



LWD MEMORY LOG

Gamma Ray

Scale:	Company: Great Western Operating Company LLC																		
1:240	Well: RIO LC 12-368HN																		
Measured Depth	Field:	Adams County				Country: United States													
Depth Reference:	County:	Adams				Country: United States													
Driller's Depth	State:	Colorado																	
Status:	Surface Location:	Other Services:																	
Final Print	Latitude:	39° 59' 58.333" N																	
API No:	Longitude:	104° 56' 23.215" W																	
Job ID:	SEC:	6	TWN:	1S	RGE:	67W	Directional												
Permanent Datum (P.D.):	Mean Sea Level	Elevation:	0.00 ft	Elev. KB:	N/A														
Log Measured From:	Rig Floor	Above P.D.:	5088.40 ft	Elev. DF:	5088.40 ft														
				Elev. GL:	5068.40 ft														
Dates	Interval	Magnetic Field Reference																	
From: 2019-08-28	Drilled (ft)	Logged (ft)	Azi Reference North:	True	Dip Angle: (deg)	66.43													
To: 2019-08-31	Top: 1778.00	Top: 1778.00	Total Magnetic Field Strength: (nT)			51891													
Spud: 2019-07-05	Bottom: 18047.00	Bottom: 18034.00	Mag to Reference North Correction: (deg)			8.23													
Borehole Record										Casing Record									
Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)													
13.500	20.00	1778.00	9.625	36.00	20.00	1778.00													
8.500	1778.00	18047.00																	
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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
						Top	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	8.500	PDC	4.00	AutoTrak Curve	1778.00	18034.00	1778.00	18047.00	2019-08-28 18:19	2019-08-31 17:00	66.92

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Alain Atemoh	2019-08-28	2019-09-01	Jairo Garcia	2019-08-28	2019-09-01			

Mud Properties Record

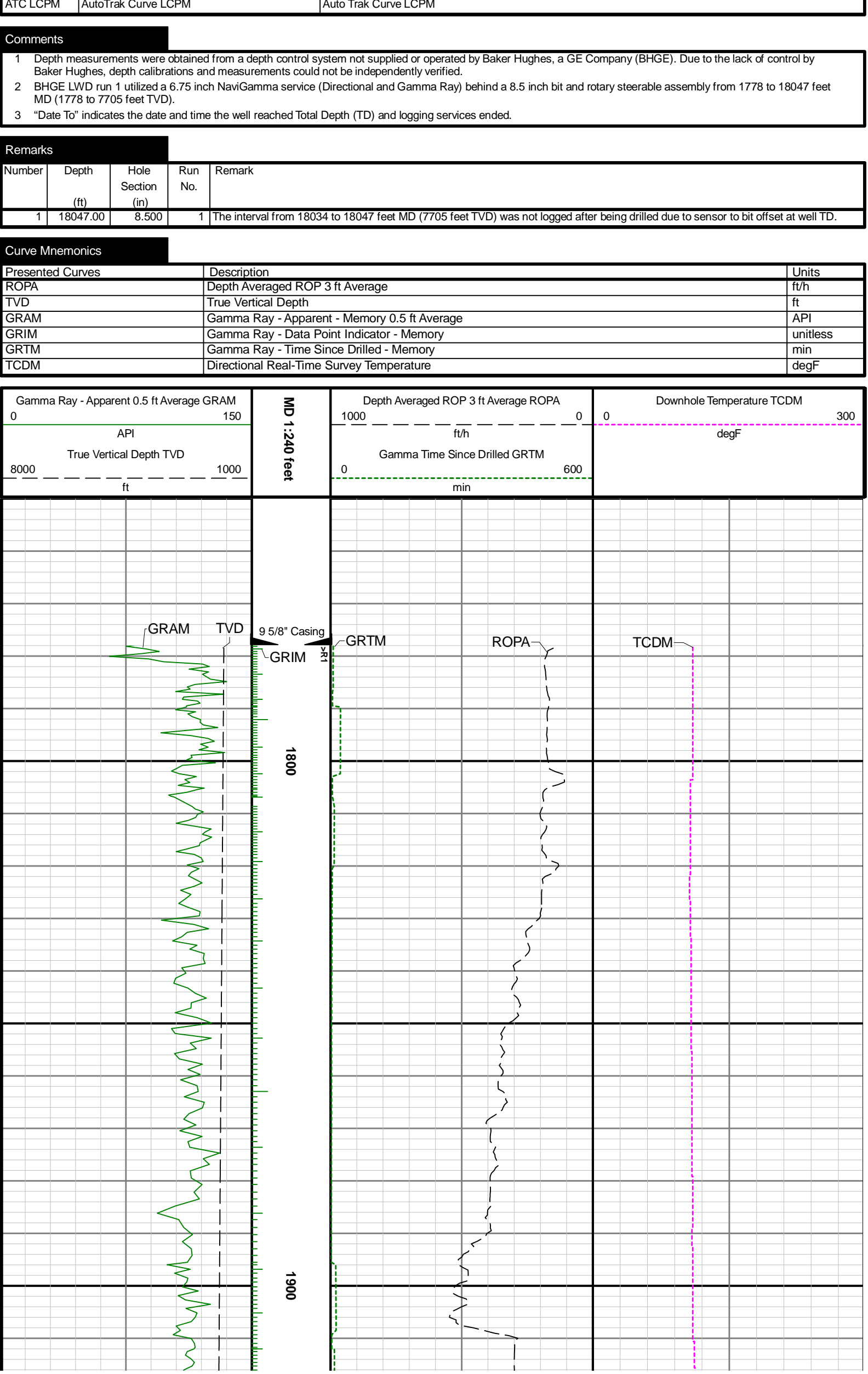
Date / Time	Run No.	Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2019-08-28 21:00	1	2202.93	Diesel-Oil Based Mud	10.5	25	N/A	10.0	61.7/21	Flow Line	22500	0.00
2019-08-29 02:00	1	3543.79	Diesel-Oil Based Mud	10.5	25	N/A	10.0	61.5/21	Shale Shaker	24295	0.00
2019-08-30 02:00	1	8711.08	Diesel-Oil Based Mud	10.5	20	N/A	10.0	60.7/22	Shale Shaker	24295	0.00
2019-08-31 02:00	1	14901.34	Diesel-Oil Based Mud	10.5	26	N/A	10.0	59.7/23	Shale Shaker	20568	0.00

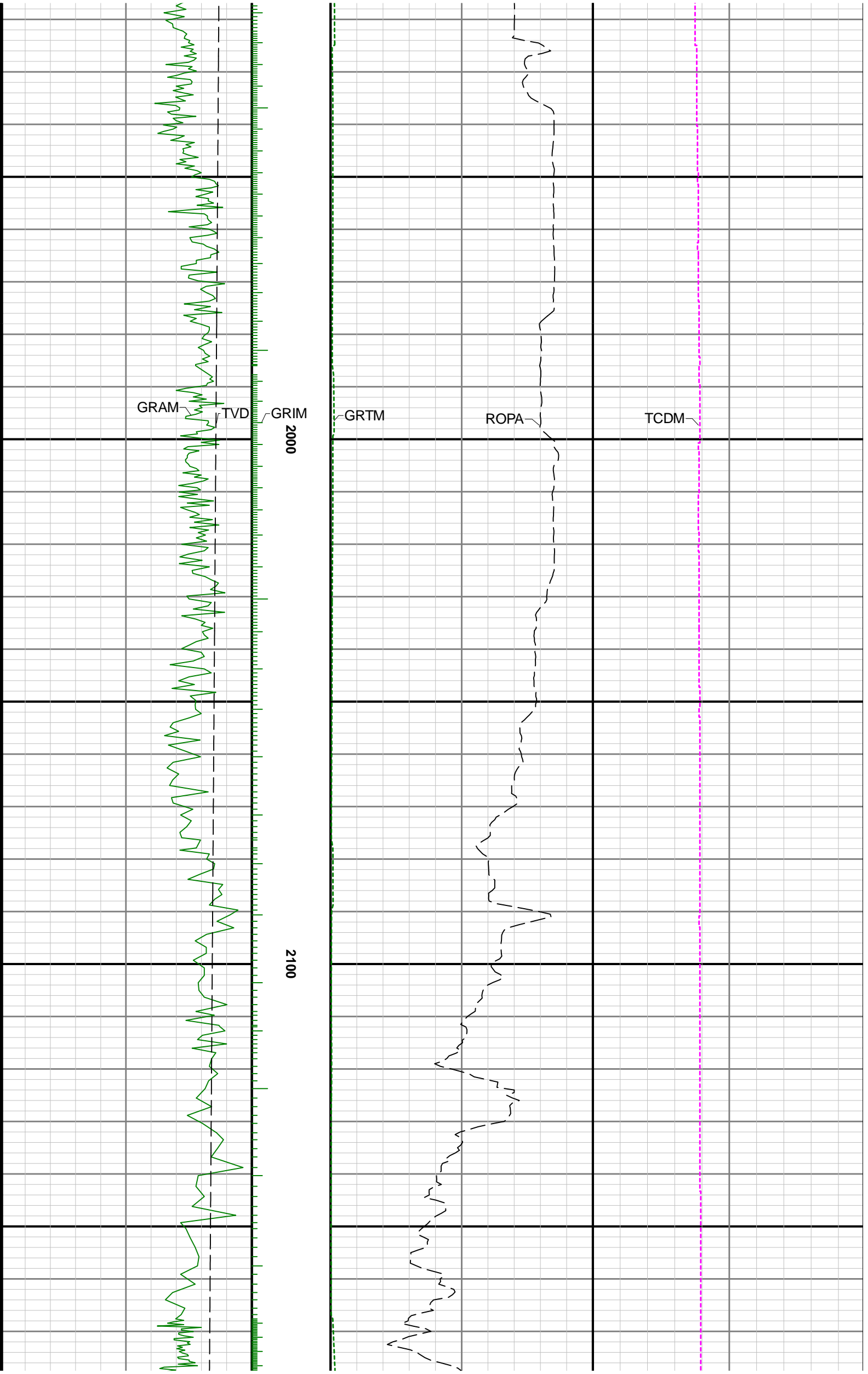
Equipment and Service Data

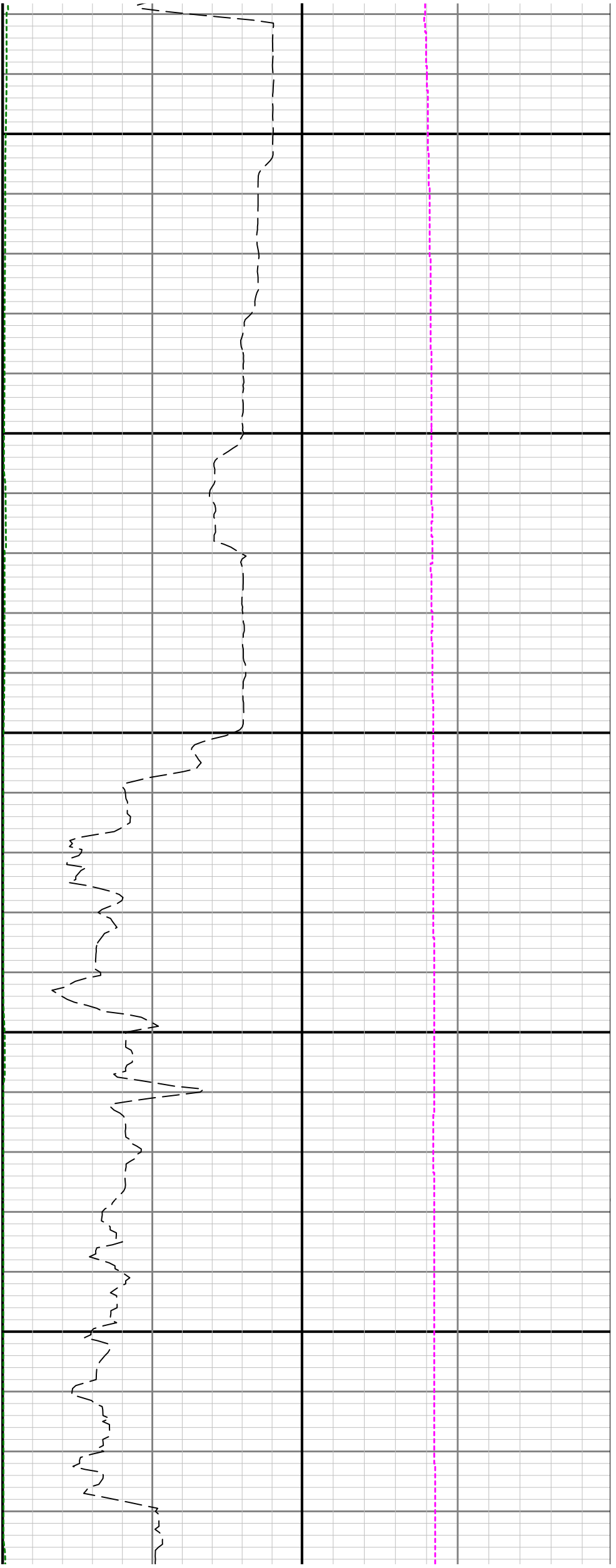
Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	AutoTrak Curve Steering Unit	11994997	Near Bit VSS	5.93	6.77	7.000	4.330
1	AutoTrak Curve Steering Unit	11994997	Near Bit Inclination	5.93	6.77	7.000	4.330
1	AutoTrak Curve MWD	14705204	Gamma (single)	2.76	12.94	7.000	3.250
1	AutoTrak Curve MWD	14705204	Directional (mag)	12.27	22.45	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC SU	AutoTrak Curve SU	Auto Trak Curve Steering Unit
ATC MWD	AutoTrak Curve MWD	Auto Trak Curve MWD
ATC LCPM	AutoTrak Curve LCPM	Auto Trak Curve LCPM





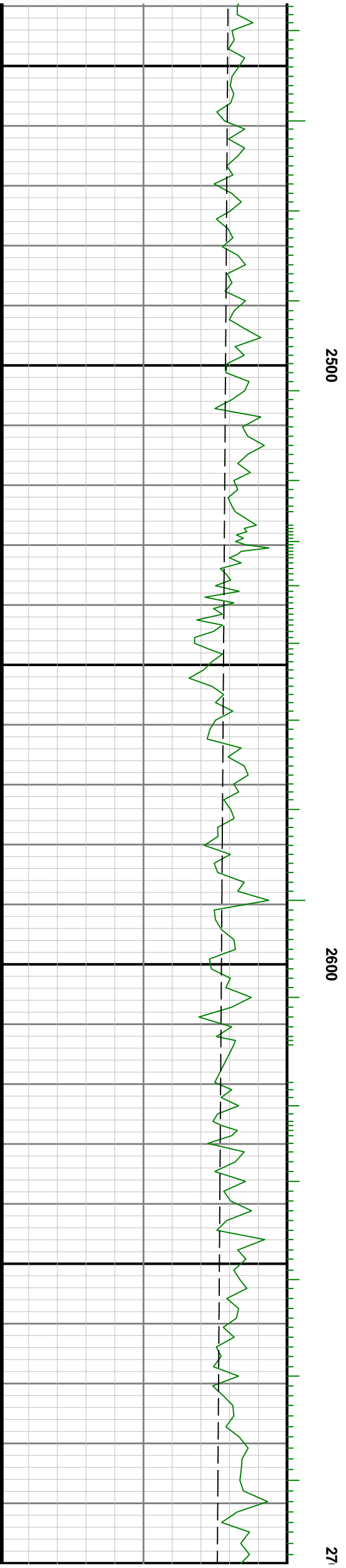
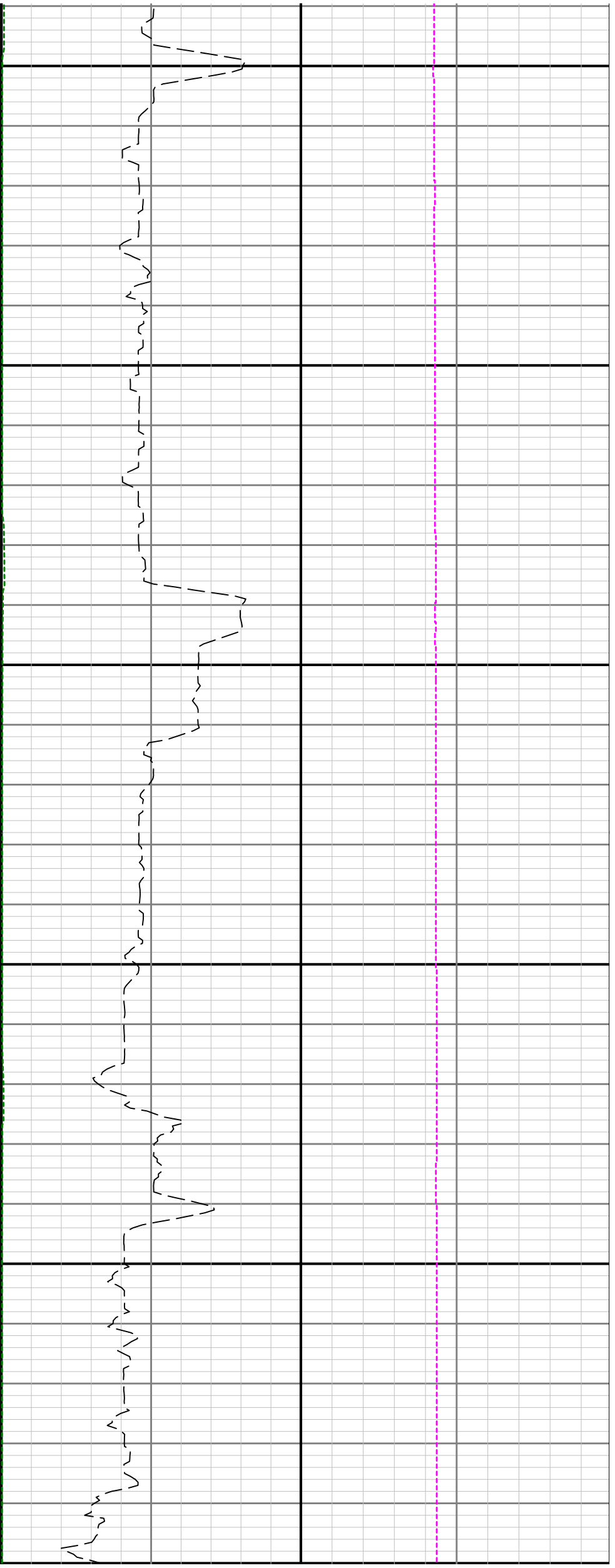


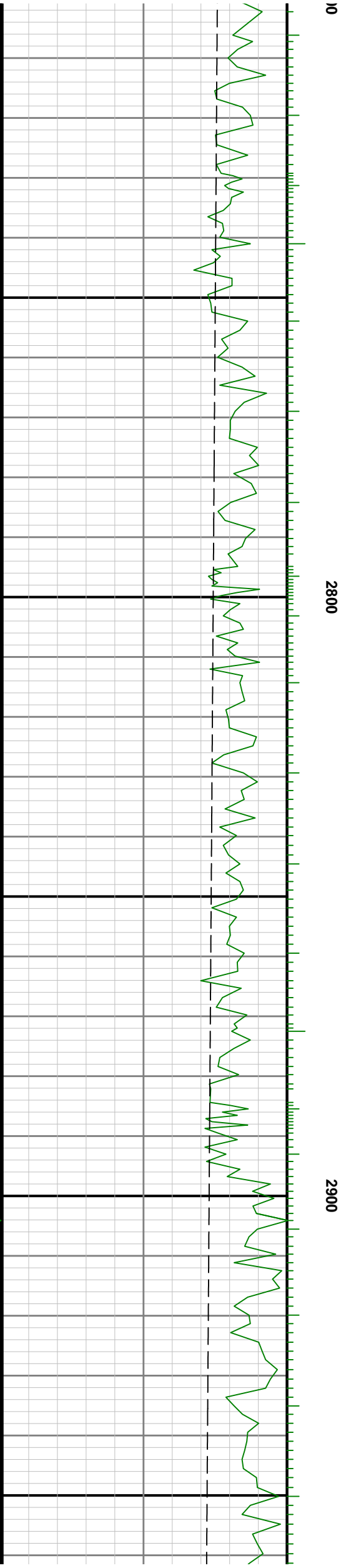
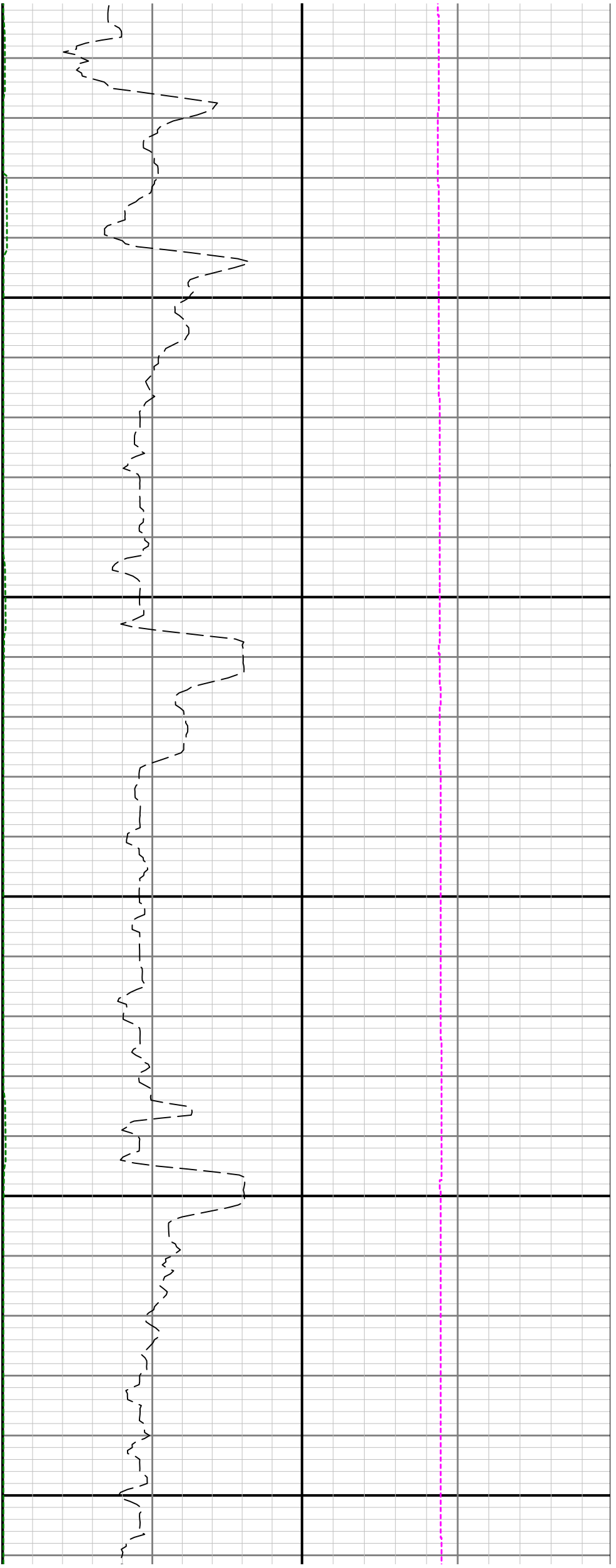
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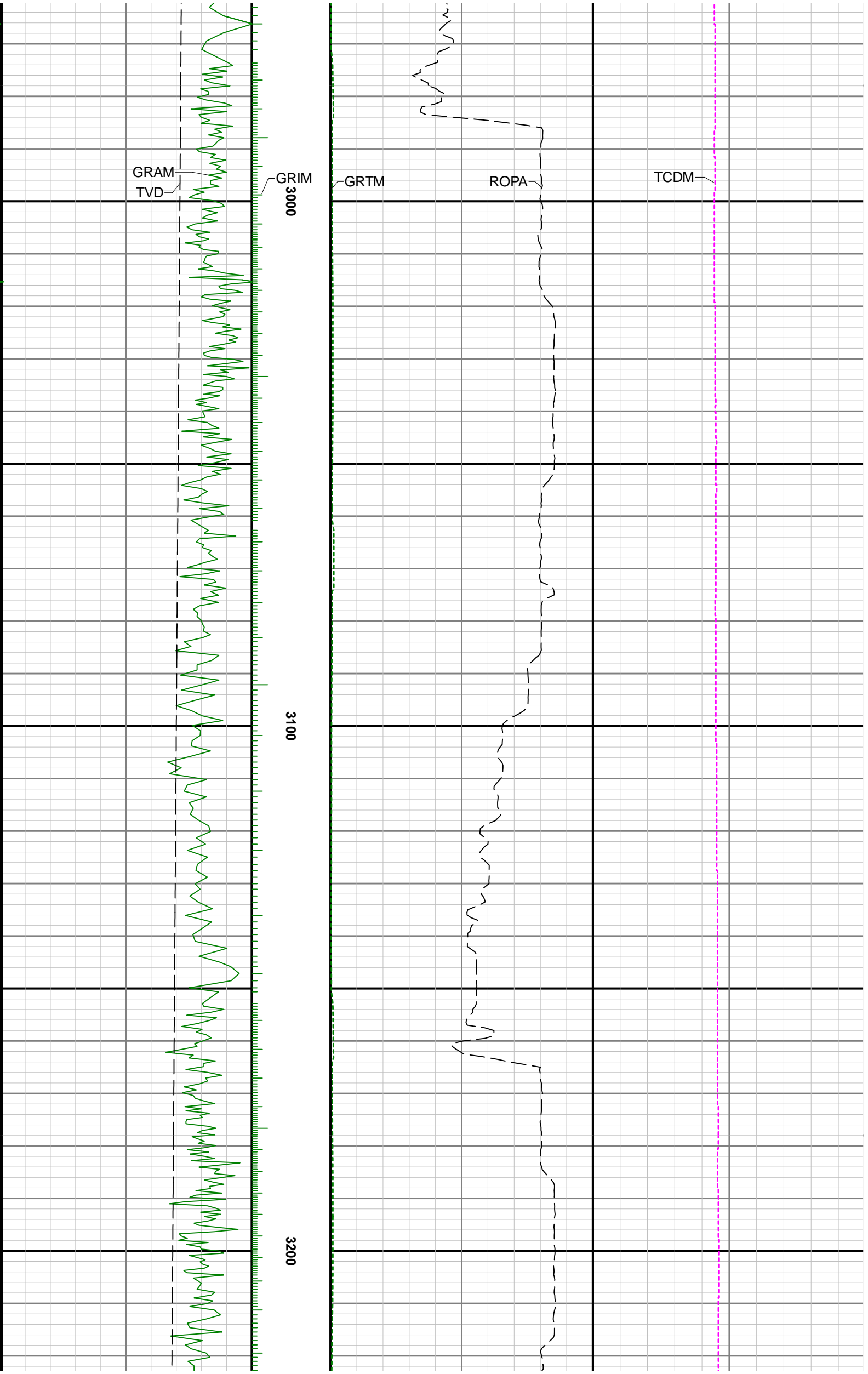
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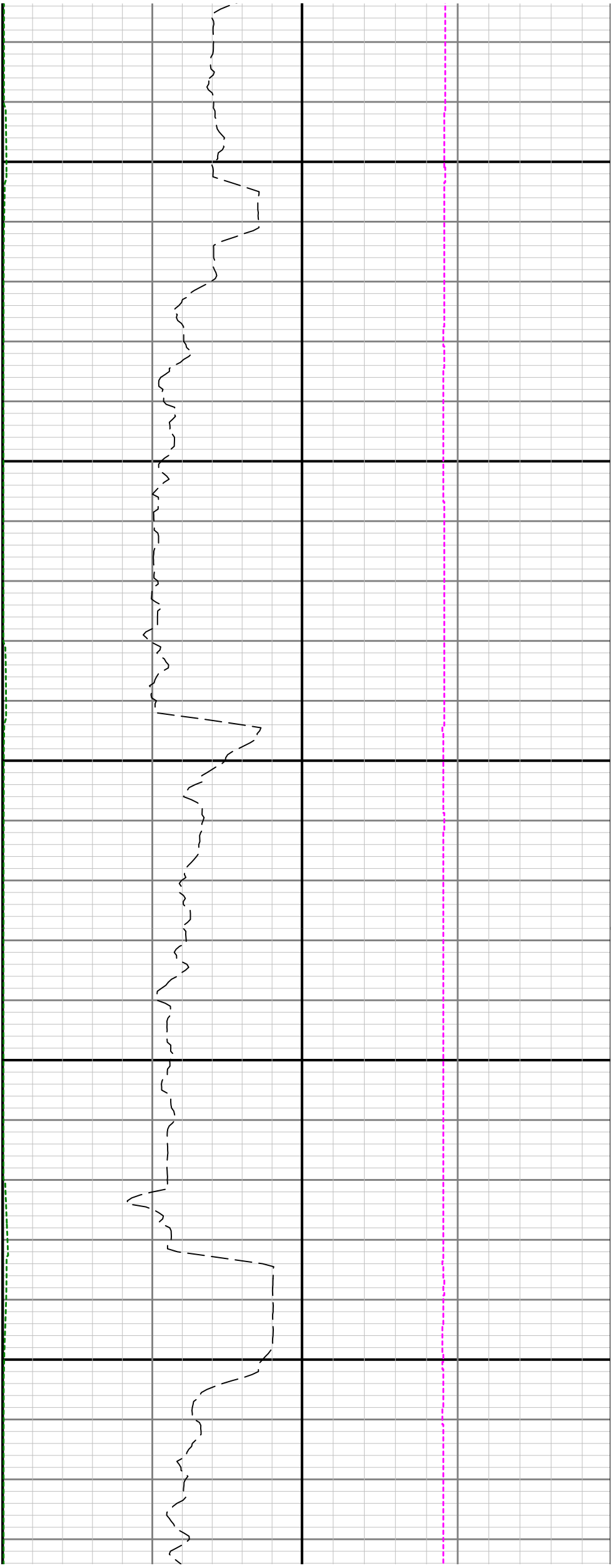
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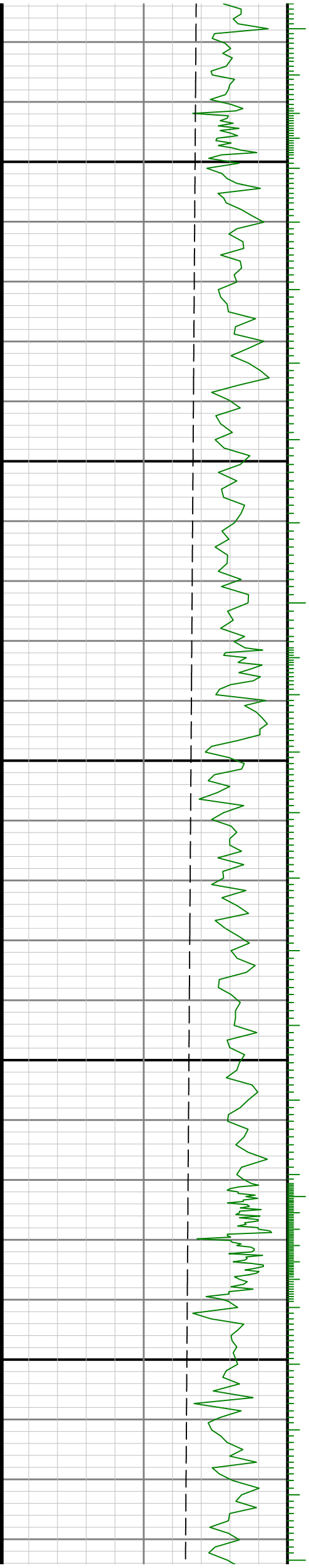


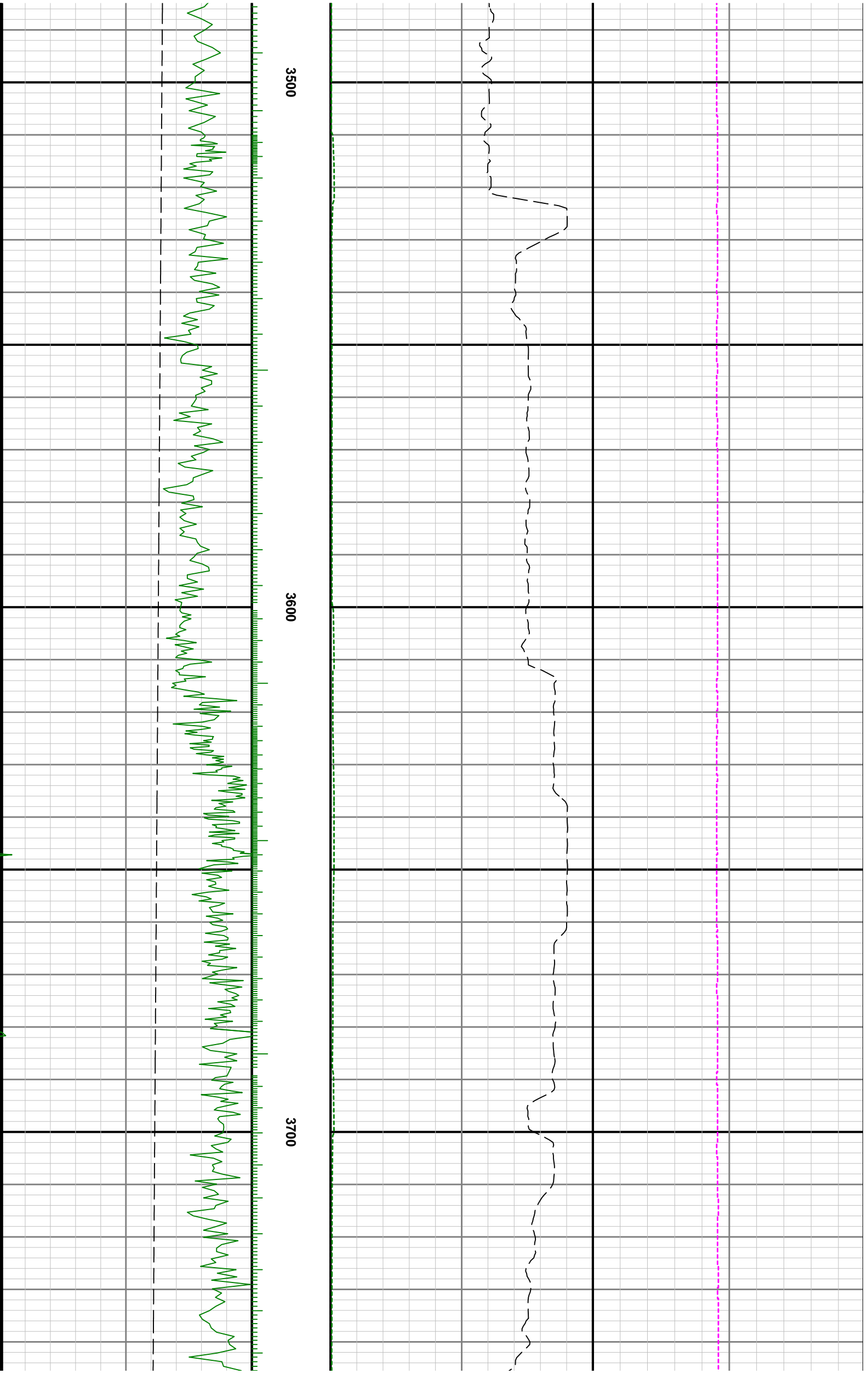


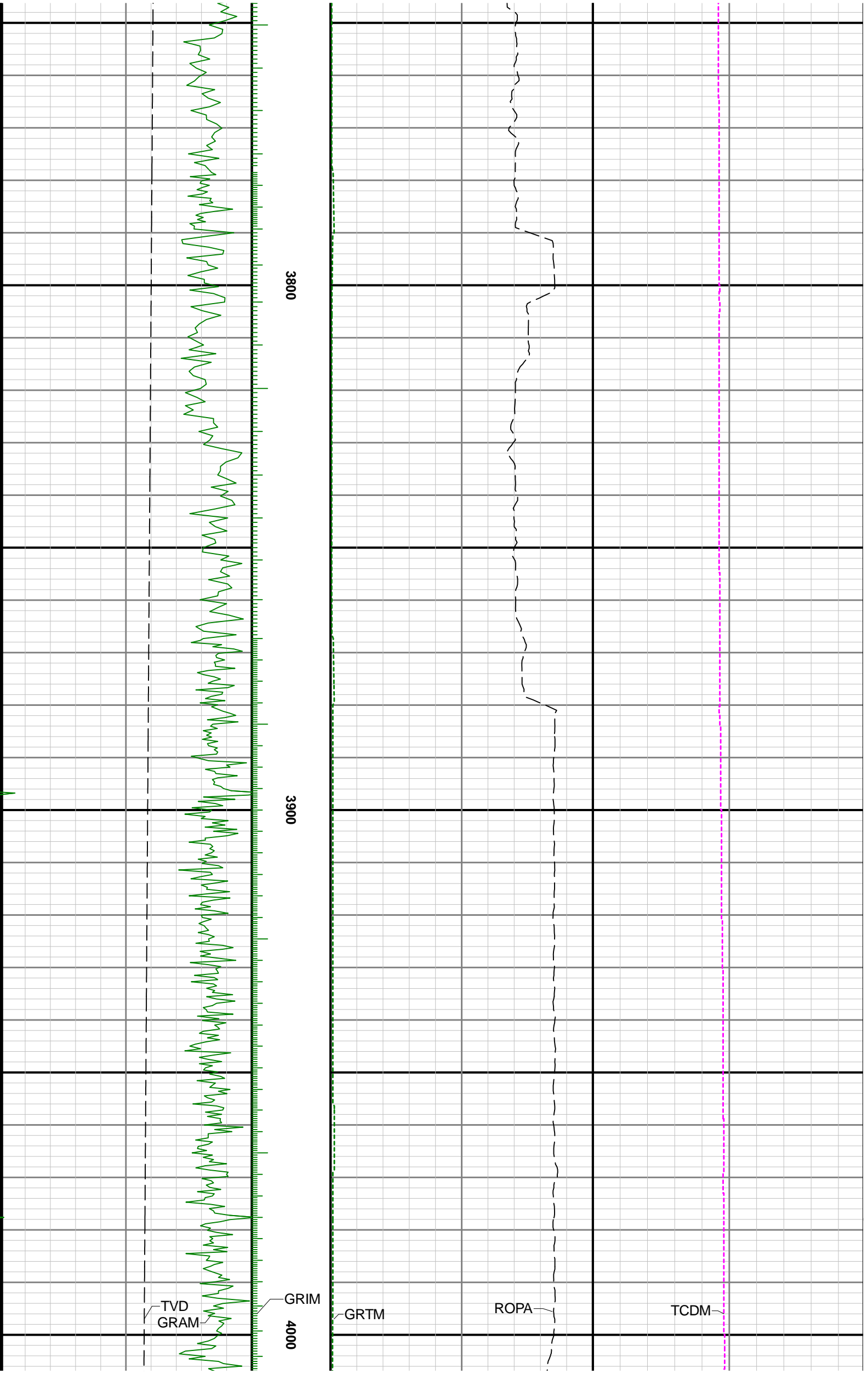


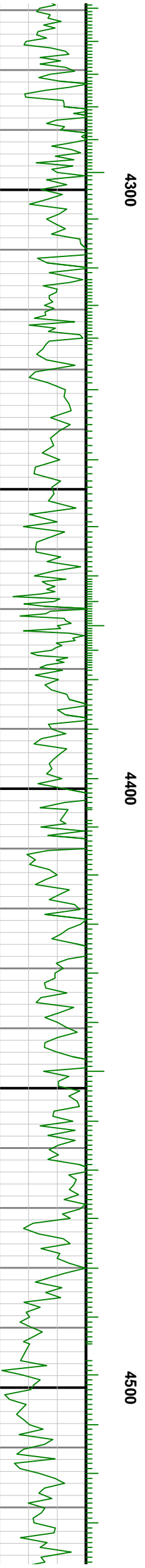
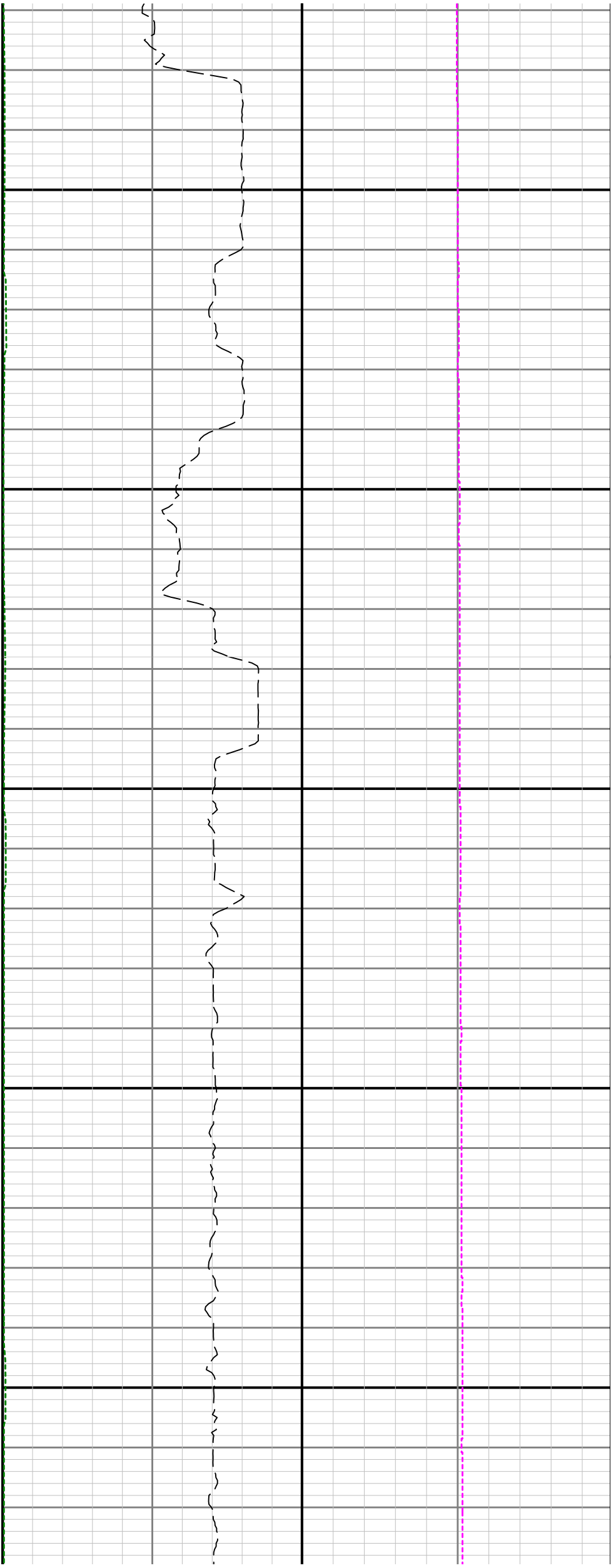
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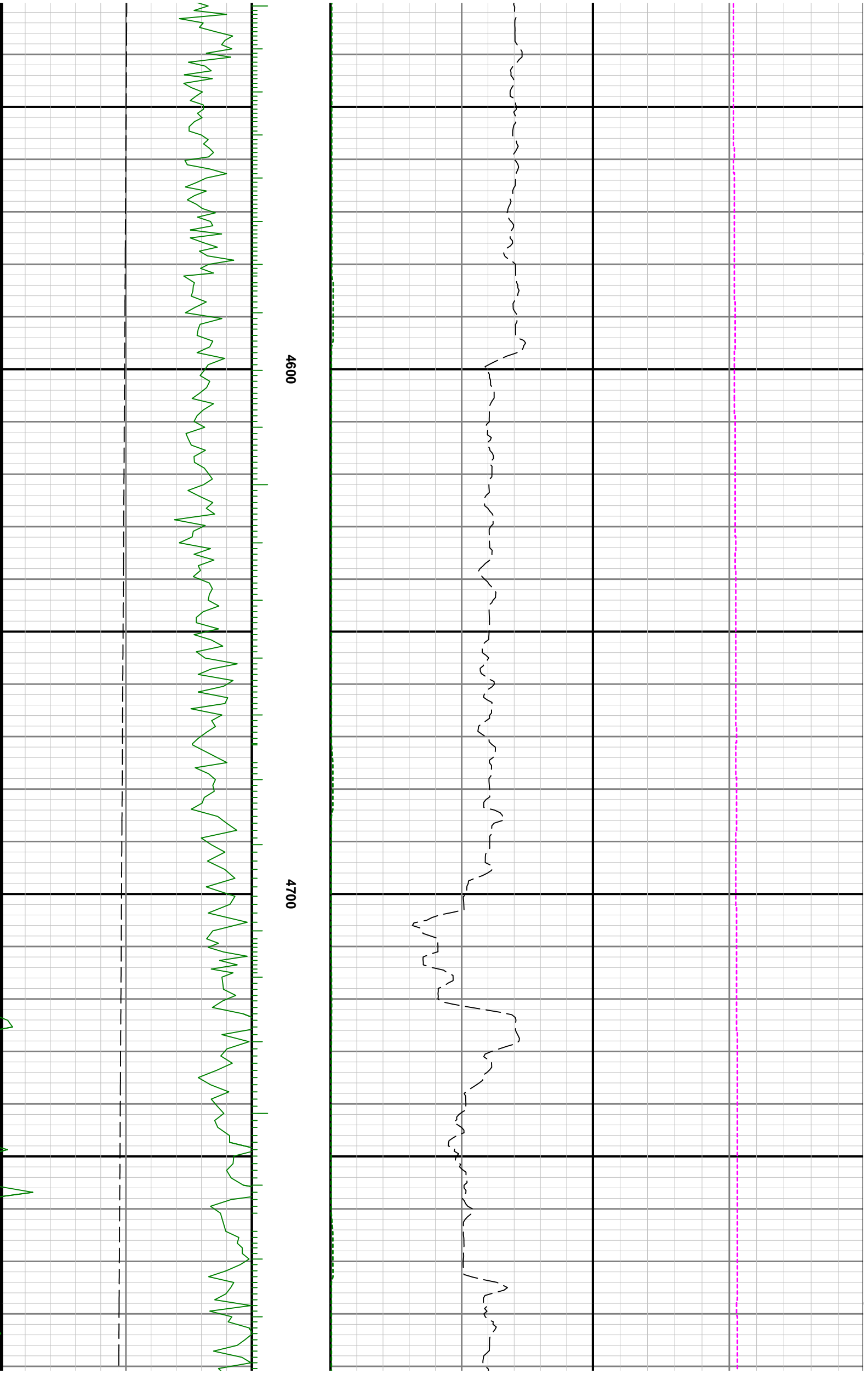
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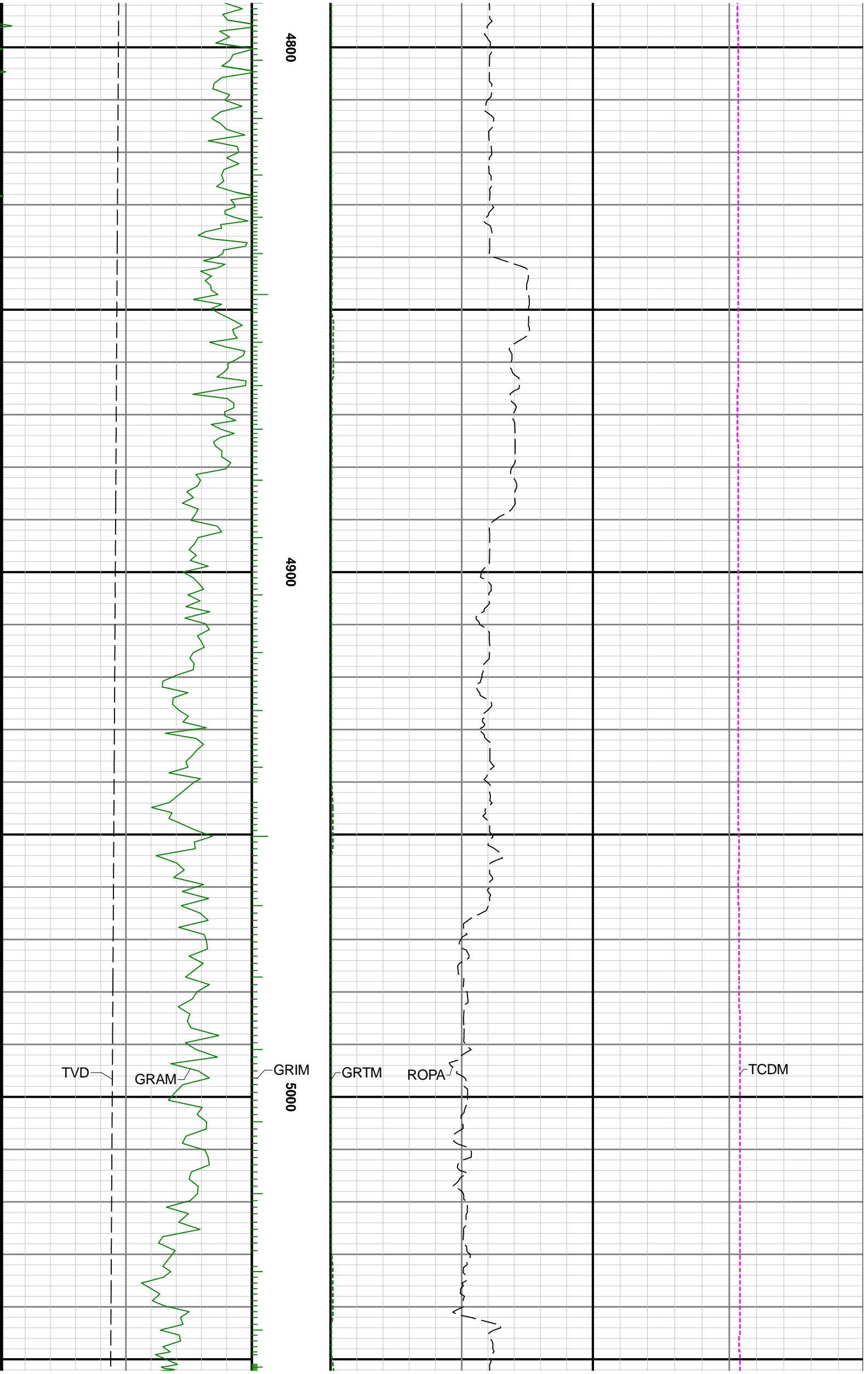


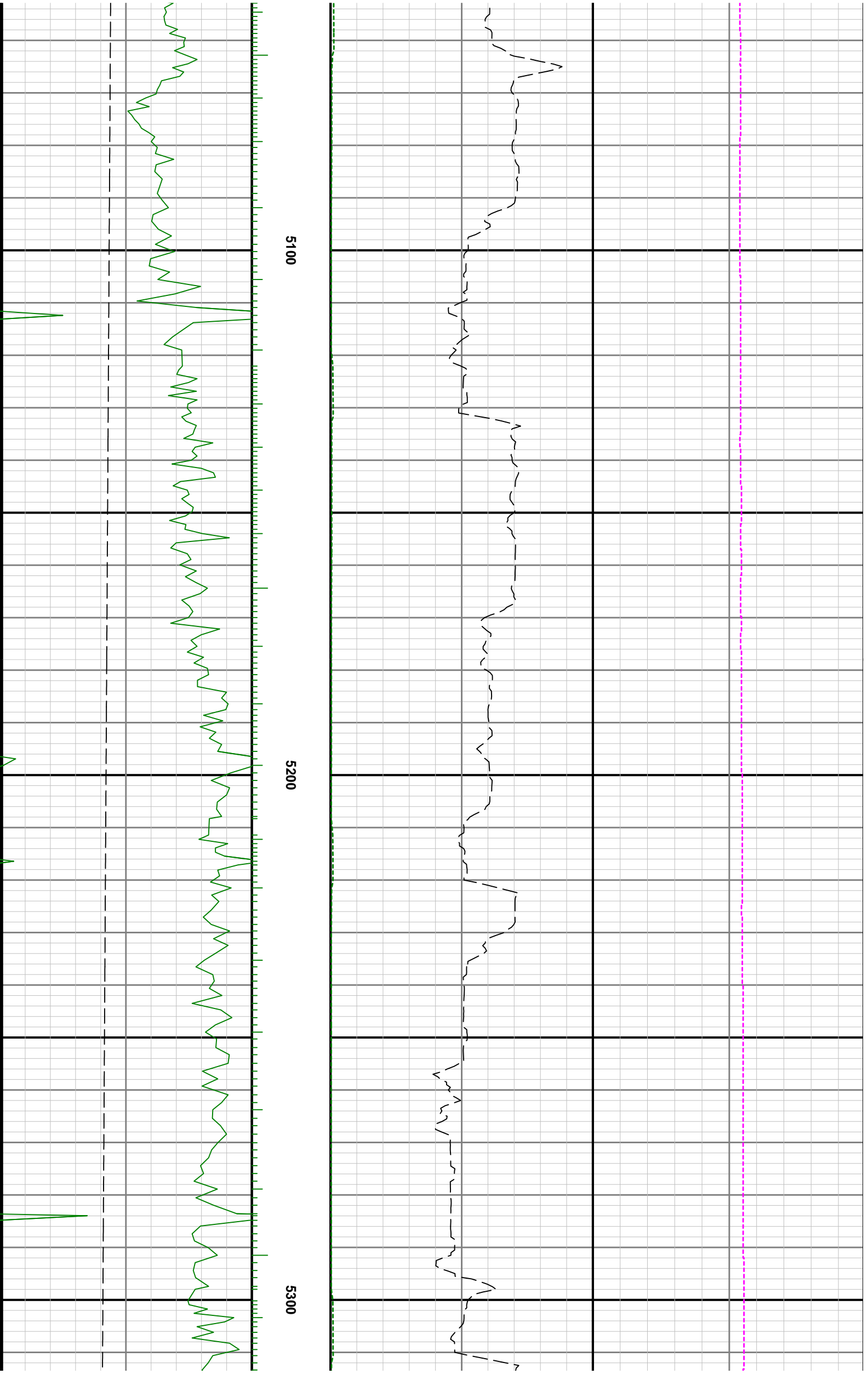


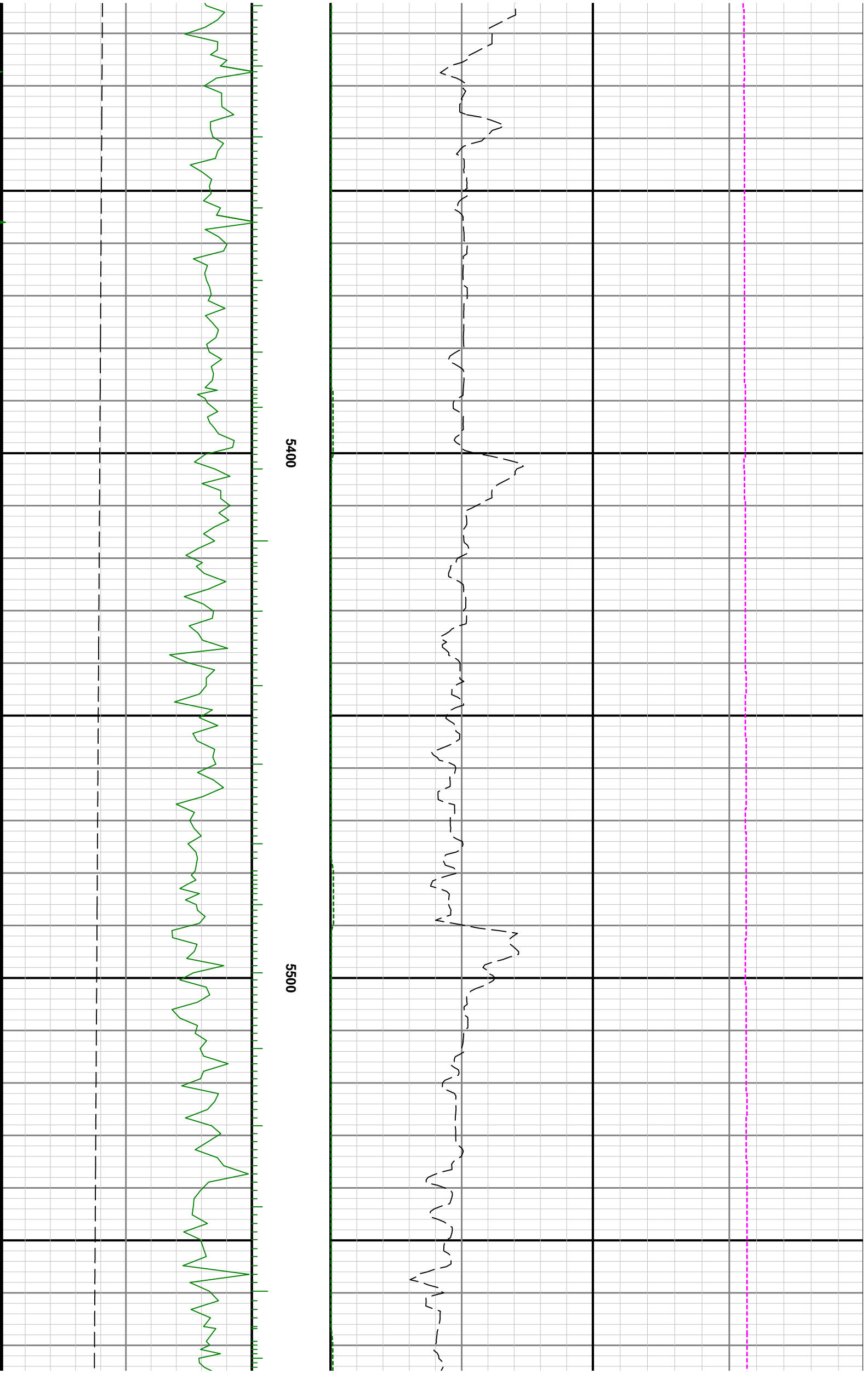


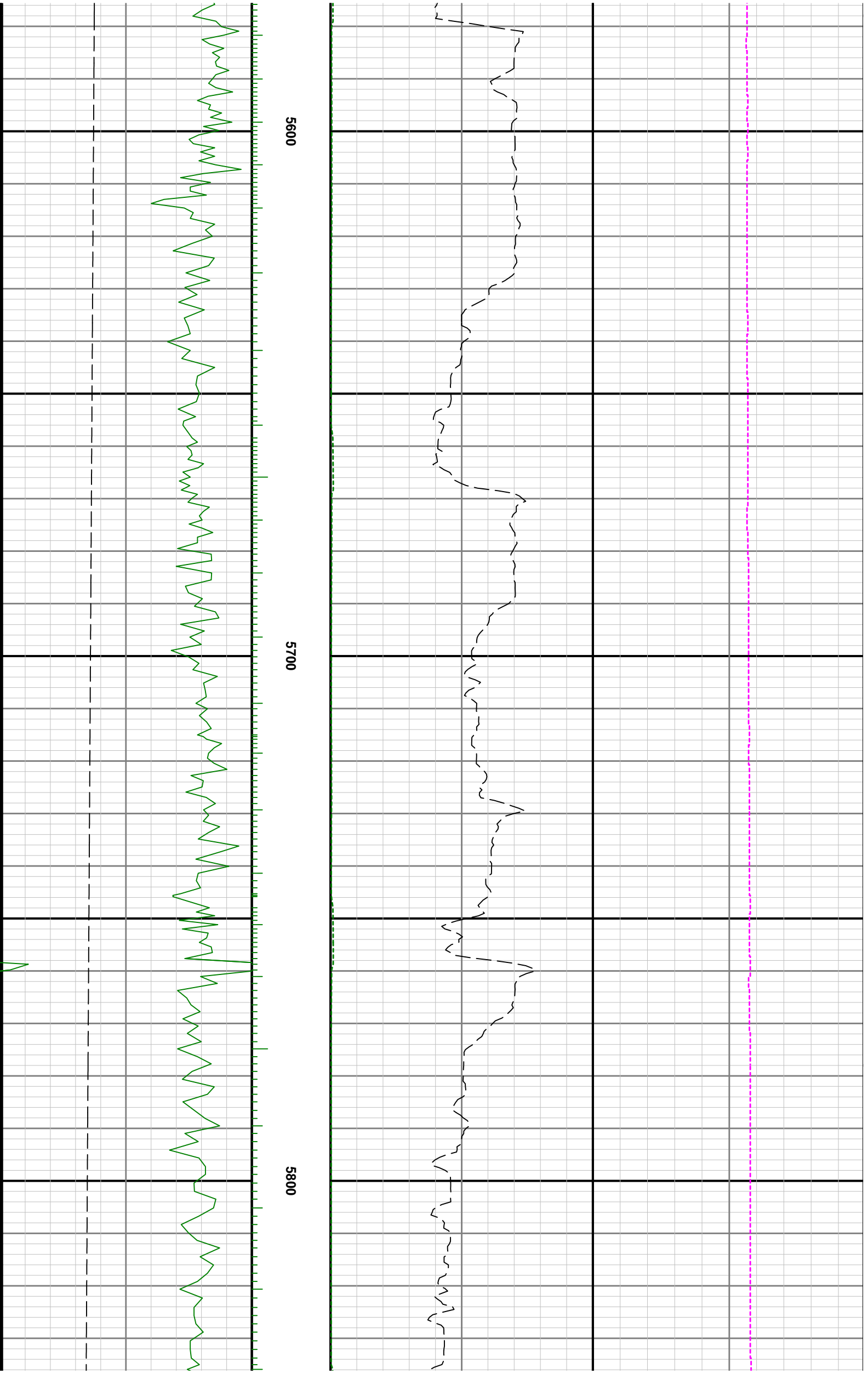


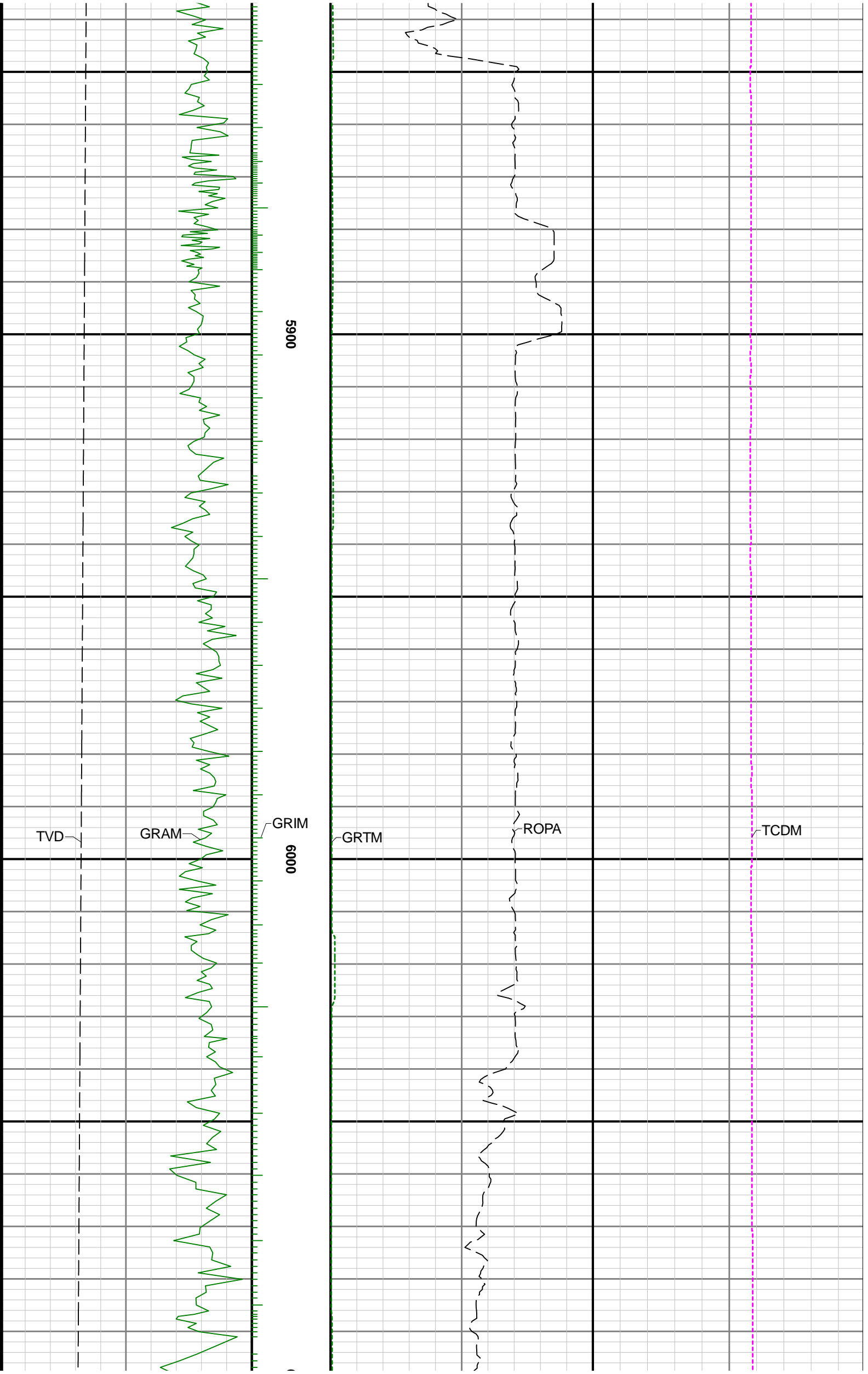


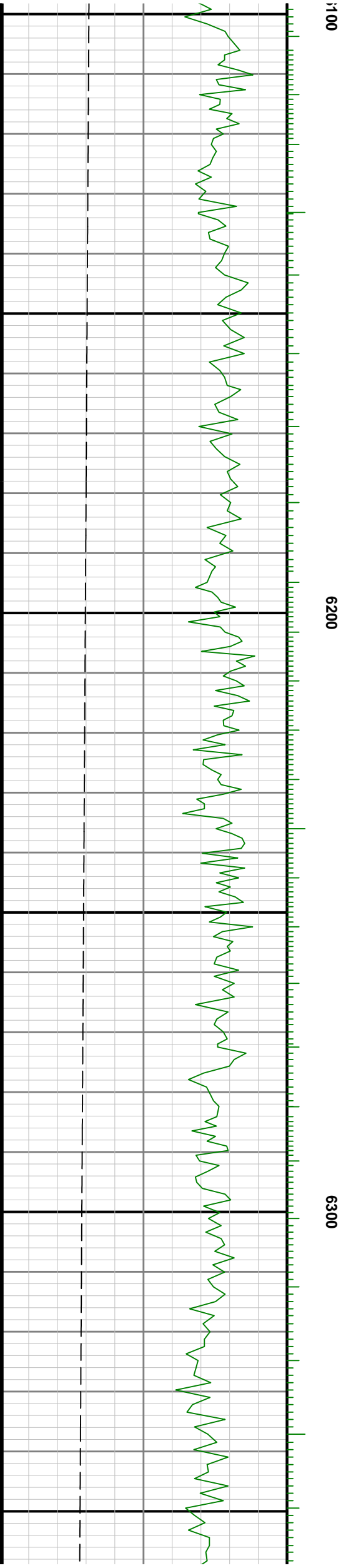
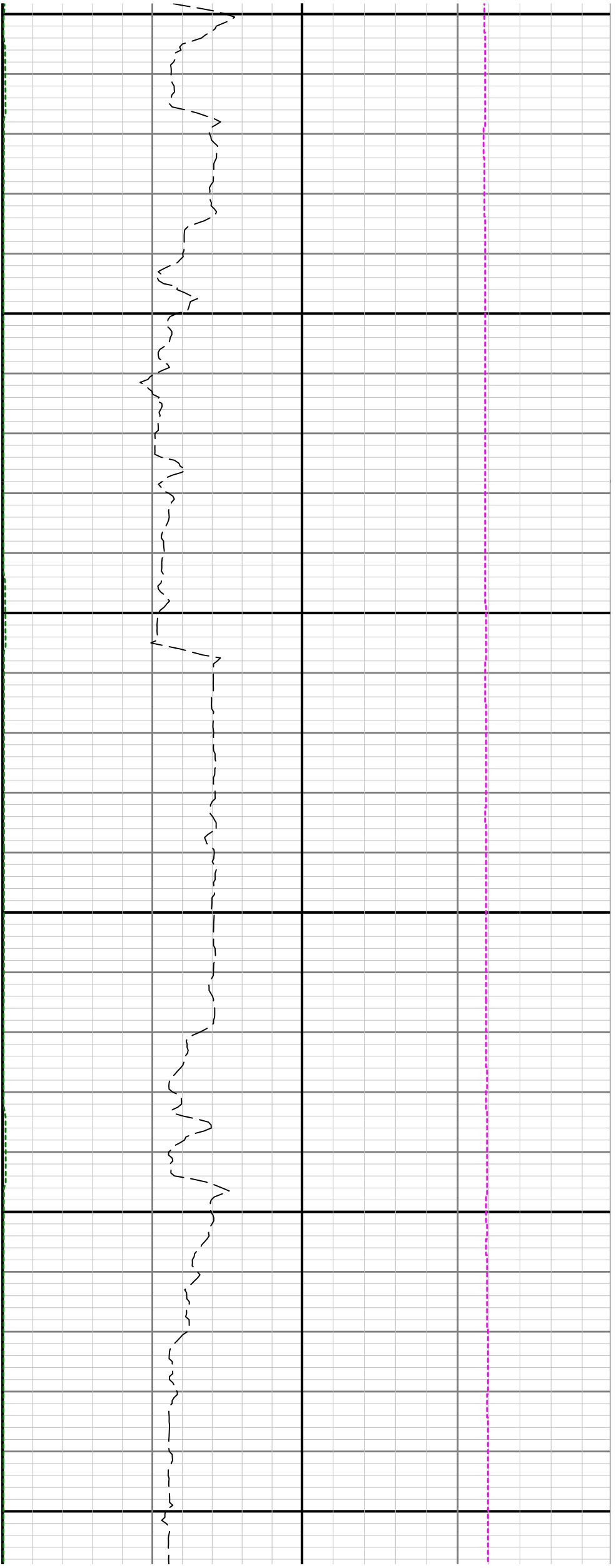


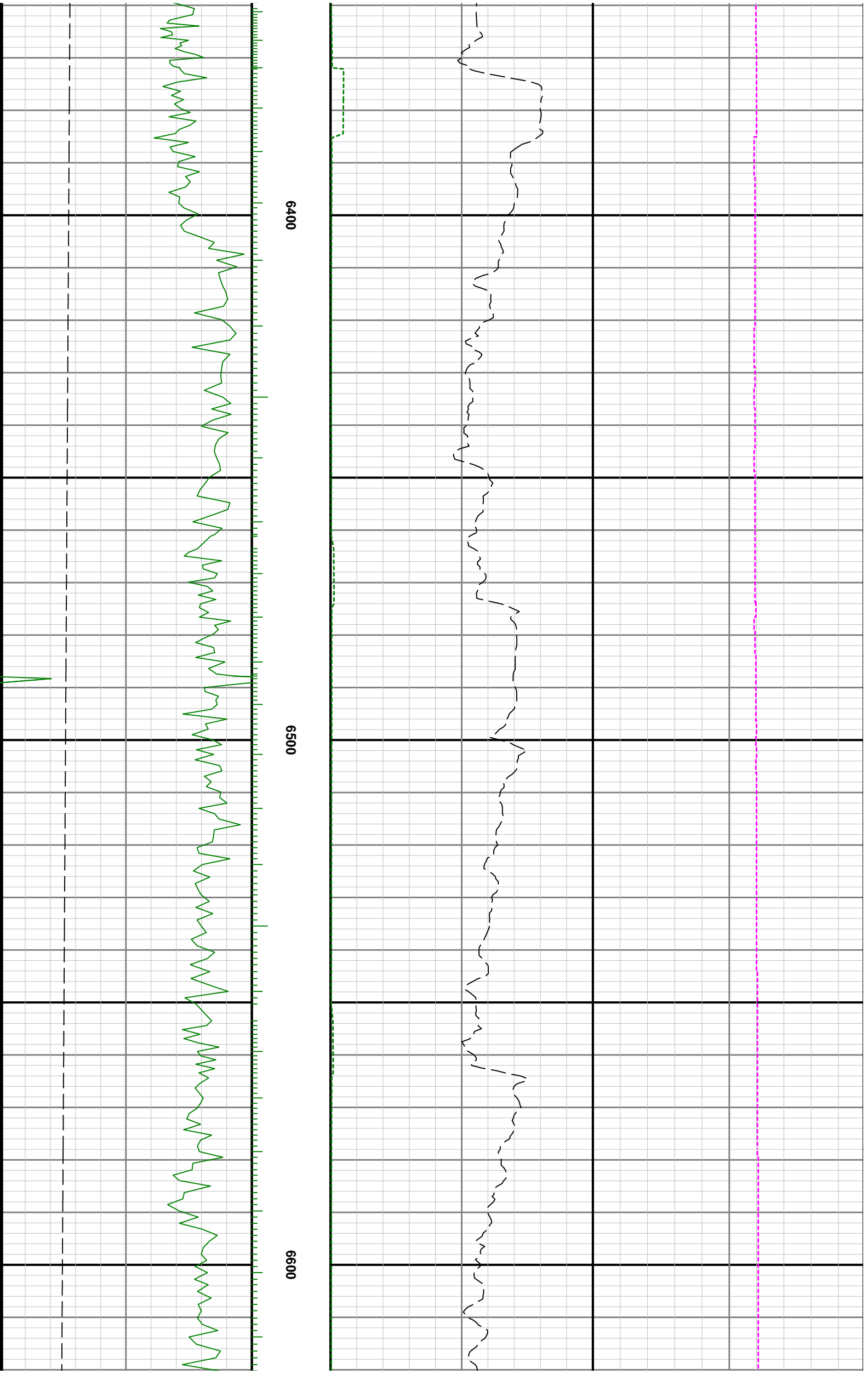


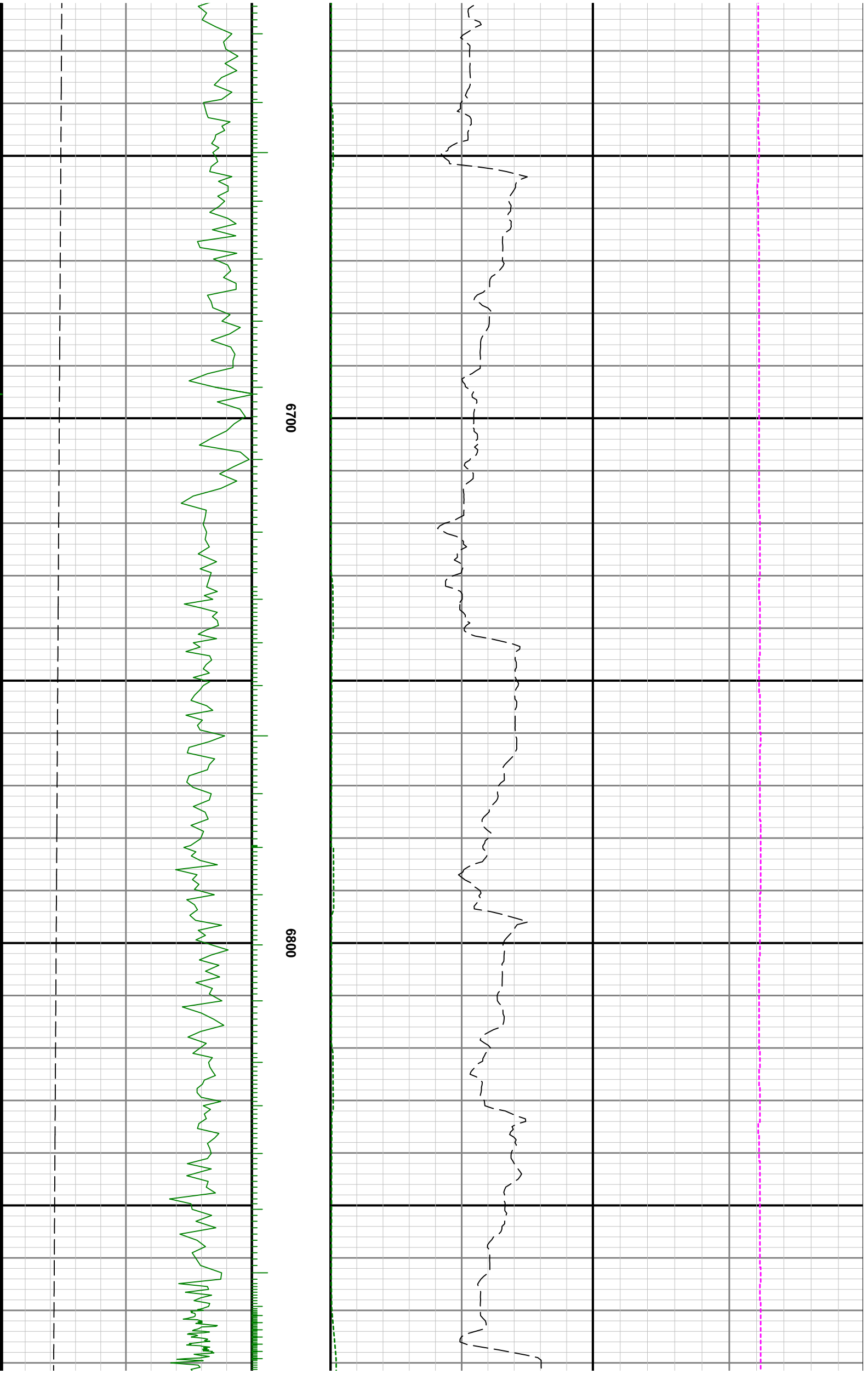


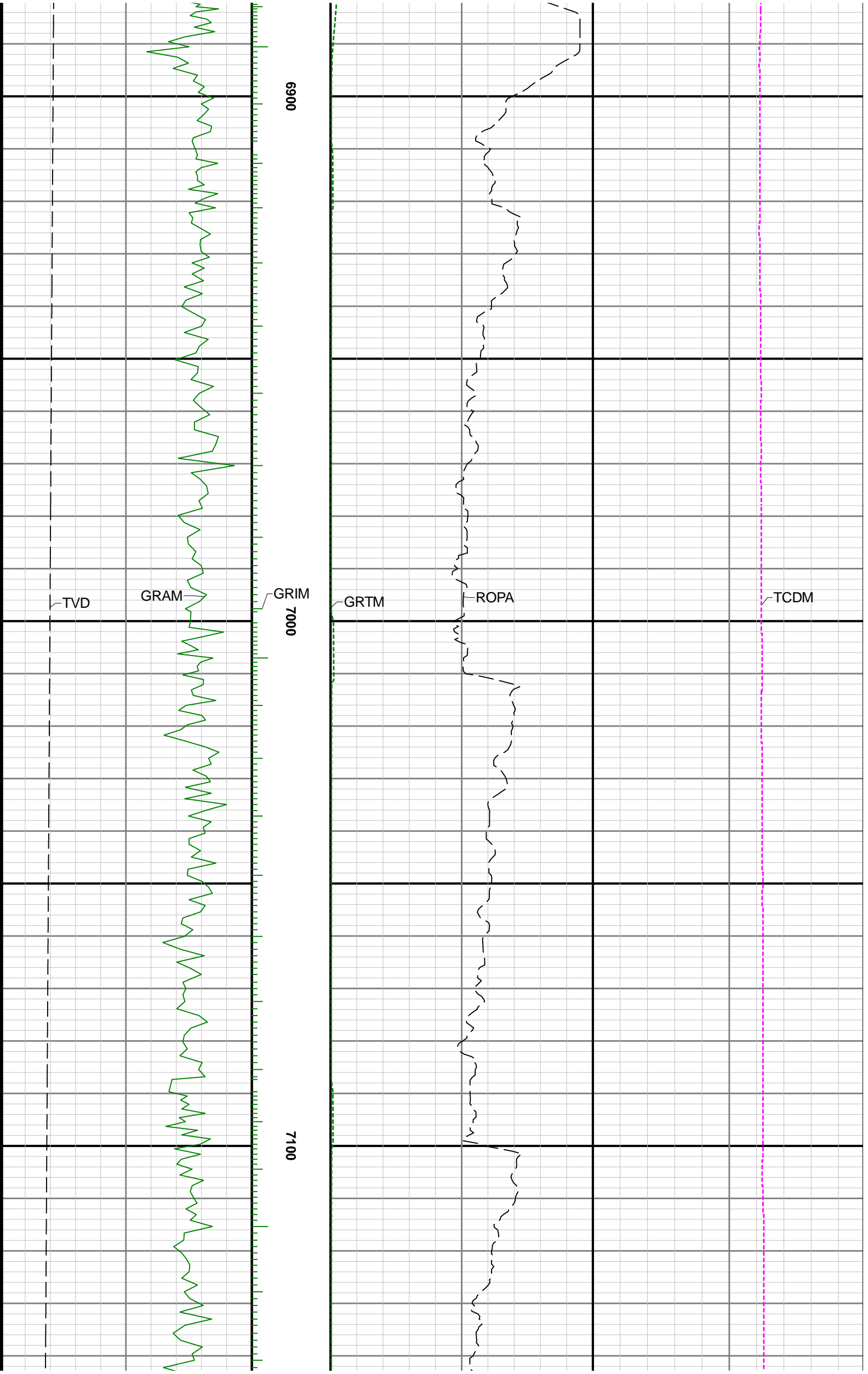


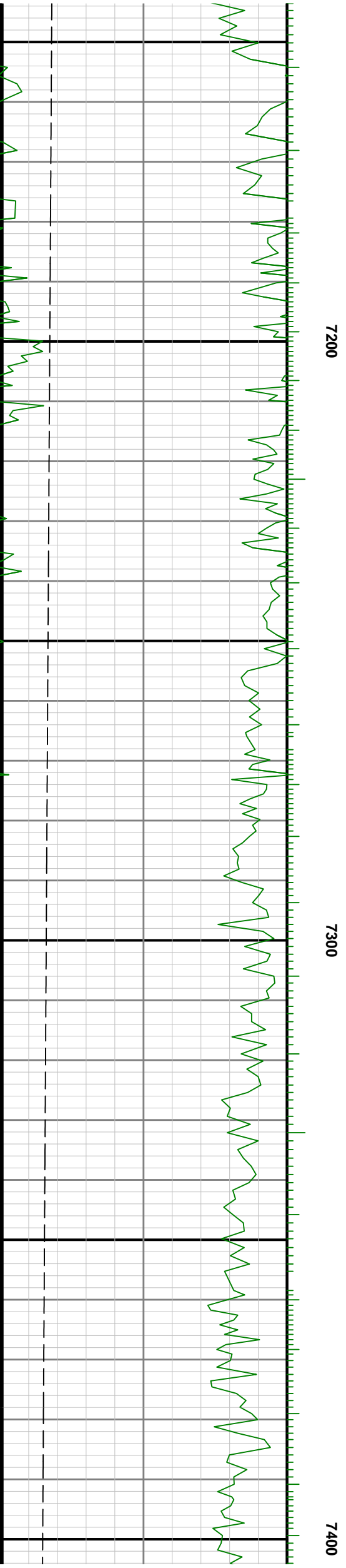
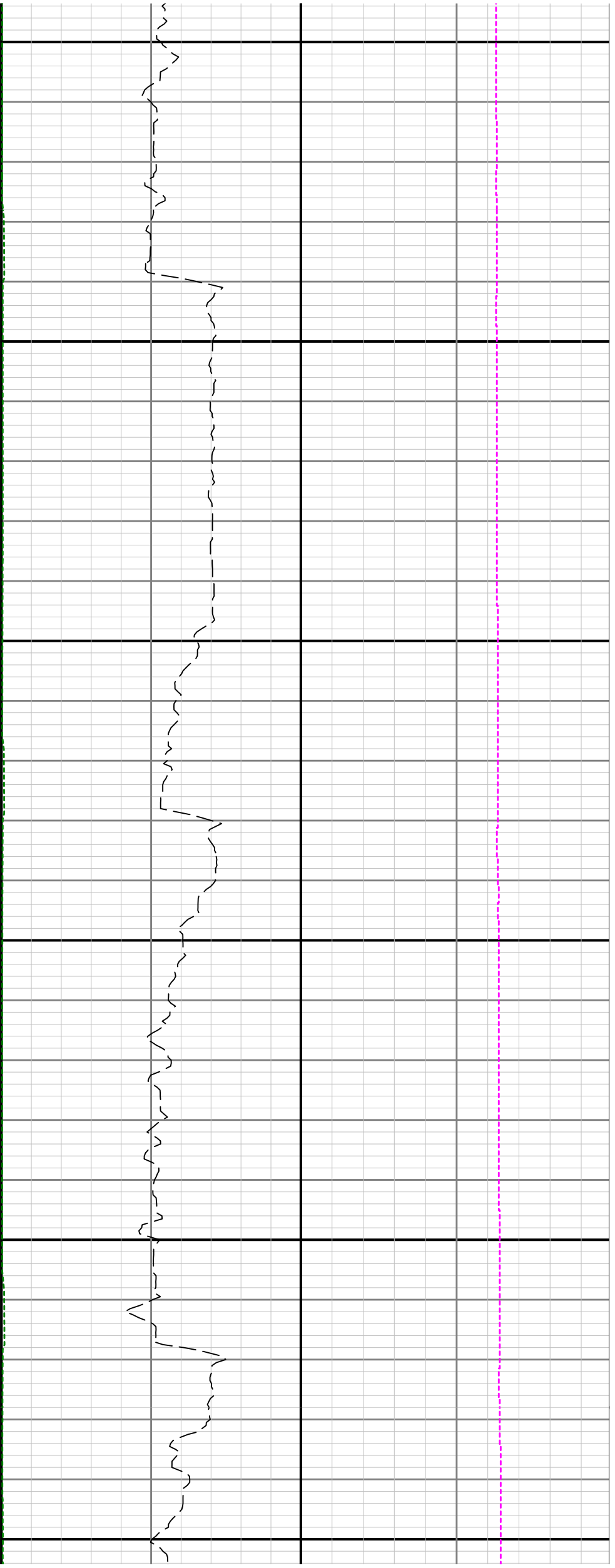


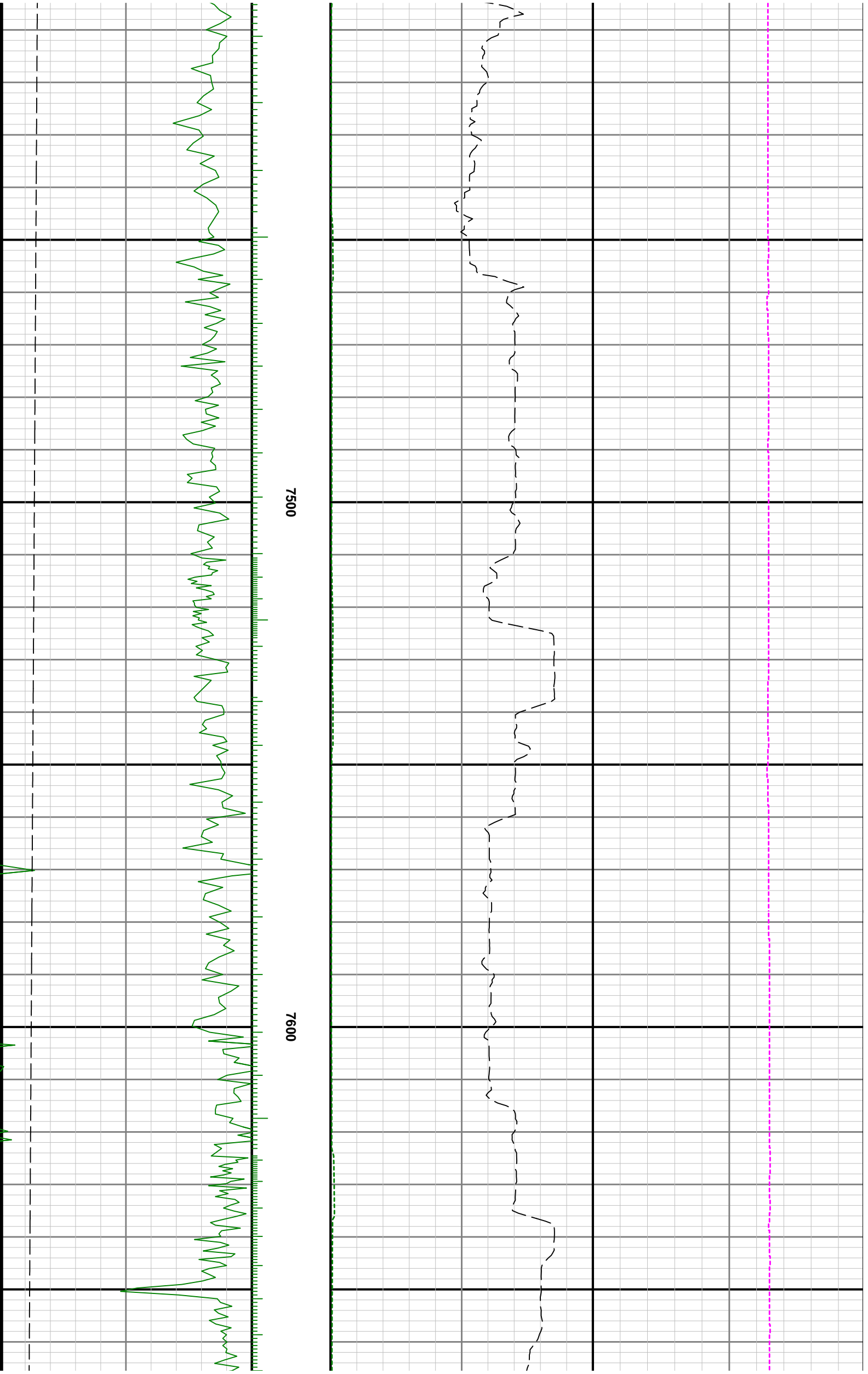


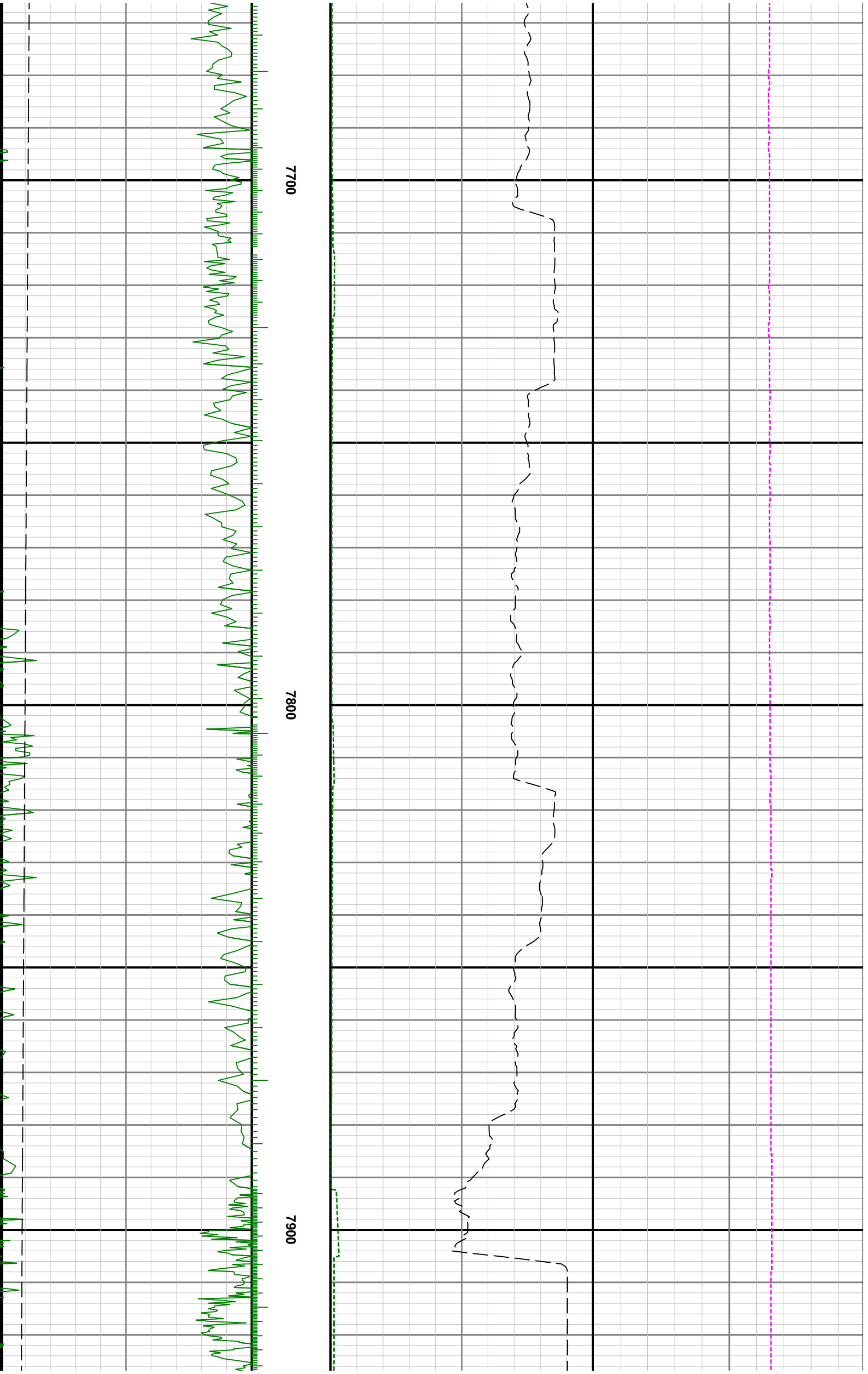


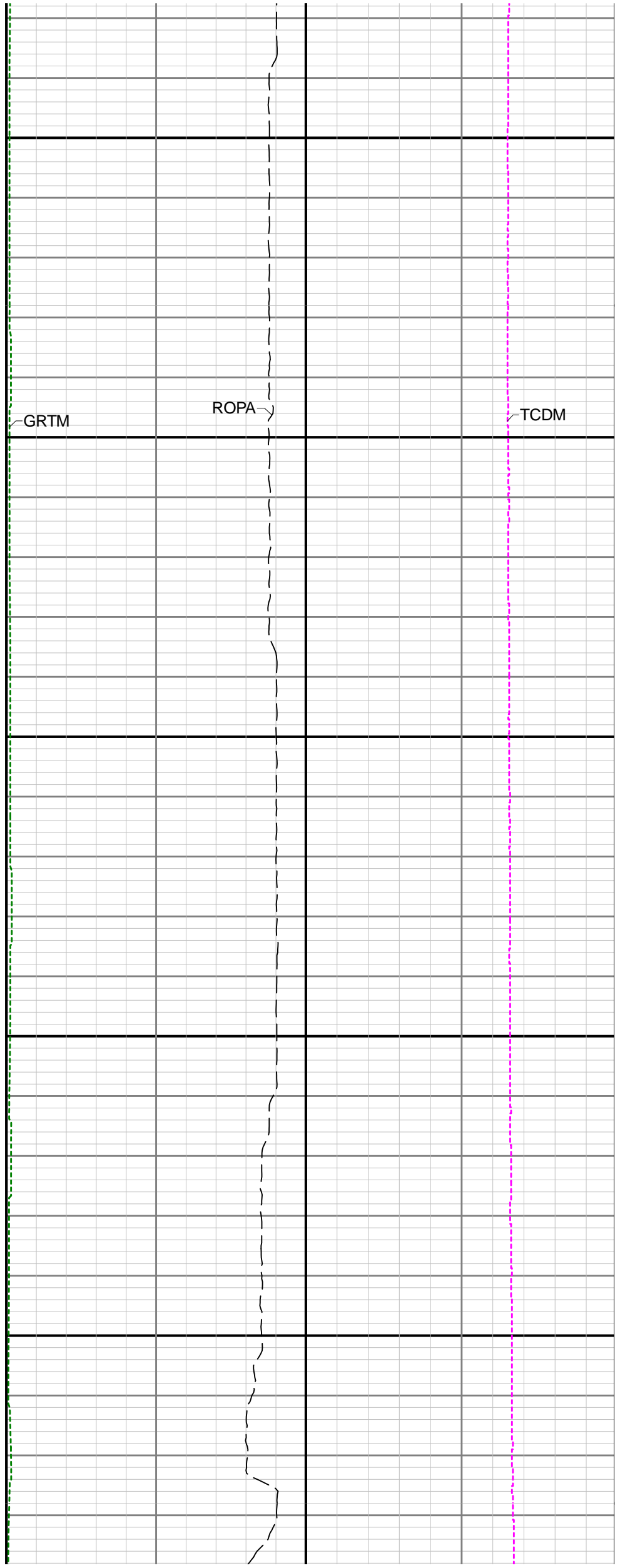
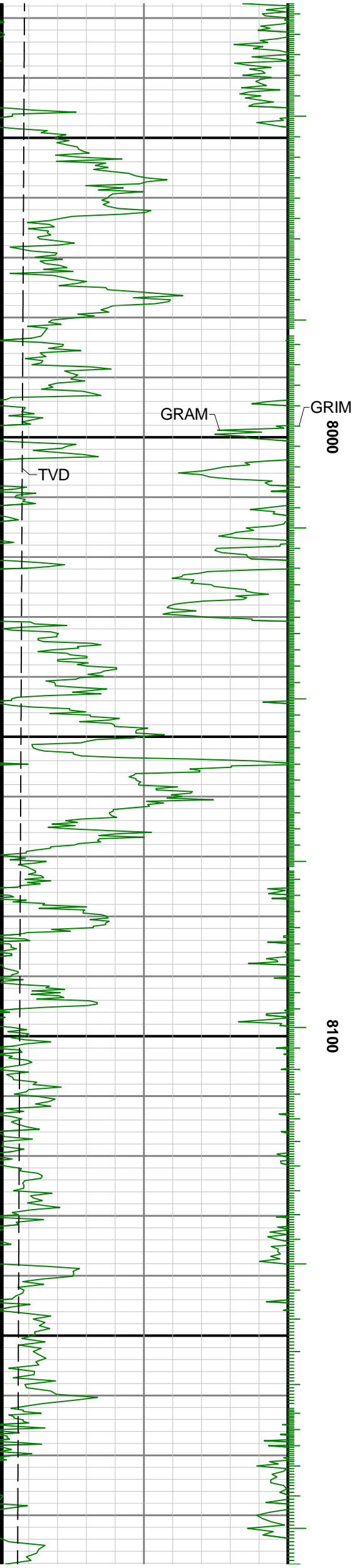


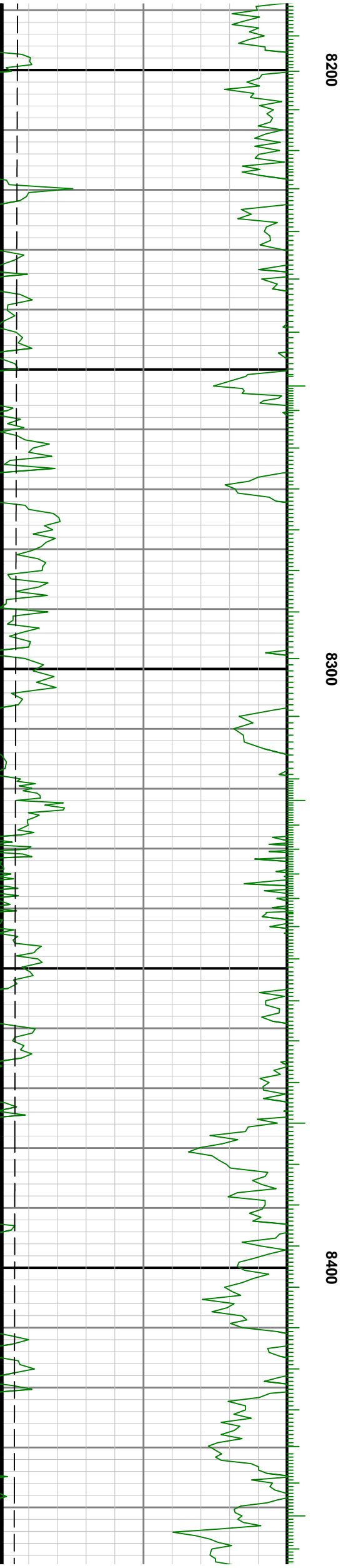
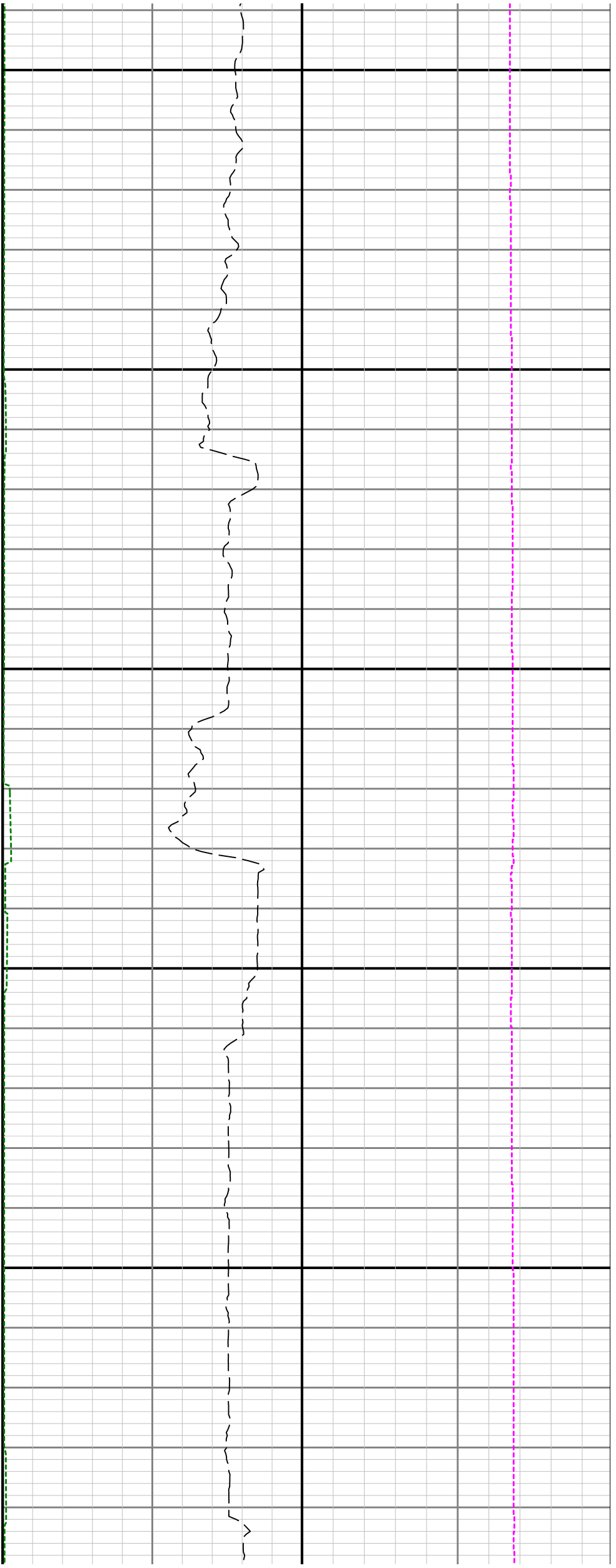


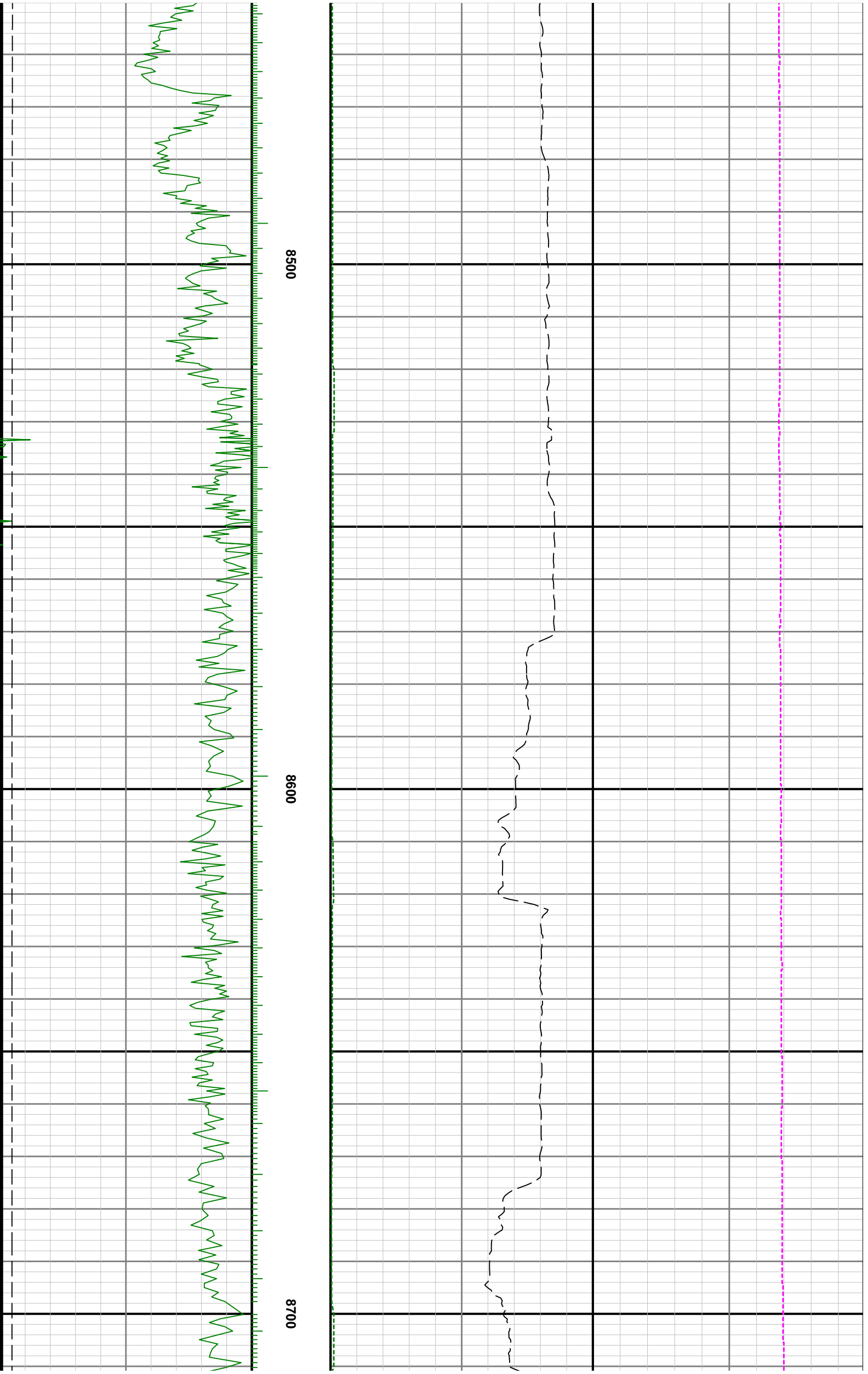


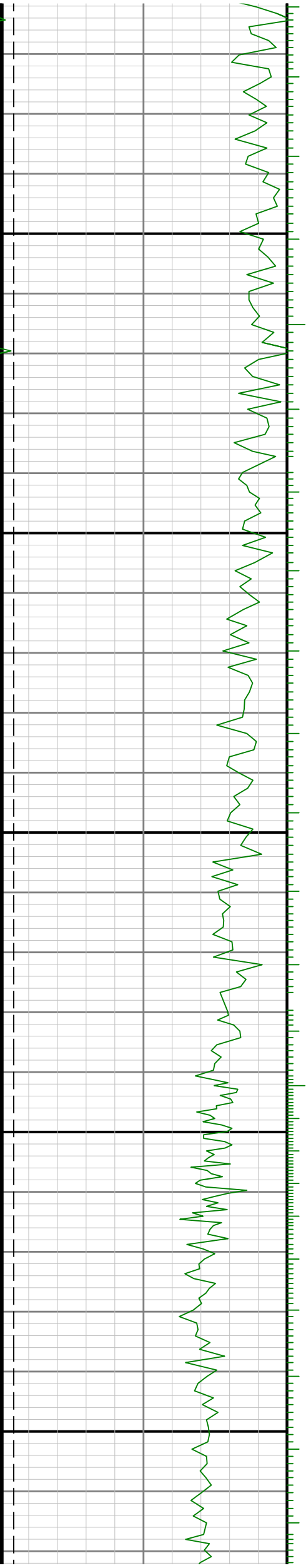












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