

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"Eqpfkvkqpu0\$""

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	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	13.500	Tricone	0.00	Motor	0.00	0.00	0.00	1425.00	2015-11-08 04:15	2015-11-08 13:13	7.23
2	2	8.750	PDC	2.50	Motor	1580.00	6486.00	1425.00	6549.00	2015-11-09 08:51	2015-11-10 03:15	16.13
3	3	6.125	PDC	2.00	Motor	6486.00	13281.00	6549.00	13343.00	2015-11-25 22:38	2015-11-27 23:49	46.75

Crew

Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite
Alex Robinson		2015-11-08	2015-11-28	Neil Schneider		2015-11-08	2015-11-10	Adam Schlenz		2015-11-13	2015-11-28

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	13312567	Gamma (single)	12.73	51.90	6.750	3.250
1	NaviGamma	13312567	Directional (mag)	16.10	55.27	6.750	3.250
1	NaviGamma	13312567	VSS	16.10	55.27	6.750	3.250
2	NaviGamma	13312567	Gamma (single)	12.73	63.10	6.750	3.250
2	NaviGamma	13312567	Directional (mag)	16.10	66.47	6.750	3.250
2	NaviGamma	13312567	VSS	16.10	66.47	6.750	3.250
3	NaviGamma	501	Gamma (single)	9.69	62.31	4.750	2.750
3	NaviGamma	501	Directional (mag)	13.07	65.69	4.750	2.750
3	NaviGamma	501	VSS	13.07	65.69	4.750	2.750

Service and Tool Mnemonics

Mnemonic	Name	Description
GAM	NaviGamma	Probe Based Gamma Module, NaviTrak Platform

Comments

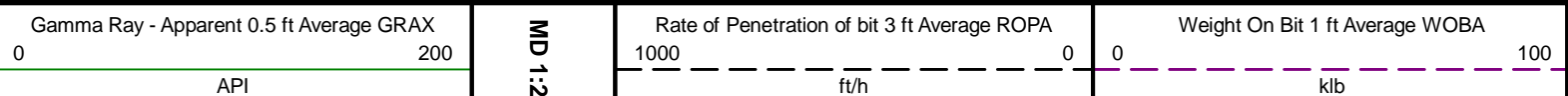
- 1
- Depth measurements obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
- 2
- Öæ^!P~* @•SY ÖÄÜ~} ÄÄ qä^äÄ ÄÄ/ä &ÖpæäÖæ { æQÖ^&q} æDä^ @ ä/ä Ä ÄHÄBÄ &Öä/ä äÄc^!æ|/æ•^ { äÄÄ[{ ÄÜ~!æÄ Ä Ä G ÄÄ^Ä ÖÄÜ~!æÄ Ä 1425 feet TVD).
- 3
- Öæ^!P~* @•SY ÖÄÜ~} ÄÄ qä^äÄ ÄÄ/ä &ÖpæäÖæ { æQÖæ { æÜæ/ä äÖÄ^&q} æDä^ @ ä/ä Ä ÄHÄBÄ &Öä/ä äÄc^!æ|/æ•^ { äÄÄ[{ Ä Ä G Ä Ä Ä Ä JÄÄ^Ä Ö (1425 to 6045 feet TVD)

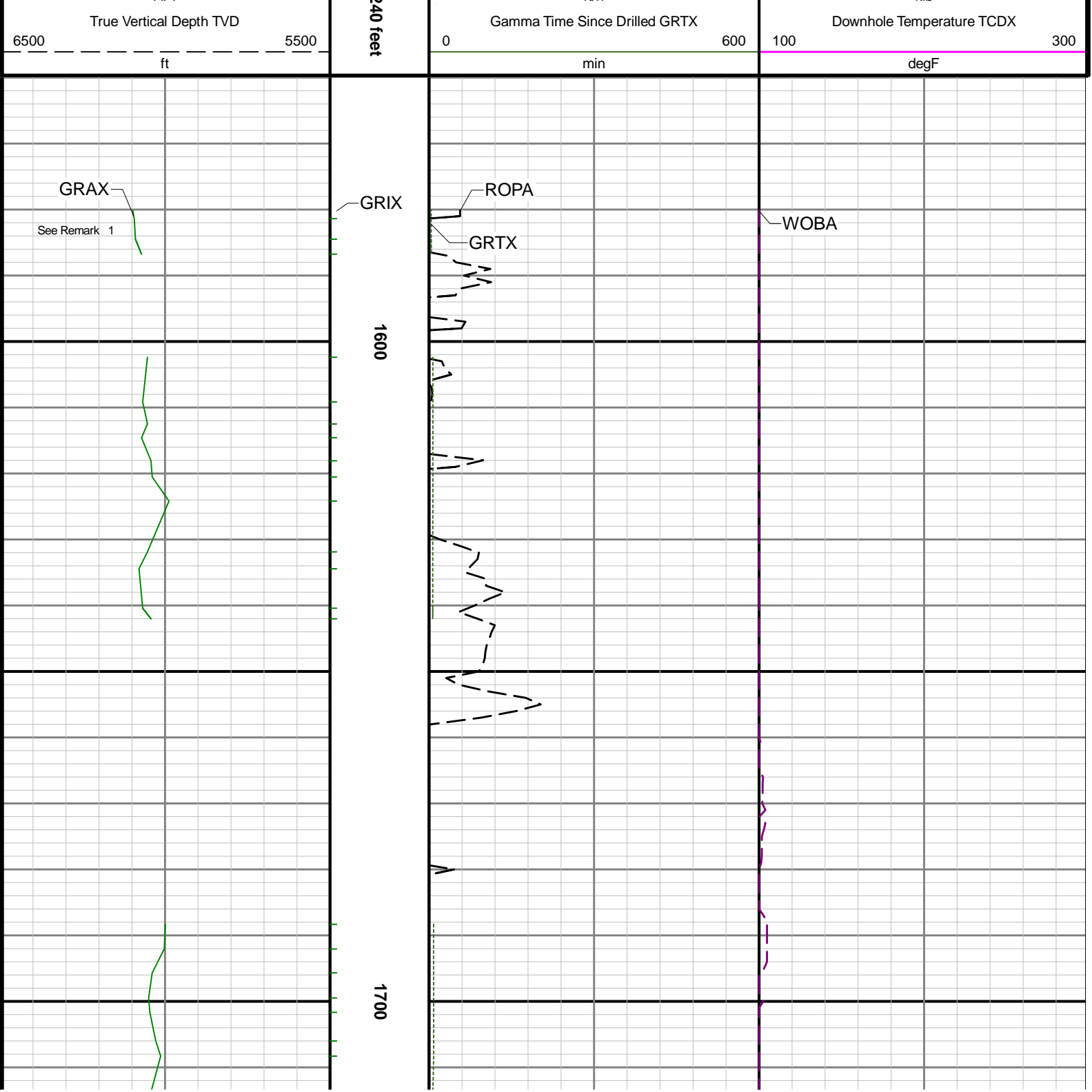
- (1425 to 6045 feet TVD).
- 4
- MD (6045 to 6033 feet TVD).
- 5
- A sliding indicator is shown on the left side of track 1 as a heavy line. This indicator has been depth shifted to the Gamma sensor offset to correspond with Gamma data acquired while sliding.

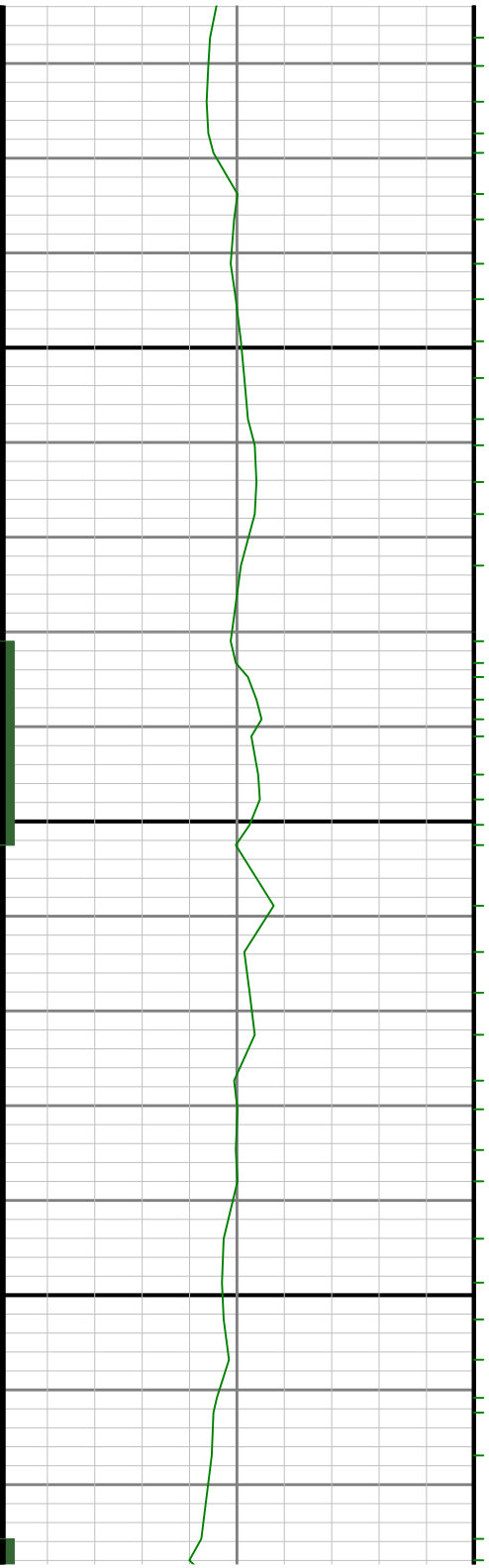
Remarks				
Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	1580.00	8.750	2	Gamma Ray logging operations began at 1580 feet (1580 feet TVD).
2	6486.00	8.750	2	The interval from 6486 to 6549 feet MD (6042 to 6045 feet TVD) was logged more than 10 hours after being drilled to trip out of the hole for casing and cement operations.
3	13281.00	6.125	3	The interval from 13281 to 13343 feet MD (6032 to 6033 feet TVD) was not logged due to sensor to bit offset at TD.

Curve Mnemonics		
Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
GRAX	Gamma Ray - Apparent 0.5 ft Average	API
GRIX	Gamma Ray - Data Point Indicator	unitless
GRTX	Gamma Time Since Drilled	min
GRSI	Sliding Indicator Flag	unitless
TCDX	Downhole Temperature	degF
TVD	True Vertical Depth	ft
WOBA	Weight On Bit, Average 1 ft Average	klb

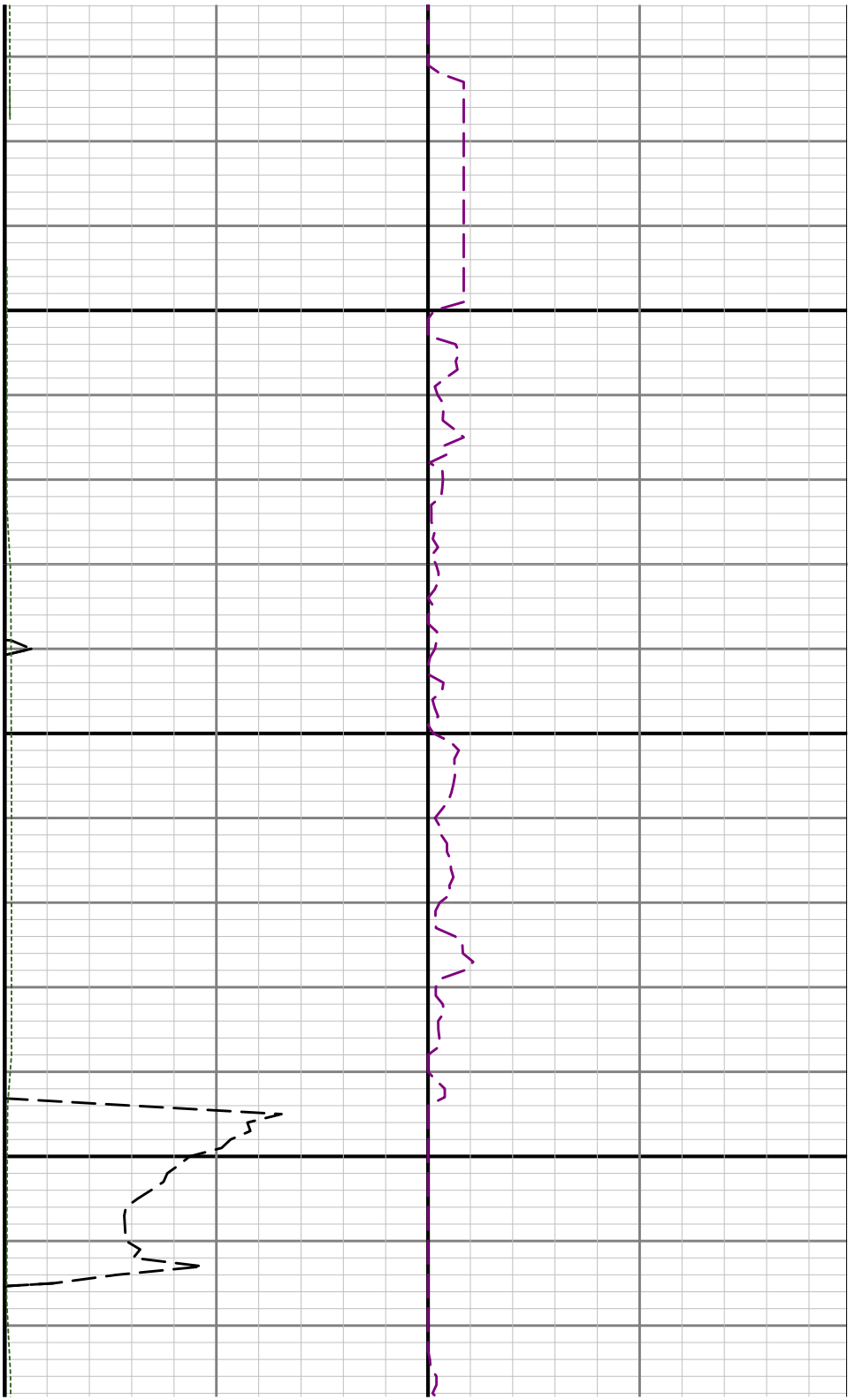
"These interpretations and analyses ("Interpretations") are opinions provided by Baker Hughes Oilfield Operations, Inc ("Baker Hughes"), based upon industry practice, empirical relationships, assumptions and measurements, (many of which may be provided by the customer). The Interpretations are not infallible 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"tgnkcpæg"qp"uwej"Kpvgtrtgvckqpu"yknn"ceeqornkuj"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 qdnkicvkqpu"ujcnn"dg"iqxgtpgf"d{"Dcmgt"Jwijgu"Kpeqtrqtcvgføu"Yqtnfykfg"Vgtou"cpf"Eqpfkvkqpu0\$""

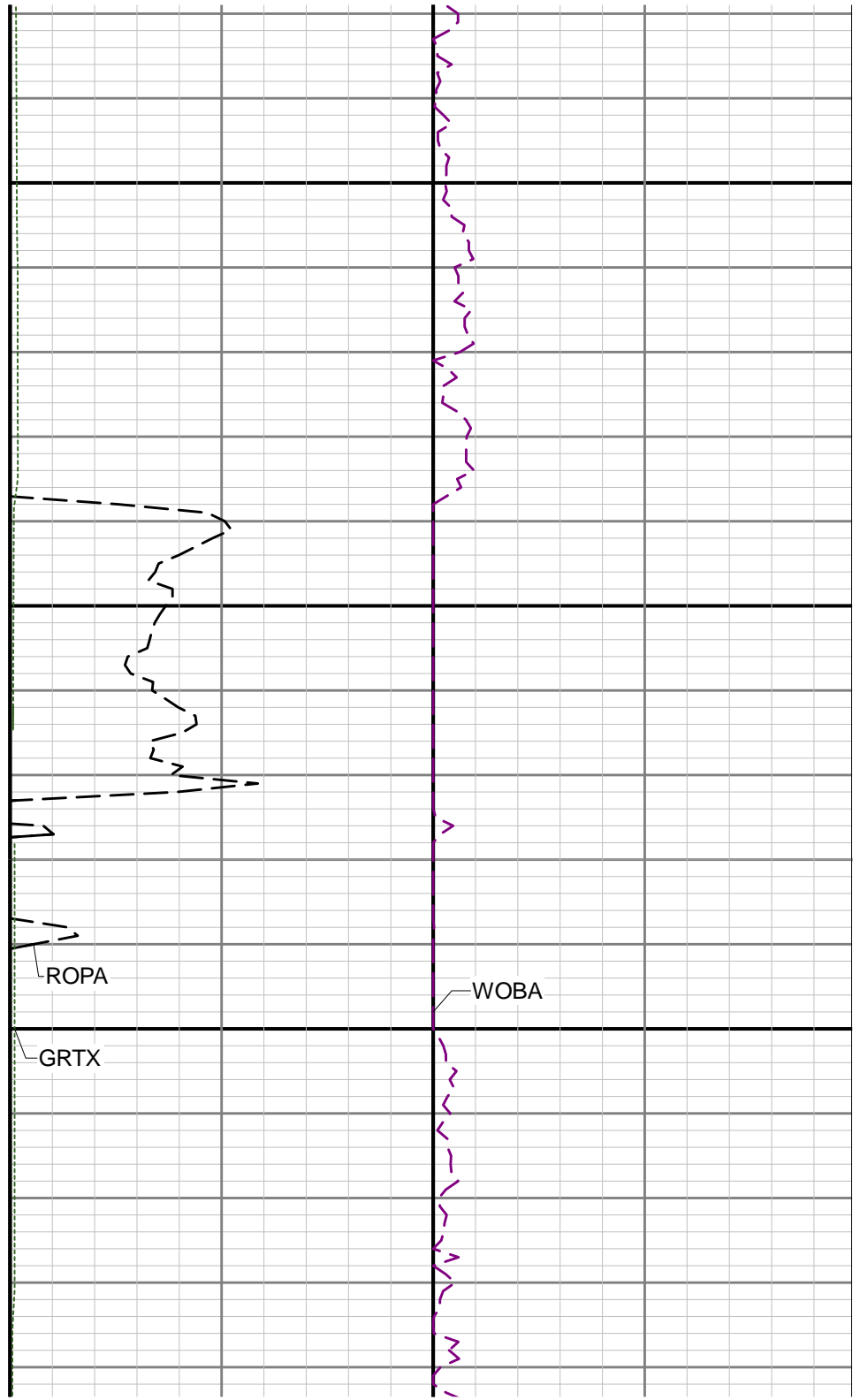
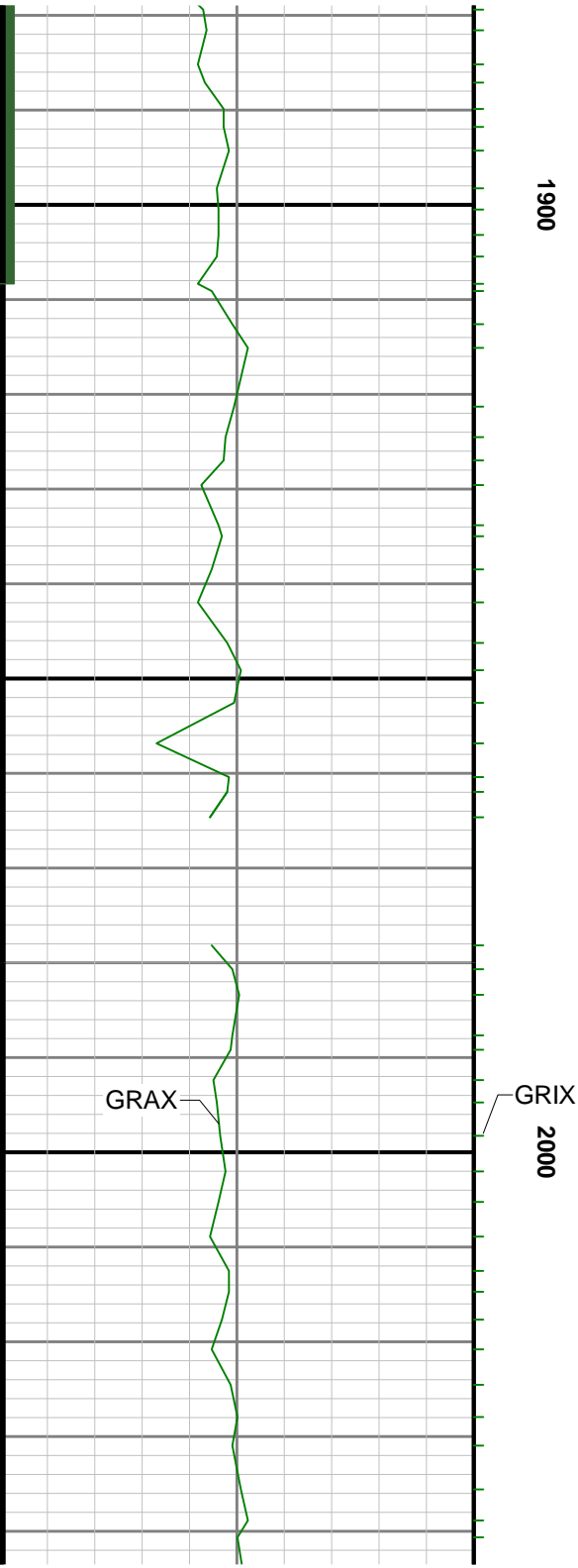


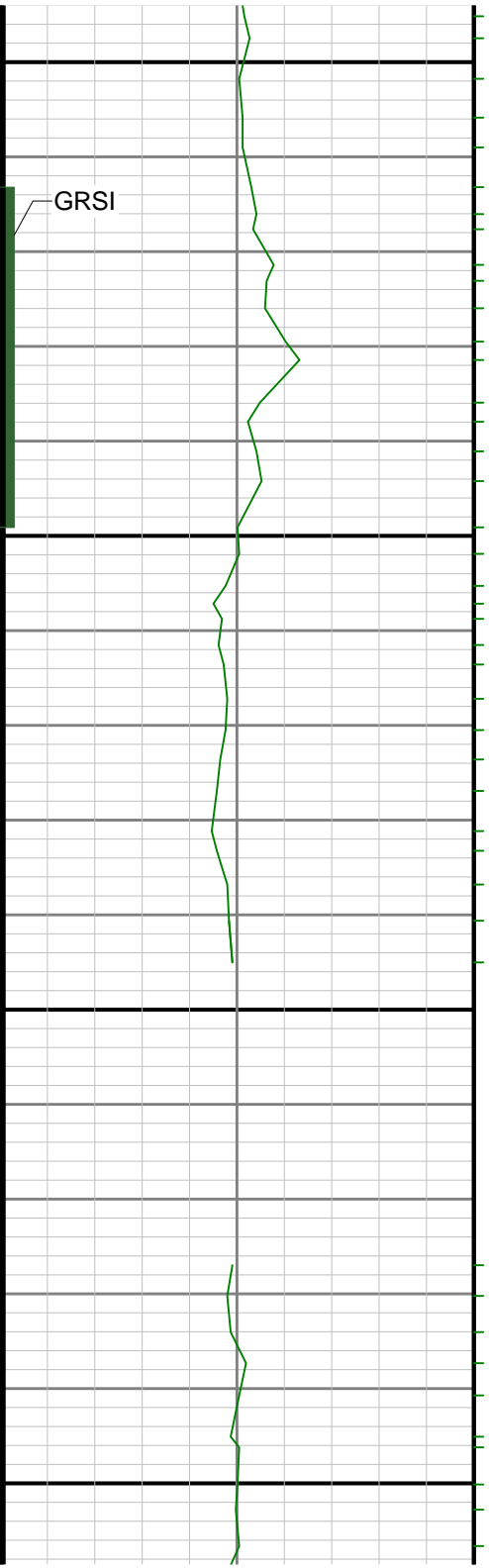




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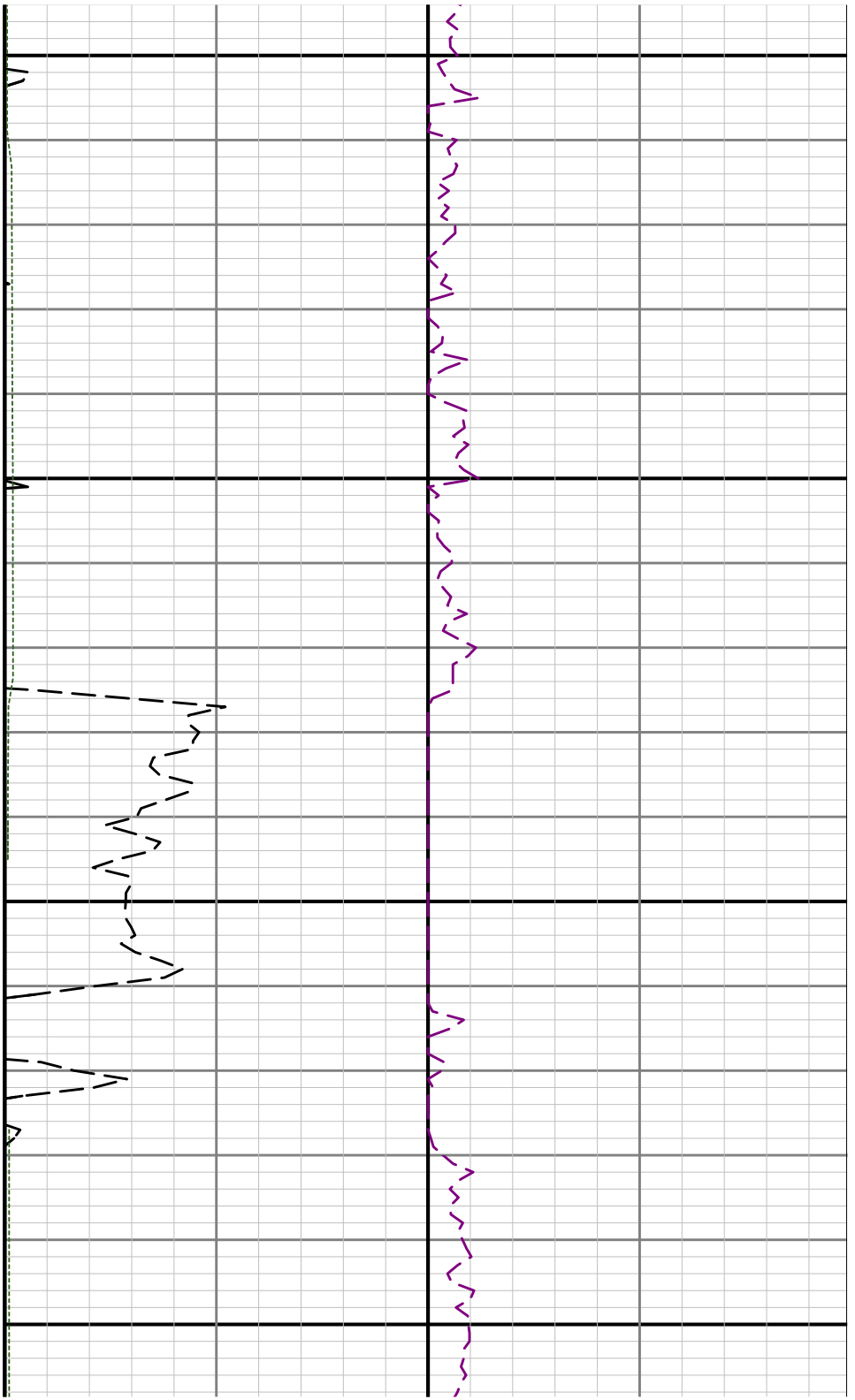


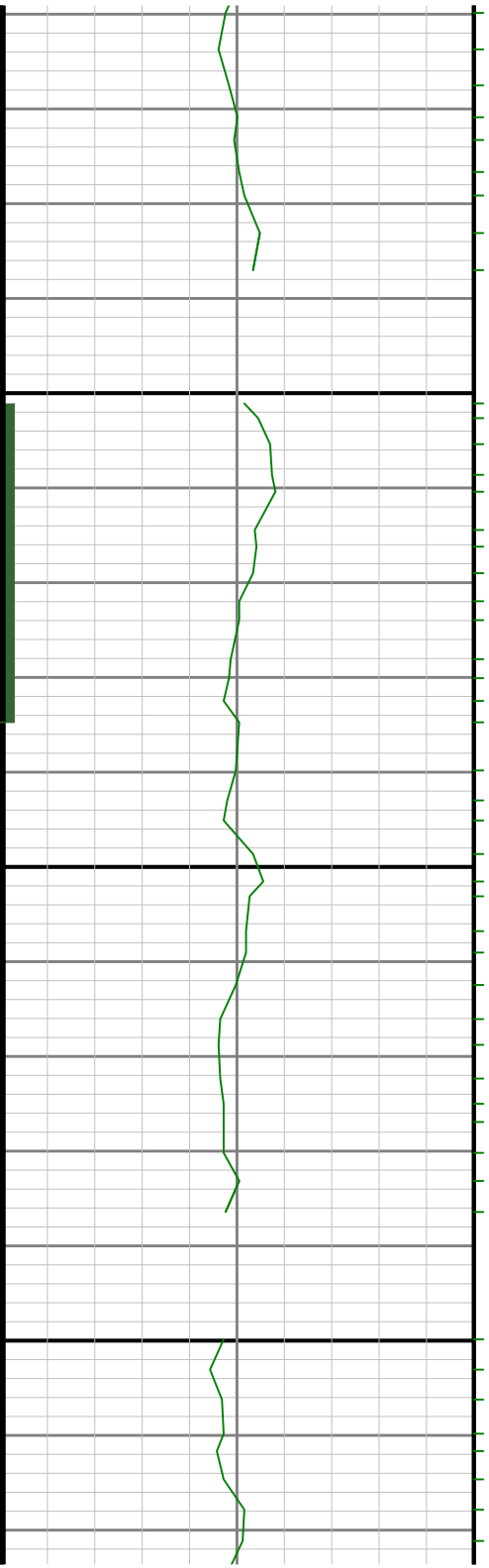




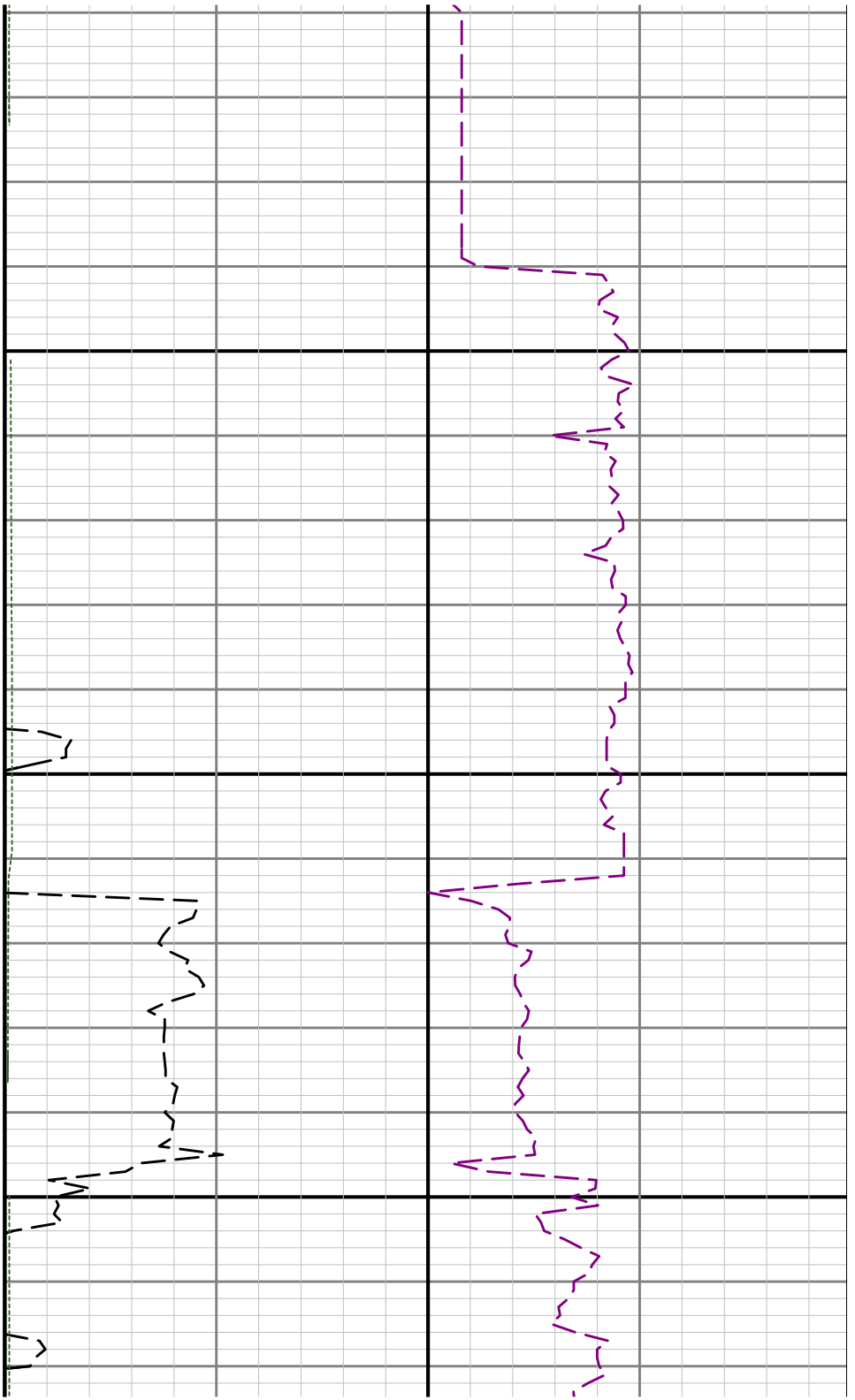
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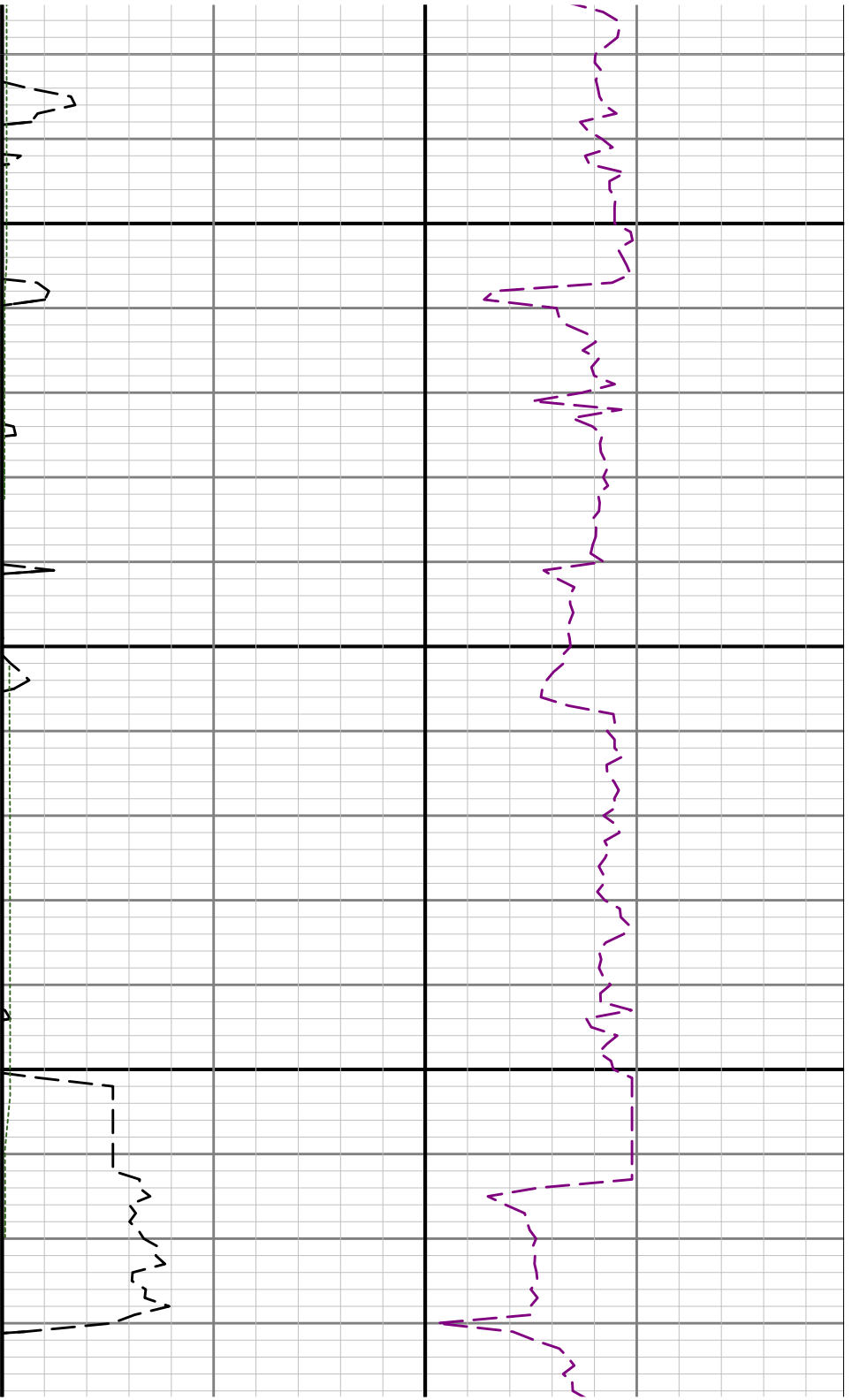
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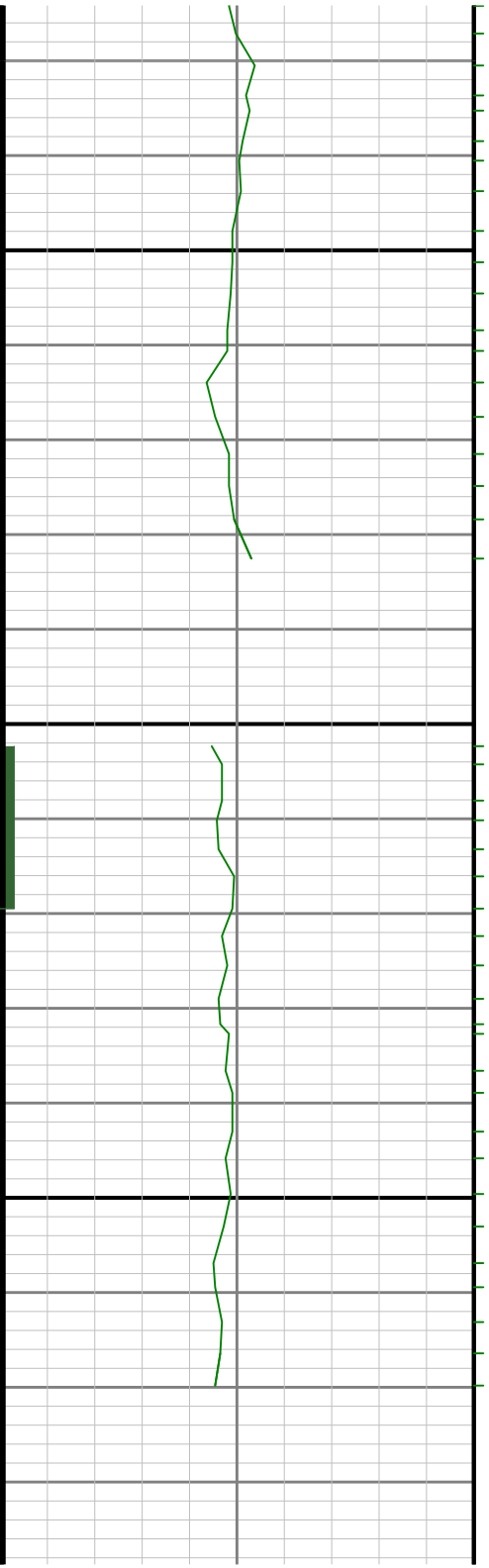
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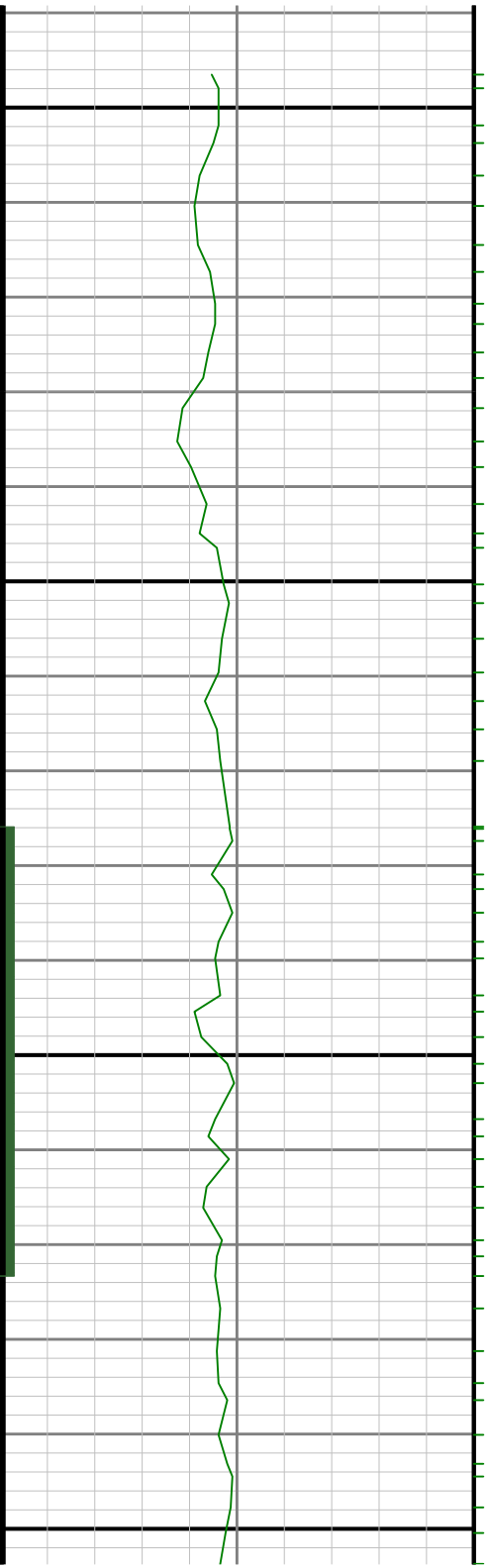




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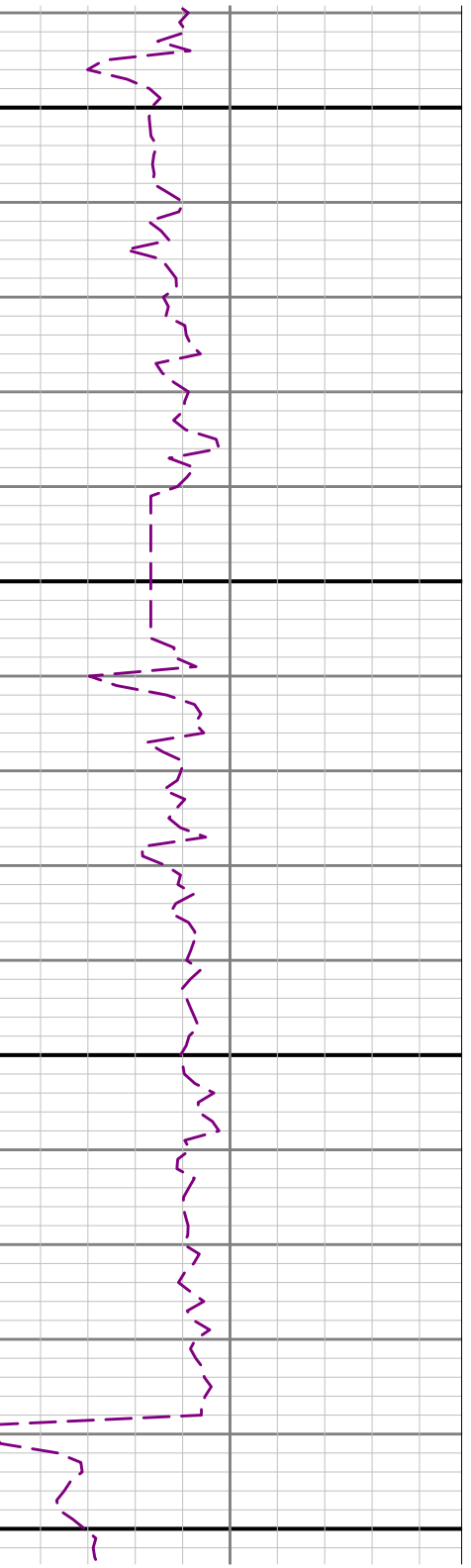
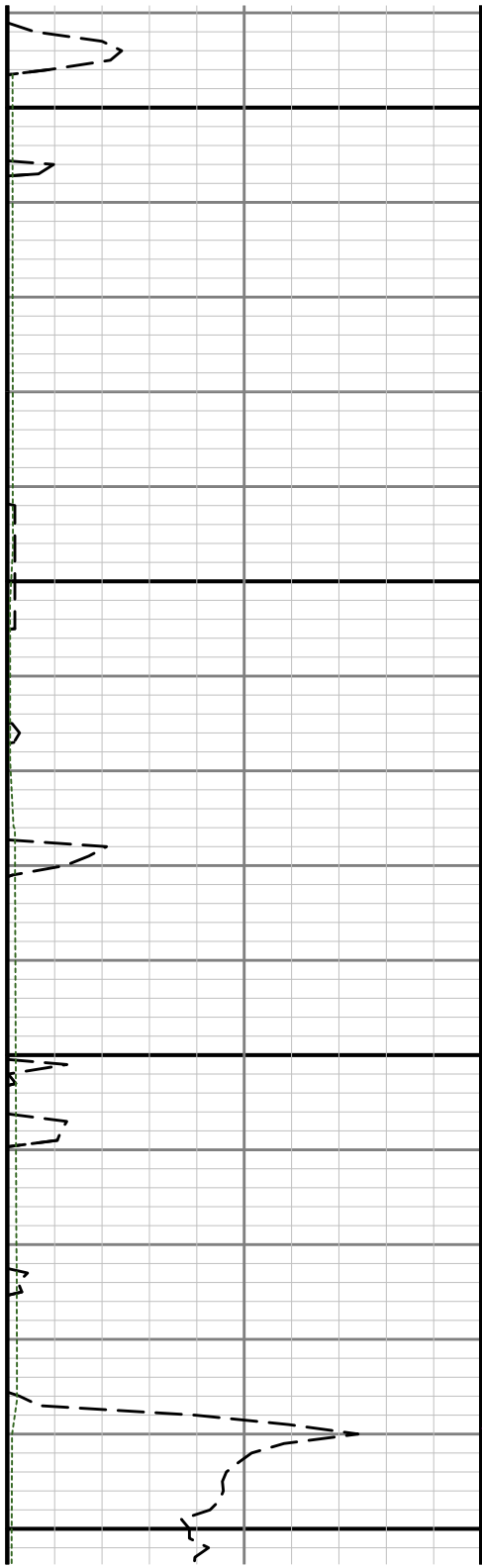
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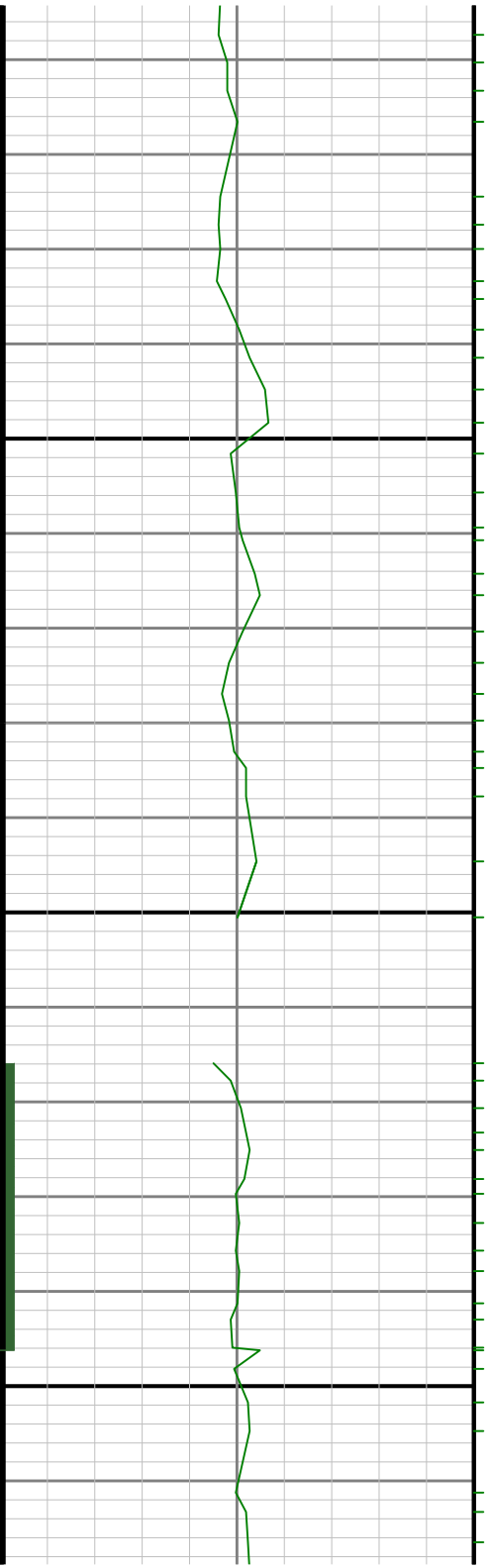
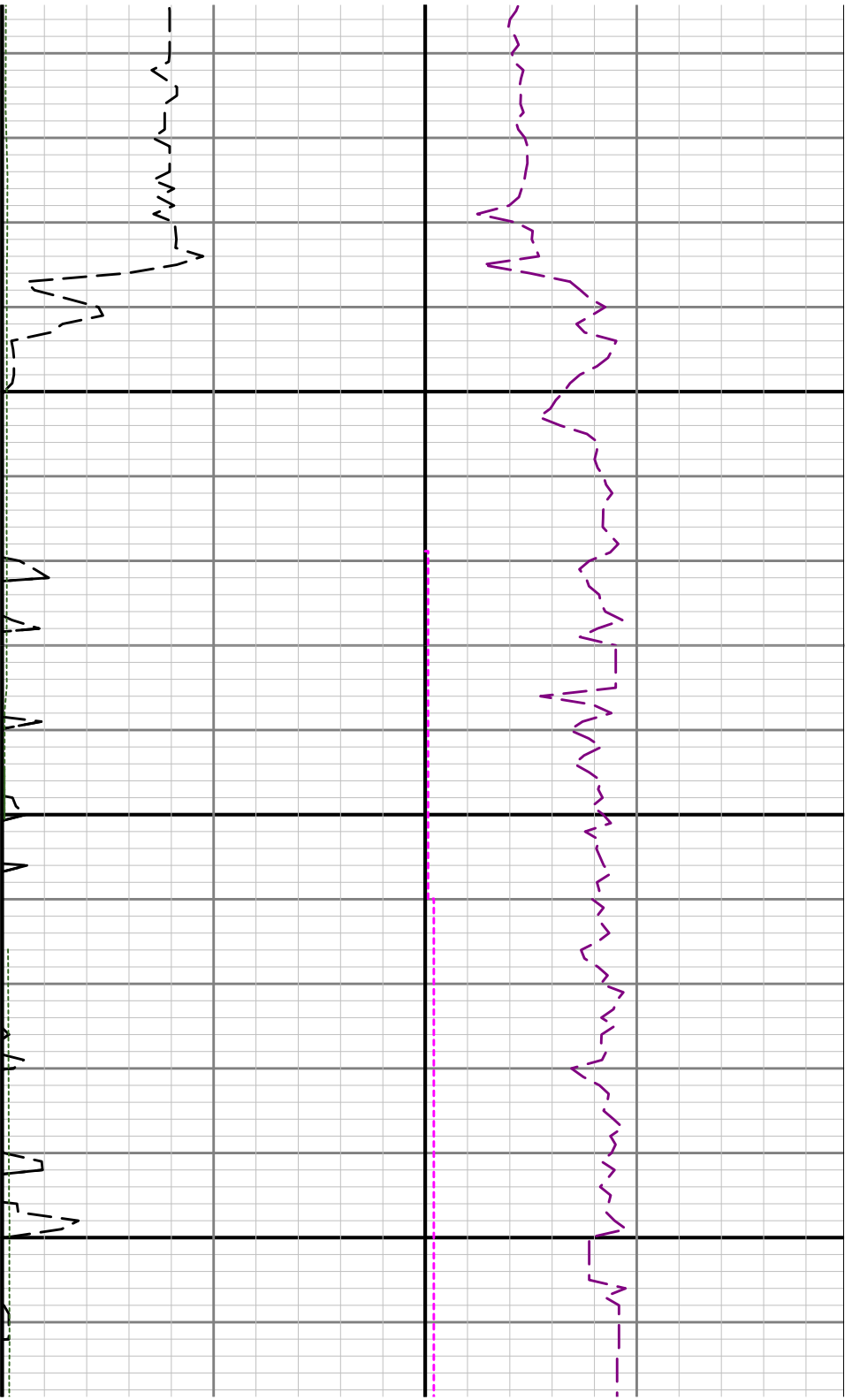


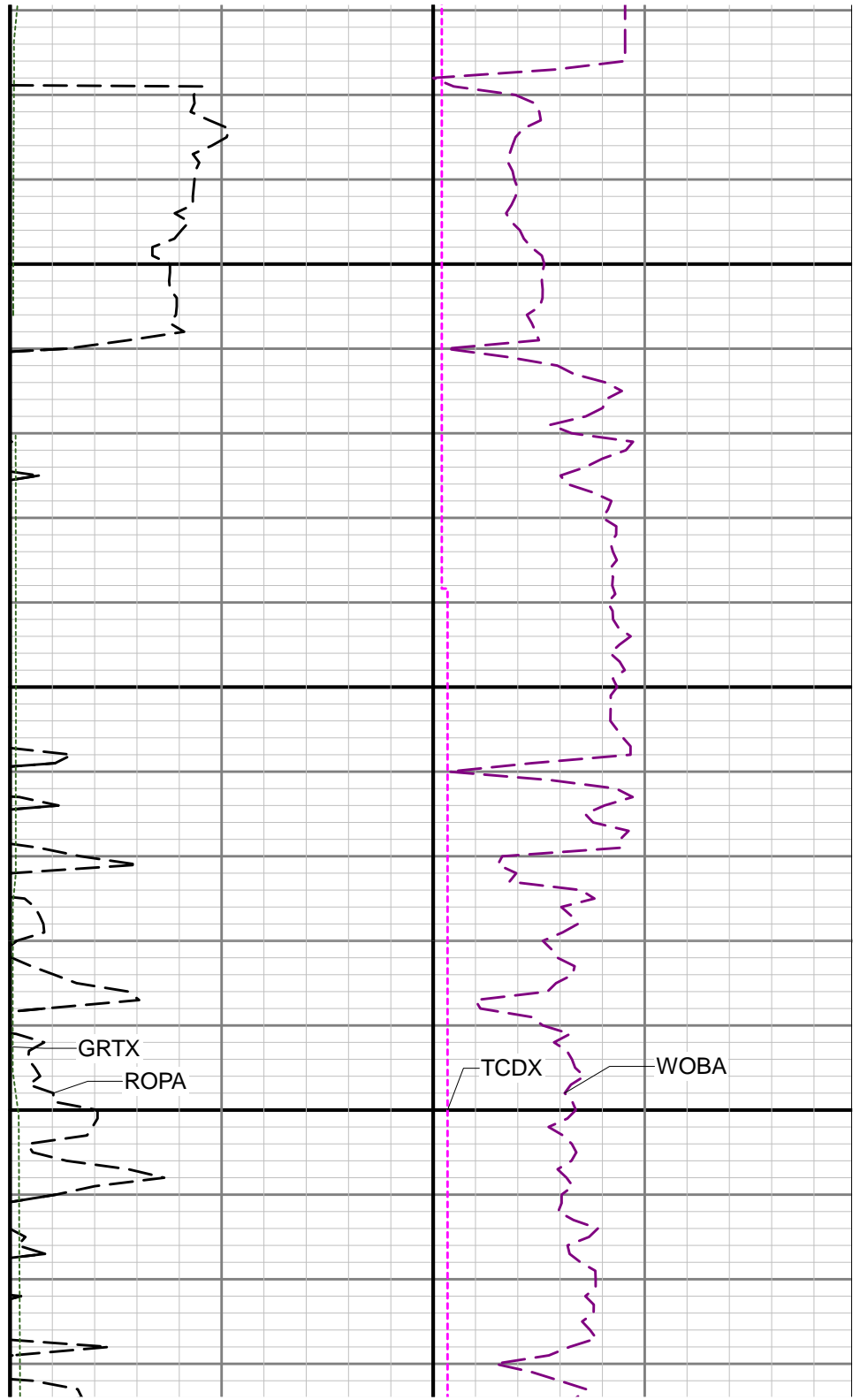
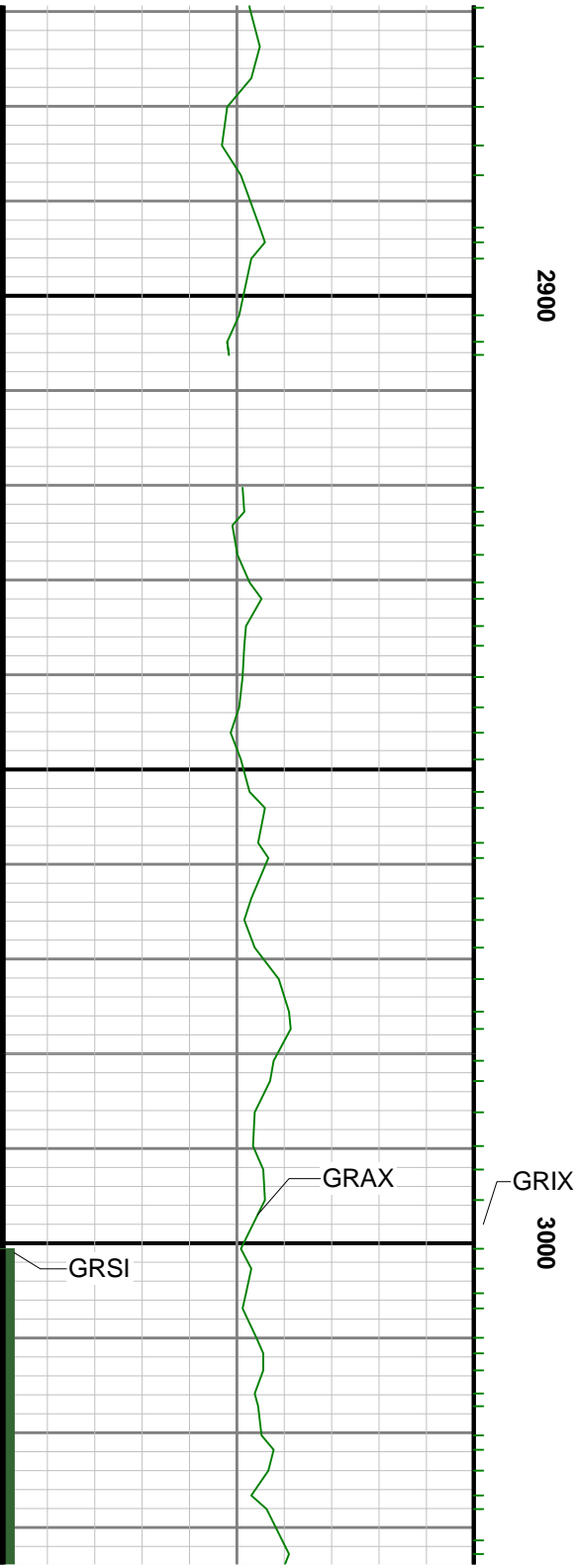


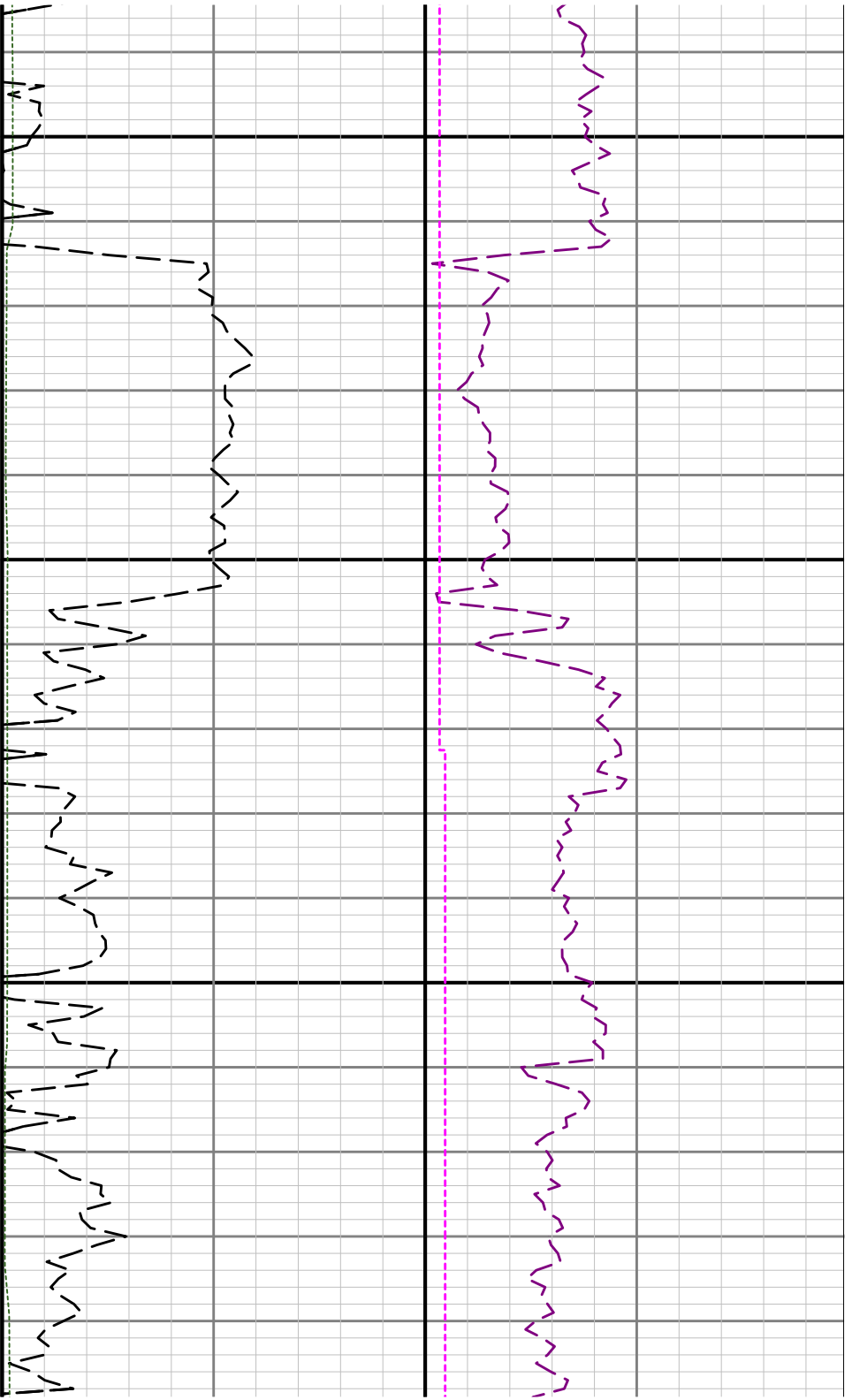
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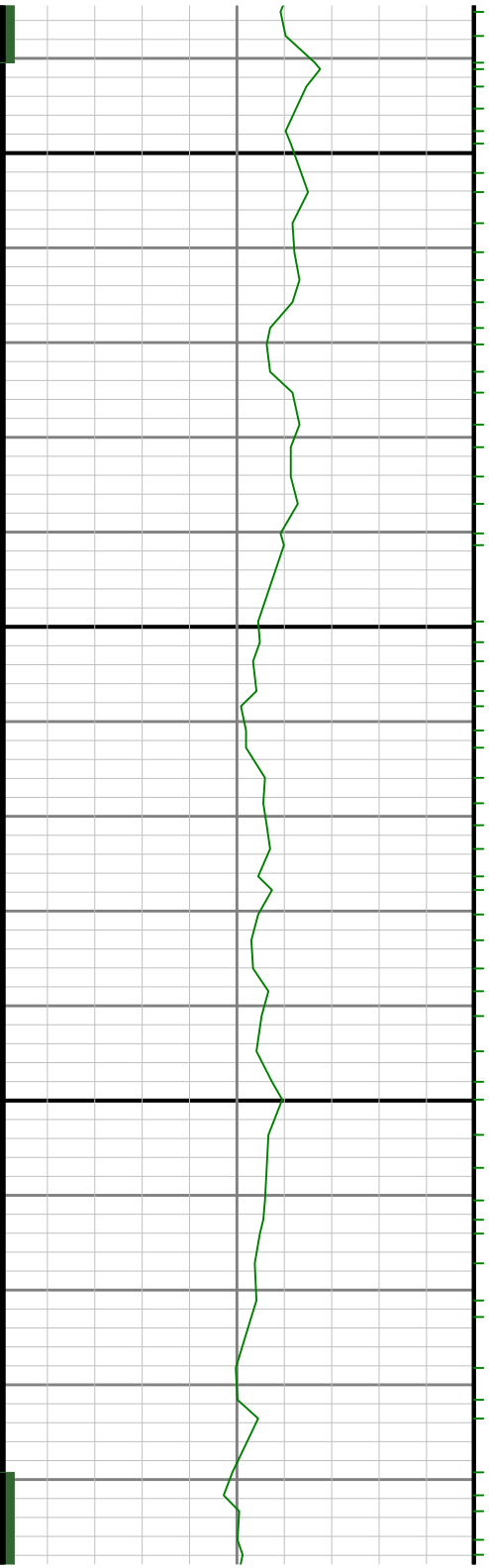


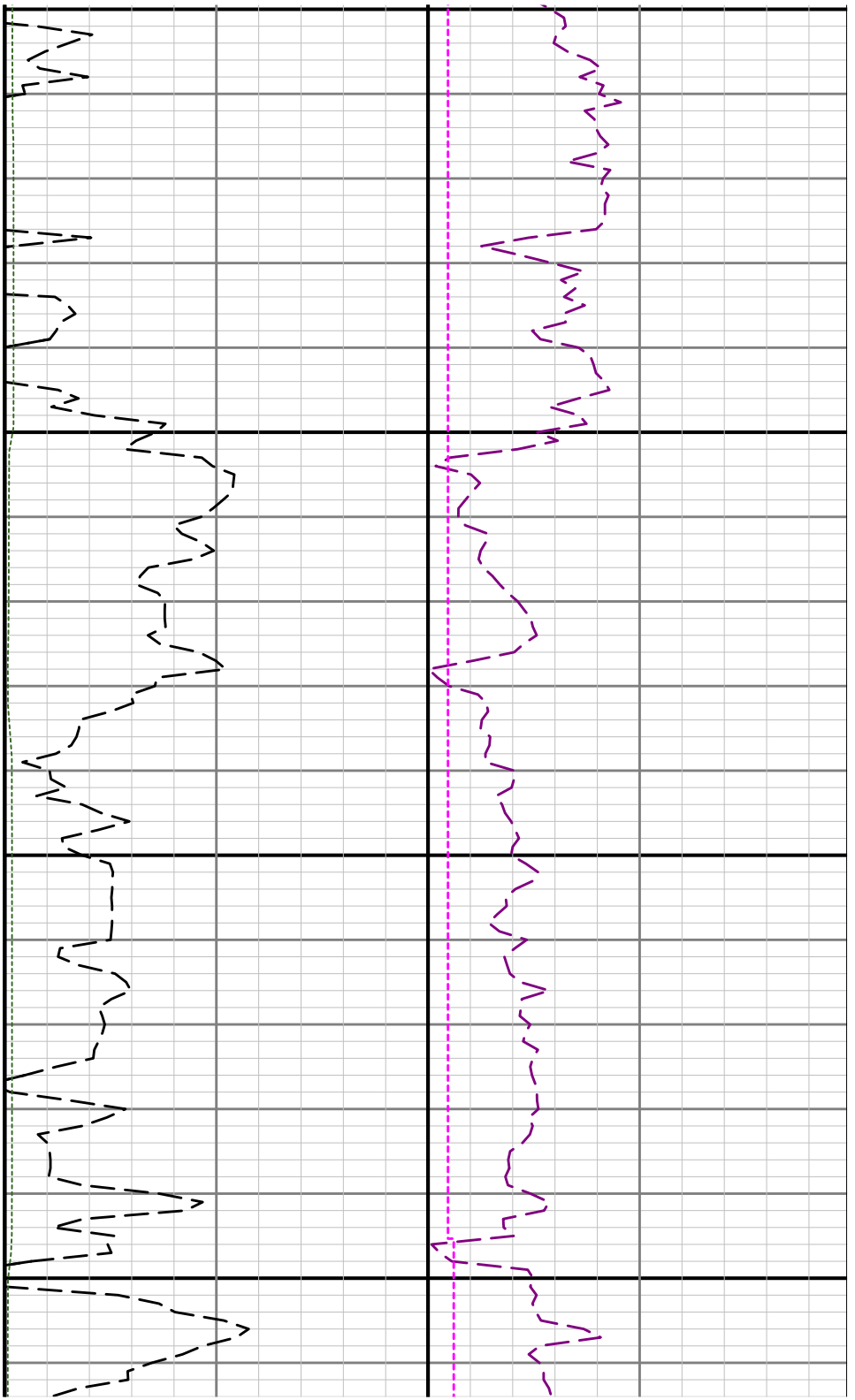




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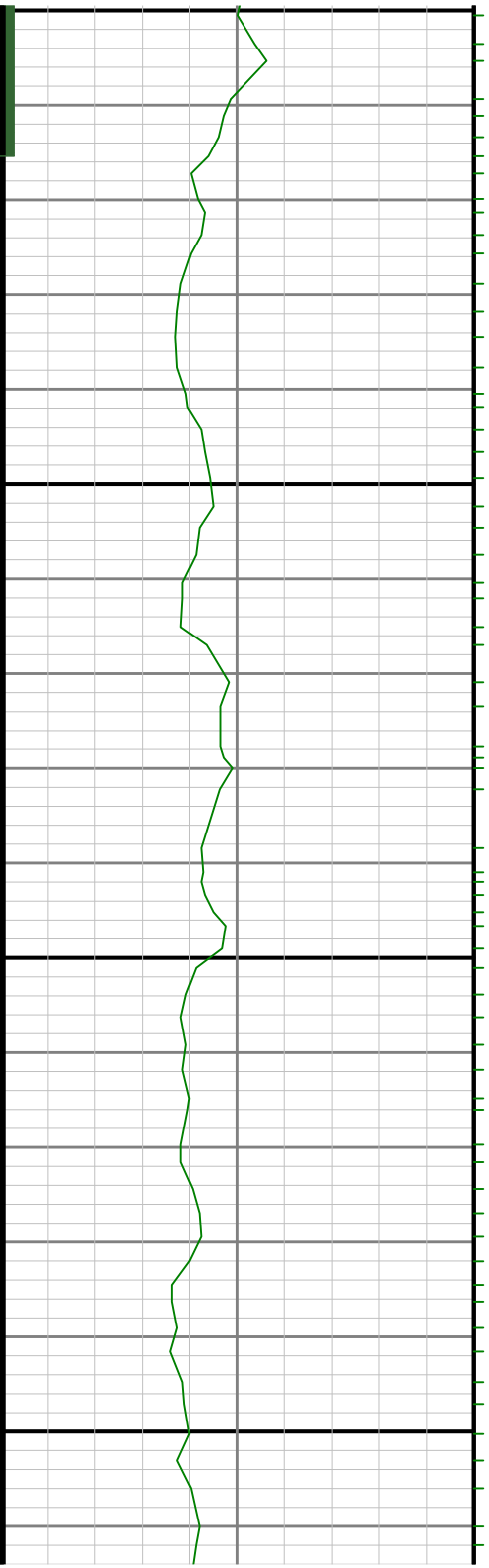
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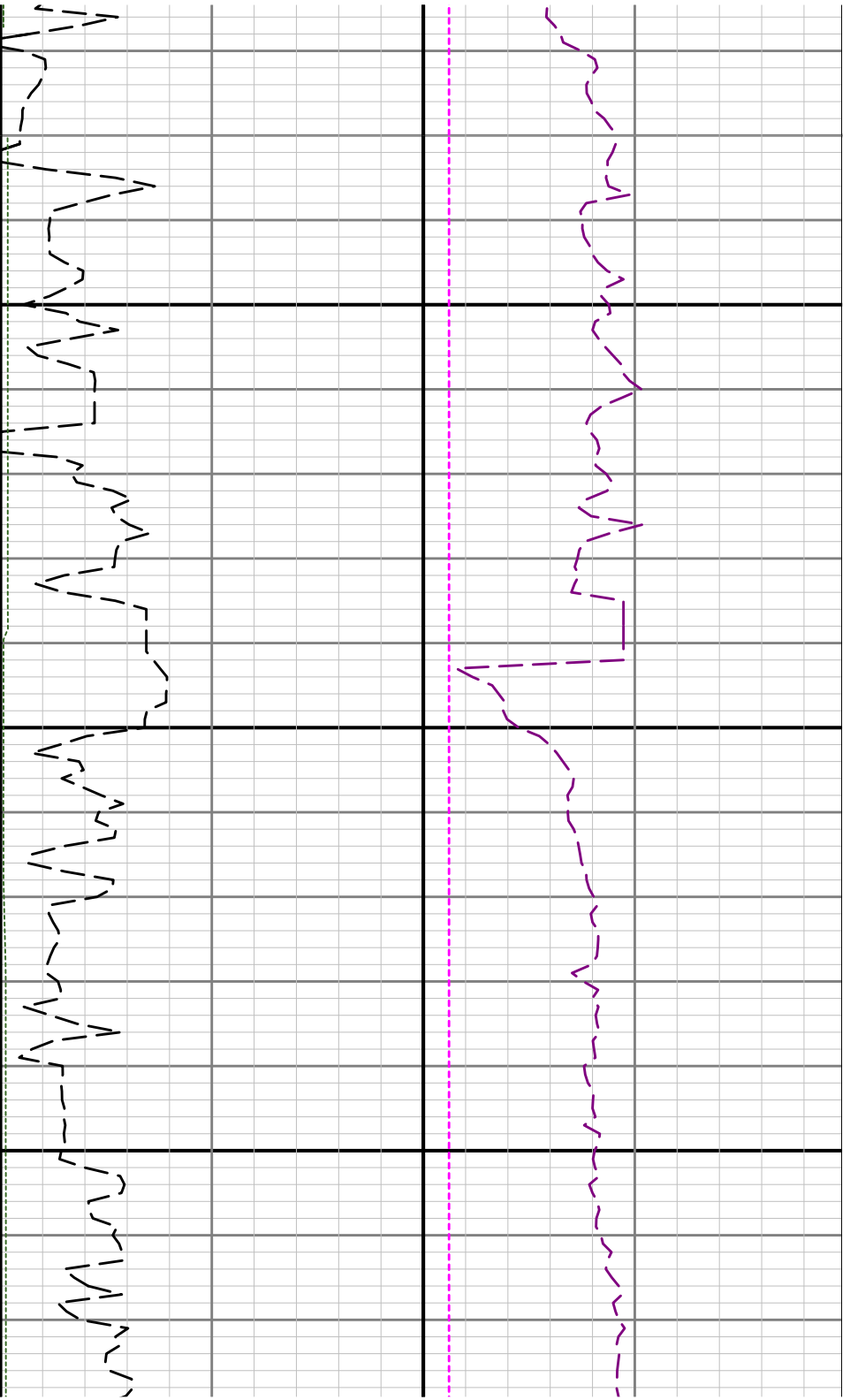




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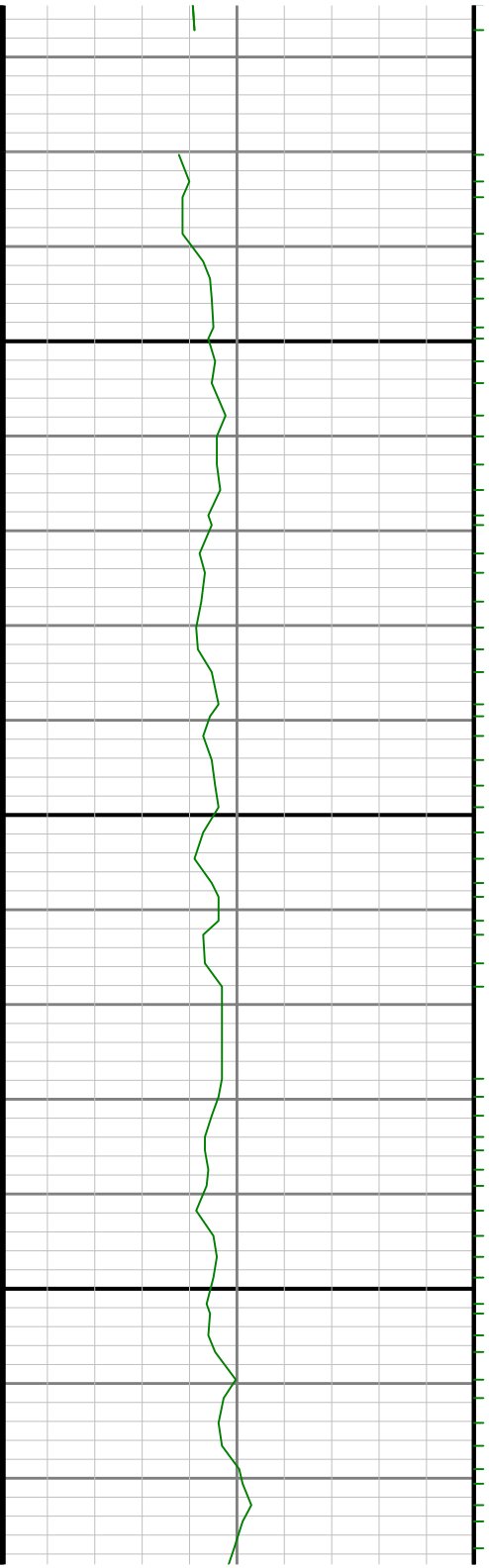
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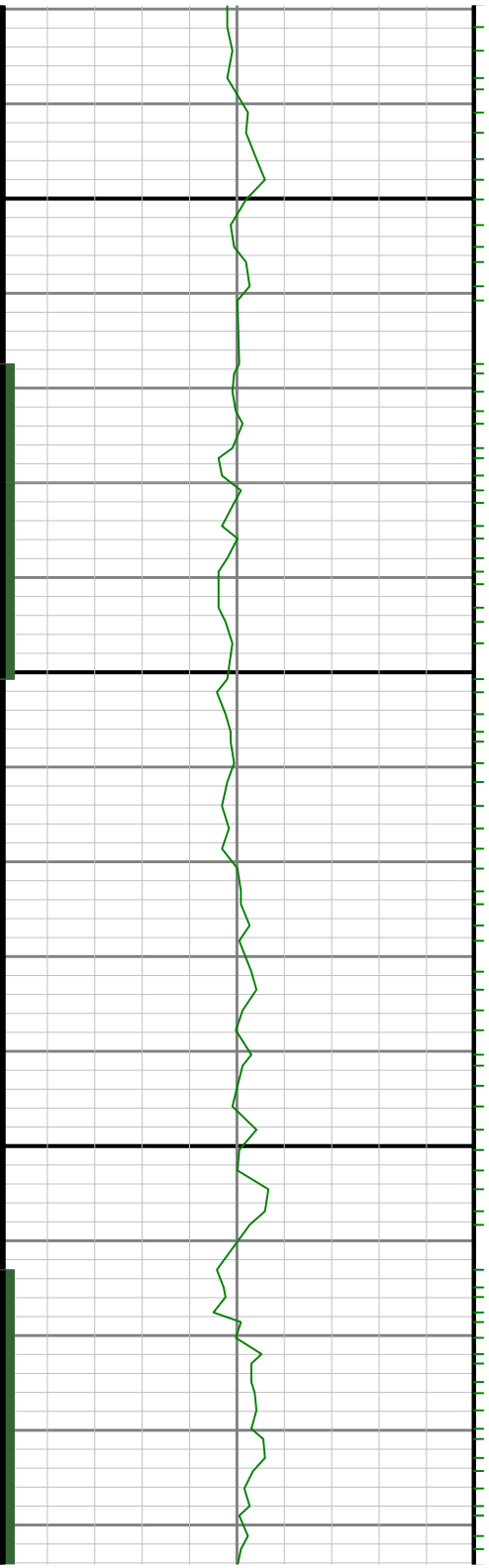




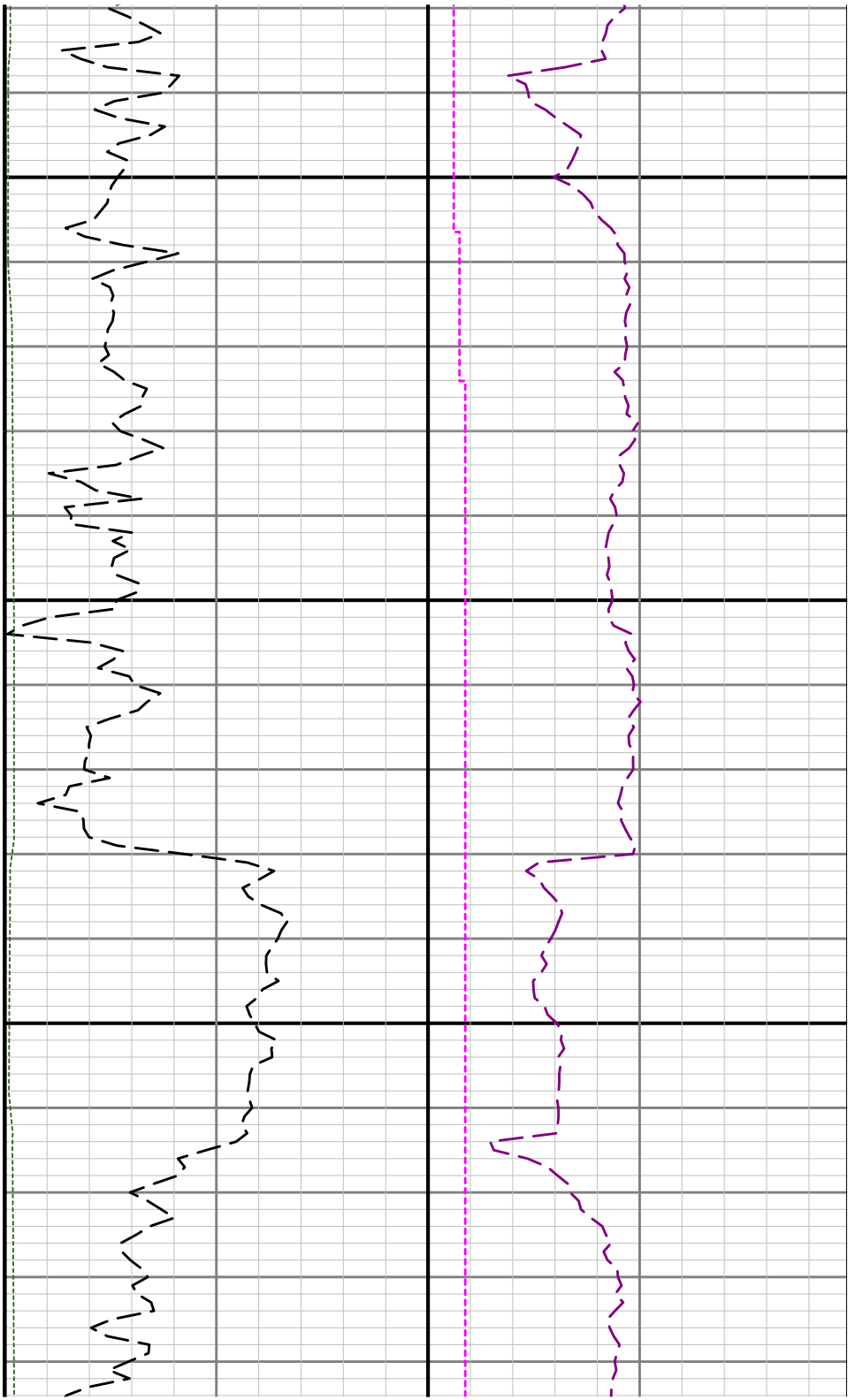
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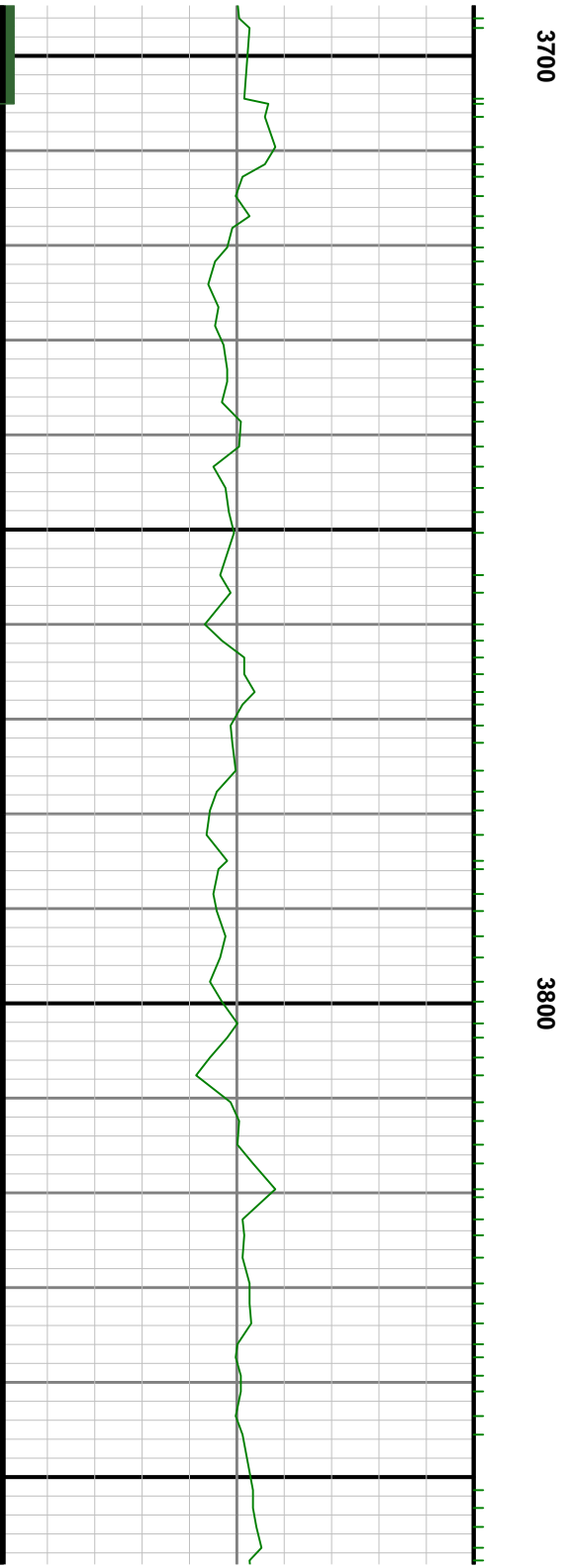
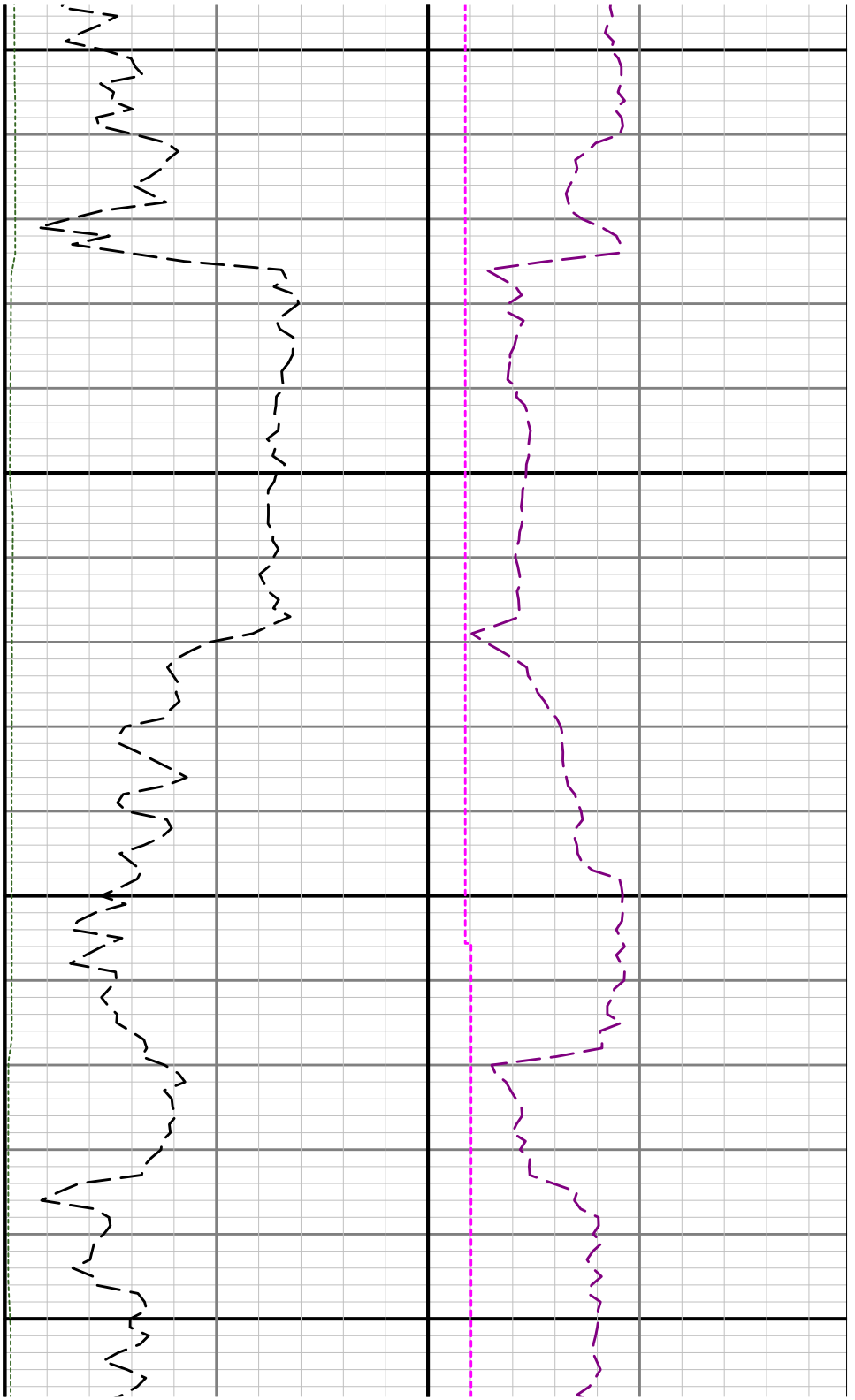
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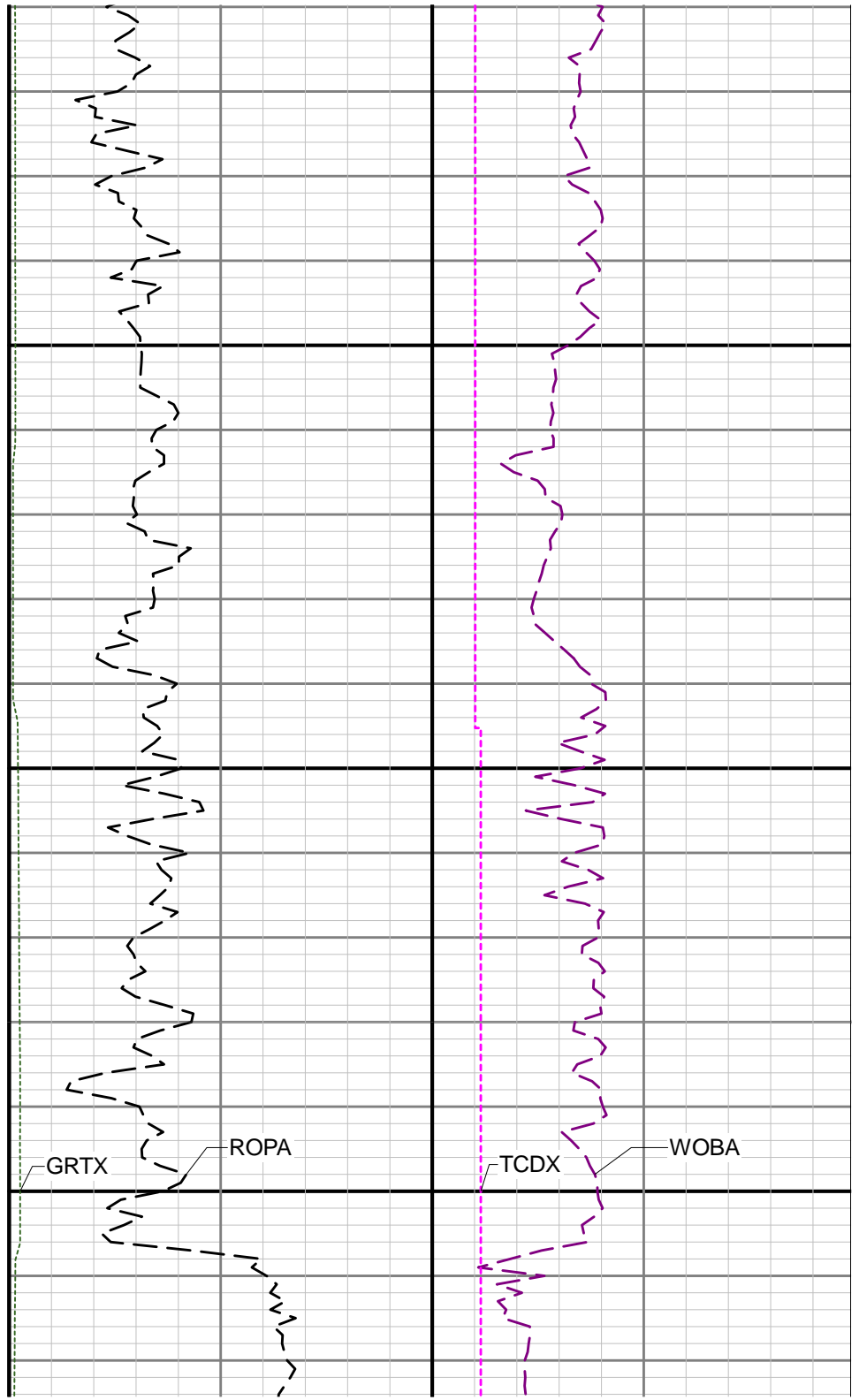
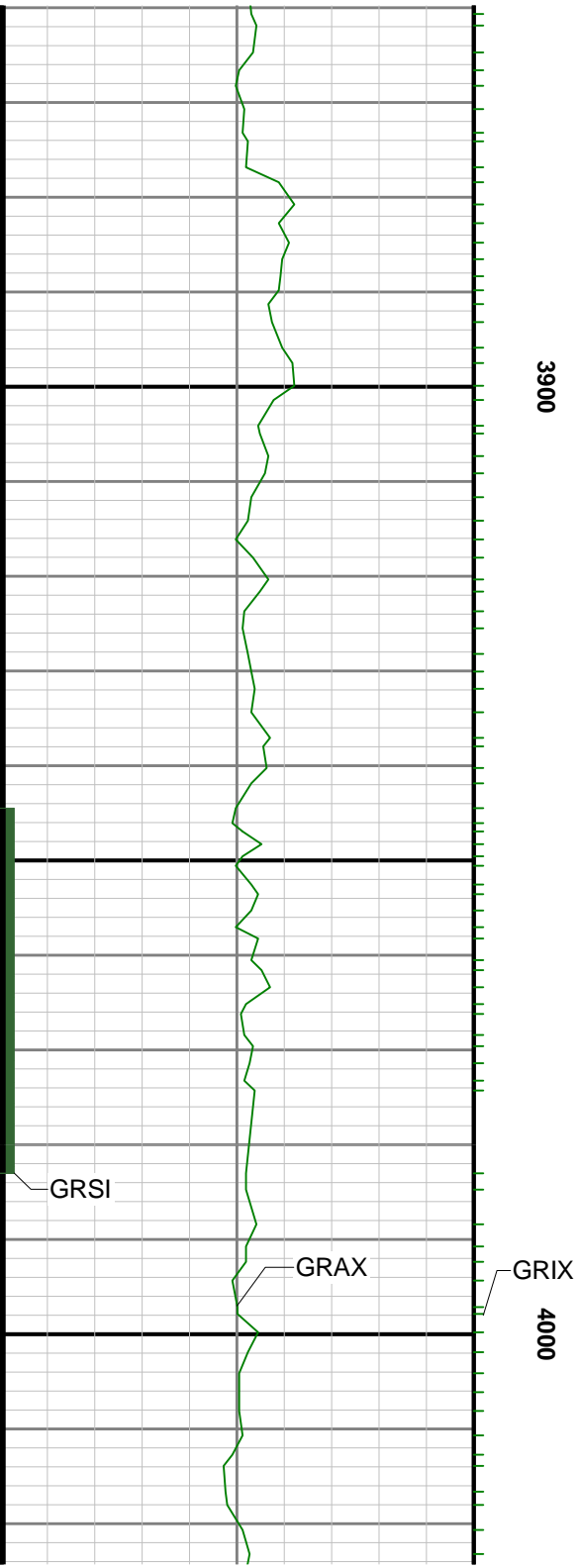




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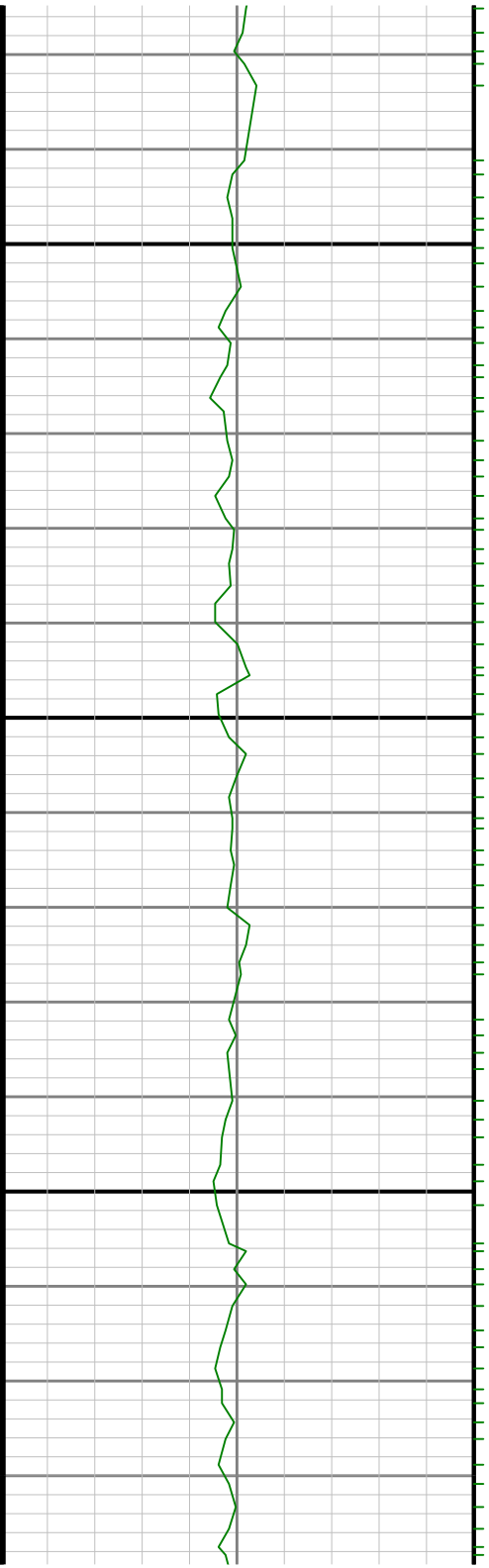


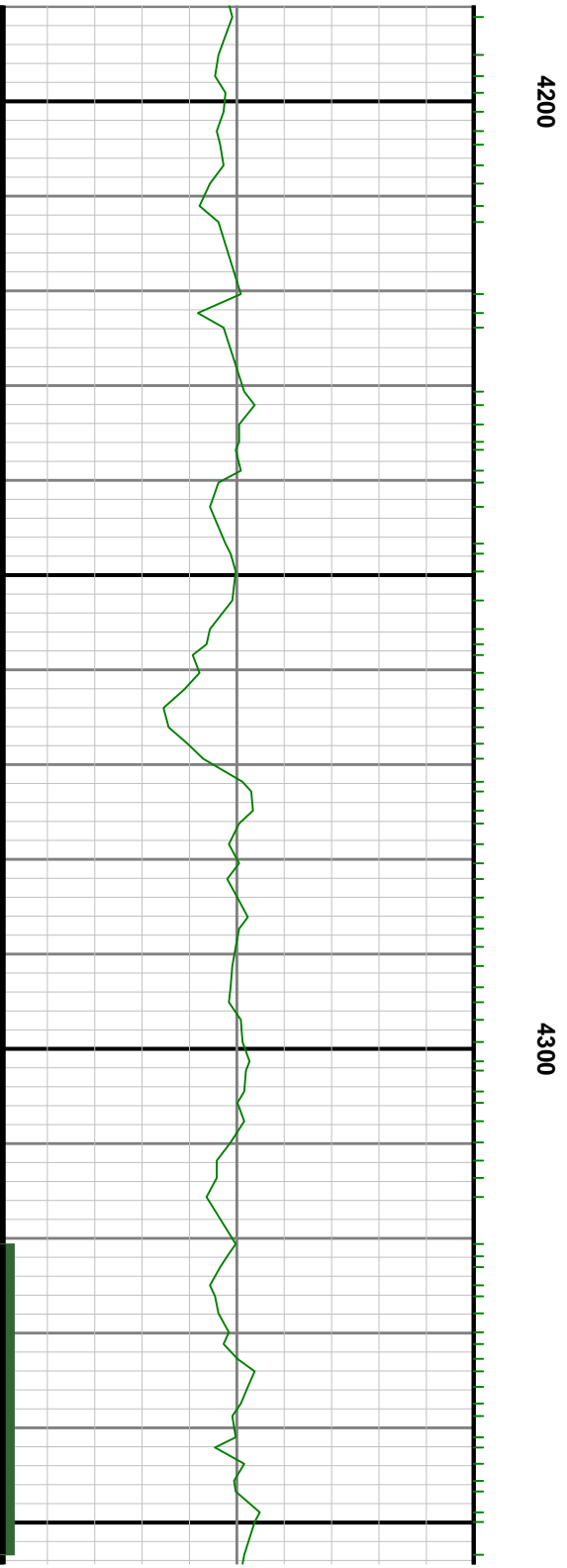
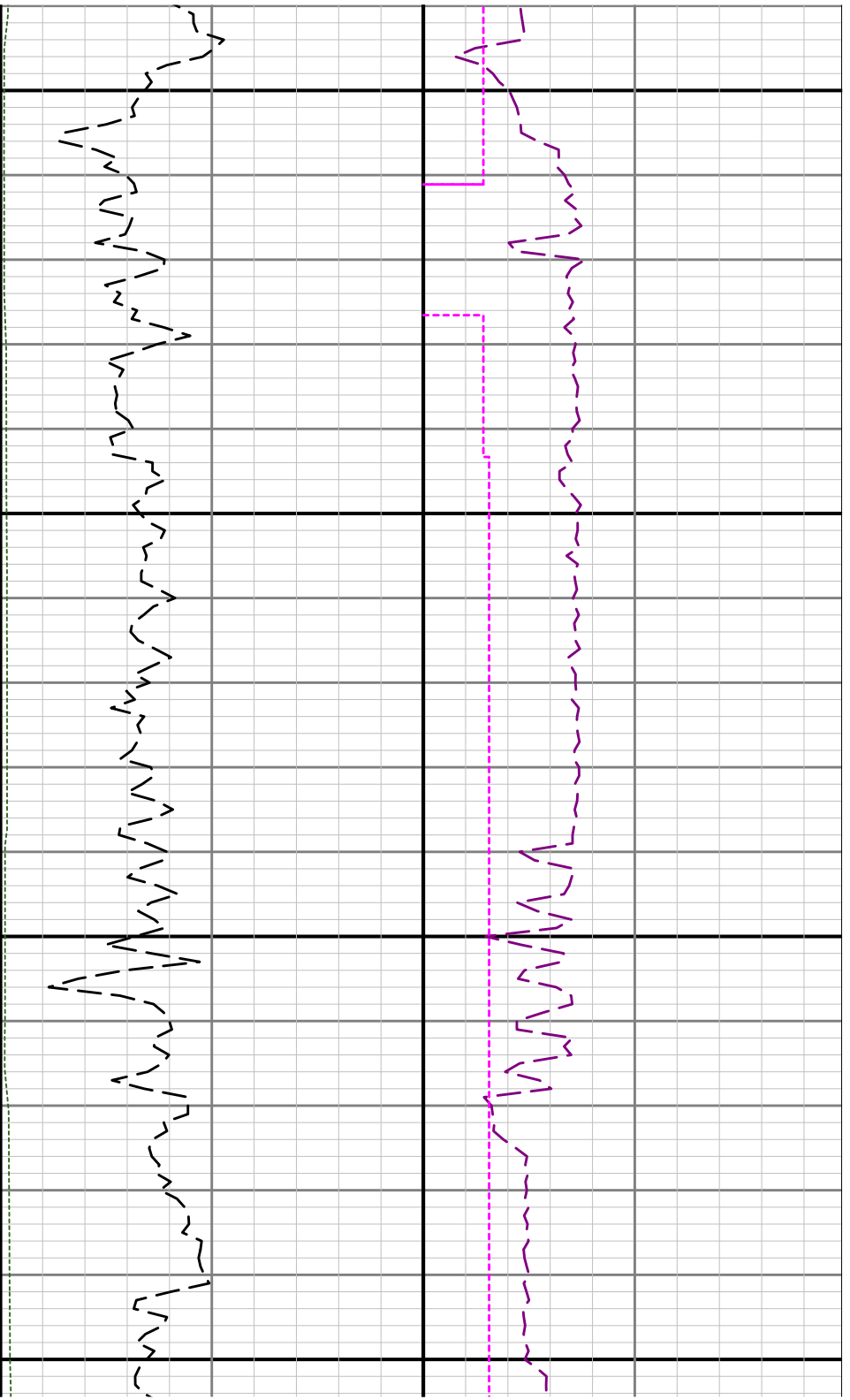


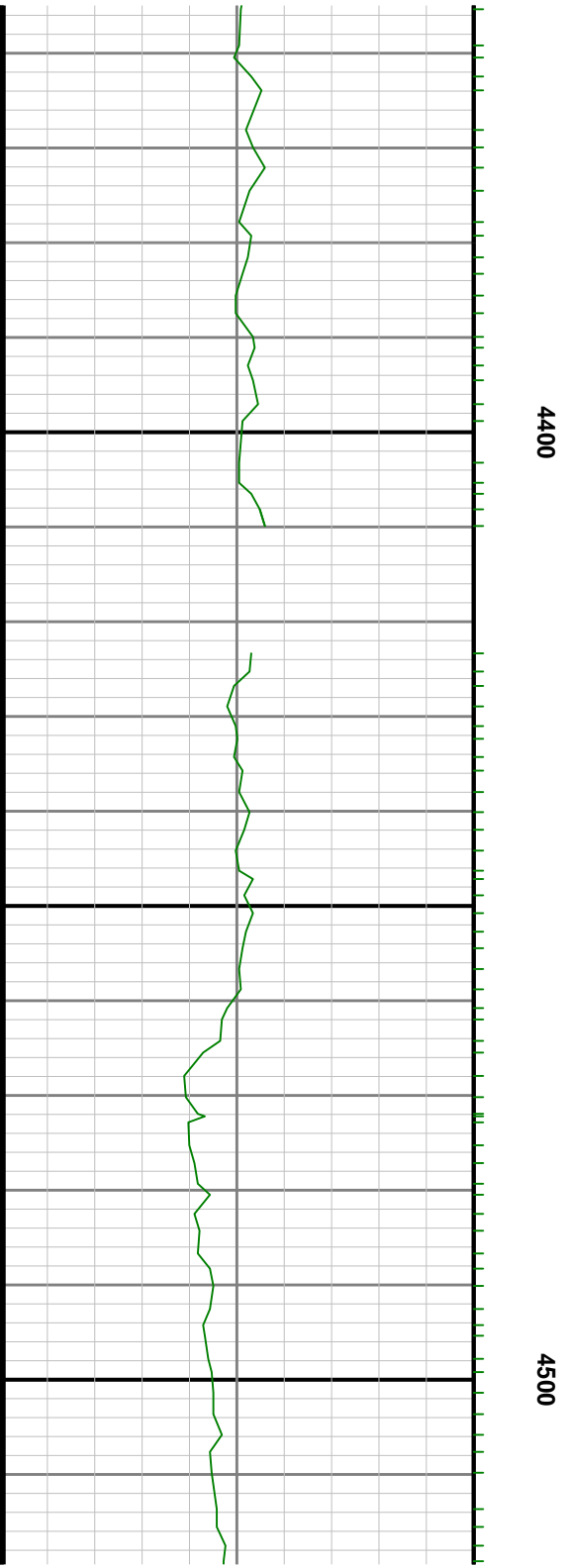
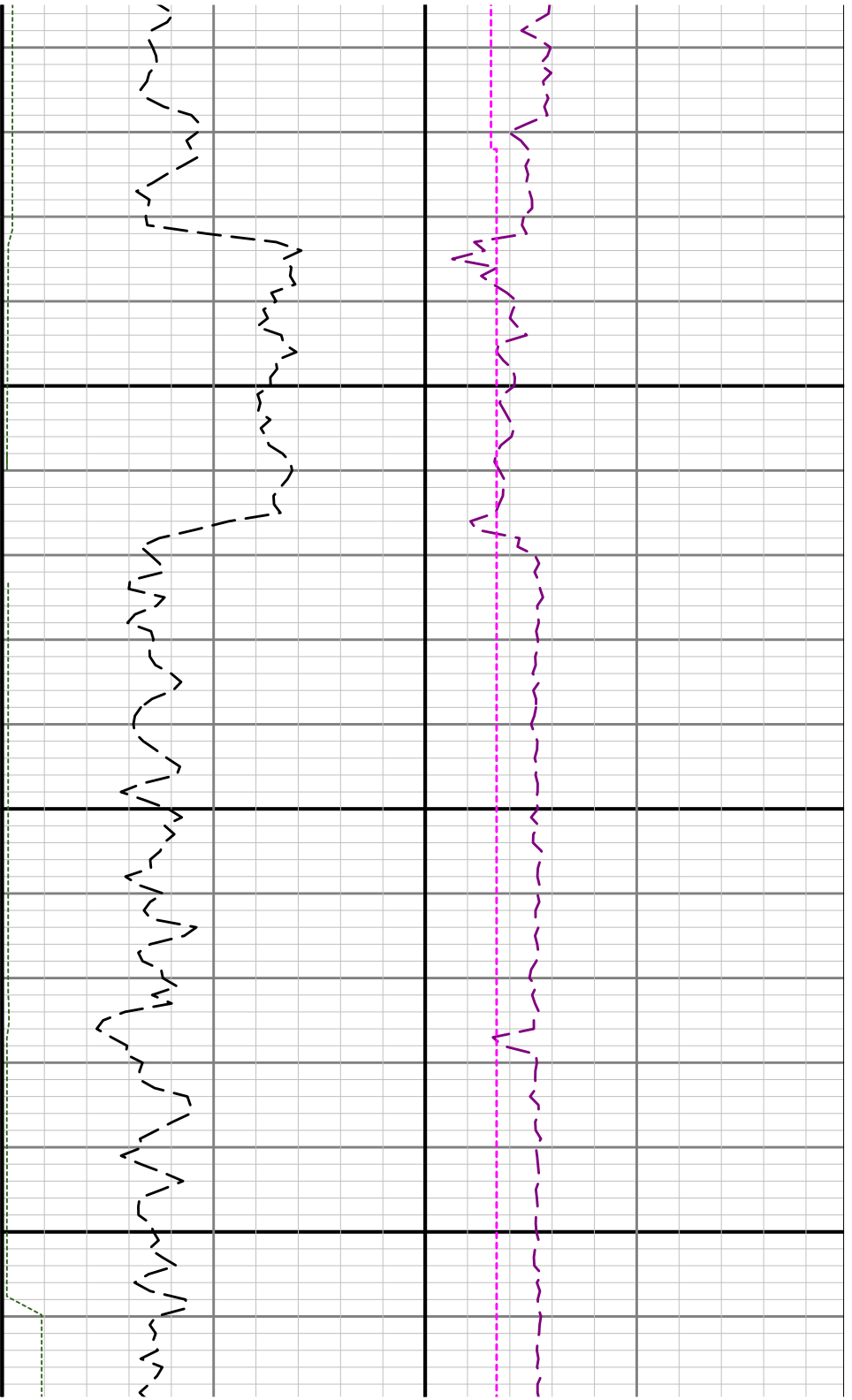


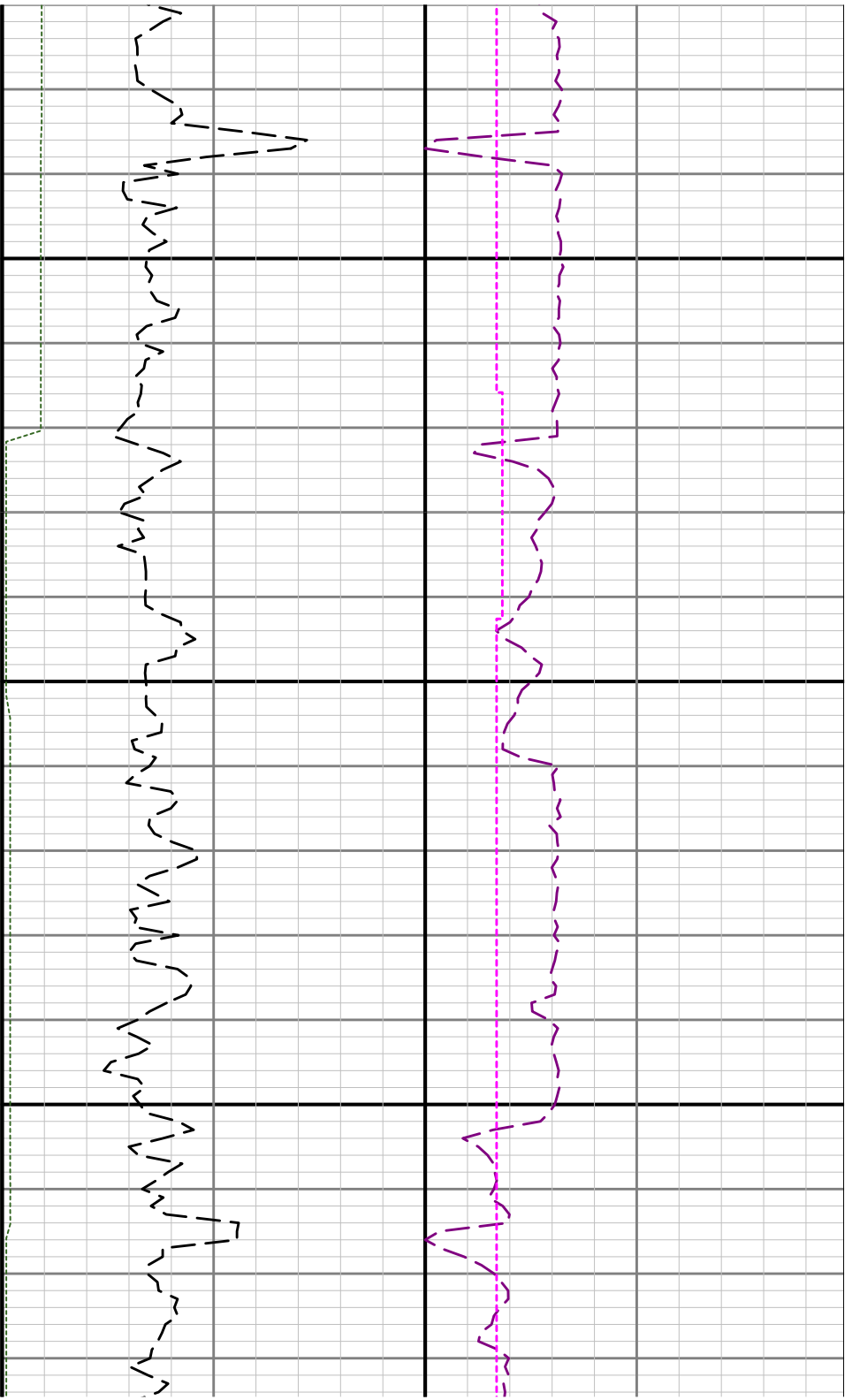


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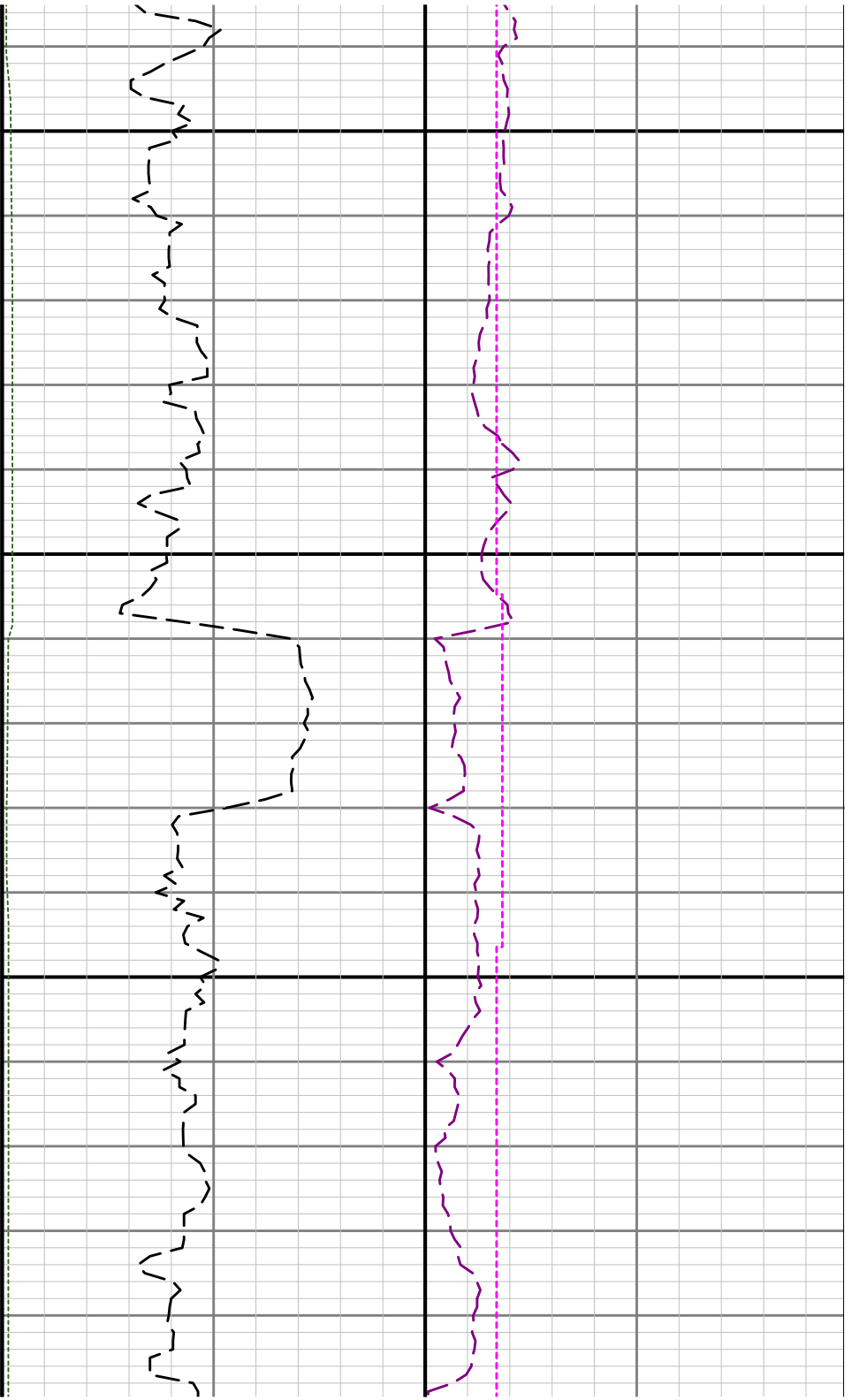






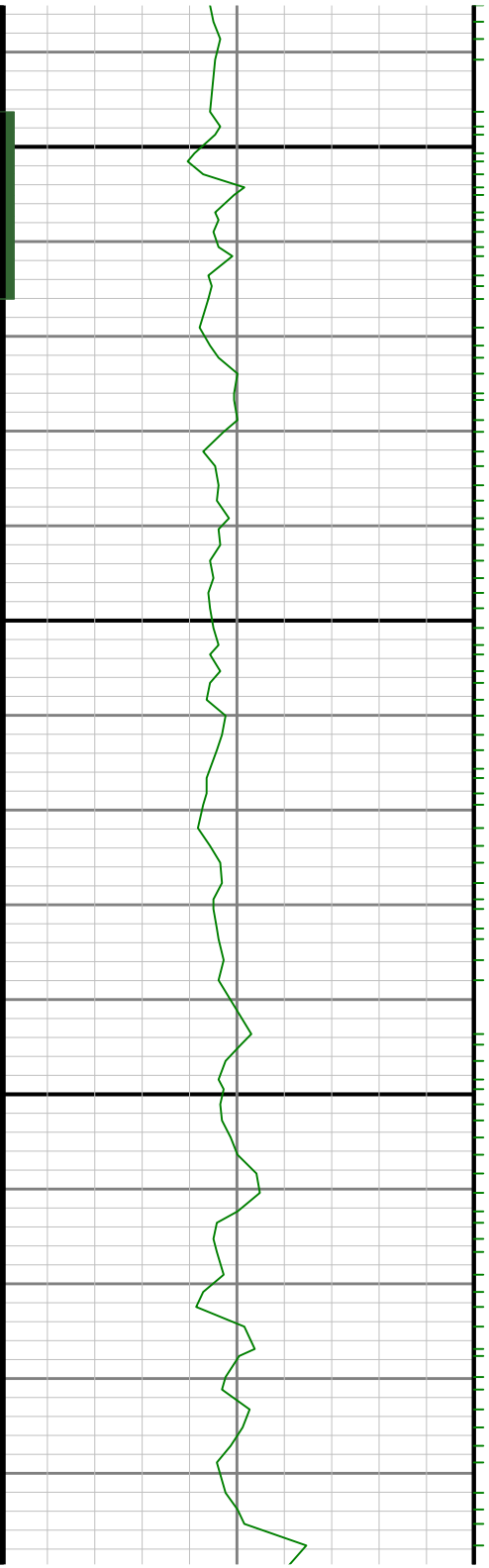
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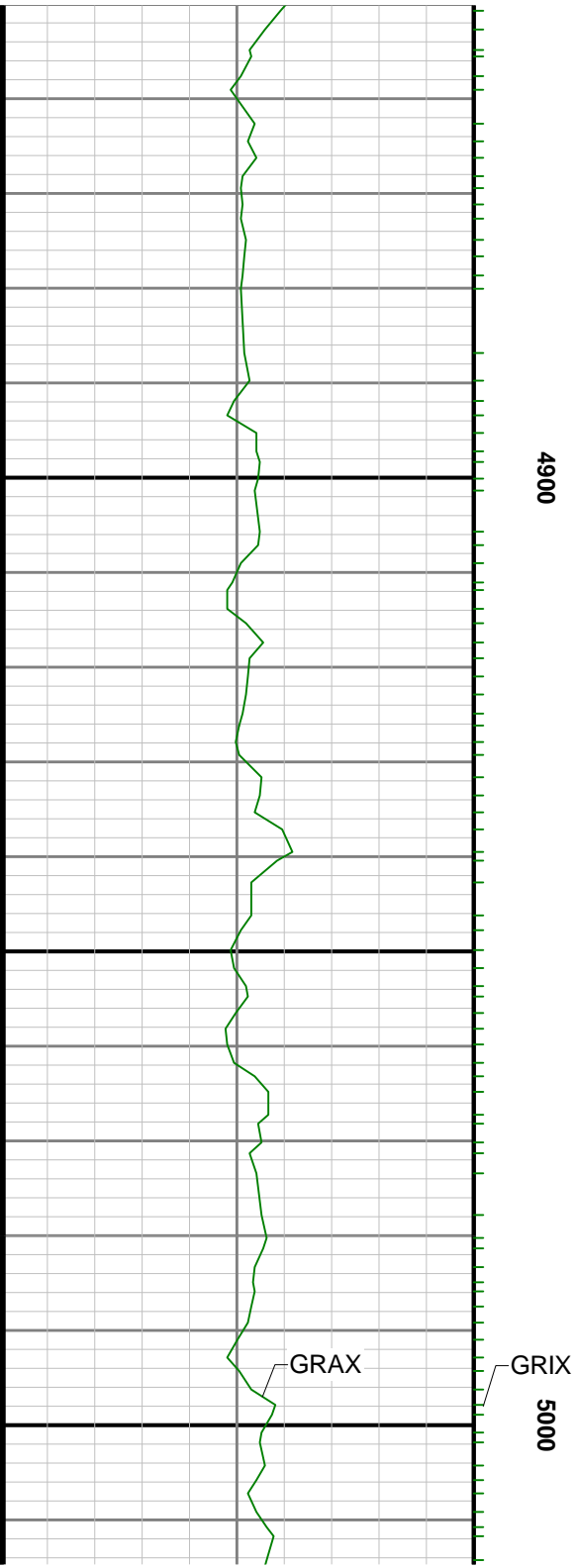




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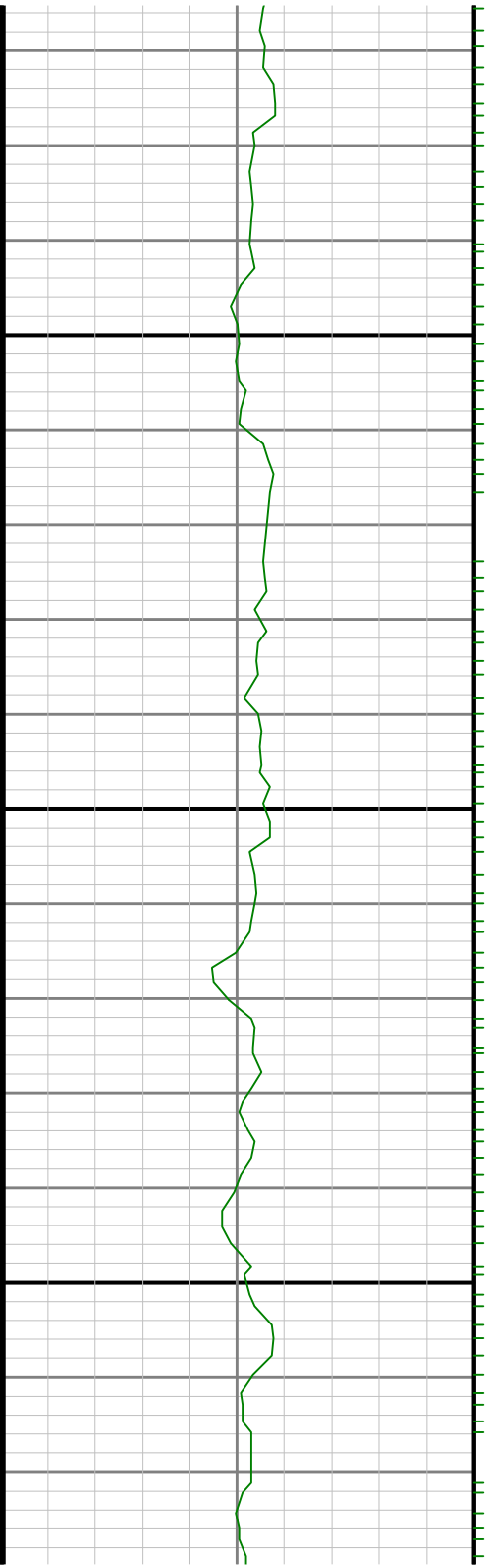
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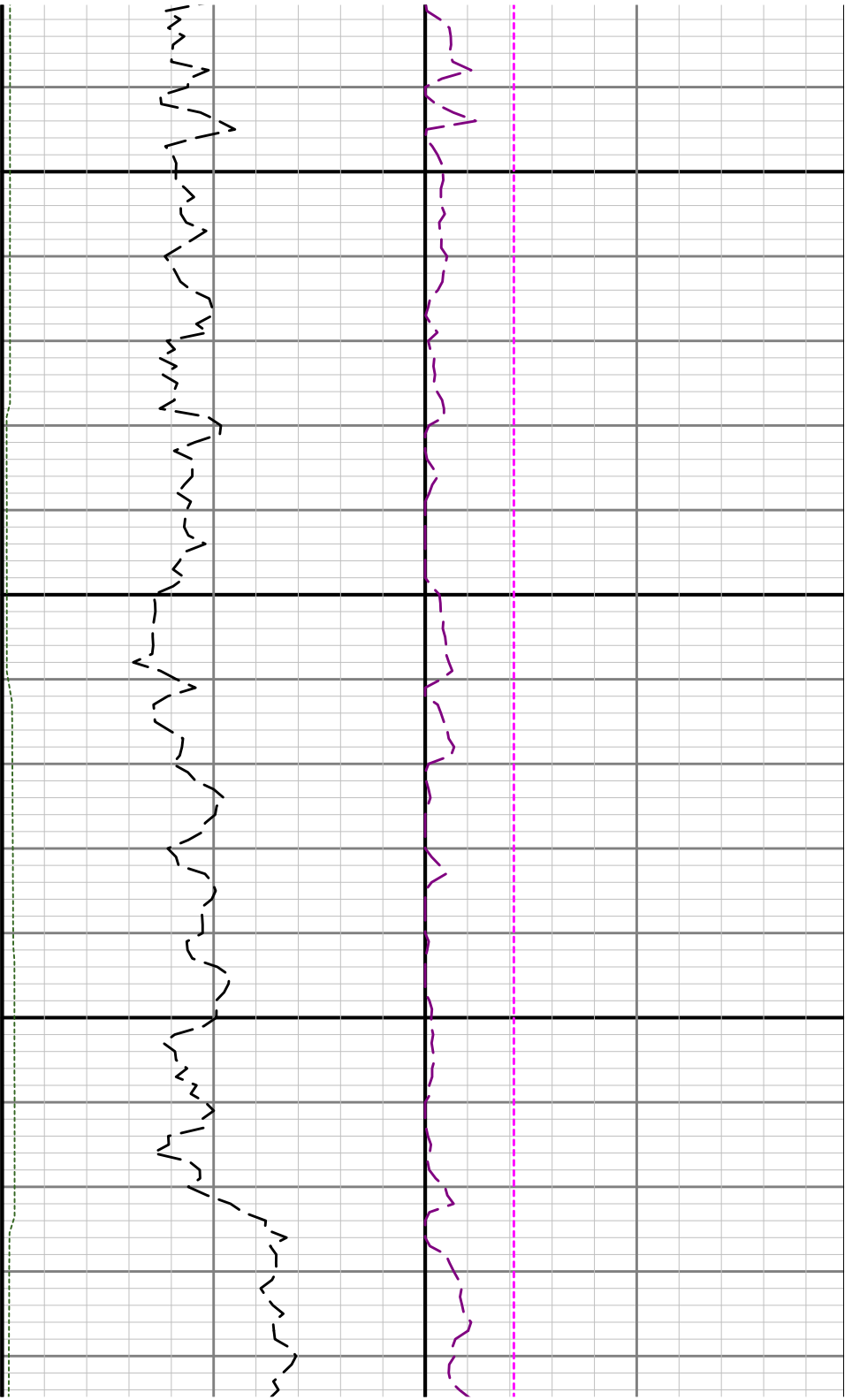






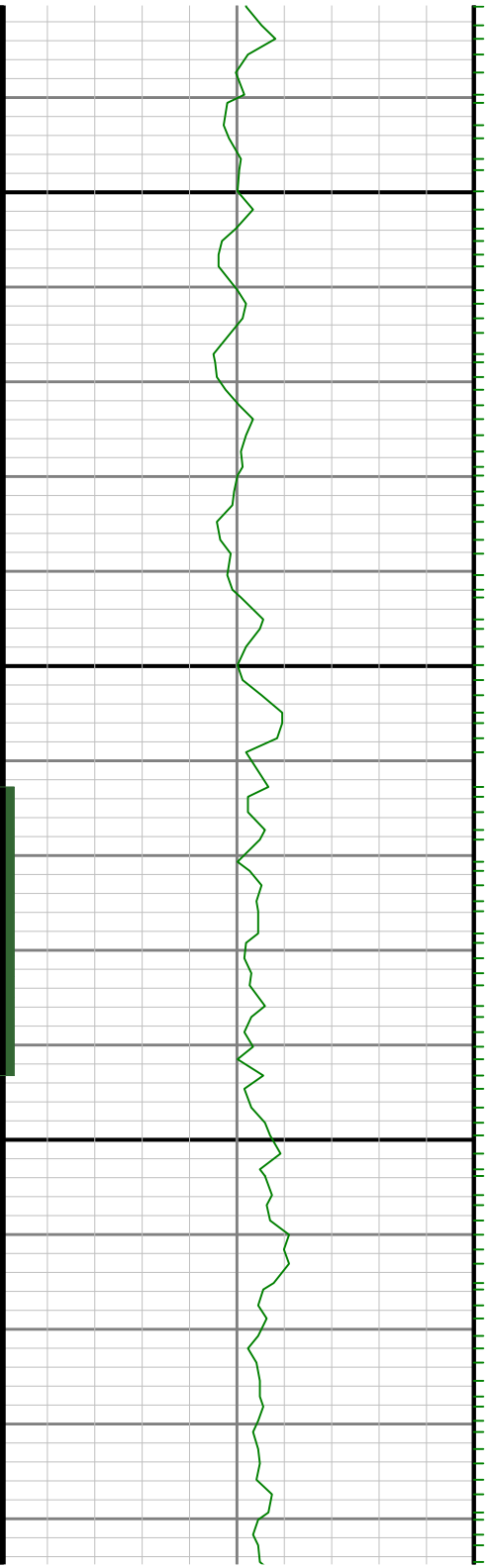
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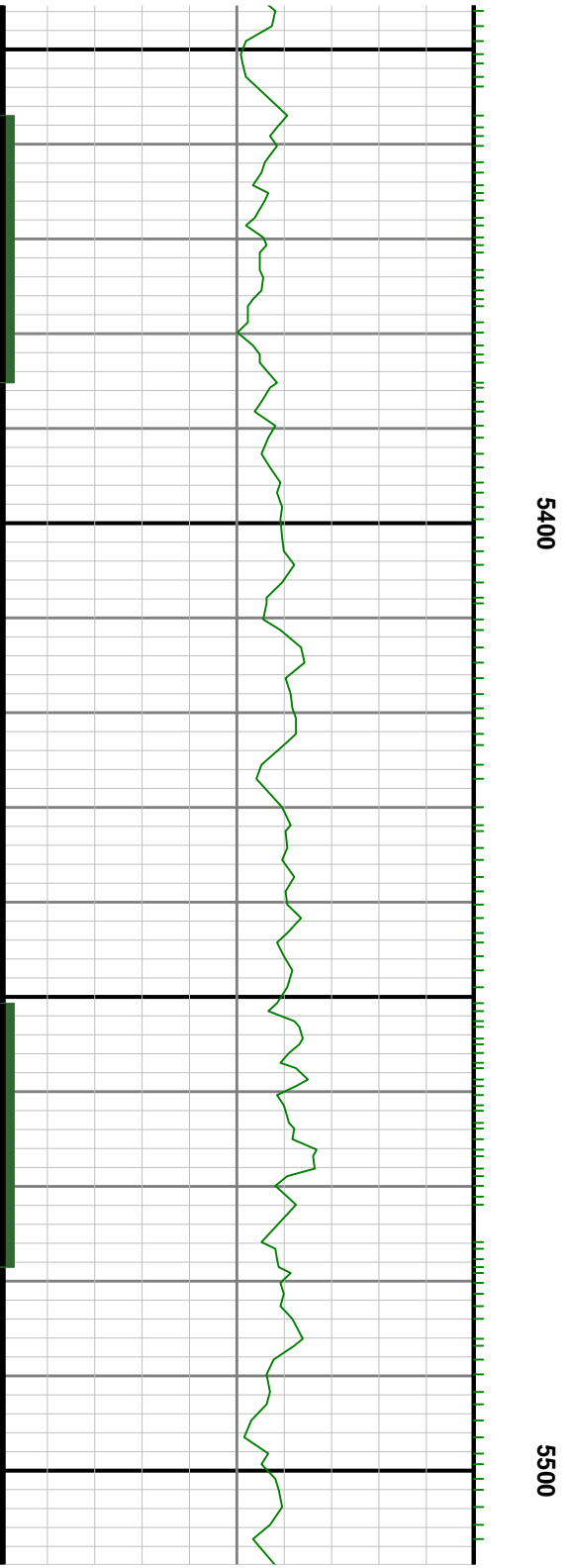
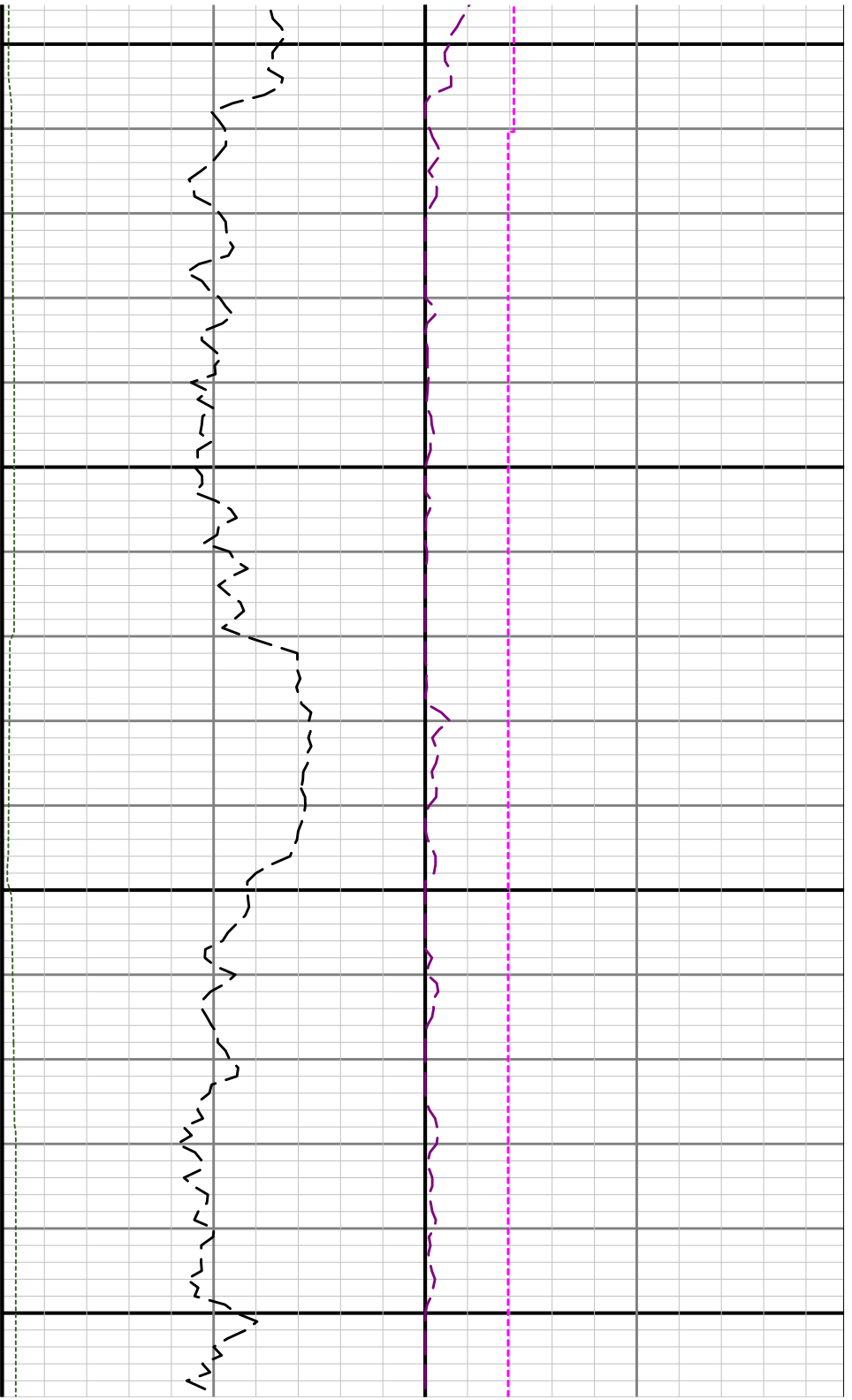


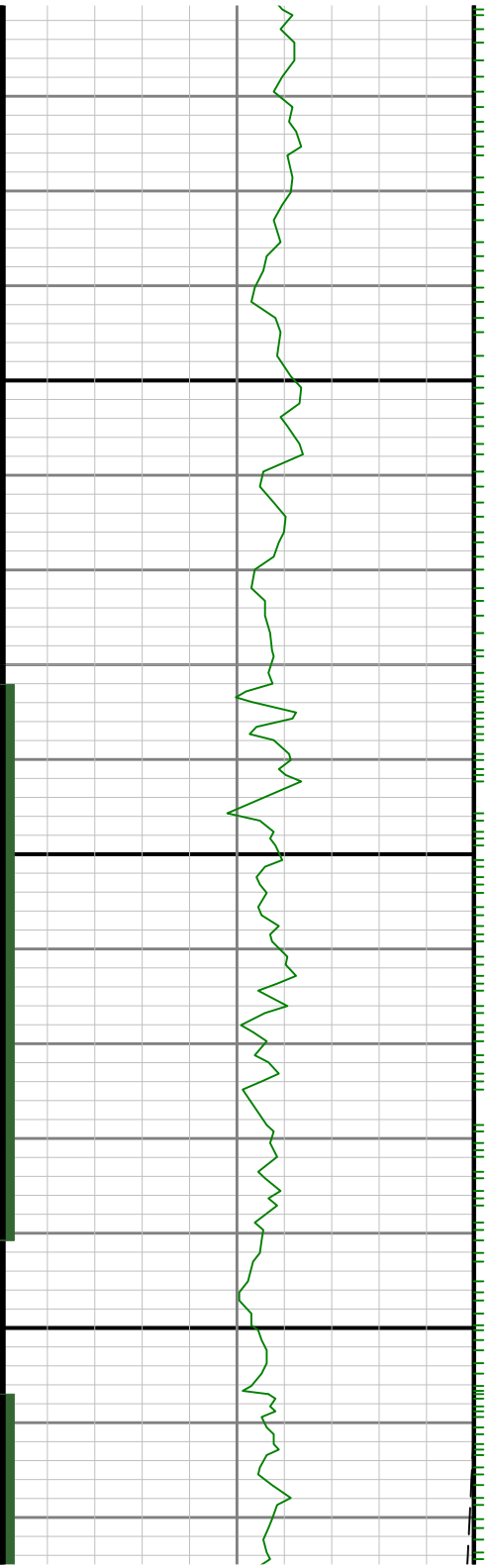
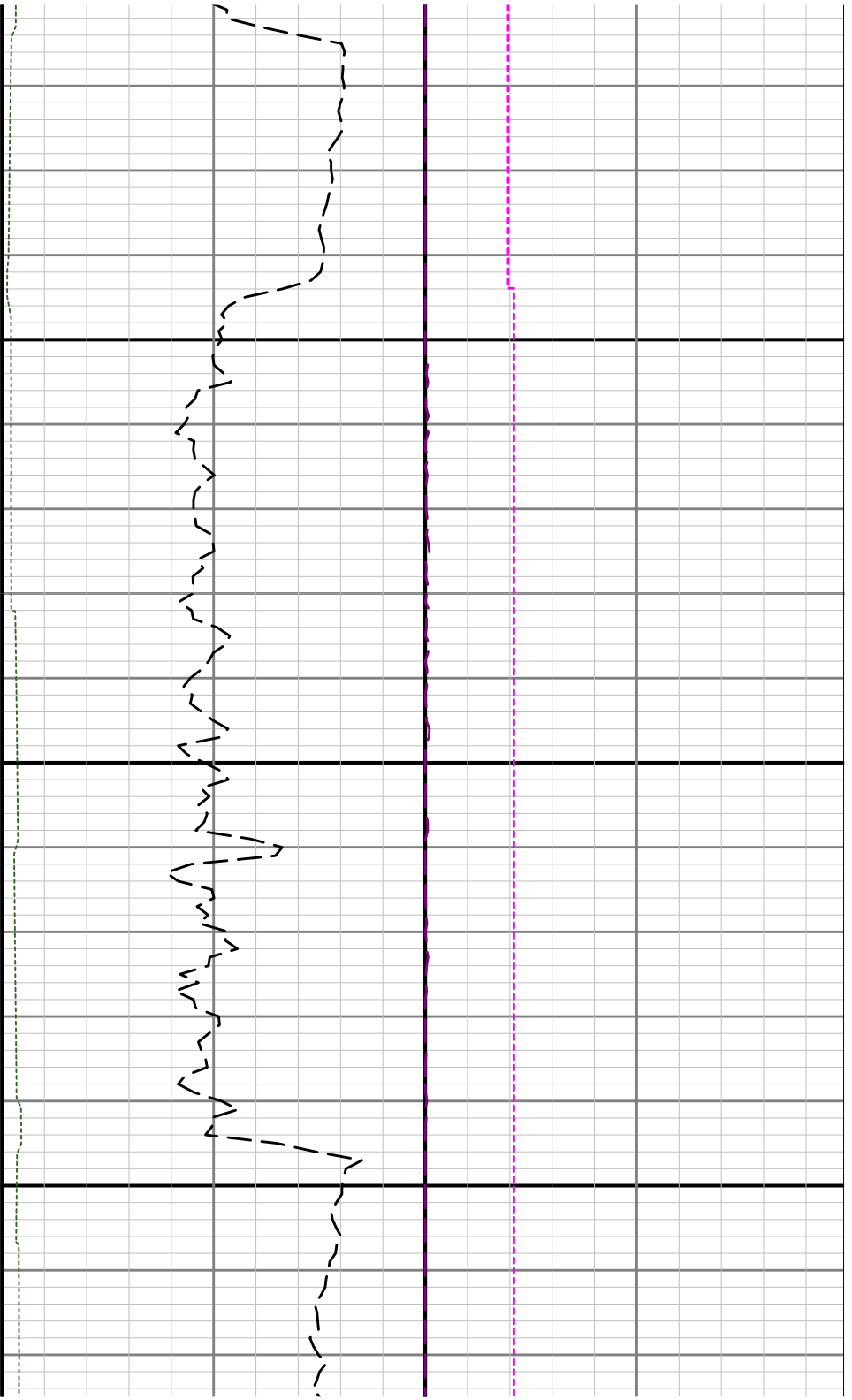


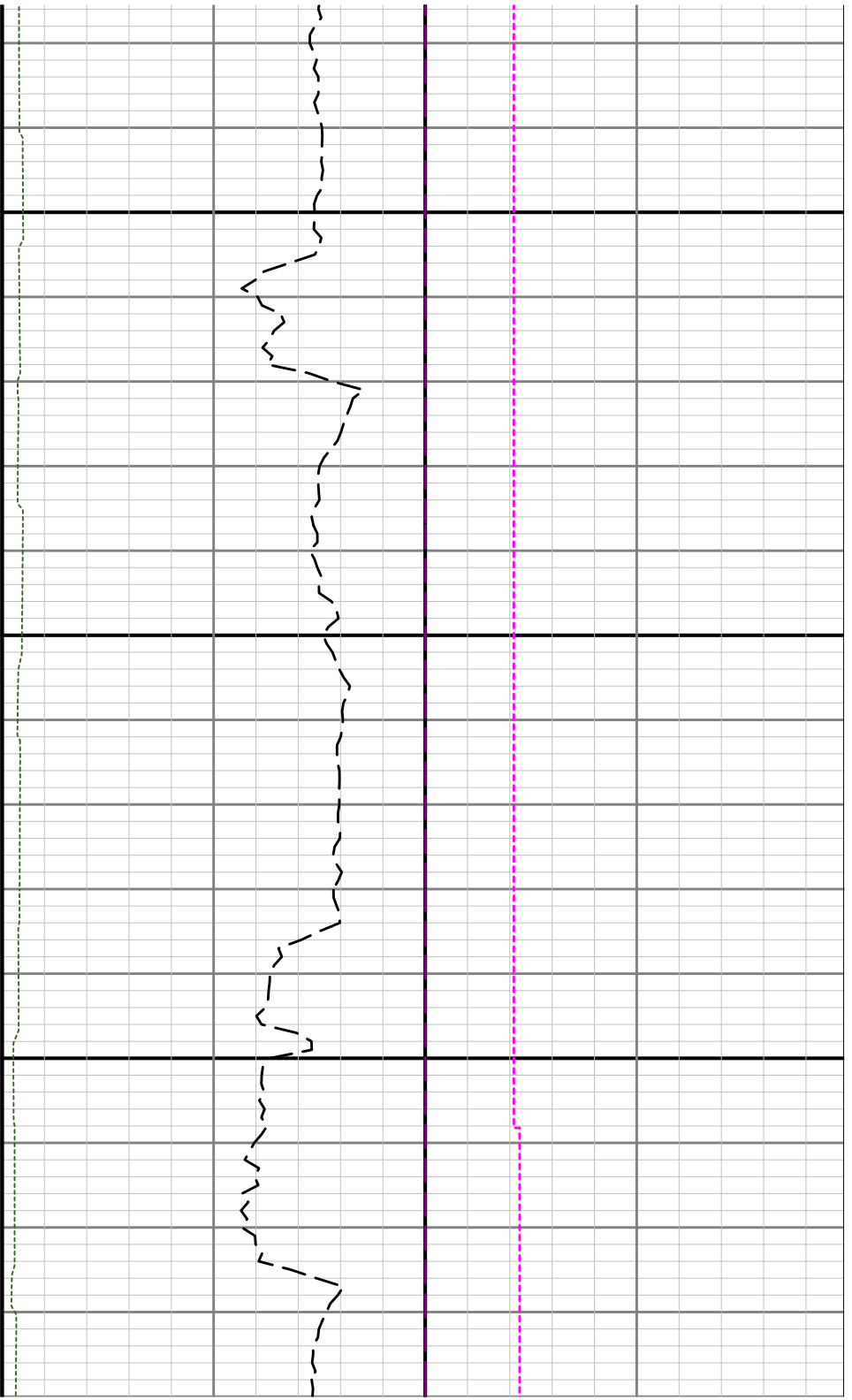
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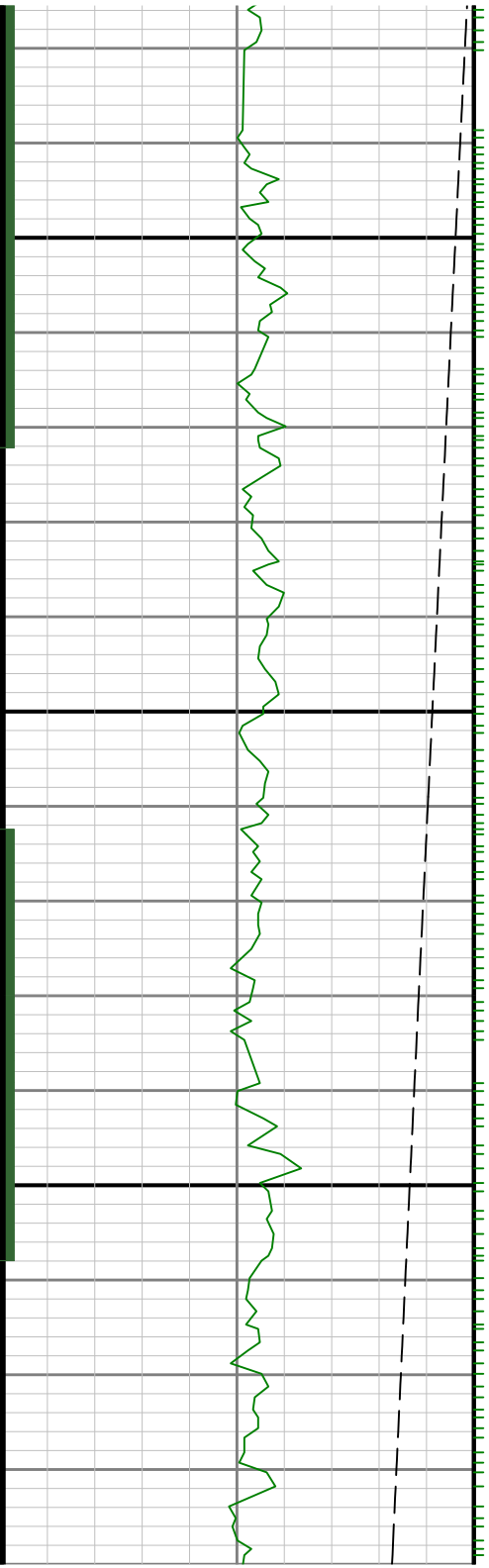


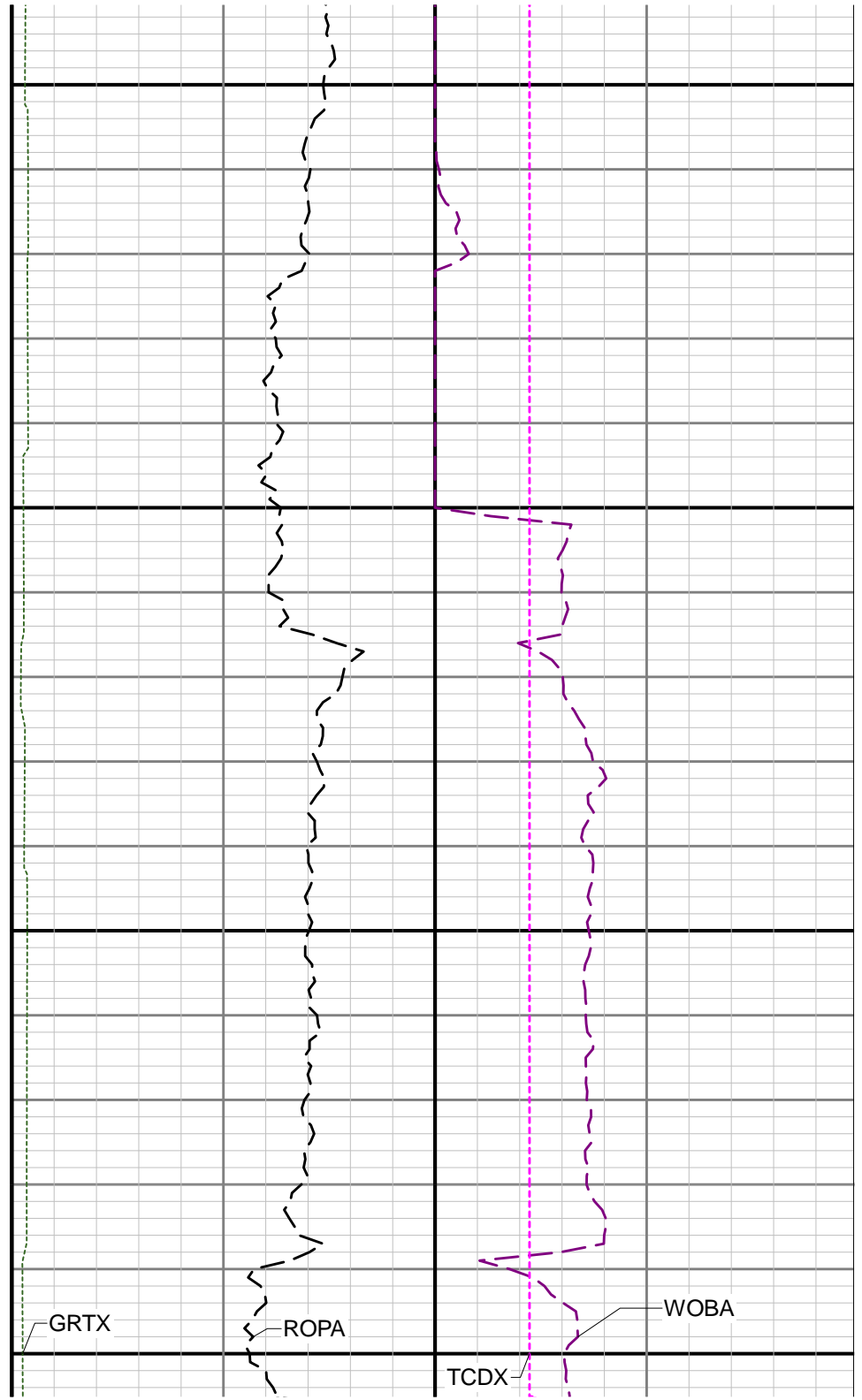
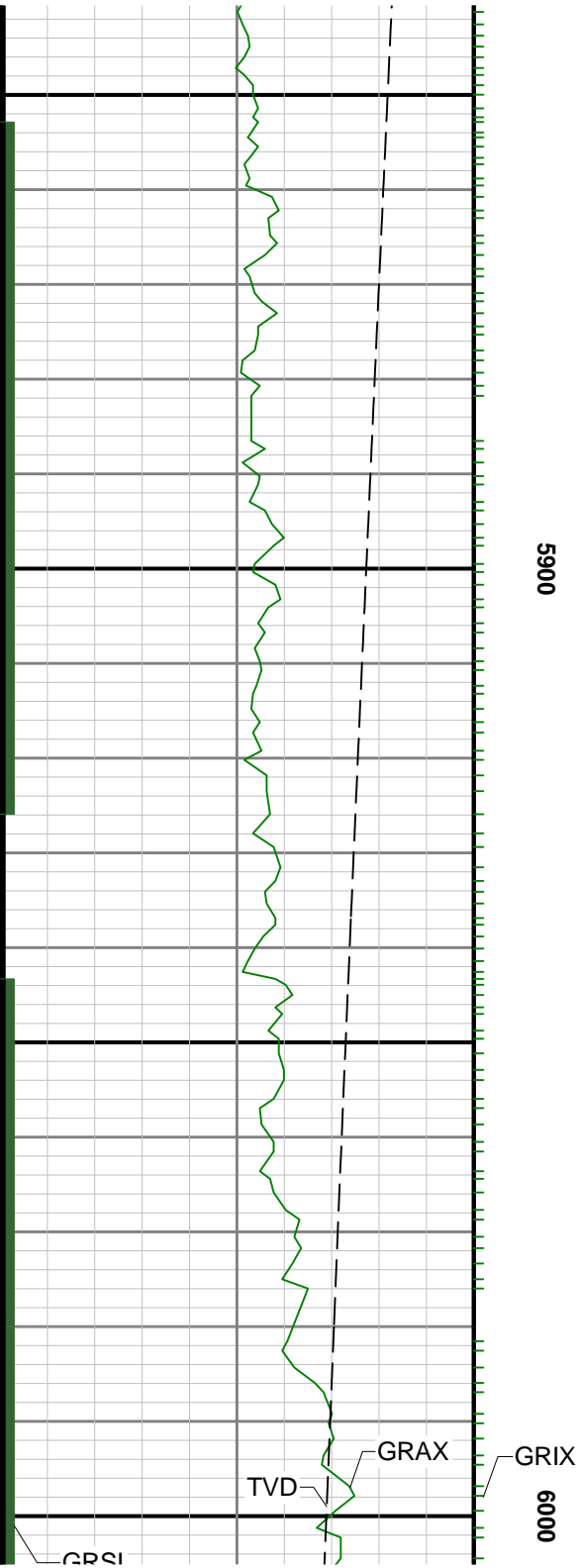


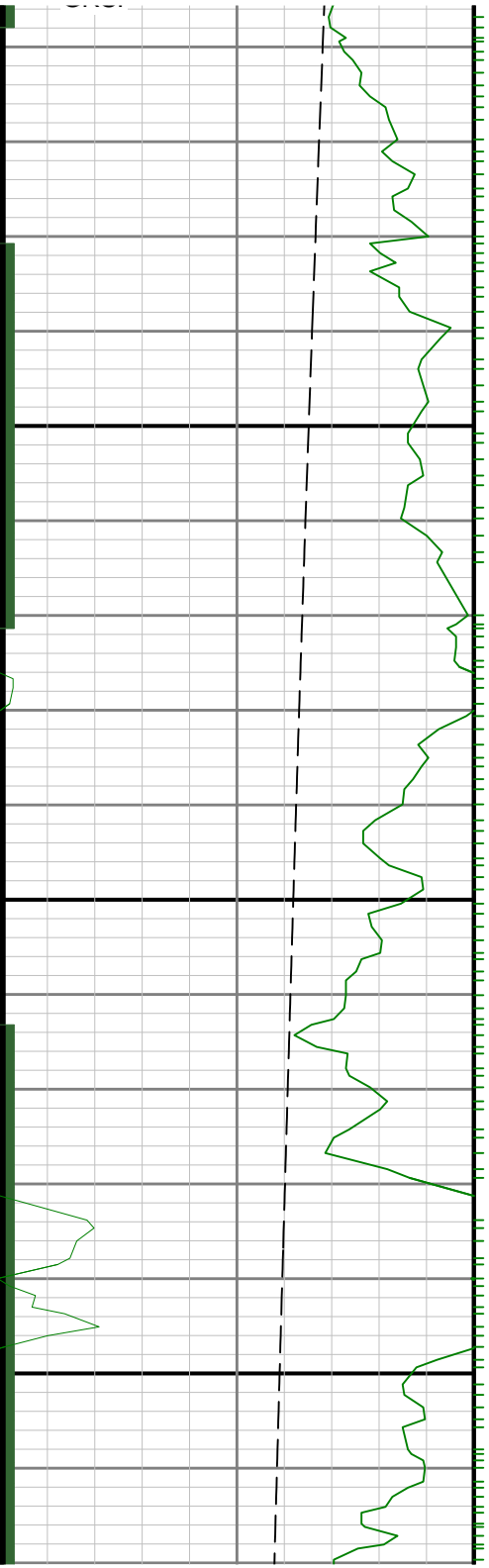


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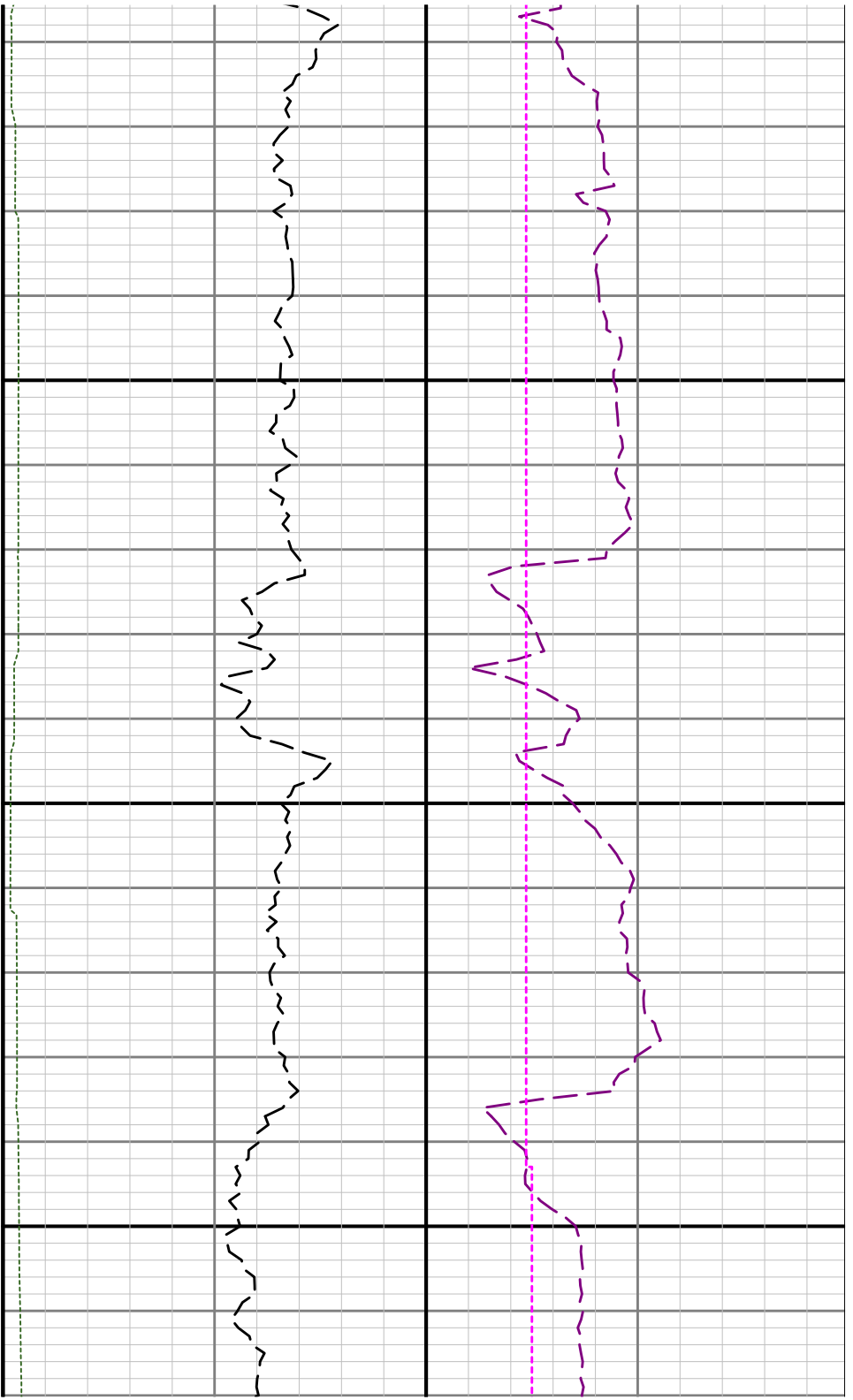
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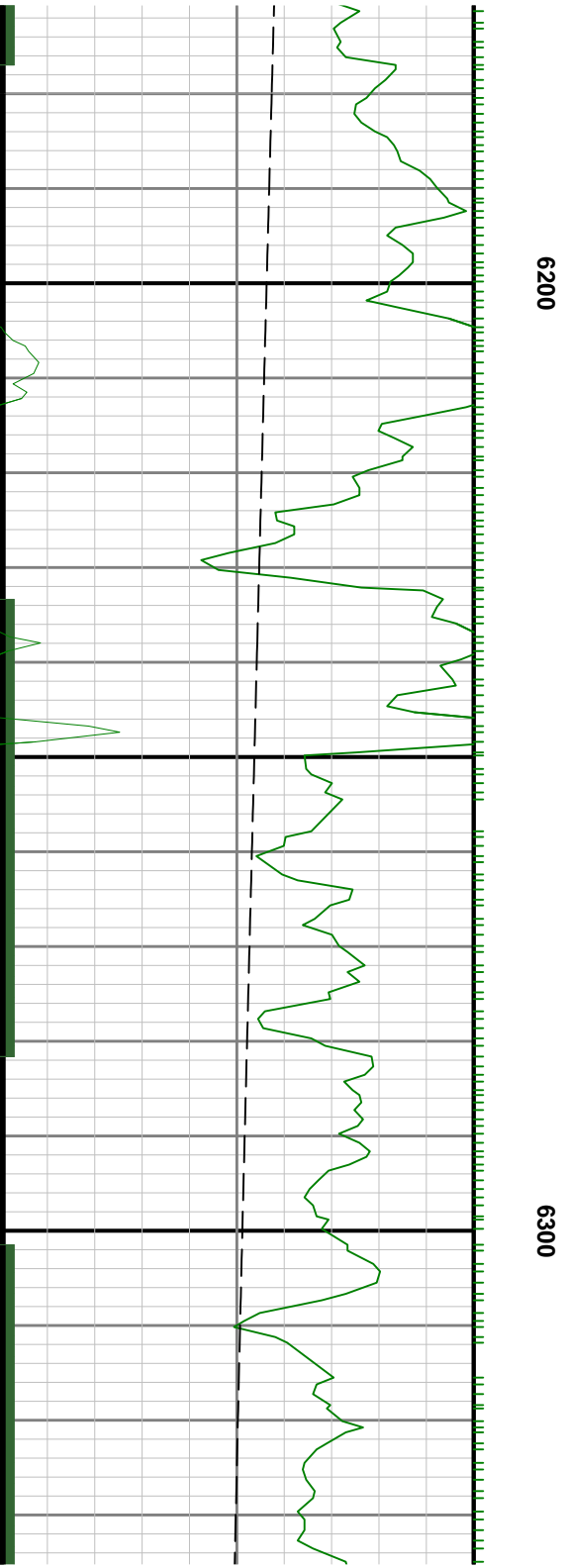
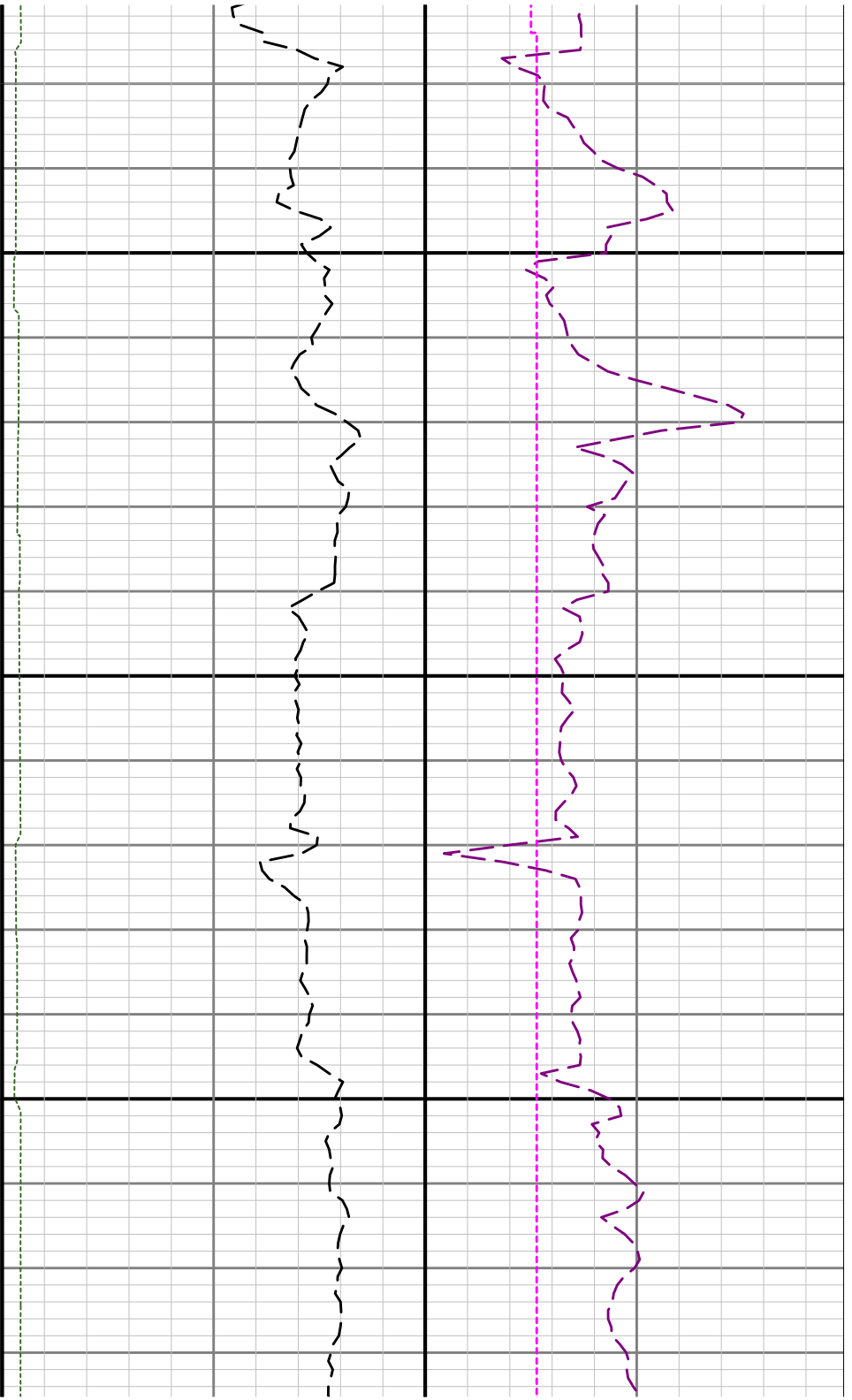


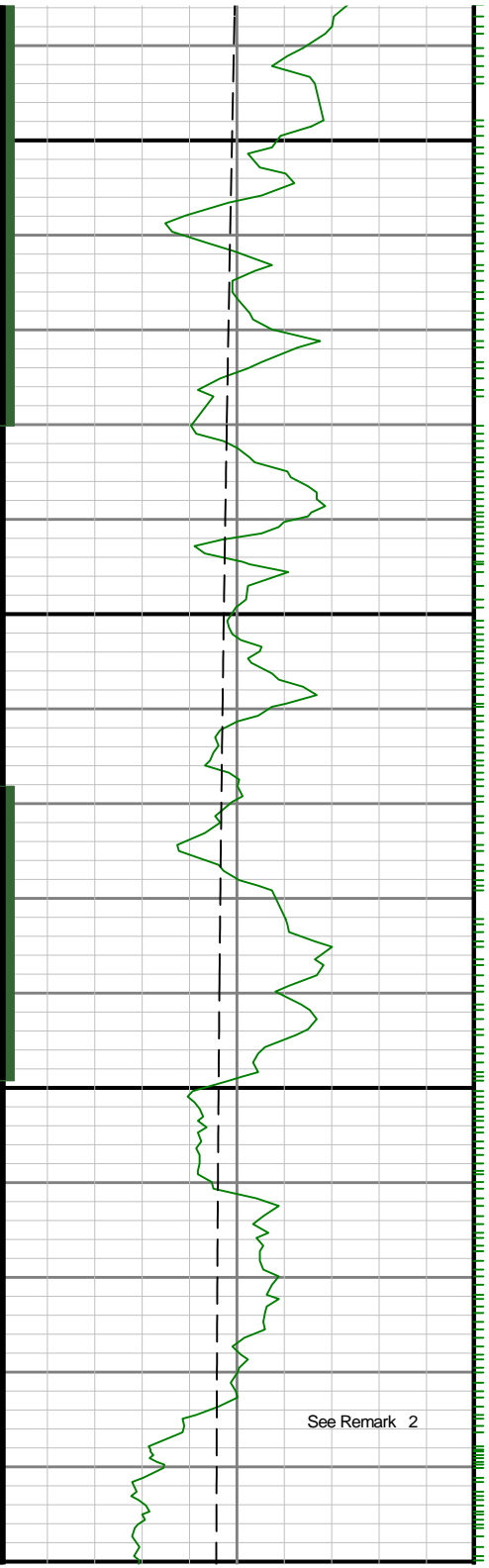




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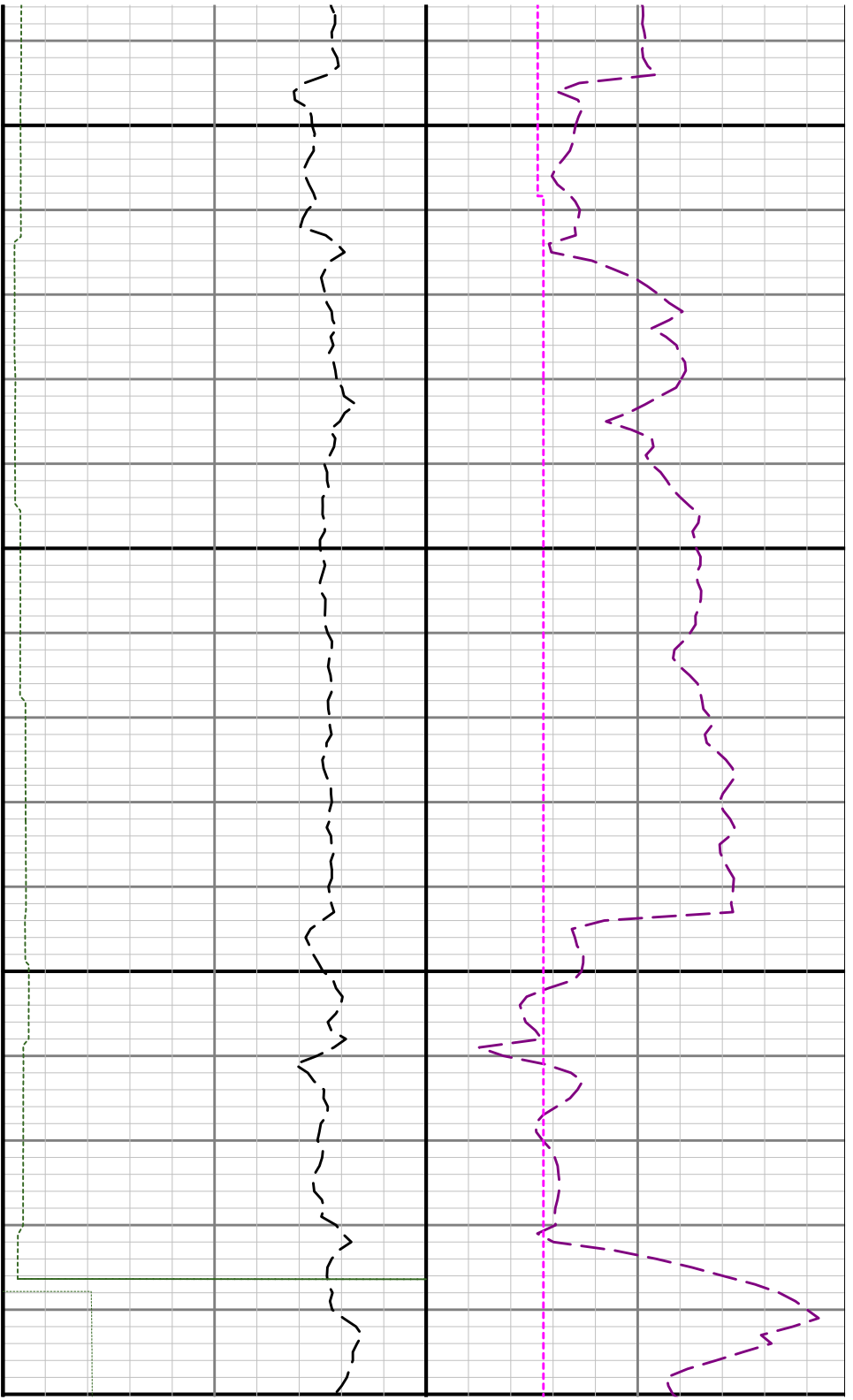


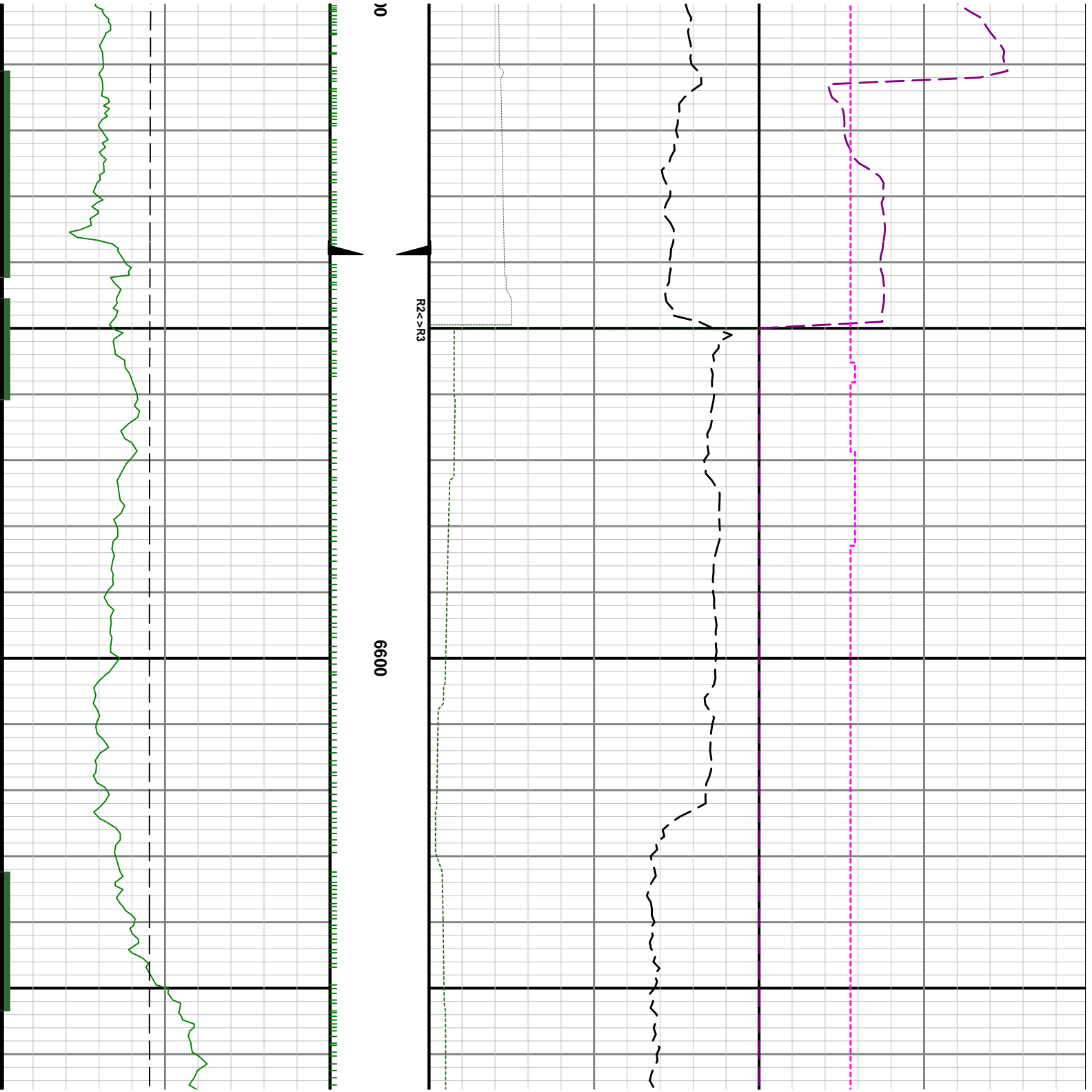


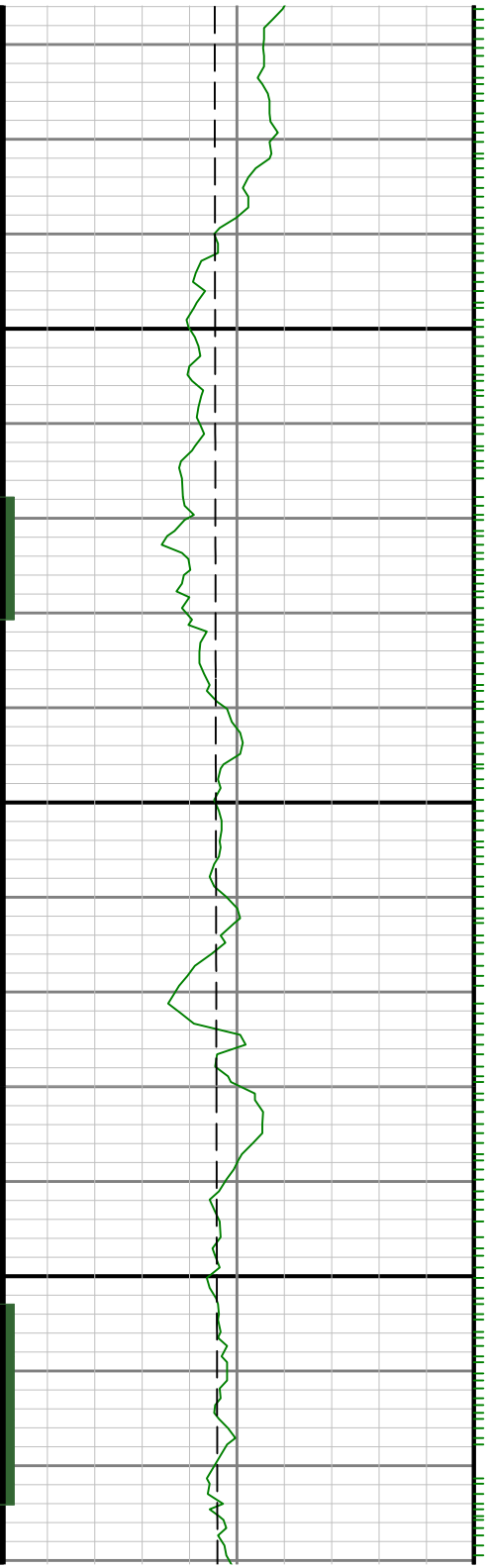
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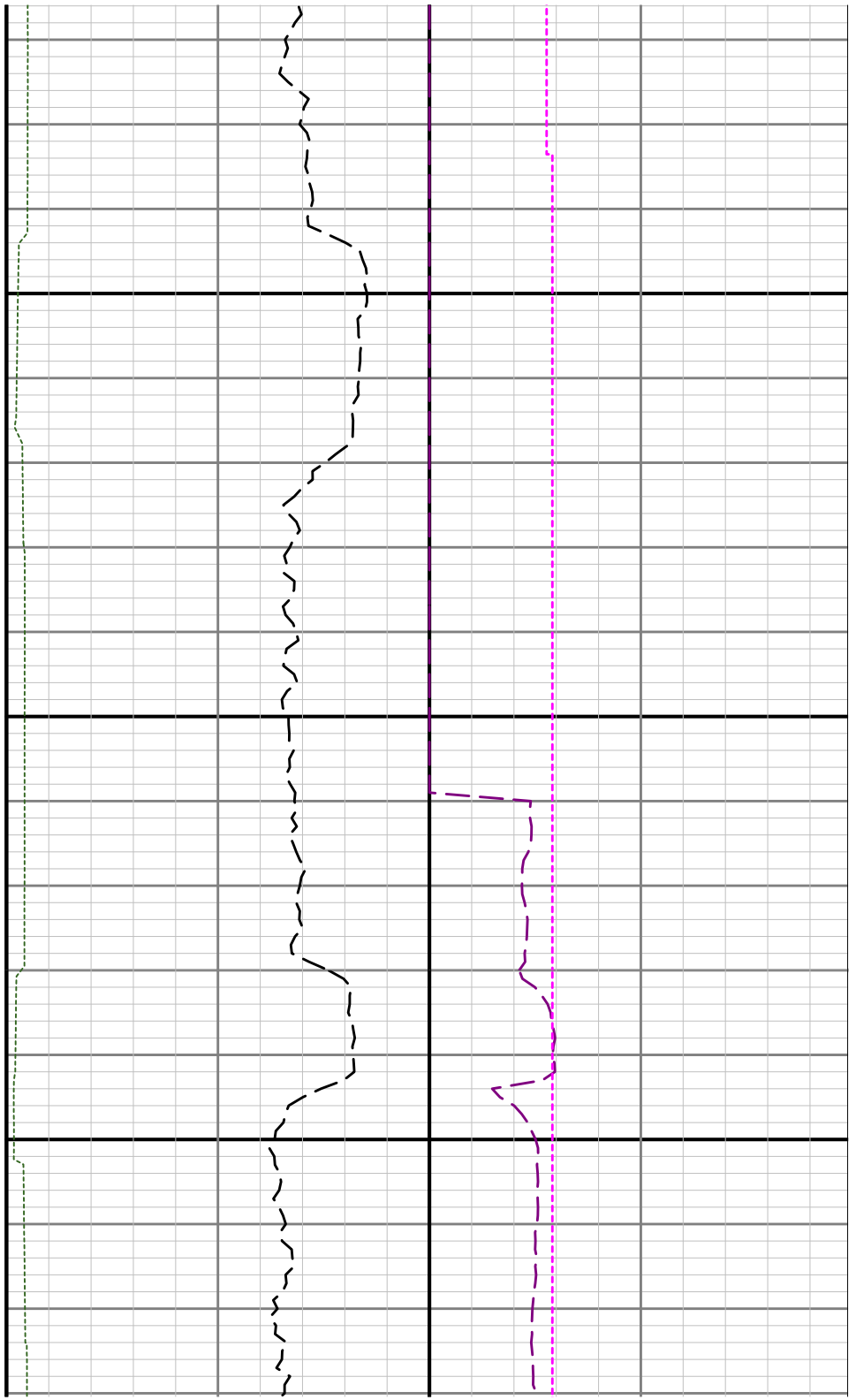


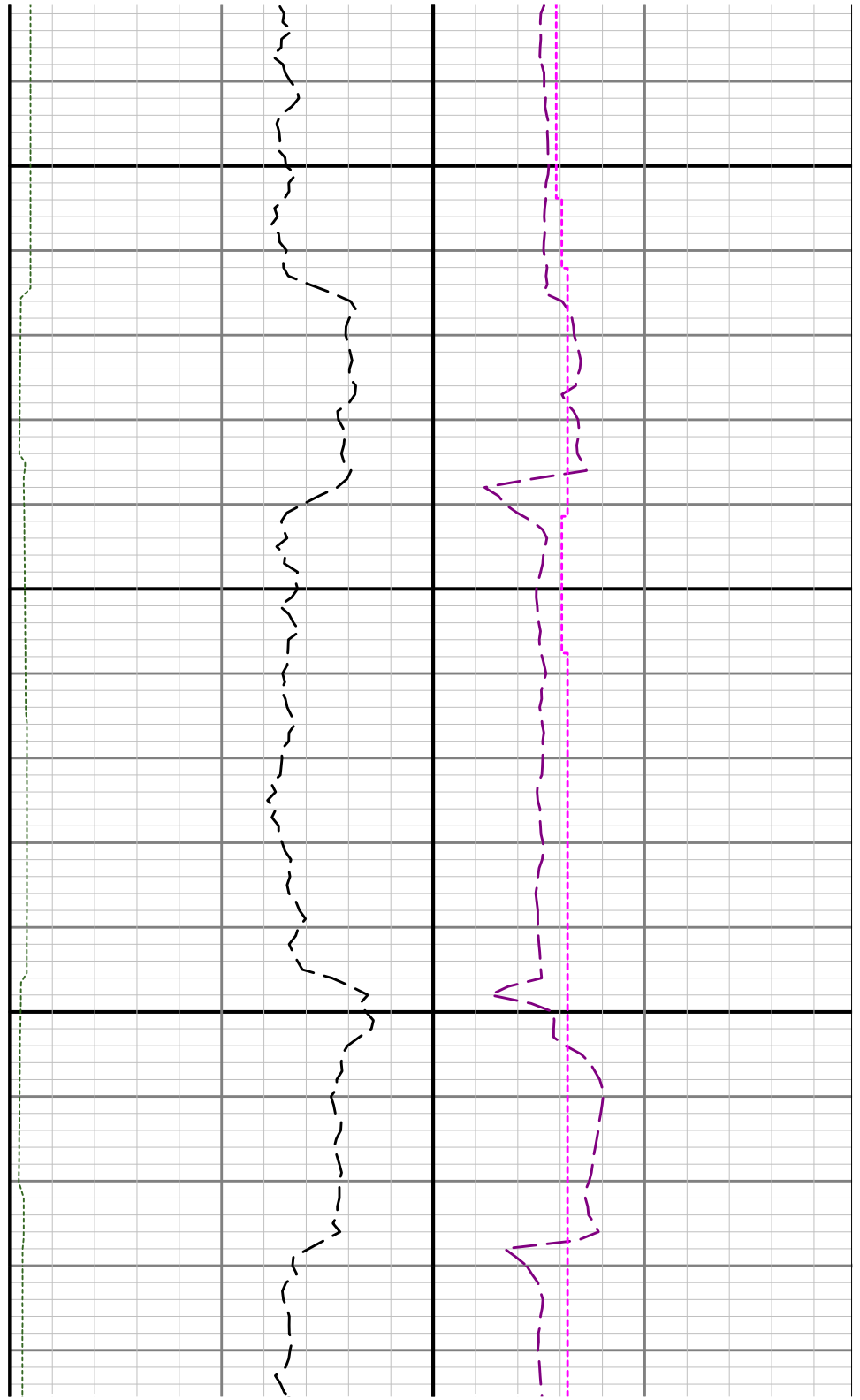
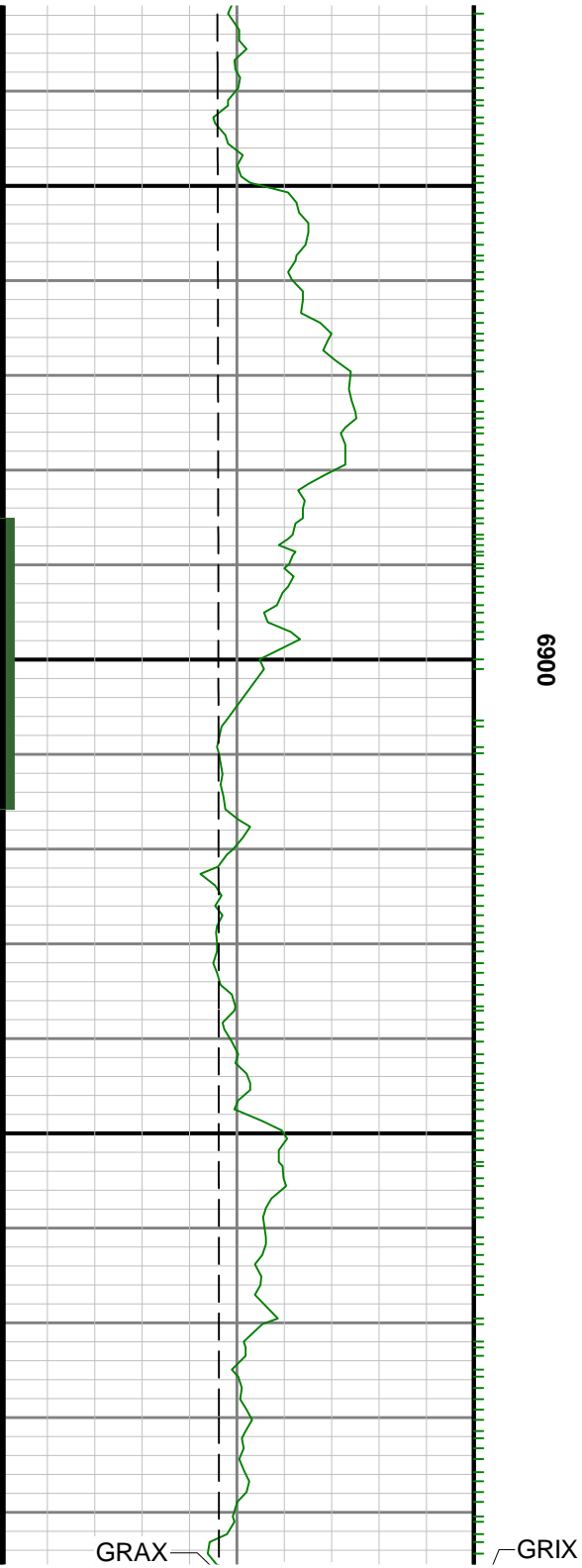


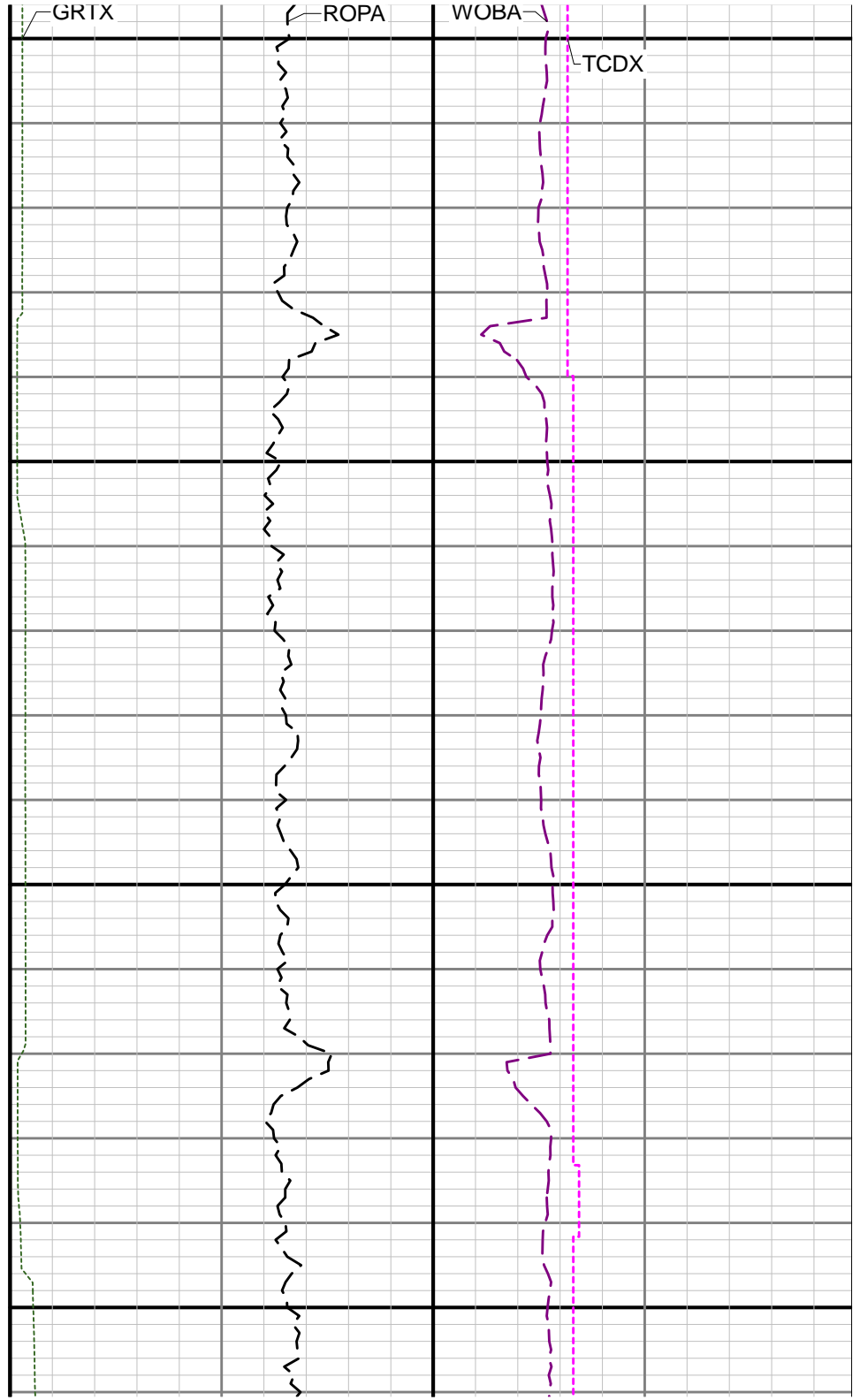
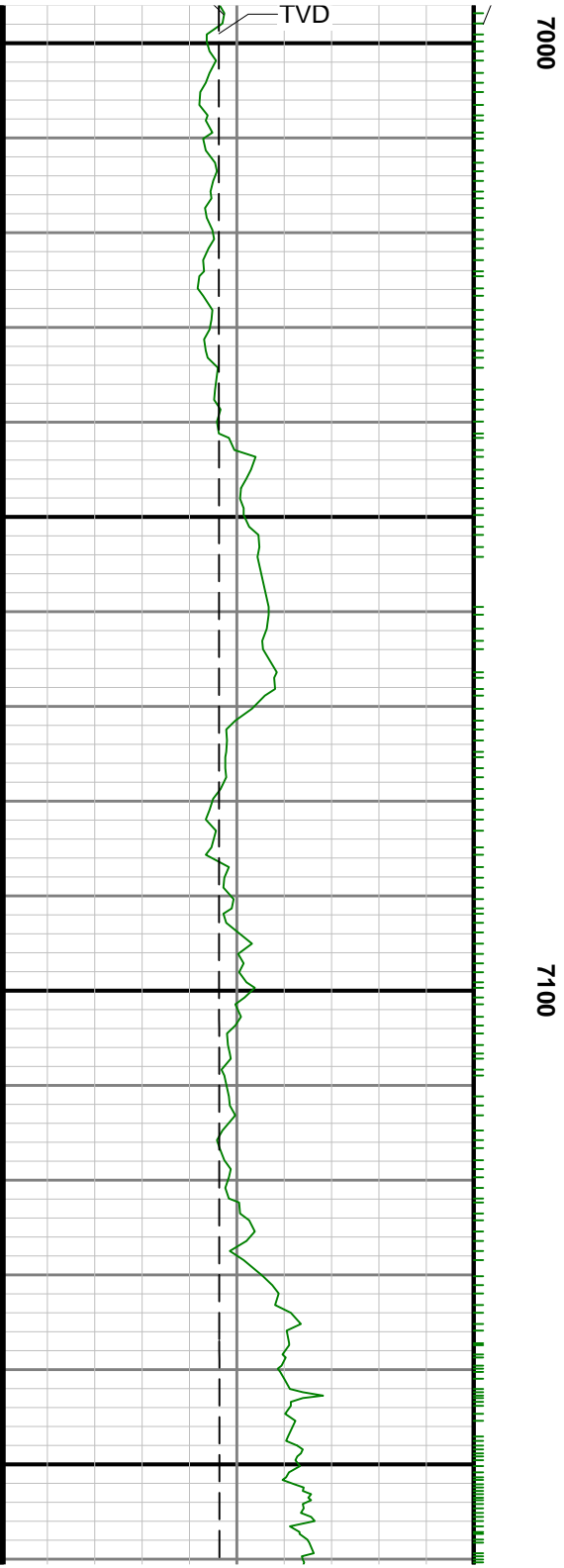


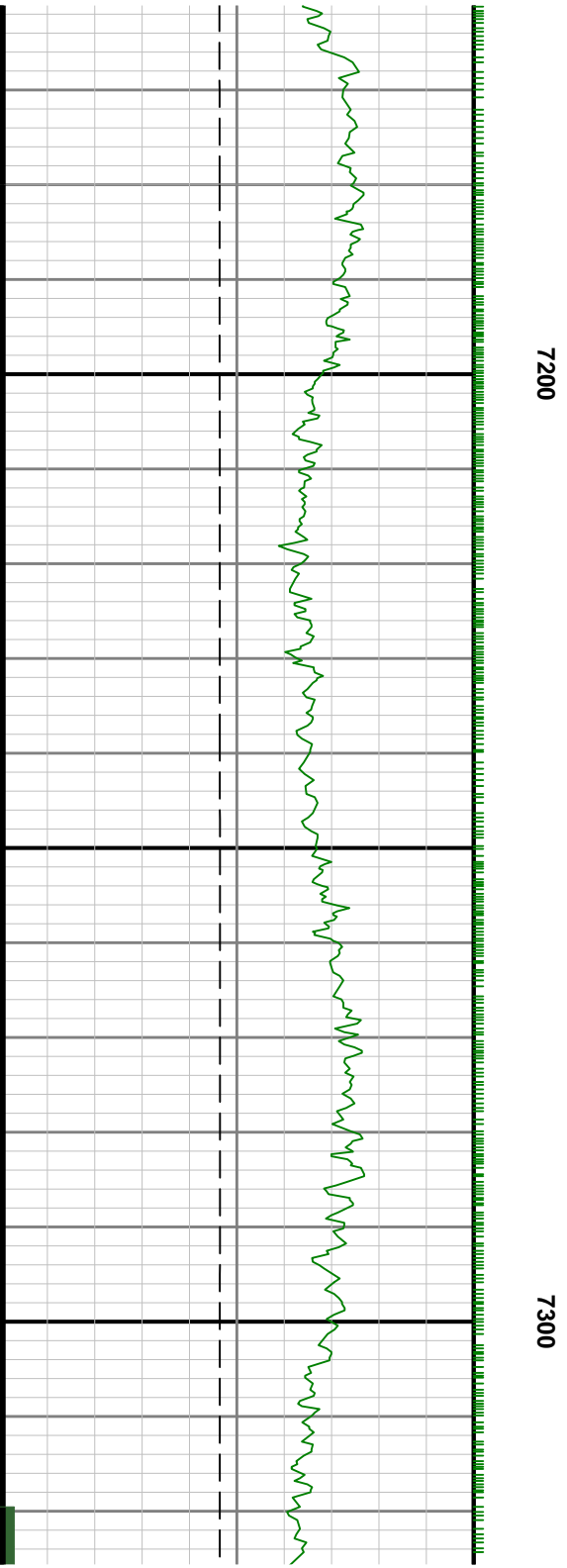
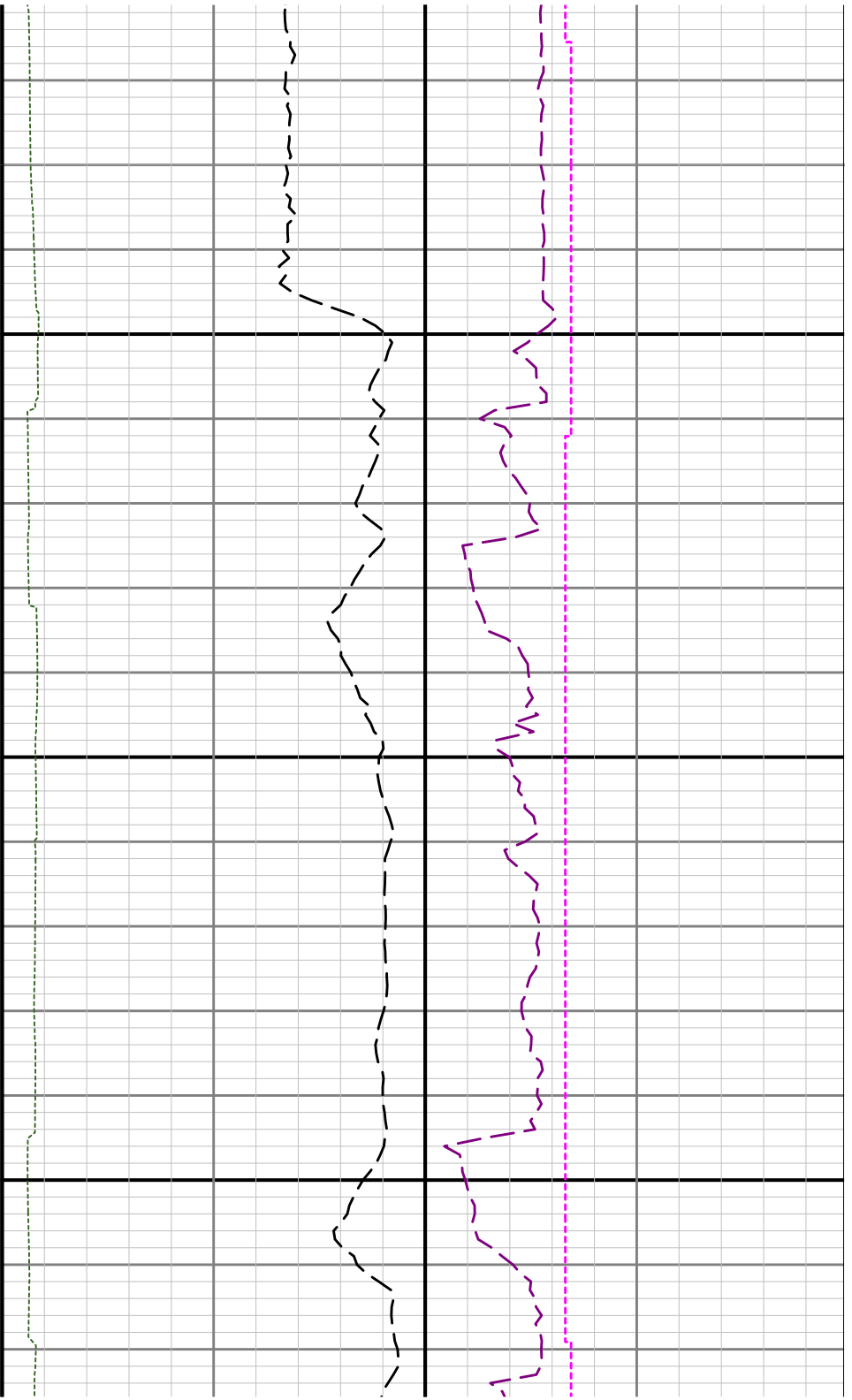
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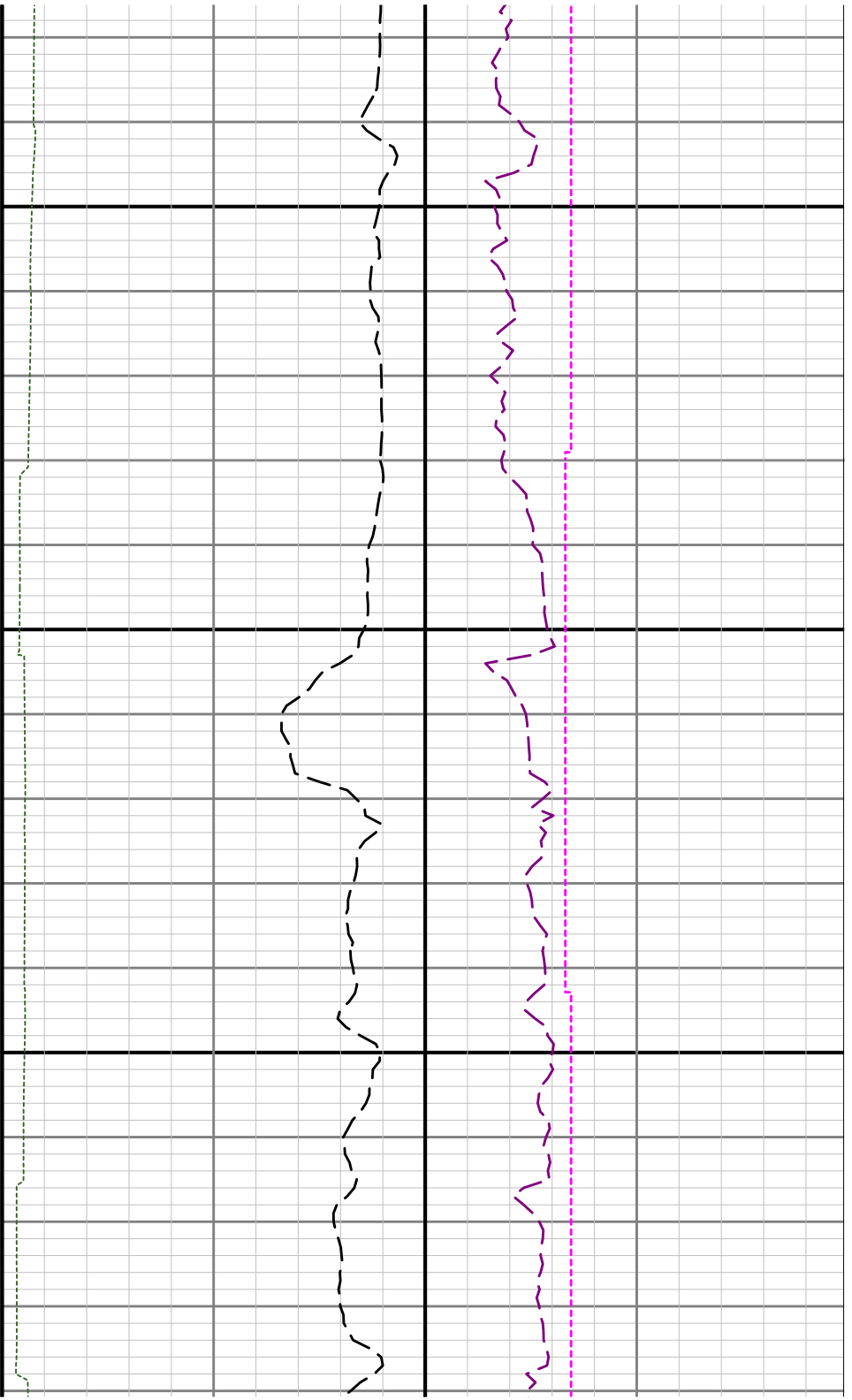
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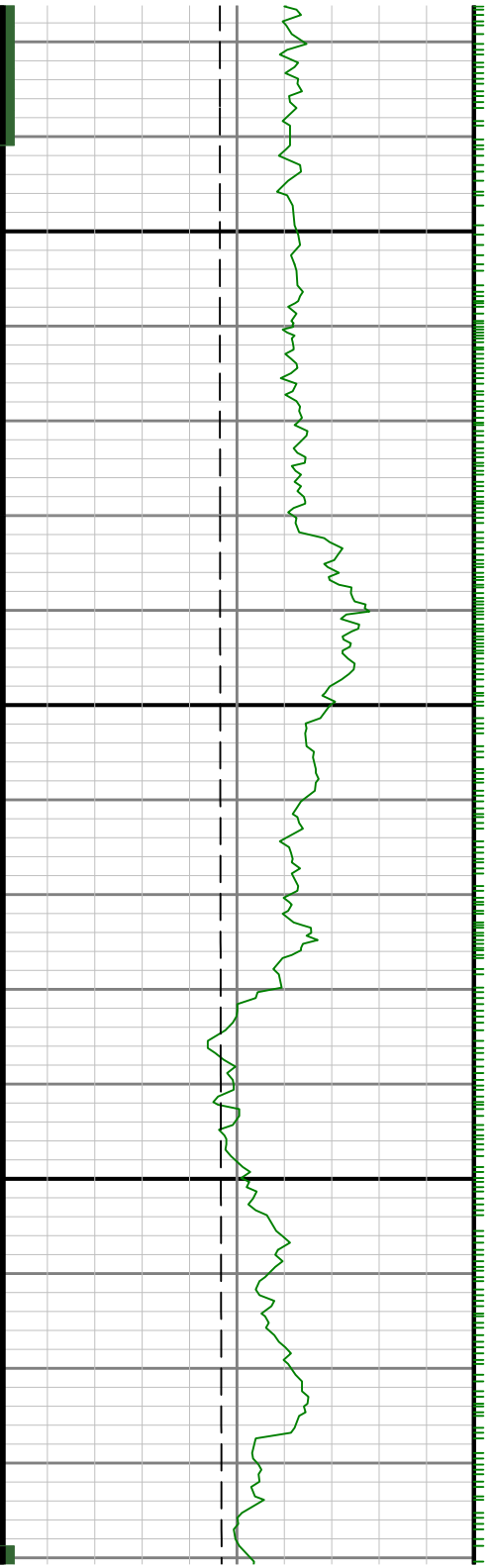


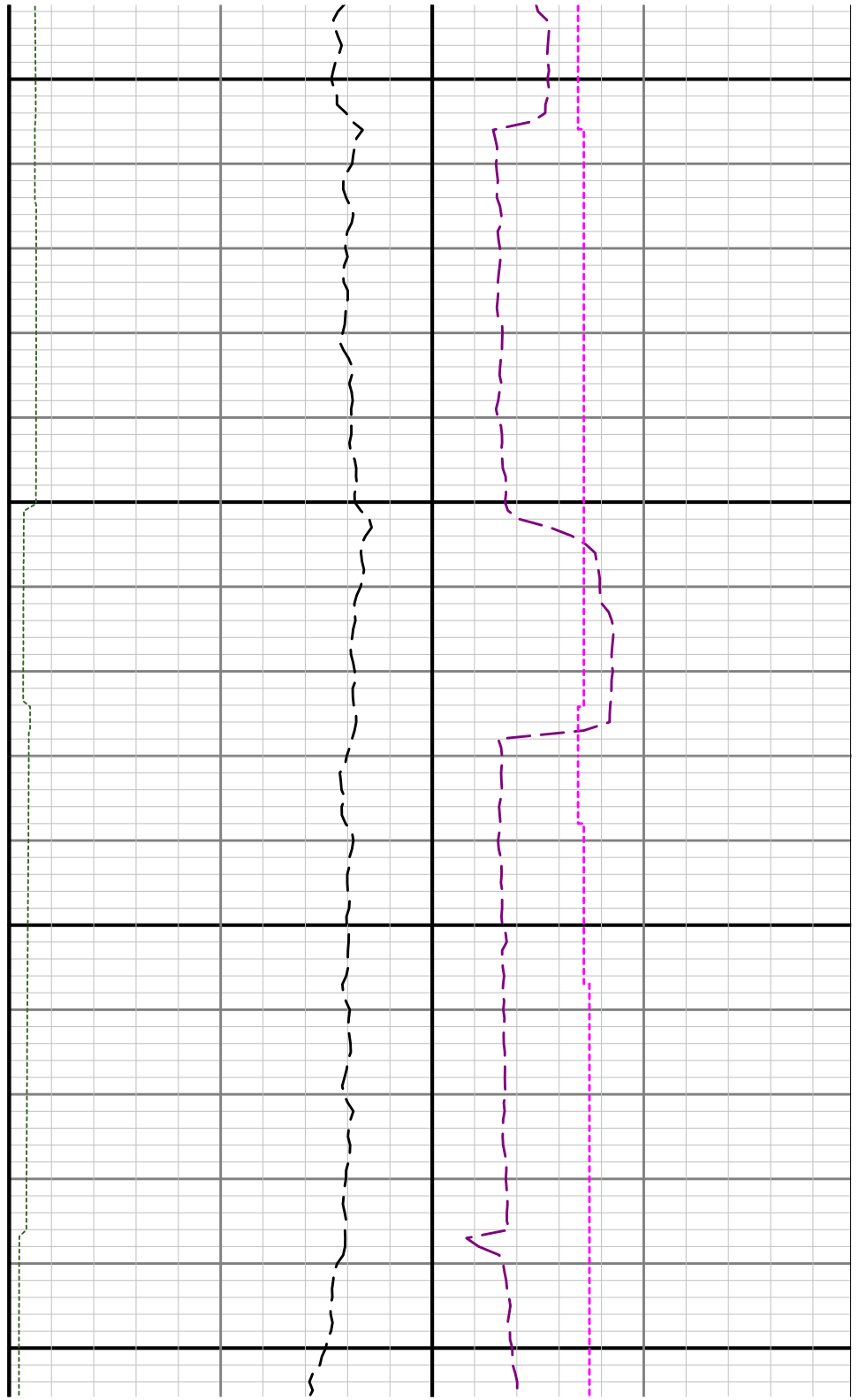
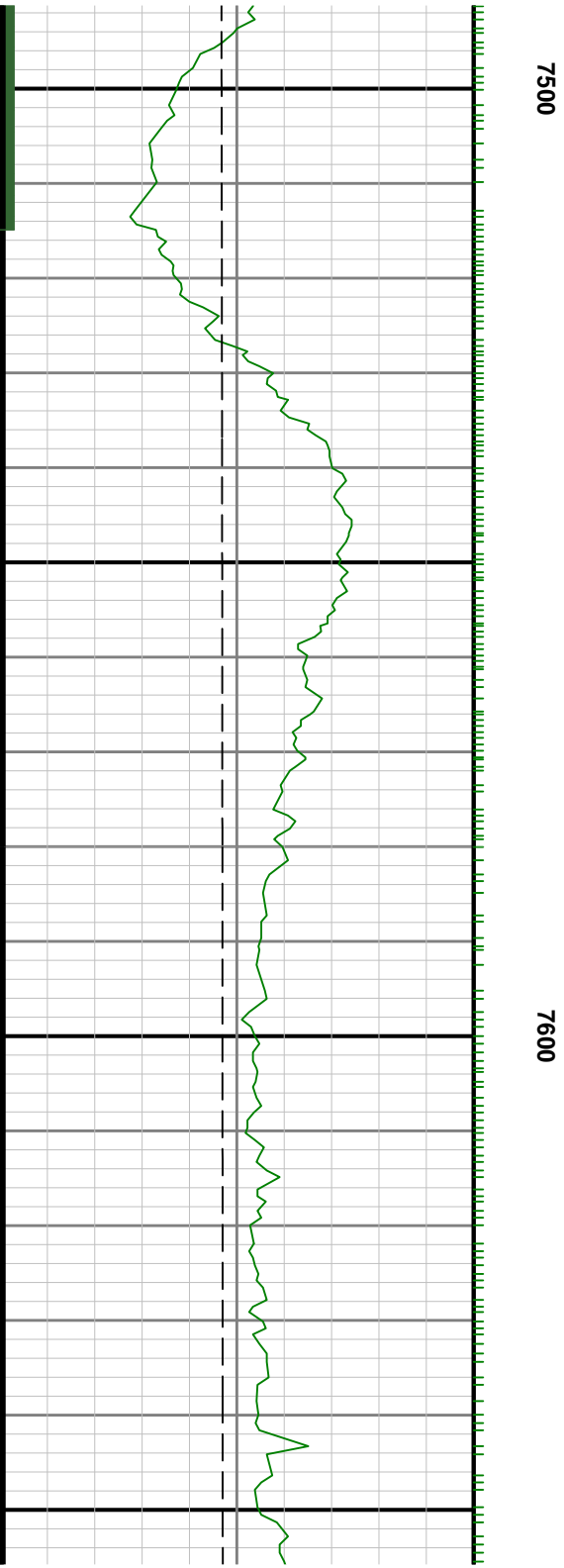


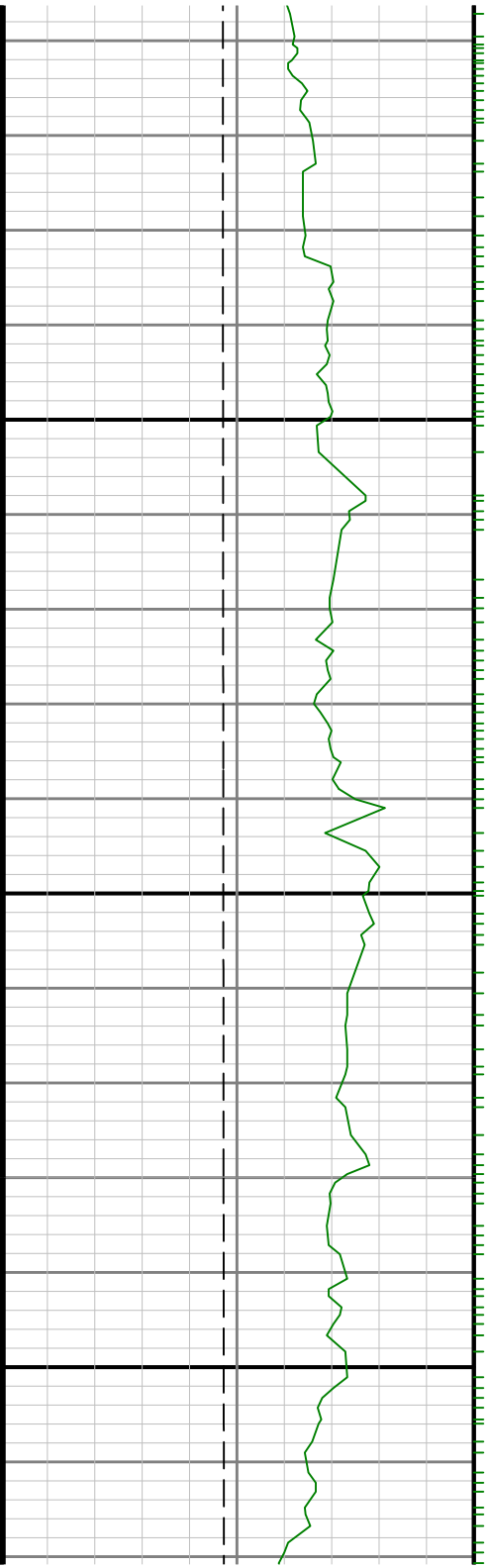




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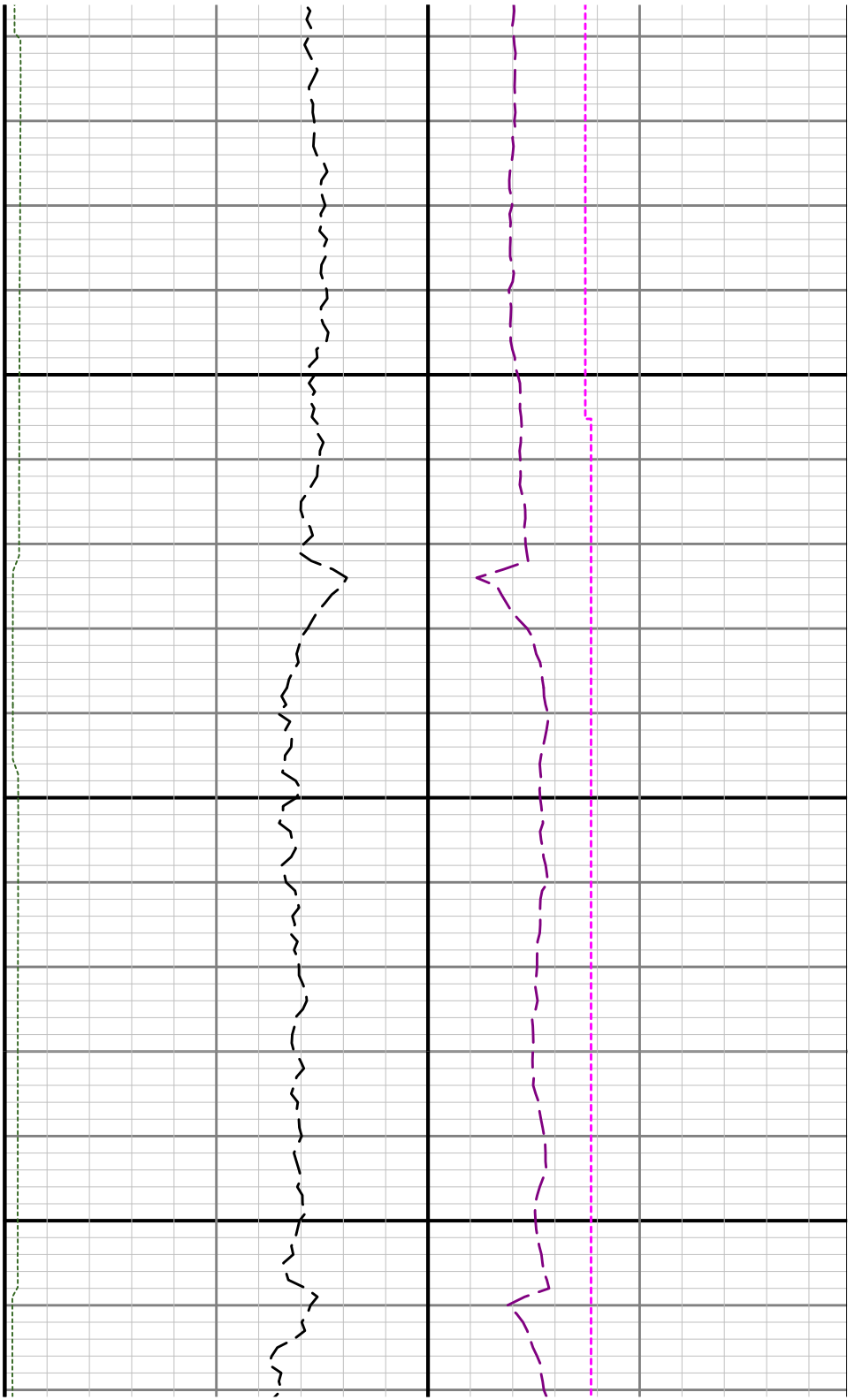


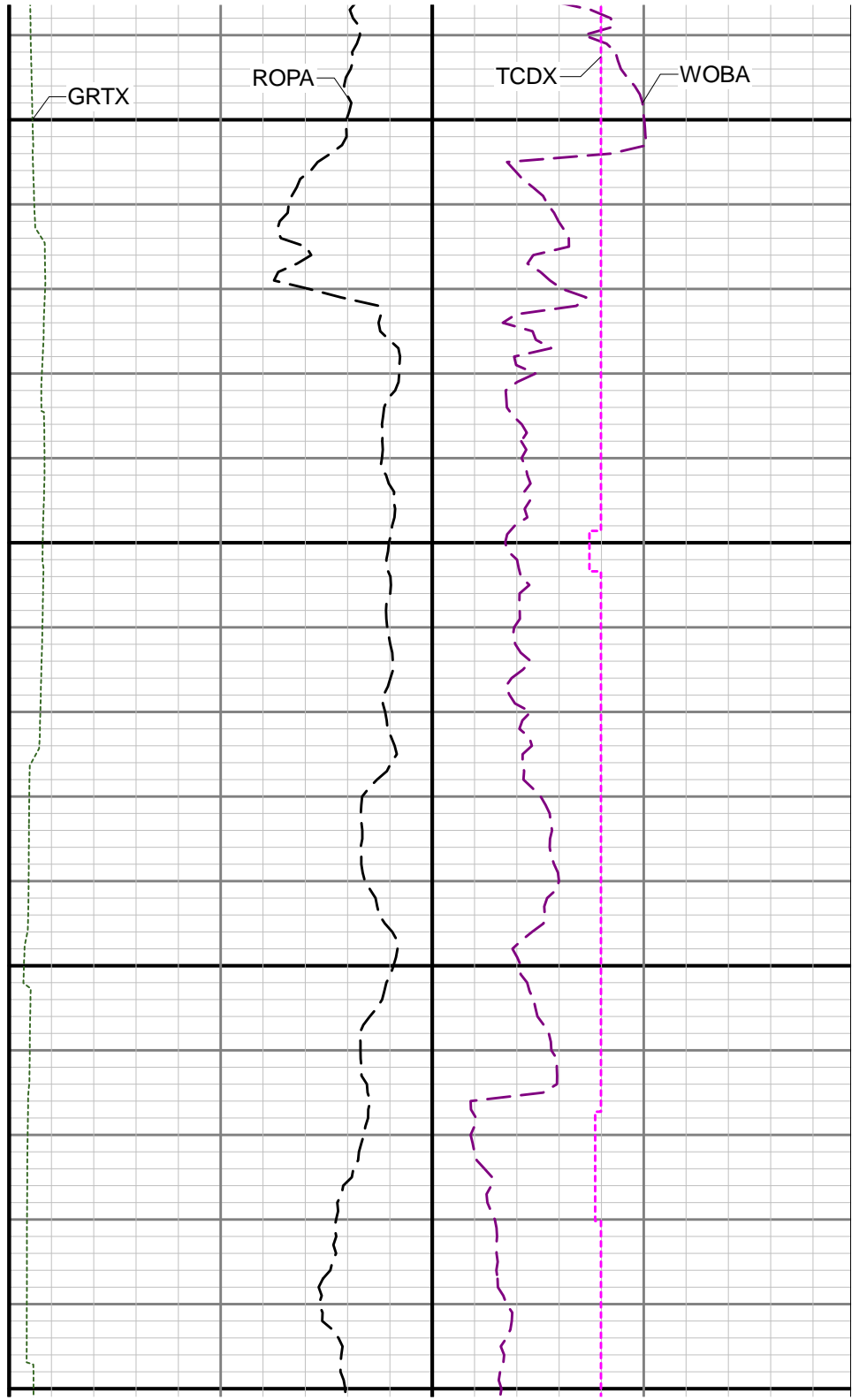
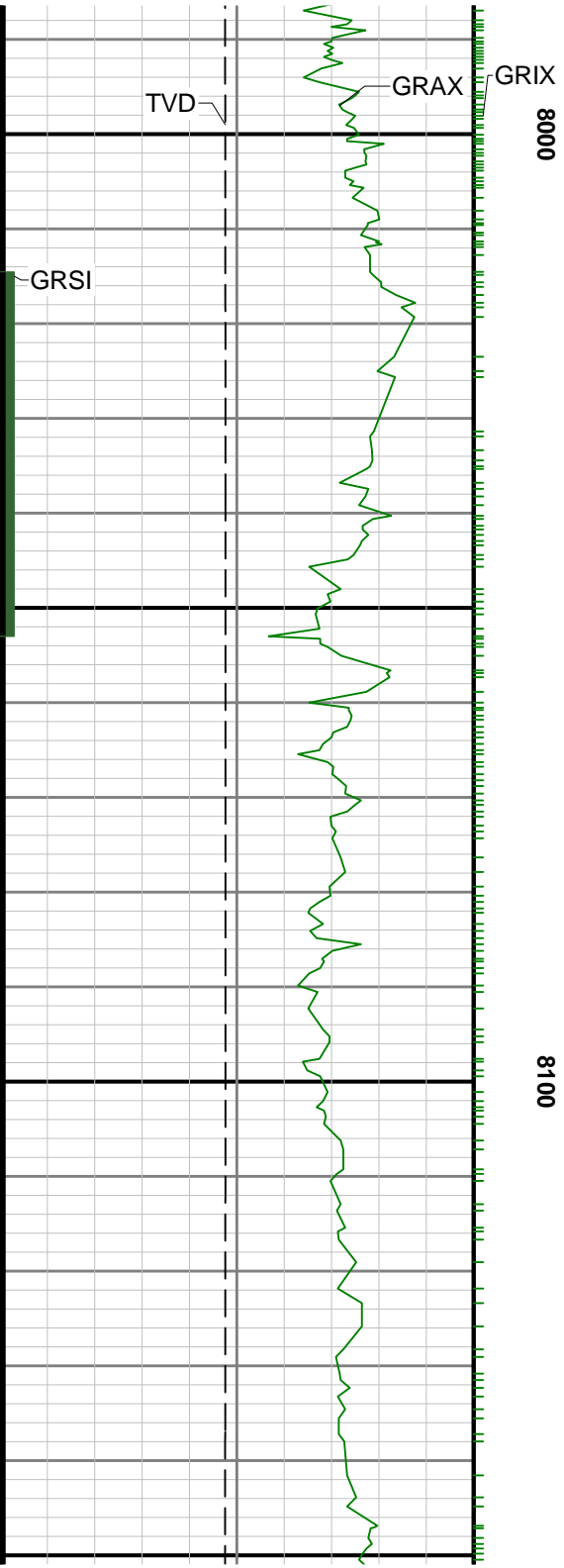


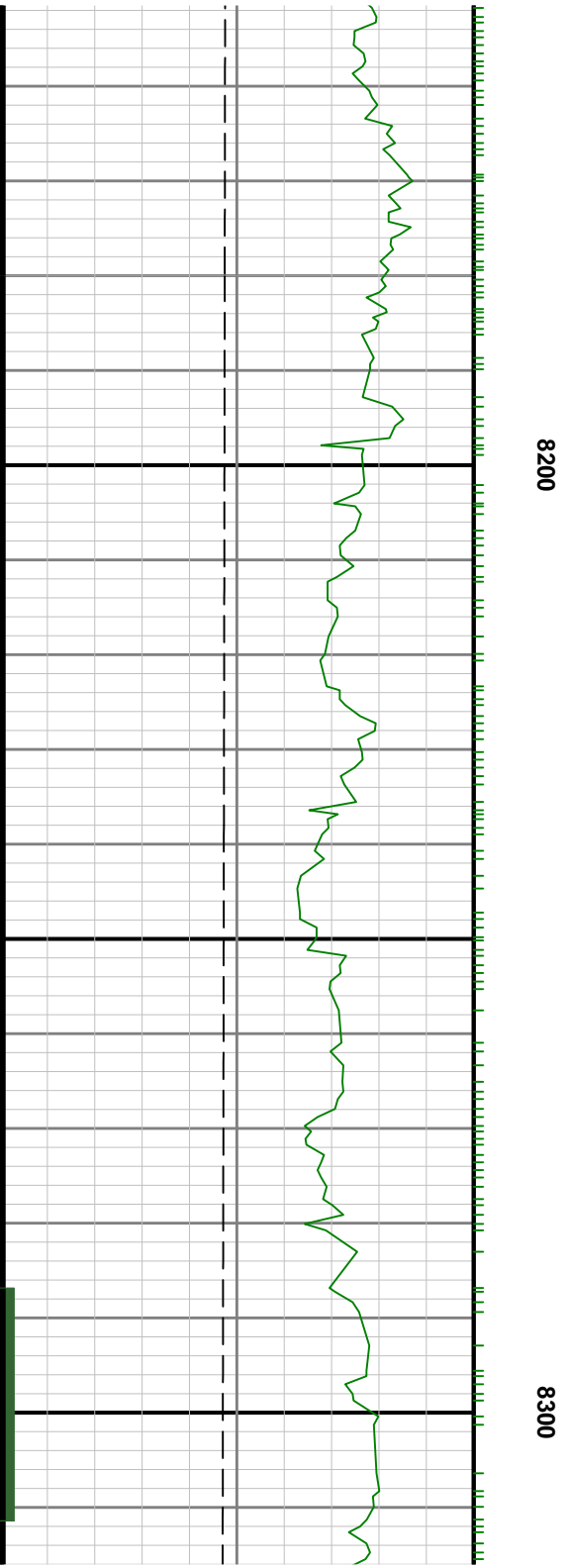
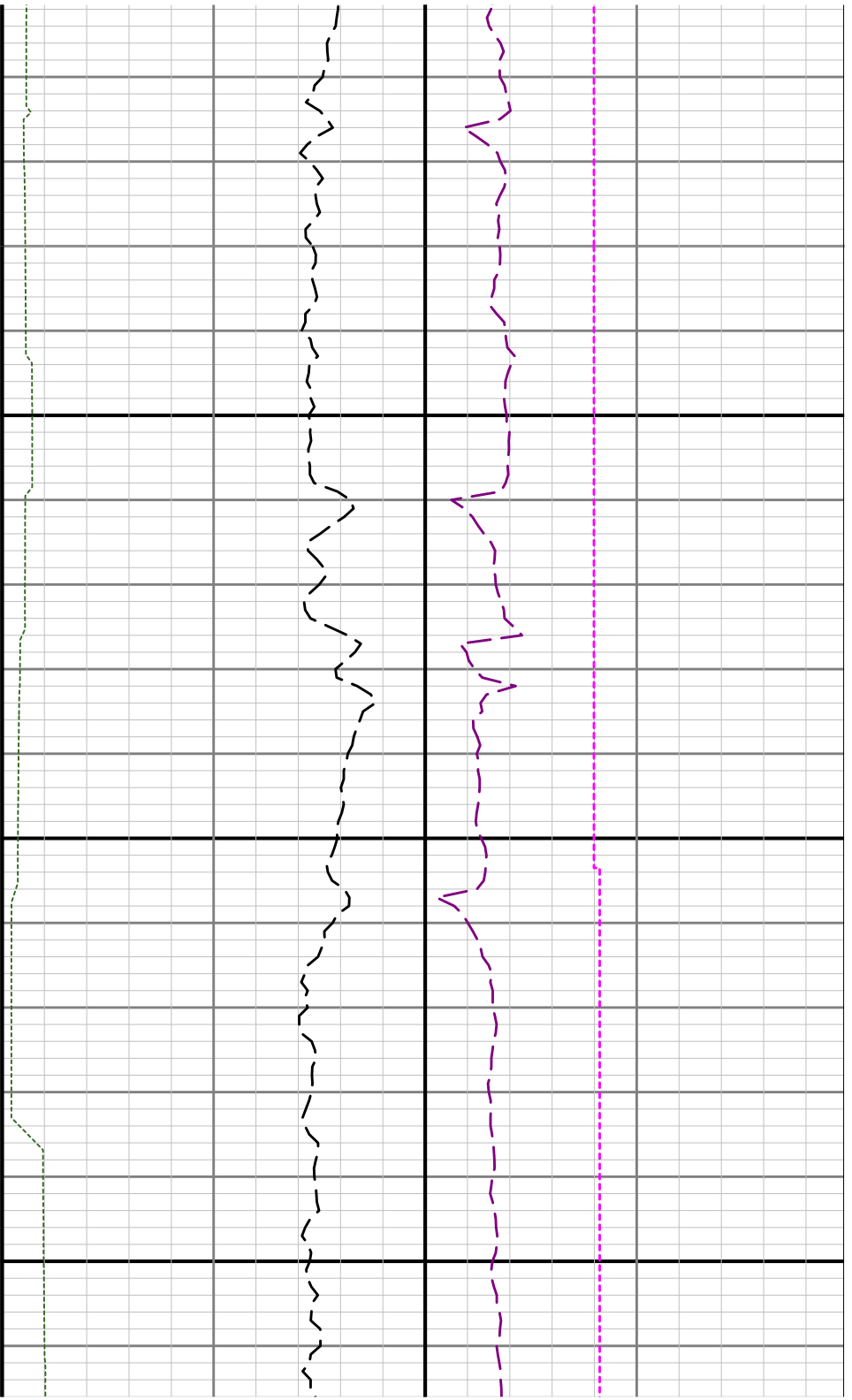


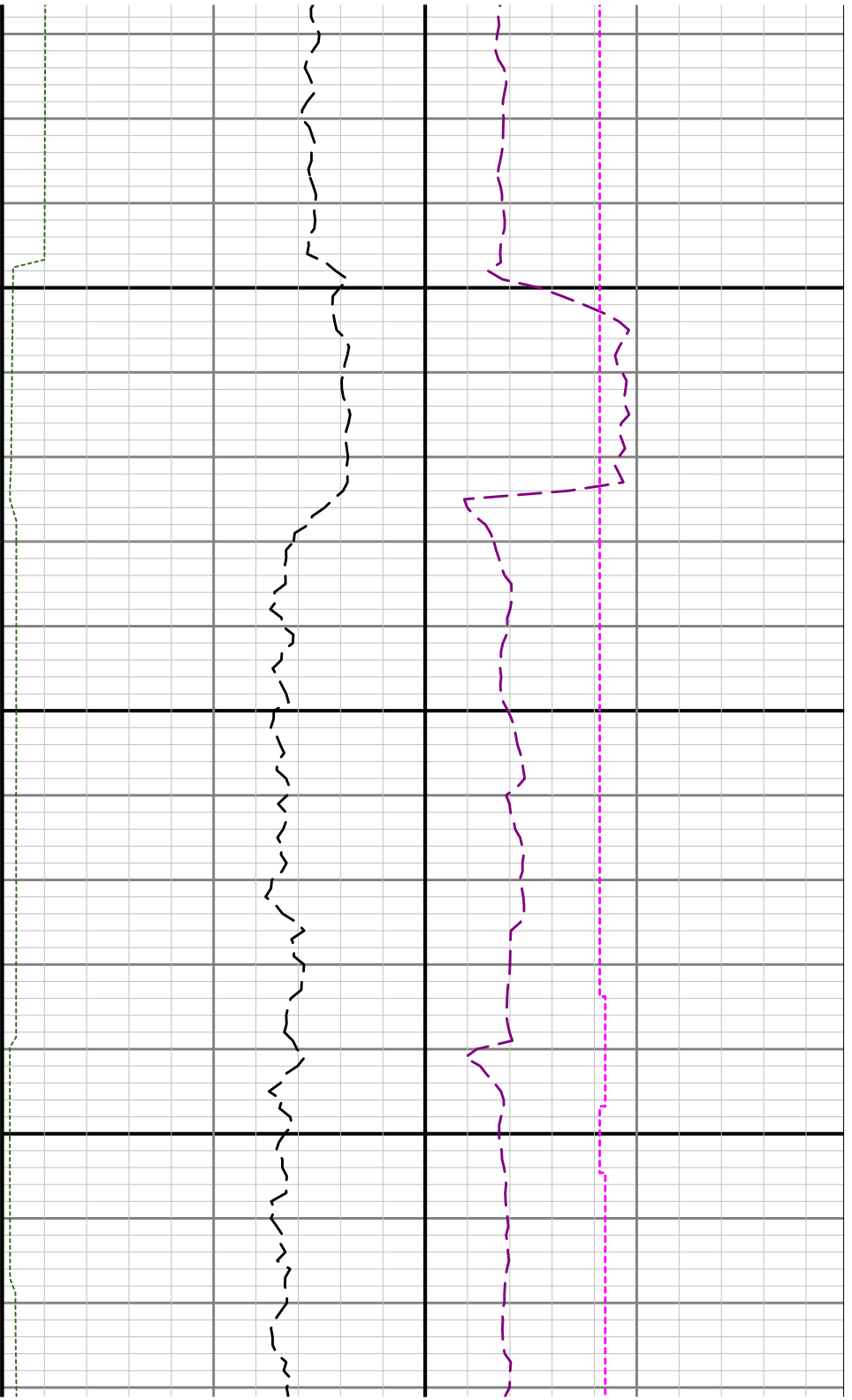
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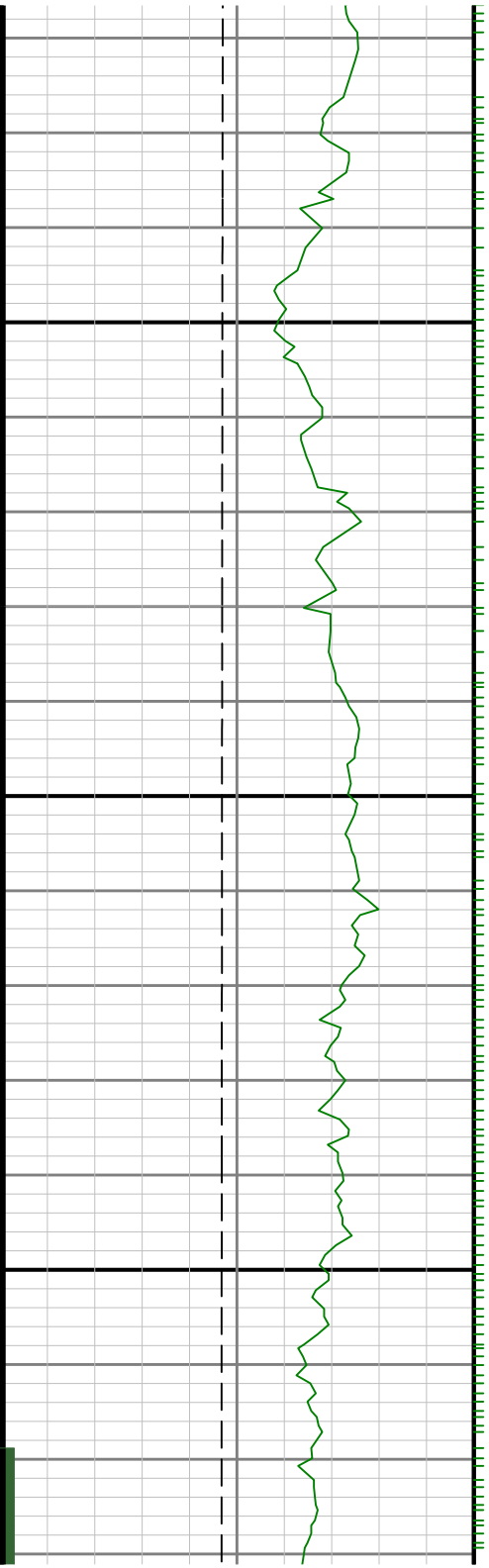


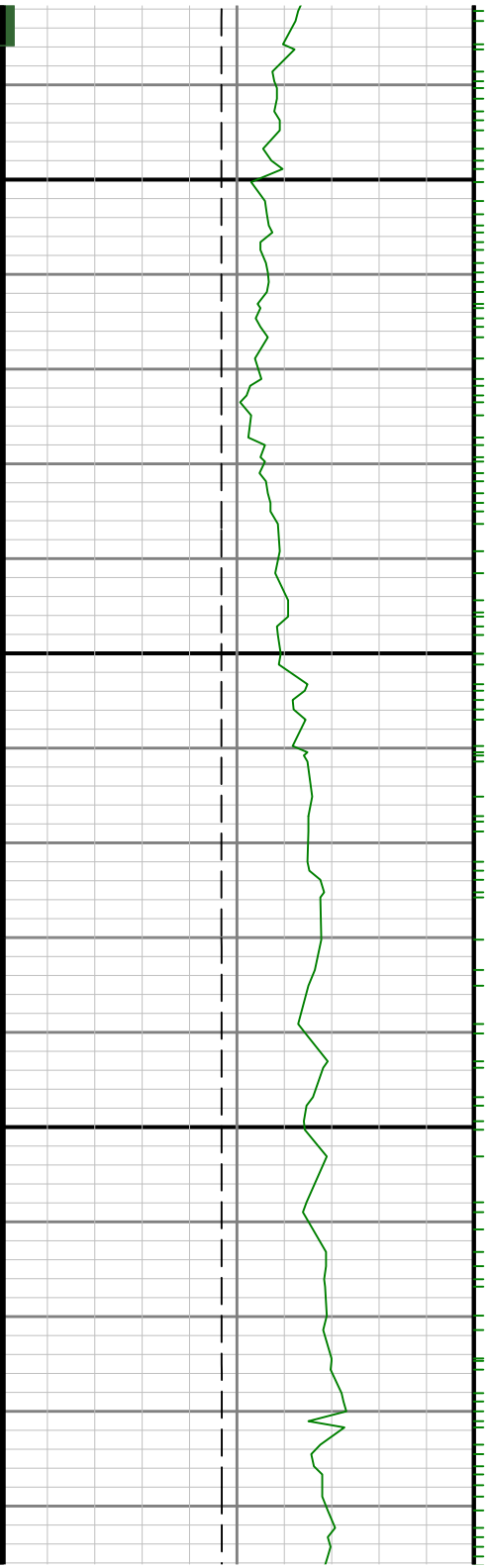






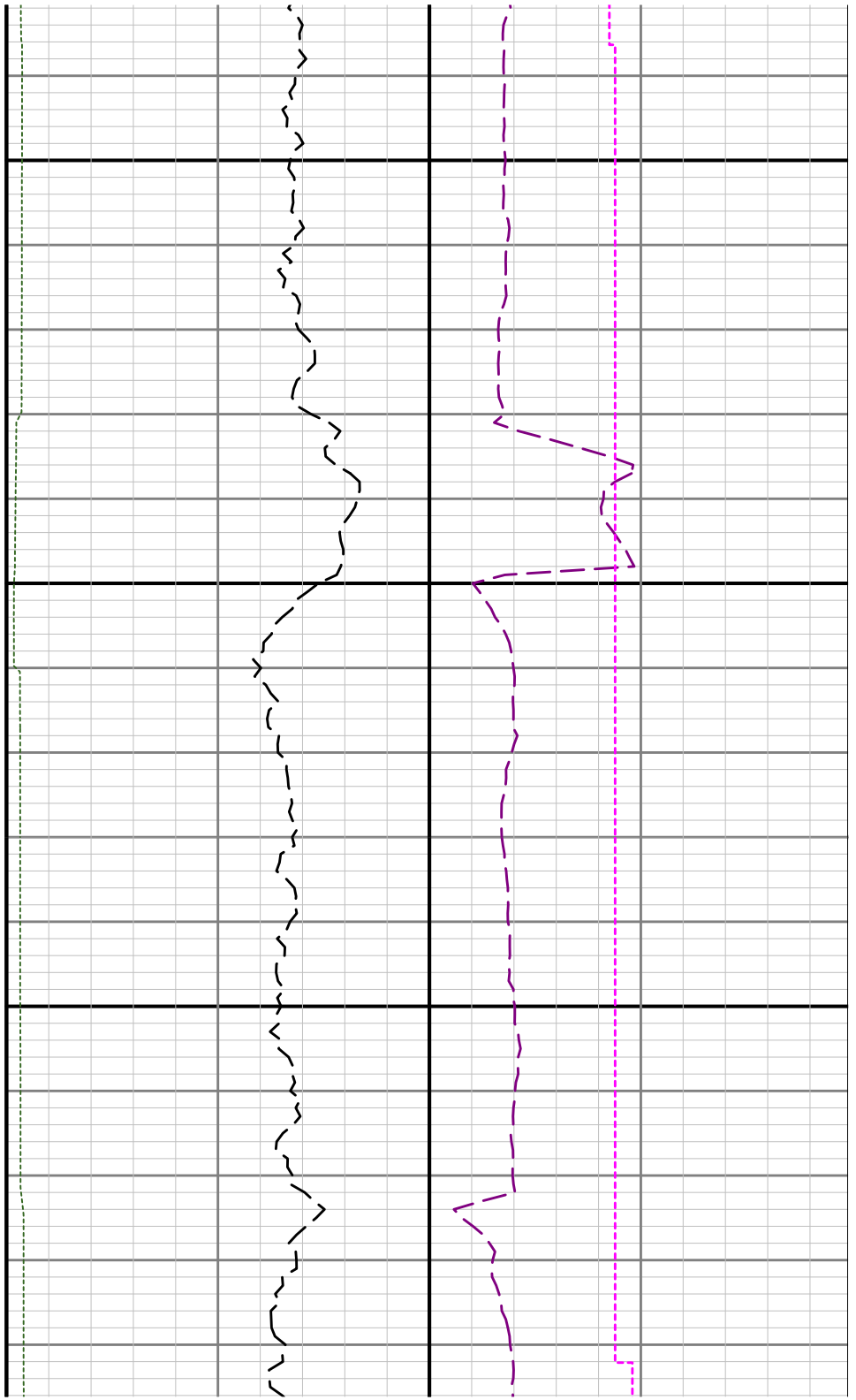
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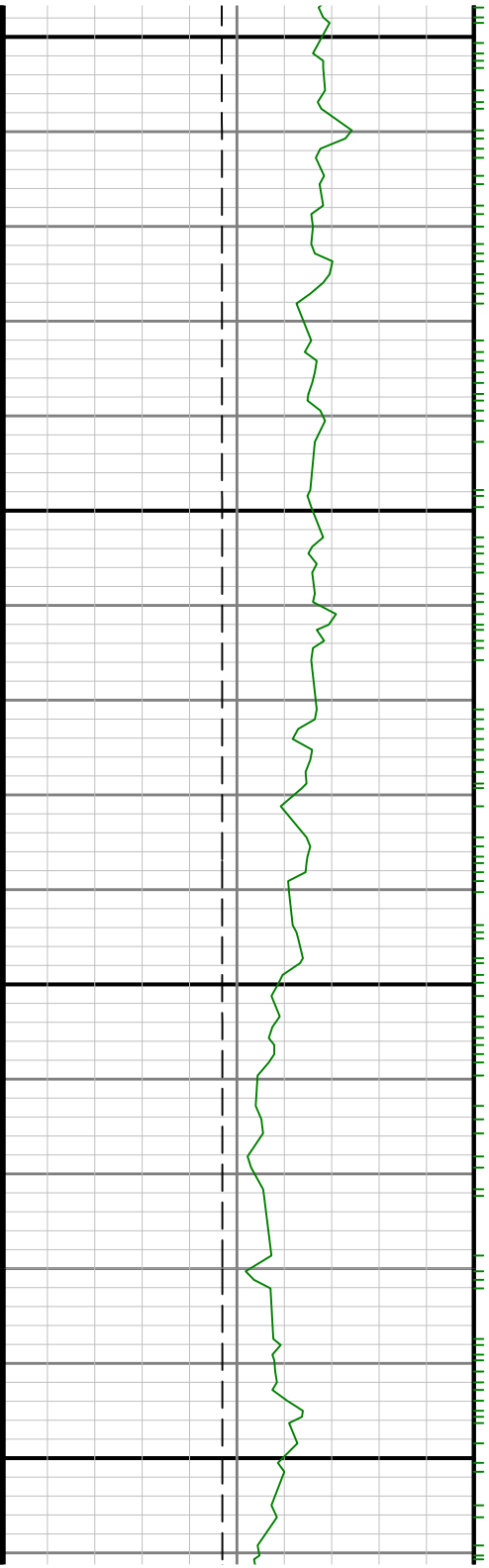




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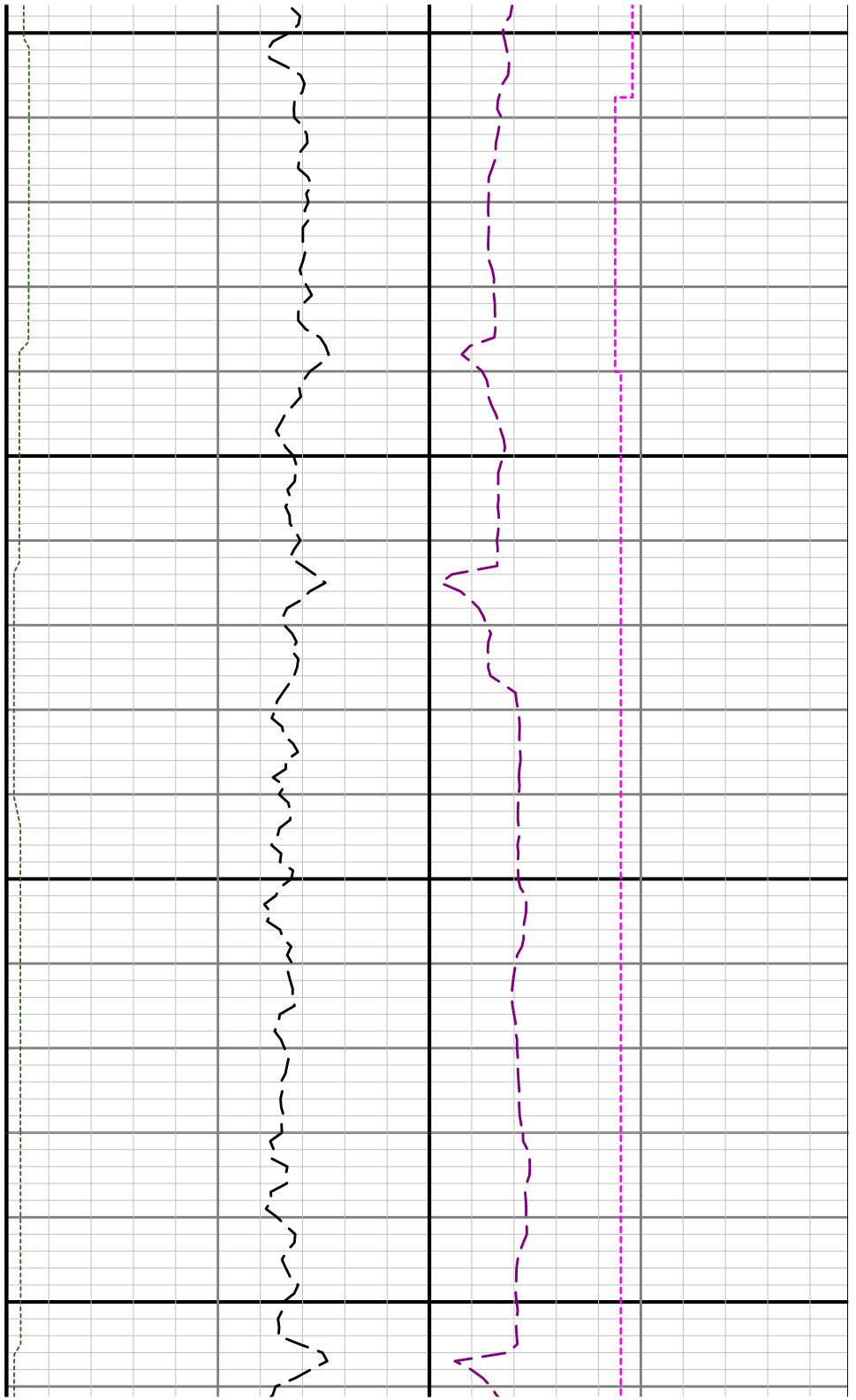
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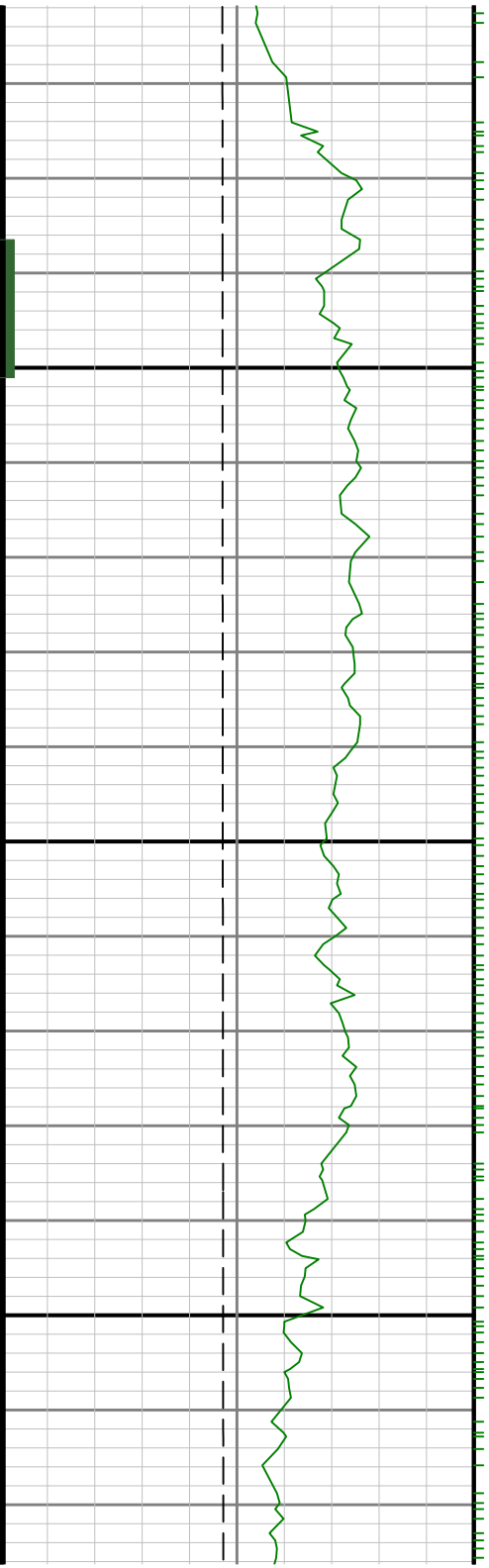




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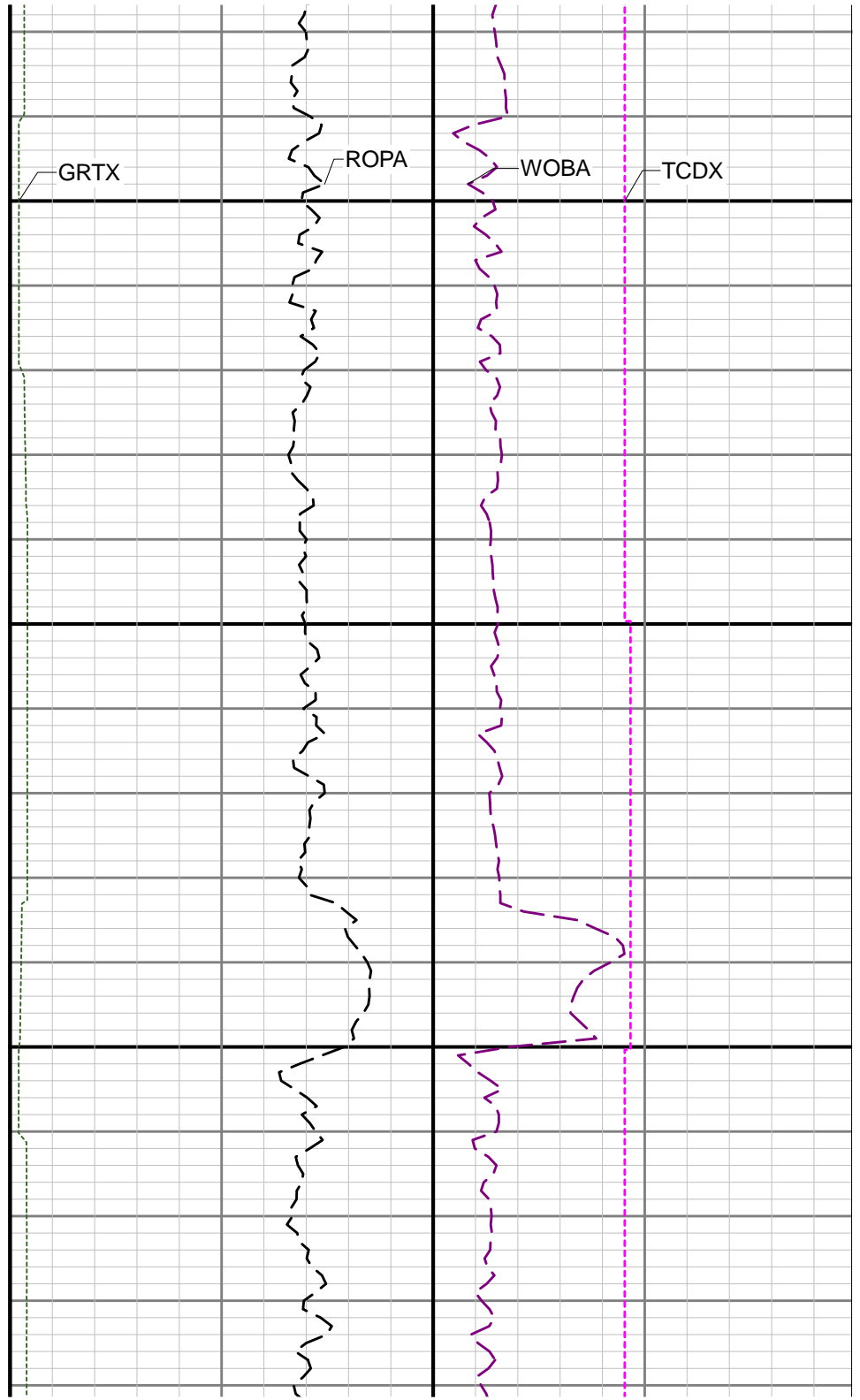
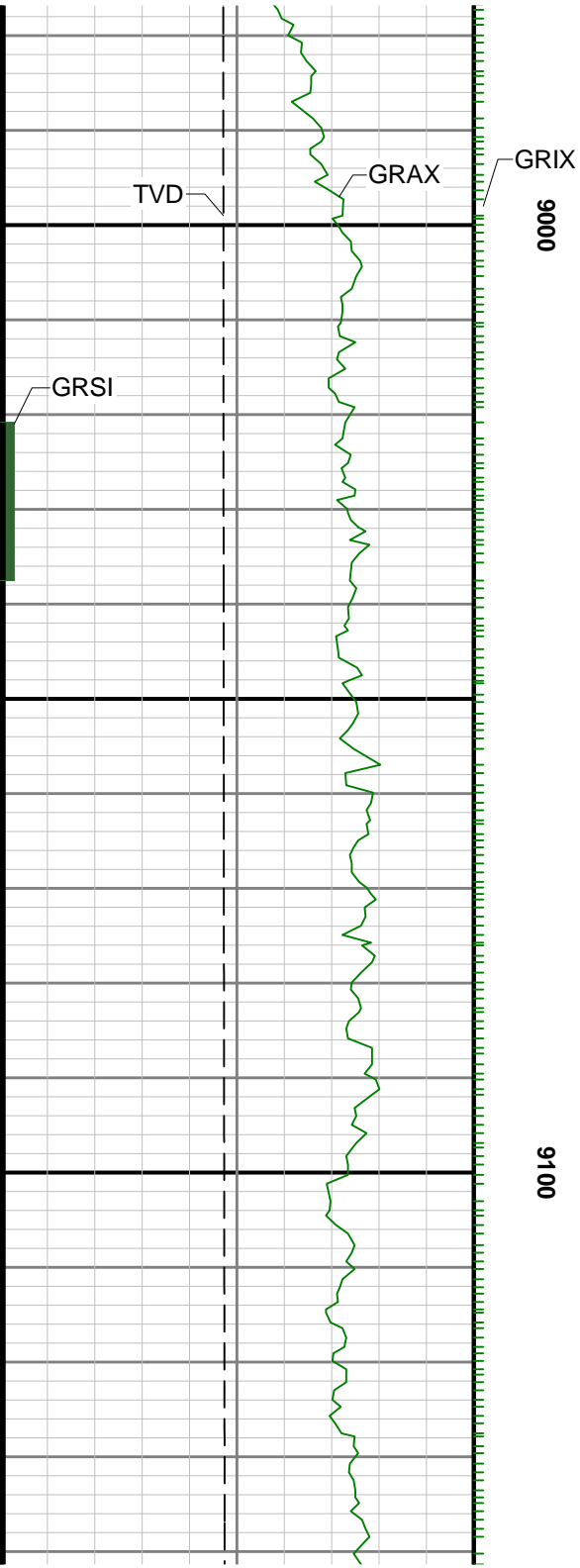
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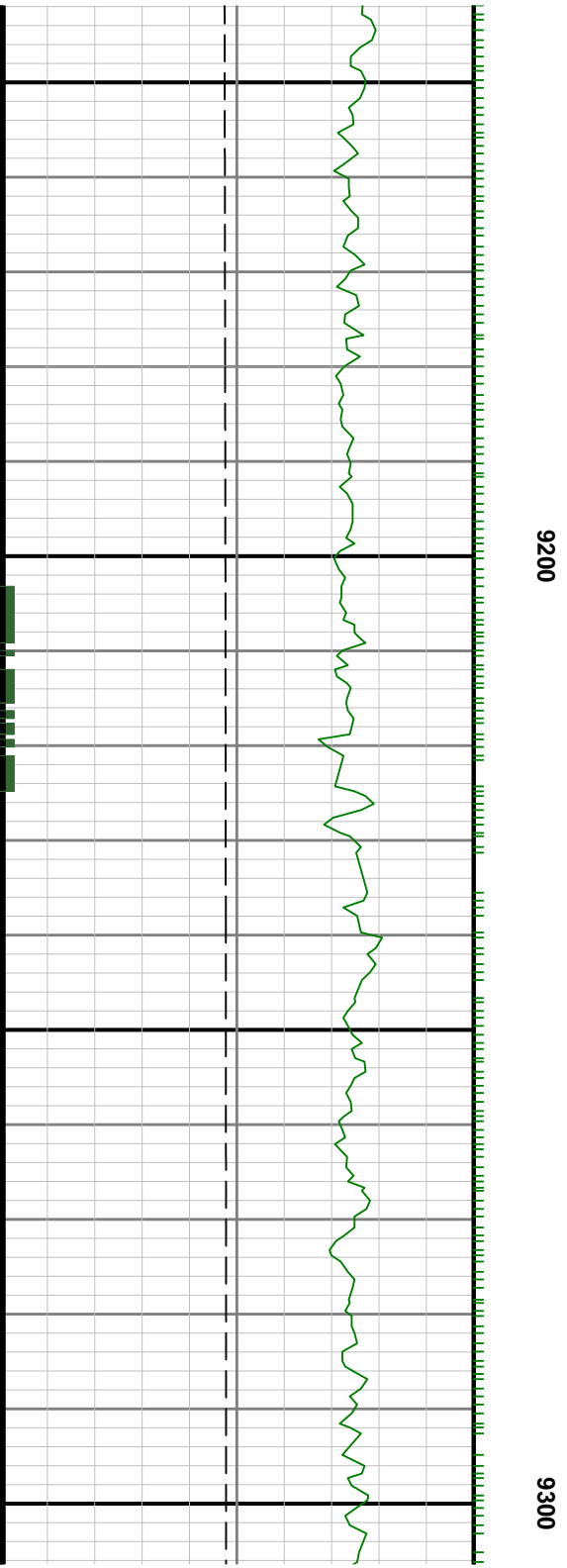




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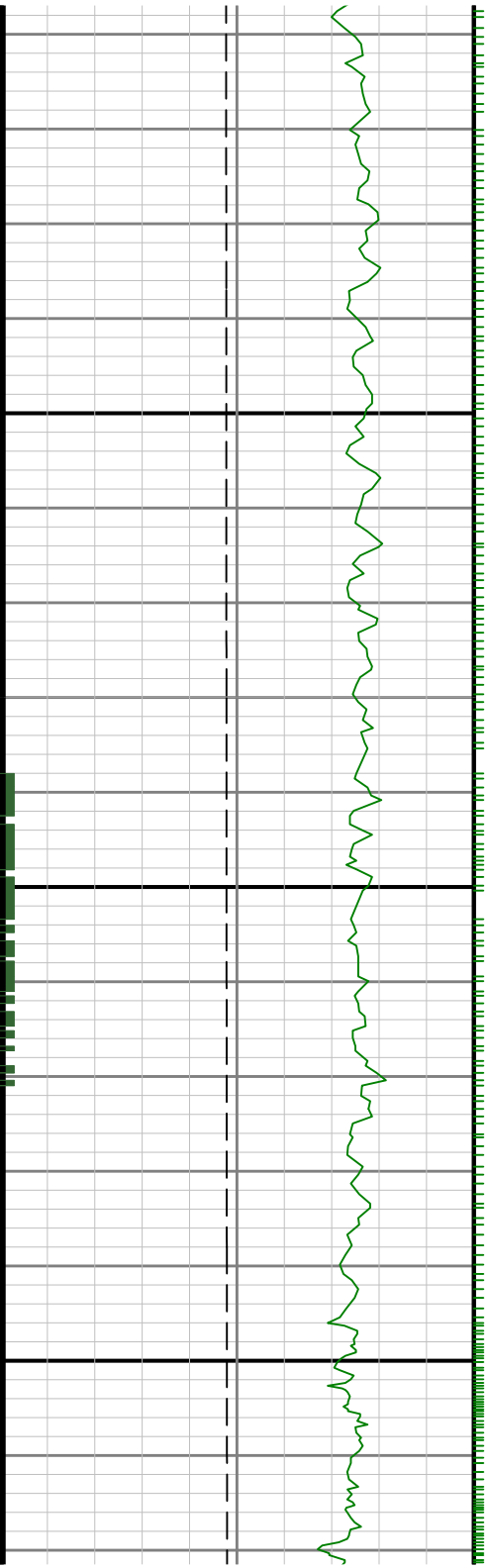


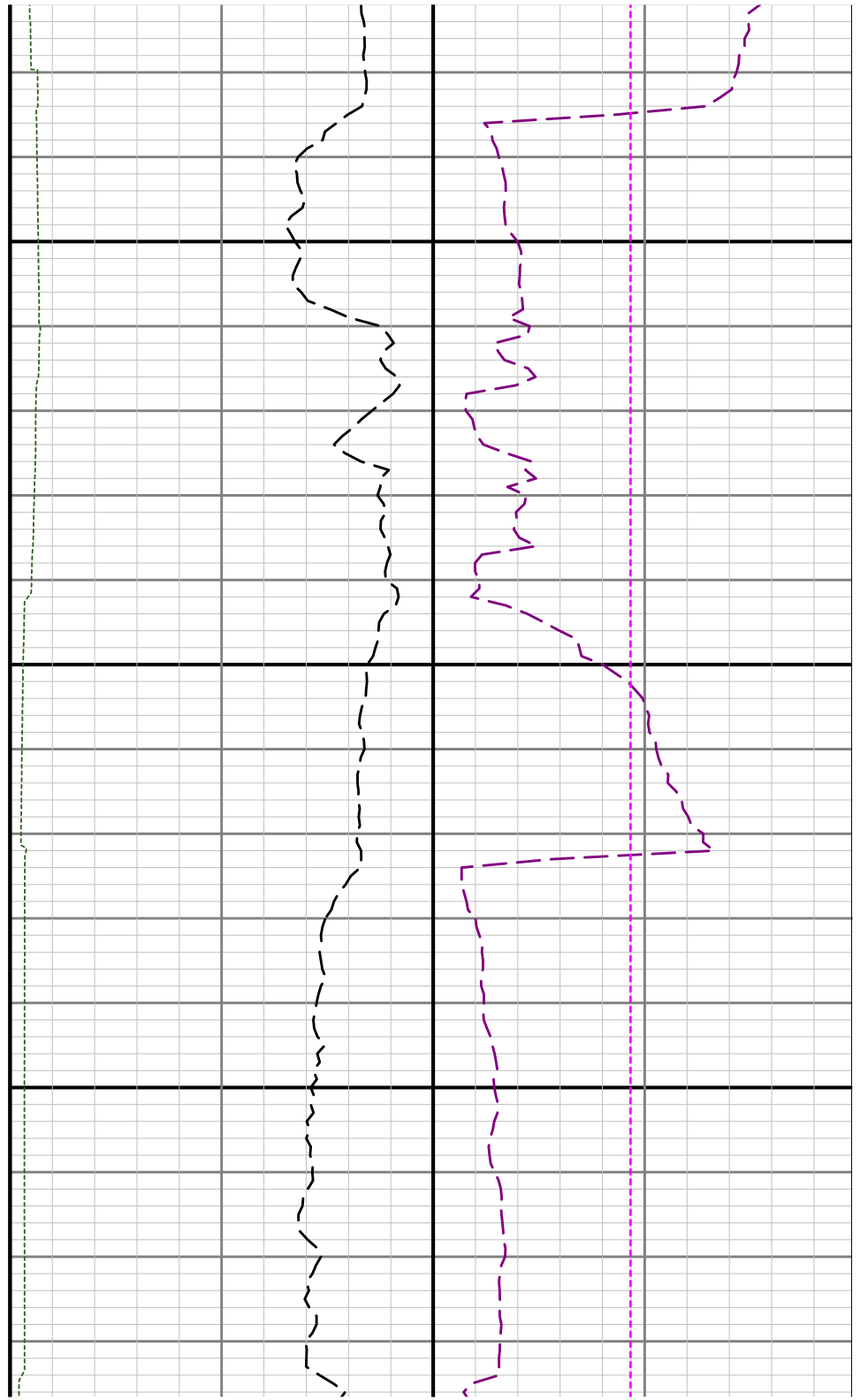
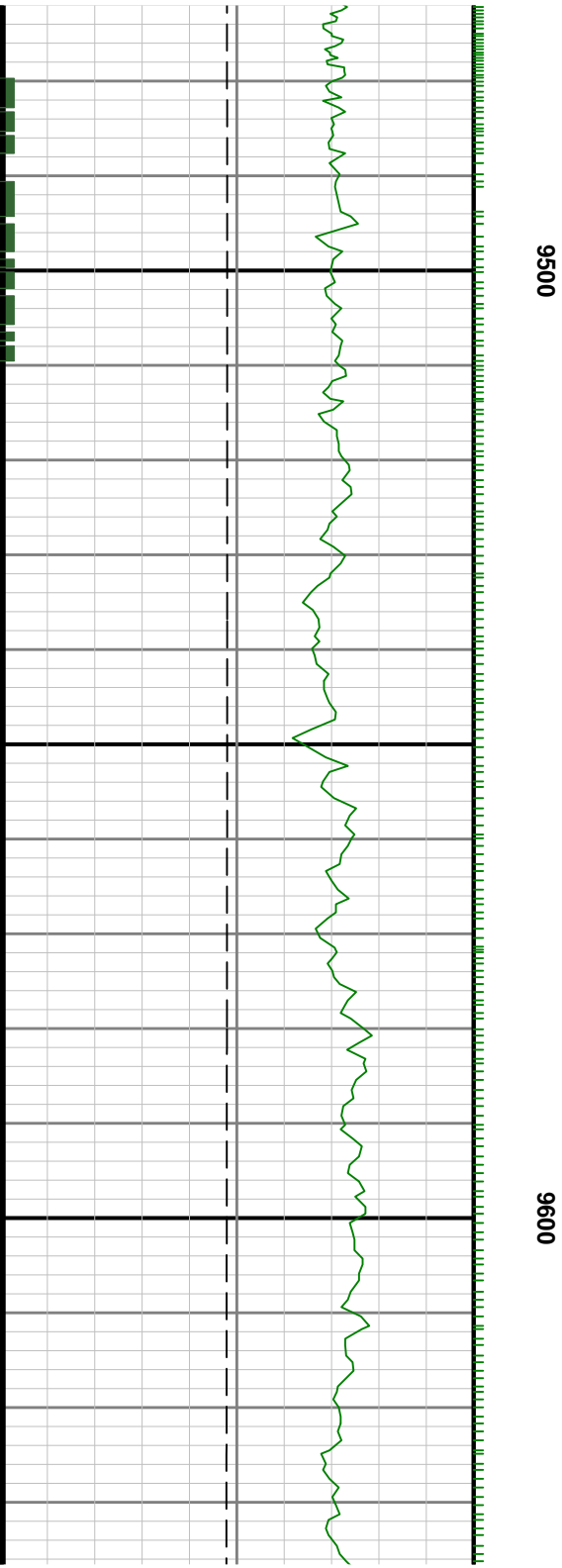


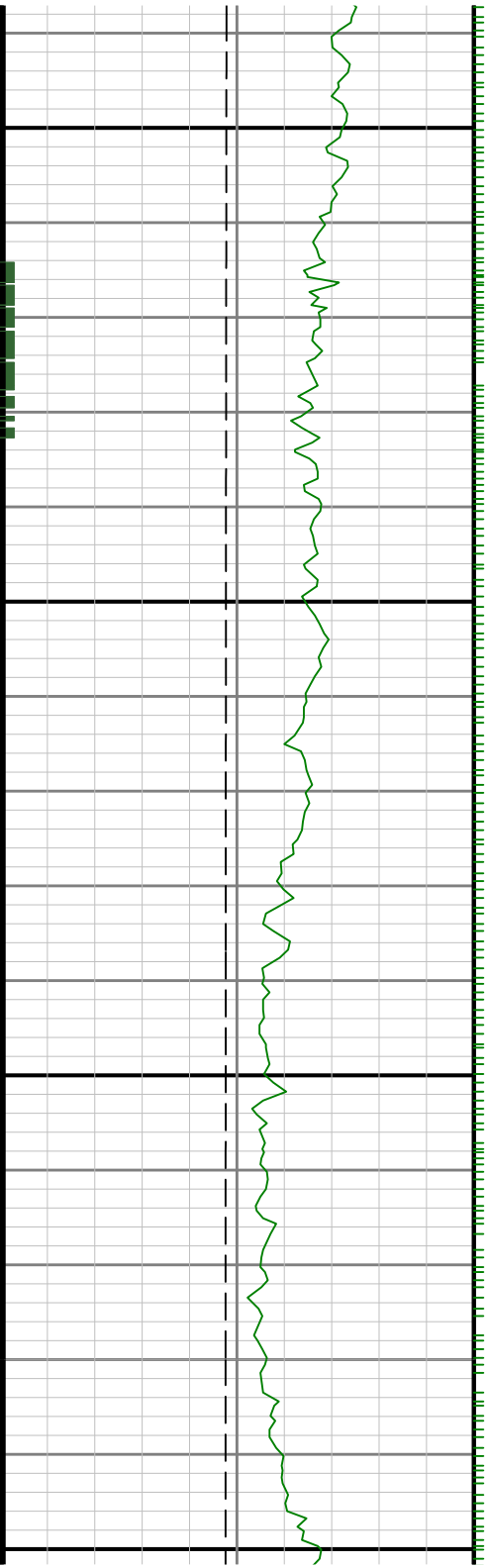




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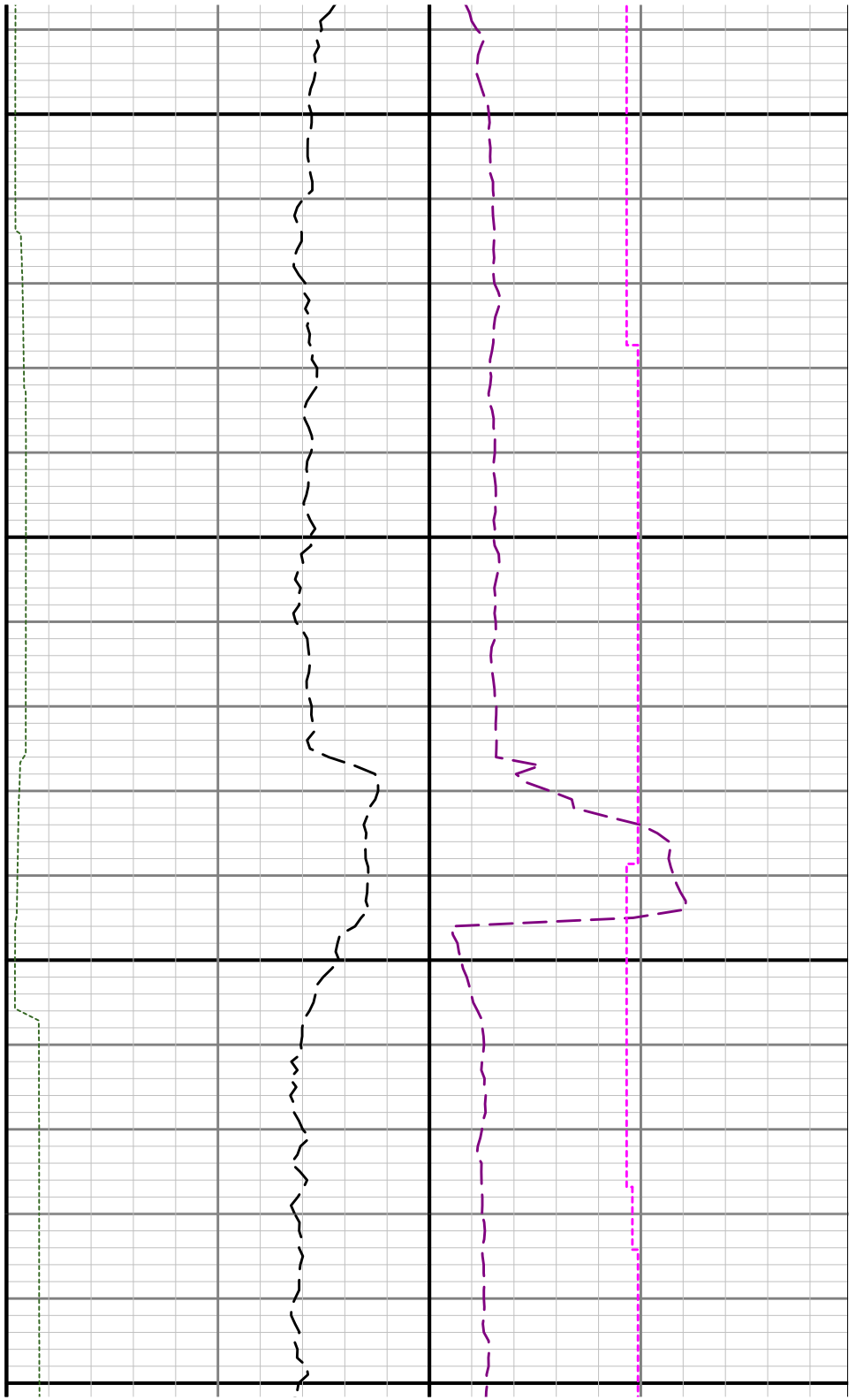


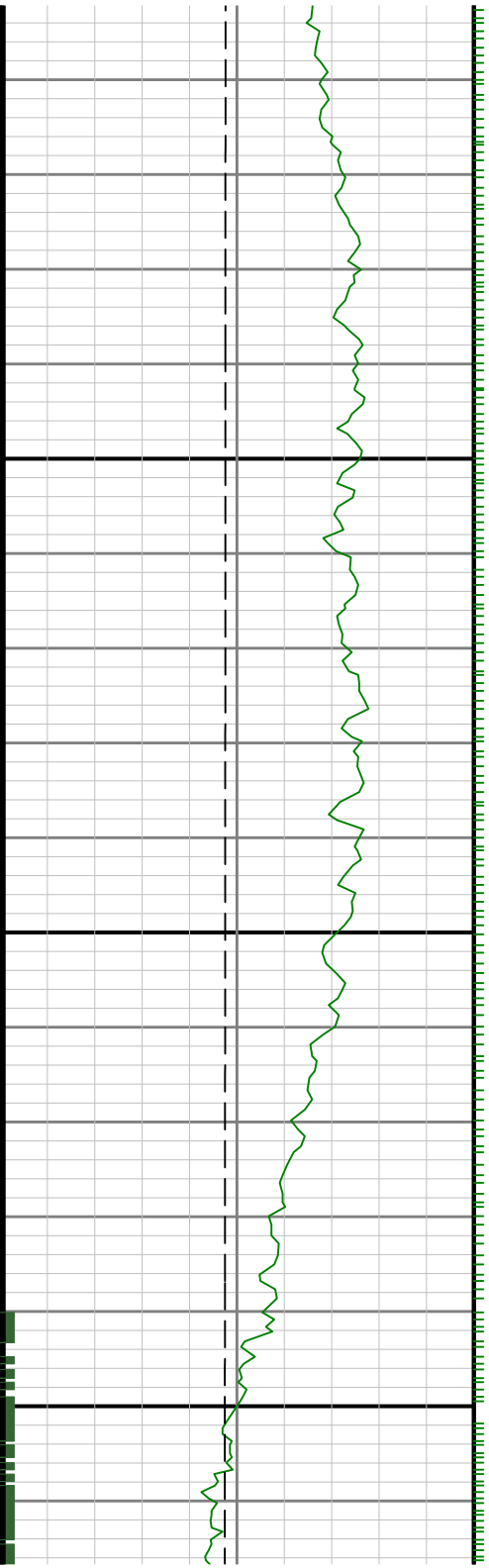




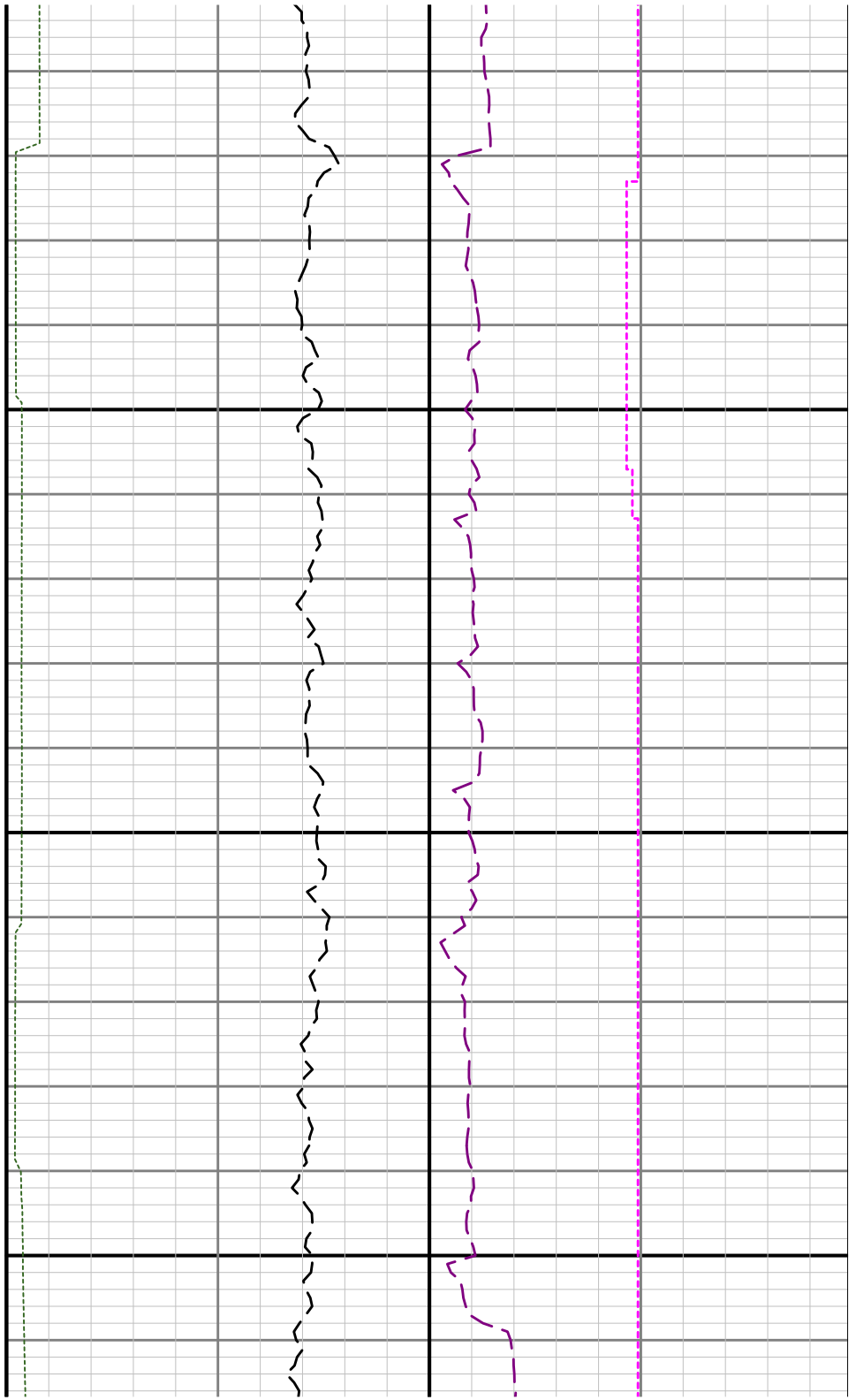
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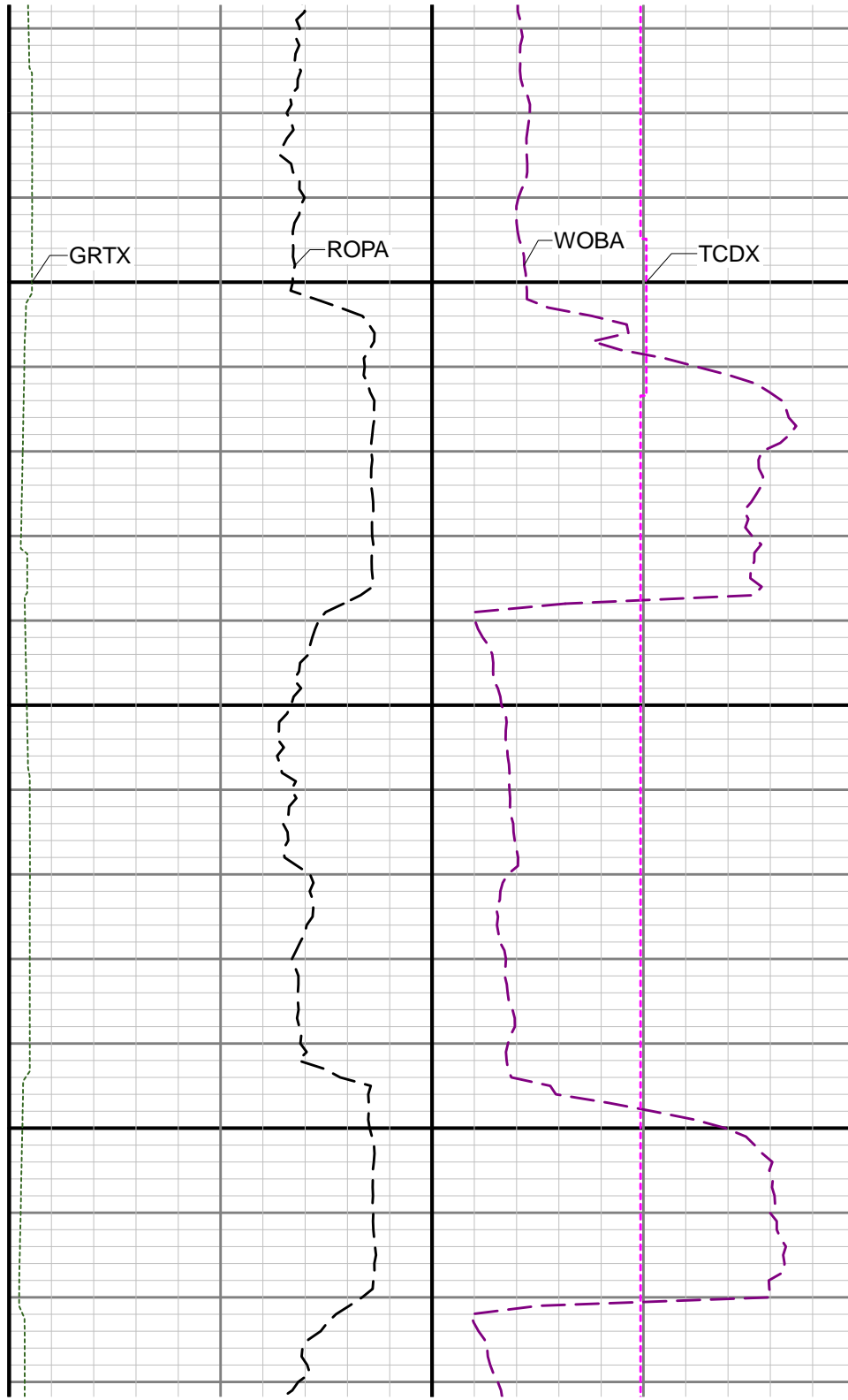
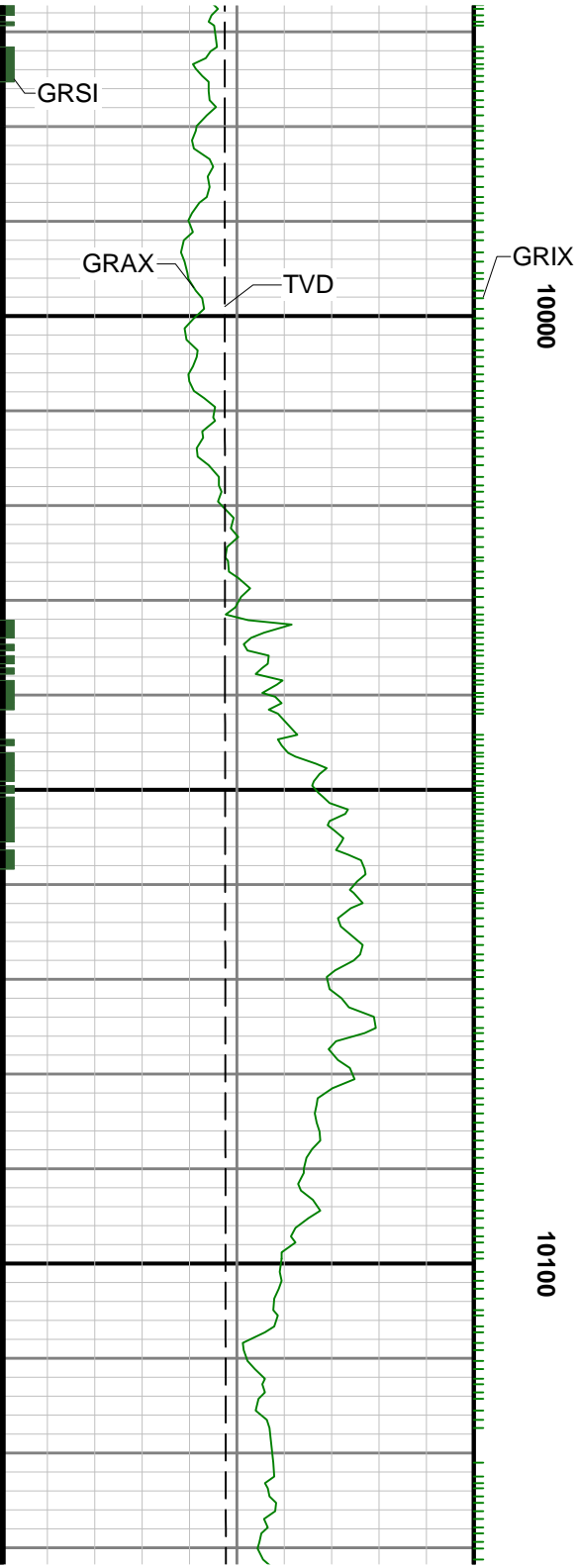
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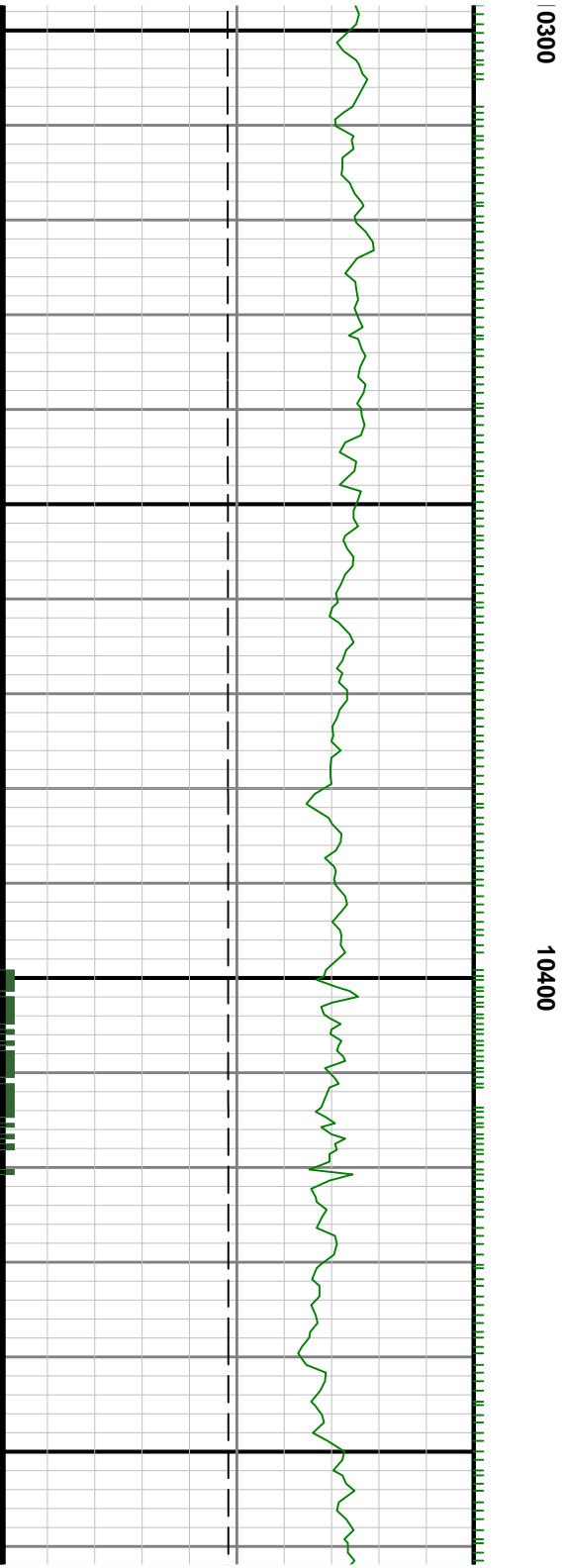
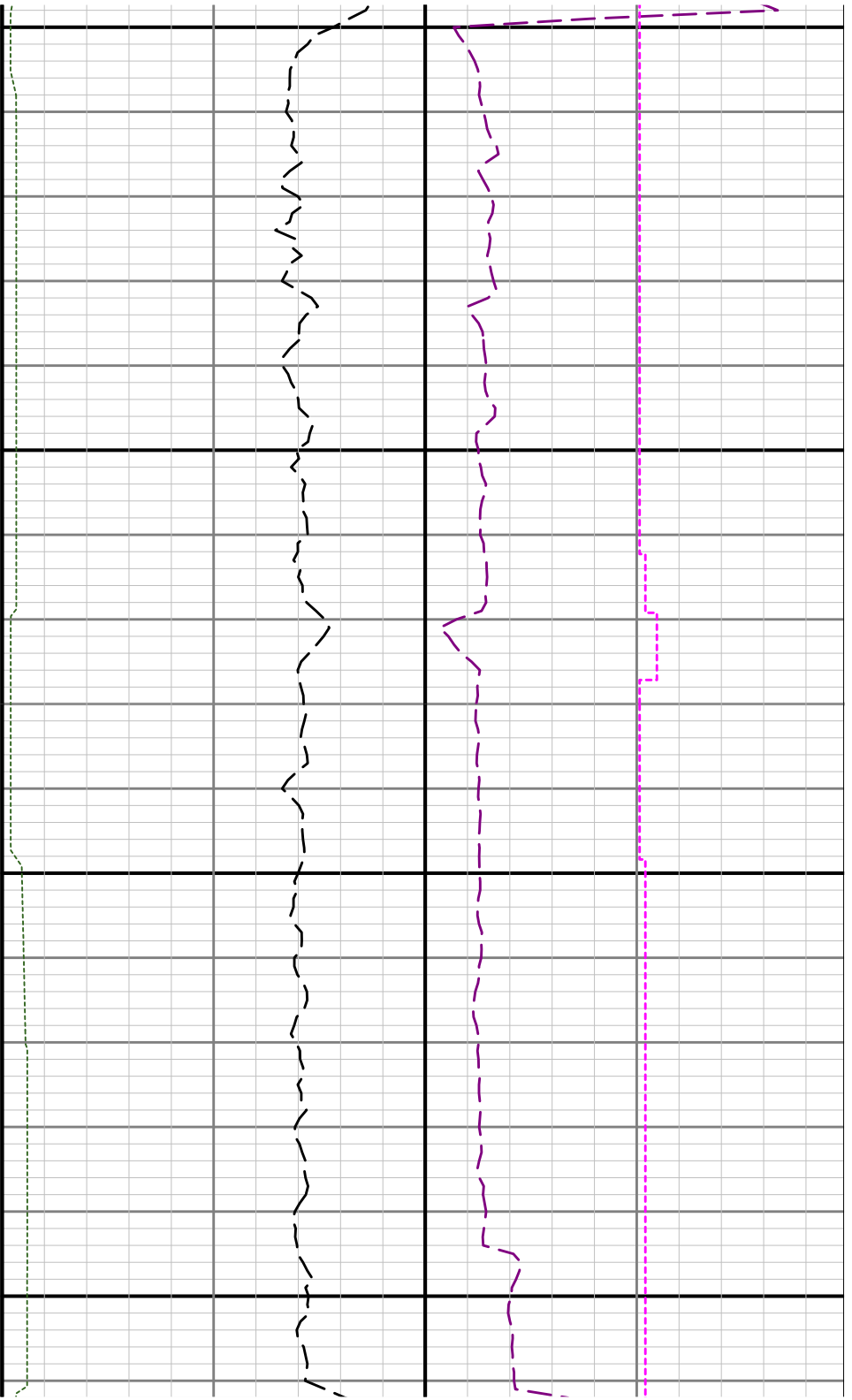


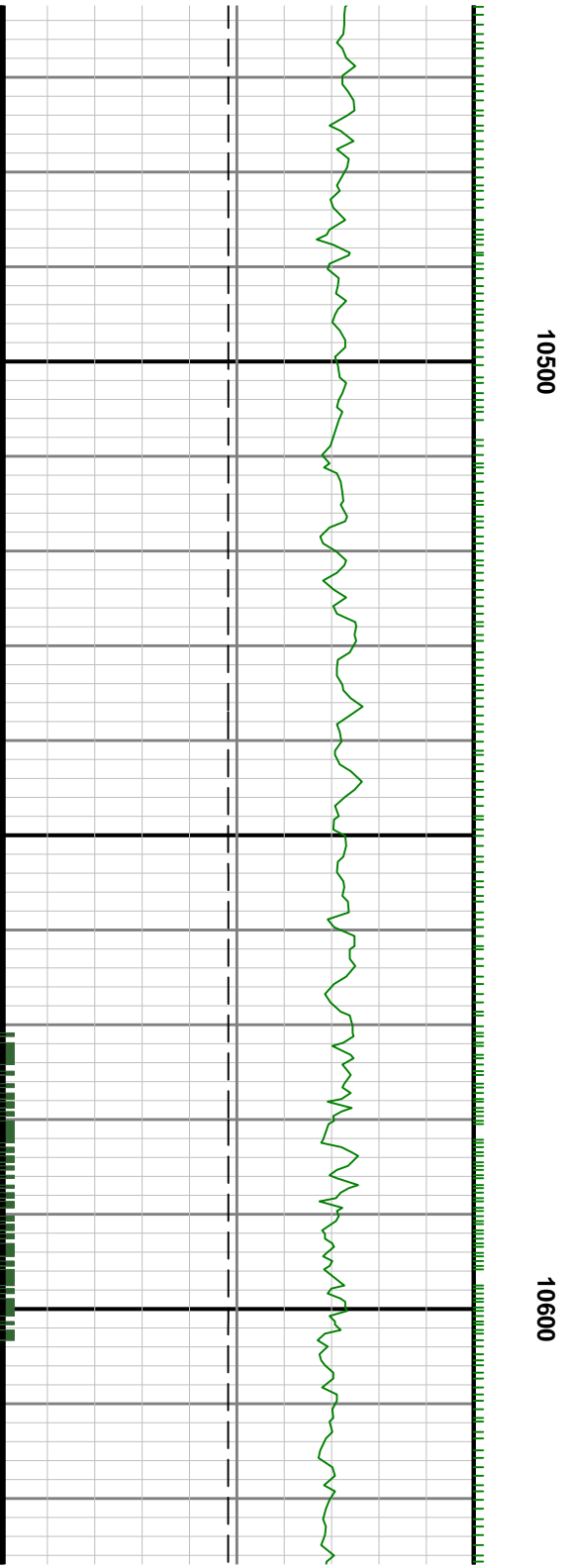
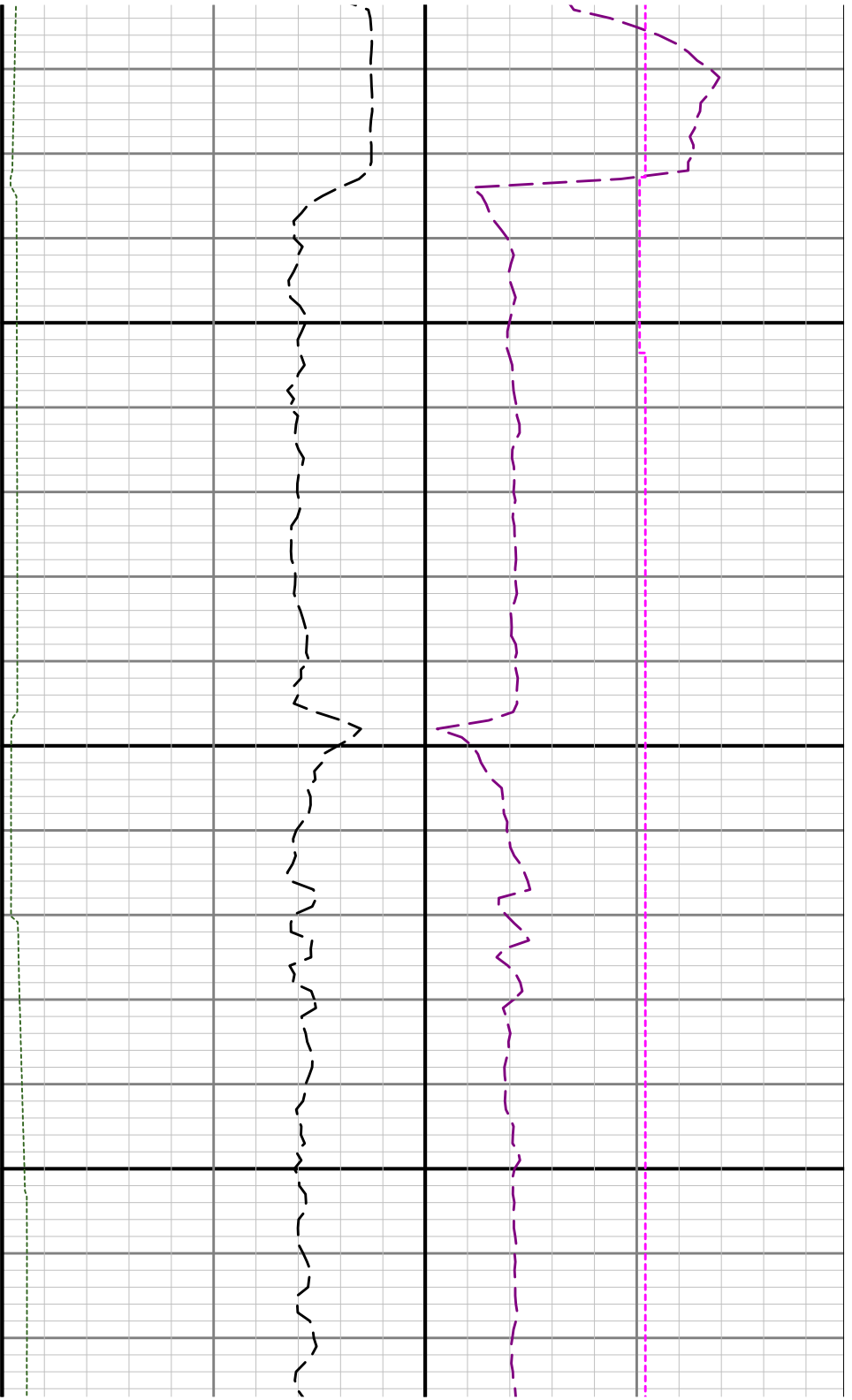


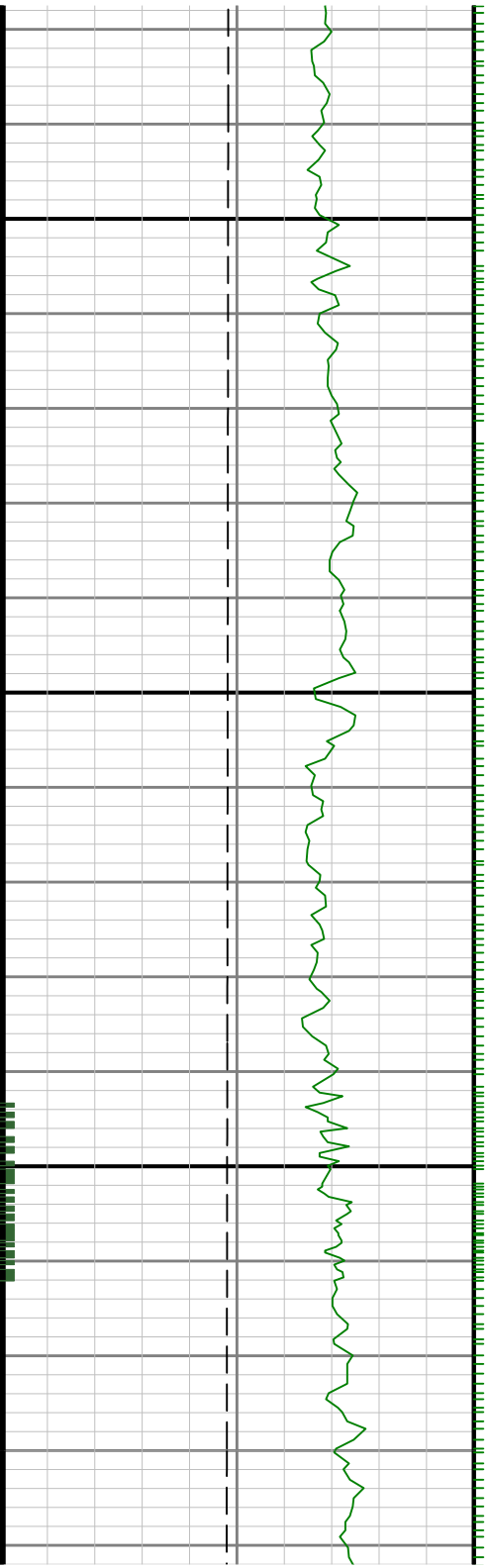
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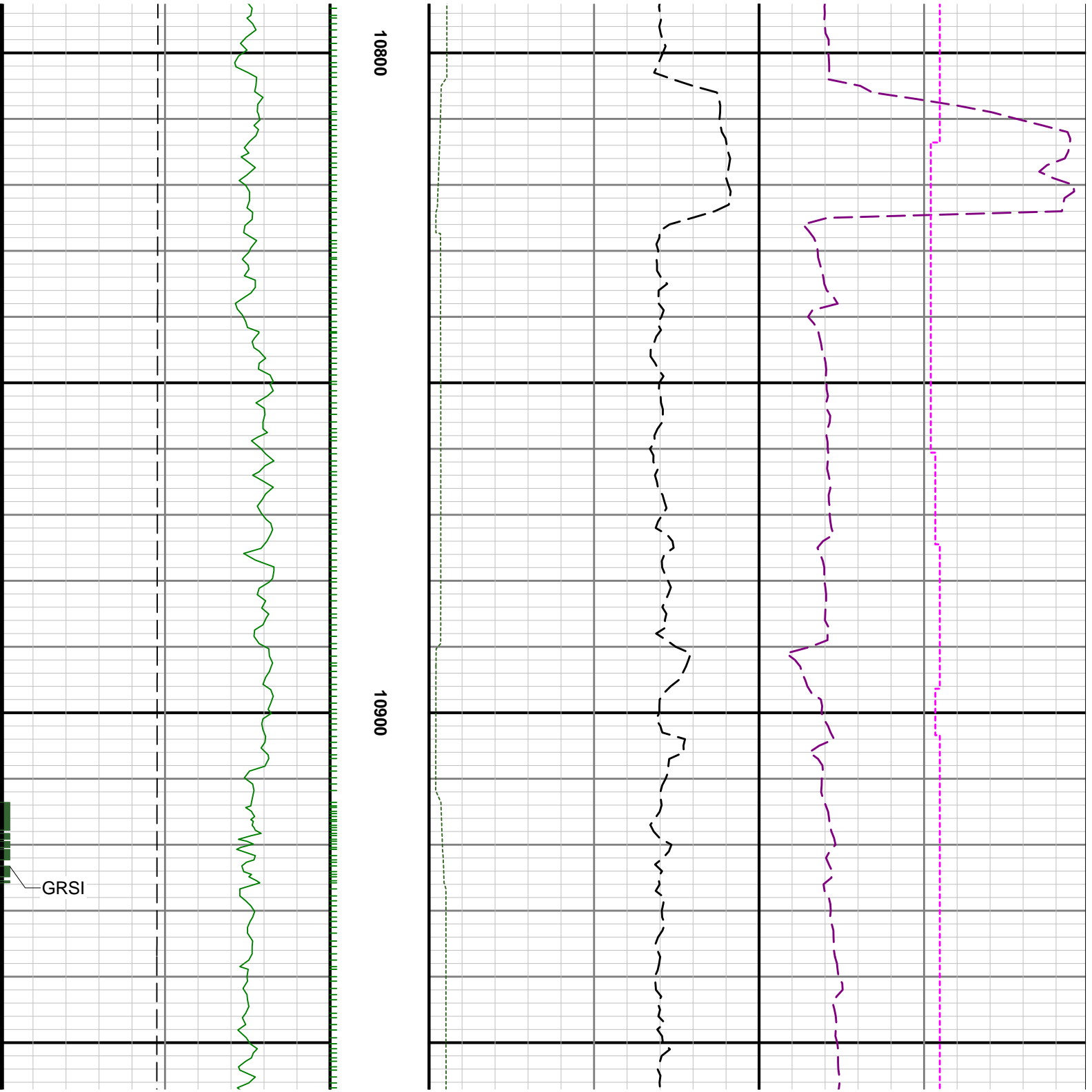


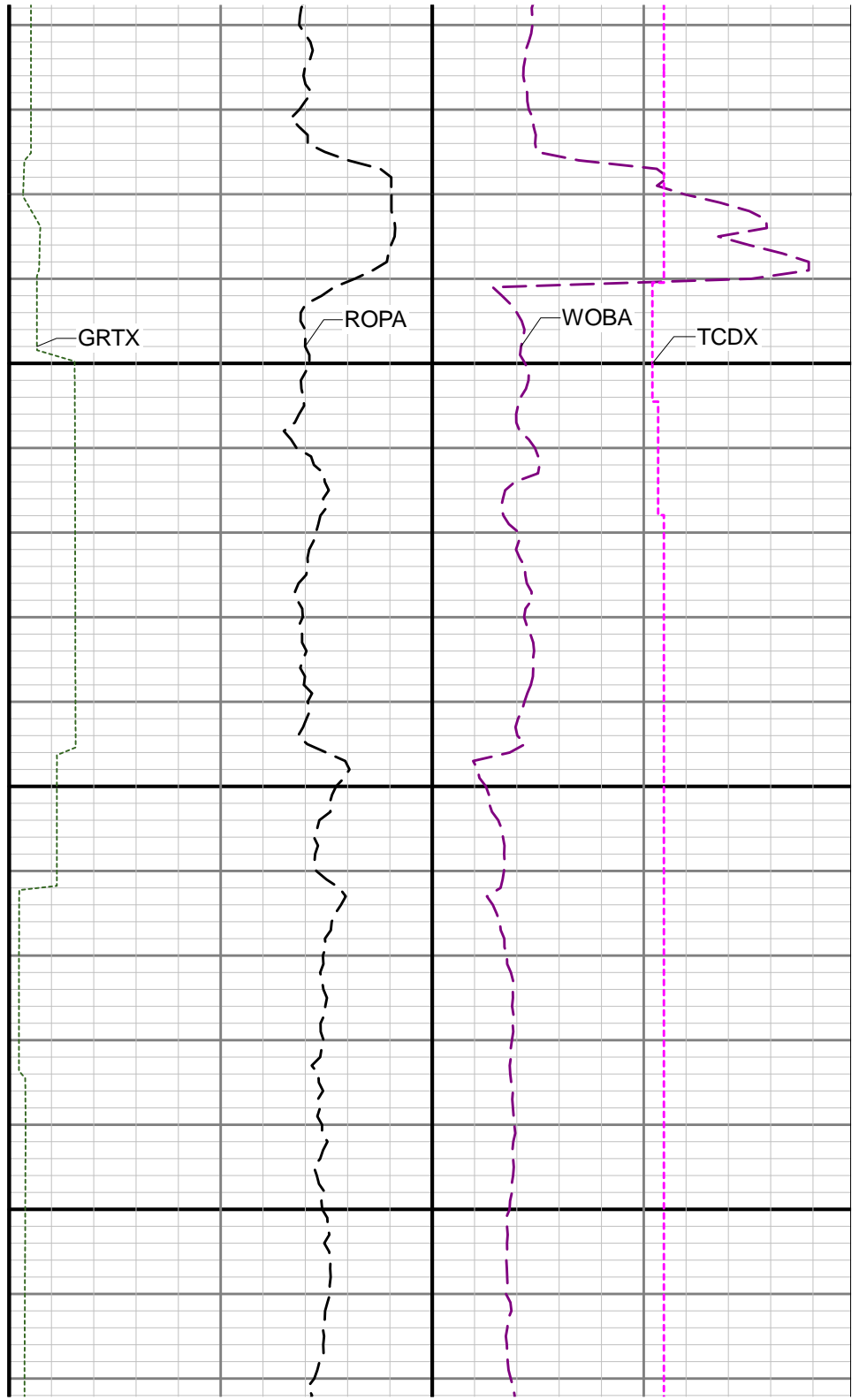
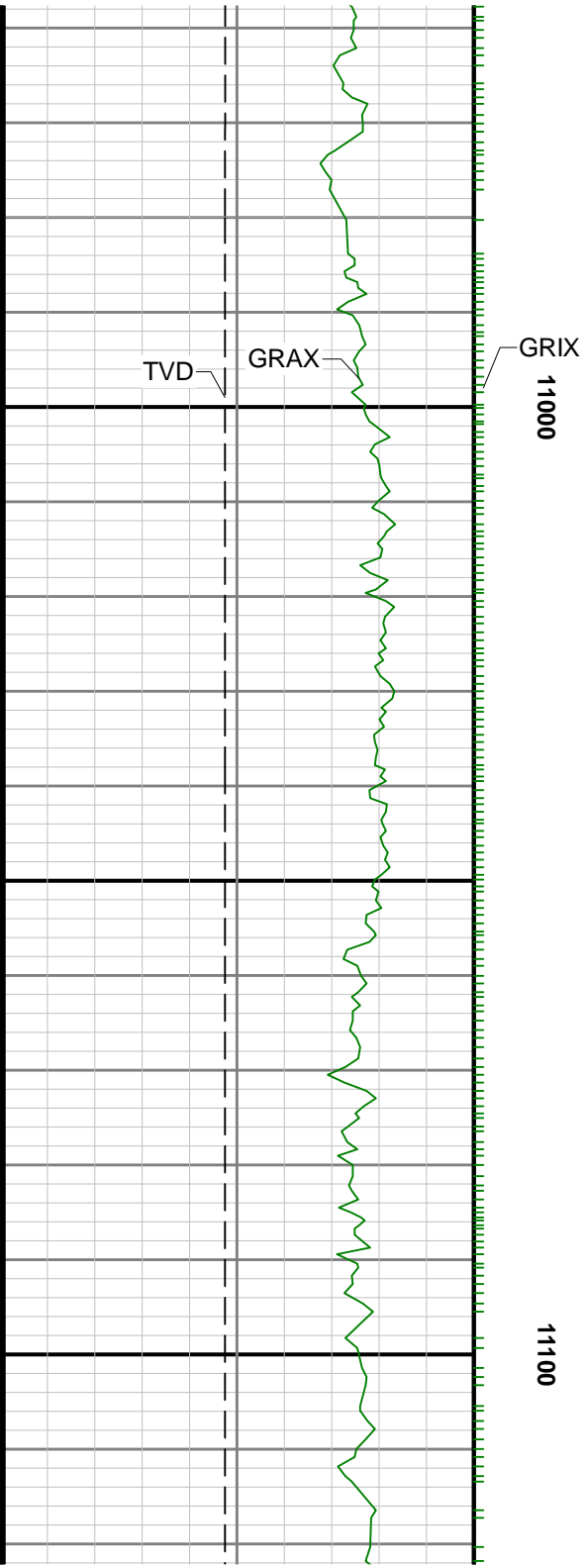


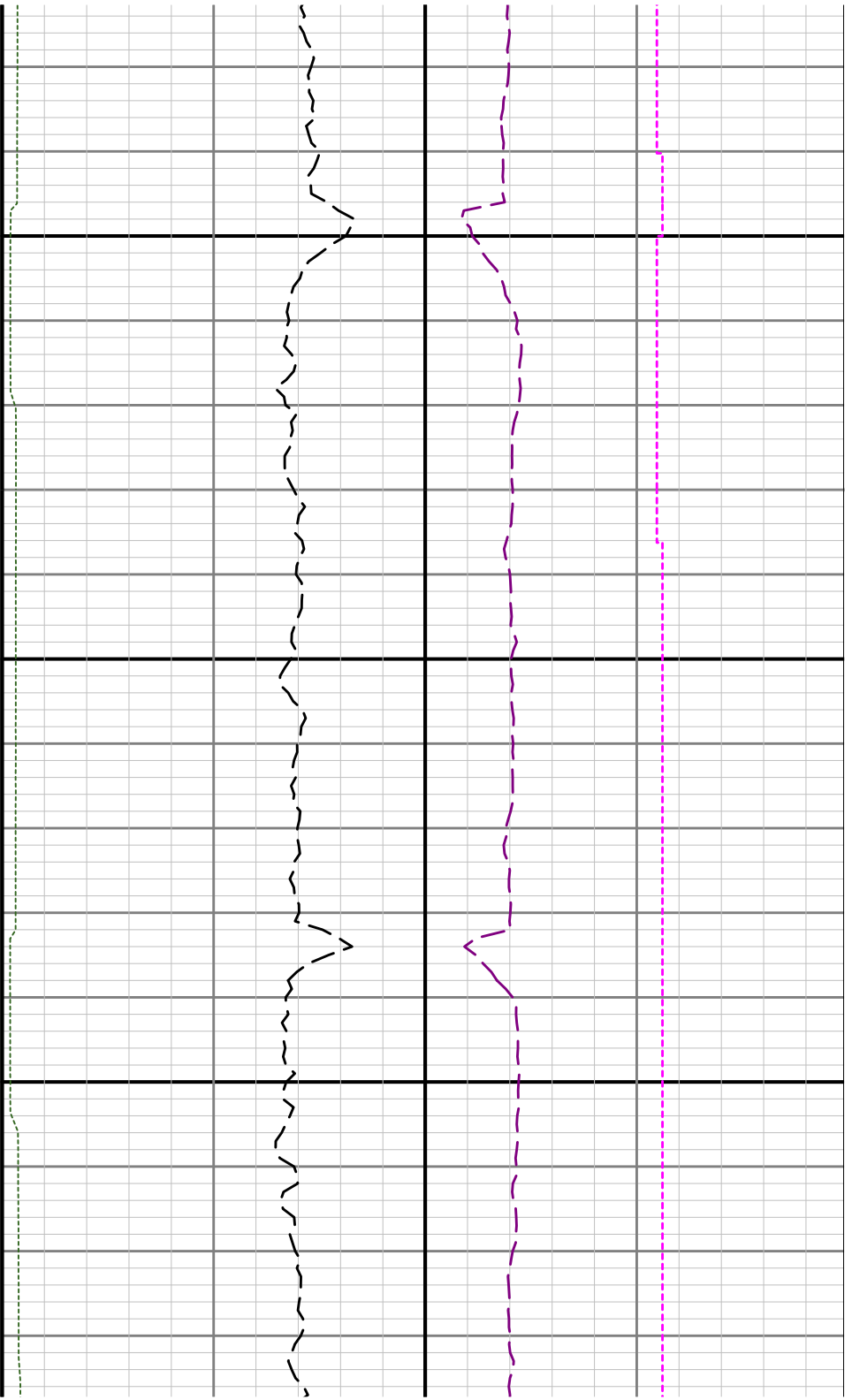


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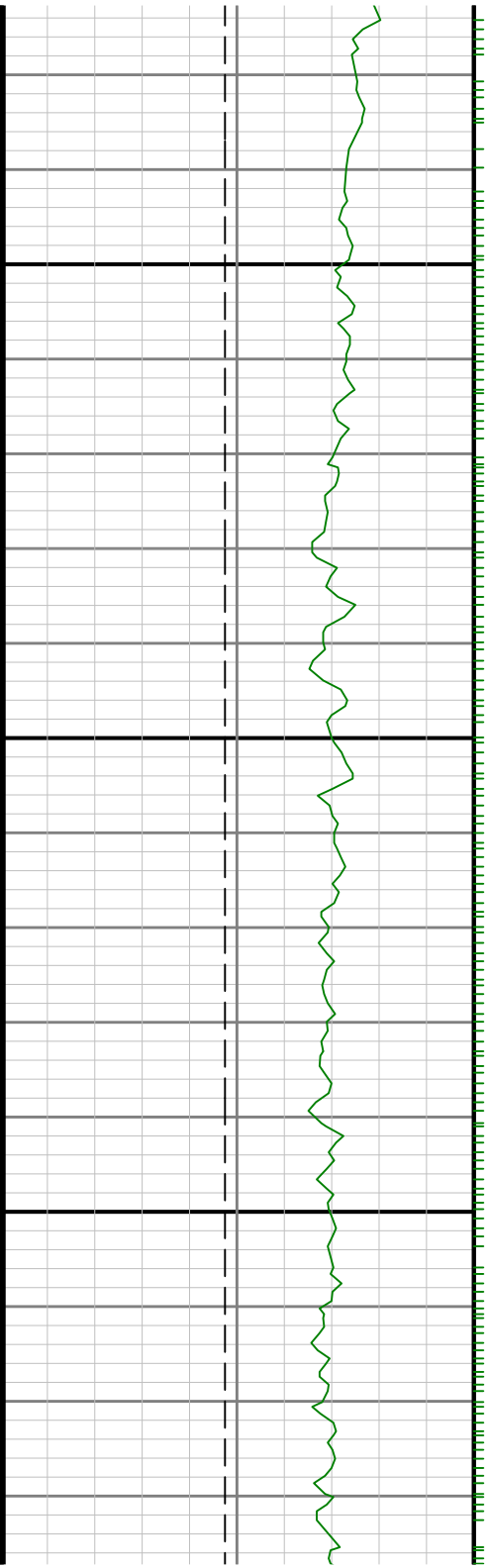


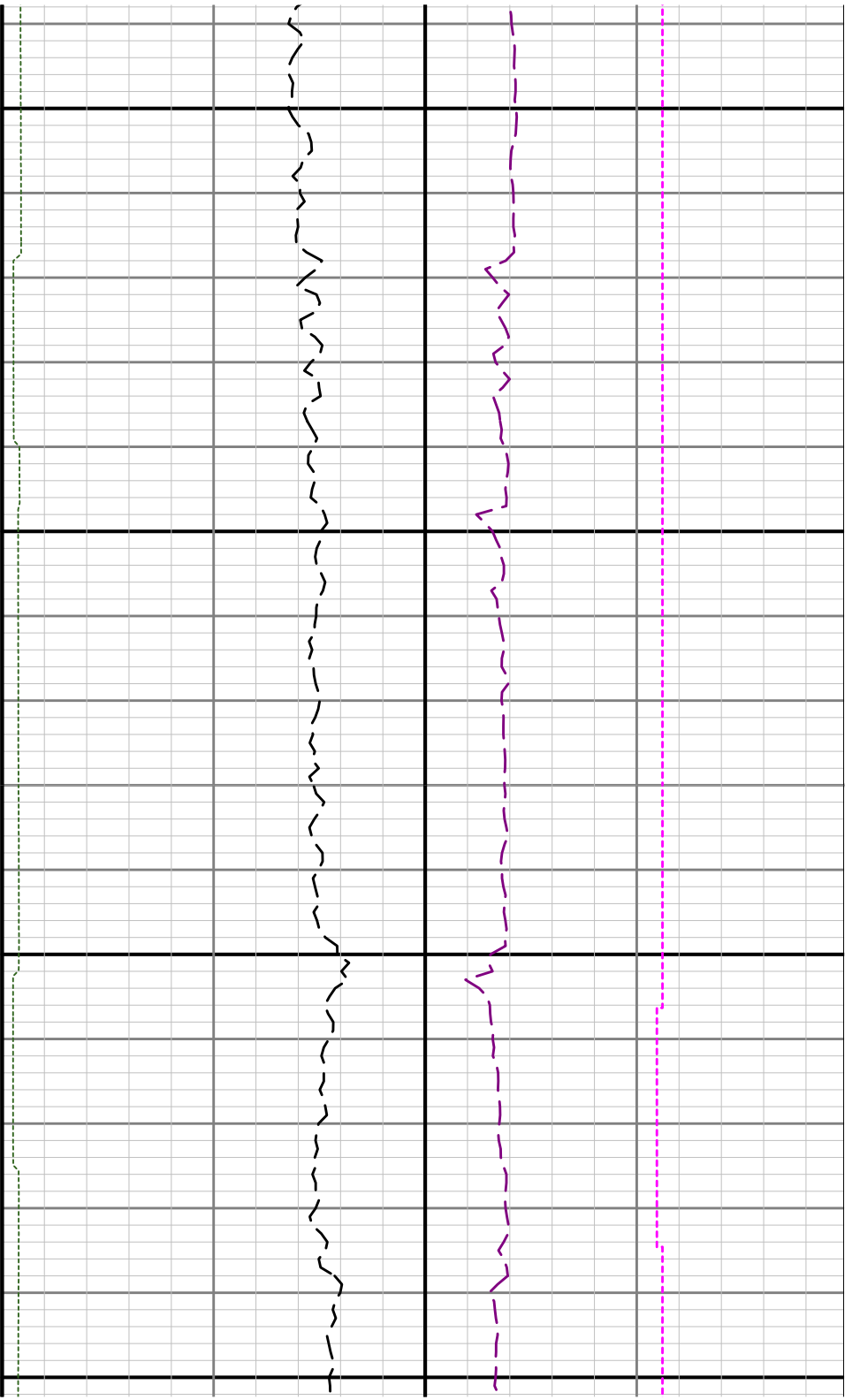






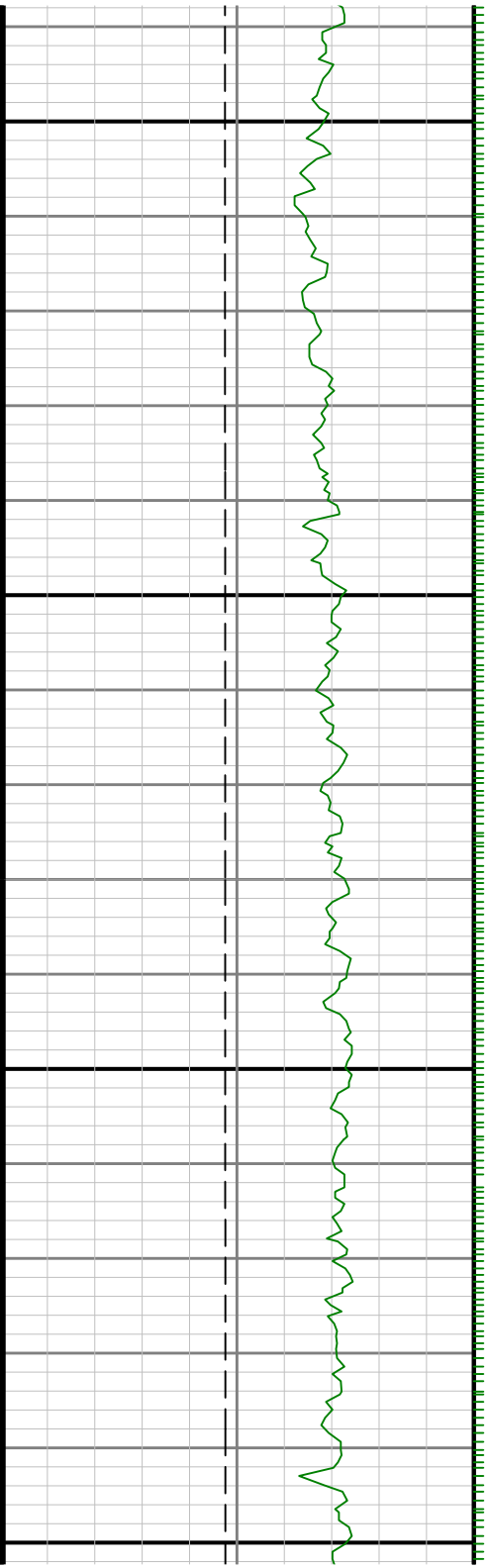
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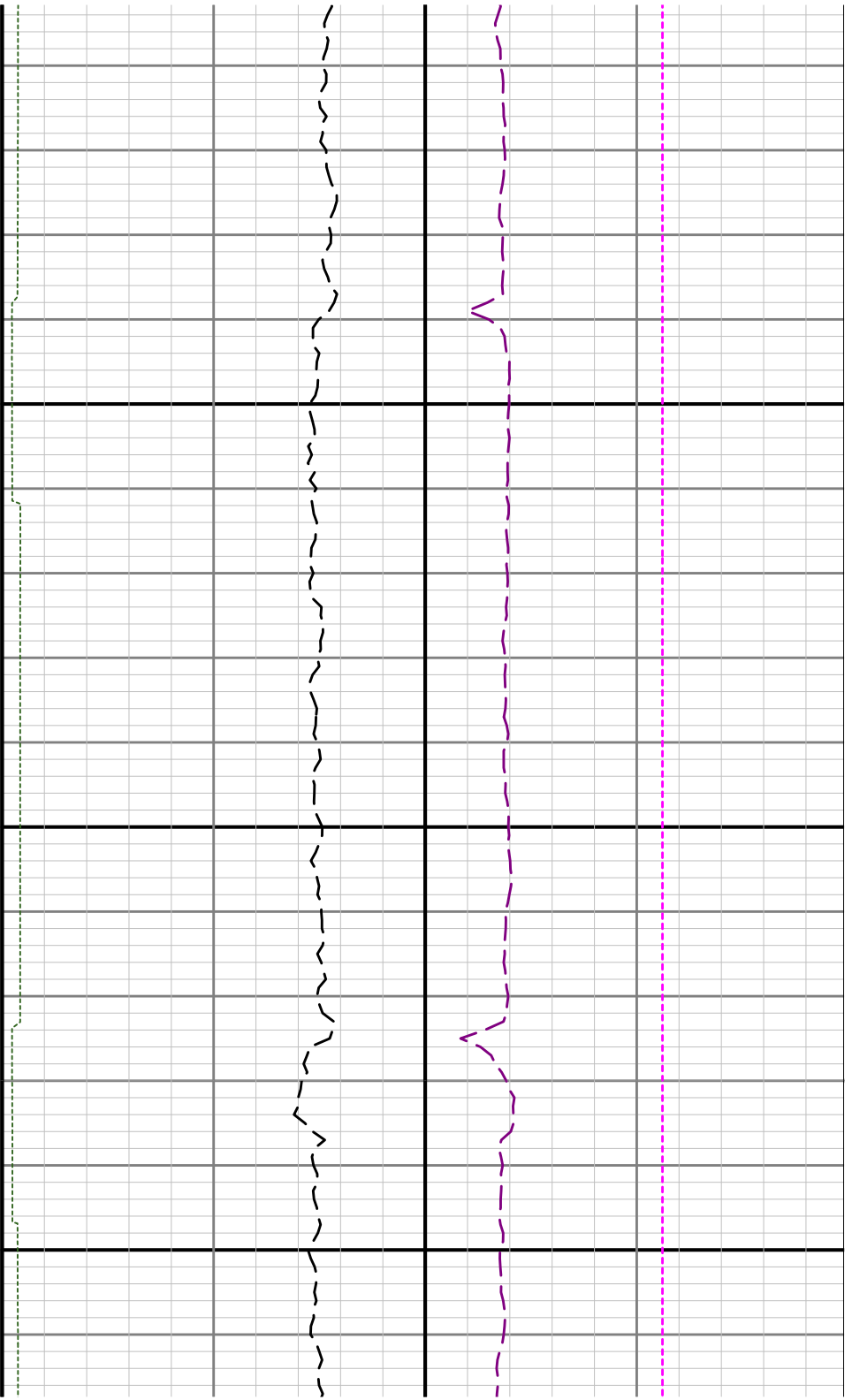




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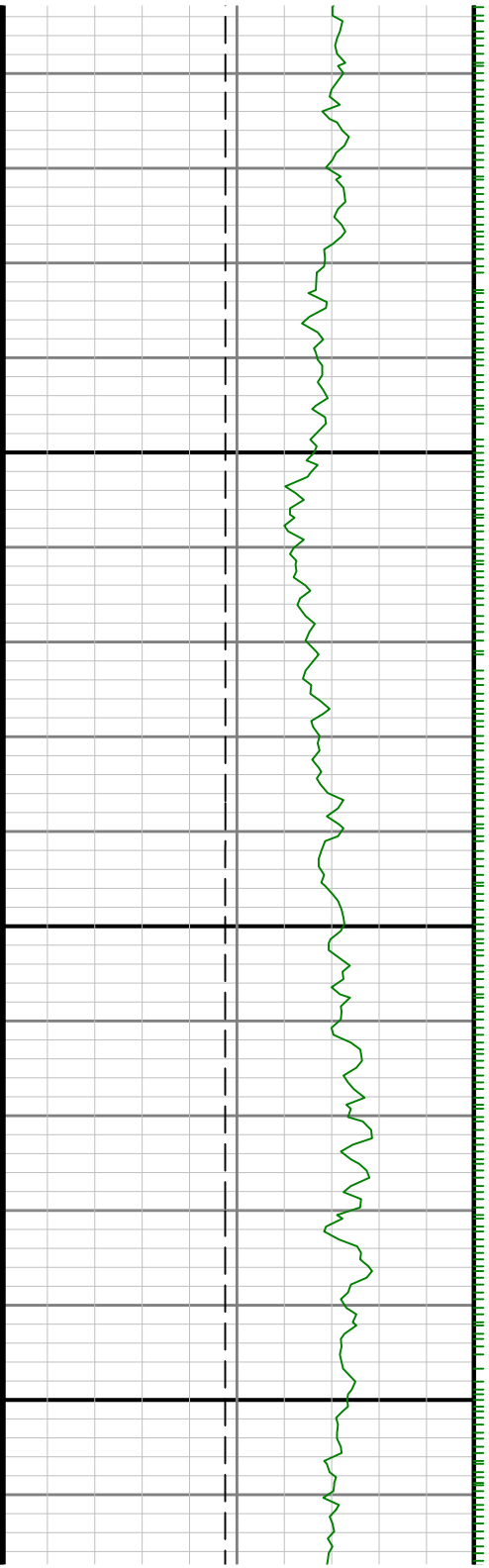
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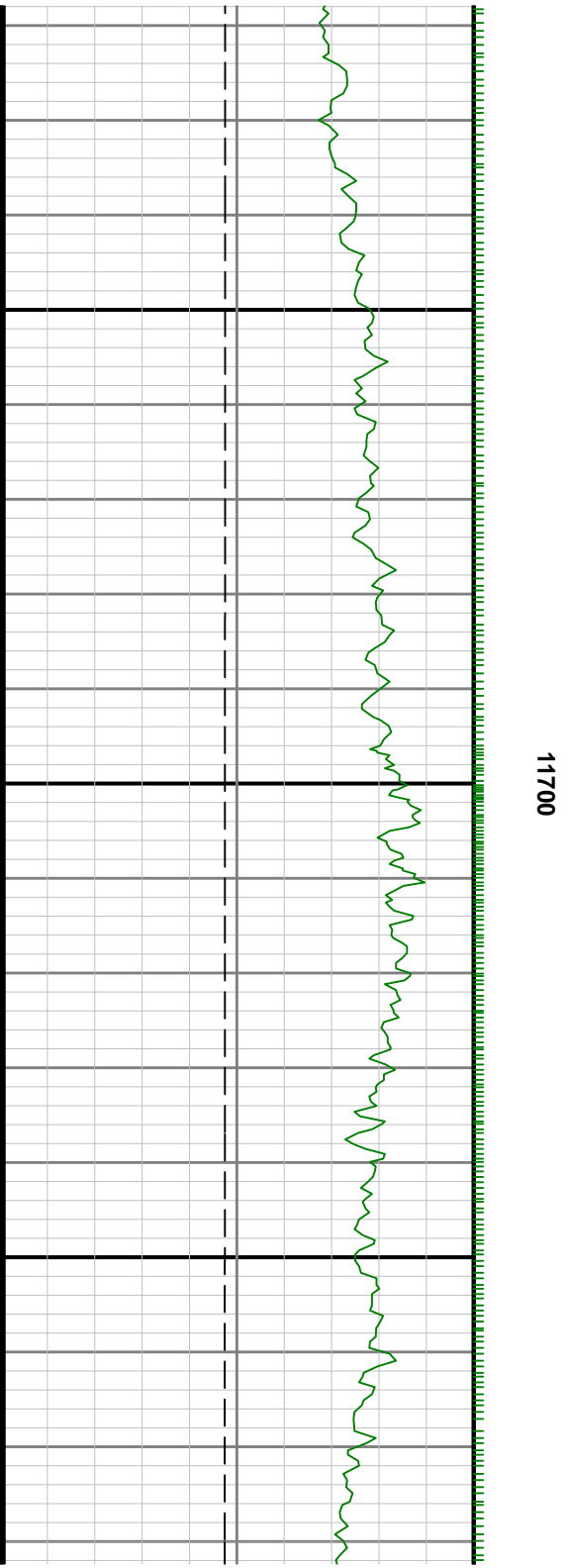
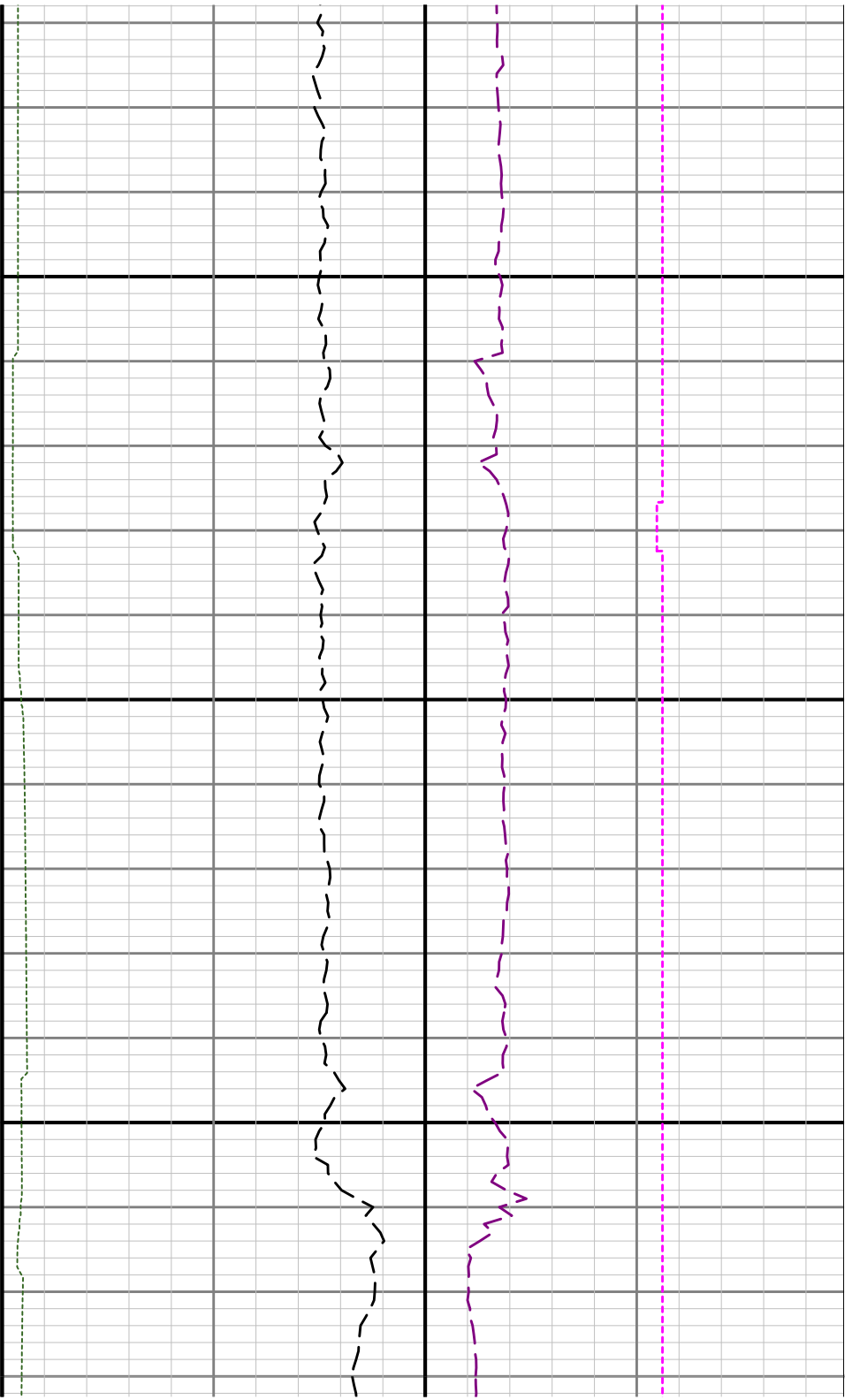


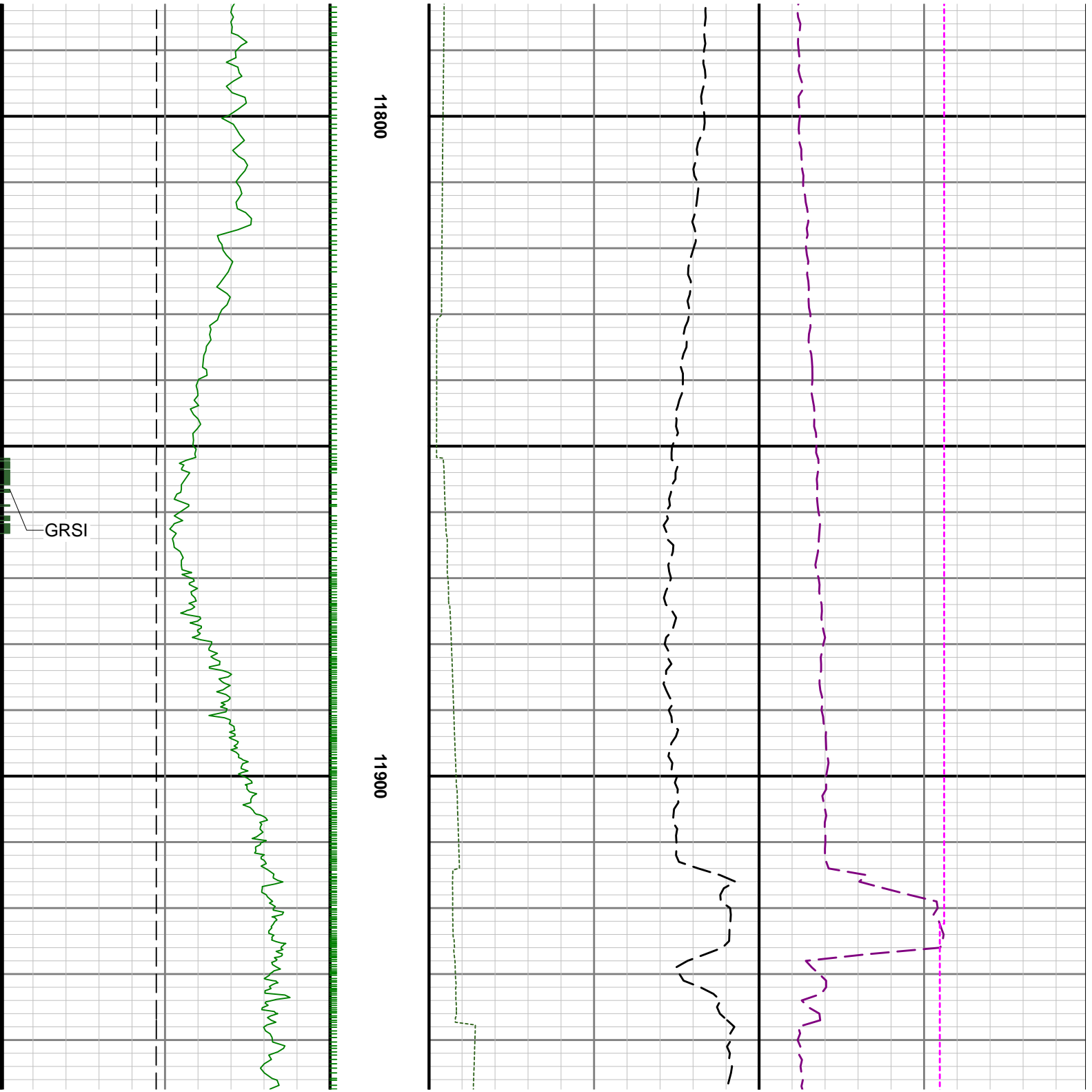


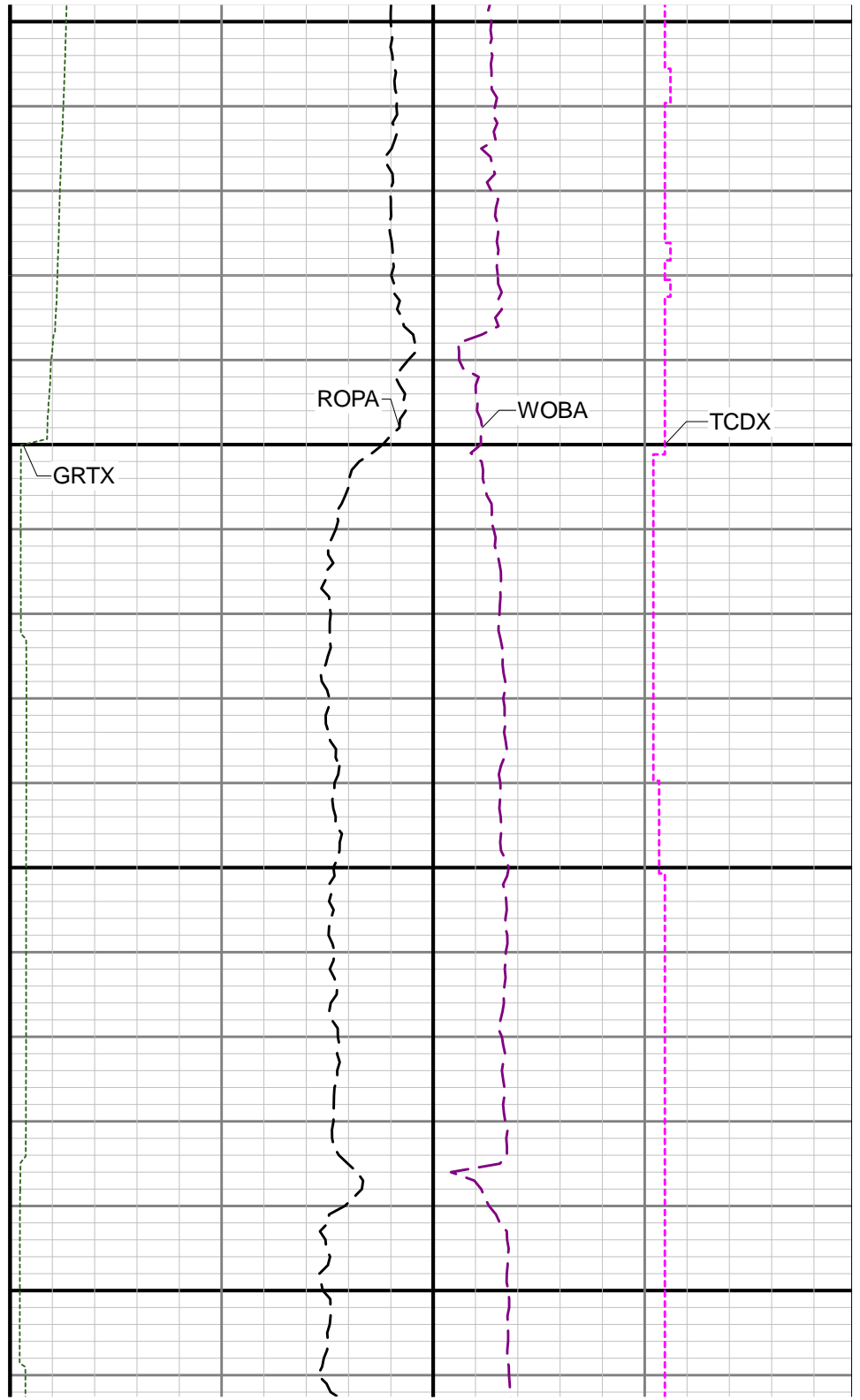
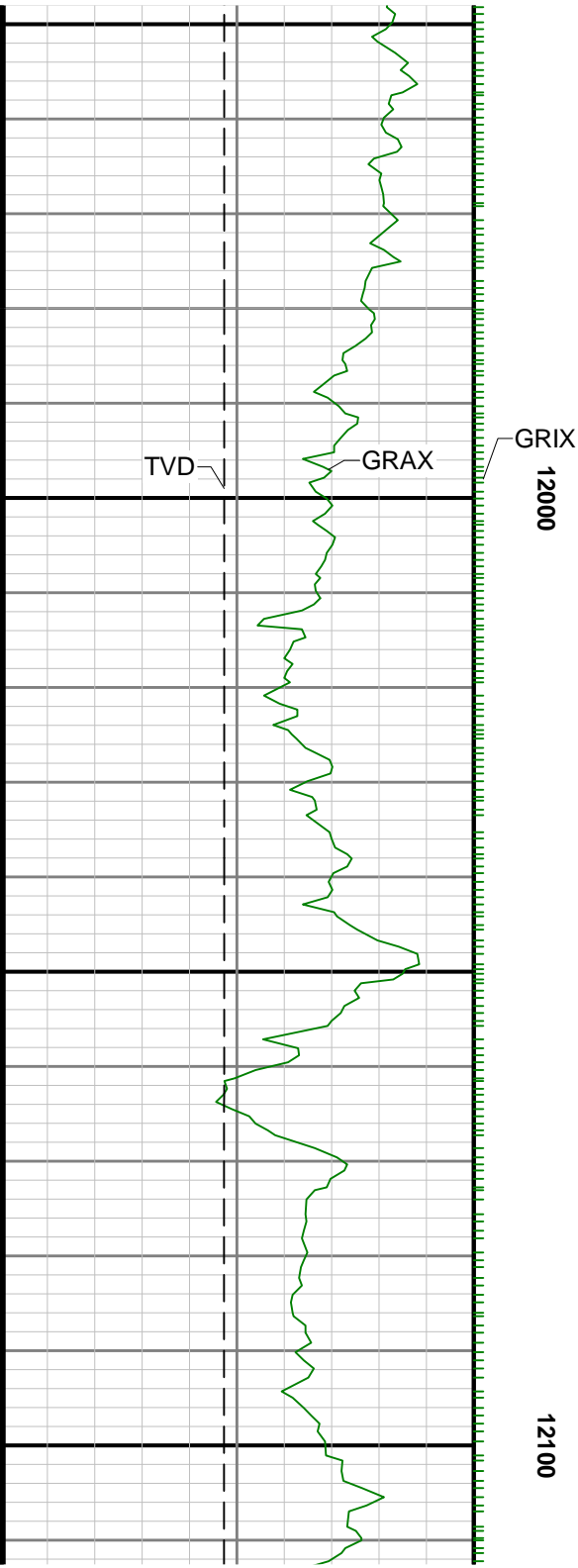
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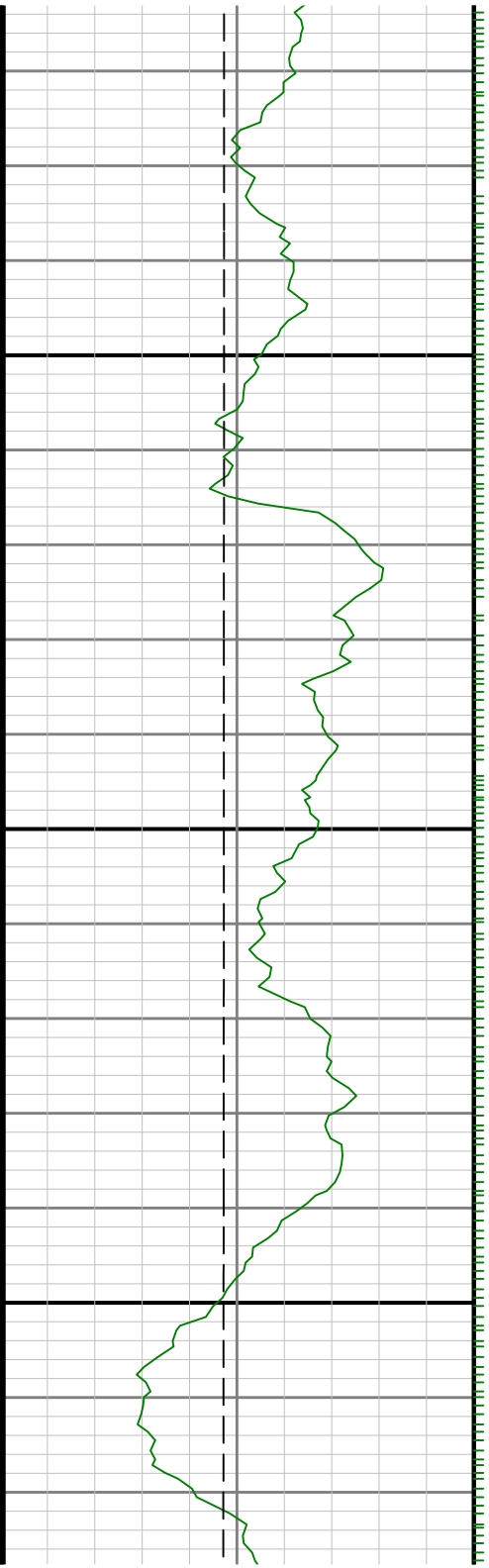
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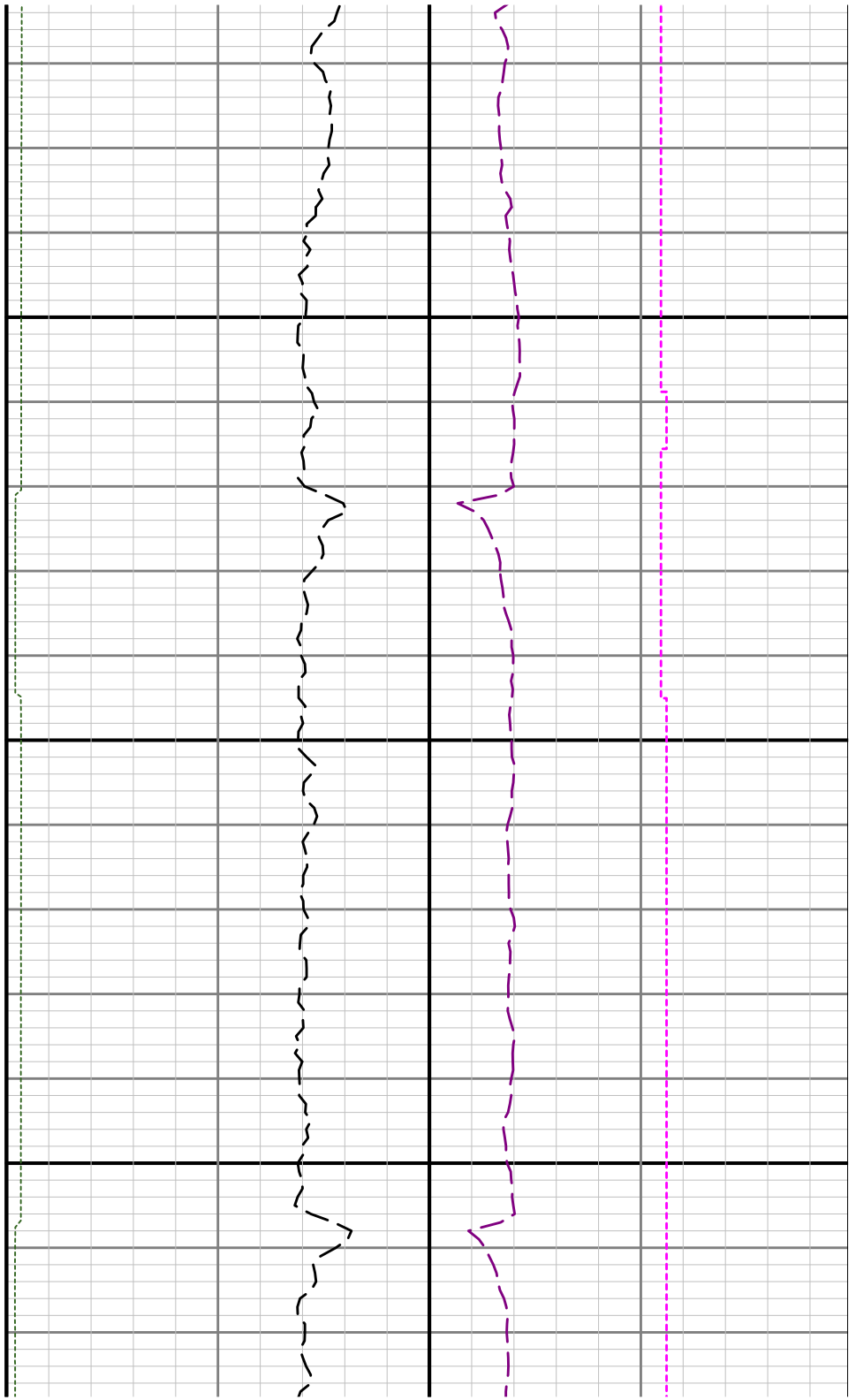


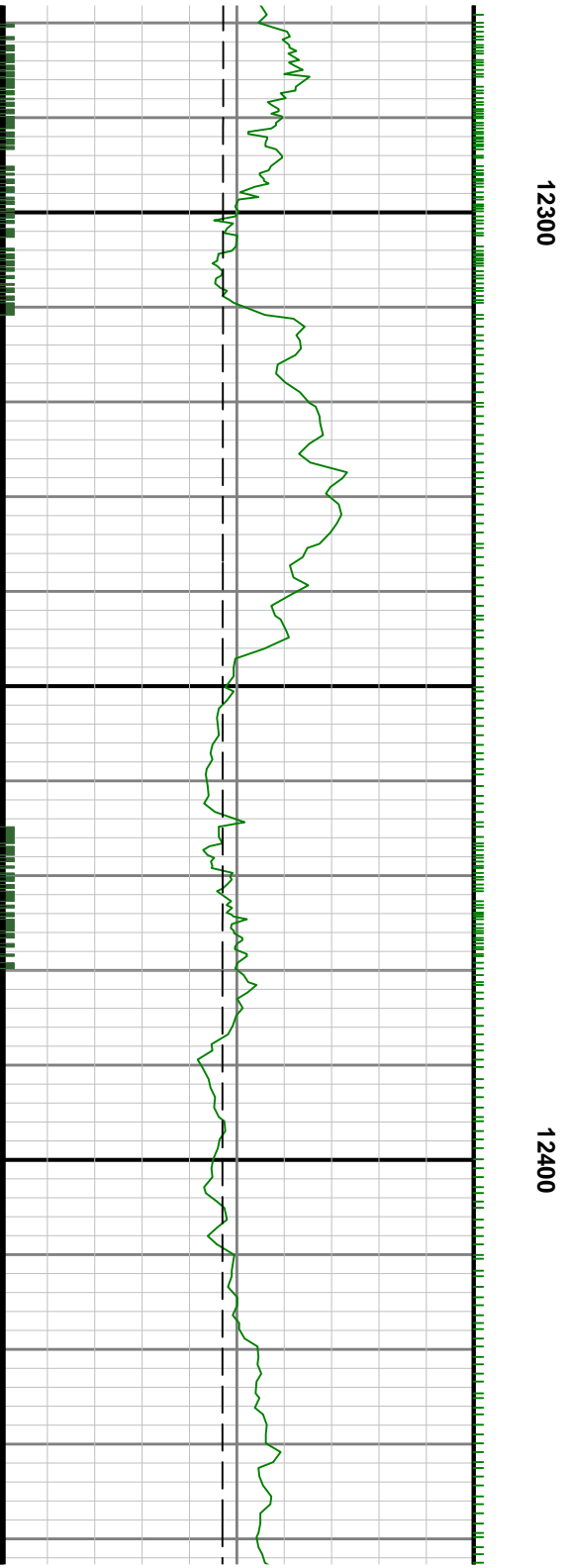
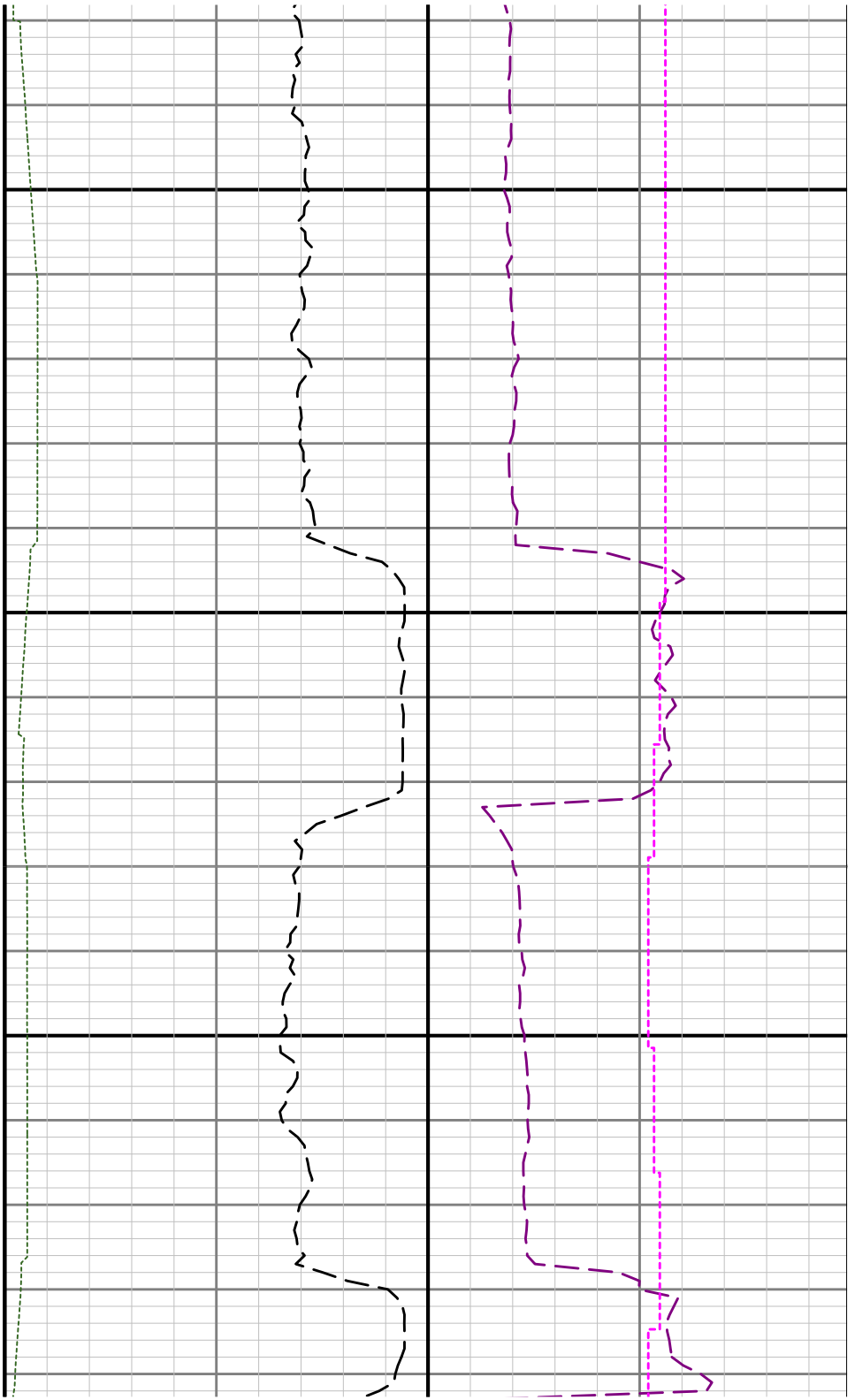






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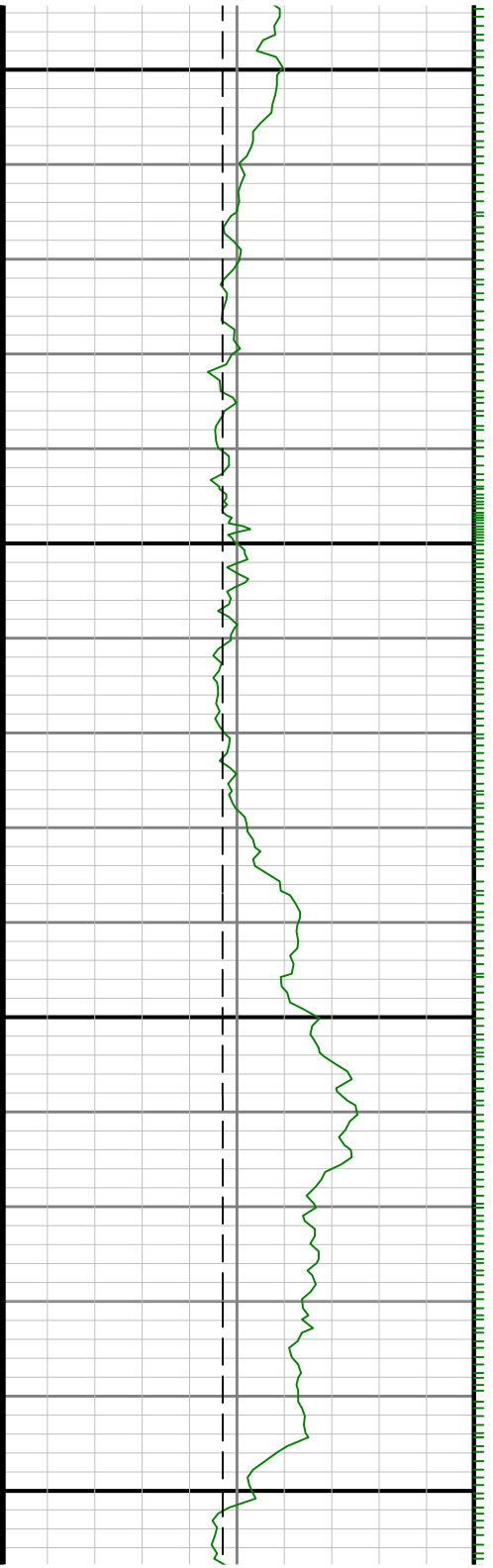


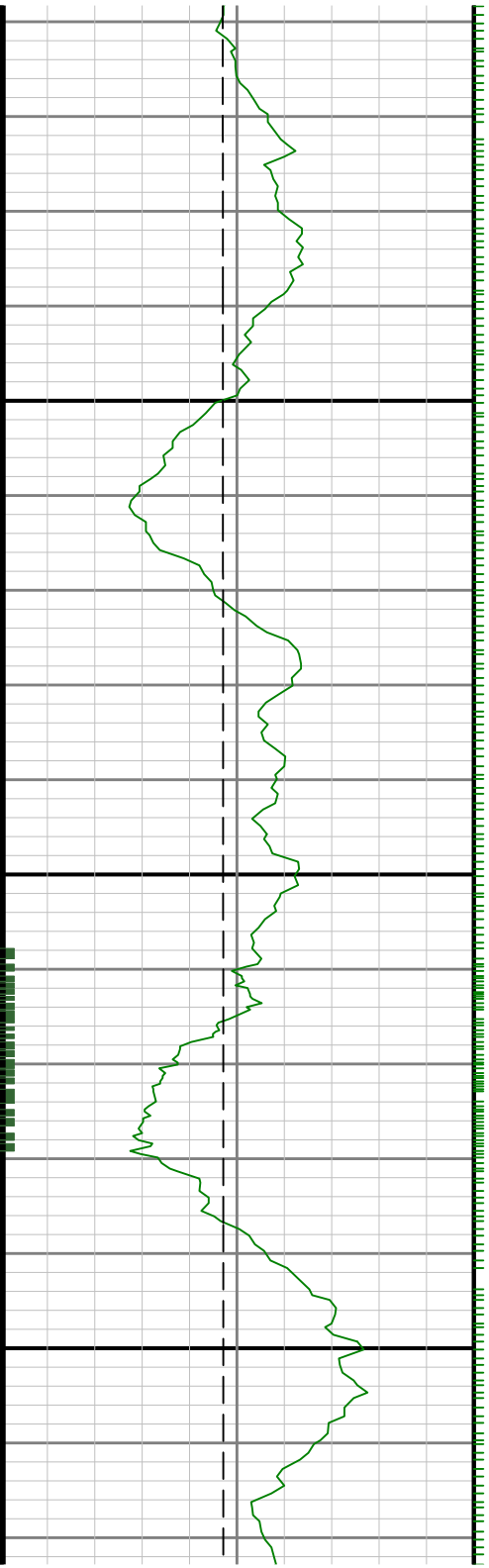




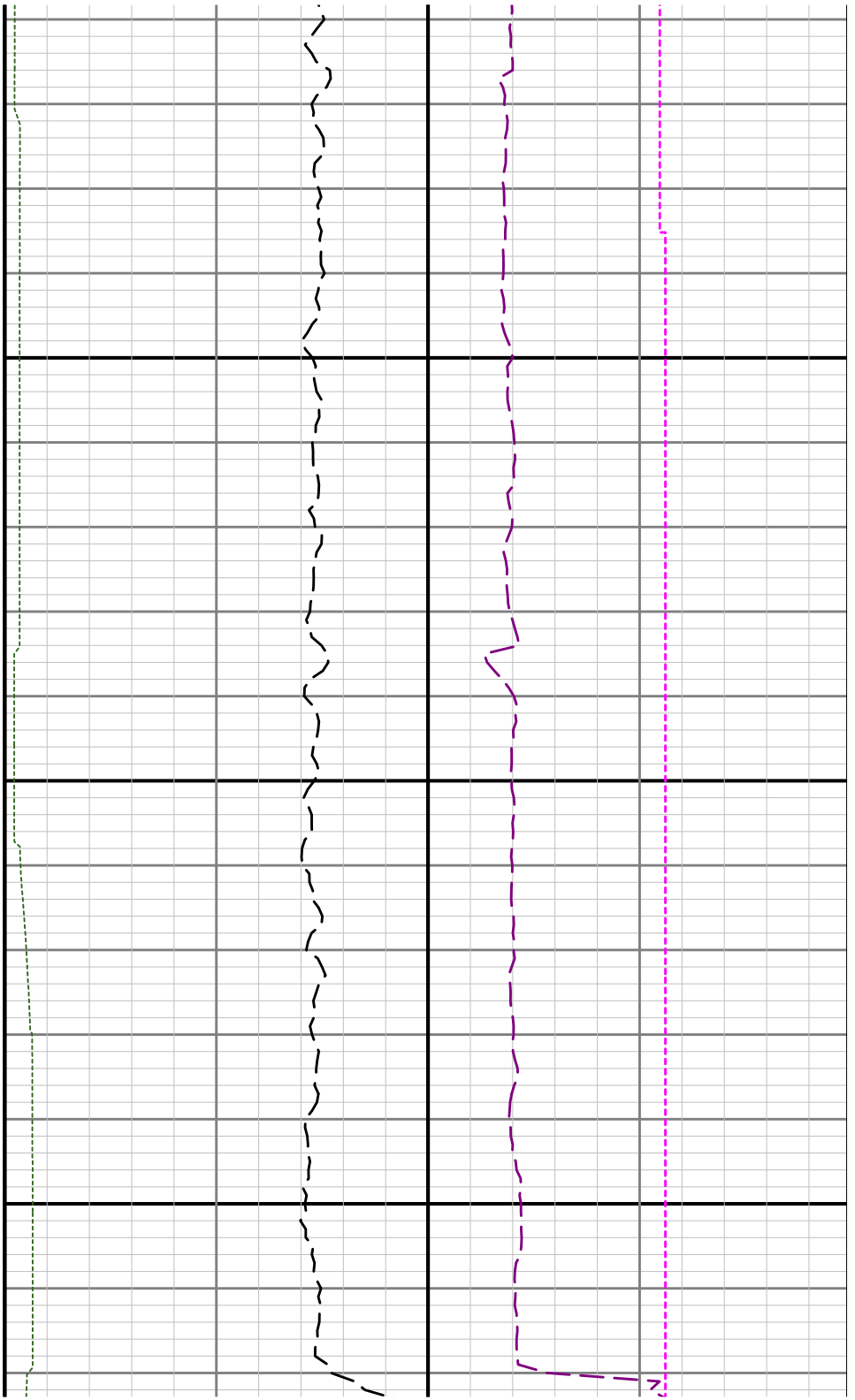
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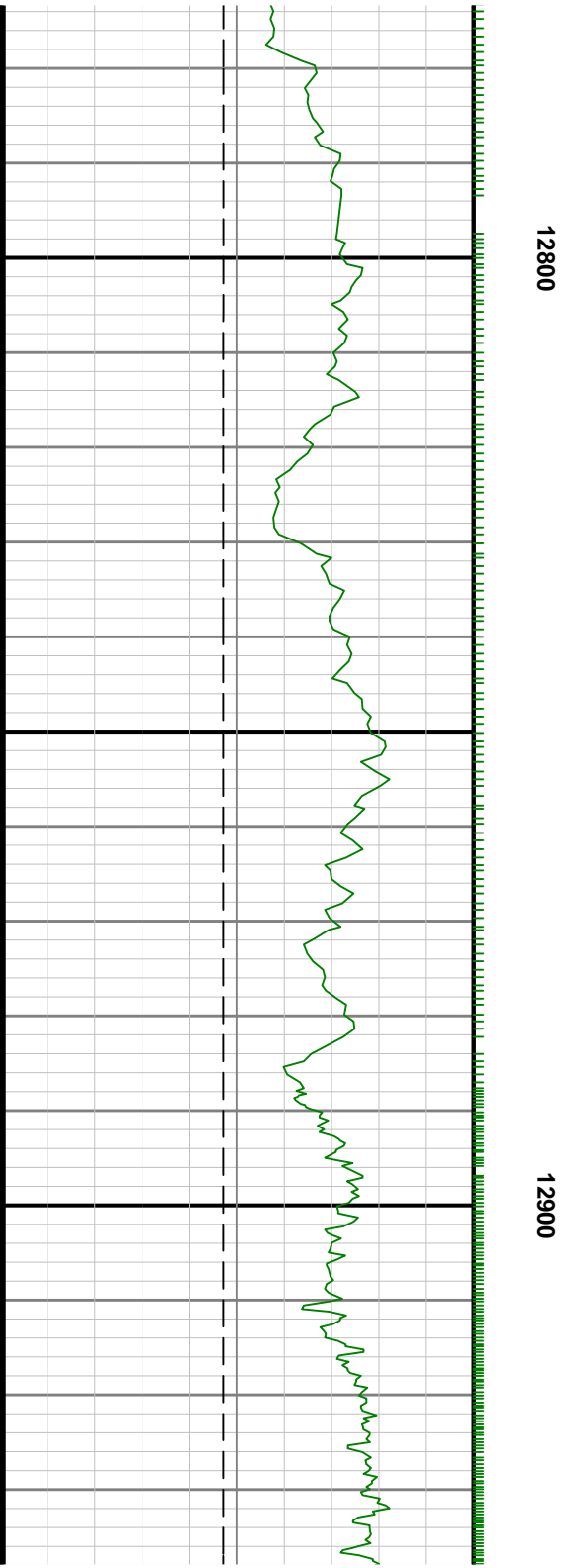
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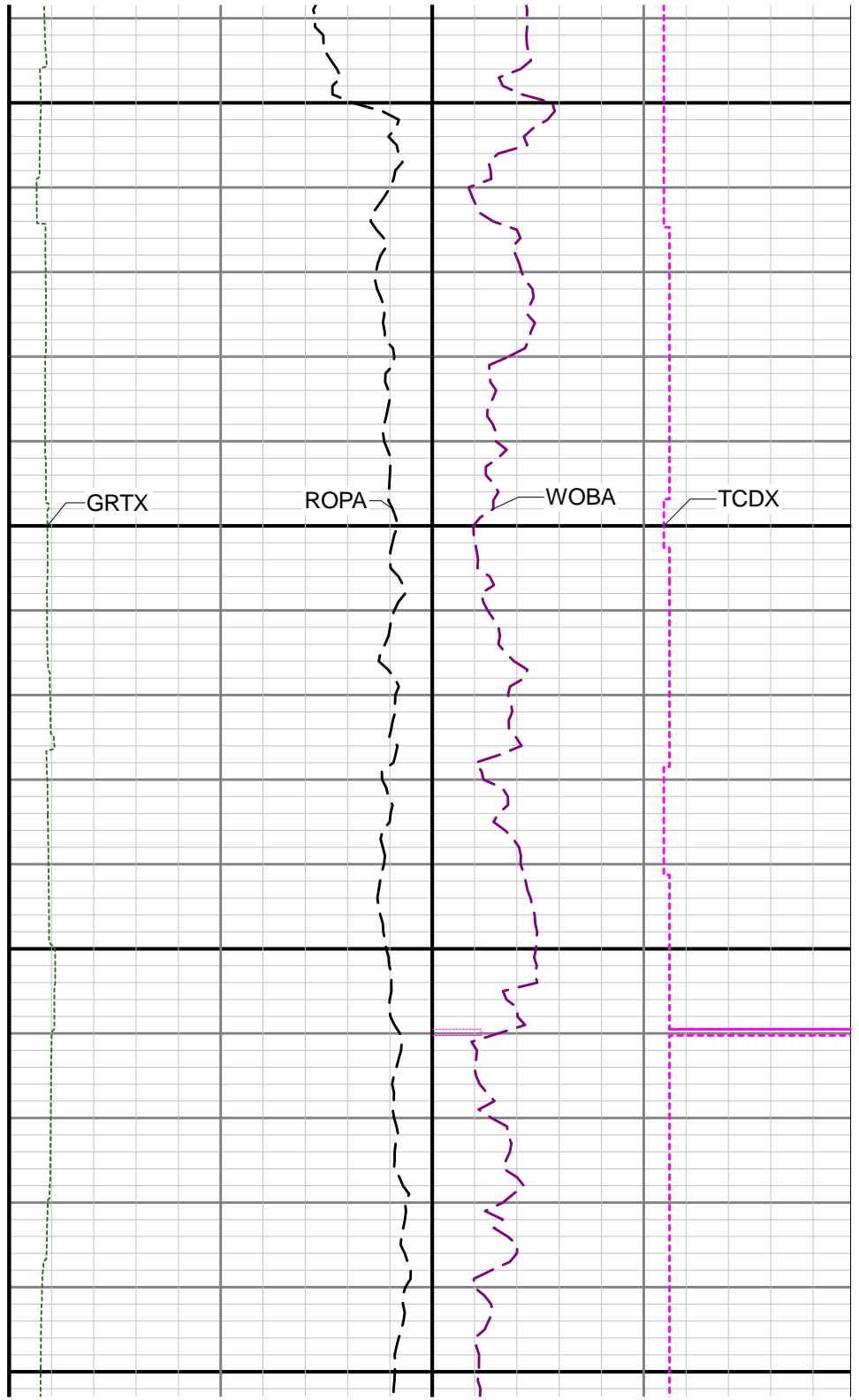
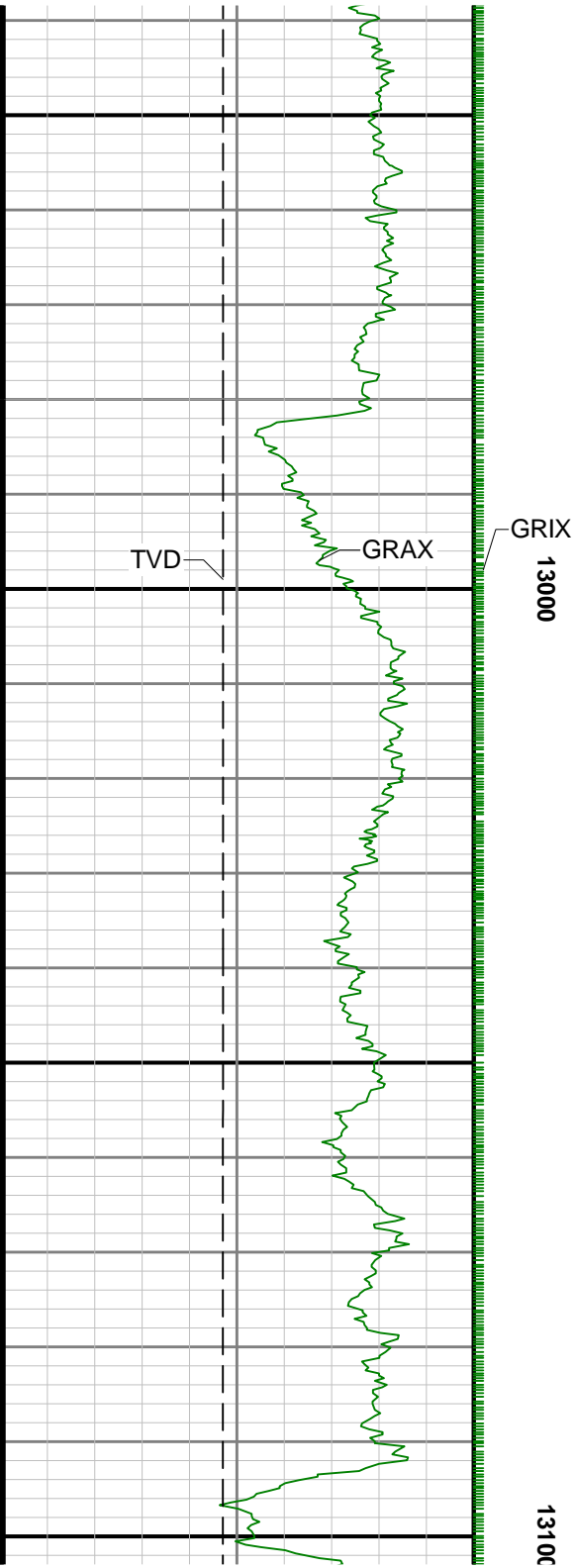


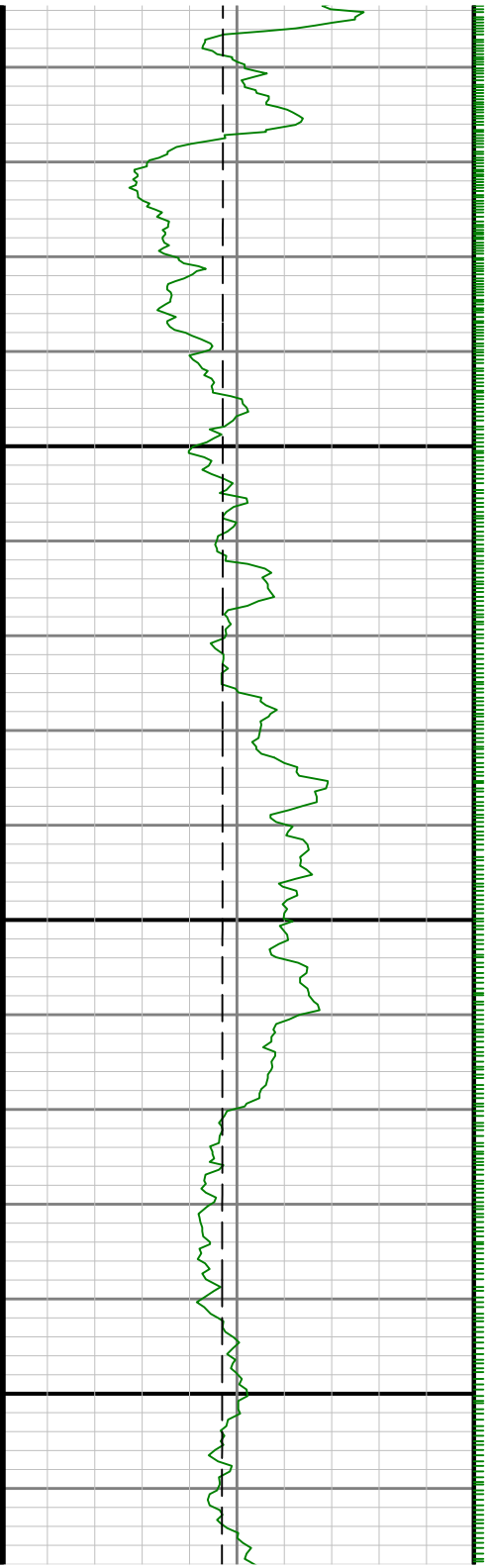


12700









13200

