



**Natural Formation Evaluation
Gamma Ray**

Realtime Log

Scale: **1:240**
MEASURED DEPTH
 Company: **Kerr McGee Oil & Gas Onshore LP**
 Well: **Kerr 36C-25HZ**
 Field: **Weld County**

Region: **Continental US** Country: **United States**

Status: **Final Print**
 API Number: **05123389800000**
 Surface Location:
 Latitude: **40° 7' 56.384" N**
 Longitude: **104° 50' 28.475" W**
 Section: **13** TWN: **2N** Range **67W**

Permanent Datum (P.D.): **Mean Sea Level** Elevation: **0.00 ft.**
 Log Measured From: **Kelly Bushing** **4899.00 ft.** Above P.D.
 Depth Reference: **Driller's Depth**
 Other Services:
 Elevations:
 KB: **4899.00 ft.**
 DF: **N/A**
 GL: **4883.00 ft.**

Interval Logged **Dates** **Magnetic Field Reference**
 Top: **6650ft.** Date From: **13/Jan/15** Dip Angle: **66.85°** Azi Reference North: **True**
 Bottom: **17876 ft.** Date To: **20/Jan/15** Total **Mag to Reference**
 Spud Date: **13/Jan/15** Field Strength: **52754.0 nT** North Correction: **8.54°**

Borehole Record			Casing Record			
Hole Size	From	To	Size	Weight	From	To
8.750 in.	1075 ft.	7849 ft.	9.625 in.	36.00 lb/ft	Surface	1070 ft.
6.125 in.	7849 ft.	17923 ft.	7.000 in.	26.00 lb/ft	Surface	7565 ft.

Mud Record			Deviation Record			
Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	1075 ft.	17923 ft.	8.750 in.	6774 ft.	0.5° / 292.3°	80.4° / 183.1°
			6.125 in.	10074 ft.	85.6° / 180.5°	89.9° / 179.2°
					/	/
					/	/
					/	/
					/	/

Acquisition System		Software Version		Other	
Advantage	2.20U4	Rig / Contractor:	Xtreme 24	/ Xtreme Drilling	
PATS	6.4.1.34	Job No.:	6837481	/ 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 (m.)	Bottom (m.)	From (m.)	To (m.)	Start		End		
1	1	1	8.750	PDC	3.000	Steerable	6650	7797	1075	7849	13/Jan/2015 11:00	15/Jan/2015 06:18	30.2		
2	2	2	6.125	PDC	3.000	Steerable	7797	17876	7849	17923	16/Jan/2015 15:30	20/Jan/2015 20:00	68.5		

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite
Andrew Overbey	13/Jan/2015	20/Jan/2015	Ben Klarin	13/Jan/2015	20/Jan/2015			

Mud Properties Record

Date / Time	LWD Run No.	Measured Depth (m.)	Mud Type	Density (sg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)	
13/Jan/2015	18:00	1	1978	Water Based Mud	8.4	27	10.1	N/A	0.3 / 99.0	Flow Line	1500	N/A
14/Jan/2015	18:00	1	7272	Water Based Mud	10.1	43	9.3	N/A	1.0 / 90.0	Active Mud Pits	1100	N/A
15/Jan/2015	18:00	1	7489	Water Based Mud	10.2	45	9.5	N/A	1.0 / 89.8	Active Mud Pits	1600	N/A
17/Jan/2015	18:00	2	10171	Water Based Mud	9.4	45	9.2	N/A	2.5/ 90.8	Active Mud Pits	1500	N/A
18/Jan/2015	18:00	2	13342	Water Based Mud	9.1	43	9.4	N/A	0.3 / 99.0	Active Mud Pits	1300	N/A
19/Jan/2015	18:00	2	16665	Water Based Mud	9.3	44	9.4	N/A	0.3 / 99.0	Active Mud Pits	1300	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg.	API
GRTX	Gamma Ray Time Since Drilled	Min.
GRIX	Gamma Ray Density, Points	unitless
GRSI	Gamma Ray Slide Indicator	unitless
ROPA	Rate of Penetration, 3.0 ft. Avg.	Ft./Hr.
TCDX	Downhole Temperature	Deg. F.
TVD	True Vertical Depth	Ft.
WOBA	Surface Weight on Bit, 1.0 ft. Avg.	K. lbs.

Equipment and Service Data

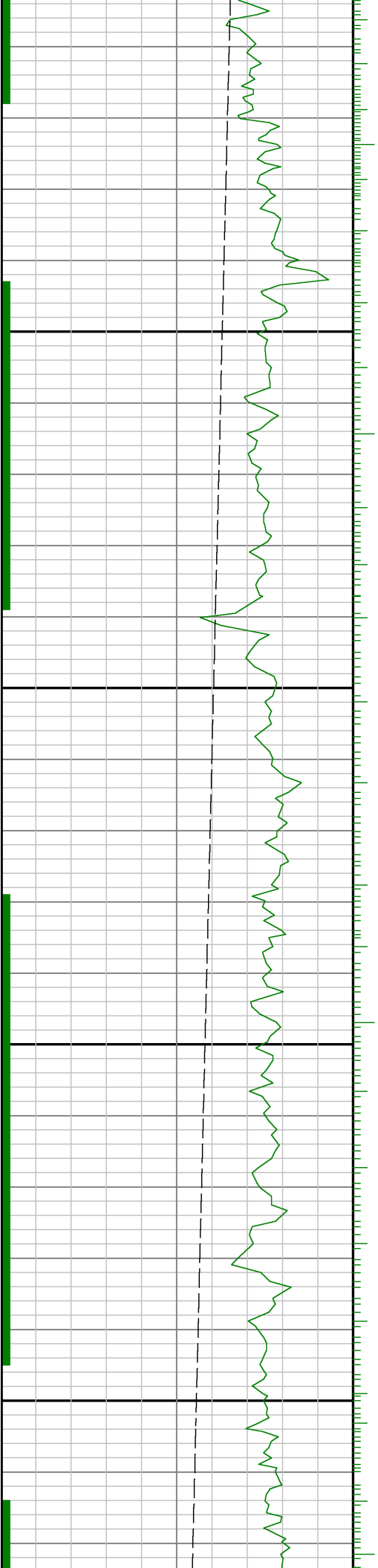
LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (m.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12235763	Directional	57.10	6.750	2.750
1	SRIG	12899613	Gamma	53.73	6.750	2.750
2	DIR	12662922	Directional	53.01	4.750	2.125
2	SRIG	12131378	Gamma	49.64	4.750	2.125

Service and Tool Mnemonics

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

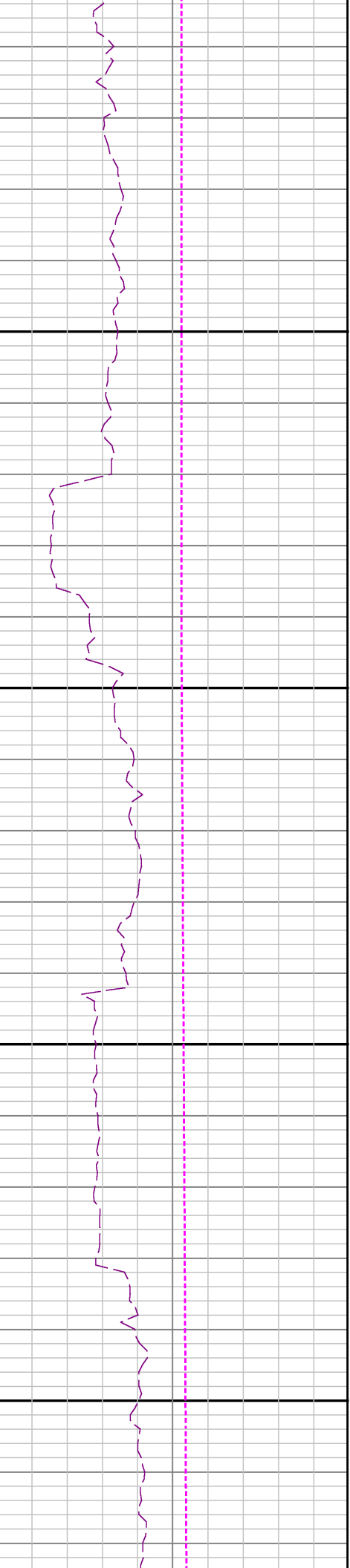
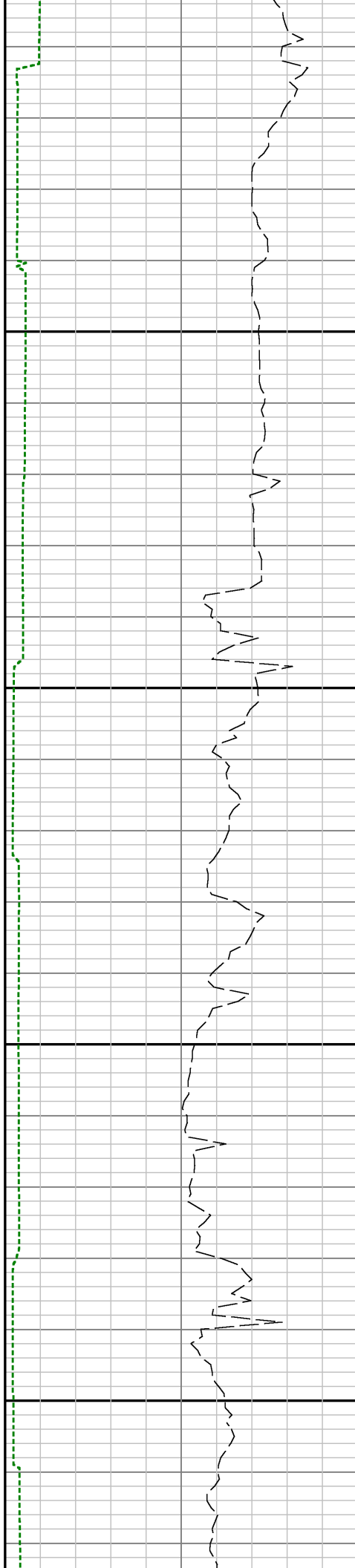
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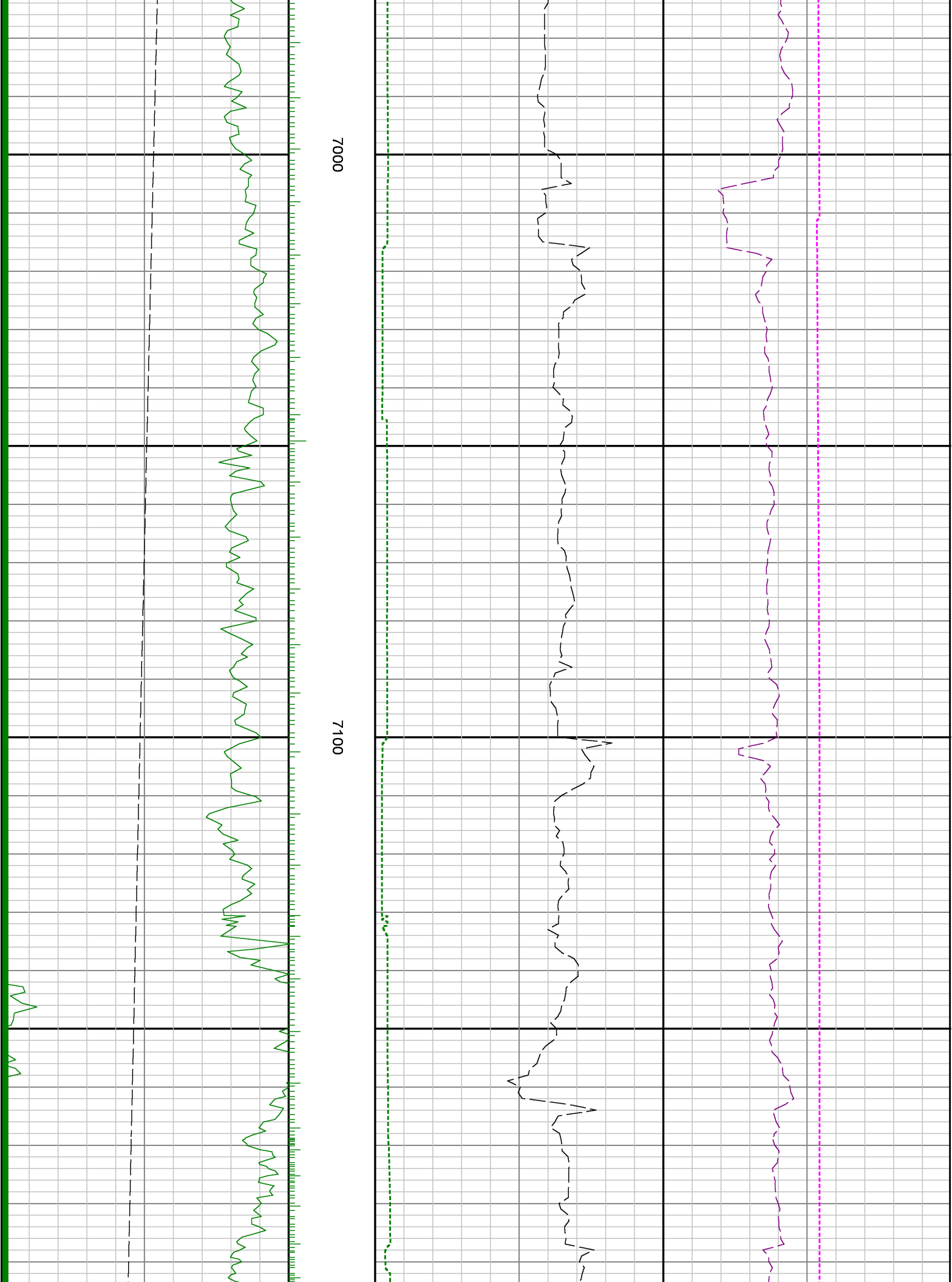
- (1) Baker Hughes INTEQ run 1 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1075 to 7849 ft MD (1075 to 7421 ft TVD).
- (2) Baker Hughes INTEQ run 2 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 6 3/4 inch bit and steerable assembly from 7849 to 17923 ft MD (7421 to 7498 ft TVD).
- (3) 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.
- (4) A sliding indicator is shown to the left side of track 1 as a heavy line and corresponds to the Gamma Ray sensor offset from the bit.



0089

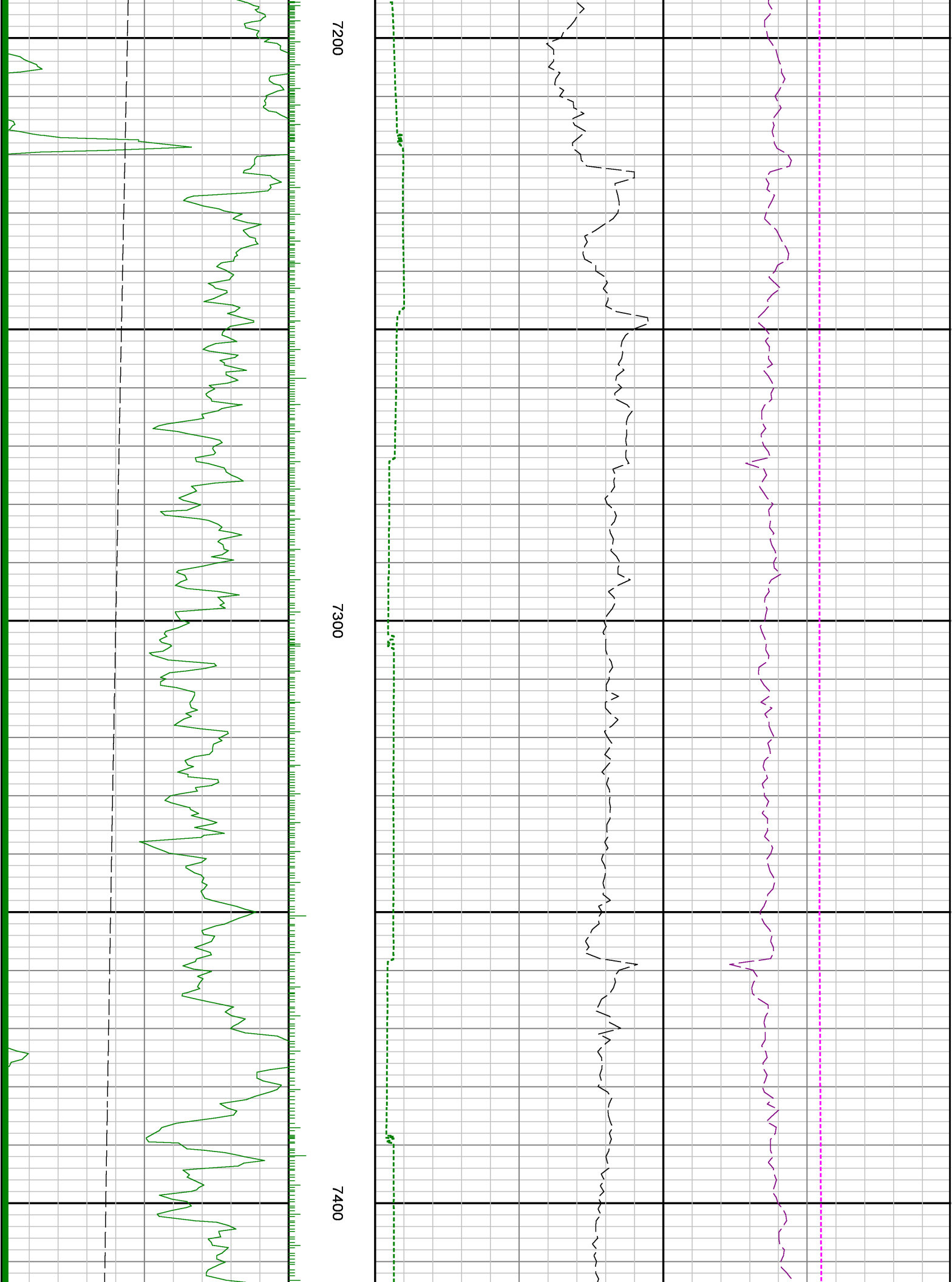
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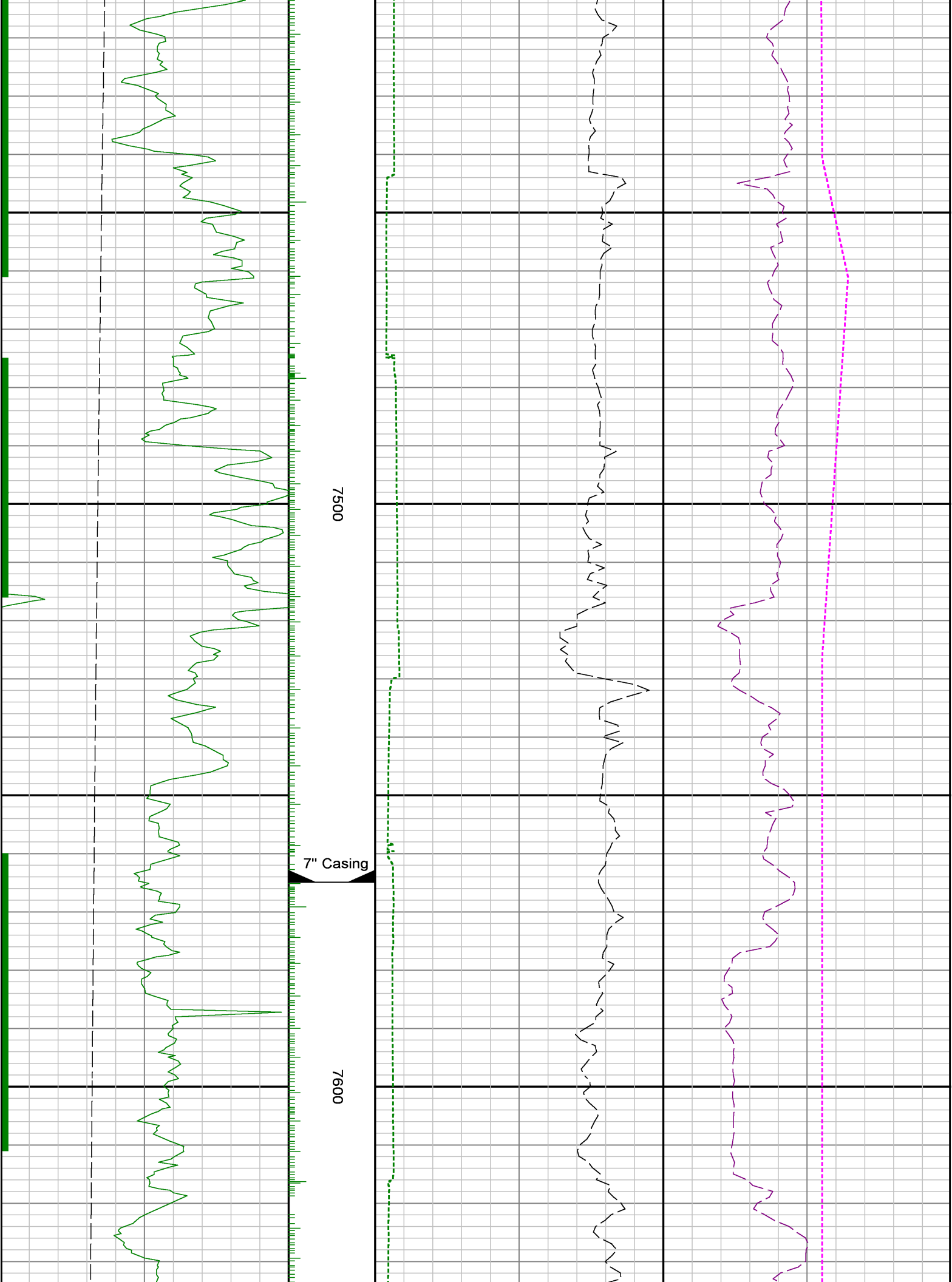
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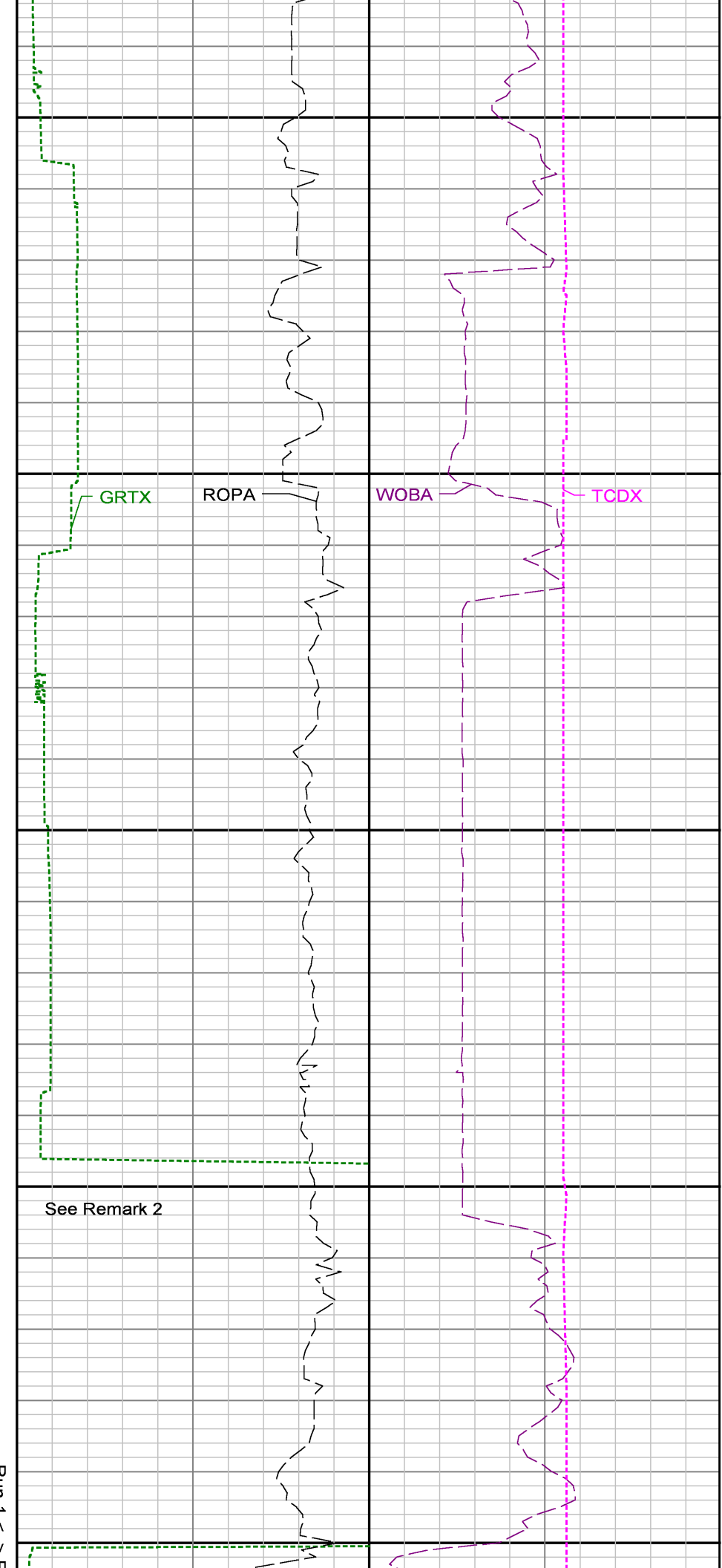
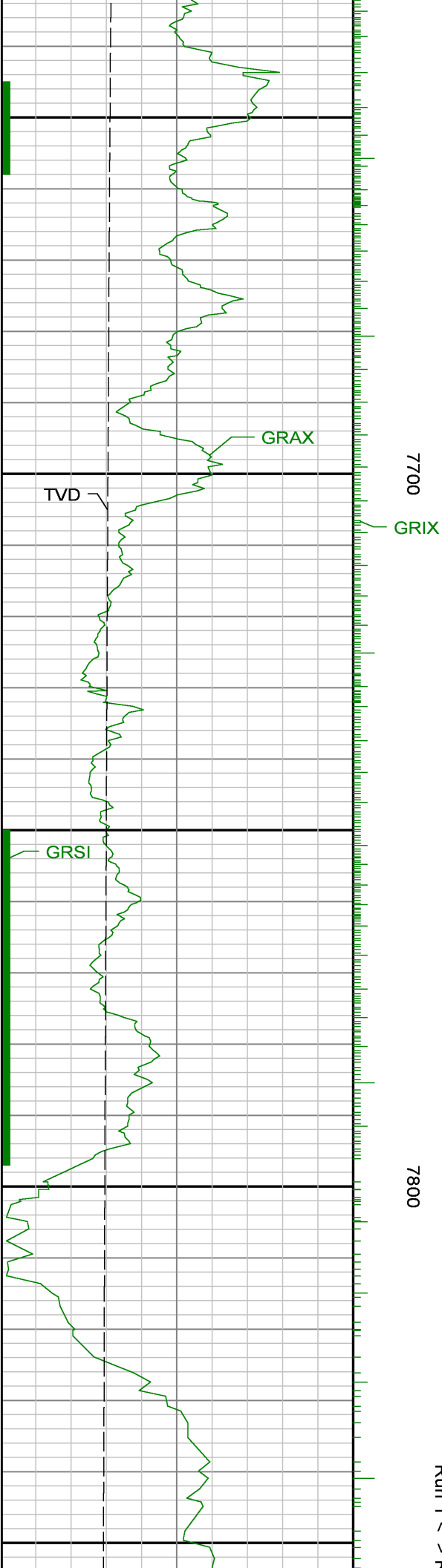


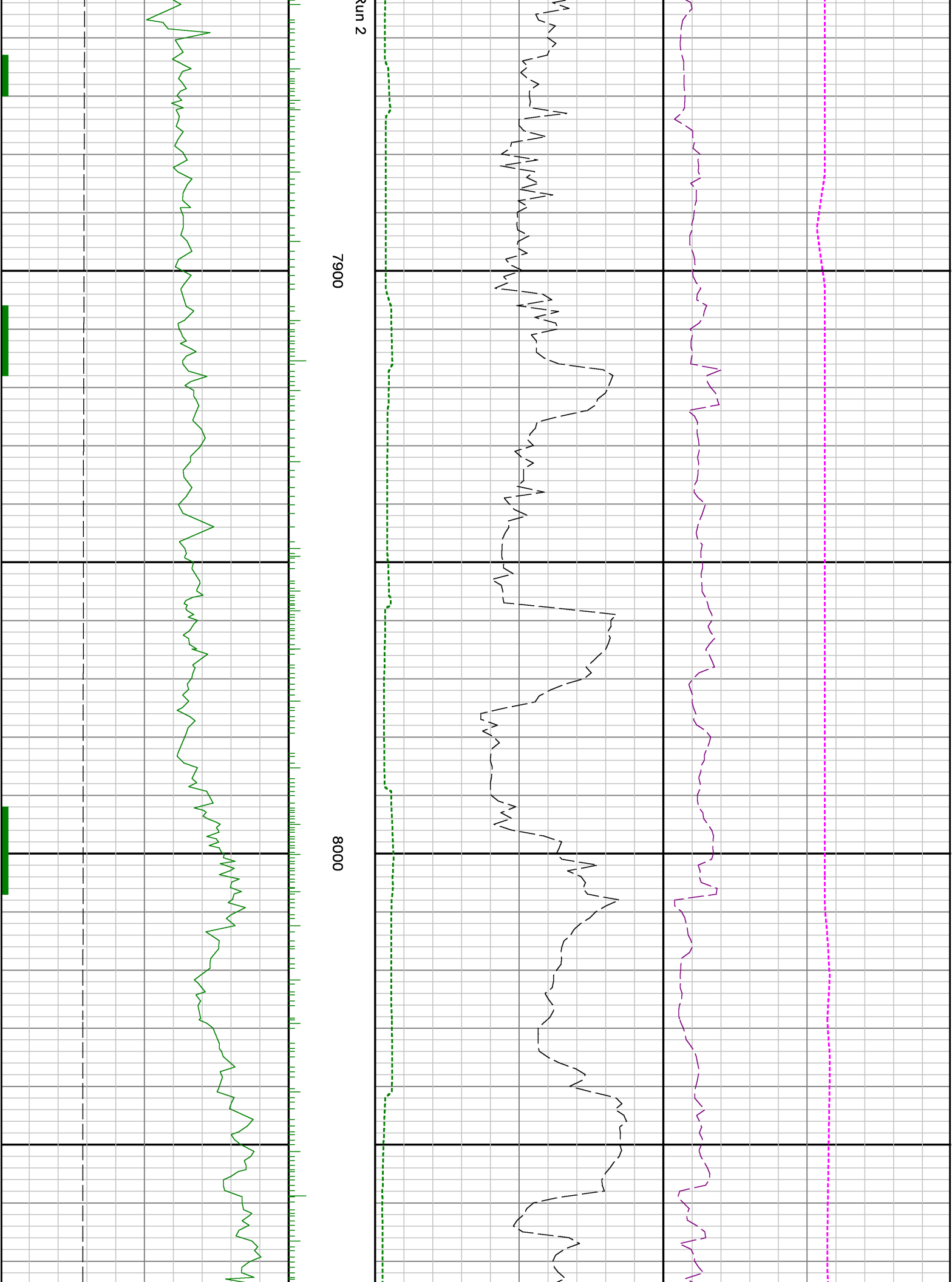
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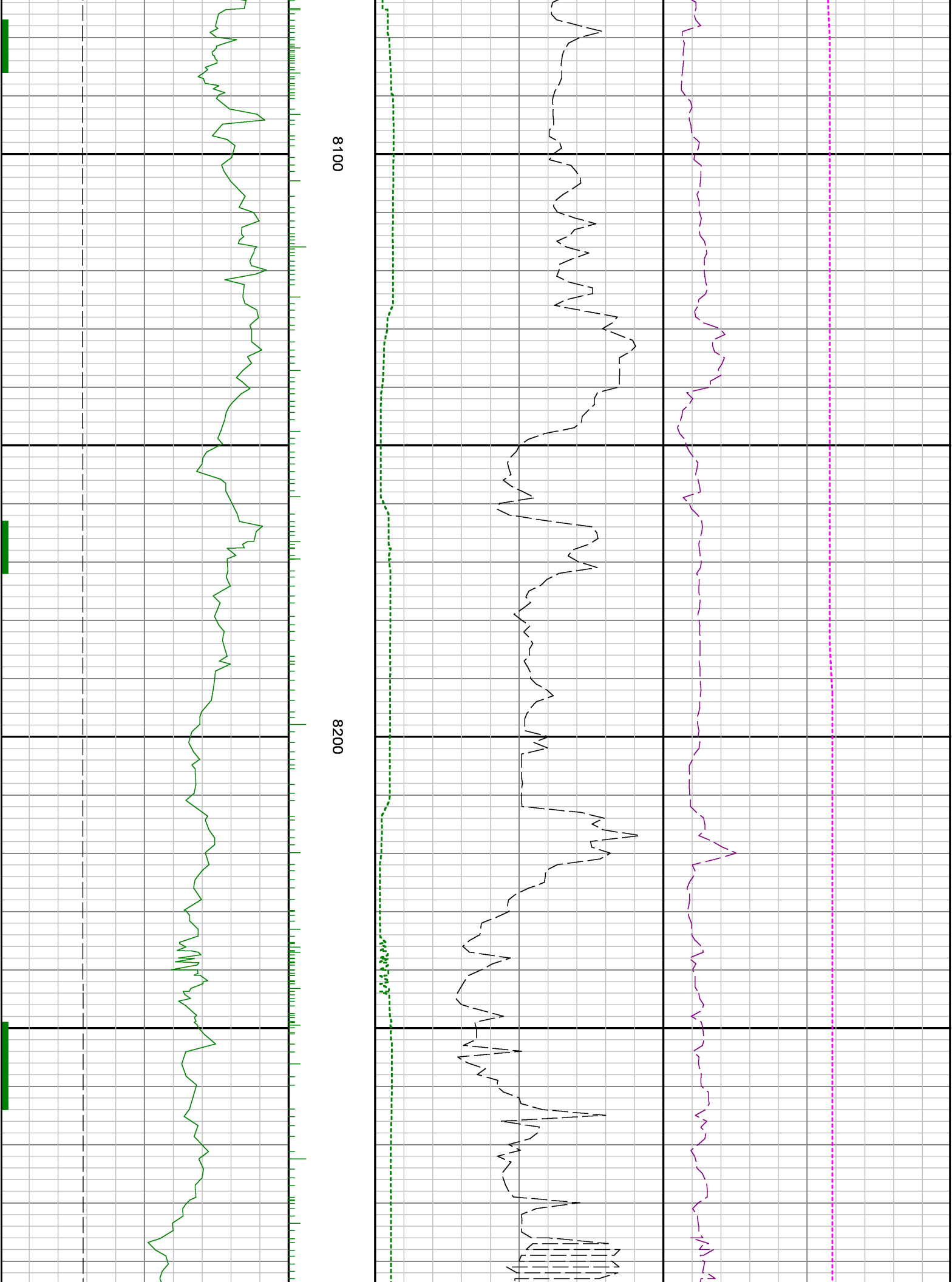
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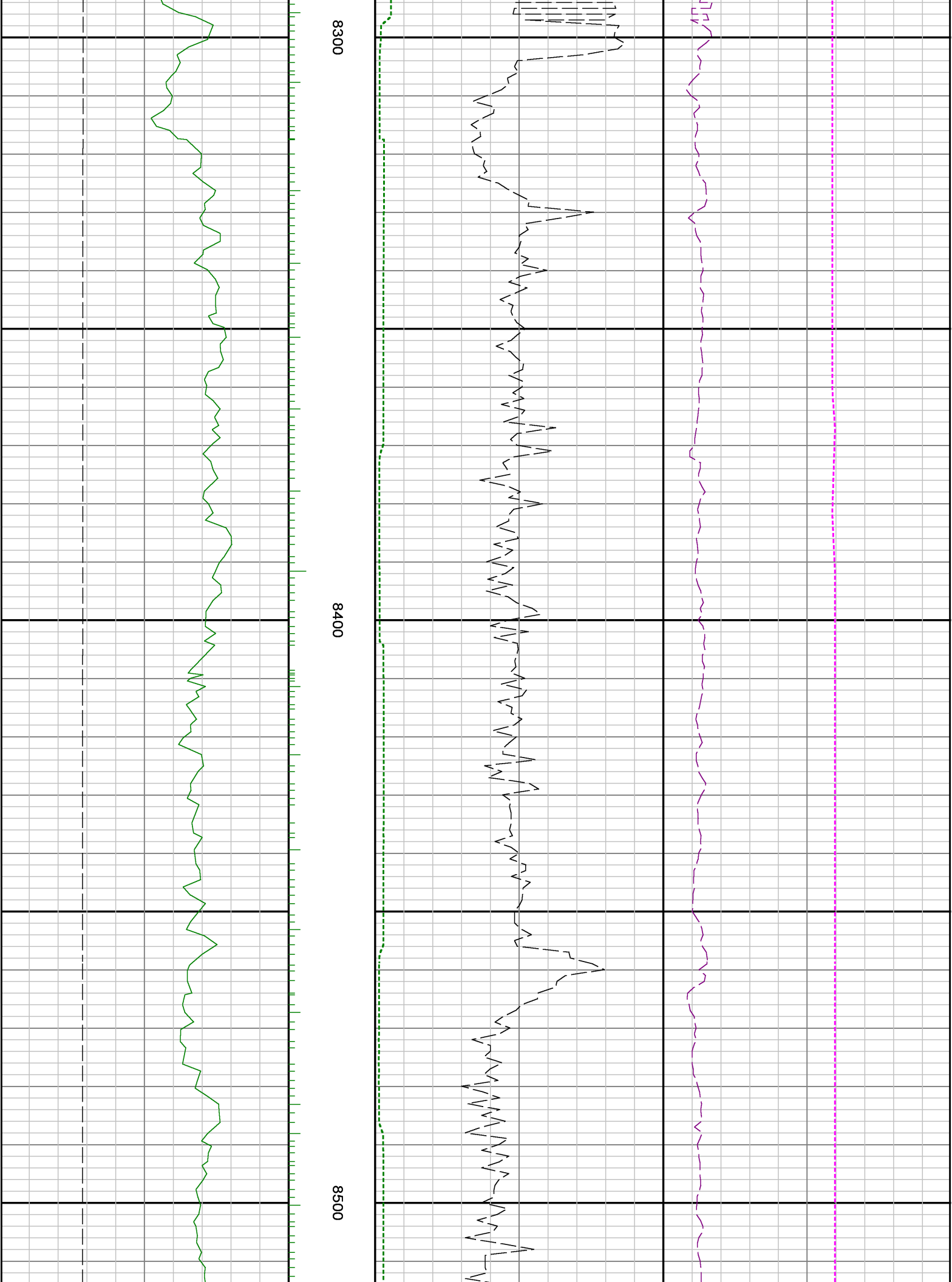
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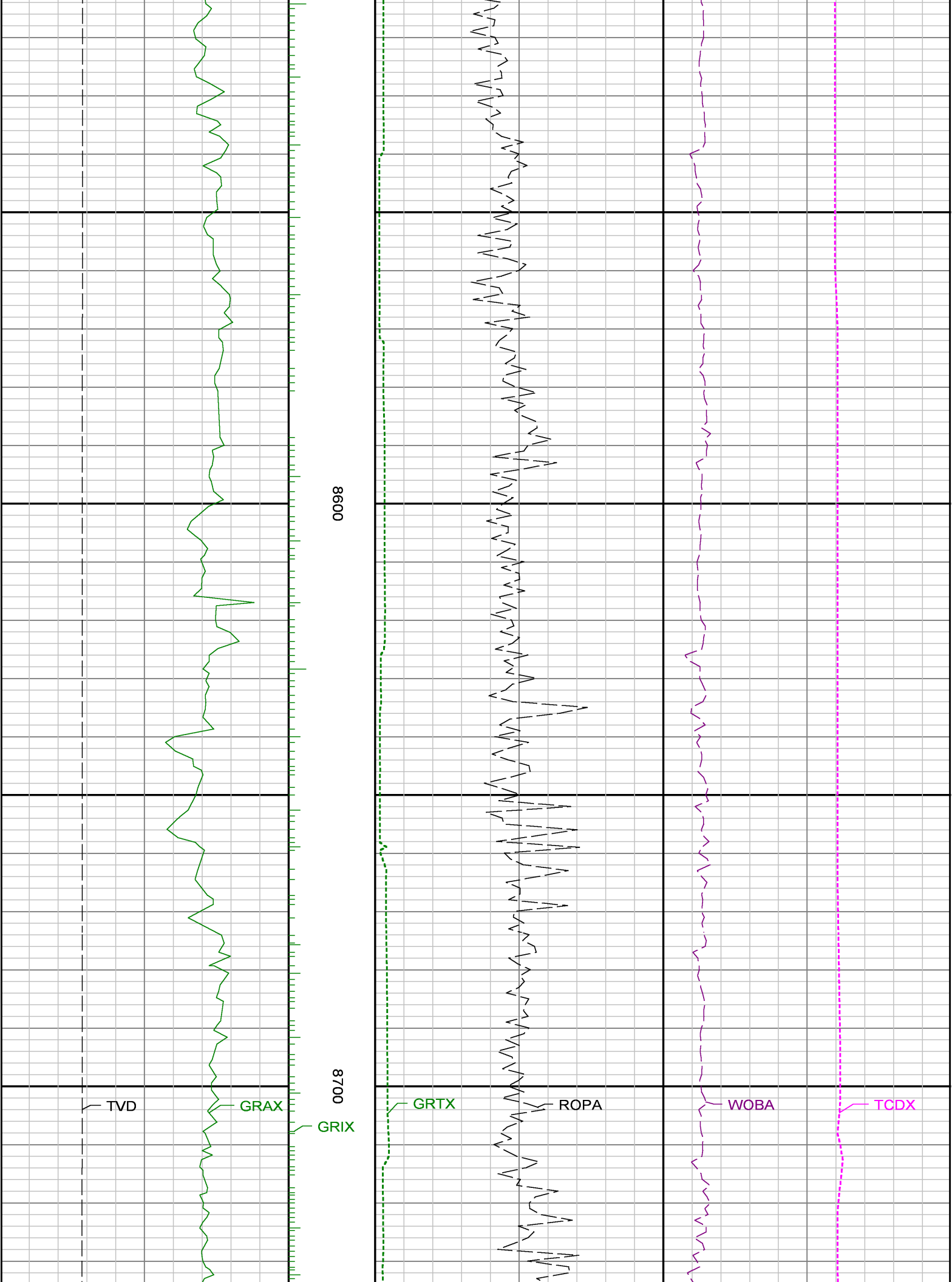


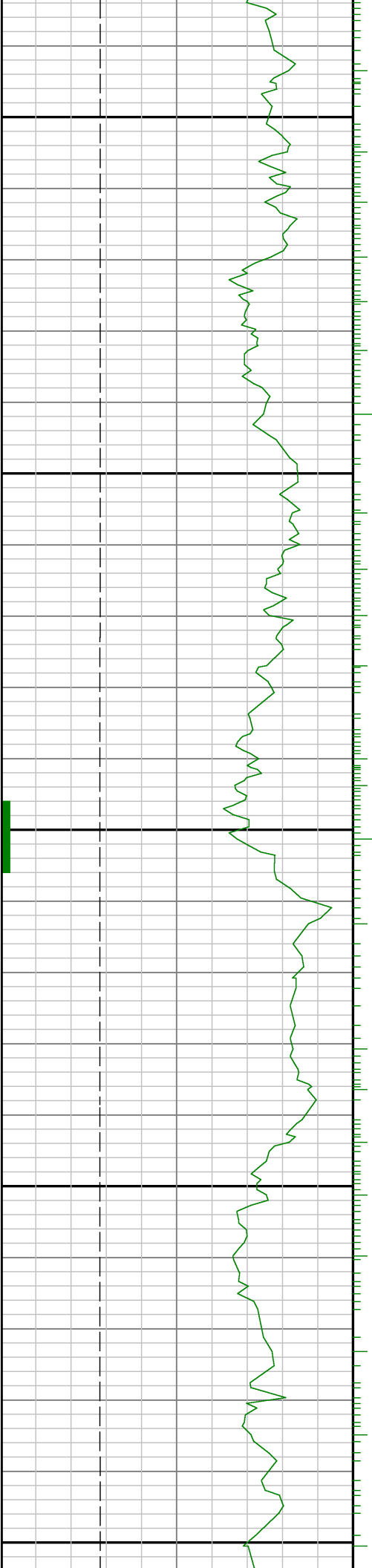






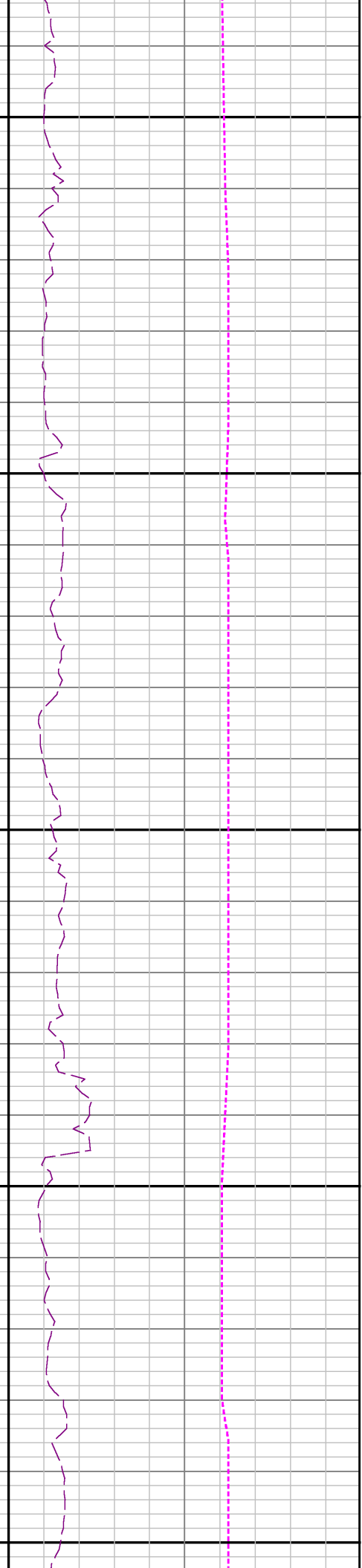
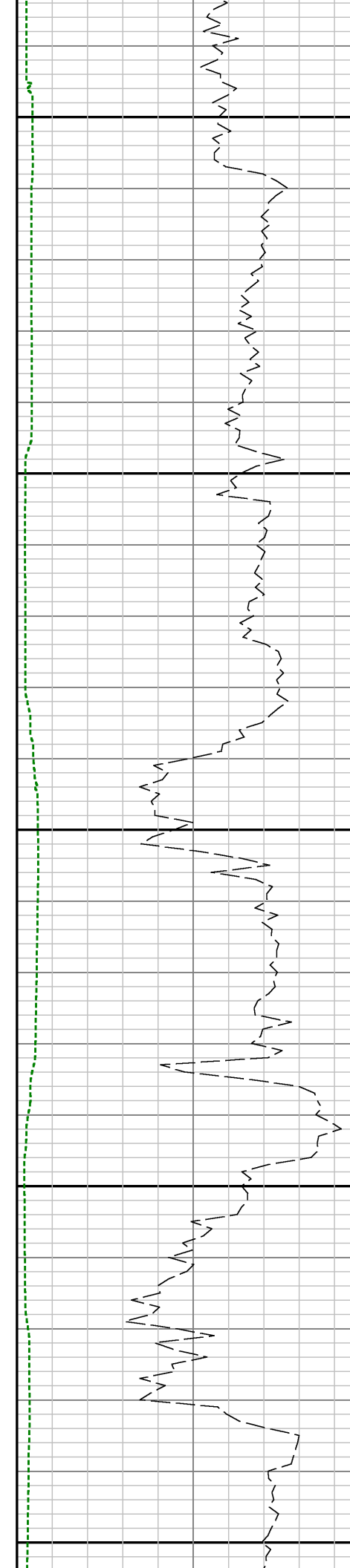


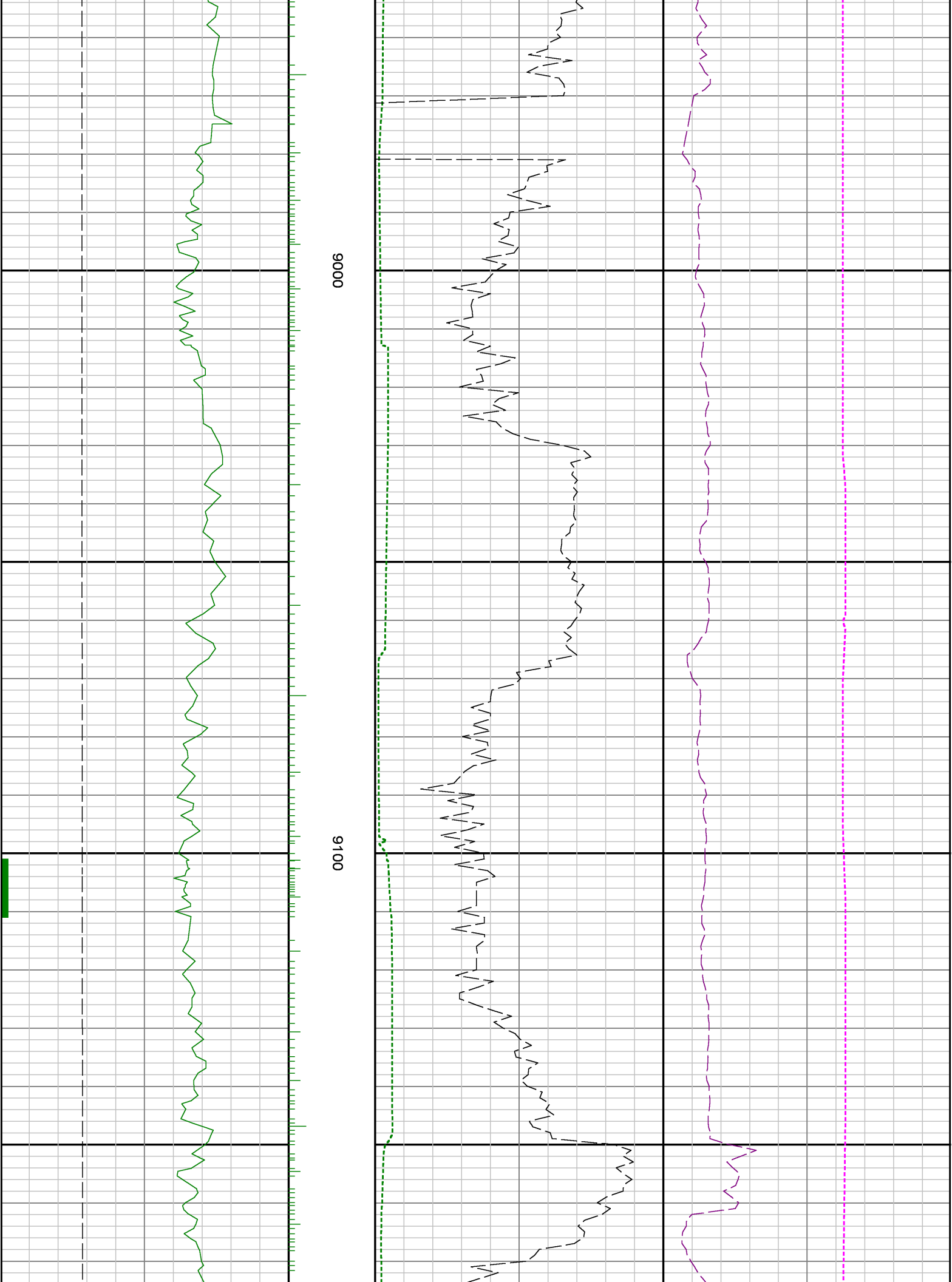


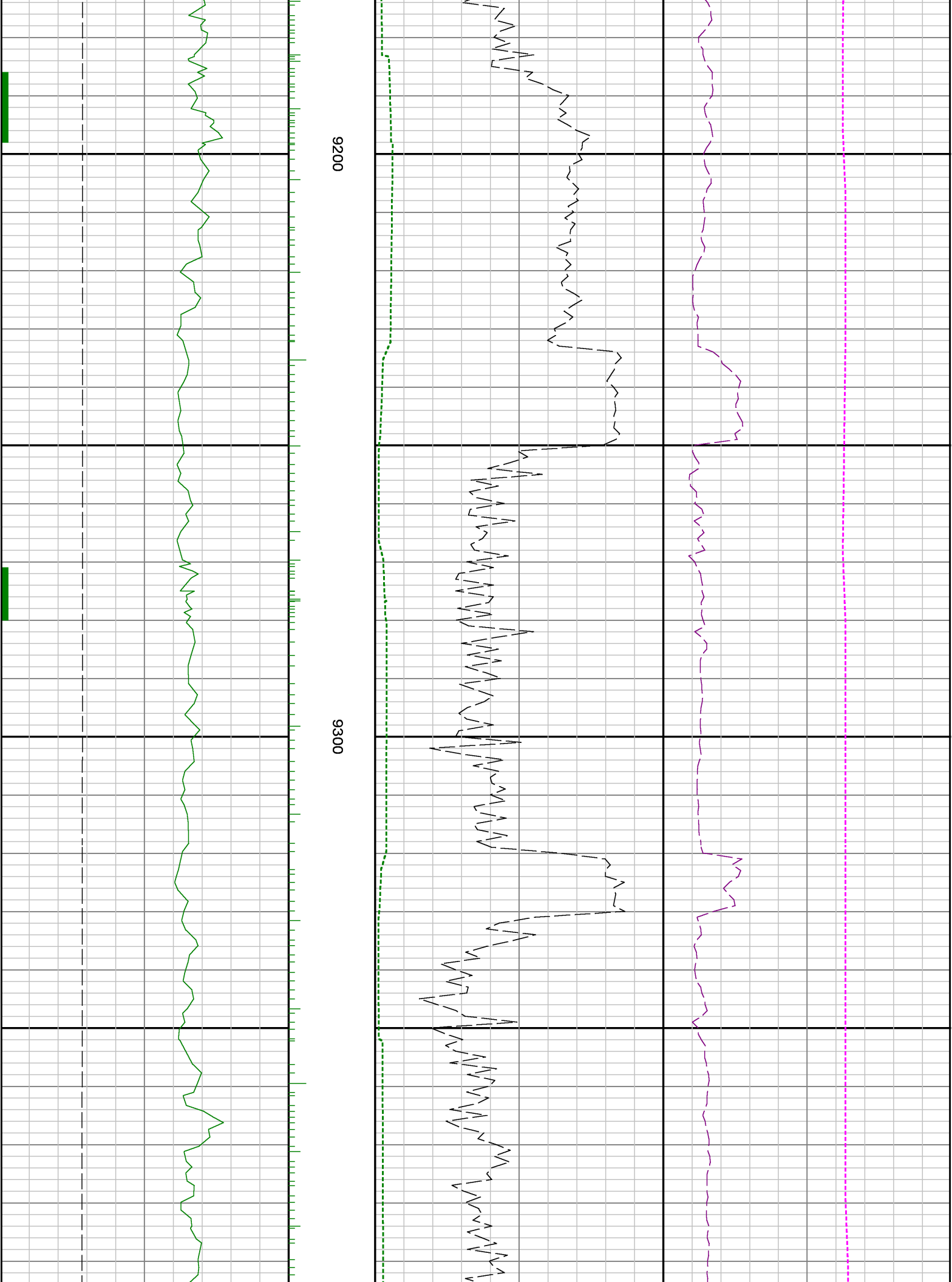


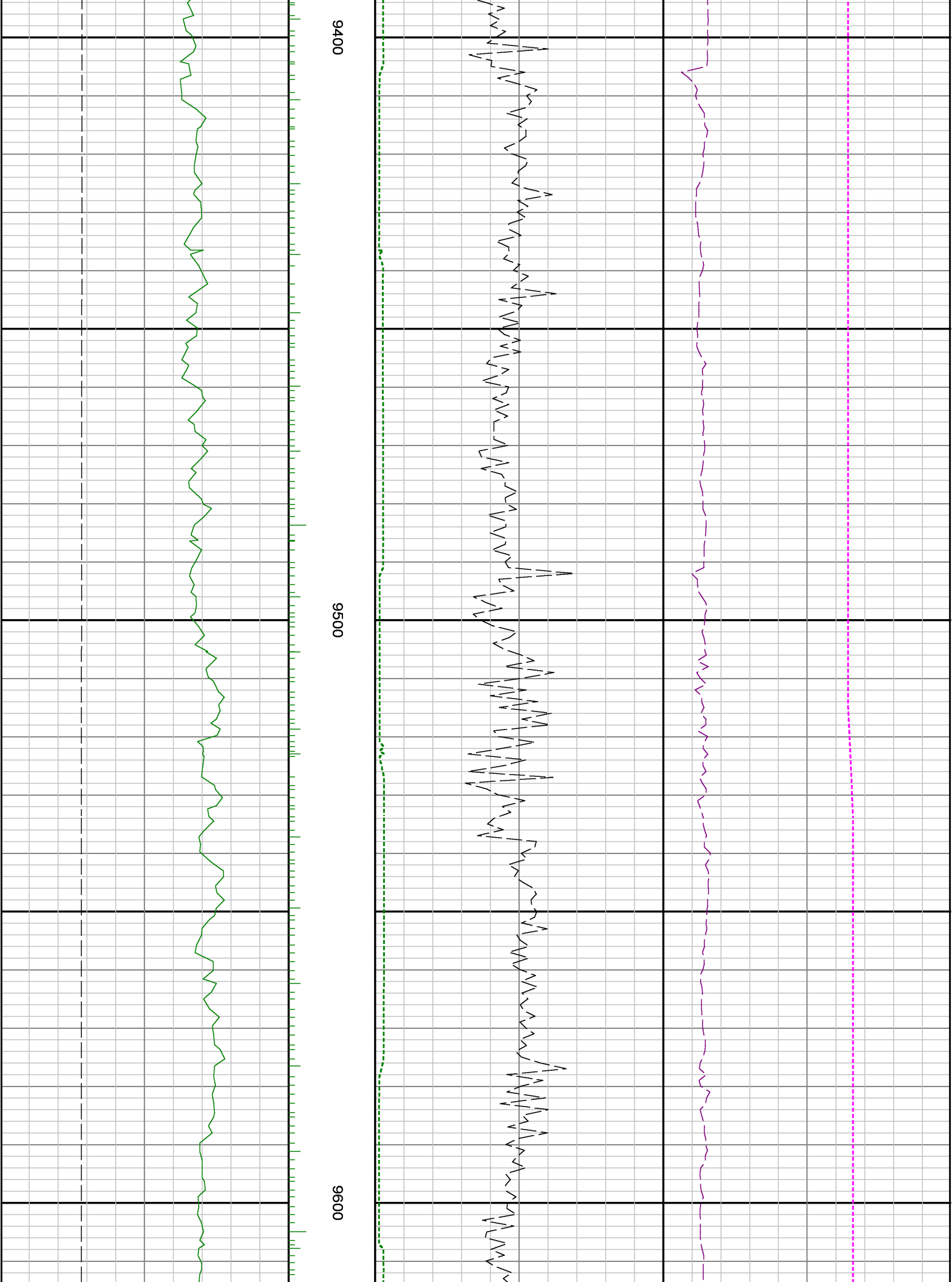
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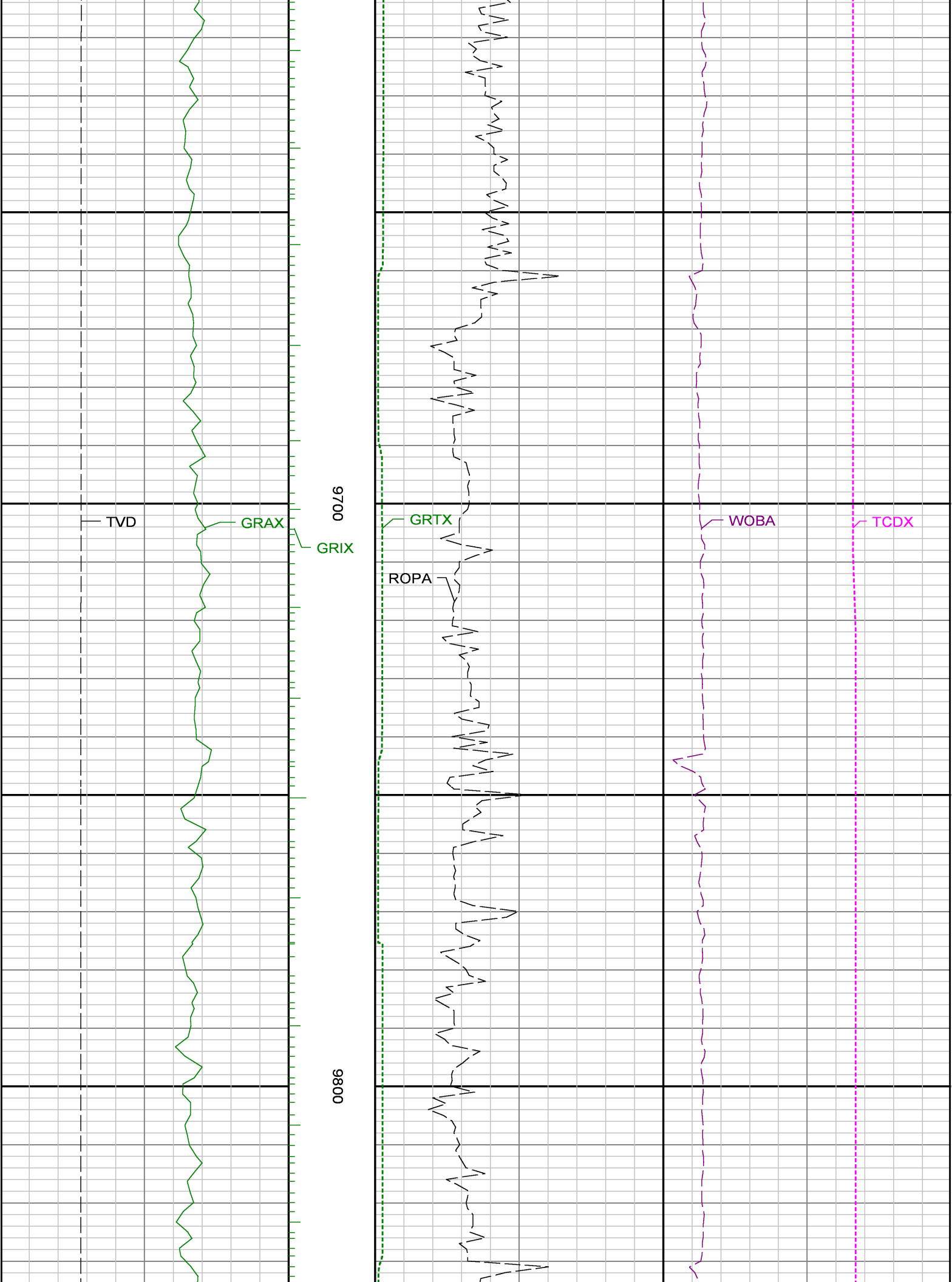
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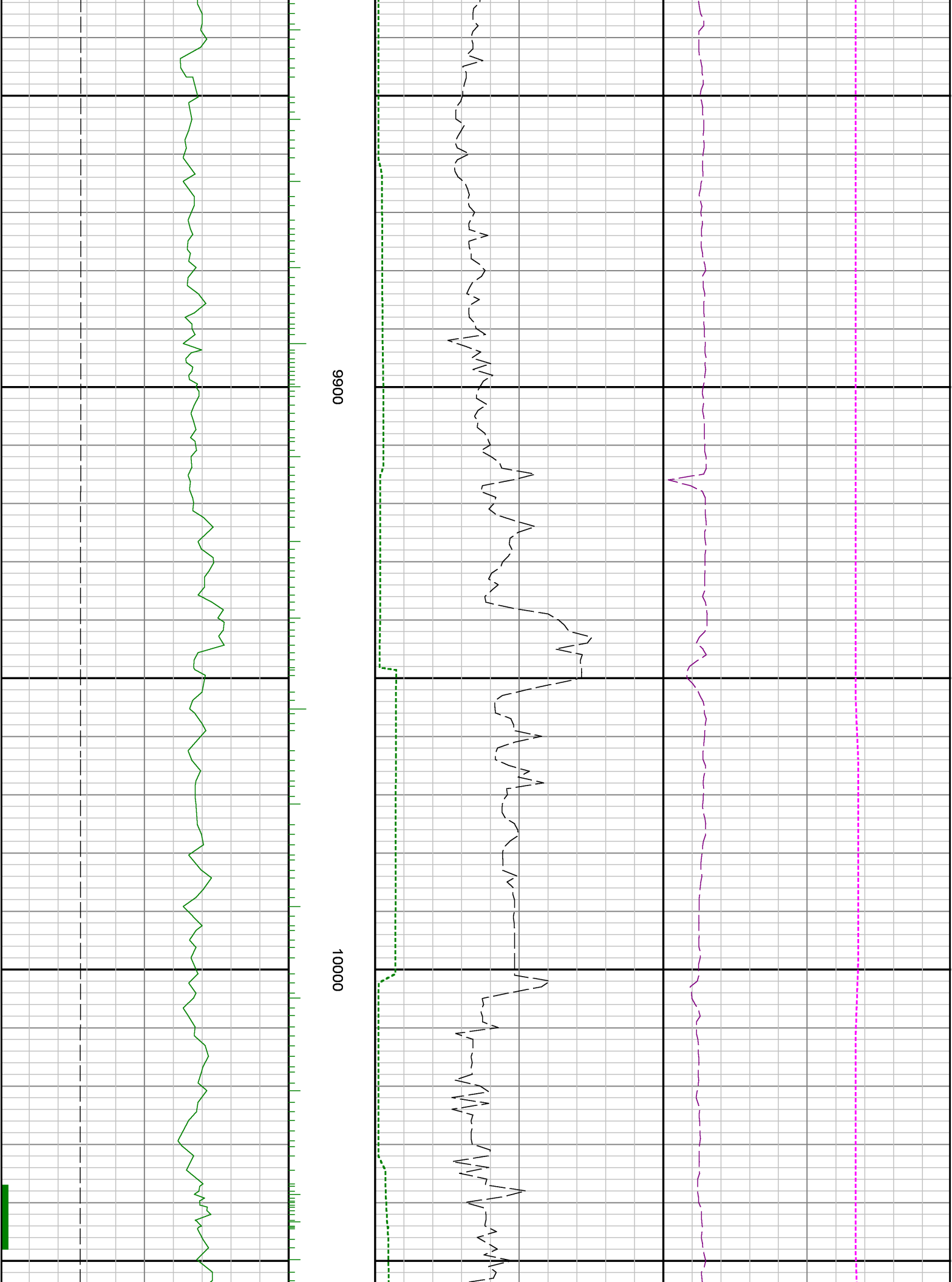


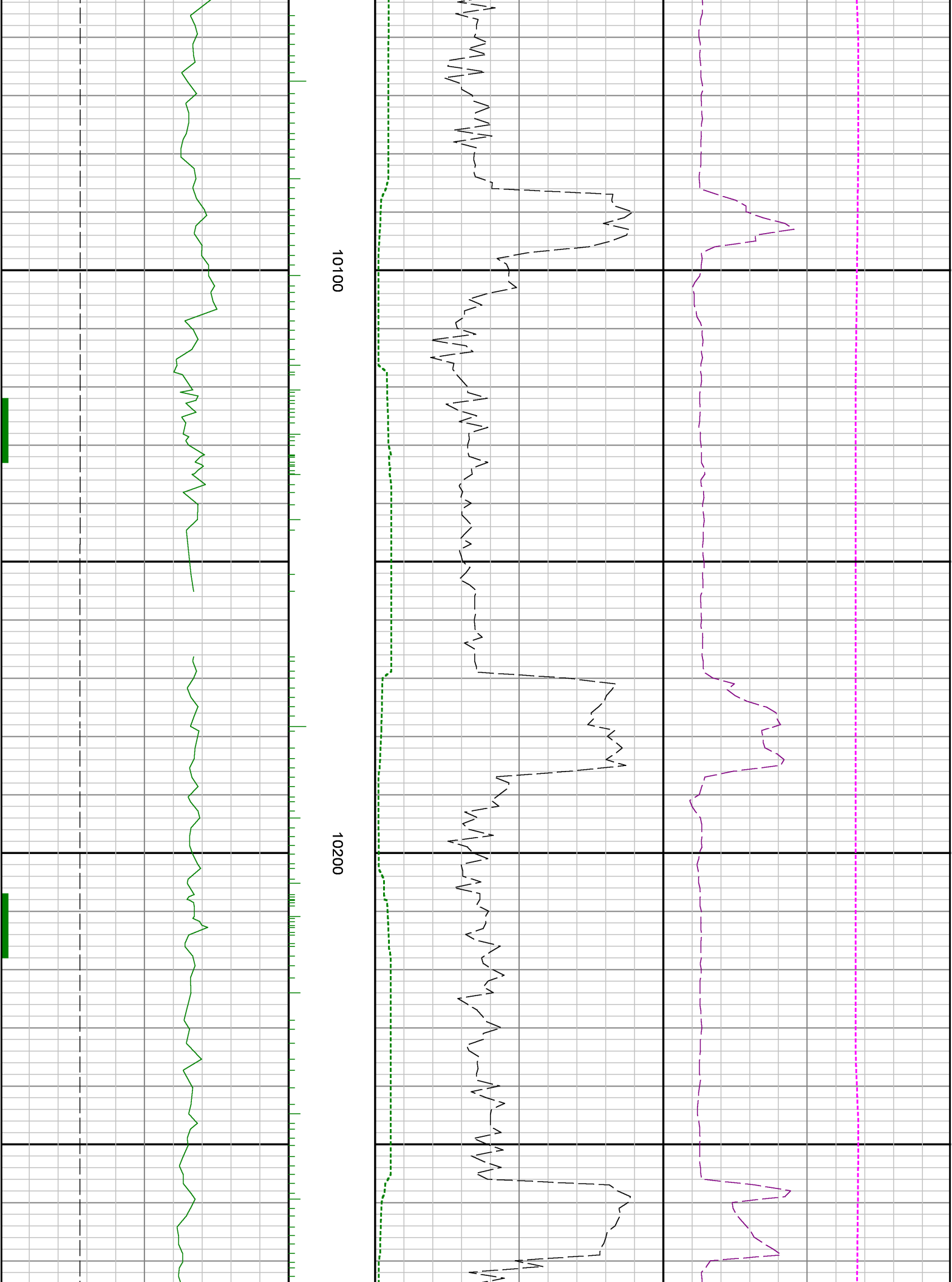


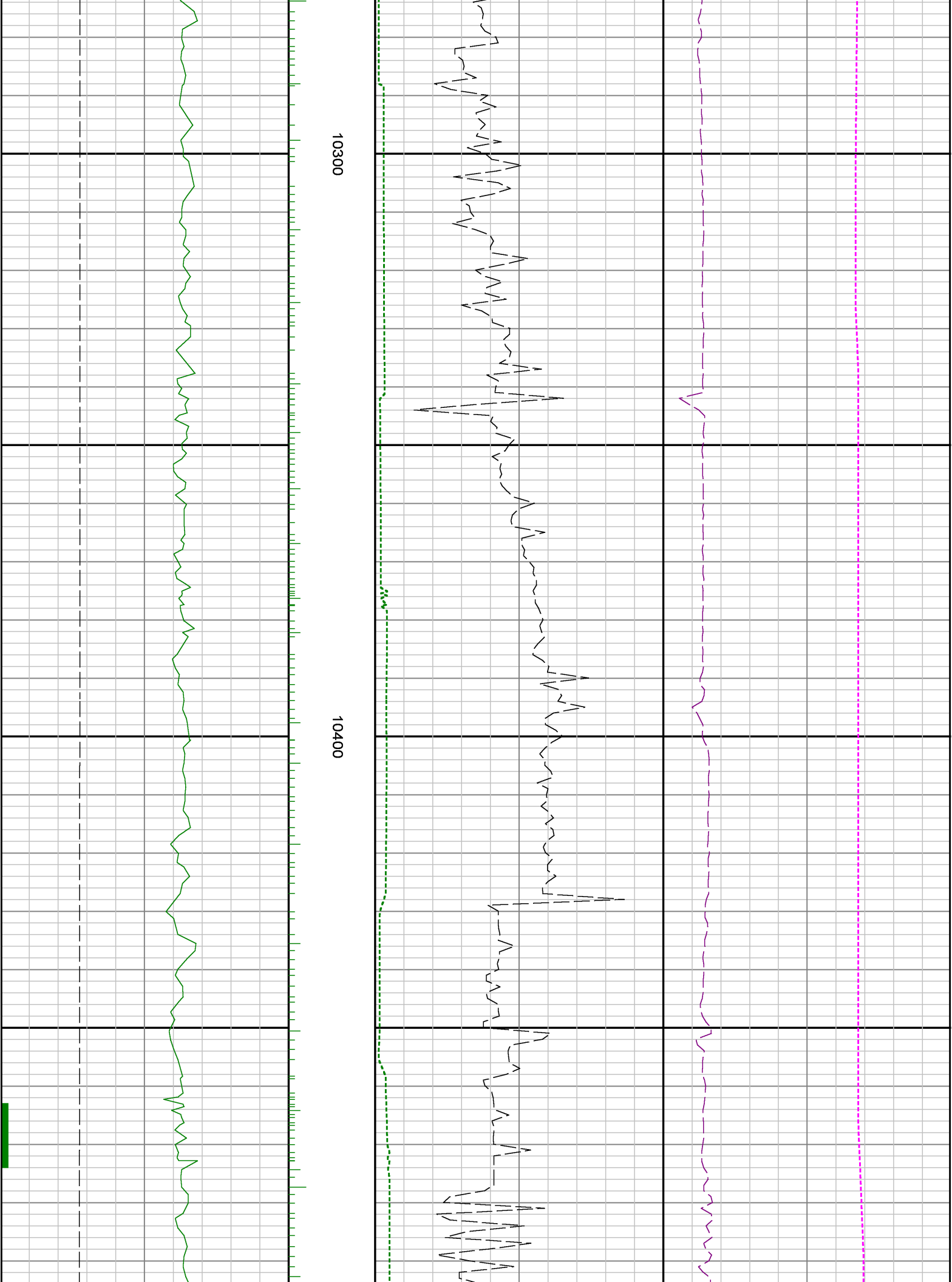


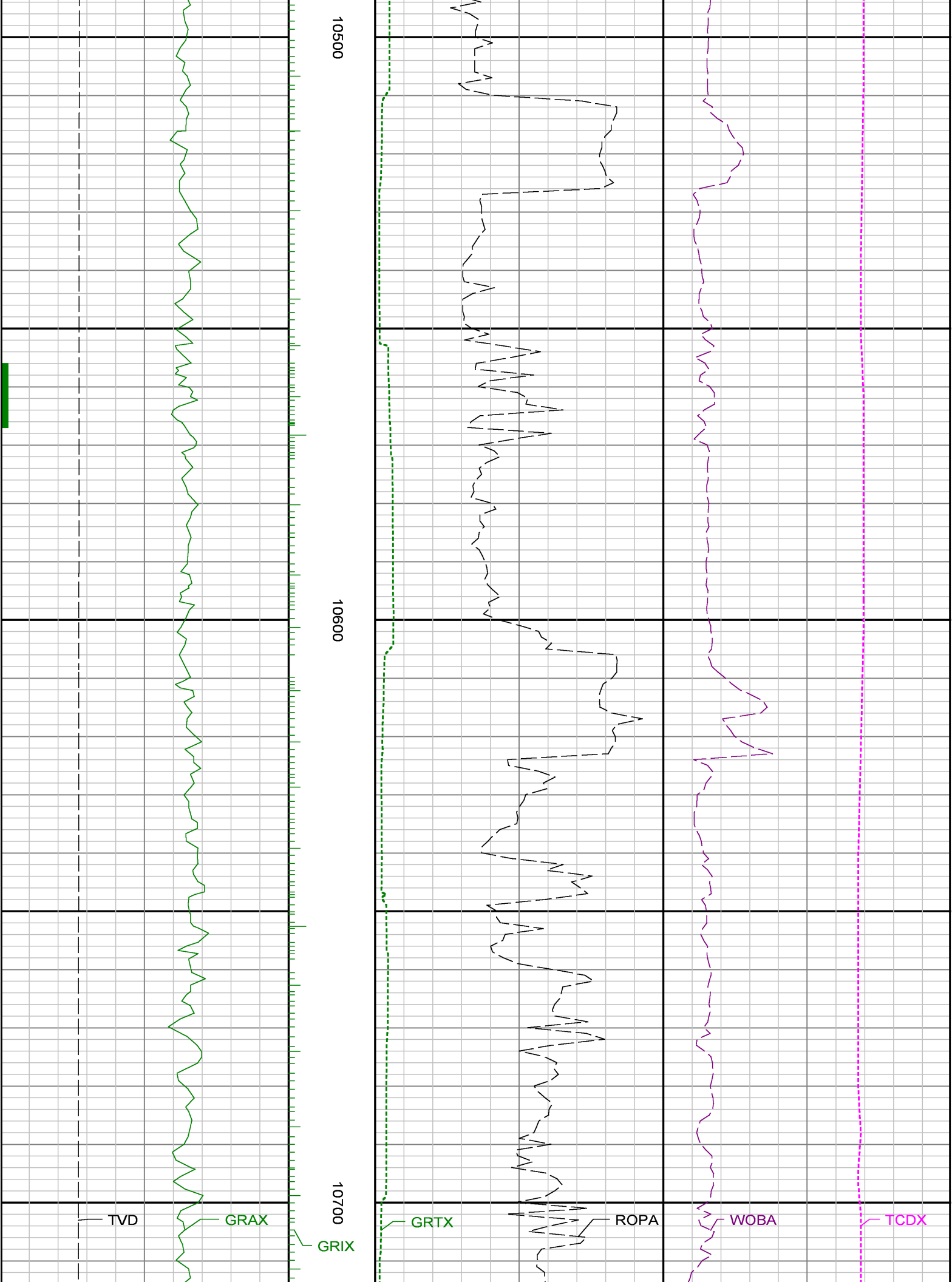


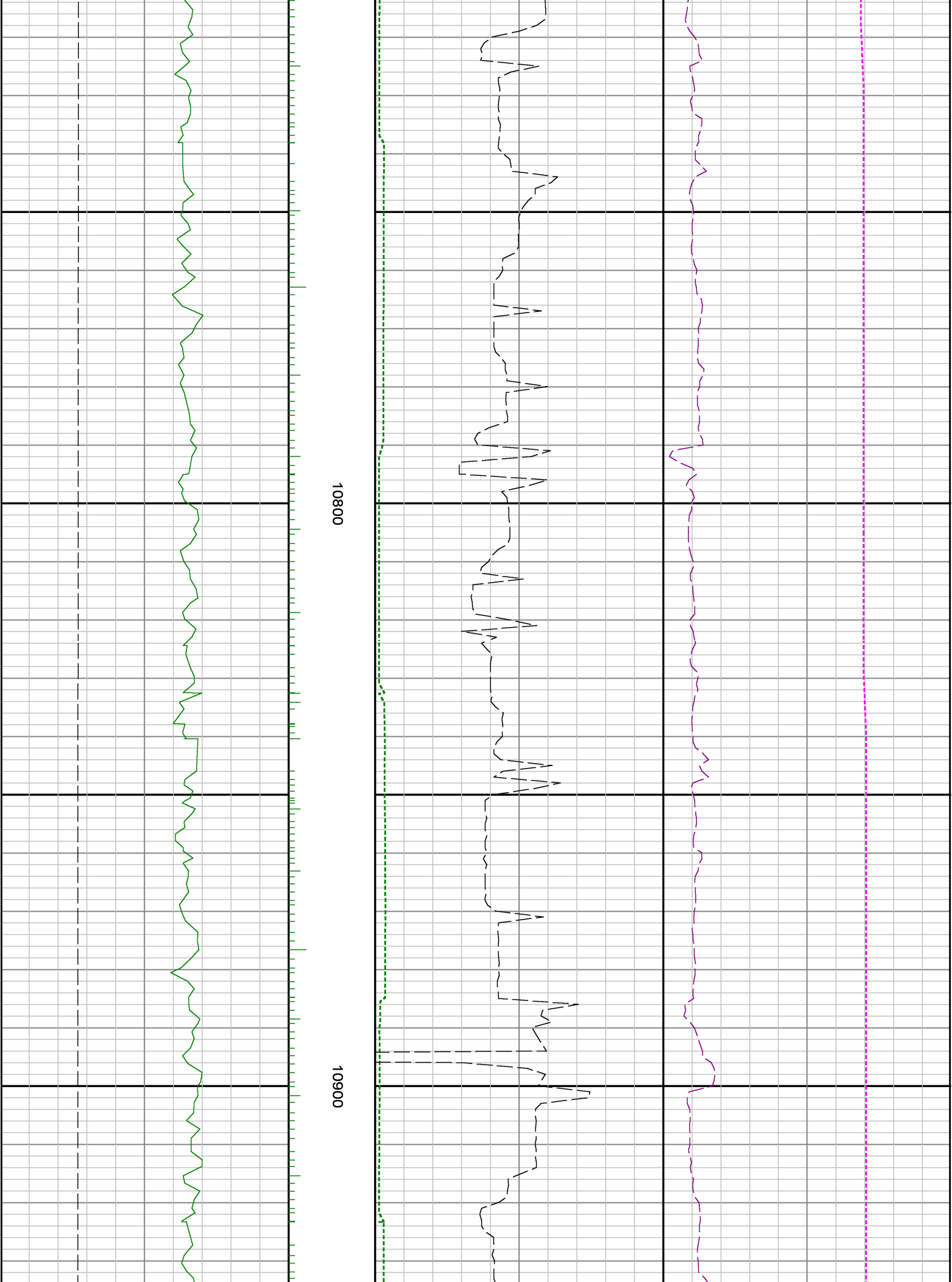


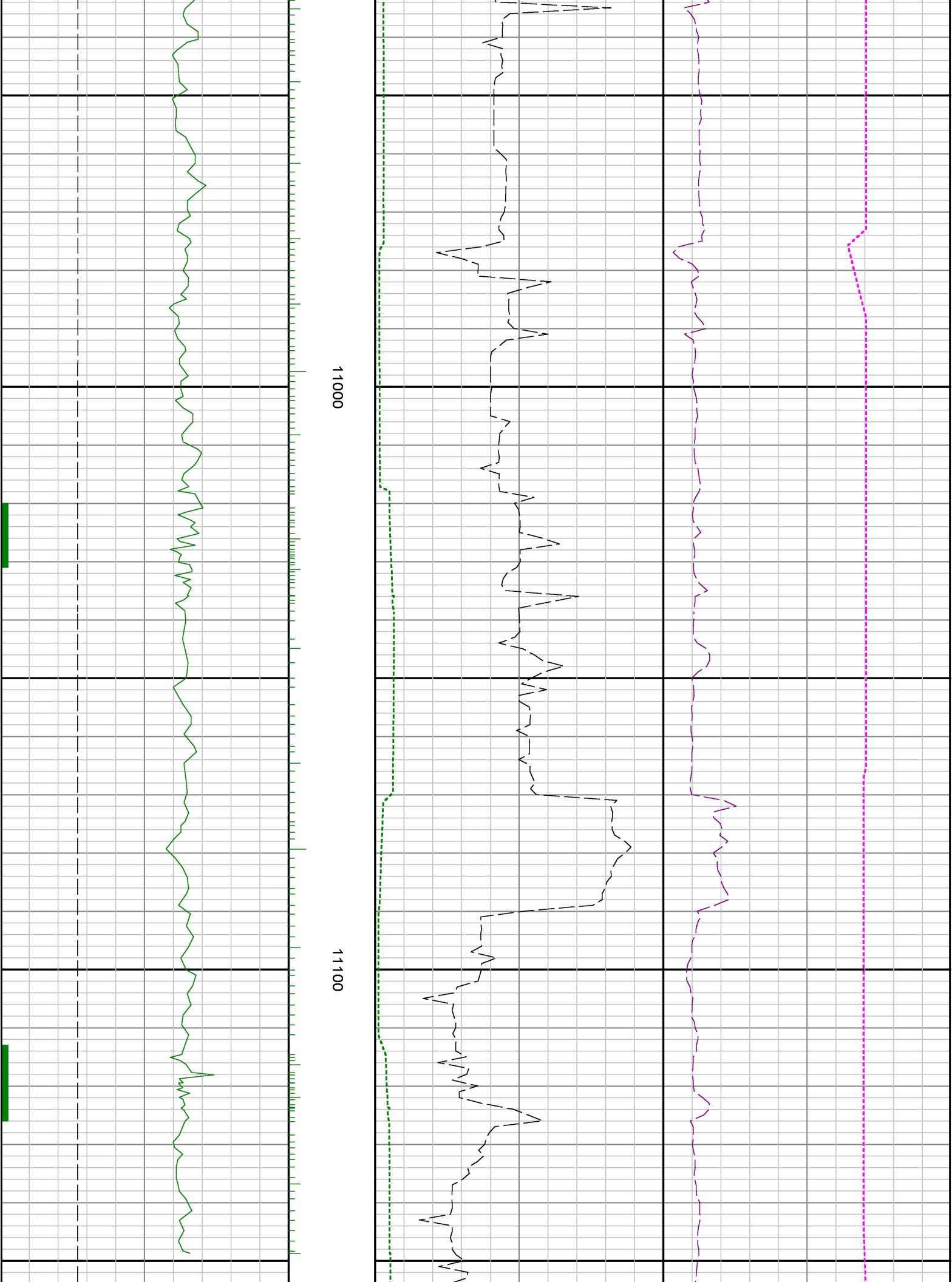






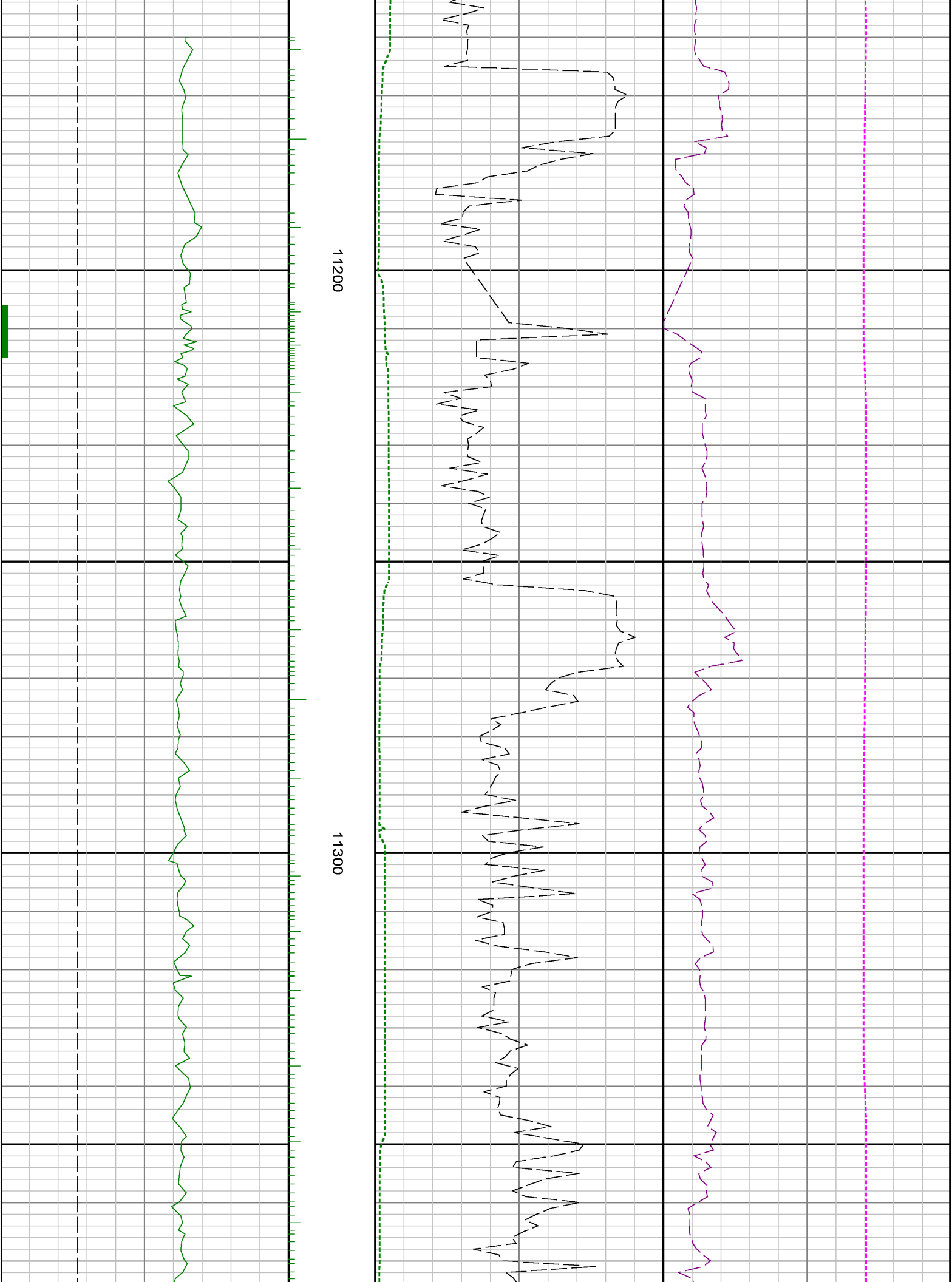






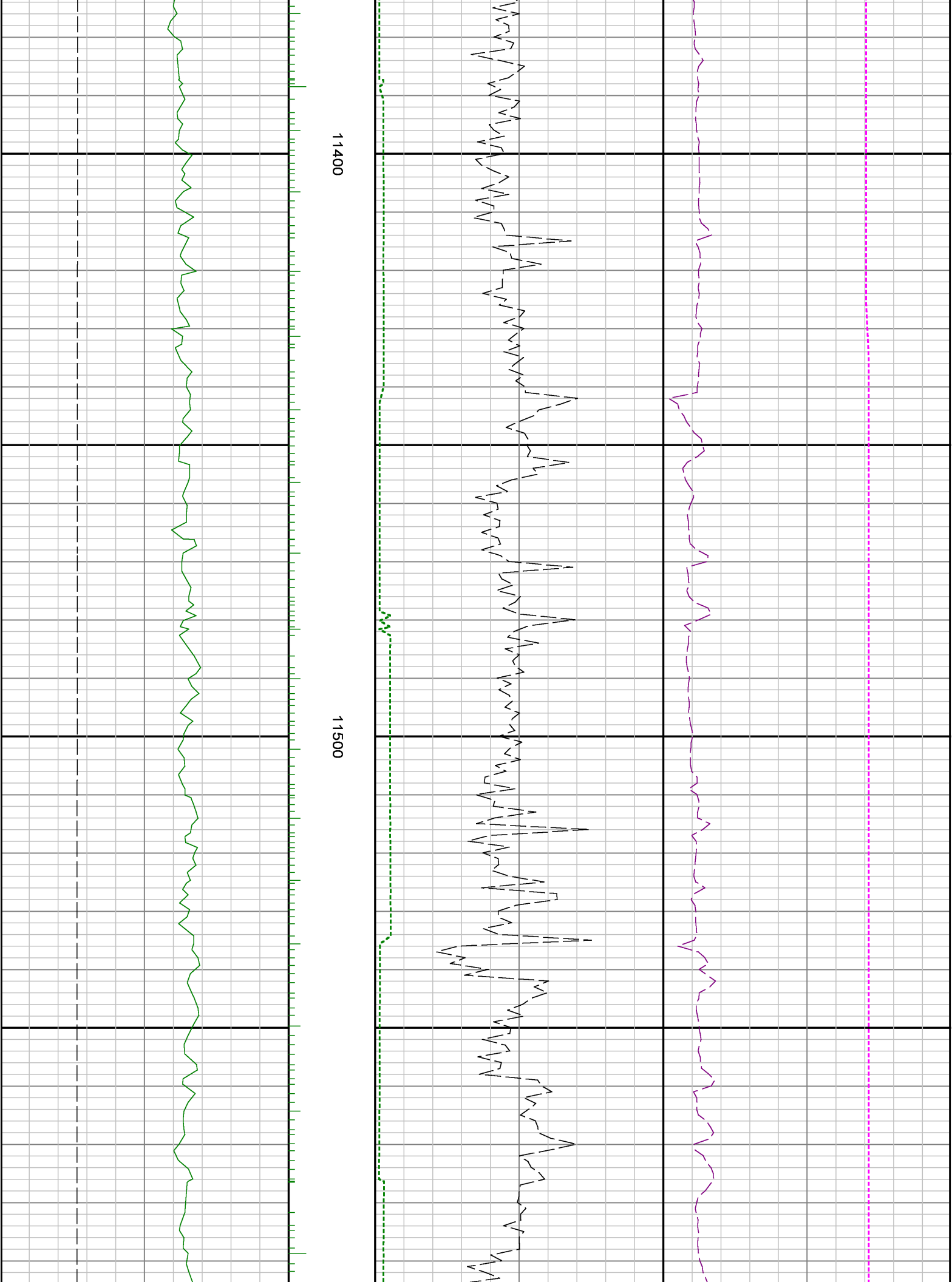
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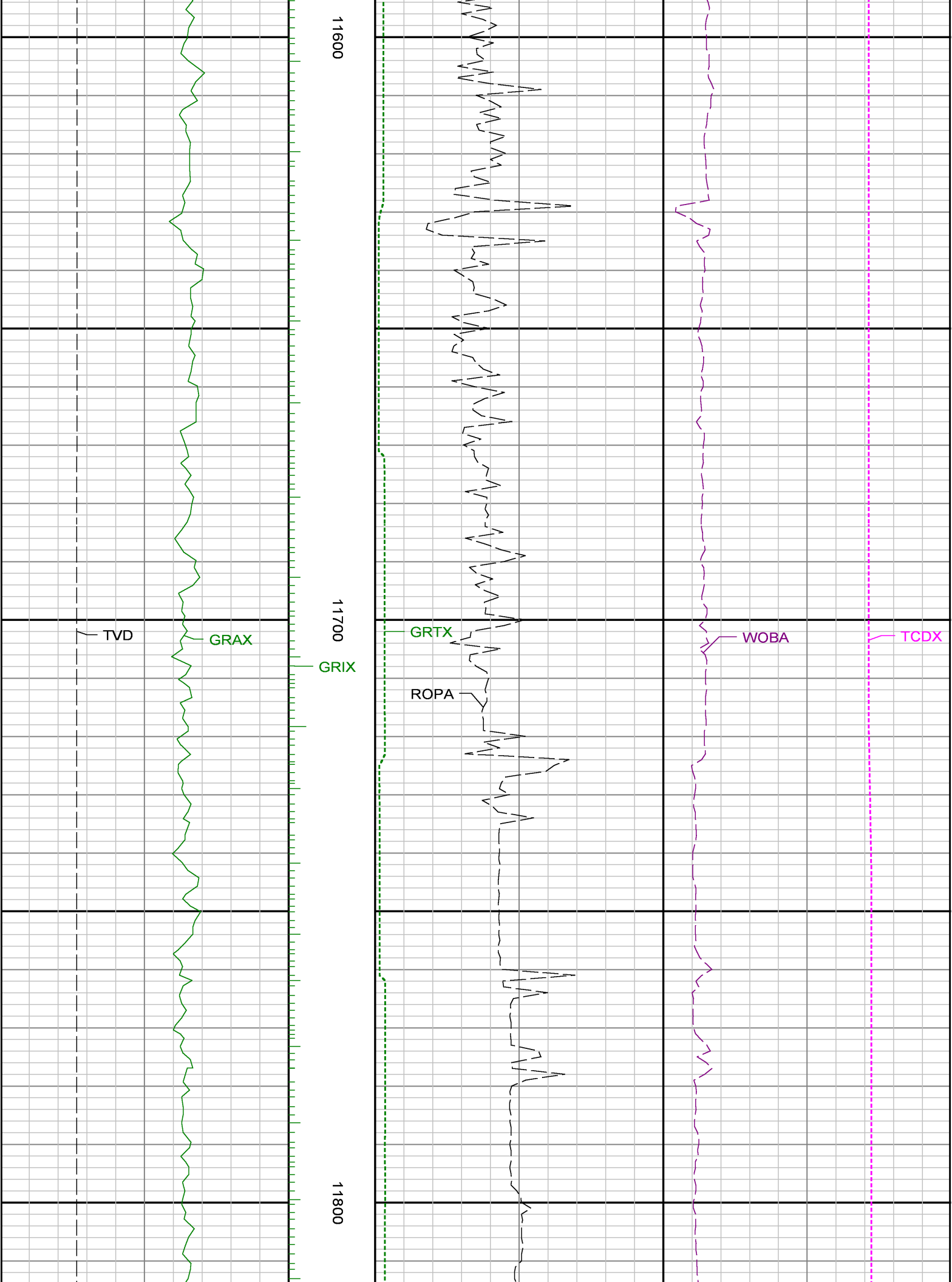
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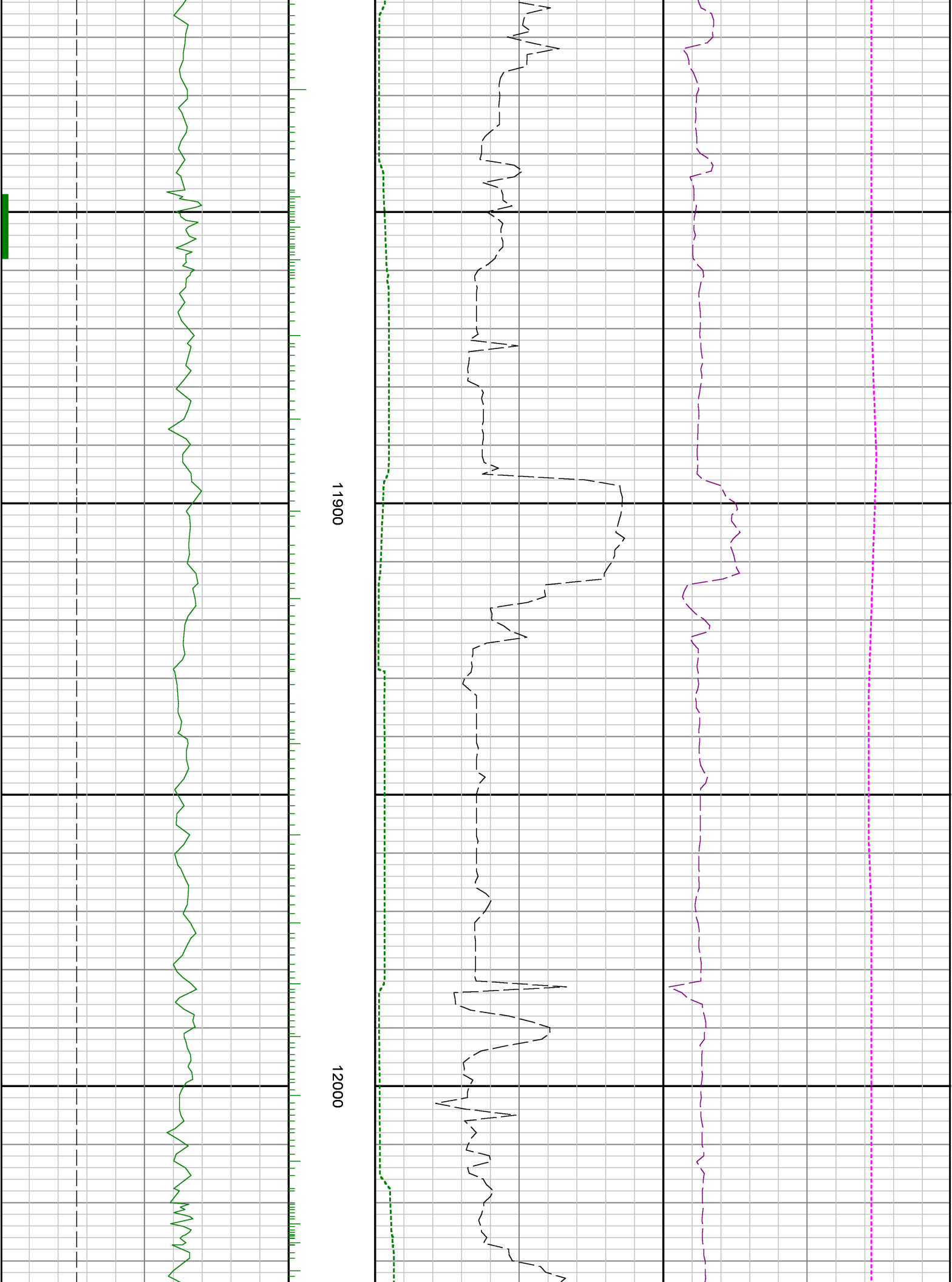
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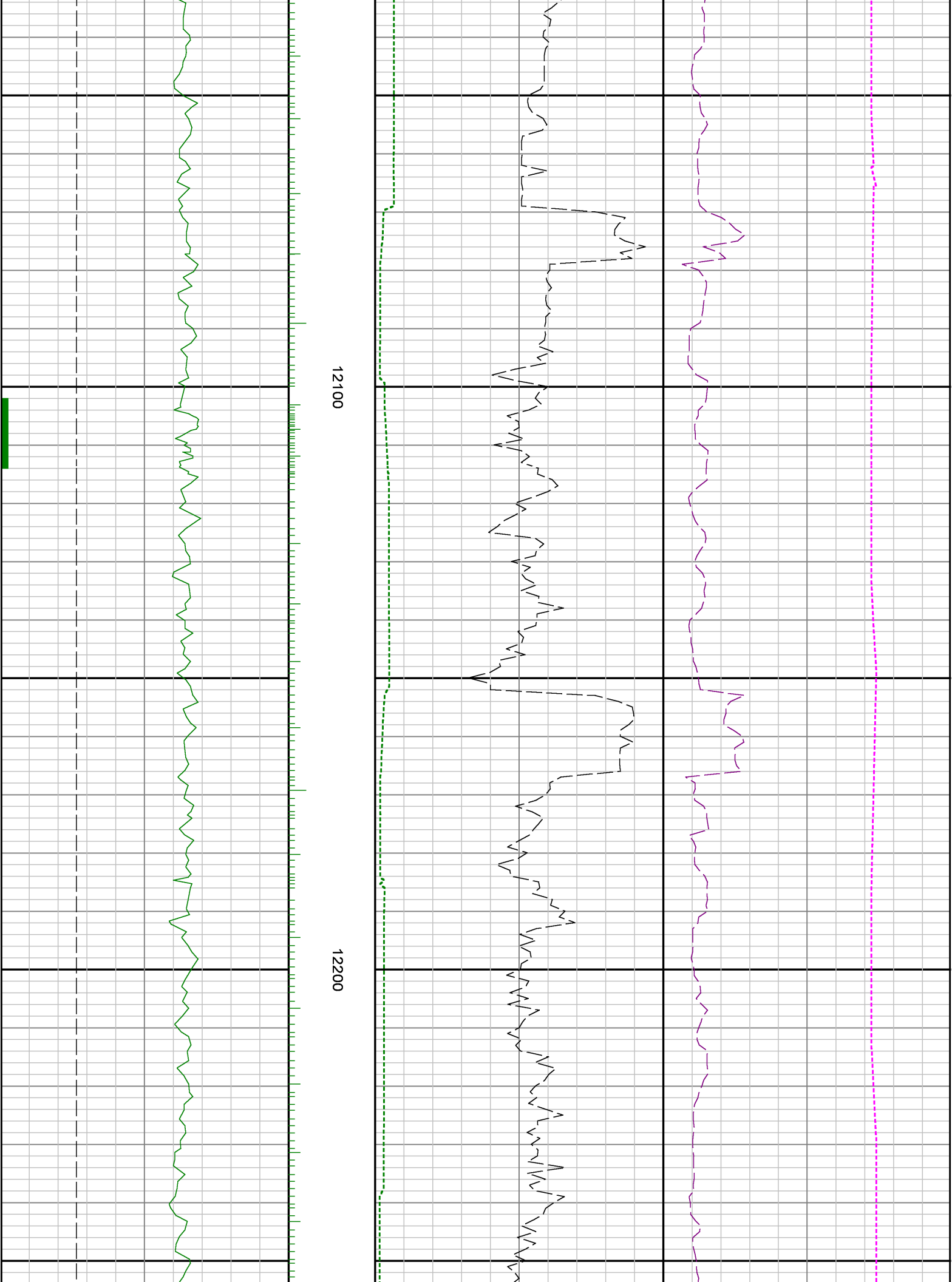


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11500

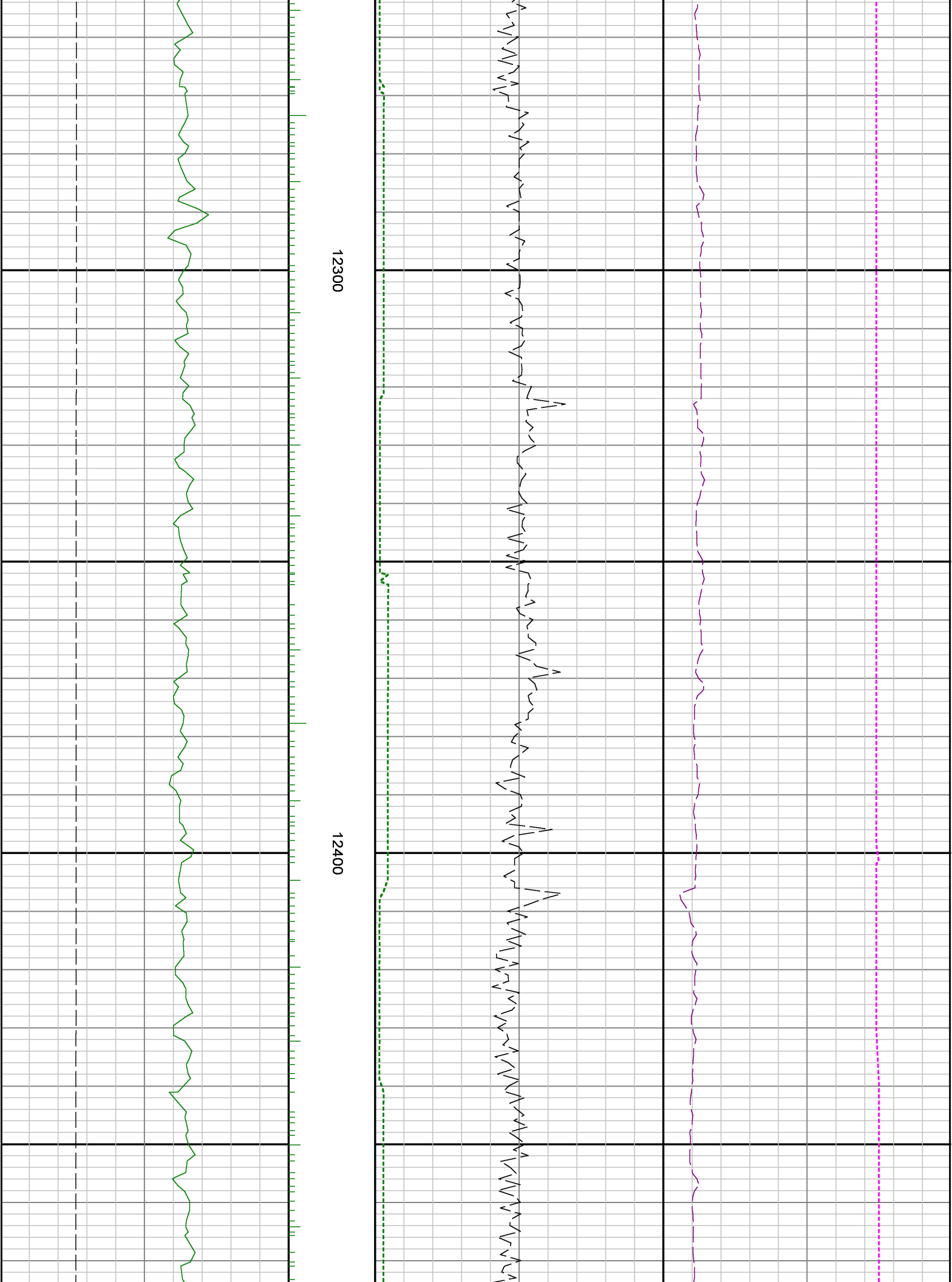






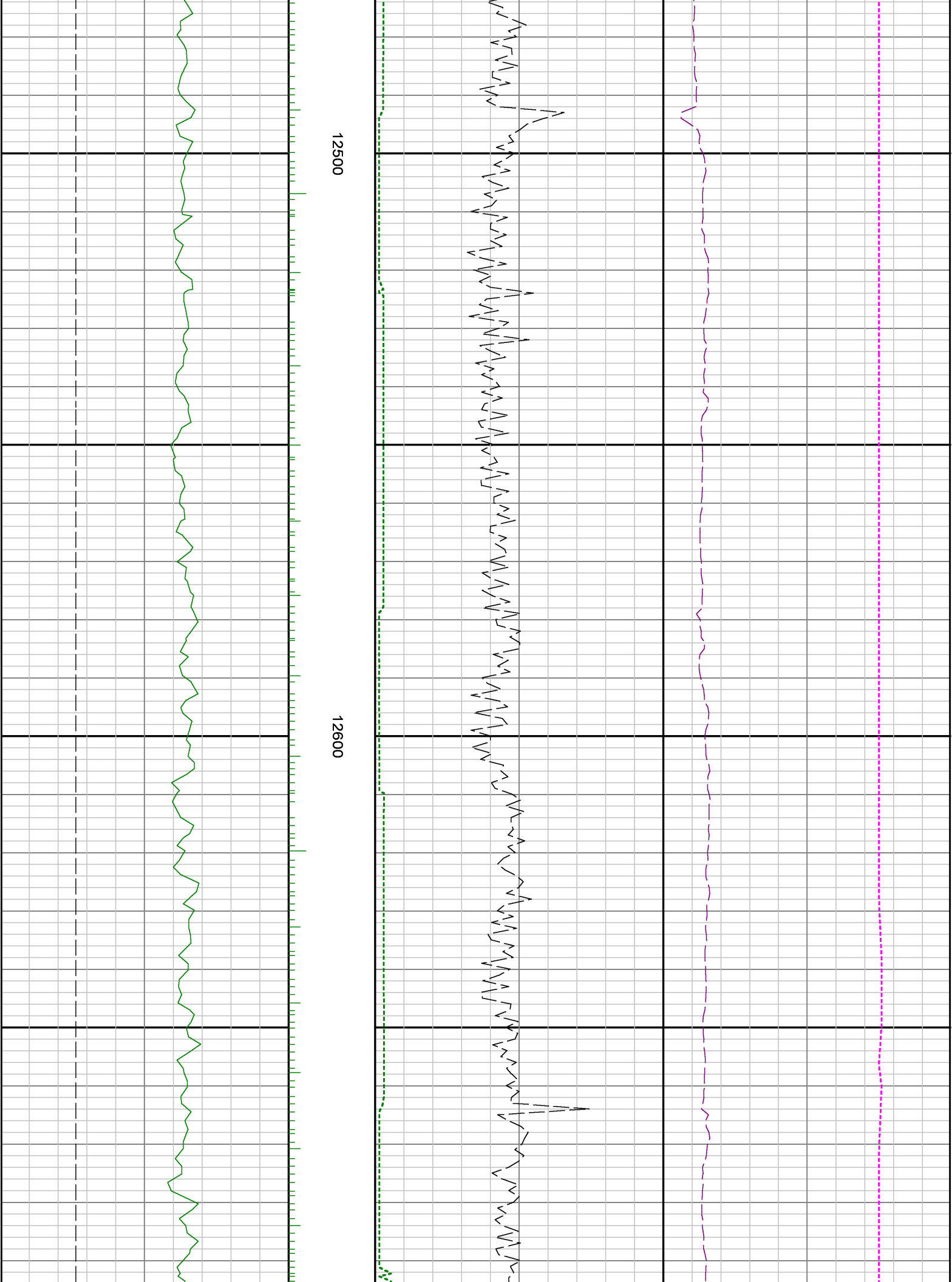
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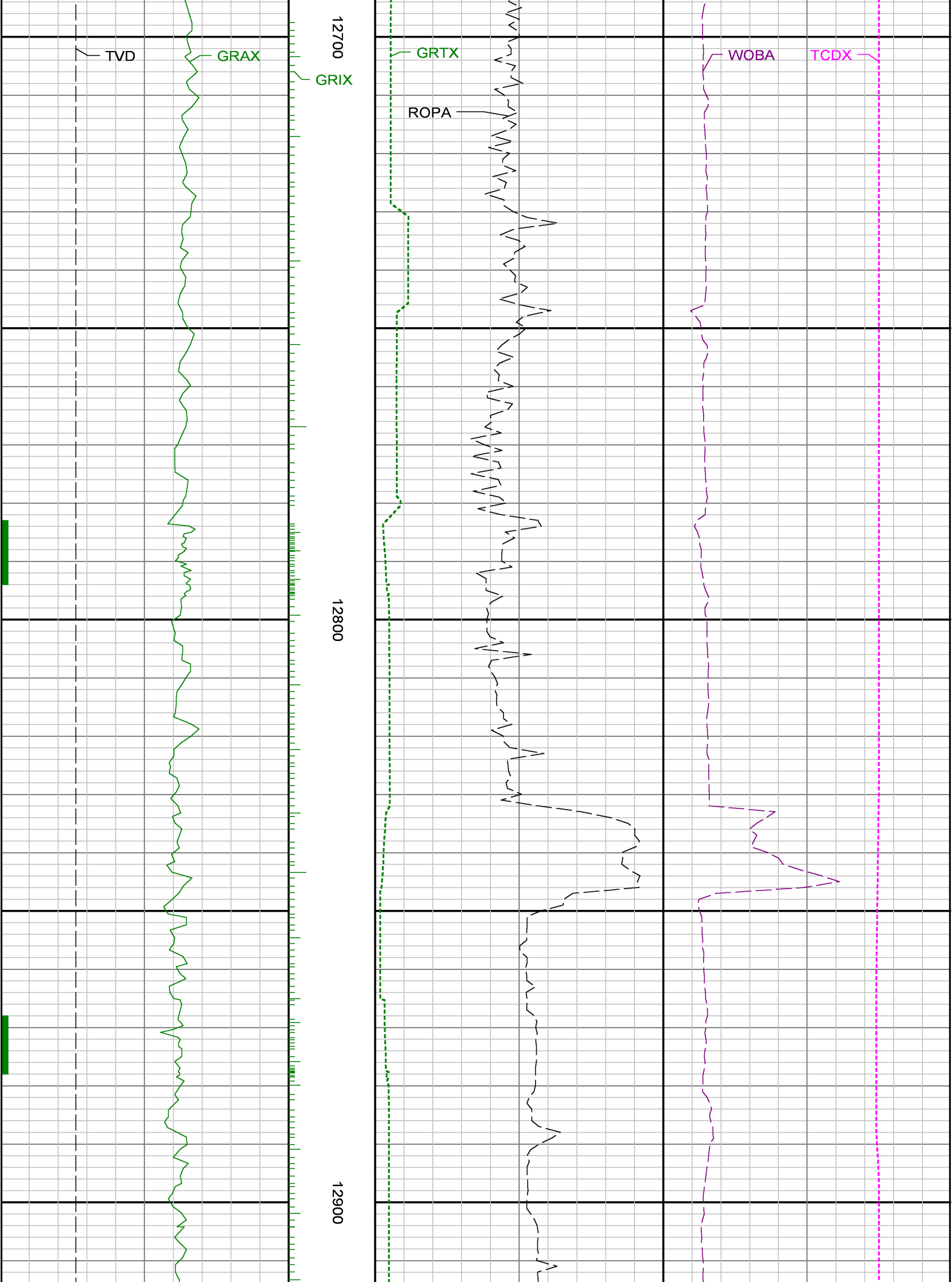
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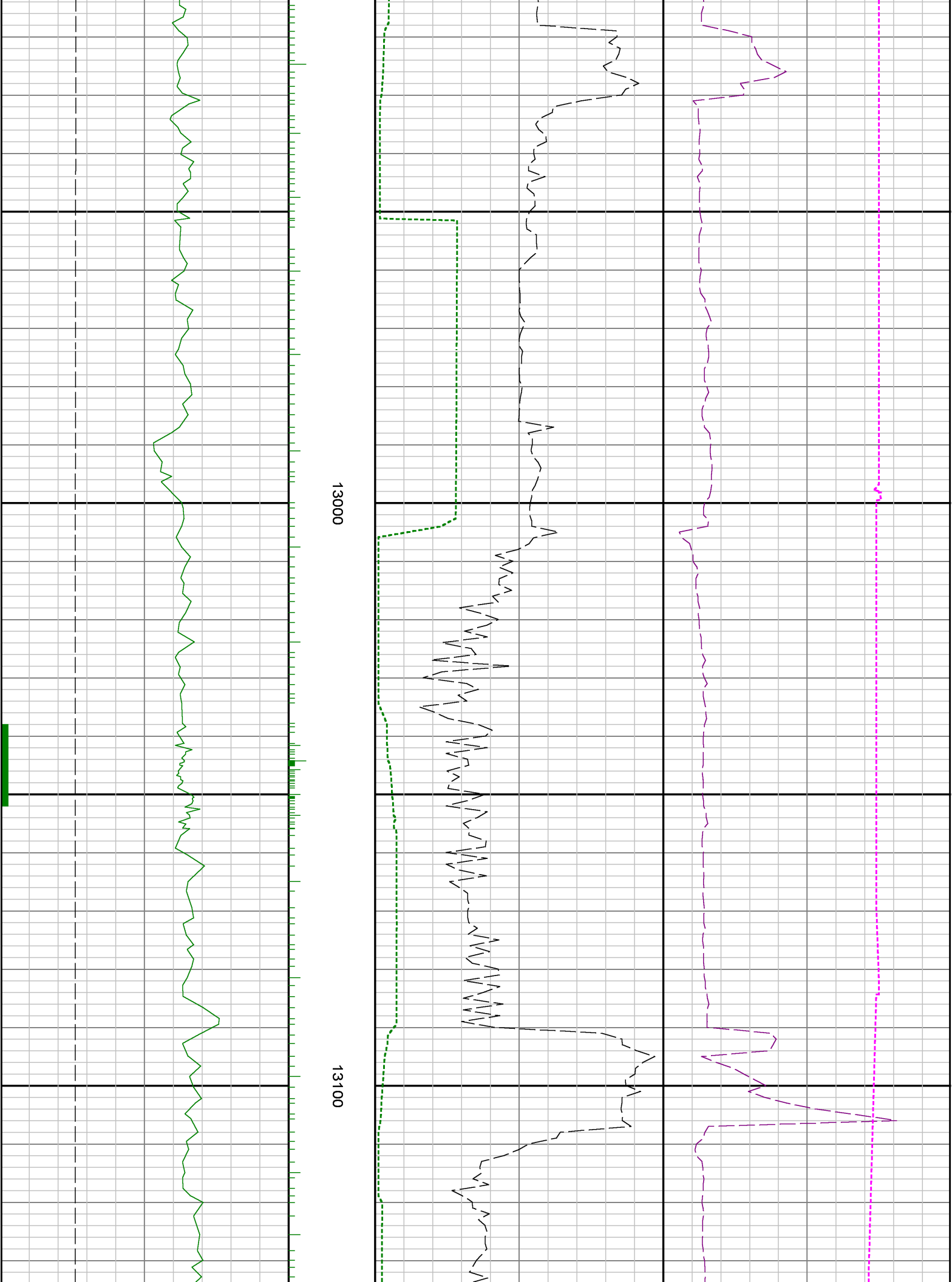


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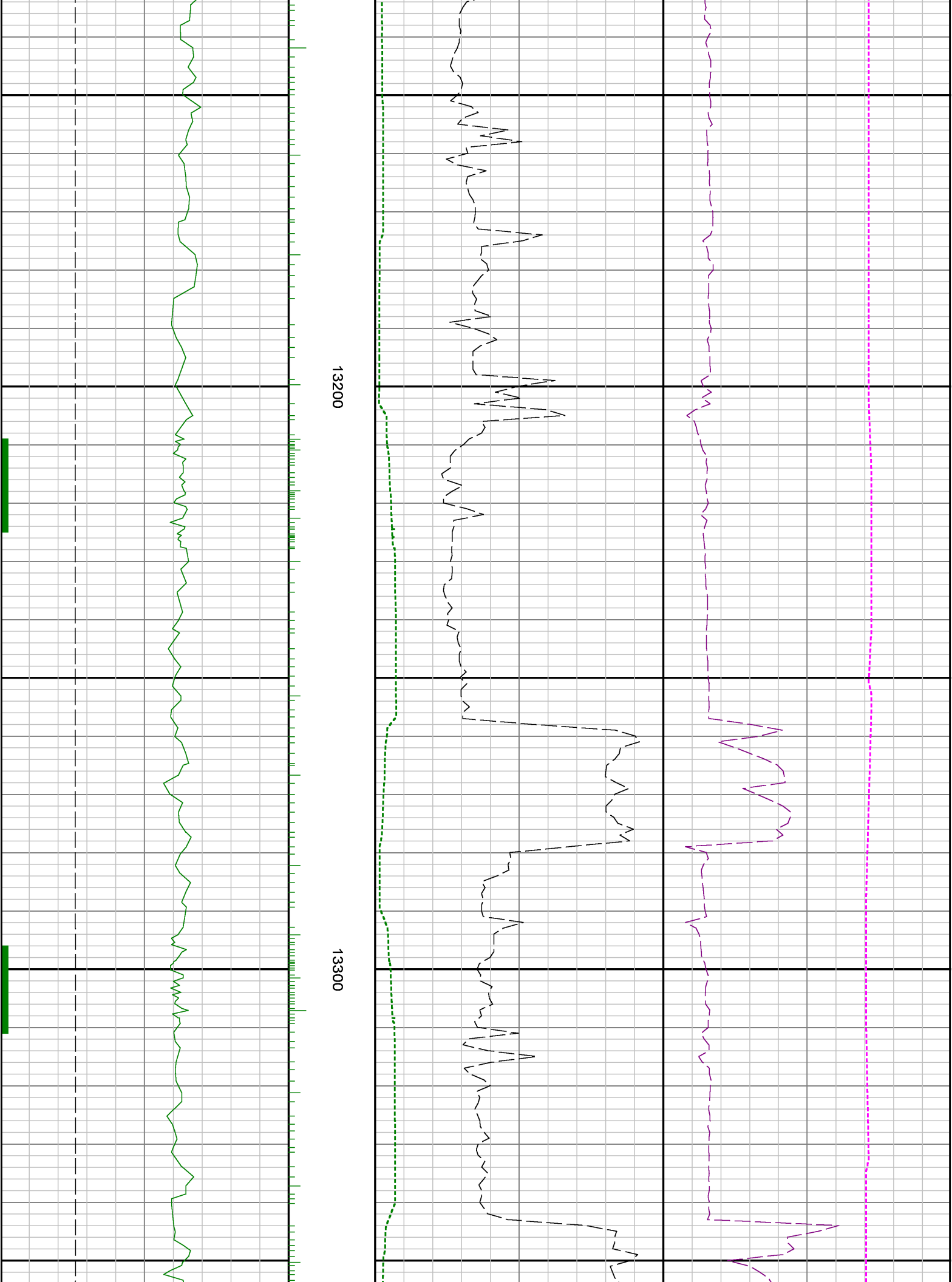


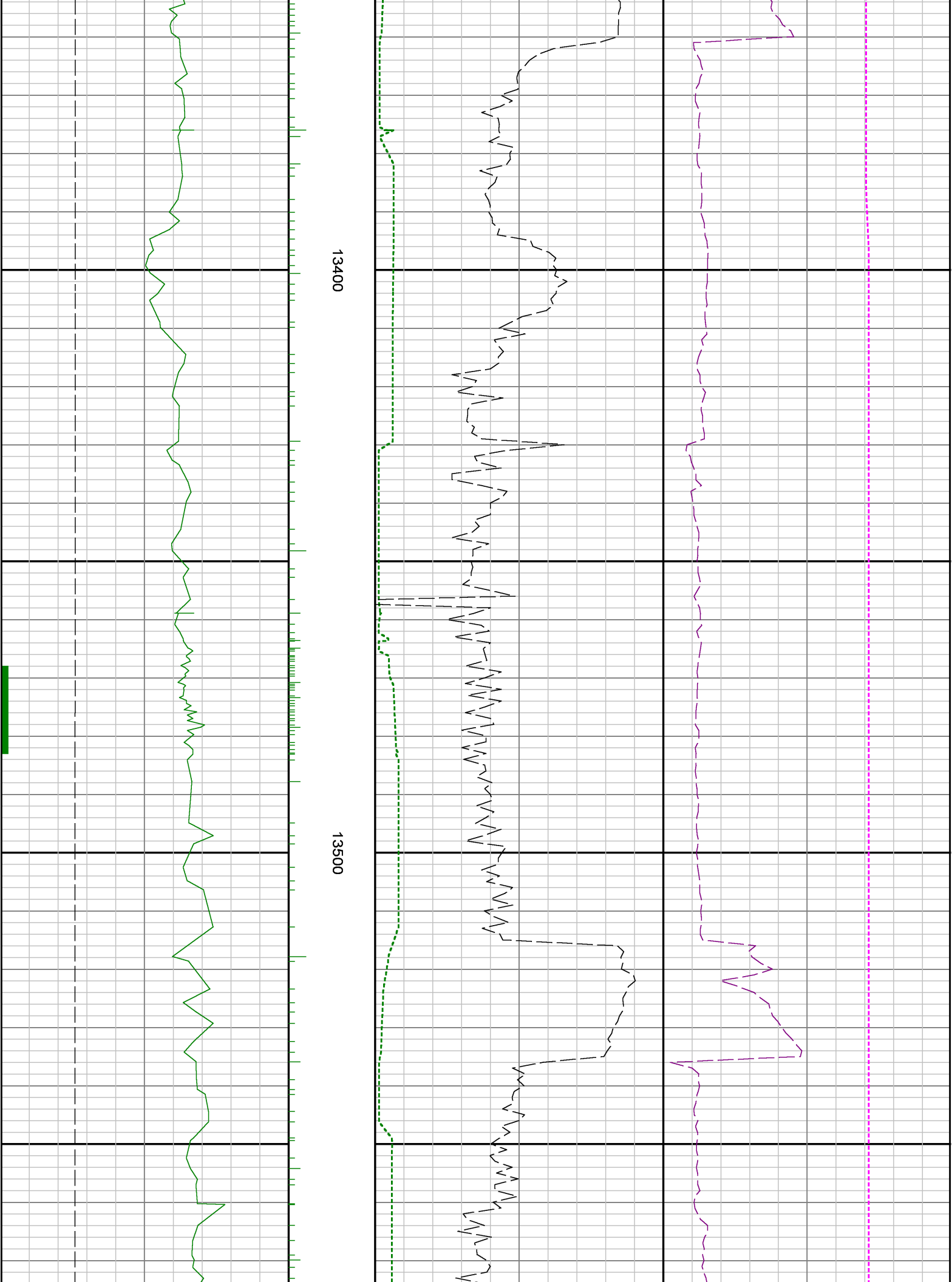


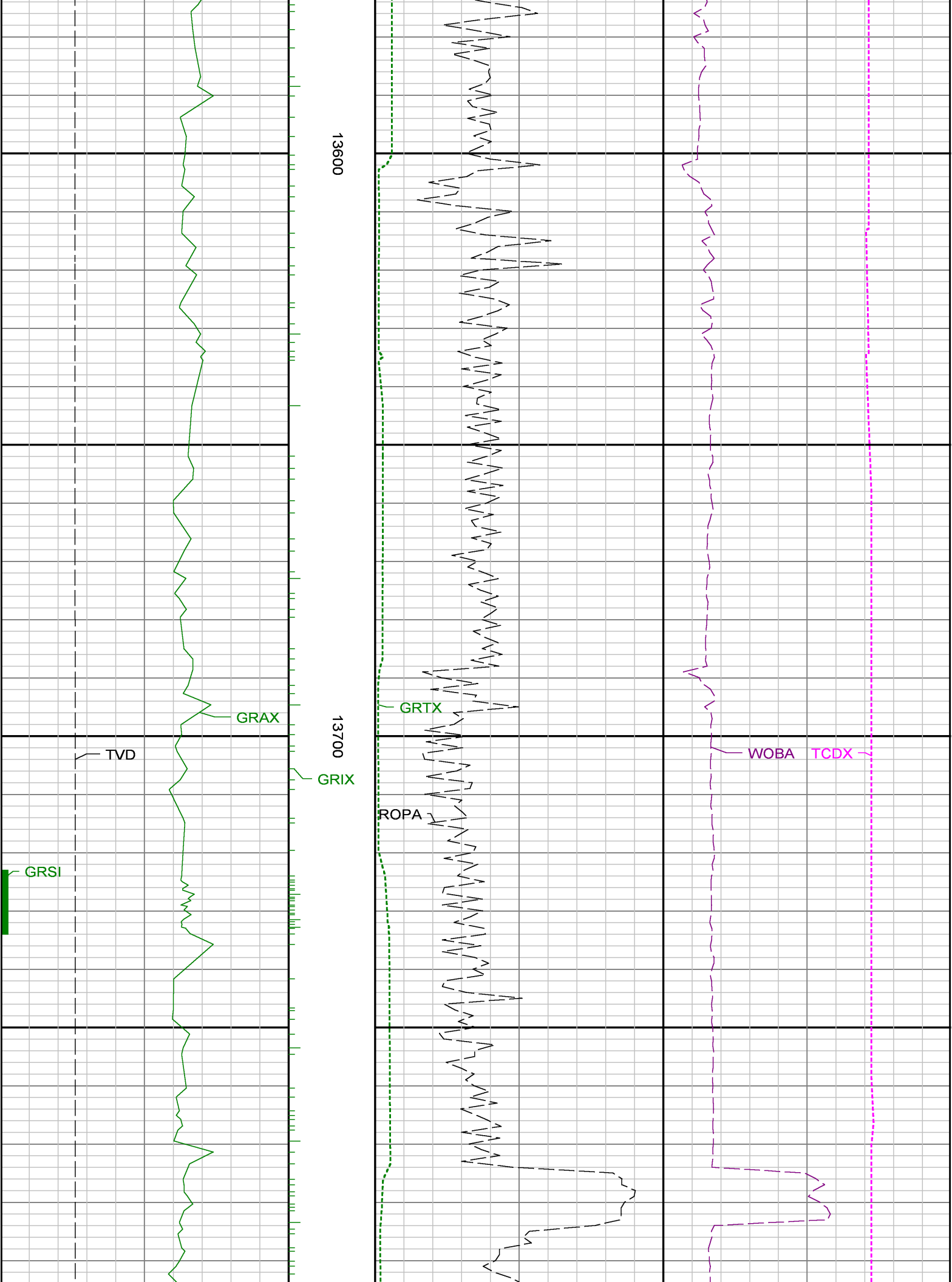


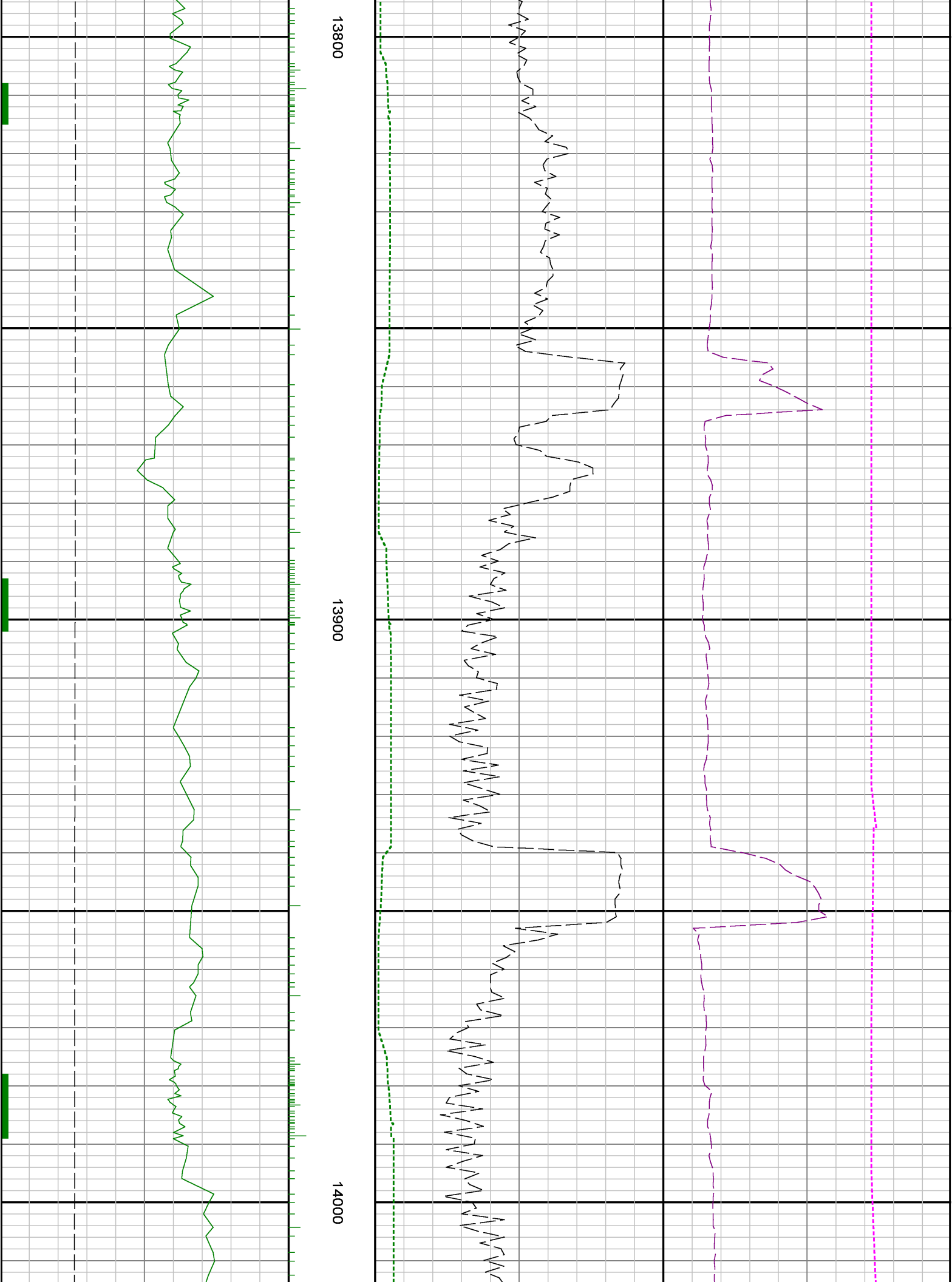
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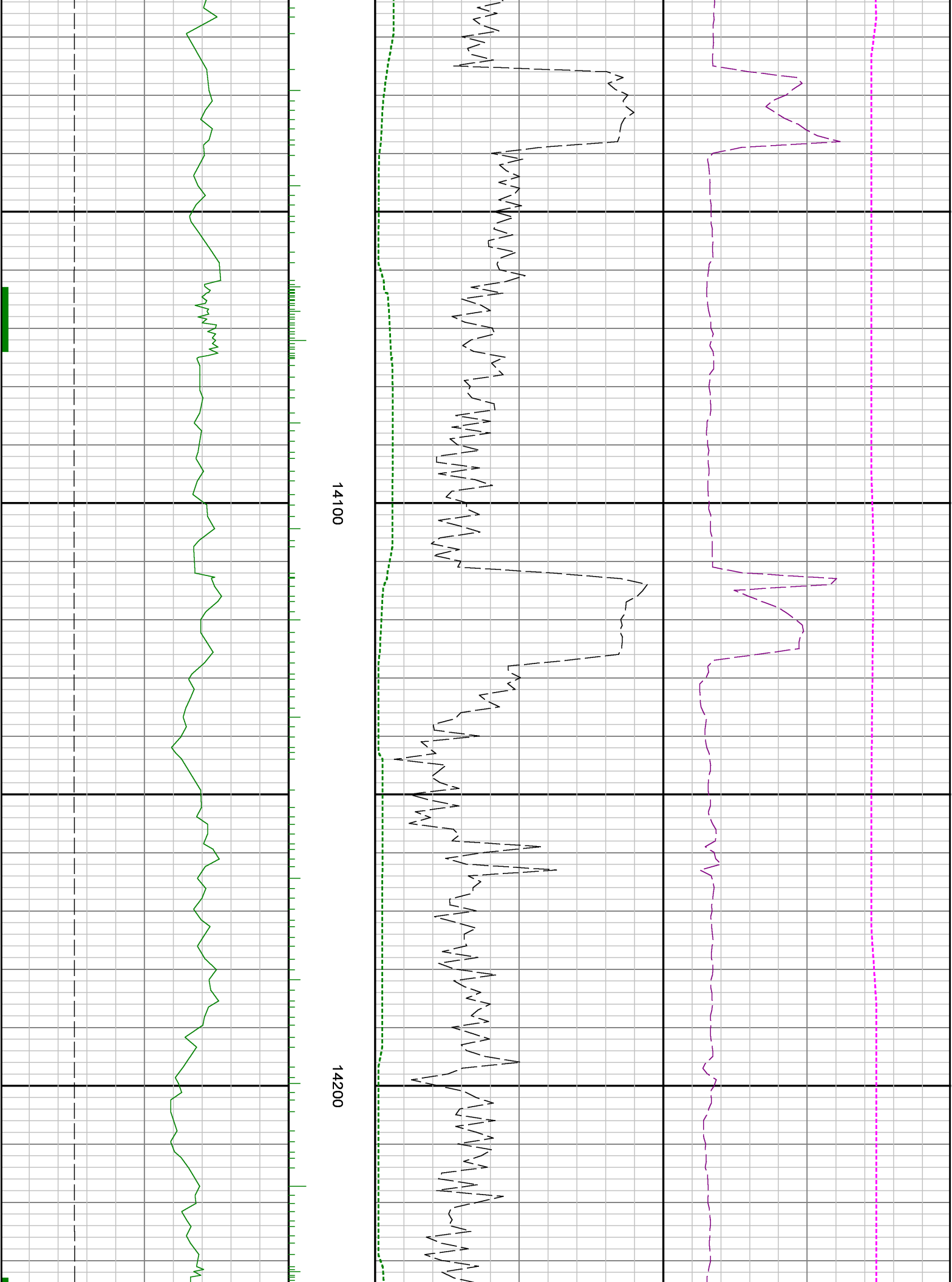
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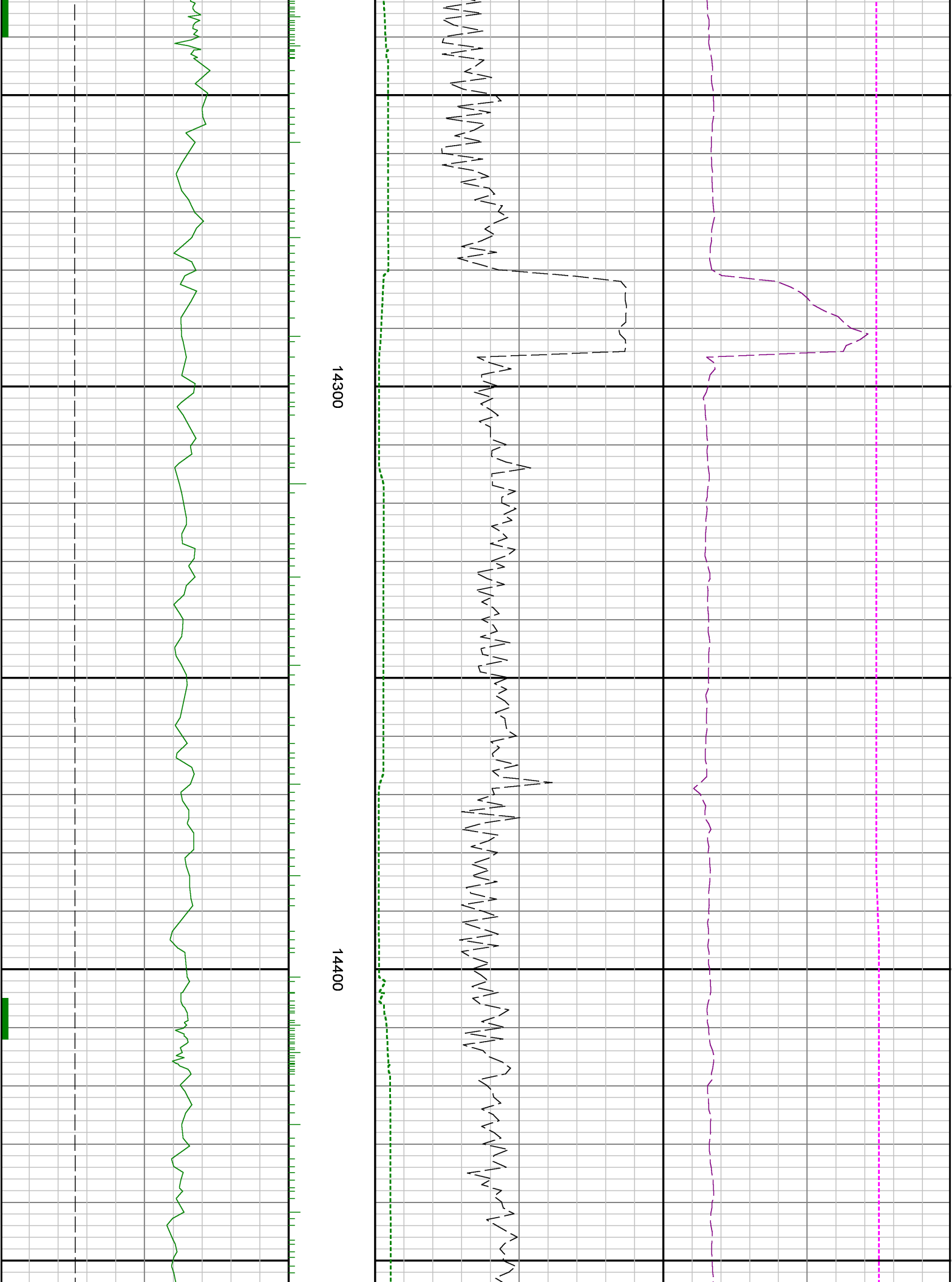


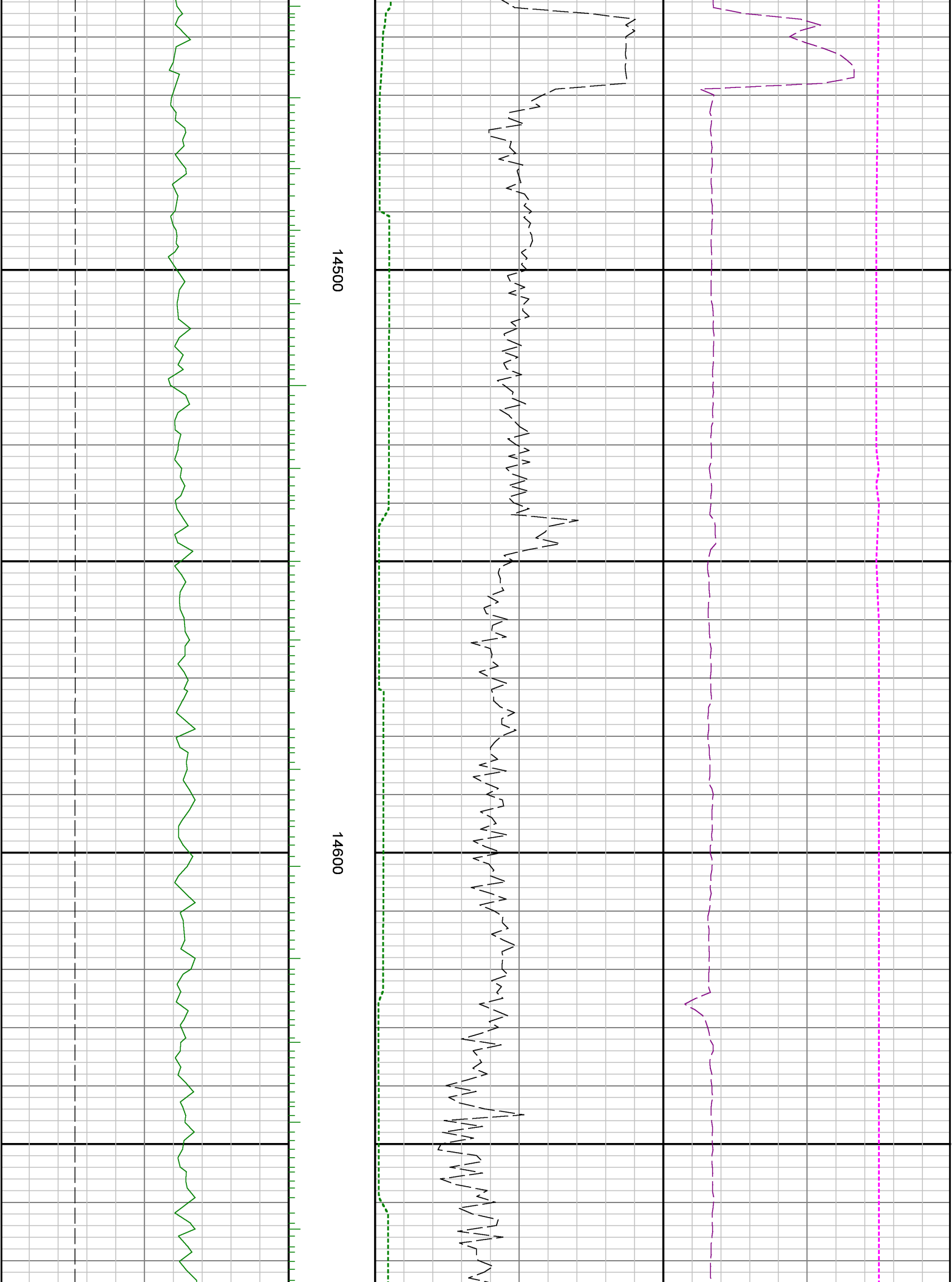


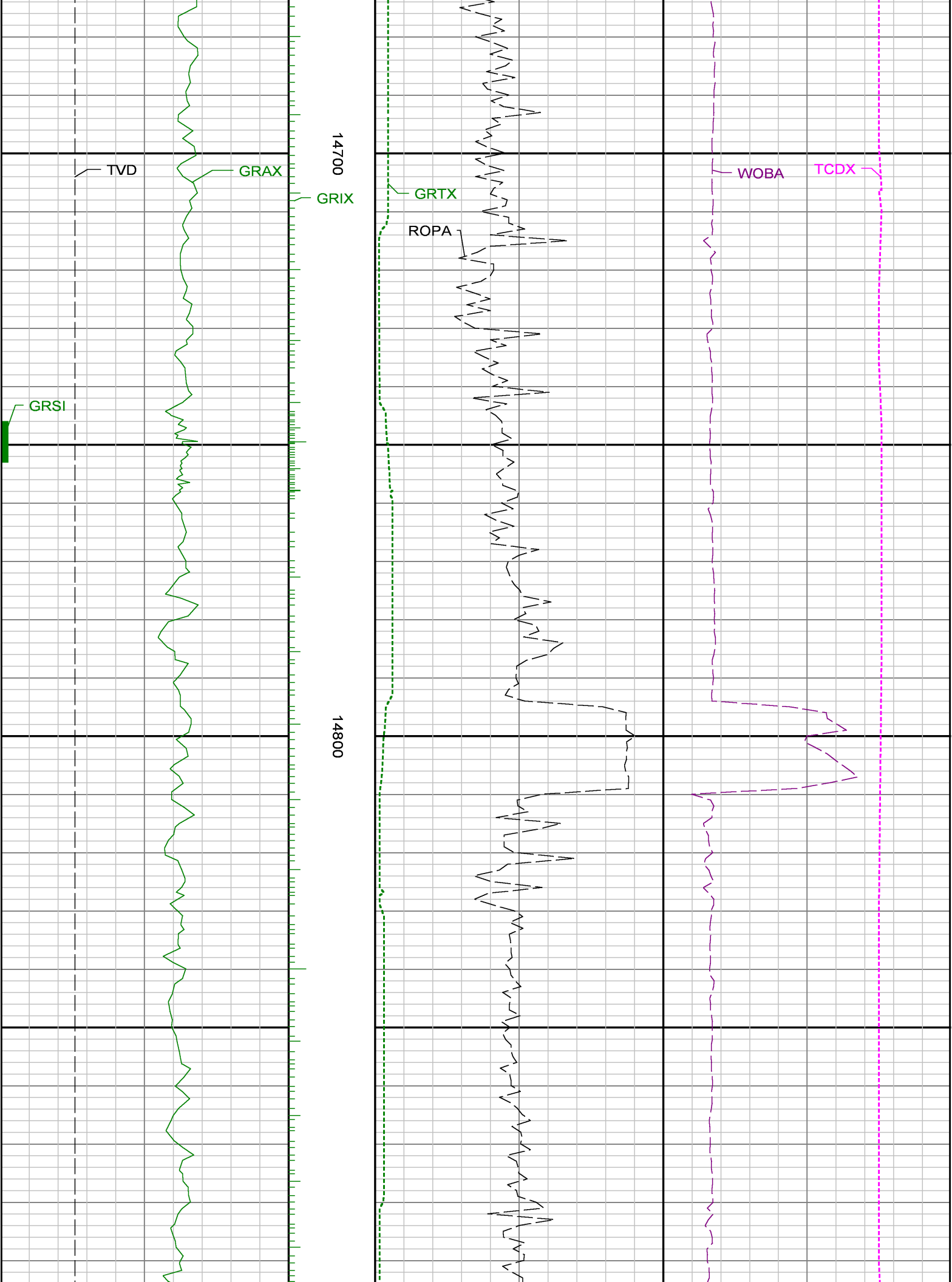


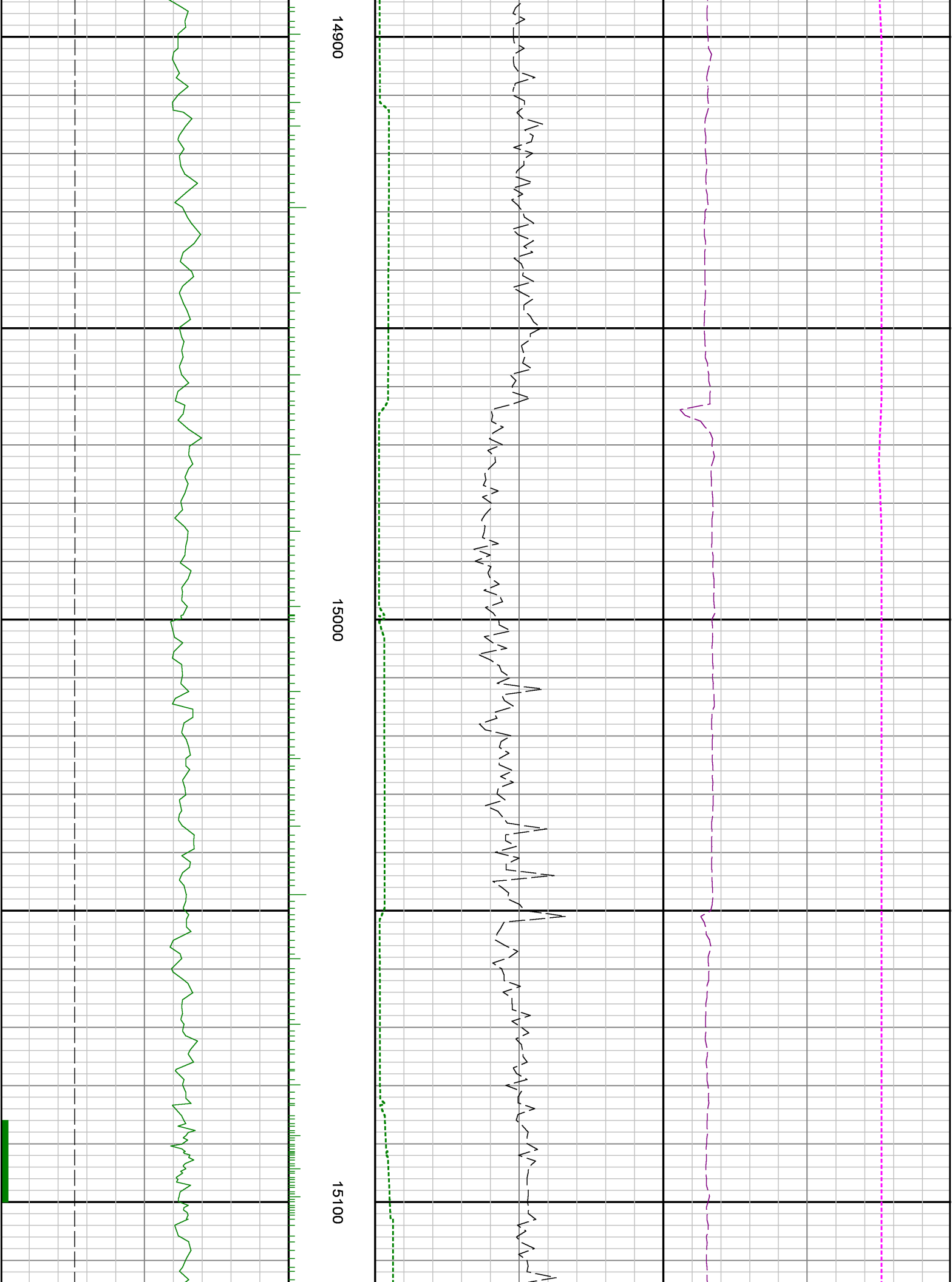


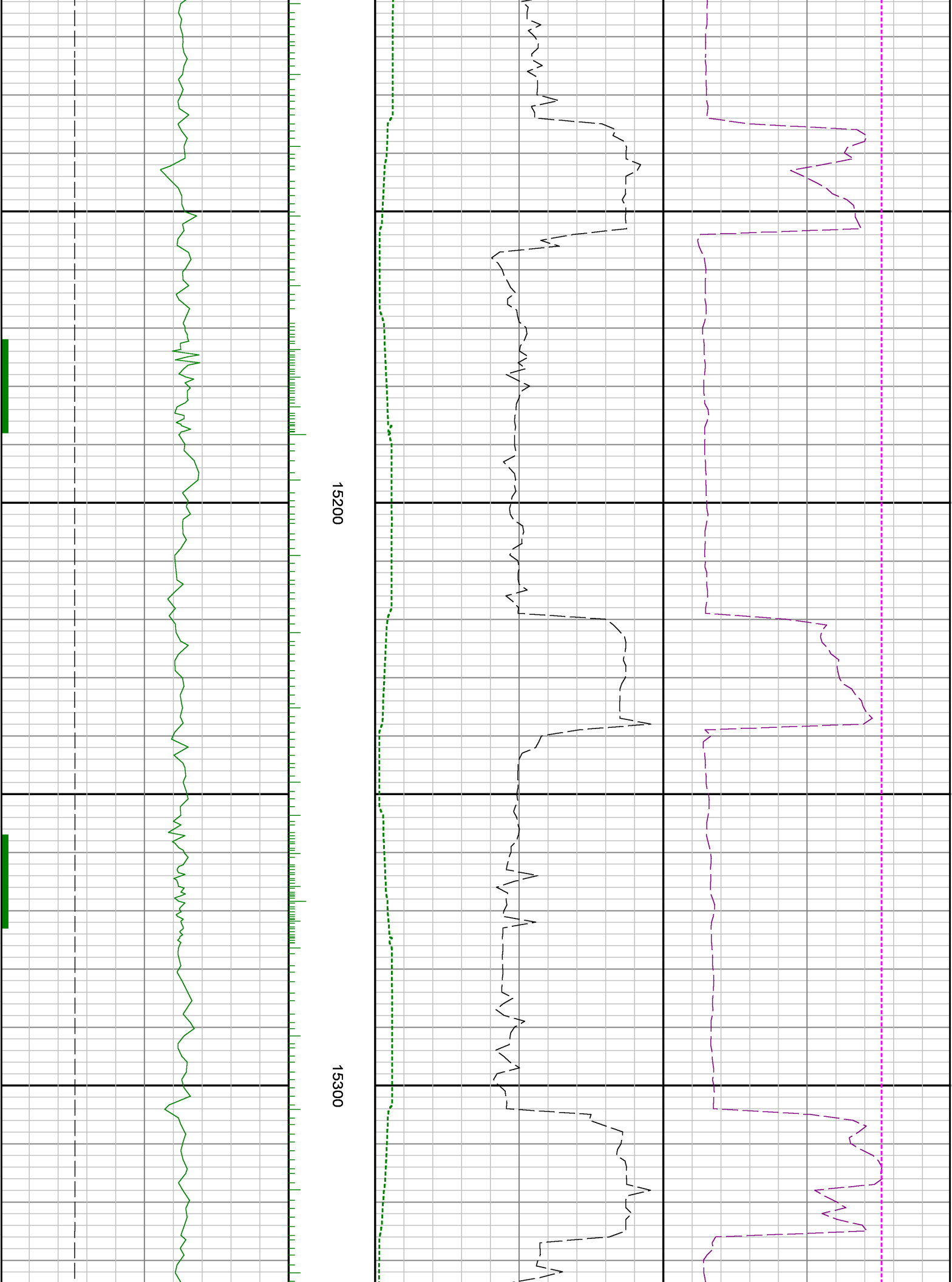








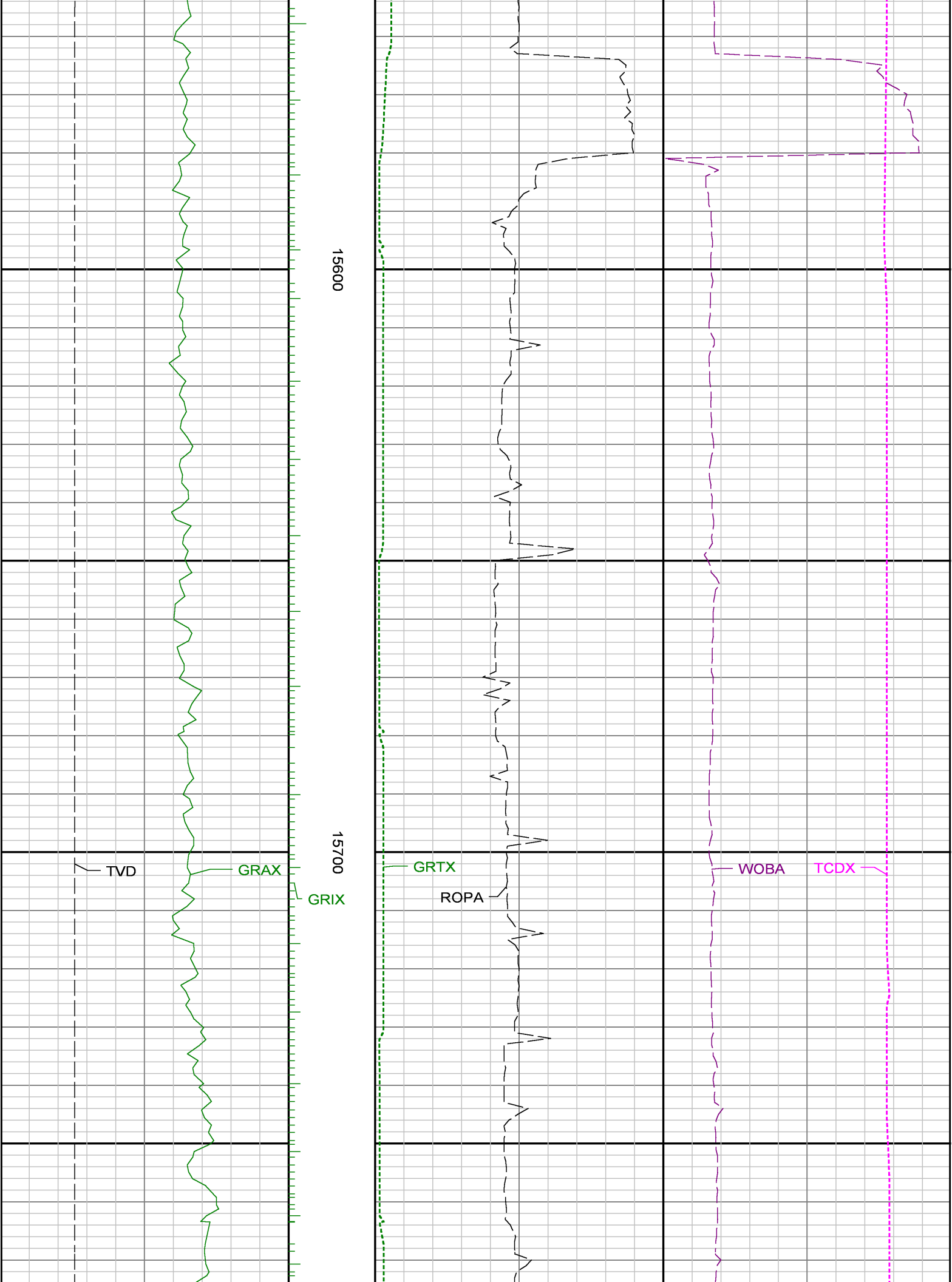






15400

15500



15600

15700

TVD

GRAX

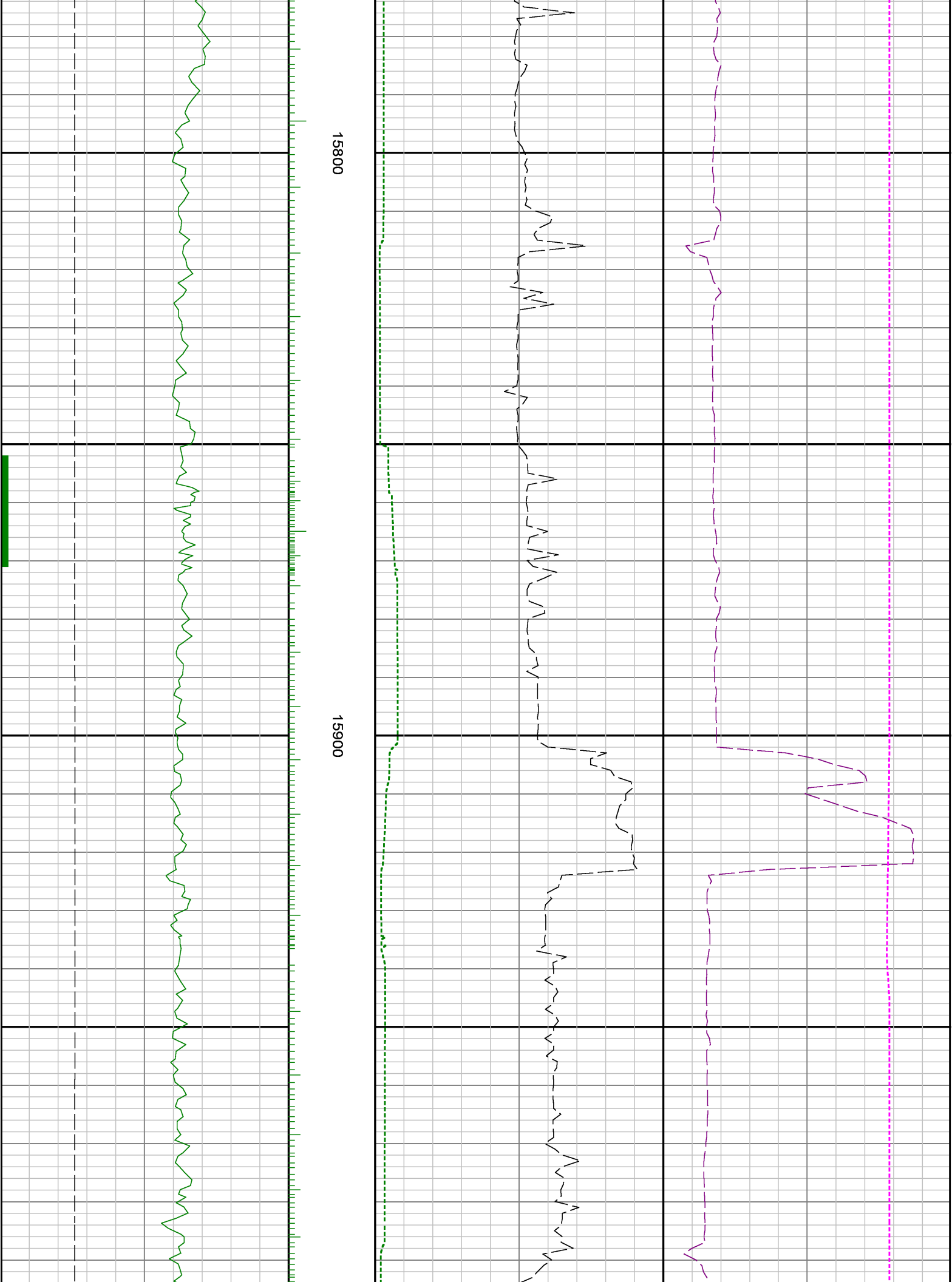
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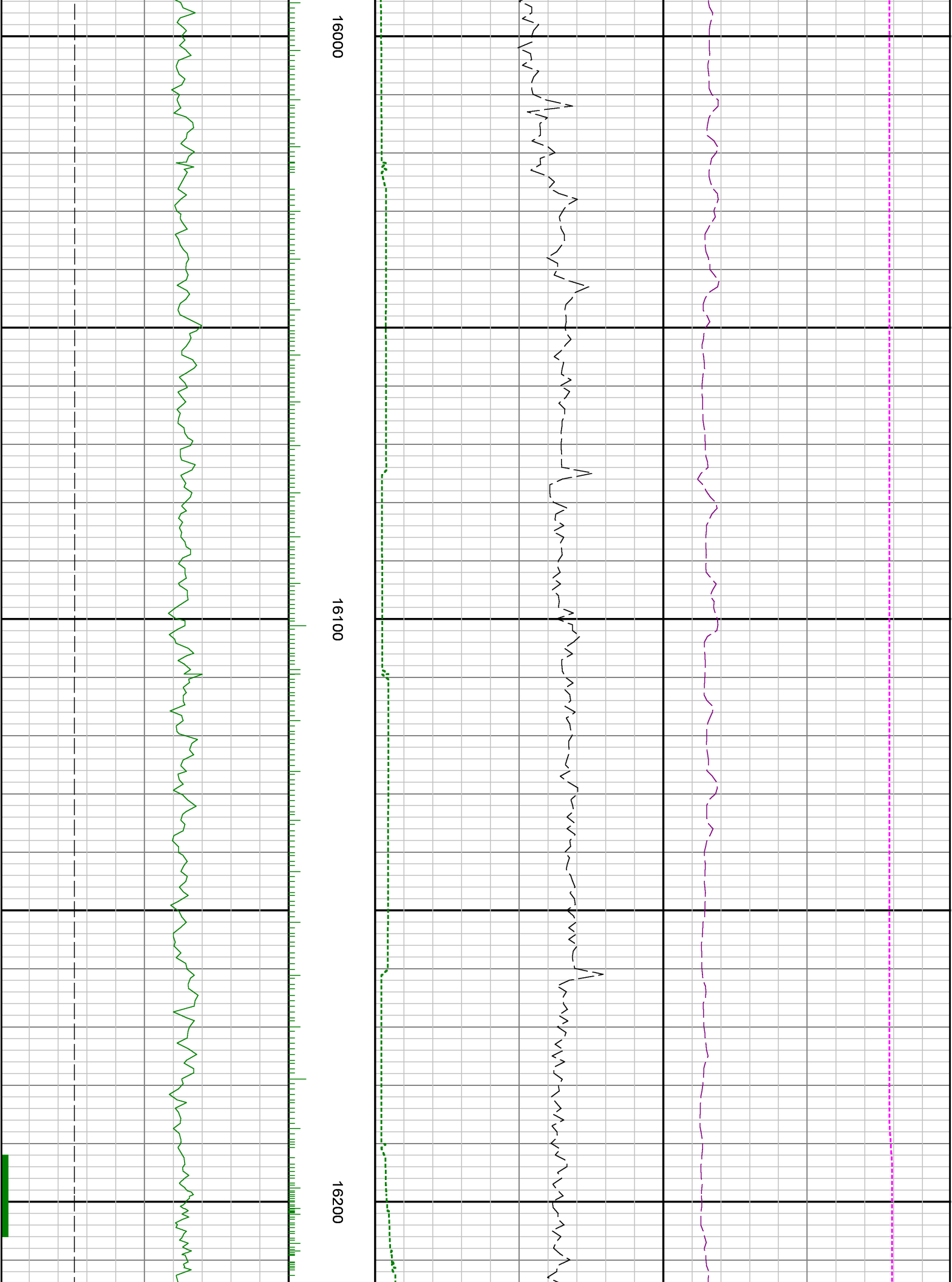
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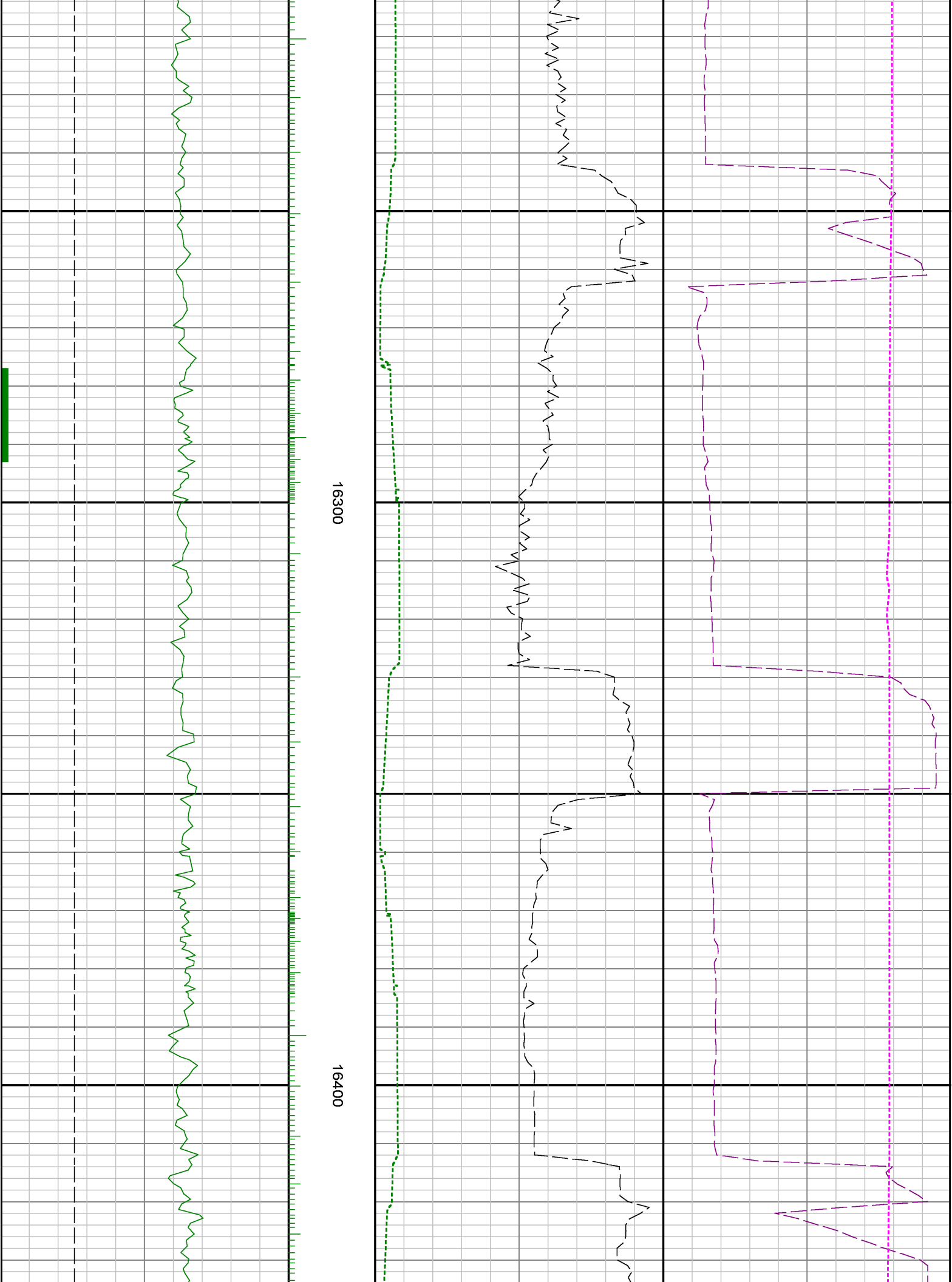
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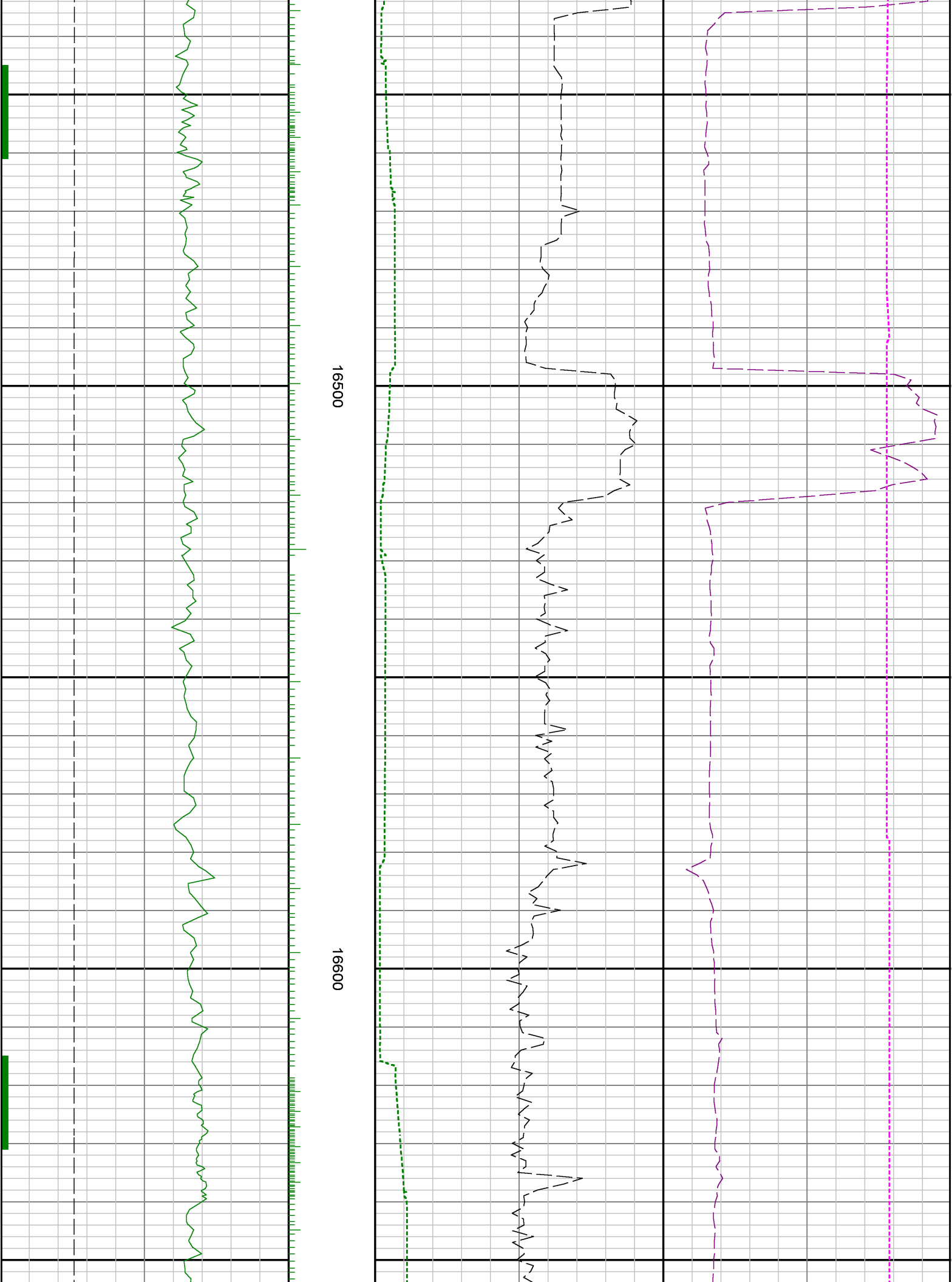
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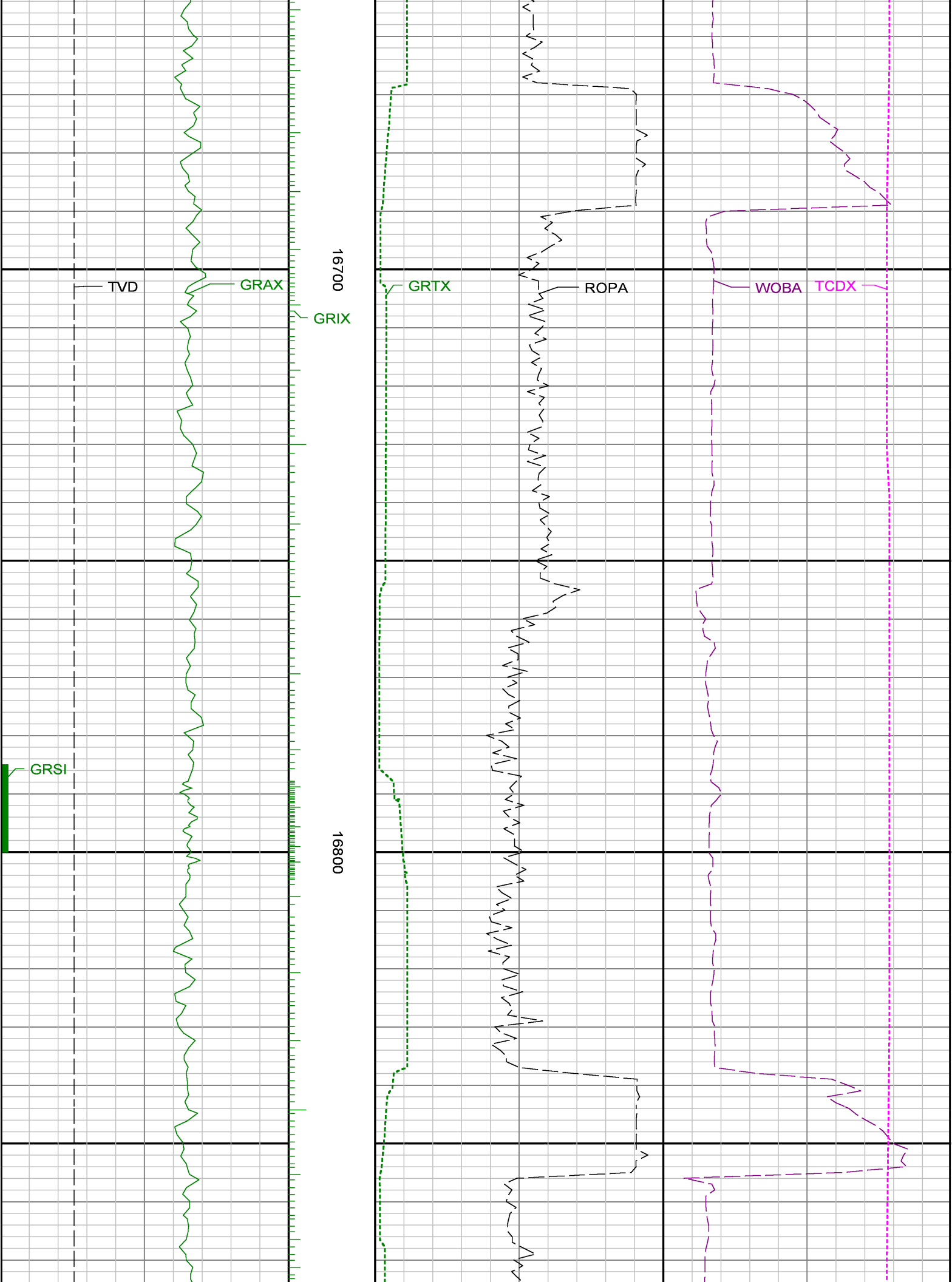
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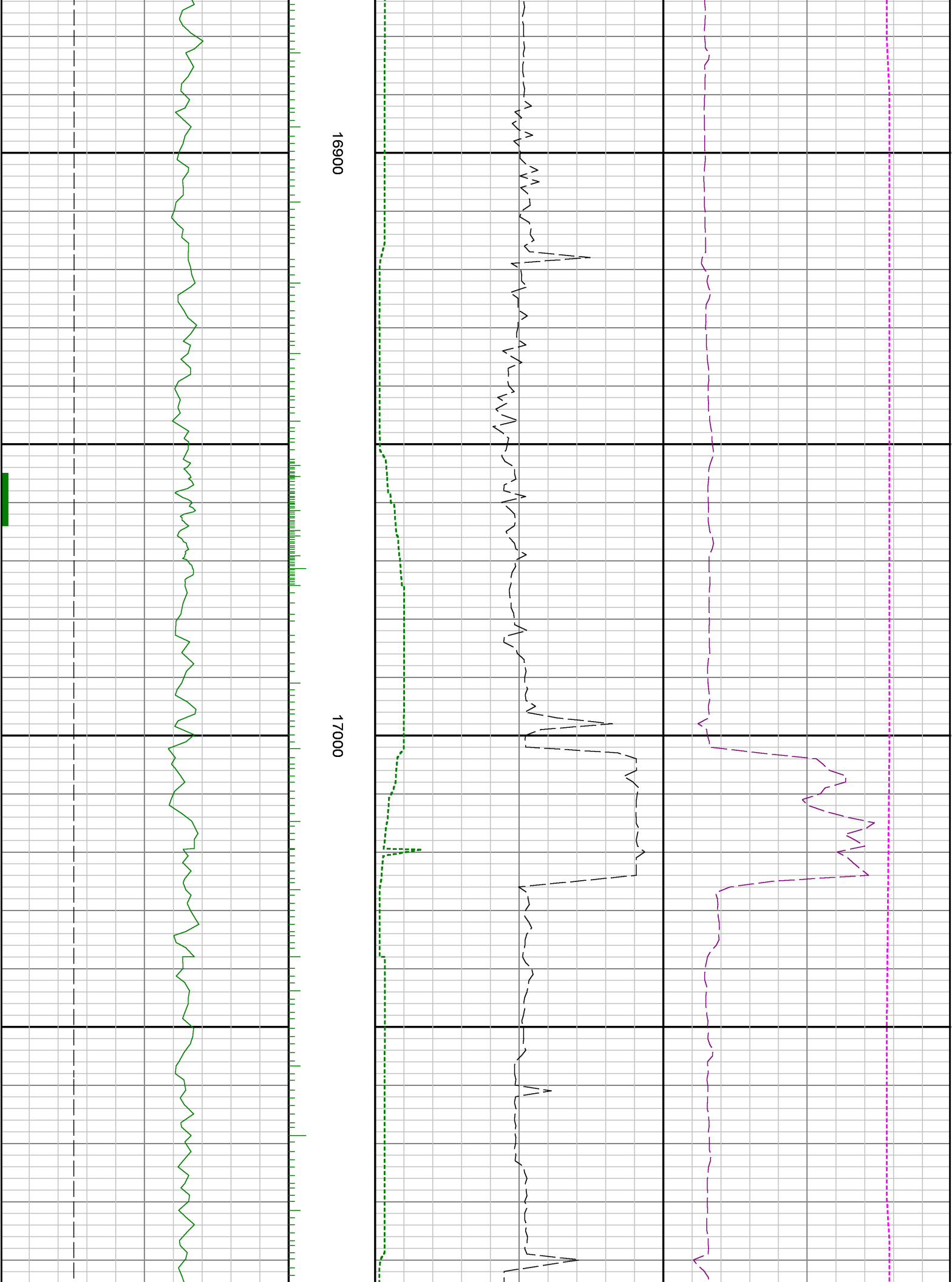


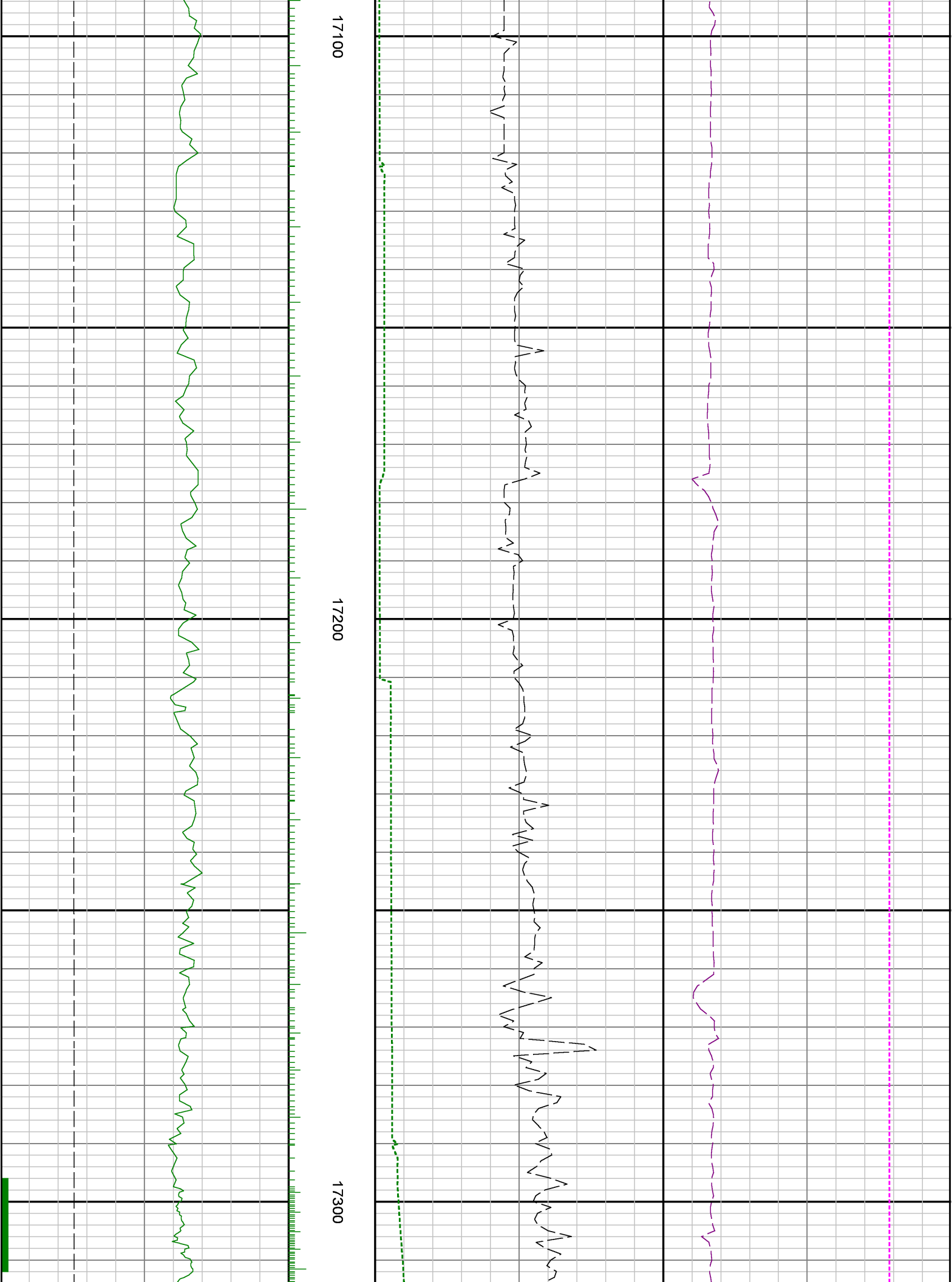


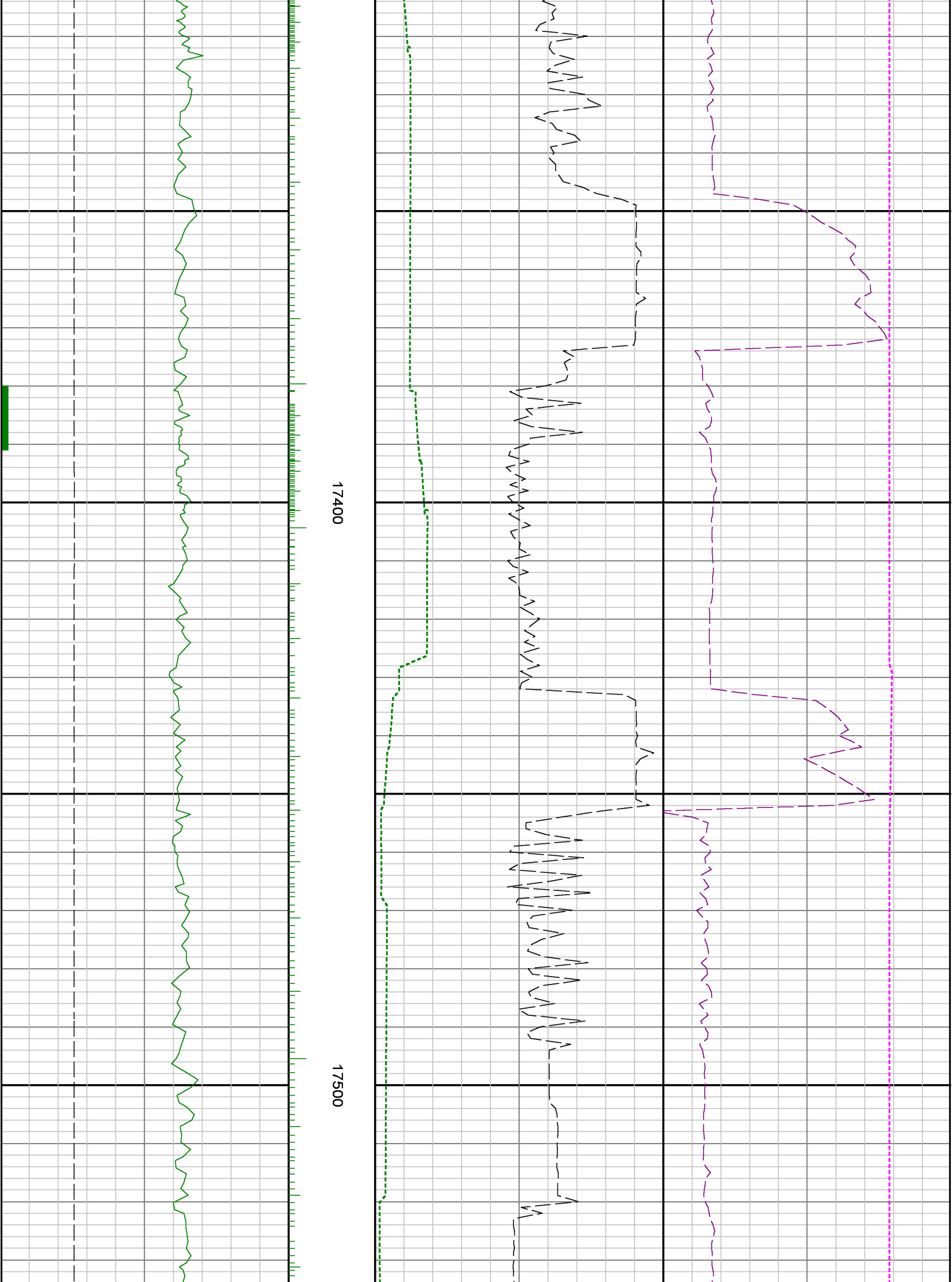


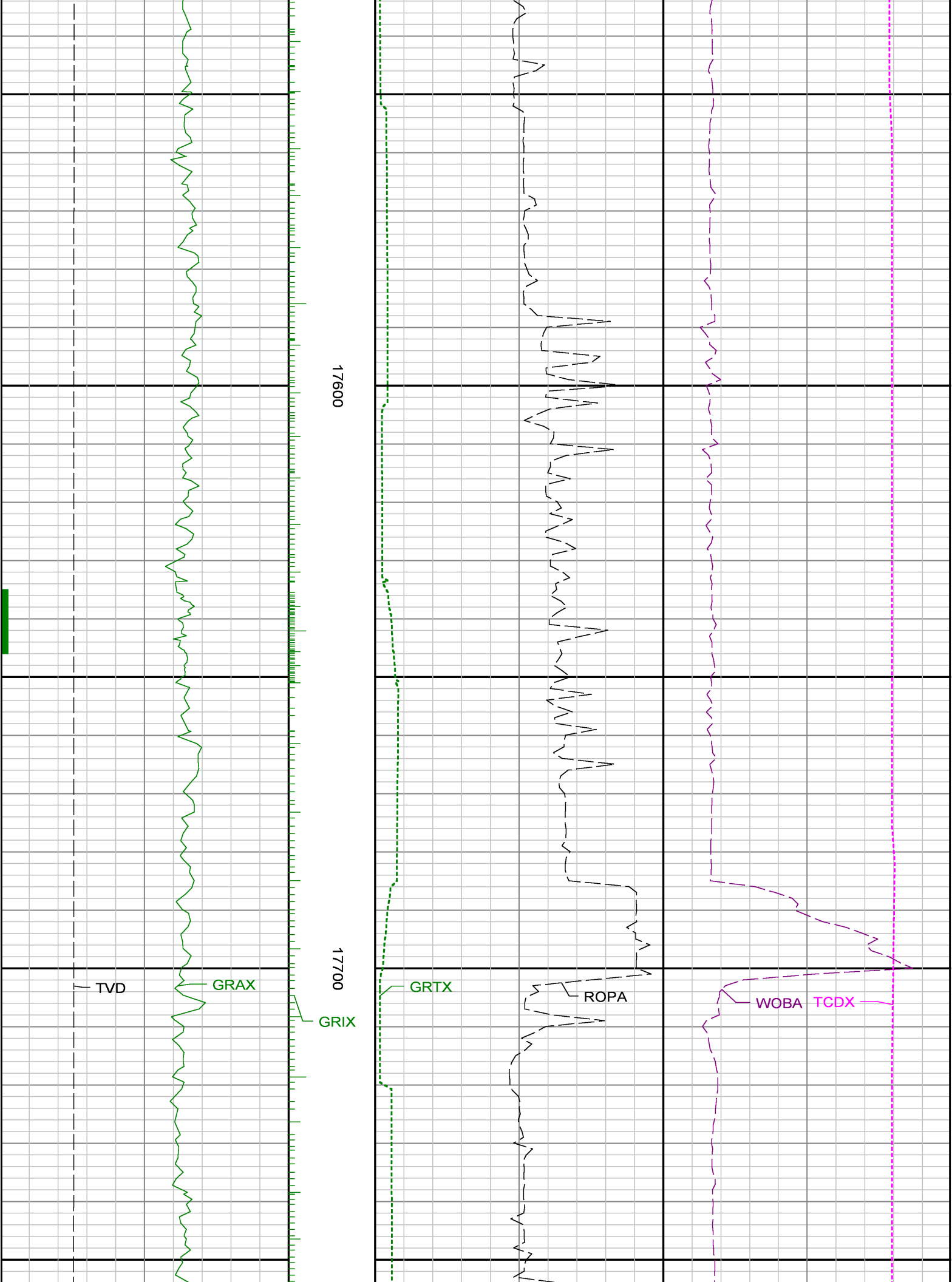


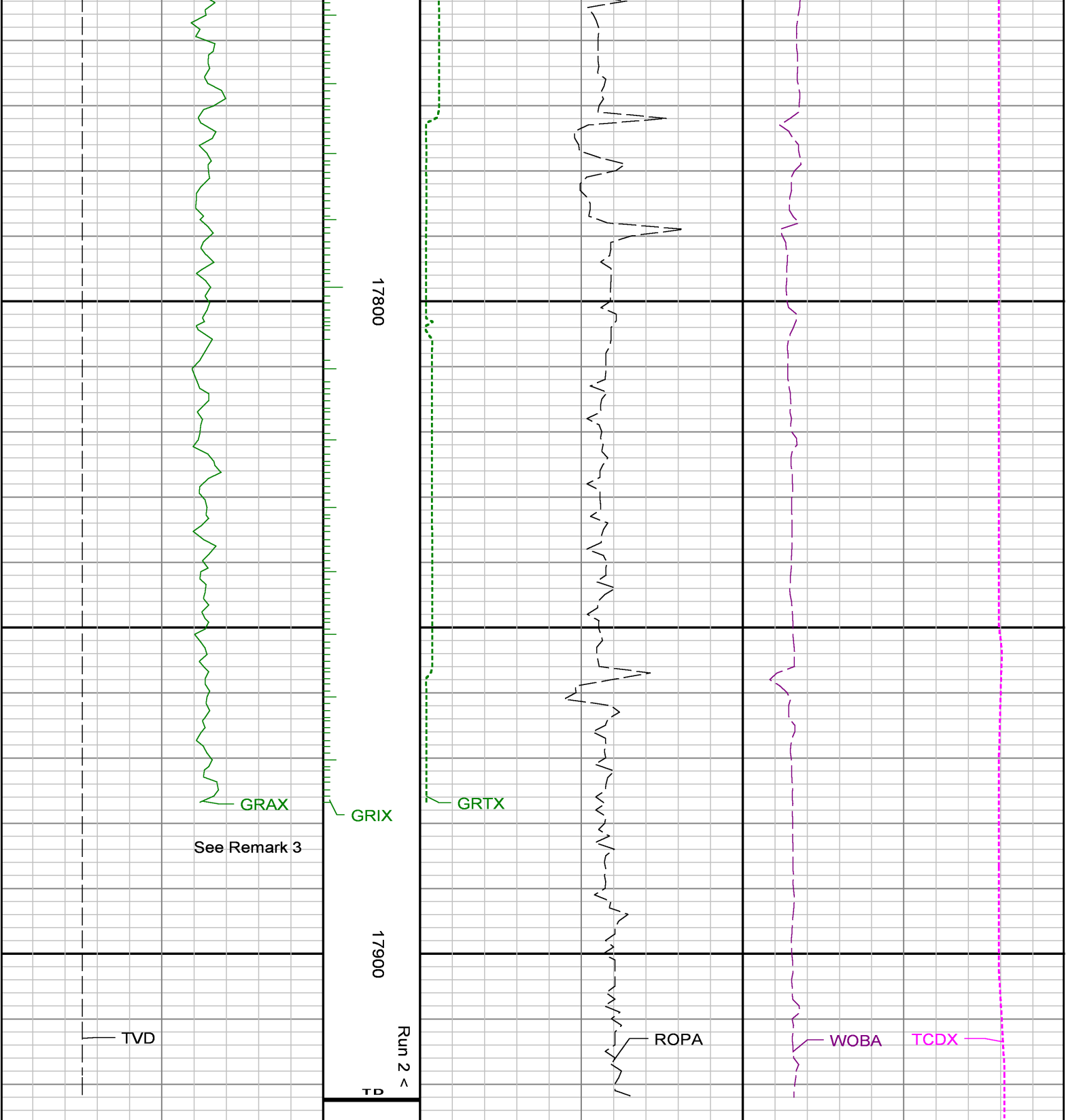












<p>Gamma Ray Apparent 0.5 ft Avg GRAX</p> <p>0 150</p>	<p>Gamma Ray Time Since Drilled GRTX</p> <p>0 600</p>	<p>Surface Weight On Bit 1.0 ft Avg WOBA</p> <p>0 100</p>
<p>API</p>	<p>min</p>	<p>klbf</p>
<p>True Vertical Depth TVD</p> <p>8000 6000</p> <p>ft</p>	<p>Rate of Penetration 3.0 ft Avg ROPA</p> <p>600 0</p> <p>ft/hr</p>	<p>Downhole Temperature TCDX</p> <p>0 300</p> <p>degF</p>

MD feet 1:240