

BAKER HUGHES				Natural Formation Evaluation Gamma Ray				Realtime Log	
Scale: 1:240 MEASURED DEPTH				Company: Anadarko Well: Dugite 13C-35HZ Field: Weld County (Kerr McGee) County: Weld State: Colorado					
Status:	Final Print			Surface Location: Latitude: 40° 7' 9.134" N Longitude: 104° 51' 55.678" W		Other Services: Directional VSS			
API Number: 05123393300000			Section: 23 TWN: 2N Range 67E						
Permanent Datum (P.D.): Mean Sea Level			Elevation: 4994.00 ft.		Elevations: N/A				
Log Measured From: Rig Floor			4994.00 ft.		Above P.D. 4994.00 ft.				
Depth Reference: Drillers Depth					KB: DF: GL: 4968.00 ft.				
Interval Logged				Dates		Magnetic Field Reference			
Top: 6800 ft.		Date From: 24/Jun/14	Dip Angle: 66.75 °		Azi Reference North: True				
Bottom: 17863 ft.		Date To: 05/Jul/14	Total		Mag to Reference				
		Spud Date: 22/Jun/14	Field Strength: 52835.6 nT		North Correction: 8.62 °				
Borehole Record				Casing Record					
Hole Size	From	To	Size	Weight	From	To			
13,500 in.	Surface	1346 ft.	9,600 in.	36.00 lb/ft	Surface	1338 ft.			
8,750 in.	1346 ft.	7914 ft.	7,000 in.	26.00 lb/ft	Surface	7905 ft.			
6,125 in.	7914 ft.	17863 ft.							
Mud Record				Deviation Record					
Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)			
Water Based Mud	Surface	17863 ft.	13,500 in.	Surface	0.0 ° / 292.0 °	0.3 ° / 149.0 °			
			8,750 in.	Vert/Curve	0.2 / 18.8 °	83.7 ° / 179.9 °			
			6,125 in.	Lateral	89.7 ° / 179.1 °	89.2 ° / 181.4 °			
					/	/			
					/	/			
					/	/			
Acquisition System				Software Version		Other			
Advantage	2.20U4		Rig / Contractor:	H&P 307		/ Helmerich & Payne Drilling Co			
PATS	6.4.1.34		Job No:	6433175					
			District / Unit:	RMD		/ D & E			

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Log Run Summary															
LWD	BHA	Bit	Bit	Bit	Bit	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time				Circ. Time (hrs.)
Run	Run	Run	Size	Type	Gauge Length (in.)		Top	Bottom	From	To	Start		End		
No.	No.	No.	(in.)				(ft.)	(ft.)	(ft.)	(ft.)					
1	1	1	8.750	PDC		Steerable	6800	7870	1330	7915	24/Jun/2014 16:02	25/Jun/2014 14:52	40.8		
2	2	2	6.125	PDC		Steerable	7863	15448	7914	15500	27/Jun/2014 12:48	30/Jun/2014 18:53	69.2		
3	3	3	6.125	PDC		Steerable	N/A	N/A	N/A	N/A	01/Jul/2014 13:50	01/Jul/2014 13:50	2.8		
4	4	4	6.125	PDC		Steerable	15451	17814	15501	17863	03/Jul/2014 04:26	04/Jul/2014 21:20	31		

Crew										
Name	Arrive	Depart		Name	Arrive	Depart		Name	Arrive	Depart
	Wellsite	Wellsite			Wellsite	Wellsite			Wellsite	Wellsite
Andrew King	27/June/14	05/July/14		John Nguyen	22/June/14	03/July/14		Nick Roosen	22/June/14	26/June/14

Hans Cary	01/July/14	05/July/14	Bill Herbers	22/June/14	05/July/14	Scott Sanford	22/June/14	01/July/14
Ahmed Bani-Saad	03/July/14	05/July/14						

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 (ft.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12456788	Directional	47.07	6.750	3.250
1	SRIG	5015	Gamma	43.70	6.750	3.250
2	DIR	10239728	Directional	52.52	4.750	2.750
2	SRIG	10239728	Gamma	49.10	4.750	2.750
3	DIR	10307183	Directional	51.31	4.750	2.750
3	SRIG	12461716	Gamma	47.94	4.750	2.750
4	DIR	10307183	Directional	51.35	4.750	2.750
4	SRIG	12461716	Gamma	47.98	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
<p>(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 1346 to 7914 ft MD (1346 to 7595 ft TVD).</p> <p>(2) Baker Hughes INTEQ runs 2, 3, and 4 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 7914 to 17862 ft MD (7595 to 7638 ft TVD).</p> <p>(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.</p> <p>(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.</p>

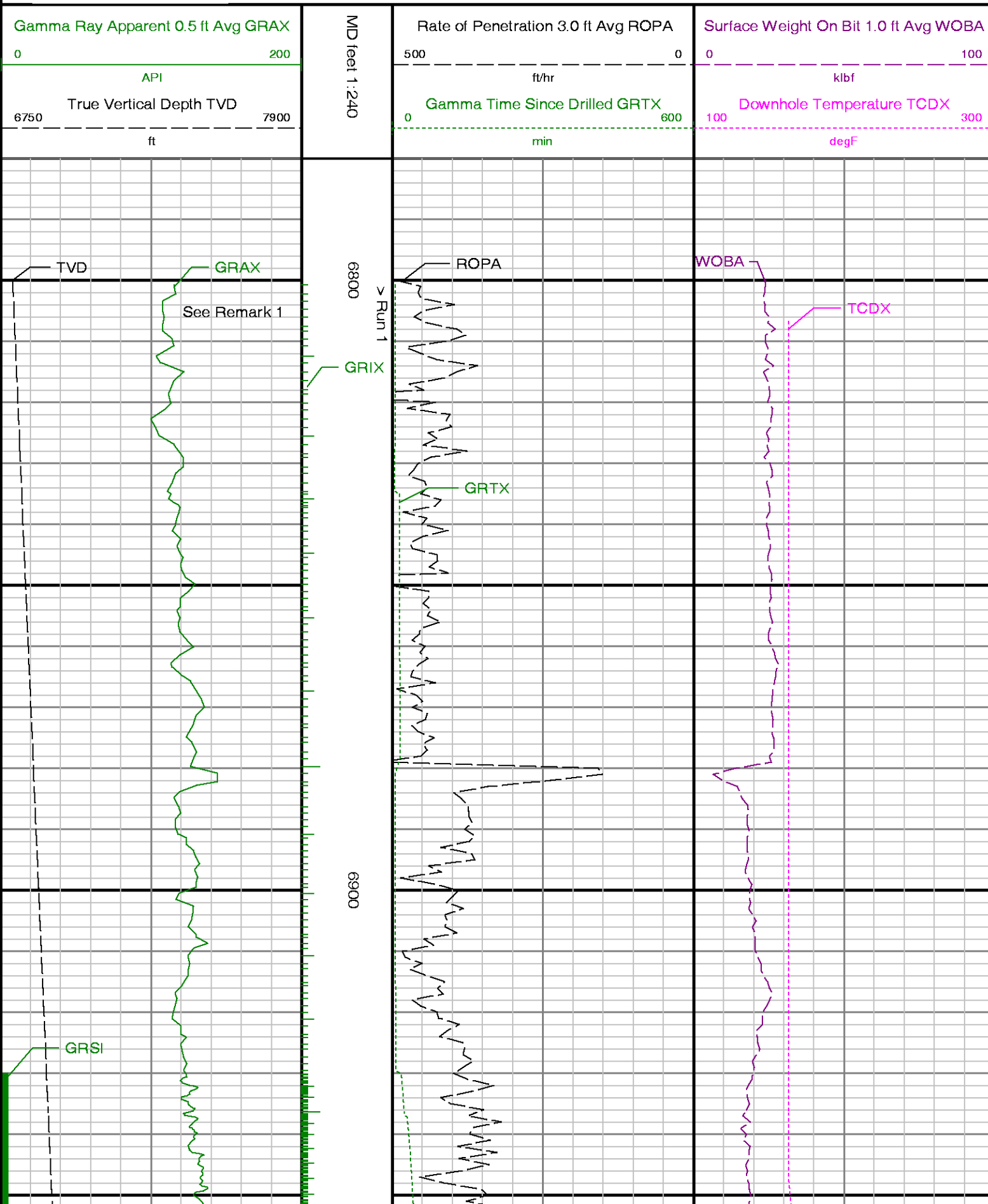


Company : Anadarko

Well : Dugite 13C-35HZ

Interval : 6780.00 - 17890.00 feet

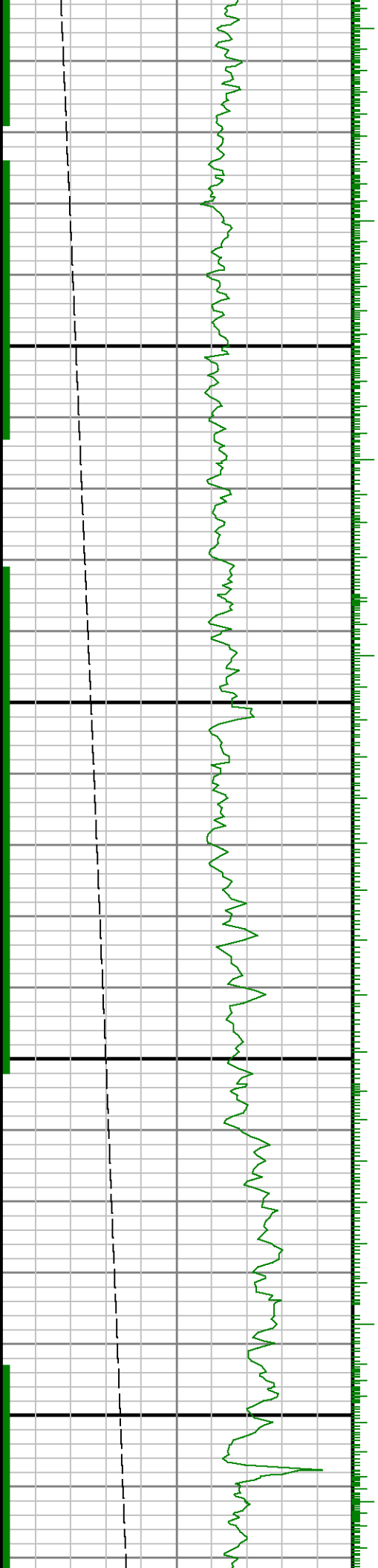
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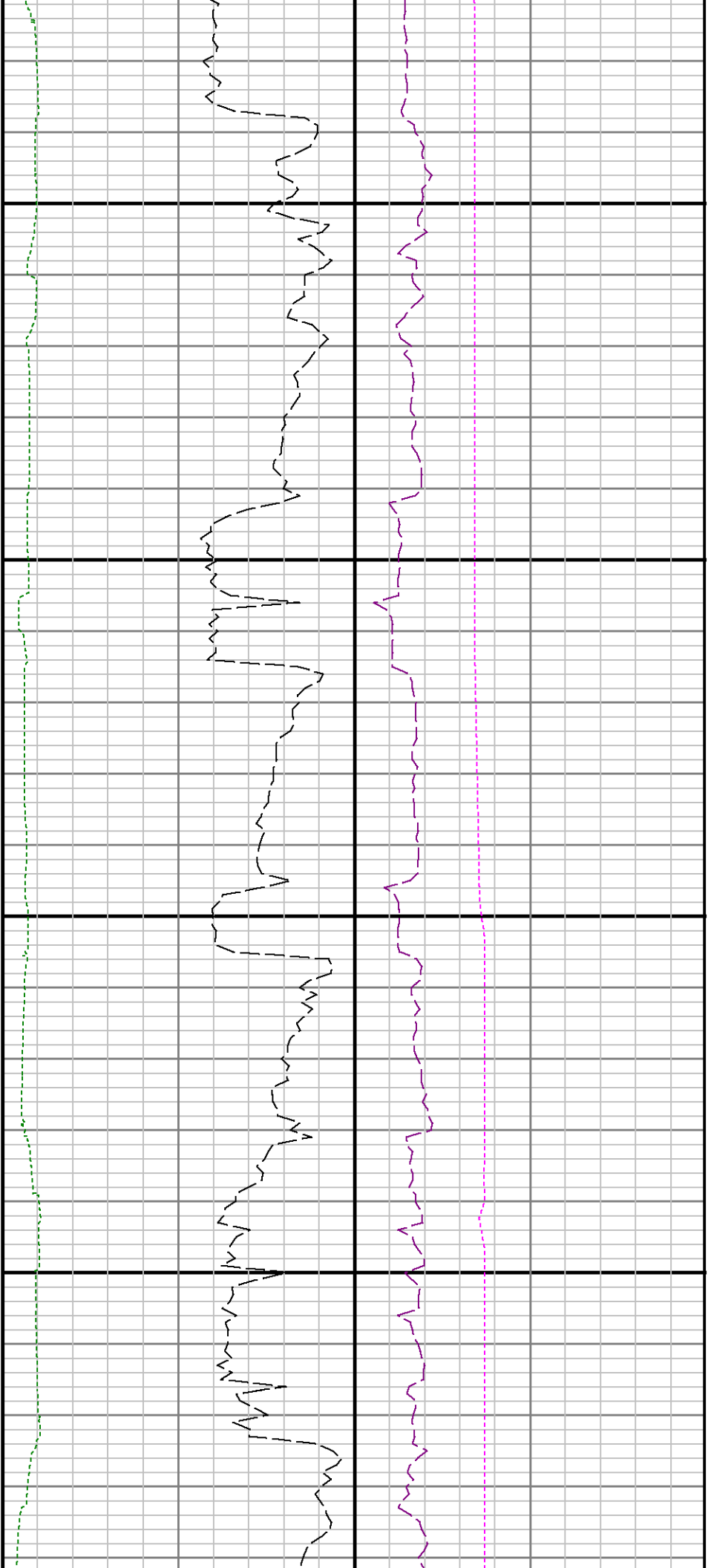




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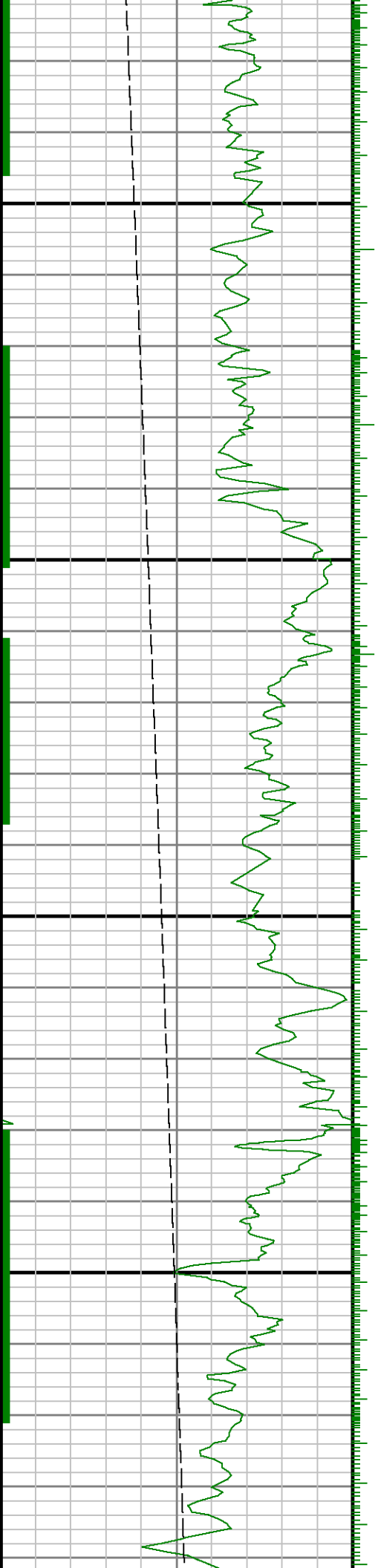
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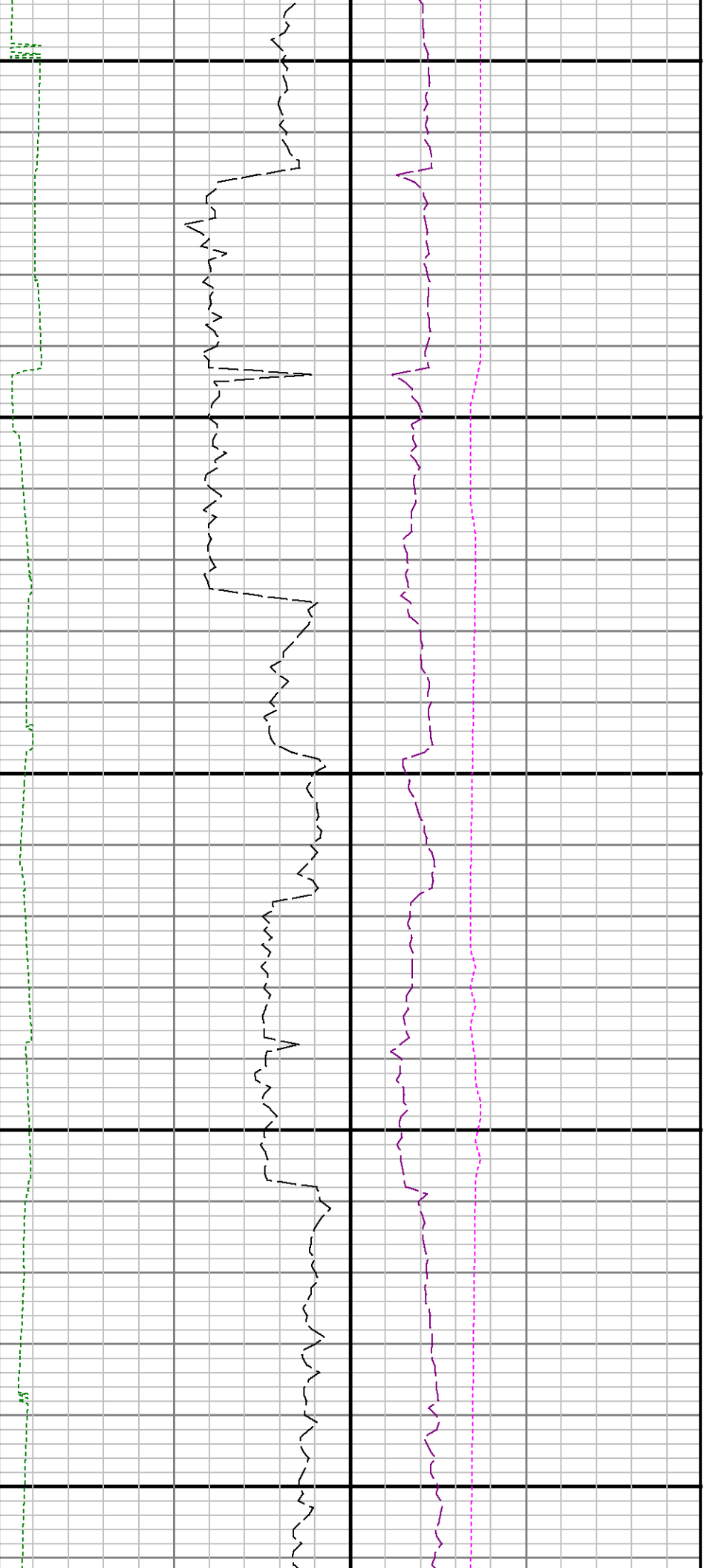




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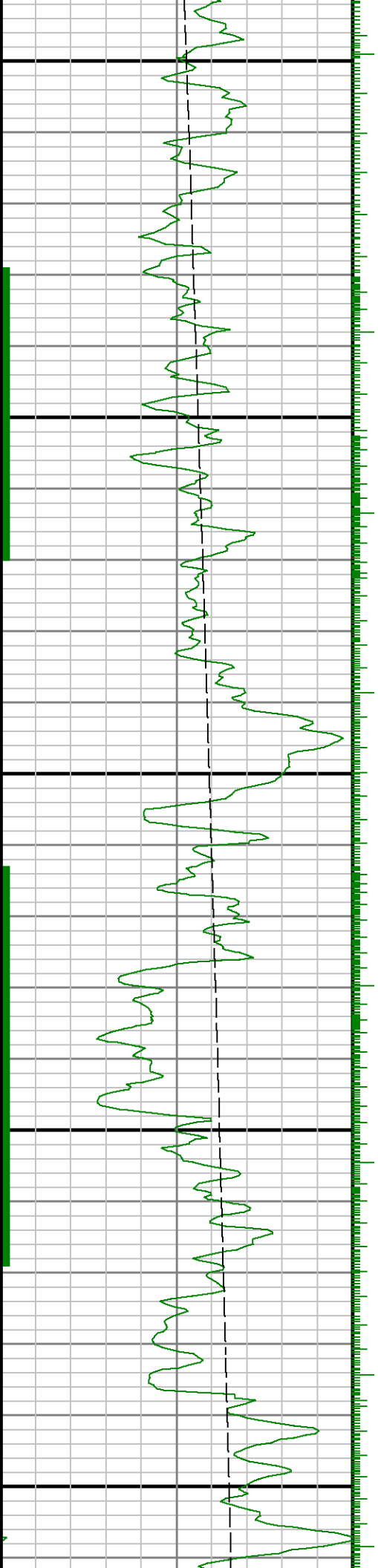


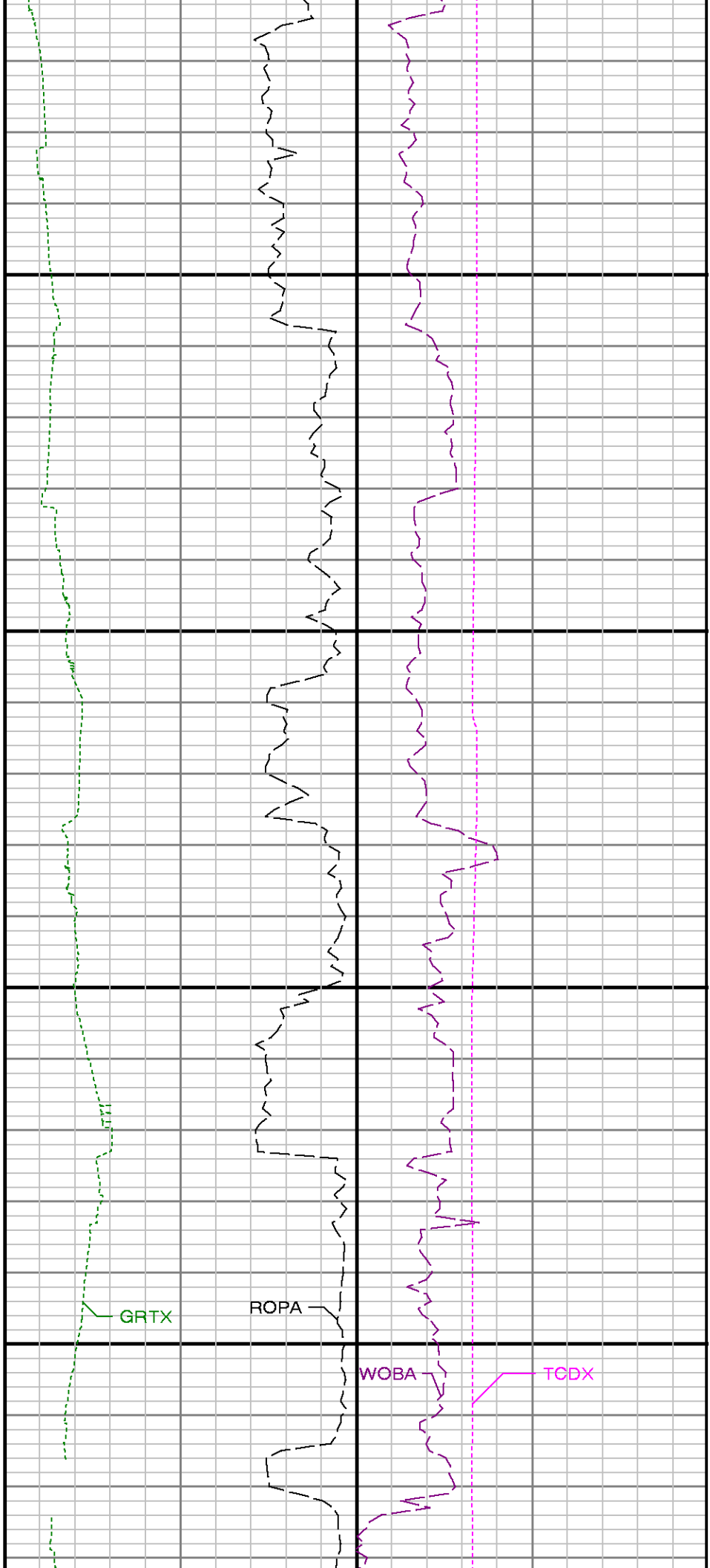
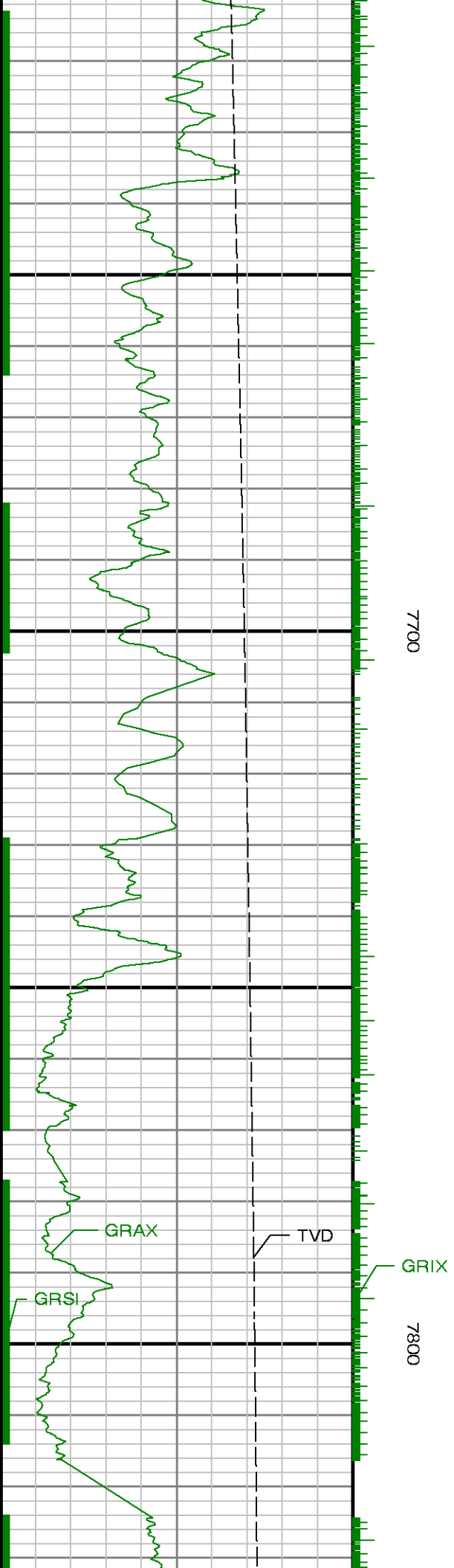


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See Remark 2

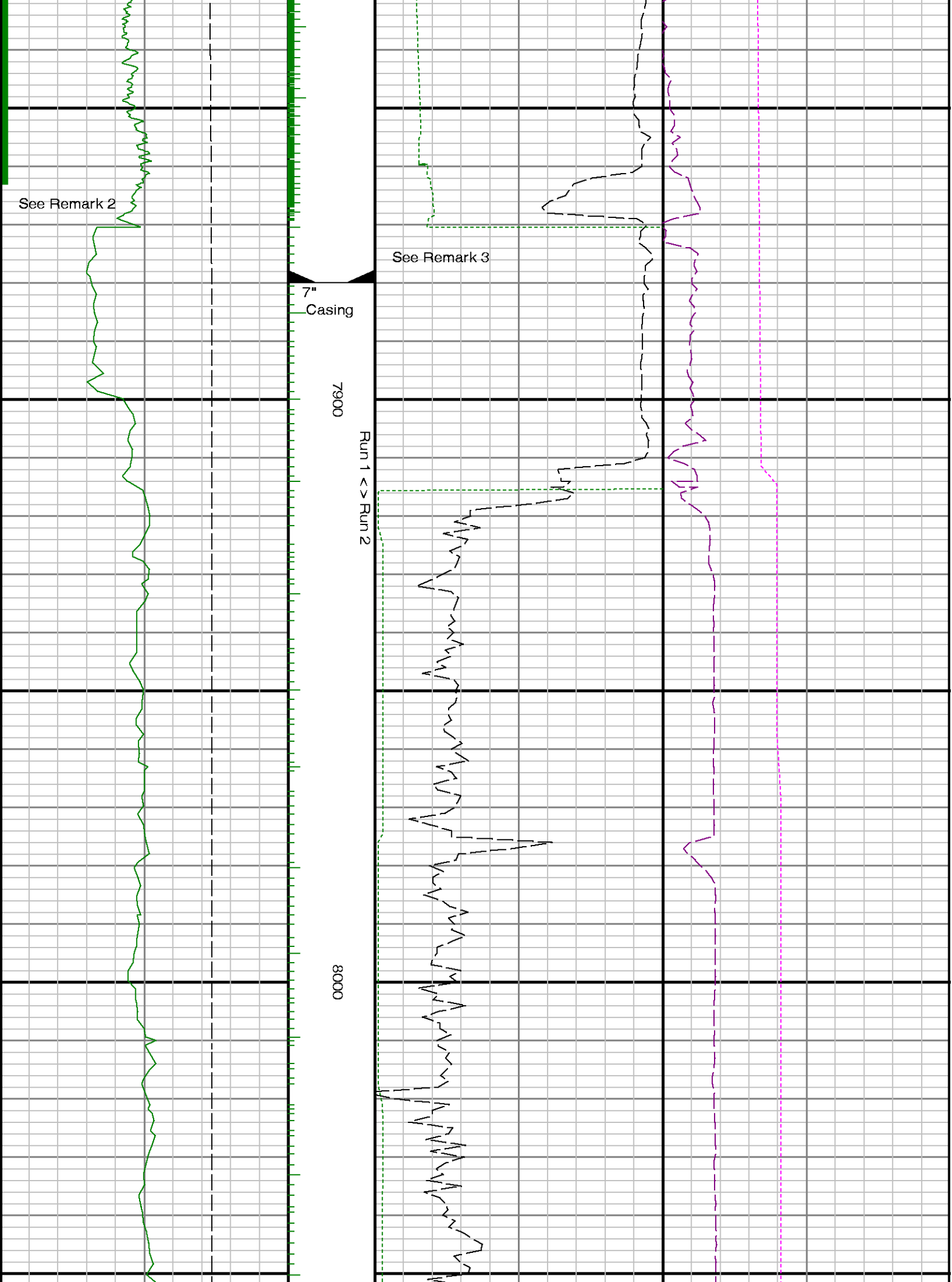
See Remark 3

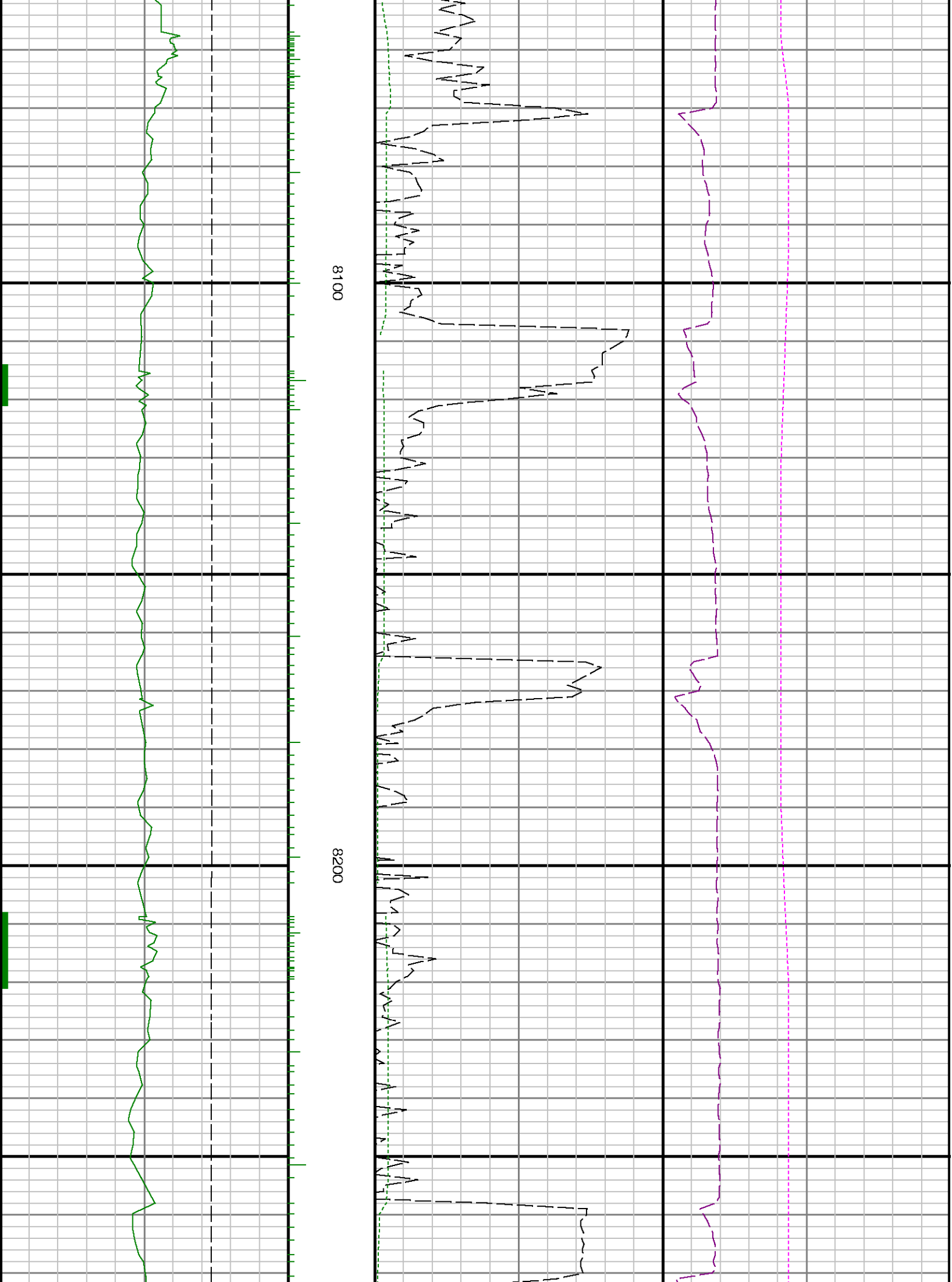
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Casing

7900

Run 1 <> Run 2

8000

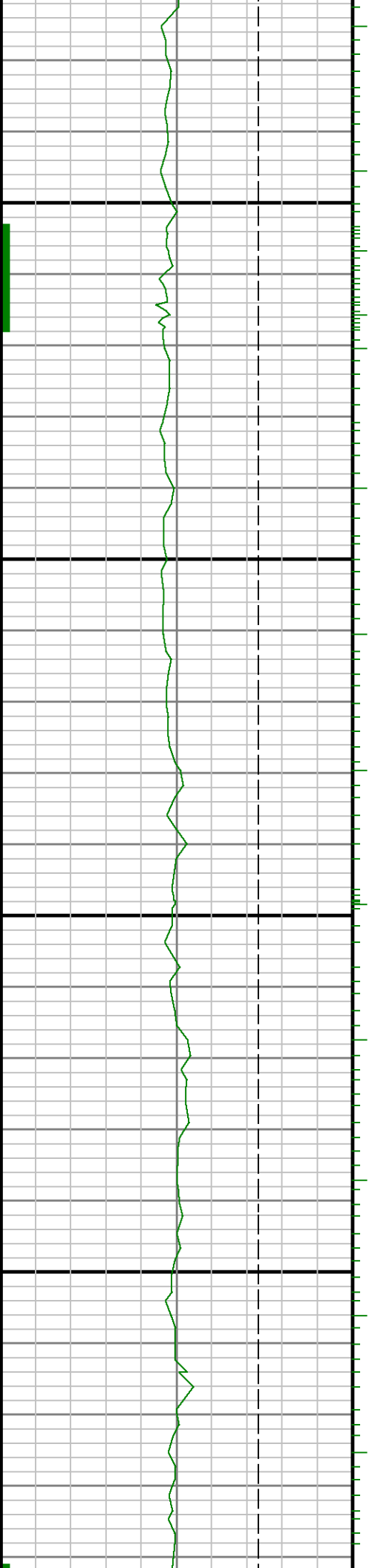




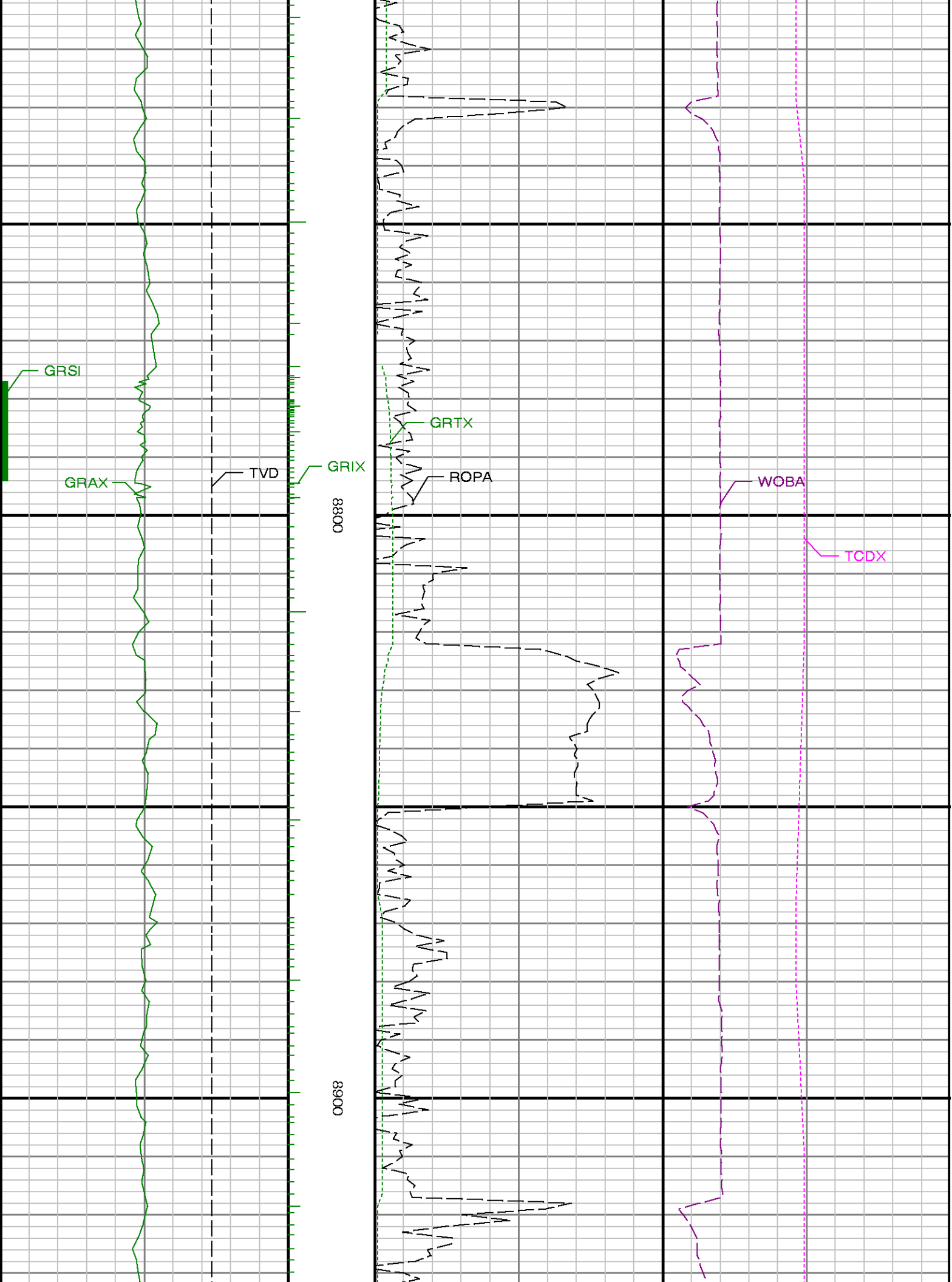


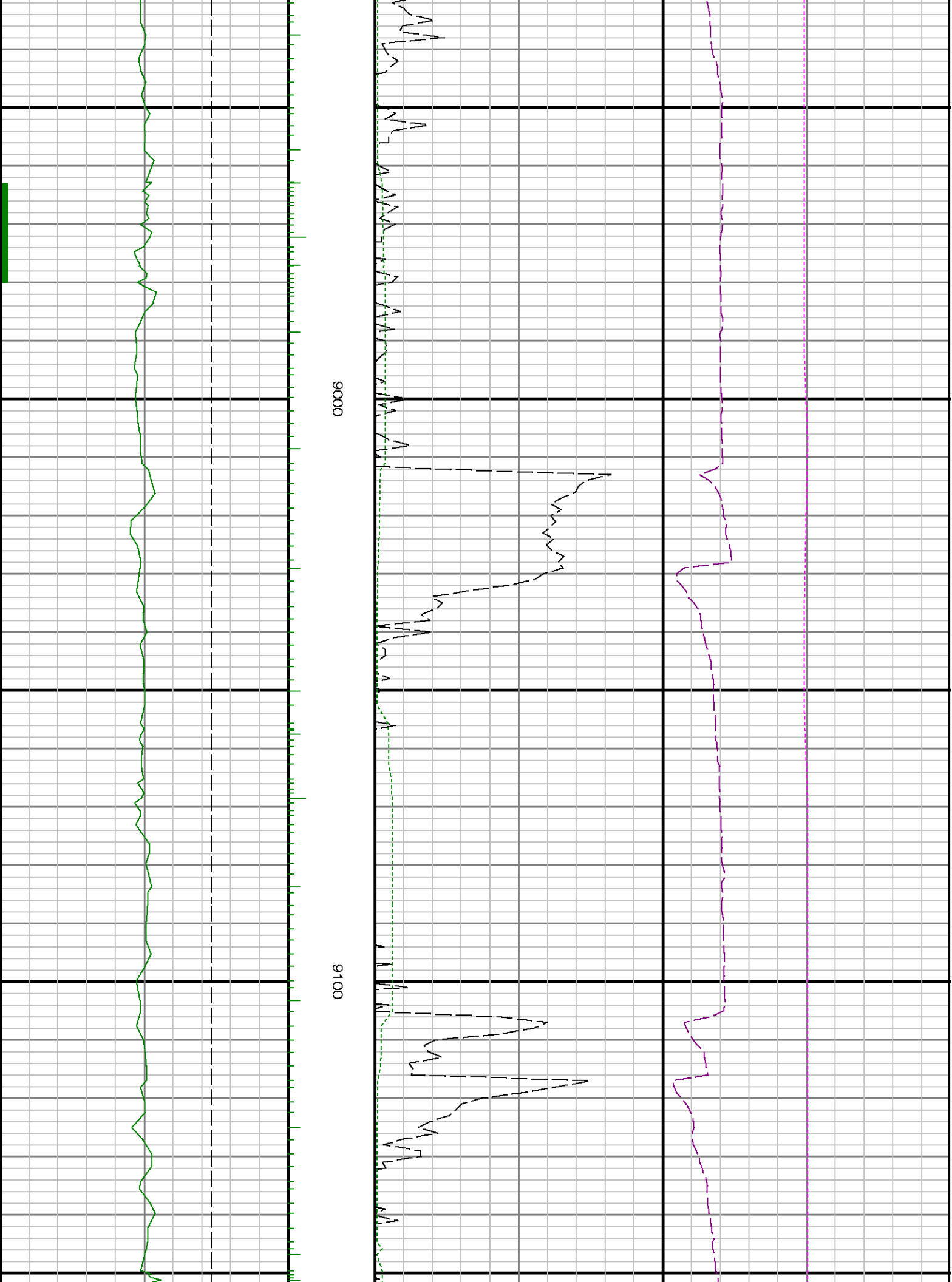
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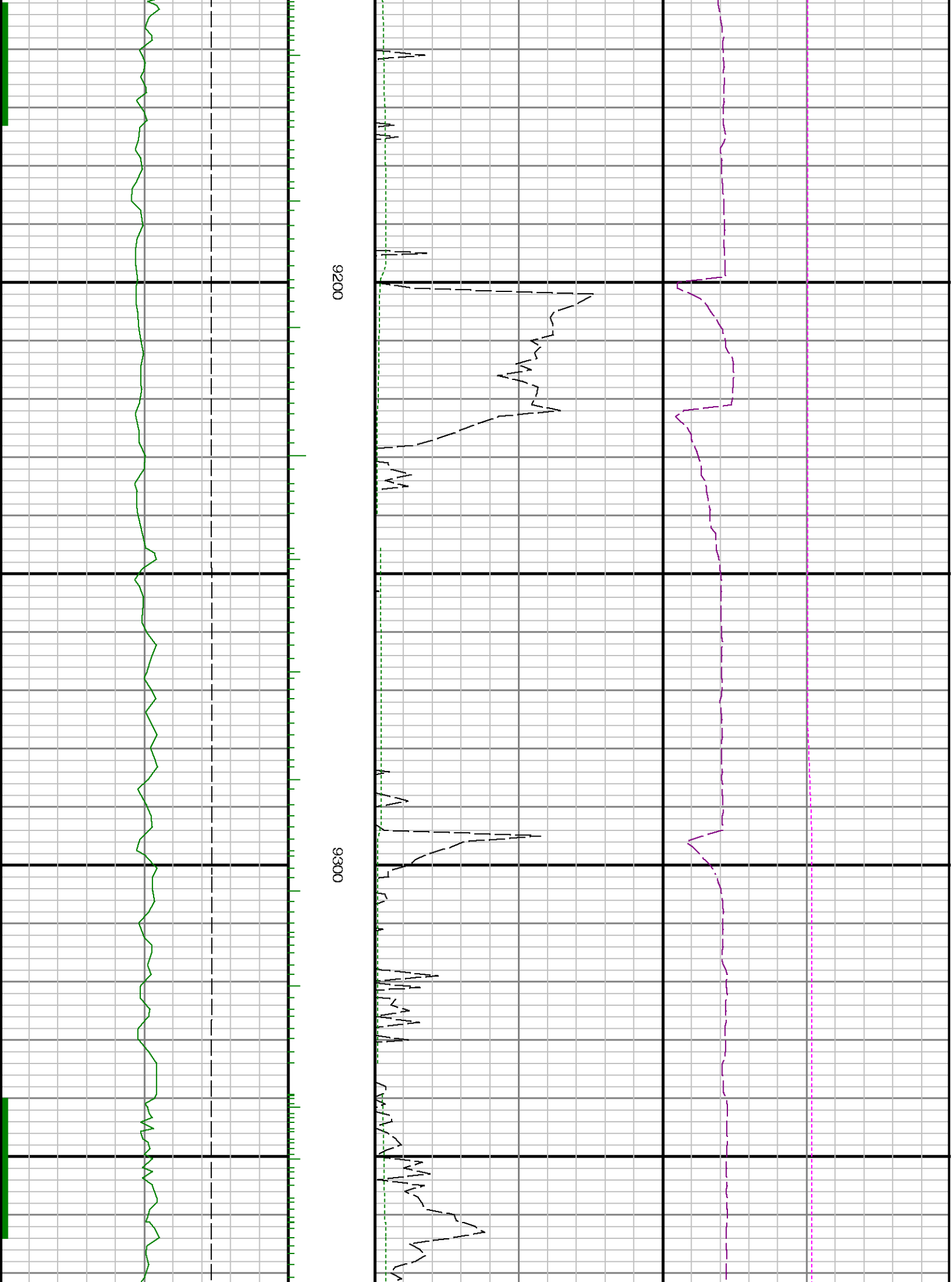
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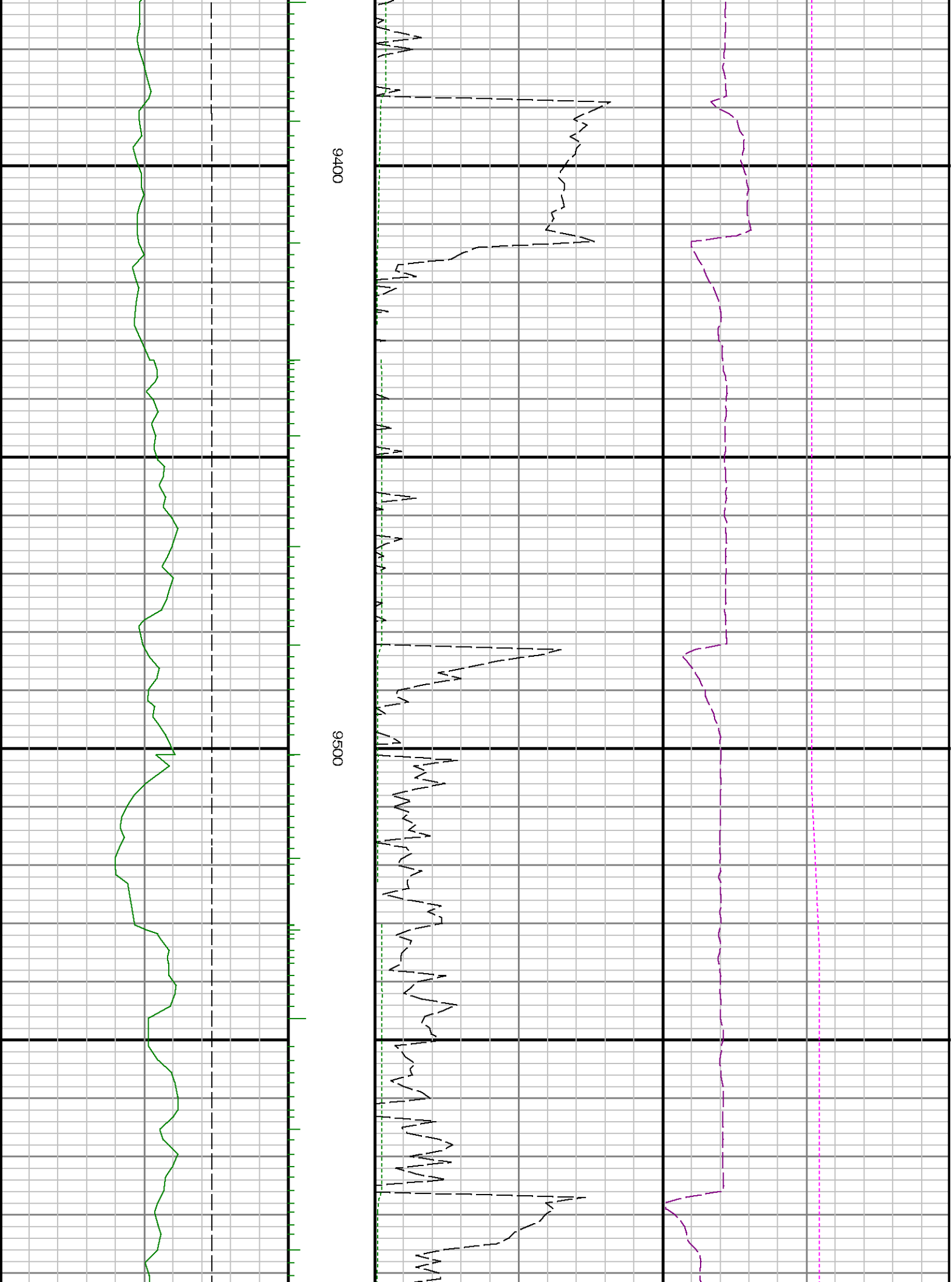


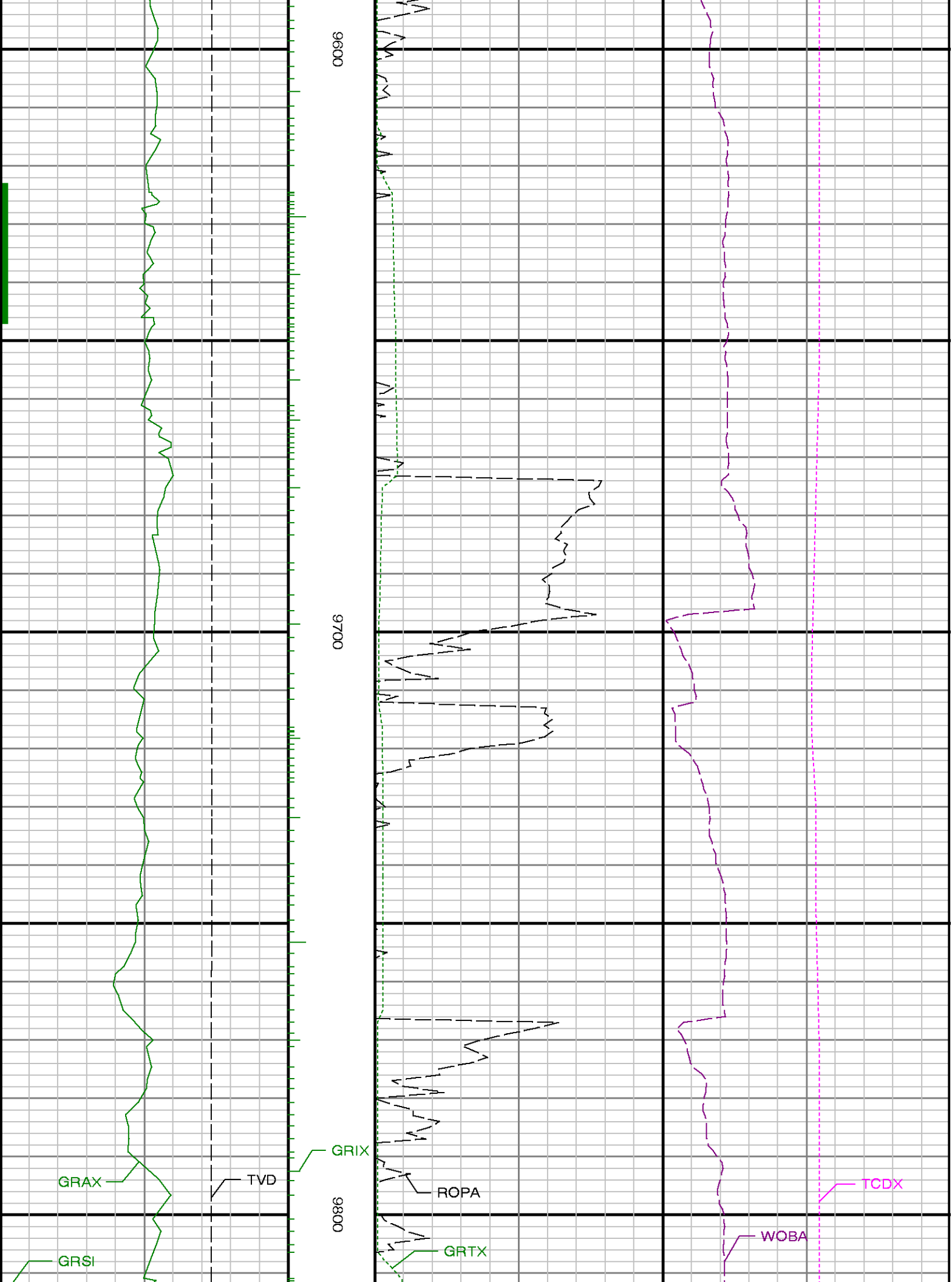


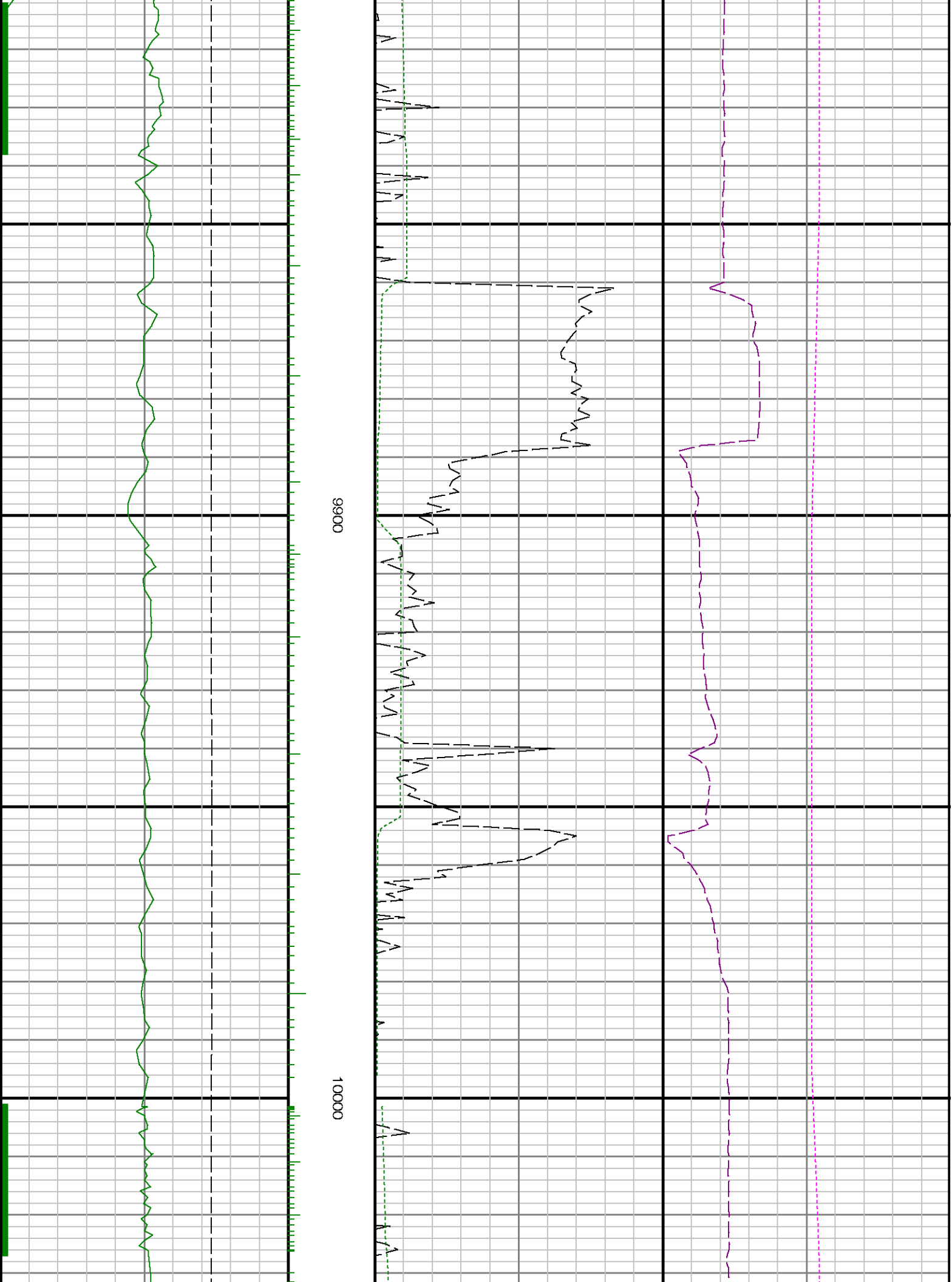


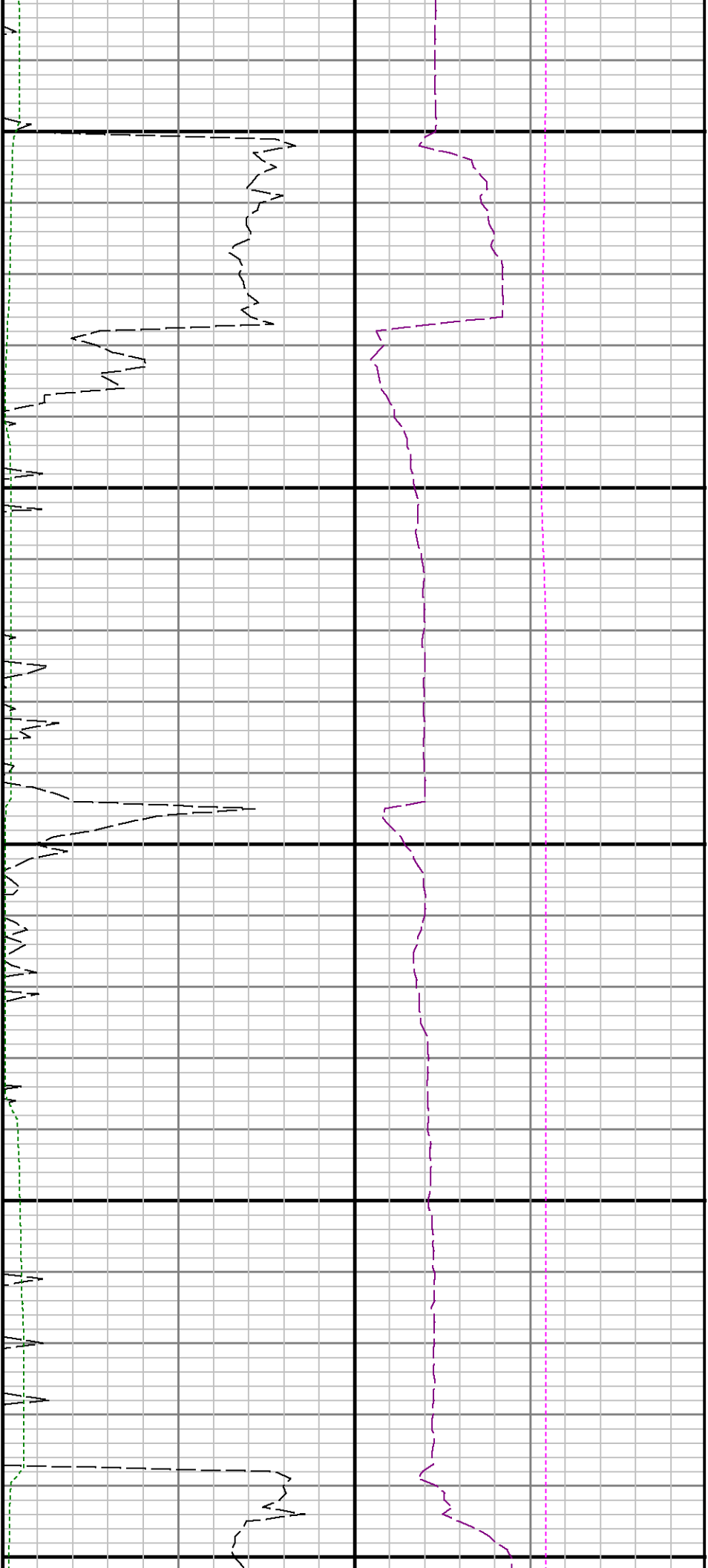






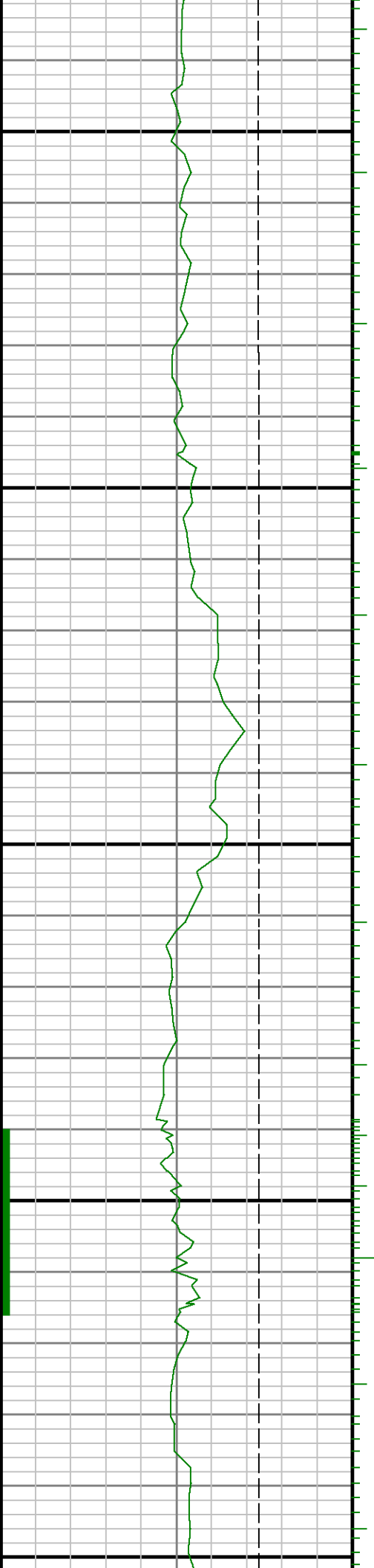




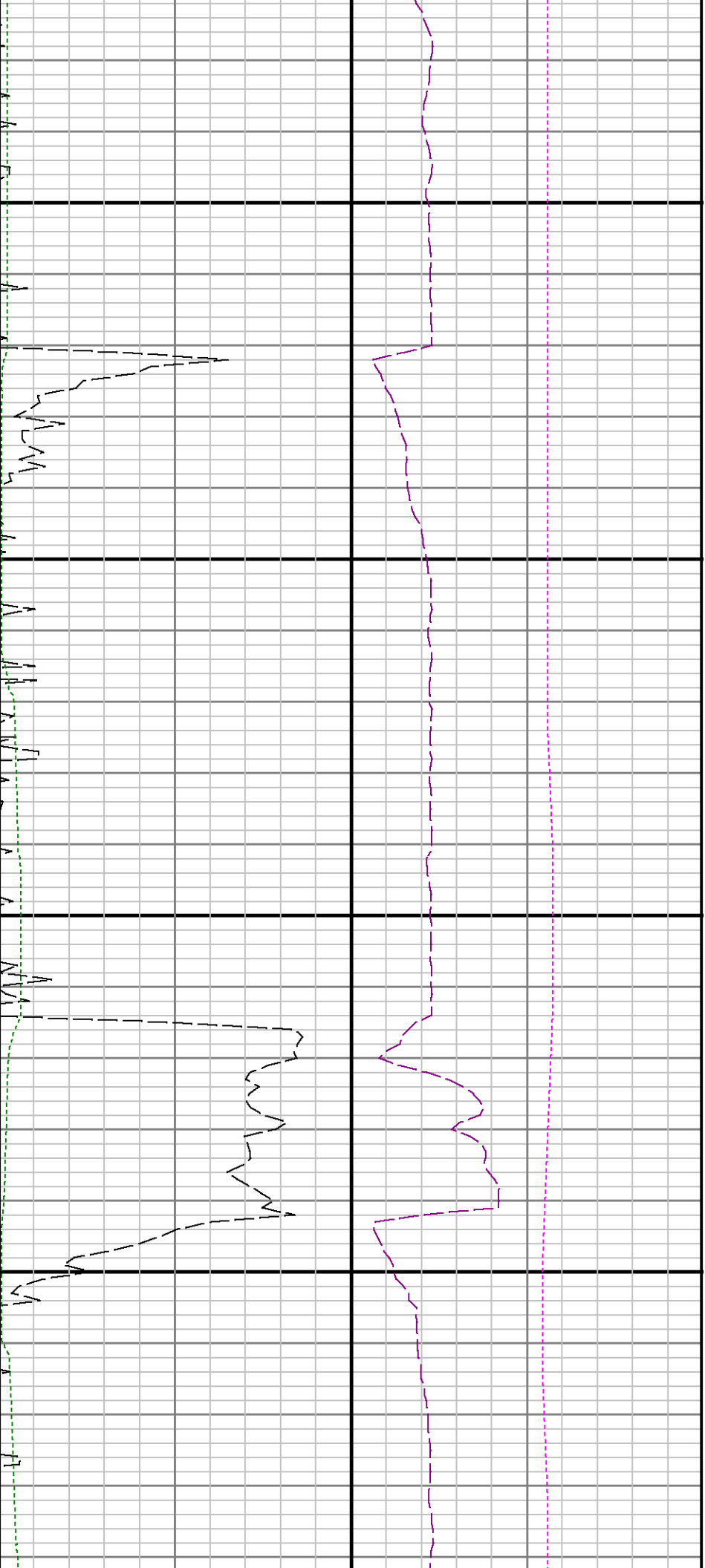


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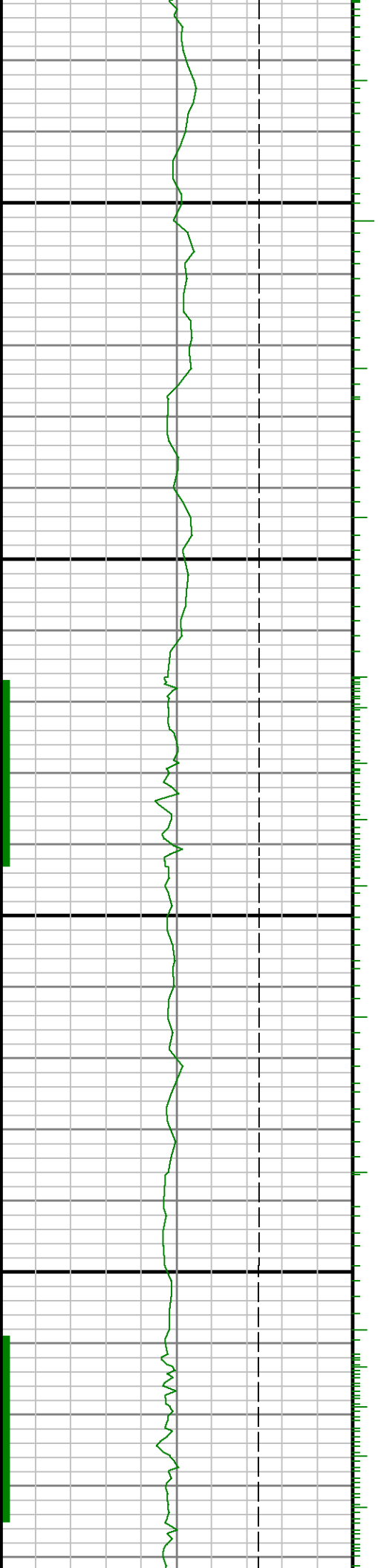


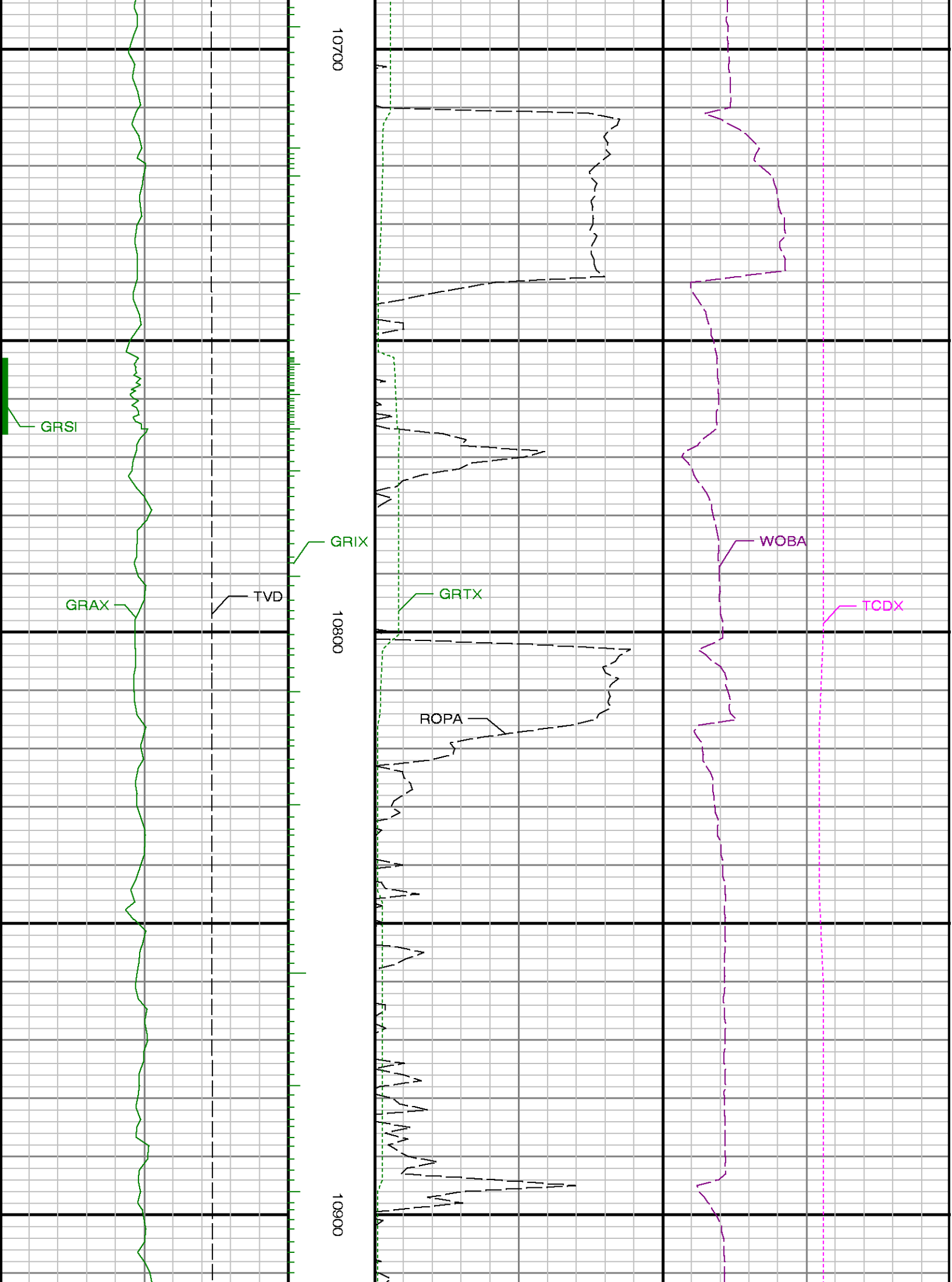


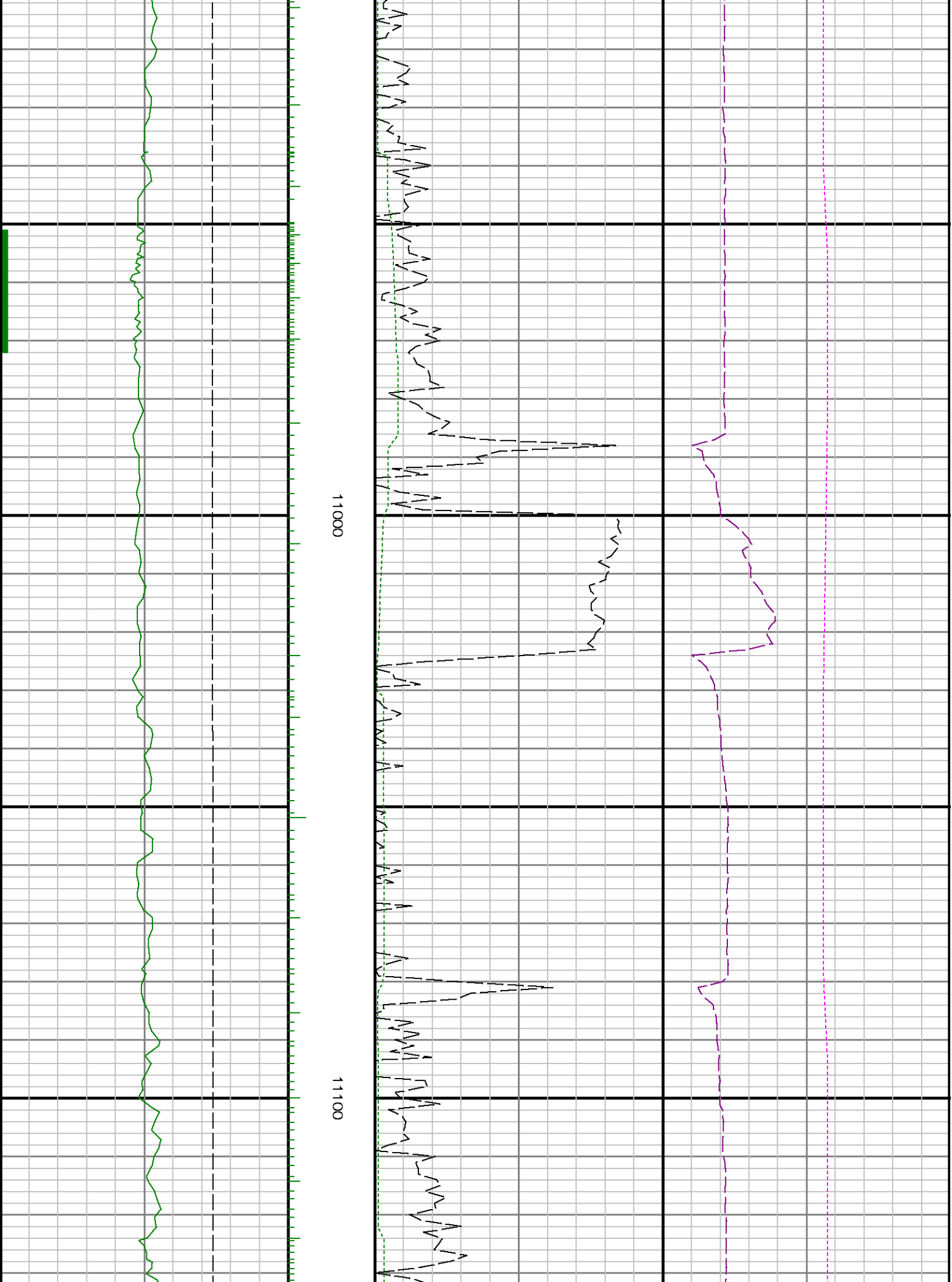


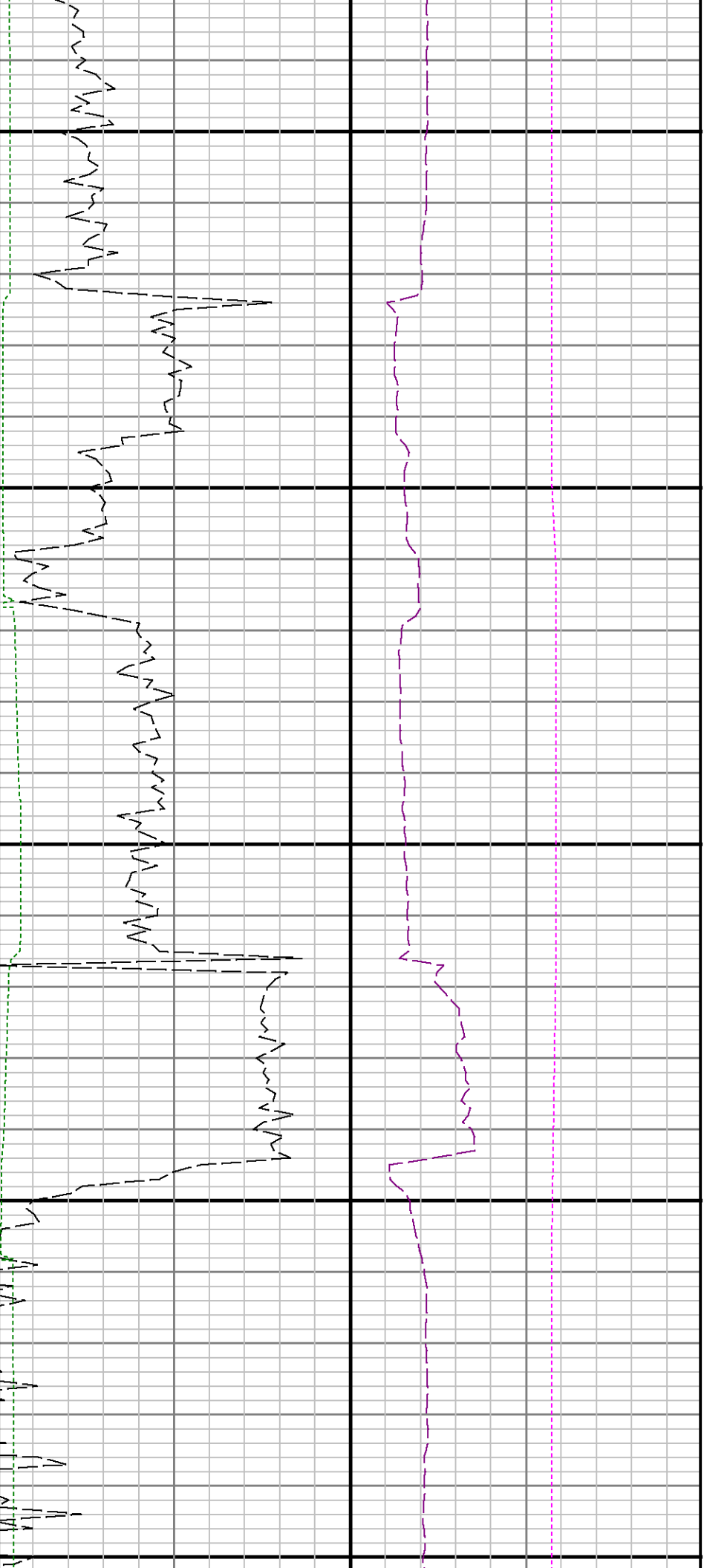
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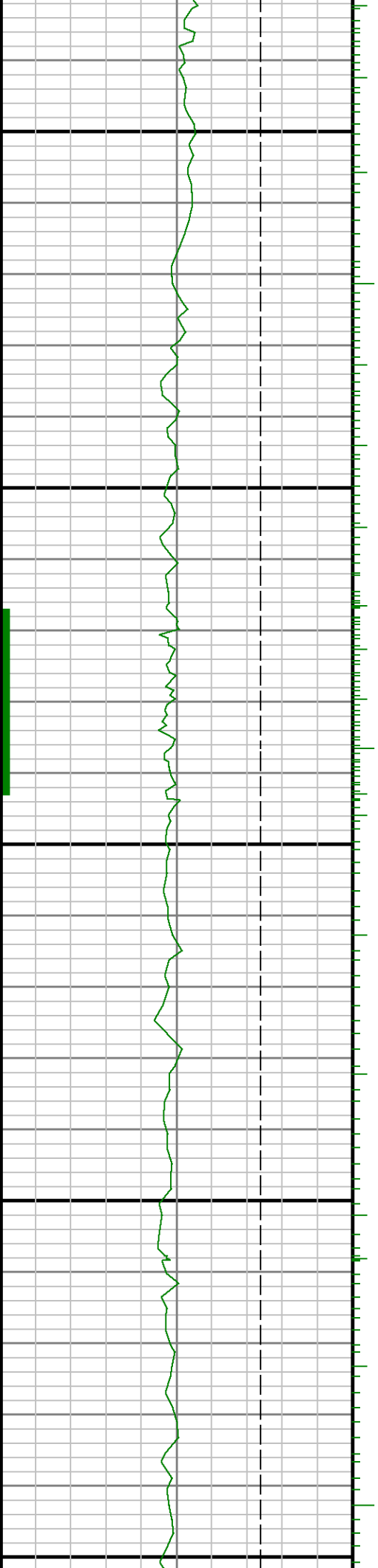


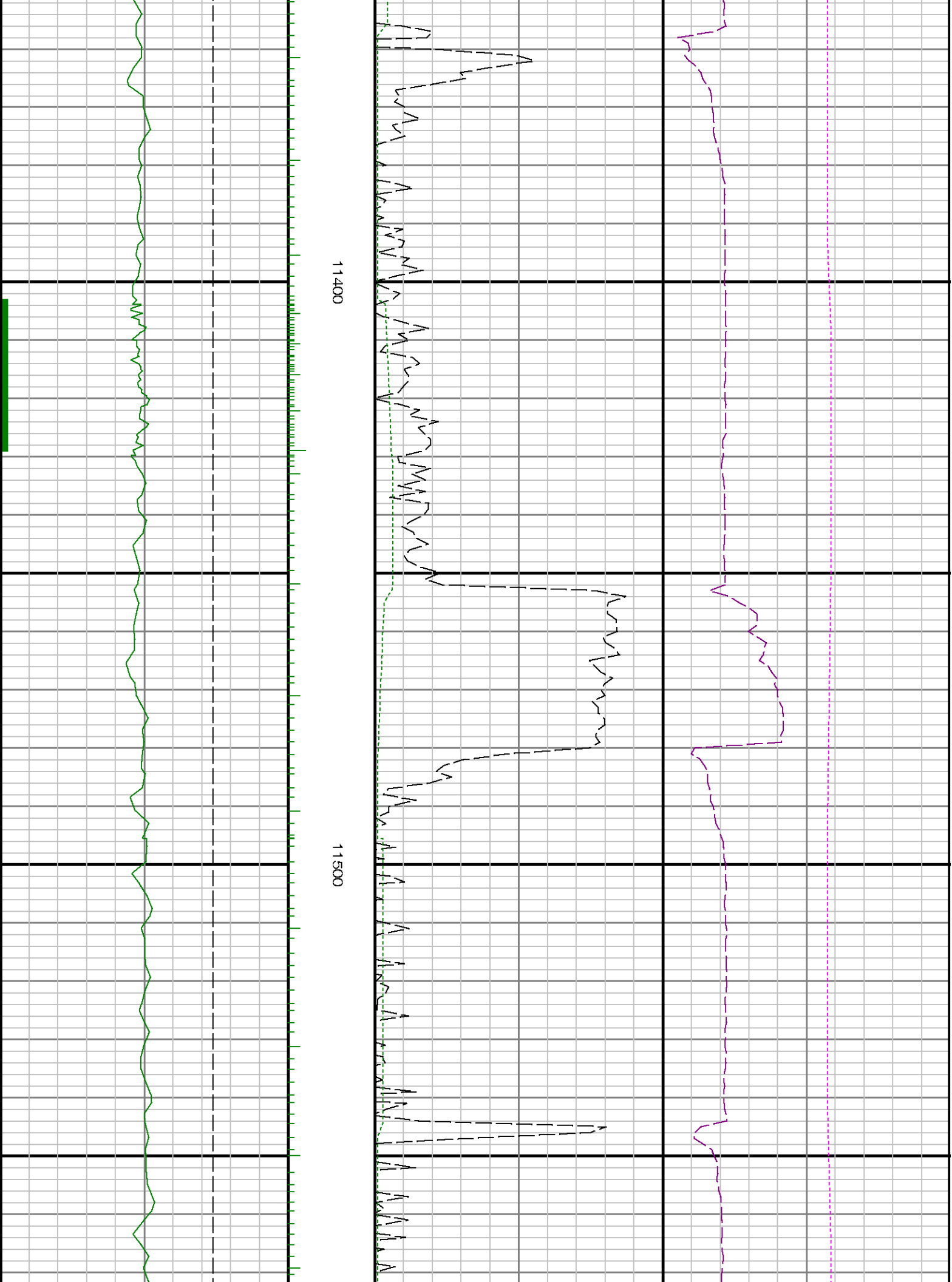


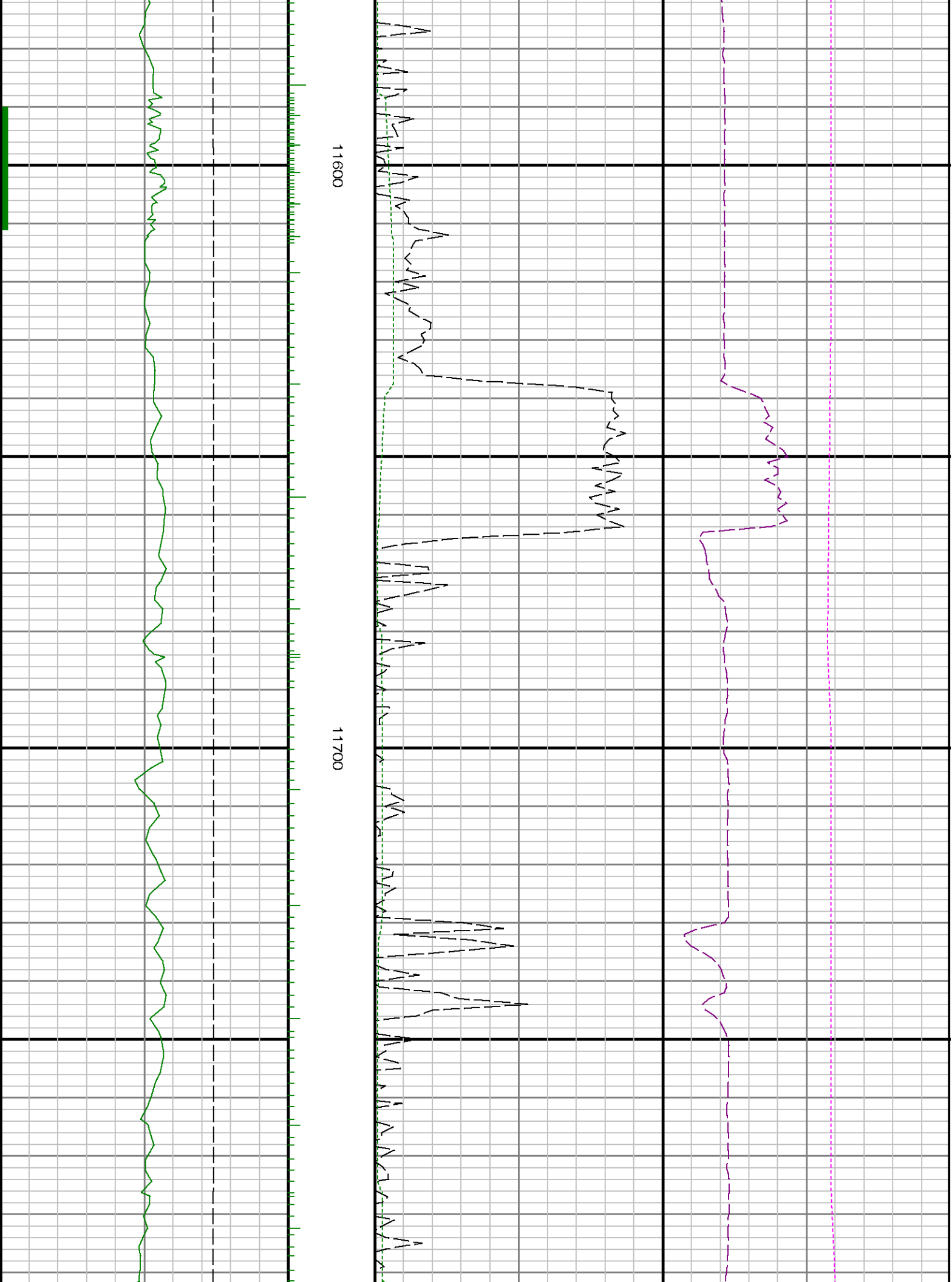


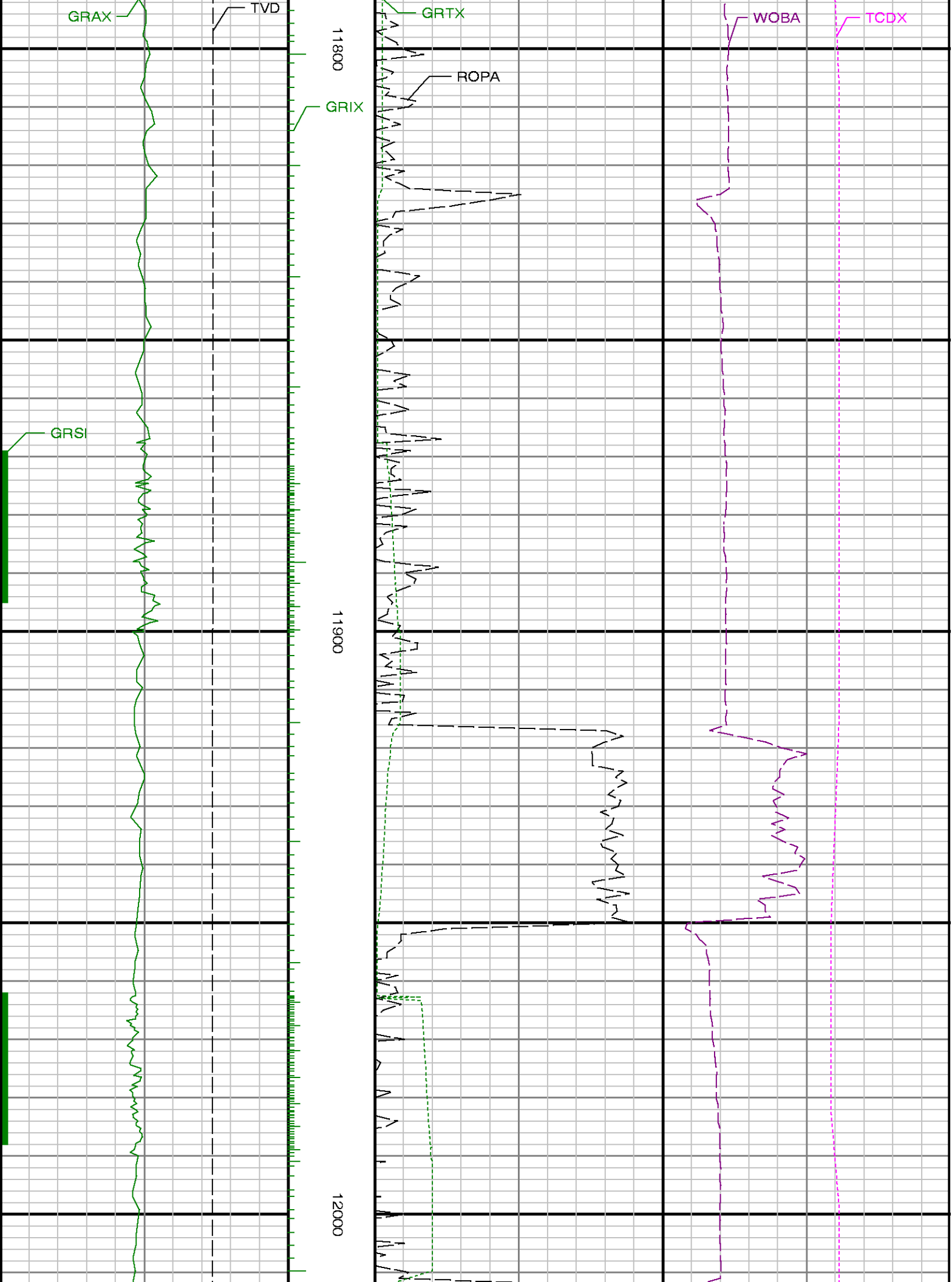
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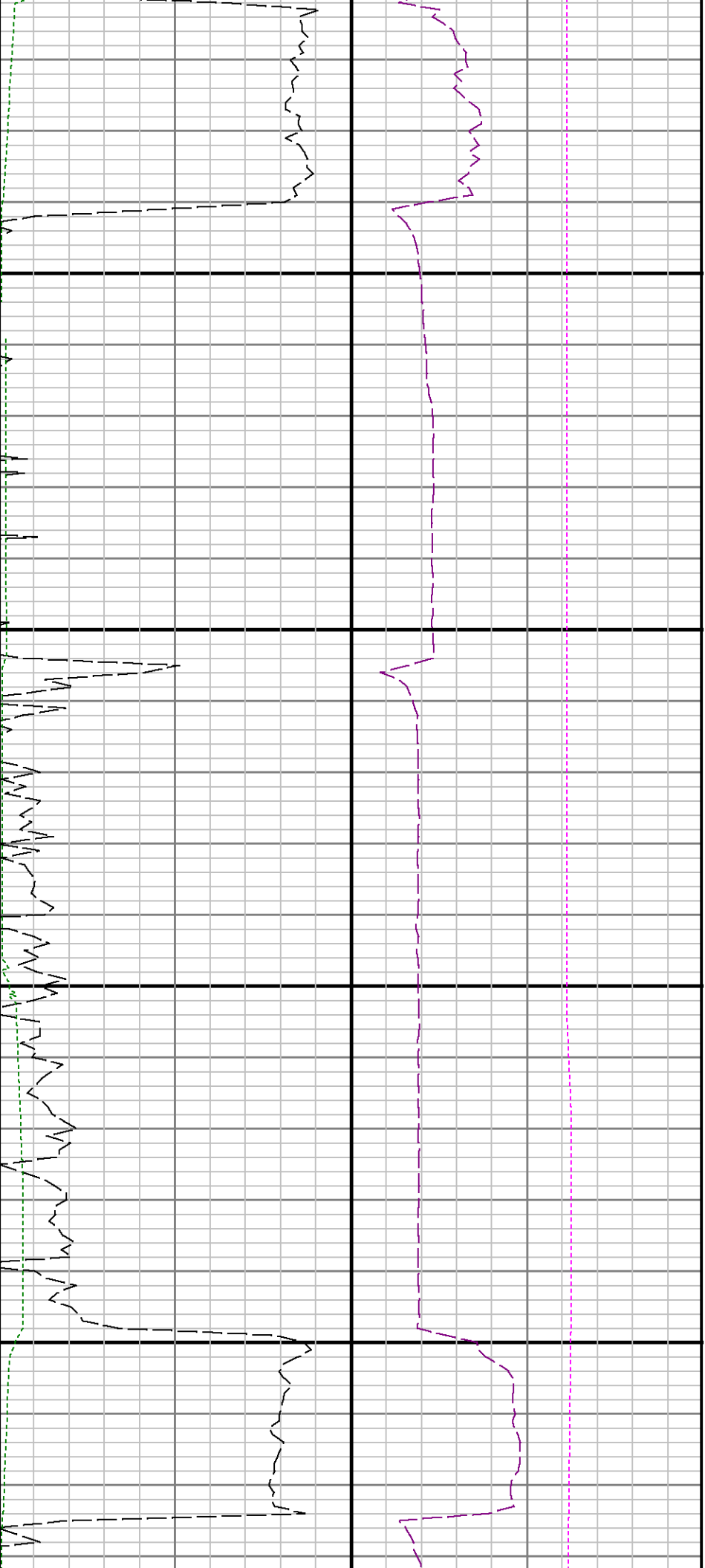
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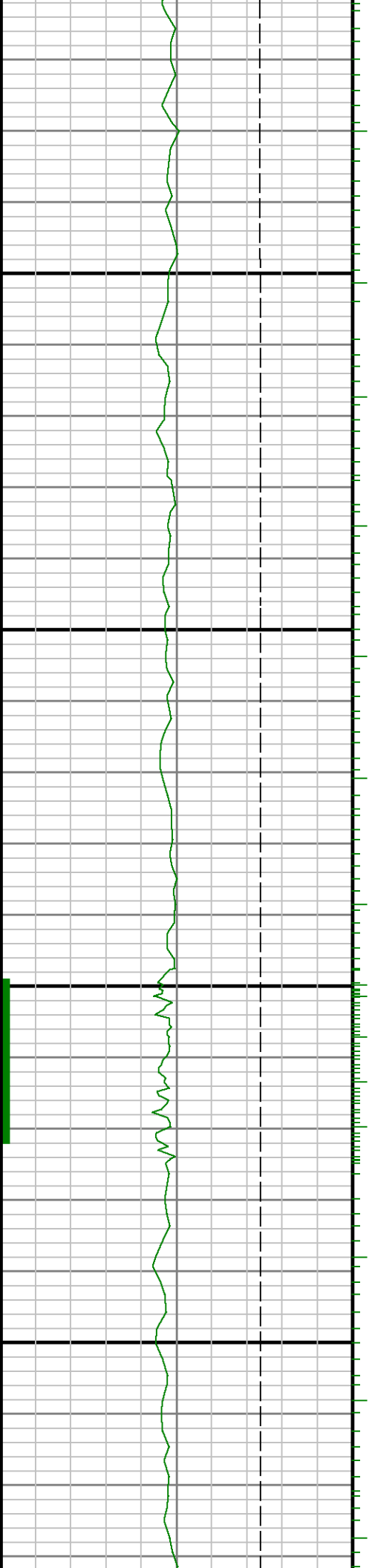


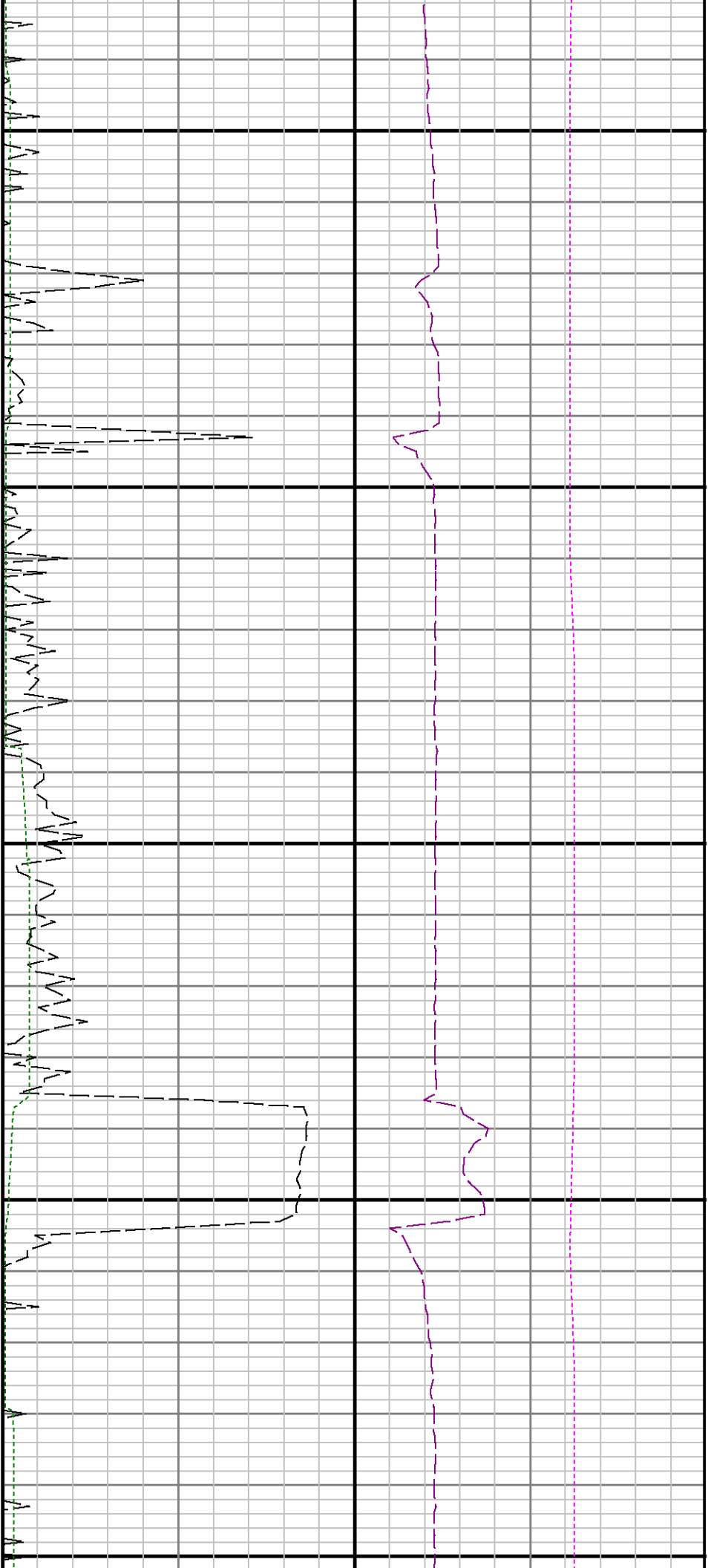




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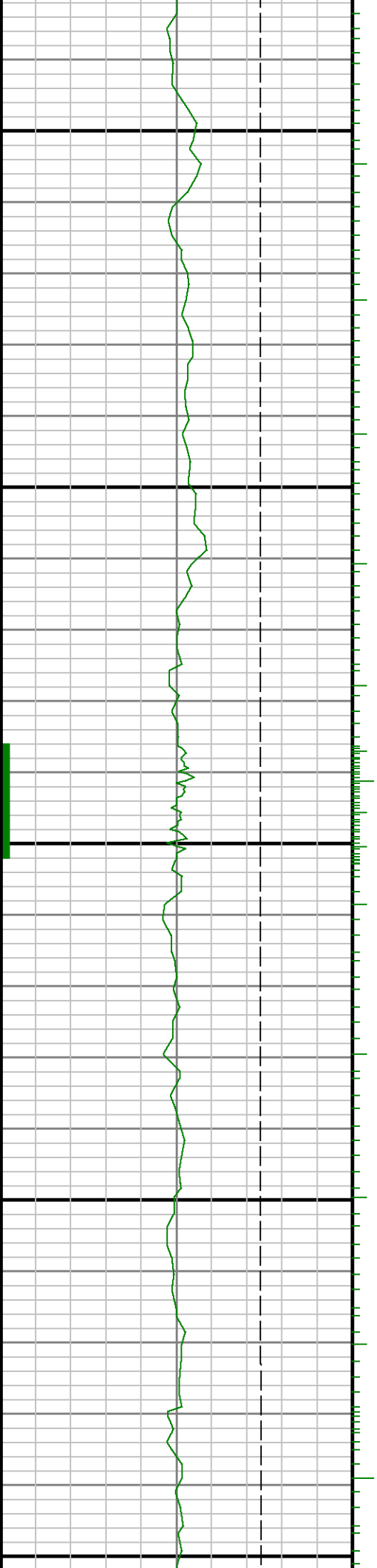
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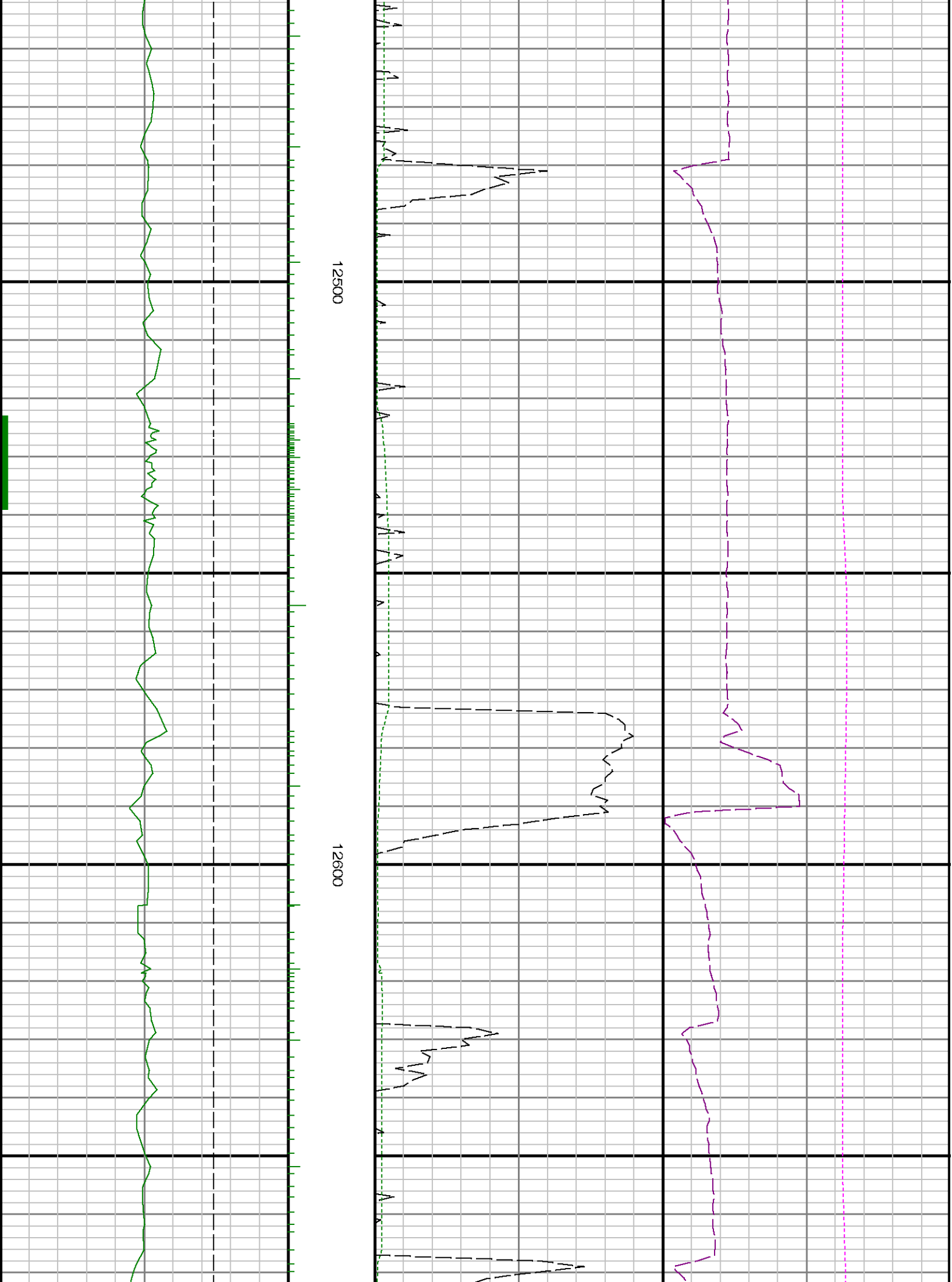


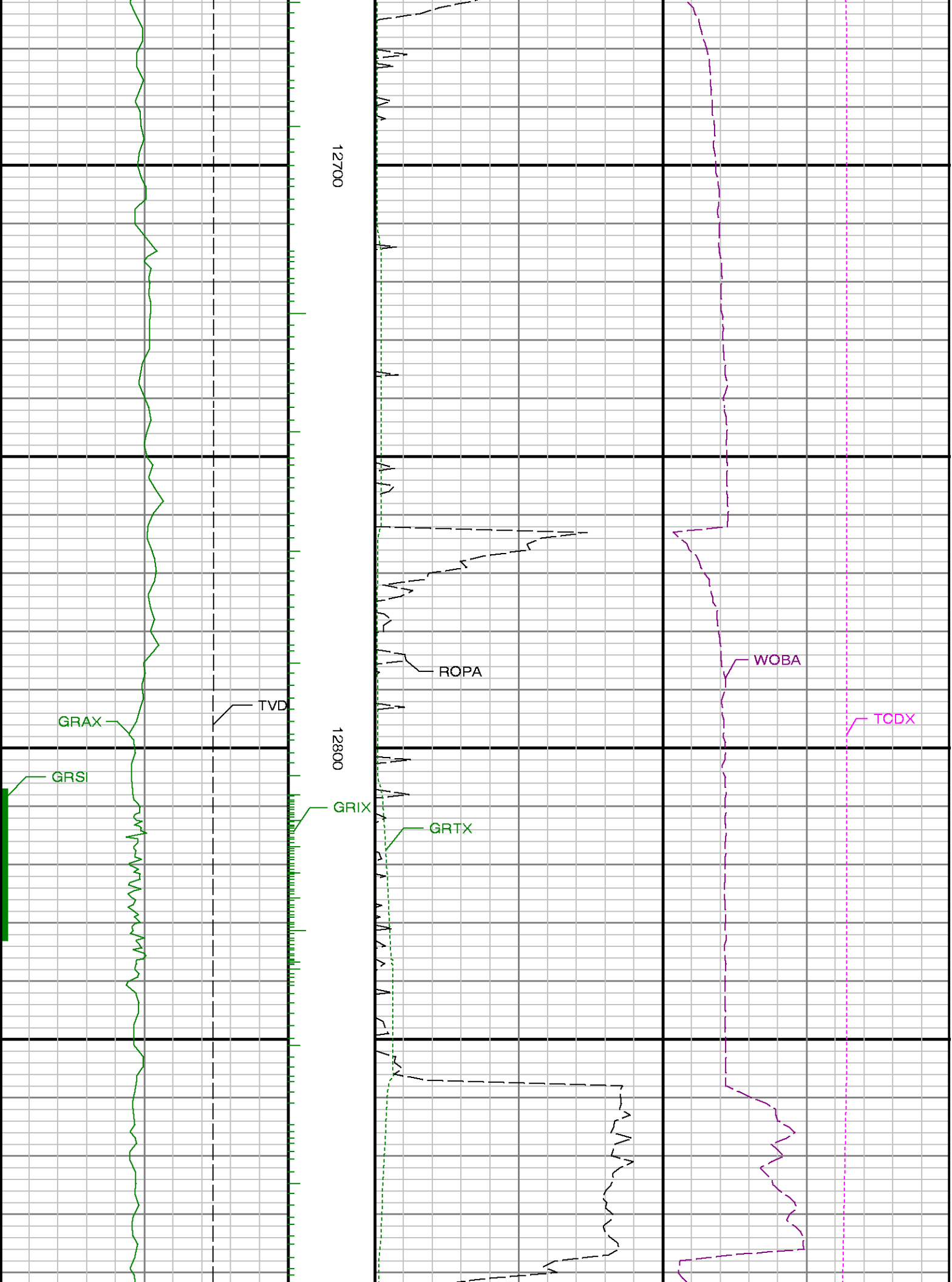


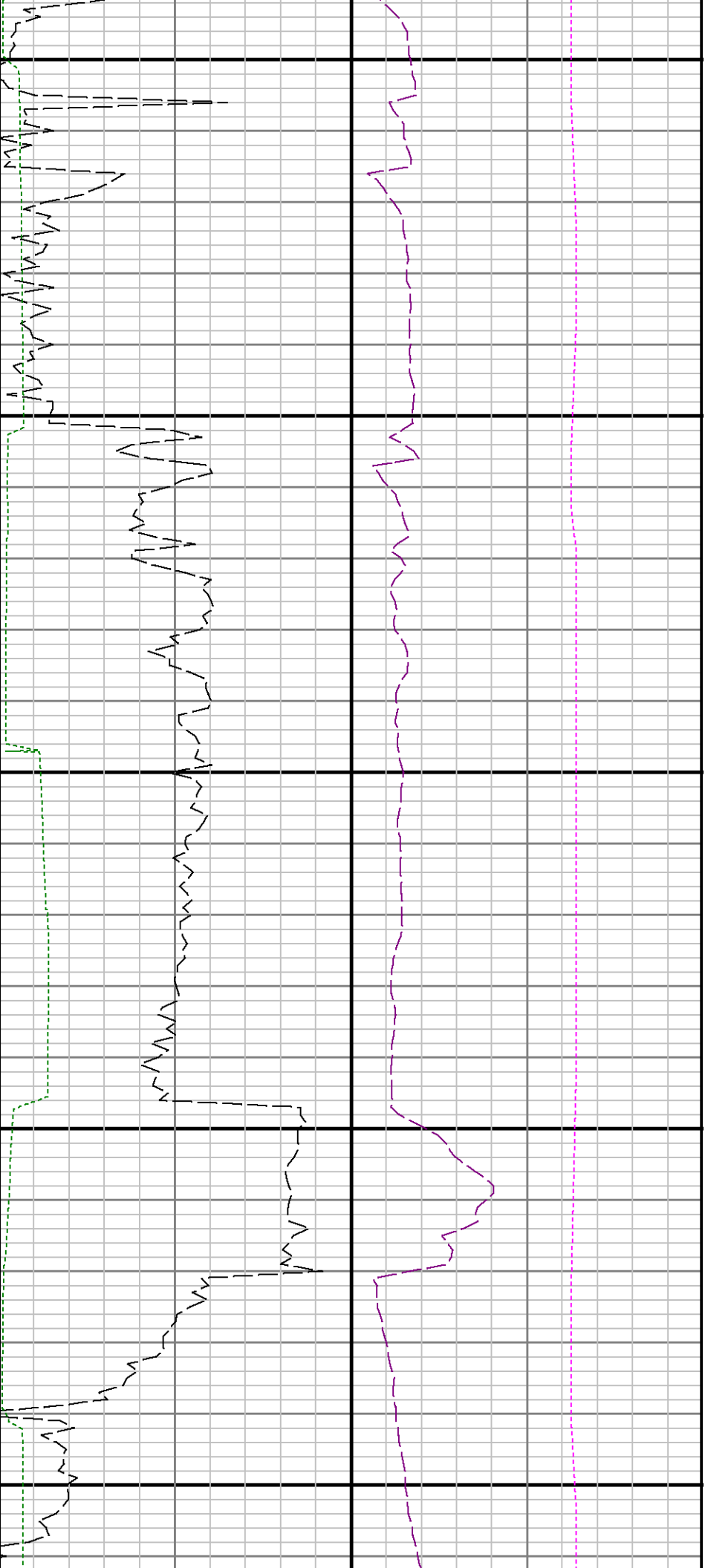
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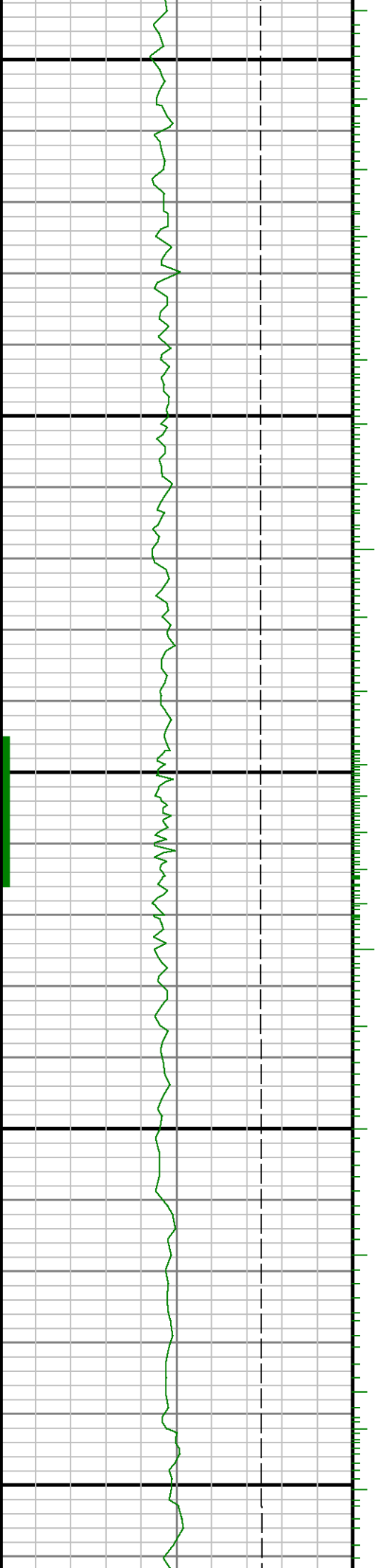


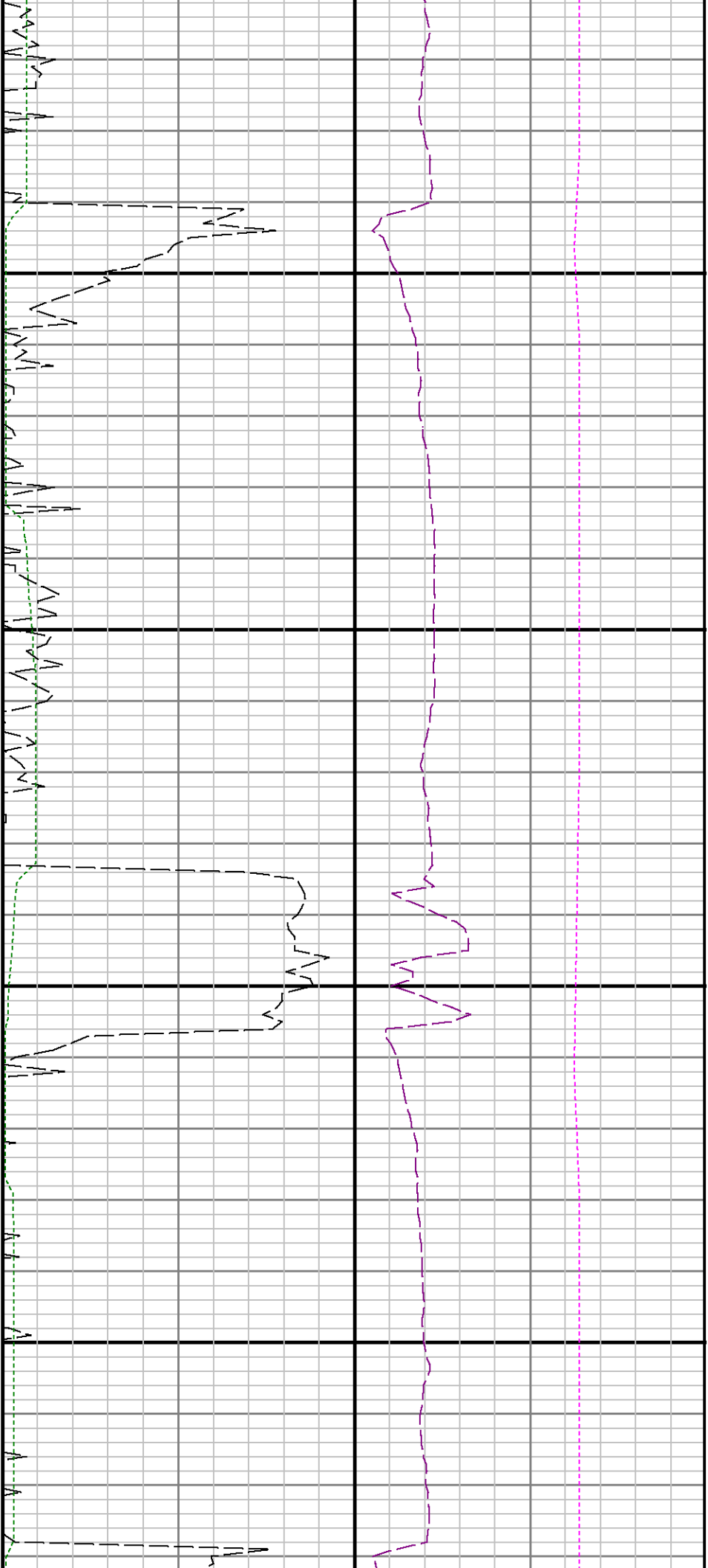


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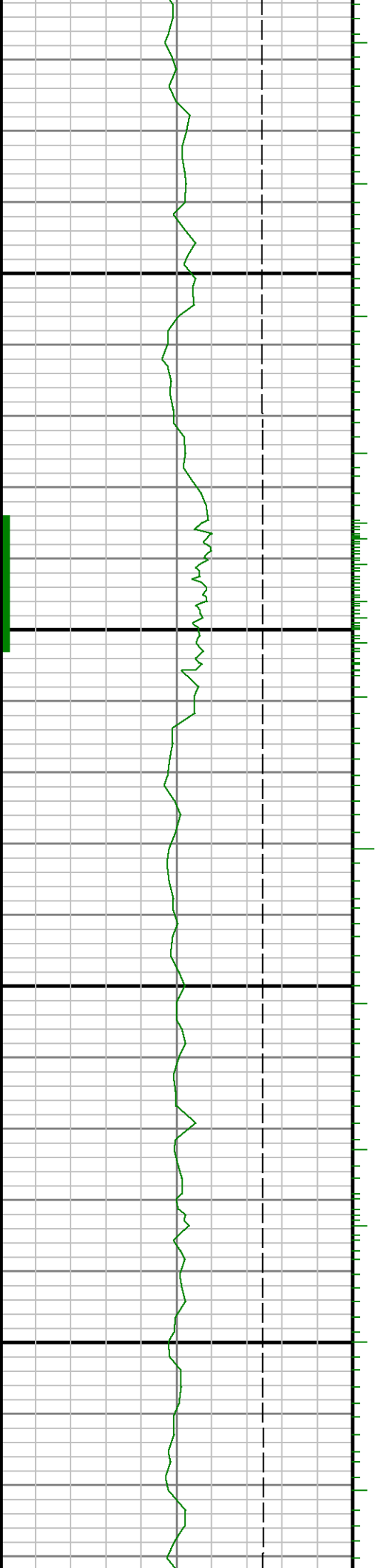
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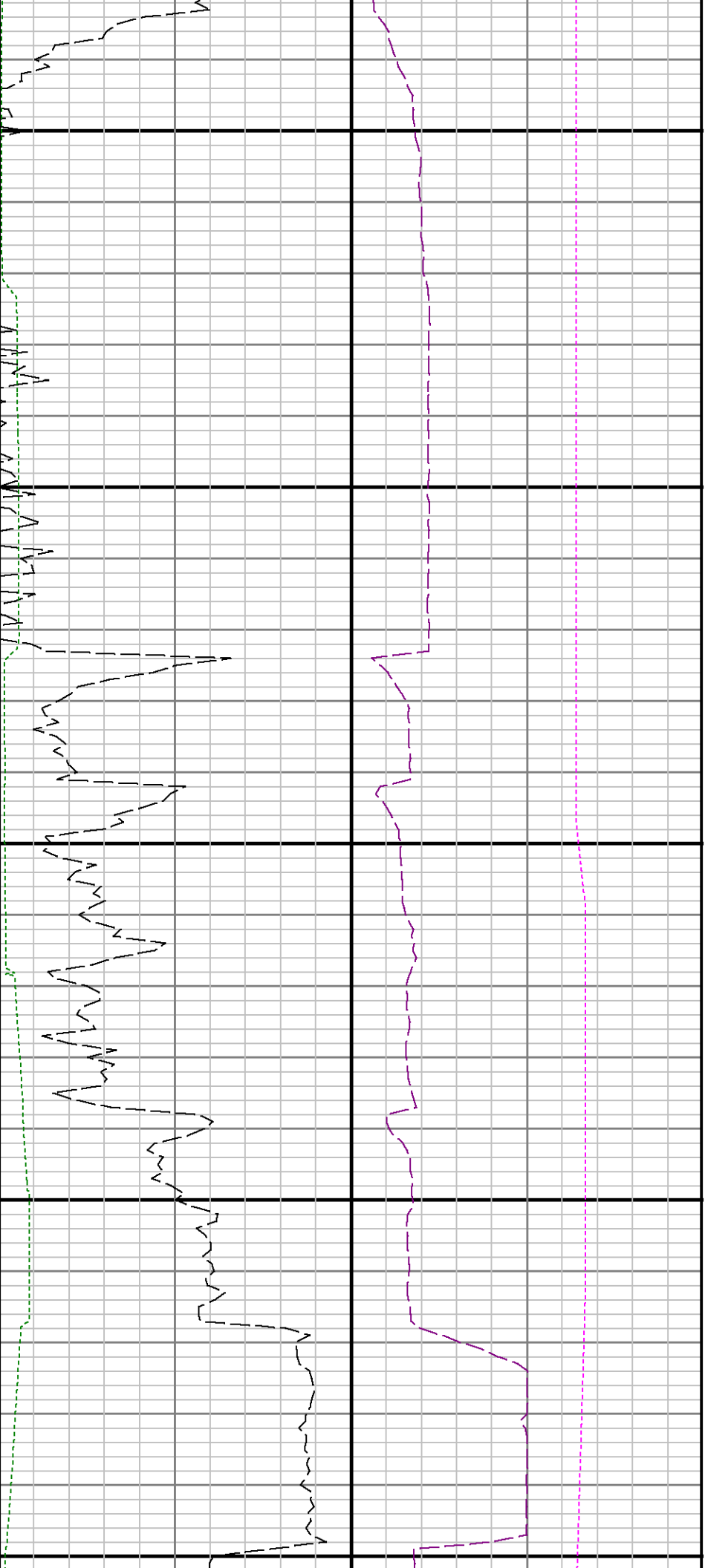




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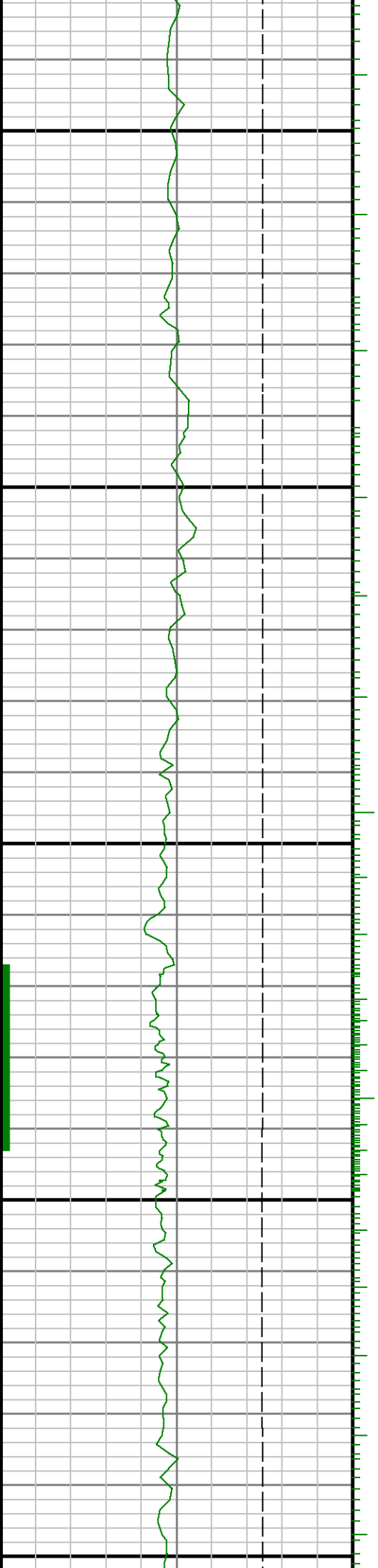
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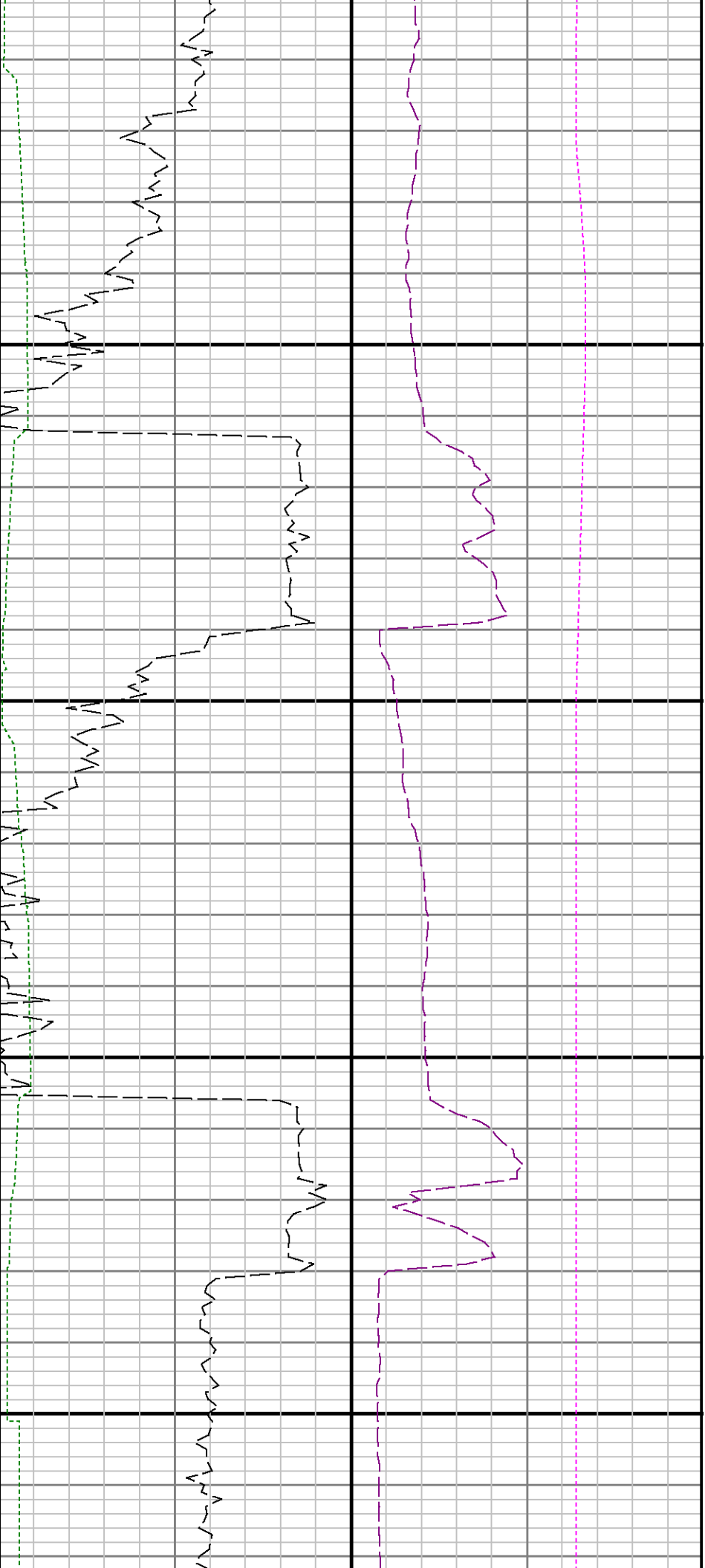




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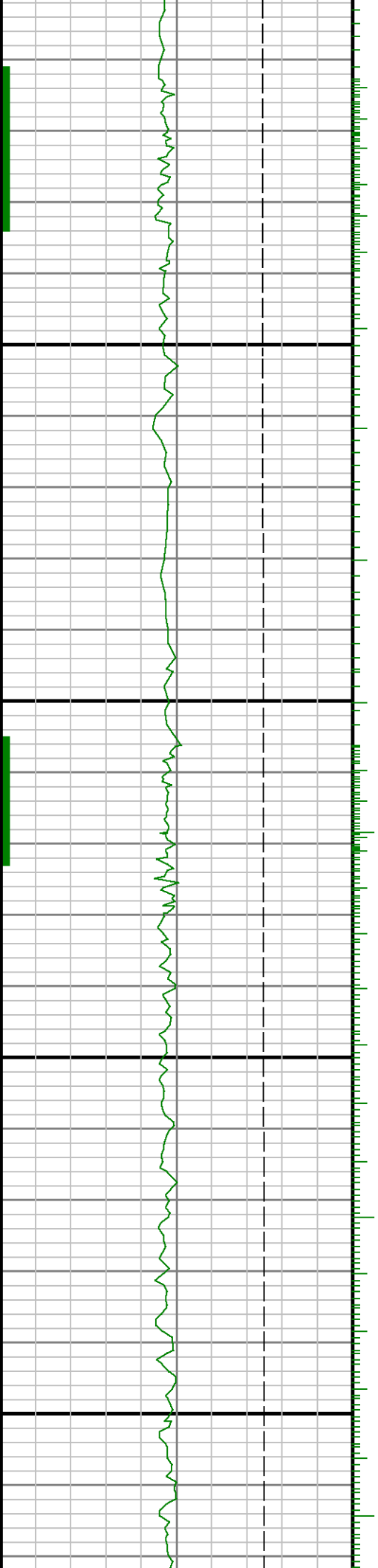
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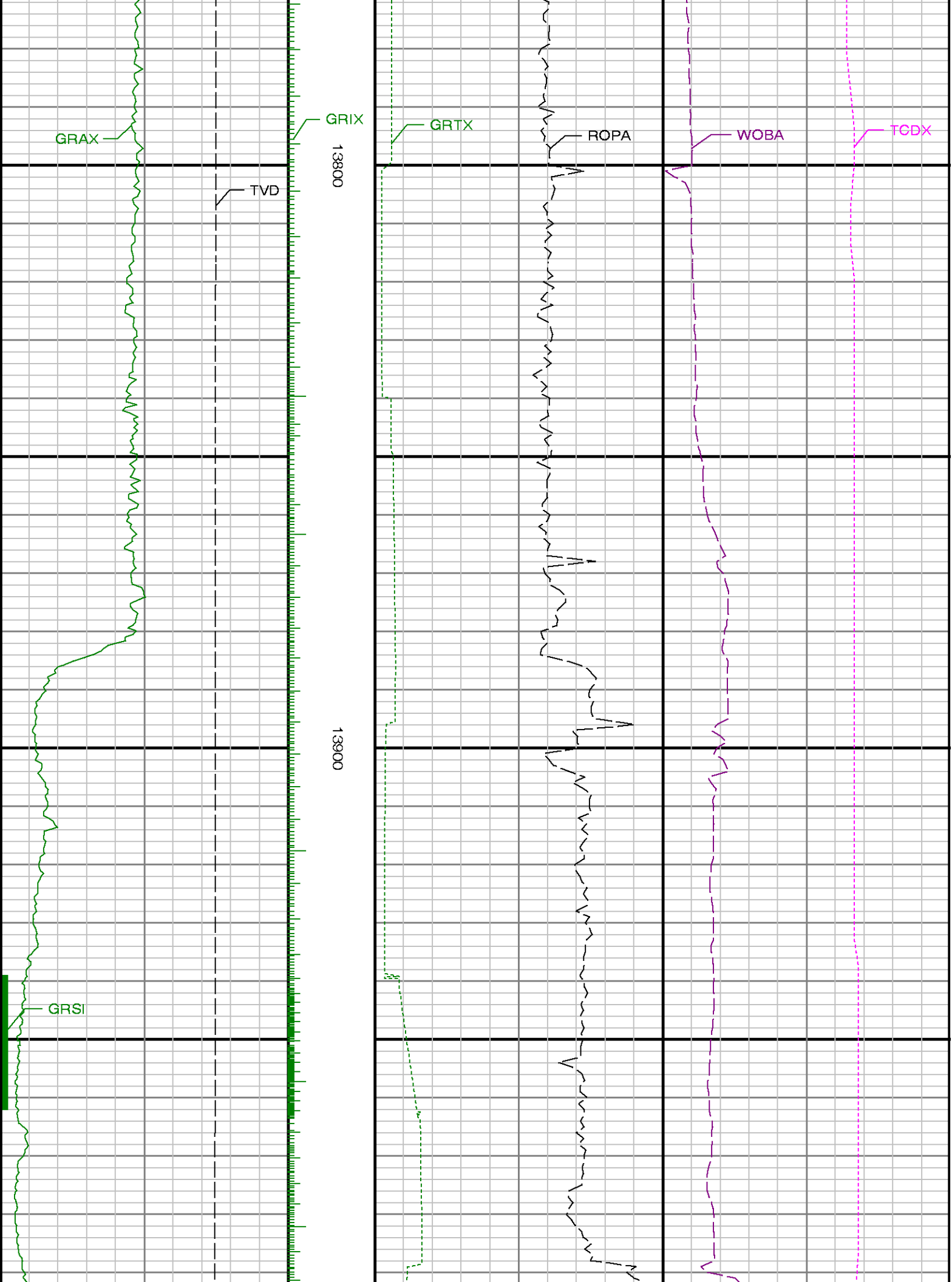


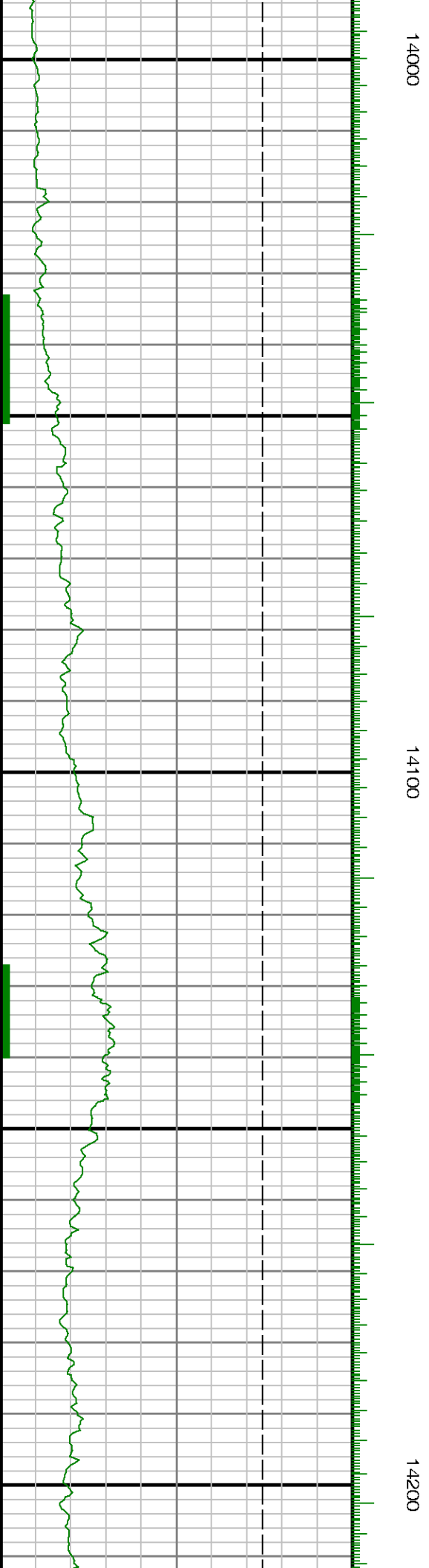
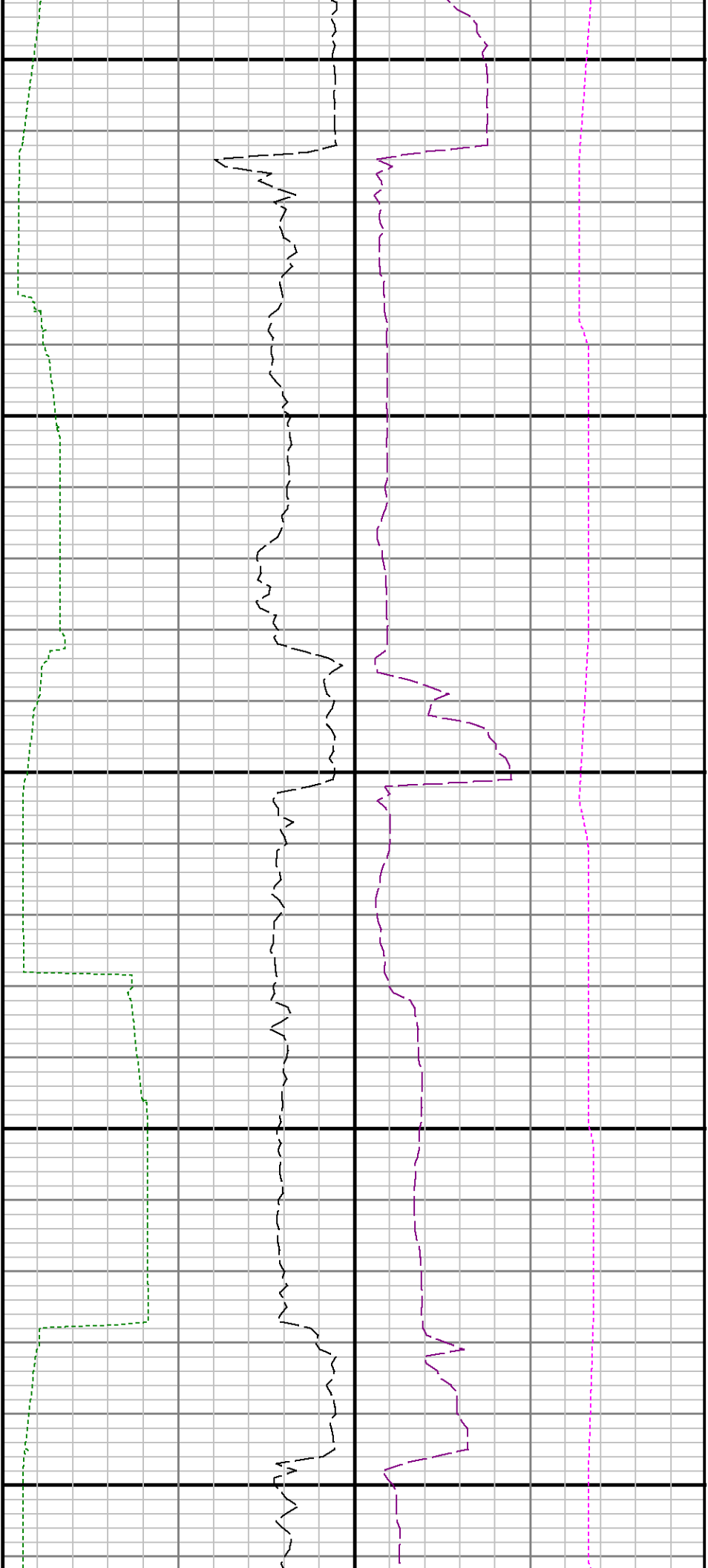


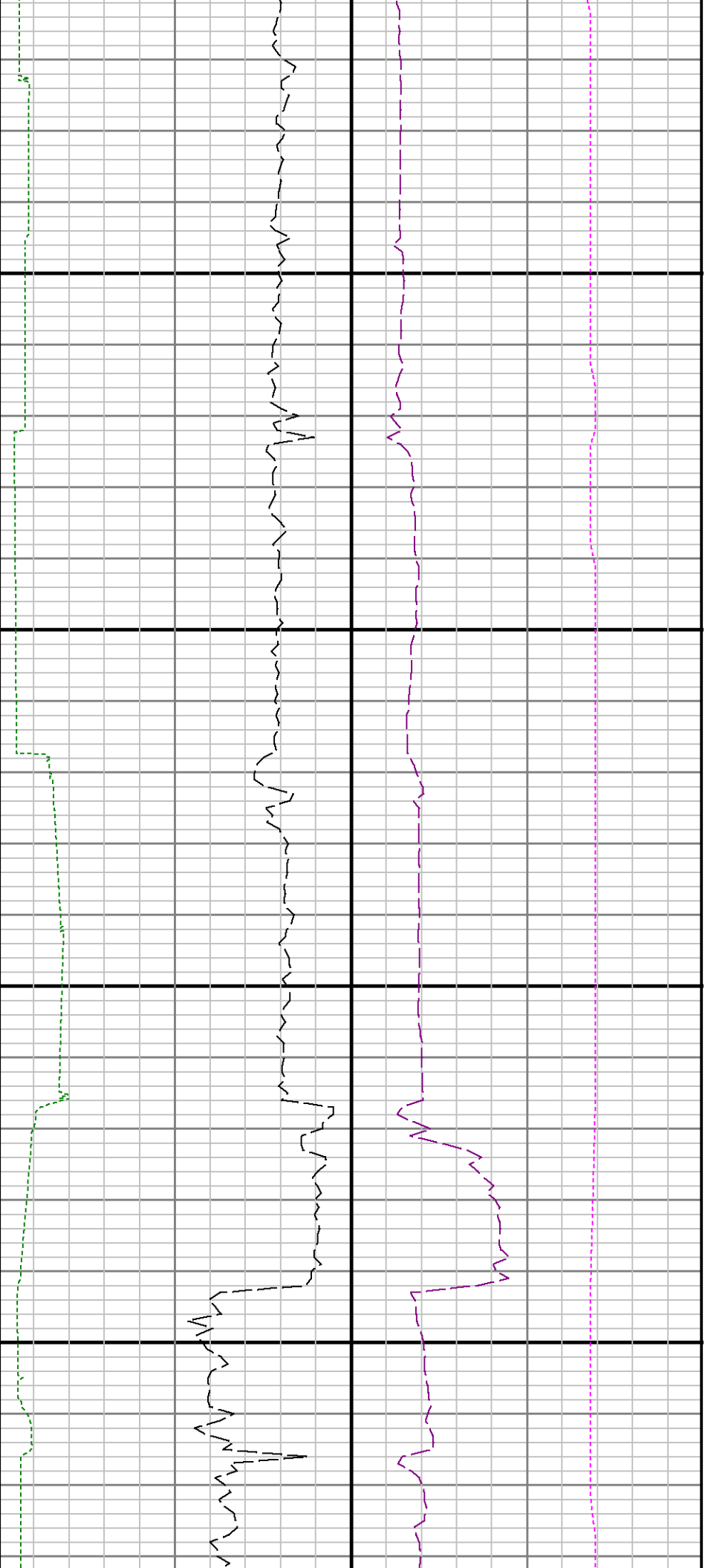
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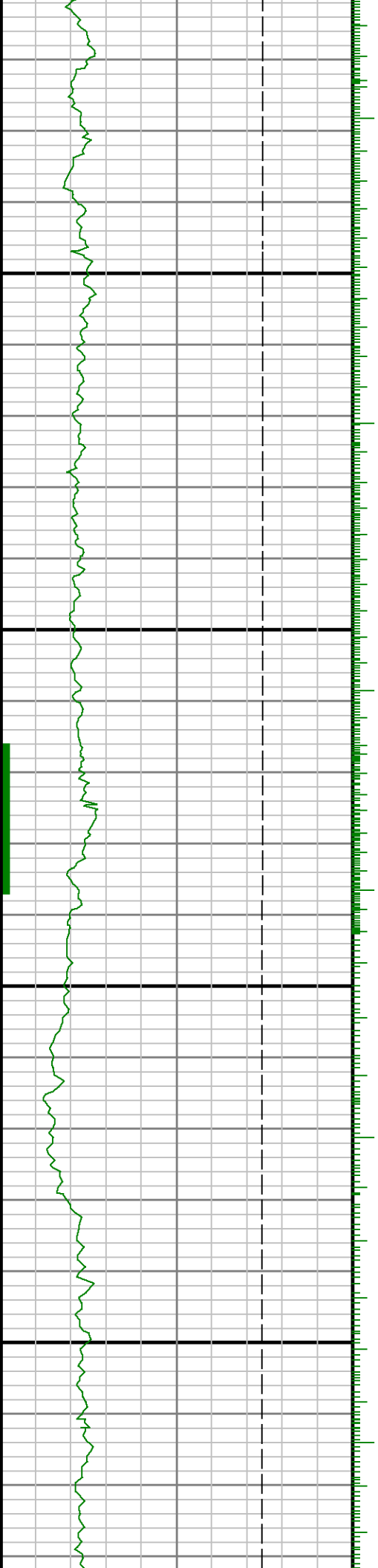


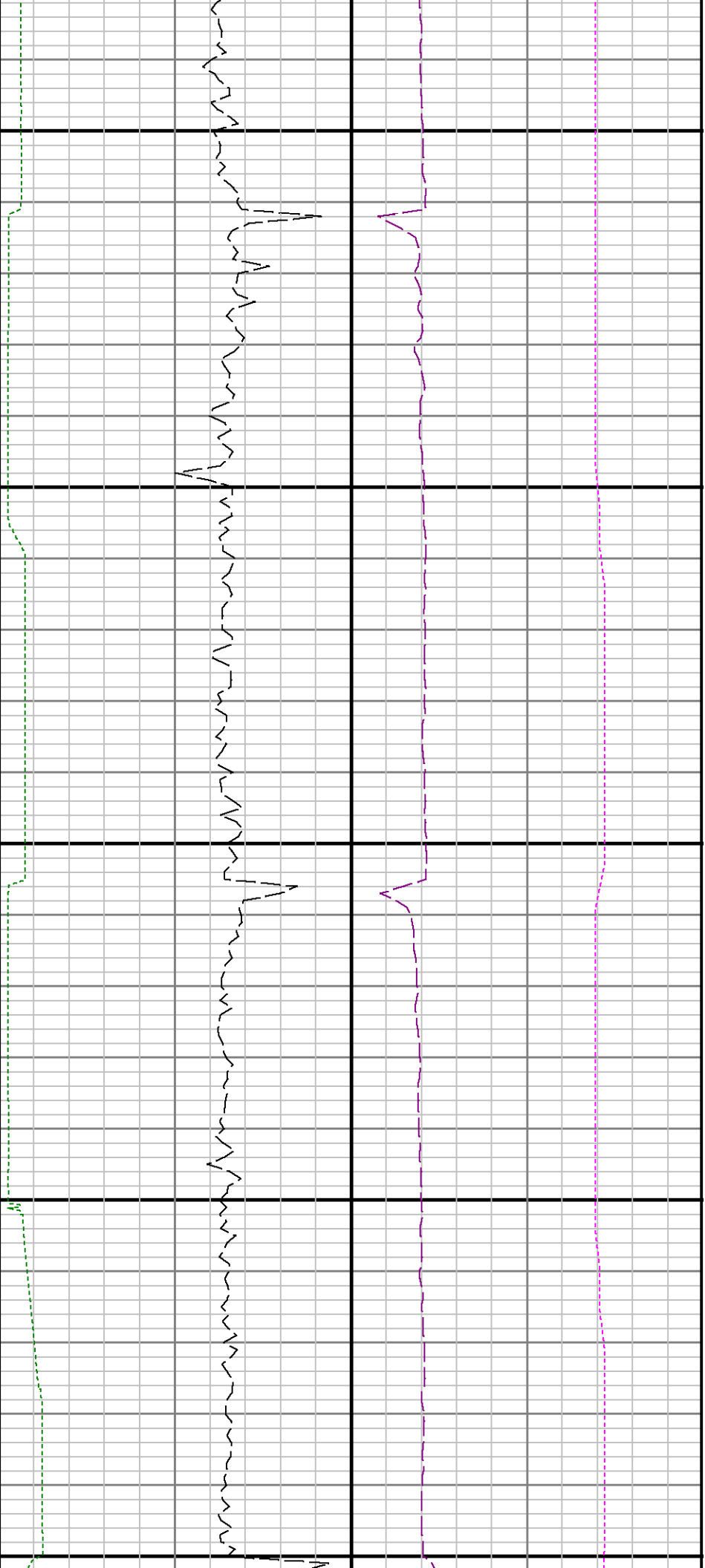




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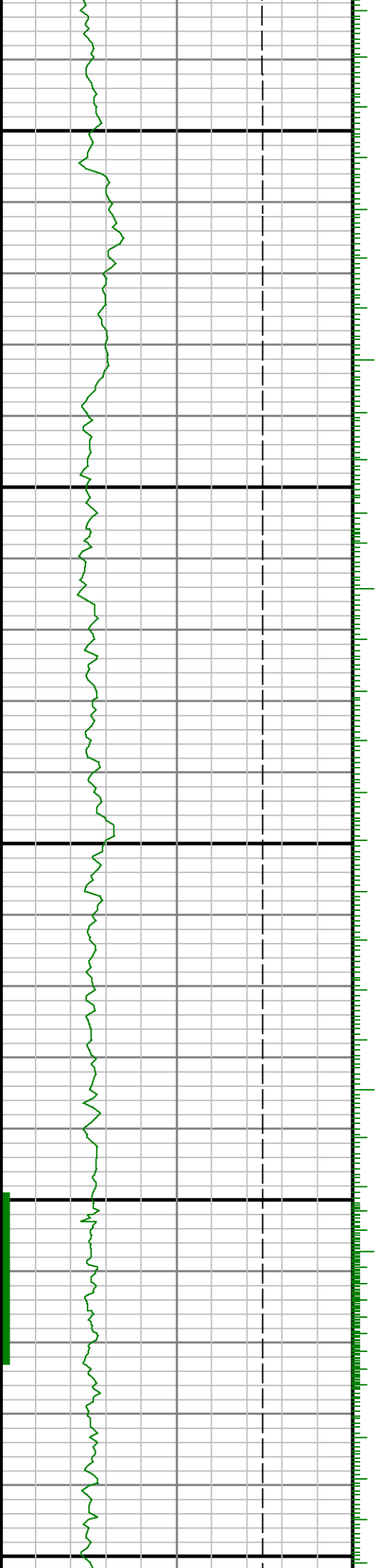
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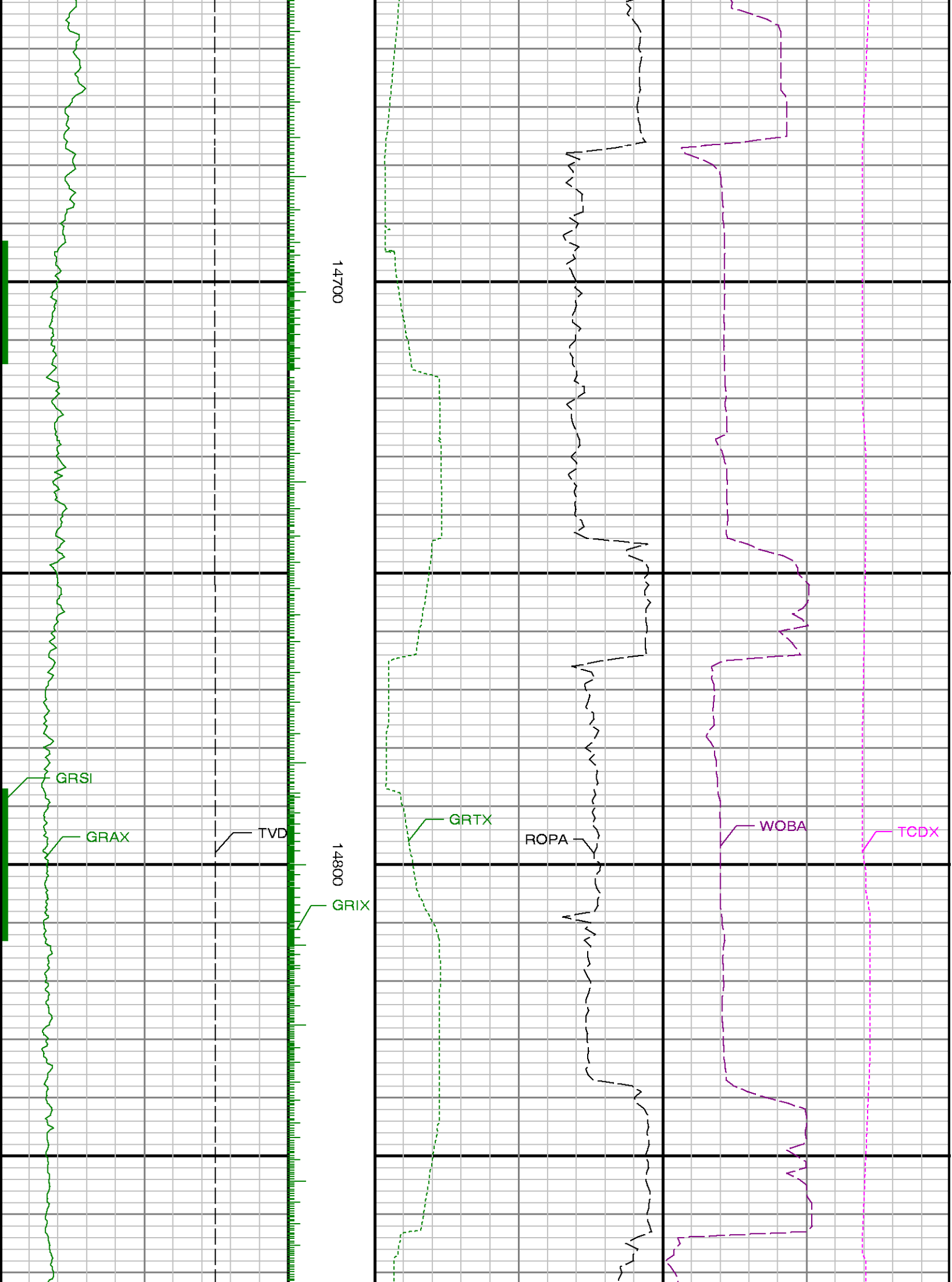


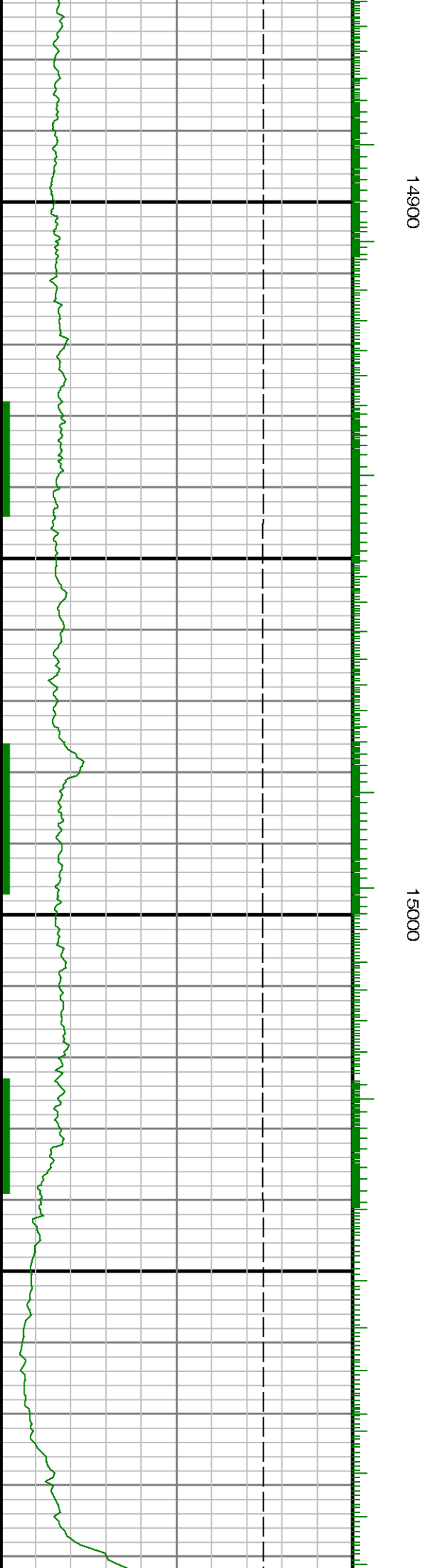
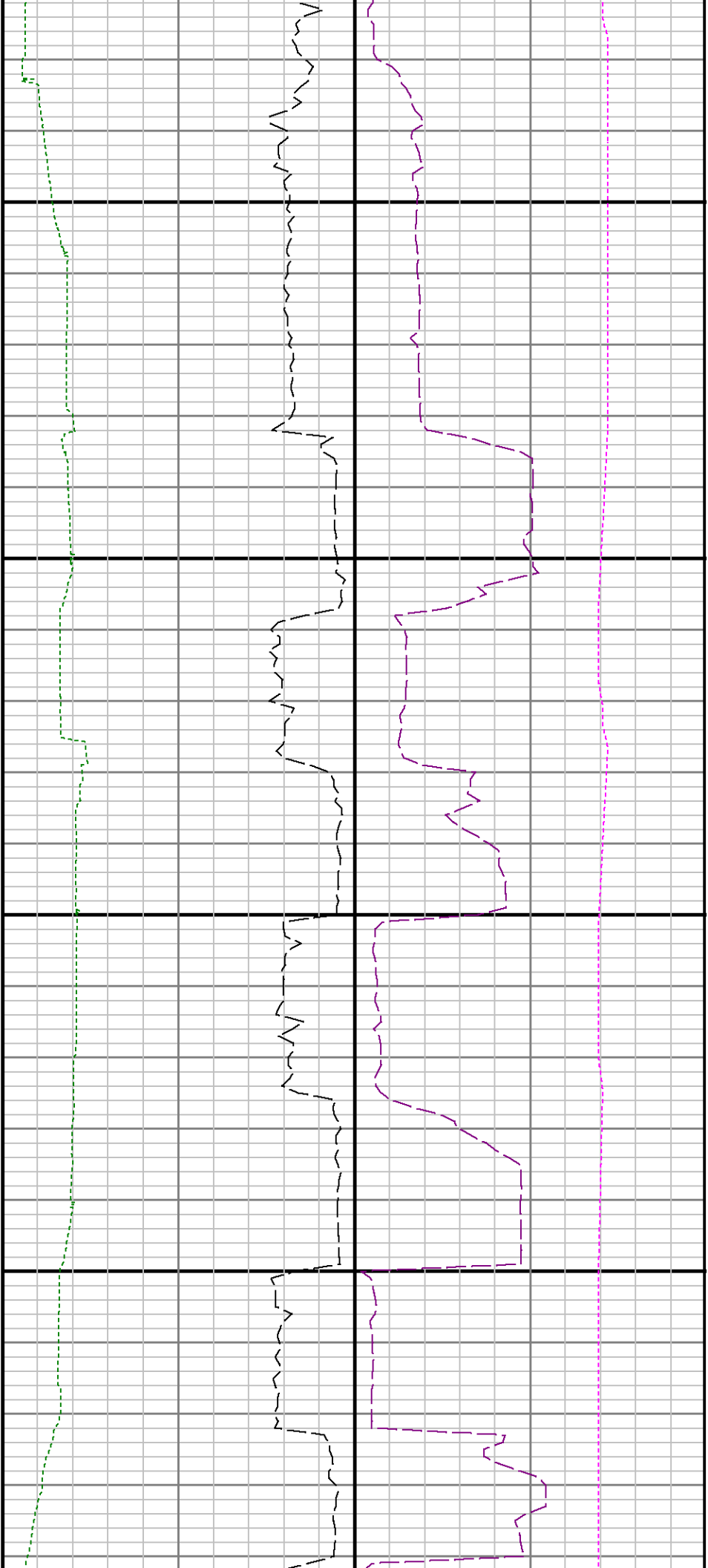


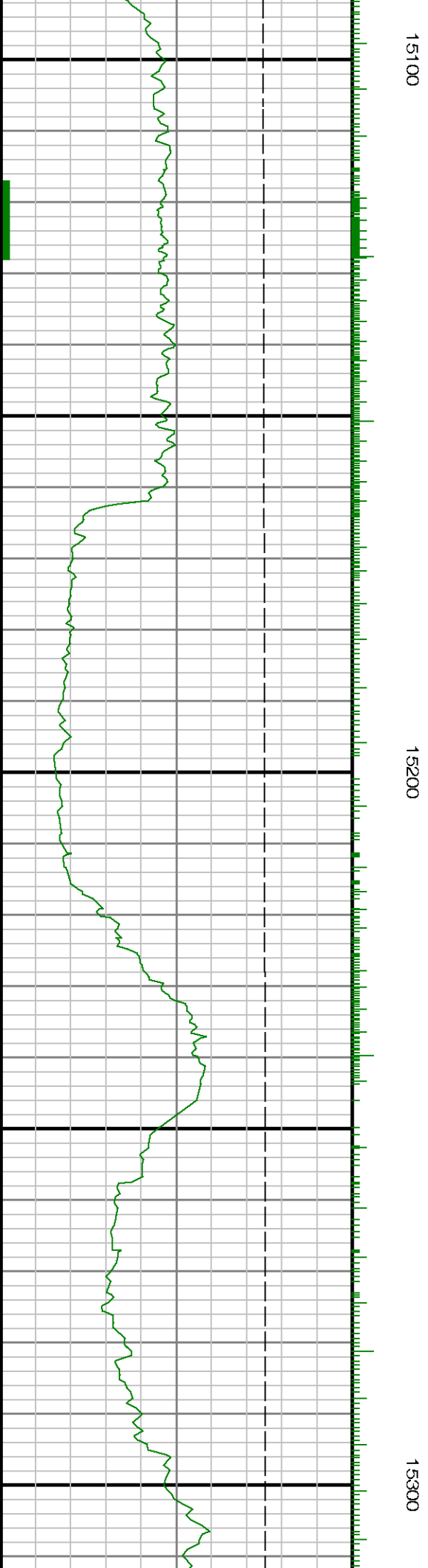
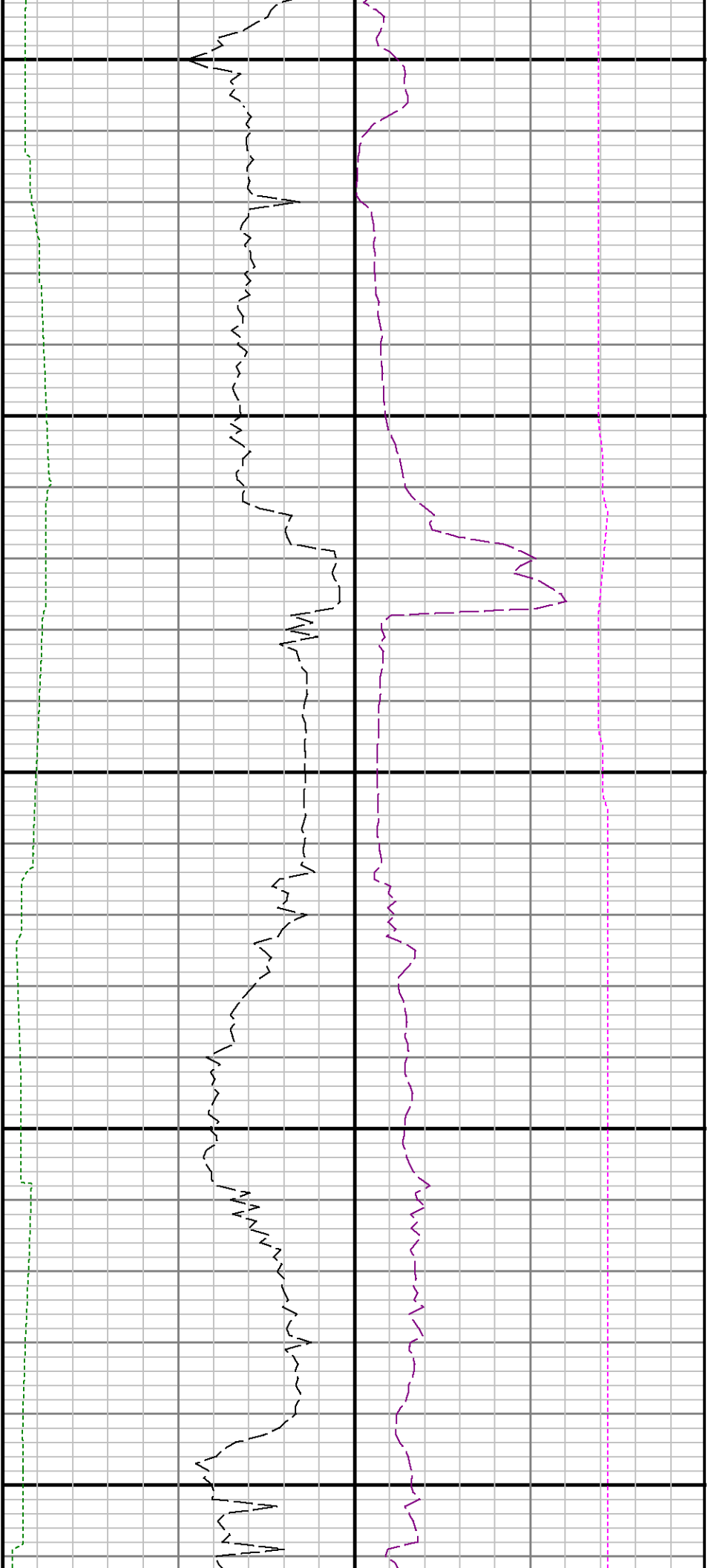
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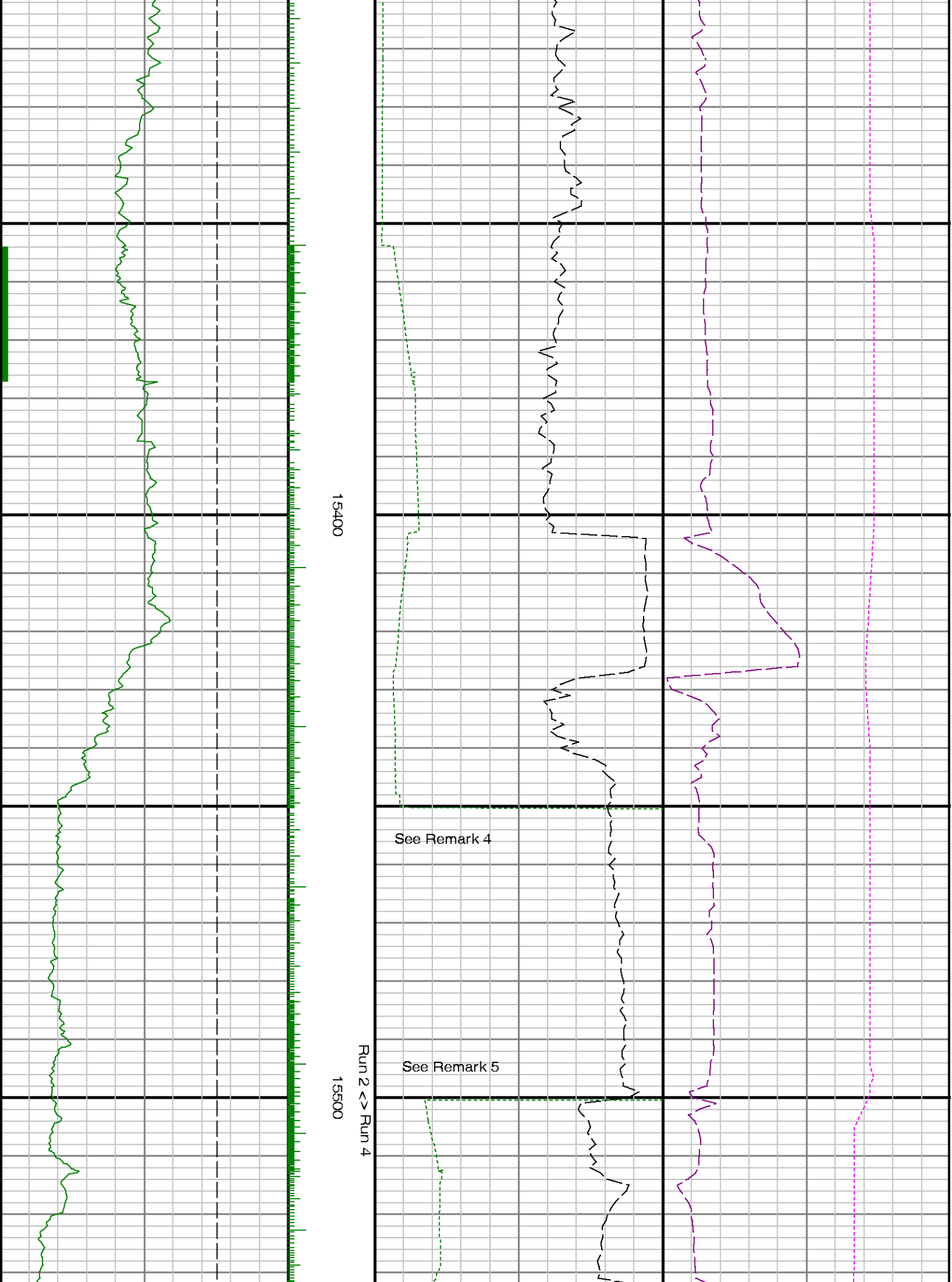
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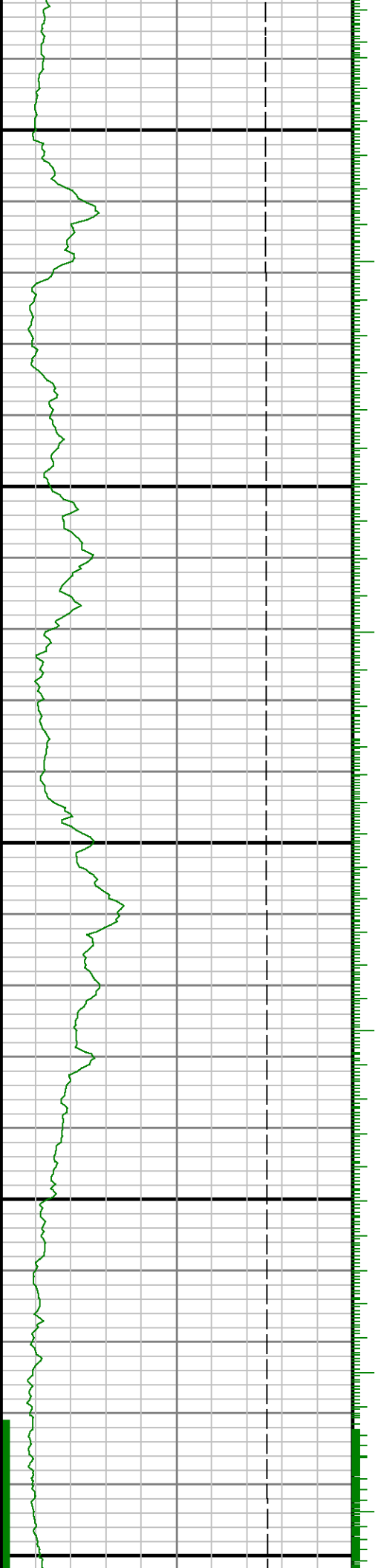


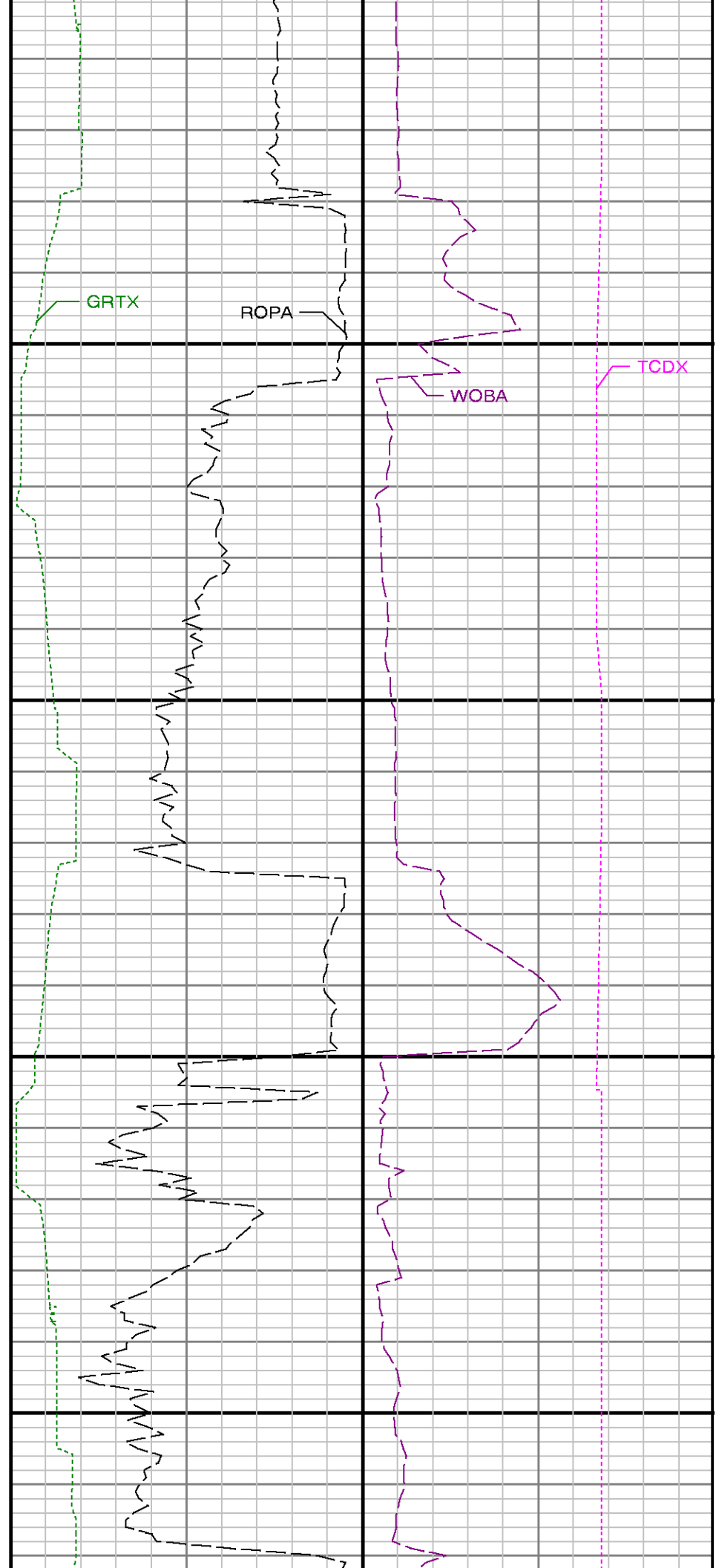
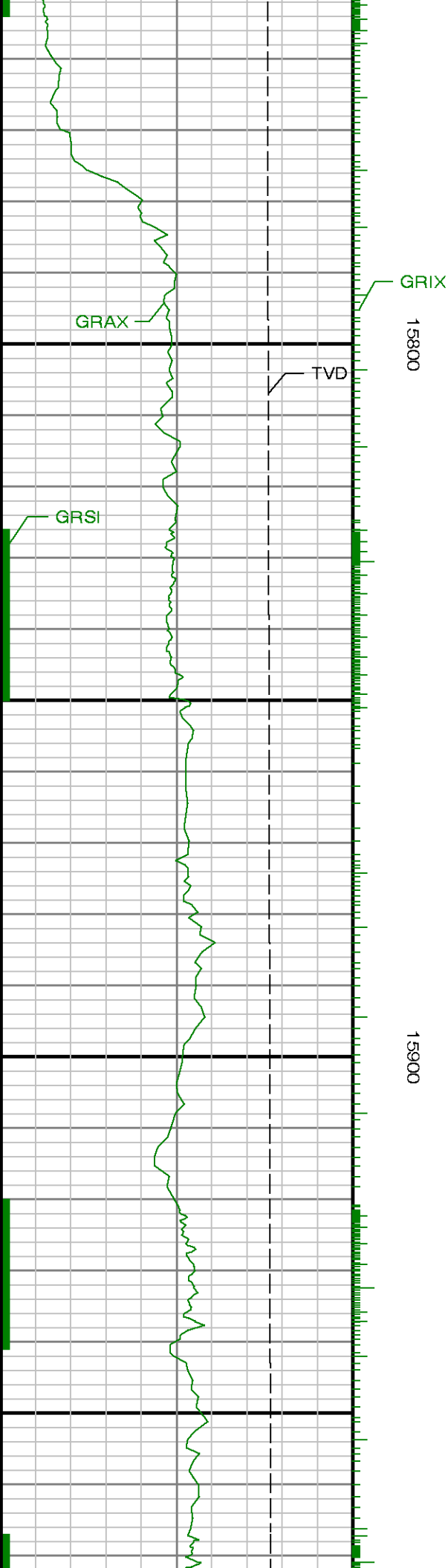


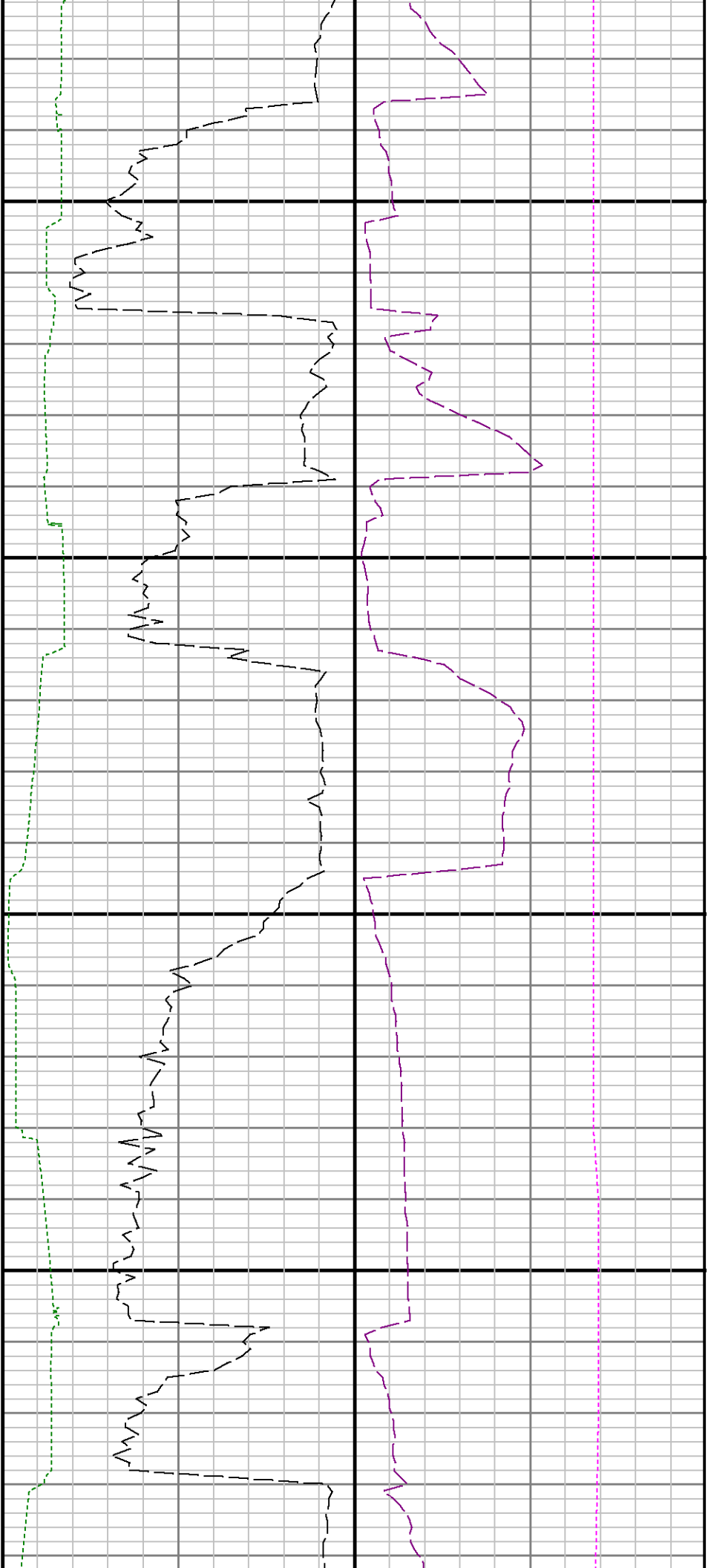


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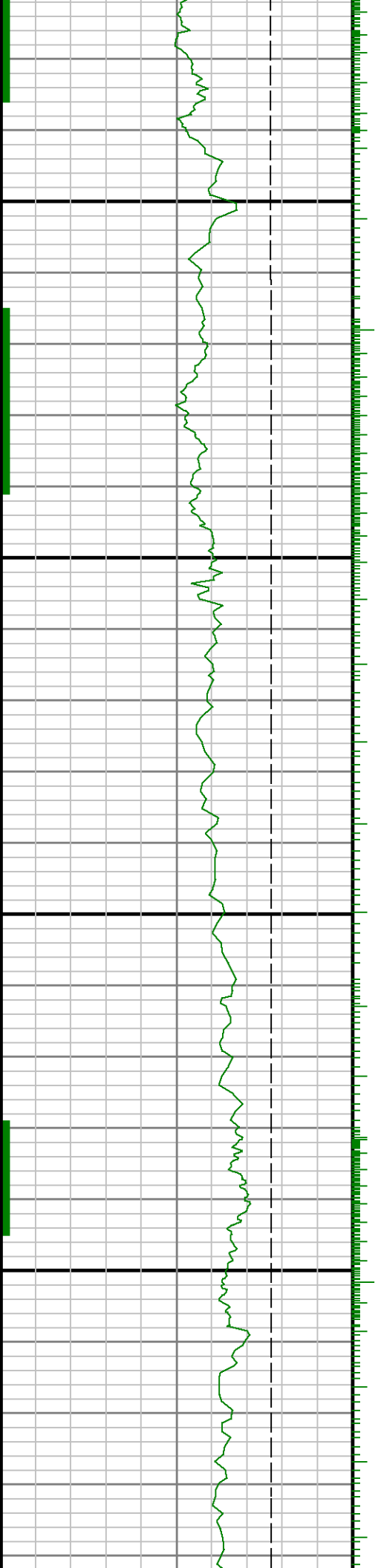


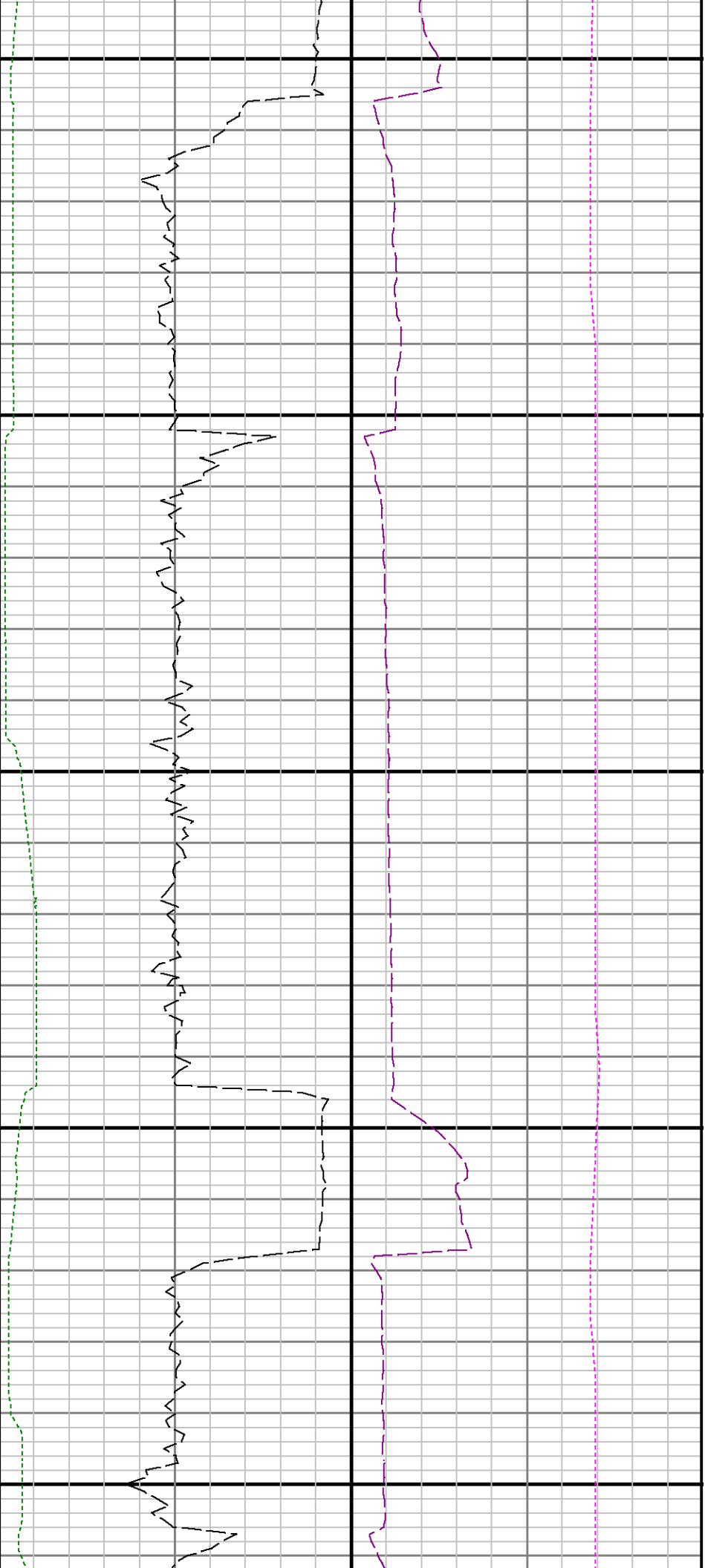




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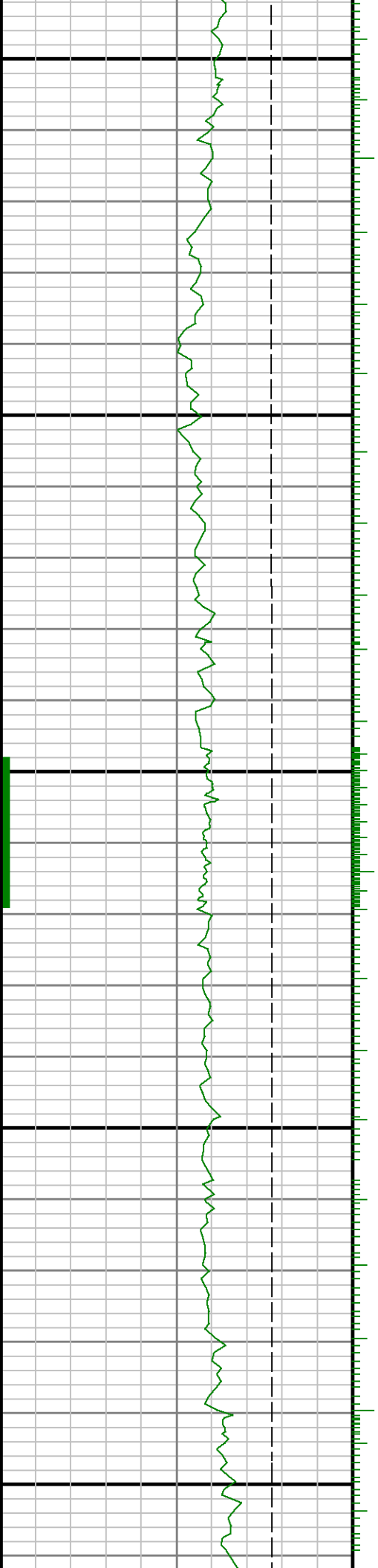


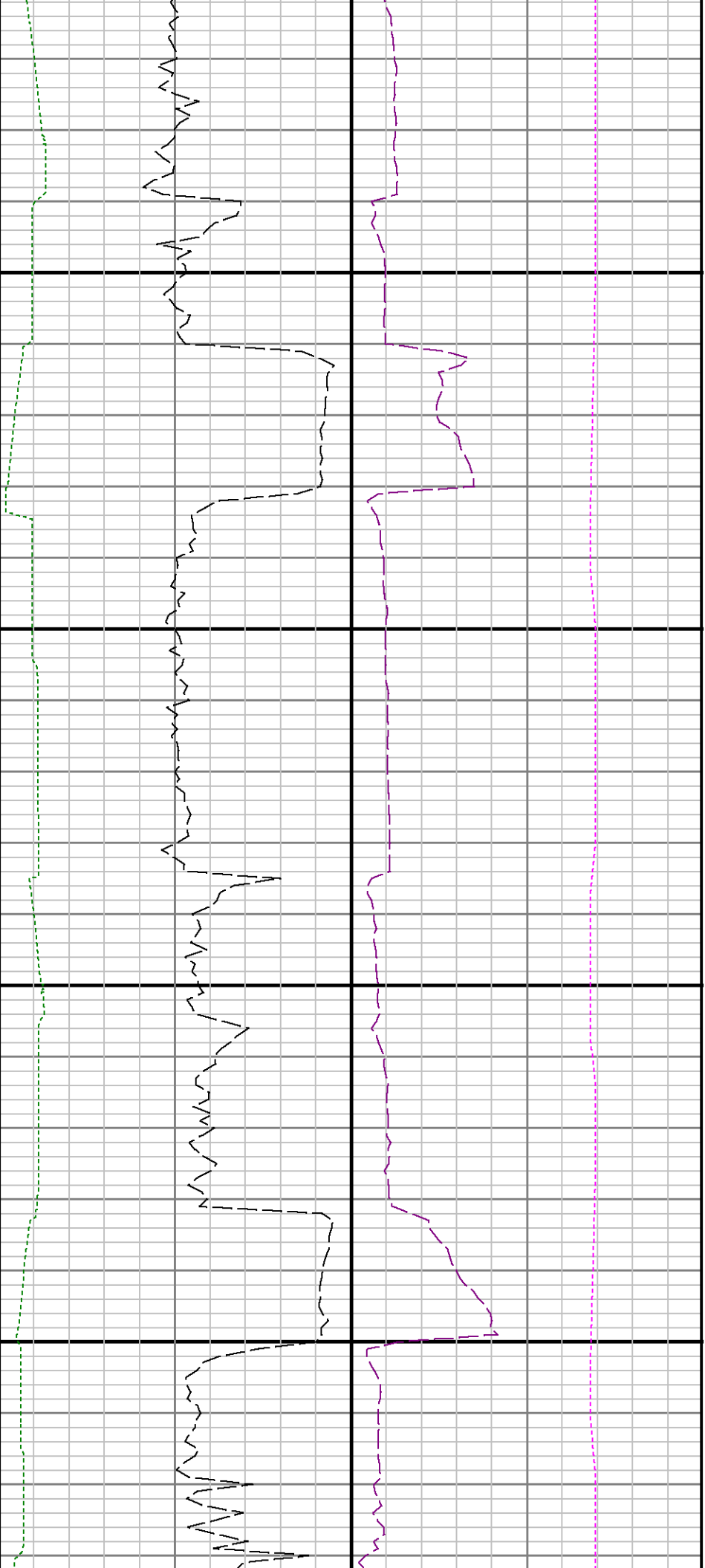


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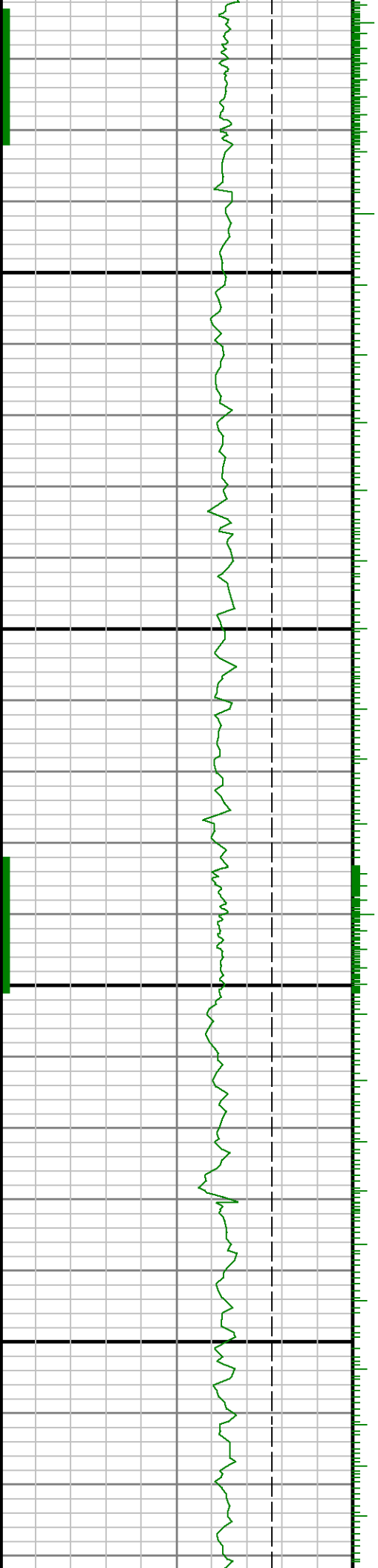
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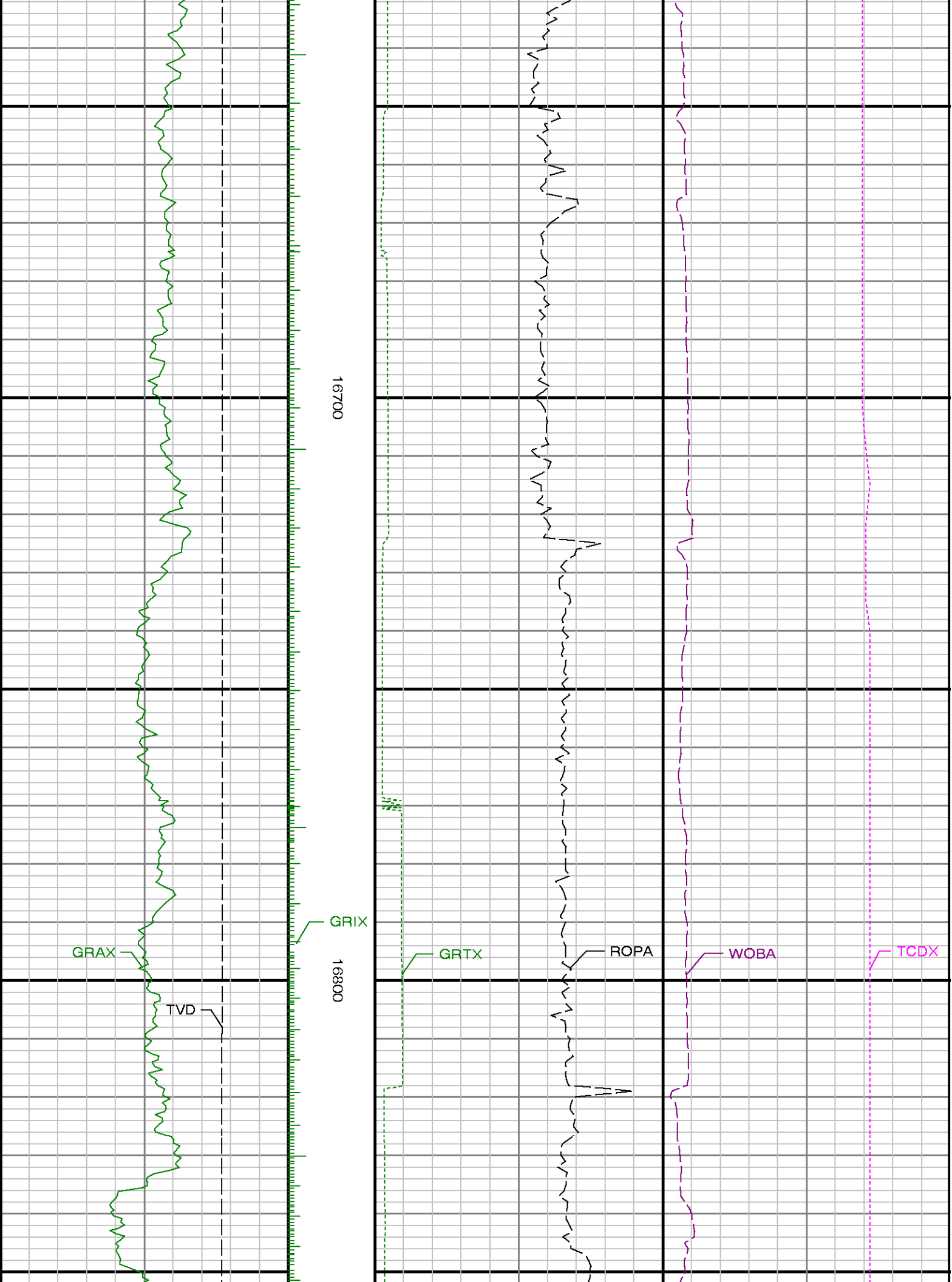


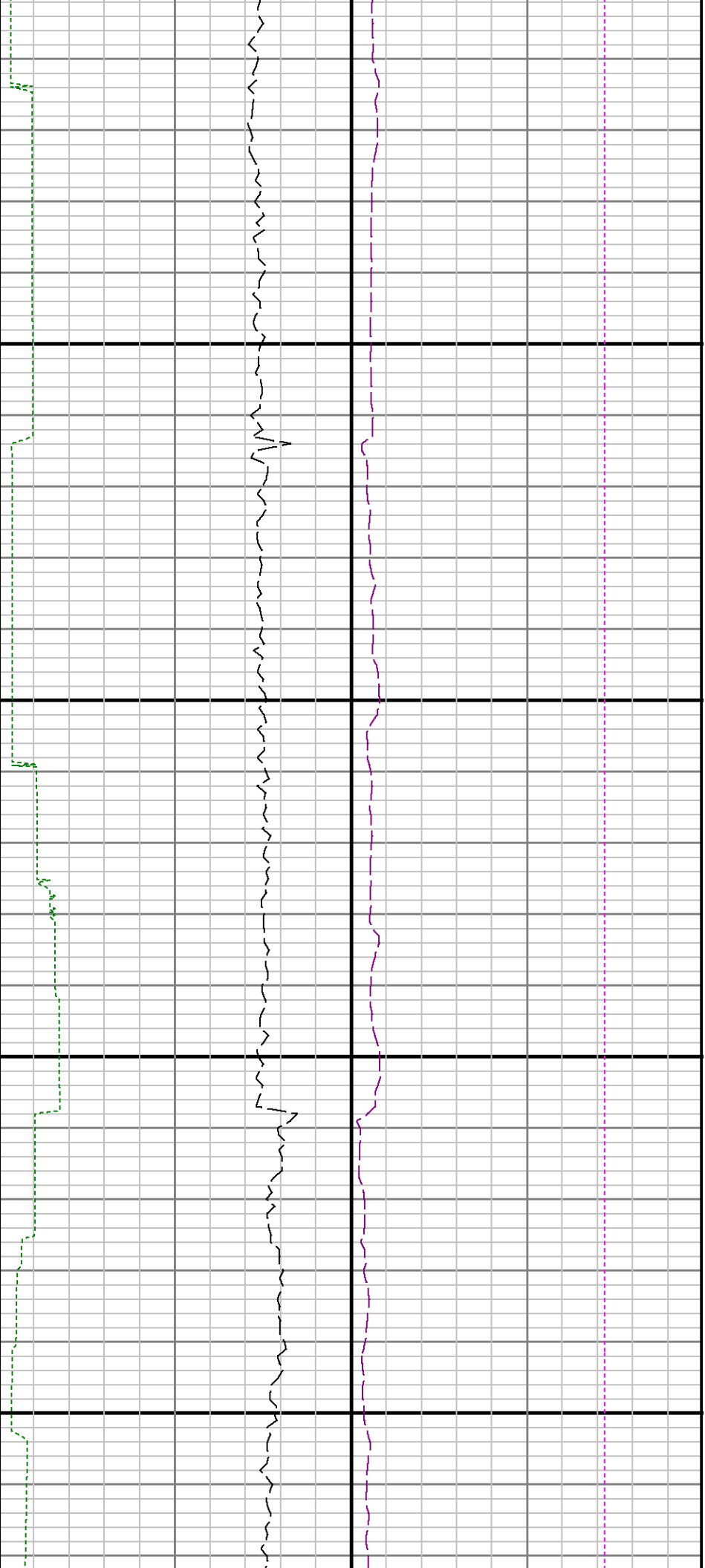


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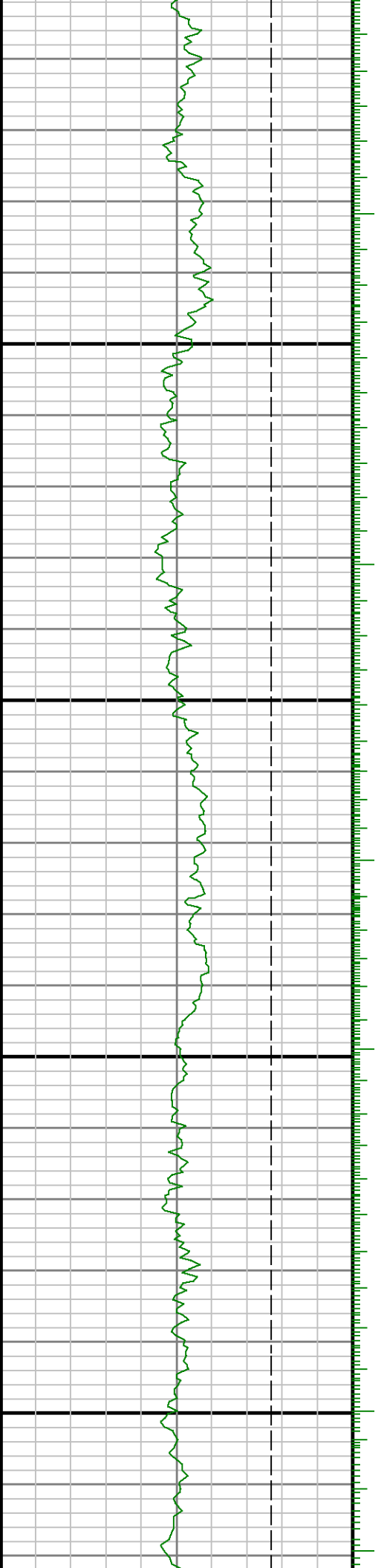






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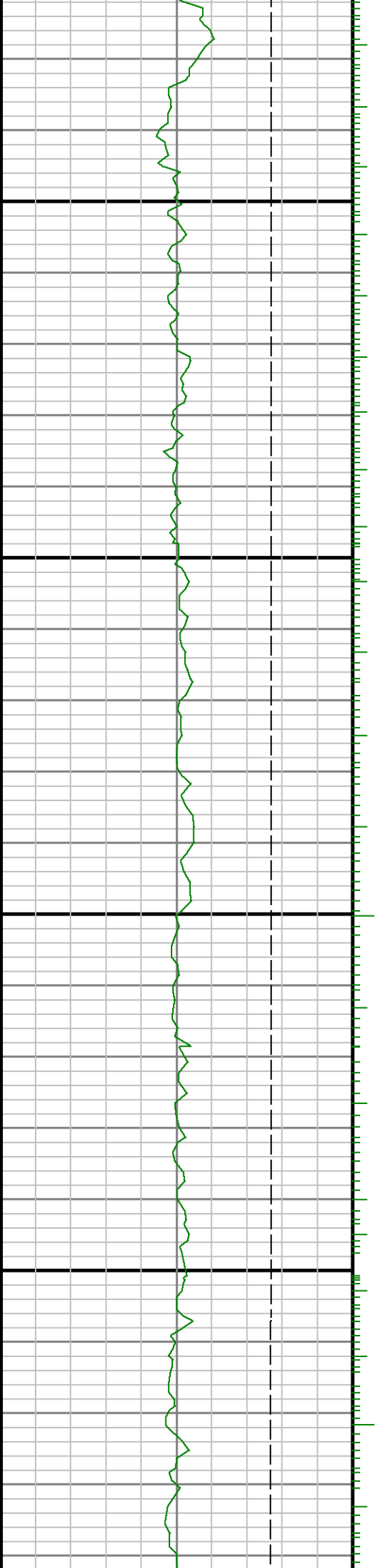
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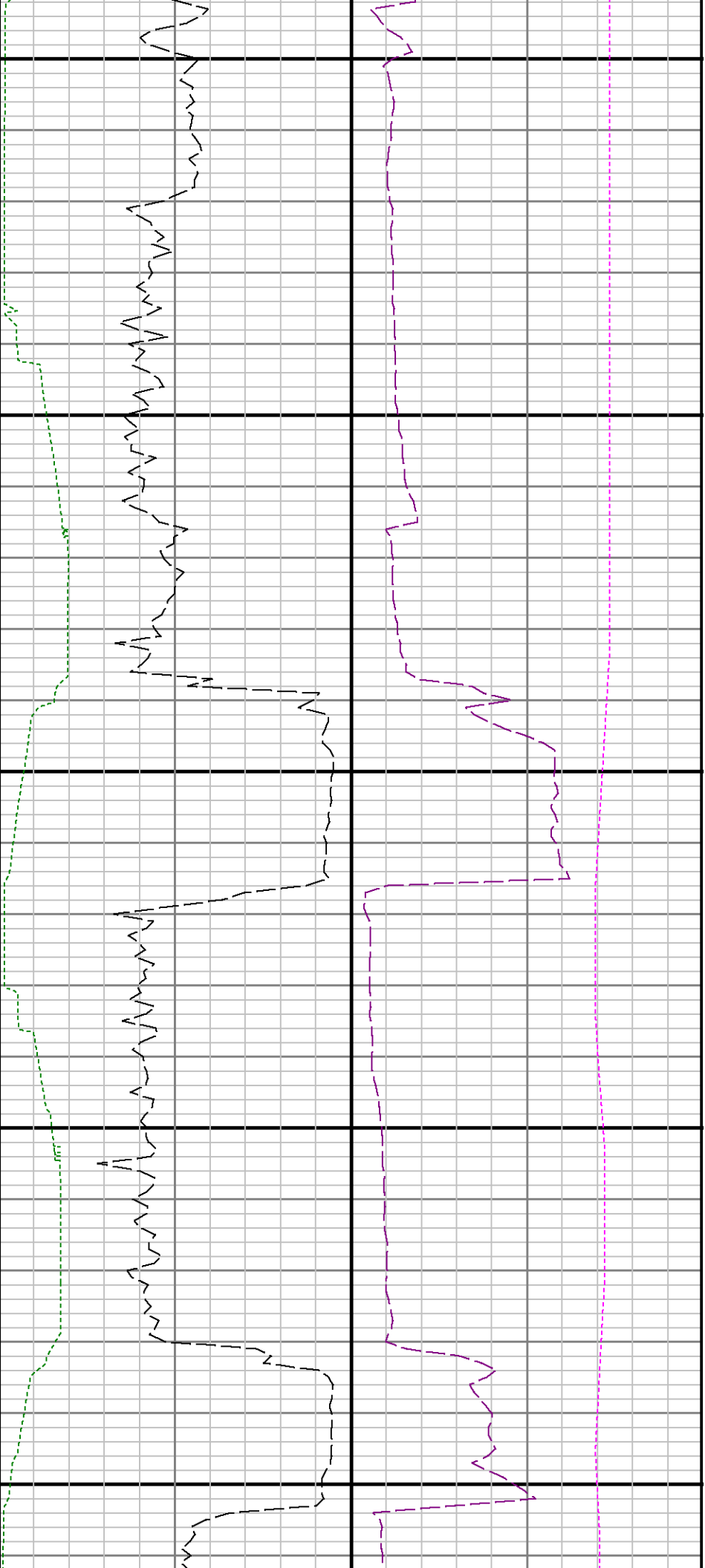




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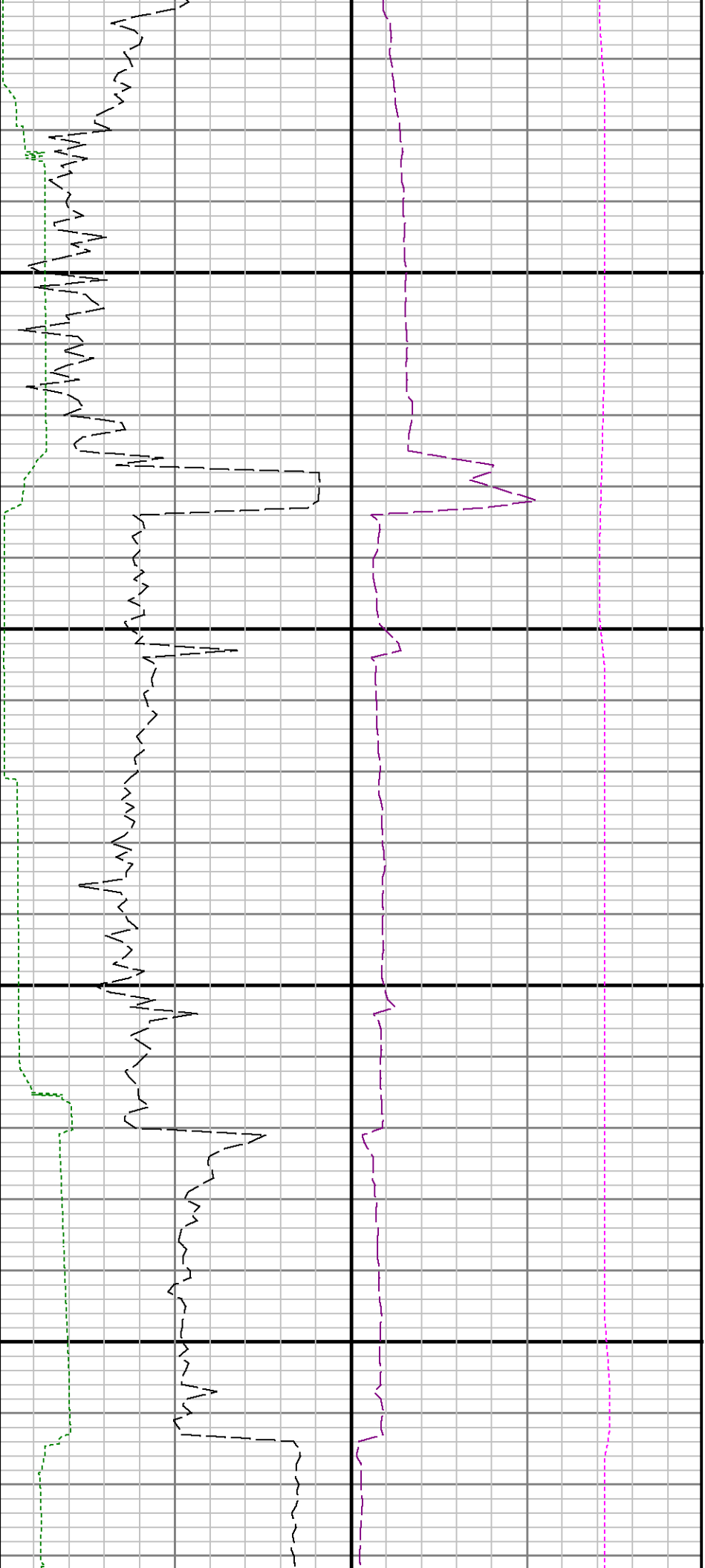




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