



Natural Formation Evaluation  
Gamma Ray

Realtime Log

Scale:

Company: Anadarko

1:240

Well: Boyd 2N-32HZ

MEASURED DEPTH

Field: Weld County (Kerr McGee)

County: Weld State: Colorado

Status:

Final Print

Surface Location:

Latitude: 40° 4' 27.253" N

Longitude: 104° 41' 12.354" W

Other Services:

API Number:

0512337774

Section: 5 TWN: 1N Range: 6SE

Directional  
VSS

Permanent Datum (P.D.):

Mean Sea Level

Elevation:

4975.00 ft.

Elevations:

Log Measured From:

Rig Floor

4975.00 ft.

Above P.D.

KB:

DF:

GL:

N/A  
4975.00 ft.  
4949.00 ft.

Depth Reference:

Driller's Depth

GL:

GL:

GL:

GL:

Interval Logged

Dates

Magnetic Field Reference

Top: 6500 ft. Date From: 19/Jan/14 Date To: 02/Feb/14 Date To: 02/Feb/14 Dip Angle: 66.60° Azi Reference North: True

Bottom: 16561 ft. Date To: 02/Feb/14 Date To: 02/Feb/14 Total Mag to Reference

Spud Date: 17/Jan/14 Field Strength: 52838.0 nT North Correction: 8.19°

Borehole Record

Casing Record

Hole Size From To Size Weight From To

12.250 in. Surface 1075 ft. 9.625 in. 36.00 lb/ft. Surface 1064 ft.

8.750 in. 1075 ft. 7494 ft. 7.000 in. 26.00 lb/ft. Surface 7478 ft.

6.125 in. 7494 ft. 16612 ft.

Mud Record

Deviation Record

Type From To Hole Size Interval Inc / Az (Start) Inc / Az (End)

Water Based Surface 16612 ft. 8.625 in. Vertical/Curve 0.1° / 0.7° 86.3° / 359.8°

7.000 in. Lateral 86.3° / 359.8° 91.3° / 3.3°

Acquisition System Software Version

Other

Advantage 2.20U4 Rig: / Contractor: H&P 307 / Helmerich & Payne Drilling Co

PATS 6.4.1.34 Job No: 58-45096 / District / Unit: RMD / D & E

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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	1	8.750	PDC		Mud Motor	6500	6909	1075	6953	19/Jan/2014	18:23	19/Jan/2014	21:53	29.77
2	2	2	8.750	PDC		Mud Motor	6910	7453	6953	7493	20/Jan/2014	11:17	20/Jan/2014	21:05	13.8
3	3	3	6.125	PDC		Mud Motor	7442	10258	7494	10309	23/Jan/2014	03:04	24/Jan/2014	14:48	37.53
4	4	4	6.125	PDC		Mud Motor	10257	13603	10310	13654	25/Jan/2014	14:21	29/Jan/2014	08:02	82.35
5	5	5	6.125	PDC		Mud Motor	13603	16561	13655	16611	30/Jan/2014	05:27	02/Feb/2014	05:01	74.6

Crew

Name	Arrive	Depart	Name	Arrive	Depart	Name	Arrive	Depart
	Wellsite	Wellsite		Wellsite	Wellsite		Wellsite	Wellsite

Andrew King	17/Jan/14	02/Feb/14	Nick Roosen	17/Jan/14	01/Feb/14	John Nguyen	22/Jan/14	02/Feb/14	

Equipment and Service Data


LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (m.)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12497607	Directional	47.61	6.810	3.250
1	SRIG	12604926	Gamma	44.24	6.810	3.250
2	DIR	12497607	Directional	43.71	6.810	3.250
2	SRIG	12604926	Gamma	40.34	6.810	3.250
3	DIR	10239728	Directional	54.51	4.750	2.625
3	SRIG	12722372	Gamma	51.13	4.750	2.625
4	DIR	10239728	Directional	54.81	4.750	2.625
4	SRIG	12722372	Gamma	51.43	4.750	2.625
5	DIR	11991886	Directional	54.20	4.750	0.000
5	SRIG	12283328	Gamma	50.82	4.750	0.000

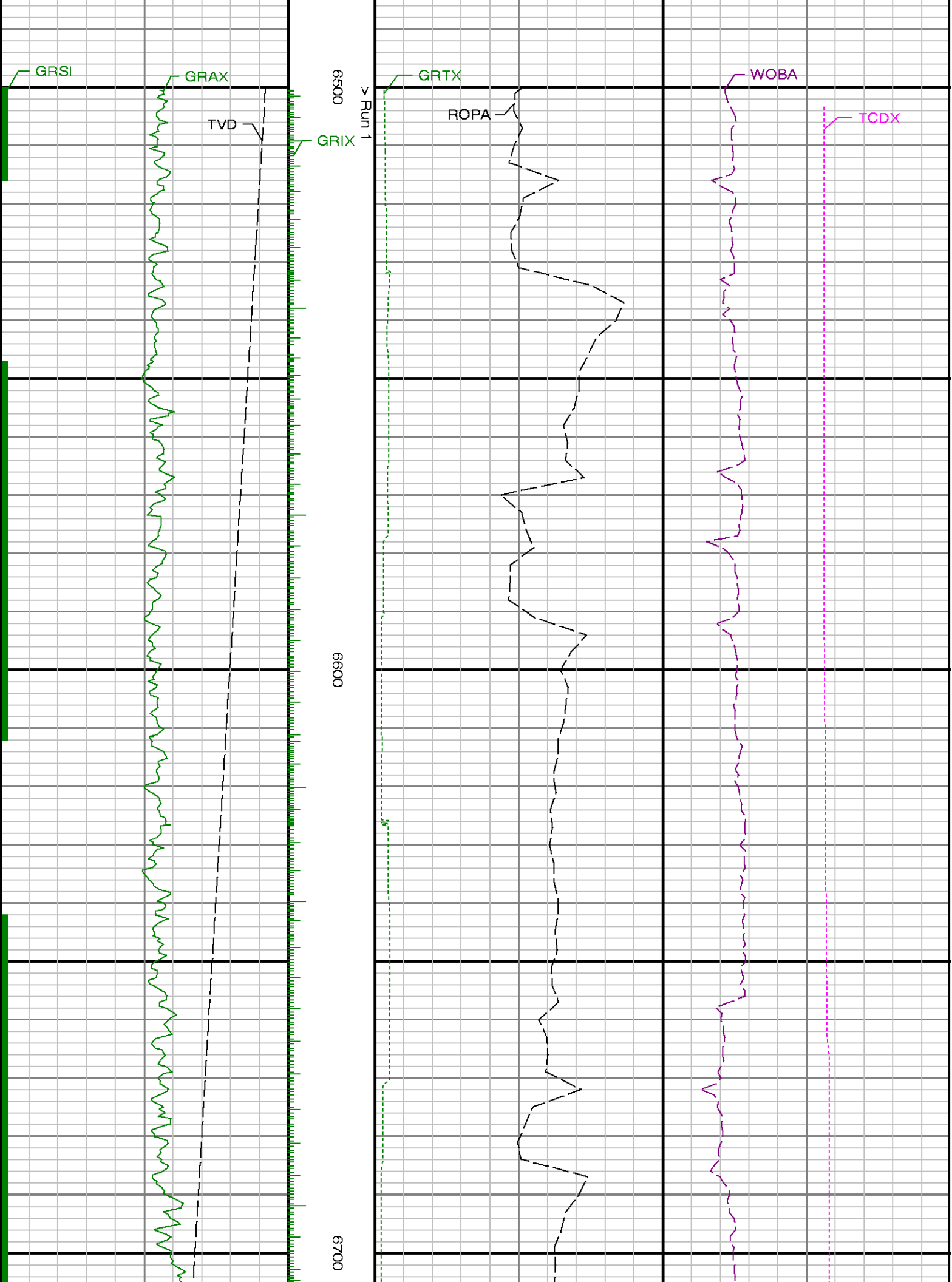
Service and Tool Mnemonics

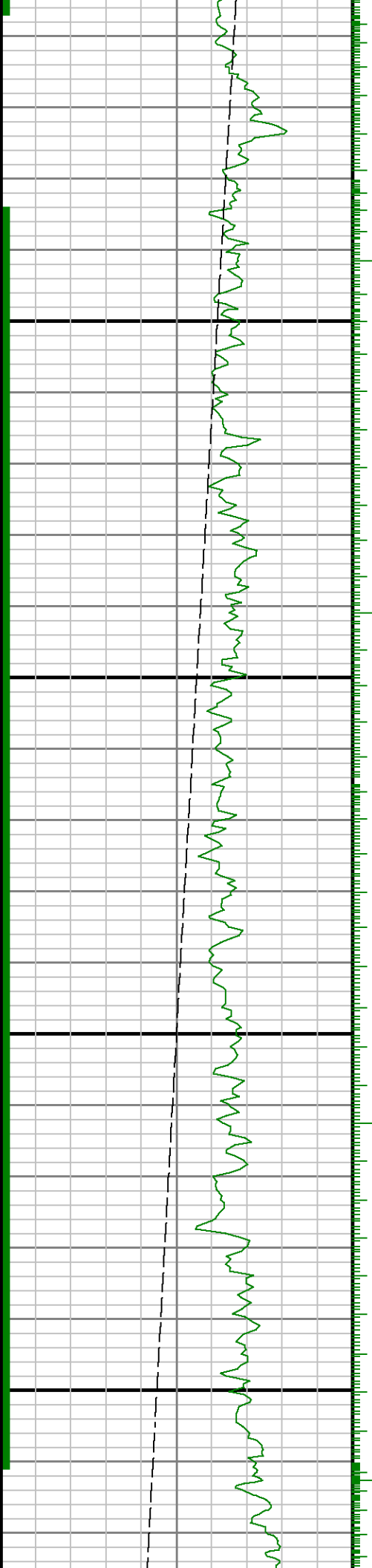
Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

Comments

(1) Baker Hughes INTEQ runs 1 and 2 utilized 6 3/4 inch NaviGamma services (Gamma Ray and Directional) behind an 8 3/4 inch bit and steerable assembly from 1075 to 7494 feet MD (1075 to 7102 feet TVD).
(2) Baker Hughes INTEQ runs 3, 4, and 5 utilized 4 3/4 inch NaviGamma services (Gamma Ray and Directional) behind a 6 1/8 inch bit and steerable assembly from 7494 to 16612 ft MD (7102 to 7141 ft TVD).
(3) Depth measurements were 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 right edge of track 1 as a heavy line.

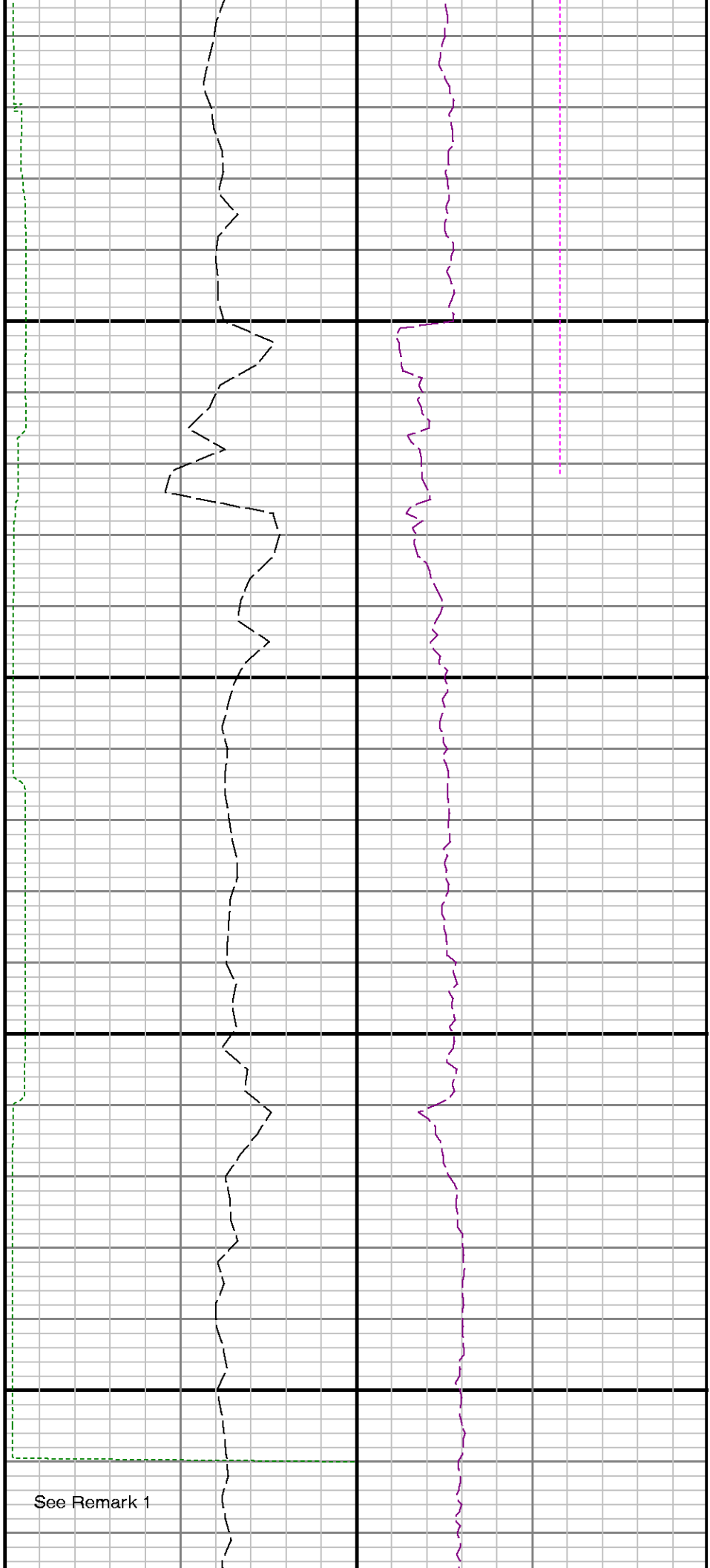
<div><div>Company : Anadarko Well : Boyd 2N-32HZ Interval : 6480.00 - 16640.00 feet Created : 02/Feb/2014 12:10:59 PM</div></div>						
Gamma Ray Apparent 0.5 ft Avg GRAX		MD feet 1:240	Rate of Penetration 3.0 ft Avg ROPA		Surface Weight On Bit 1.0 ft Avg WOBA	
0200			5000		0100	
API			ft/hr		klbf	
True Vertical Depth TVD			Gamma Ray Time Since Drilled GRTX		Downhole Temperature TCDX	
72006400			0600		0300	
ft			min		degF	

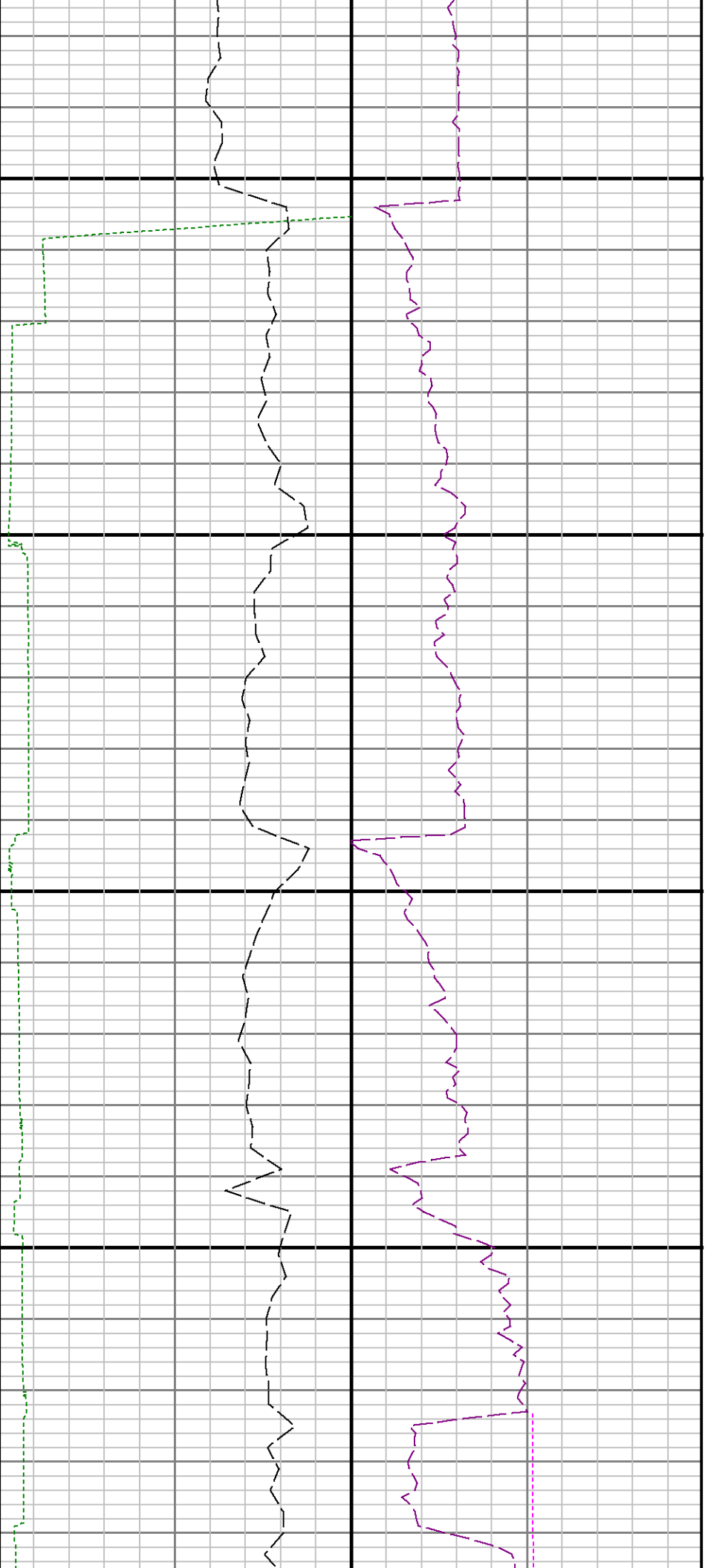




0089

0069

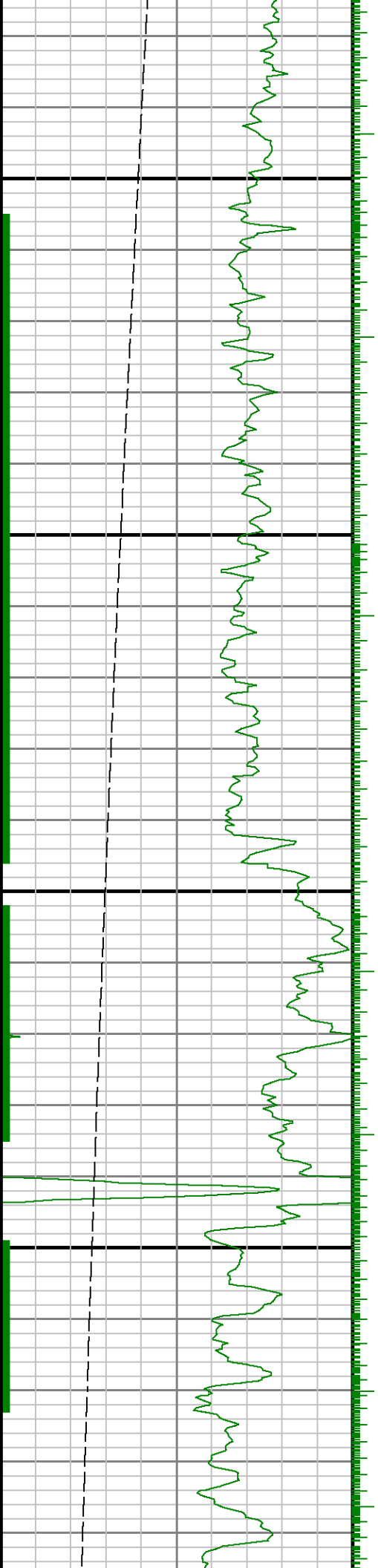




Run 1 <> Run 2

7000

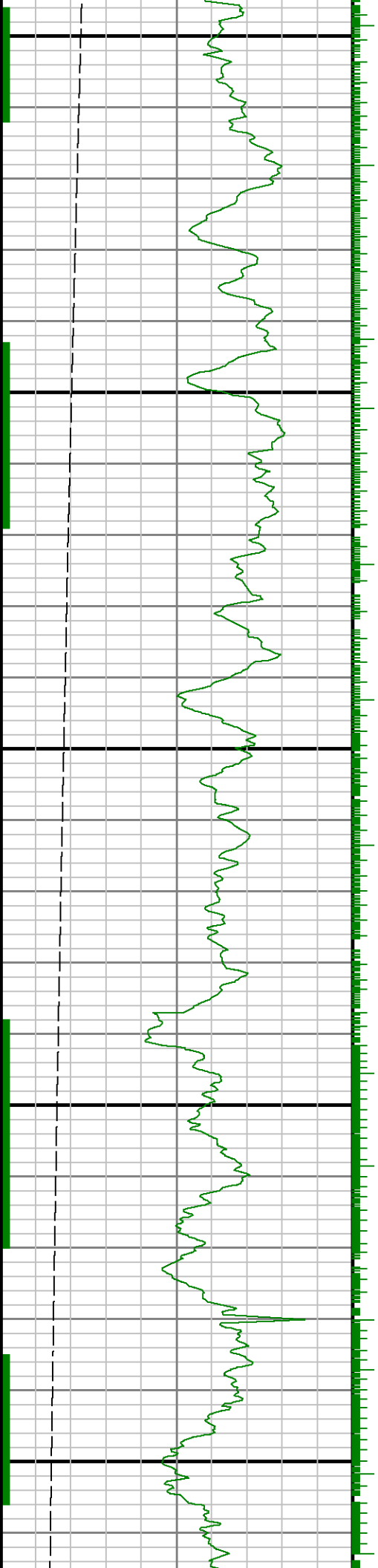
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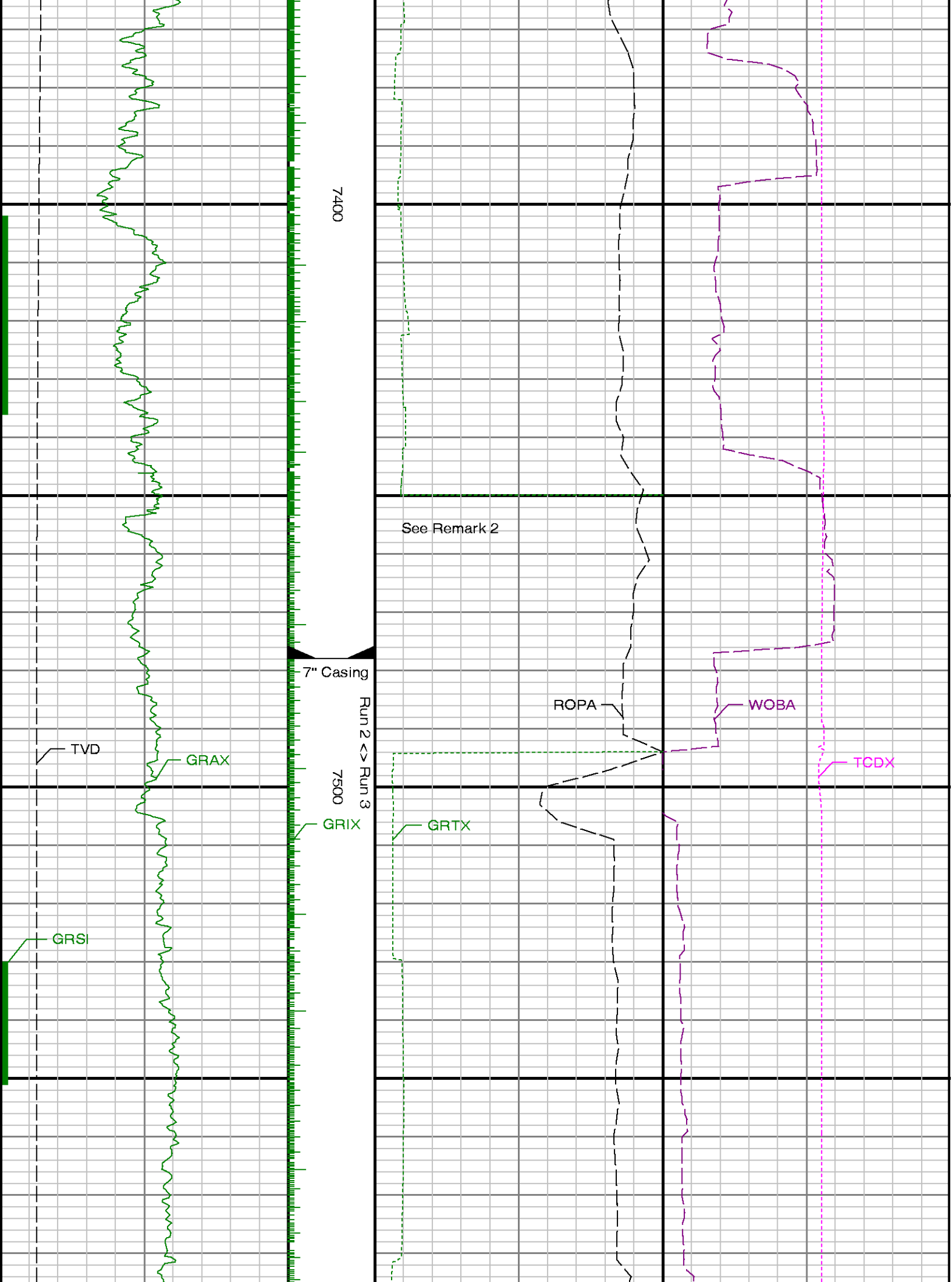


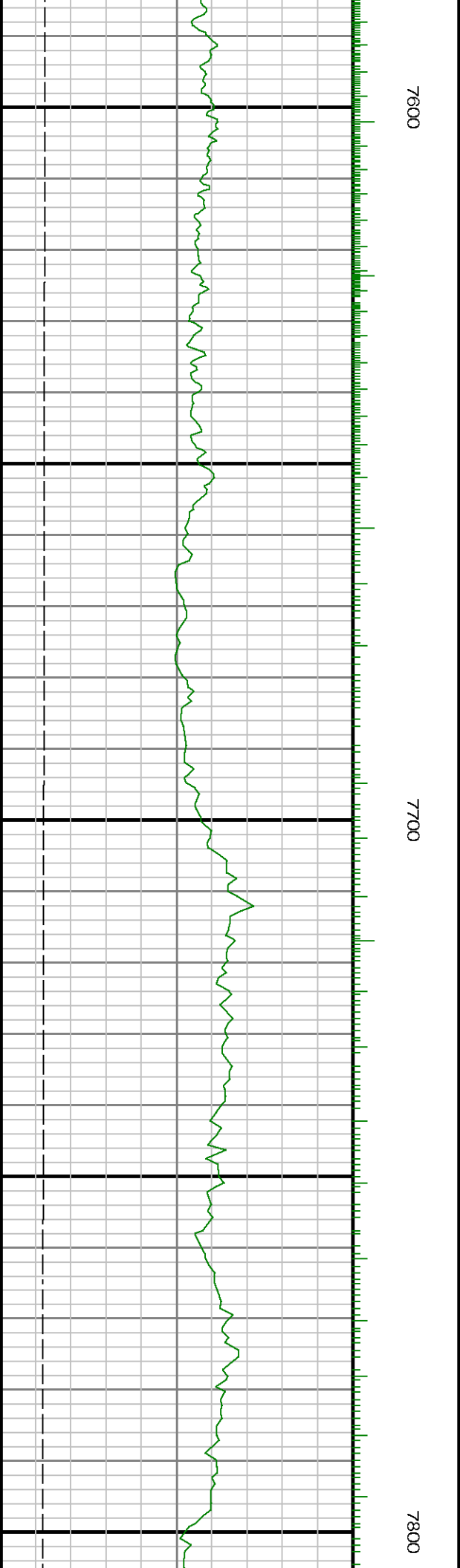


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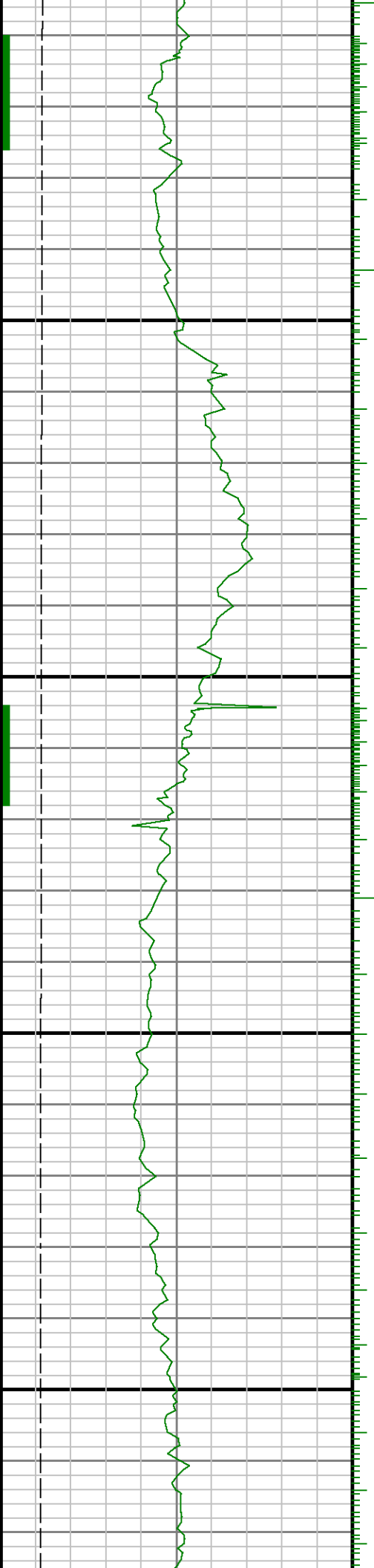
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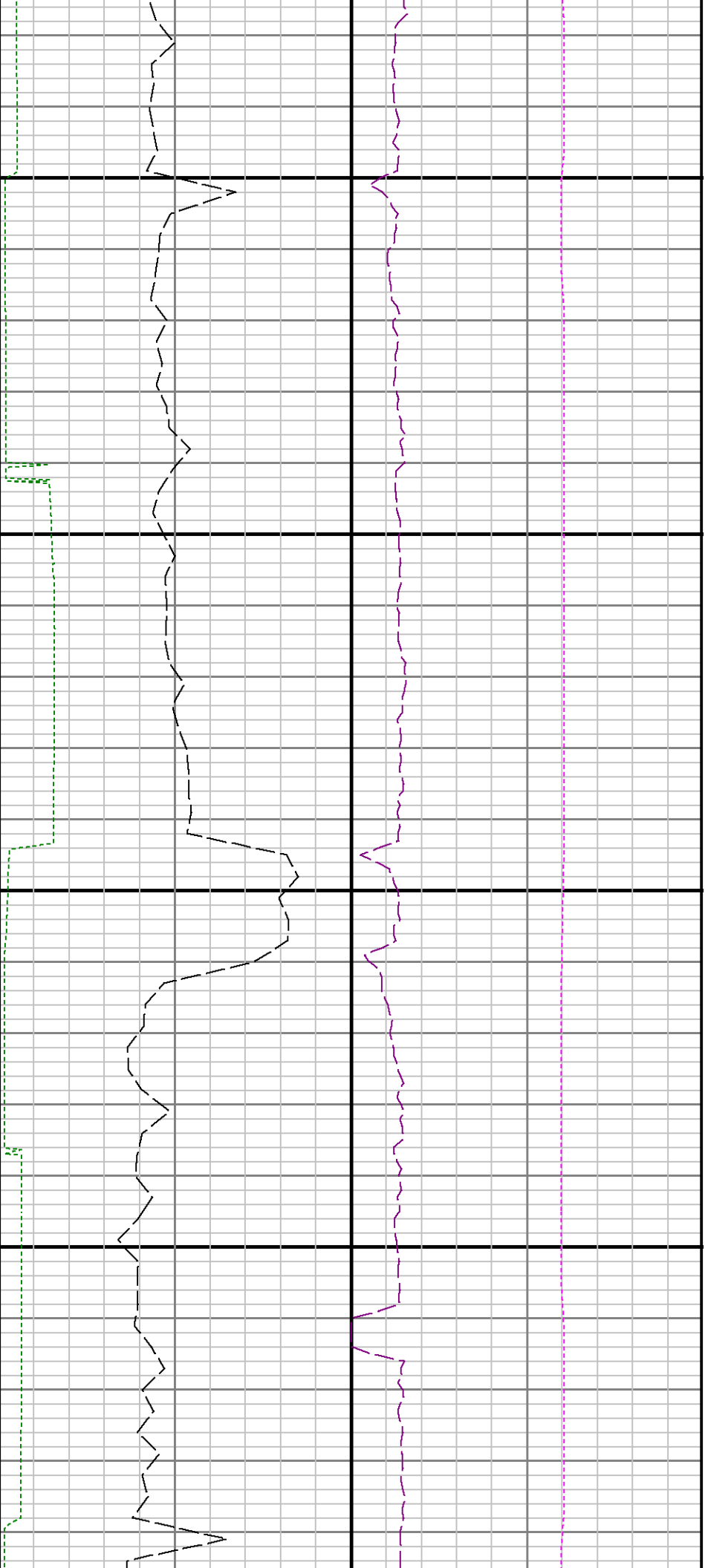




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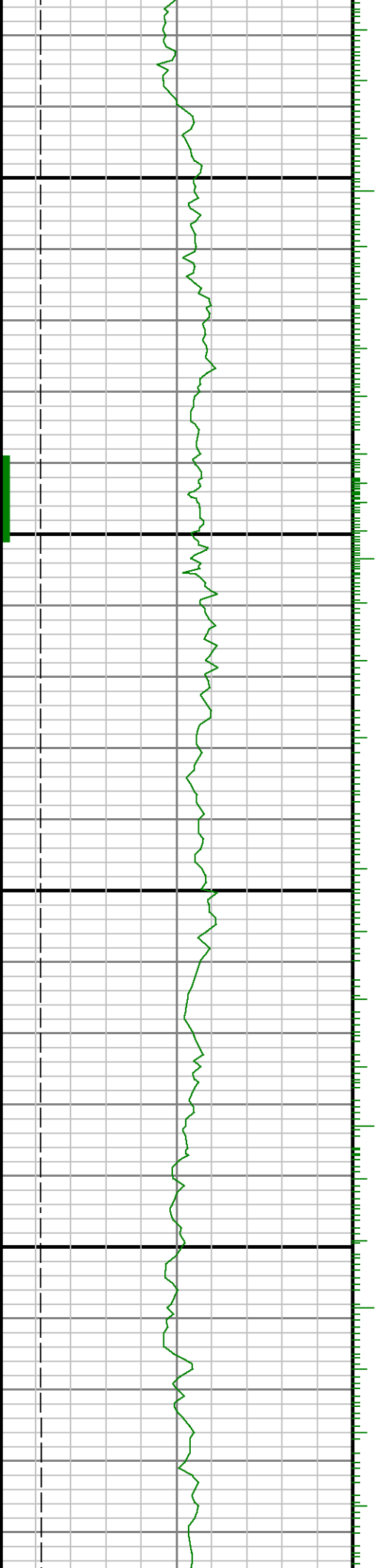
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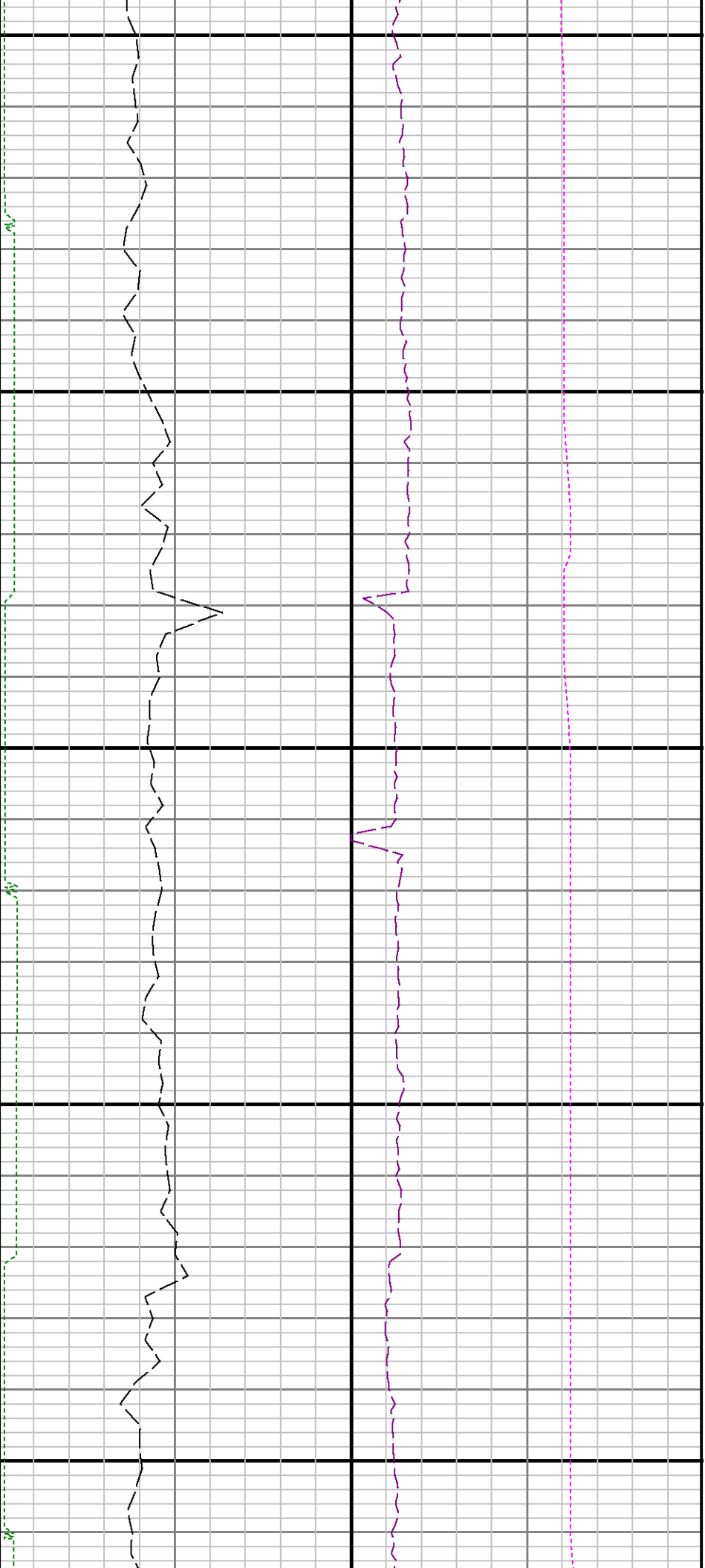




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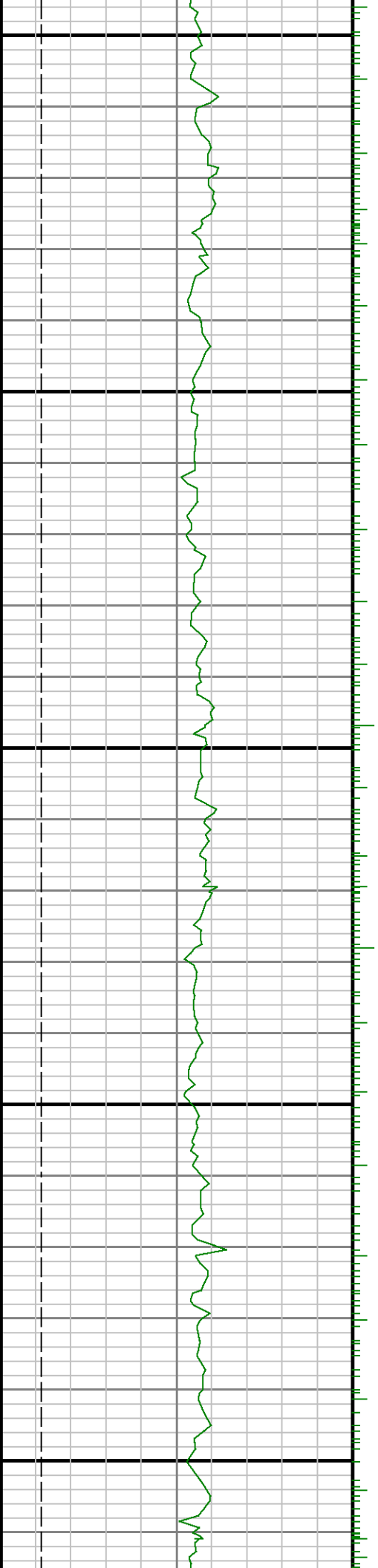
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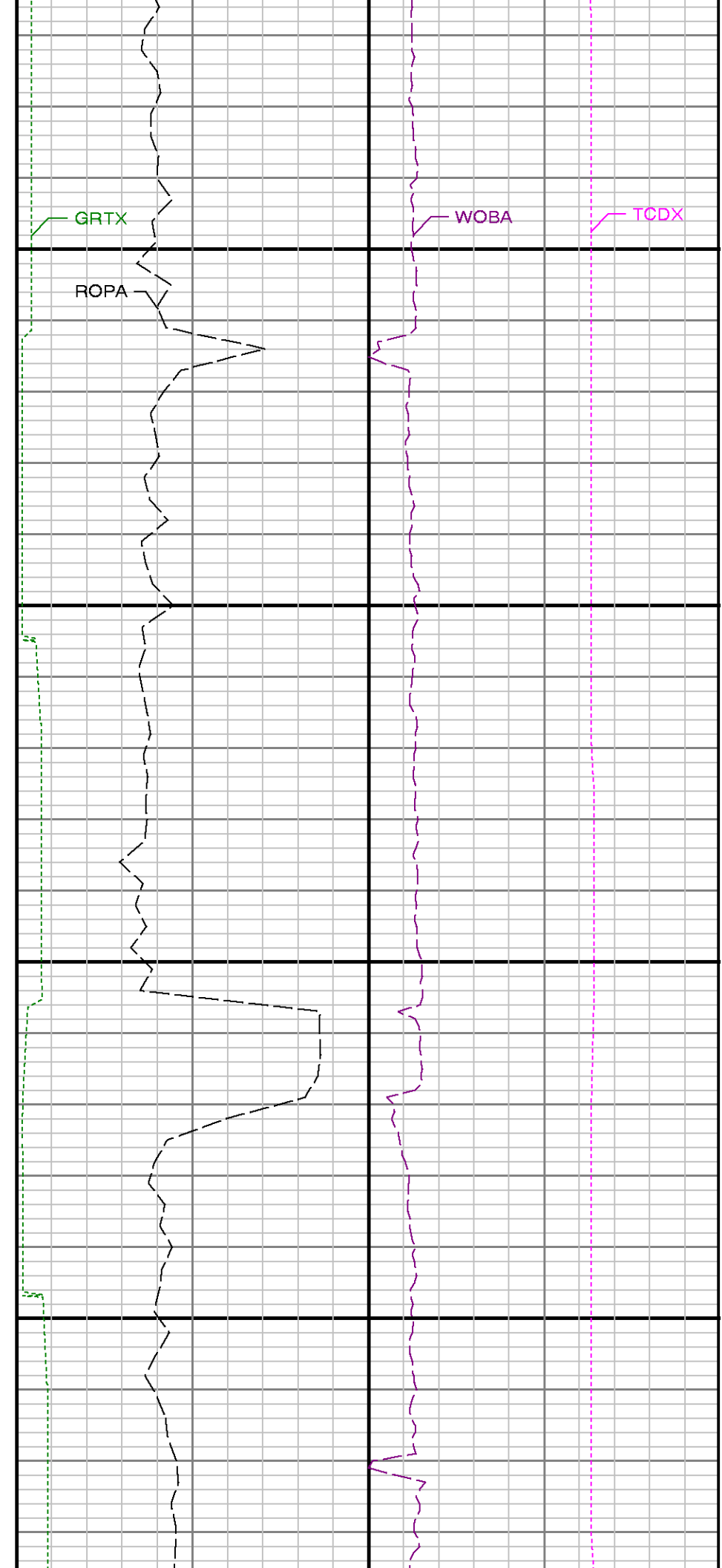
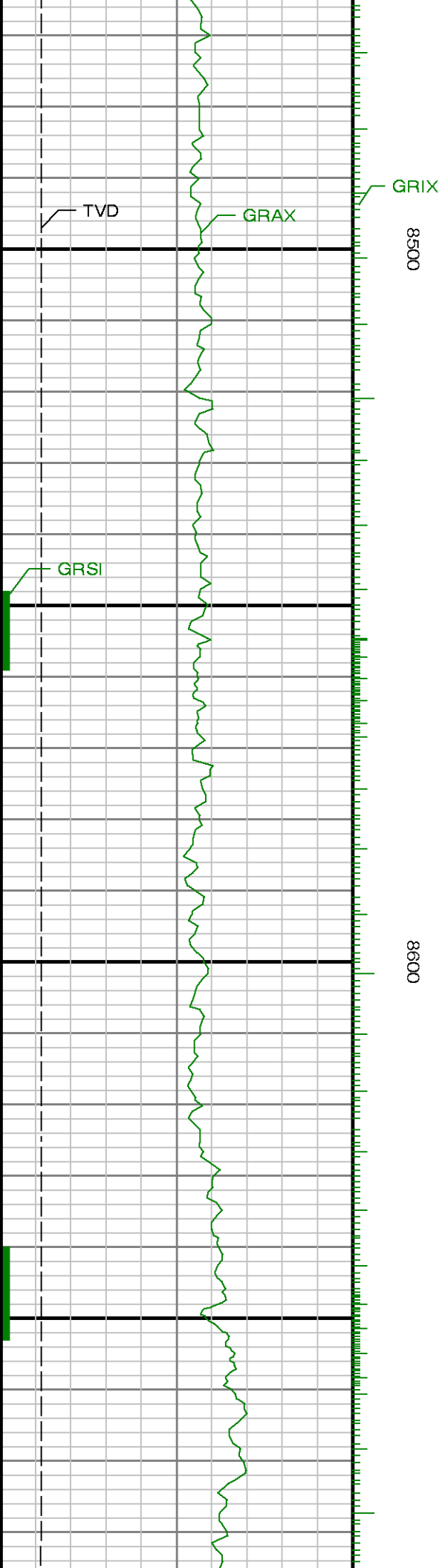


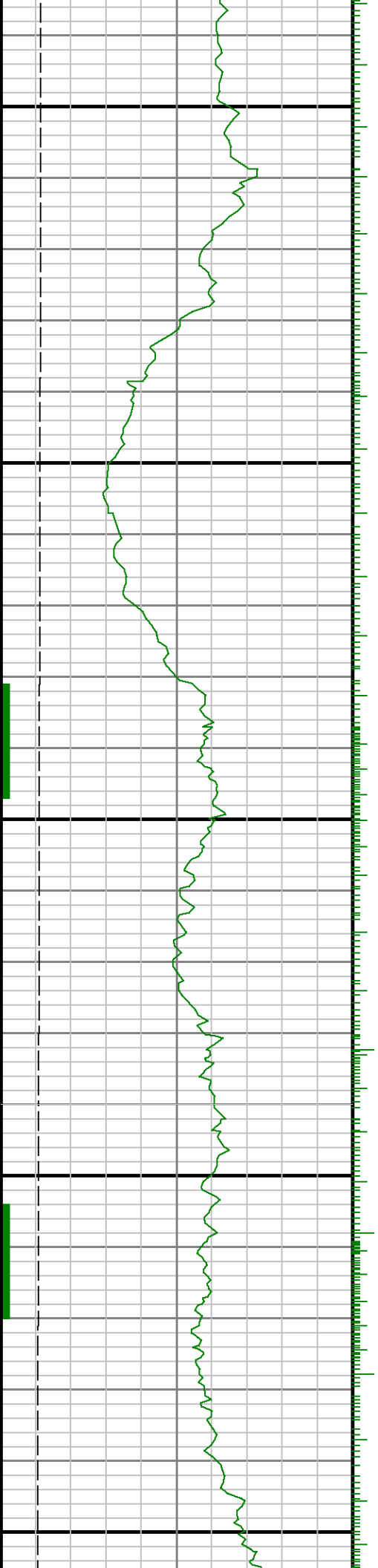


8300

8400





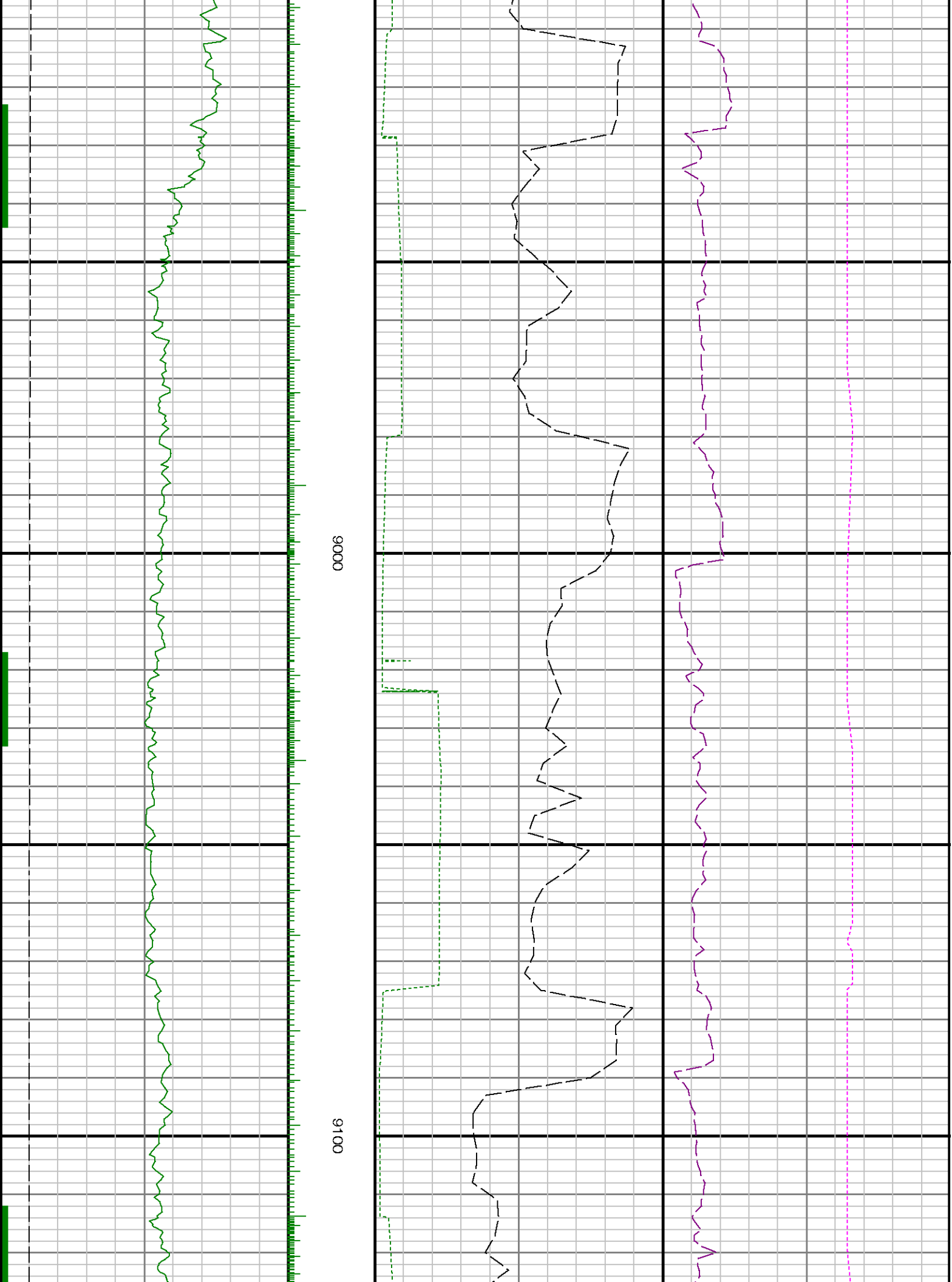


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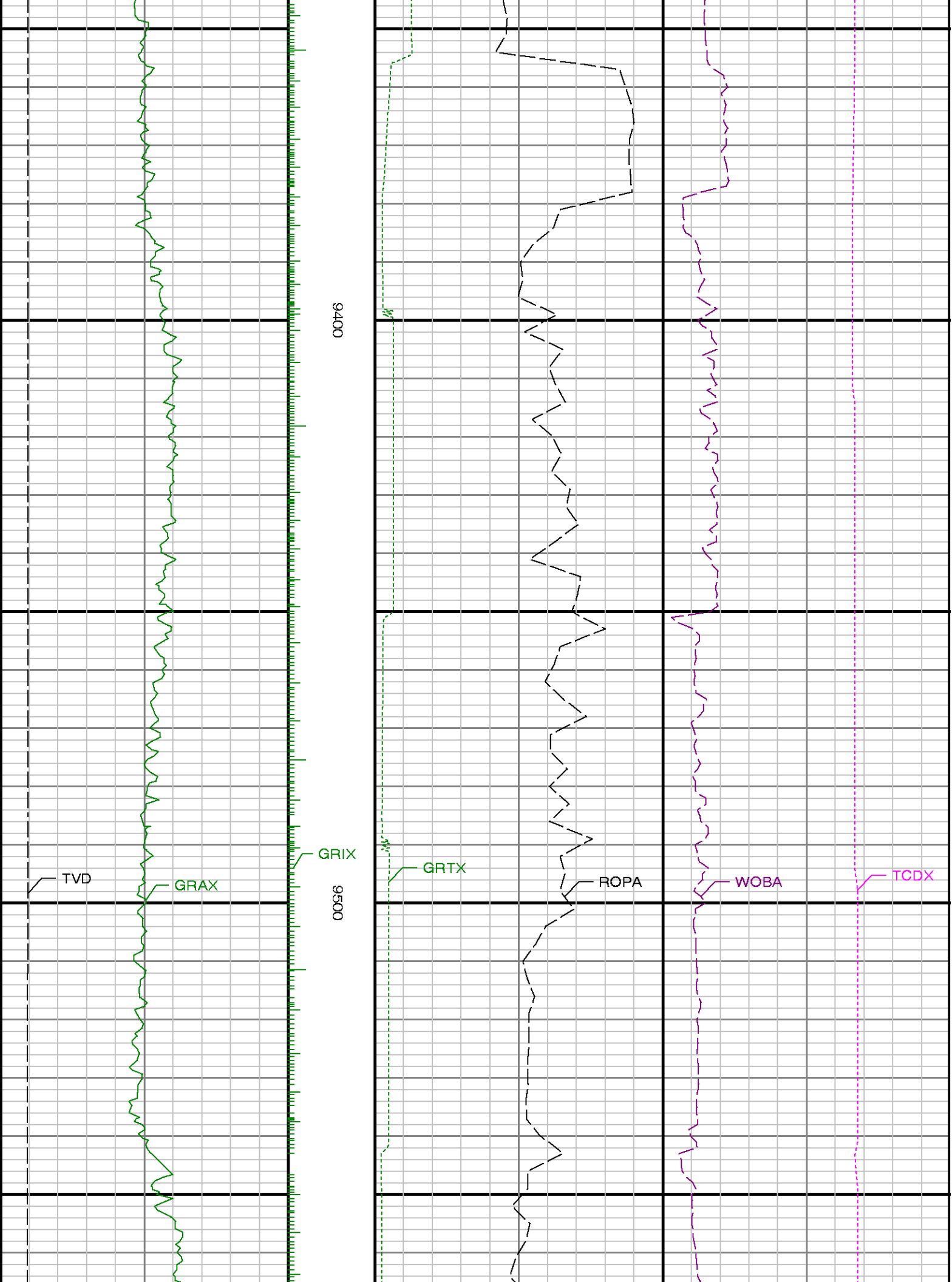
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8900

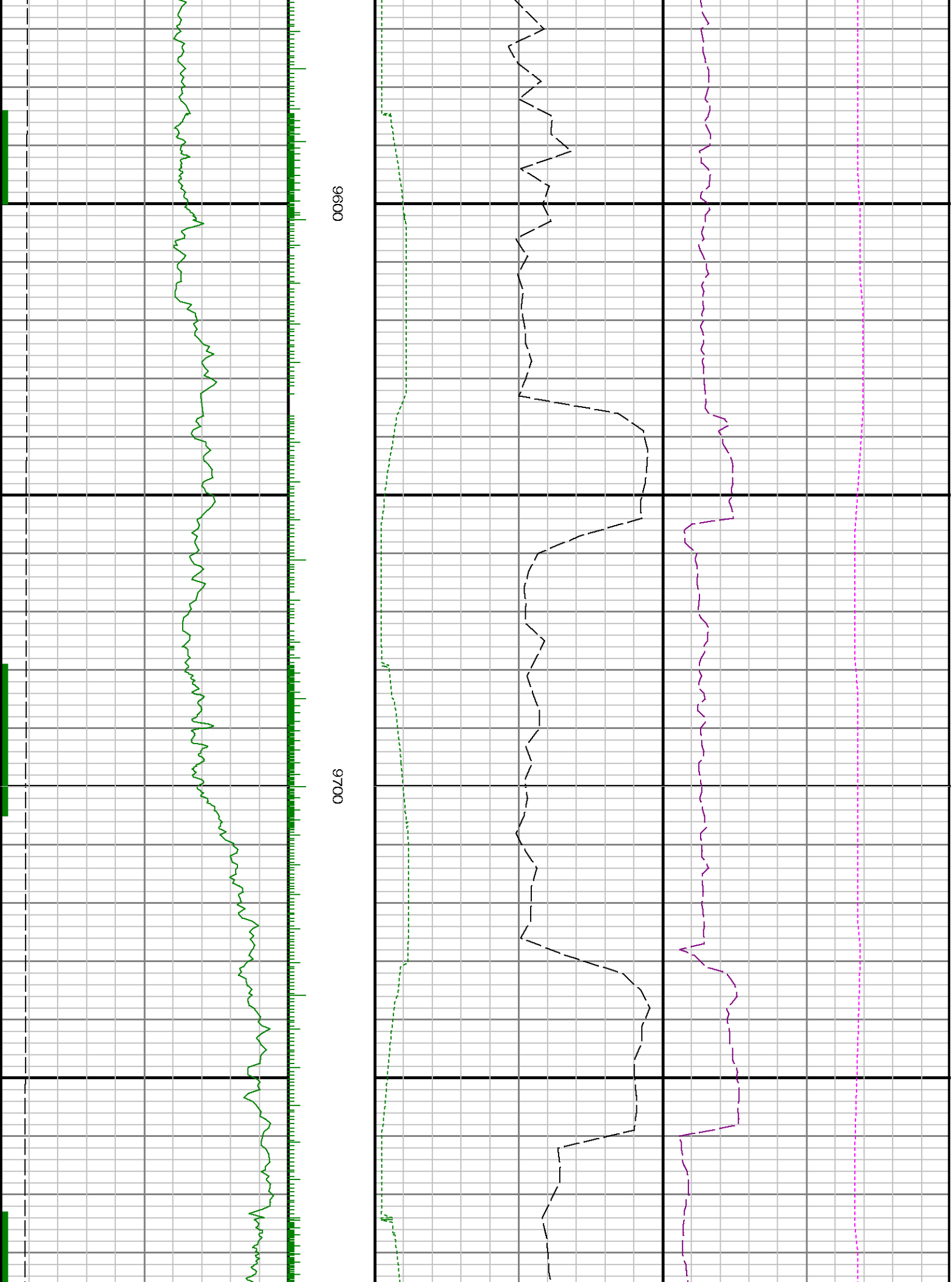


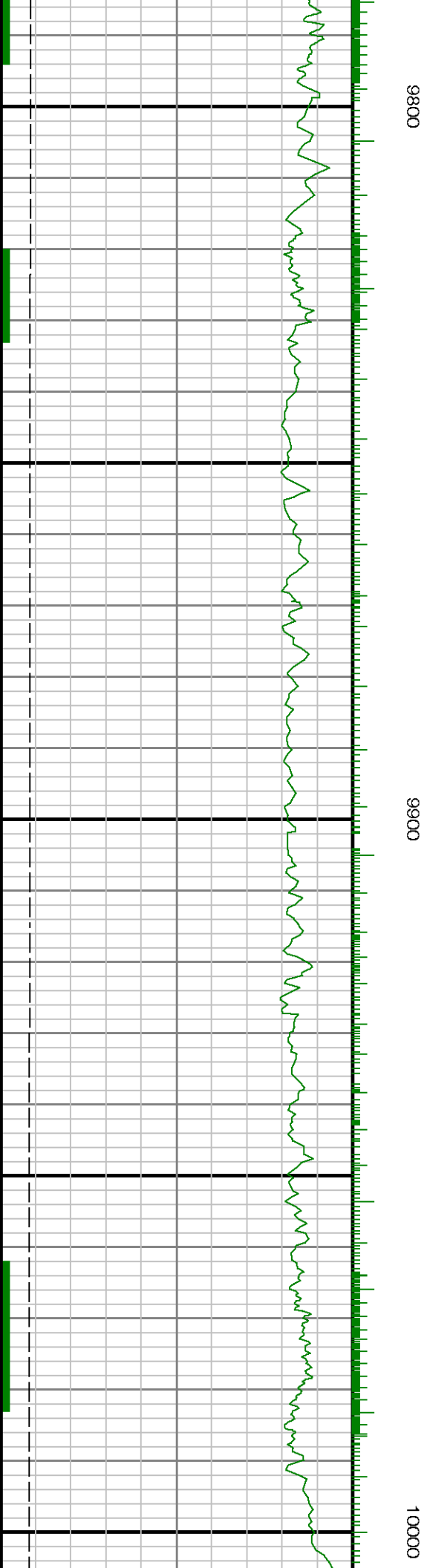


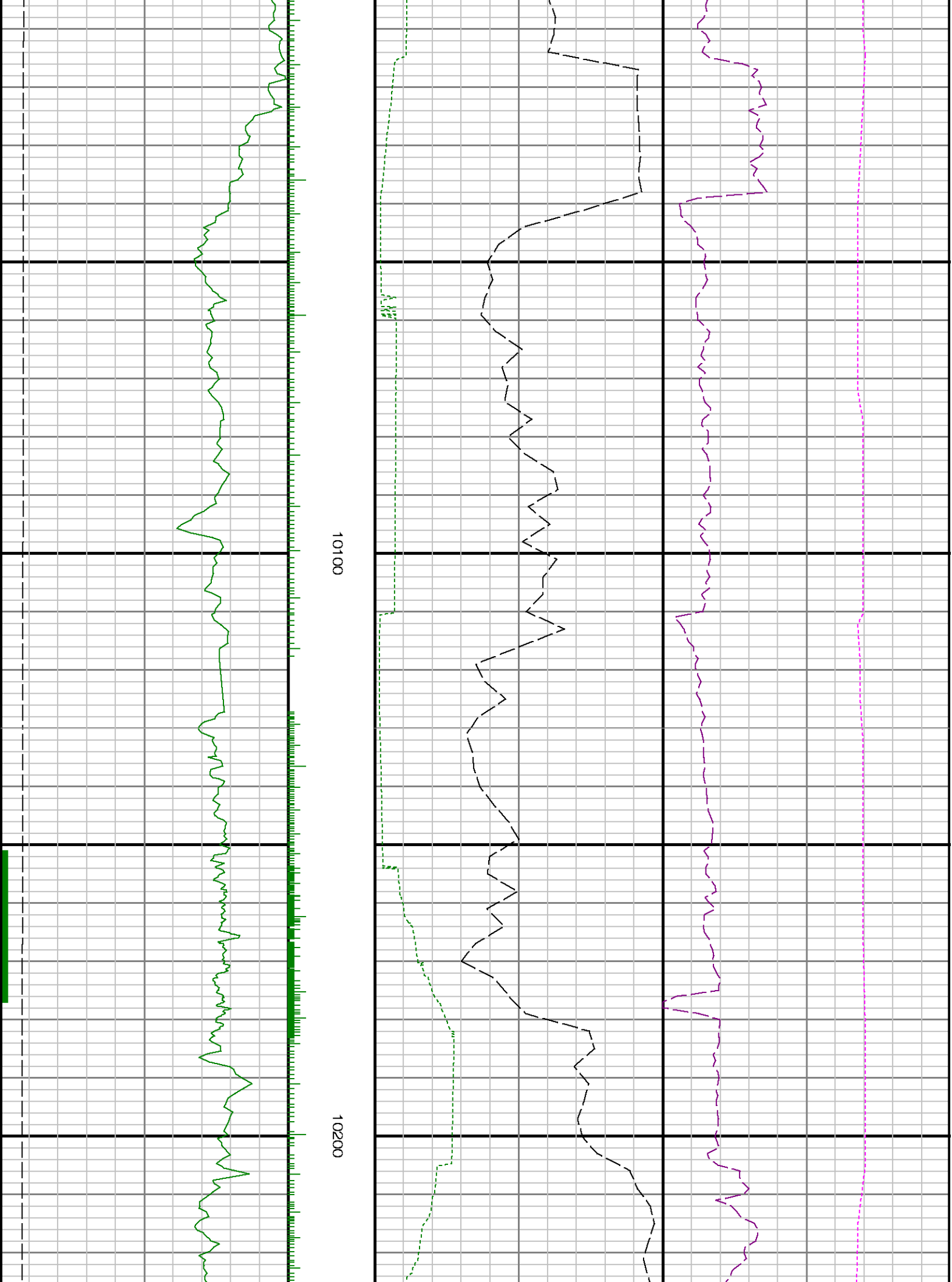


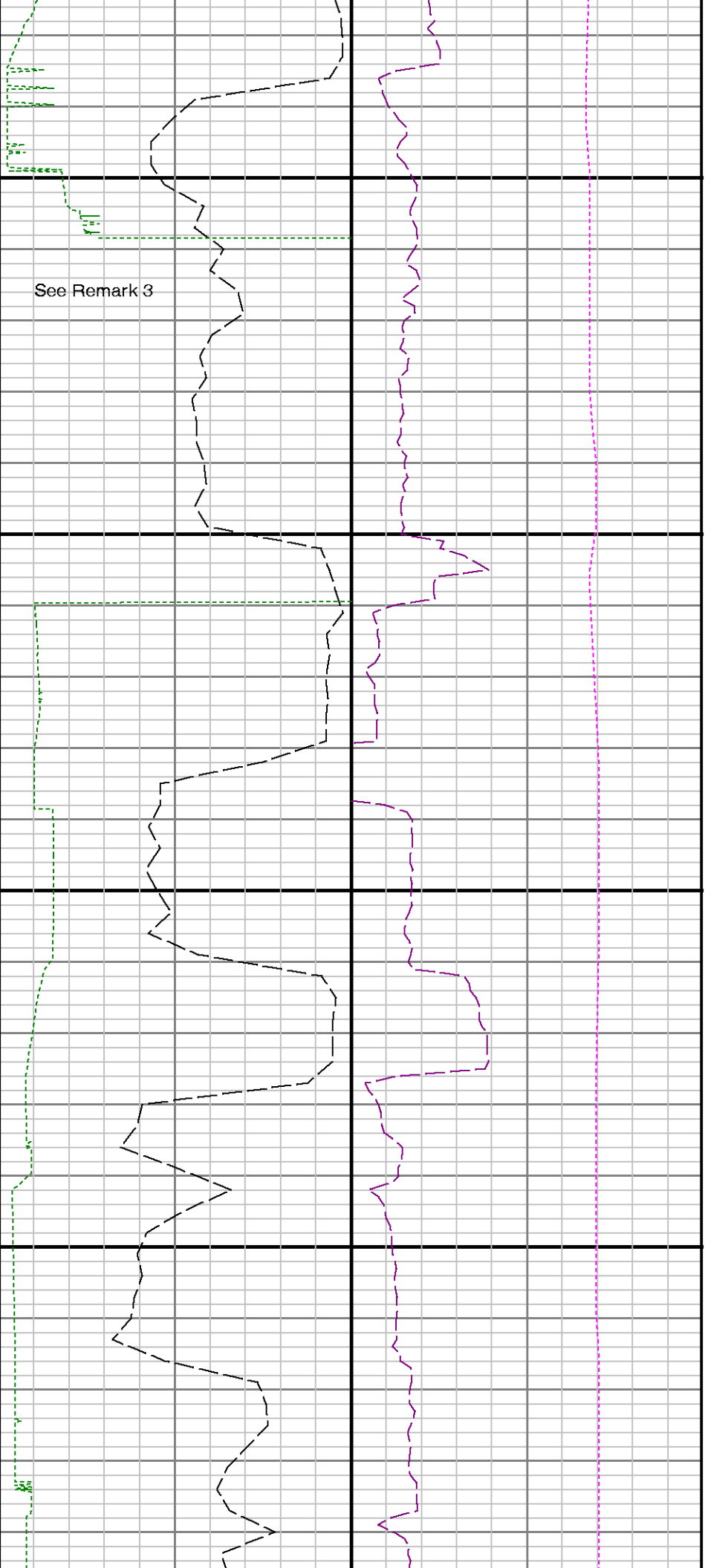








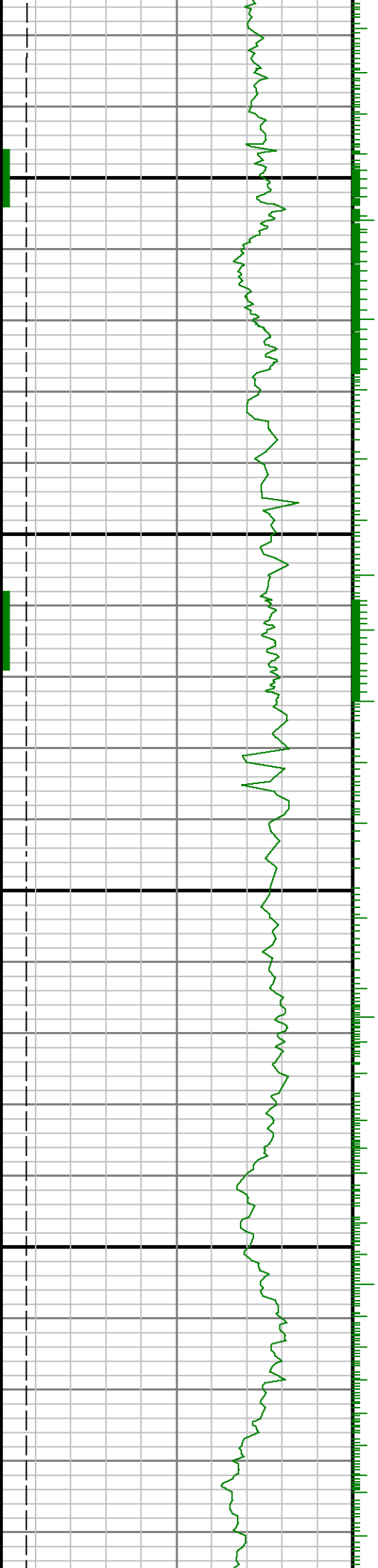


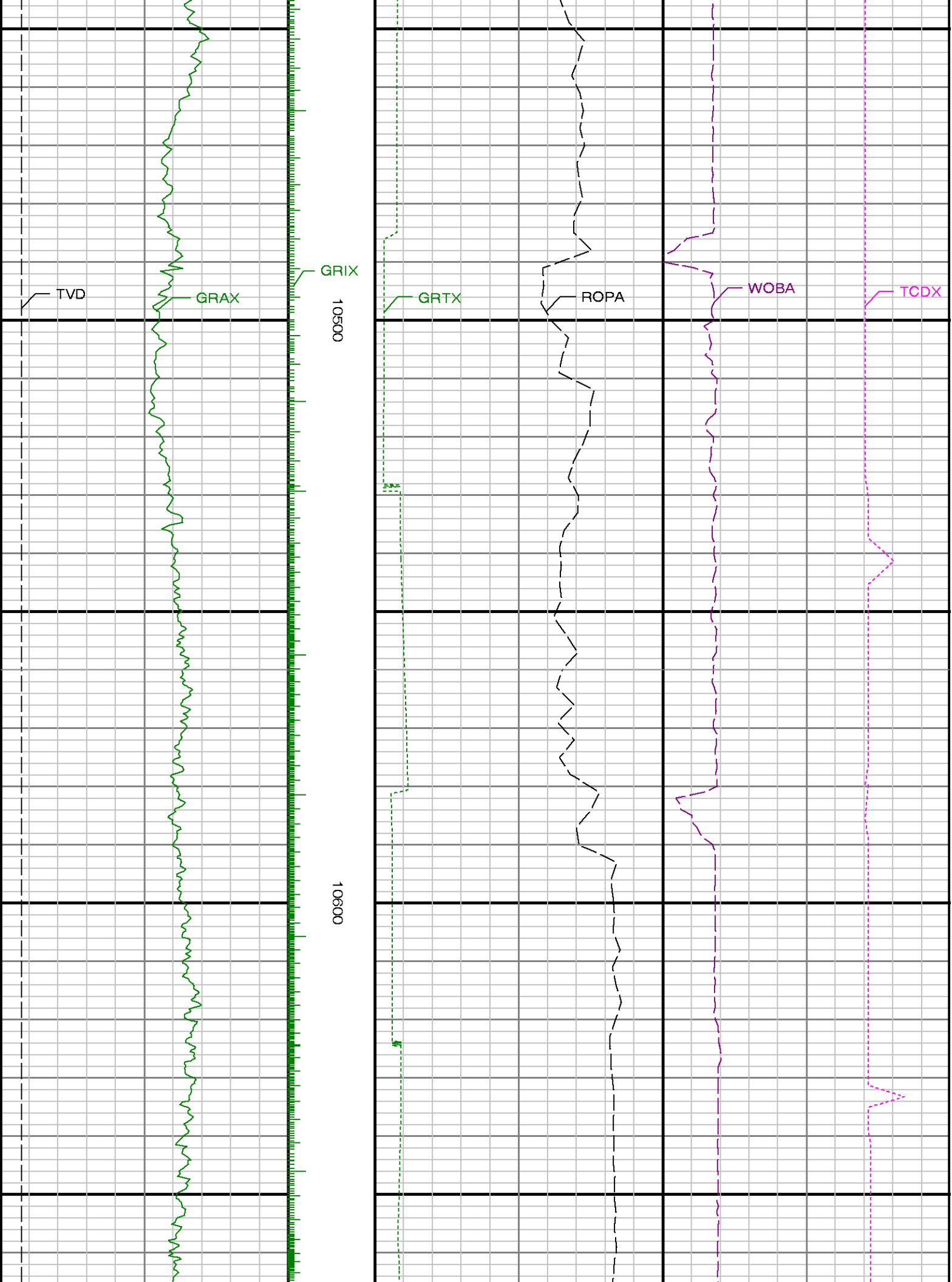


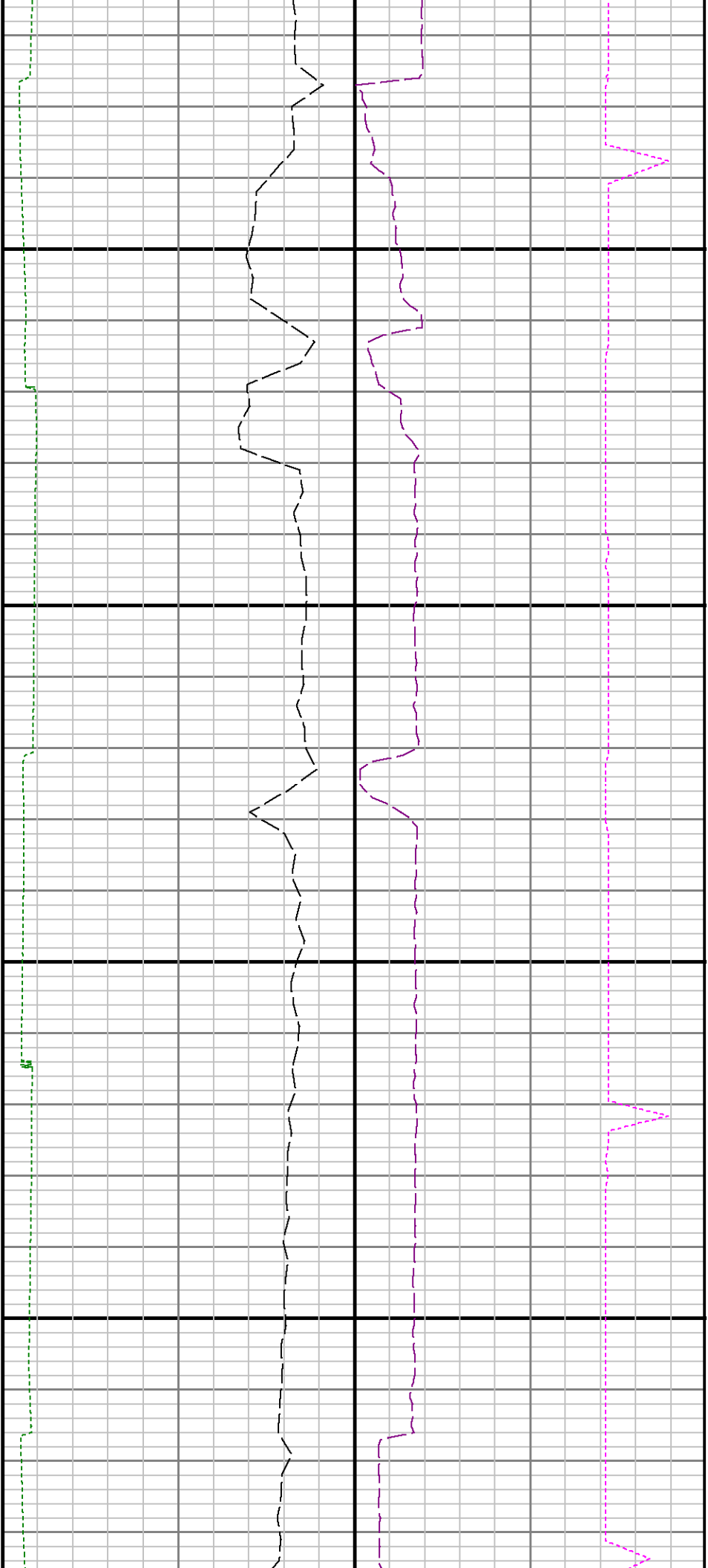
Run 3 <> Run 4

10300

10400

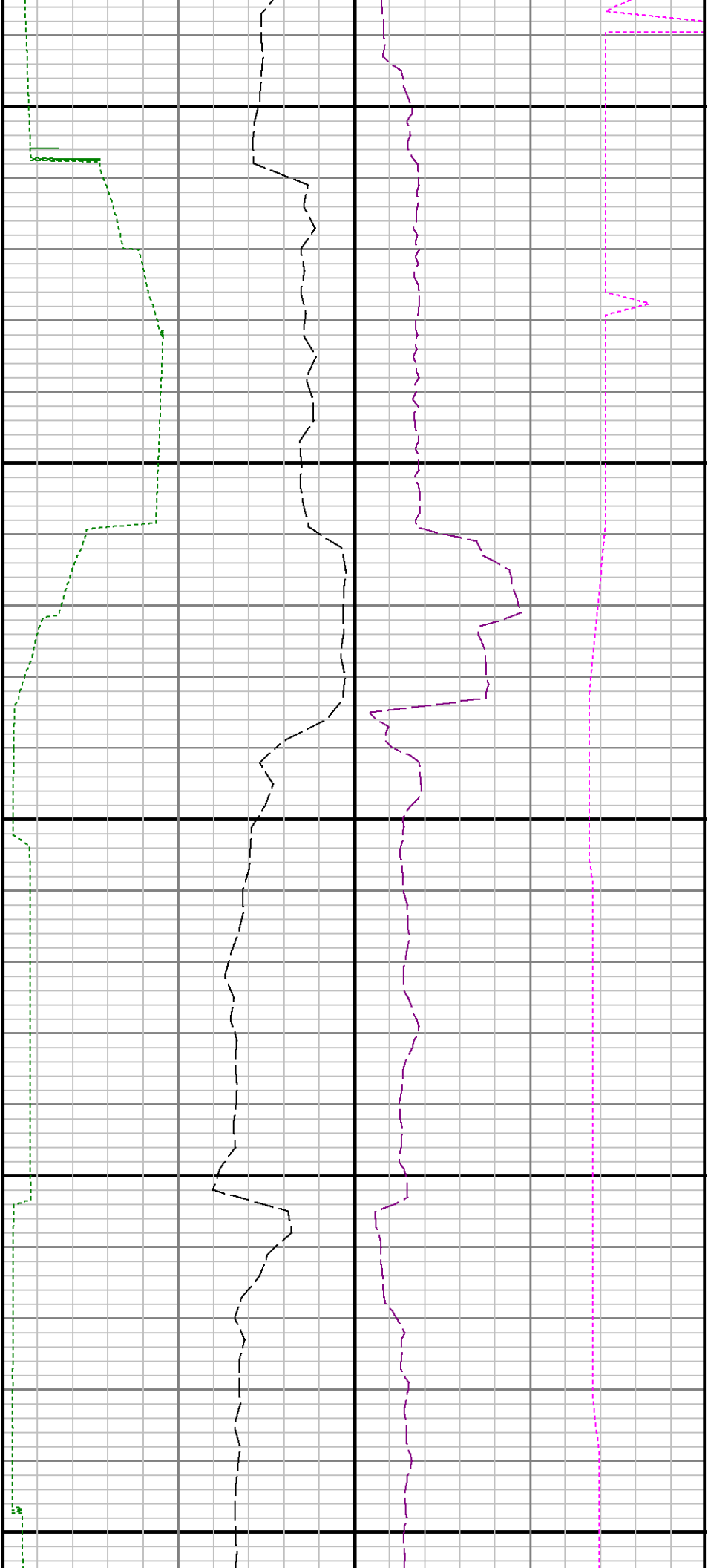






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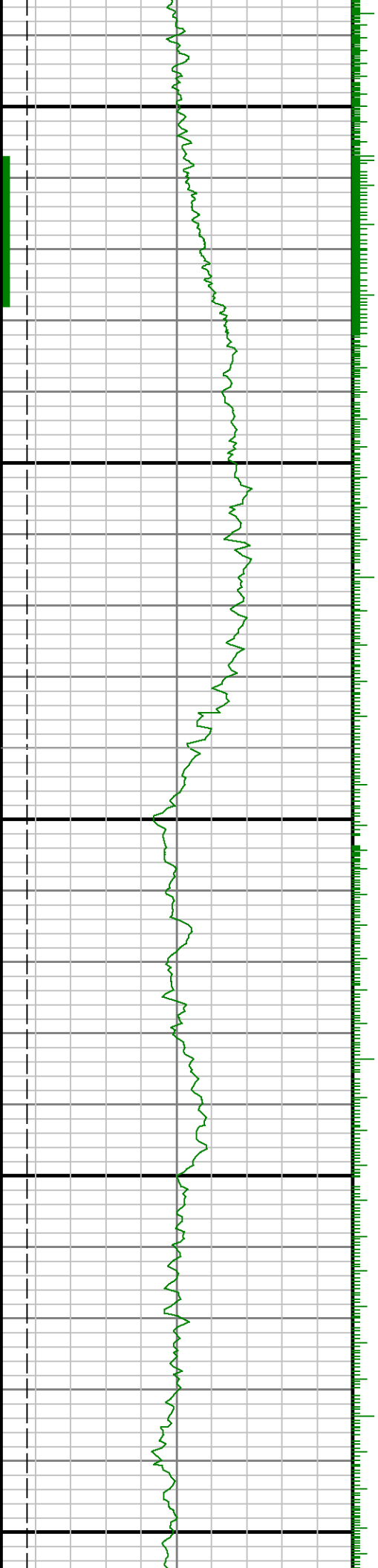
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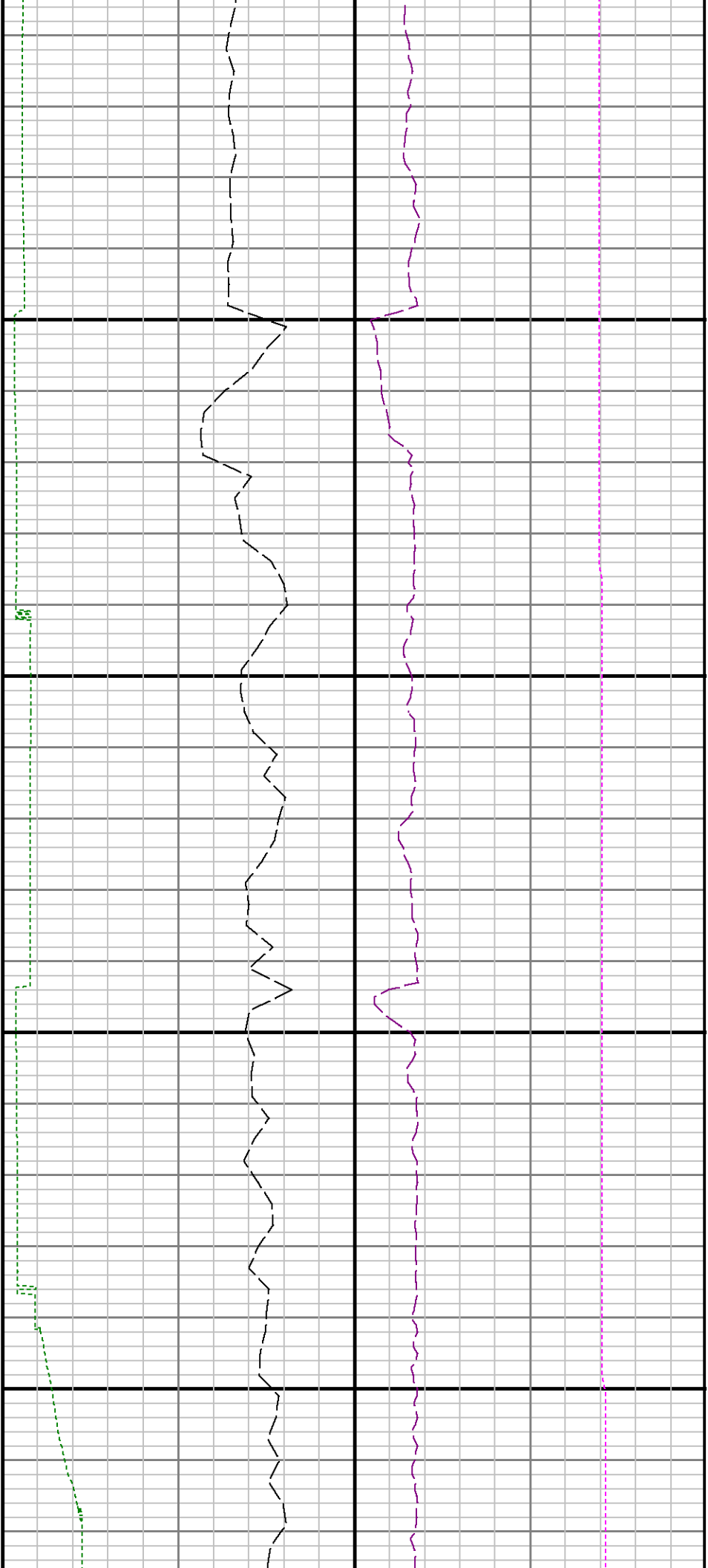


10900

11000

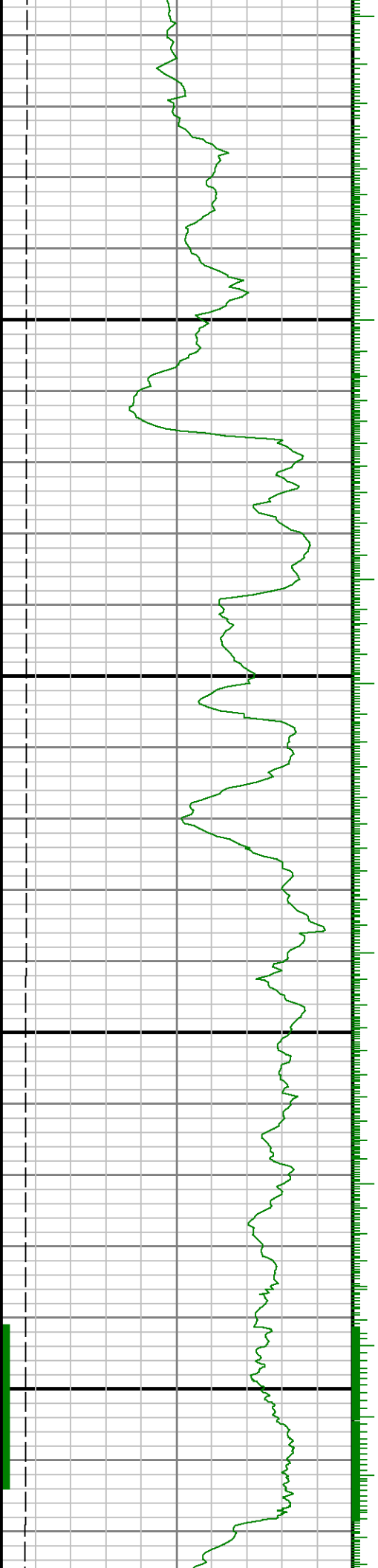
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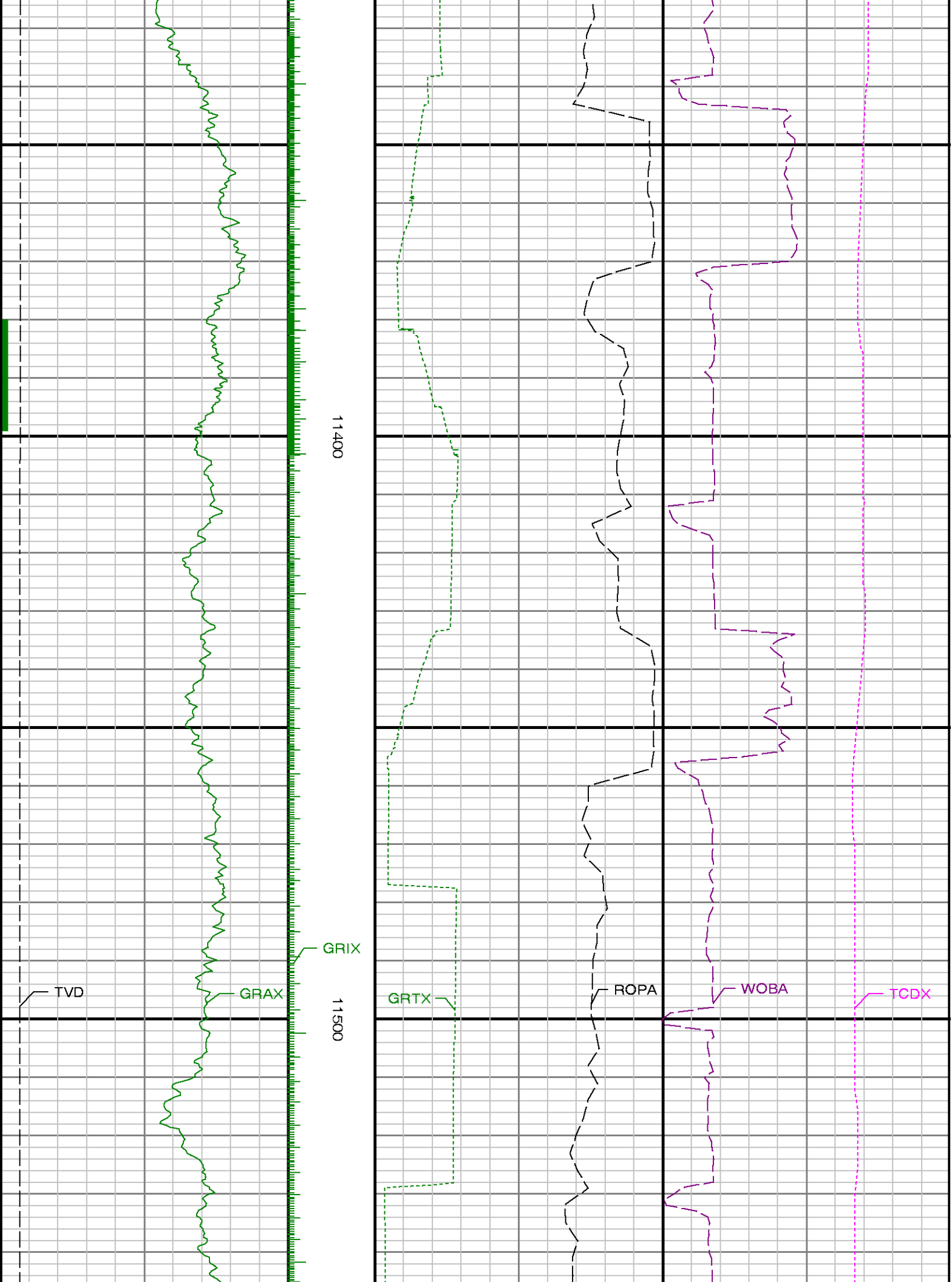


11200

11300



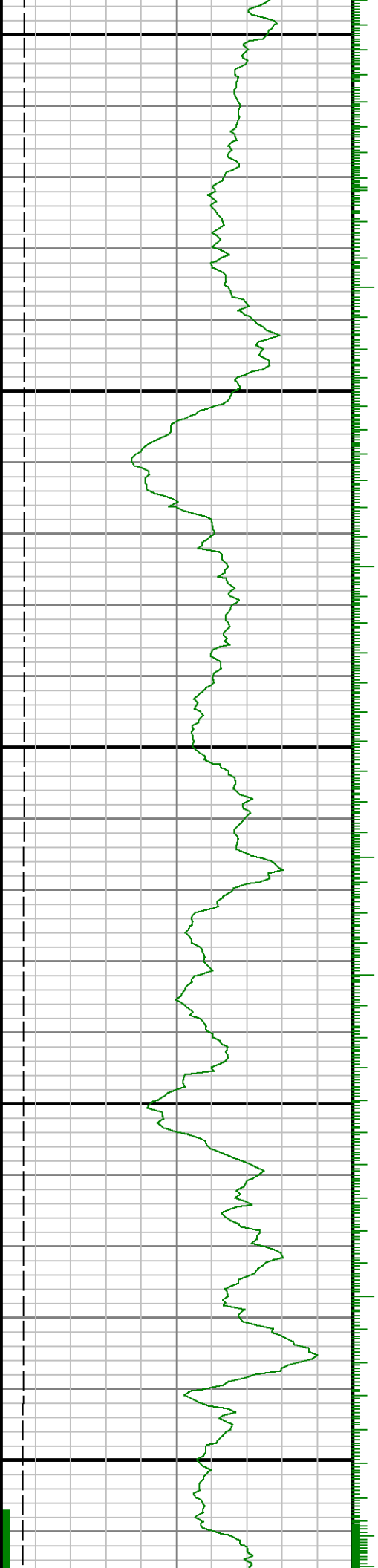


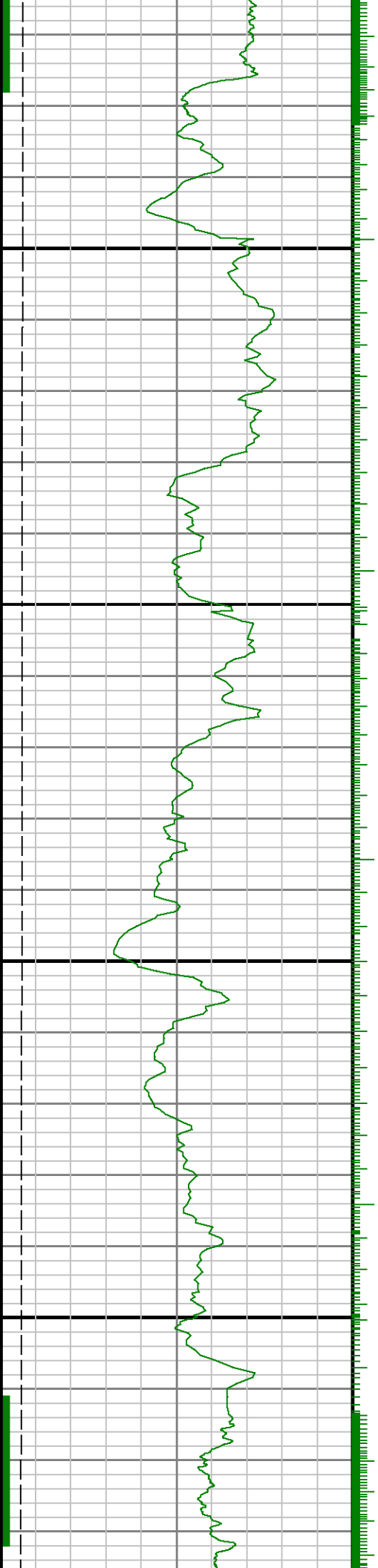




11600

11700

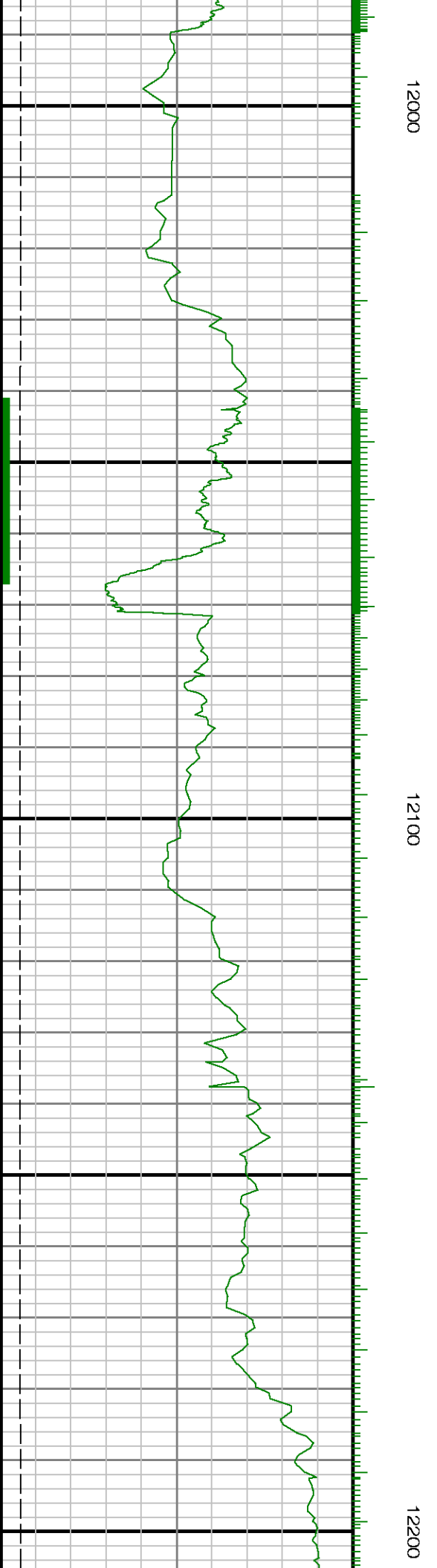
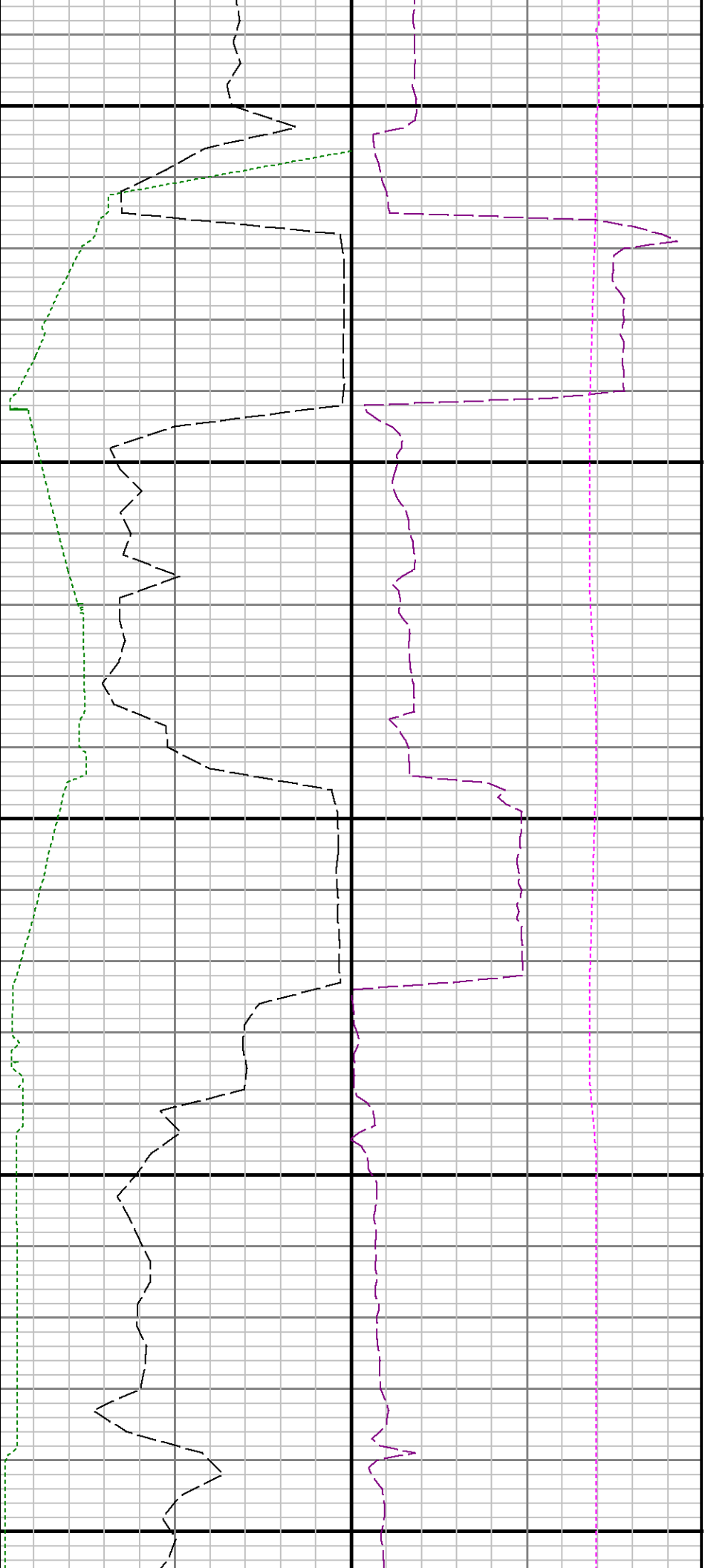


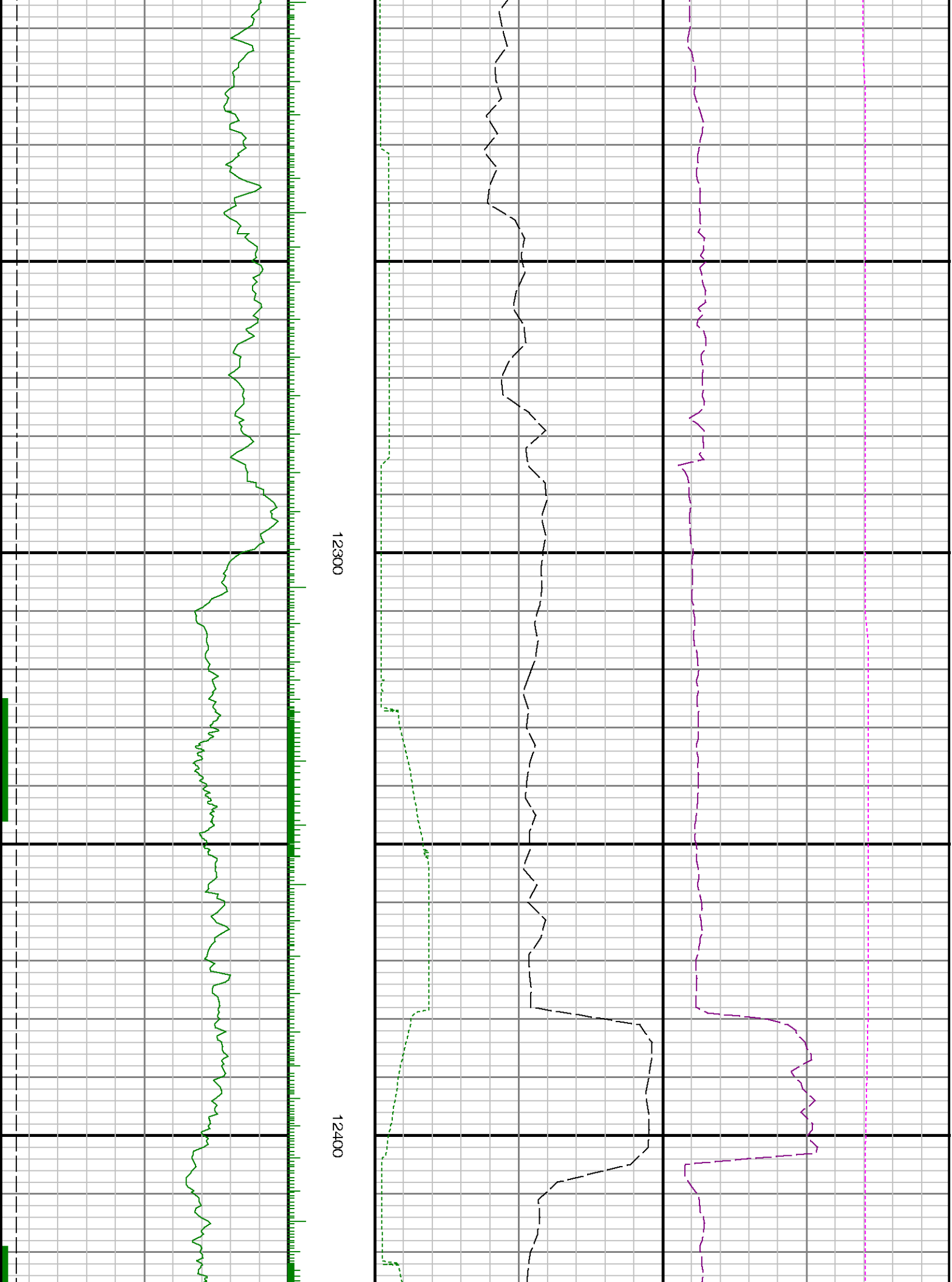


11800

11900

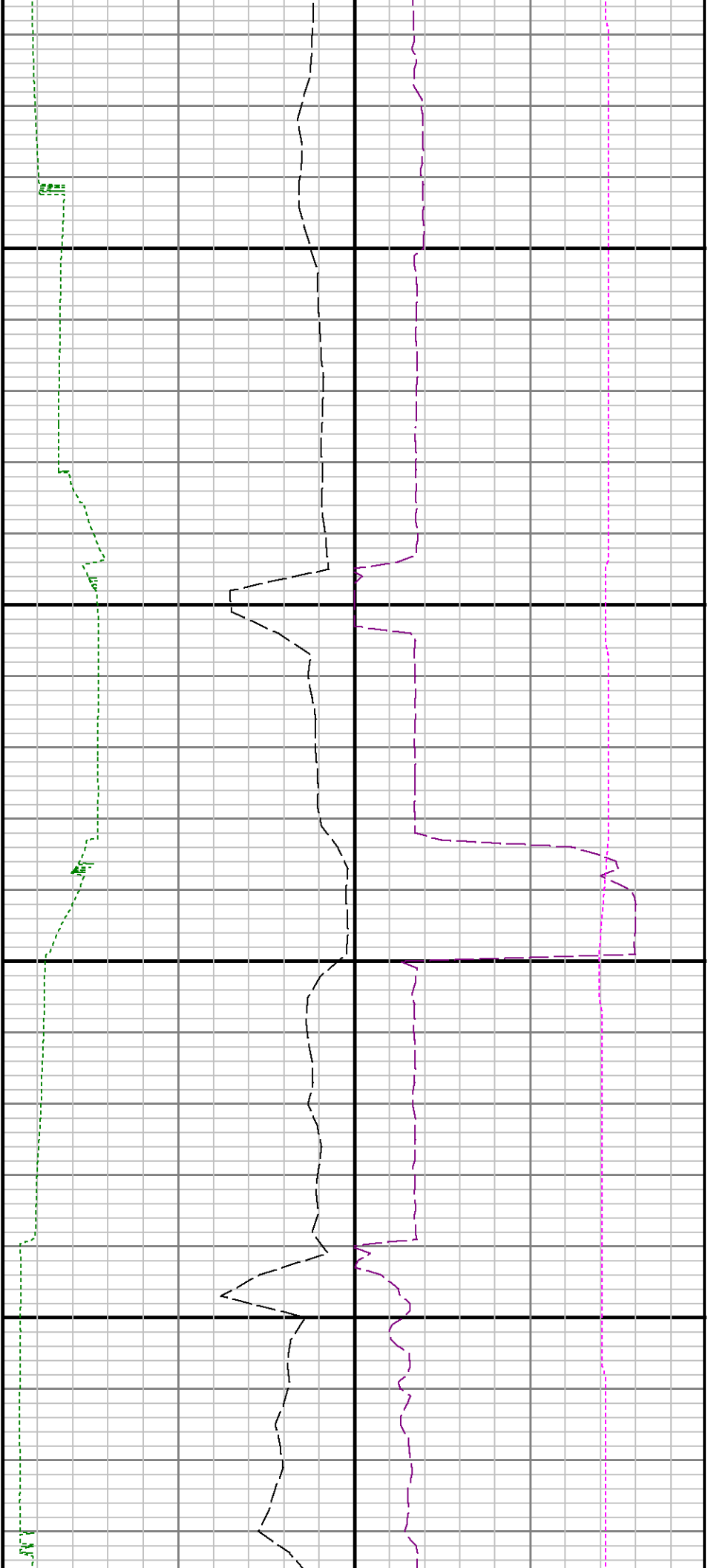






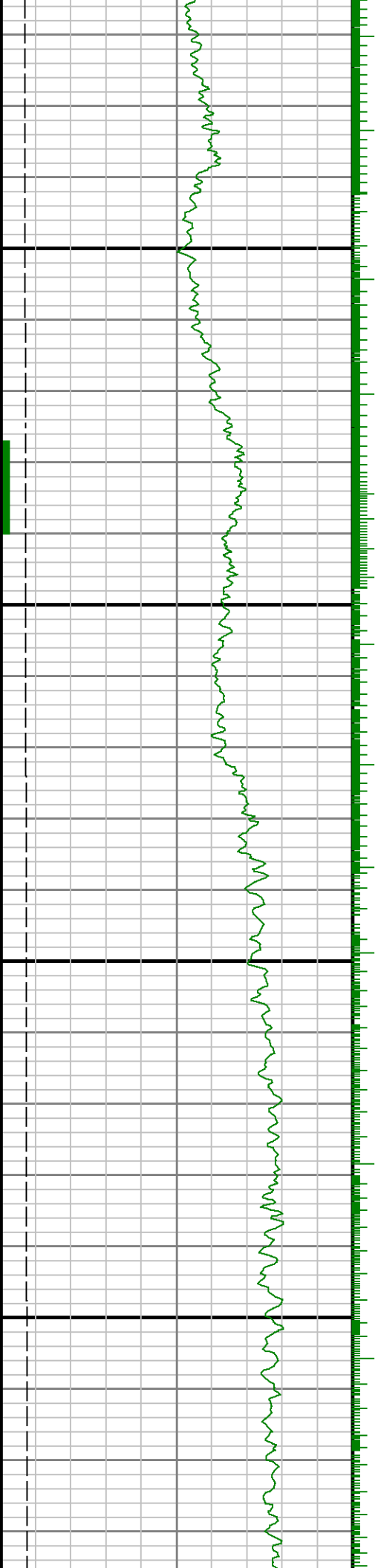




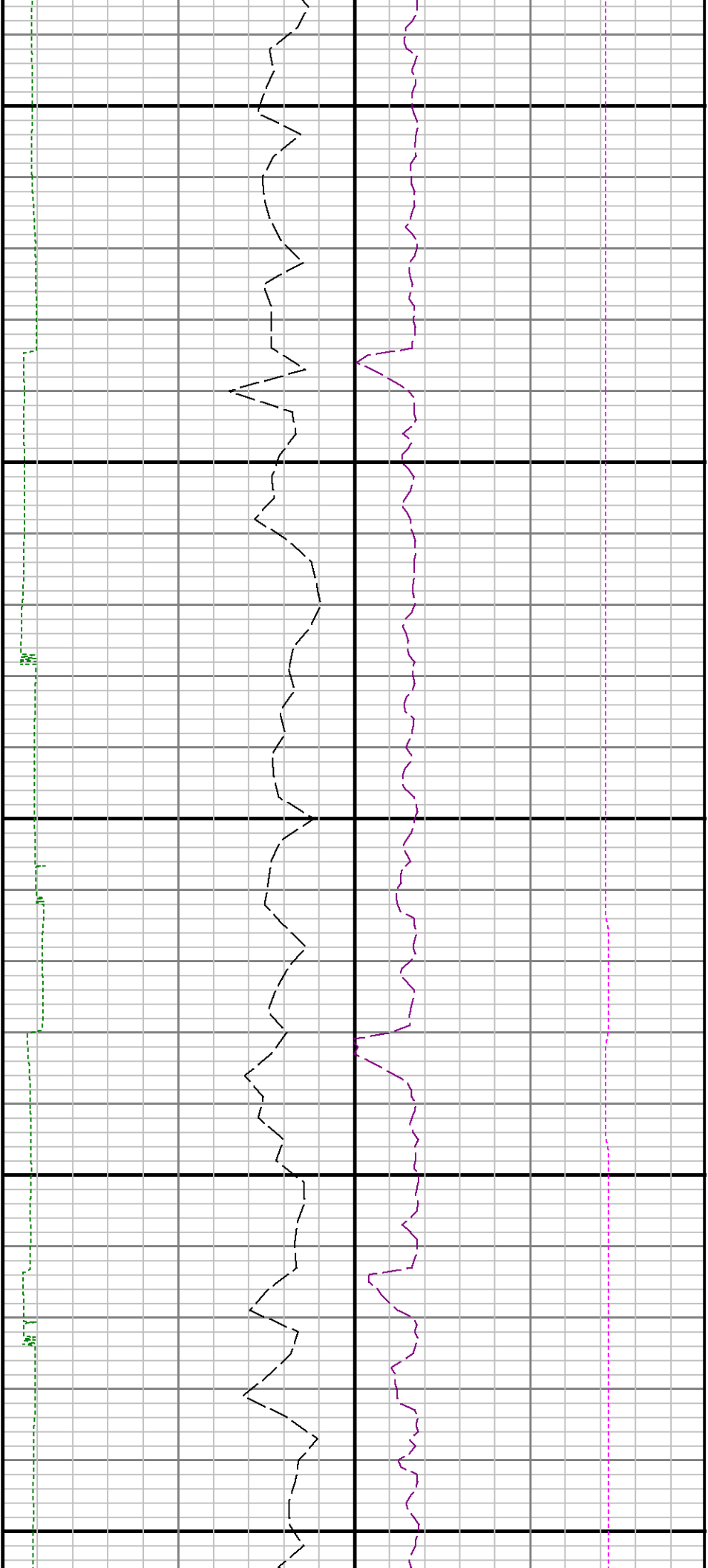


12900

13000



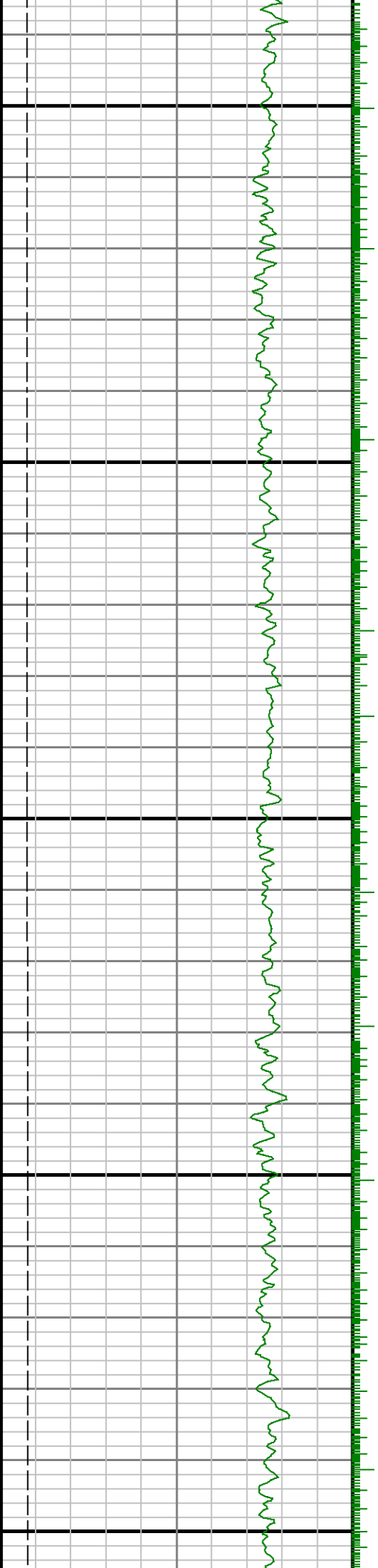


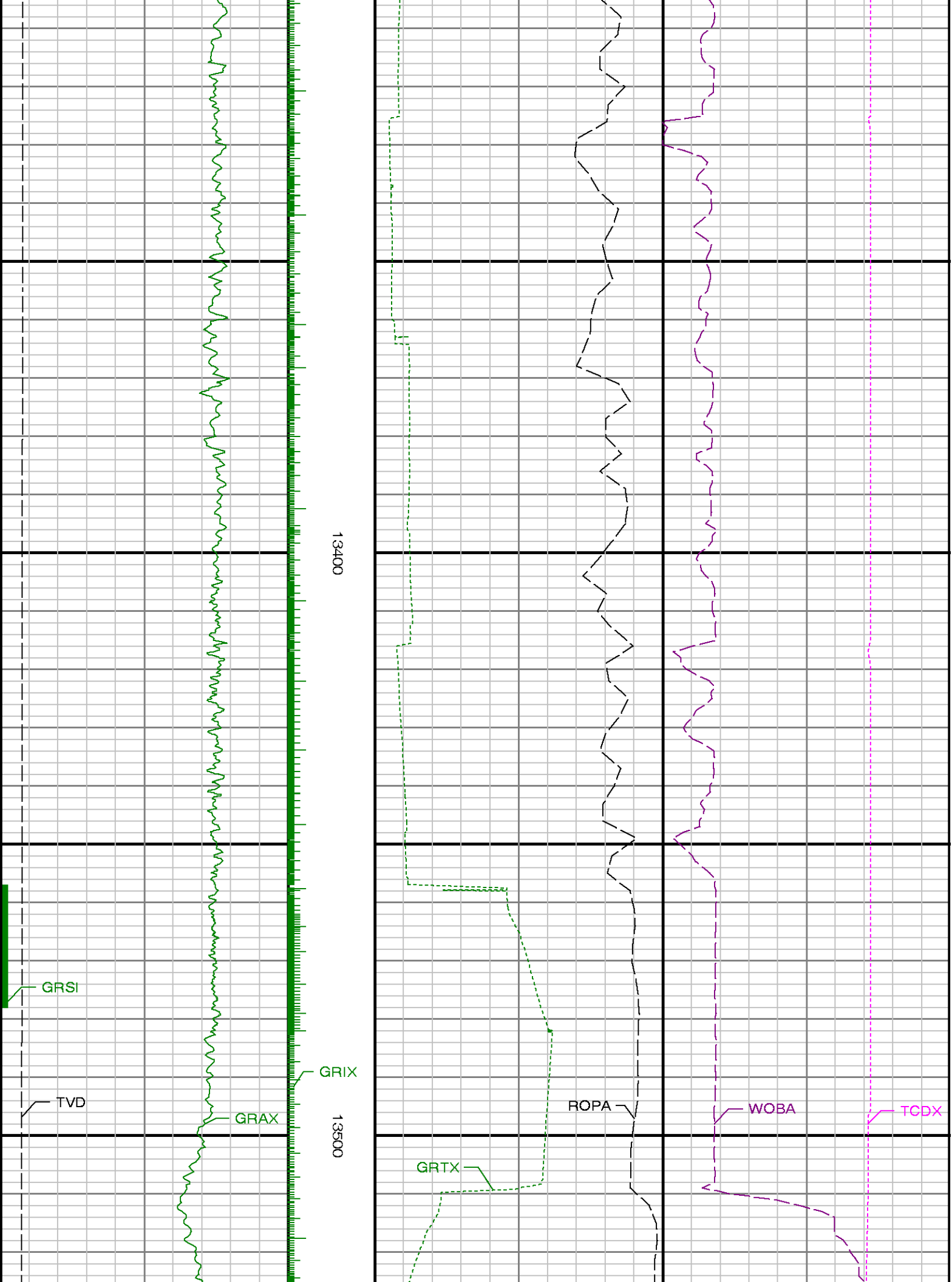


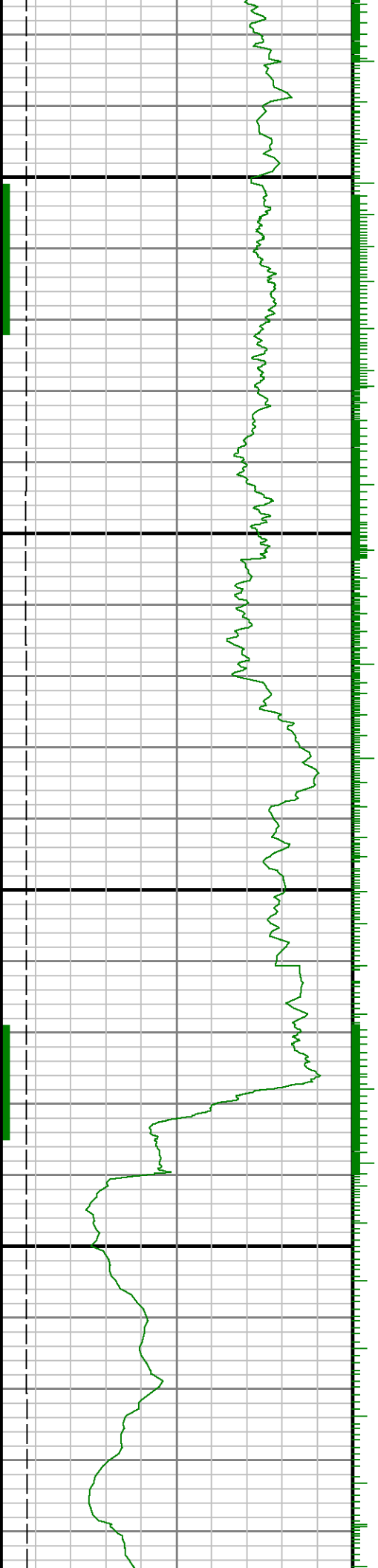
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13200

13300





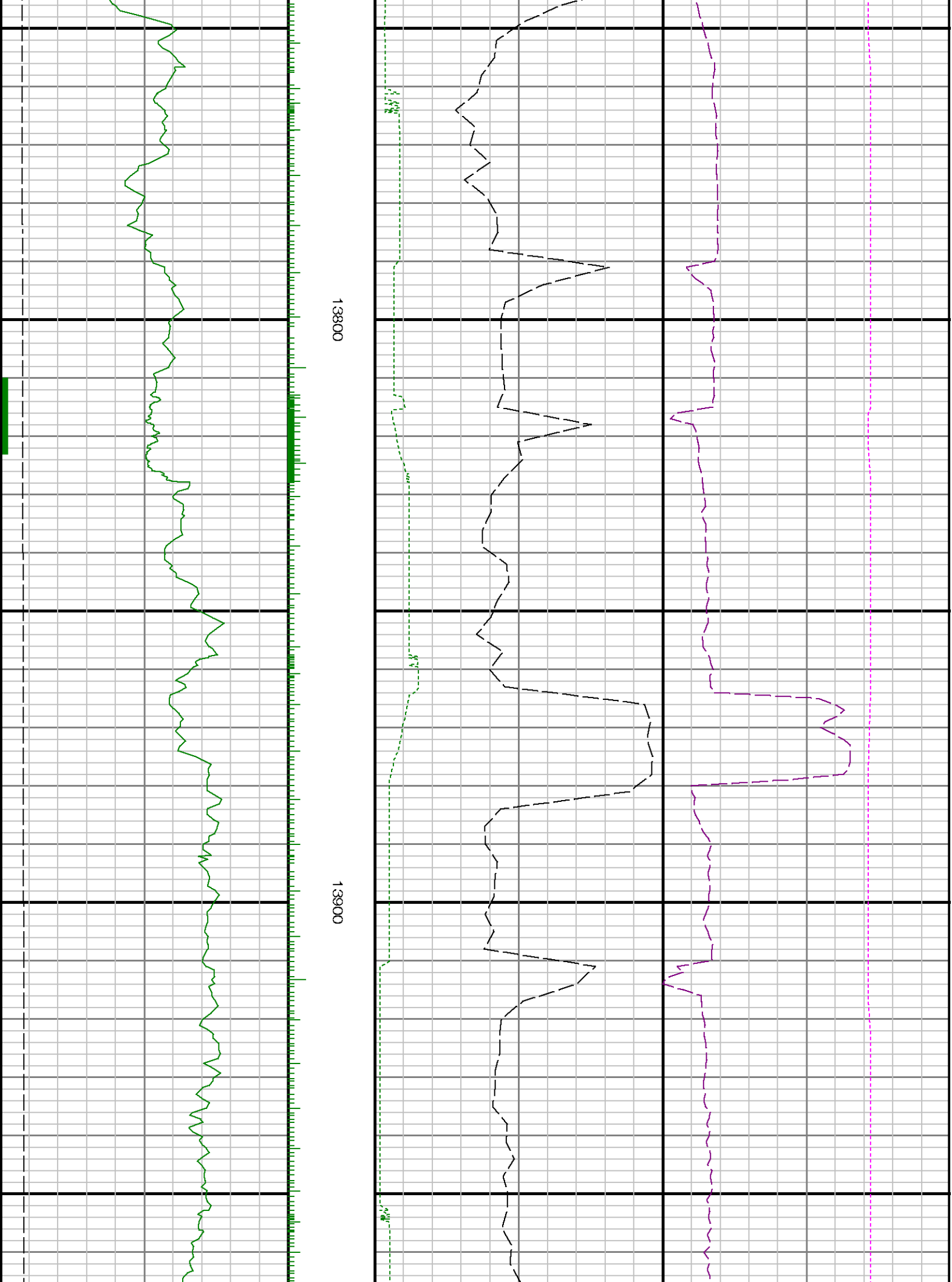


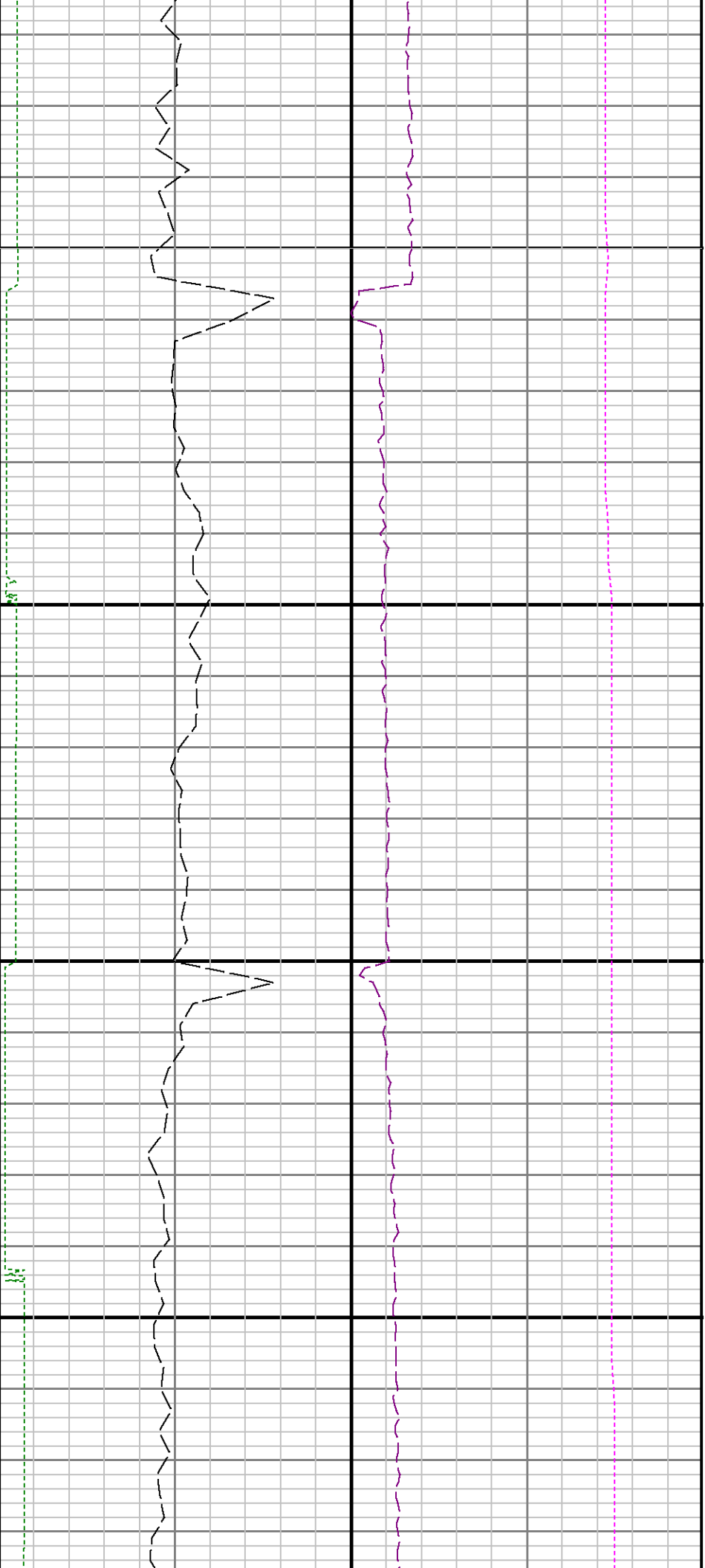
13600

Run 4 <> Run 5

13700

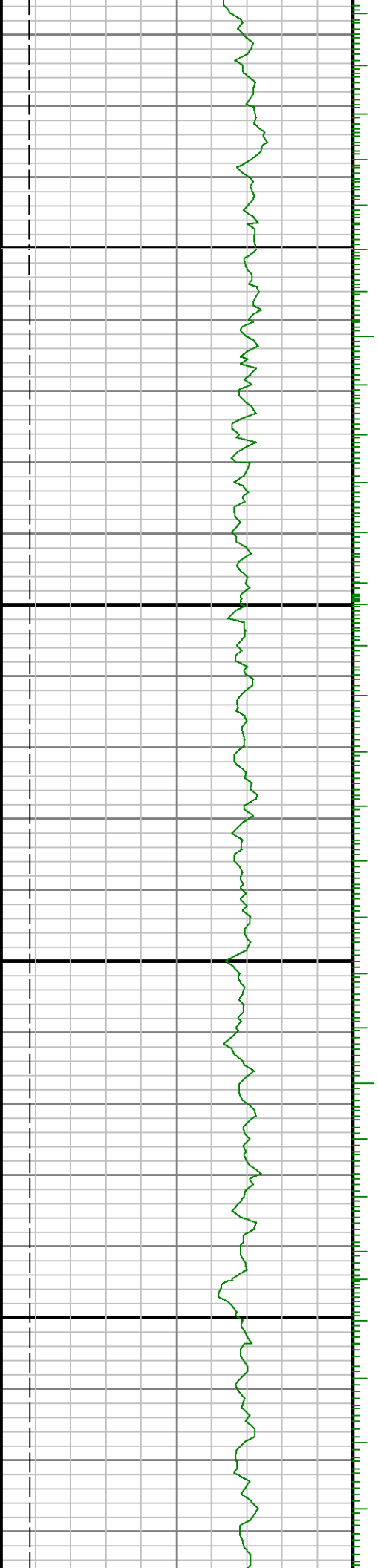


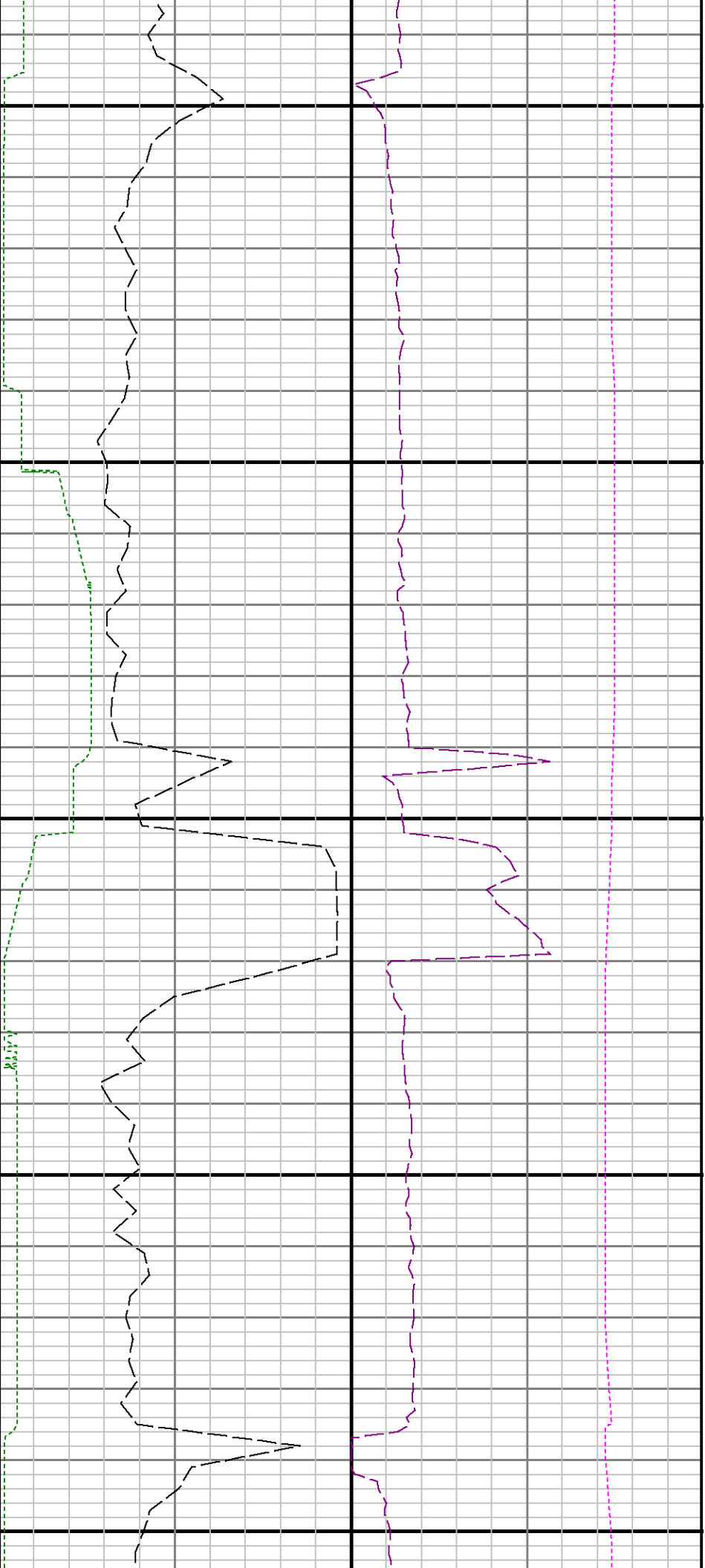




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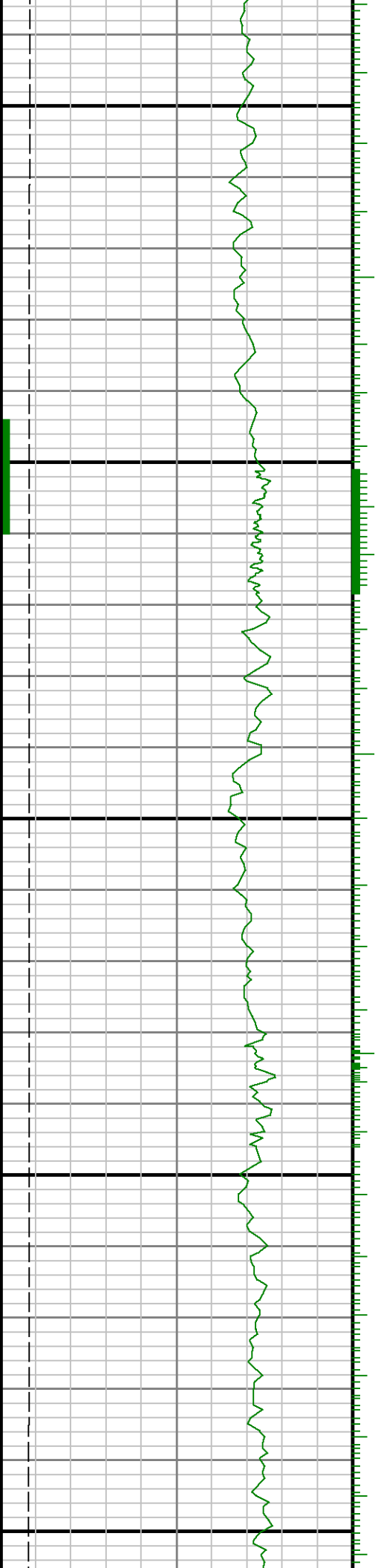


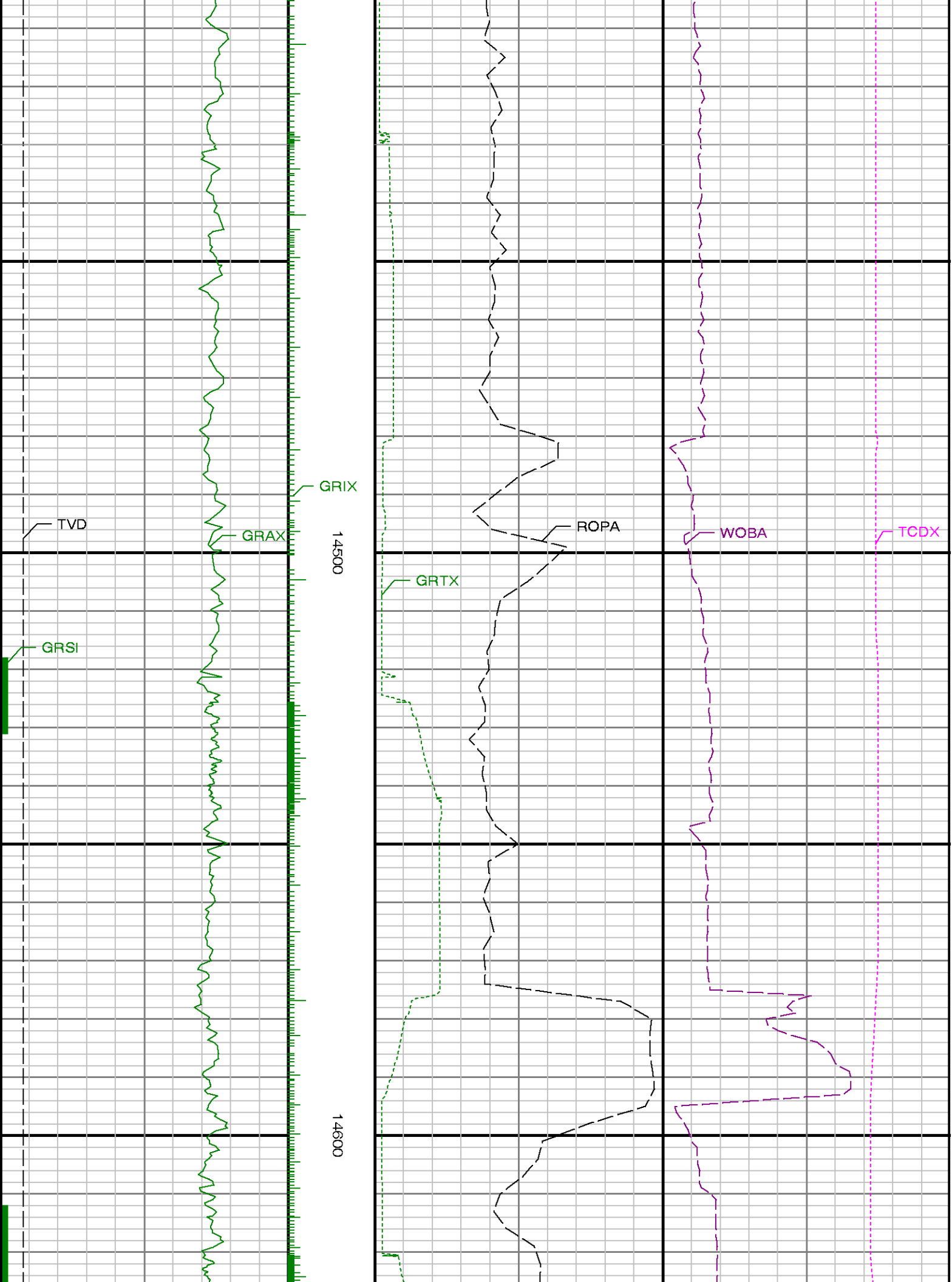


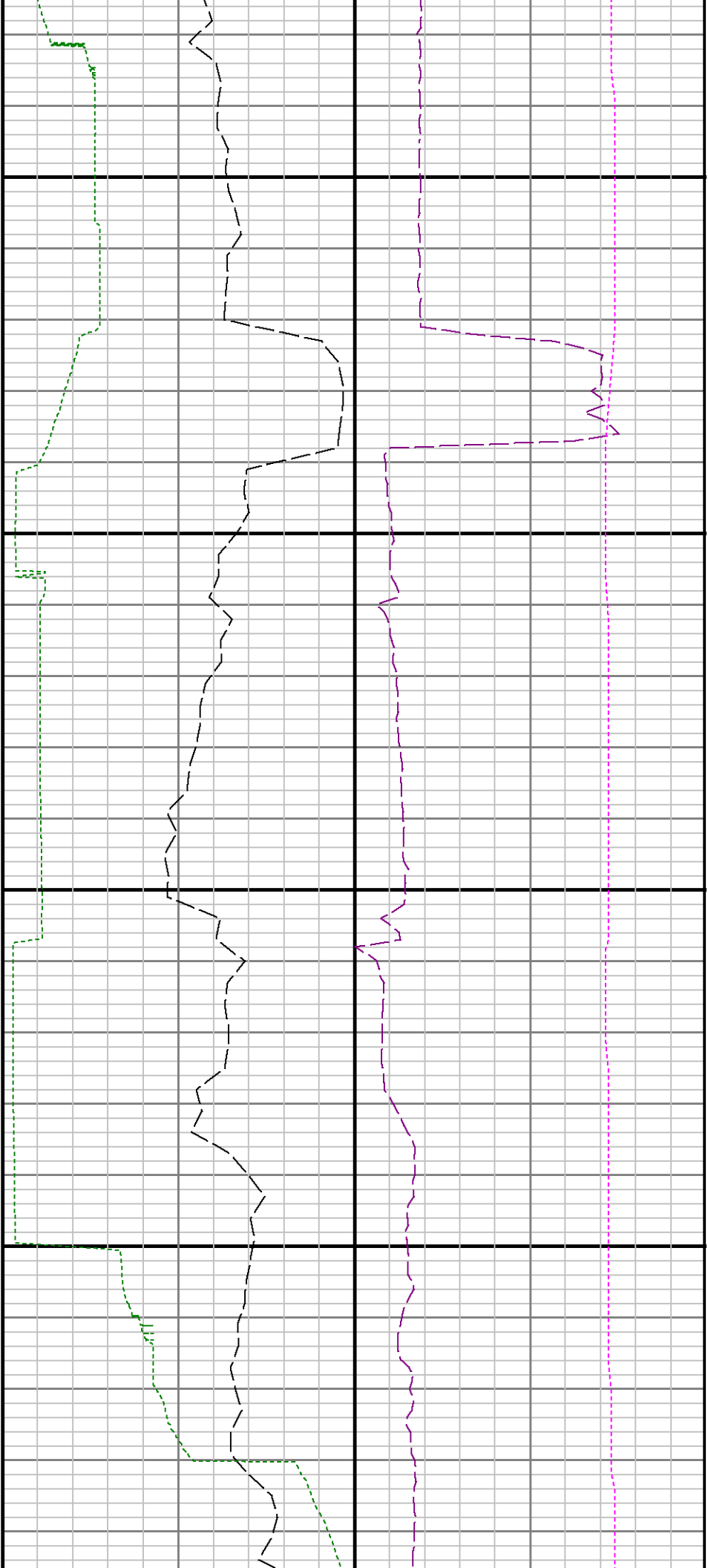
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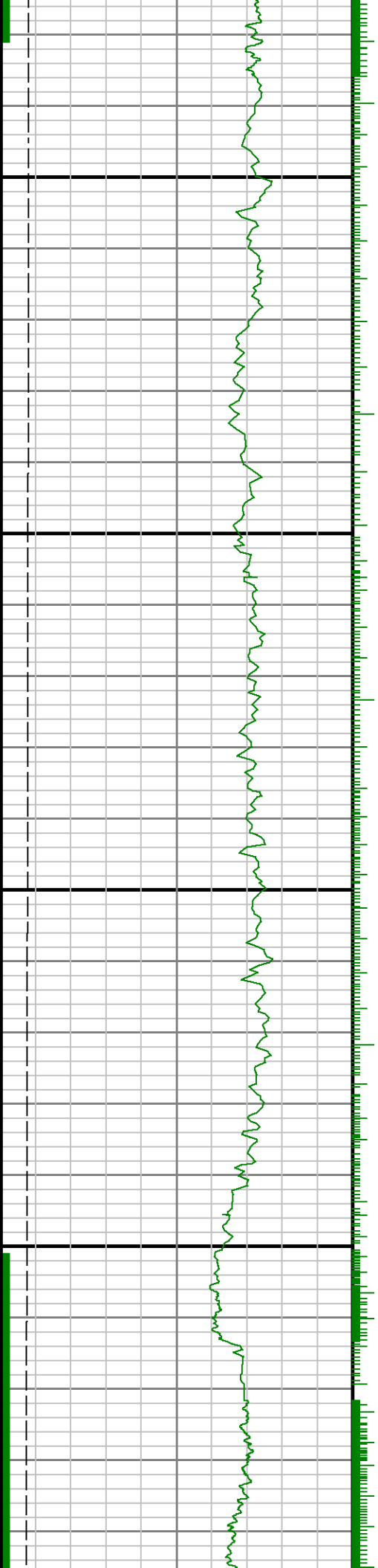




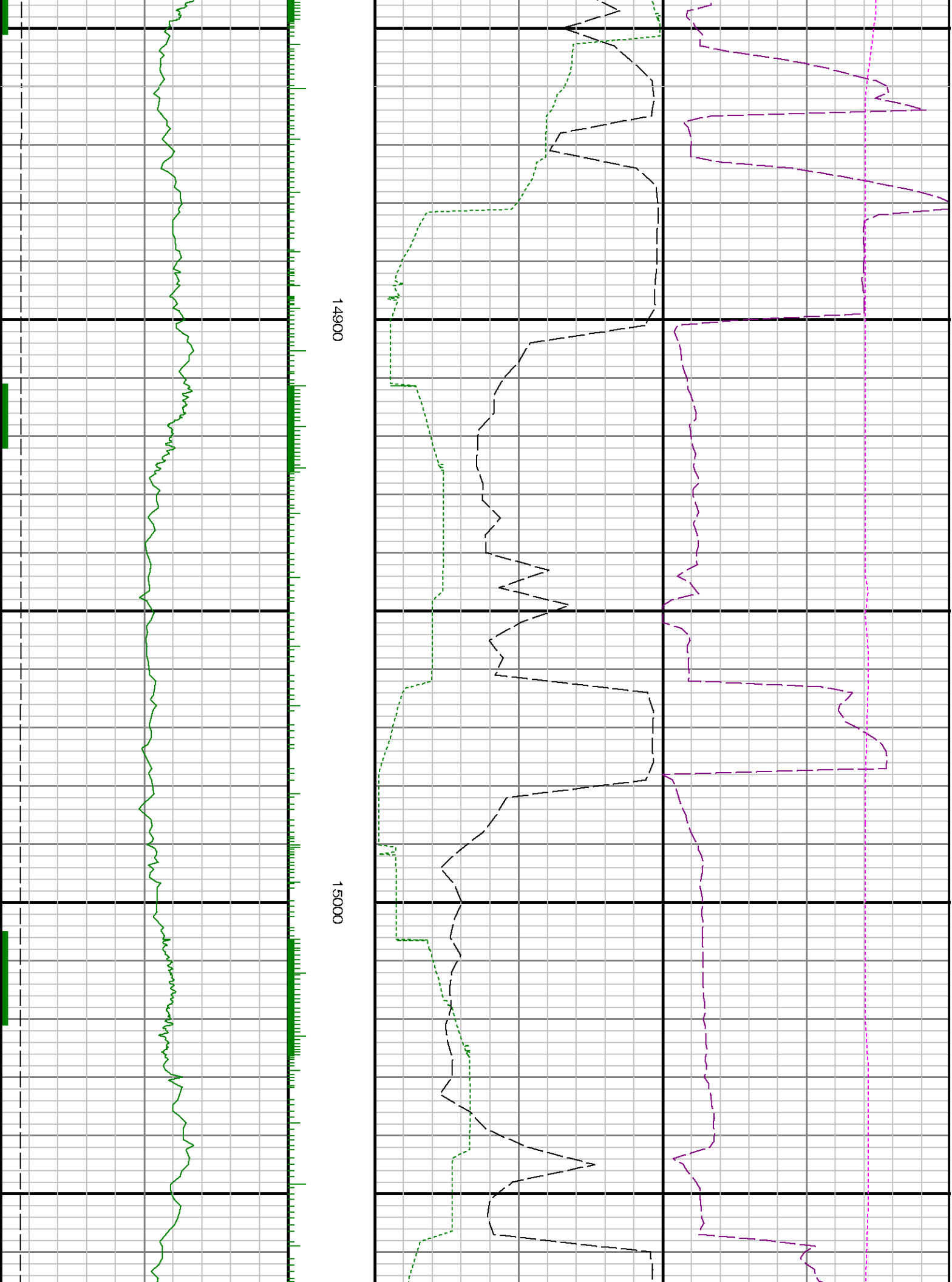


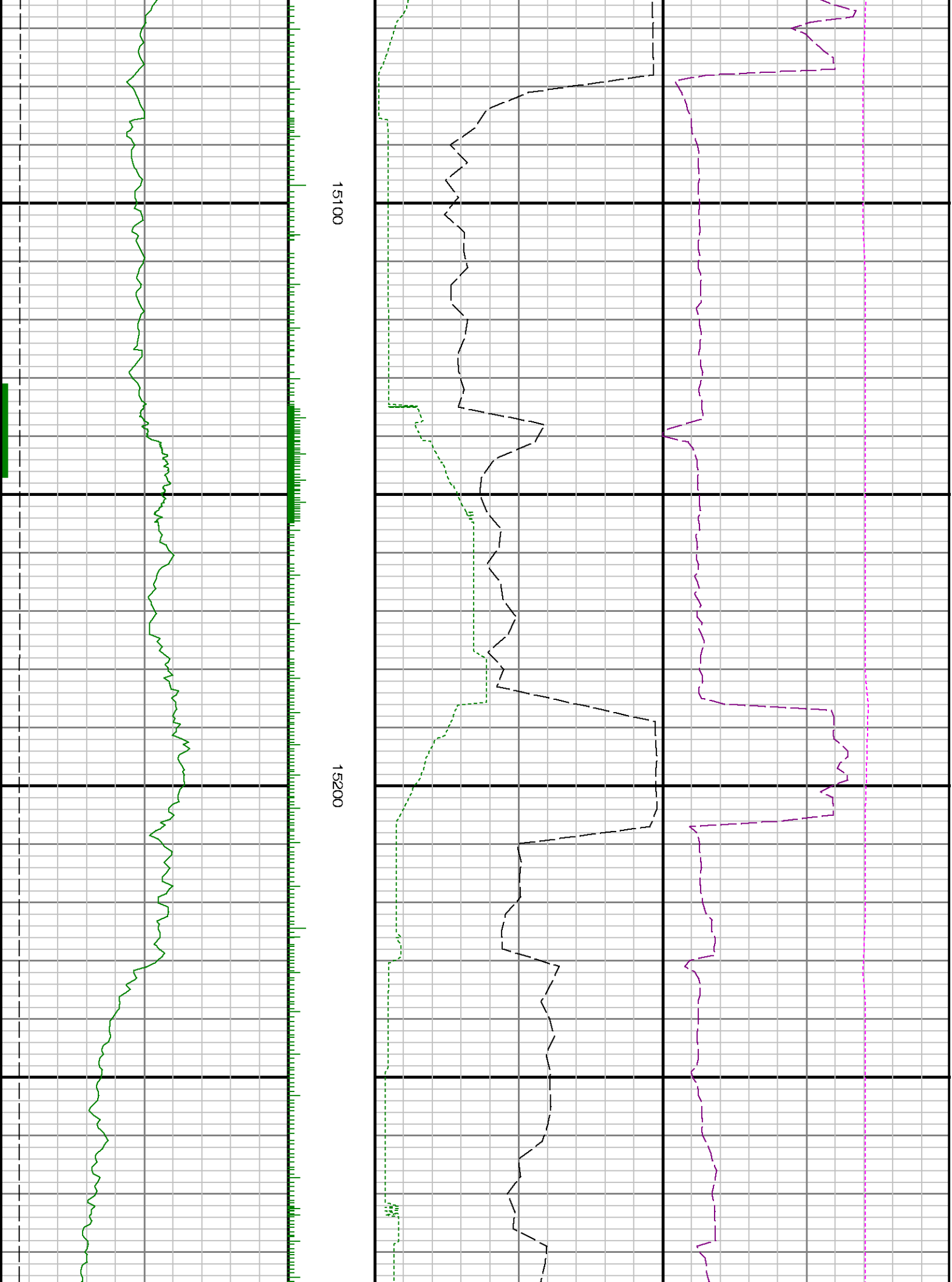
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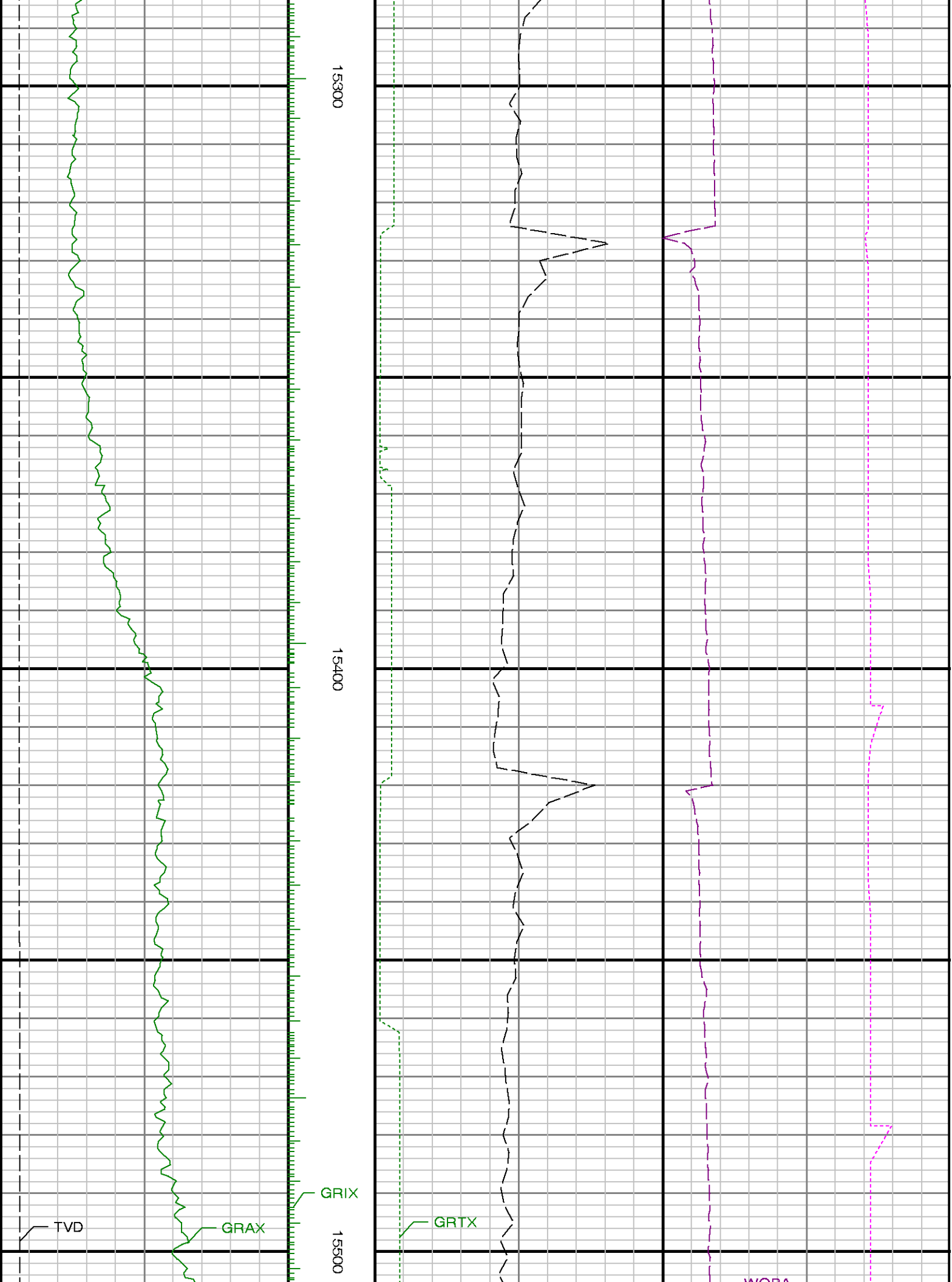
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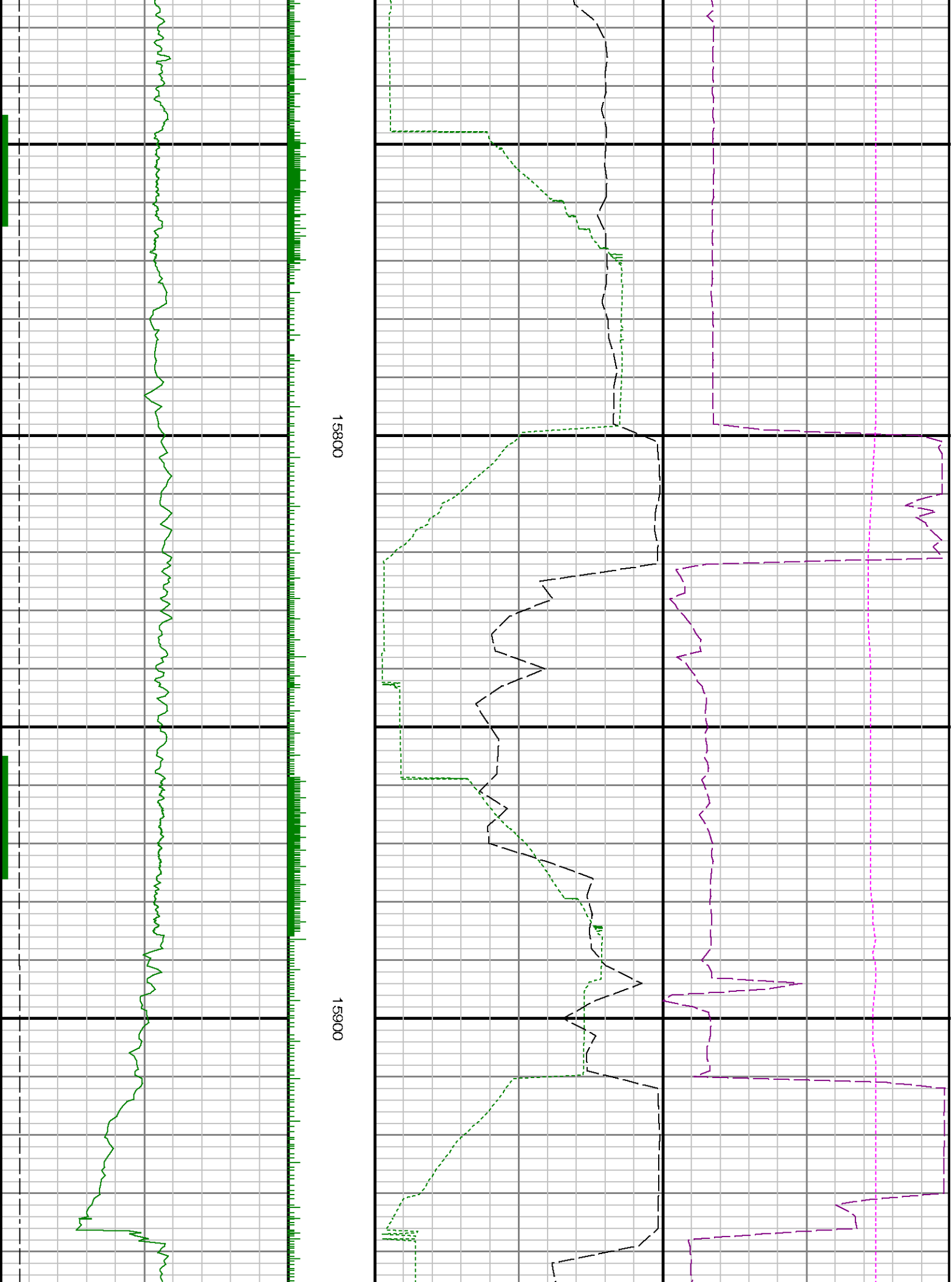


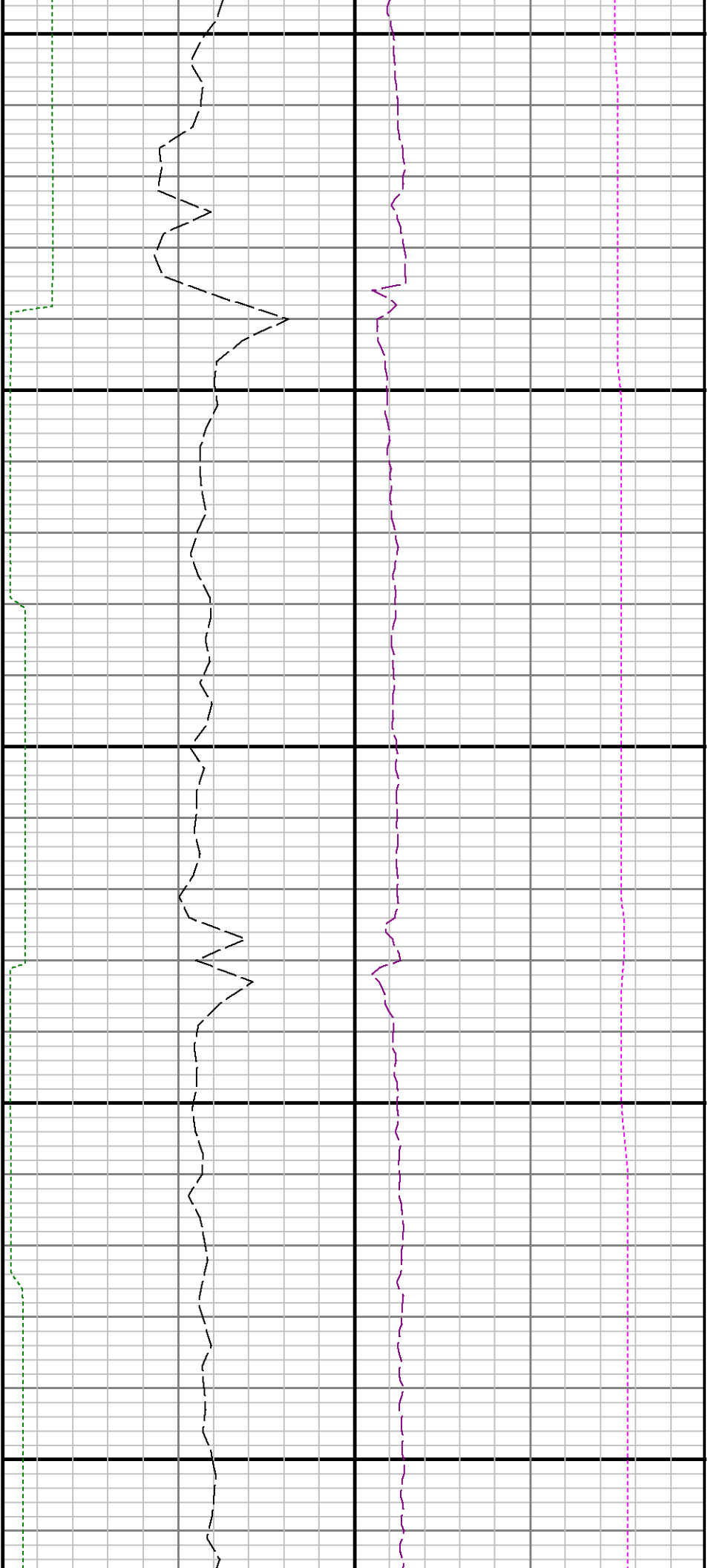






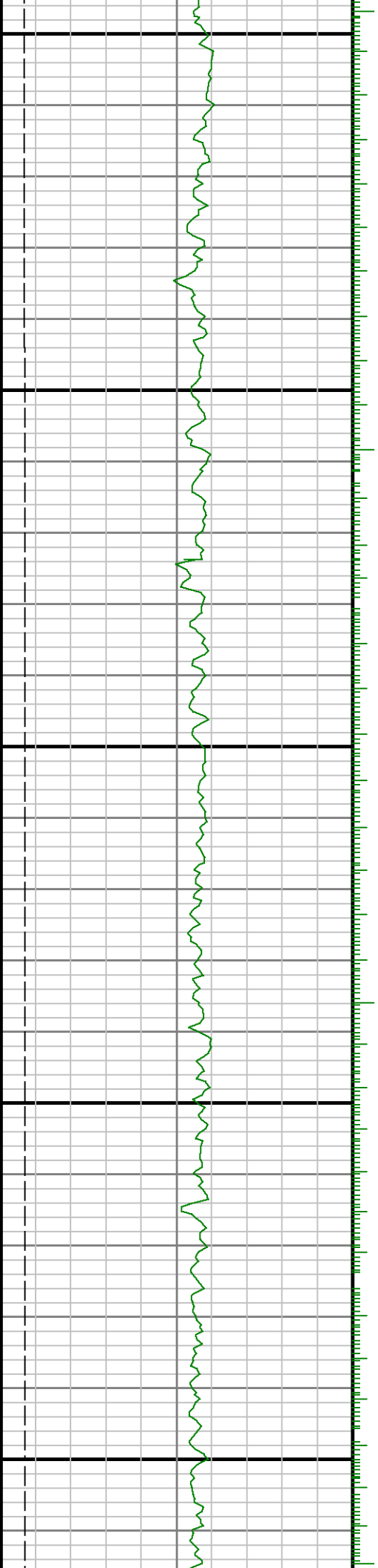


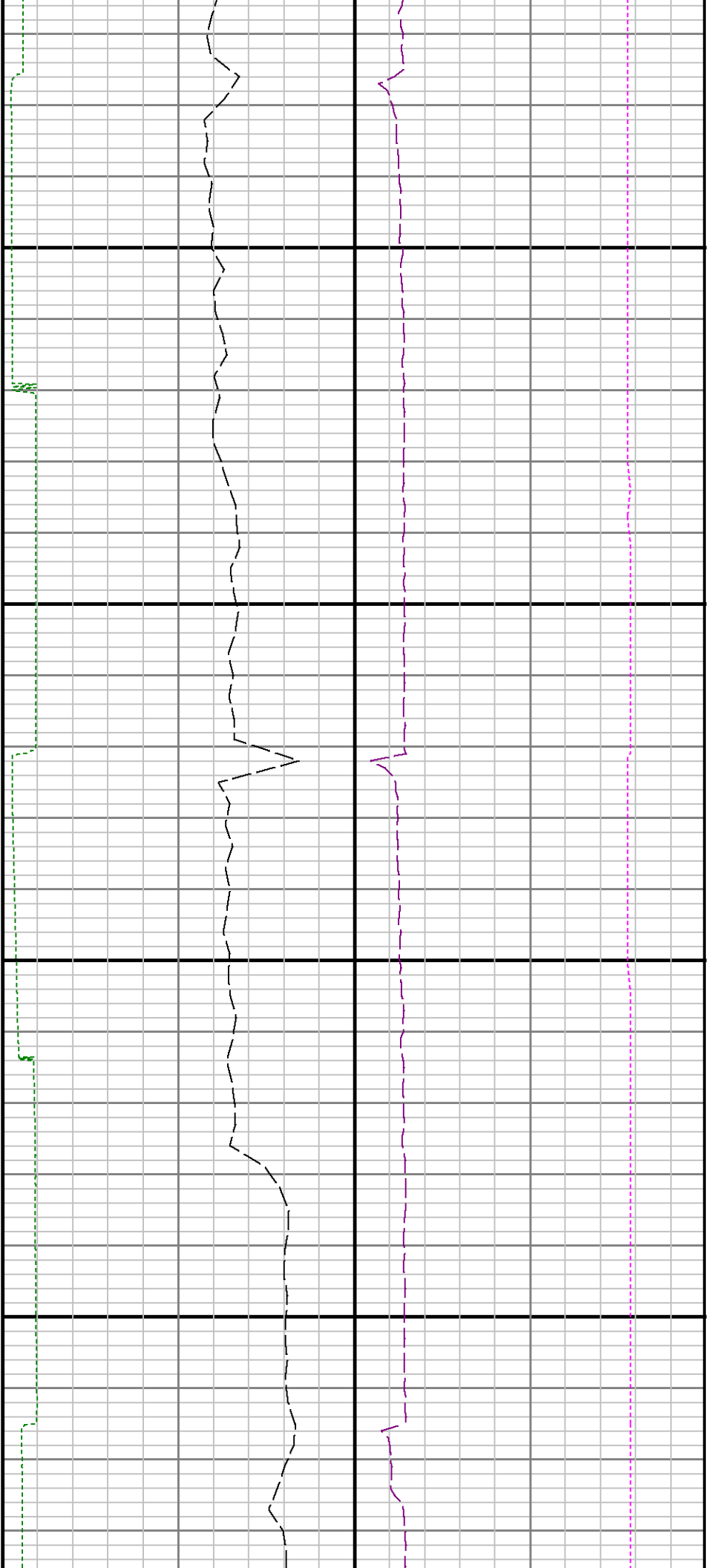




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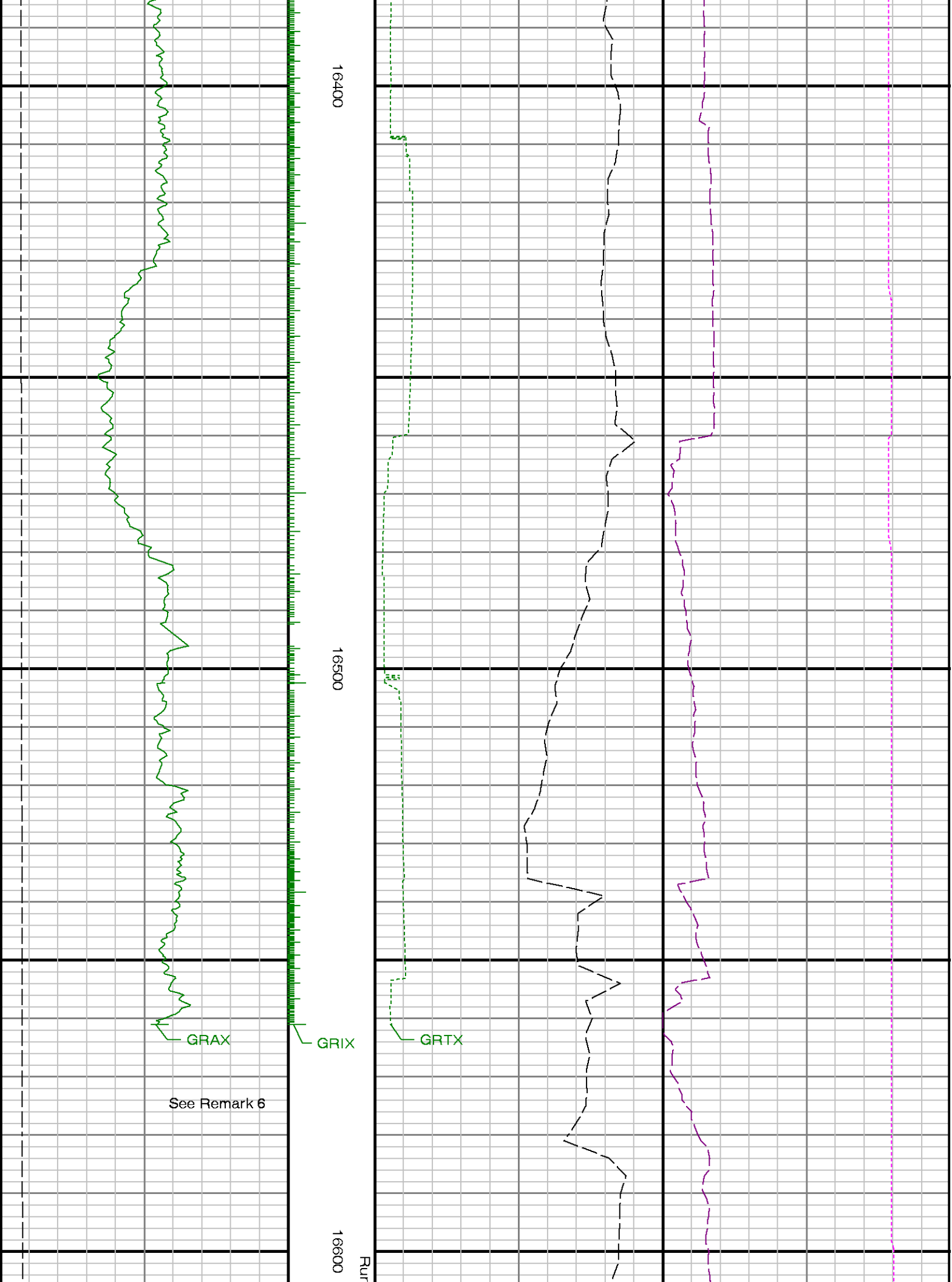
16100





16200

16300





<div>TVD</div>	ID	<div>ROPA</div>	<div>WOBA</div>	<div>TCDX</div>
<div>Gamma Ray Apparent 0.5 ft Avg GRAX</div> <div>0200</div> <div>API</div> <div>True Vertical Depth TVD</div> <div>72006400</div> <div>ft</div>	MD feet 1:240	<div>Rate of Penetration 3.0 ft Avg ROPA</div> <div>5000</div> <div>ft/hr</div> <div>Gamma Ray Time Since Drilled GRTX</div> <div>0600</div> <div>min</div>	<div>Surface Weight On Bit 1.0 ft Avg WOBA</div> <div>0100</div> <div>kibf</div> <div>Downhole Temperature TCDX</div> <div>0300</div> <div>degF</div>	