



part of Baker Hughes. Unless other contract terms have been agreed to by the parties, each party's liabilities and qdnkicvkqpu"ujcnn"dg"iqxgtpgf"d{"Dcmgt"JwiJgu"Kpeqtrqtcvgføu"Yqtnfykfg"Vgtou"cpf"Egpfkvkqpu0\$""

Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours (h)
						Top	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	8.500	PDC	3.00	Motor	1880.54	13294.25	1921.00	13334.71	2015-11-30 21:00	2015-12-03 08:38	54.55
2	2	8.500	PDC	3.00	AutoTrak Curve	13322.51	15373.30	13334.71	15379.88	2015-12-04 07:13	2015-12-04 20:54	13.78
3	3	8.500	PDC	3.00	AutoTrak Curve	15367.13	17881.35	15379.88	17885.00	2015-12-05 23:02	2015-12-06 14:56	16.69

Crew

Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite
Kelly Scott Sims		2015-11-29	2015-12-07	Sumanth Belawadi		2015-11-29	2015-12-07				

Mud Properties Record

Date / Time		Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2015-12-01 03:46		1	3972.95	Diesel-Oil Based Mud	9.3	77	0	3.8	73/27	Flow Line	54000	0.00
2015-12-02 17:00		1	11153.51	Diesel-Oil Based Mud	9.3	57	0	3.8	73/27	Flow Line	55000	0.00
2015-12-05 10:02		2	15380.00	Diesel-Oil Based Mud	9.4	69	0	3.8	72/28	Flow Line	54000	0.00

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	NaviGamma	10350727	Gamma (single)	10.08	40.46	6.830	3.250
1	NaviGamma	10350727	Directional (mag)	13.49	43.87	6.830	3.250
1	NaviGamma	10350727	VSS	13.49	43.87	6.830	3.250
2	ATC_SU	12653419	Near Bit Inclination	5.93	6.58	7.000	4.330
2	ATC_MWD	12188124	Gamma (single)	2.20	12.20	7.000	3.250
2	ATC_MWD	12188124	Directional (mag)	12.27	22.27	7.000	3.250
3	ATC_SU	12339221	Near Bit Inclination	5.93	6.58	7.000	4.330
3	ATC_MWD	12097421	Gamma (single)	2.75	12.75	7.000	3.250
3	ATC_MWD	12097421	Directional (mag)	12.27	22.27	7.000	3.250

Comments

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- 1

Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to represent logging data.
- 2


Baker Hughes Run 1 utilized a 6 3/4 inch Navigamma (Directional and Gamma Ray) tool behind an 8 1/2 inch bit steerable assembly from 1856 feet MD to 13294 feet MD (1837 to 7107 feet TVD).
- 3

Baker Hughes Run 2 and 3 utilized a 6 3/4 inch Autotrak Curve Rotary Steerable Assembly (Directional and Gamma Ray) tool behind an 8 1/2 inch bit from 13294 to 17885 feet MD (7107 to 7097 feet TVD).
- 4

A sliding indicator is shown on the left side of the track as a heavy line. This indicator has been depth-shifted to the Gamma Ray sensor offset to correspond with Gamma Ray data acquired while sliding.

Remarks				
Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	6400.00	8.500	1	Logging services began at 6400 feet MD. No logging data prior to 6400 feet MD (6374 TVD) as per client request.
2	13294.00	8.500	1	The interval between 13294 feet and 13334 feet MD (7107 to 7106 feet TVD) was logged up to 1394 minutes due to changing out to a rotary steerable assembly from a conventional motor assembly.
3	13802.00	8.500	2	No GRAX, GRIX or GRTX due to downlinking to the rotary steerable while drilling.
4	15368.00	8.500	2	The interval between 15368 feet and 15380 feet MD (7093 to 7092 feet TVD) was logged up to 1651 minutes due to changing out a rotary steerable to a backup rotary steerable after an initial failed tick sensor.
5	17872.00	8.500	3	The interval between 17872 to 17885 feet (7097 feet TVD) has no GRAX, GRIX, GRTX values due to the Gamma sensor offset to bit after TD

Curve Mnemonics		
Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
GRAX	Gamma Ray - Apparent 0.5 ft Average	API
GRIX	Gamma Ray - Data Point Indicator	unitless
GRTX	Gamma Time Since Drilled	min
GRSI	Sliding Indicator Flag	unitless
TCDX	Downhole Temperature	degF
TVD	True Vertical Depth	ft
WOBA	Weight On Bit, Average 1 ft Average	klb



Company

Well

Interval

Created

Anadarko

COOK 37N-28HZ

Date From: 2015-12-01 11:16

Date To: 2015-12-06 14:52

2015-12-06 16:06

Top: 6400.00

Bottom: 17885.00

Gamma Ray Apparent 0.5 ft Average GRAX

0150

MD

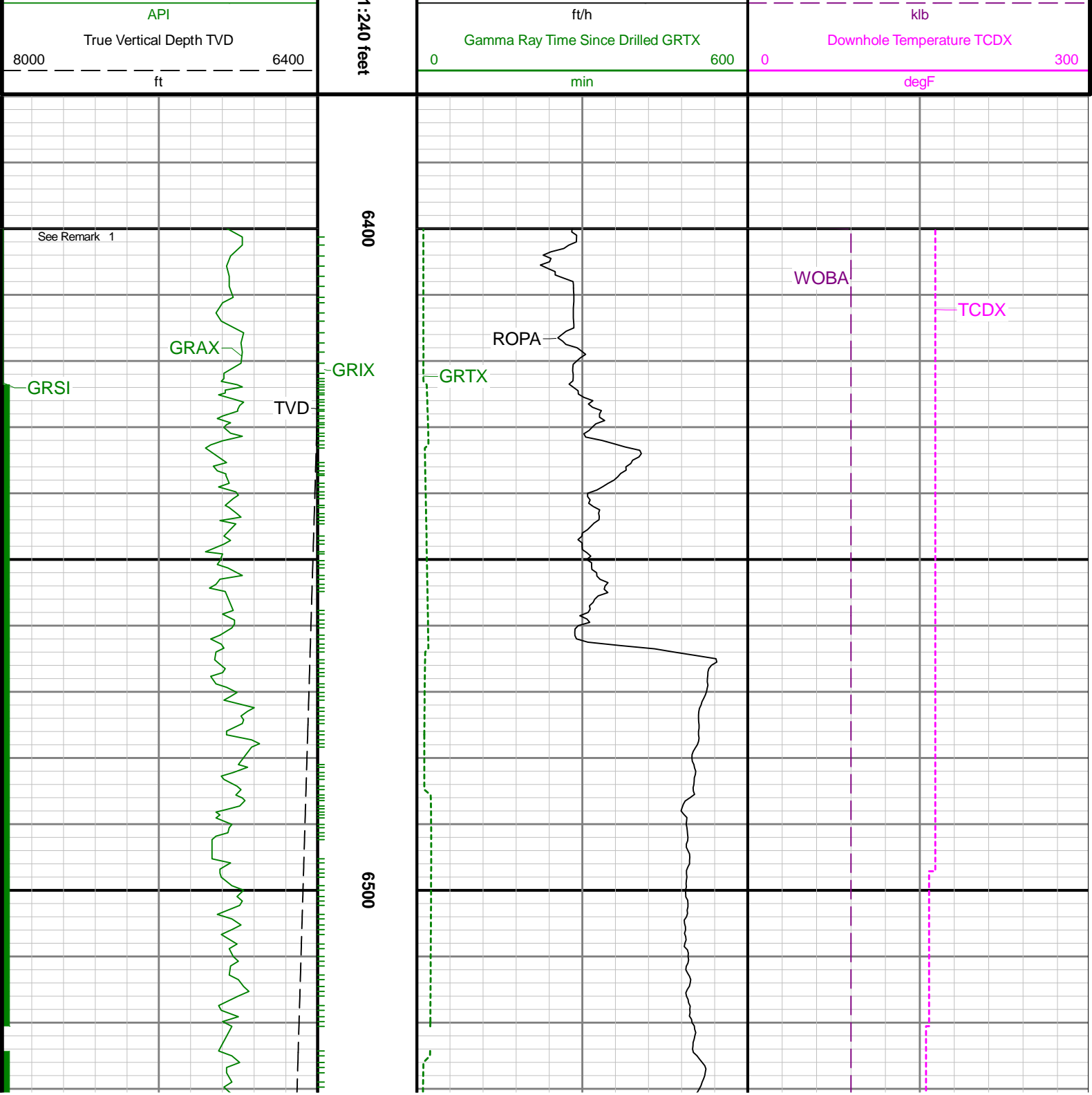
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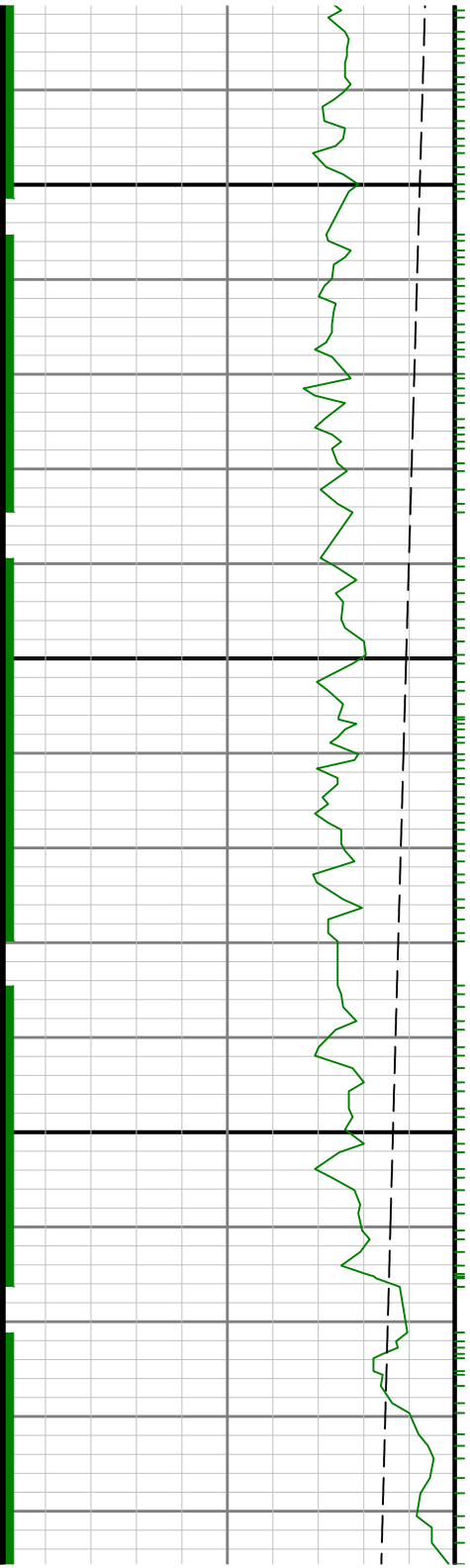
Rate of Penetration 3 ft Average ROPA

10000

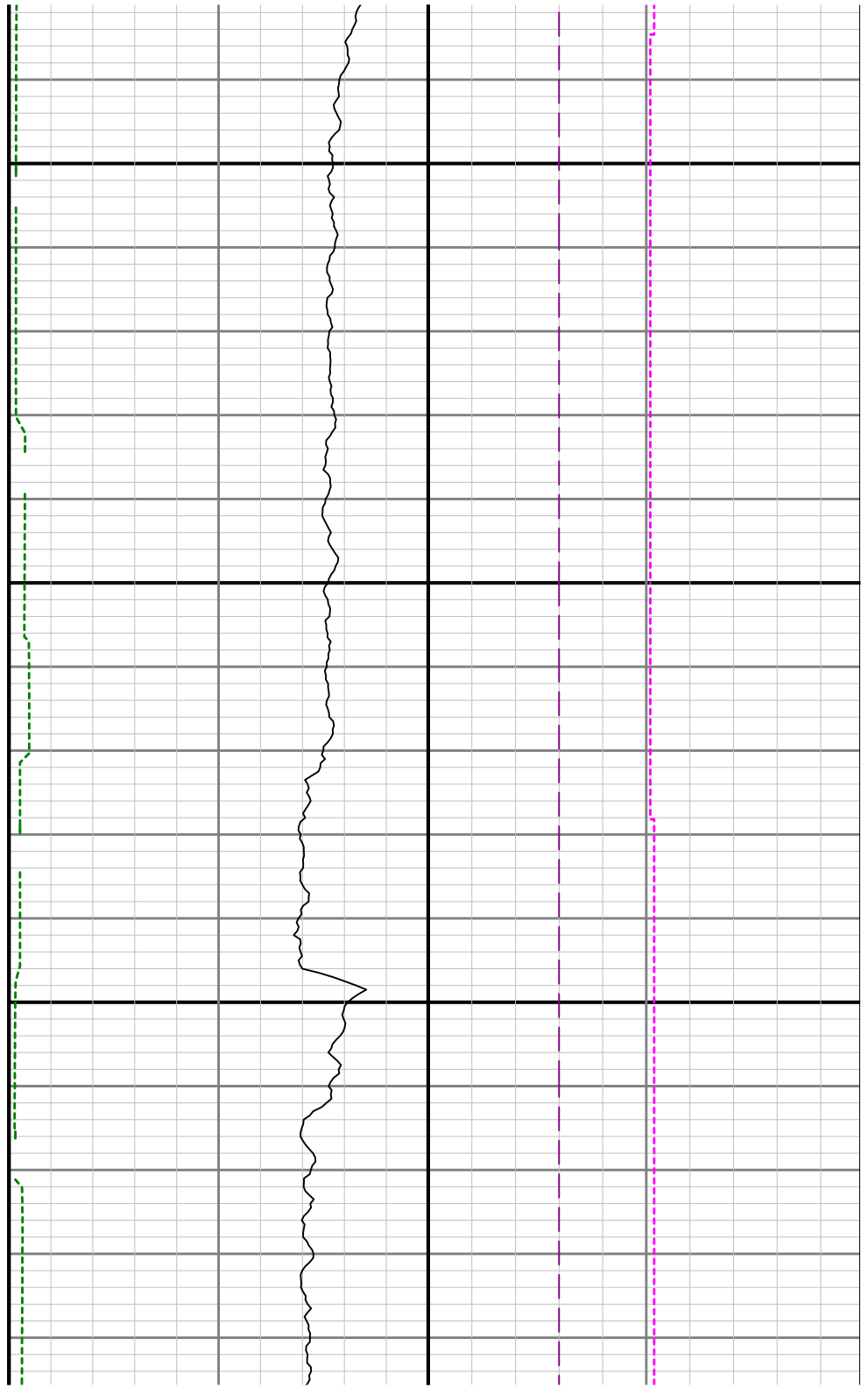
Surface Weight On Bit 1 ft Average WOBA

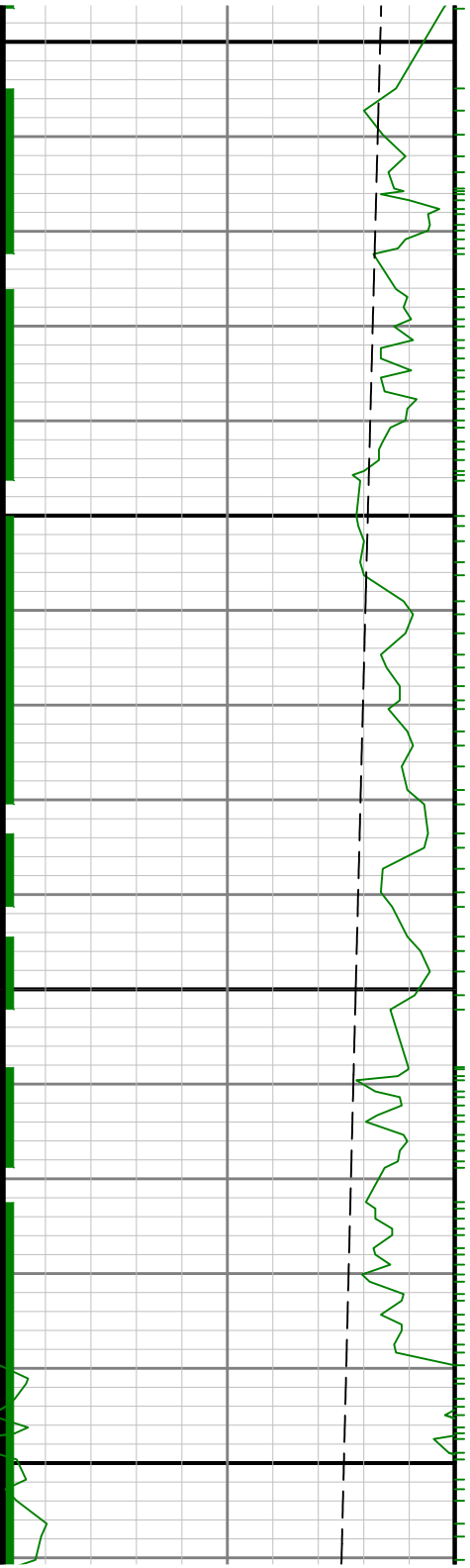
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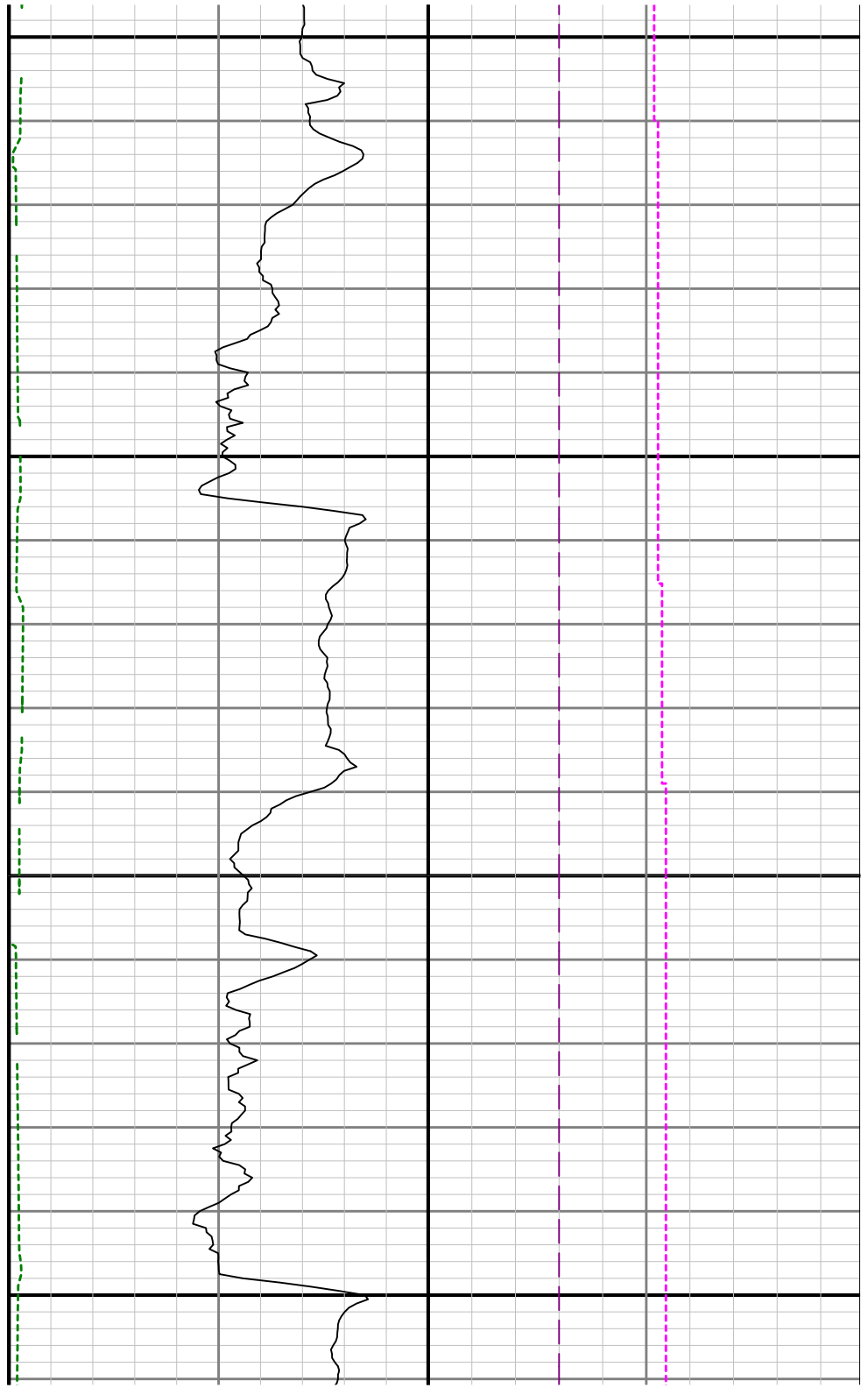
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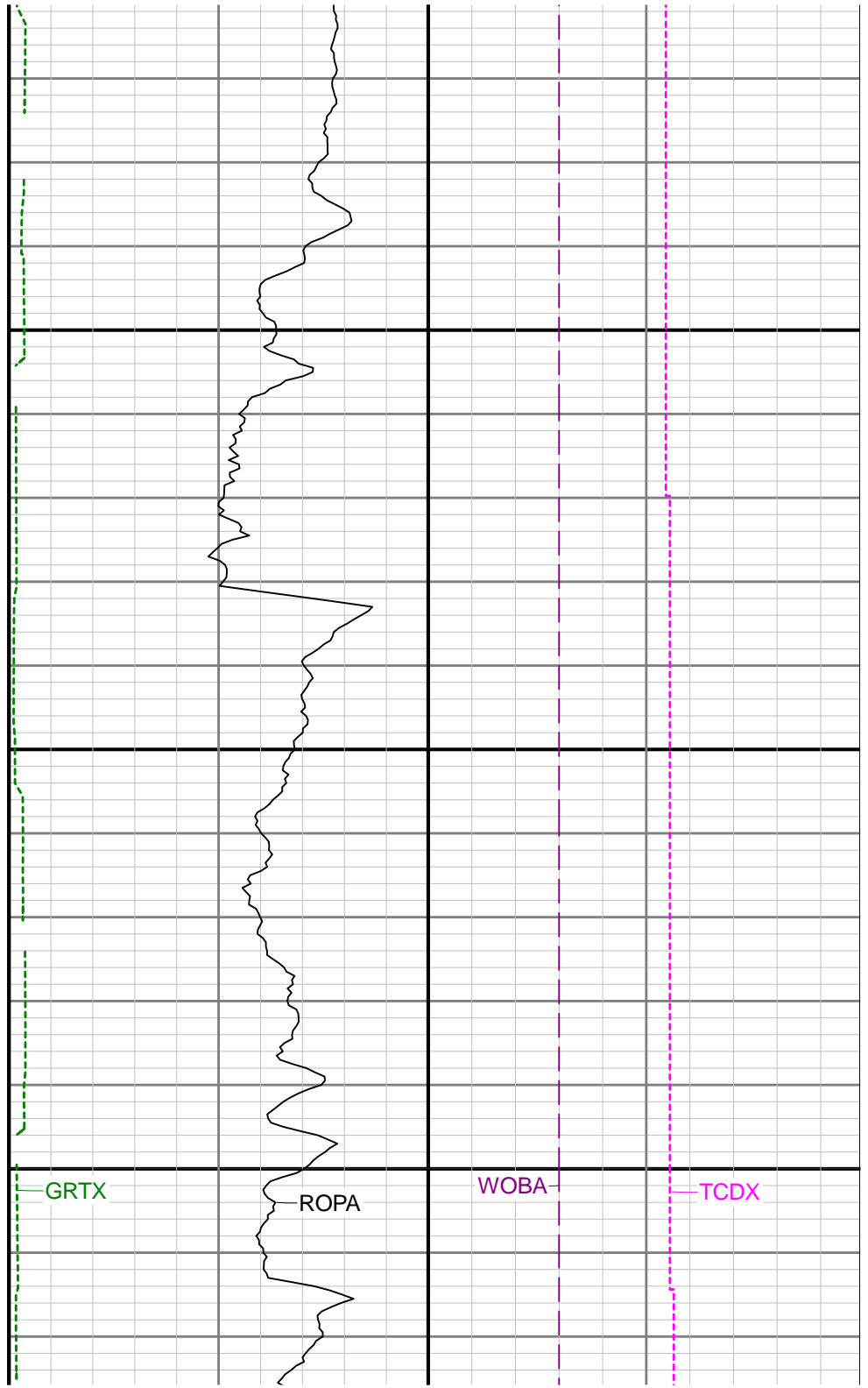
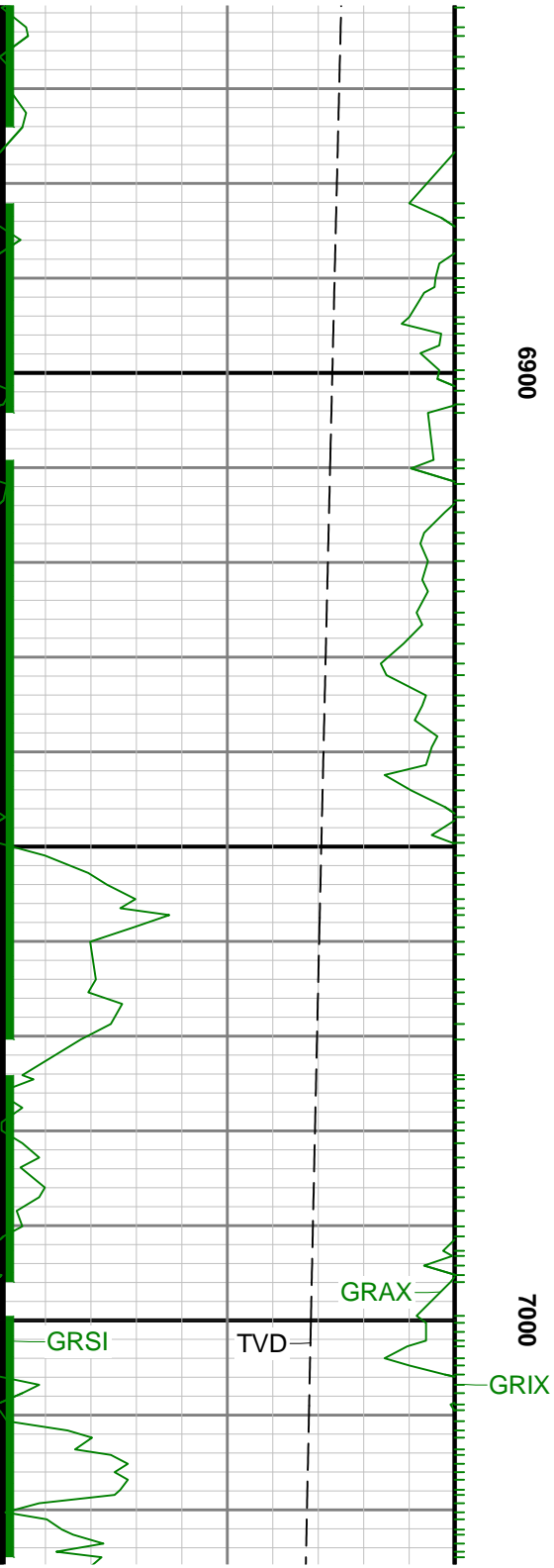


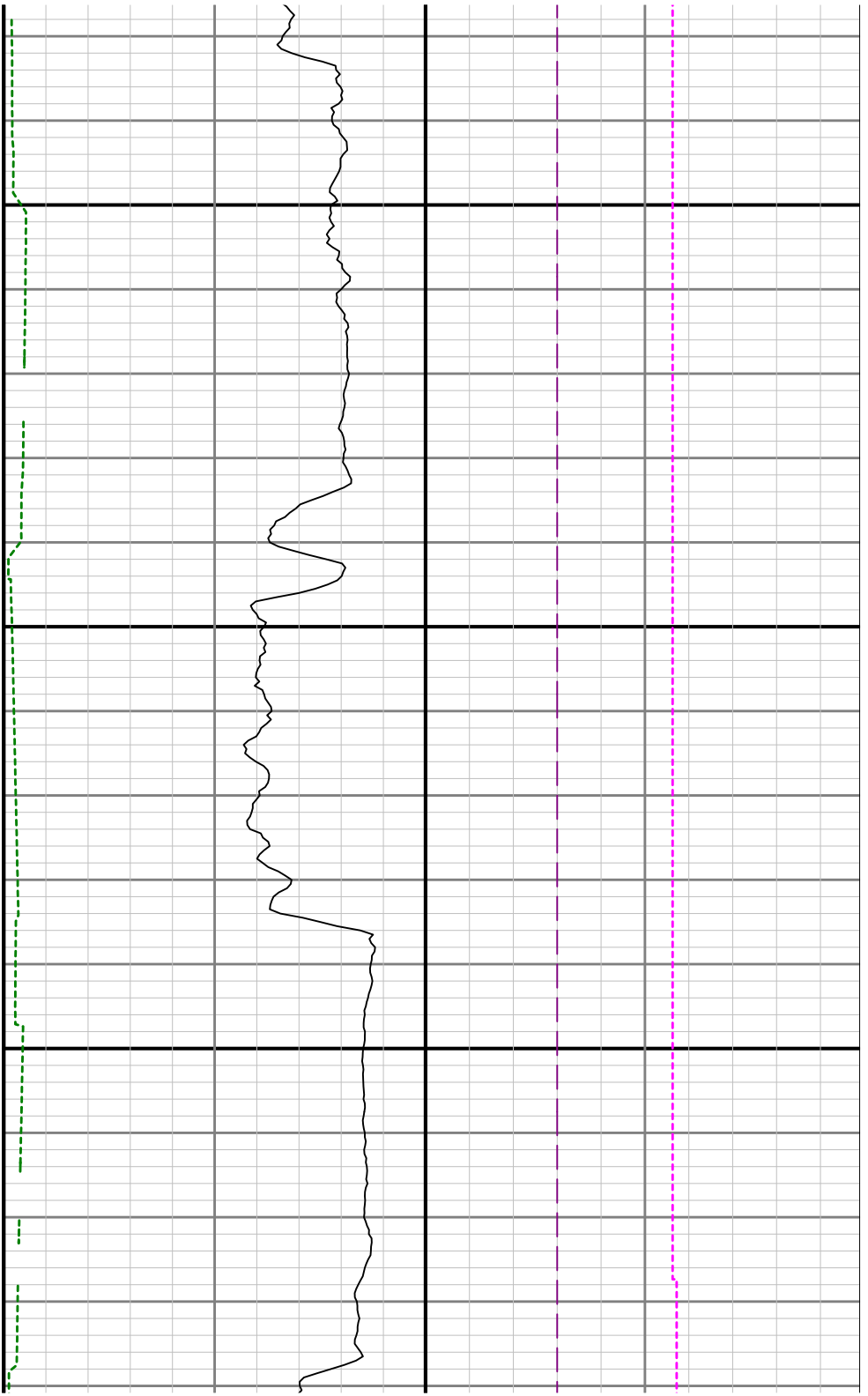


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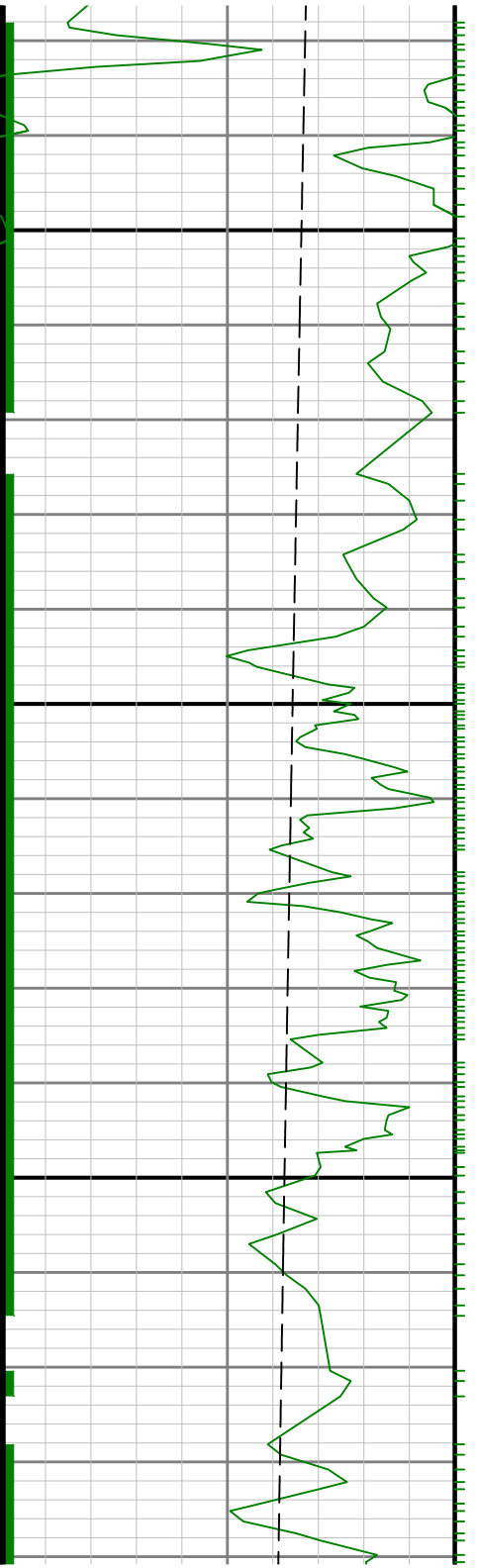
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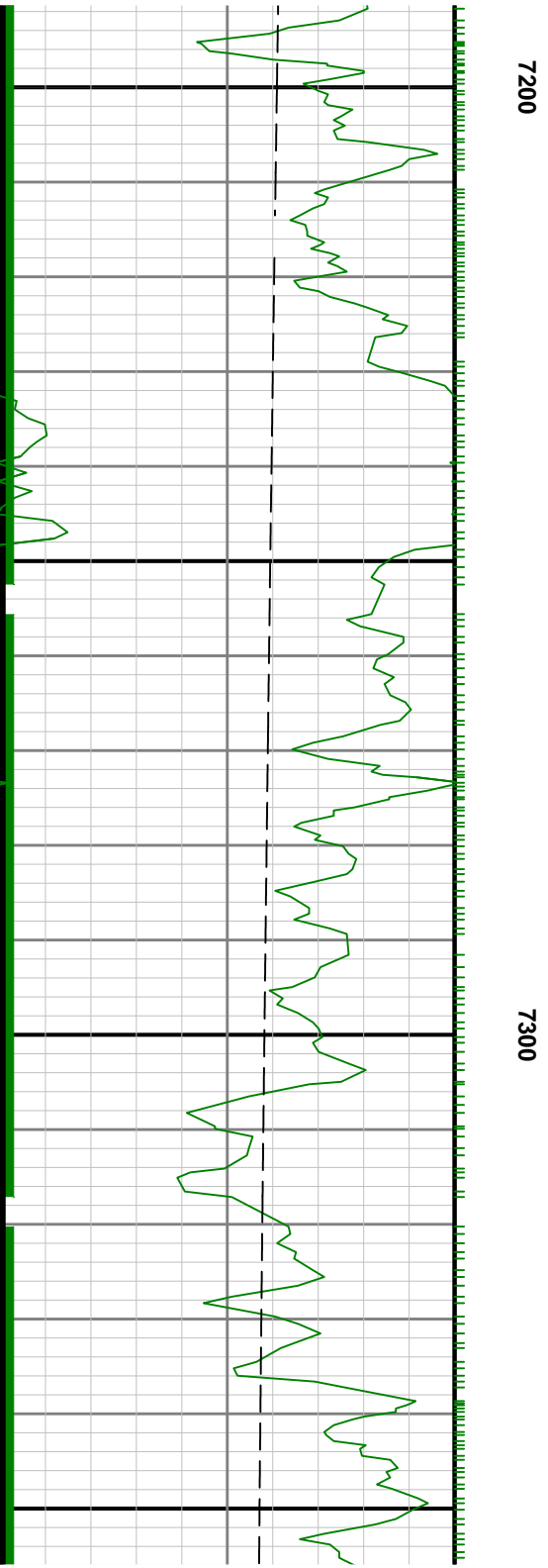


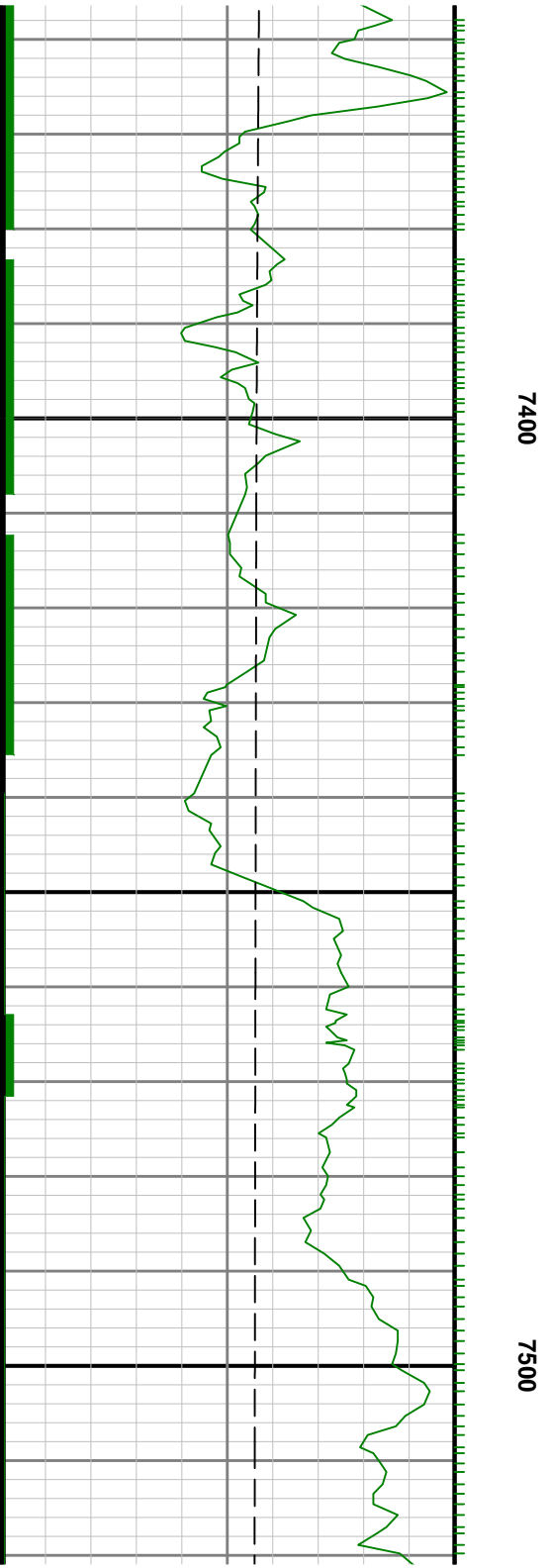
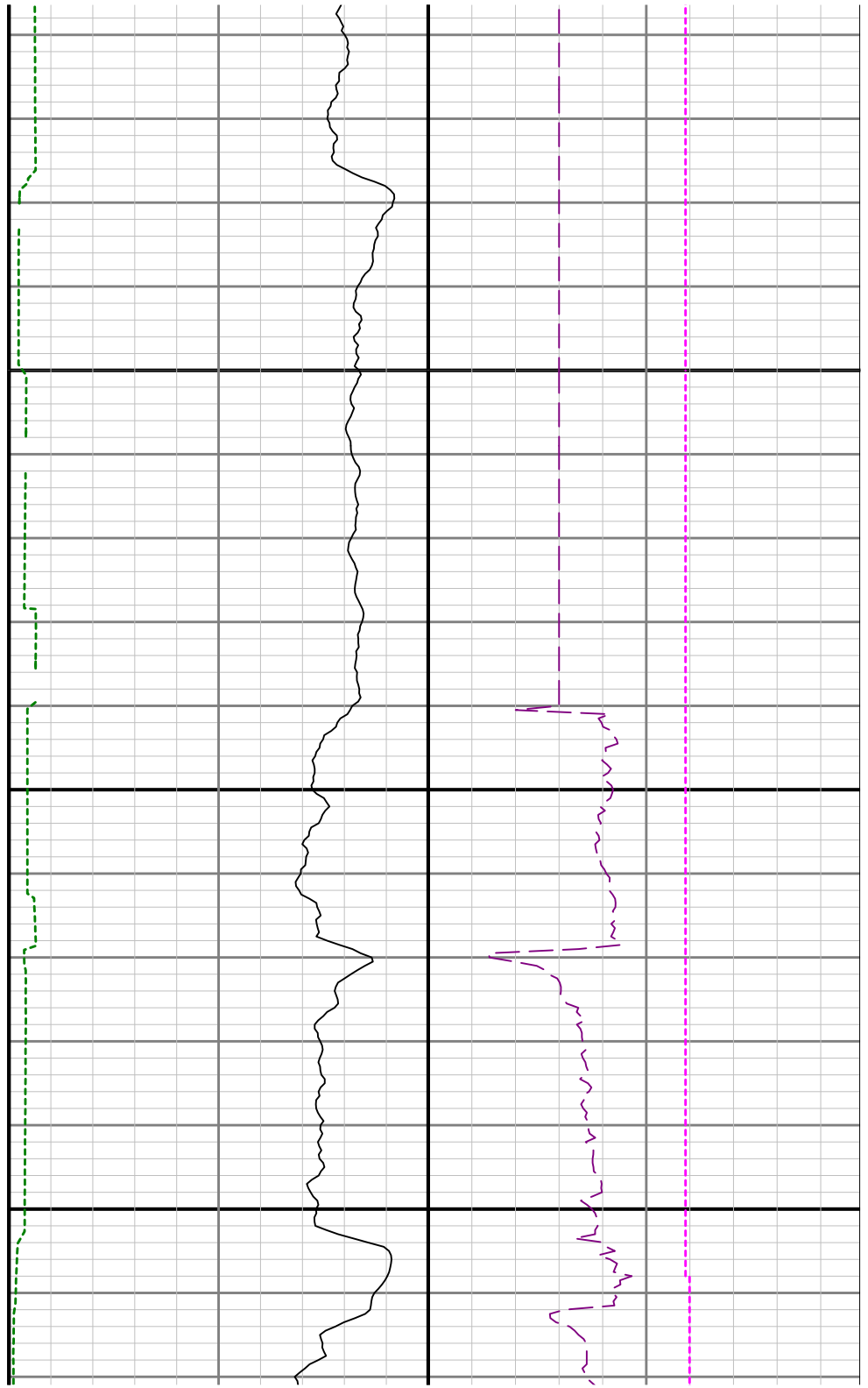


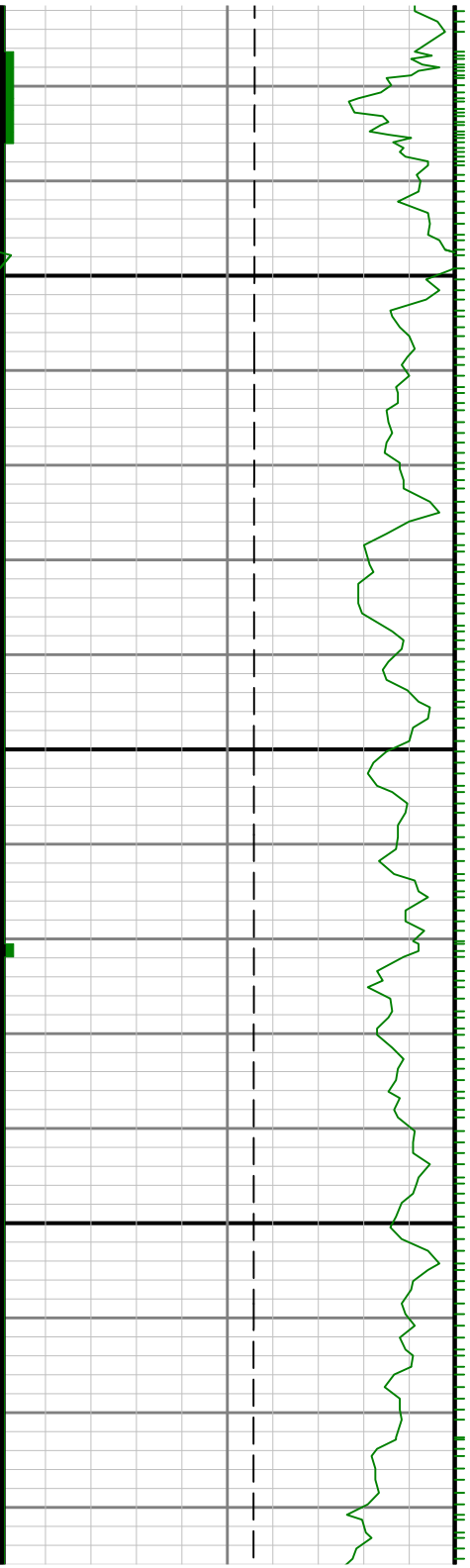
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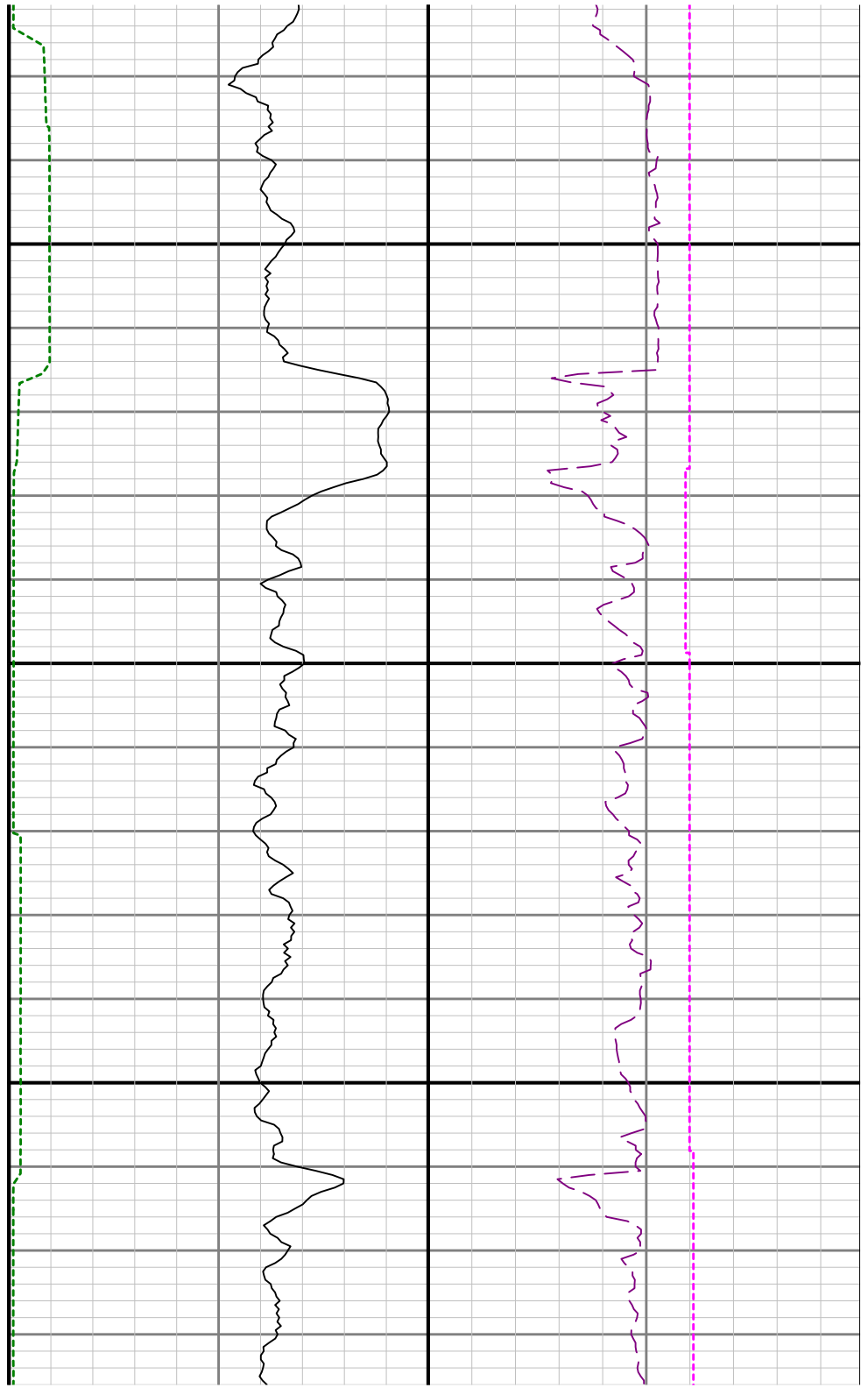


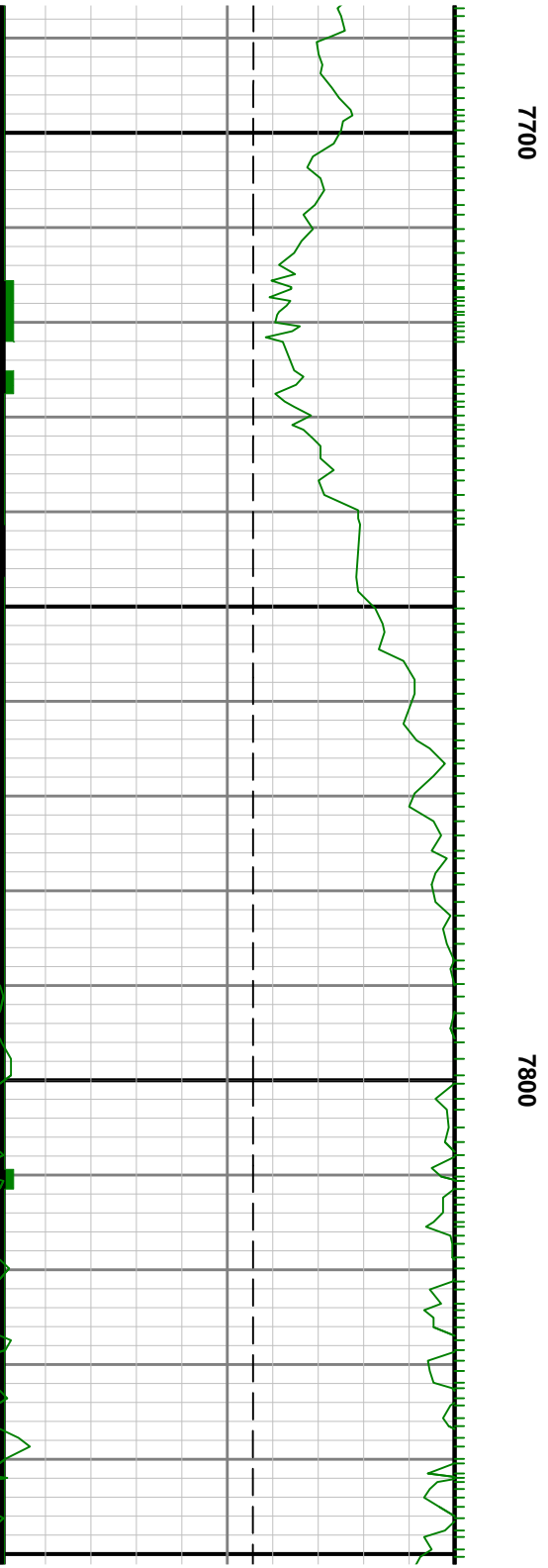


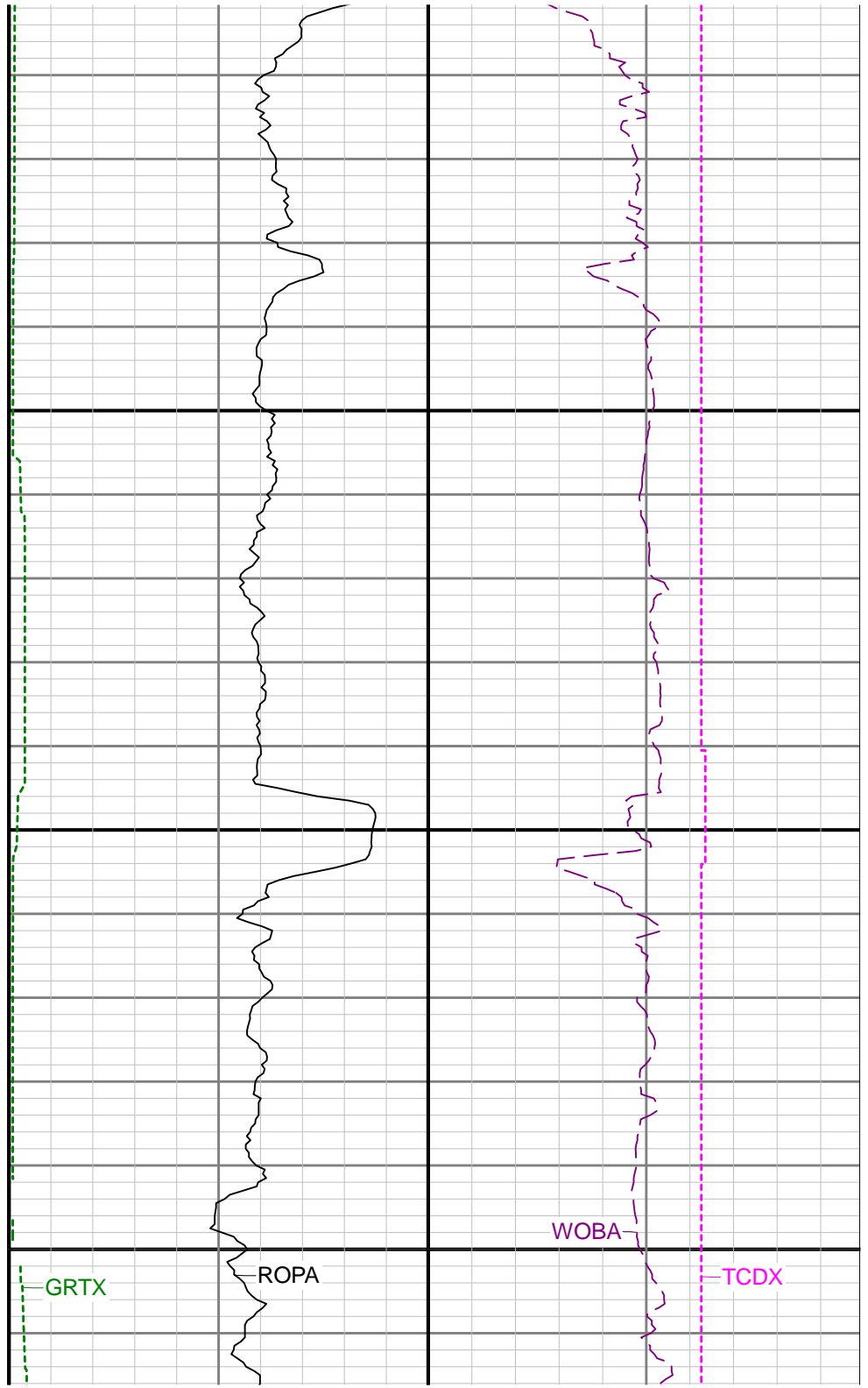
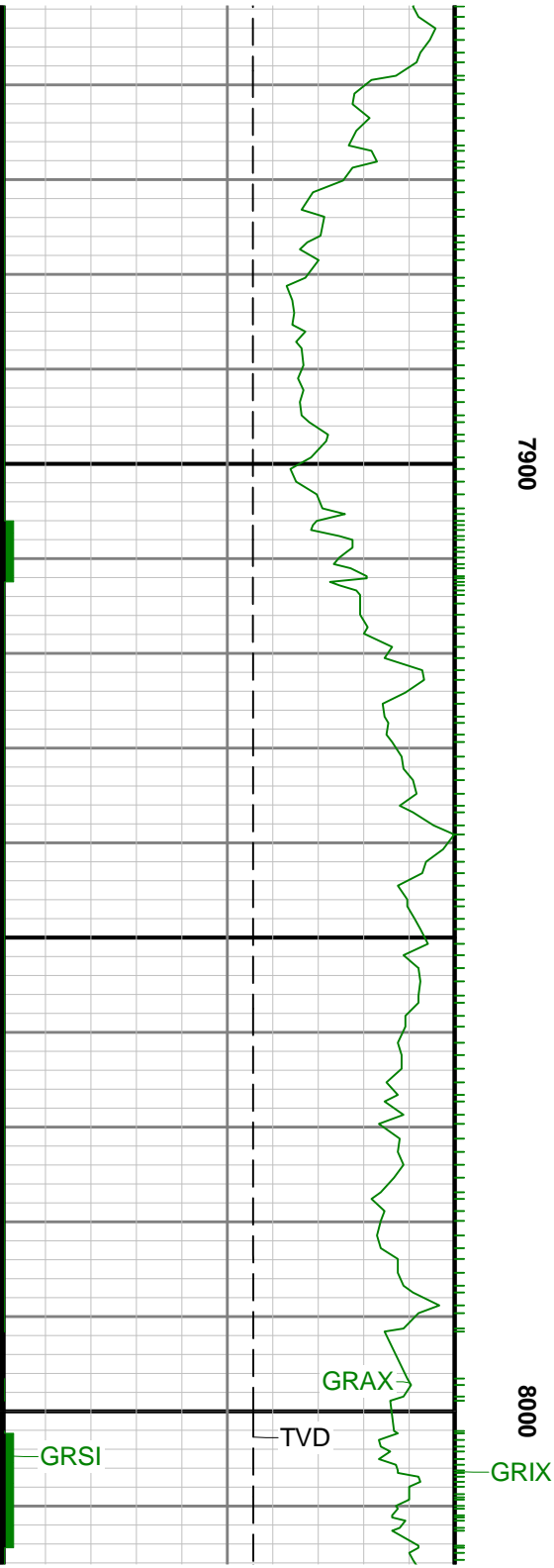


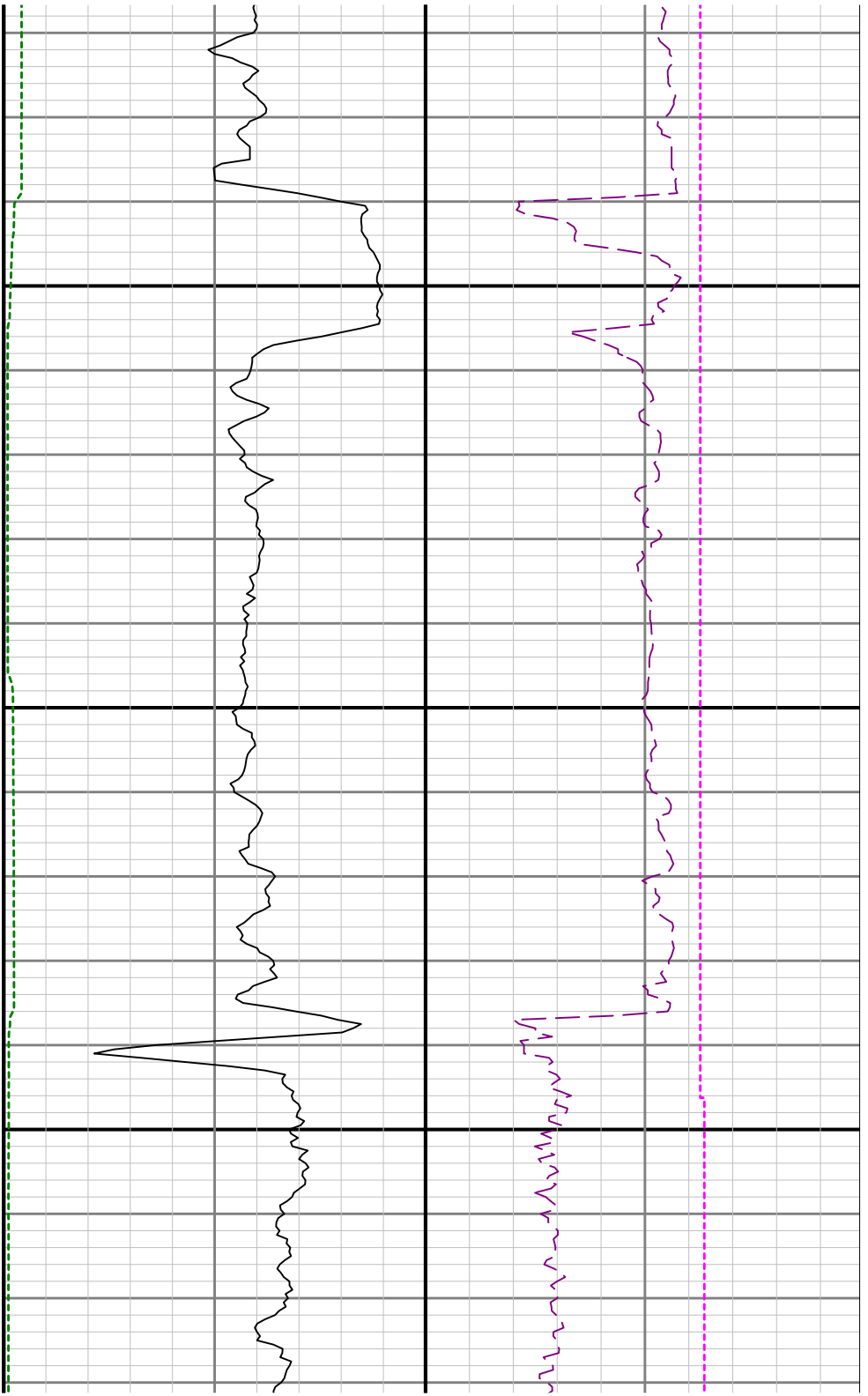


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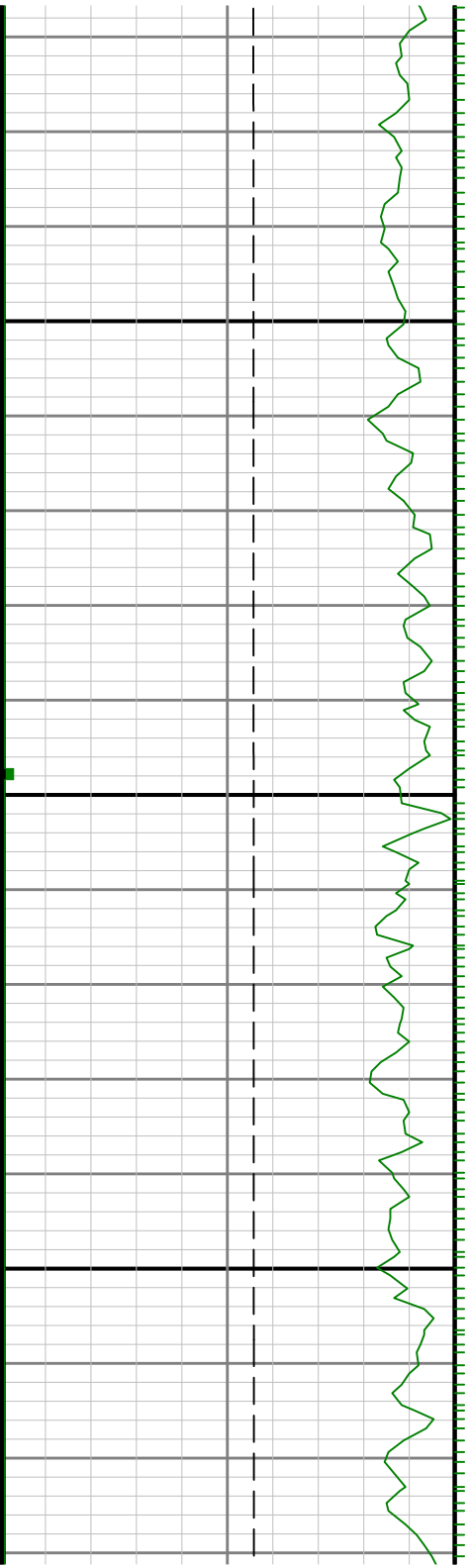


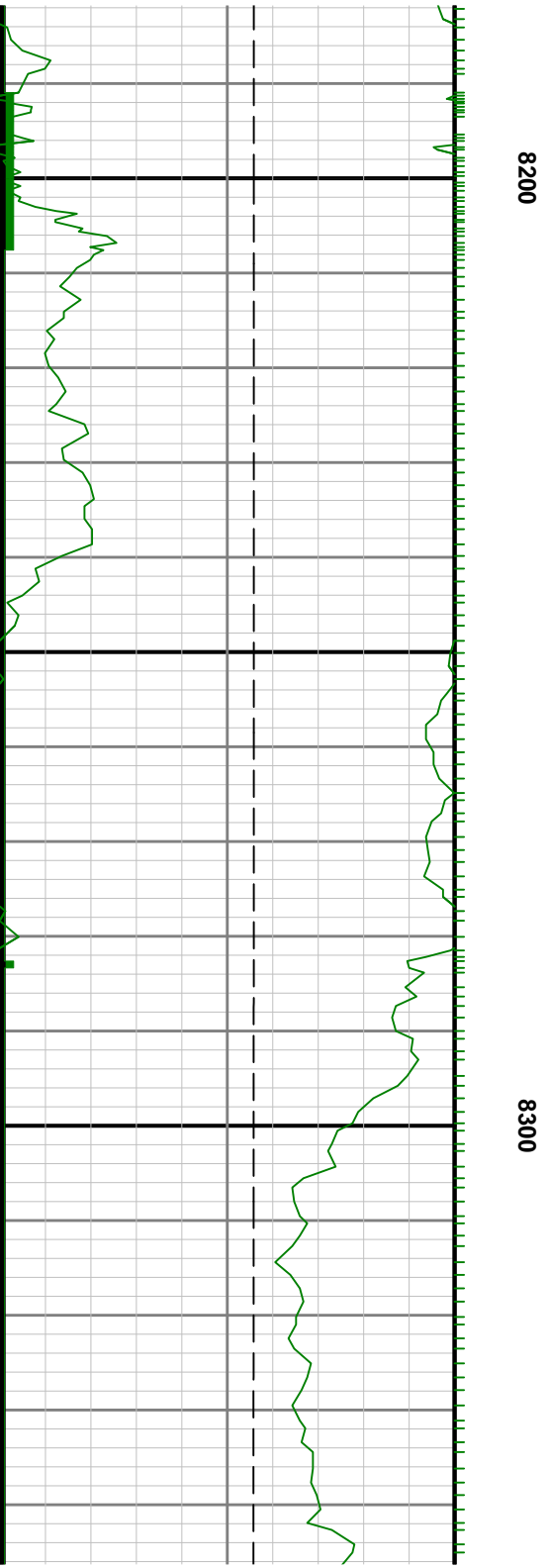
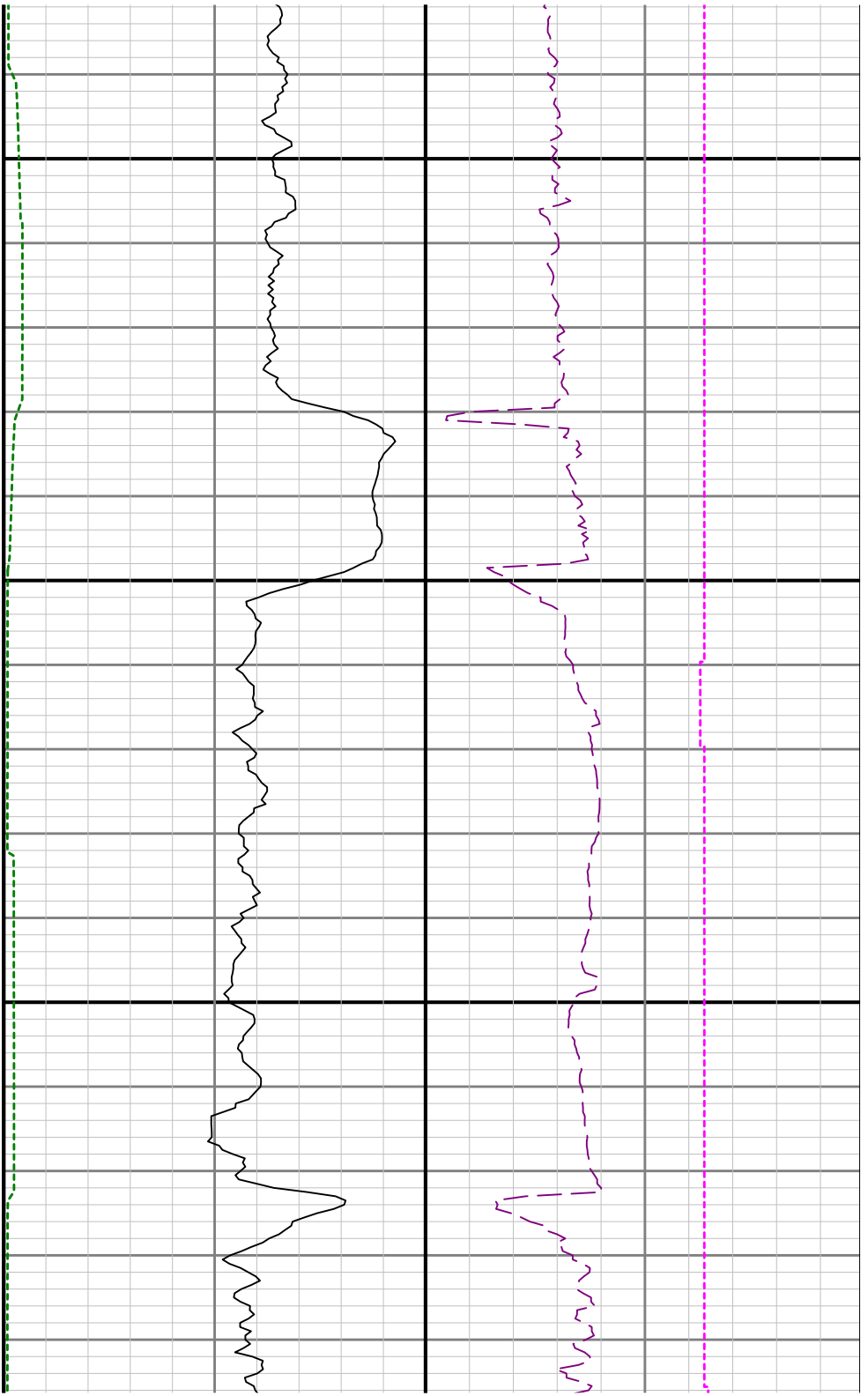


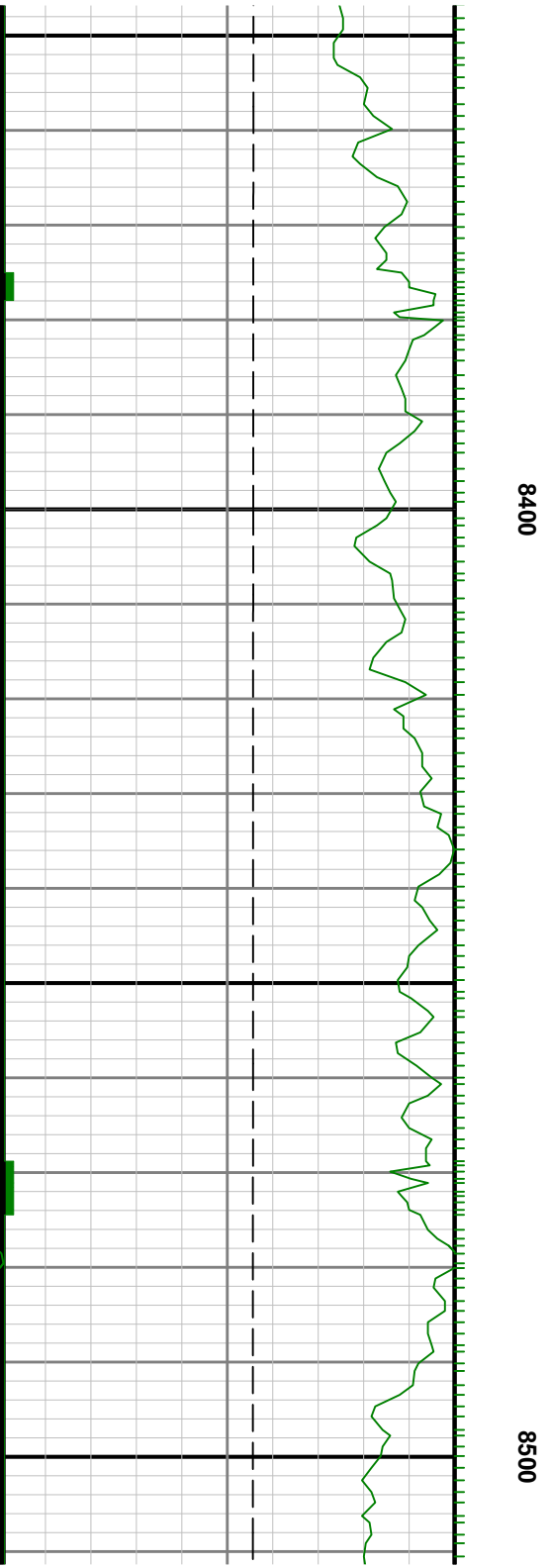
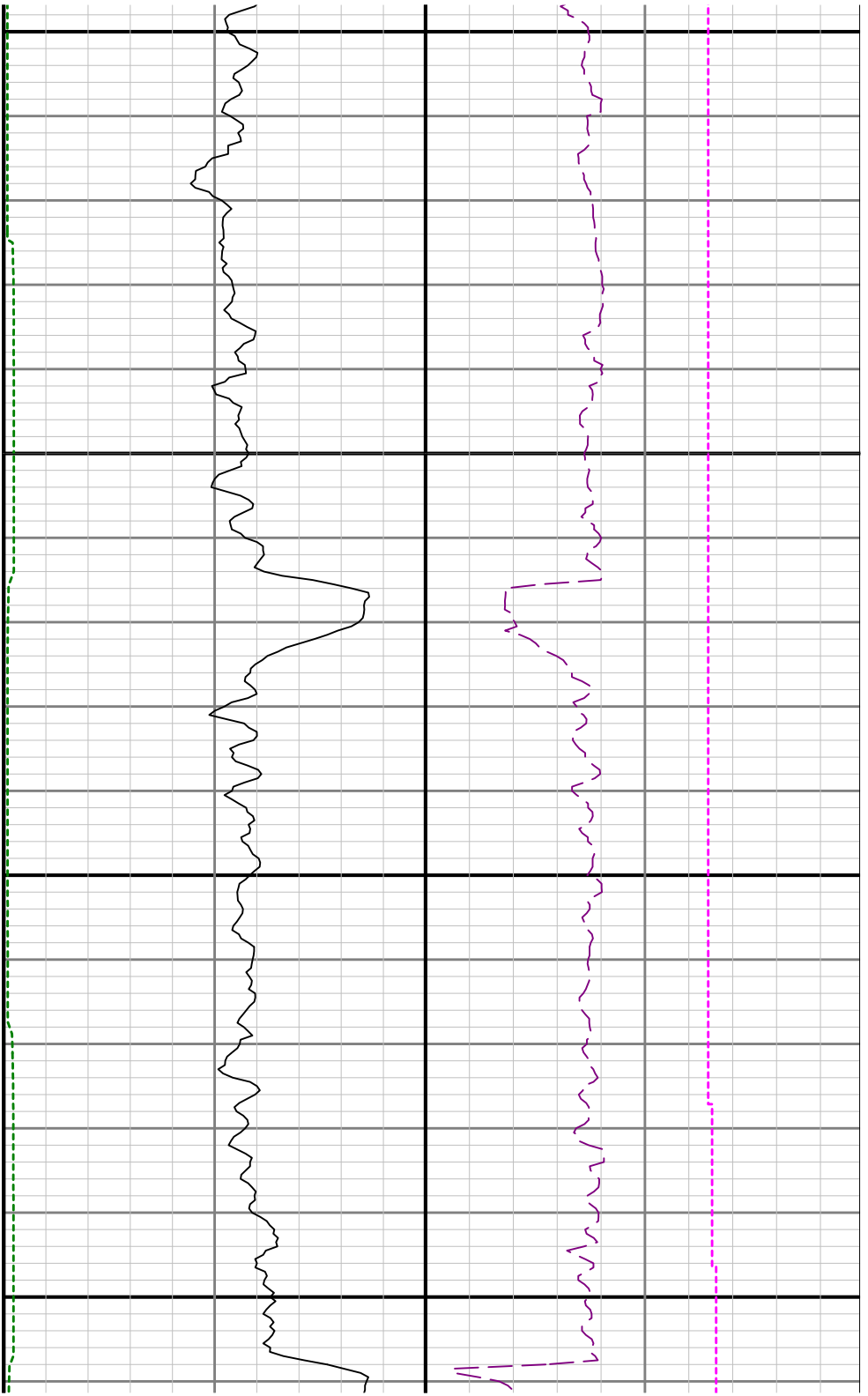




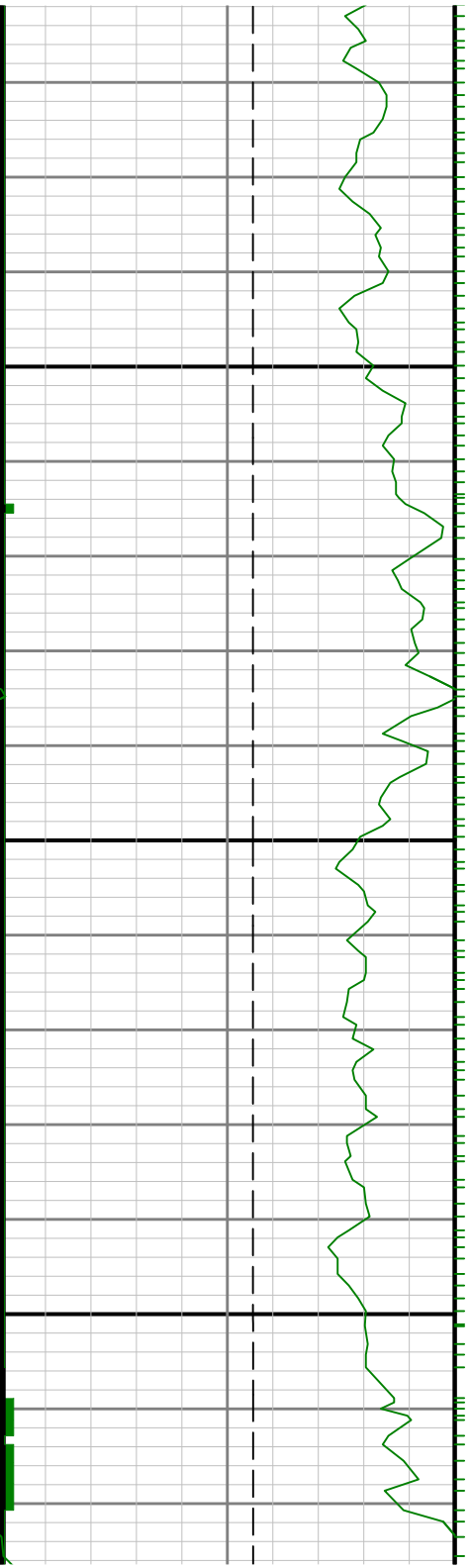
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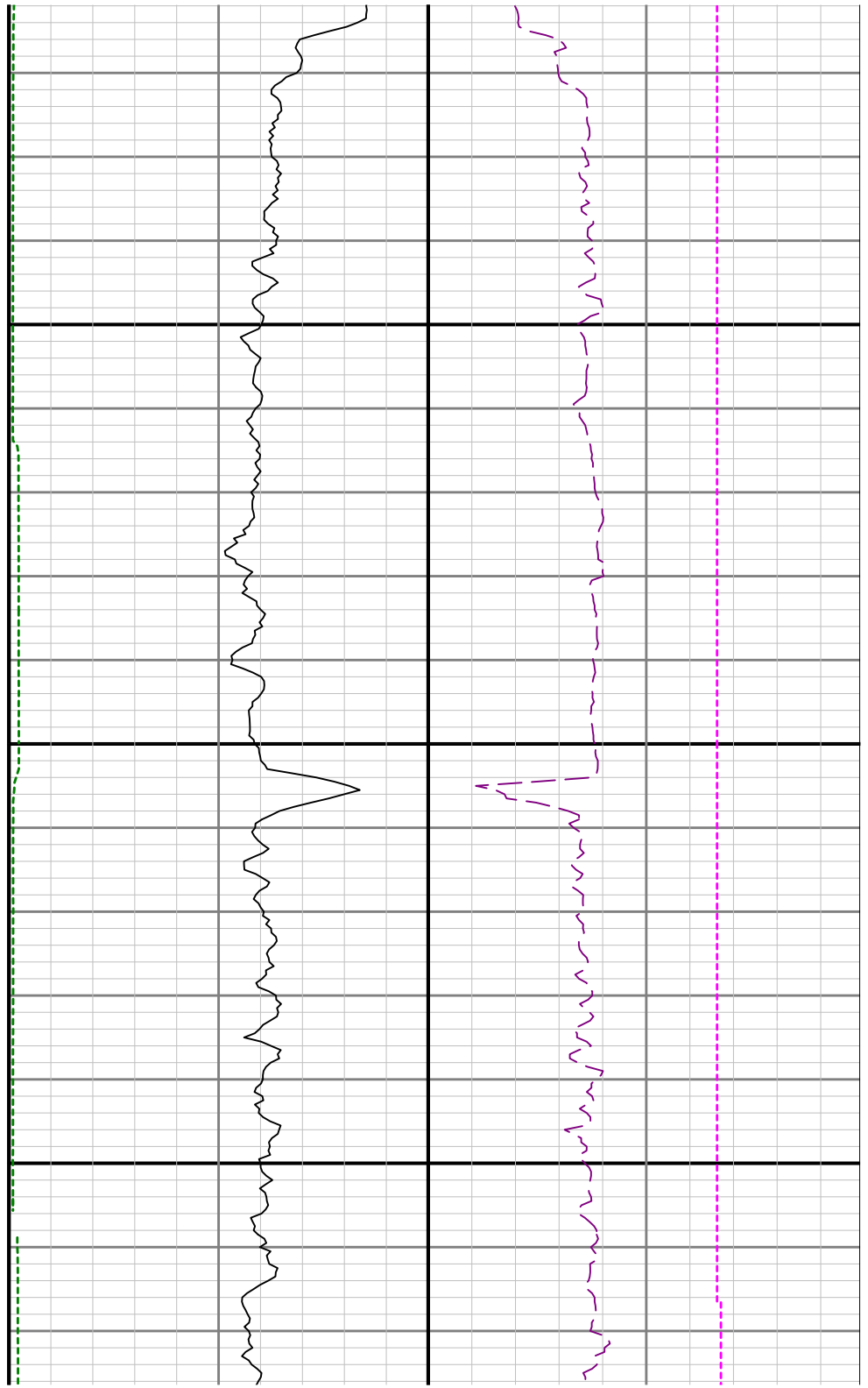


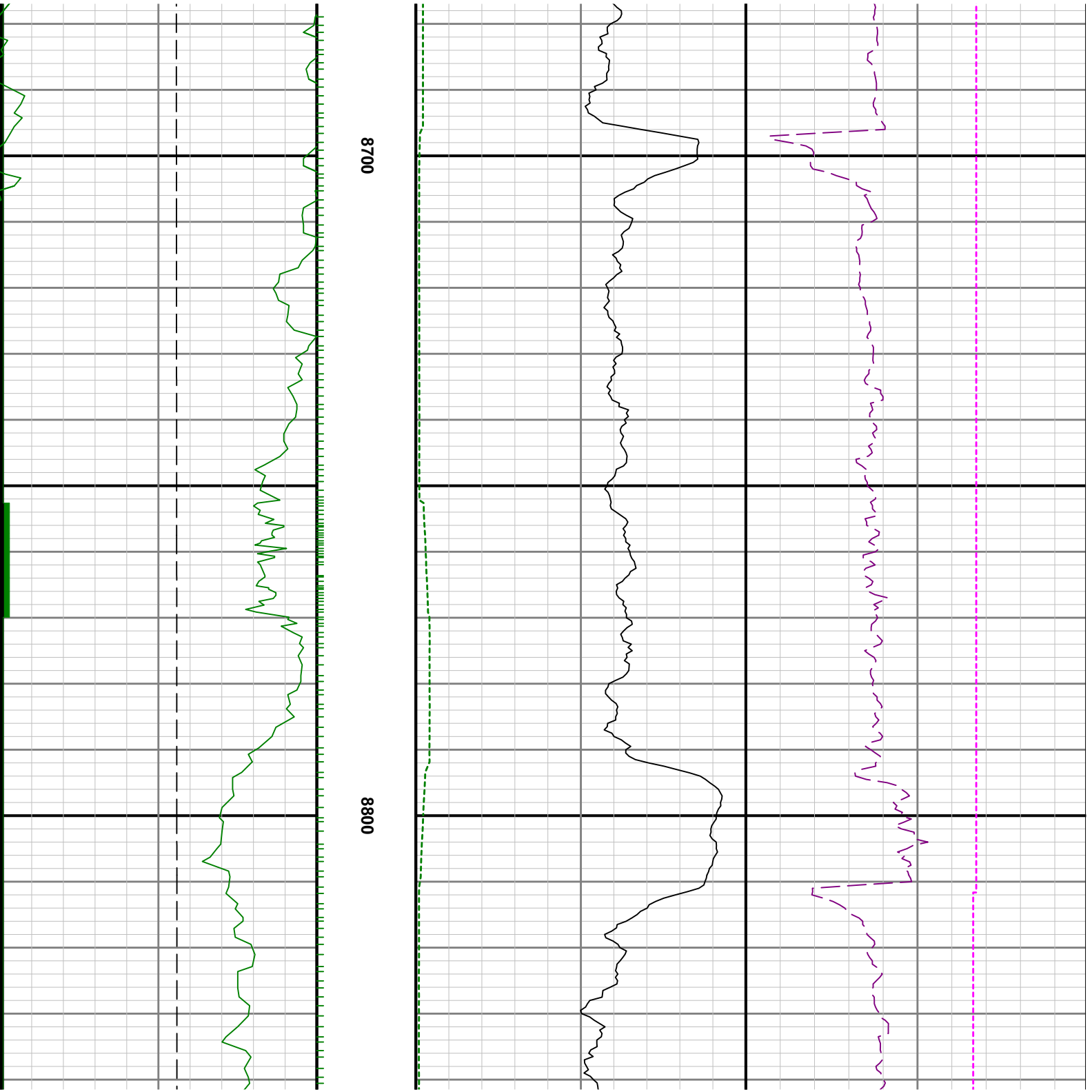


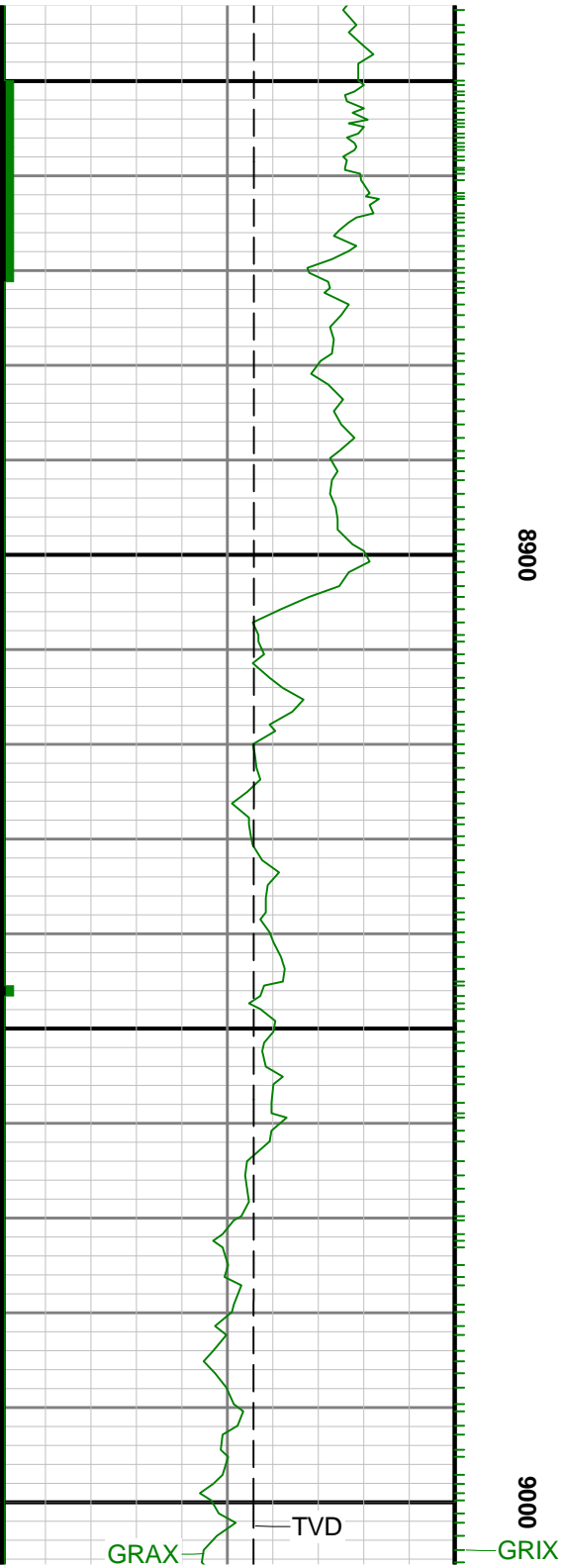


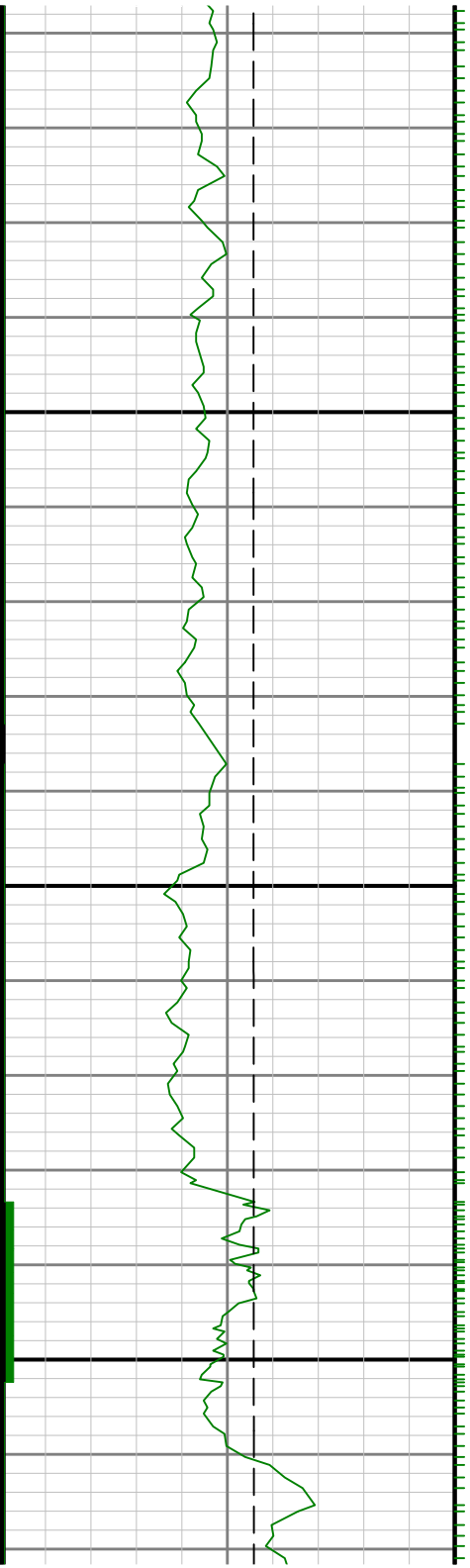


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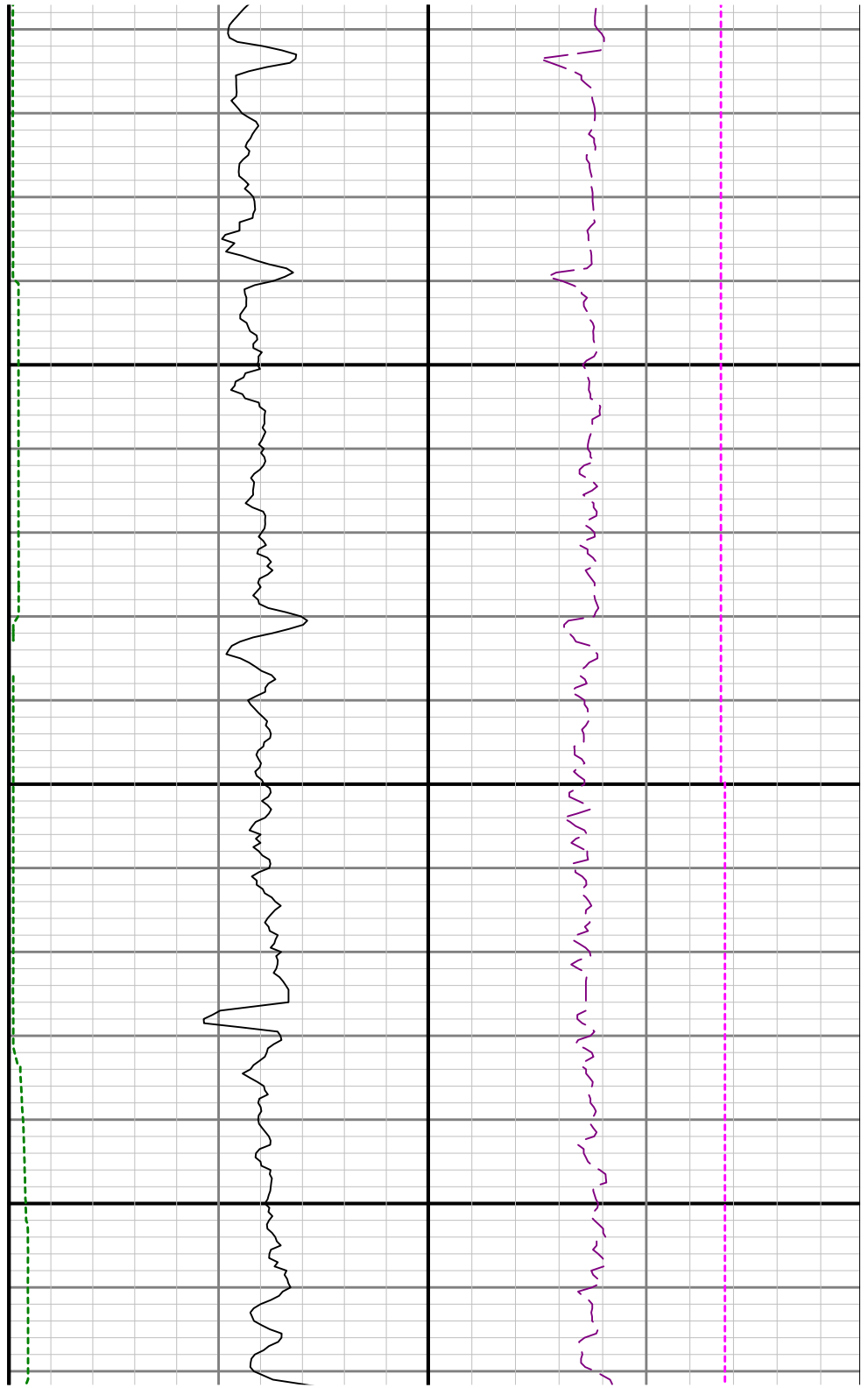


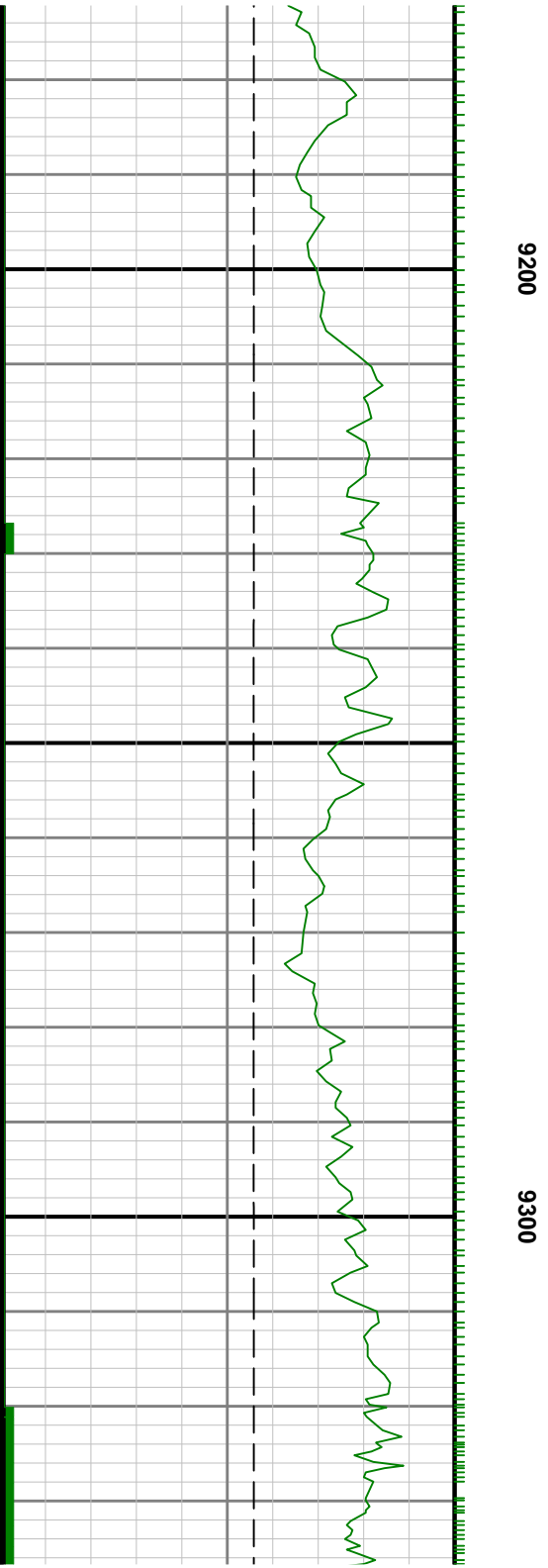


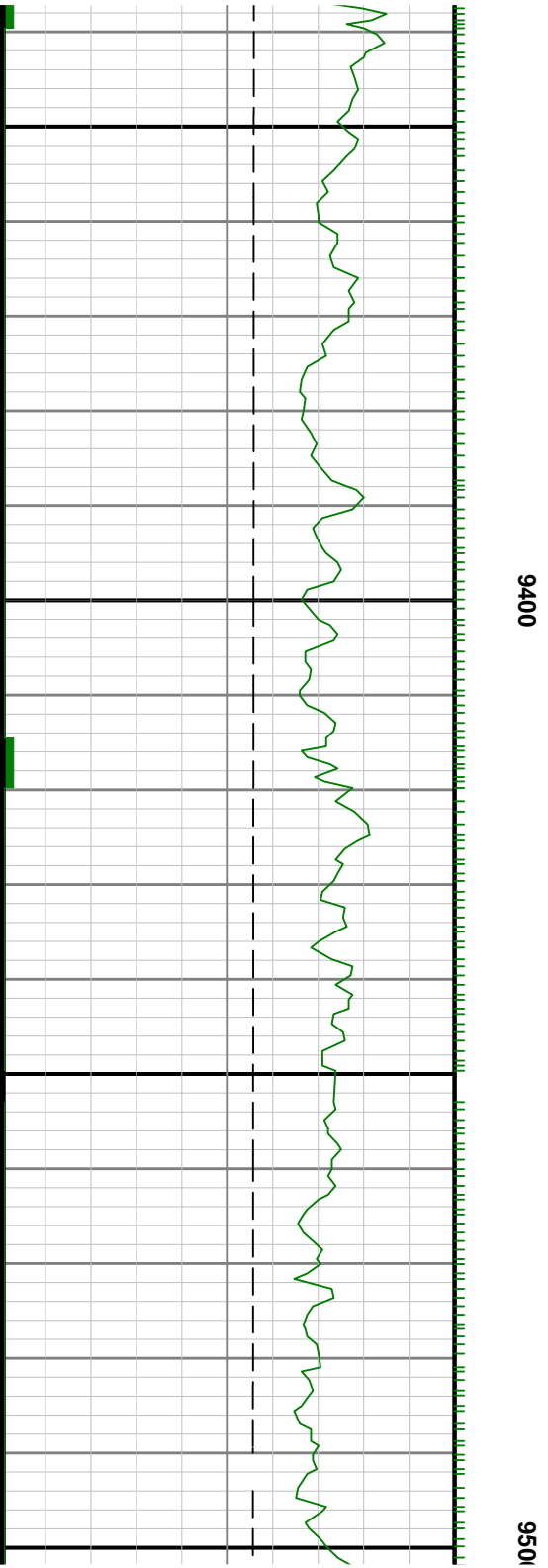
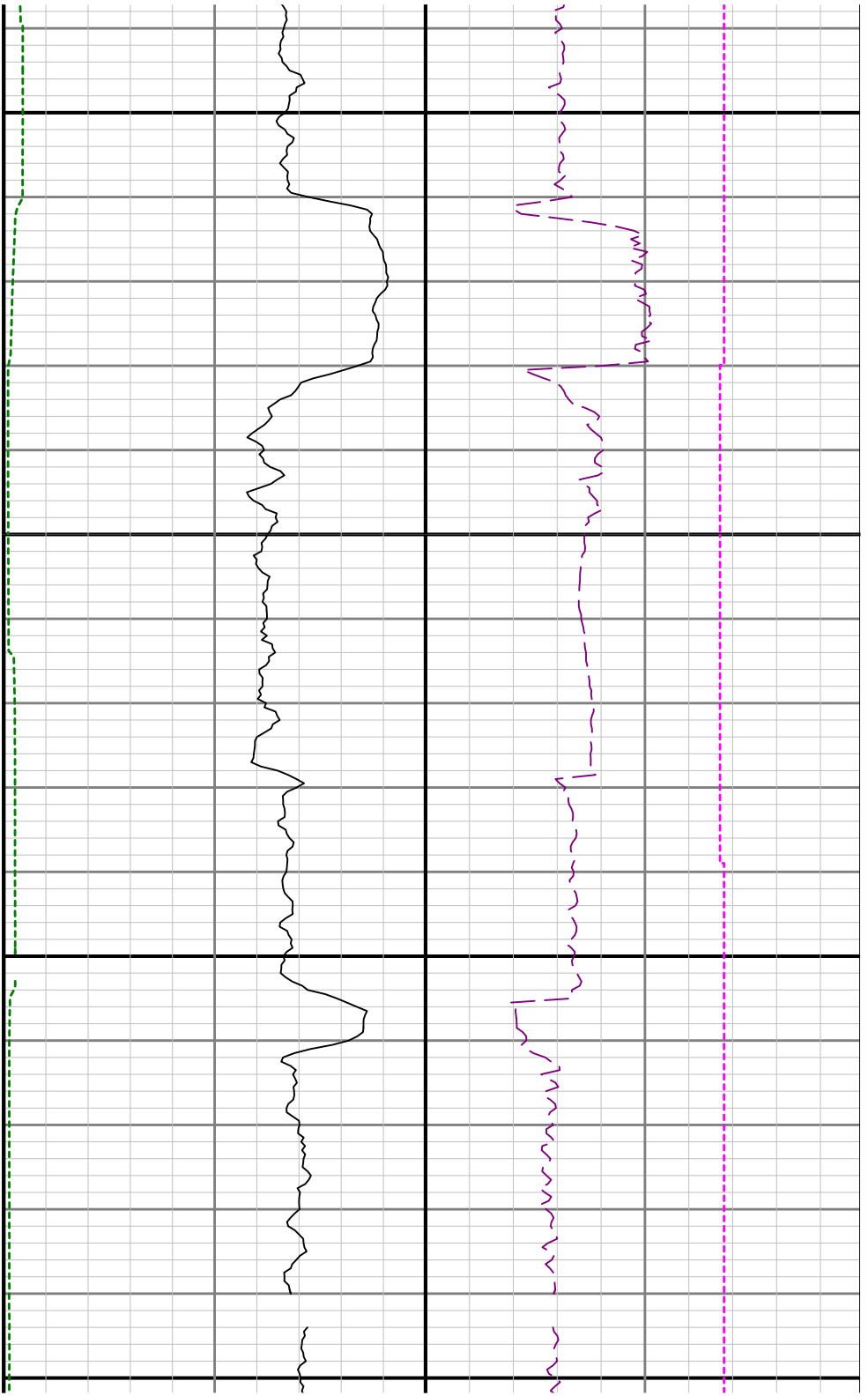


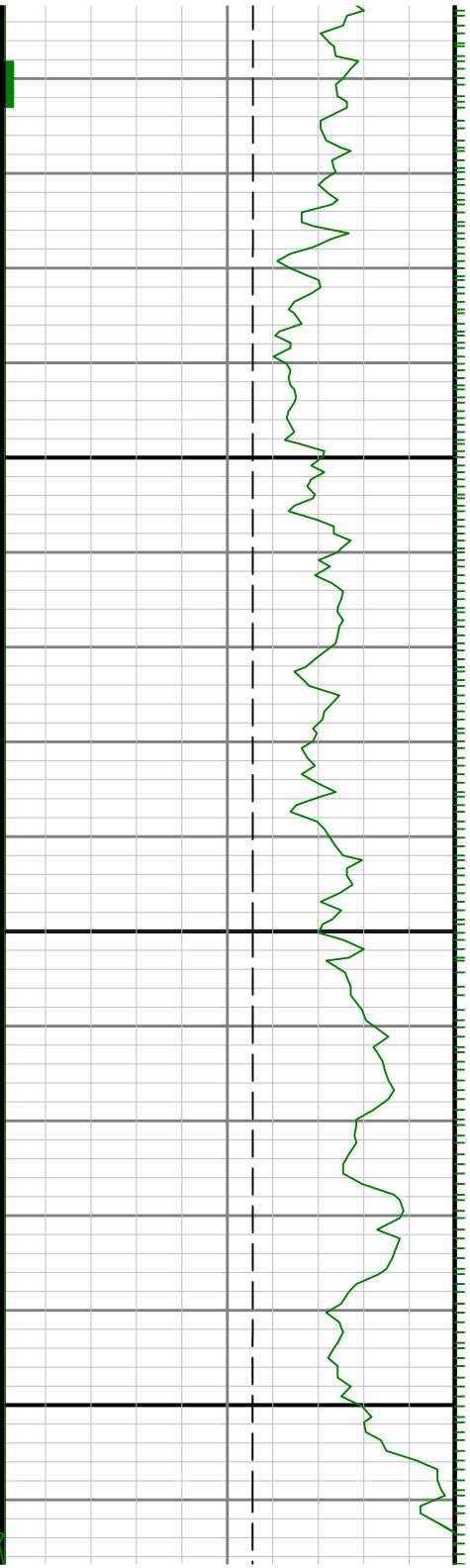


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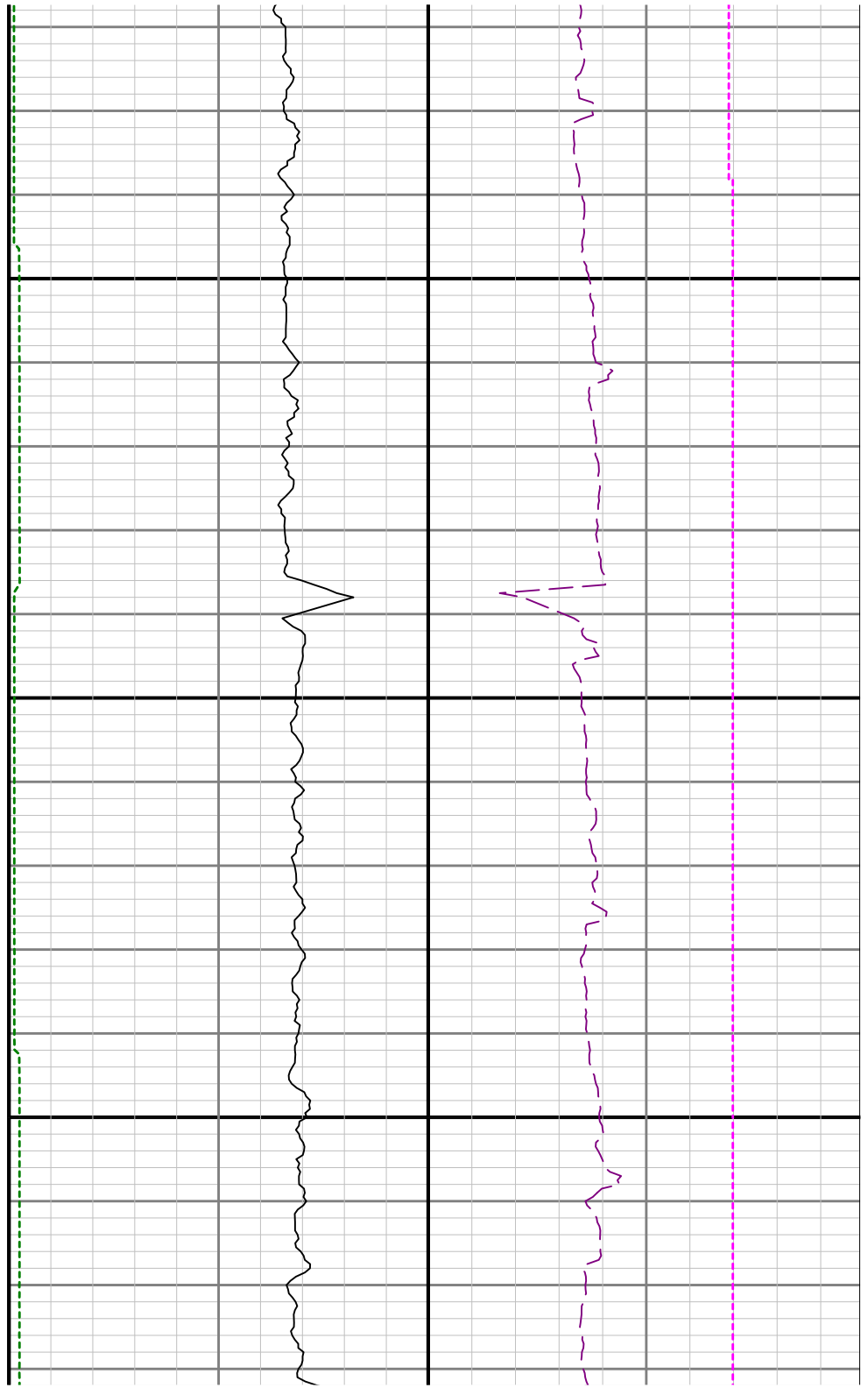
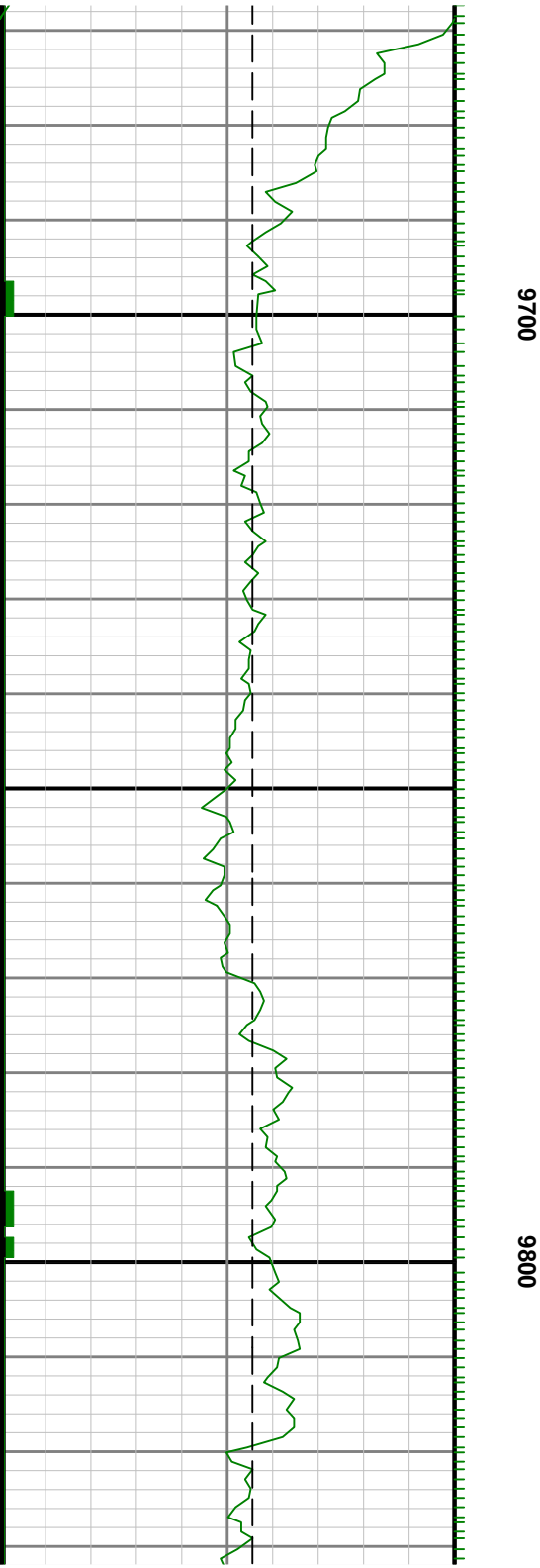




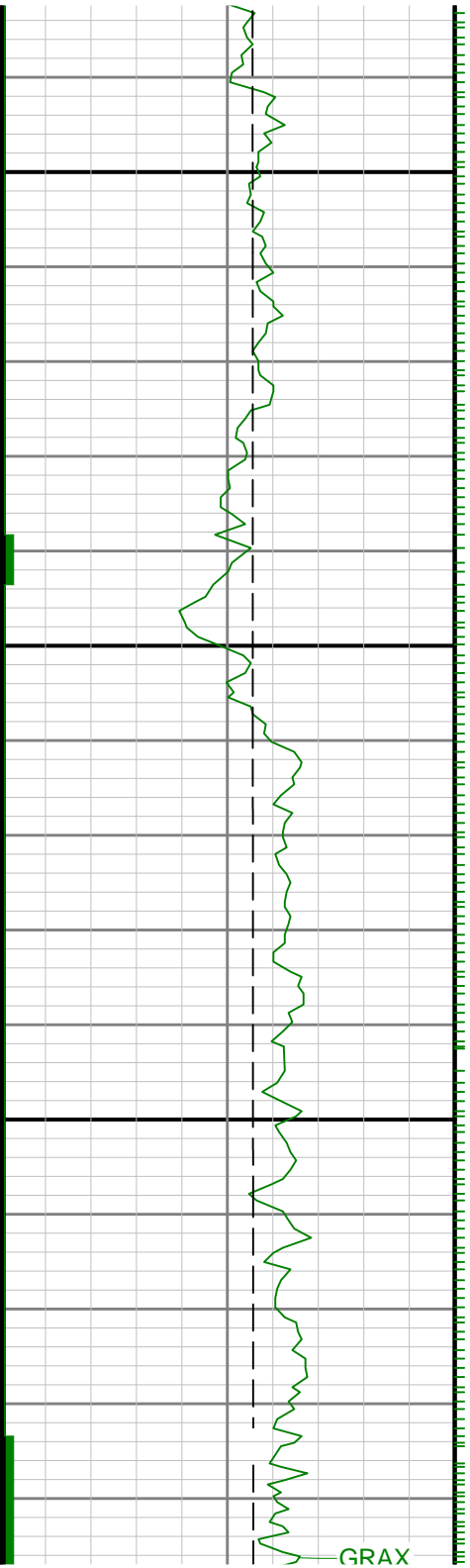


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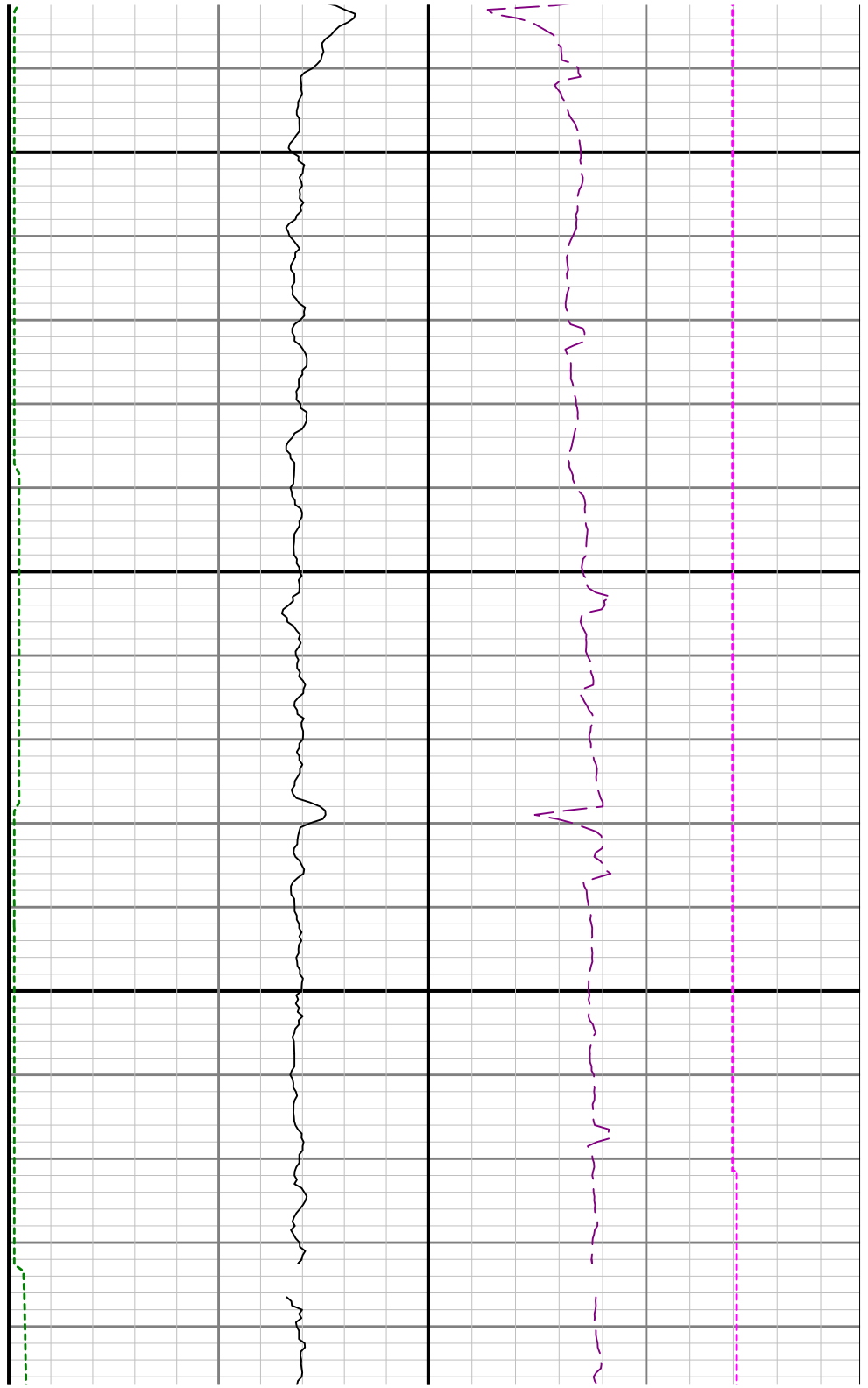


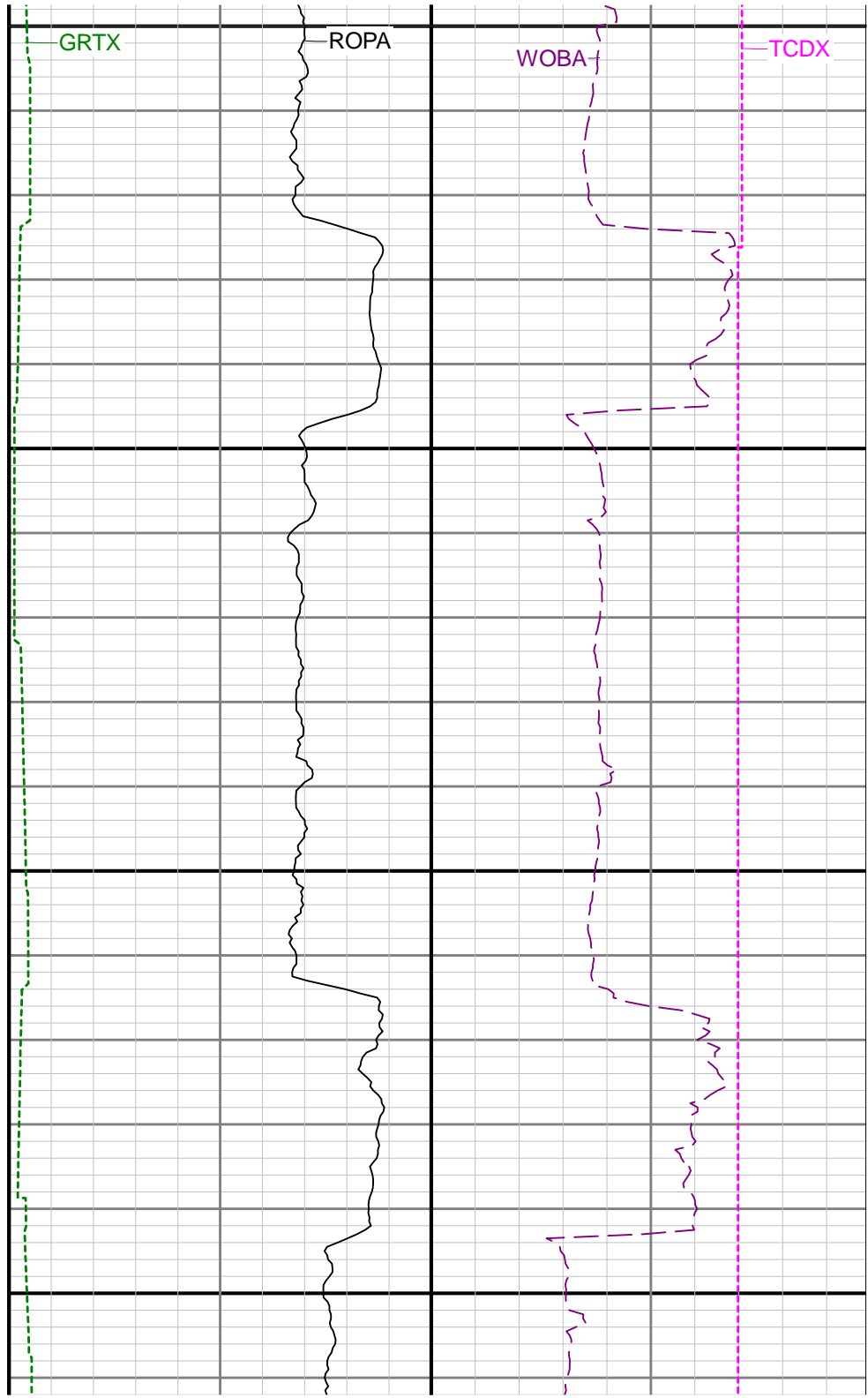
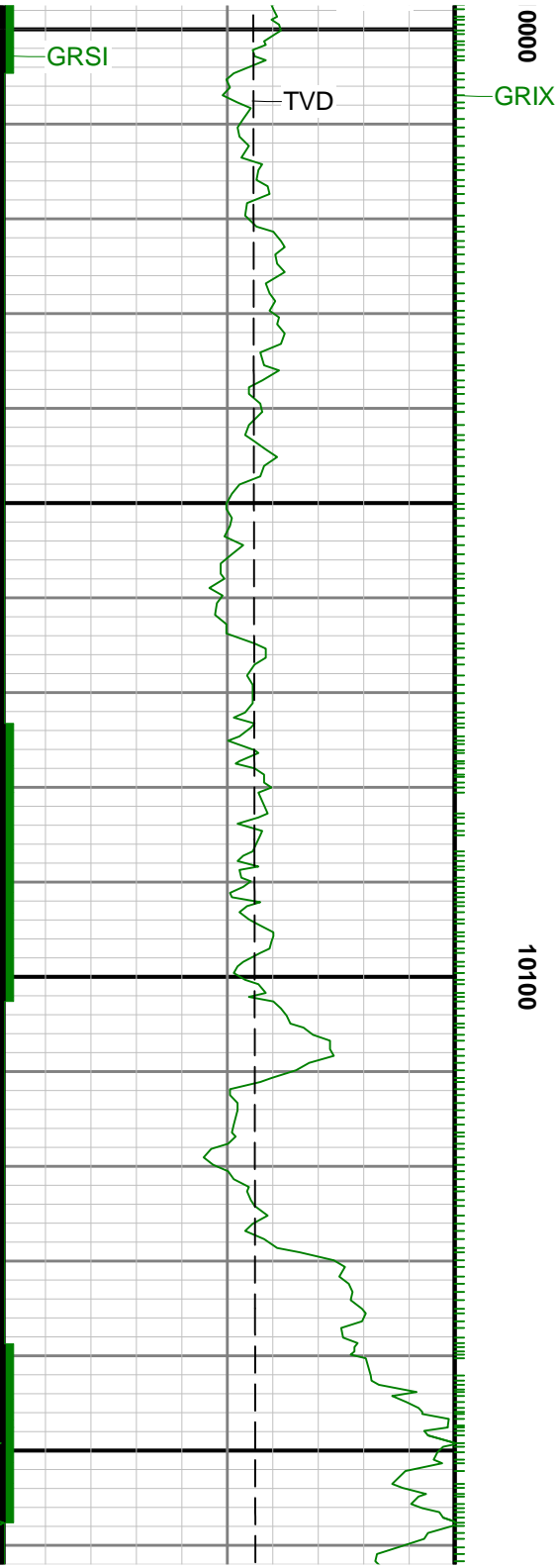


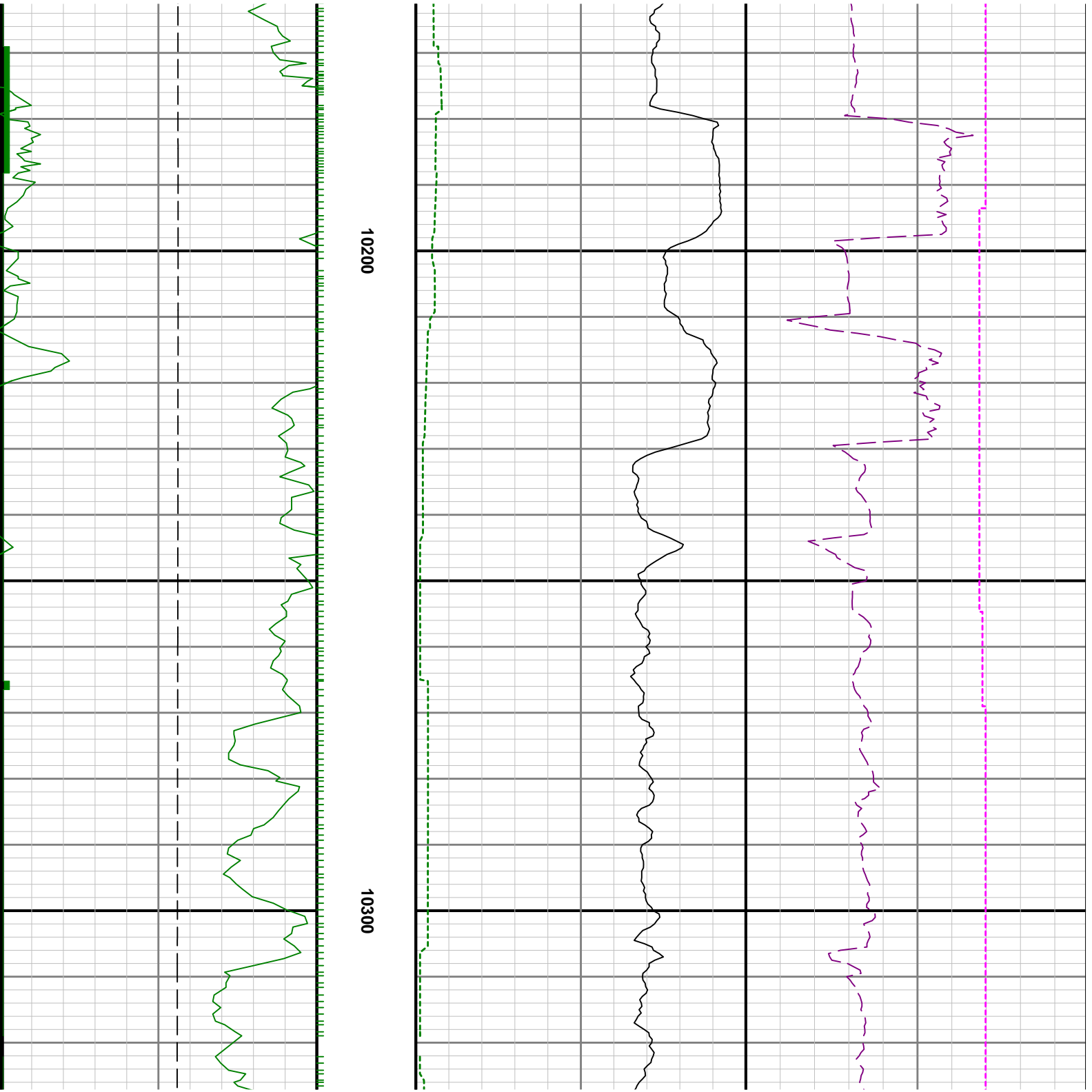


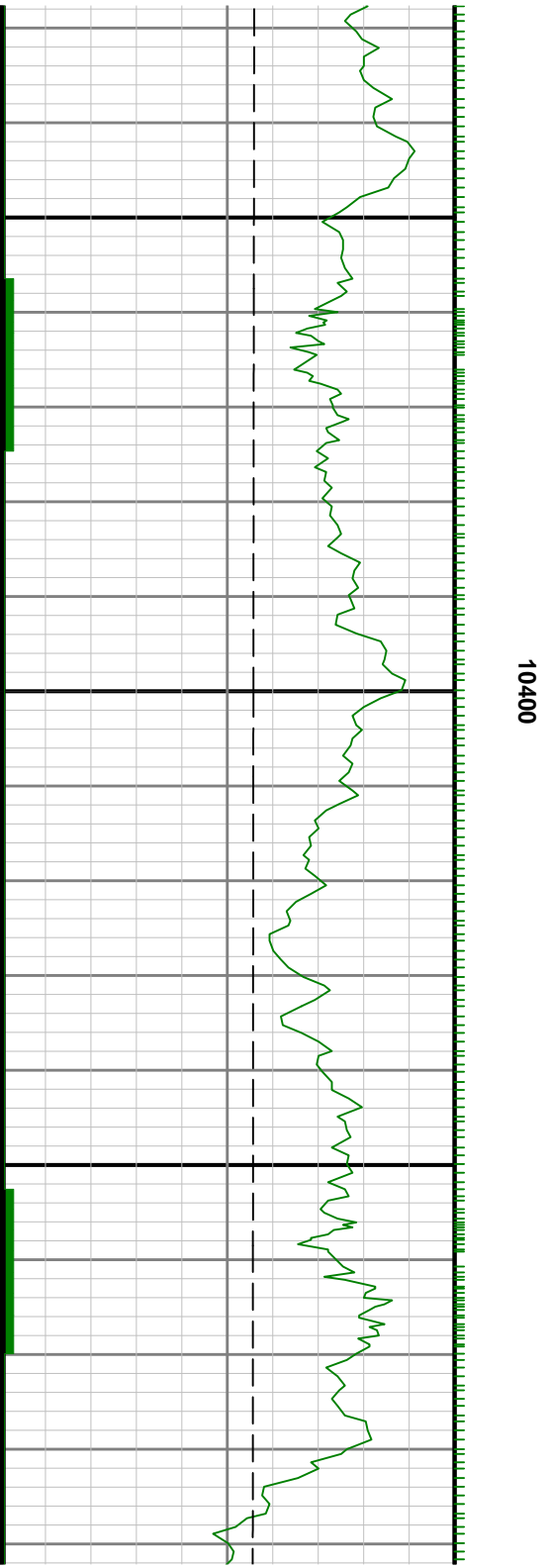


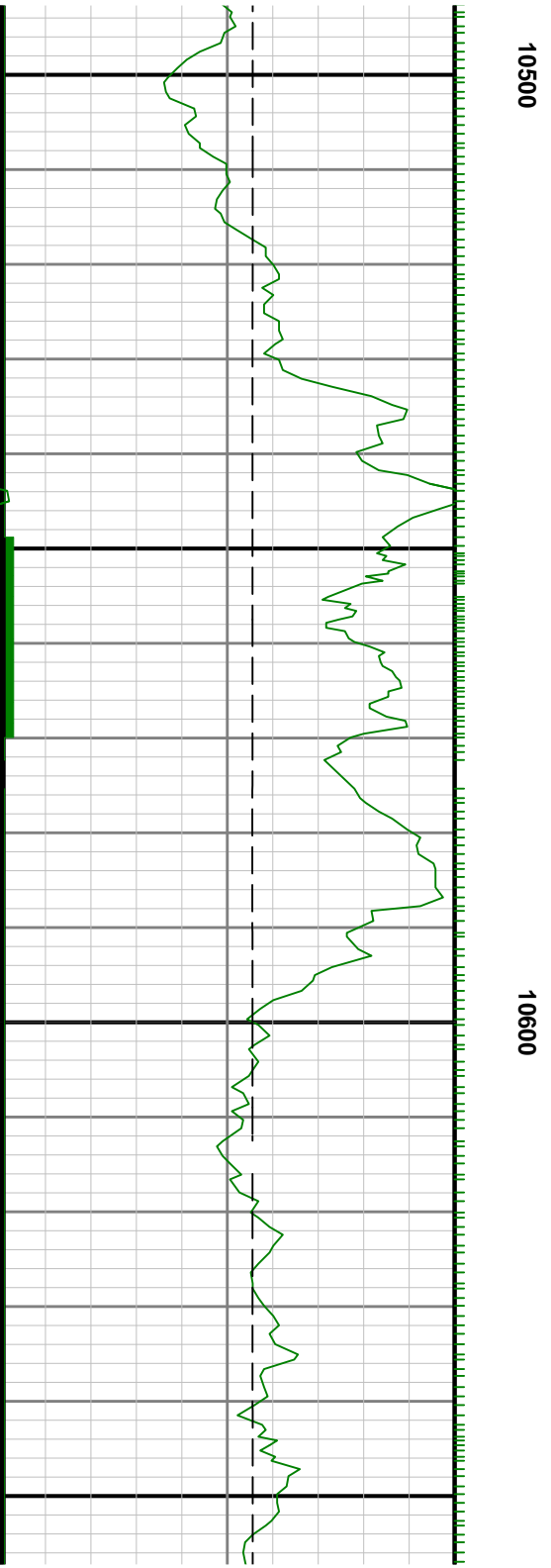
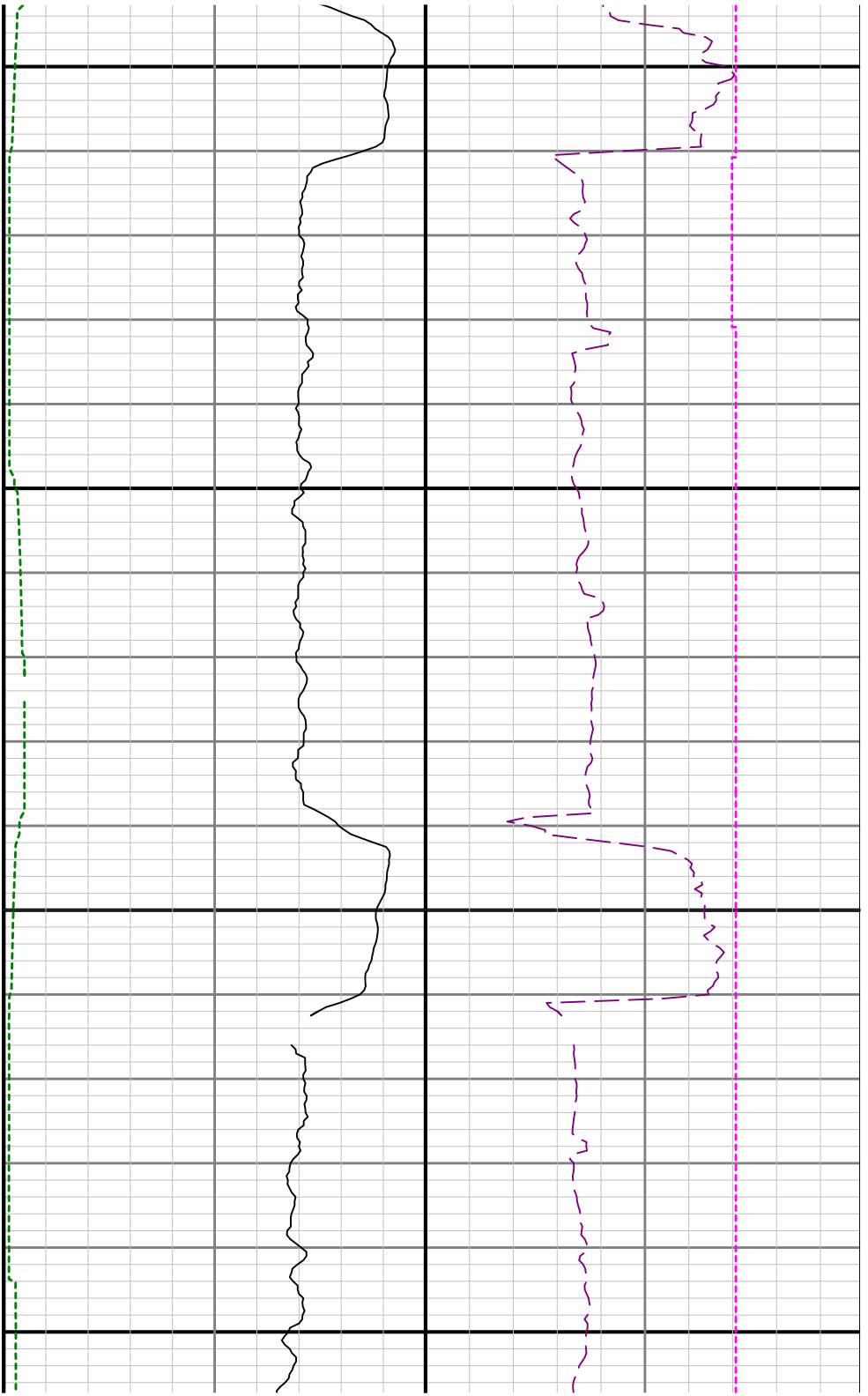
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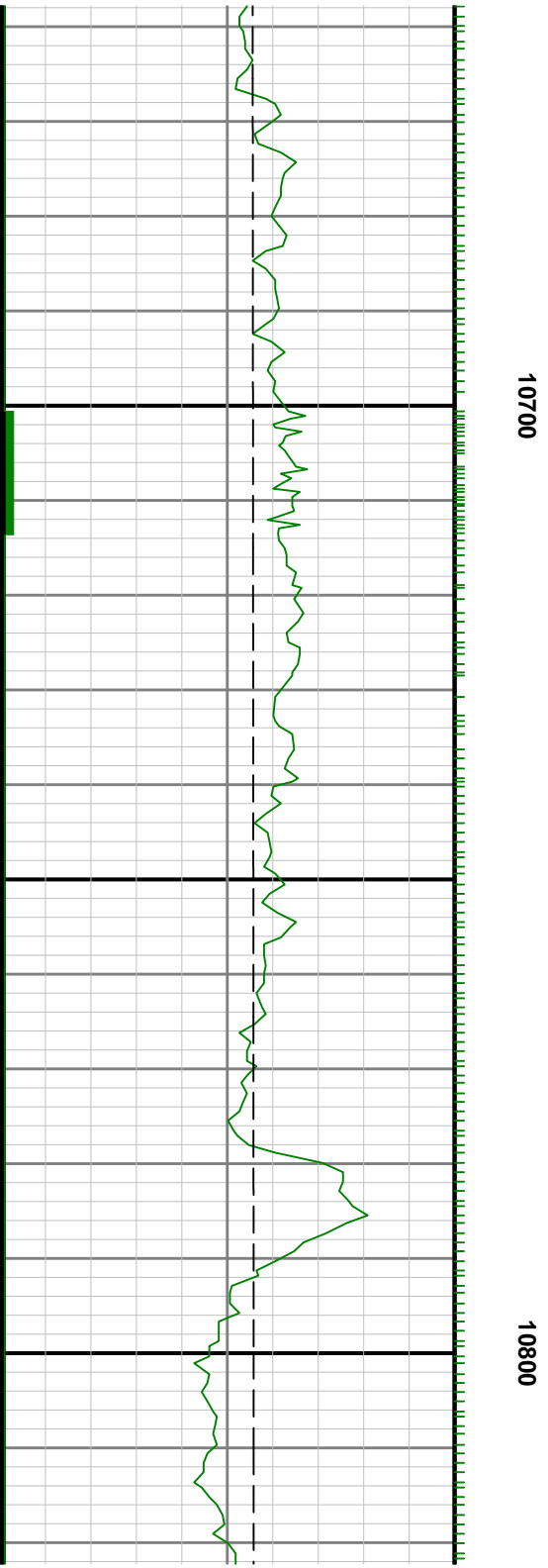
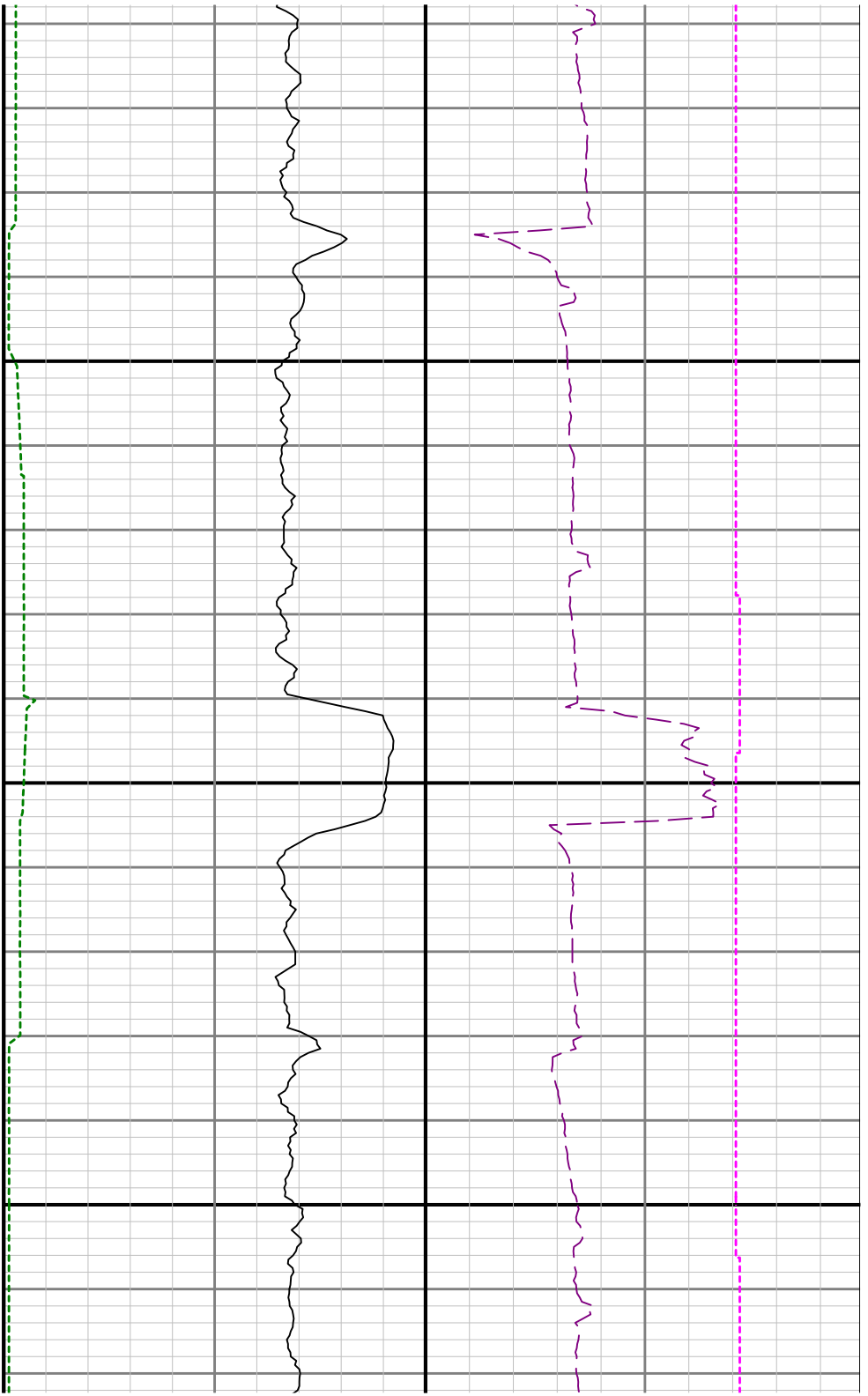


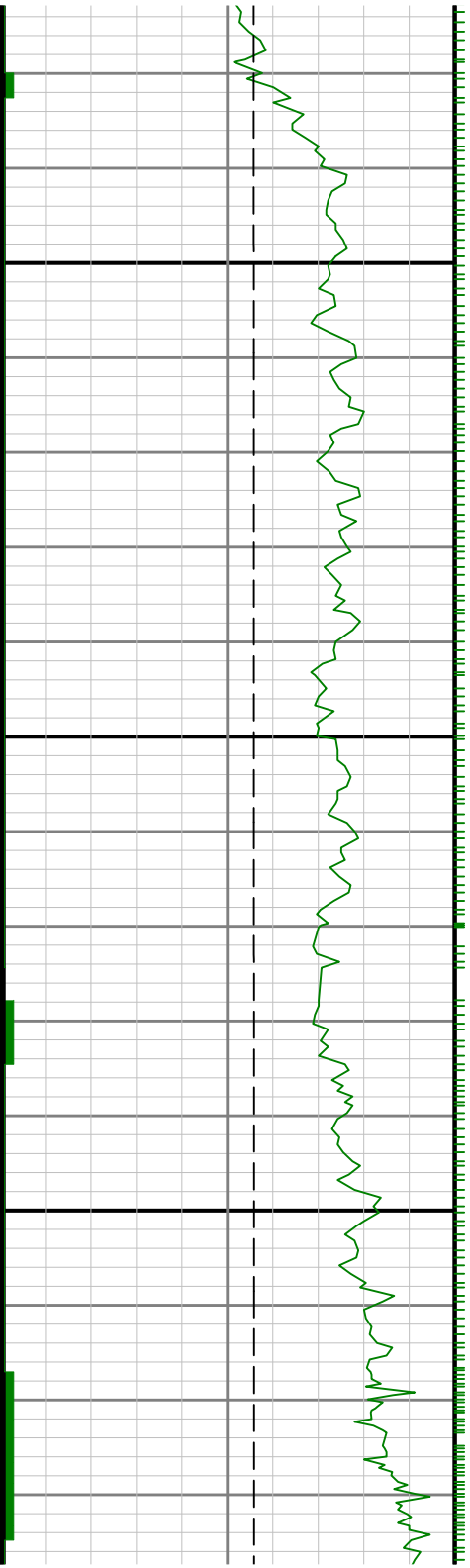




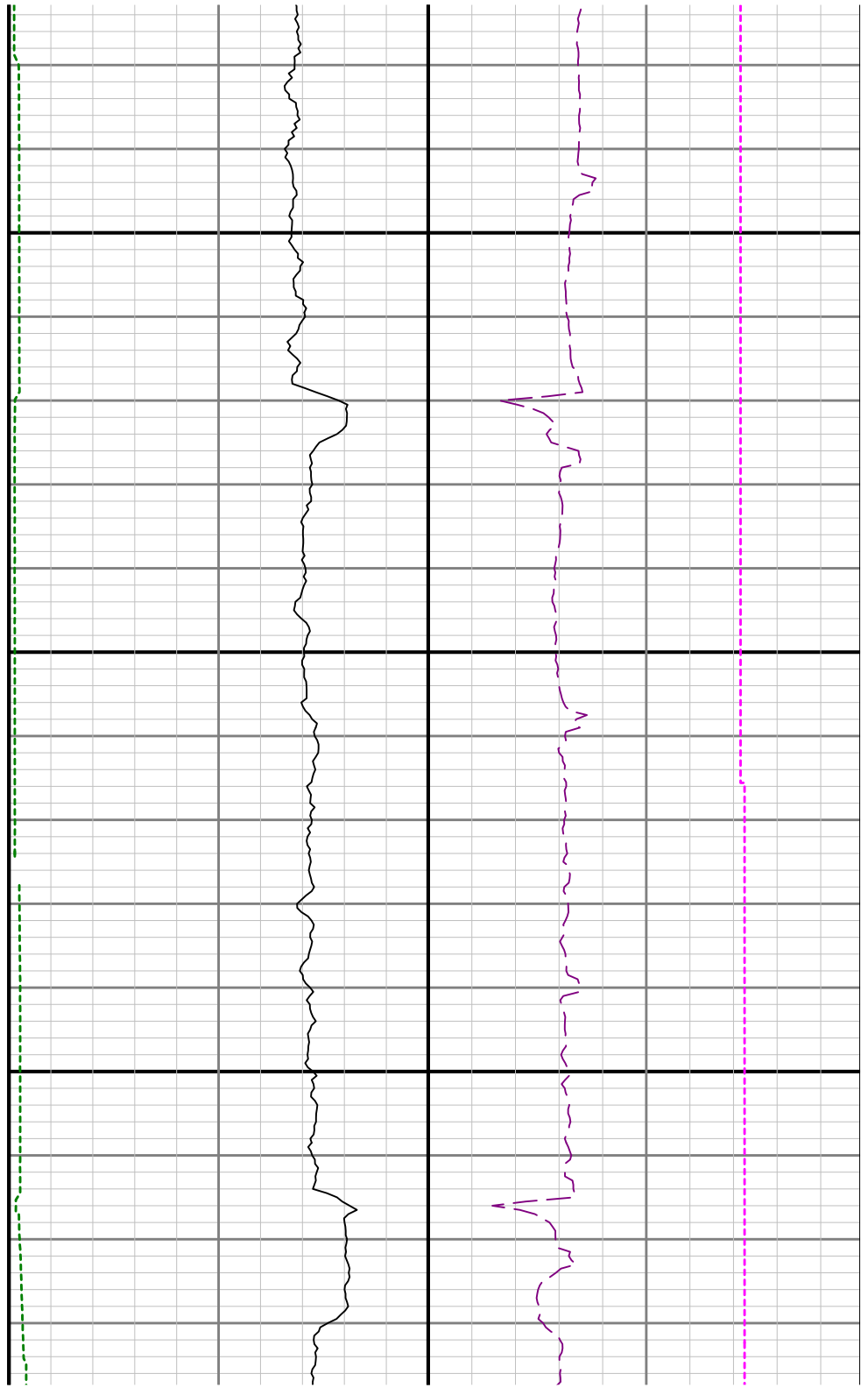


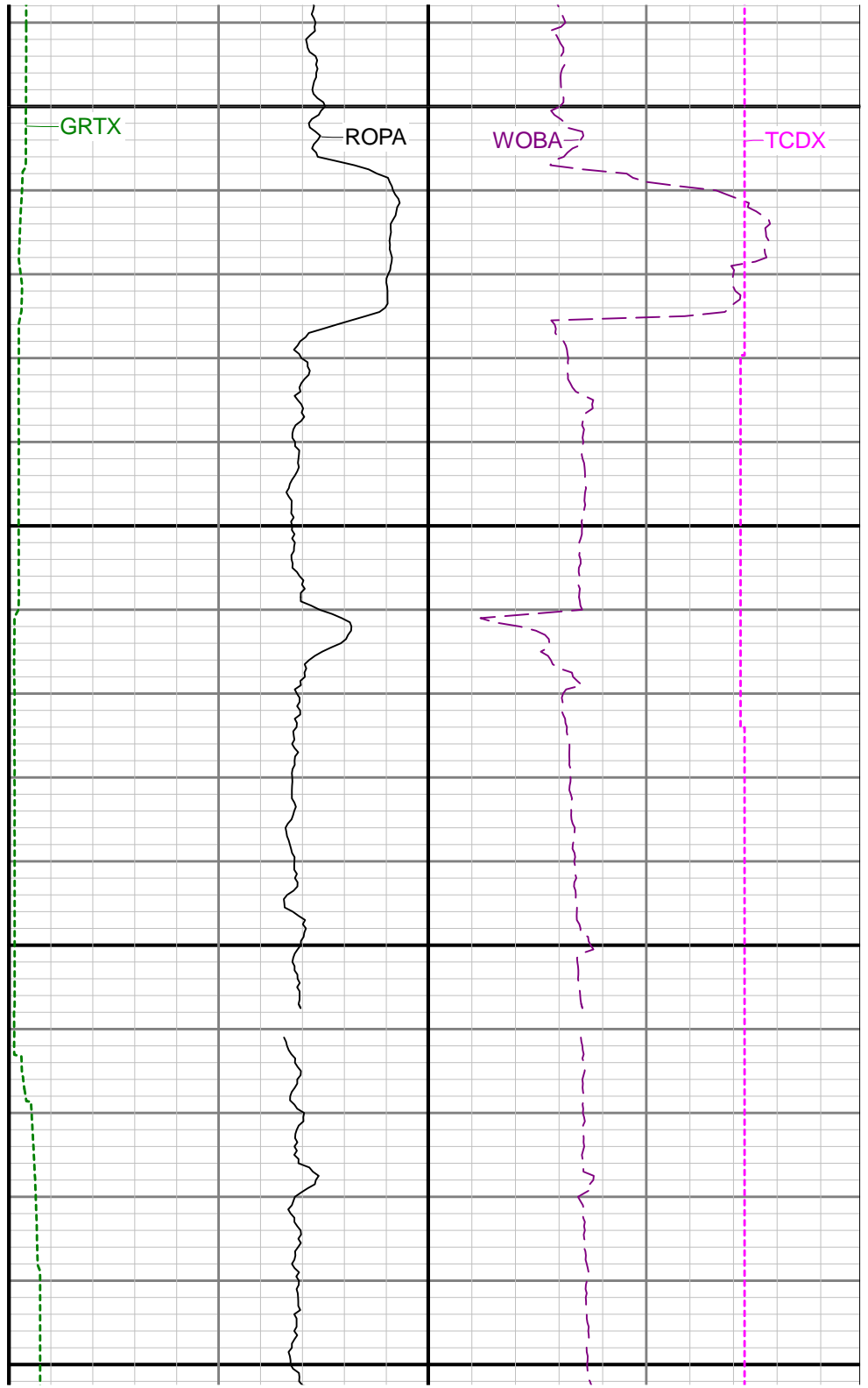
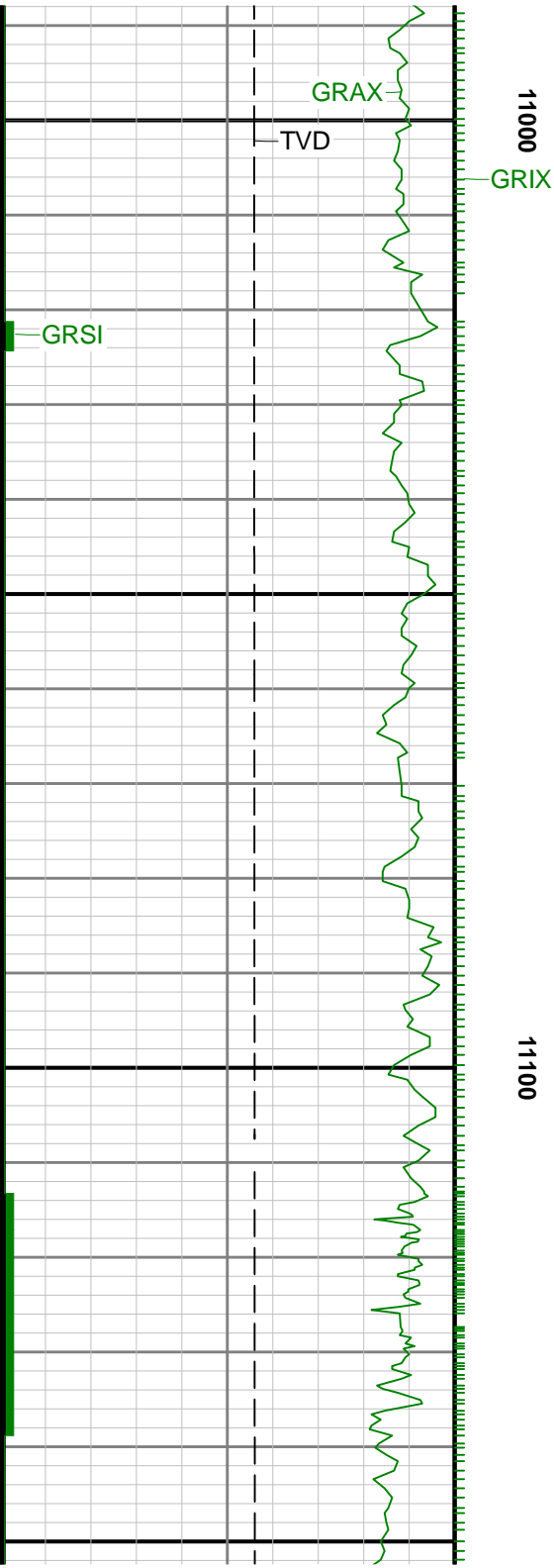




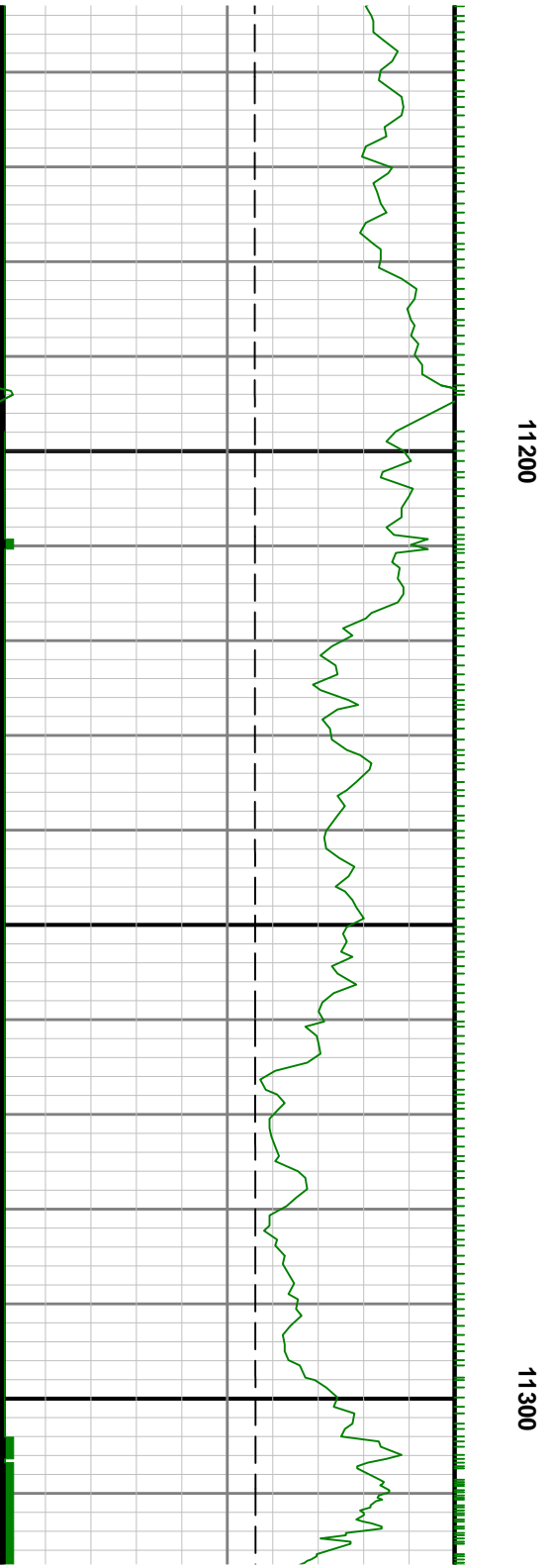


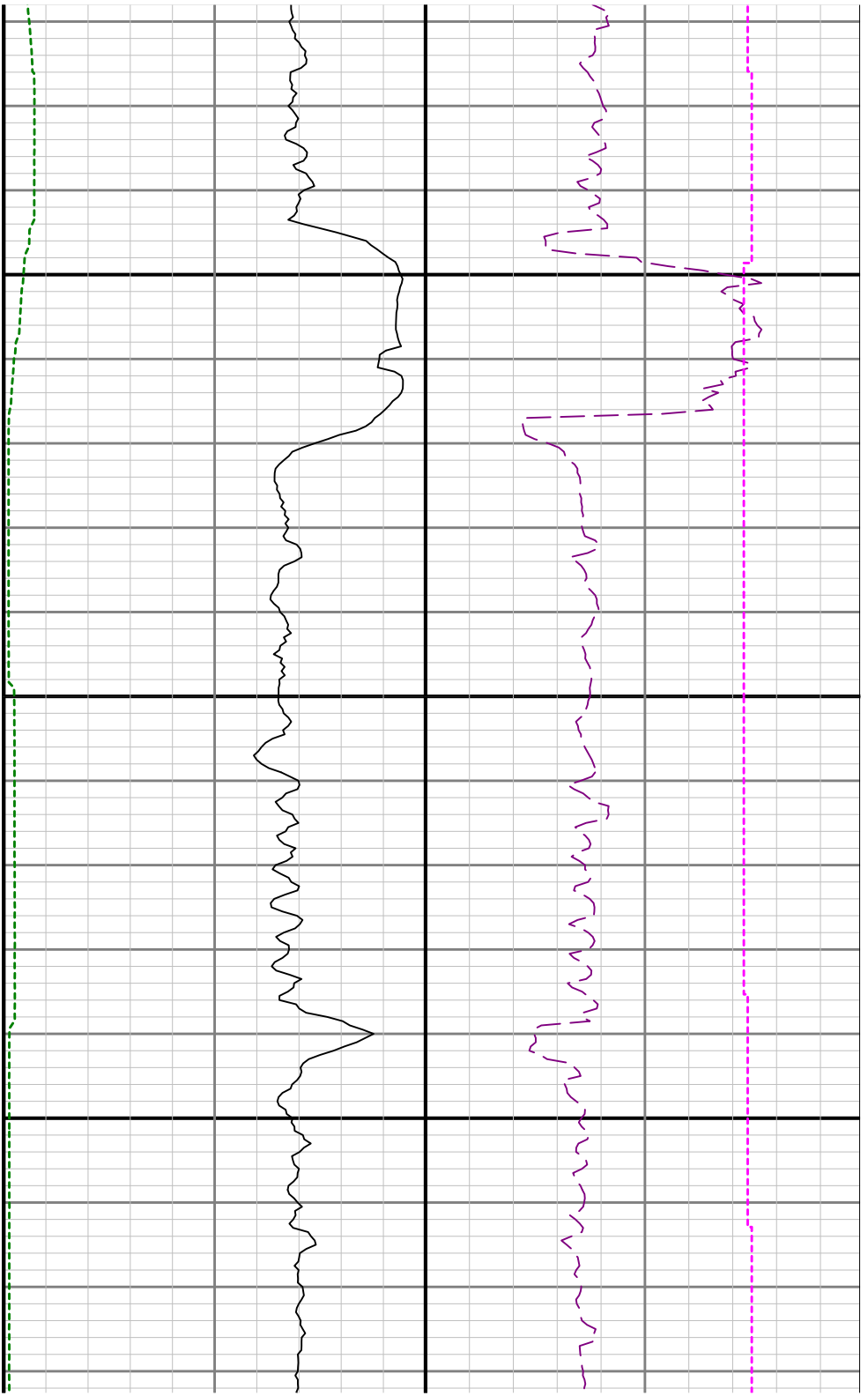
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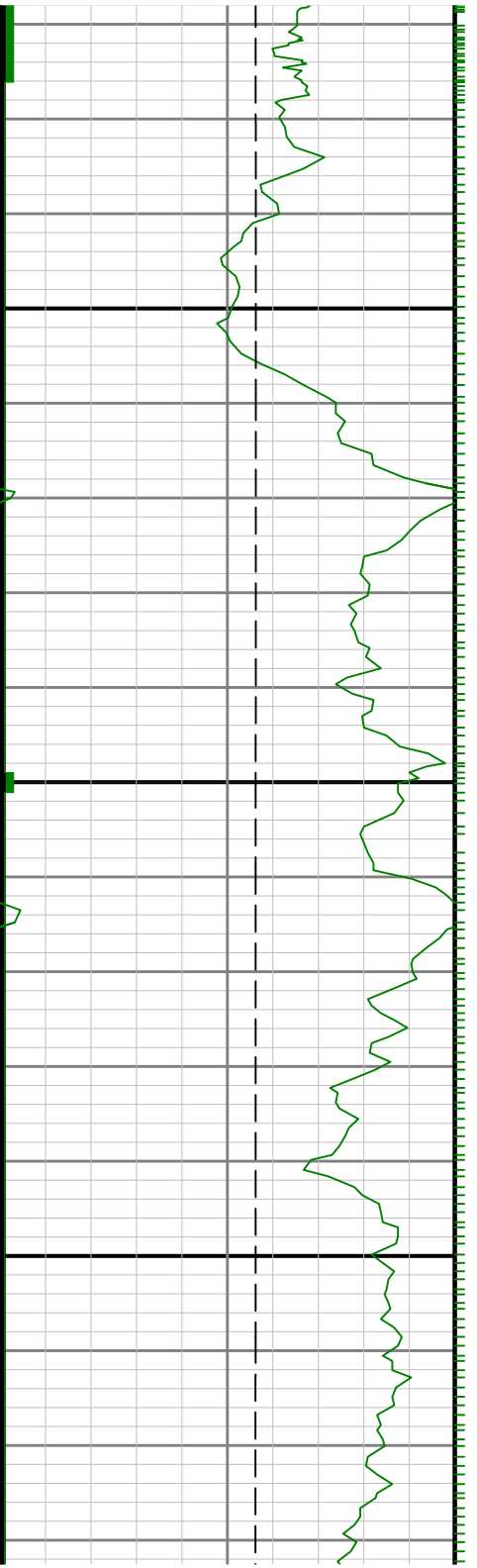


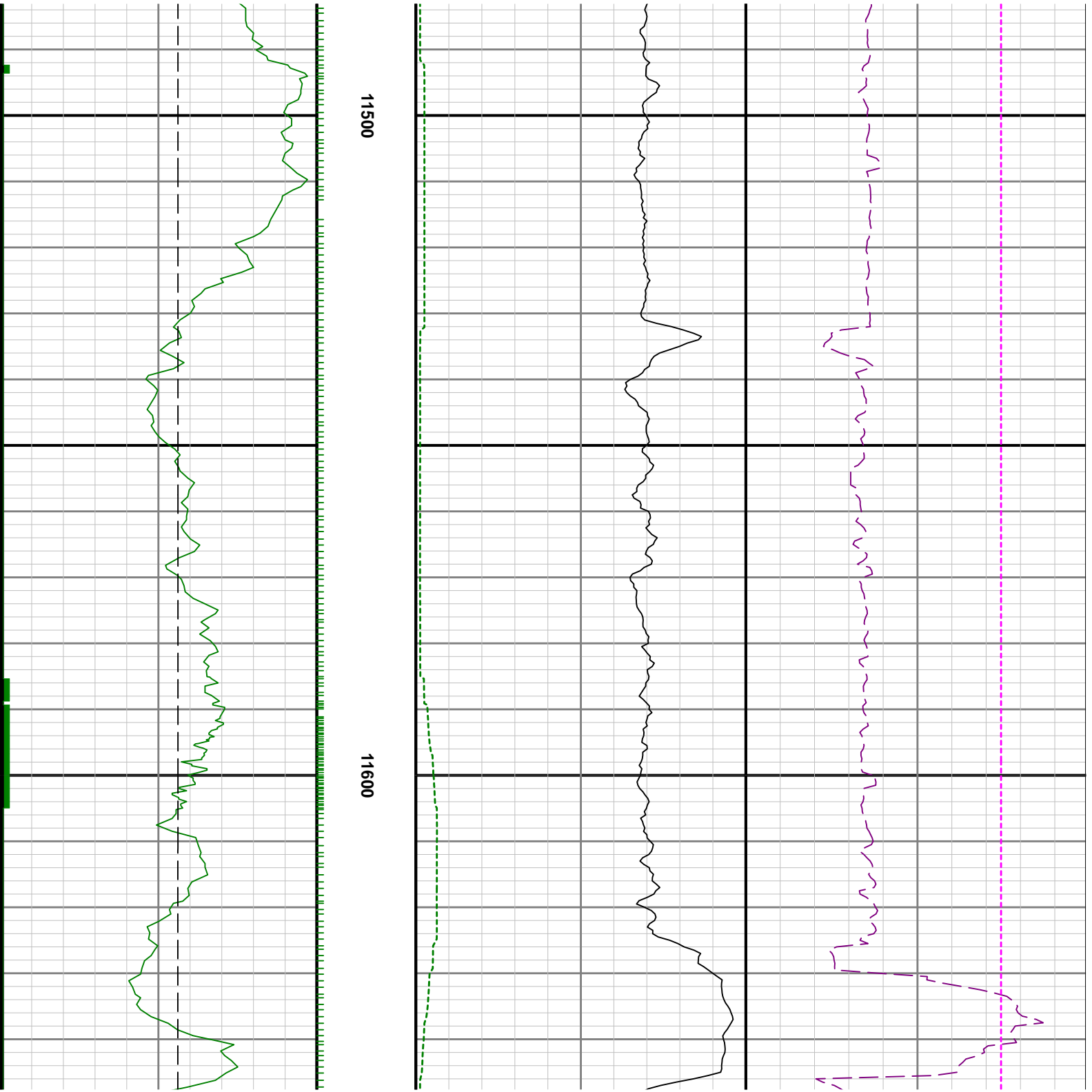


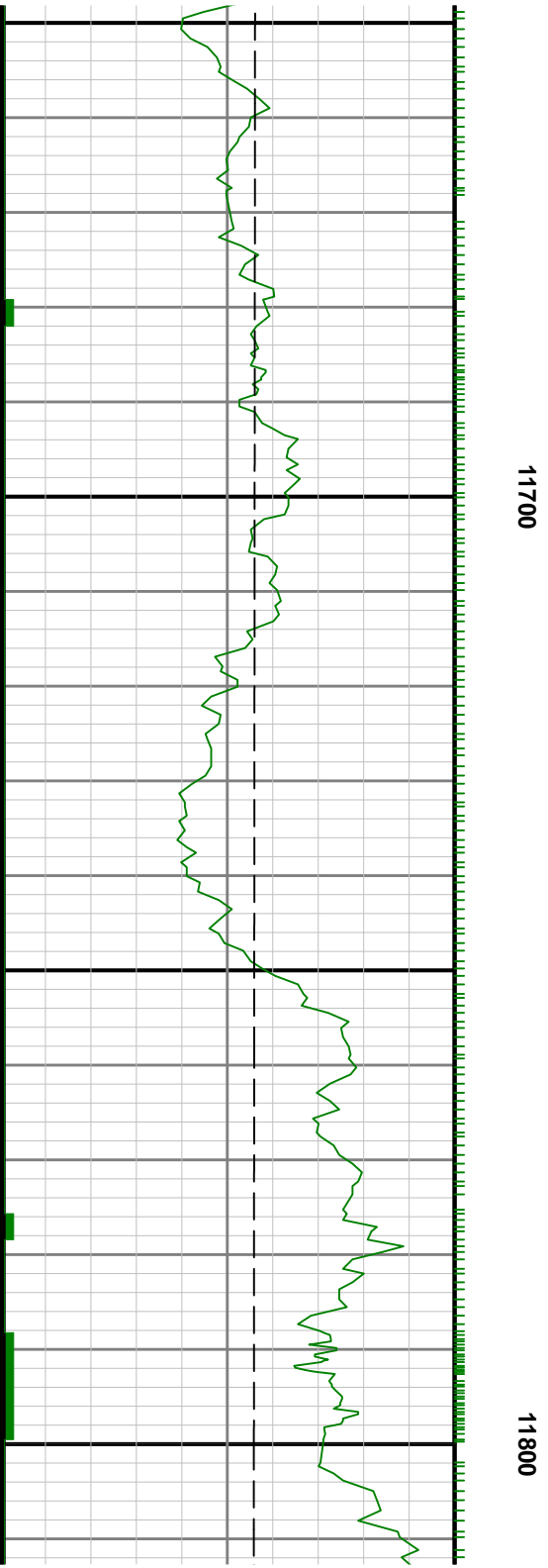
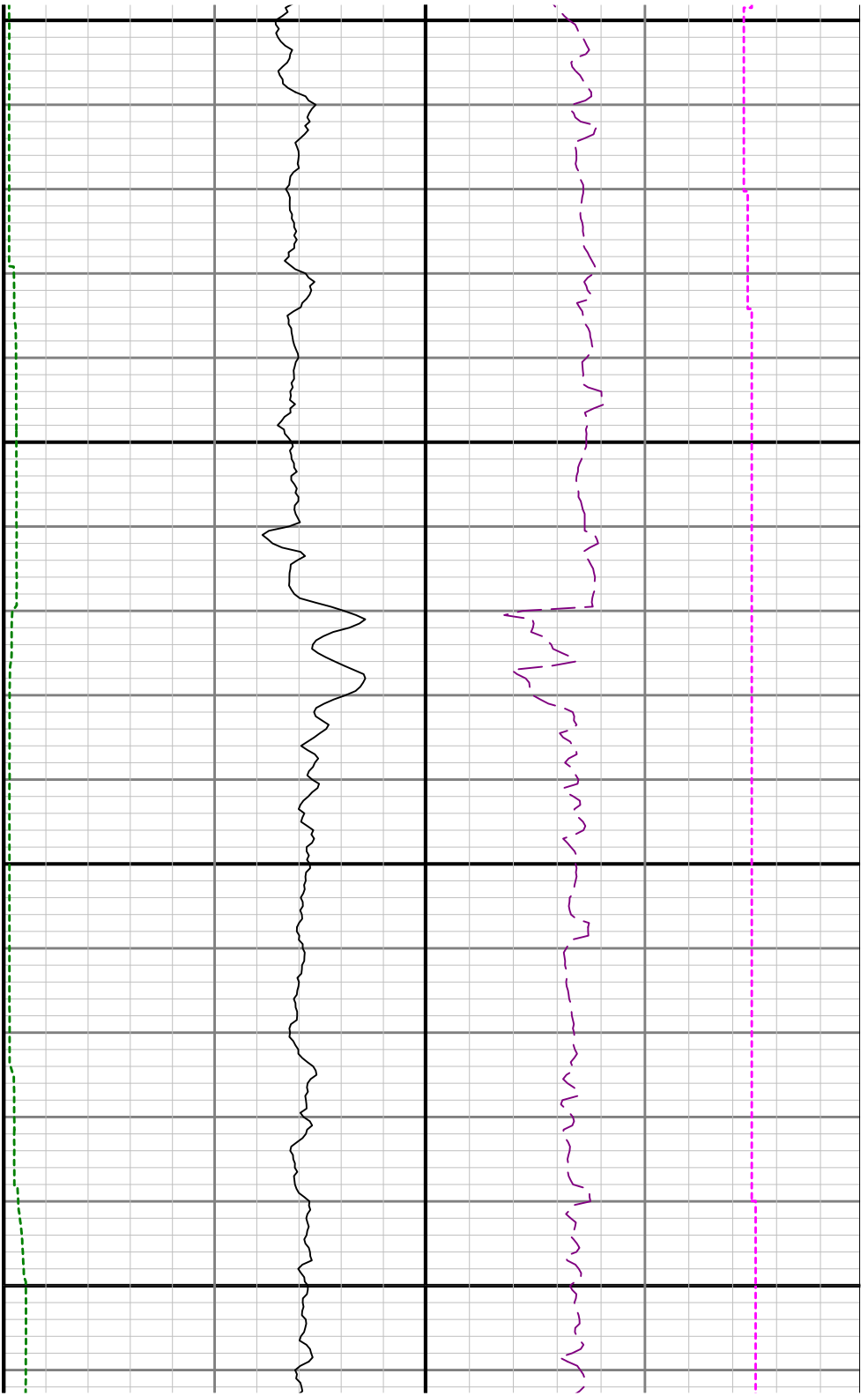


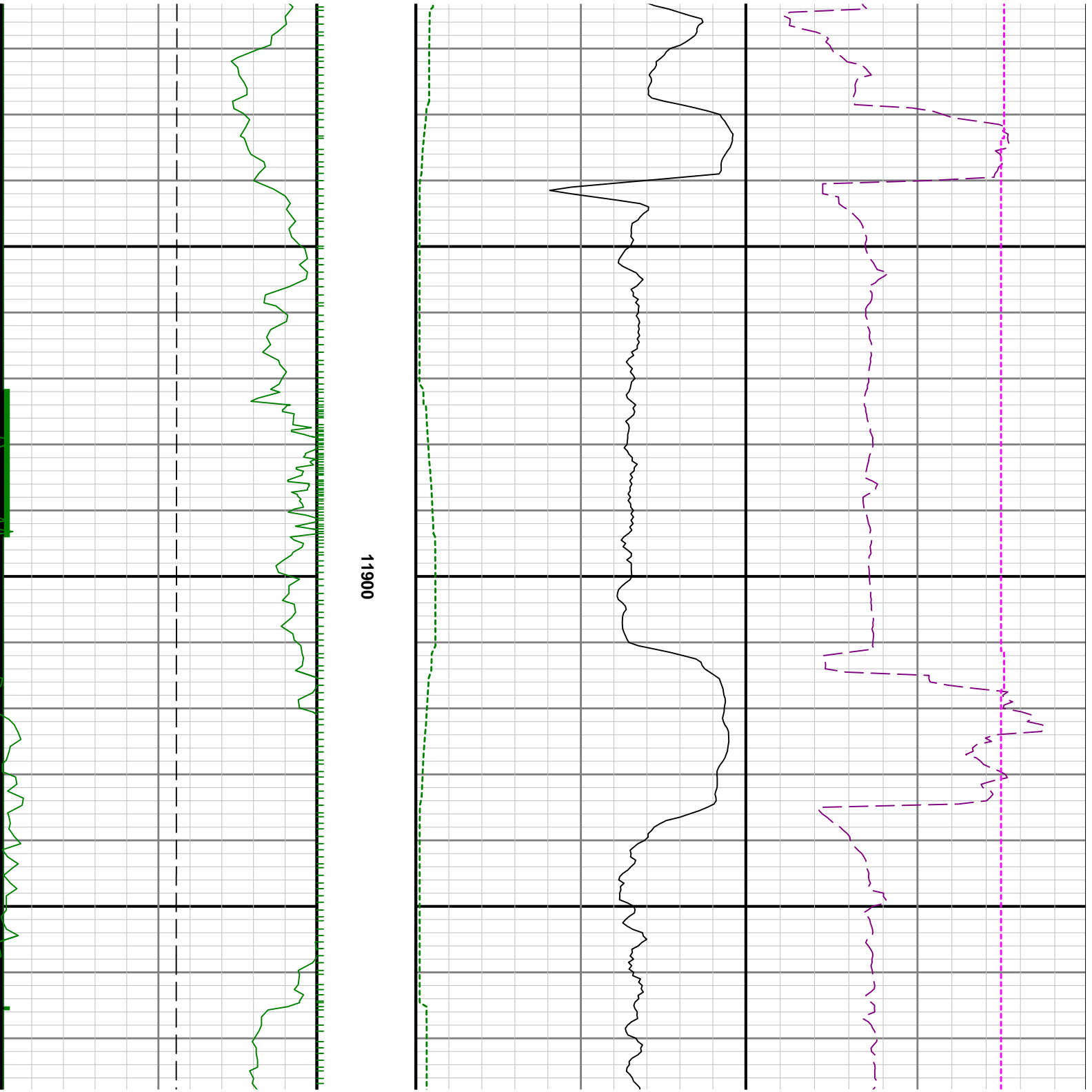


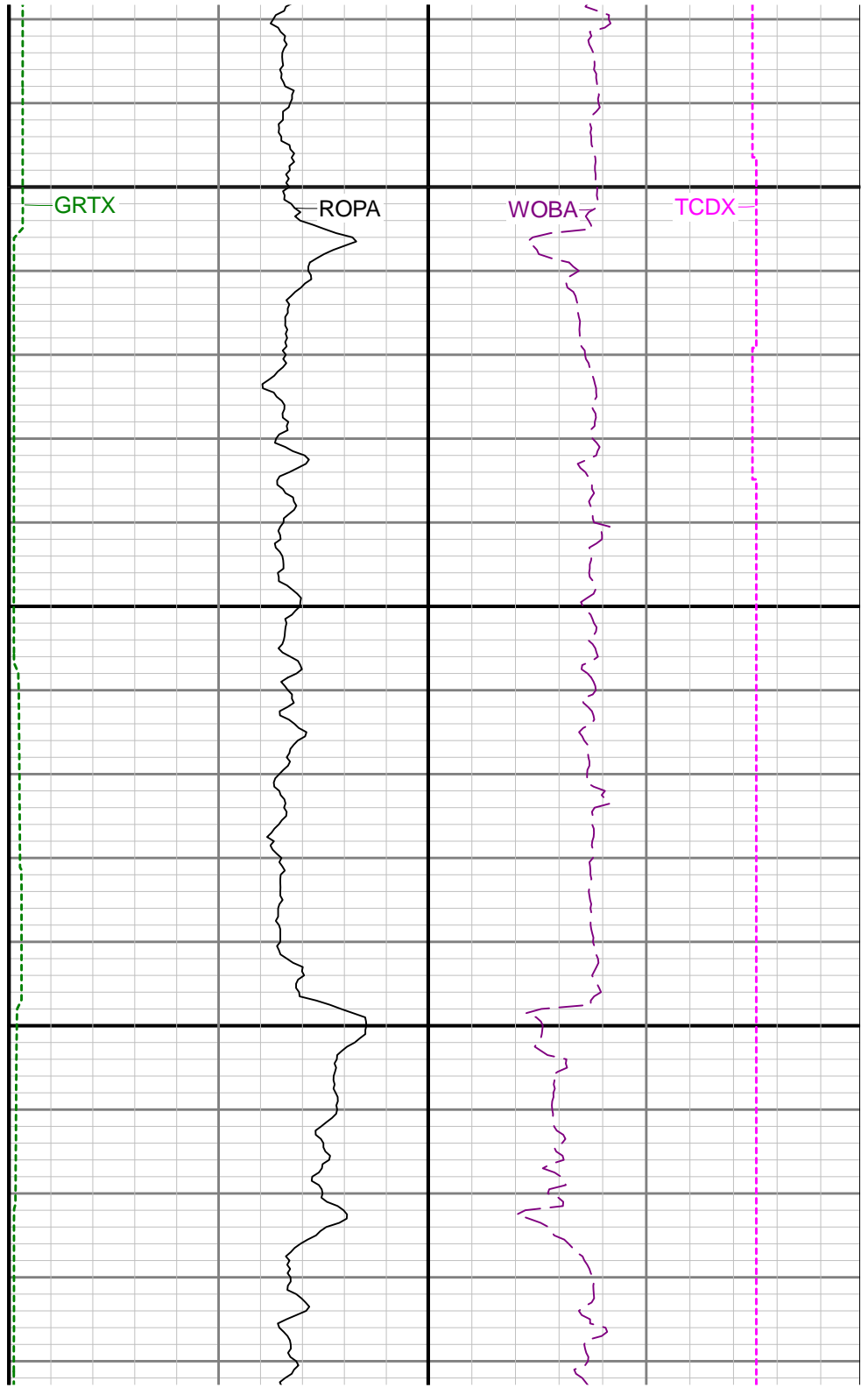
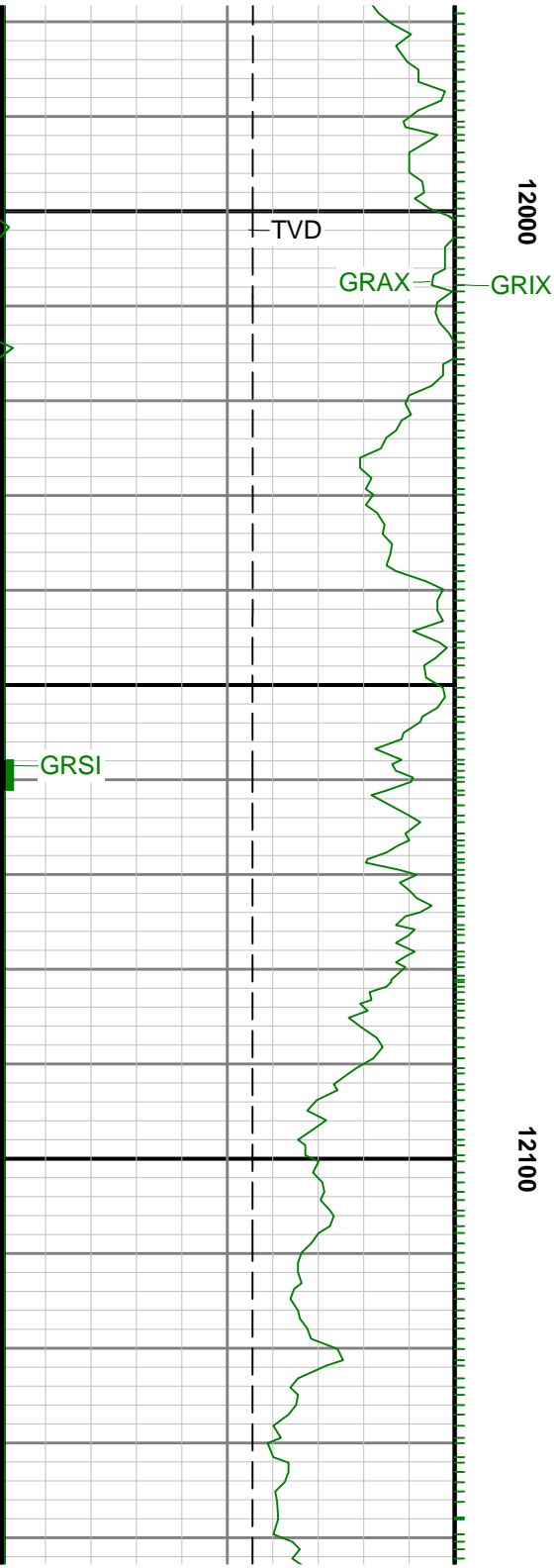
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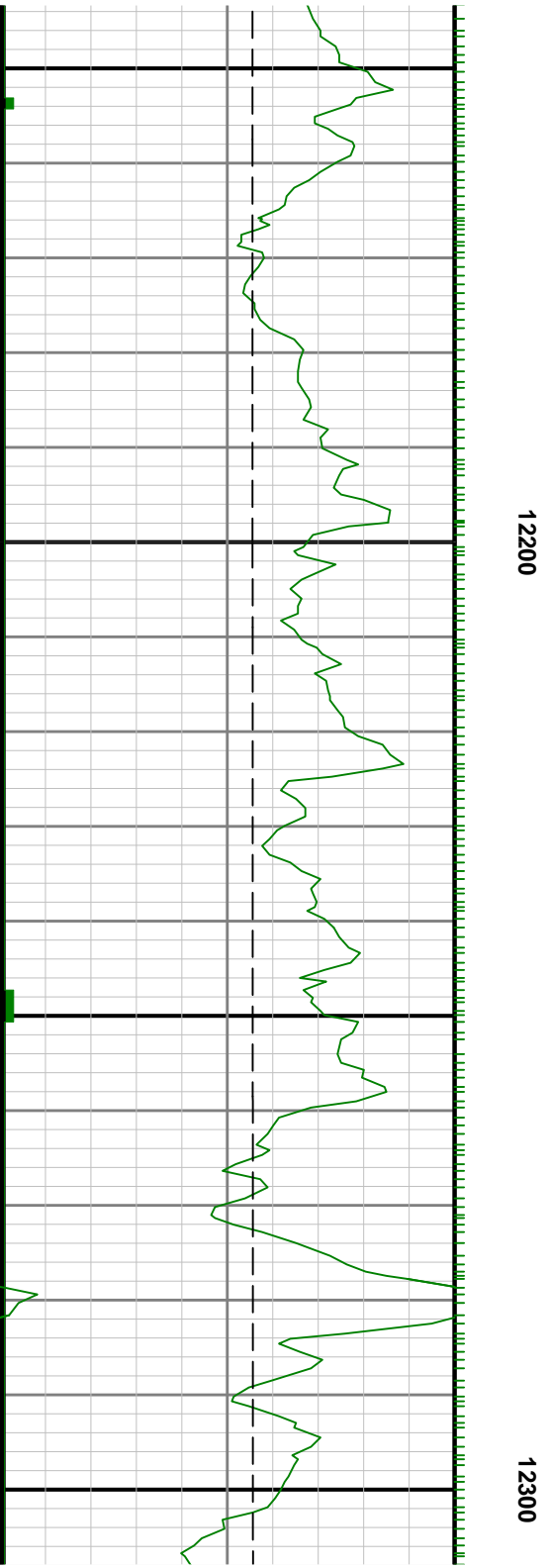
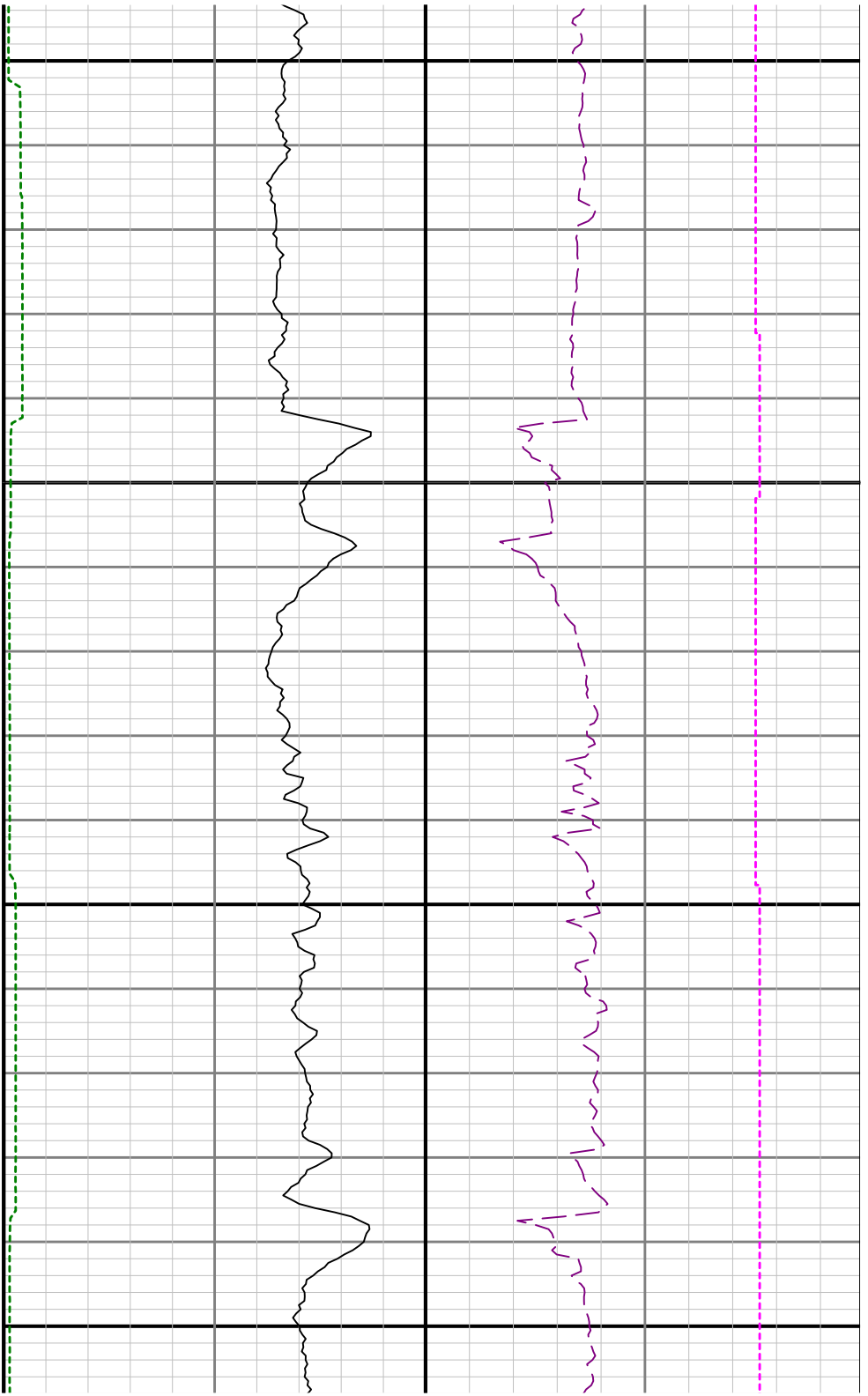


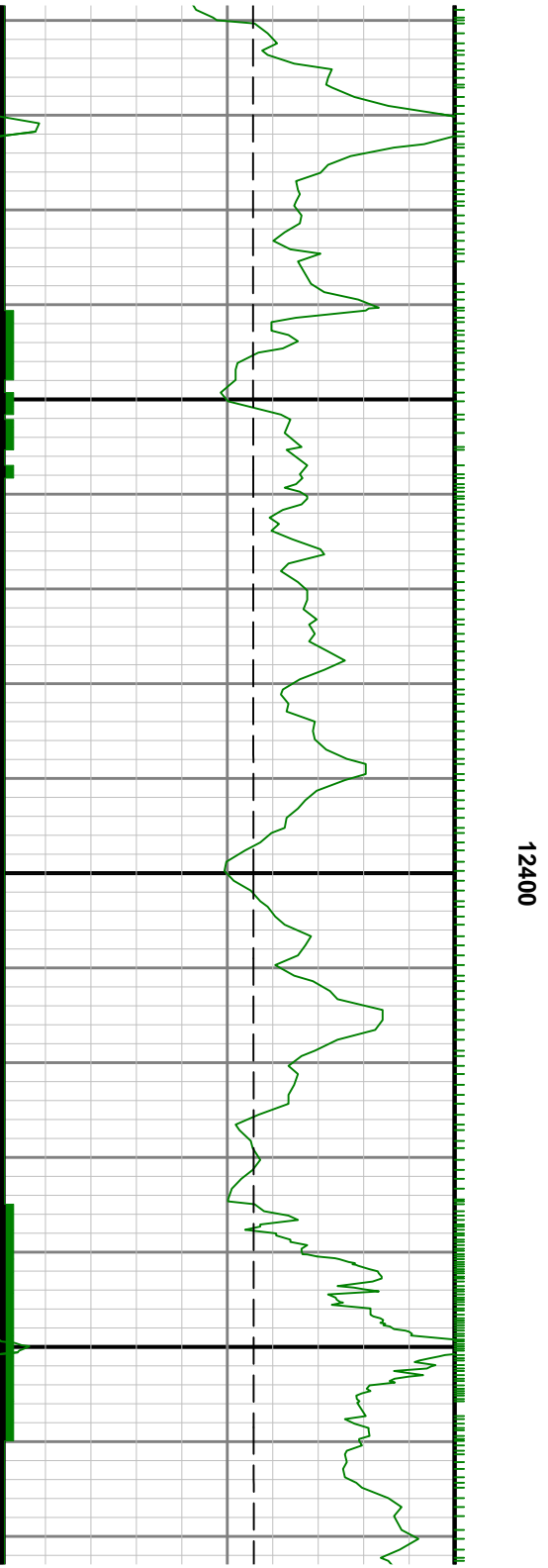
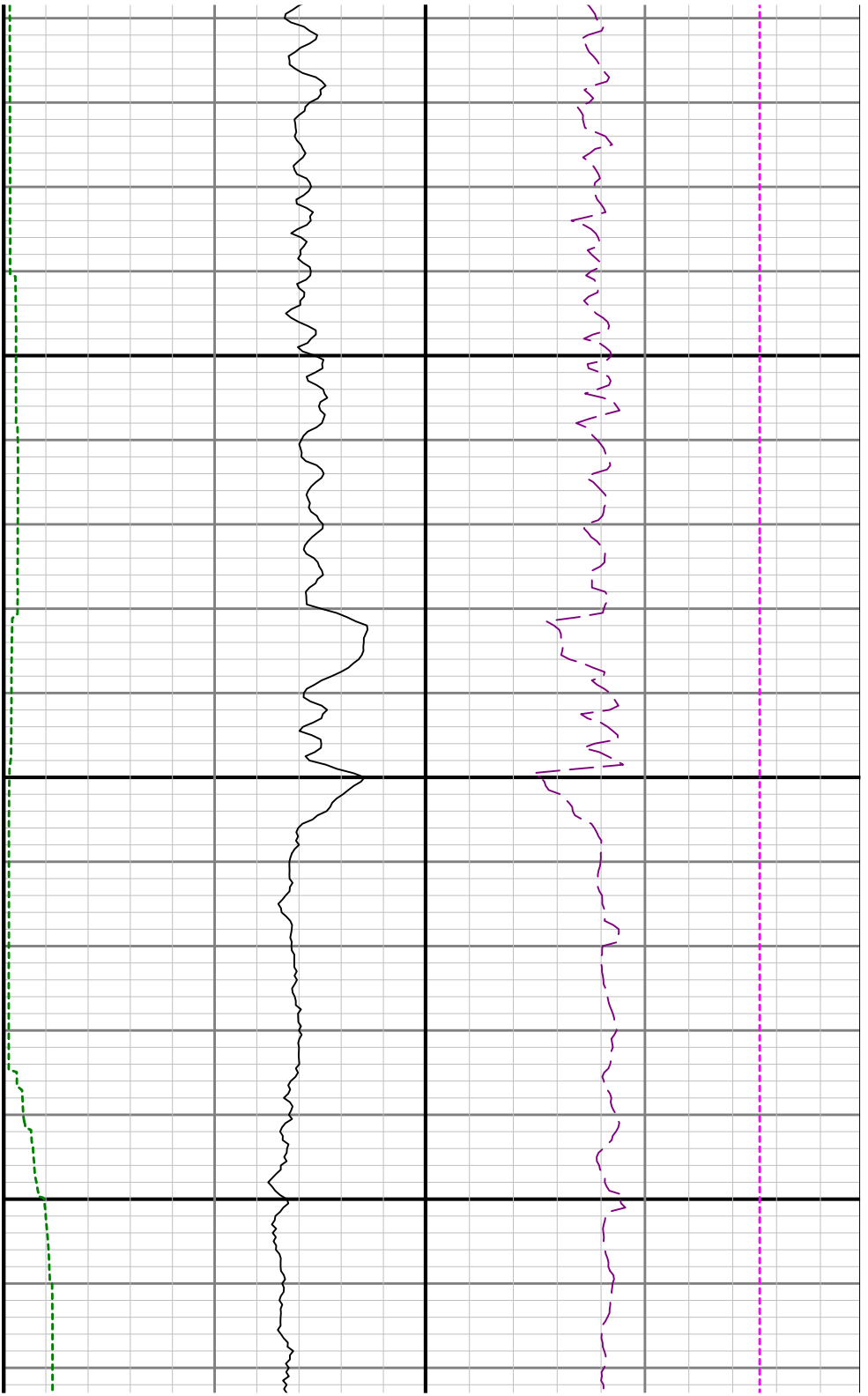




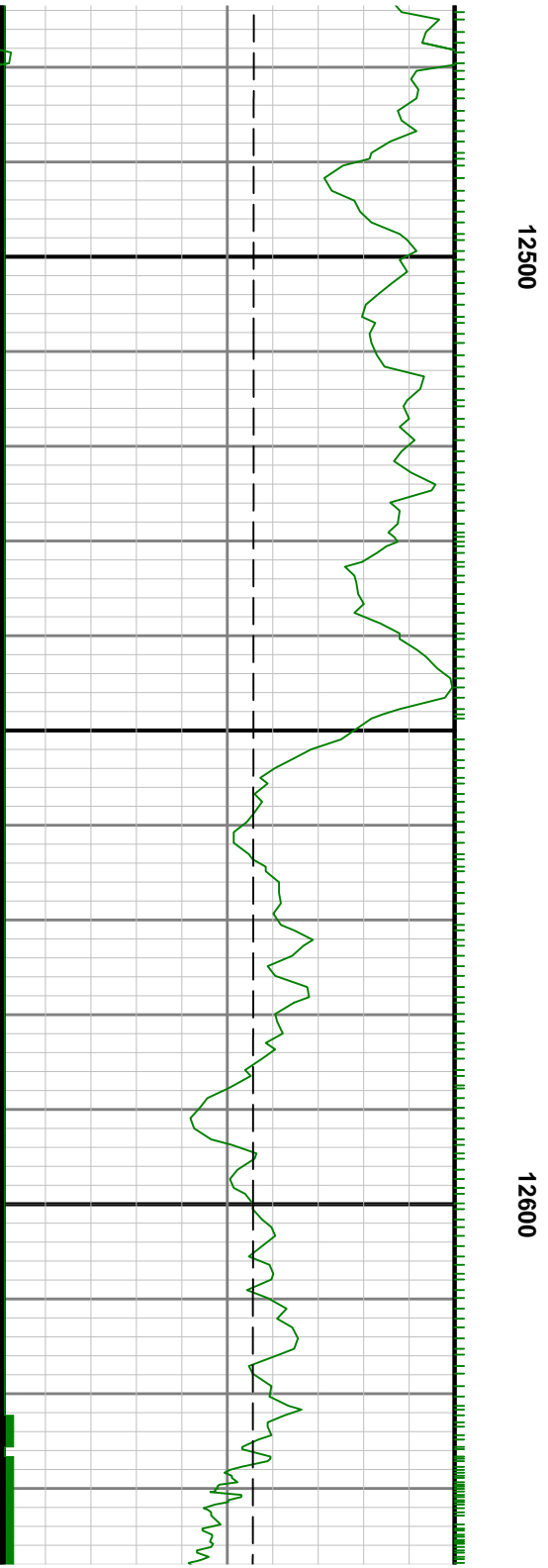


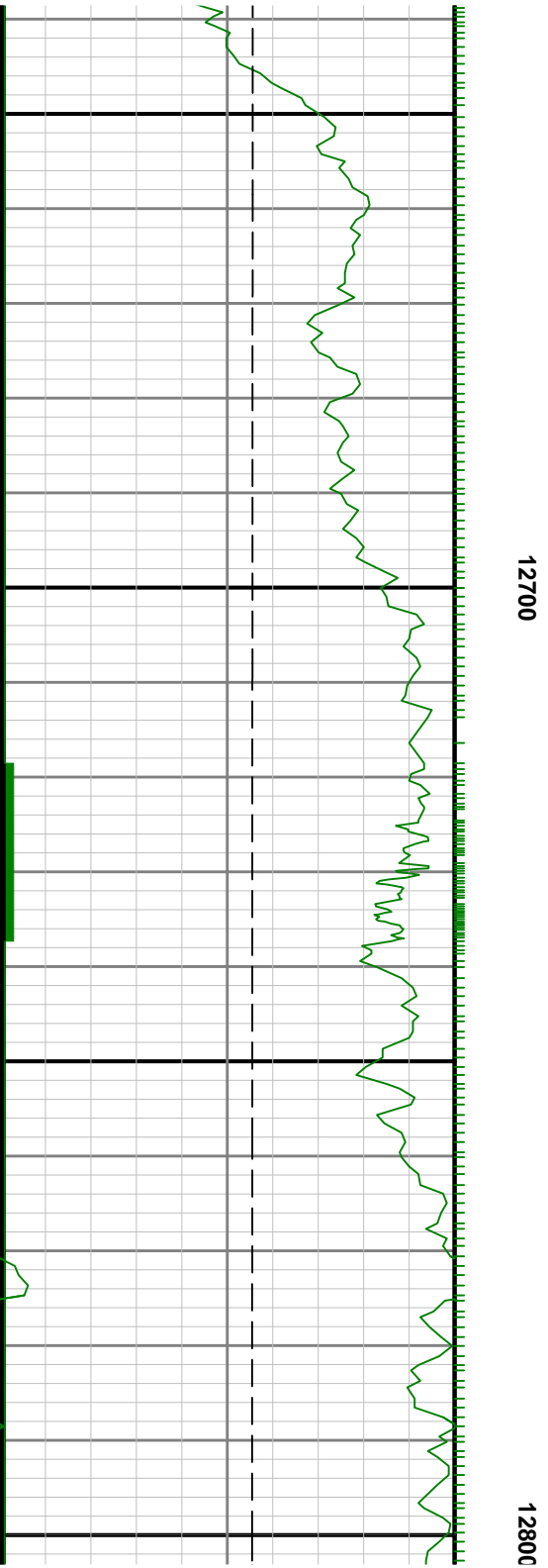
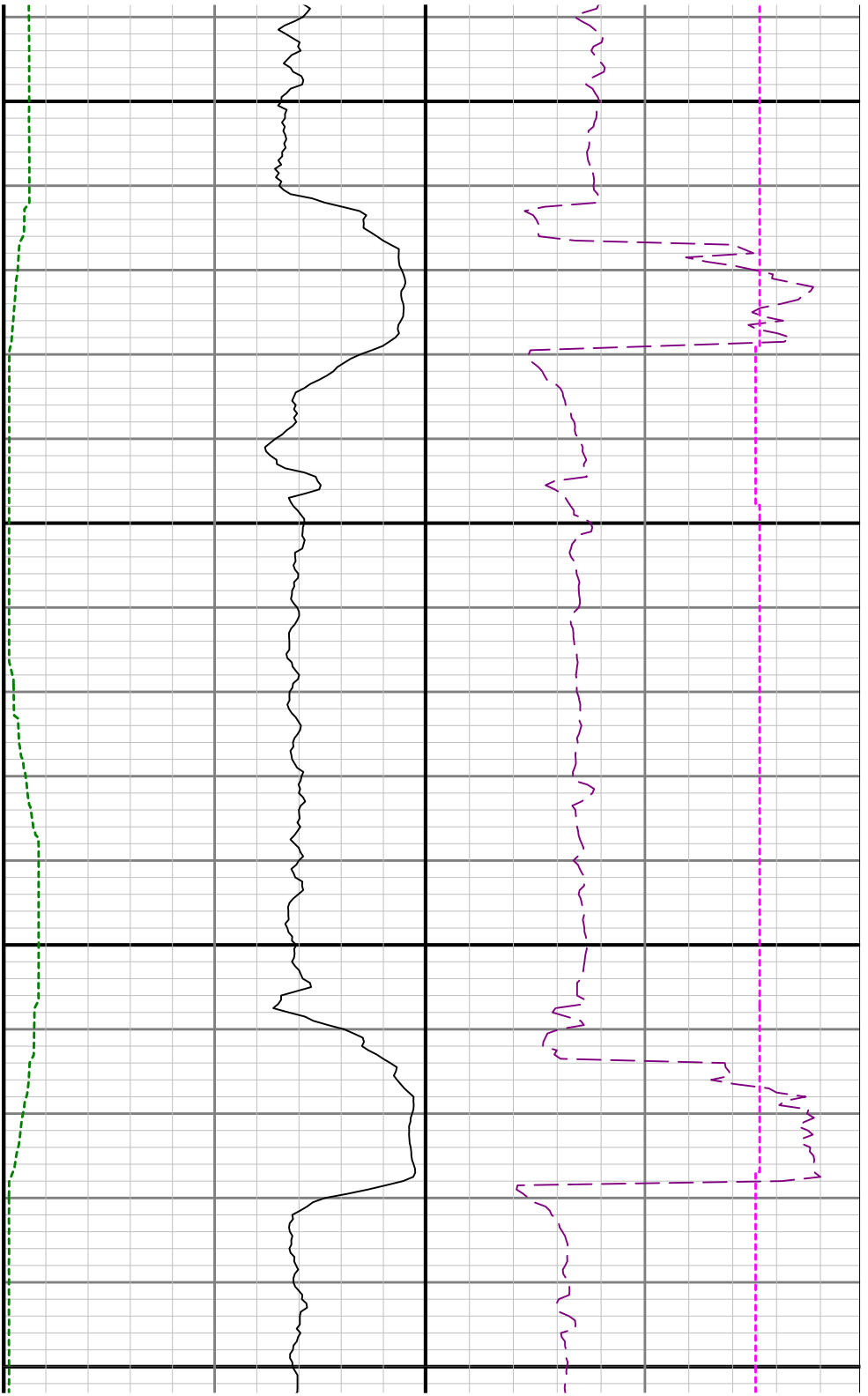






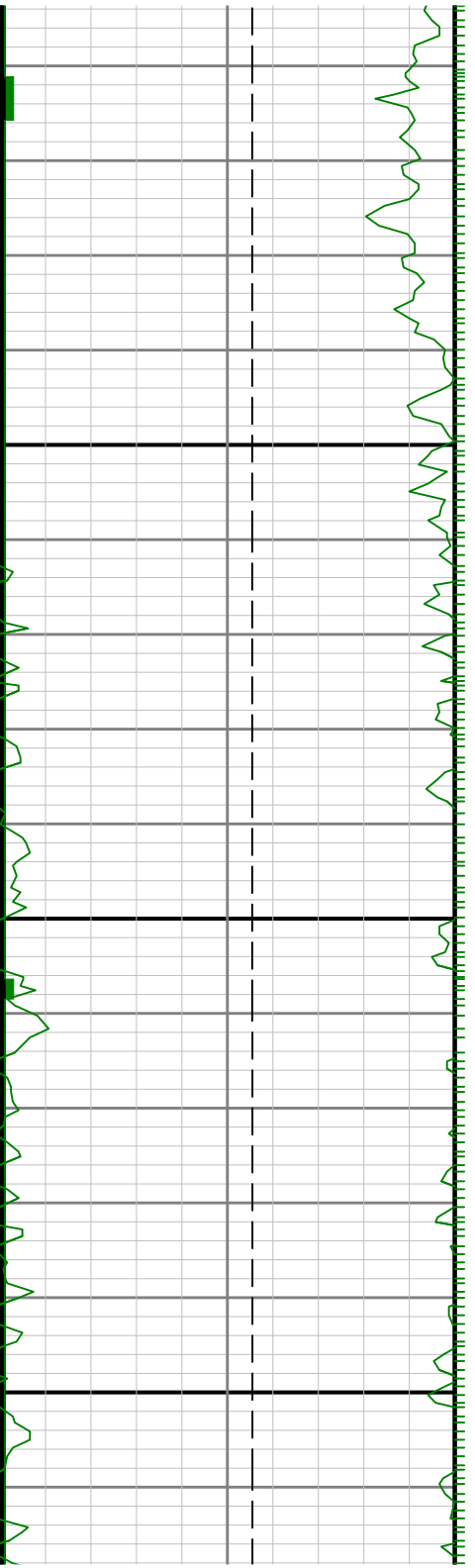


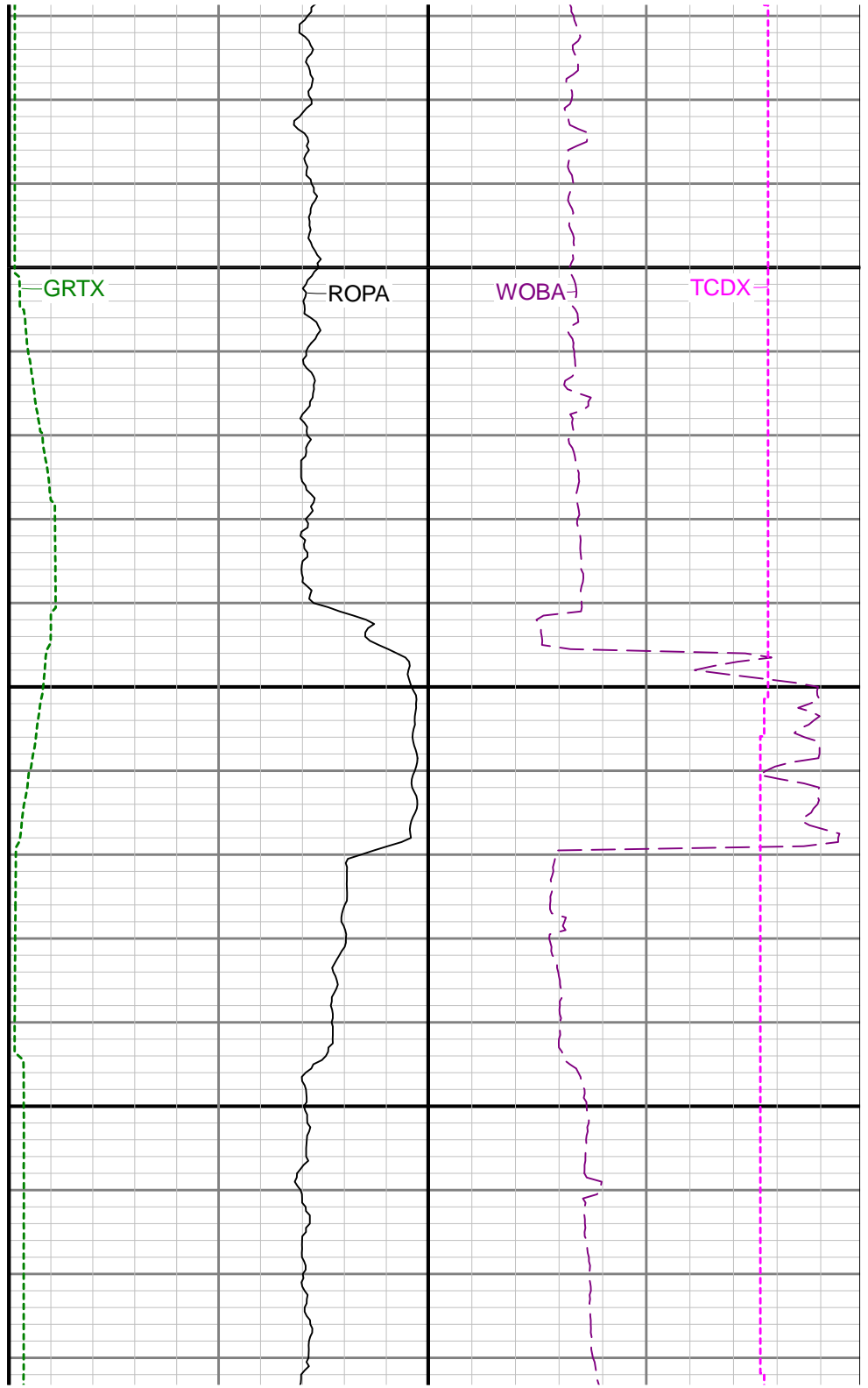
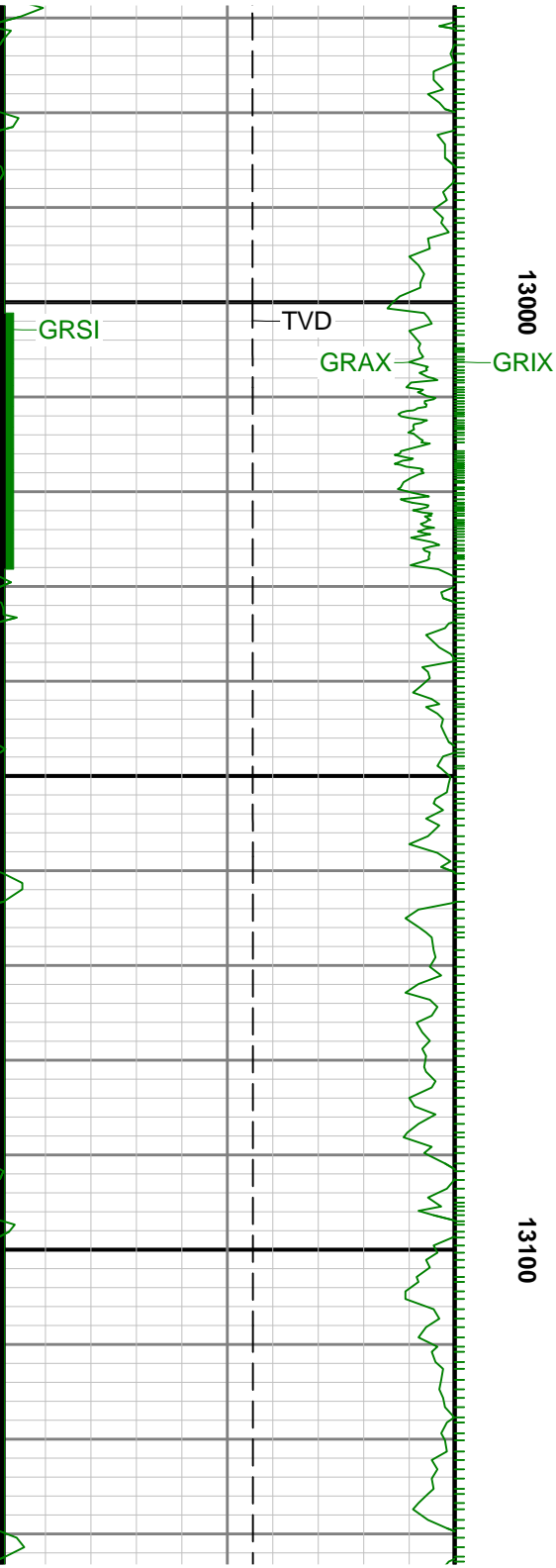




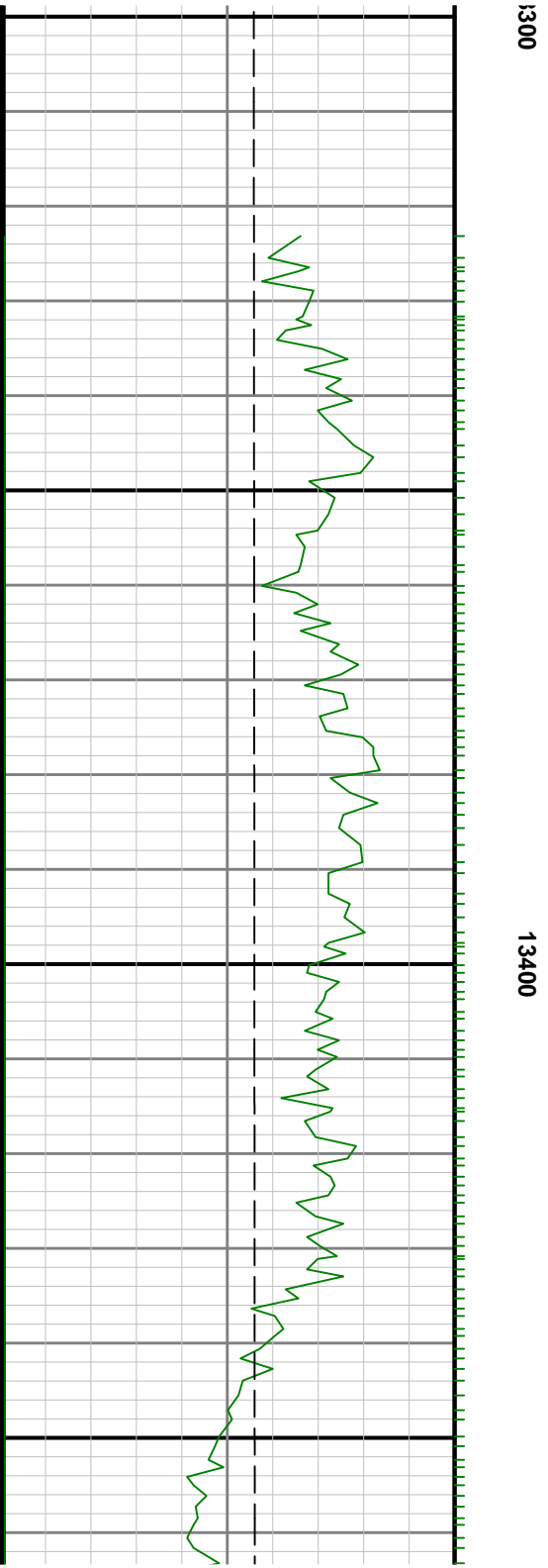
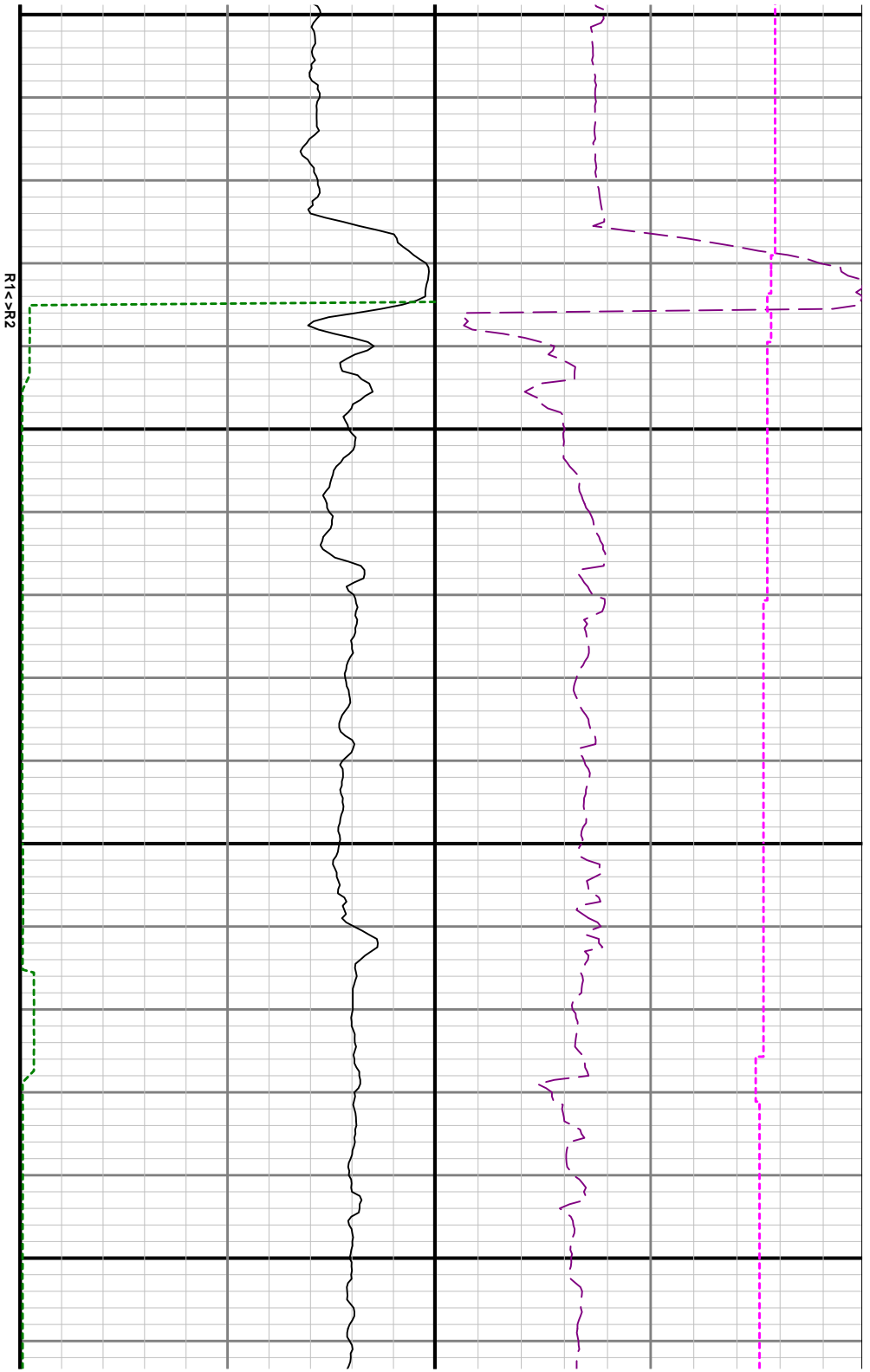


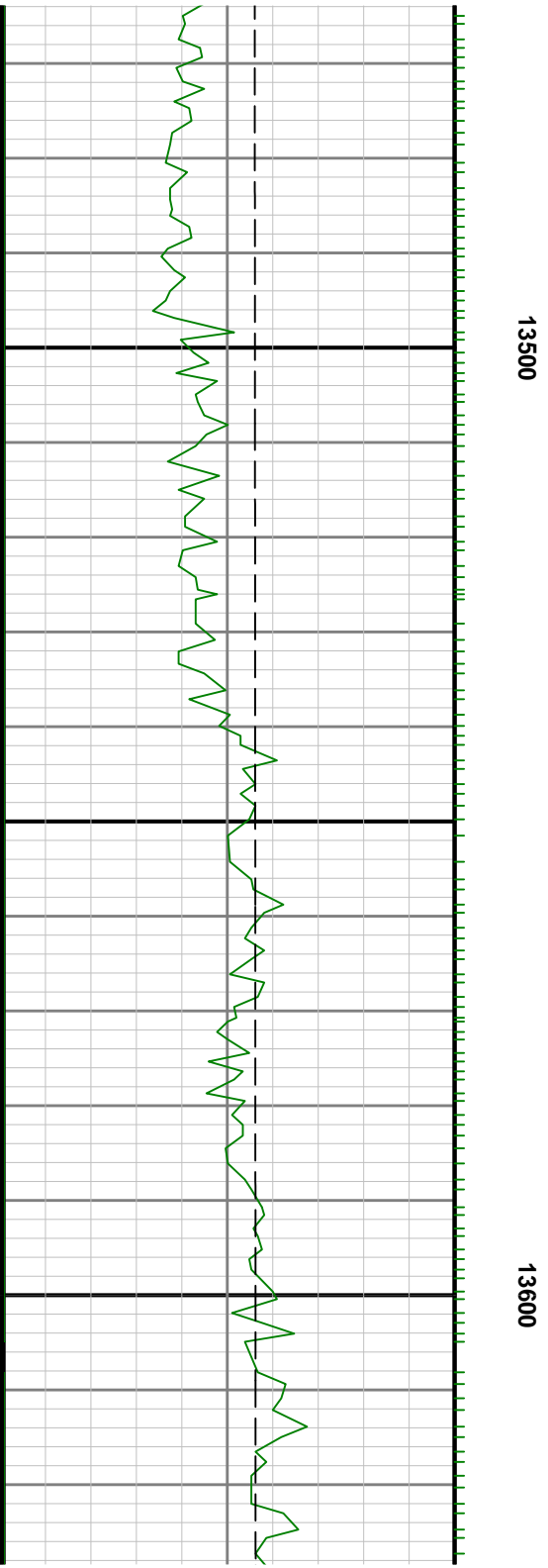
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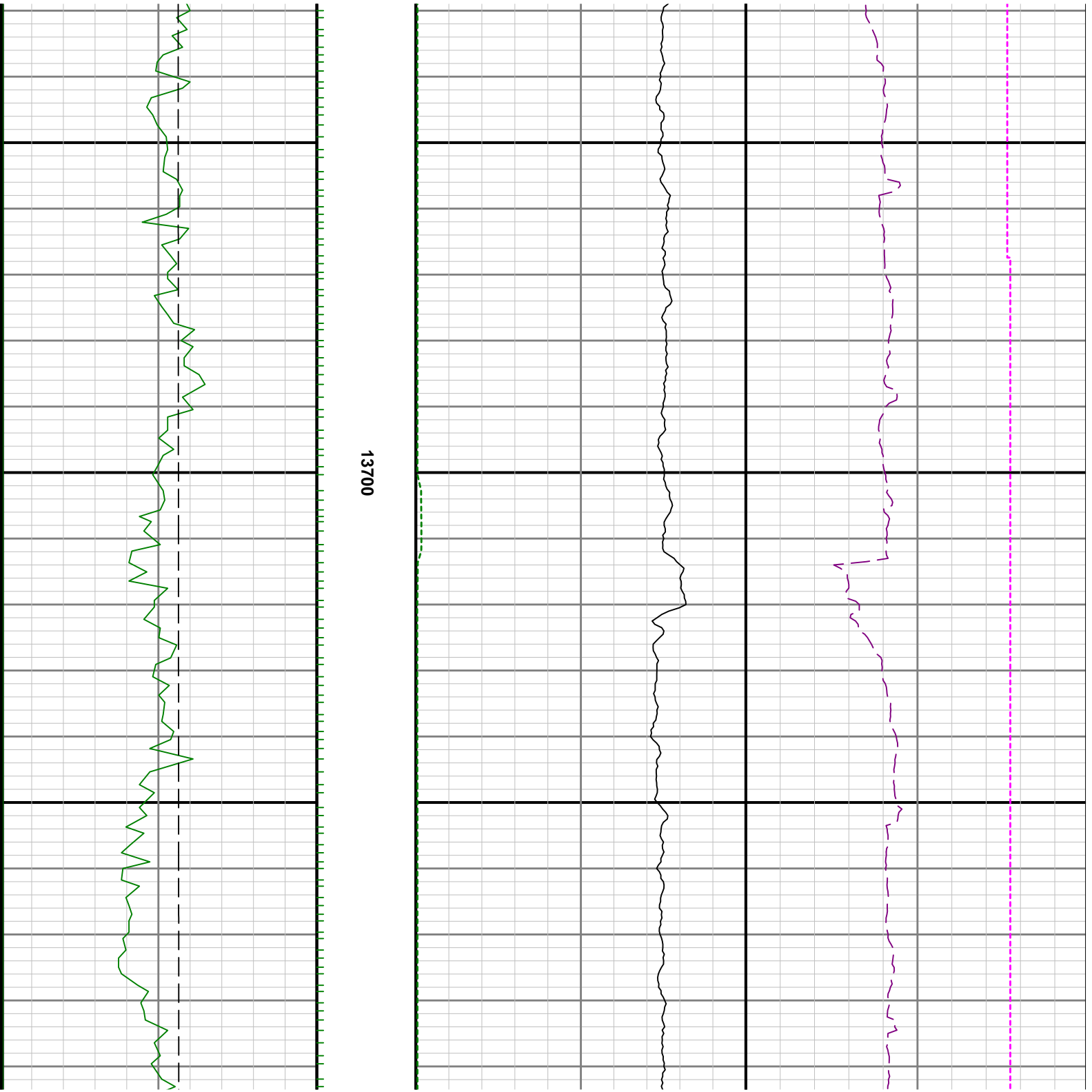










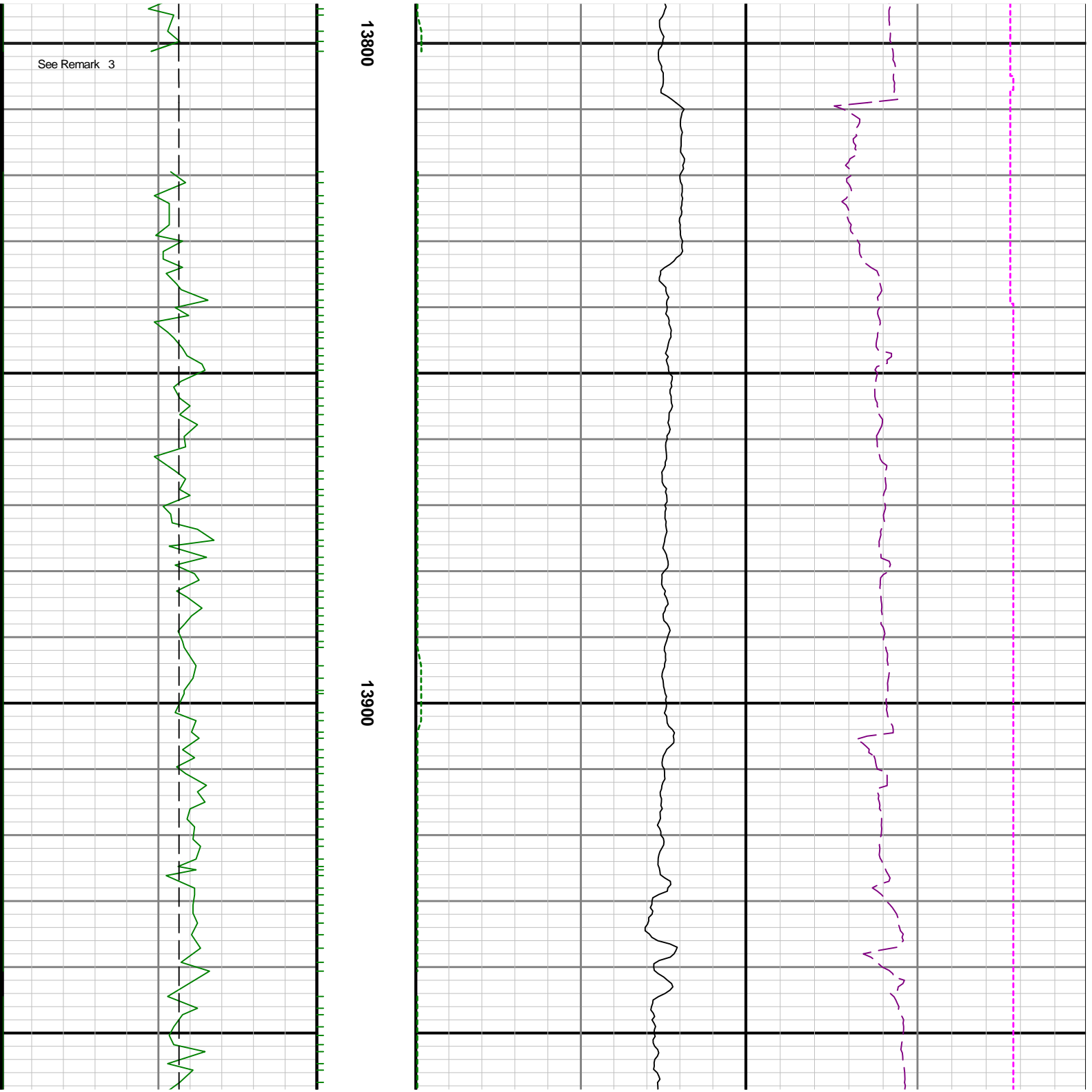


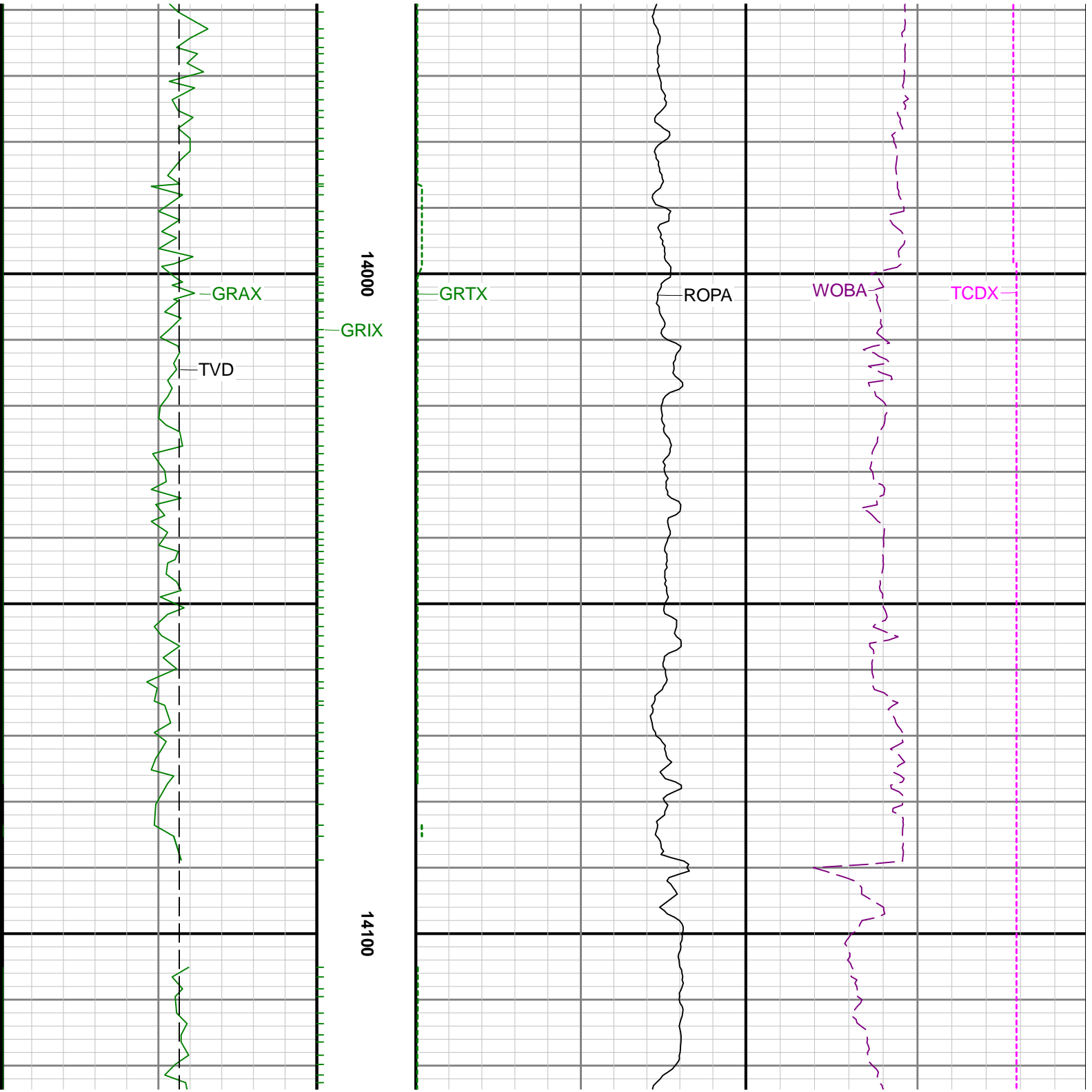


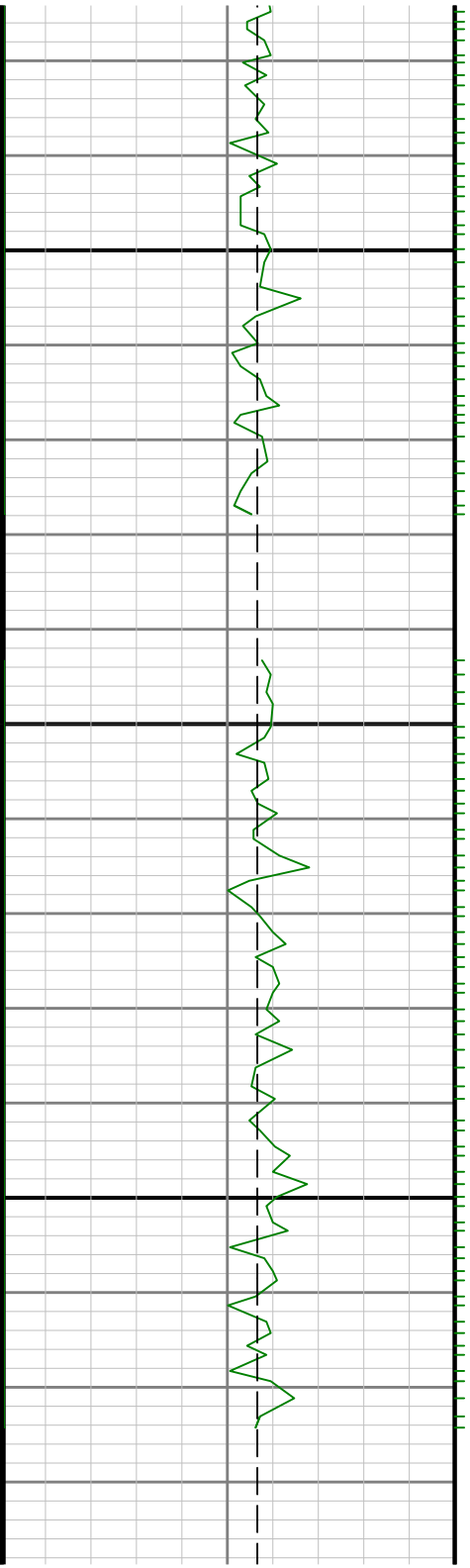
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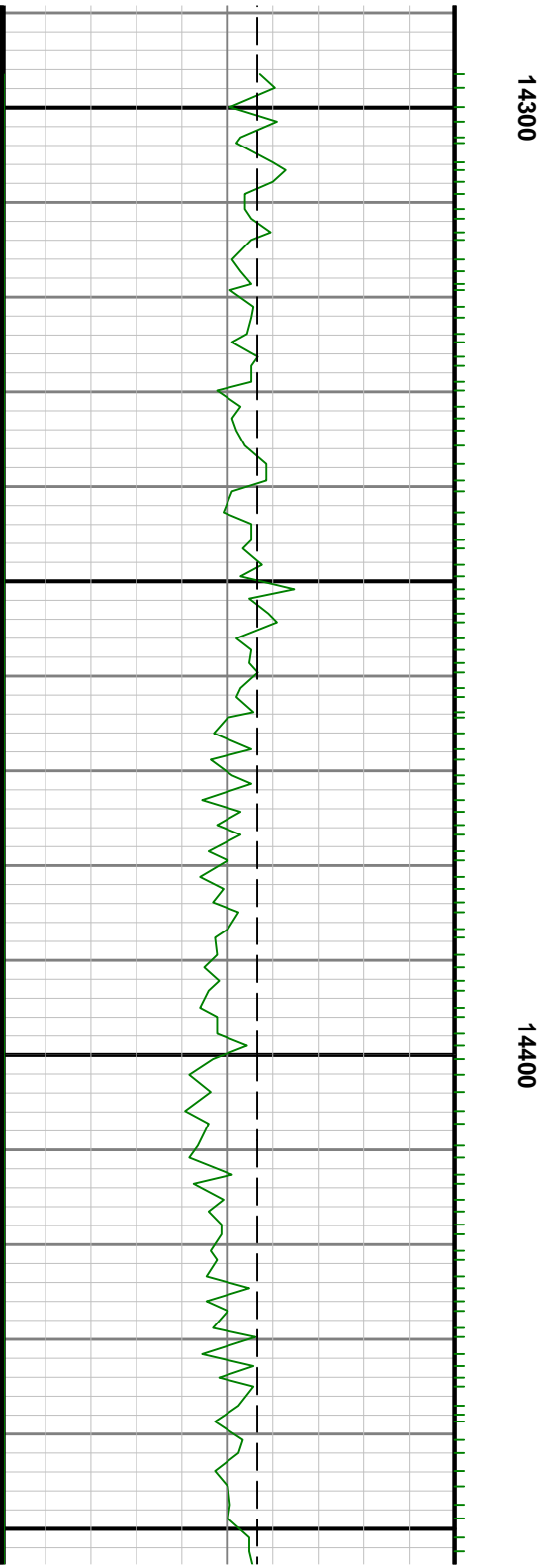
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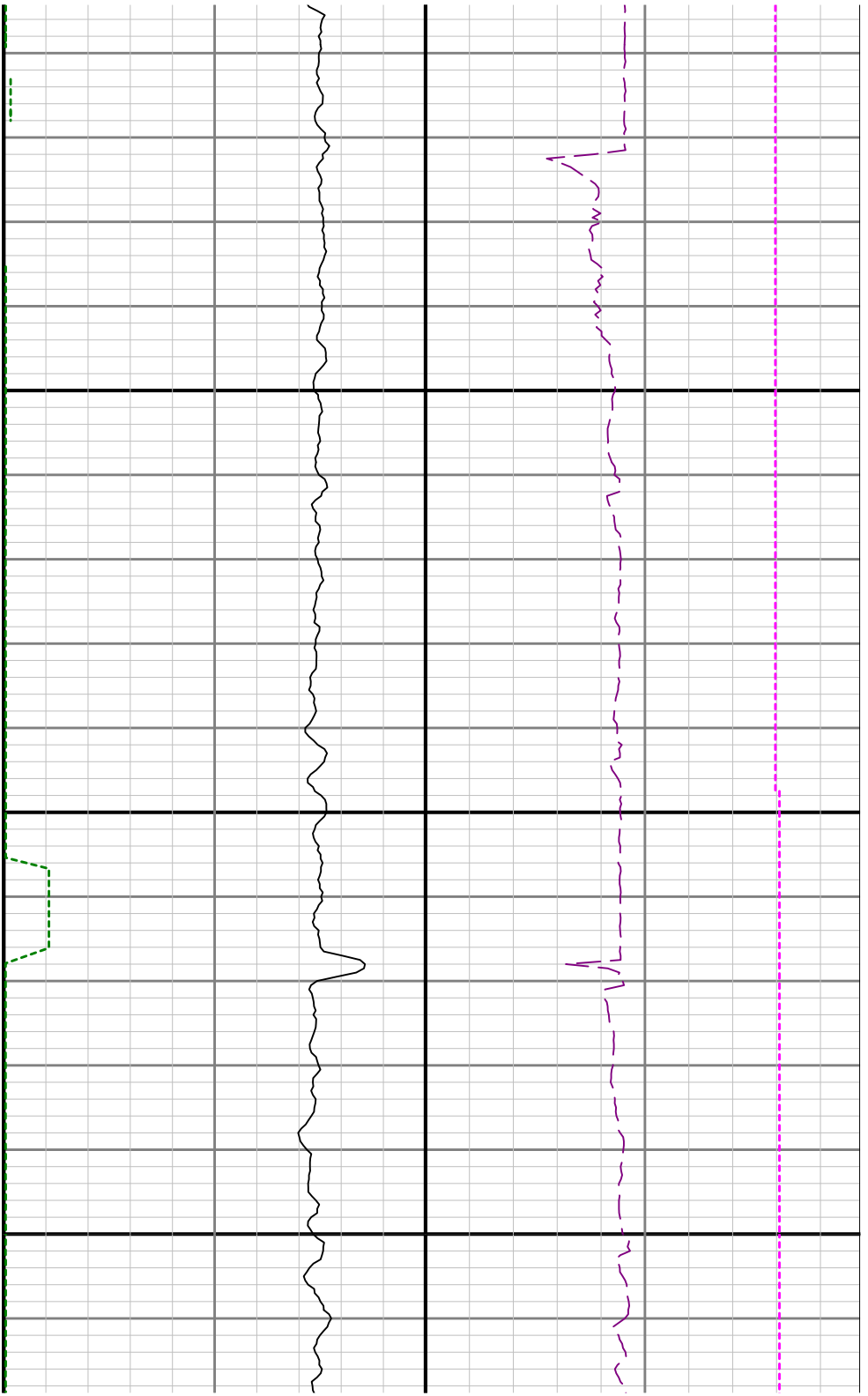
See Remark 3





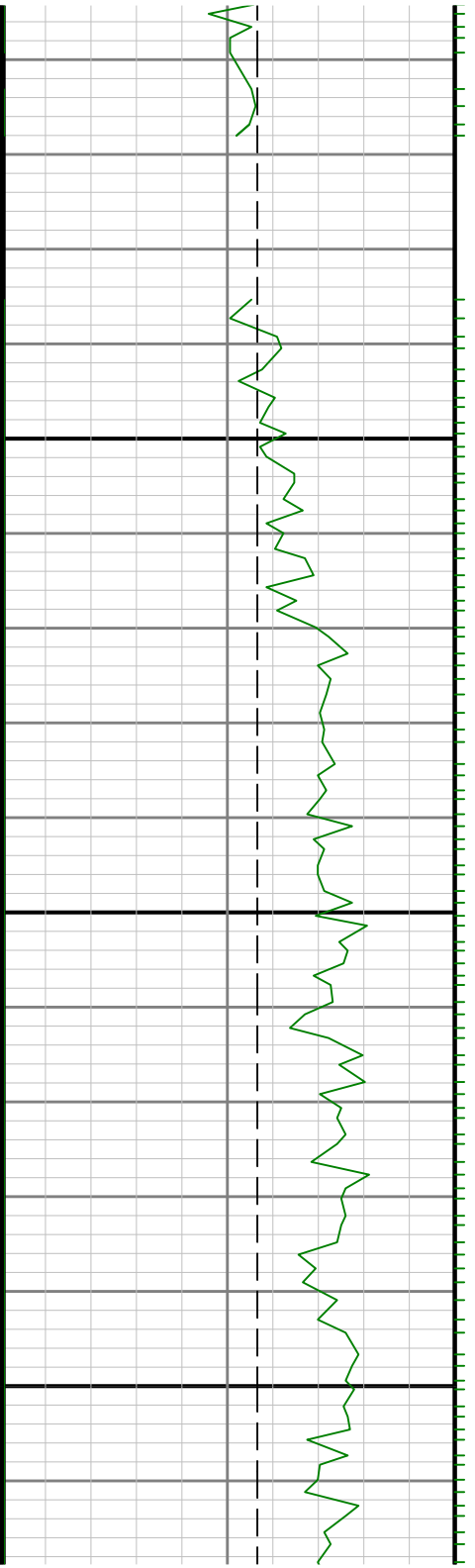






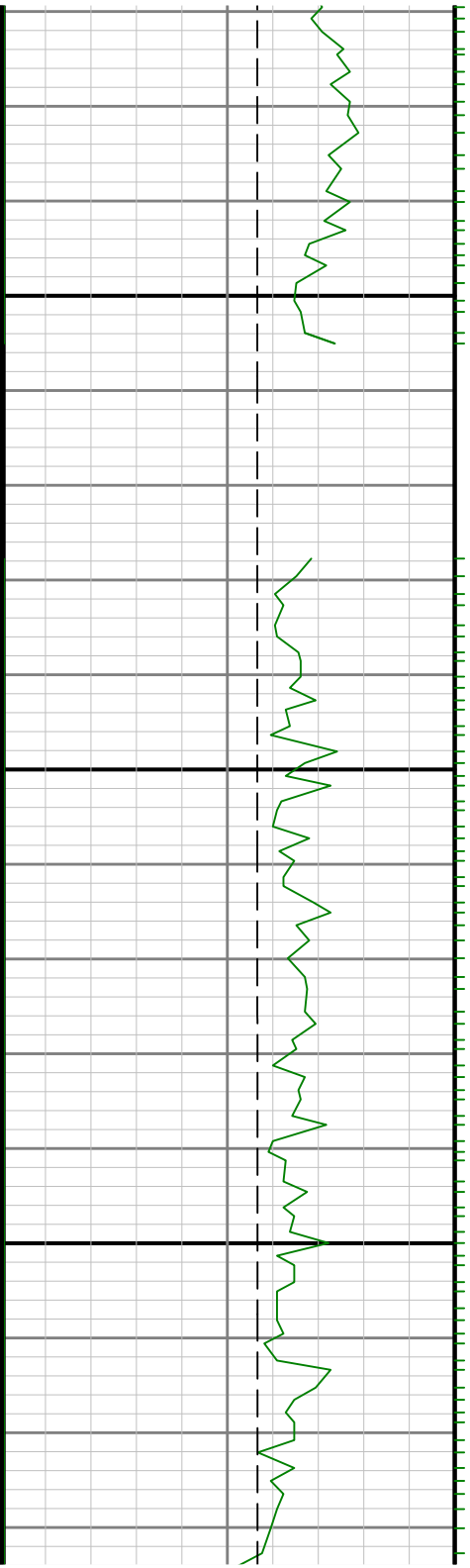
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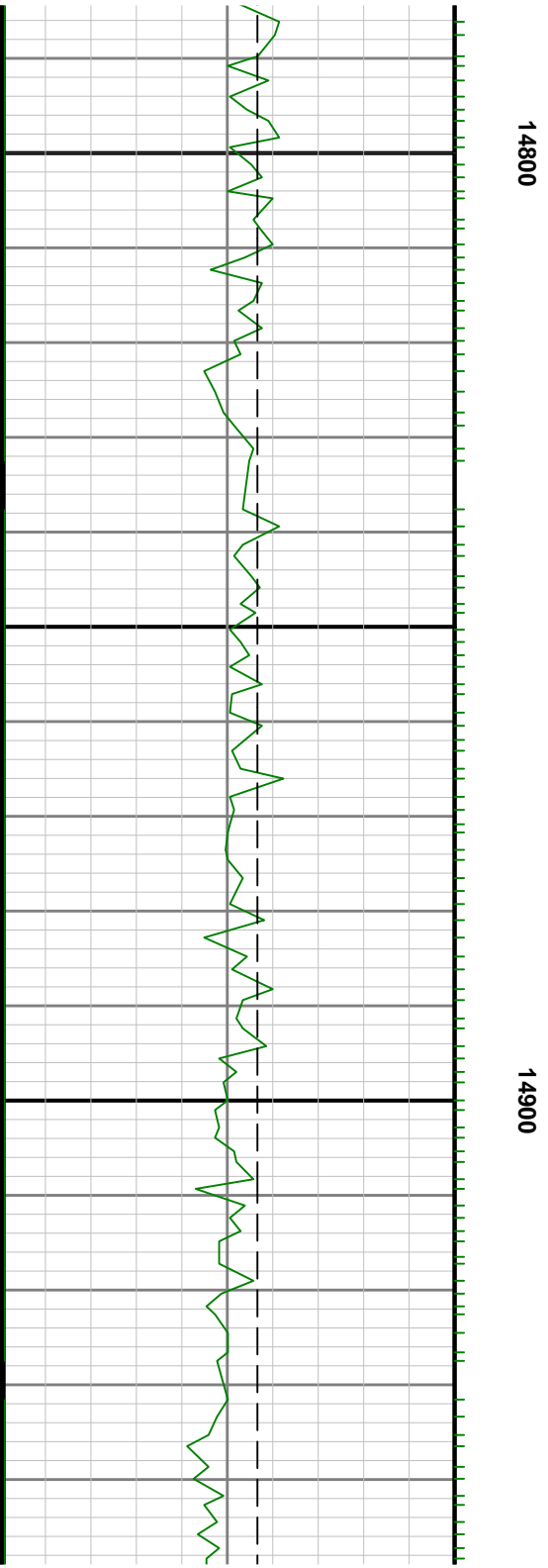
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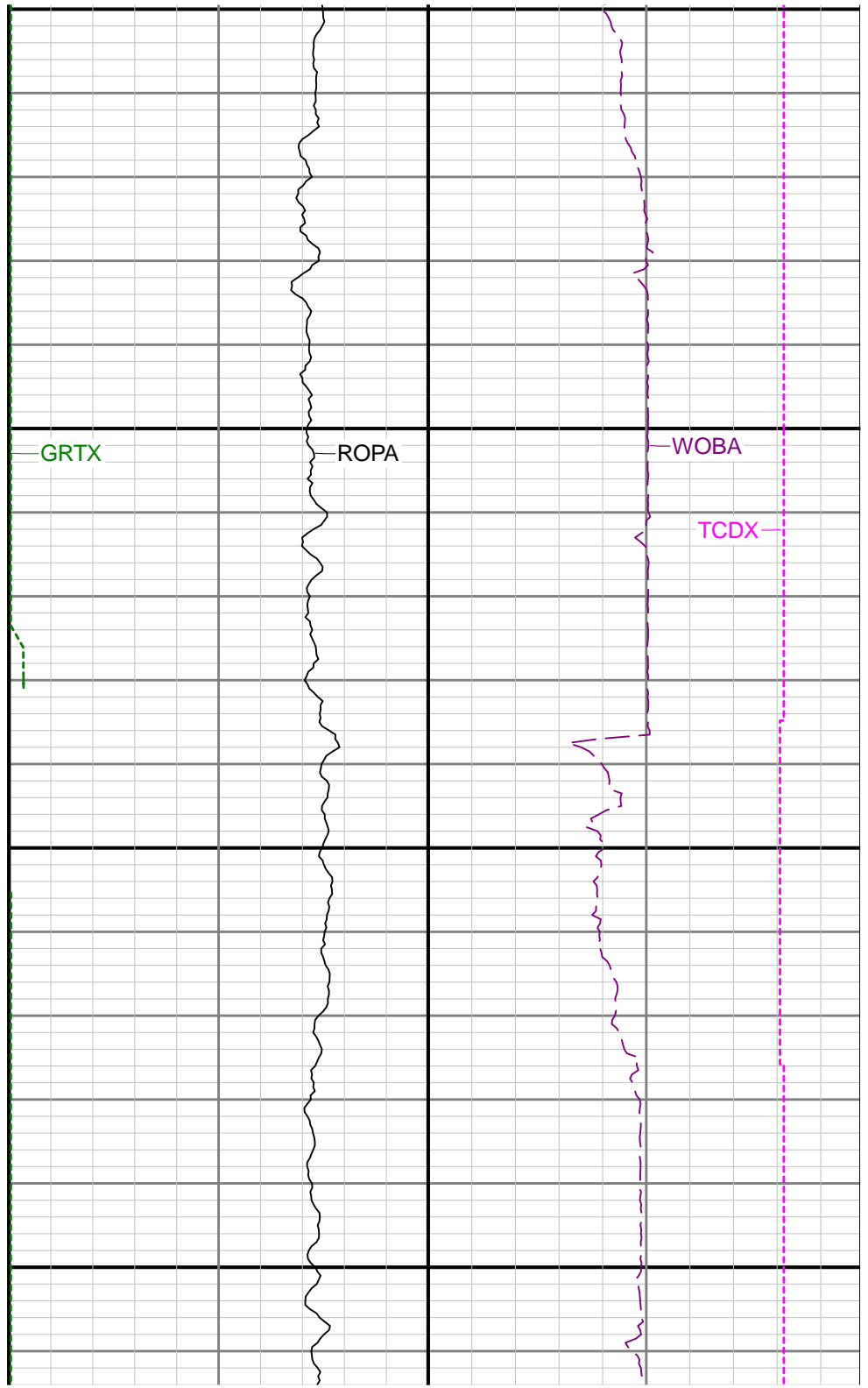
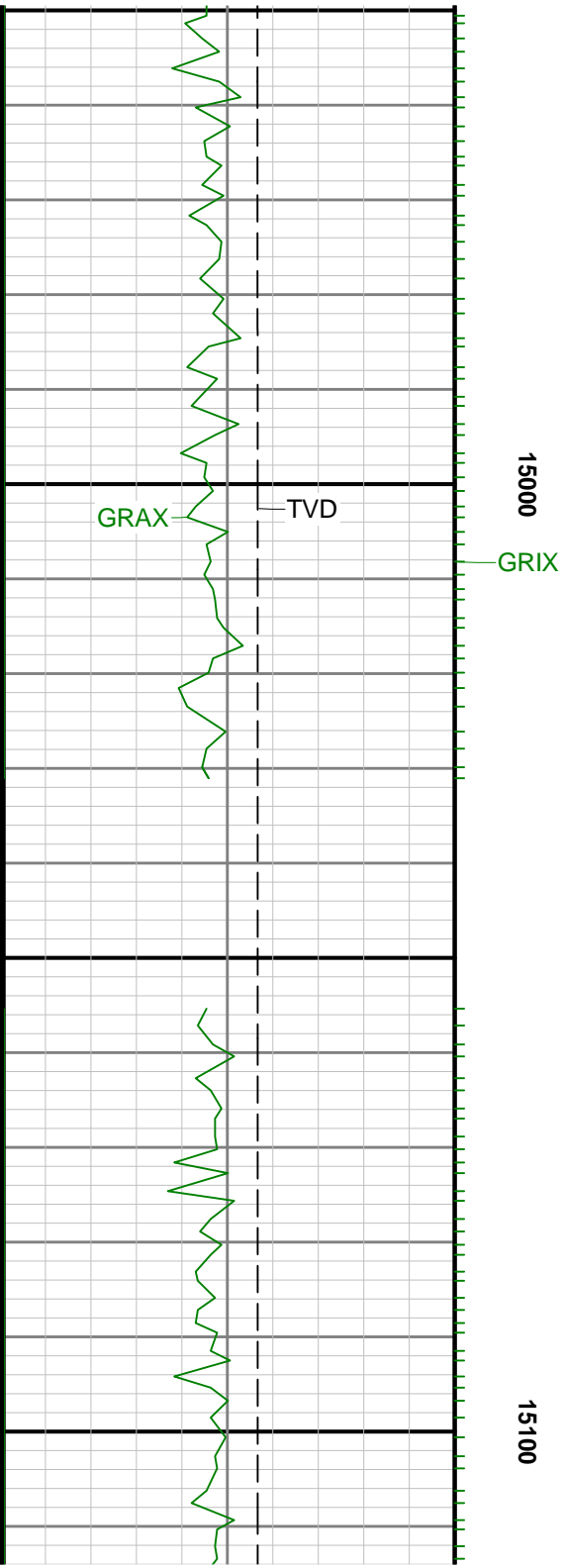




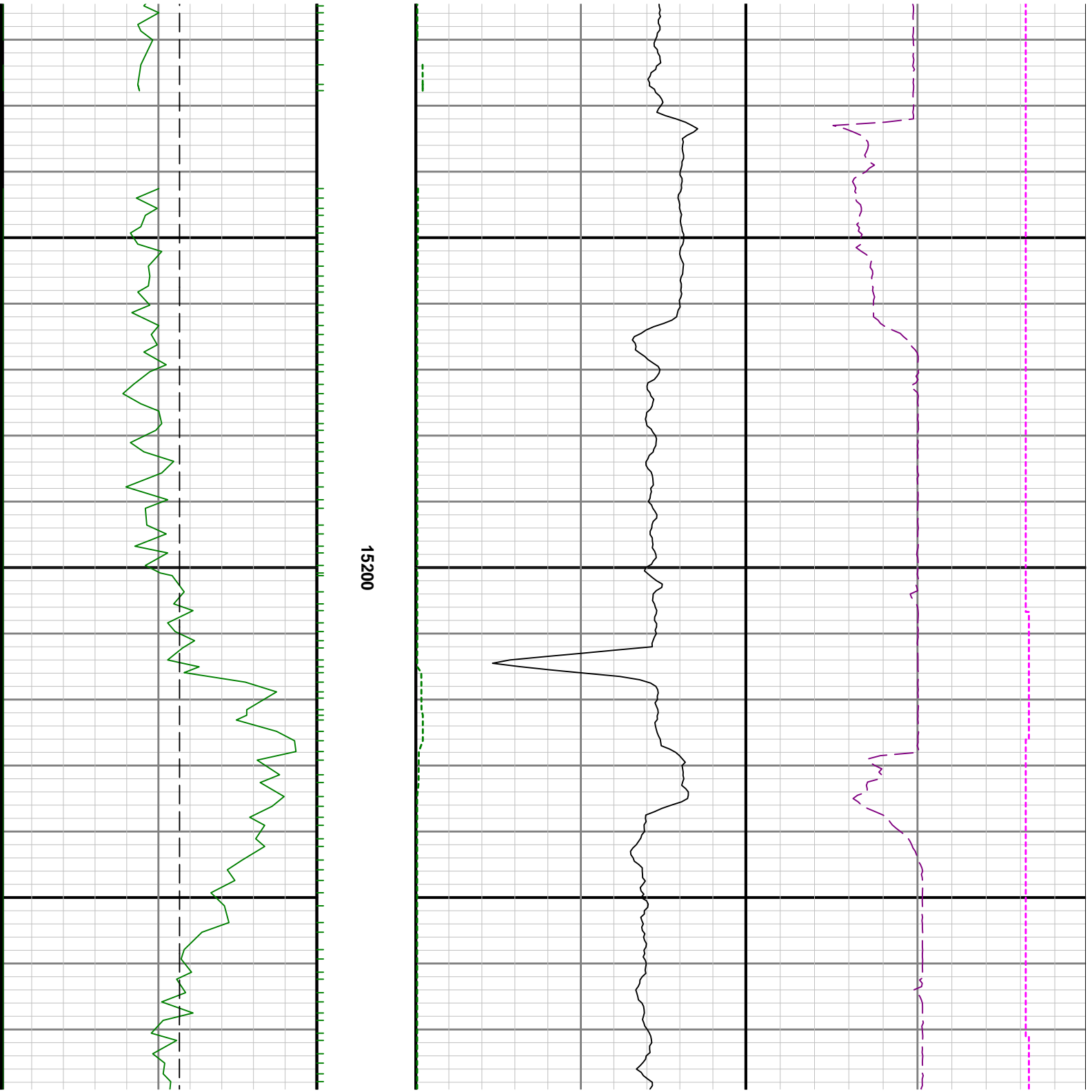
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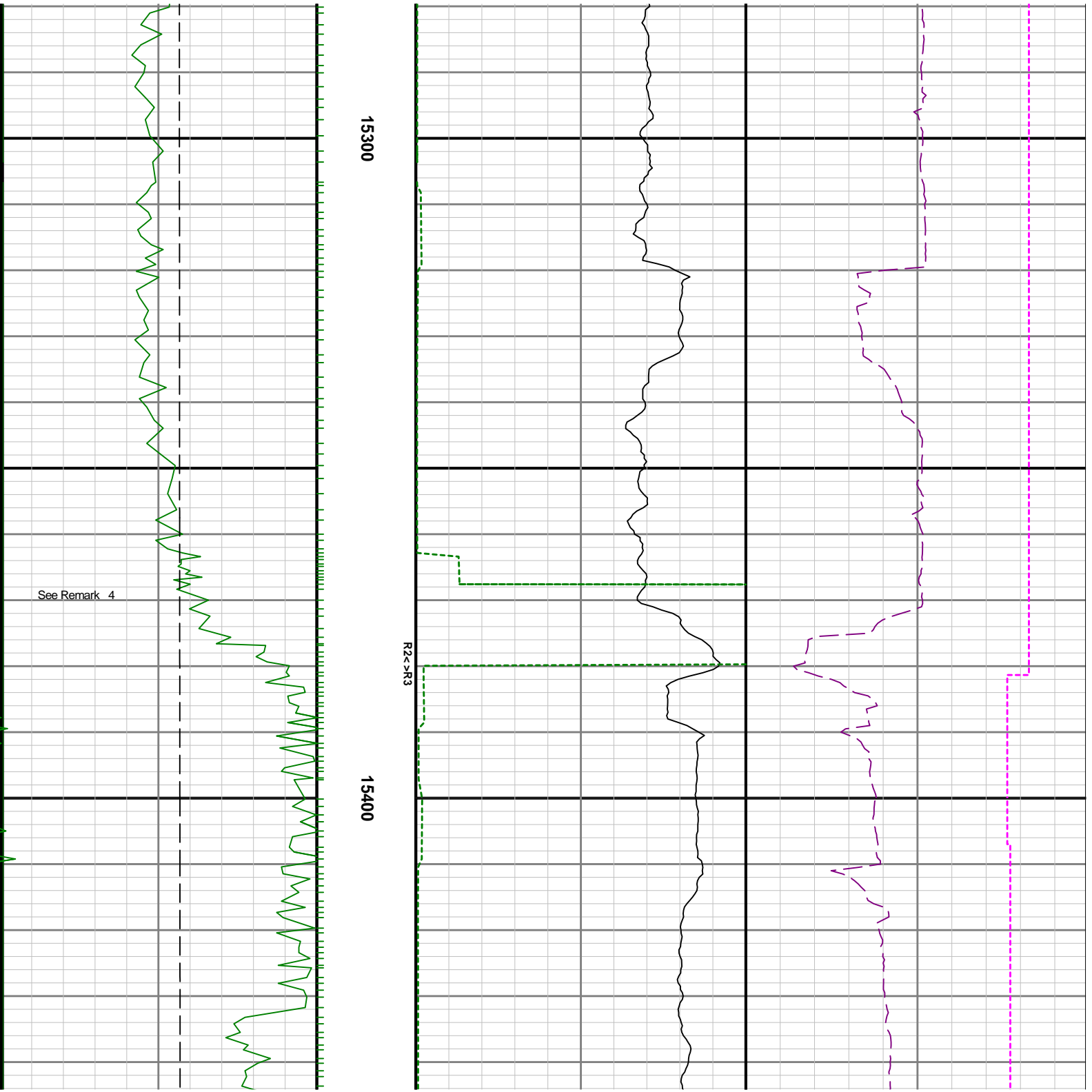


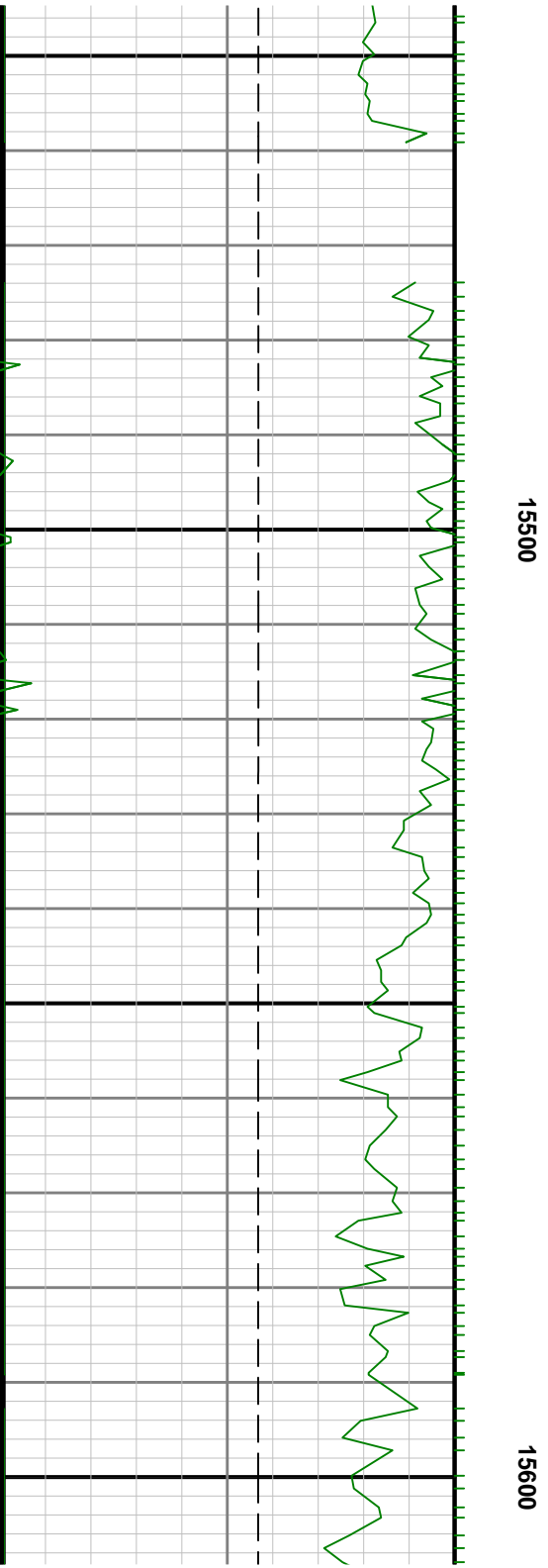


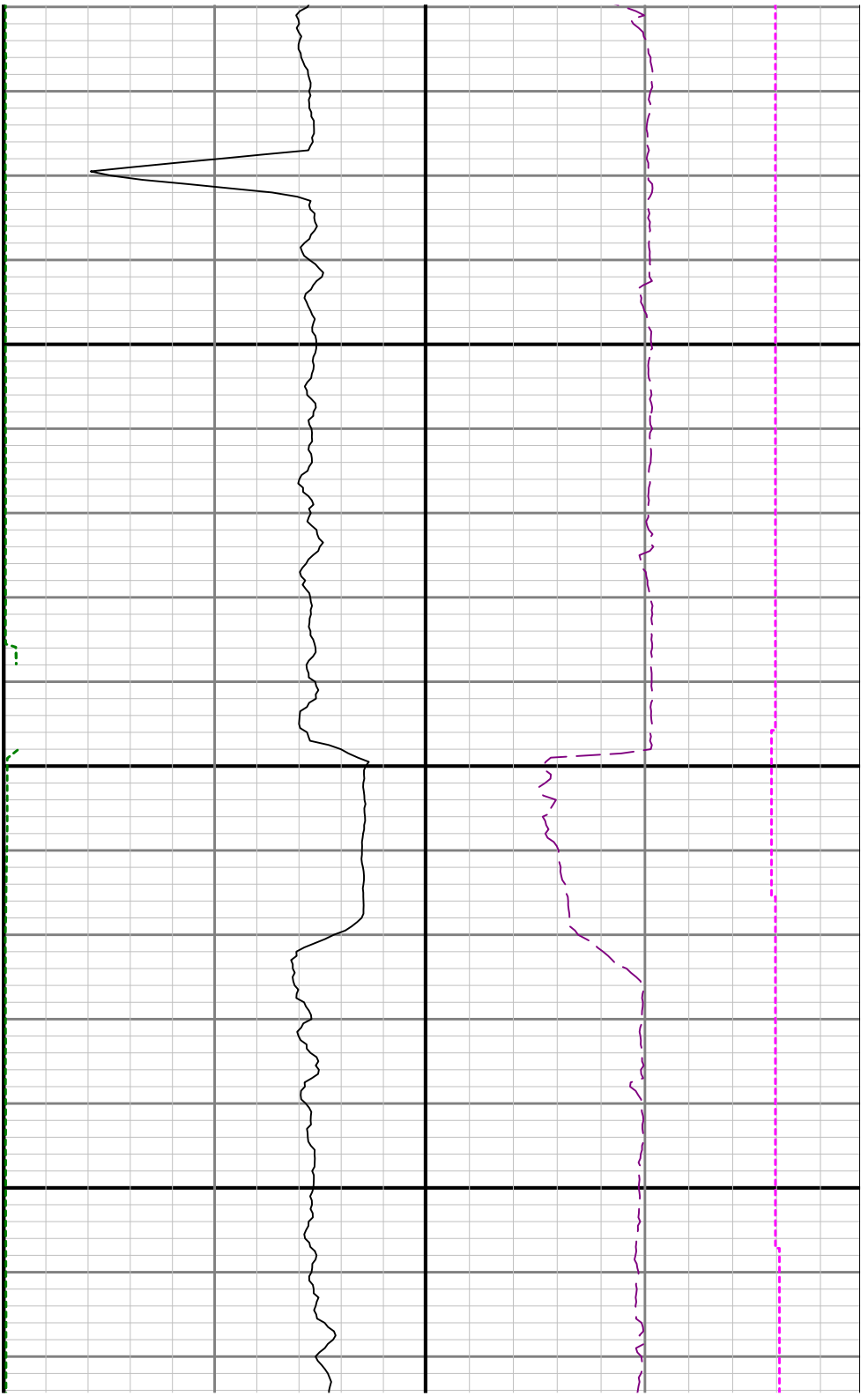




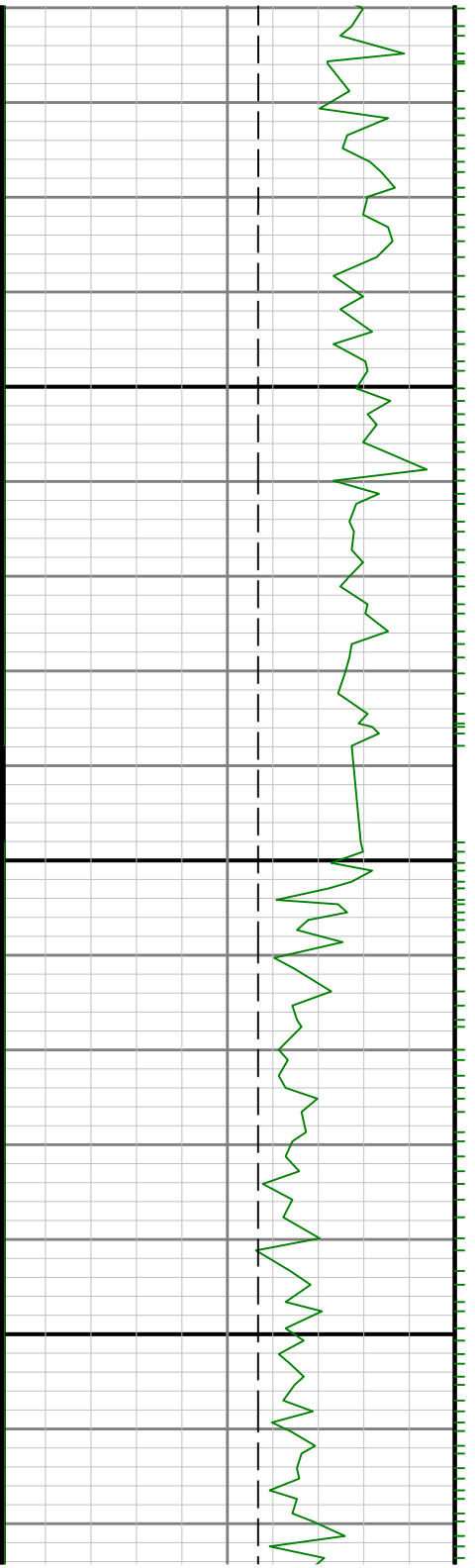








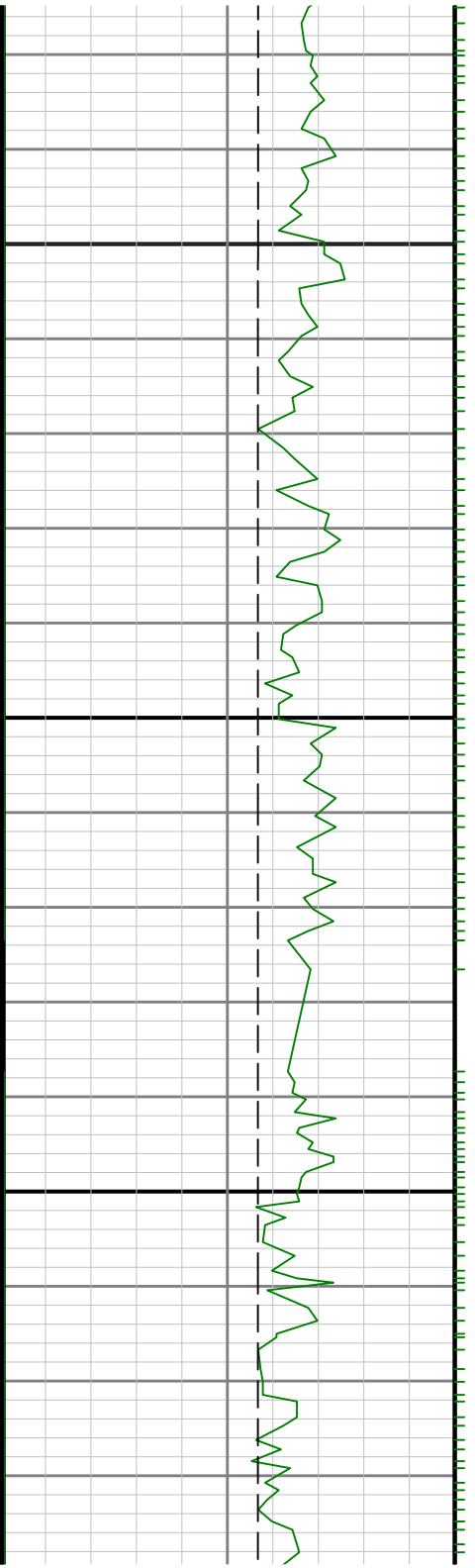
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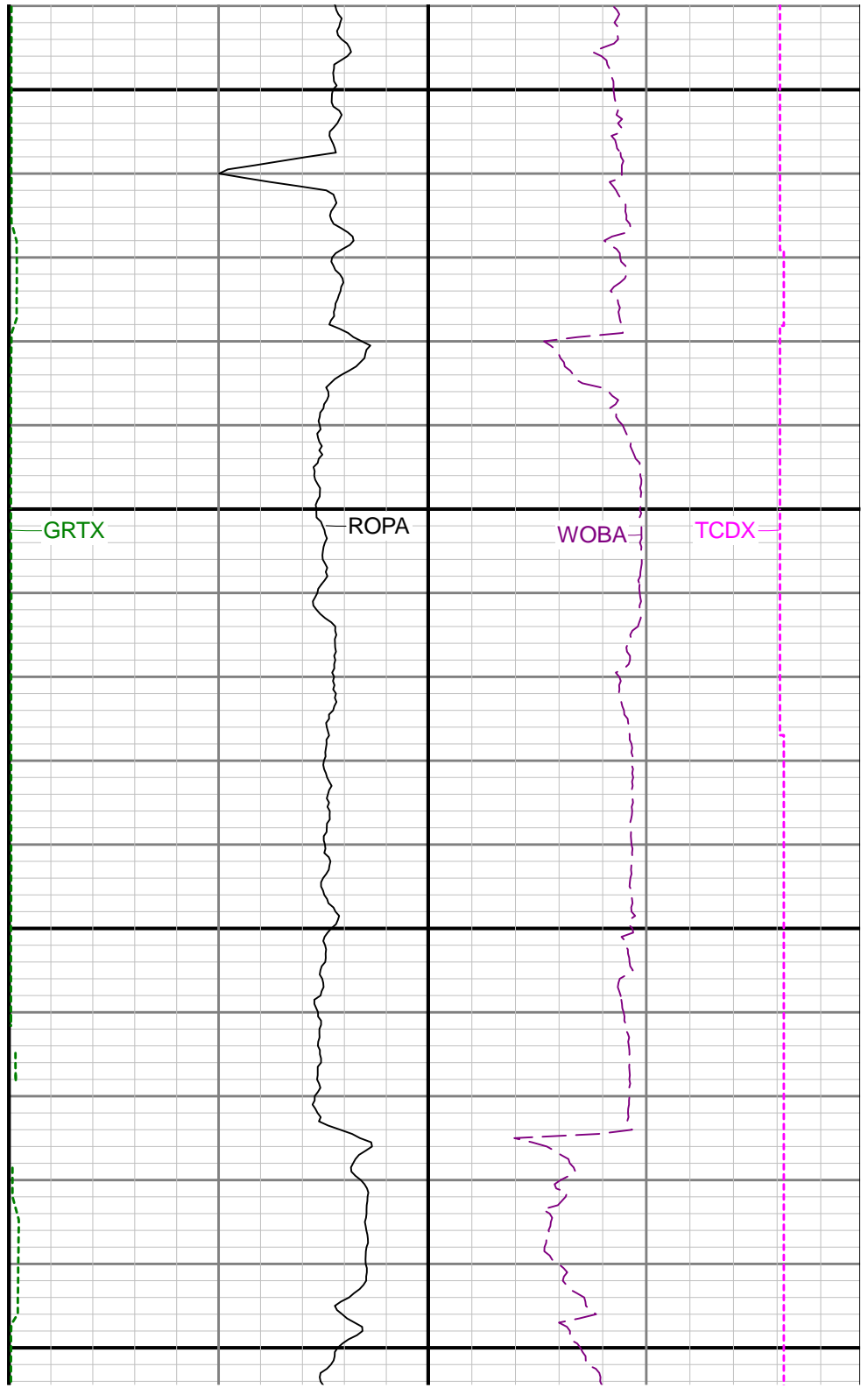
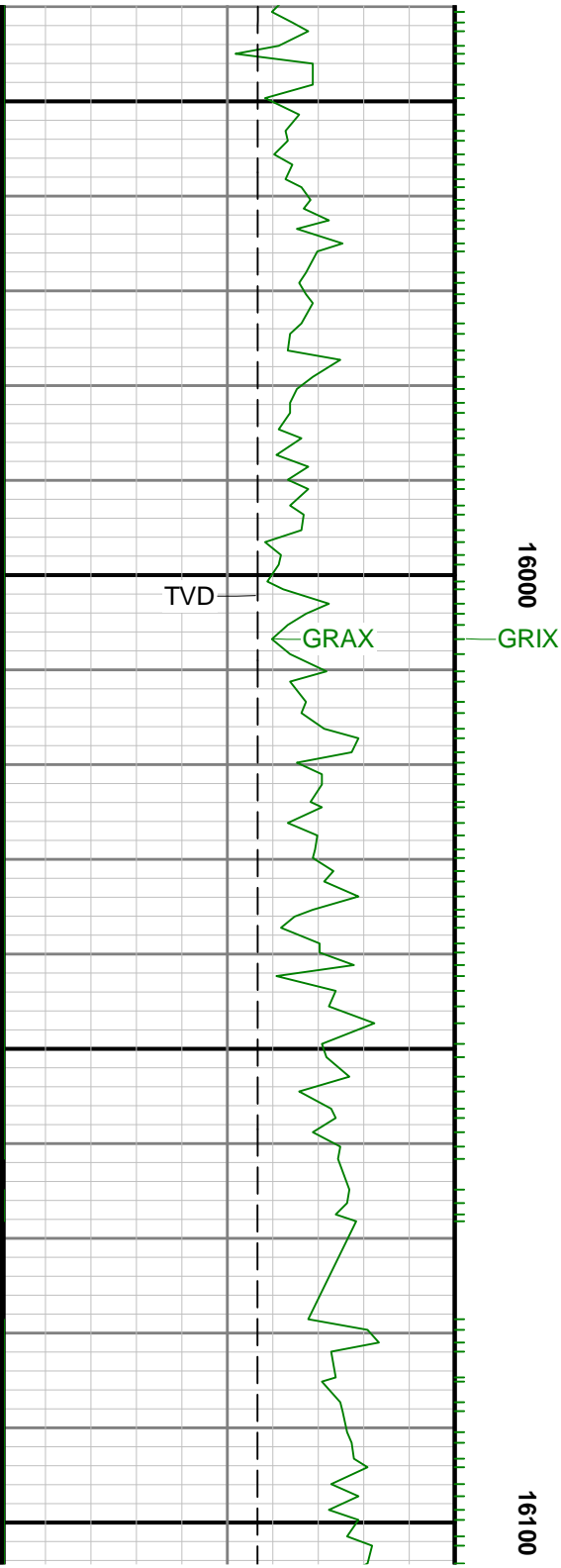


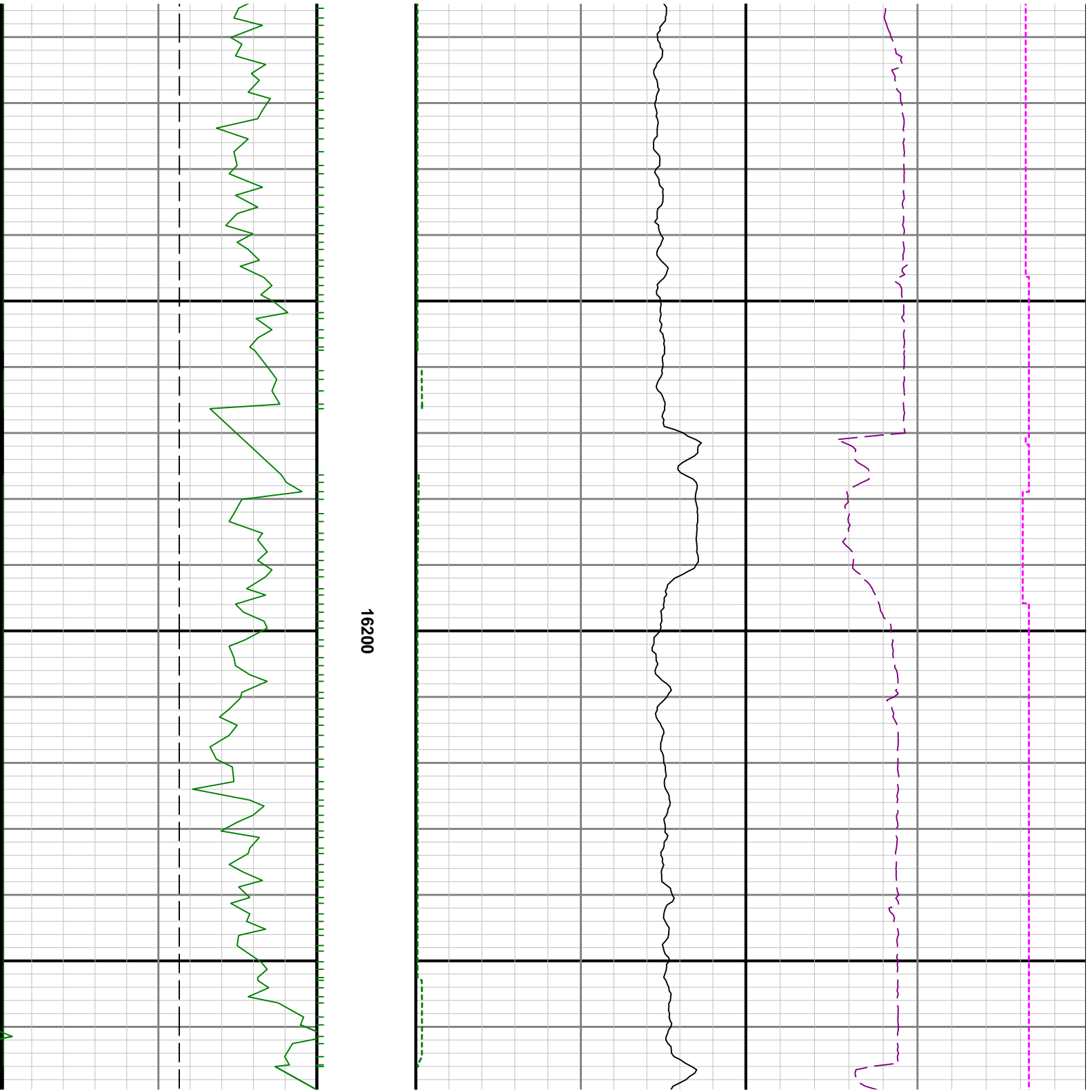


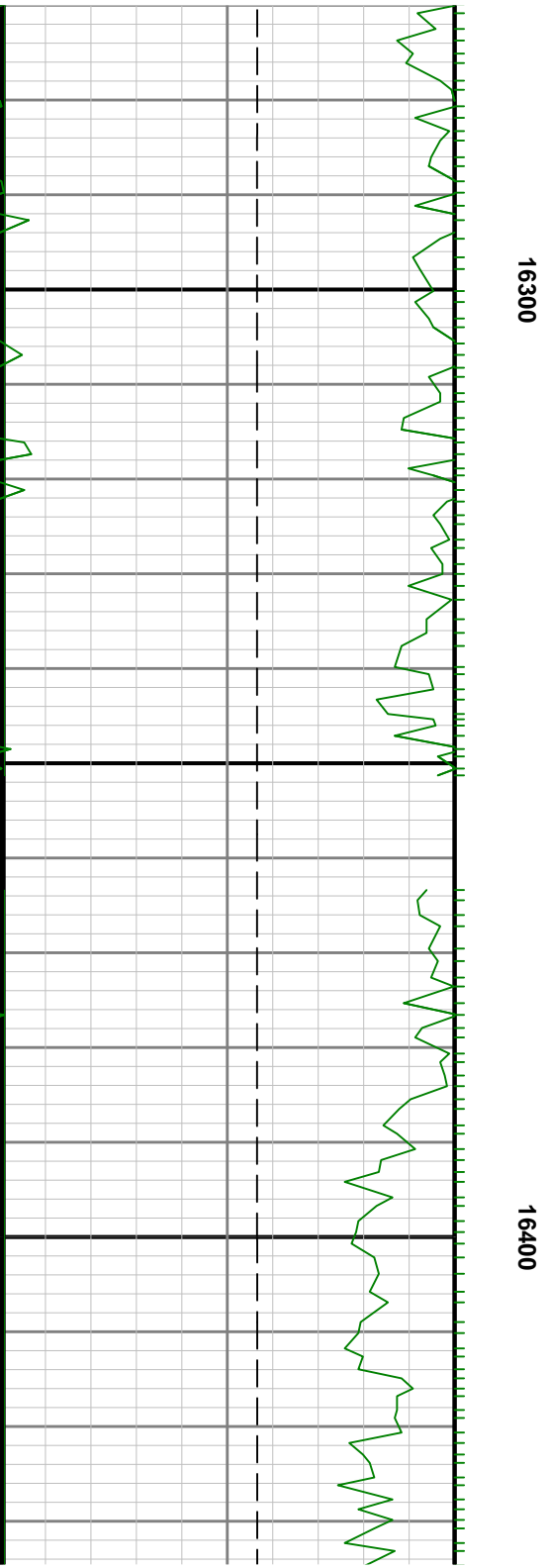
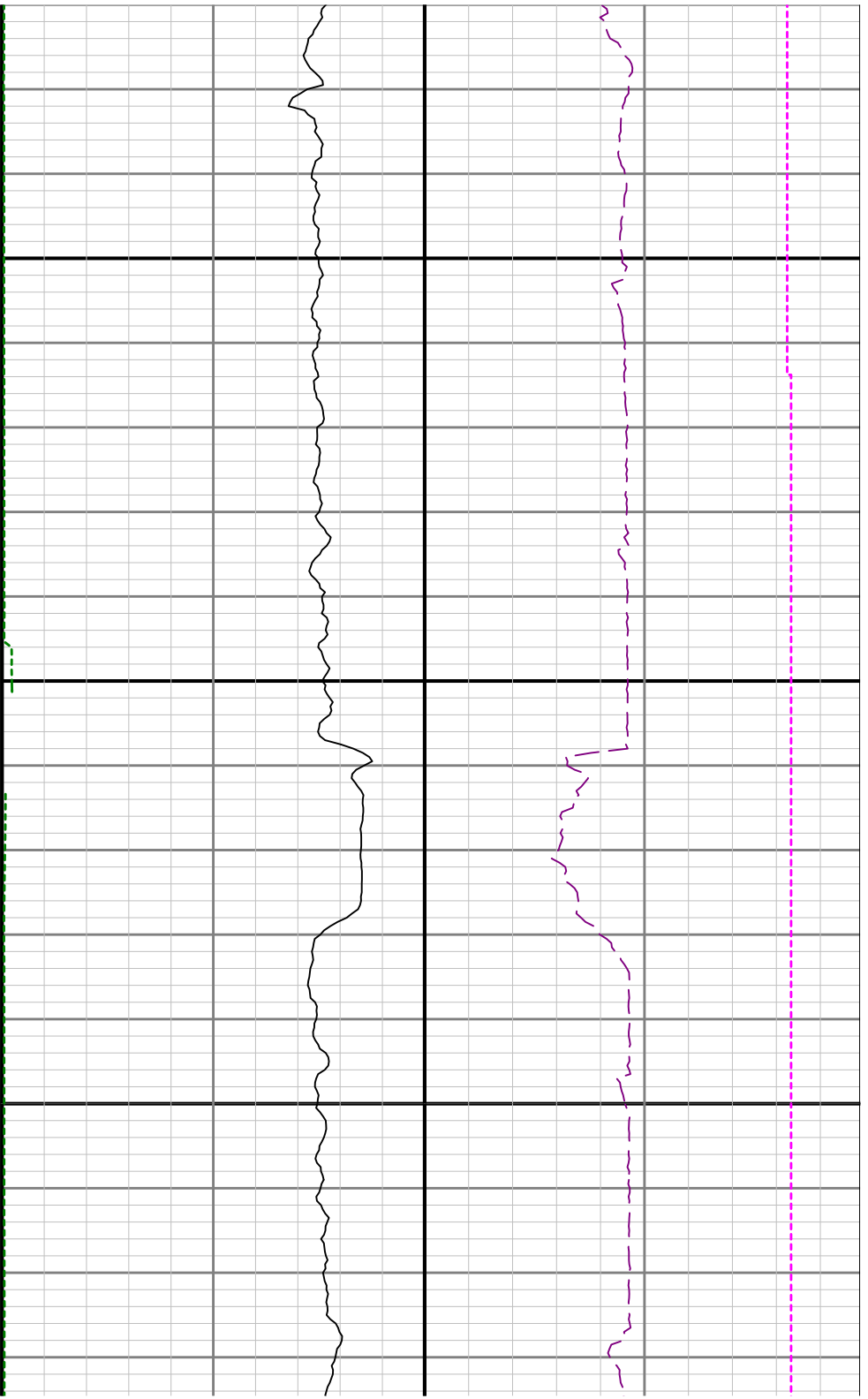
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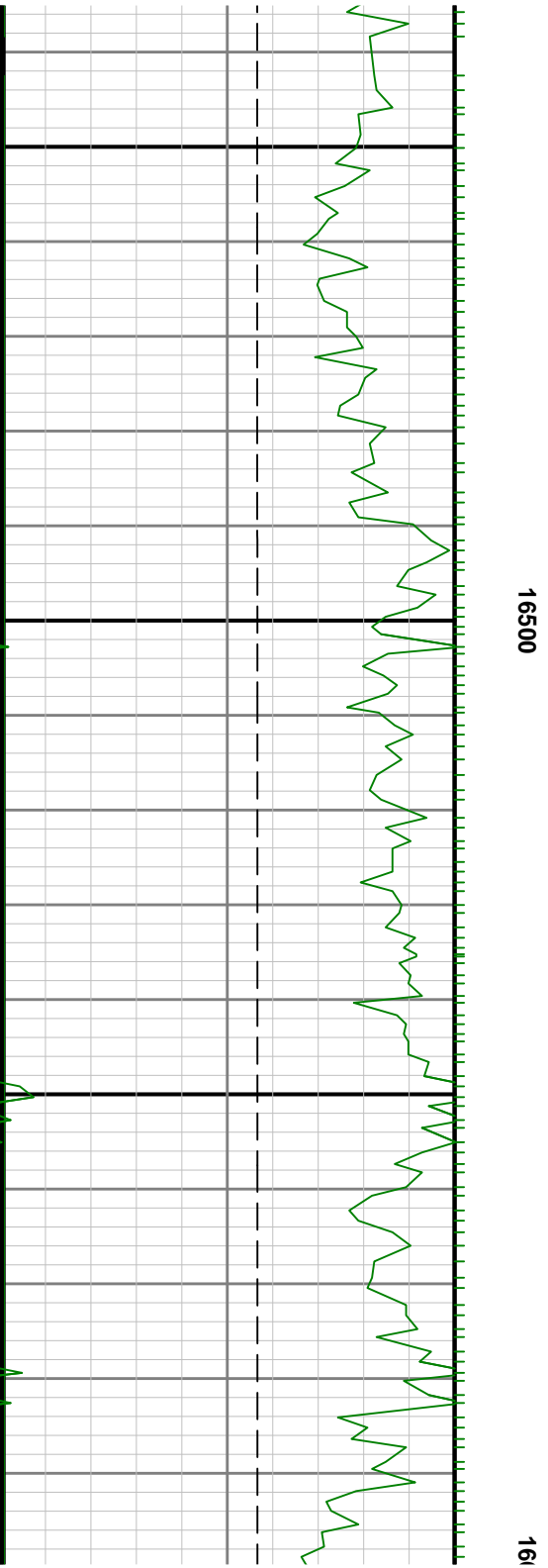


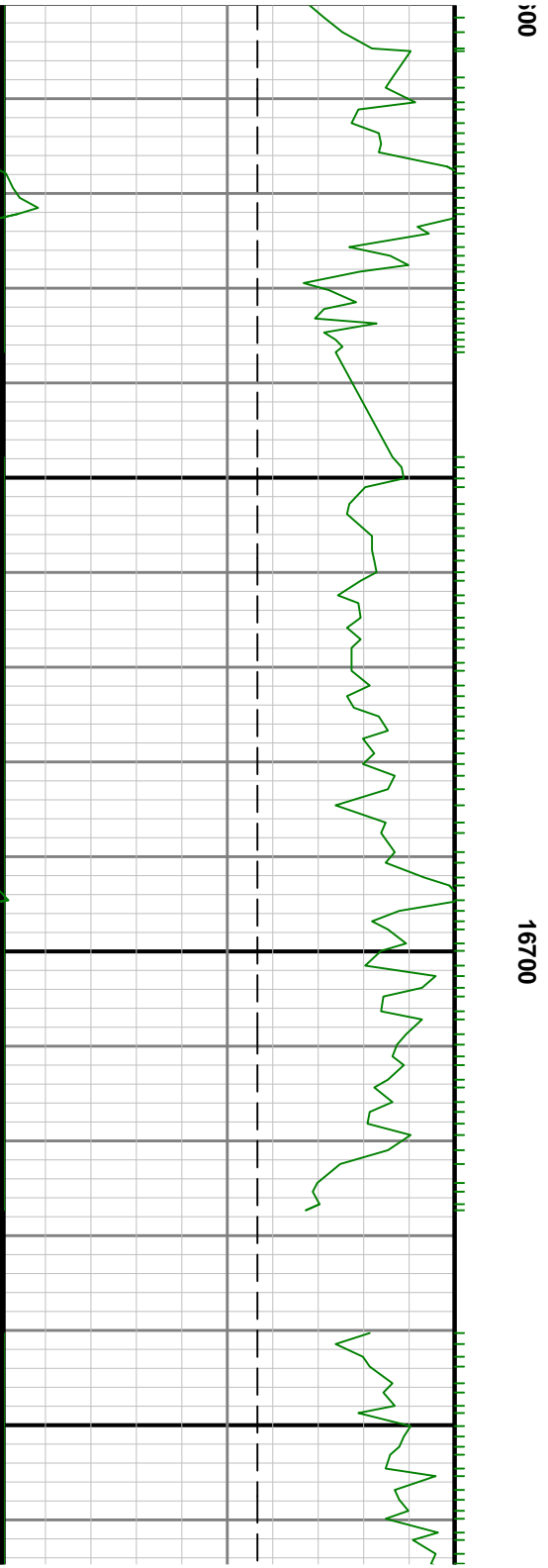
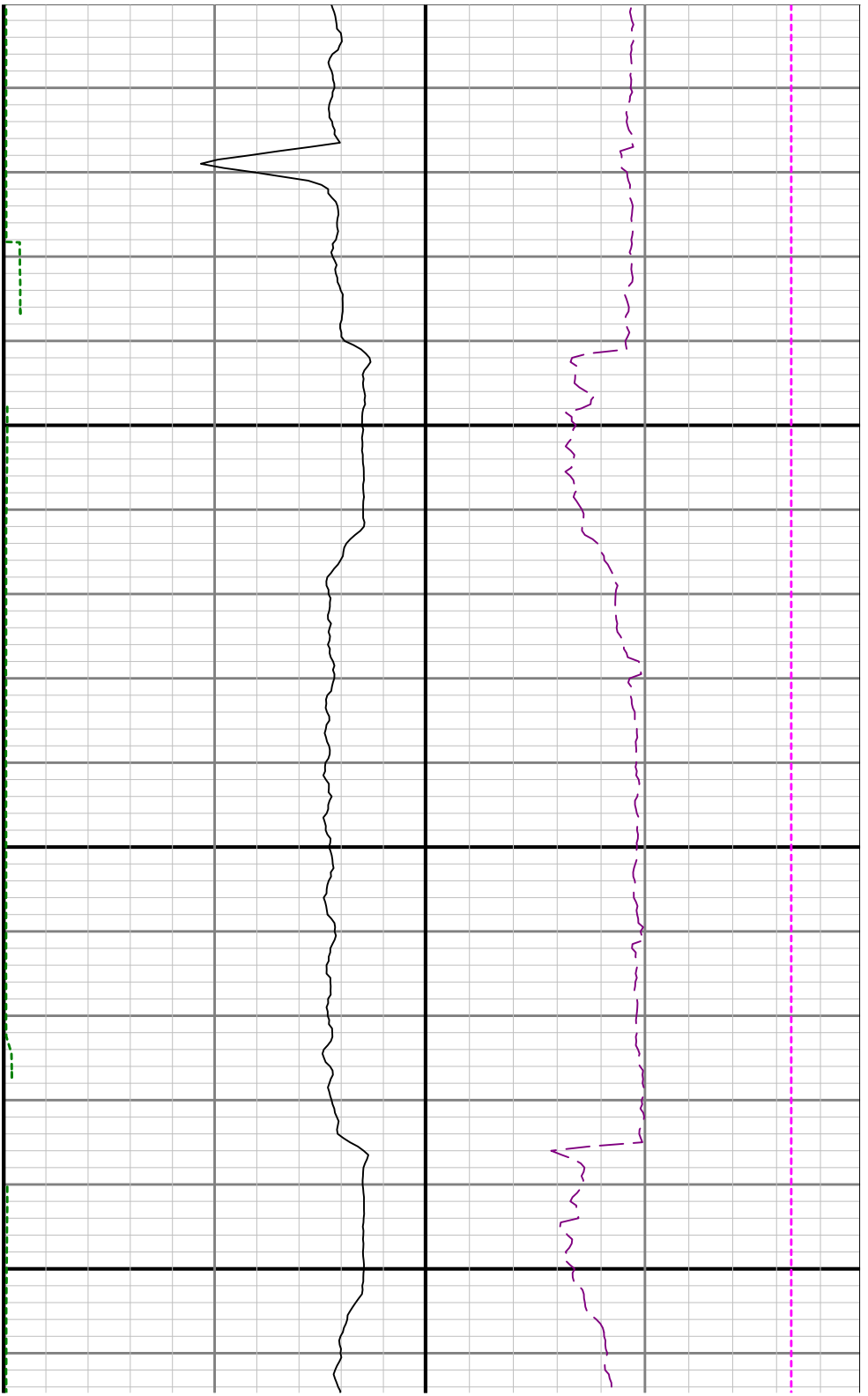


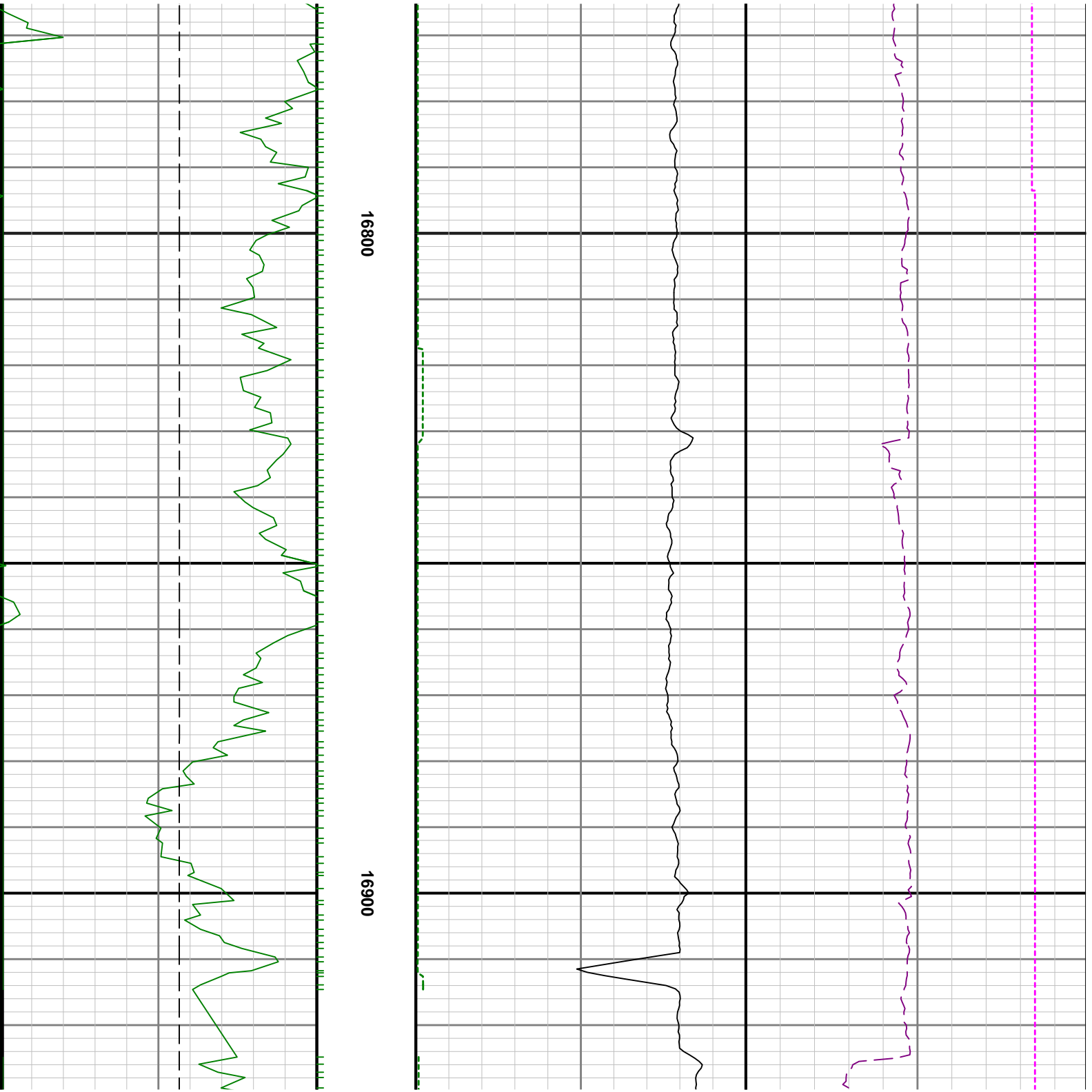


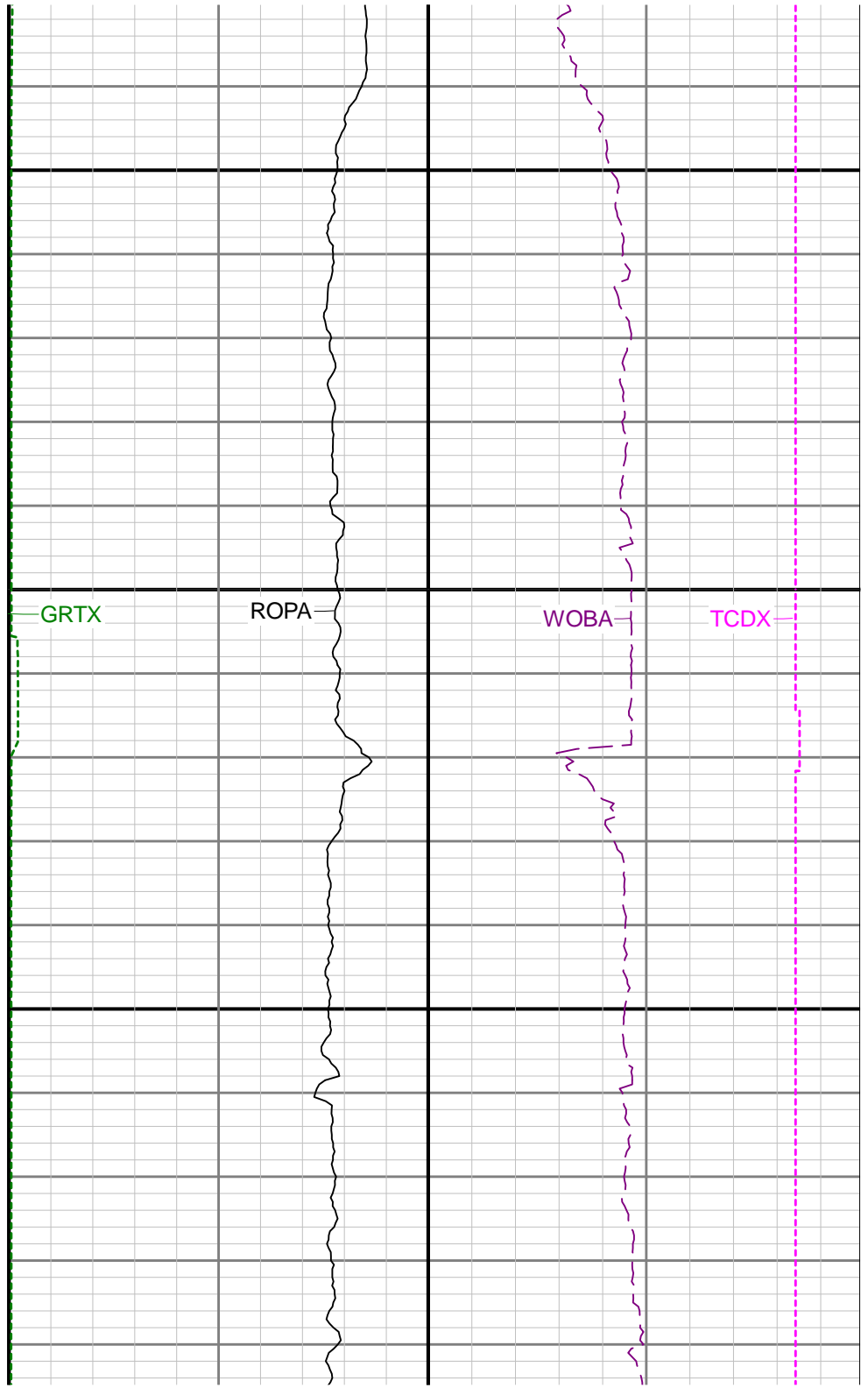
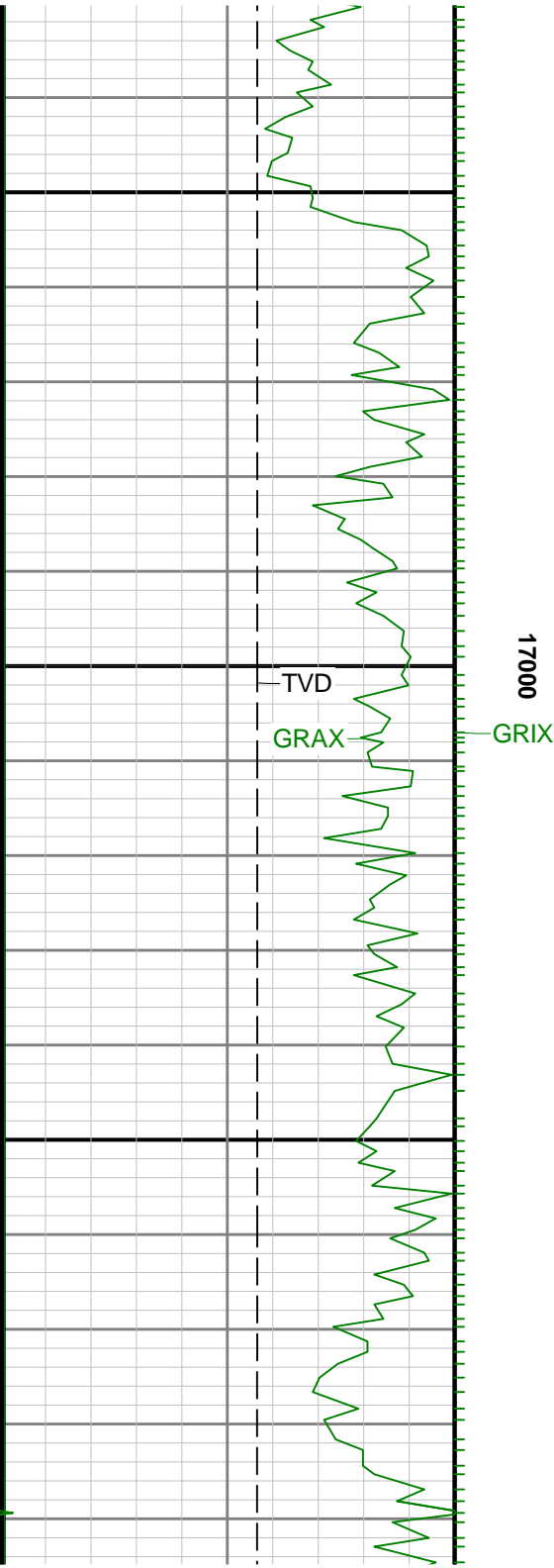


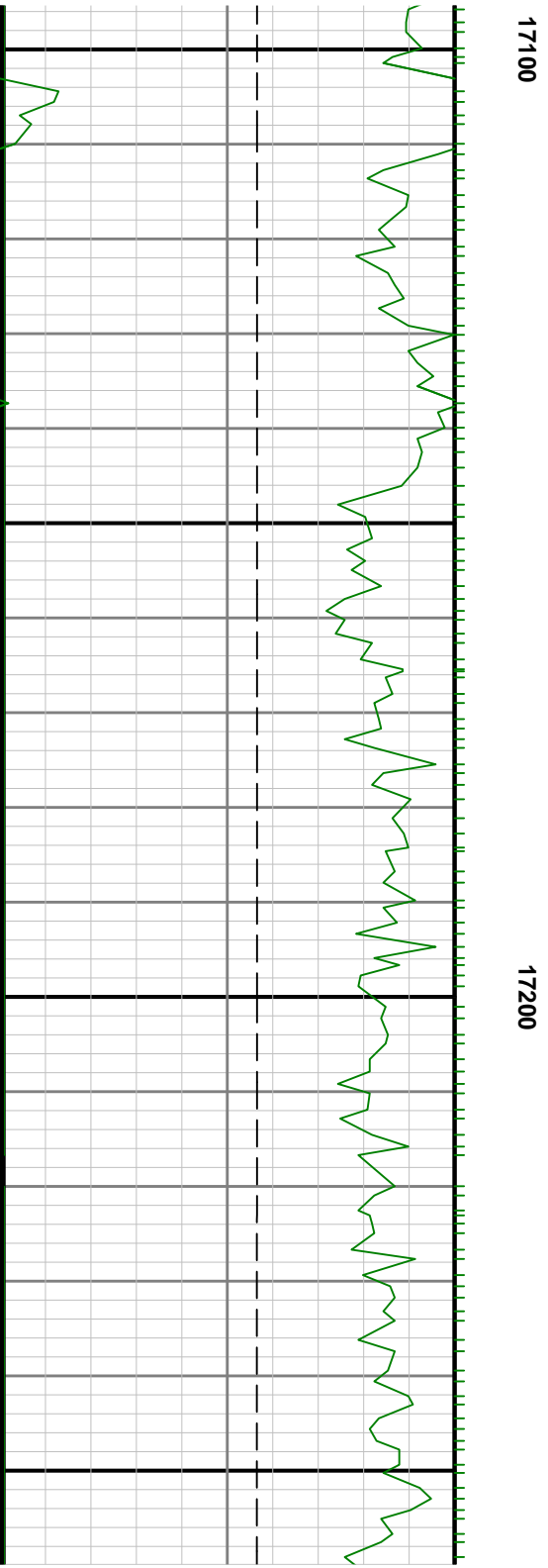
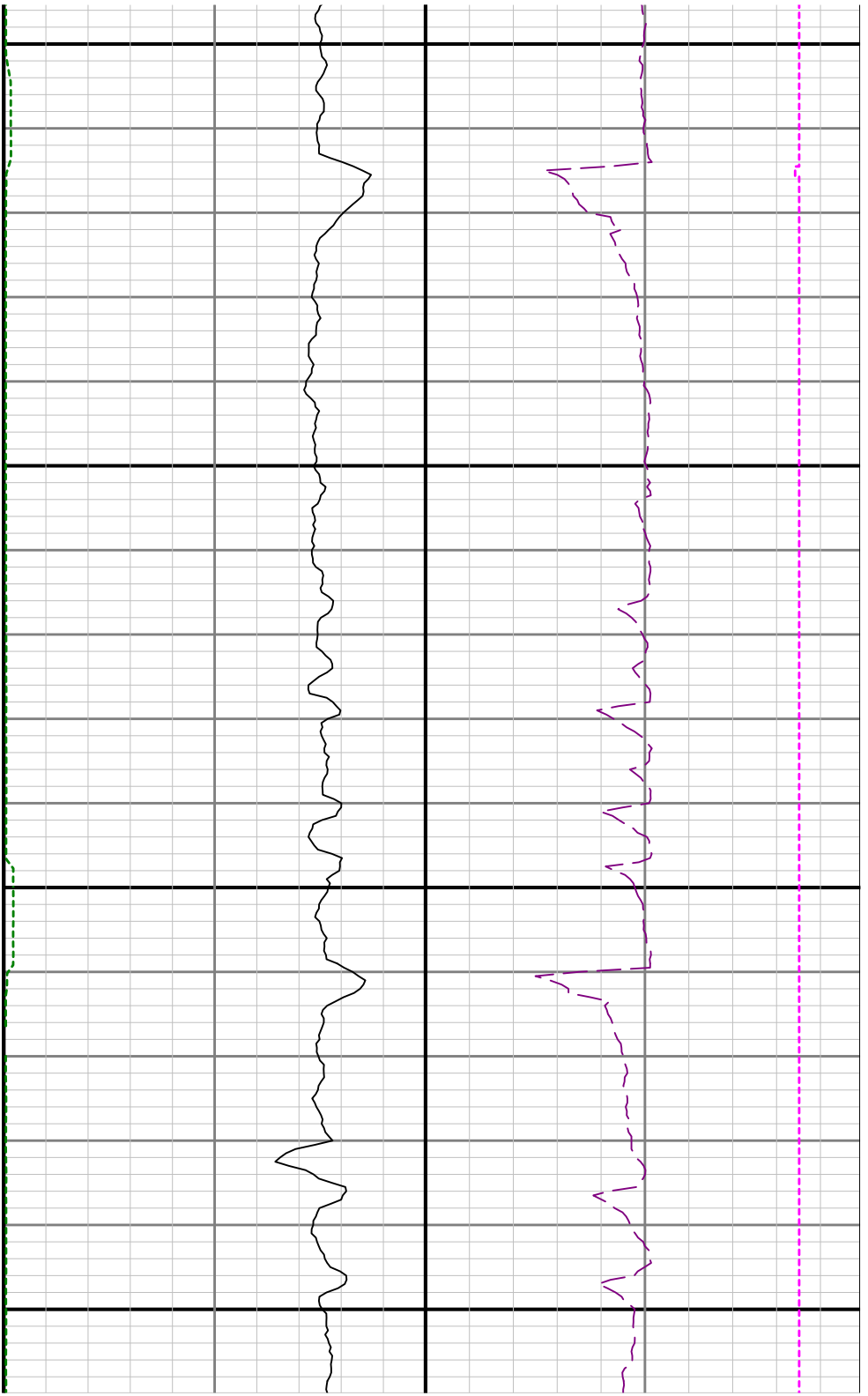


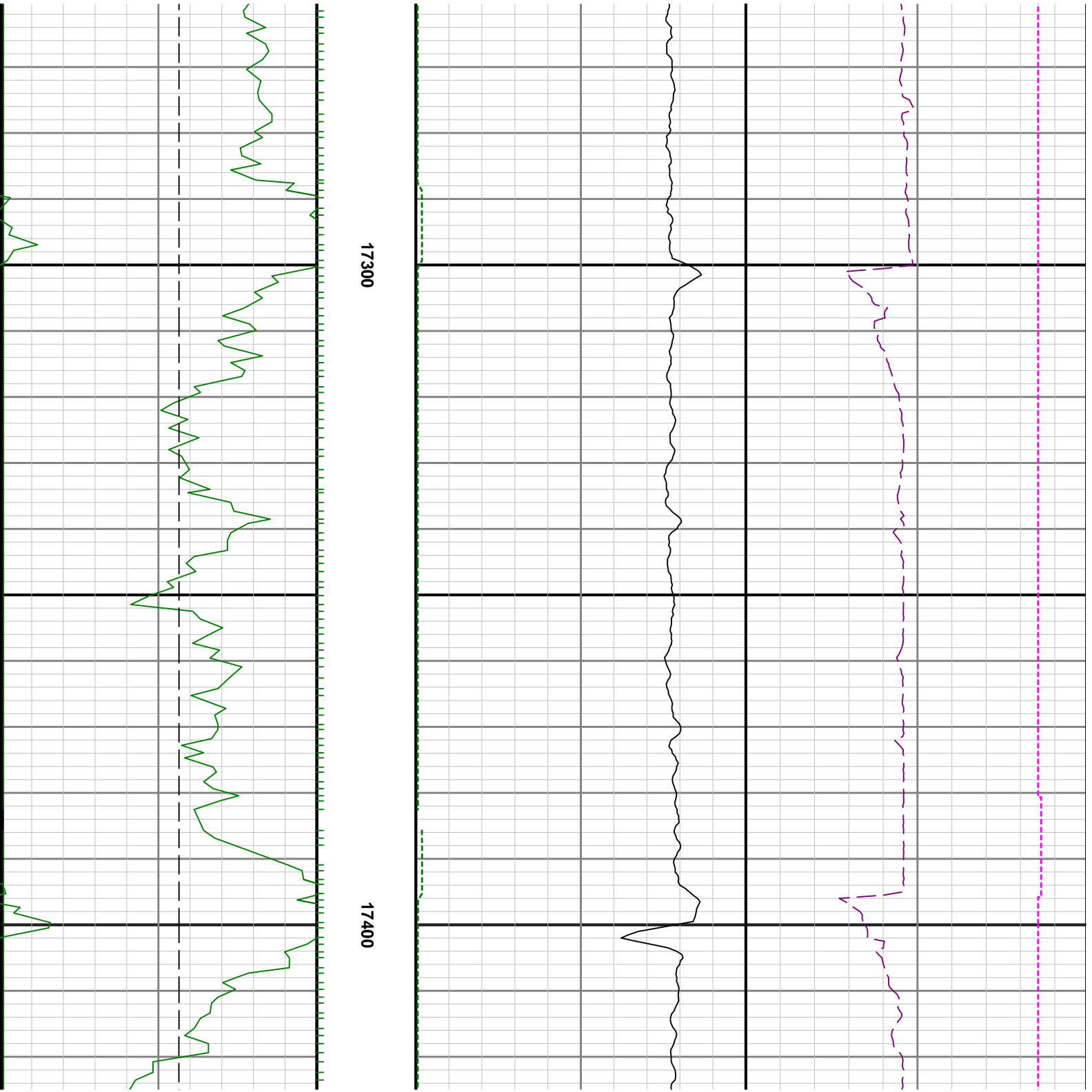


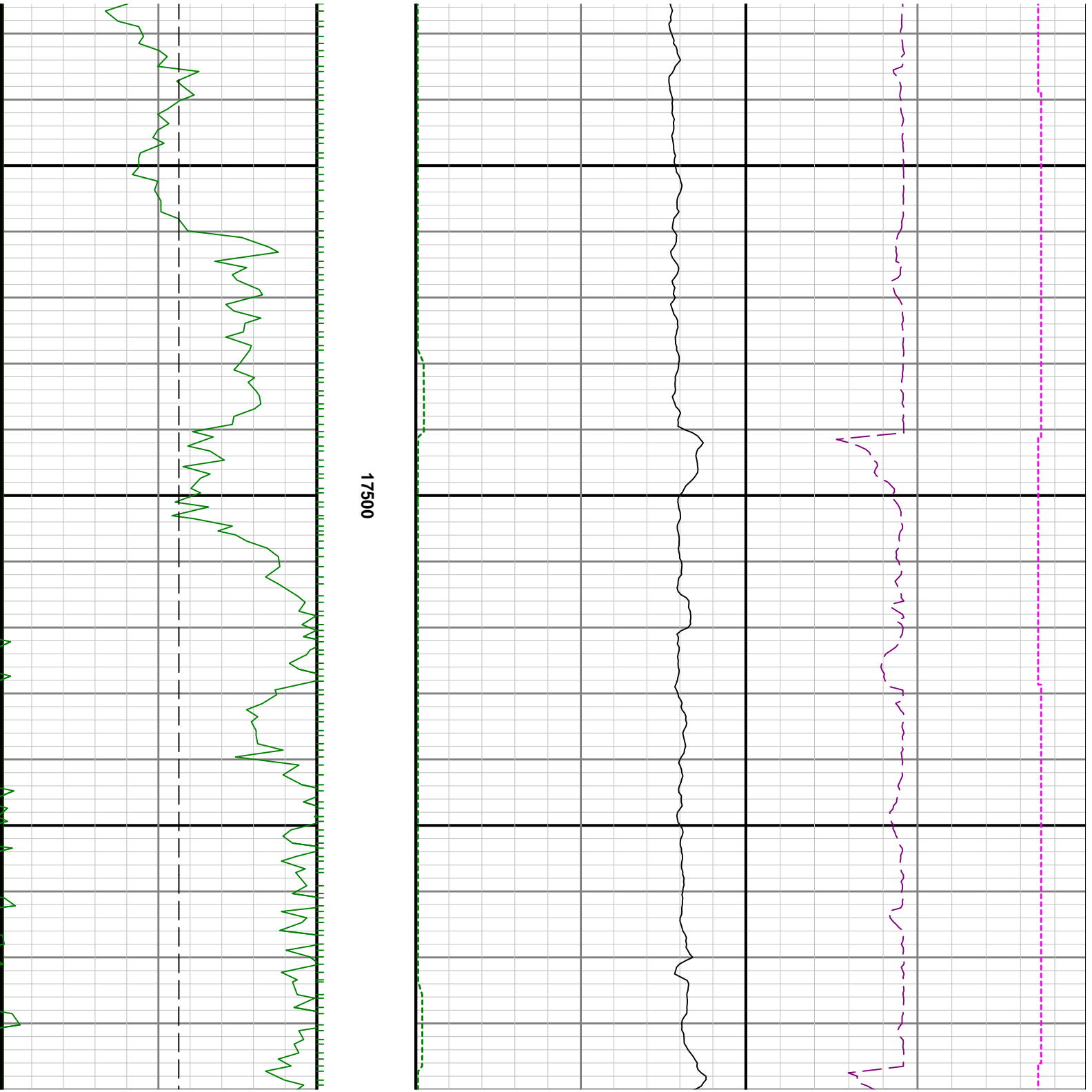






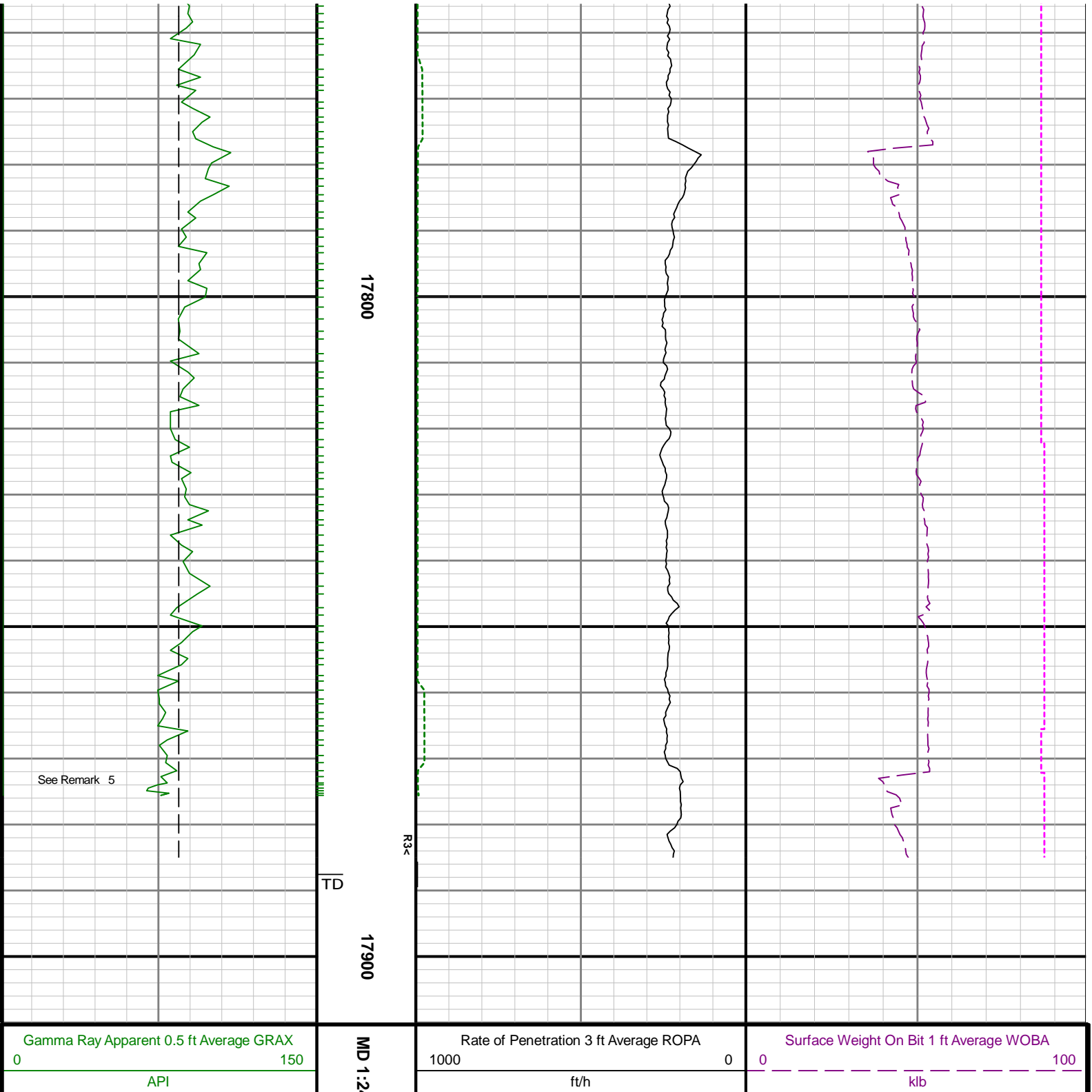












<div>True Vertical Depth TVD</div> <div>80006400</div> <div>ft</div>	<div>40 feet</div>	<div>Gamma Ray Time Since Drilled GRTX</div> <div>0600</div> <div>min</div>	<div>Downhole Temperature TCDX</div> <div>0300</div> <div>degF</div>
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