



REALTIME LOG									
<div> <div>   </div> <div> <div> <div> <div>Scale:</div> <div>1:240</div> </div> <div> <div>Measured Depth</div> <div>Well: JDB 15-1HZ</div> <div>Field: Wattenburg</div> </div> </div> <div> <div> <div>Driller's Depth</div> <div>State: Colorado</div> </div> <div> <div>Country: United States</div> </div> </div> </div> </div>									
<div> <div> <div>Company: Anadarko</div> <div>Well: JDB 15-1HZ</div> <div>Field: Wattenburg</div> </div> <div> <div>County: Weld</div> <div>Country: United States</div> </div> </div>									
<div> <div> <div>Depth Reference:</div> <div>Driller's Depth</div> </div> <div> <div>State: Colorado</div> <div>Country: United States</div> </div> </div>									
<div> <div> <div>Status:</div> <div>Final Print</div> </div> <div> <div>Surface Location:</div> <div>Latitude: 040° 24' 44.609" N</div> <div>Longitude: 104° 45' 28.141" W</div> </div> <div> <div>Other Services:</div> <div>Directional</div> </div> </div>									
<div> <div> <div>API No:</div> <div>0512349220</div> </div> <div> <div>SEC:</div> <div>15 TWN: 1N RGE: 66W</div> </div> </div>									
<div> <div> <div>Job ID:</div> <div>109808249</div> </div> <div> <div>Permanent Datum (P.D.):</div> <div>Ground Level</div> </div> <div> <div>Elevation:</div> <div>5170.00 ft</div> </div> <div> <div>Eleiv. KB:</div> <div>N/A</div> </div> </div>									
<div> <div> <div>Log Measured From:</div> <div>Rig Floor</div> </div> <div> <div>Above P.D.:</div> <div>17.00 ft</div> </div> <div> <div>Eleiv. DF:</div> <div>5187.00 ft</div> </div> <div> <div>Eleiv. GL:</div> <div>5170.00 ft</div> </div> </div>									
<div> <div> <div>Dates</div> <div>Interval</div> </div> <div> <div> <div>From: 2019-06-01</div> <div>To: 2019-06-05</div> <div>Spud: 2019-06-01</div> </div> <div> <div>Drilled (ft)</div> <div>Top: 1878.00</div> <div>Bottom: 19005.00</div> </div> <div> <div>Logged (ft)</div> <div>Top: 1878.00</div> <div>Bottom: 18963.00</div> </div> <div> <div>Azi Reference North:</div> <div>True</div> </div> <div> <div>Dip Angle: (deg)</div> <div>66.18</div> </div> <div> <div>Total Magnetic Field Strength: (nT)</div> <div>52109</div> </div> <div> <div>Mag to Reference North Correction: (deg)</div> <div>7.84</div> </div> </div> </div>									
<div> <div> <div>Borehole Record</div> <div>Casing Record</div> </div> <div> <div> <div>Hole Size (in)</div> <div>From (ft)</div> <div>To (ft)</div> <div>Size (in)</div> <div>Weight (lb/ft)</div> <div>From (ft)</div> <div>To (ft)</div> </div> <div> <div>13.500</div> <div>17.00</div> <div>1878.00</div> <div>9.625</div> <div>25.00</div> <div>17.00</div> <div>1868.00</div> </div> <div> <div>7.875</div> <div>1878.00</div> <div>19005.00</div> <div></div> <div></div> <div></div> <div></div> </div> </div> </div>									
<div> <div> <div>Mud Record</div> <div>Deviation Record</div> </div> <div> <div> <div>Type</div> <div>From (ft)</div> <div>To (ft)</div> <div>Hole Size (in)</div> <div>Interval (ft)</div> <div>Inc   Azi (Start)</div> <div>Inc   Azi (End)</div> </div> <div> <div>Oil Based Mud</div> <div>1878.00</div> <div>19005.00</div> <div>7.875</div> <div>17127.00</div> <div>20.38   52.67</div> <div>91.02   179.43</div> </div> <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> </div> </div>									
<div> <div> <div>Acquisition System</div> <div>Software Version</div> </div> <div> <div> <div>Cadence</div> <div>DeliverableGen</div> </div> <div> <div>RT 5.2</div> <div>1.0.8425.1</div> </div> </div> </div>									
<div> <div> <div>Rig:</div> <div>Contractor:</div> <div>District:</div> </div> <div> <div>Akita 522</div> <div>Akita Drilling</div> <div>RMA</div> </div> <div> <div>Unit: D&amp;E</div> </div> </div>									

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## 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	7.875	PDC	2.00	Steerable	1878.00	8116.00	1878.00	8166.00	2019-06-01 02:35	2019-06-02 14:00	24.06
2	1	7.875	PDC	2.00	Steerable	8125.00	18963.00	8166.00	19005.00	2019-06-02 23:39	2019-06-05 17:27	61.38

## Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Kent Hopkins	2019-05-30	2019-06-05	Teniola Onafowokan	2019-05-31	2019-06-05			

## Mud Properties Record

Date / Time	Run No.	Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2019-05-31 06:00	1	1878.00	Oil Based Mud	9.2	15	N/A	N/A	68/23	Active Pit	34516	0.00
2019-05-31 18:00	1	6384.00	Oil Based Mud	8.9	15	N/A	N/A	68/24	Active Pit	37392	0.00
2019-06-02 18:00	2	8166.17	Oil Based Mud	8.9	15	N/A	N/A	68/24	Active Pit	37000	0.00
2019-06-03 18:00	2	12367.00	Oil Based Mud	8.9	15	N/A	N/A	69/23	Active Pit	36433	0.00
2019-06-04 18:00	2	16394.00	Oil Based Mud	9.0	14	N/A	N/A	69/22	Active Pit	34516	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	EvoOne	14786471	Gamma (single)	8.20	50.55	6.500	0.000
1	EvoOne	14786471	Directional (mag)	9.39	51.74	6.500	0.000
2	NaviGamma	10350731	Gamma (single)	11.13	41.52	6.590	3.250
2	NaviGamma	10350731	Directional (mag)	15.58	45.97	6.590	3.250
2	NaviGamma	10350731	VSS	15.58	45.97	6.590	3.250

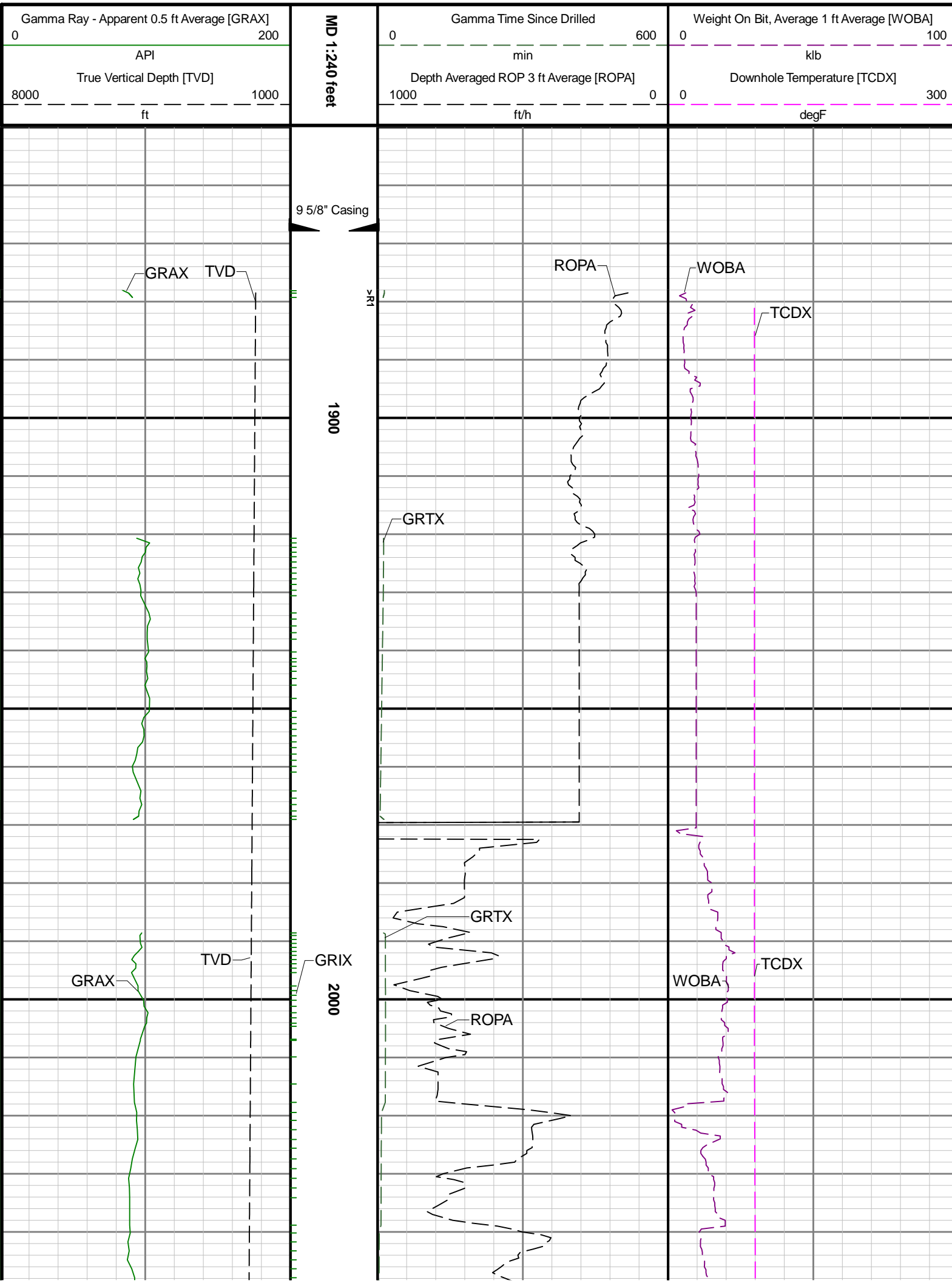
## Service and Tool Mnemonics

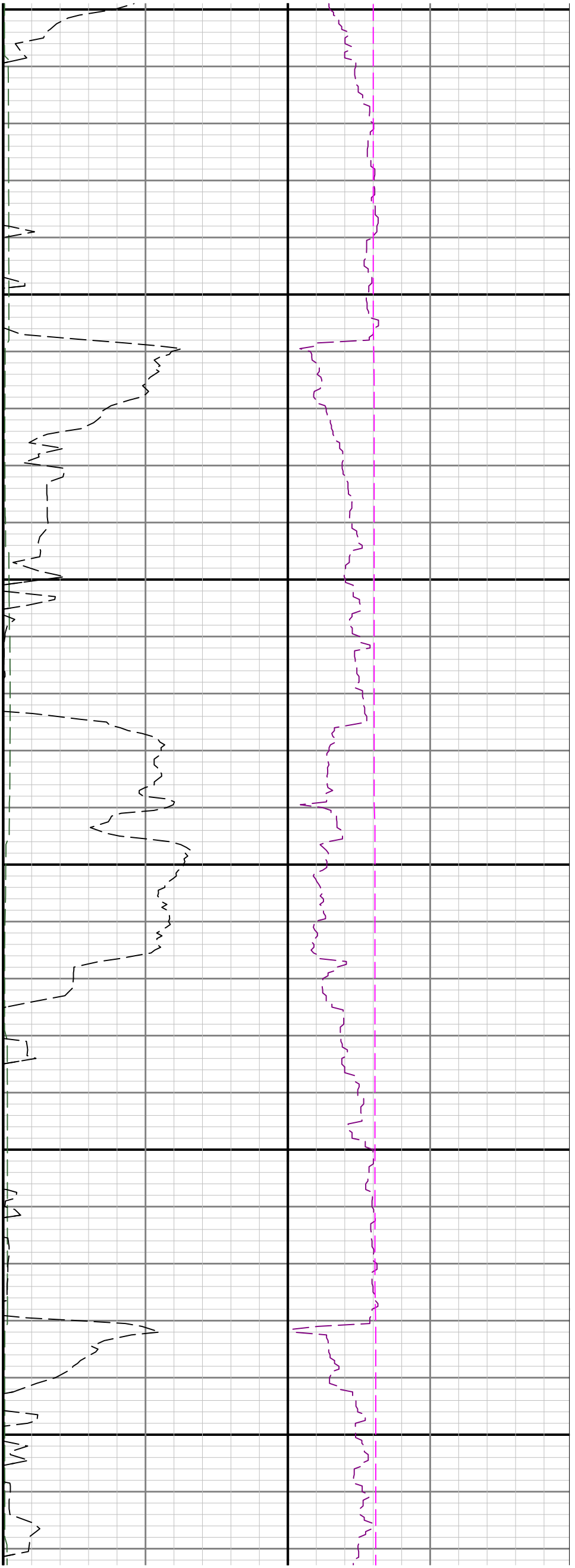
Mnemonic	Name	Description
MWD	EvoOne - Dir Gamma	EvoOne
GAM	NaviGamma	Probe Based Gamma Module, NaviTrak Platform

## Comments

- 1 Depth measurements were obtained from a depth control system not supplied 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 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 Ray sensor offset to correspond with Gamma Ray data acquired while sliding.
- 3 Baker Hughes run 1 utilized 6 1/2 inch Evo One services (Directional and Gamma Ray) behind a 7 7/8 inch bit and steerable assembly from 1878 to 8166 feet MD (1838 to 7690 feet TVD).
- 4 Baker Hughes run 2 utilized 6 1/2 inch Navigamma services (Directional and Gamma Ray) behind a 7 7/8 inch bit and steerable assembly from 8166 to 19005 feet MD (7690 to 7723 feet TVD).
- 5 Gamma Ray (GRAX) scale is presented from a 0 to 200 API scale at the request of the customer.
- 6 Numerous gaps are present throughout the log due to surveying while on bottom drilling ahead.

Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	8160.00	7.875	1	The interval from 8110 to 8160 feet MD (7690 feet TVD) was not logged due to trip out of hole for MWD failure.
2	18980.00	7.875	2	The interval from 18963 to 19005 feet MD (7723 feet TVD) was not logged due to sensor to bit offset at well TD.

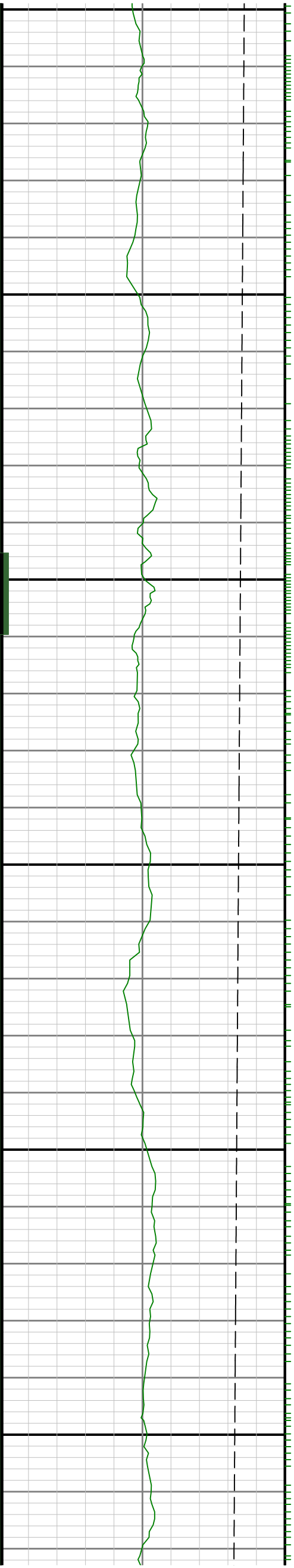


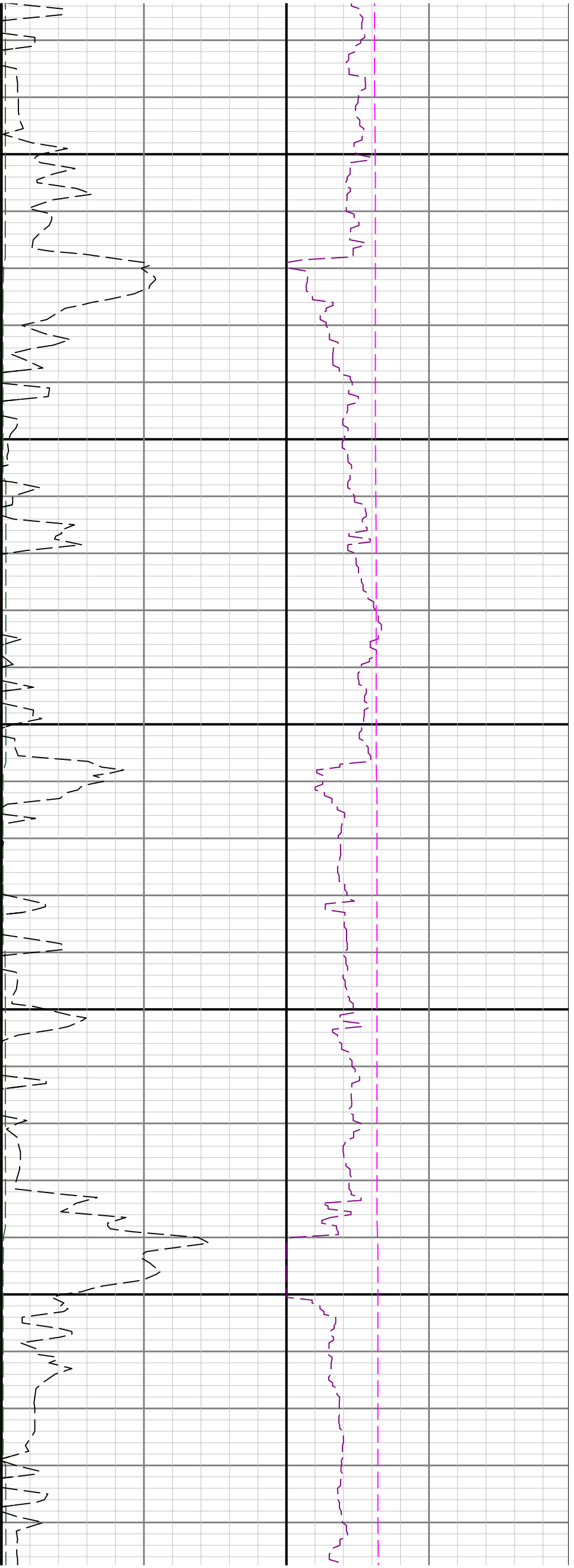


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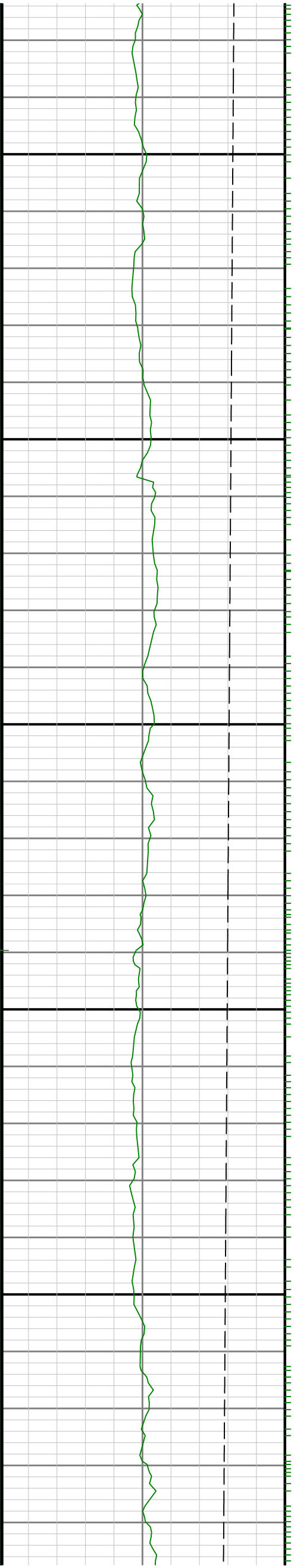
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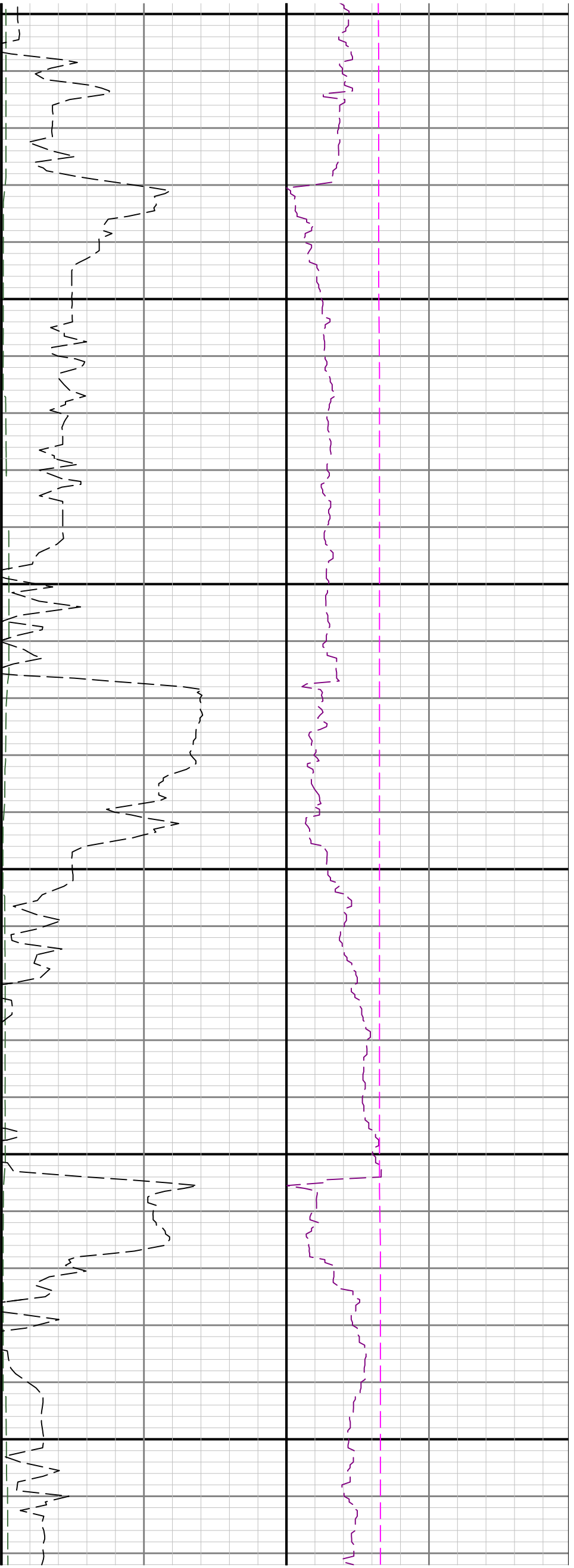




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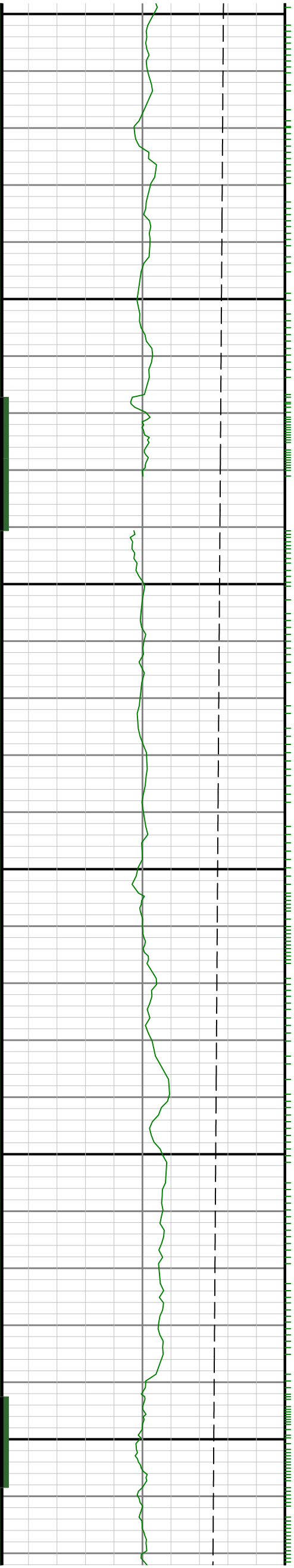


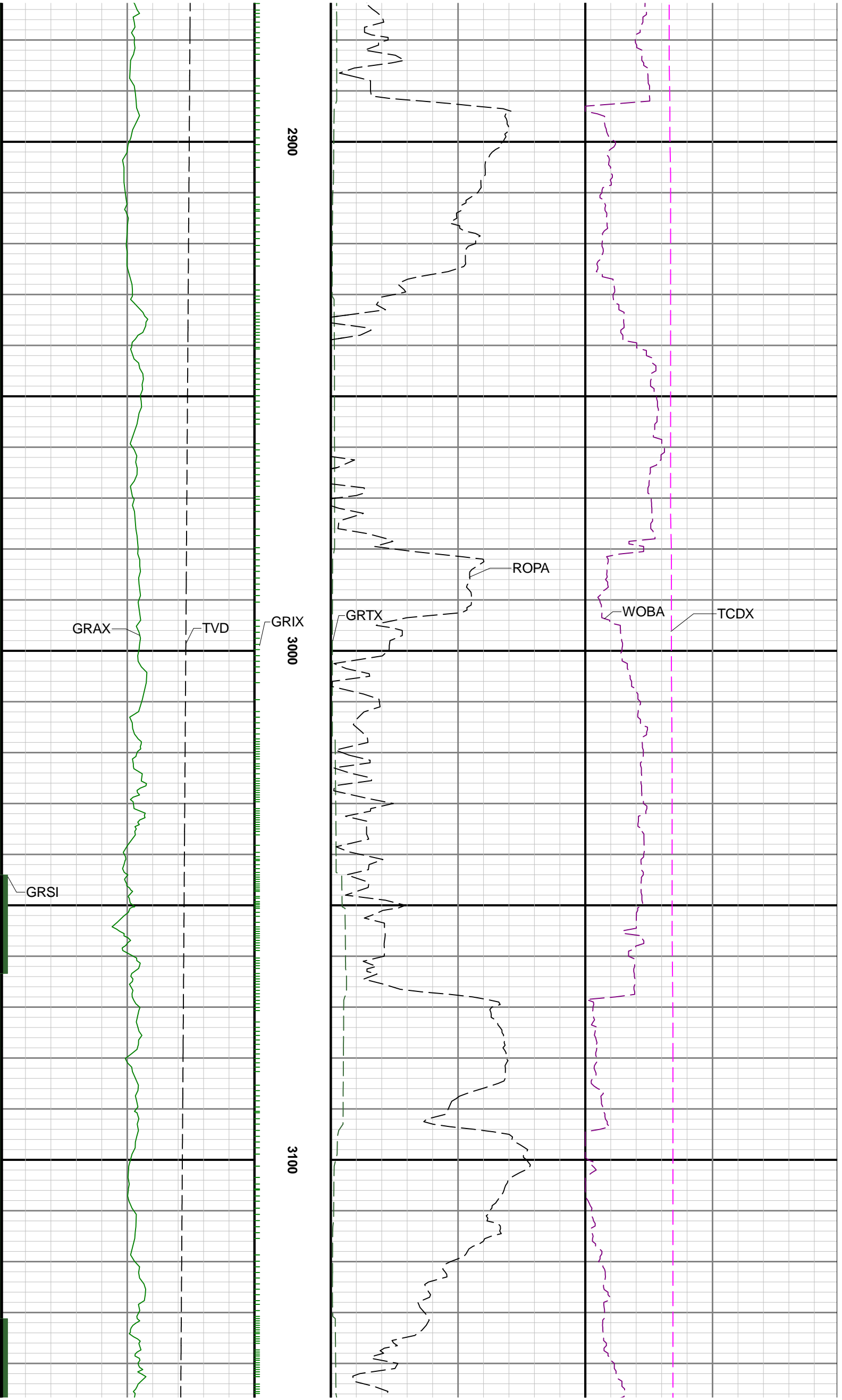


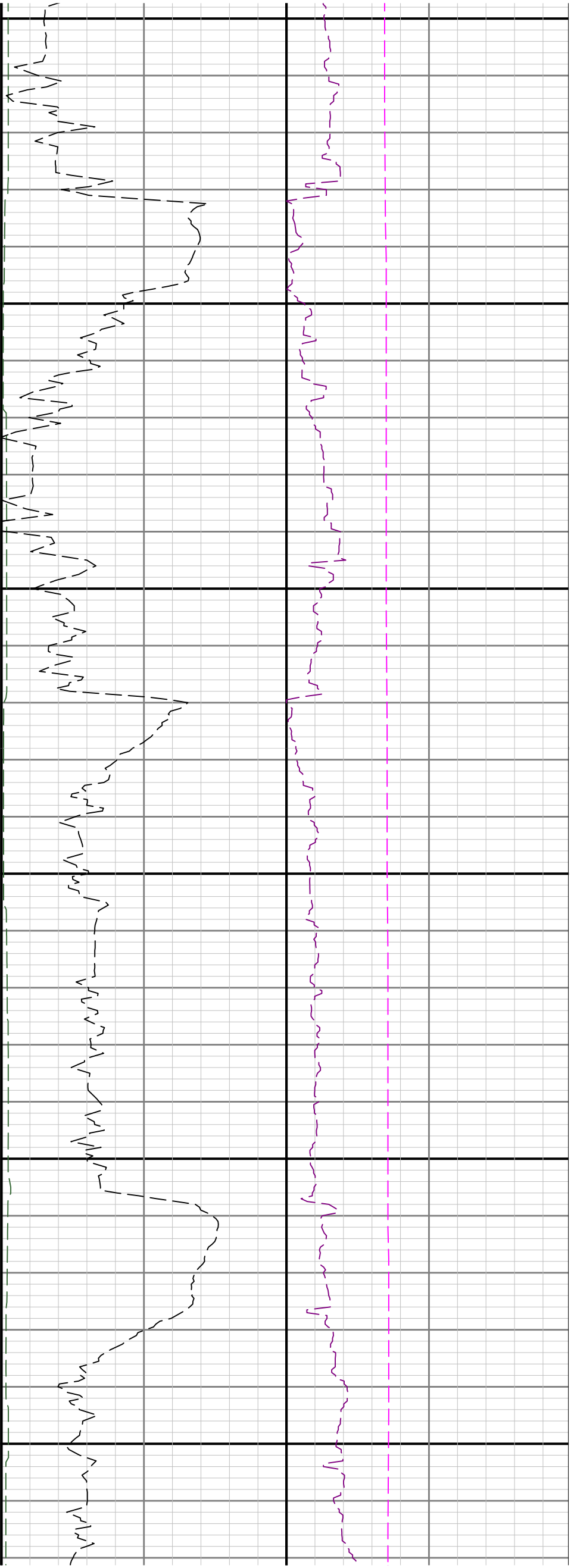
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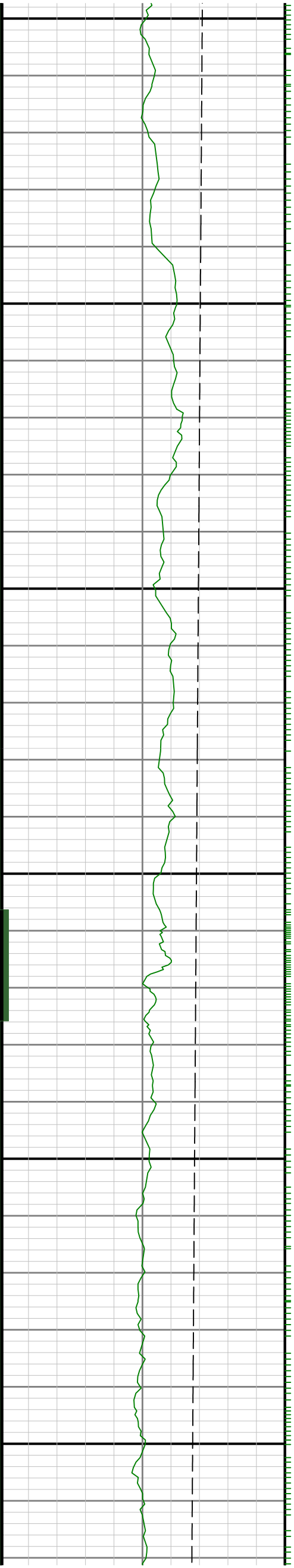


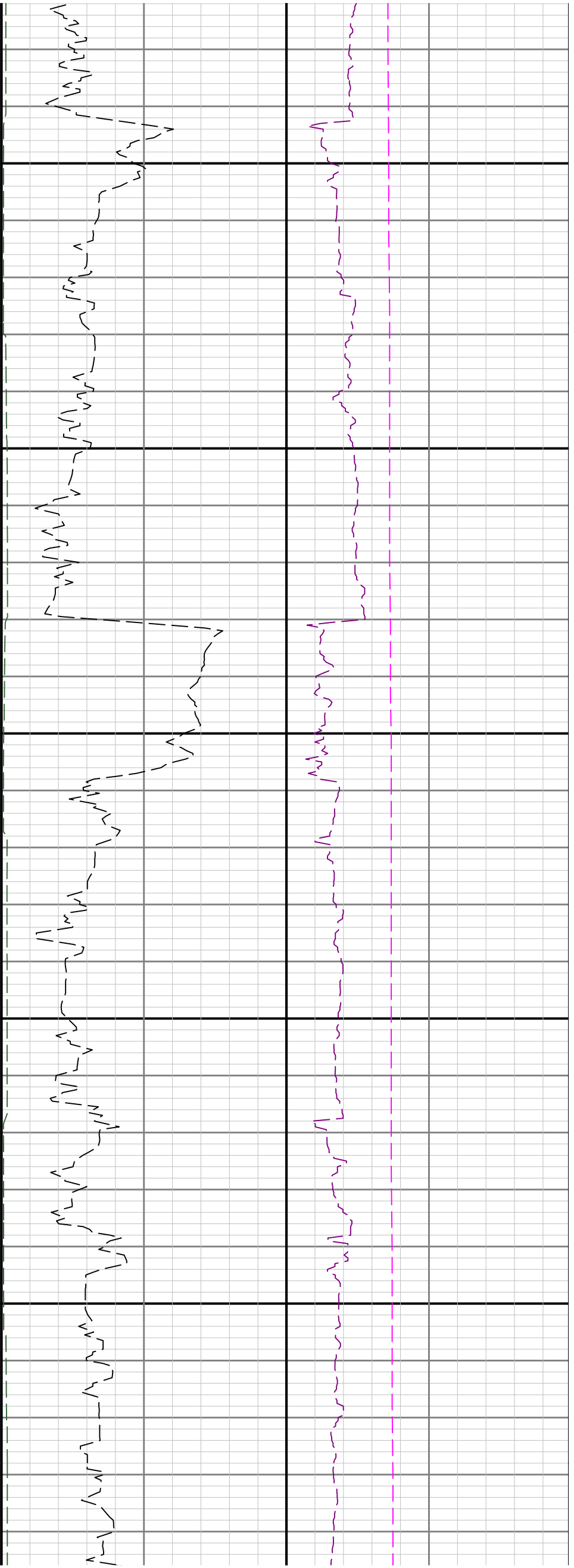


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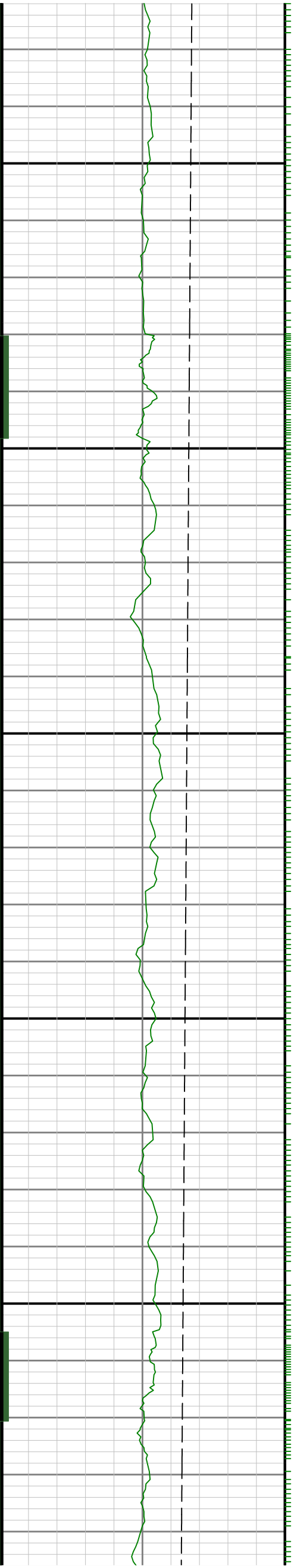
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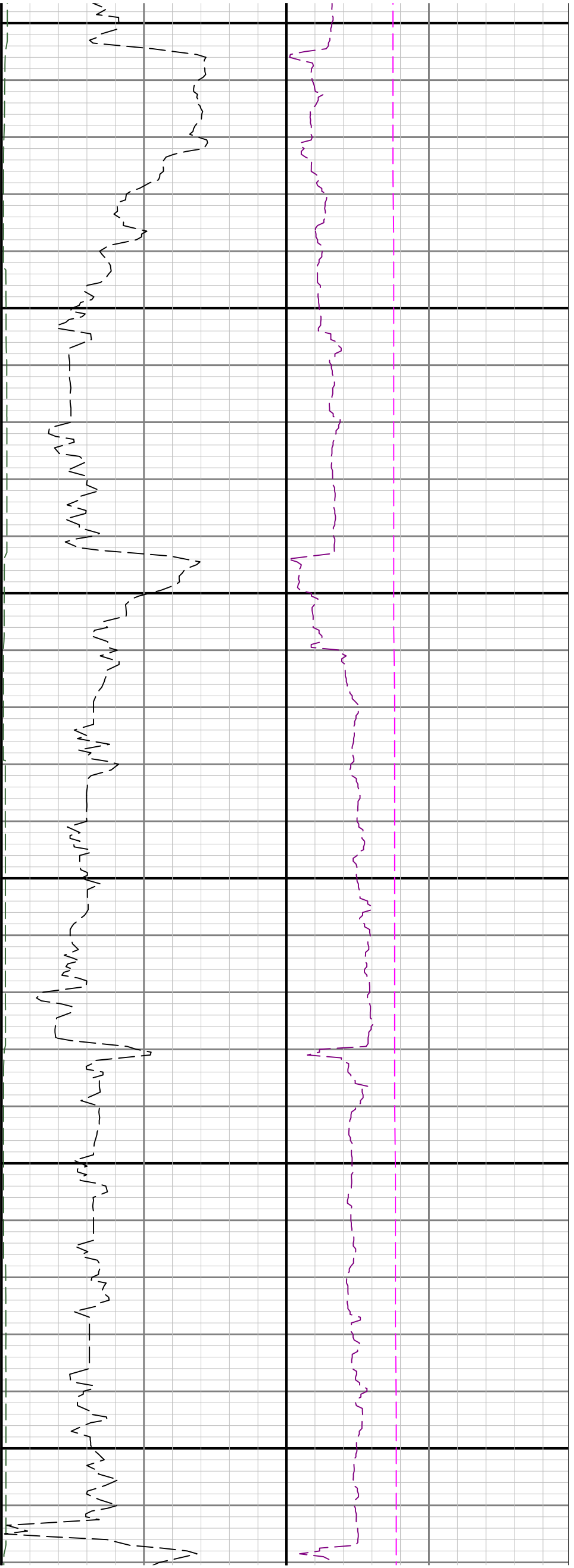


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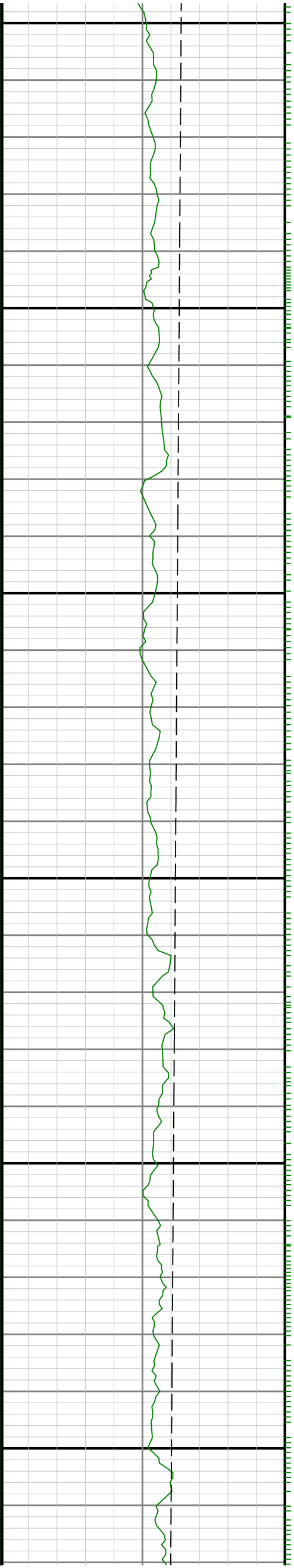


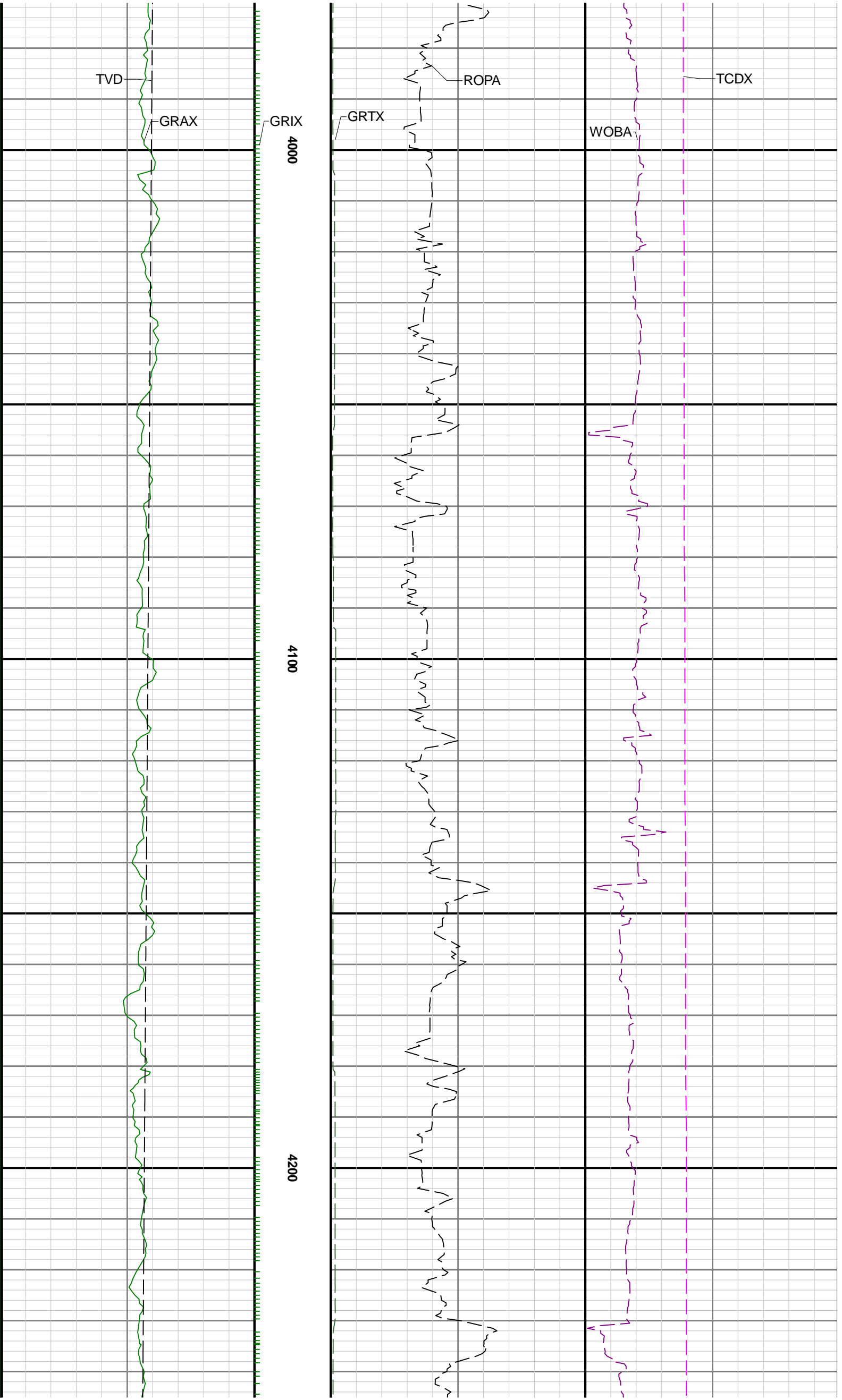


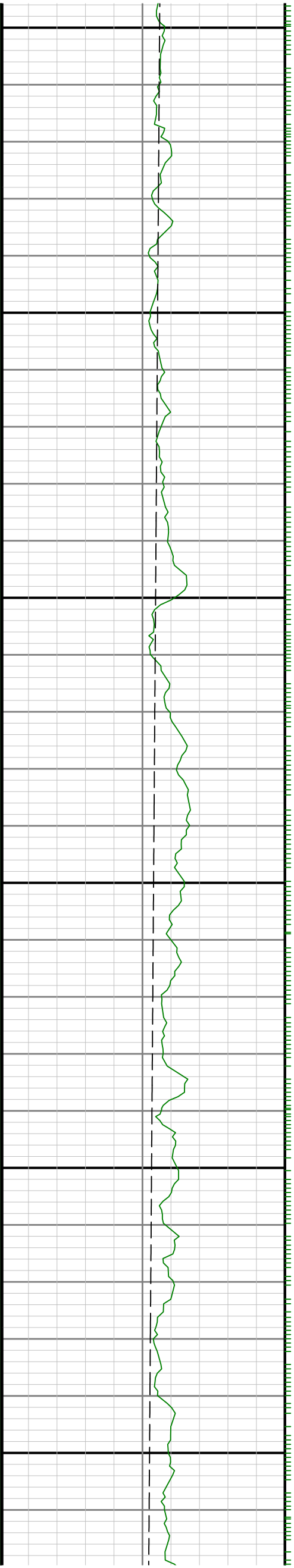
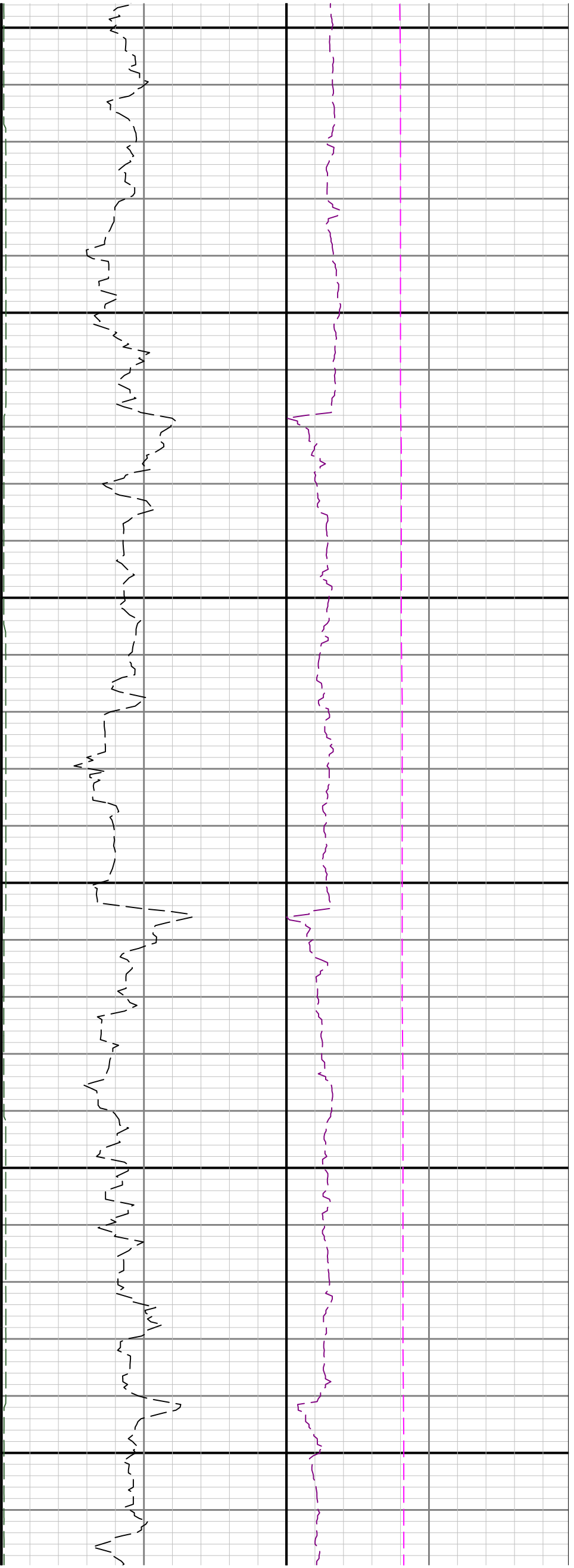
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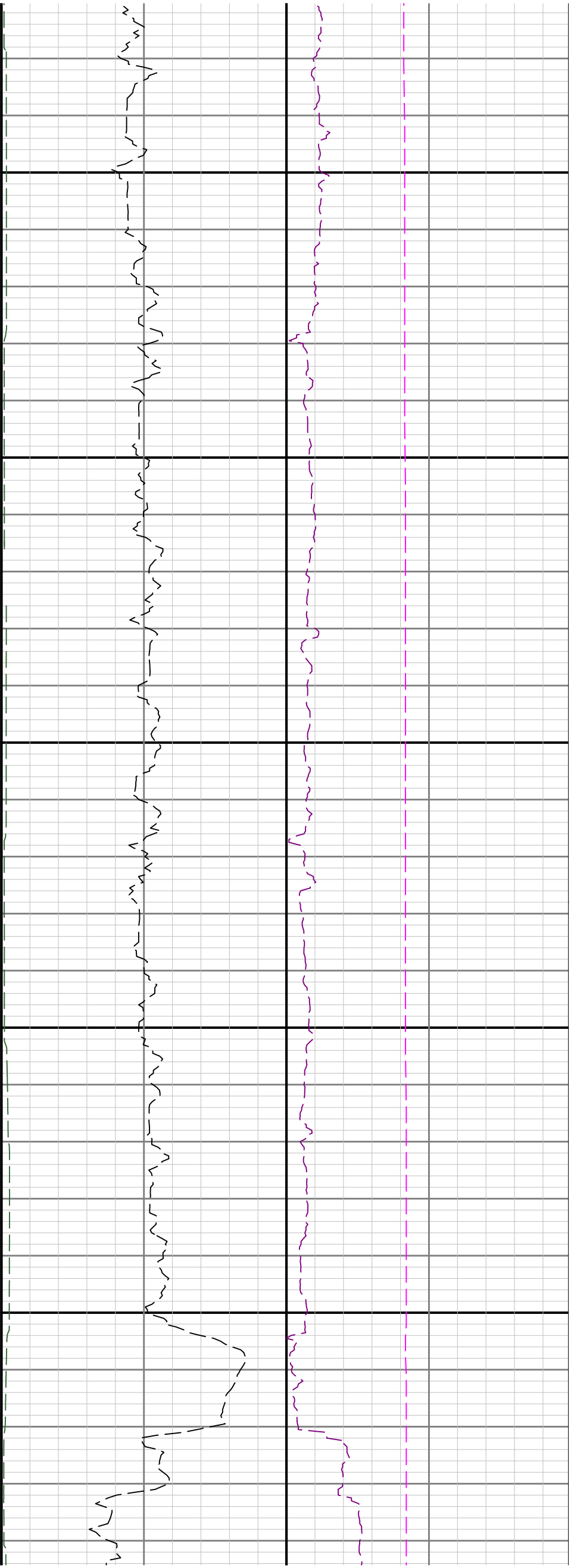
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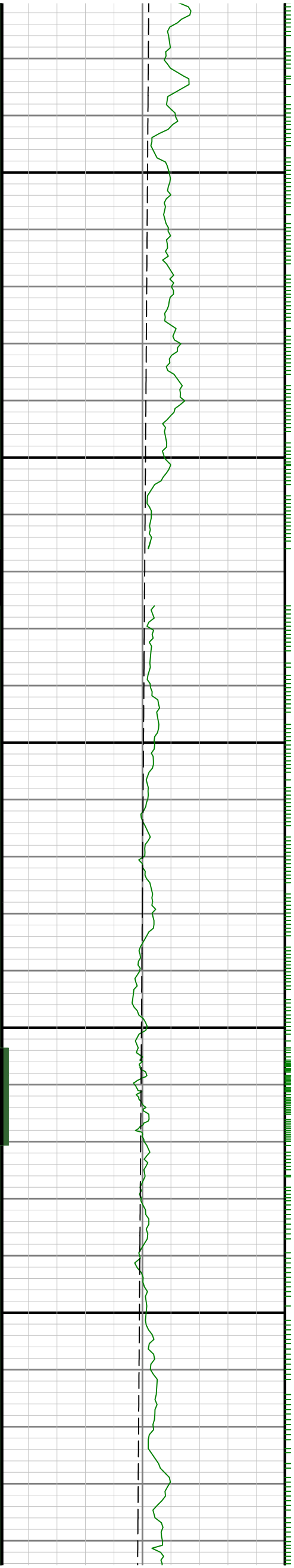


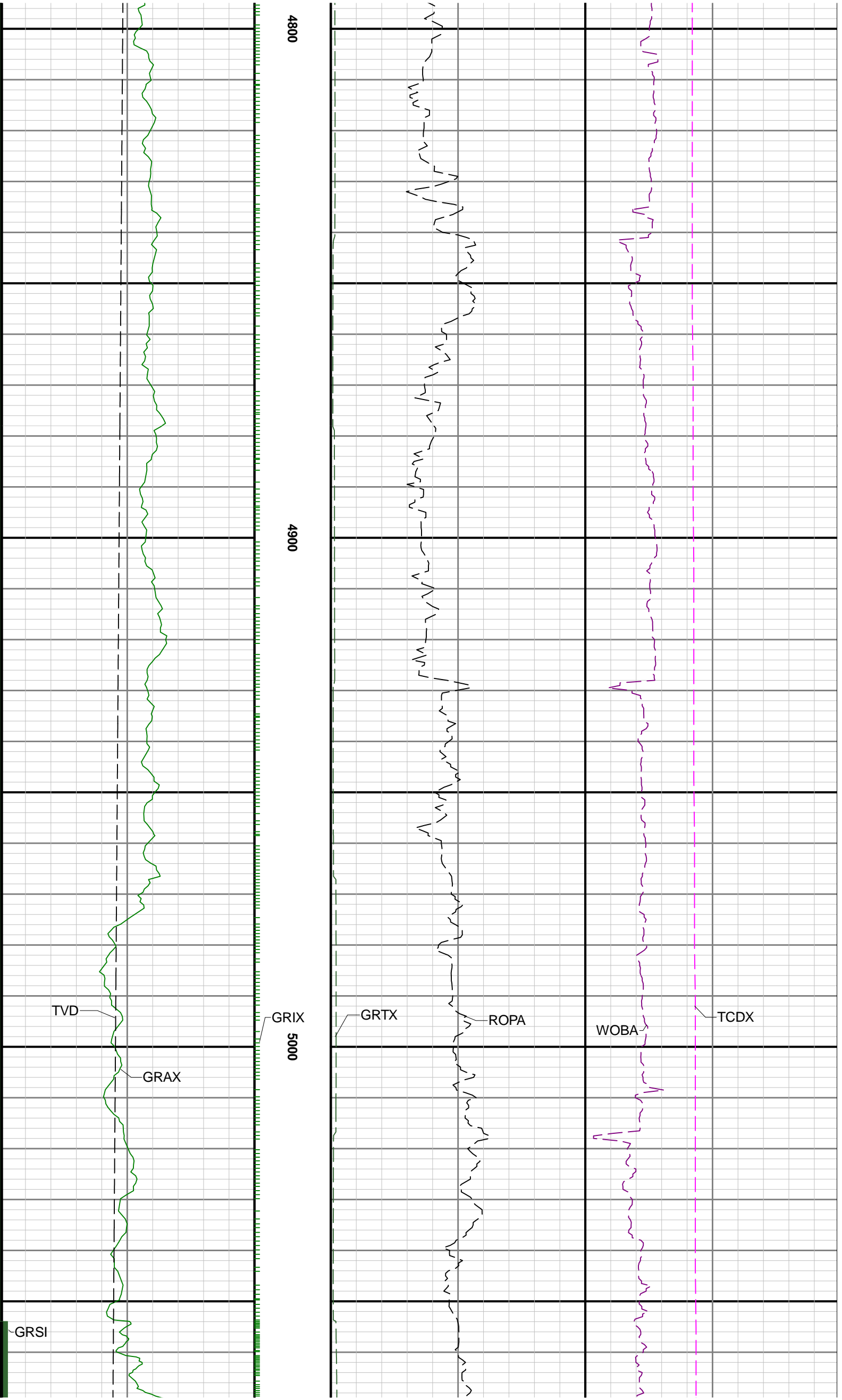


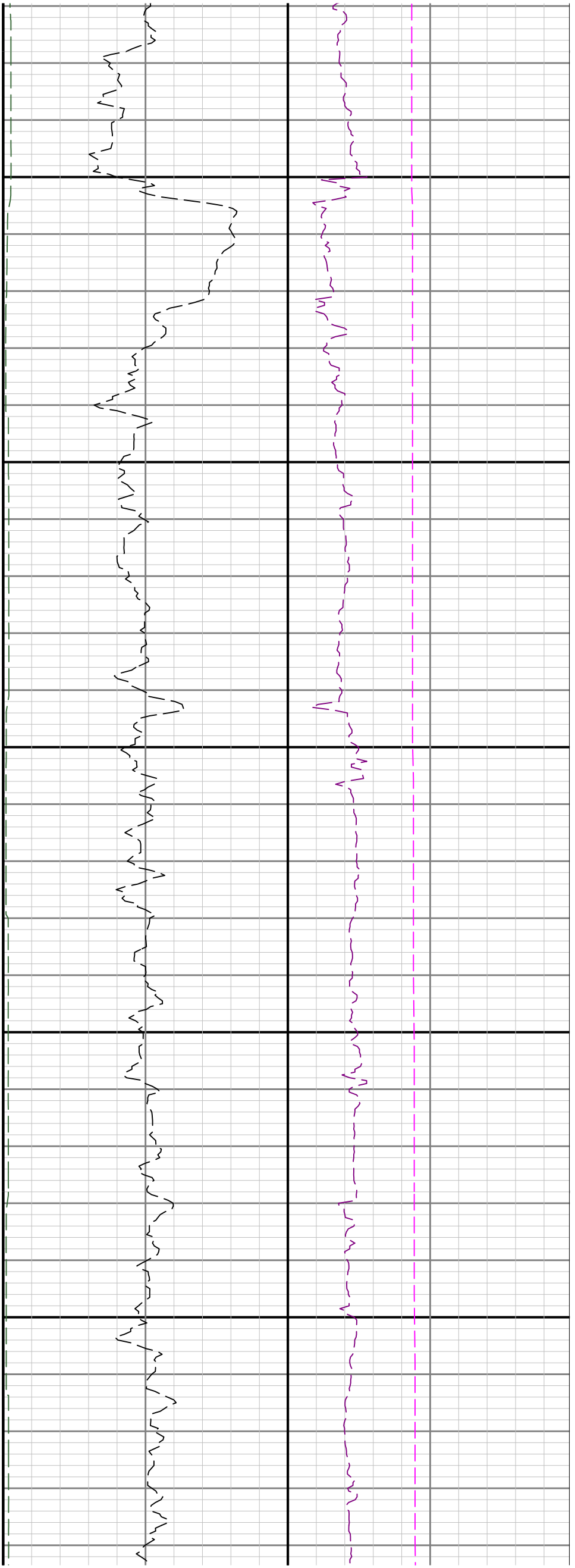


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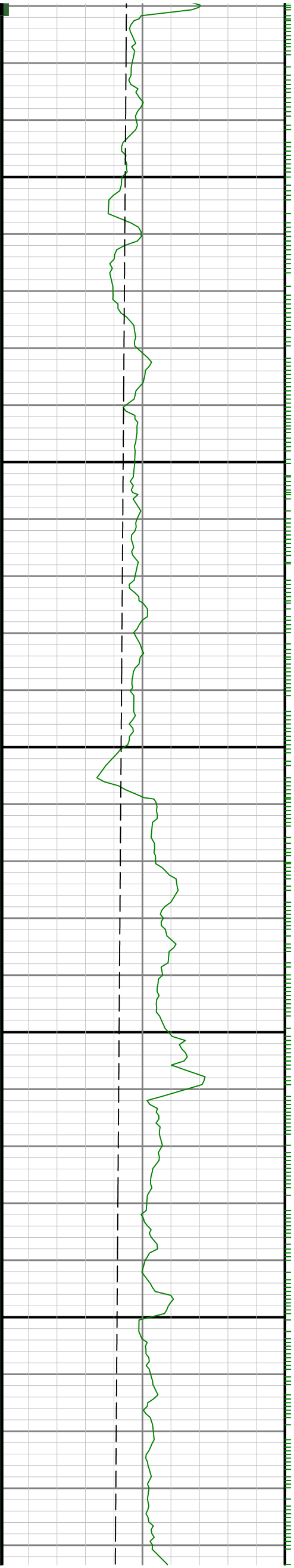


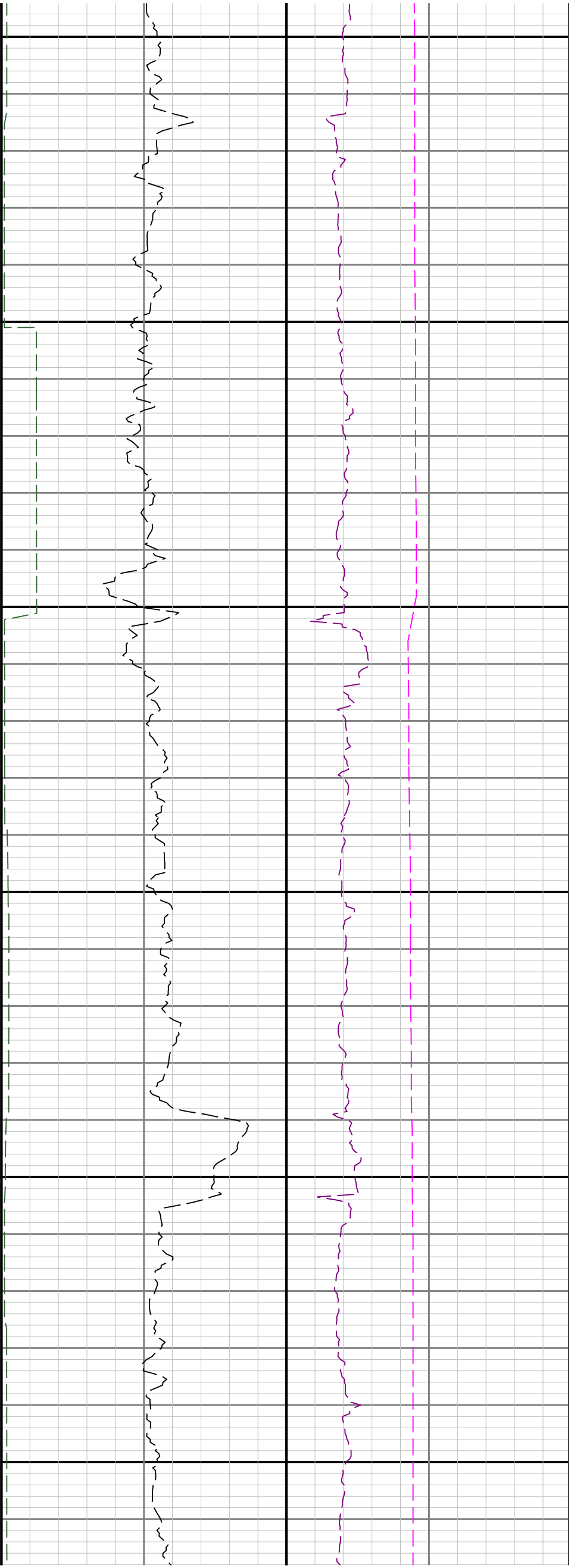


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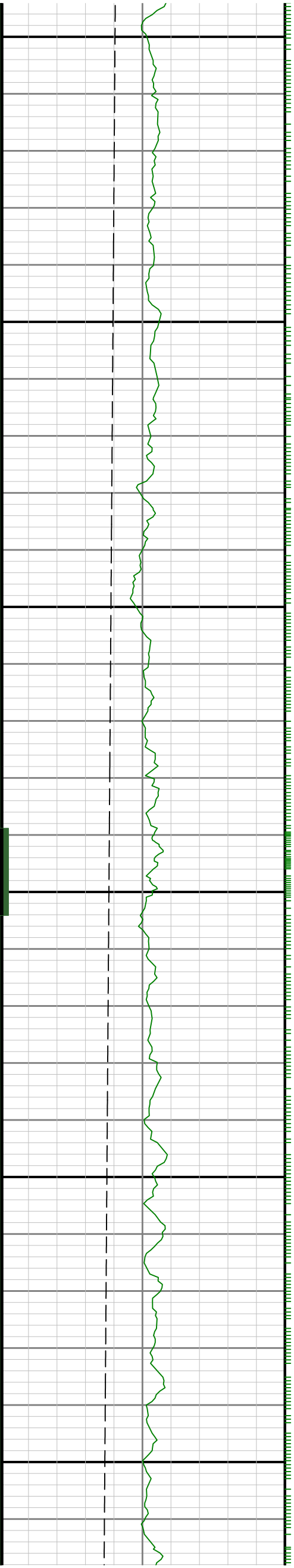


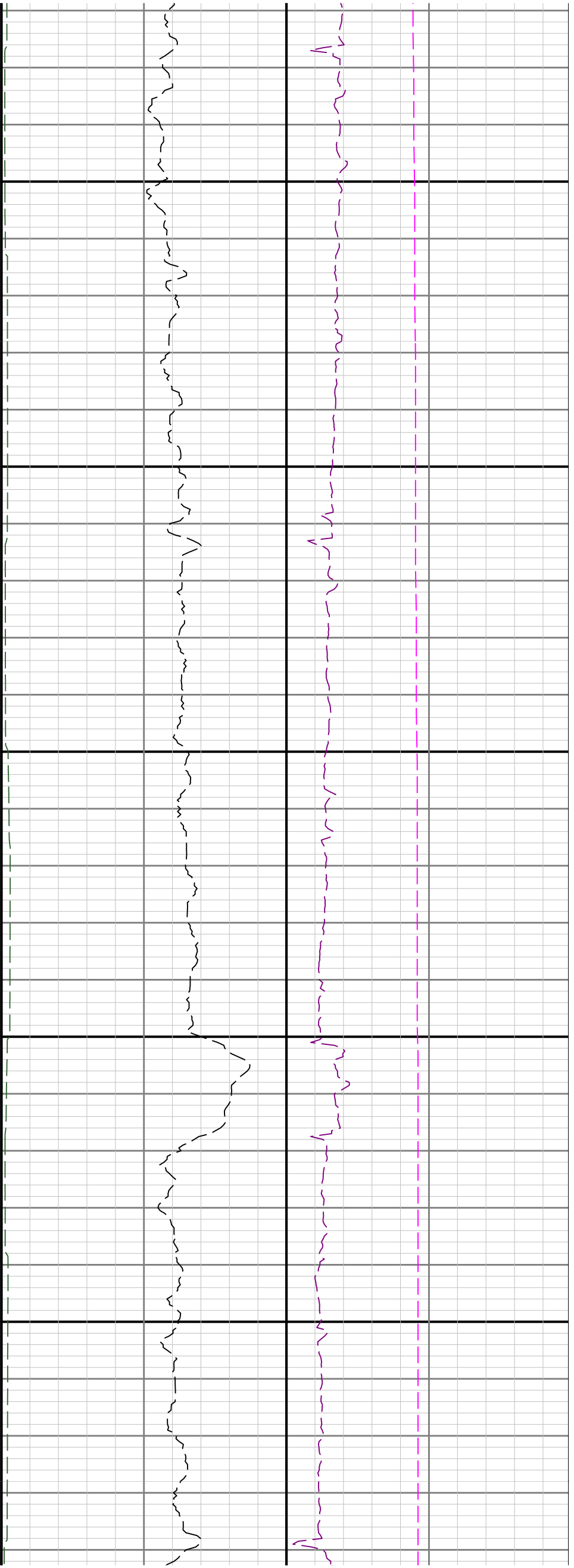


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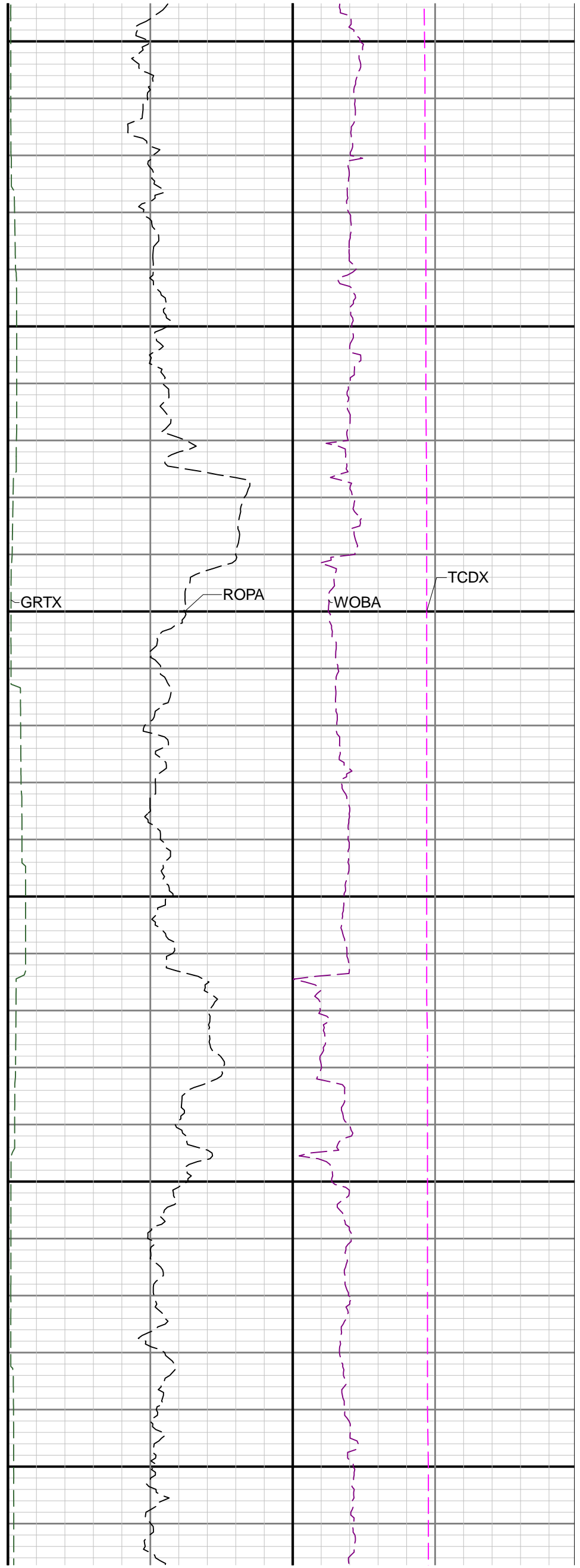
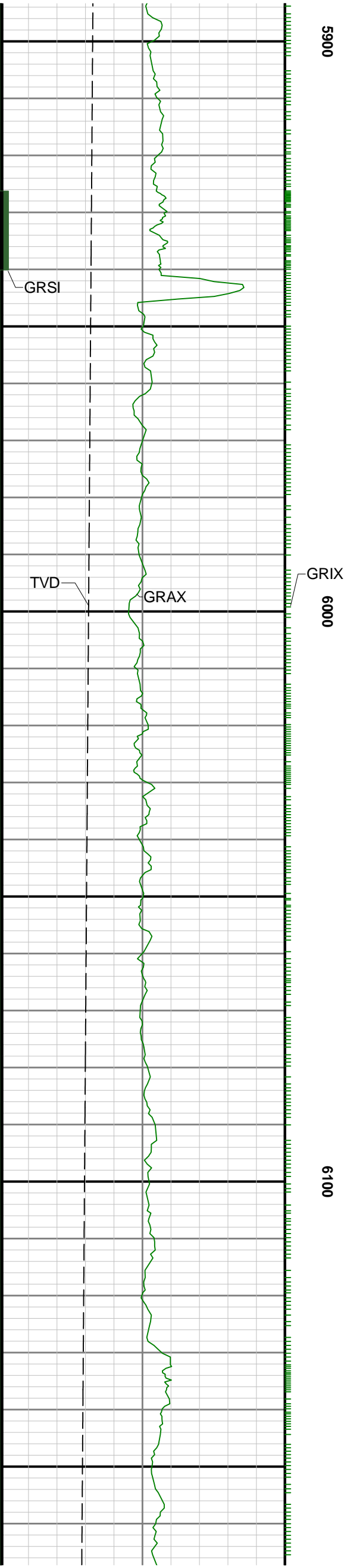
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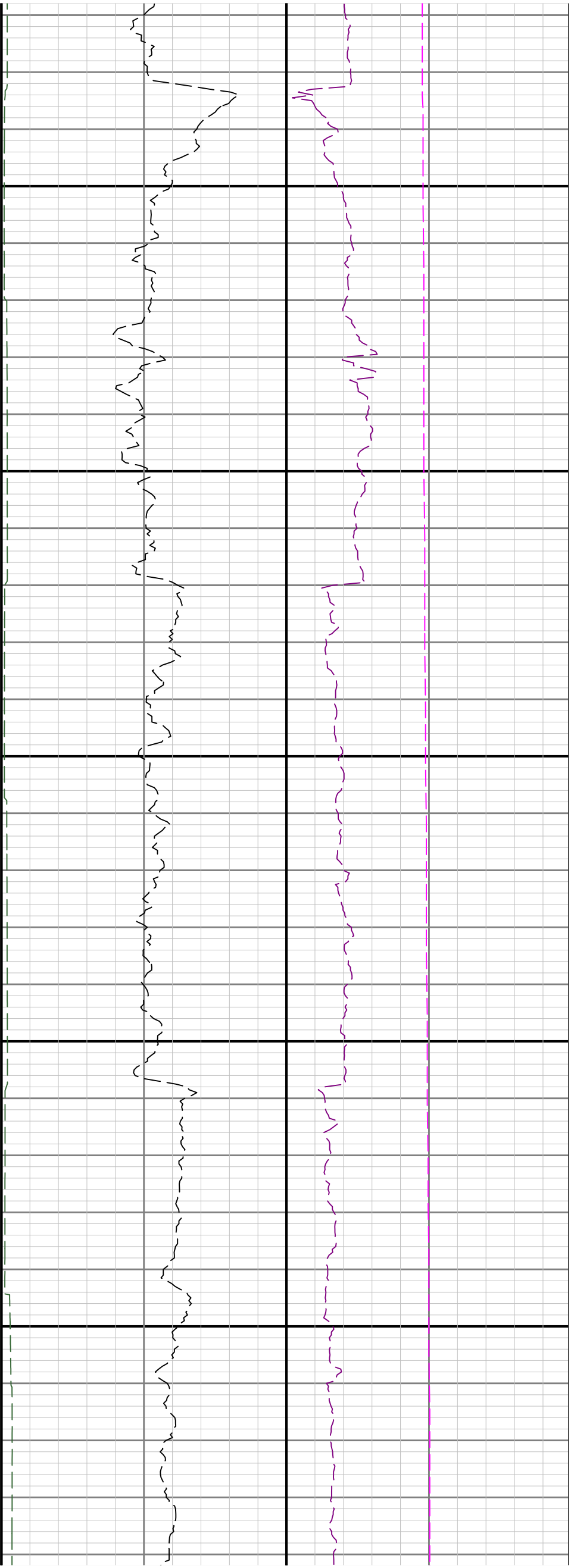
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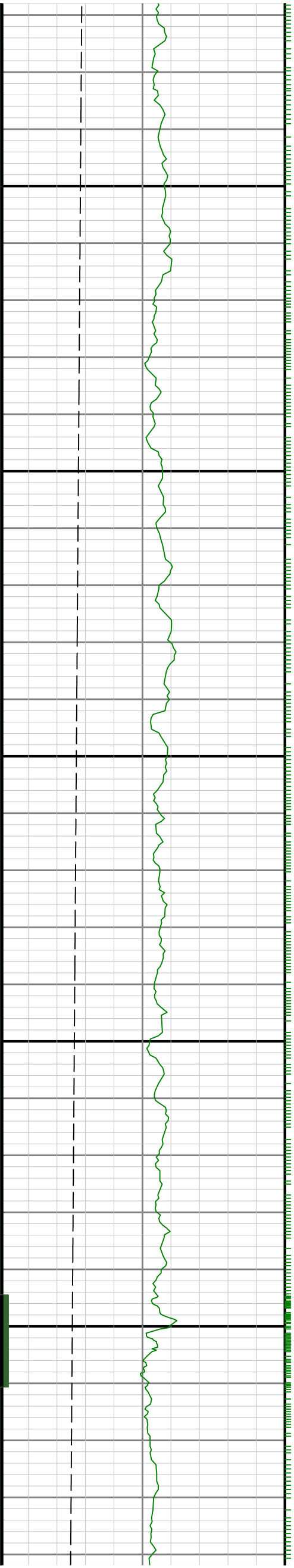


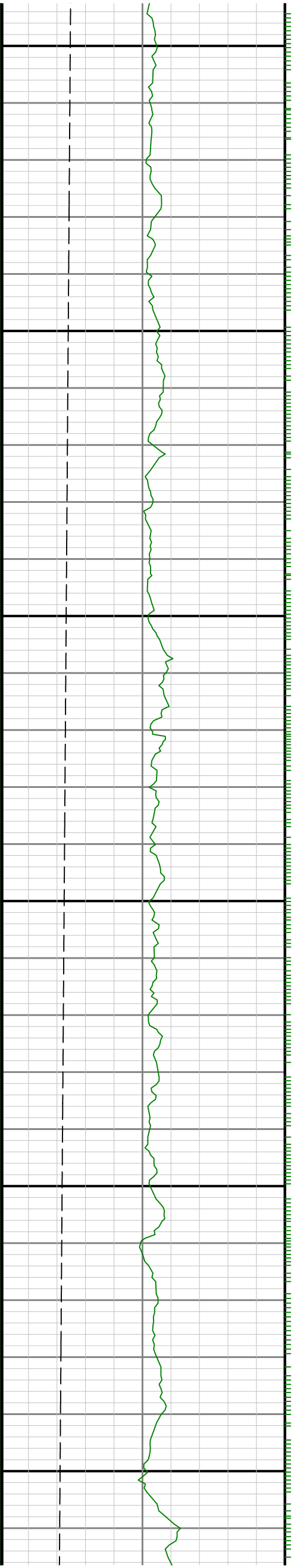


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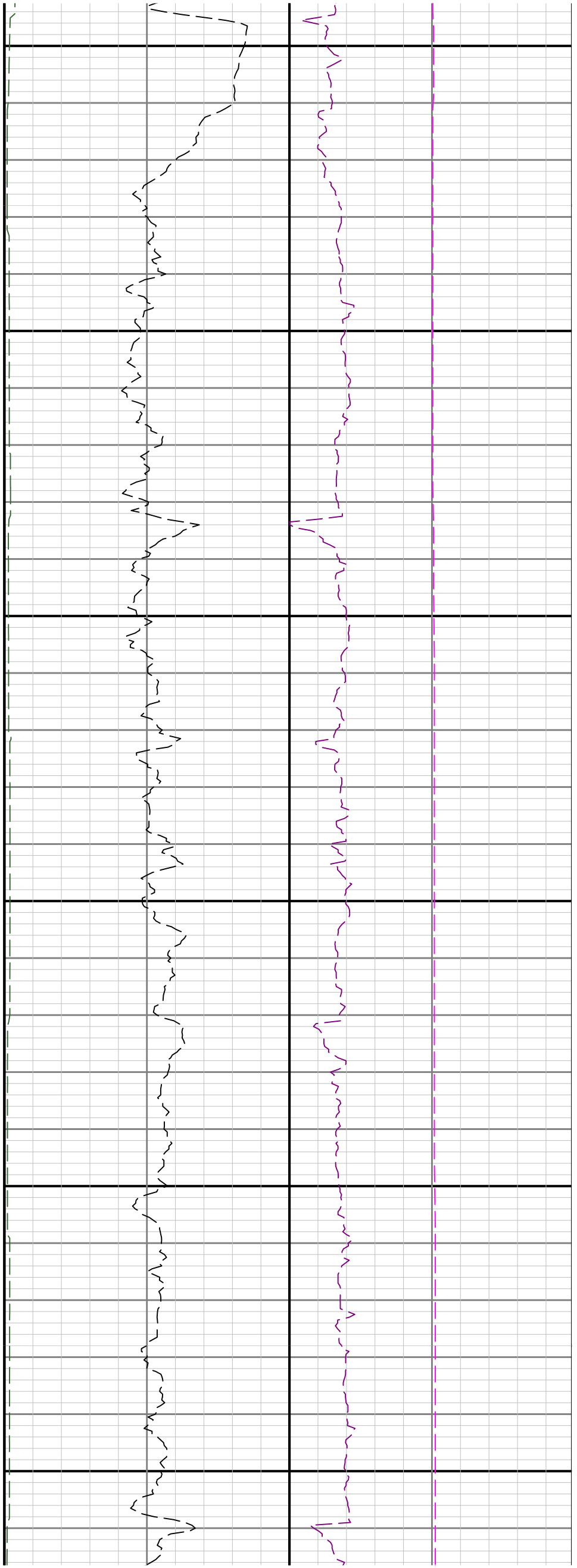


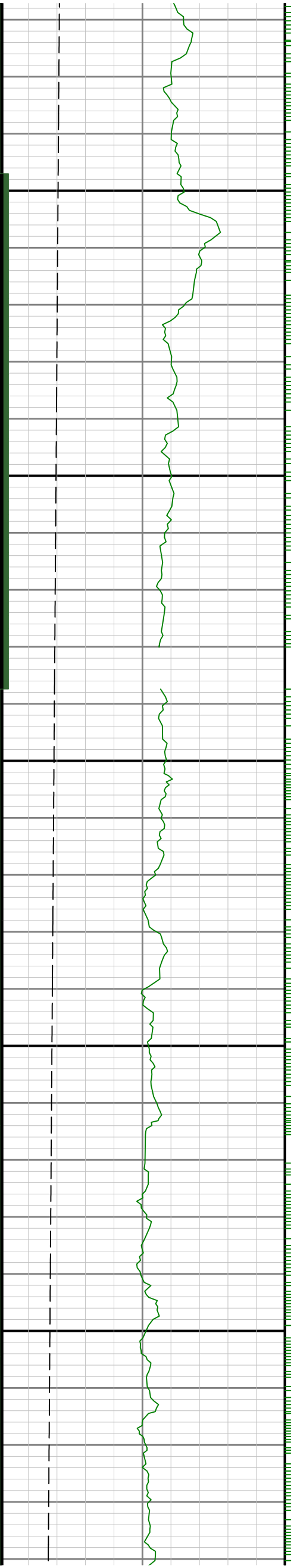


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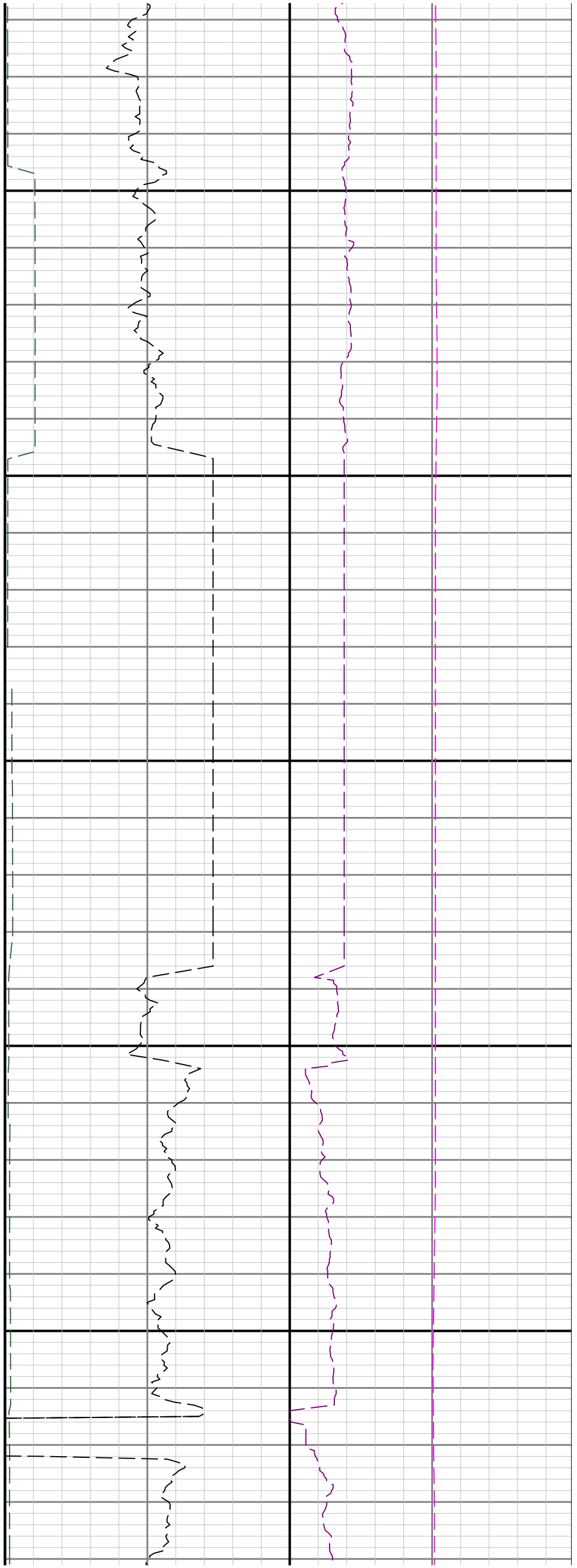
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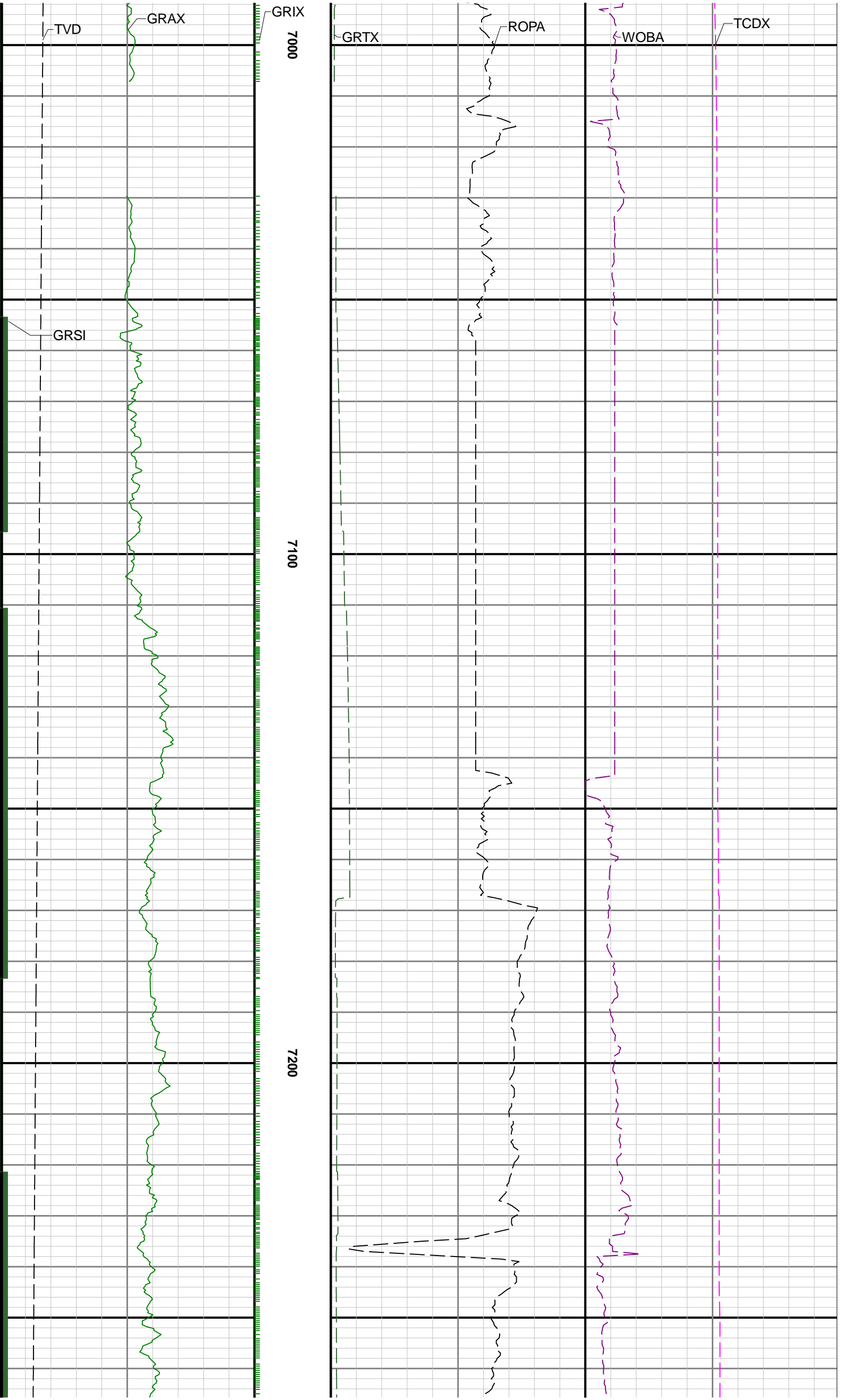


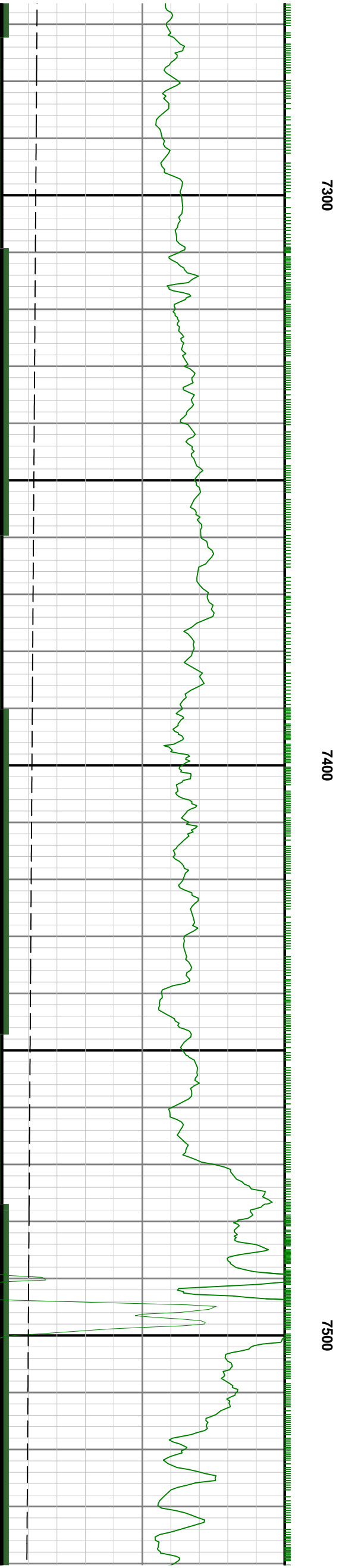
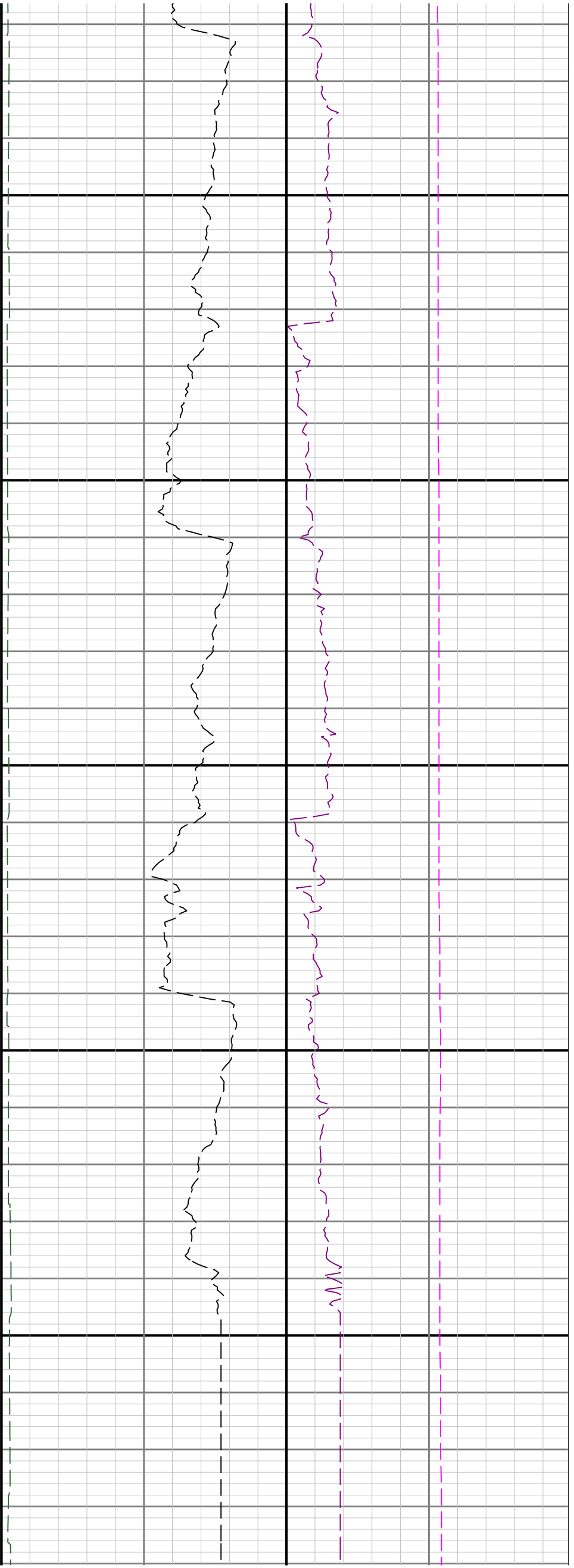


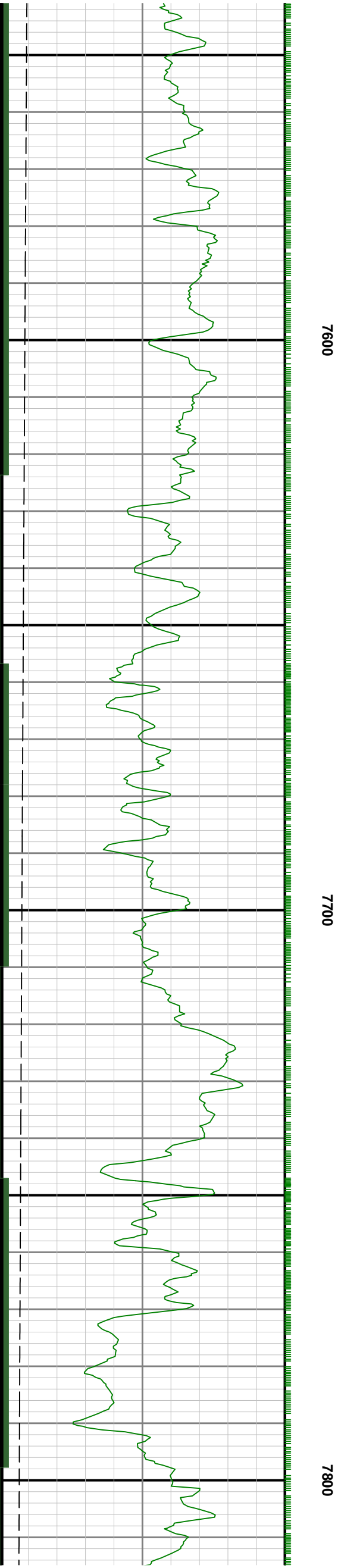
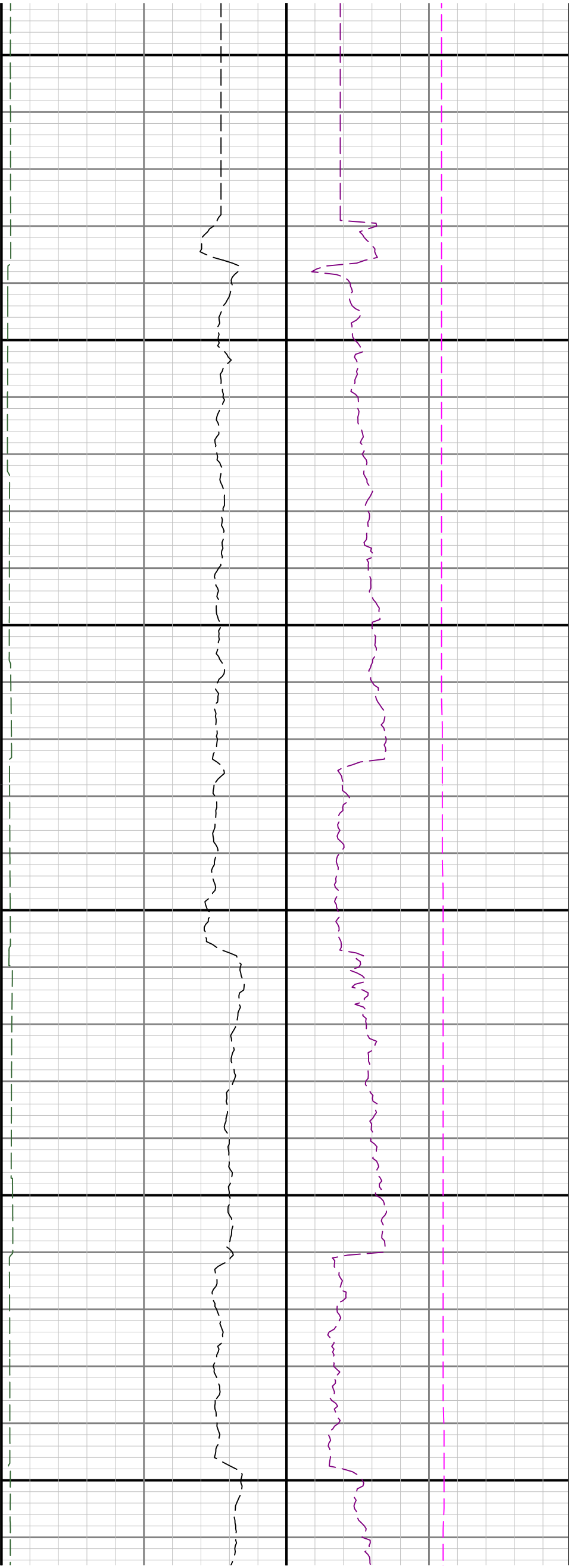
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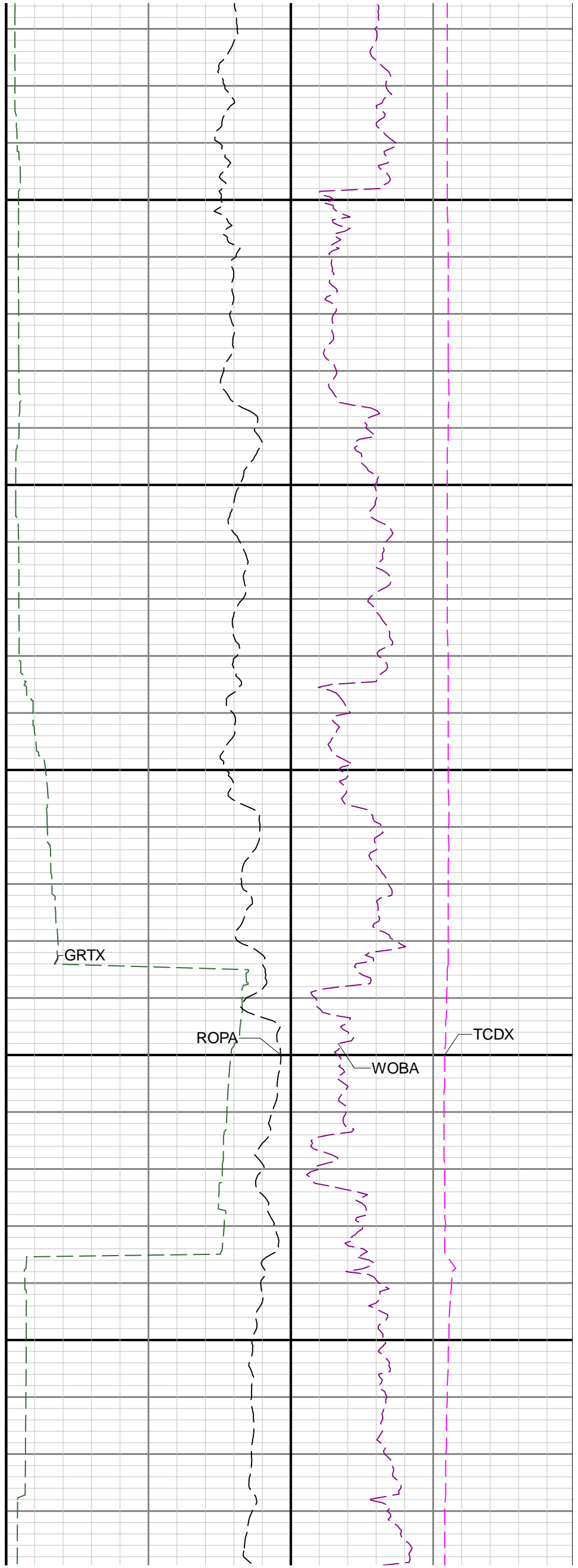
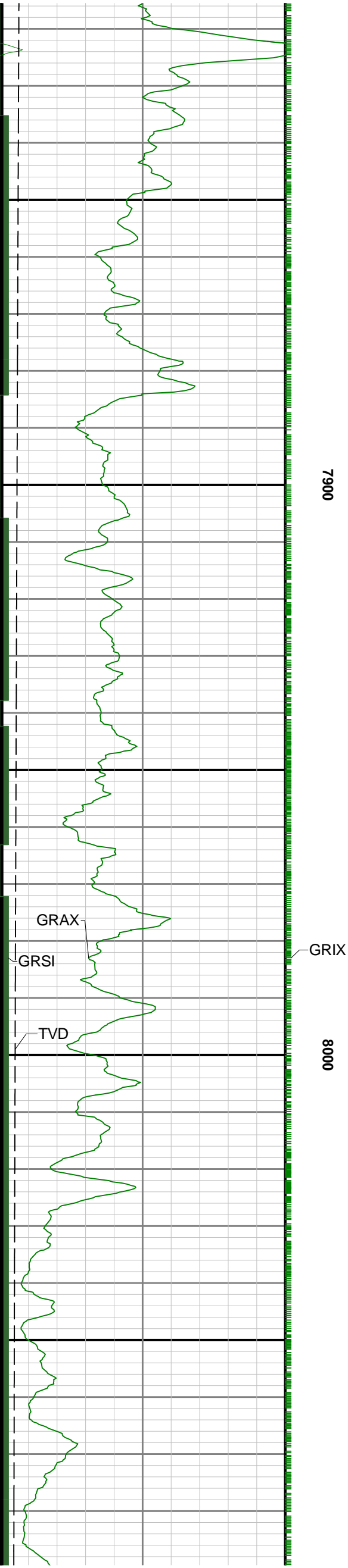
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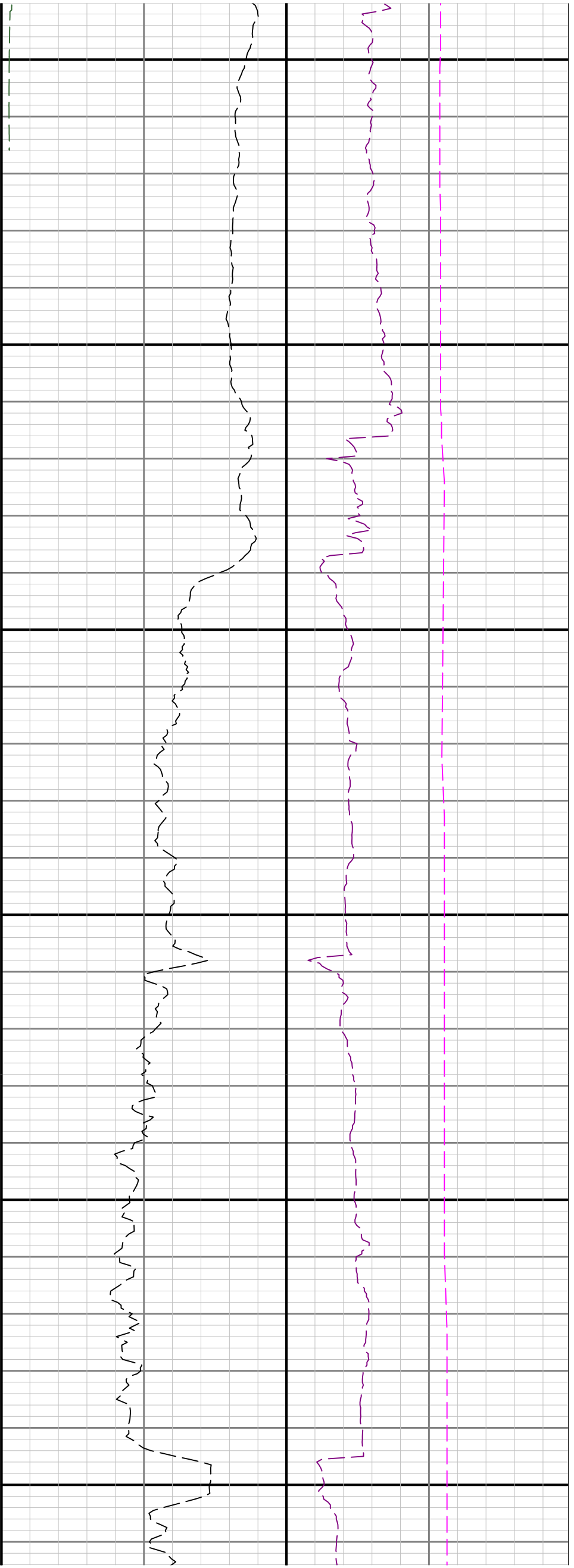












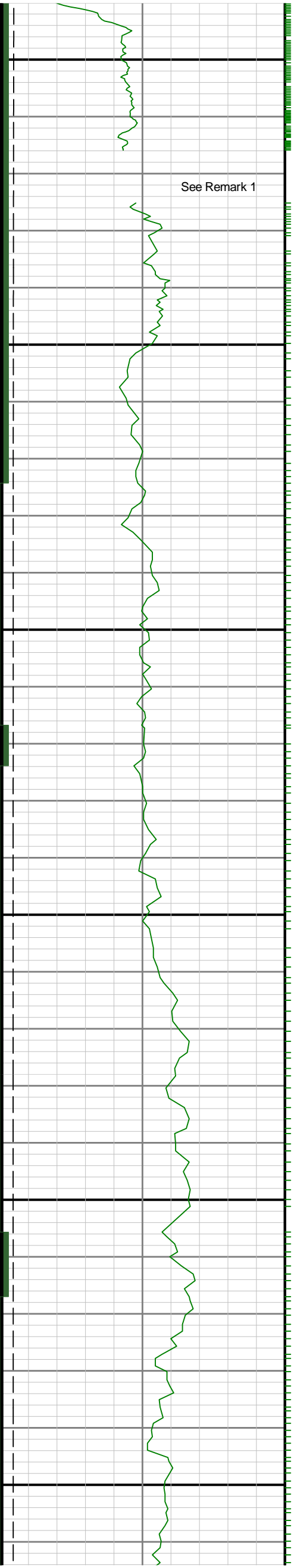
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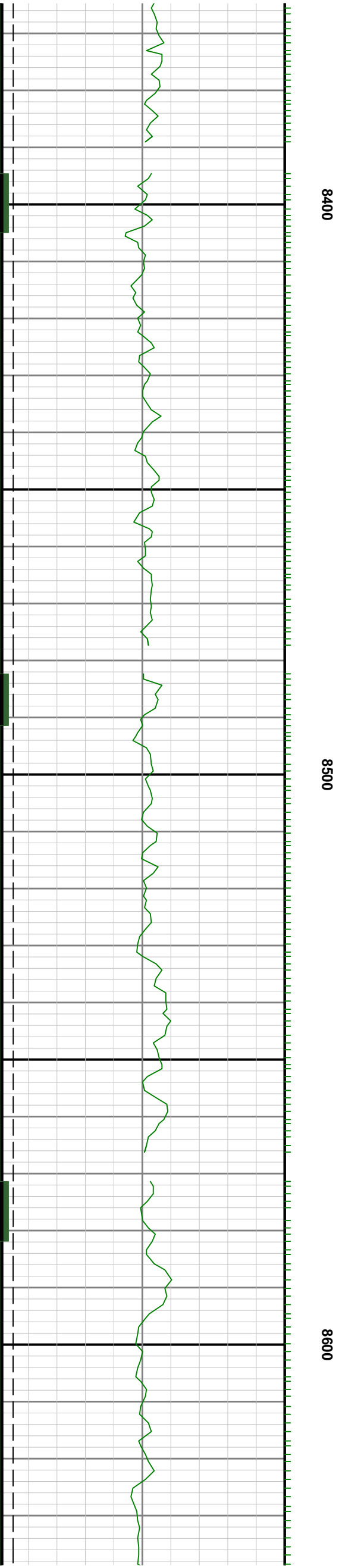
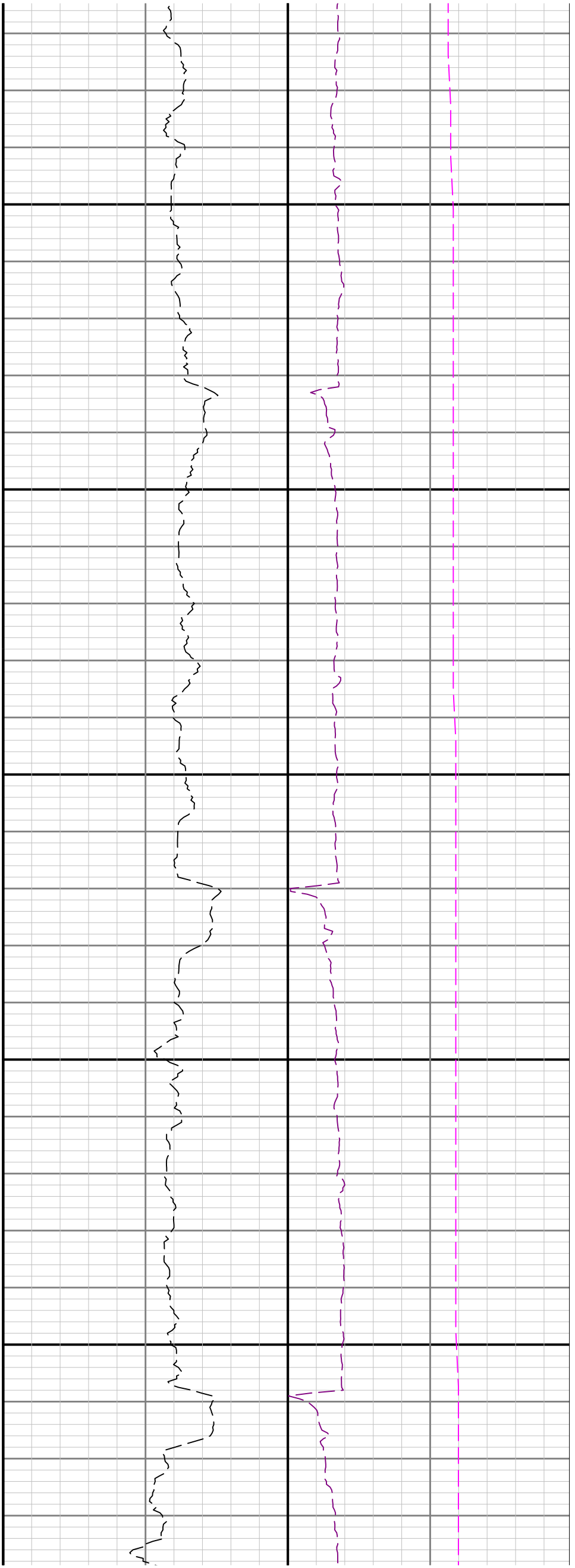
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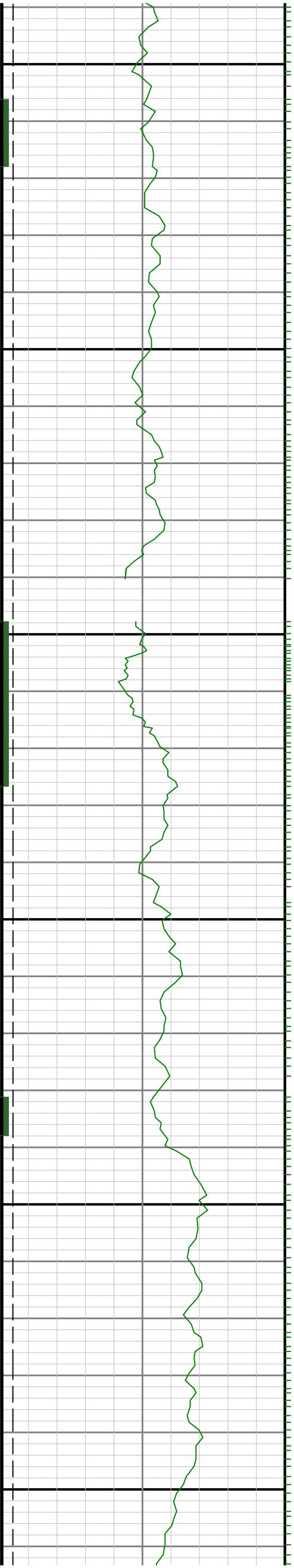
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See Remark 1



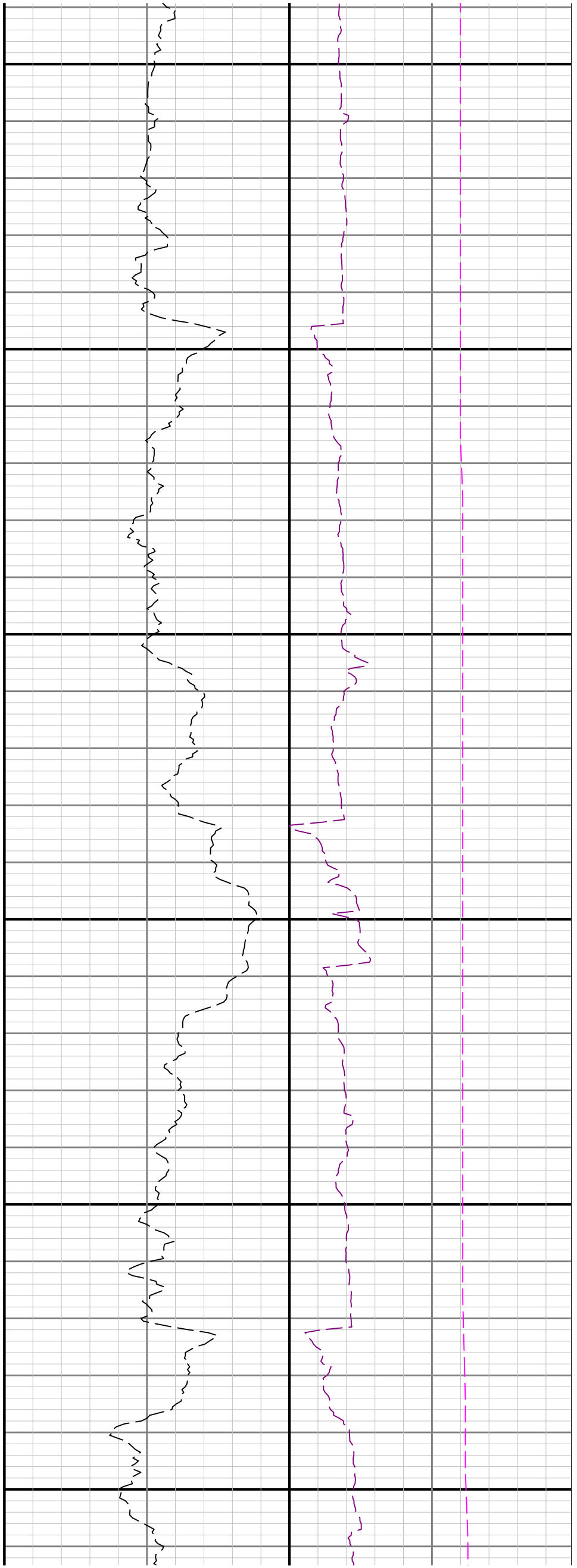


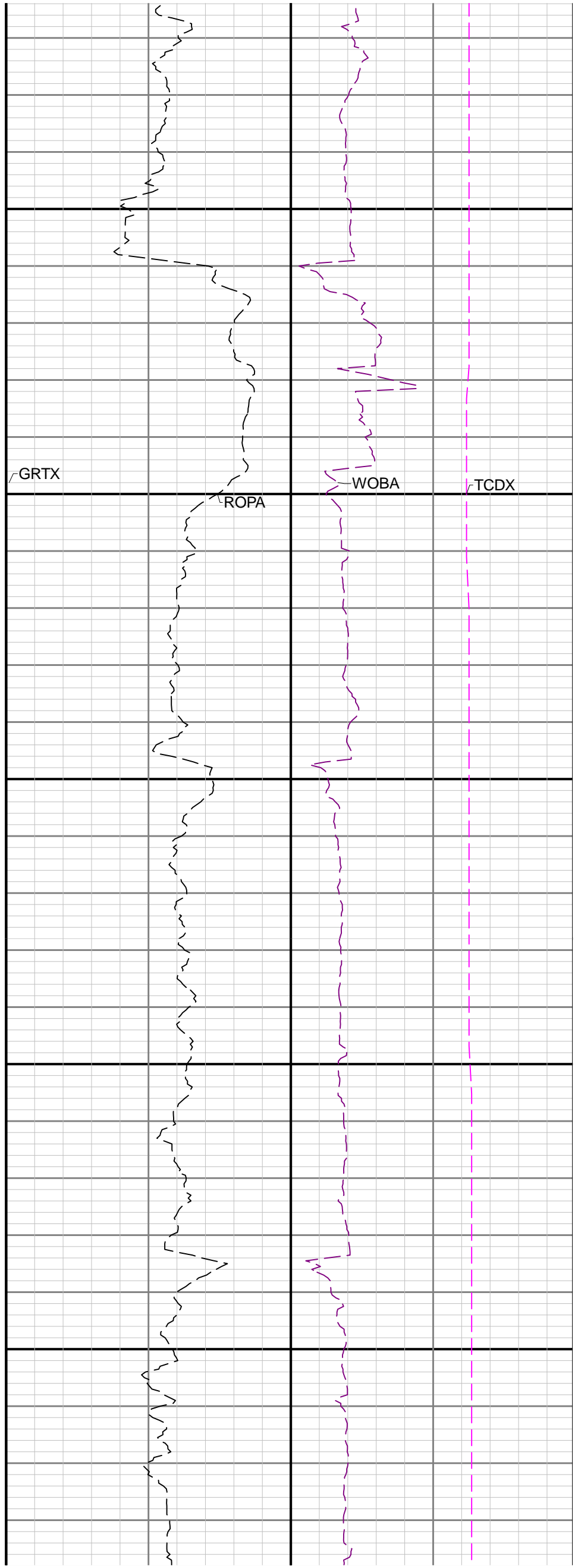
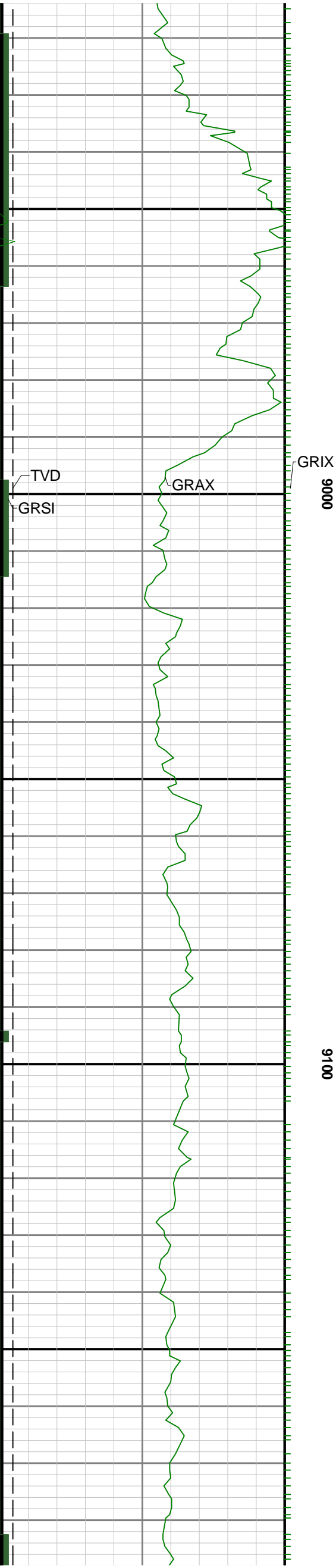


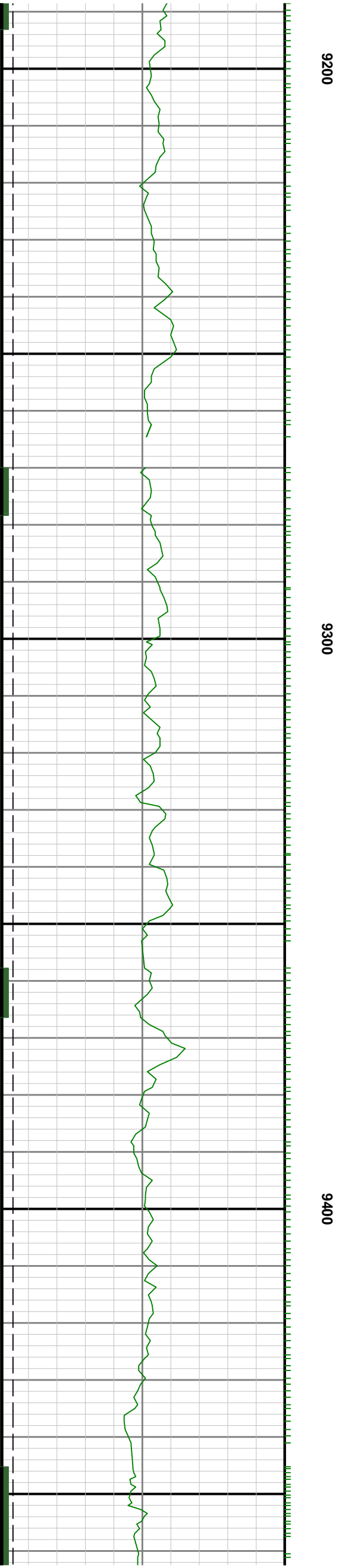
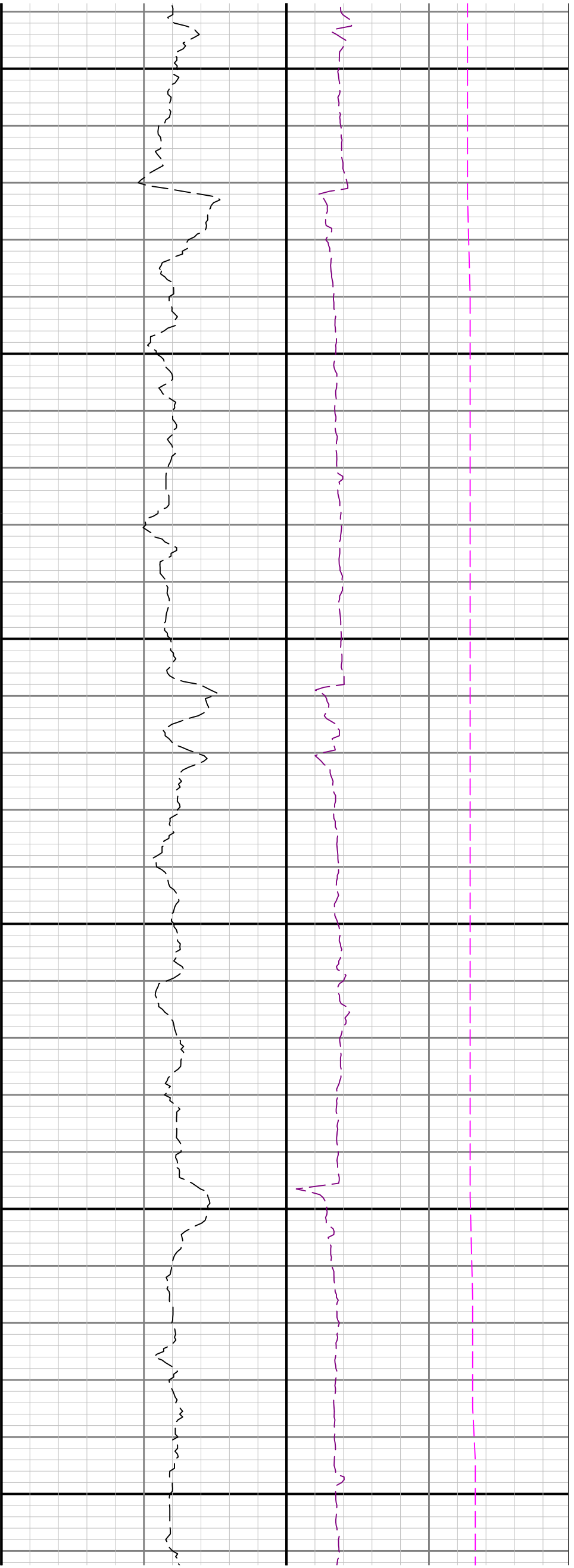
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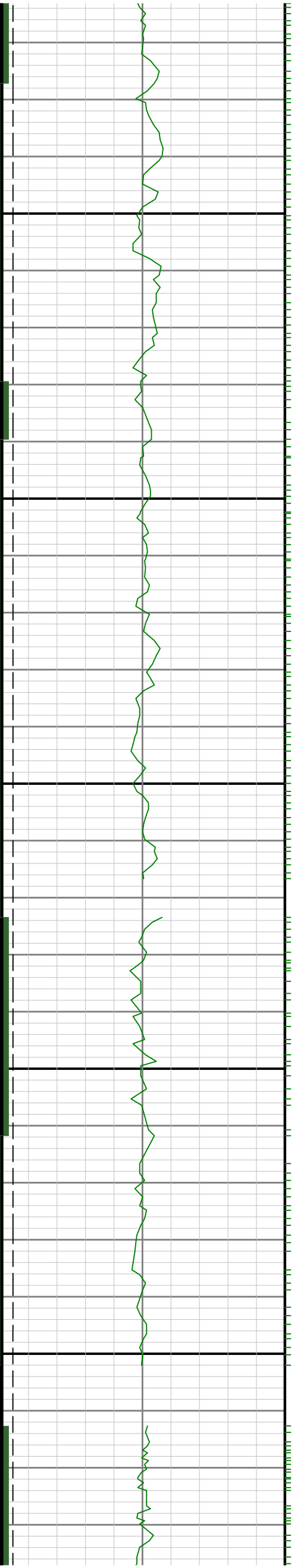
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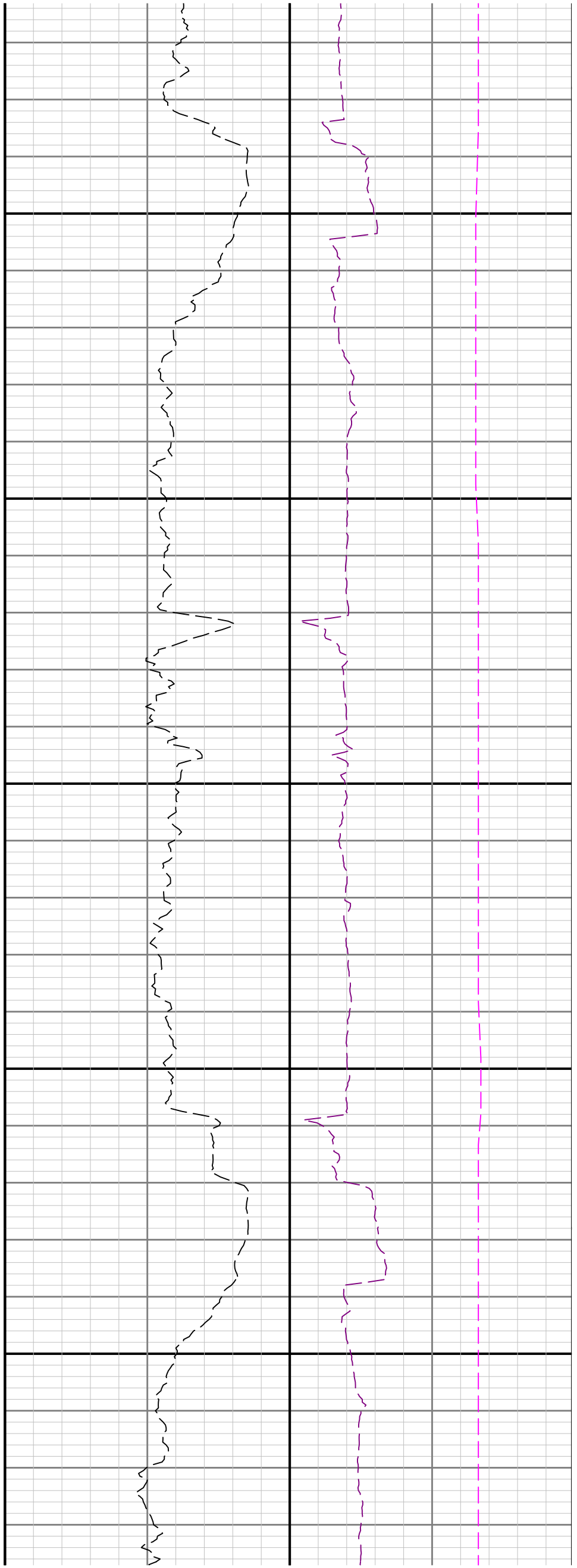


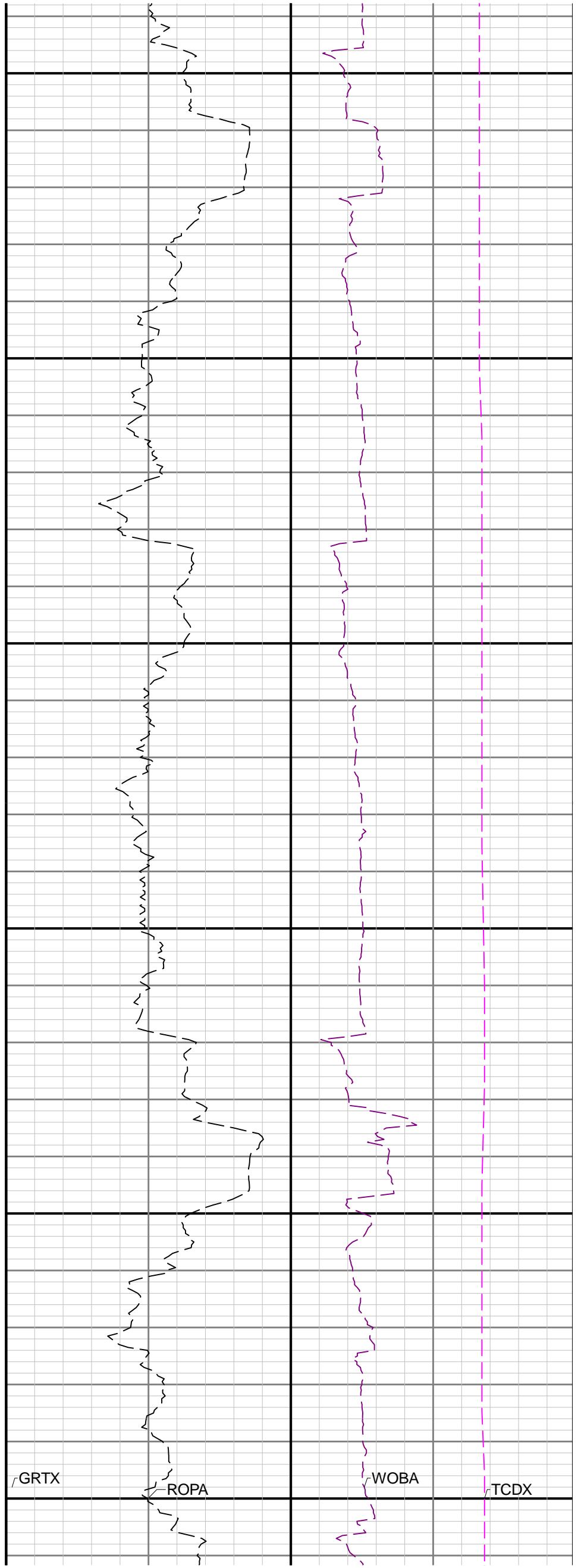
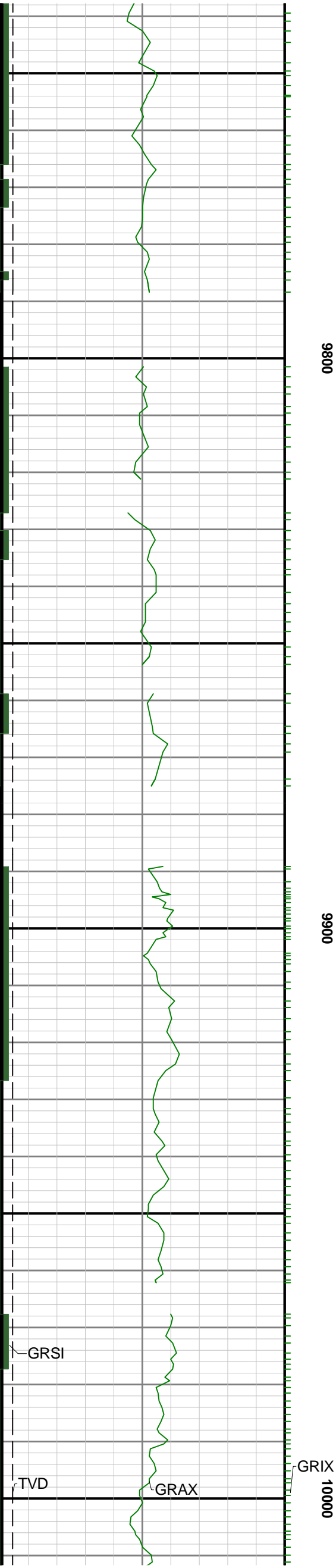


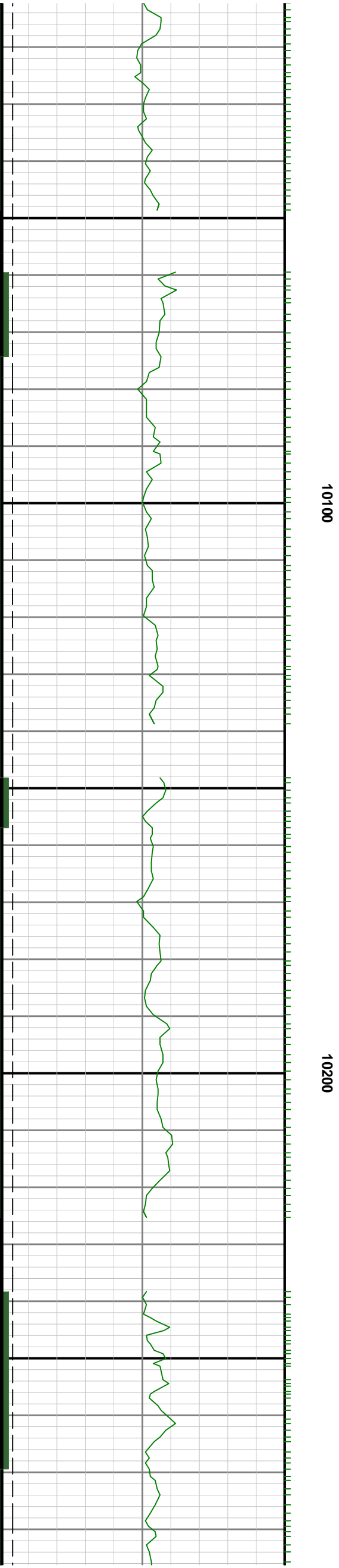
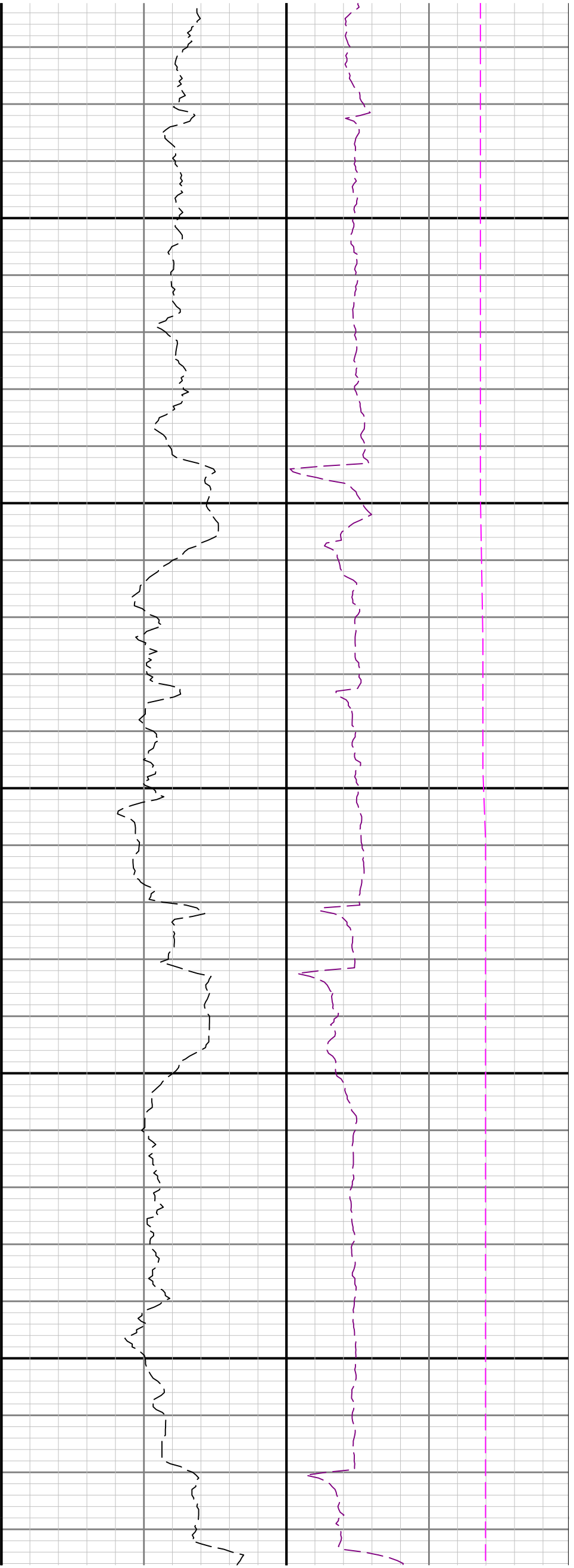
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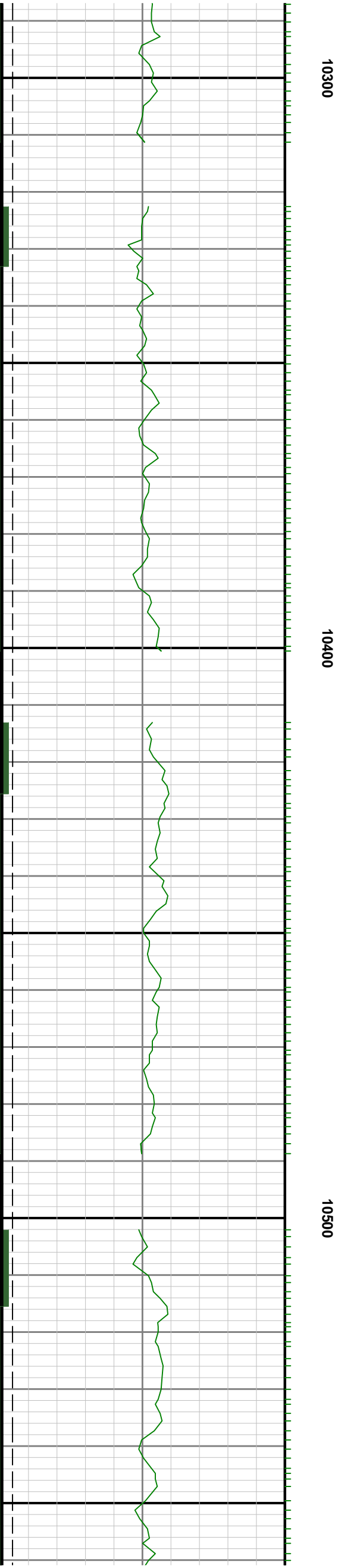
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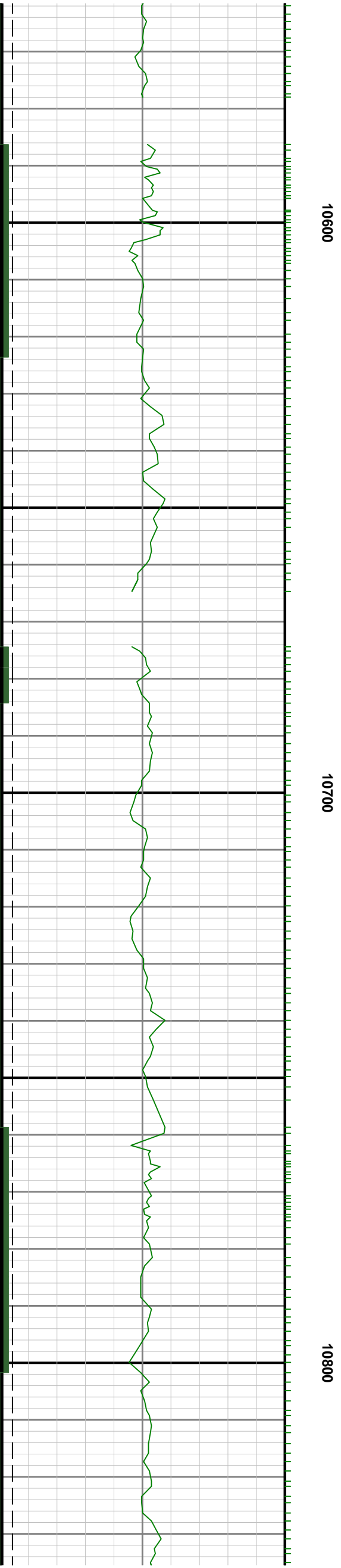
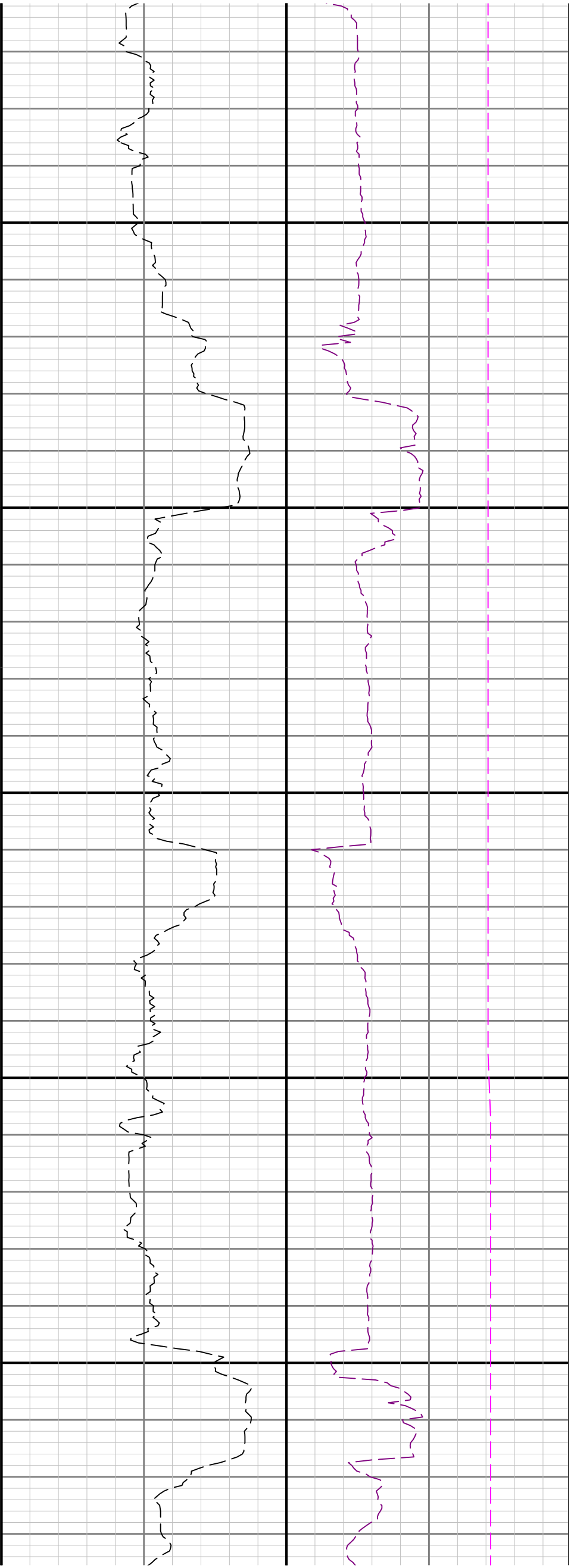


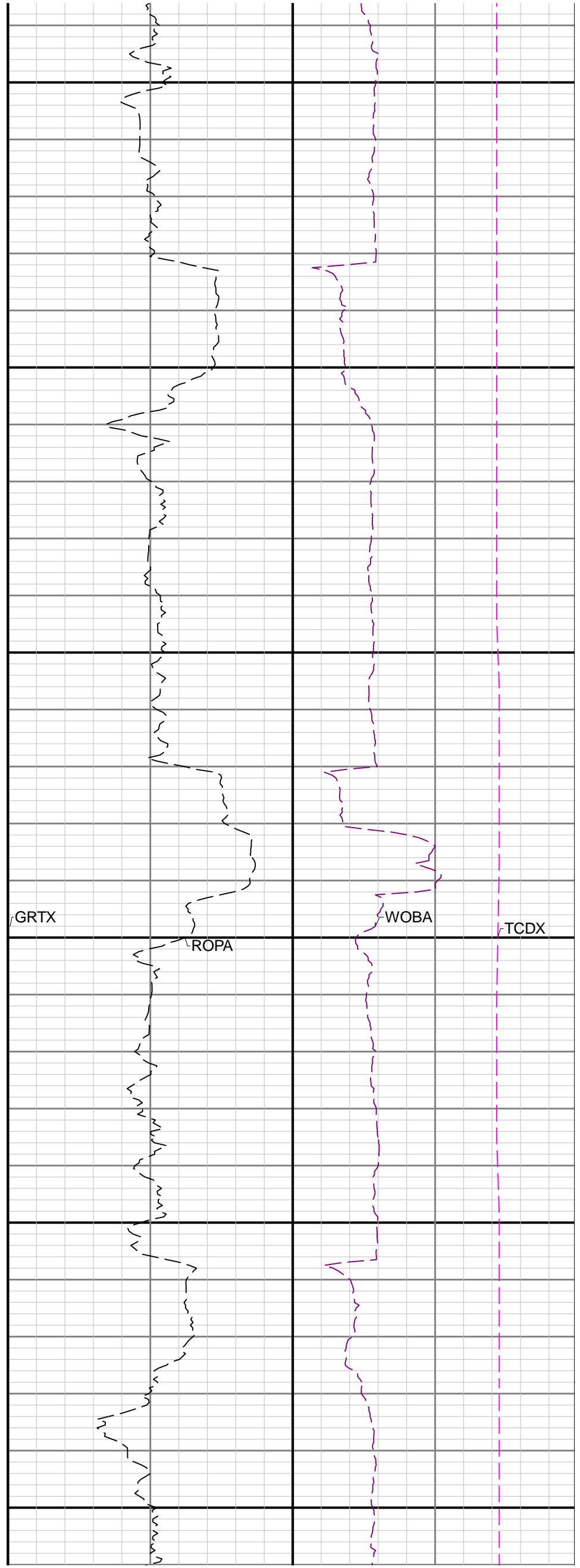
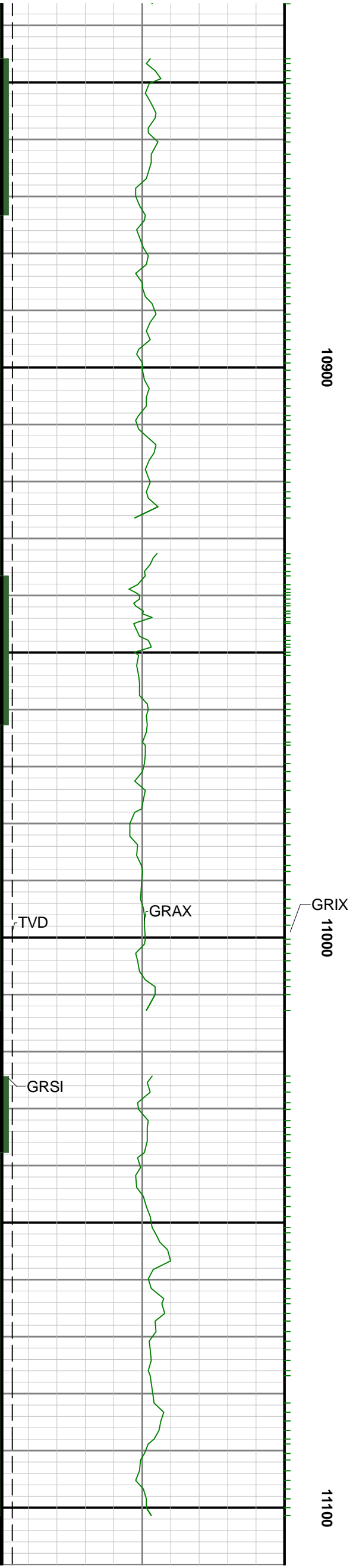


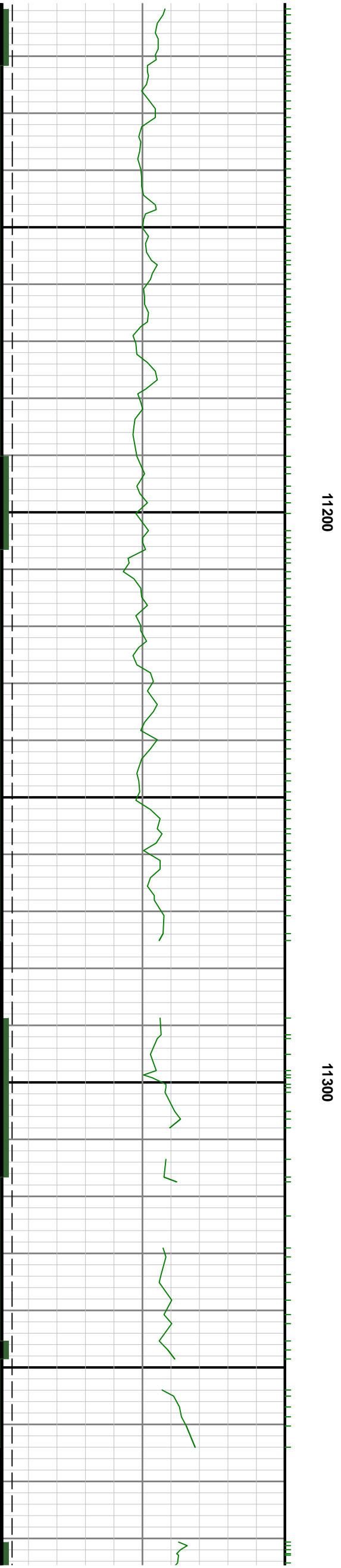
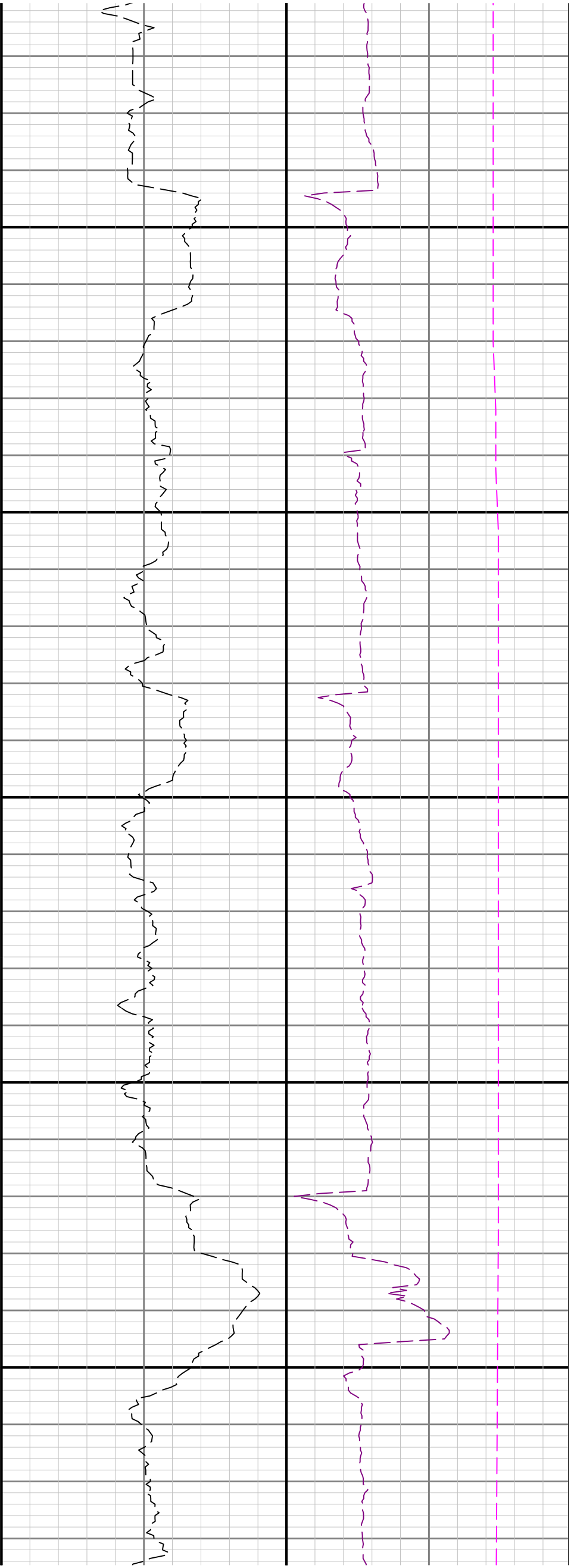


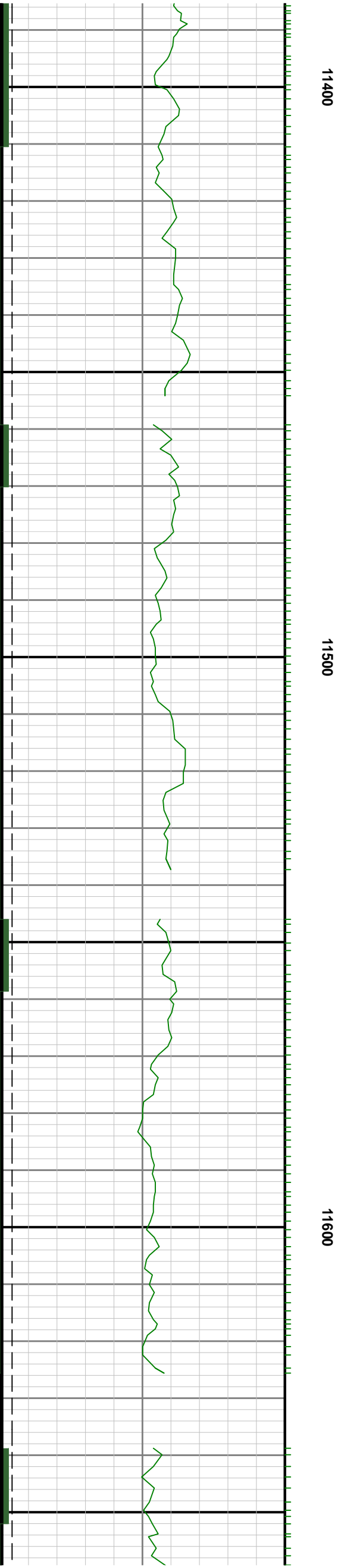
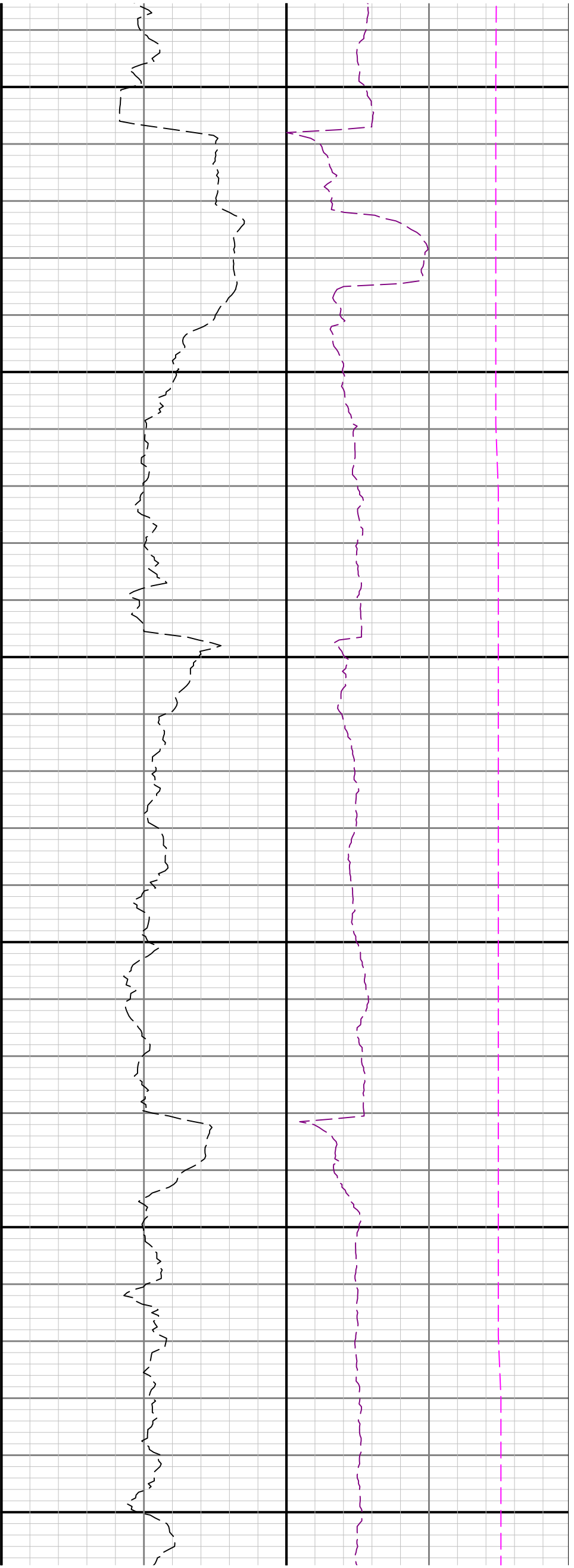


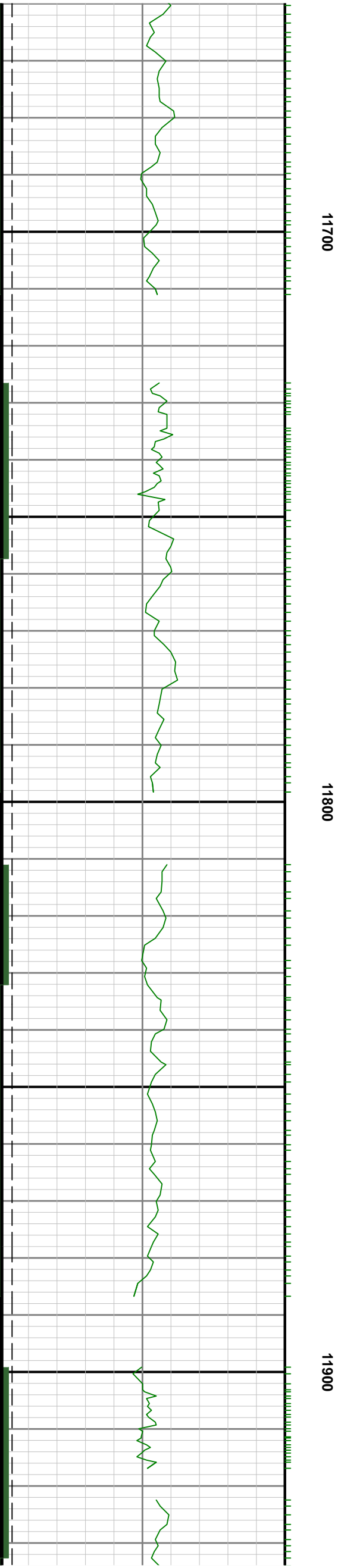
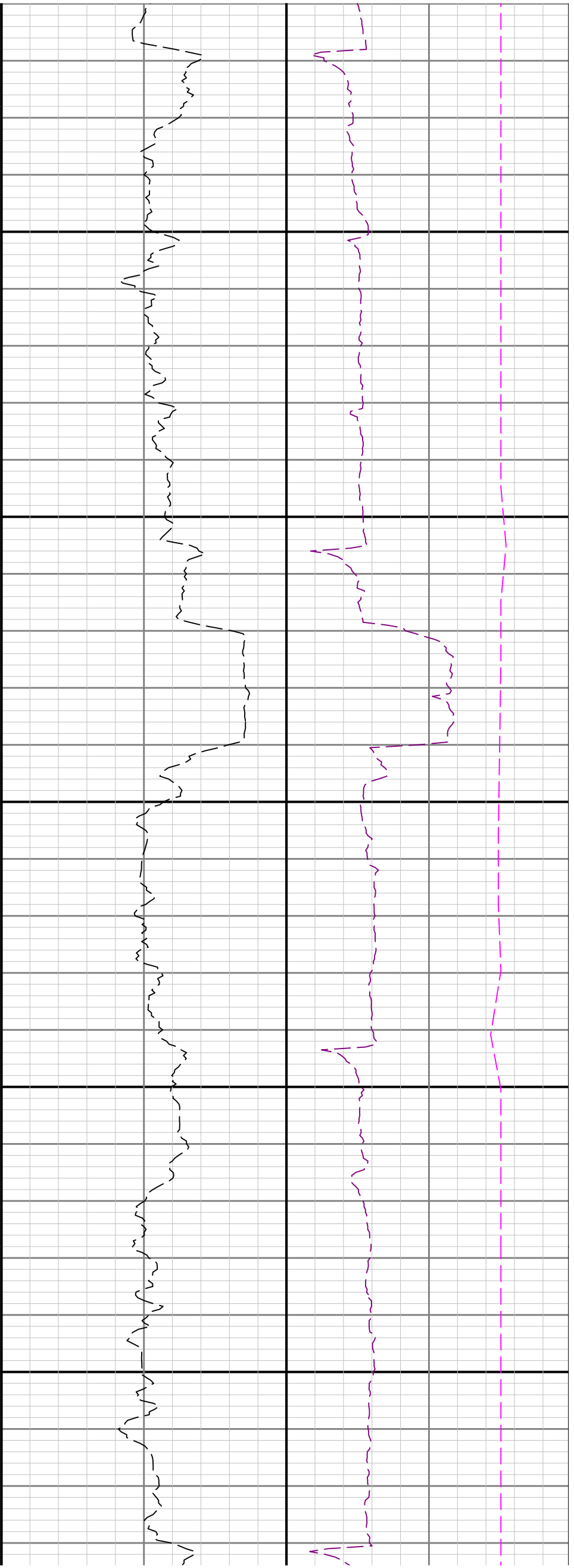


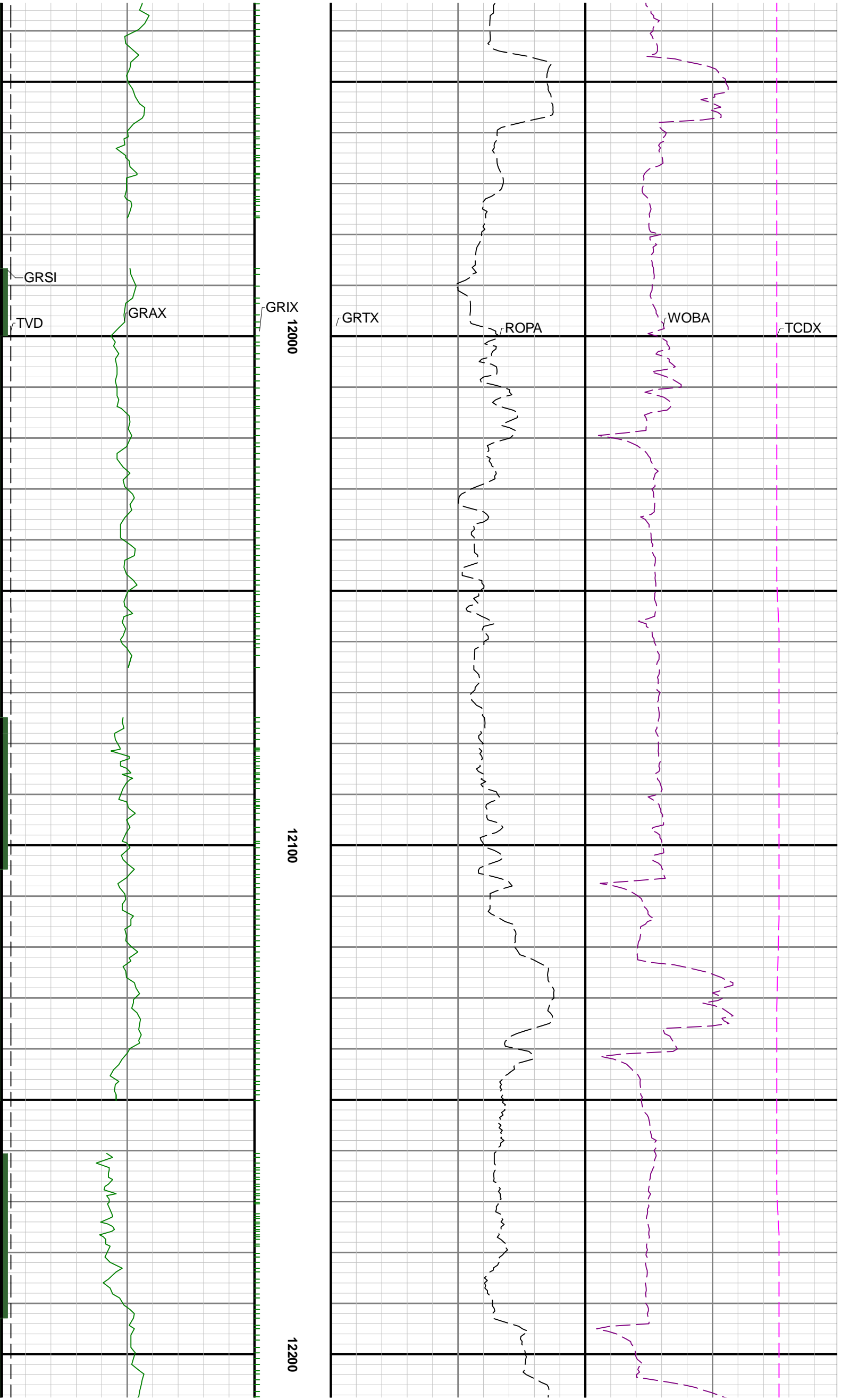


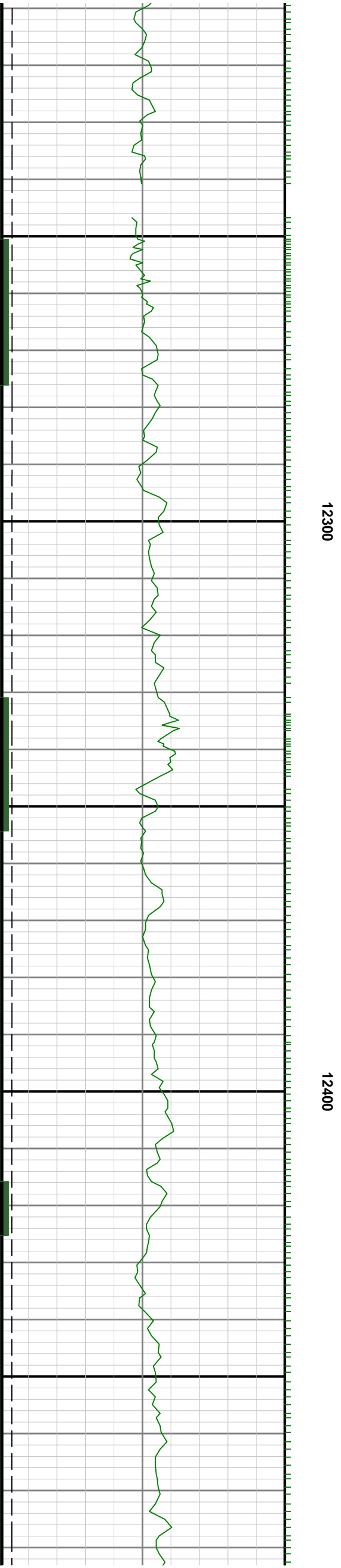
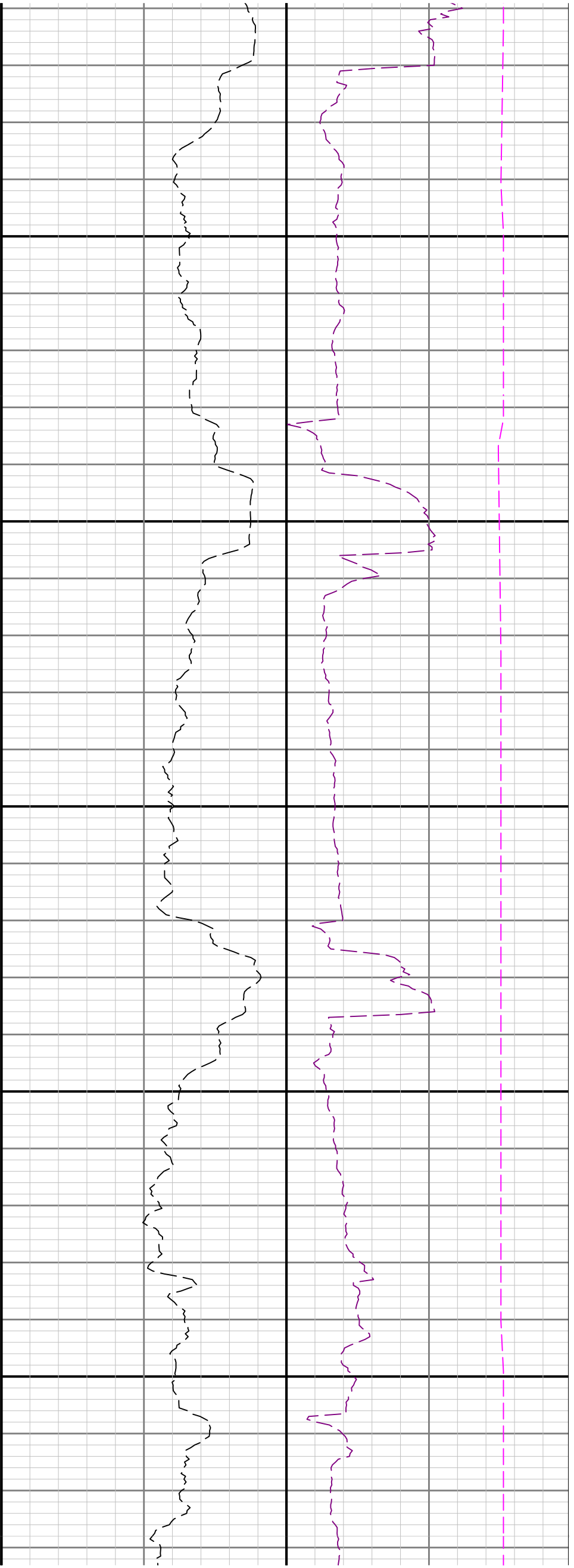




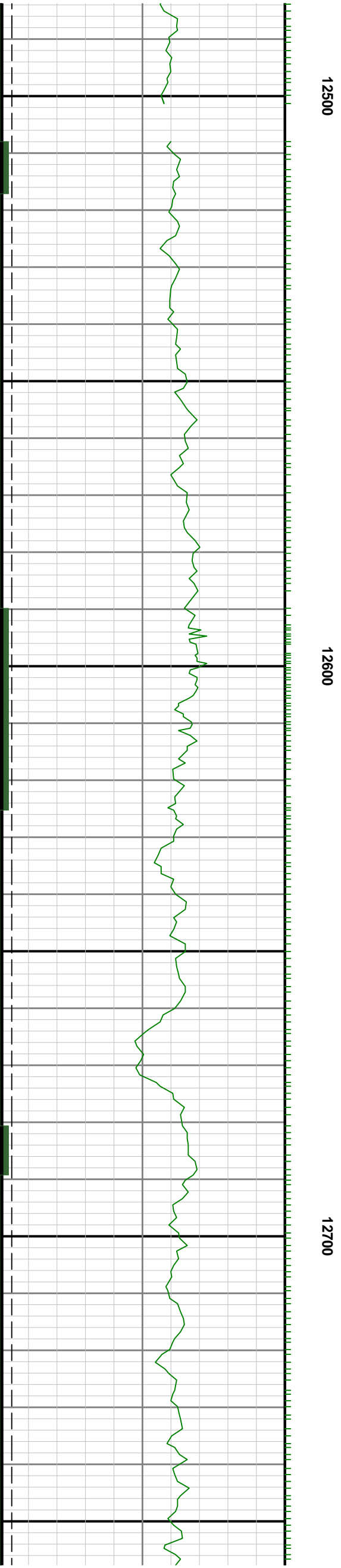
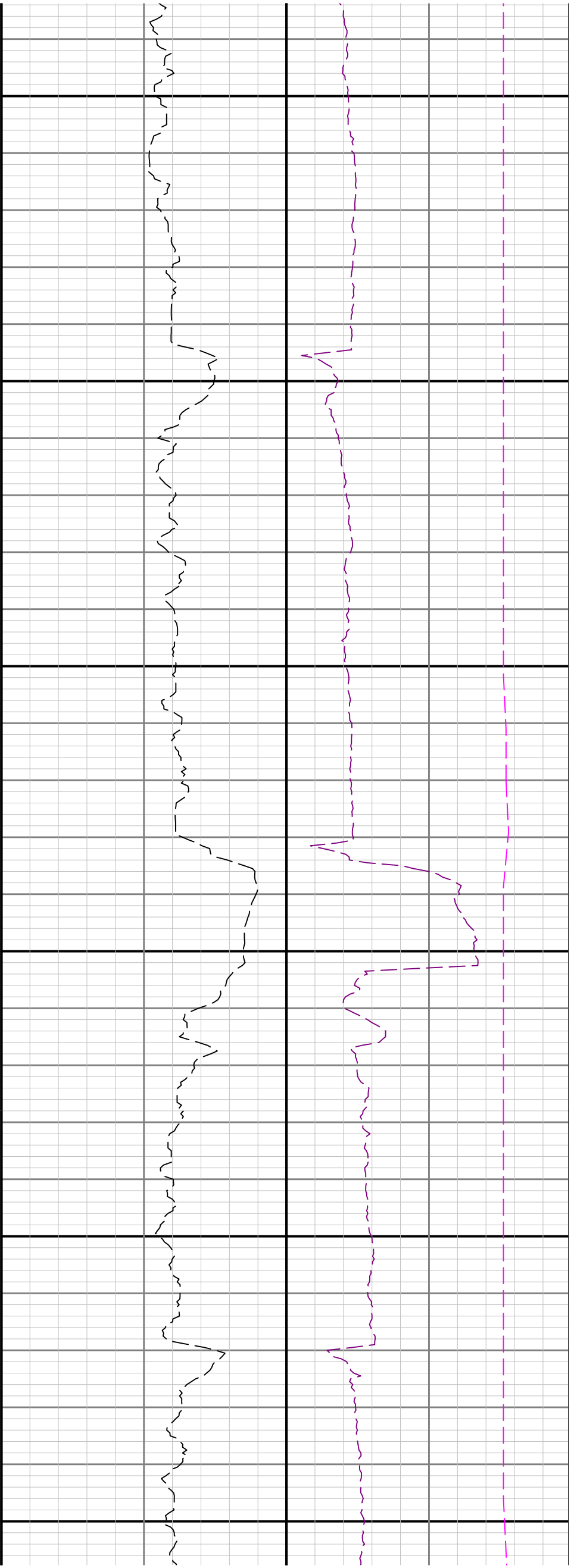


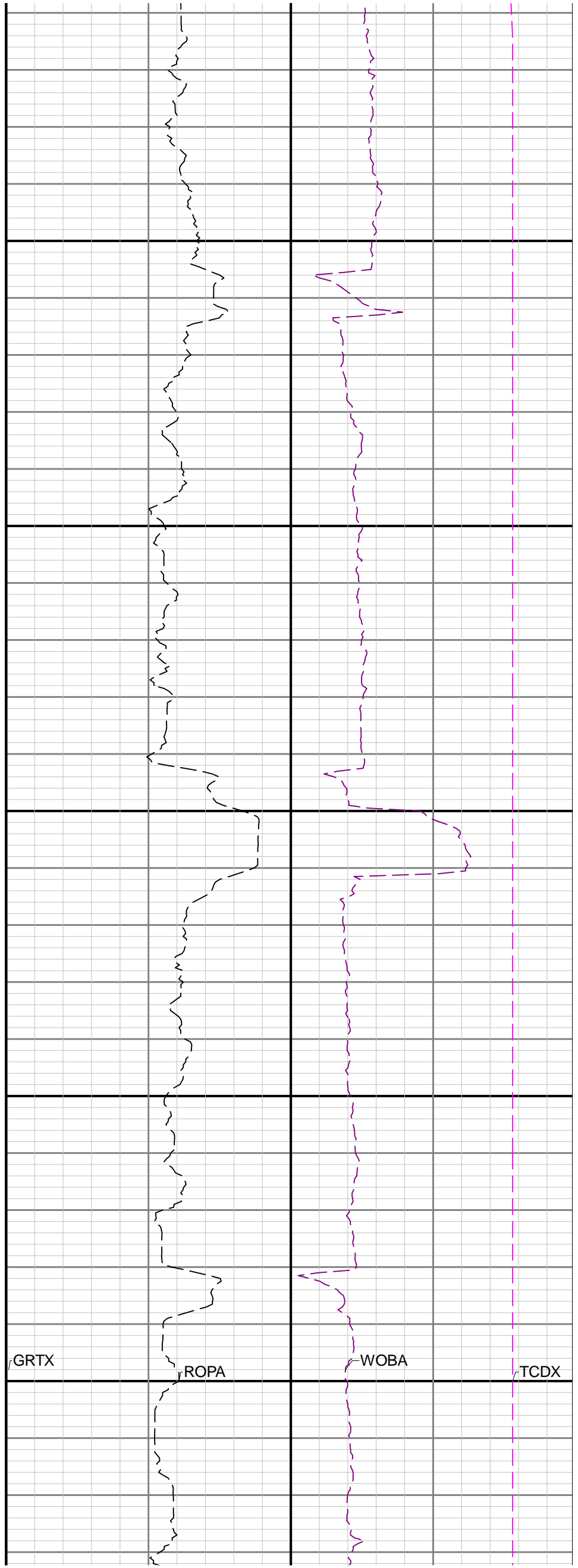
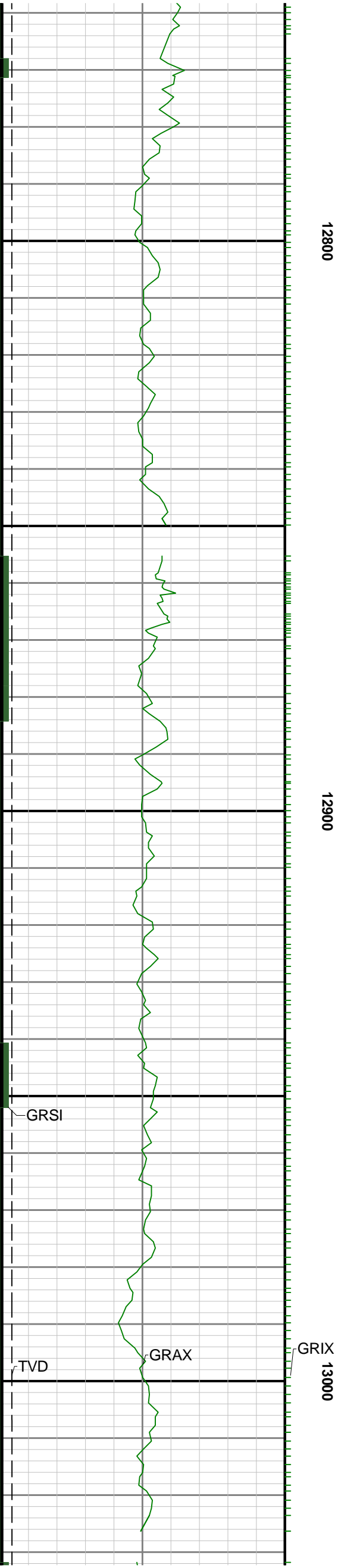


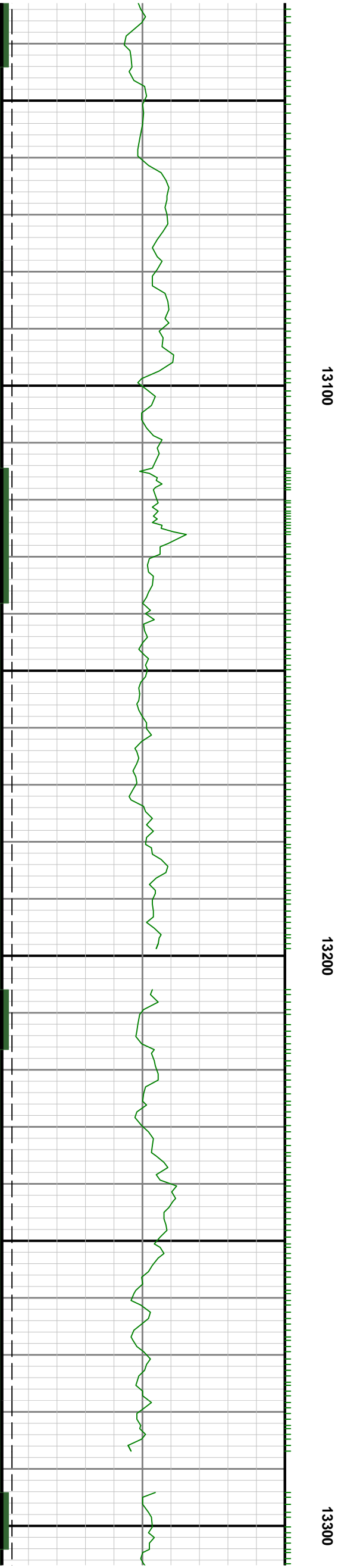
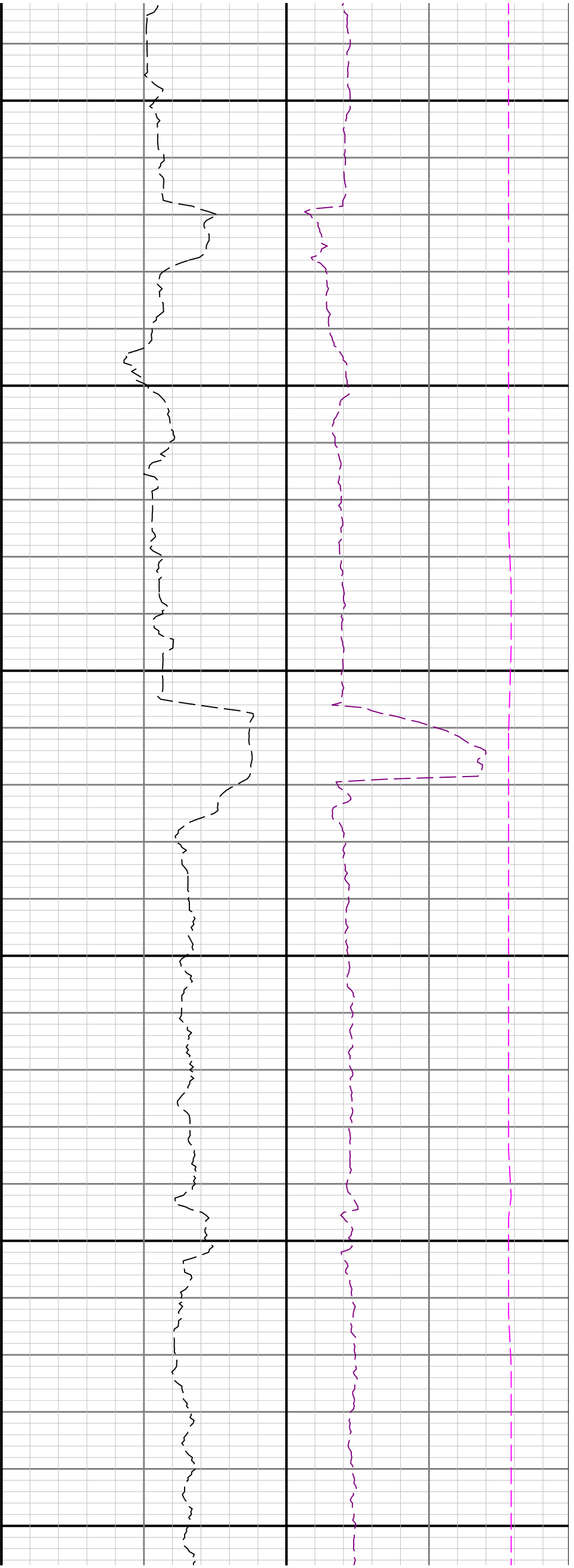


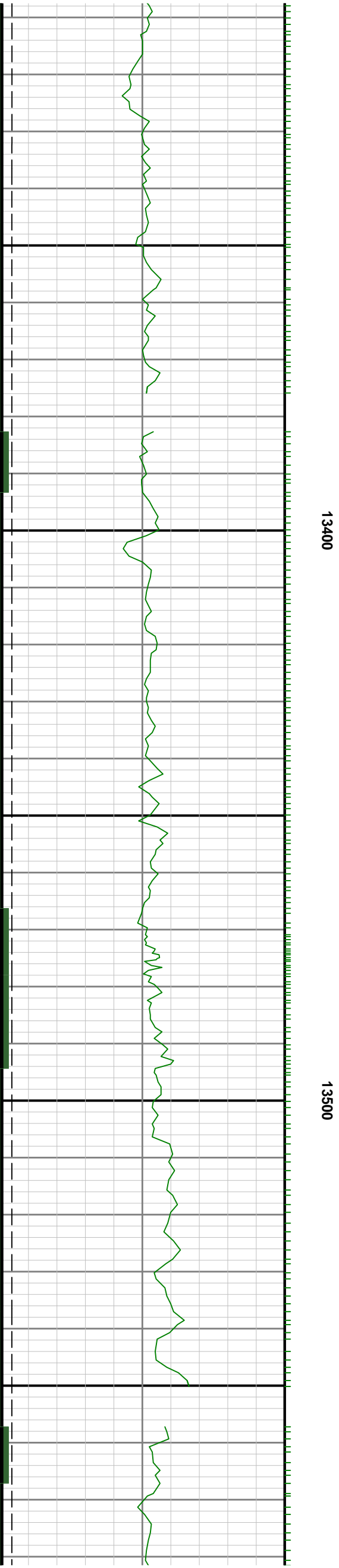
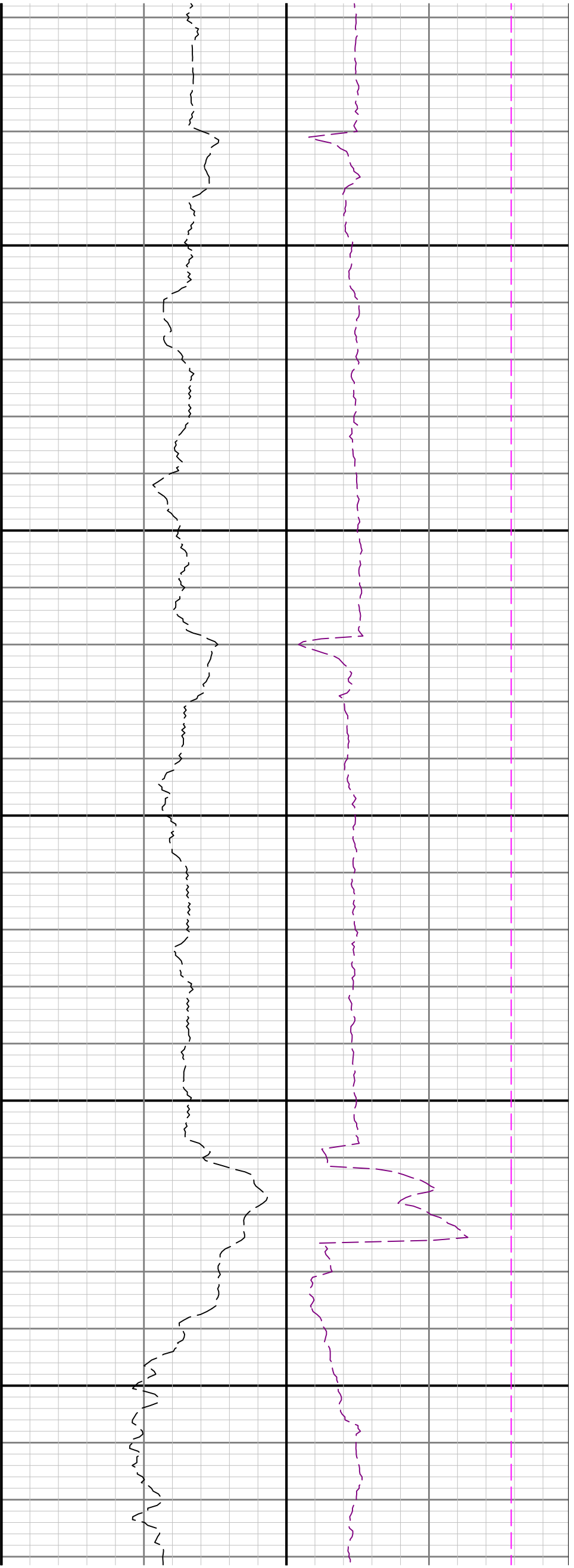


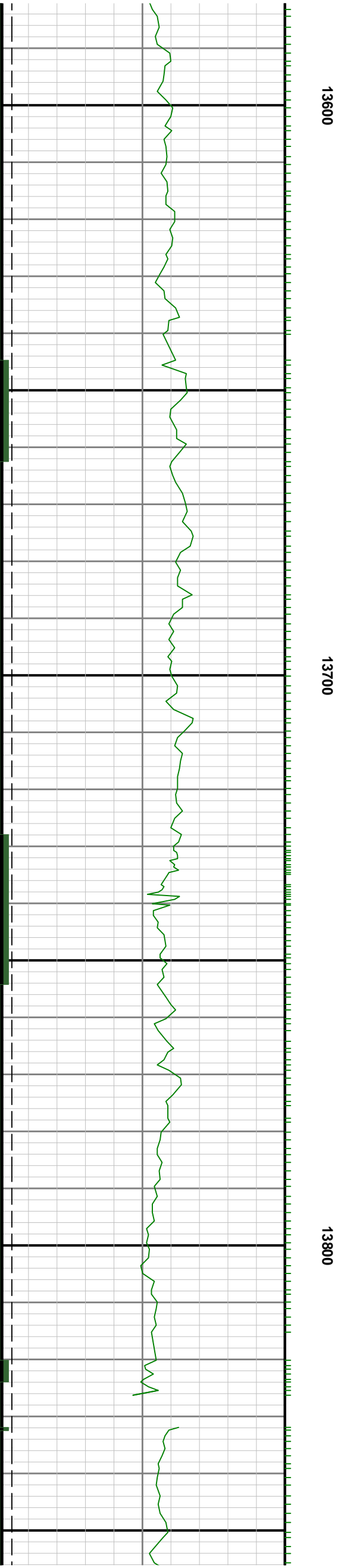


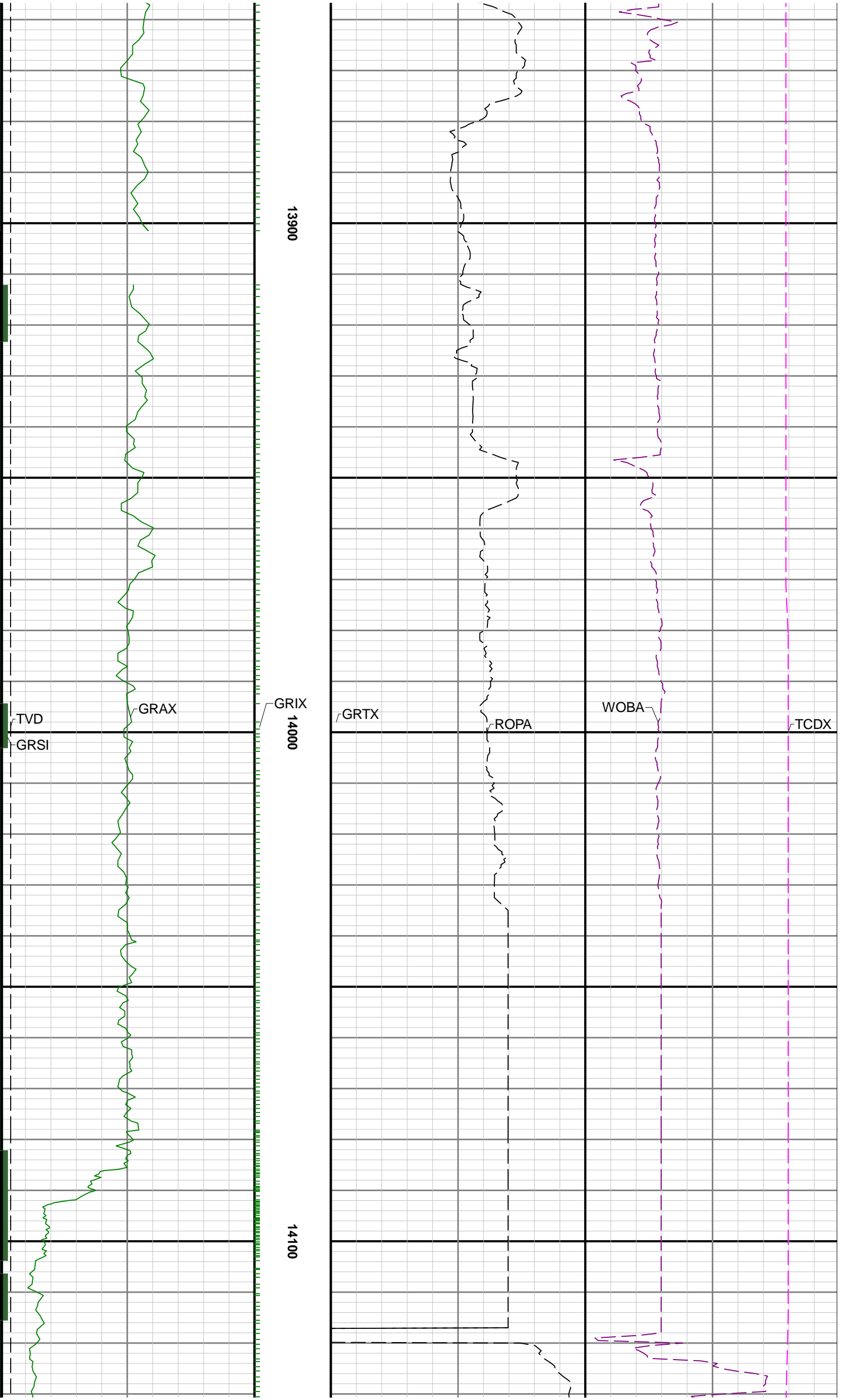


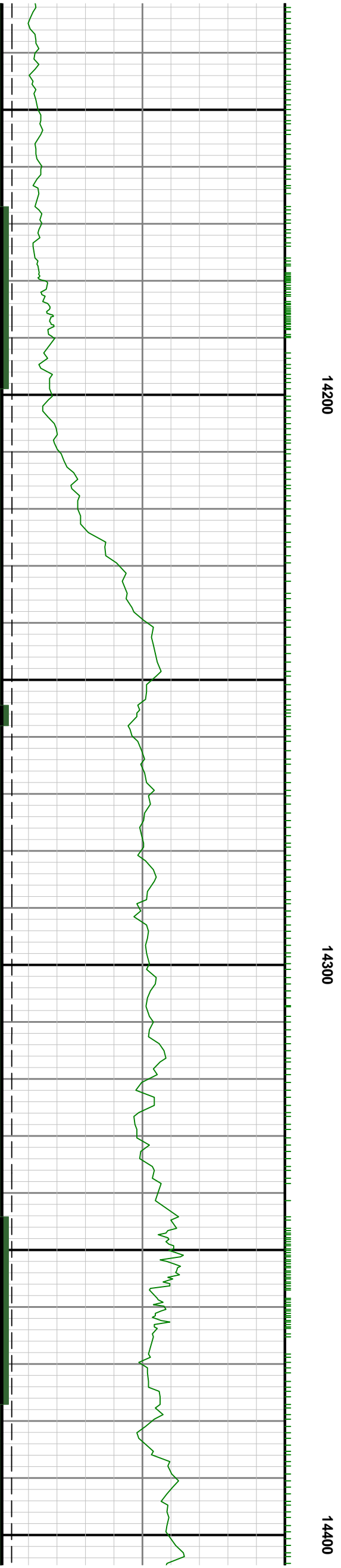
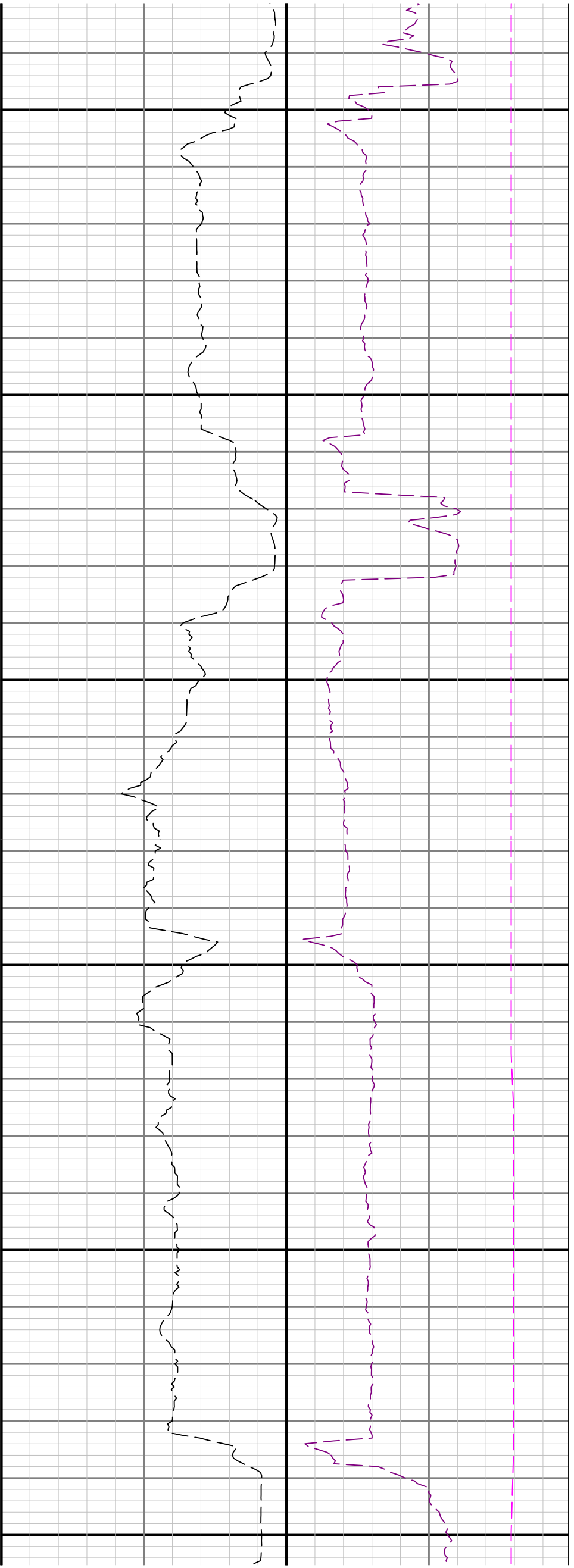


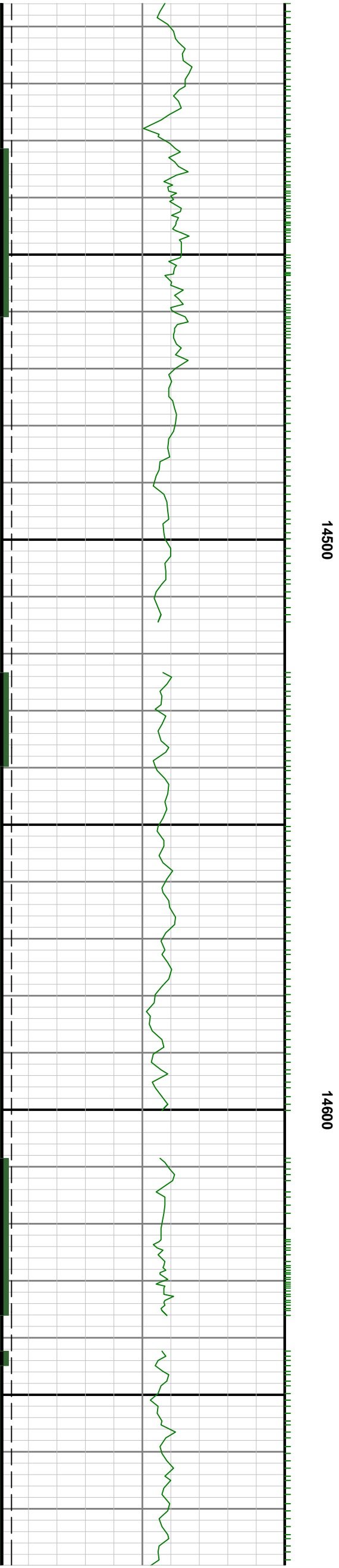
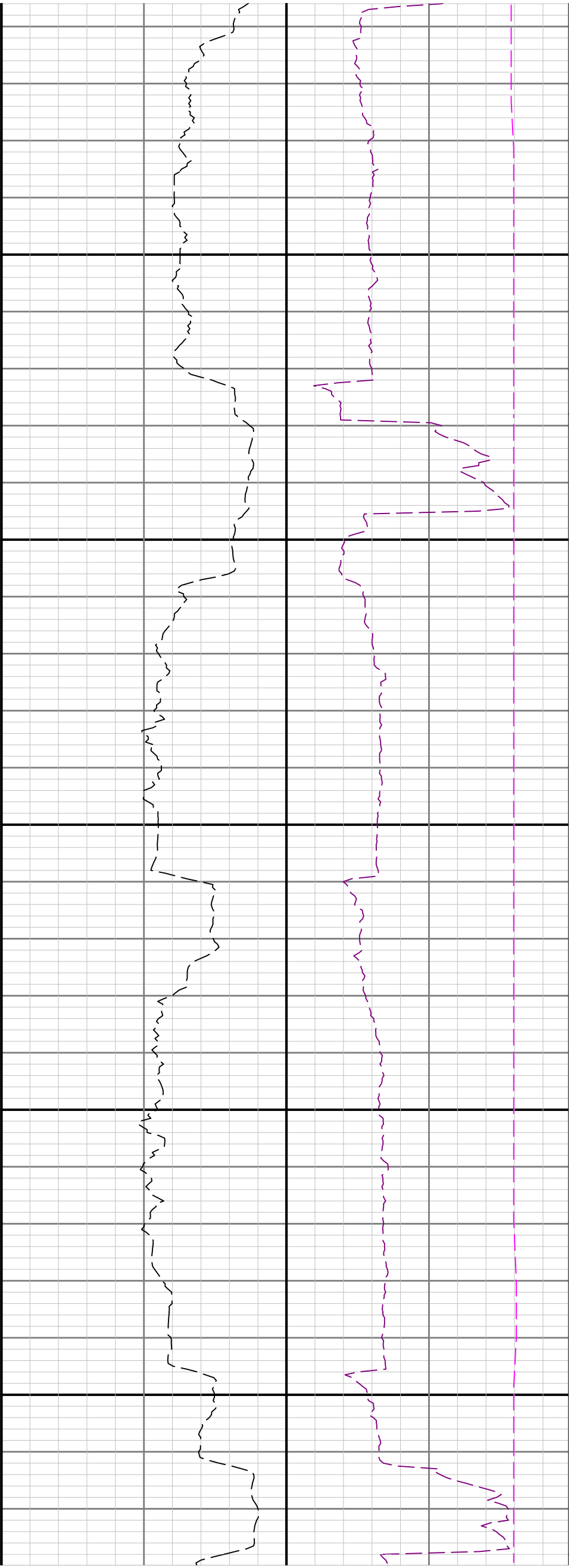




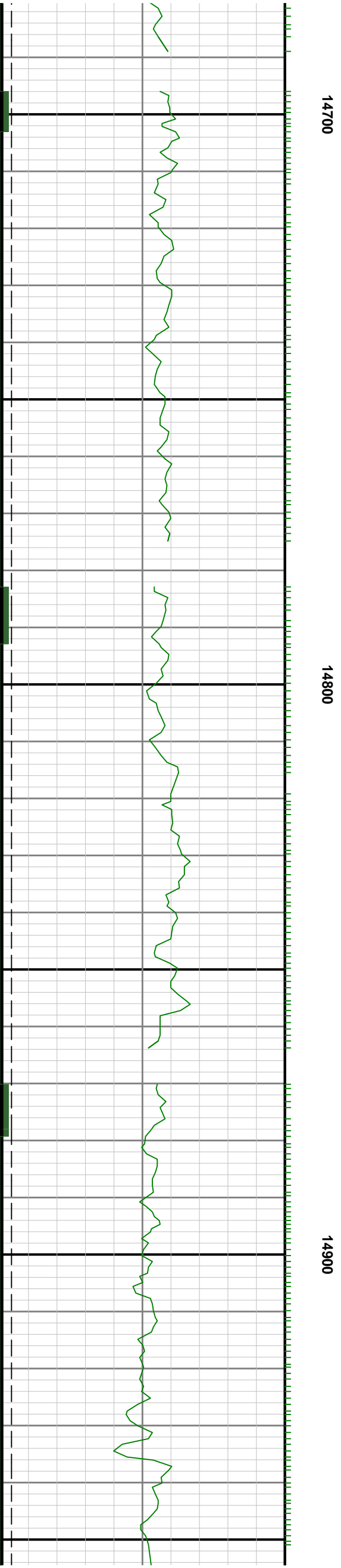
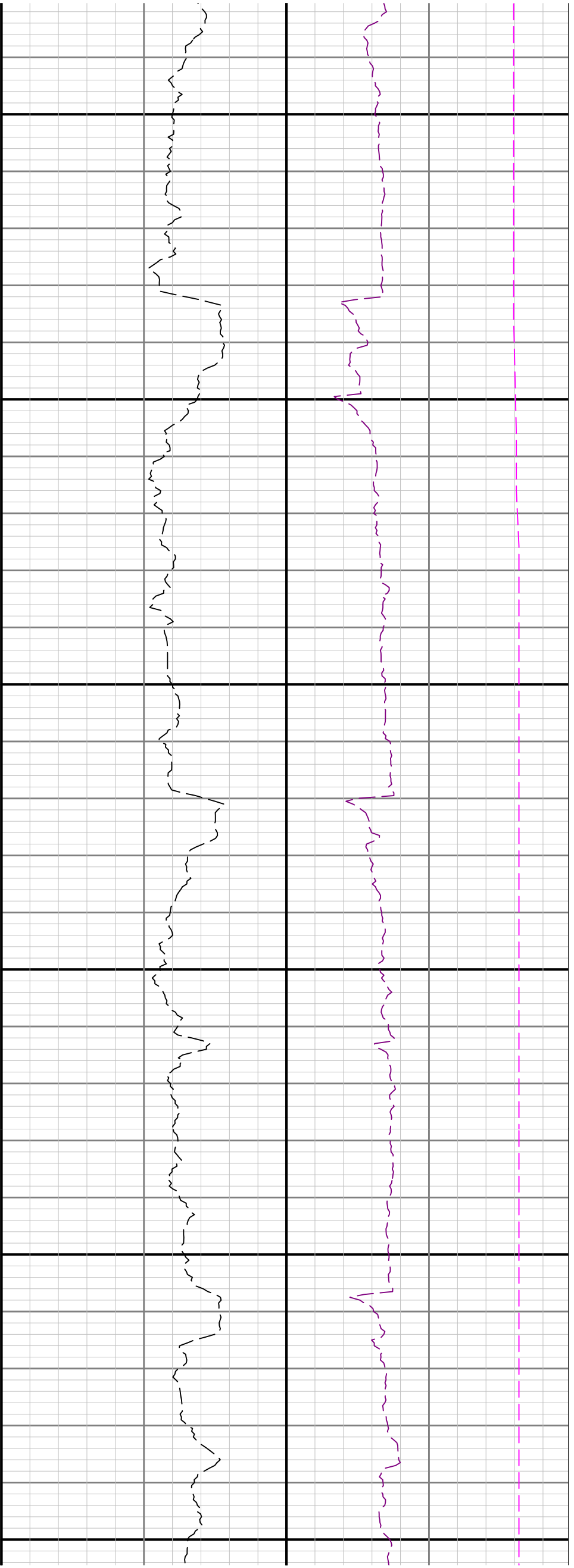


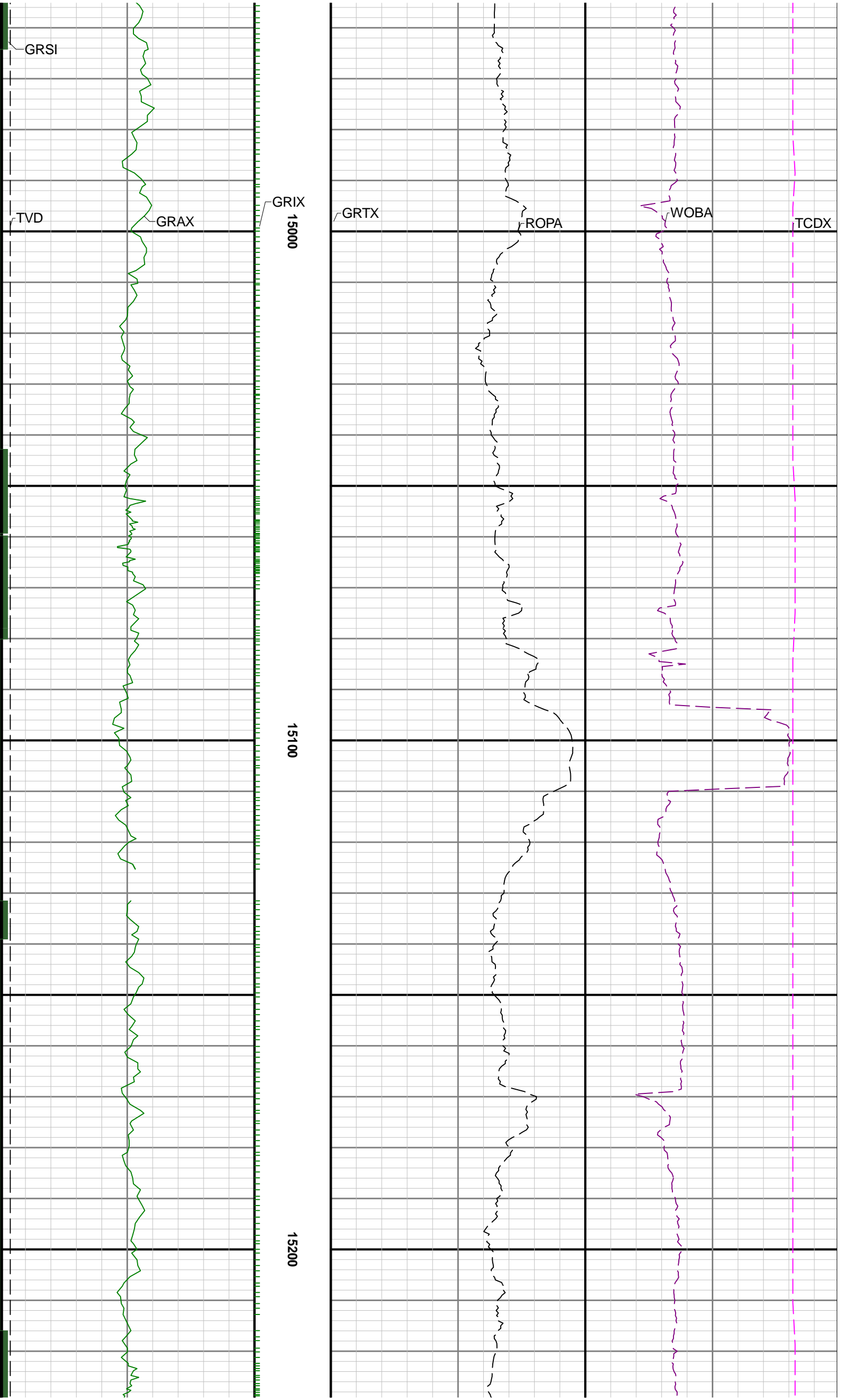


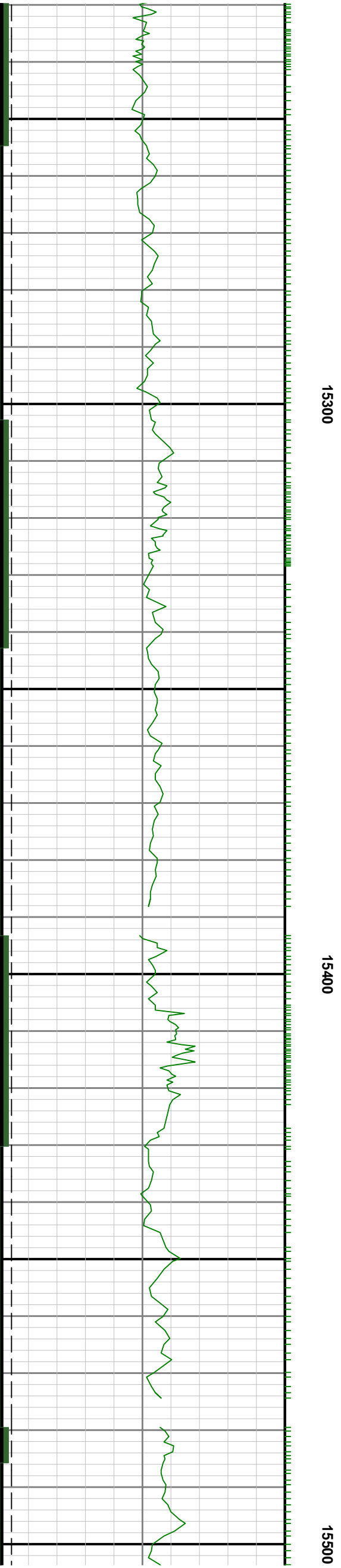
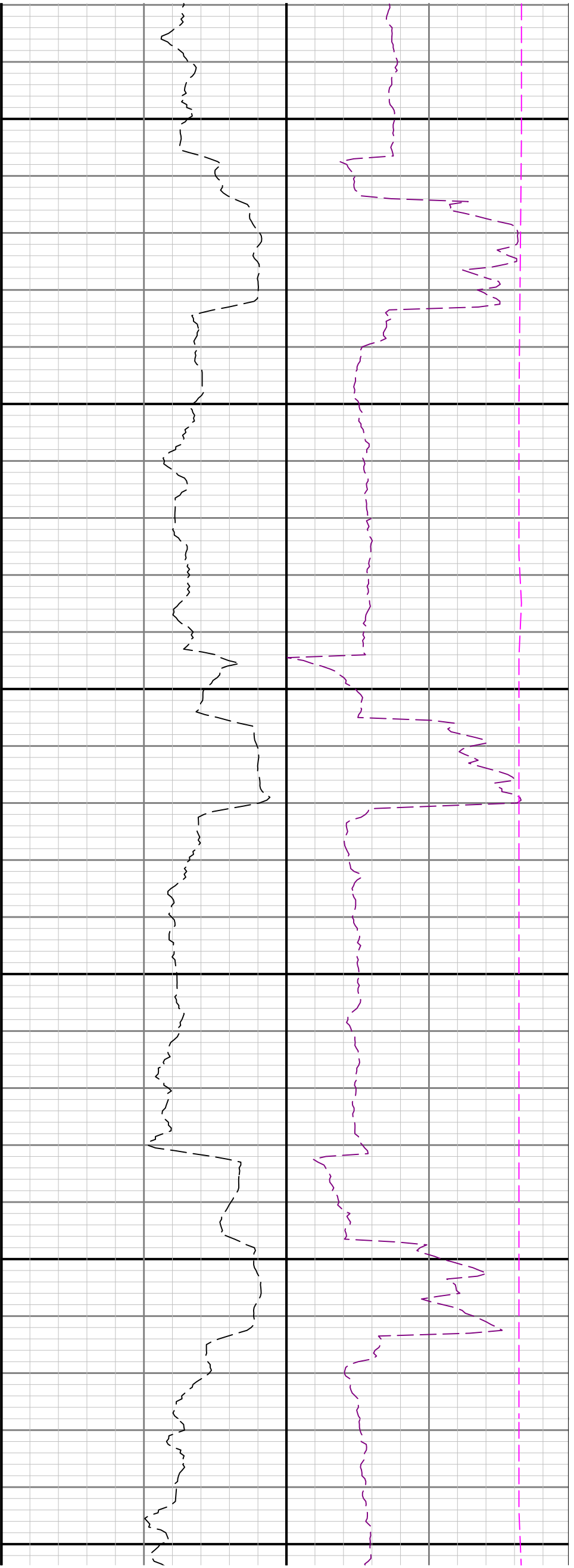


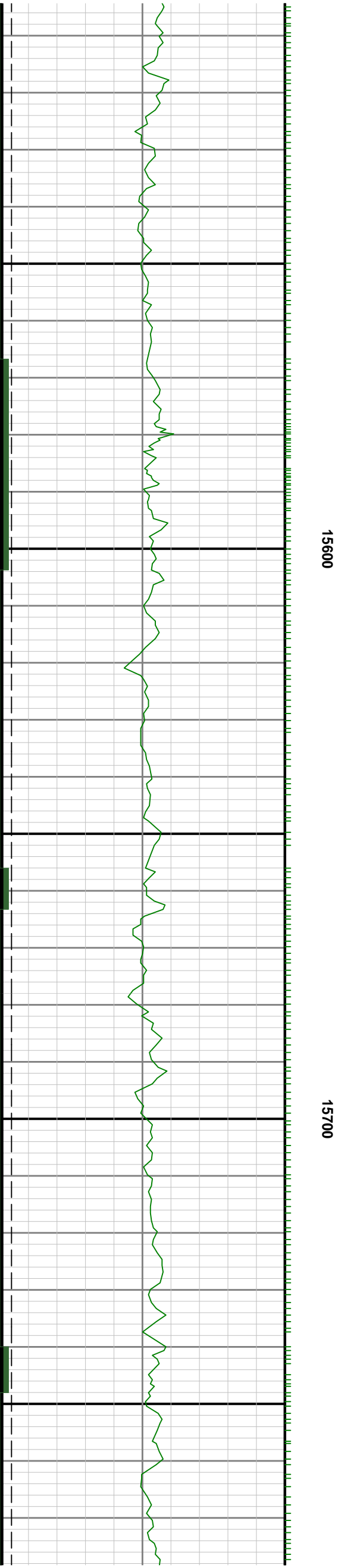
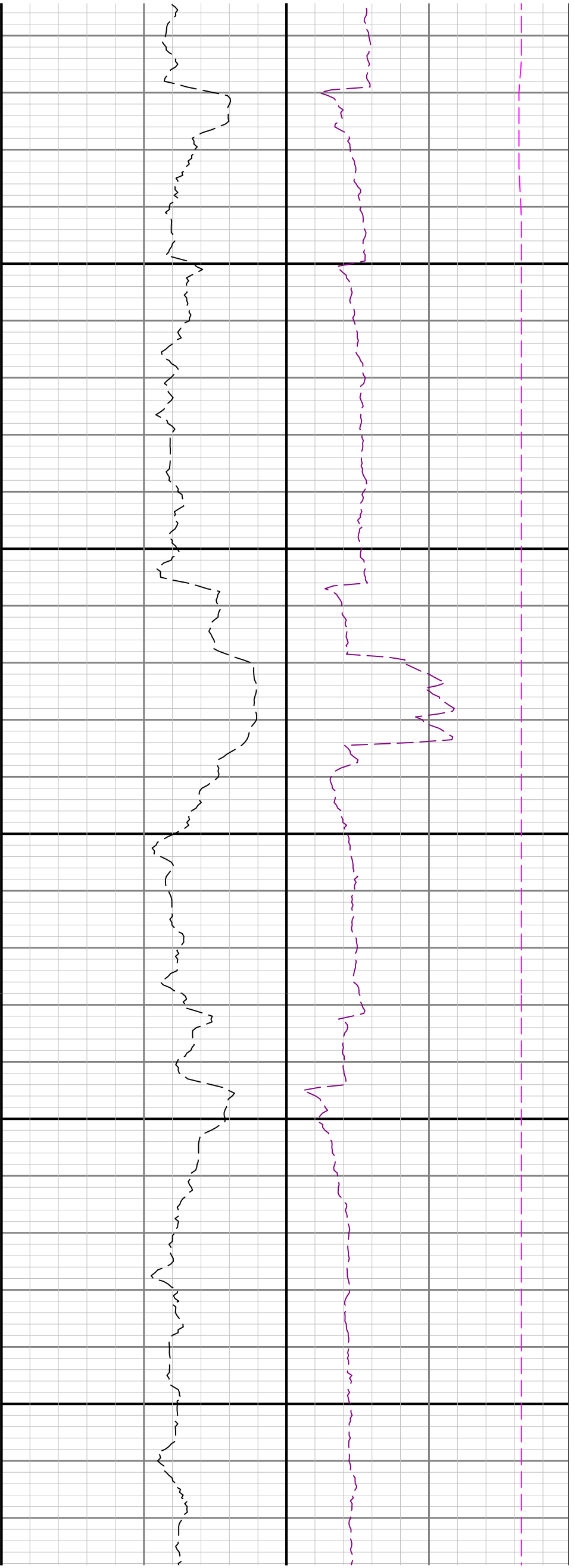


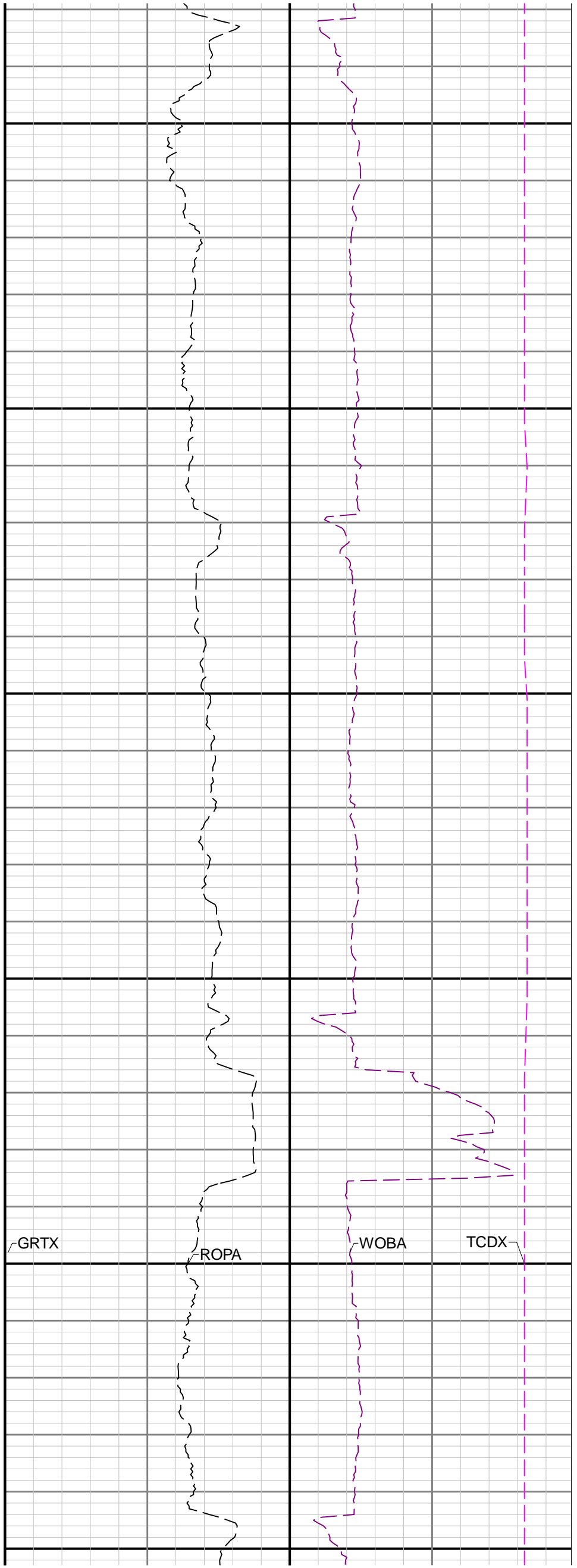
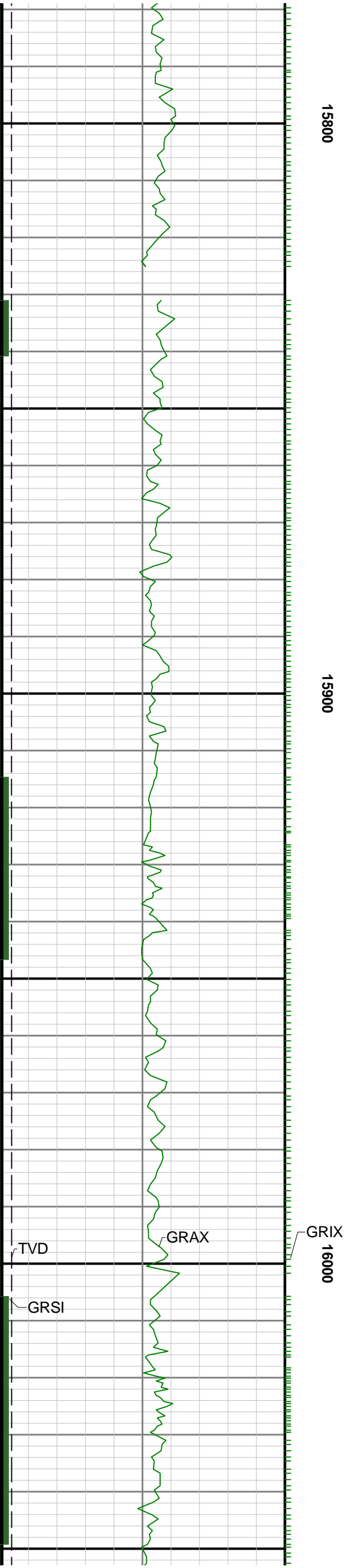


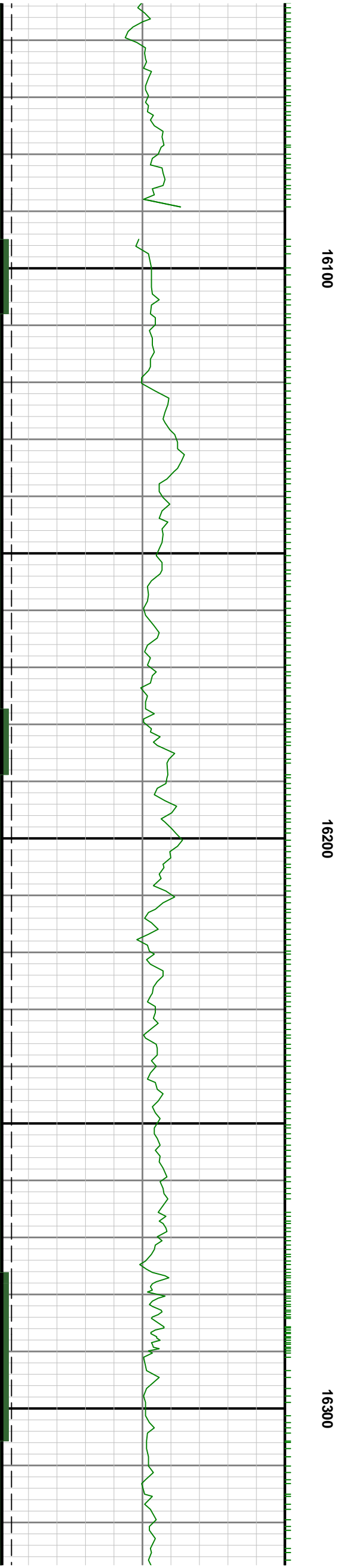
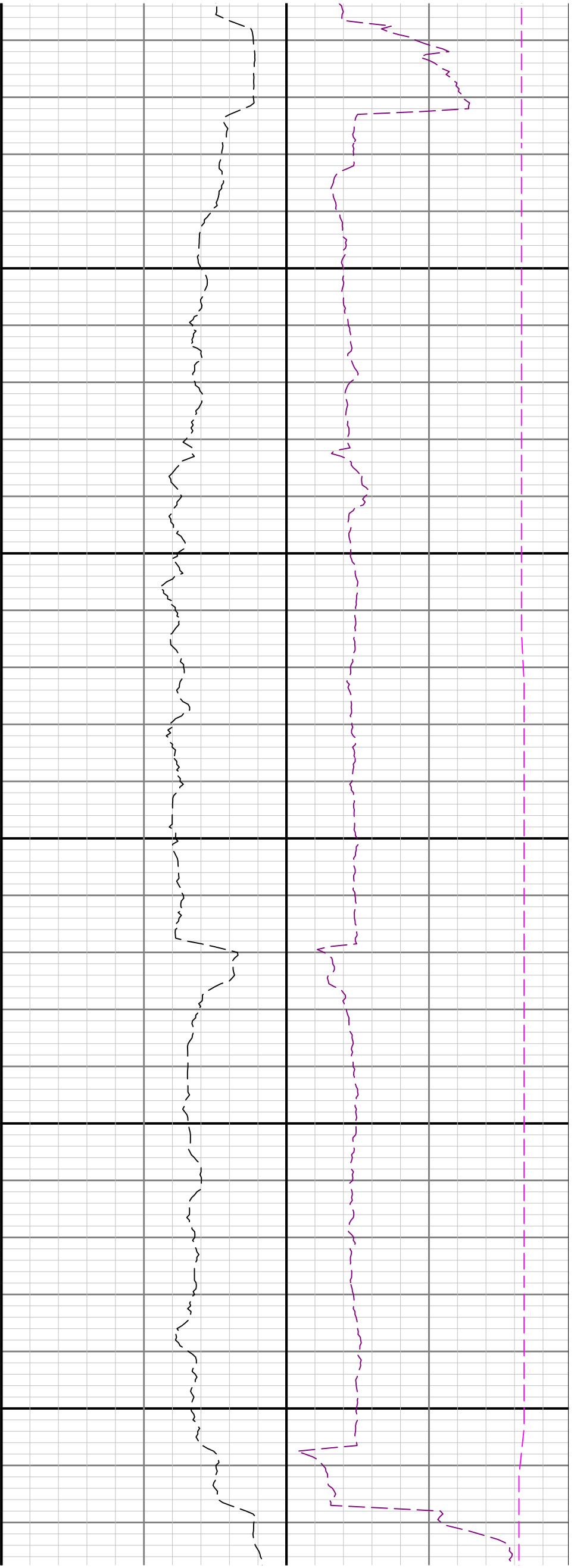


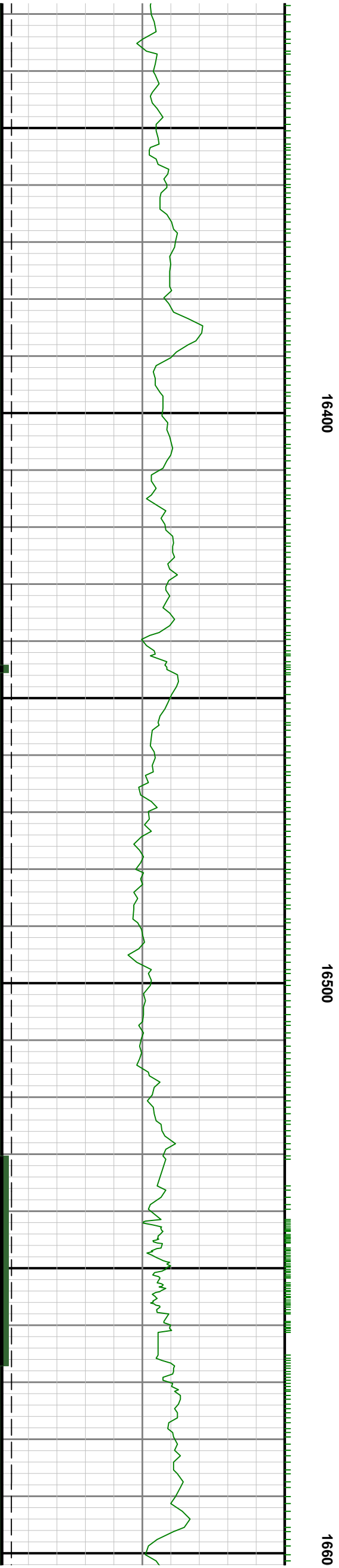
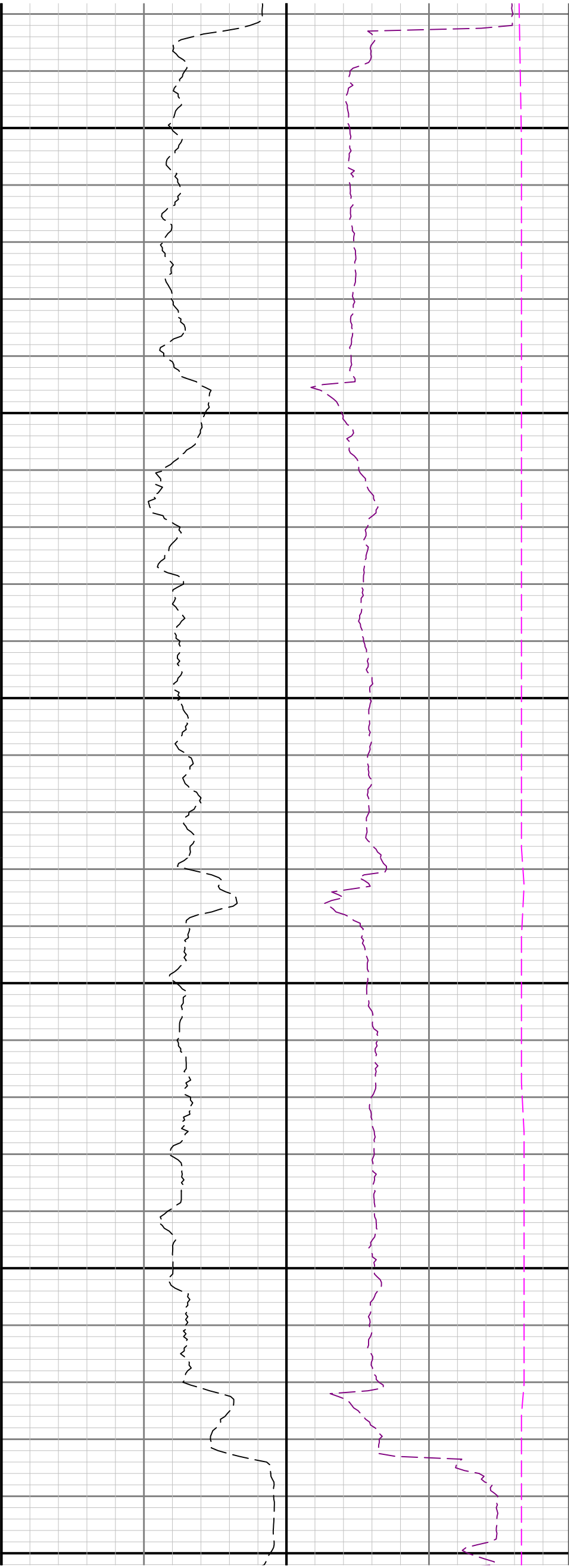


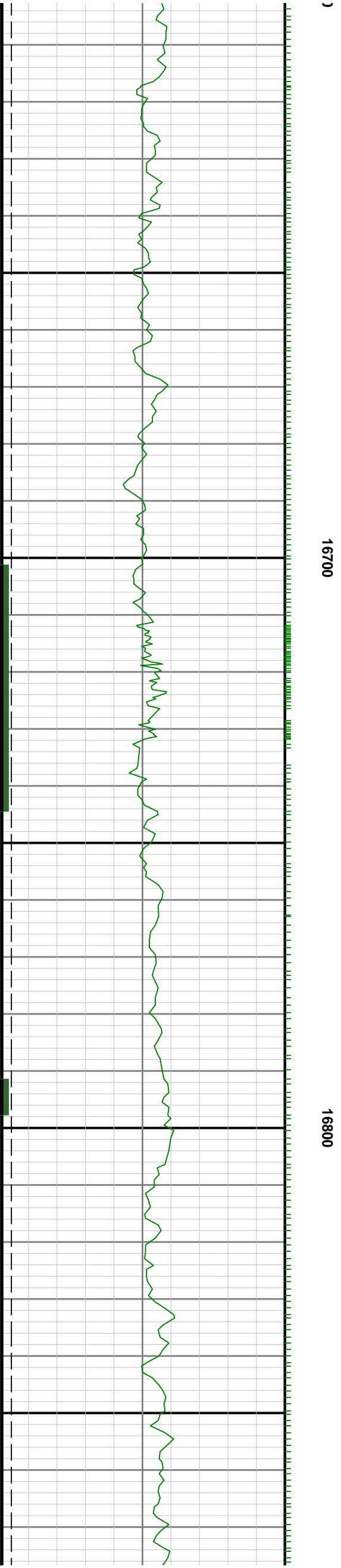
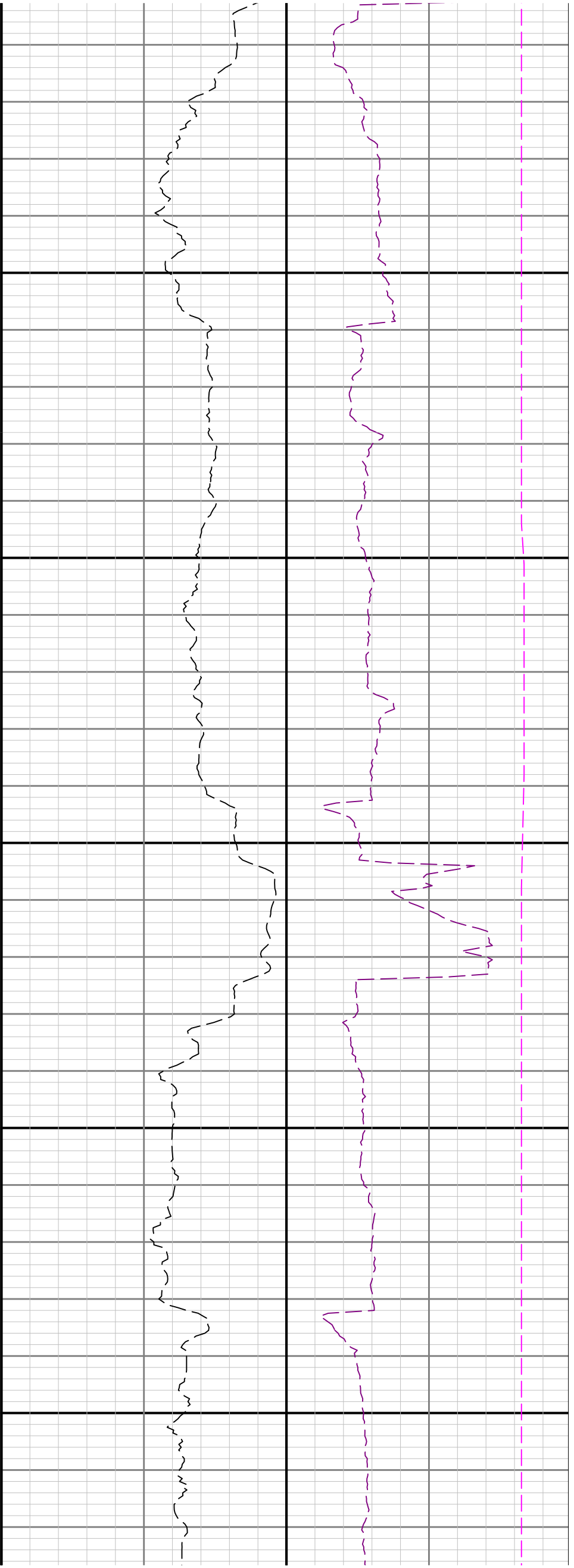




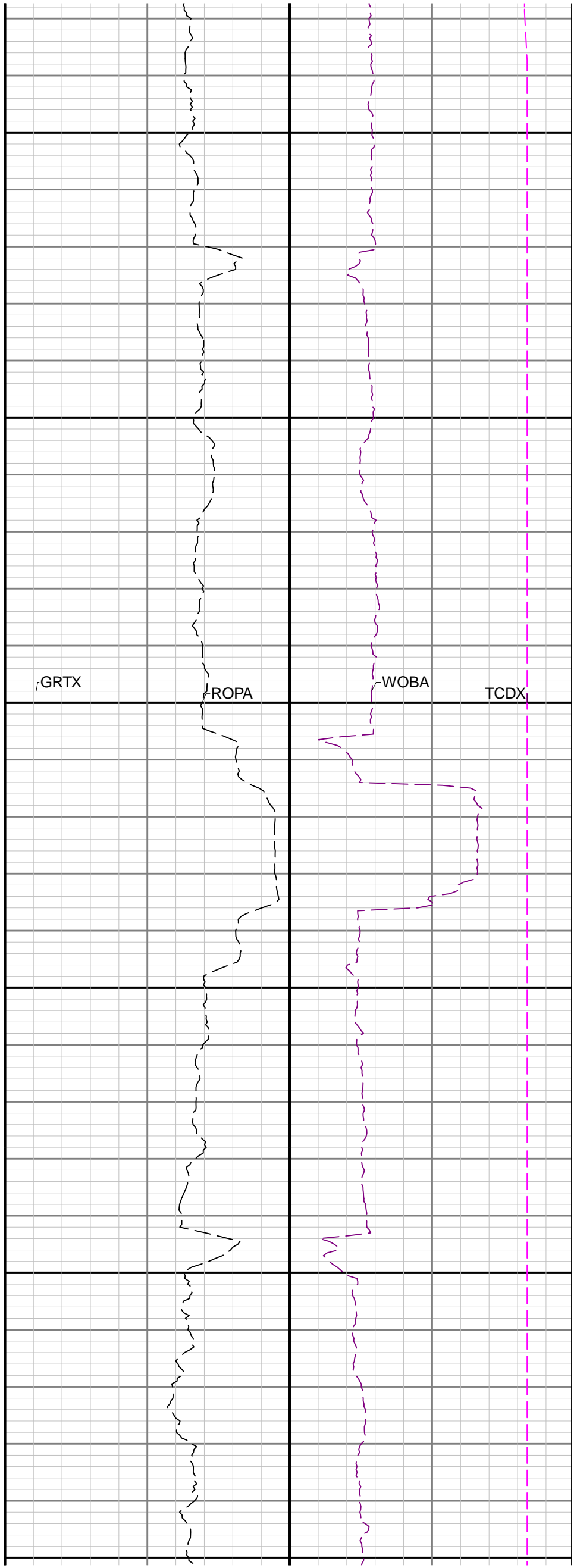
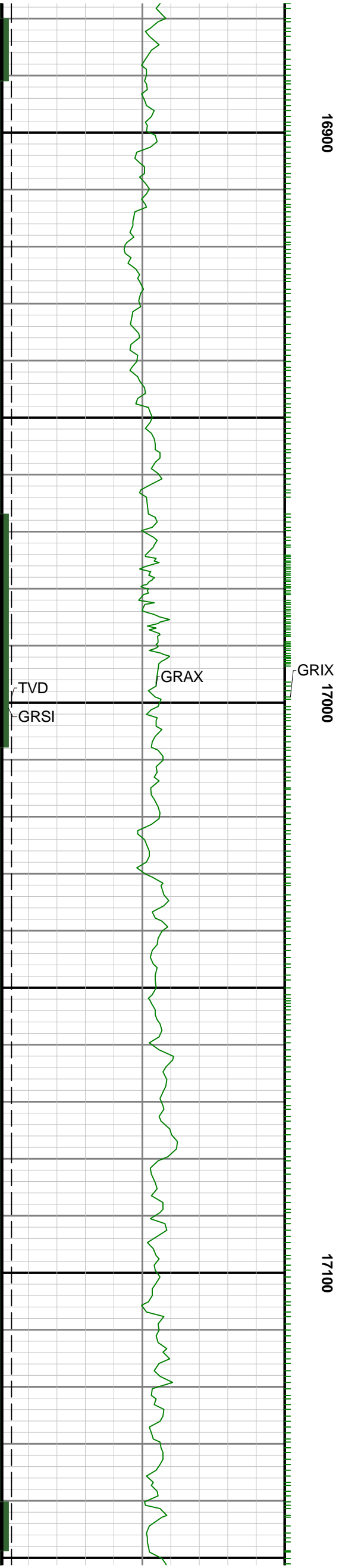


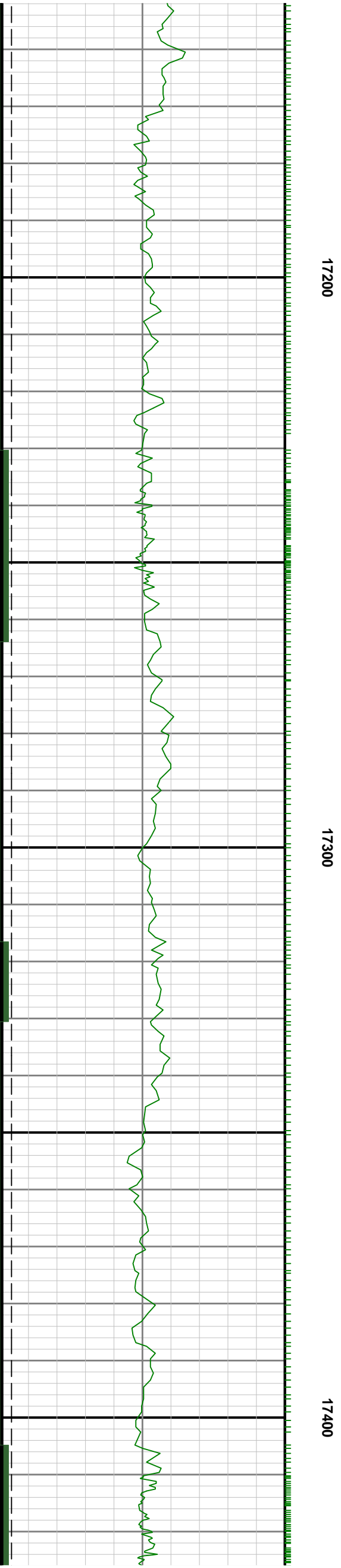
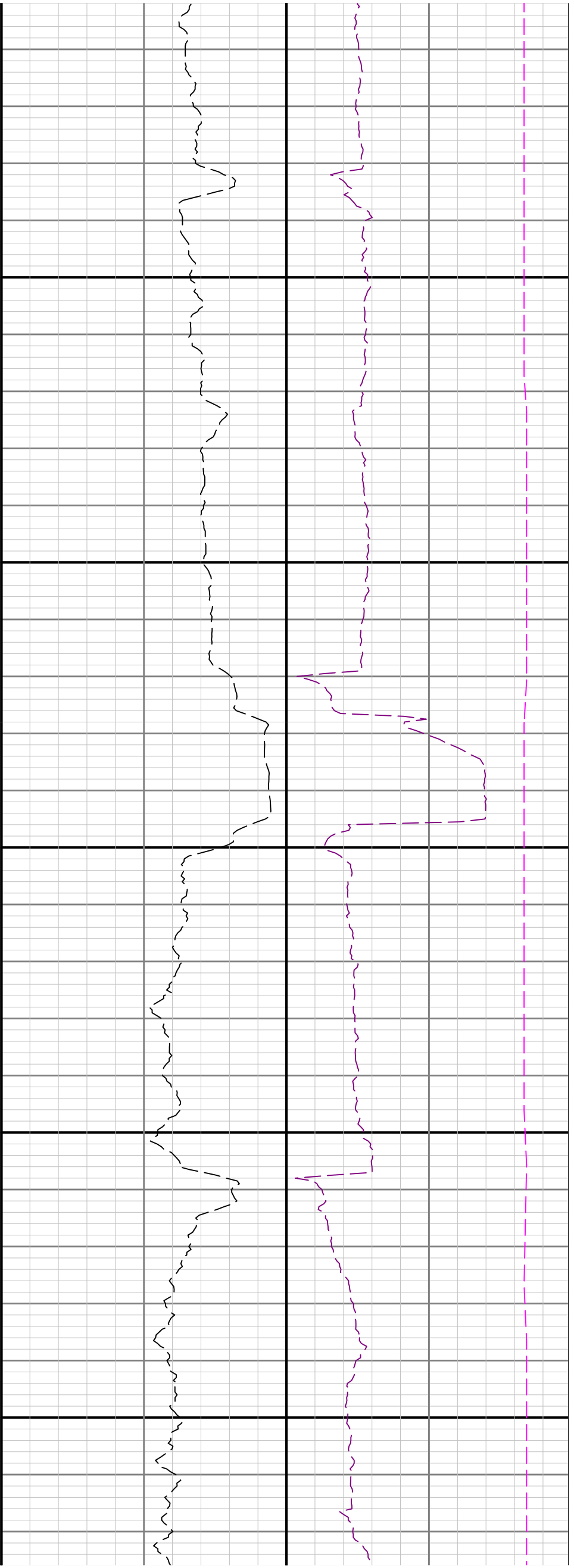


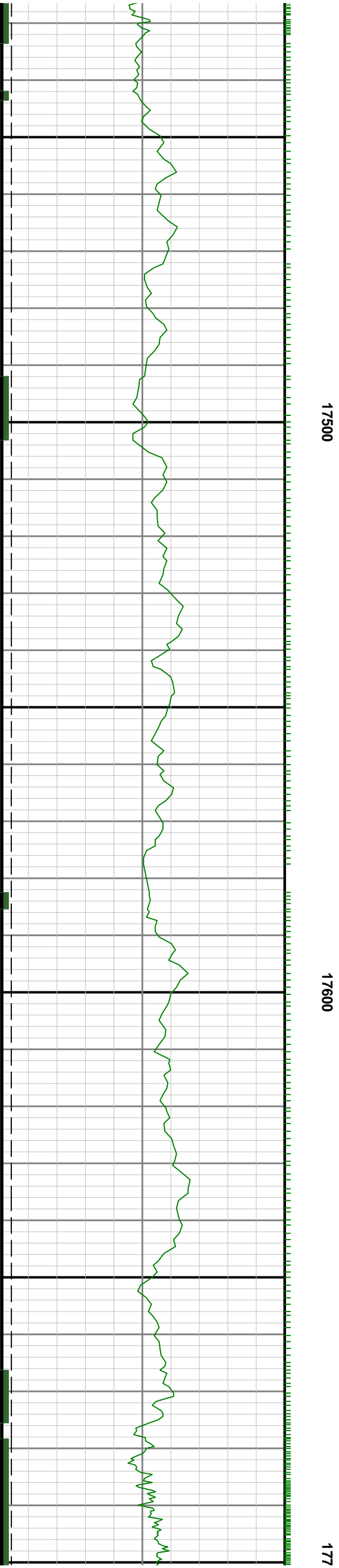
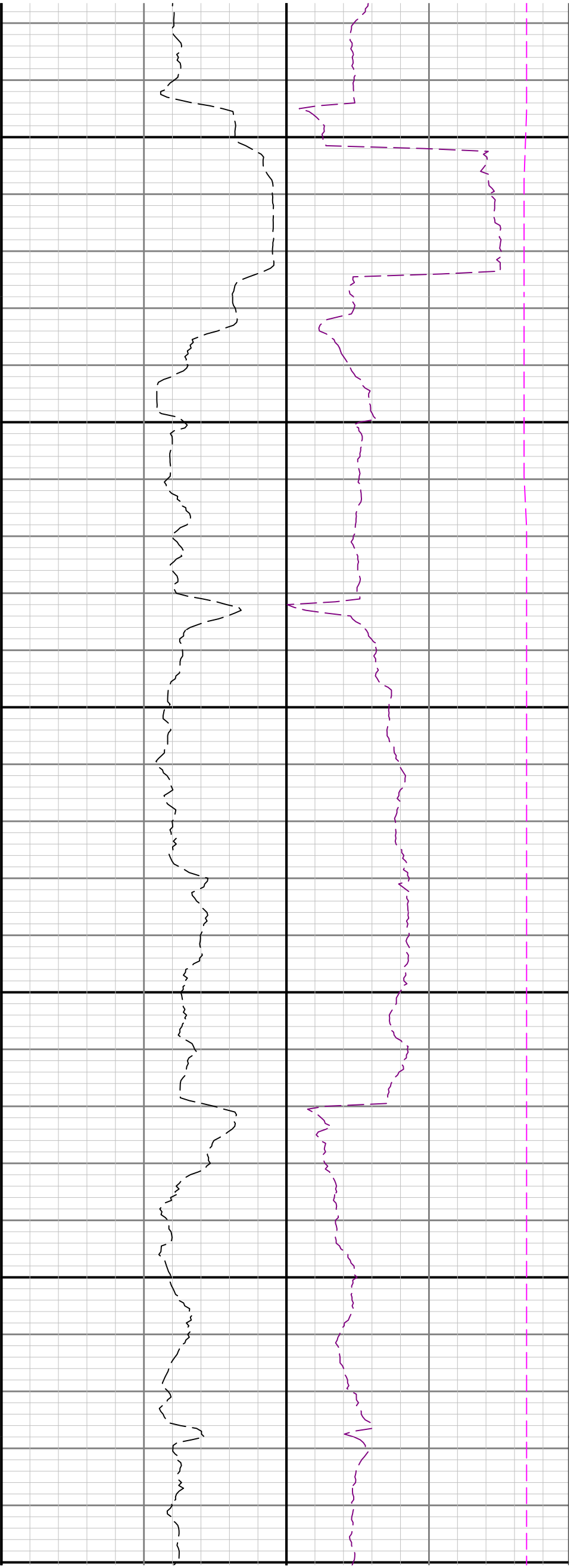


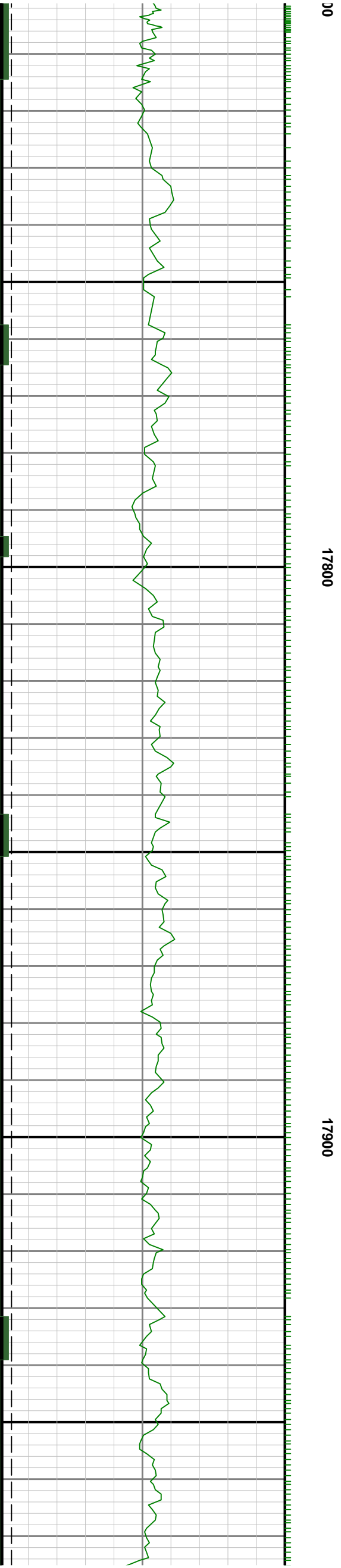
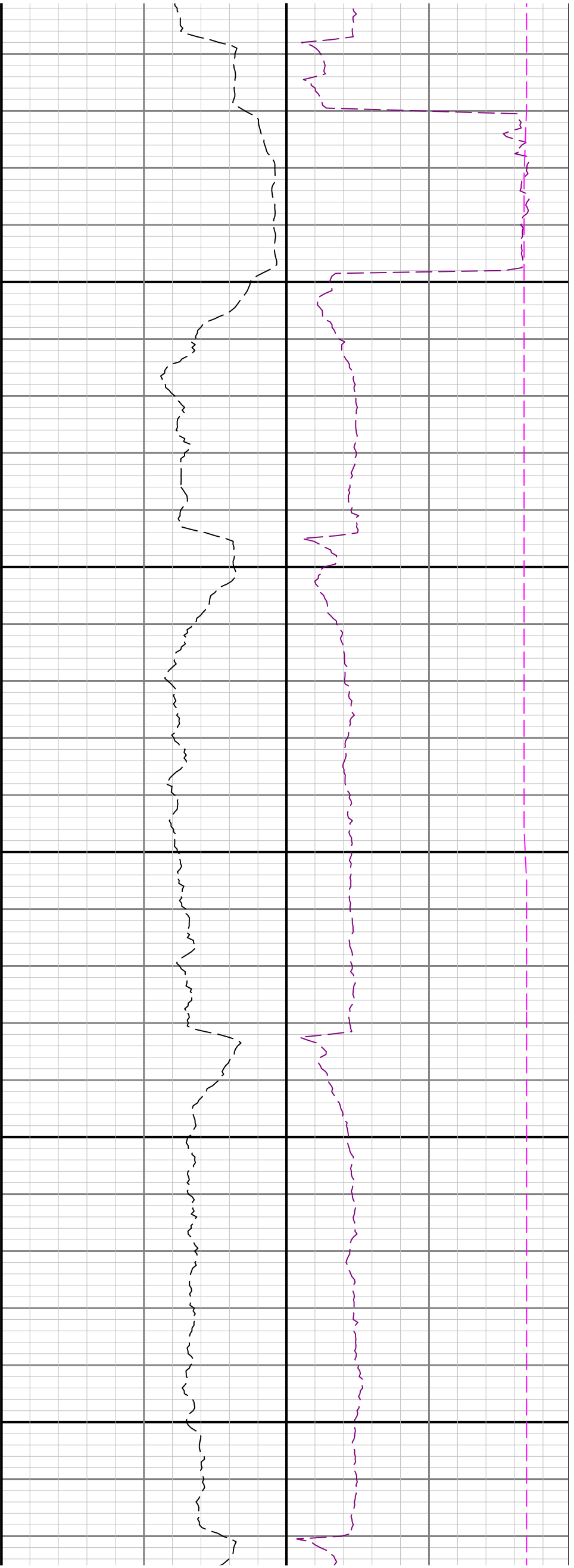


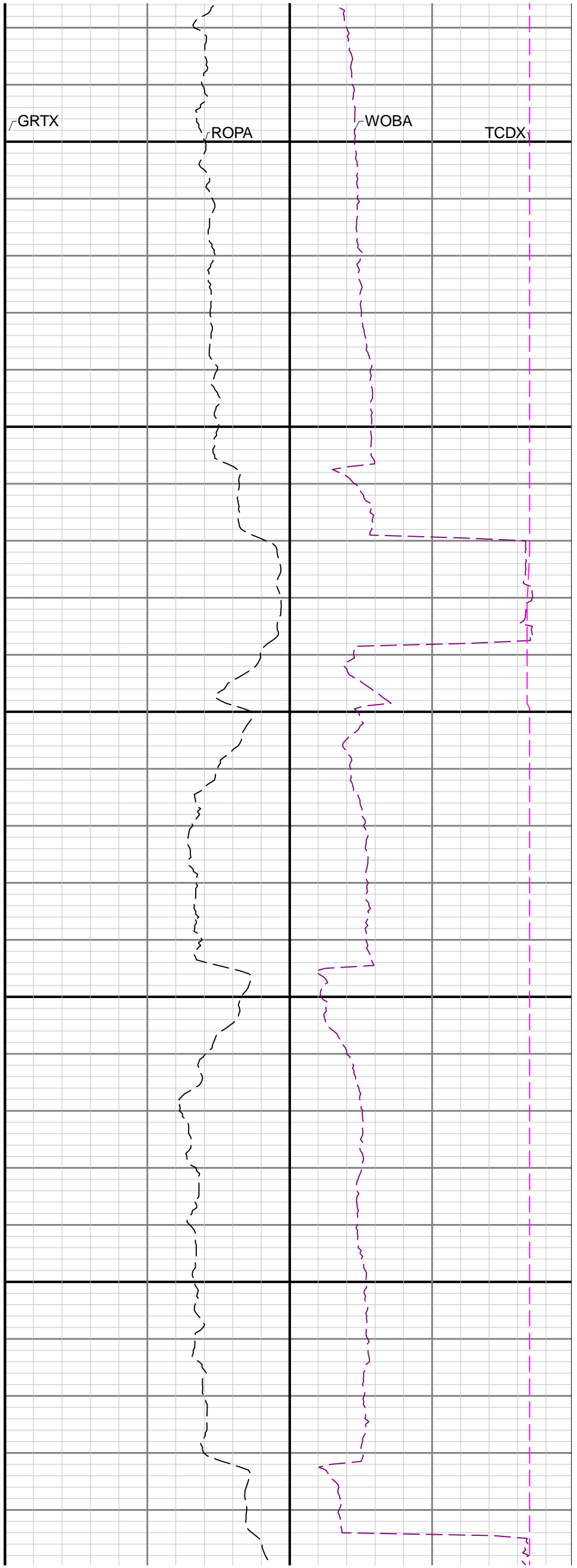
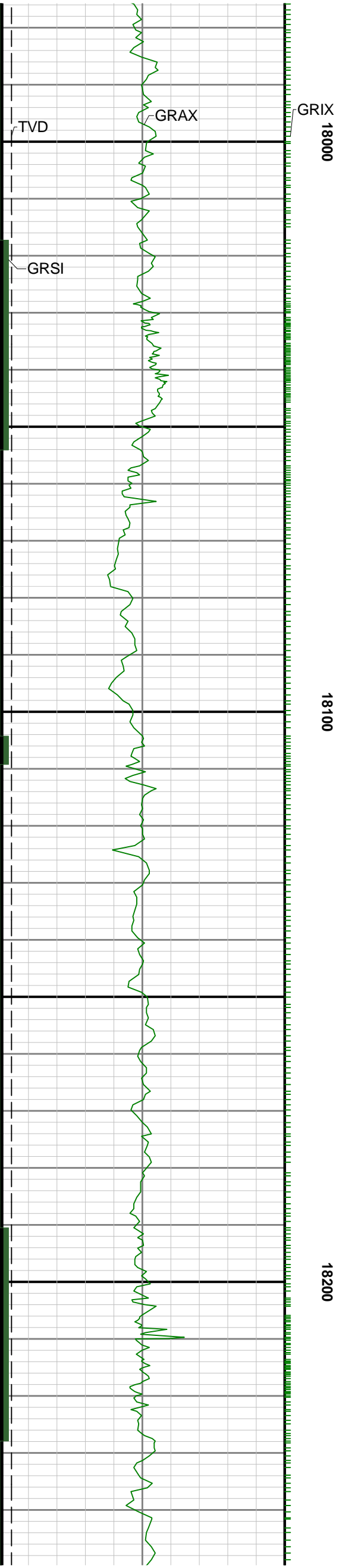


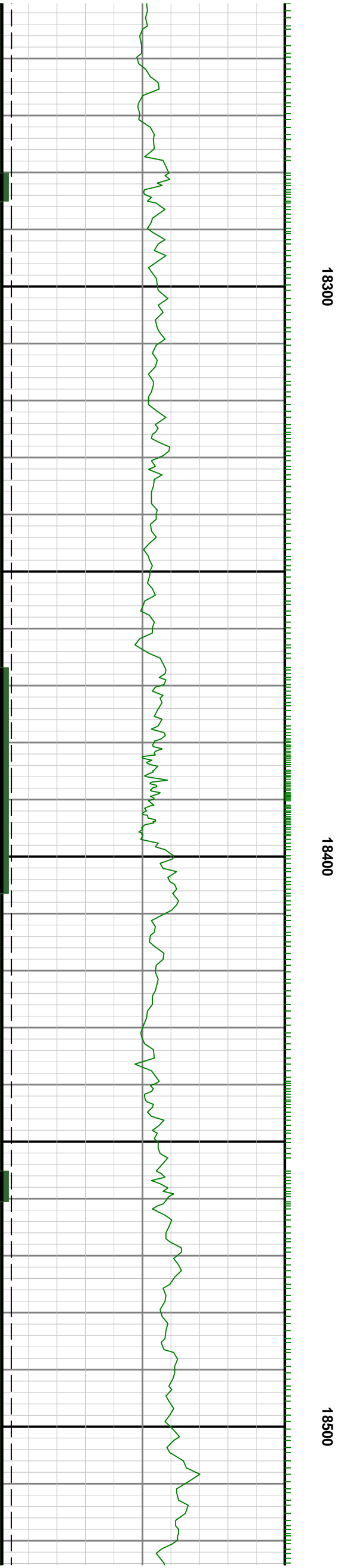
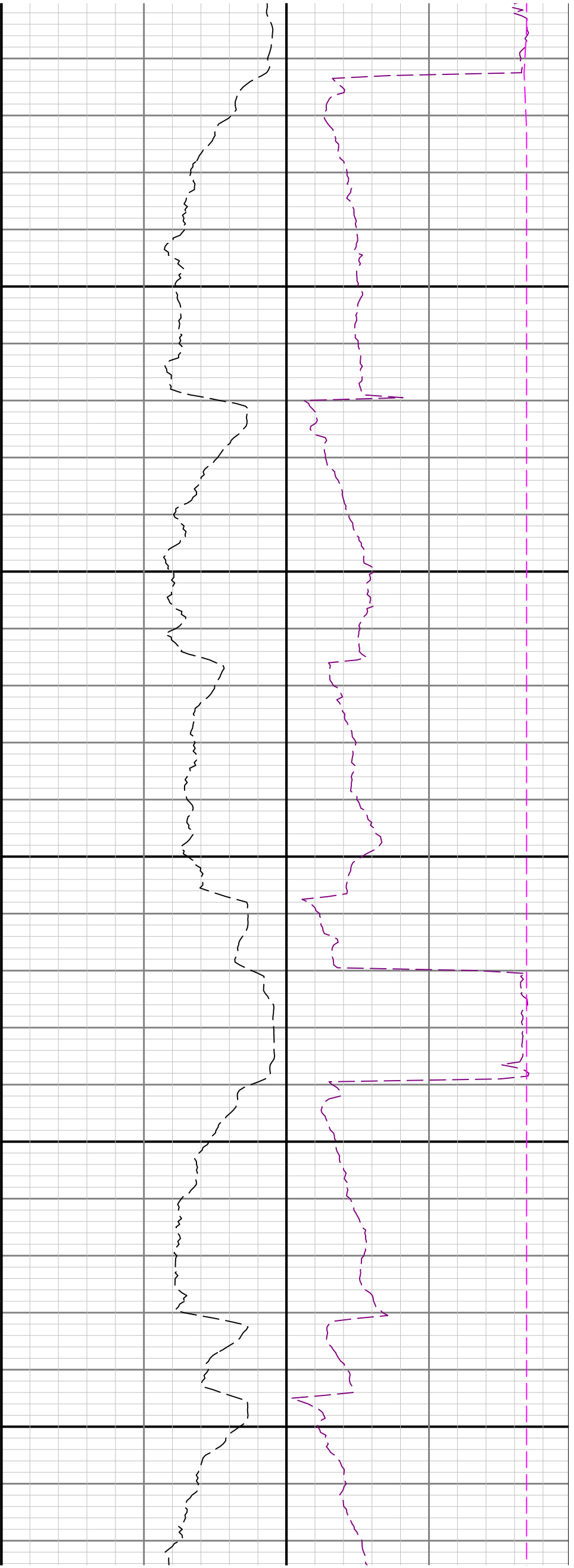


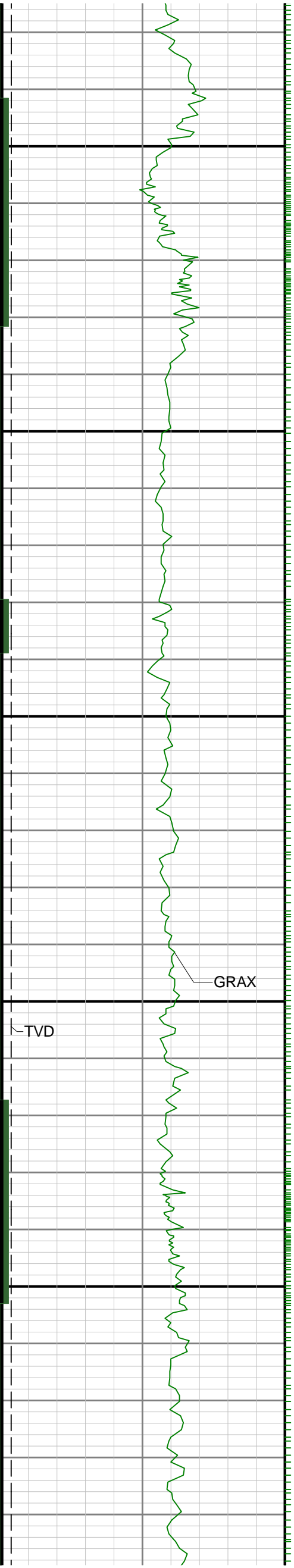












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