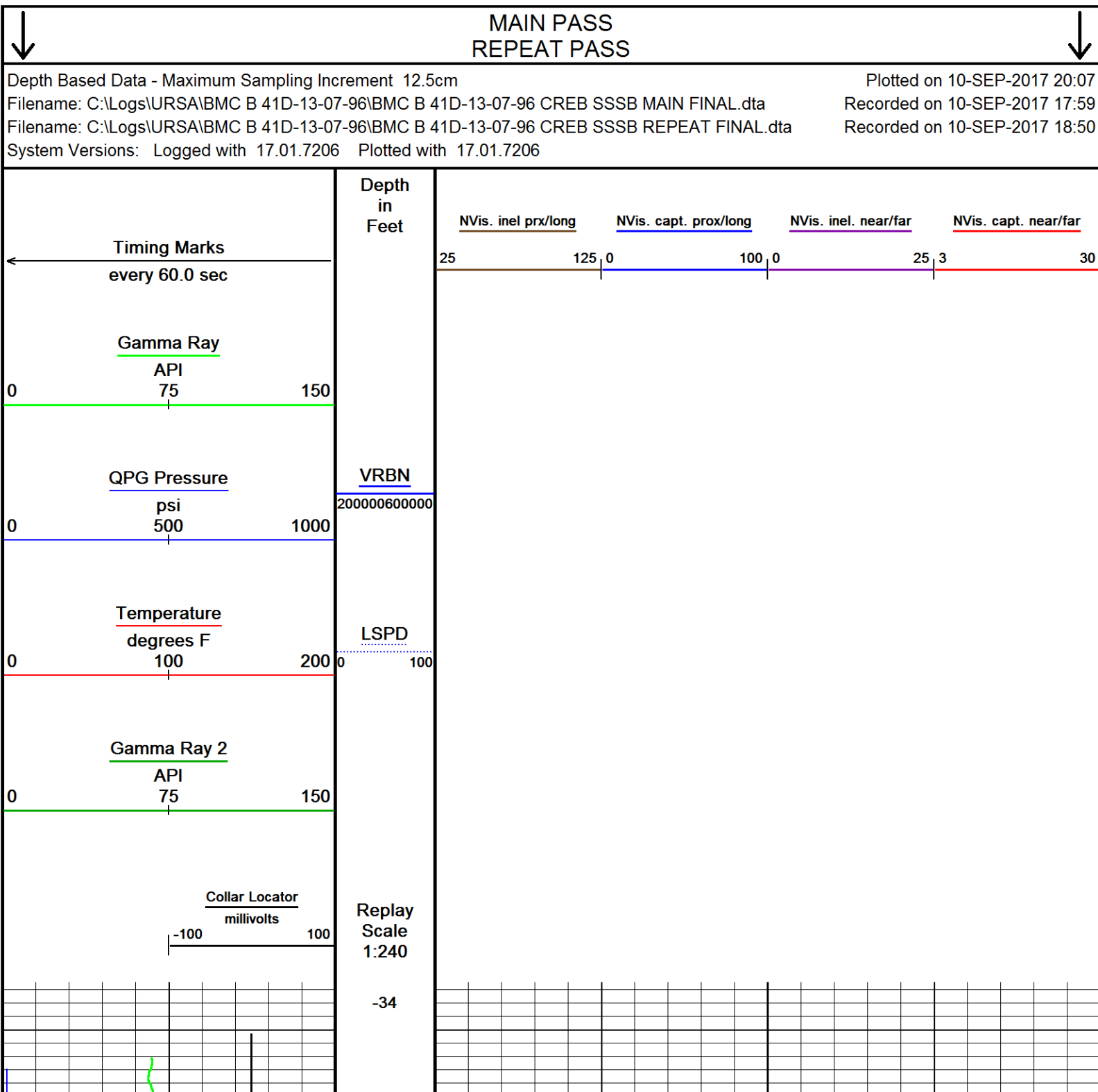
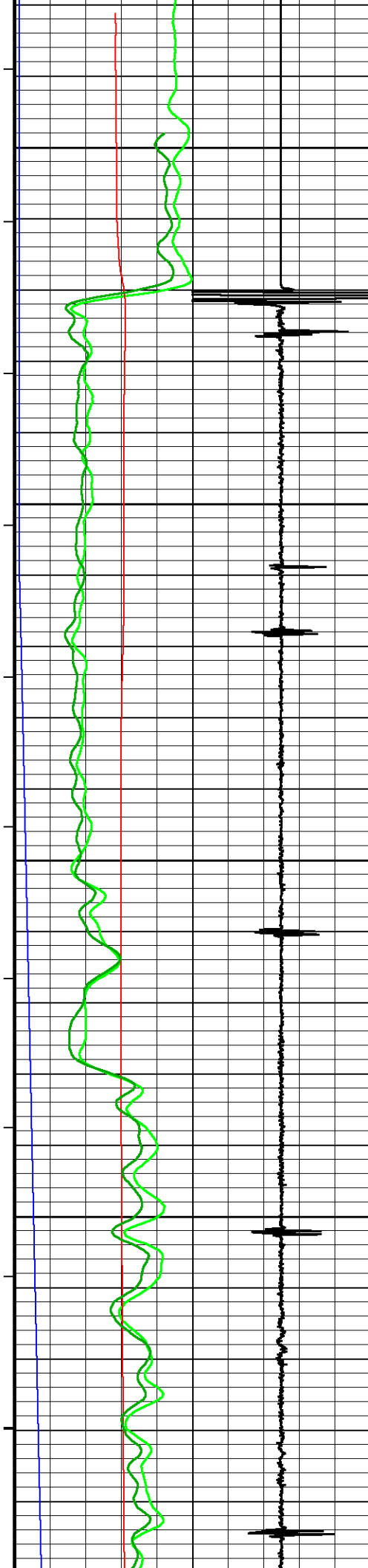
										RAPTOR NVISION LOG											
COMPANY					URSA OPERATING COMPANY																
WELL					BMC B 41D-13-07-96																
FIELD					WILDCAT																
PROVINCE/COUNTY					GARFIELD																
COUNTRY/STATE					USA / COLORADO																
LOCATION					2236' FNL & 0667' FWL																
SEC 18		TWP 7S		RGE 95W		Other Services								Elevations: KB 5117.00 DF 5117.00 GL 5100.00							
Latitude		SSSB																			
Longitude																					
API Number		05-045-23489																			
Permanent Datum GROUND LEVEL, Elevation 5100 feet																					
Log Measured From KB, 17.00 feet above Permanent Datum																					
Drilling Measured From KB																					
Date					10-SEP-2017					PERFORATION RECORD											
Run Number					ONE					Shot		Number		Depth From		Depth To					
Service Order										Density		of Shots		feet		feet					
Type Log					CREB																
Depth Driller					6823.00					feet											
Depth Logger					6414.00					feet											
Top Log Interval					3100.00					feet											
Bottom Log Interval					6823.00					feet											
Hole Fluid Type					WATER																
Hole Fluid Level					0.00					feet											
Restriction ID					3.875					inches		Gun Type									
Max Recorded Temp					197.00					deg F		Gun Size									
Well Head Pressure					0.00					psi		CASING / TUBING RECORD									
Well Head Equipment					N/A					Size		Weight		Depth From		Depth To					
Time Well Ready					ROA					inches		pounds/ft		feet		feet					
Time Logger Bottom					SEE LOG					8.625		32.00		0.00		1700.00					
Unit					14115					4.500		11.60		0.00		6823.00					
Equipment Name					WSS-E																
Base					CASPER																
Recorded By					P. MAZUR																
Witnessed By					NOT WITNESSED																

CASING / TUBING RECORD						
Type	Grade	TypeJoint	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE			8.625	0.00	1700.00	32.00
PRODUCTION			4.500	0.00	6823.00	11.60

REMARKS
SOFTWARE VERSION 17.01.7206 - COMMERCIAL VERSION
ALL DEPTH CONTROL PROCEDURES FOR SUBSEQUENT RUN IN HOLE WERE FOLLOWED. LOG RUN FROM 17' K.B.
SURFACE SYSTEM USED: WCM-D 160
TOOLS RUN: WCCC, UGRK, QPGE, CR3B, TMPN, CRPB, CRMB, CR3B, UGRK, SUEC, SSSB, STEB, CENA WERE RAN IN COMBINATION
GAMMA RAY COUNTS ON SUBSEQUENT PASSES ARE AFFECTED BY RESIDUAL NEUTRON ACTIVATION CAUSED BY THE PREVIOUS PASS
PREDICTED 3' AMPLITUDE FOR 4.5" WITH 11.6 LB/FT CASING: 81 mv
FREE PIPE CALIBRATION DONE AT 370 FT
UNKNOWNEN CEMENT CLASS DUE MISSING DATA FROM CLIENT
UNKNOWNEN CEMENT JOB ENDED TIME DUE TO MISSING DATA FROM CLIENT
BOTTOM HOLE TEMPERATURE WAS DEG. 197F

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.





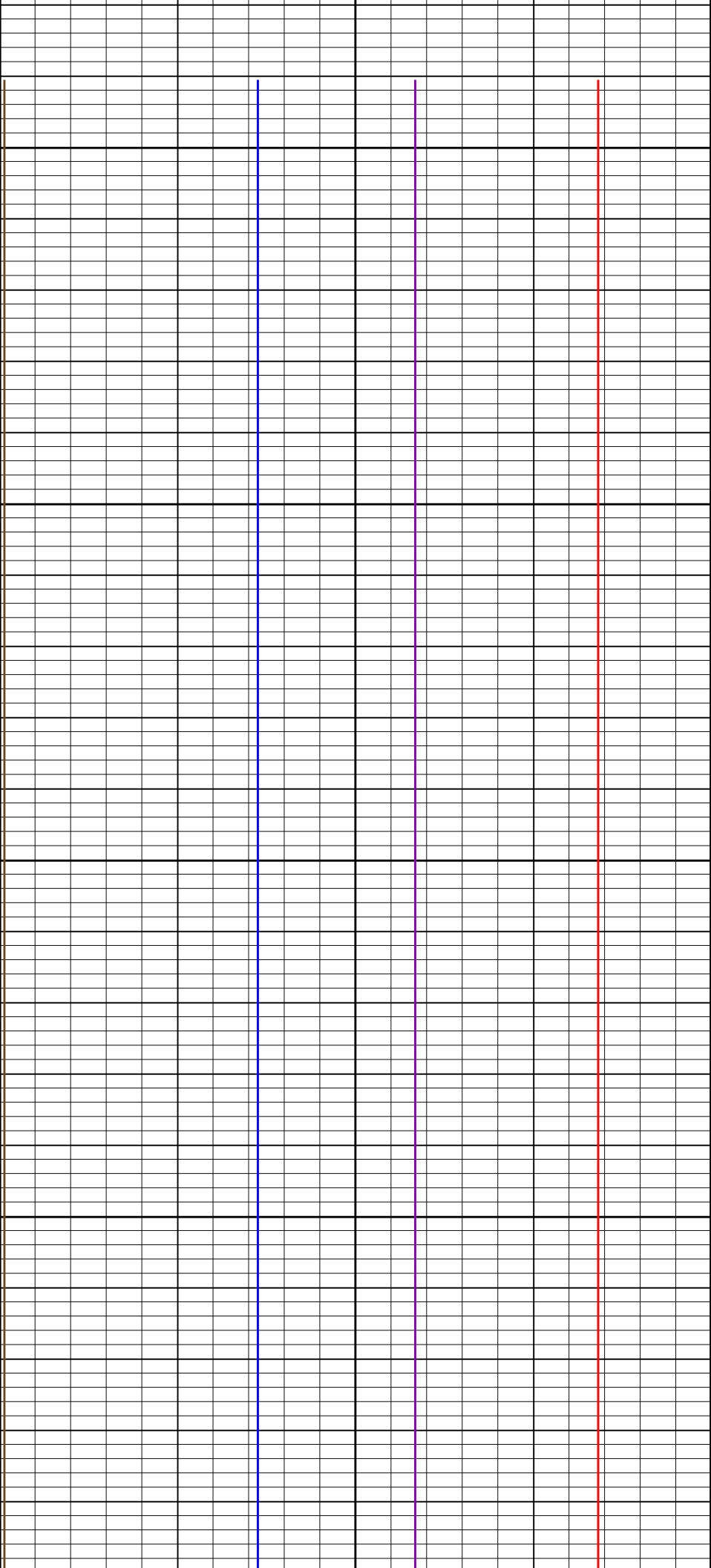
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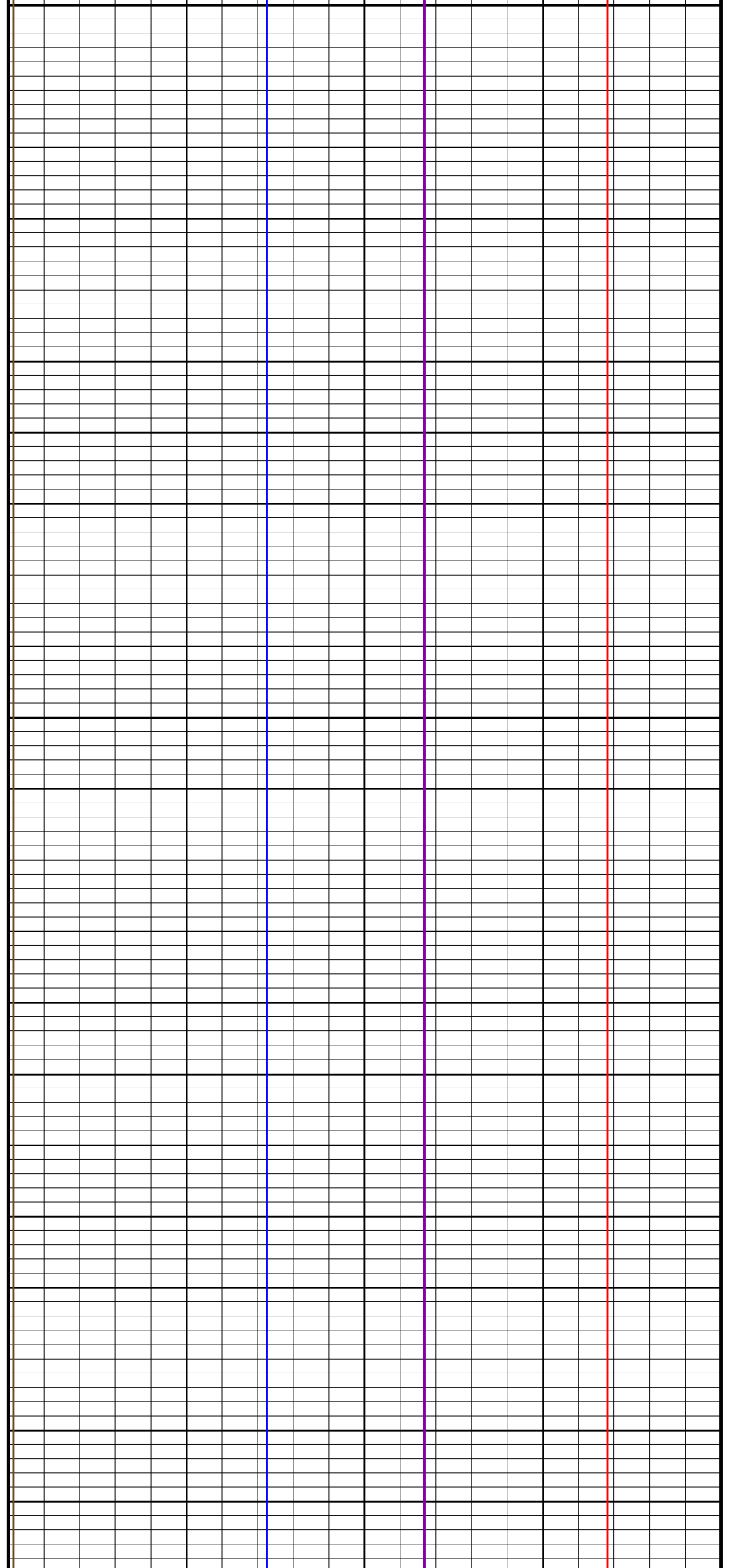
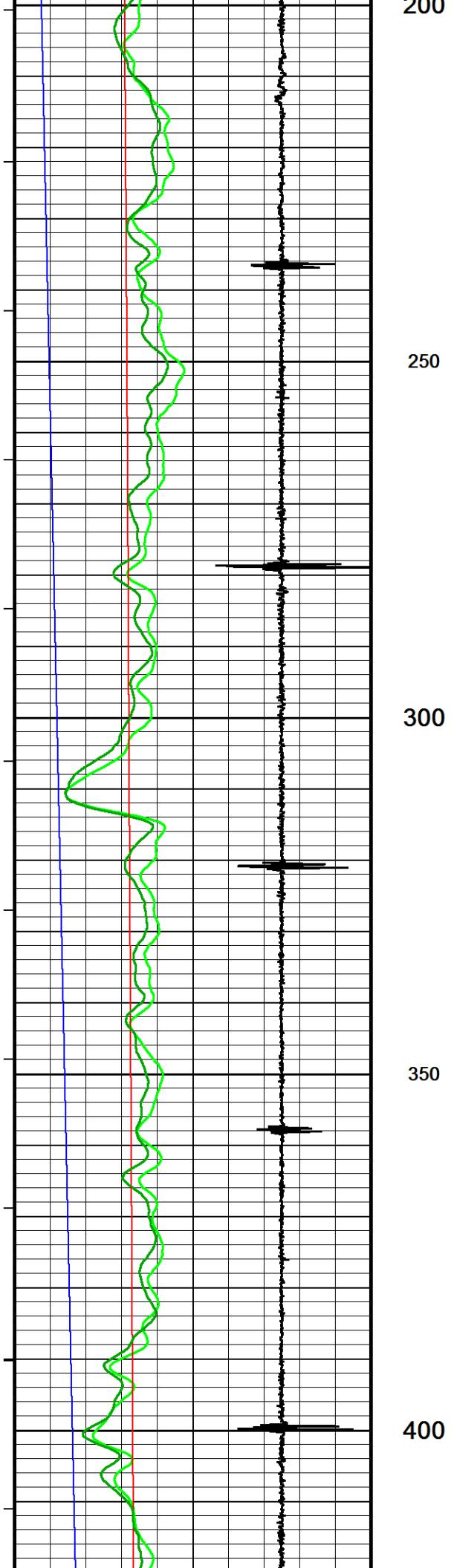
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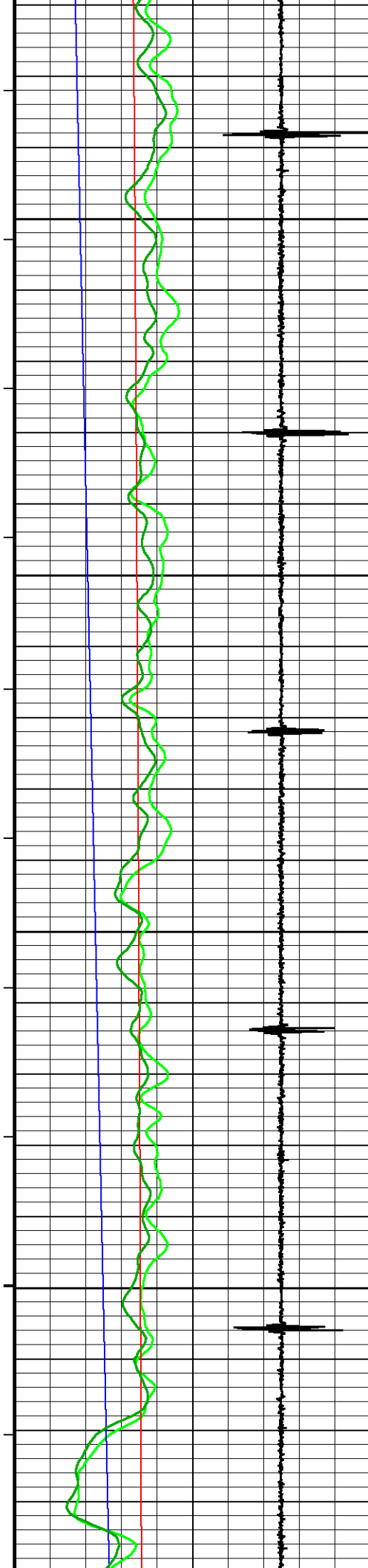
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150

200





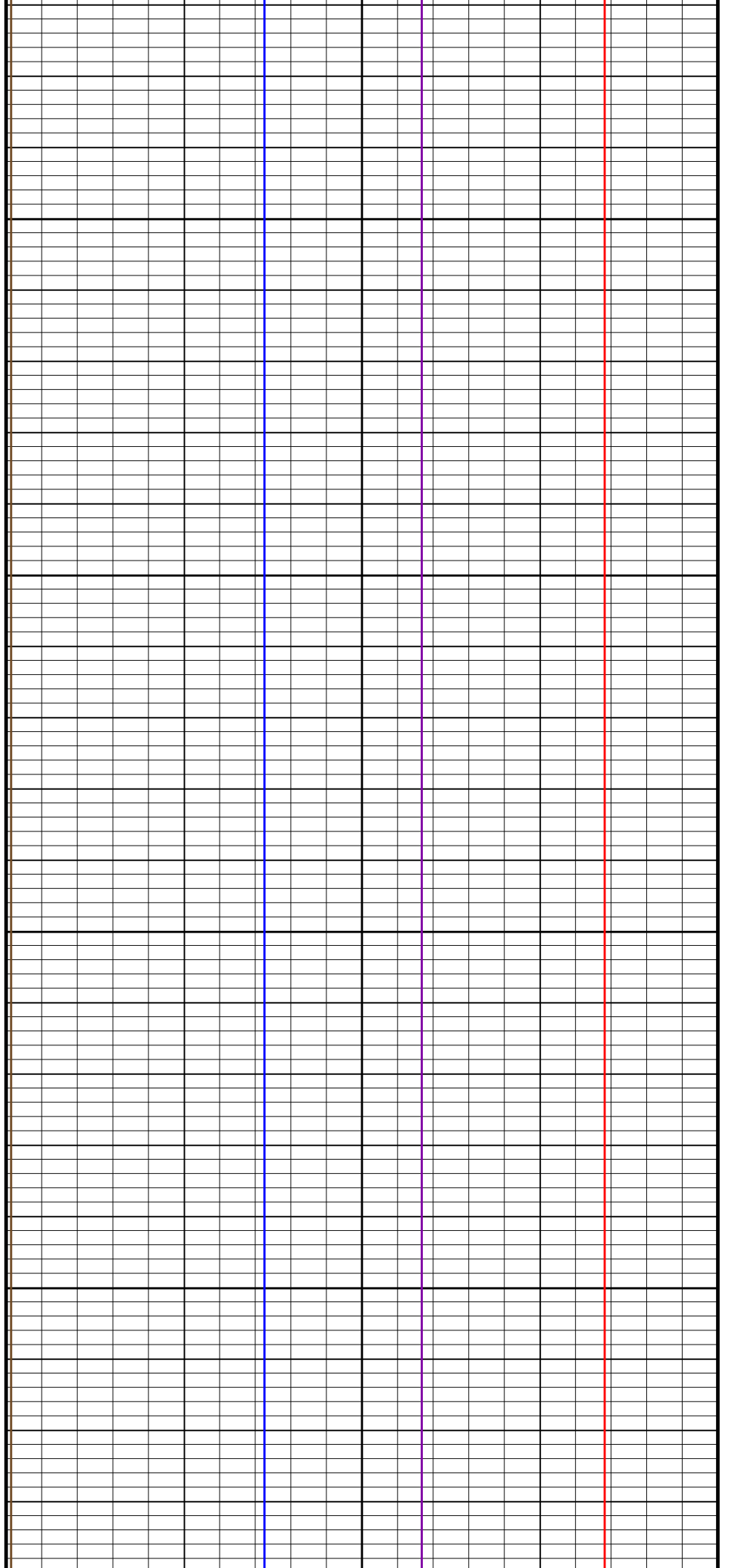


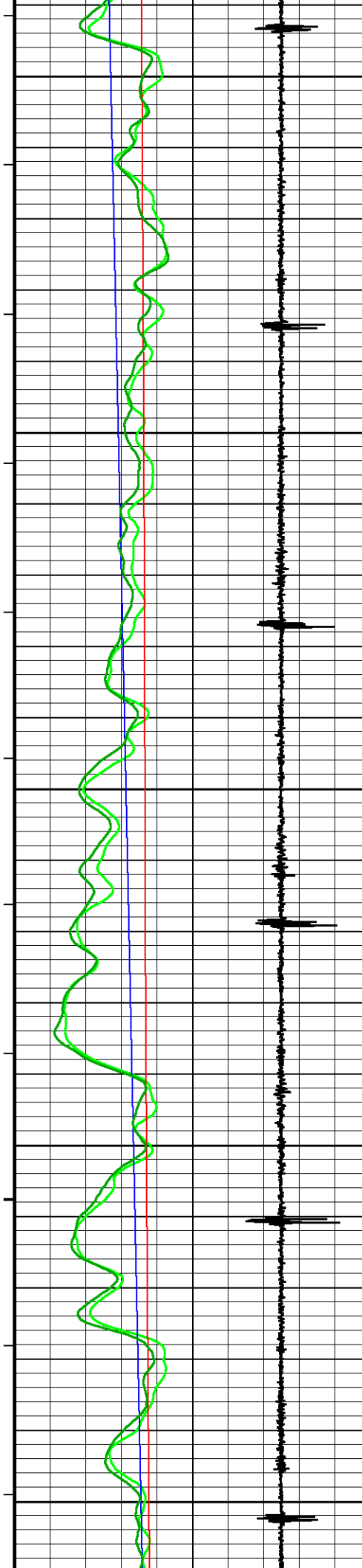
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500

550

600





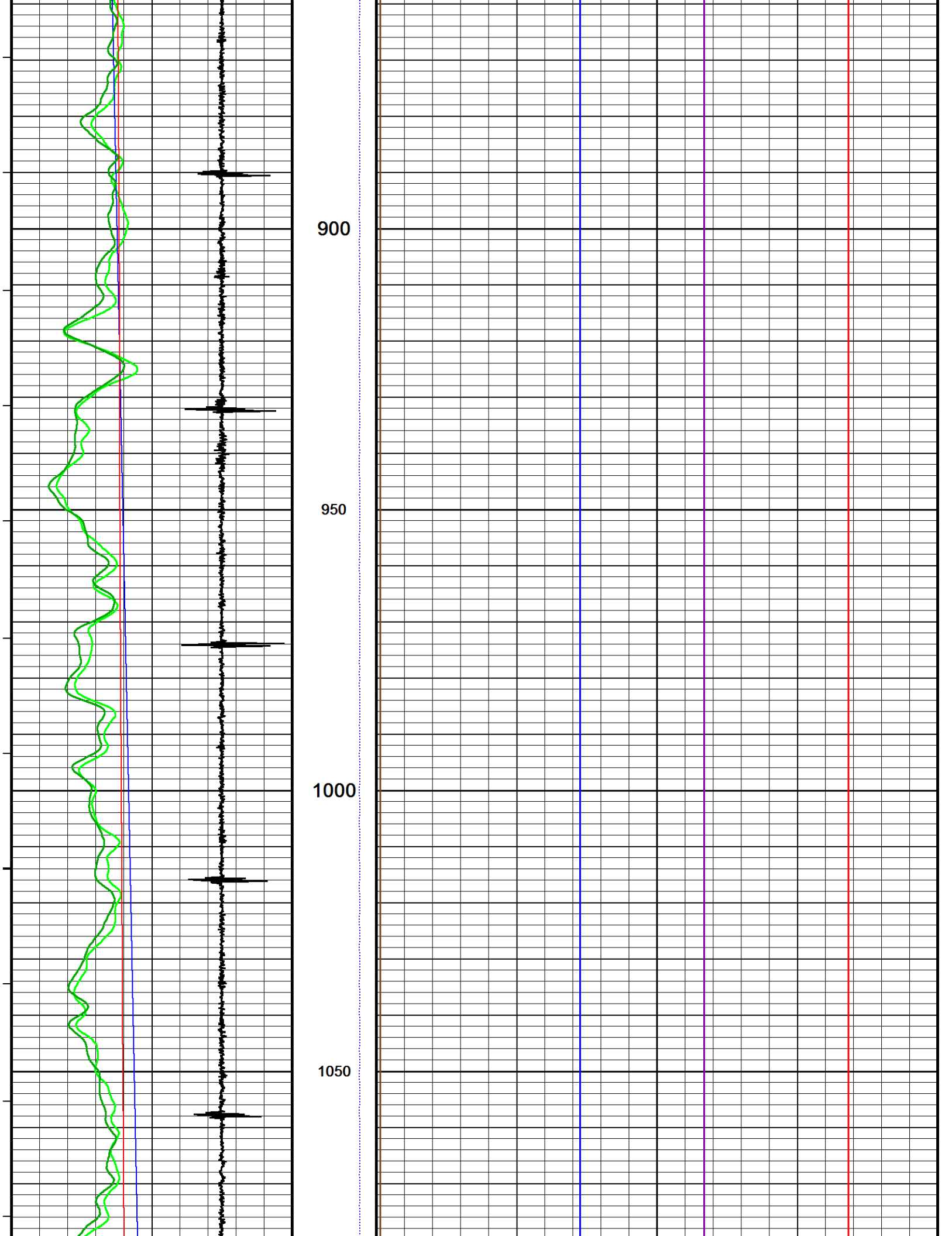
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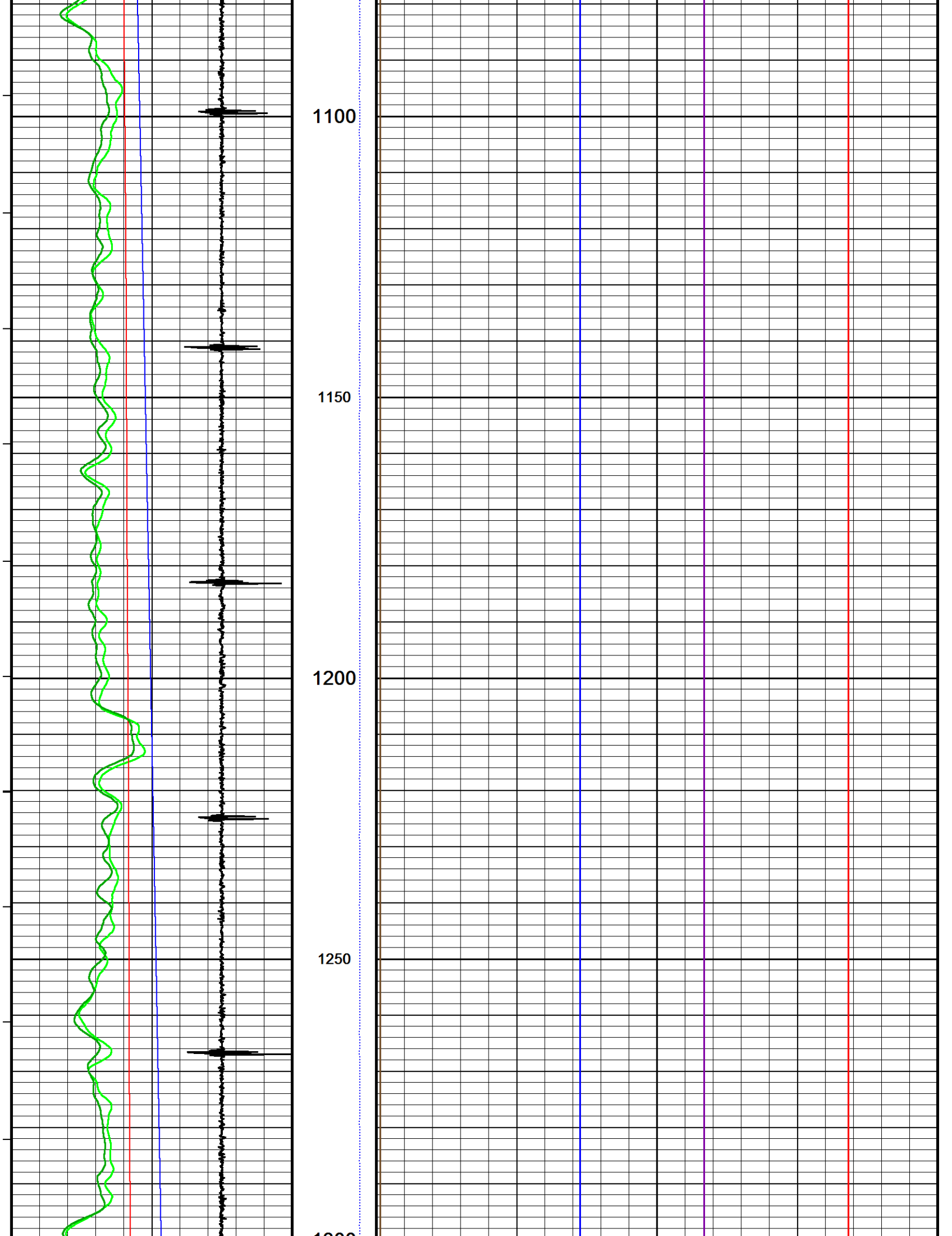
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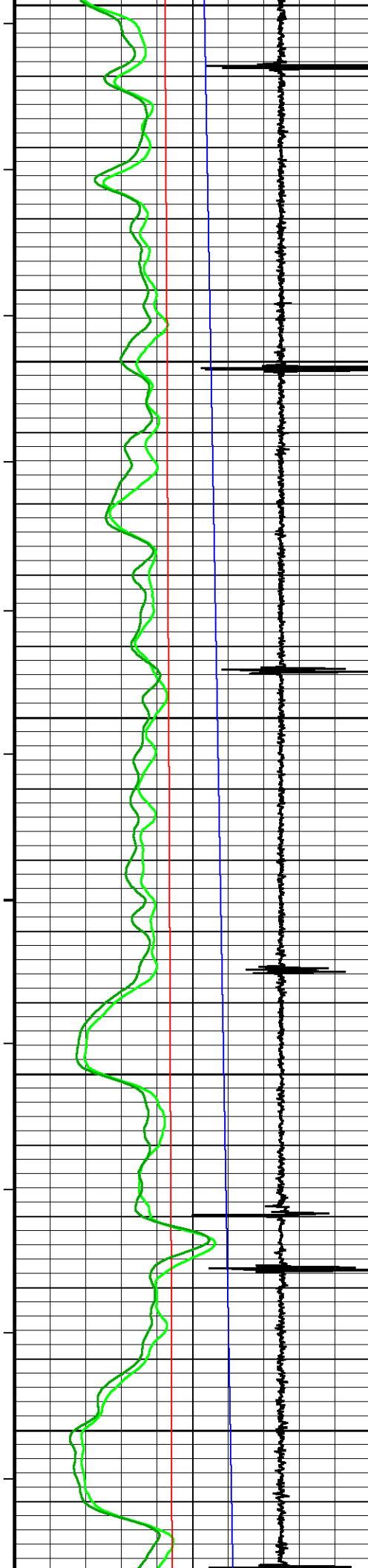
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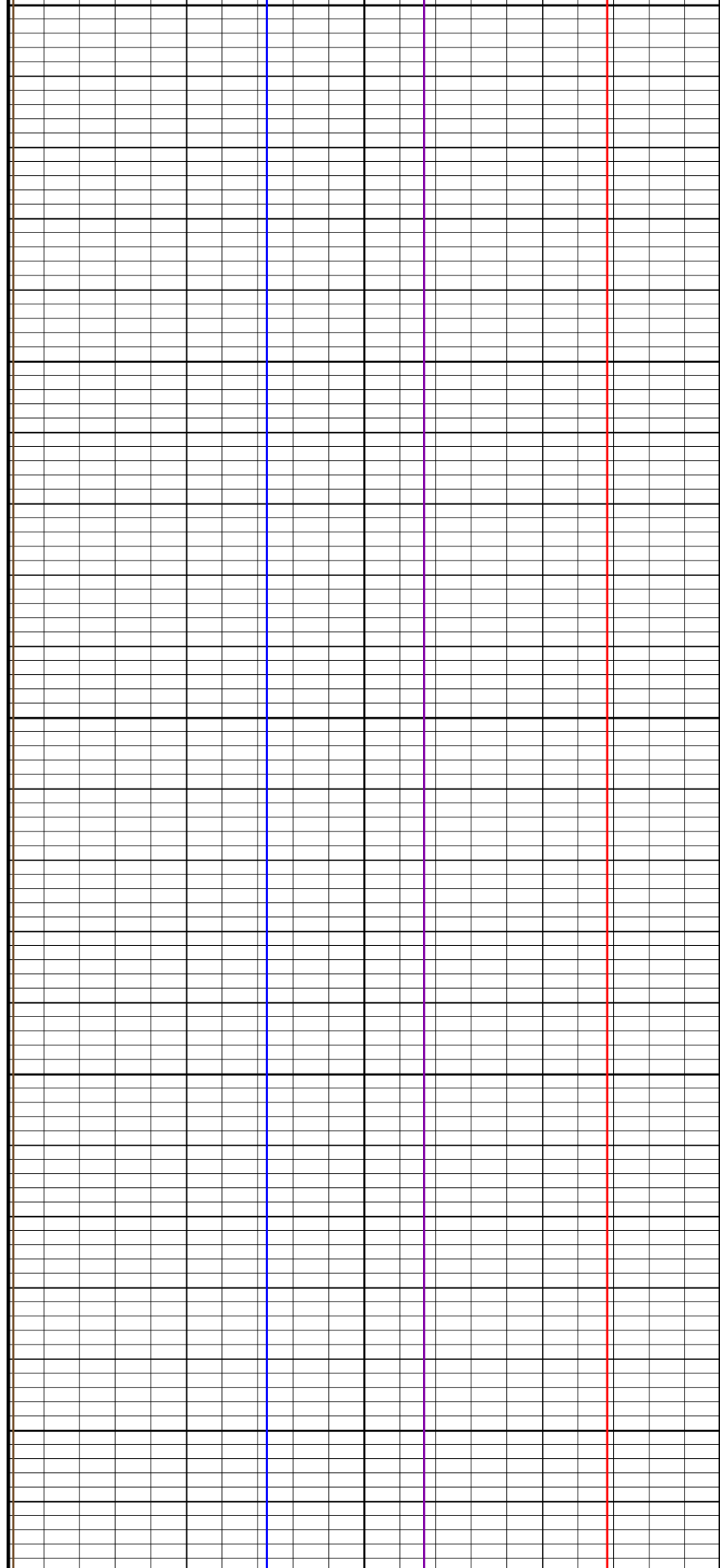
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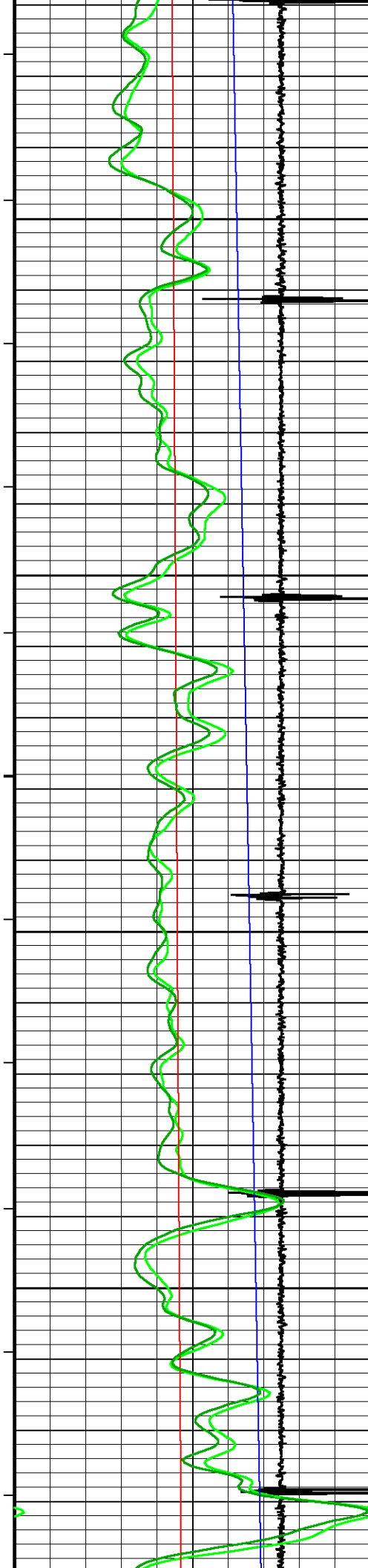
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1400

1450

1500



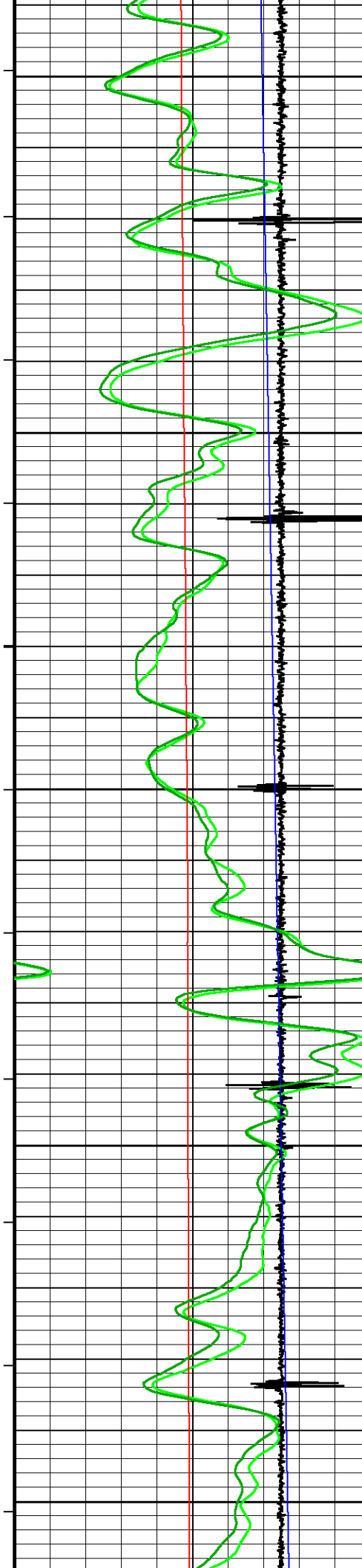


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1600

1650

1700



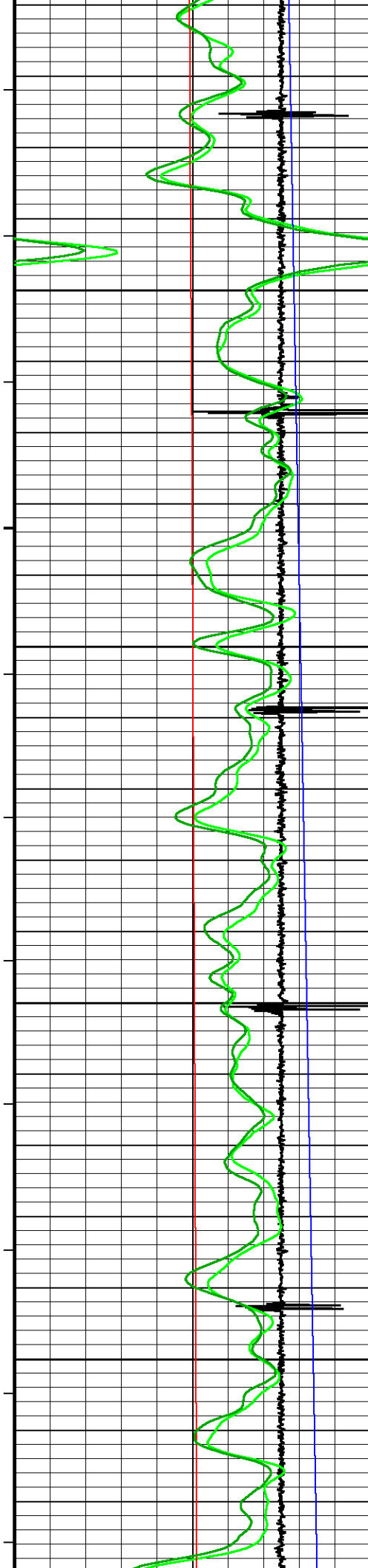
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1800

1850

1900

1950

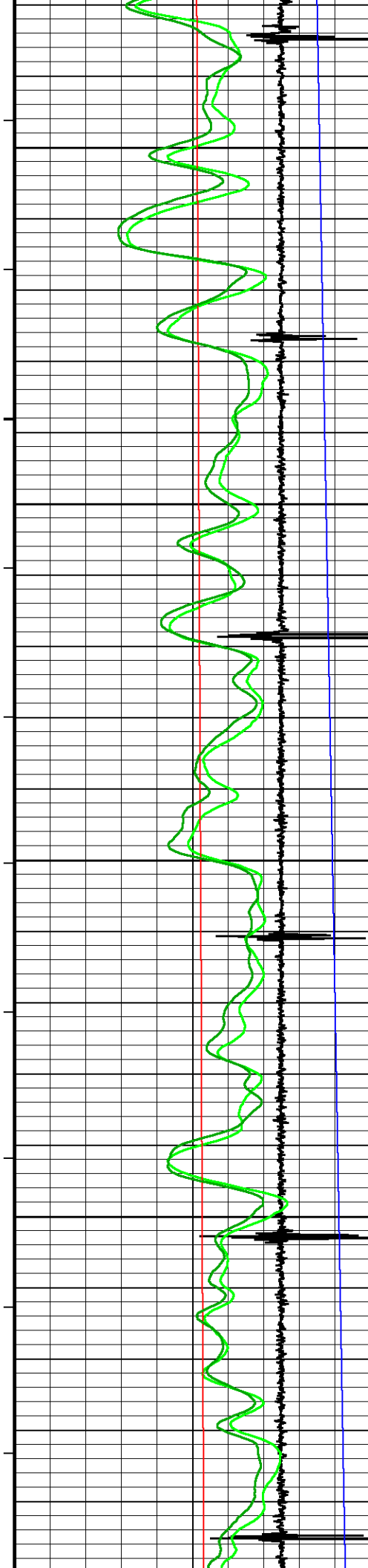


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2050

2100

2150



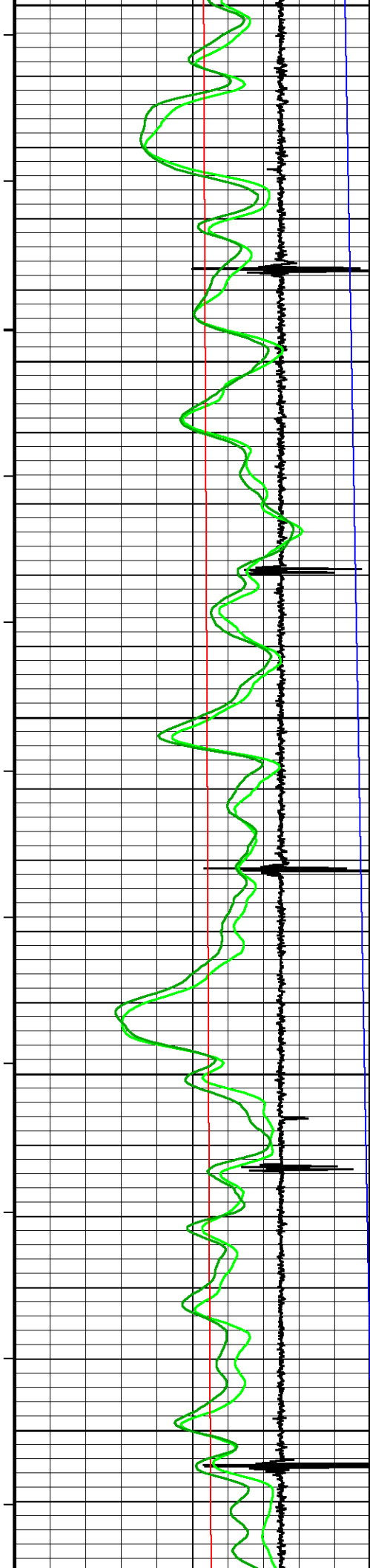
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2250

2300

2350

2400



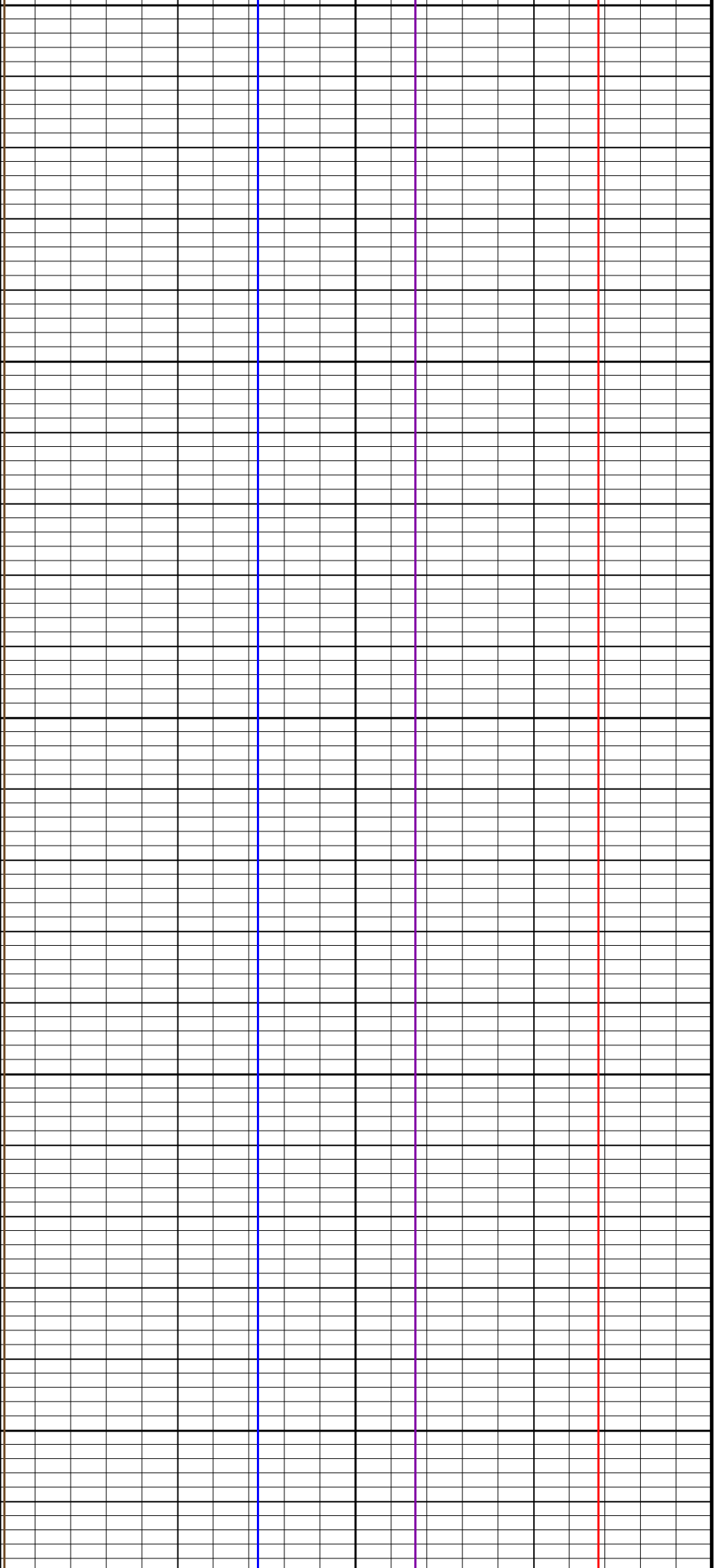
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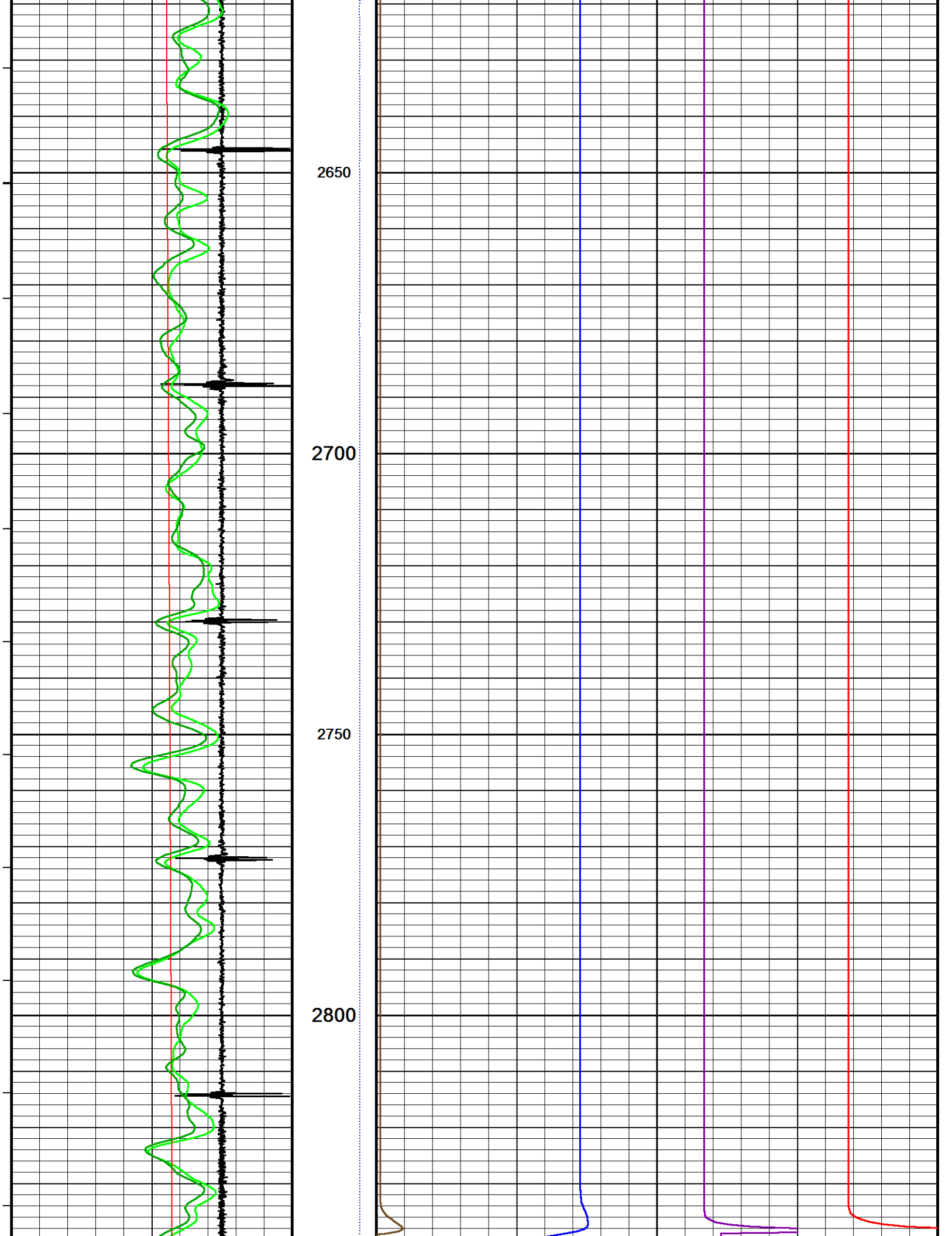
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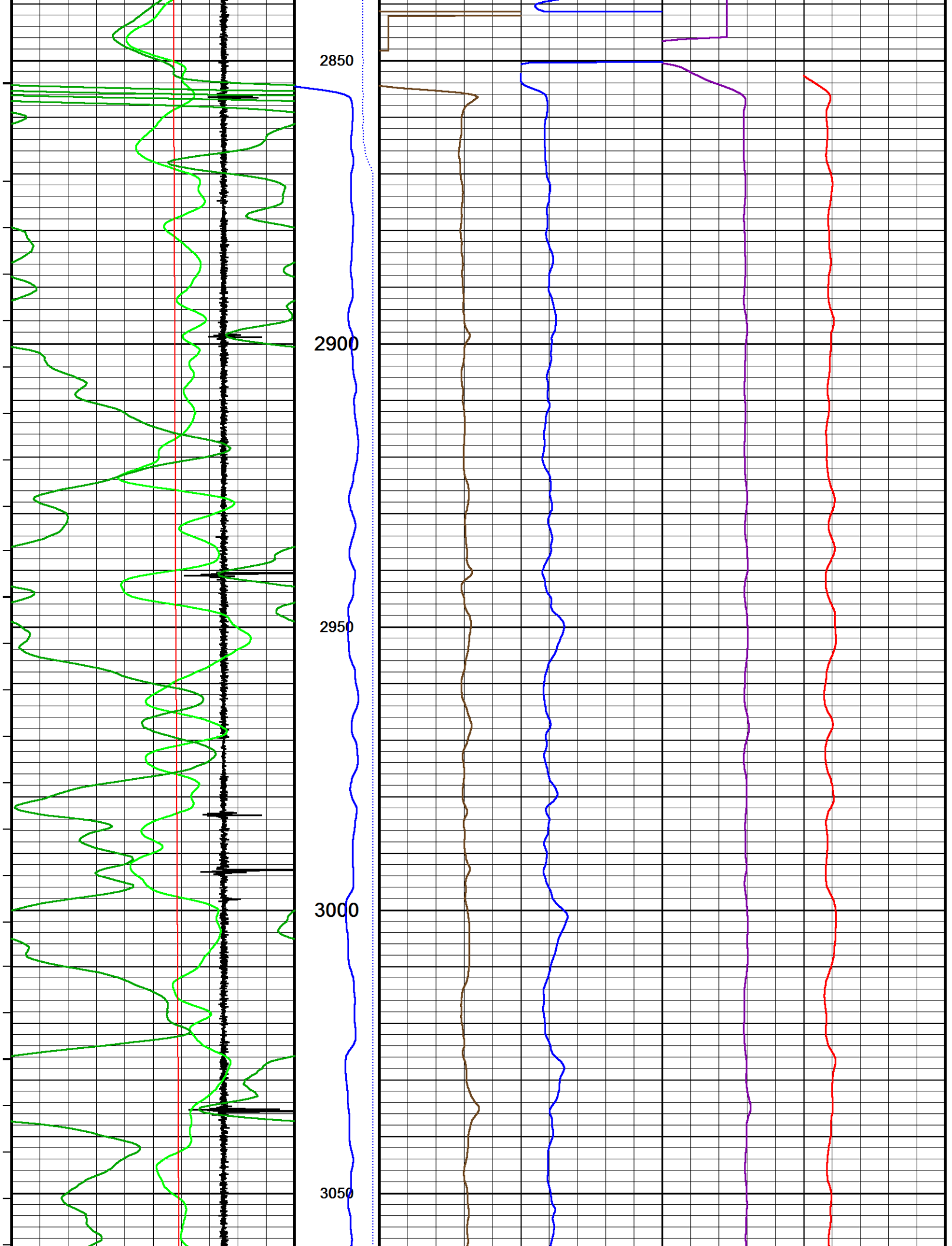
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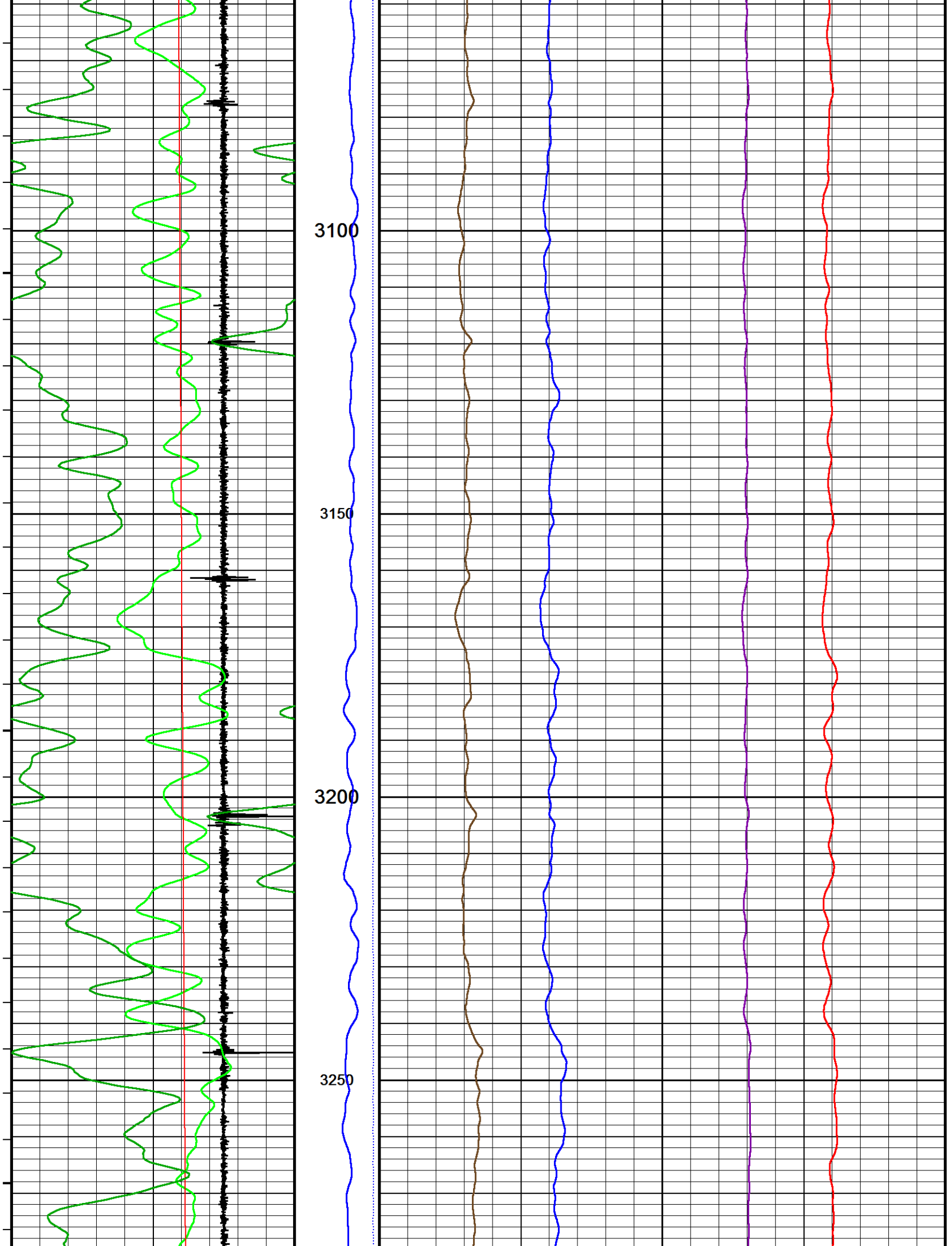
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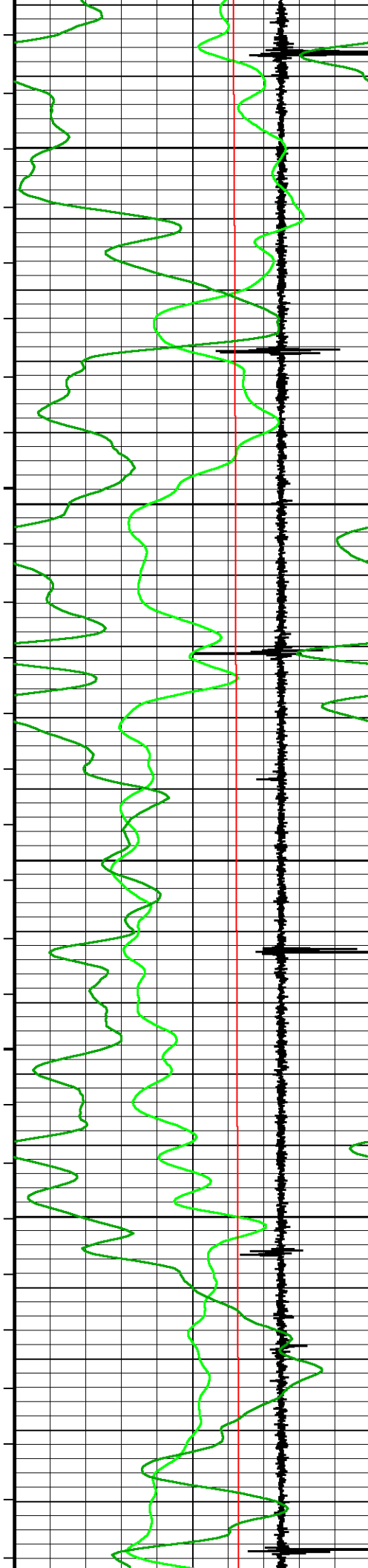












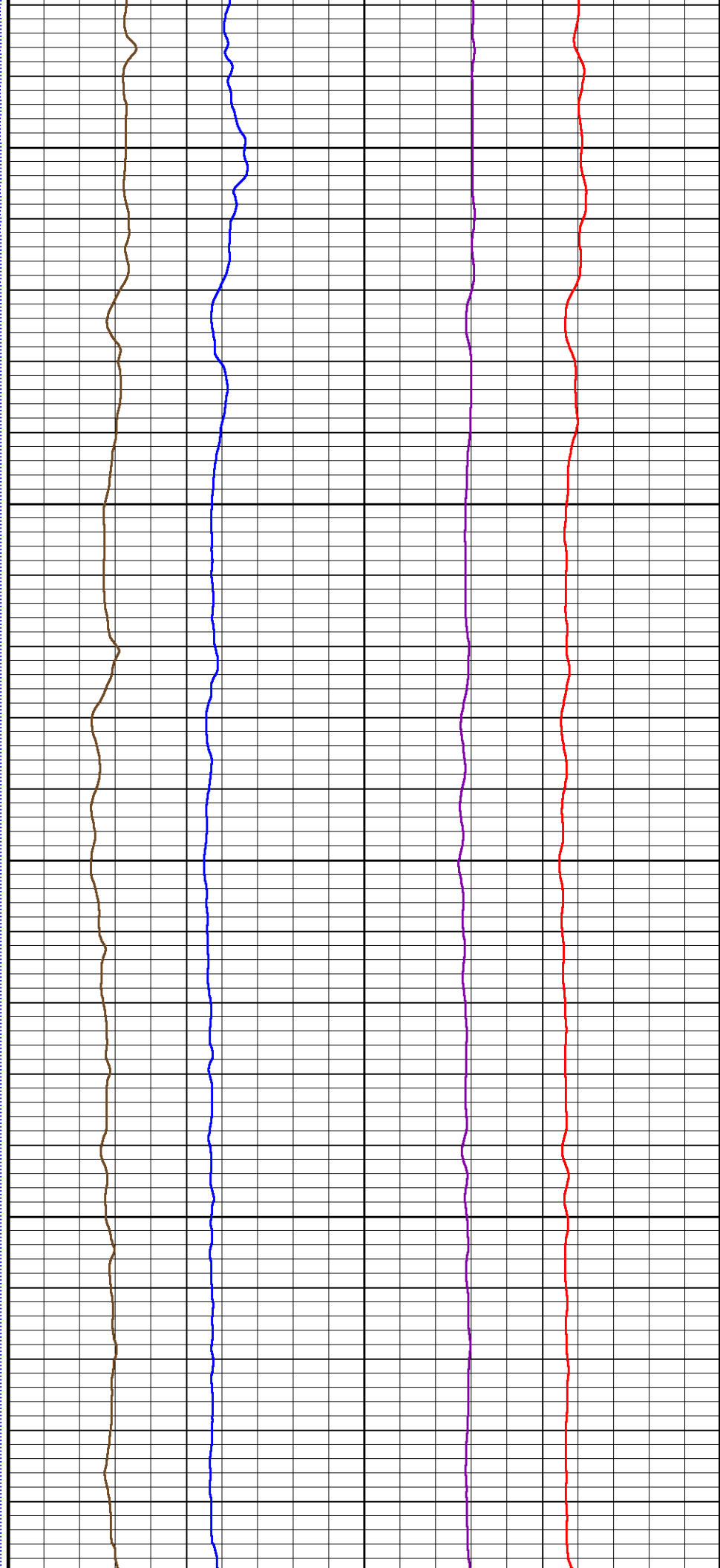
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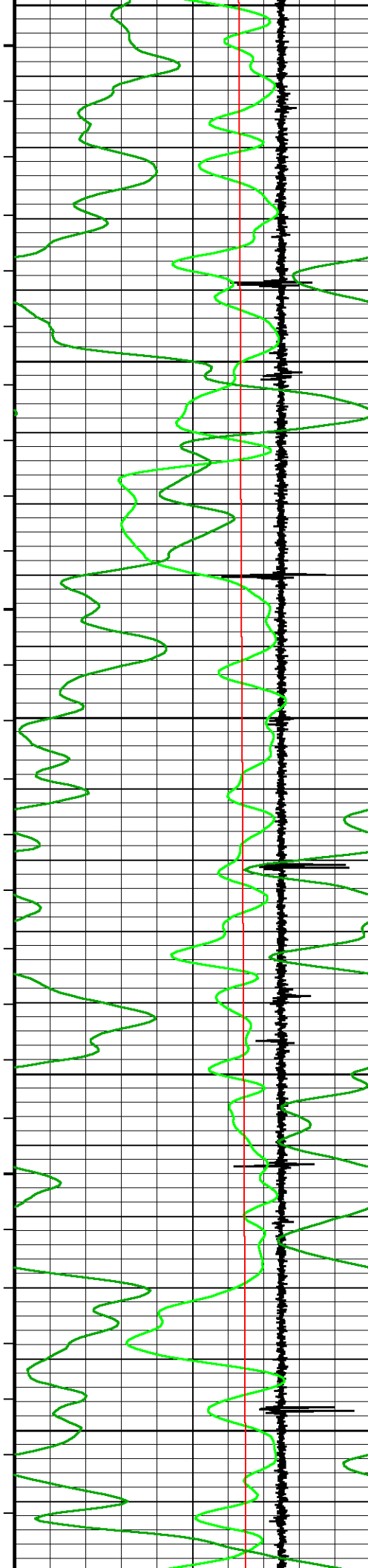
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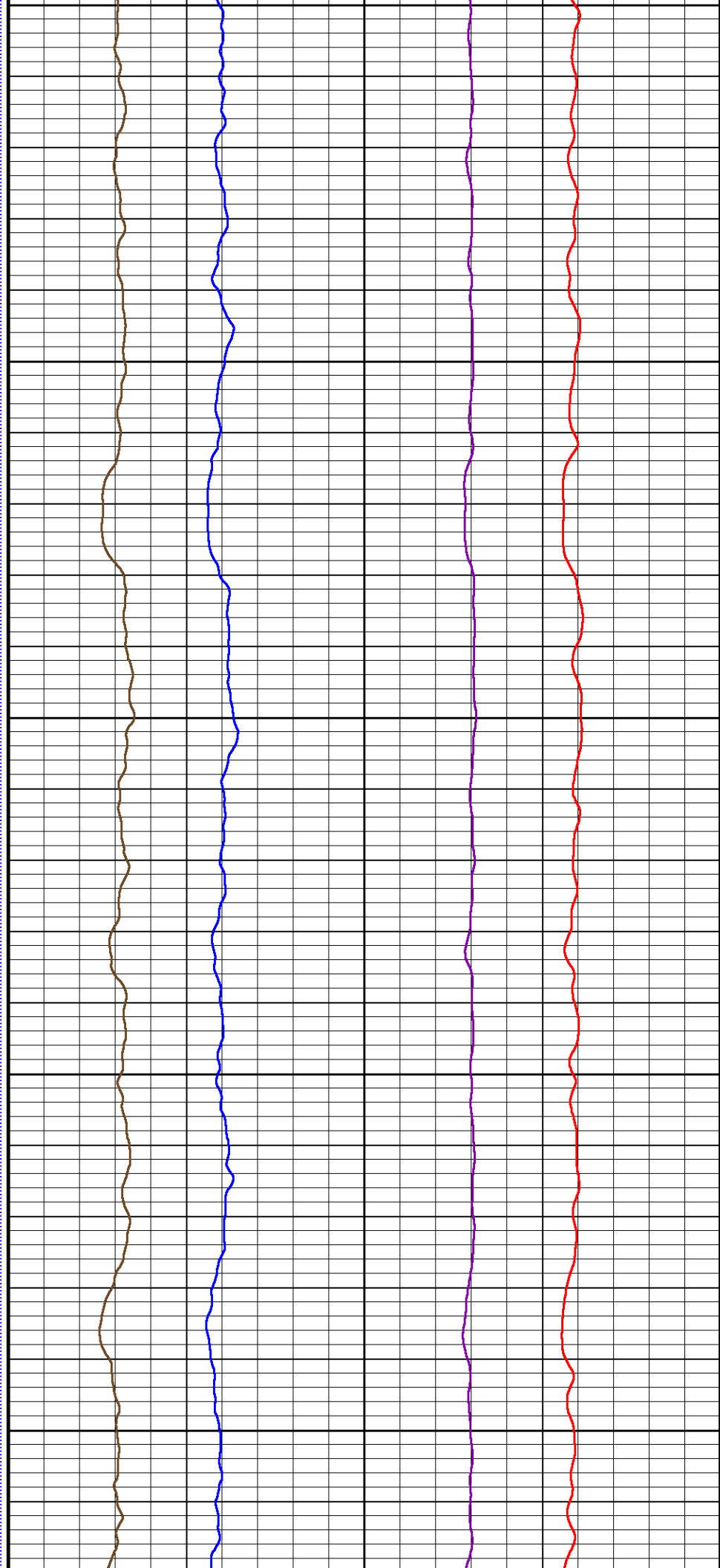
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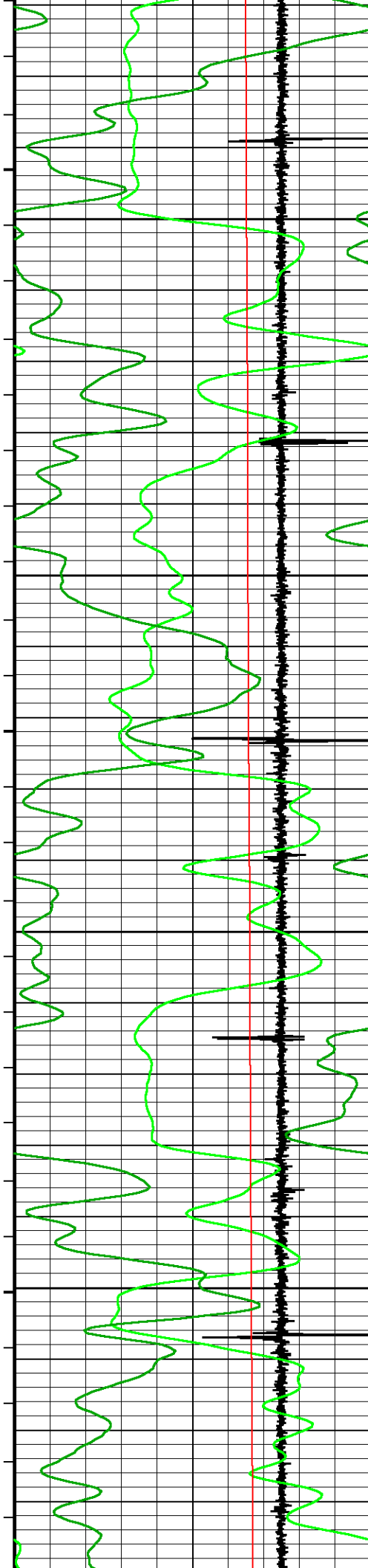
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3500  
3550  
3600  
3650  
3700



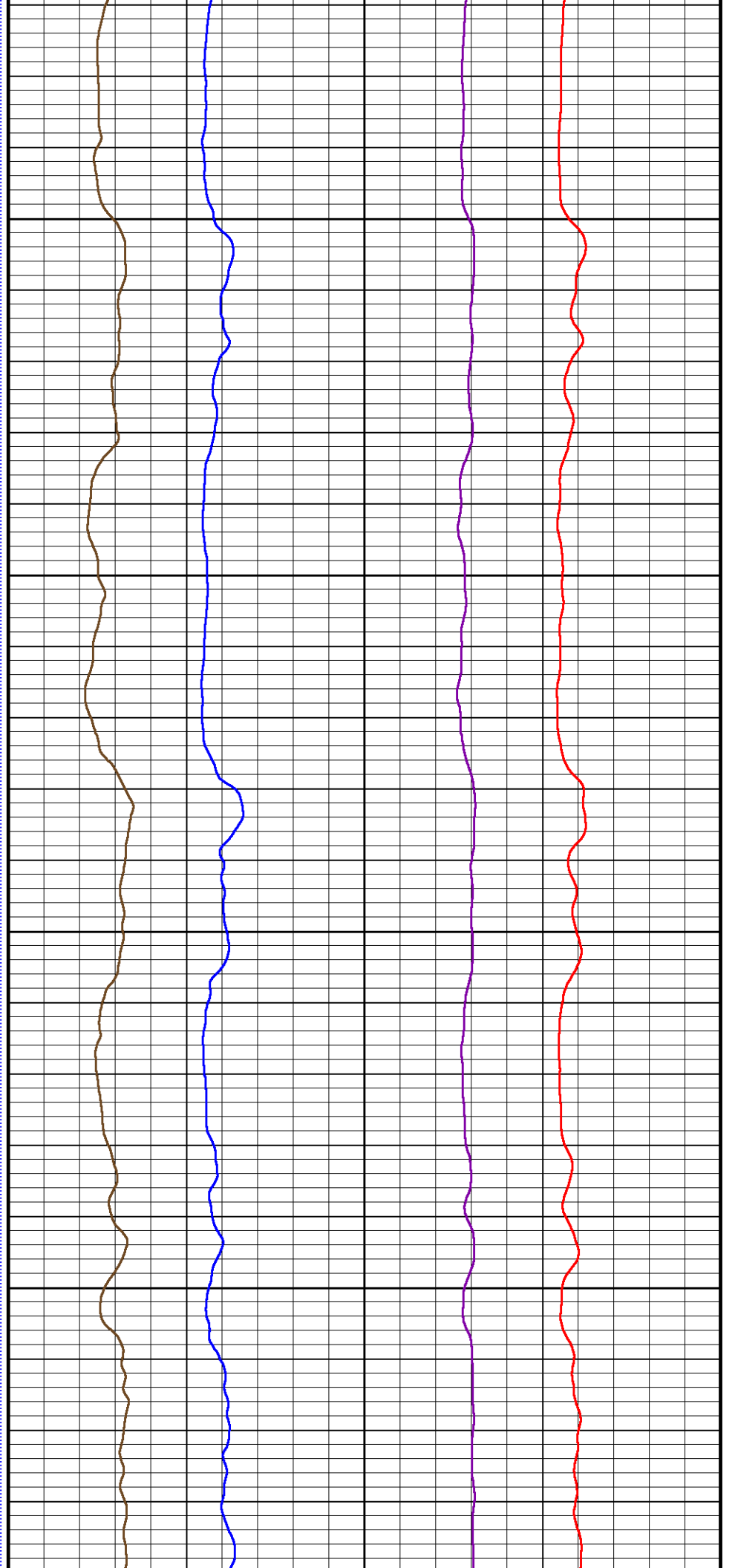


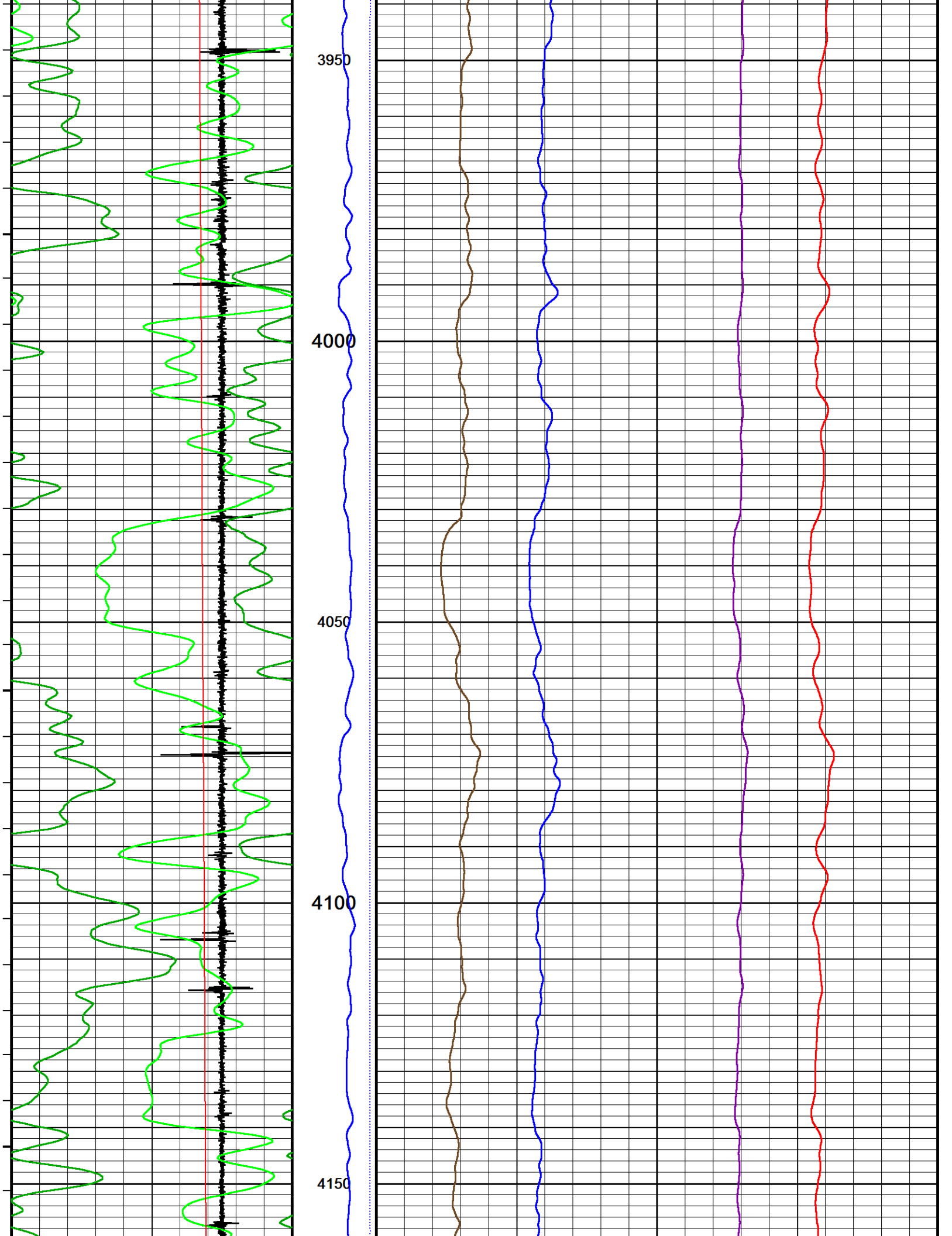
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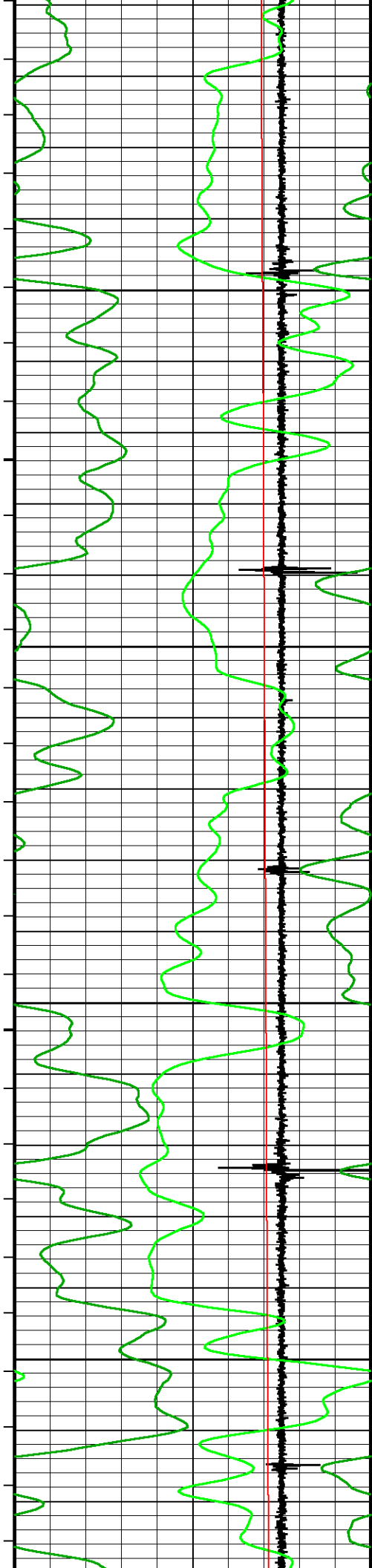
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3850

3900





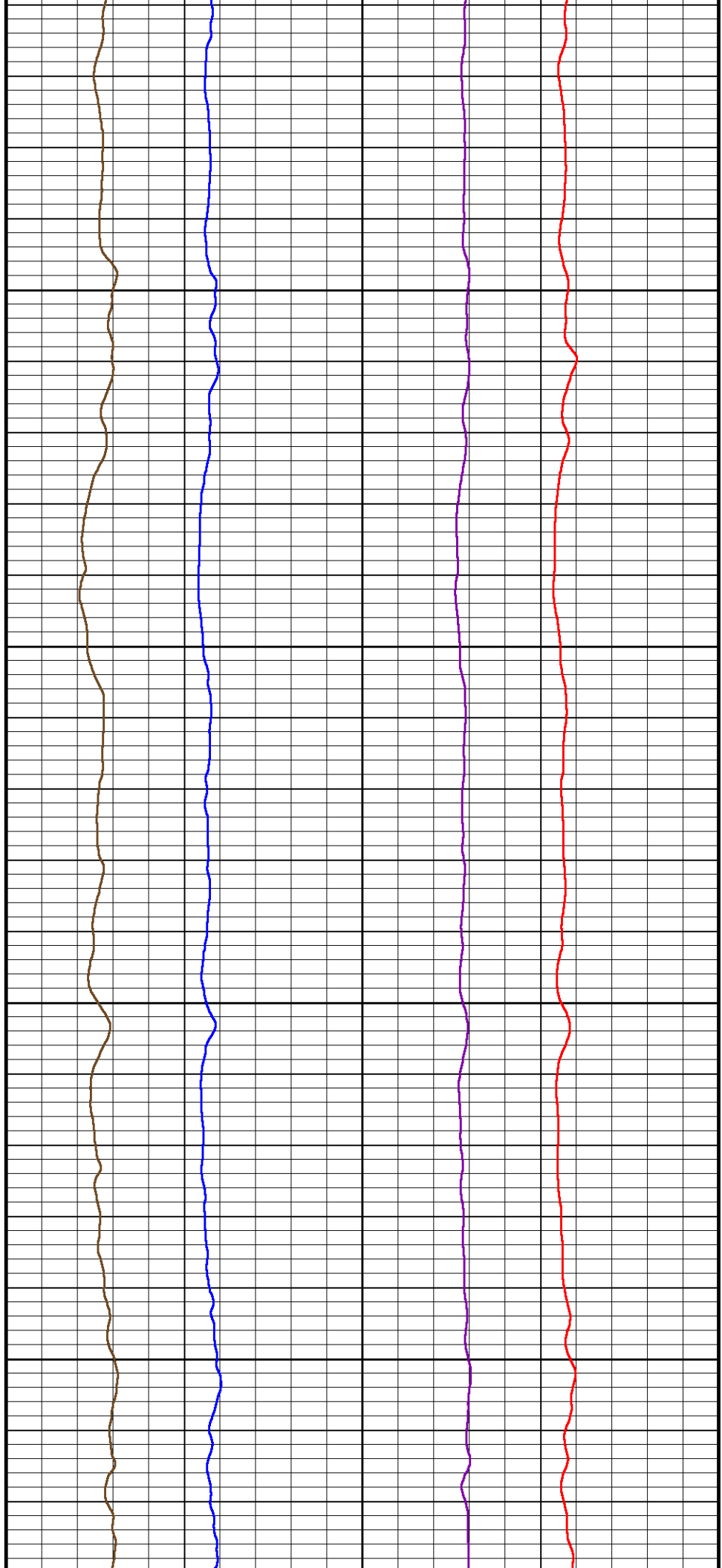


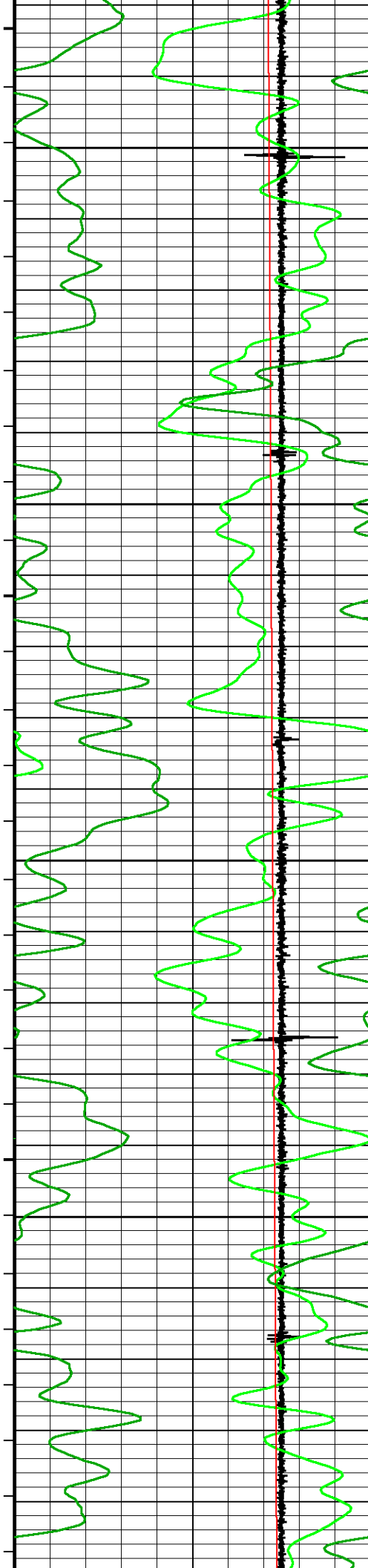
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4250

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4350





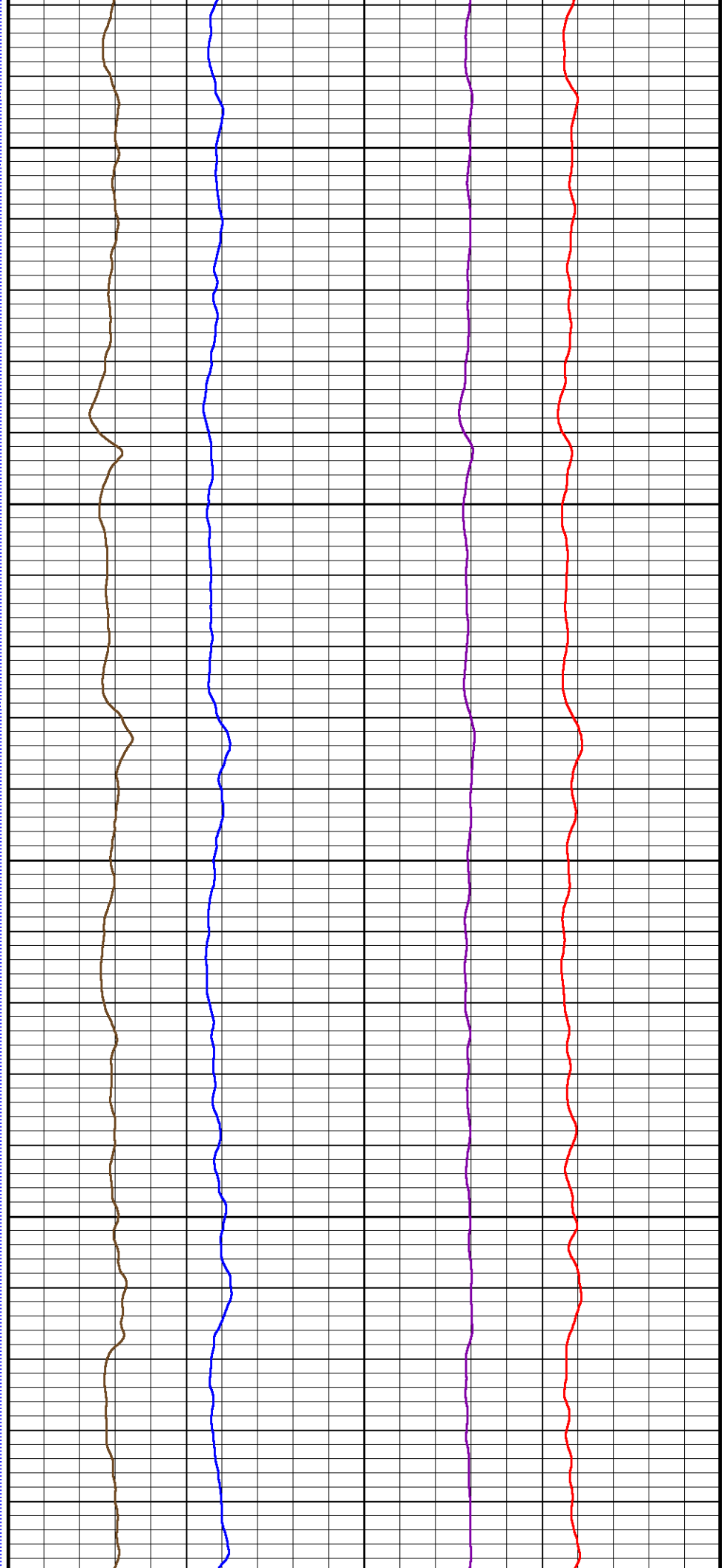
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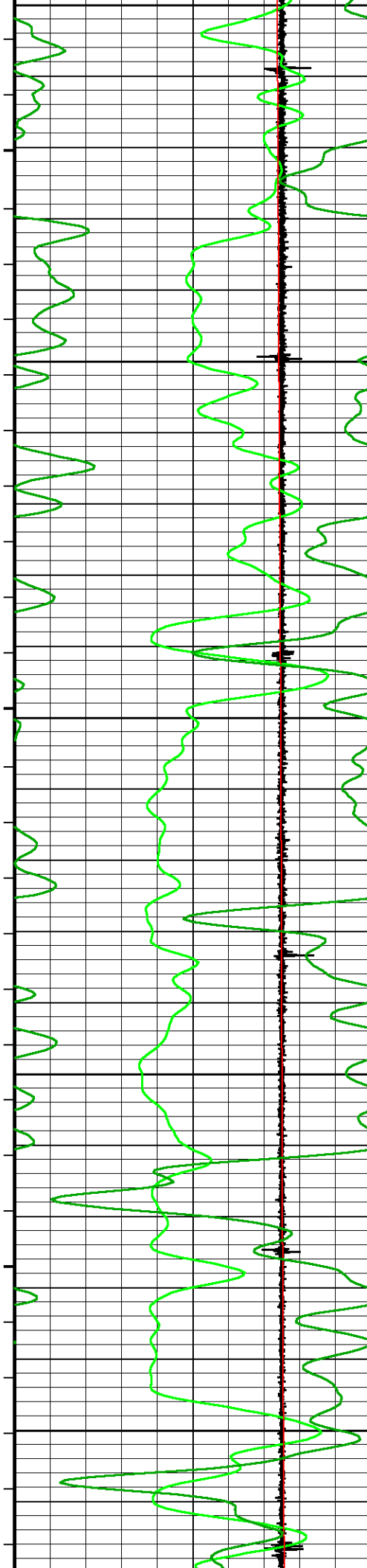
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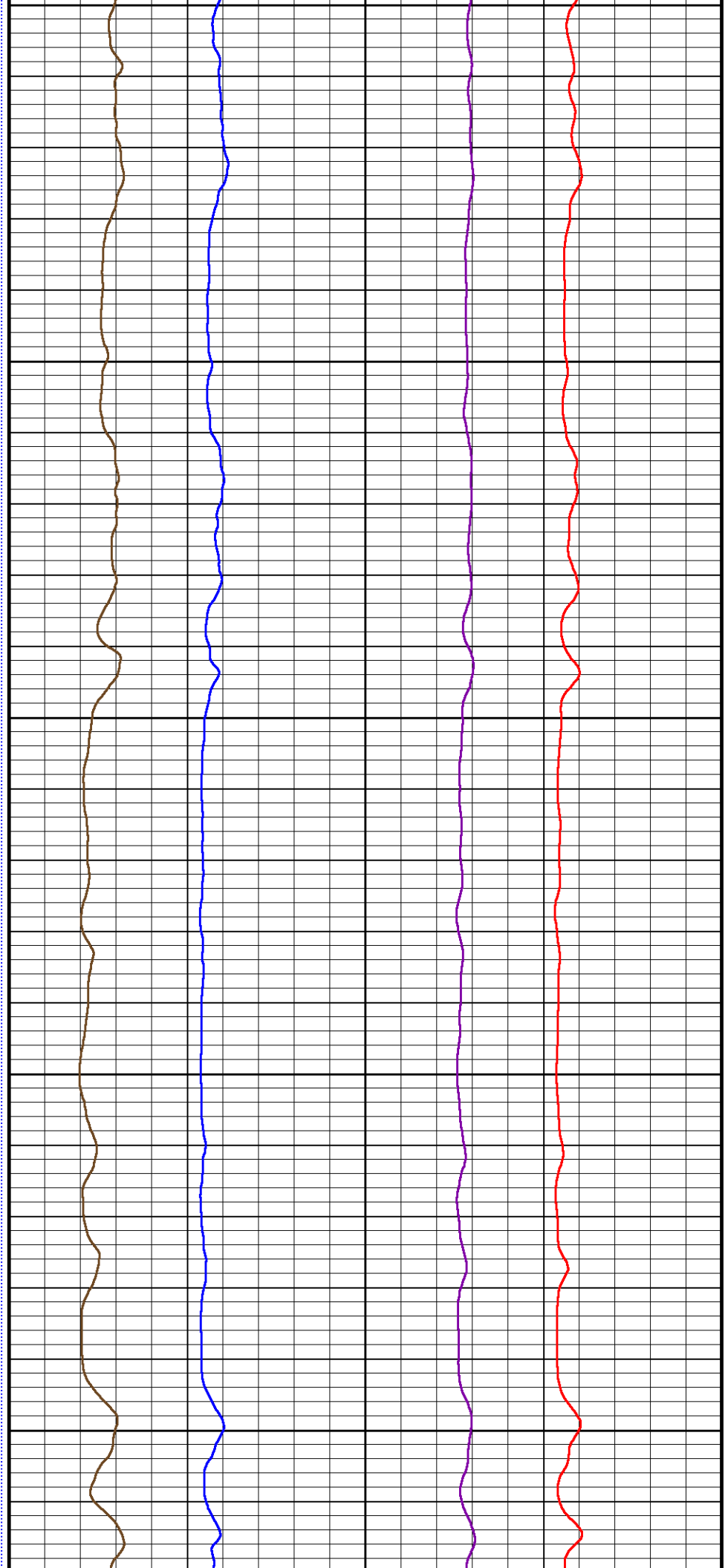
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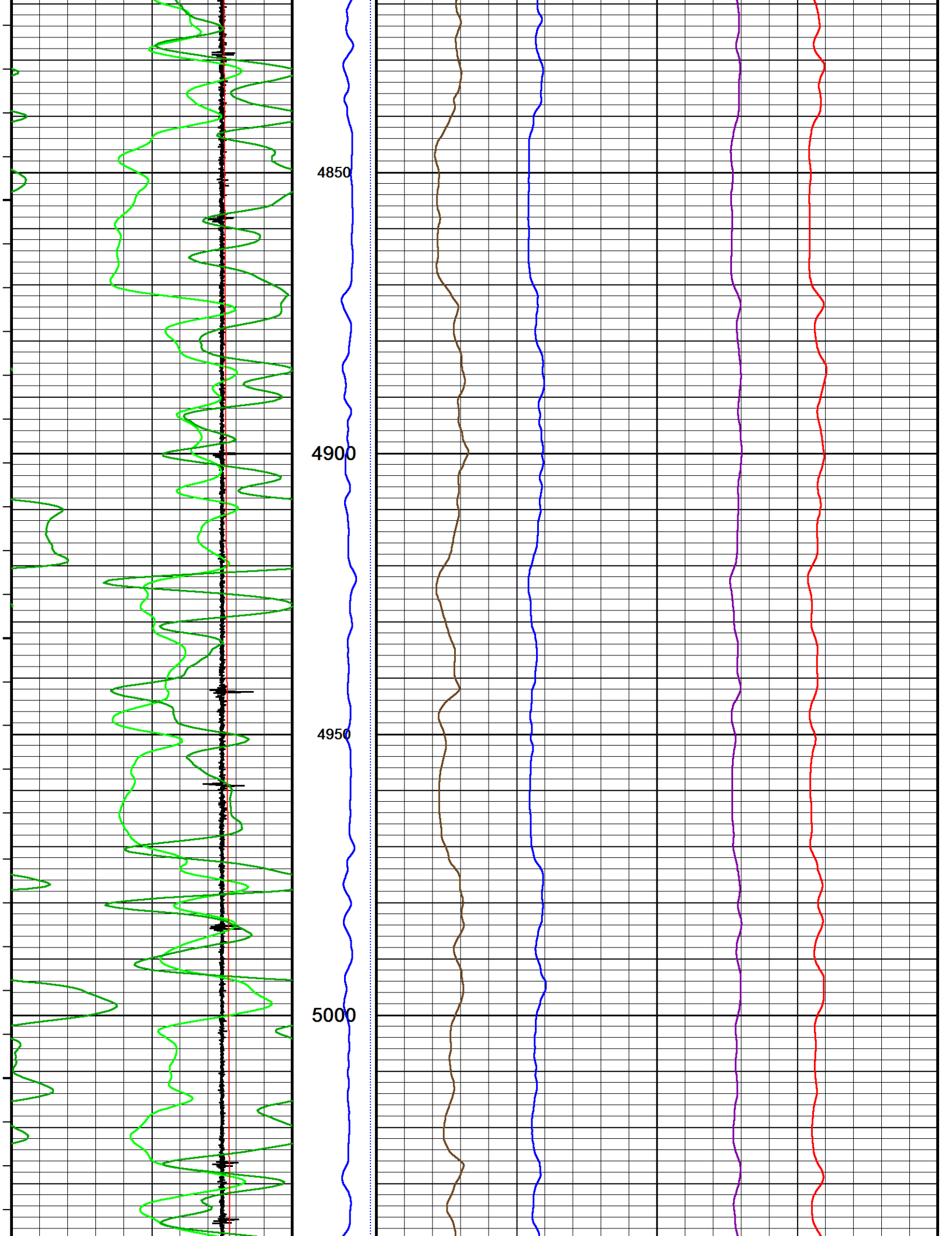


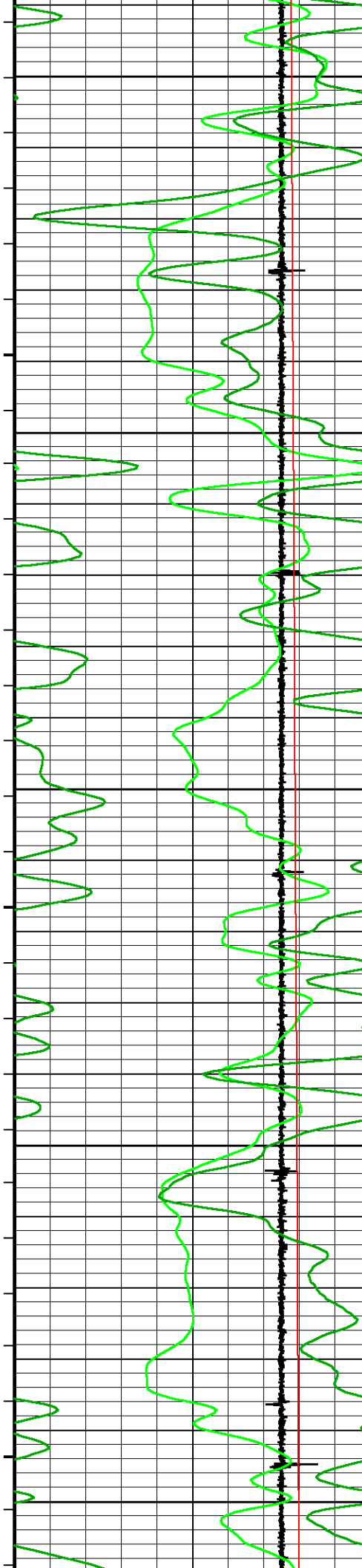


4600  
4650  
4700  
4750  
4800

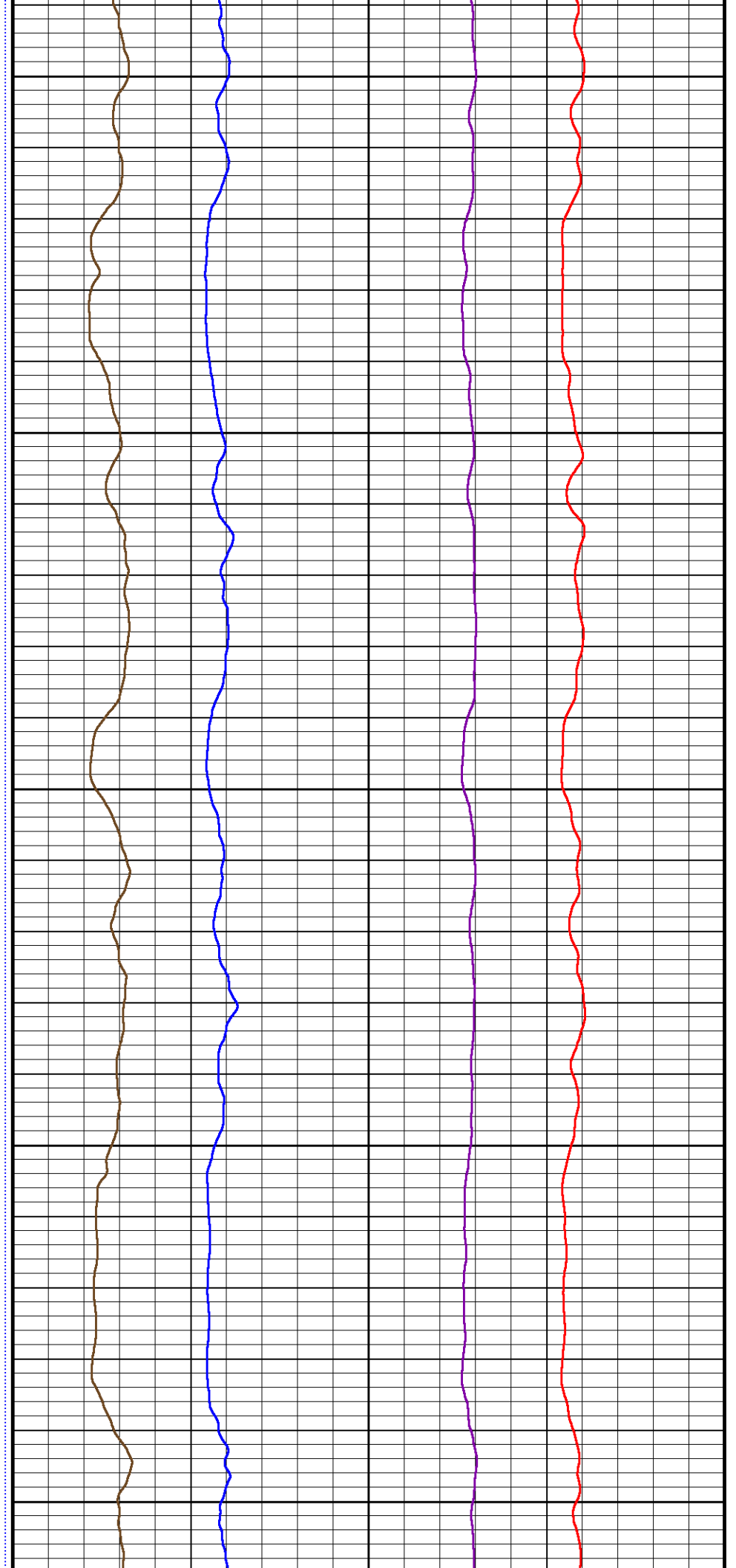


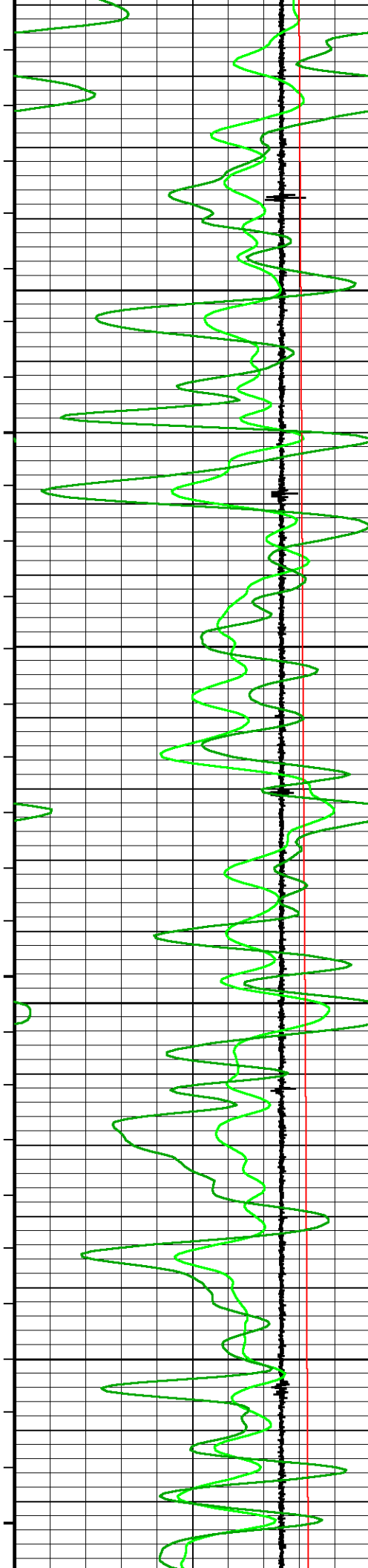






5050  
5100  
5150  
5200  
5250



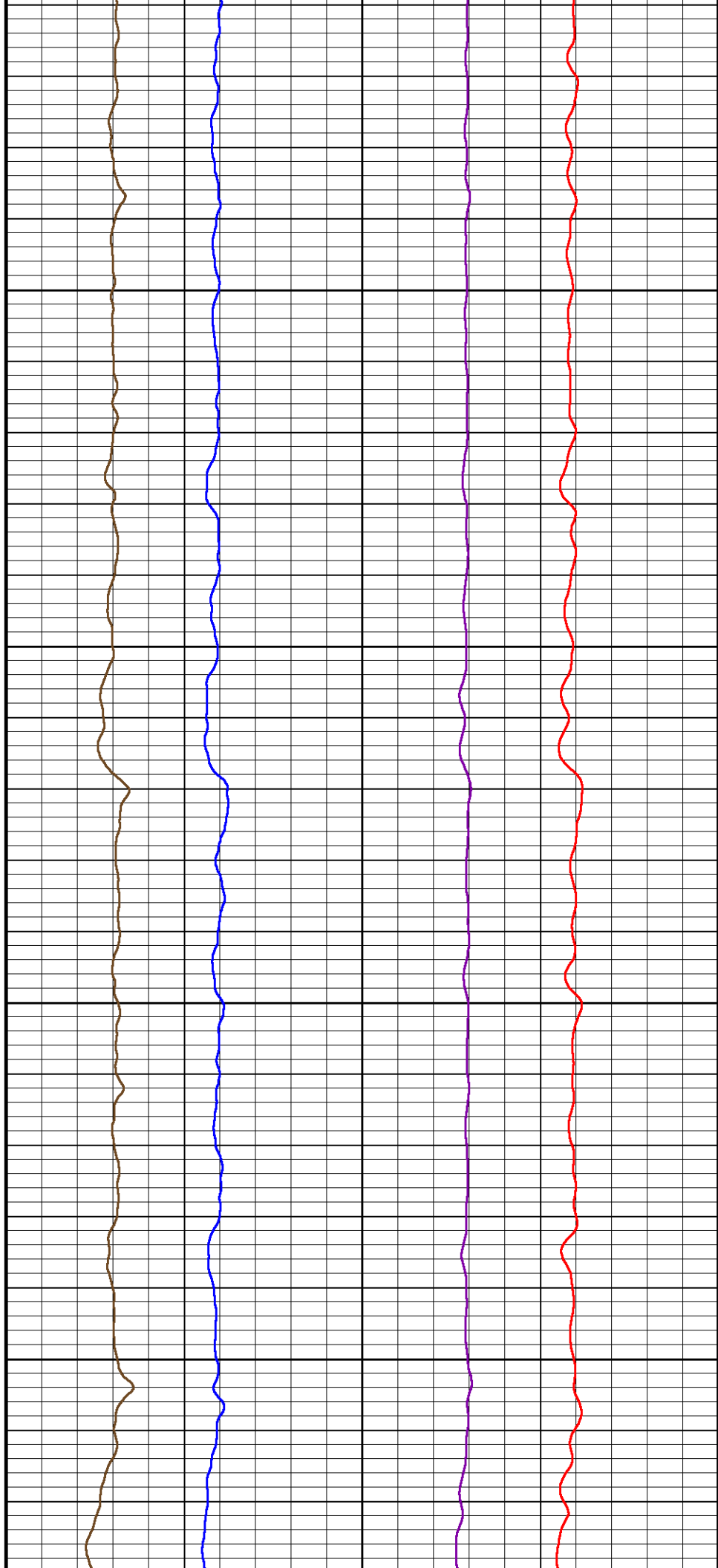


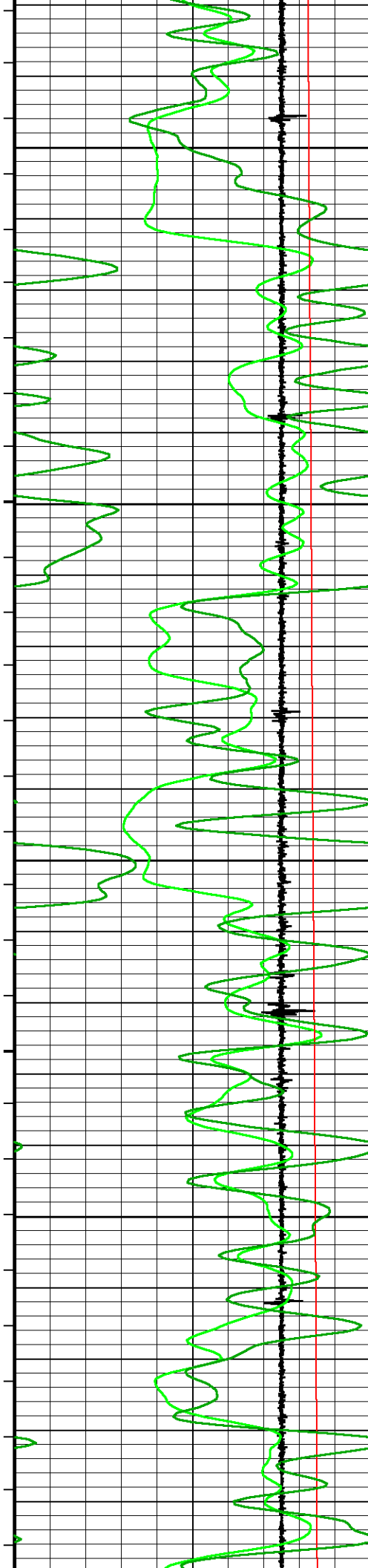
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5350

5400

5450





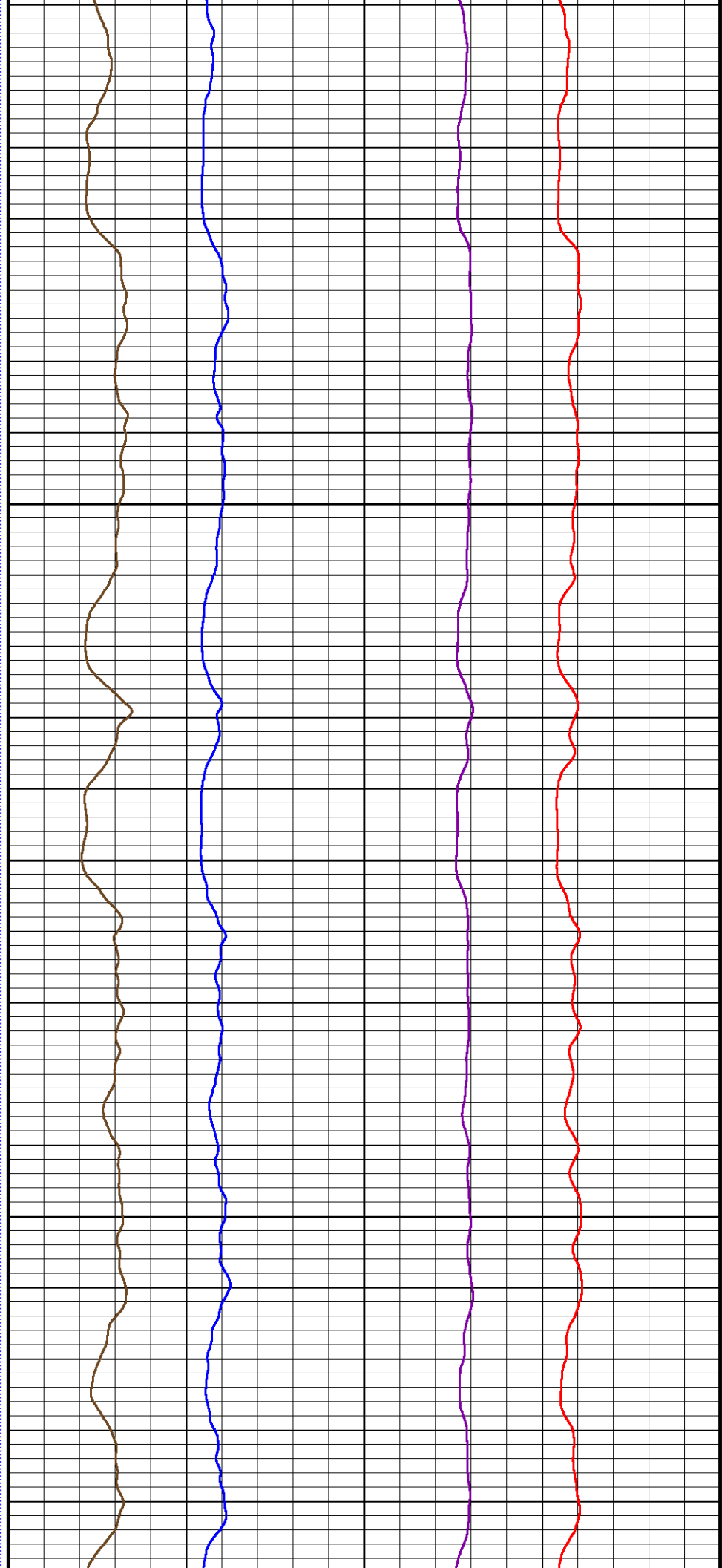
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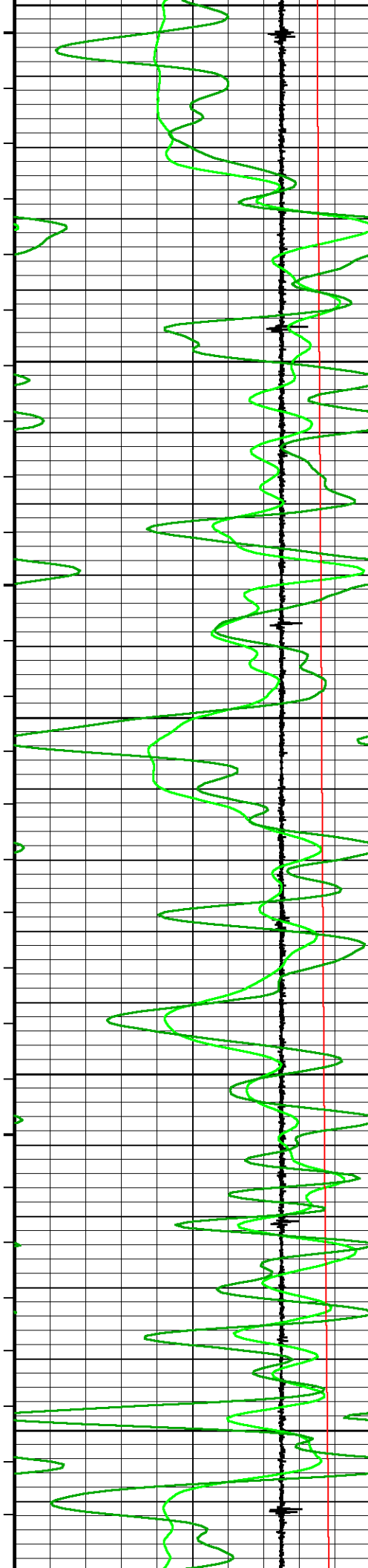
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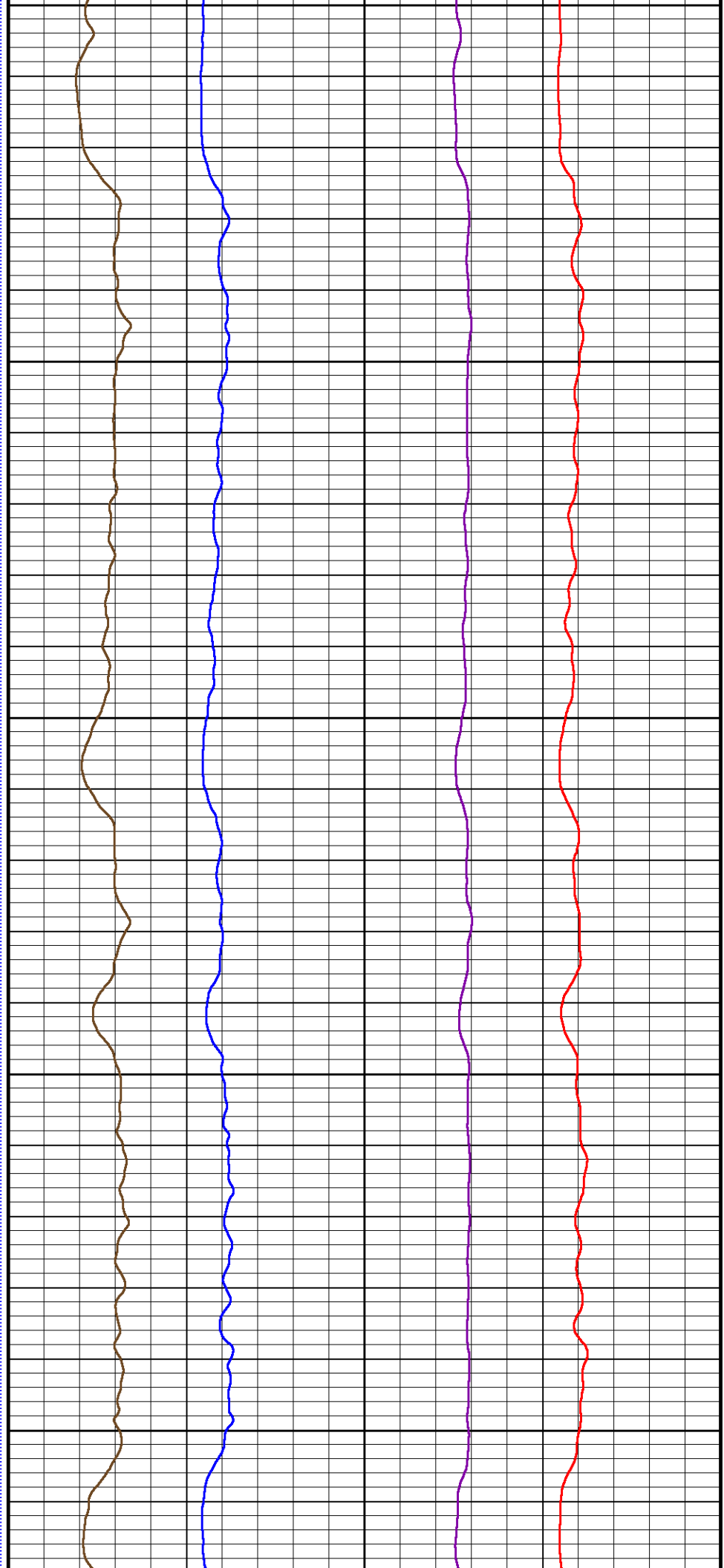
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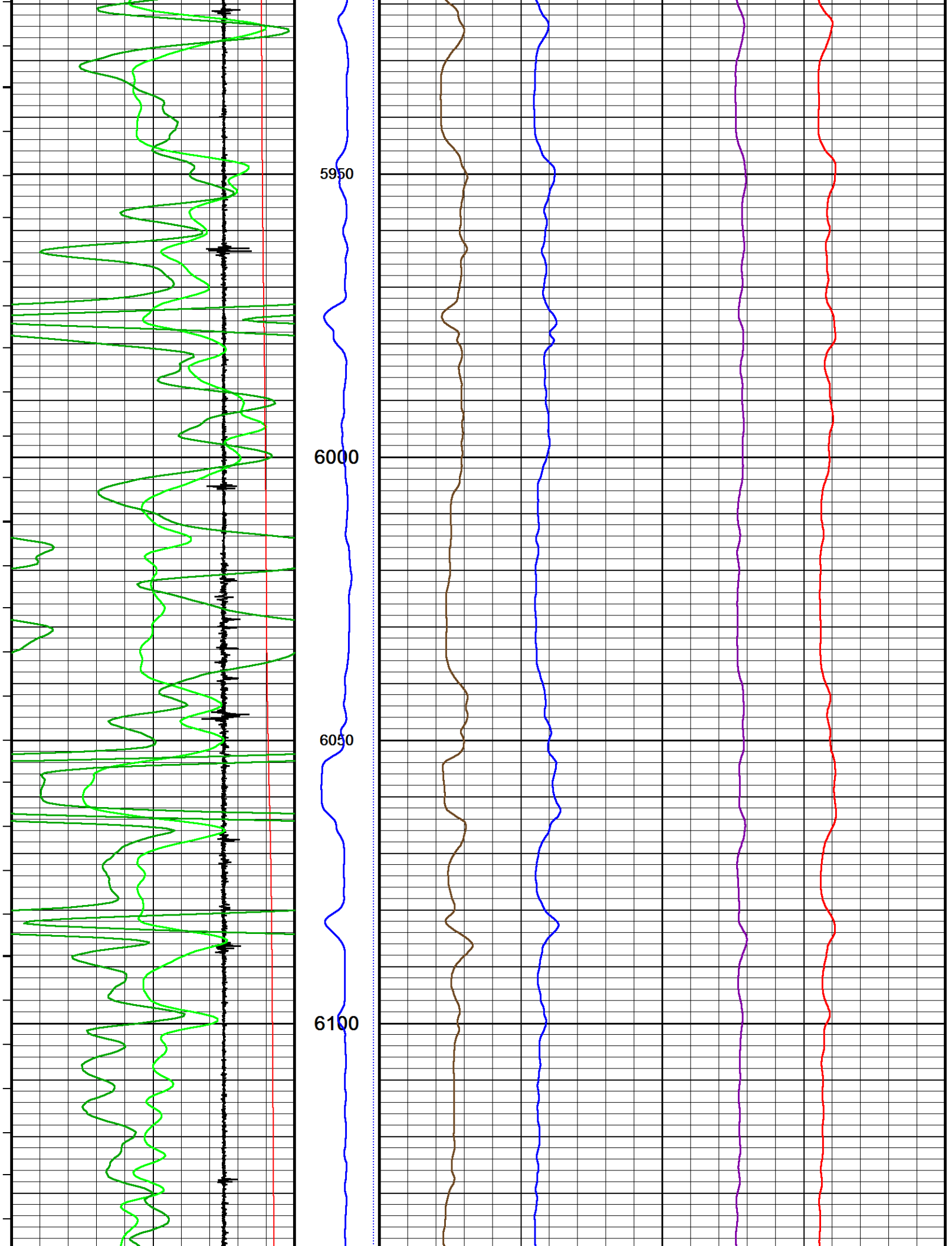
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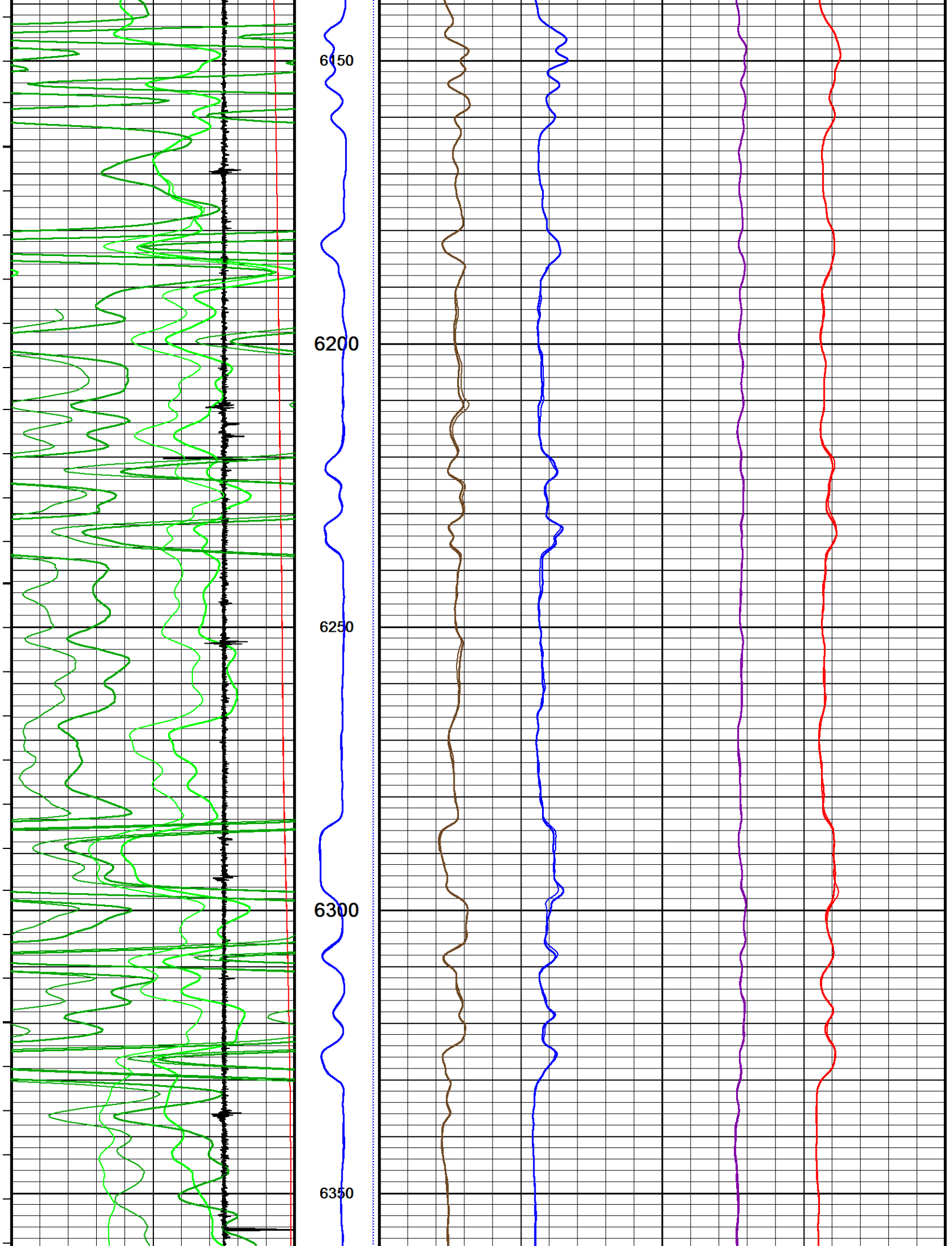


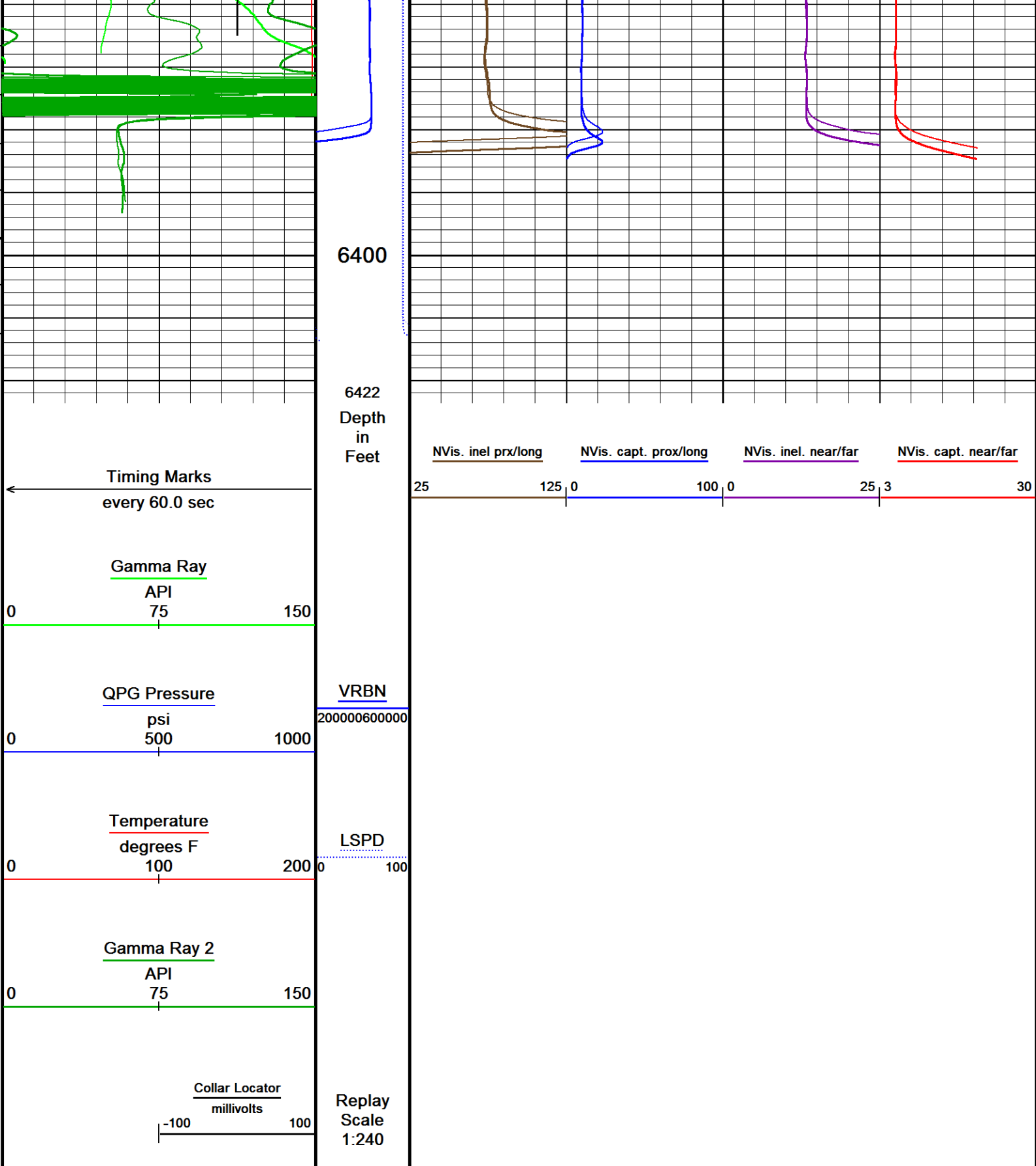


5700 5750 5800 5850 5900









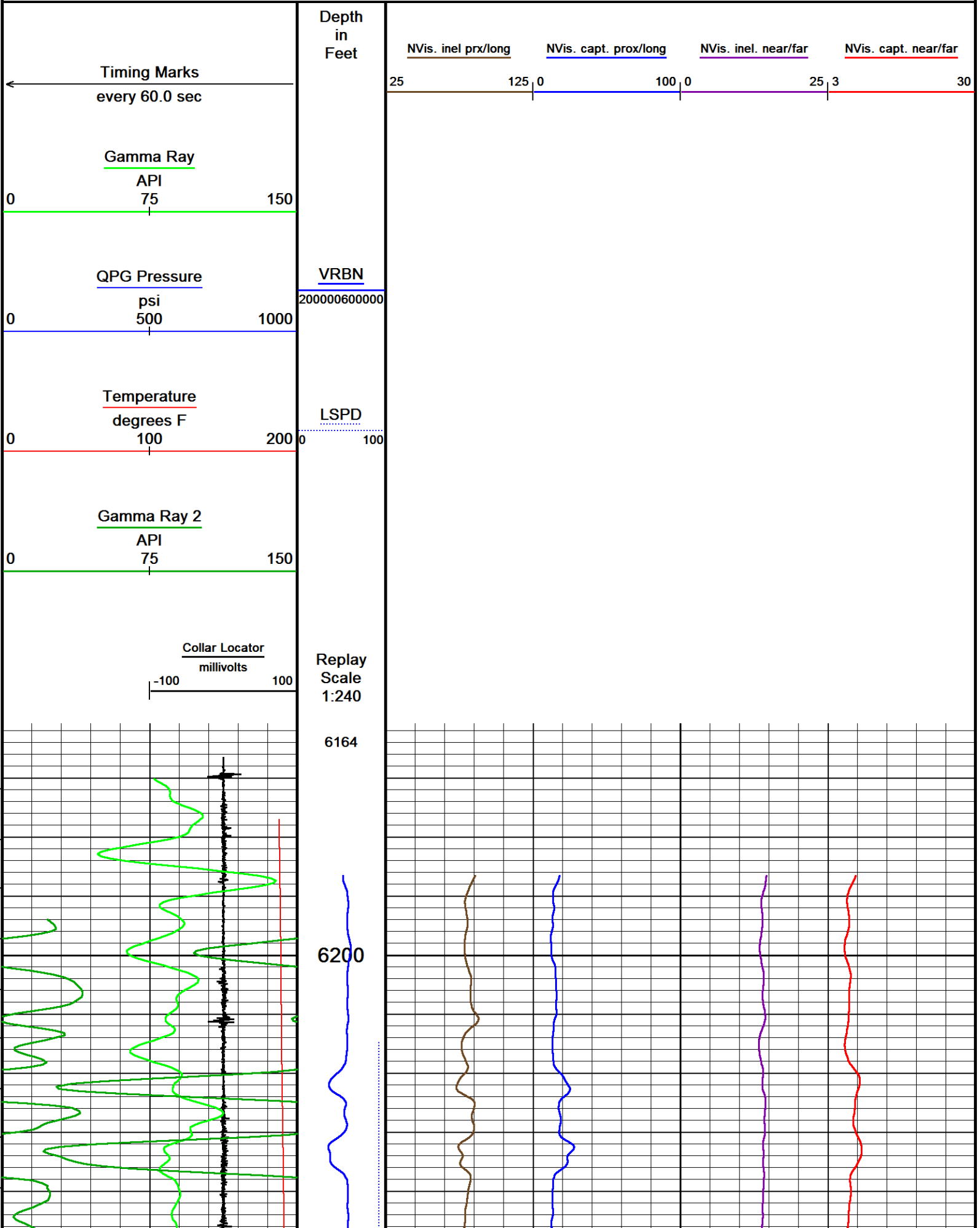
Depth Based Data - Maximum Sampling Increment 12.5cm  
Filename: C:\Logs\URSA\BMC B 41D-13-07-96\BMC B 41D-13-07-96 CREB SSSB MAIN FINAL.dta  
Filename: C:\Logs\URSA\BMC B 41D-13-07-96\BMC B 41D-13-07-96 CREB SSSB REPEAT FINAL.dta  
System Versions: Logged with 17.01.7206 Plotted with 17.01.7206

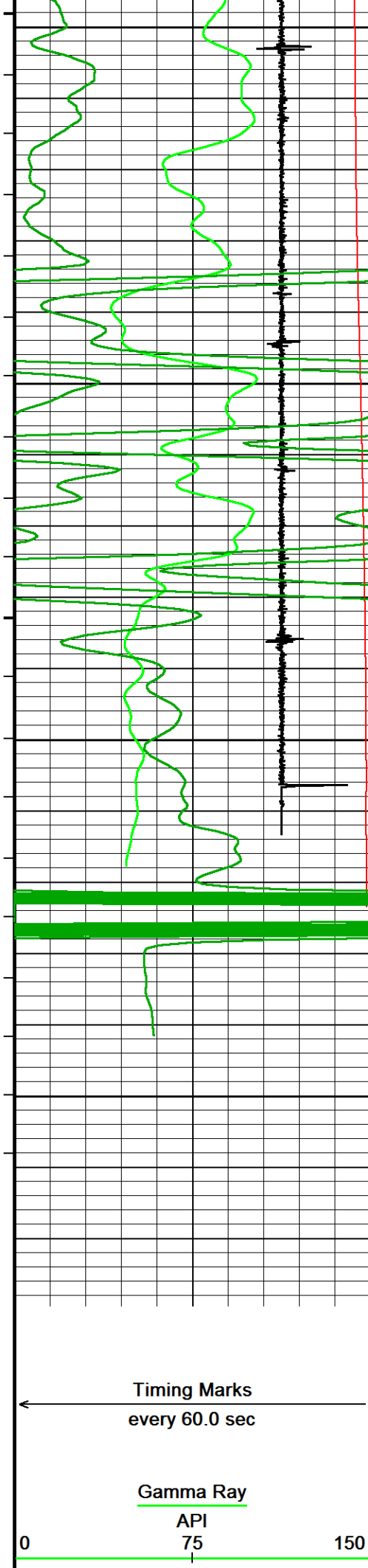
Plotted on 10-SEP-2017 20:07  
Recorded on 10-SEP-2017 17:59  
Recorded on 10-SEP-2017 18:50

↑ MAIN PASS REPEAT PASS ↑

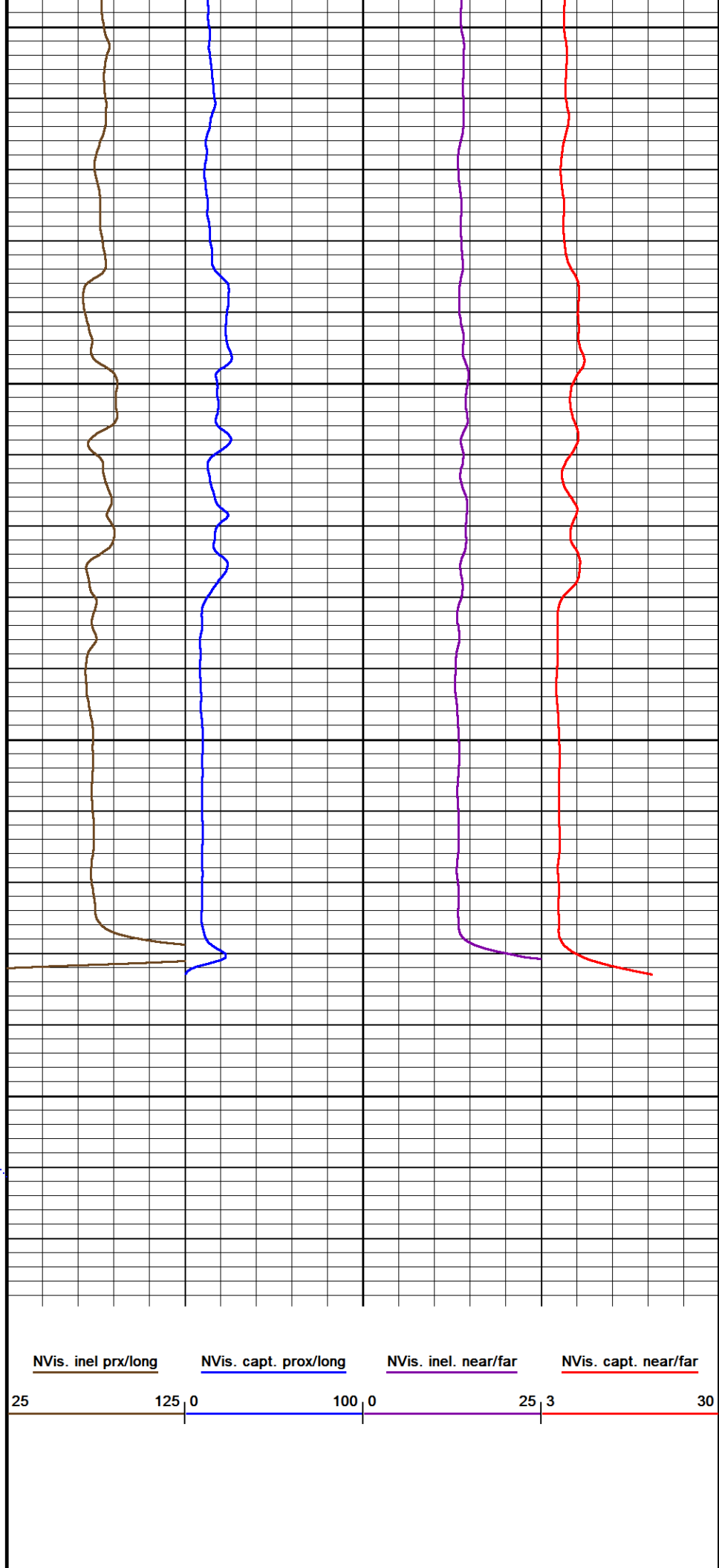
↓ REPEAT PASS ↓

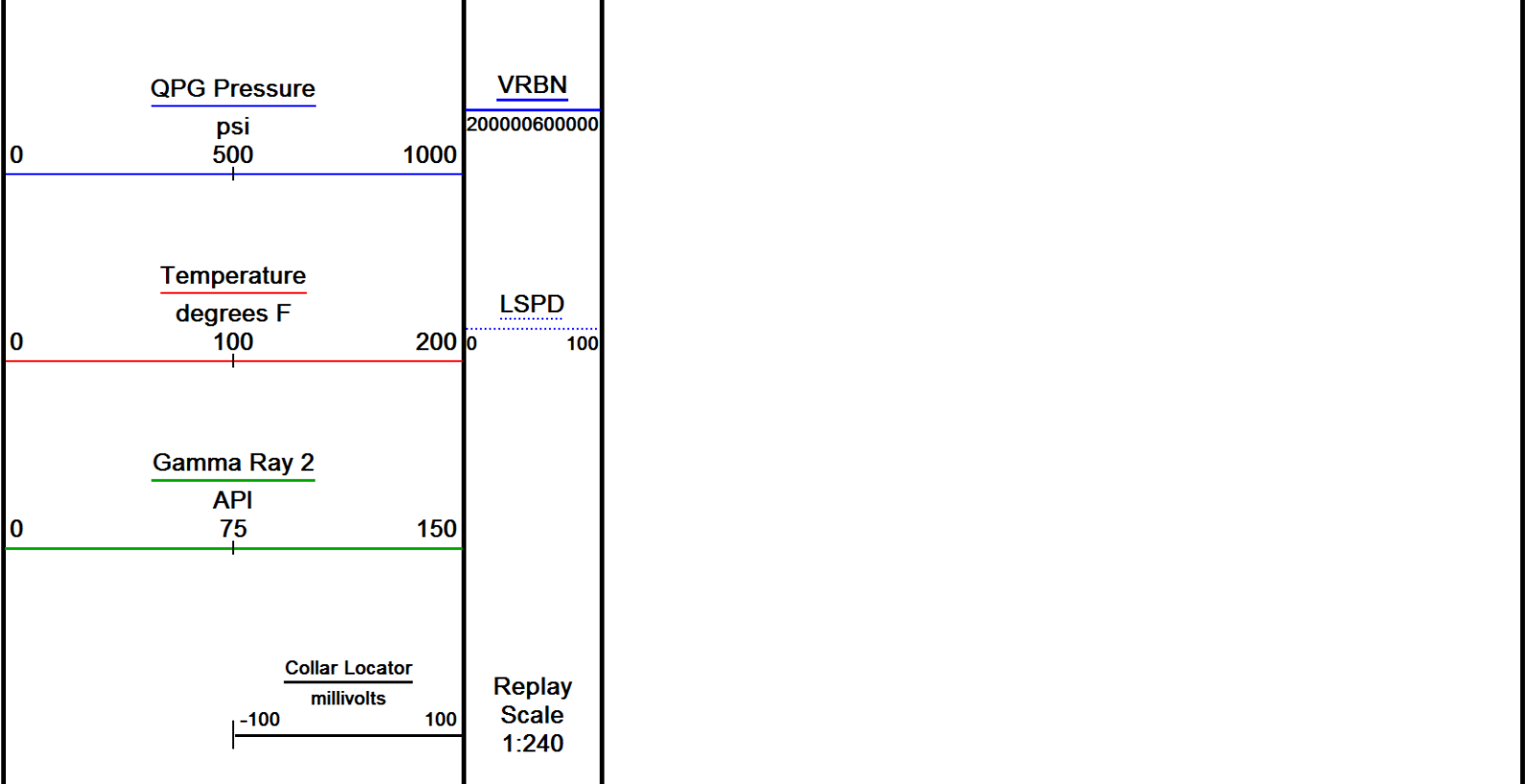






6250  
6300  
6350  
6400  
Depth  
in  
Feet





Depth Based Data - Maximum Sampling Increment 12.5cm Plotted on 10-SEP-2017 20:07  
 Filename: C:\Logs\URSA\BMC B 41D-13-07-96\BMC B 41D-13-07-96 CREB SSSB REPEAT FINAL.dta Recorded on 10-SEP-2017 18:50  
 System Versions: Logged with 17.01.7206 Plotted with 17.01.7206

↑ REPEAT PASS ↑

## DOWNHOLE EQUIPMENT

C:\Logs\URSA\BMC B 41D-13-07-96\BMC B 41D-13-07-96 CREB SSSB MAIN FINAL.dta

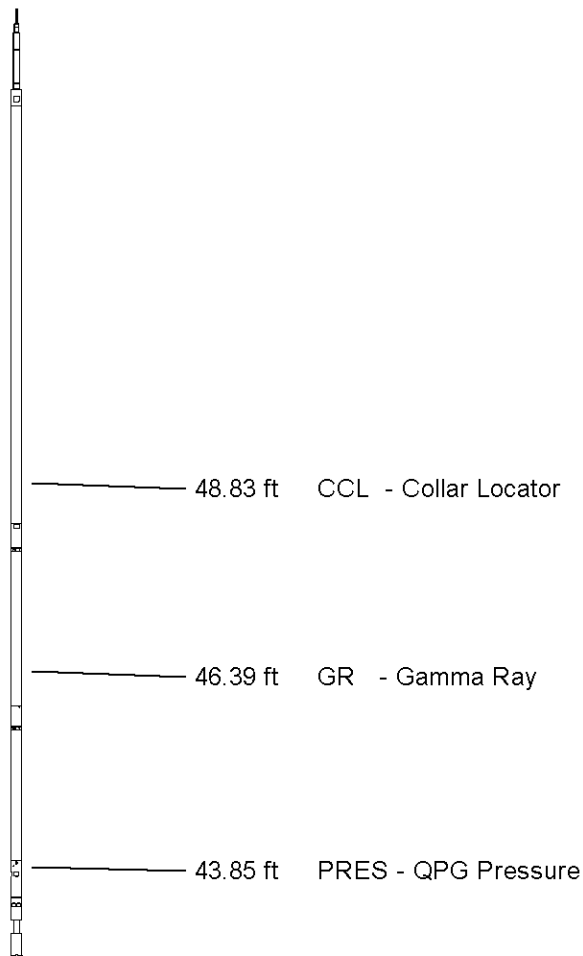
Mono-Cablehead  
 MCH-AA 0 LG: 1.03 ft WT: 2.2 lb OD: 1.457 in

Comm Sub  
 WCC-CB 107 LG: 5.97 ft WT: 24.3 lb OD: 1.693 in

Gamma Ray K  
 UGR-KA 108 LG: 2.34 ft WT: 17.6 lb OD: 1.693 in

Quartz Press, Dual ITB, 43mm  
 QPG-EA 106 LG: 2.23 ft WT: 8.8 lb OD: 1.693 in

Centroller, 43mm, ITB, 3-arm Bi-Direct  
 CR3-BA 138 LG: 2.51 ft WT: 8.8 lb OD: 1.693 in



Tool Temperature, 43mm, 177C, 10-pin ITB  
TMP-NA 138 LG: 1.93 ft WT: 8.8 lb OD: 1.693 in

CRE series II processor section  
CRP-BA 129 LG: 3.31 ft WT: 15.4 lb OD: 1.654 in

Casing Reservoir Evaluation Tool Sonde  
CRM-BA 129 LG: 9.19 ft WT: 46.3 lb OD: 1.693 in

Centroller, 43mm, ITB, 3-arm Bi-Direct  
CR3-BA 105 LG: 2.51 ft WT: 8.8 lb OD: 1.693 in

Gamma Ray K  
UGR-KA 132 LG: 2.34 ft WT: 17.6 lb OD: 1.693 in

SSB Upper Electronics, ITB  
SUE-CA 137 LG: 7.64 ft WT: 26.5 lb OD: 1.654 in



39.48 ft TMPN - Temperature

31.41 ft VC15 - NVis. capt. prox/long  
31.41 ft VB24 - NVis. incl. near/far  
31.41 ft VB15 - NVis. incl prx/long  
31.41 ft VC24 - NVis. capt. near/far  
31.41 ft VRBN - VRBN

22.38 ft GR2 - Gamma Ray 2

SSB Receiver Sonde  
SSS-BA 117 LG: 8.76 ft WT: 30.9 lb OD: 1.693 in

SSB Transmitter Section  
STE-BA 129 LG: 2.64 ft WT: 17.6 lb OD: 1.654 in

Centralizer, 35mm, ITB, uni-directional  
CEN-LA 370 LG: 2.60 ft WT: 8.8 lb OD: 1.380 in

Total Length: 54.99 ft Weight: 242.5 lb



Tool Zero (0.00ft from bottom)

All measurements relative to tool zero.

## SHOP AND FIELD CALIBRATIONS

C:\Logs\URSA\BMC B 41D-13-07-96\BMC B 41D-13-07-96 CREB SSSB MAIN FINAL.dta

WCC Shop calibration WCC-CB 107

Calibration on 00-JAN-1988 00:00

Tension Compression Shop calibration

Tool Type: WCC-CB

Serial No: 107

	standard	+1G Measured	standard	-1G Measured
X Acc	1.000 G	3675.0 mv	-1.000 G	1288.0 mv
Y Acc	1.000 G	3700.0 mv	-1.000 G	1286.0 mv
Z Acc	1.000 G	3721.0 mv	-1.000 G	1313.0 mv

UGK Before Survey Cal UGR-KA 108

Field calibration on 15-AUG-2017 11:53

Gamma Ray Before Survey calibration

Tool Type: UGR-KA

Serial No: 108

Tool Type: QGK KA  
Calibrator No: 101

Serial No: 108

Background	Calibrator	Standard	Units
46.3	786.0	470.2	API
Delta Counts Per Sec: 739.7		CPS/API = 1.573	

QPG Master Calibration QPG-EA 106

Gauge

Serial Number220928

Calibration Date15 Sep 2012

Gauge TypeQHB108-16-177

Base Check Date

Max Pressure16000 PSI

Max Temperature177 Deg C

Min Pressure13 PSI

Min Temperature25 Deg C

Pressure

Pressure polynomial order3

Temperature polynomial order3

T0

T1

T2

T3

T4

P0

13.6402

-0.585455

-0.0197893

9.3116e-006

P1

9.3116e-006

42.1819

-0.0208838

2.62627e-005

P2

2.62627e-005

-5.38063e-008

-0.00199429

8.64228e-006

P3

8.64228e-006

-3.99023e-008

3.69856e-011

6.96299e-007

P4

Temperature

Temperature polynomial order3

T0

T1

T2

T3

T4

25.2302

-0.731527

-0.000858522

-6.86634e-007

Temperature Tool Shop survey calibration TMP-NA 138	
Temperature Tool Shop survey calibration	
Tool Type: TMP-NA	Serial No: 138

calibration		
Standard		Measured
32	DEGF	36714 Hz
212	DEGF	50840 Hz

UGK Before Survey Cal UGR-KA 132

Field Calibration on 15-AUG-2017 12:40

Gamma Ray Before Survey Calibration

Tool Type: UGR-KA  
Calibrator No: 101

Serial No: 132

Background Calibrator Standard Units

42.6 812.4 470.2 API

Delta Counts Per Sec: 769.8 CPS/API = 1.637

SSBC Field Calibration SSS-BA 117

Field Calibration on 08-SEP-2017 15:24

Slim Sector Bond Field Calibration

Tool Type SSS-BA Serial No 117


Sensor	Description	Standard	Measured
AMP 3FT	100% Bond	1.00	2.90
	Free Pipe	81.00	1841.20
AMP 5FT	100% Bond	0.40	0.90
	Free Pipe	54.00	1616.20
1 SECTOR AMP	100% Bond	5.00	4.20
	Free Pipe	95.00	519.00
2 SECTOR AMP	100% Bond	5.00	6.70
	Free Pipe	95.00	582.00
3 SECTOR AMP	100% Bond	5.00	0.30
	Free Pipe	95.00	456.30
4 SECTOR AMP	100% Bond	5.00	1.70
	Free Pipe	95.00	334.20
5 SECTOR AMP	100% Bond	5.00	0.00
	Free Pipe	95.00	309.80
6 SECTOR AMP	100% Bond	5.00	0.30
	Free Pipe	95.00	434.00

SSBC Constants SSS-BA 117

Last Edited on 00-JAN-1988 00:00

Min Ampl 100% Bond	3.63 MV
Max Ampl 0% Bond	81.03 MV
Casing Size	4.50 IN
Casing Weight	11.6 LB/F
3' TT Correction	0.0 US
DT Fluid	200.0 US/F
Fast Formation TT	38.5 US/F
Cement Cmpn Strength	580 PST

Cement Comp. Strength	5000 PSI
Casing Velocity	57.00 US/F
Maximum Attenuation	12.00 DB/F
SMS Constants    SMS-A 0	
Last Edited on 00-JAN-1988 00:00	
Cement Weight	0.00 LB/G
Cement Weight	0.00 LB/G

COMPANY	URSA OPERATING COMPANY				
WELL	BMC B 41D-13-07-96				
FIELD	WILDCAT				
PROVINCE/COUNTY	GARFIELD				
COUNTRY/STATE	USA / COLORADO				
Elevation Kelly Bushing	5117	feet	Bottom Log Interval	6823.00	feet
Elevation Drill Floor	5117	feet	Depth Driller	6823.00	feet
Elevation Ground Level	5100	feet	Depth Logger	6414.00	feet
<div> <b>Weatherford</b><sup>®</sup></div> <div>RAPTOR NVISION LOG</div>					