

LWD REALTIME LOG COMPOSITE



Natural Formation Evaluation
Gamma Ray

Scale:

1:240 MD

Company: Anadarko

Well: English Farms 36N-8HZ

Depth Reference:

Field: Weld County

Driller's Depth

County: Weld

State: United States

Status:

Field Print

Surface Location:

Latitude:

Longitude:

Other Services:

API No: 05123415030000

Directional
VSS

Job ID: 7290479

SEC: 8

TWN: 1N

RGE: 65W

Permanent Datum (P.D.): Ground Level

Elevation:

4948.00 ft

KB:

0.00 ft

Log Measured From: Rig Floor

Above P.D.

16.00 ft

DF:

4964.00 ft

Dates

Interval Logged

Magnetic Field Reference

Date From: 2015-07-04

Top: (ft)

6600.00

Azi Reference North:

True

Dip Angle: (deg)

66.57

Date To: 2015-07-05

Bottom: (ft)

13009.00

Total Magnetic Field Strength: (nT)

52676

Spud Date: 2015-06-01

Mag to Reference North Correction: (deg)

8.09 E

Borehole Record

Casing Record

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

Size (in)

Weight (lb/ft)

From (ft)

To (ft)

13.500 76.00 1894.64

9.625

95.00

16.00

1860.00

7.875 1894.64 13009.04

Mud Record

Deviation Record

Type From (ft) To (ft)

Hole Size (in)

Interval (ft)

Inc | Az (Start)

Inc | Az (End)

Water Based Mud 76.00 13009.04

13.500

1818.64

0.31 | 92.47

25.47 | 347.57

92.68 | 179.80

7.875

11114.40

25.47 | 347.57

92.68 | 179.80

Acquisition System

Software Version

Other

Baker Hughes Cadence

1.0.6955.1

Rig:

Rig 1

Prior Studio

1.0.7056.2

Contractor:

Xtreme Drilling

District:

RMA

Unit:

D&E

"These interpretations and analyses ("Interpretations") are opinions provided by Baker Hughes Oilfield Operations, Inc ("Baker Hughes"), based upon industry practice, empirical relationships, assumptions and measurements, (many of which may be provided by the customer). The Interpretations are not infallible and may be subject to different opinions. Vjwu."Dcmgt"JwiJgu"fqgu"pqv"ycttcpv"vjgkt"ceewtce{."eqttgevpguu."qt"eqorngvgpguu."qt"vjcv"vjg"ewuvqogtøu"cpflqt"cp{"vjktf"rctv{øu"tgnkcpes"qp"uwej"Kpvgtrtgv cvkqpu"yknn"cee qornkuj"cp{"rctvkewnct"tguwnvu0"Vjg"ewuvqogt"cuuwogu"hwnn"responsibility for the use of the Interpretations and for decisions based thereon and the customer agrees to release, defend and indemnify Baker Hughes, its parent, subsidiaries and affiliated or related entities, and subcontractors, together with its and their officers, directors, employees, agents and invitees against, any and all claims, losses, damages, or expenses sustained by the customer or any third party arising out of reliance upon or use of the Interpretations, without regard to the cause(s) thereof, including without limitation any form of negligence on the

part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and

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.
						Top	Bottom	From	To	Start Logging	End Logging	Hours
						(ft)	(ft)	(ft)	(ft)			
1	1	13.500	PDC	4.00	Steerable	28.39	1847.03	76.00	1894.64	2015-06-05 12:40	2015-06-06 01:50	9.70
2	2	7.875	PDC	2.00	Steerable	1853.01	12967.41	1894.64	13009.04	2015-07-03 14:12	2015-07-05 23:20	51.49

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Andrew Overbey	2015-06-05	2015-06-06	Marchus Boucher	2015-06-05	2015-06-06	Andrew Overbey	2015-07-03	2015-07-07
Matt Leopold	2015-07-03	2015-07-07						

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2015-07-04 18:00	2	8165.14	Water Based Mud	9.2	57	-	0.0	66.9/33.1	Flow Line	63000	0.00

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	12235767	Gamma (single)	11.51	47.61	6.750	3.375
1	NaviGamma	12235767	VSS	14.88	50.98	6.750	3.375
1	NaviGamma	12235767	Directional (mag)	14.88	50.98	6.750	3.375
2	NaviGamma	13312569	Gamma (single)	10.65	41.63	6.500	3.440
2	NaviGamma	13312569	Directional (mag)	14.07	45.05	6.500	3.440
2	NaviGamma	13312569	VSS	14.07	45.05	6.500	3.440

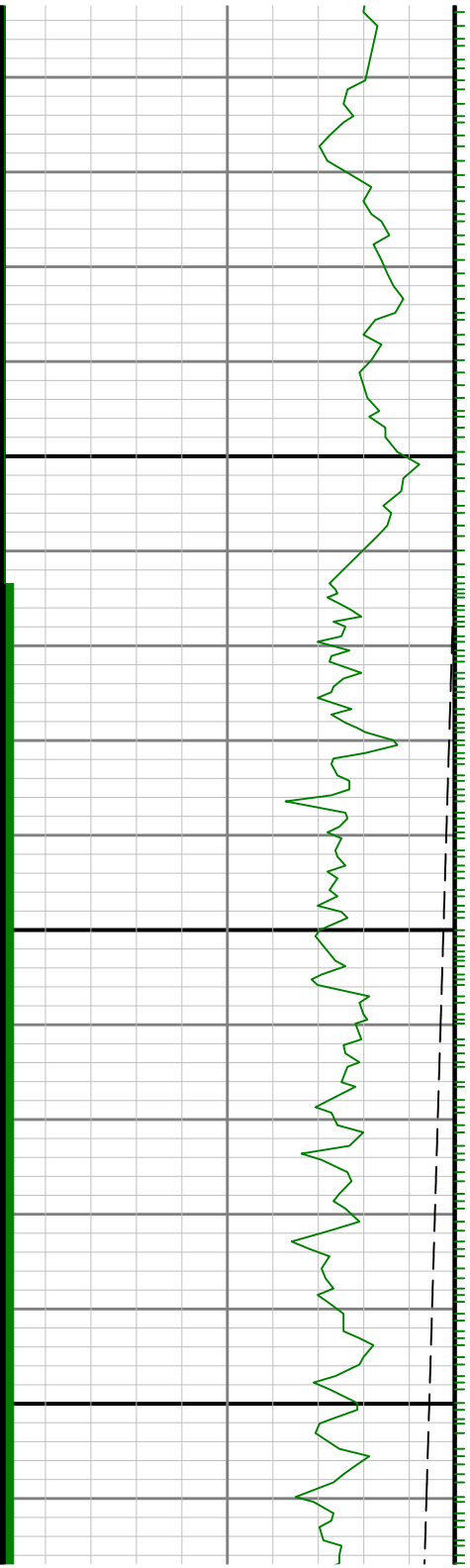
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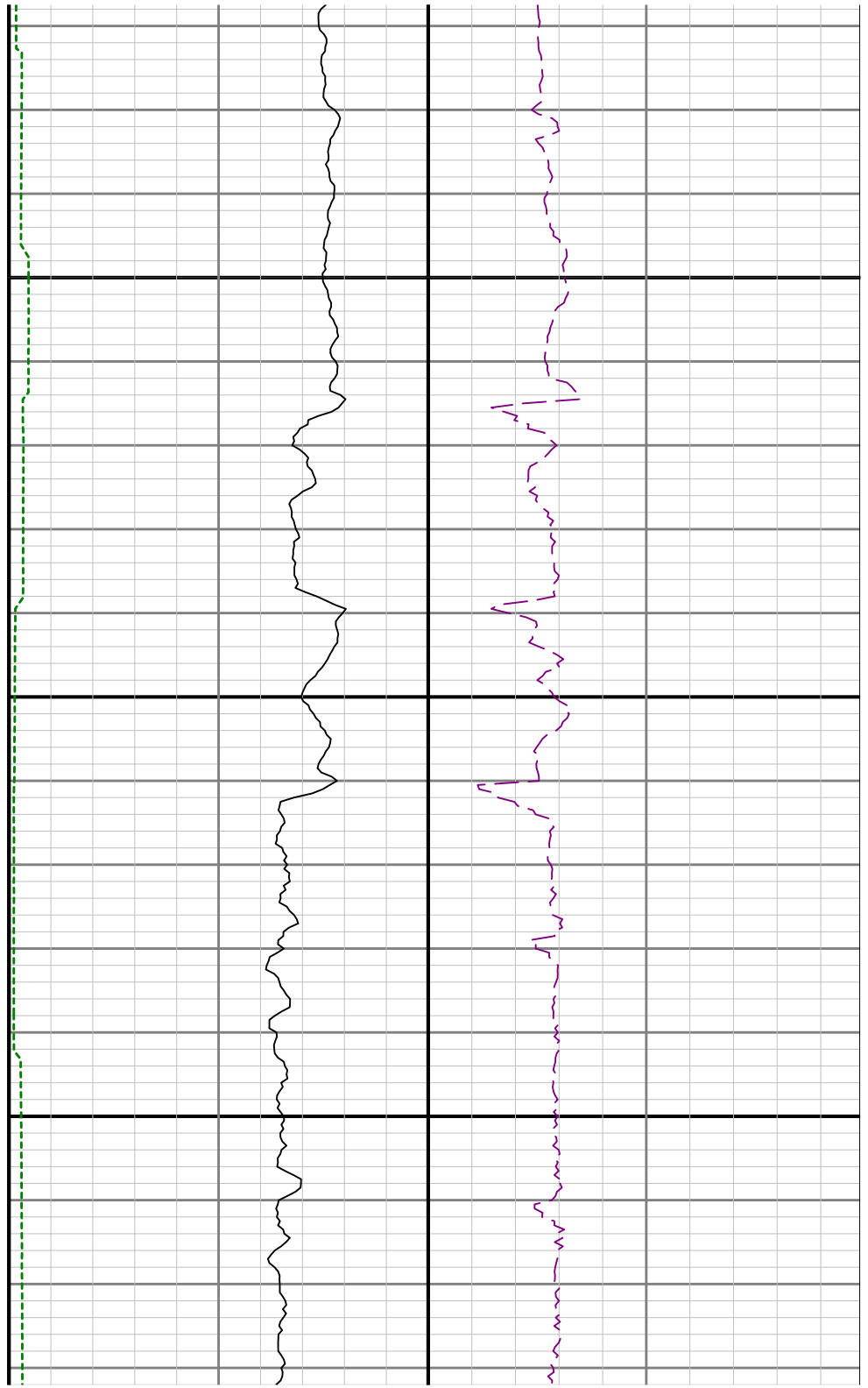
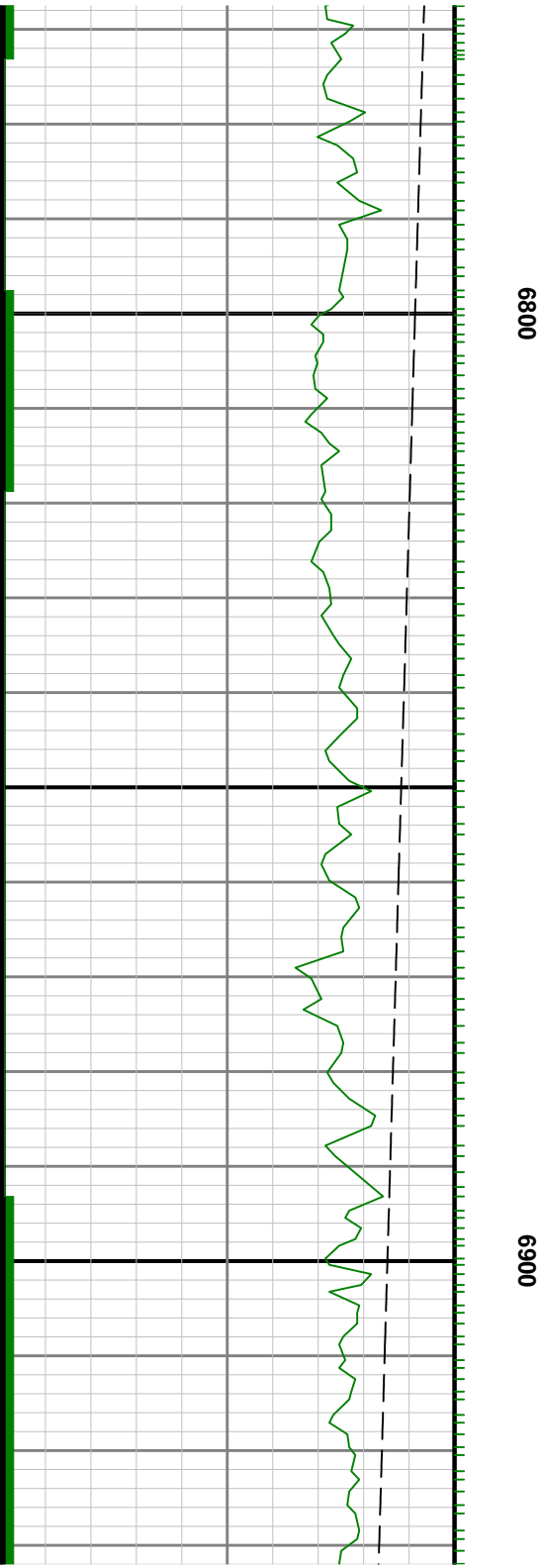
- 1 Baker Hughes INTEQ run 1 utilized a 6.75 inch NaviGamma (Directional and Gamma Ray) tool ran behind an 13.5 inch bit with a steerable assembly from 0 to 1891 feet MD (0 to 1778 feet TVD).
- 2 Baker Hughes INTEQ run 2 utilized a 6.5 inch NaviGamma (Directional and Gamma Ray) tool ran behind an 7.875 inch bit with a steerable assembly from 1891 to 13009 feet MD (1778 to 7156 feet TVD).
- 3 A sliding indicator is shown on the left side of track 1 as a heavy line. The indicator has been shifted to the Gamma Ray sensor offset to correspond with Gamma

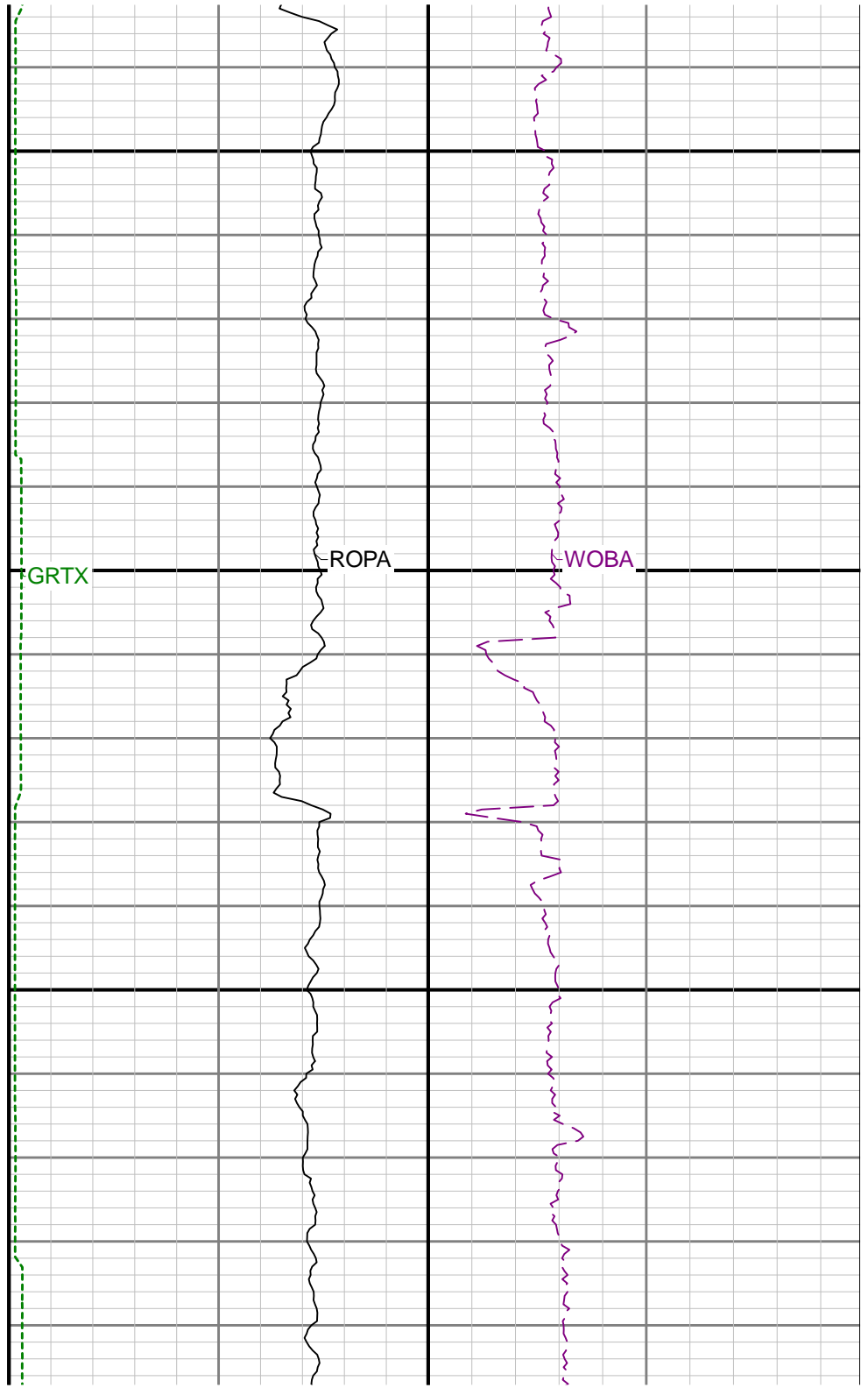
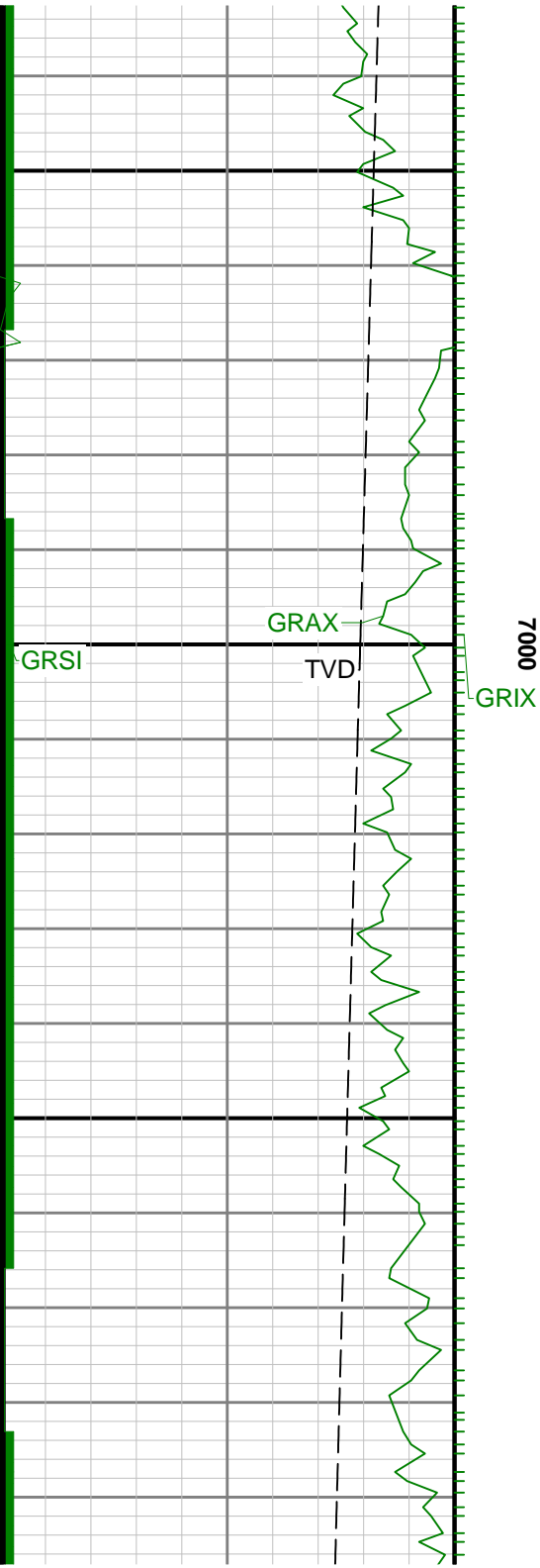
Source		Description				
F_ORIG.		ORIG.:R001-R002				
Gamma Ray Apparent 0.5 ft Average GRAX 0150		MD 1:240 feet	Rate of Penetration 3 ft Average ROPA 10000		Surface Weight On Bit 1 ft Average WOBA 0100	
API True Vertical Depth TVD 80006400 ft			ft/h Gamma Ray Time Since Drilled GRTX 0600 min		klb Downhole Temperature TCDX 0300 degF	
		6600				

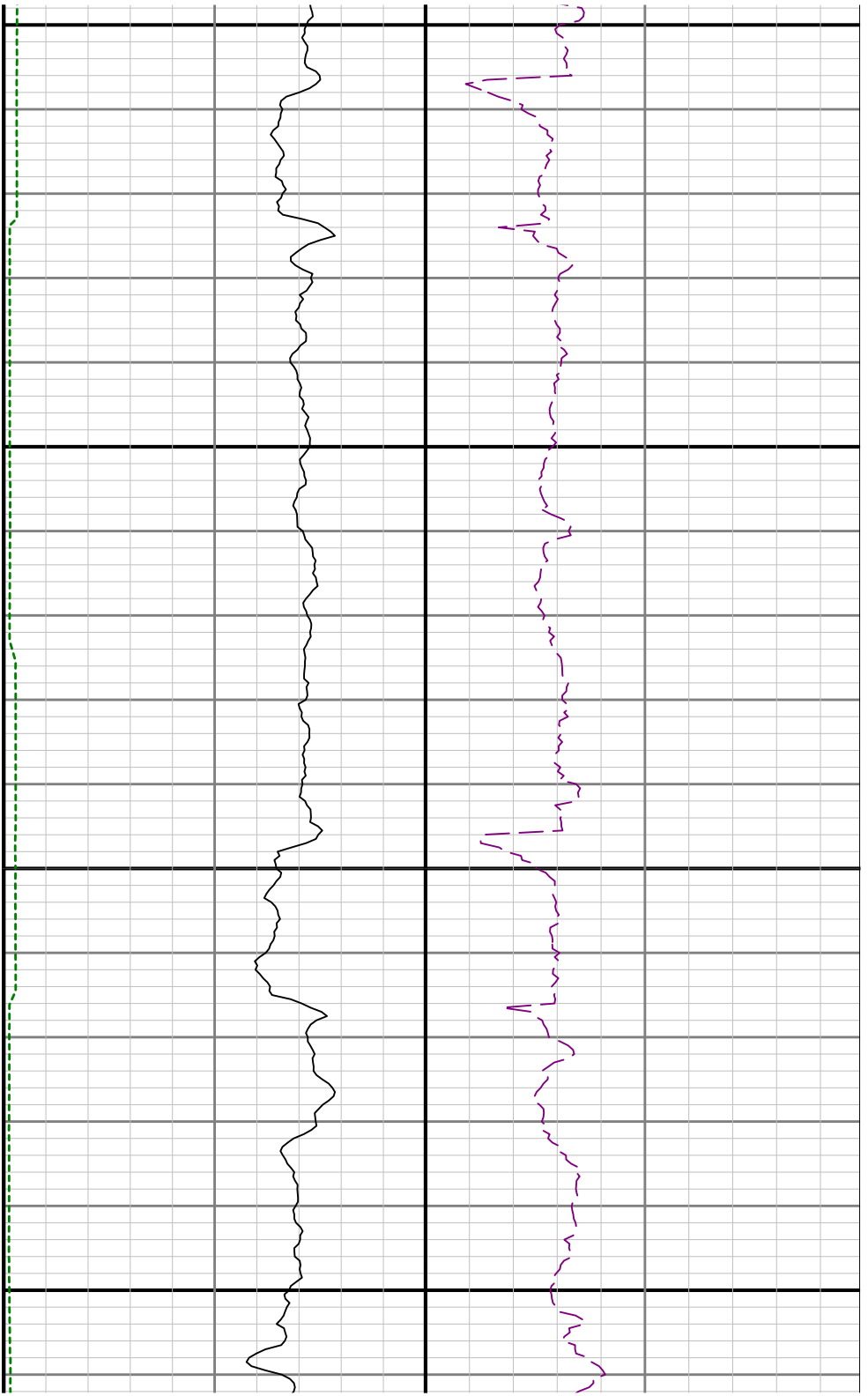


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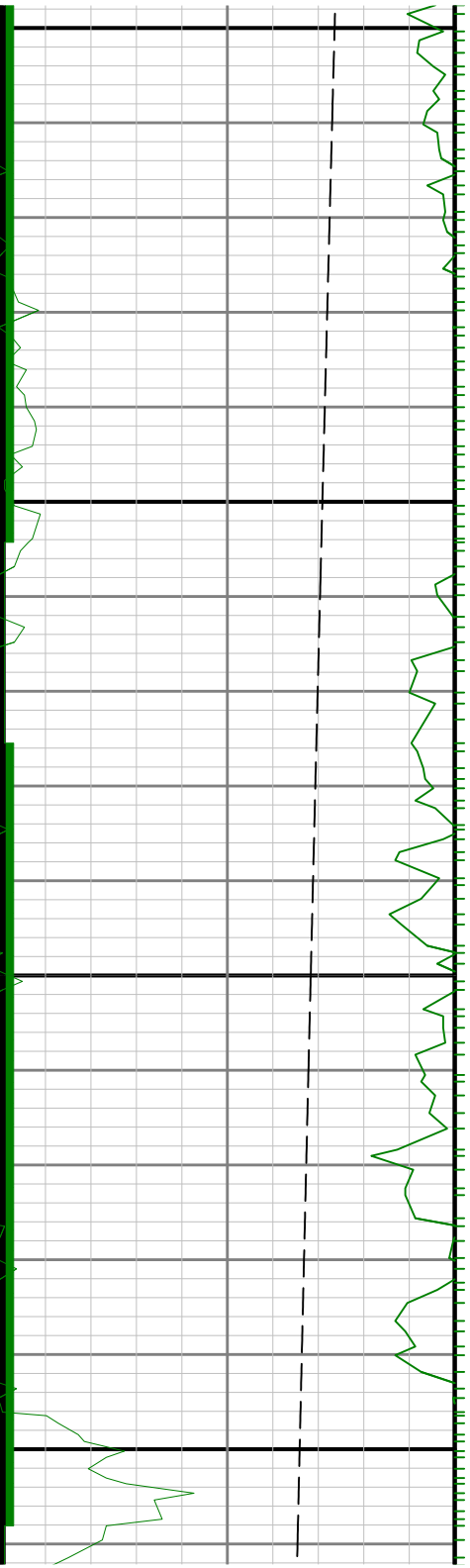


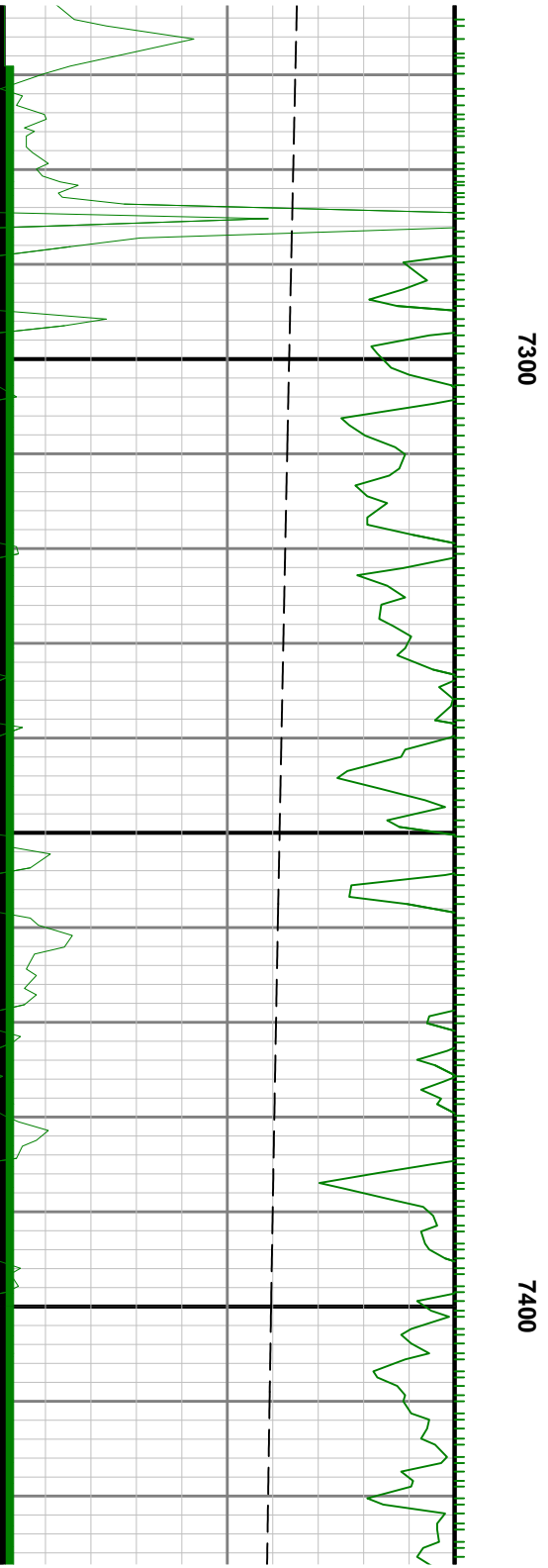
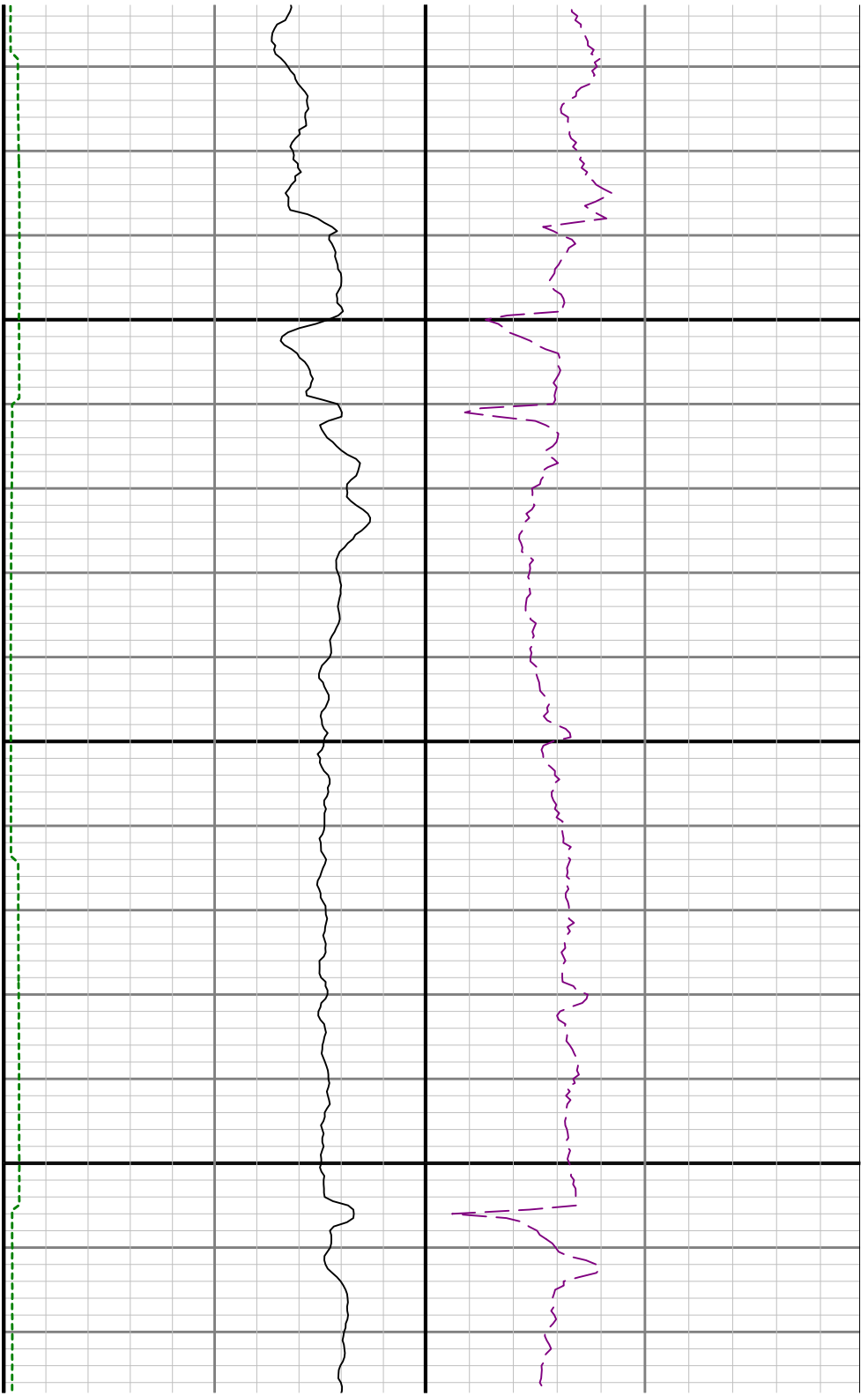


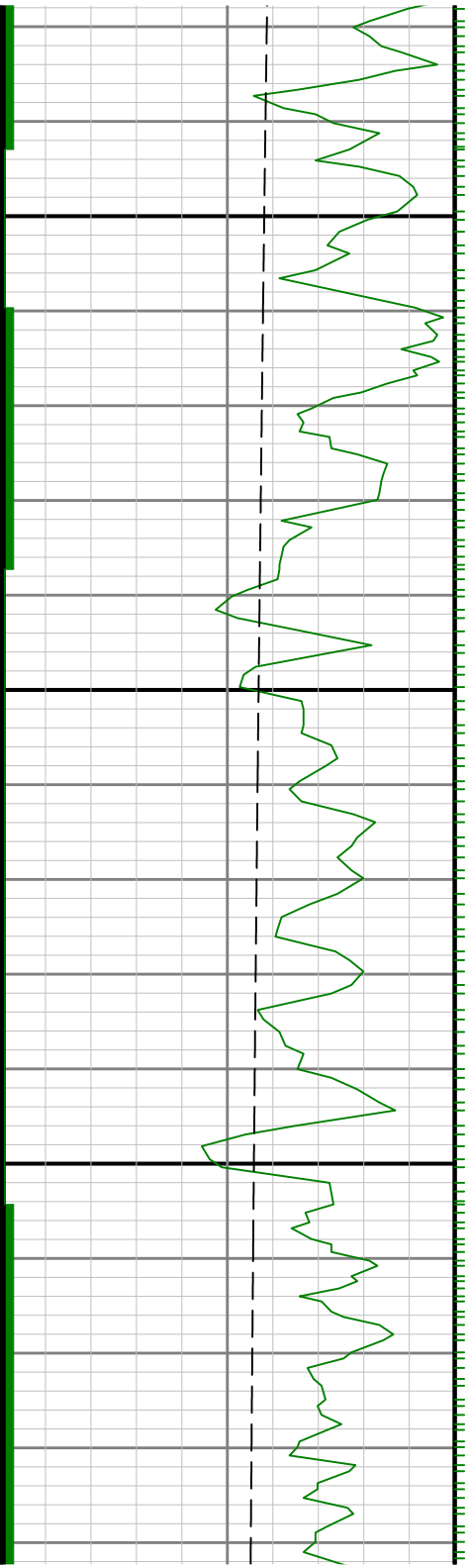


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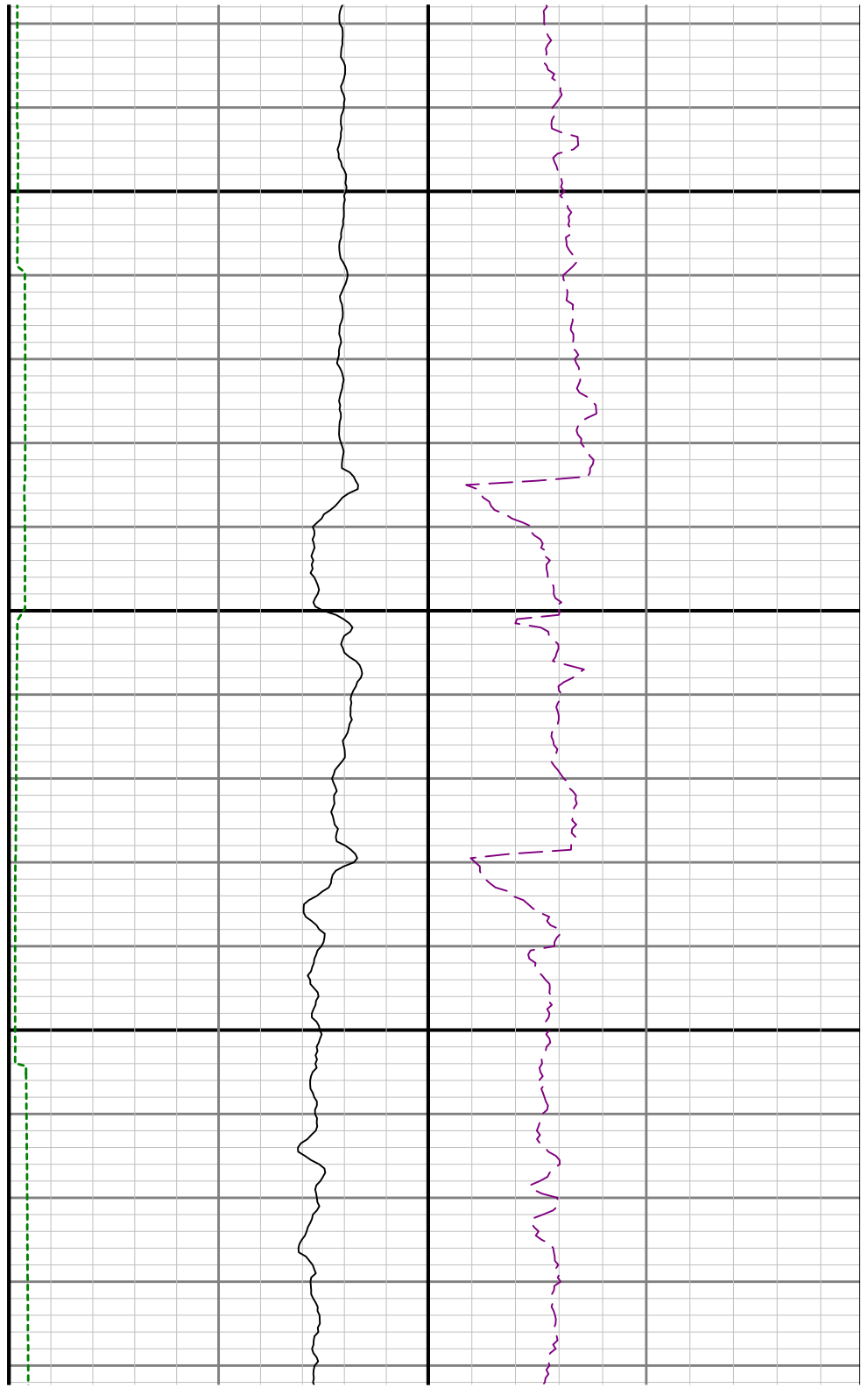
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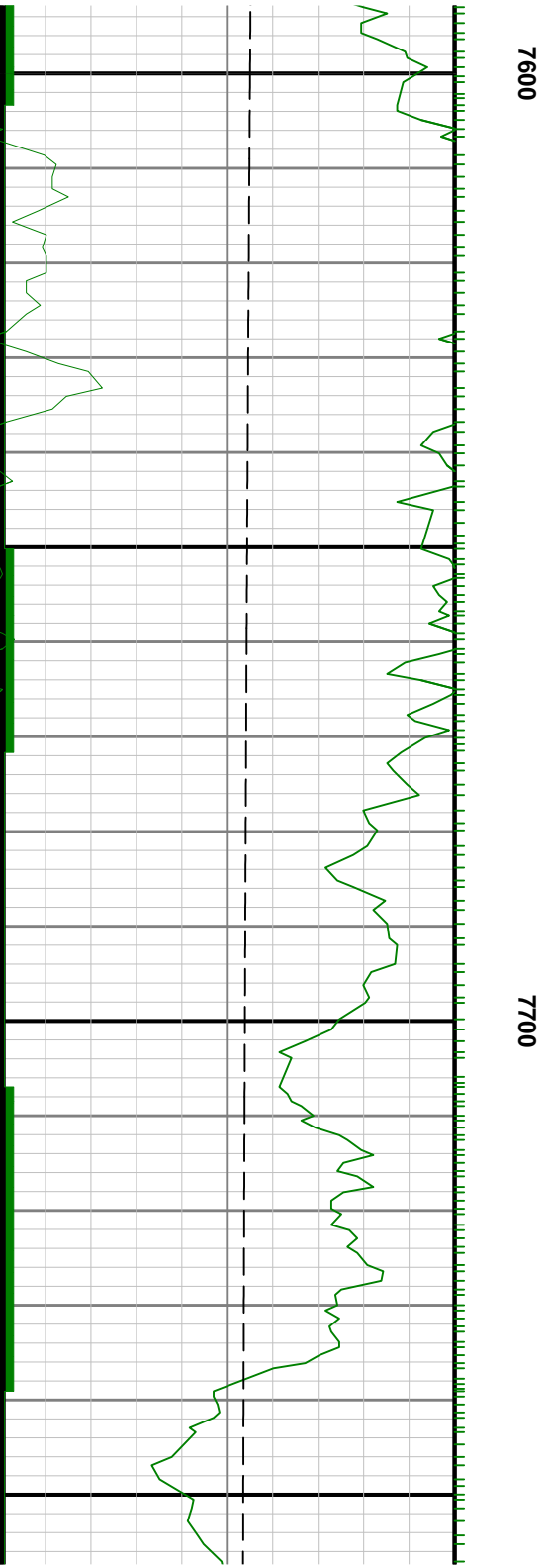
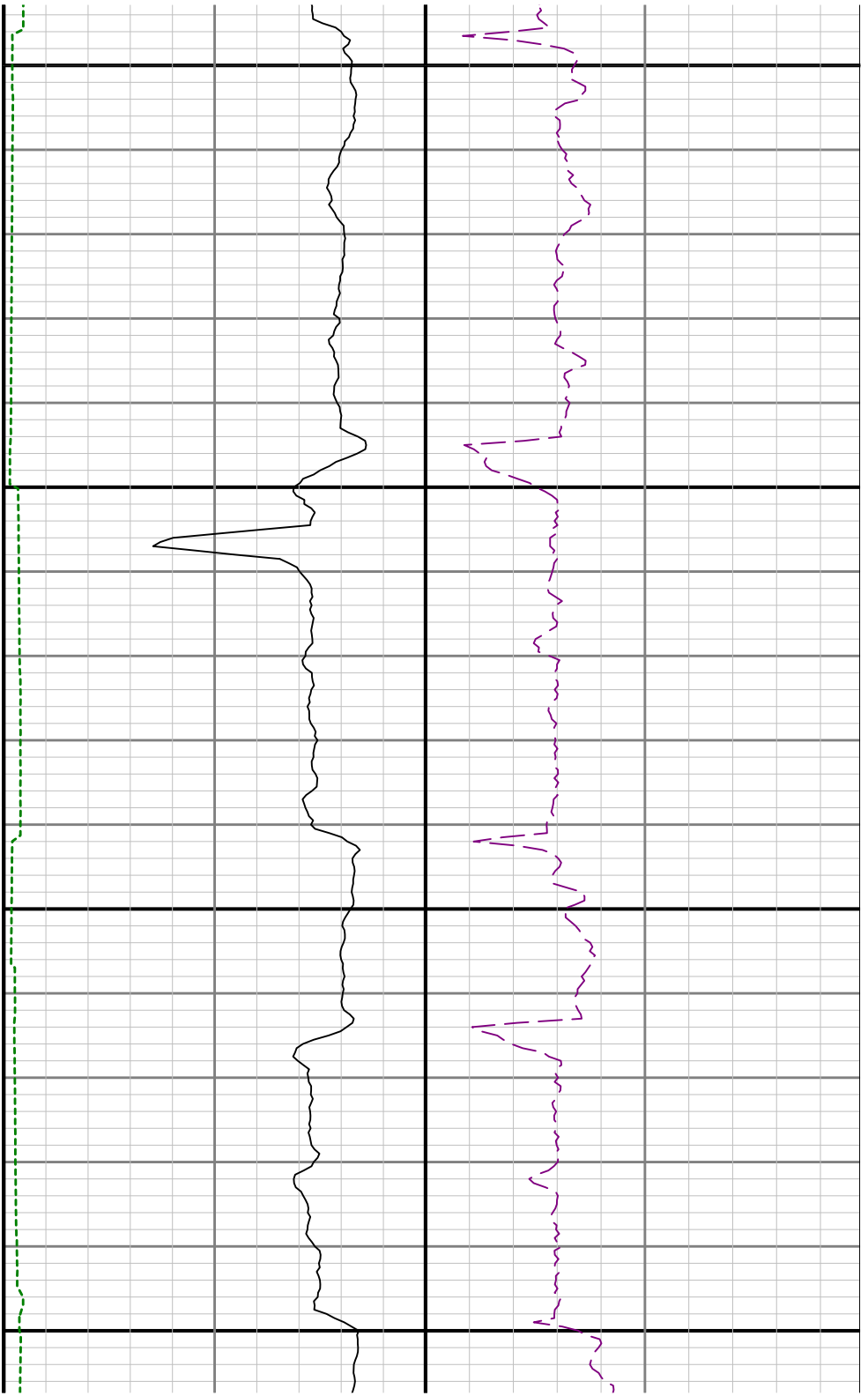


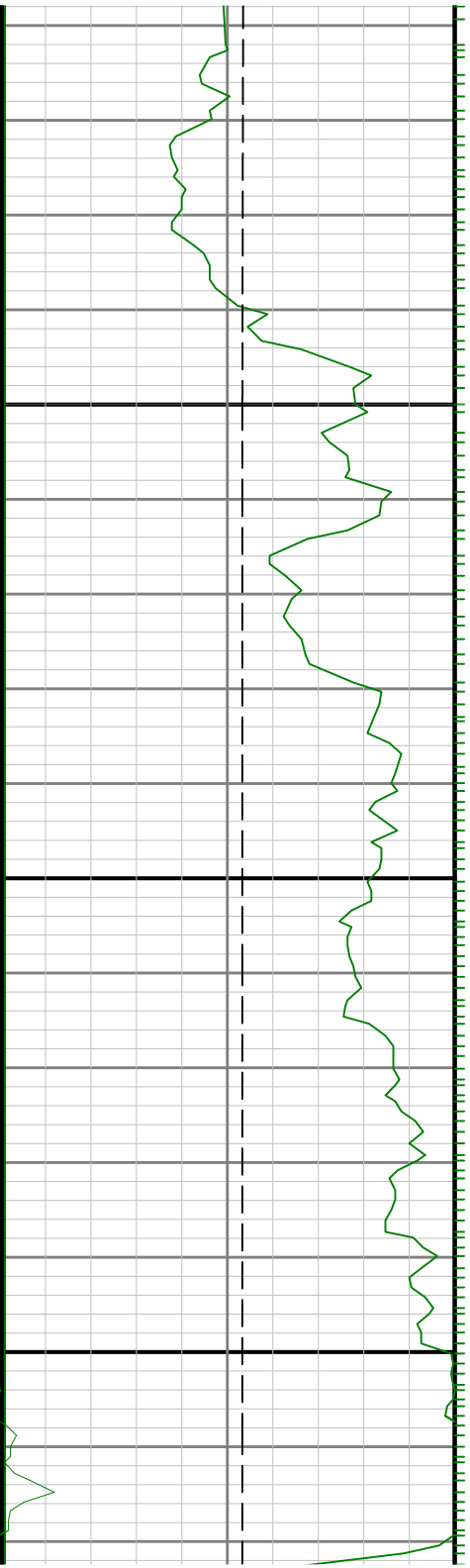




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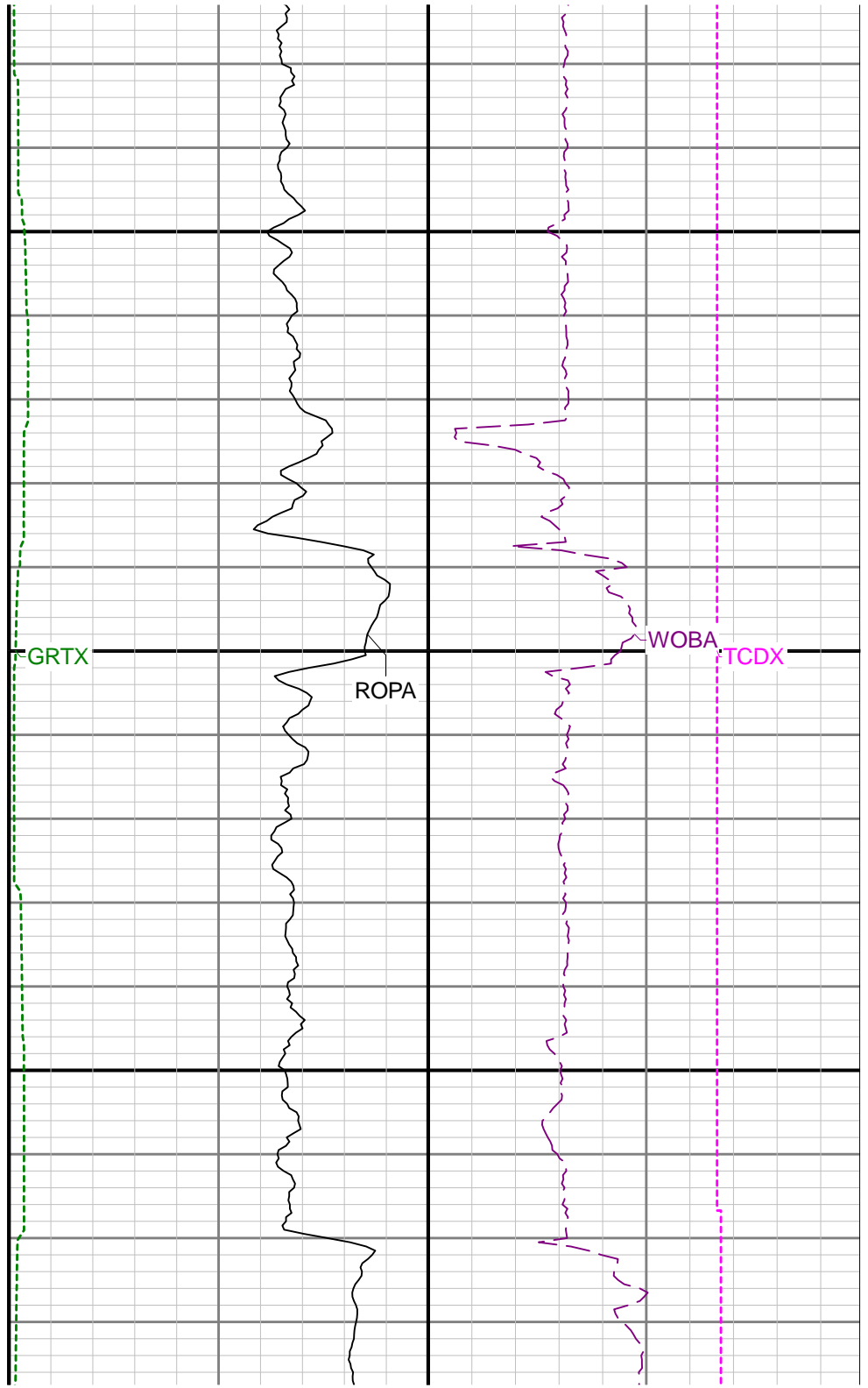
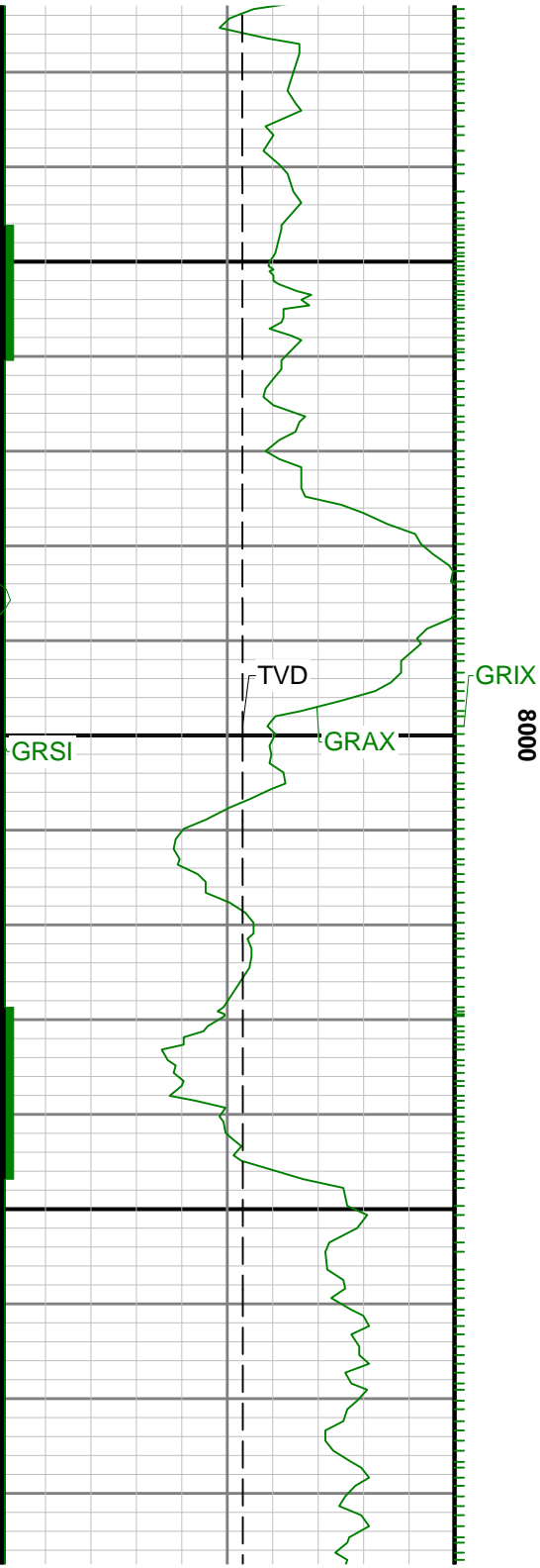


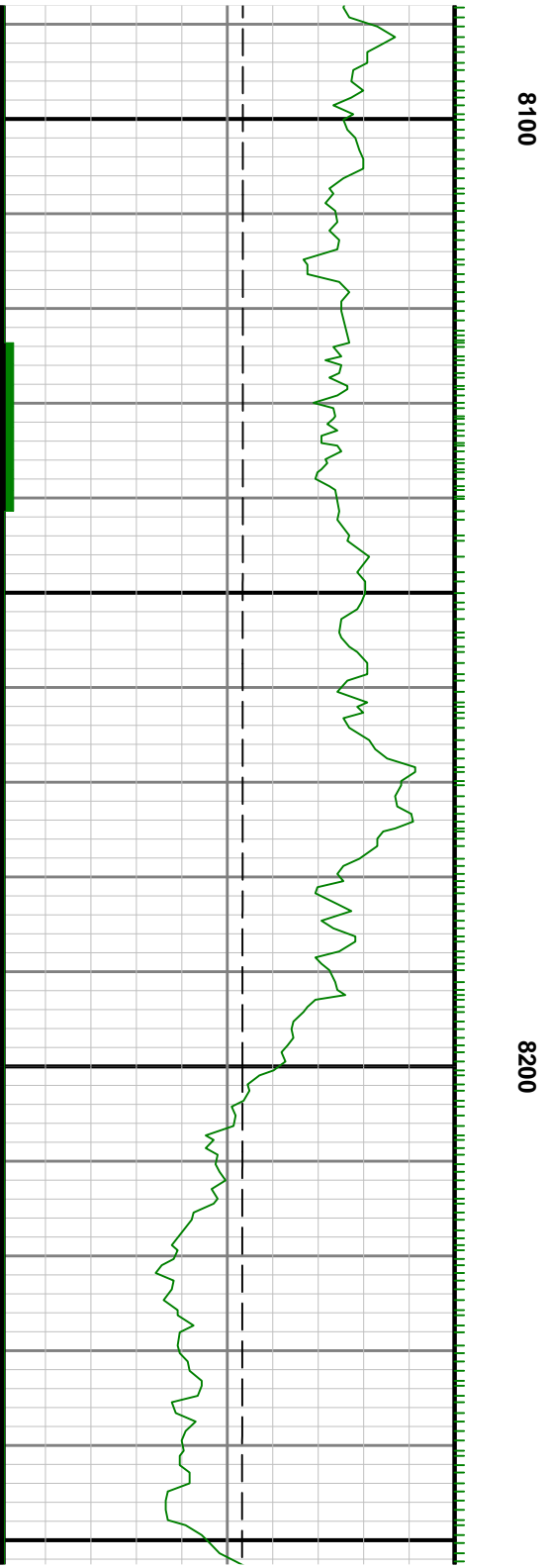


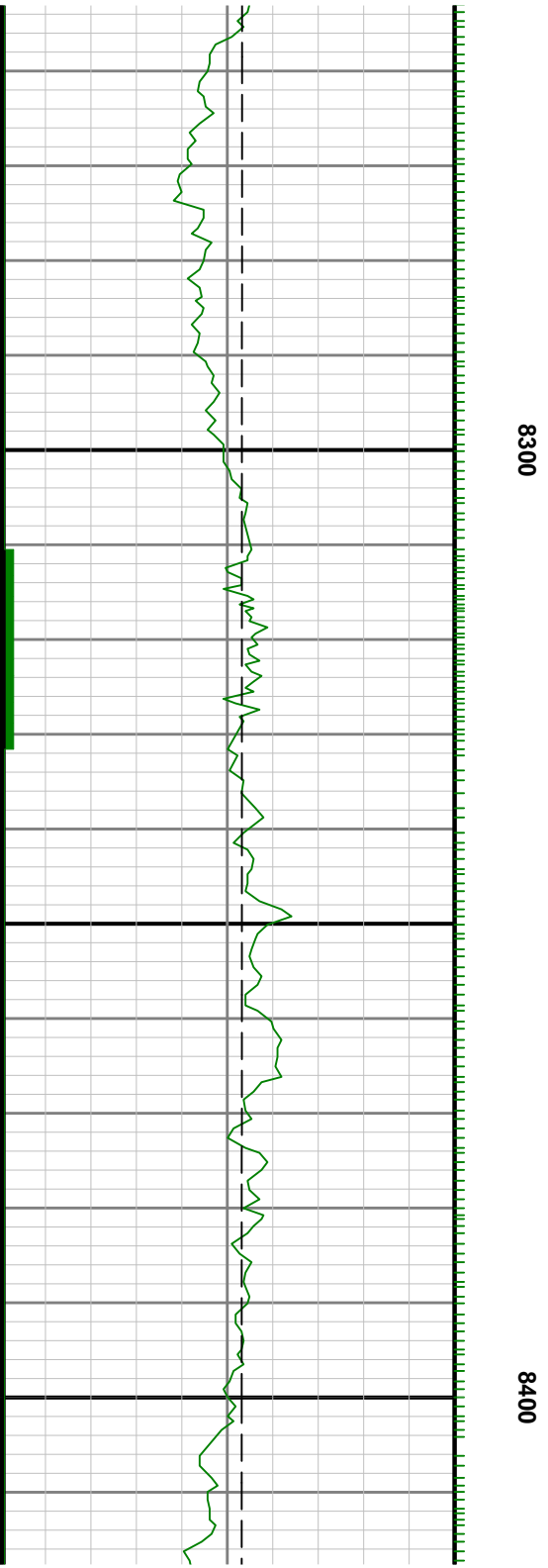
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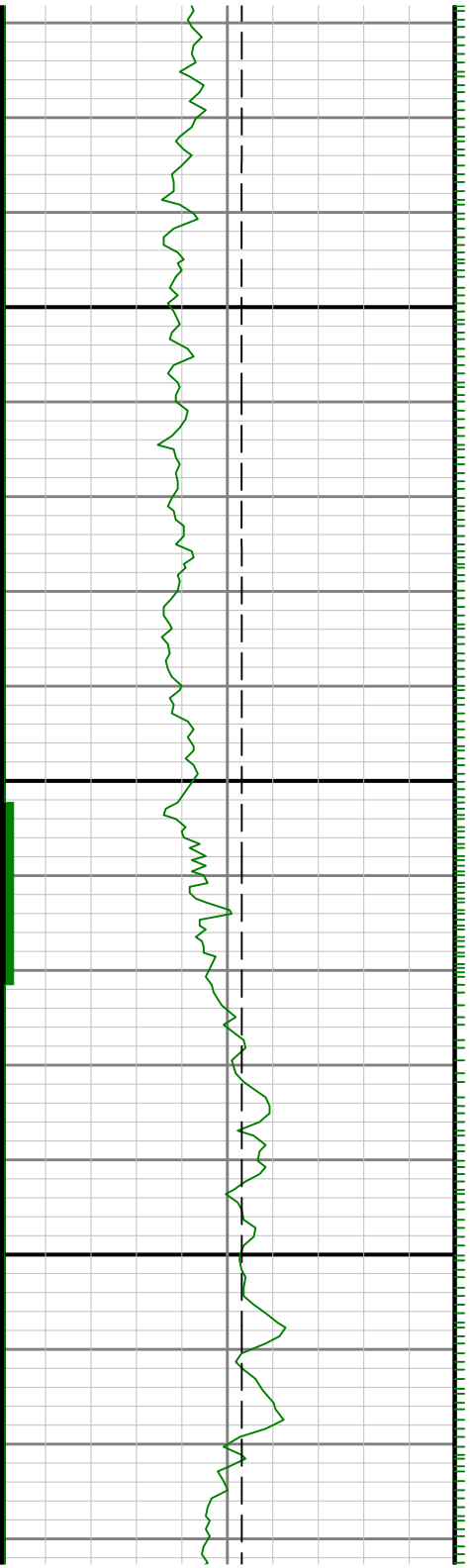
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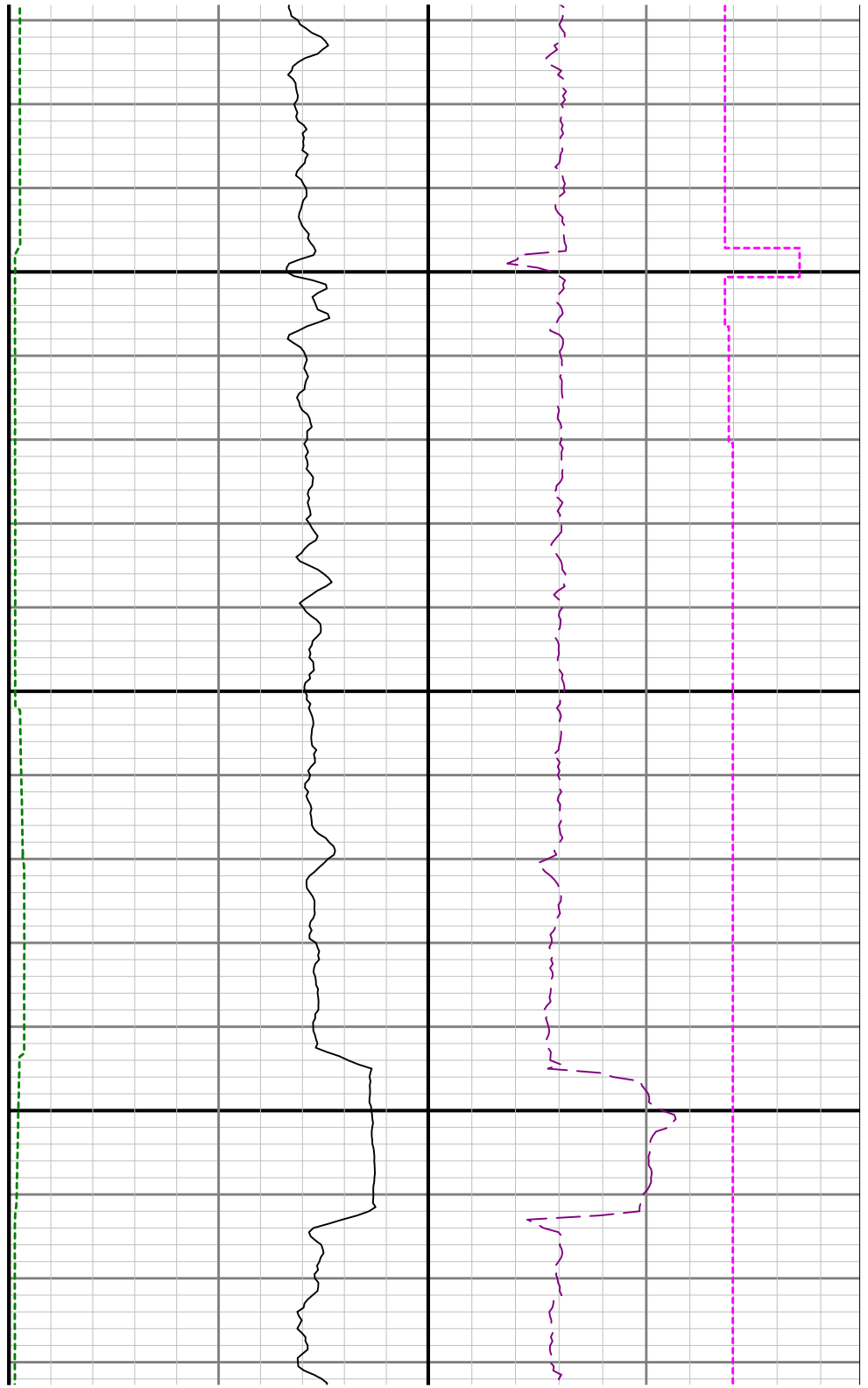


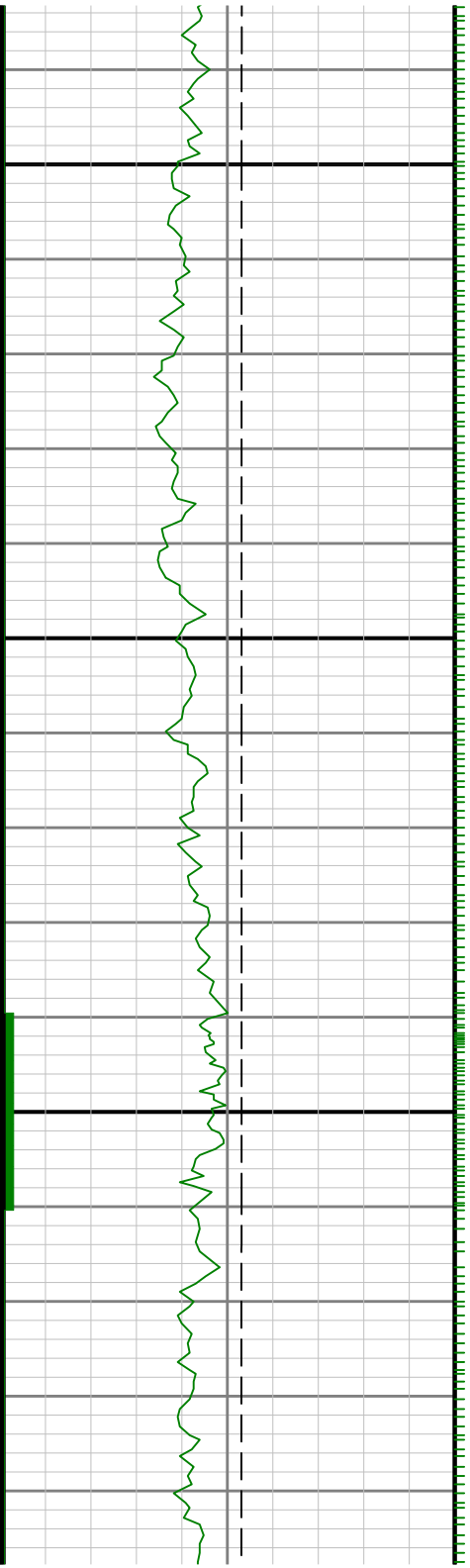






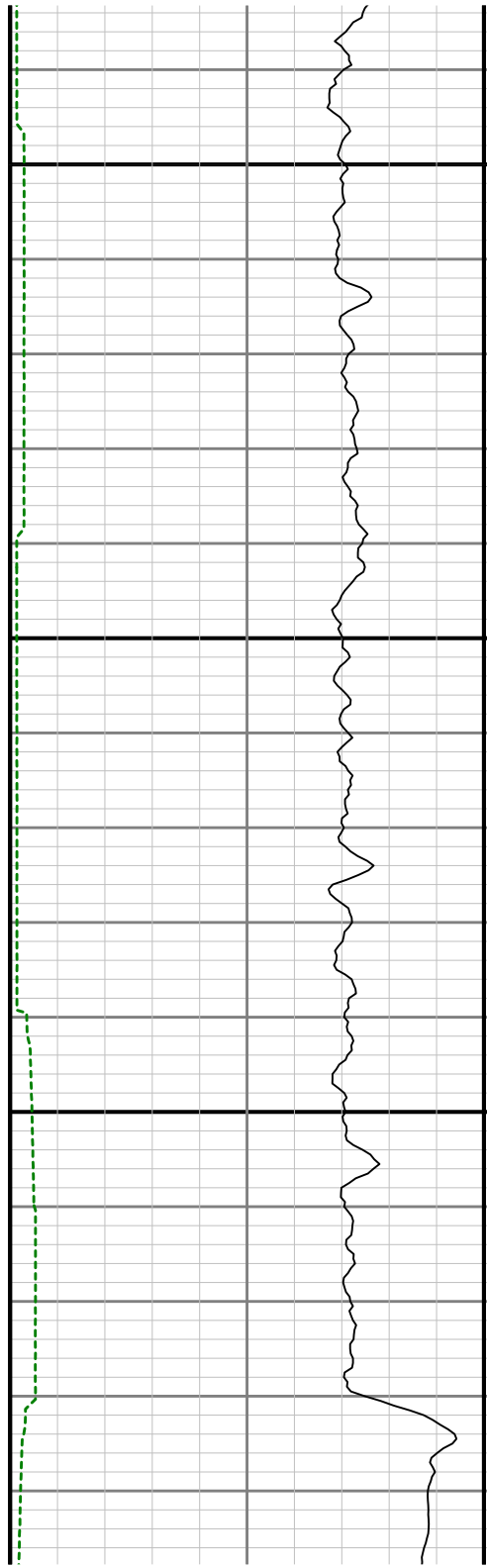
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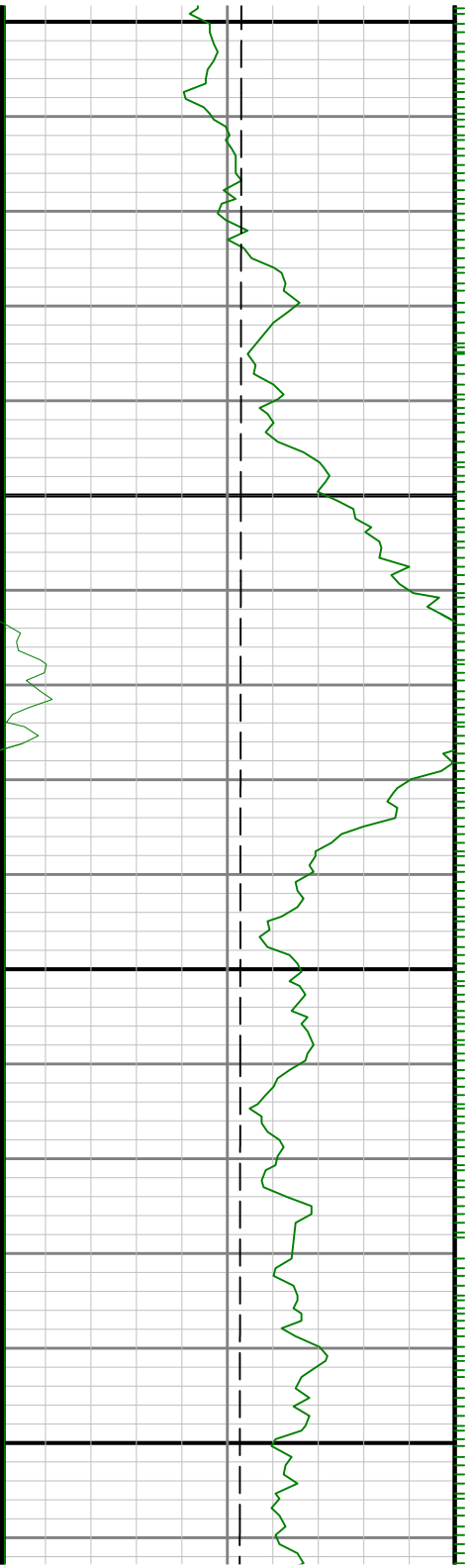




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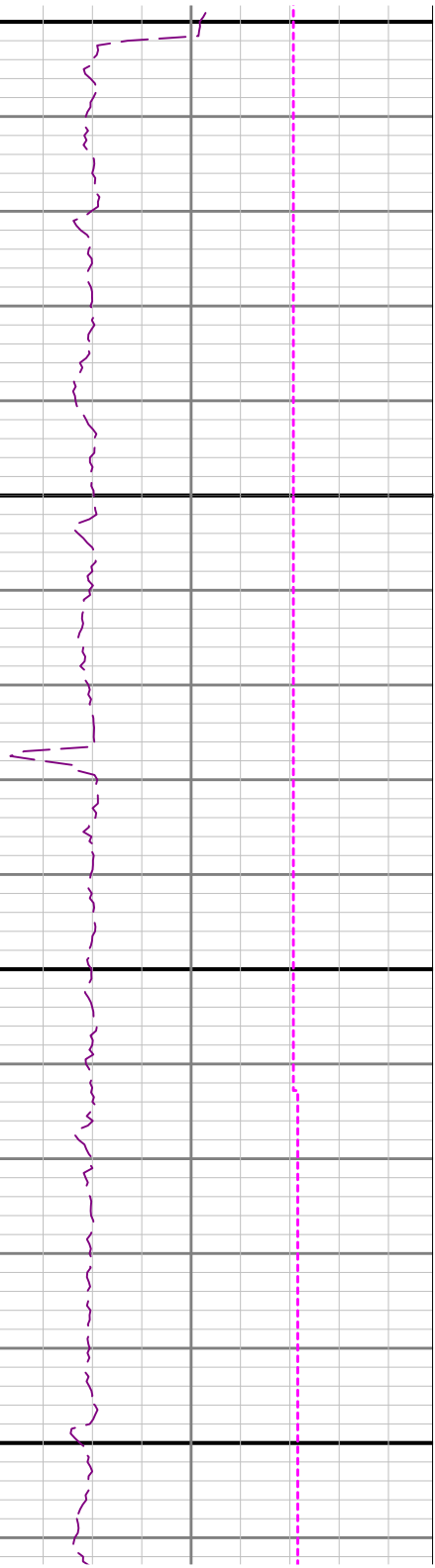
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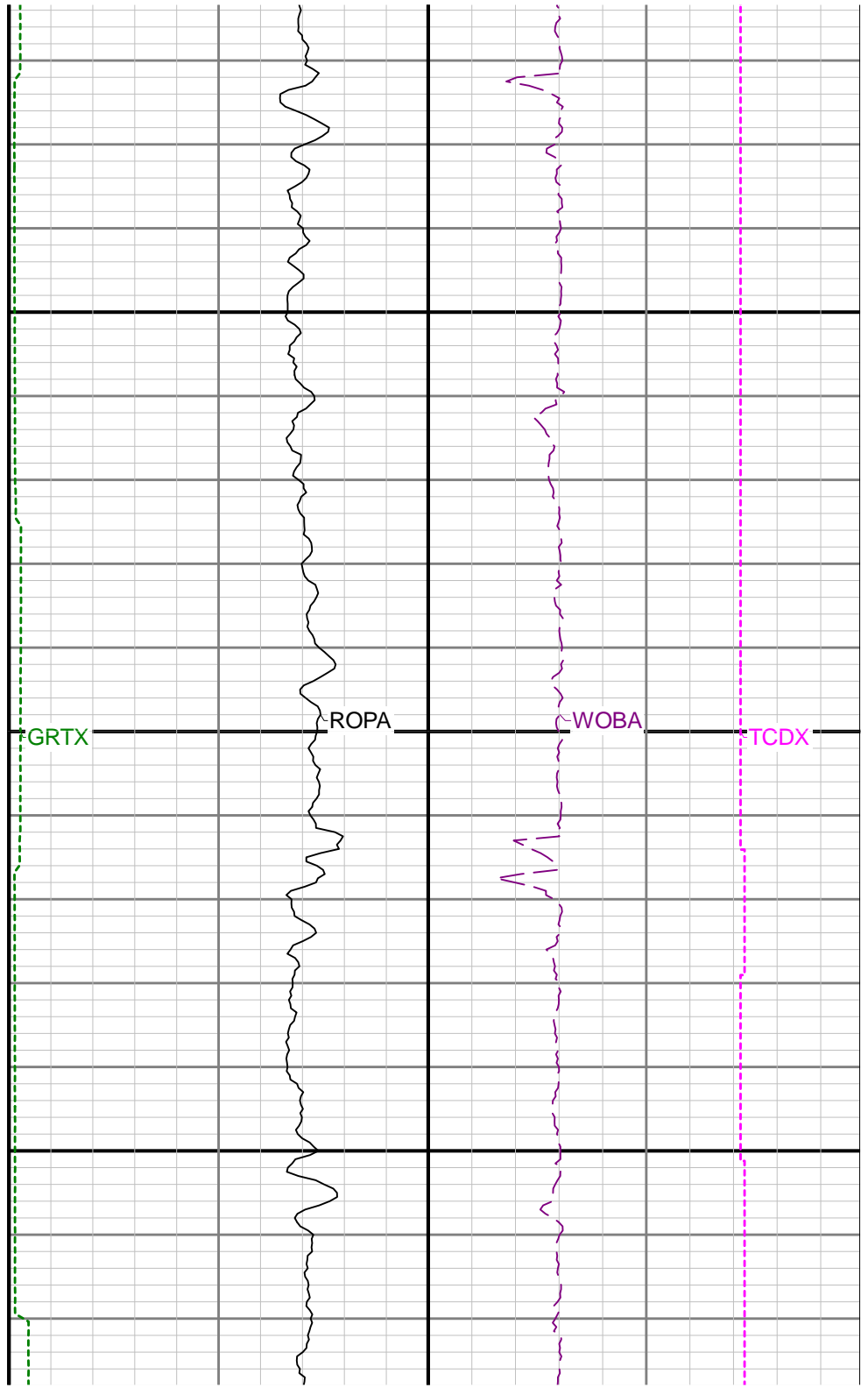
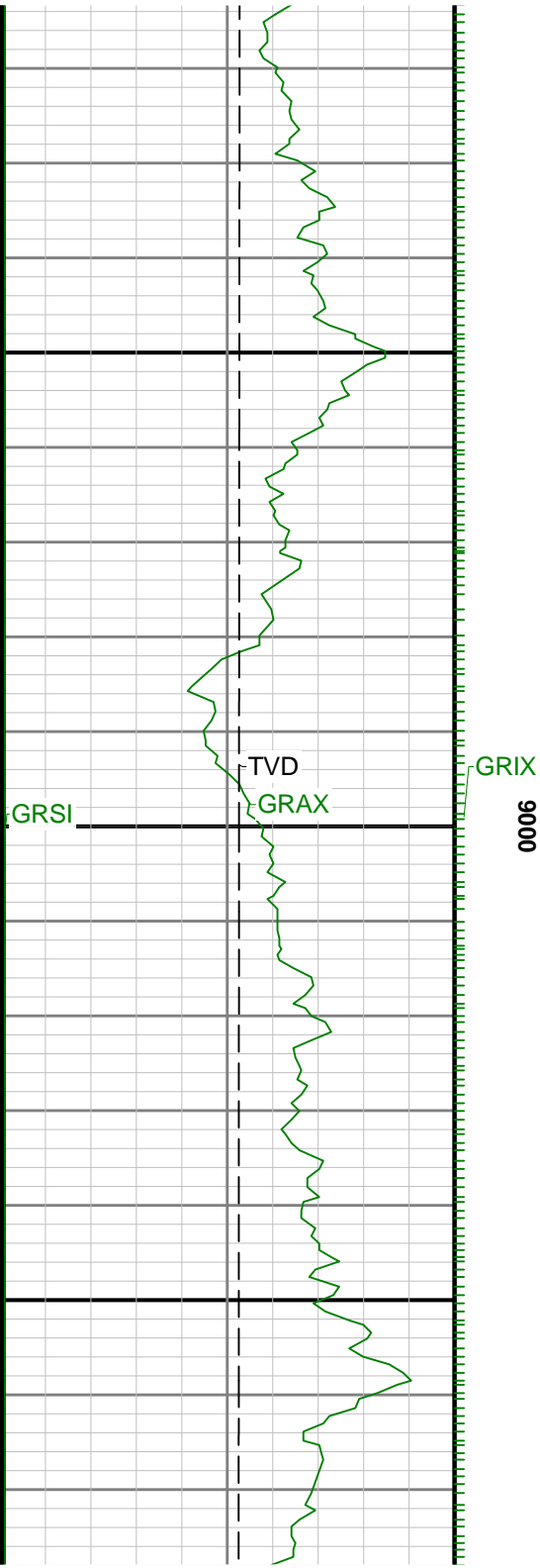


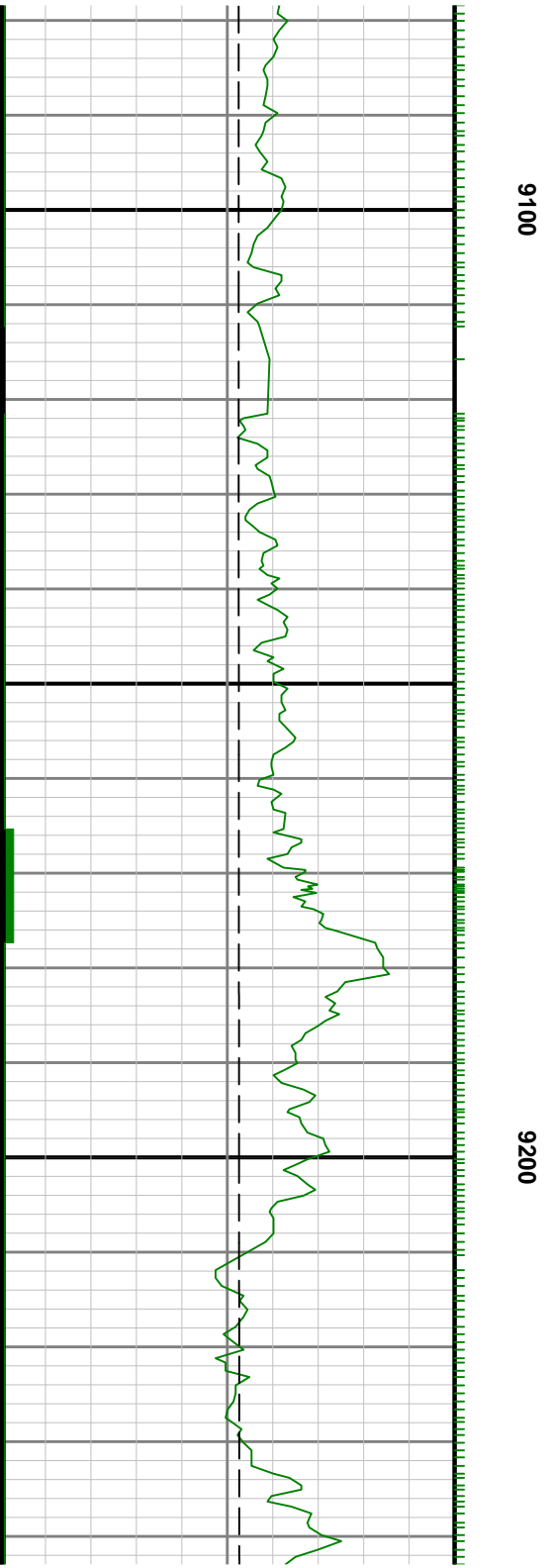


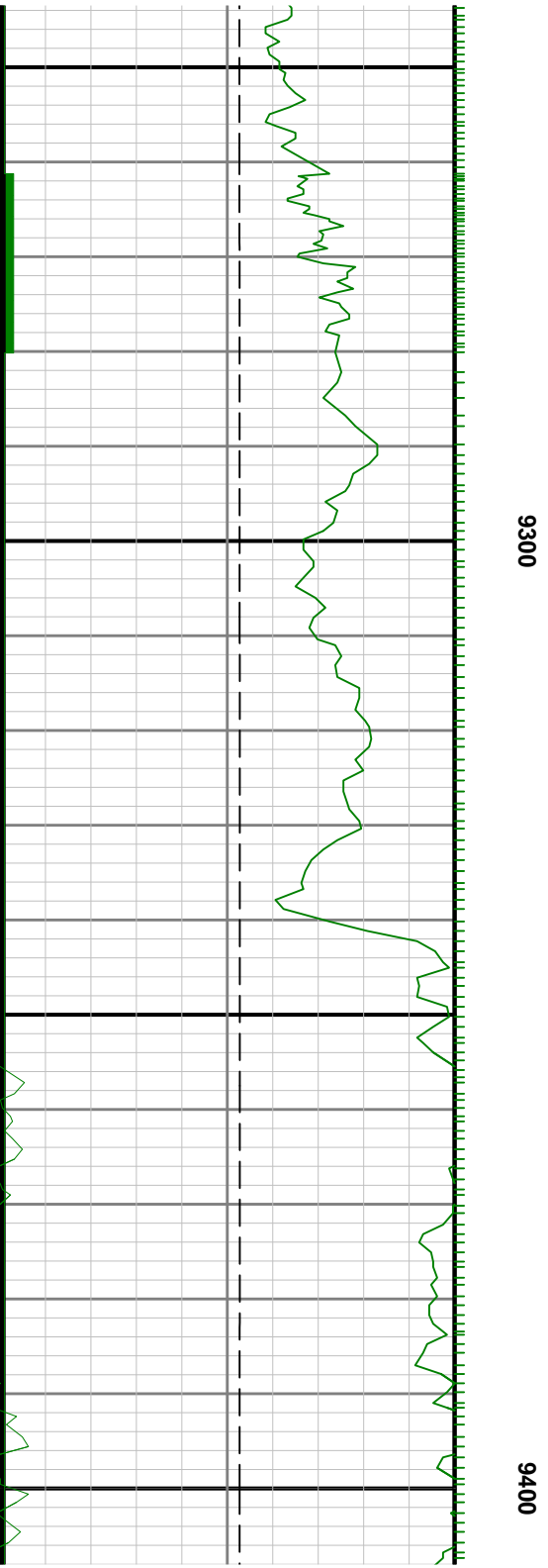
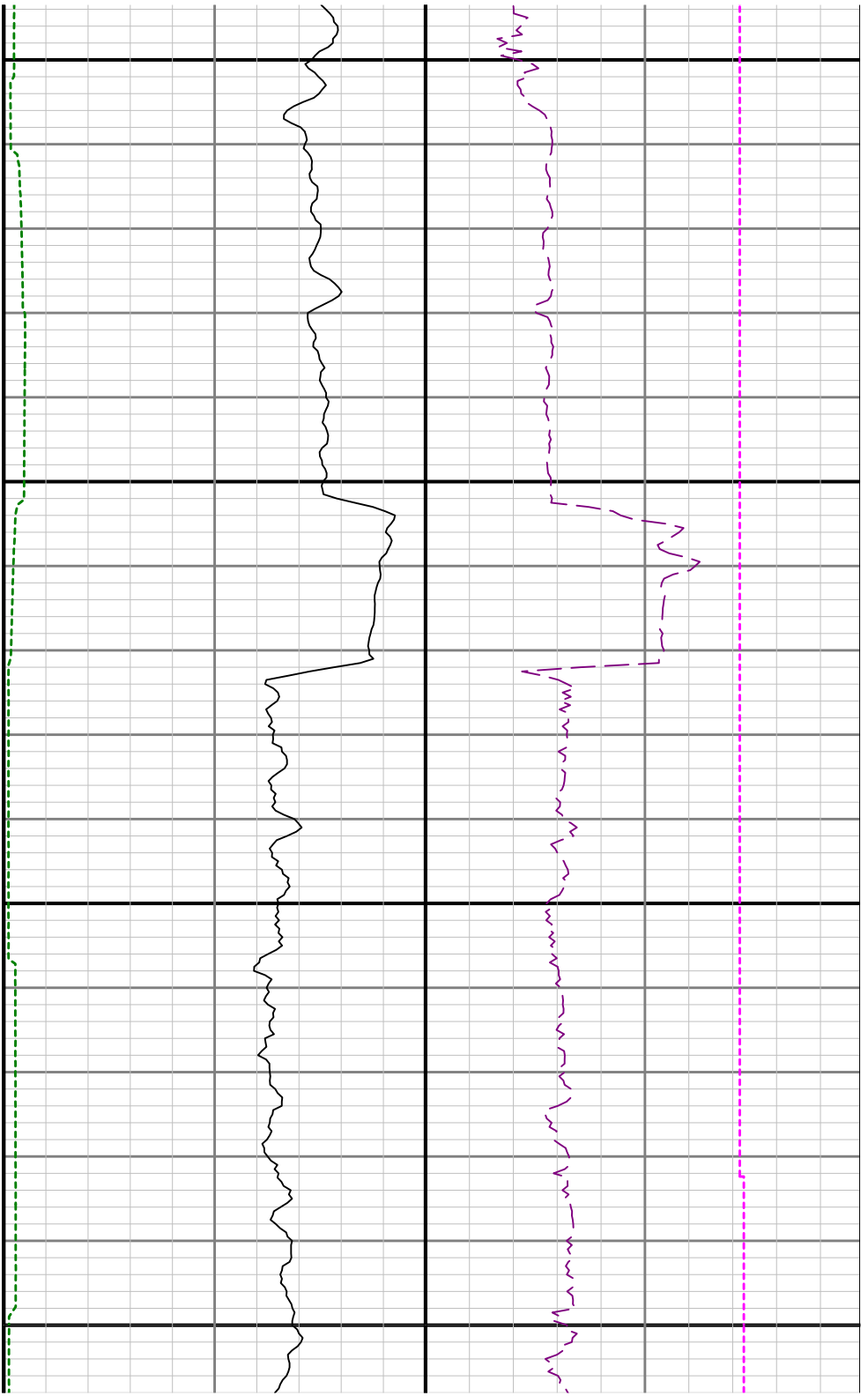
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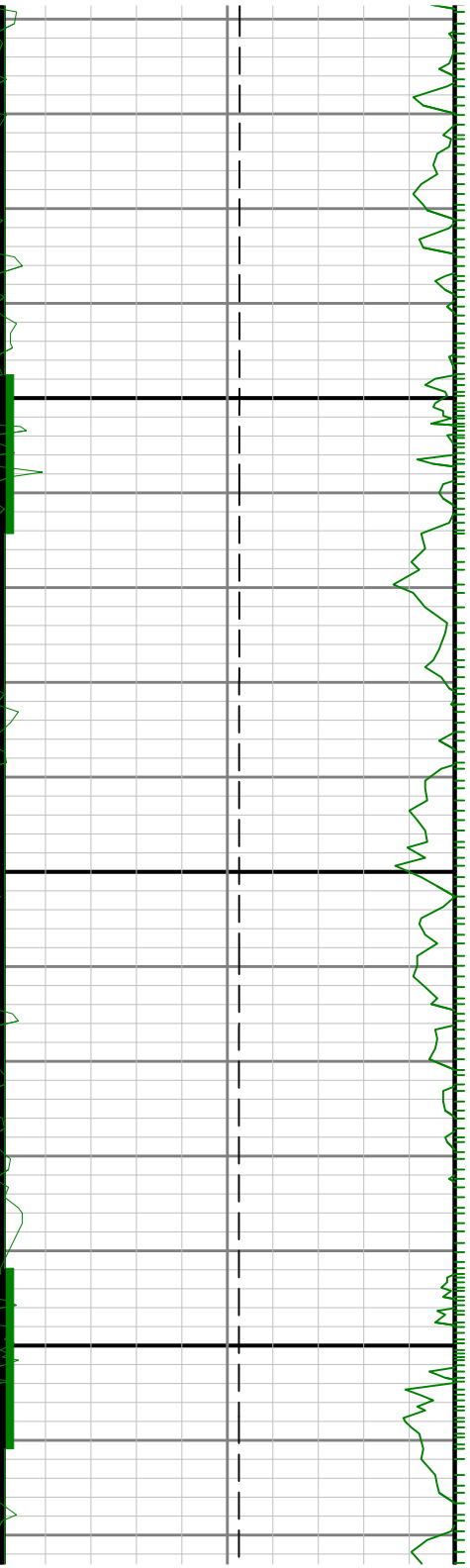
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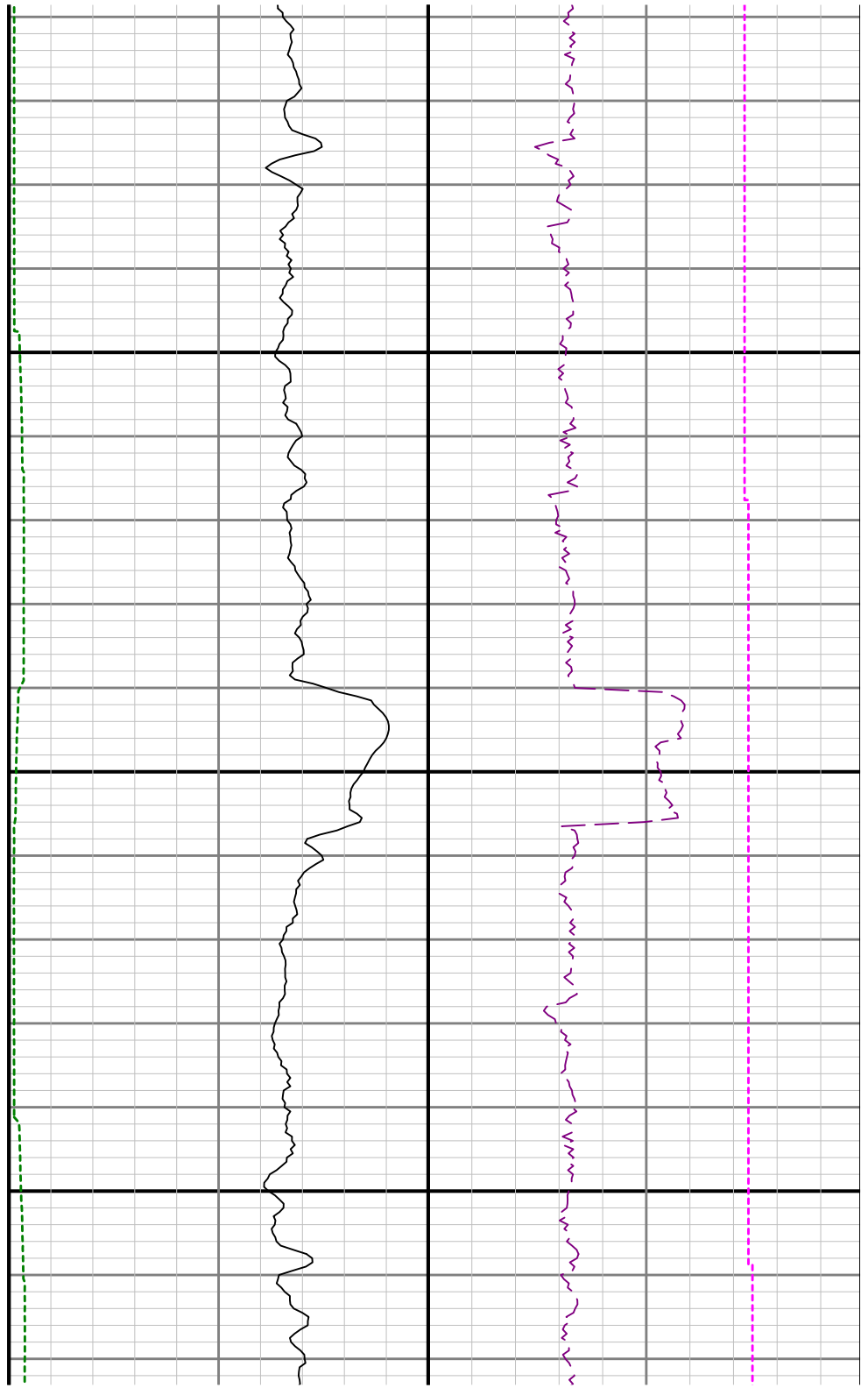


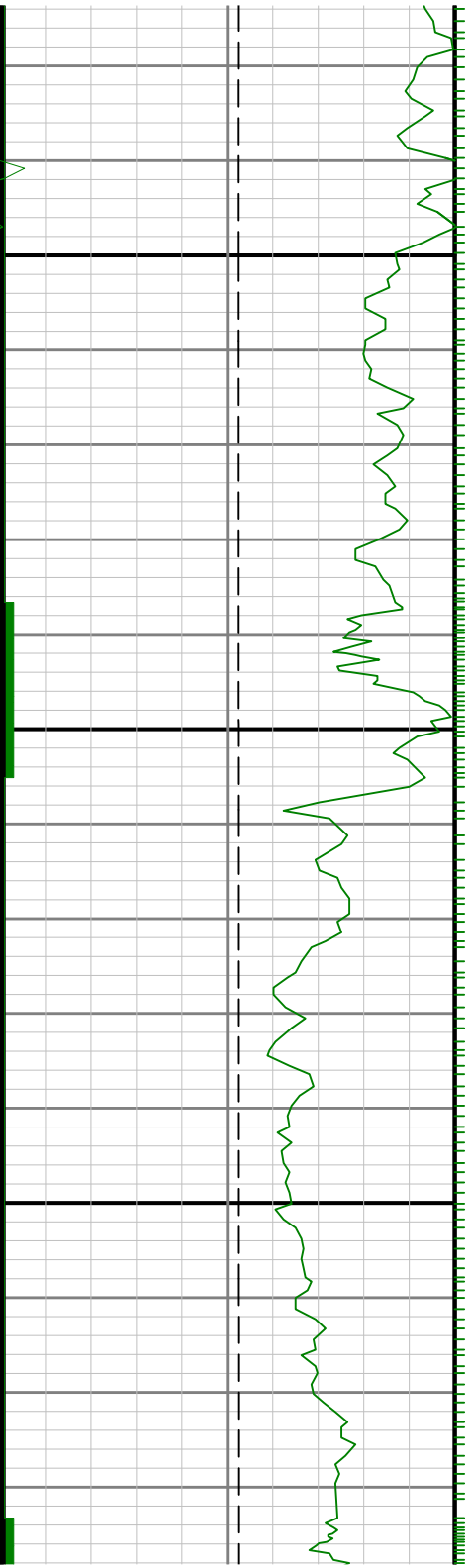






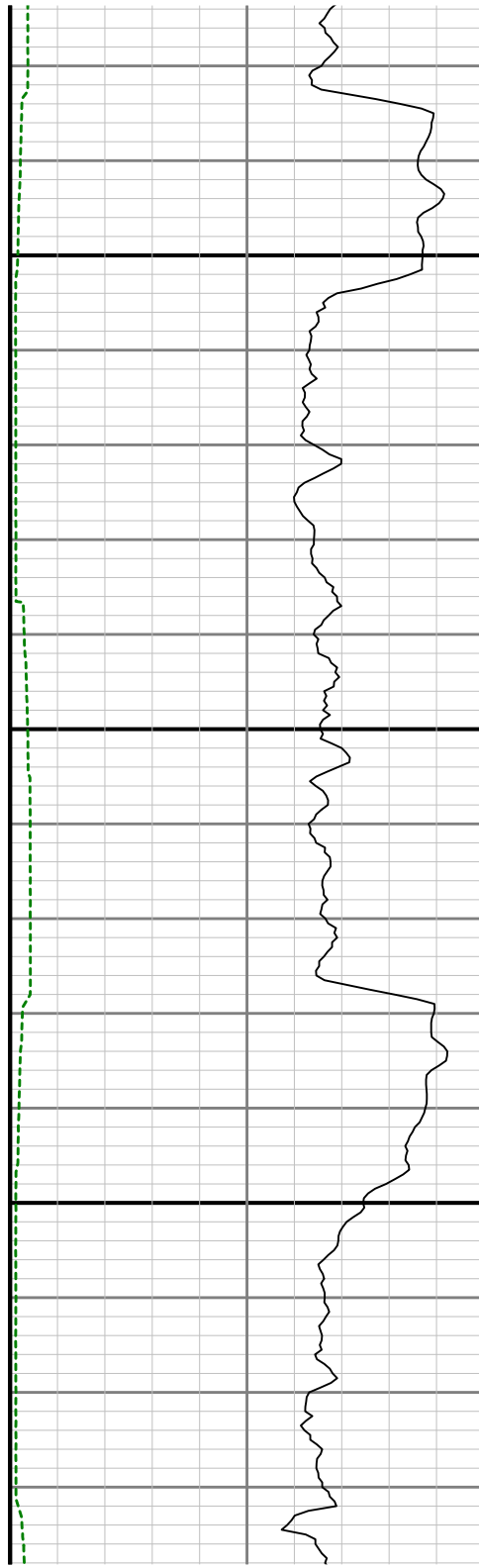
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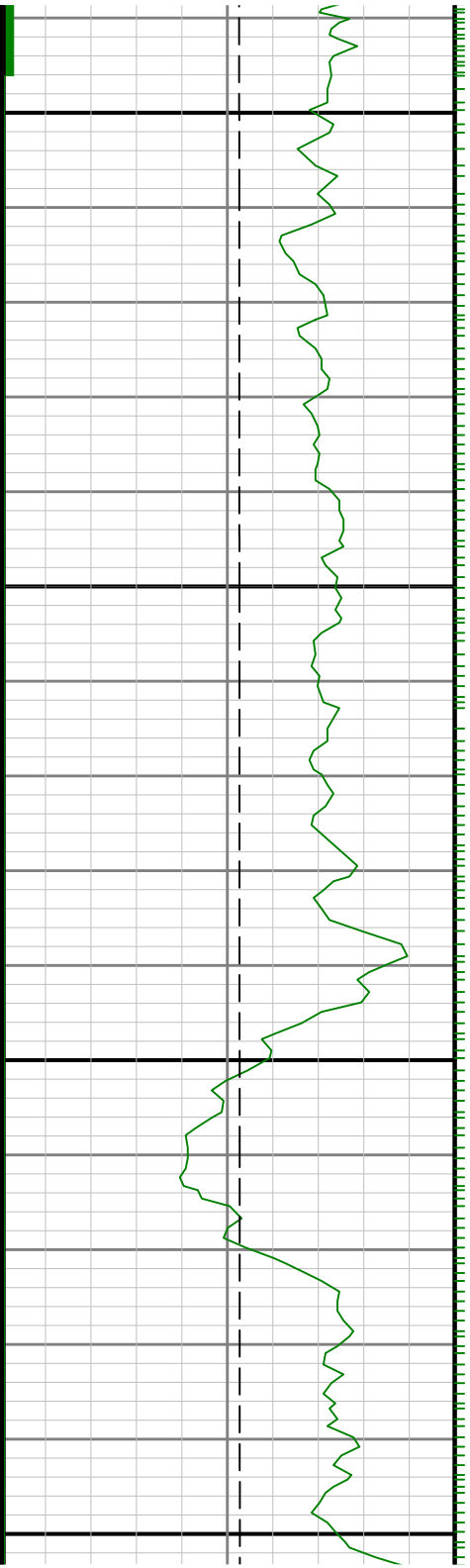




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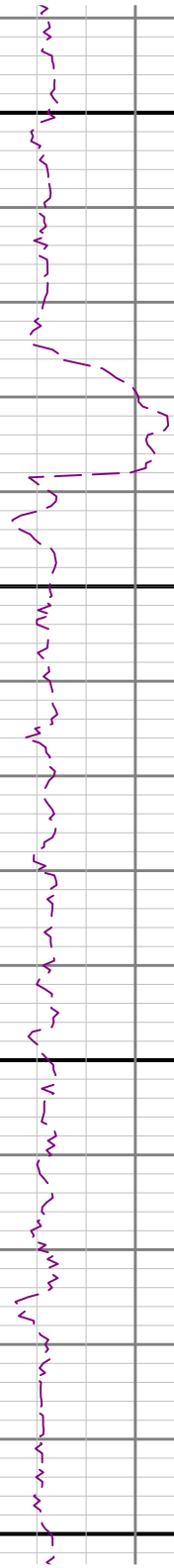
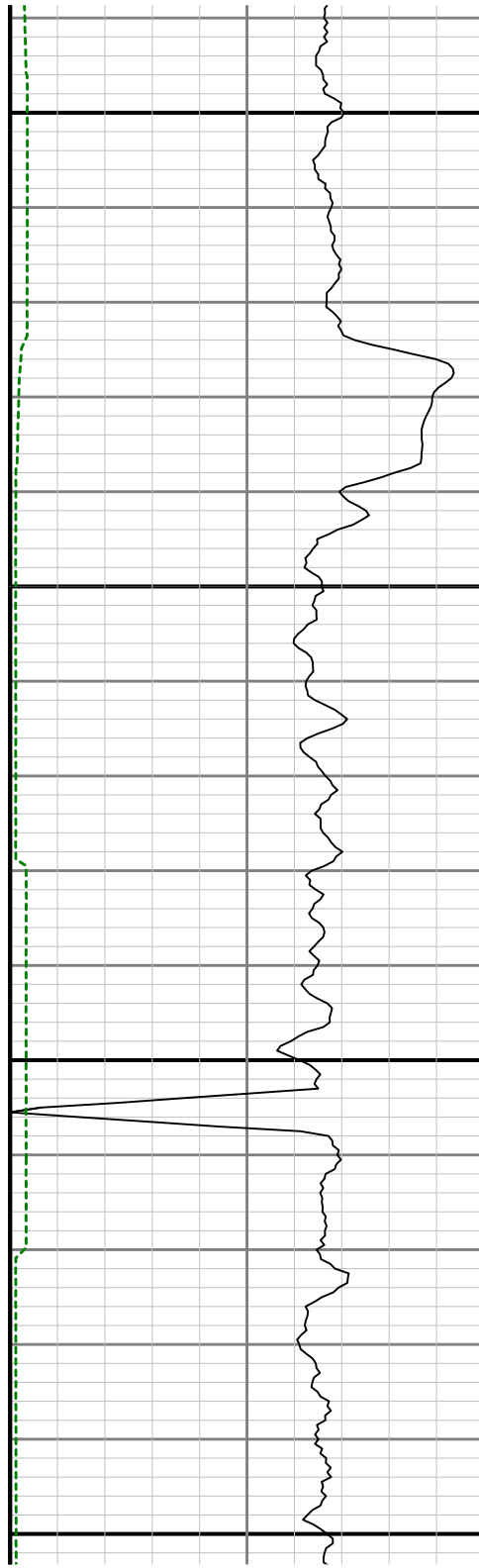
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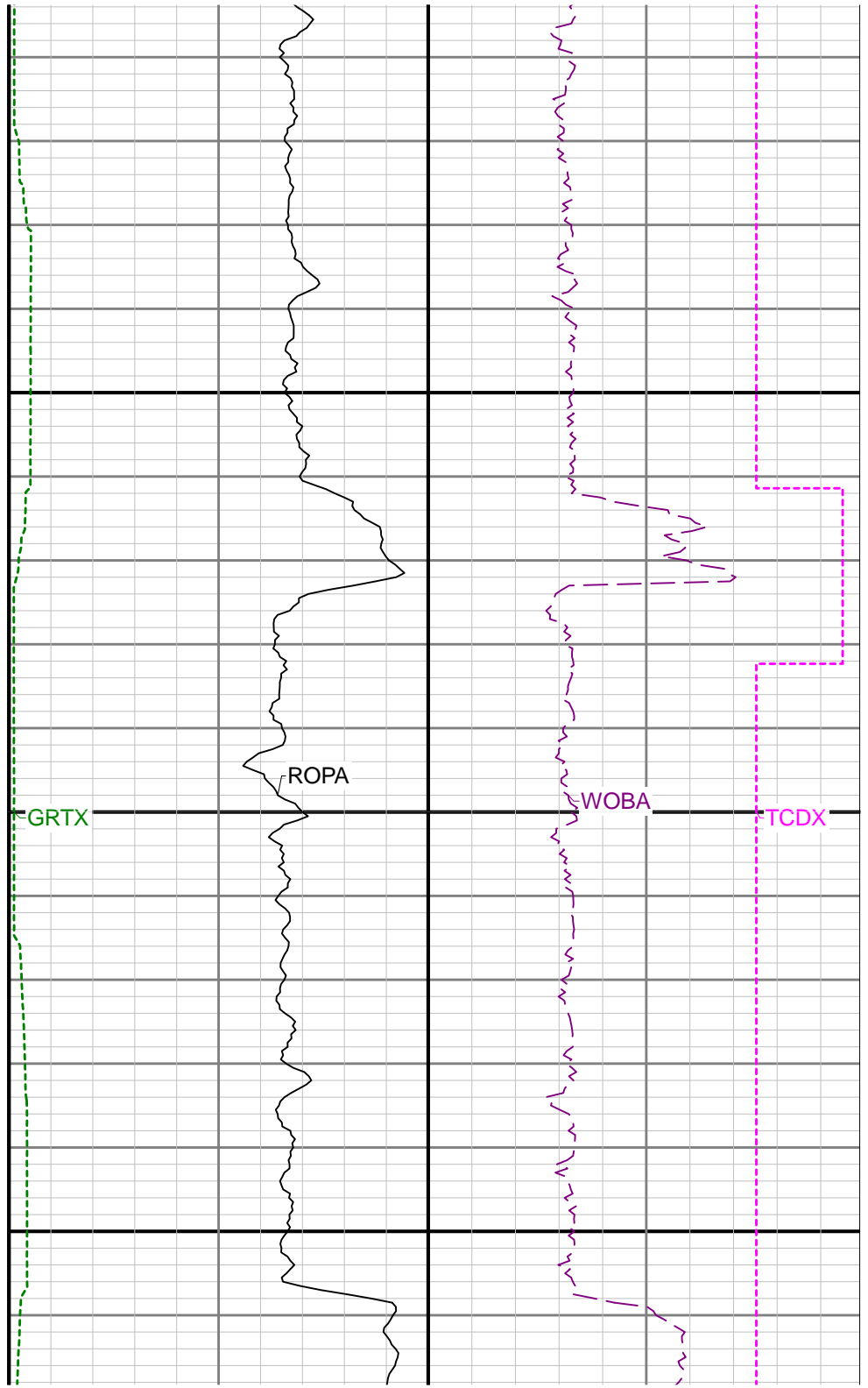
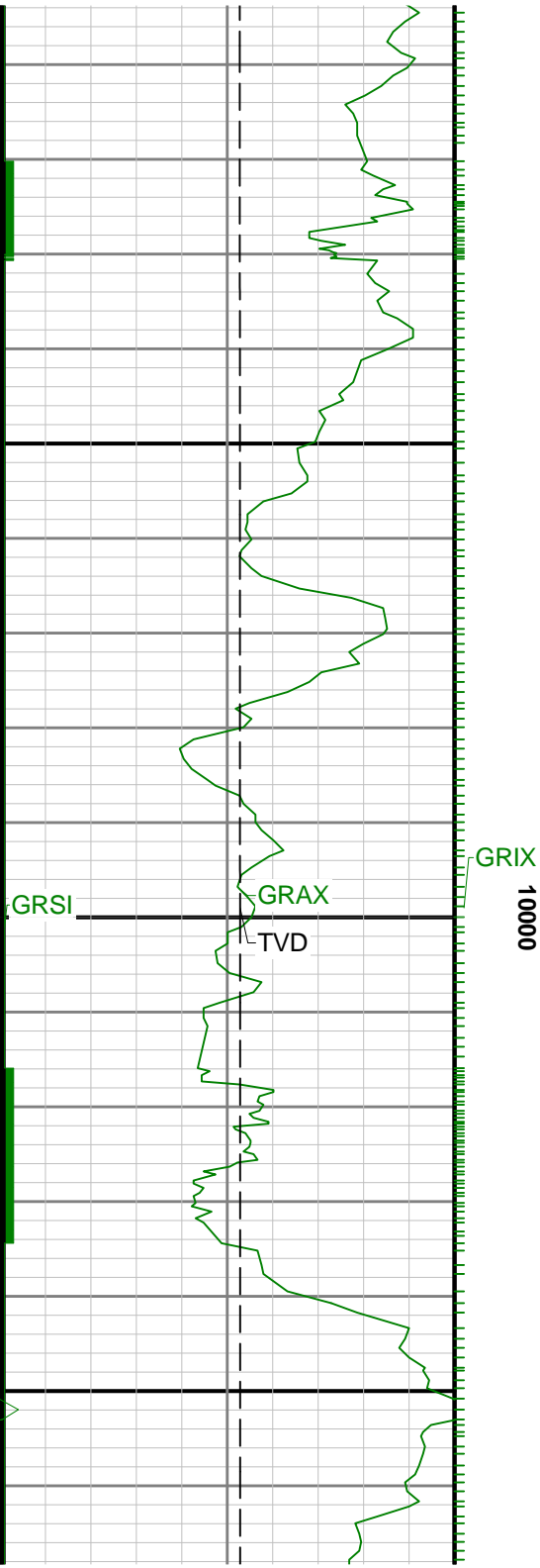


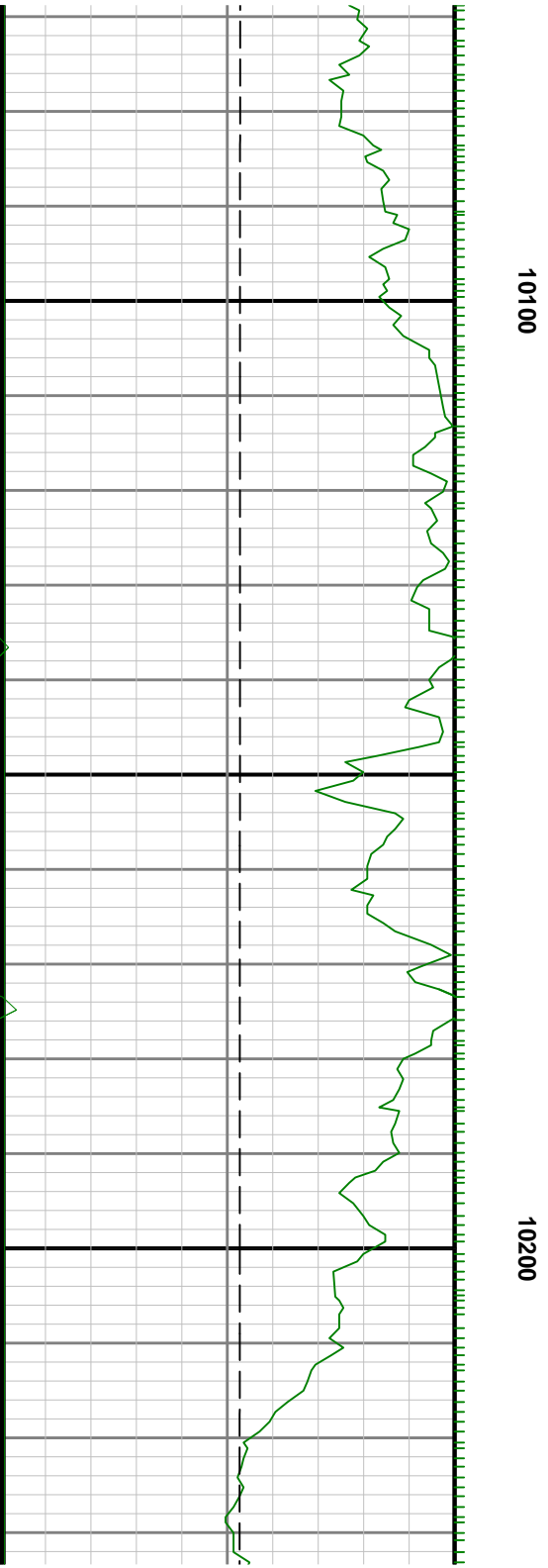
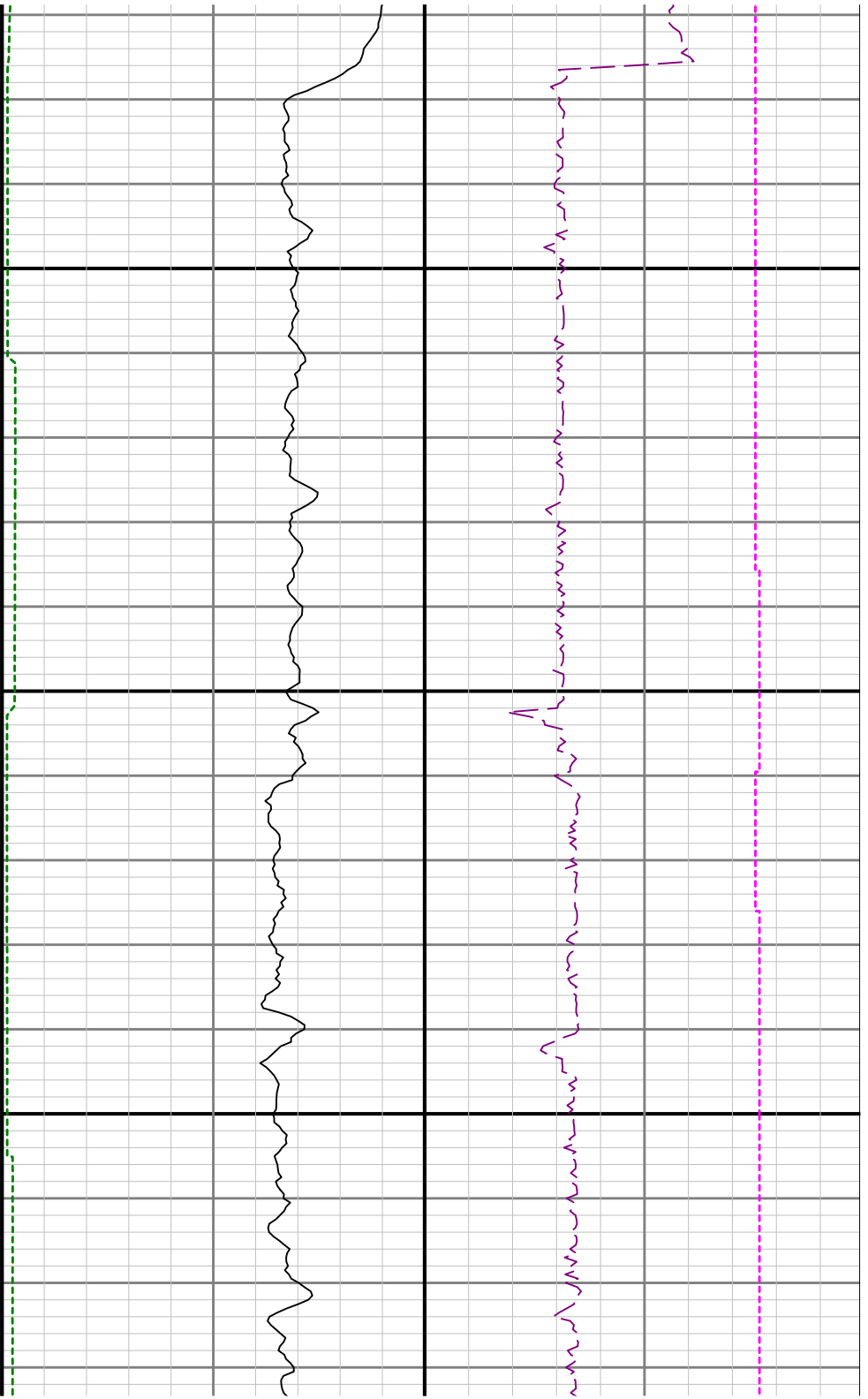


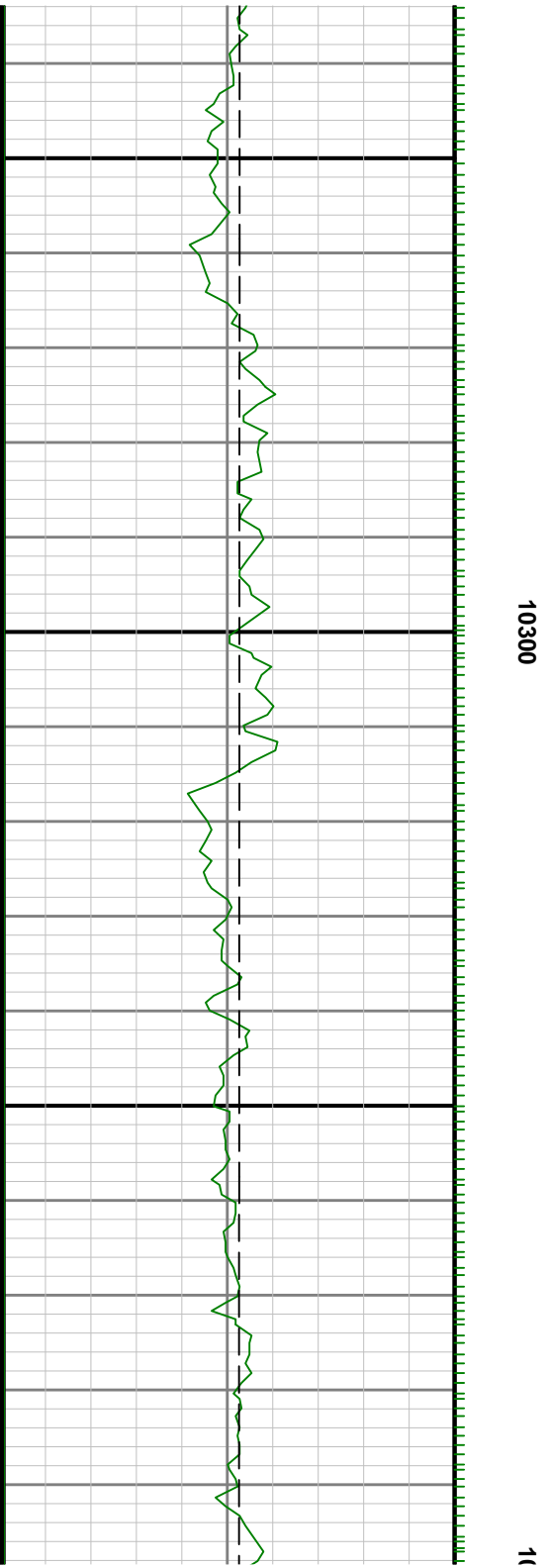
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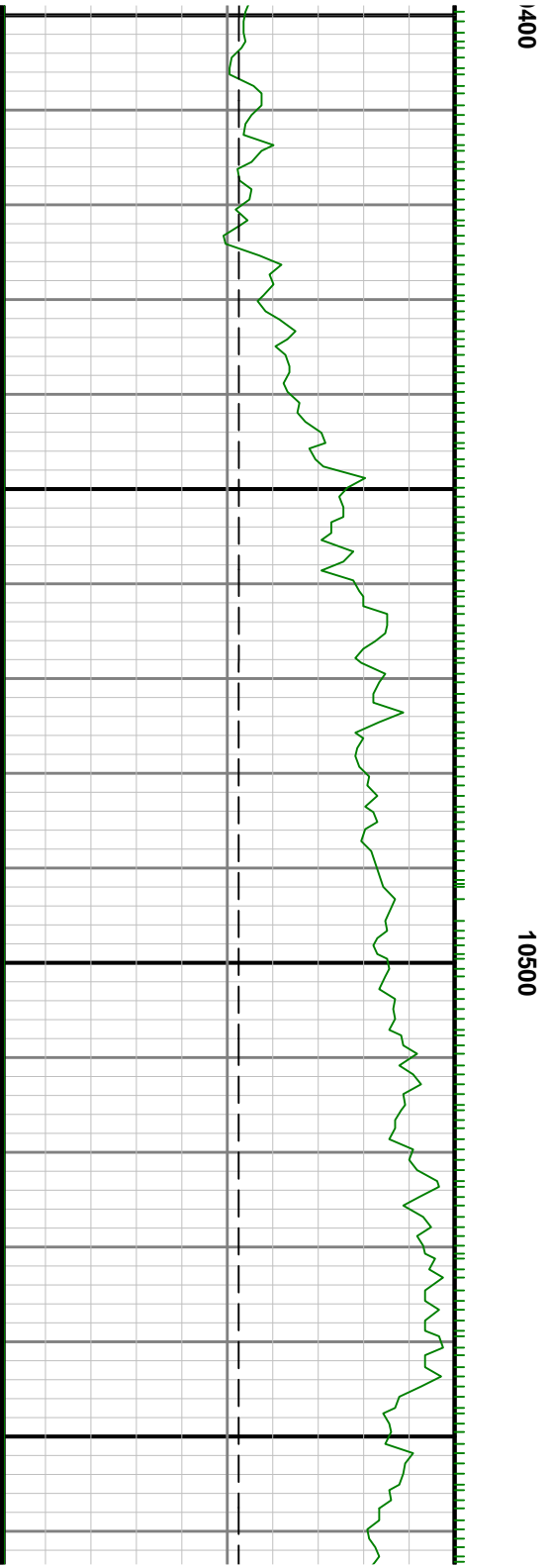
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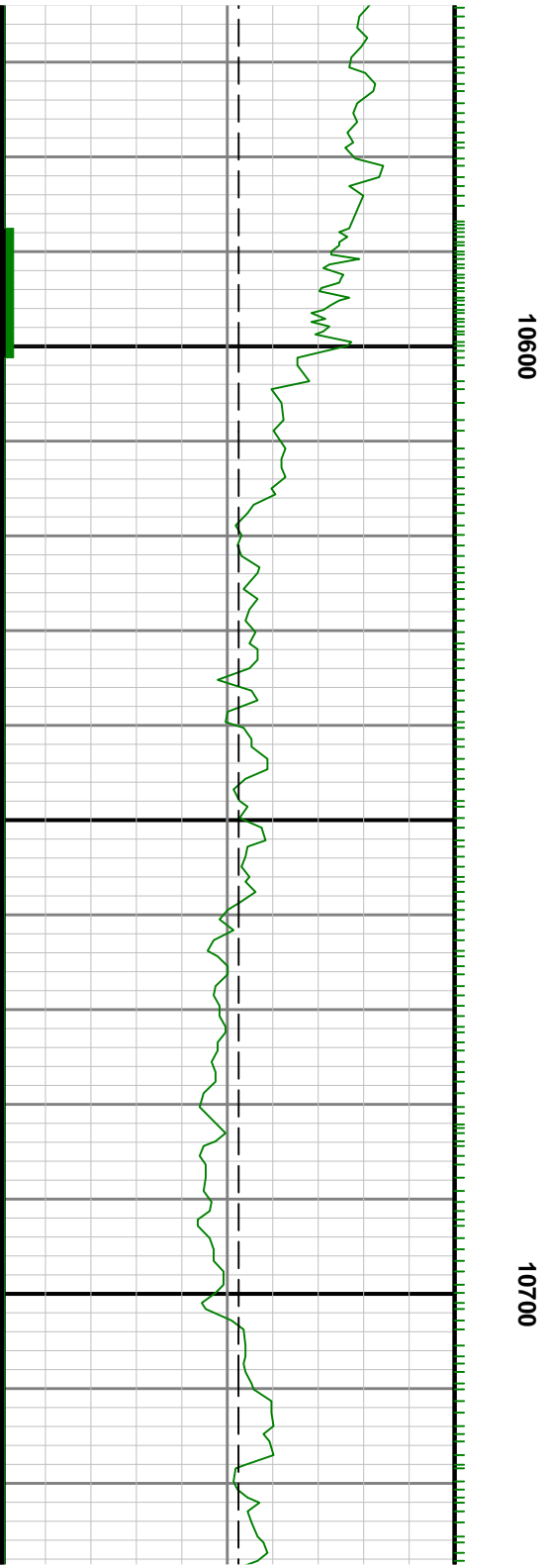


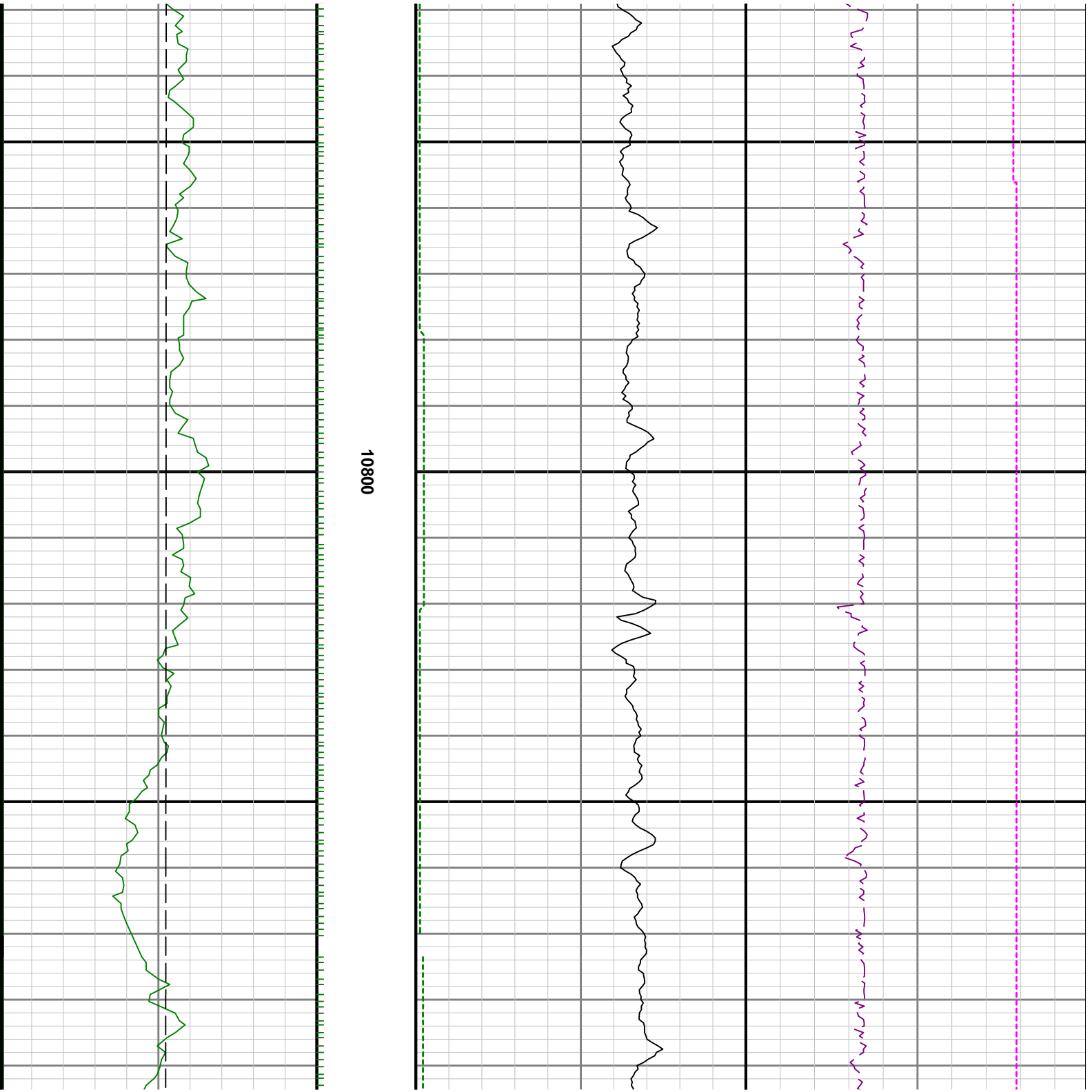


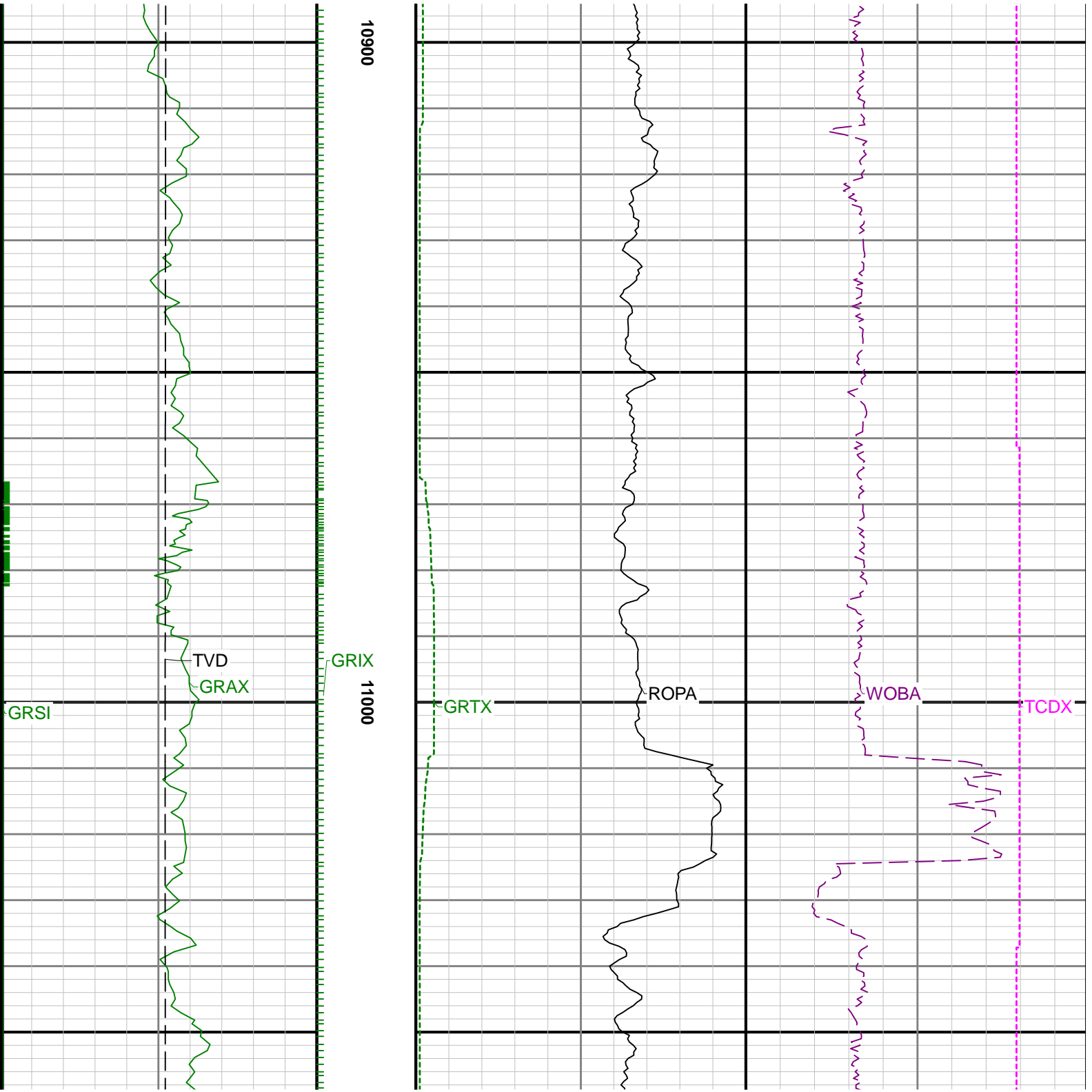








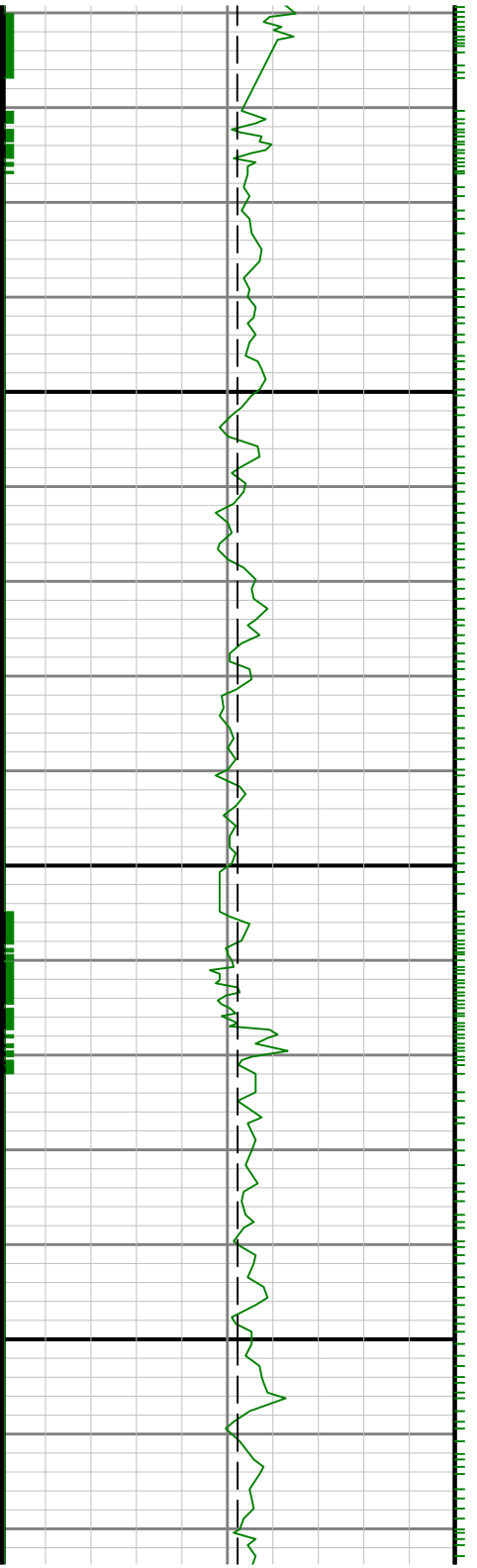






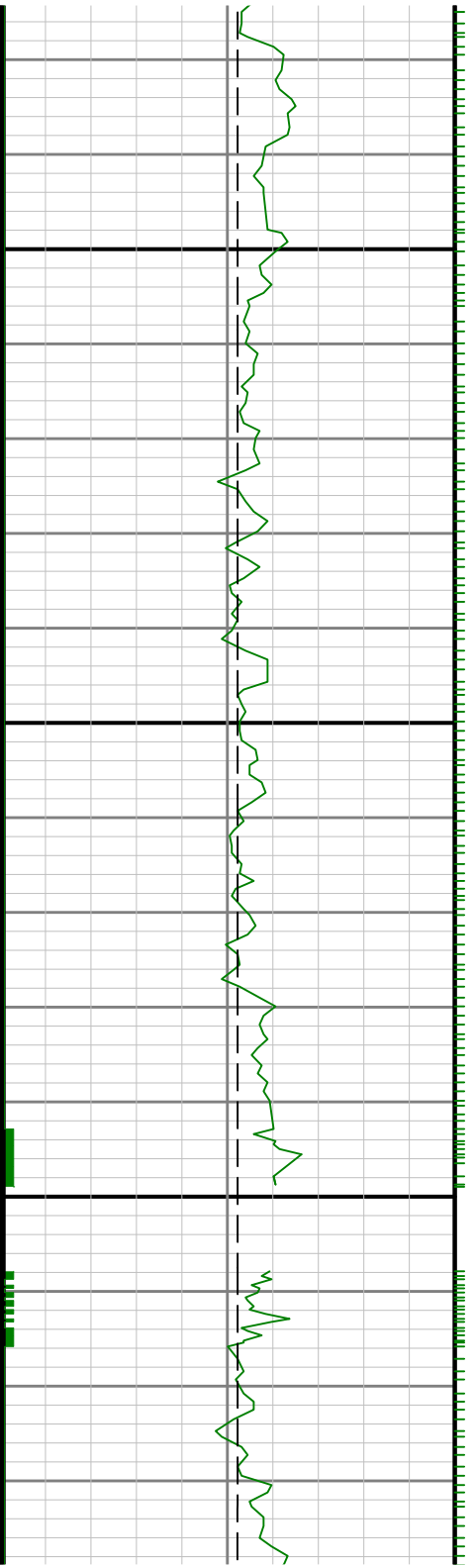
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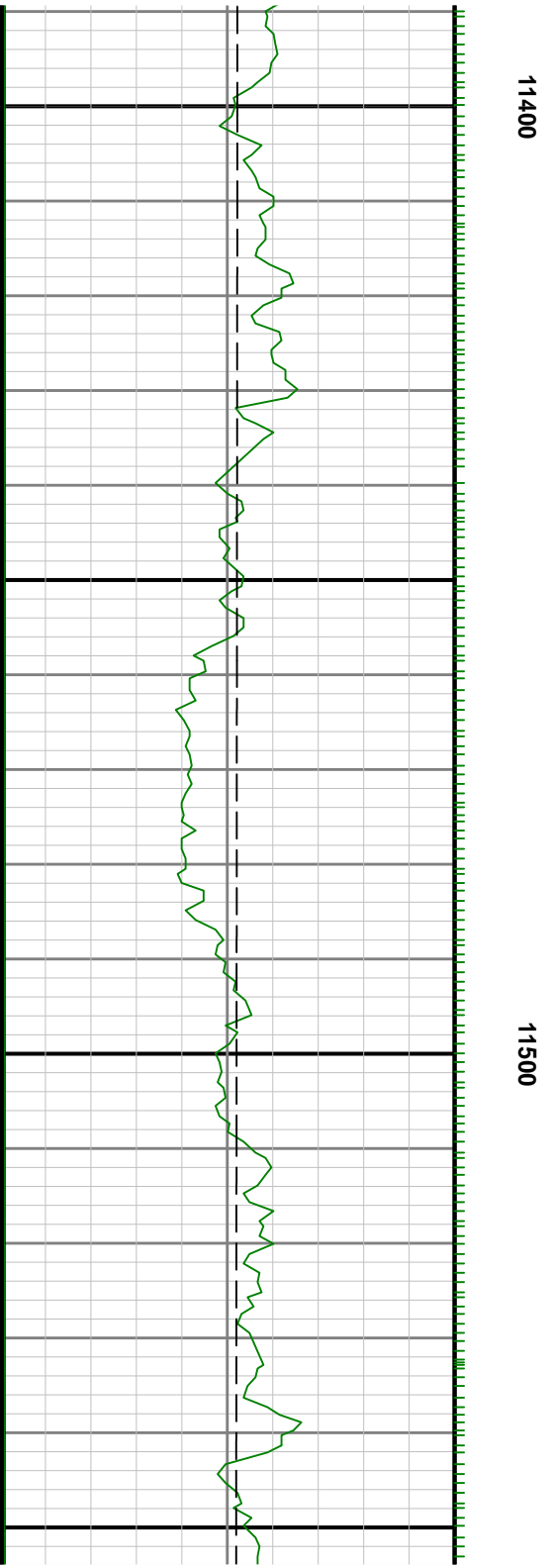
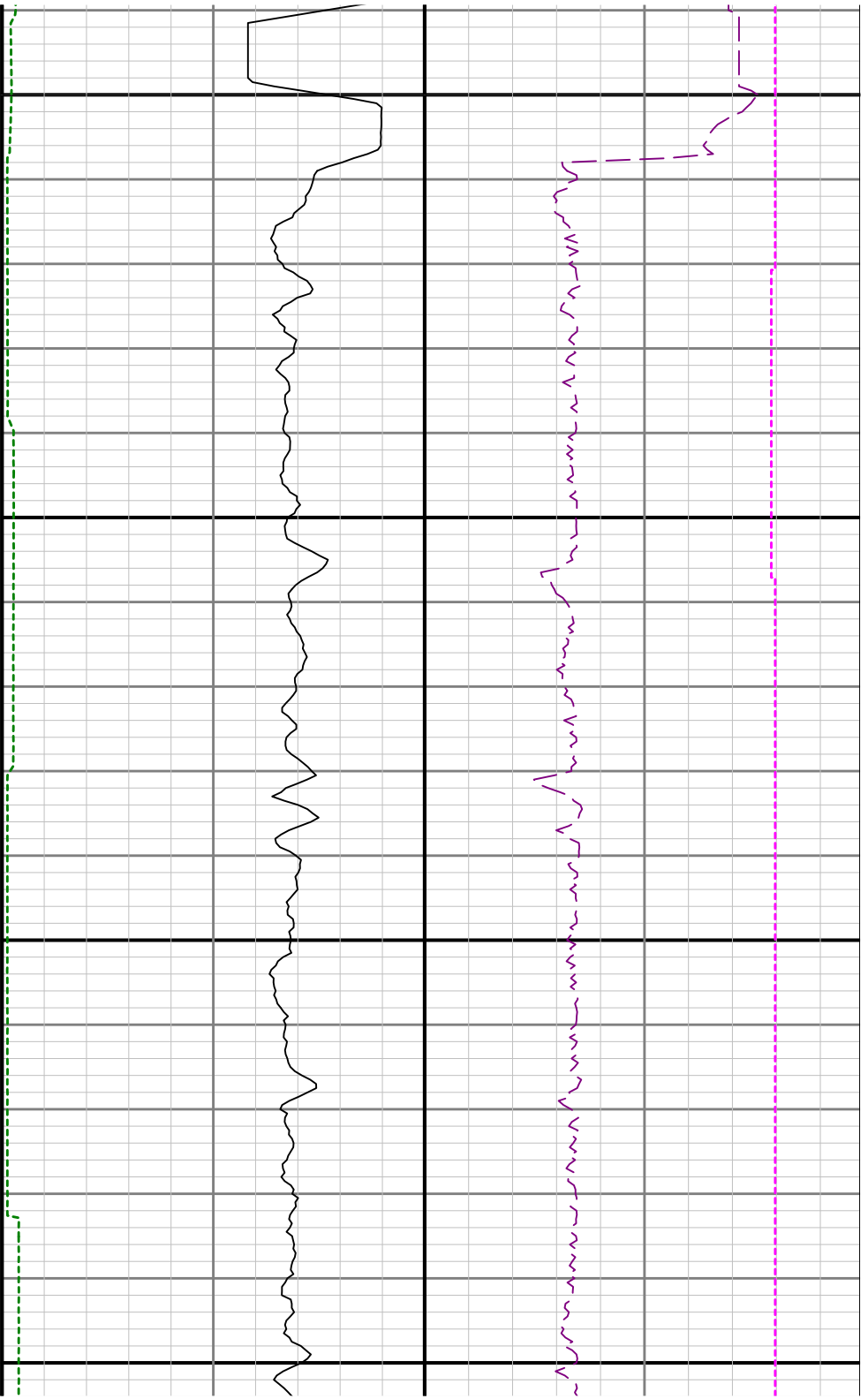
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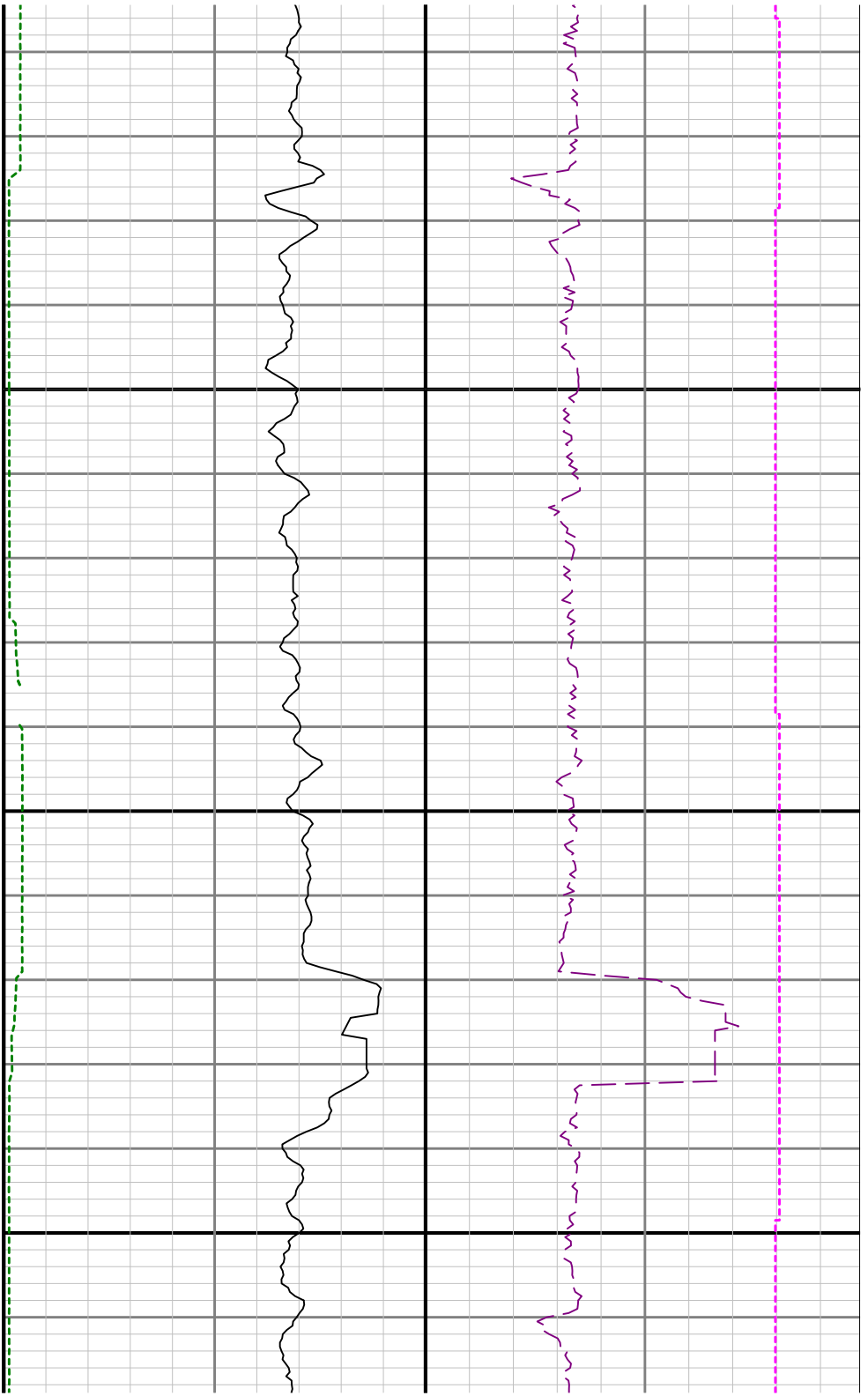


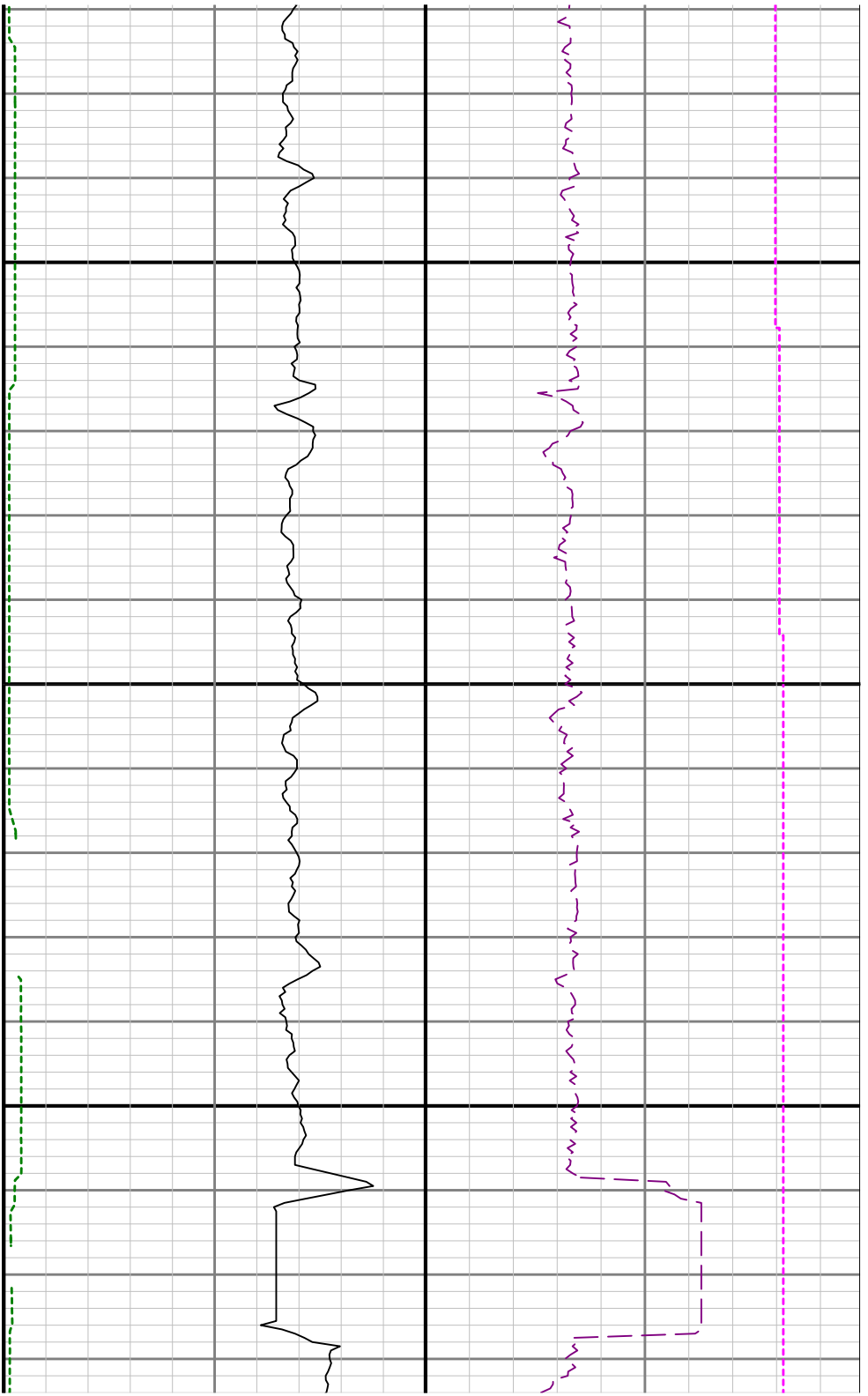


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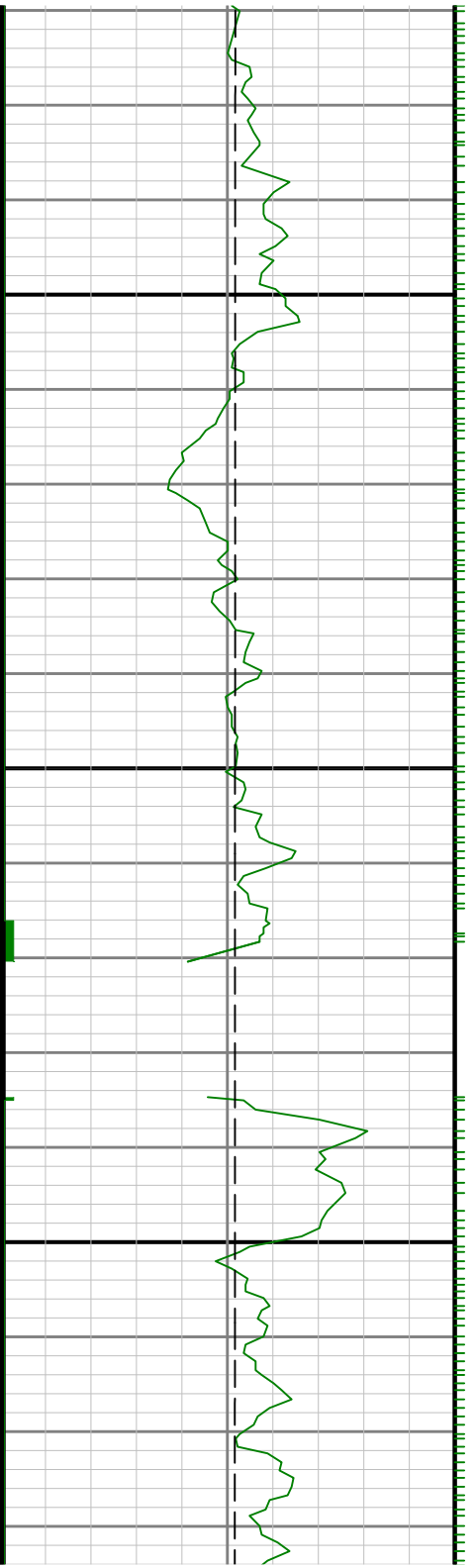




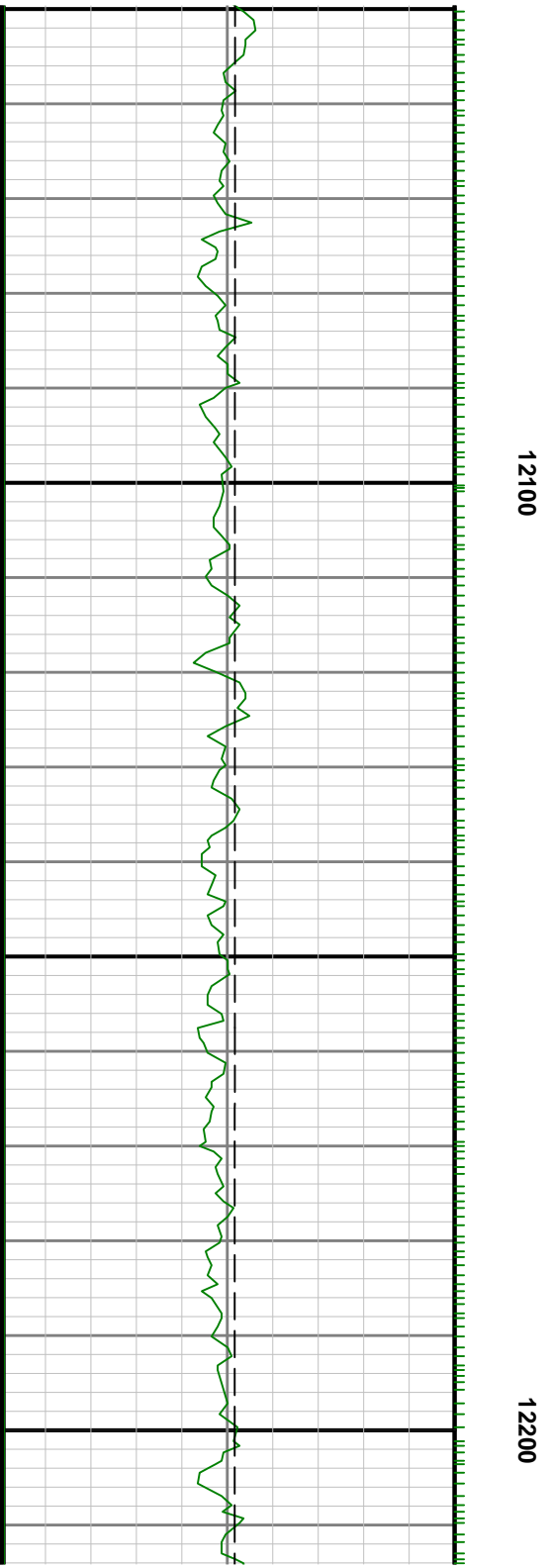
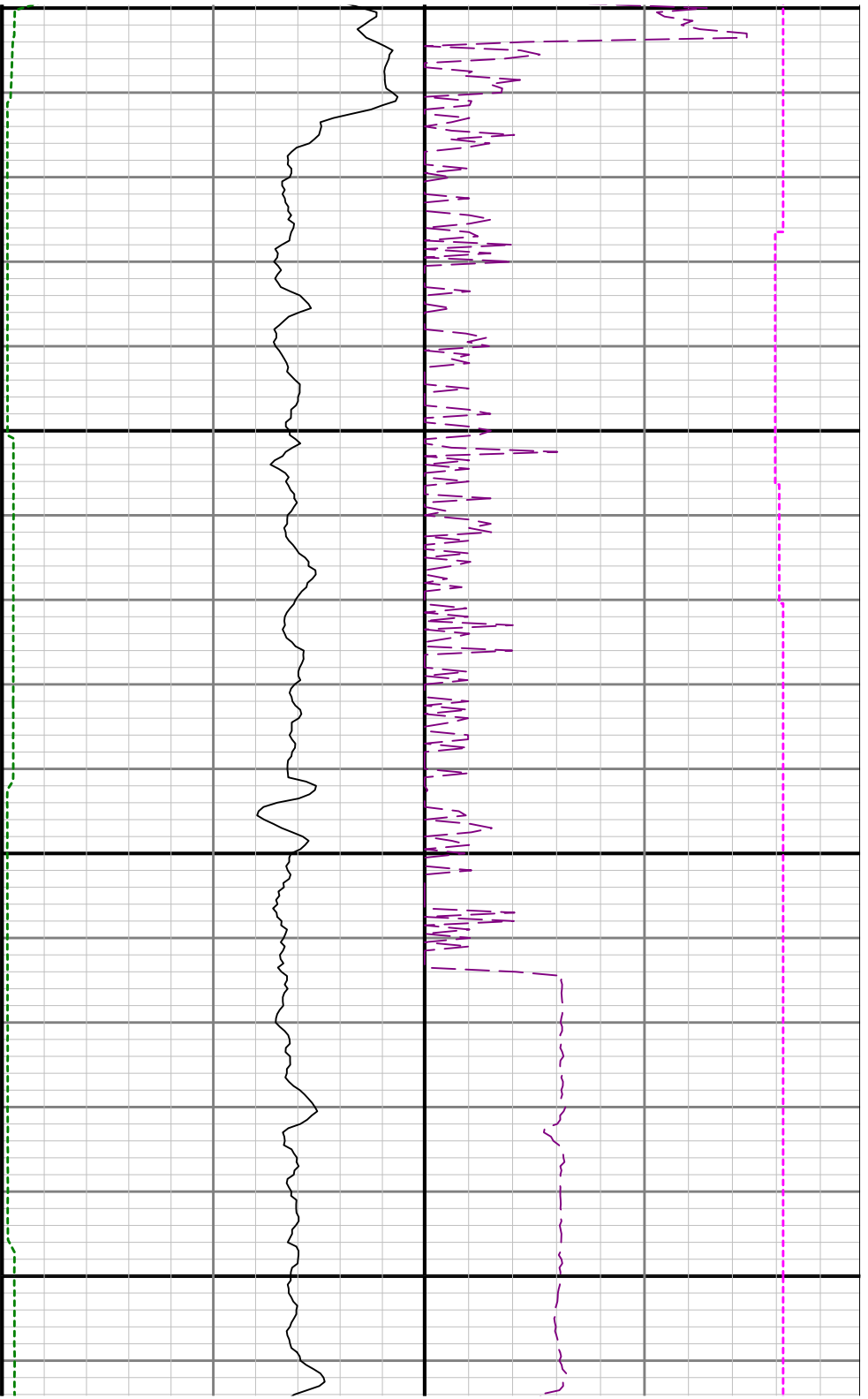


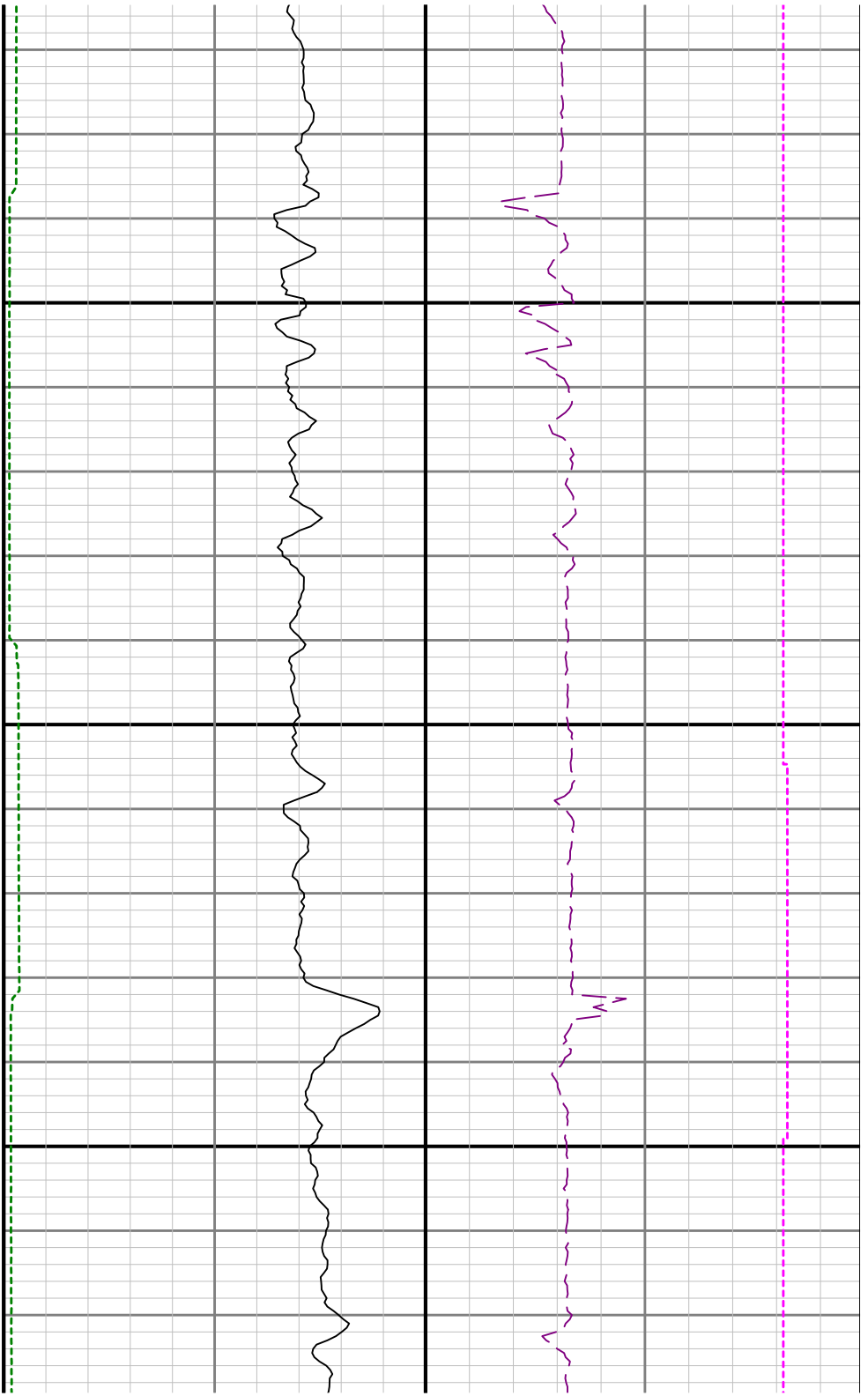


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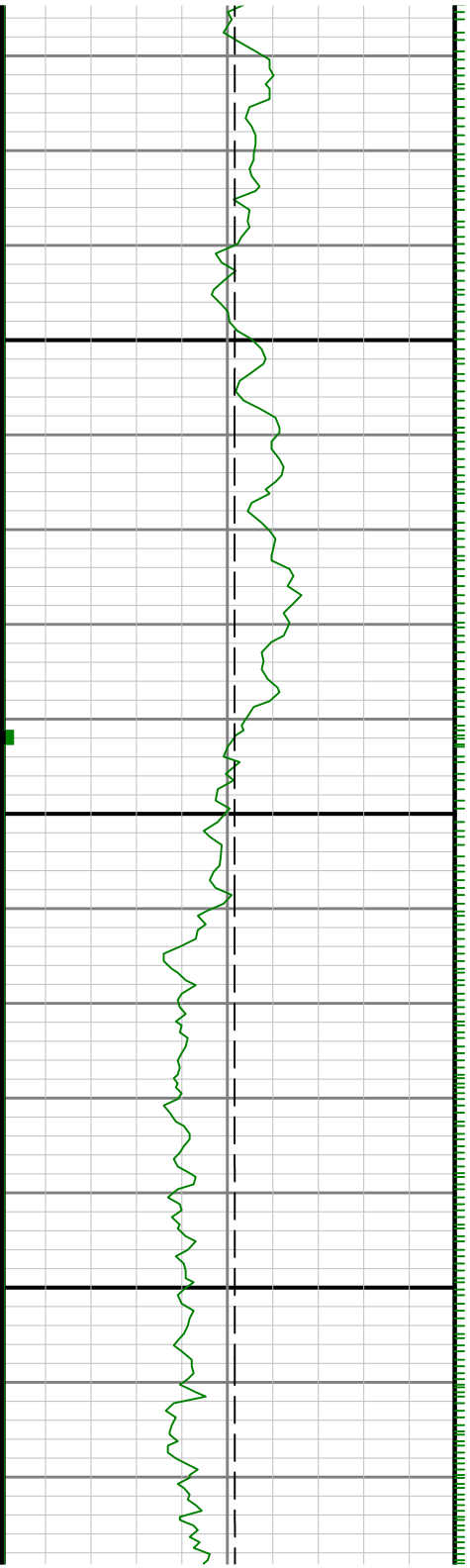


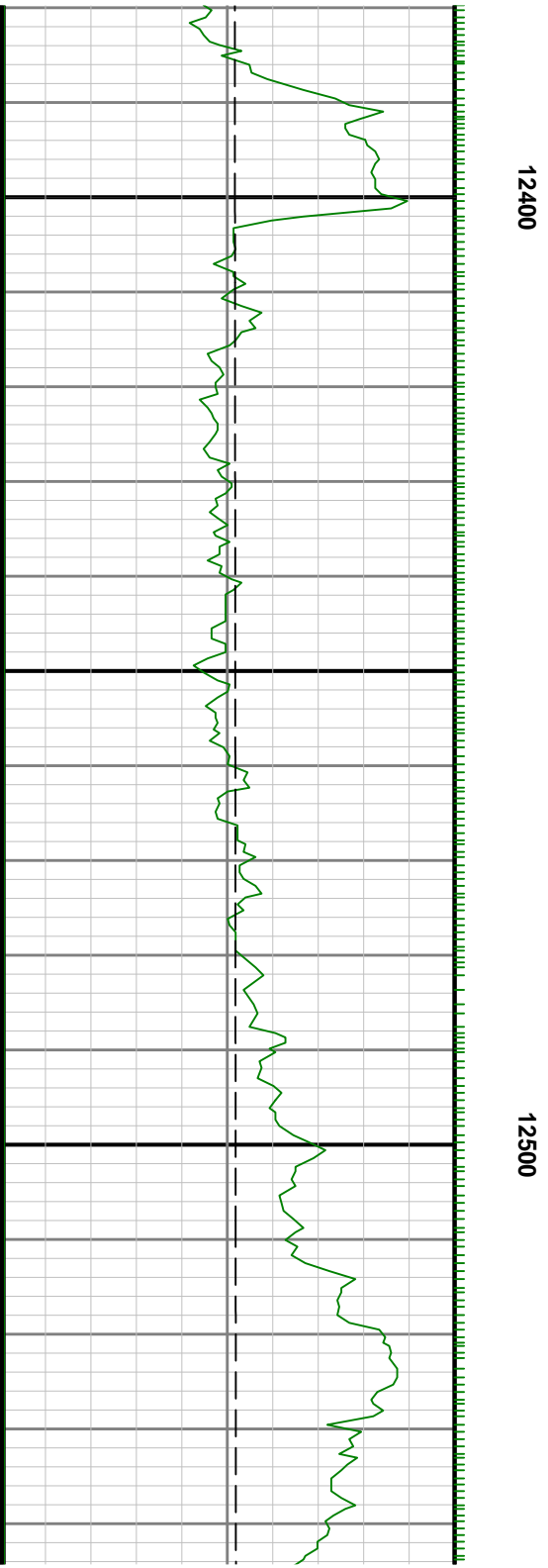


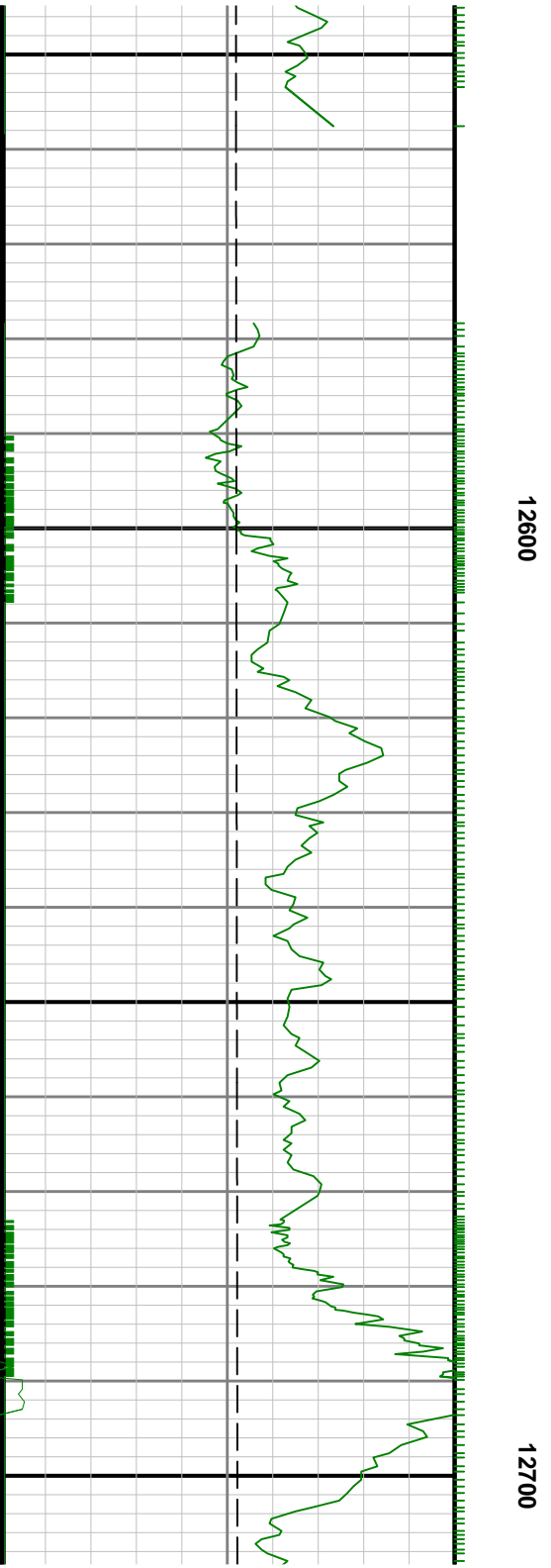
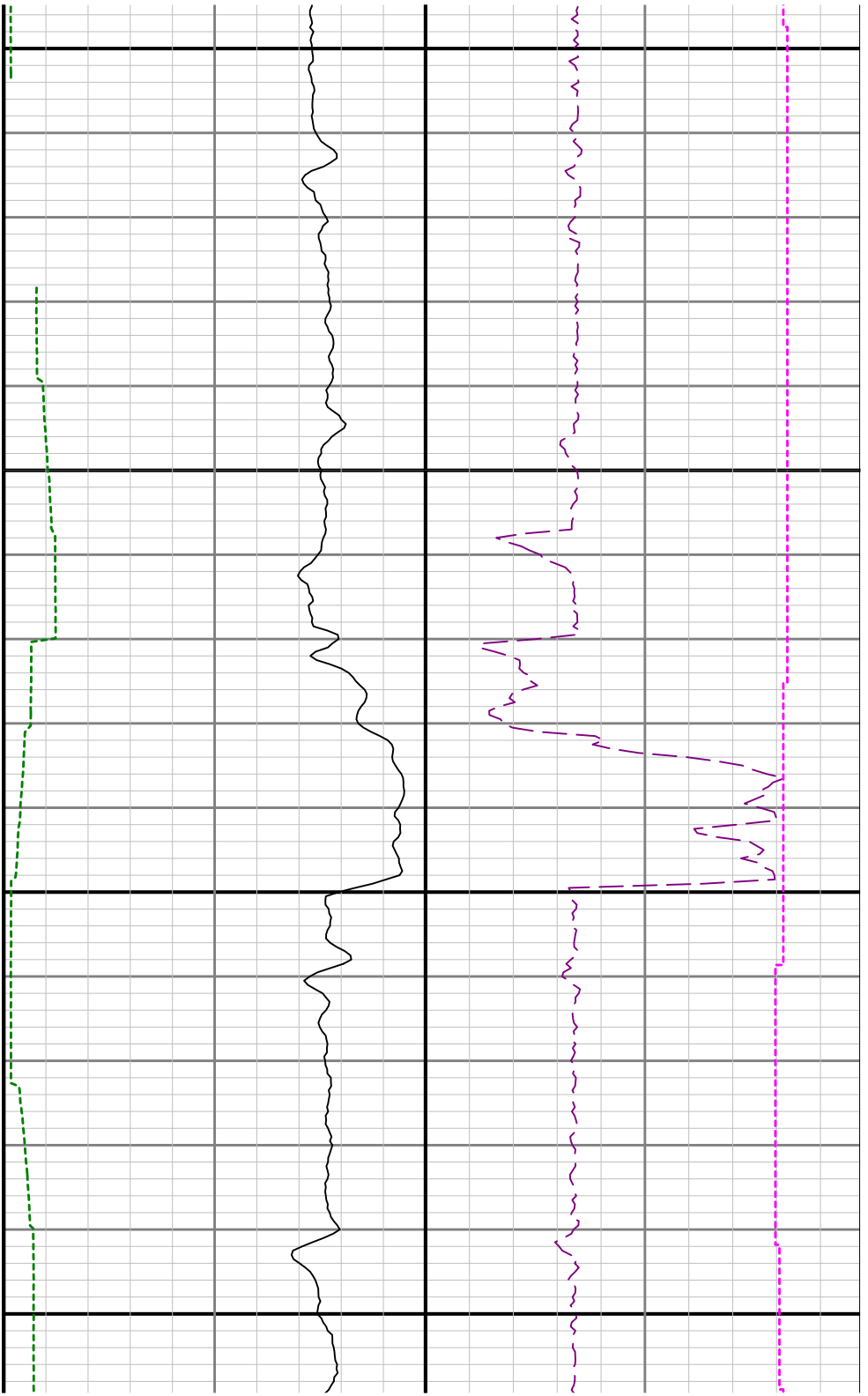


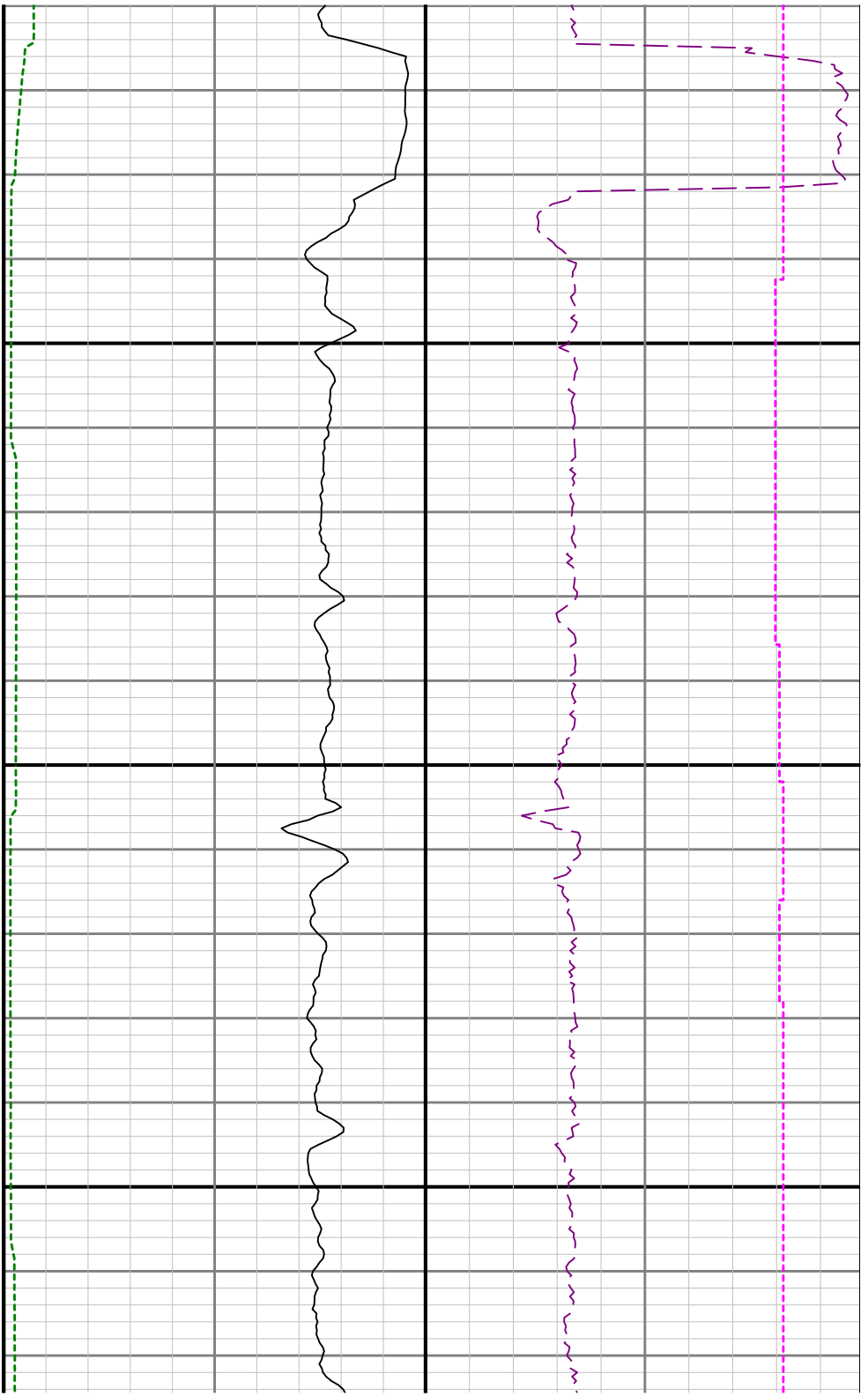


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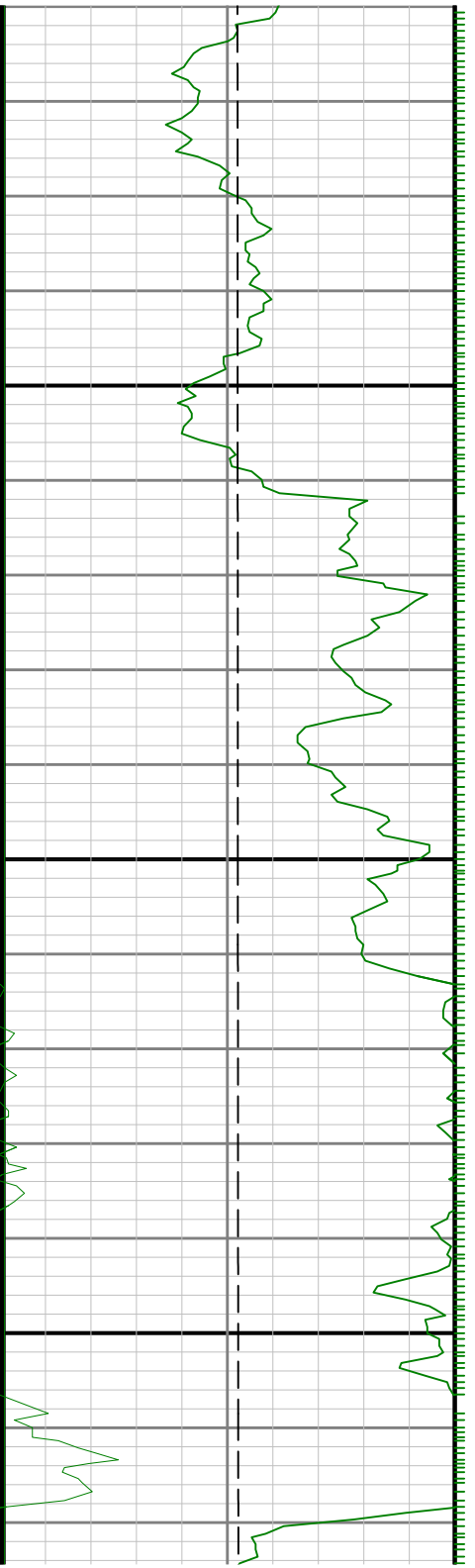


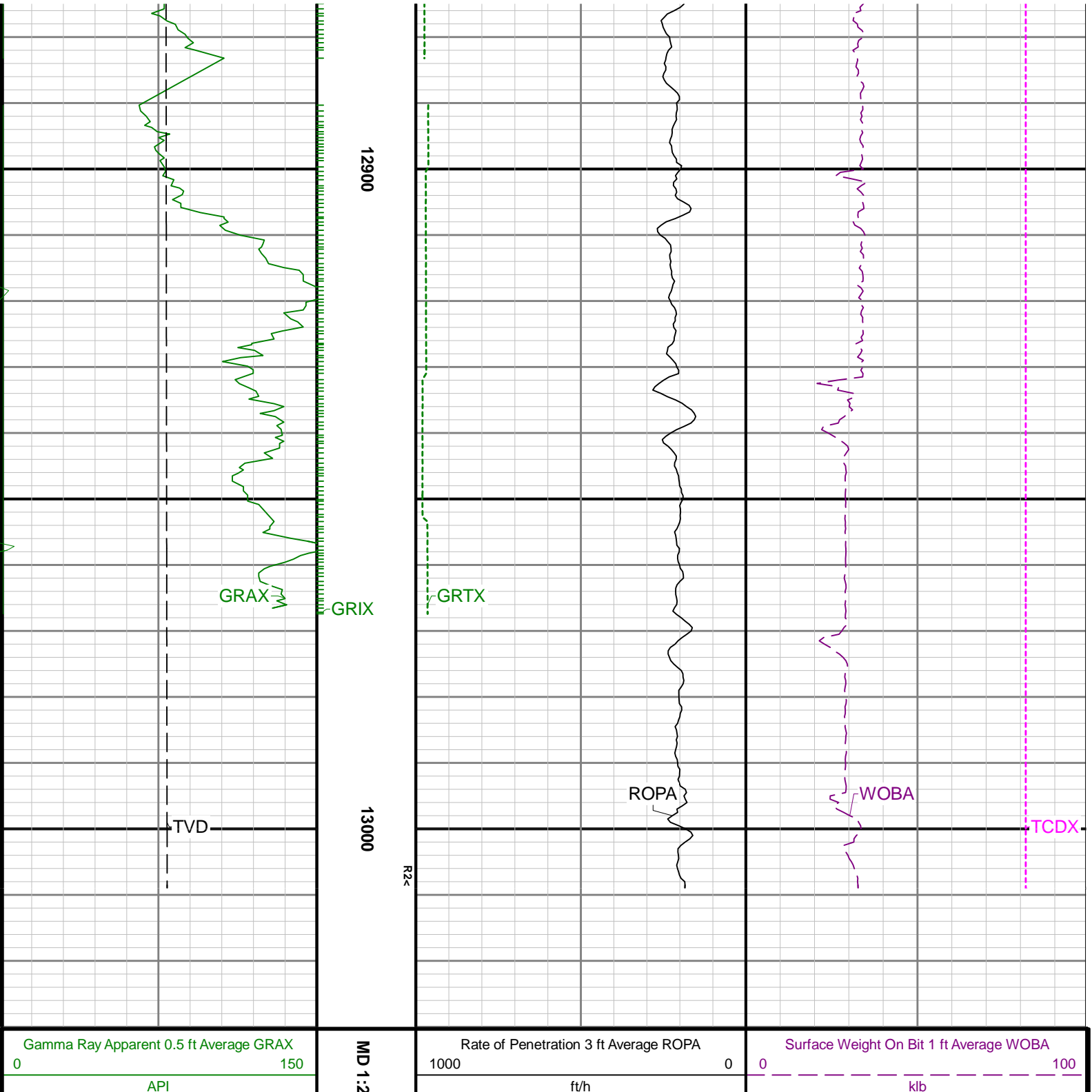






12800





True Vertical Depth TVD ft 8000 6400	240 feet	Gamma Ray Time Since Drilled GRTX min 0 600	Downhole Temperature TCDX degF 0 300
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