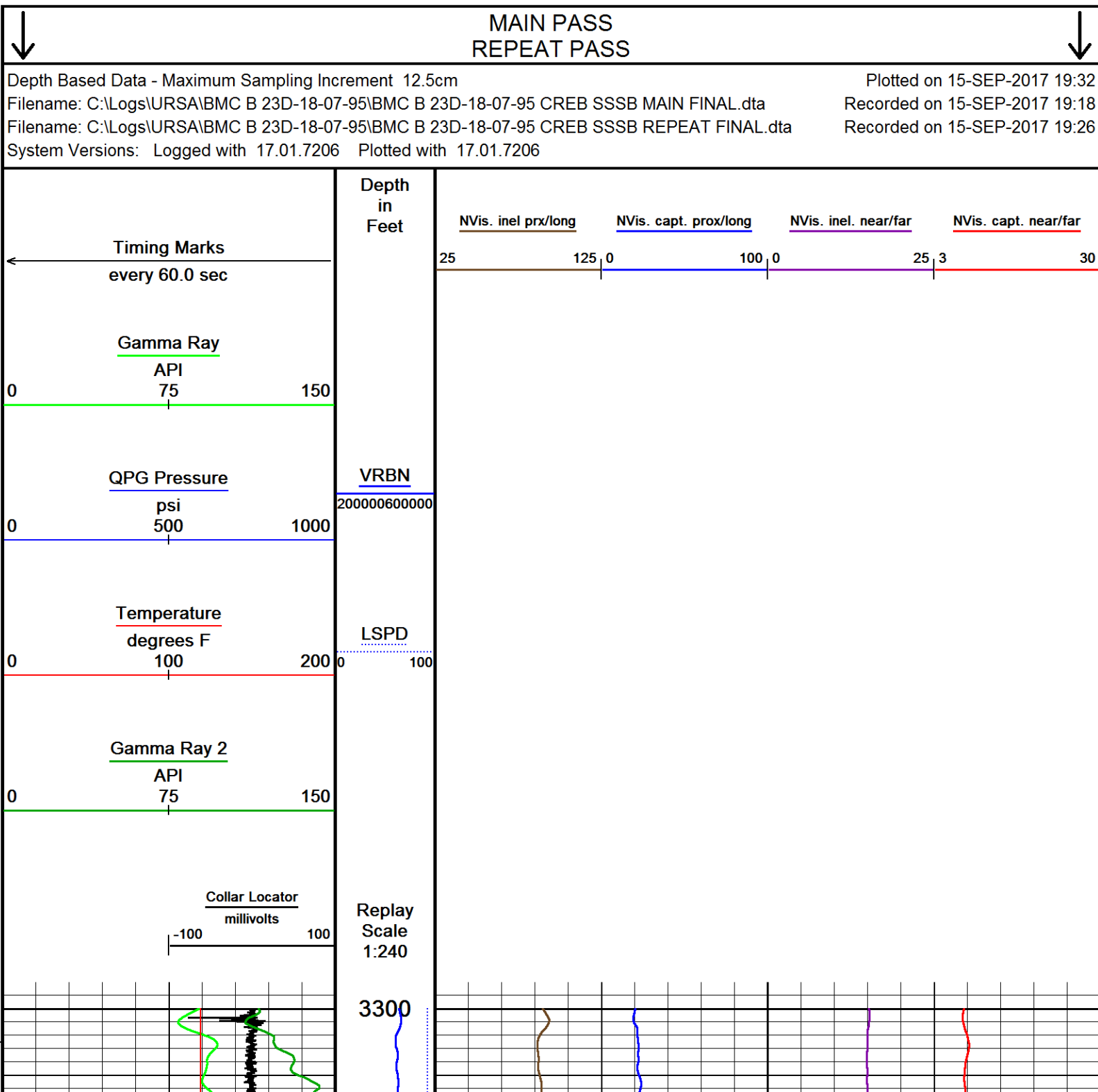
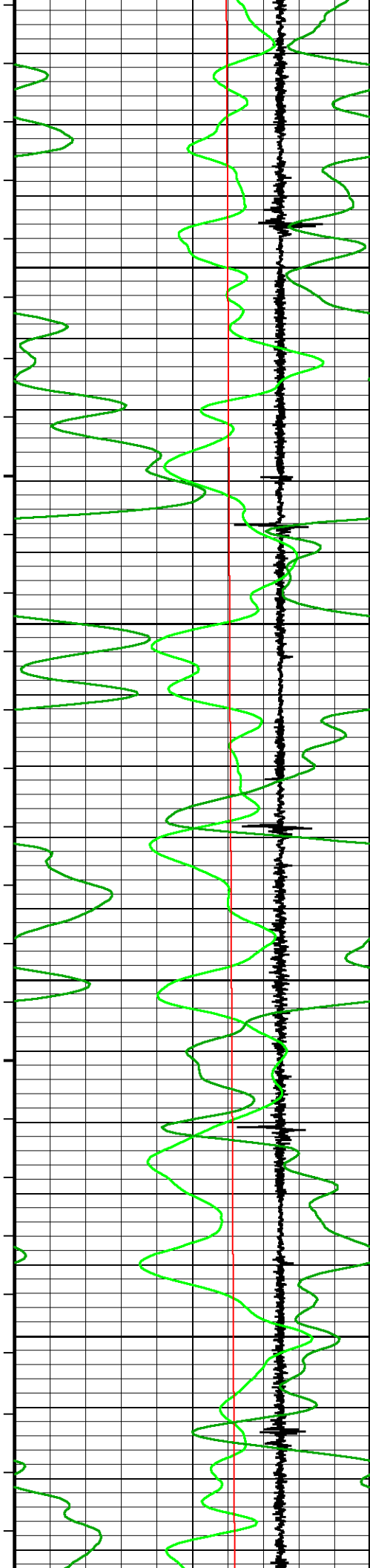
										RAPTOR NVISION LOG									
COMPANY										URSA OPERATING COMPANY									
WELL										BMC B 23D-18-07-95									
FIELD										WILDCAT									
PROVINCE/COUNTY										GARFIELD									
COUNTRY/STATE										USA / COLORADO									
LOCATION										2261' FNL & 0623' FWL									
SEC 18		TWP 7S		RGE 95W		Other Services						Elevations: feet KB 5117.00 DF 5117.00 GL 5100.00							
Latitude		SSSB																	
Longitude																			
API Number		05-045-23318																	
Permanent Datum GROUND LEVEL, Elevation 5100 feet																			
Log Measured From KB, 17.00 feet above Permanent Datum																			
Drilling Measured From KB																			
Date		15-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		6986.00		feet															
Depth Logger		6620.00		feet															
Top Log Interval		3300.00		feet															
Bottom Log Interval		6986.00		feet															
Hole Fluid Type		WATER																	
Hole Fluid Level		0.00		feet															
Restriction ID		3.875		inches		Gun Type													
Max Recorded Temp		198.00		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		6986.00									
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	6986.00	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 80 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. 198F

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.



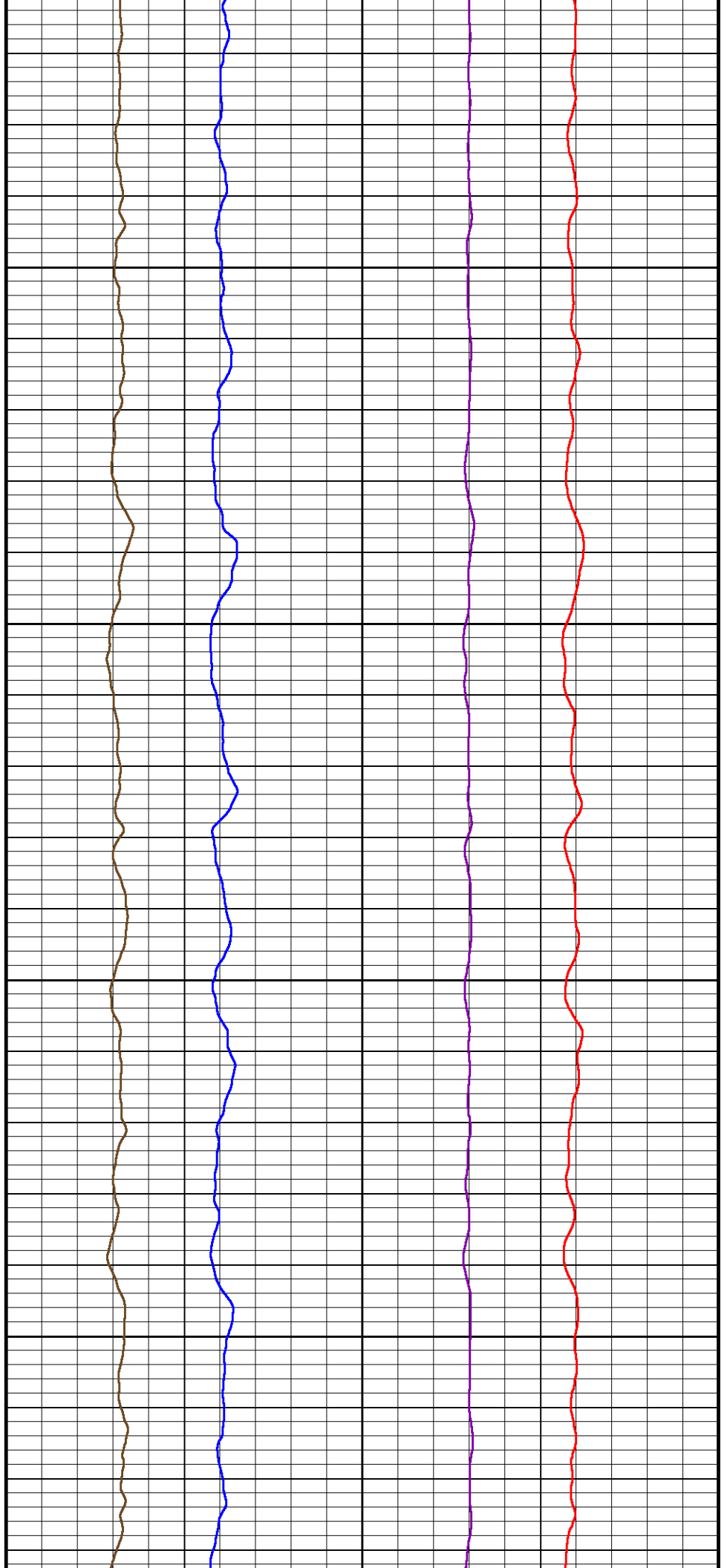


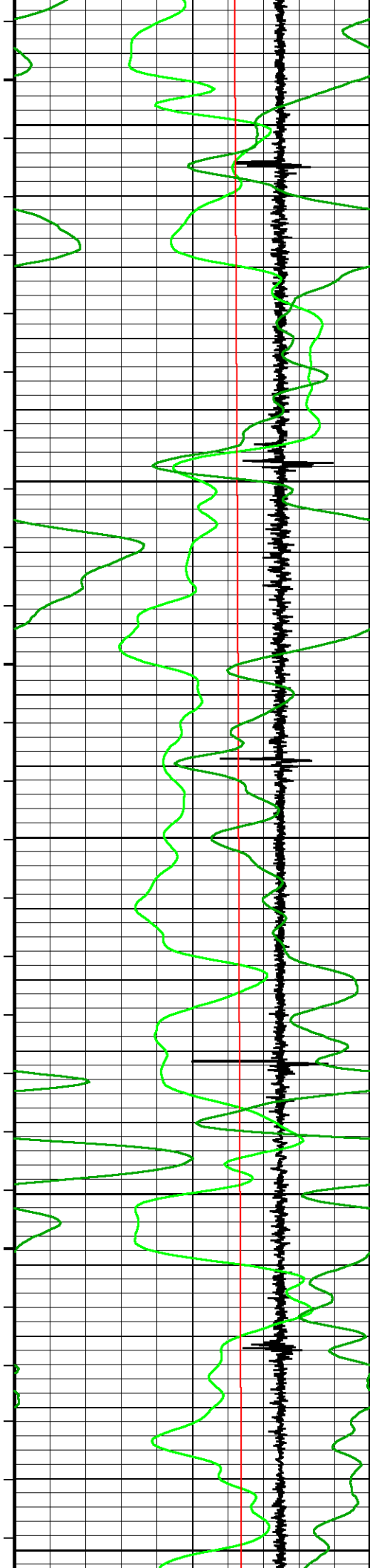
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3400

3450

3500





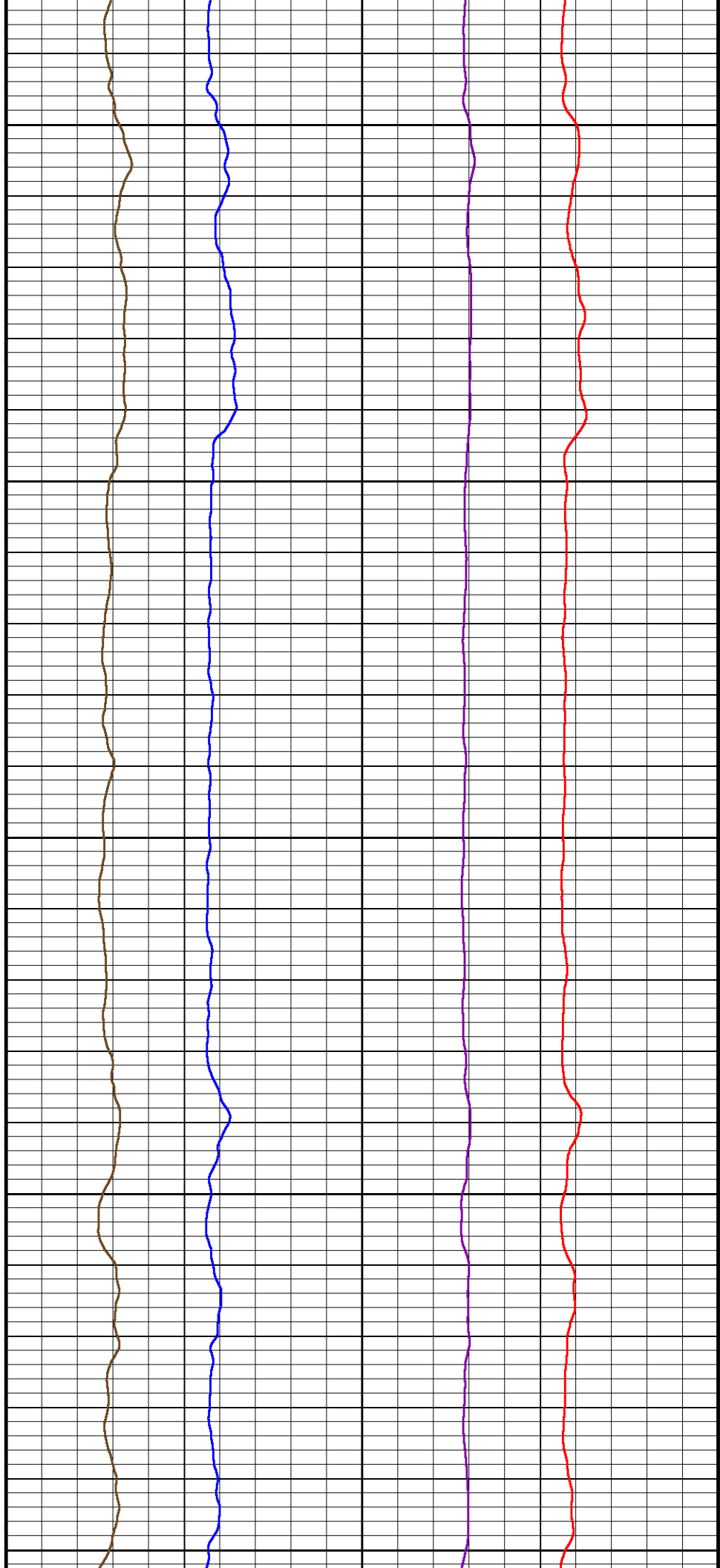
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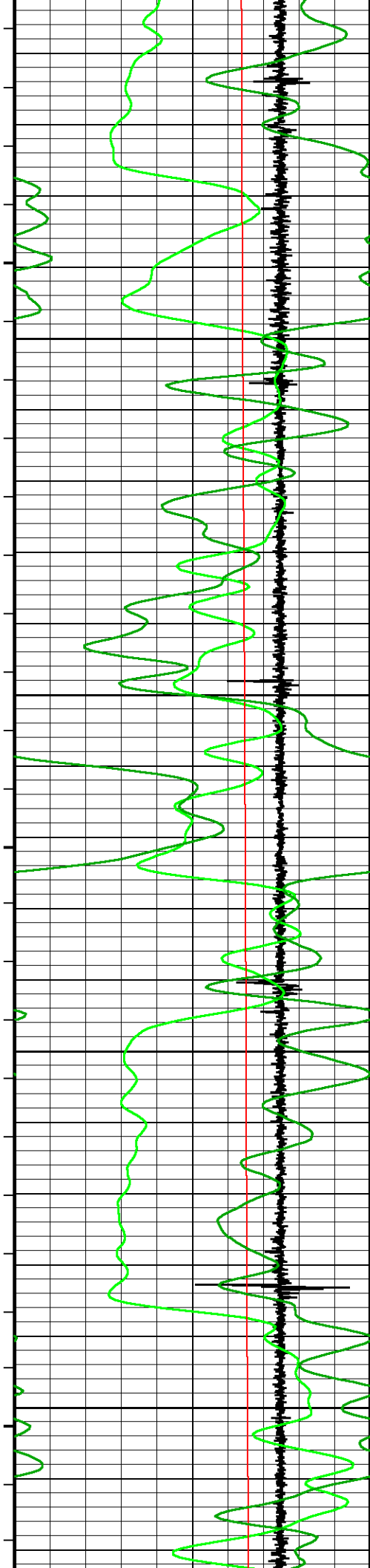
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3650

3700

3750



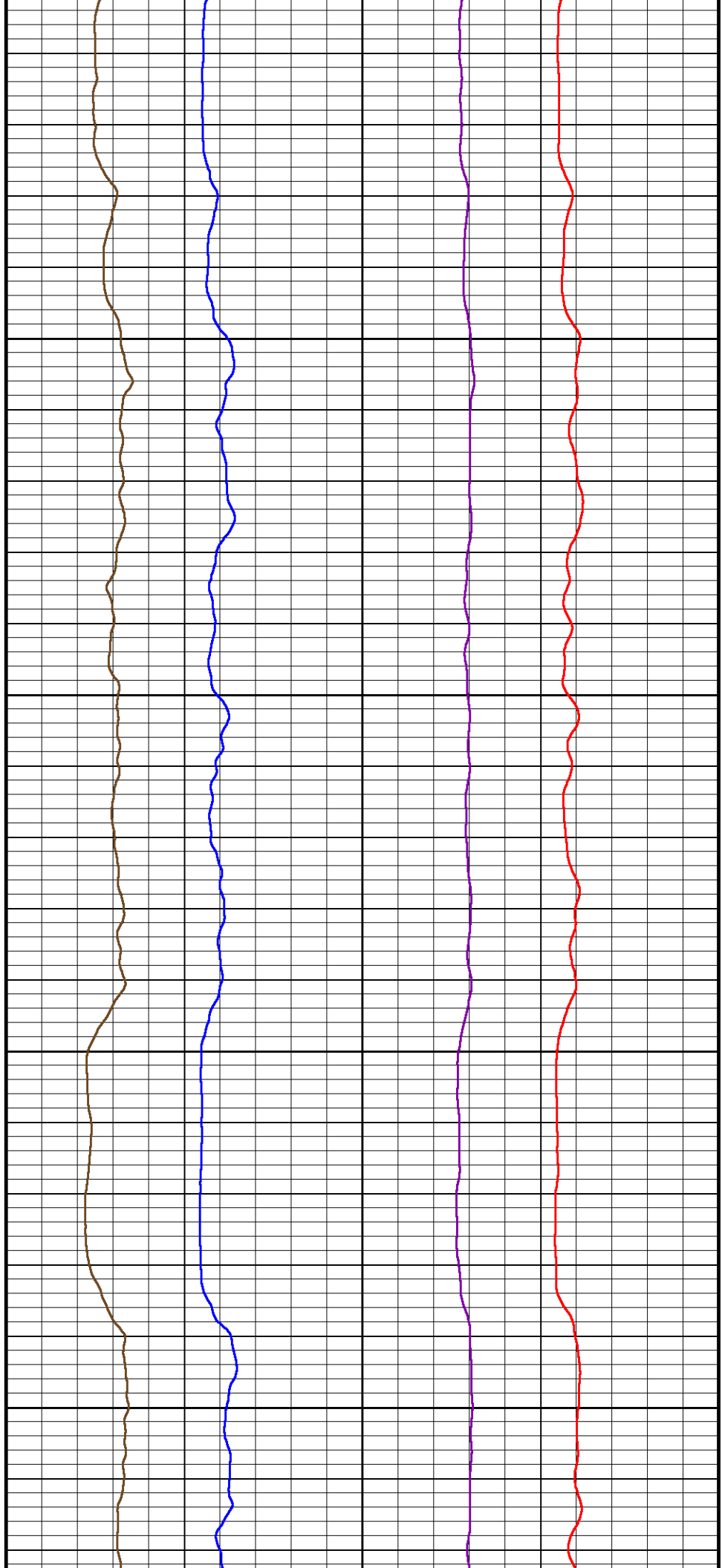


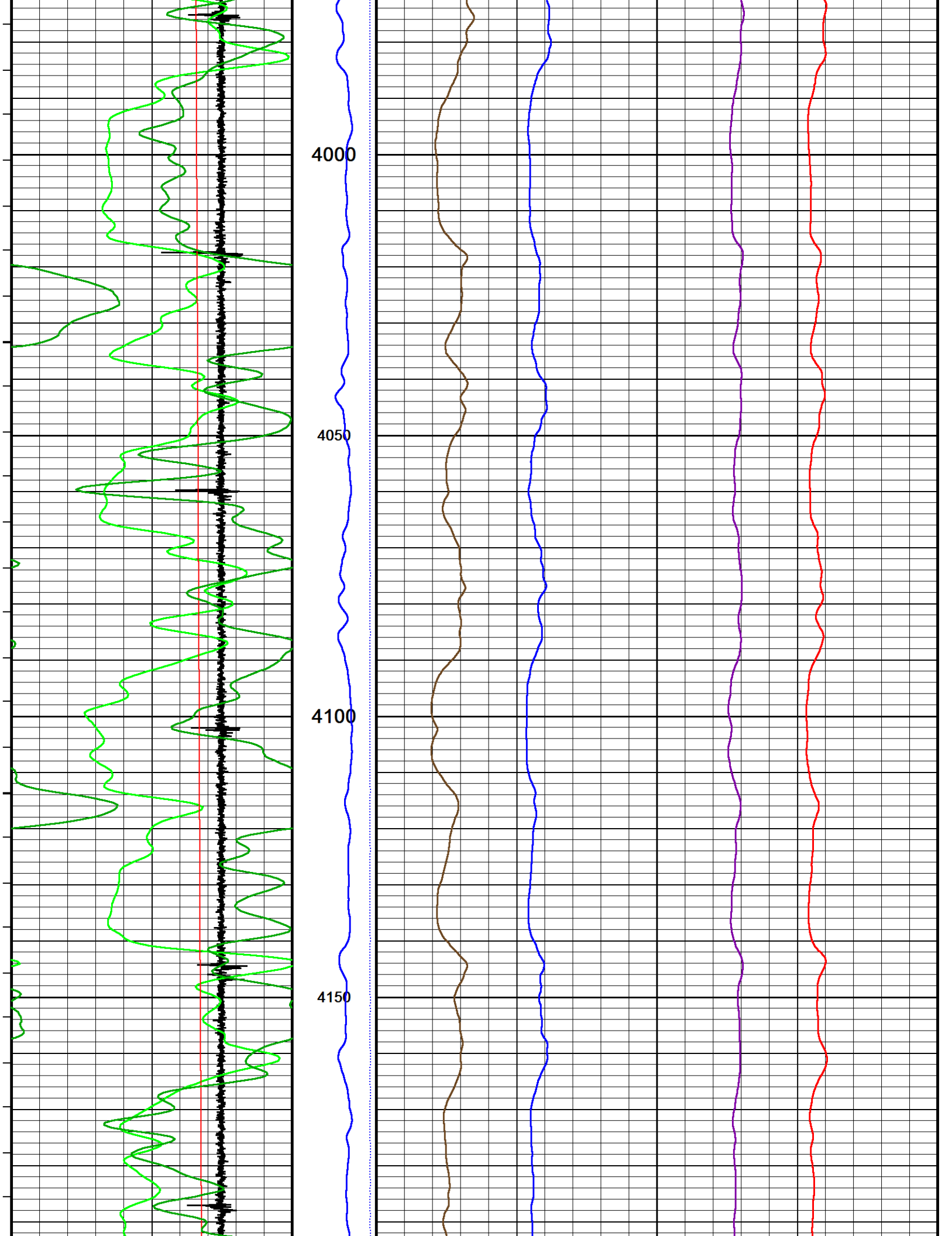
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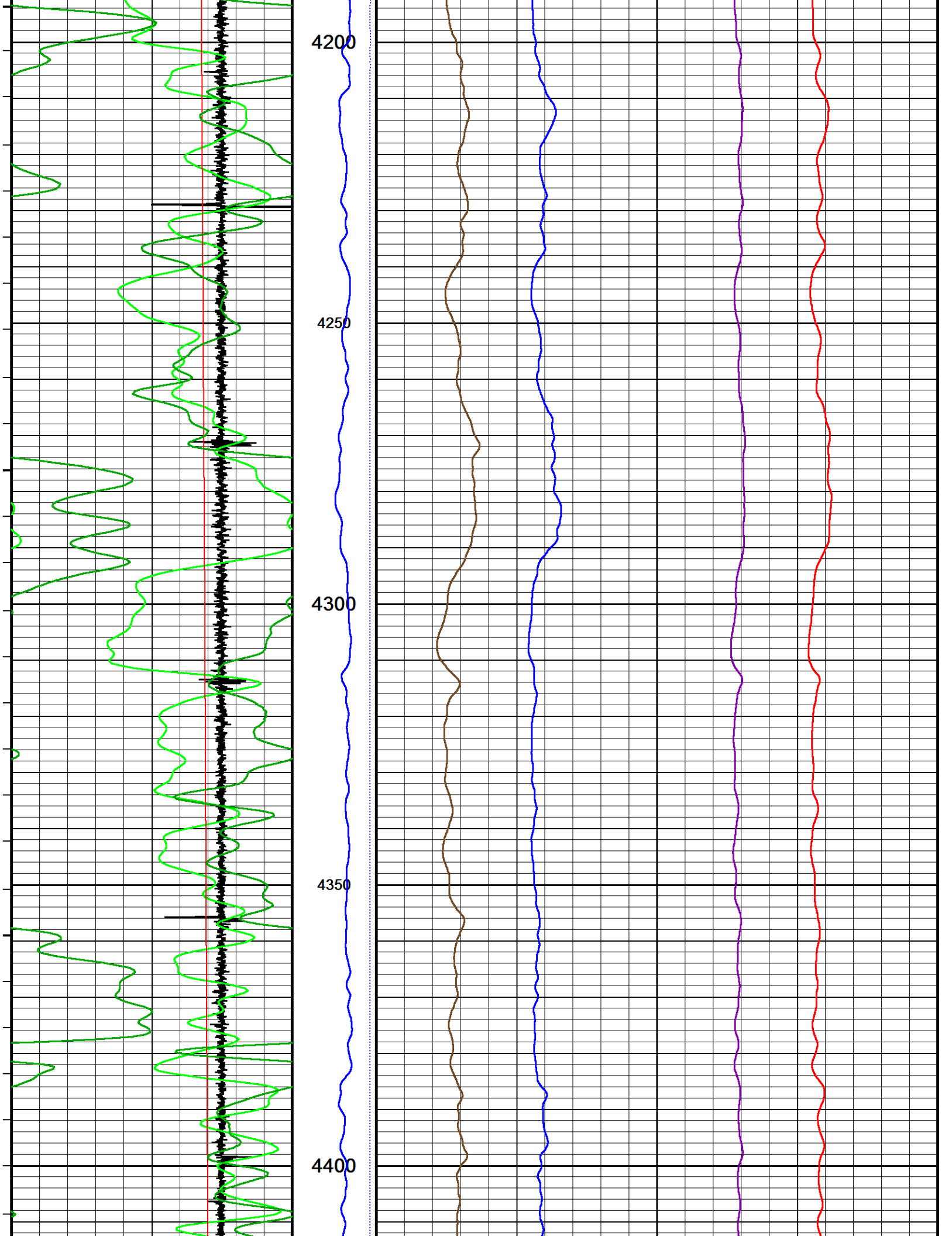
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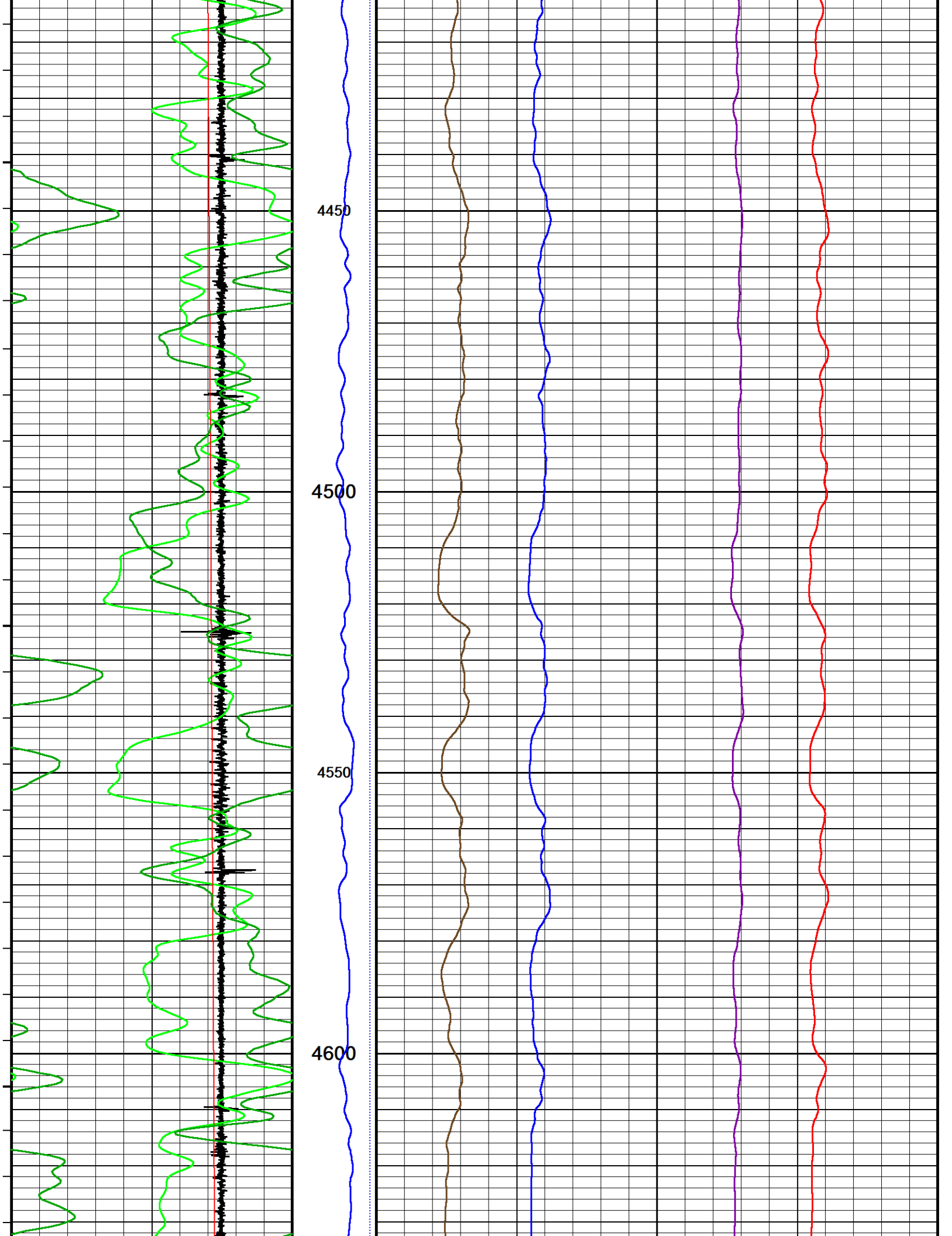
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3950

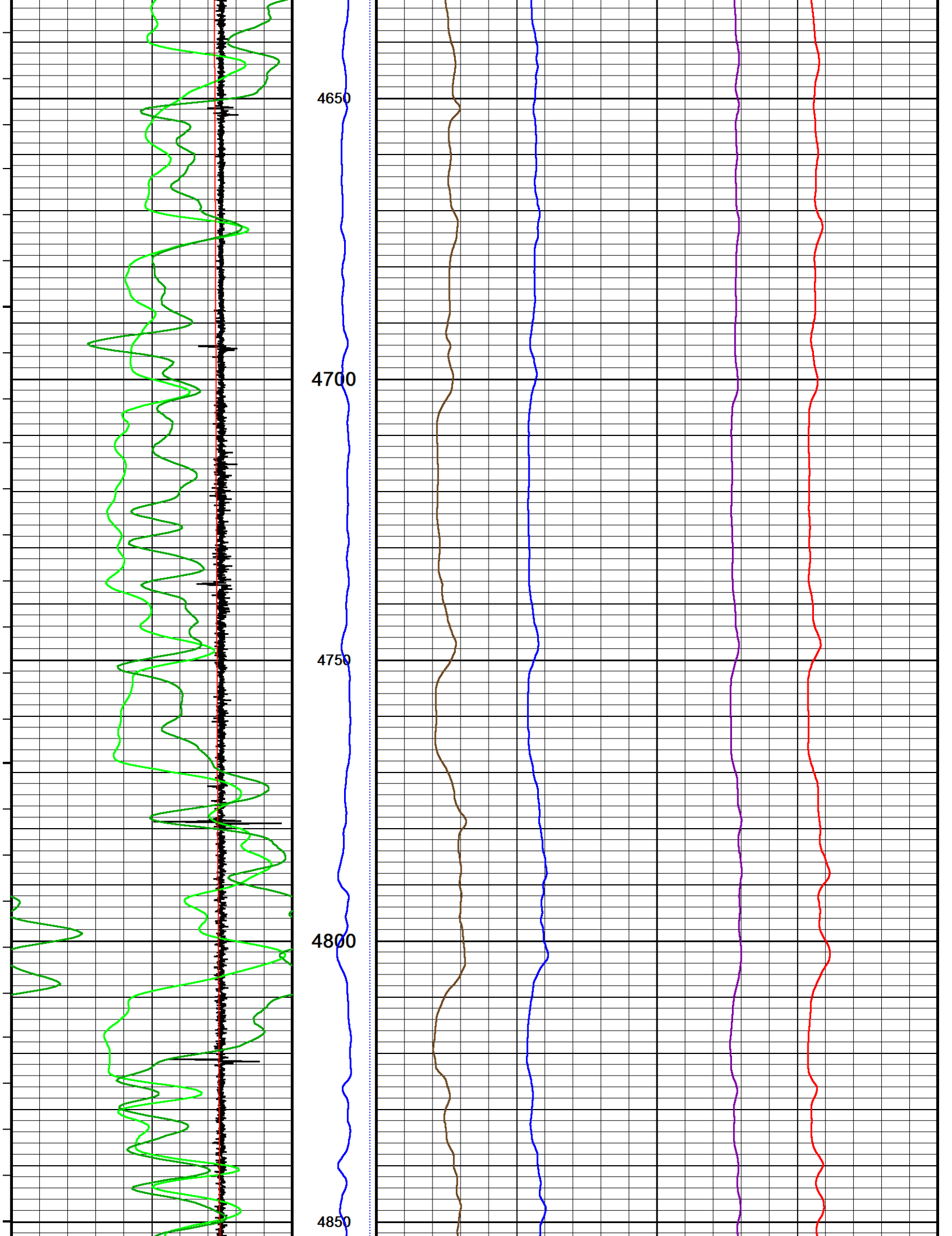


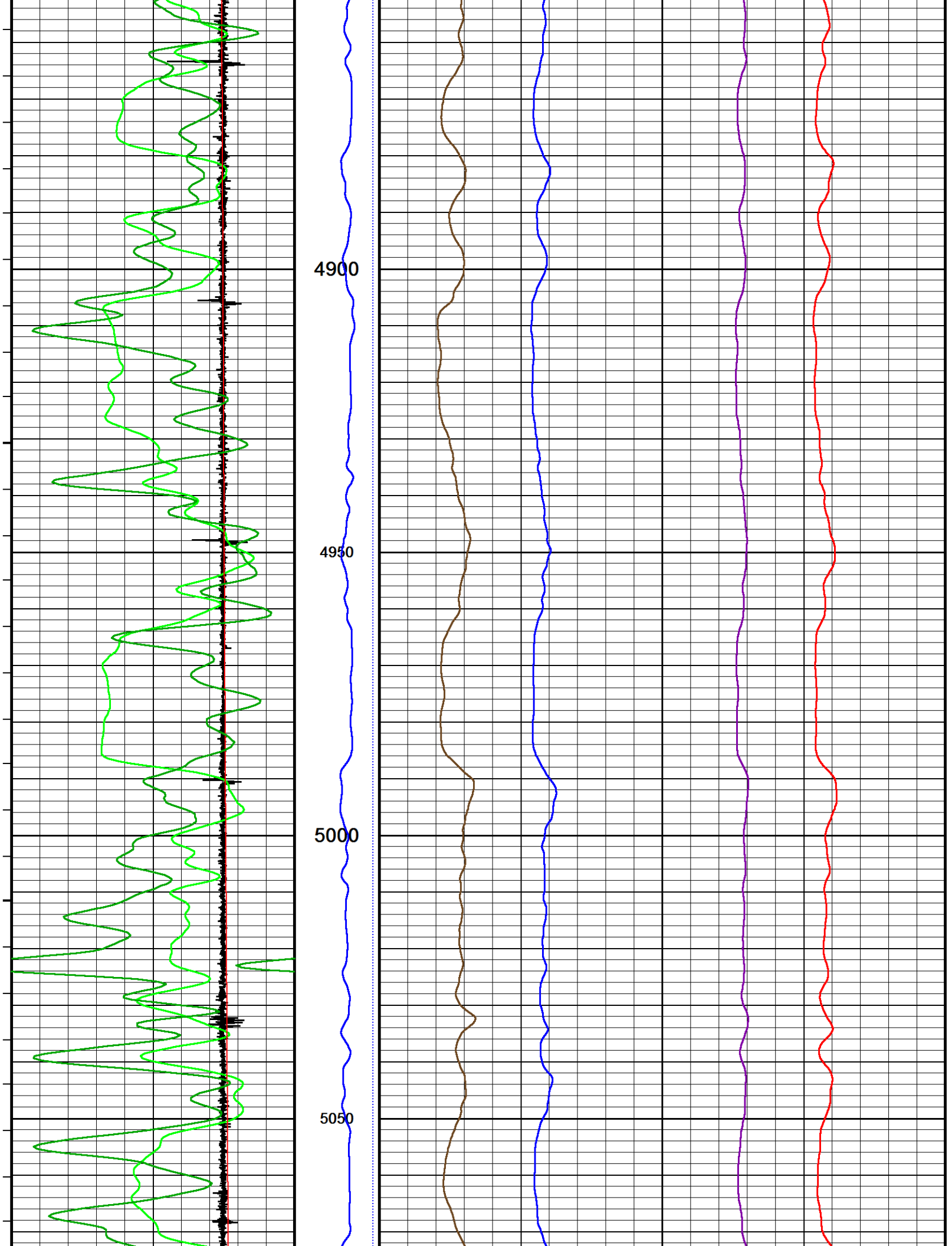


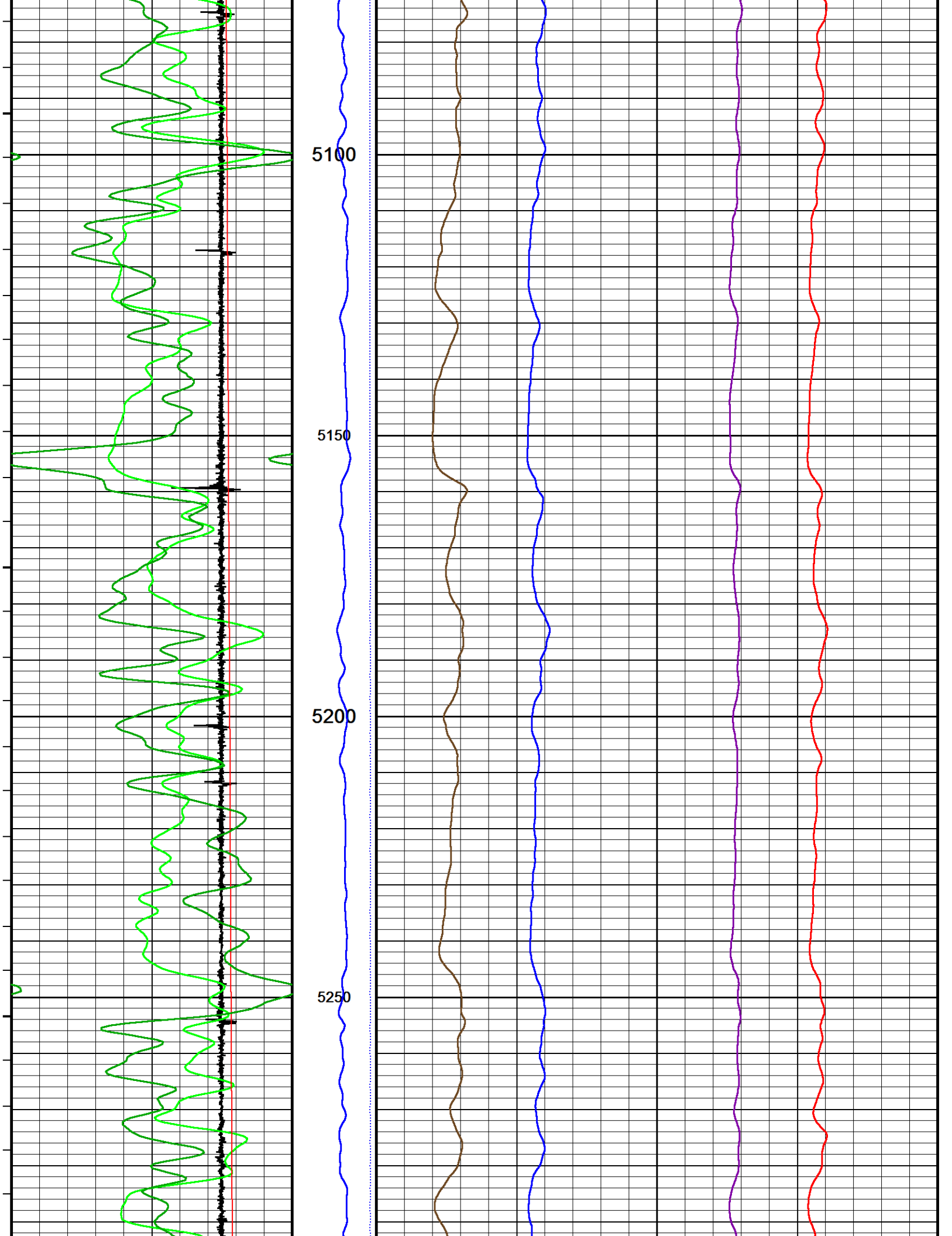


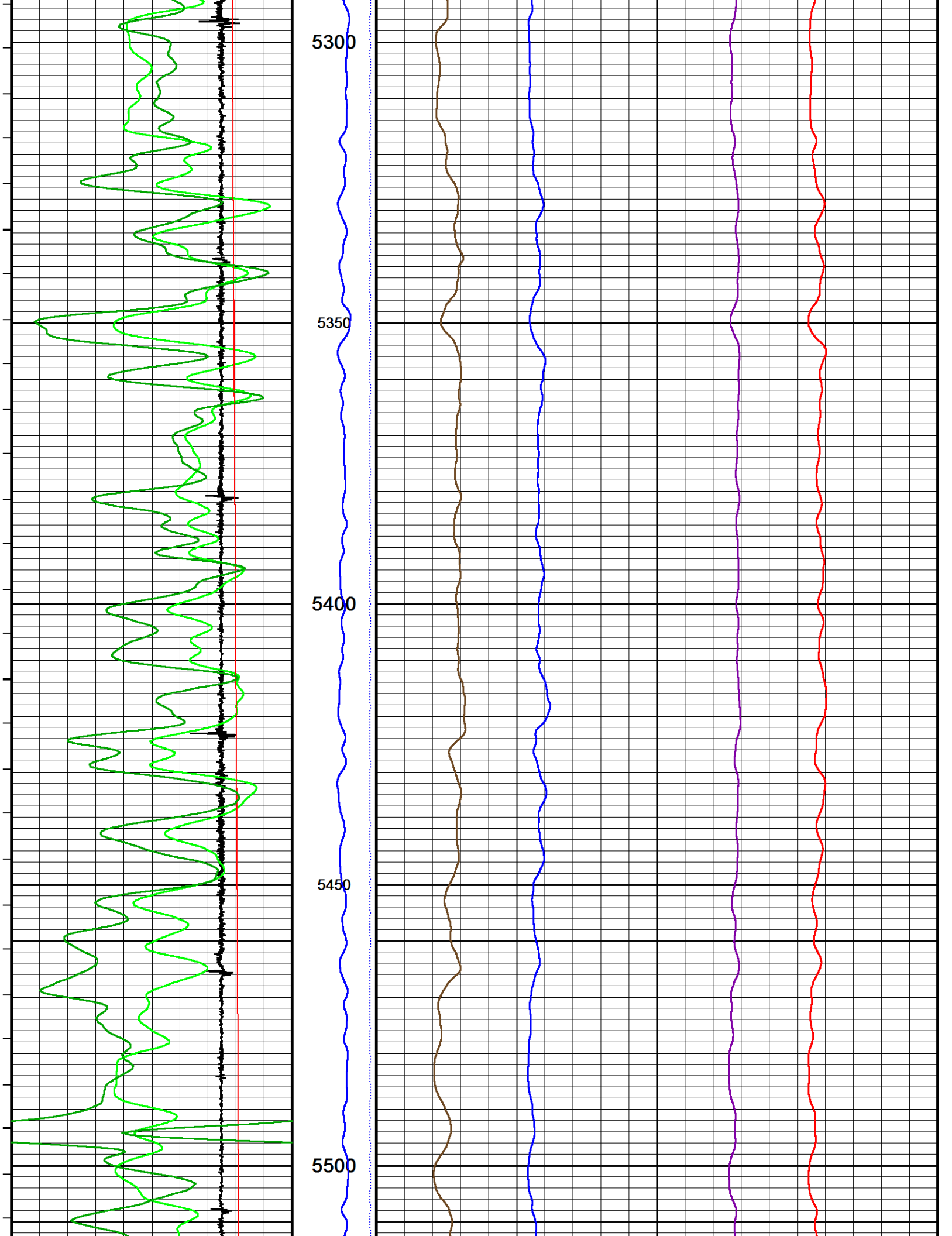


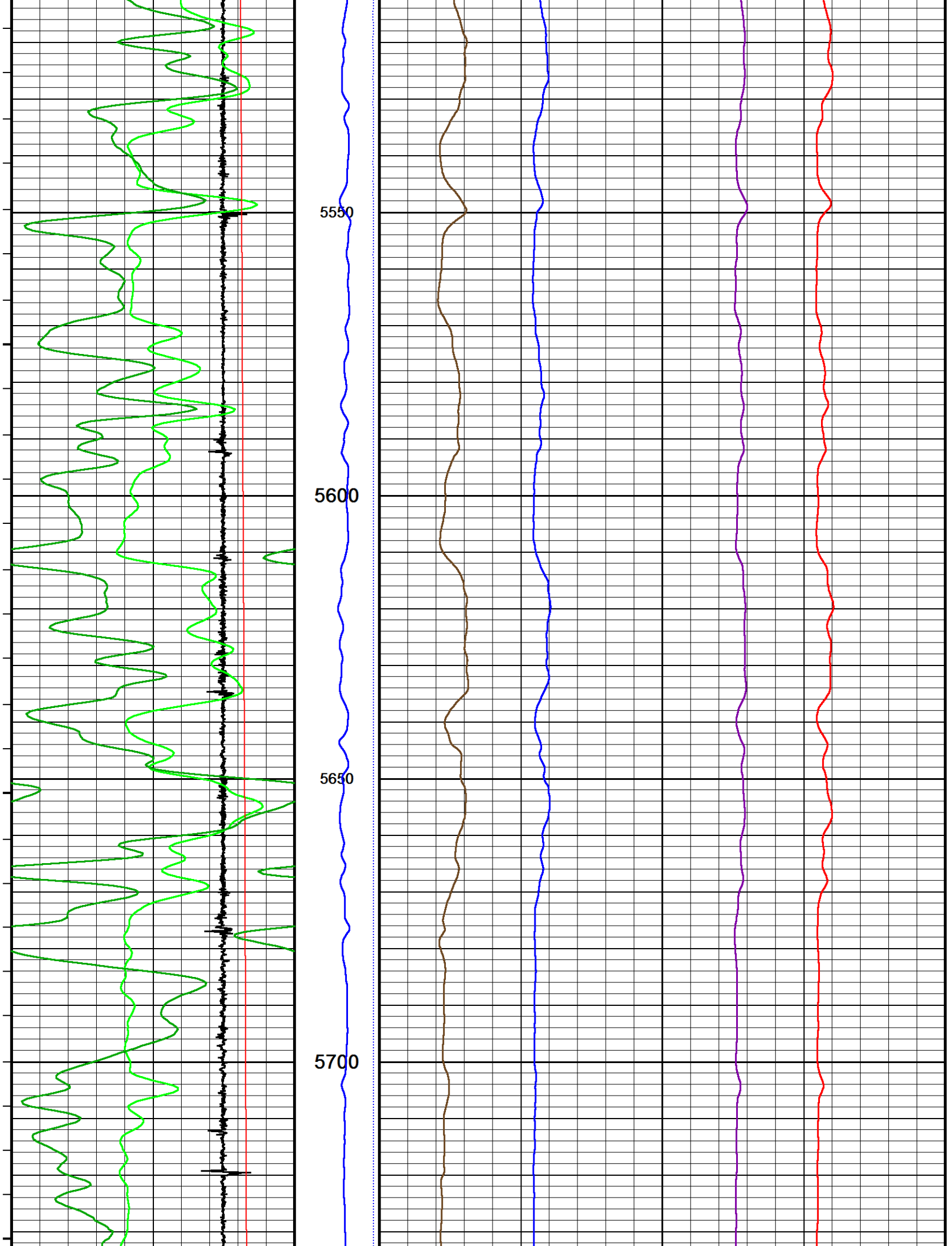


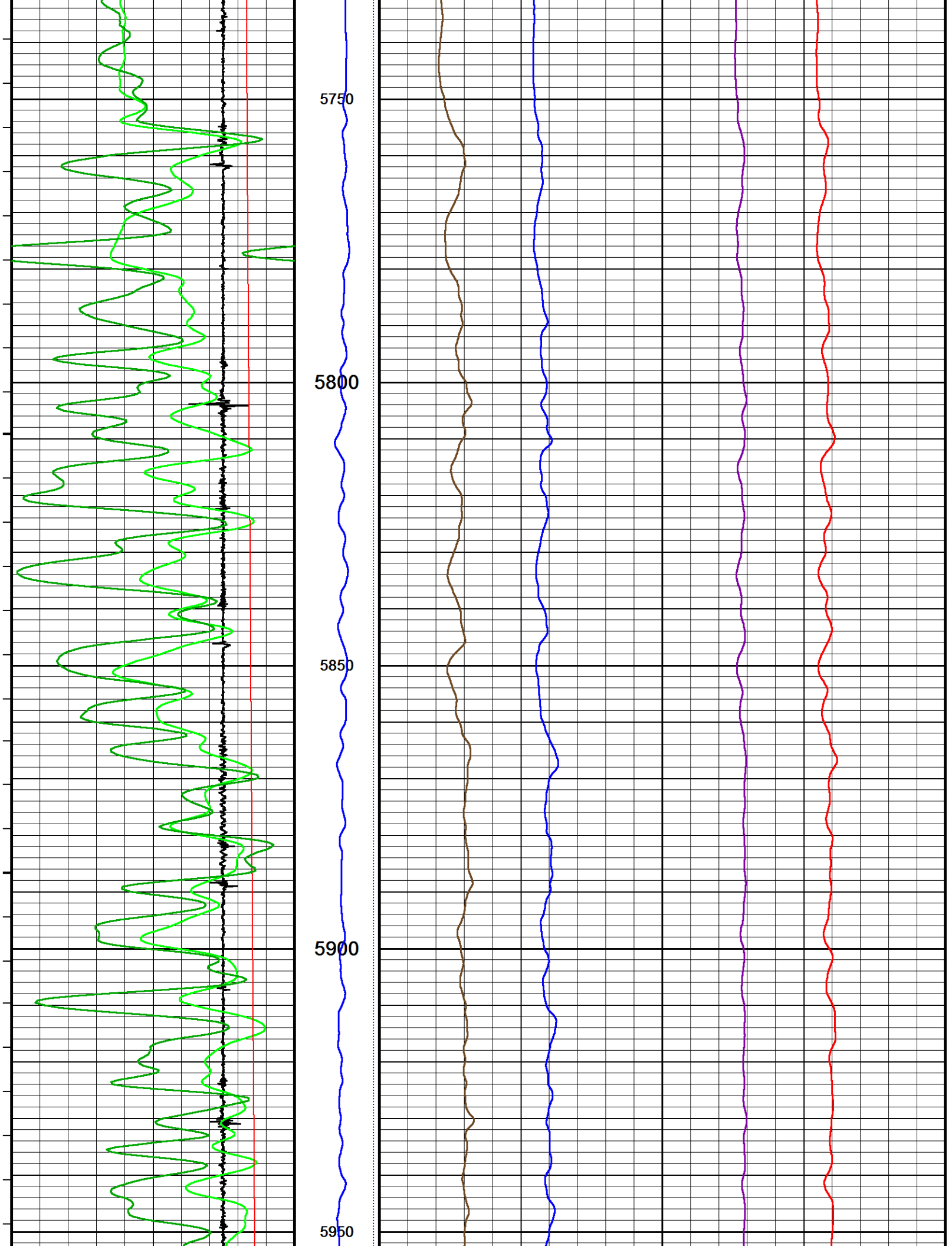


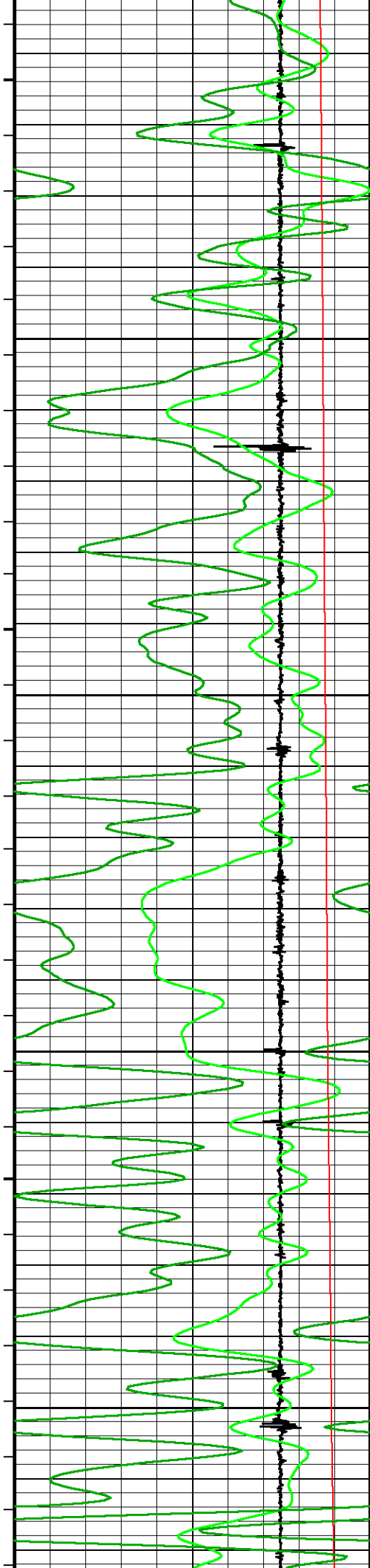










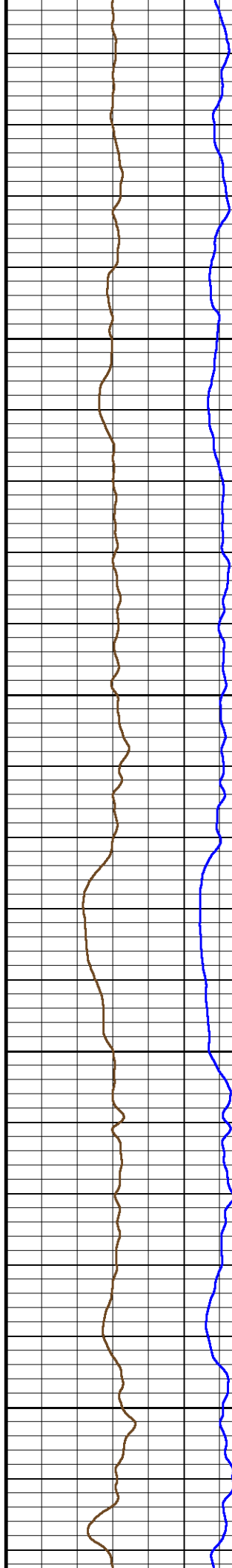


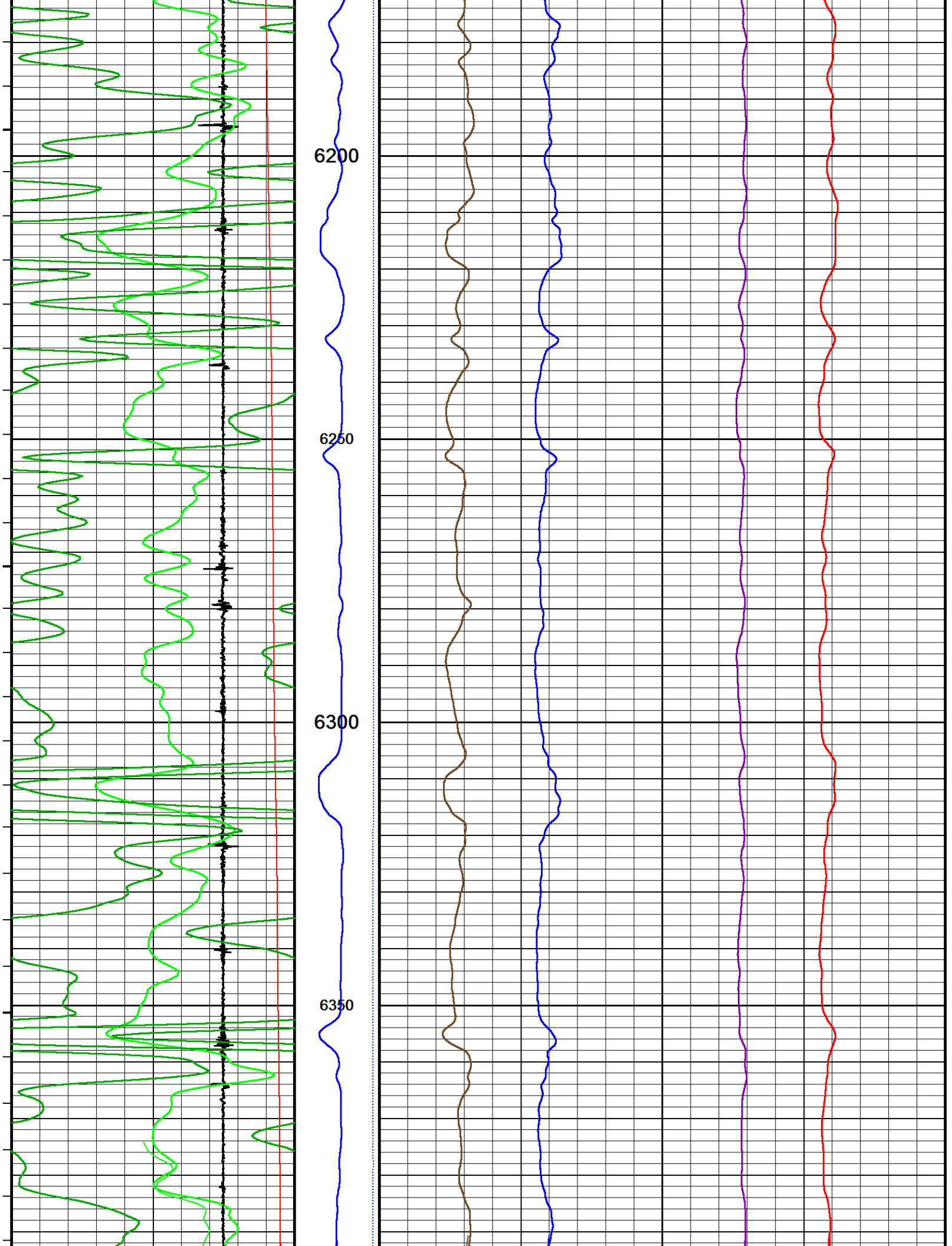
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6050

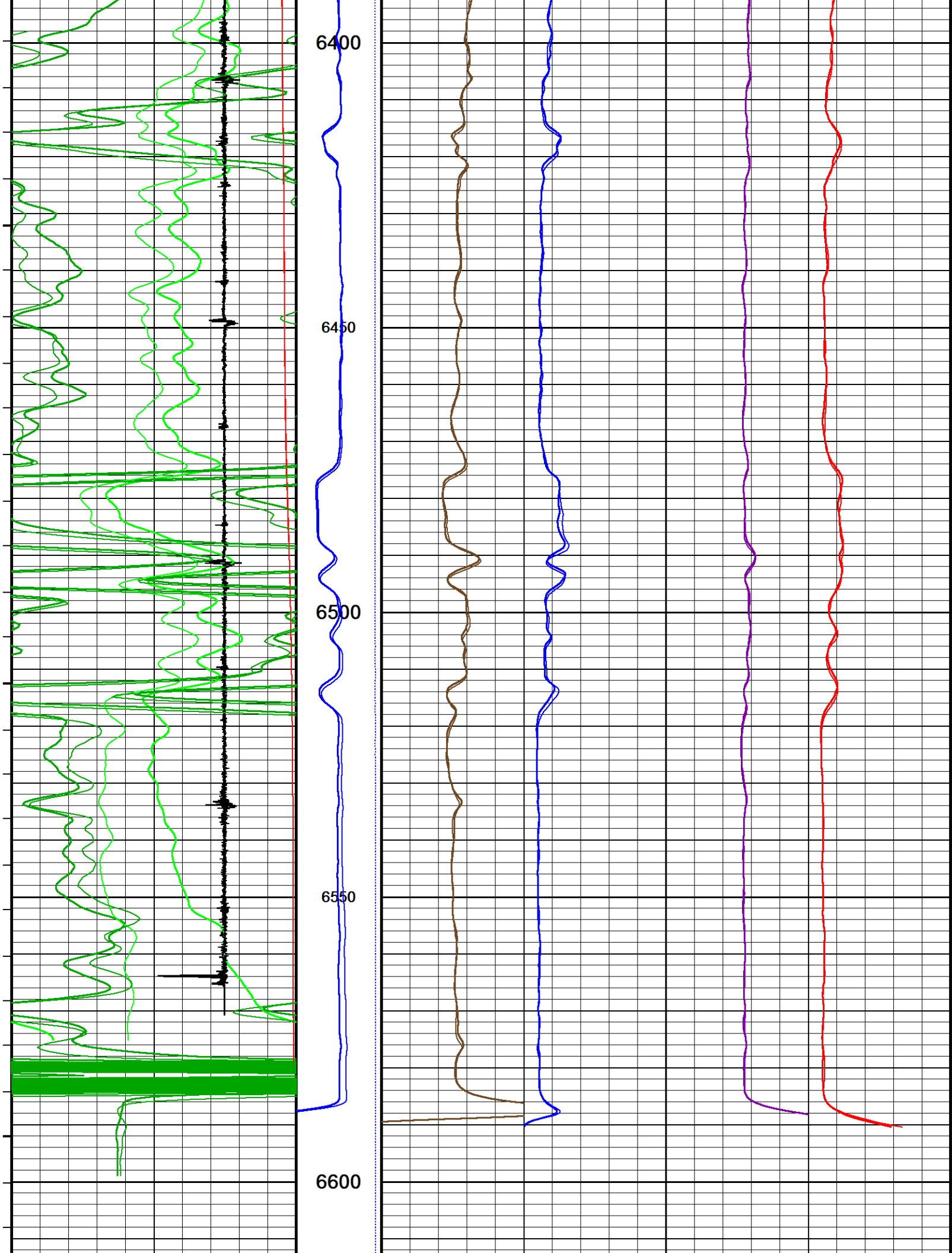
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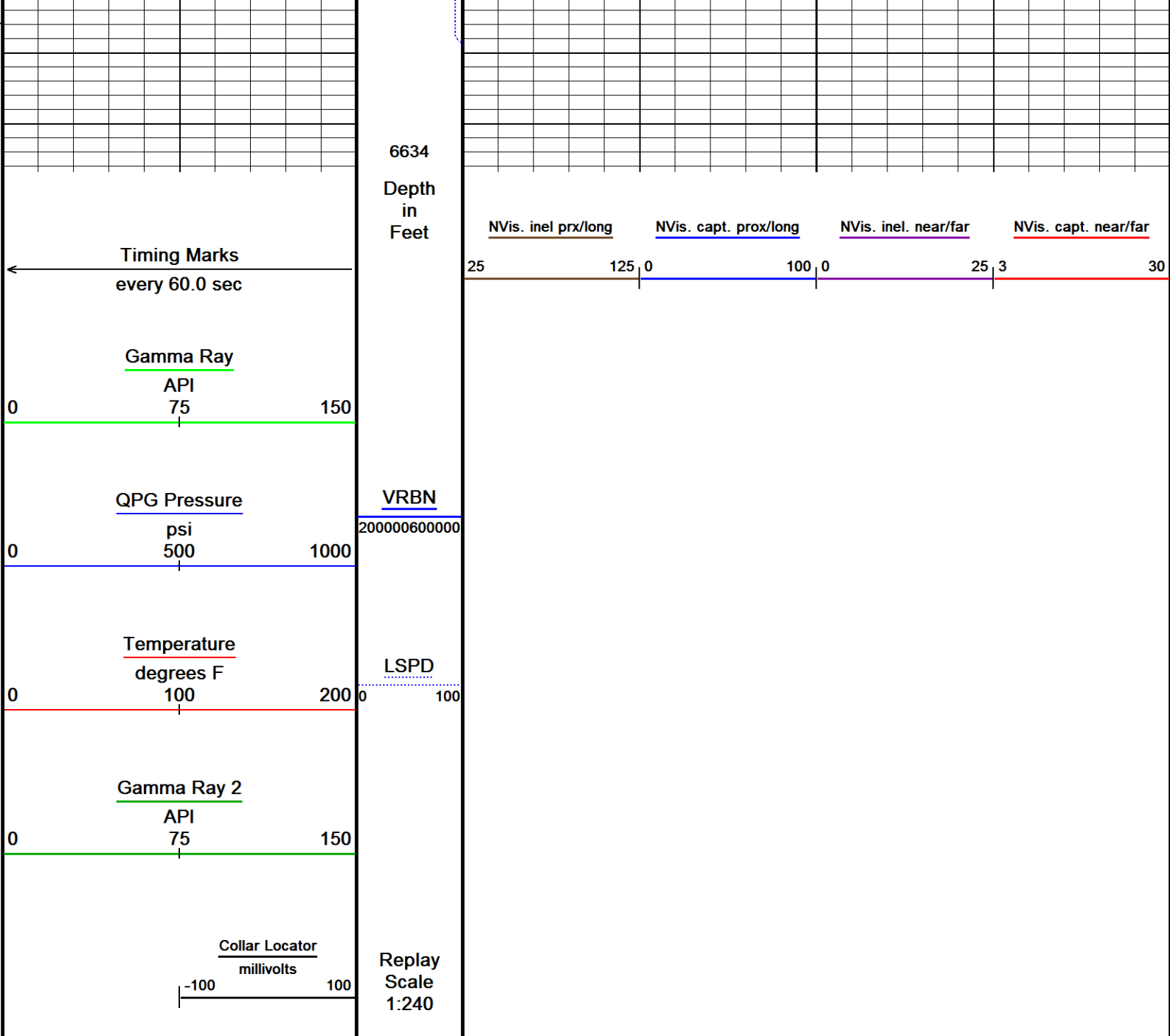
6150







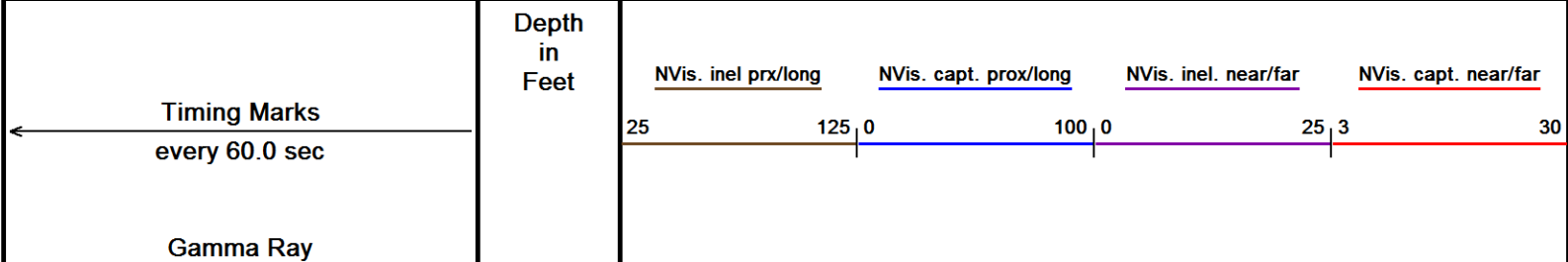


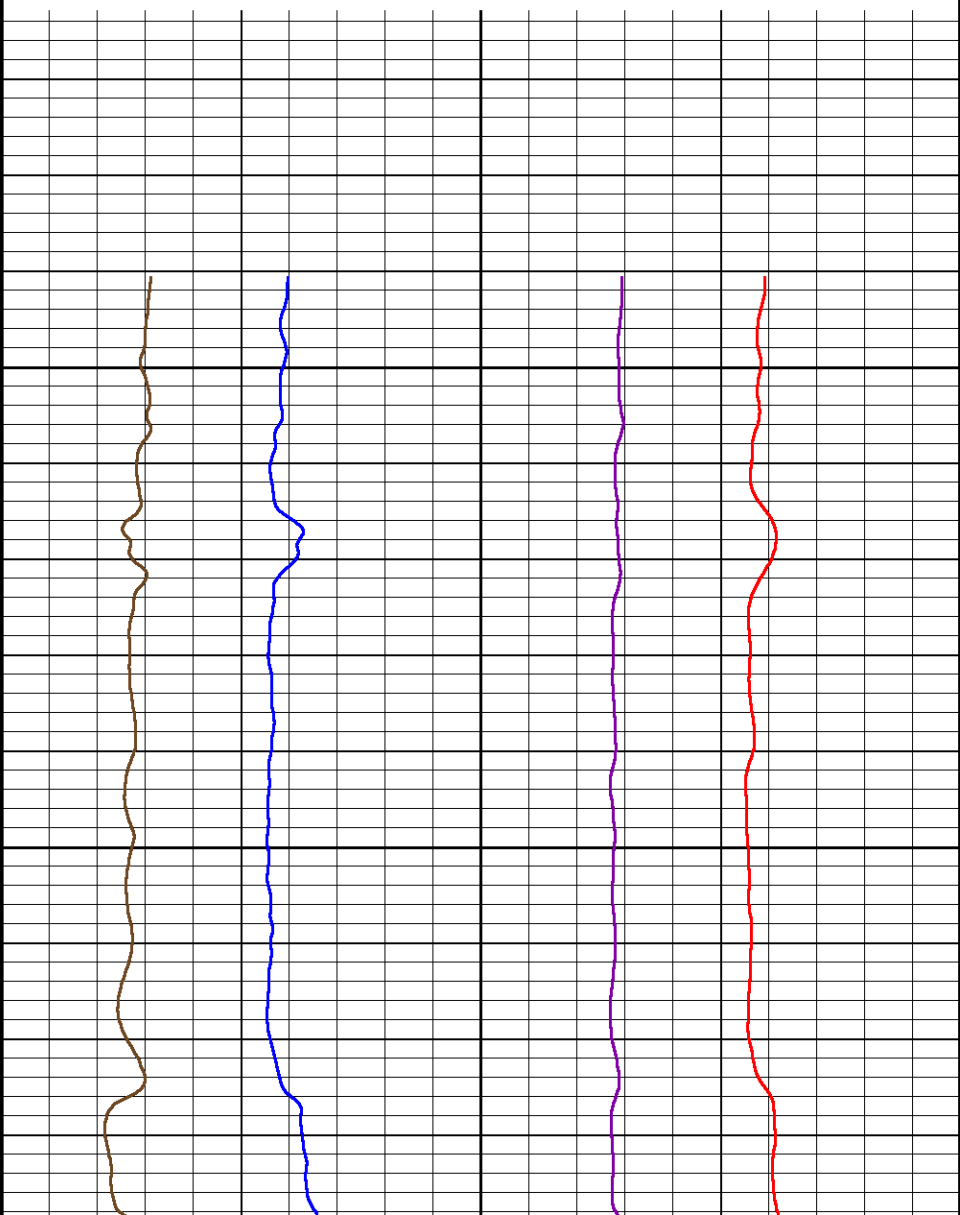
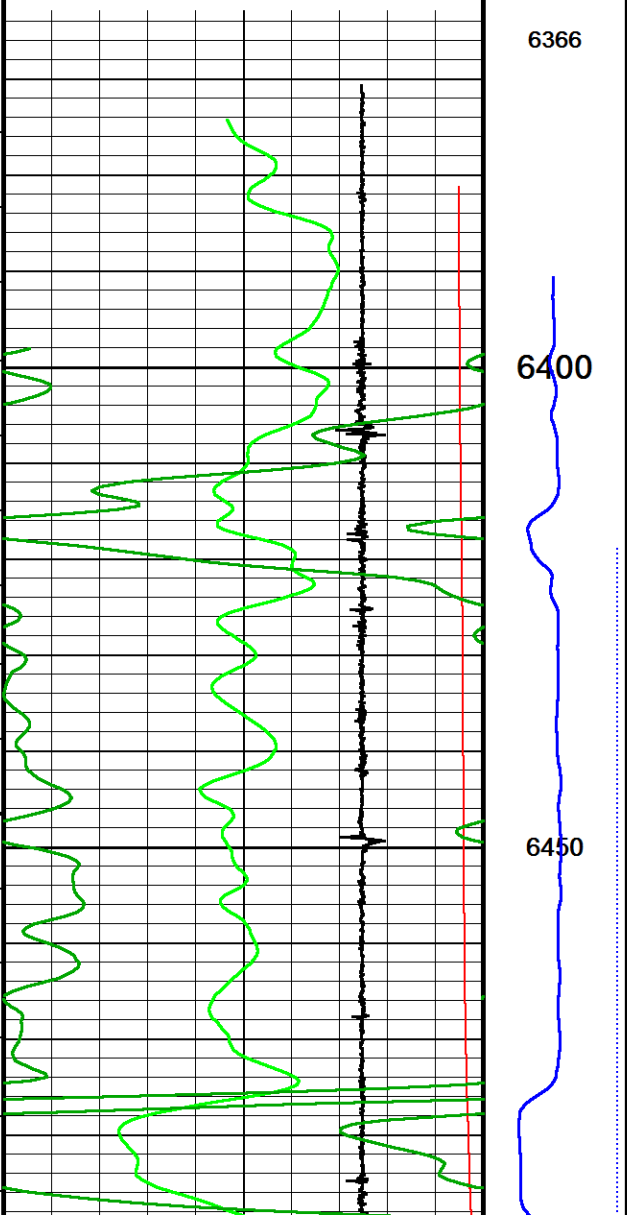
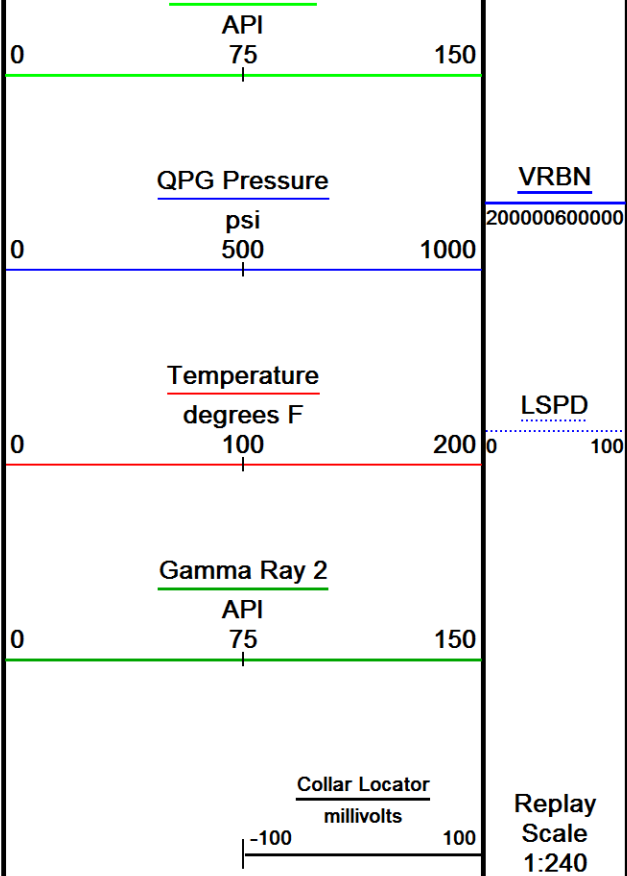


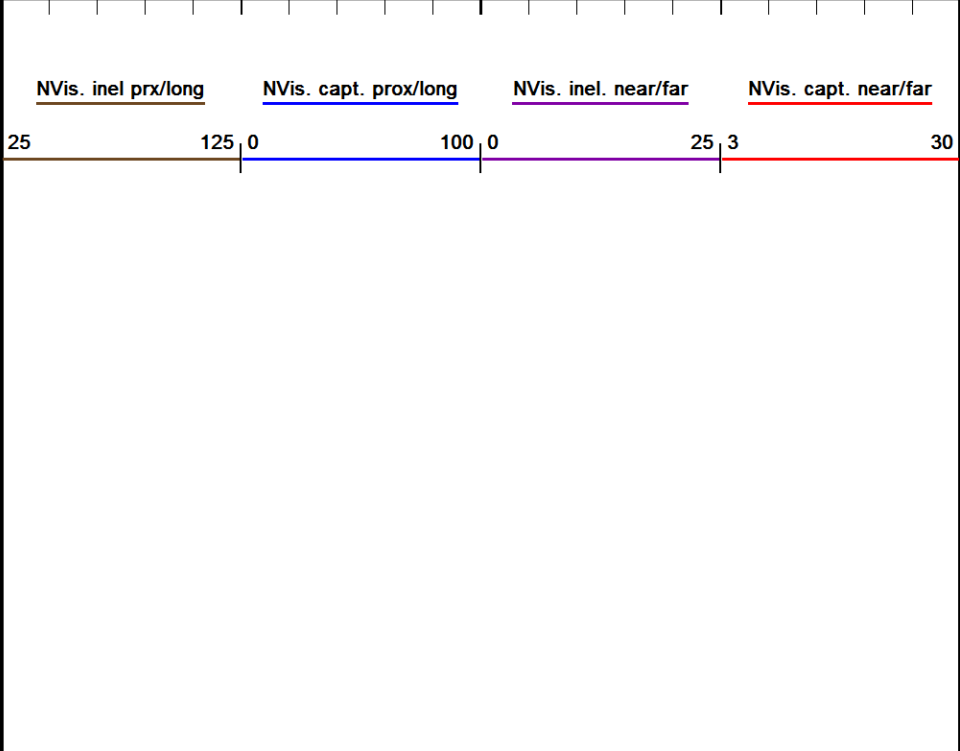
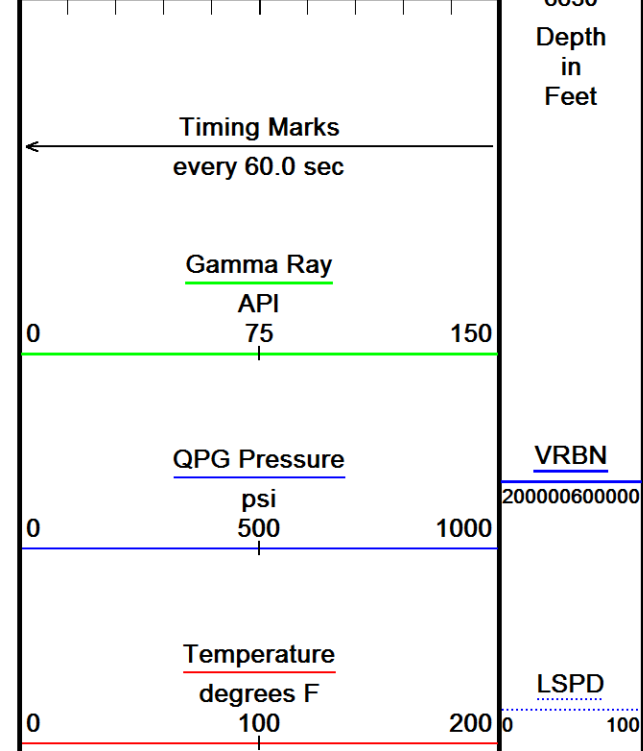
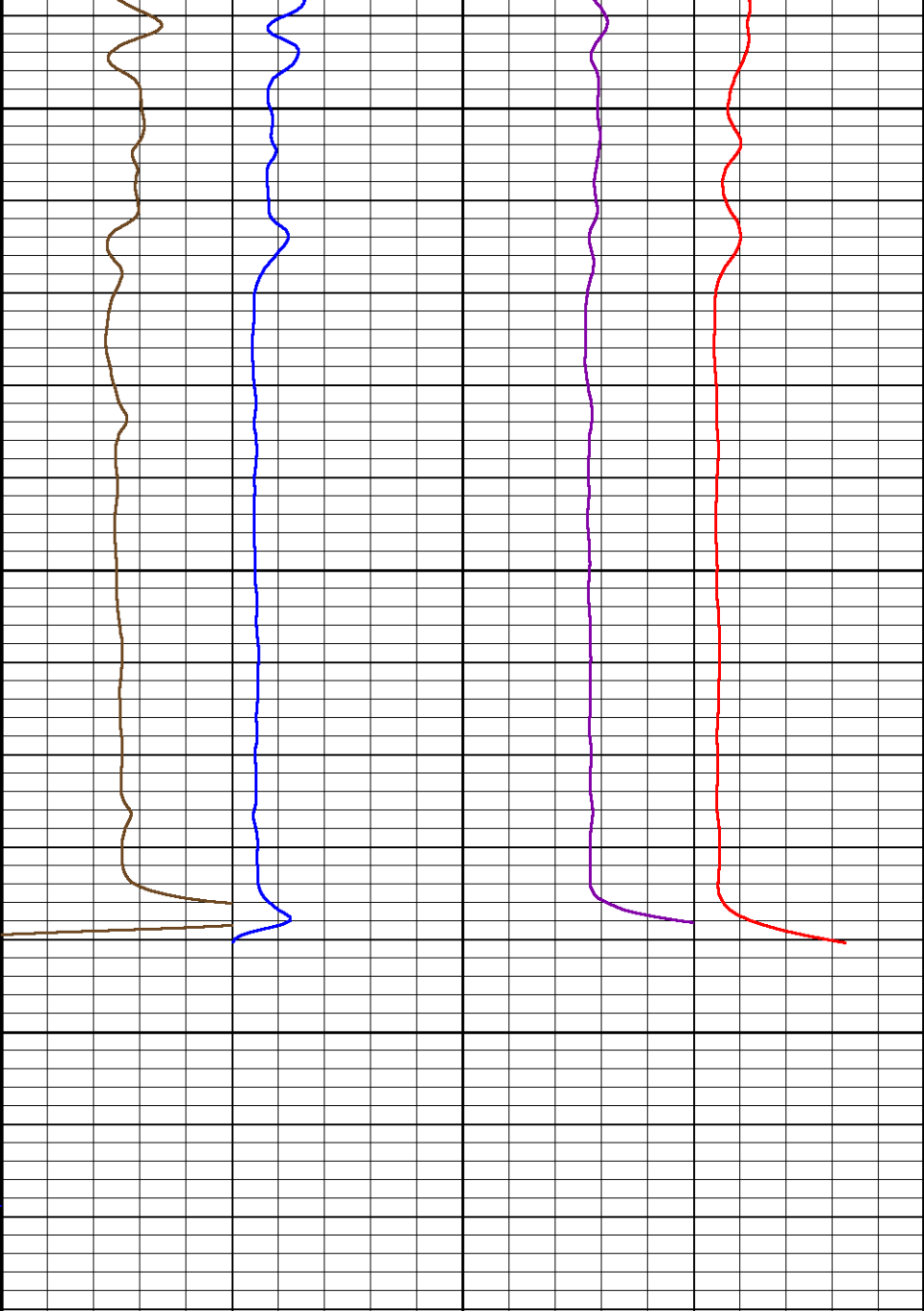
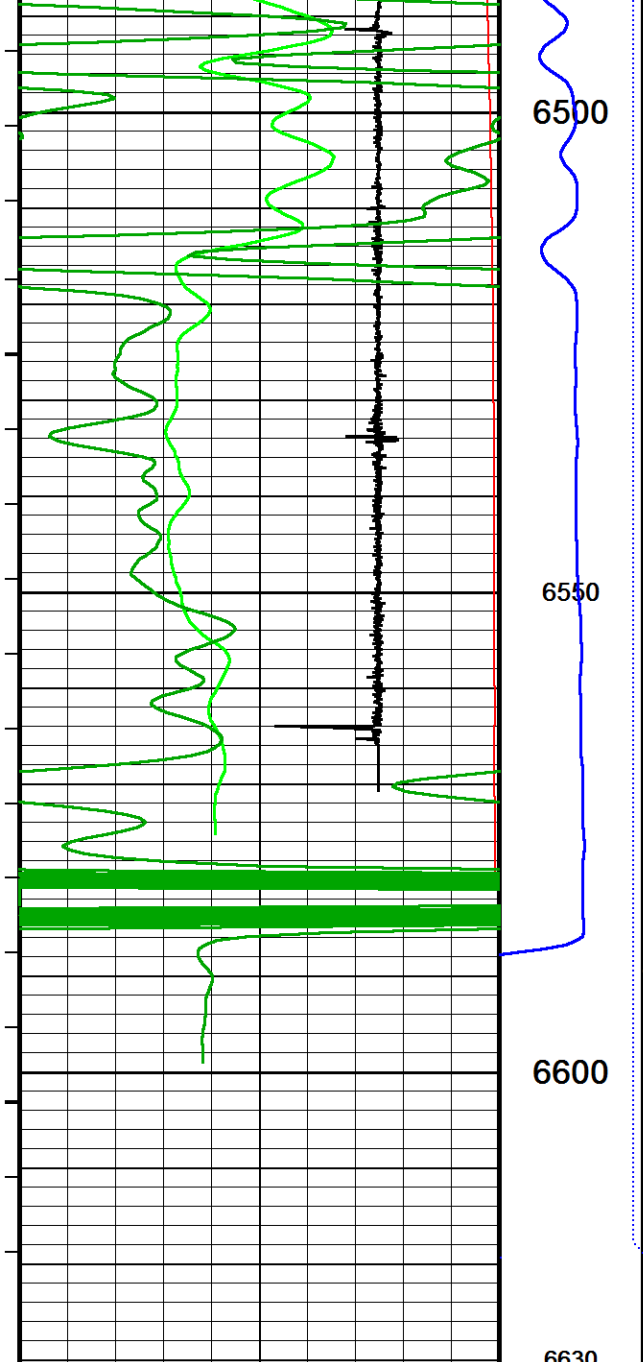
Depth Based Data - Maximum Sampling Increment 12.5cm	Plotted on 15-SEP-2017 19:32
Filename: C:\Logs\URSA\BMC B 23D-18-07-95\BMC B 23D-18-07-95 CREB SSSB MAIN FINAL.dta	Recorded on 15-SEP-2017 19:18
Filename: C:\Logs\URSA\BMC B 23D-18-07-95\BMC B 23D-18-07-95 CREB SSSB REPEAT FINAL.dta	Recorded on 15-SEP-2017 19:26
System Versions: Logged with 17.01.7206   Plotted with 17.01.7206	

↑	MAIN PASS REPEAT PASS	↑
---	--------------------------	---

↓	REPEAT PASS	↓
Depth Based Data - Maximum Sampling Increment 12.5cm		
Filename: C:\Logs\URSA\BMC B 23D-18-07-95\BMC B 23D-18-07-95 CREB SSSB REPEAT FINAL.dta		Plotted on 15-SEP-2017 19:32
System Versions: Logged with 17.01.7206   Plotted with 17.01.7206		Recorded on 15-SEP-2017 19:26







### Gamma Ray 2

API

75

0

150

Collar Locator

millivolts

-100

100

Replay

Scale

1:240

Depth Based Data - Maximum Sampling Increment 12.5cm

Plotted on 15-SEP-2017 19:32

Filename: C:\Logs\URSA\BMC B 23D-18-07-95\BMC B 23D-18-07-95 CREB SSSB REPEAT FINAL.dta

Recorded on 15-SEP-2017 19:26

System Versions: Logged with 17.01.7206 Plotted with 17.01.7206



REPEAT PASS



## DOWNHOLE EQUIPMENT

C:\Logs\URSA\BMC B 23D-18-07-95\BMC B 23D-18-07-95 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

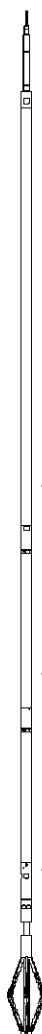
CR3-BA 138 LG: 2.51 ft WT: 8.8 lb OD: 1.693 in

### 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



48.83 ft CCL - Collar Locator

46.39 ft GR - Gamma Ray

43.85 ft PRES - QPG Pressure

39.48 ft TMPN - Temperature

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

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

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

- 22.38 ft GR2 - Gamma Ray 2

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

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 23D-18-07-95\BMC B 23D-18-07-95 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	250000.0 mv	-1.000 G	0.0 mv
Y Acc	1.000 G	250000.0 mv	-1.000 G	0.0 mv
Z Acc	1.000 G	250000.0 mv	-1.000 G	0.0 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  
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

T0T1T2T3T4

P013.6402-0.585455-0.01978939.3116e-006

P19.3116e-00642.1819-0.02088382.62627e-005

P22.62627e-005-5.38063e-008-0.001994298.64228e-006

P38.64228e-006-3.99023e-0083.69856e-0116.96299e-007

P4

Temperature

Temperature polynomial order3

T0T1T2T3T4

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-NASerial No: 138

calibration		
Standard		Measured
32	DEGF	36714 Hz
212	DEGF	50849 Hz

UGK Before Survey Cal UGR-KA 132

Field calibration on 15-AUG-2017 12:40

Gamma Ray Before Survey Calibration

Tool Type: UGR-KASerial No: 132

Calibrator No: 101



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	5.50
	Free Pipe	81.00	2151.20
AMP 5FT	100% Bond	0.40	1.30
	Free Pipe	54.00	3075.40
1 SECTOR AMP	100% Bond	5.00	10.80
	Free Pipe	95.00	1835.40
2 SECTOR AMP	100% Bond	5.00	9.80
	Free Pipe	95.00	1310.20
3 SECTOR AMP	100% Bond	5.00	2.40
	Free Pipe	95.00	1474.00
4 SECTOR AMP	100% Bond	5.00	4.10
	Free Pipe	95.00	1727.50
5 SECTOR AMP	100% Bond	5.00	8.00
	Free Pipe	95.00	1889.60
6 SECTOR AMP	100% Bond	5.00	1.30
	Free Pipe	95.00	2047.60

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 Cmpr Strength	580	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 23D-18-07-95		
FIELD	WILDCAT		
PROVINCE/COUNTY	GARFIELD		
COUNTRY/STATE	USA / COLORADO		

Elevation Kelly Bushing	5117	feet	Bottom Log Interval	6986.00	feet
Elevation Drill Floor	5117	feet	Depth Driller	6986.00	feet
Elevation Ground Level	5100	feet	Depth Logger	6620.00	feet



RAPTOR NVISION LOG