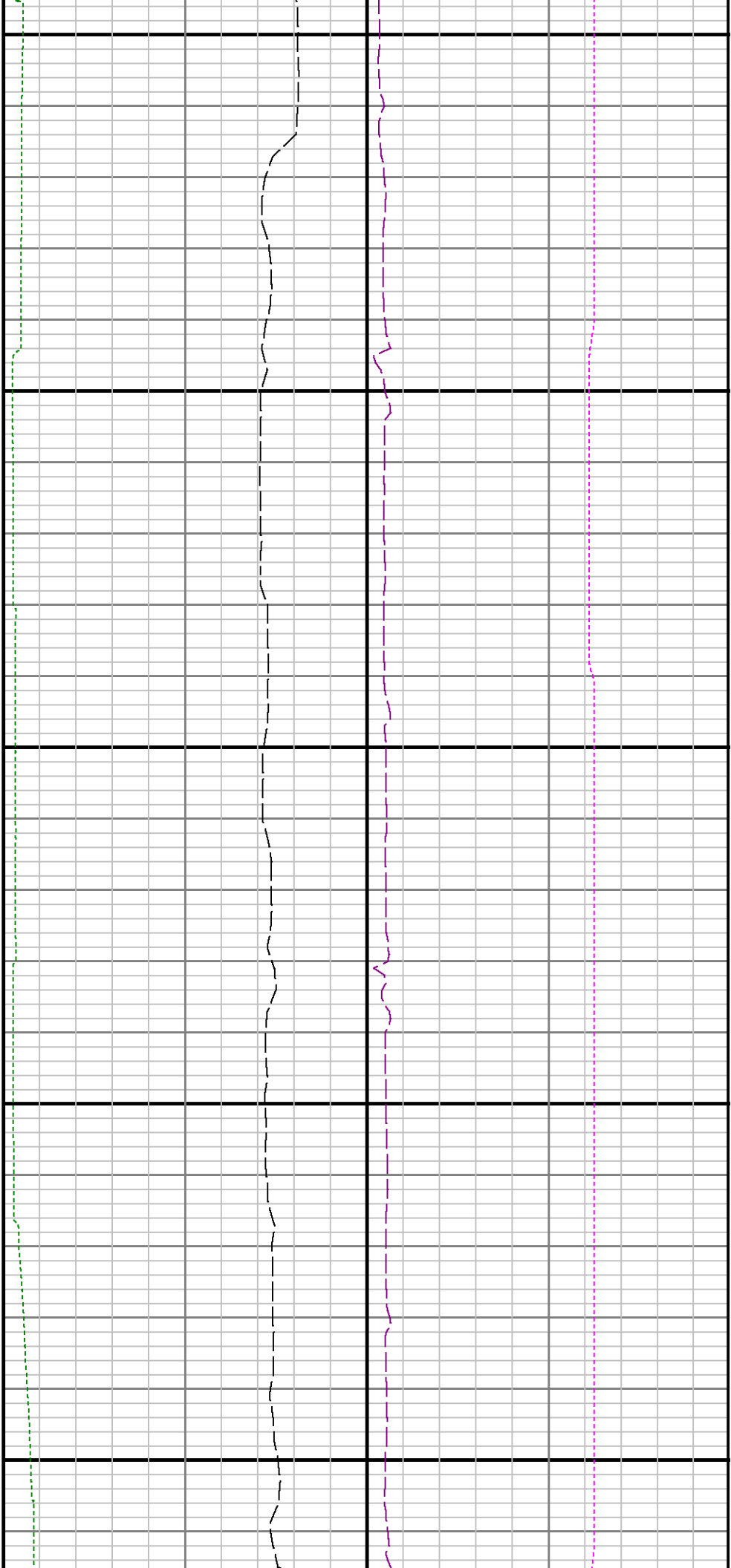
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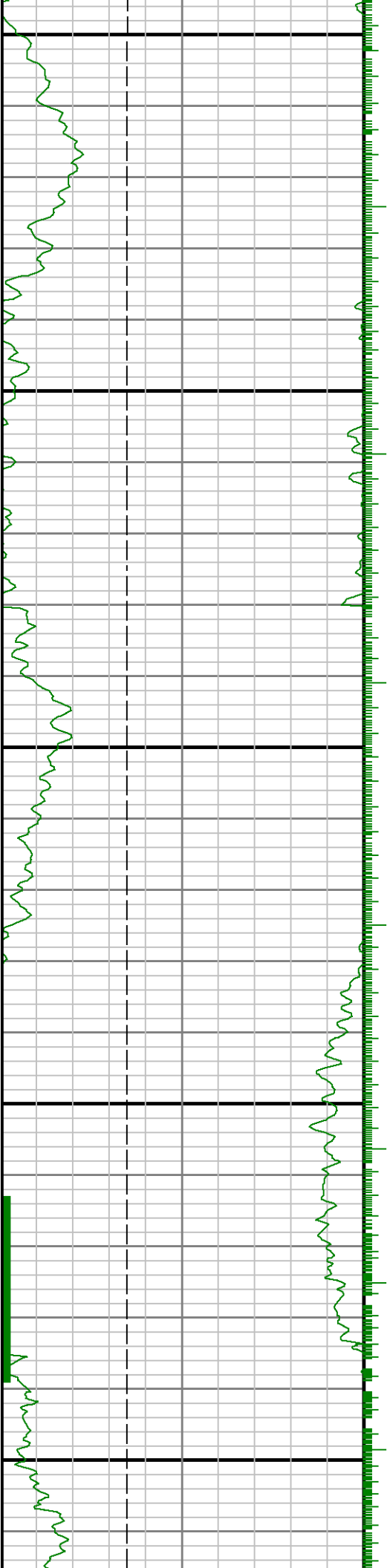


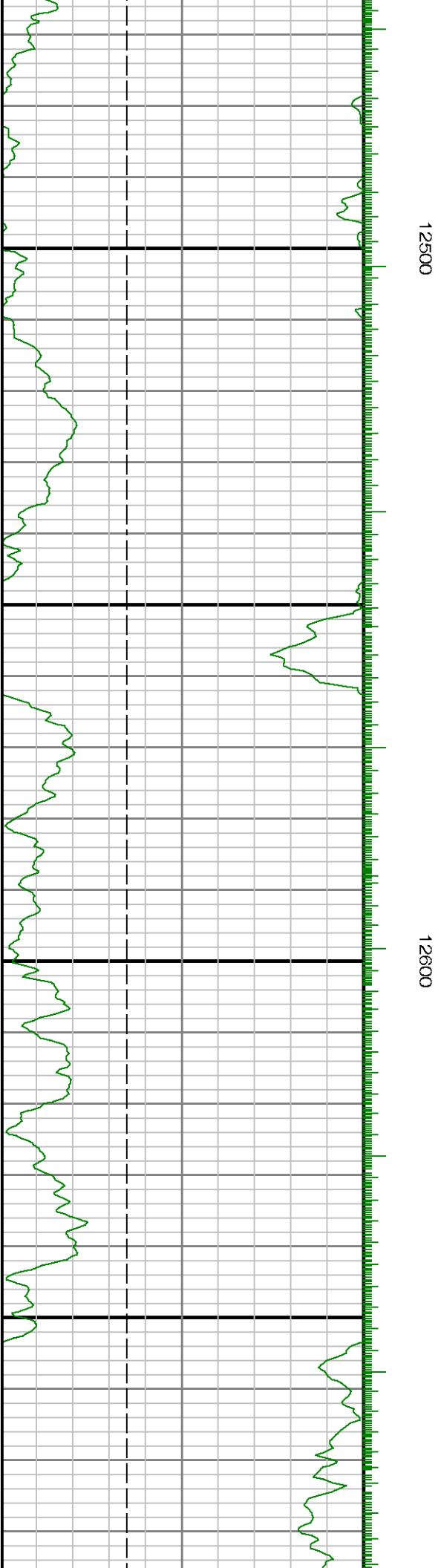


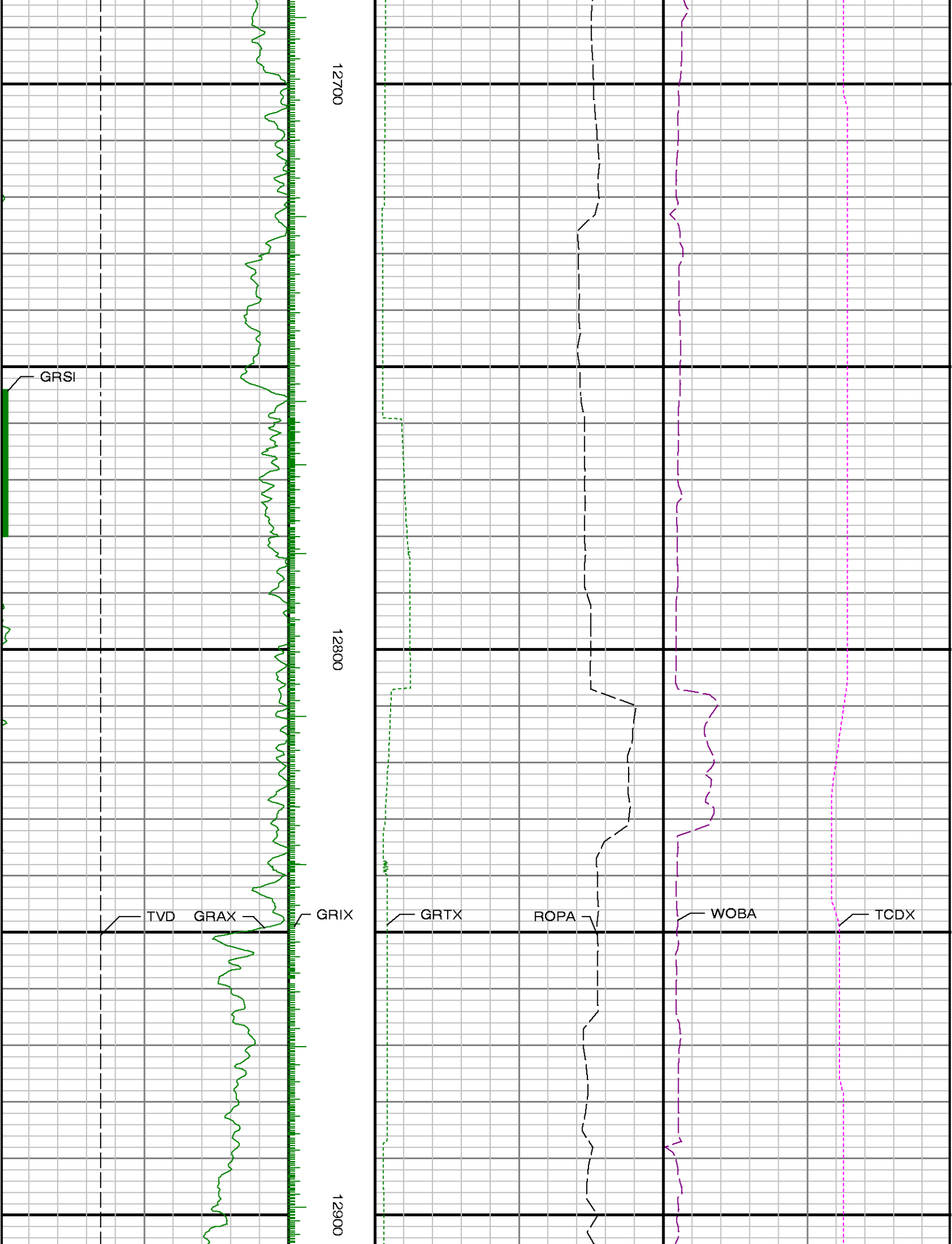


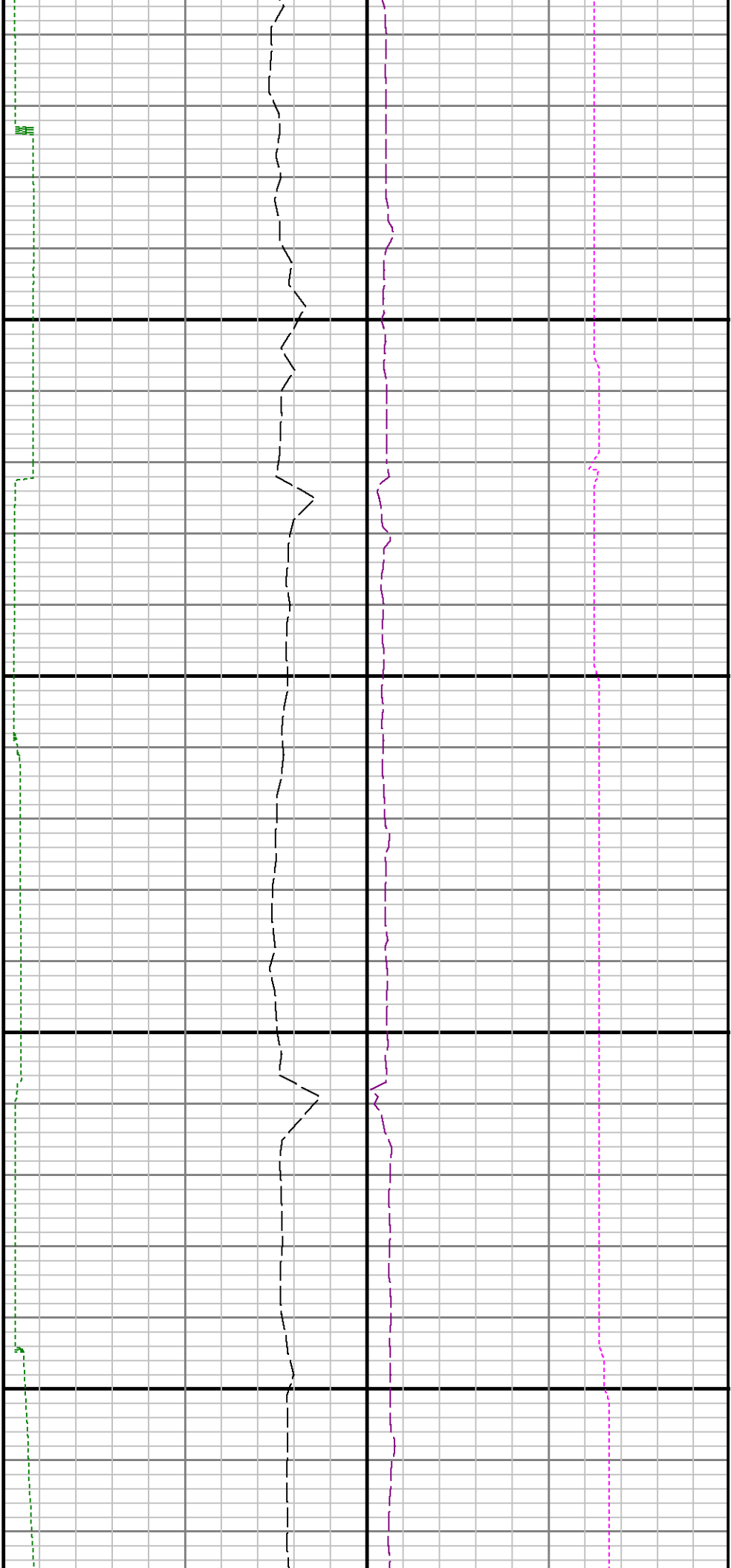
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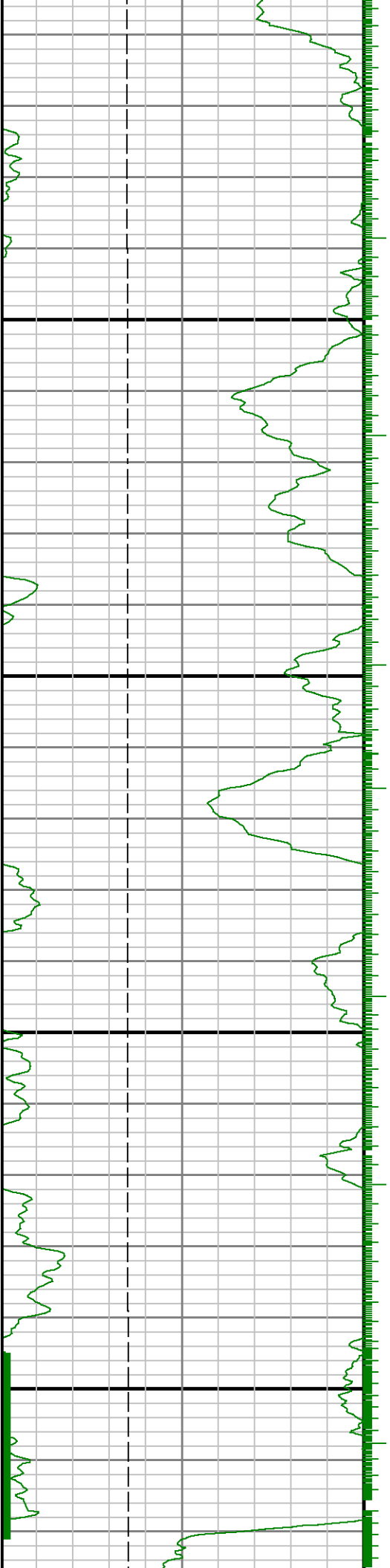


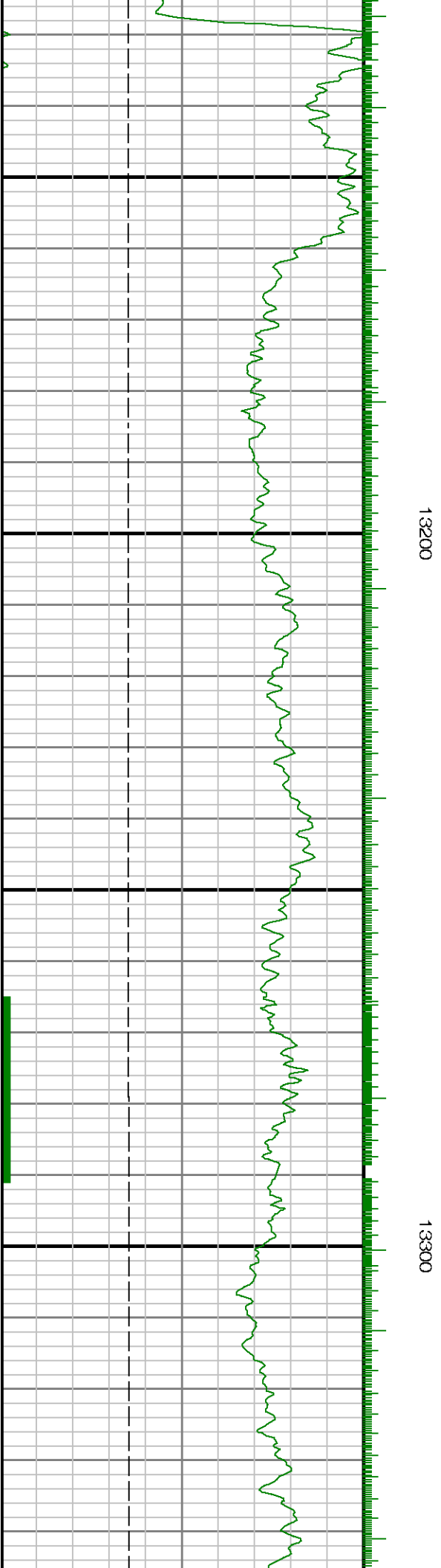




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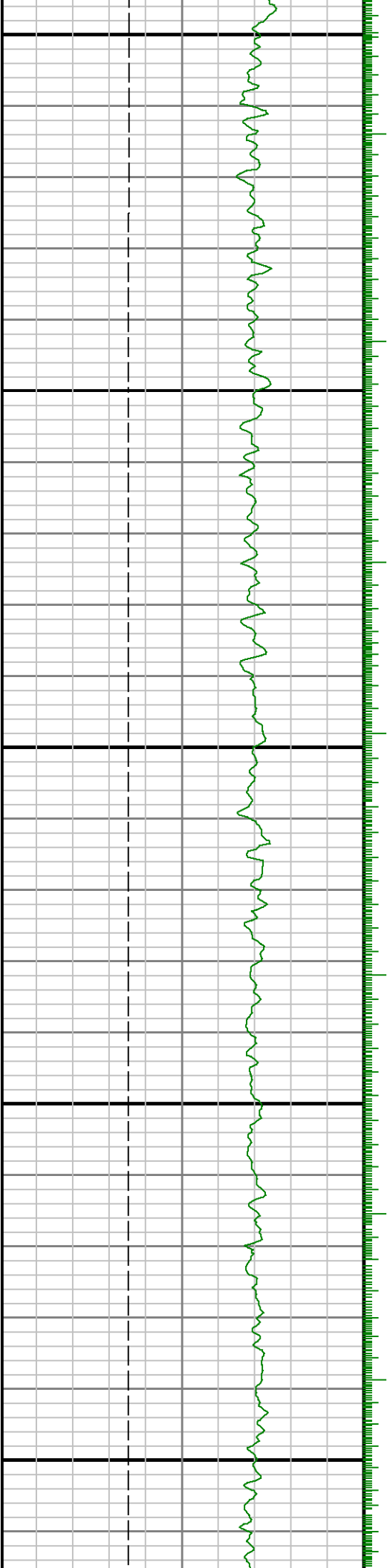






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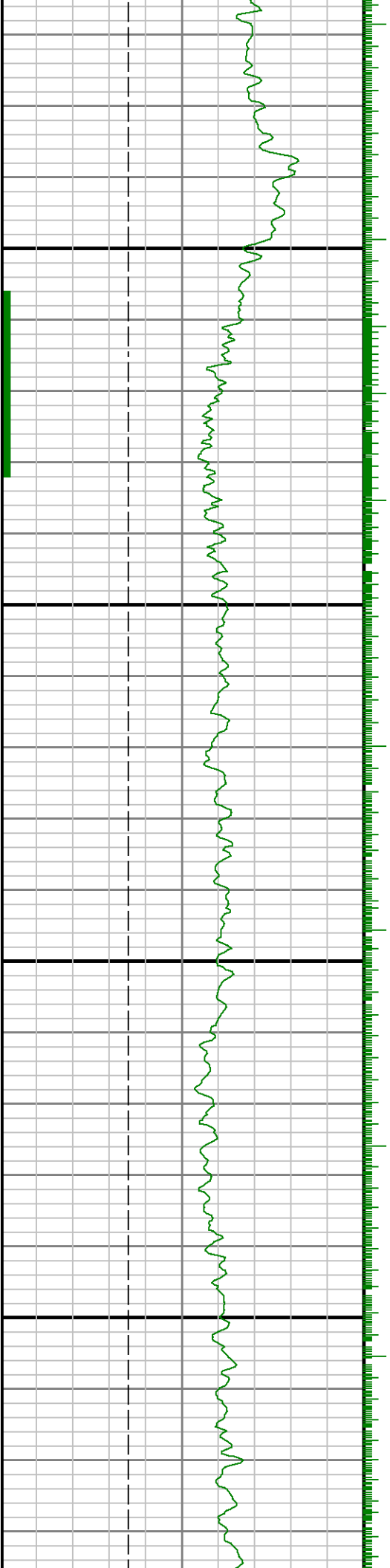
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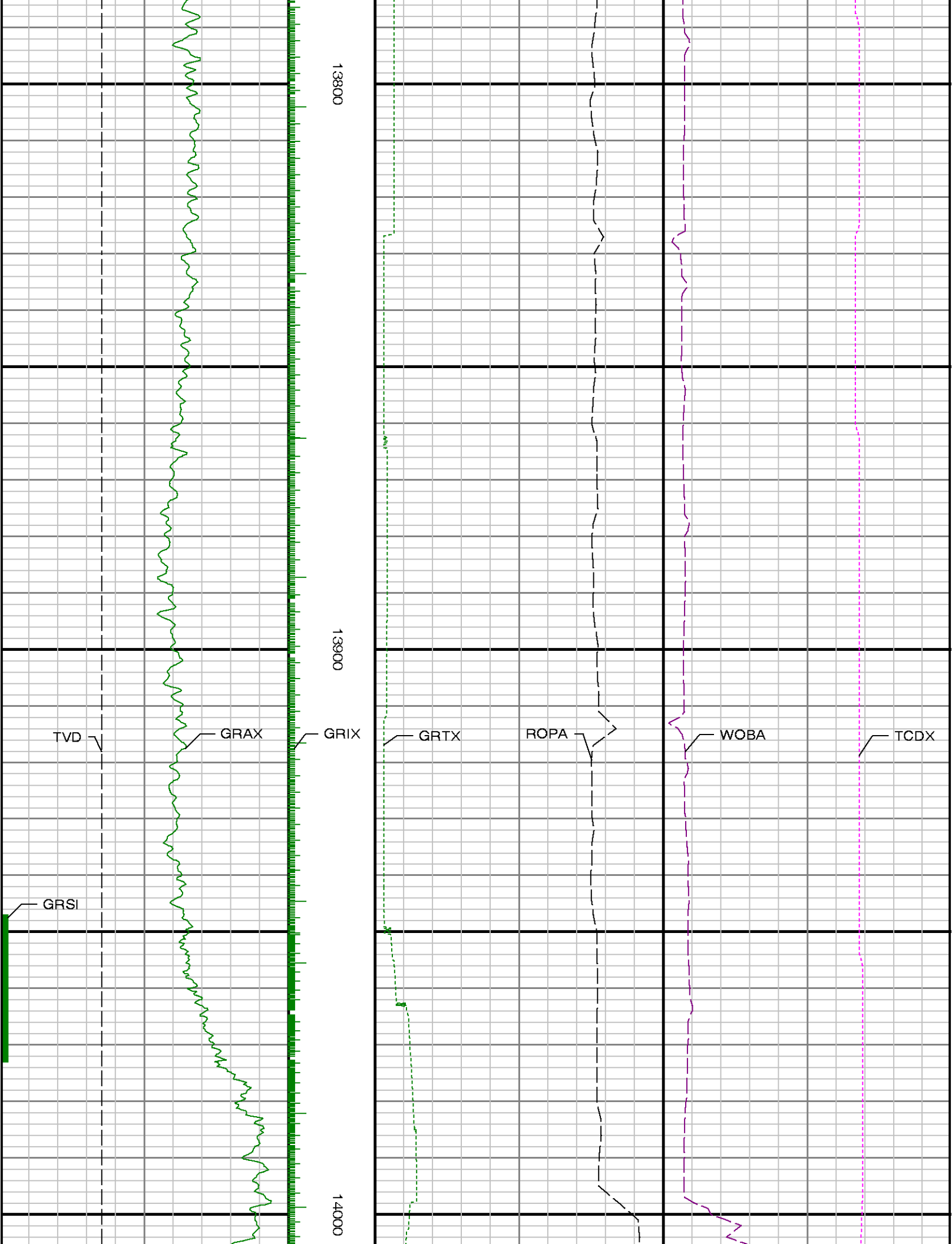


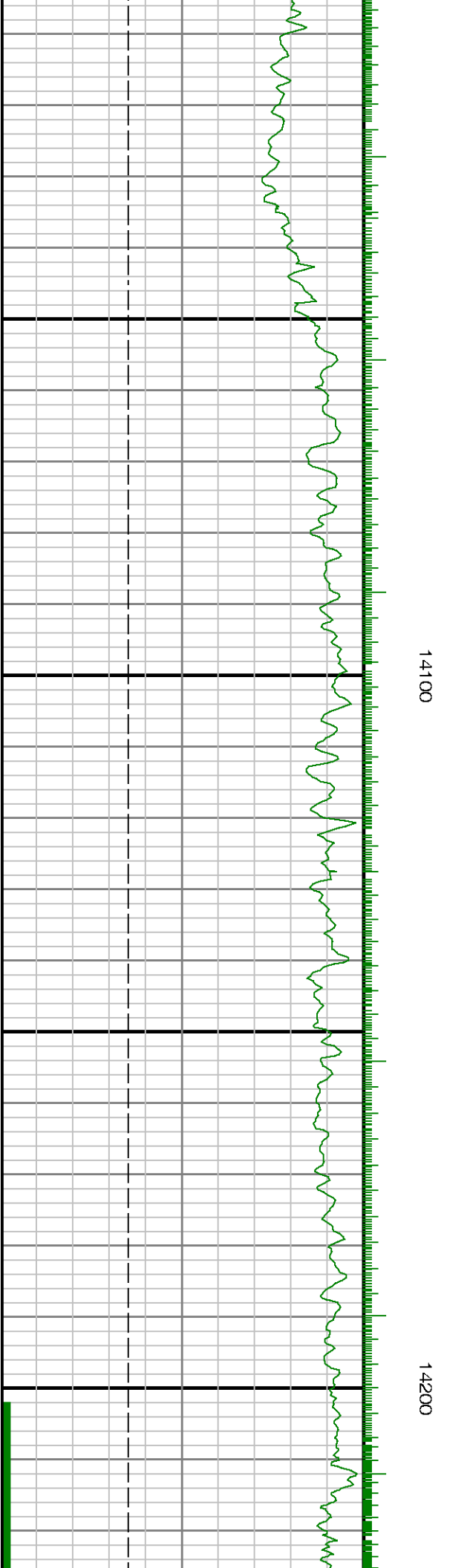


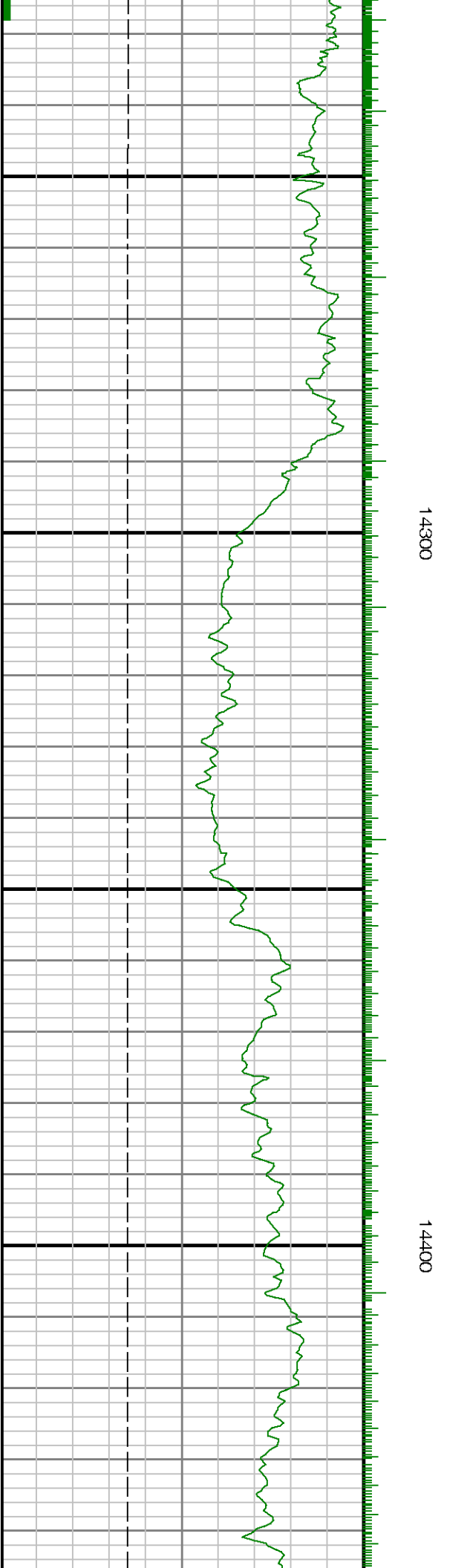
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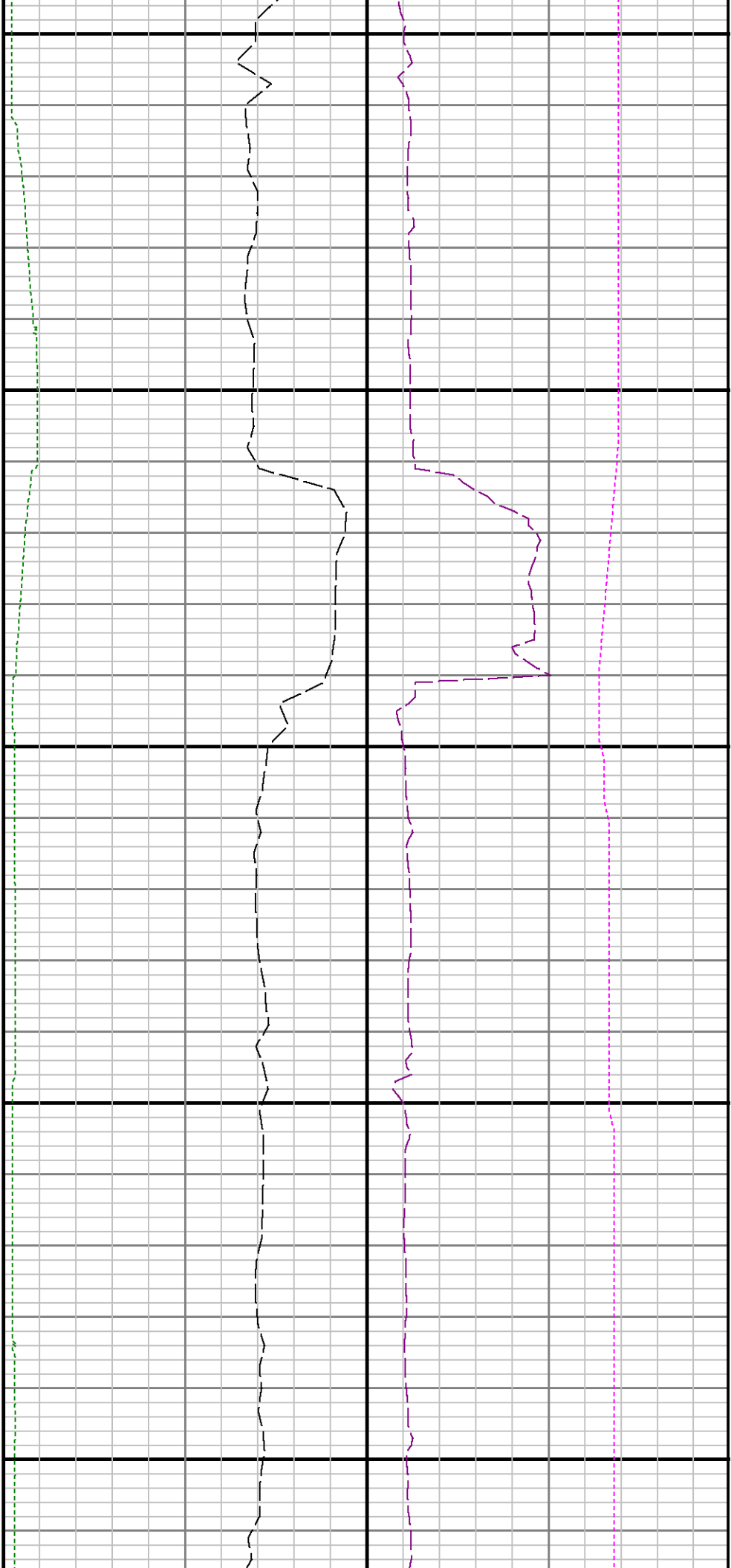
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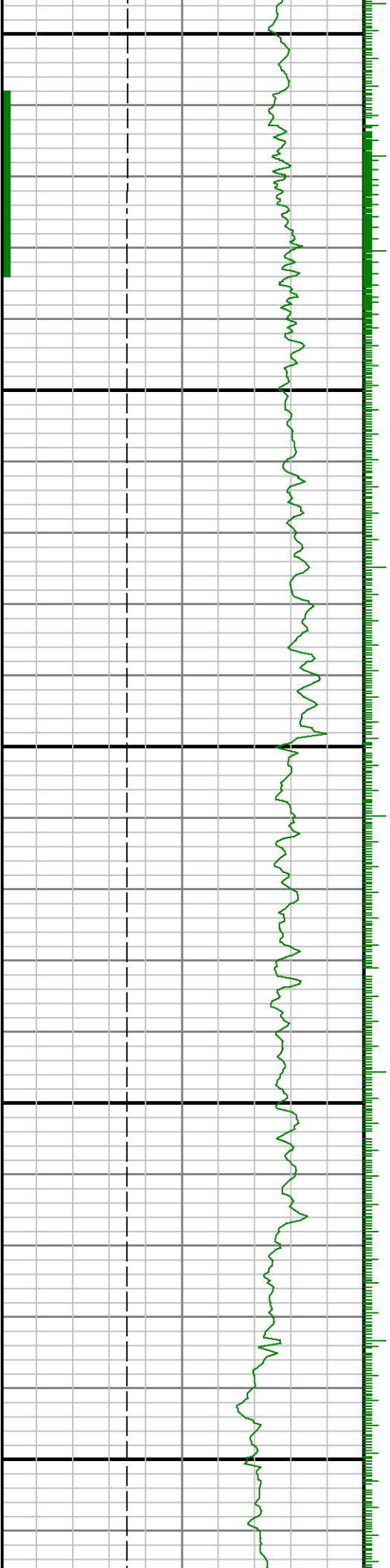


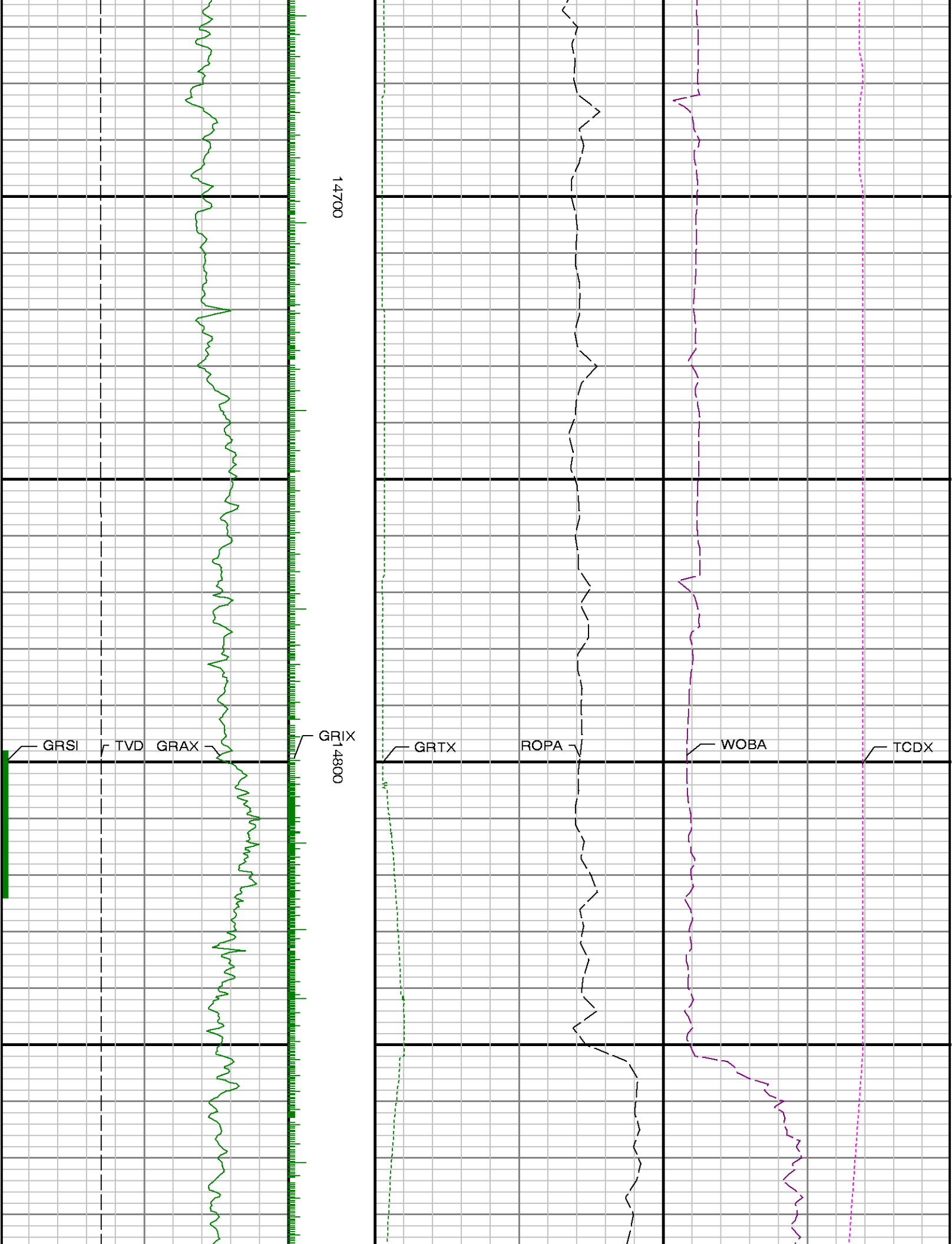


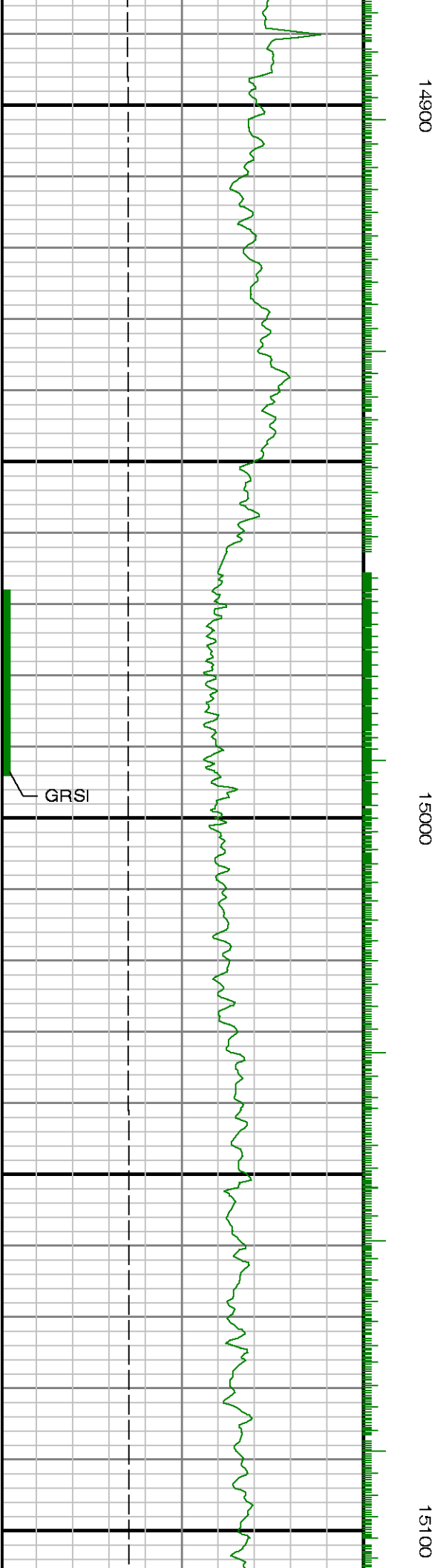
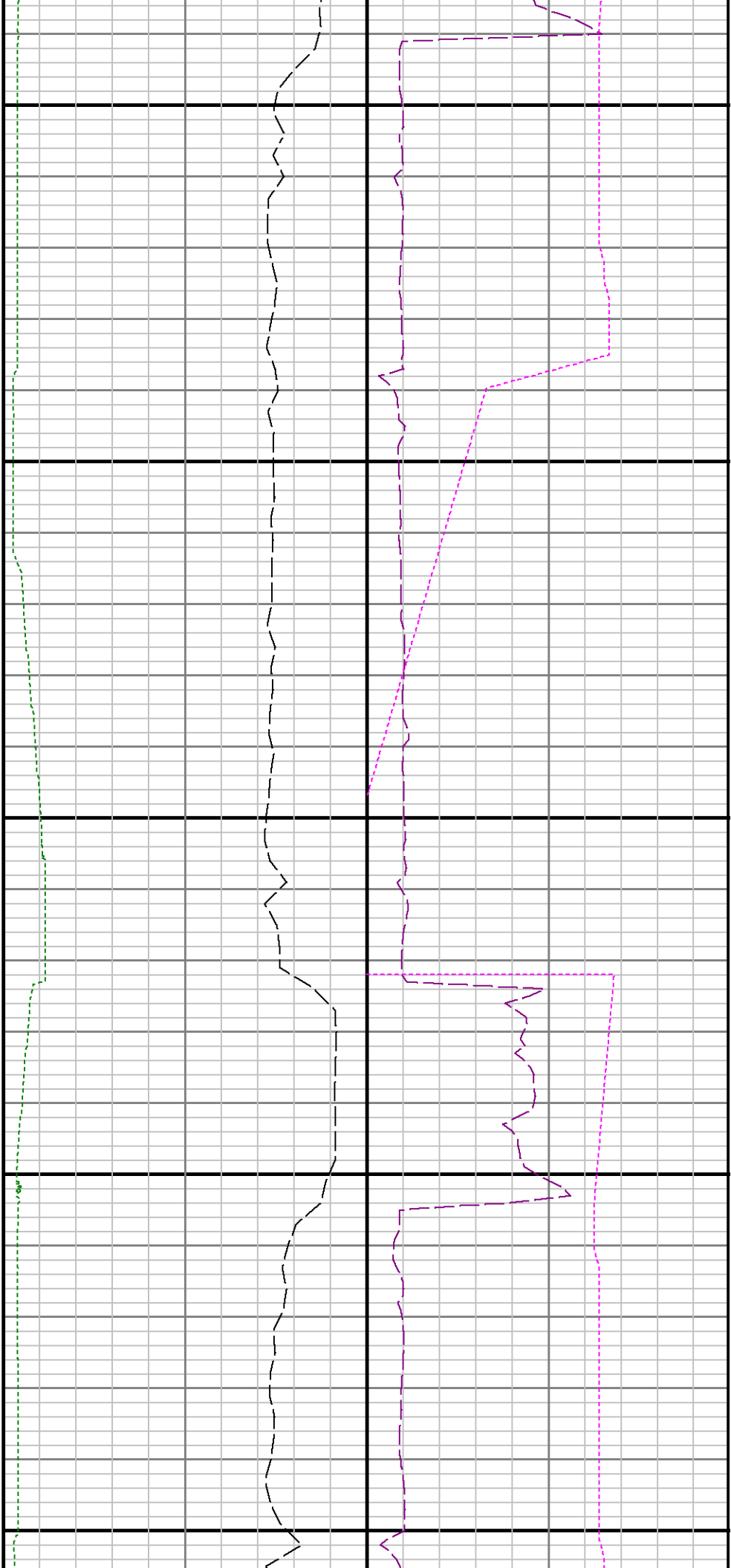


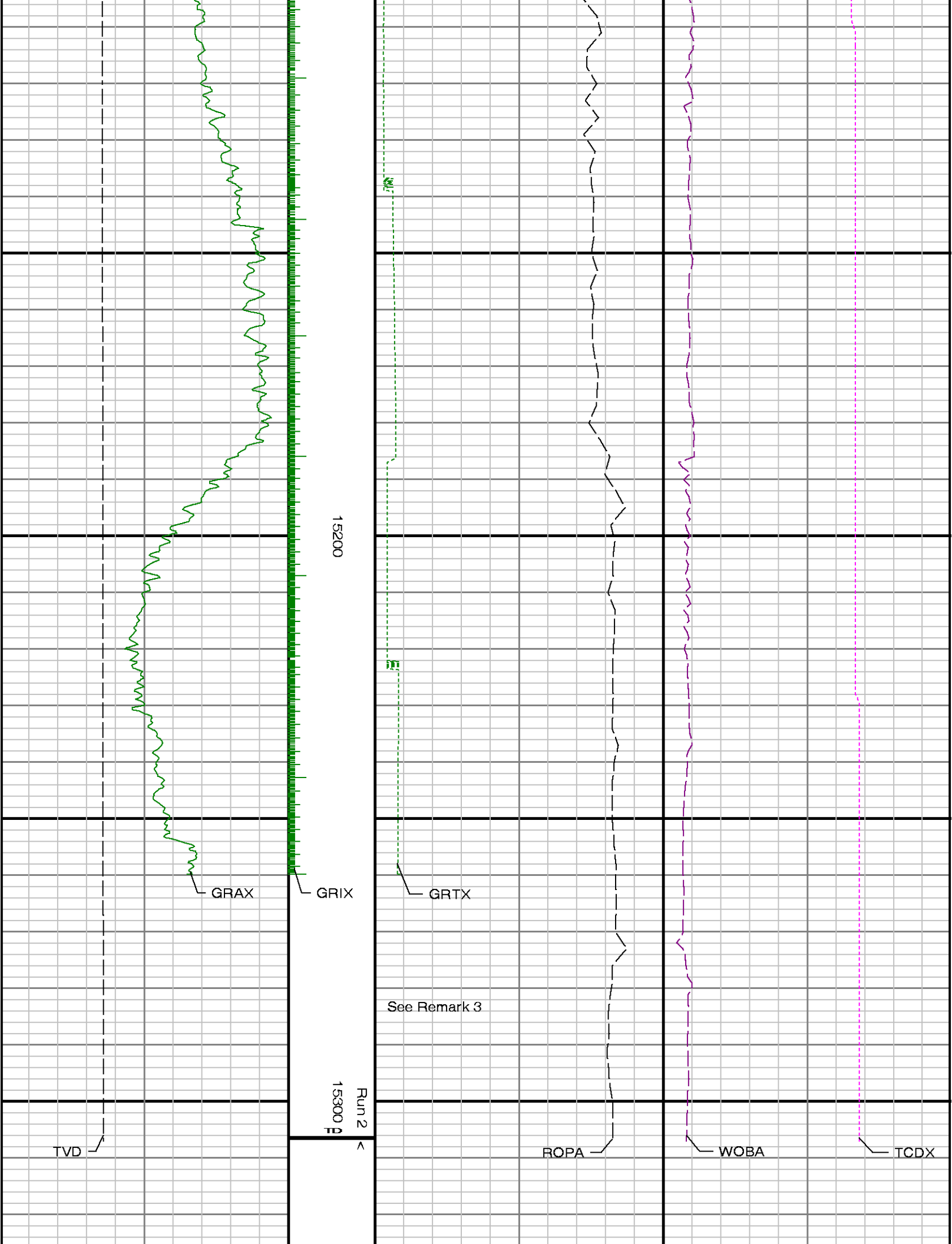
14500

14600









<div> <div>Gamma Ray Apparent 0.5 ft Avg [GRAX]</div> <div>0150</div> <div>API</div> <div>True Vertical Depth [TVD]</div> <div>80006700</div> <div>ft</div> </div>	MD feet 1:240	<div> <div>Rate of Penetration 3.0 ft Avg [ROPA]</div> <div>6500</div> <div>ft/hr</div> <div>Gamma Time Since Drilled GRTX</div> <div>0600</div> <div>min</div> </div>	<div> <div>Surface Weight On Bit 1.0 ft Avg [WOBA]</div> <div>0150</div> <div>klbf</div> <div>Downhole Temperature [TCDX]</div> <div>100300</div> <div>degF</div> </div>
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