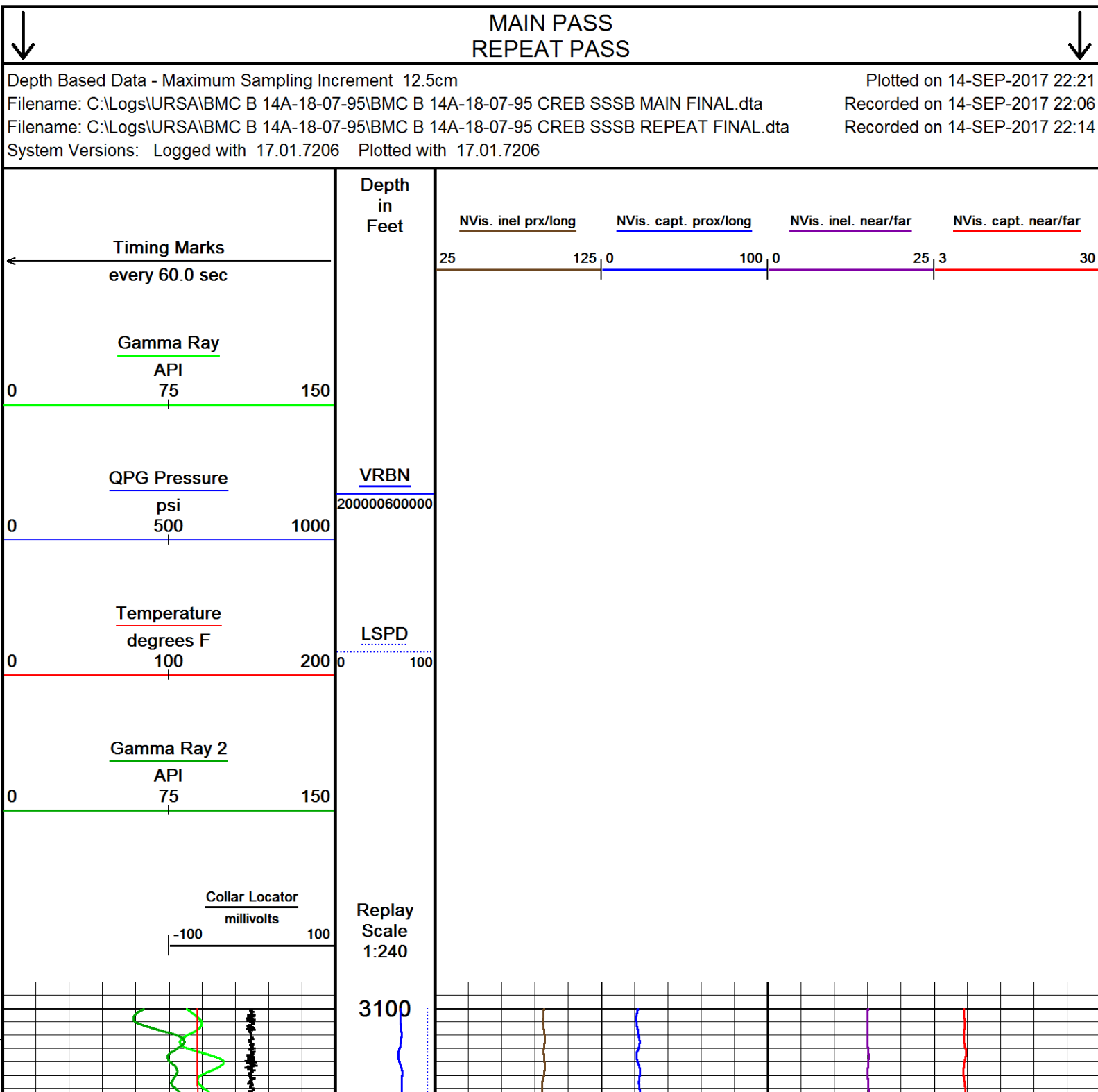
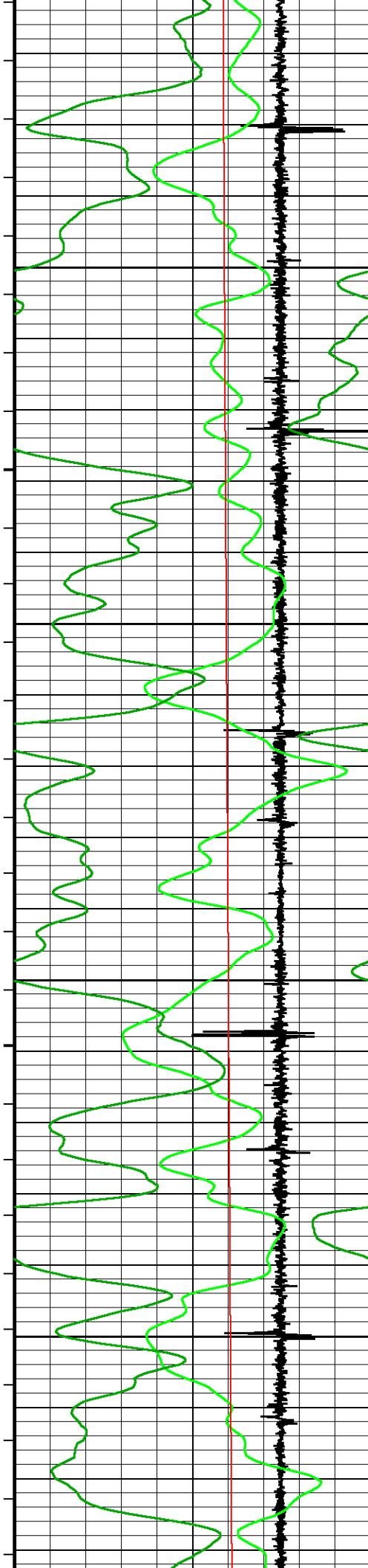
										RAPTOR NVISION LOG											
COMPANY										URSA OPERATING COMPANY											
WELL										BMC B 14A-18-07-95											
FIELD										WILDCAT											
PROVINCE/COUNTY										GARFIELD											
COUNTRY/STATE										USA / COLORADO											
LOCATION										2261' FNL & 0613' FWL											
SEC 18		TWP 7S		RGE 95W		Other Services						Elevations: feet KB 5117.00 DF 5117.00 GL 5100.00									
Latitude		SSSB																			
Longitude																					
API Number		05-045-23319																			
Permanent Datum GROUND LEVEL, Elevation 5100 feet																					
Log Measured From KB, 17.00 feet above Permanent Datum																					
Drilling Measured From KB																					
Date		14-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		6822.00				feet															
Depth Logger		6400.00				feet															
Top Log Interval		3100.00				feet															
Bottom Log Interval		6822.00				feet															
Hole Fluid Type		WATER																			
Hole Fluid Level		0.00				feet															
Restriction ID		3.875				inches		Gun Type													
Max Recorded Temp		196.00				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		6822.00									
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	6822.00	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 280 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. 196F

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.



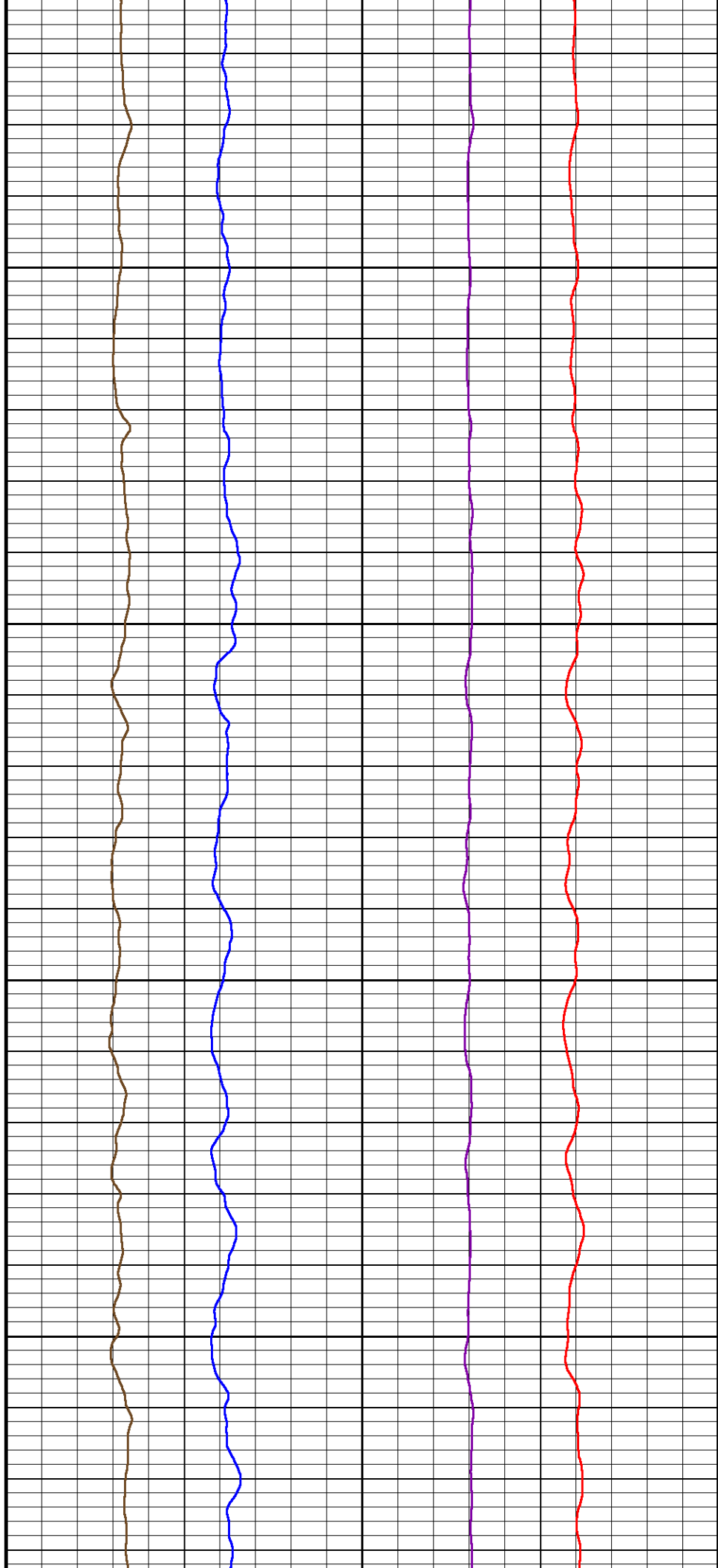


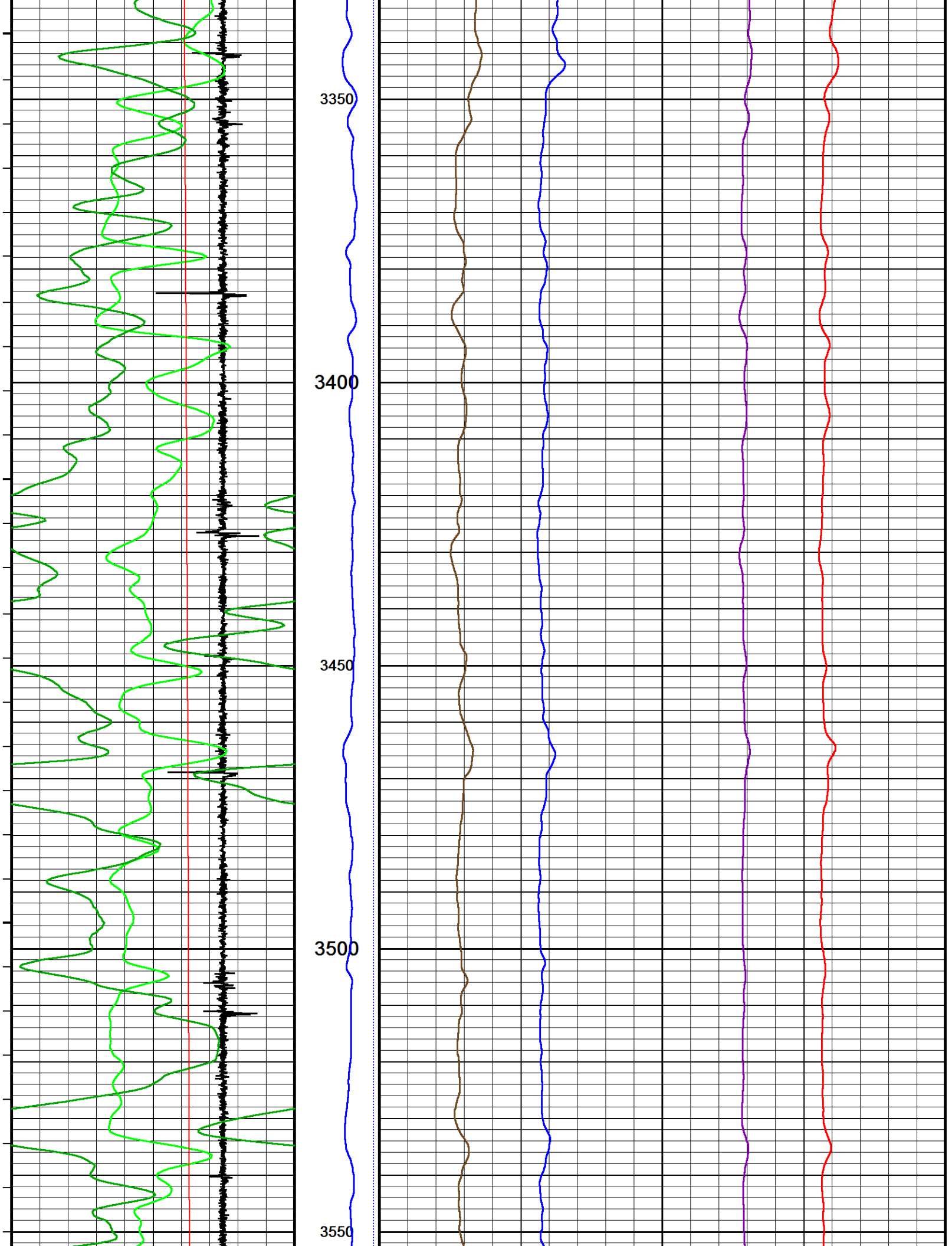
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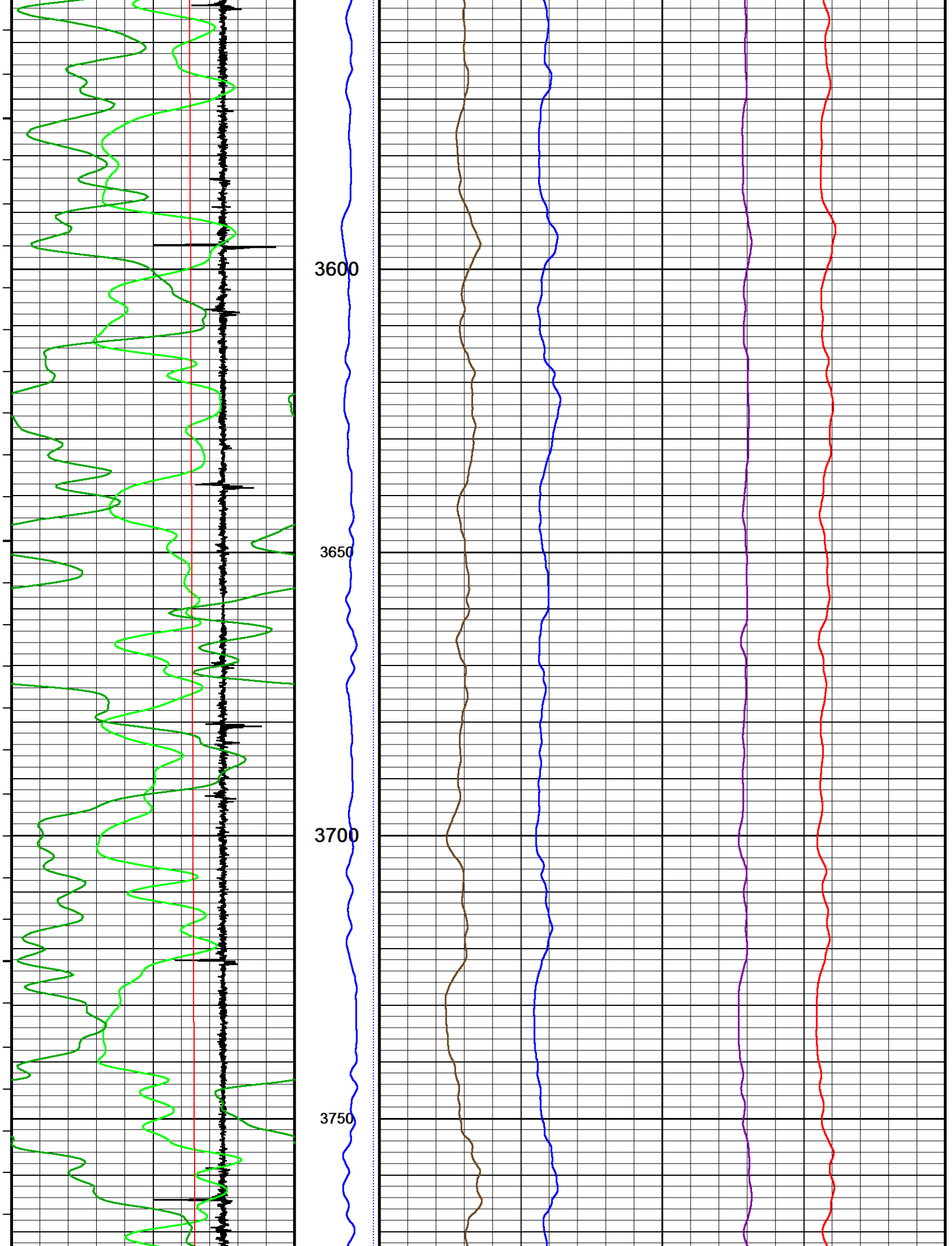
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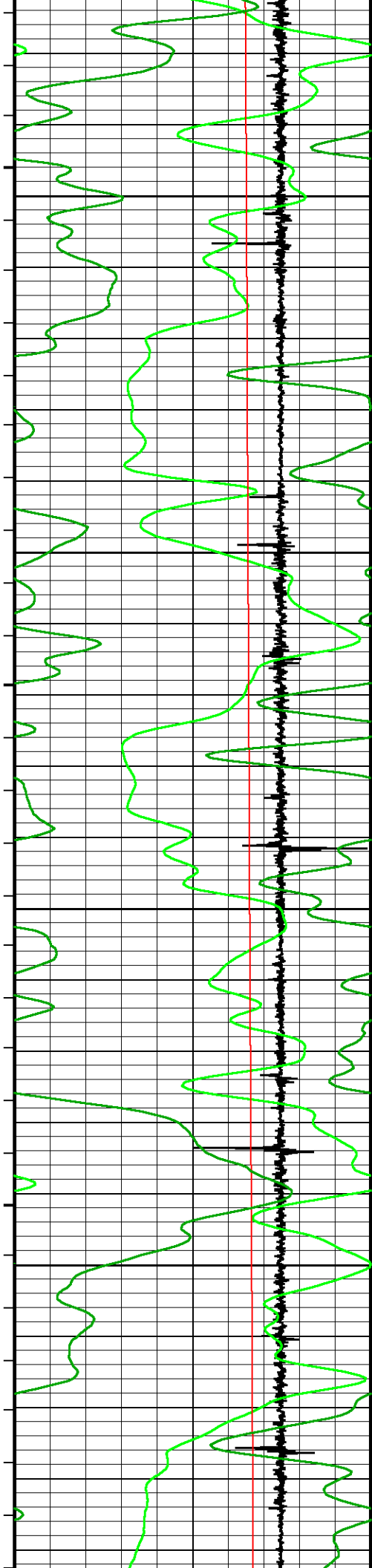
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3300







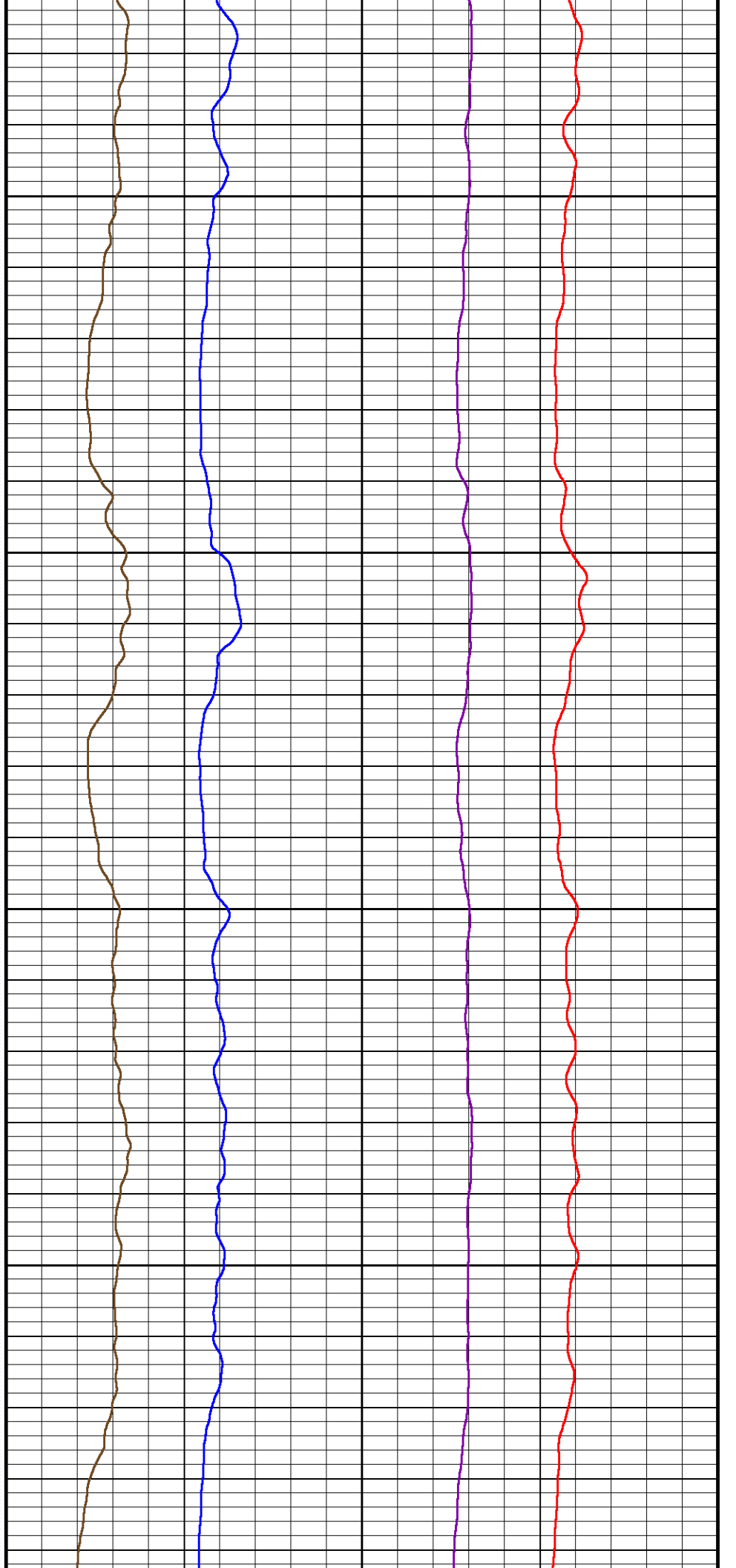


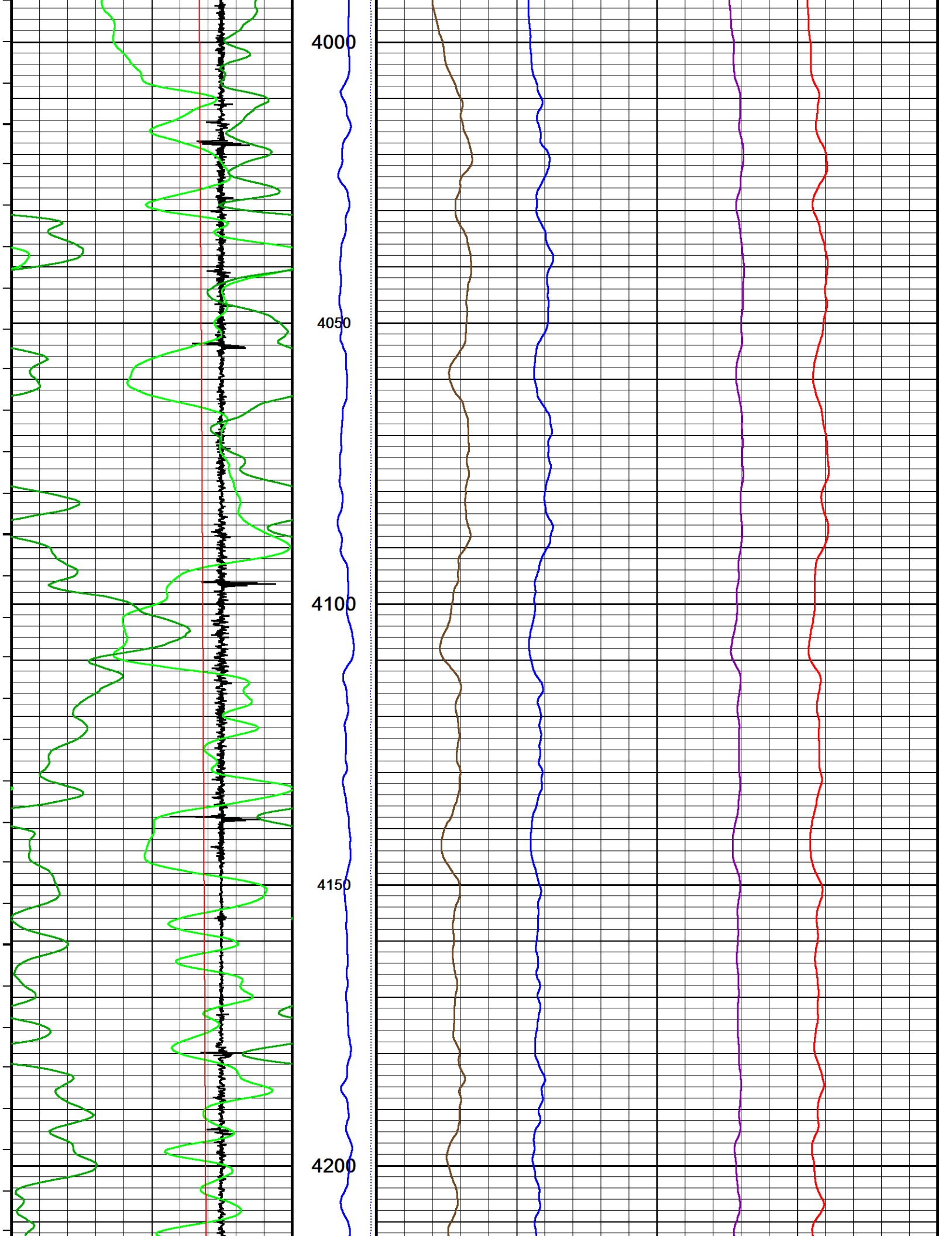
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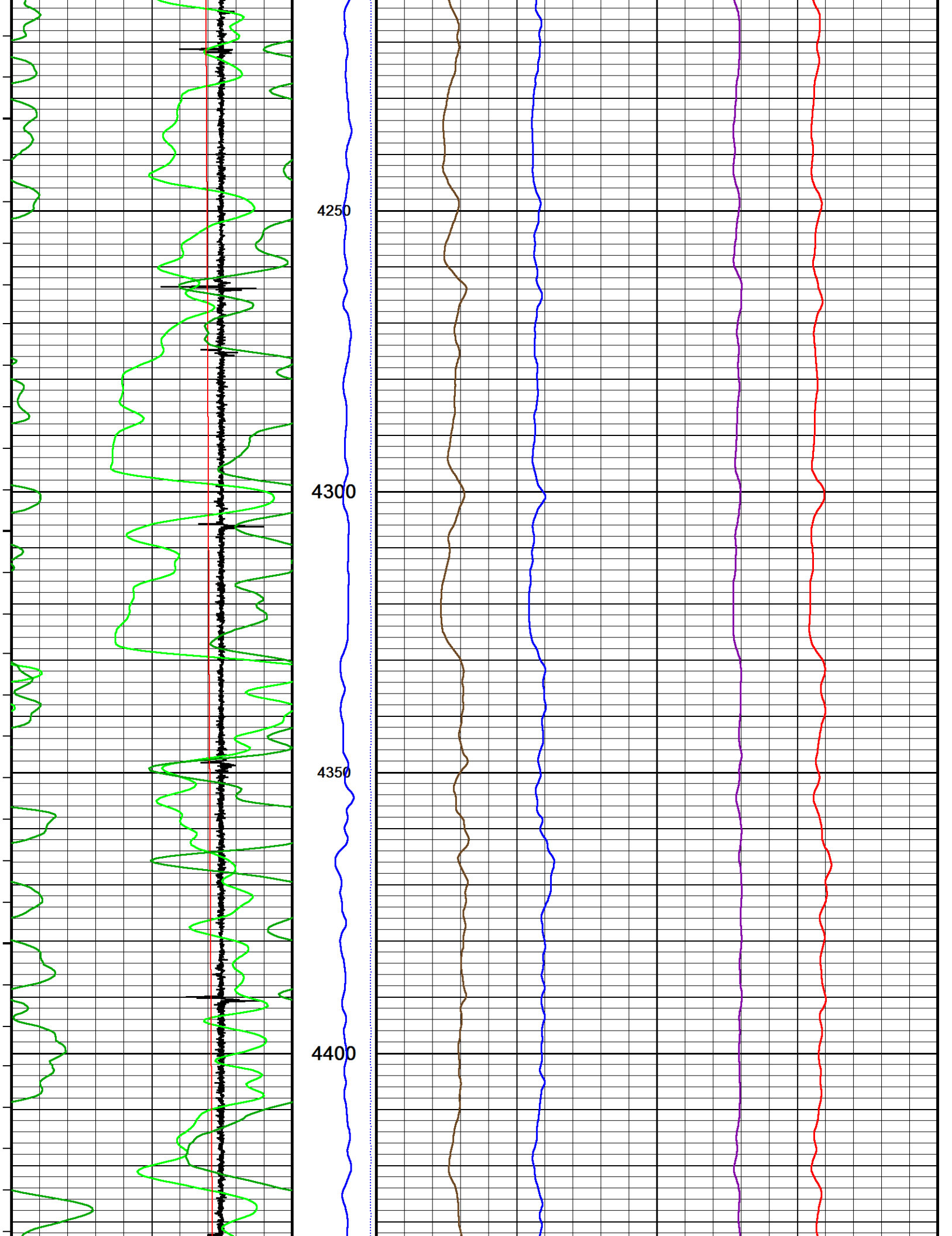
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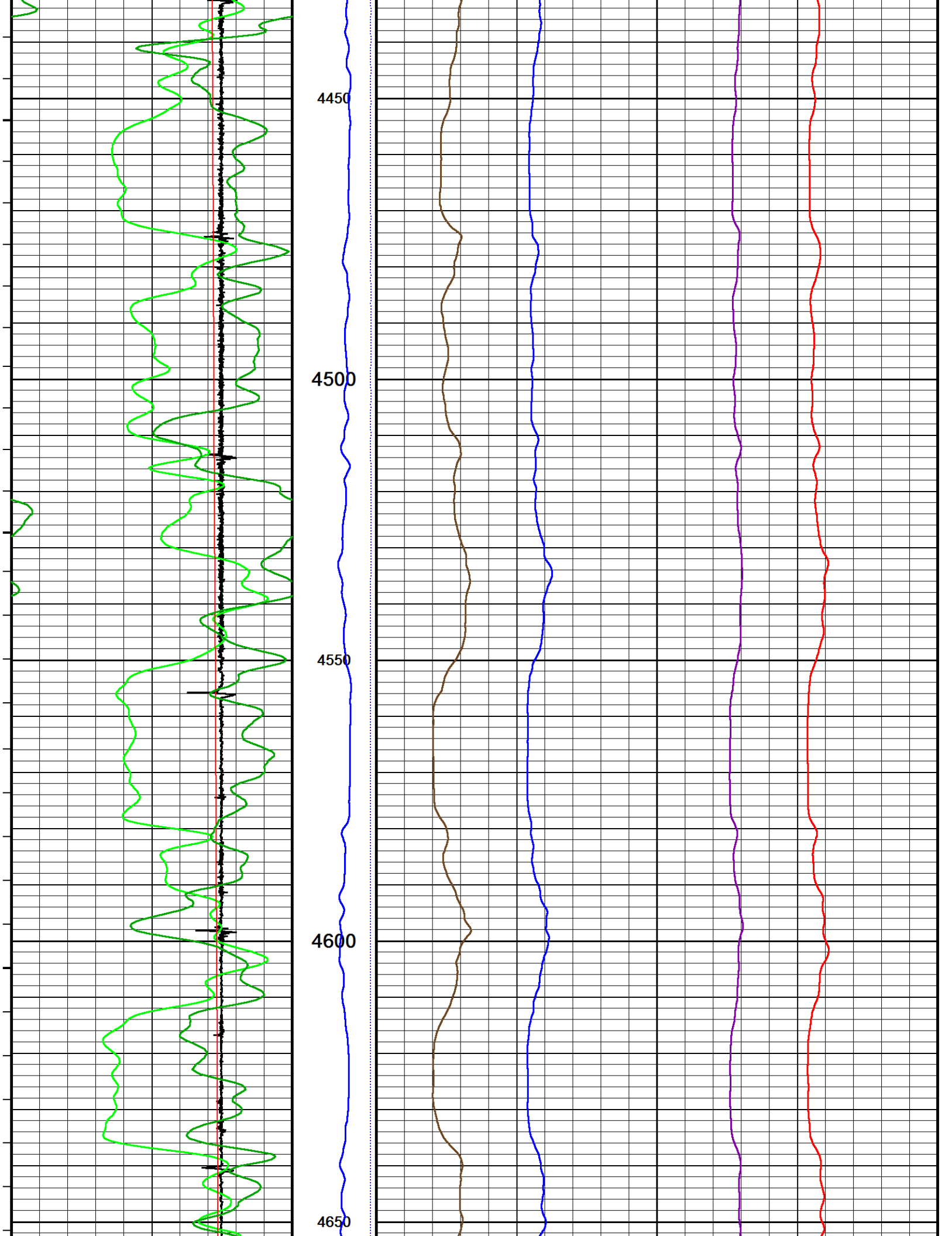
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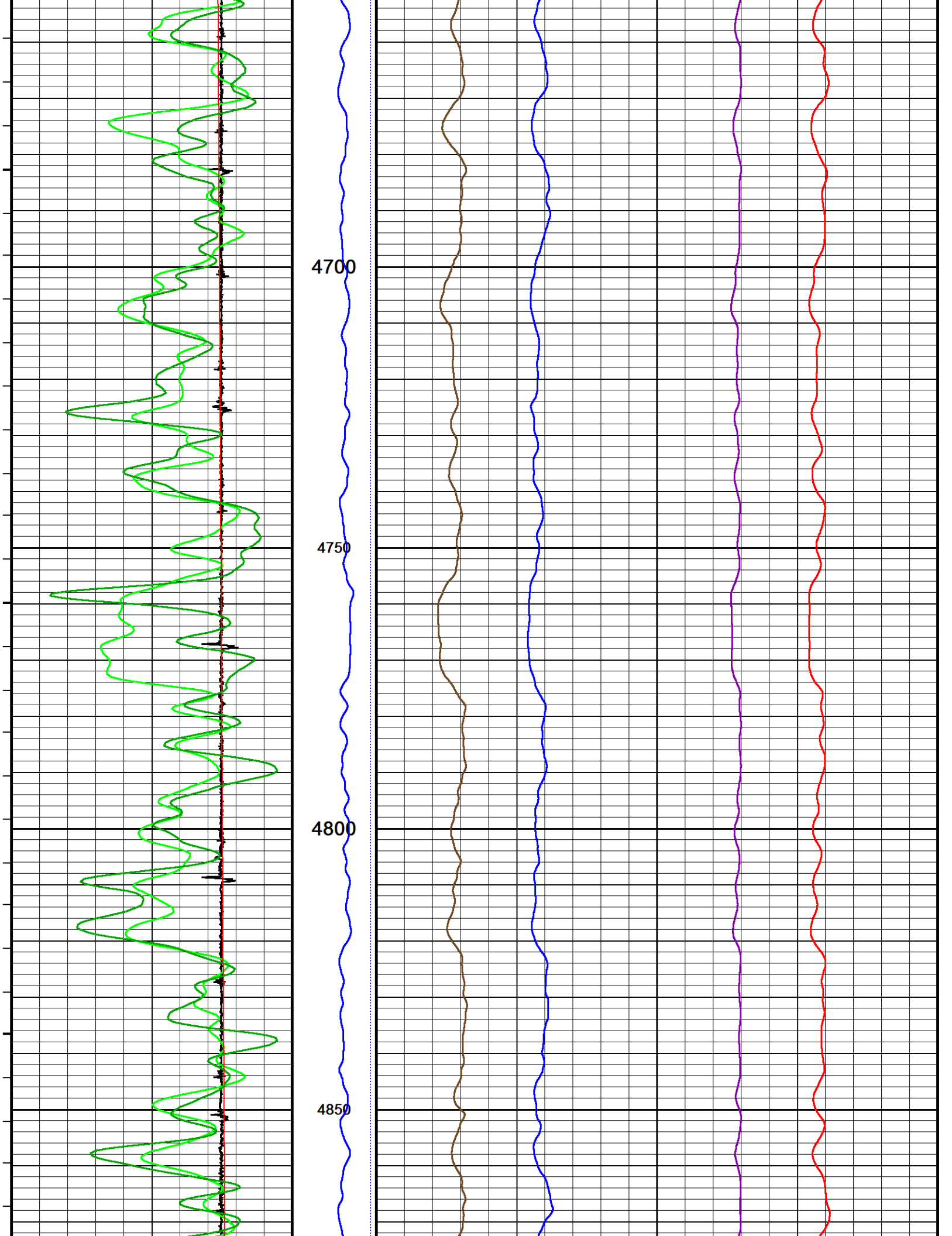
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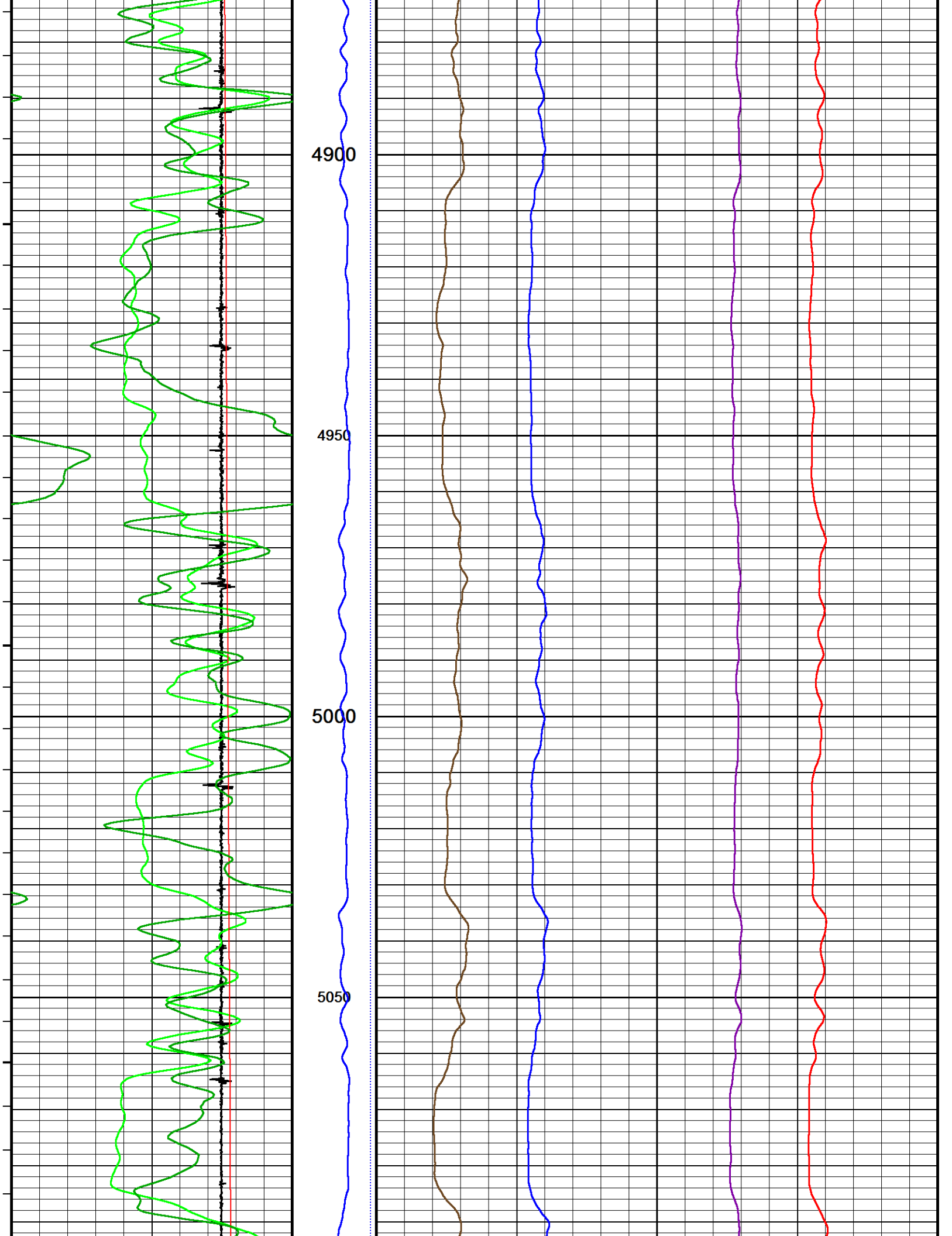


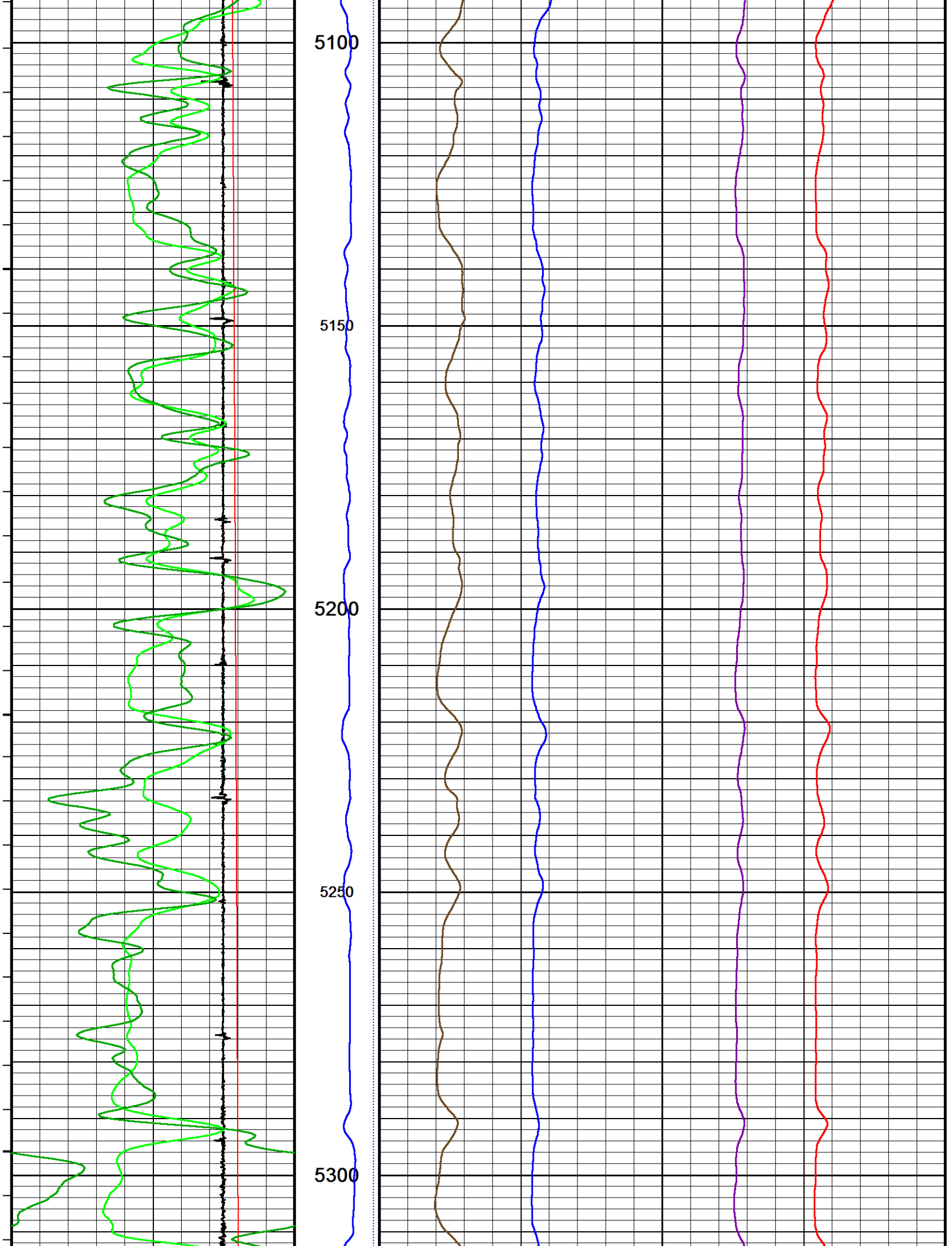


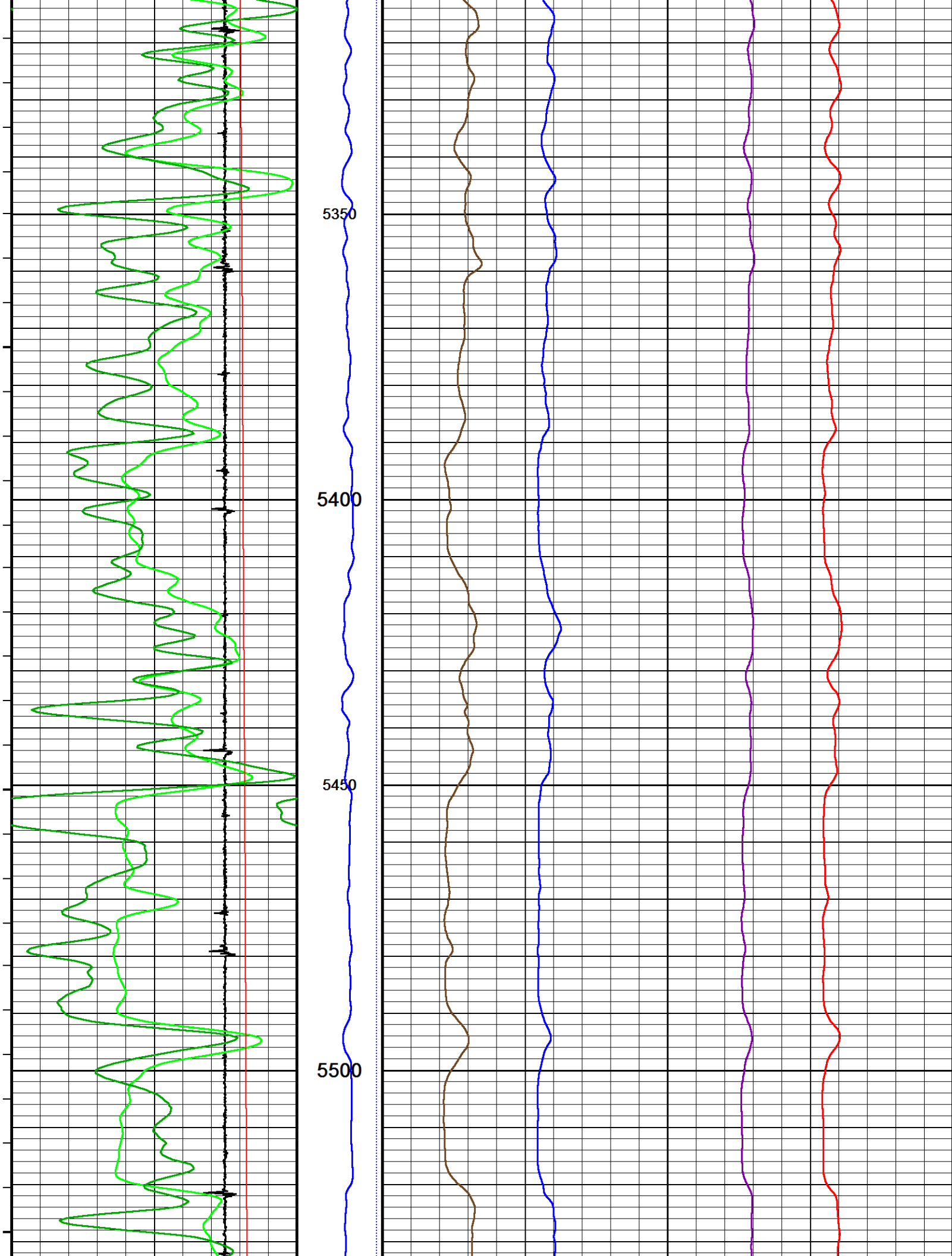


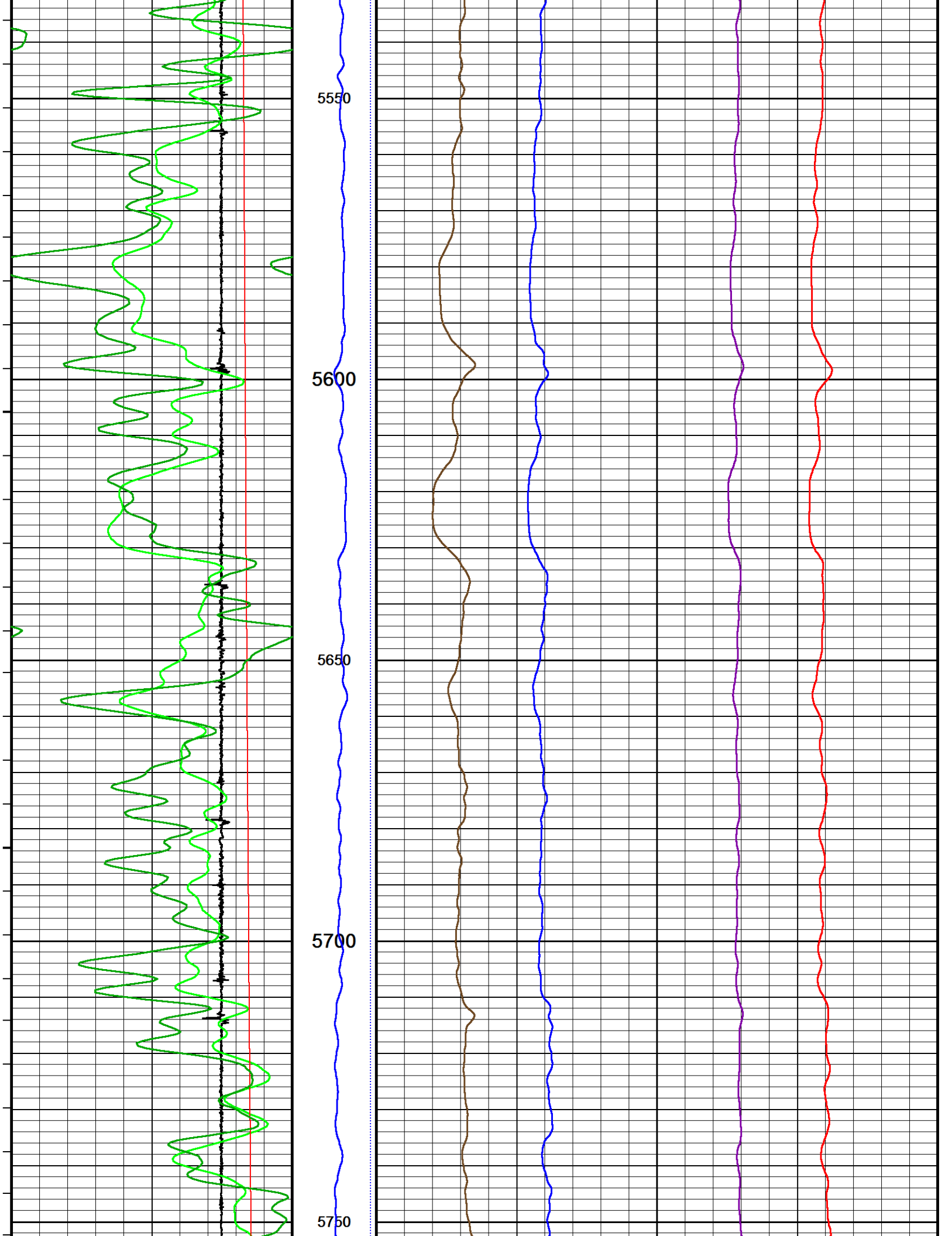


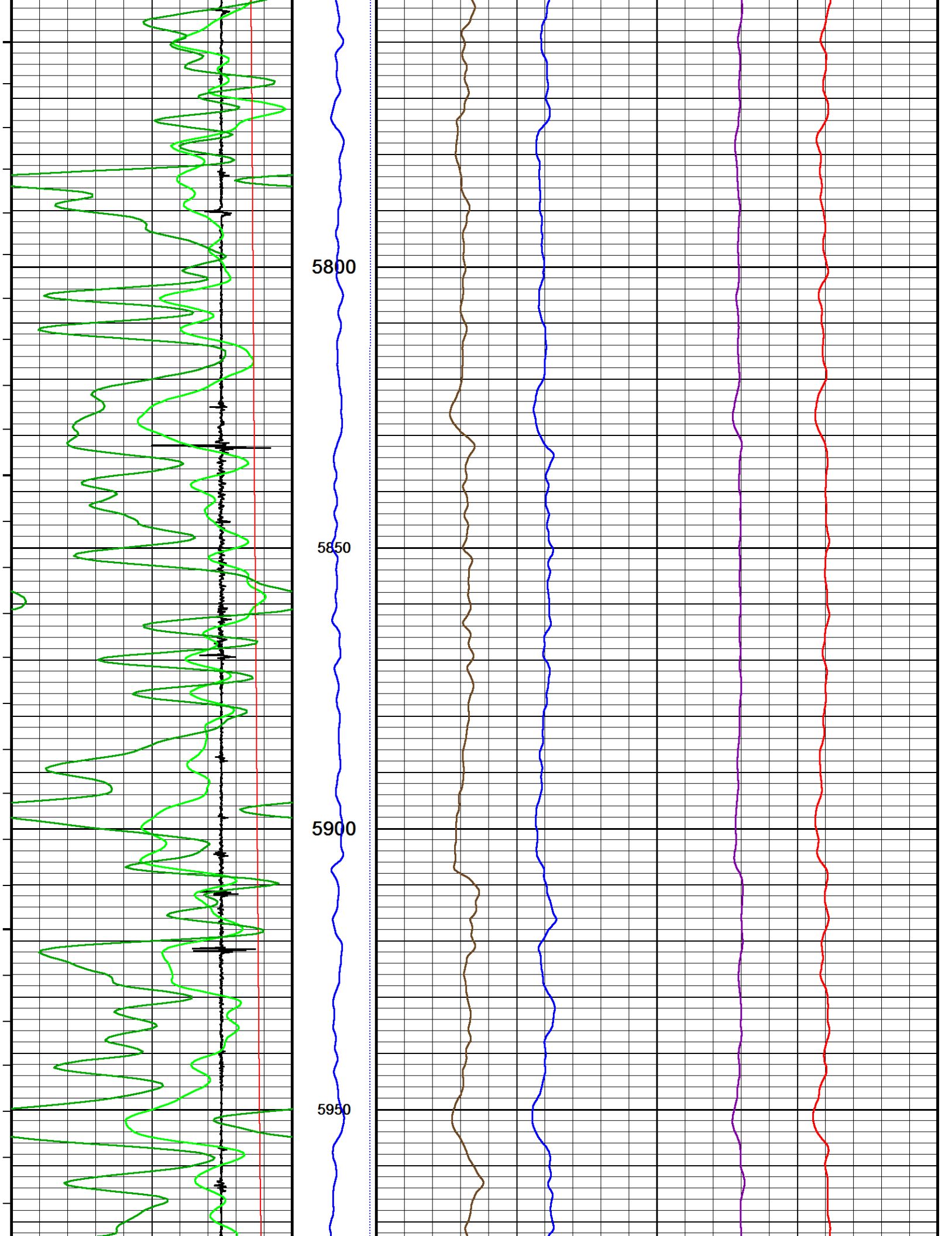


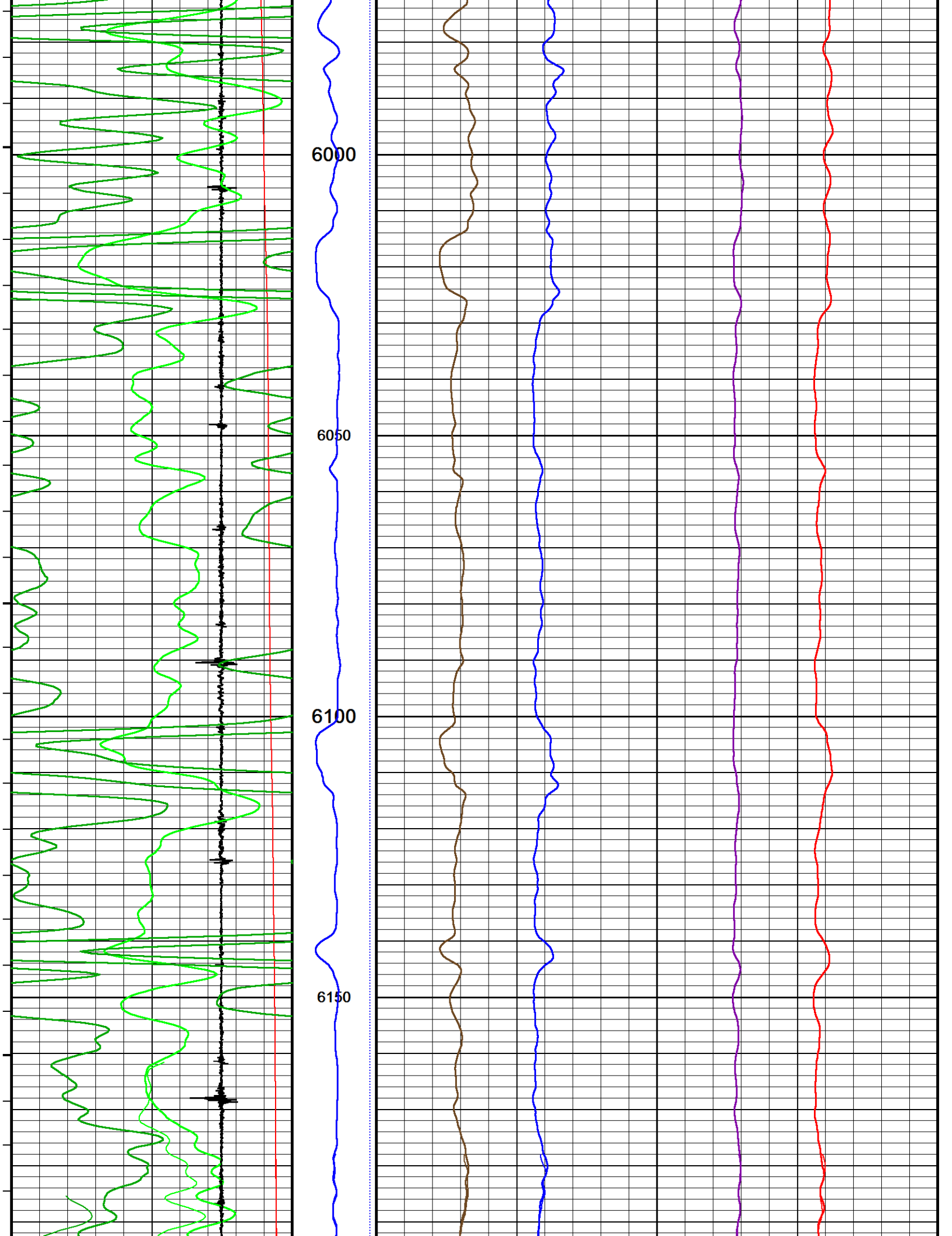


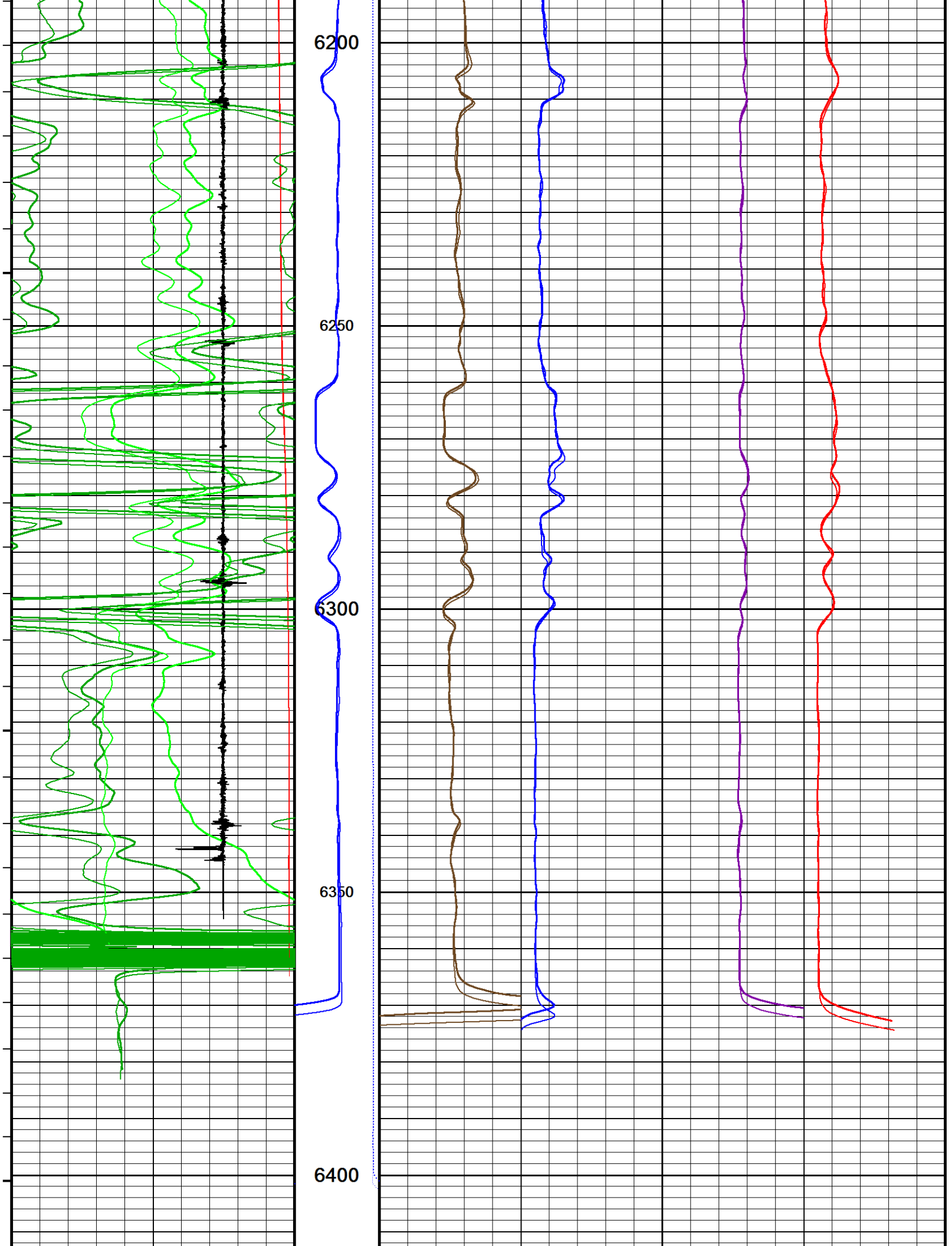


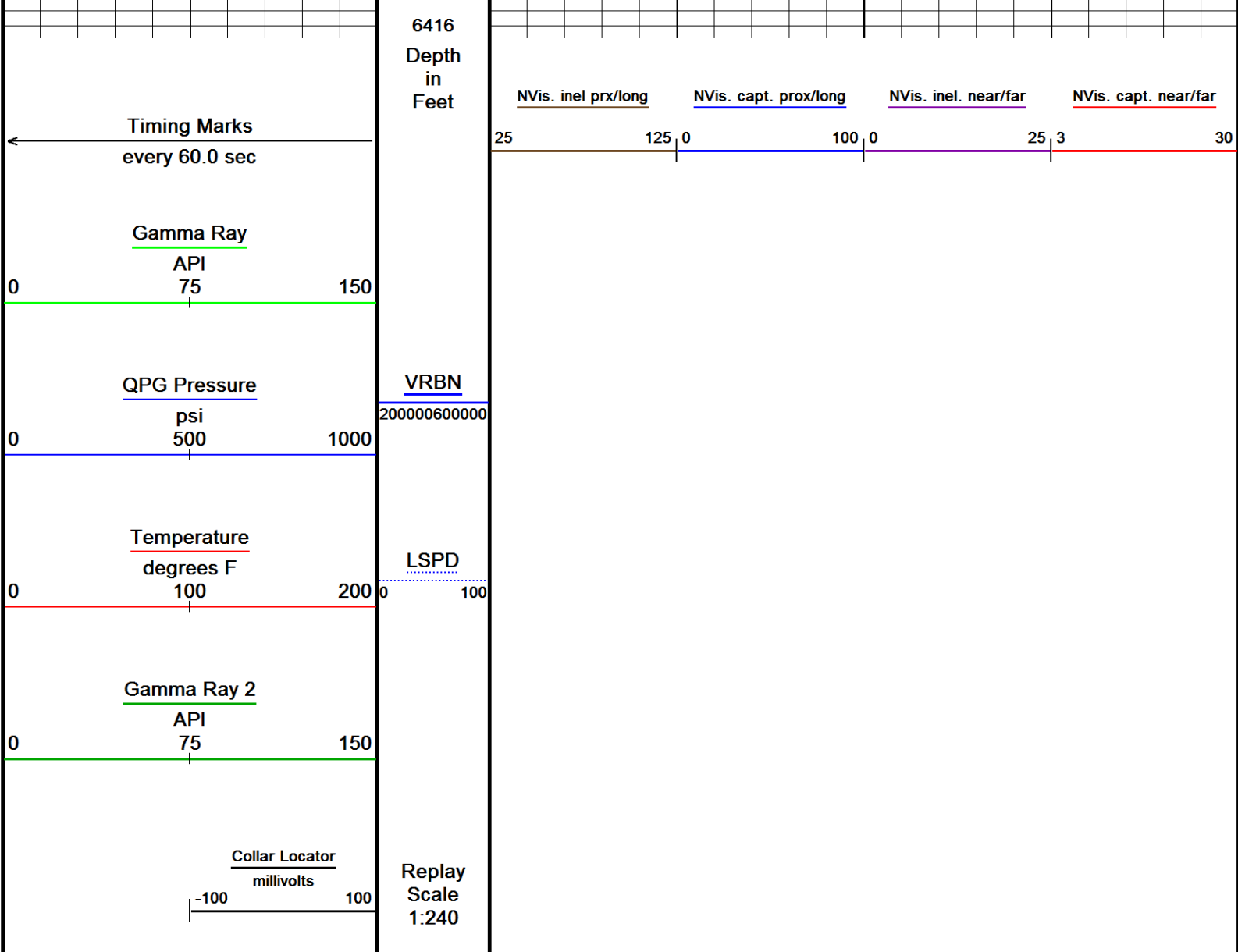








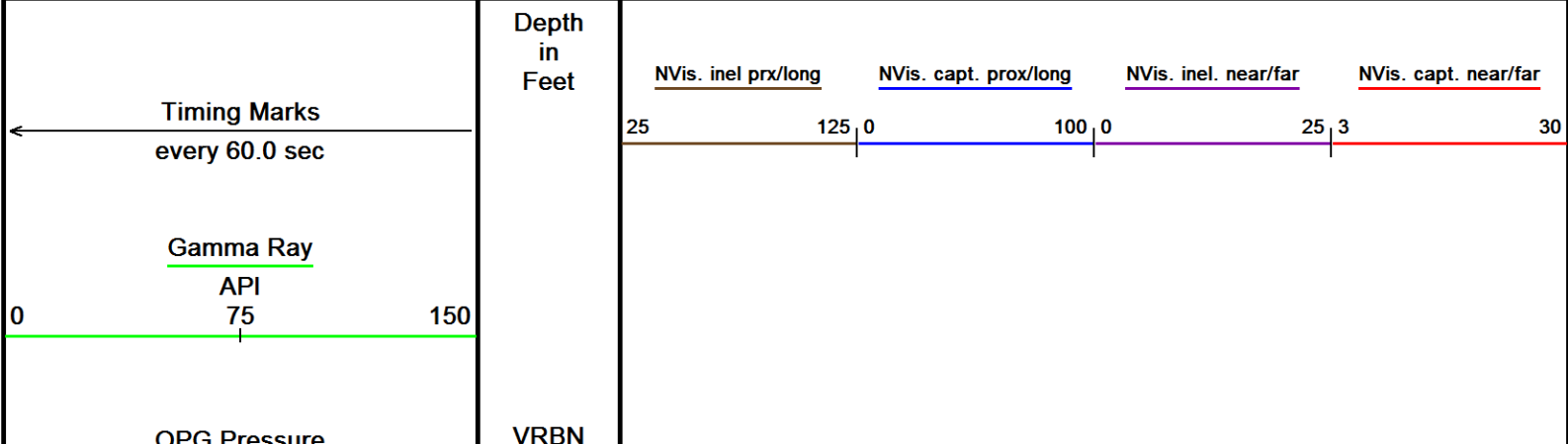


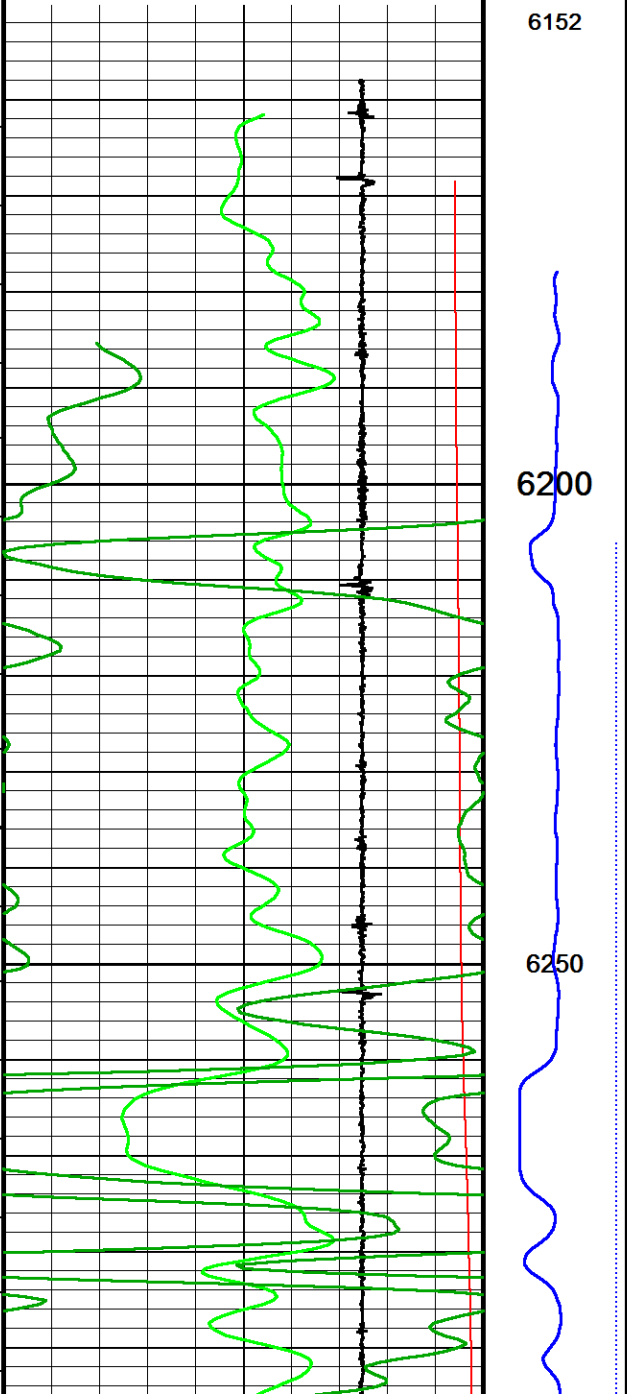
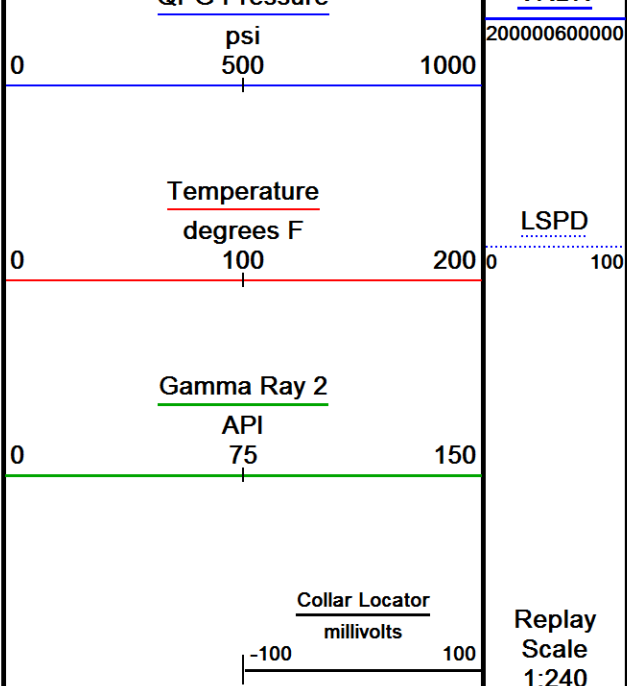


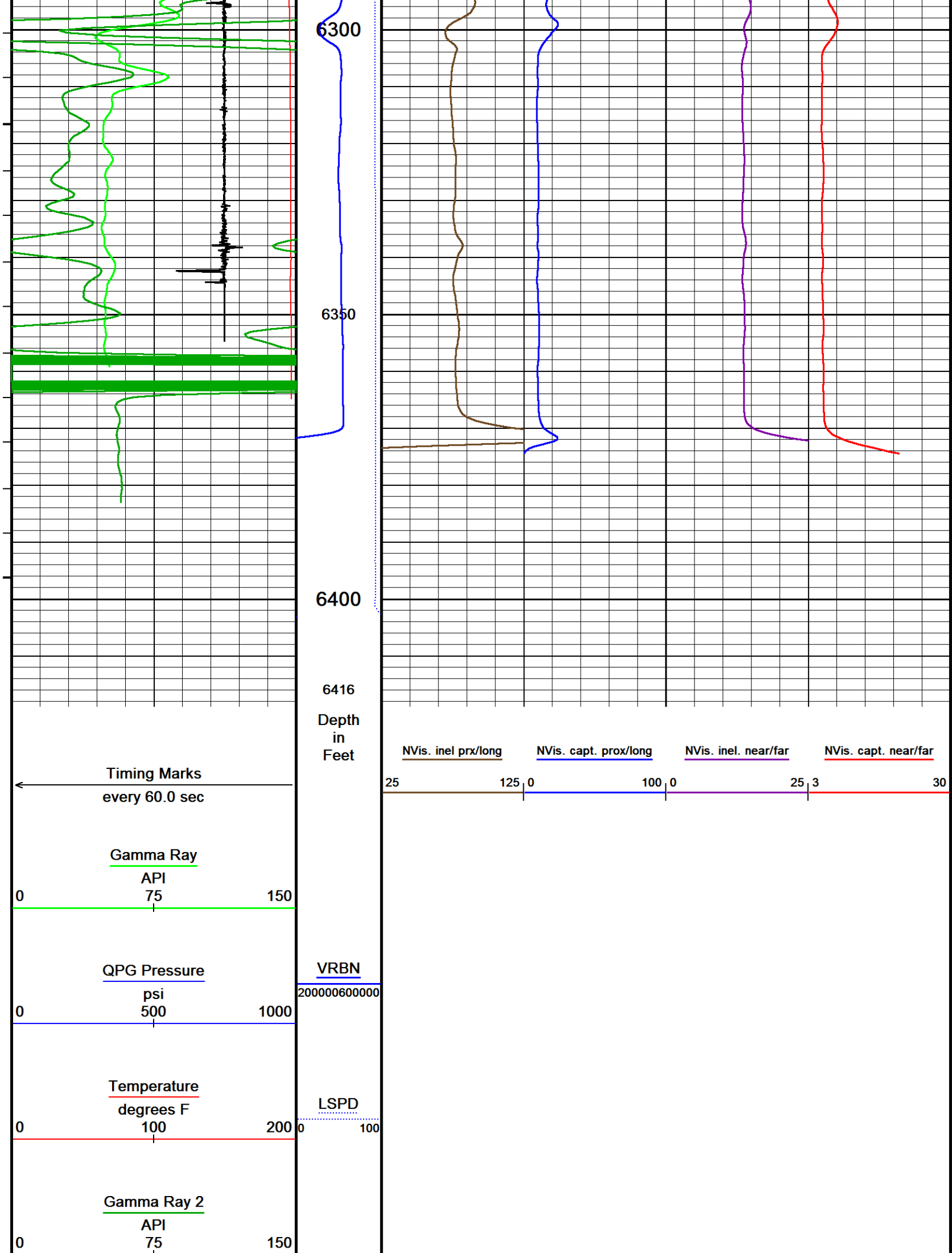
Depth Based Data - Maximum Sampling Increment 12.5cm		Plotted on 14-SEP-2017 22:21
Filename: C:\Logs\URSA\BMC B 14A-18-07-95\BMC B 14A-18-07-95 CREB SSSB MAIN FINAL.dta		Recorded on 14-SEP-2017 22:06
Filename: C:\Logs\URSA\BMC B 14A-18-07-95\BMC B 14A-18-07-95 CREB SSSB REPEAT FINAL.dta		Recorded on 14-SEP-2017 22:14
System Versions: Logged with 17.01.7206 Plotted with 17.01.7206		

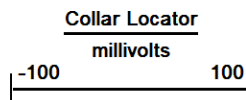
↑	MAIN PASS REPEAT PASS	↑
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↓	REPEAT PASS	↓
Depth Based Data - Maximum Sampling Increment 12.5cm		Plotted on 14-SEP-2017 22:21
Filename: C:\Logs\URSA\BMC B 14A-18-07-95\BMC B 14A-18-07-95 CREB SSSB REPEAT FINAL.dta		Recorded on 14-SEP-2017 22:14
System Versions: Logged with 17.01.7206 Plotted with 17.01.7206		









Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 12.5cm

Plotted on 14-SEP-2017 22:21

Filename: C:\Logs\URSA\BMC B 14A-18-07-95\BMC B 14A-18-07-95 CREB SSSB REPEAT FINAL.dta

Recorded on 14-SEP-2017 22:14

System Versions: Logged with 17.01.7206 Plotted with 17.01.7206



REPEAT PASS



DOWNHOLE EQUIPMENT

C:\Logs\URSA\BMC B 14A-18-07-95\BMC B 14A-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

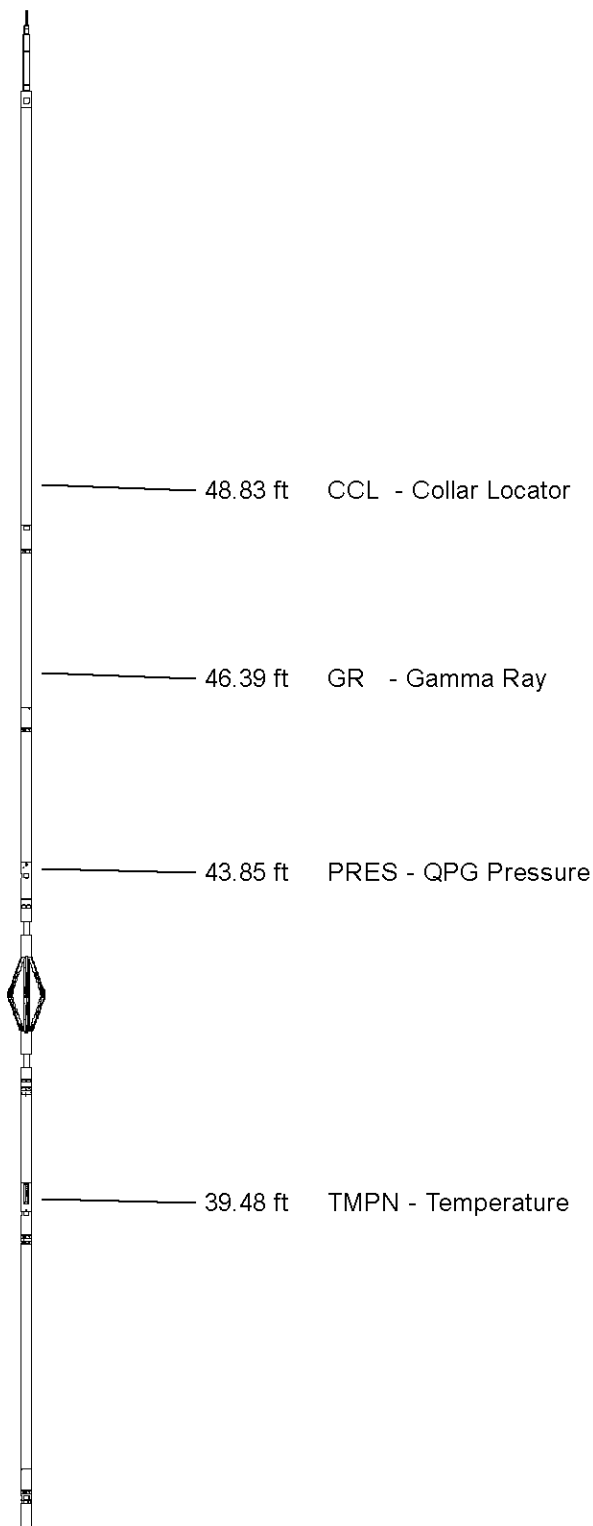
Tool Temperature, 43mm, 177C, 10-pin ITB

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

Casing Reservoir Evaluation Tool Sonde



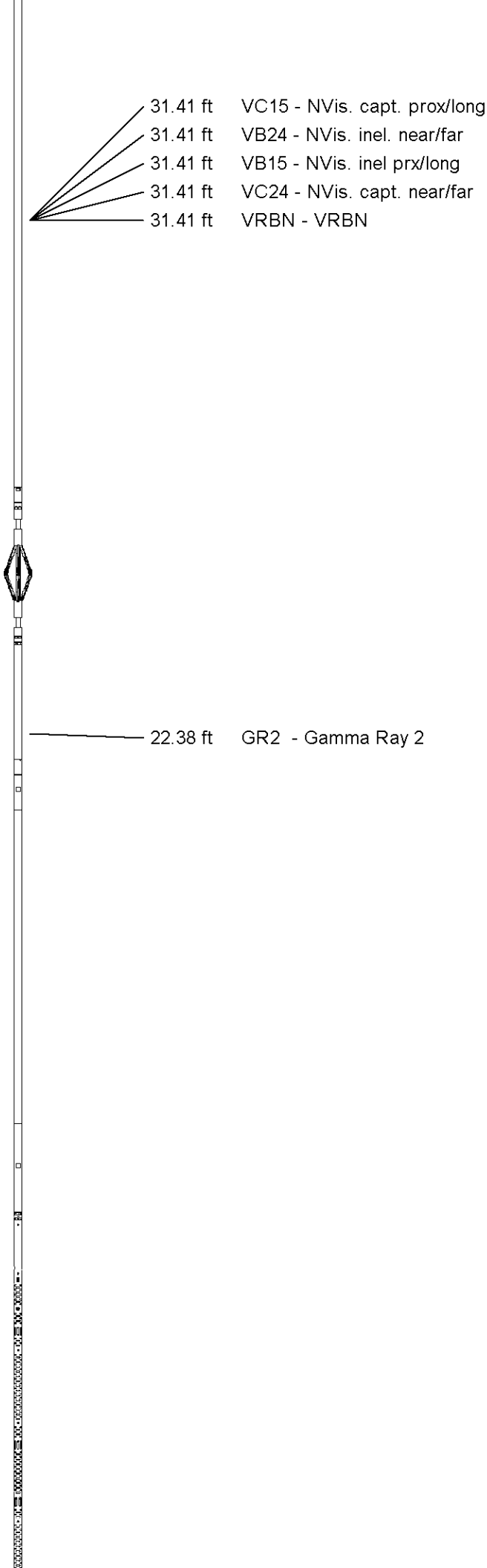
CRM-BA 129 LG: 9.19 ft WT: 46.3 lb OD: 1.693 in

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

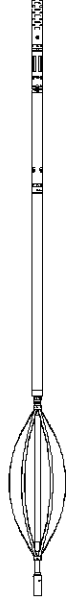
SSB Receiver Sonde
SSS-BA 117 LG: 8.76 ft WT: 30.9 lb OD: 1.693 in



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 14A-18-07-95\BMC B 14A-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 Number 220928

calibration Date 15 Sep 2012

Gauge Type QHB108-16-177

Base Check Date

Max Pressure 16000 PSI

Max Temperature 177 Deg C

Min Pressure 13 PSI

Min Temperature 25 Deg C

Pressure

Pressure polynomial order 3

Temperature polynomial order 3

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 order 3

T0

T1

T2

T3

T4

25.2302	-0.731527	-0.000858522	-6.86634e-007	
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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	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-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	6.60
	Free Pipe	81.00	2210.50
AMP 5FT	100% Bond	0.40	1.10
	Free Pipe	54.00	4015.30
1 SECTOR AMP	100% Bond	5.00	16.60
	Free Pipe	95.00	1451.60
2 SECTOR AMP	100% Bond	5.00	15.60
	Free Pipe	95.00	1328.80
3 SECTOR AMP	100% Bond	5.00	9.70
	Free Pipe	95.00	1212.30
4 SECTOR AMP	100% Bond	5.00	2.00
	Free Pipe	95.00	1412.20
5 SECTOR AMP	100% Bond	5.00	6.20
	Free Pipe	95.00	1431.60
6 SECTOR AMP	100% Bond	5.00	1.20
	Free Pipe	95.00	1725.00

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 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 14A-18-07-95
FIELD	WILDCAT
PROVINCE/COUNTY	GARFIELD
COUNTRY/STATE	USA / COLORADO

Elevation Kelly Bushing	5117	feet	Bottom Log Interval	6822.00	feet
Elevation Drill Floor	5117	feet	Depth Driller	6822.00	feet
Elevation Ground Level	5100	feet	Depth Logger	6400.00	feet



Weatherford®

RAPTOR NVISION LOG