


REALTIME LOG											
<div><div><div>BAKER HUGHES</div><div>a GE company</div></div><div></div></div>				Gamma Ray							
Scale: 1:240 MD				Company: Anadarko							
Depth Reference:				Well: Leinweber Fed 31N-8HZ							
Driller's Depth				Field: Wattenburg							
				County: Weld				Country: United States			
Status: Final Print				State: Colorado							
API No: 05123442060000				Surface Location: Latitude: 040° 04' 17.404" N Longitude: 104° 50' 59.780" W				Other Services: Directional			
Job ID: 8917850				SEC: 11 TWN: 1N RGE: 67W							
Permanent Datum (P.D.): Ground Level				Elevation: 4958.00 ft				Elev. KB: N/A			
Log Measured From: Rig Floor				Above P.D. 17.00 ft				Elev. DF: 4975.00 ft Elev. GL: 4958.00 ft			
Dates				Interval Logged				Magnetic Field Reference			
Date From: 2018-01-03				Top: (ft) 1869.00				Azi Reference North: True			
Date To: 2018-01-09				Bottom: (ft) 18486.00				Total Magnetic Field Strength: (nT) 52405			
Spud Date: 2018-01-03								Mag to Reference North Correction: (deg) 8.15 E			
Borehole Record				Casing Record							
Hole Size (in)				From (ft)		To (ft)		Size (in)		Weight (lb/ft)	
13.500				17.00		1869.00		9.625		25.00	
8.500				1869.00		18545.00					

2018-01-06 21:49	3	9505.00	Diesel-Oil Based Mud	9.0	17	N/A	0.0	71.4/28.6	Active Pit	42000	0.00
2018-01-07 19:00	3	13223.00	Diesel-Oil Based Mud	9.0	17	N/A	N/A	73.3/26.7	Active Pit	42000	0.00
2018-01-08 19:00	3	16415.00	Diesel-Oil Based Mud	9.0	16	N/A	N/A	73.6/26.4	Active Pit	40000	0.00

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	NaviGamma	13182654	Gamma (single)	8.18	59.07	6.500	3.250
1	NaviGamma	10350730	VSS	10.93	61.82	6.500	3.250
1	NaviGamma	10350730	Directional (mag)	10.93	61.82	6.500	3.250
2	NaviGamma	13182654	Gamma (single)	8.18	57.16	6.500	3.250
2	NaviGamma	10350730	VSS	10.93	59.91	6.500	3.250
2	NaviGamma	10350730	Directional (mag)	10.93	59.91	6.500	3.250
3	NaviGamma	13182654	Gamma (single)	8.18	59.07	6.500	3.250
3	NaviGamma	10350730	VSS	10.93	61.82	6.500	3.250
3	NaviGamma	10350730	Directional (mag)	10.93	61.82	6.500	3.250

Service and Tool Mnemonics

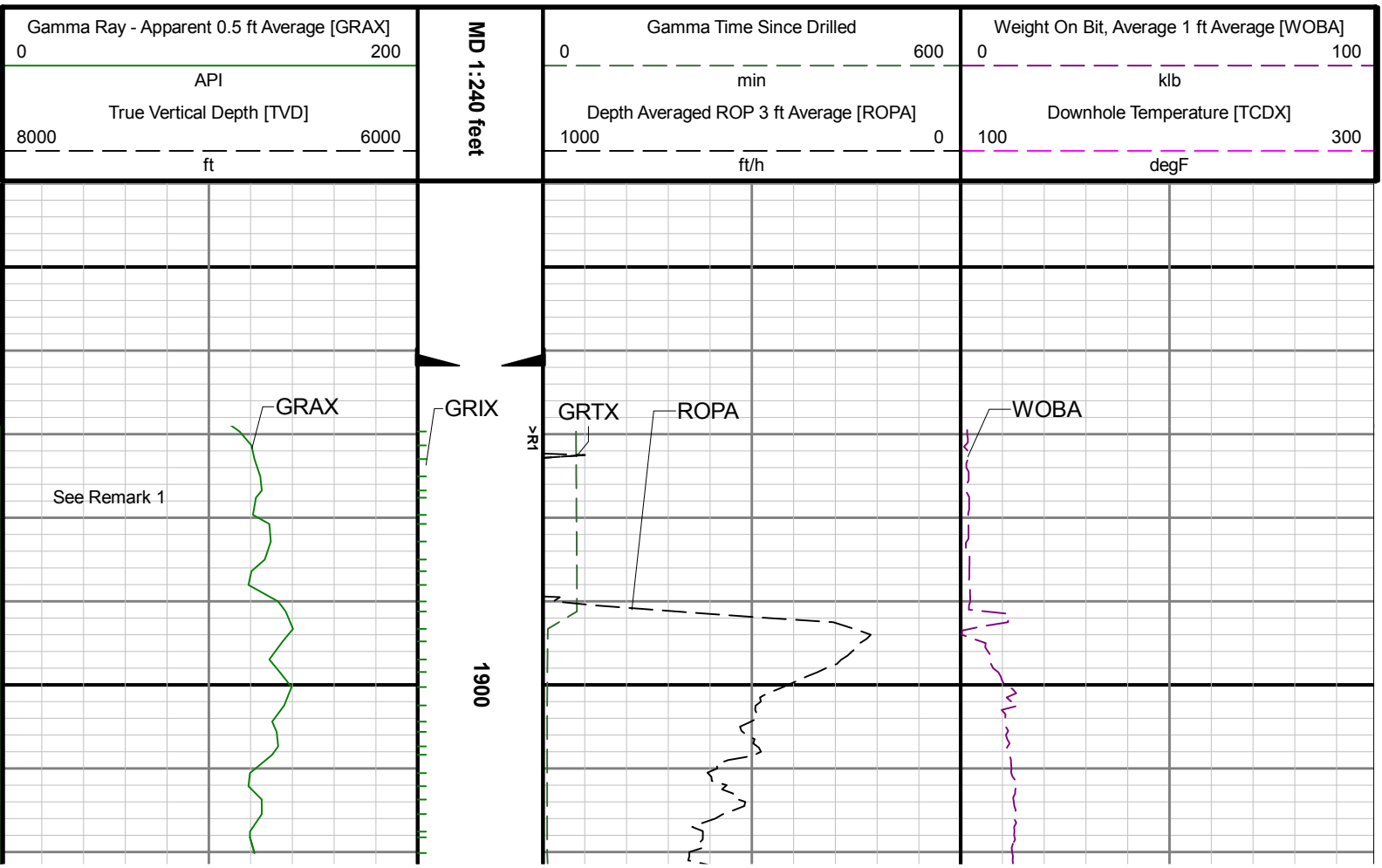
Mnemonic	Name	Description
GAM	NaviGamma	Probe Based Gamma Module, NaviTrak Platform

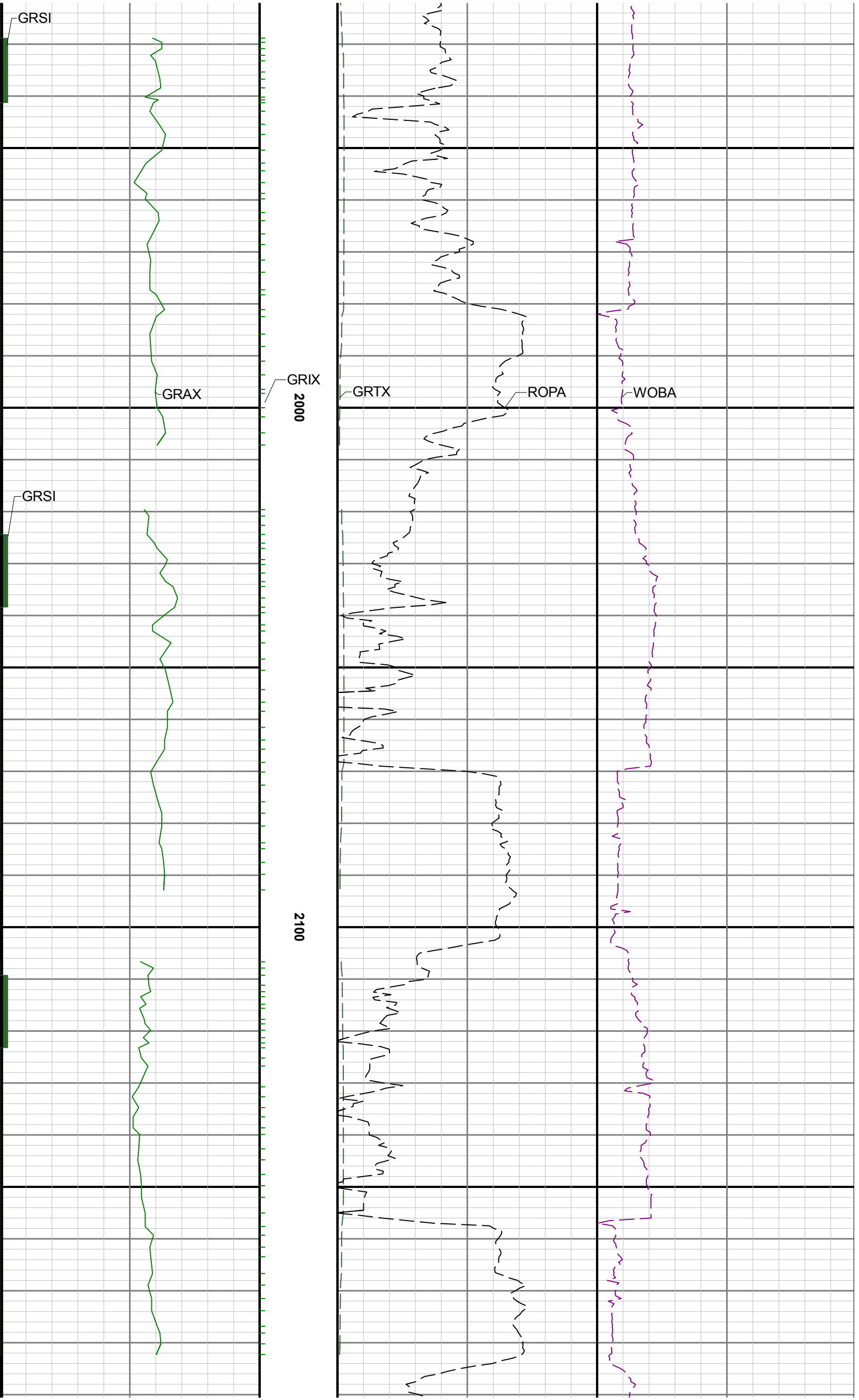
Comments

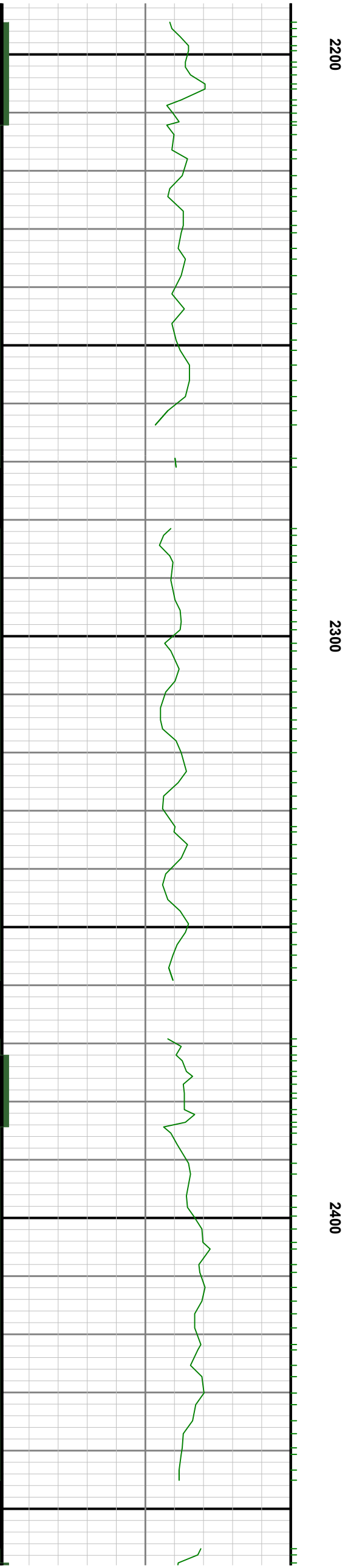
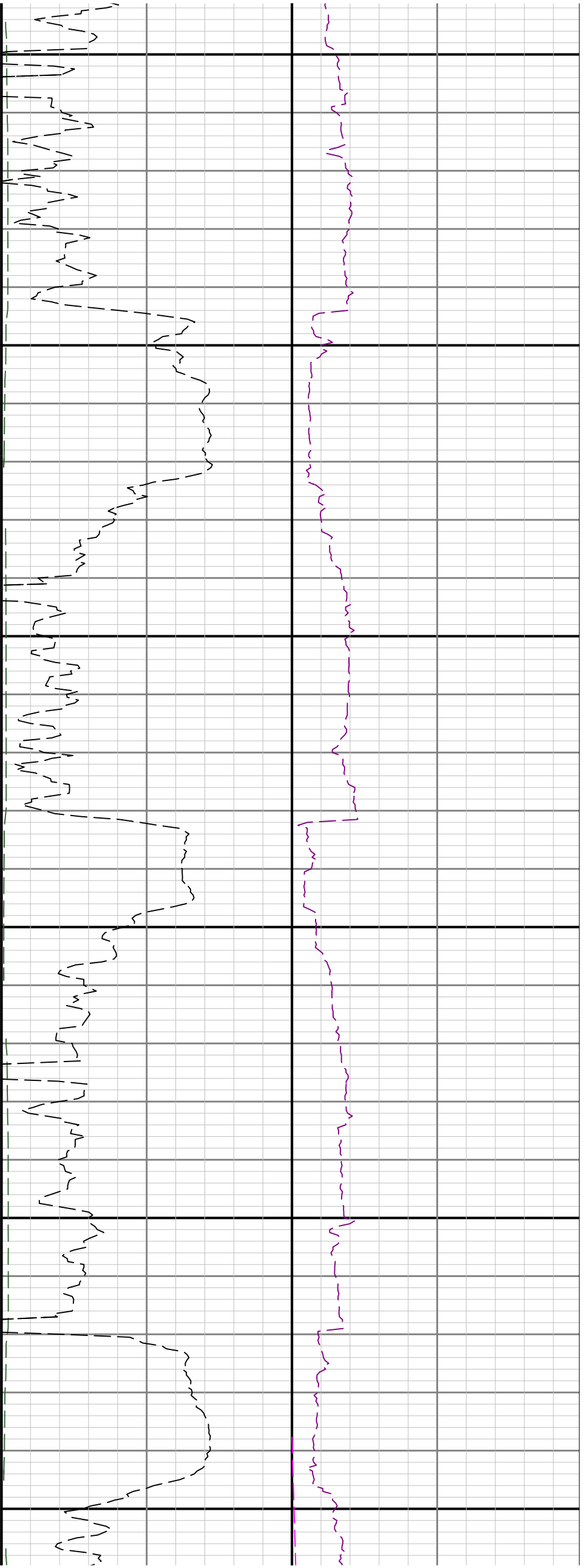
1	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
2	A sliding indicator is shown to the left edge of track 1 as a heavy line. The indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.
3	Baker Hughes runs 1 thru 3 utilized 6.50 inch NaviGamma services (Gamma Ray and Directional) behind a 8 1/2 inch bit and steerable assembly from 1869 to 18545 feet MD (1842 to 7274 feet TVD).
4	Numerous gaps are present throughout the log due to surveying while on bottom drilling ahead.
5	Gamma Ray (GRAX) scale is presented 0 to 200 API per customer request.

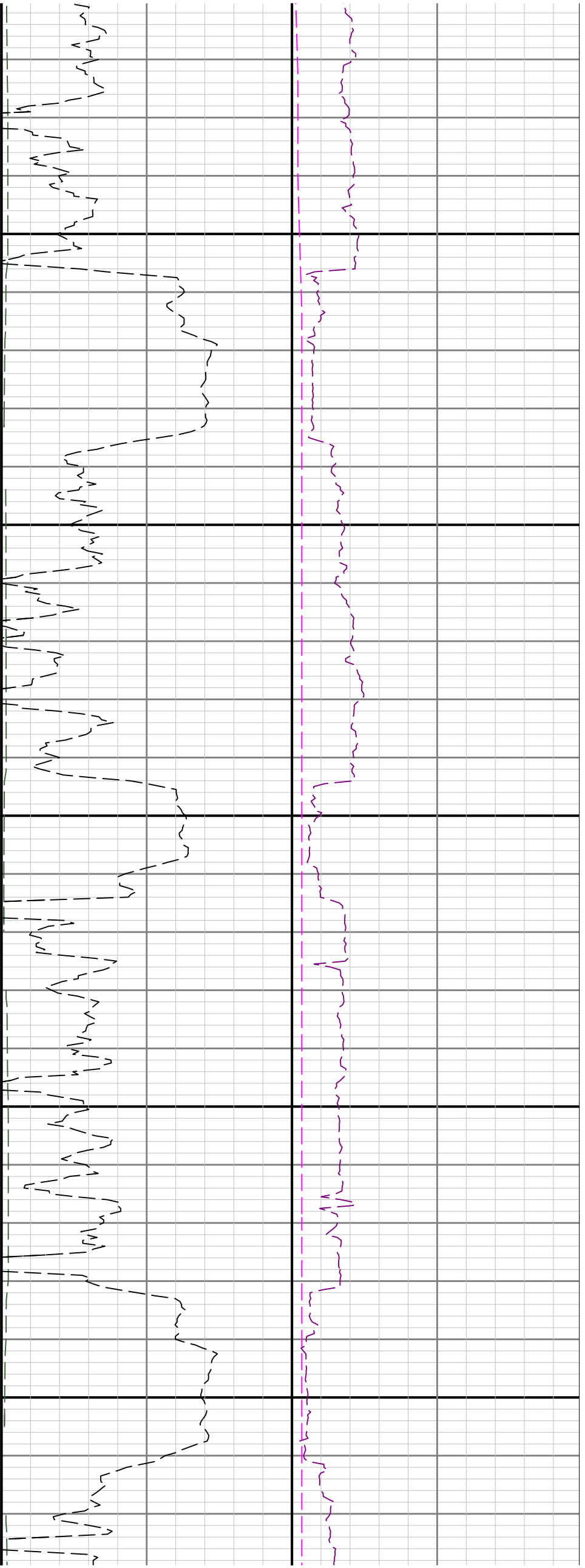
Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	1880.00	8.500	1	Baker Hughes logging services began 1869 feet MD (1827 feet TVD) per customer request.
2	7210.00	8.500	2	The GRTX interval from 7195 to 7252 feet MD (7102 feet TVD) was logged up to 12 hours after tripping out for a tricone bit to finish the curve.
3	7760.00	8.500	3	The GRTX interval from 7747 to 7804 feet MD (7370 feet TVD) was logged up to 16 hours after tripping out for lateral BHA.
4	18500.00	8.500	3	The interval from 18486 to 18545 feet MD (7274 feet TVD) was not logged due to sensor to bit offset at the end of well TD.





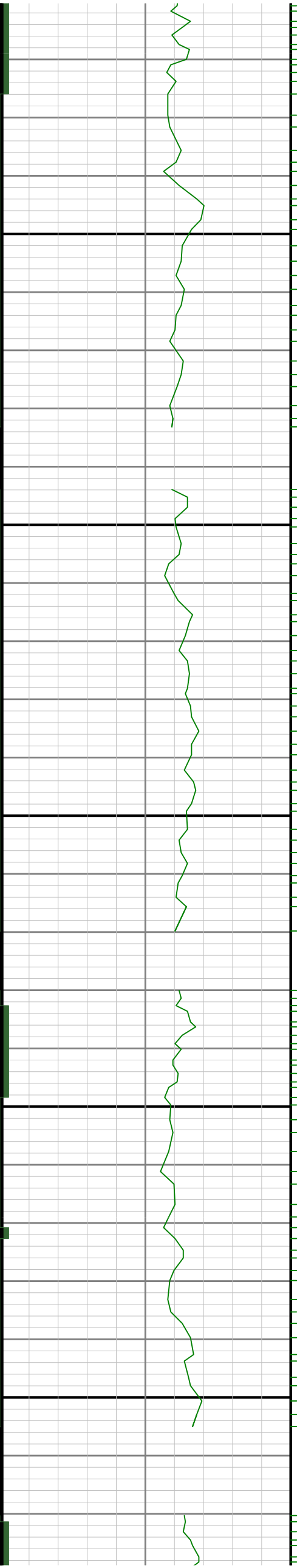


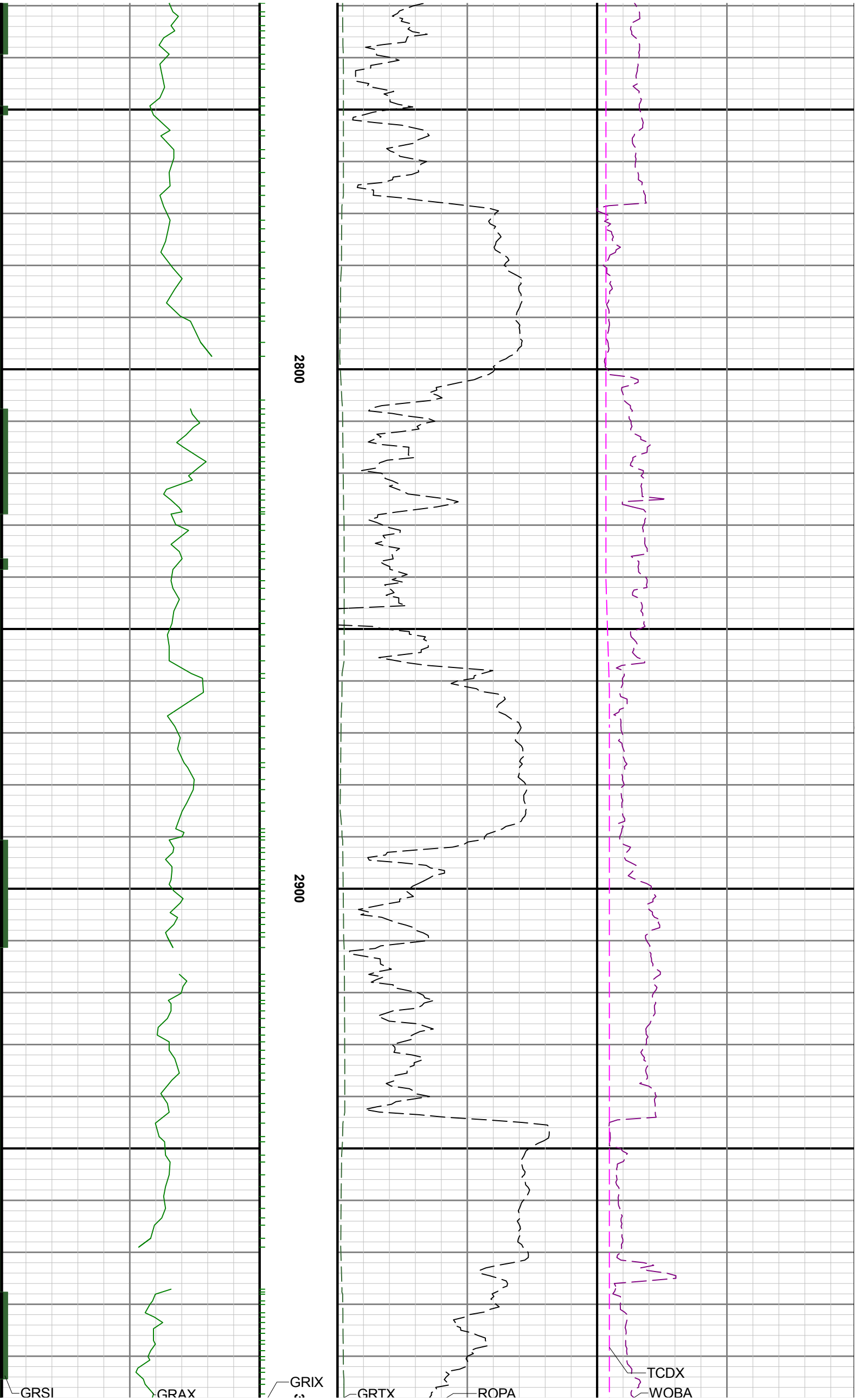


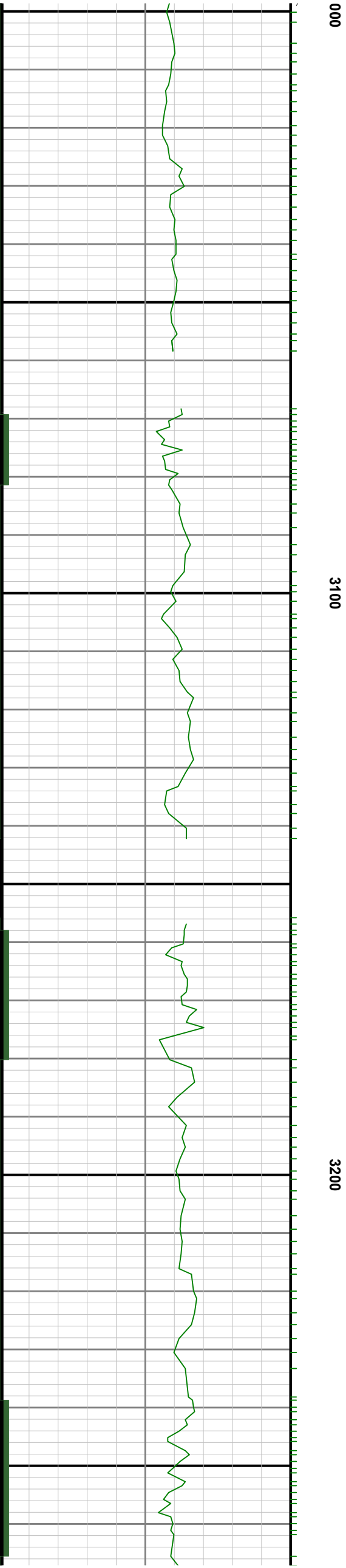
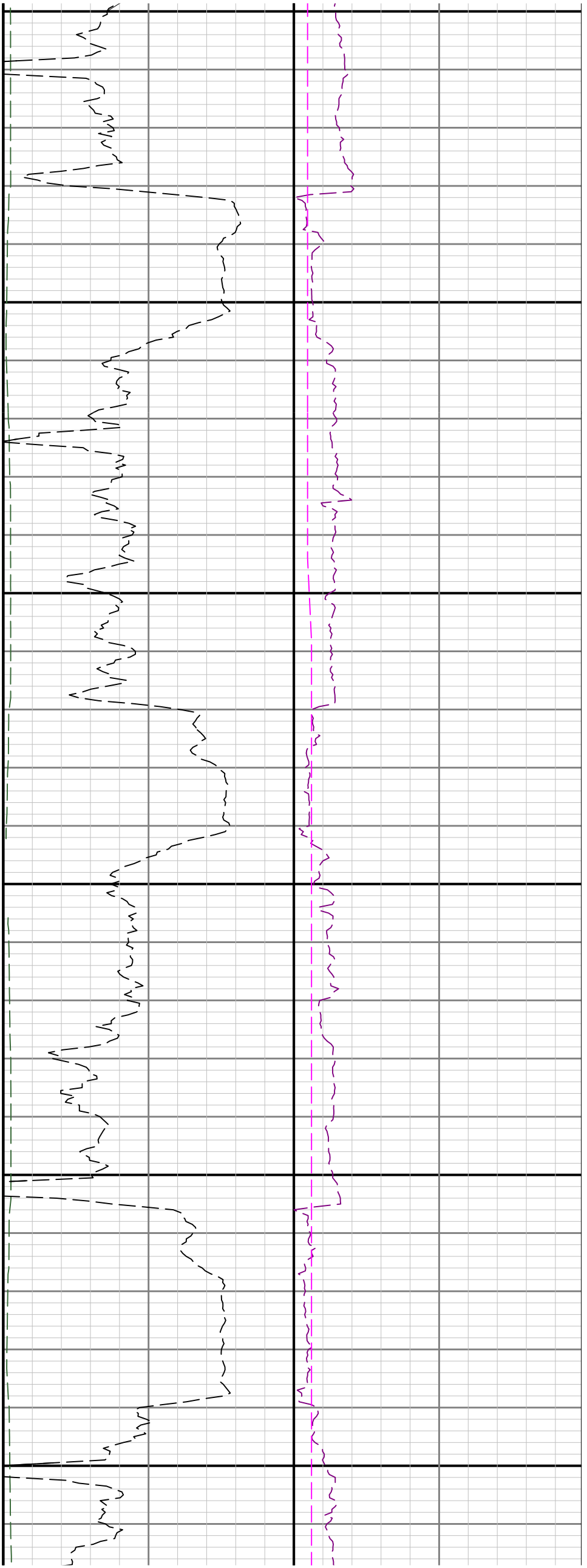
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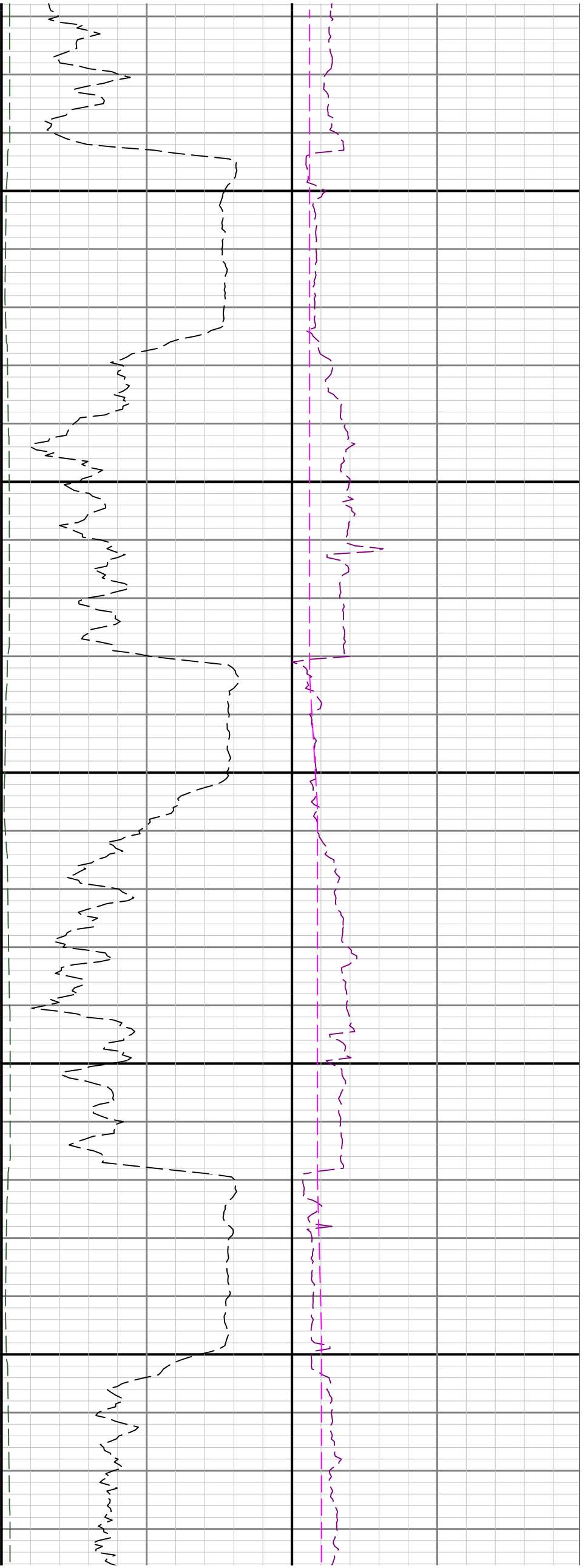
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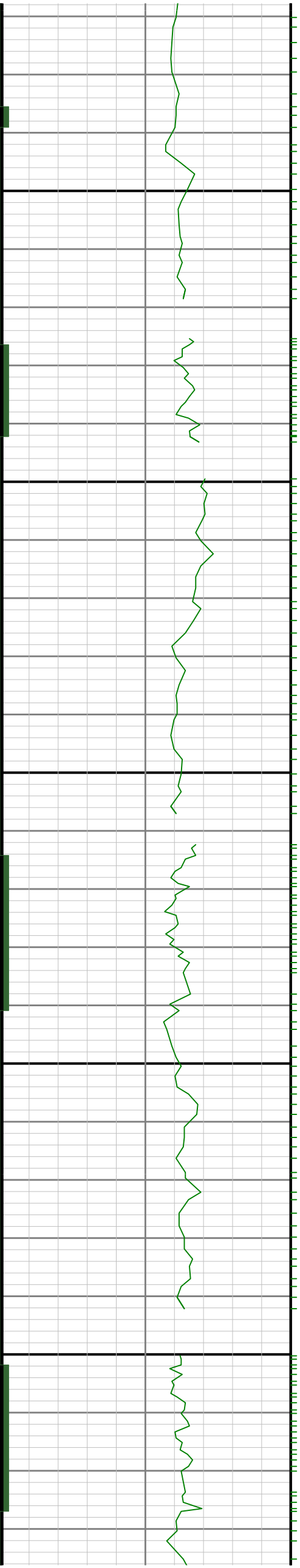




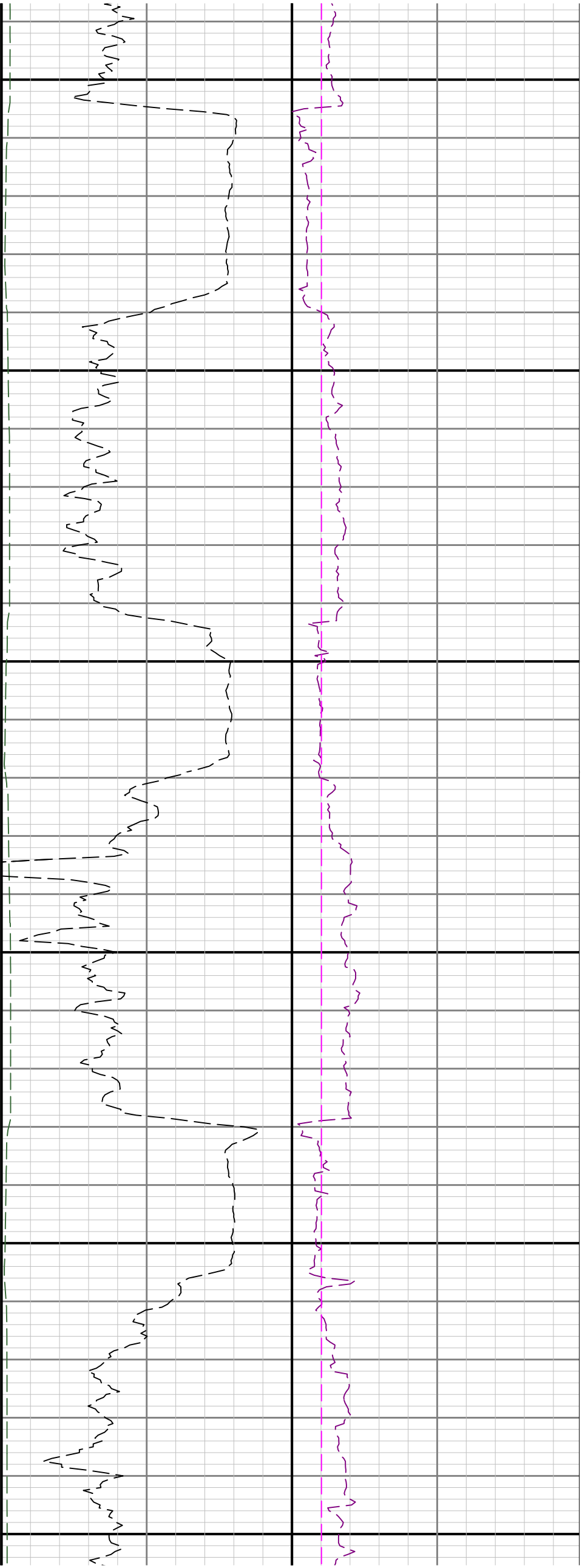
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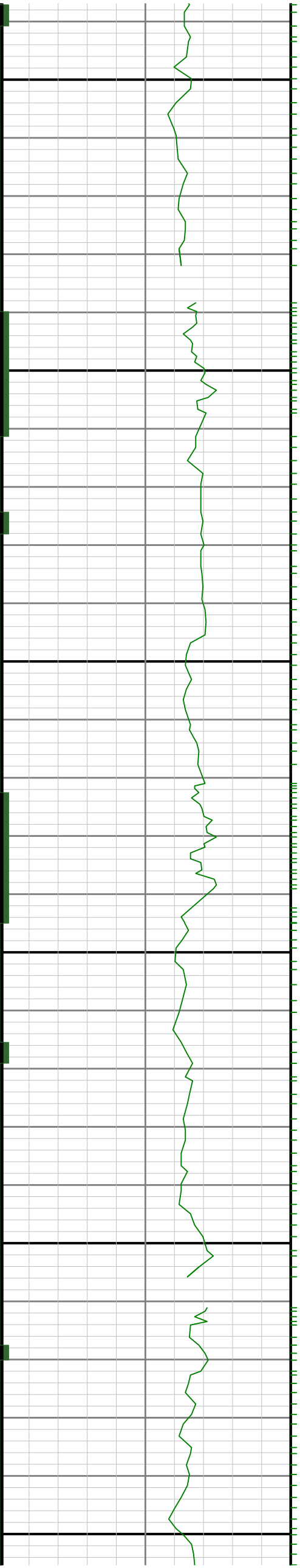


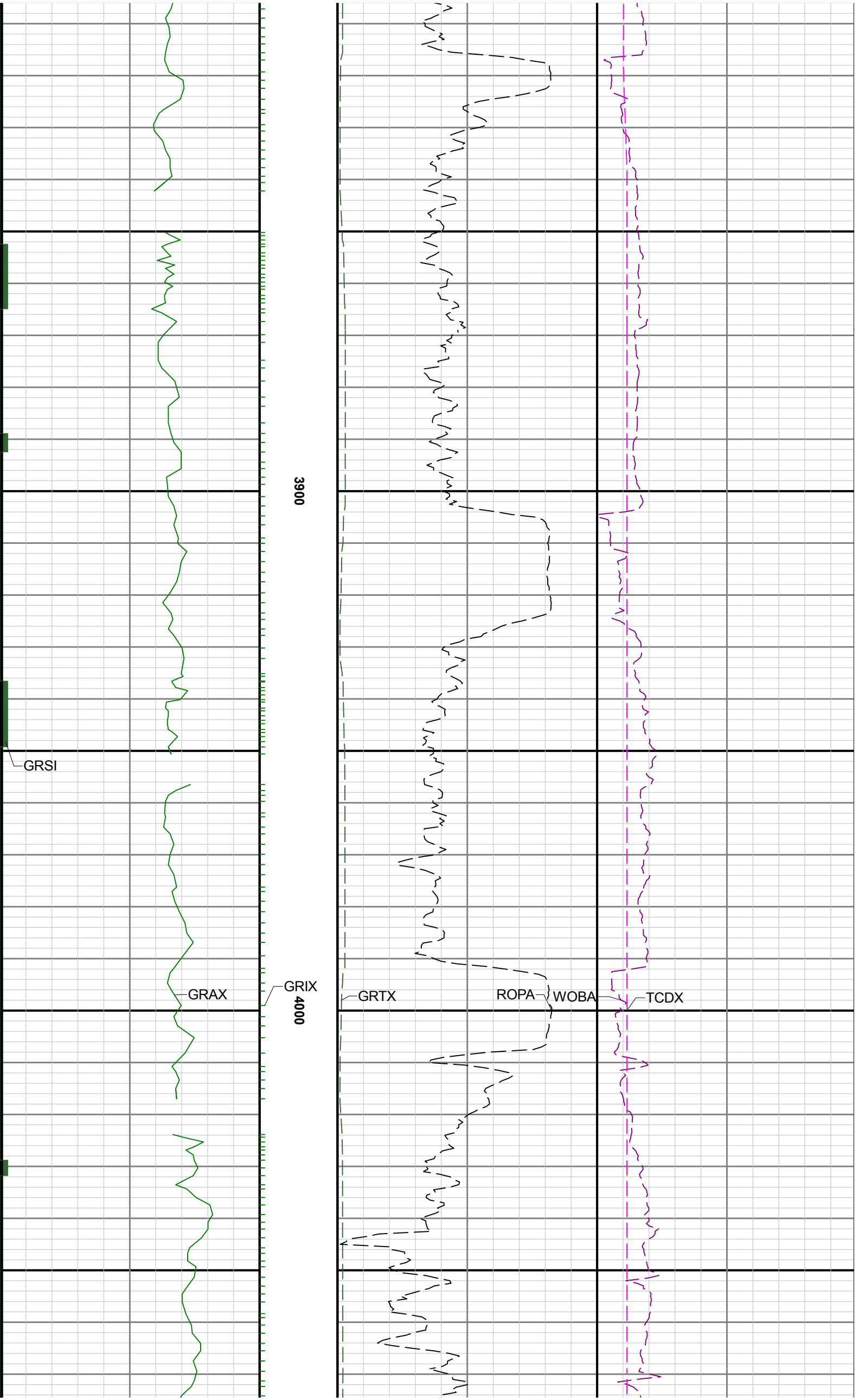


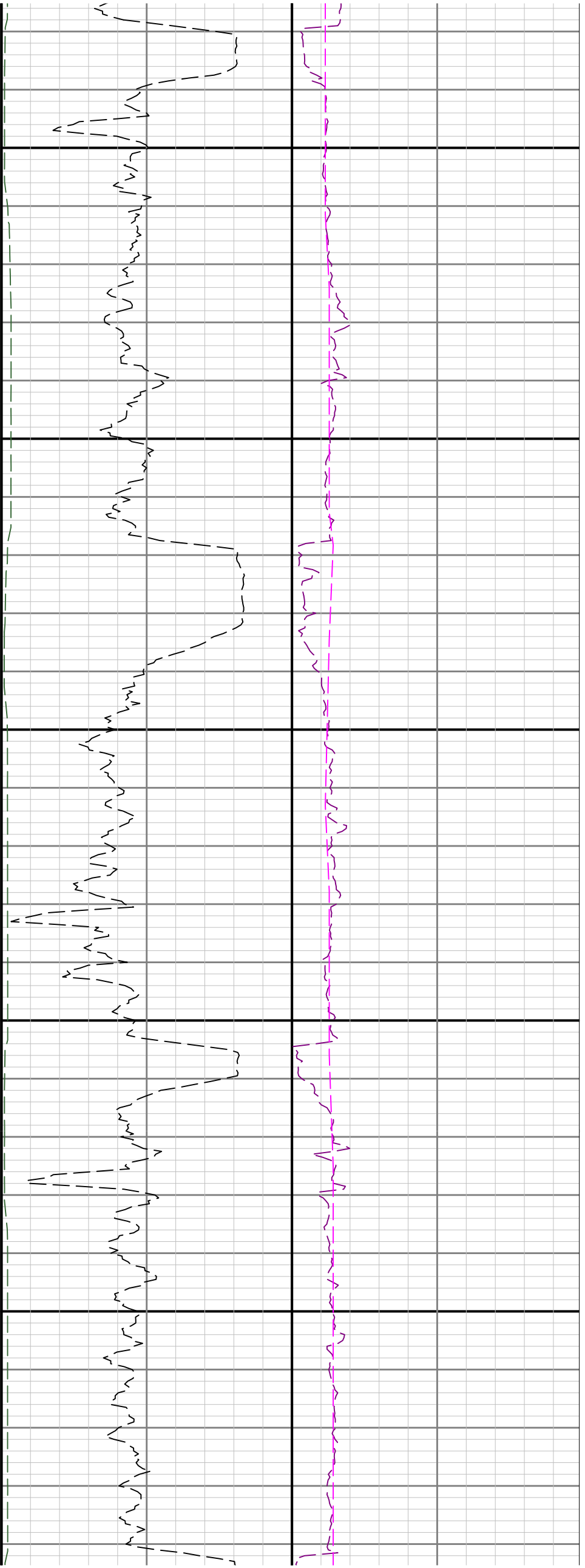
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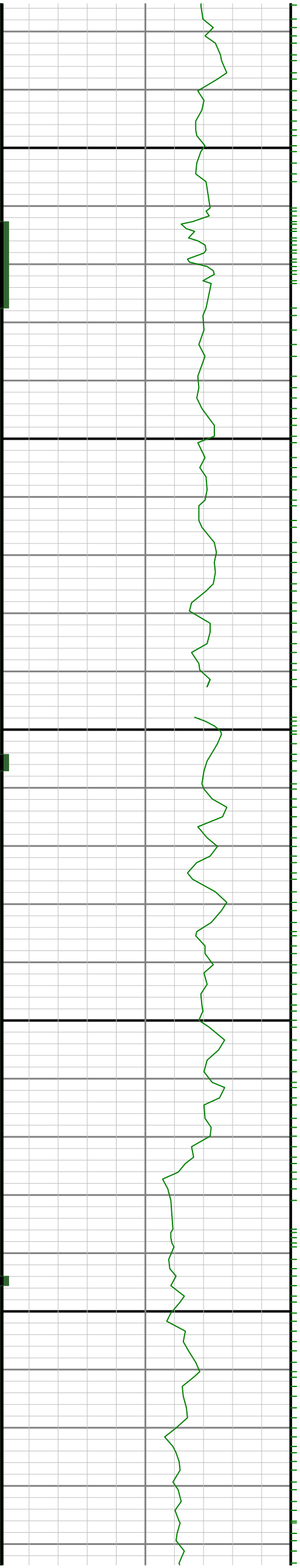


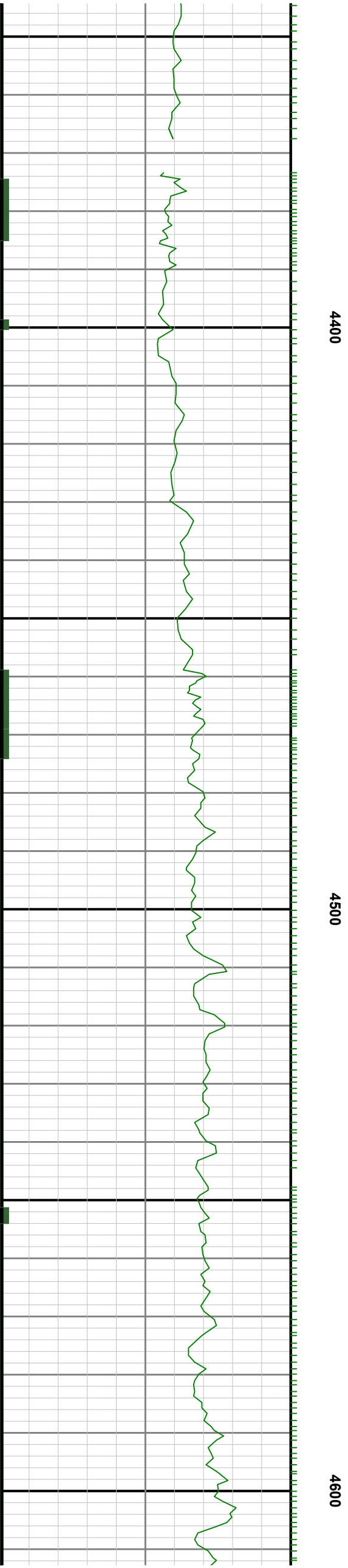
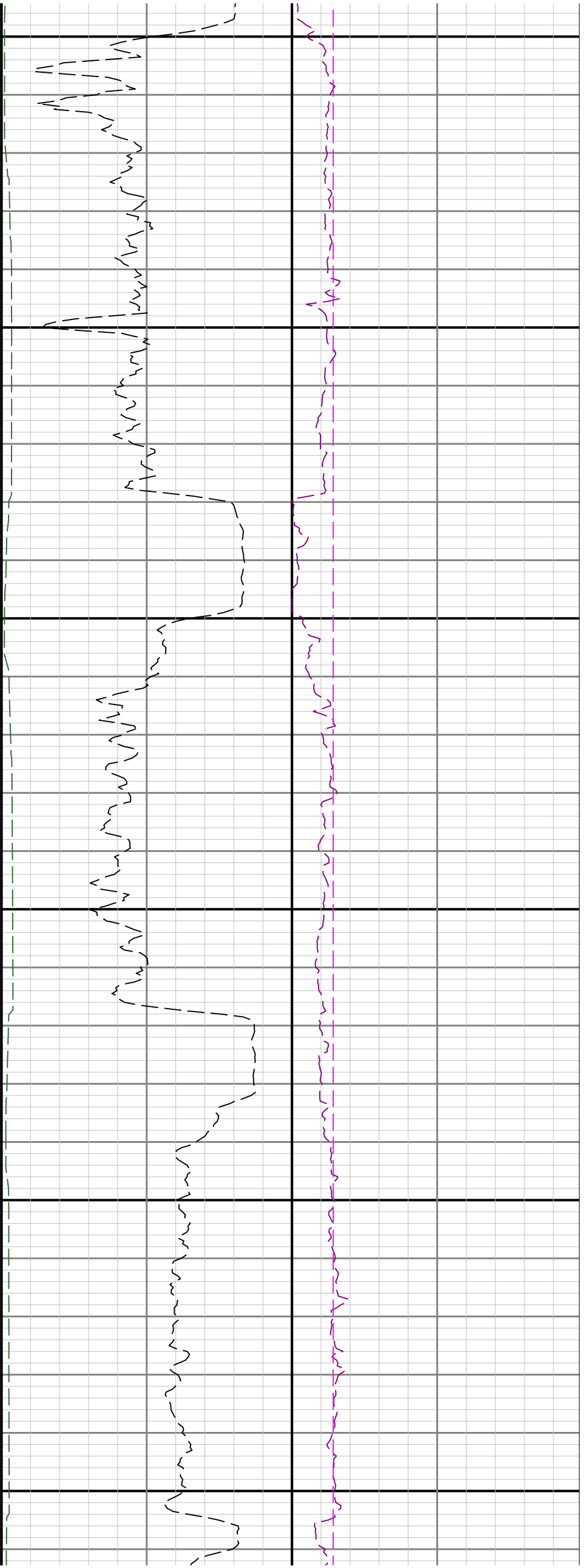


4100

4200

4300

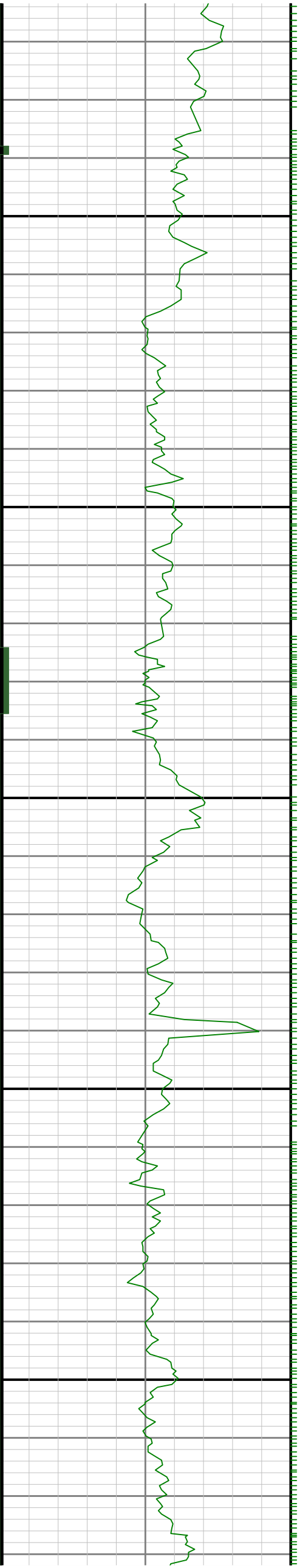


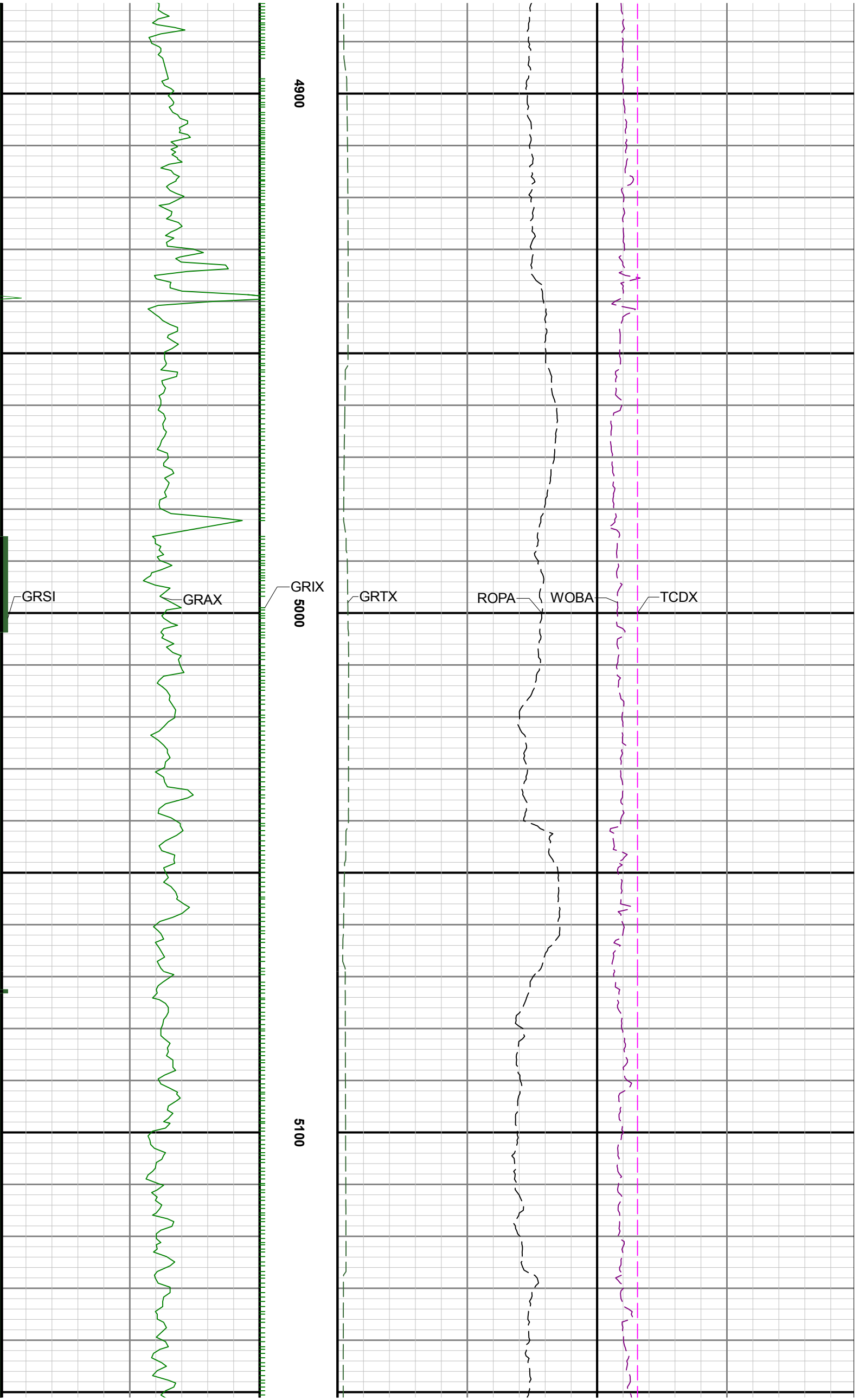


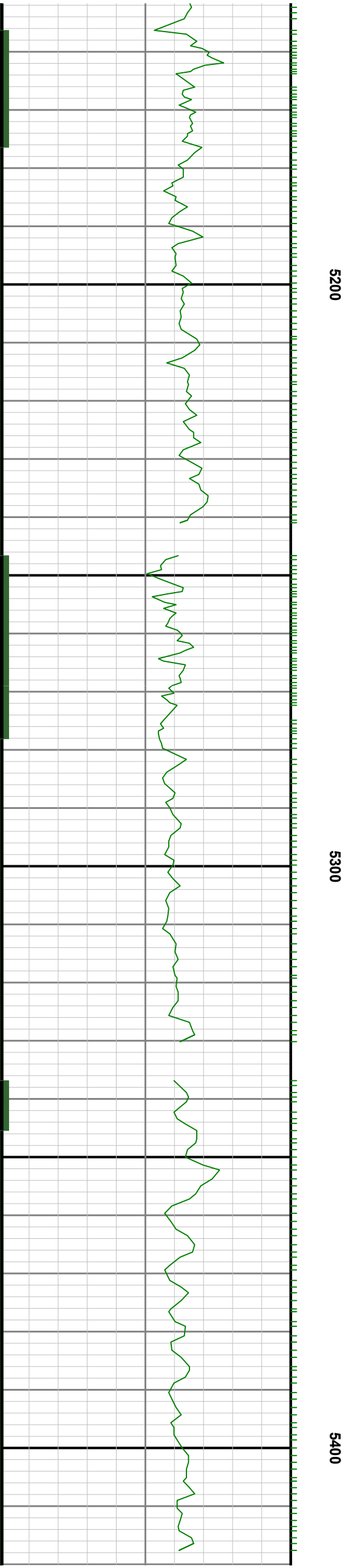
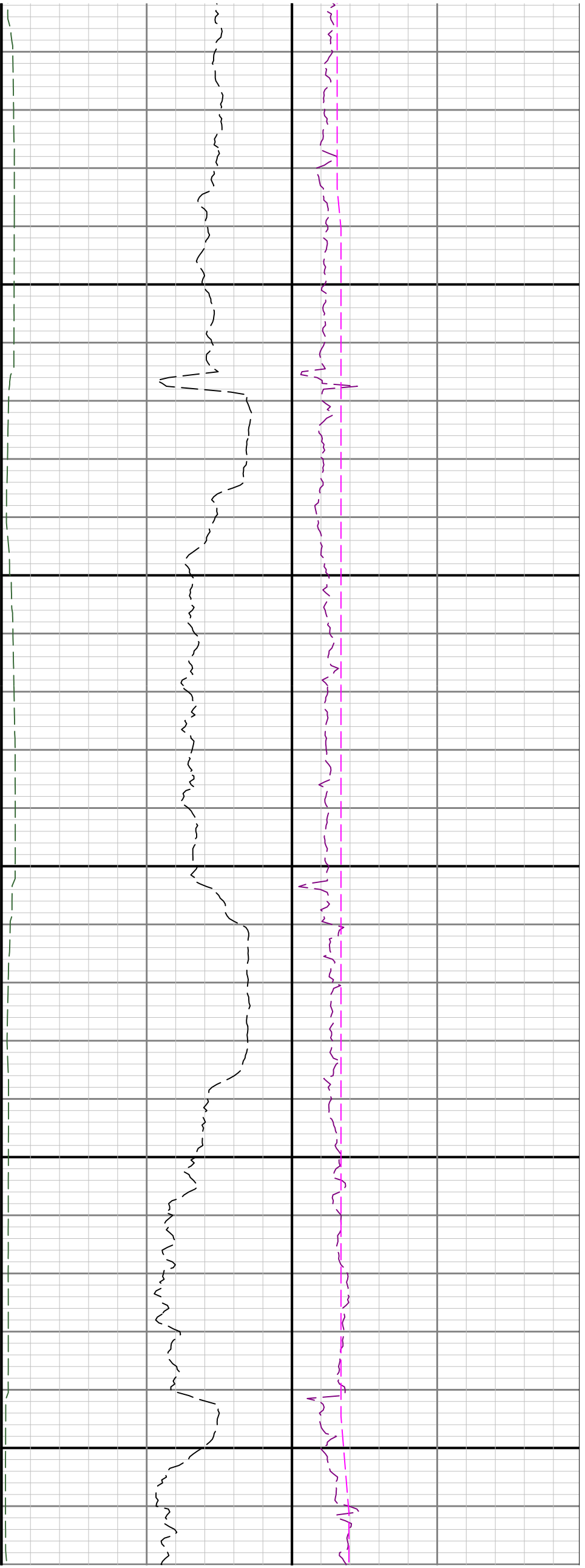


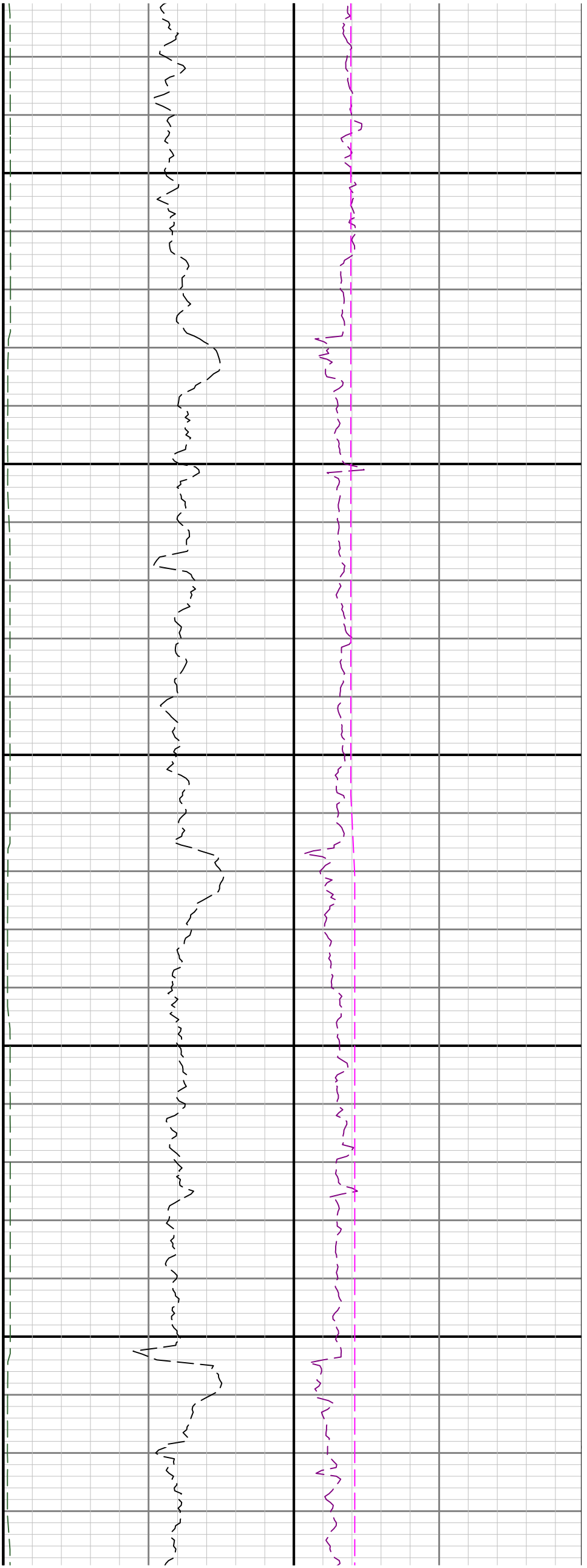
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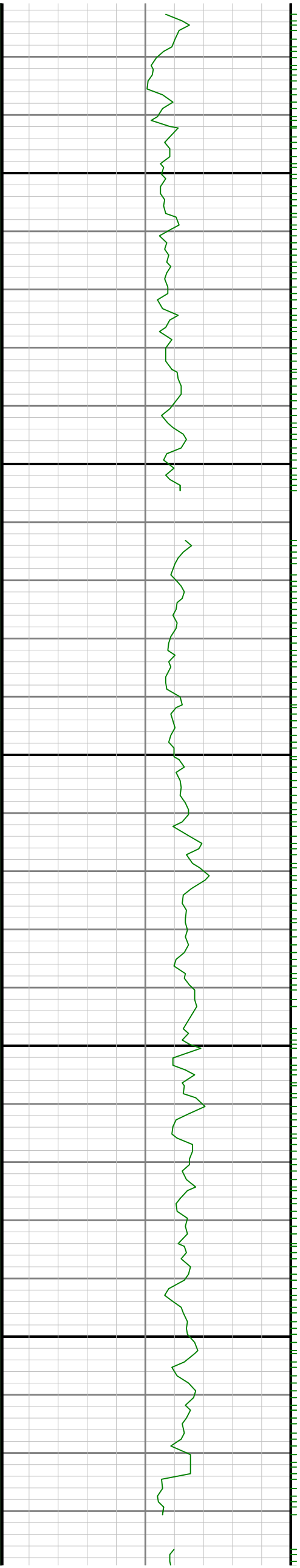




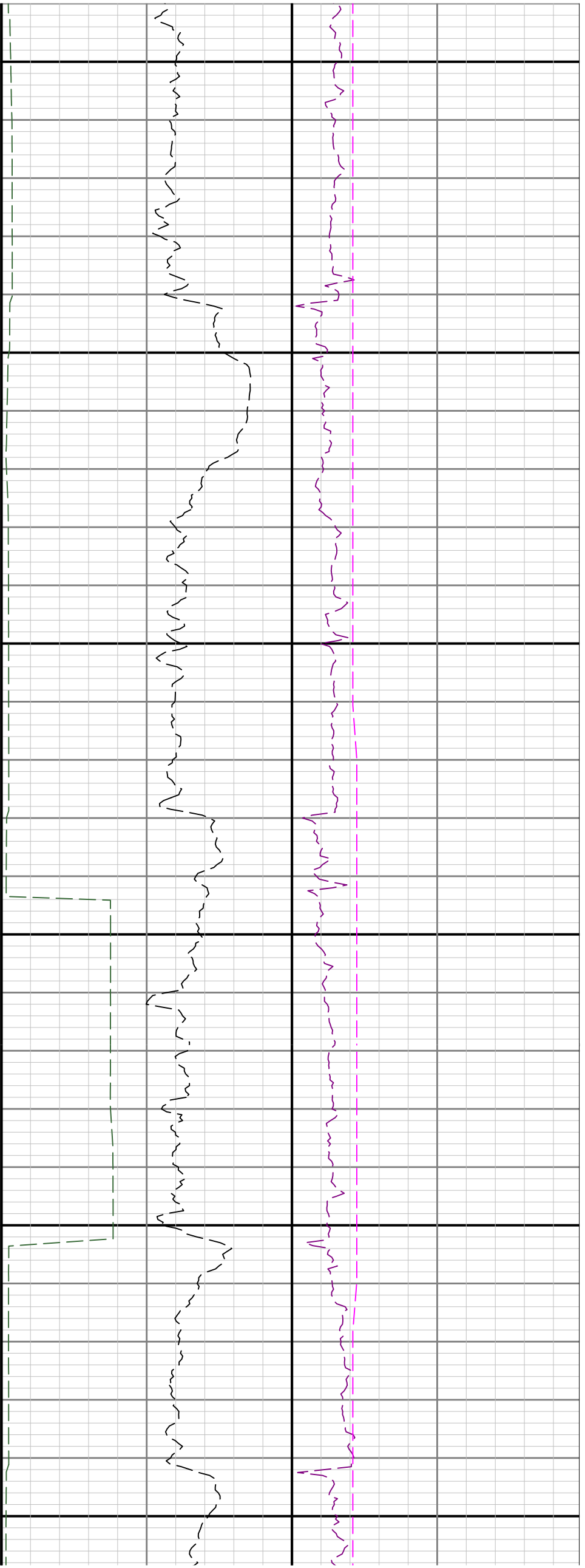


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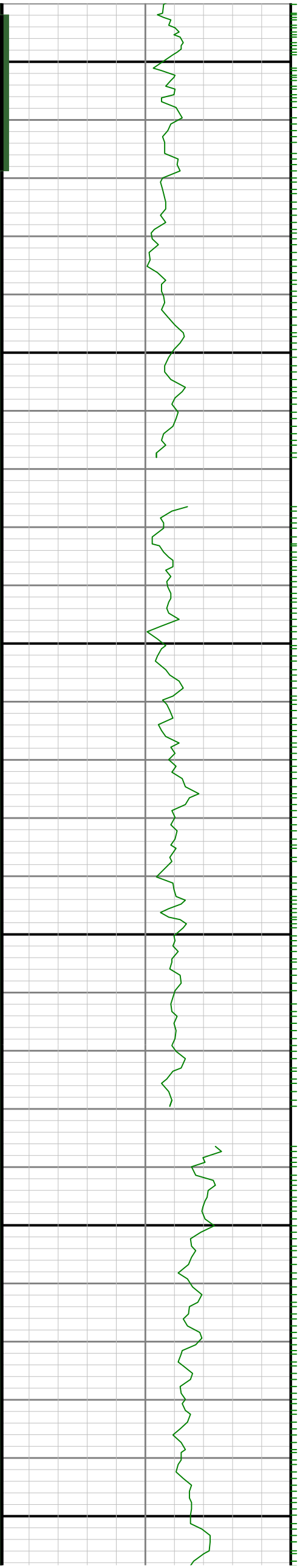


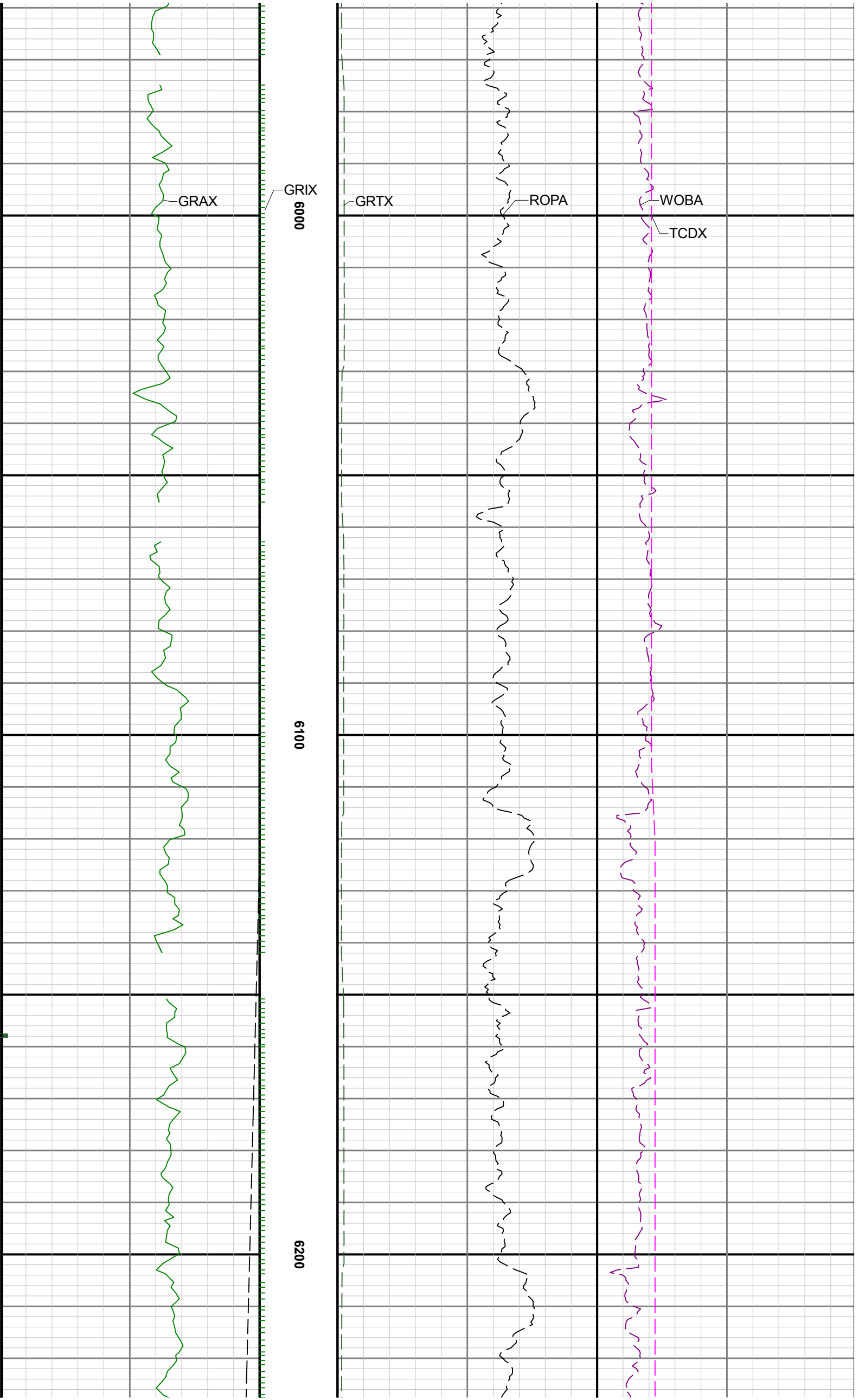


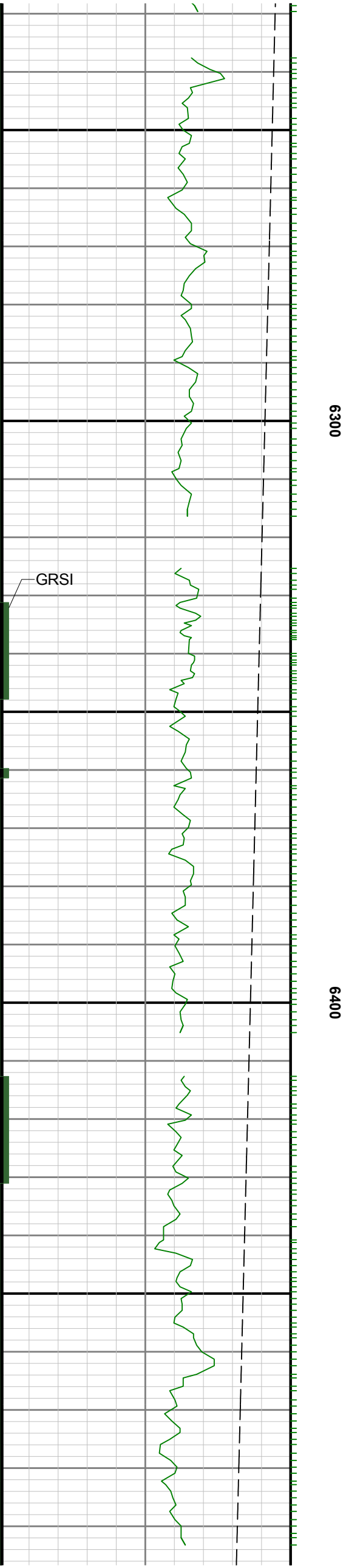
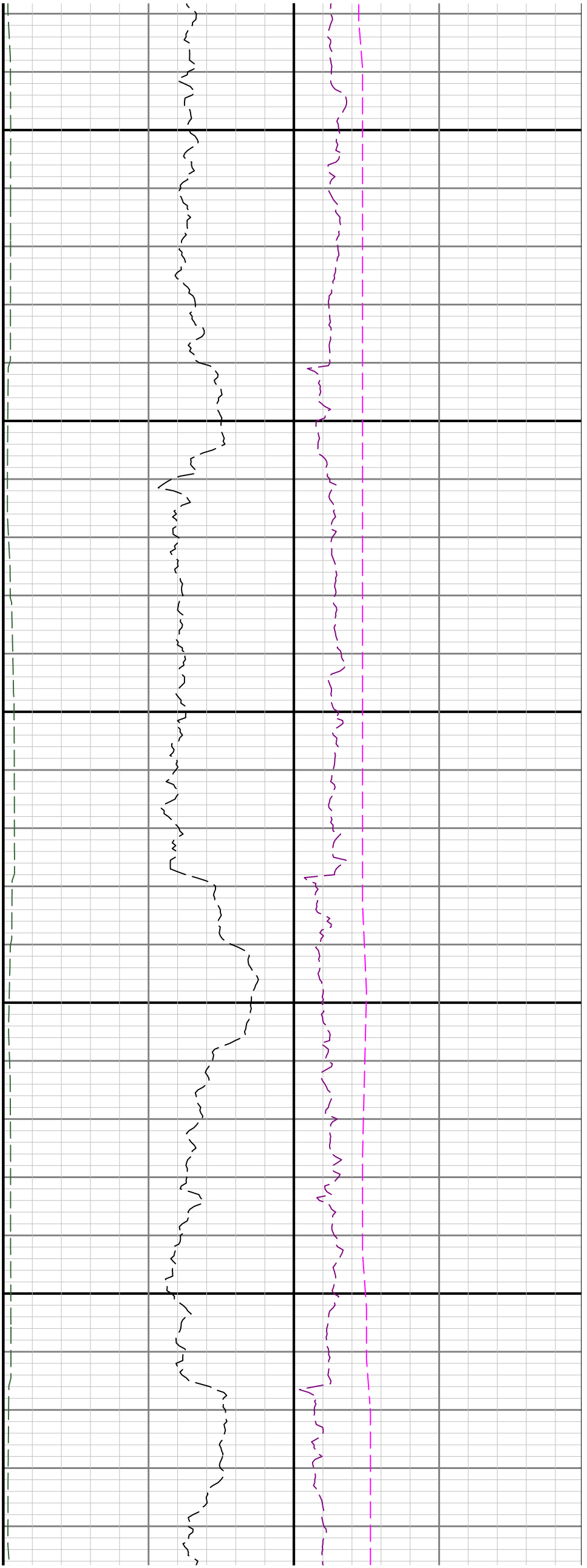
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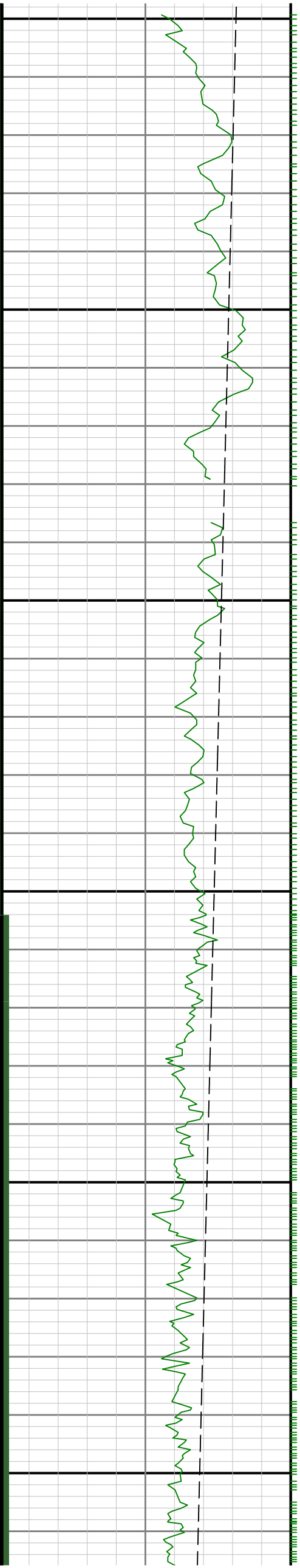
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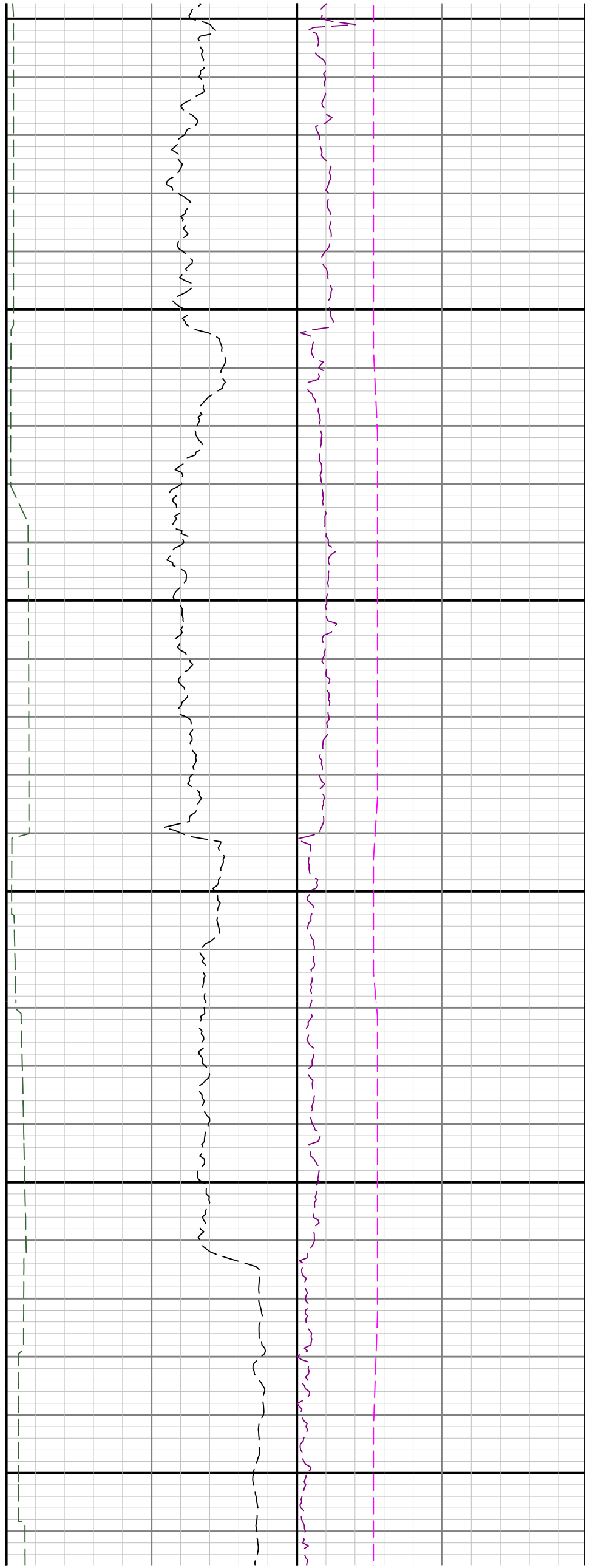


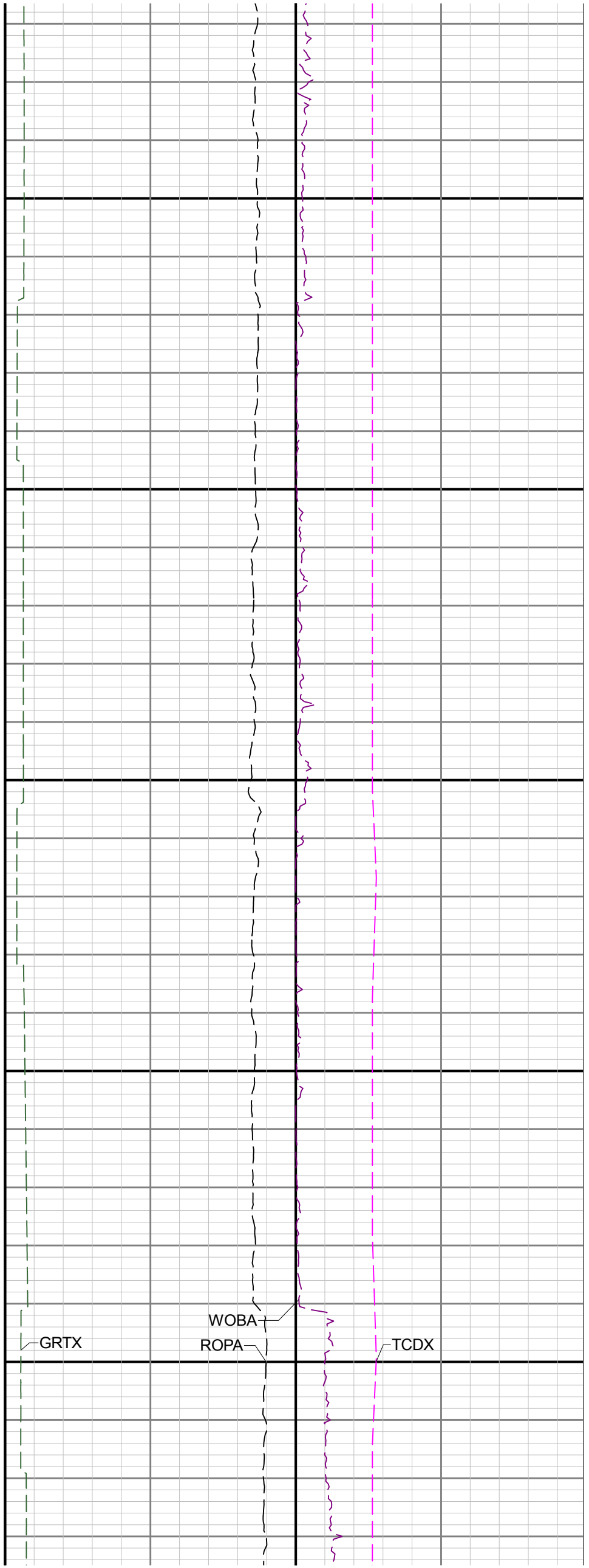
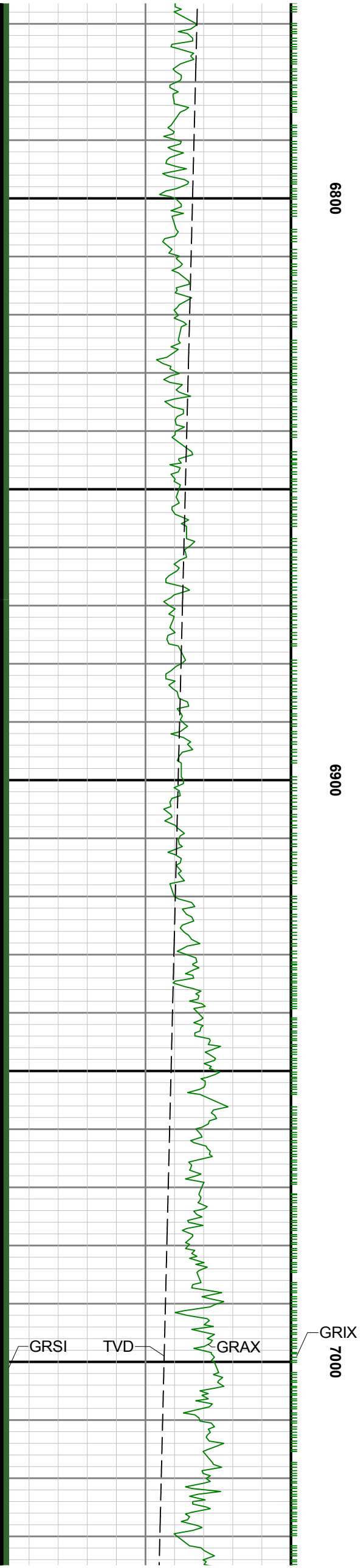


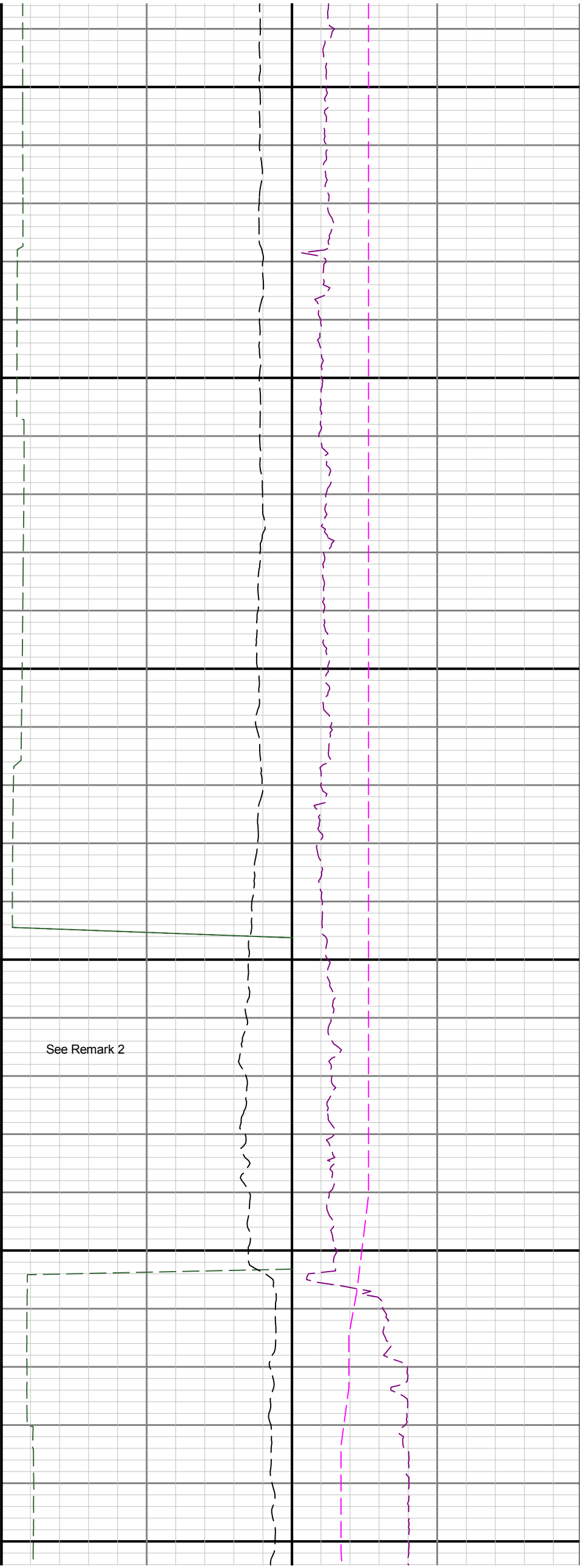
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6700





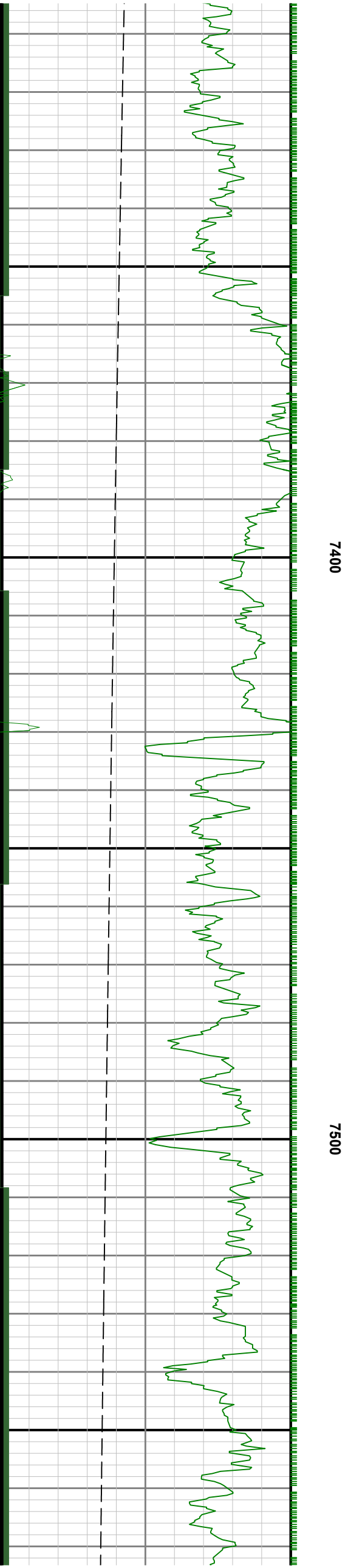
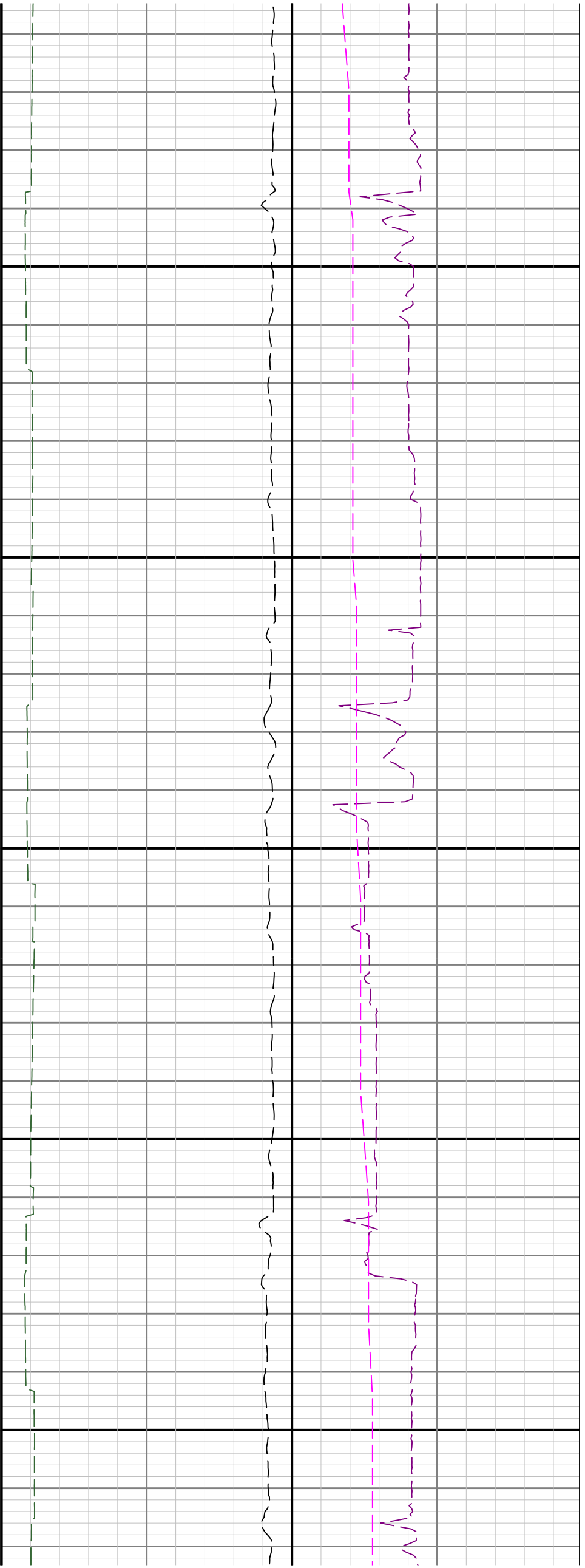


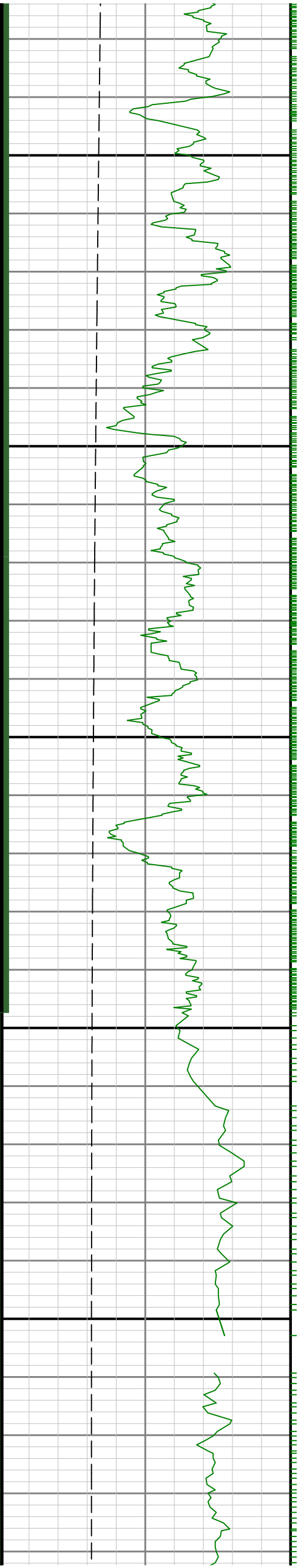
R1 > R2

7100

7200

7300



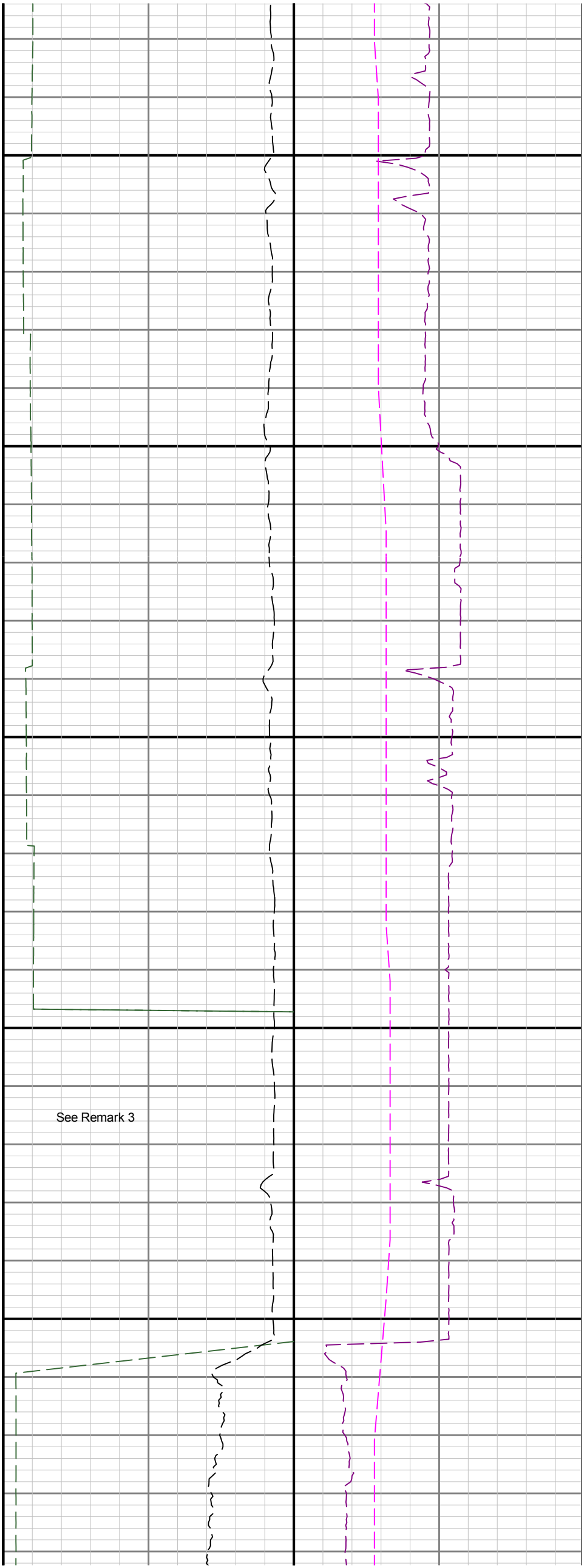


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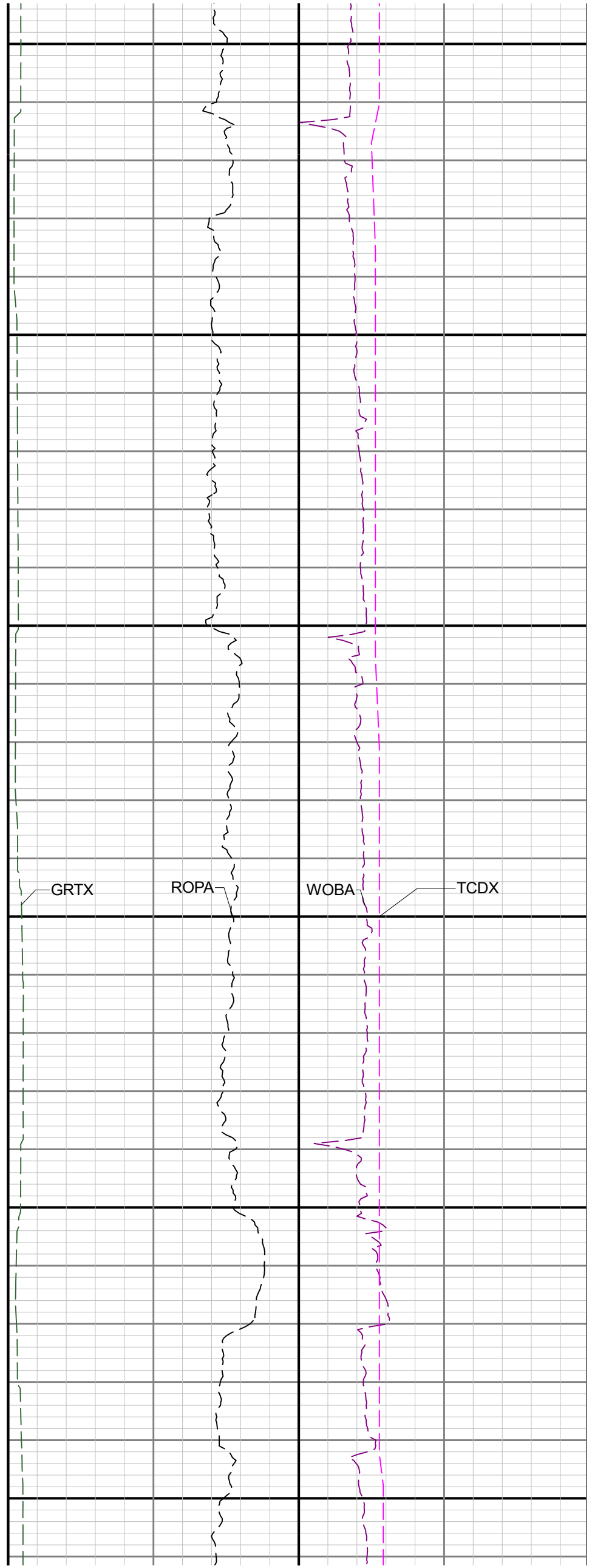
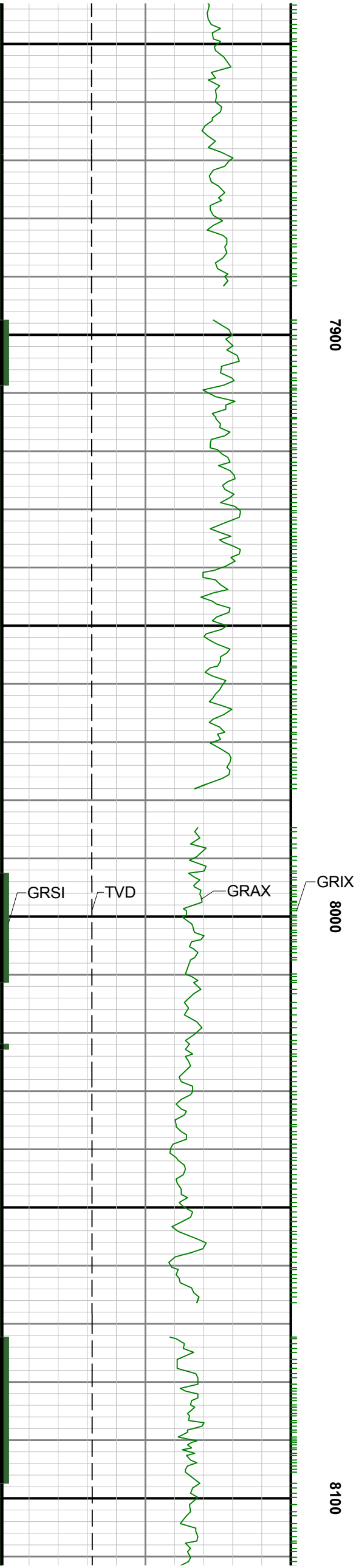
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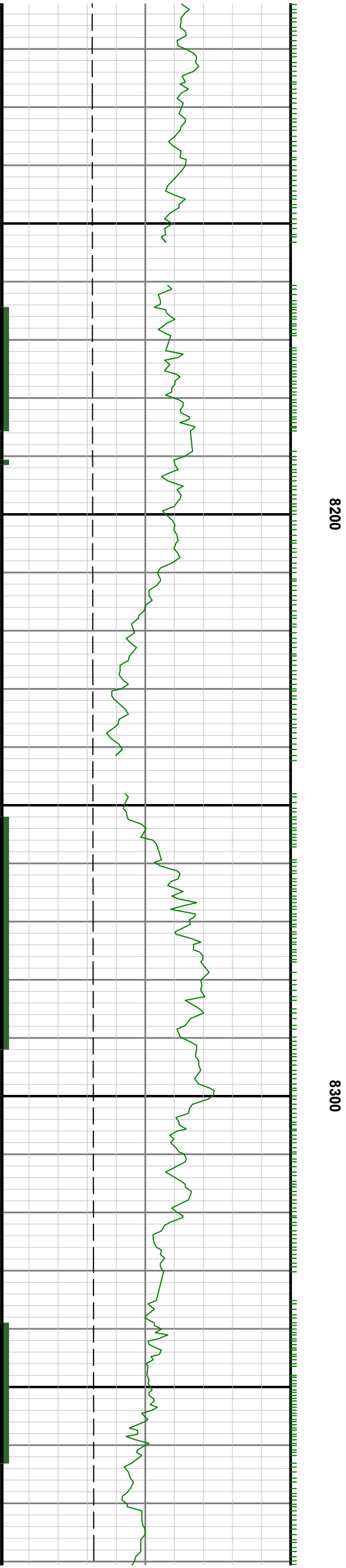
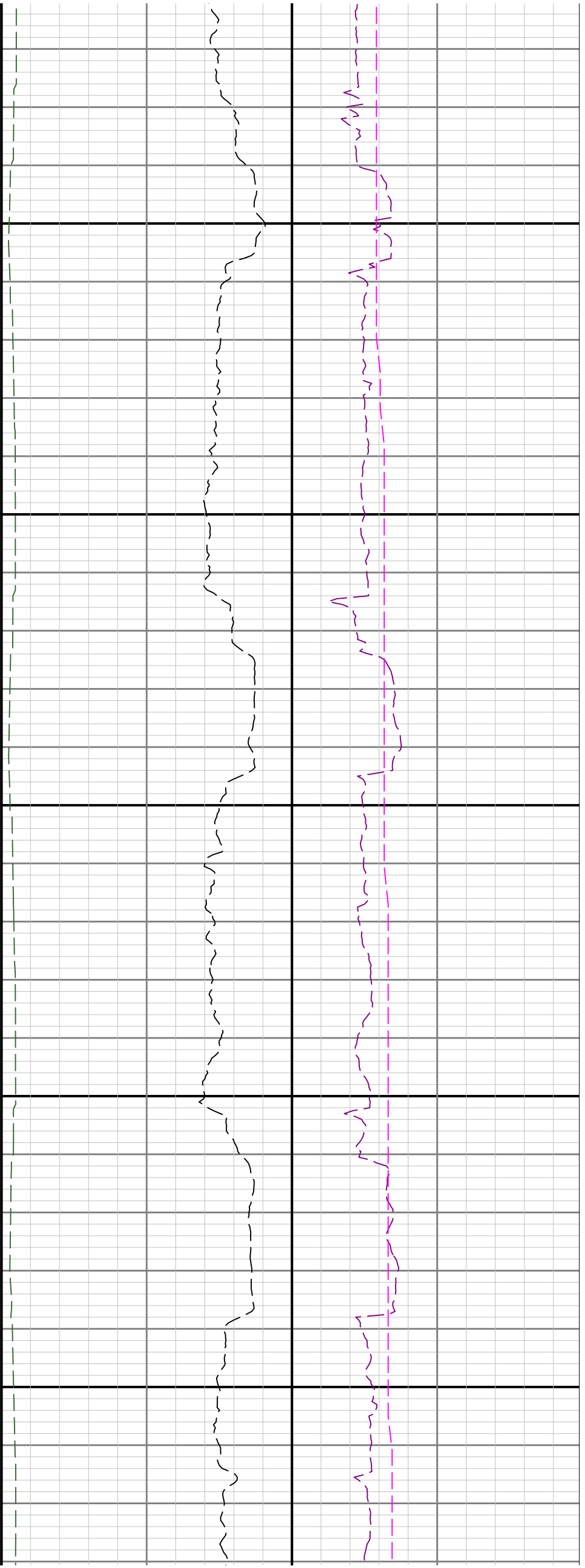
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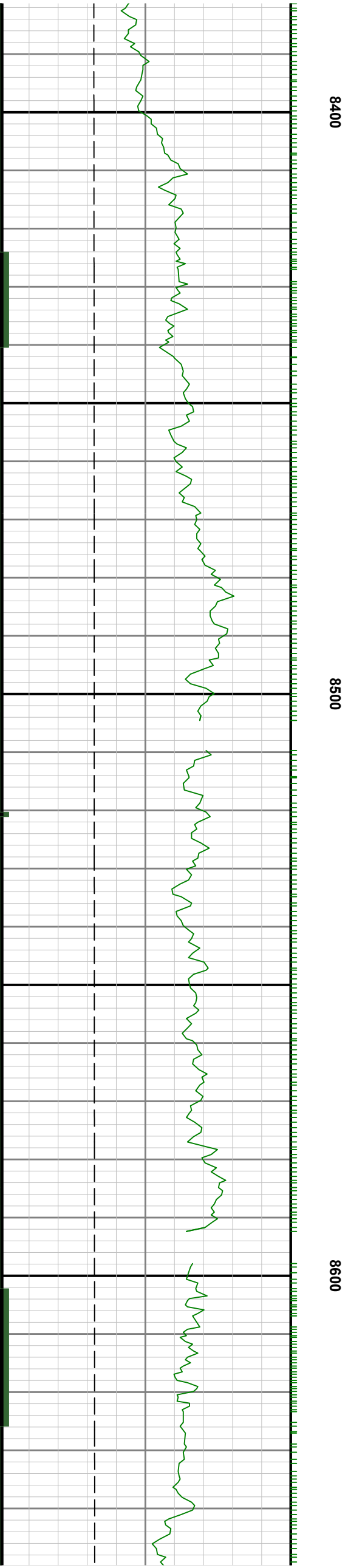
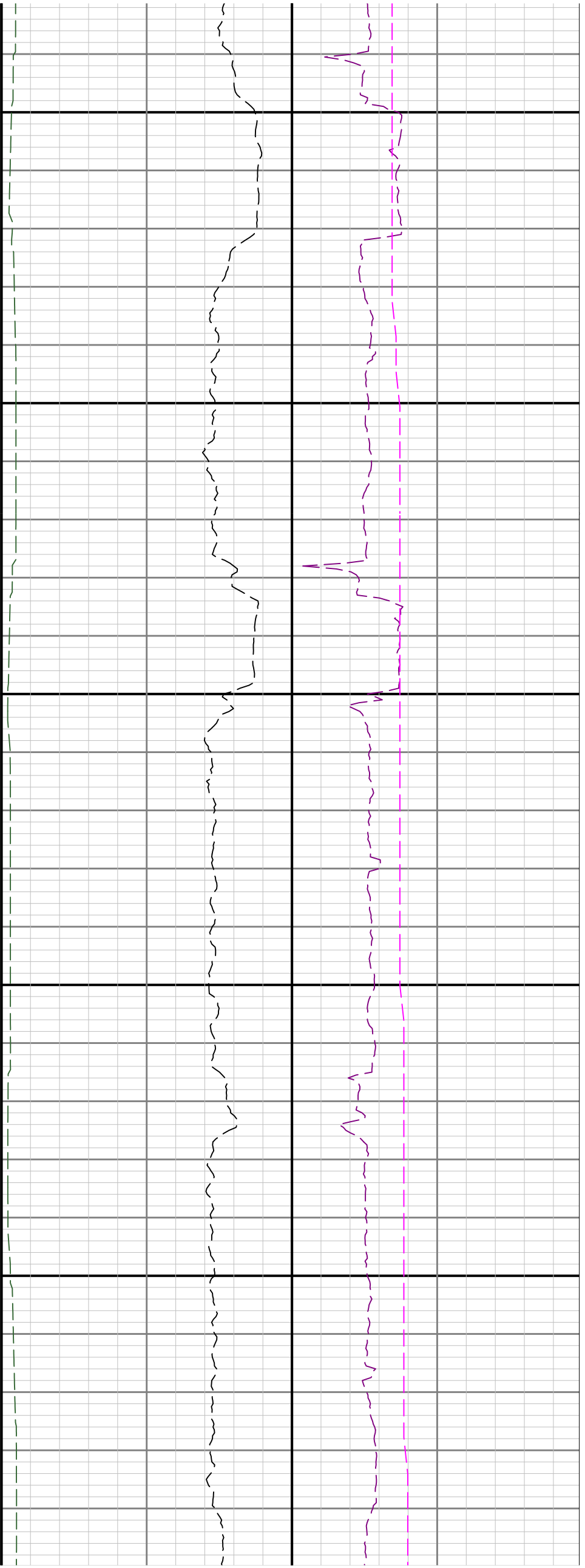
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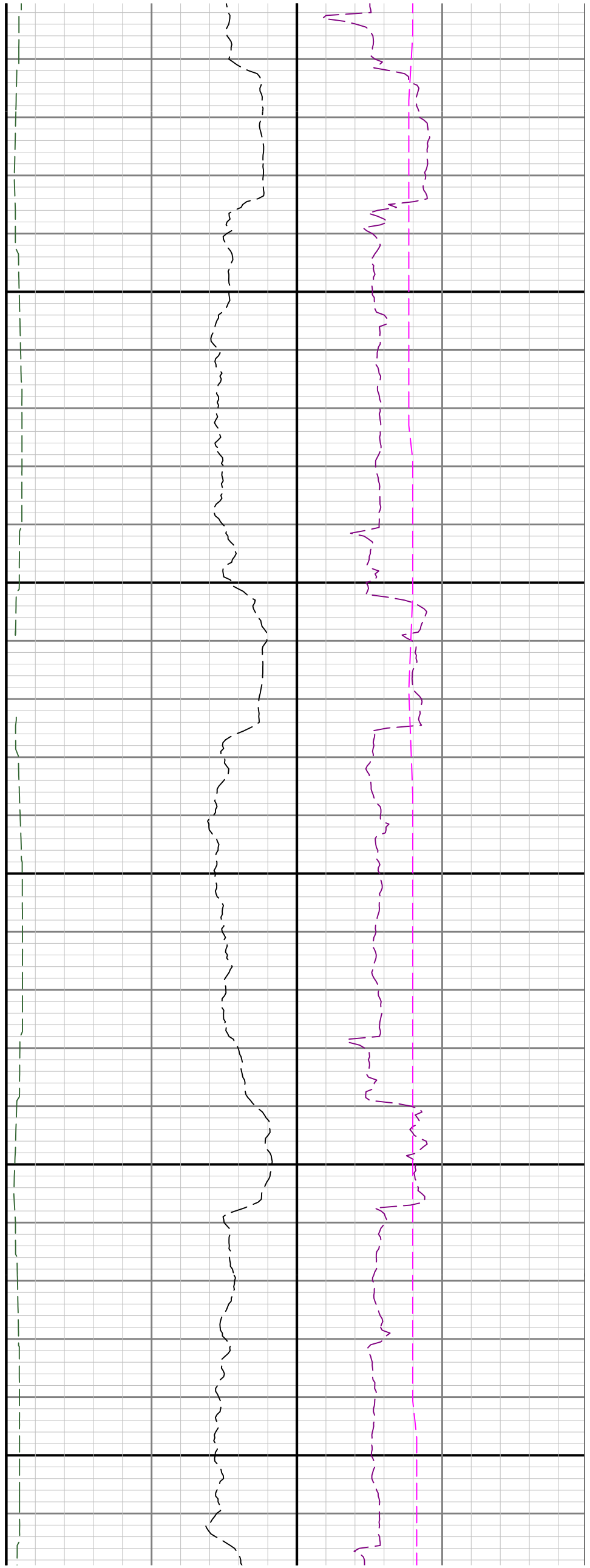
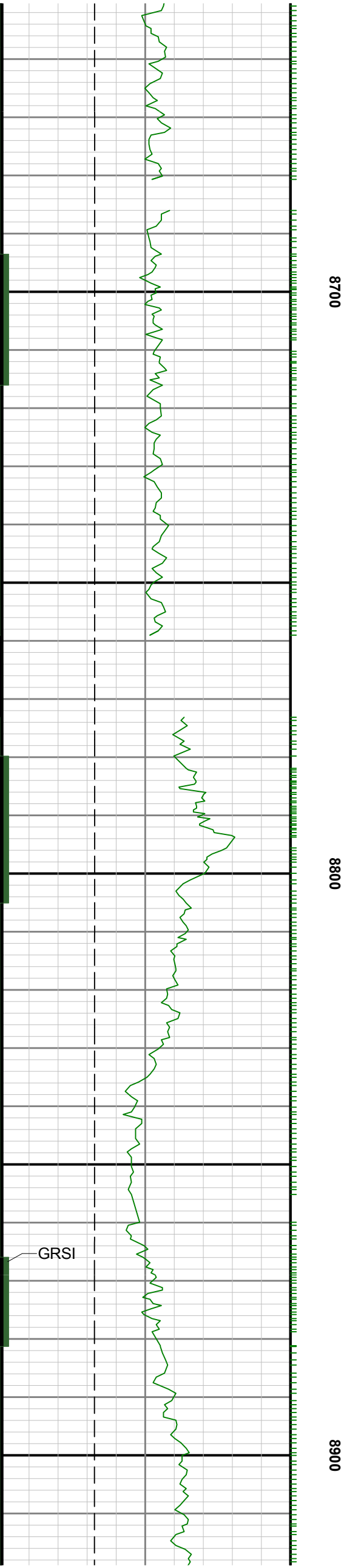


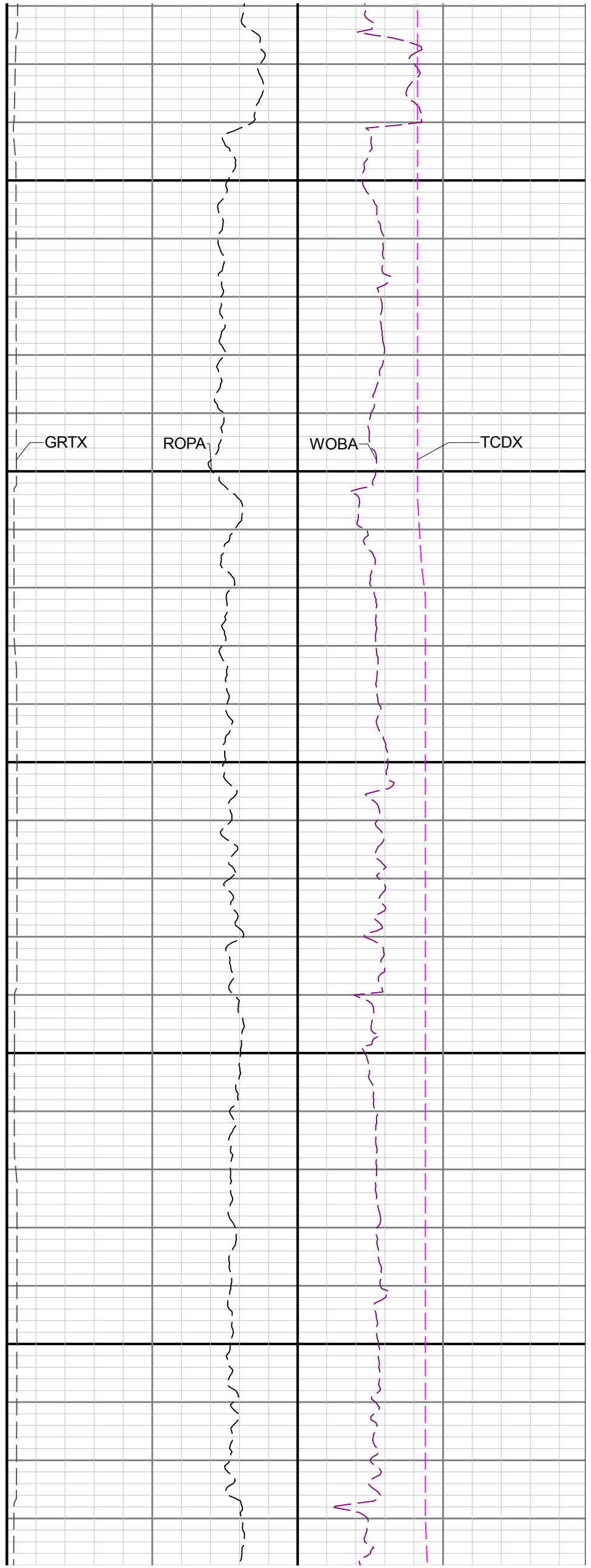
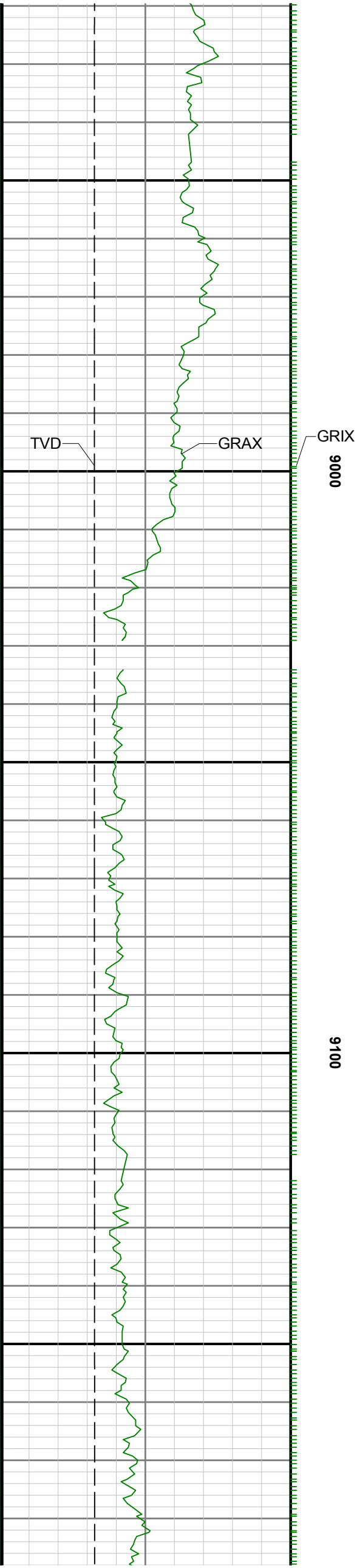


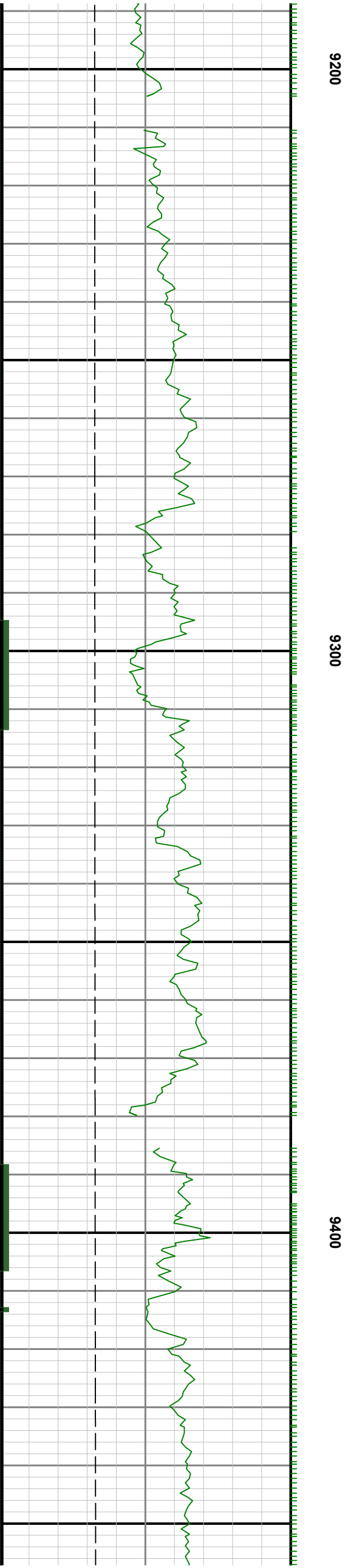
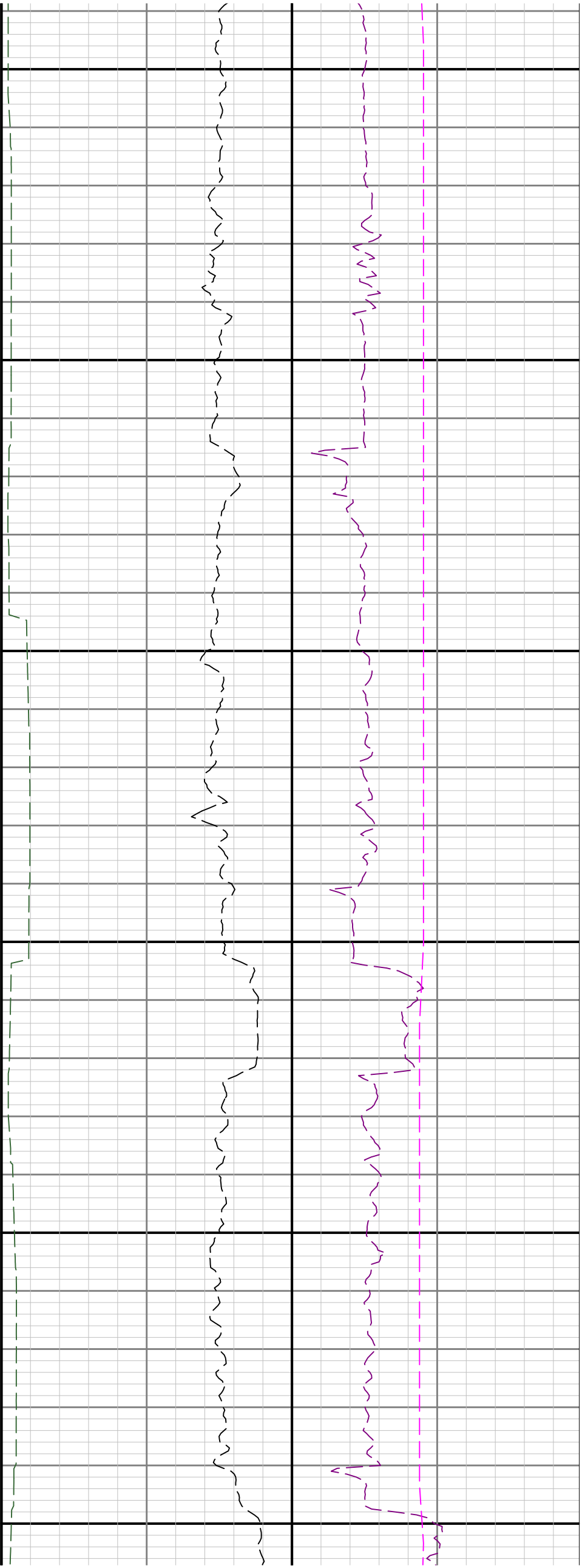


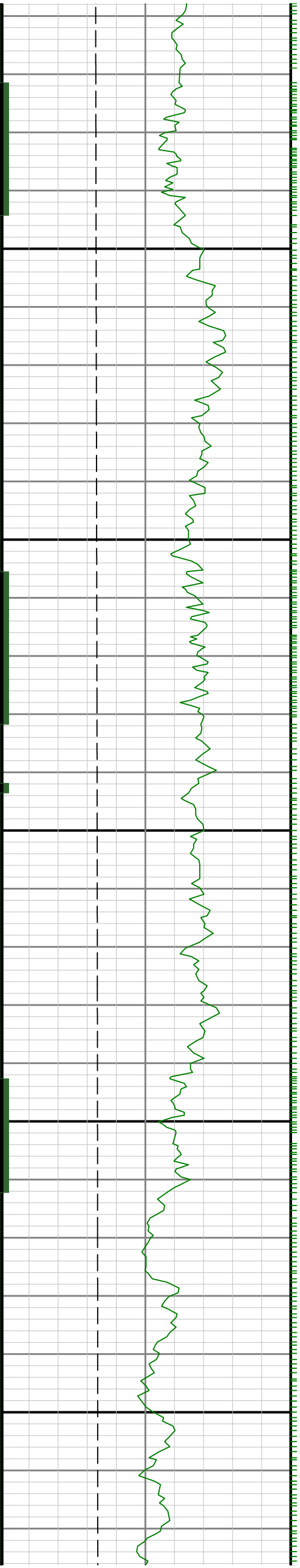








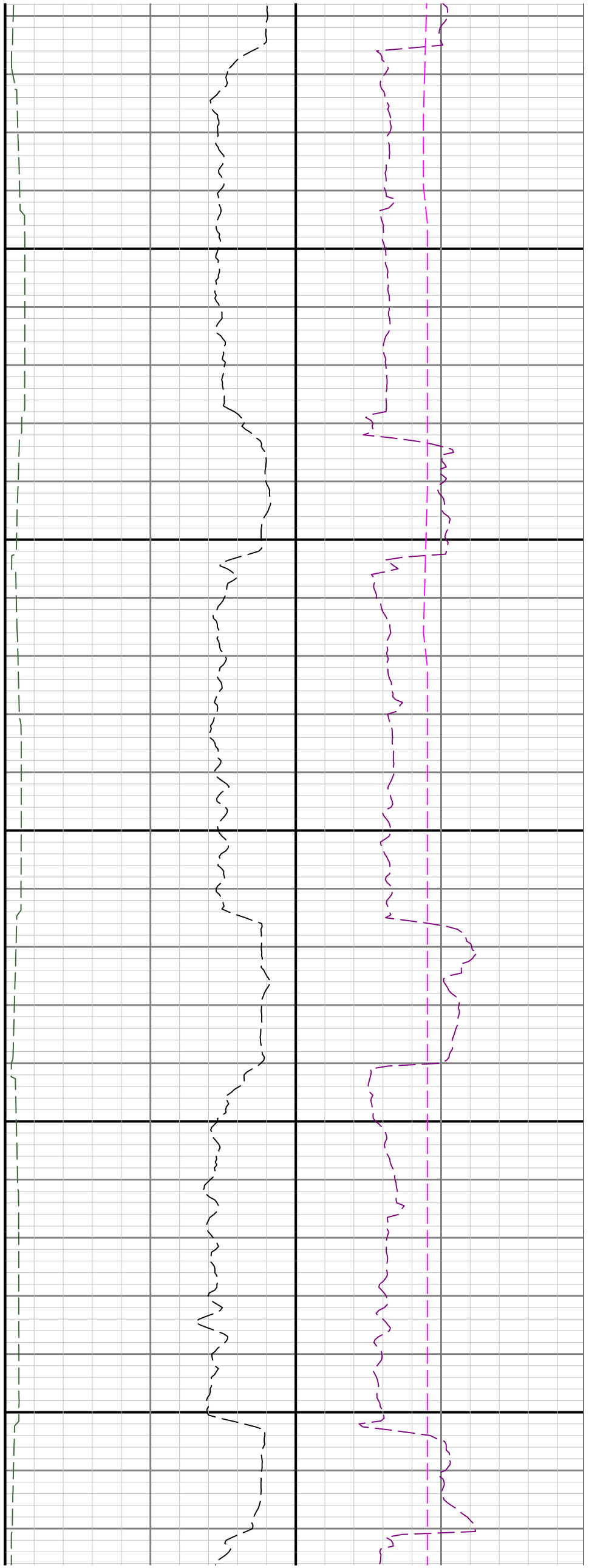


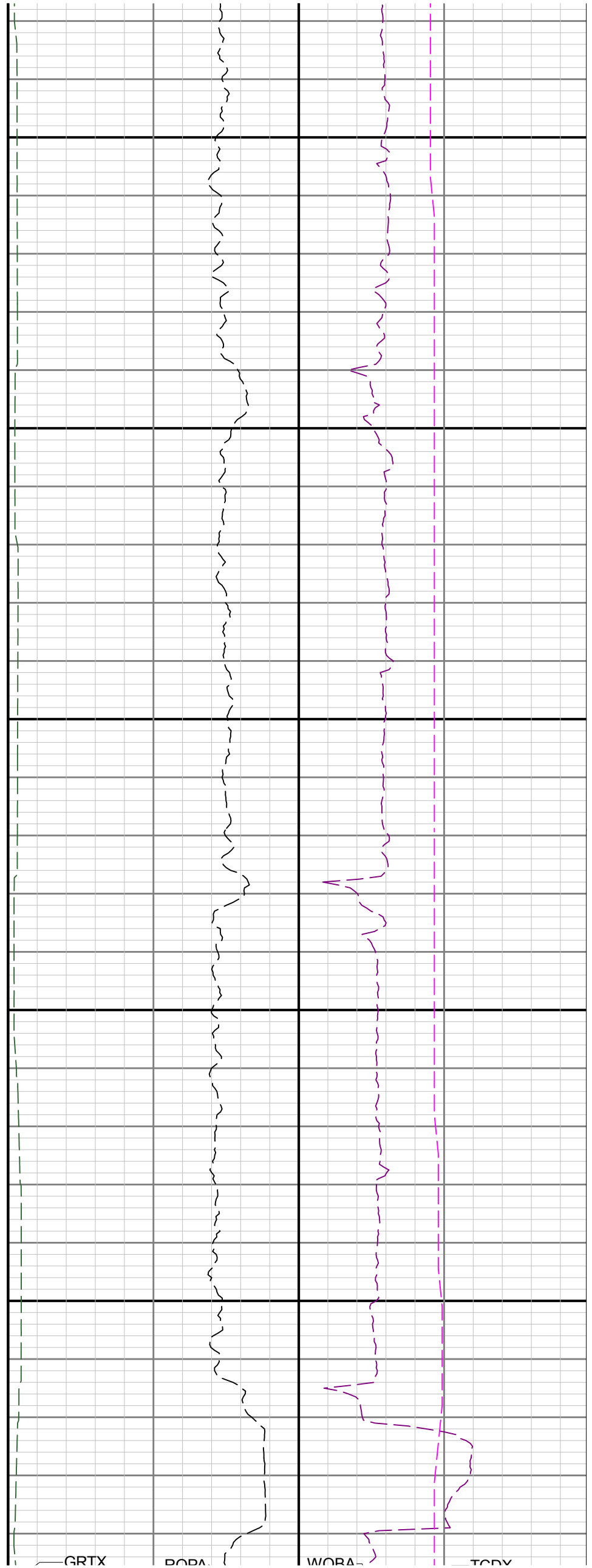
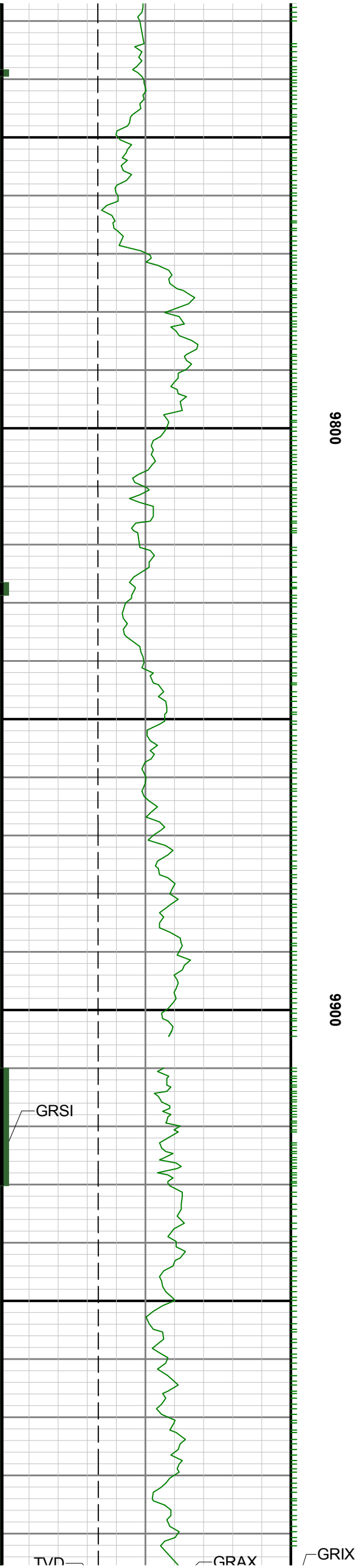


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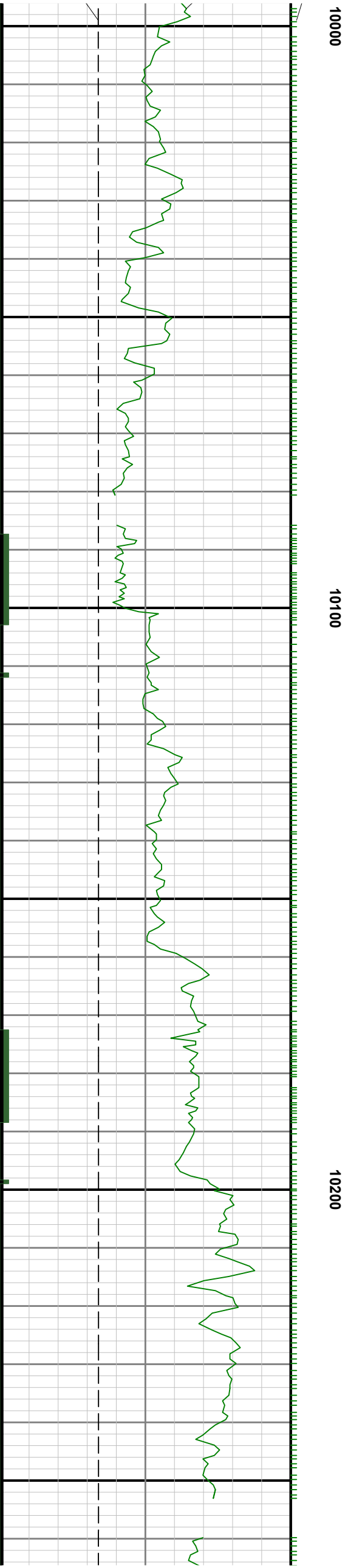
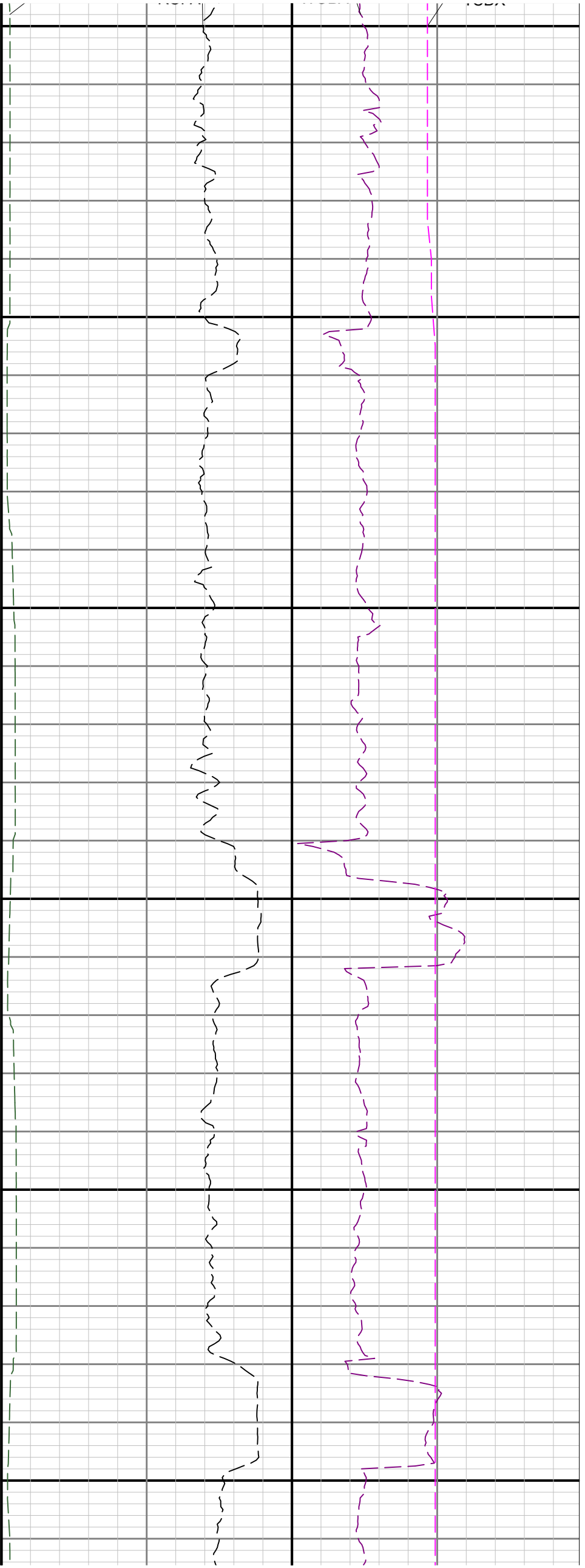
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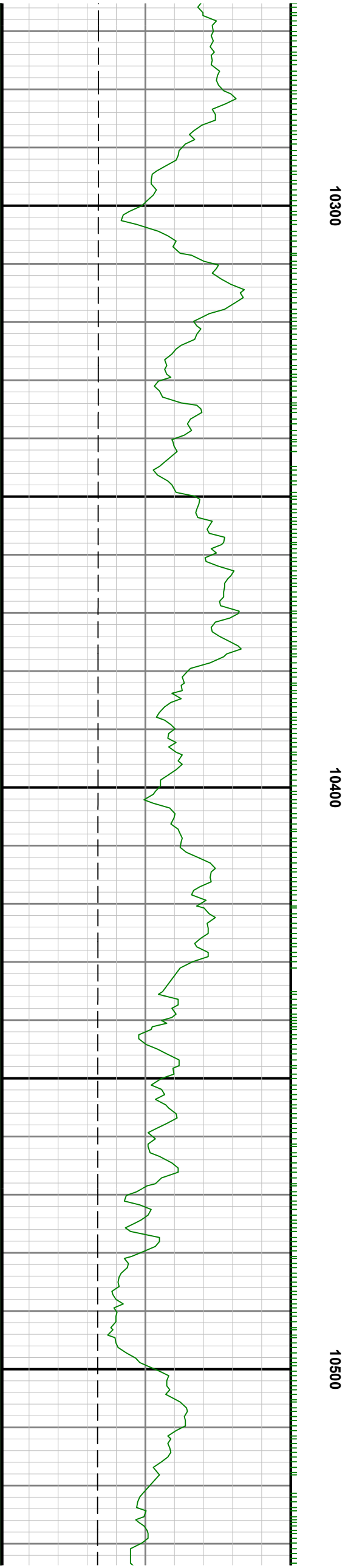
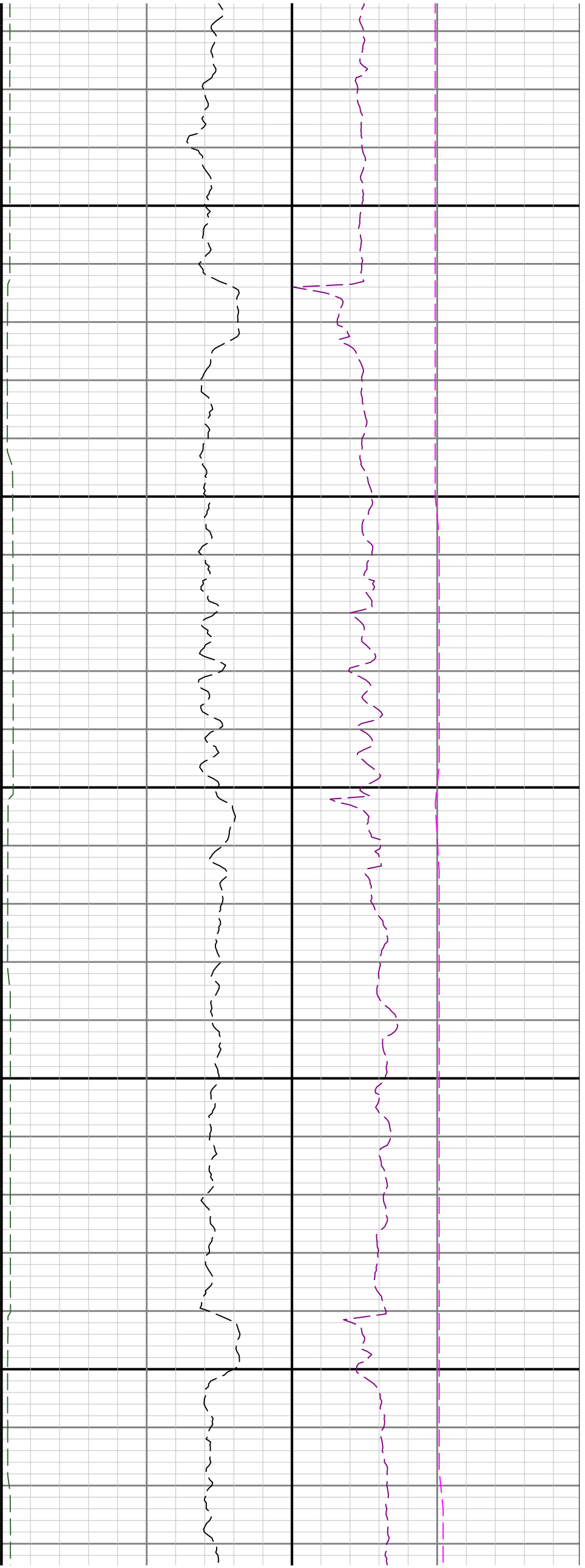
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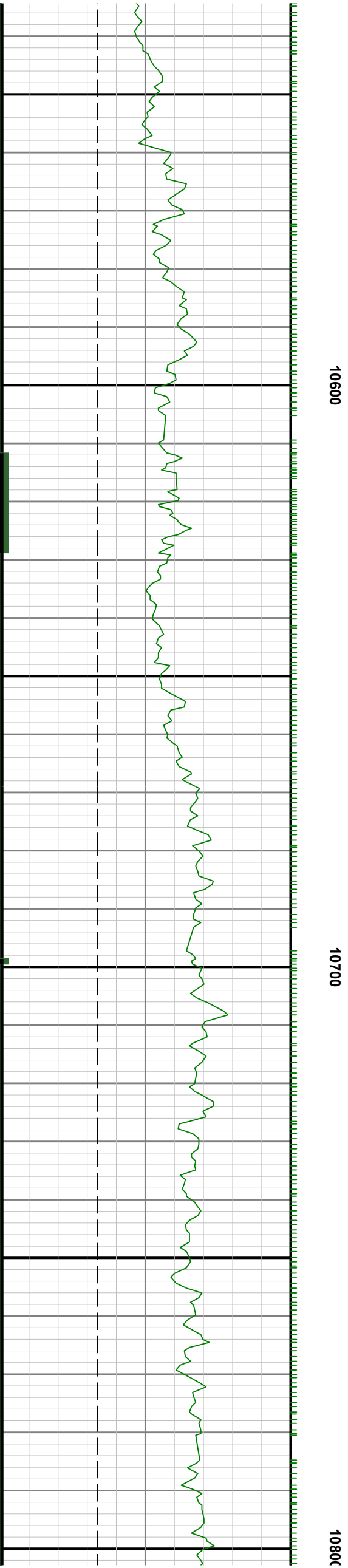
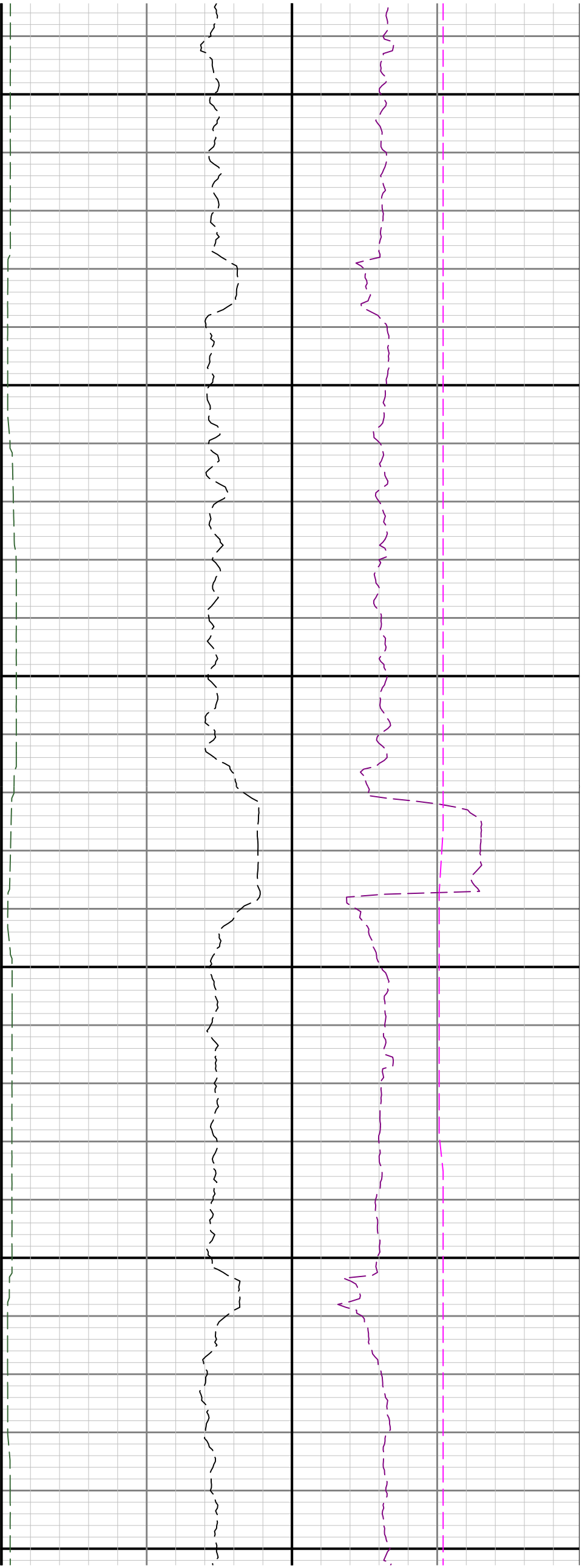


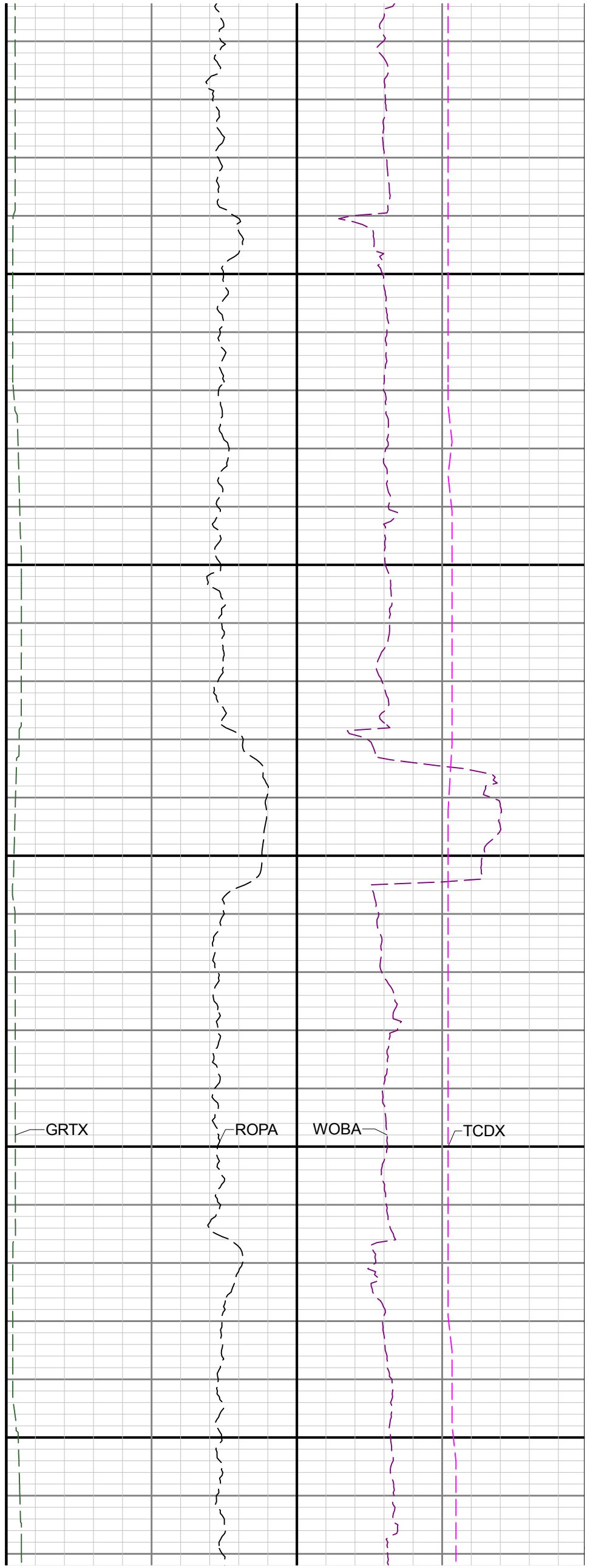
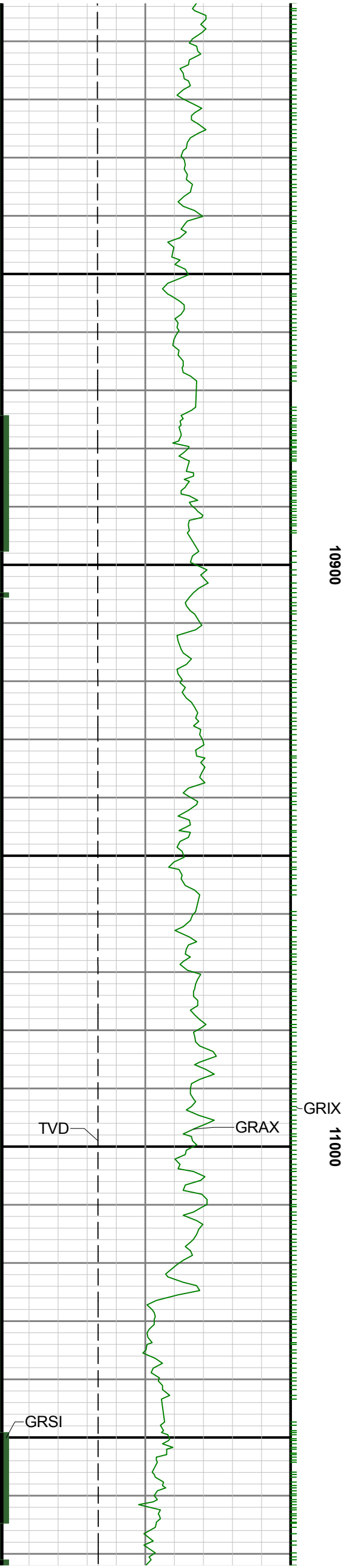


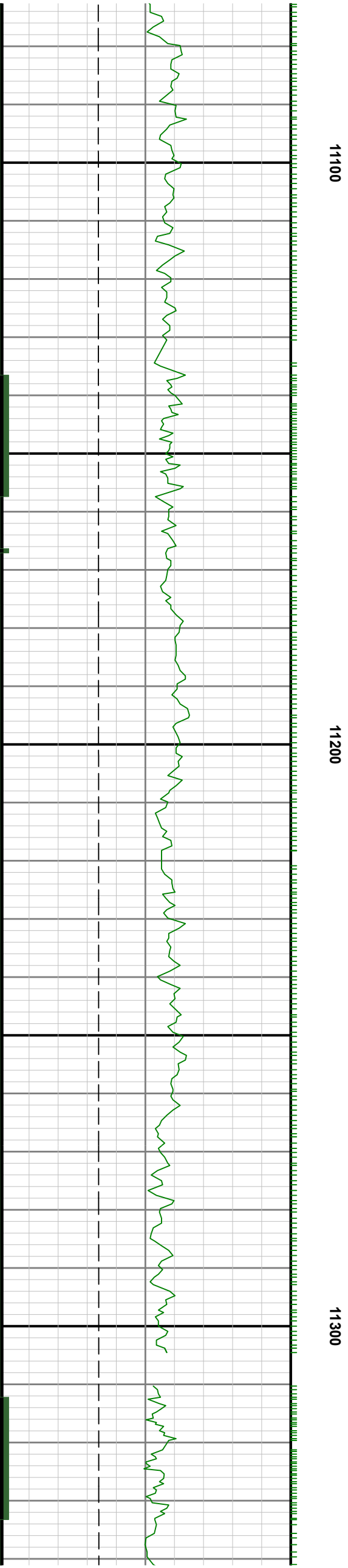
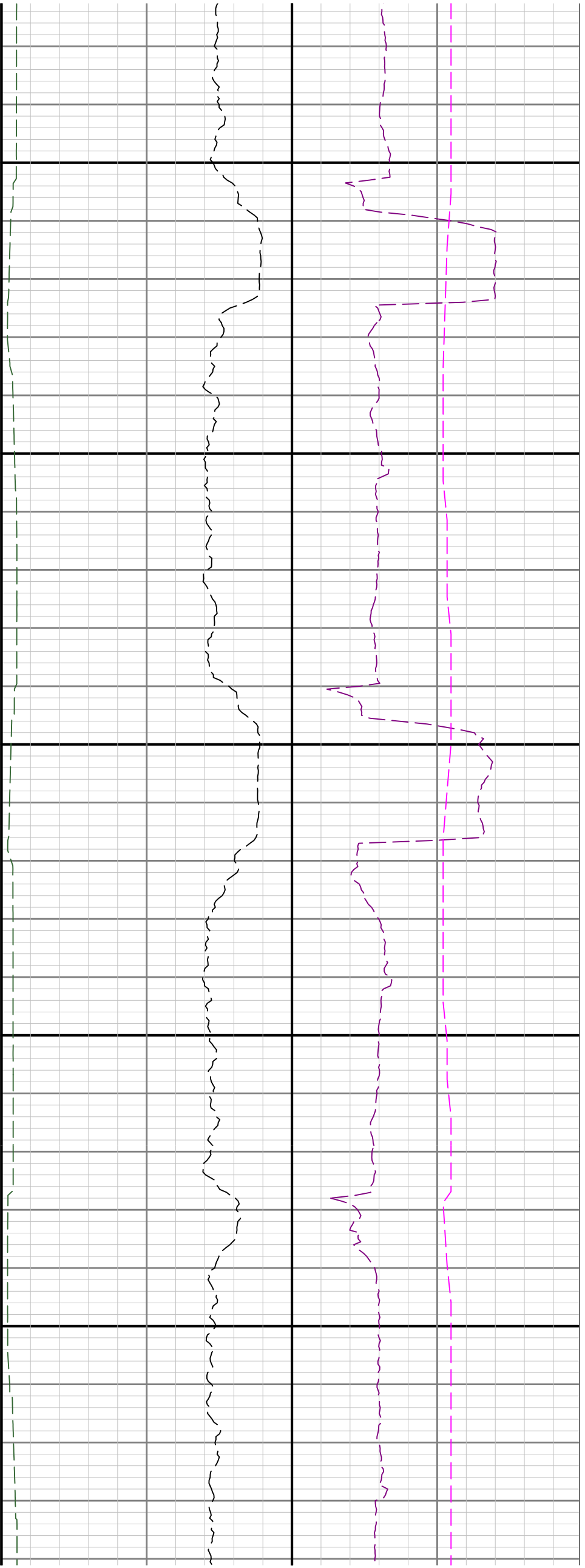


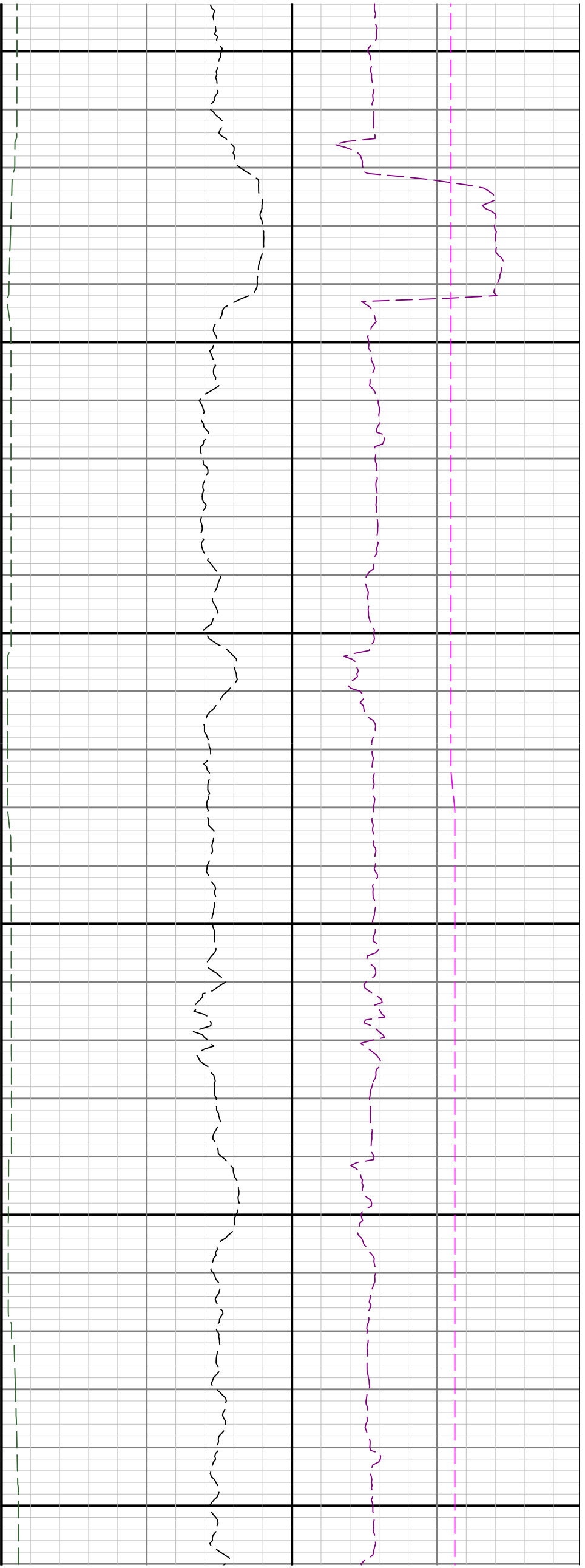








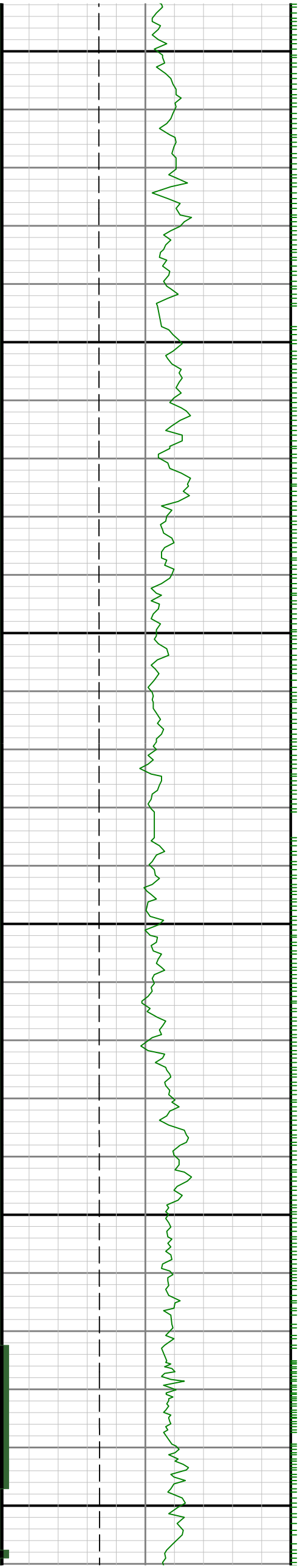


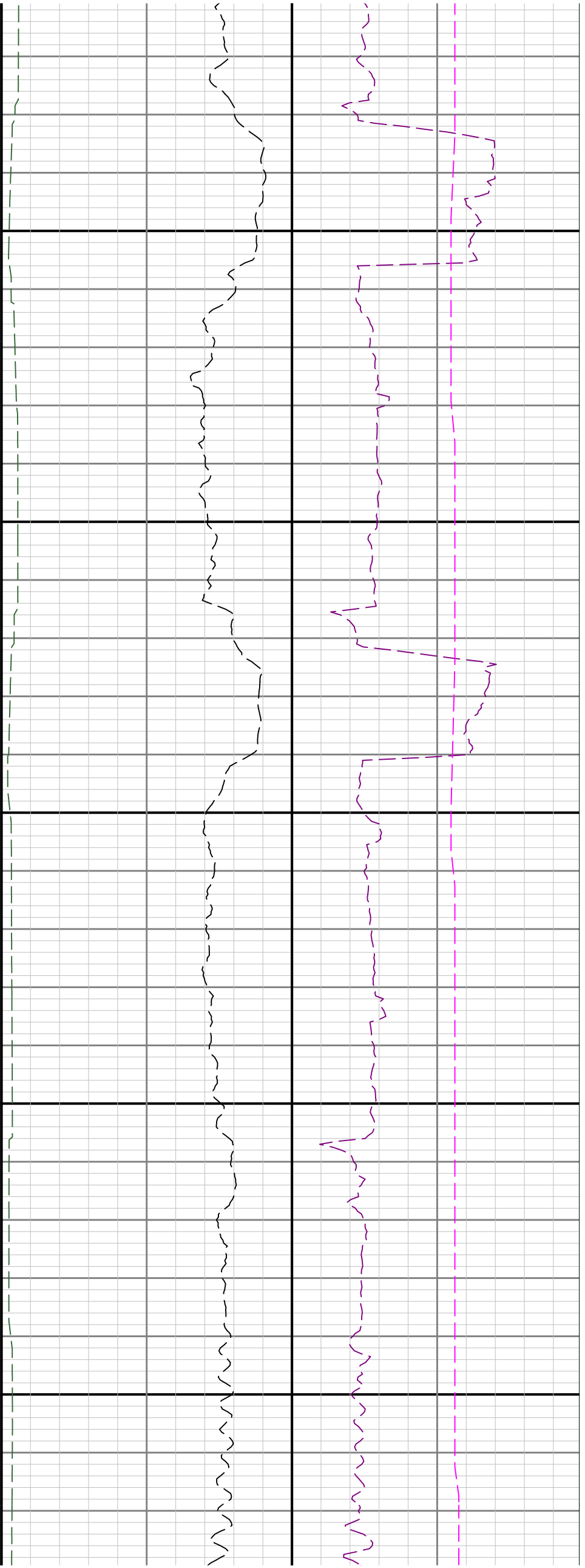


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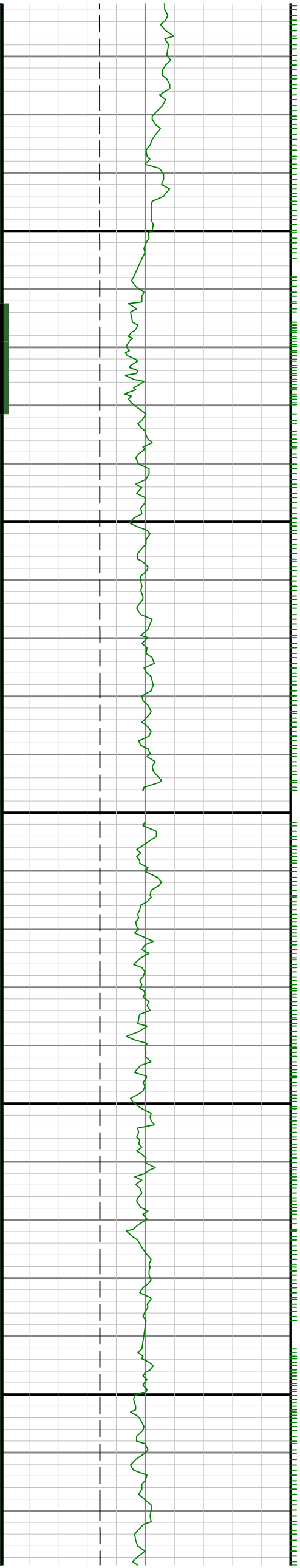
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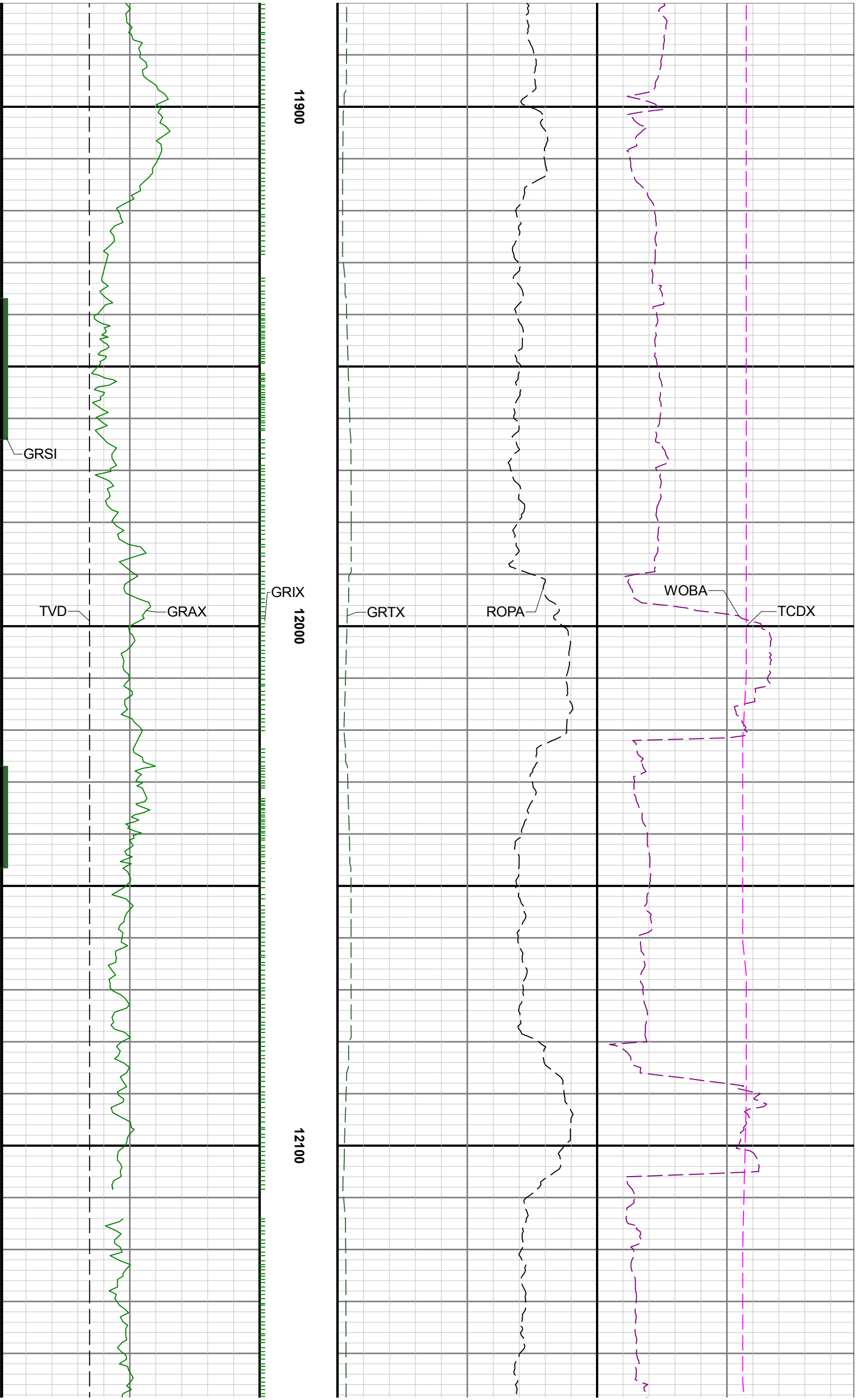




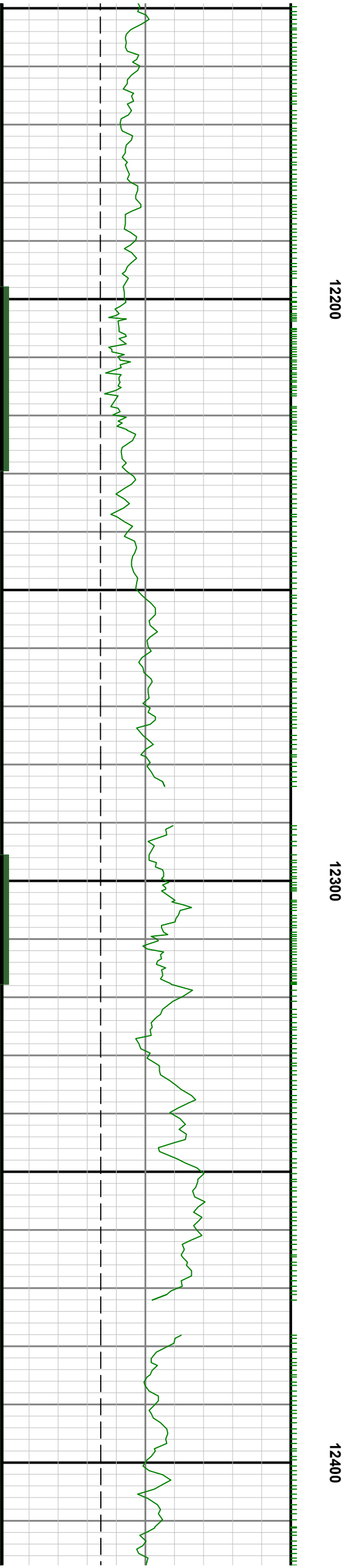
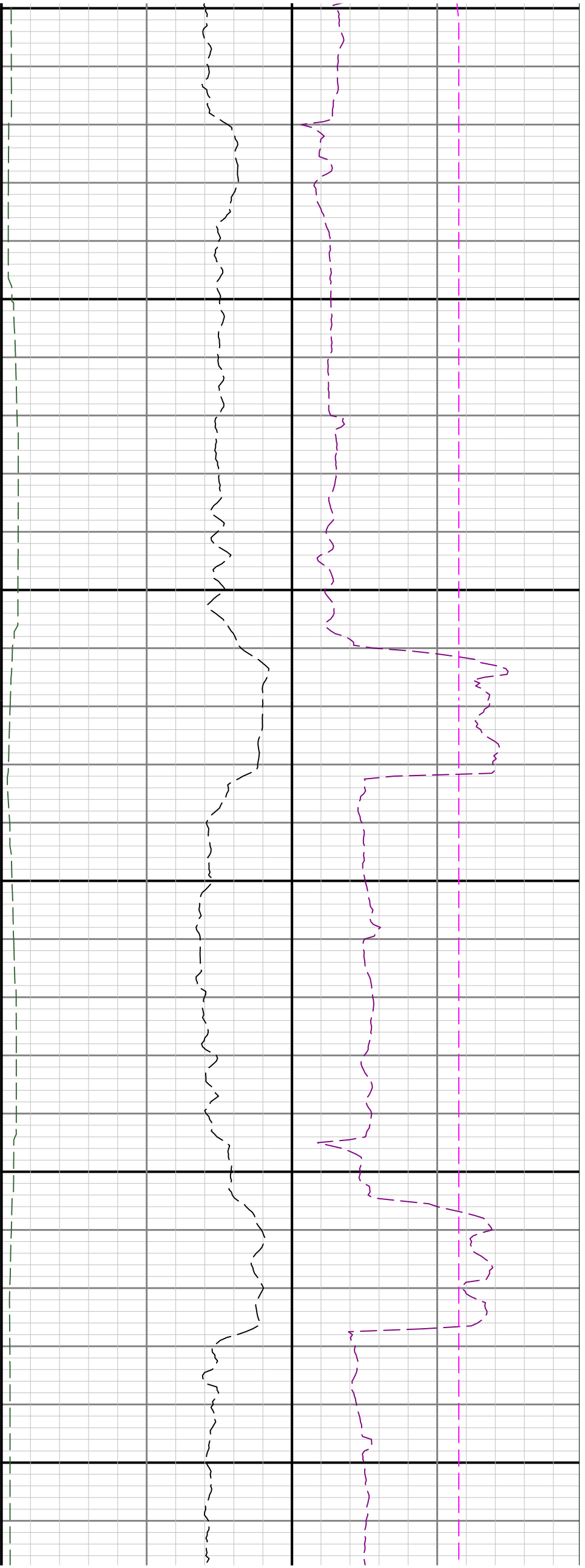
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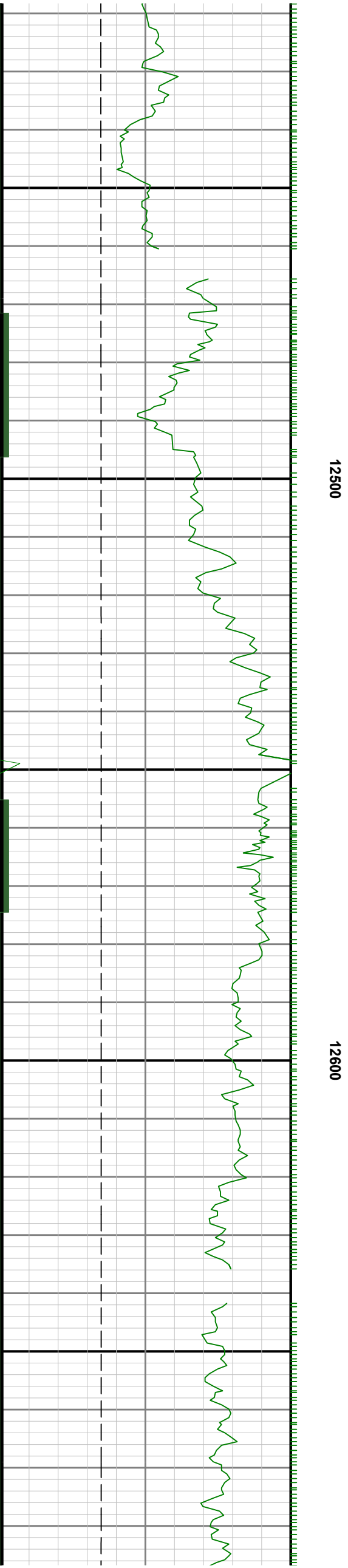
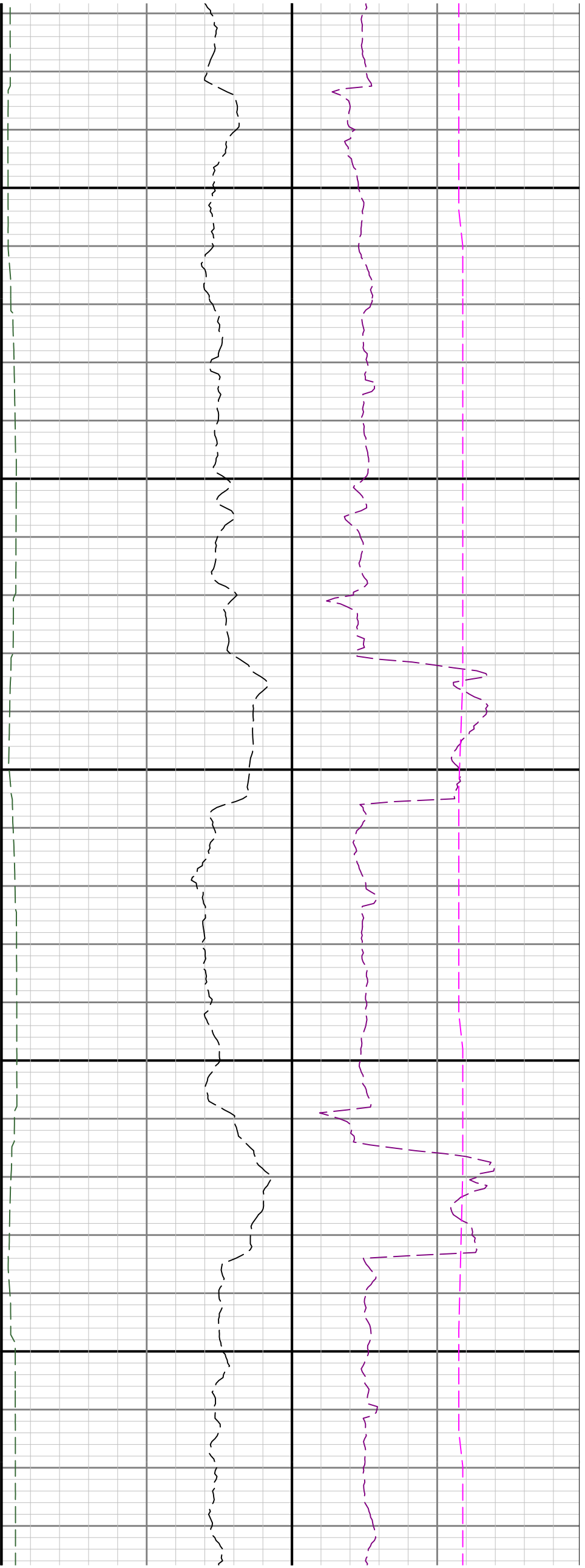
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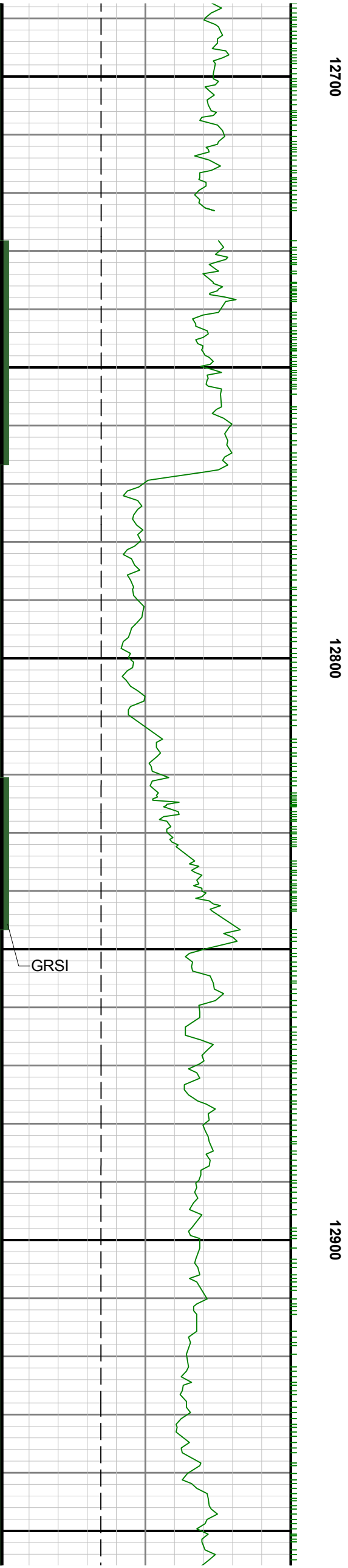
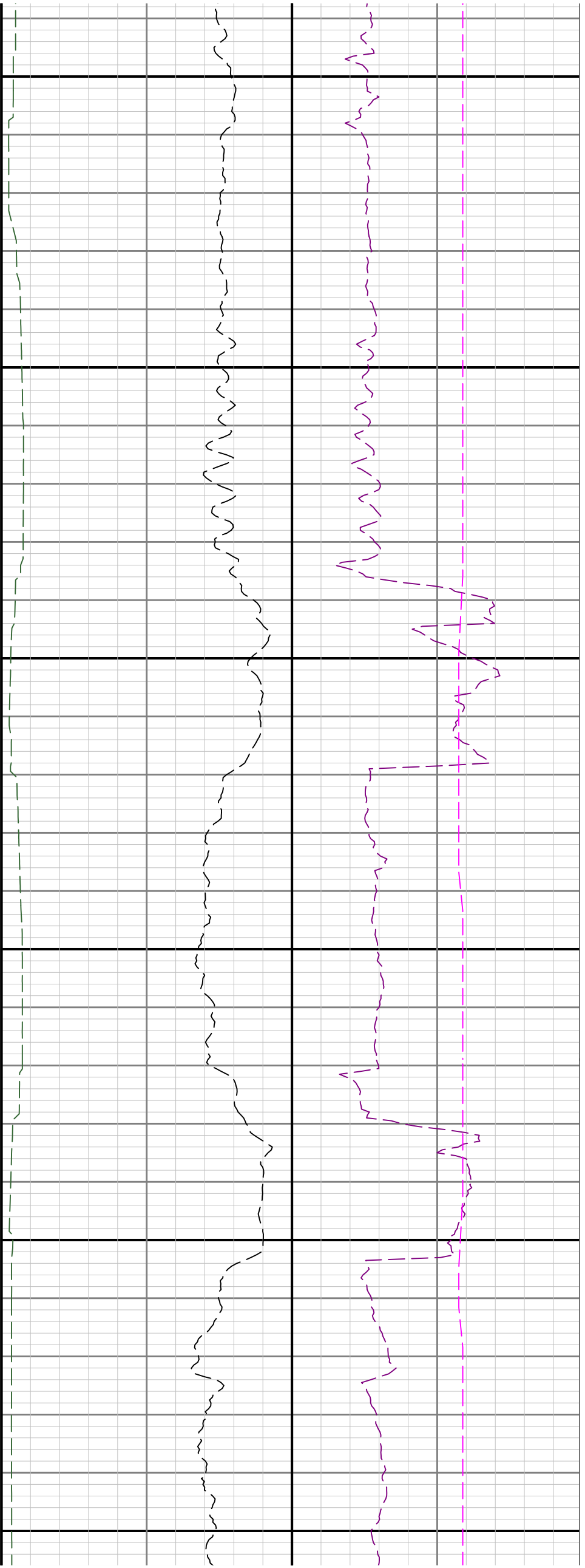


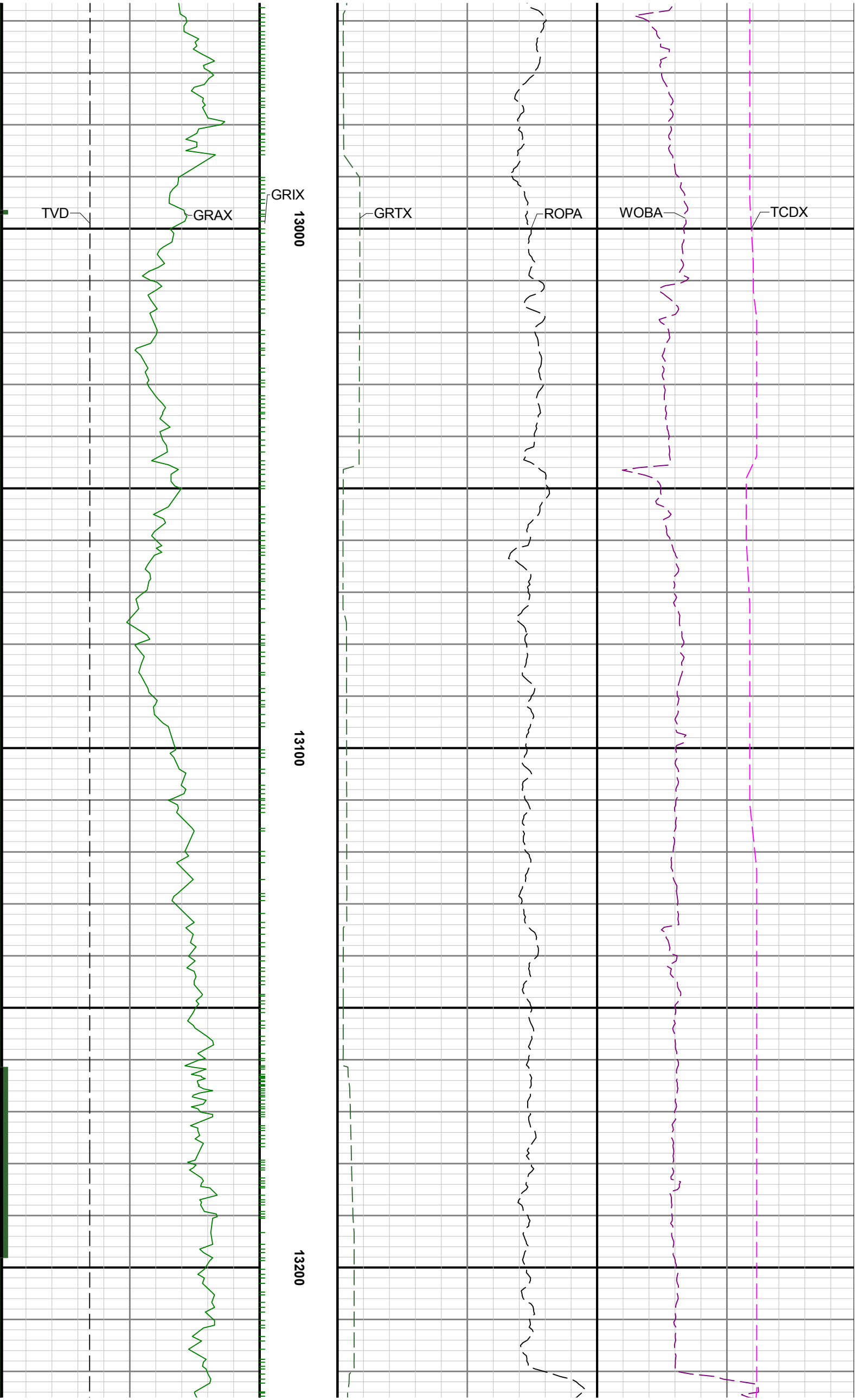


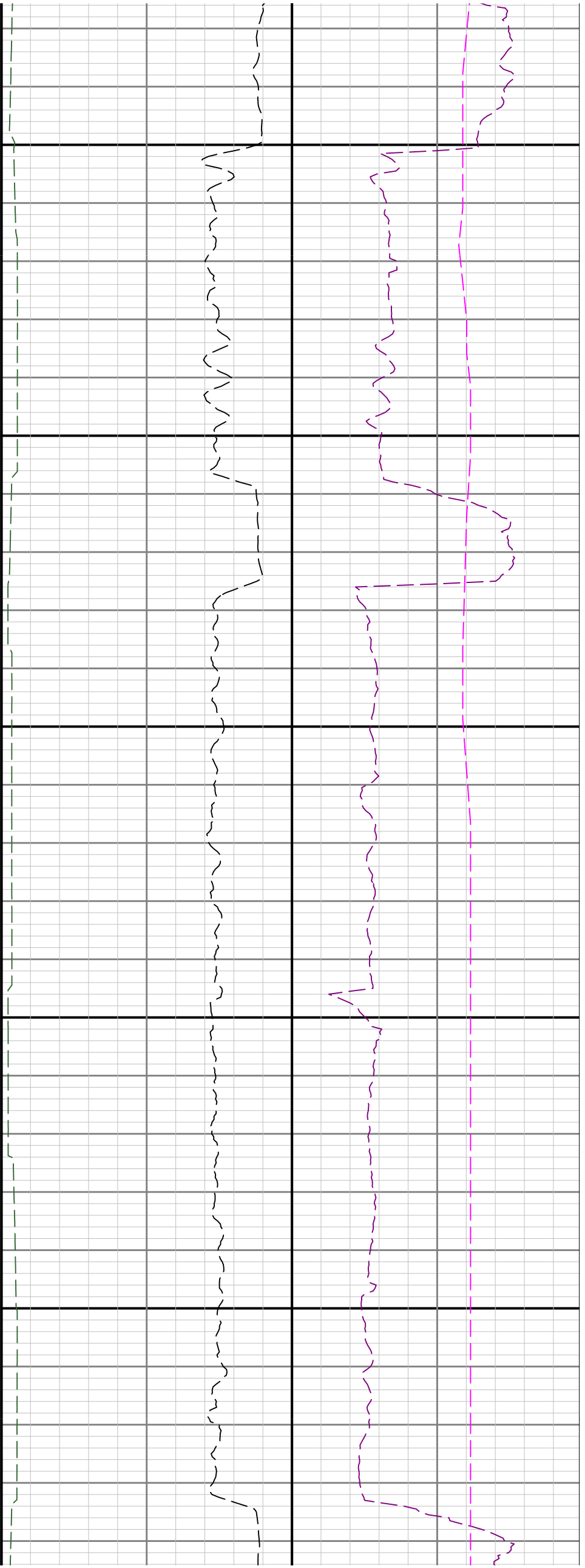






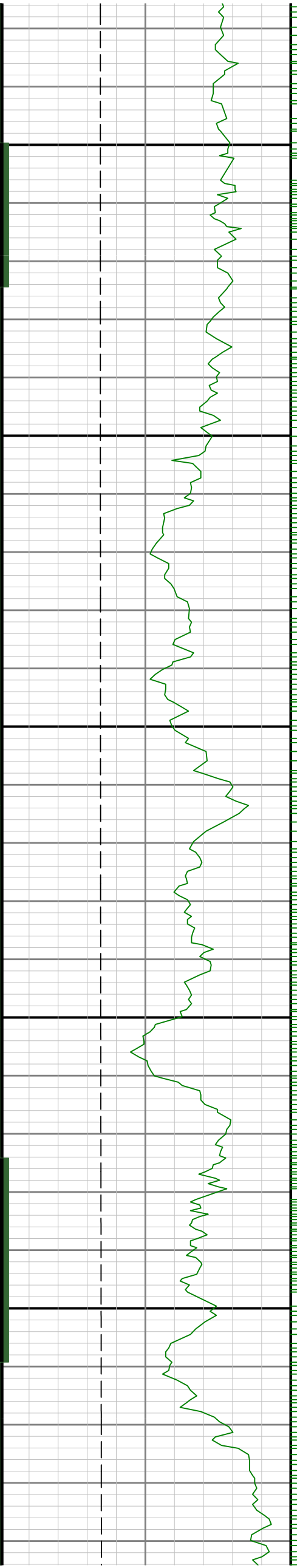


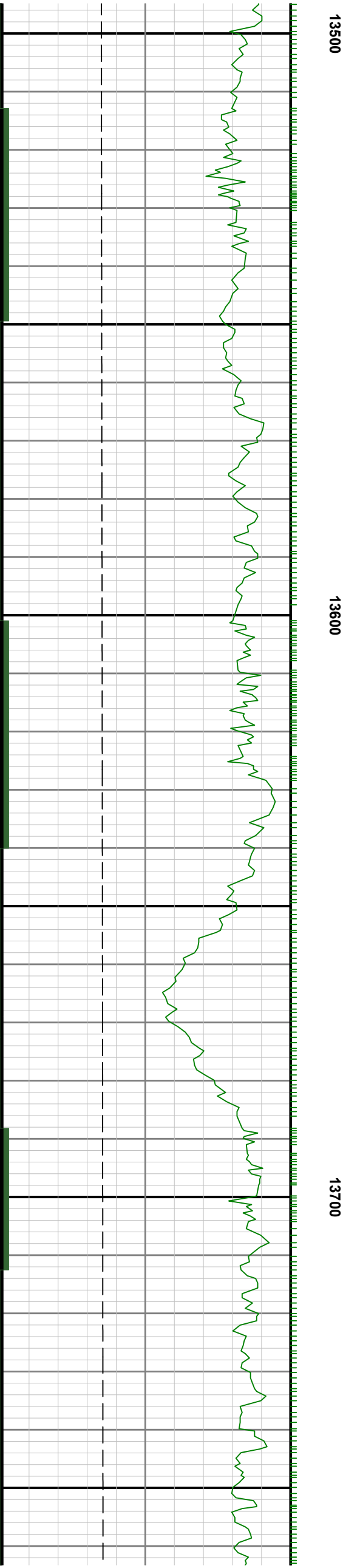
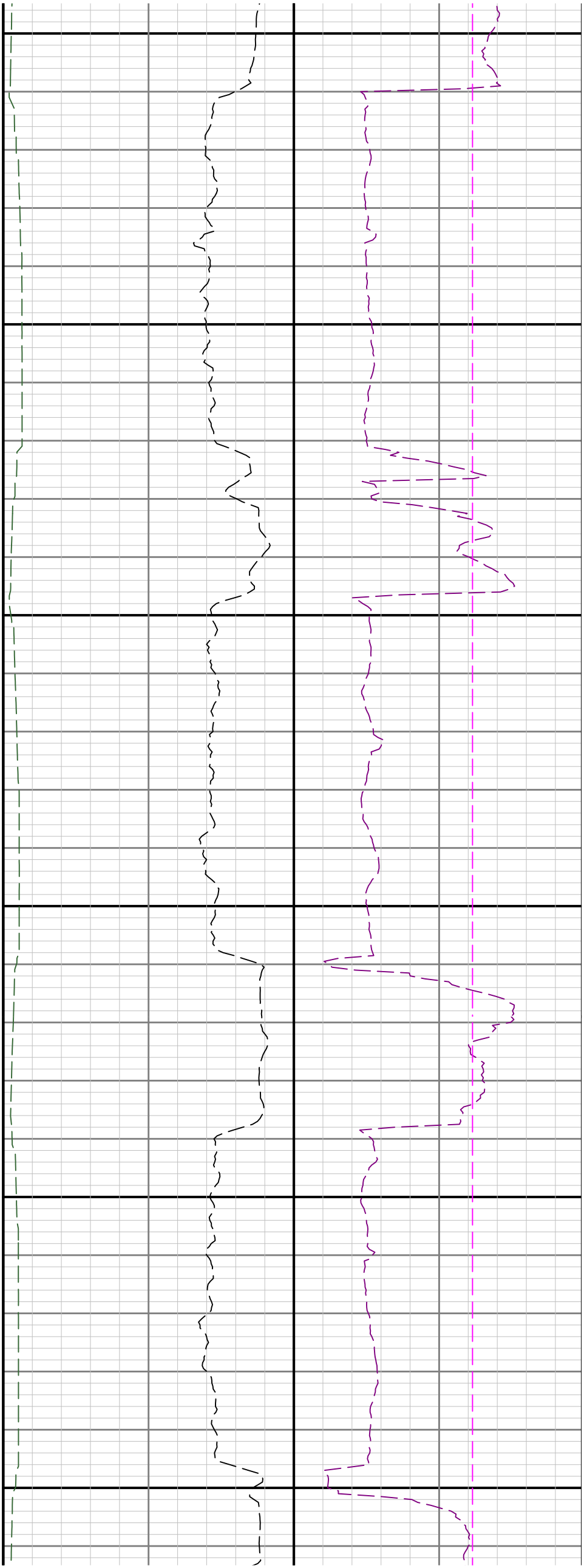


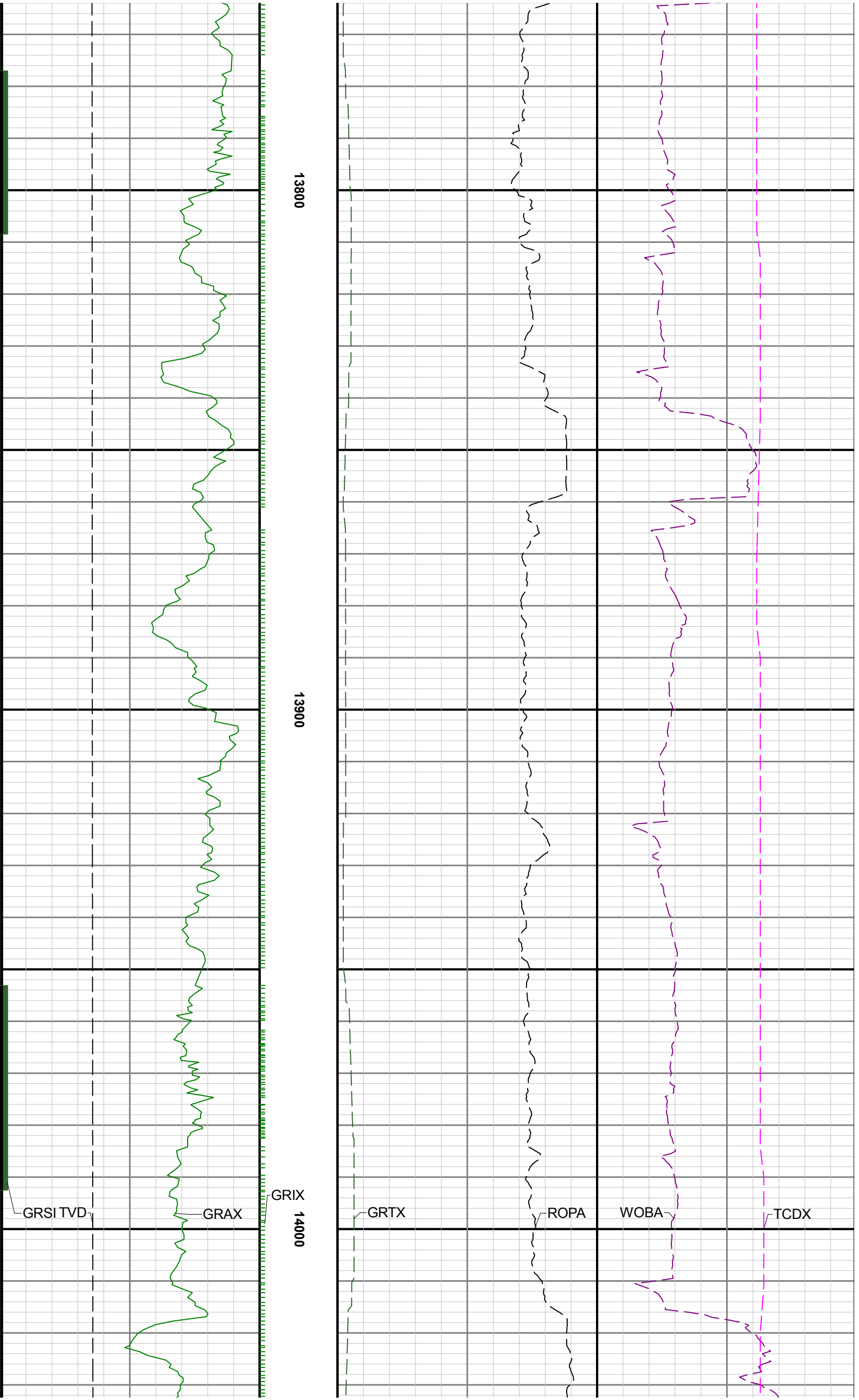


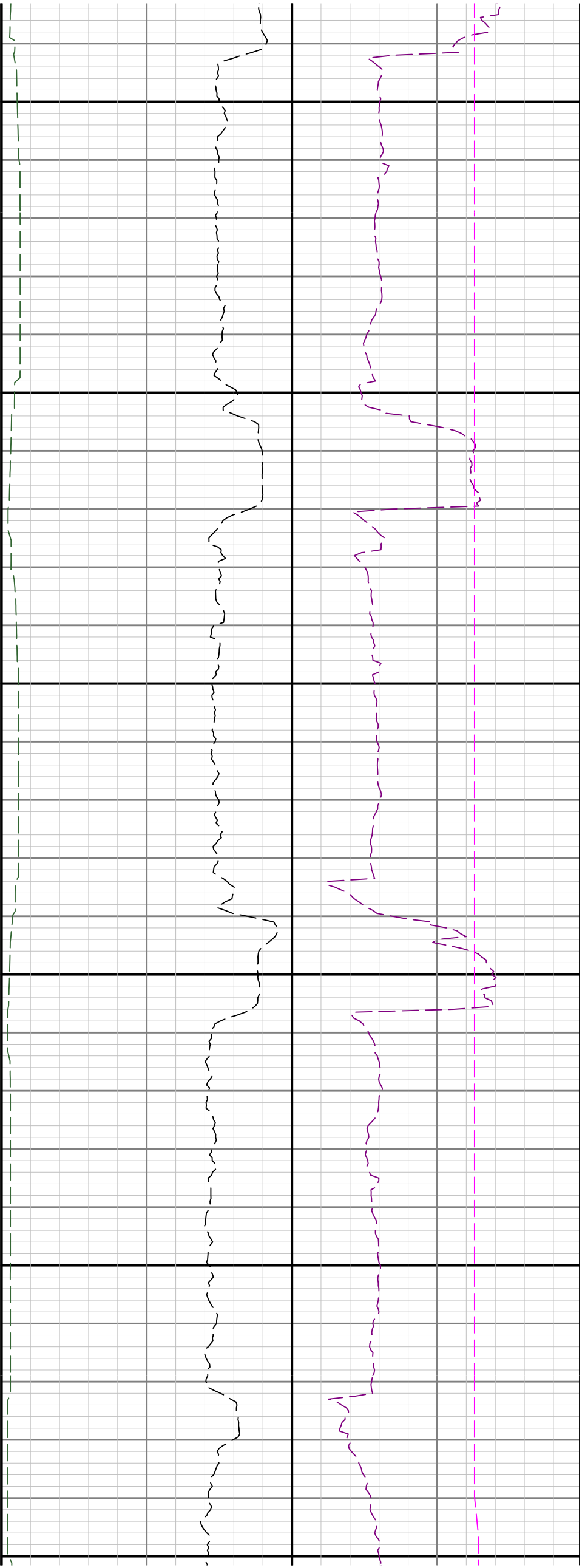
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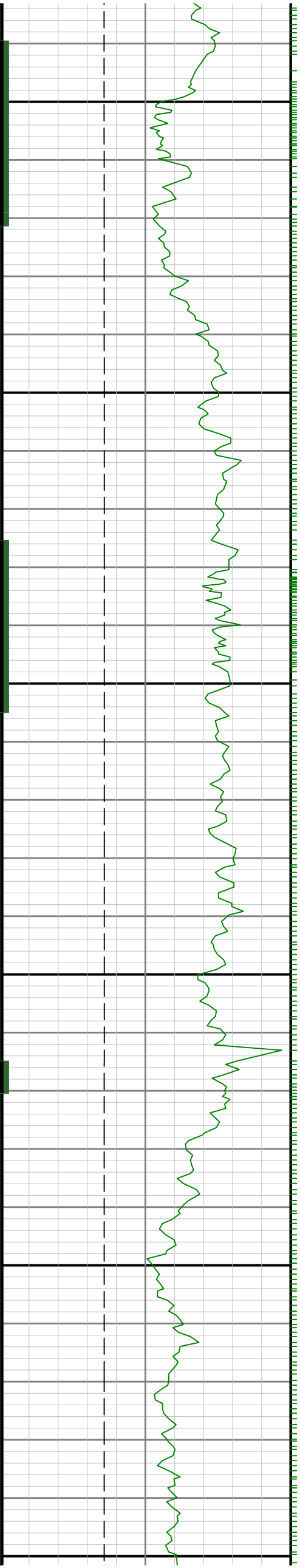




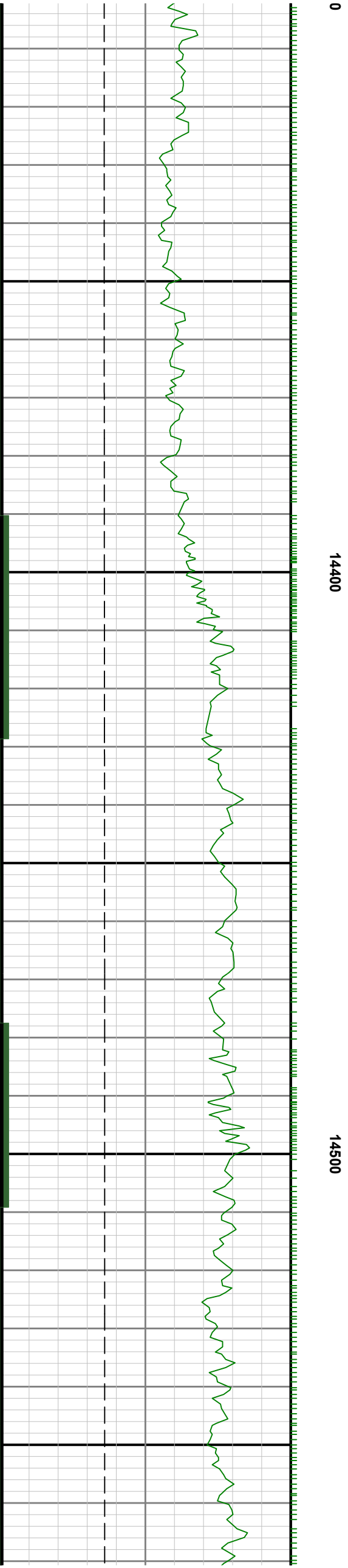
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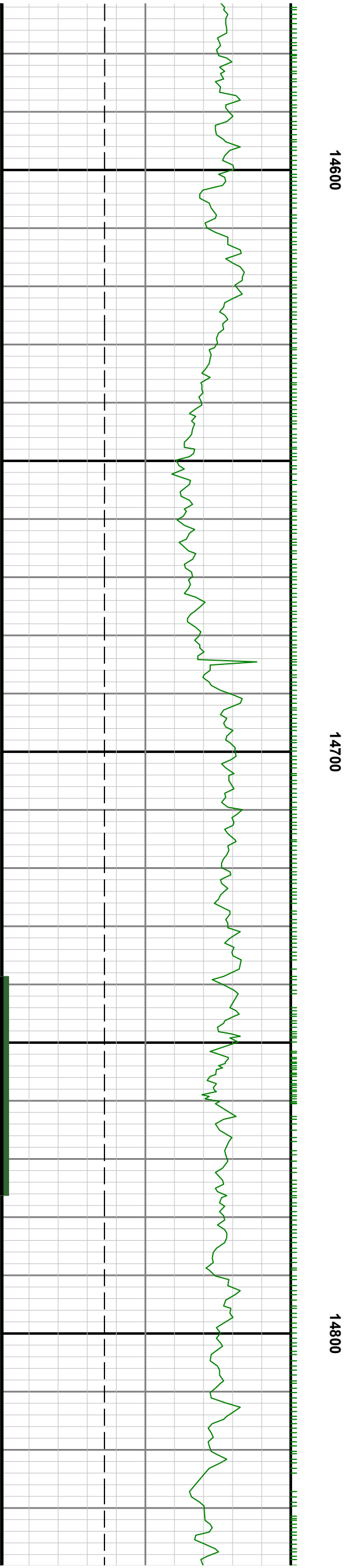
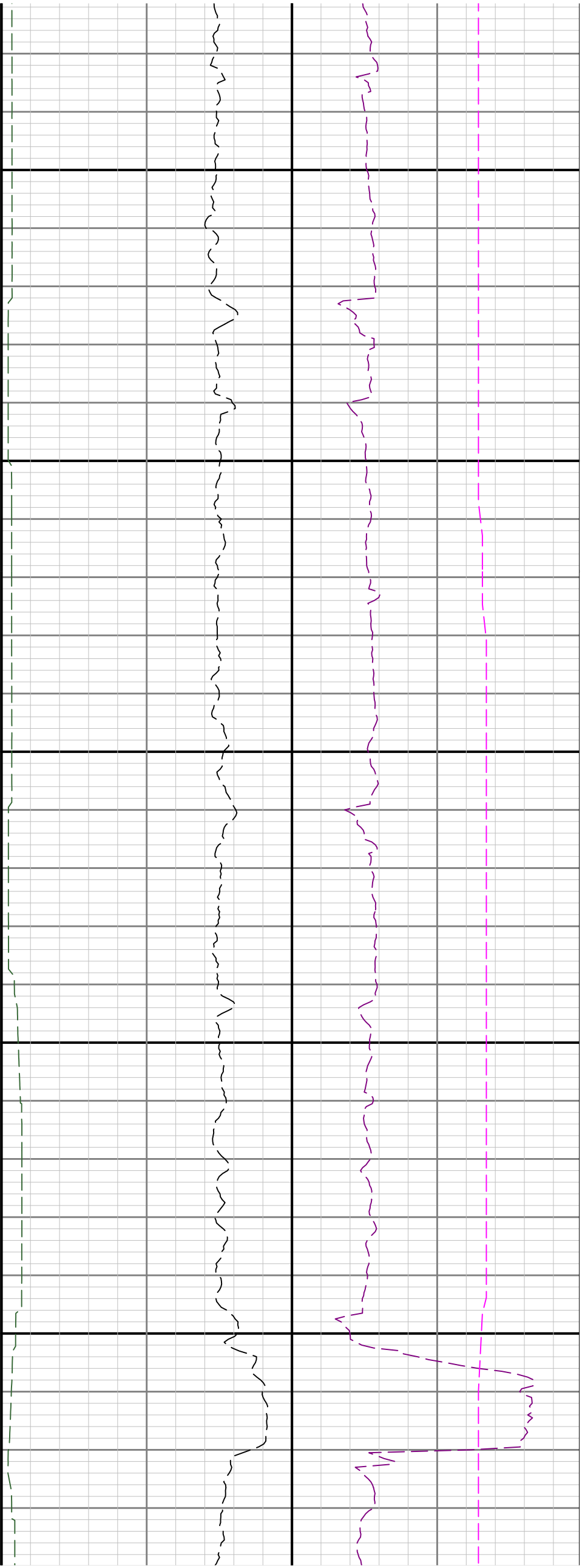
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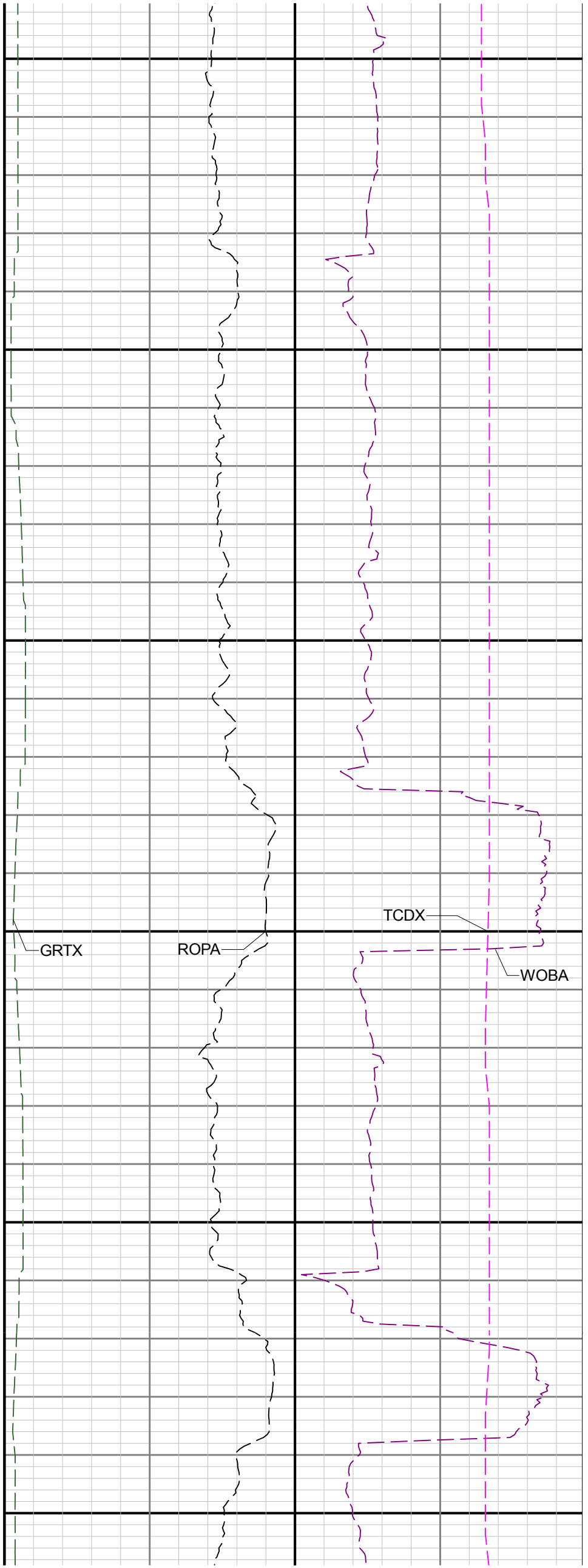
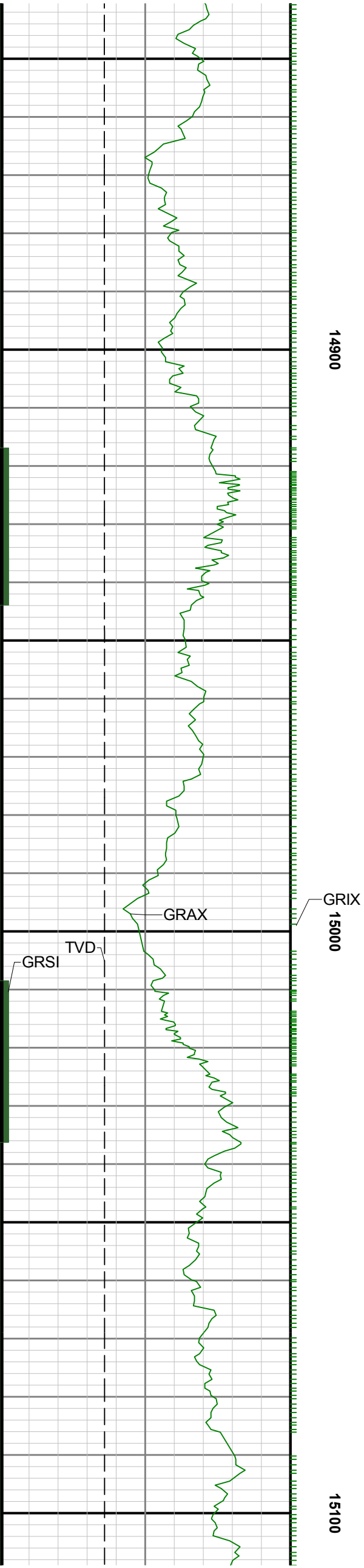
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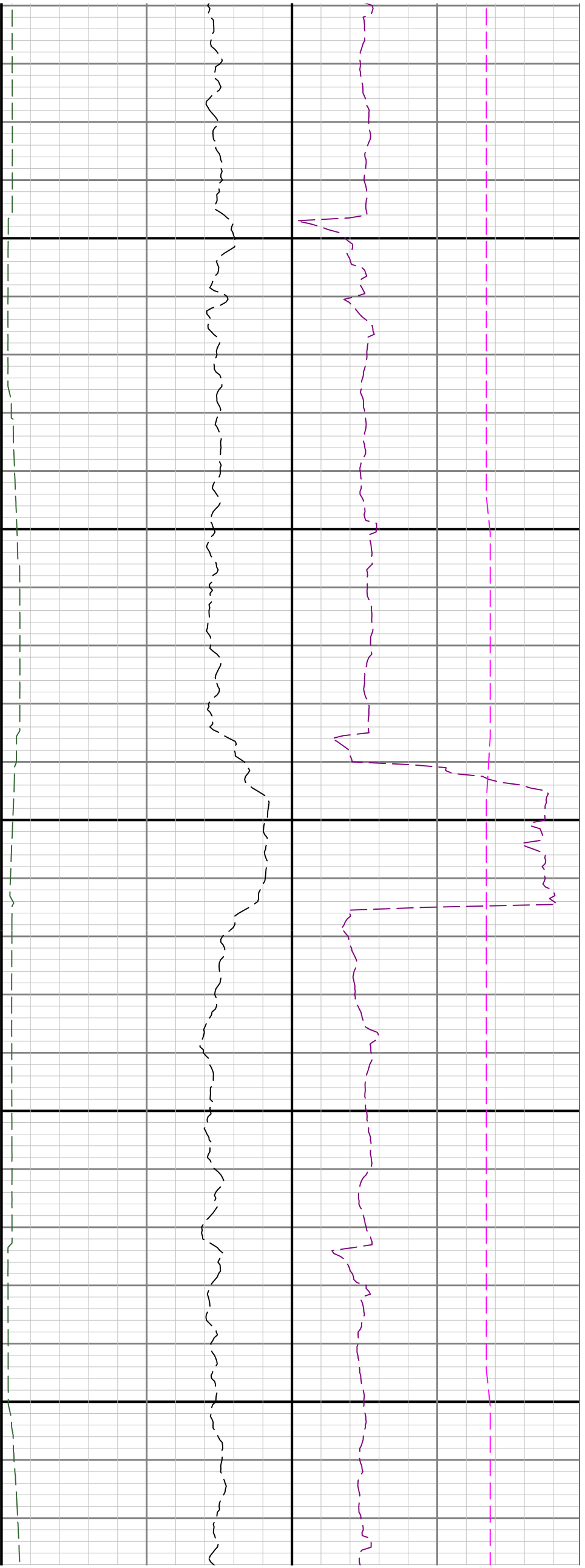






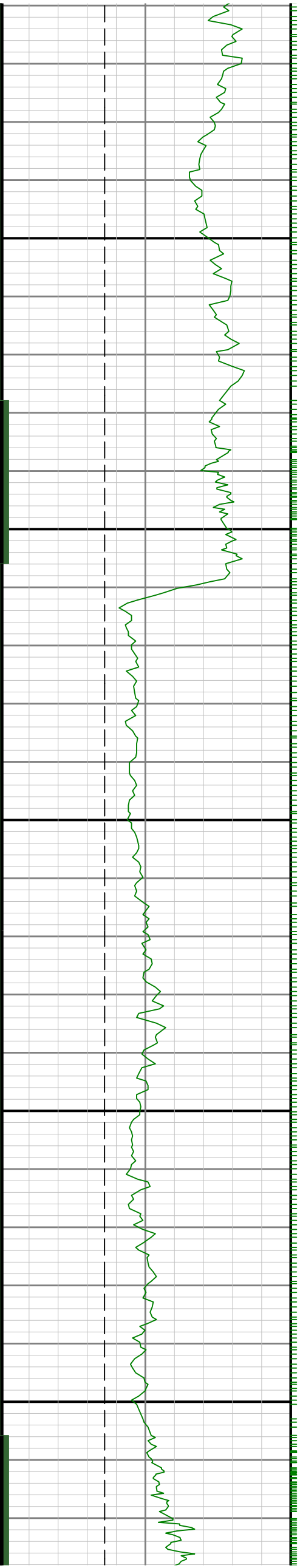


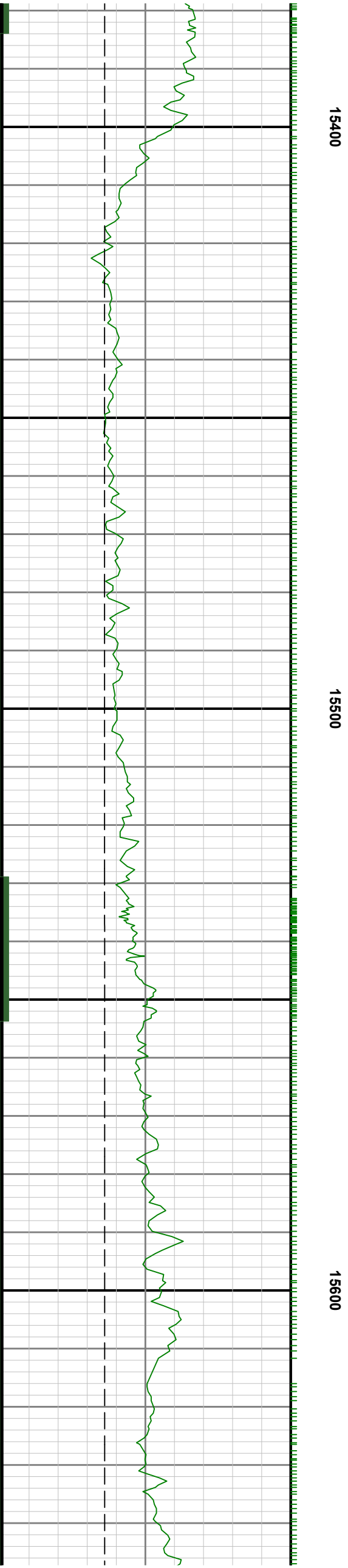
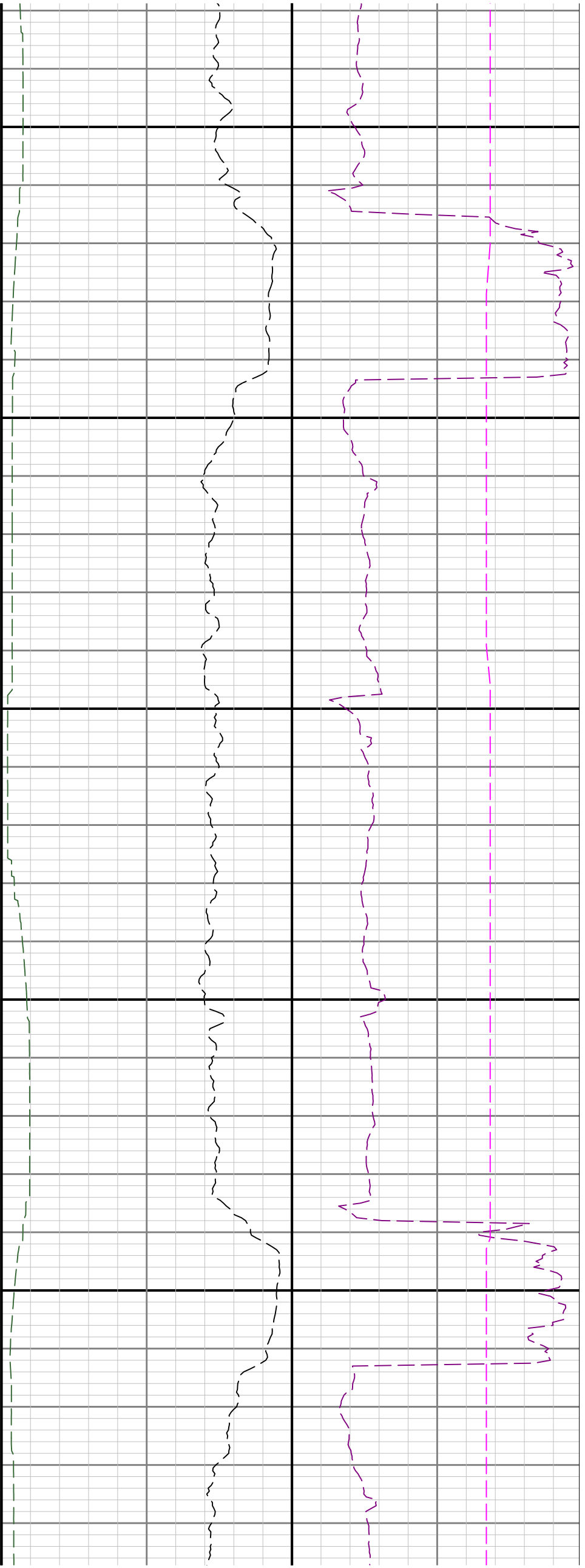


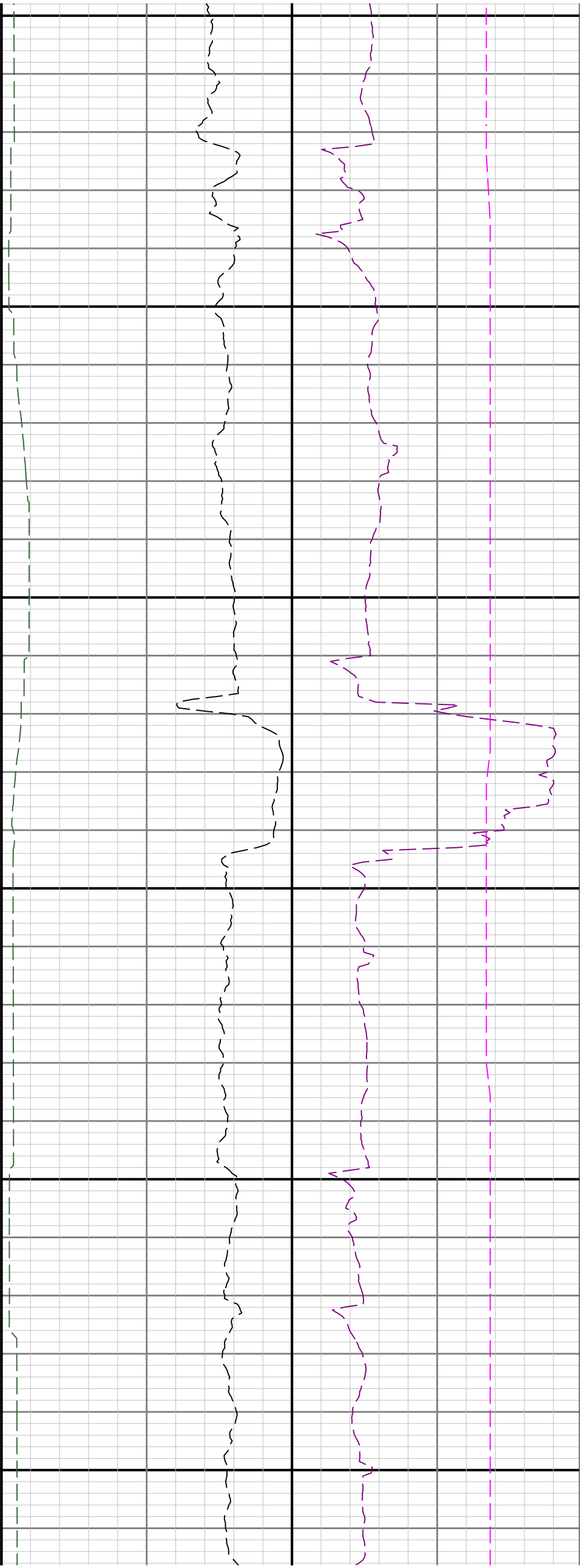


15200

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15700

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