

BAKER HUGHES a GE company										LWD MEMORY LOG			
<div> <div>Scale:</div> <div>1:240 MD</div> <div>Depth Reference:</div> <div>Driller's Depth</div> <div>Status:</div> <div>Final Print</div> <div>API No: 05-123-46362</div> <div>Job ID: 9051251</div> <div>Permanent Datum (P.D.): Ground Level</div> <div>Log Measured From: Rig Floor</div> </div>										Azimuthal Gamma Ray			
<div> <div>Company: SRC Energy</div> <div>Well: Harvesters State 4N-16A-M</div> <div>Field: DJ Basin</div> <div>County: Weld County</div> <div>State: Colorado</div> </div>													
<div> <div>Surface Location:</div> <div>Latitude: 40° 45' 00" N</div> <div>Longitude: 105° 00' 00" W</div> <div>UTM: N/A</div> <div>SEC: 15</div> <div>TWN: 6N</div> <div>RGE: 66W</div> </div>										Other Services:			
<div> <div>Elevation: 4802.00 ft</div> <div>Above P.D. 20.00 ft</div> </div>										KB: N/A			
<div> <div>DF: 4822.00 ft</div> <div>GL: 4802.00 ft</div> </div>													
<div> <div>Date From: 2018-05-02</div> <div>Date To: 2018-05-05</div> <div>Spud Date: 2018-03-19</div> </div>										<div> <div>Interval Logged</div> <div>Magnetic Field Reference</div> </div>			
<div> <div>Top: (ft) 1836.00</div> <div>Bottom: (ft) 14855.00</div> </div>										<div> <div>Azi Reference North: True</div> <div>Total Magnetic Field Strength: (nT) 52652</div> <div>Mag to Reference North Correction: (deg) 7.51 E</div> </div>			
<div> <div>Hole Size (in)</div> <div>From (ft)</div> <div>To (ft)</div> </div>										<div> <div>Borehole Record</div> <div>Casing Record</div> </div>			
<div> <div>13.500</div> <div>20.00</div> <div>1836.00</div> <div>8.500</div> </div>										<div> <div>Size (in)</div> <div>Weight (lb/ft)</div> <div>From (ft)</div> <div>To (ft)</div> </div>			
<div> <div>9.625</div> <div>36.00</div> <div>20.00</div> </div>										<div> <div>1826.00</div> </div>			
<div> <div>Type</div> <div>From (ft)</div> <div>To (ft)</div> </div>										<div> <div>Mud Record</div> <div>Deviation Record</div> </div>			
<div> <div>Diesel-Oil Based Mud</div> <div>1836.00</div> <div>14855.00</div> </div>										<div> <div>Hole Size (in)</div> <div>Interval (ft)</div> <div>Inc Az (Start)</div> <div>Inc Az (End)</div> </div>			
<div> <div>13.500</div> <div>1836.00</div> <div>0.001</div> <div>161.07</div> <div>5.84</div> <div>342.17</div> </div>										<div> <div>8.500</div> <div>13019.00</div> <div>5.84</div> <div>342.17</div> <div>5.72</div> <div>337.86</div> </div>			
<div> <div>Acquisition System</div> <div>Software Version</div> <div>Other</div> </div>													
<div> <div>Baker Hughes Cadence</div> <div>RT4.1</div> <div>4.1.7763.3</div> </div>										<div> <div>Rig: Precision 462</div> <div>Contractor: Precision Drilling</div> <div>District: RMD</div> <div>Unit: D&E</div> </div>			

©"4239"Dcmgt"Jwi jgu."c"IG"eqorcp{."NNE"ó"Cnn"tki jvu"tgugt xgf0"Dcmgt"Jwi jgu."c"IG"eqorcp{."NNE"cpf"kvu"chhknkcvgu"*öDJIGö+"rtq xkfgu"vjku"kphqtocvkqp"qp"cp"öcu"kuö"dcuku"hqt"igpgtcn"kphqtocvkqp" purposes and believes it to be accurate as of the date of publication. BHGE does not make any representation as to the accuracy or completeness of the information and makes no warranties of any kind, specific, implied or oral, to the fullest extent permissible by law, including those of merchantability and fitness for a particular purpose or use. BHGE hereby disclaims any and all liability for any direct, indirect, consequential or special damages, claims for lost profits, or third party claims arising from the use of the information, whether a claim is asserted in contract, tort, or otherwise. The BHGE logo is a trademark of Baker Hughes, a GE company, LLC. GE and the GE monogram are trademarks of General Electric Company used under trademark license.

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	13.500	PDC	6.00	Steerable	0.00	0.00	20.00	1836.00	2018-03-19 13:56	2018-03-19 22:49	12.10
2	2	8.500	PDC	3.00	Rotary Steerable	1836.00	14841.00	1836.00	14855.00	2018-05-02 20:27	2018-05-05 05:04	50.03

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
John Moisan	2018-05-02	2018-05-05						

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+ (%)
2018-05-02 11:00	2	1836.00	Diesel-Oil Based Mud	9.7	22	N/A	4.2	87/13	Active Pit	44500	0.00
2018-05-03 03:30	2	3829.00	Diesel-Oil Based Mud	9.5	20	N/A	5.2	82/18	Active Pit	26000	0.00
2018-05-03 15:00	2	6745.00	Diesel-Oil Based Mud	10.2	26	N/A	4.4	82/18	Active Pit	29000	0.00
2018-05-04 03:30	2	9653.00	Diesel-Oil Based Mud	10.2	30	N/A	4.4	81/19	Active Pit	30500	0.00
2018-05-04 15:00	2	12150.00	Diesel-Oil Based Mud	10.3	37	N/A	4.8	81/19	Active Pit	31000	0.00
2018-05-05 03:30	2	14760.00	Diesel-Oil Based Mud	10.3	38	N/A	4.8	81/19	Active Pit	30500	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	Sensor Sub	ZAPS230949	VSS	12.17	61.94	8.000	3.250
1	Sensor Sub	ZAPS230949	Directional (mag)	12.17	61.94	8.000	3.250
1	Sensor Sub	ZAPS230949	Pressure	32.77	82.54	8.000	3.250
2	ATC_SU	14169950	Near Bit Inclination	5.93	6.73	7.000	4.330
2	ATC_SU	14169950	Near Bit VSS	5.93	6.73	7.000	4.330
2	ATC_MWD	12304604	Gamma (single)	2.75	12.90	7.000	3.250
2	ATC_MWD	12304604	Directional (mag)	12.27	22.42	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
GAM	APS	APS EM Module
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM

Comments

1	Depths and 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. These unverified depths are being used to represent logging data.
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3	Depths and 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. These unverified depths are being used to represent logging data.
4	Gamma Ray Apparent (GRAM-GRAUM-GRADM) is presented 0 to 300 API per customer request.



Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	1836.00	8.500	2	Baker Hughes logging services began at 1836 feet MD (1827 feet TVD) per customer request.
2	14839.00	8.500	2	The interval from 14839 to 14855 feet MD (6963 feet TVD) was not logged due to sensor to bit offset at well TD.

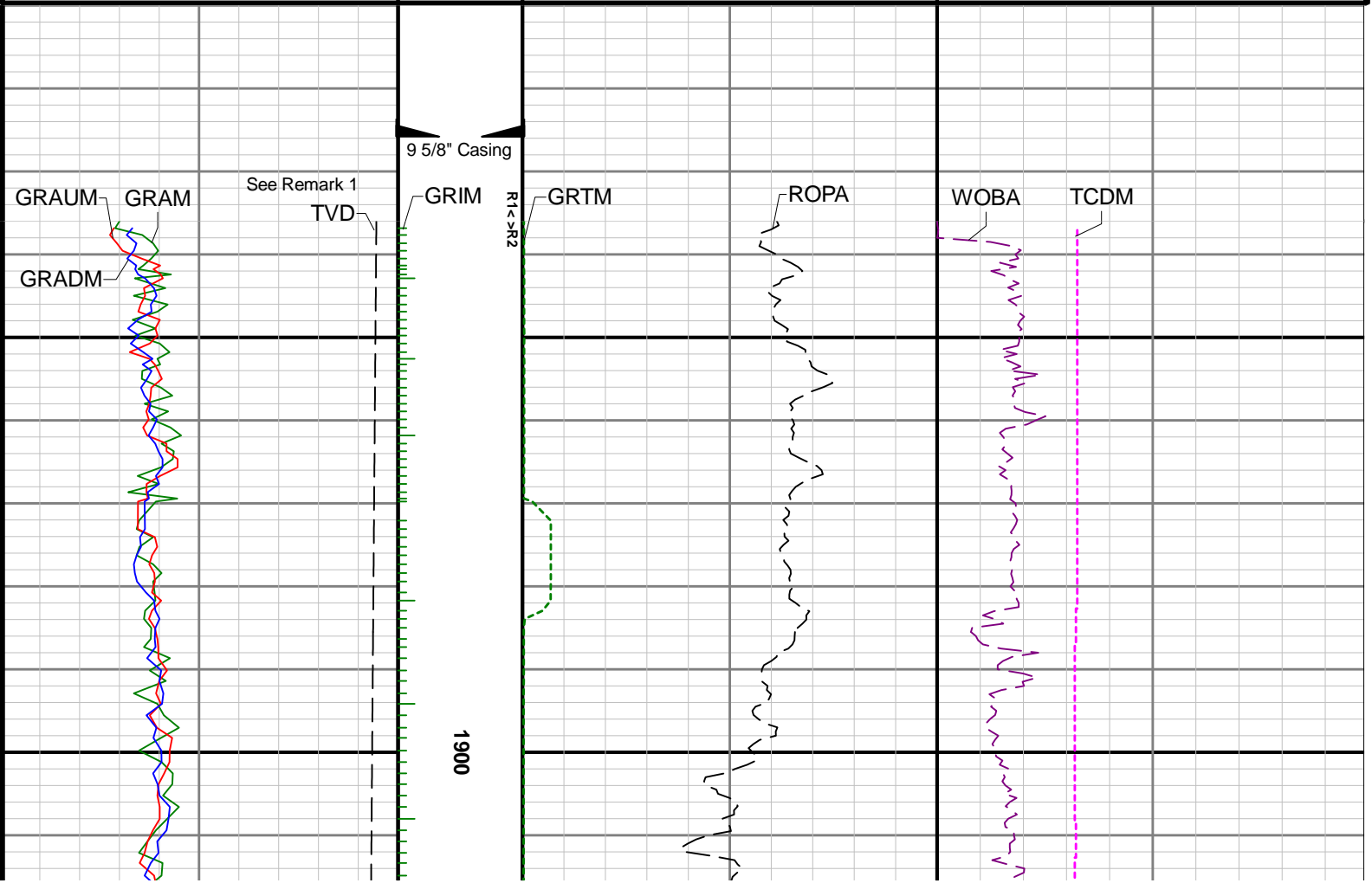
Curve Mnemonics

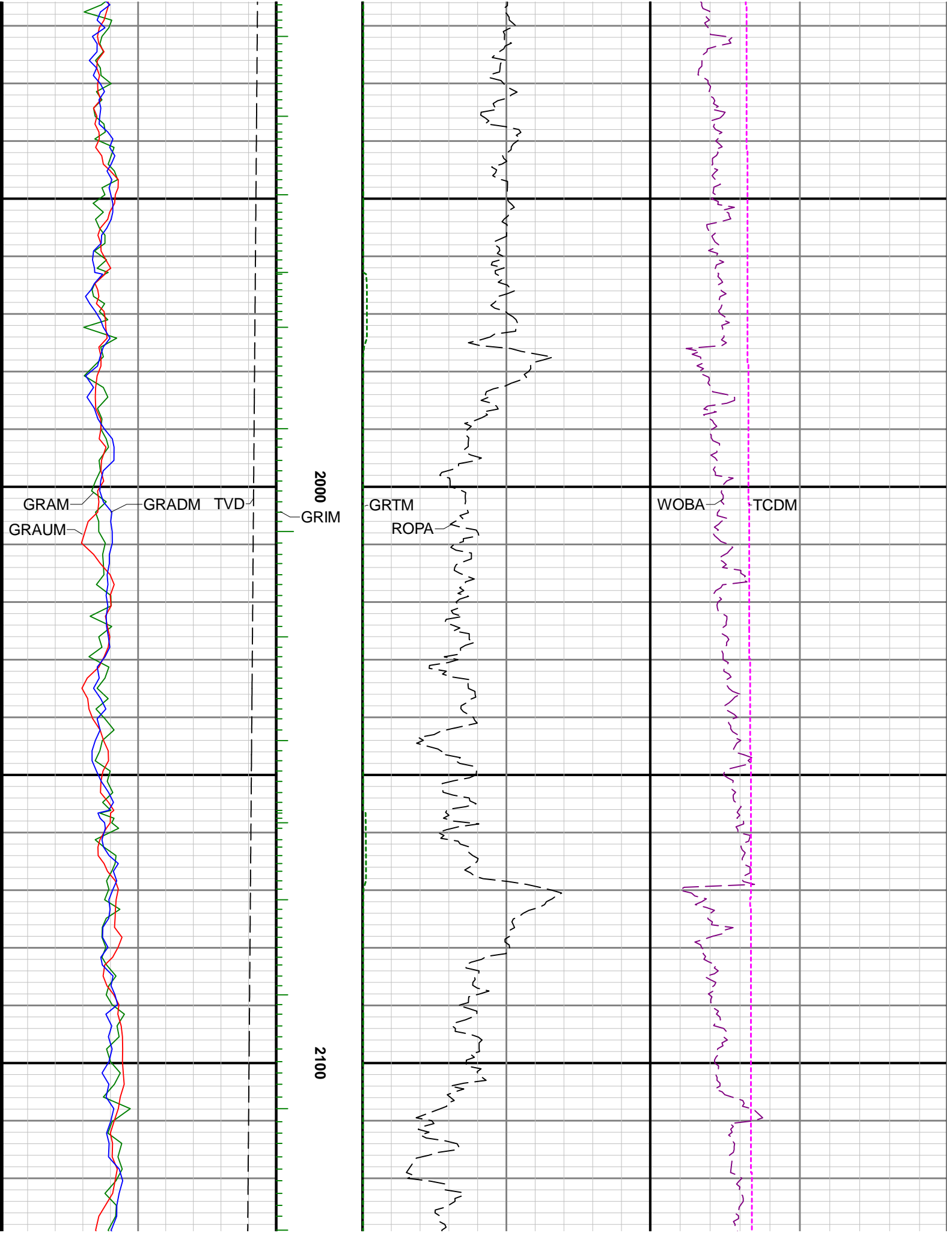
Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD		ft

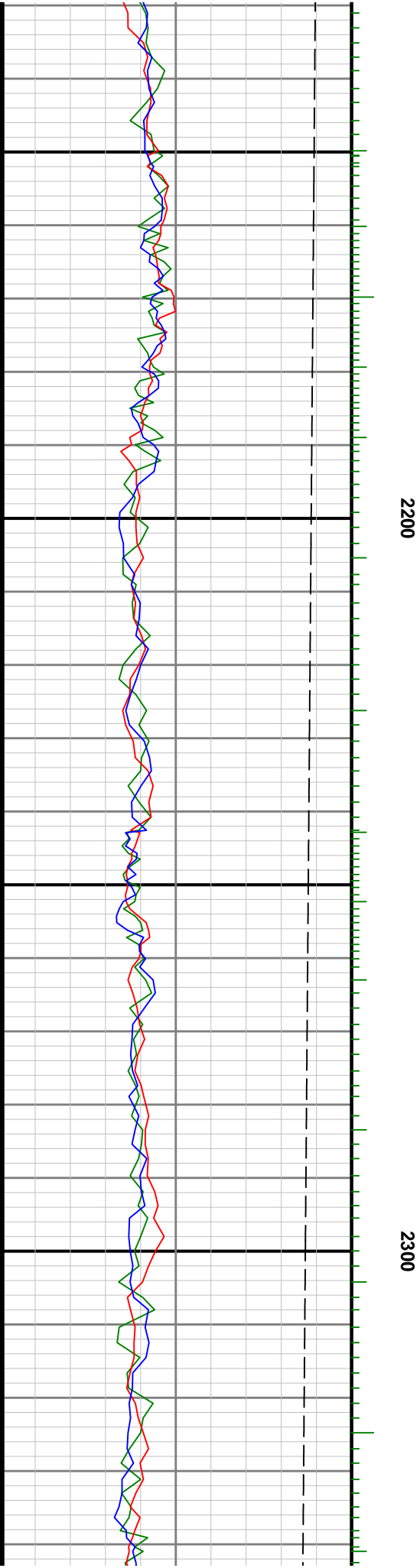
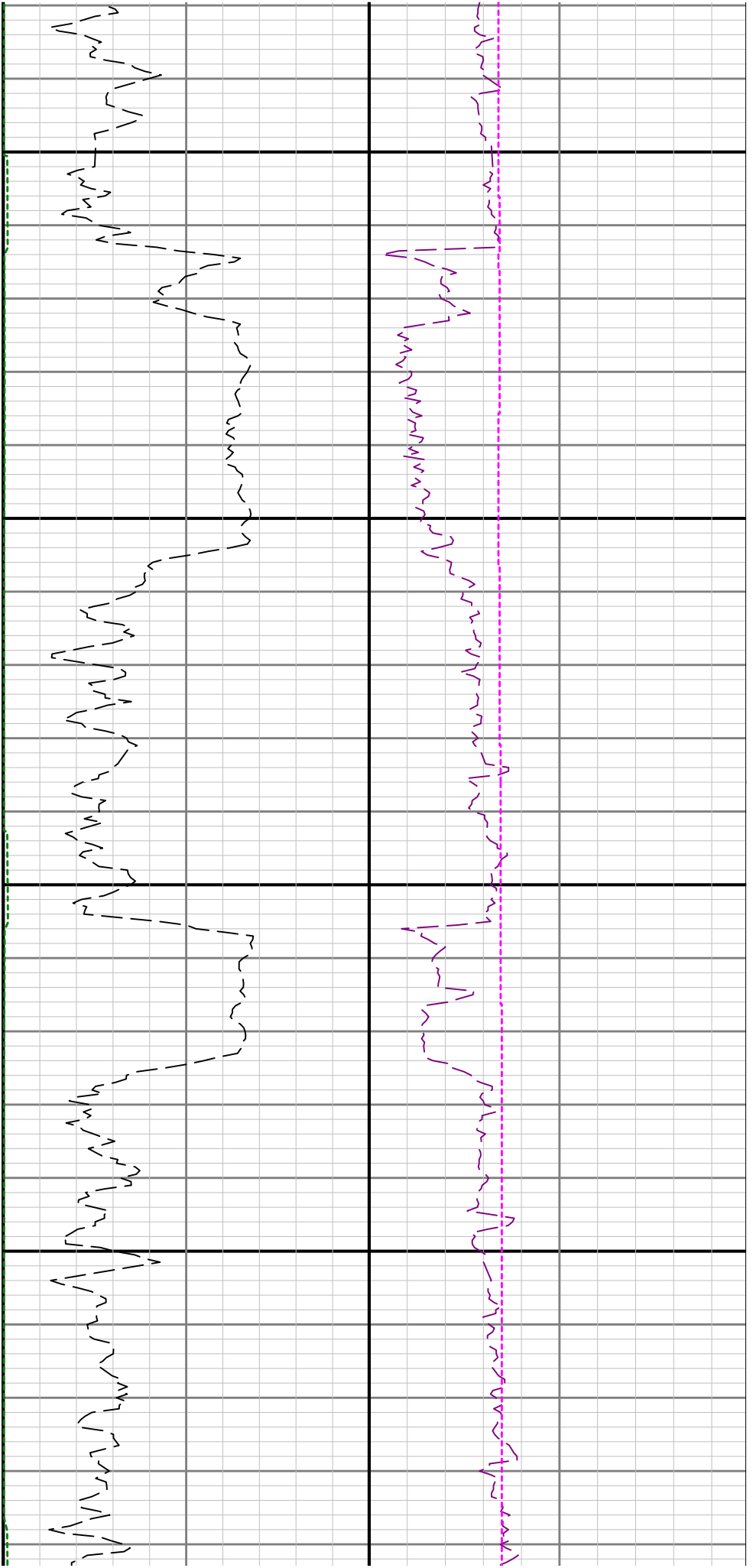
WOBA	True Vertical Depth	klb
GRAM	Weight On Bit, Average 1 ft Average	API
GRIM	Gamma Ray - Apparent - Memory 0.5 ft Average	unitless
GRTM	Gamma Ray - Data Point Indicator - Memory	min
GRADM	Gamma Ray - Time Since Drilled - Memory	API
GRAUM	Gamma Ray - Apparent - Down Quadrant - Memory 0.5 ft Average	API
TCDM	Gamma Ray - Apparent - Up Quadrant - Memory 0.5 ft Average	degF
	Downhole Temperature	

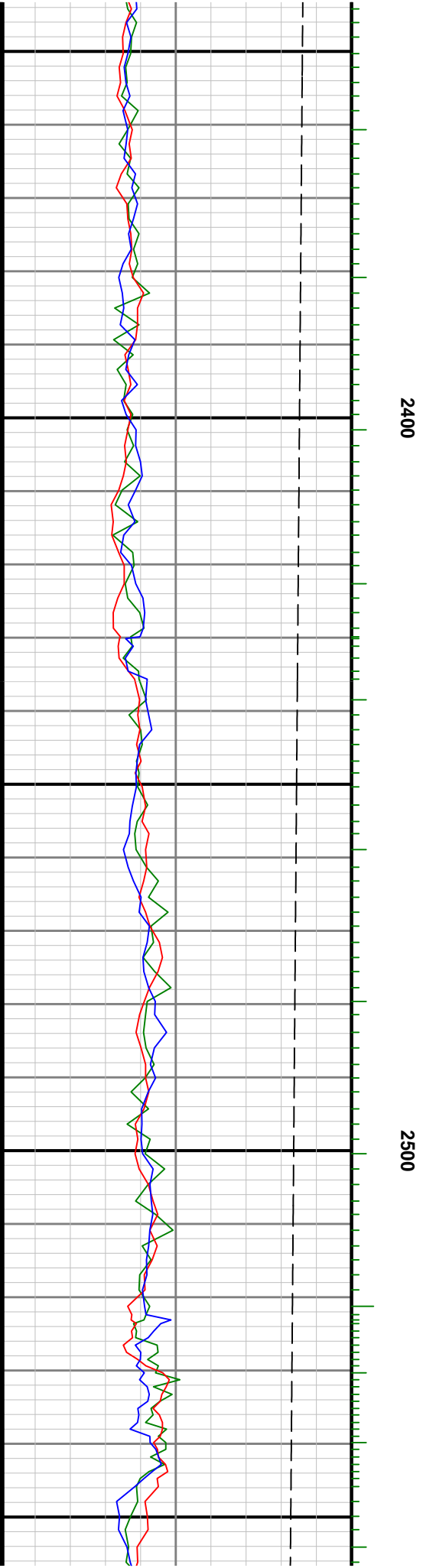
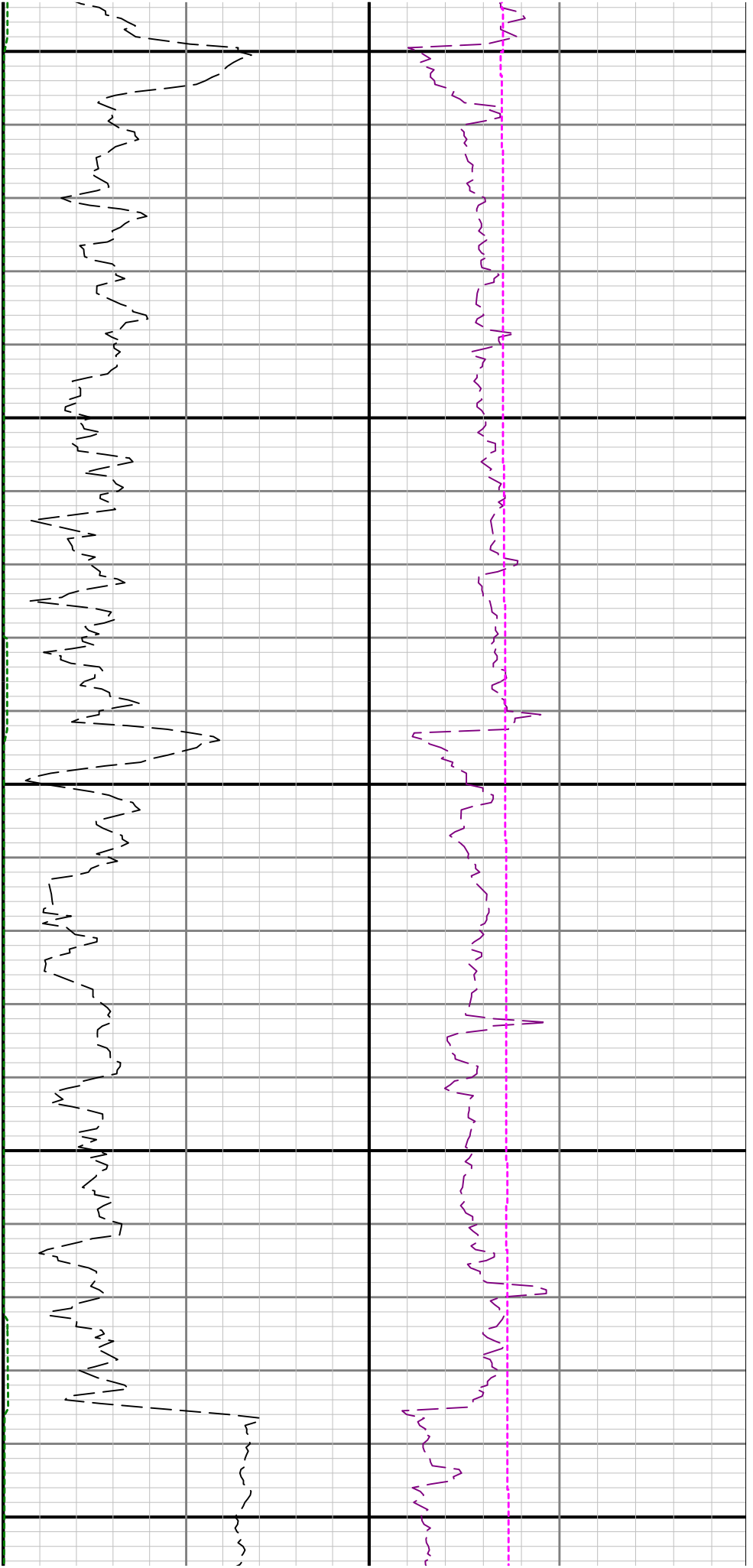
 	Company	SRC Energy			
	Well	Harvesters State 4N-16A-M			
	Interval	Date From:	2018-05-02 18:00:00	Top:	1836.00
	Created	Date To:	2018-05-05 18:00:00	Bottom:	14855.00
		2018-05-06 14:29:06			

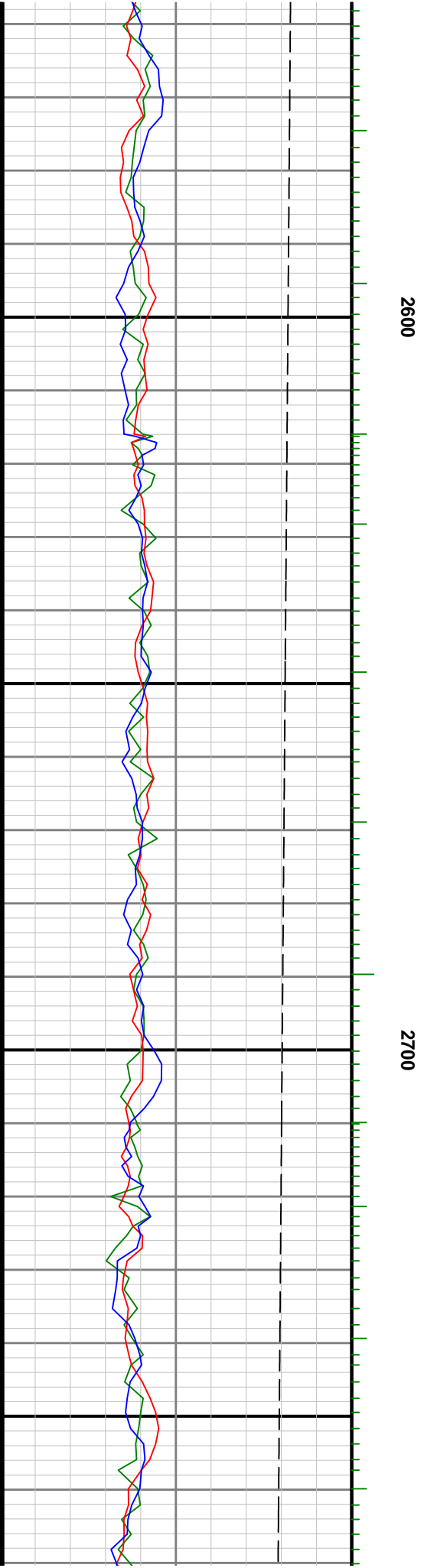
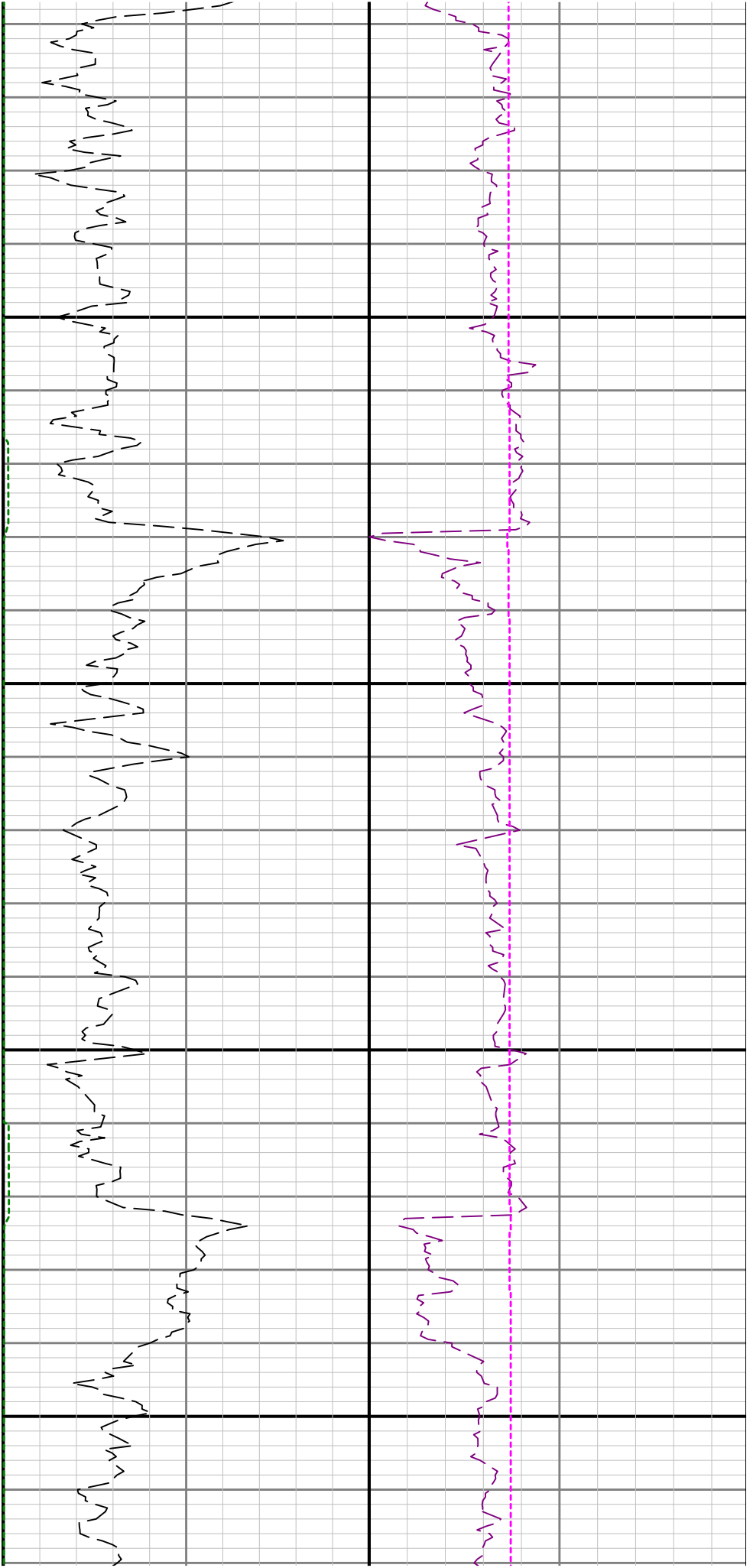
Gamma Ray - Apparent 0.5 ft Average GRAM	MD 1:240 feet	Gamma Time Since Drilled GRTM	Weight On Bit, Average 1 ft Average WOBA
0 300		0 600	0 50
API		min	klb
Azimuthal Gamma Ray - Apparent - Up Quadrant 0.5 ft Average GRAUM		Depth Averaged ROP 3 ft Average ROPA	Downhole Temperature TCDM
0 300		1000 0	0 300
API		ft/h	degF
Azimuthal Gamma Ray - Apparent - Down Quadrant 0.5 ft Average GRADM			
0 300			
API			
True Vertical Depth TVD			
7500 1500			
ft			

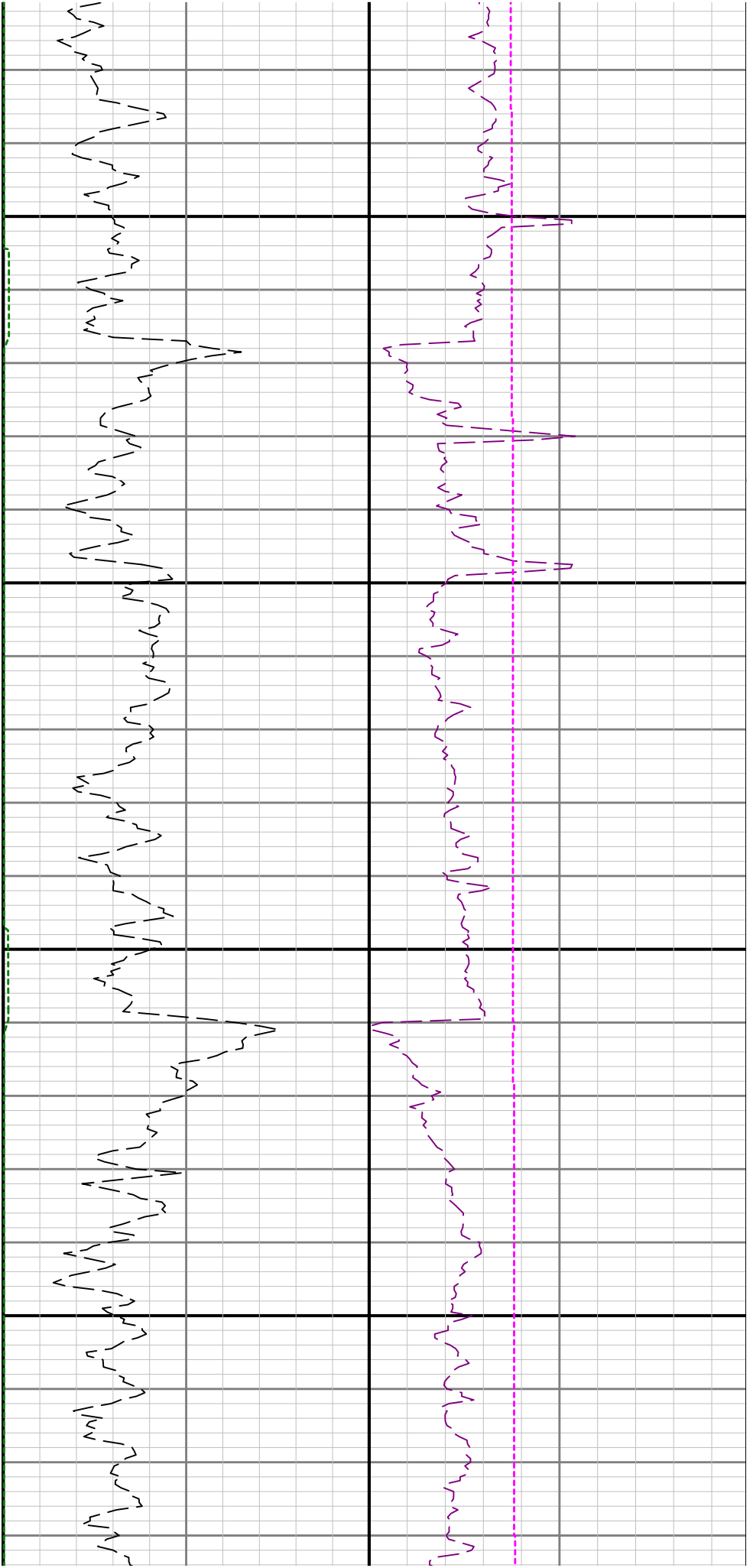






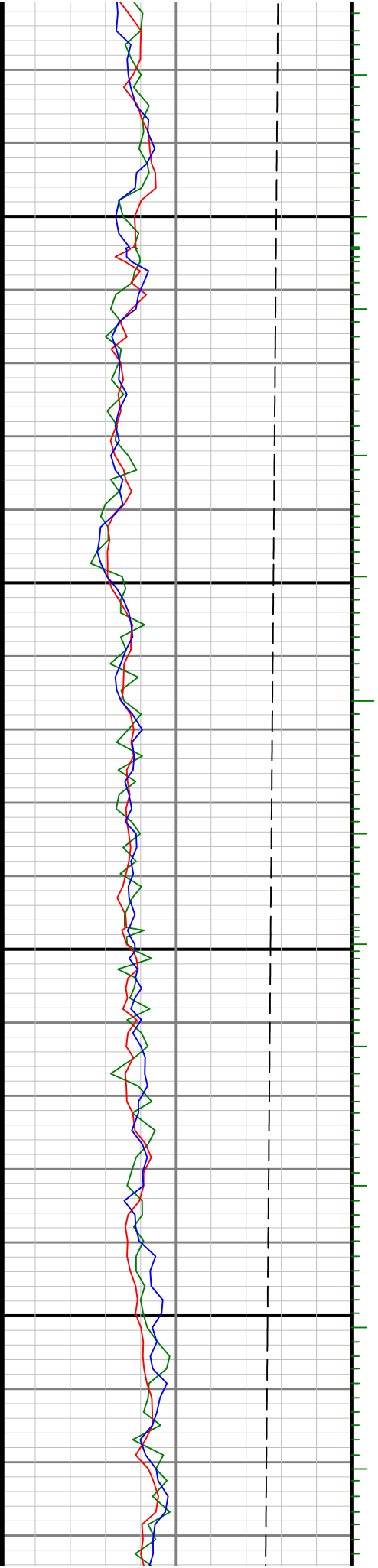


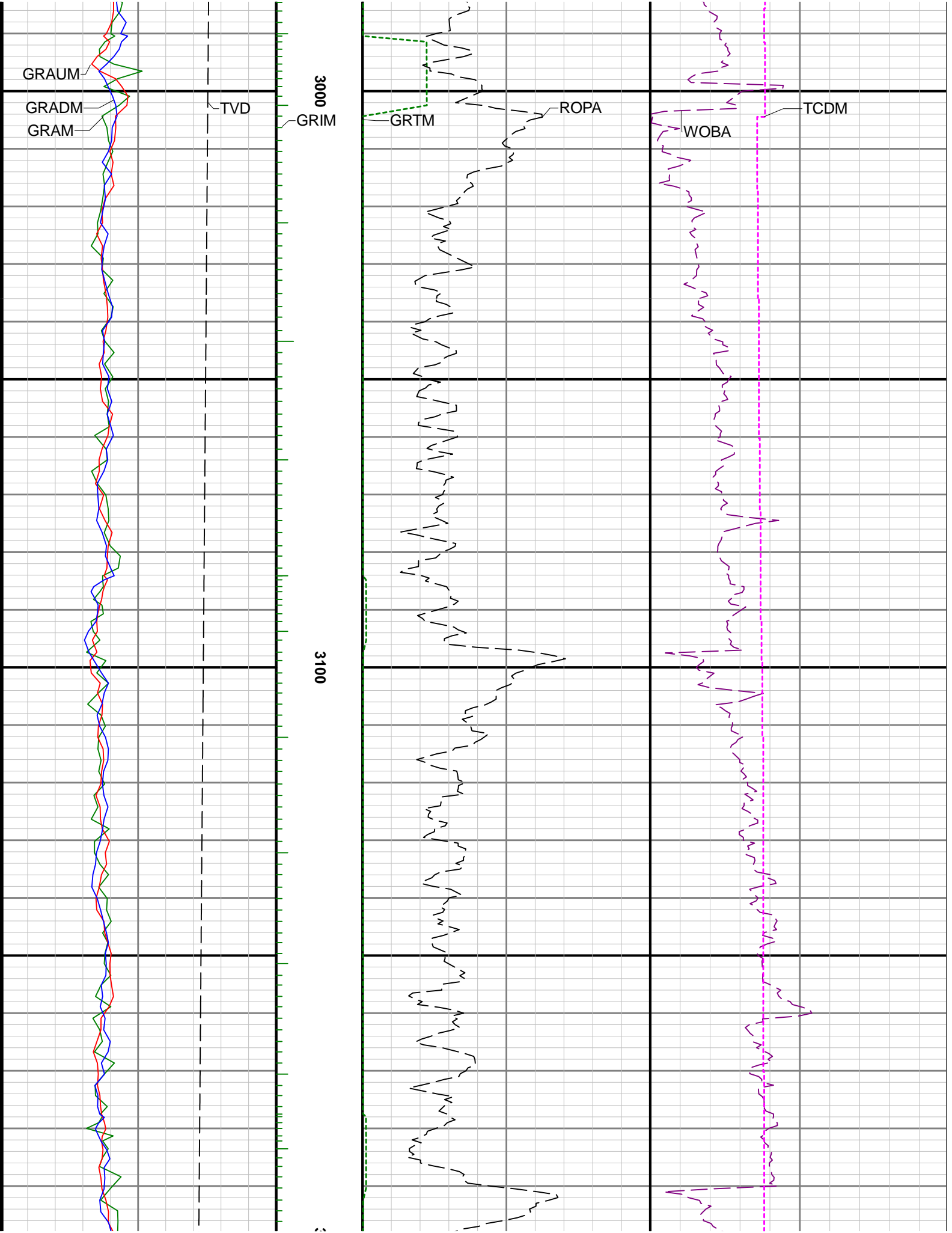


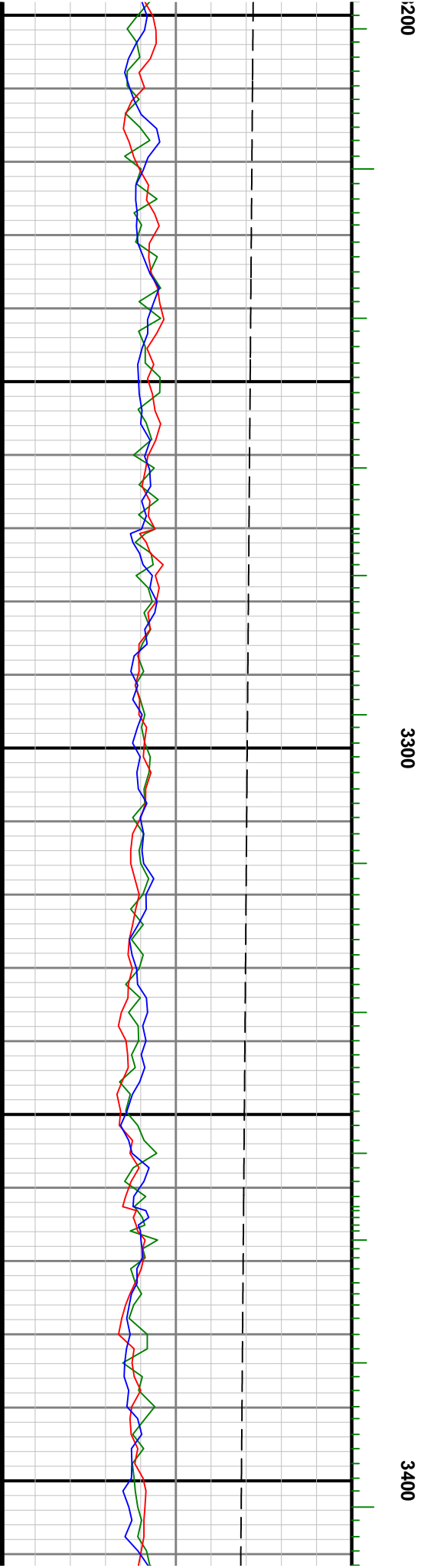
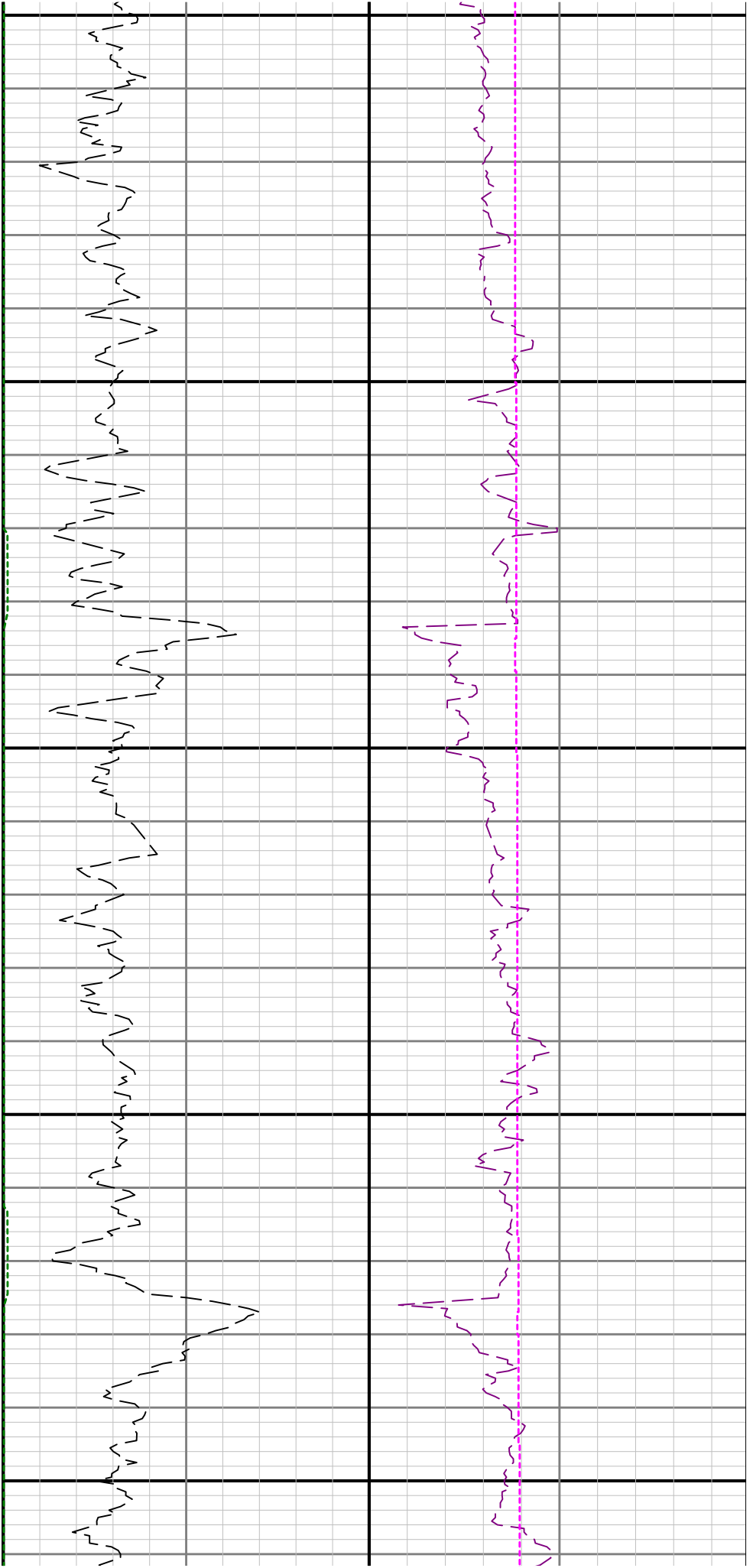


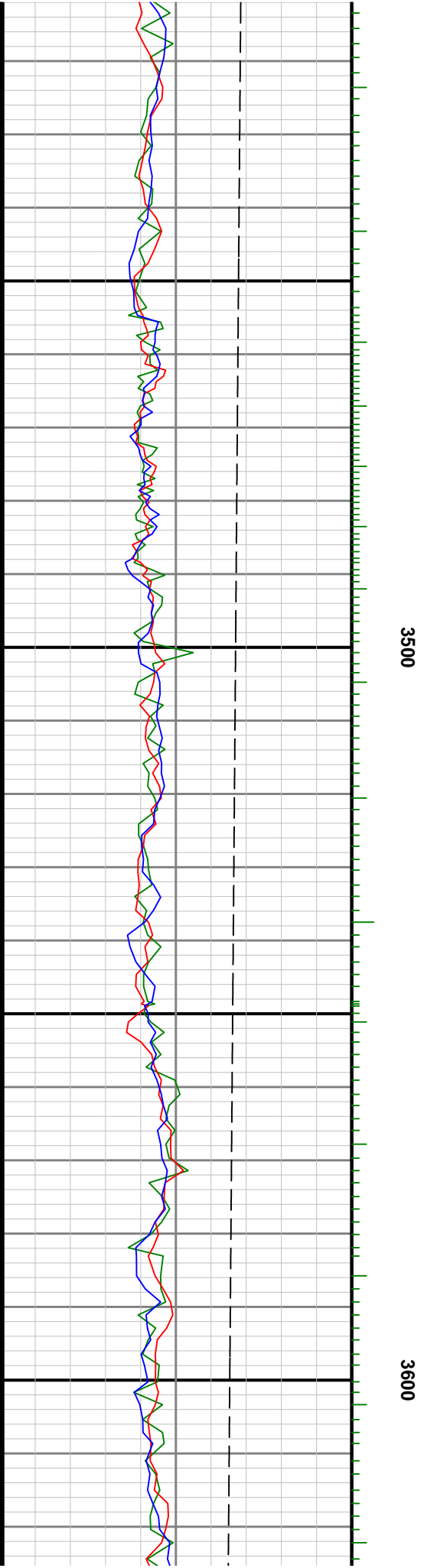
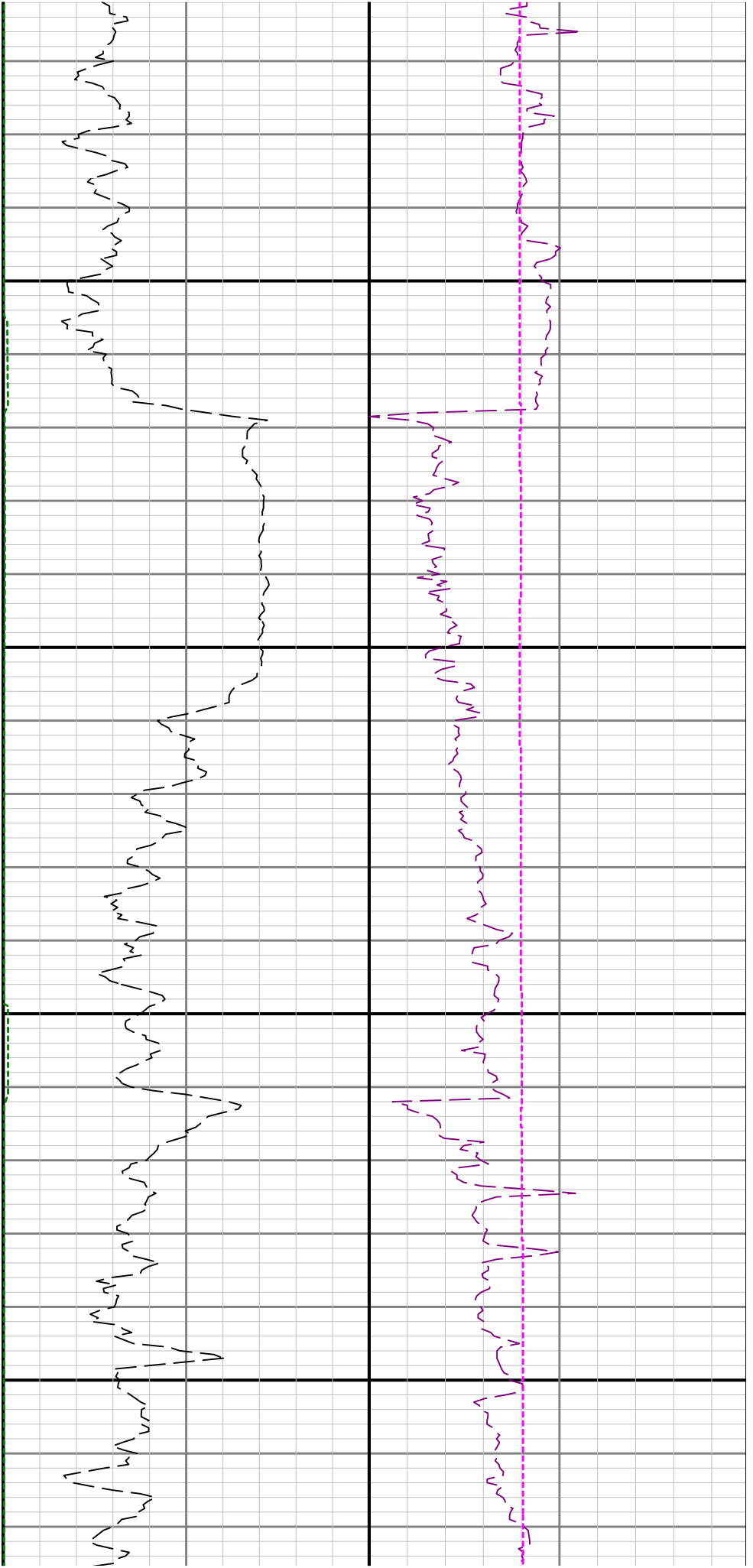
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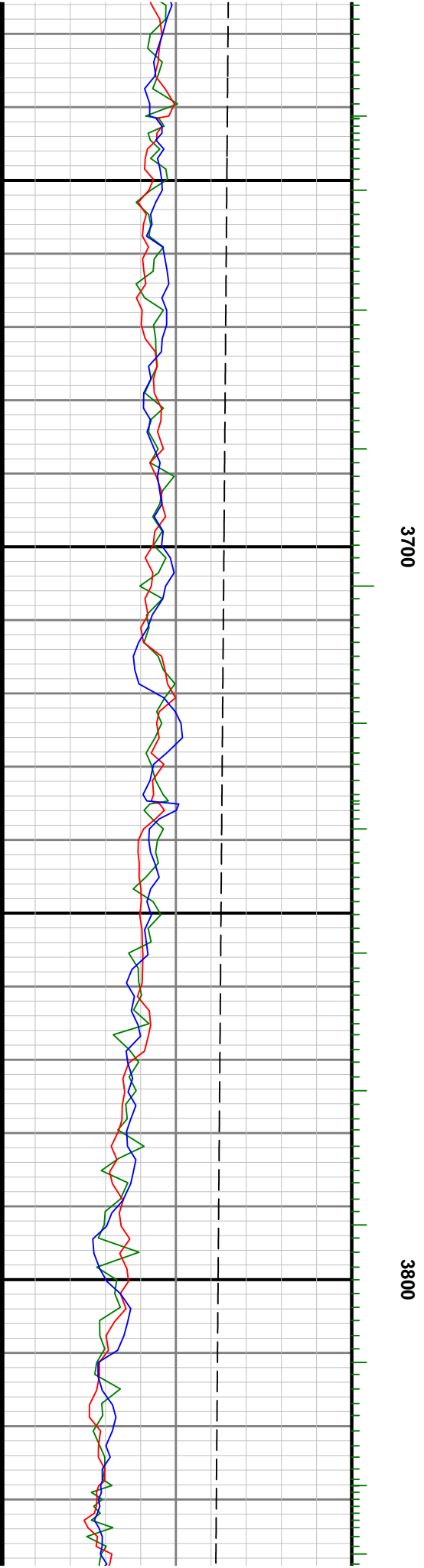
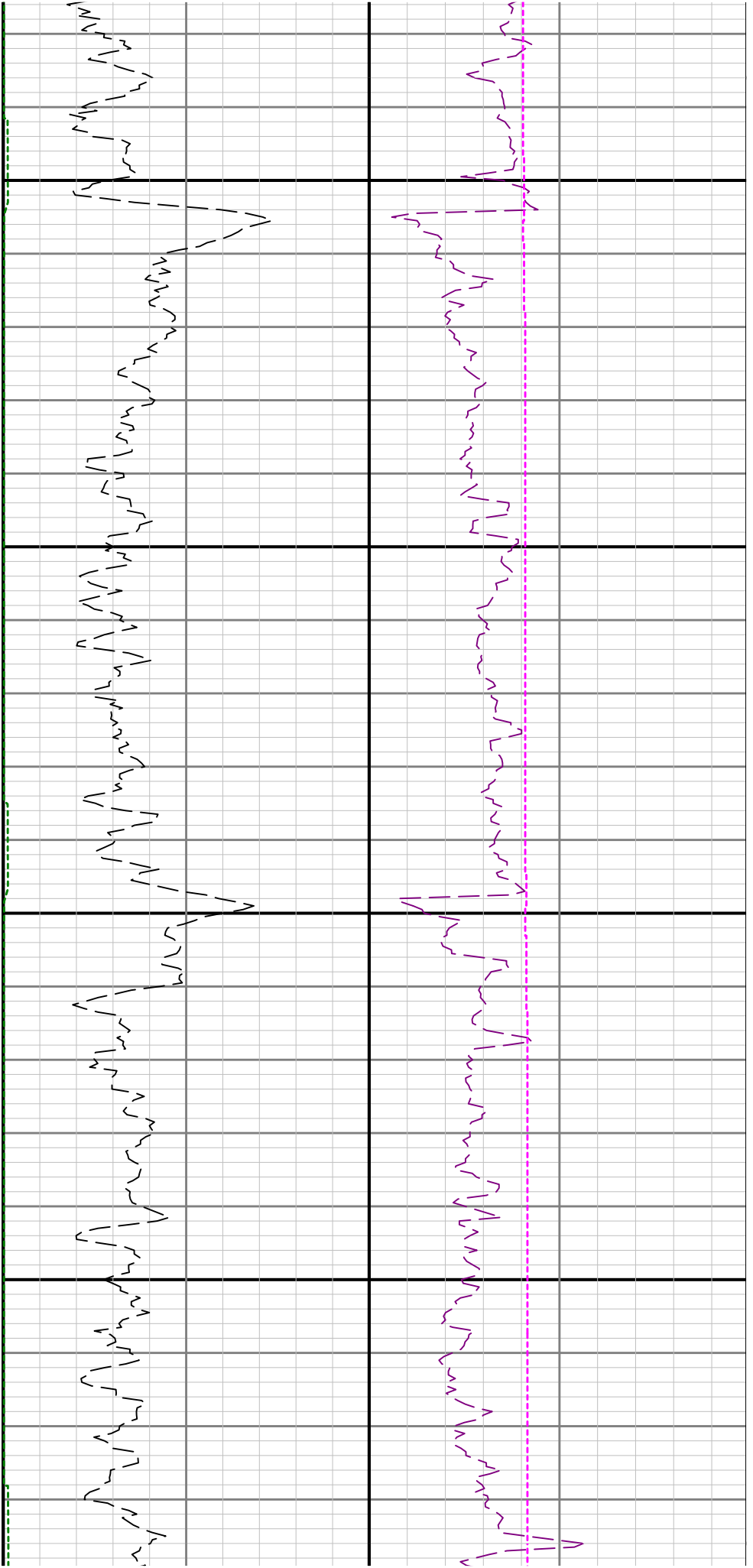
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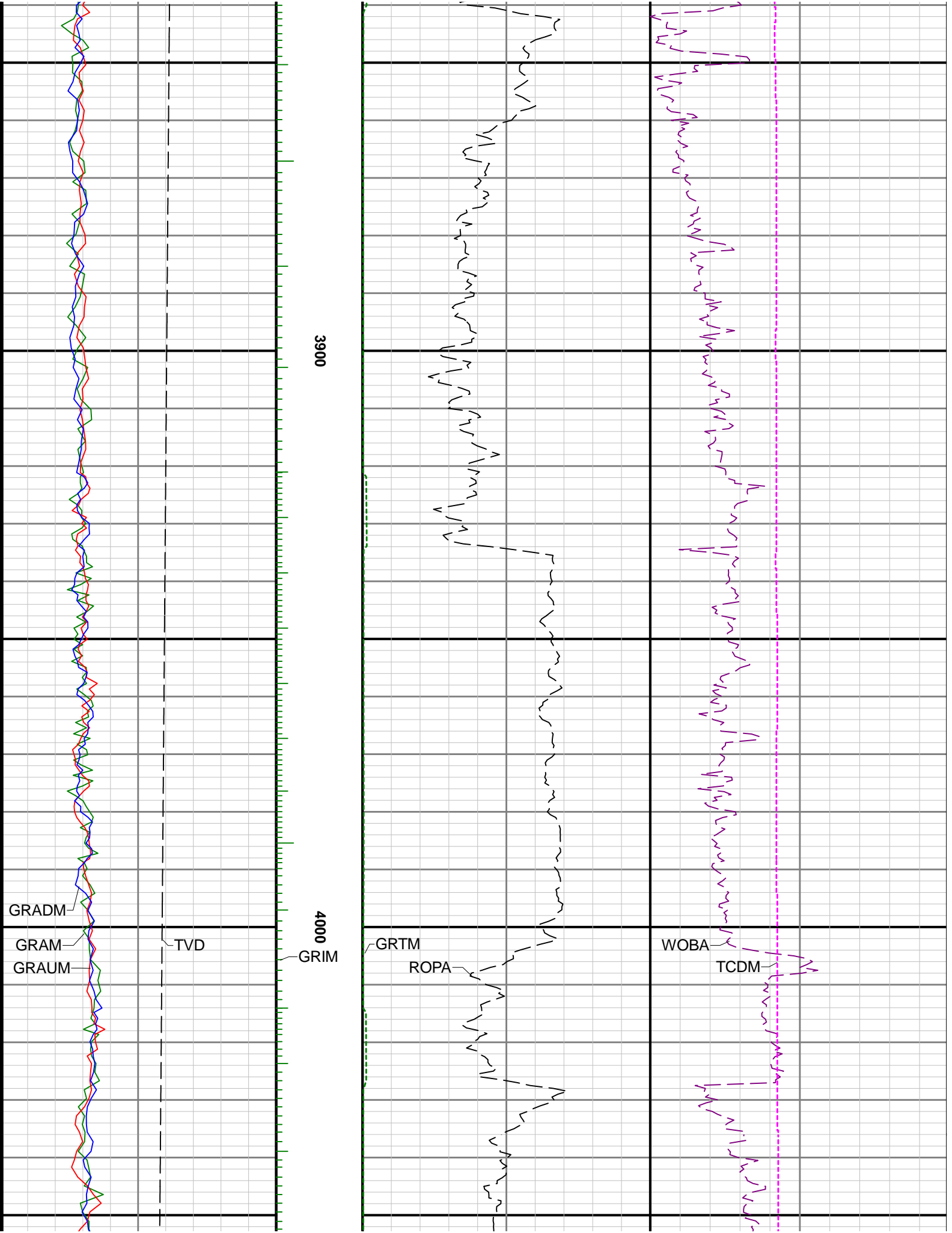


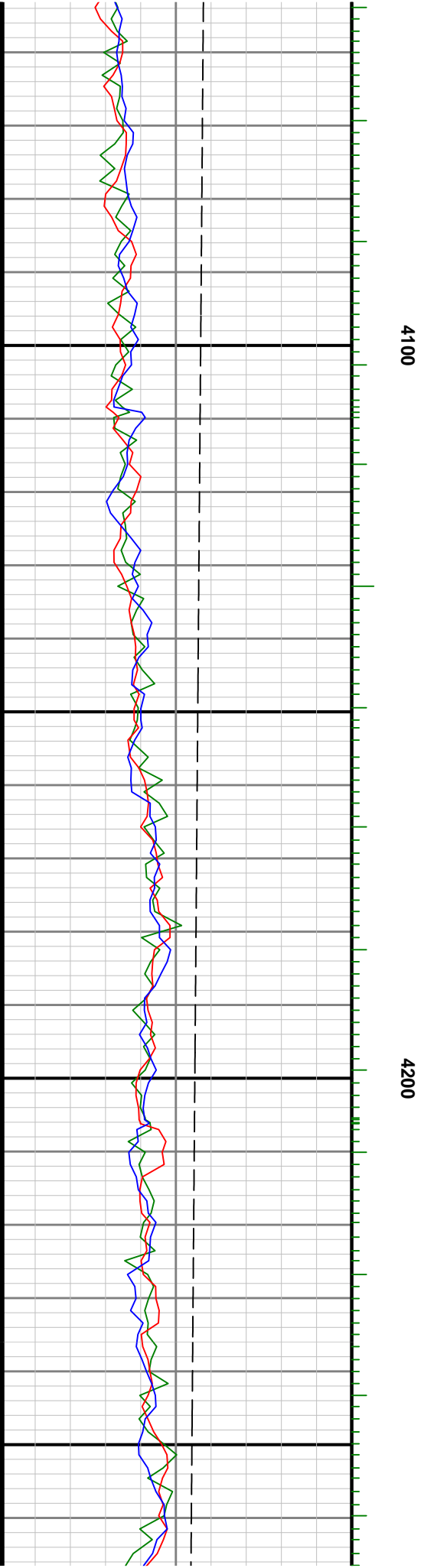
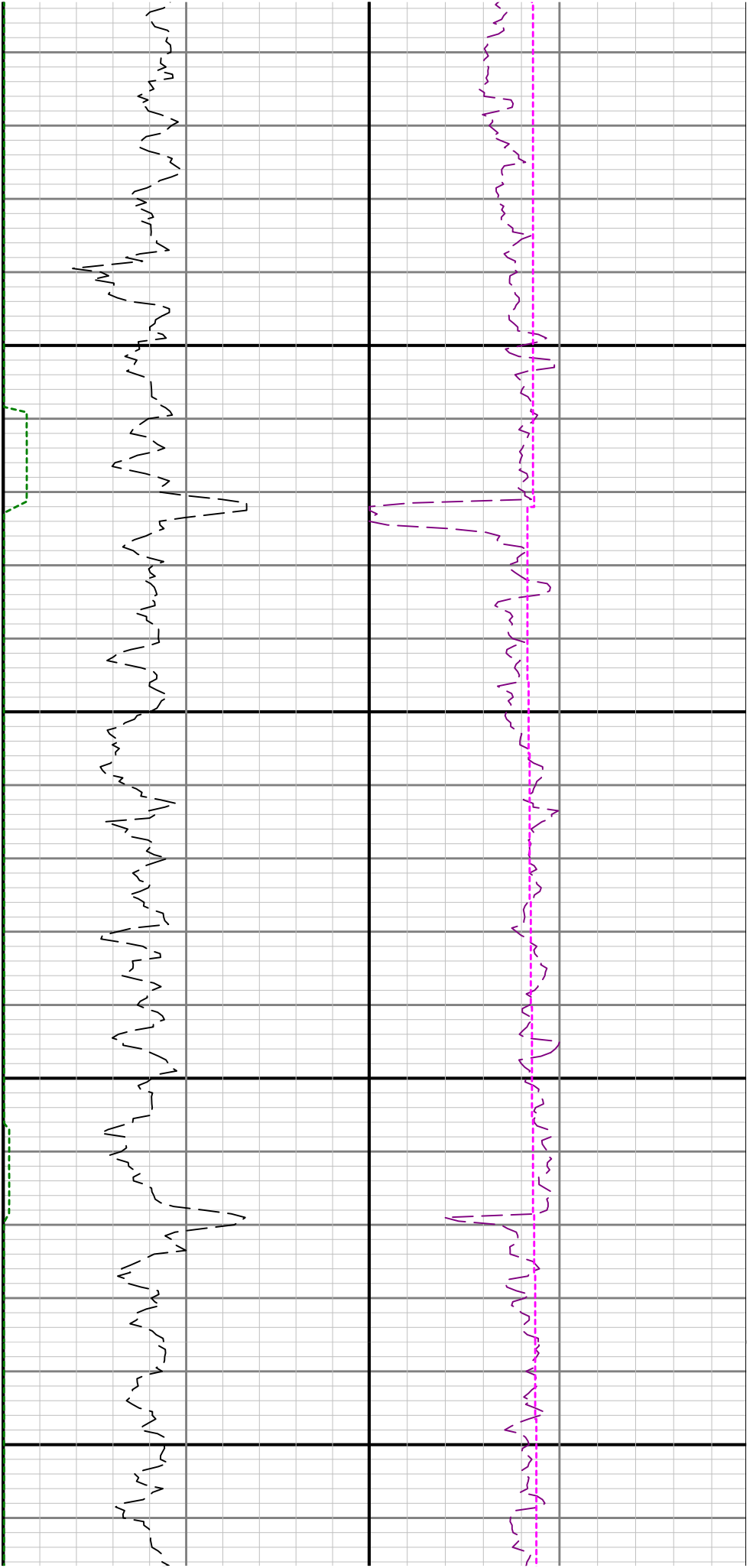


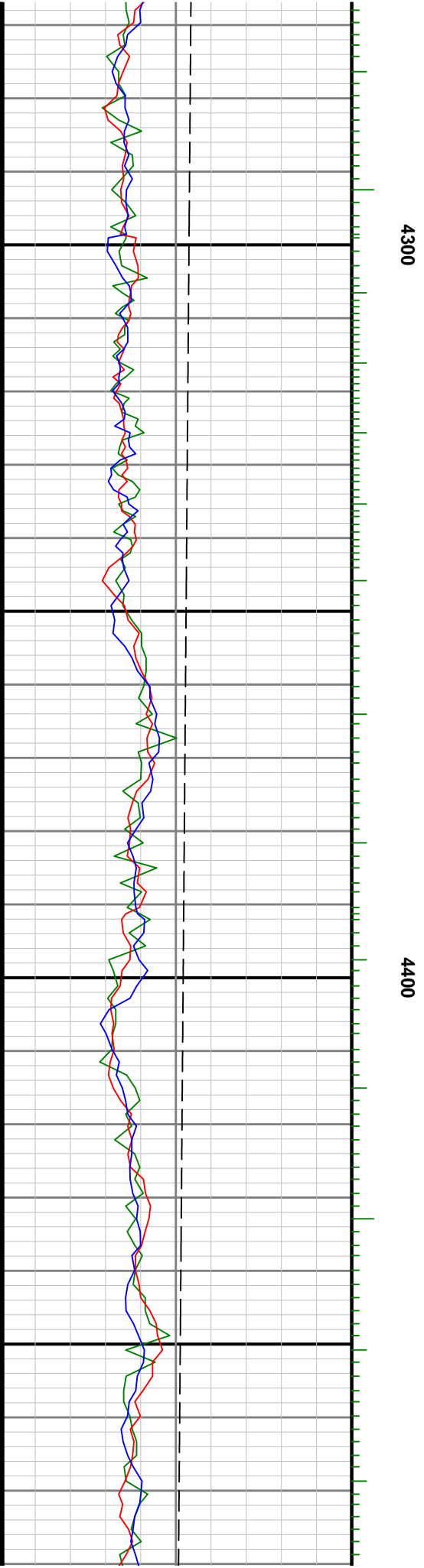
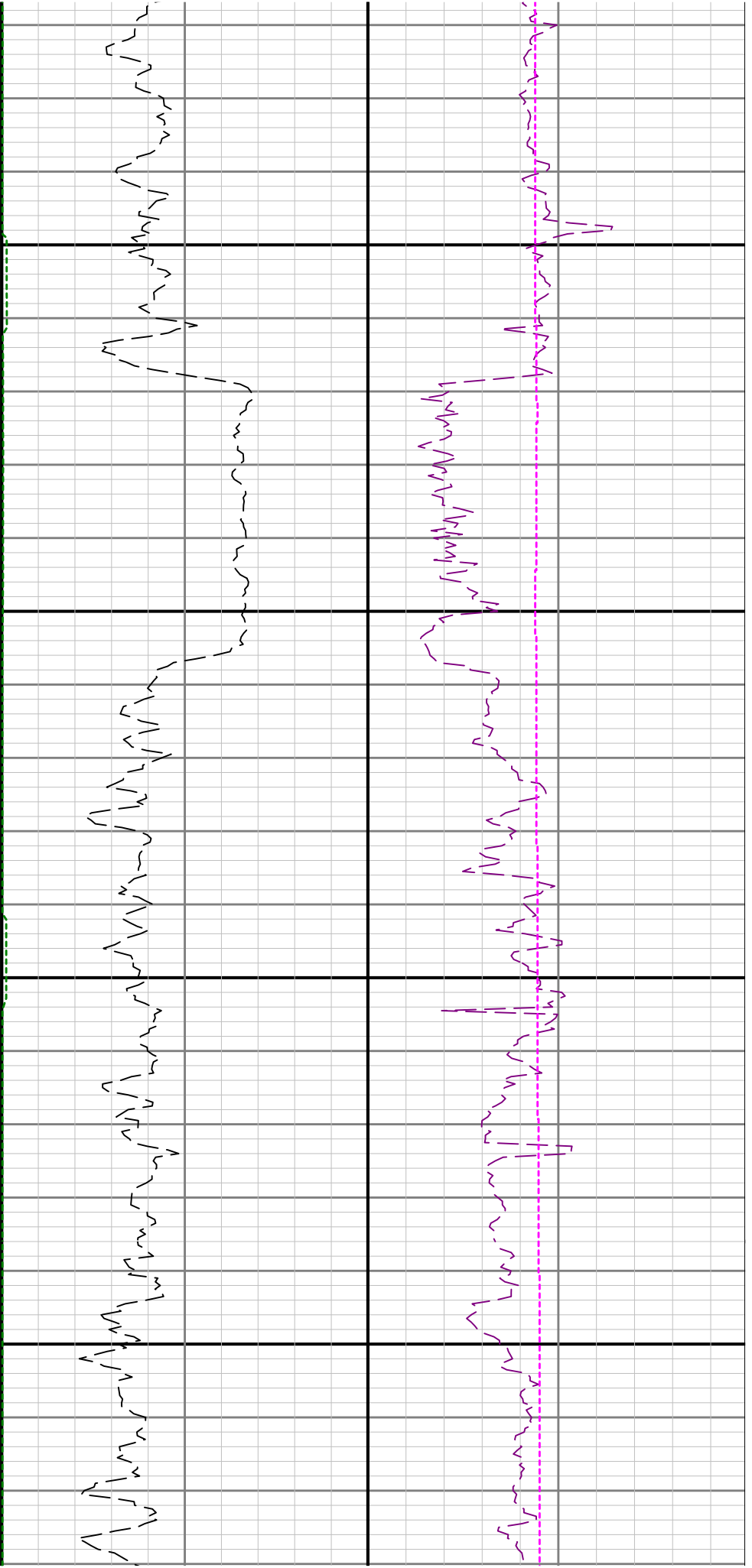


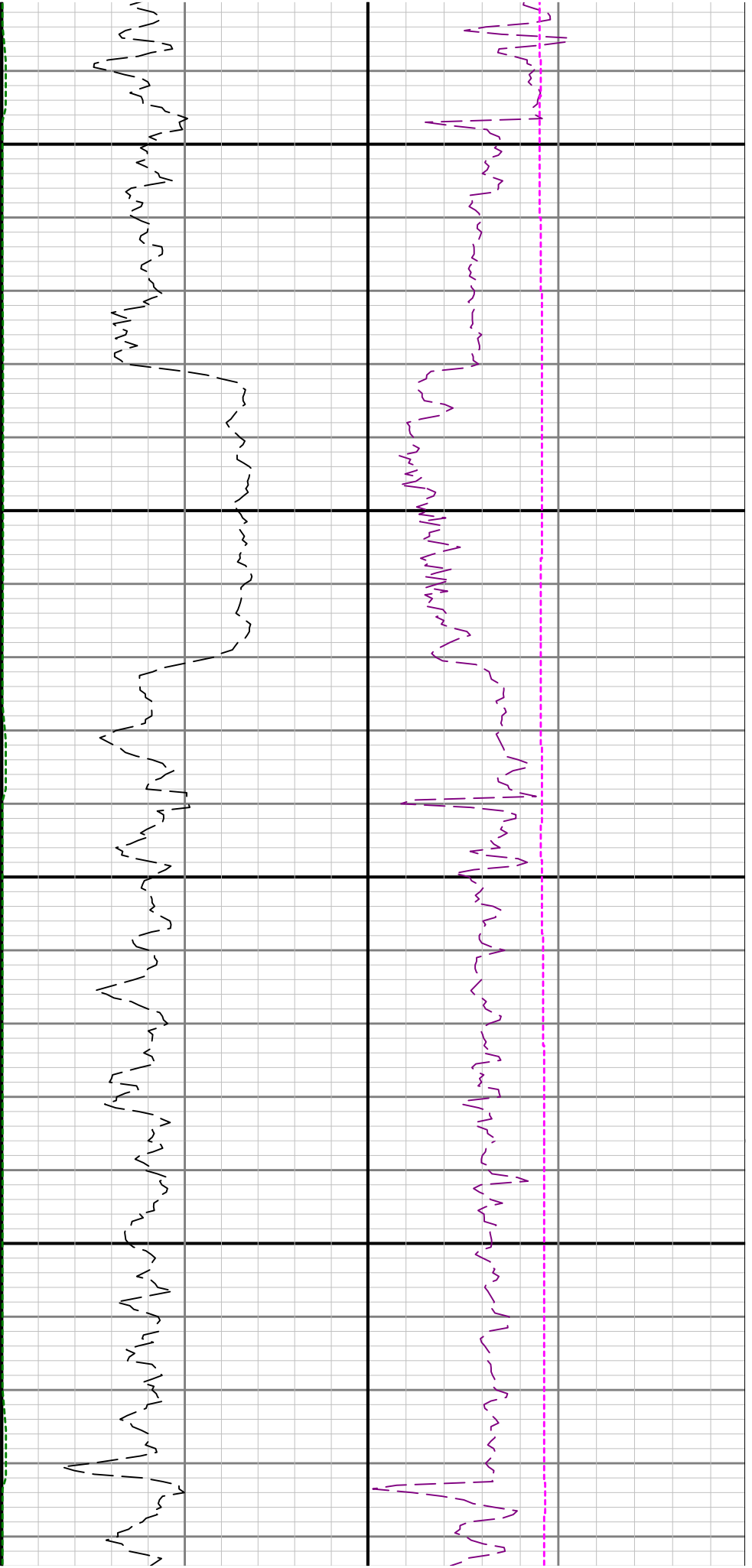






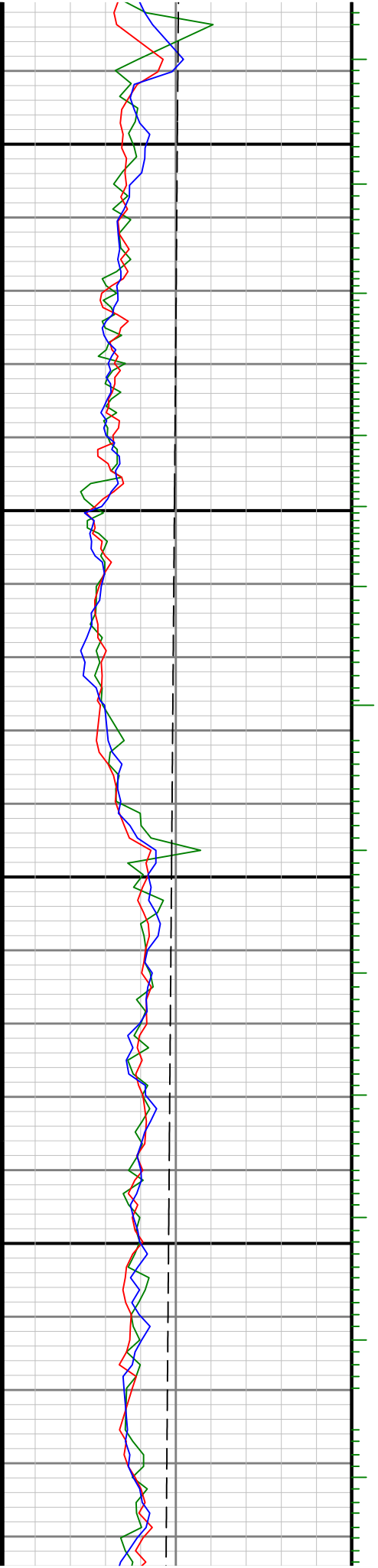


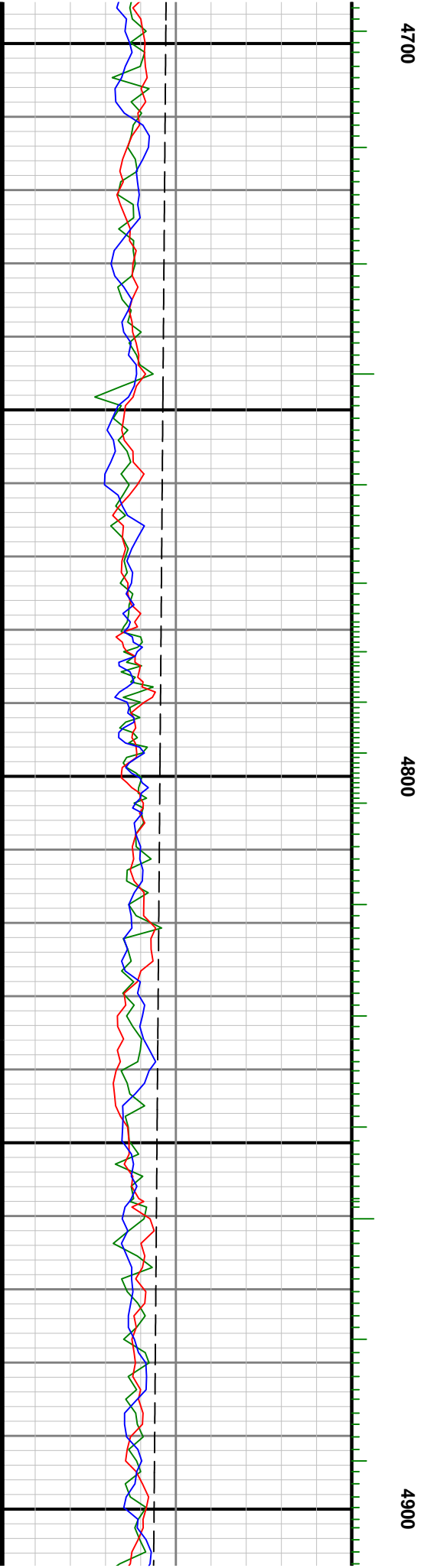
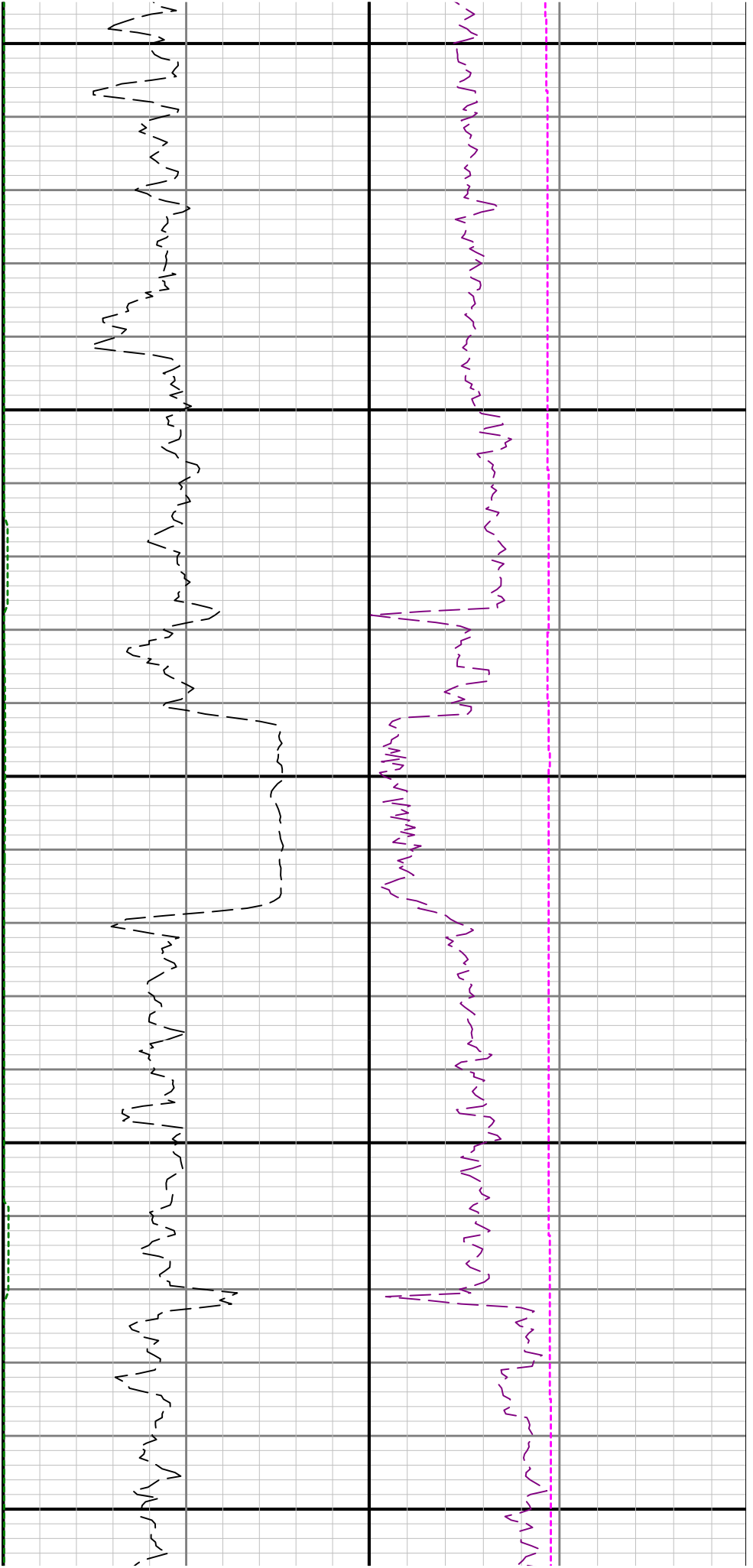


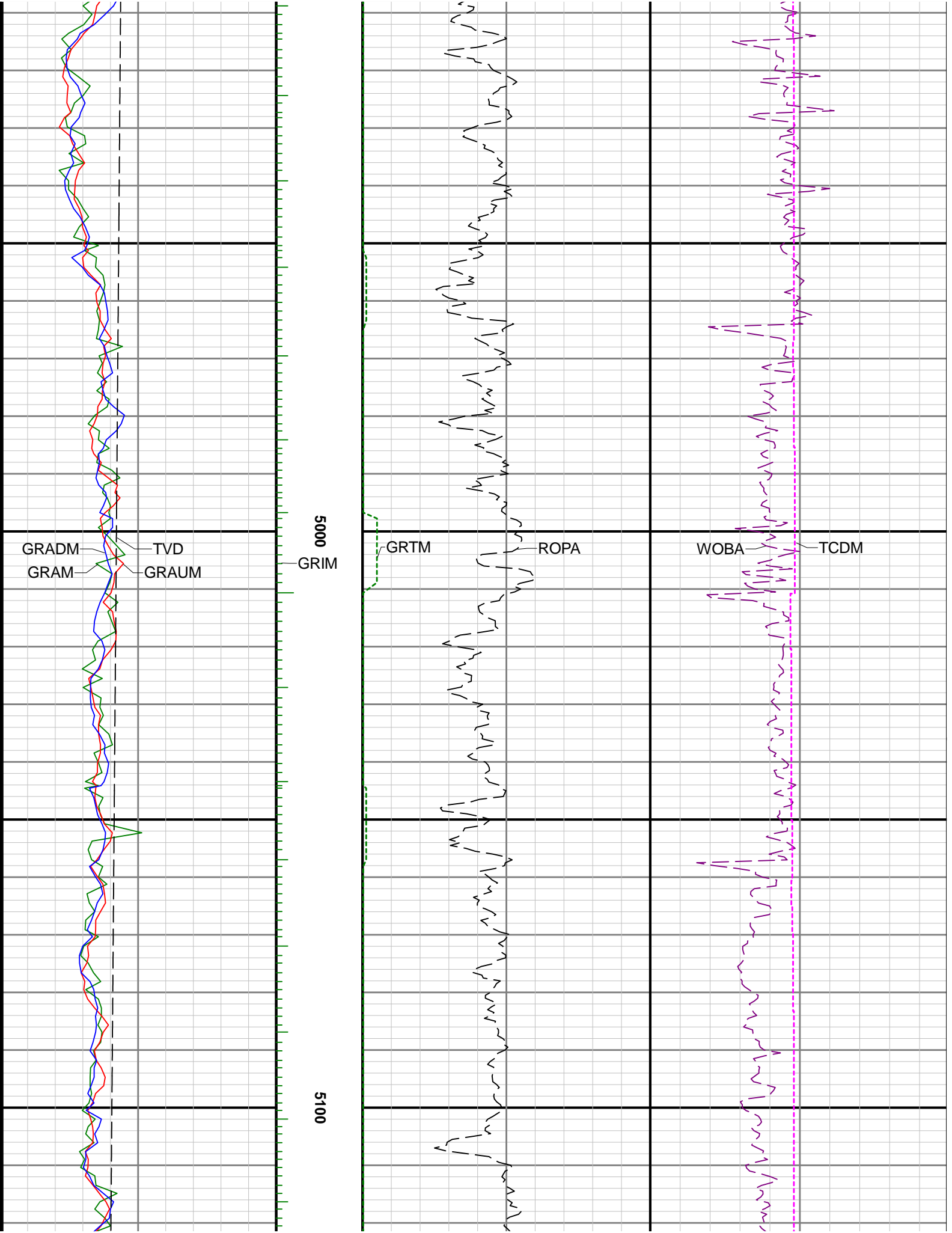


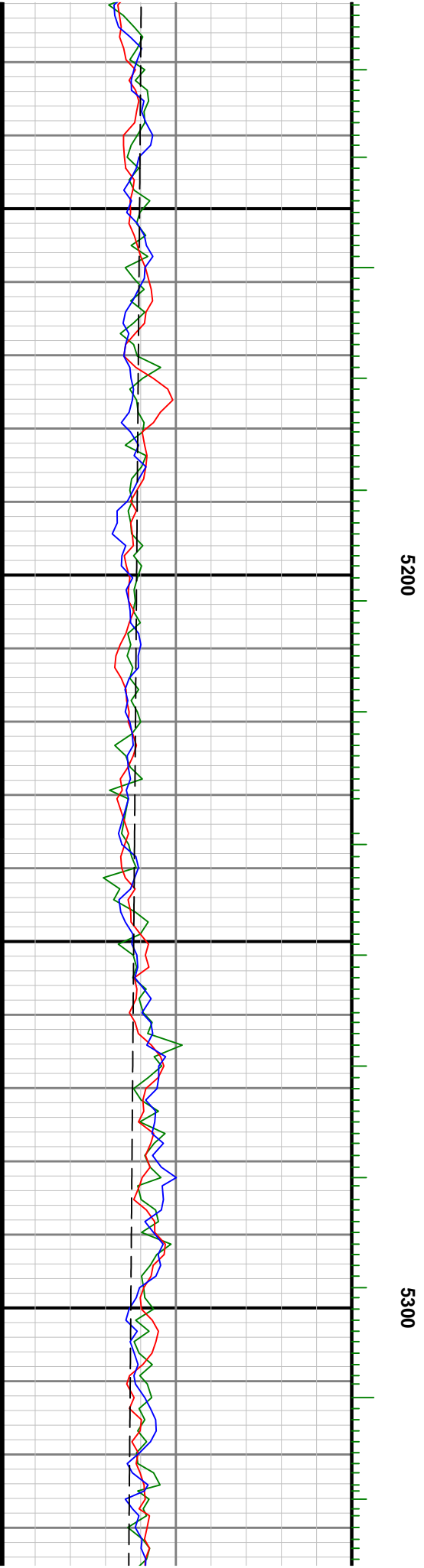
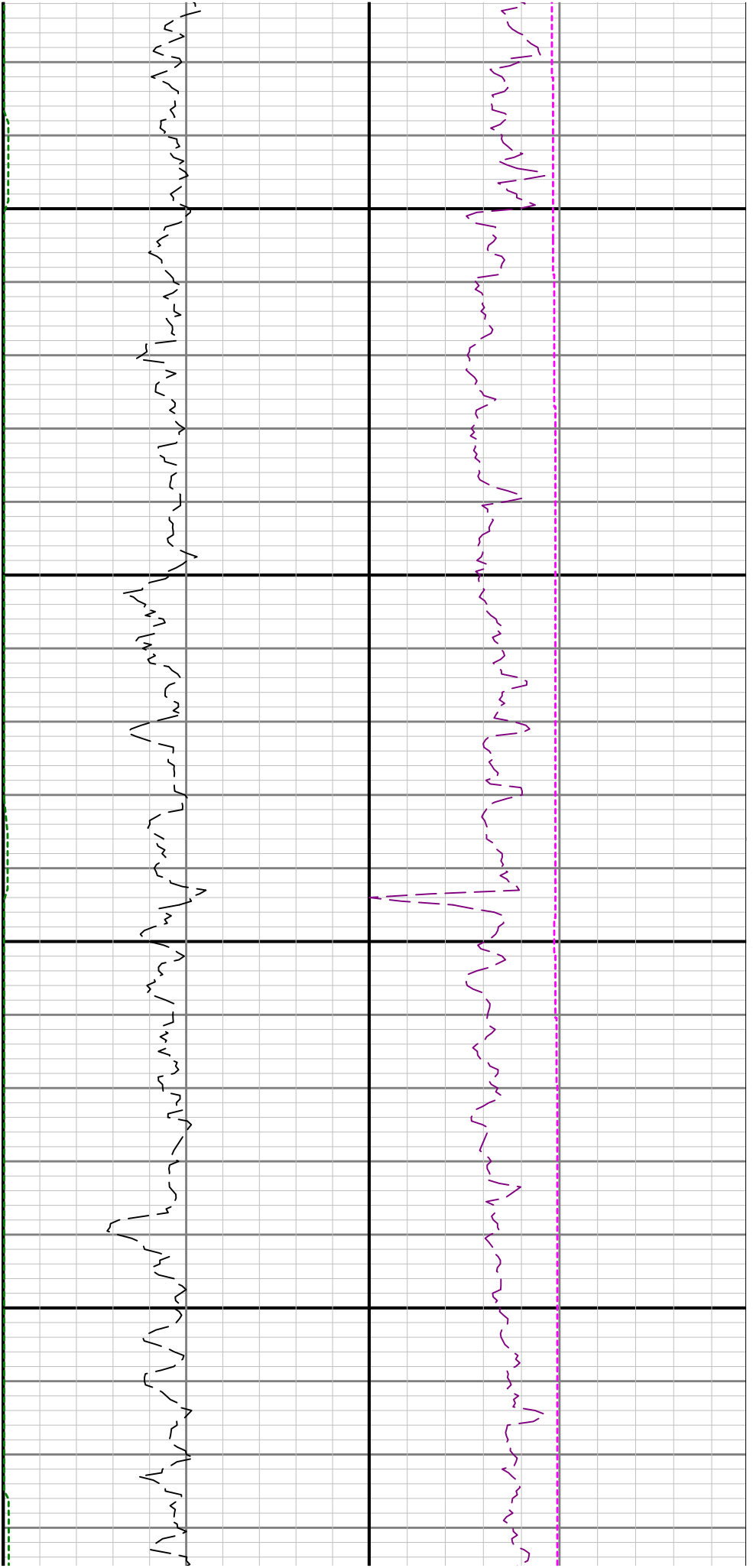
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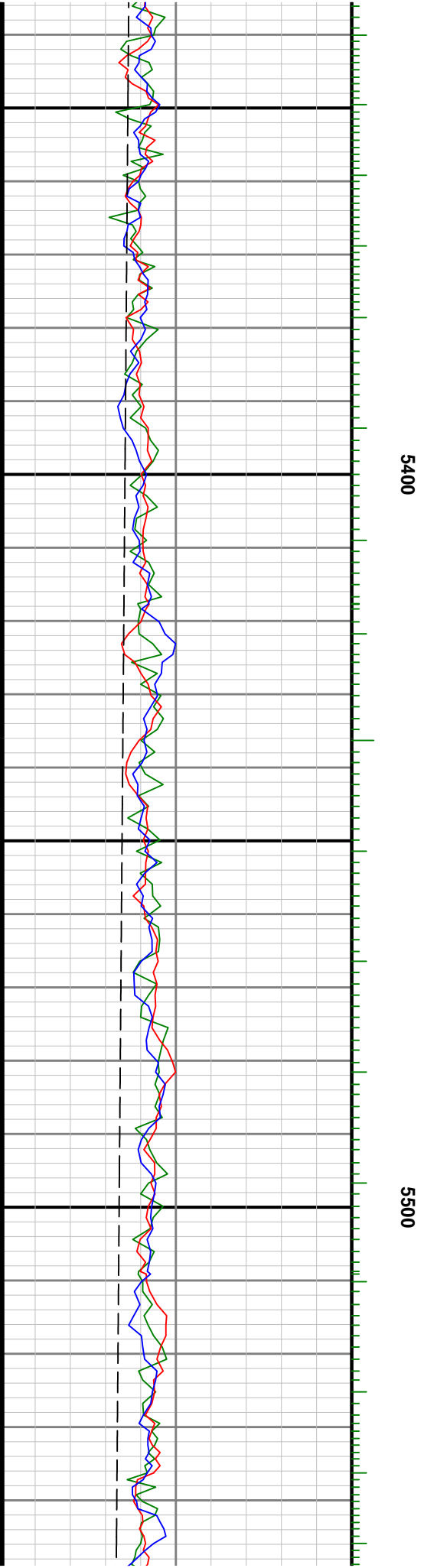
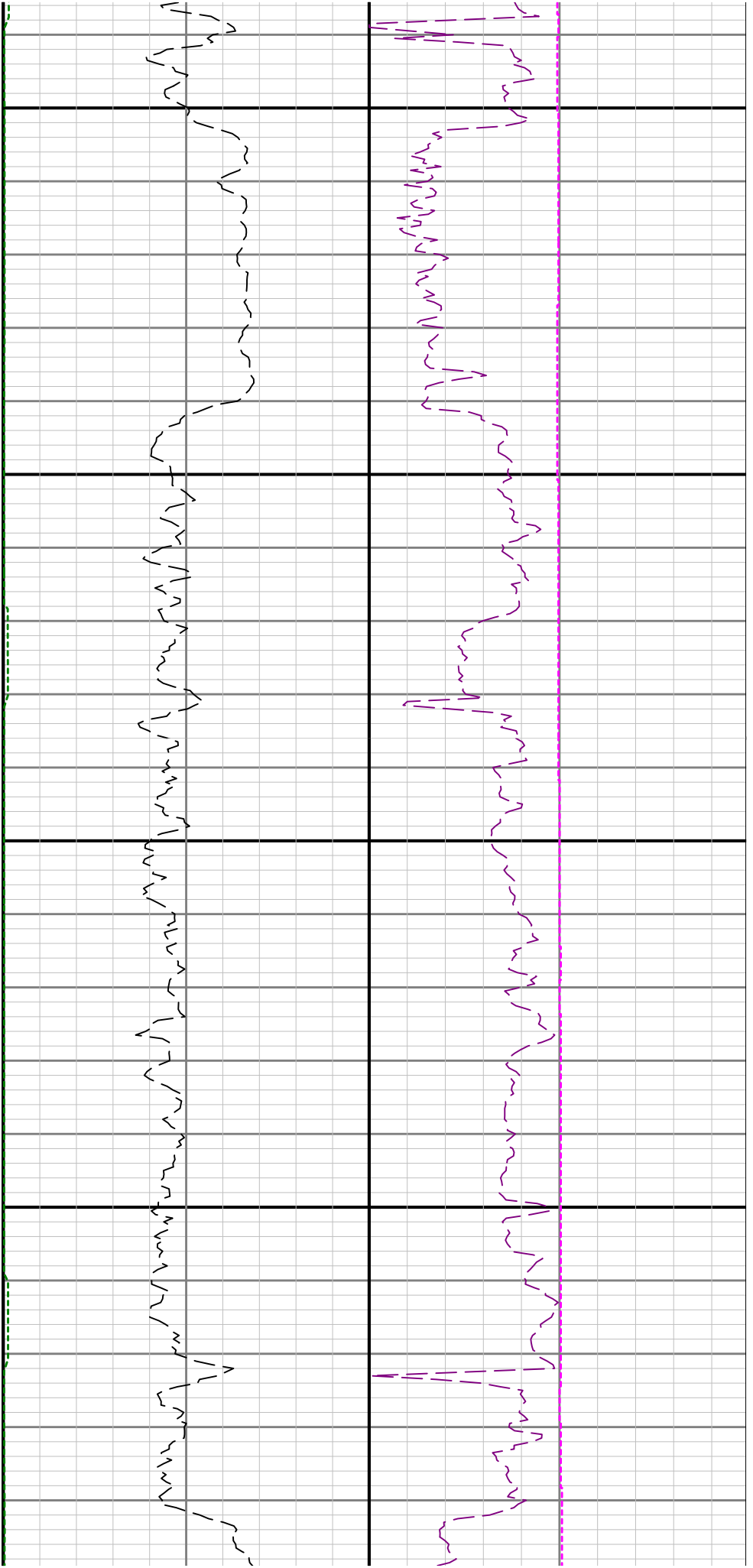
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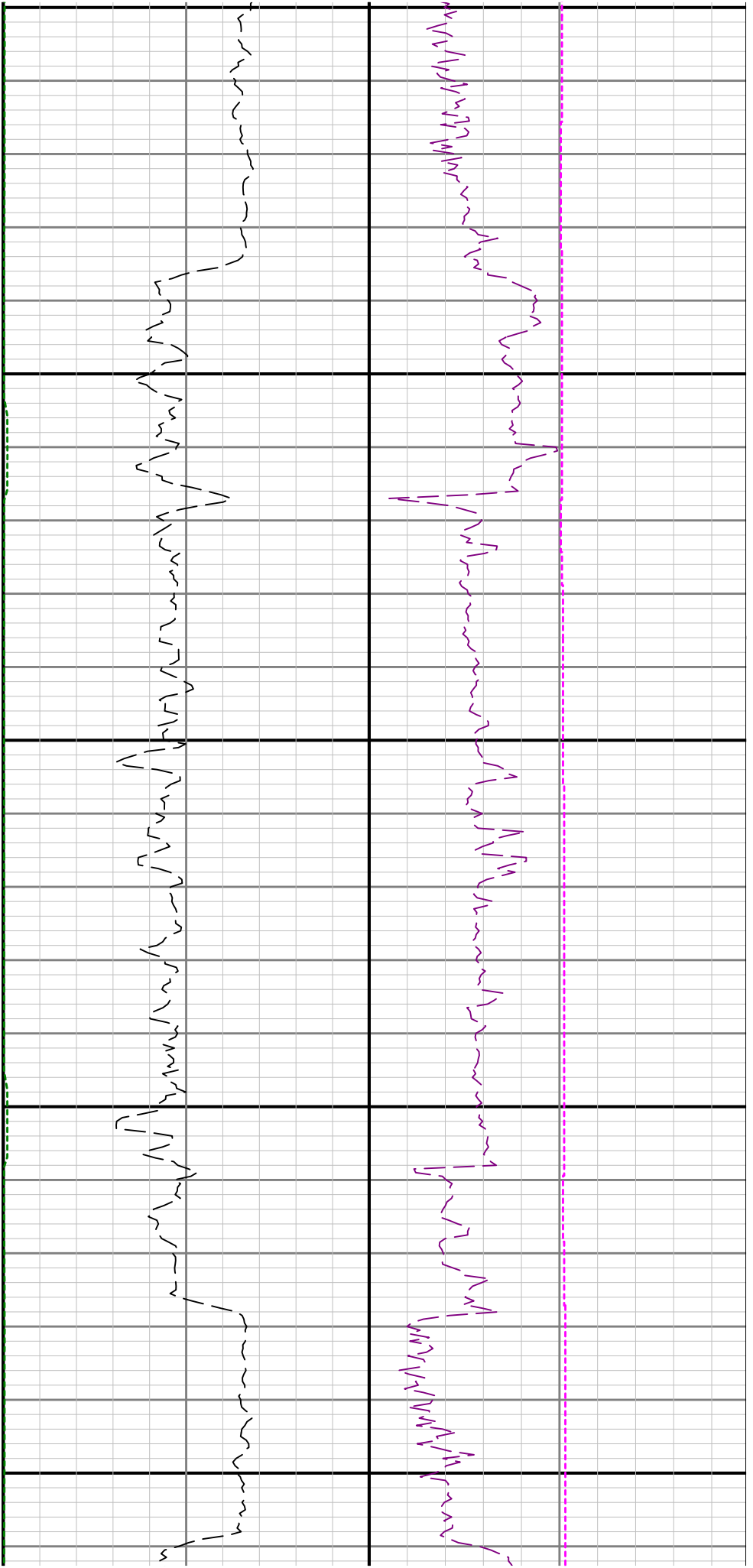






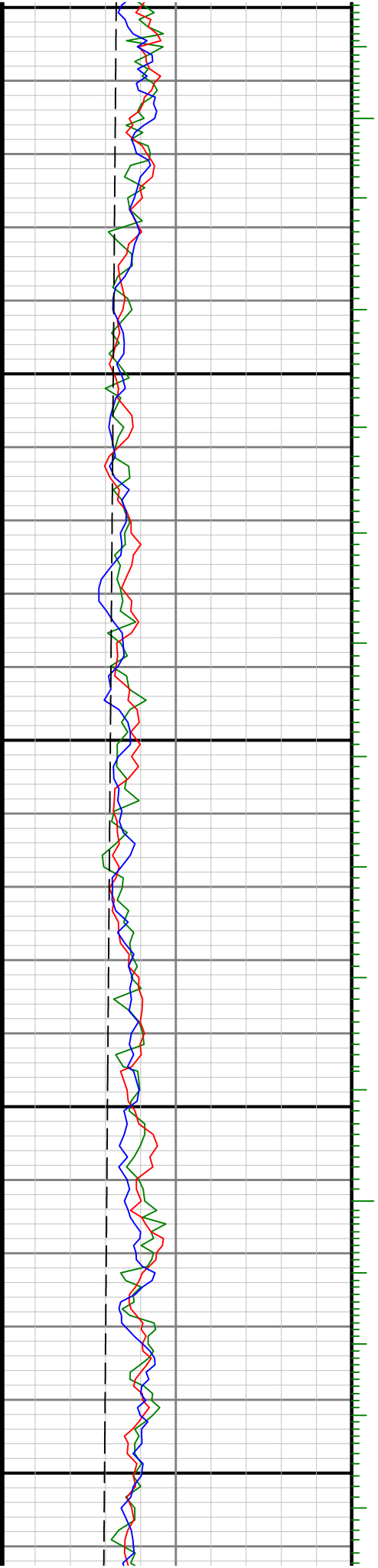


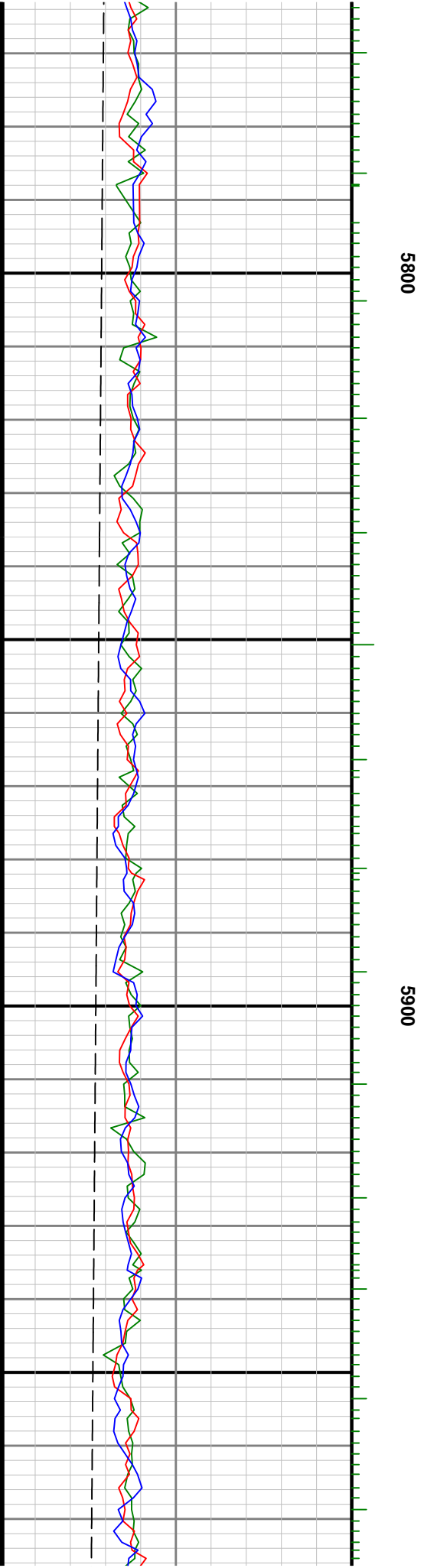
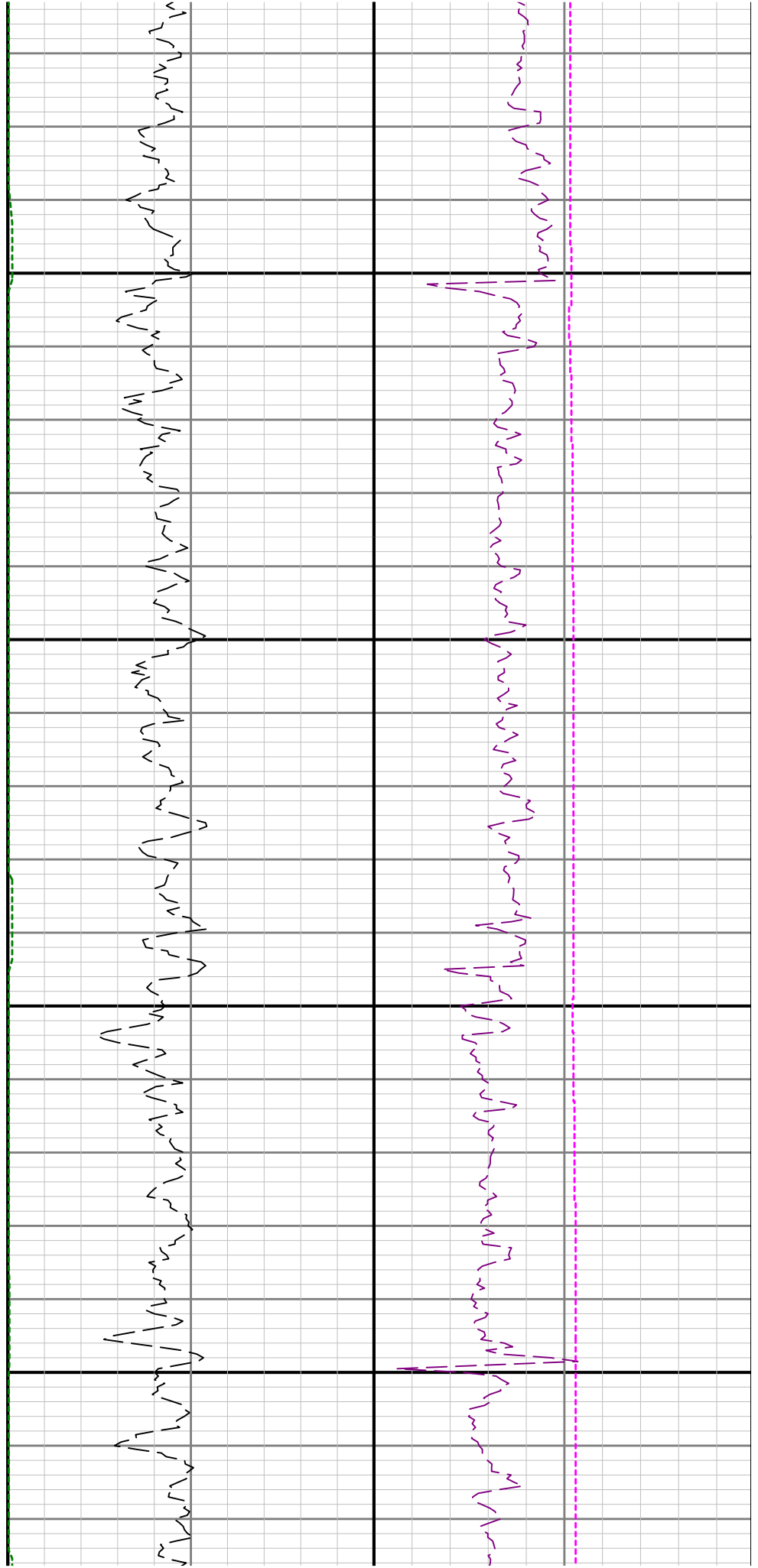


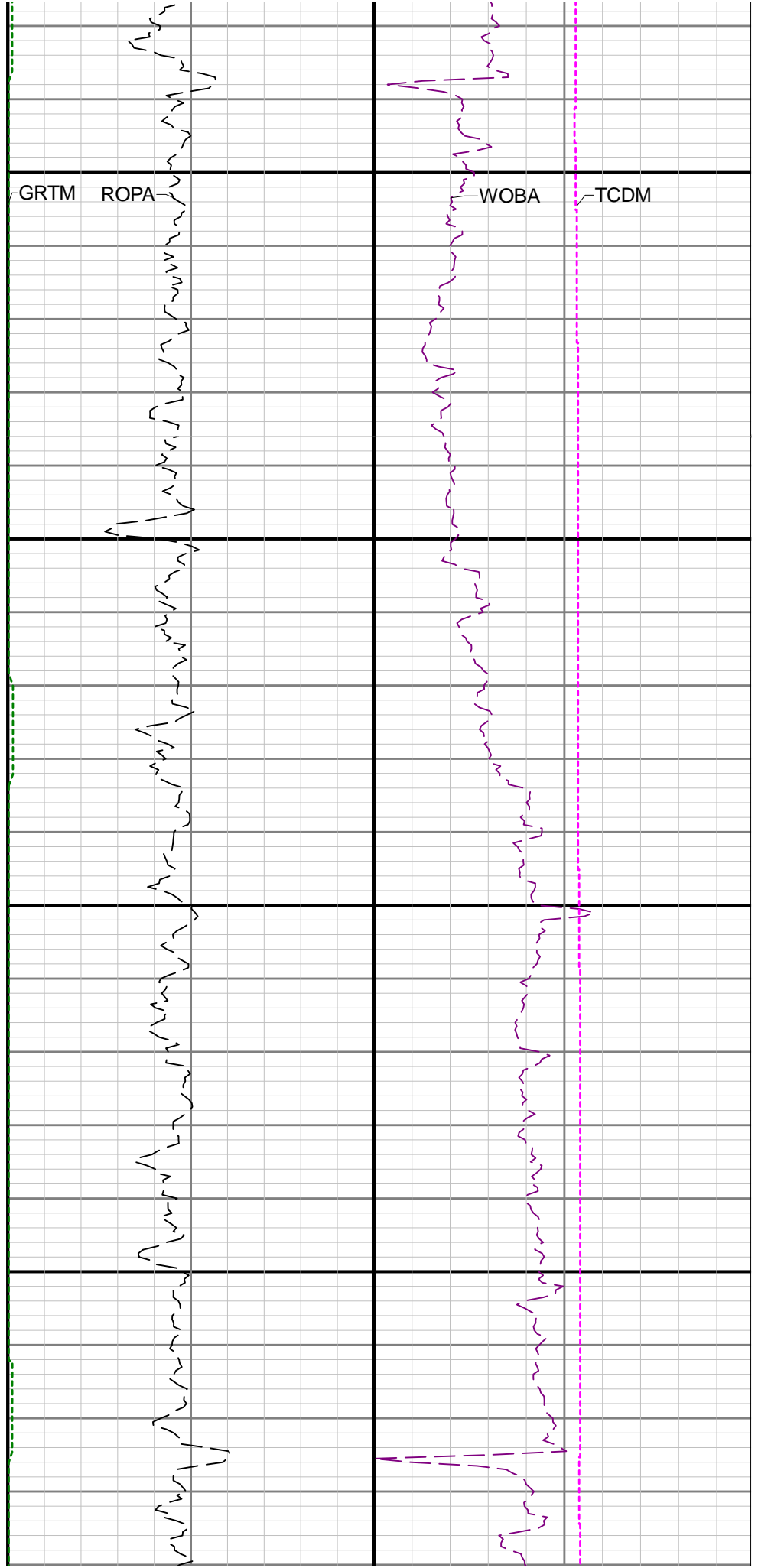
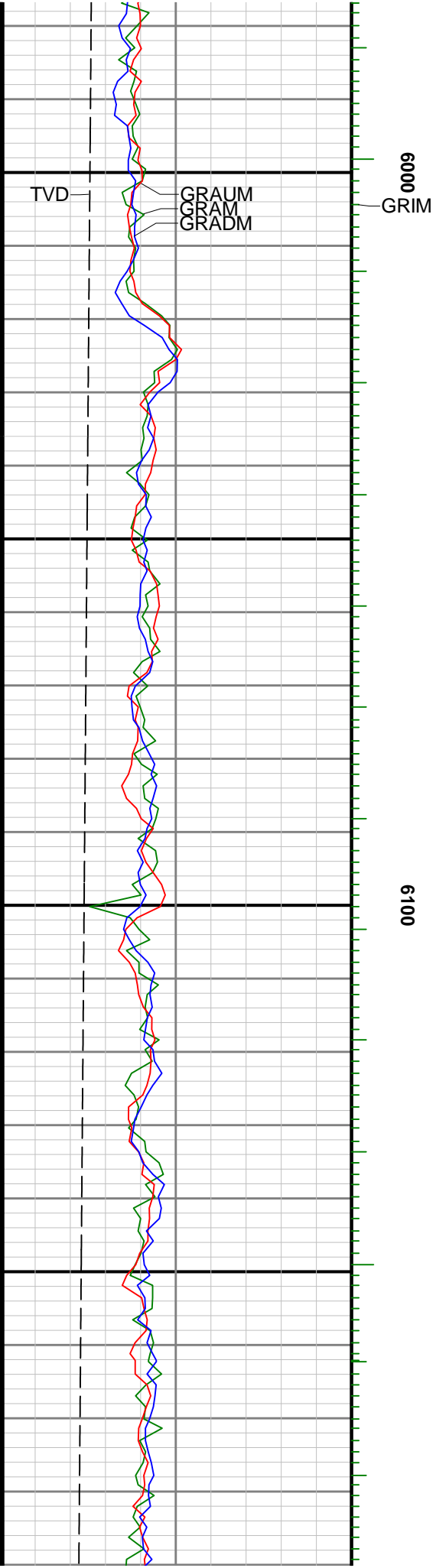


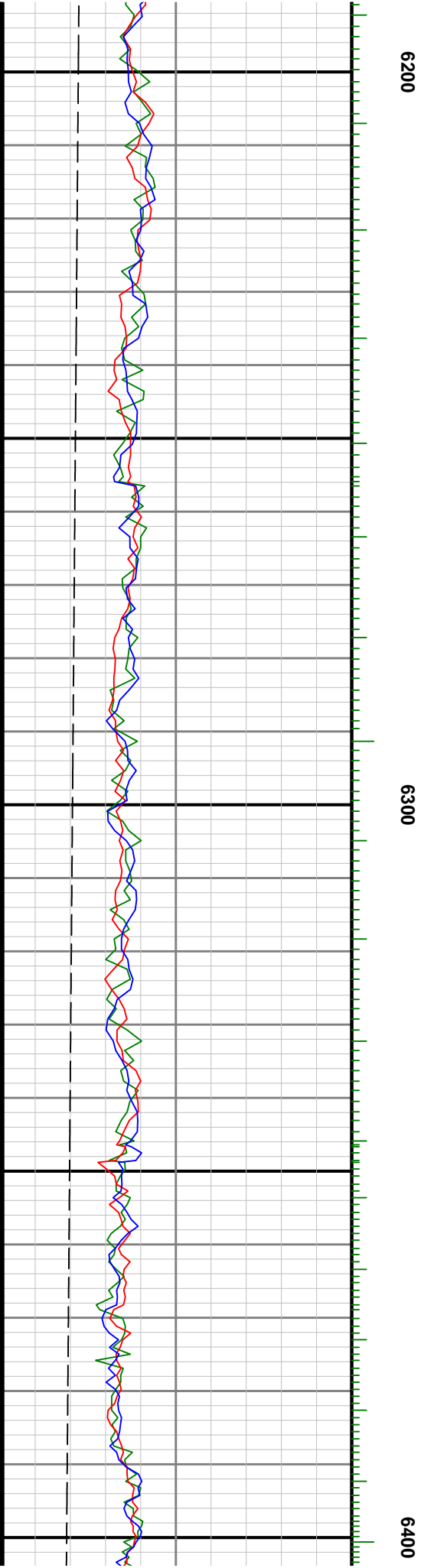
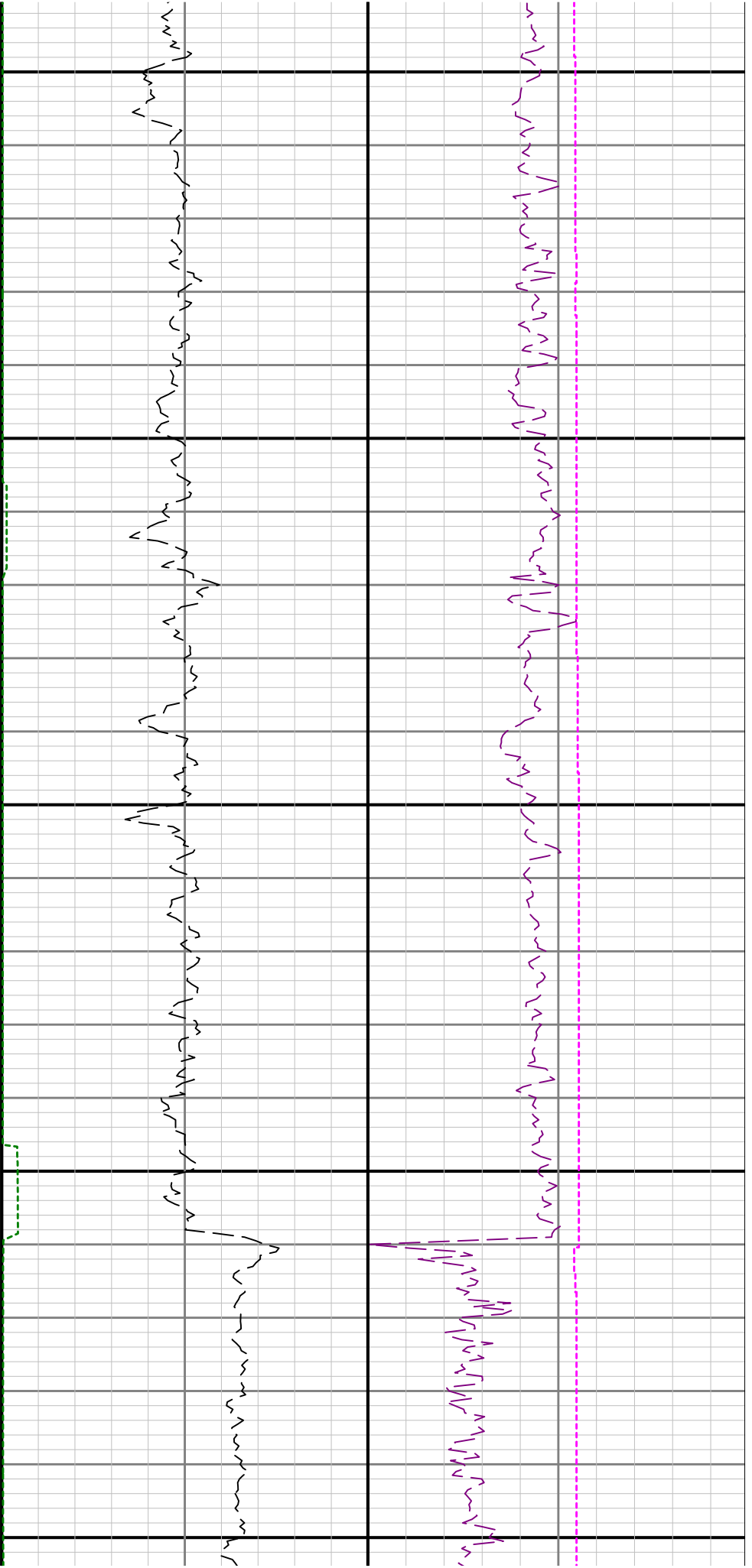
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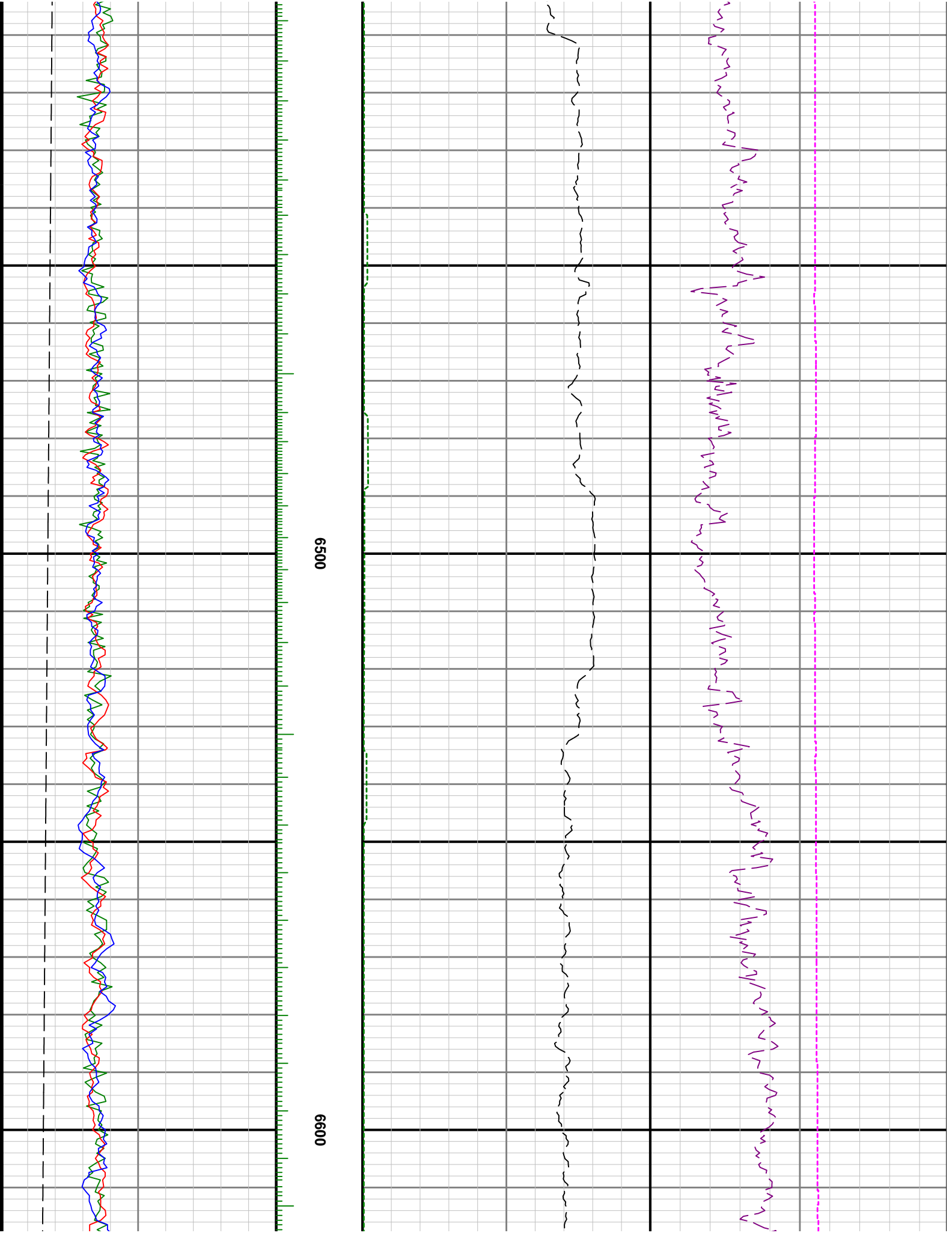
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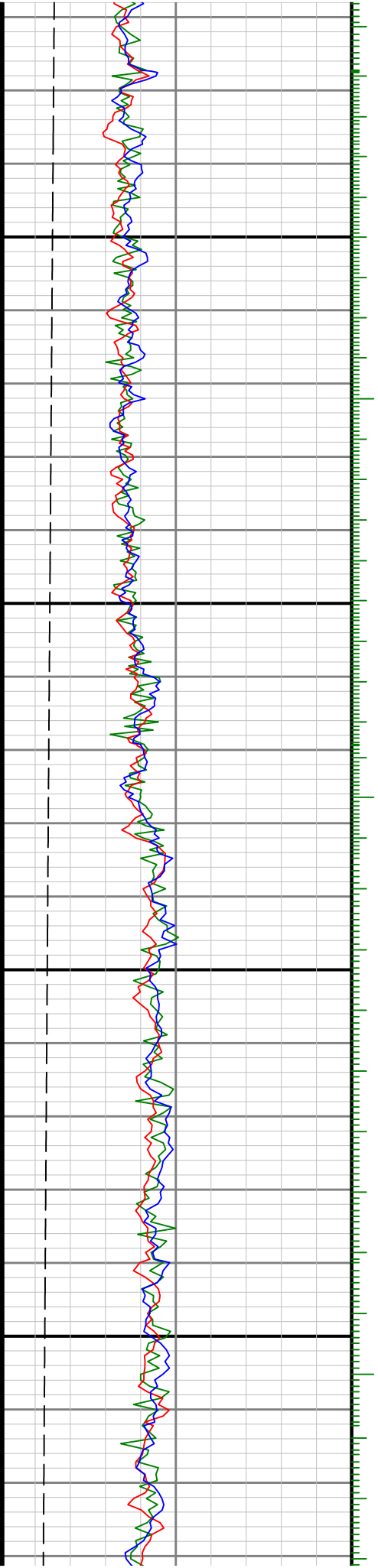
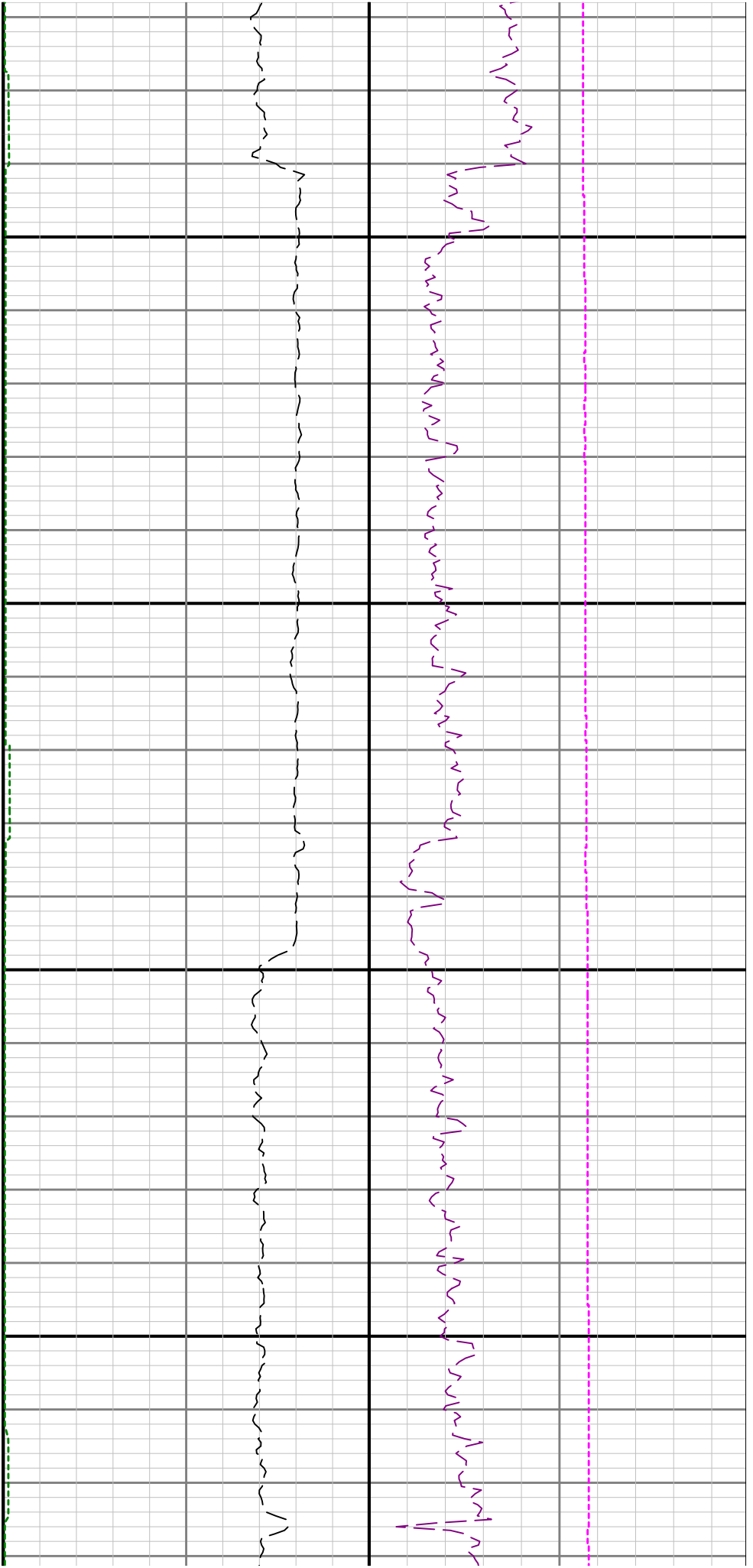


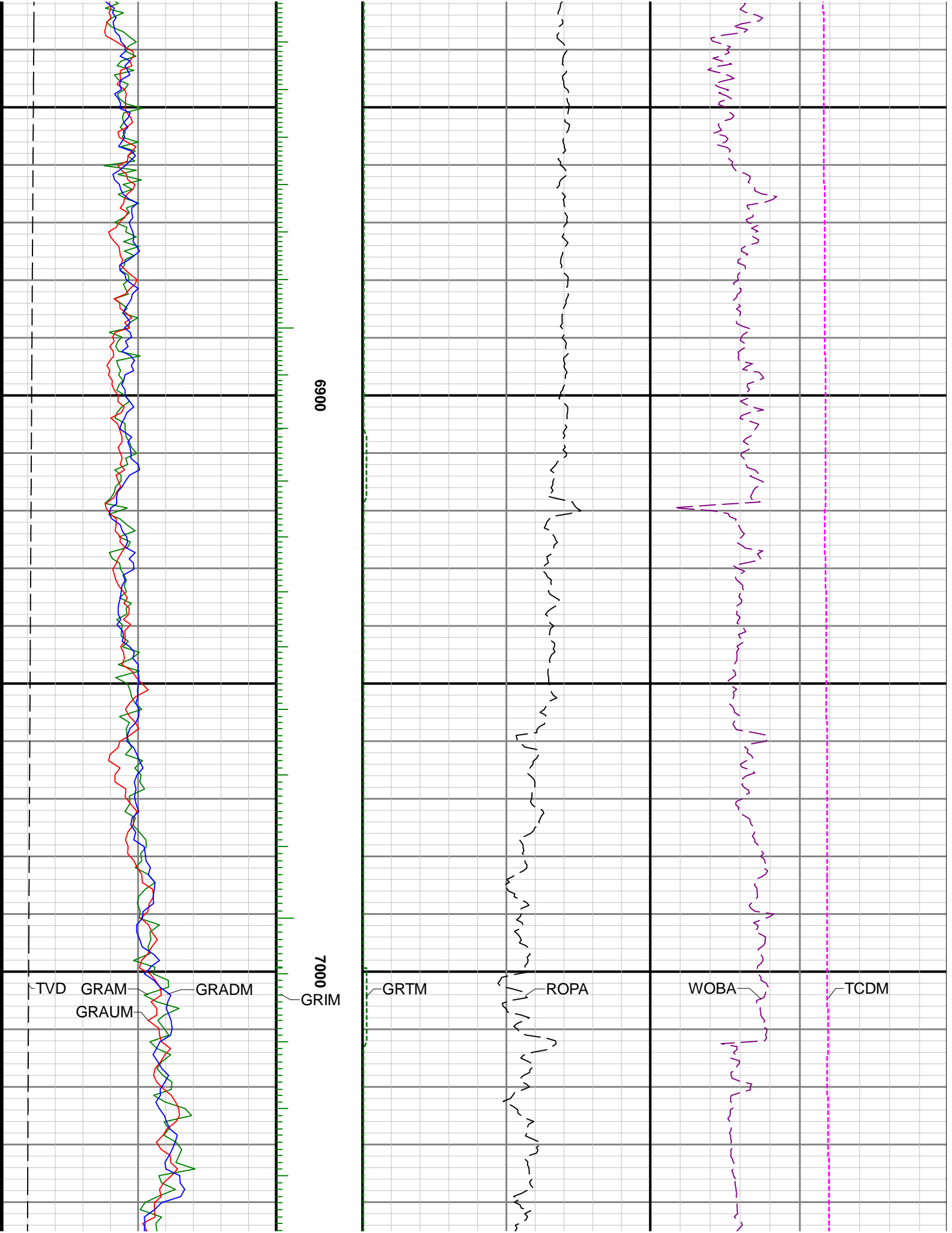


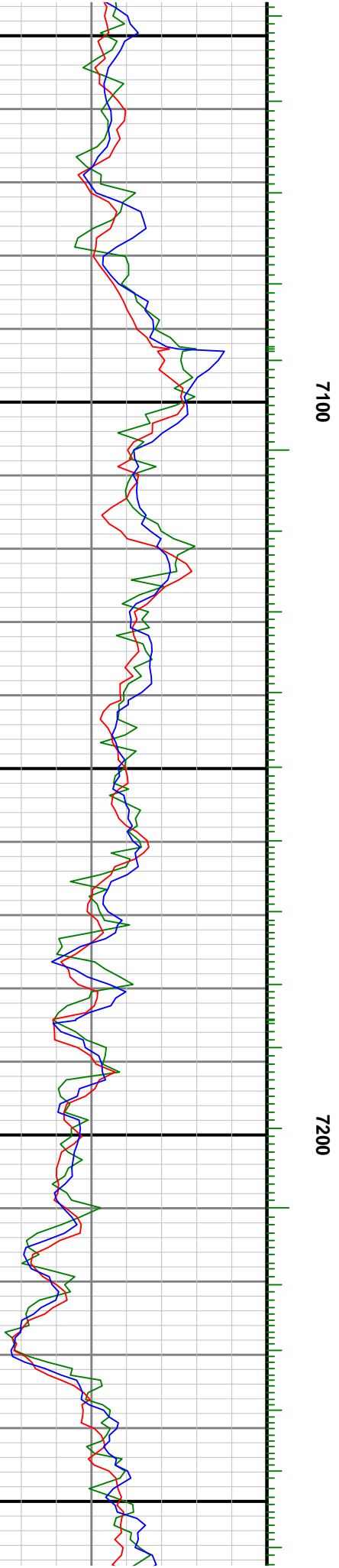
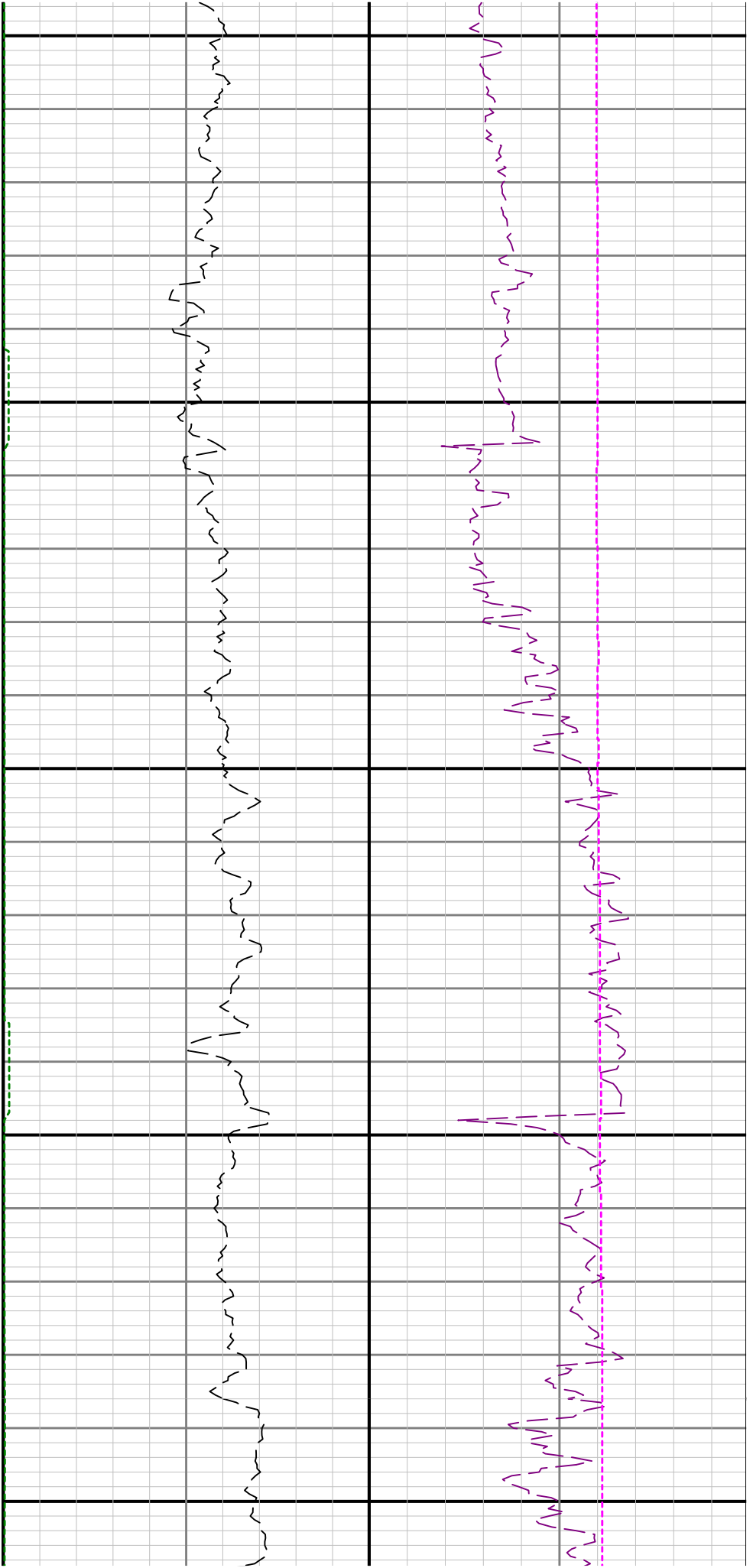


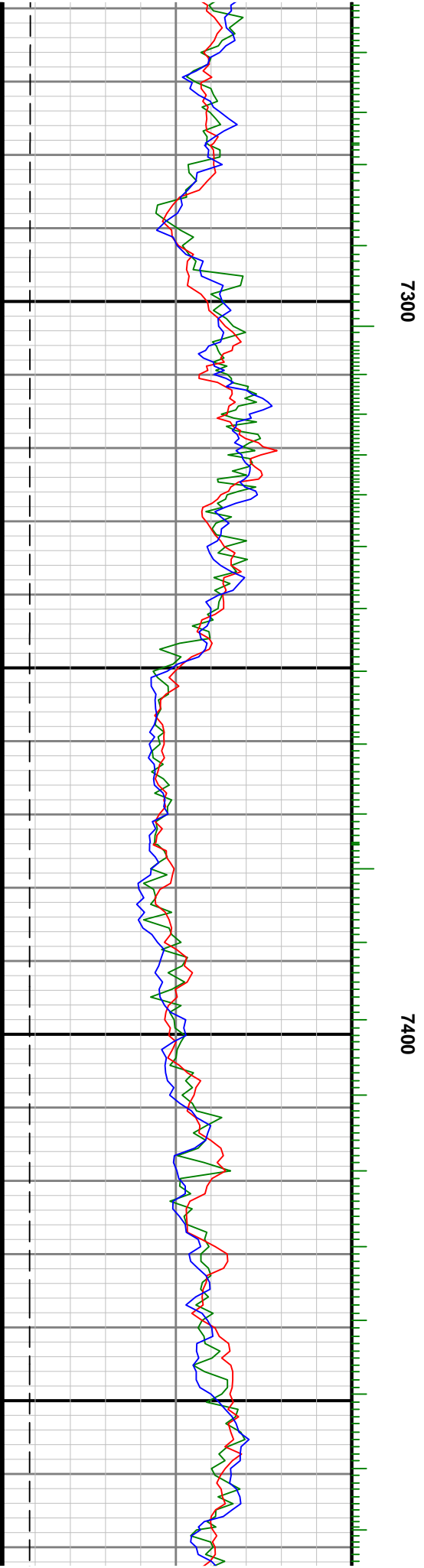
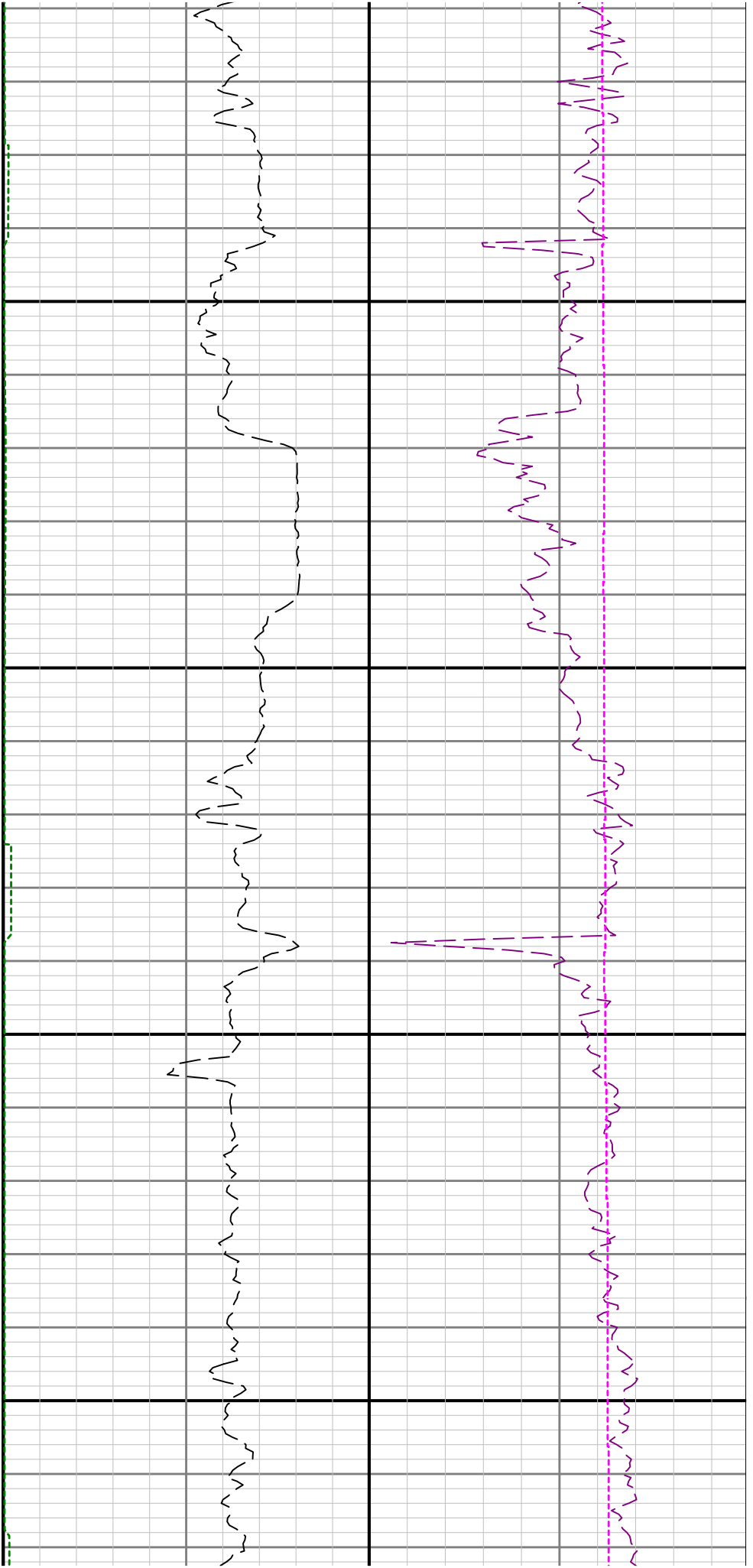


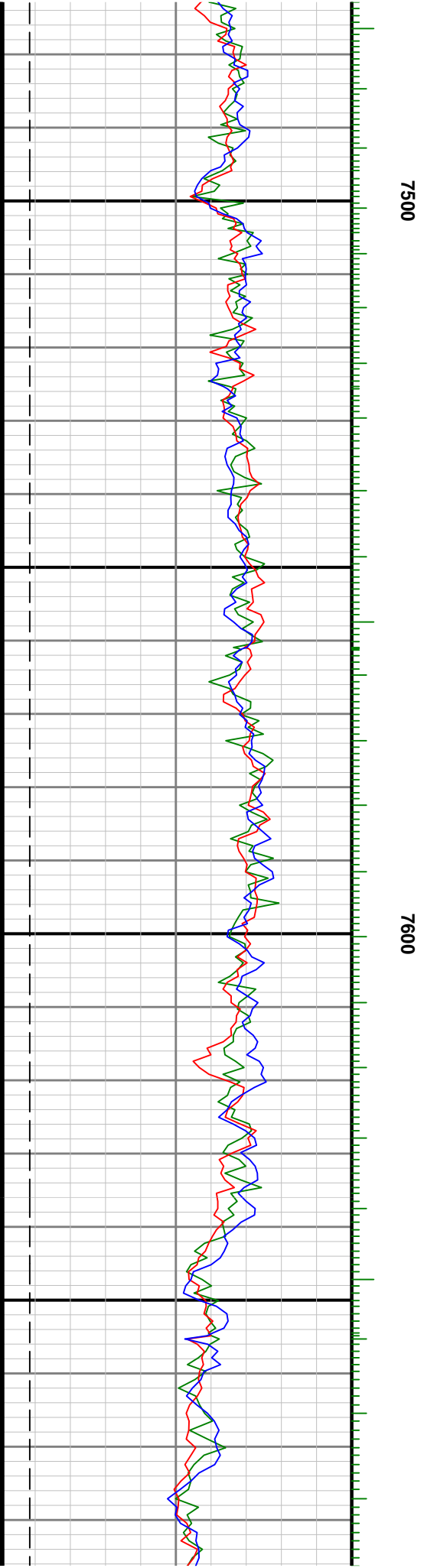
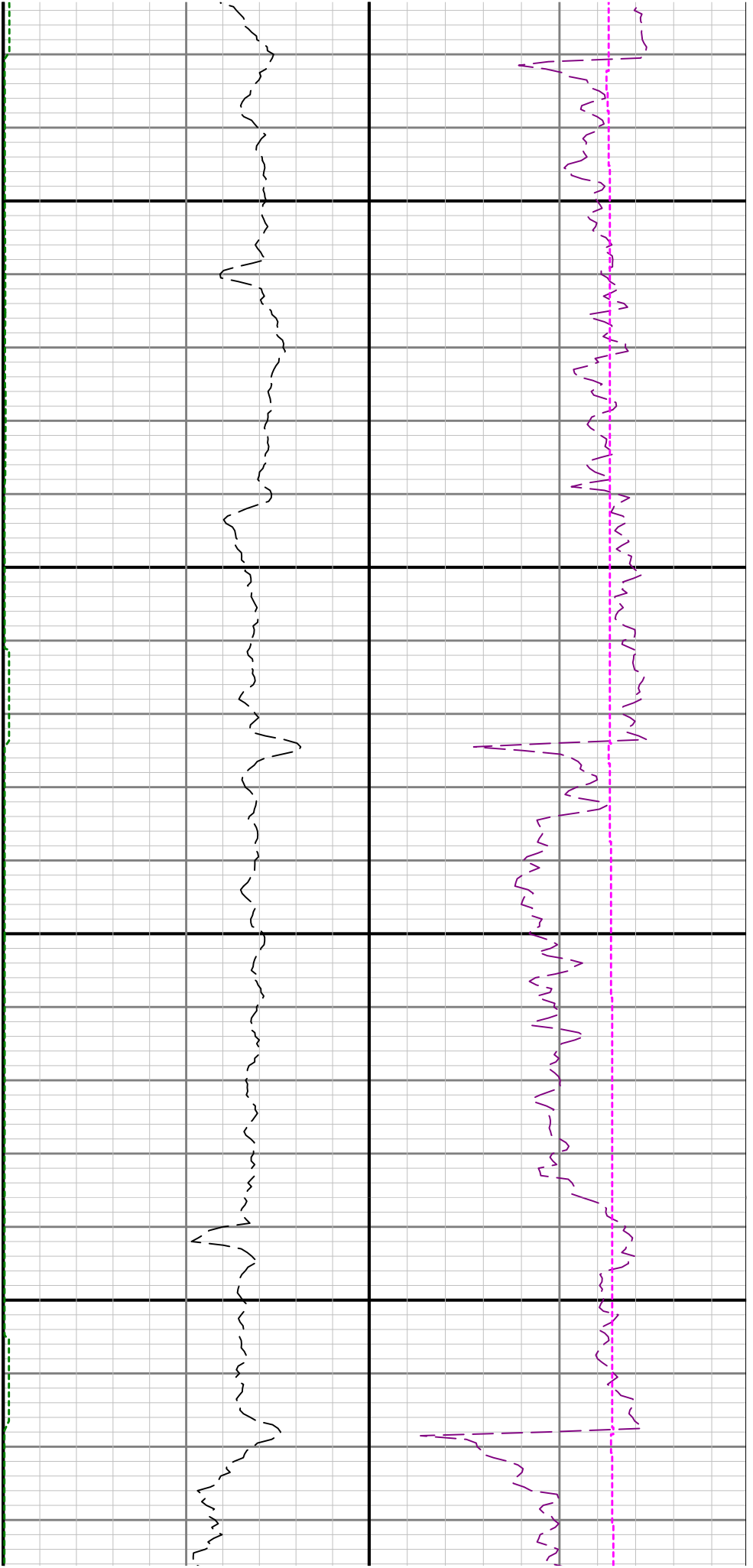


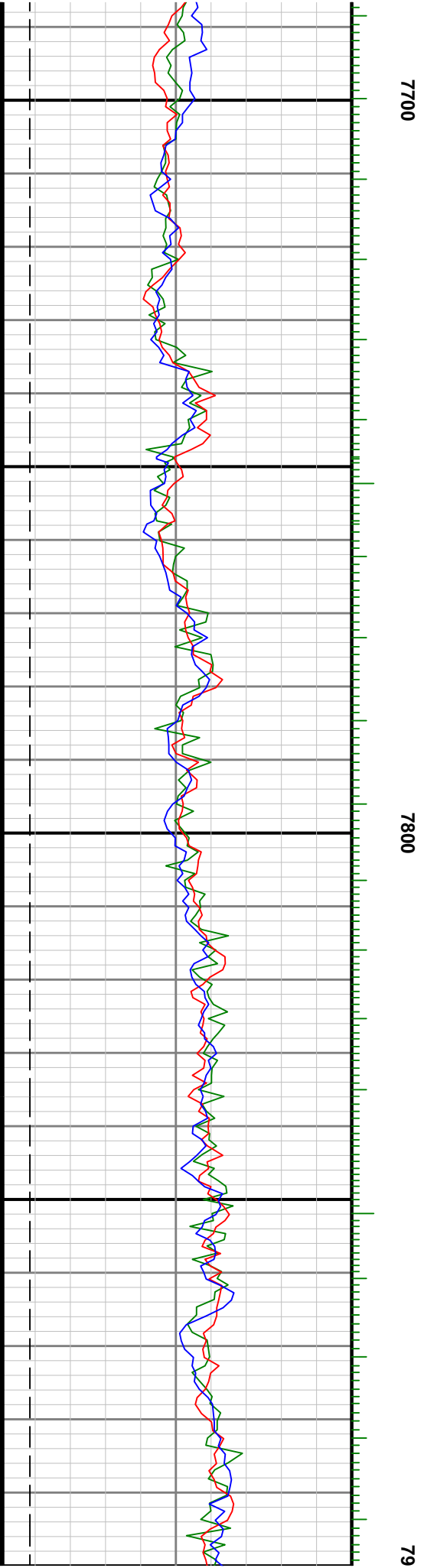
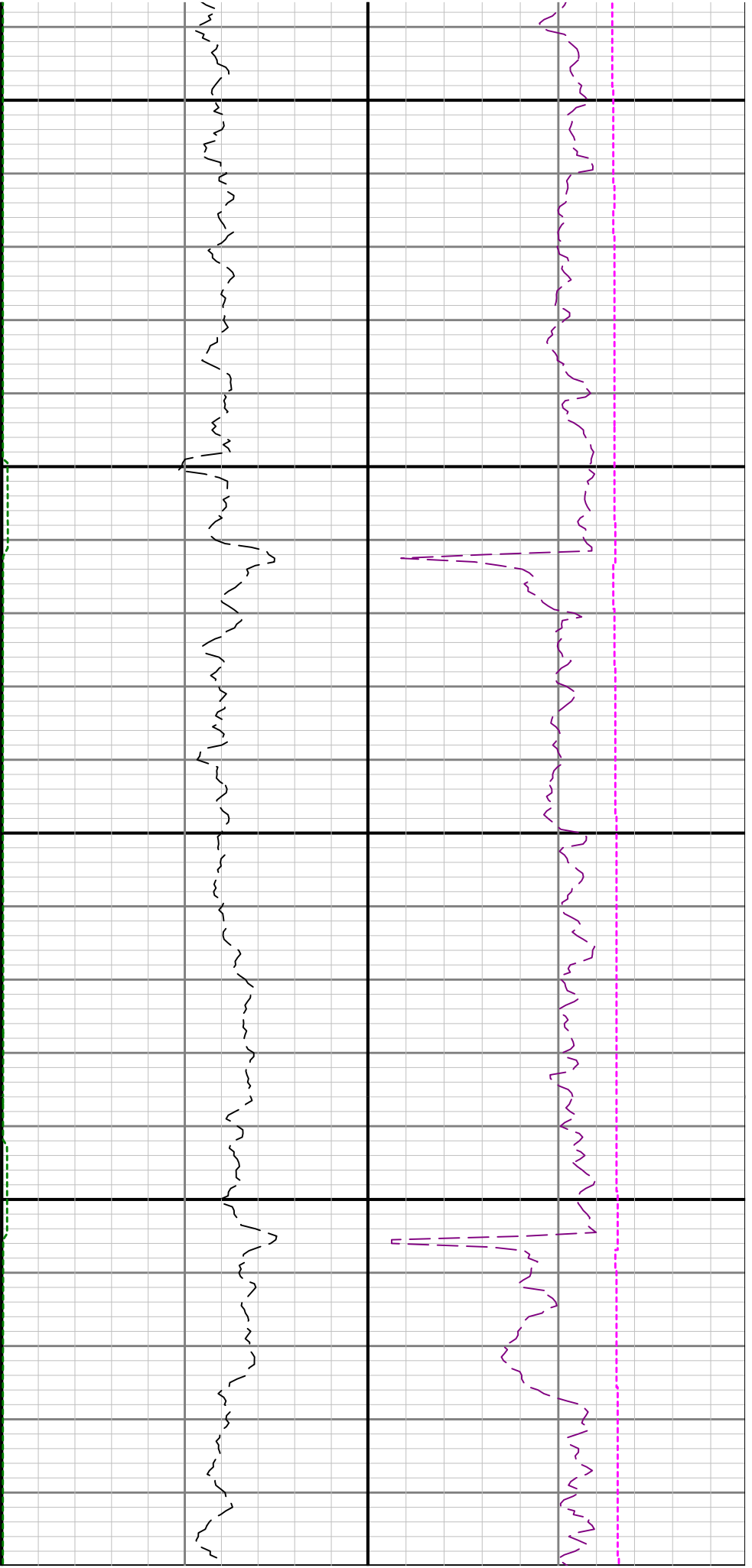


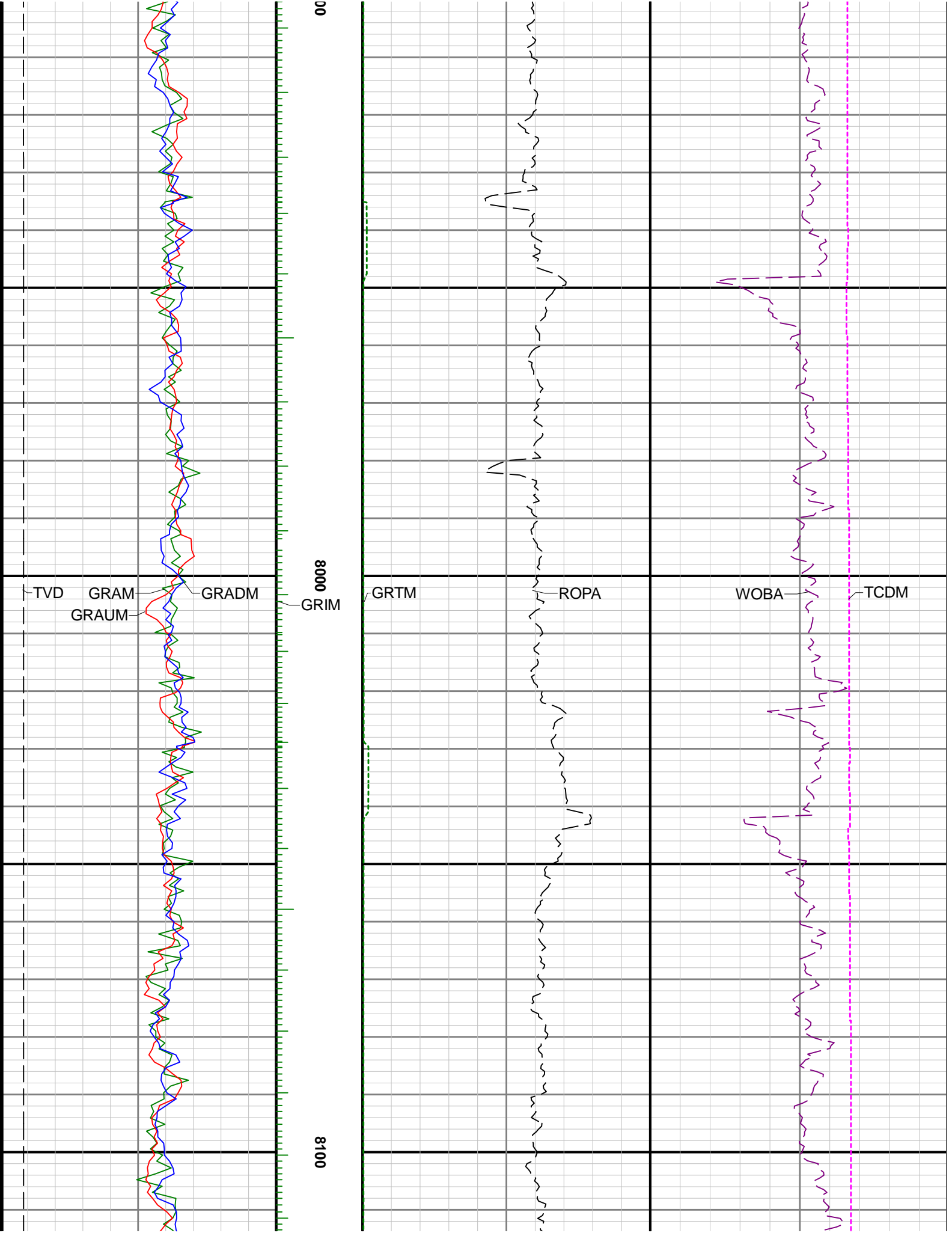


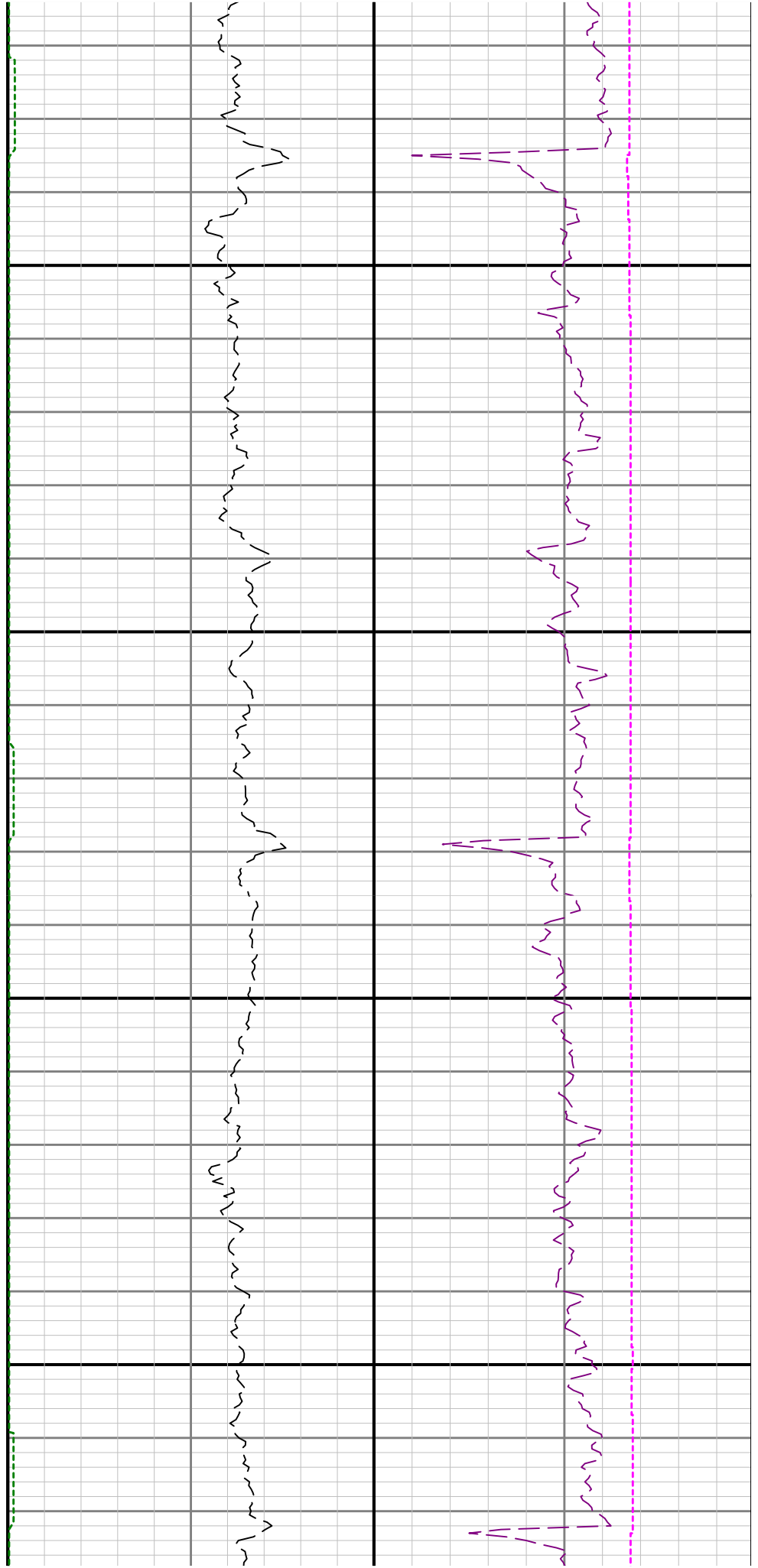






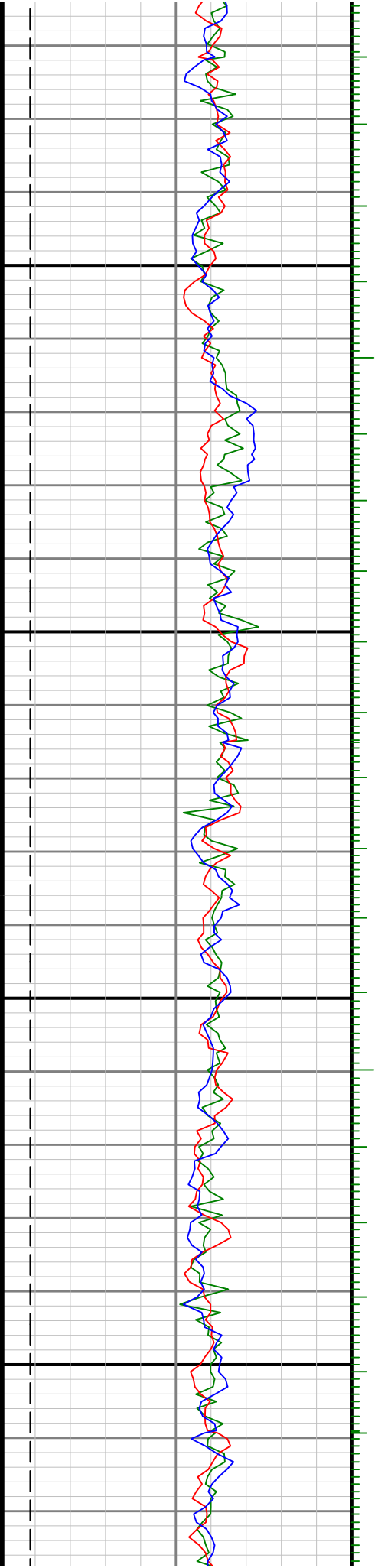


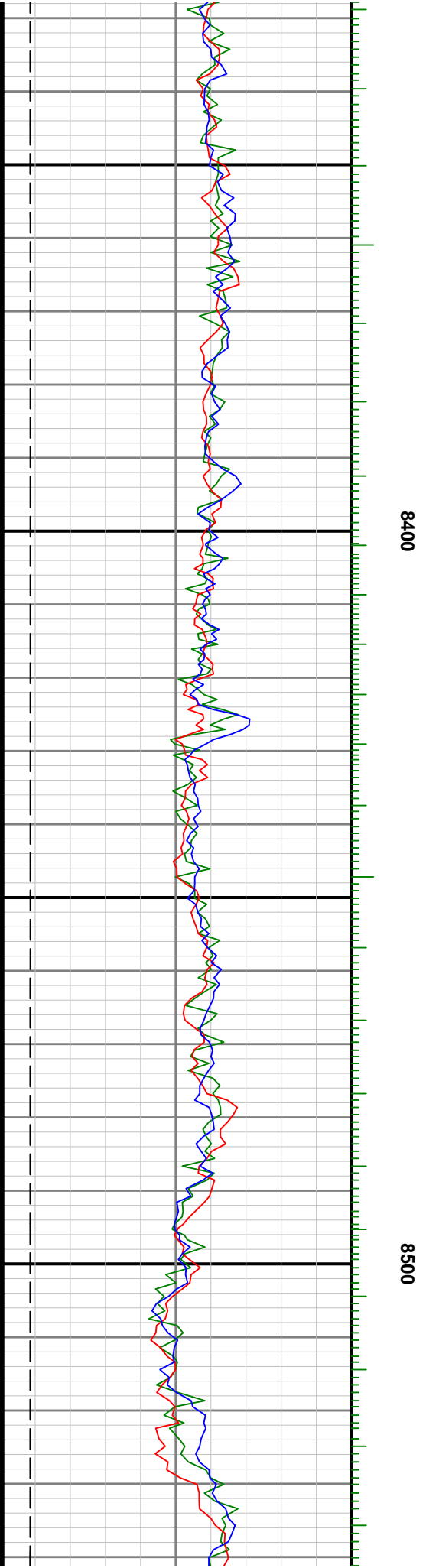
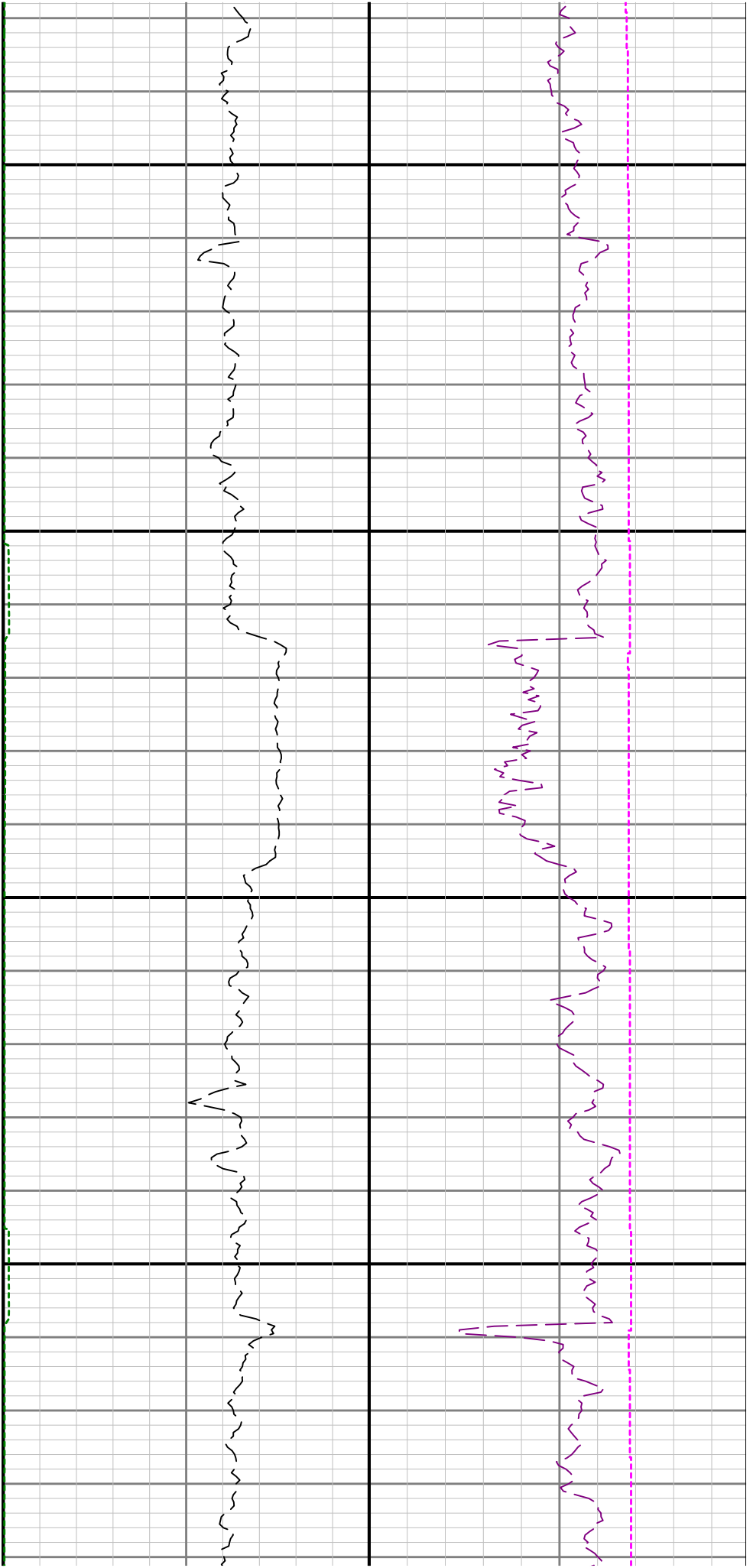


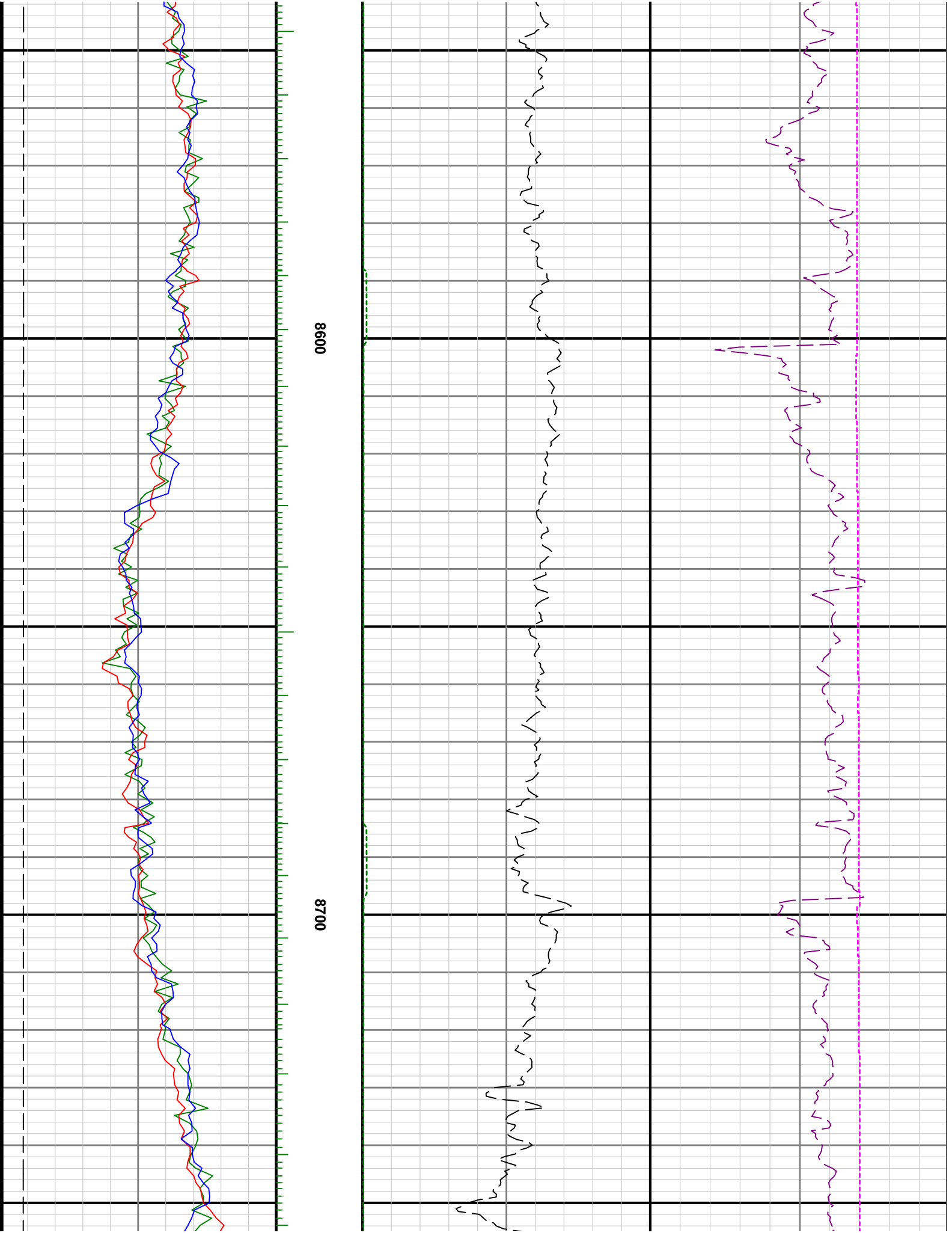


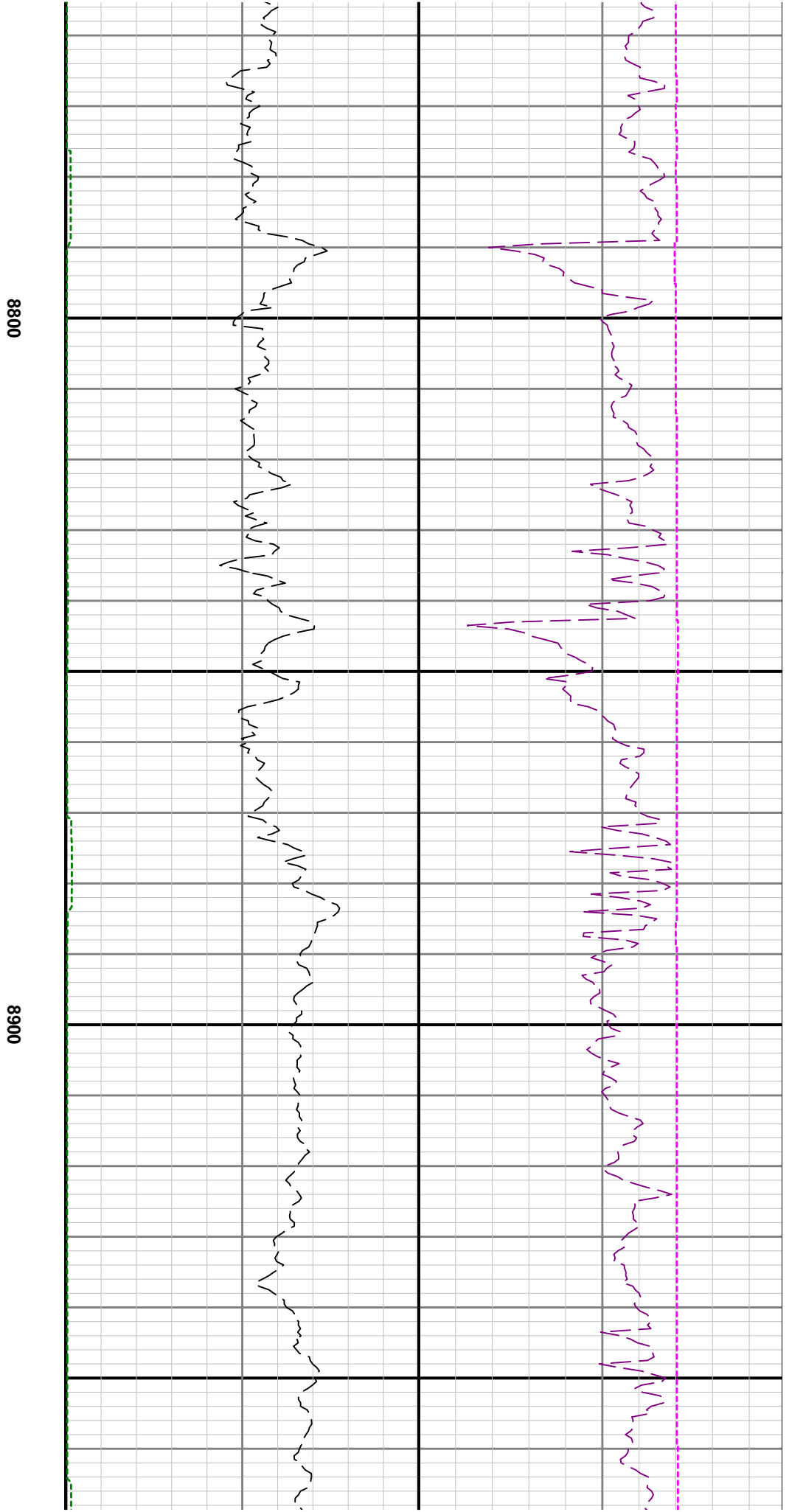
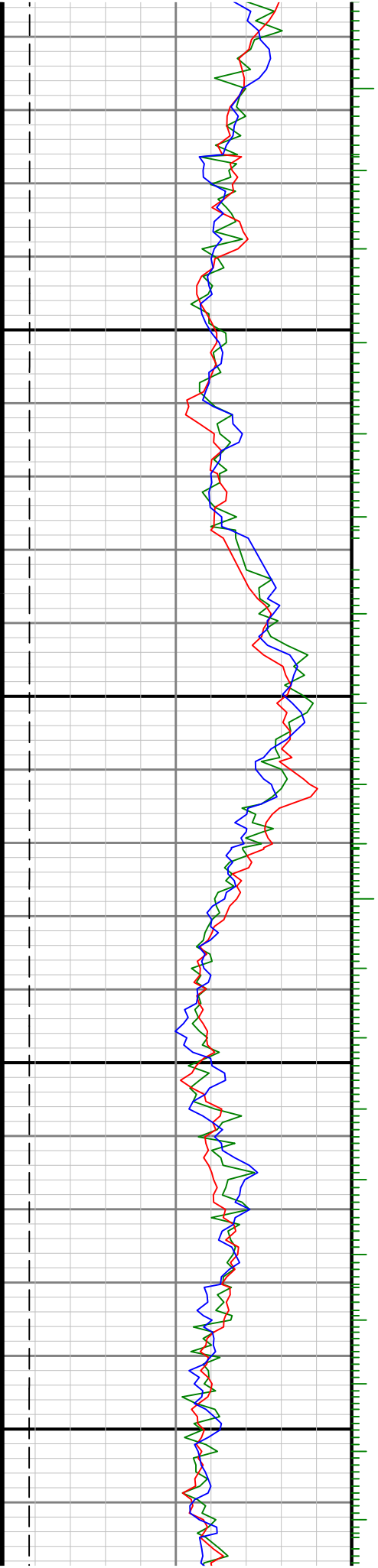
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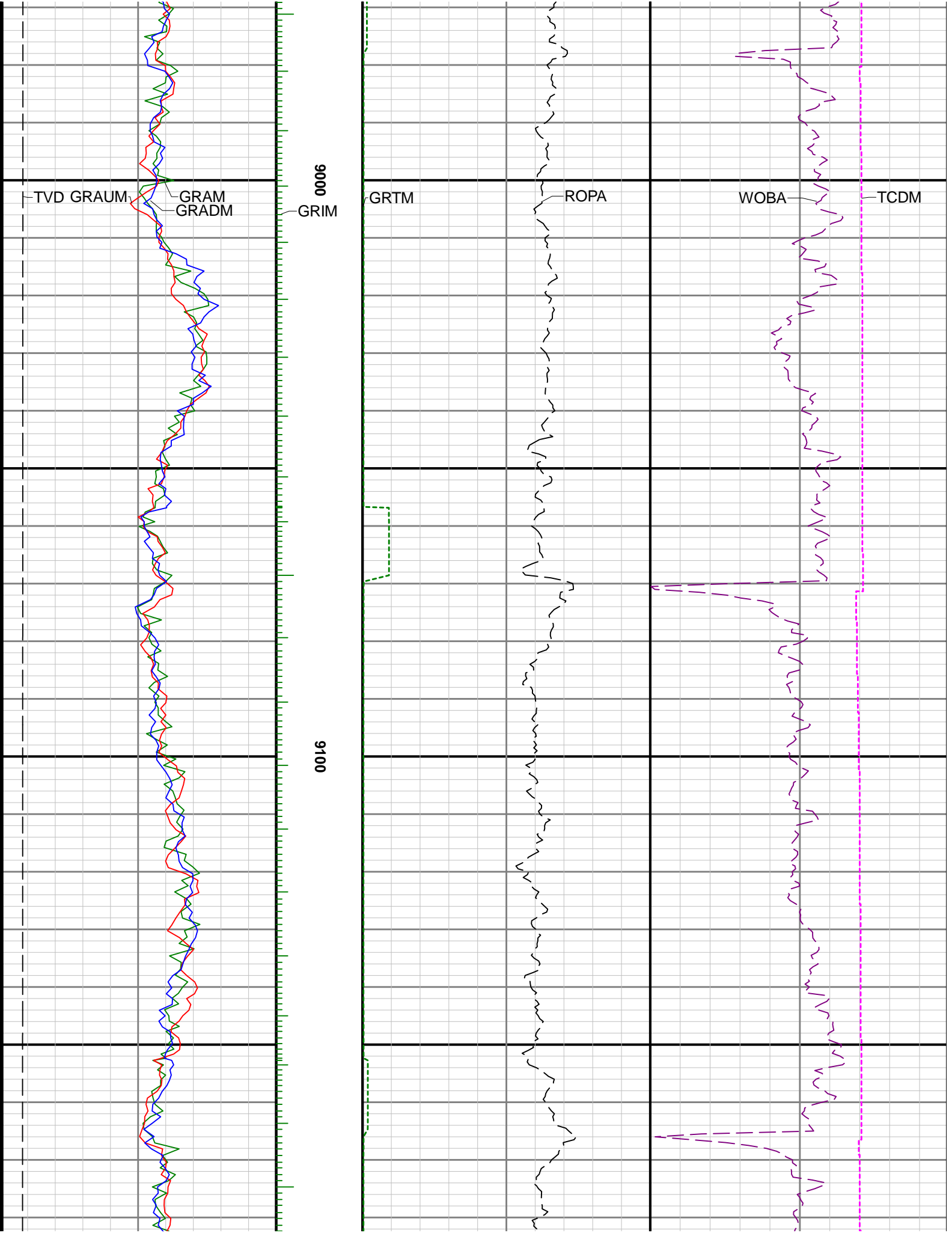
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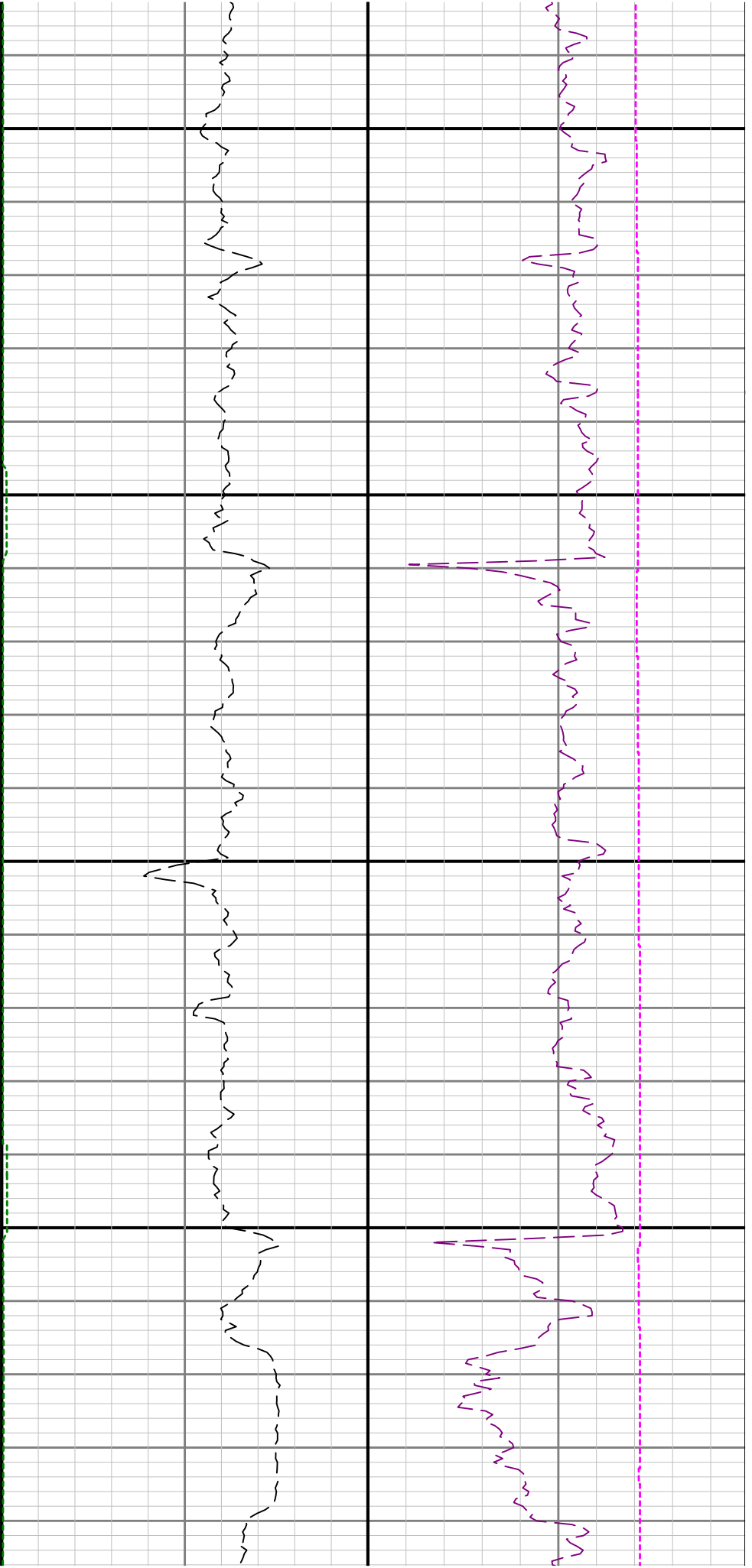






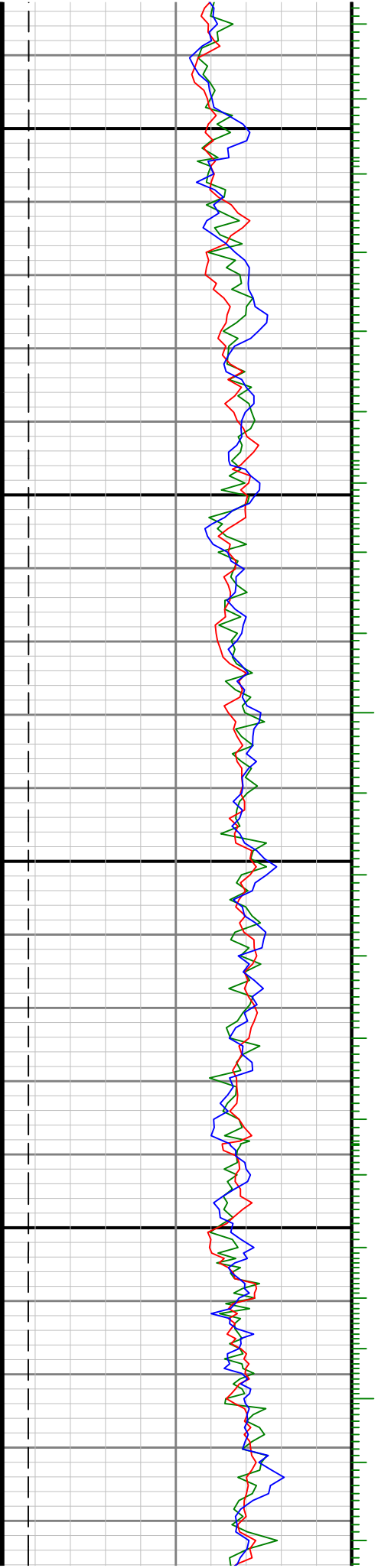


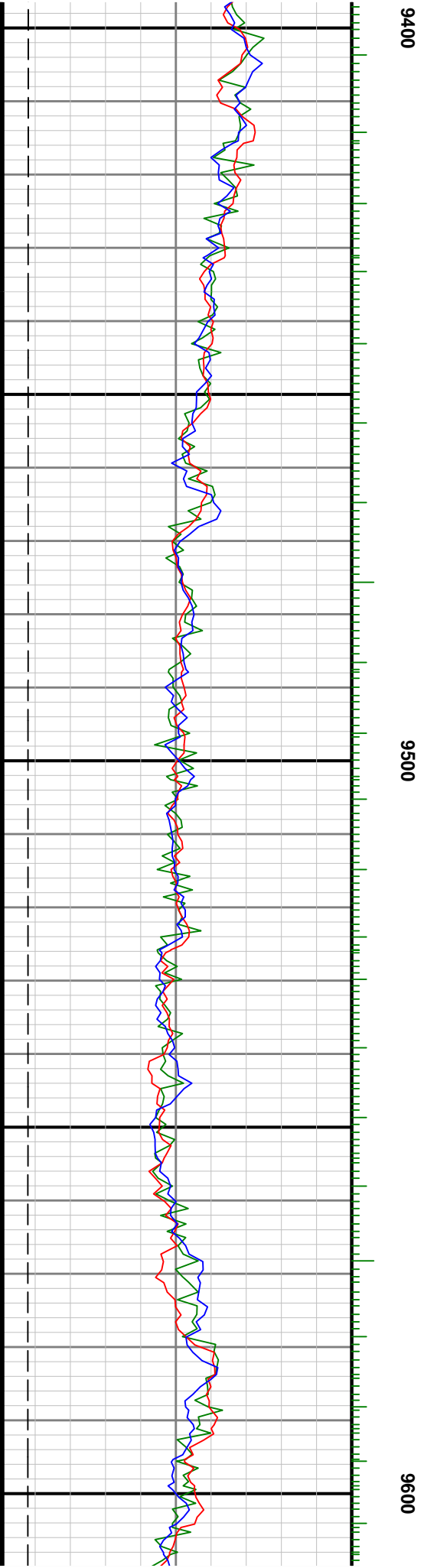
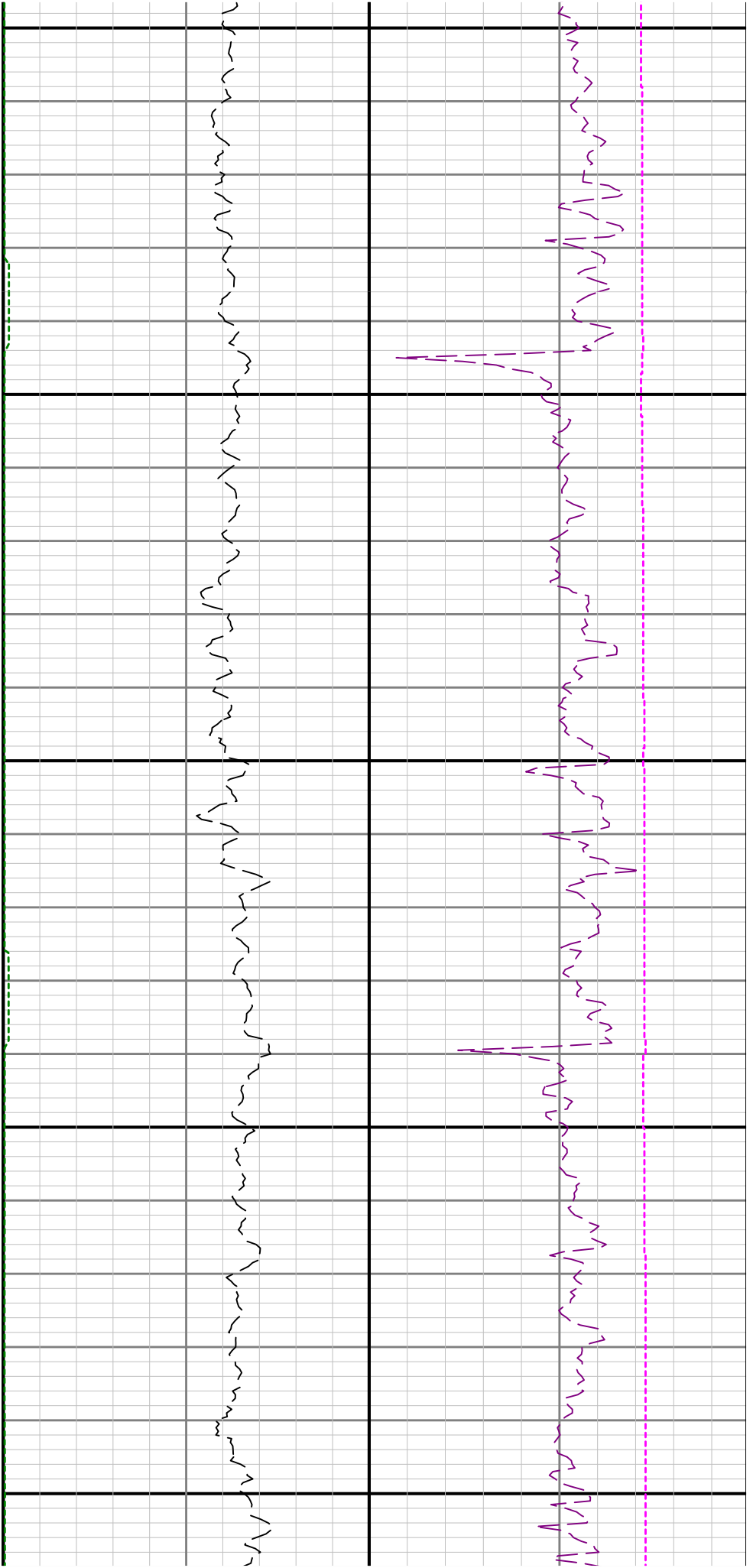


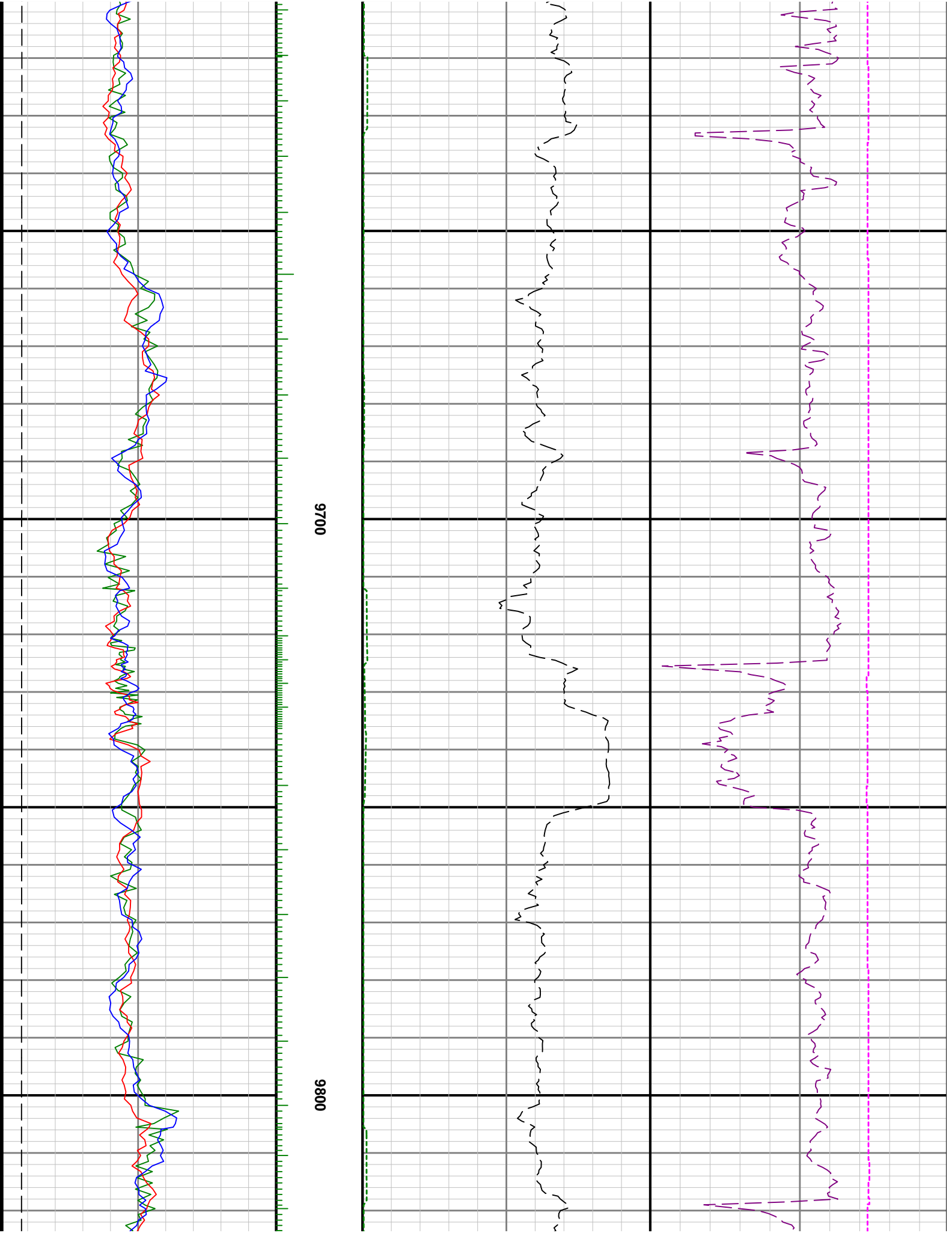


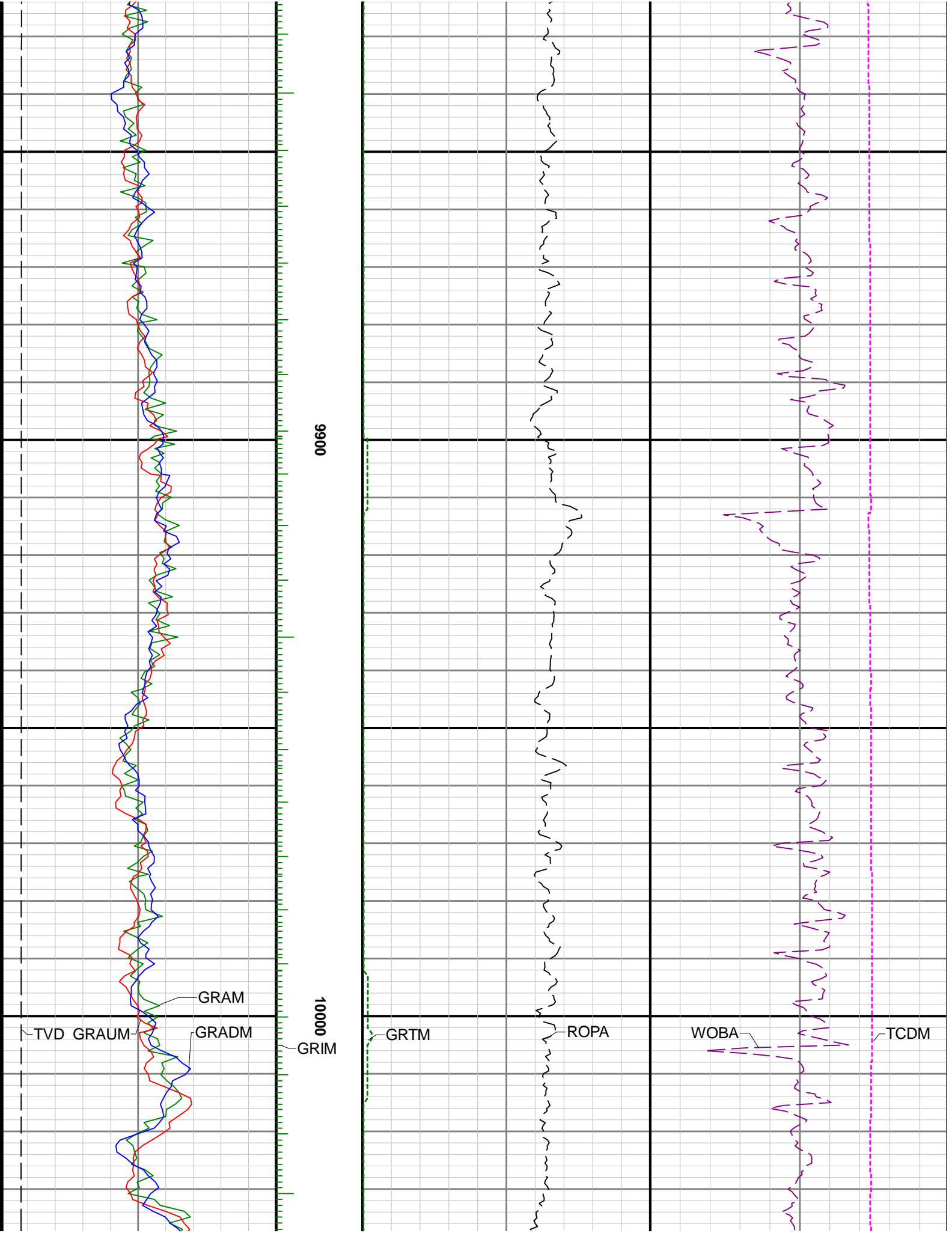
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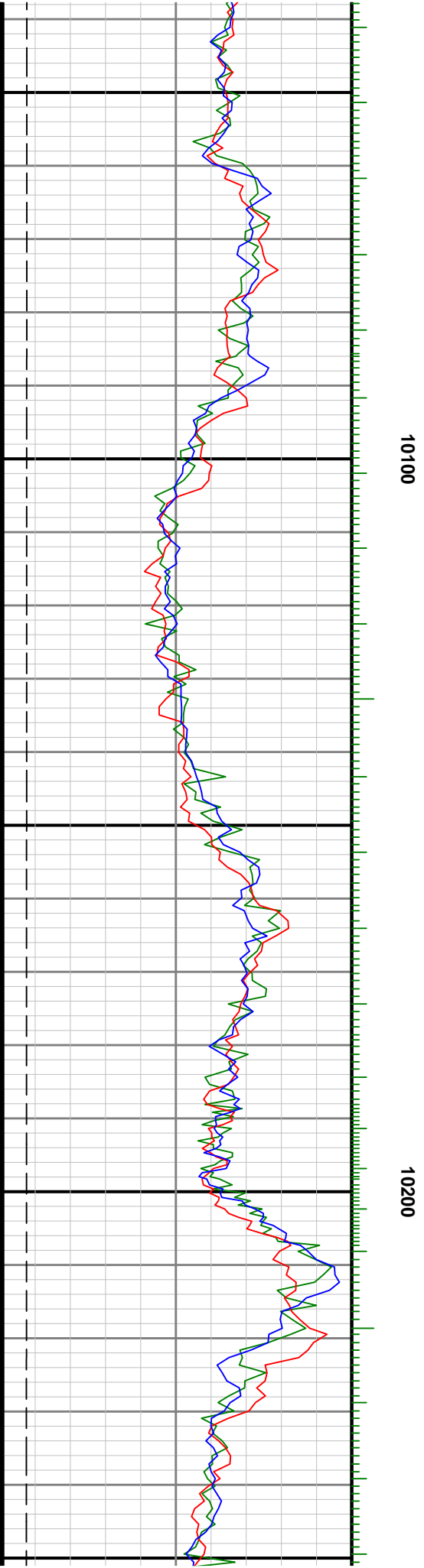
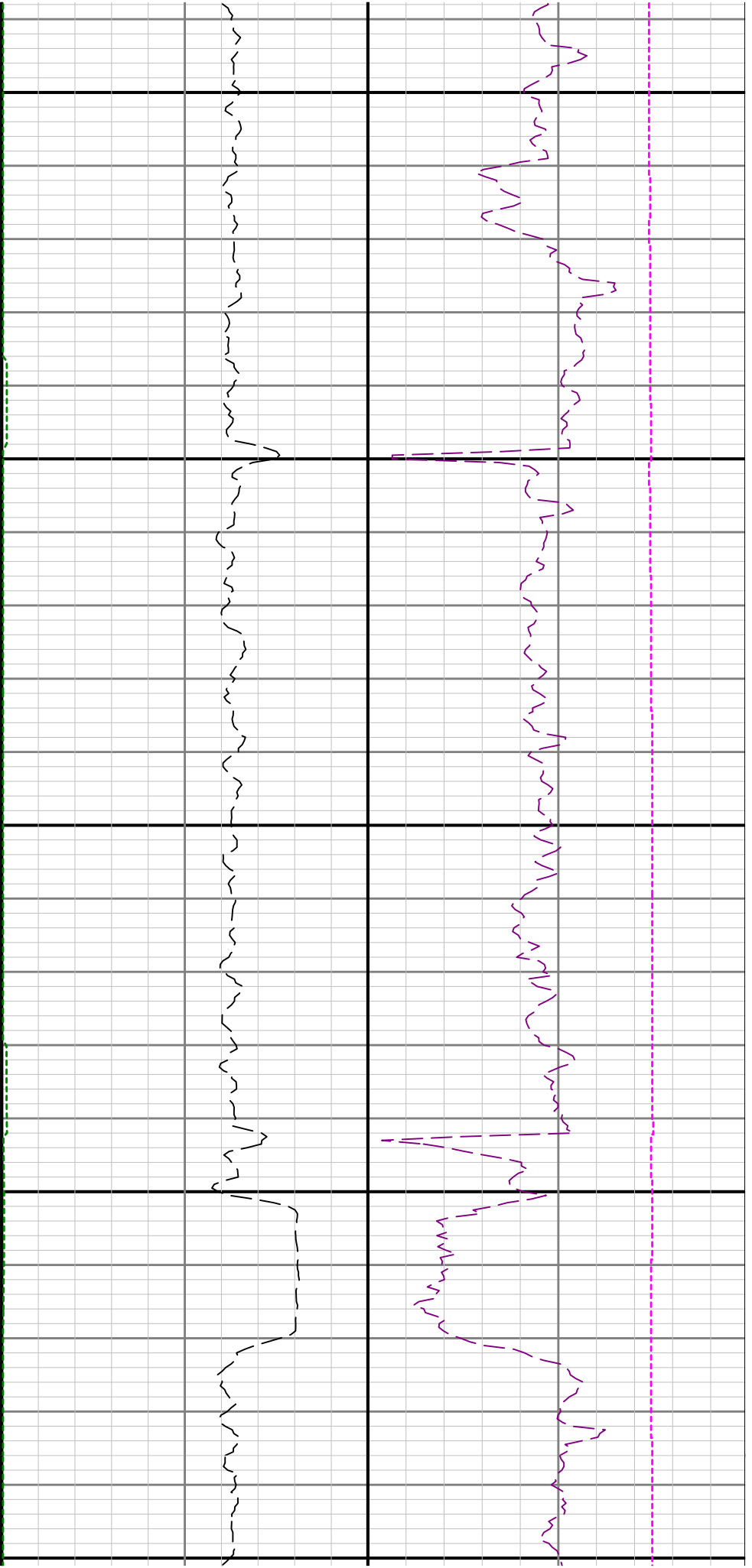
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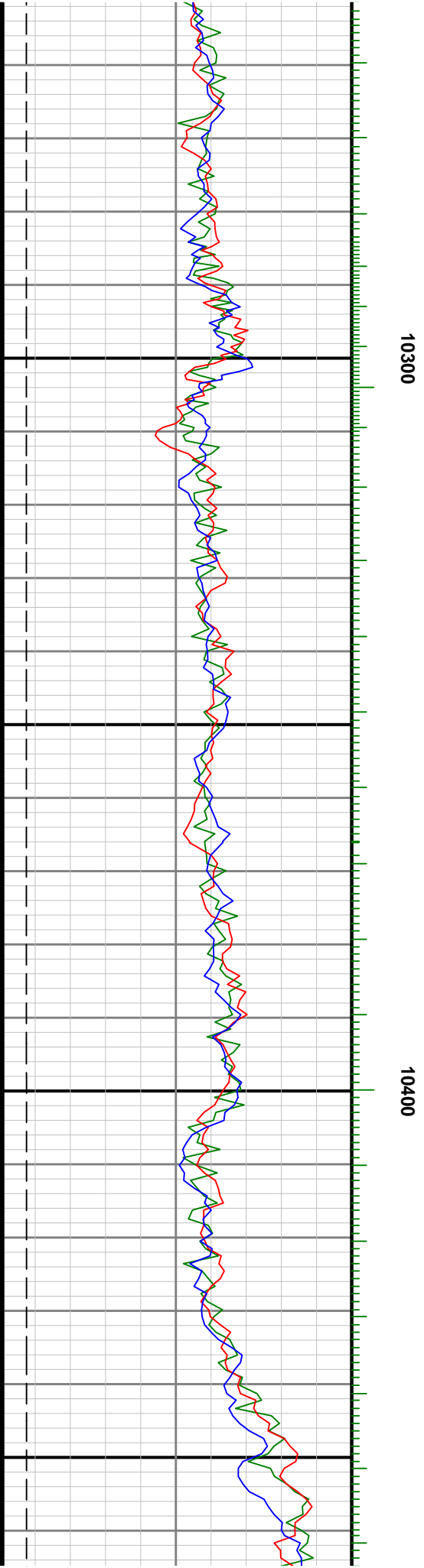
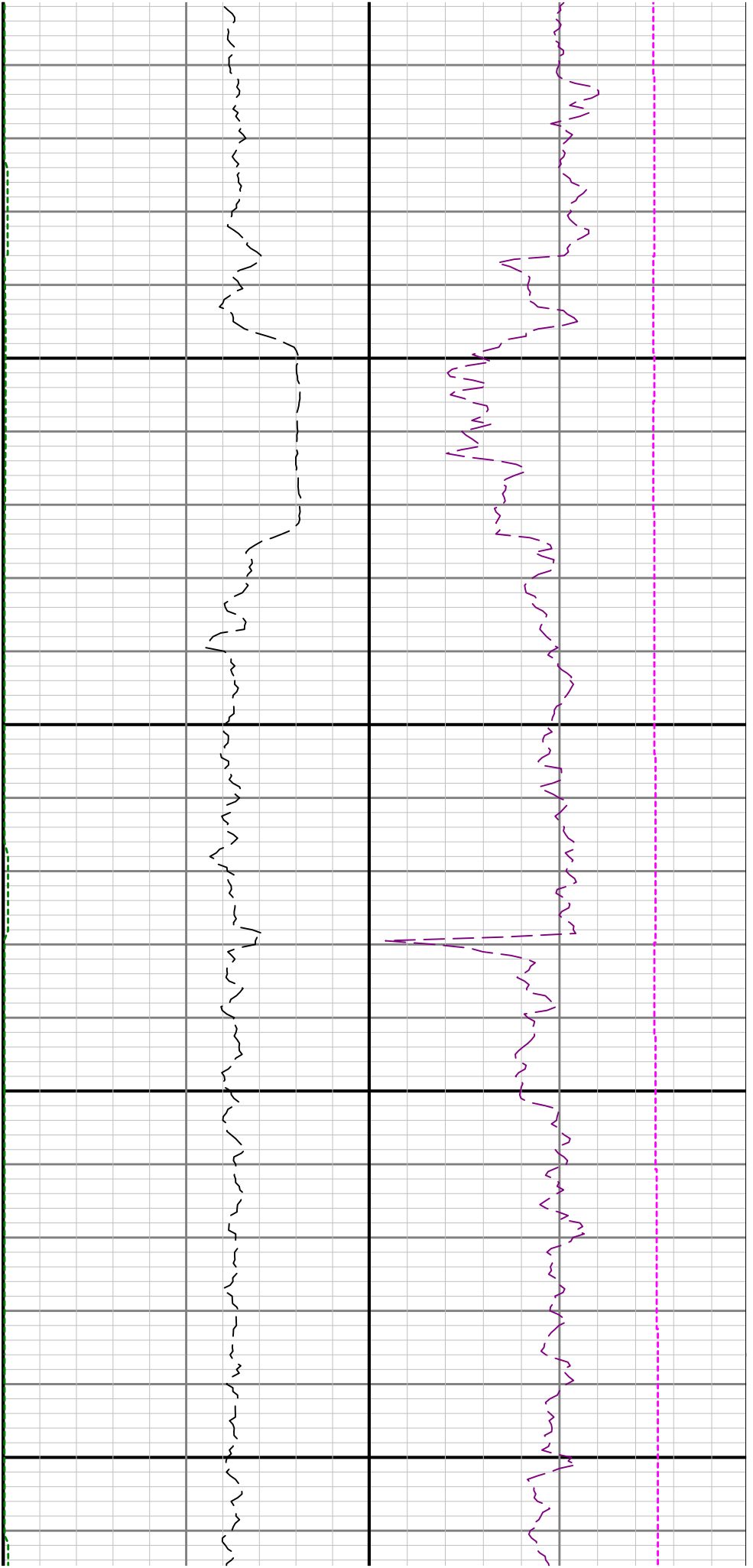


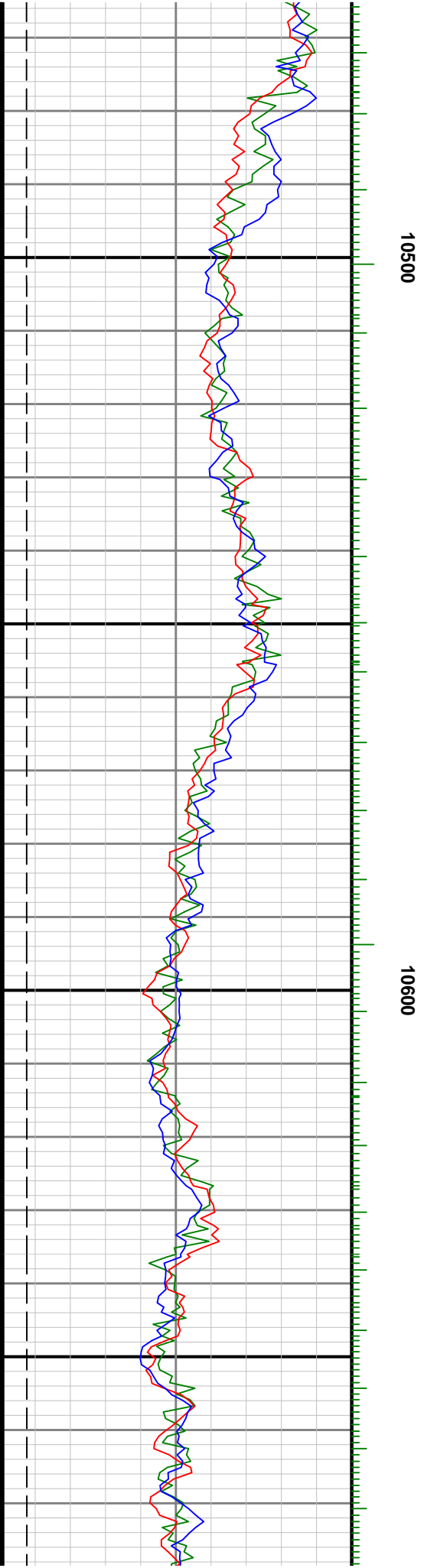
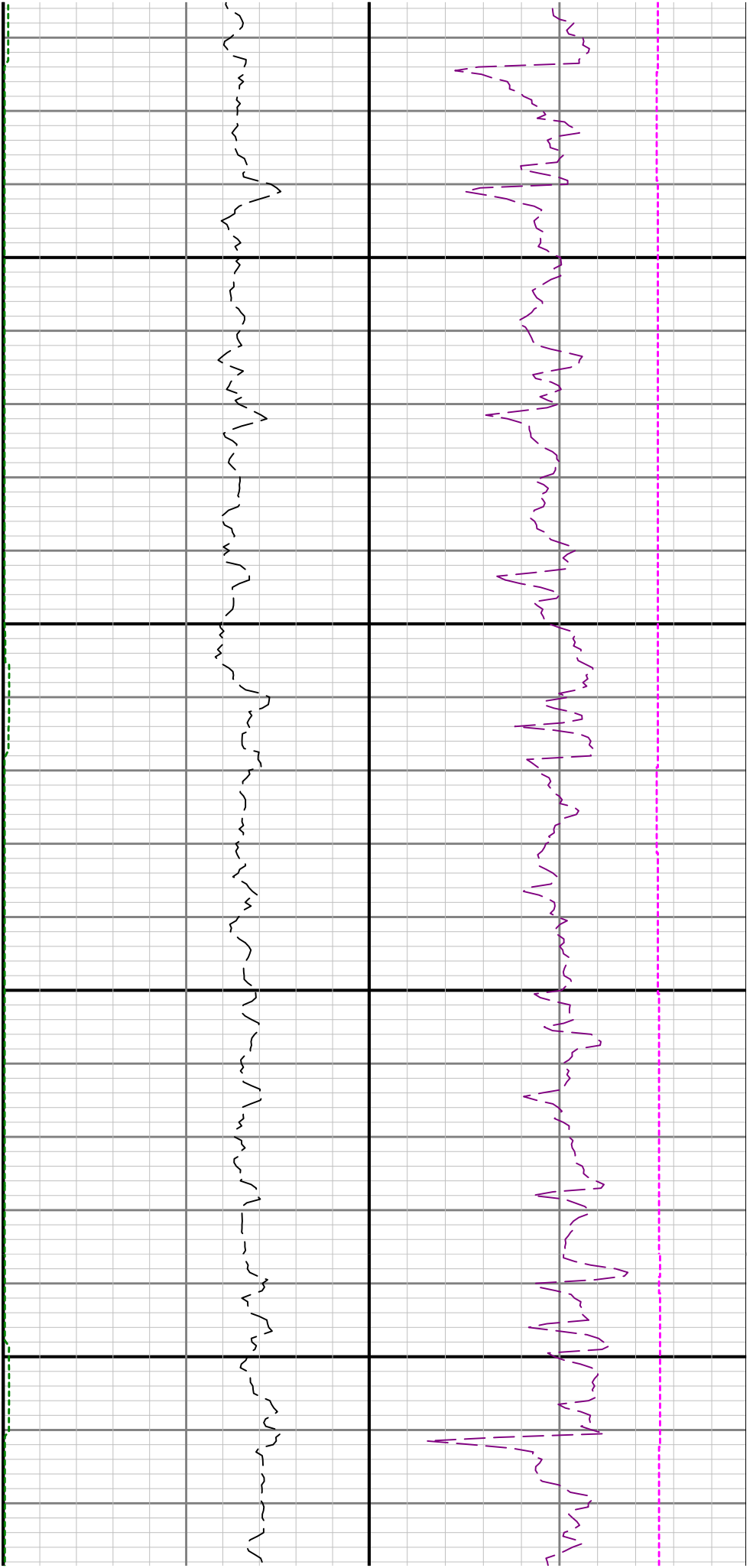


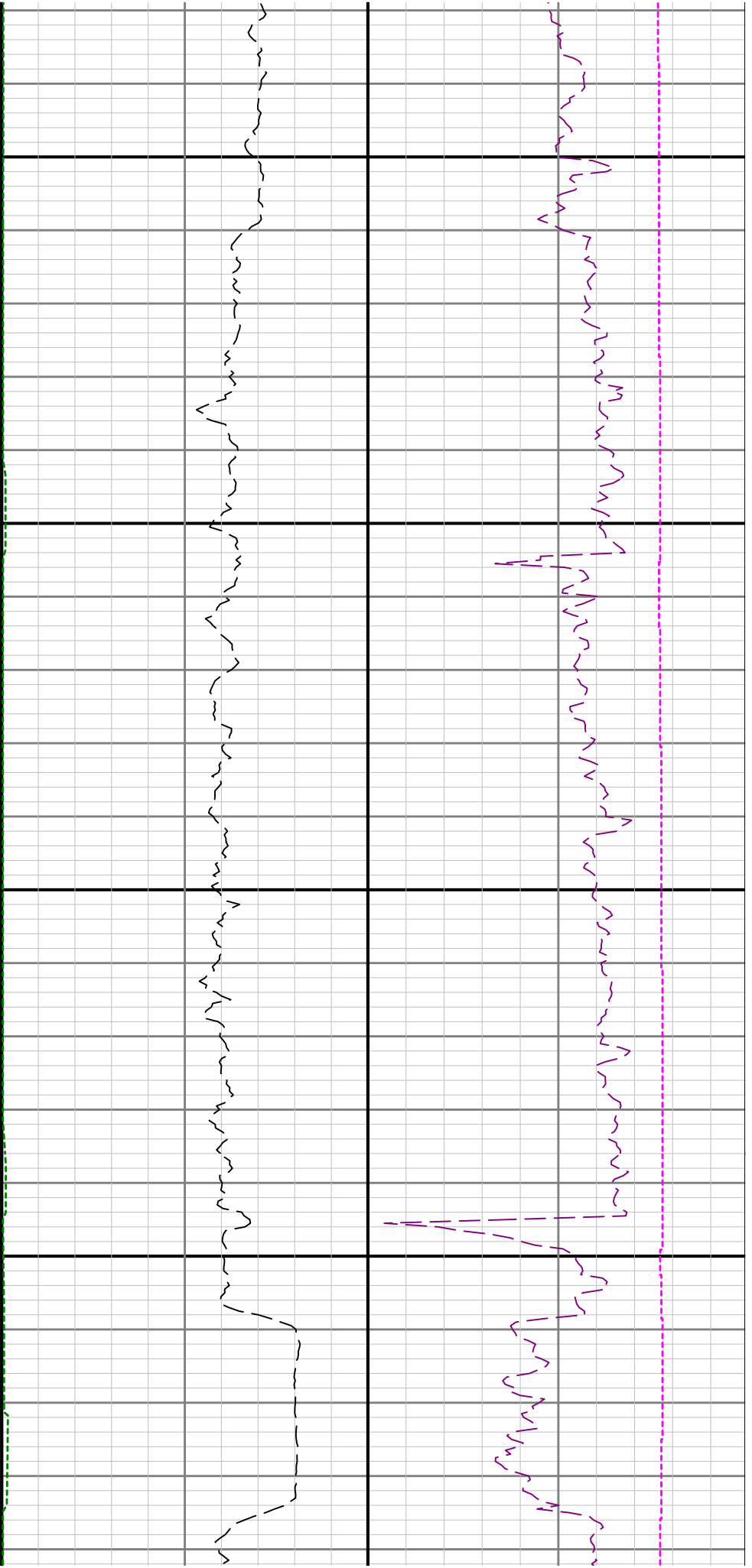






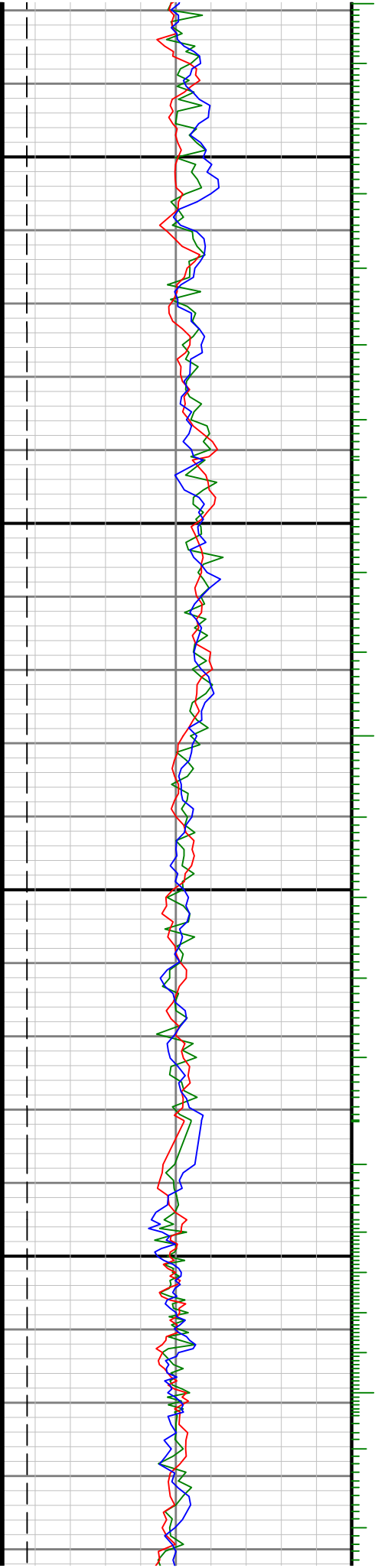


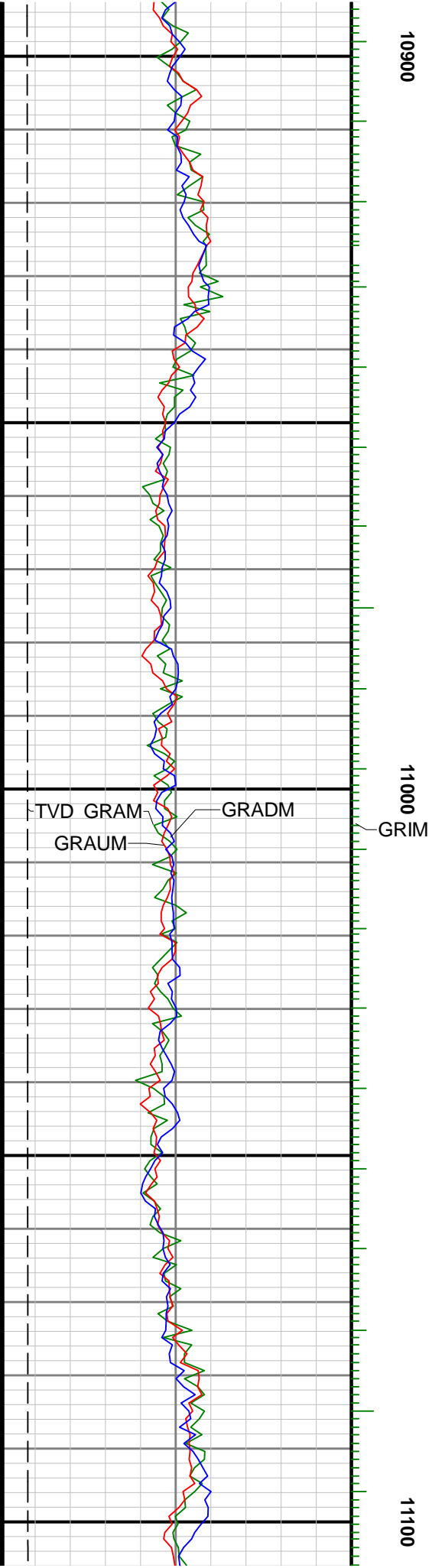
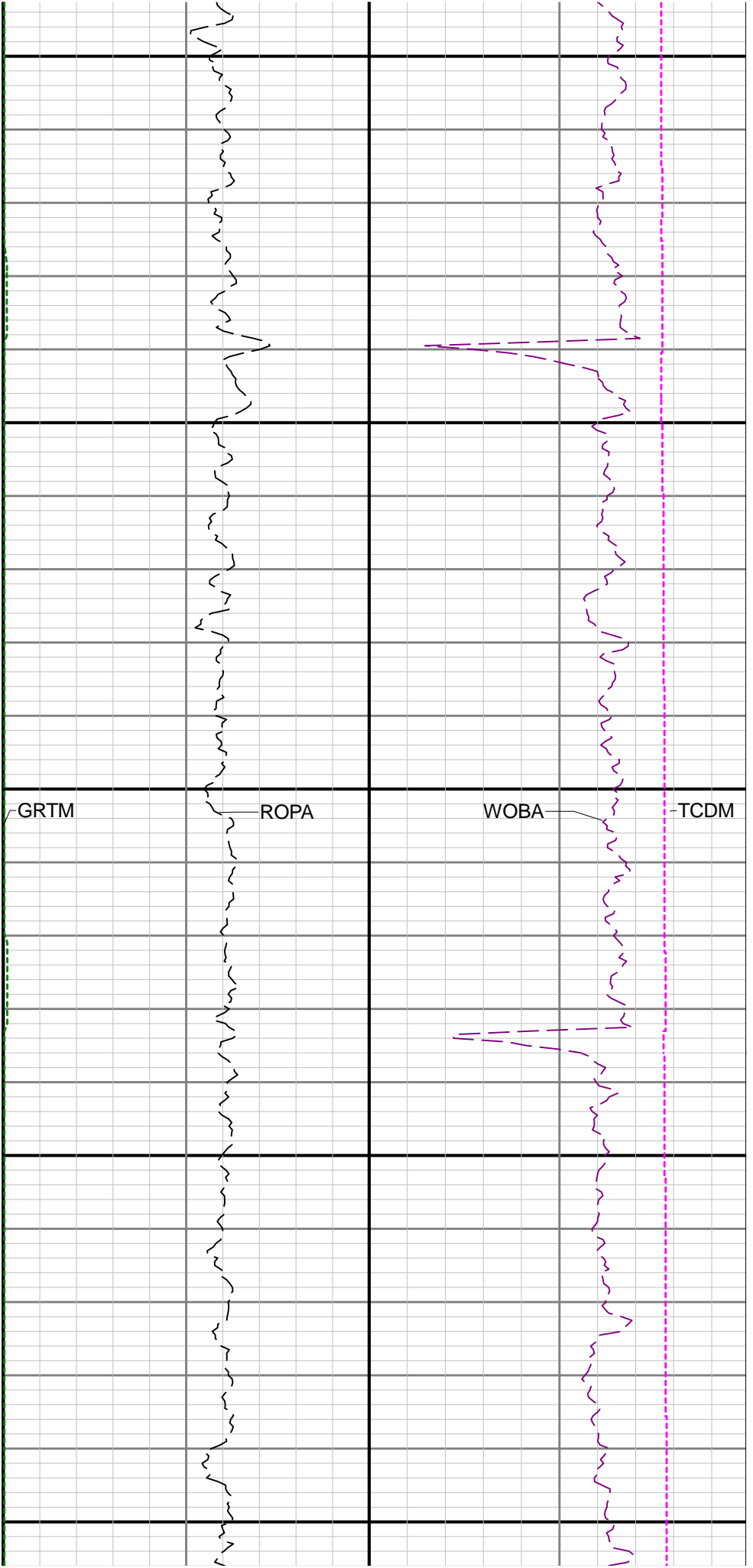


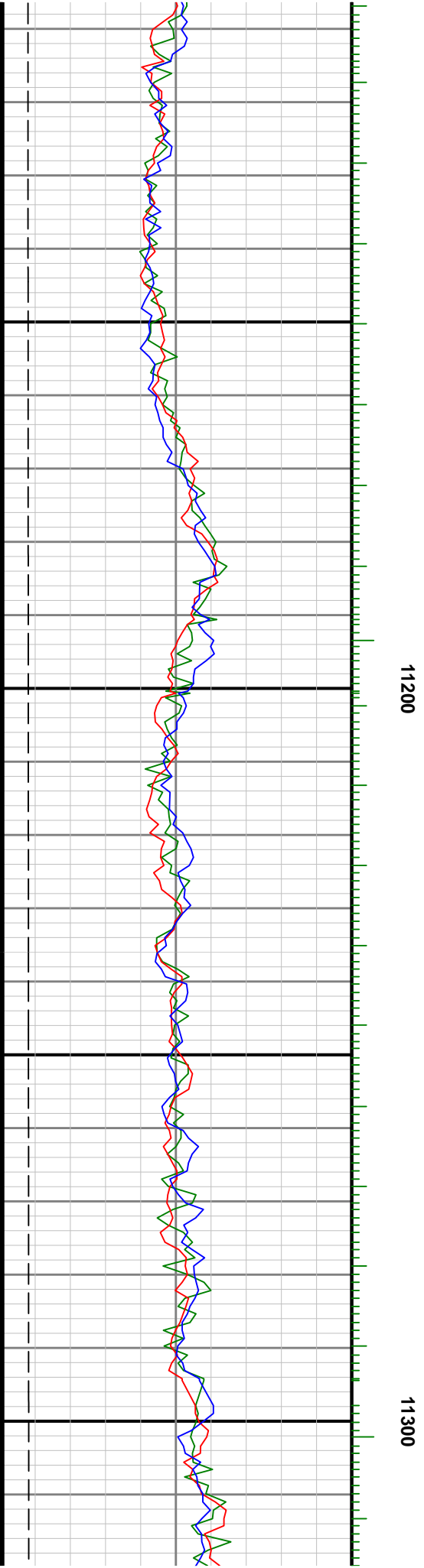
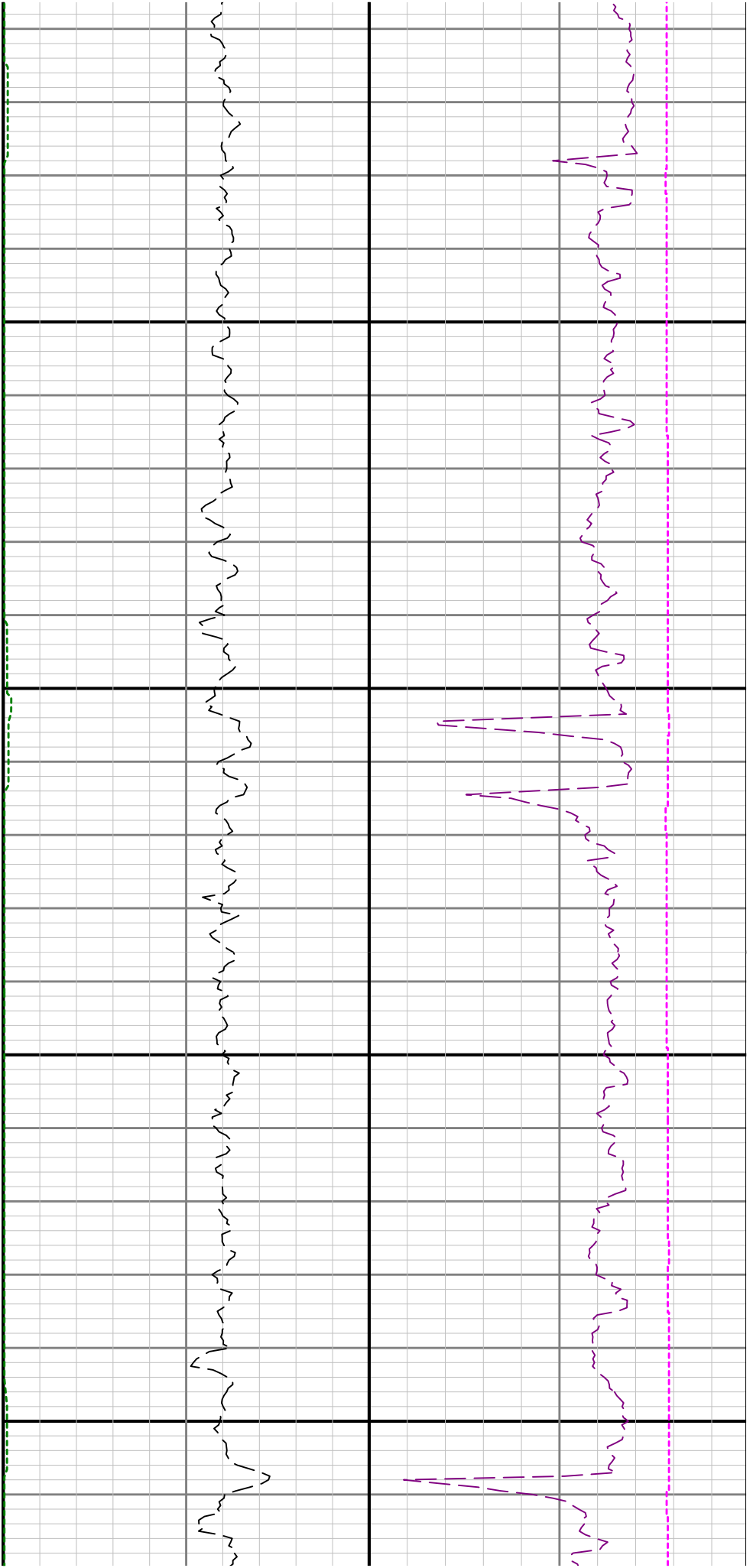


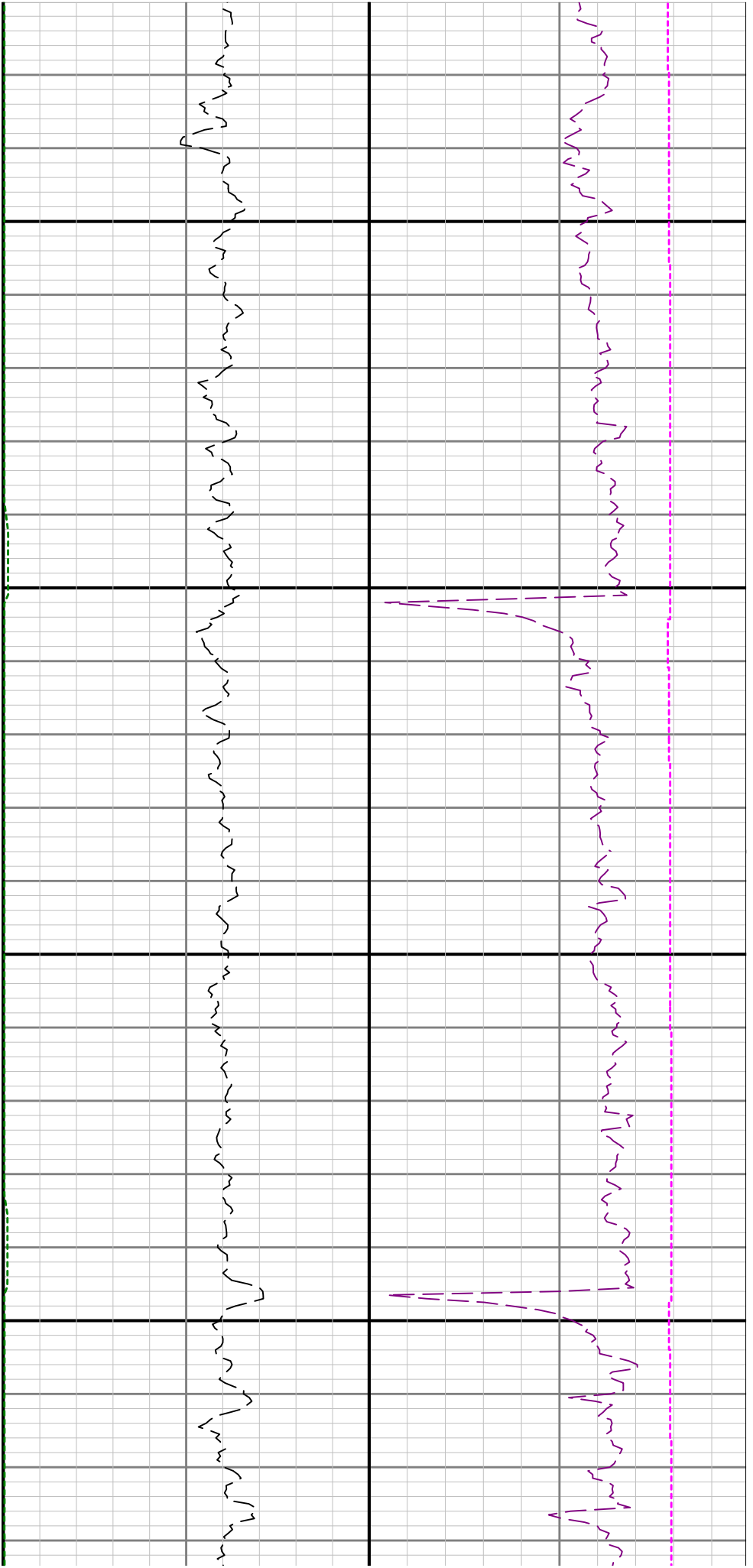
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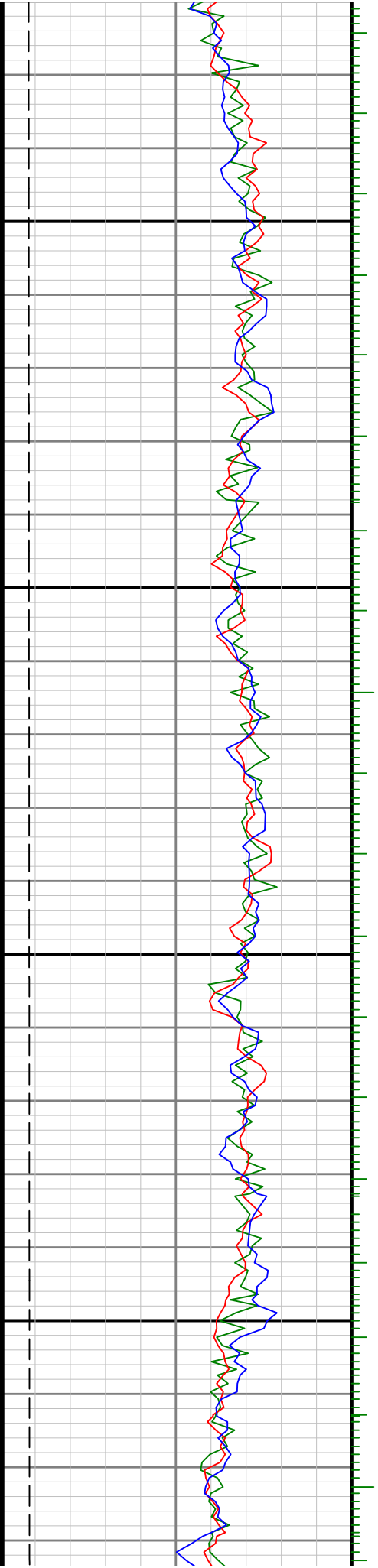


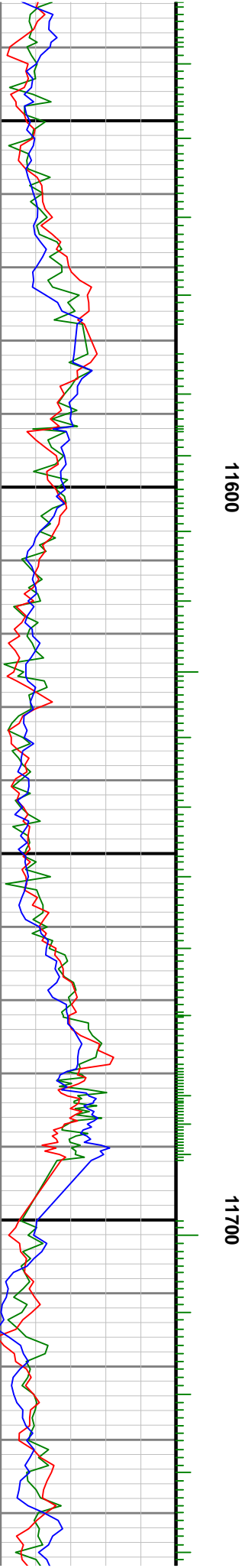
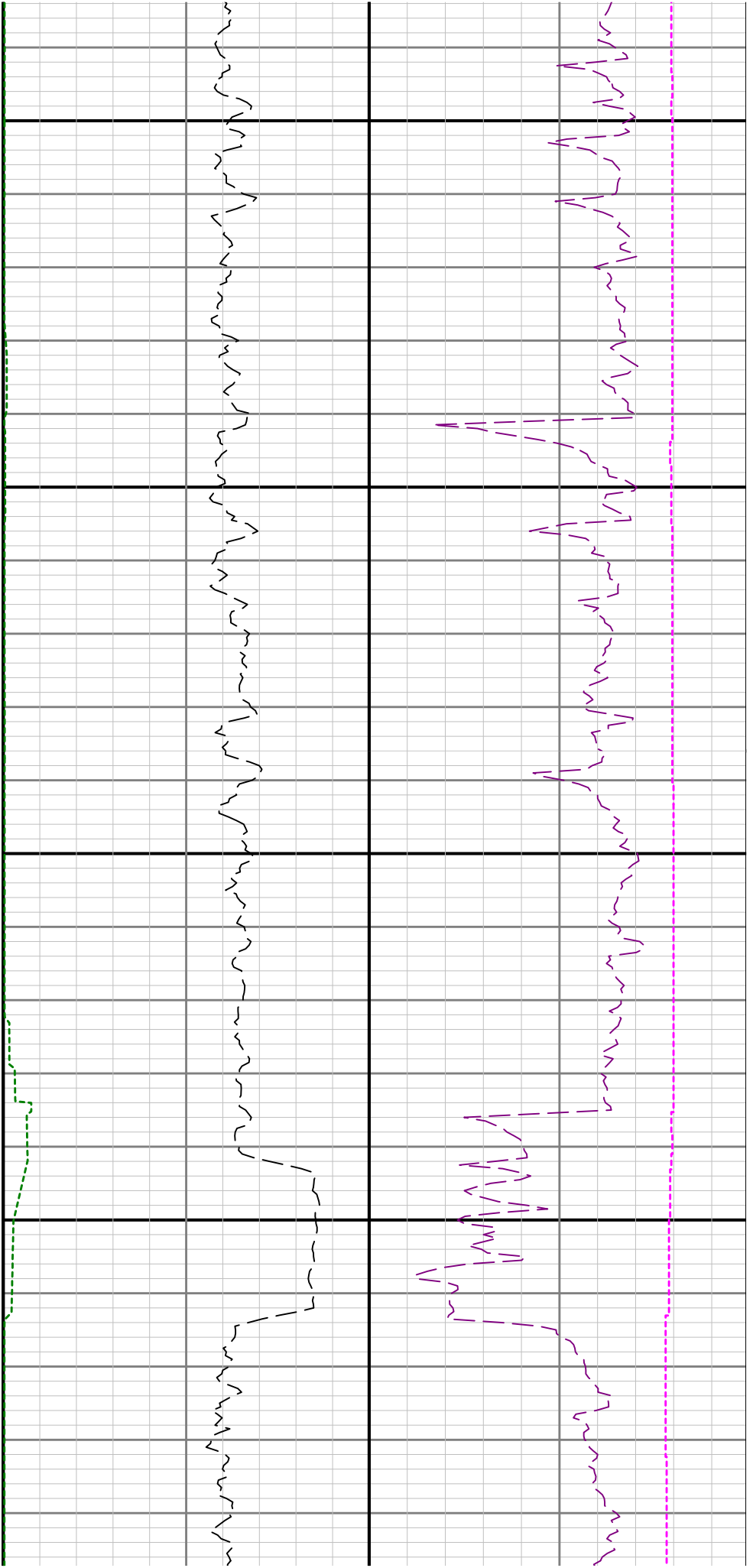


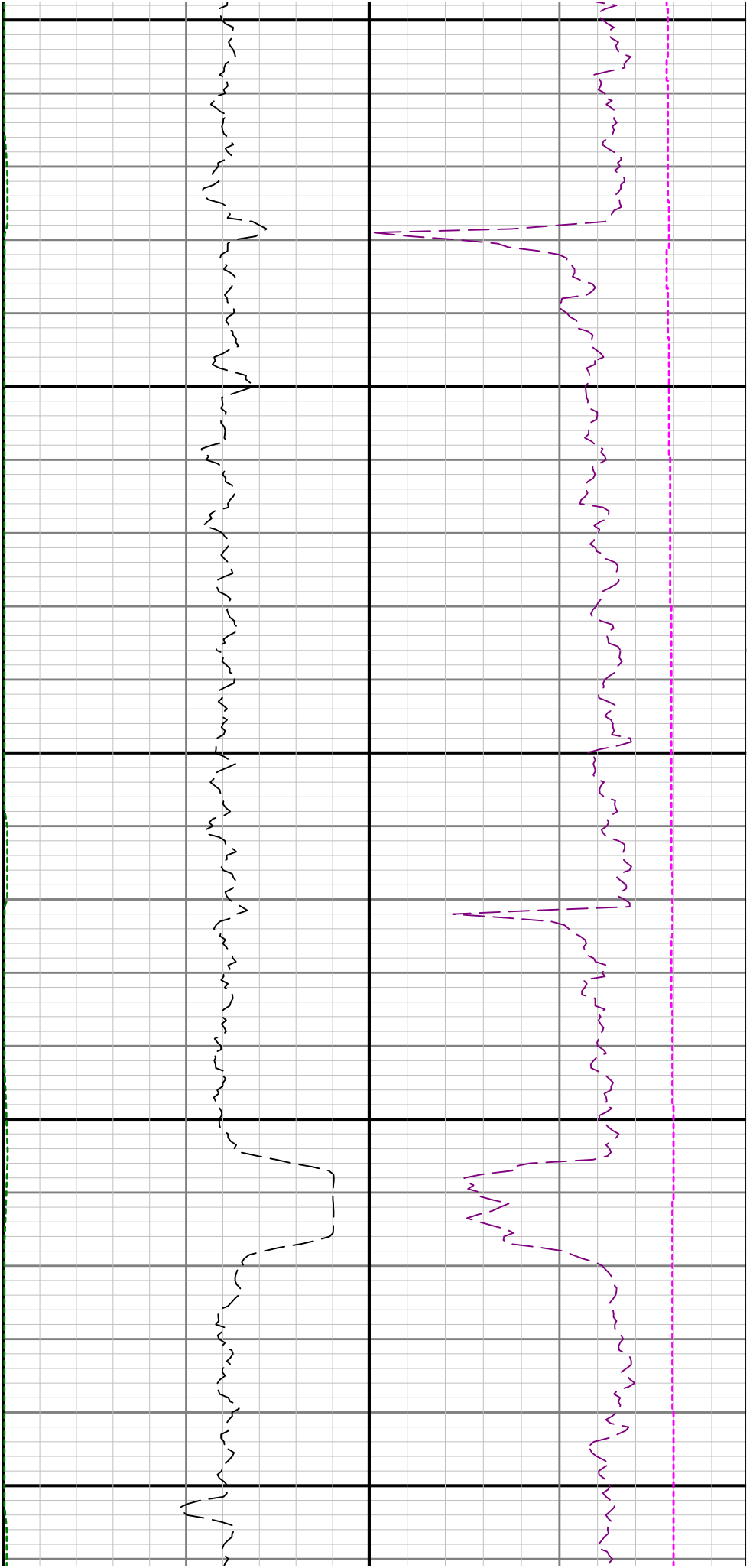


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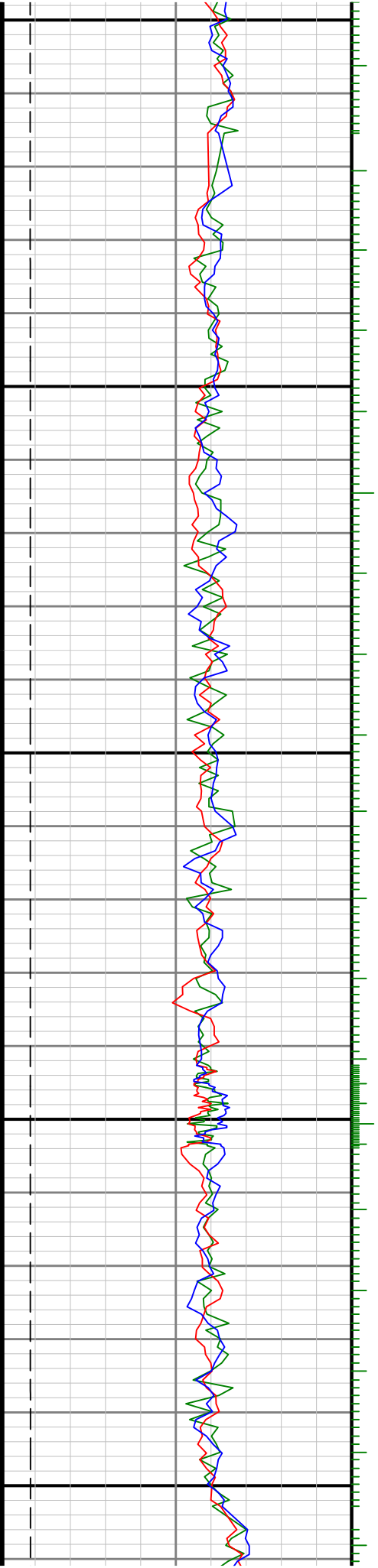


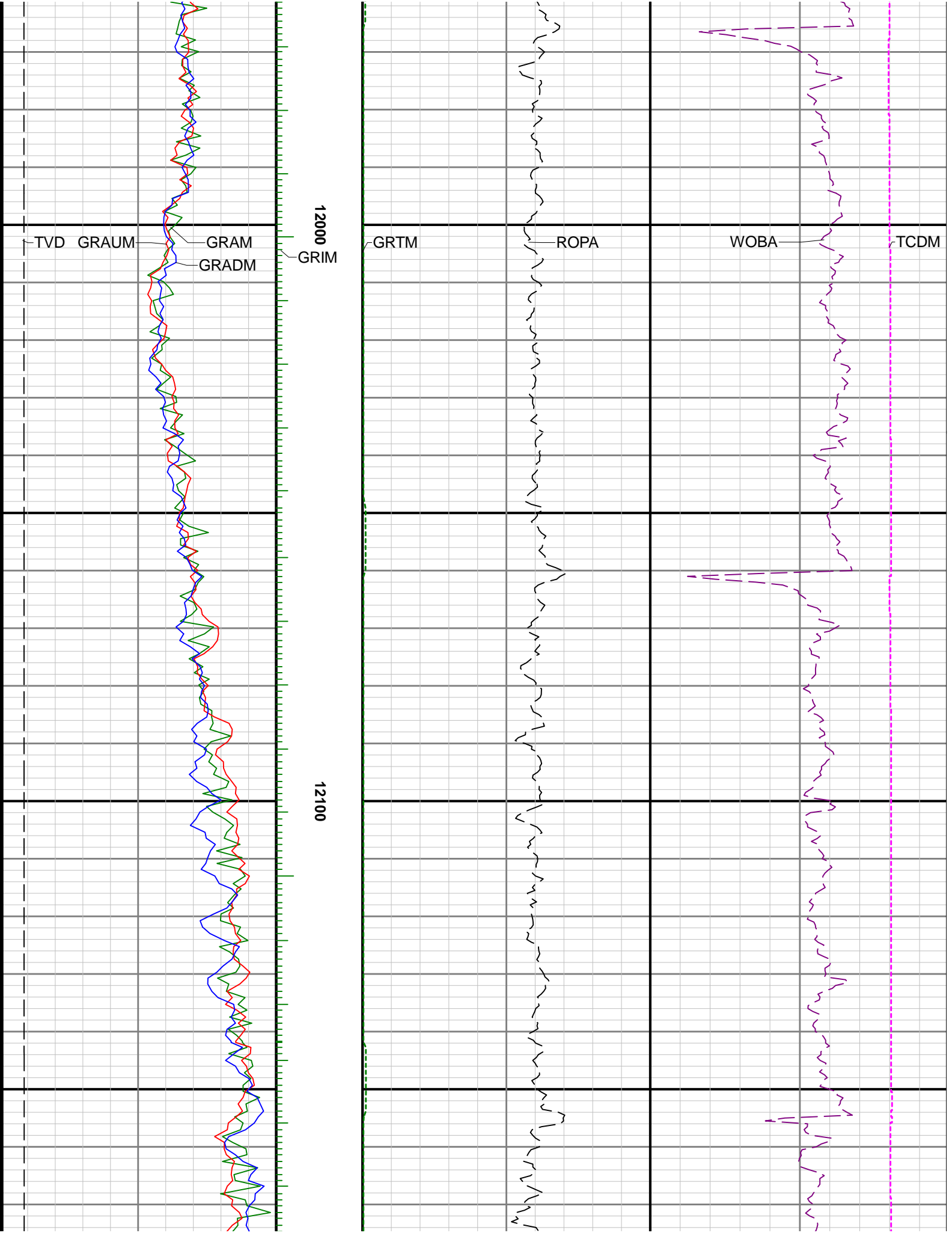


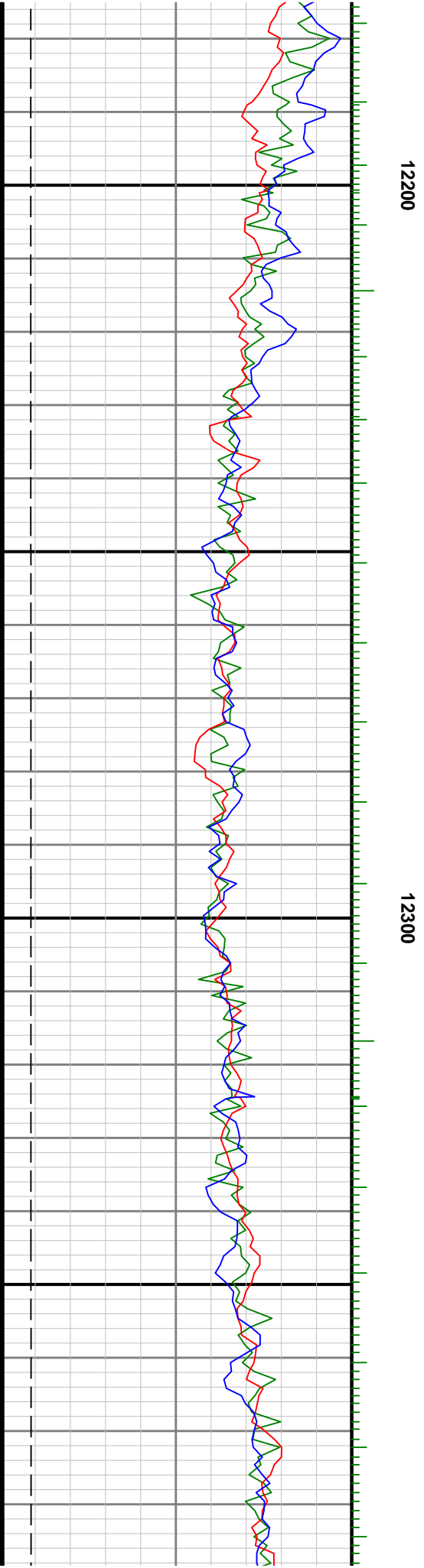
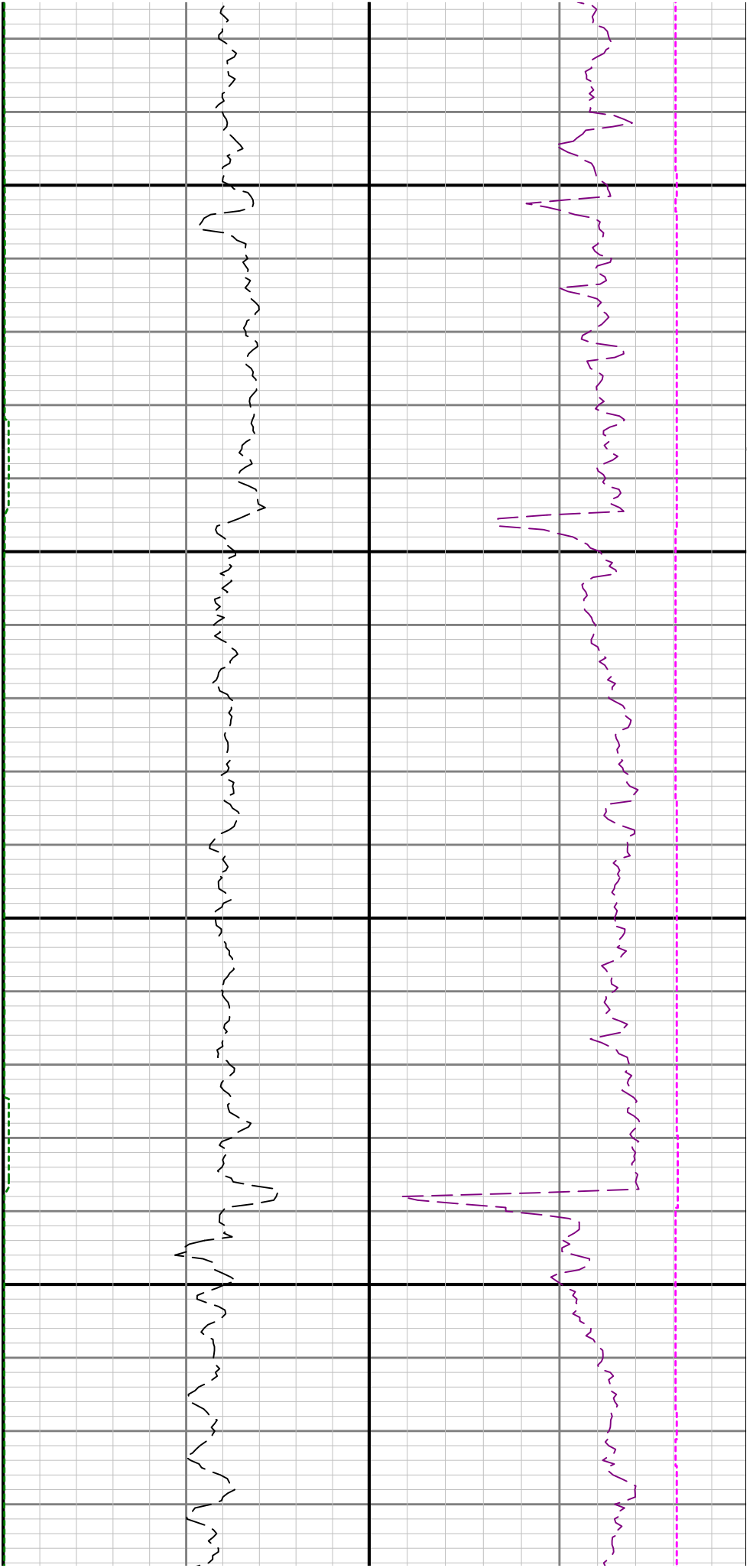


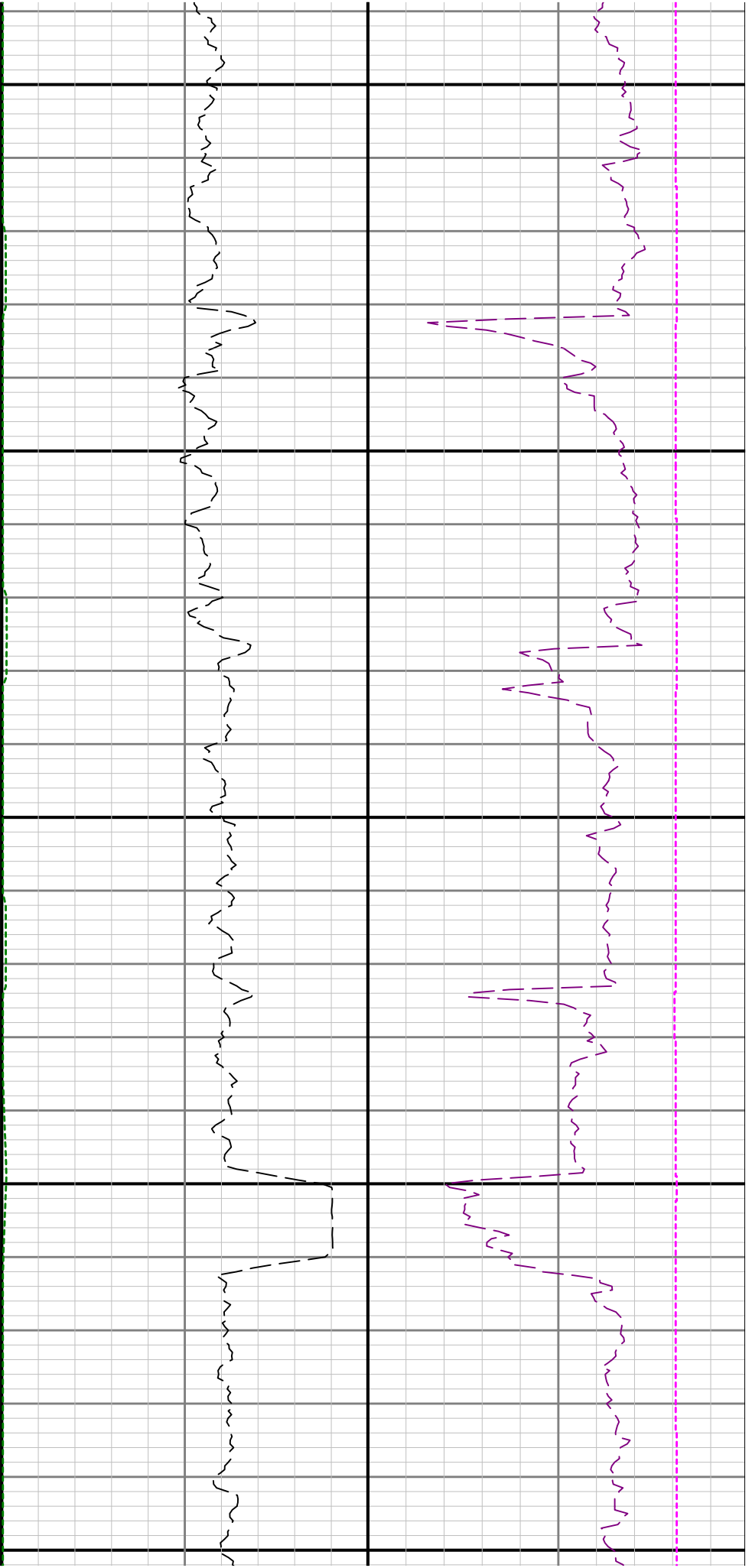
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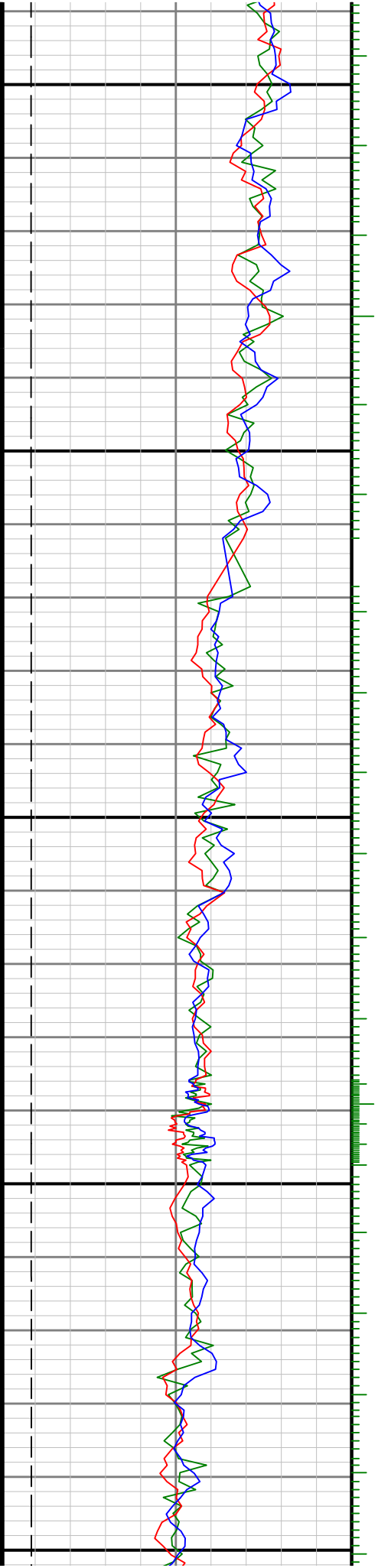


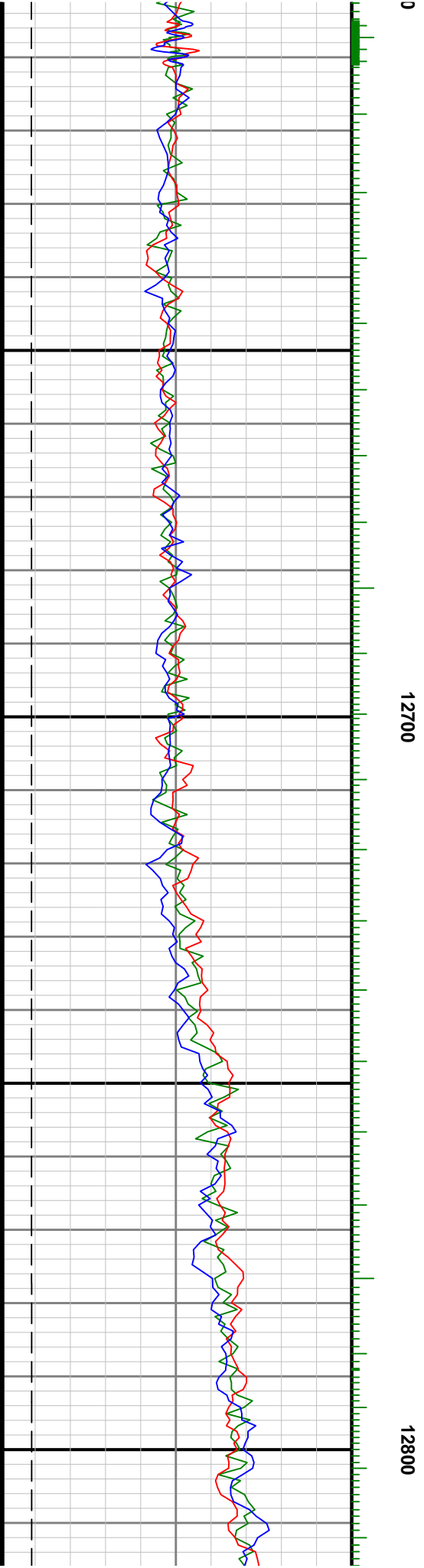
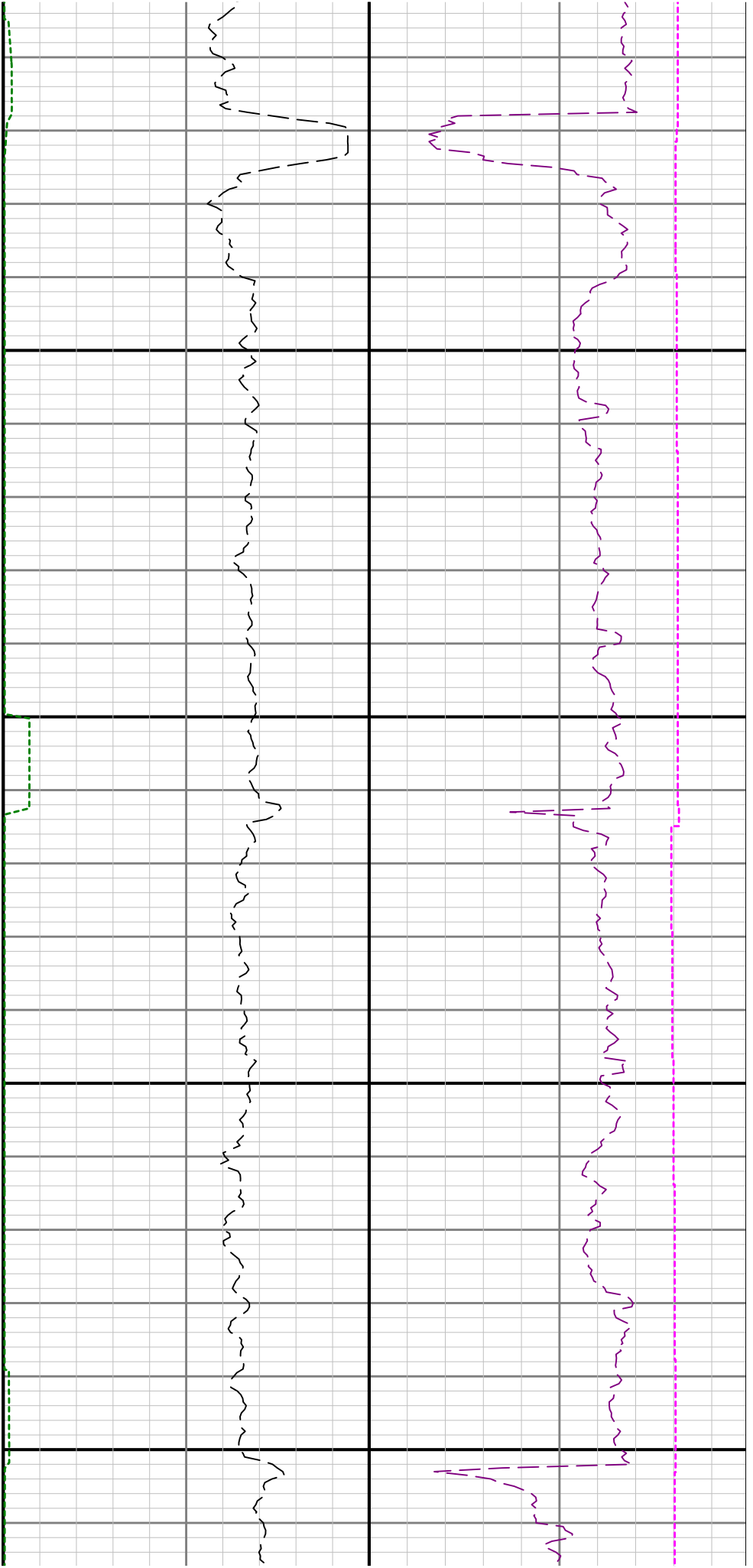


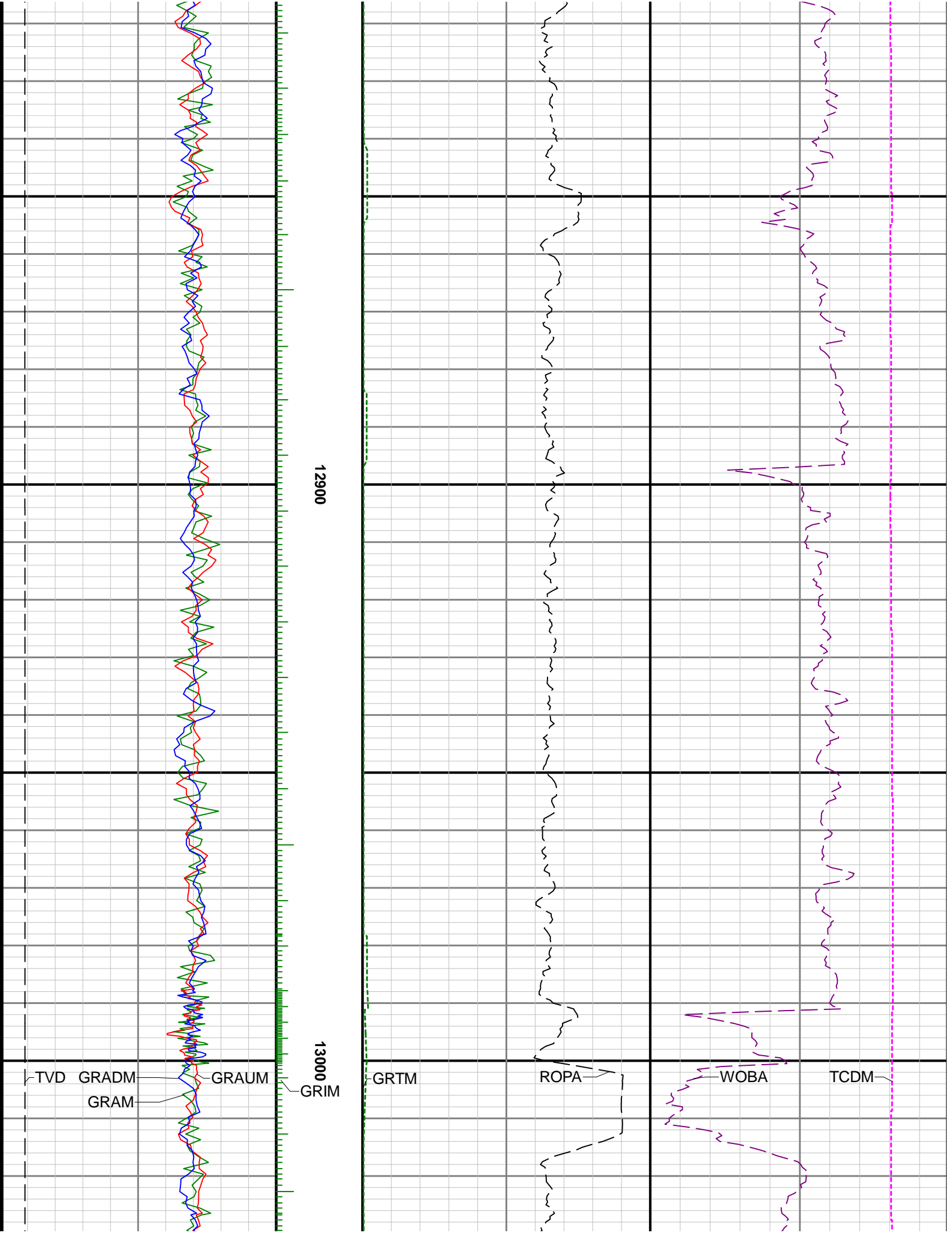
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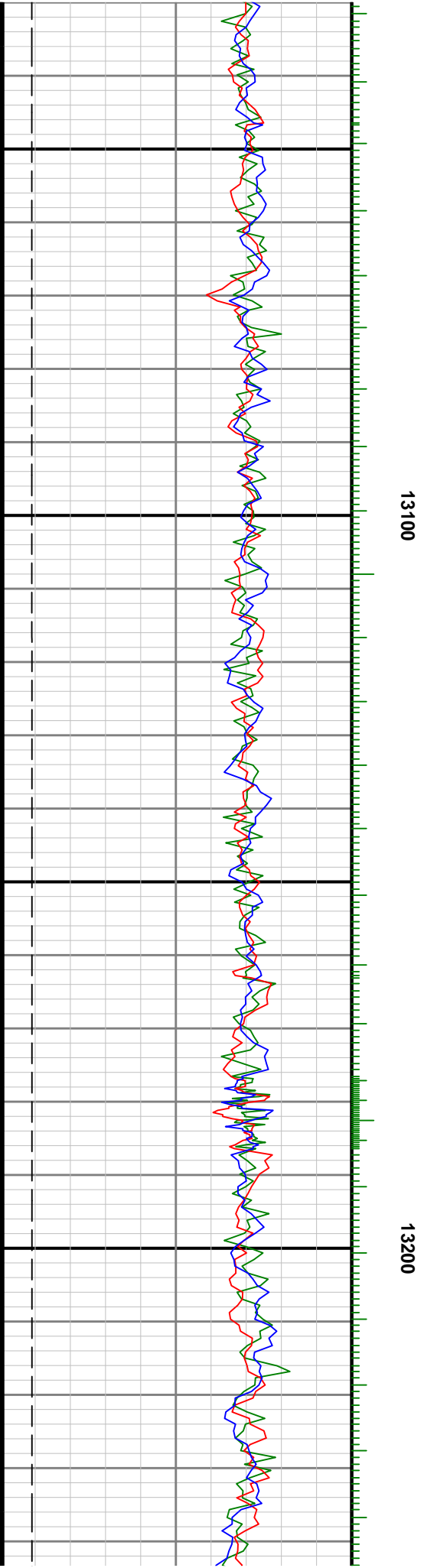
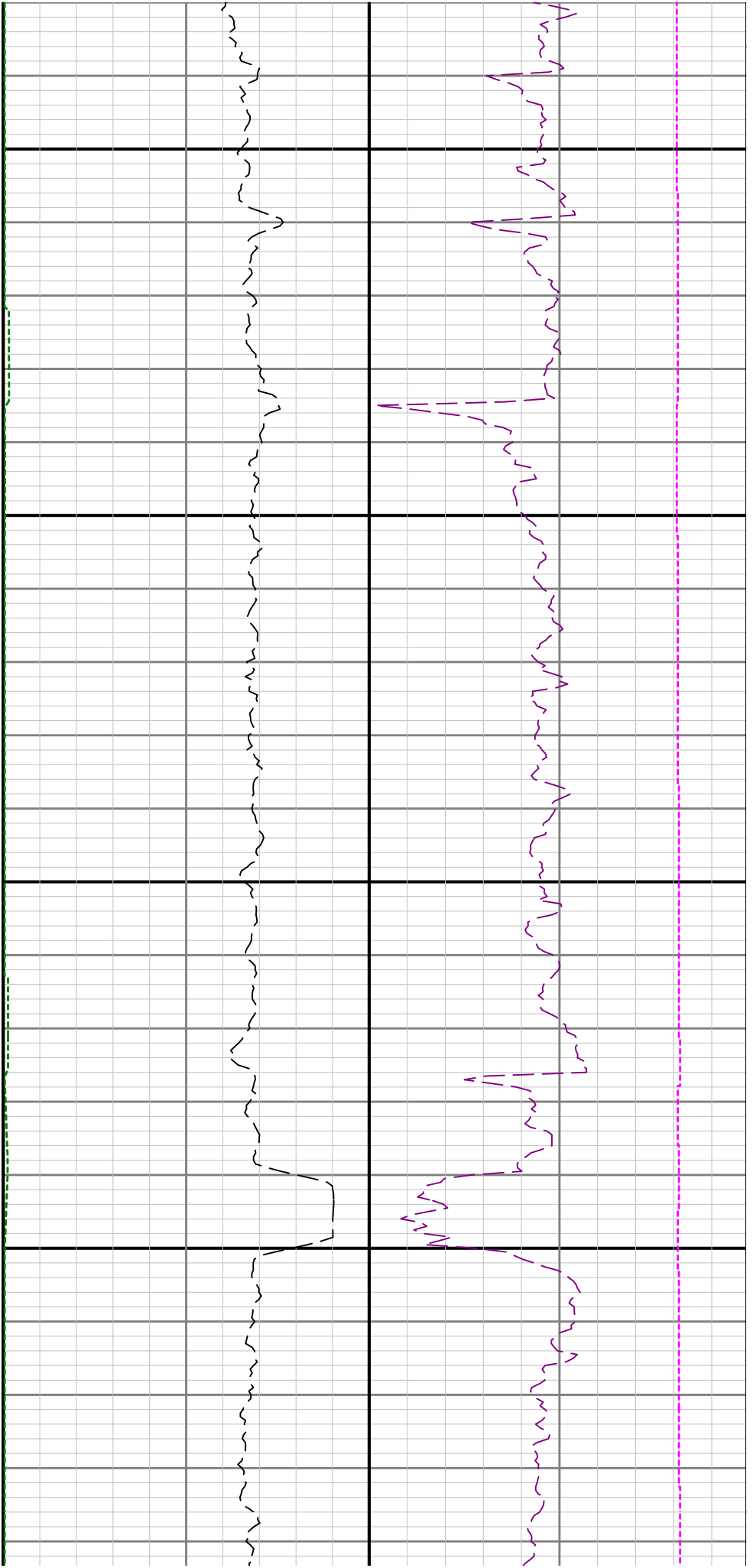
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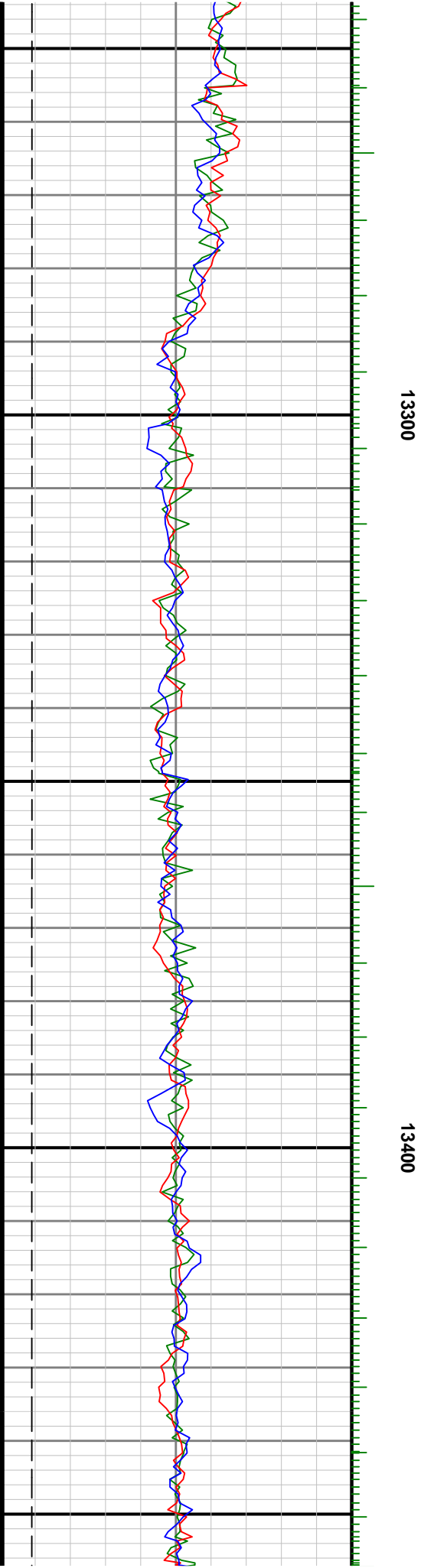
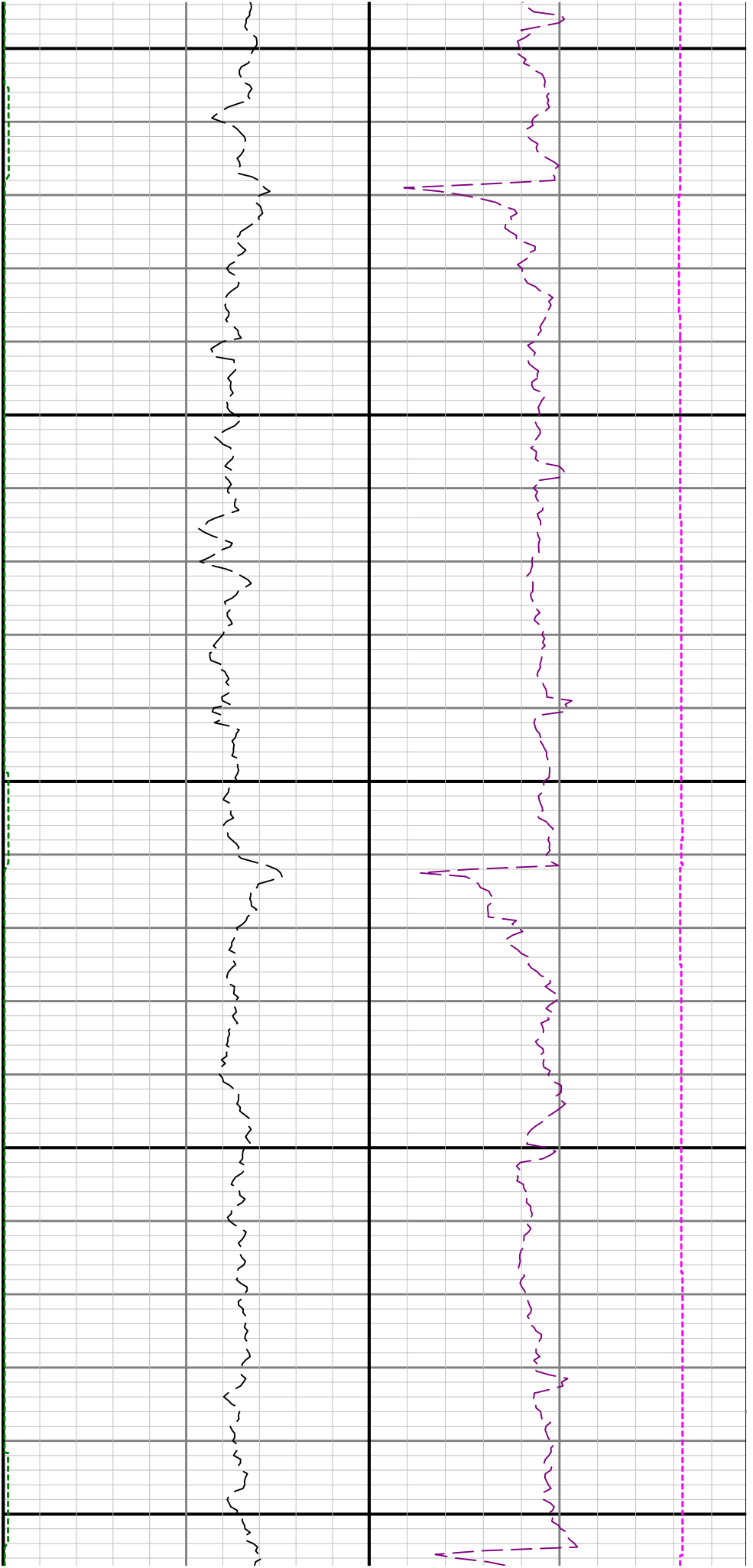
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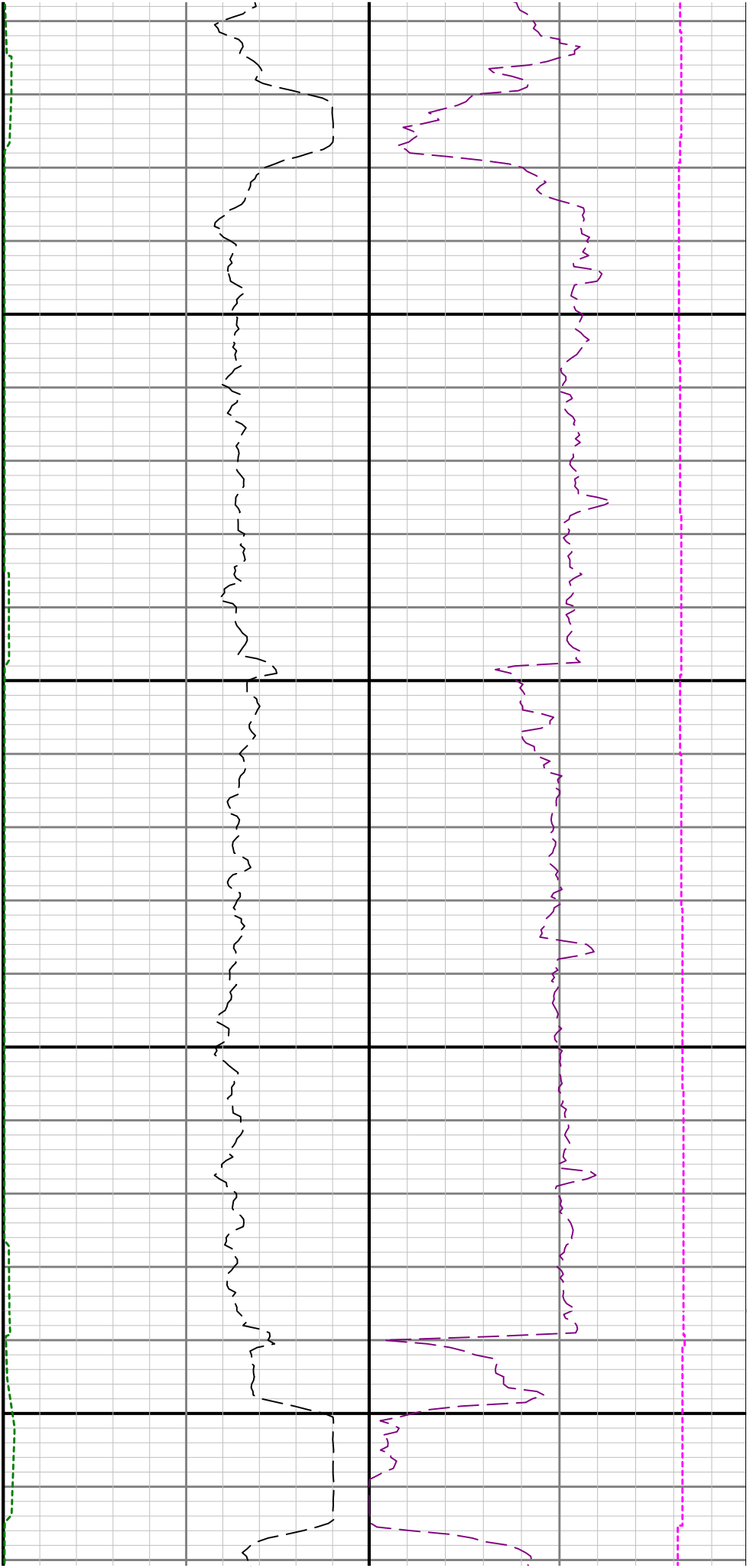












13500

13600

