



Realtime Log

Natural Formation Evaluation  
Gamma Ray

Scale:

Company: Anadarko

1:240

Well: Vollmar 29C-11HZ

Measured Depth

Field: Weld County (Kerr McGee)

County: Weld County State: Colorado

Status:

Final Print

Surface Location:

Latitude: 40° 8' 31.027" N

Longitude: 104° 51' 38.174" W

Other Services:

Directional  
VSS

API Number:  
05-123-40535-00

SEC: 14 TWP: 2N RNG: 67W

Permanent Datum (P.D.): Ground Level Elevation: 4945.00 ft.

Elevations:

Log Measured From: Rig Floor Elevation: 4961.00 ft. Above P.D.

KB: N/A  
DF: 4961.00 ft.  
GL: 4945.00 ft.

Depth Reference: Driller's Depth

GL:

Interval Logged

Dates

Magnetic Field Reference

Top: 6950.0 ft. Date From: 21/Feb/15 Dip Angle: 66.89° Azi Reference North: True

Bottom: 13082.0 ft. Date To: 28/Feb/15 Total Mag to Reference

Spud Date: 21/Feb/15 Field Strength: 52706.1 nT North Correction: 8.58°

Borehole Record

Casing Record

Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	1220.0 ft.	9.625 in.	36.00 lb/ft	Surface	1205.0 ft.
8.750 in.	1205.0 ft.	7933.0 ft.	7.000 in.	26.00 lb/ft	Surface	7923.0 ft.
6.125 in.	7923.0 ft.	13082.0 ft.				

Mud Record

Deviation Record

Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Fresh Water	1211.0 ft.	5000.0 ft.	13.500 in.	1204.0 ft.	0.0° / 310.2°	0.4° / 163.8°
Water Based Mud	5000.0 ft.	13082.0 ft.	8.750 in.	6728.0 ft.	0.3° / 160.0°	88.7° / 3.2°
			6.125 in.	5159.0 ft.	87.8° / 2.3°	88.2° / 1.4°
					/	/
					/	/
					/	/
					/	/

Acquisition System

Software Version

Other

Advantage 2.20U4 Rig: Xtreme 6 / Xtreme Coil Drilling Corp

PATS 6.4.1.34 Job No: 7046535 / D&E

District / Unit: RMD

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Time (hrs.)
							Top (ft.)	Bottom (ft.)	From (ft.)	To (ft.)	Start	End	
1	1	2	8.750	PDC	6.000	Steerable	6950.0	7933.0	1220.0	7933.0	21/Feb/2015 08:30	23/Feb/2015 18:45	39.3
2	2	3	6.125	PDC	3.600	Steerable	7891.0	13082.0	7933.0	13082.0	24/Feb/2015 19:45	28/Feb/2015 08:00	66.2

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Matthew Delmore	21/Feb/2015	28/Feb/2015	Ryan Kielian	21/Feb/2015	28/Feb/2015			
Donald Delay	24/Feb/2015	28/Feb/2015	Chad Hough	21/Feb/2015	24/Feb/2015			
Bryan Severson	21/Feb/2015	24/Feb/2015	Courtney Koerner	24/Feb/2015	28/Feb/2015			

Witness

Name	LWD Run Number
Sam Taylor	1
Andy Boshard	1
Joe Wallem	2
David Cornett	2

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+ (%)
21/Feb/2015 18:30	1	1211.0	Fresh Water	8.4	27	9.1	0.0	0 / 100	Active Mud Pit	2600	N/A
22/Feb/2015 08:00	1	5280.0	Fresh Water	8.8	38	9.1	6.8	1 / 96	Active Mud Pit	2500	N/A
22/Feb/2015 18:30	1	7012.0	Water Based Mud	10.2	42	9.4	4.7	1 / 90	Active Mud Pit	2400	N/A
23/Feb/2015 08:00	1	7859.0	Water Based Mud	10.2	41	9.4	4.8	1 / 89	Active Mud Pit	2400	N/A
23/Feb/2015 18:30	1	7933.0	Water Based Mud	10.4	45	9.3	4.6	1 / 89	Active Mud Pit	2500	N/A
25/Feb/2015 06:00	2	8840.0	Water Based Mud	9.4	42	9.6	4.5	1 / 93	Active Mud Pit	2400	N/A
25/Feb/2015 20:30	2	10204.0	Water Based Mud	9.4	41	9.4	4.6	1 / 93	Active Mud Pit	2500	N/A
26/Feb/2015 07:00	2	10817.0	Water Based Mud	9.4	44	9.5	4.4	1 / 93	Active Mud Pit	2500	N/A
26/Feb/2015 20:00	2	11825.0	Water Based Mud	9.4	42	9.4	4.5	1 / 93	Active Mud Pit	2400	N/A
27/Feb/2015 07:00	2	12510.0	Water Based Mud	9.5	43	9.3	4.3	2 / 92	Active Mud Pit	2100	N/A
27/Feb/2015 19:00	2	12977.0	Water Based Mud	9.5	39	9.4	4.2	2 / 92	Active Mud Pit	2000	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	Surface 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	13134419	Directional	45.76	6.750	3.250
1	SRIG	12023992	Gamma	42.38	6.750	3.250
2	DIR	11954358	Directional	48.36	4.750	2.750
2	SRIG	12600745	Gamma	44.98	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

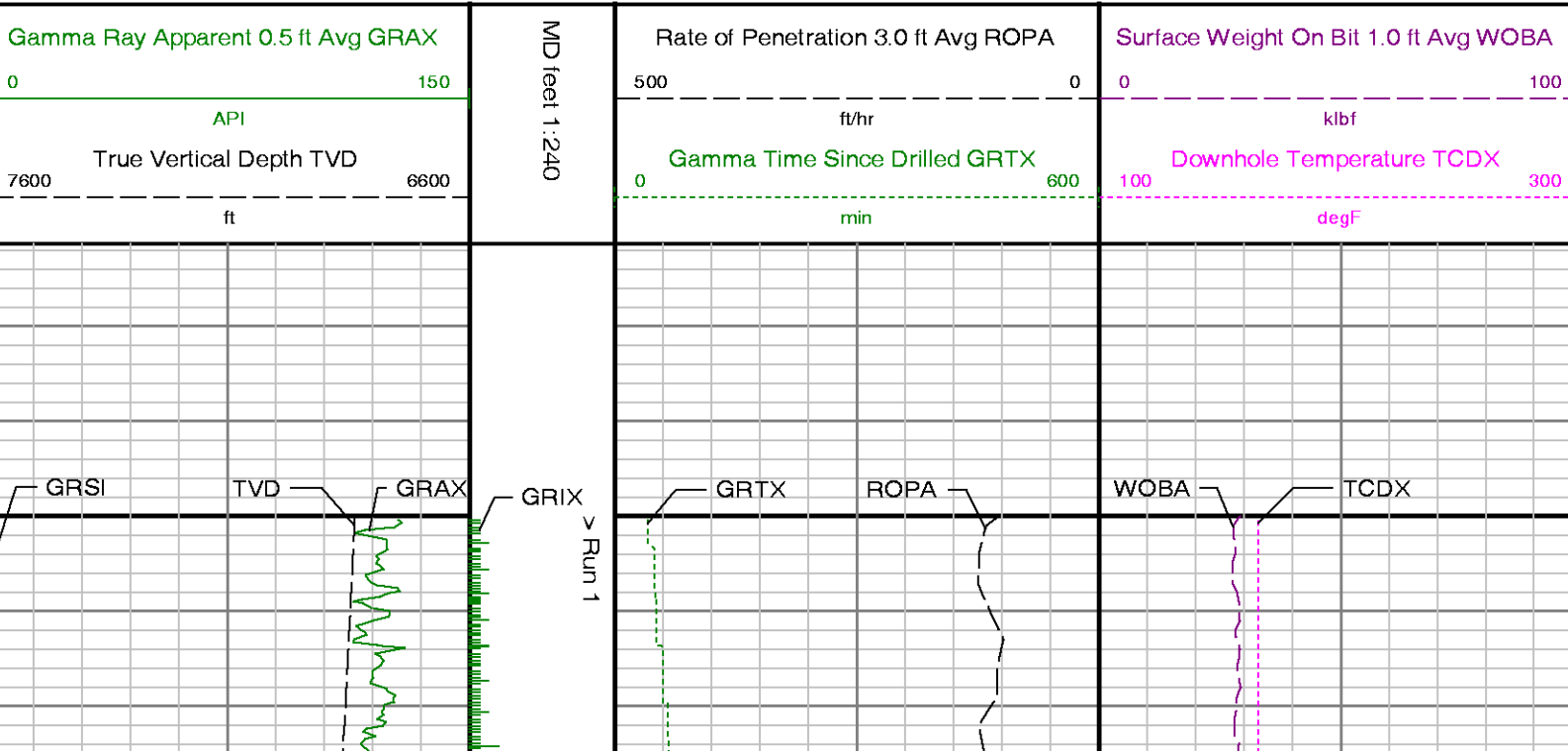
- 1.) Baker Hughes LWD run 1 utilized 6 3/4 inch NaviTrak Services (VSS, Directional) from 1220 to 6950 ft. MD ( 1219.97 to 6837.42 ft. TVD) and NaviGamma Services (VSS, Directional, Gamma Ray) from 6950 to 7933 ft. MD (6837.42 to 7454.78 ft. TVD) behind an 8 3/4 inch bit and steerable assembly.
- 2.) Baker Hughes LWD run 2 utilized 4 3/4 inch NaviGamma Services (VSS, Directional, Gamma Ray) from 7933 to 13082 ft. MD (7454.78 to 7482.84 ft. TVD) behind an 6 1/8 inch bit and steerable assembly.
- 3.) 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.
- 4.) Depth measurements 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.

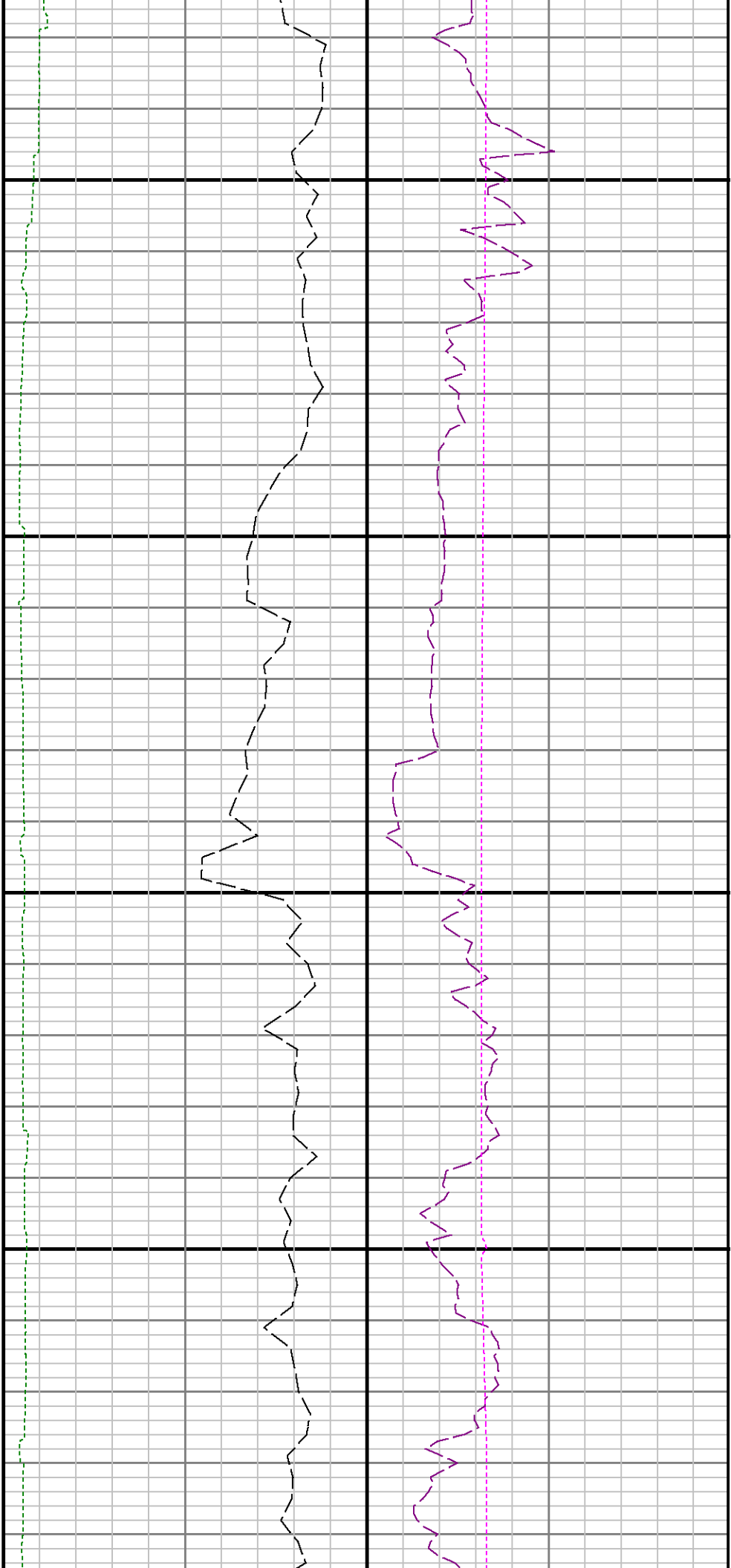
Remarks

Number	Measured Depth (ft)	Hole Section (in.)	LWD Run No.	Remark
1	7910	6.125	2	The interval from 7891 to 7933 ft. MD (7452.51 to 7454.78 ft. TVD) was logged up to 40.8 hours after being drilled due to a trip out of the hole to lay down the vertical/curve assembly, run intermediate casing, cementing operations, and to pick up the lateral assembly.
2	13060	6.125	2	The interval from 13037 to 13082 ft. MD (7481.42 to 7482.84 ft. TVD) does not contain GRAX, GRIX or GRTX due to the bit to sensor offset.



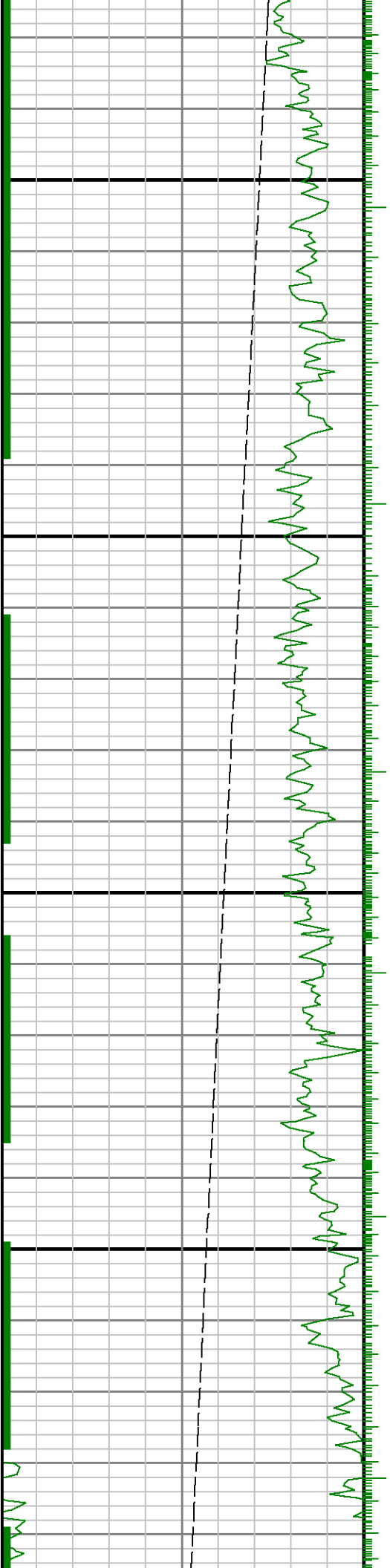
Company : Anadarko  
Well : Vollmar 29C-11HZ  
Interval : 6921.32 - 13110.00 feet  
Created : 27/Feb/2015 7:48:23 PM

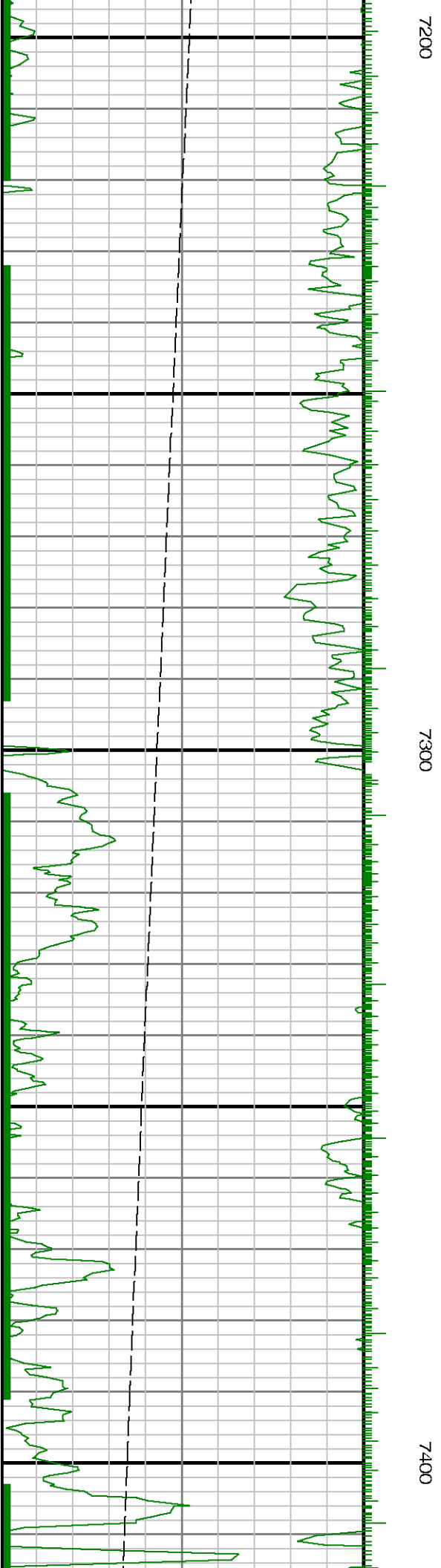
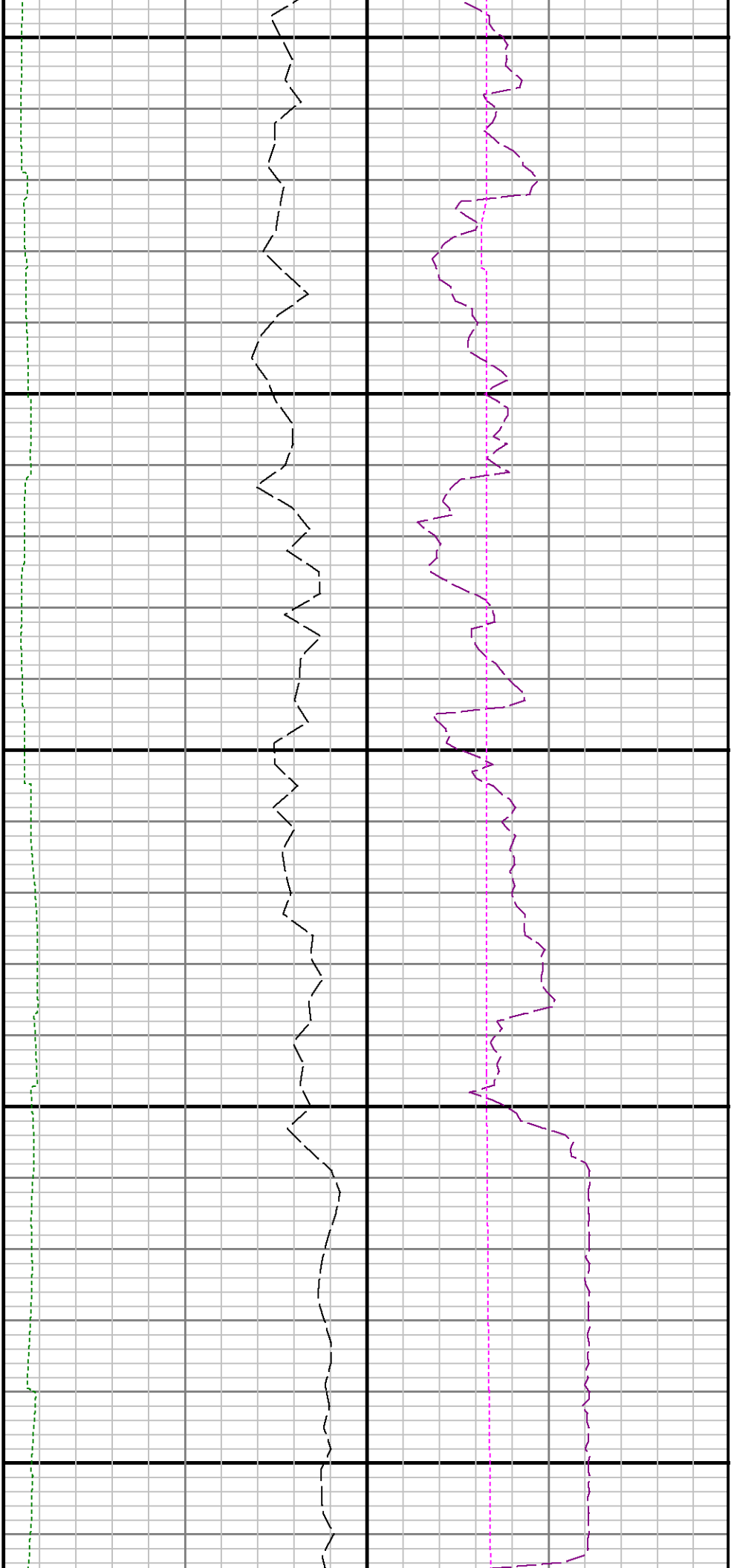


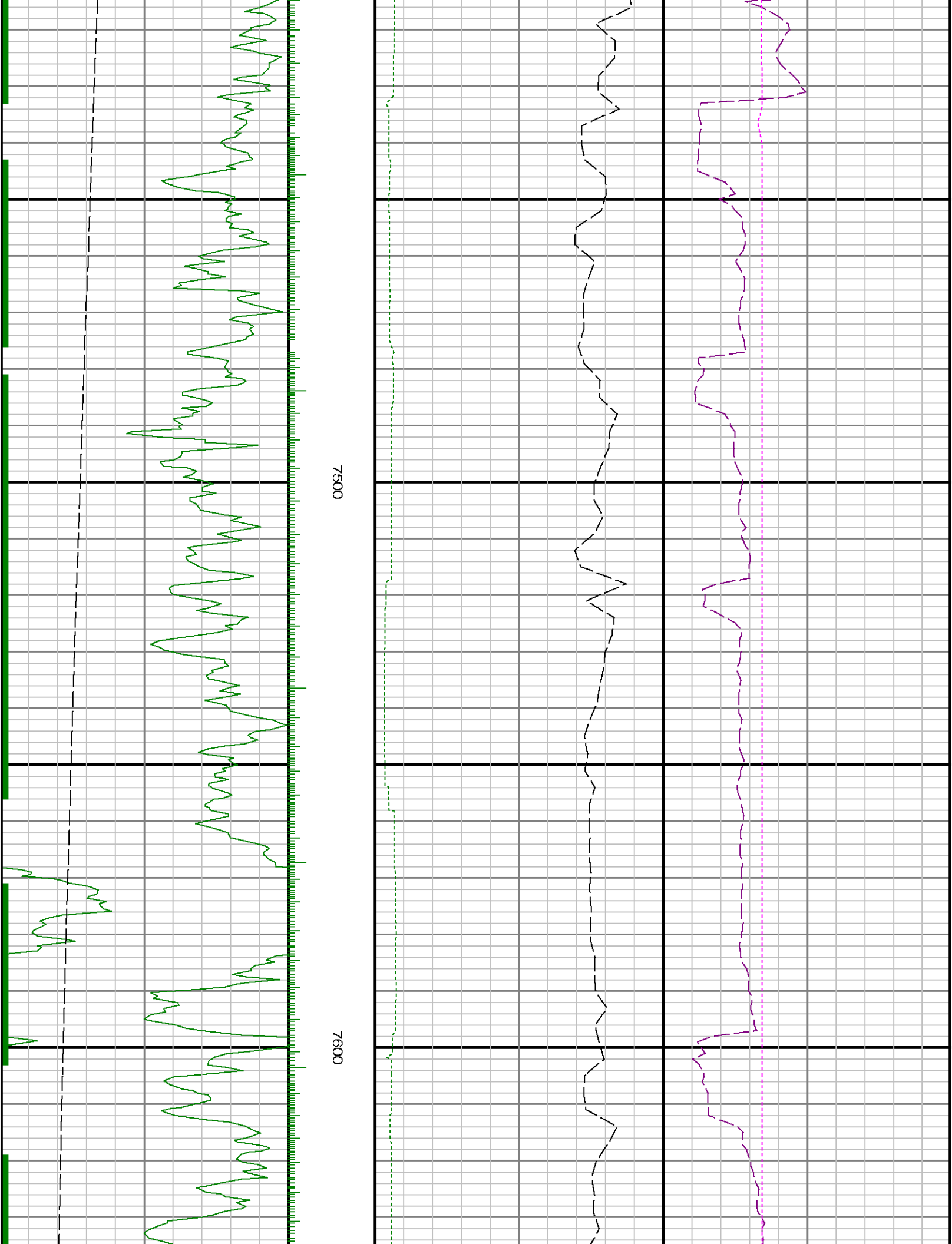


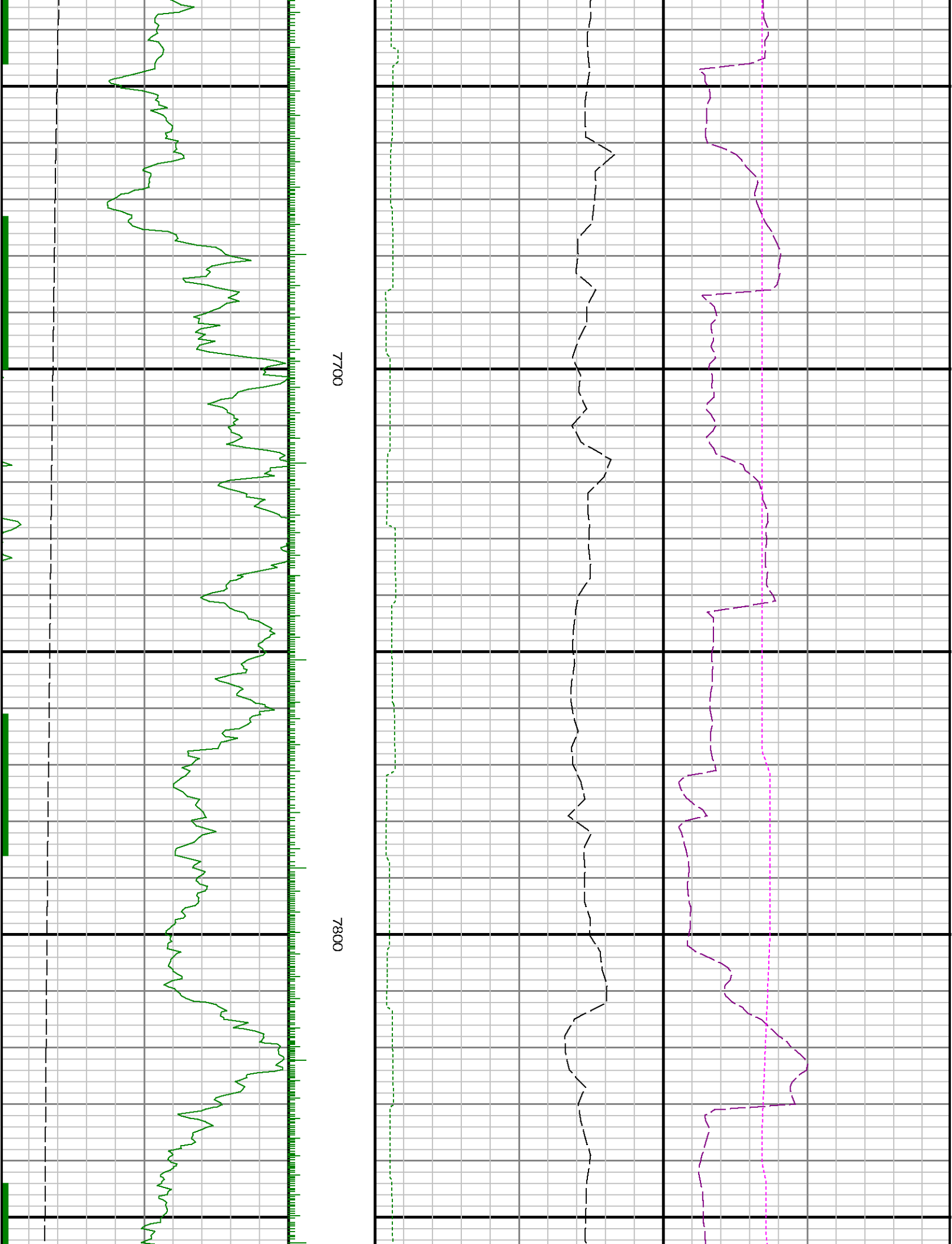
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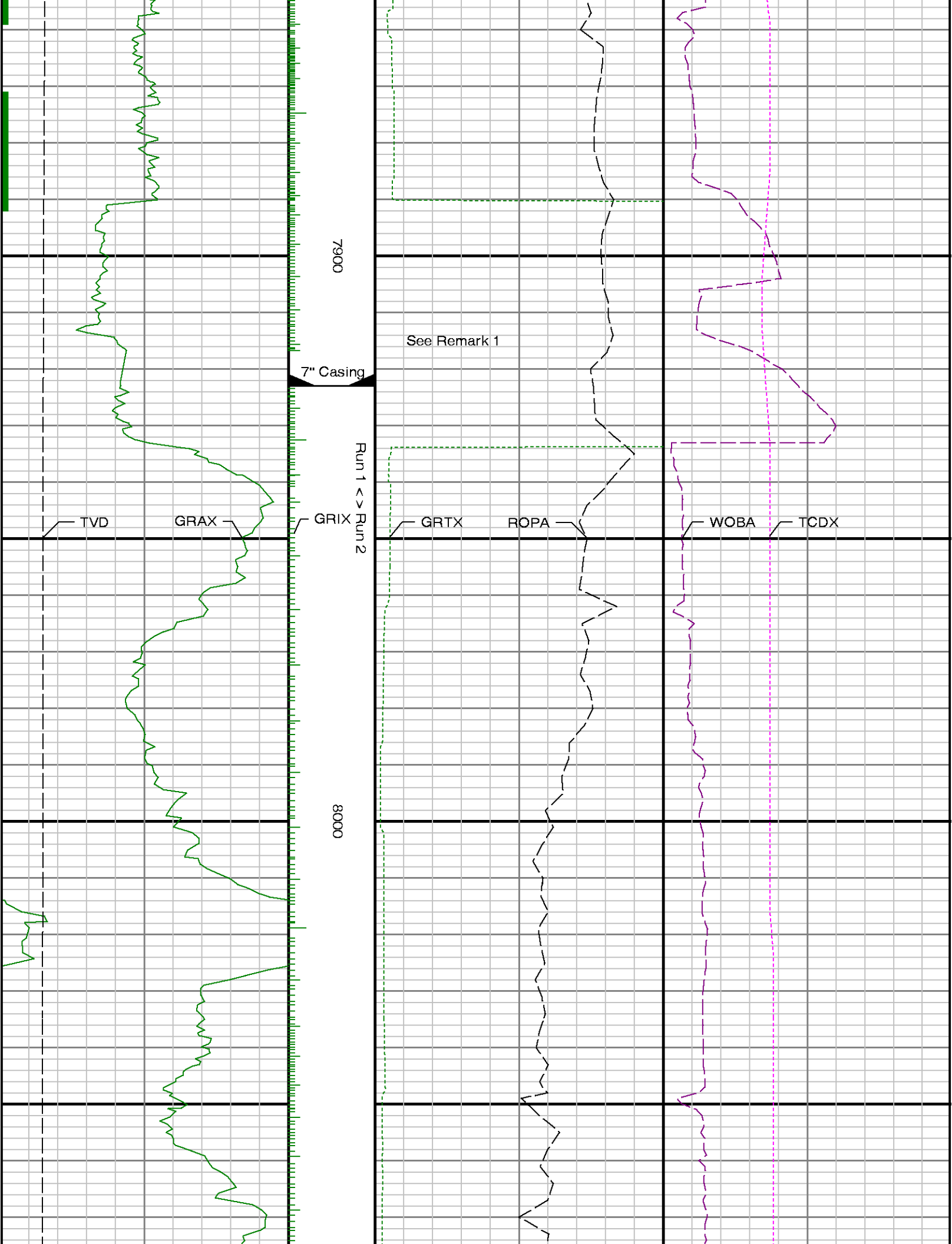
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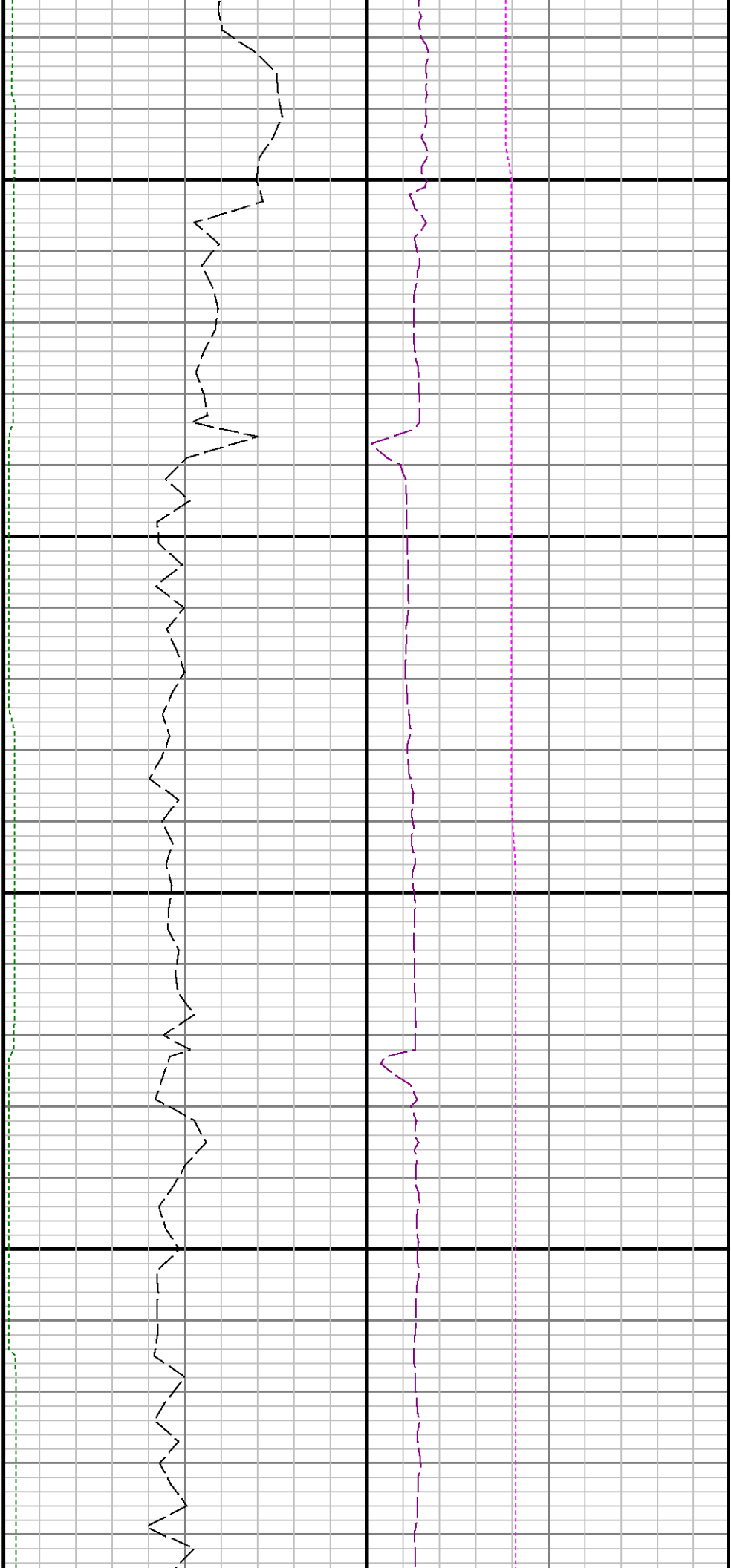






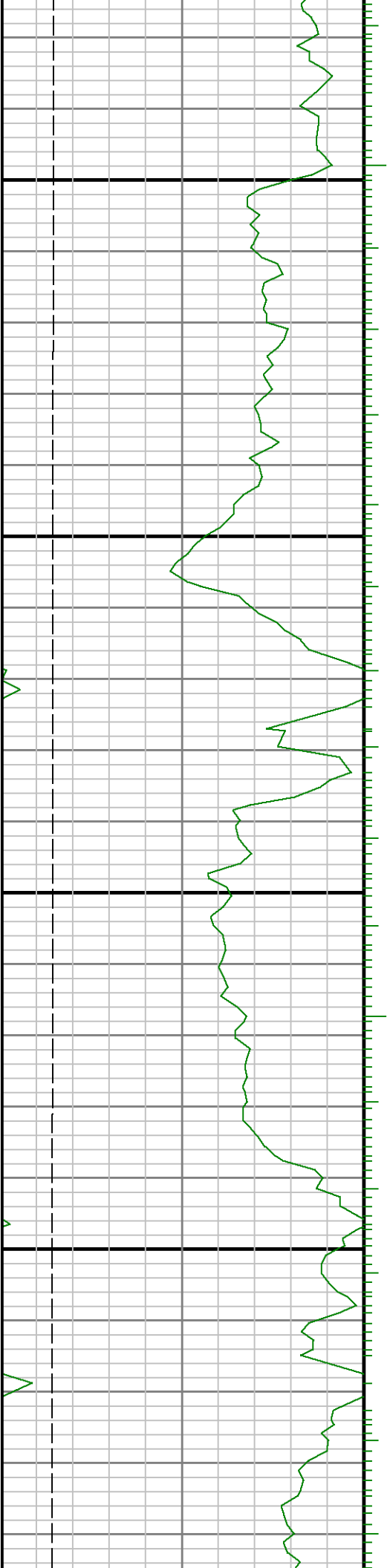


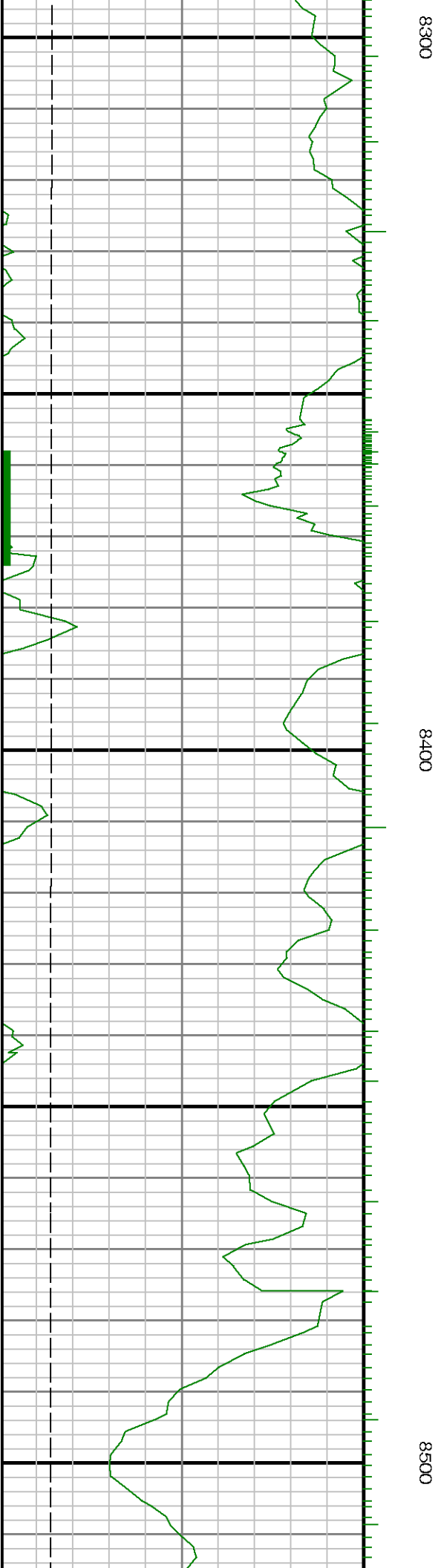




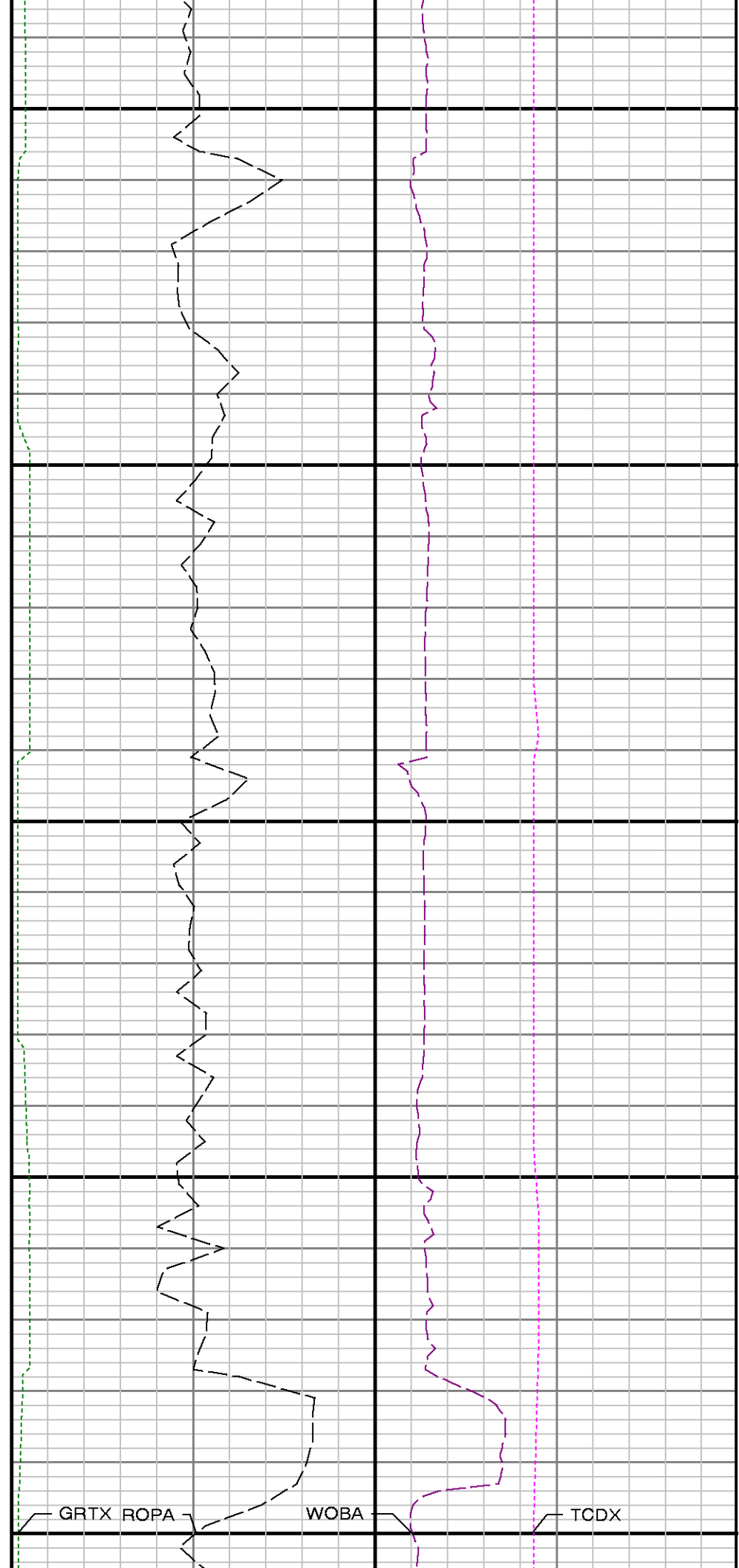
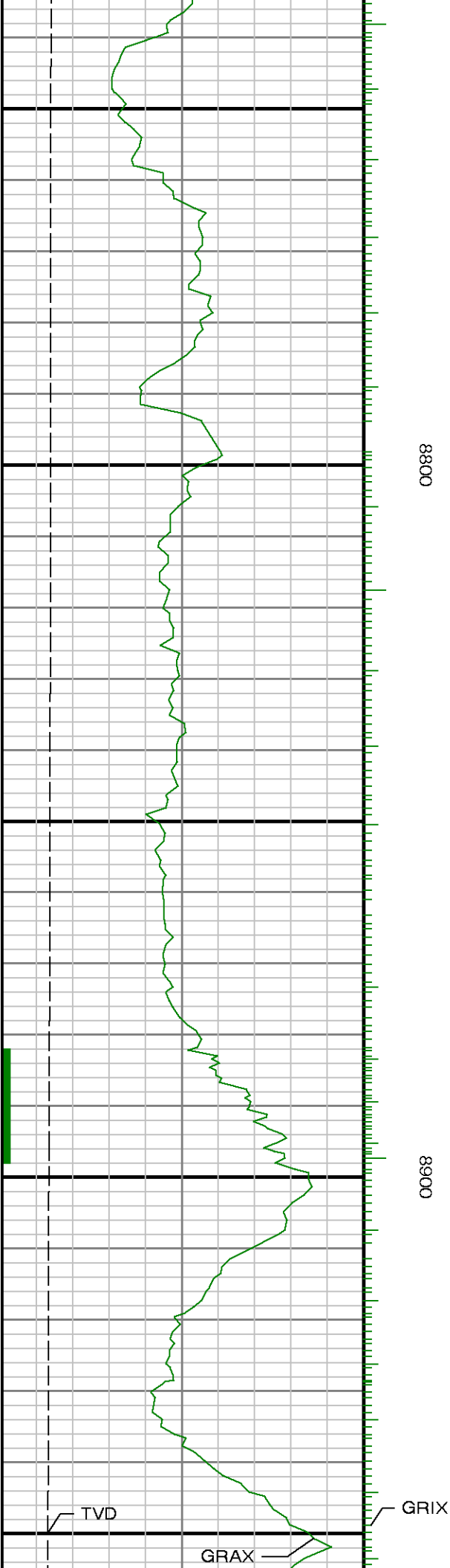
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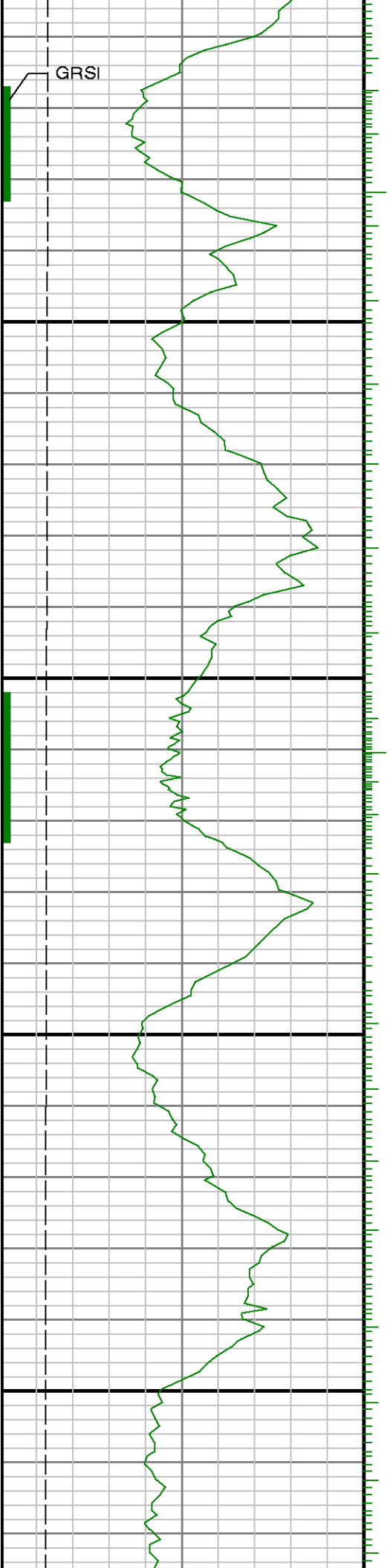
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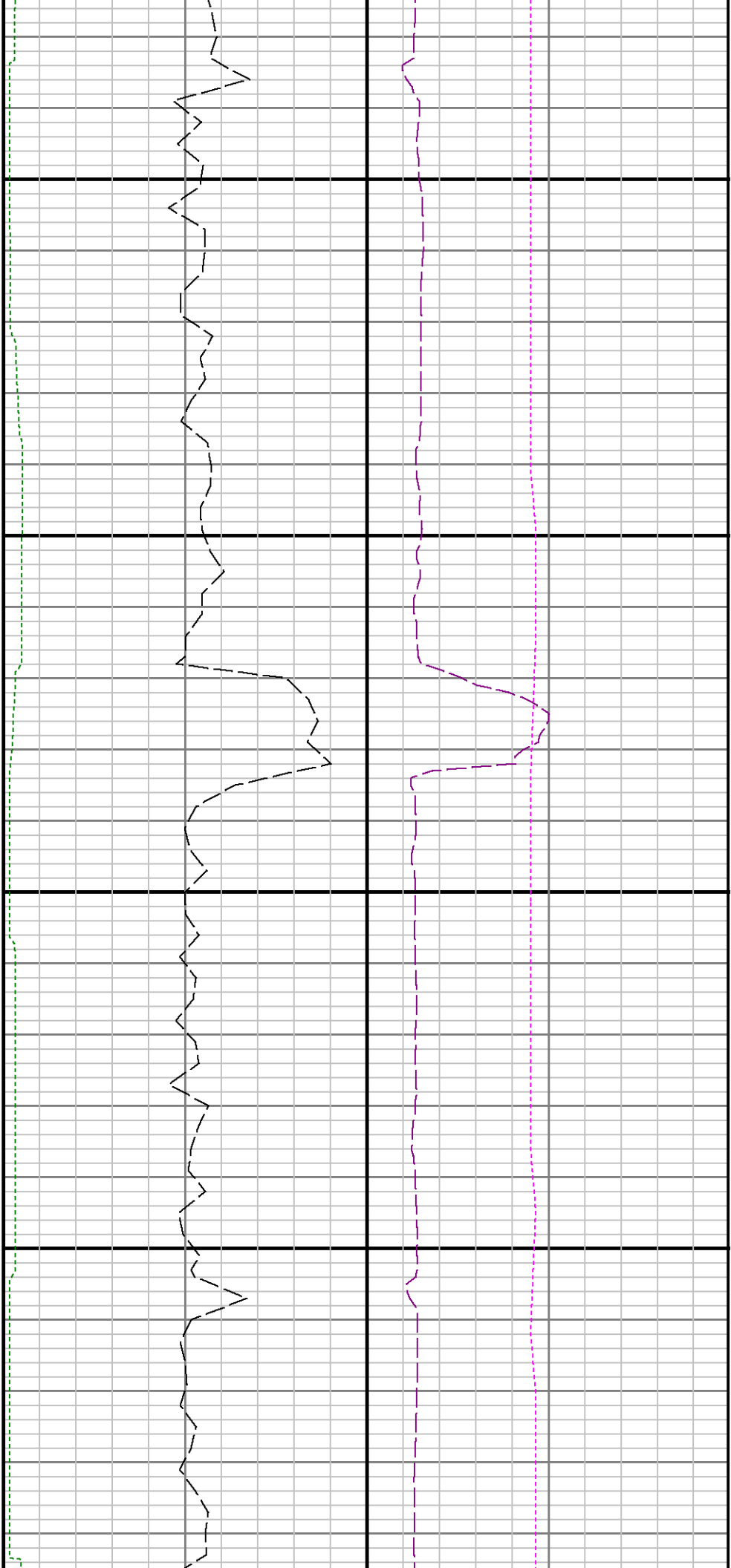




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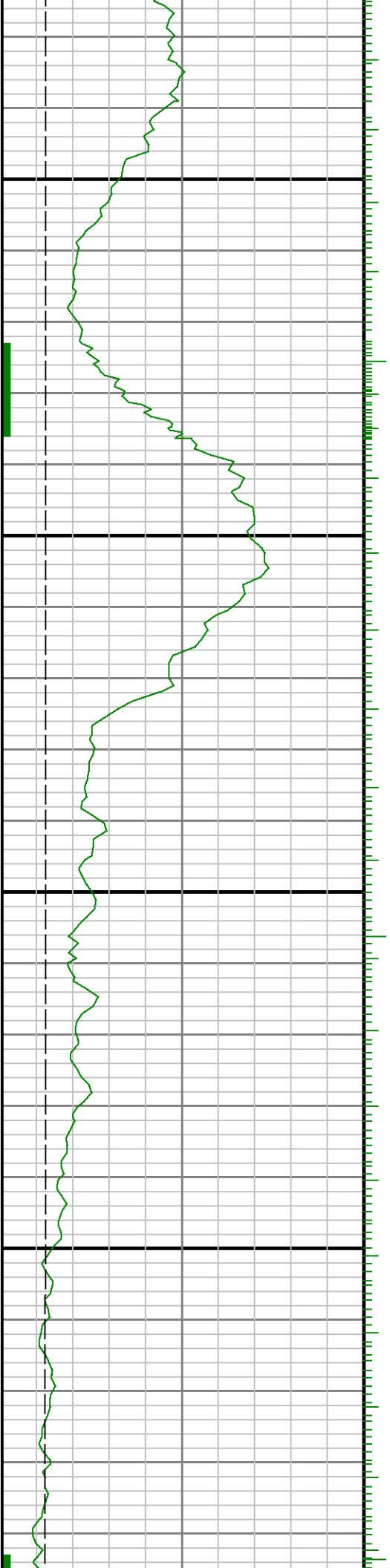
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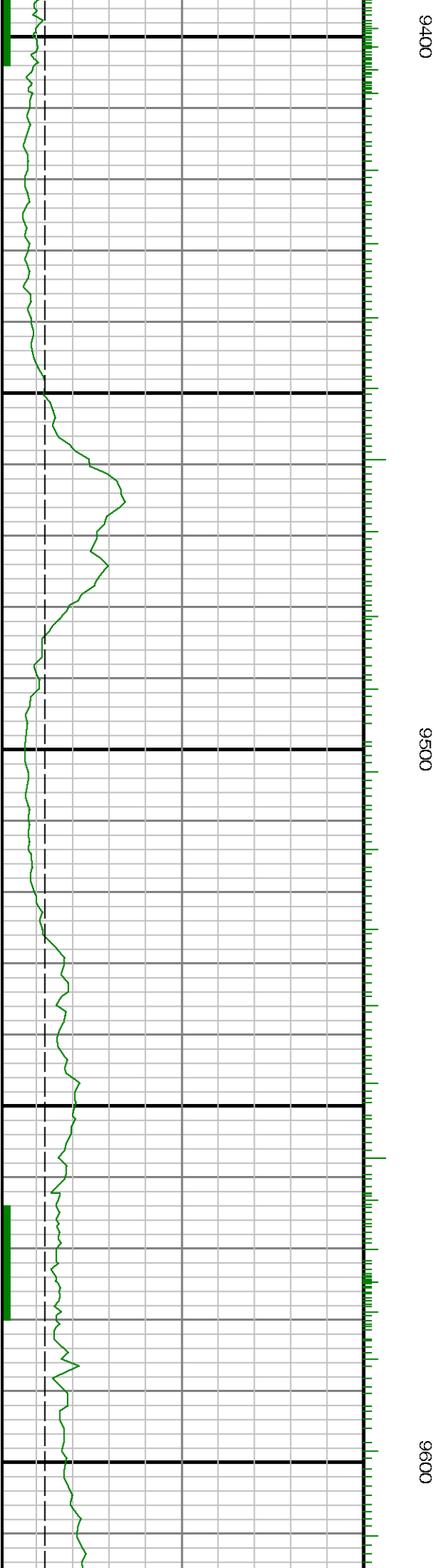
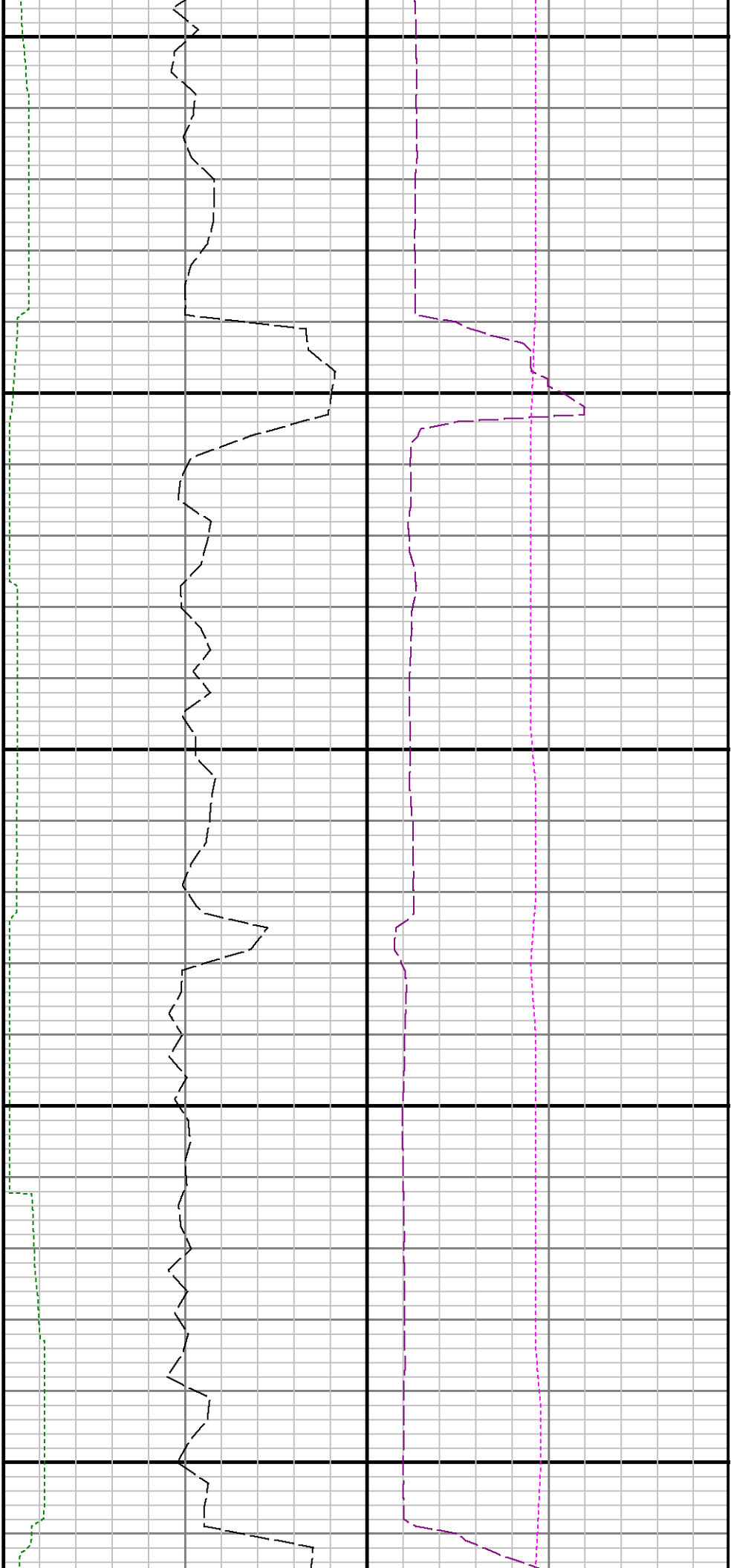


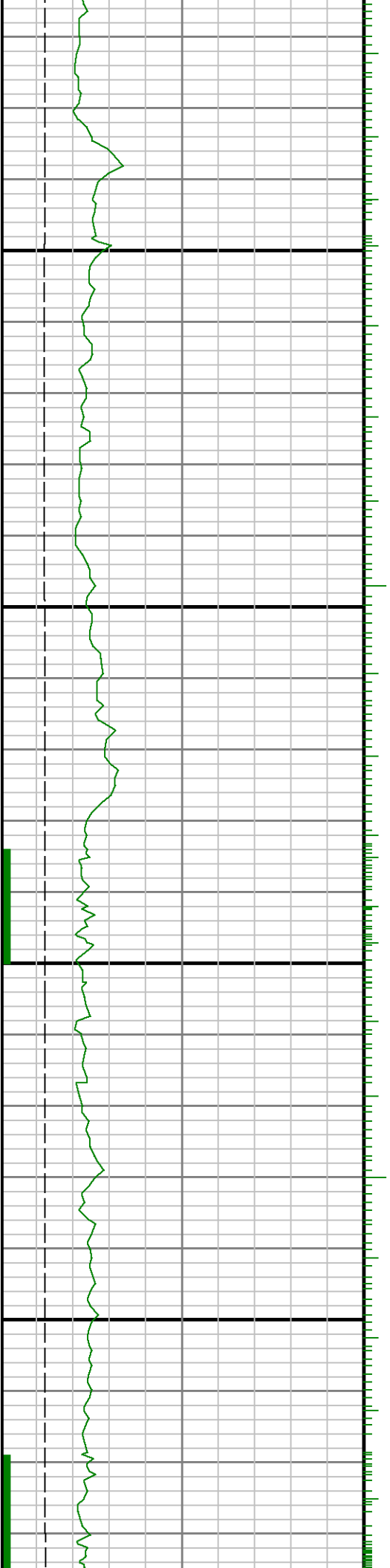


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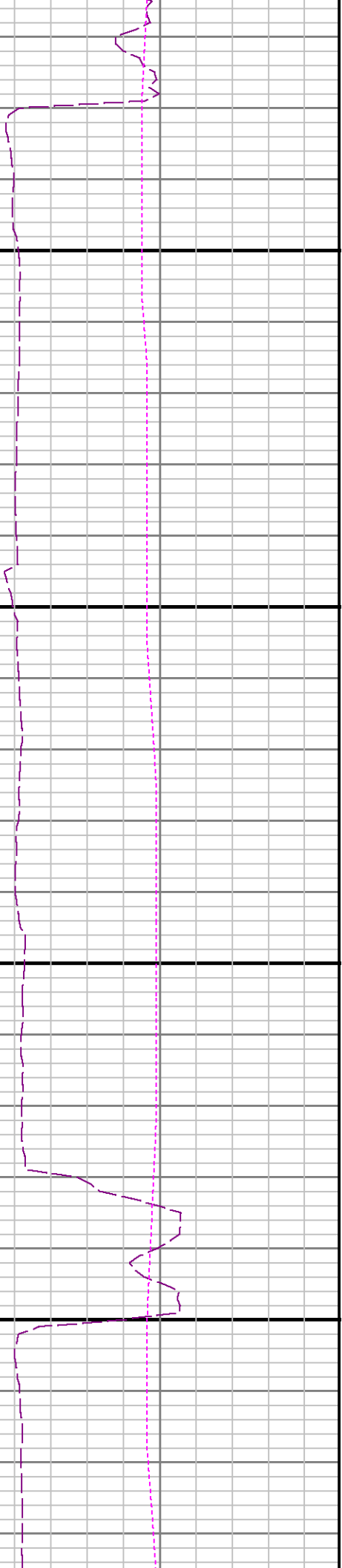
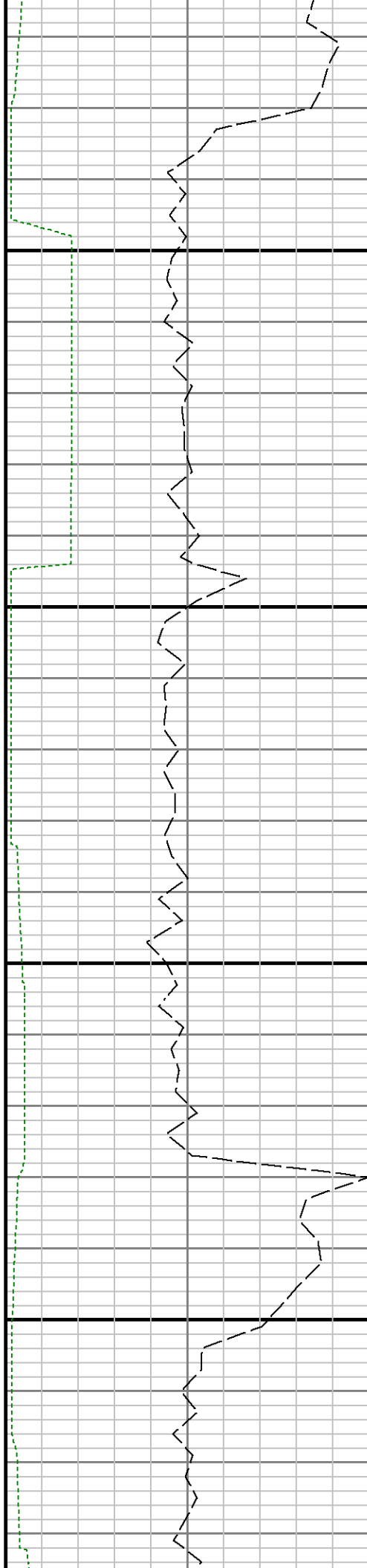




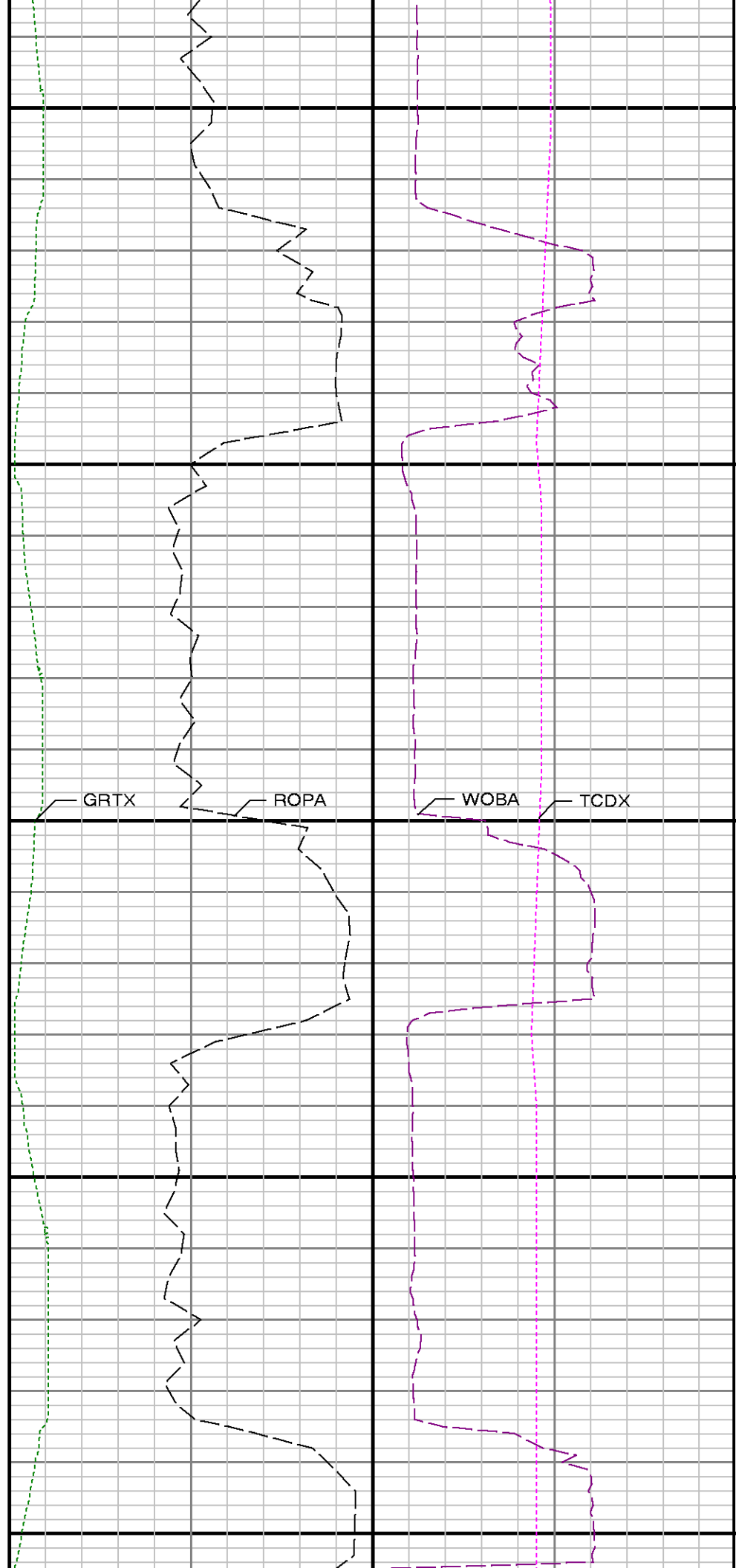
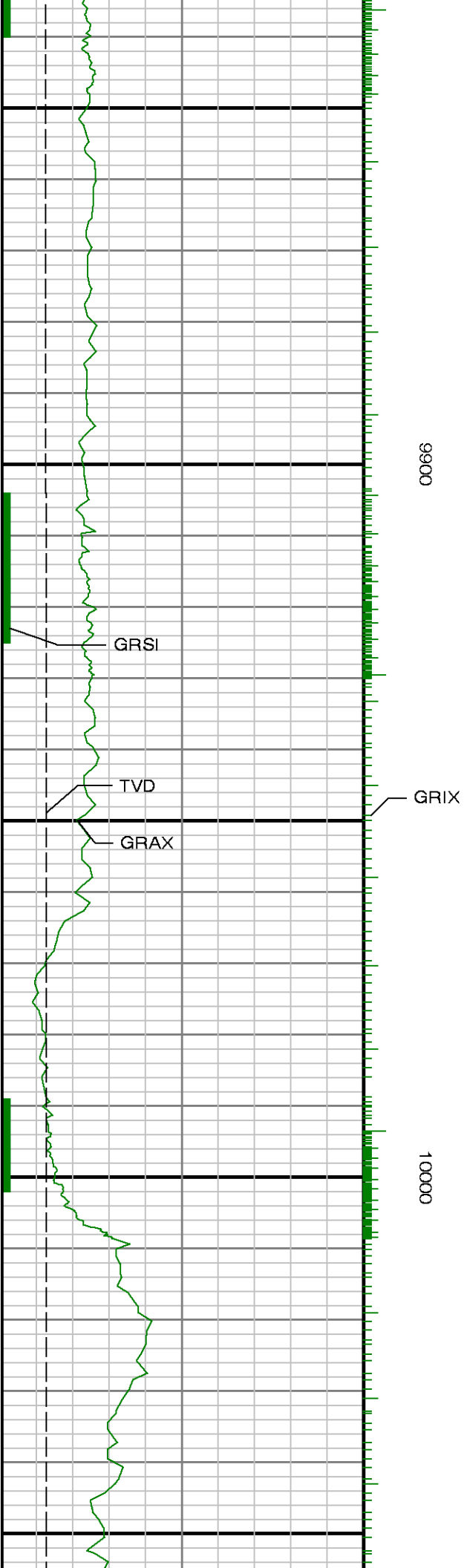


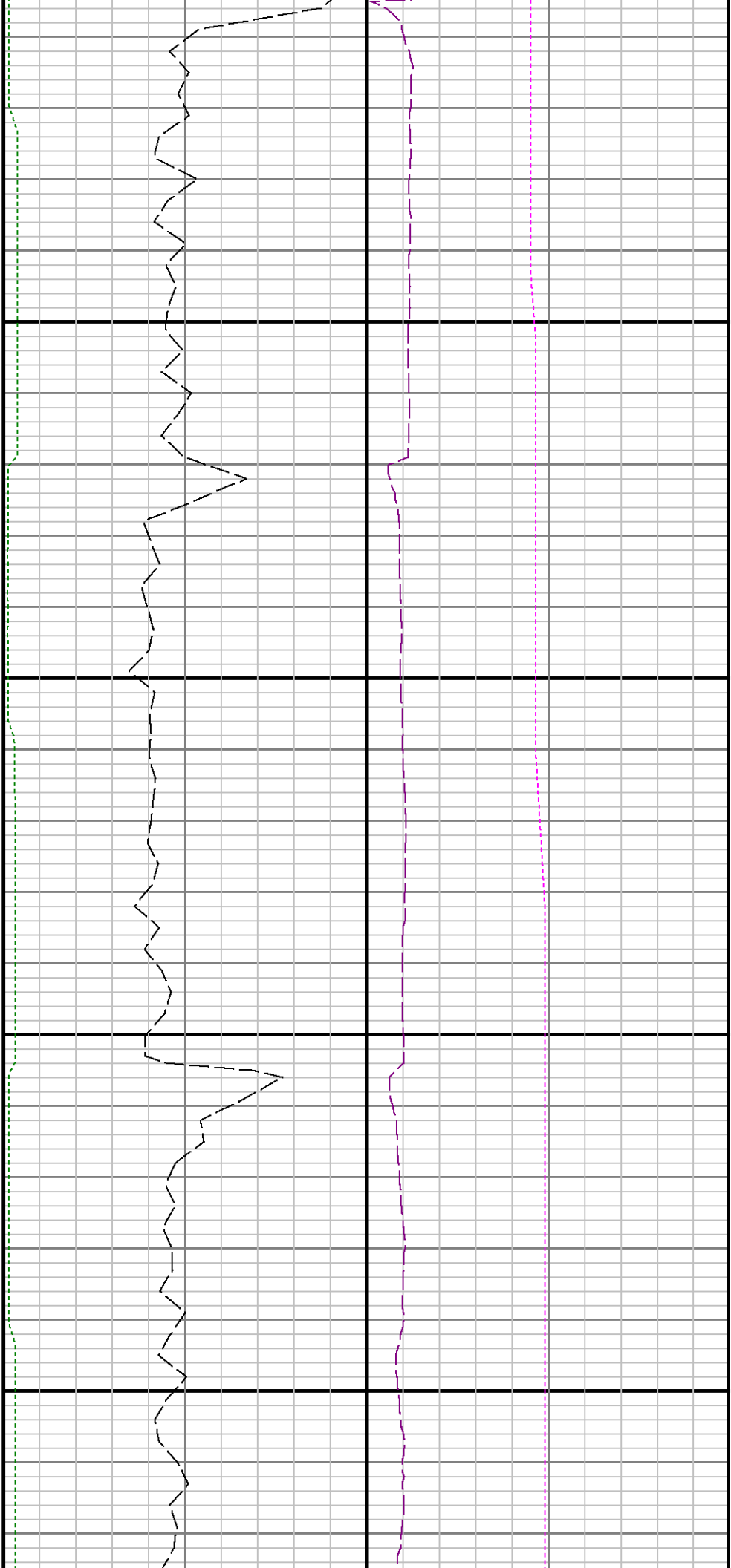
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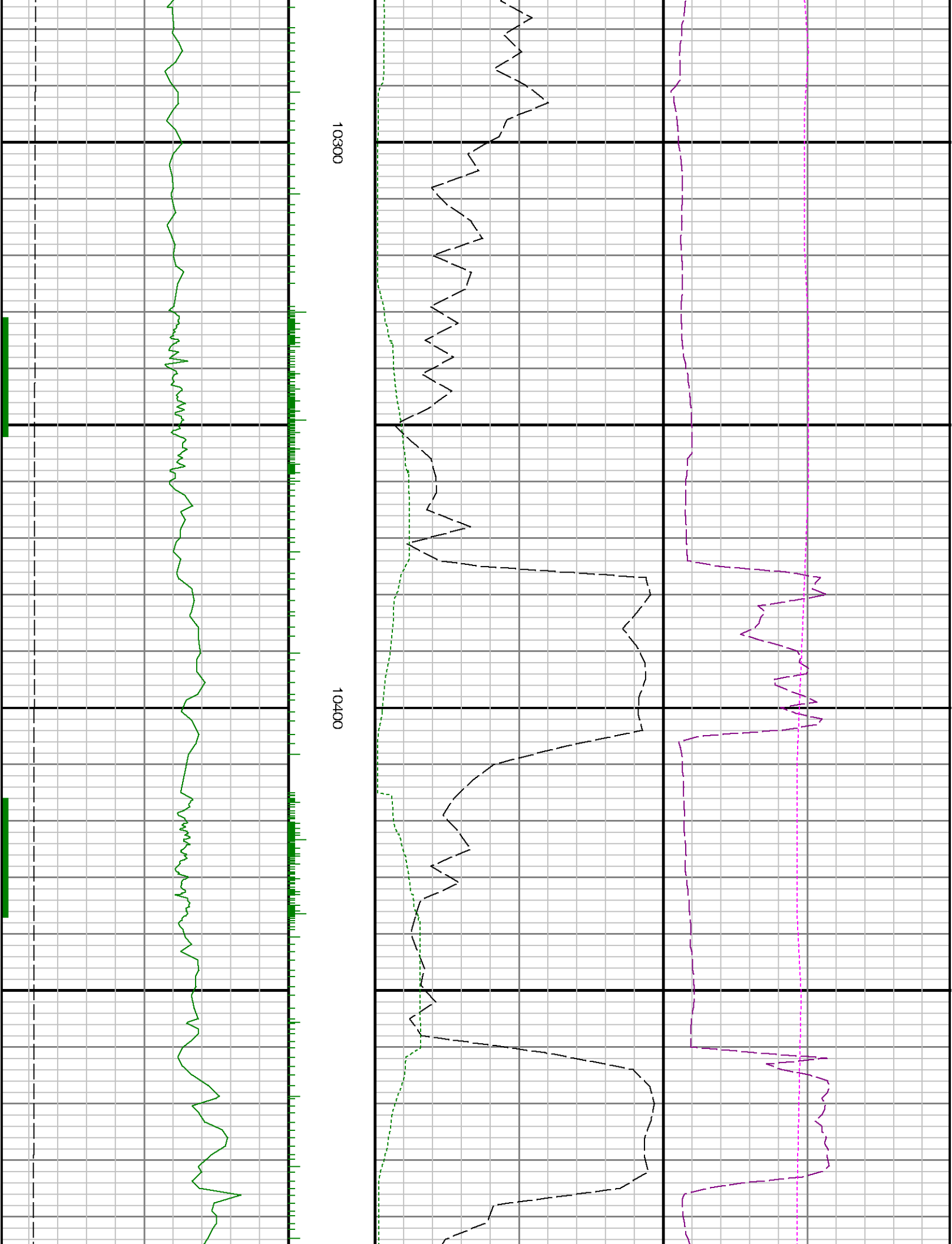


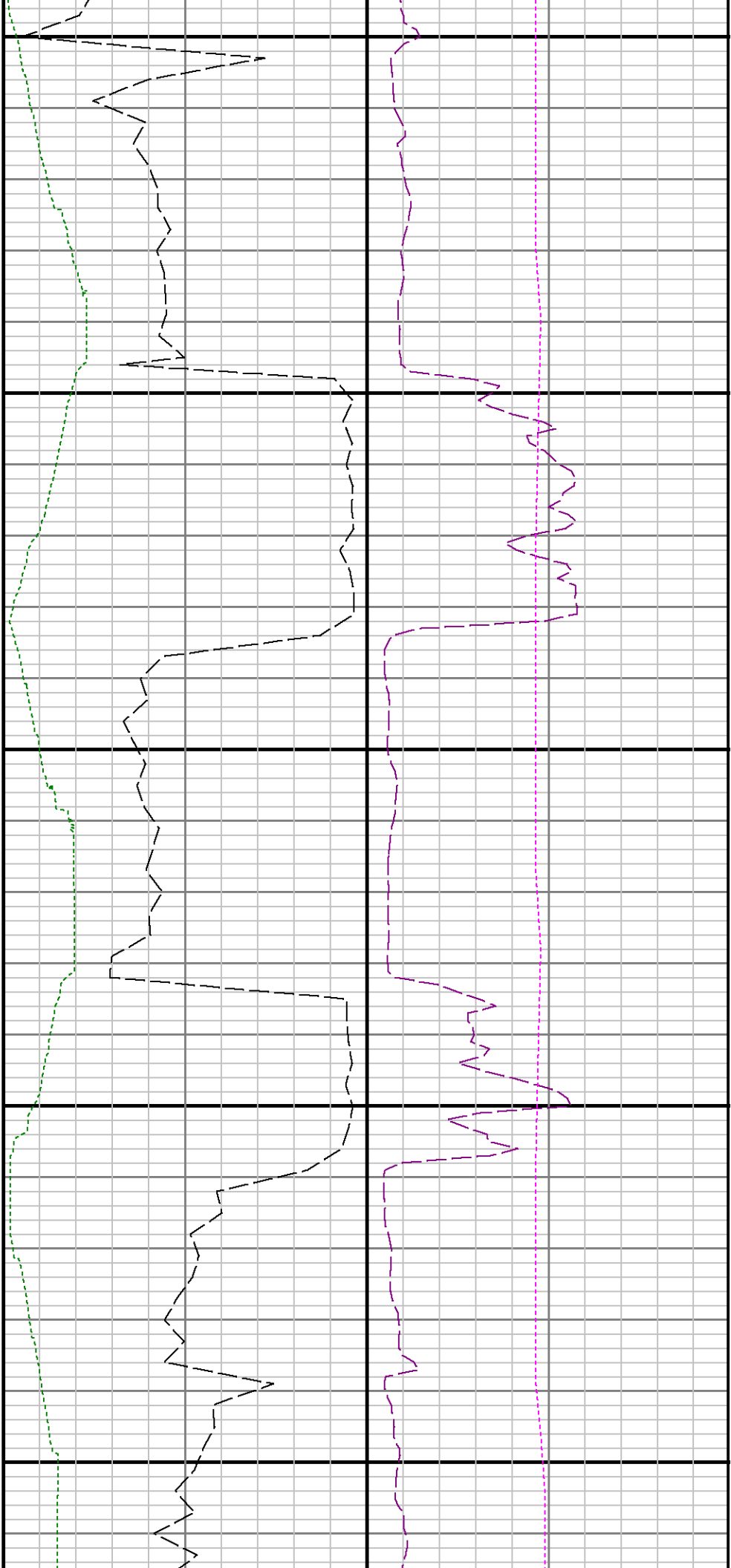




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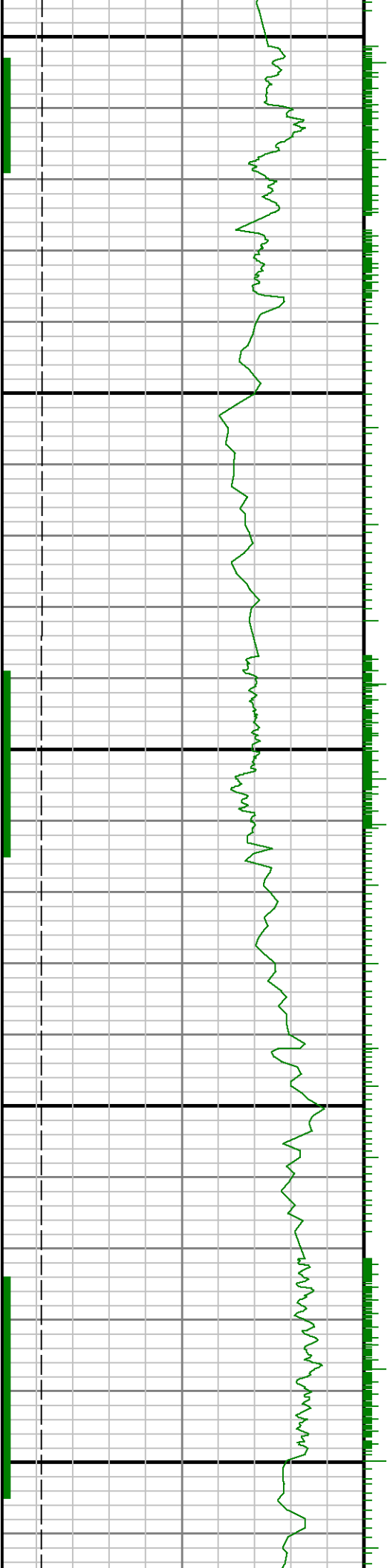




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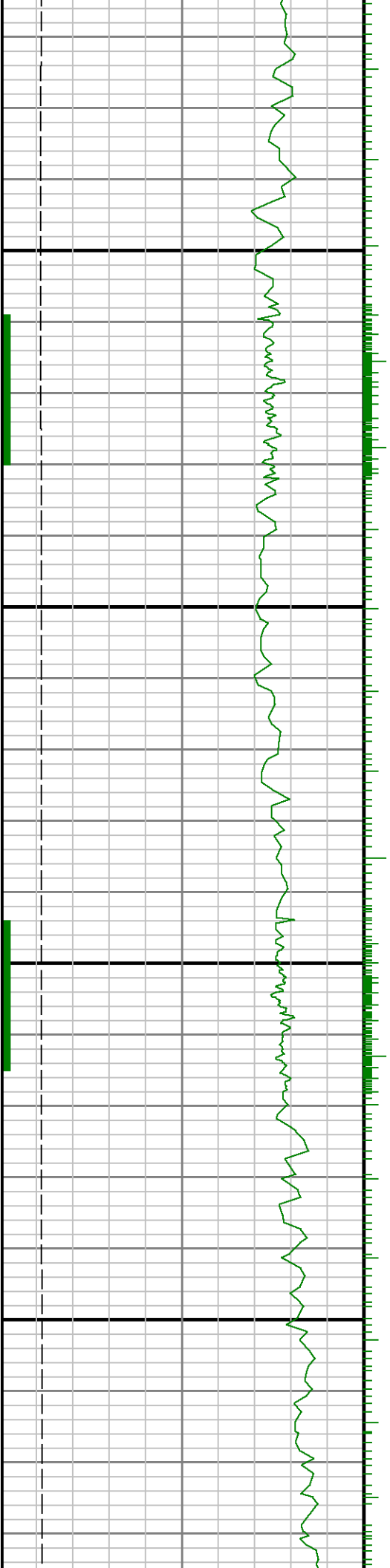
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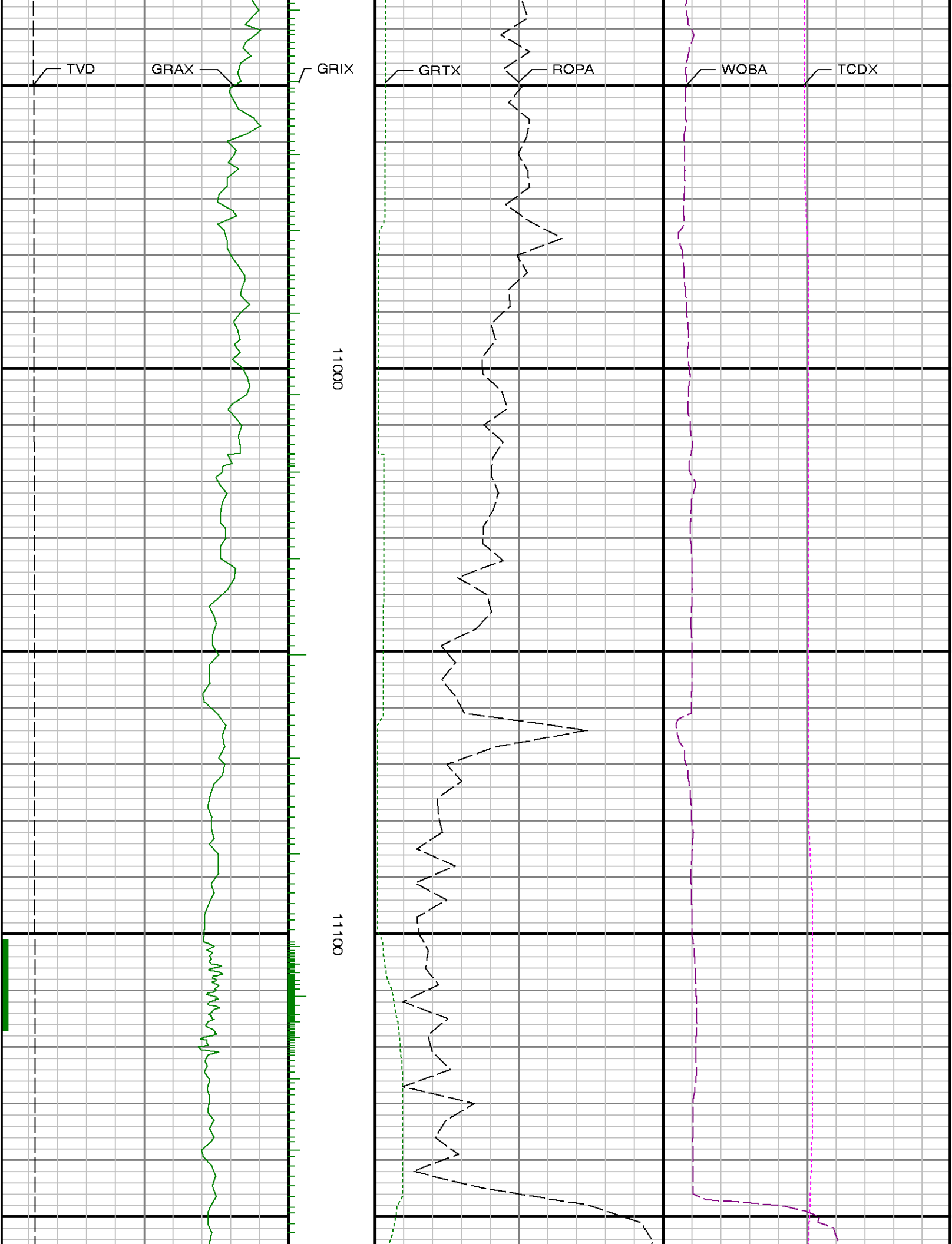


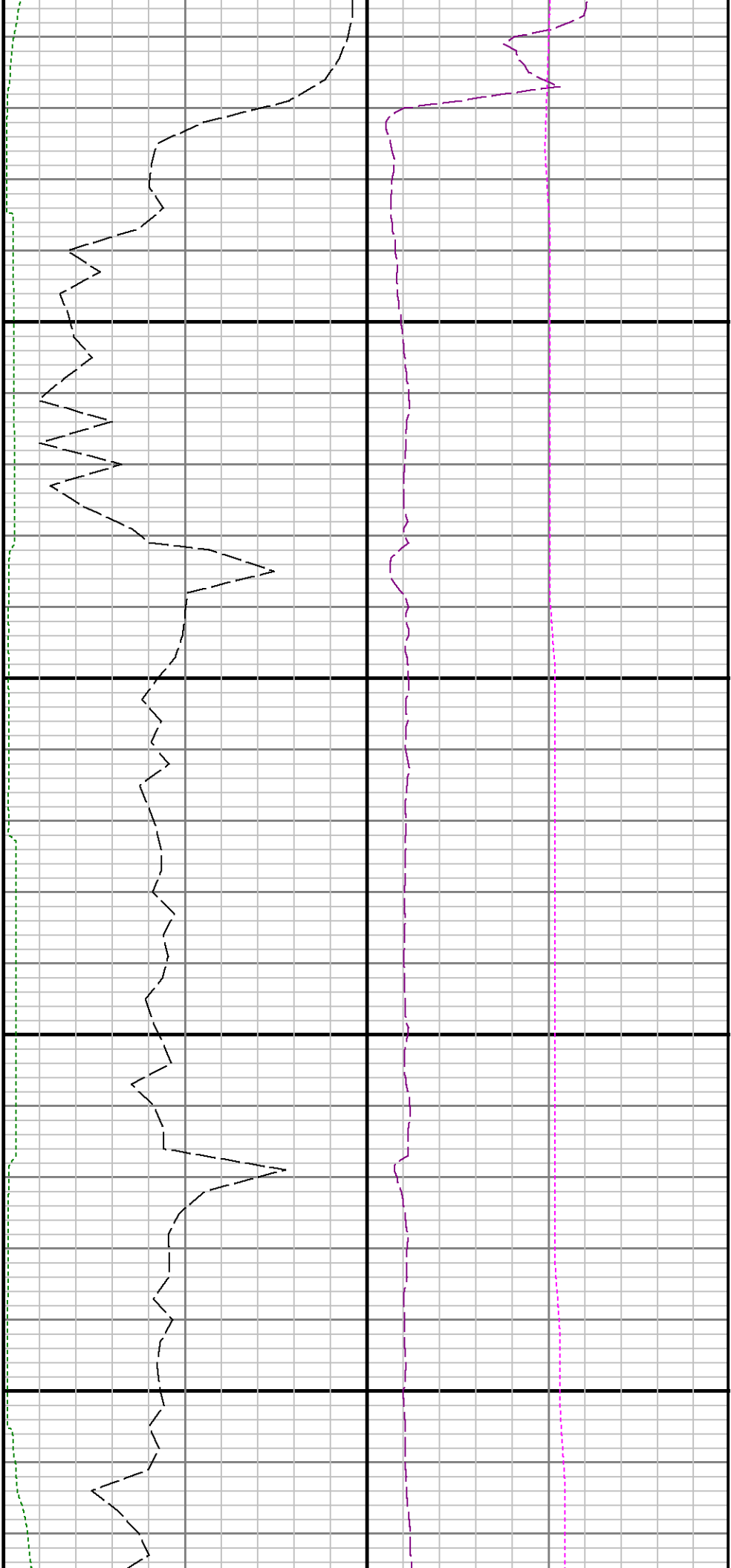


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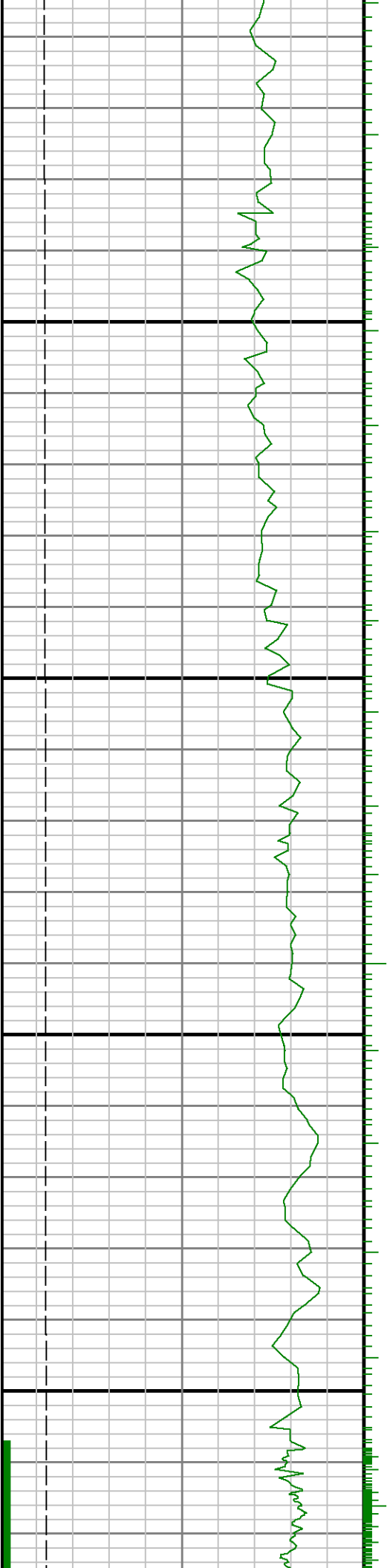






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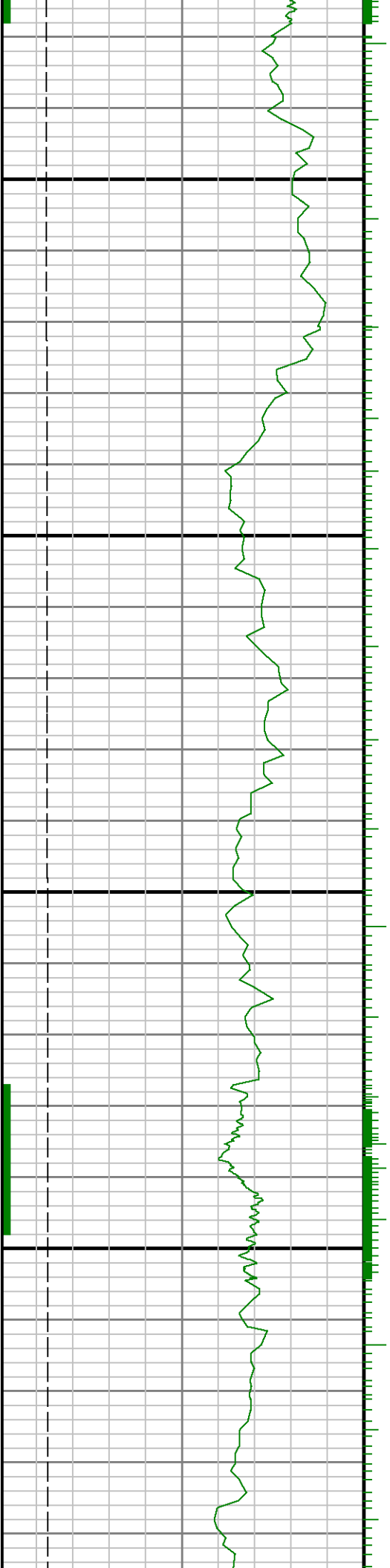
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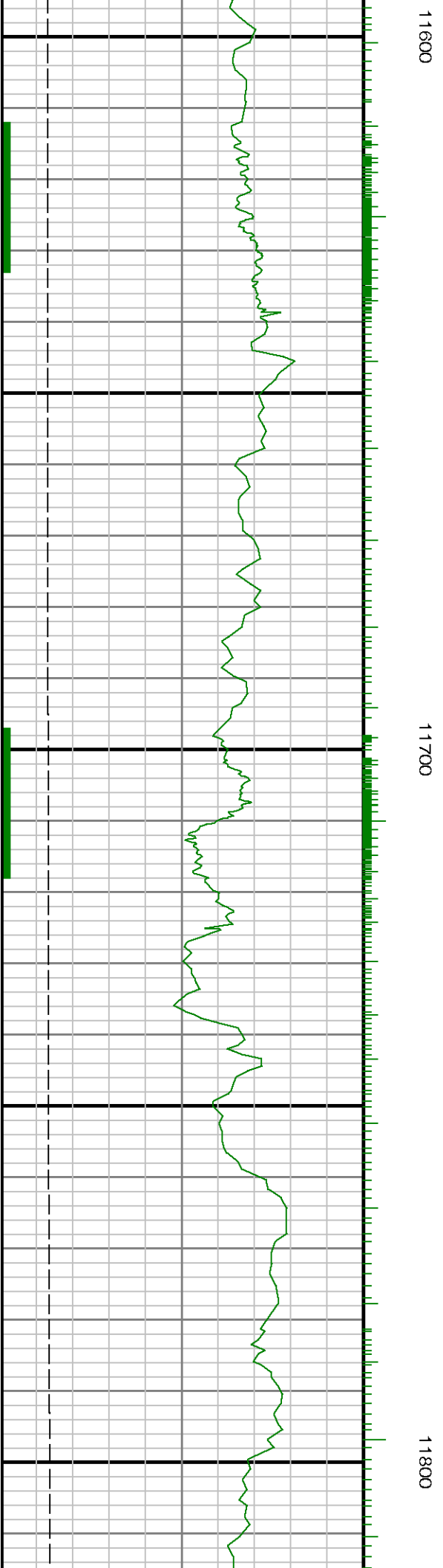


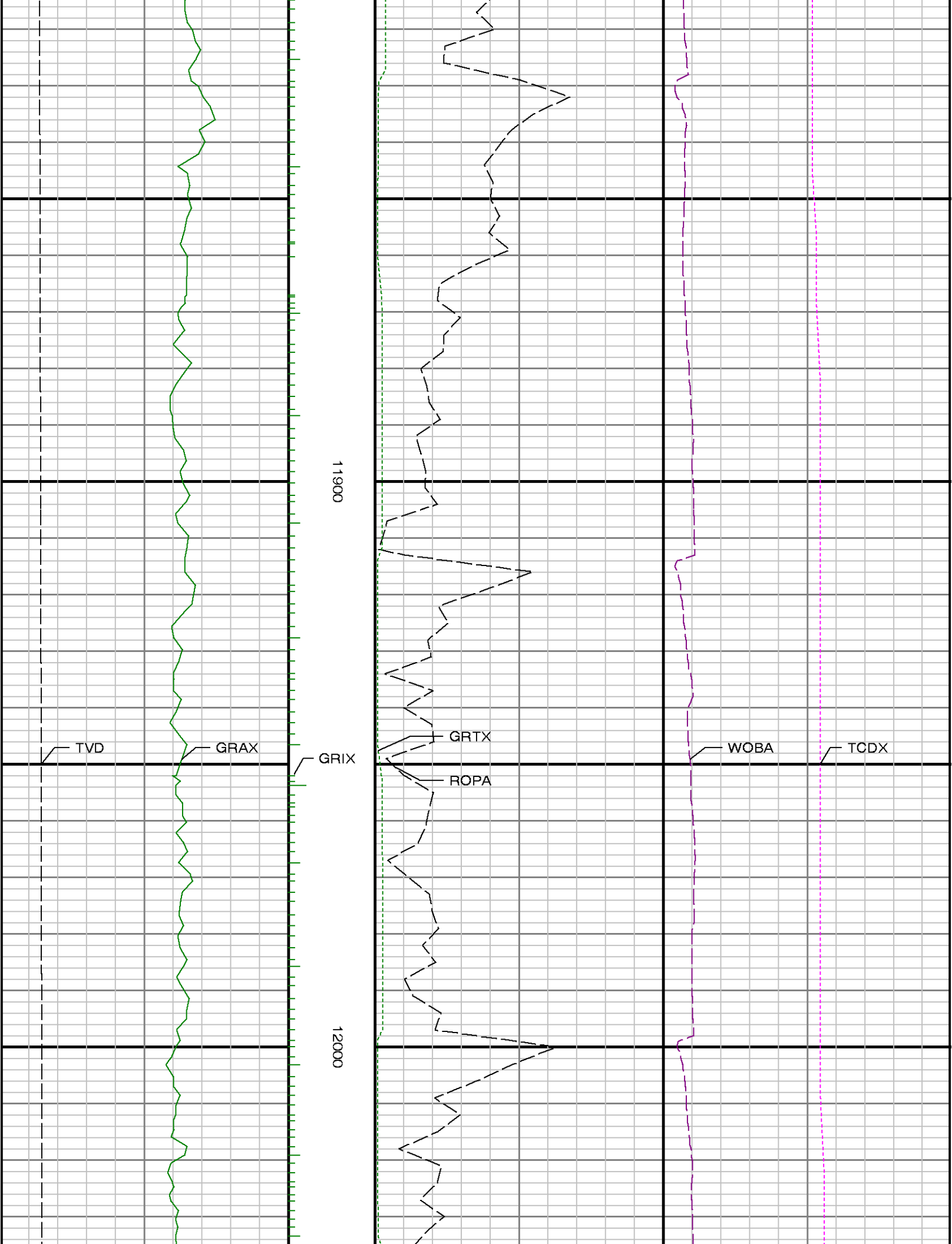
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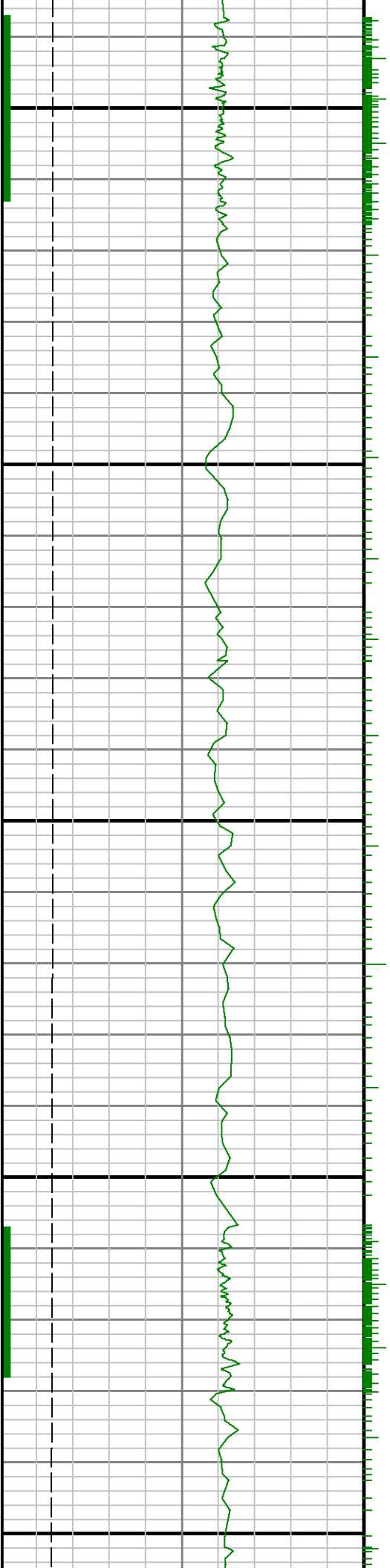
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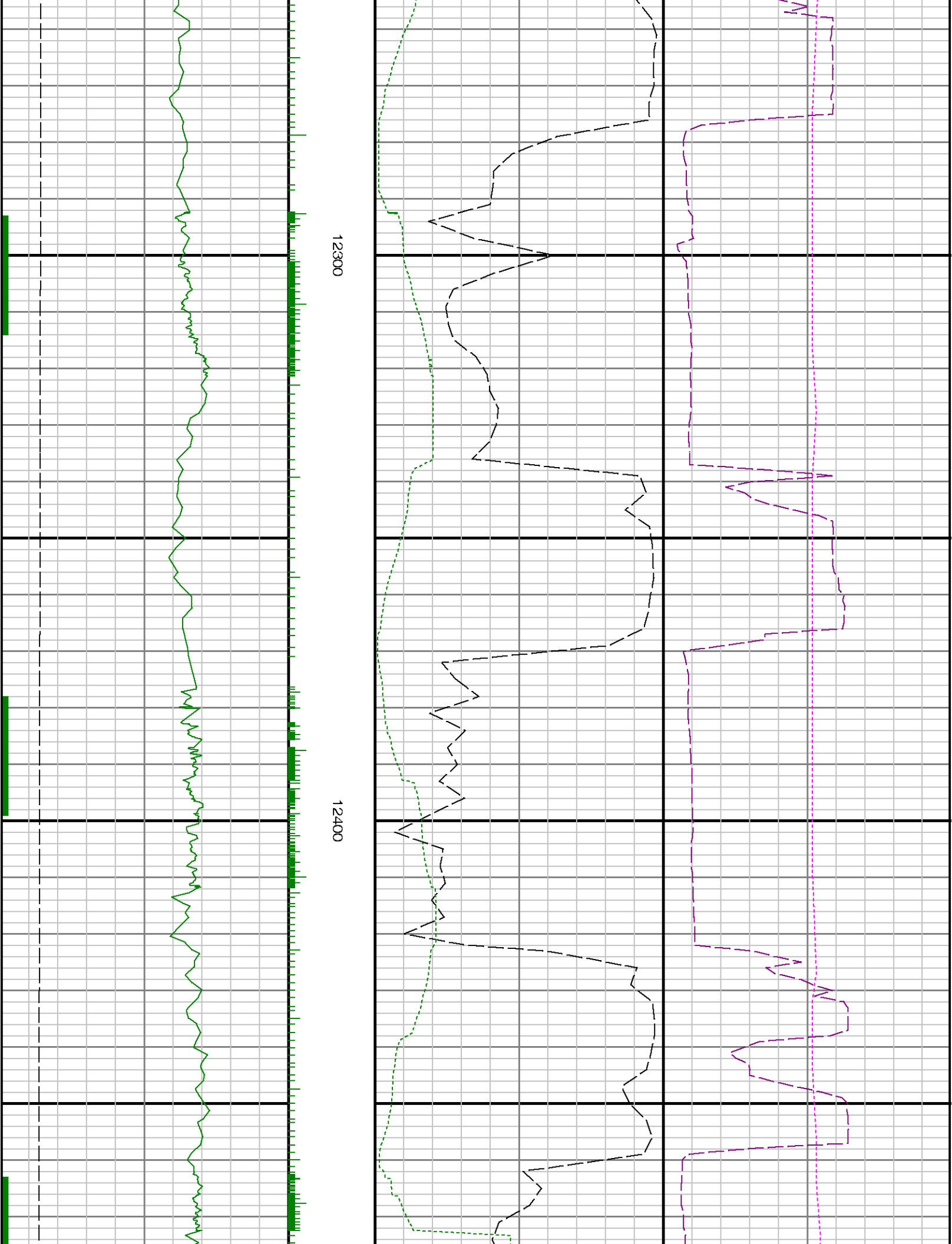


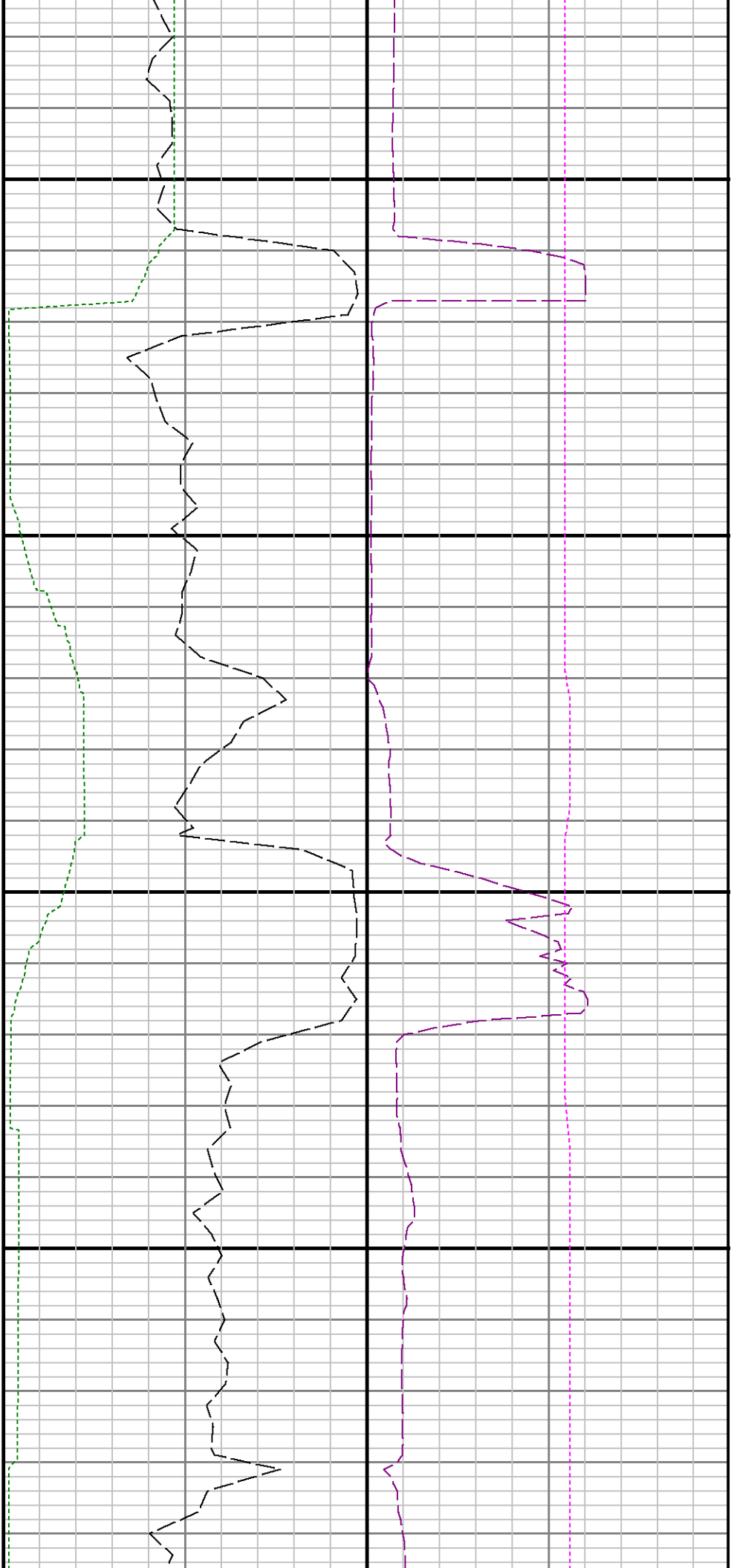












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