



Jason Cross	Oct 11 2014	Nov 9 2014	Alex Janorschke	Nov 10 2014	Nov 14 2014	Matt Leopold	Oct 11 2014	Nov 14 2014
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Mud Properties Record												
Date / Time		LWD Run No.	Measured Depth (f.)	Mud Type	Density  (sg)	Viscosity  (cp)	pH	Fluid Loss  (cc)	Oil / Water	Source	Total Chlorides  (ppm)	K+  (%)
16/Oct/2014	08:33	1	1283	Water Based Mud	8.5	28	8.2	2.0	0 / 99	Active Mud Pit	2500	0.0
17/Oct/2014	21:52	1	7324	Water Based Mud	10.1	15	9.3	4.5	0 / 91	Active Mud Pit	1800	0.0
20/Oct/2014	00:30	2	8109	Water Based Mud	10.3	52	9.4	25.0	1 / 89	Active Mud Pit	1800	0.0
20/Oct/2014	00:30	2	8177	Water Based Mud	10.3	52	9.3	0.0	1 / 89	Active Mud Pit	1700	0.0
03/Nov/2014	23:57	3	8772	Synthetic Base Mud	9.5	20	1.4	0.0	65 / 35	Active Mud Pit	57000	0.0
05/Nov/2014	04:26	3	10373	Synthetic Base Mud	9.6	68	2.0	0.0	56 / 36	Active Mud Pit	66559	0.0
06/Nov/2014	02:28	3	12201	Synthetic Base Mud	9.7	62	2.0	0.0	68 / 32	Active Mud Pit	54000	0.0
10/Nov/2014	05:03	4	14873	Synthetic Base Mud	9.8	49	1.0	0.0	74 / 26	Active Mud Pit	41000	0.0

Mnemonics		
Curve	Description	Units
GRAX	Gamma Ray Apparent, 0.5 ft. Avg.	API
GRIX	Gamma Ray Data Density	point
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  (m.)	Max O.D.  (in.)	Min I.D.  (in.)	
1	DIR	11801247	Directional	40.35	6.750	3.750	
1	SRIG	12722372	Gamma	36.98	6.750	3.750	
2	DIR	11801247	Directional	40.35	6.750	3.750	
2	SRIG	12722372	Gamma	36.98	6.750	3.750	
3	DIR	12497605	Directional	51.66	6.750	0.000	
3	SRIG	11734844	Gamma	48.28	6.750	0.000	
4	DIR	11958754	Directional	51.32	4.750	2.750	
4	SRIG	12586749	Gamma	47.95	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.) 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
- 2.) Baker Hughes run 1 utilized 6 3/4 inch NaviTrak services (Directional only) behind an 8 3/4 inch bit and steerable assembly from 1234 to 7292 feet MD (1233.87 to 7247.38 feet TVD) and a NaviGamma services (Gamma Ray and Directional) from 7292 to 8113 feet MD (7247.38 to 7860.14 feet TVD).
- 3.) Baker Hughes run 2 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 8113 to 8219 feet MD (7860.14 to 7878.07 feet TVD).
- 4.) Baker Hughes runs 3 & 4 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 8219to 17415 feet MD (7877.05 to 7885.52 feet TVD).
- 5.) The interval from 1234 to 7292feet MD (1233.87 to 7247.35 feet TVD) was not logged due to directional only services being provided through the straight-hole and nudge section for Baker Hughes run 1.
- 6) A sliding indicator is shown on the left side of track 1 as a heavy line. The indicator has been shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.

Remarks

Number	Measured Depth (ft.)	Hole Section (in.)	LWD Run No.	Remark
1	8075	8.750	2	The interval from 8068 to 8113 feet MD (7844 to 7860 feet TVD) was logged up to 22 hours after being drilled due to trip out of hole to change BHA.
2	8175	8.750	2	The interval from 8171 to 8220 feet MD (7840 feet TVD) was logged up to 350 hours after being drilled due to batch drilling other wells.
3	14133	6.125	4	The interval from 14124 to 14174 feet MD (7888 feet TVD) was logged up to 53 hours after being drilled due to trip out of hole to change BHA.
4	17373	6.125	4	The interval from 17370 to 17415 feet MD (7884 feet TVD) has no GRAX, GRIX or GRTX due to the Gamma Ray sensor offset to bit.

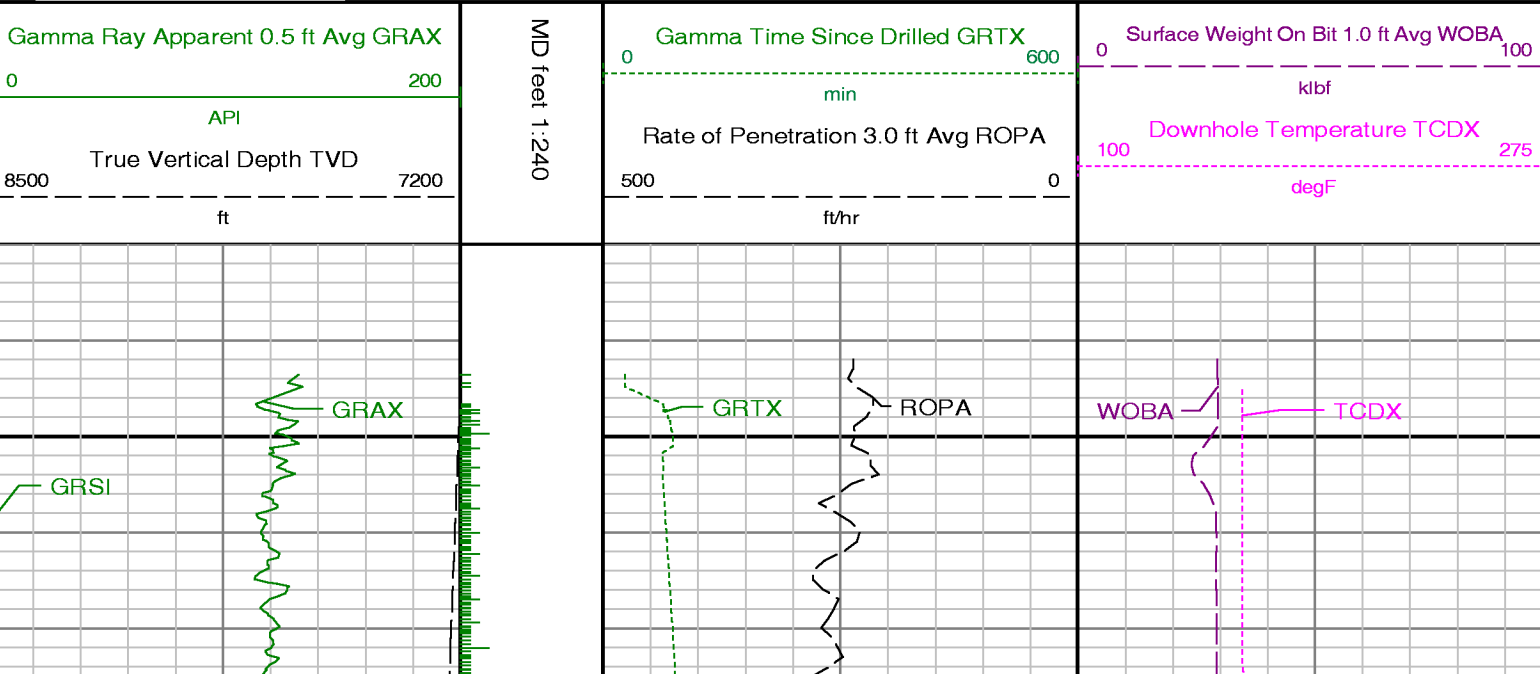


Company : Anadarko

Well : Sack State 30C-30HZ

Interval : 7230.00 - 17430.00 feet

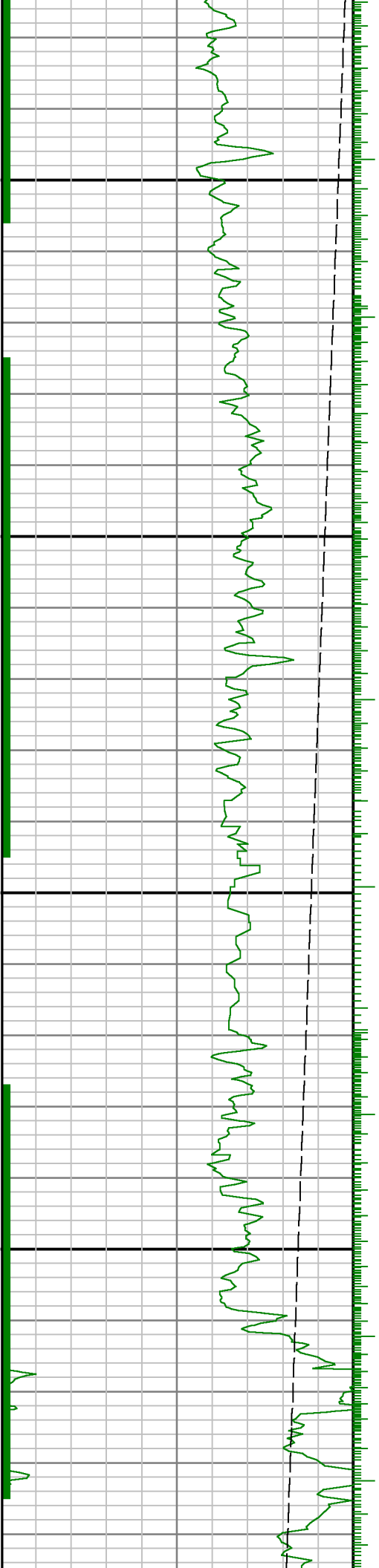
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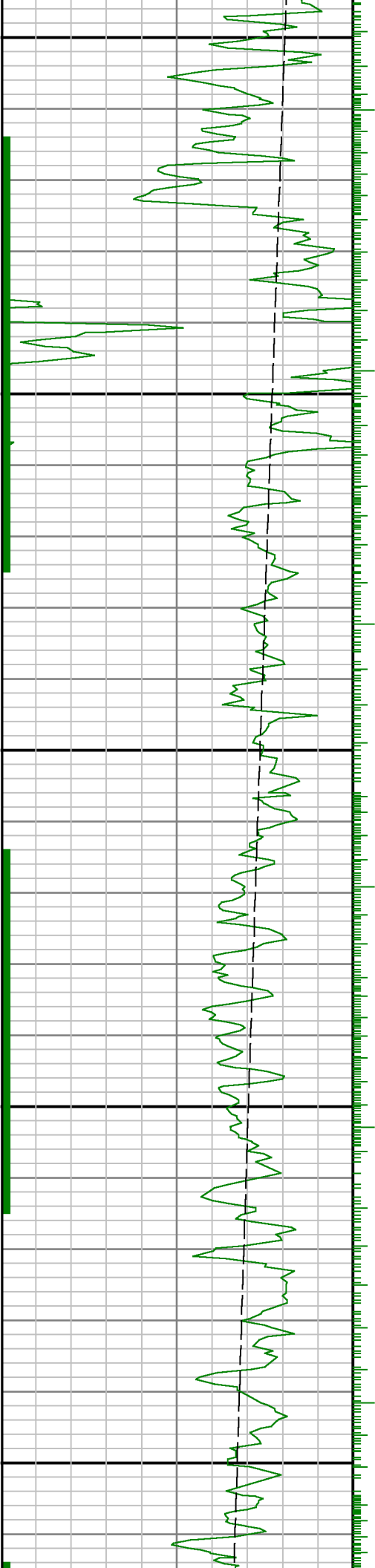




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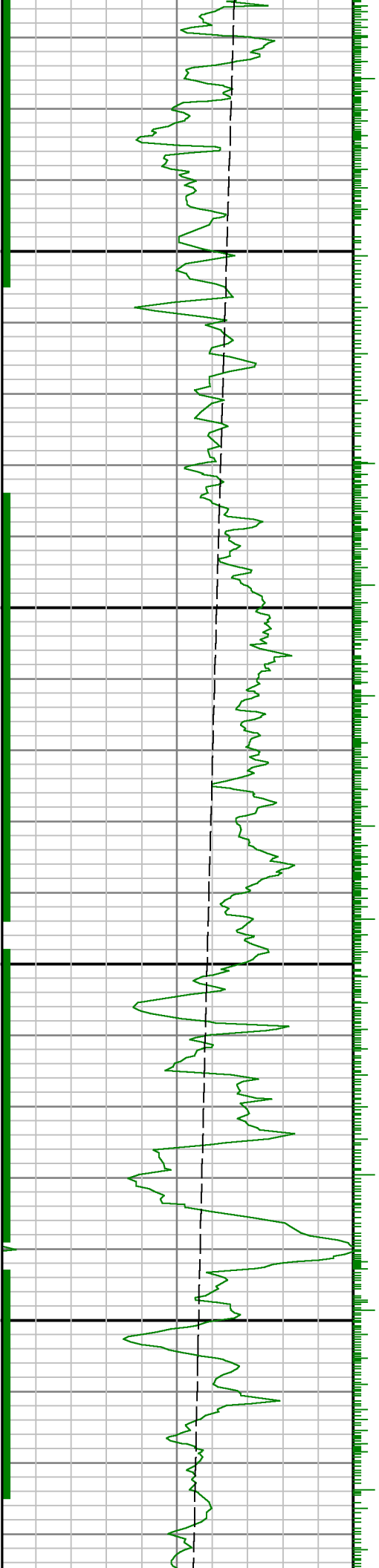
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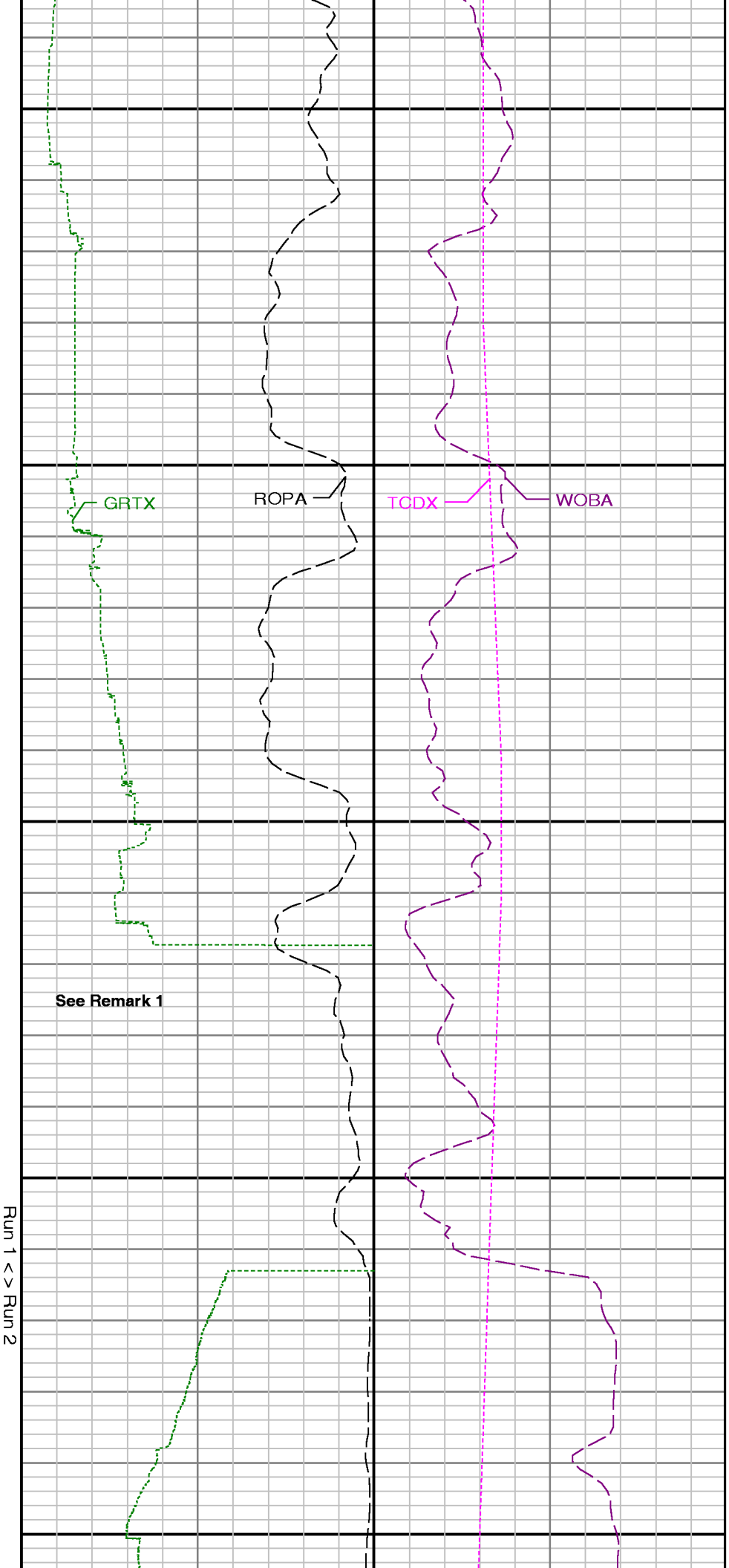
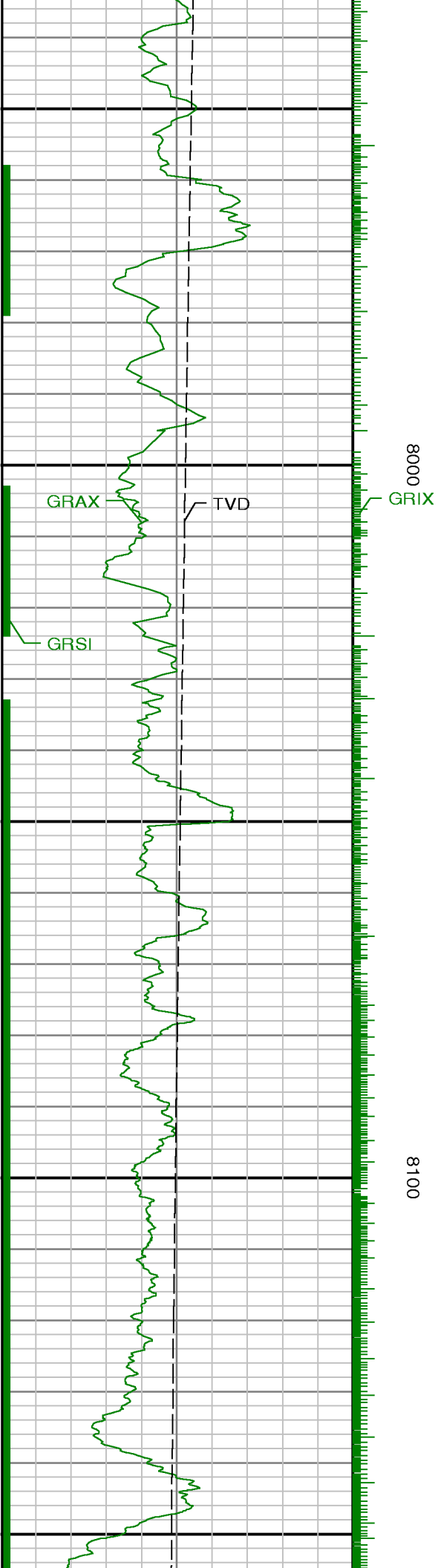




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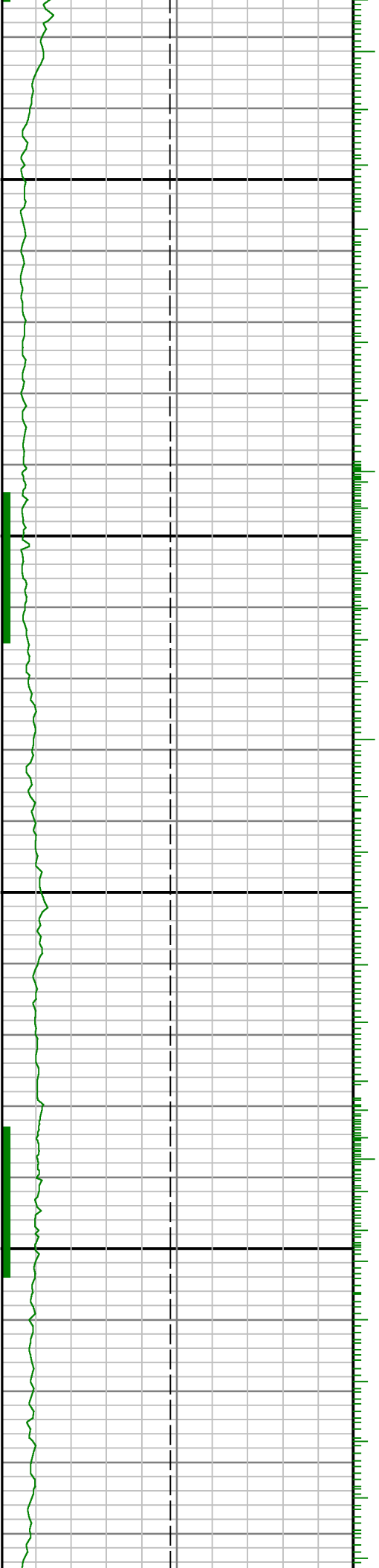


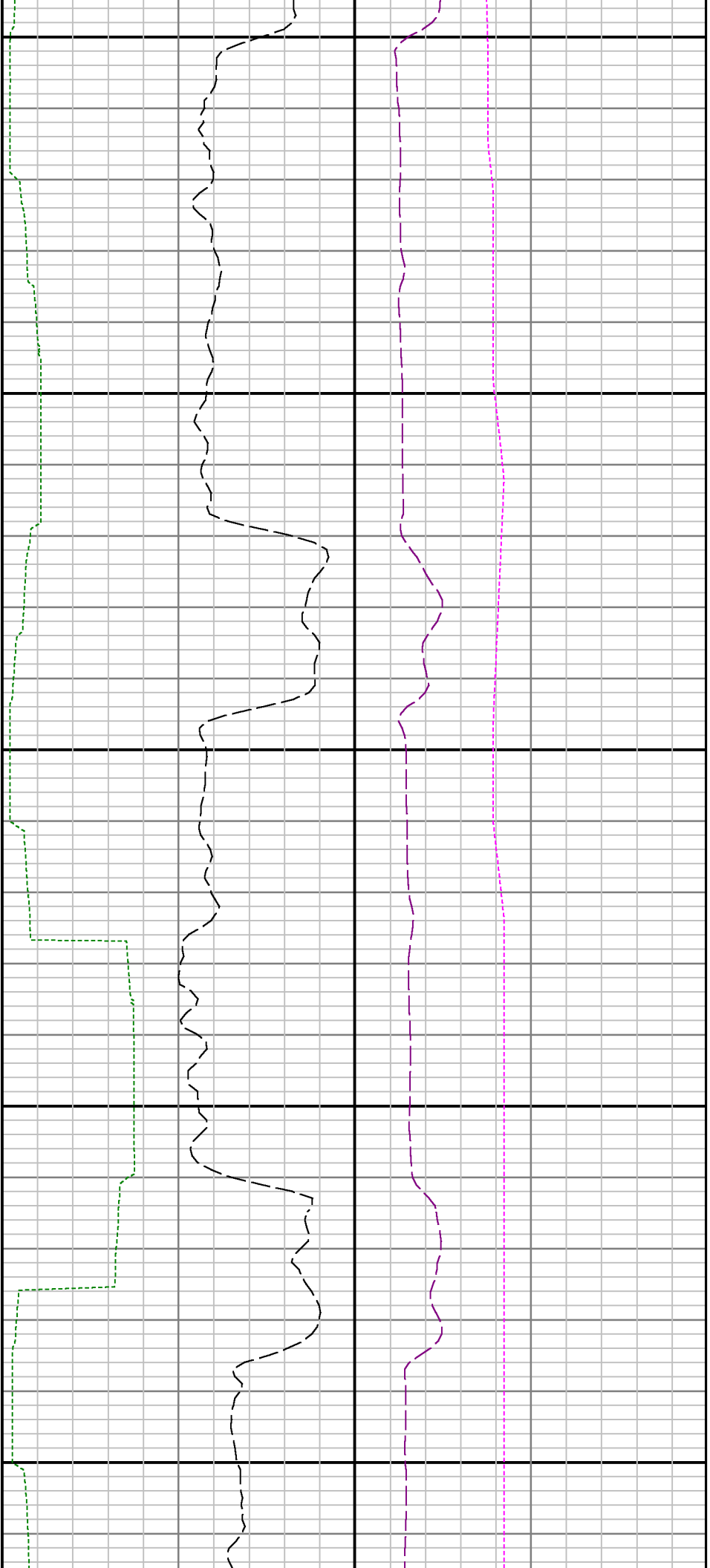




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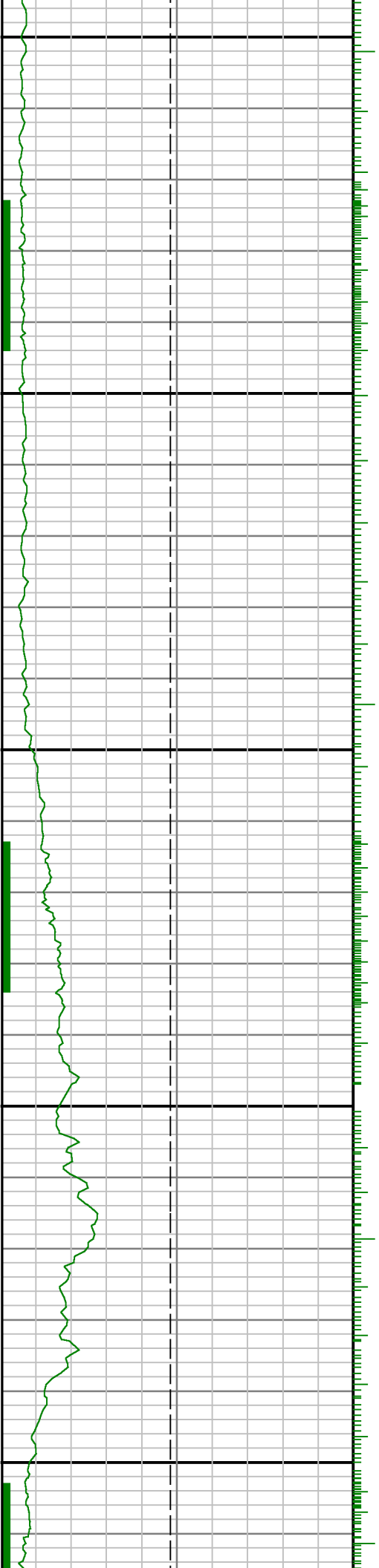


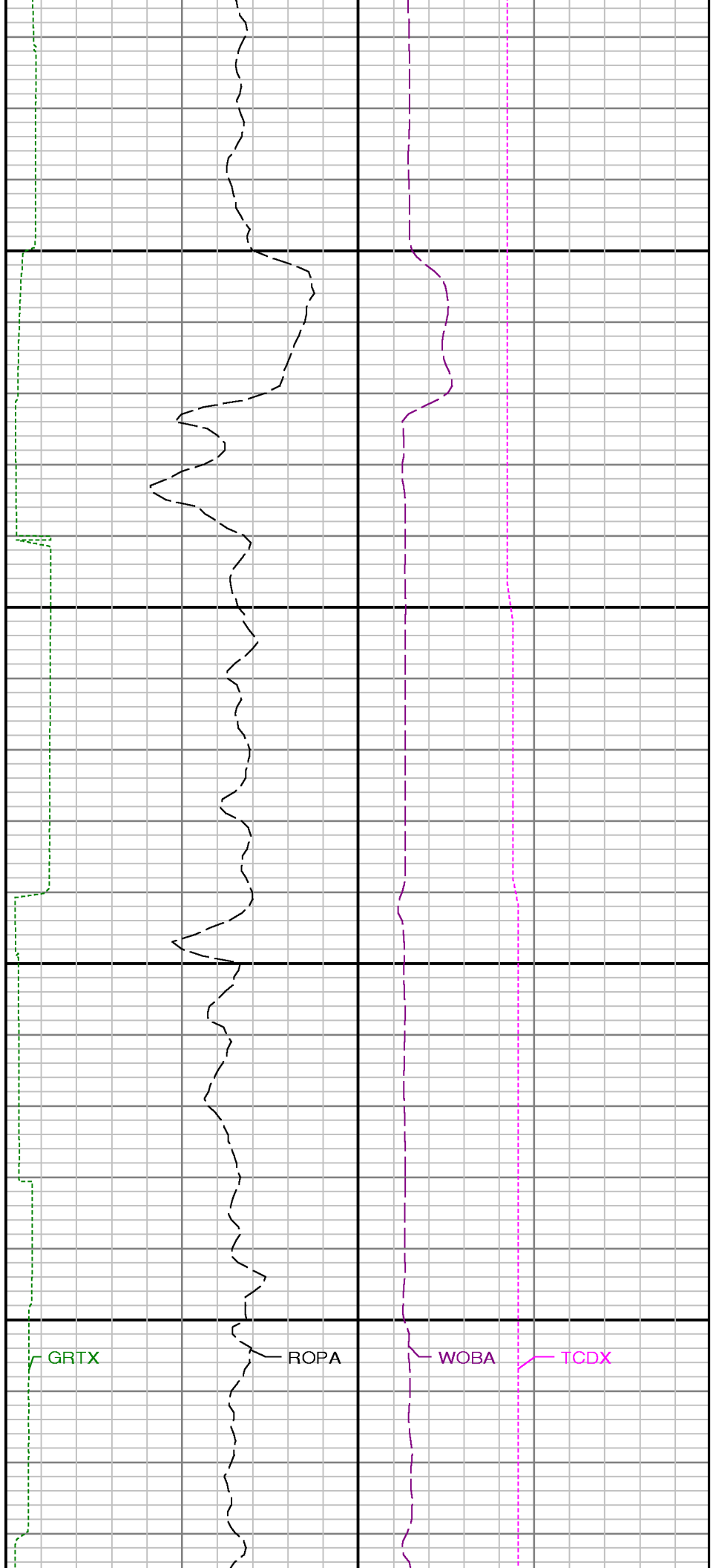
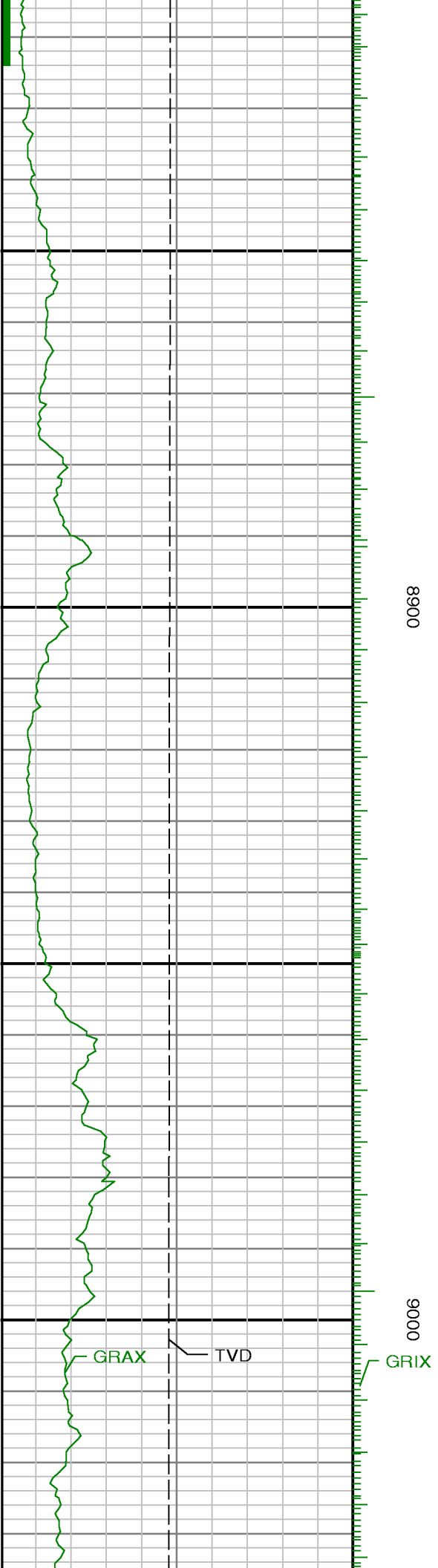


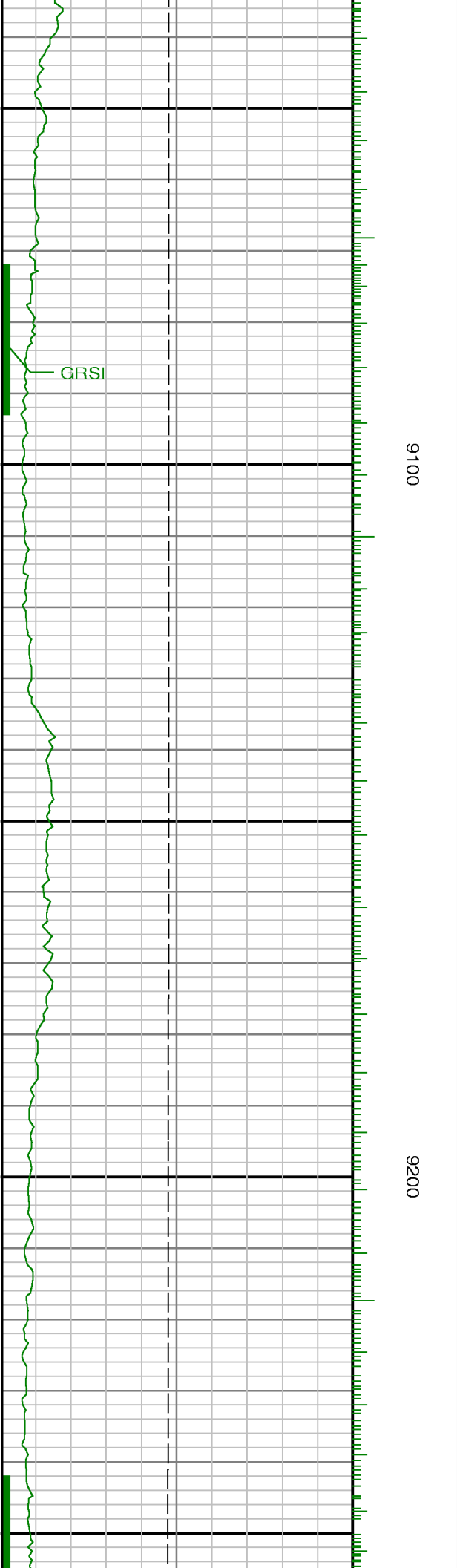
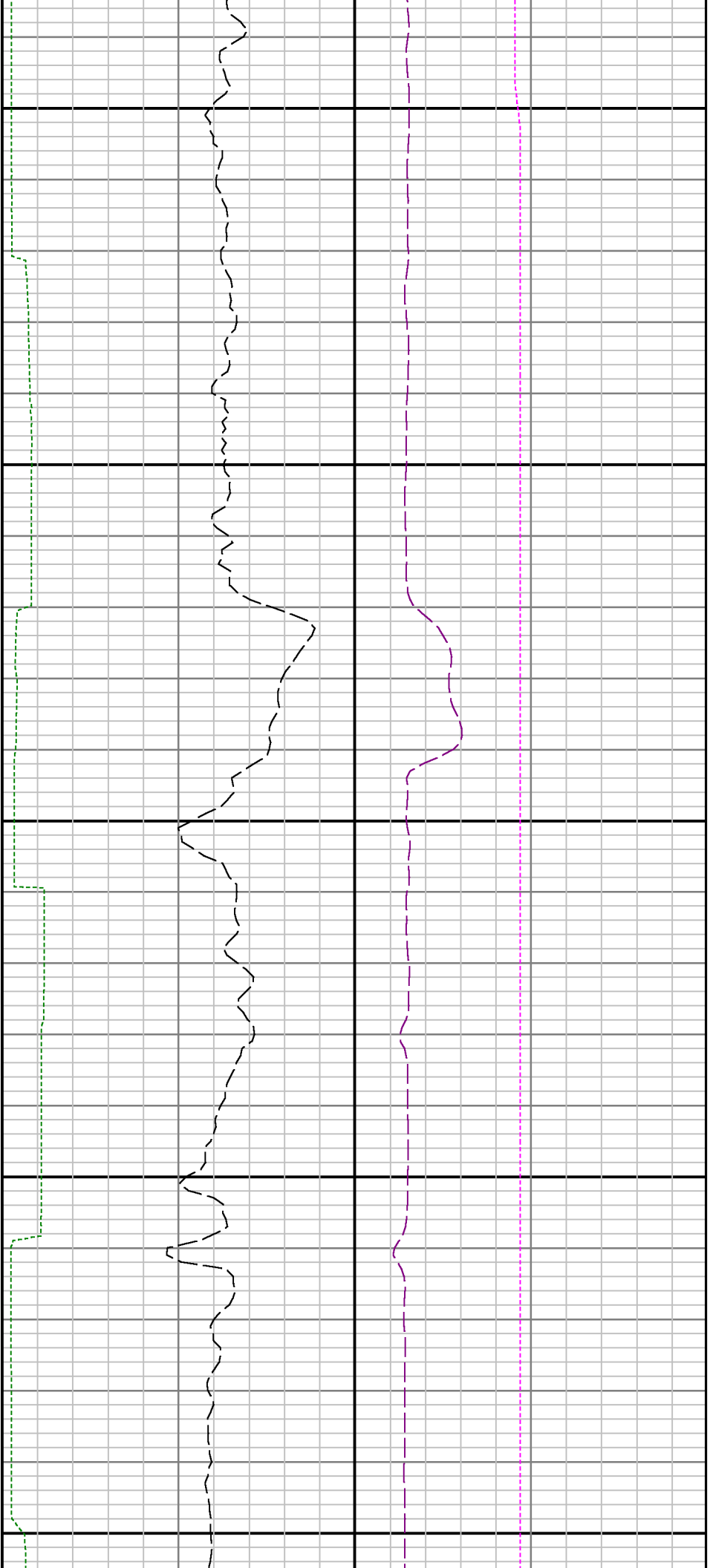
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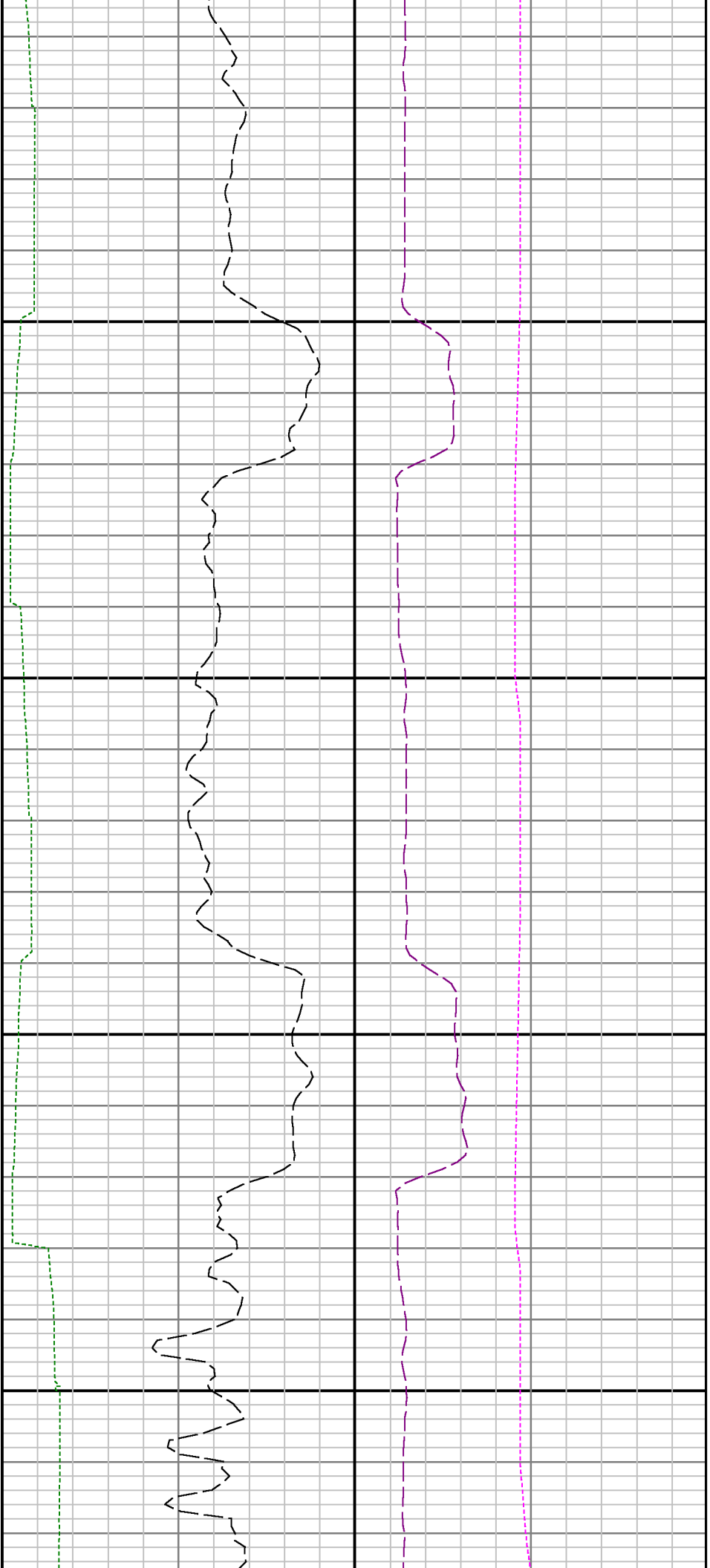
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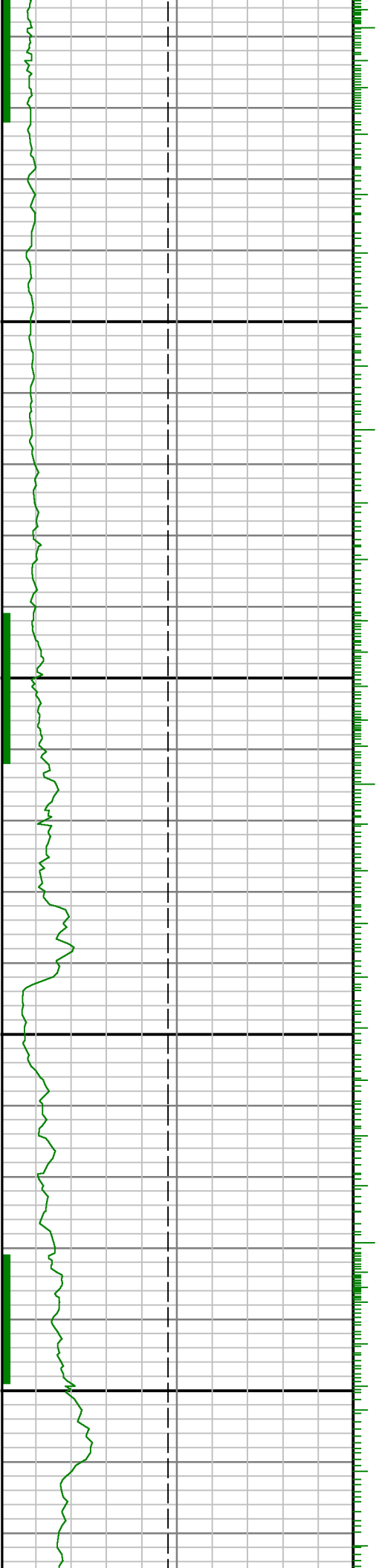


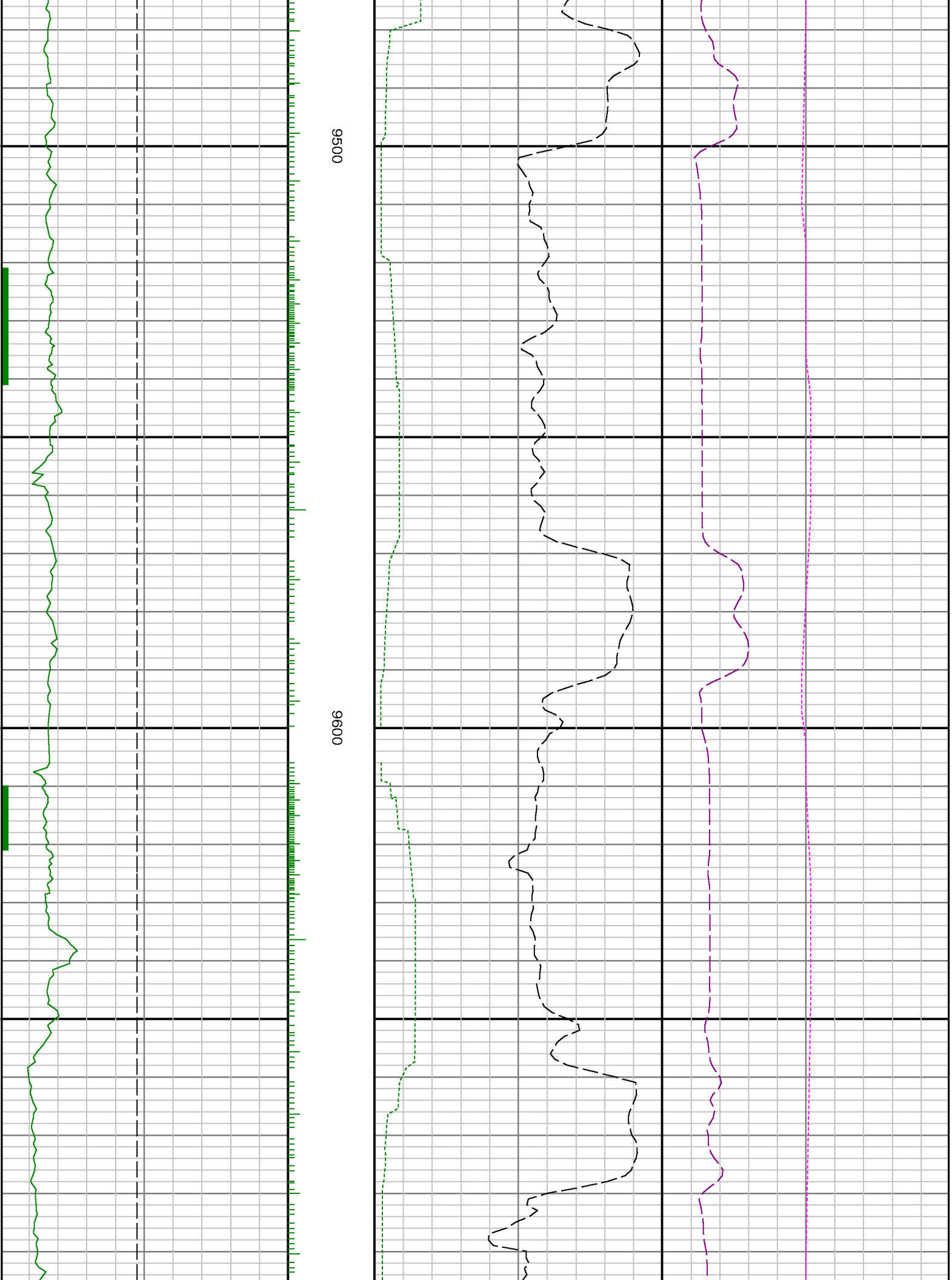


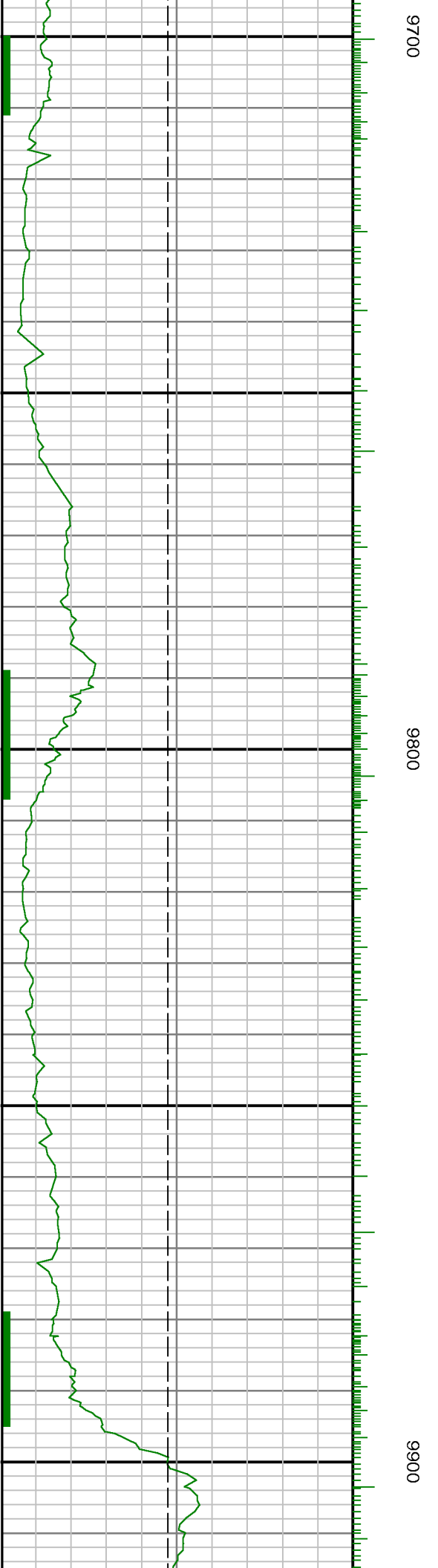
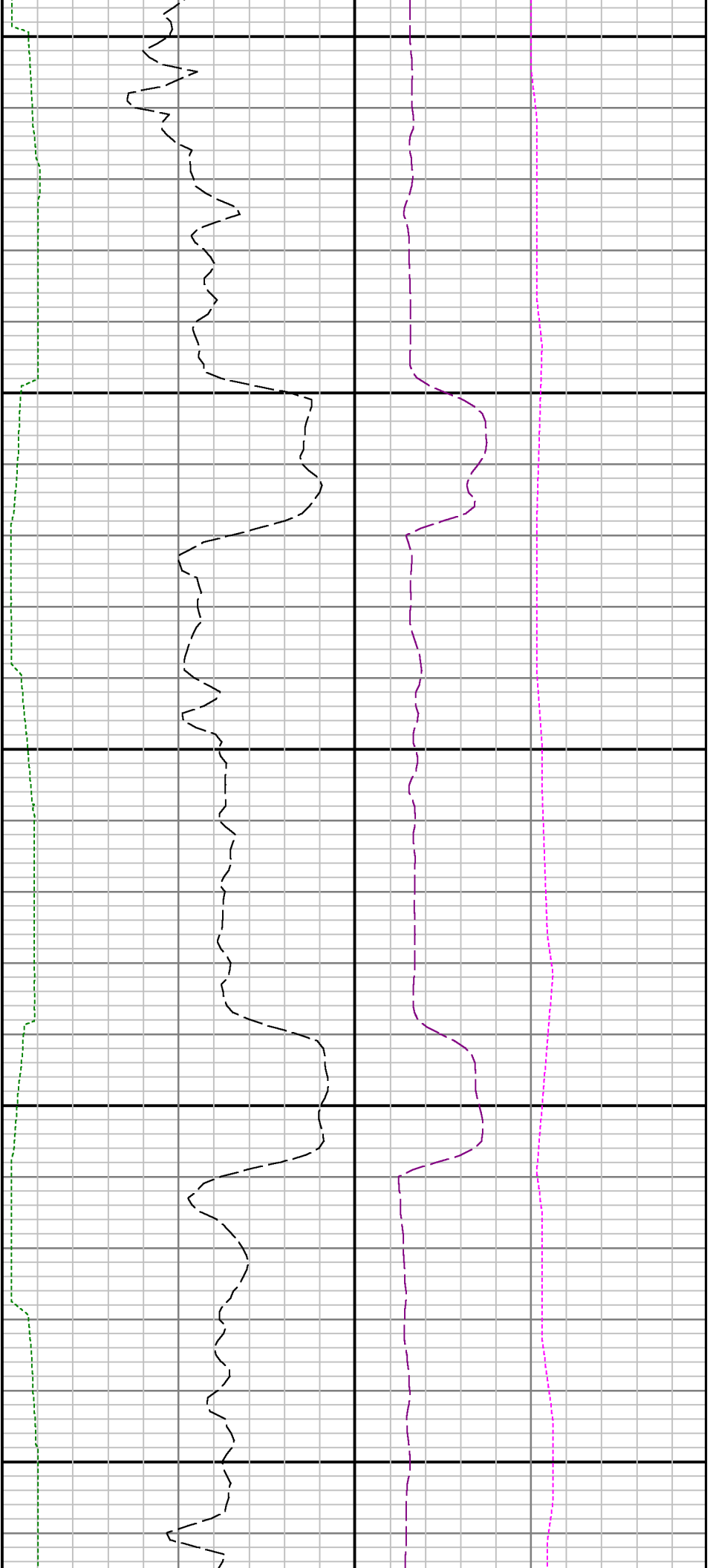


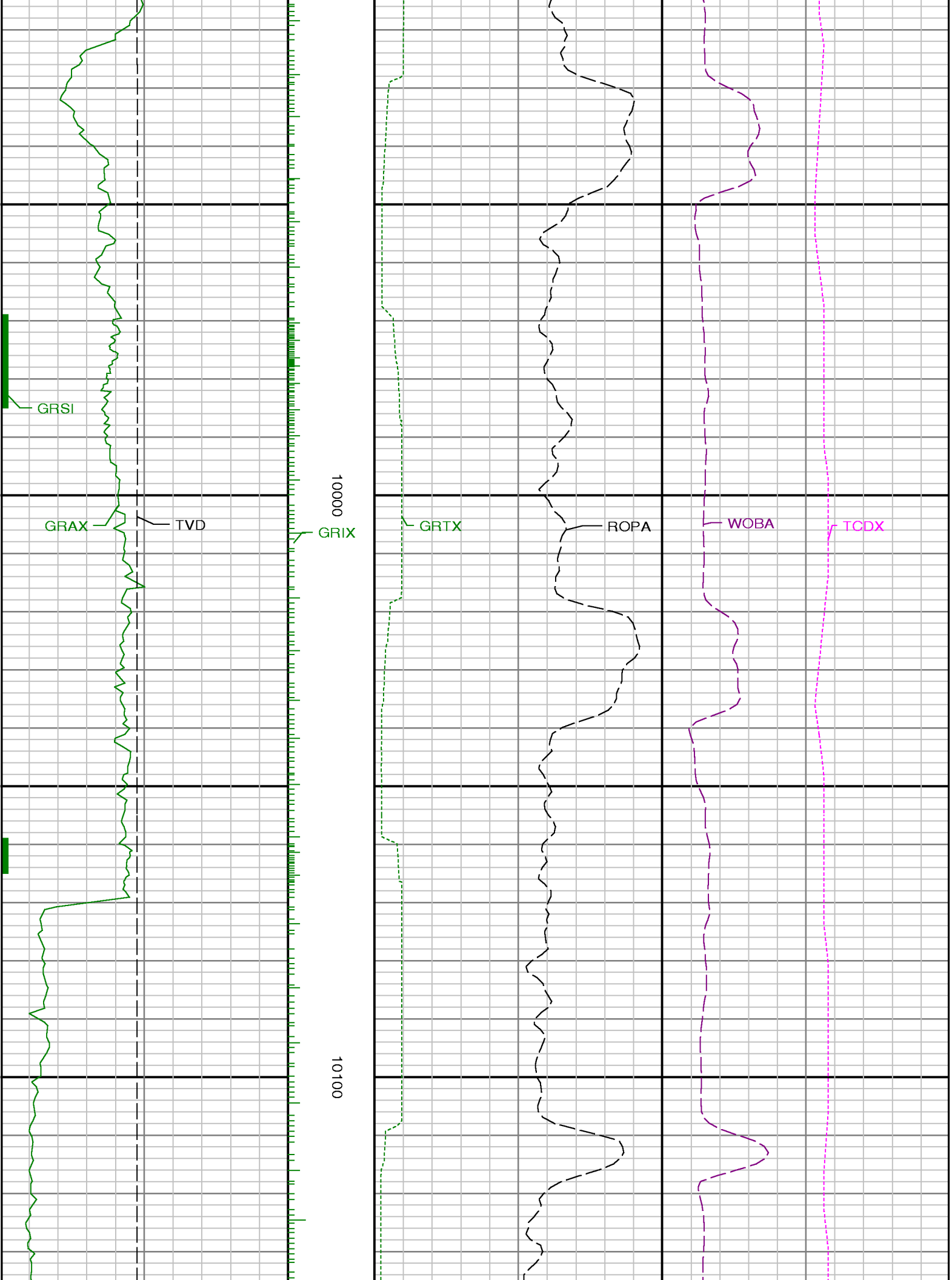
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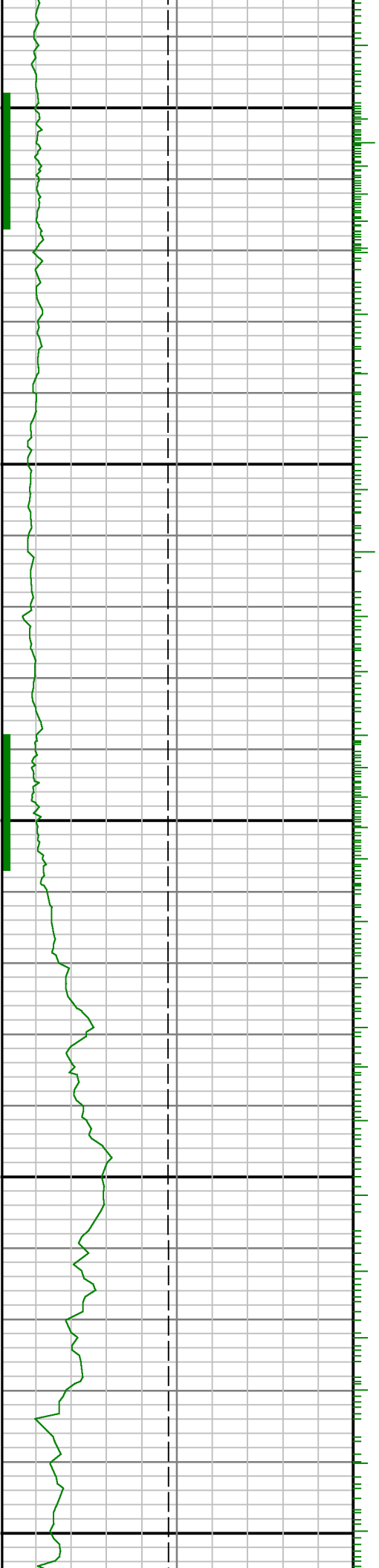


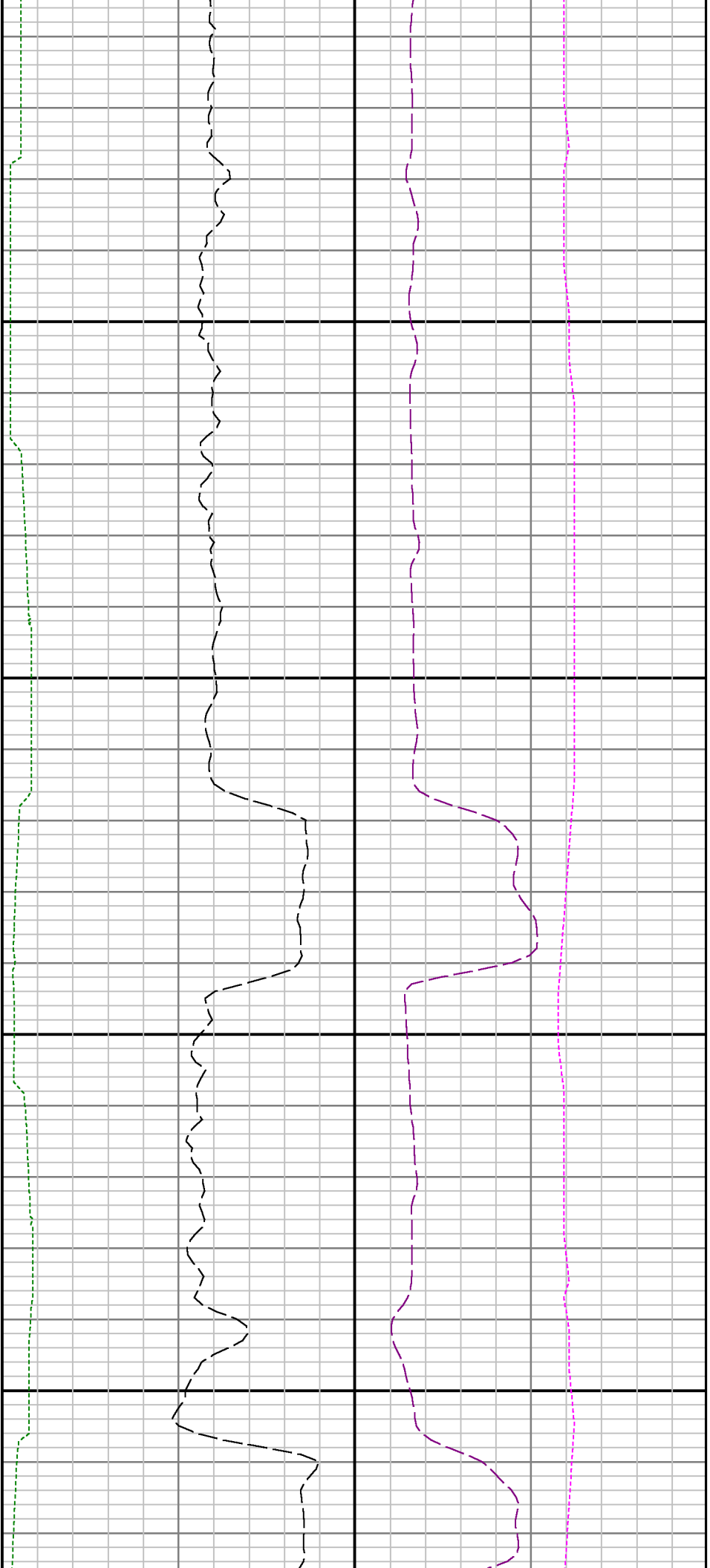




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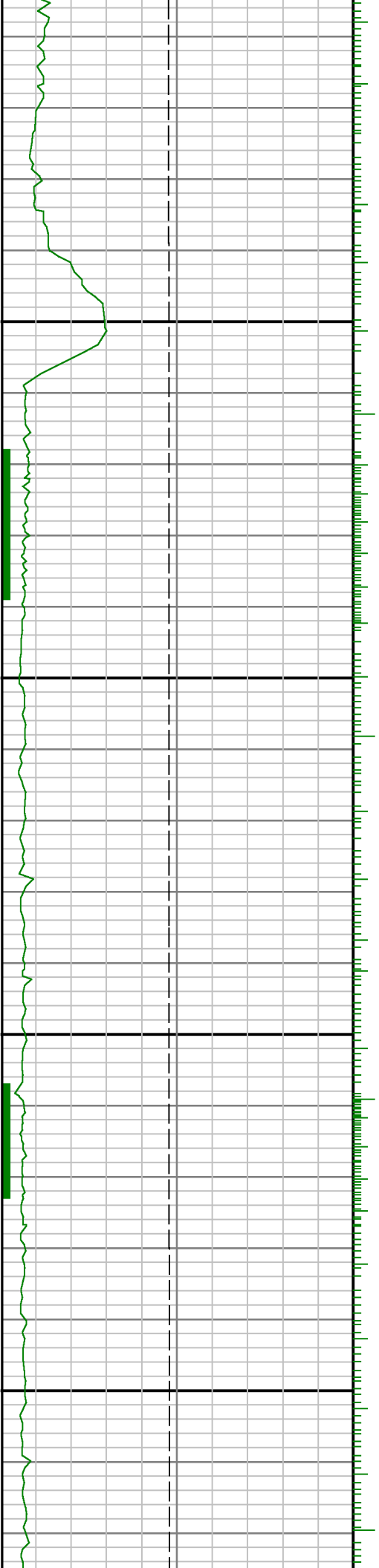
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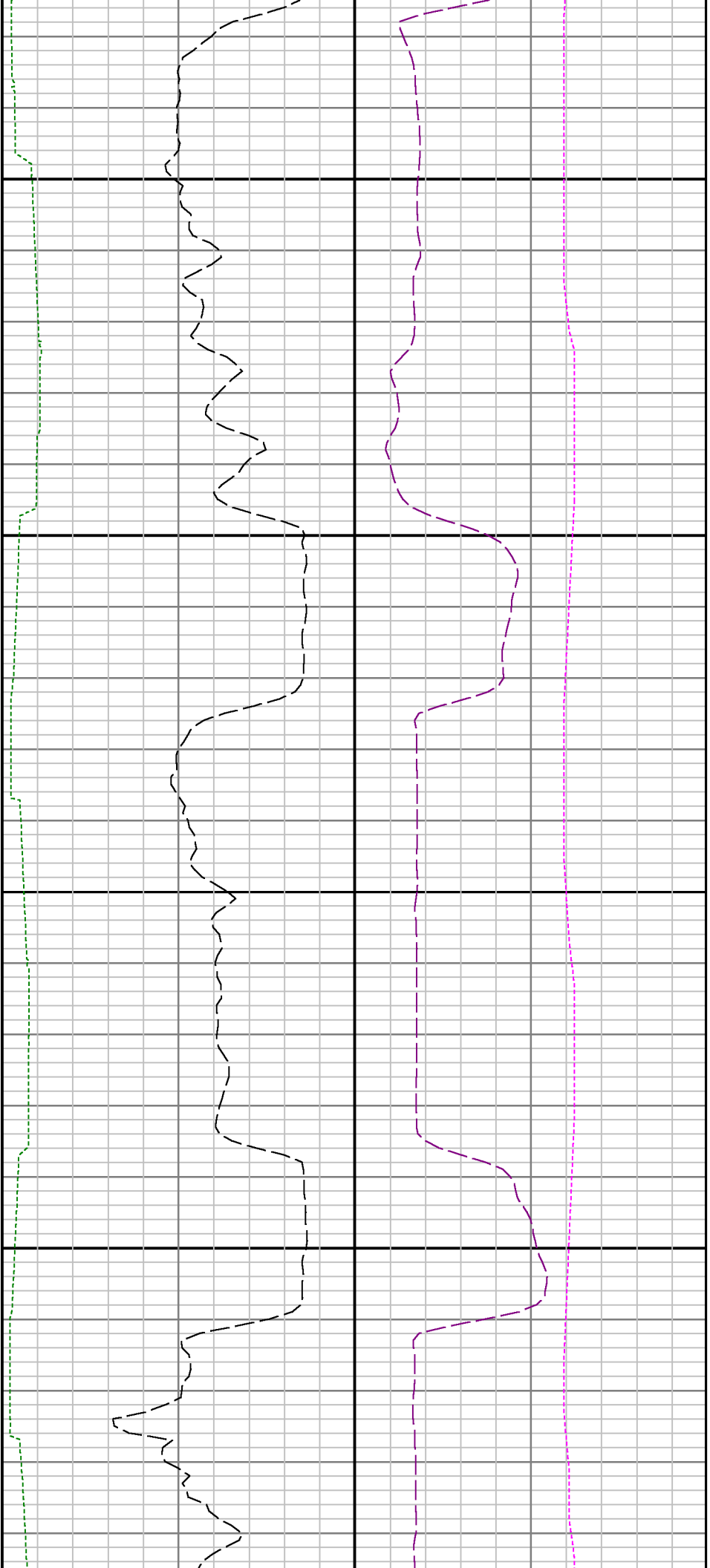




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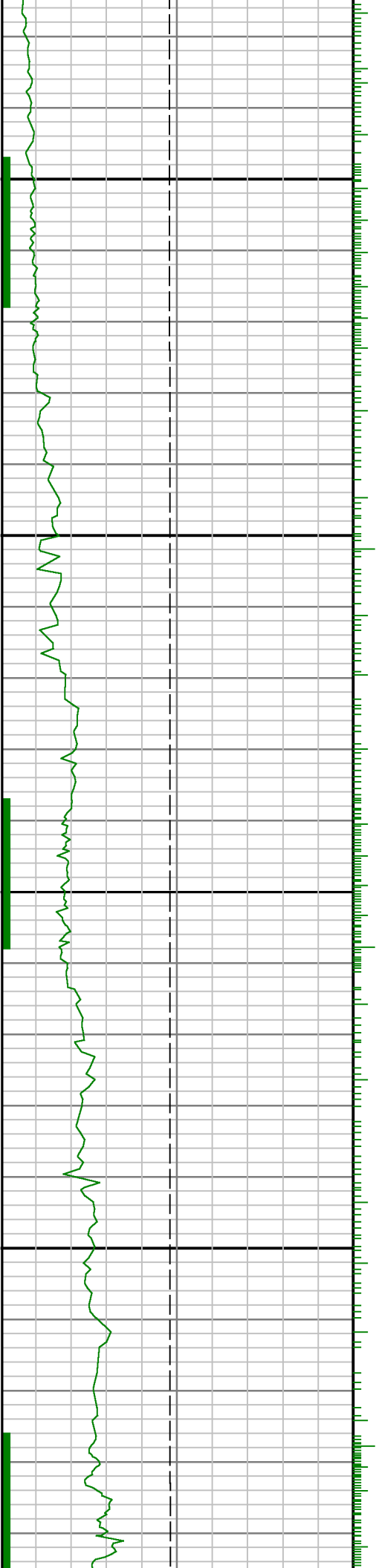
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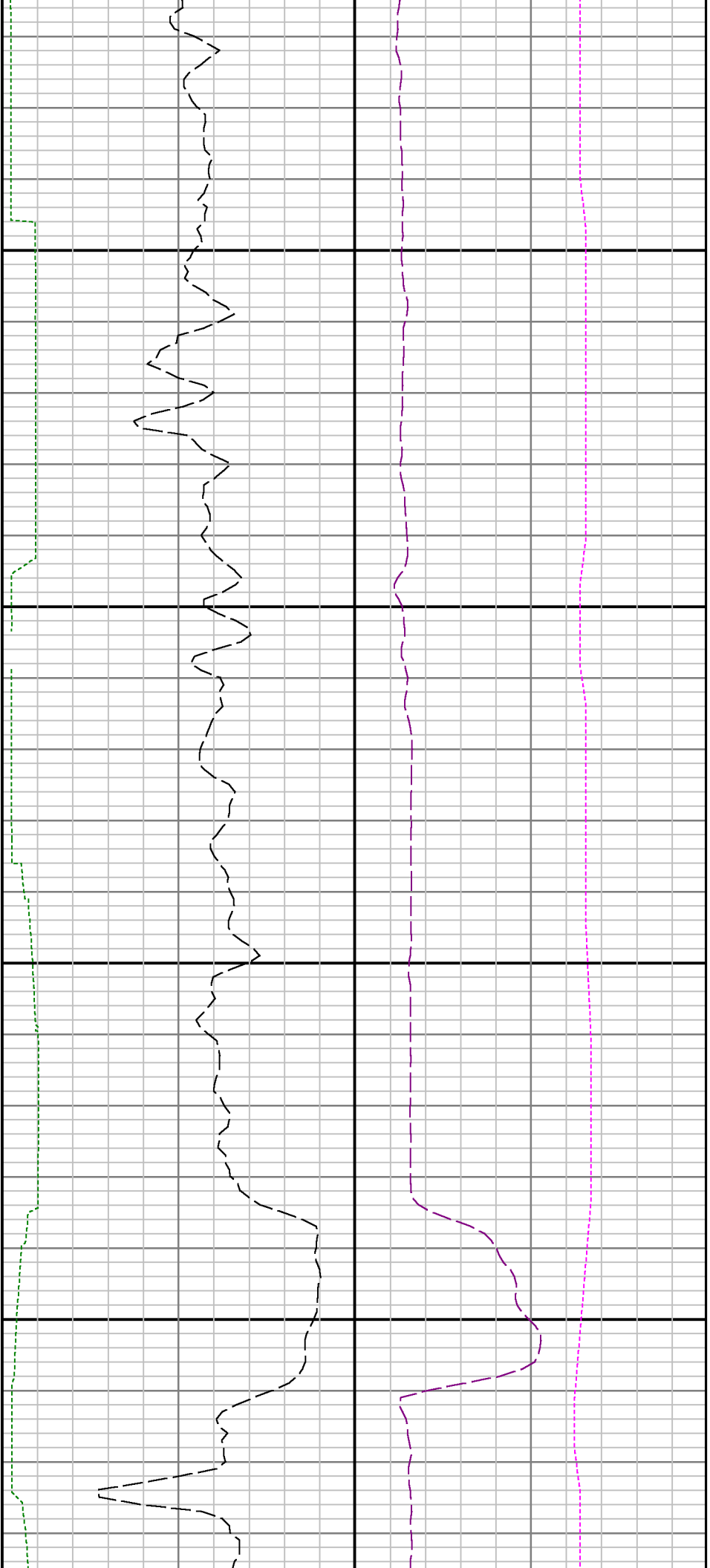


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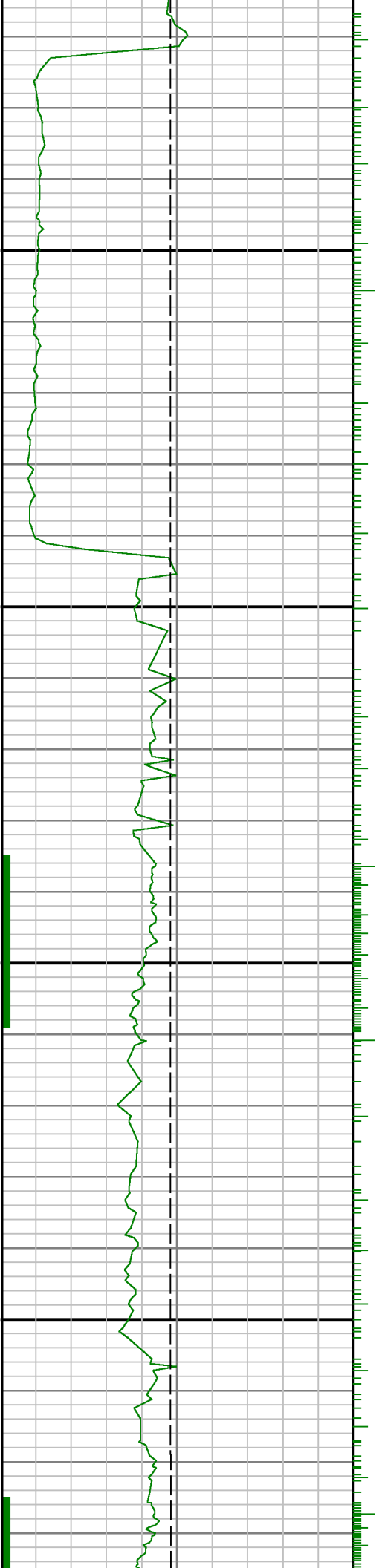






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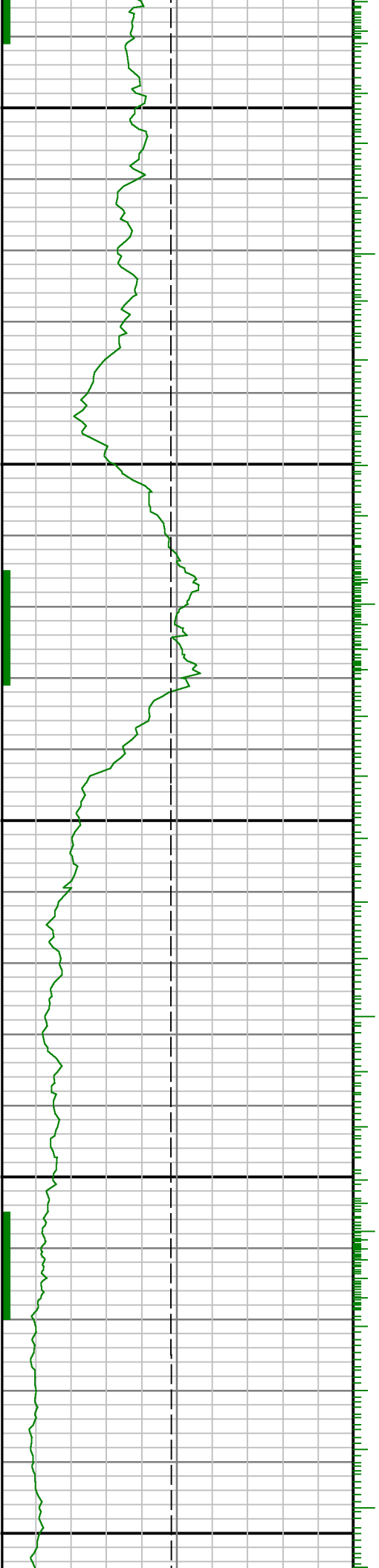
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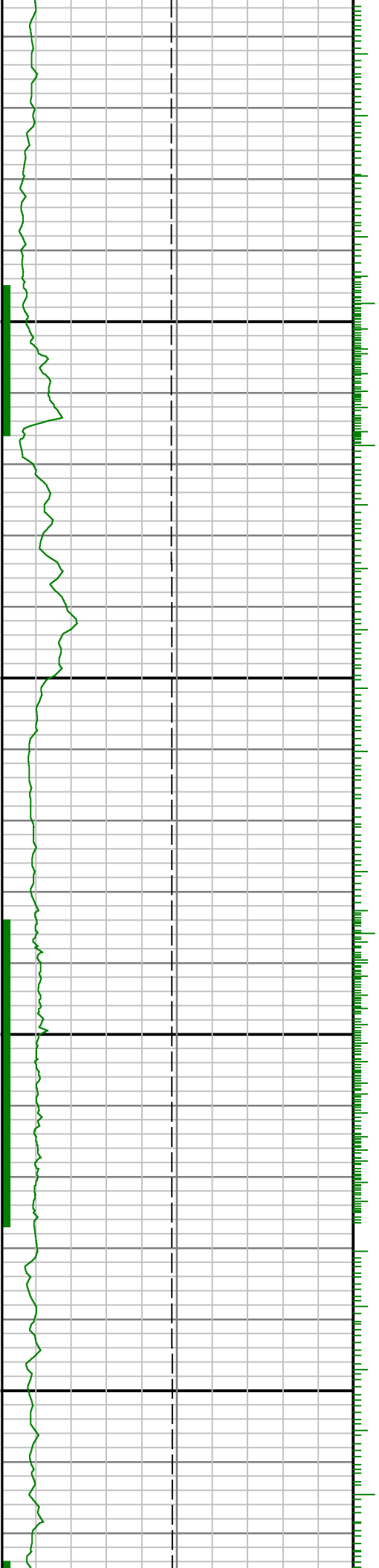
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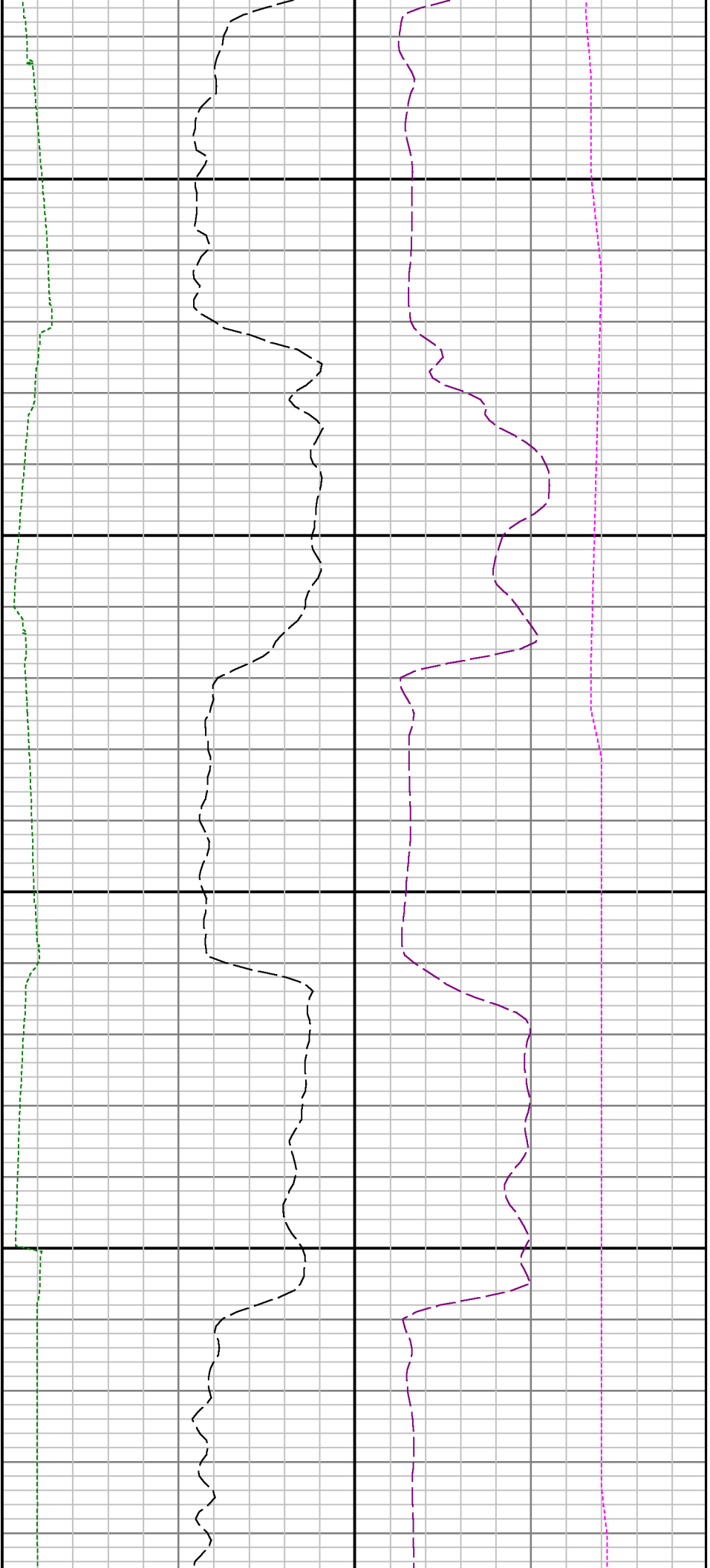




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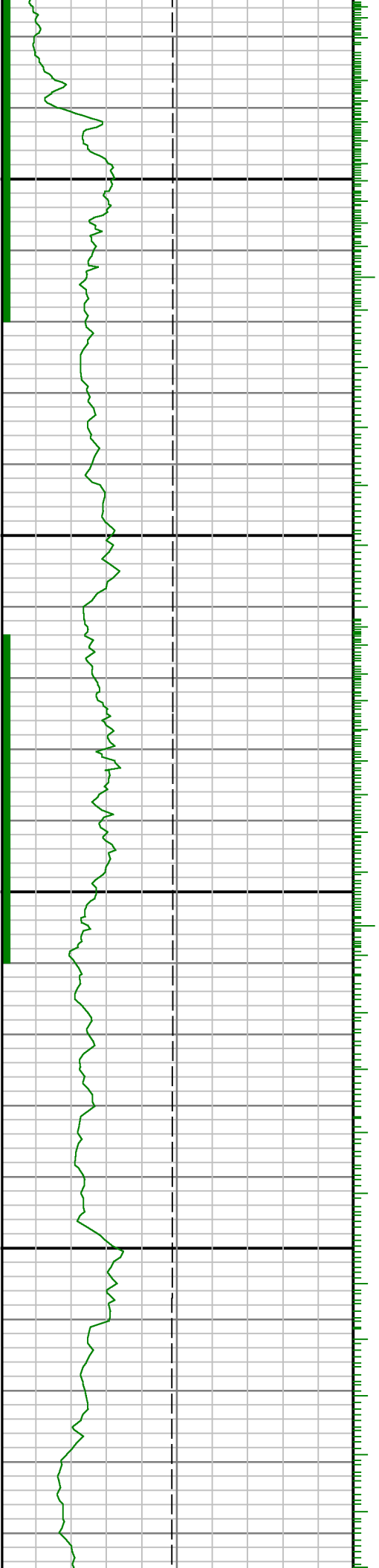
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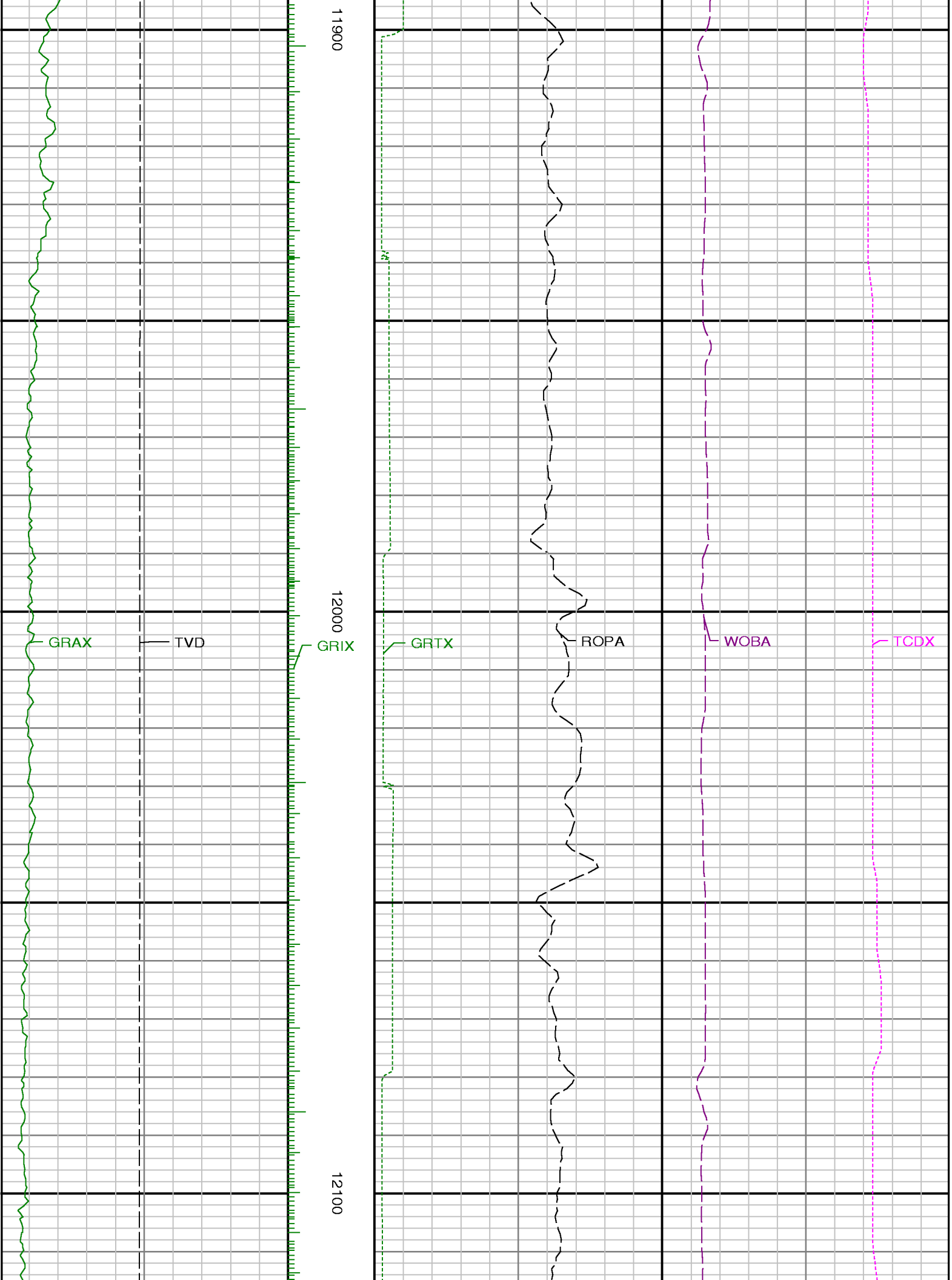


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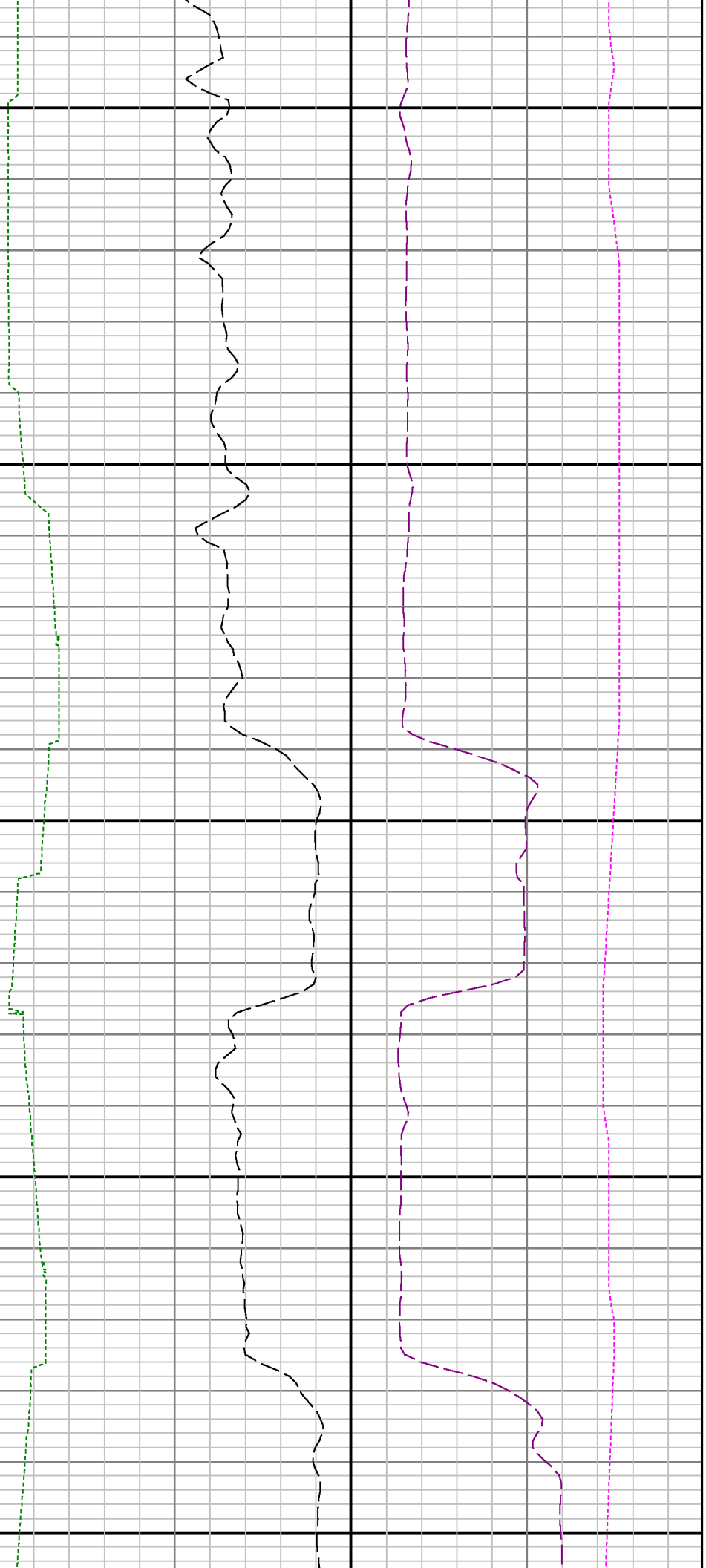
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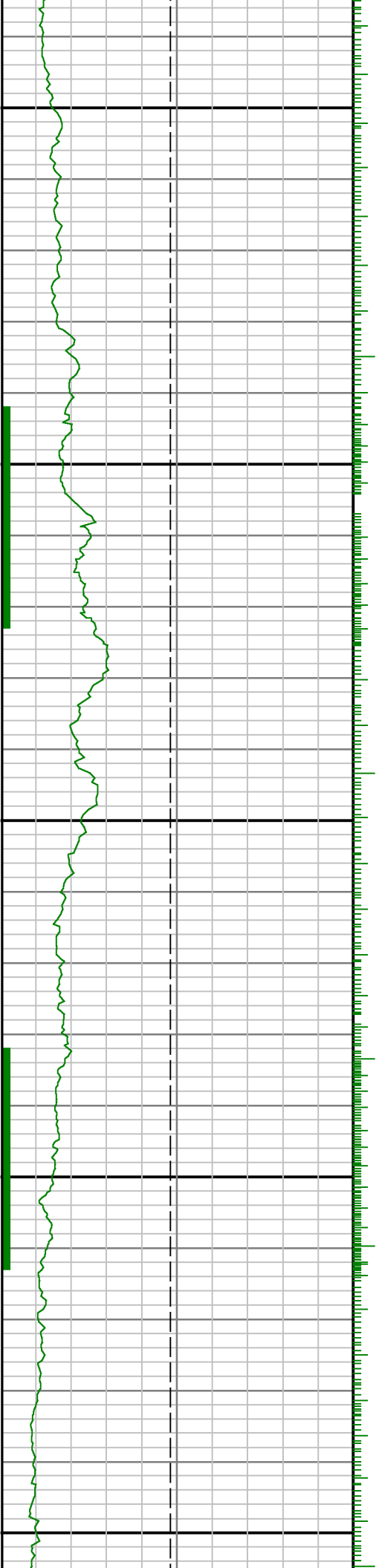


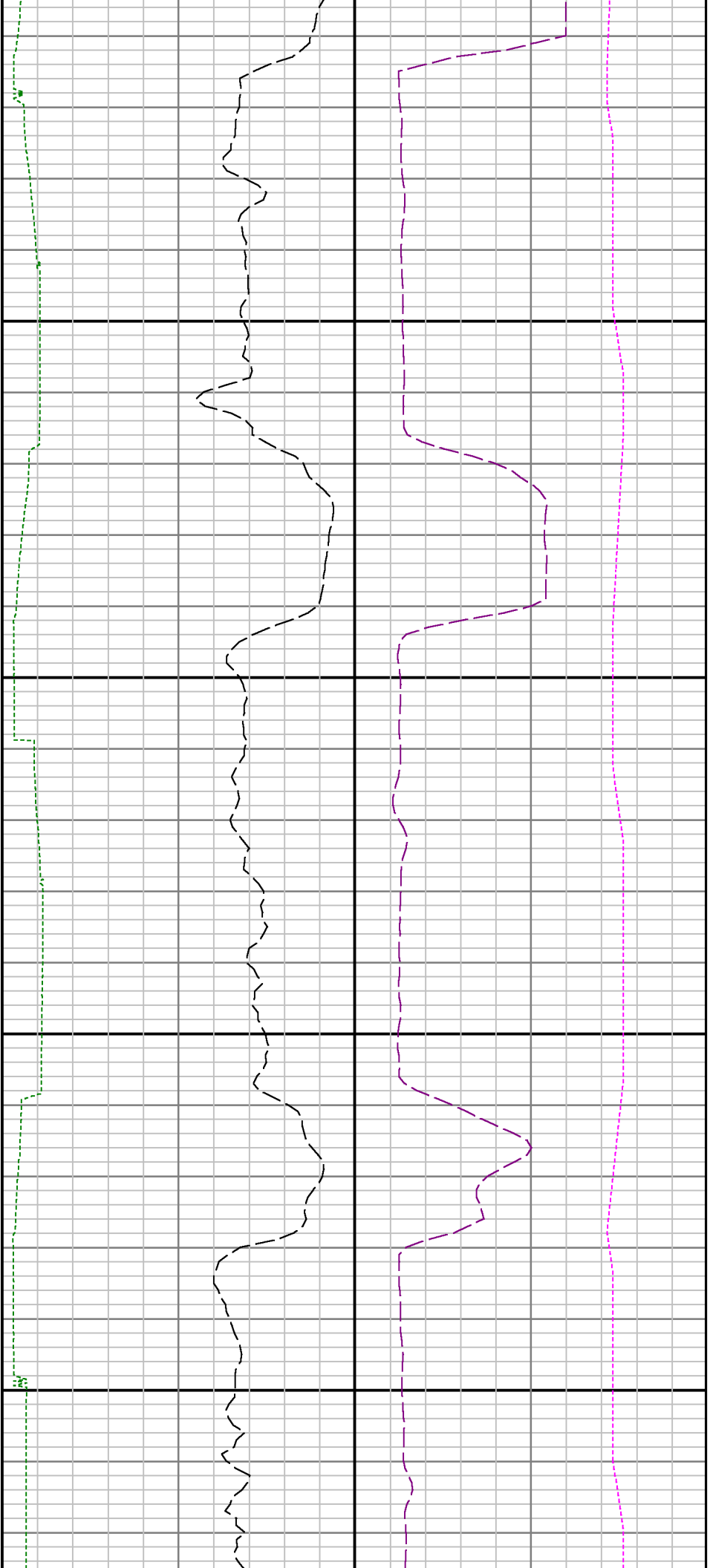




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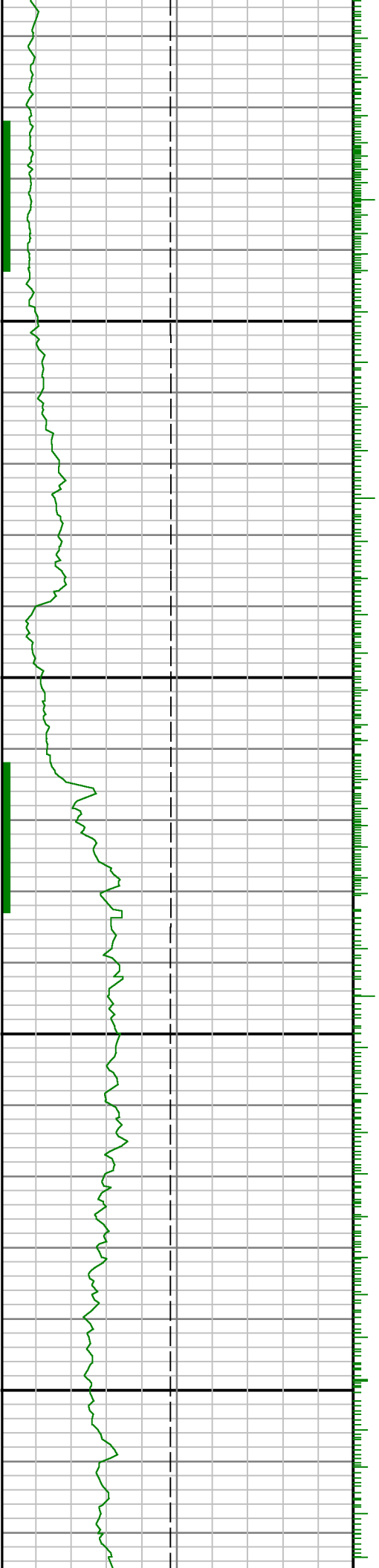
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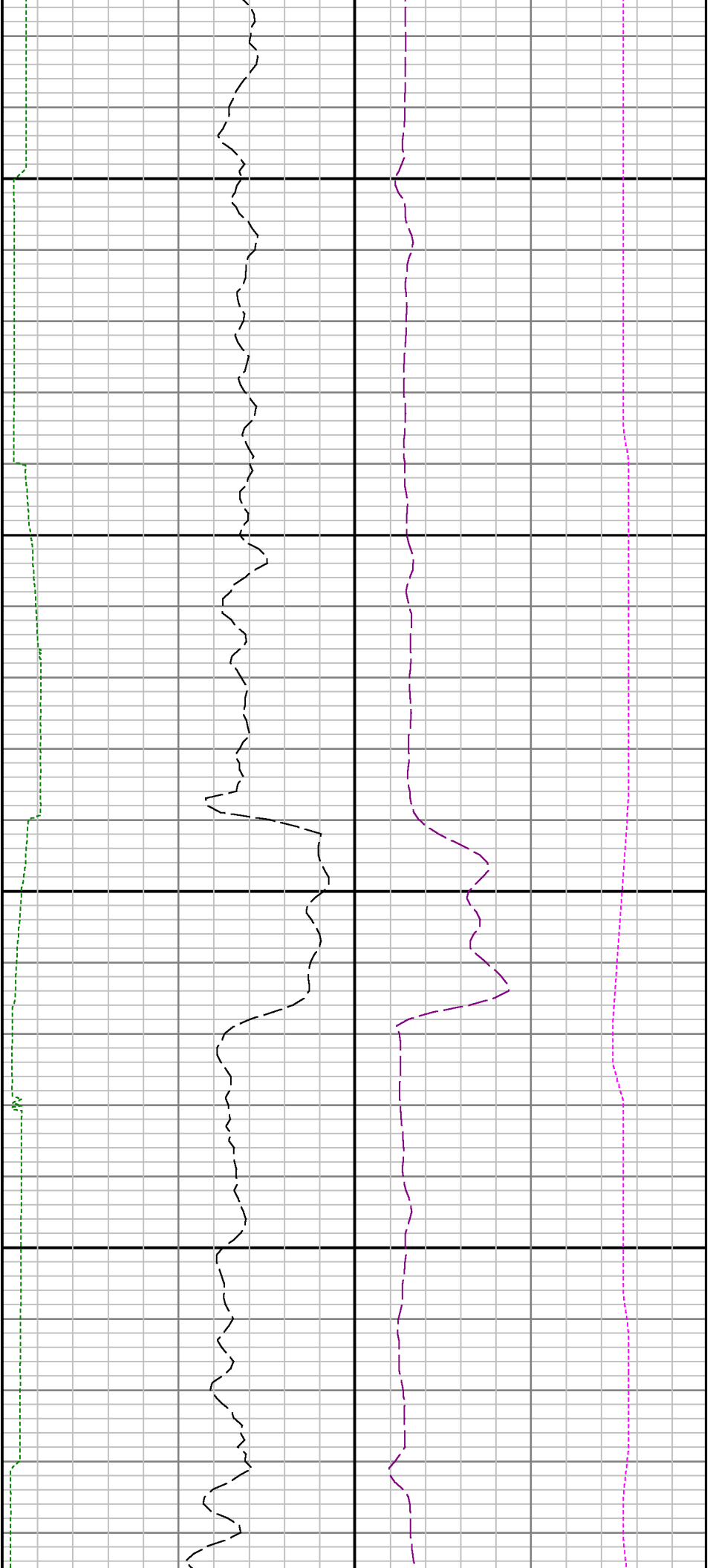




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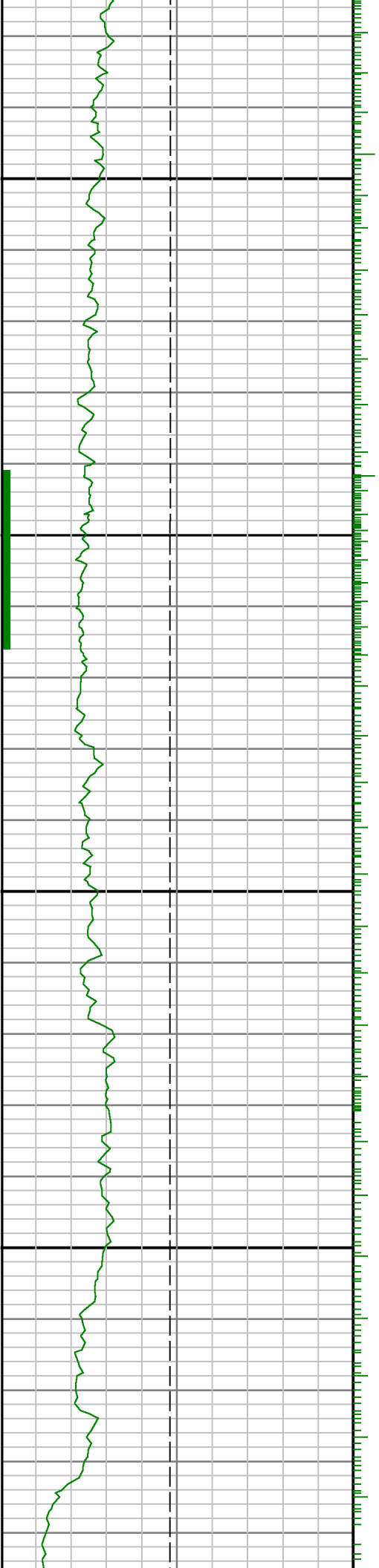
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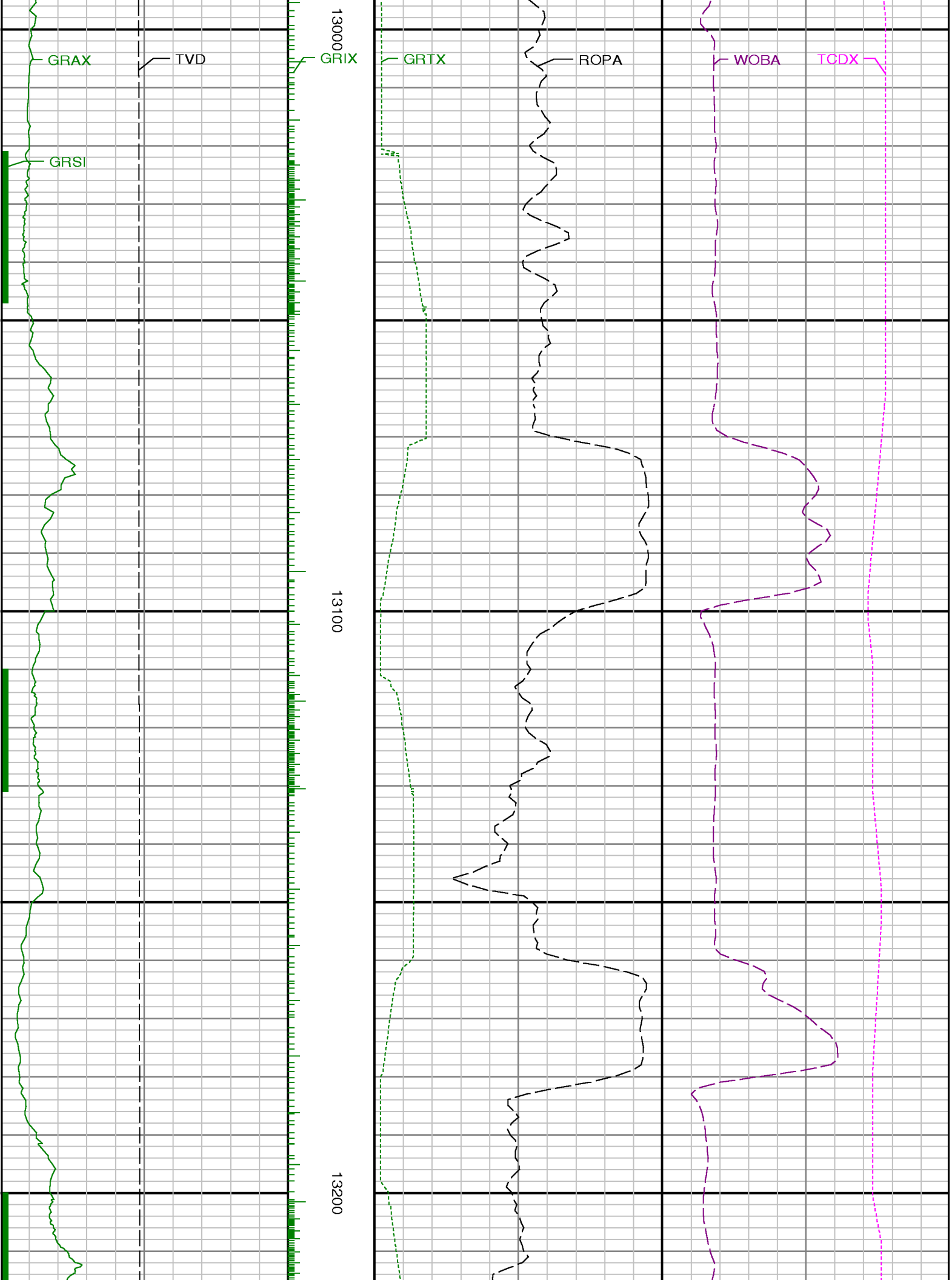




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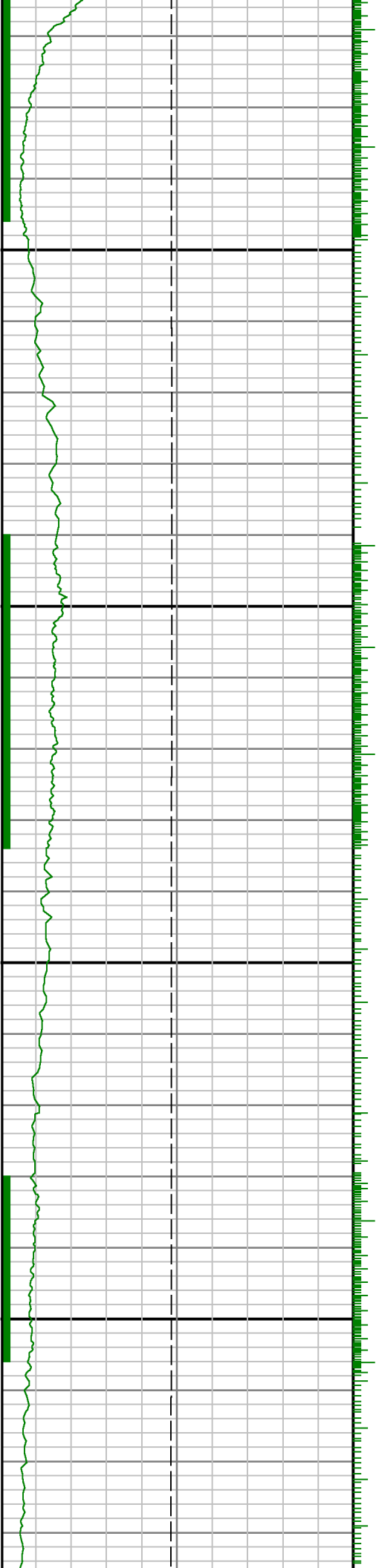


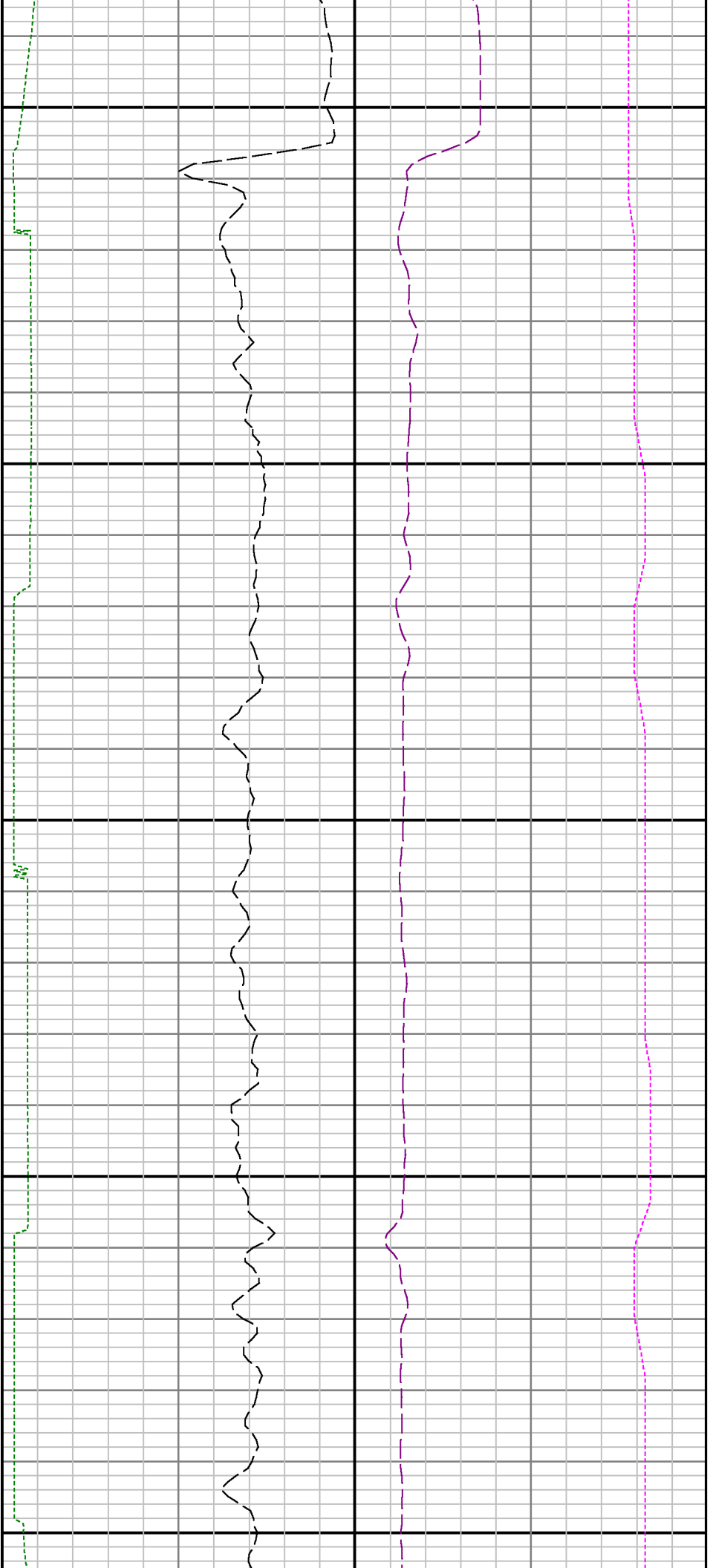




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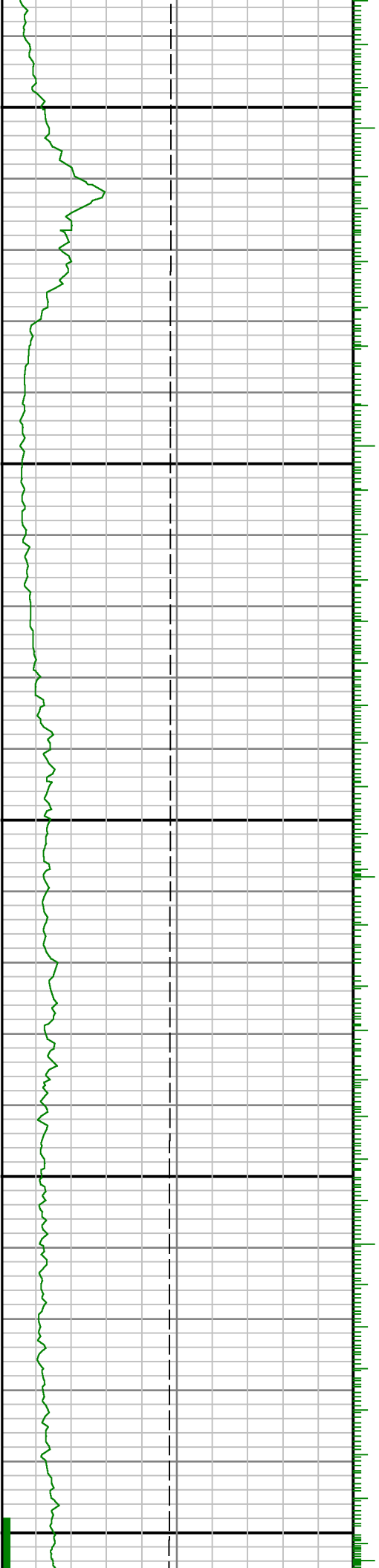
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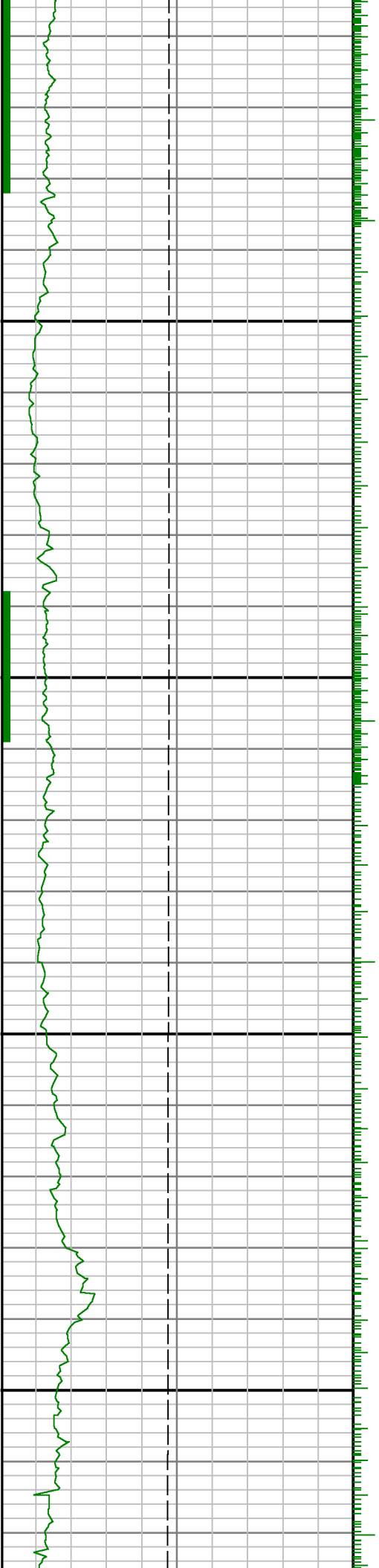


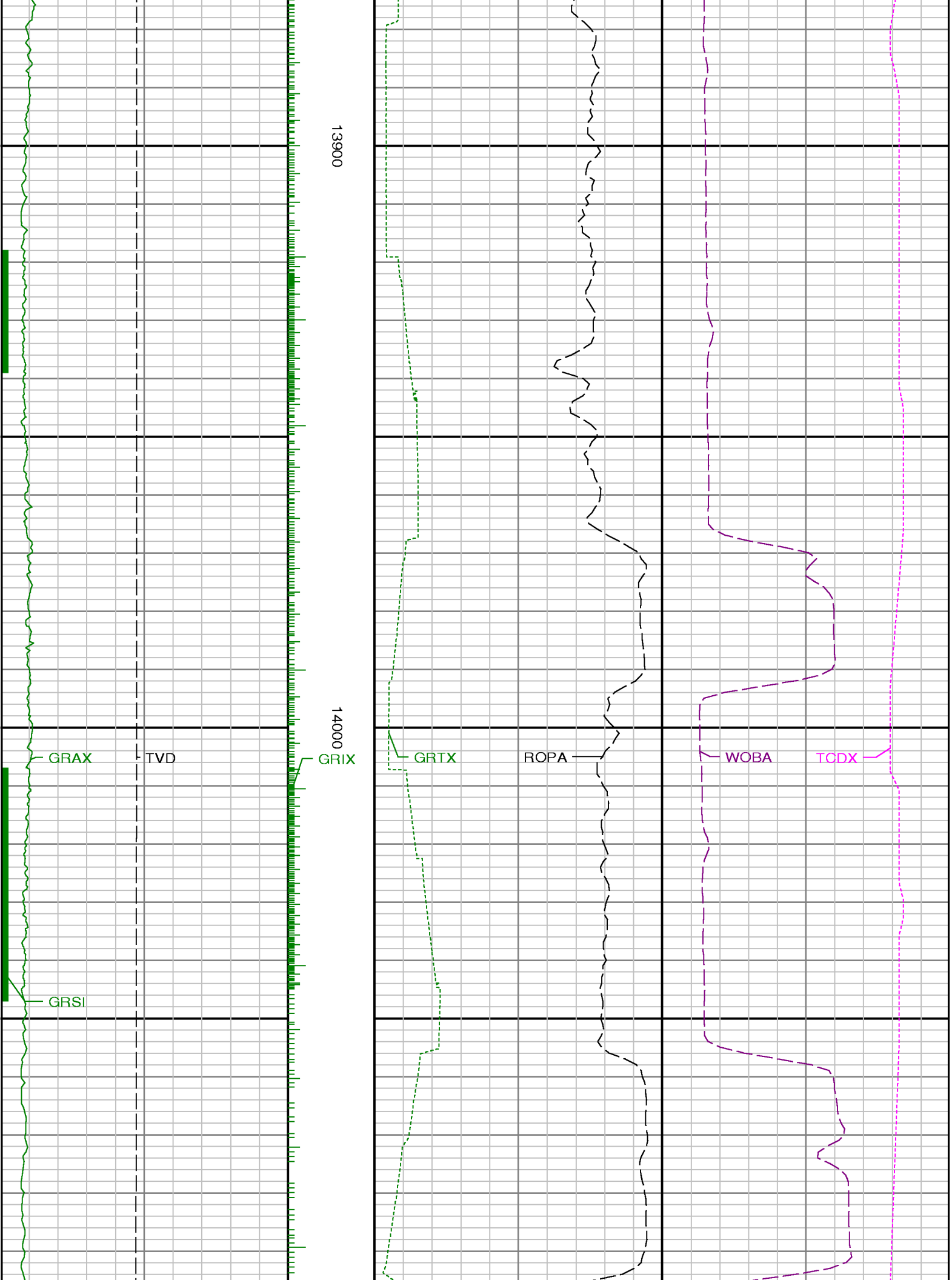


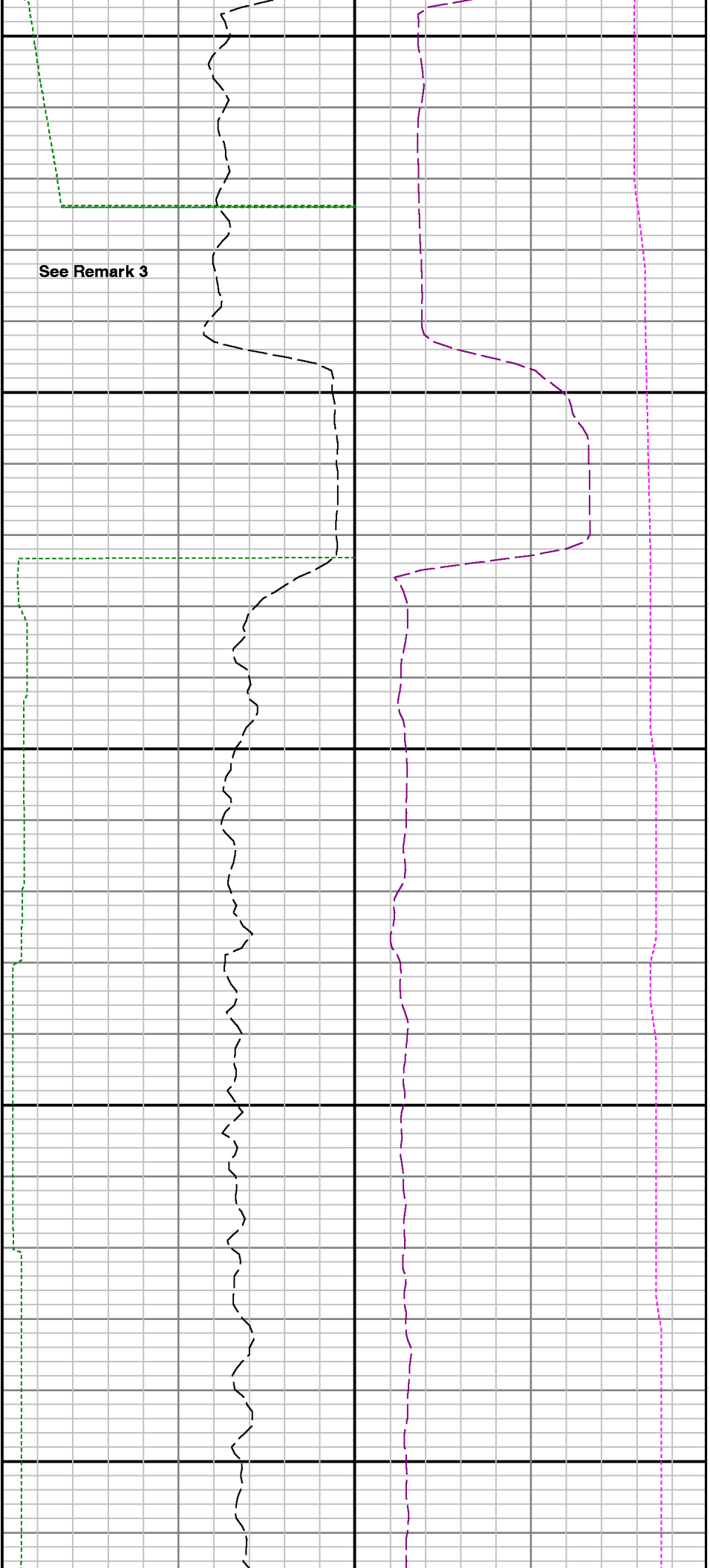


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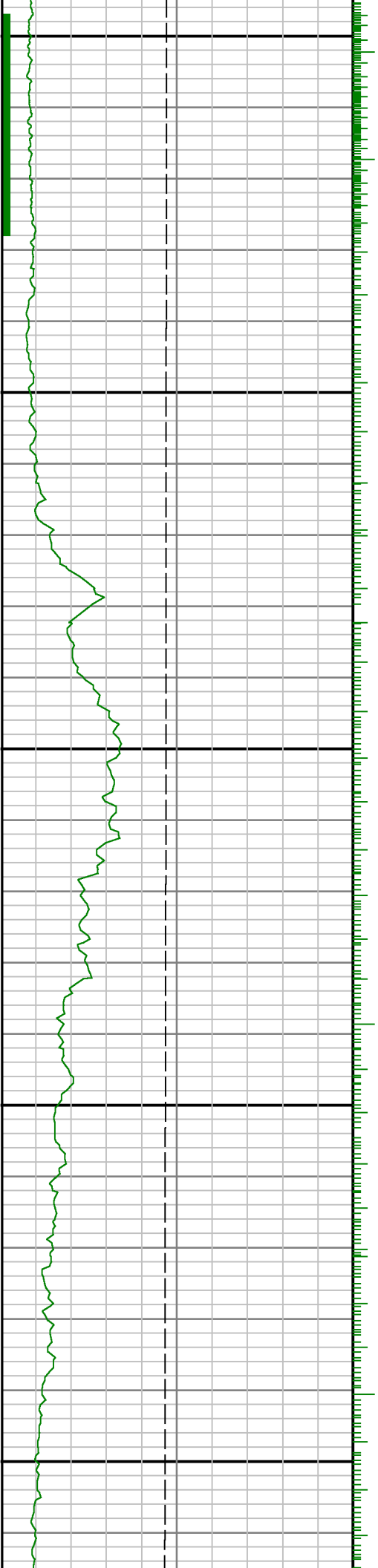
See Remark 3

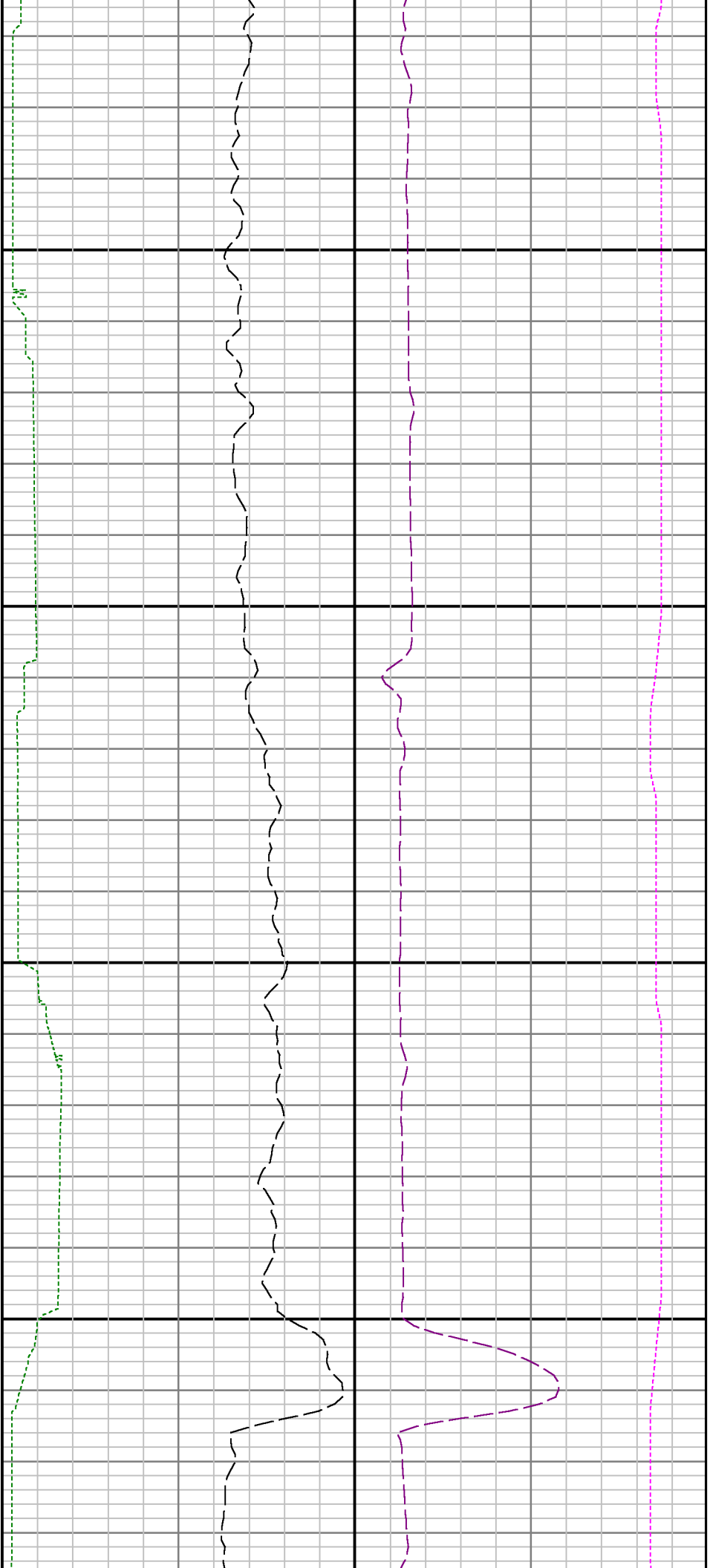
Run 3 <> Run 4

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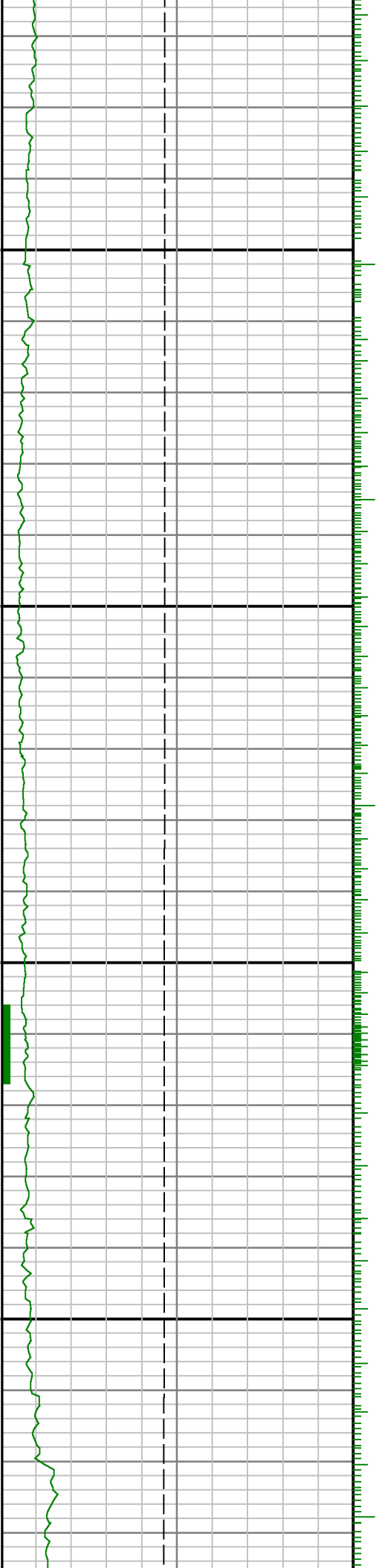
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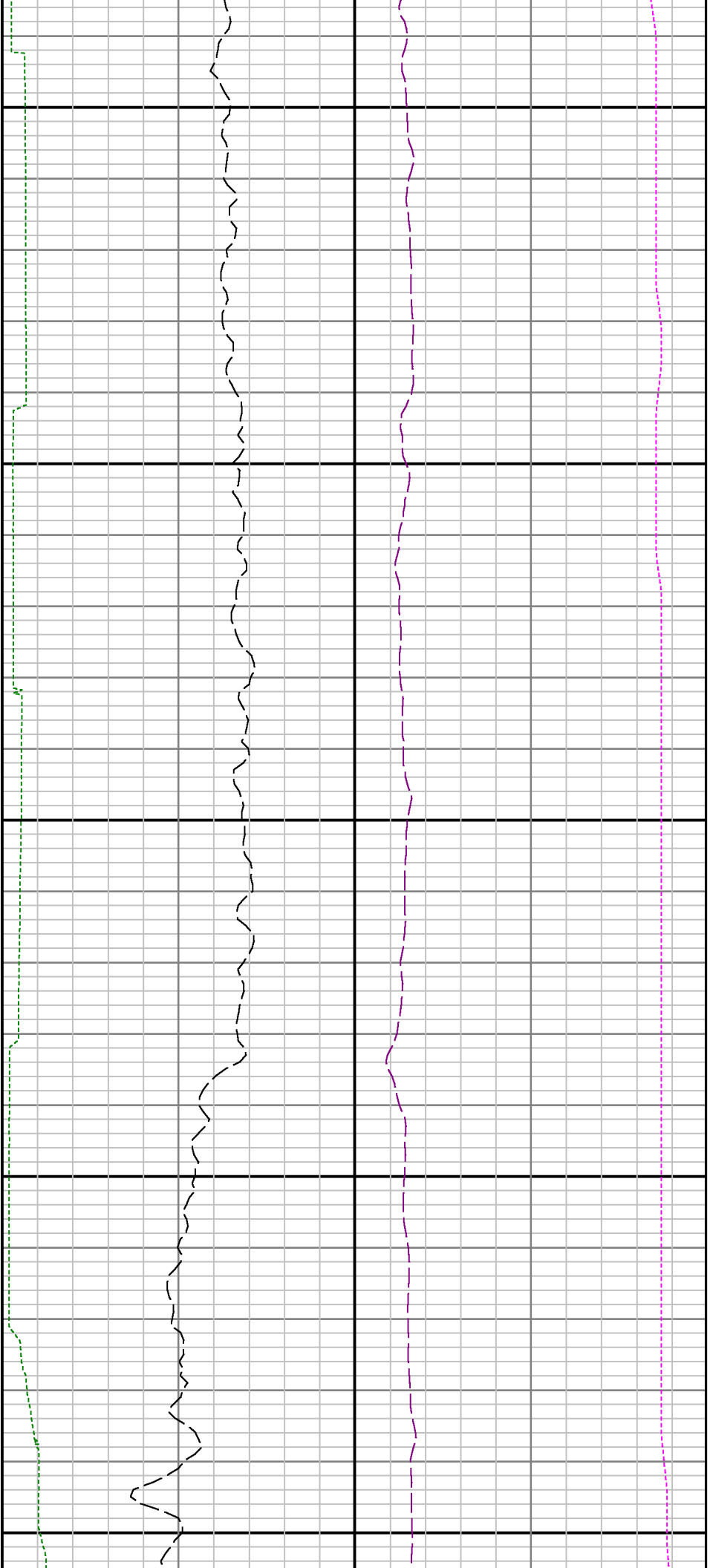




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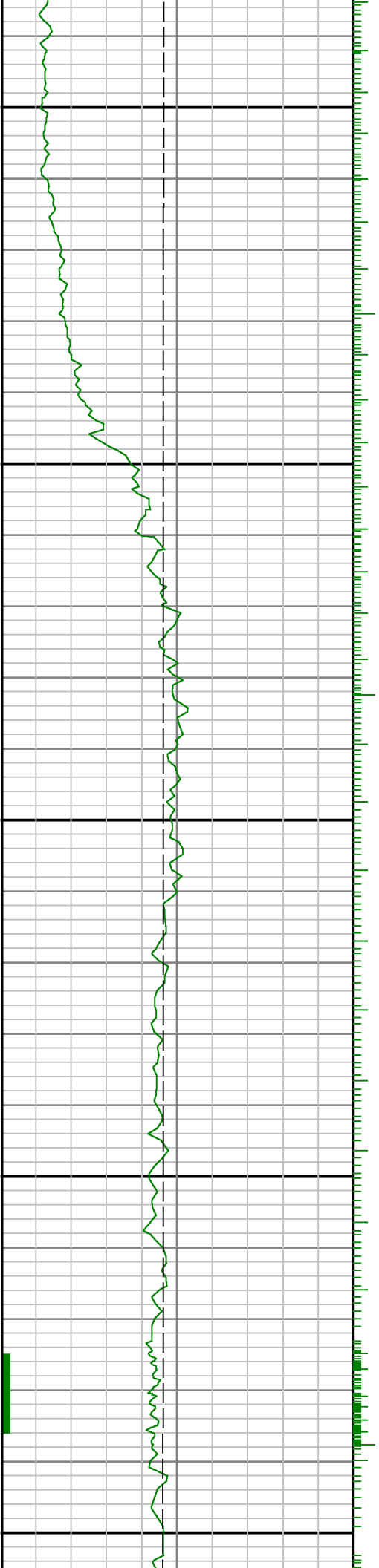
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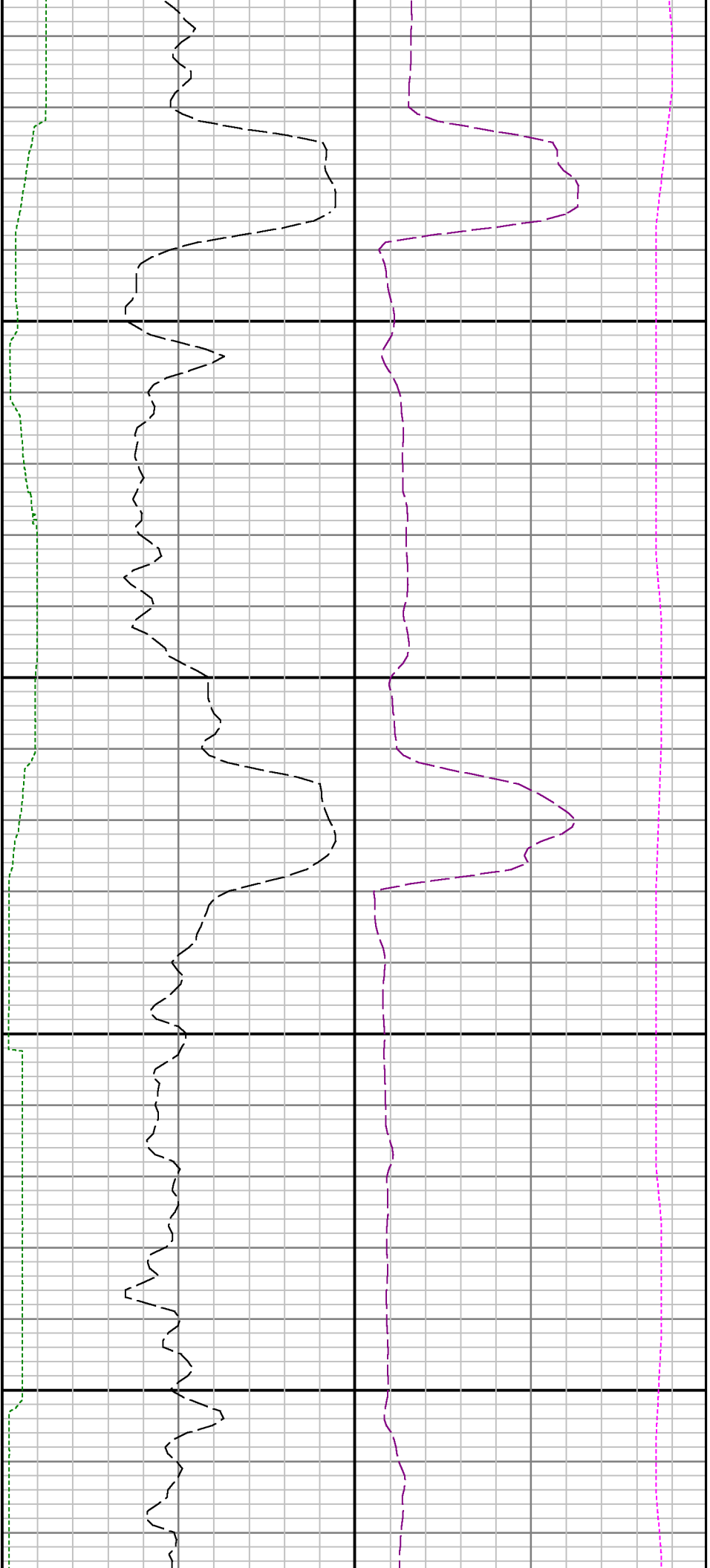




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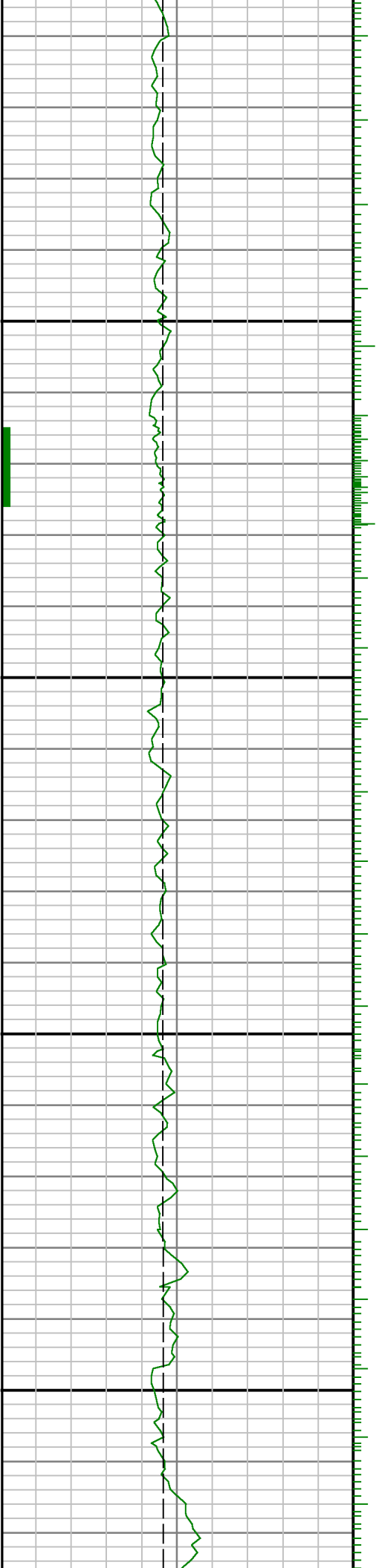
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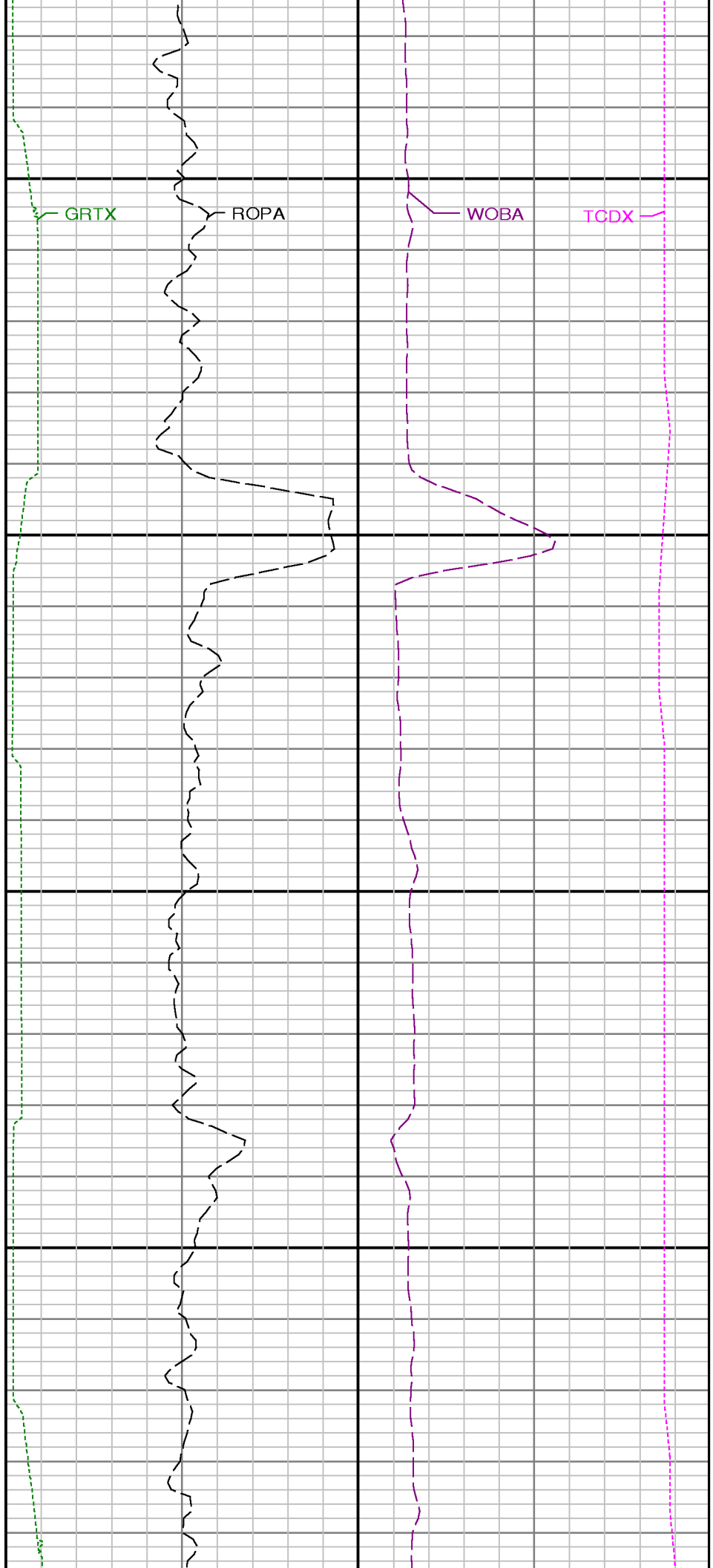
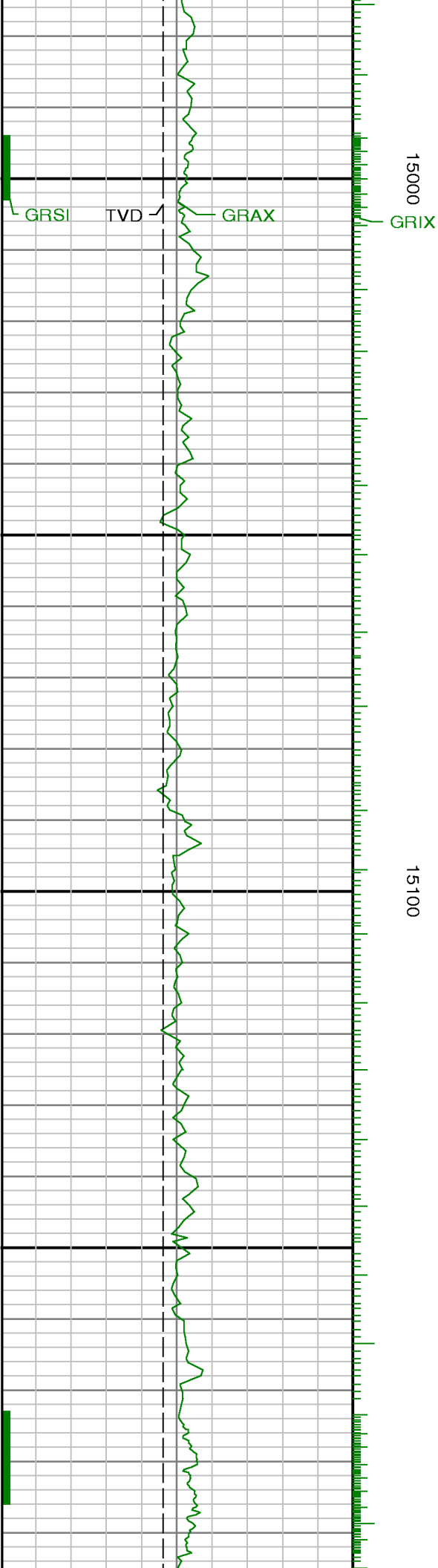


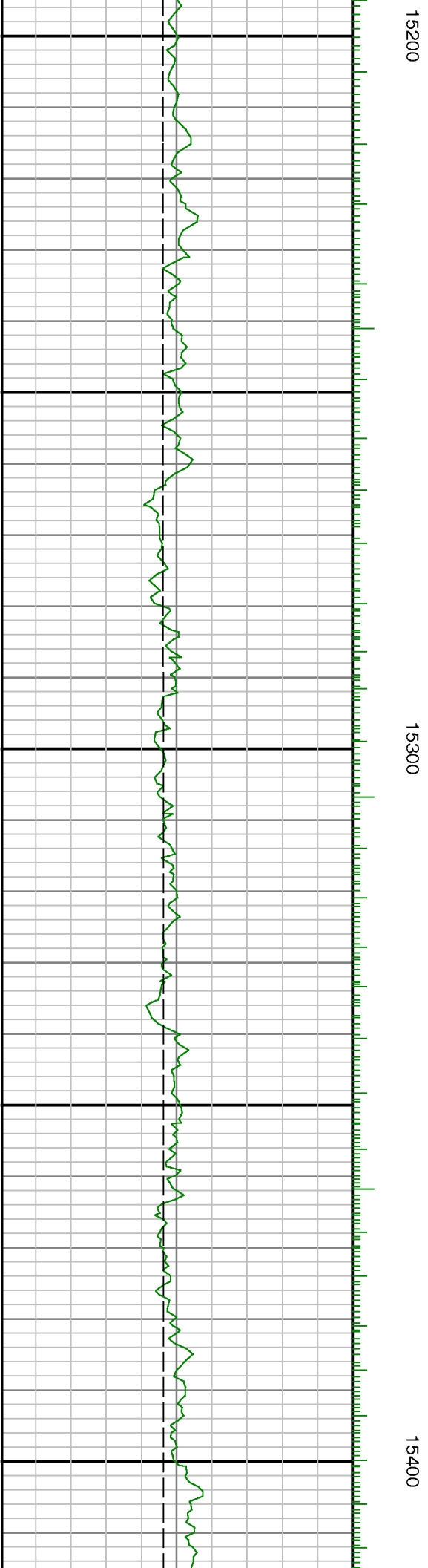
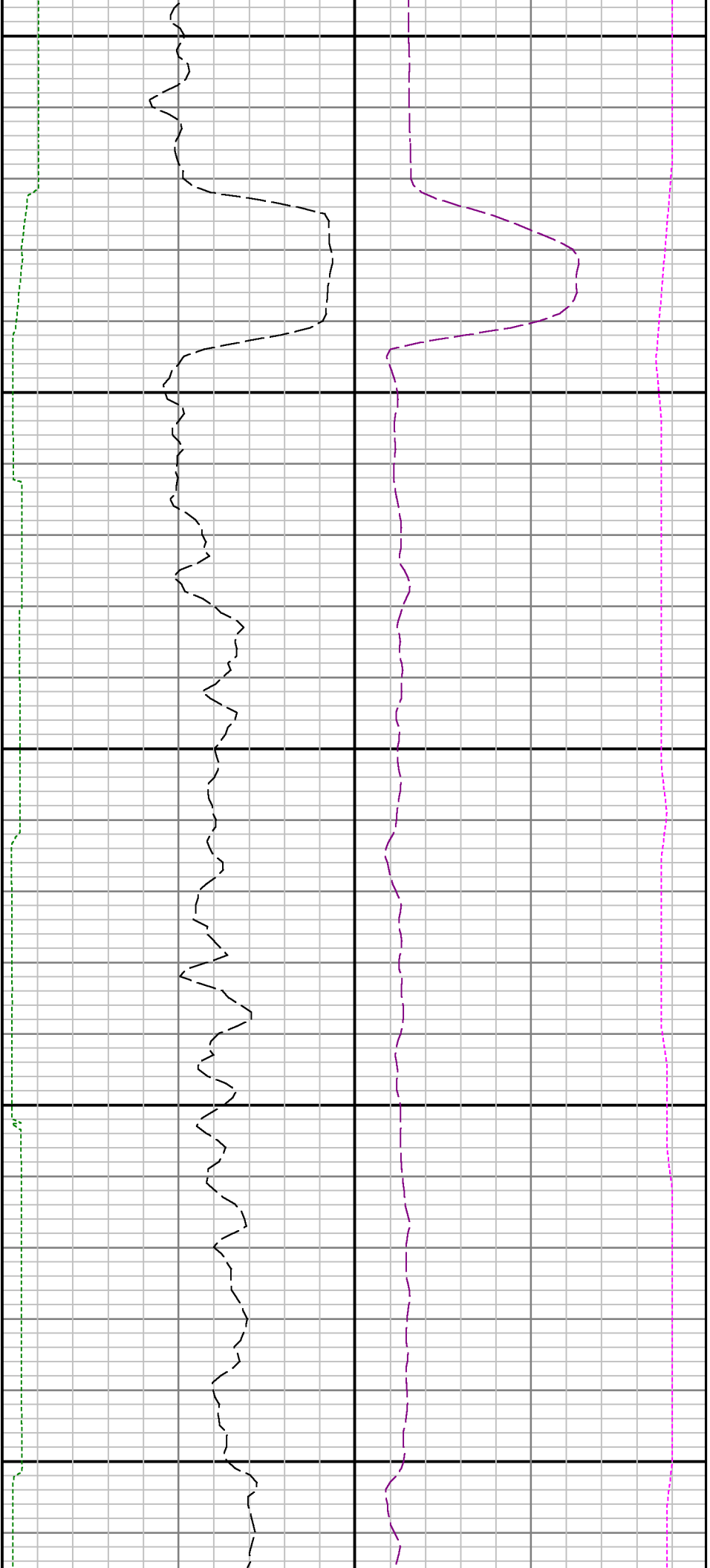


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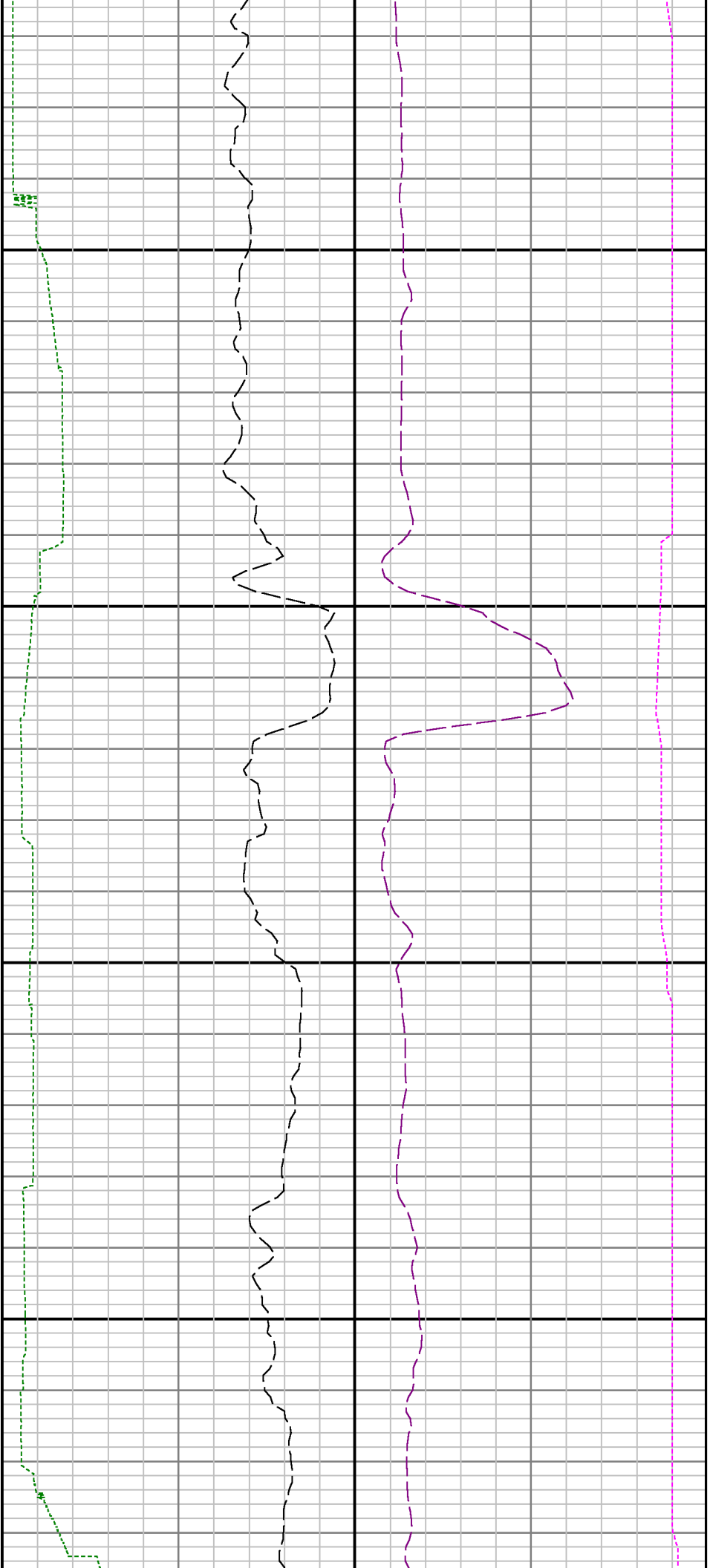
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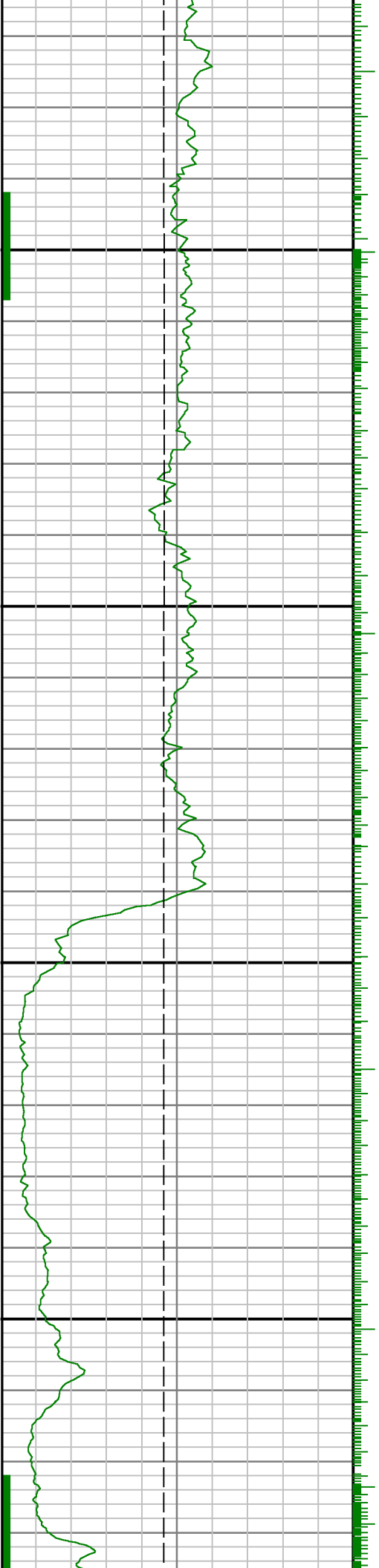


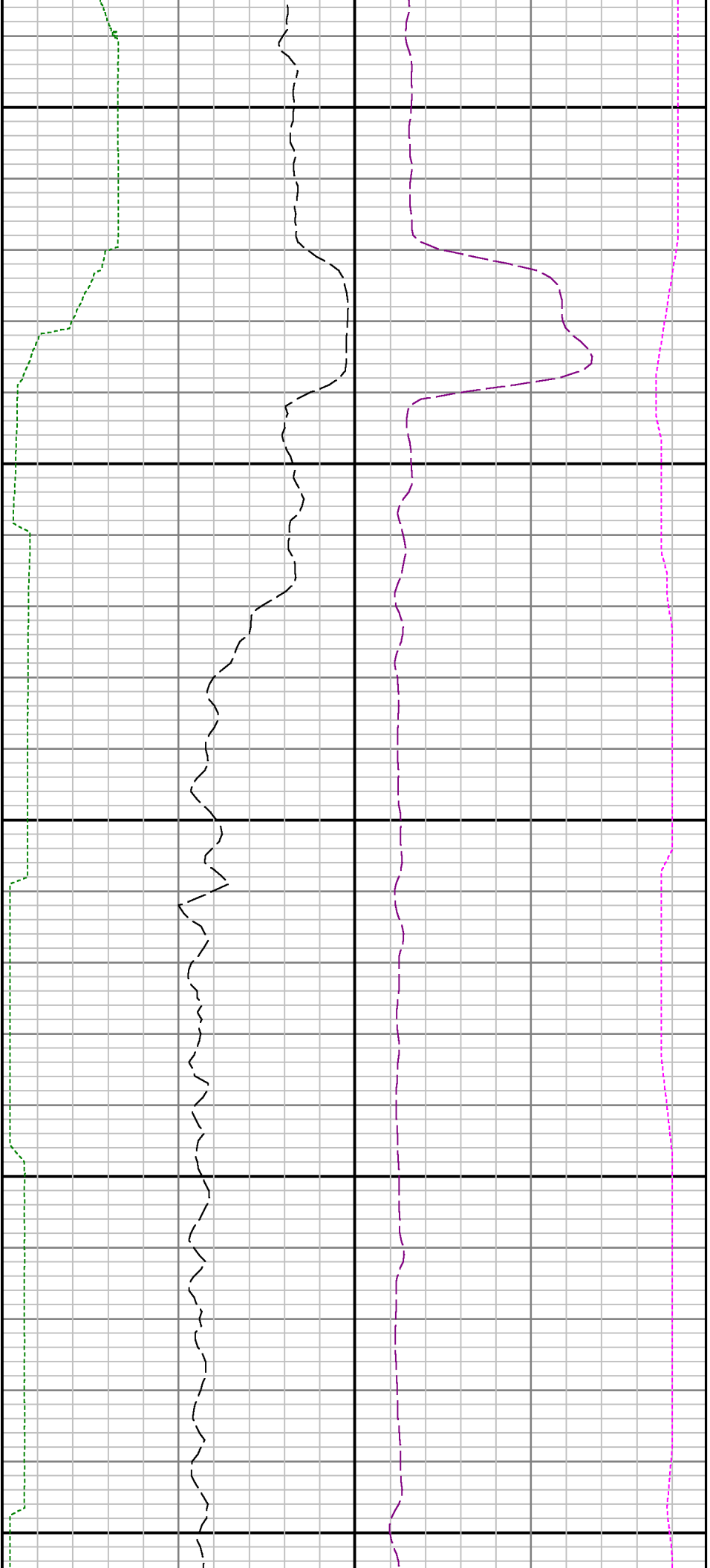




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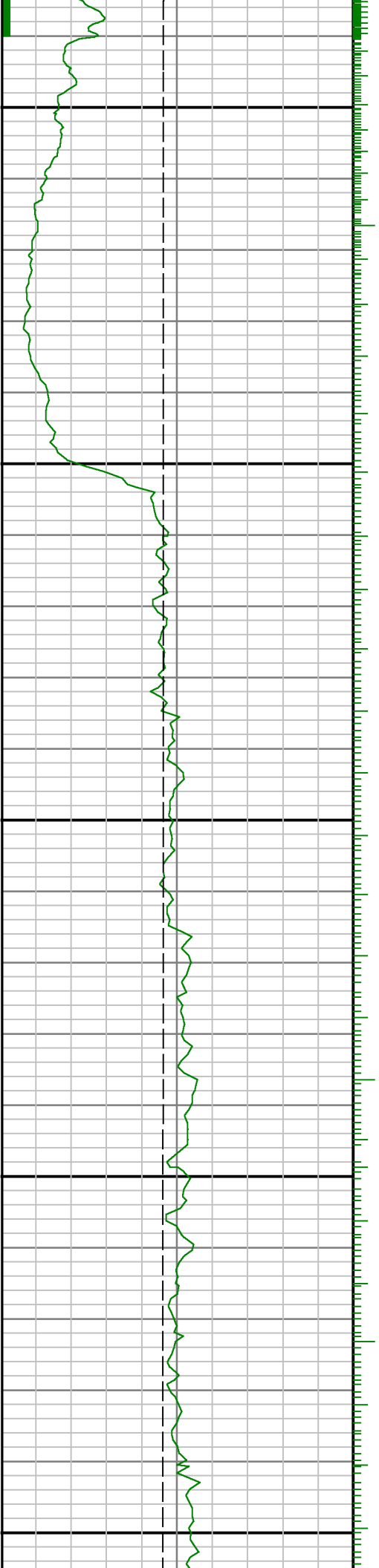
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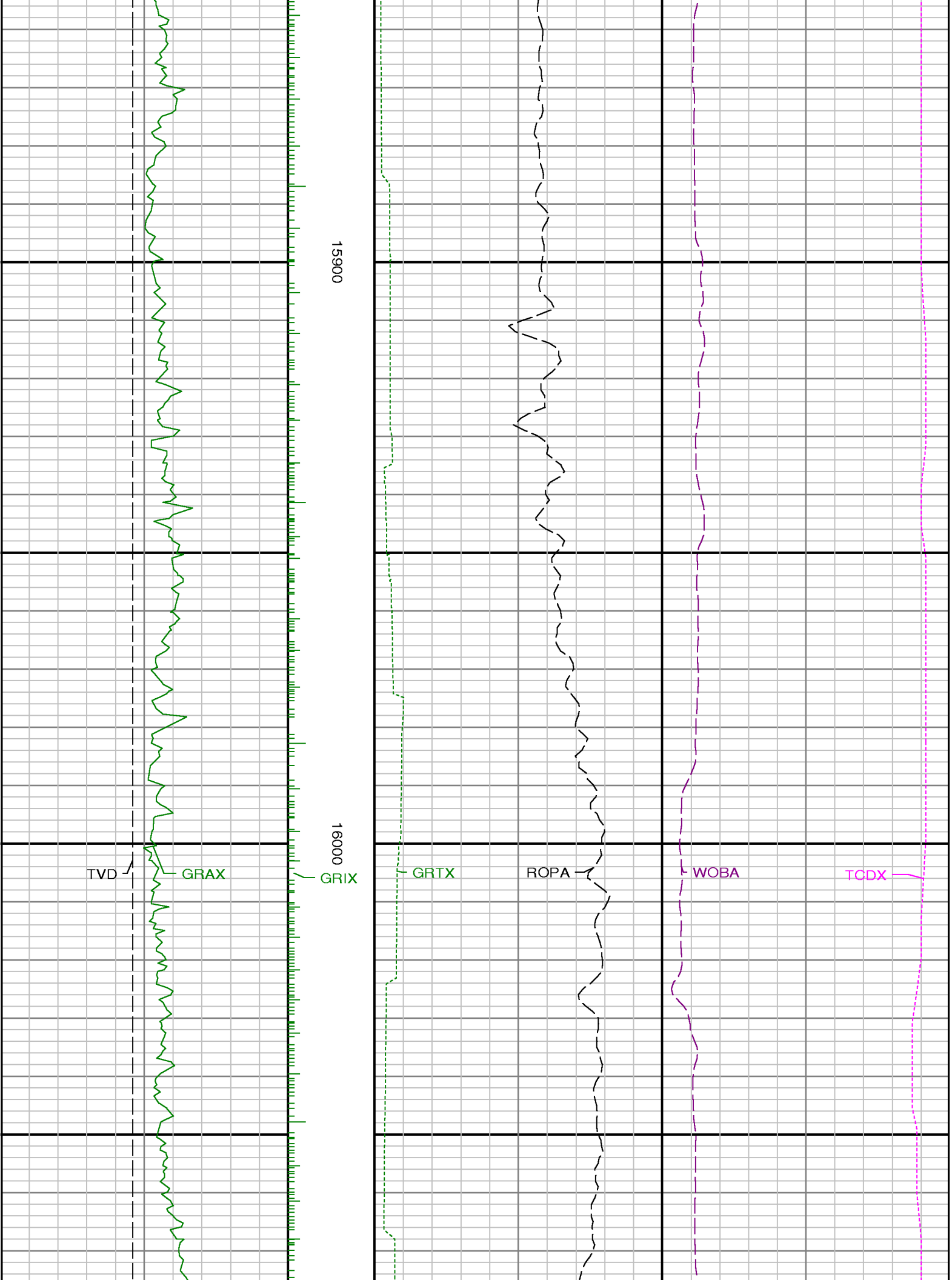


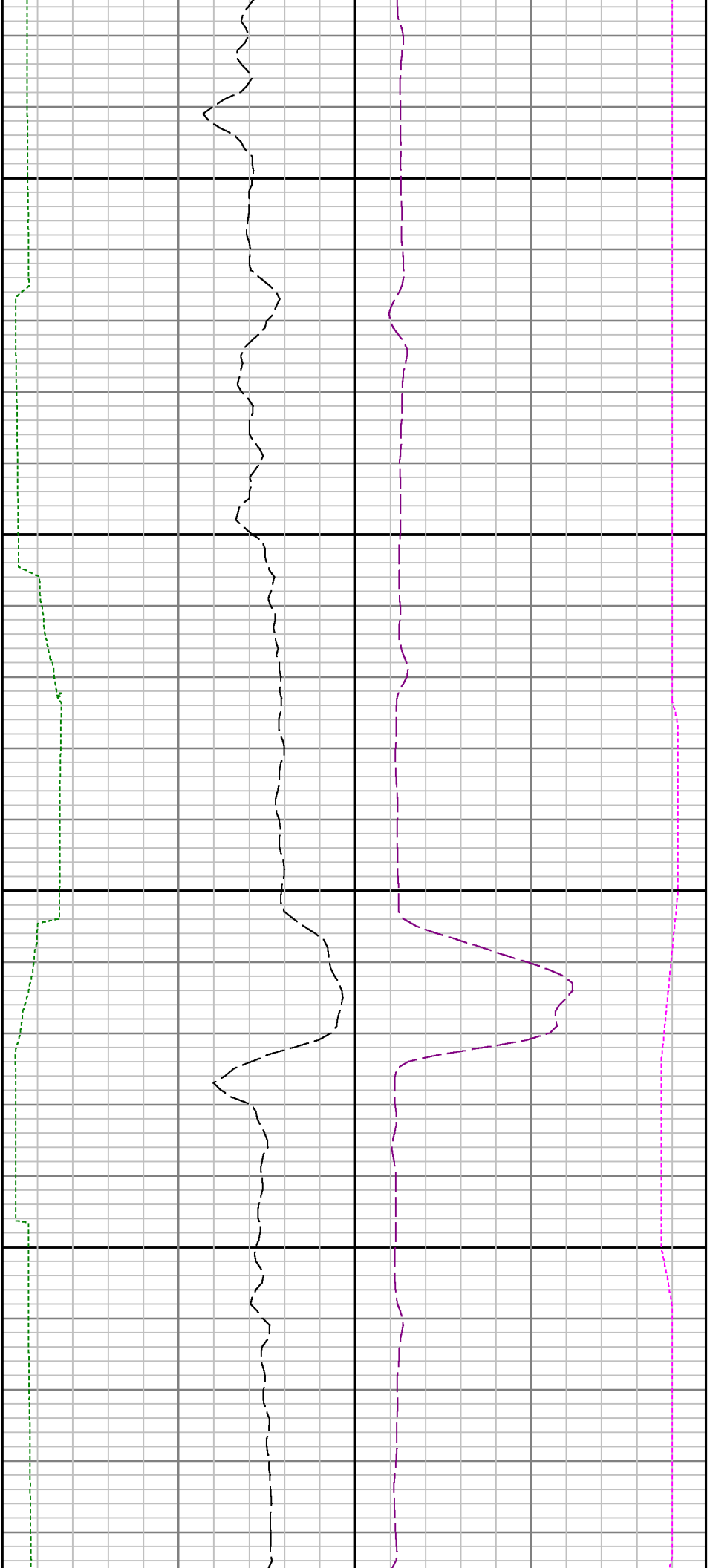


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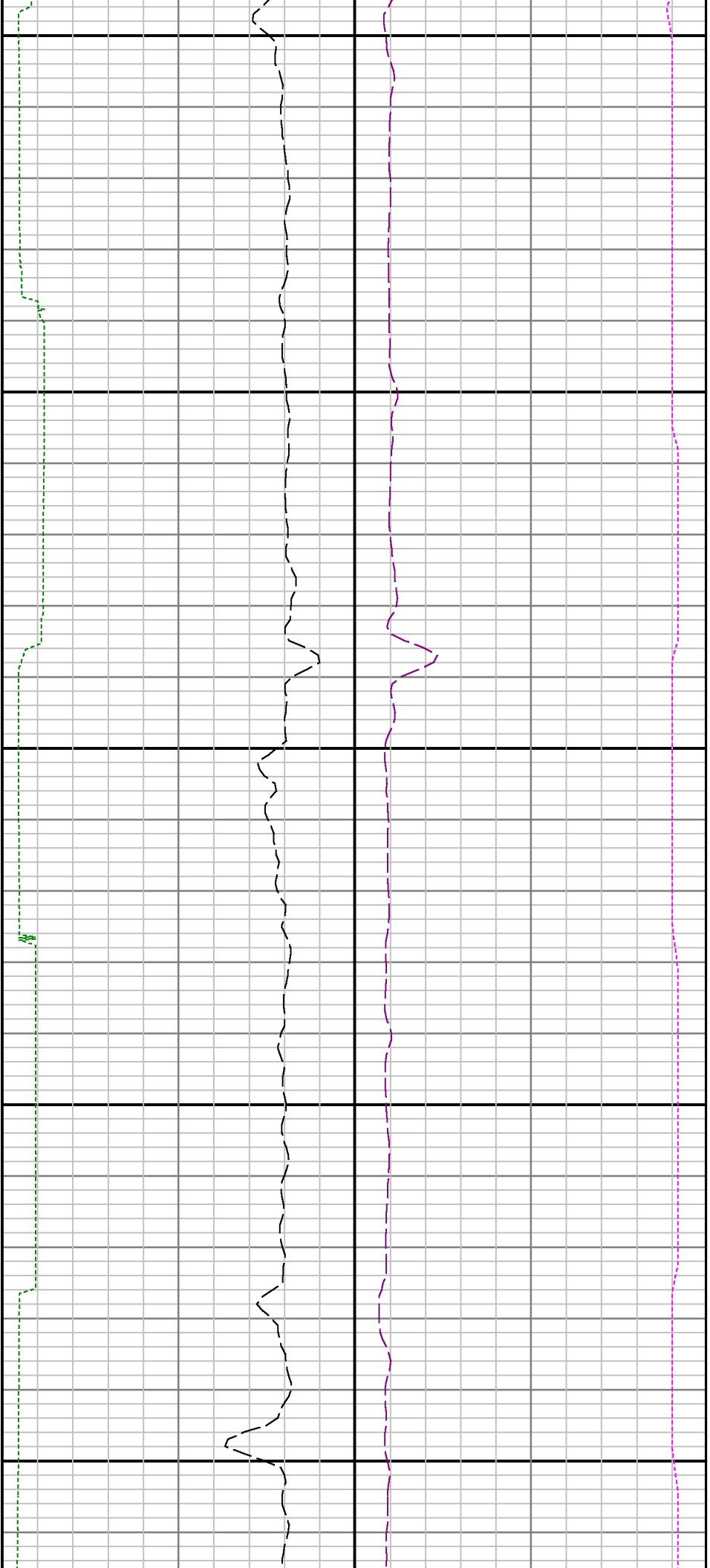




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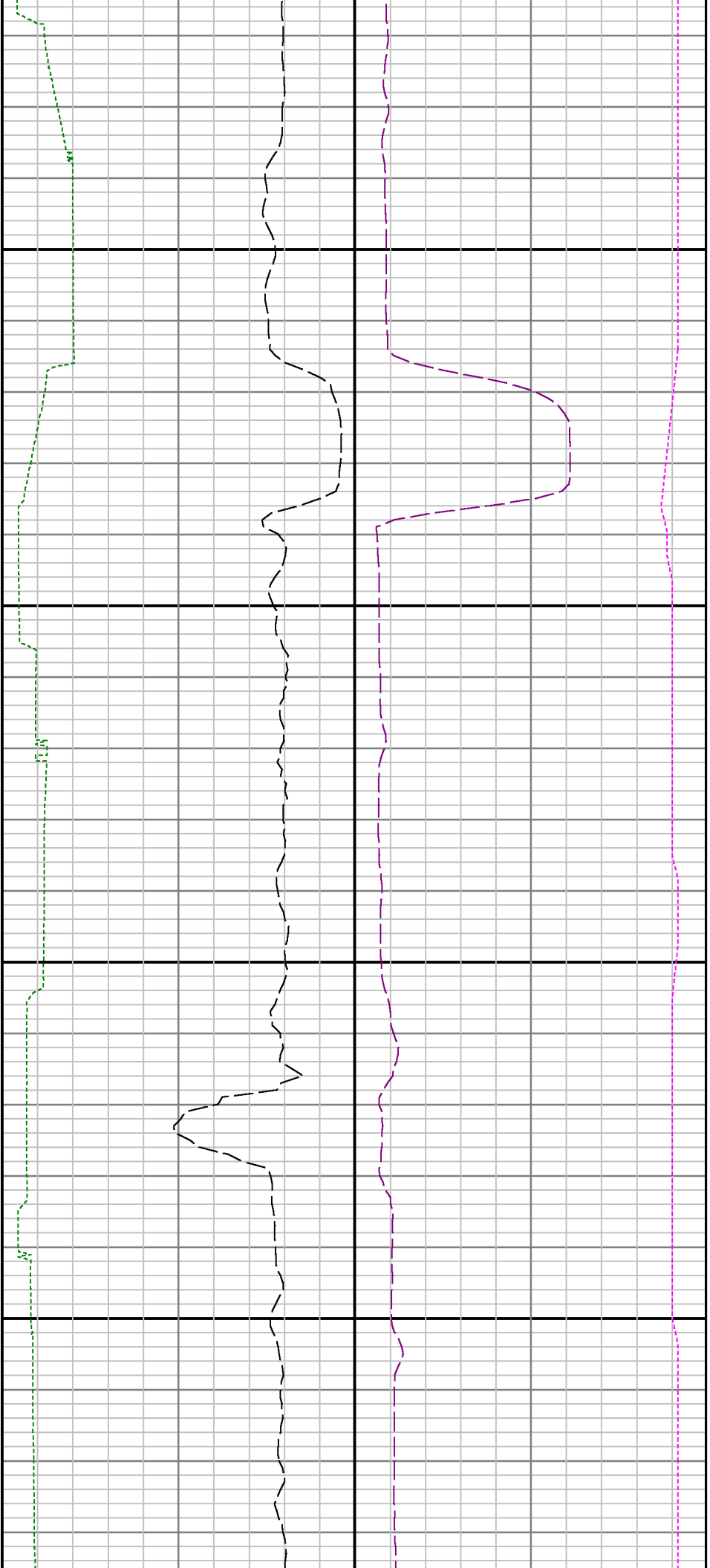
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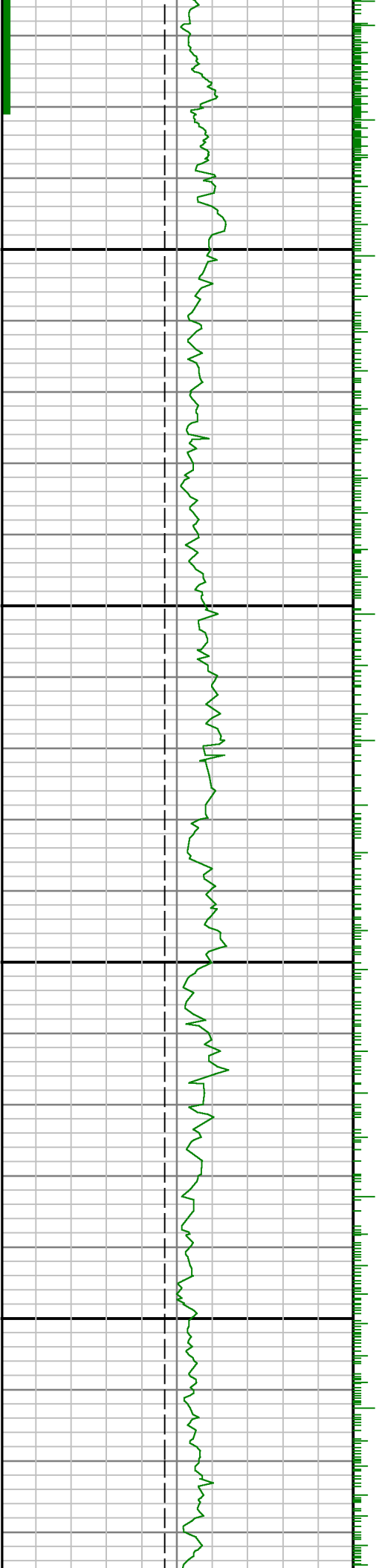
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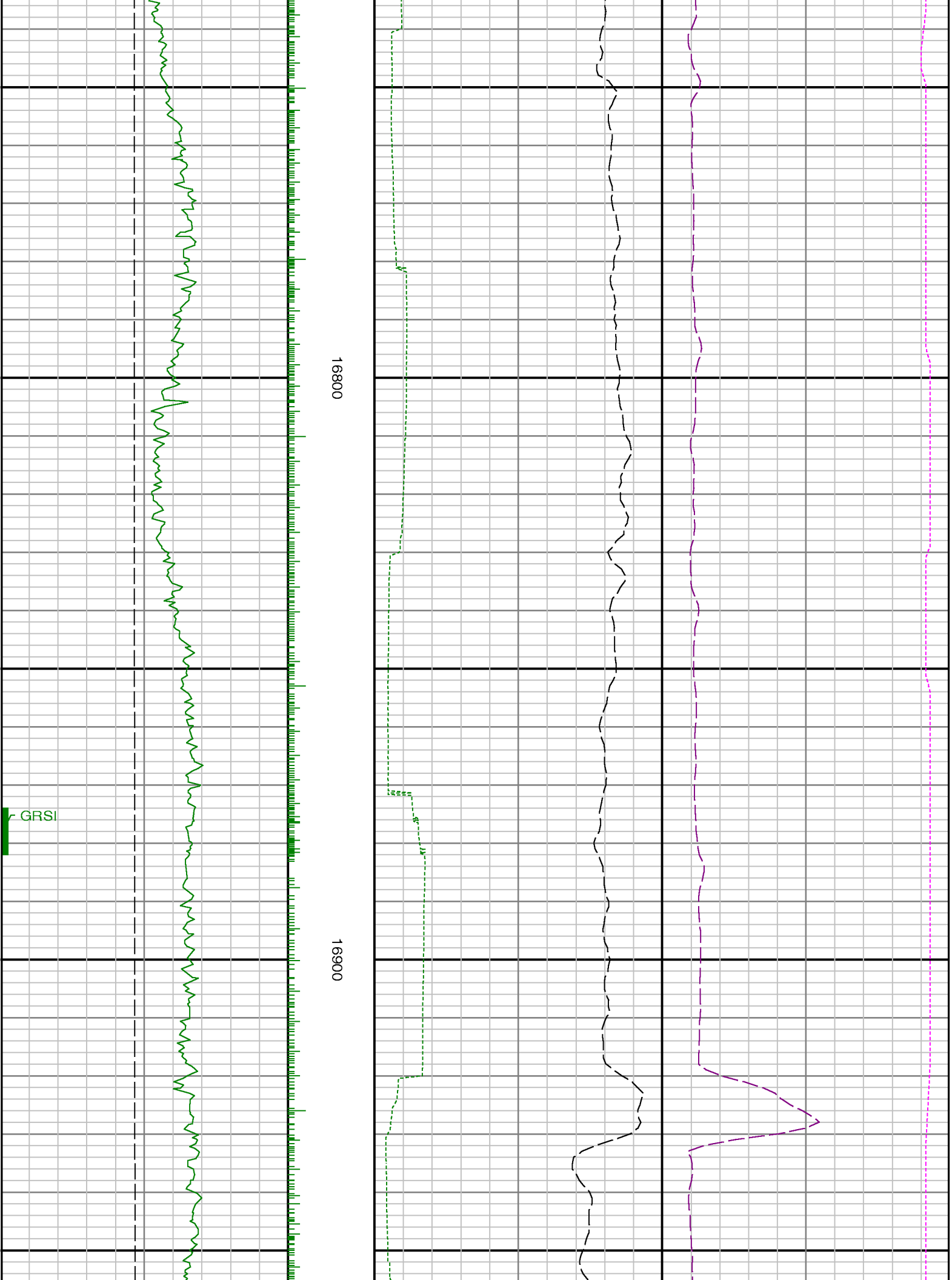
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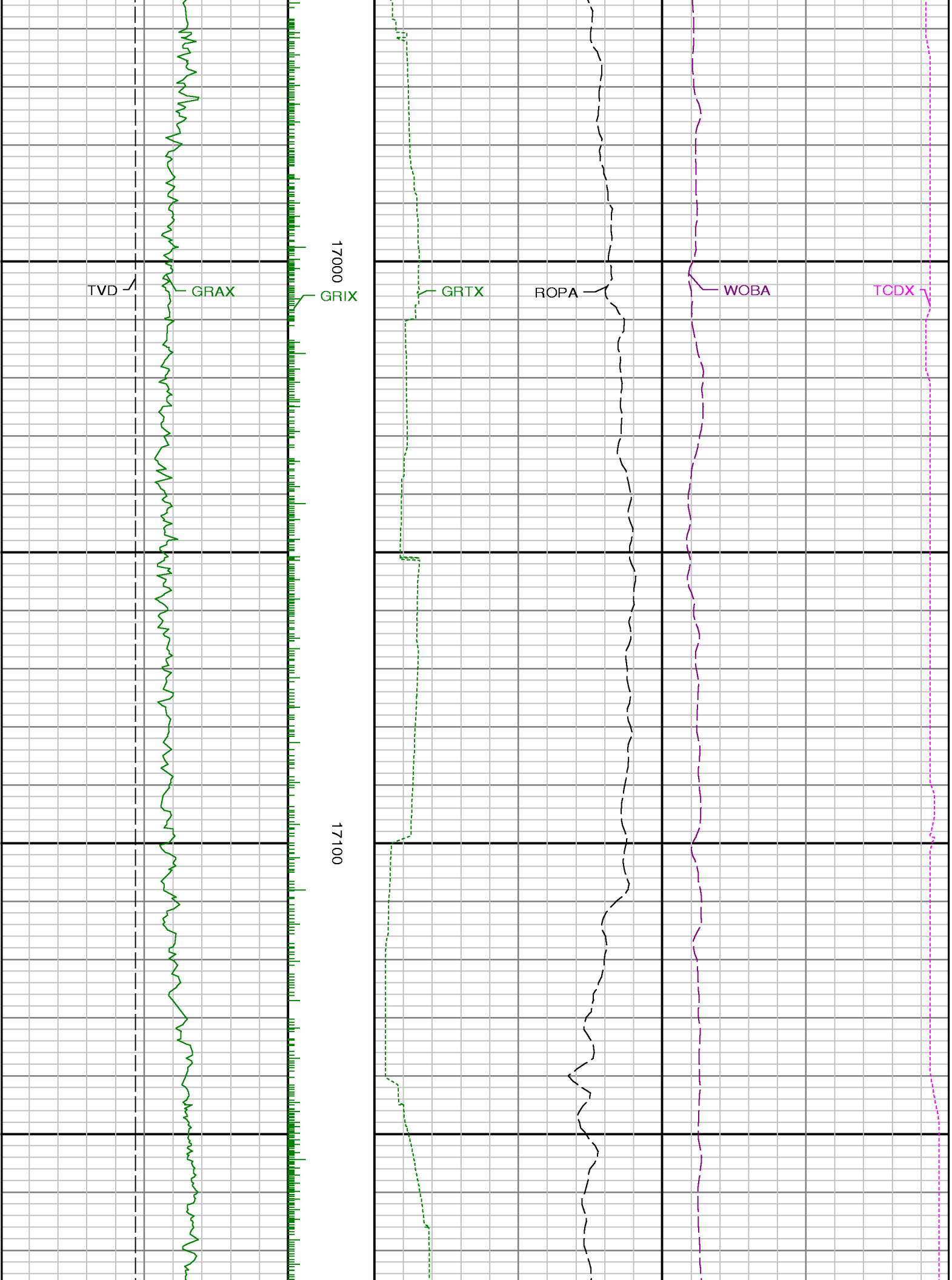


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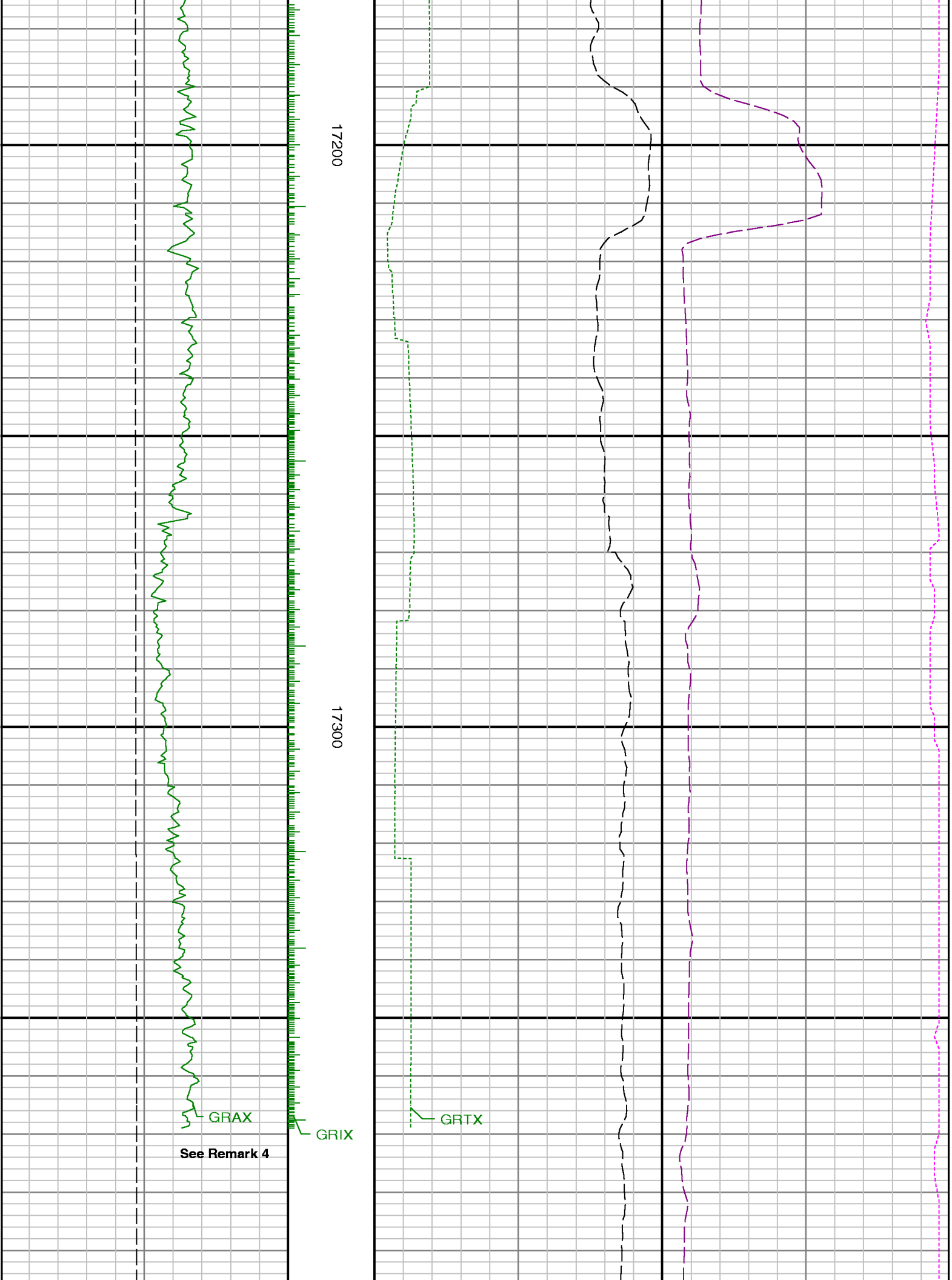
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17200

17300

GRAX

GRIX

See Remark 4

GRTX

<p>TVD</p>	<p>Run 4 &lt; 17400</p>	<p>ROPA</p>	<p>WOBA</p> <p>TCDX</p>
<p>Gamma Ray Apparent 0.5 ft Avg GRAX</p> <p>0 200</p> <p>API</p> <p>True Vertical Depth TVD</p> <p>8500 7200</p> <p>ft</p>	<p>MD feet 1:240</p>	<p>Gamma Time Since Drilled GRTX</p> <p>0 600</p> <p>min</p> <p>Rate of Penetration 3.0 ft Avg ROPA</p> <p>500 0</p> <p>ft/hr</p>	<p>Surface Weight On Bit 1.0 ft Avg WOBA</p> <p>0 100</p> <p>klbf</p> <p>Downhole Temperature TCDX</p> <p>100 275</p> <p>degF</p>