



Natural Formation Evaluation
Gamma Ray

Scale:

1:240 MD

Company: Anadarko

Well: Miracle 40N-11HZ

Depth Reference:

Field: Larimer County

Driller's Depth

County: Larimer

State: Colorado

Status:

Final Print

Surface Location:

Latitude:

Longitude:

Other Services:

Directional
VSS

API No: 050690647000

Job ID: 7346448

SEC: 12

TWN: 5N

RGE: 68W

Permanent Datum (P.D.): Ground Level

Elevation:

4964.00 ft

KB:

N/A

Log Measured From: Rig Floor

Above P.D.

16.00 ft

DF:

4980.00 ft

GL:

4964.00 ft

Dates

Interval Logged

Magnetic Field Reference

Date From: 2015-07-20 Top: (ft) 6400.00

Azi Reference North: True

Dip Angle: (deg)

66.78

Date To: 2015-07-22 Bottom: (ft) 13560.00

Total Magnetic Field Strength: (nT)

52782

Spud Date: 2015-07-14

Mag to Reference North Correction: (deg)

8.59 E

Borehole Record

Casing Record

Hole Size (in) From (ft) To (ft)

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

8.500 1869.00 13558.00

N/A

N/A

N/A

N/A

Mud Record

Deviation Record

Type From (ft) To (ft)

Hole Size (in)

Interval (ft)

Inc | Az (Start)

Inc | Az (End)

Diesel-Oil Based Mud 1869.00 13558.00

8.500

11691.28

12.09 | 93.16

90.09 | 270.13

Acquisition System

Software Version

Other

Baker Hughes Cadence

1.0.6955.1

Rig: Xtreme 23

Prior Studio

1.0.7056.2

Contractor: Xtreme

Unit:

D&E

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part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and qdnkicvkqpu"ujcnn"dg"iqxgtpgf"d{"Dcmgt"Jwi jgu"Kpeqtrqtcvgføu"Yqtnfykfg"Vgtou"cpf"Egpfkvkqpu0\$""

Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours (h)
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	2.50	Motor	1809.16	13500.44	1869.00	13560.28	2015-07-19 10:57	2015-07-22 04:42	59.77

Crew

Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite
Andrew Clancy		2015-07-19	2015-07-22	Jason Williams		2015-07-19	2015-07-22				

Equipment and Service Data

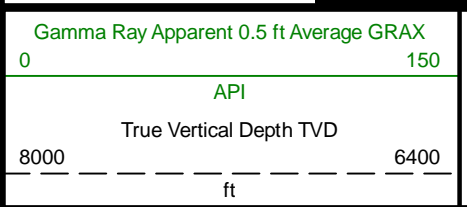
Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	NaviGamma	10350731	Gamma (single)	7.20	59.84	6.780	2.938
1	NaviGamma	10350731	VSS	10.54	63.18	6.780	2.938
1	NaviGamma	10350731	Directional (mag)	10.54	63.18	6.780	2.938

Comments

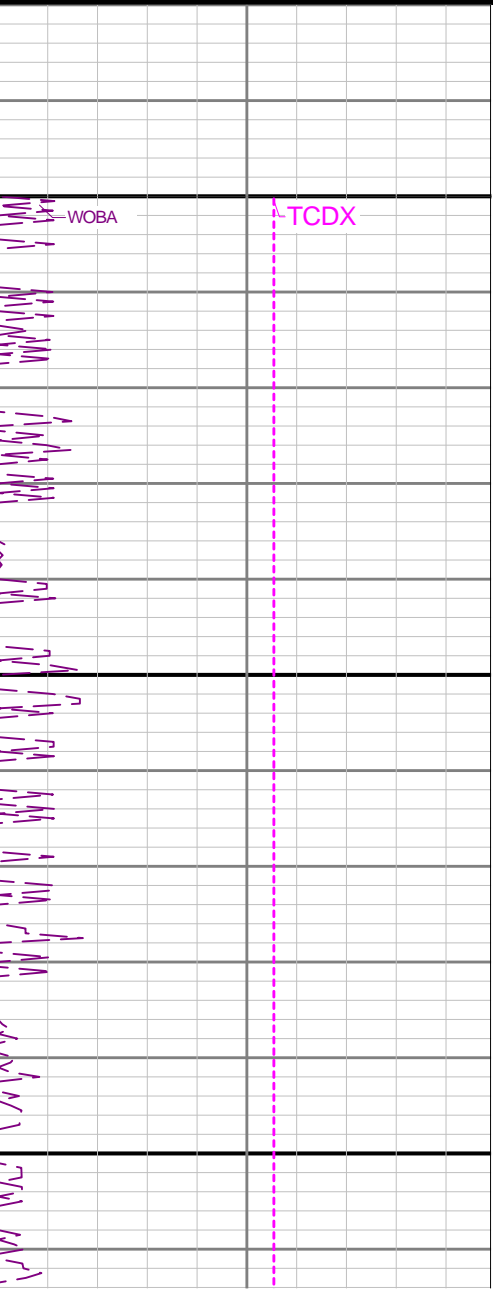
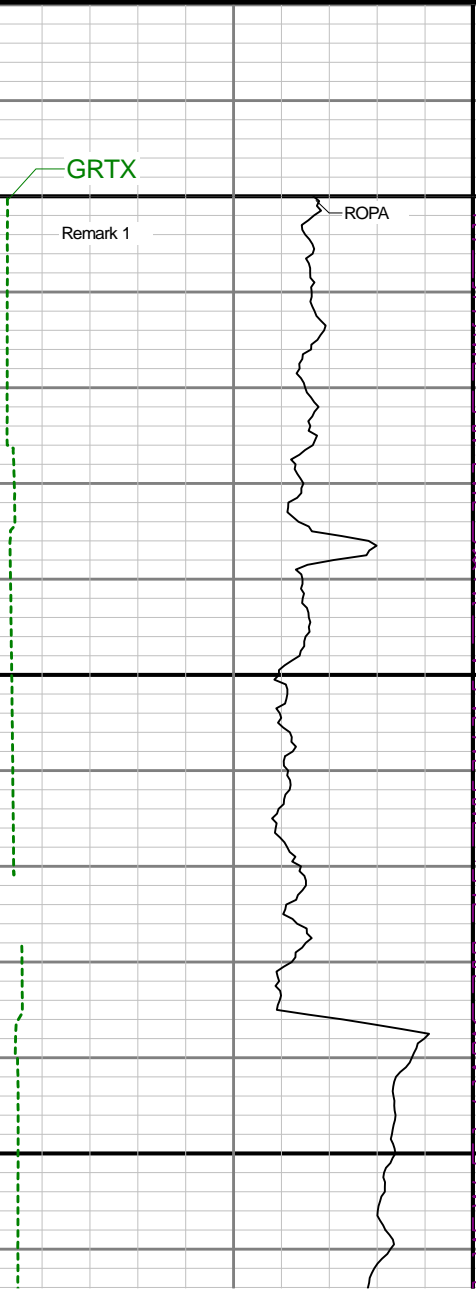
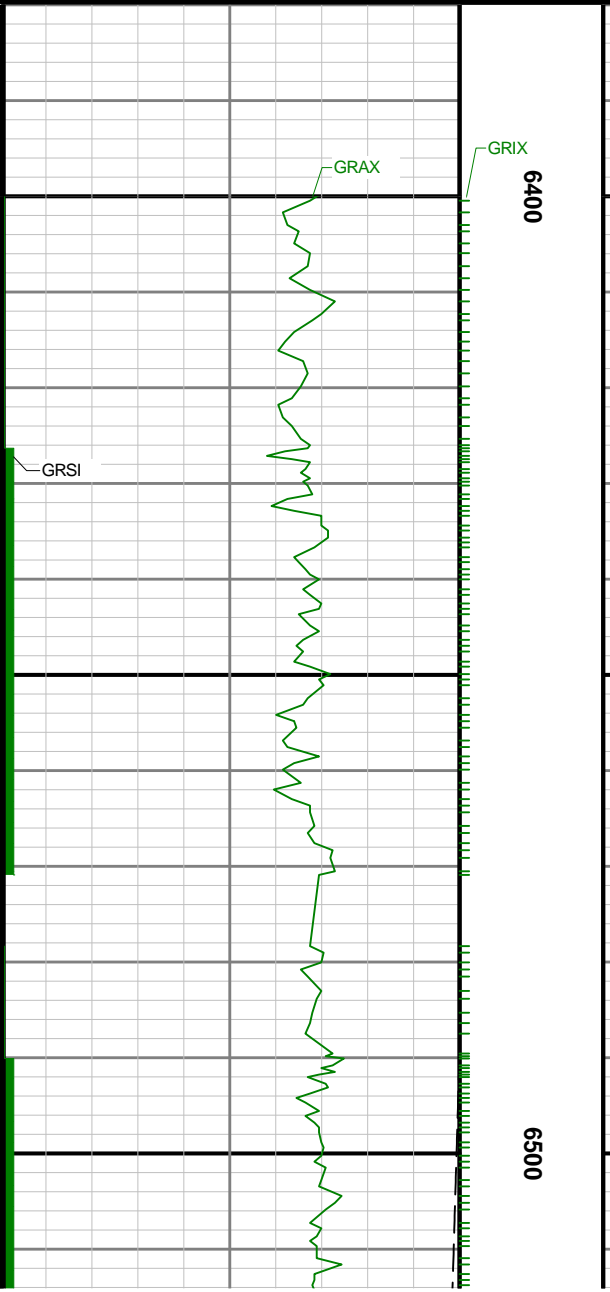
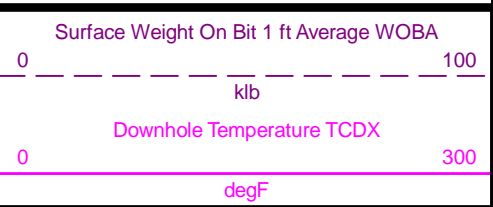
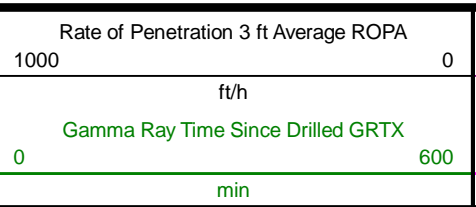
- 1
- Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to represent logging data.
- 2
- Baker Hughes Run 1 utilized a 6 1/2 inch Navigamma (Directional and Gamma Ray) tool behind an 8 1/2 inch bit and steerable assembly from surface to 1810 feet to 13558 MD (1790.32 to 7081.21 feet TVD).
- 3
- A sliding indicator is shown on the left side of the track as a heavy line. This indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.

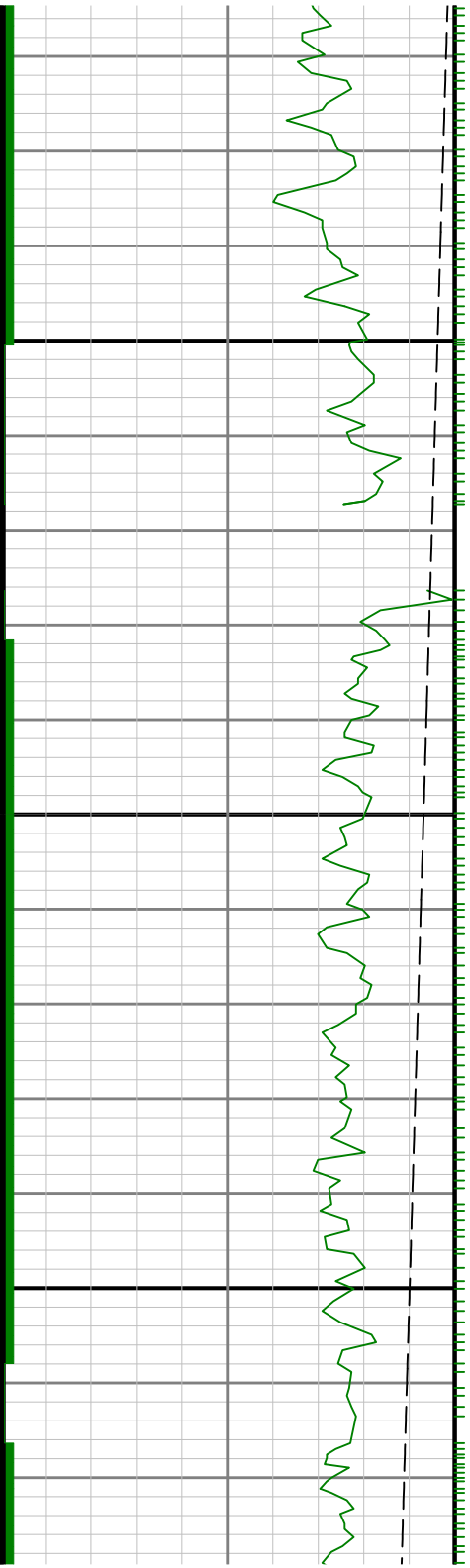
Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	7125.70	8.500	1	Logging services began at 6480 feet. No logging data prior to 6480 feet MD (6390.56 TVD) as per client request
2	13537.08	8.500	1	The interval between 12654 feet and 13558 feet MD (7096.65 to 7081.21 feet TVD) was not logged due to gamma failure .



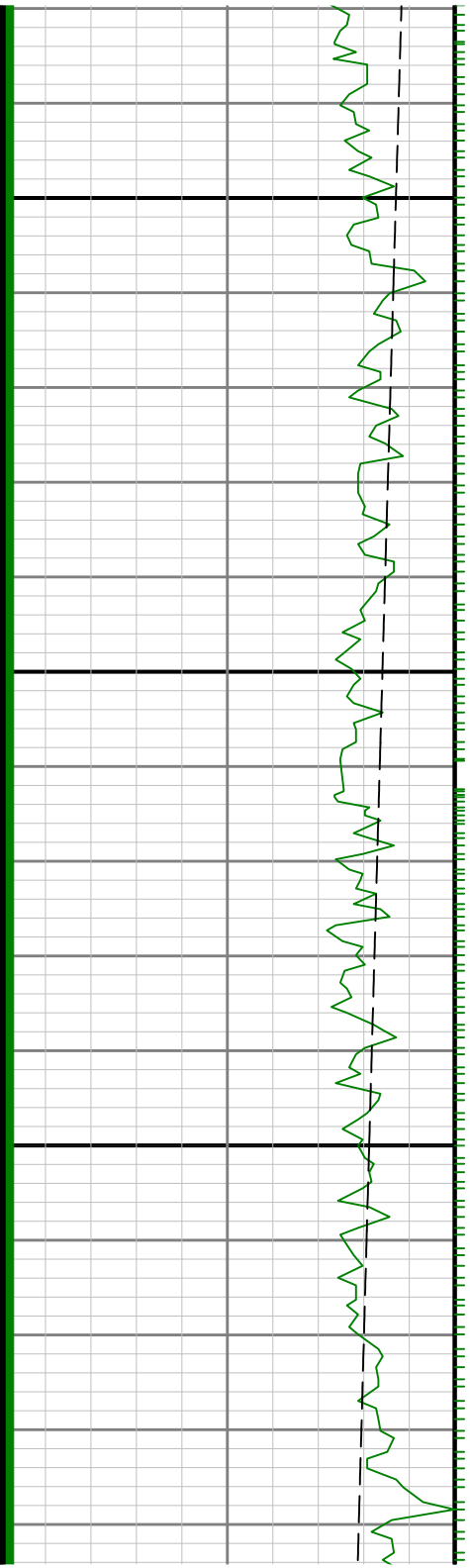
MD 1:240 feet





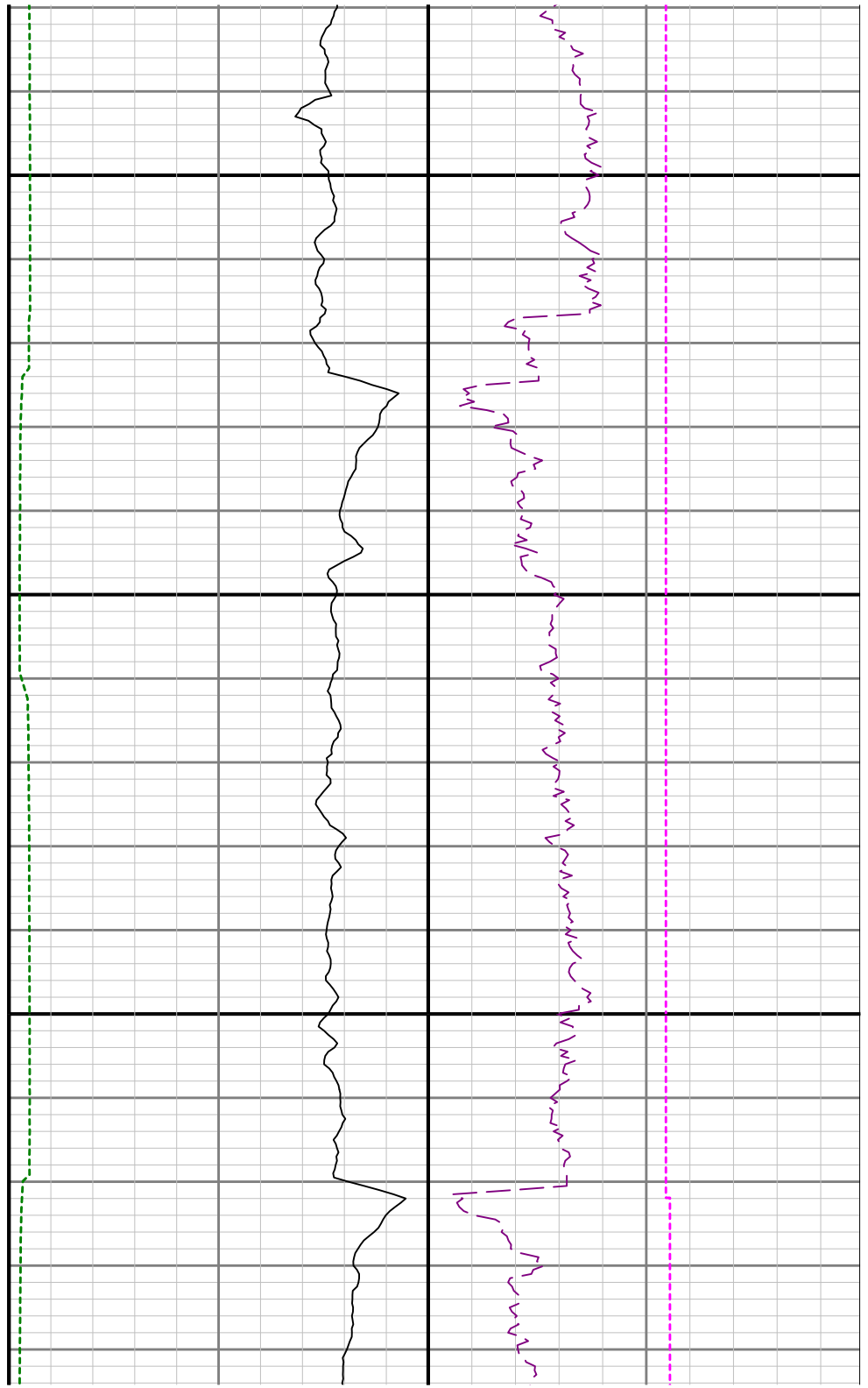
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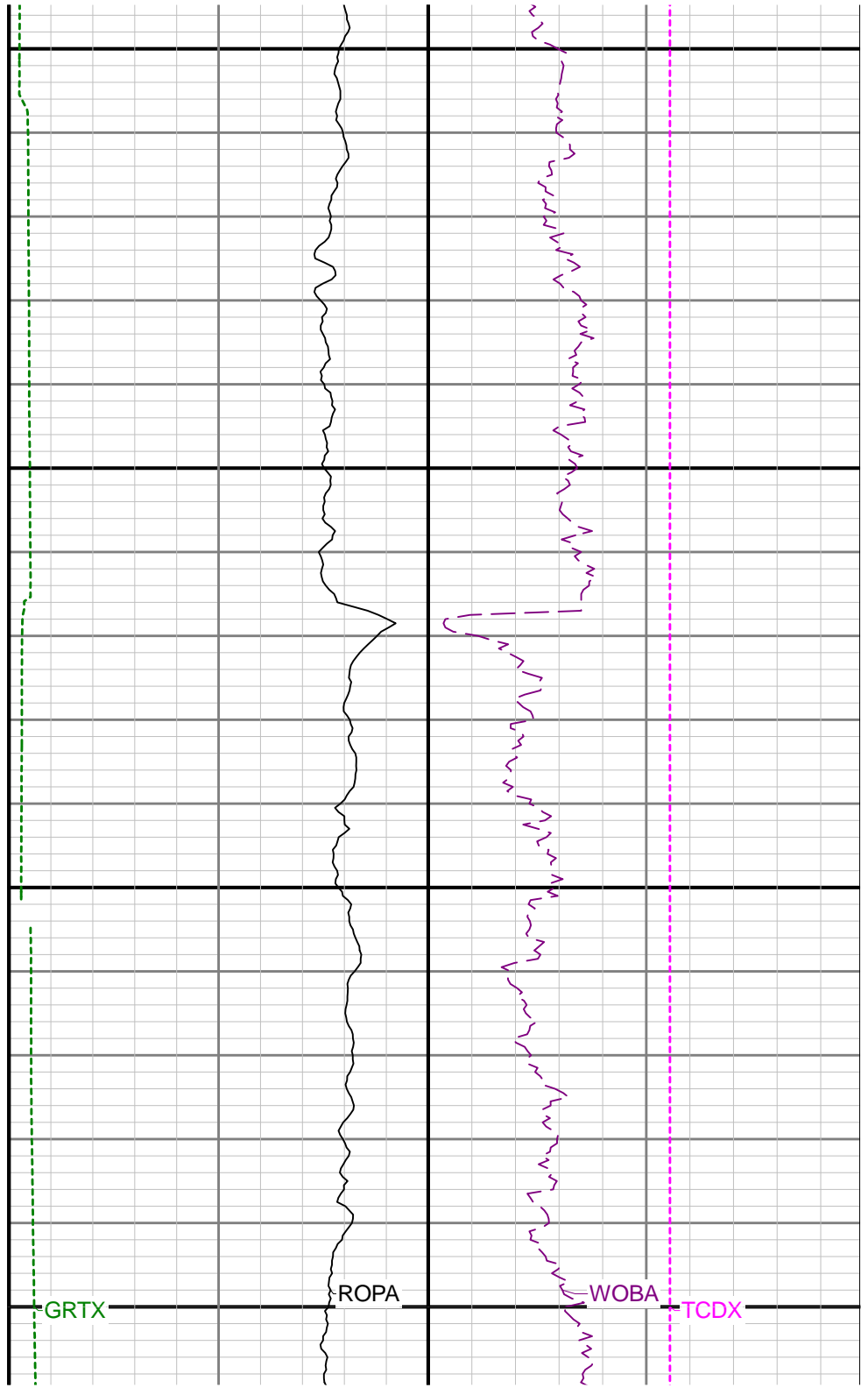
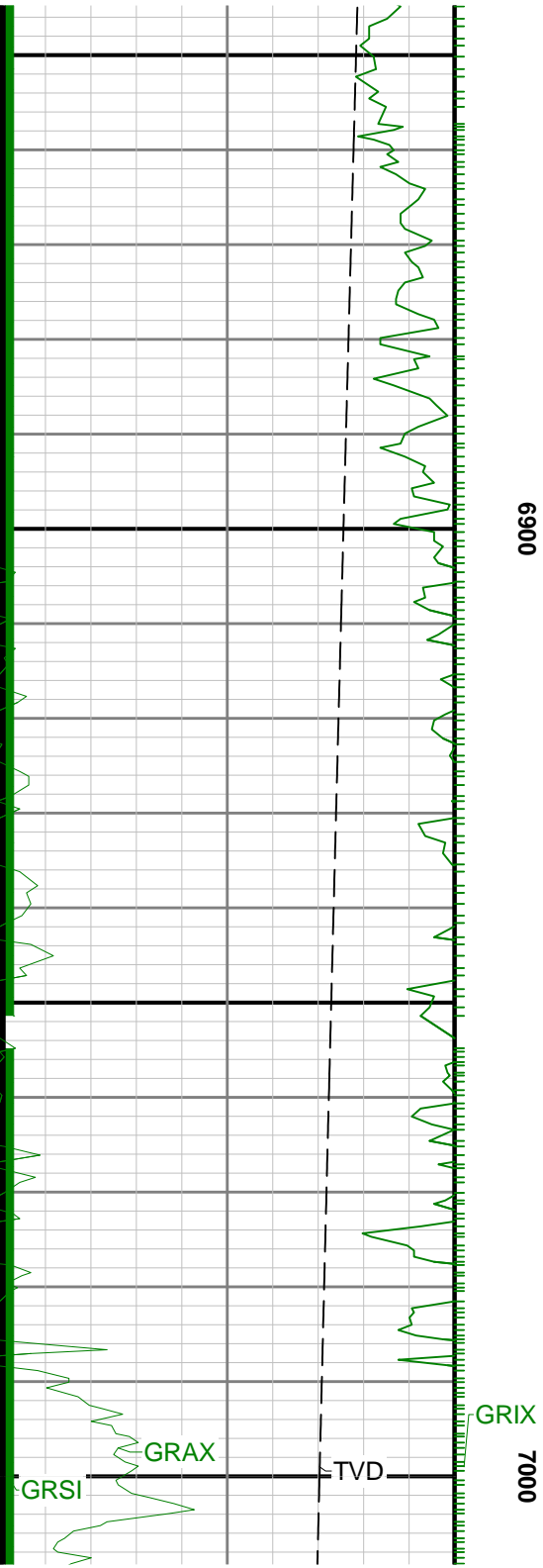


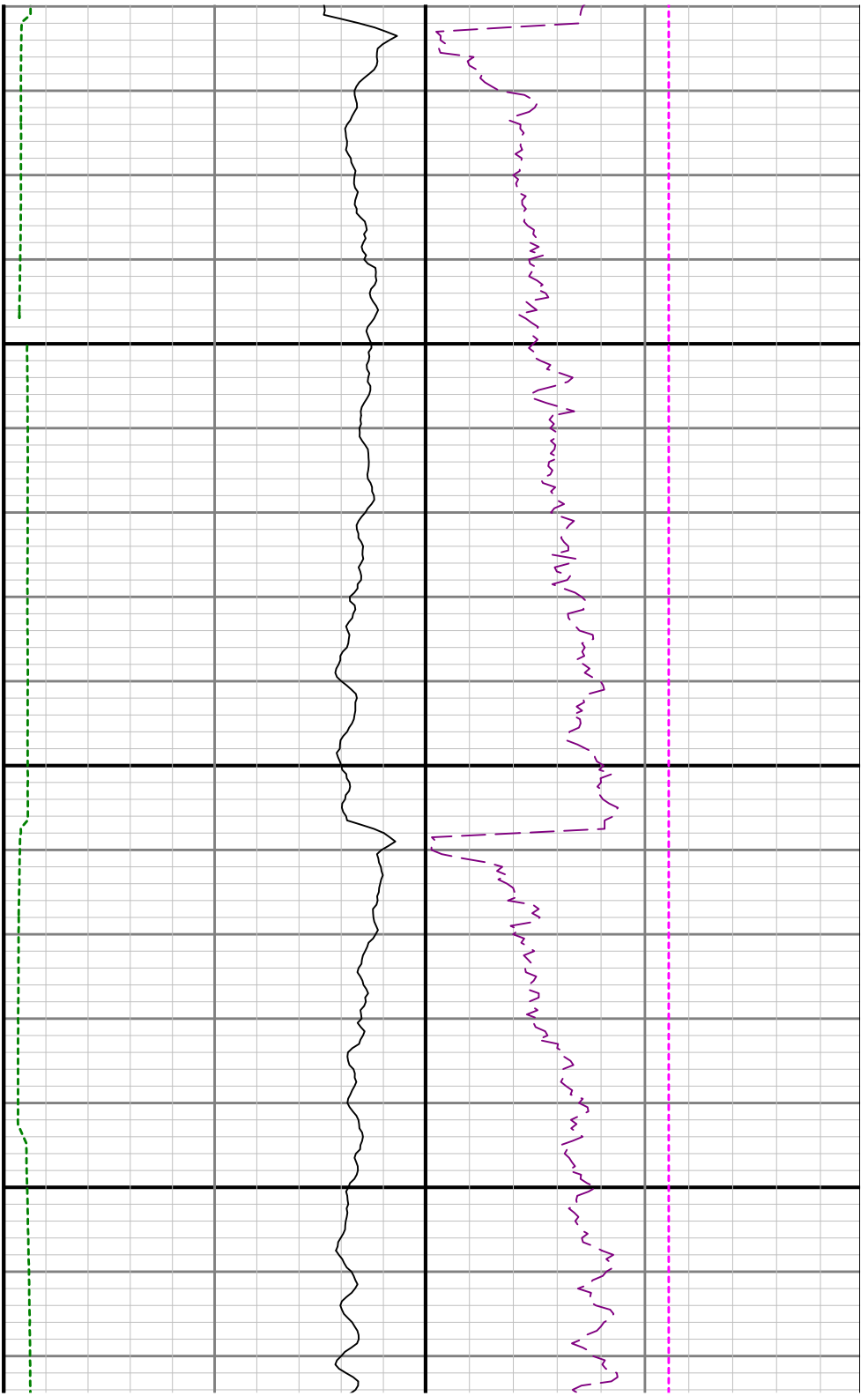


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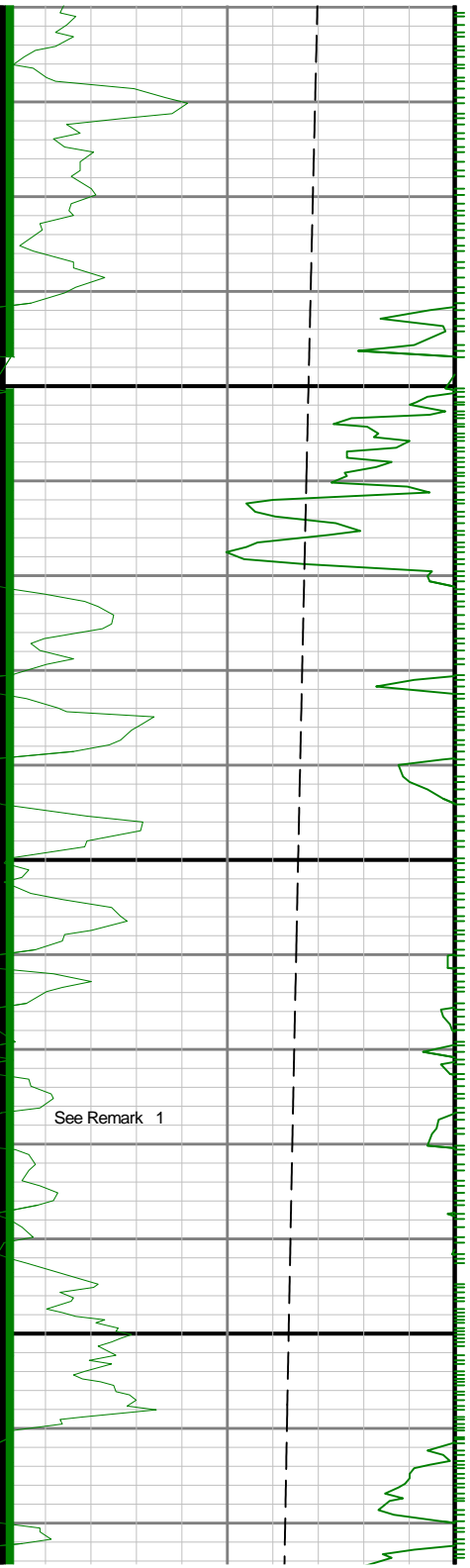
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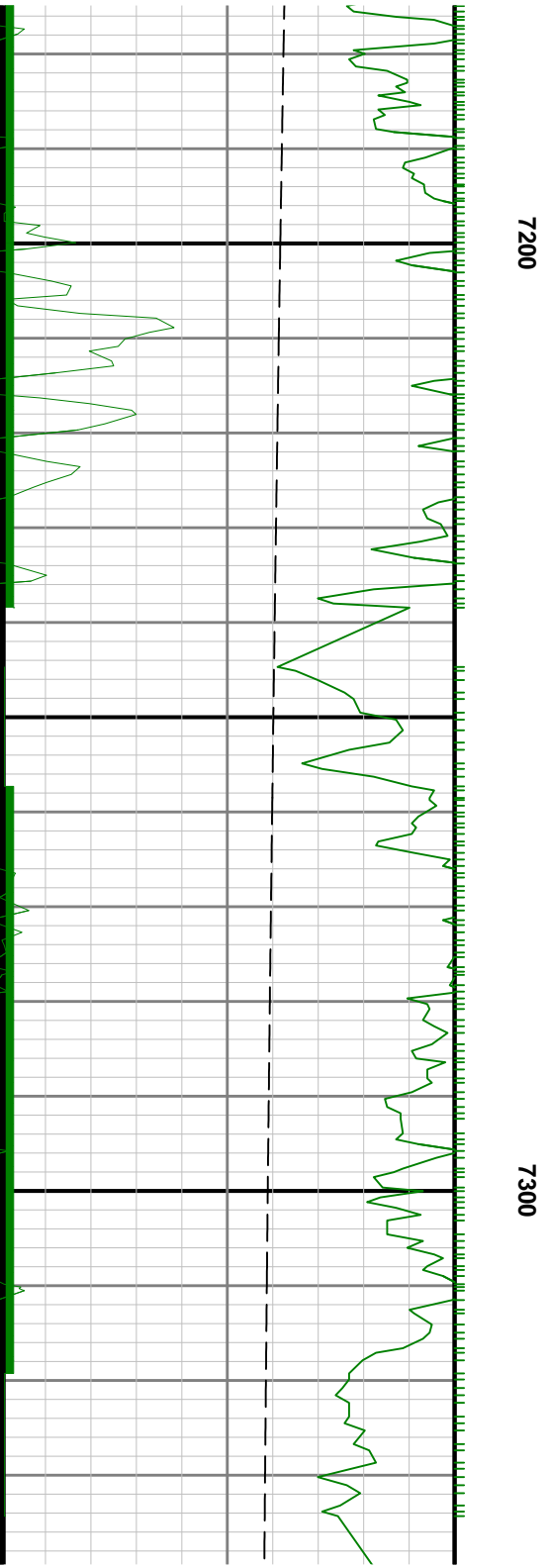
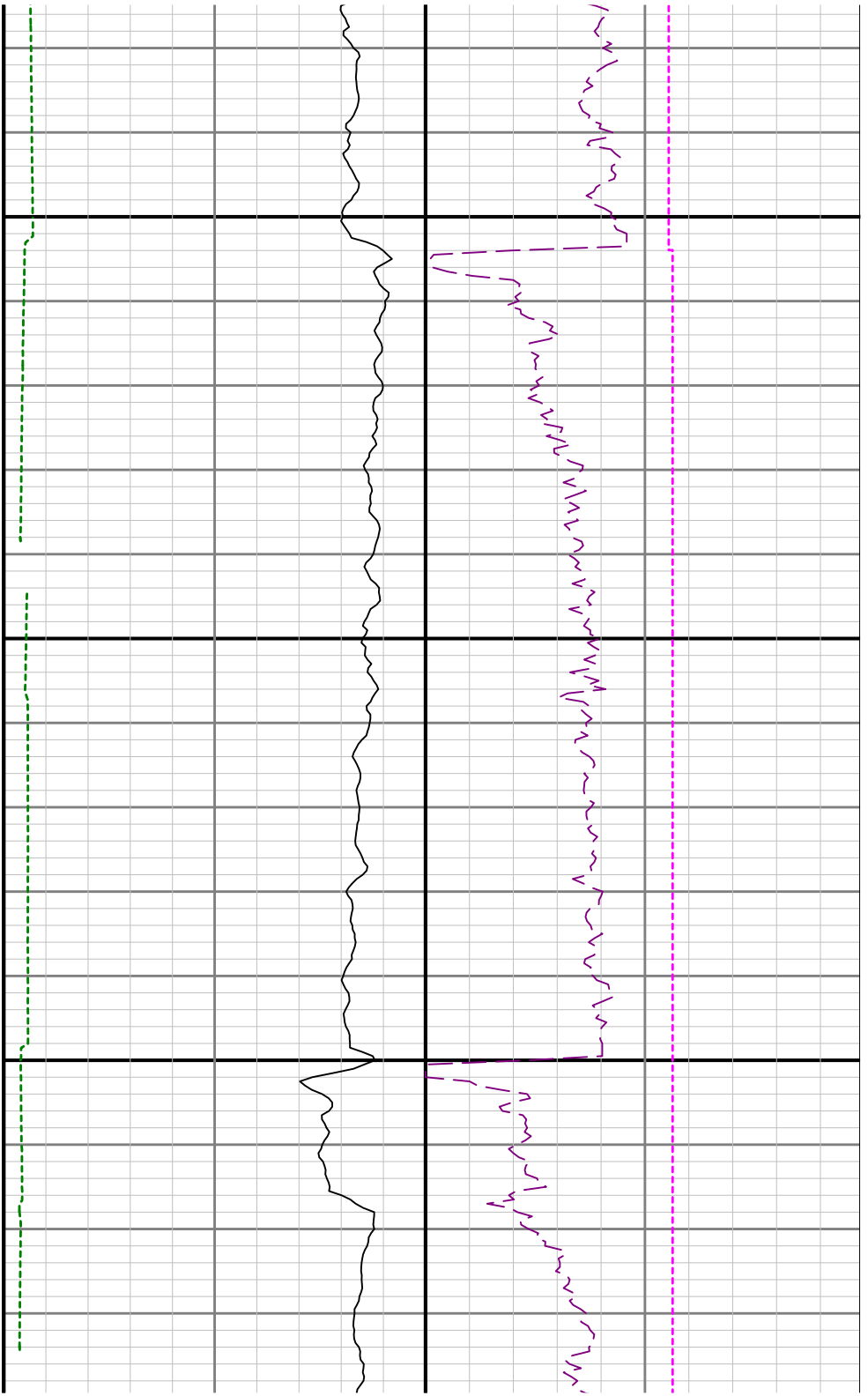


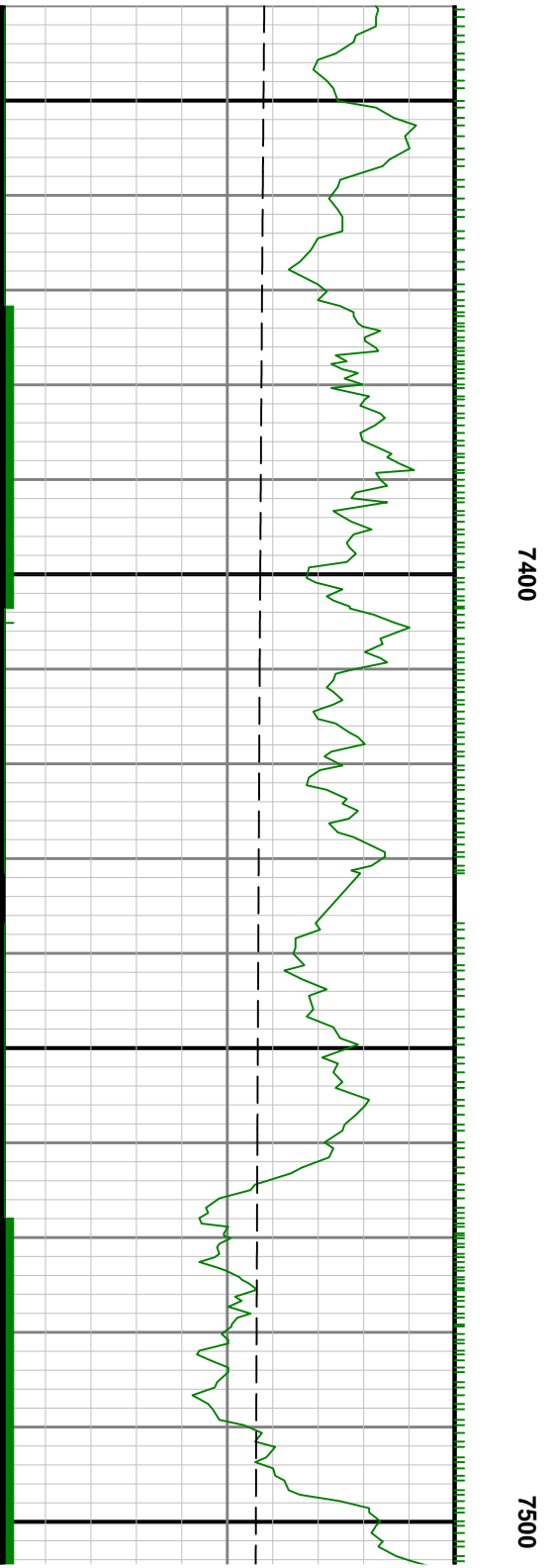
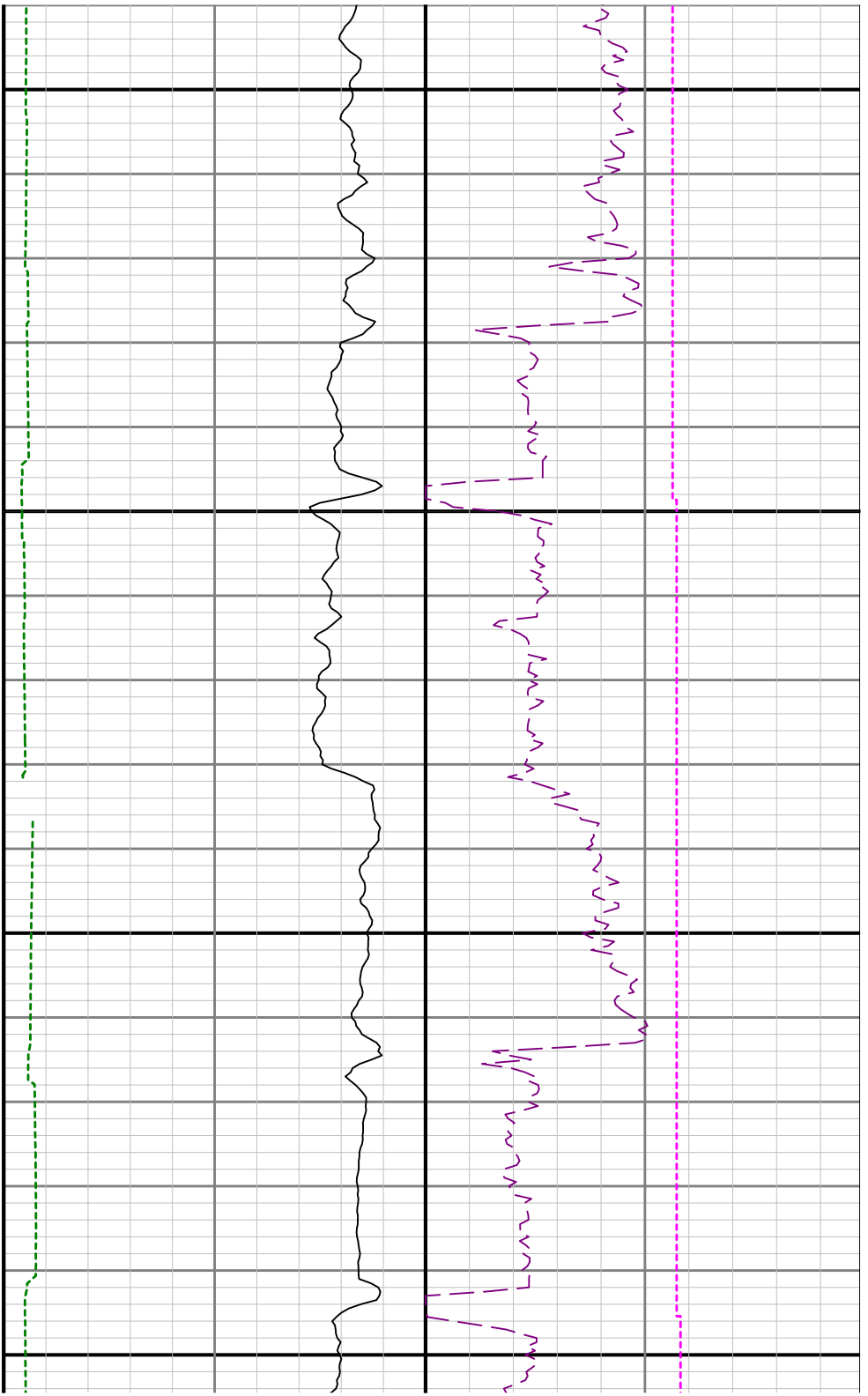


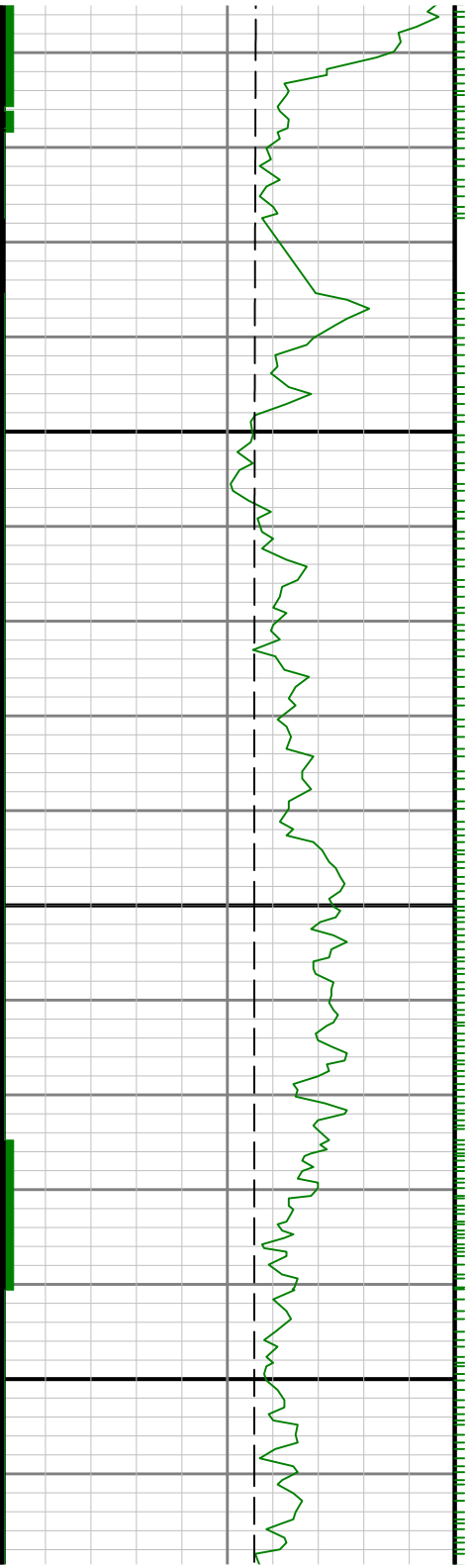
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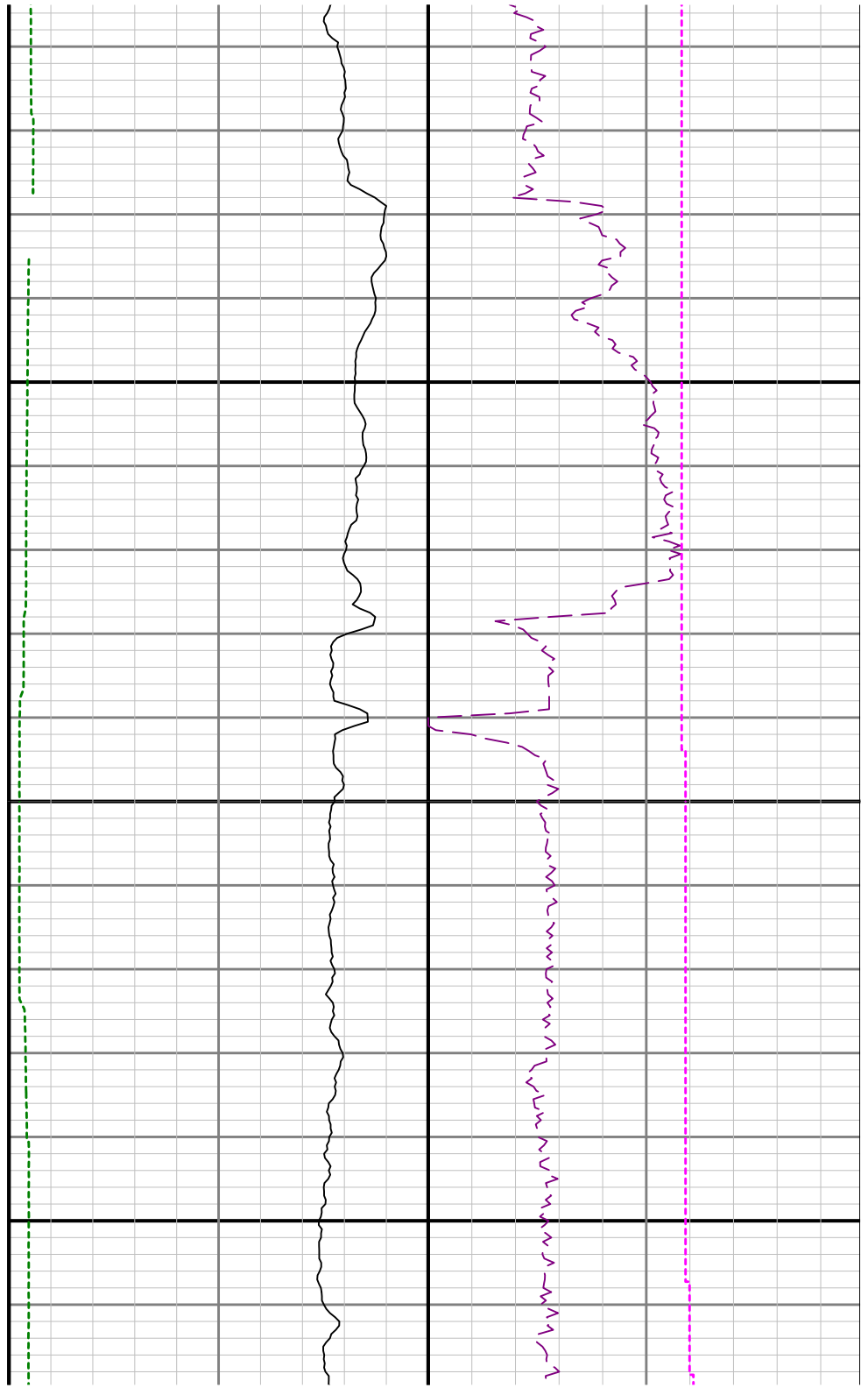
See Remark 1

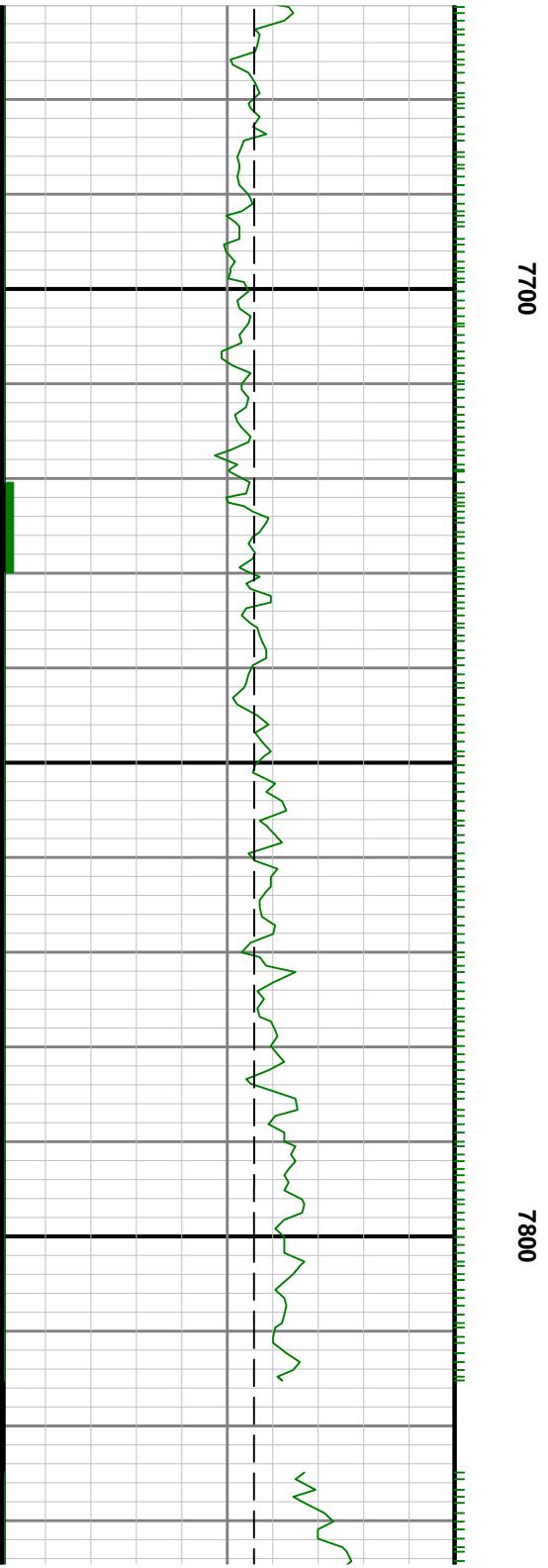


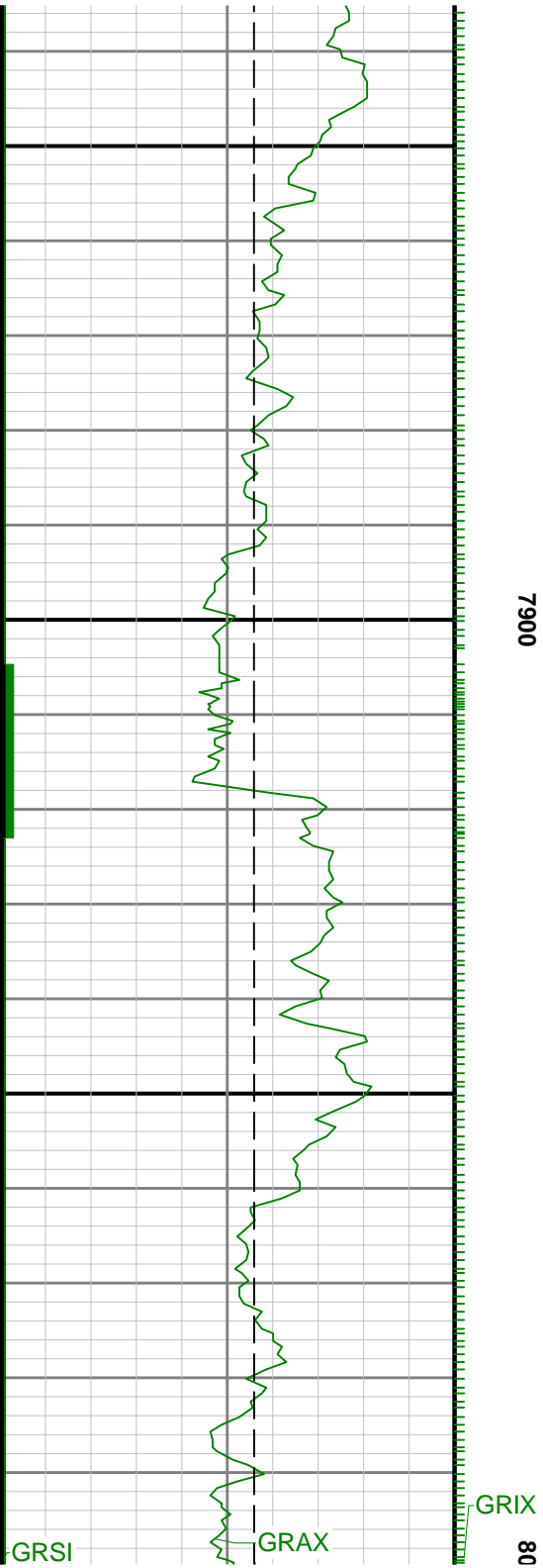


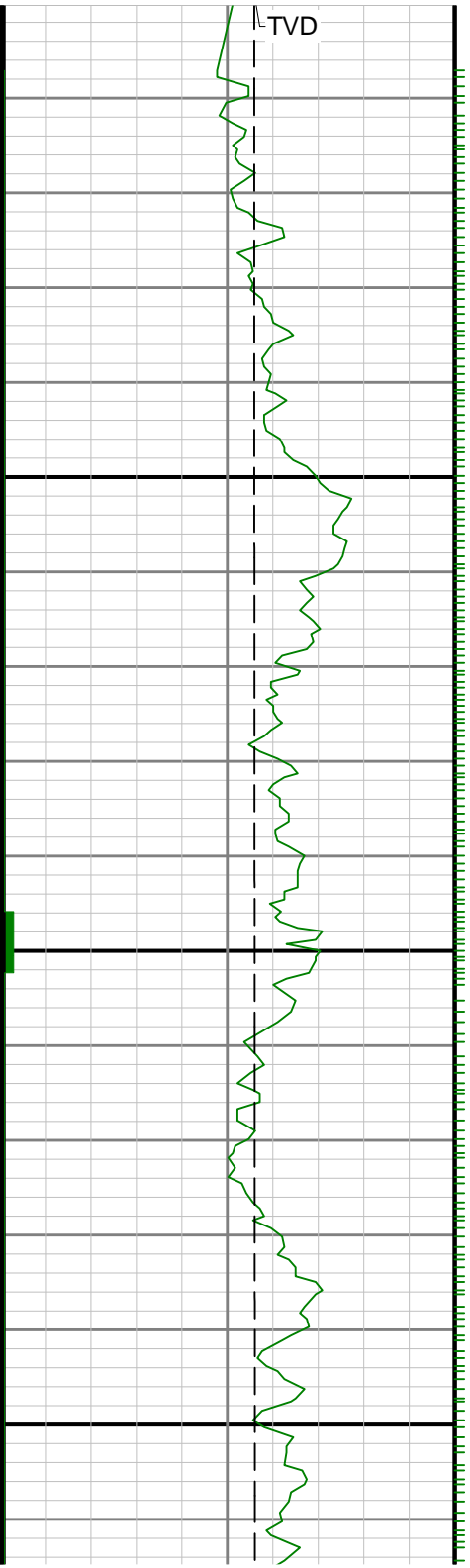


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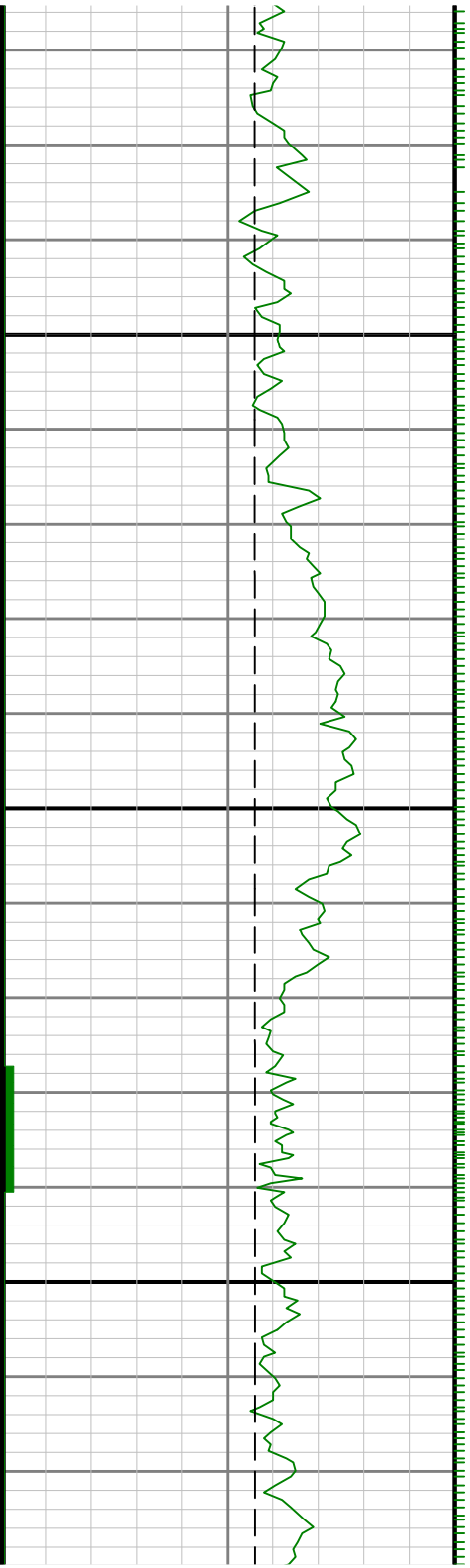
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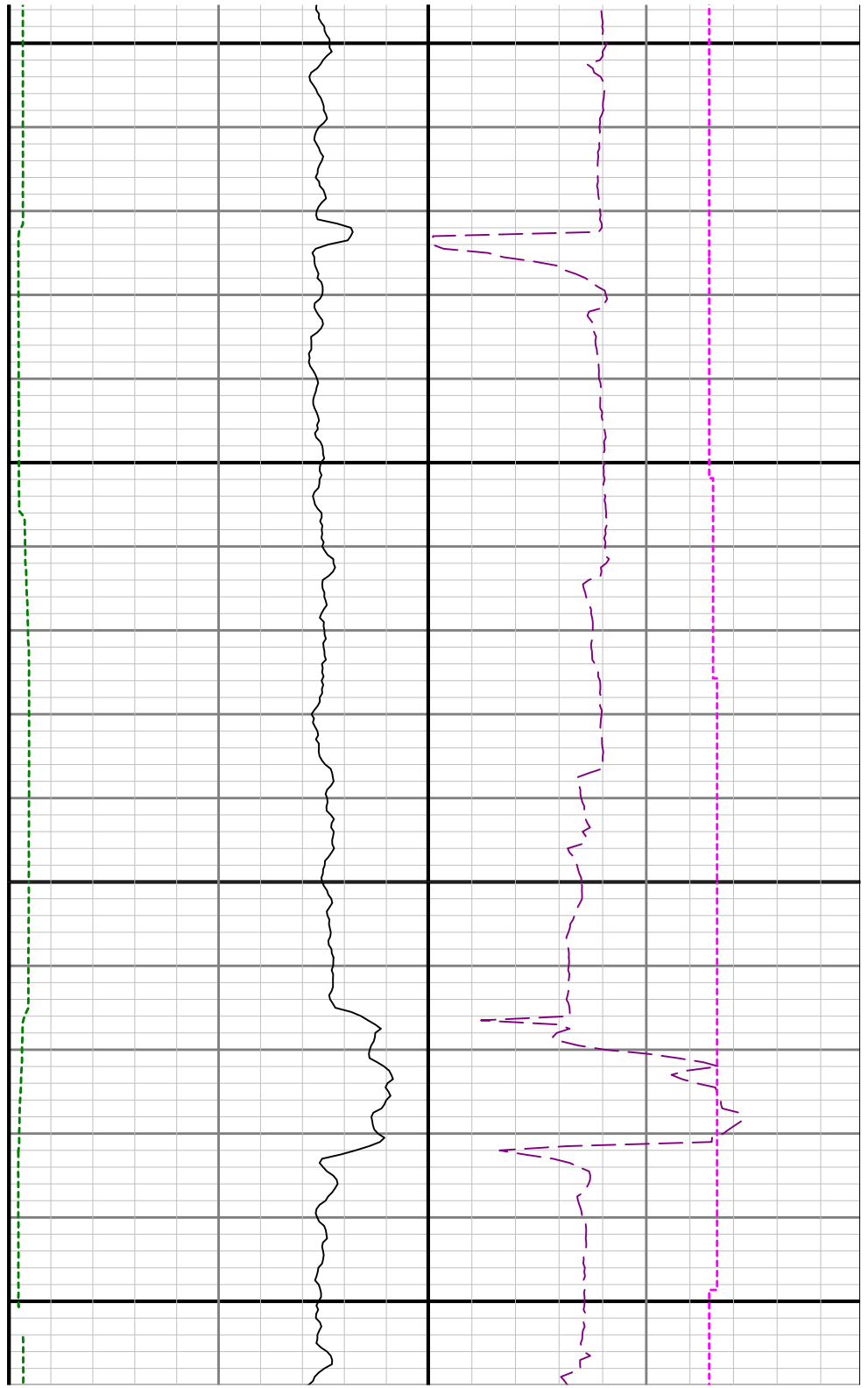
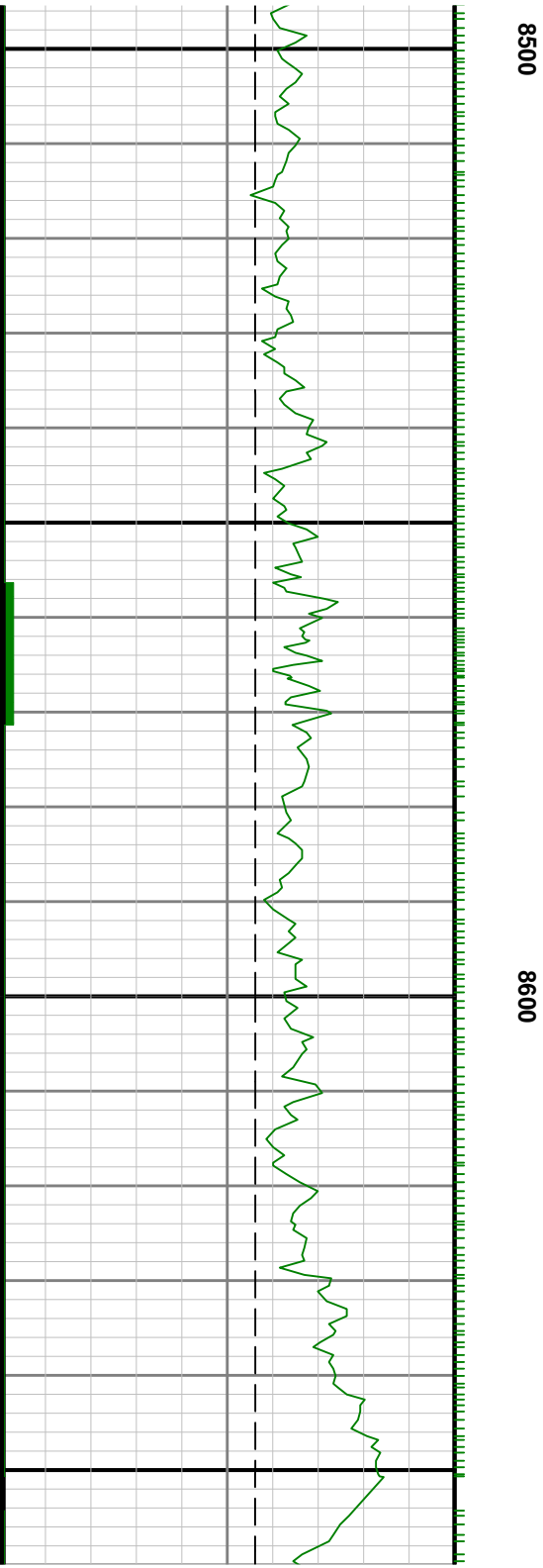


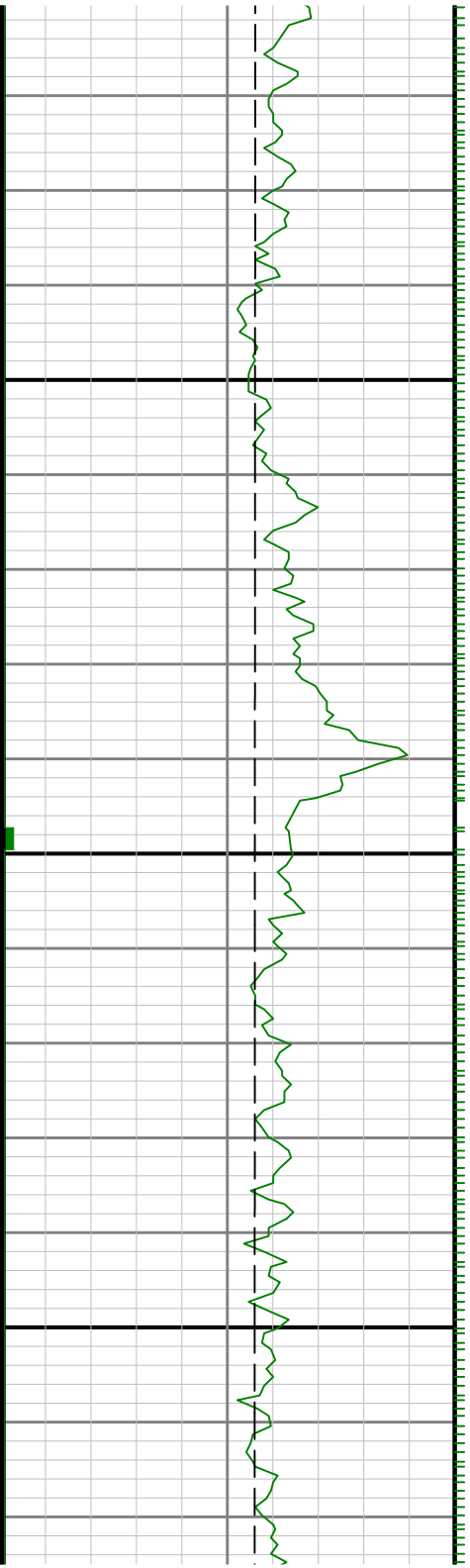
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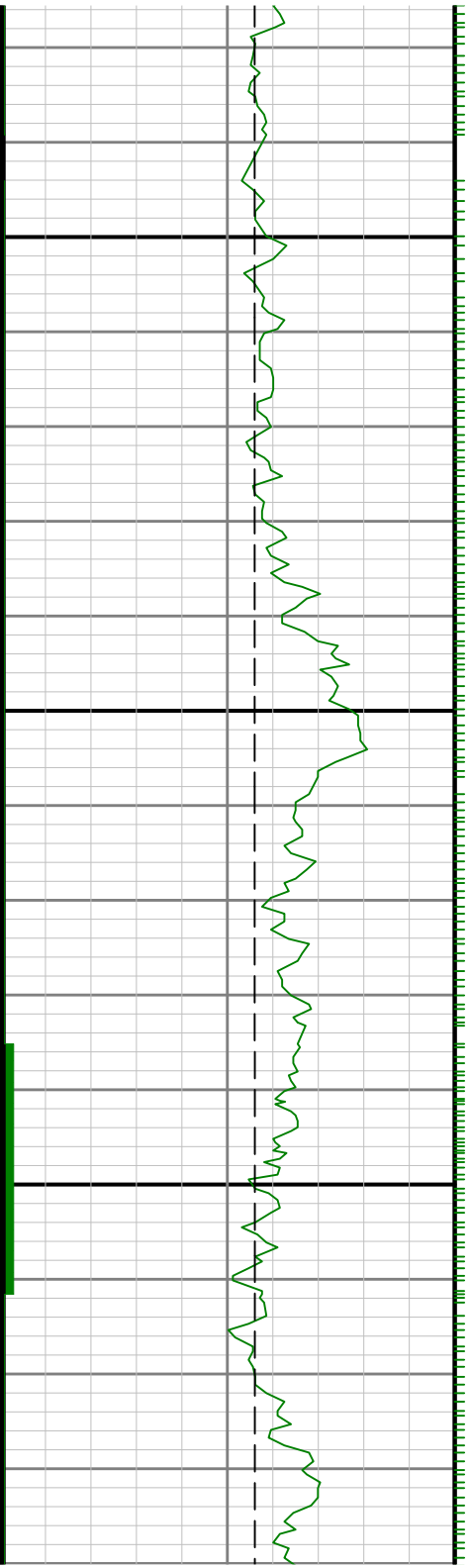




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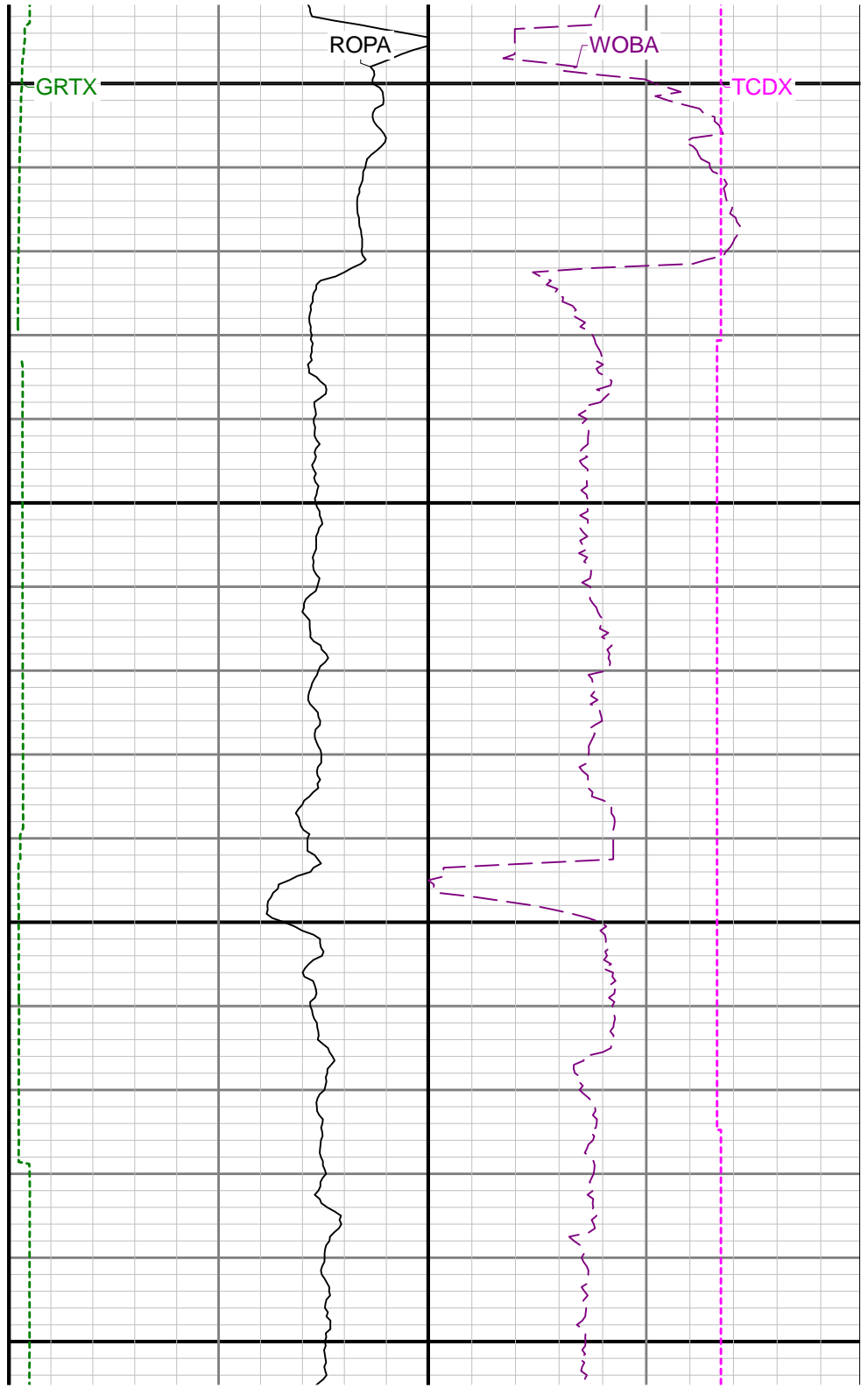
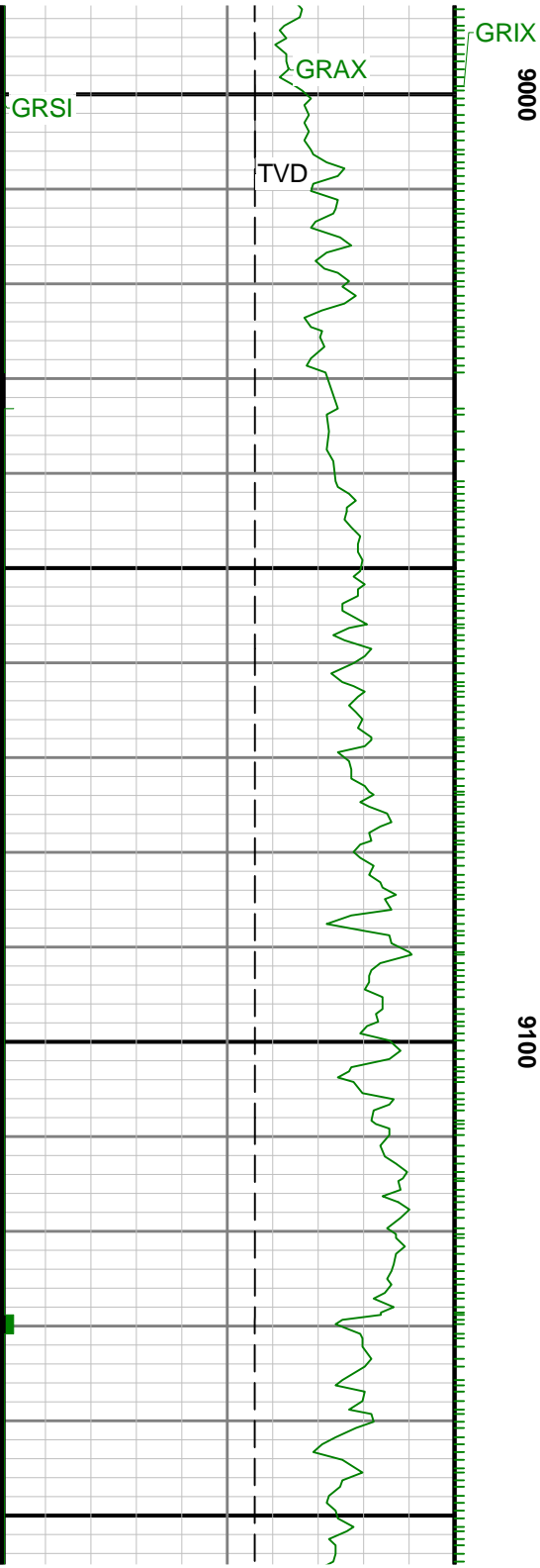
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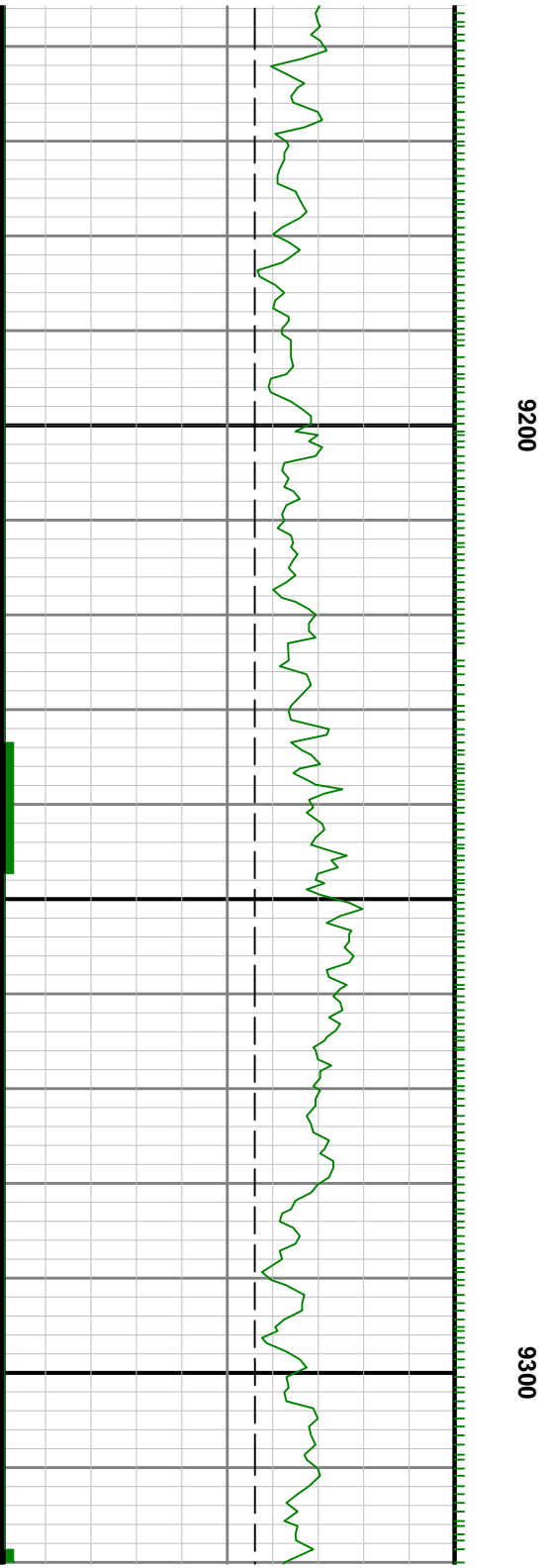


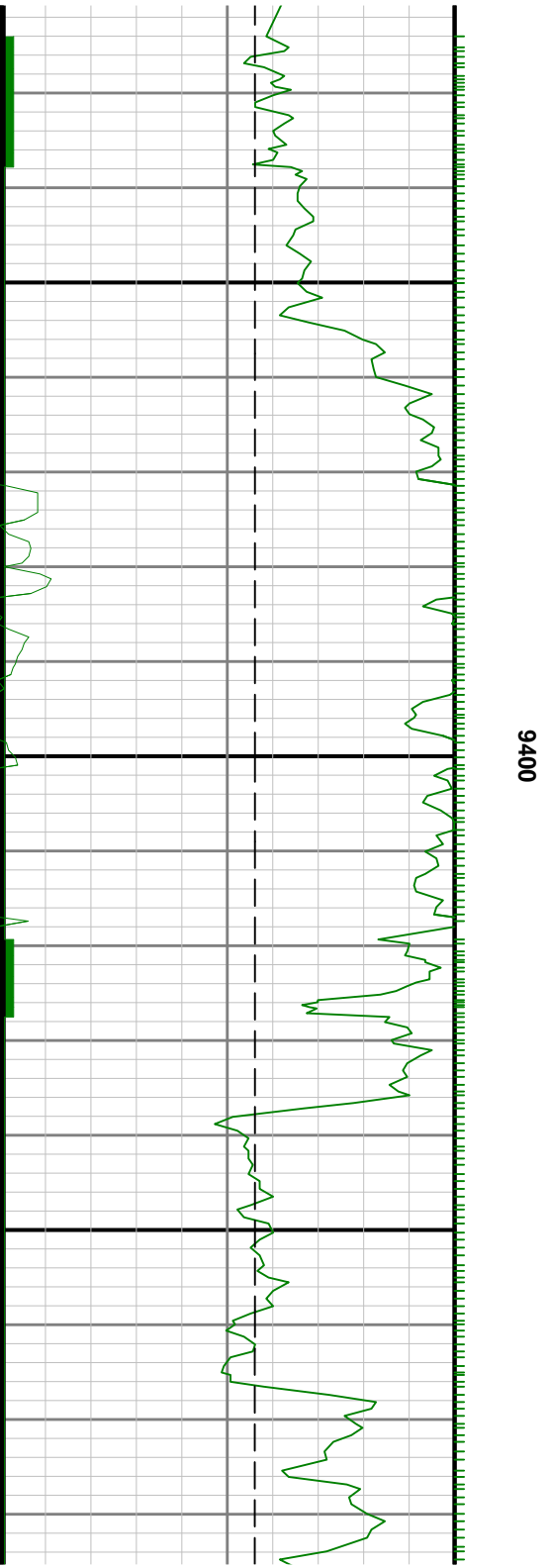


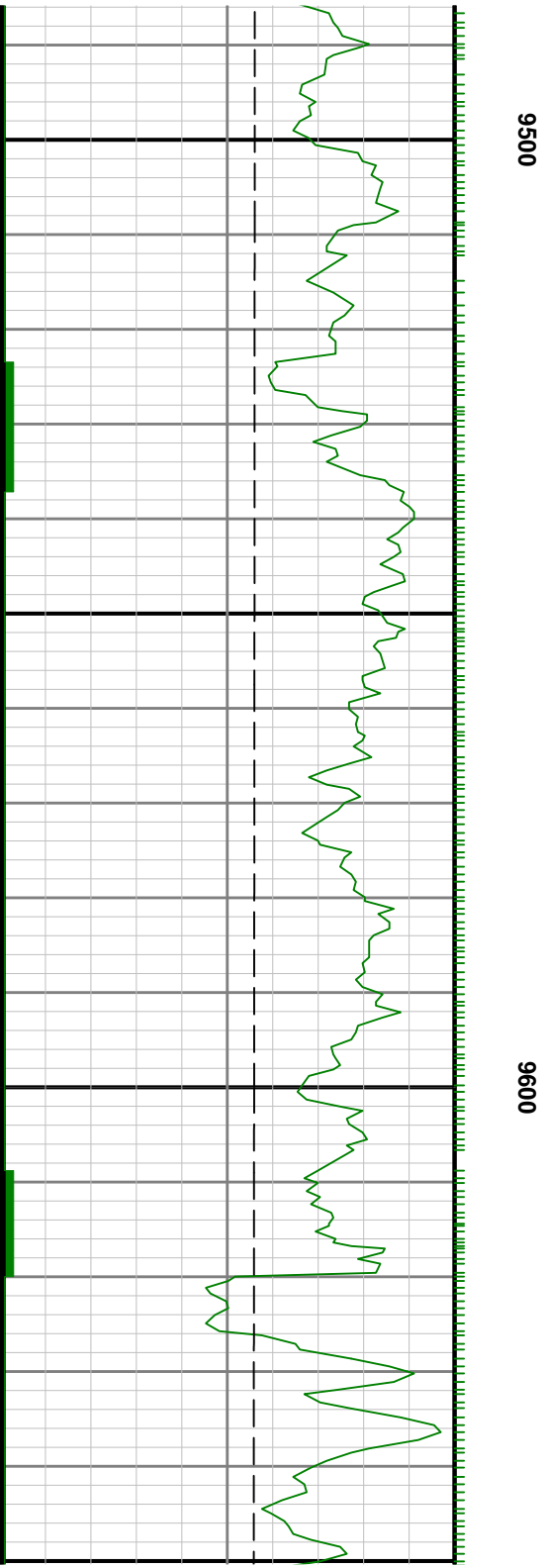
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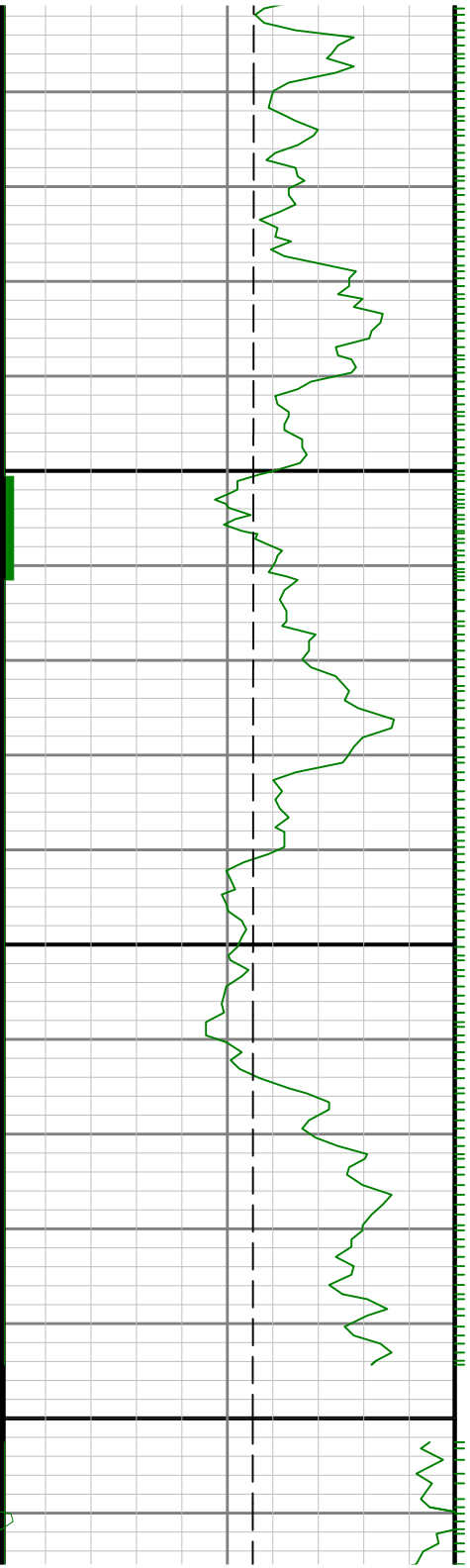






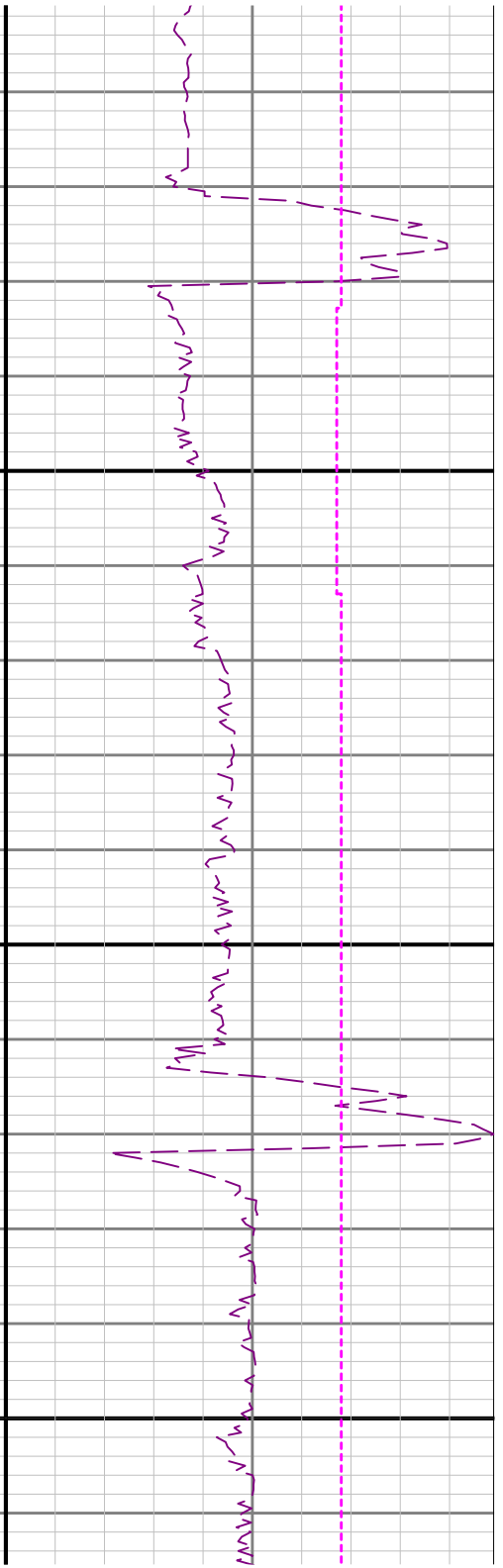
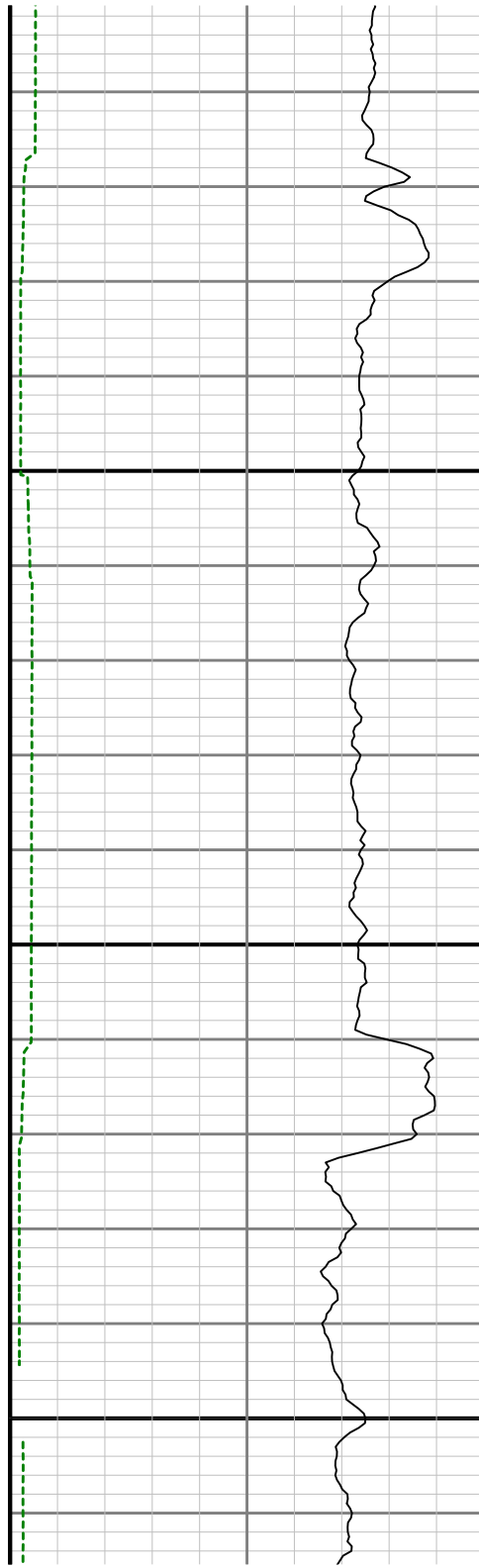


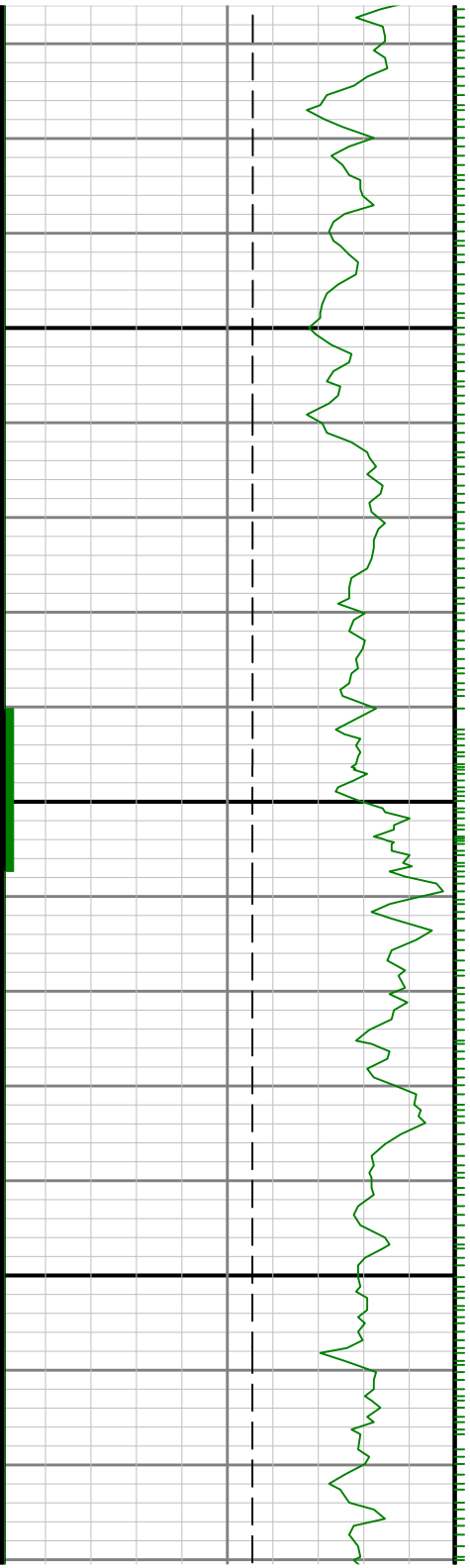




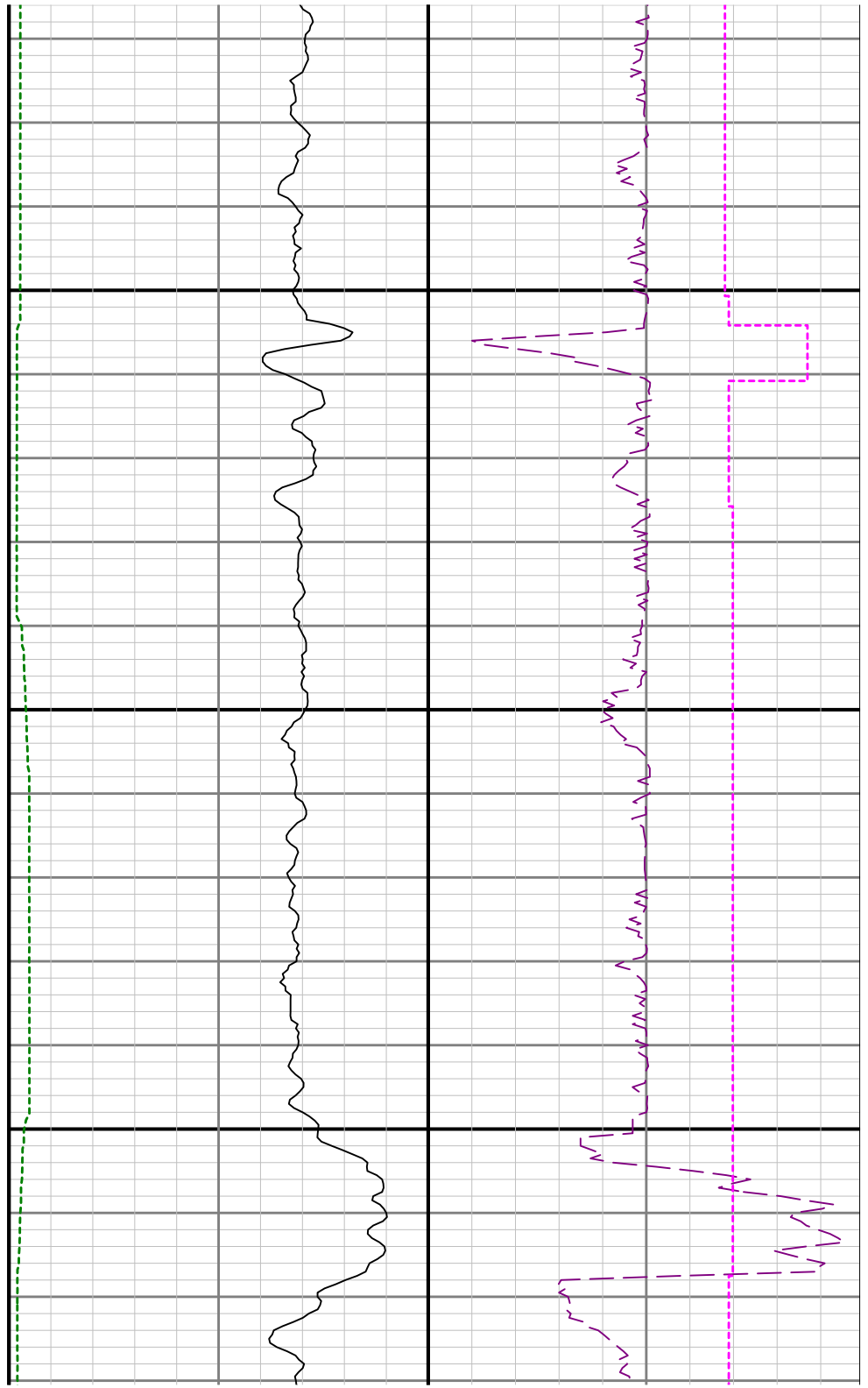
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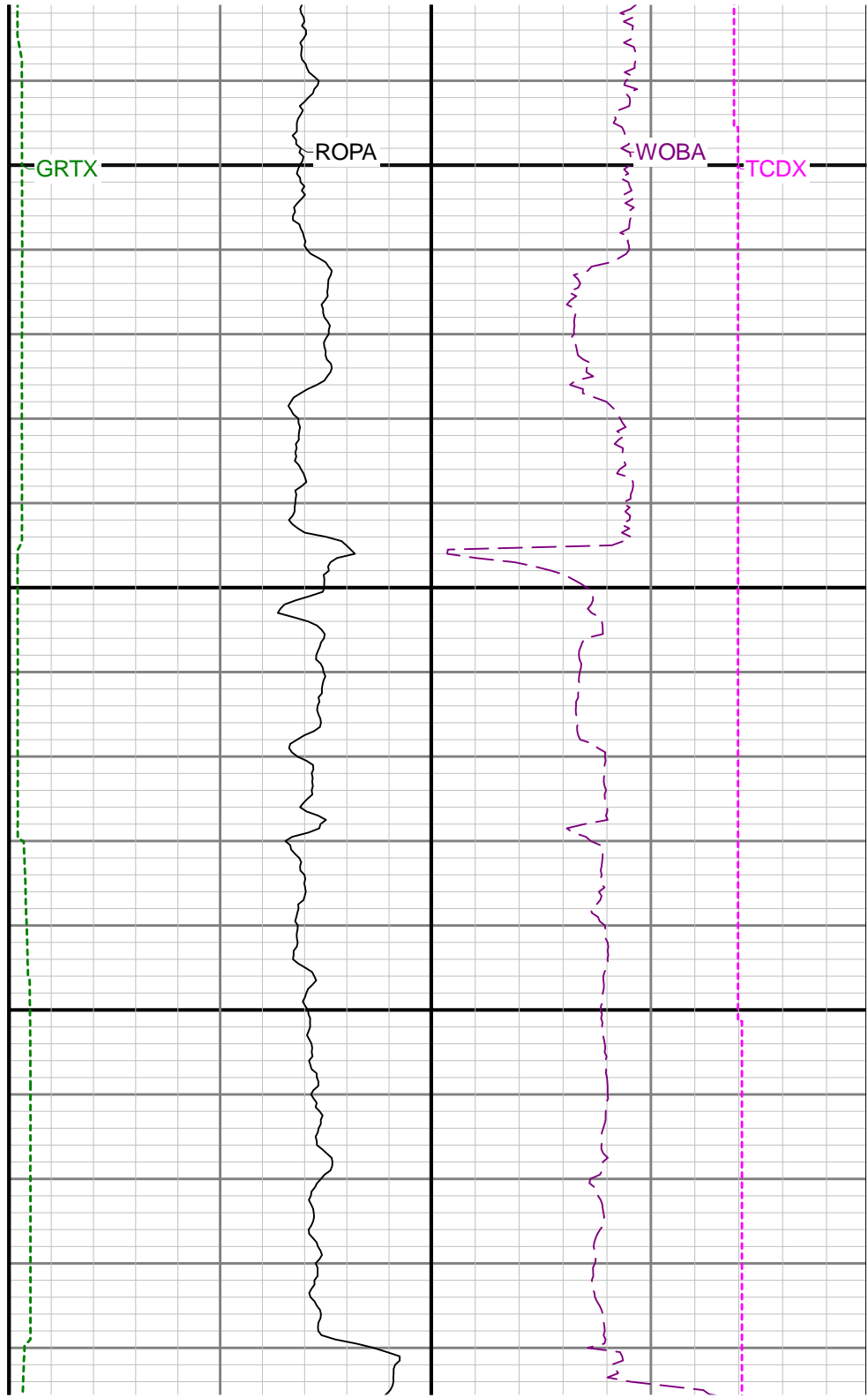
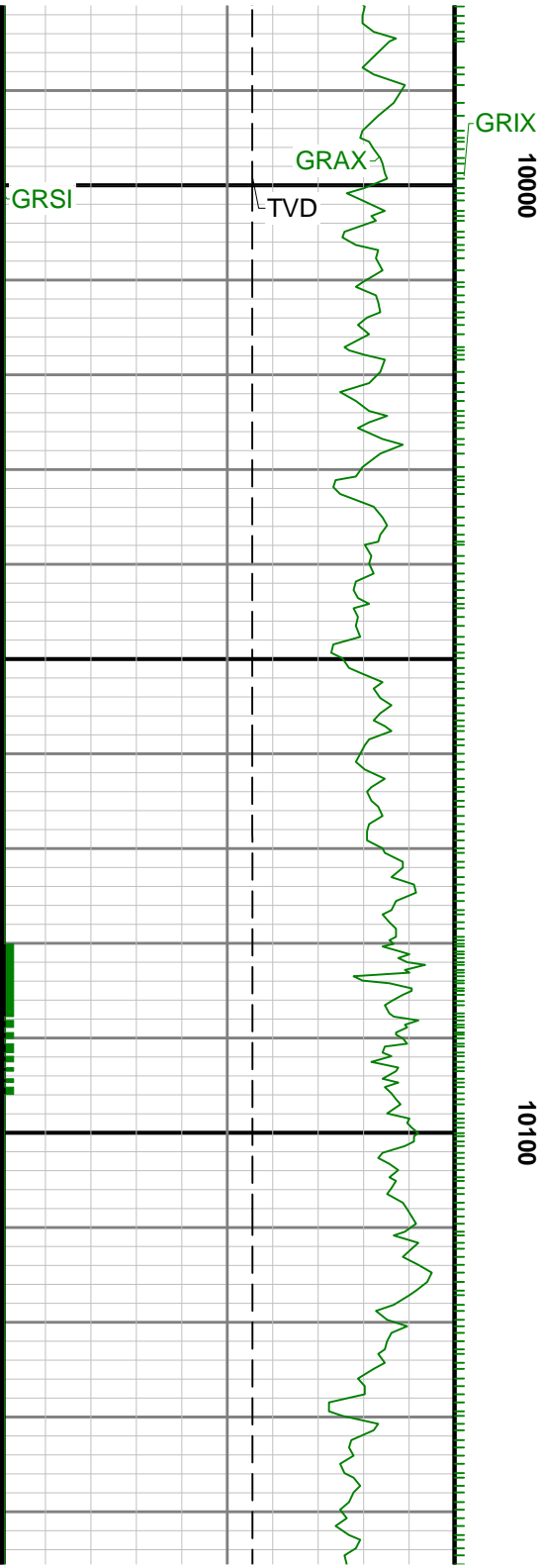
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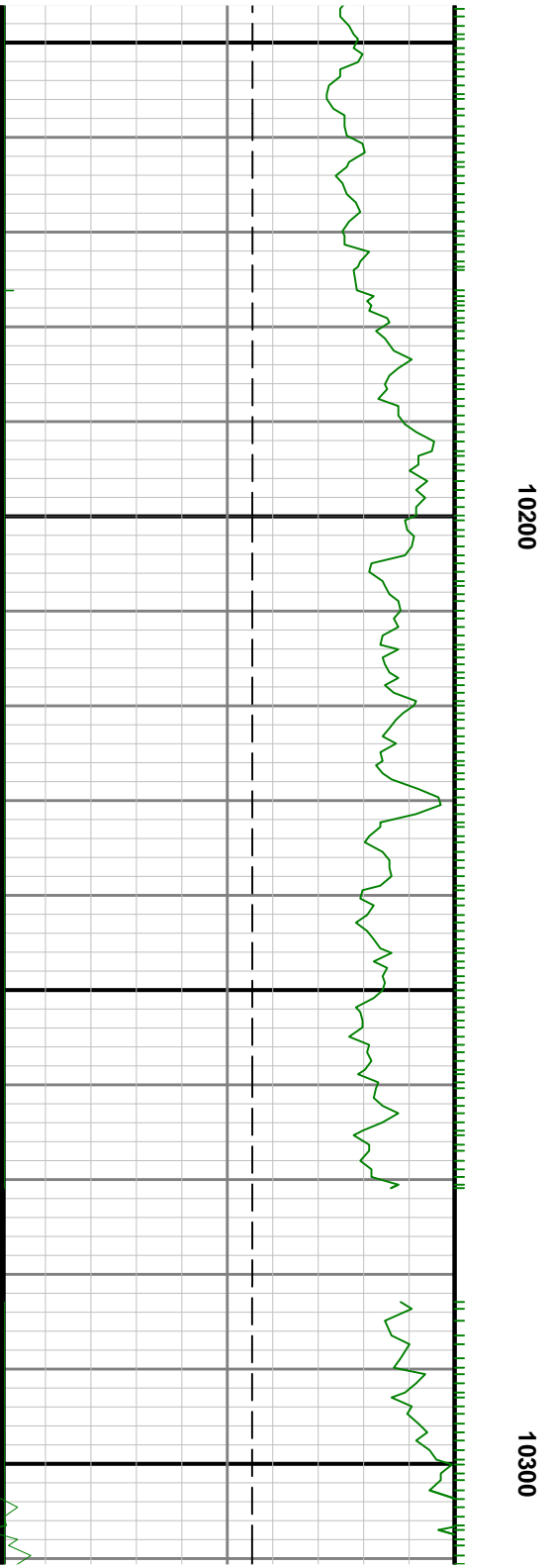
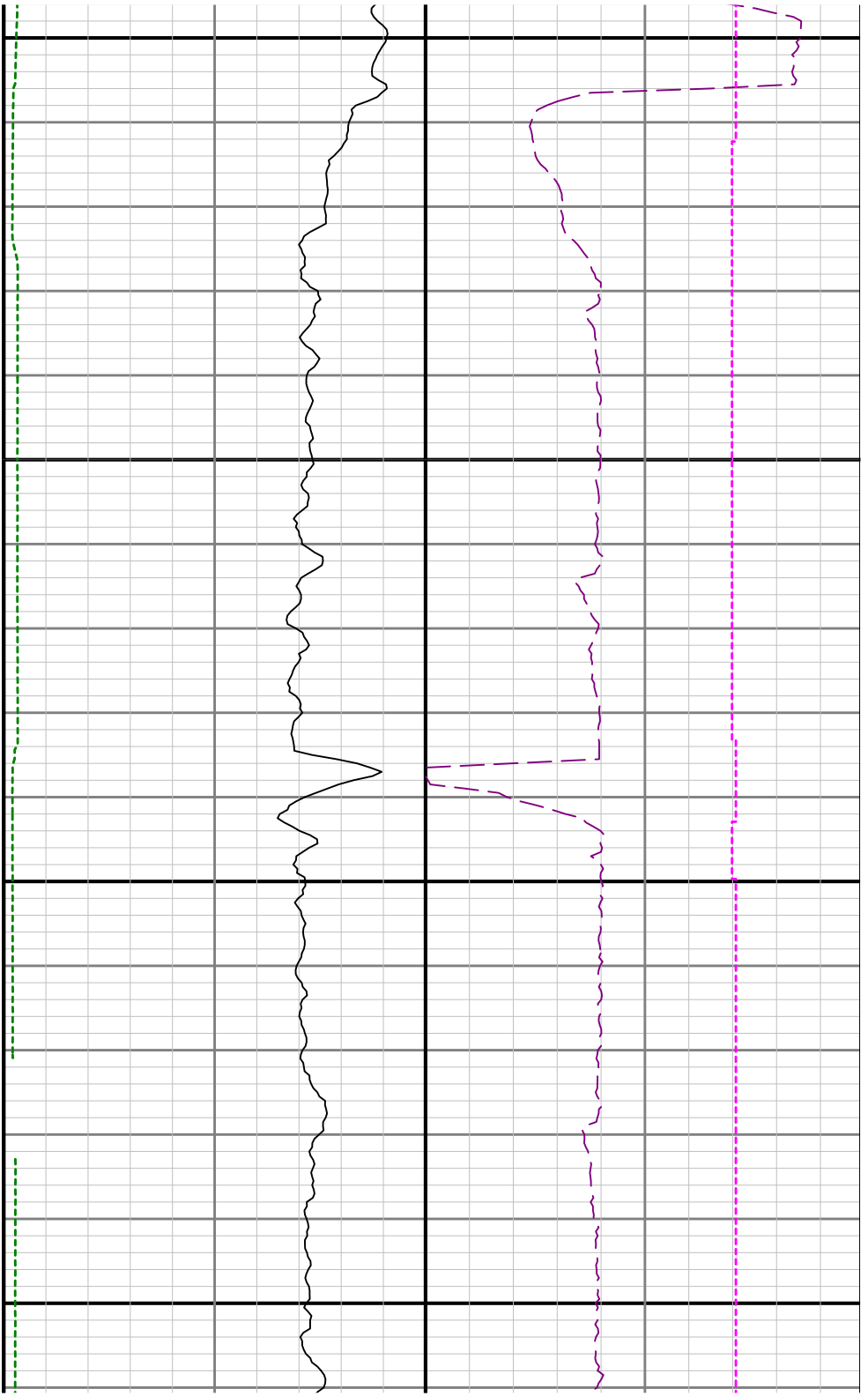


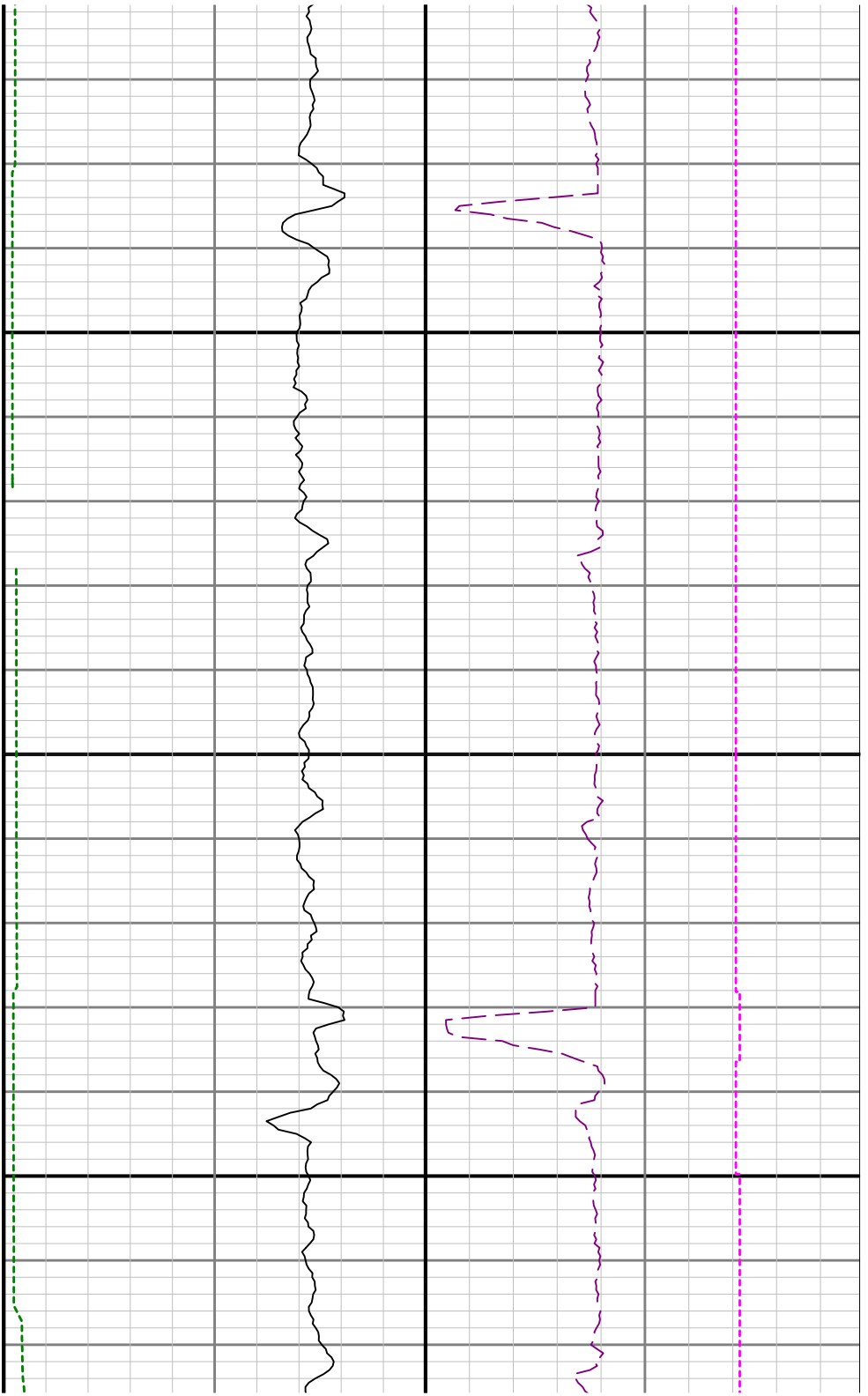


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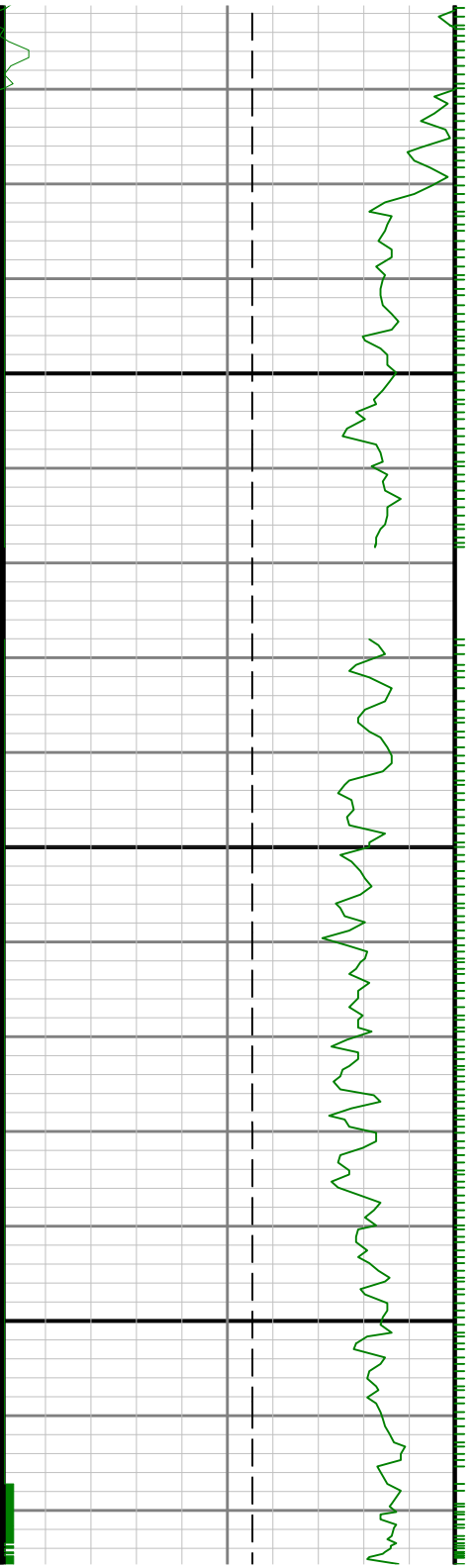


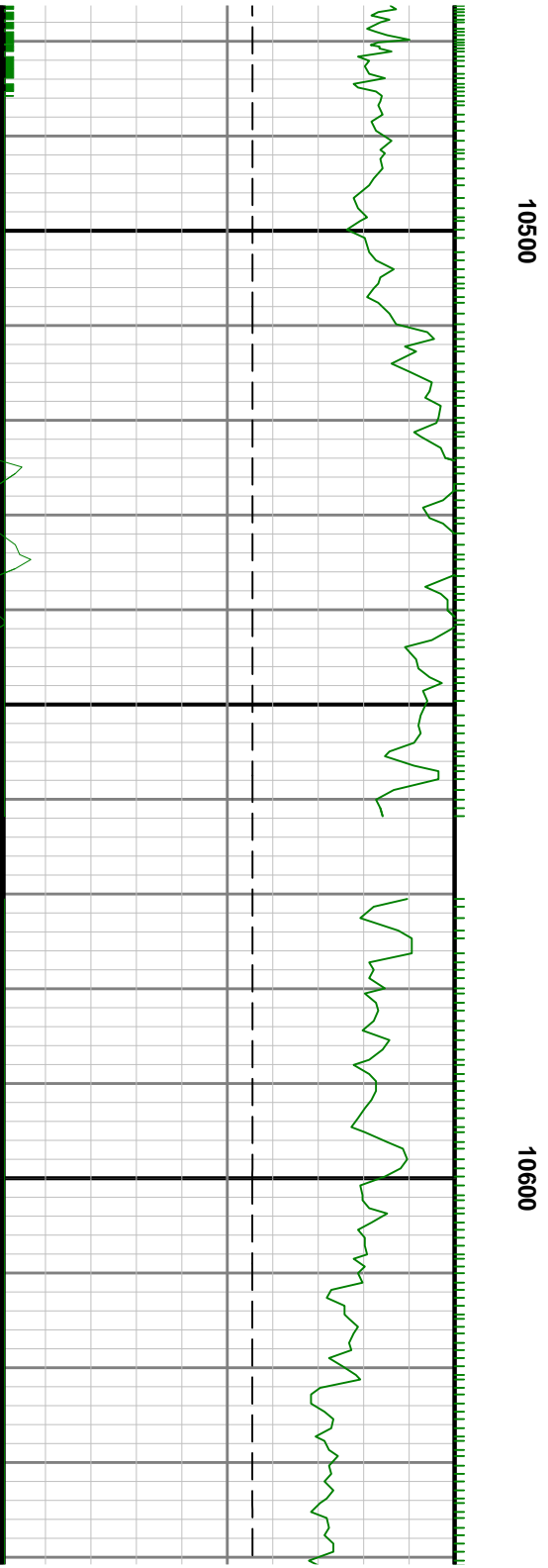
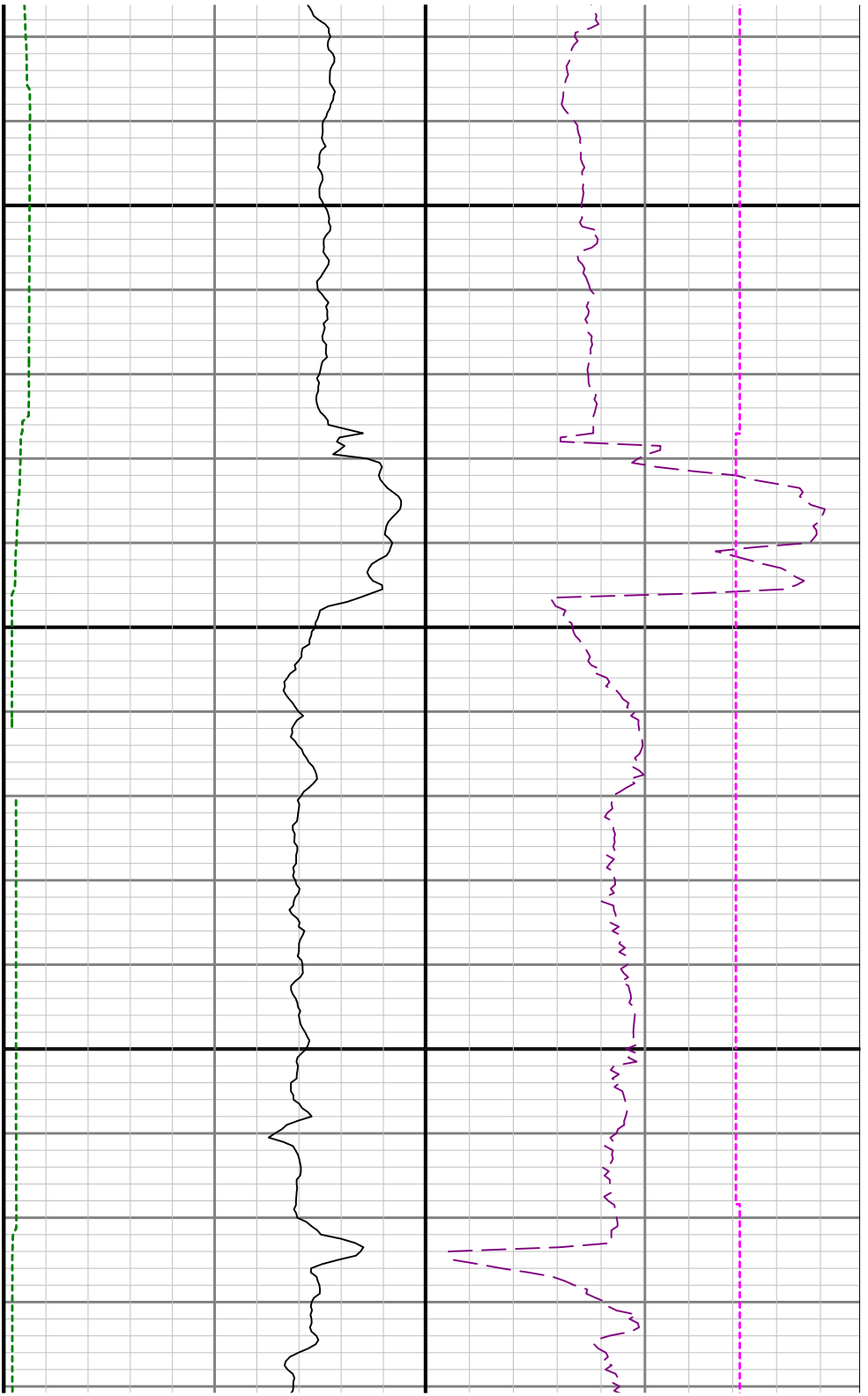


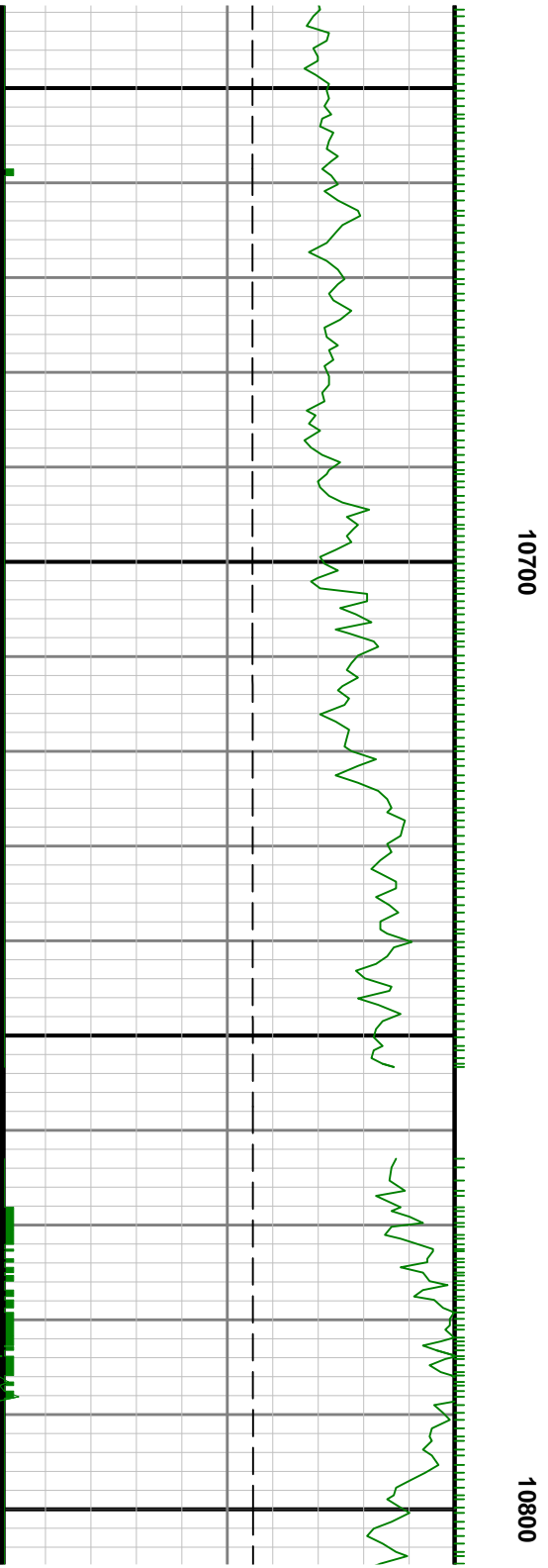


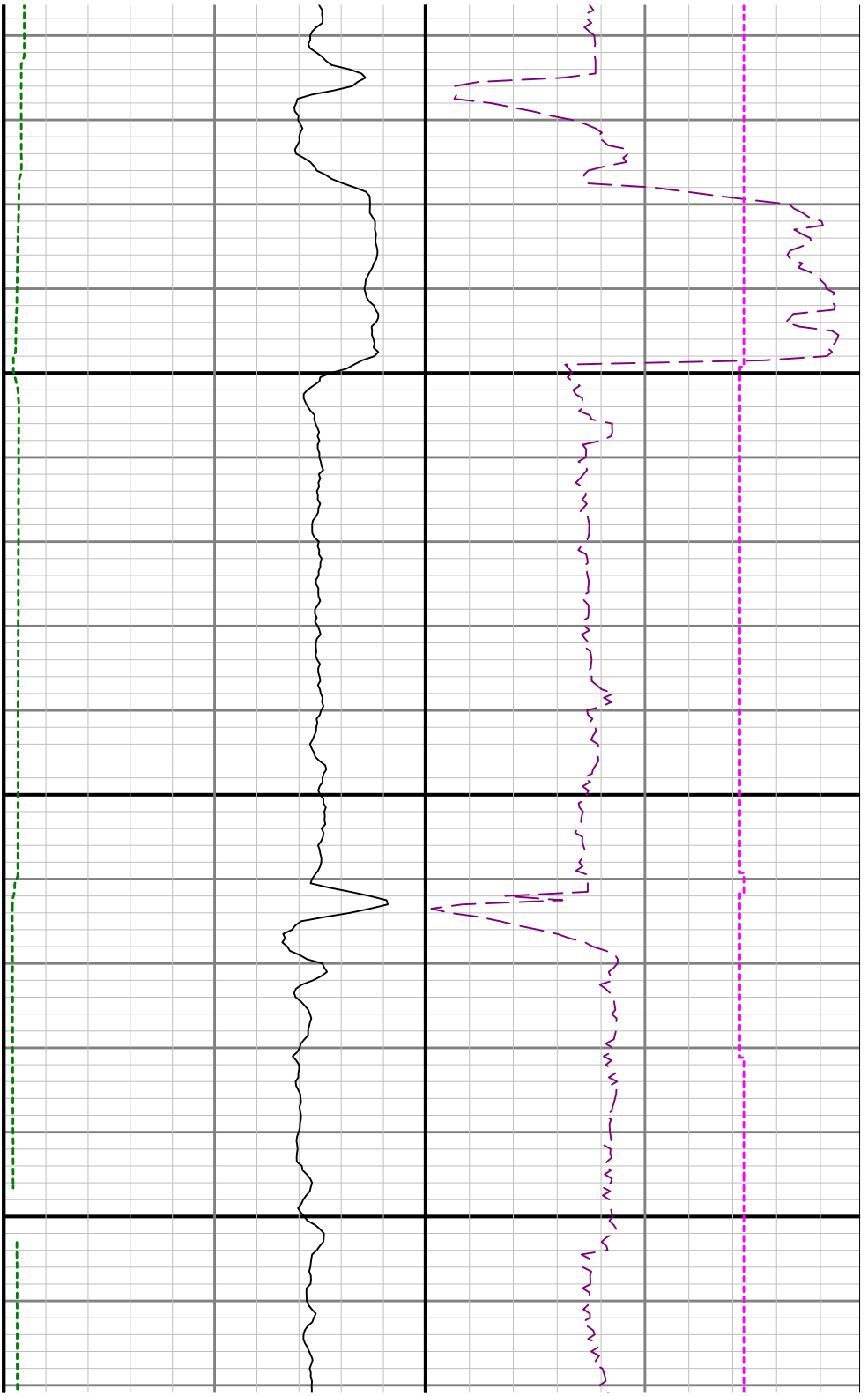


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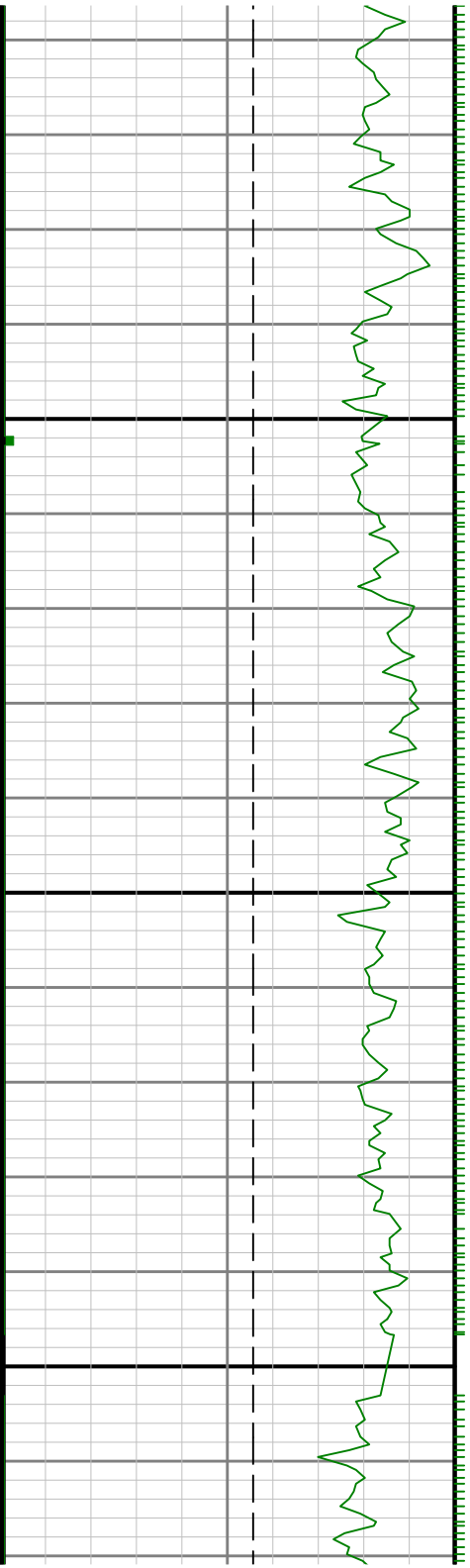


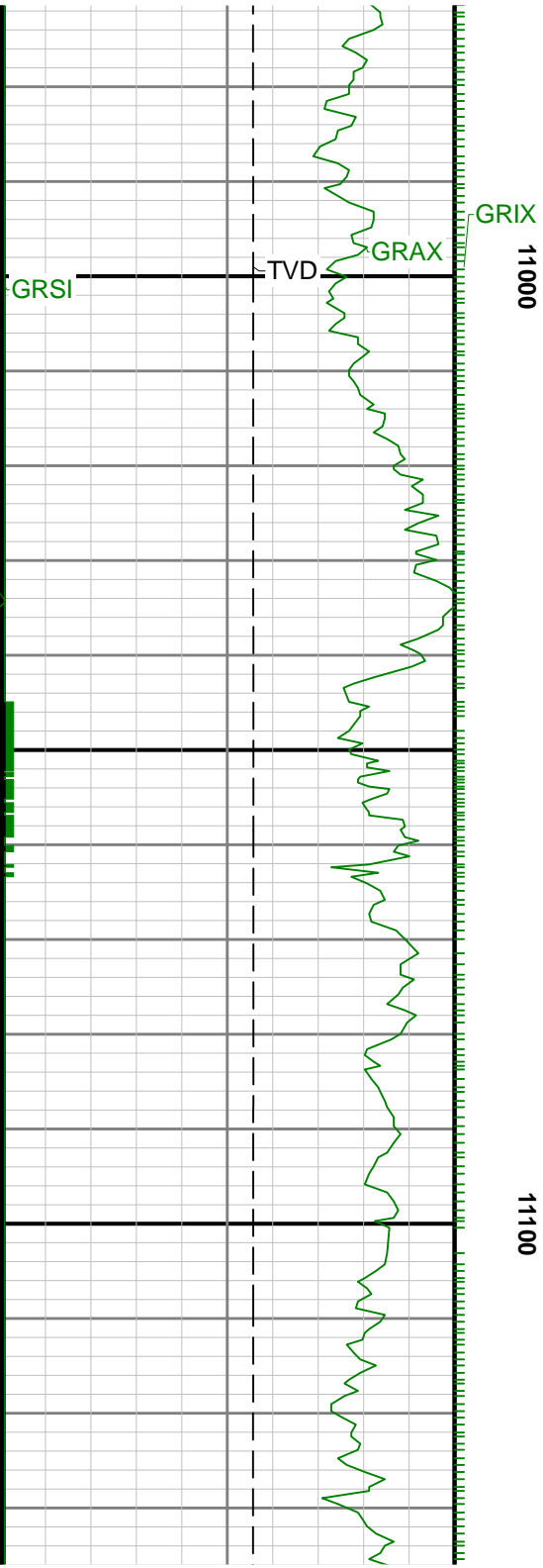


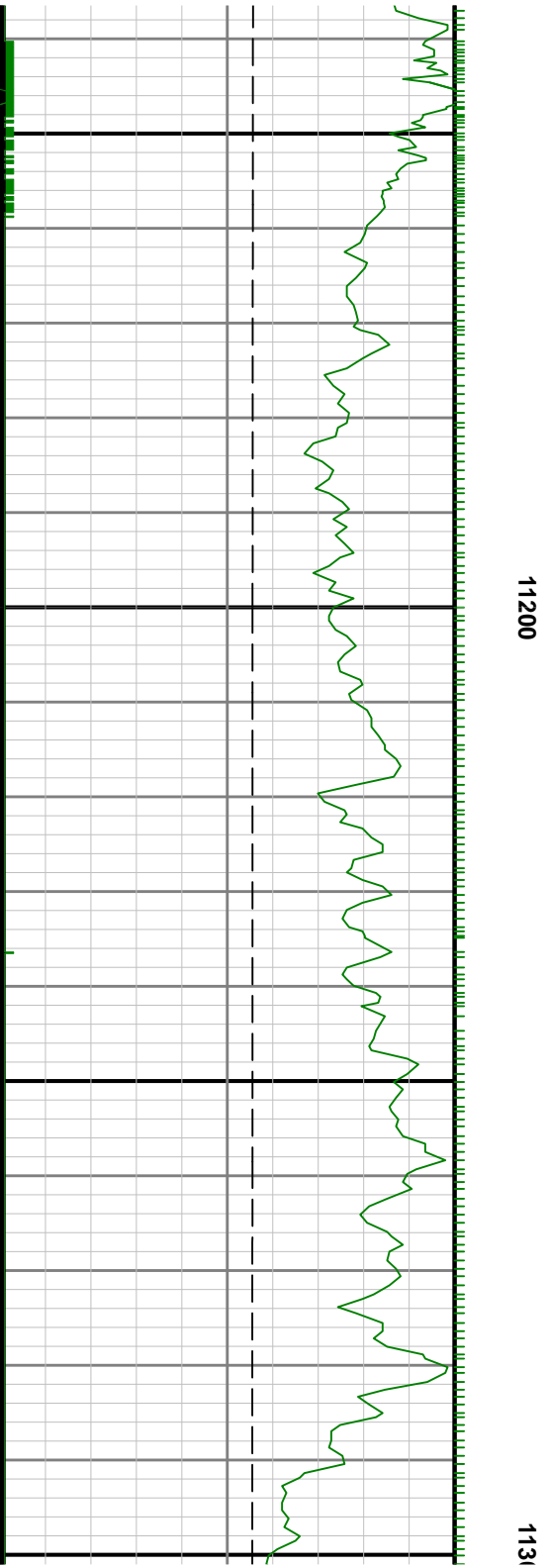


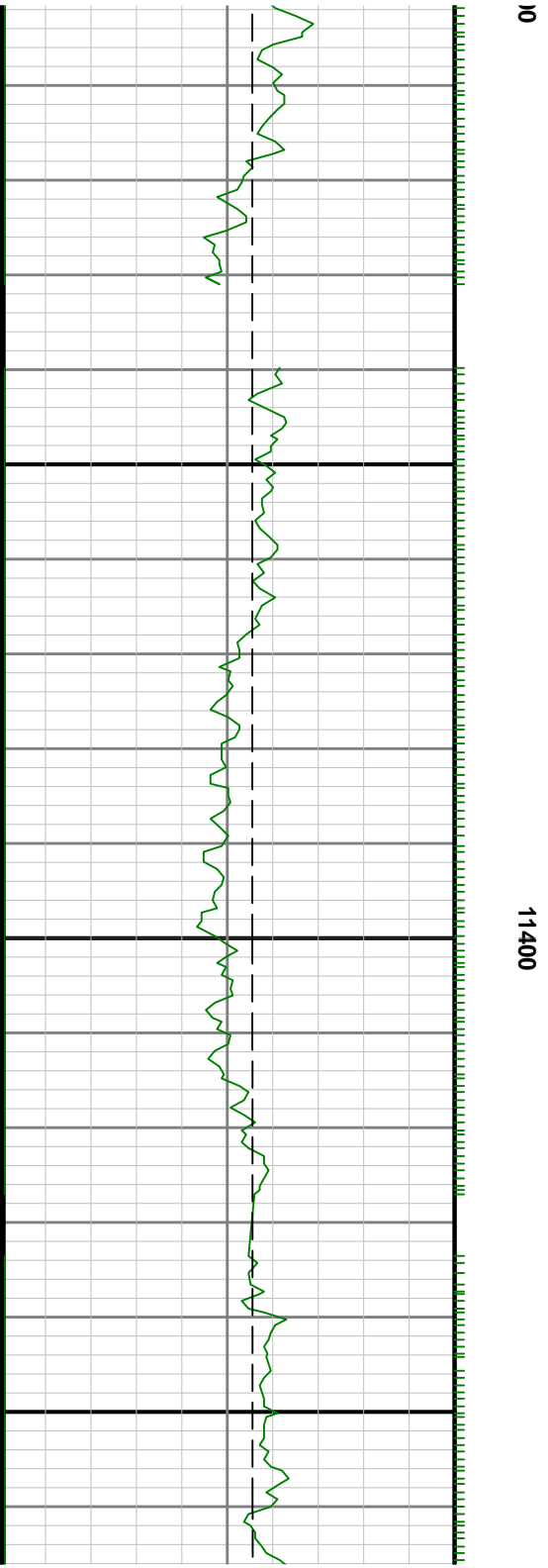


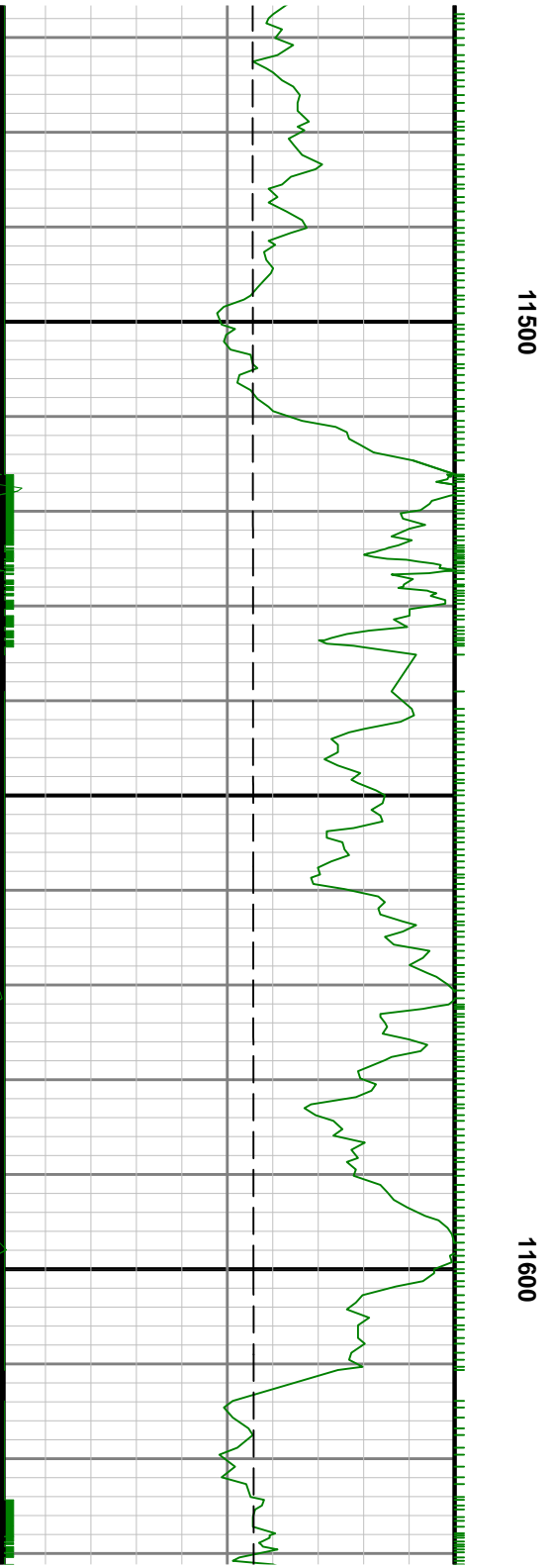
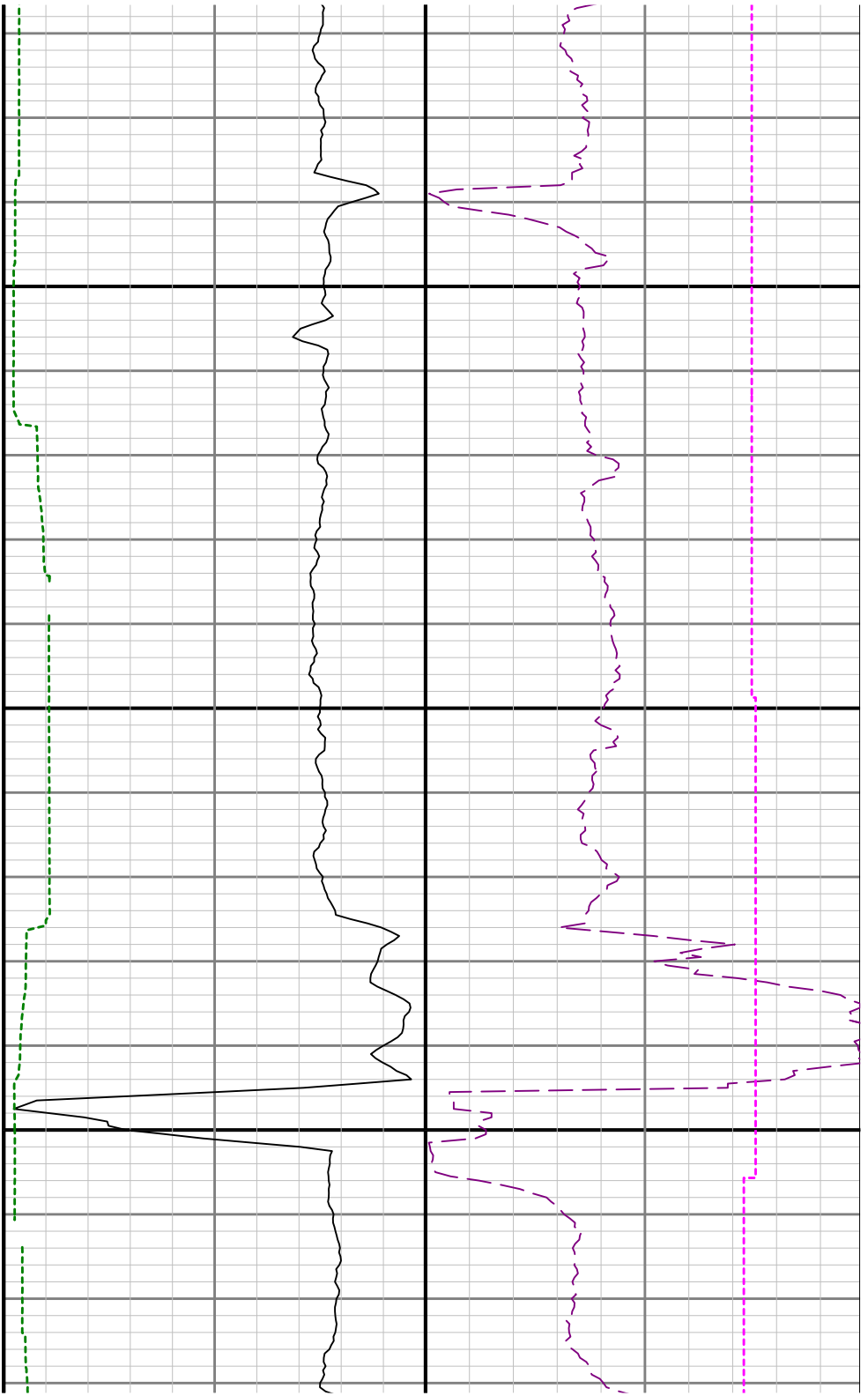
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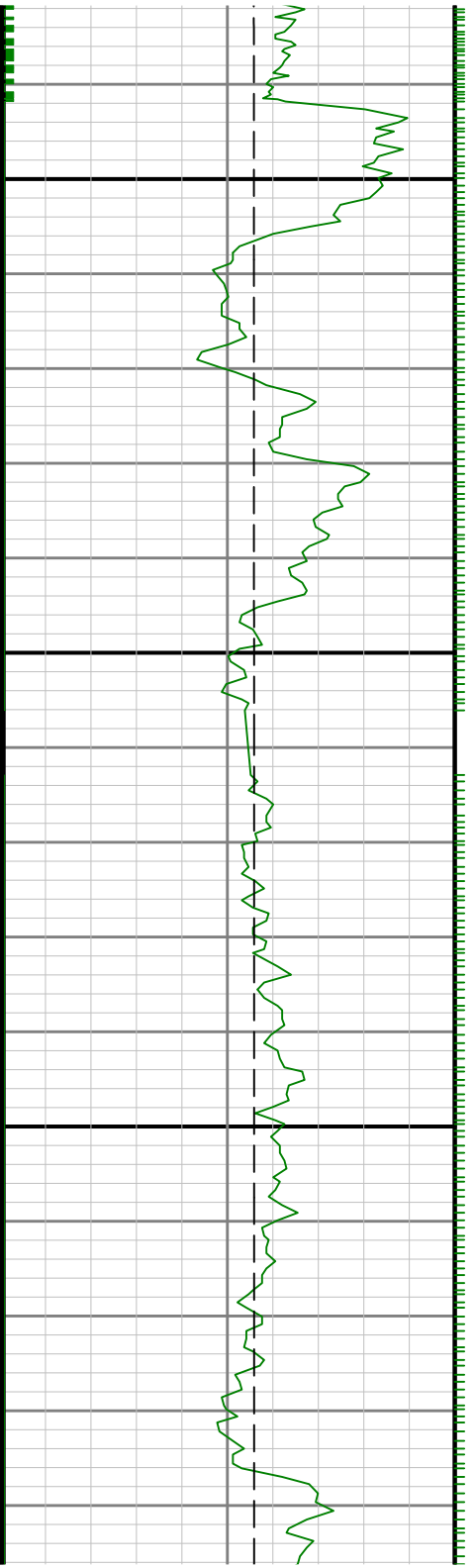


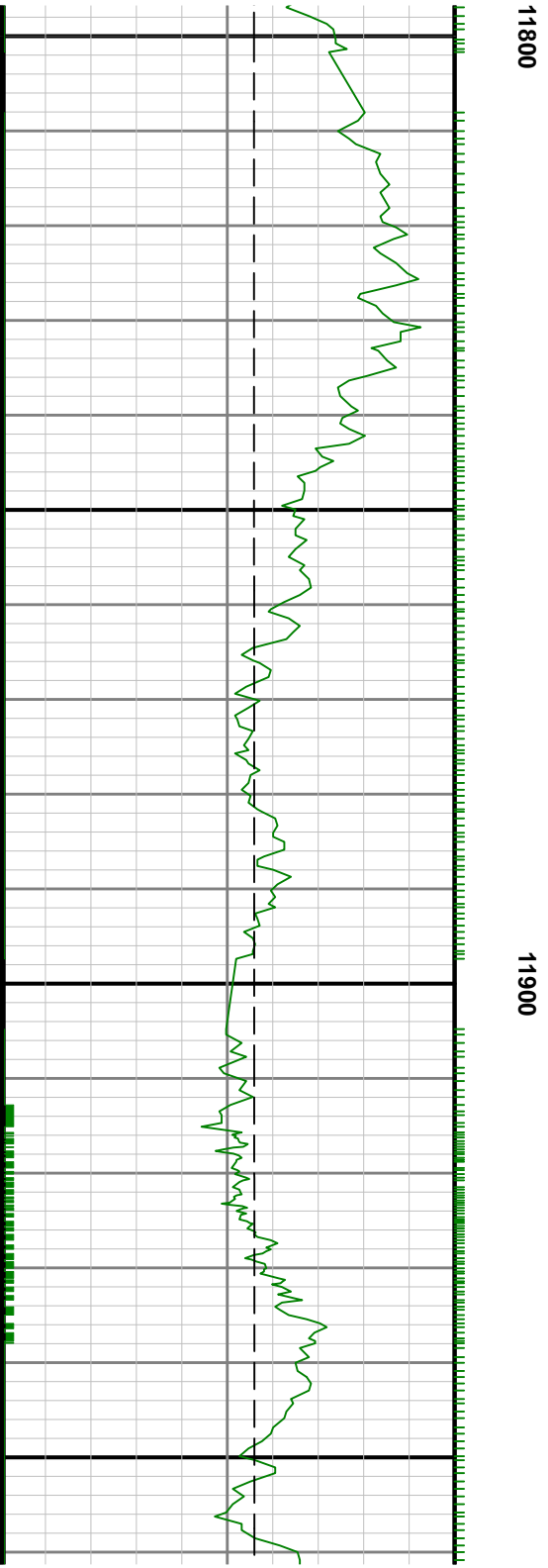
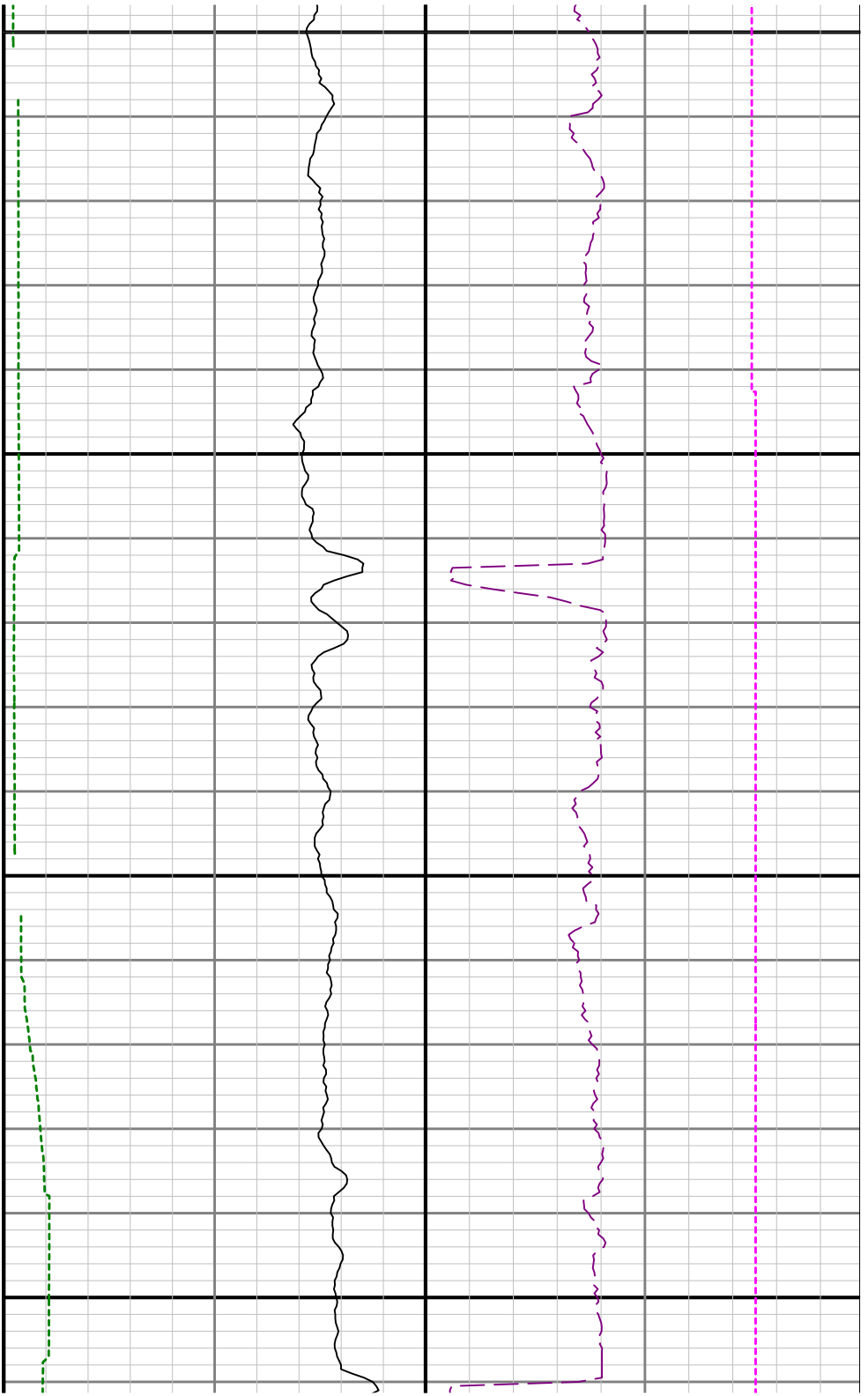


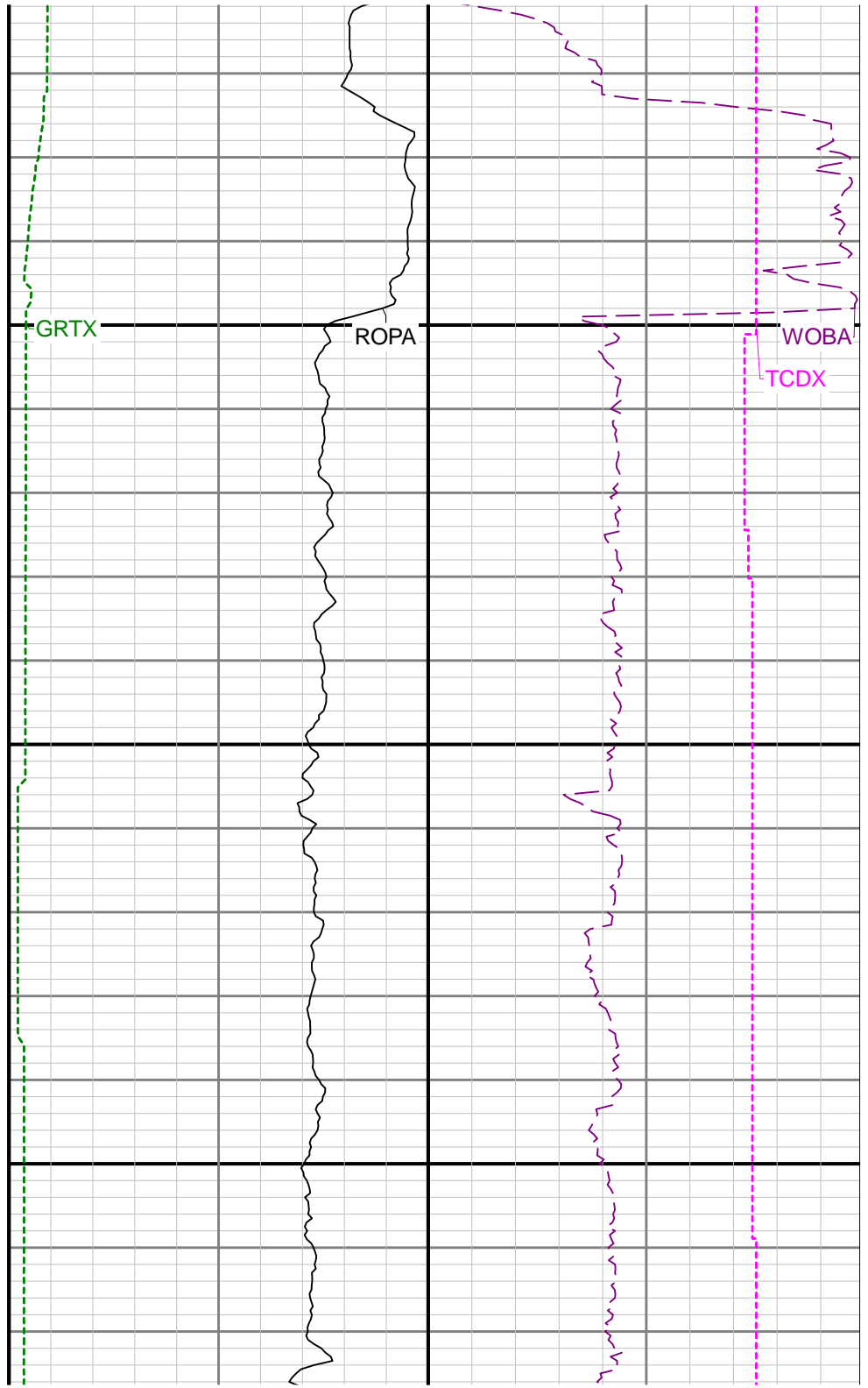
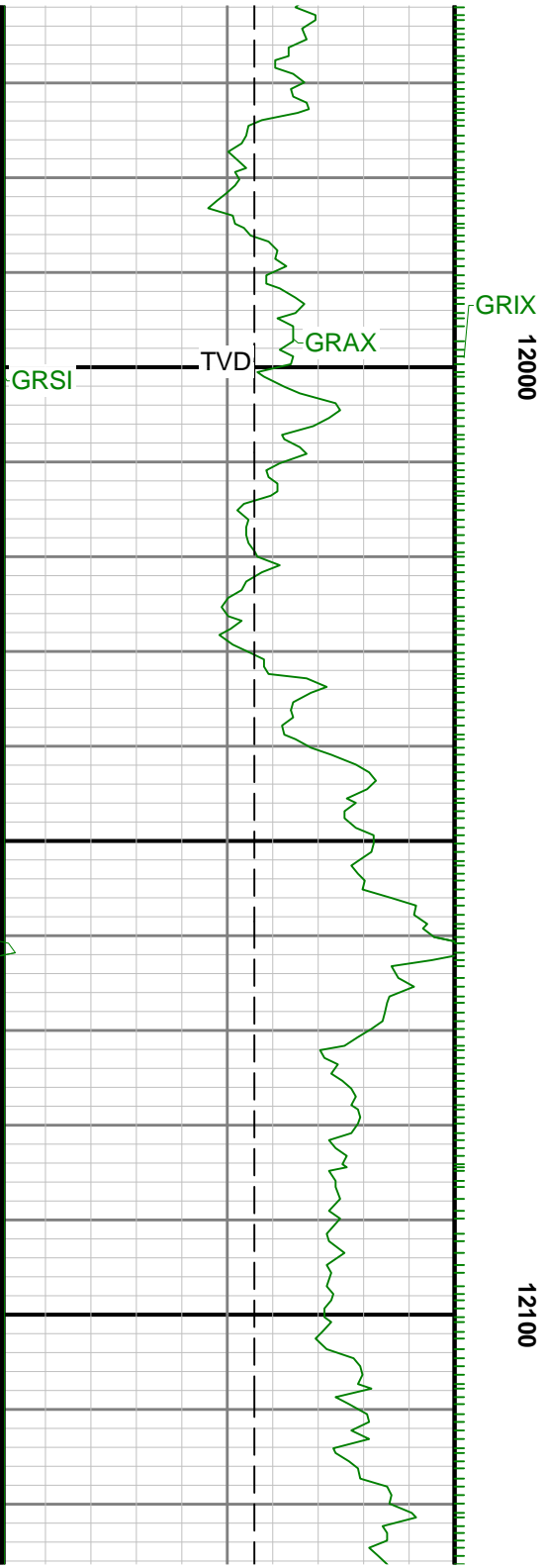




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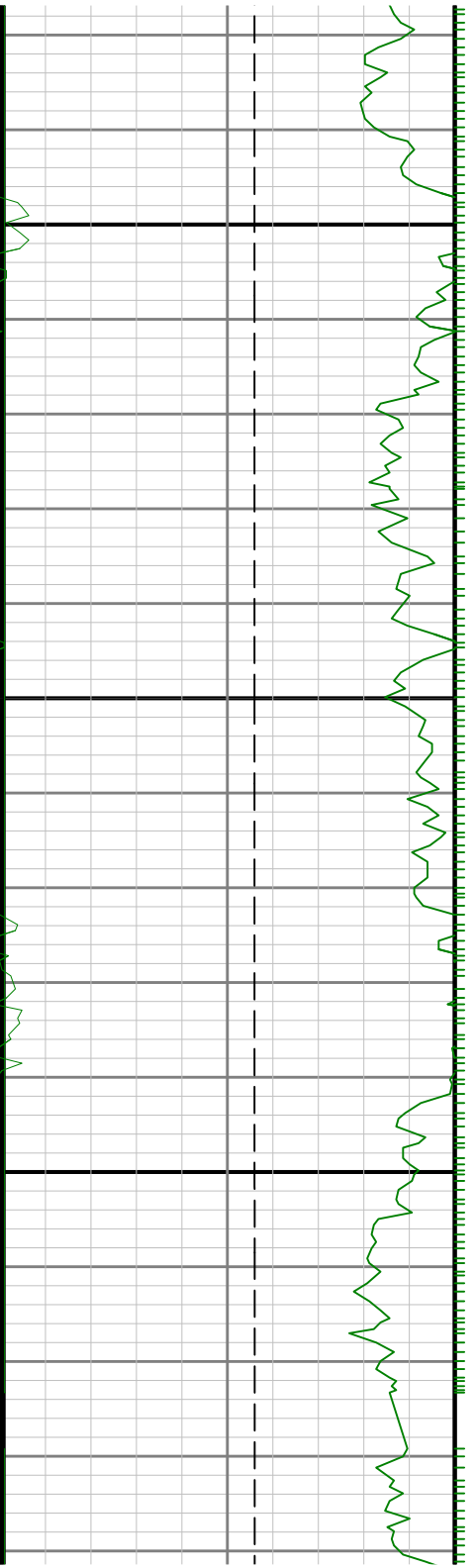


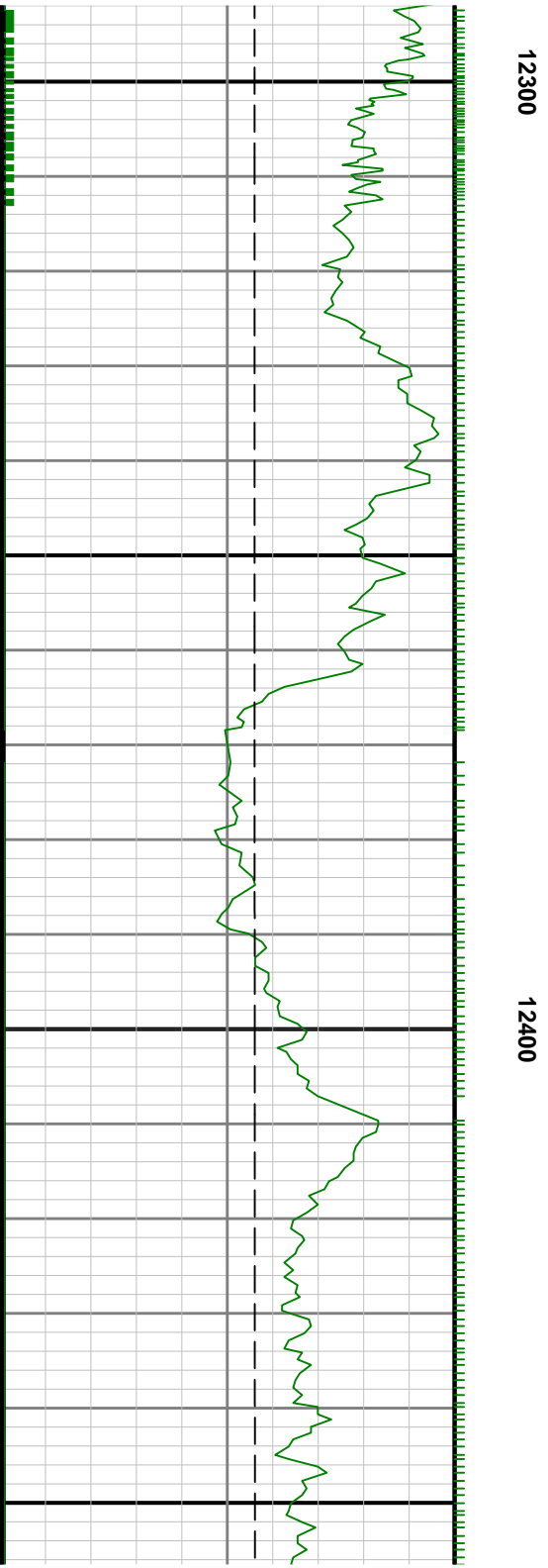
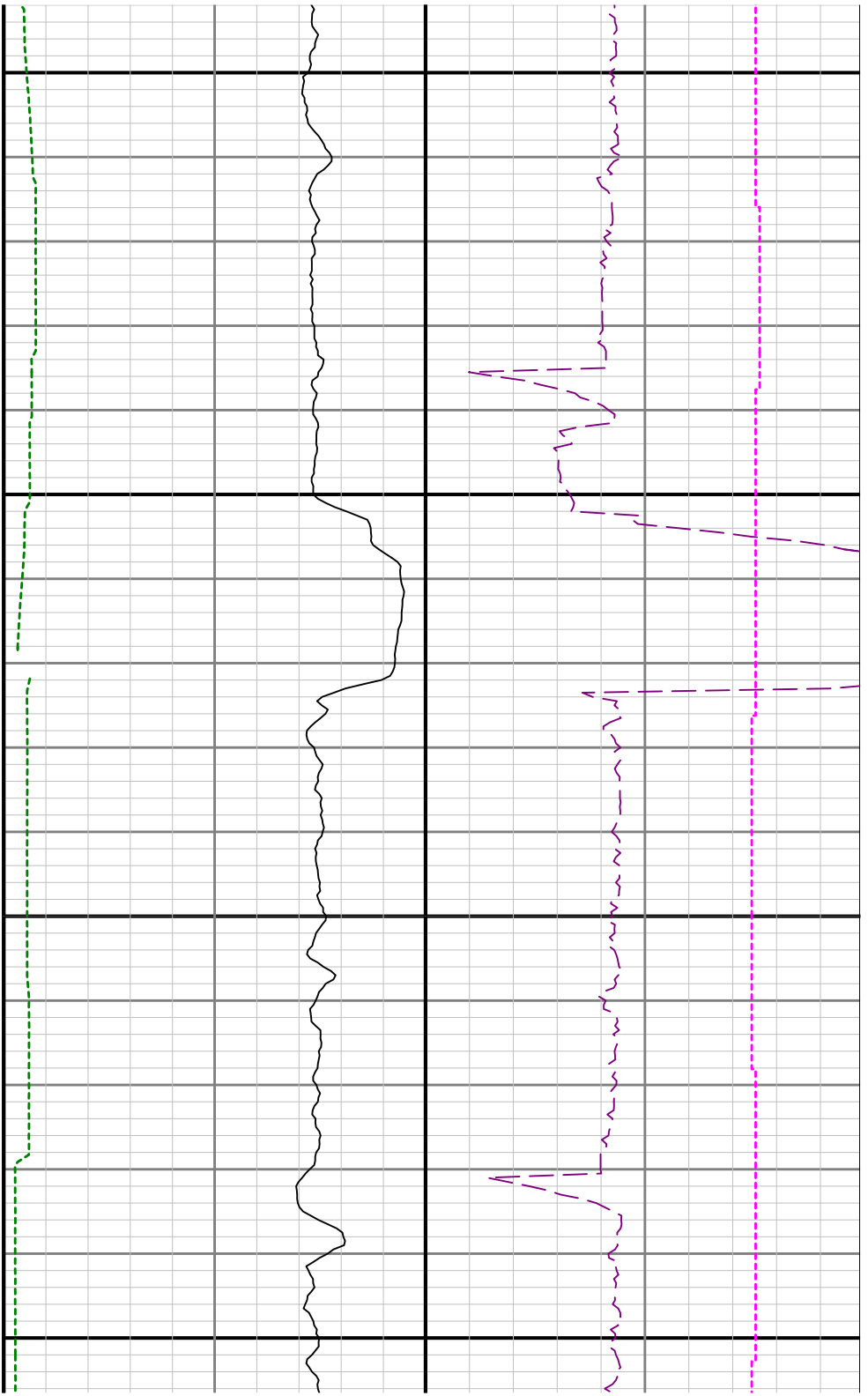


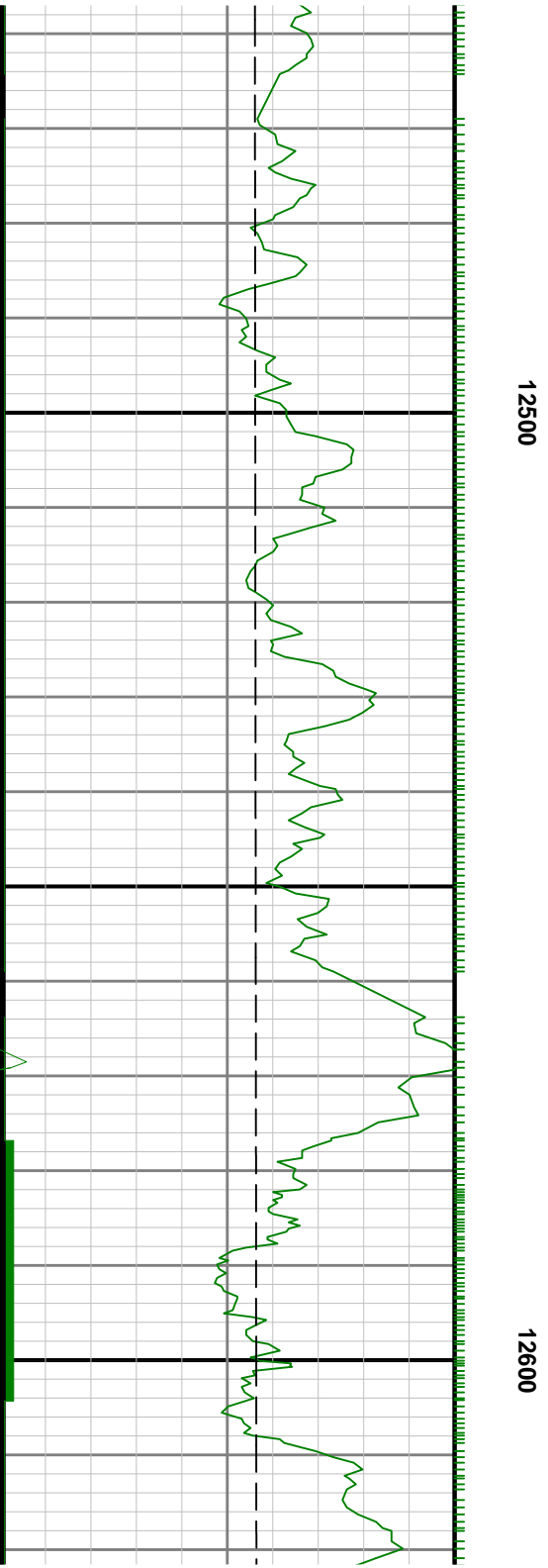
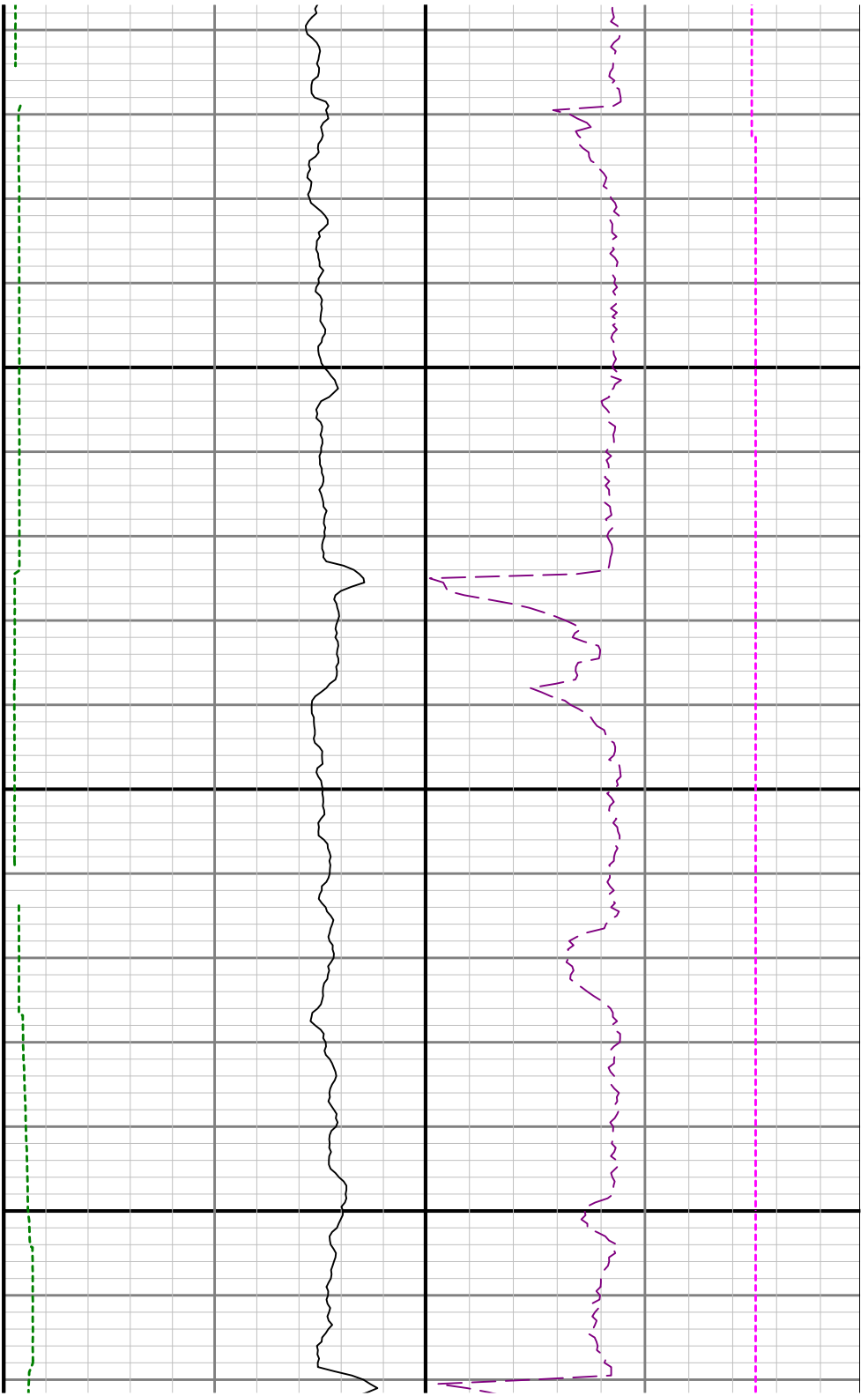




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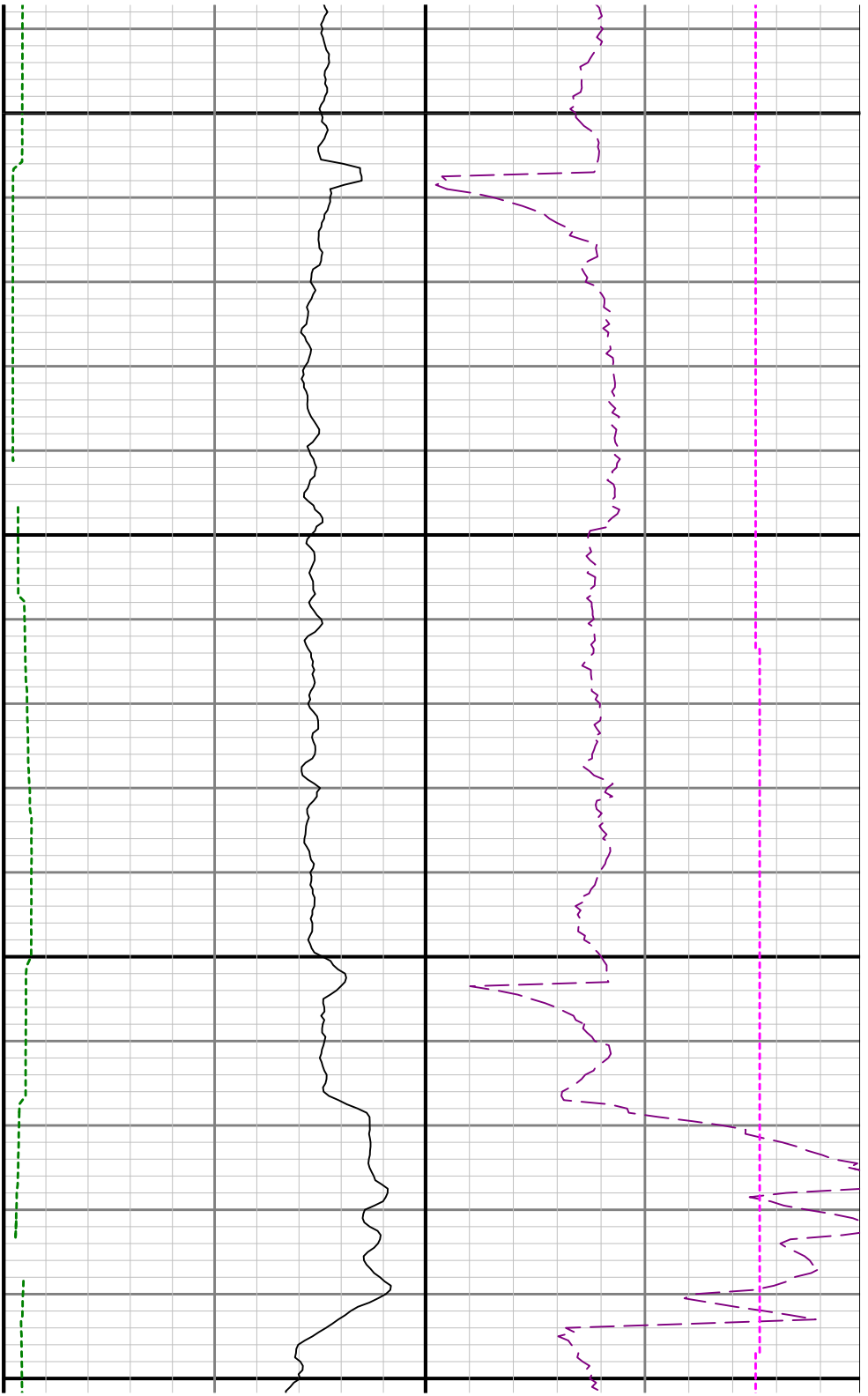






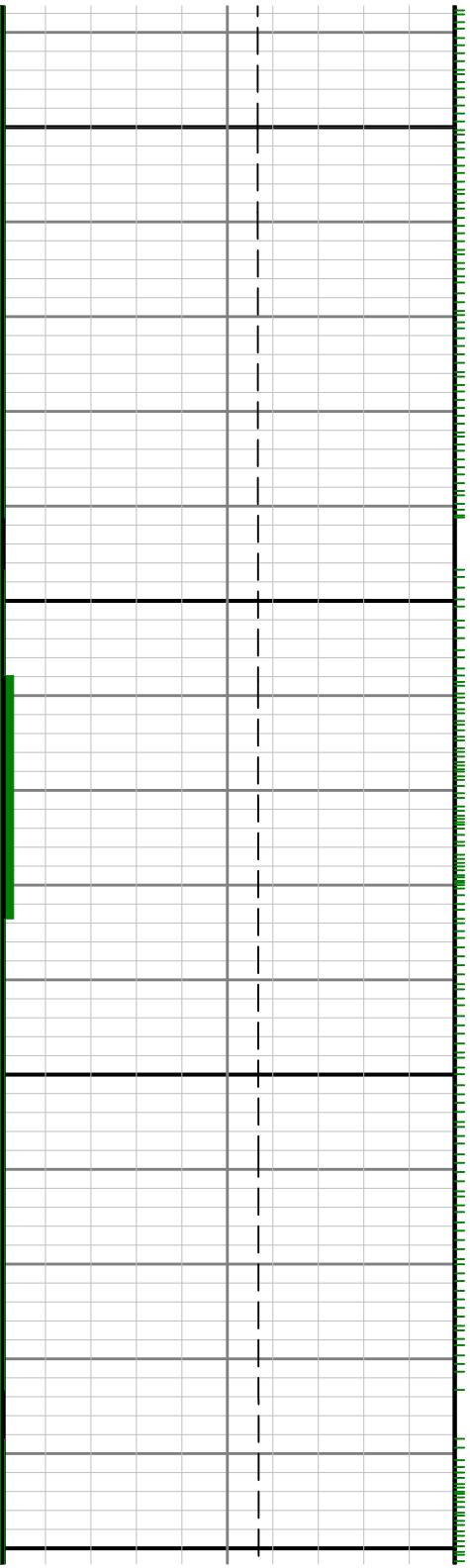
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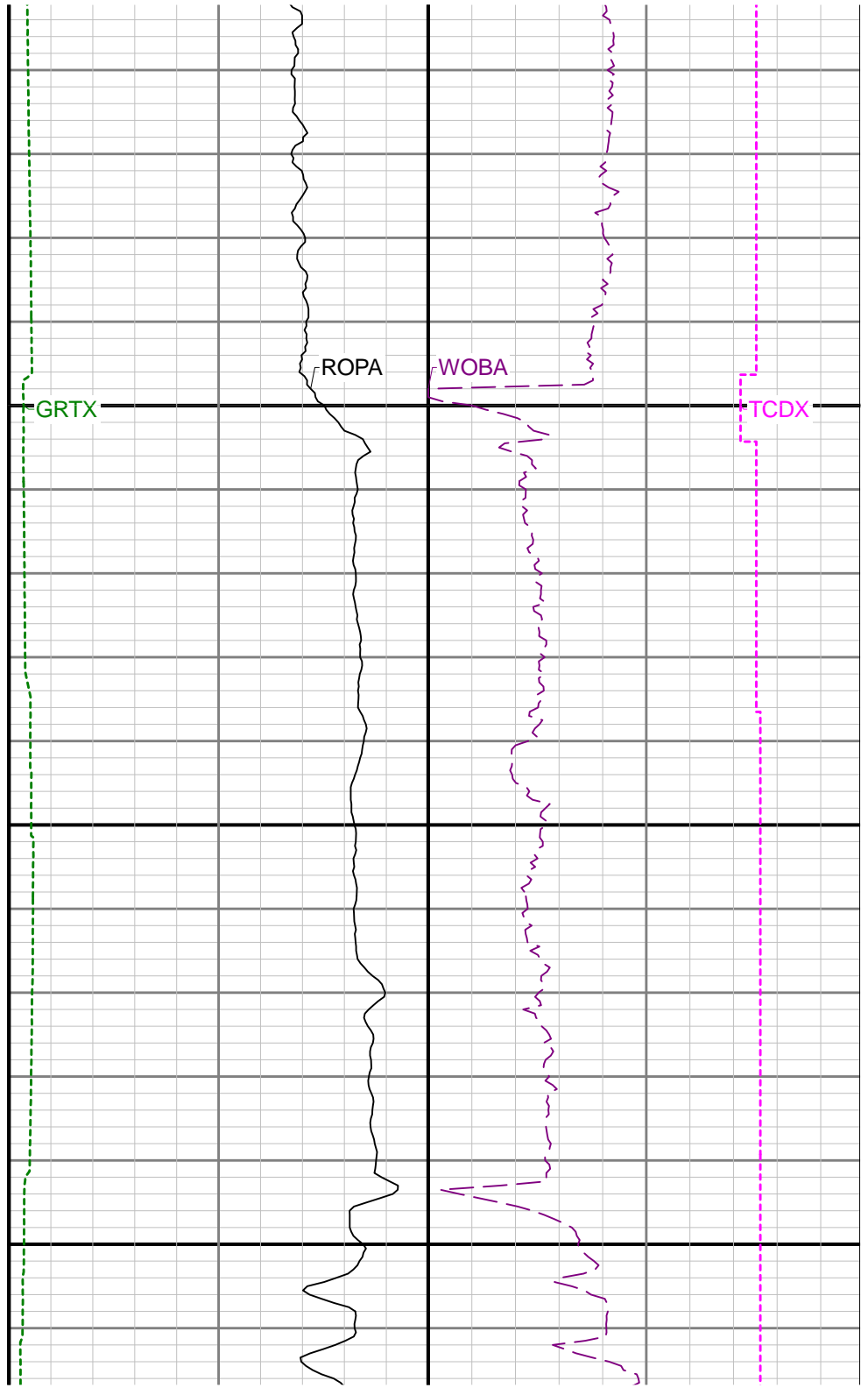
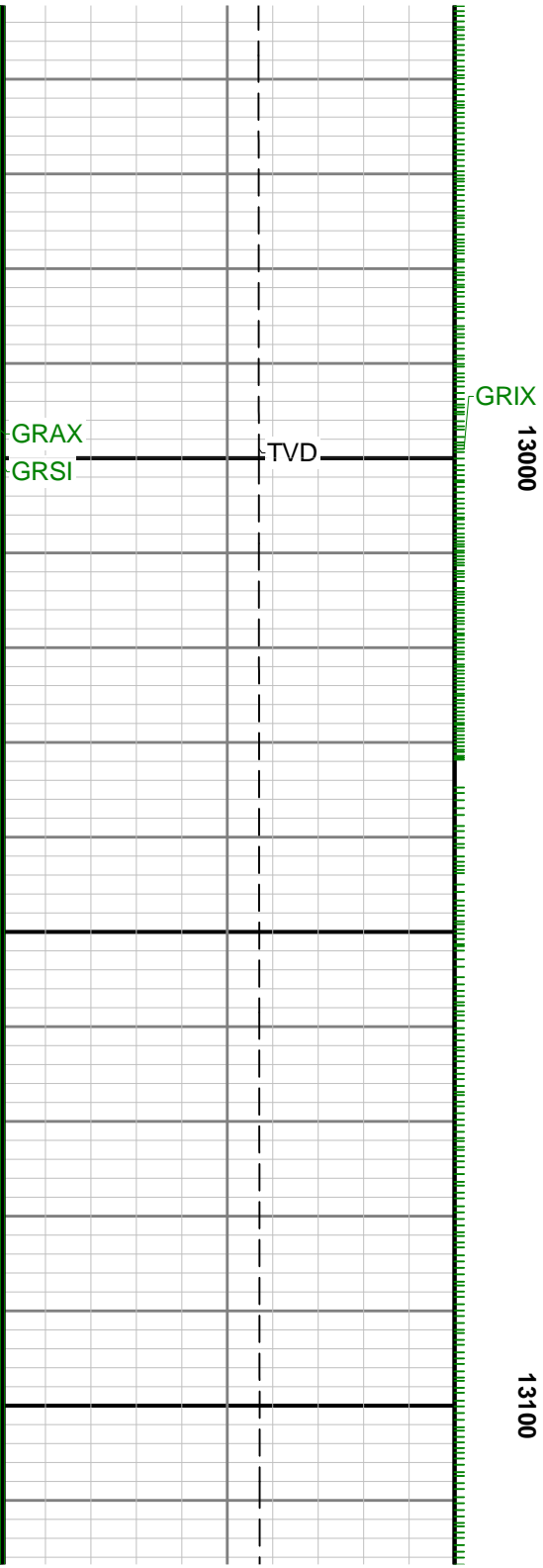
The graph shows a function on a coordinate grid. The x-axis ranges from 0 to 10, and the y-axis ranges from 0 to 3. A solid purple line represents the function, which is mostly horizontal at $y=1$. It has a vertical segment at $x=2.5$ where it goes from $y=1$ to $y=2$, and a horizontal segment at $y=2$ from $x=2.5$ to $x=3.5$. A dashed purple line shows a smoothed version of this function. A vertical dashed magenta line is drawn at $x=2.5$.

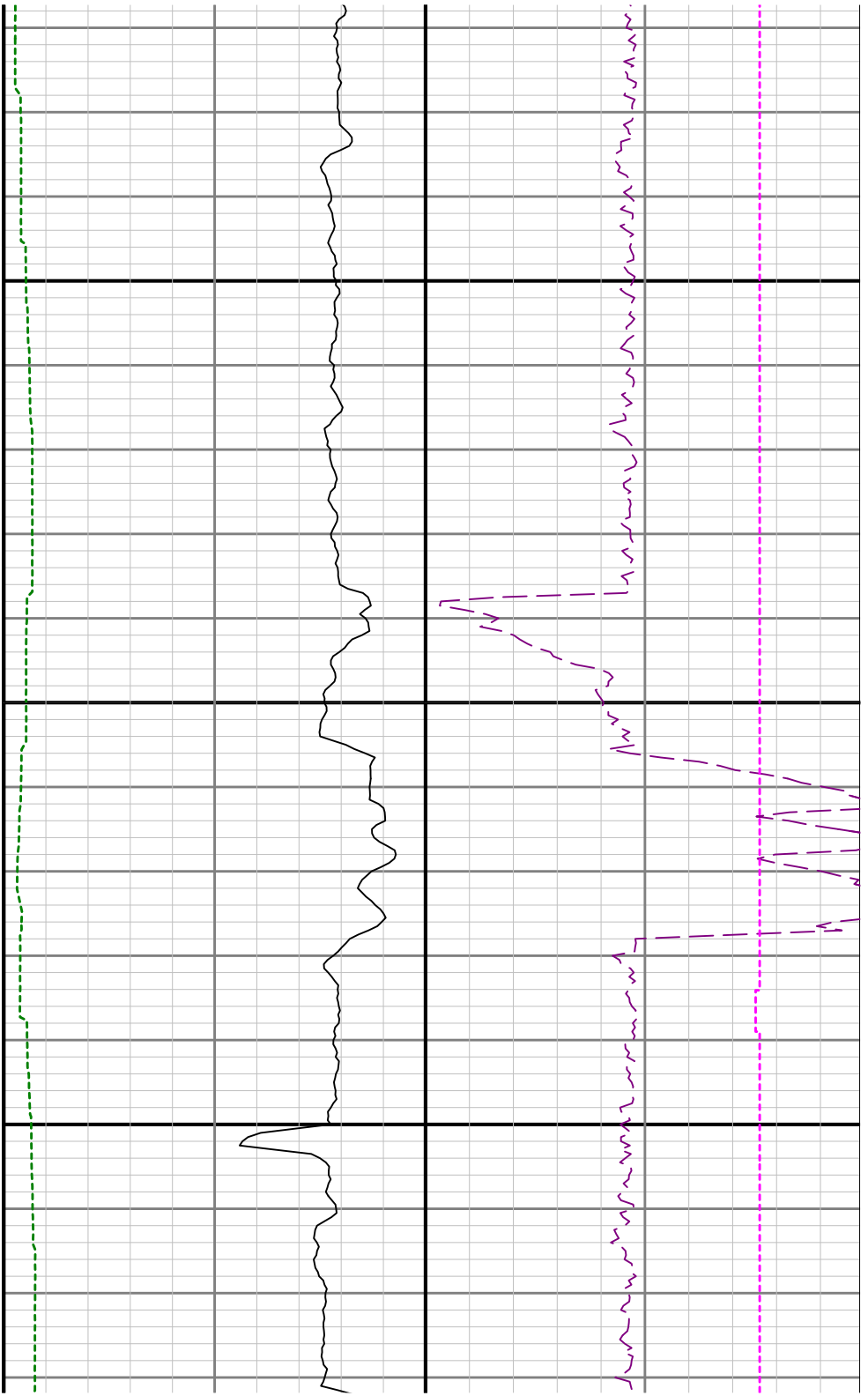


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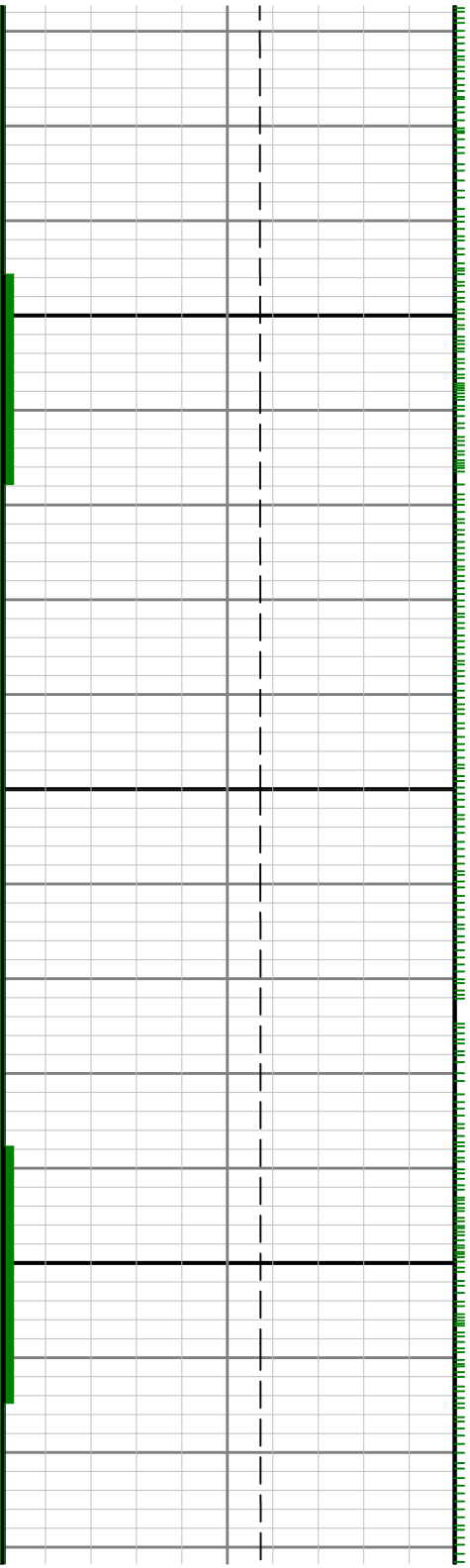
12900







13200





13300

13400

