



Realtime Log

Natural Formation Evaluation
Gamma Ray

Scale:

1:240

Measured Depth

Company: Anadarko

Well: Jester 41N-A14HZ

Field: Weld County (Kerr McGee)

County: Weld State: Colorado

Status:

Final Print

Surface Location:

Latitude: 40° 13' 45.242" N
Longitude: 104° 53' 7.022" W

Other Services:

API Number: 05-123-41346-00

SEC: 15 TWP: 3N RNG: 67W

Directional
VSS

Permanent Datum (P.D.): Ground Level Elevation: 4793.00 ft.

Elevations: N/A

Log Measured From: Rig Floor 20.00 ft. Above P.D.

KB: N/A
DF: 4813.00 ft.
GL: 4793.00 ft.

Depth Reference: Driller's Depth

GL: 4793.00 ft.

Interval Logged

Dates

Magnetic Field Reference

Top: 6150.0 ft. Date From: 11/Jun/15 Date To: 22/Jun/15 Dip Angle: 66.88 ° Azi Reference North: True

Bottom: 17028.0 ft. Date To: 22/Jun/15 Total Mag to Reference

Spud Date: 11/Jun/15 Field Strength: 52474.1 nT North Correction: 8.43 °

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
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13.500 in.	Surface	842.0 ft.	9.625 in.	36.00 lb/ft	Surface	832.0 ft.
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8.750 in.	832.0 ft.	7237.0 ft.	7.000 in.	26.00 lb/ft	Surface	7227.0 ft.
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6.125 in.	7227.0 ft.	17028.0 ft.				
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Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
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Fresh Water	Surface	4500.0 ft.	13.500 in.	822.0 ft.	0.0 ° / 172.2 °	1.3 ° / 29.8 °
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Water Based Mud	4500.0 ft.	17028.0 ft.	8.750 in.	6405.0 ft.	1.2 ° / 34.4 °	86.9 ° / 91.0 °
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			6.125 in.	9800.0 ft.	86.3 ° / 90.3 °	89.7 ° / 92.0 °
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Acquisition System Software Version

Other

Advantage	2.20U4	Rig:	Precision 460	/ Precision Drilling
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PATS	6.4.1.34	Job No:	7282882	/ D&E
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		District / Unit:	RMD	/
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Log Run Summary

LWD	BHA	Bit	Bit	Bit	Bit	Assembly	Logged Interval		Bit Depth Interval		Date / Time				Circ.
Run	Run	Run	Size	Type	Gauge	Type	Top	Bottom	From	To	Start		End		Time
No.	No.	No.	(in.)		(in.)		(ft.)	(ft.)	(ft.)	(ft.)					(hrs.)
1	1	2	8.750	PDC	3.000	Steerable	6150.0	6563.0	842.0	6563.0	11/Jun/2015	10:20	13/Jun/2015	04:00	25.8
2	2	3	8.750	PDC	3.000	Steerable	6500.0	7237.0	6563.0	7237.0	13/Jun/2015	05:40	14/Jun/2015	05:00	12
3	3	4	6.125	PDC	4.000	Steerable	7173.0	16259.0	7237.0	16259.0	15/Jun/2015	03:00	19/Jun/2015	21:15	86.2
4	4	5	6.125	PDC	4.000	Steerable	16197.0	17028.0	16259.0	17028.0	19/Jun/2015	22:45	22/Jun/2015	08:00	30.8

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Austin Small	11/Jun/2015	22/Jun/2015				Barry Combs	11/Jun/2015	20/Jun/2015

Matthew Delmore	11/Jun/2015	22/Jun/2015							Chad Hough	11/Jun/2015	22/Jun/2015	
									John Ablutz	11/Jun/2015	19/Jun/2015	
									Brad Leopold	20/Jun/2015	22/Jun/2015	

Mud Properties Record

Date / Time		LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
11/Jun/2015	18:30	1	1946.0	Water Based - Fresh	8.7	34	9.1	18.0	0 / 98	Active Mud Pit	2100	N/A
12/Jun/2015	07:00	1	4750.0	Water Based Mud	9.2	46	9.5	6.6	0 / 95	Active Mud Pit	2100	N/A
12/Jun/2015	18:30	1	6530.0	Water Based Mud	9.9	56	9.7	5.2	2 / 89	Active Mud Pit	2000	N/A
13/Jun/2015	07:30	2	6530.0	Water Based Mud	9.8	55	9.6	5.0	2 / 89	Active Mud Pit	2000	N/A
13/Jun/2015	18:30	2	7059.0	Water Based Mud	9.9	57	9.8	4.9	4 / 87	Active Mud Pit	1800	N/A
15/Jun/2015	08:00	3	7226.0	Water Based Mud	9.5	44	10.1	6.0	3 / 90	Active Mud Pit	2400	N/A
15/Jun/2015	17:00	3	8004.0	Water Based Mud	9.6	52	9.9	5.4	4 / 88	Active Mud Pit	2600	N/A
16/Jun/2015	05:30	3	9795.0	Water Based Mud	9.8	56	9.9	5.0	4 / 87	Active Mud Pit	2800	N/A
16/Jun/2015	17:00	3	11493.0	Water Based Mud	9.8	60	9.8	4.6	5 / 86	Active Mud Pit	2900	N/A
17/Jun/2015	09:00	3	13642.0	Water Based Mud	9.8	60	9.6	5.0	5 / 86	Active Mud Pit	2800	N/A
17/Jun/2015	17:00	3	14755.0	Water Based Mud	9.8	58	9.9	4.8	5 / 86	Active Mud Pit	3000	N/A
18/Jun/2015	05:00	3	15721.0	Water Based Mud	9.8	58	9.6	4.6	5 / 86	Active Mud Pit	2800	N/A
18/Jun/2015	17:00	3	16068.0	Water Based Mud	10.1	64	9.9	4.8	6 / 83	Active Mud Pit	2800	N/A
19/Jun/2015	03:33	3	16259.0	Water Based Mud	10.2	56	9.9	4.8	6 / 83	Active Mud Pit	2800	N/A
19/Jun/2015	17:00	3	16259.0	Water Based Mud	10.3	62	10.0	5.0	6 / 82	Active Mud Pit	2800	N/A
20/Jun/2015	06:00	4	16259.0	Water Based Mud	10.2	60	10.1	4.8	5 / 84	Active Mud Pit	2700	N/A
20/Jun/2015	18:00	4	16259.0	Water Based Mud	10.3	62	9.9	5.0	5 / 84	Active Mud Pit	2700	N/A
21/Jun/2015	06:30	4	17028.0	Water Based Mud	10.3	60	9.9	4.6	5 / 85	Active Mud Pit	2900	N/A
21/Jun/2015	18:30	4	17028.0	Water Based Mud	11.1	64	9.9	5.0	4 / 81	Active Mud Pit	2800	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft Avg	API
GRIX	Gamma Ray Data Density	points
GRSI	Gamma Ray Sliding Indicator	unitless
GRTX	Gamma Ray Time Since Drilled	min
ROPA	Rate of Penetration, 3.0 ft Avg	ft/hr
TCDX	Downhole Temperature	degF
TVD	True Vertical Depth	ft
WOBA	Weight on Bit, 1.0 ft Avg	klbs

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12815870	Directional	64.24	6.750	3.250

1	SRIG	12380940	Gamma	60.87	6.750	3.250
2	DIR	12546347	Directional	57.68	6.750	3.250
2	SRIG	12041109	Gamma	54.31	6.750	3.250
3	DIR	12042365	Directional	64.89	4.750	2.750
3	SRIG	12023982	Gamma	61.52	4.750	2.750
4	DIR	11814673	Directional	58.90	4.750	2.750
4	SRIG	12554661	Gamma	55.52	4.750	2.750

Service and Tool Mnemonics

Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

Comments

- 1.) Baker Hughes LWD run 1 utilized 6 3/4 inch NaviTrak Services (VSS, Directional) from 842 to 6250 ft. MD (842 to 6233 ft. TVD) and NaviGamma Services (VSS, Directional, Gamma Ray) from 6250 to 6563 ft. MD (6233 to 6535 ft. TVD) behind an 8 ¾ inch bit and steerable assembly.
- 2.) Baker Hughes LWD run 2 utilized 6 3/4 inch NaviGamma Services (VSS, Directional, Gamma Ray) from 6535 to 7237 feet MD (6535 to 6951 feet TVD) behind an 8 3/4 inch bit and steerable assembly.
- 3.) Baker Hughes LWD runs 3 and 4 utilized 4 3/4 inch NaviGamma Services (VSS, Directional, Gamma Ray) from 7237 to 17028 feet MD (6951 to 7156 feet TVD) behind an 6 1/8 inch bit and steerable assembly.
- 4.) A sliding indicator is shown on the left edge 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.
- 5.) 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.

Remarks

Number	Measured Depth (ft)	Hole Section (in.)	LWD Run No.	Remark
1	6580	8.750	2	The interval from 6500 to 6561 feet MD (6477.55 to 6534.75 feet TVD) was logged up to 17 hours after being drilled due to a trip out of the hole to lay down the vertical/curve assembly and to pick up a curve assembly.
2	7205	6.125	3	The interval from 7177 to 7237 feet MD (6948.34 to 6953.50 feet TVD) was logged up to 39.0 hours after being drilled due to a trip out of the hole to lay down the curve assembly, perform casing operations, and to pick up a lateral assembly.
3	16003	6.125	3	The interval from 16003 to 16065 feet MD (7138 to 7139 feet TVD) was logged up to 12 hrs after being drilled due to circulating out gas kick.
4	16197	6.125	4	The interval from 16197 to 16259 feet MD (7143 to 7146 feet TVD) was logged up to 46.5 hrs after being drilled due trip out of hole to swap out motor, mwd, and bit after ROP went to zero.
5	16997	6.125	4	The interval from 16968 to 17028 feet MD (7155 to 7156 feet TVD) does not contain gamma ray logging data due to the bit to sensor offset.



Company : Anadarko

Well : Jester 41N-A14HZ

Interval : 6125.00 - 17055.00 feet

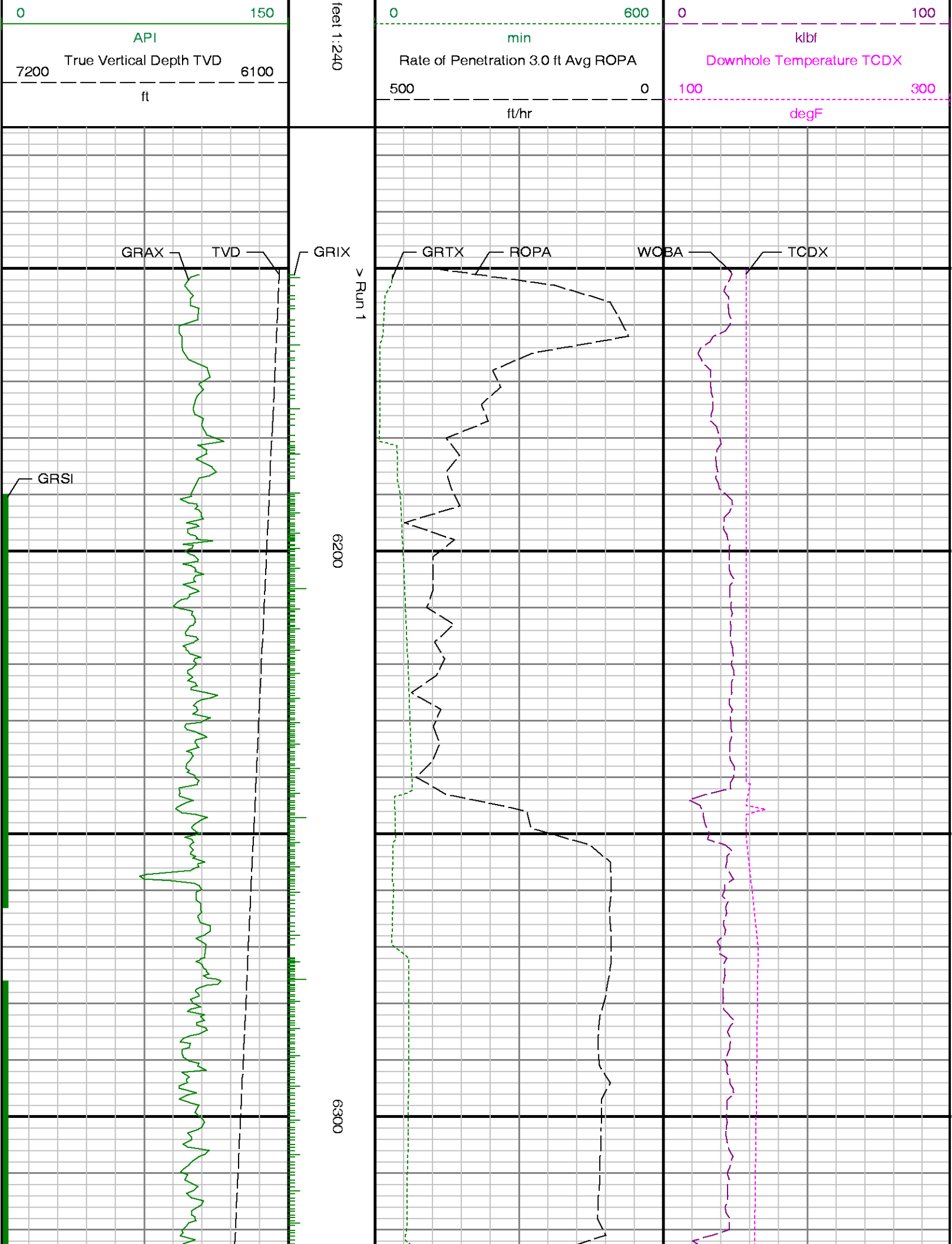
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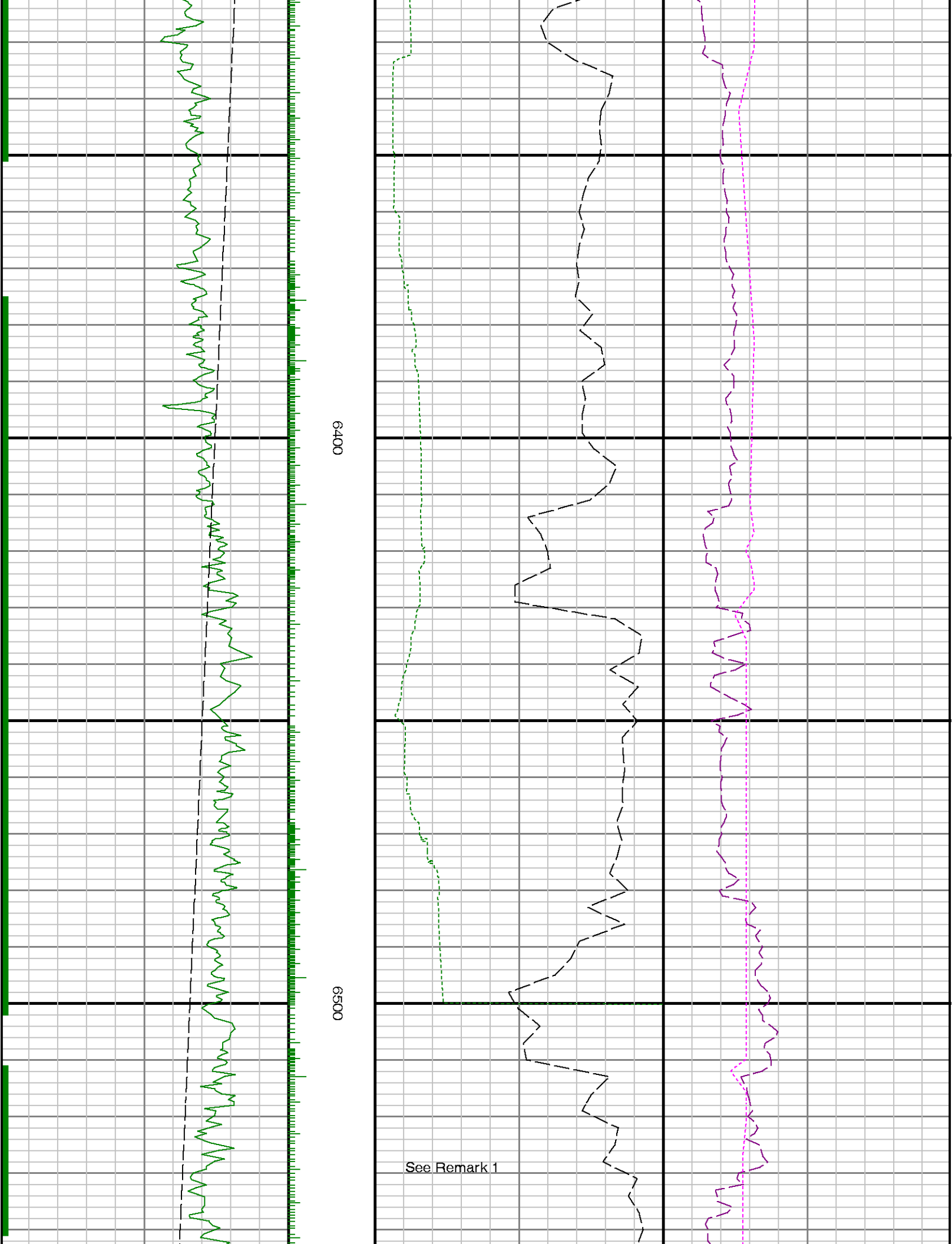
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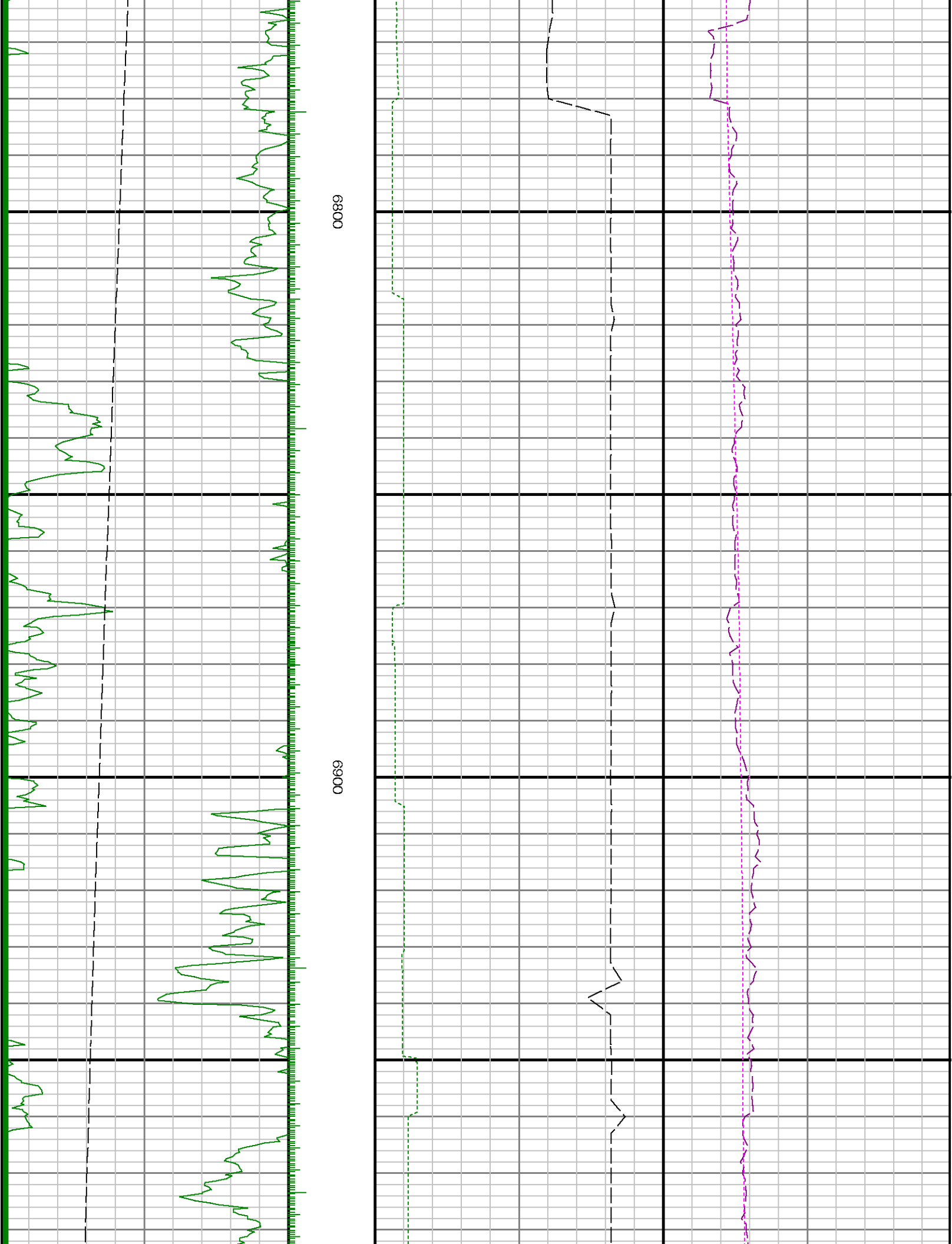
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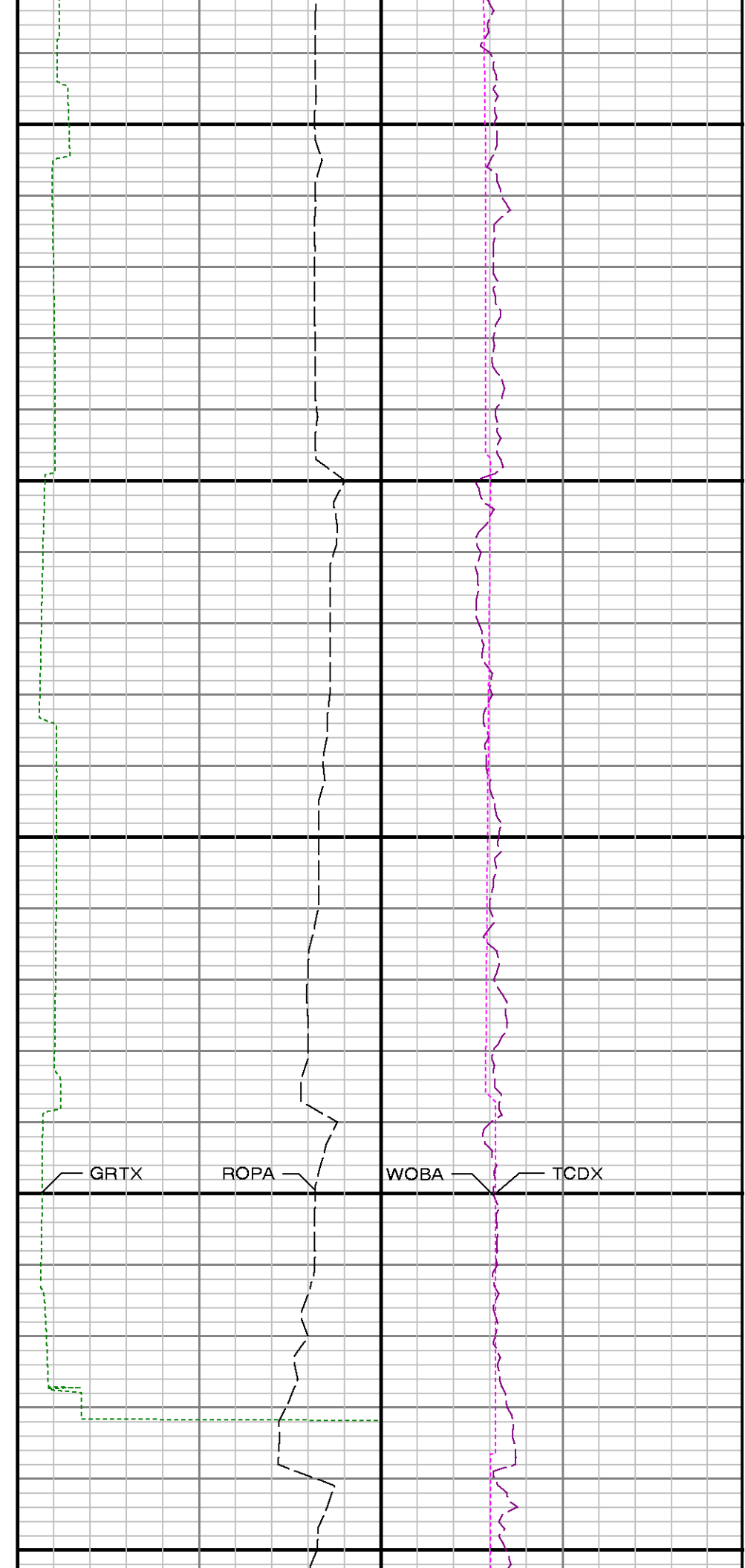
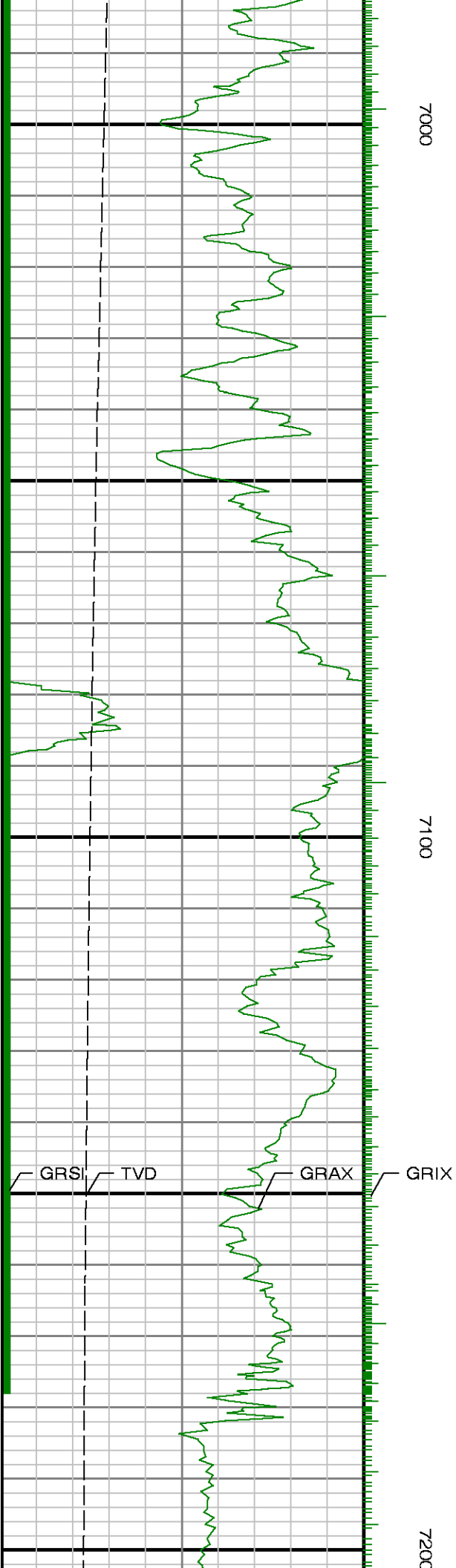
Gamma Time Since Drilled GRTX

Surface Weight On Bit 1.0 ft Avg WOBA









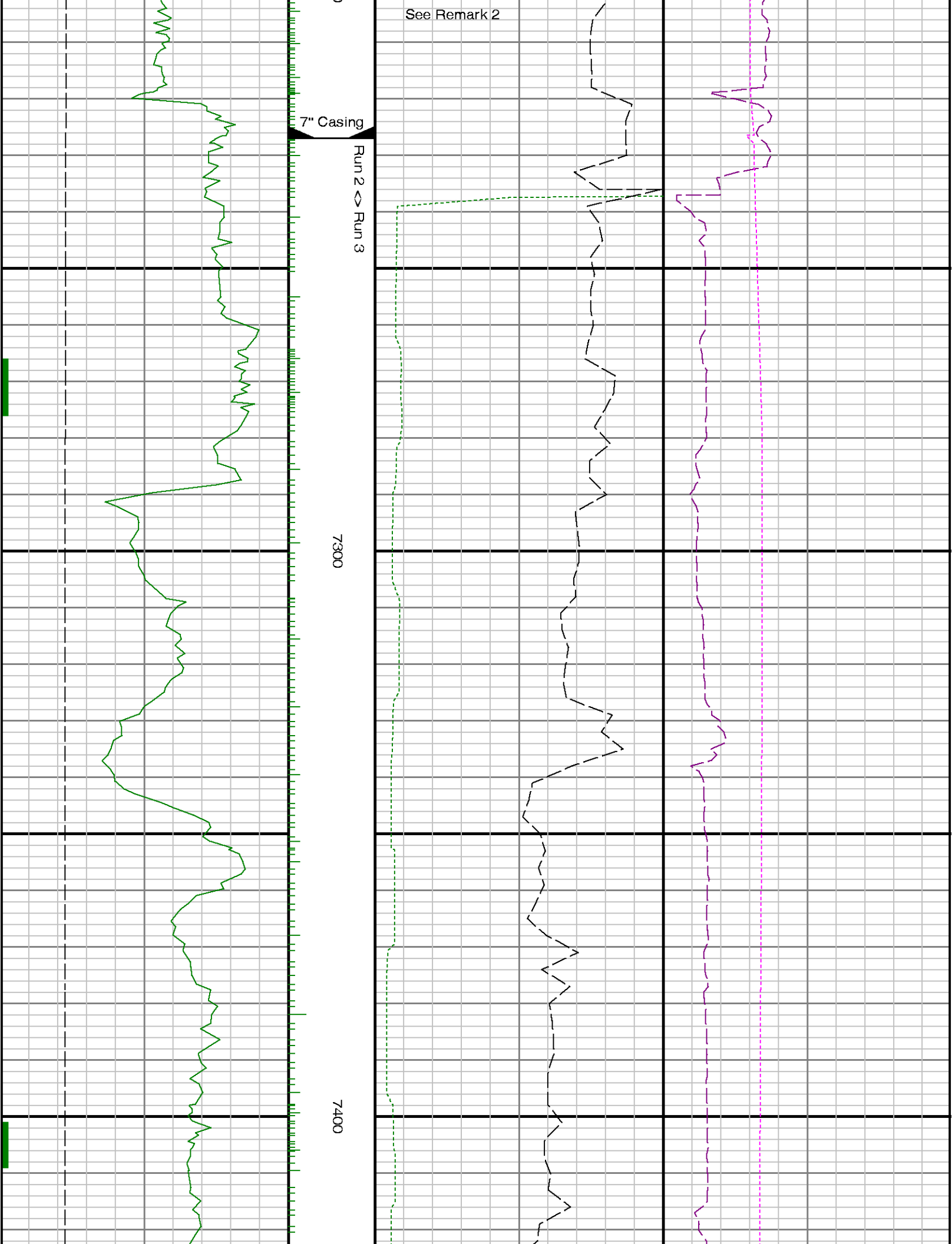
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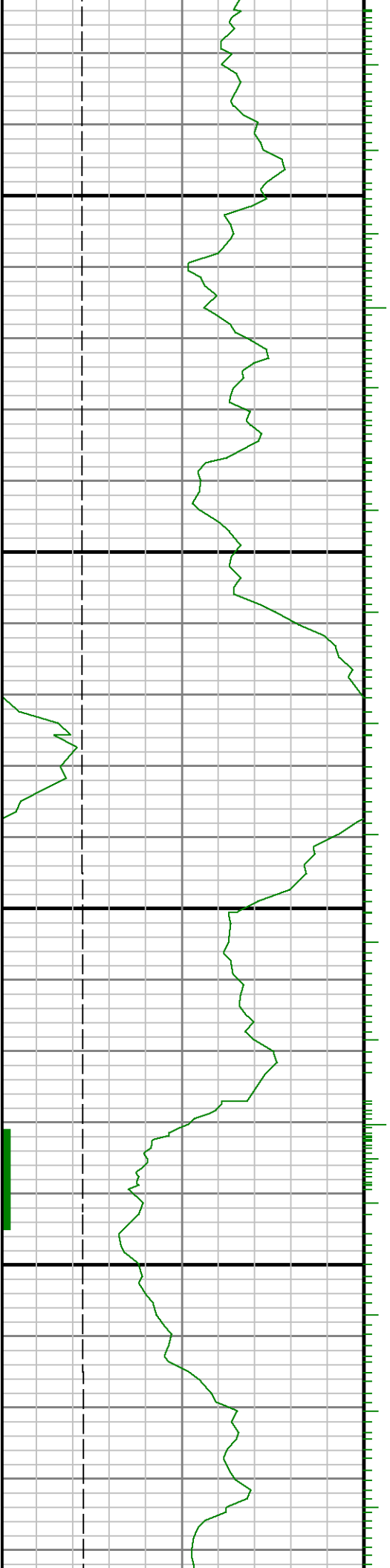
7" Casing

Run 2 <=> Run 3

7300

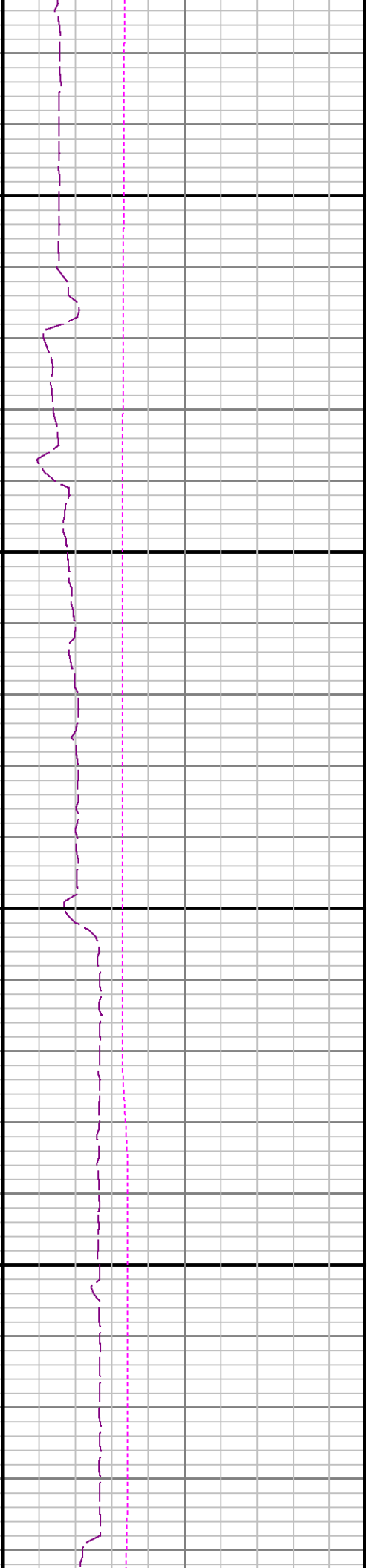
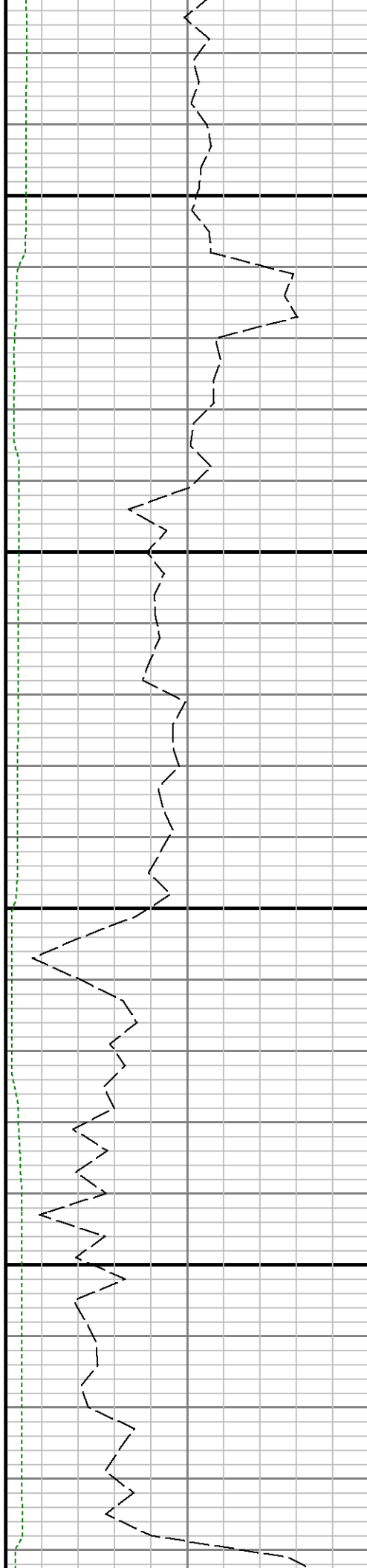
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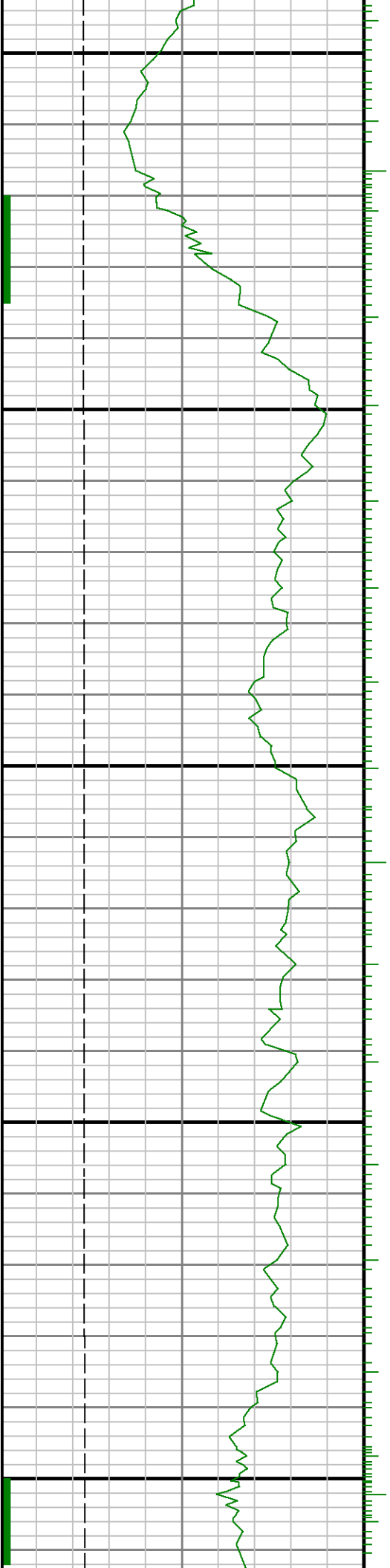




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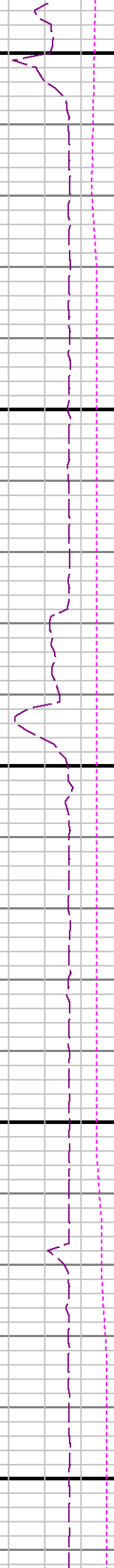
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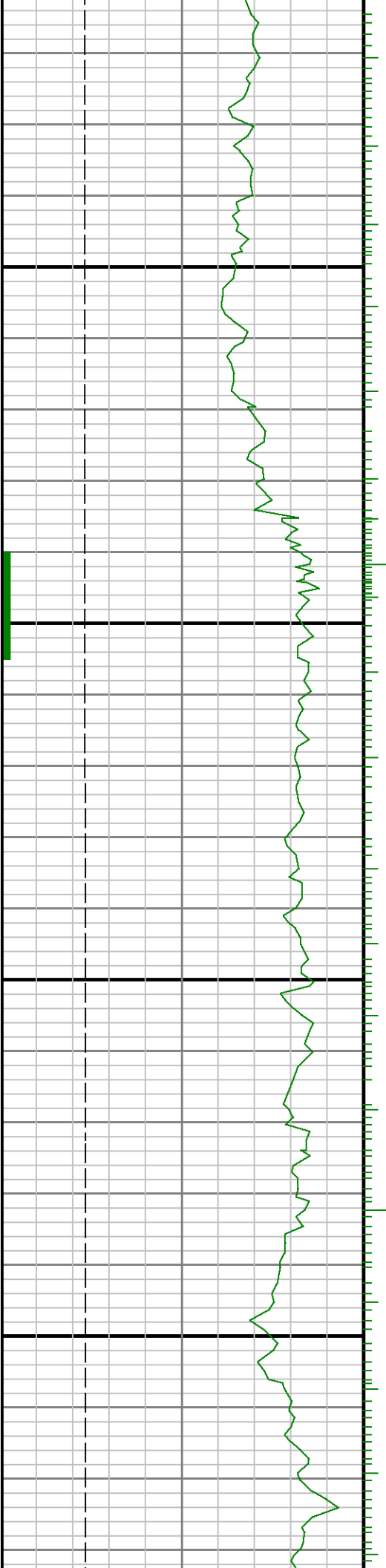




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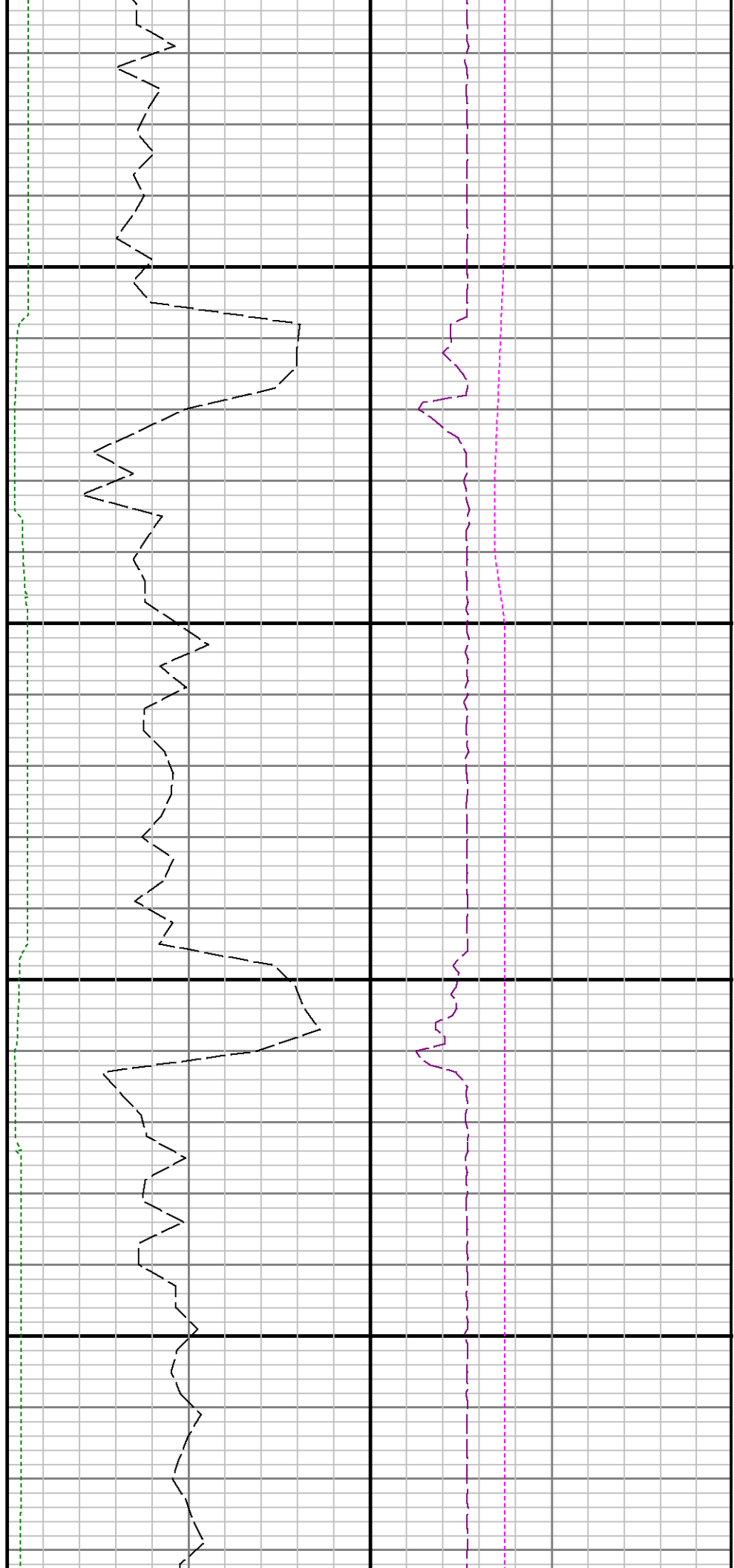
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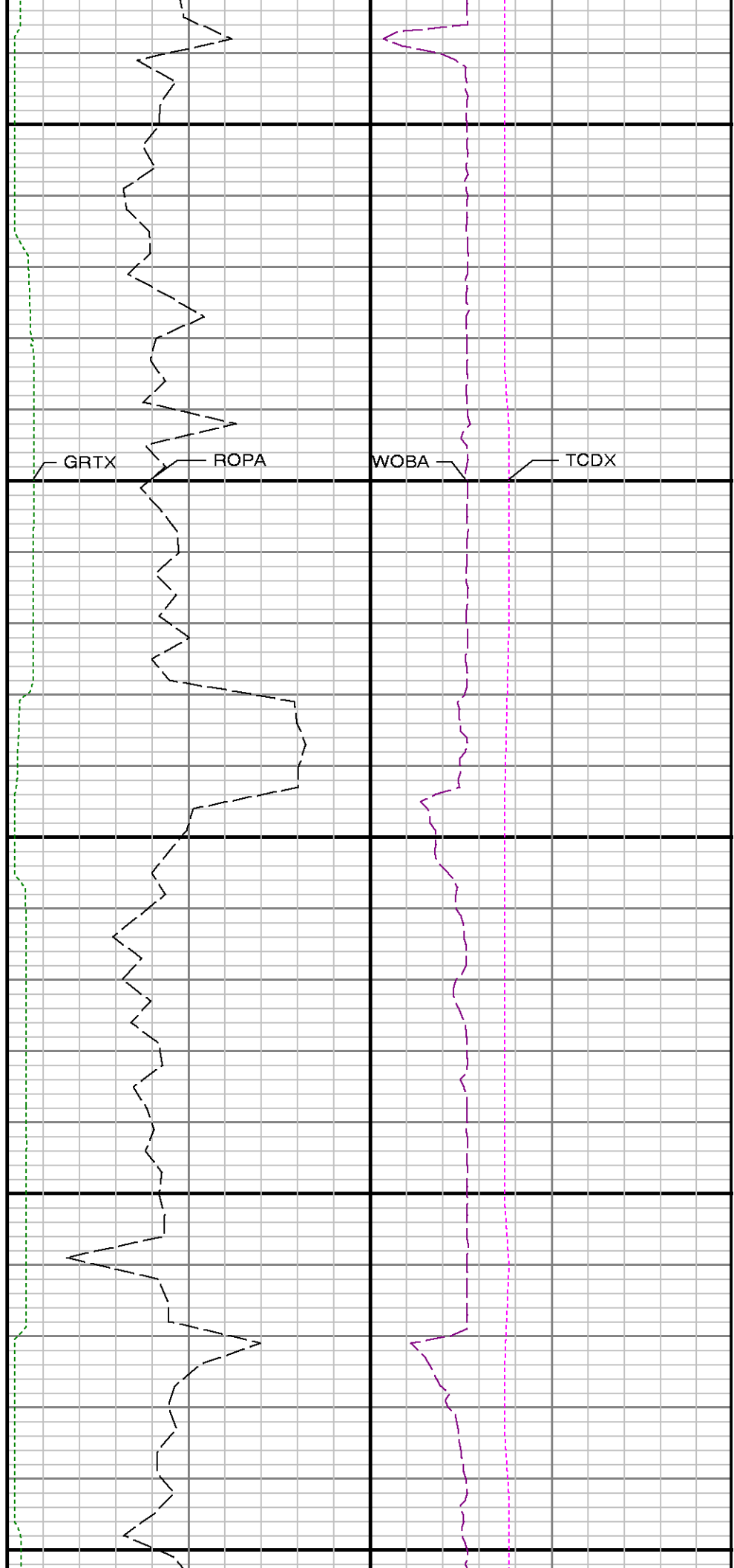
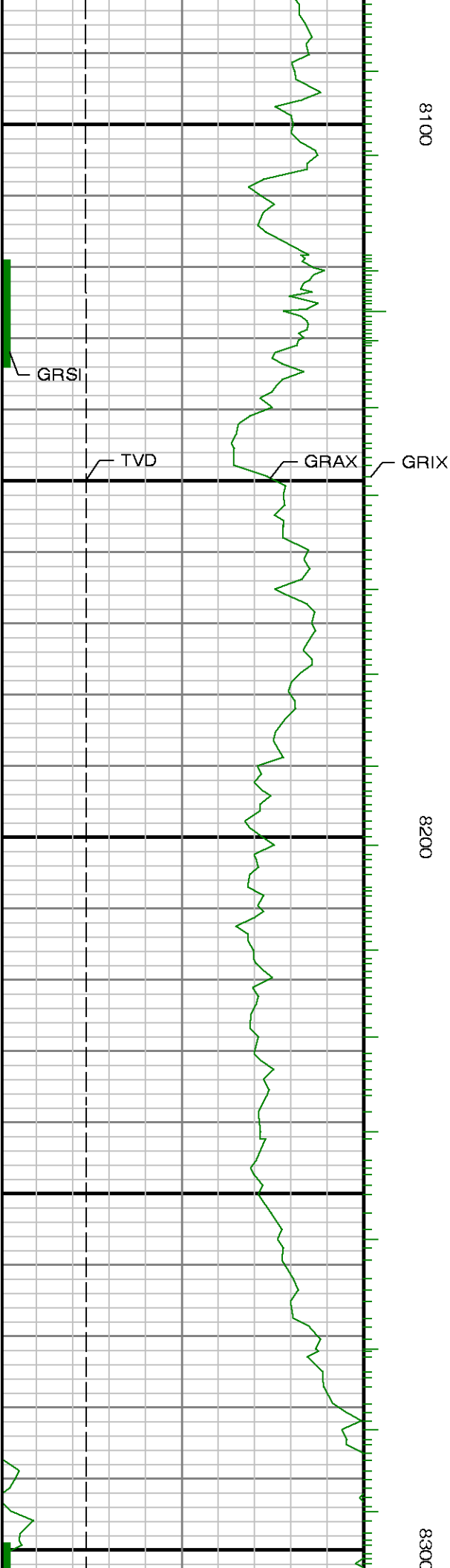


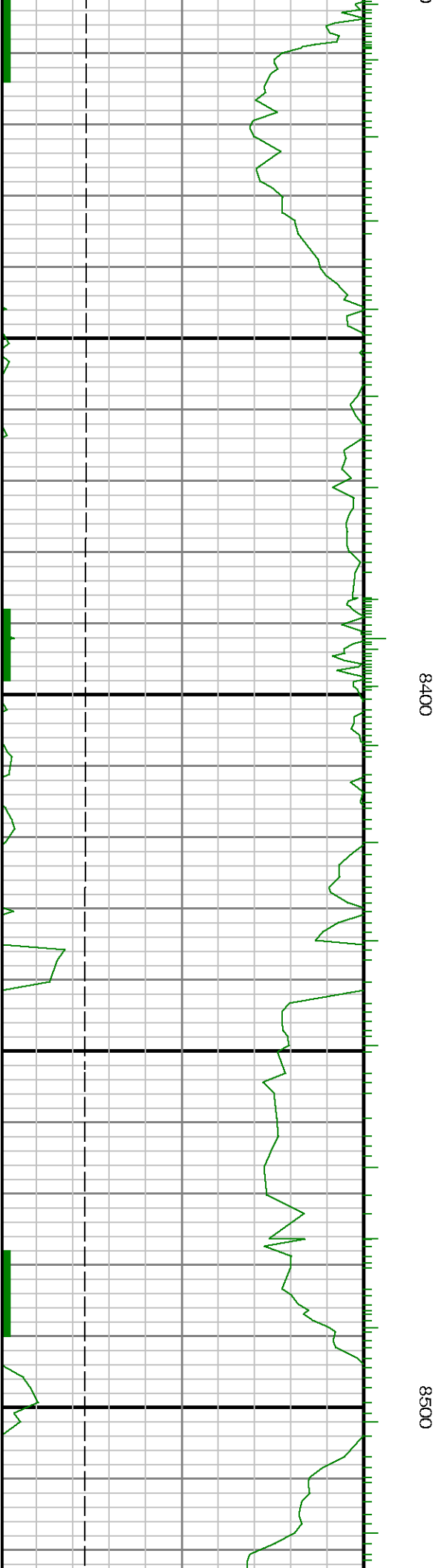
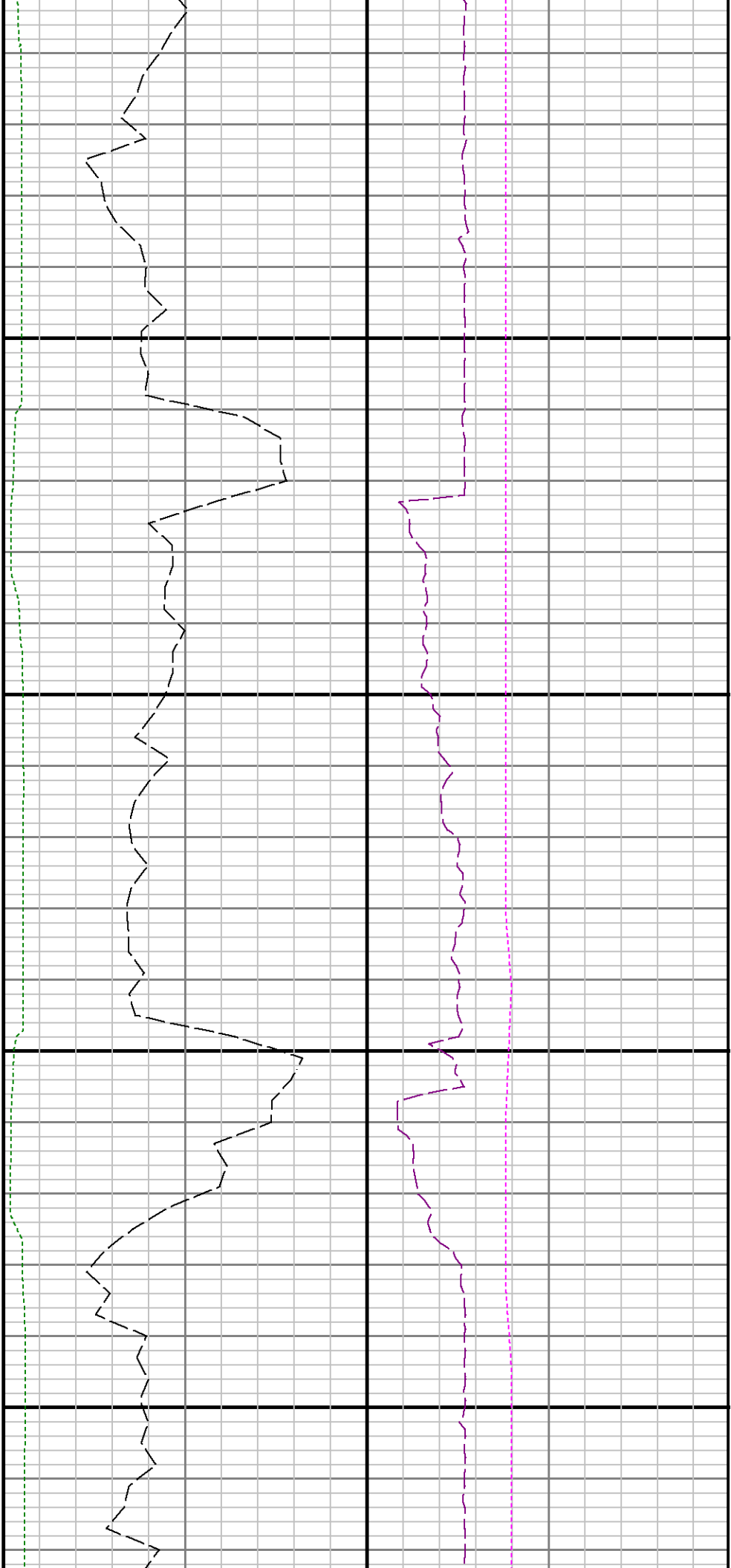


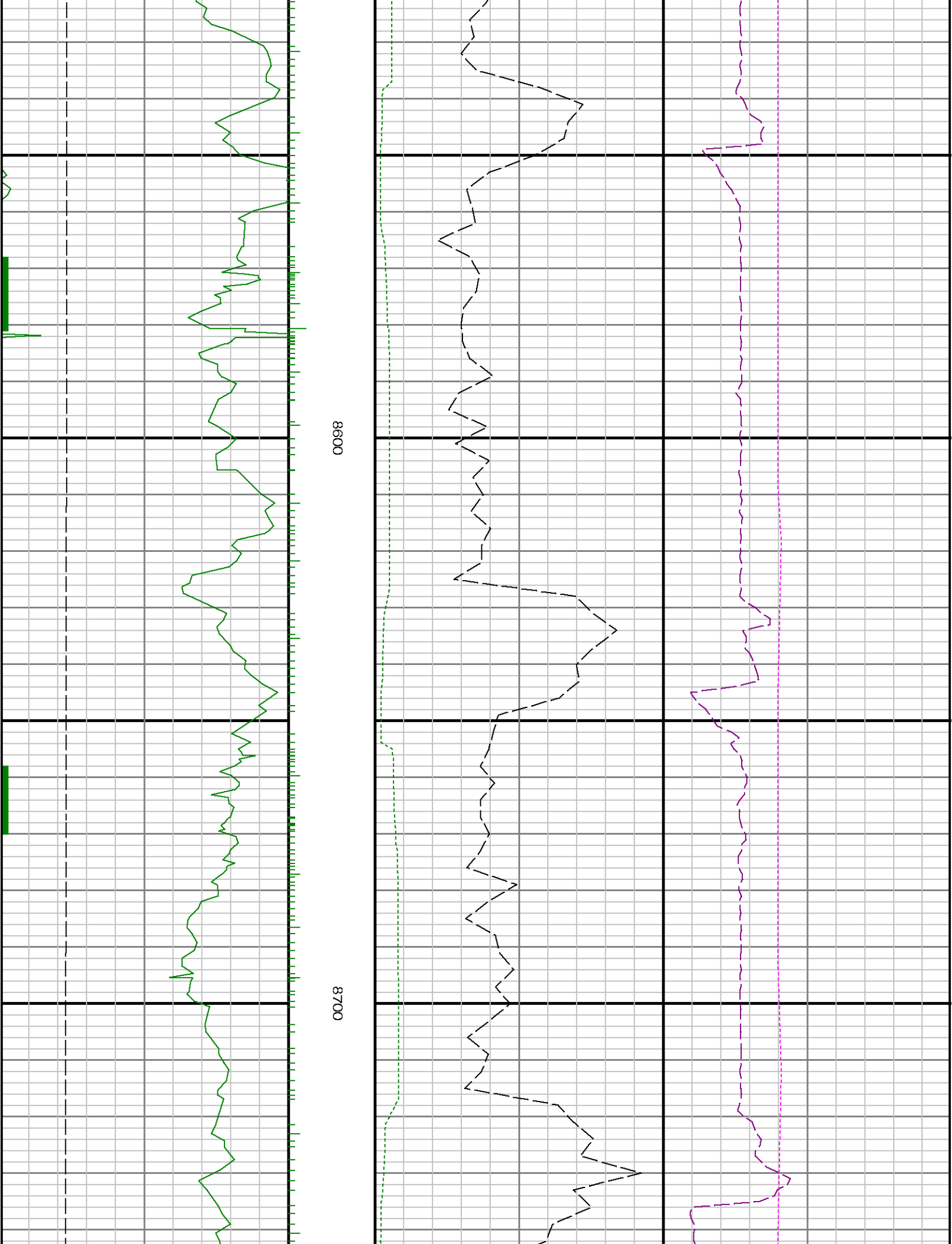
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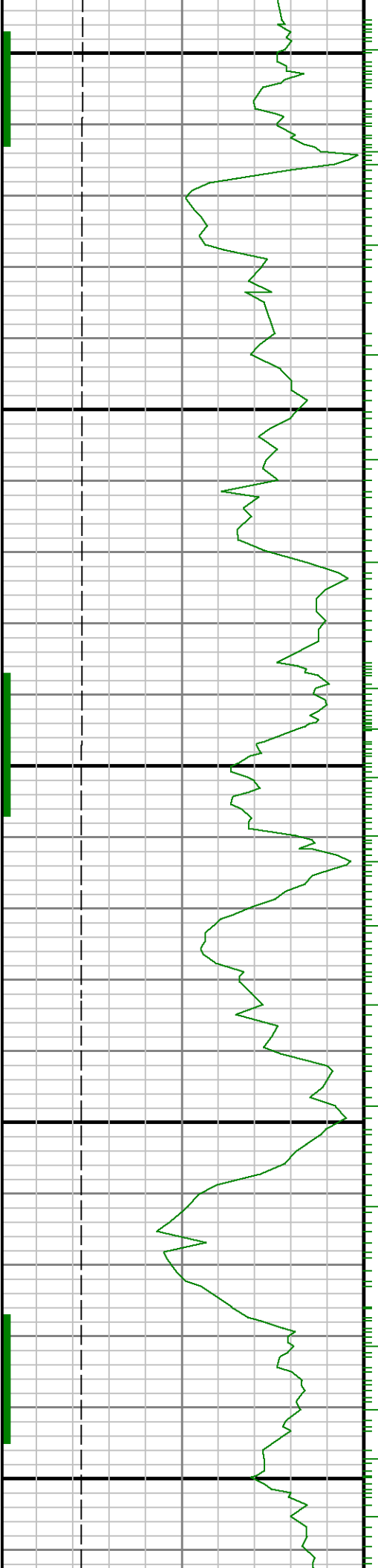
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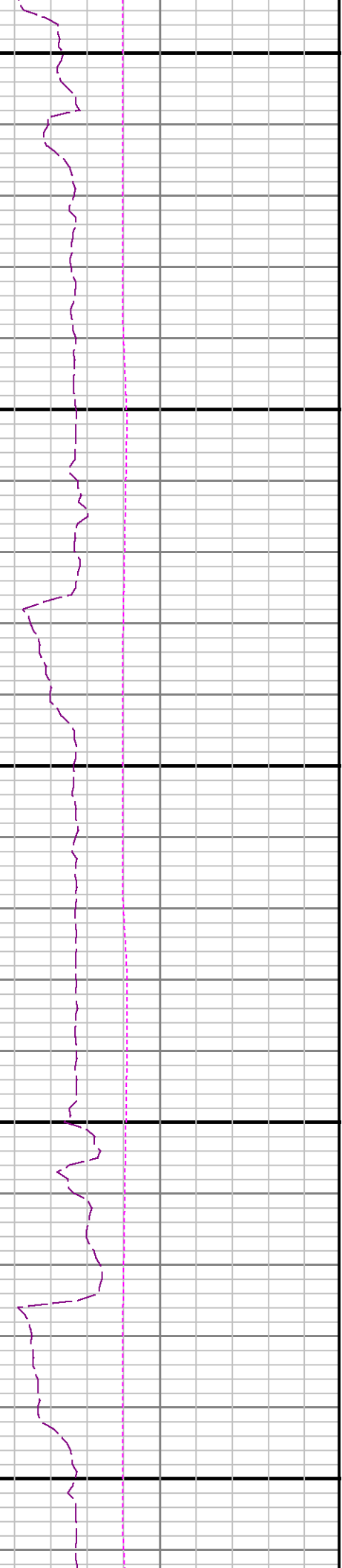
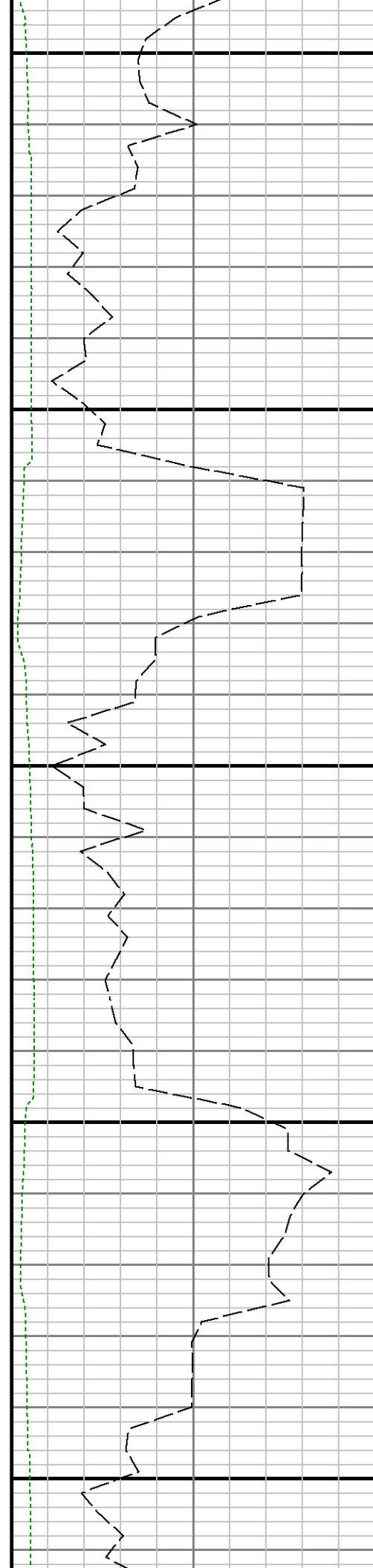


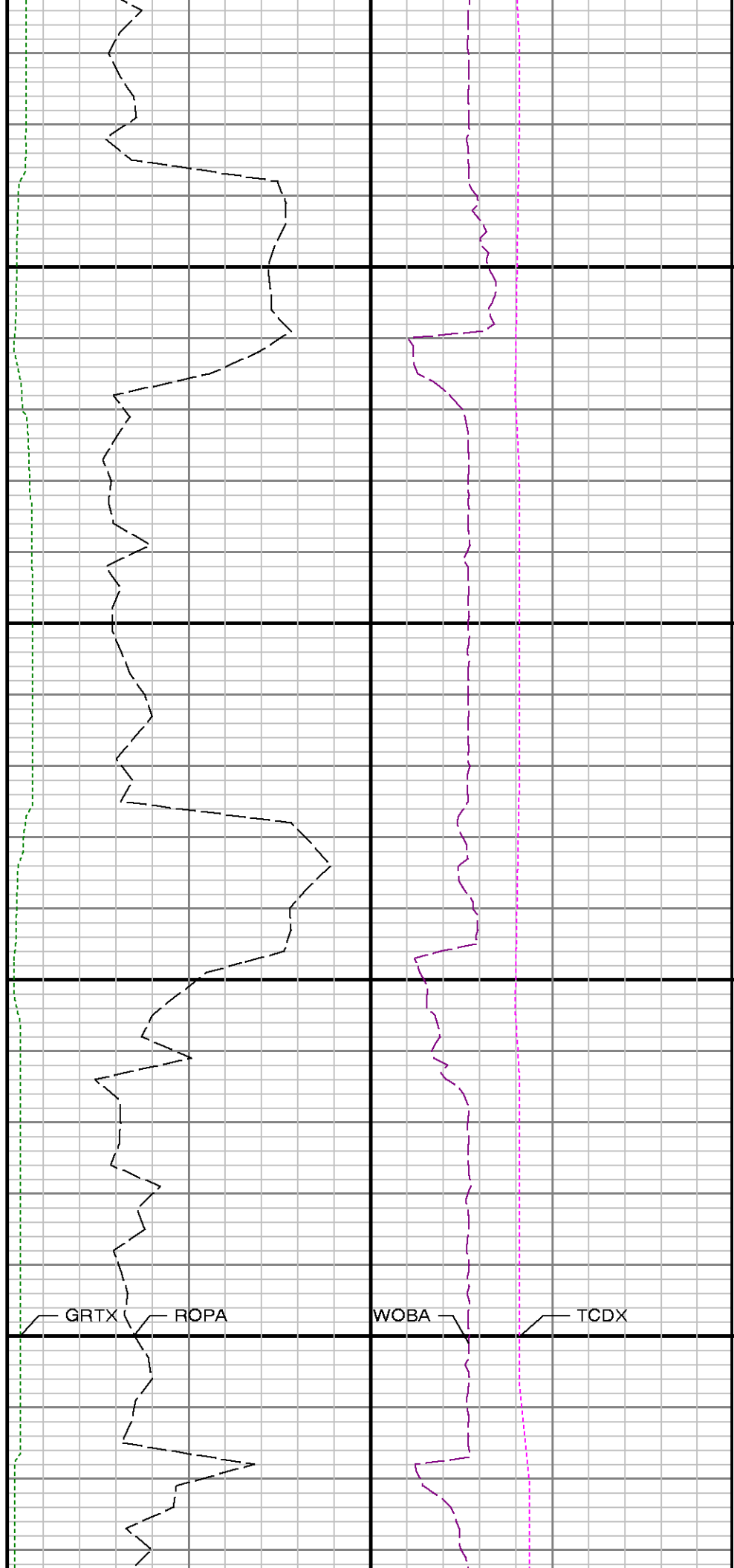
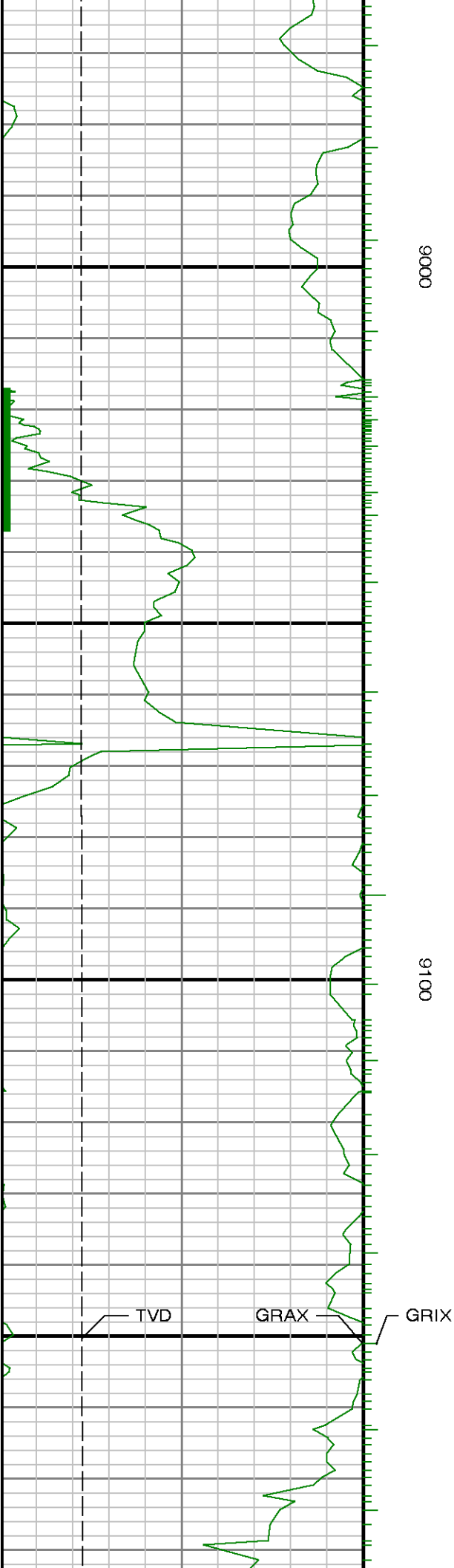


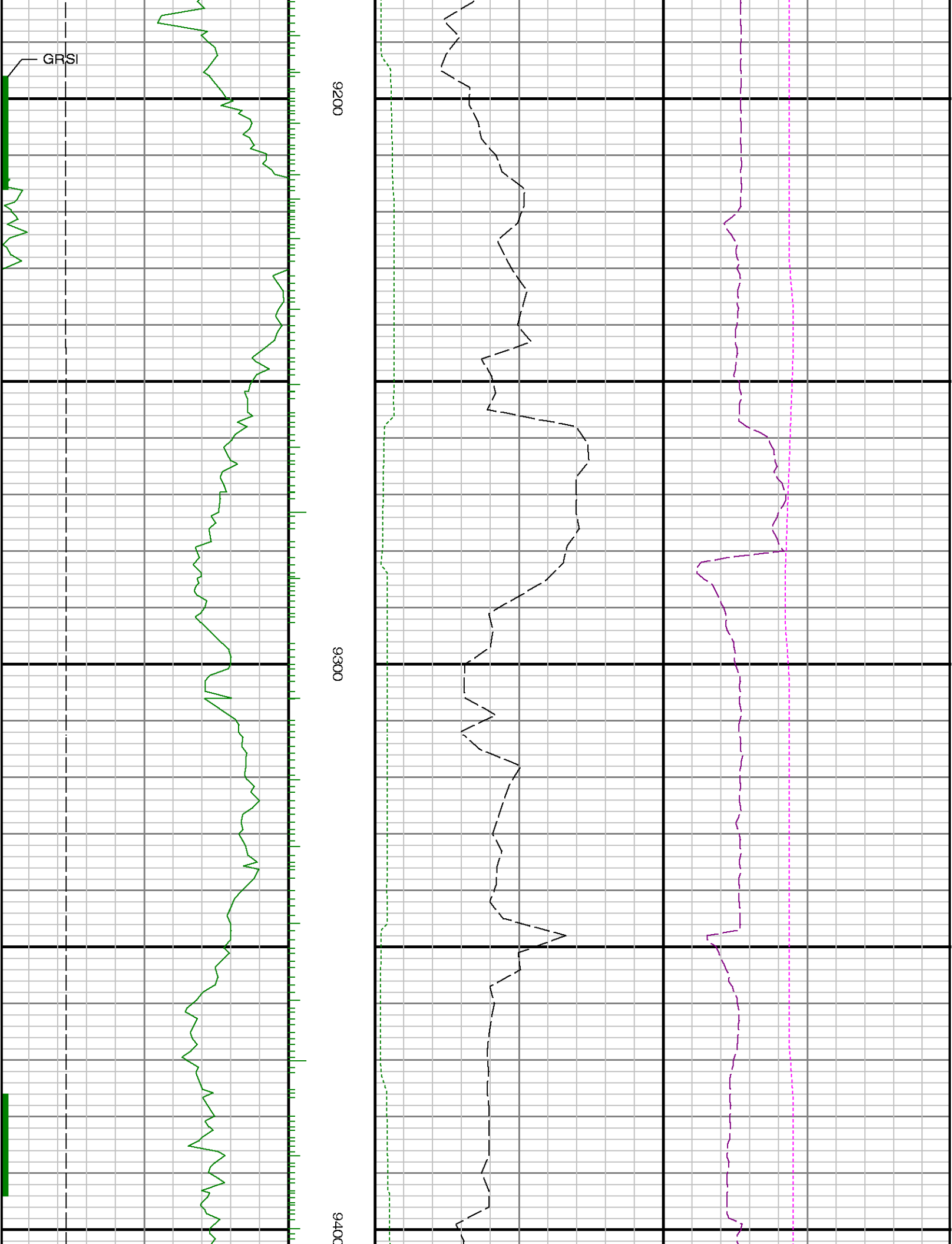


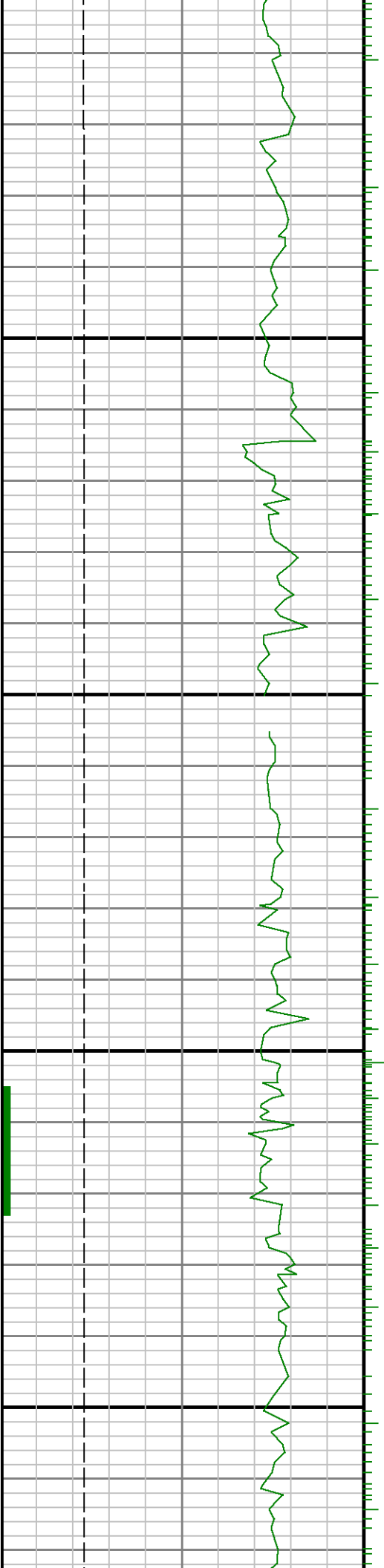
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8900



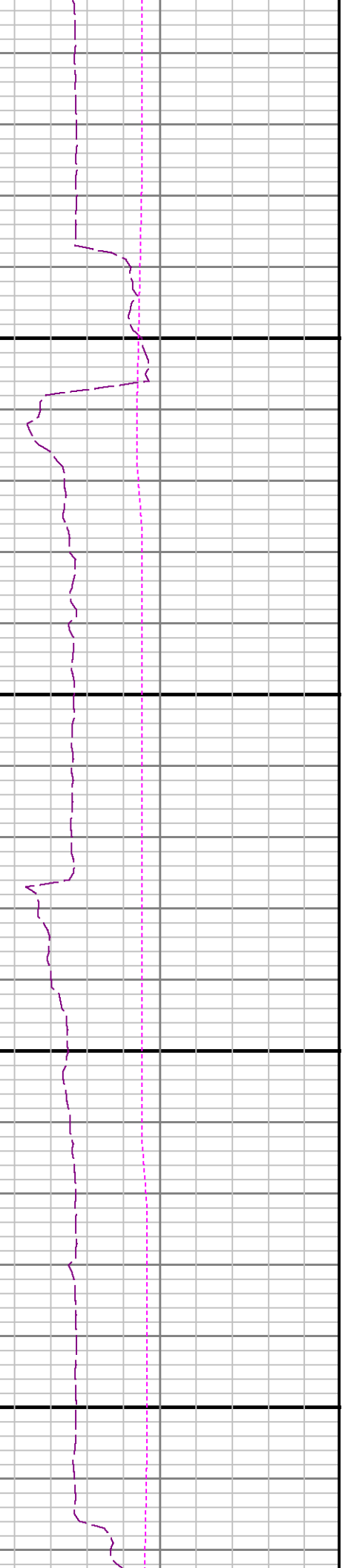
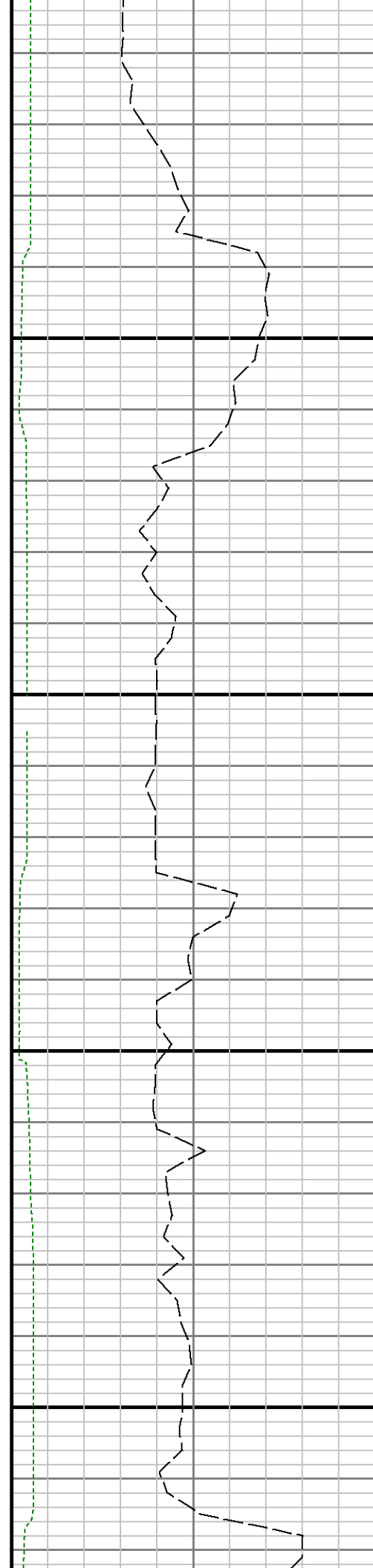


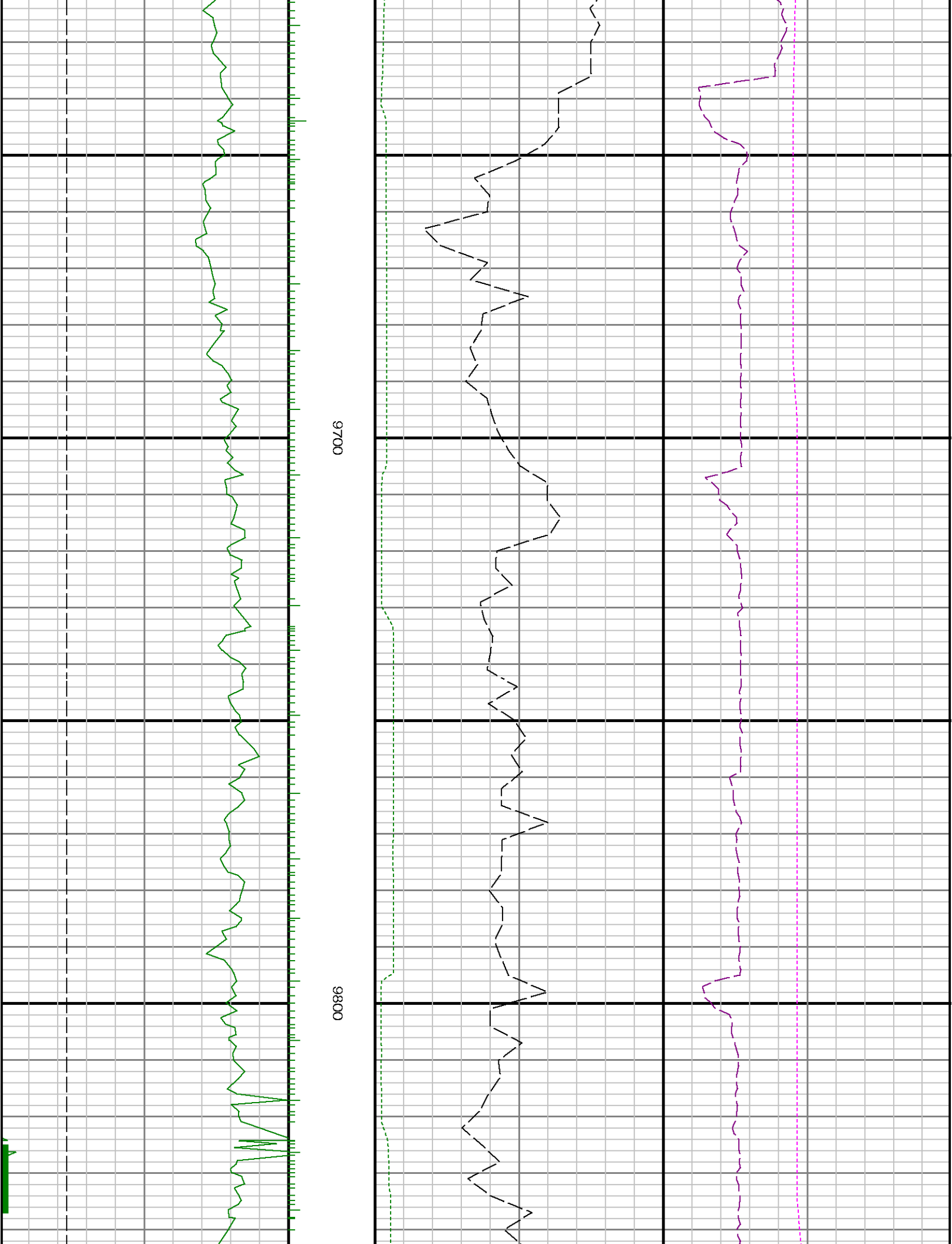




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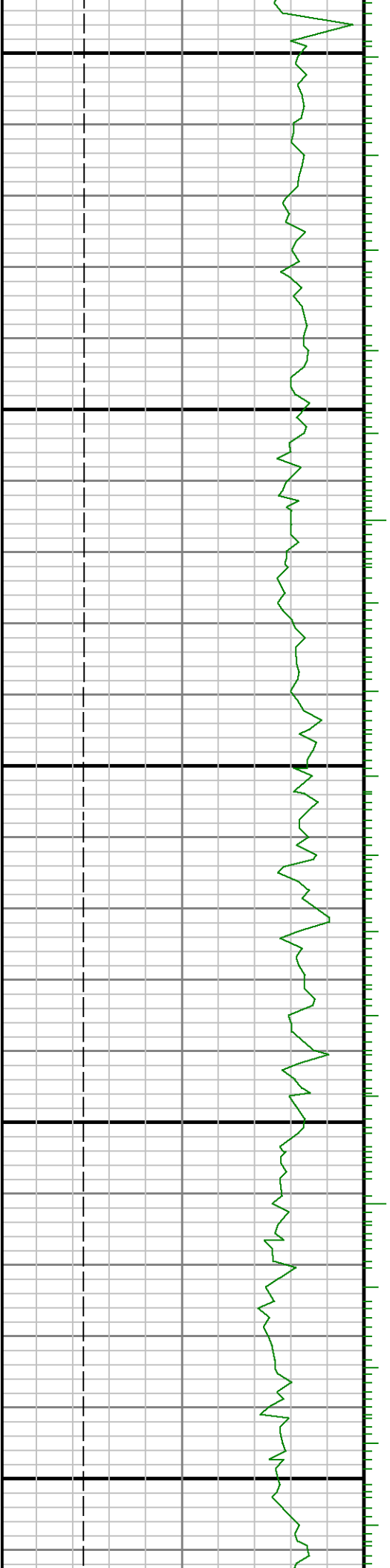


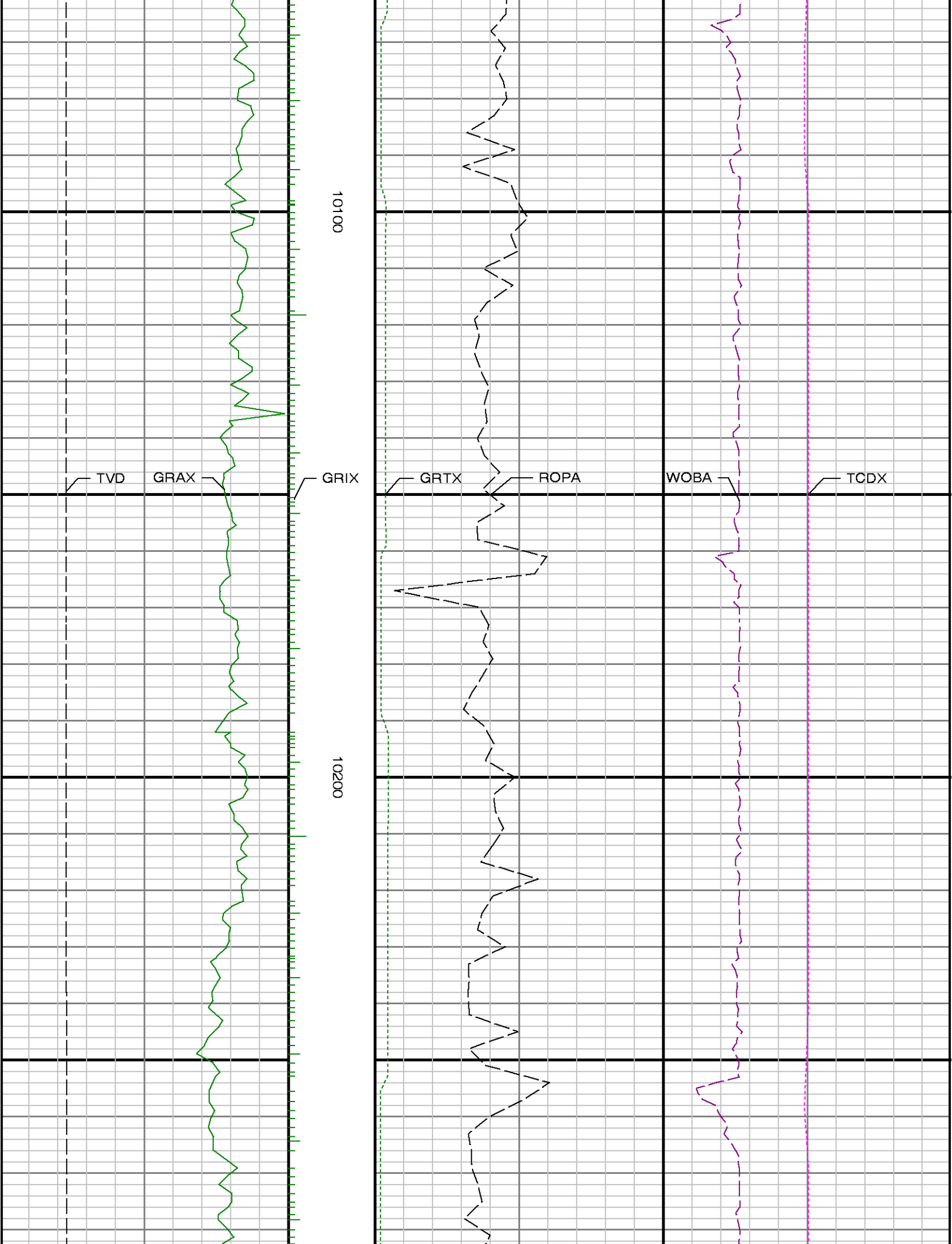


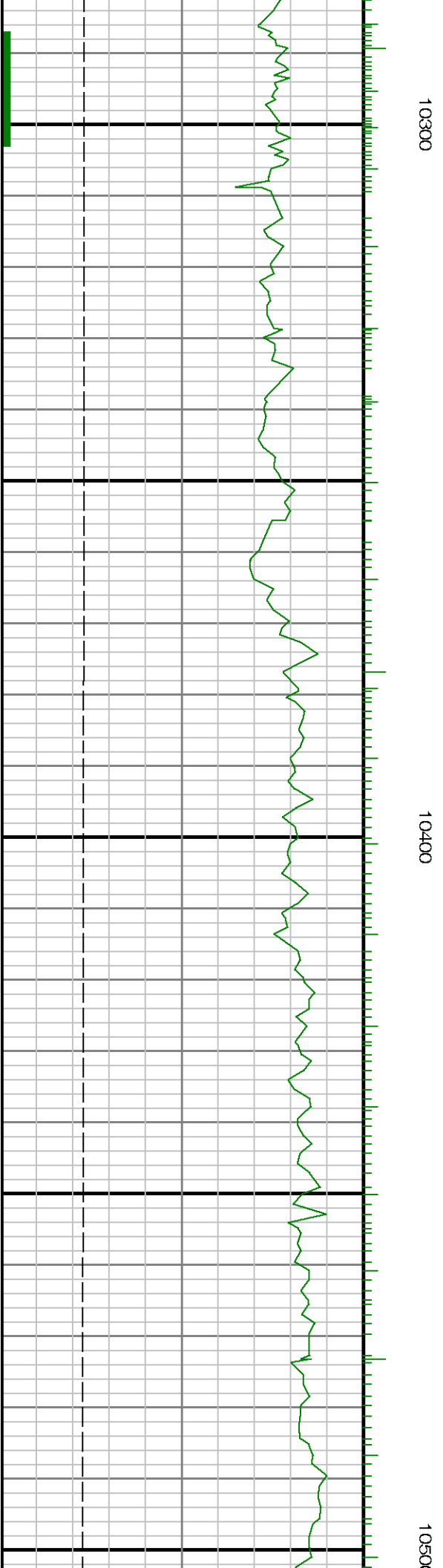
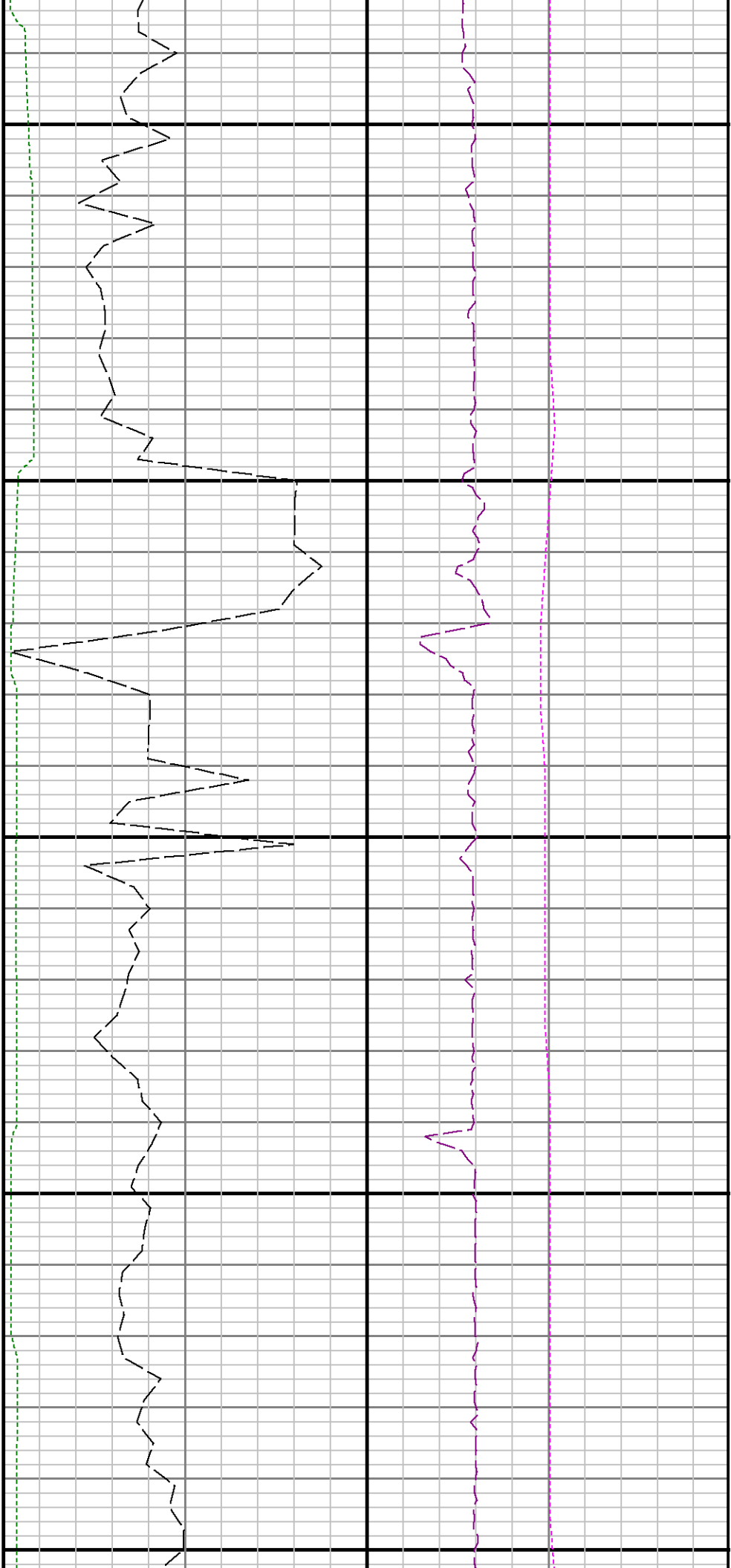


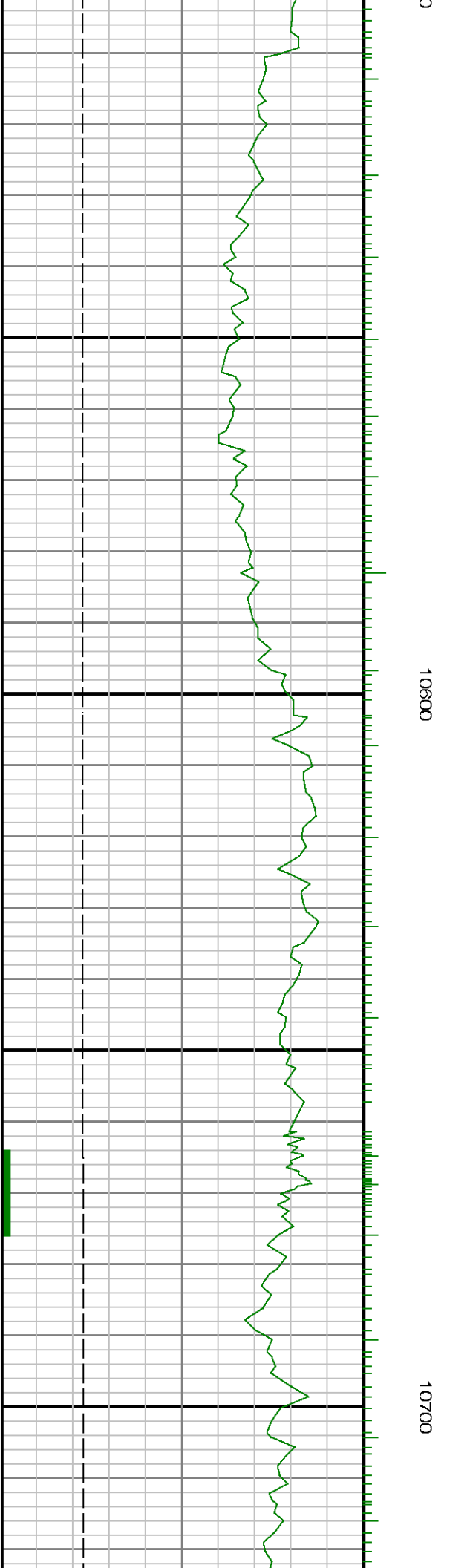
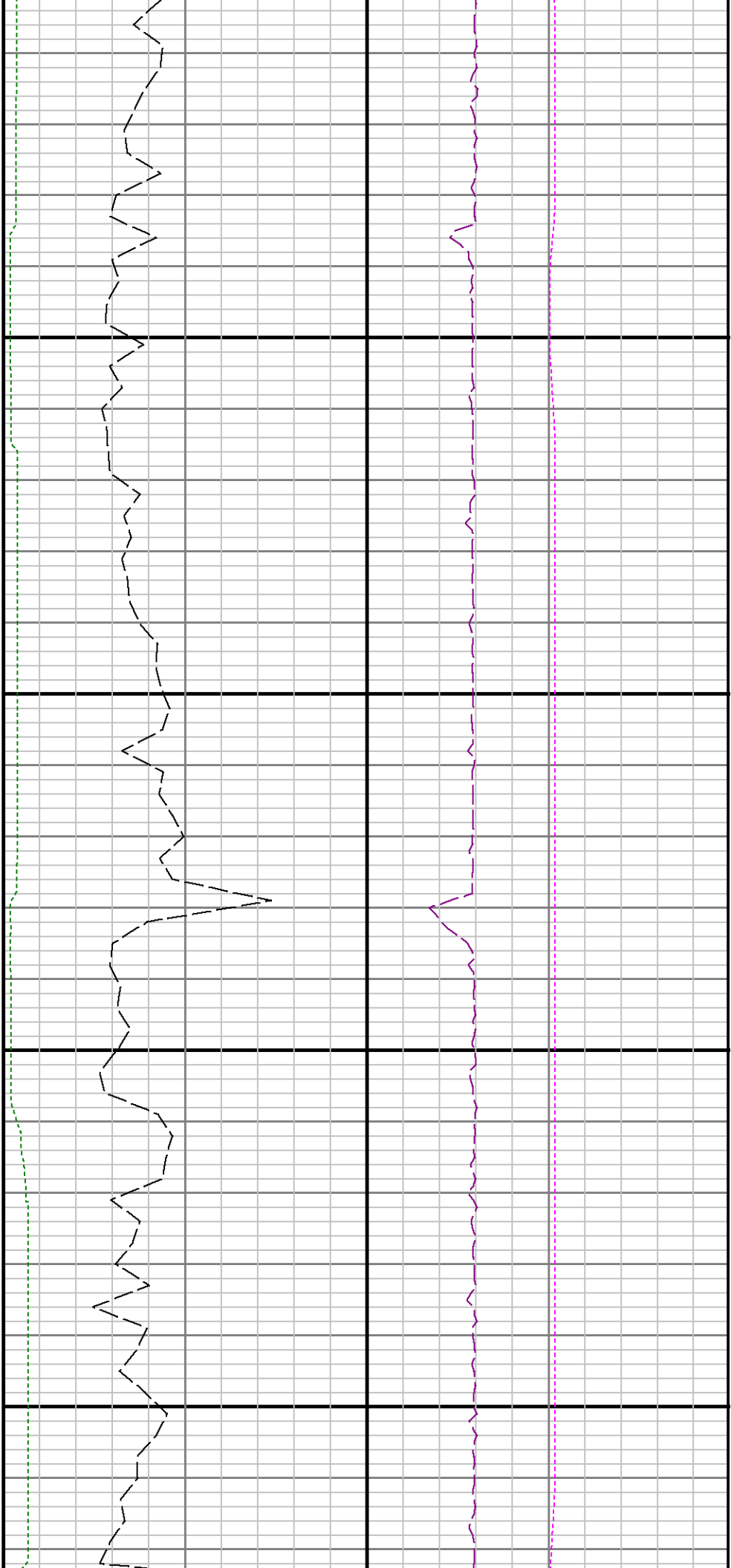
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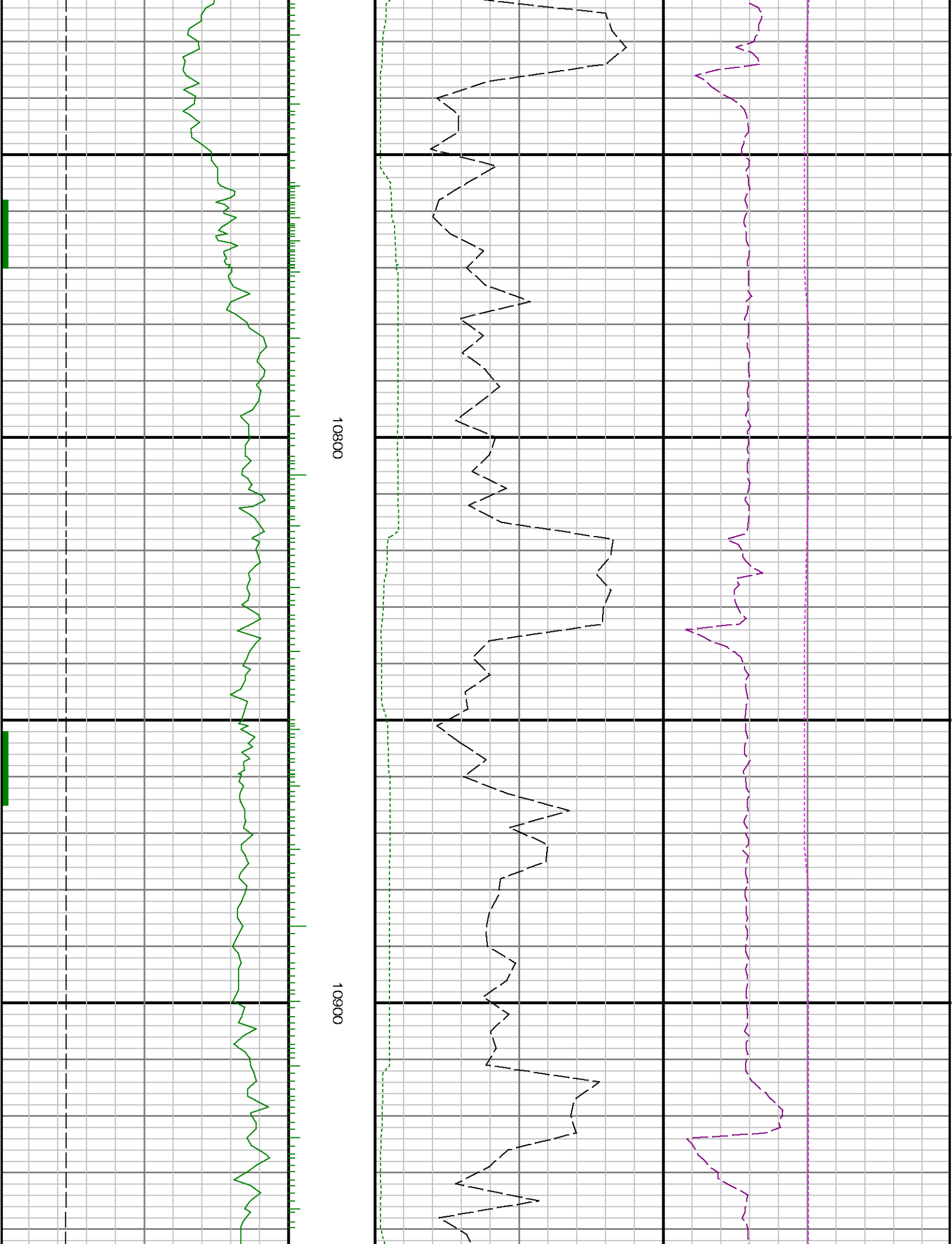
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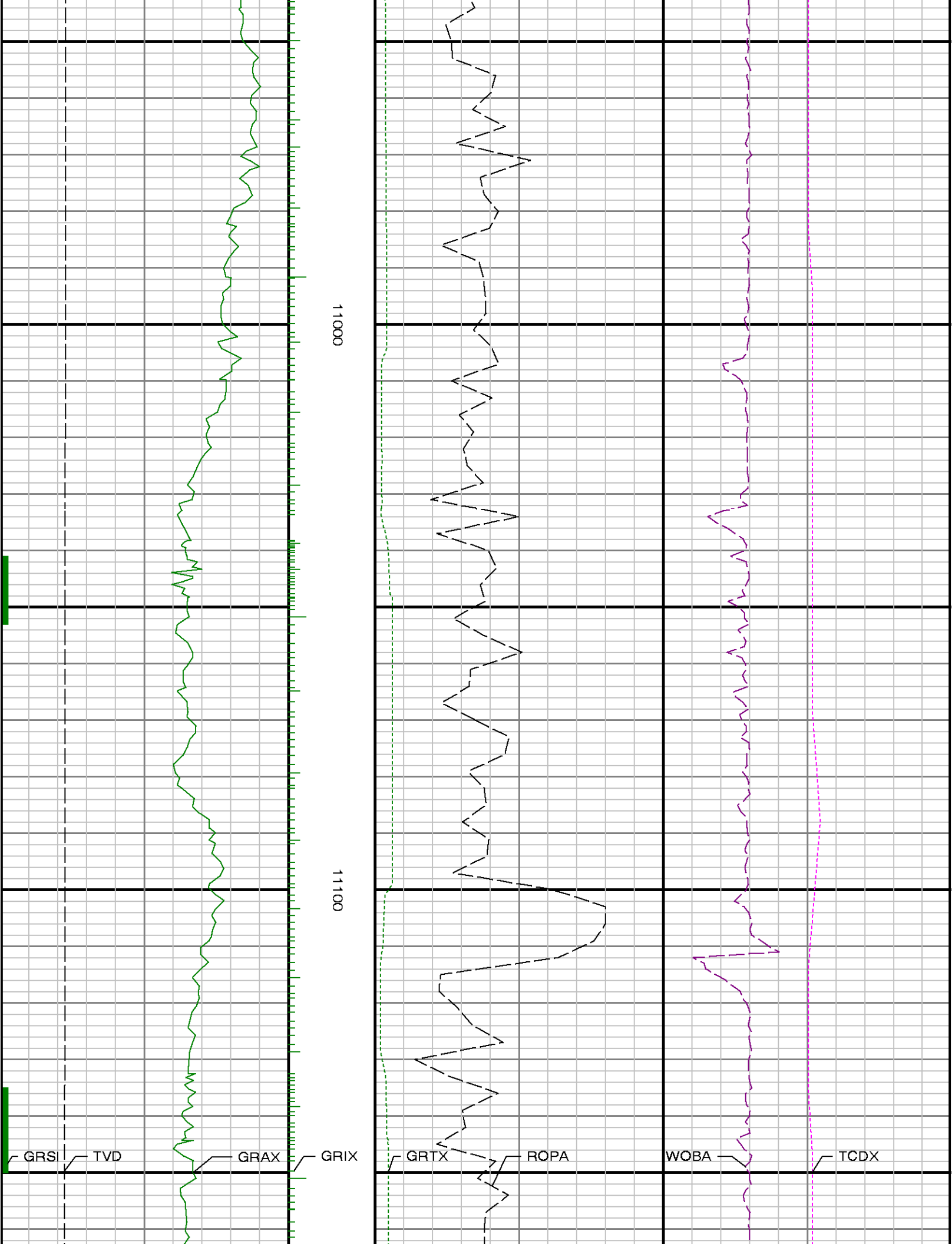


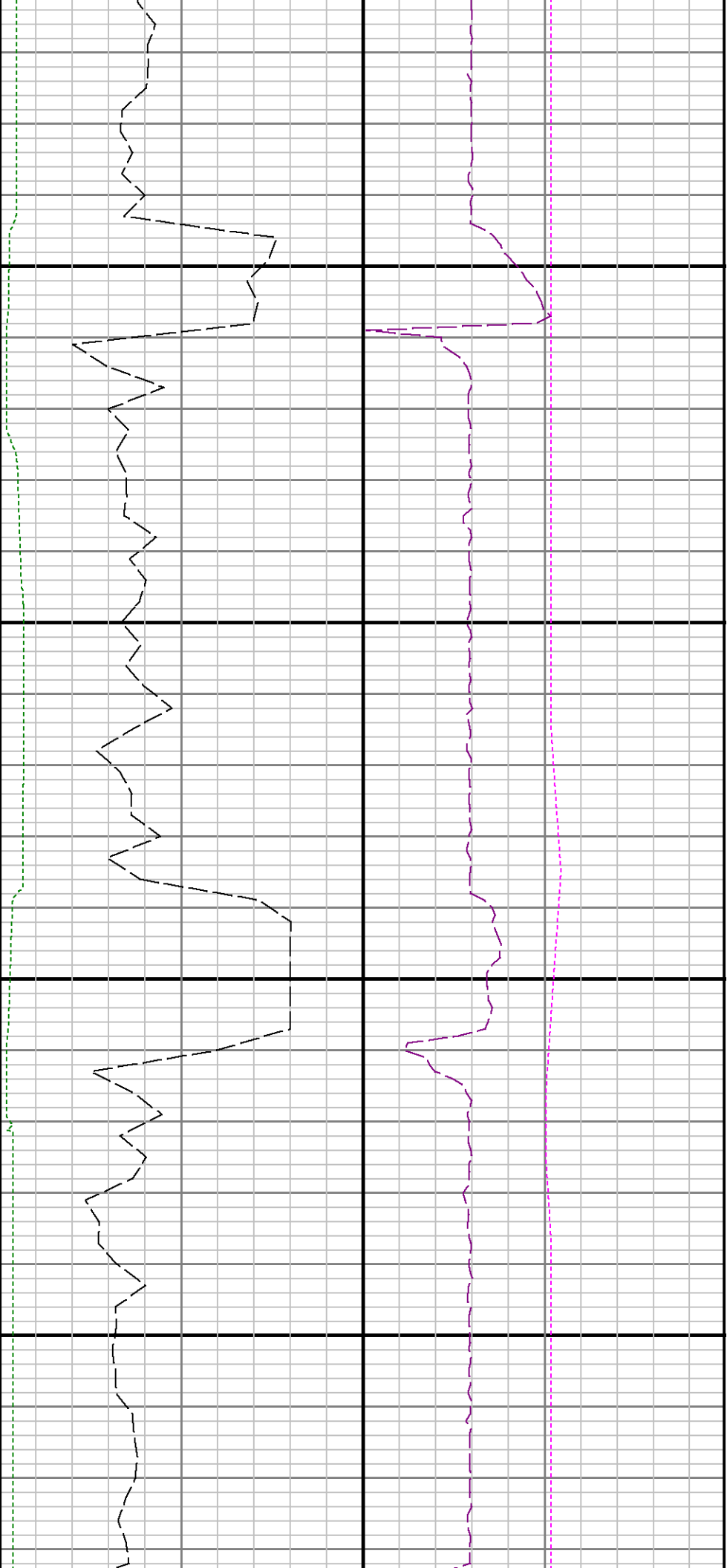






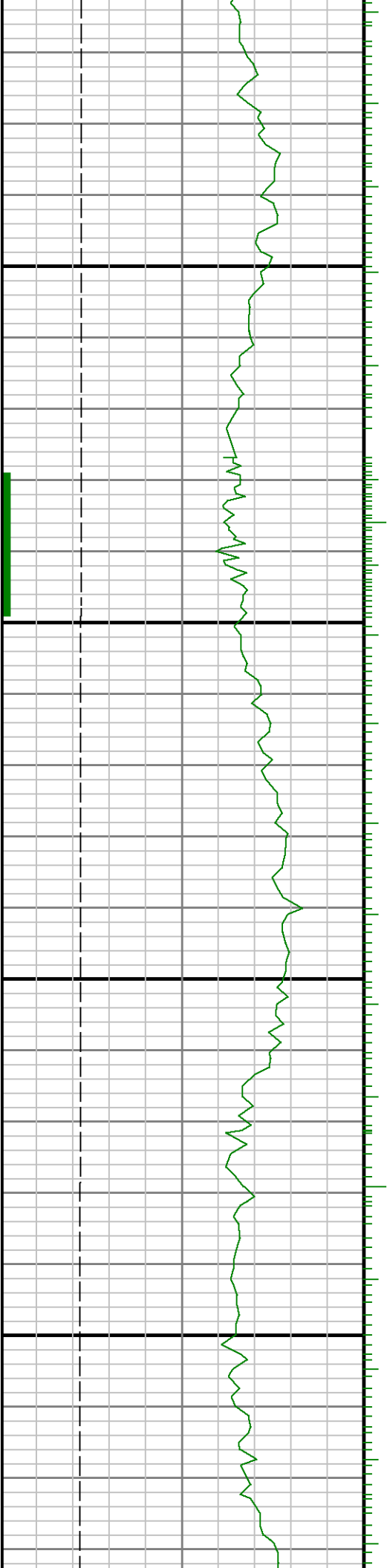


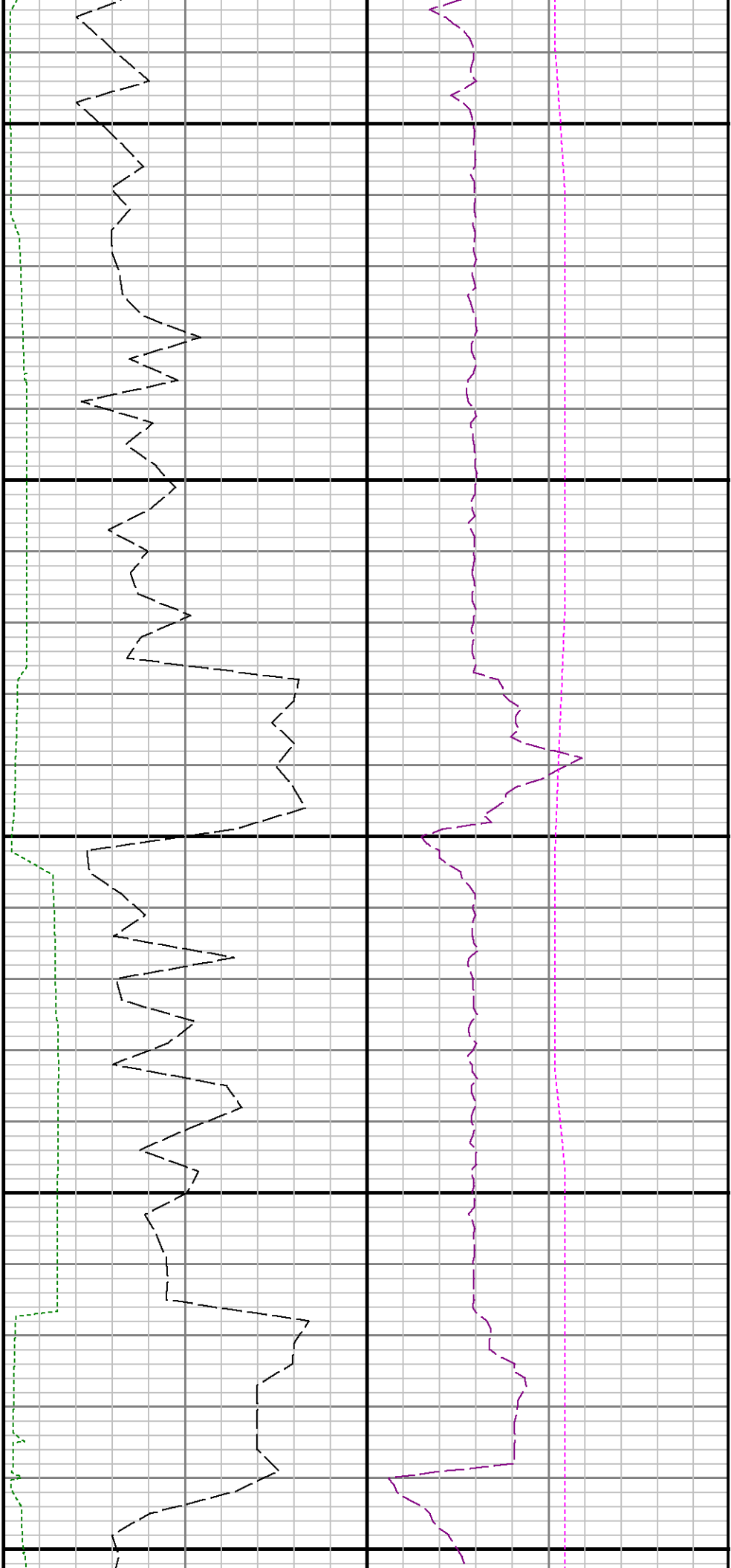




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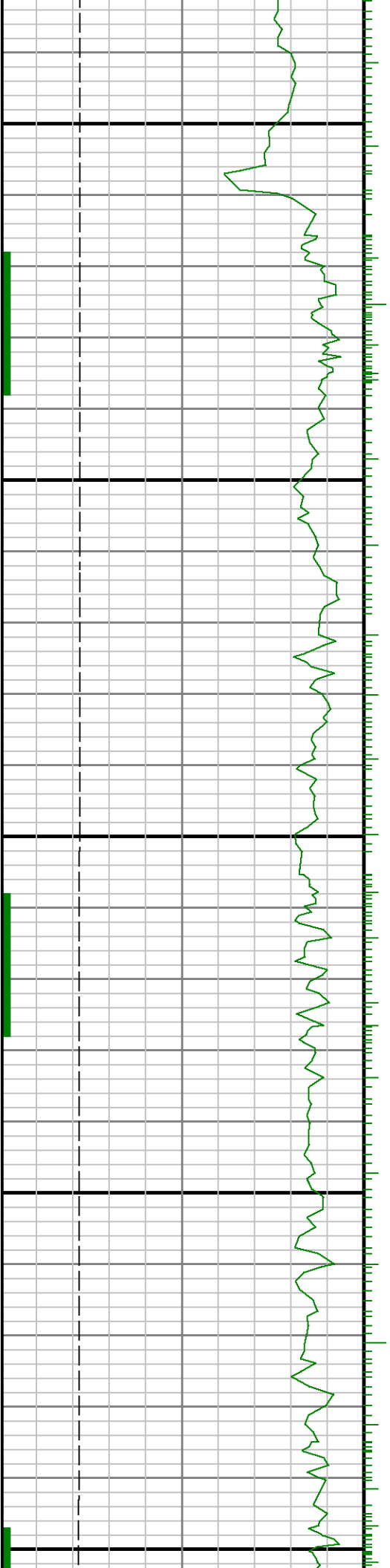


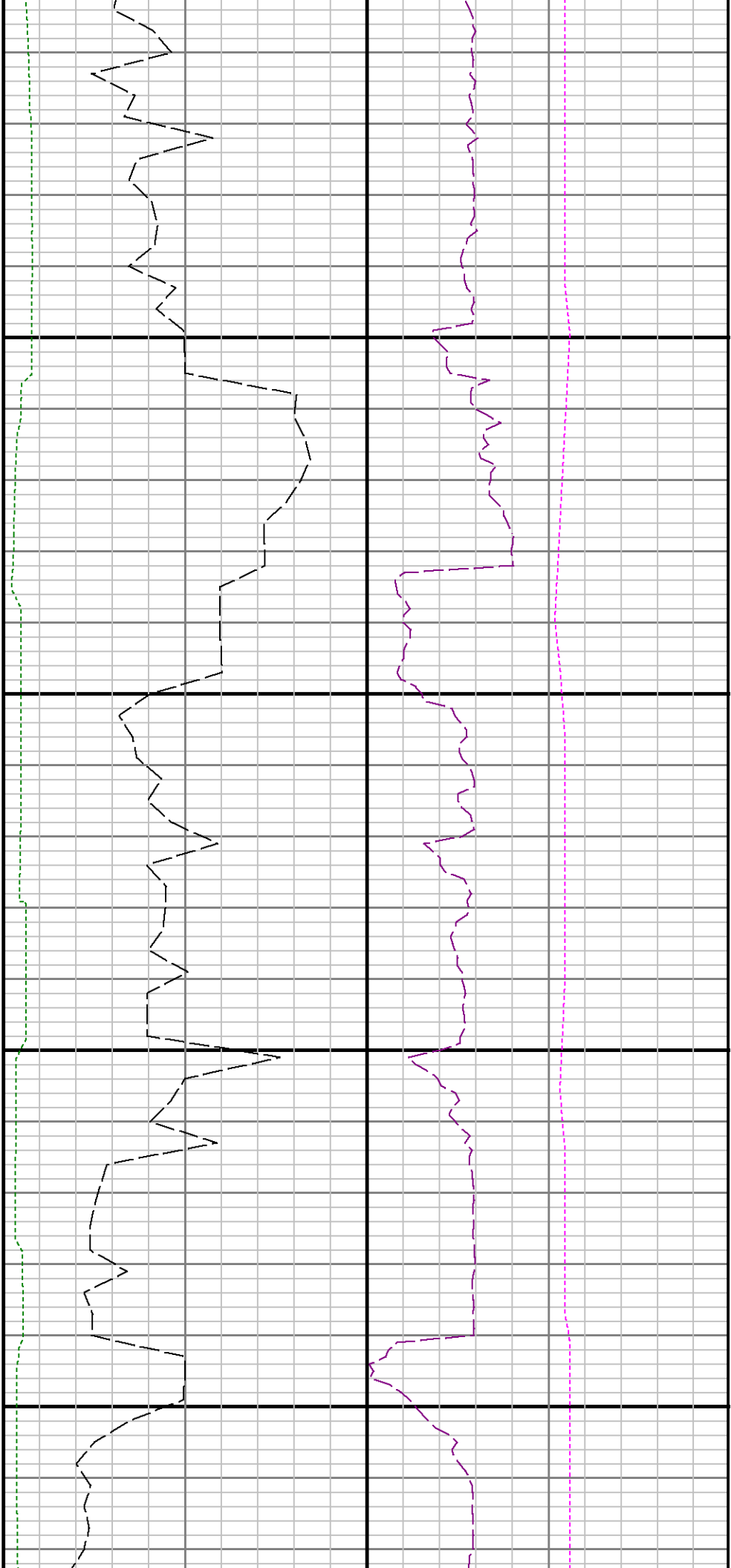


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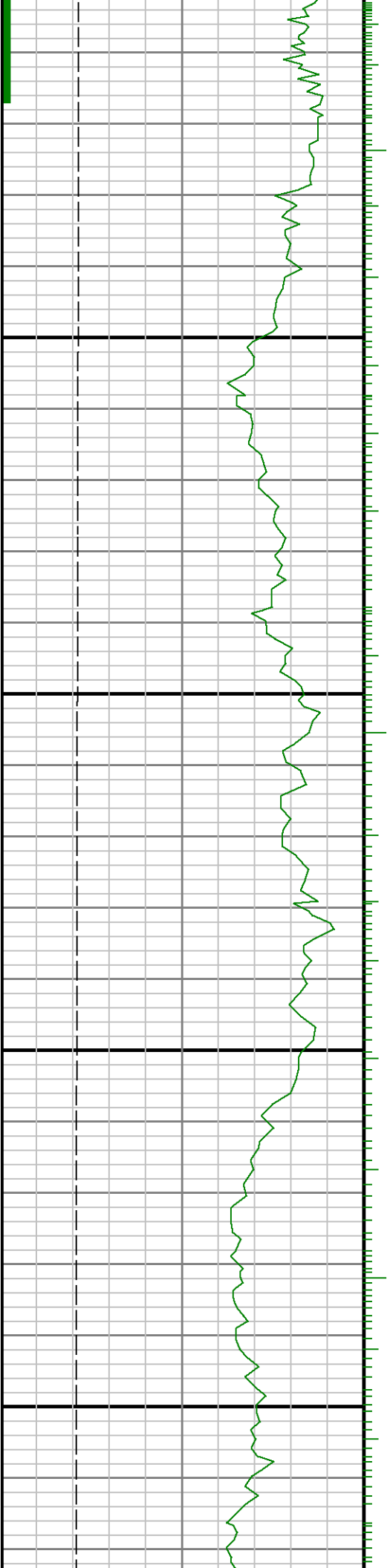
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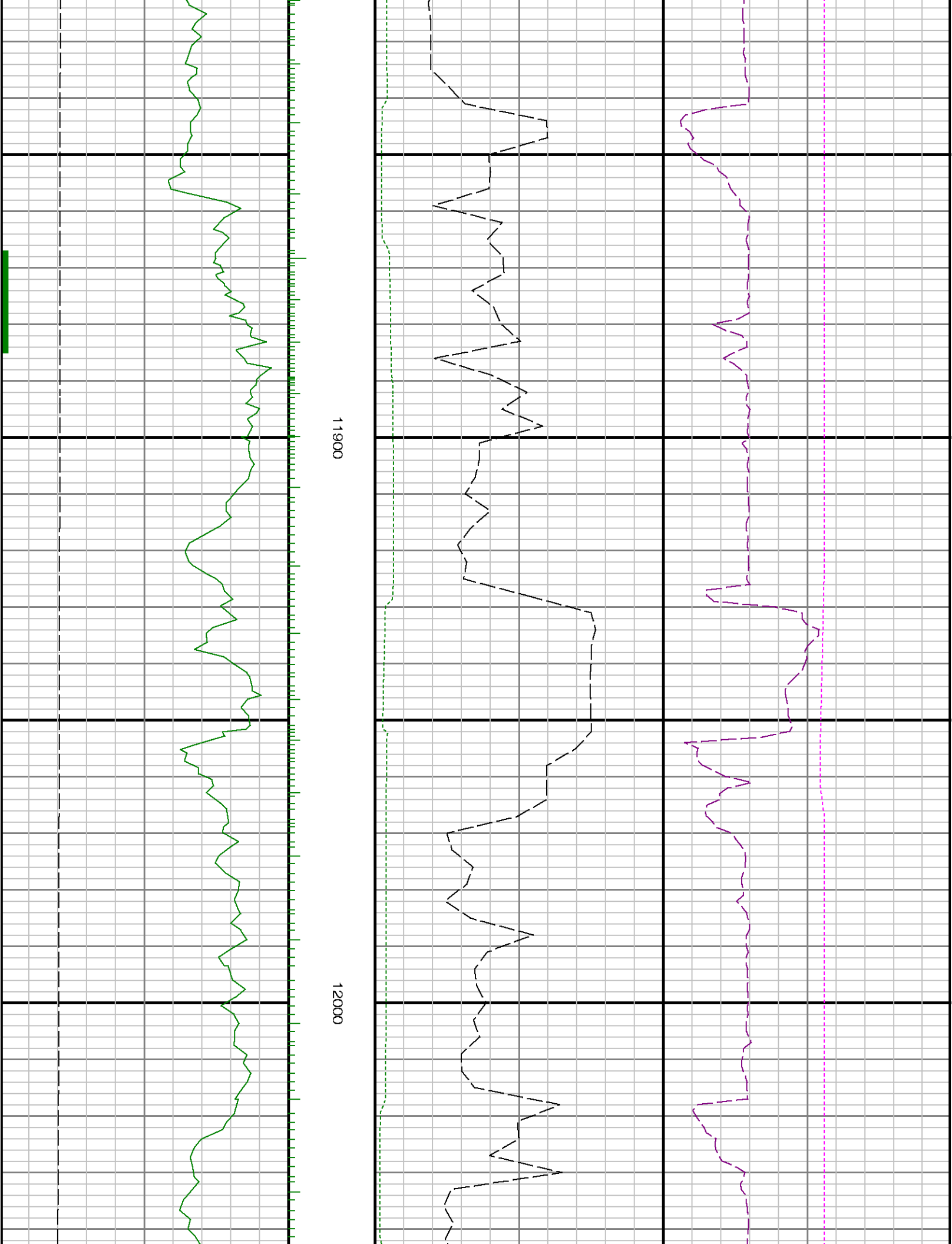


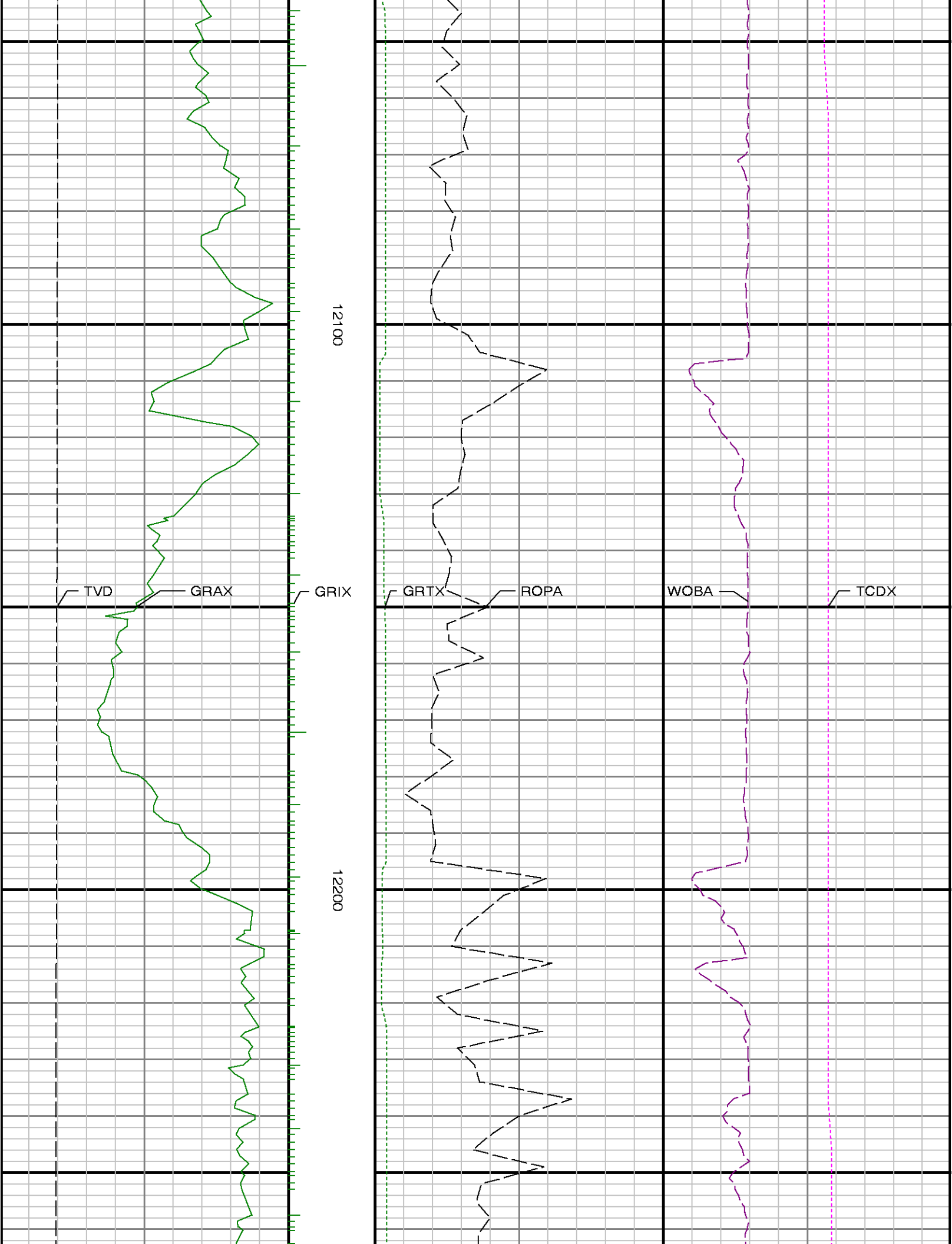


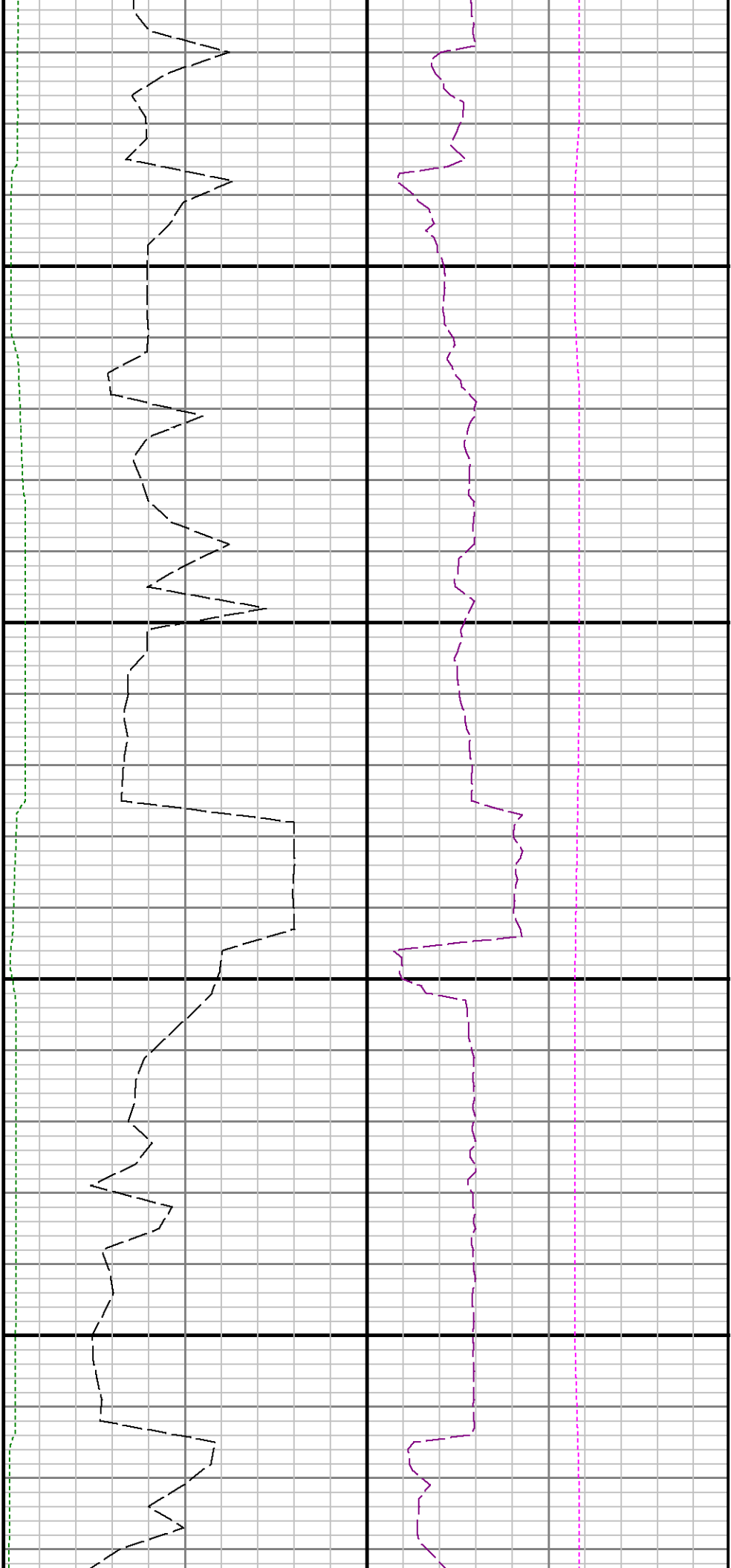
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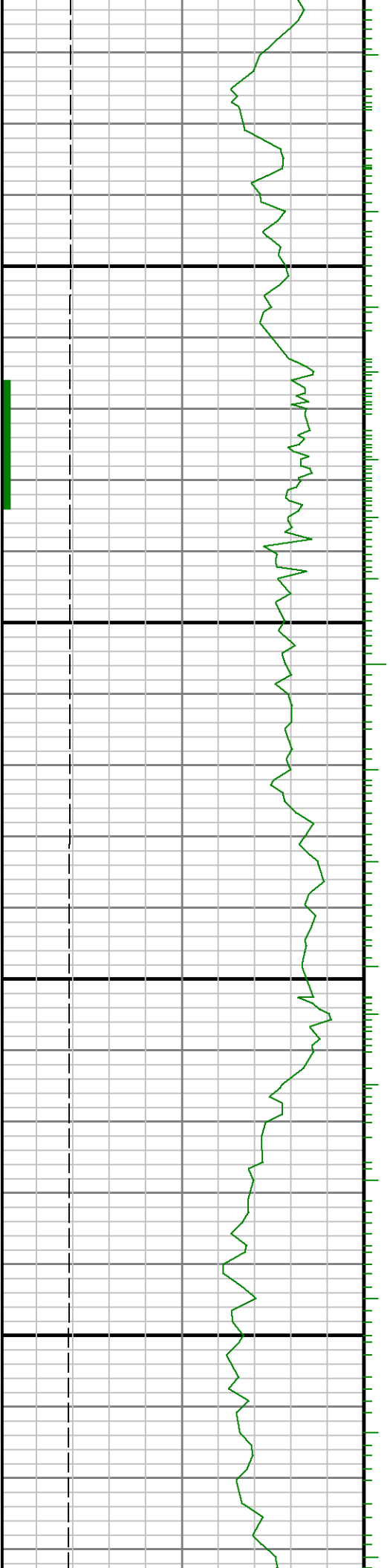


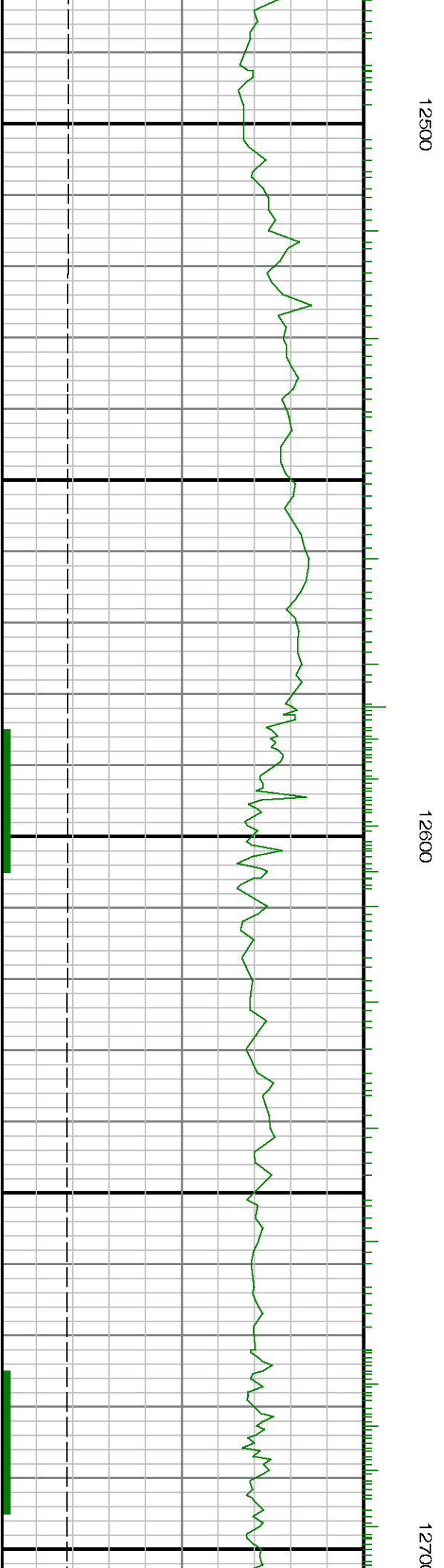
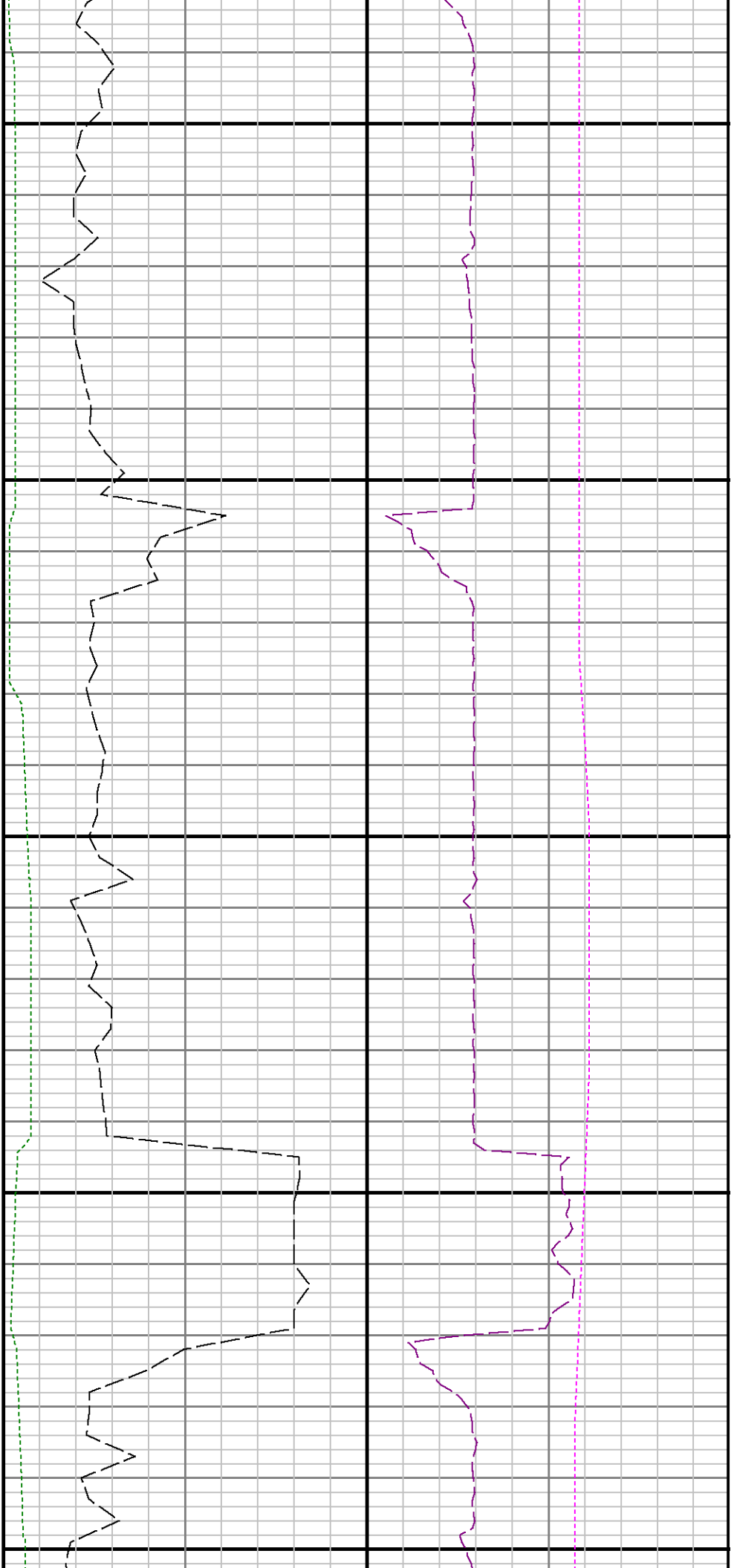




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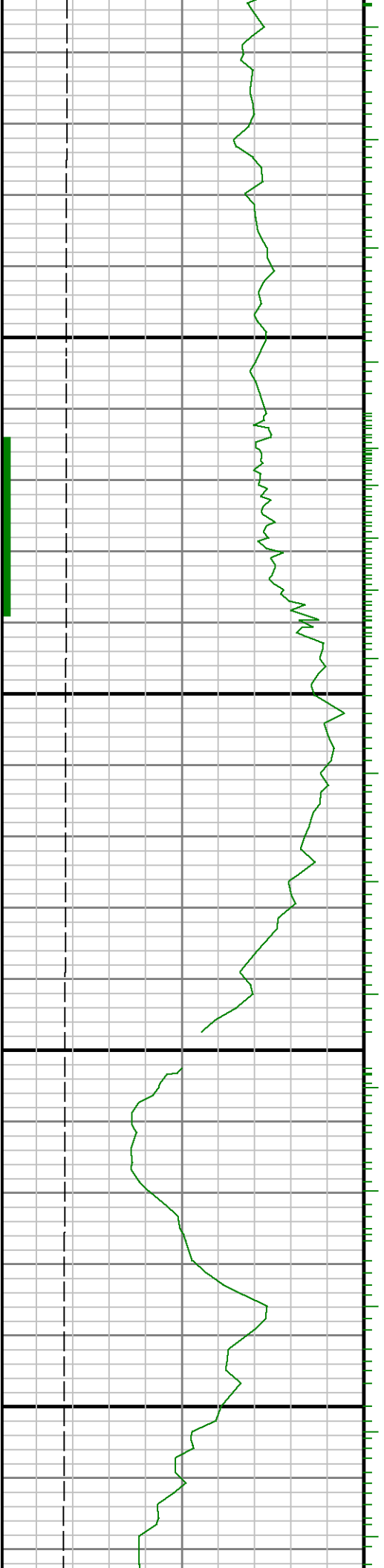


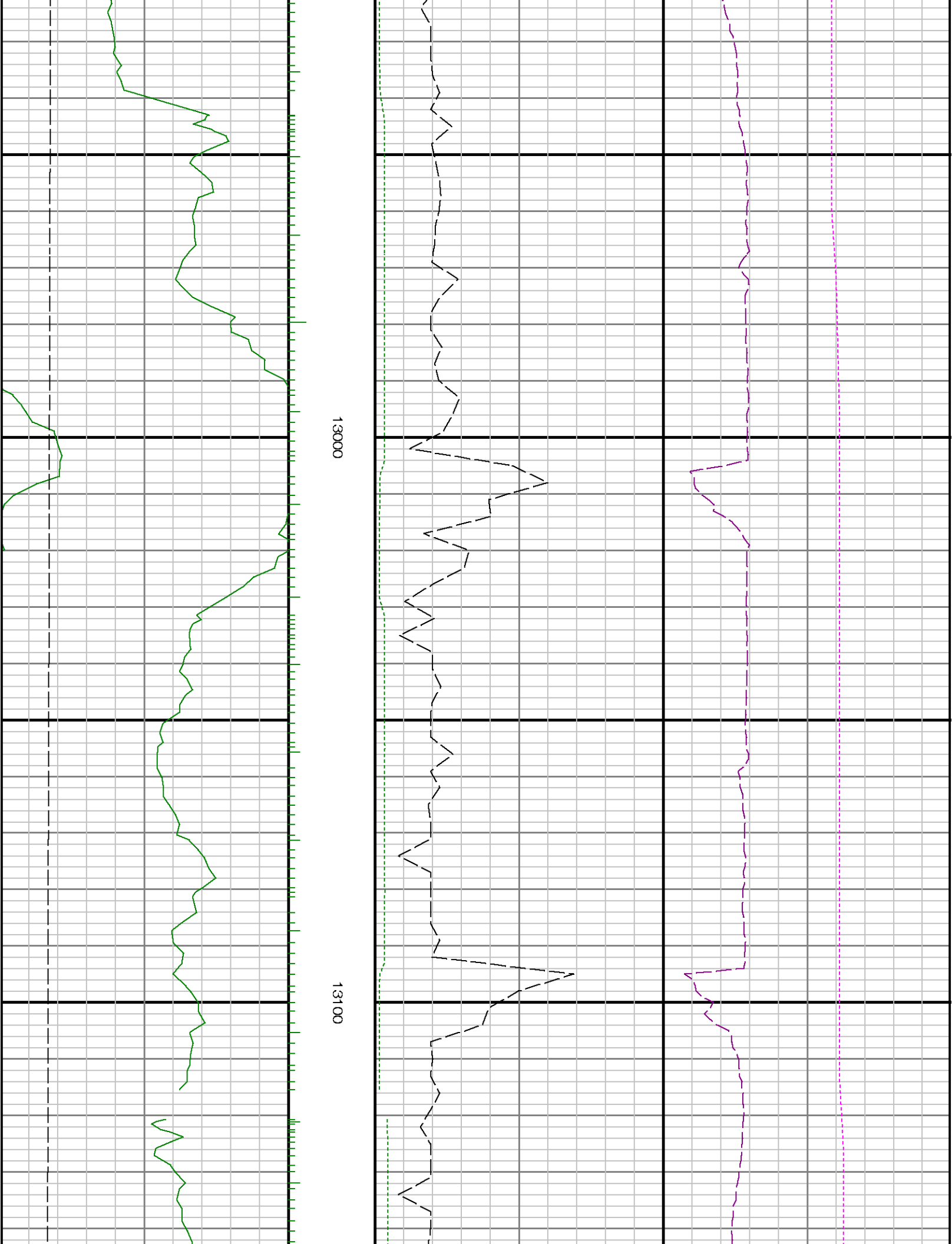


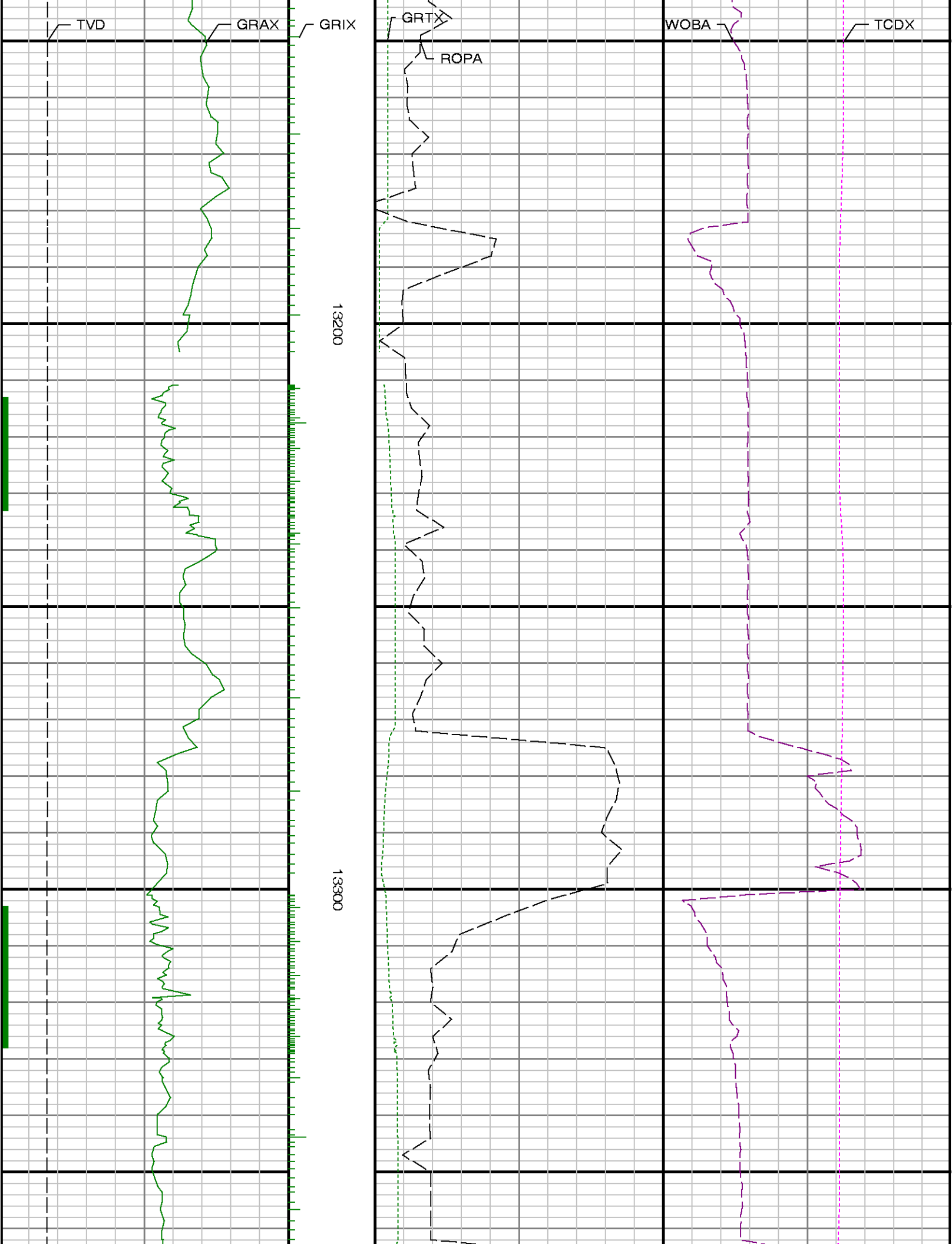


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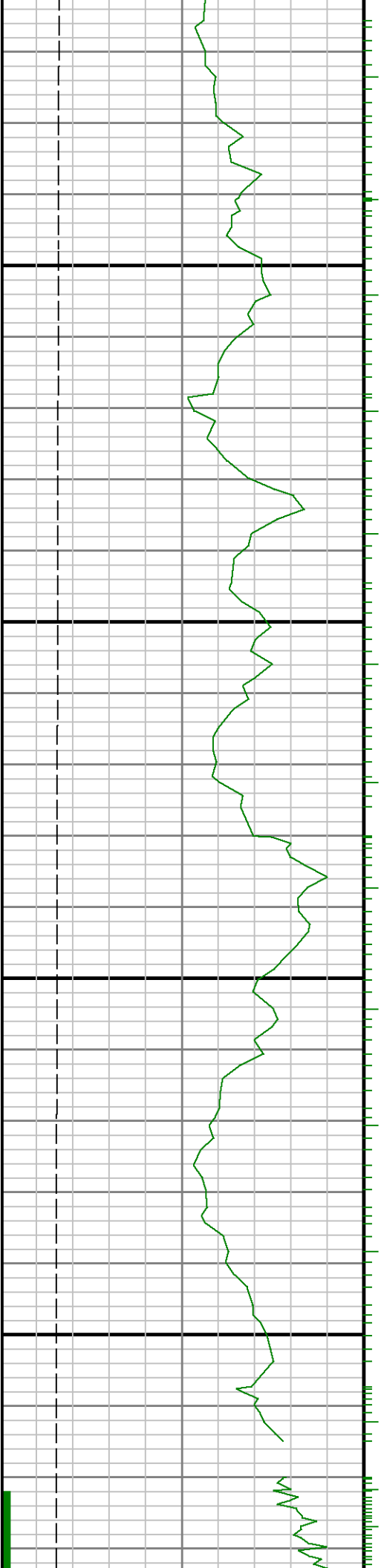


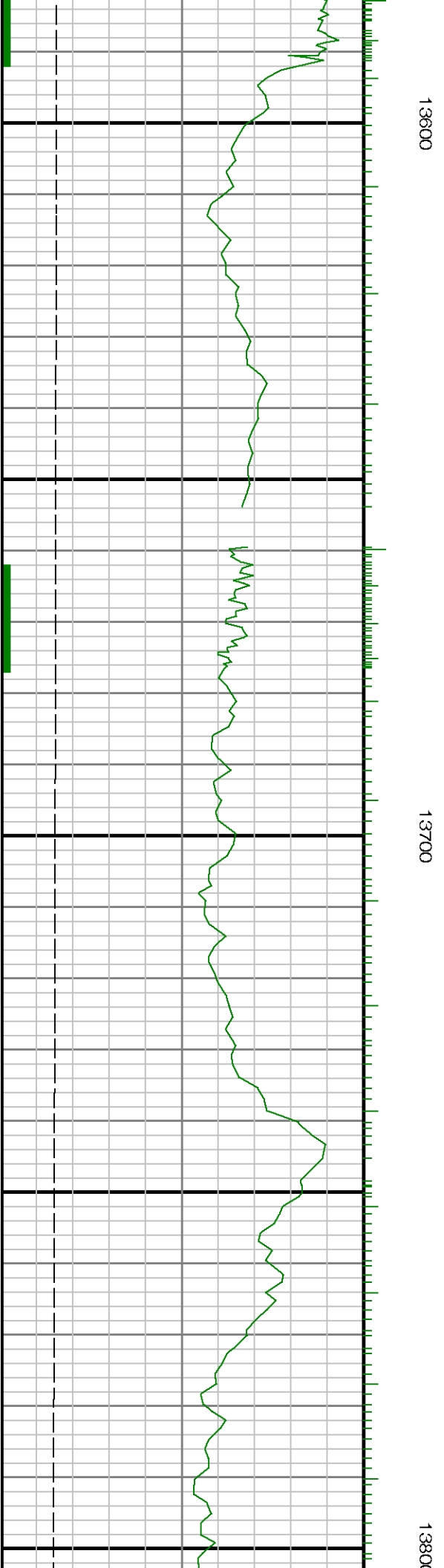
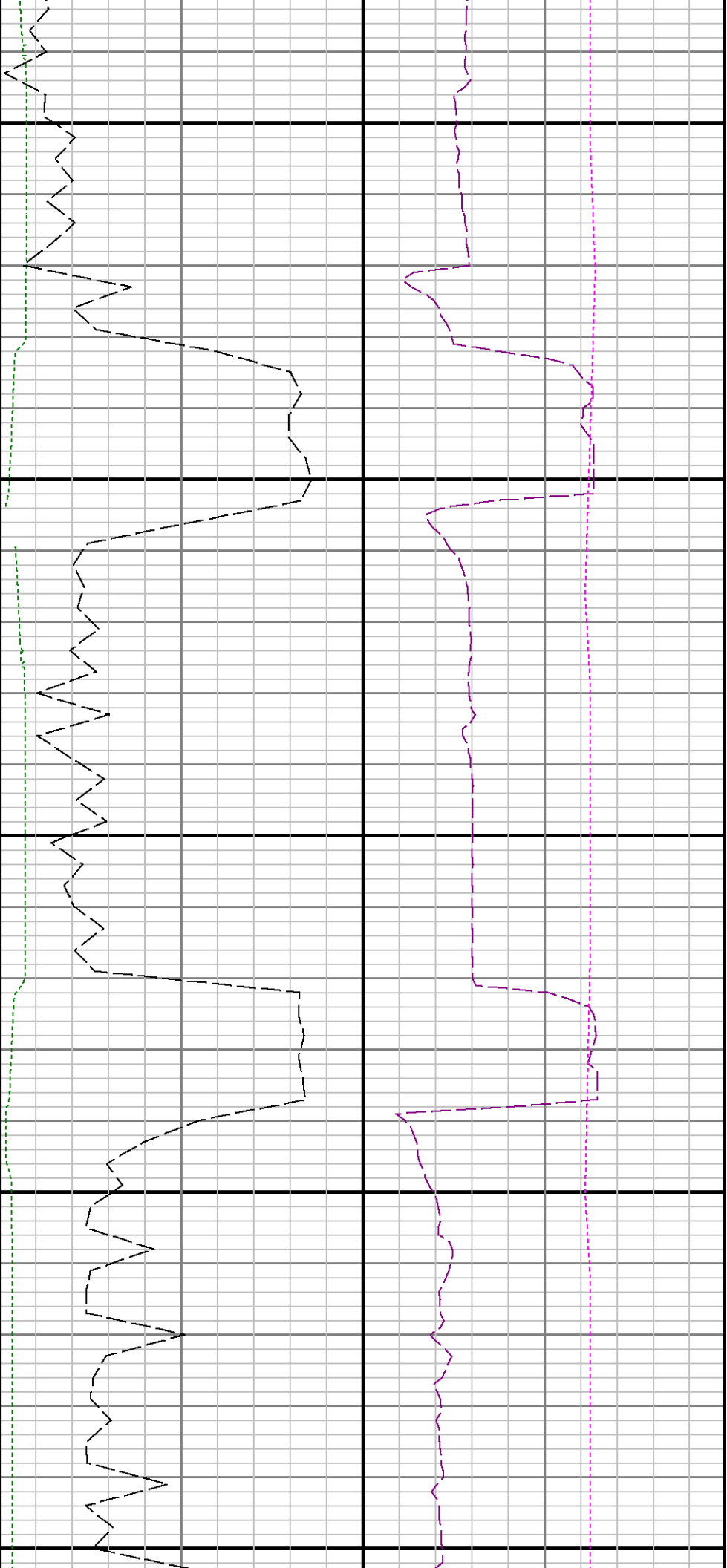


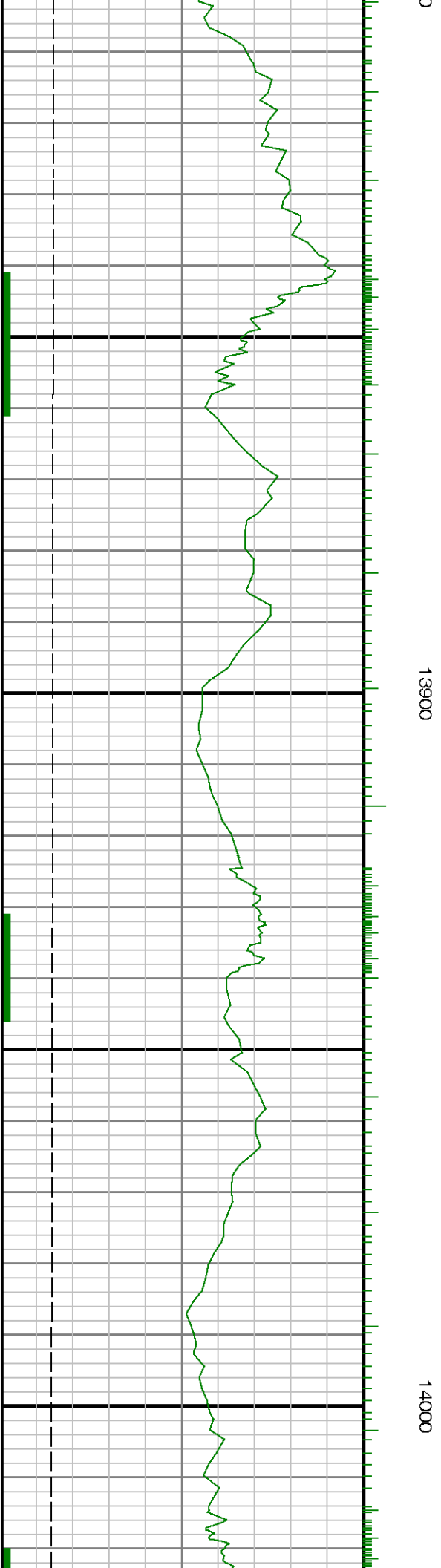
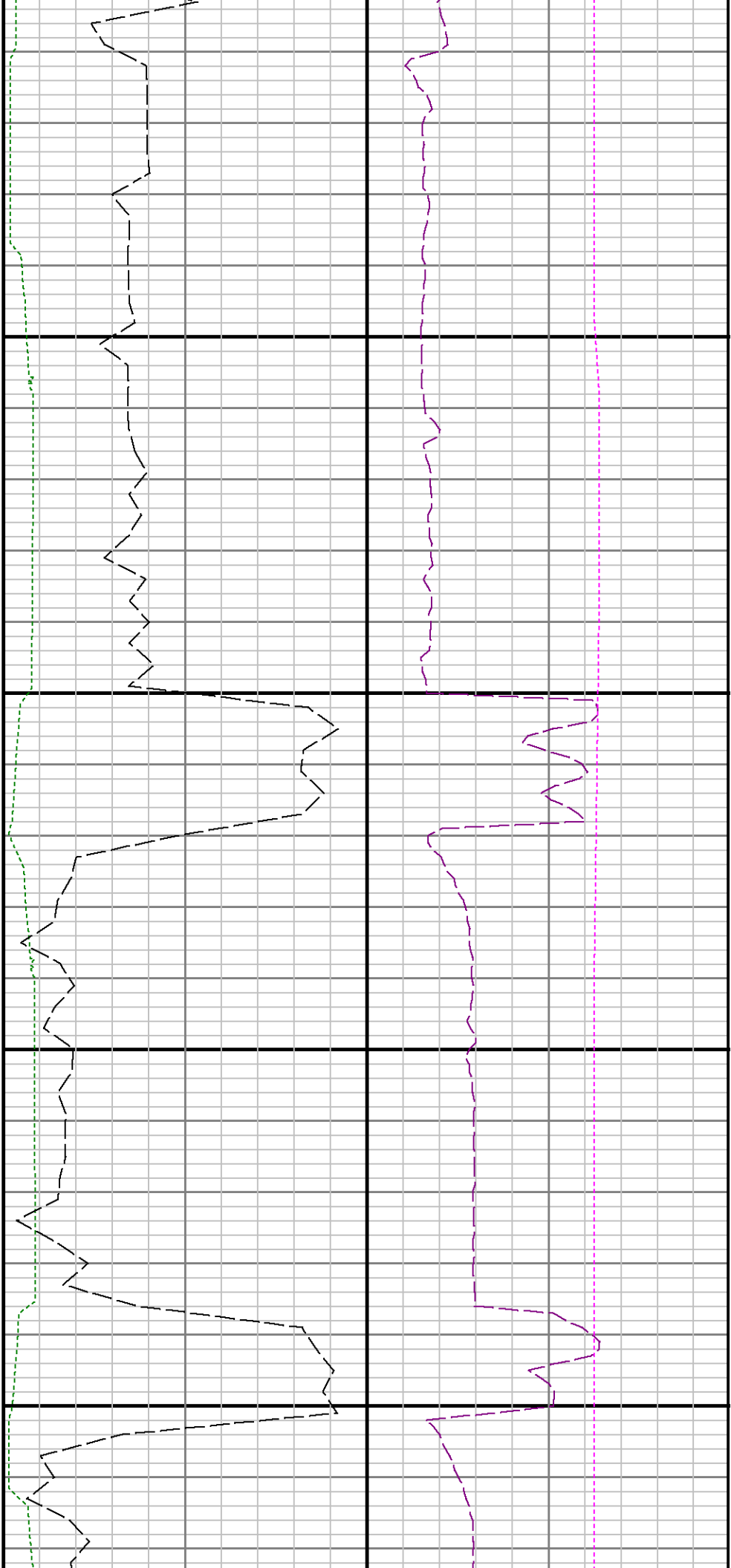


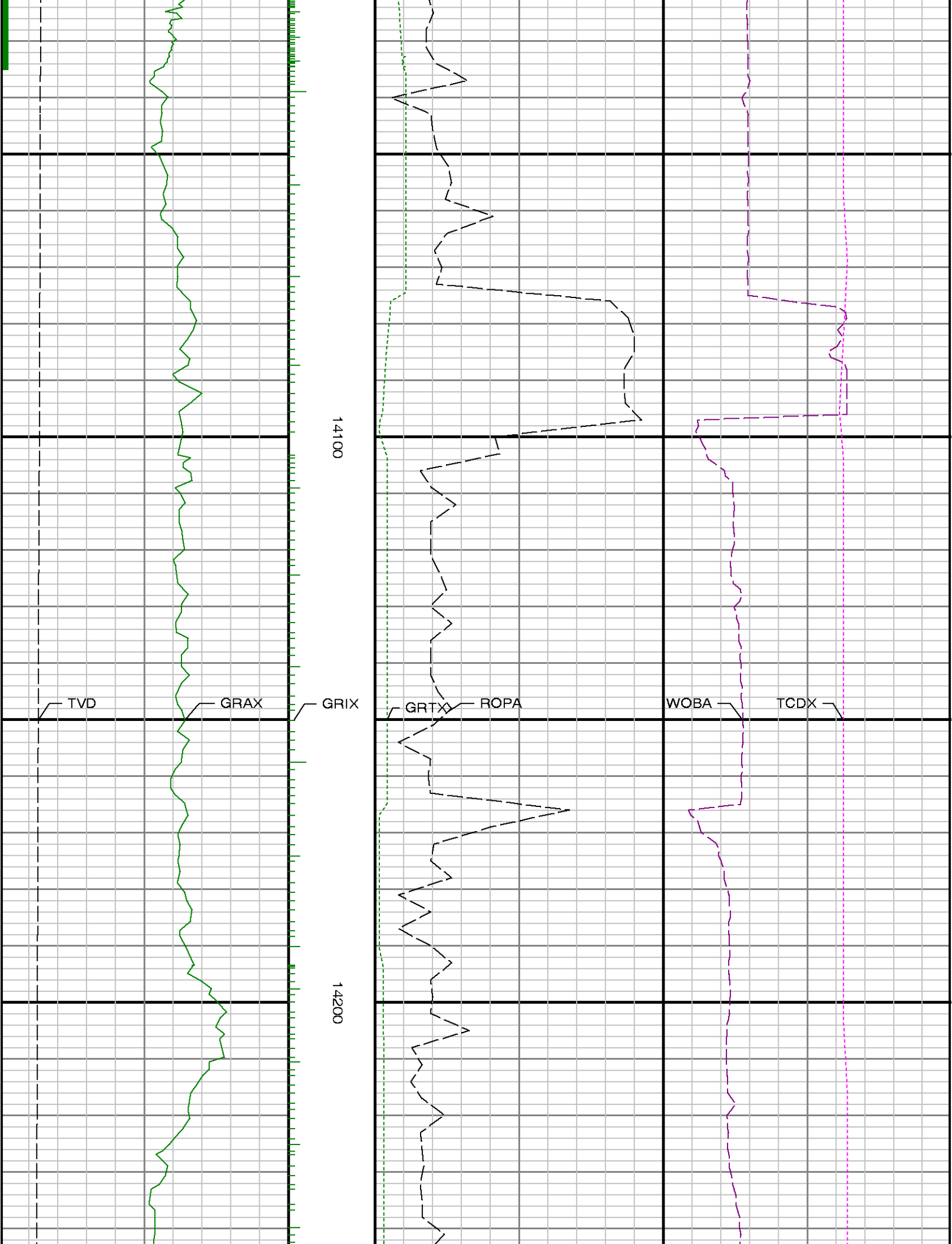
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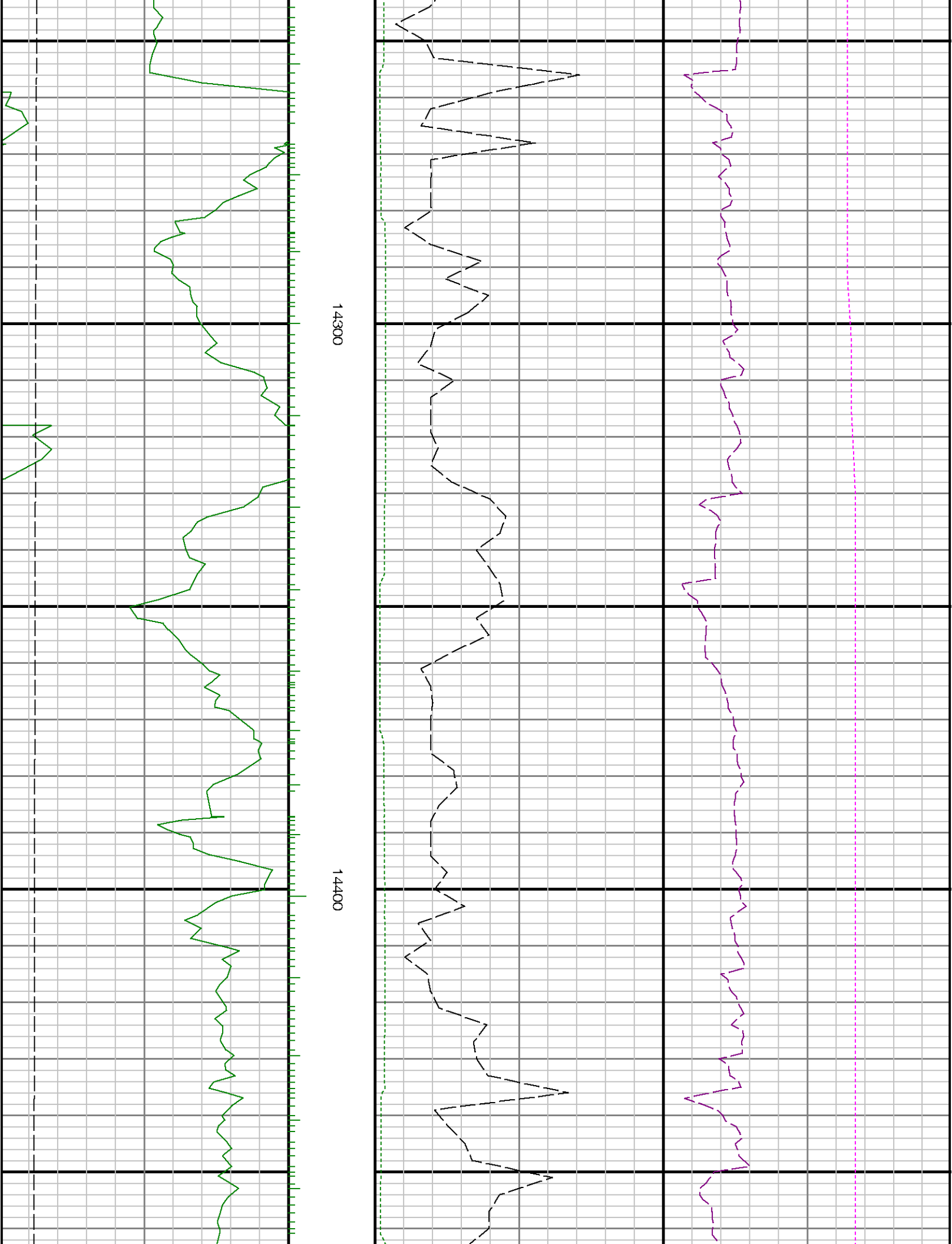
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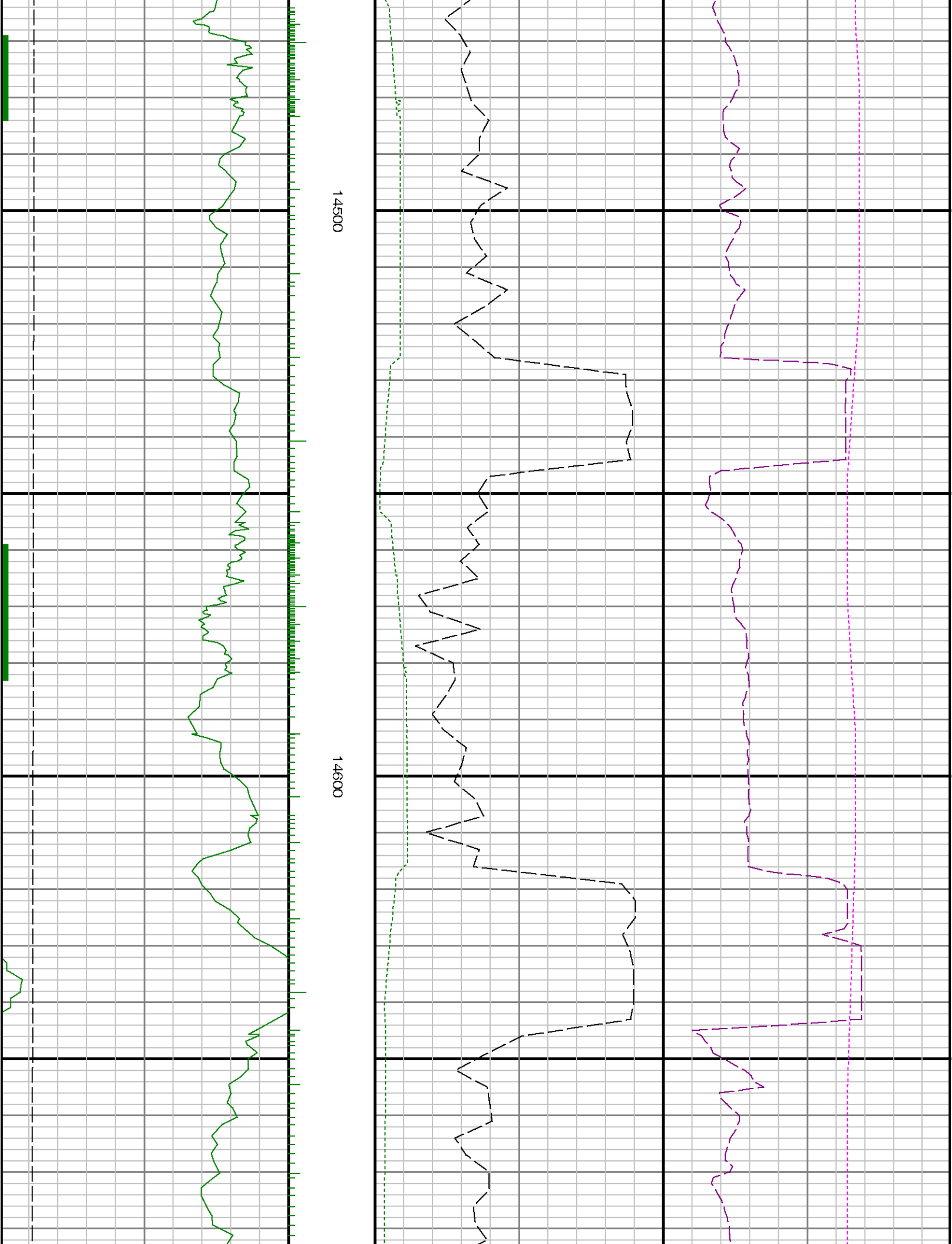


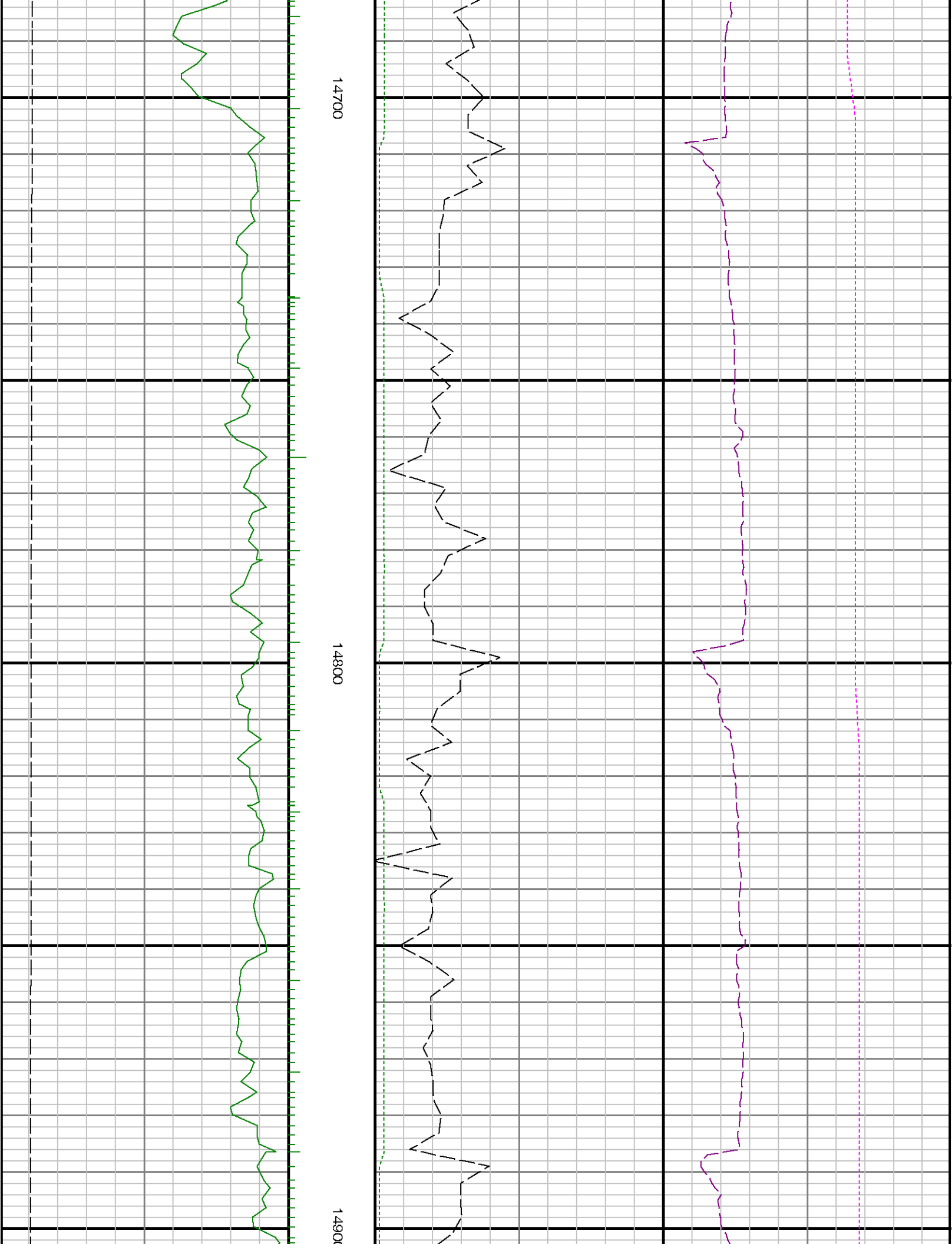


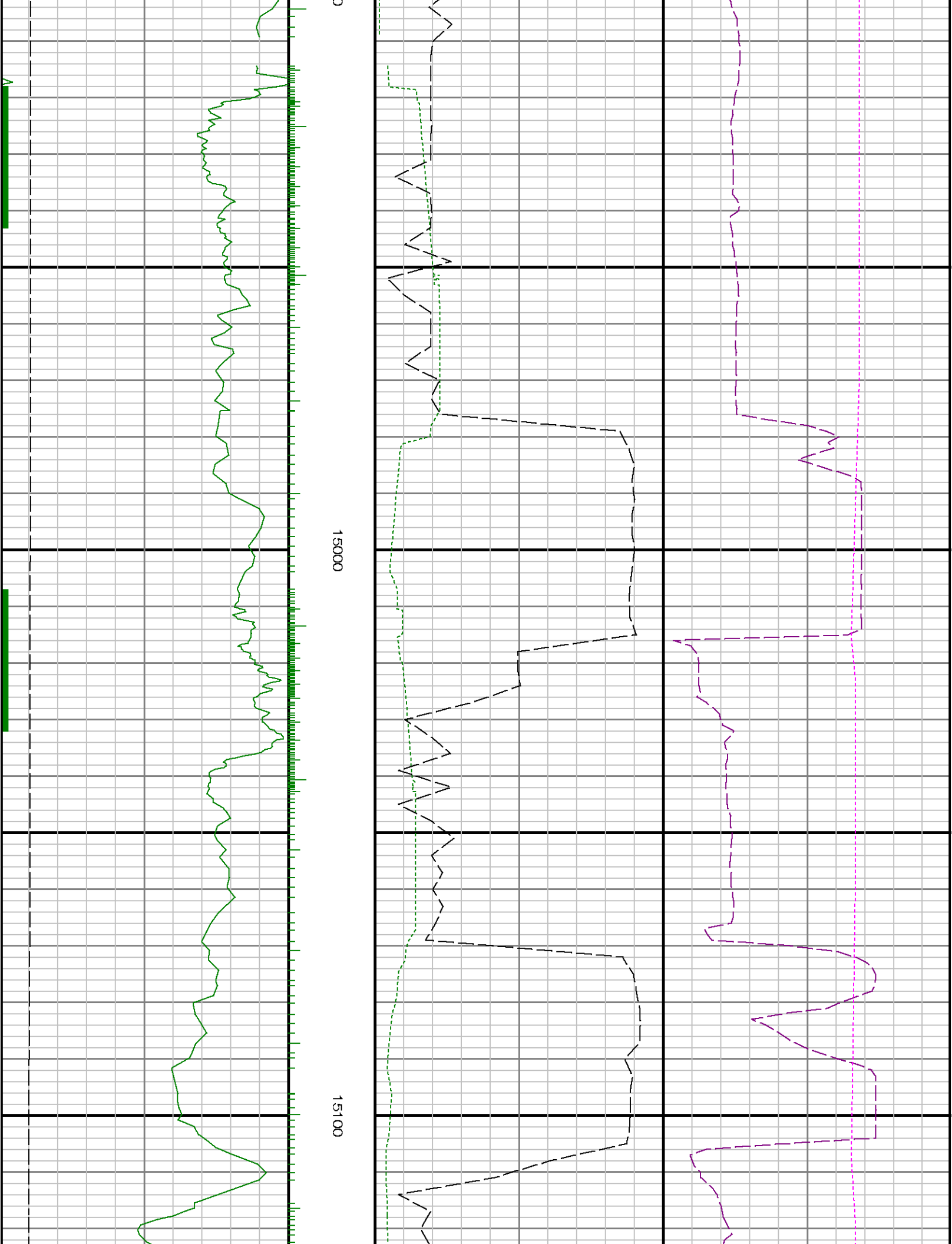


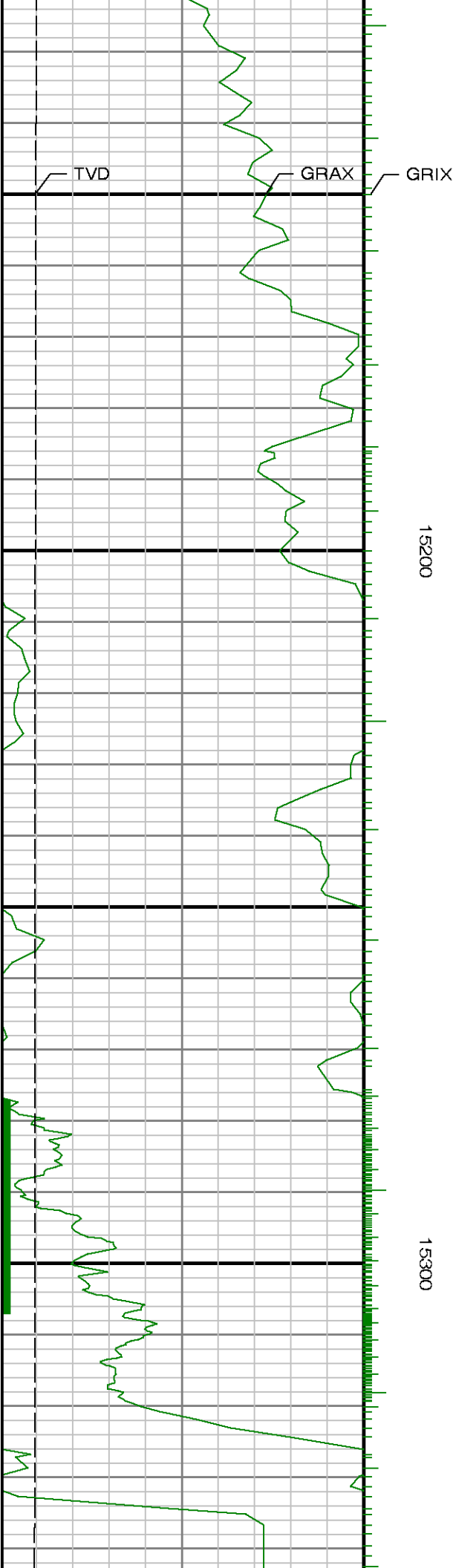


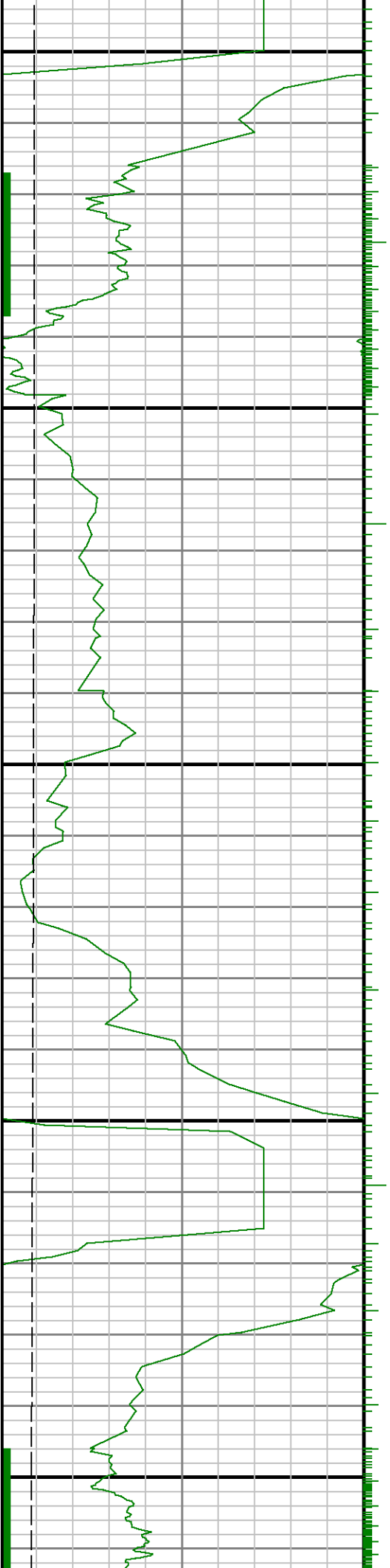






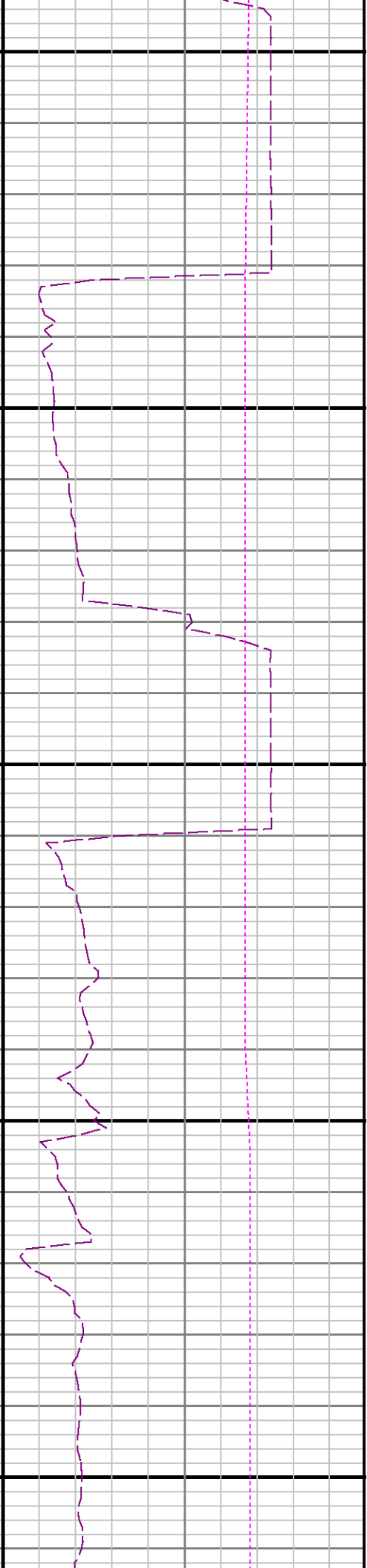
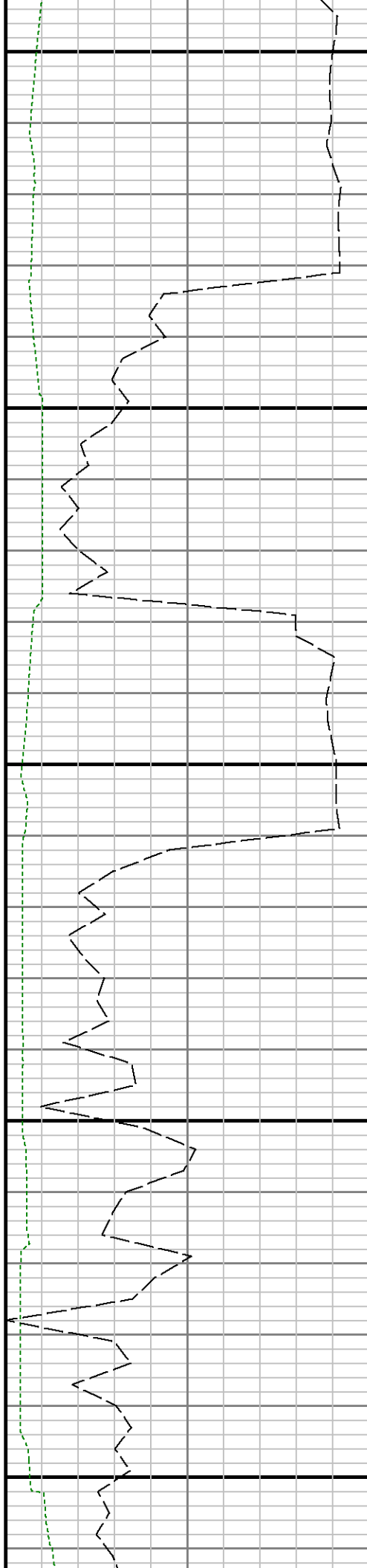






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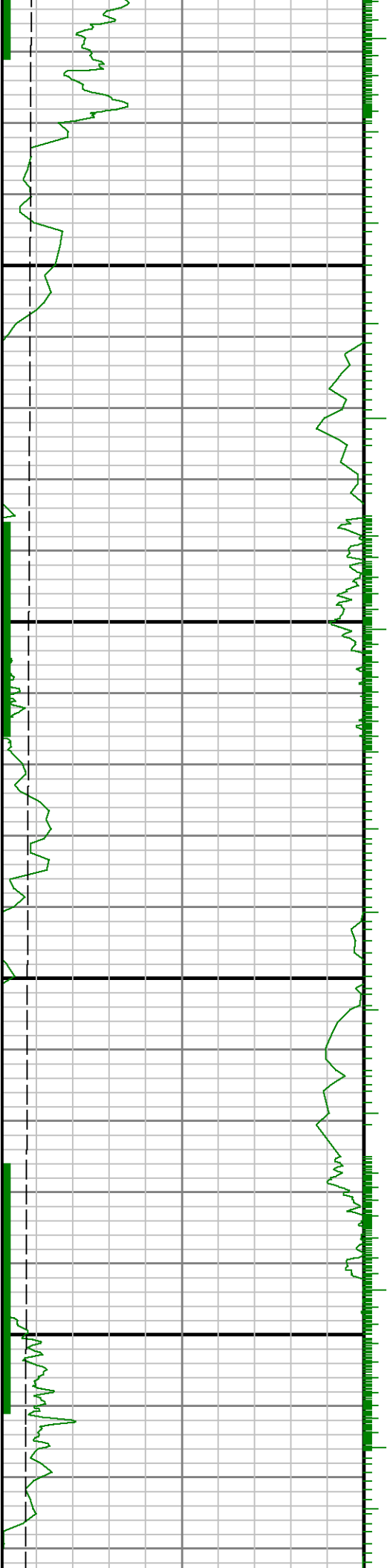
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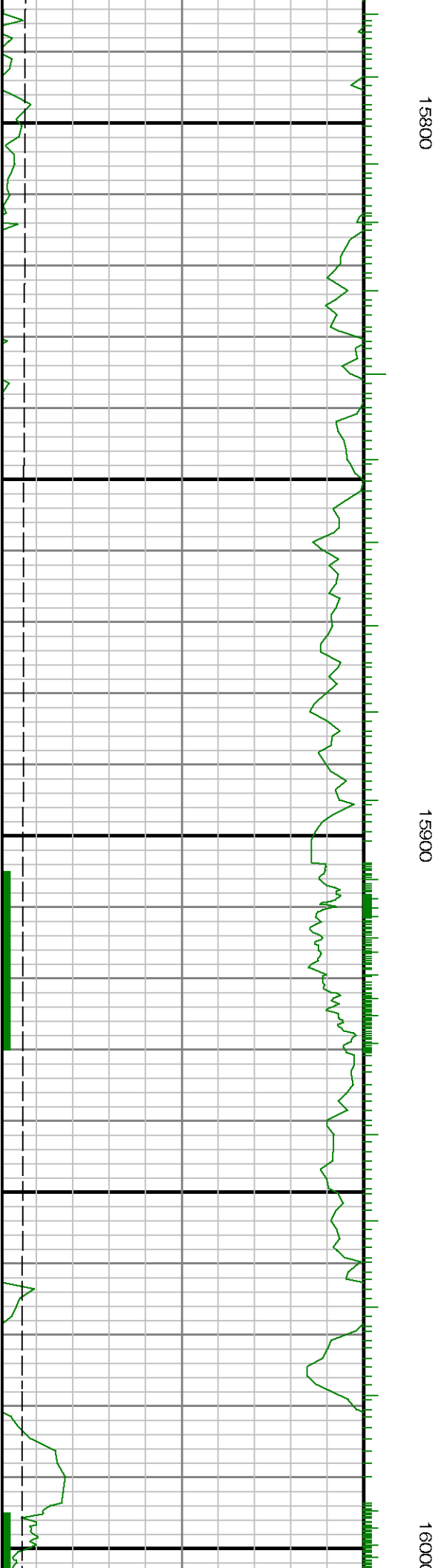
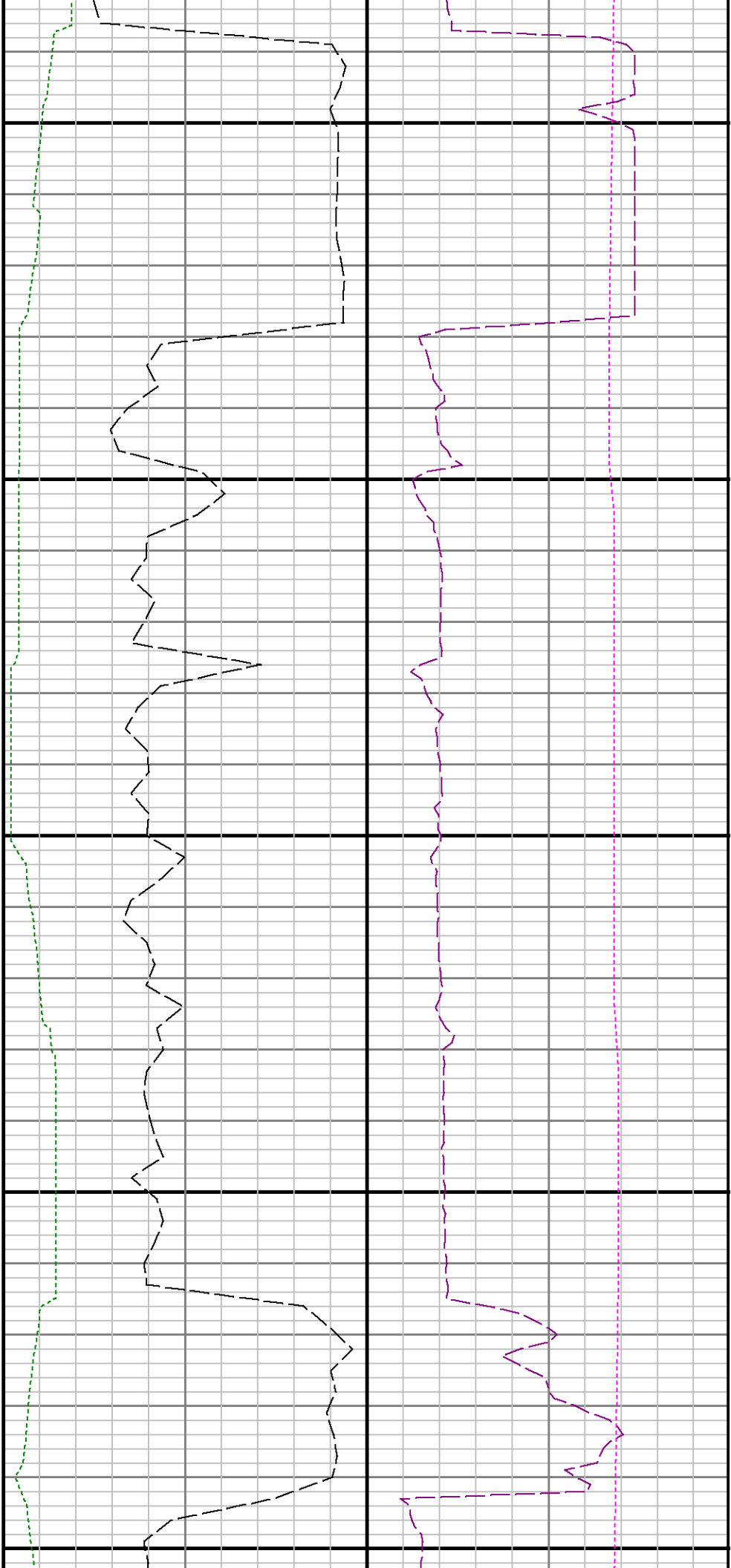


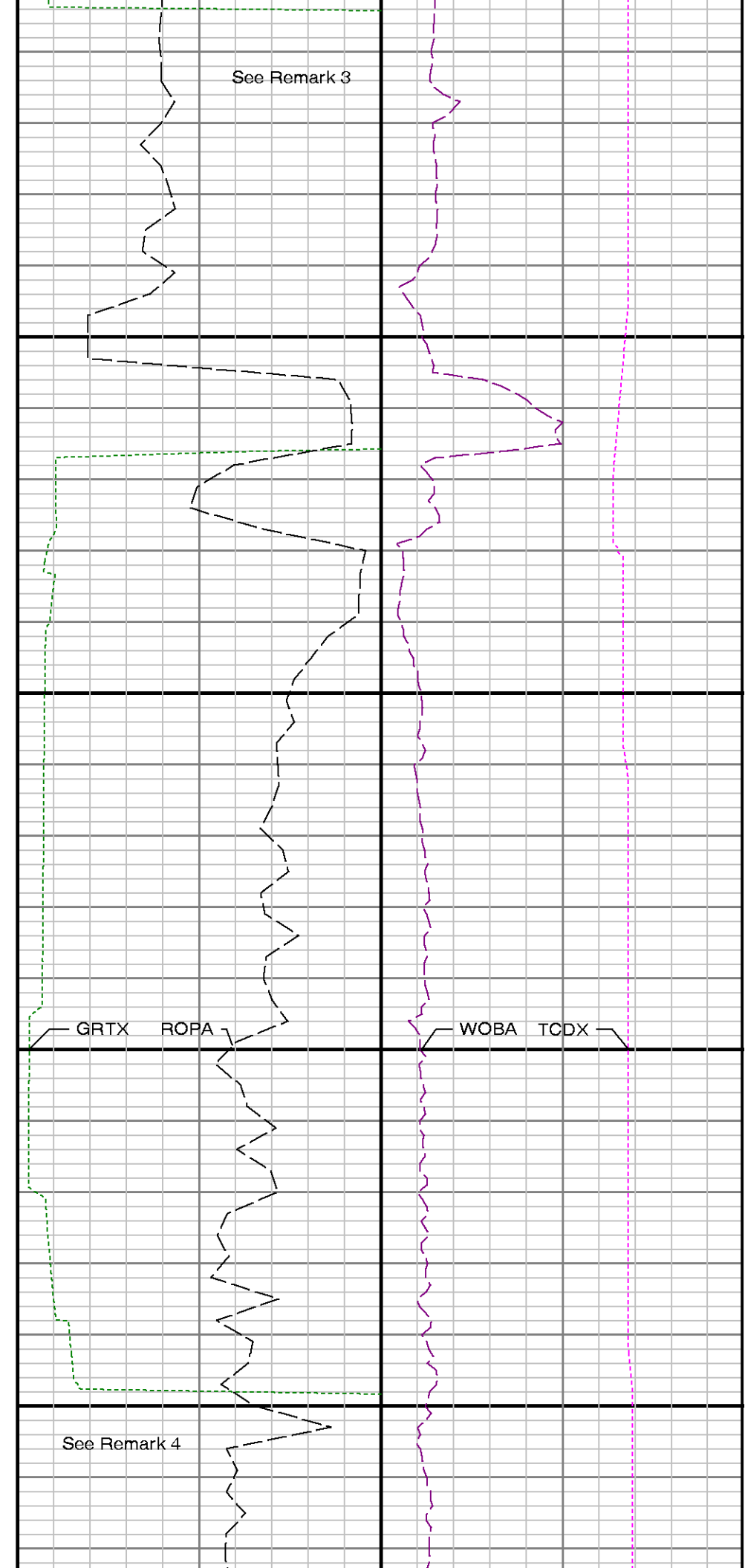
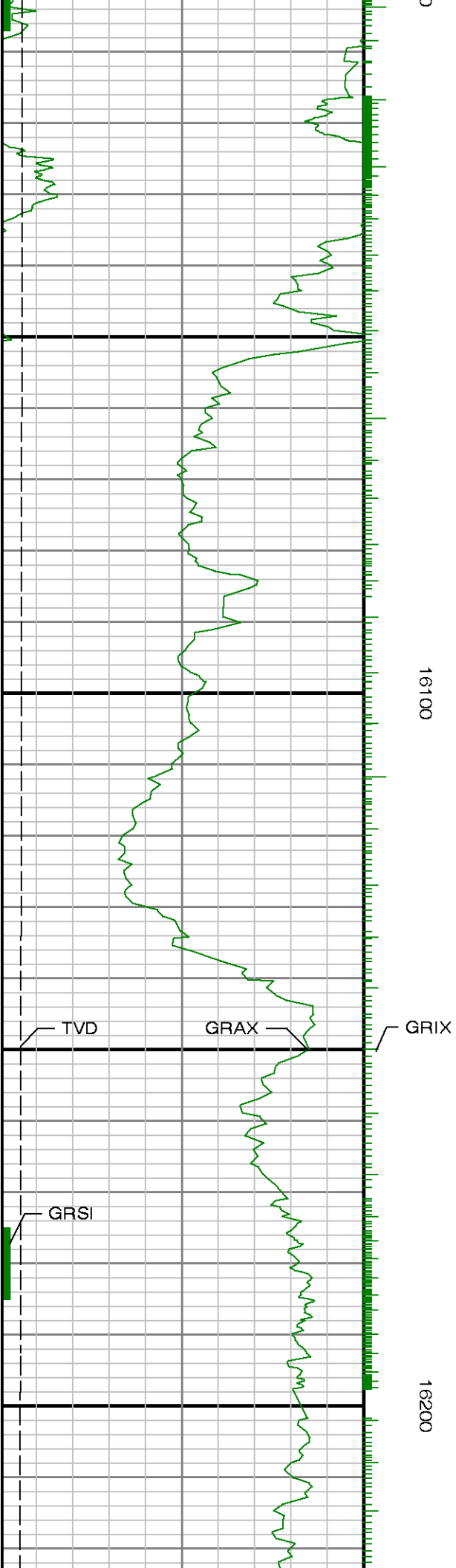


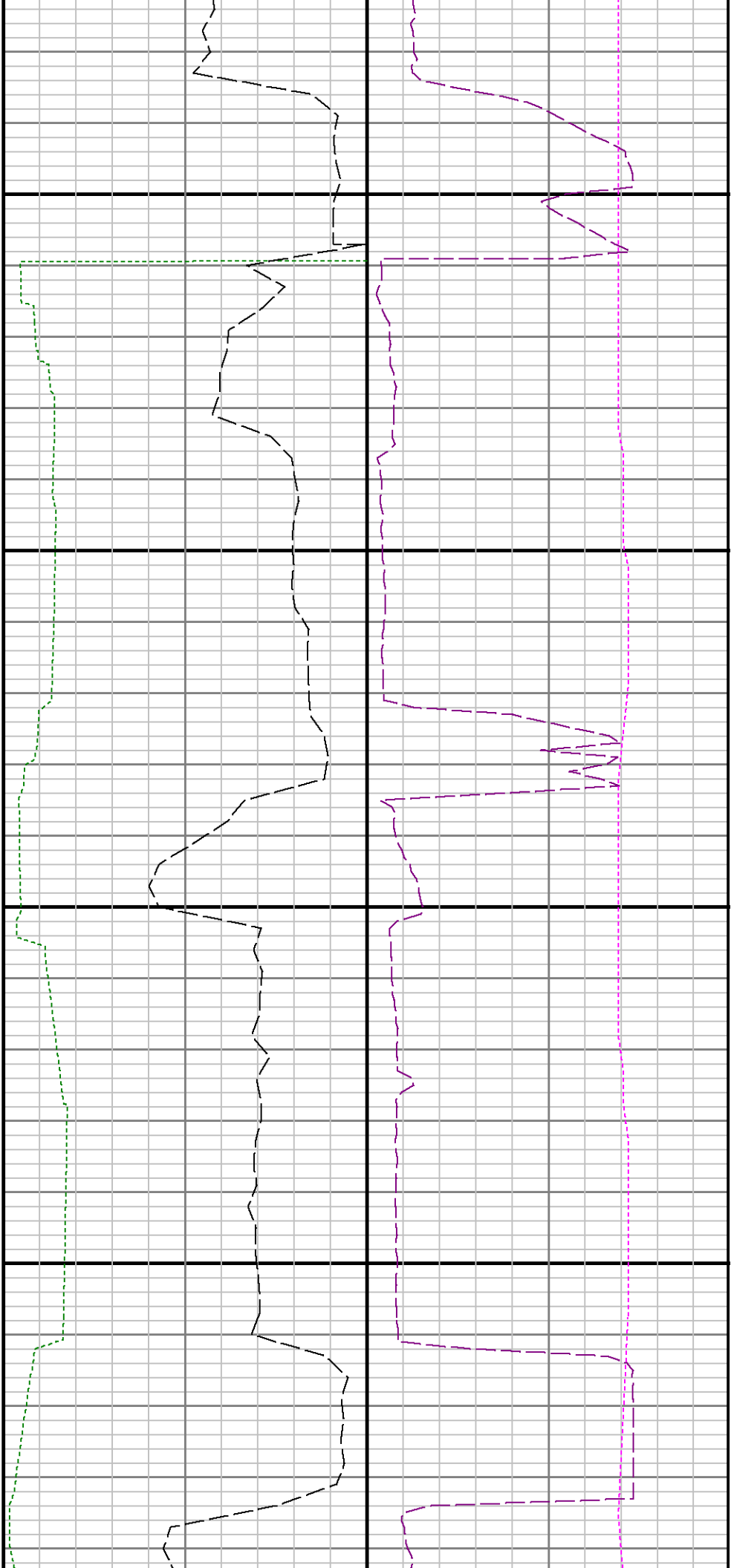
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15700





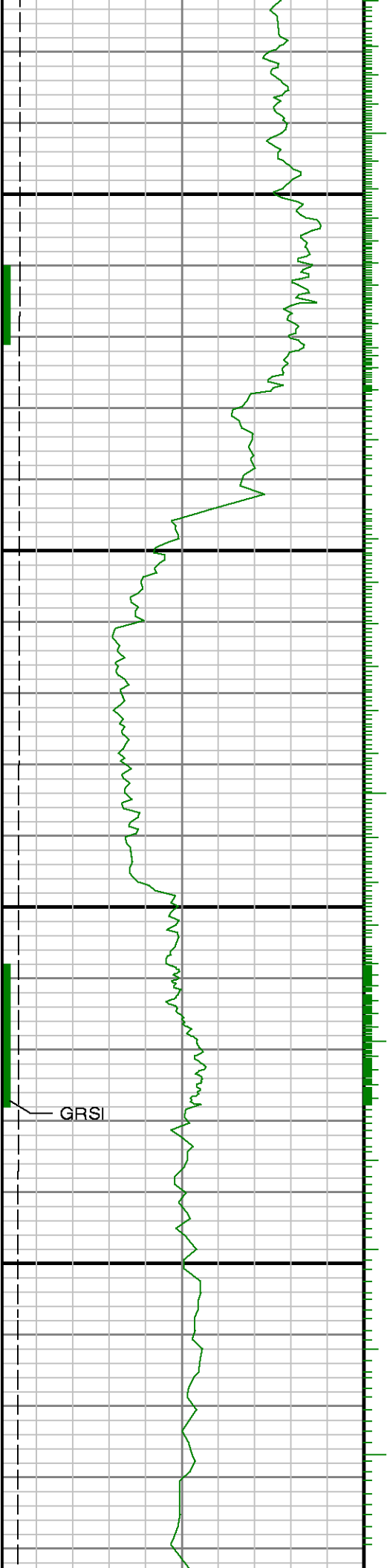


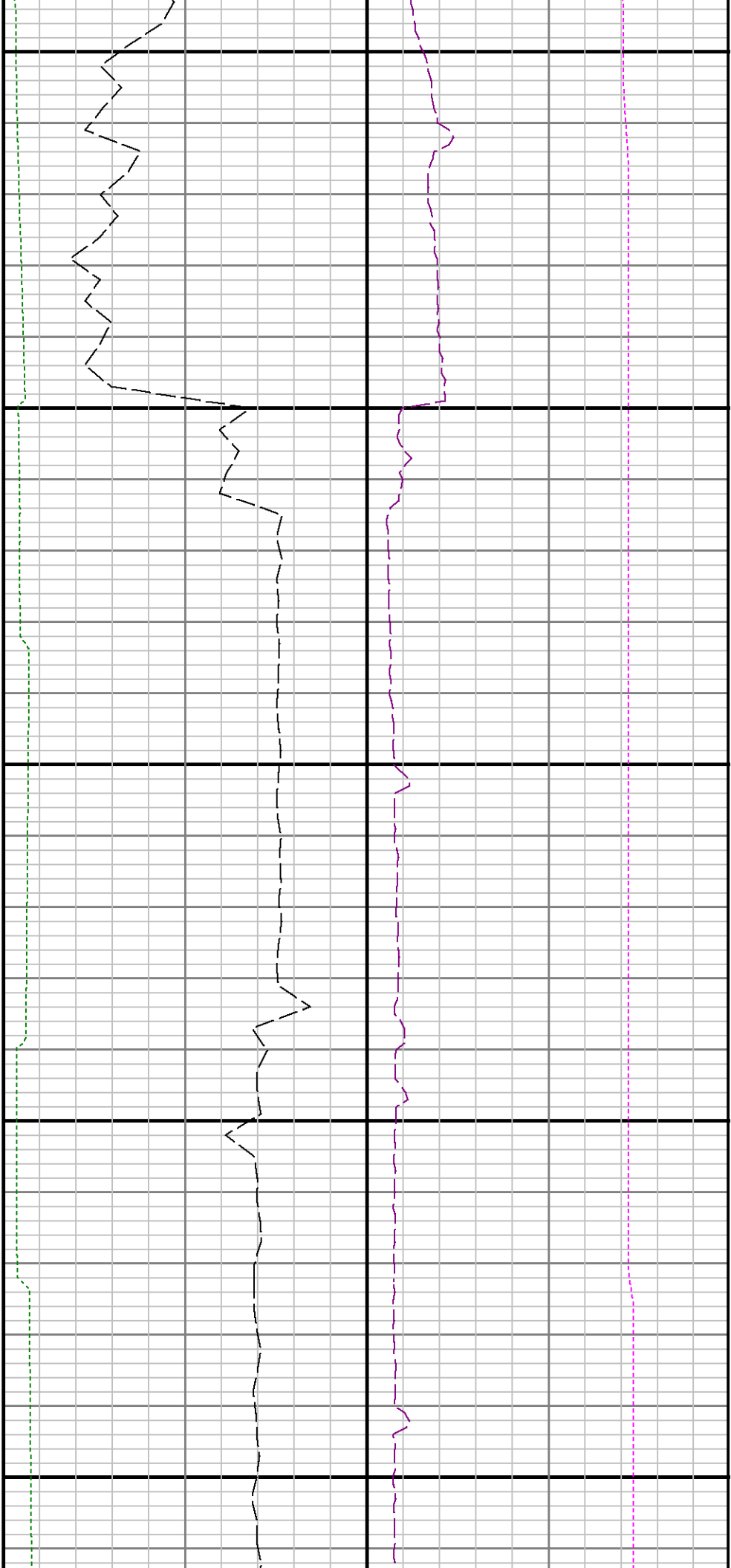


Run 3 ⇔ Run 4

16300

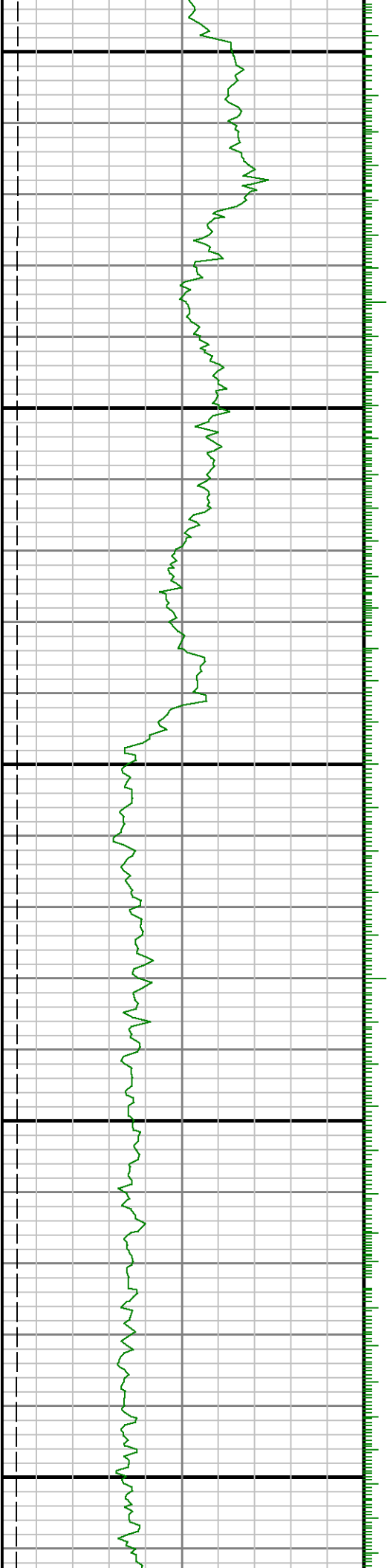
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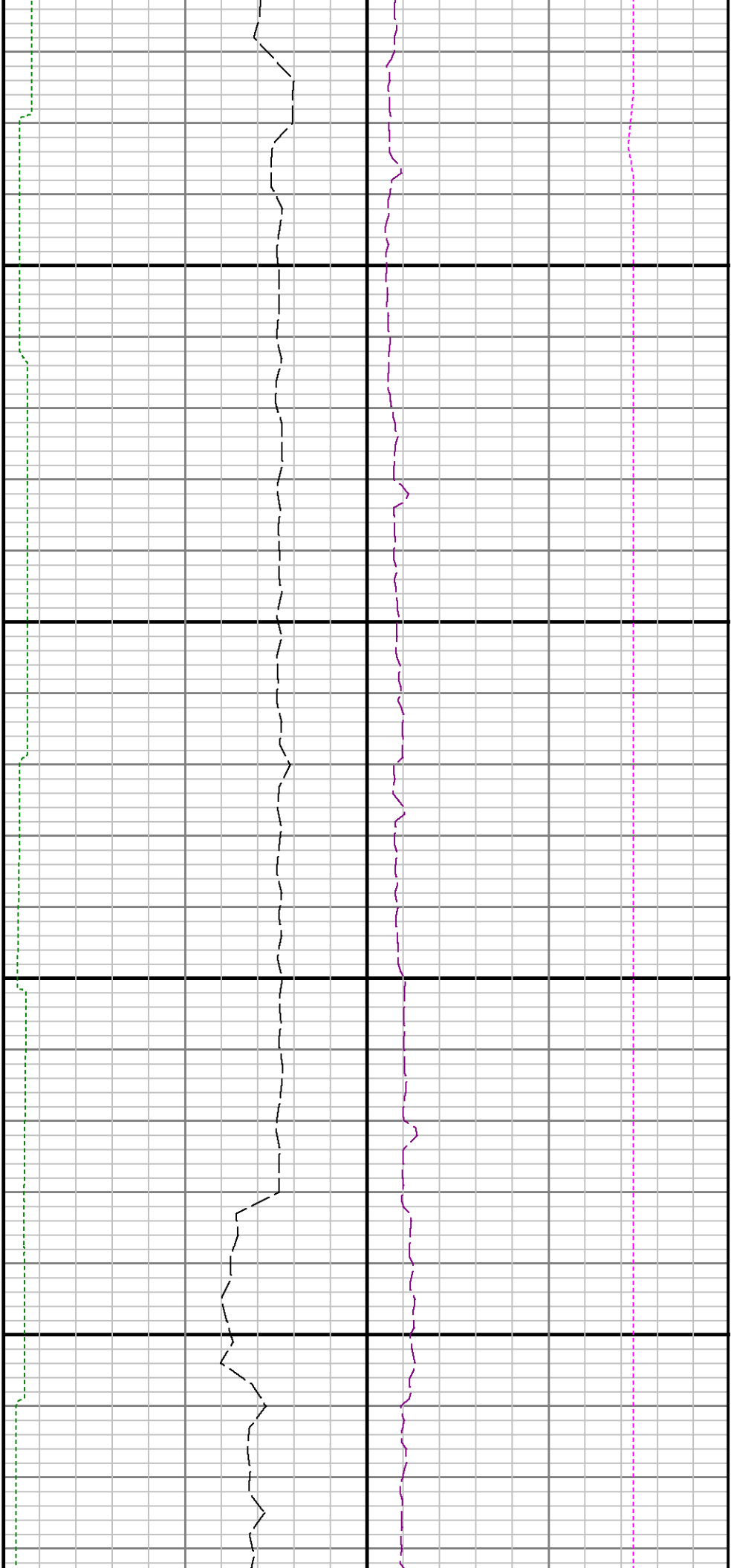




16500

16600





16700

16800

