



40 Arm Caliper
Magnetic Thickness
Radial Bond Log

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Wishbone 29C-24HZ
Field Wattenberg
County Weld State Colorado

Location: API #: 05-123-37153
SHL: 320' FSL & 980' FWL SMSW
Lat / Long: 40.117395 / -104.731469
SEC 24 TWP 2N RGE 66W
Permanent Datum Ground Level Elevation 5082'
Log Measured From Kelly Bushing (17 FT)
Drilling Measured From Kelly Bushing
Other Services
JB & Plug
RCBL
Elevation
K.B. 5099'
D.F. 5098'
G.L. 5082'

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Wishbone 29C-24HZ
Field Wattenberg
County Weld
State Colorado

Date 10-Jul-2013

Run Number Three
Depth Driller 11999 FT
Depth Logger 6928 FT
Bottom Logged Interval 6924 FT
Top Log Interval Surface
Open Hole Size 8.750"
Type Fluid Water
Density / Viscosity 8.34 lbm/gal
Max. Recorded Temp. 226 degF
Estimated Cement Top Surface
Time Well Ready 09:30
Time Logger on Bottom 11:30
Equipment Number HD-0134
Location Fort Lupton, CO.
Recorded By Sam Hopper
Witnessed By Jeff Hammond

Run Number Bit From To Size Weight From To

Casing Record Size Wgt/Ft Top Bottom
Surface String 9-5/8" 36# Surface 1019 FT
Prot. String 7" 26# Surface 7915 FT
Production String
Liner 4-1/2" 11.6# 6861 FT 11984 FT

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

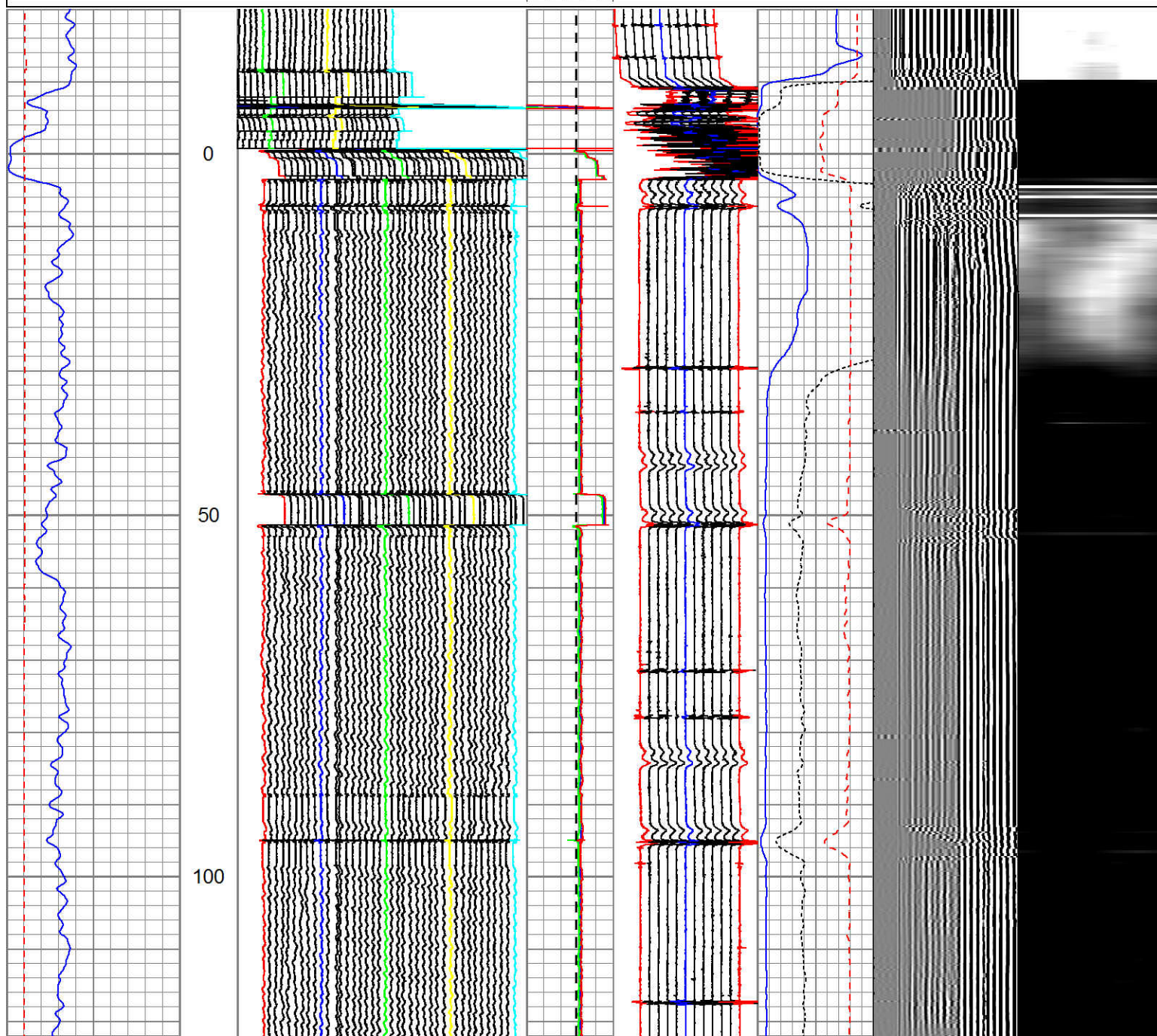
This is first recorded log in hole.
Depth reference to Casing Tally reported Top of Liner at 6861'.
Adjusted -21.6' to TOL at 6861' from a 17' KB zero.
RCBL-MIT-MTT ran at 2800 PSI surface applied pressure.
Estimated Cement Top recorded to surface.

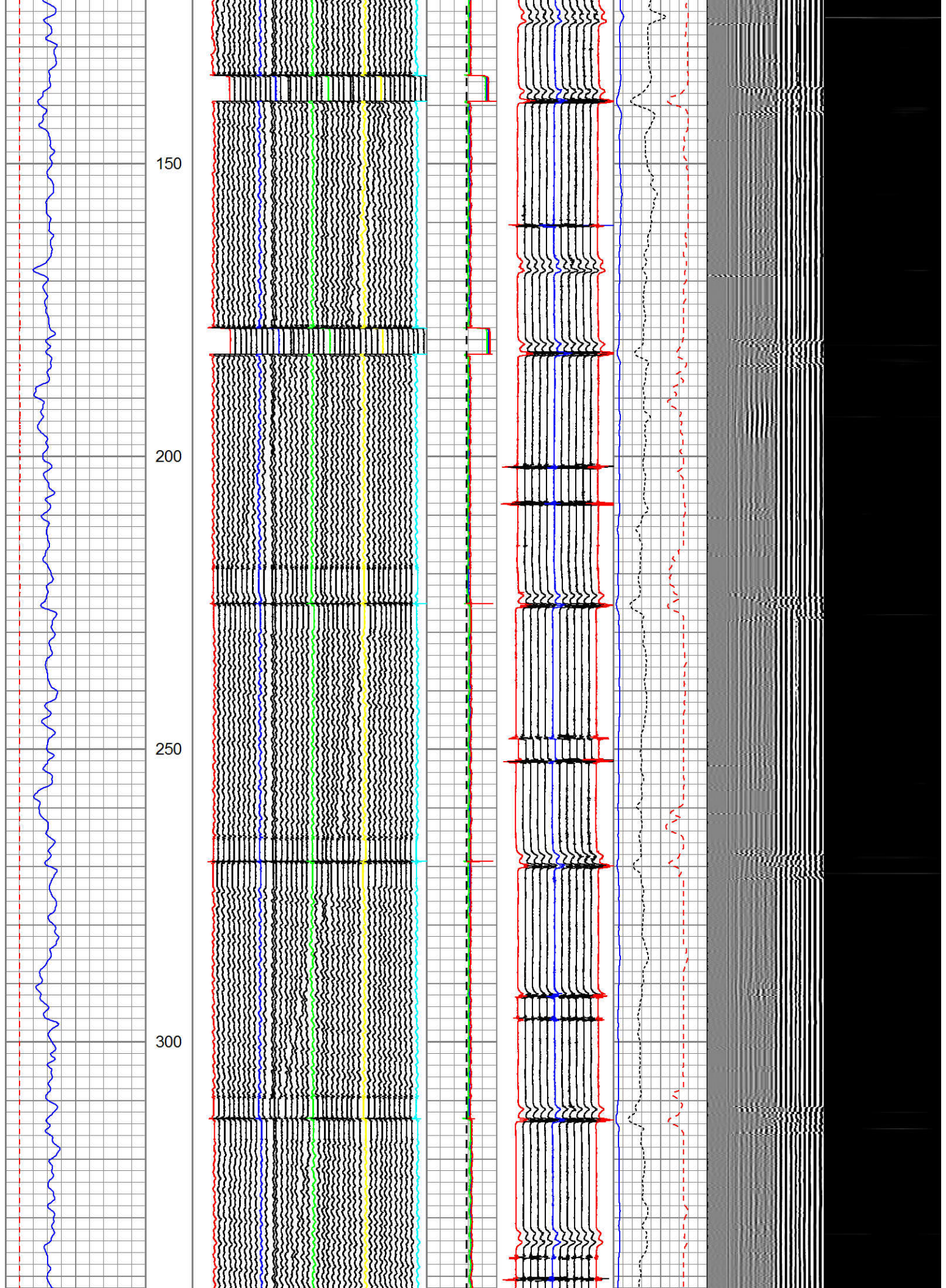
Thank you for choosing FMC Technologies Completion Services, Inc.

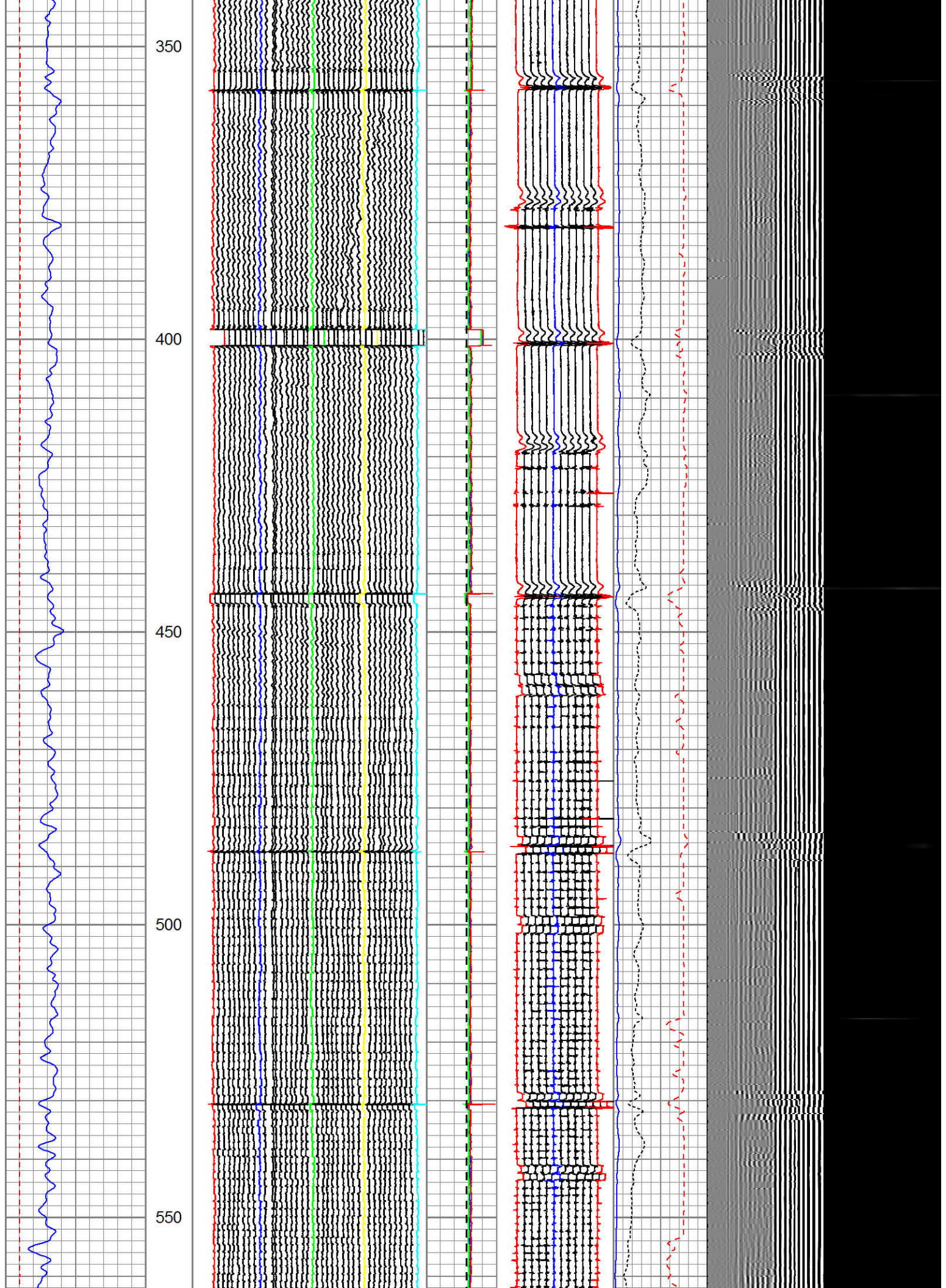
Main Pass 2800 PSI

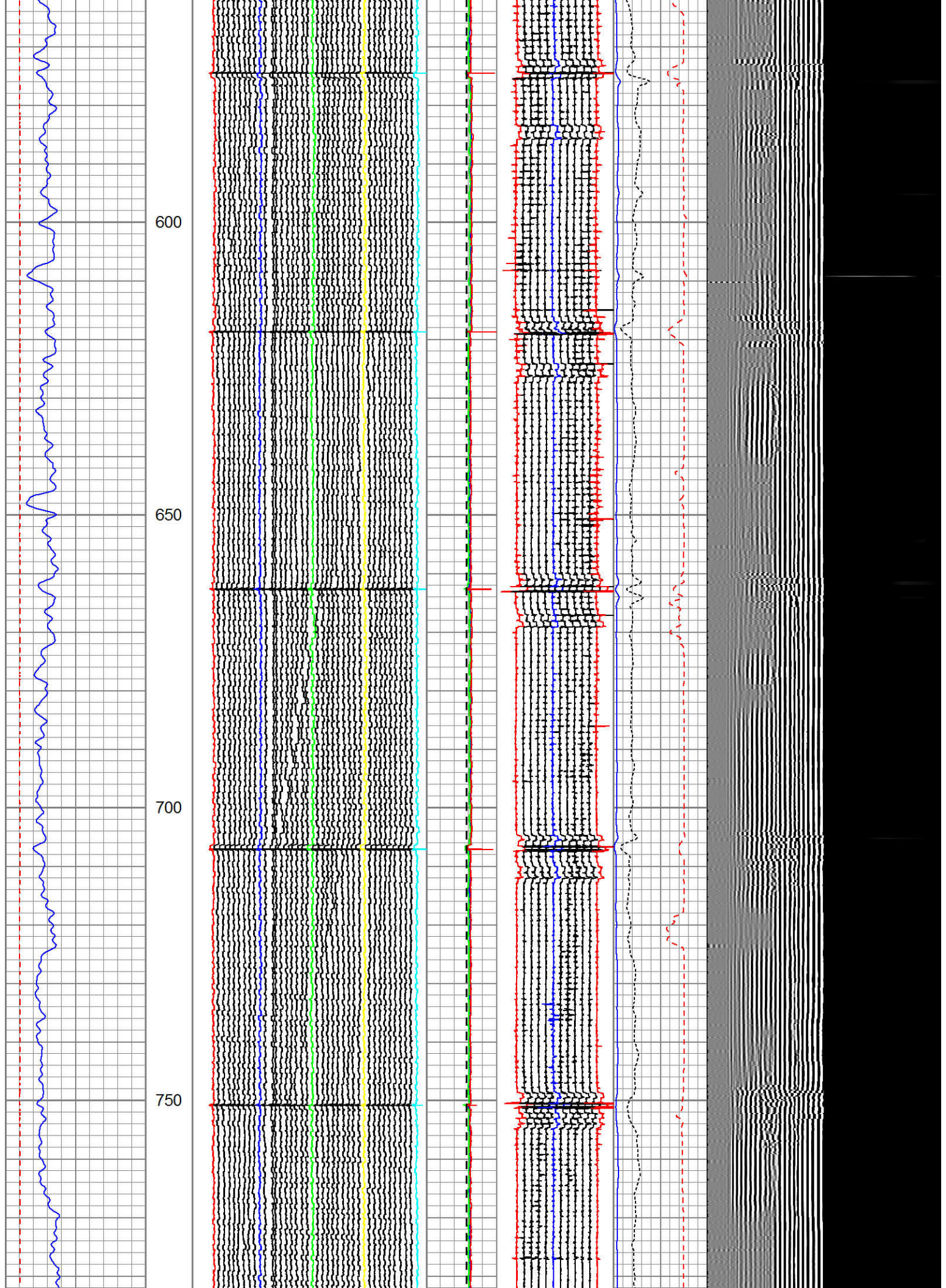
Database File: anadarko wishbone 29c-24hz-cil.db
 Dataset Pathname: main
 Presentation Format: us40rbl7
 Dataset Creation: Wed Jul 10 11:45:21 2013 by Log Sondex V7.03
 Charted by: Depth in Feet scaled 1:240

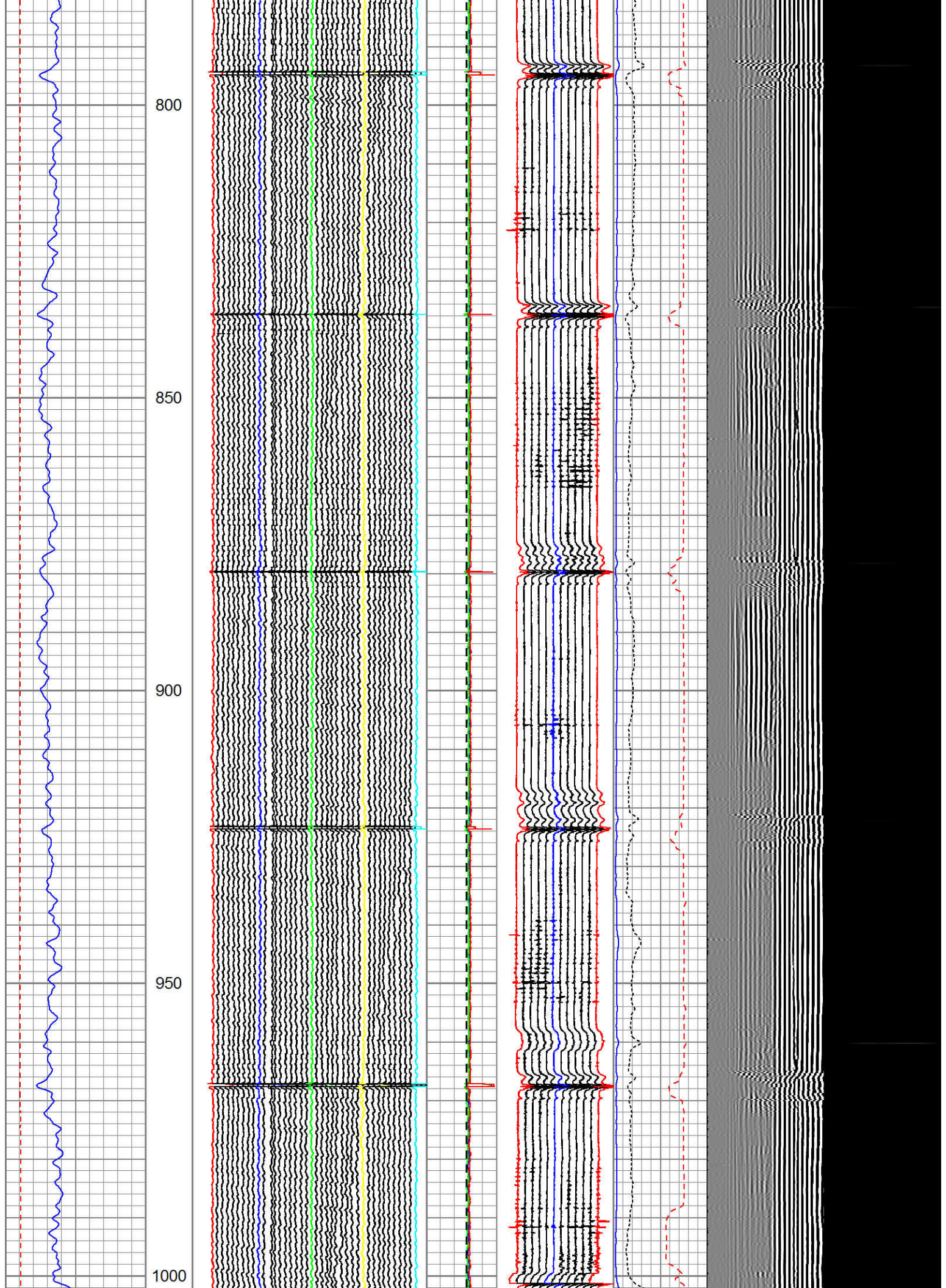
0	GR (GAPI)120	3	Caliper #1 (in)	4.8	Ave ID	MTTP01	3' Amp	5' VDL	Sector Map
	Deviation	2.64	Caliper #10 (in)	4.44	(in)	1 (rad) 9	(mV)	200 1200	
-10	(°)	2.24	Caliper #20 (in)	4.04	5.7 6.7	MTTP06	0 100		
		1.84	Caliper #30 (in)	3.64	Min ID	-1.5 (rad) 6.5	3' Amp X 5		
		1.44	Caliper #40 (in)	3.24	(in)	MTTP12	3' TT		
					5.7 6.7	-4.5 (rad) 3.5	(usec)		
					Max ID		650 150		
					(in)				
					5.7 6.7				
					Nom ID				
					(in)				
					5.7 6.7				

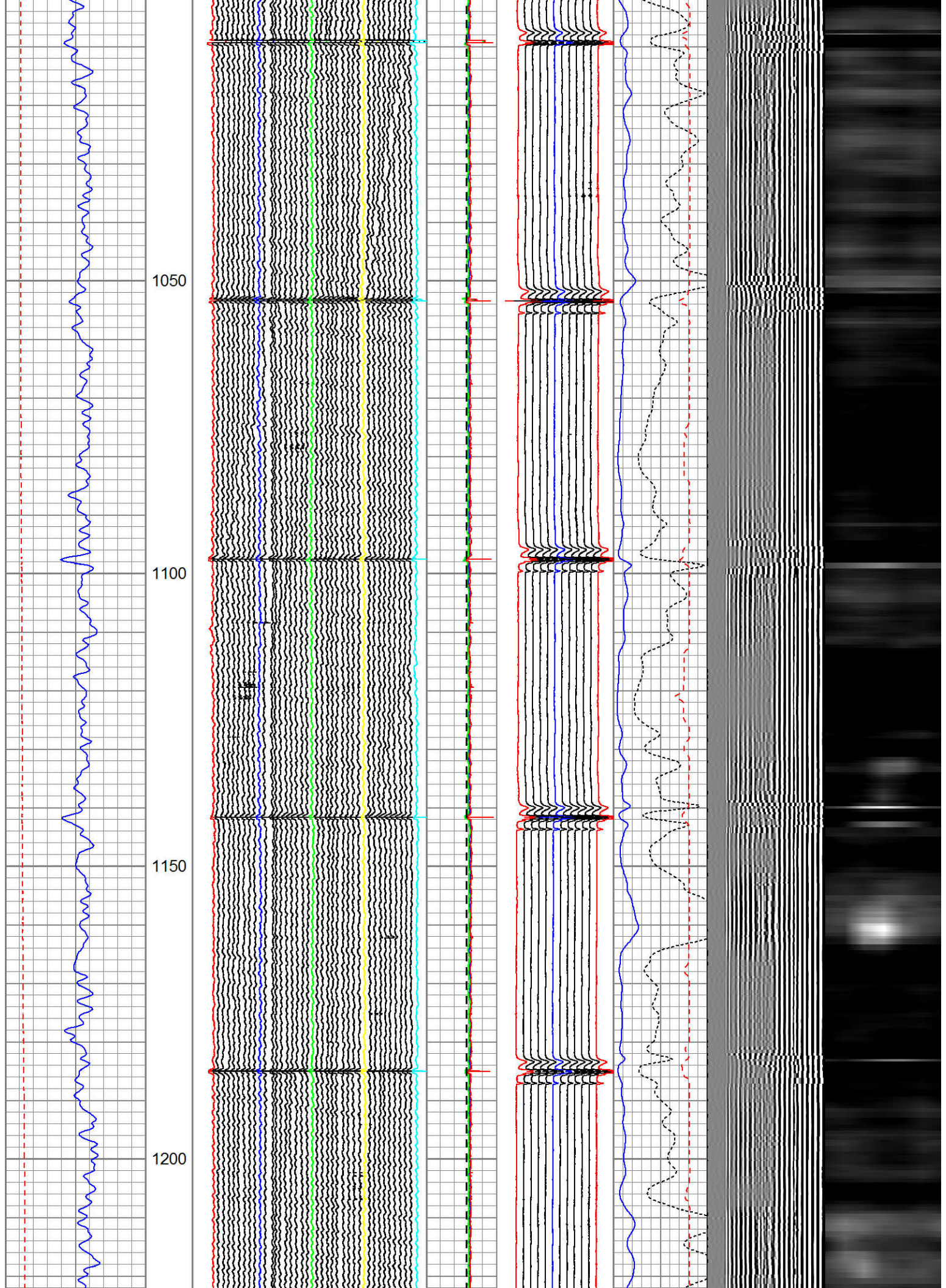


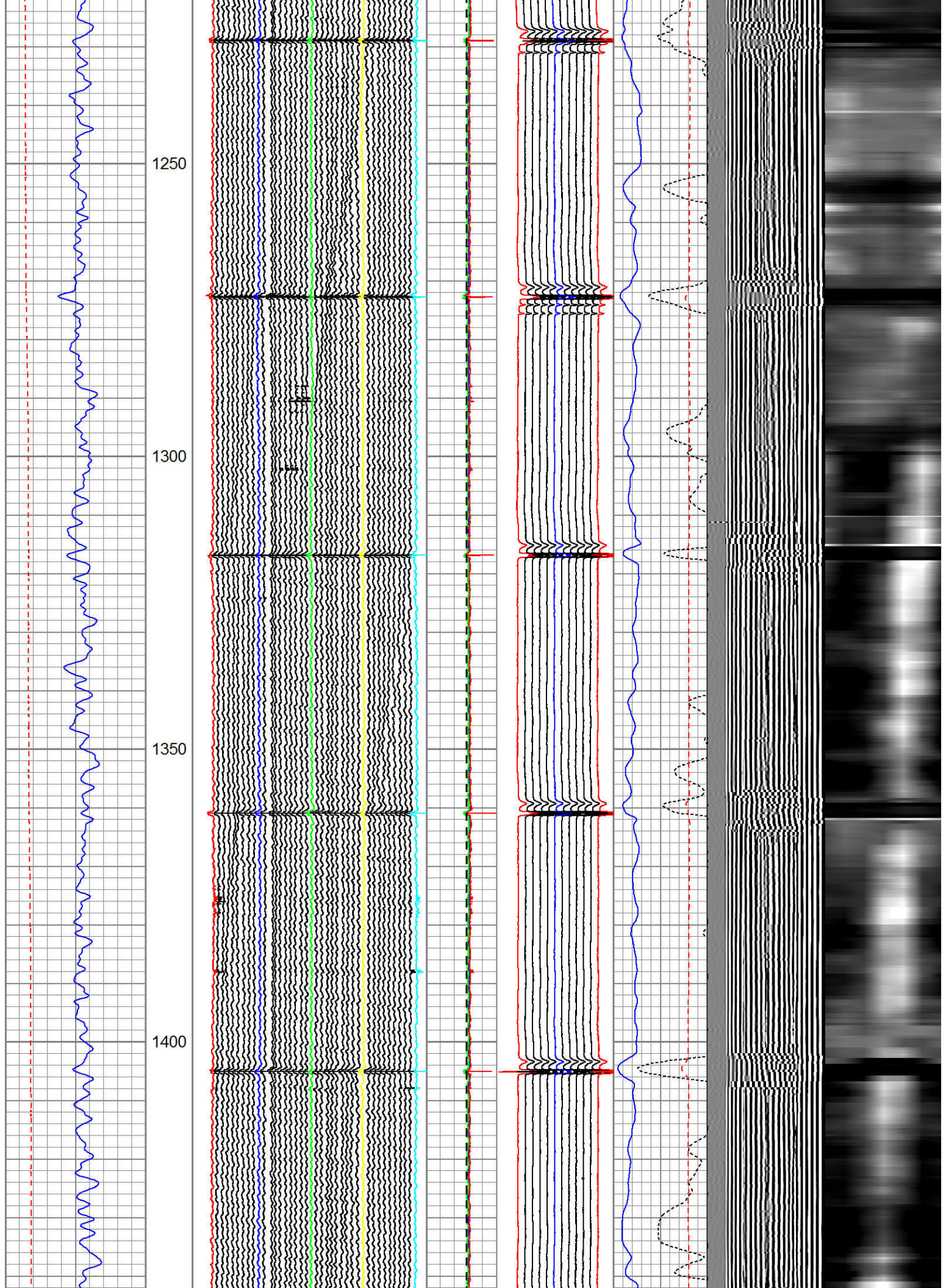


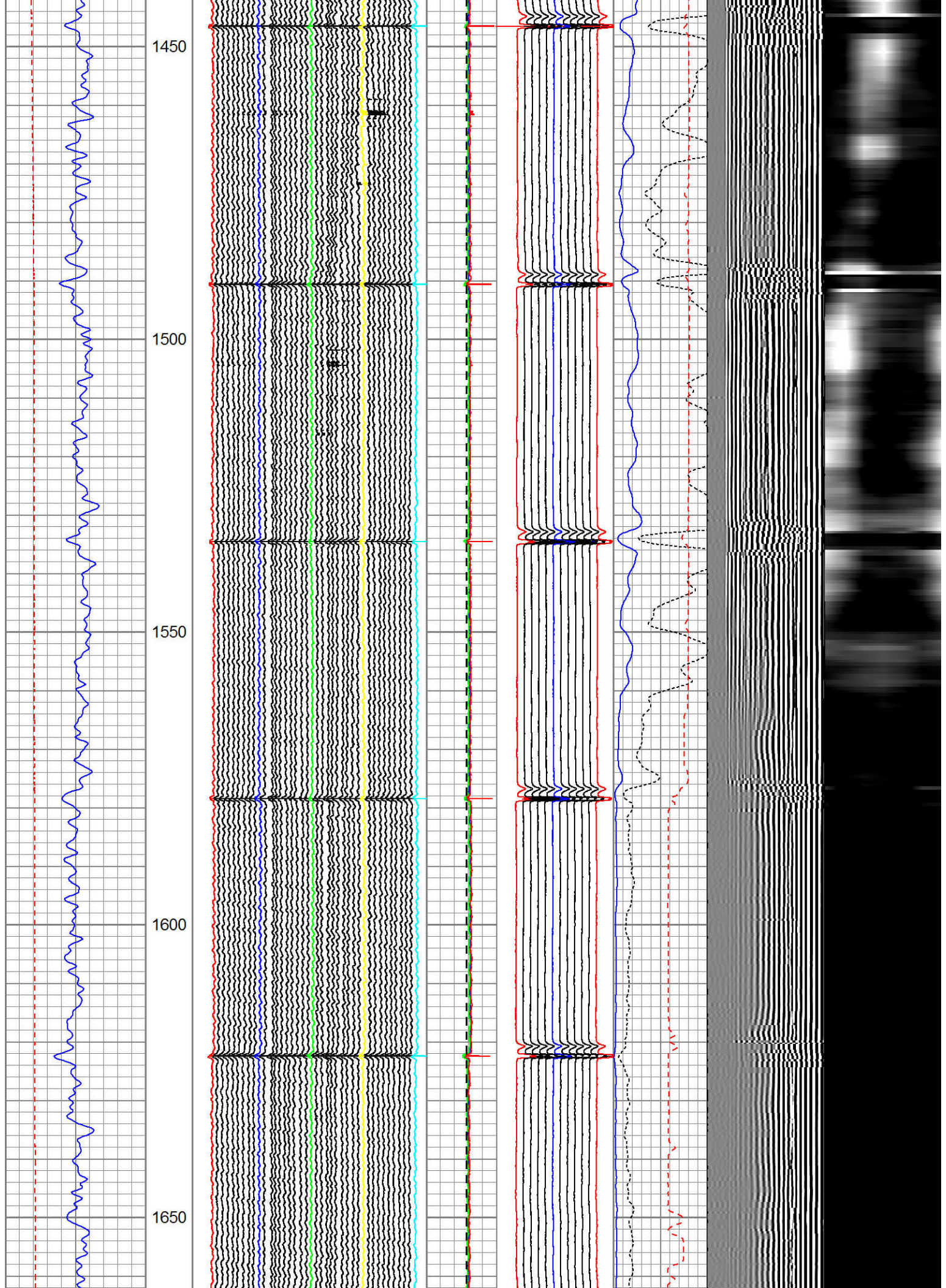


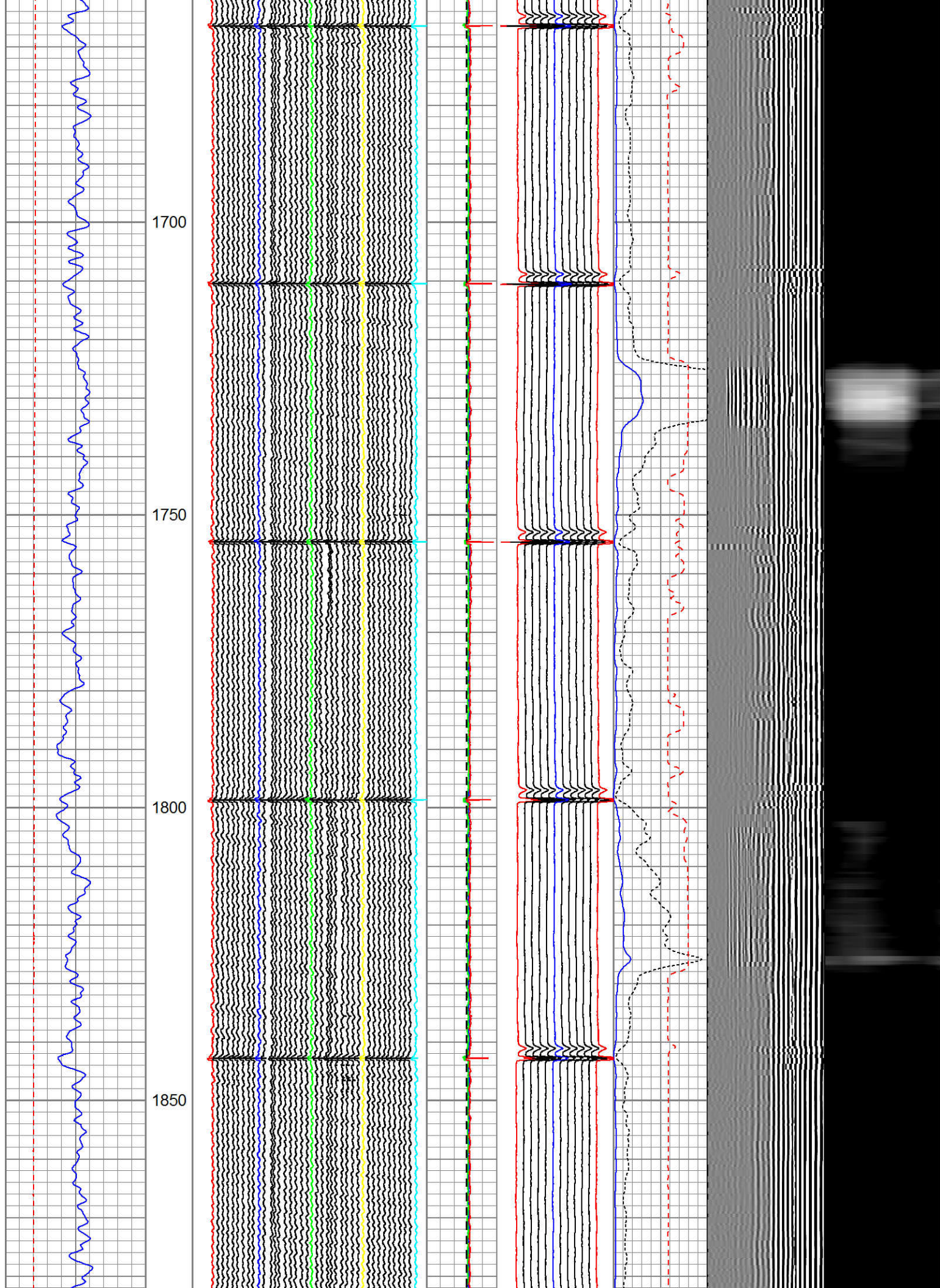


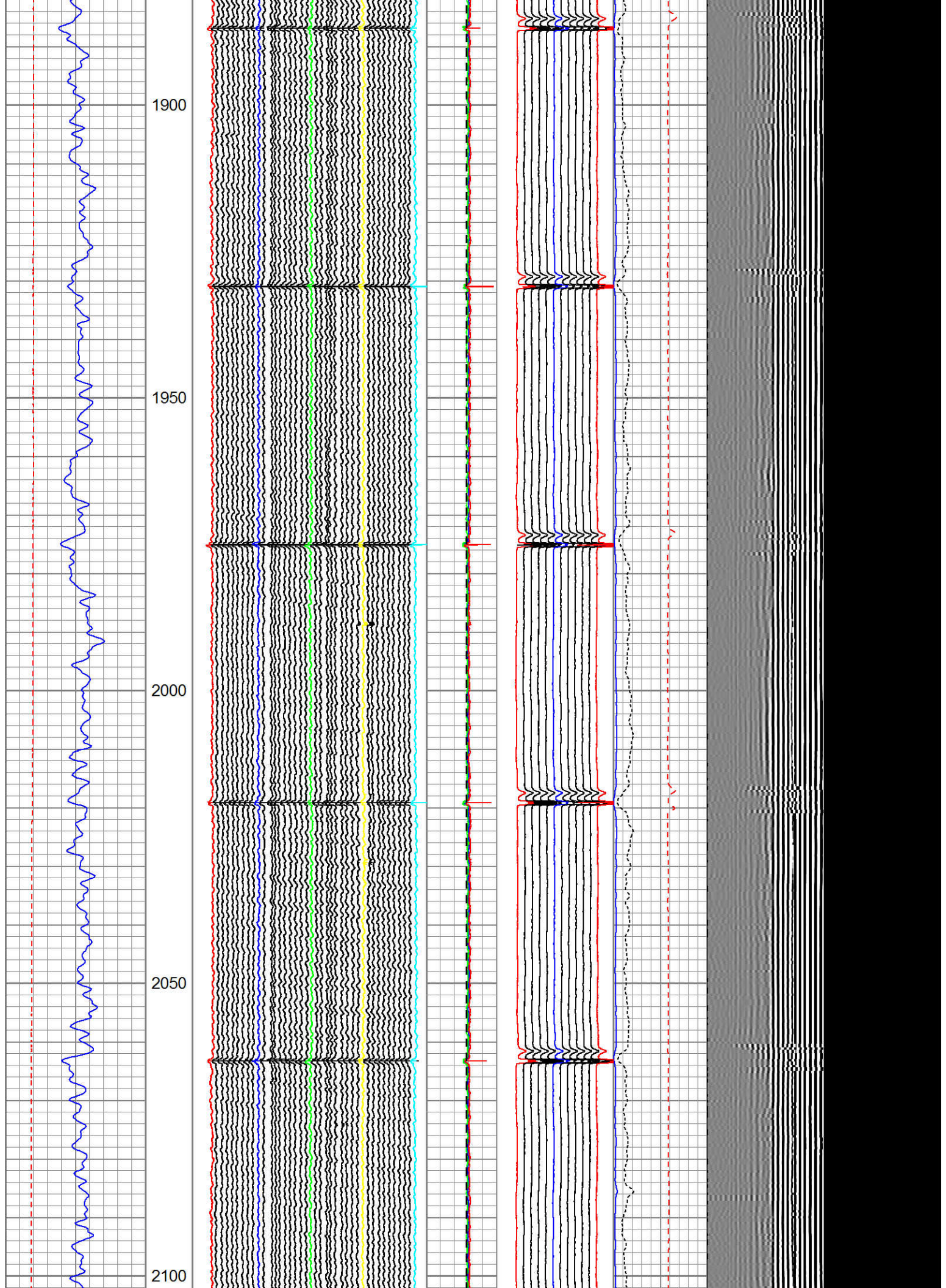


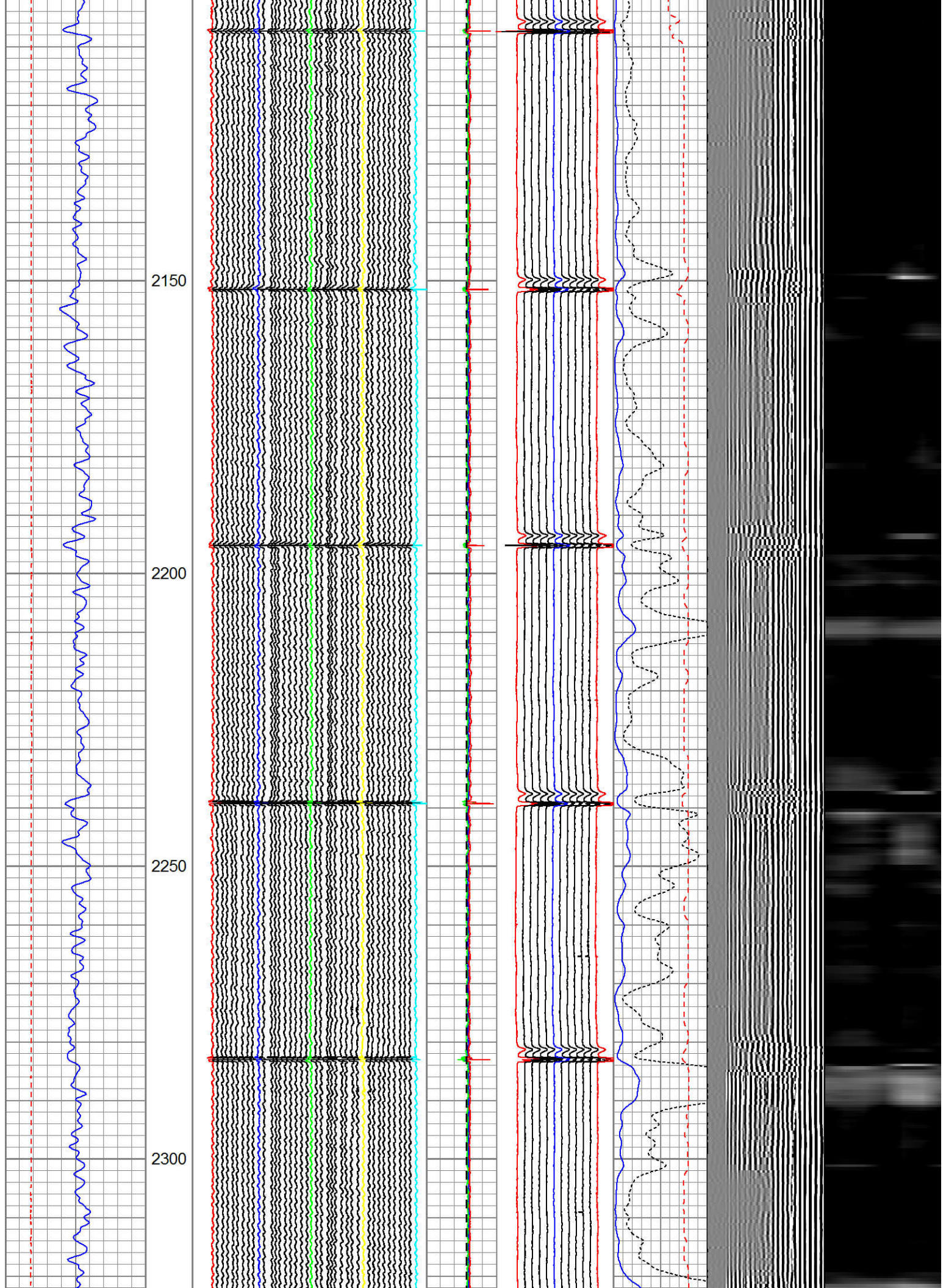


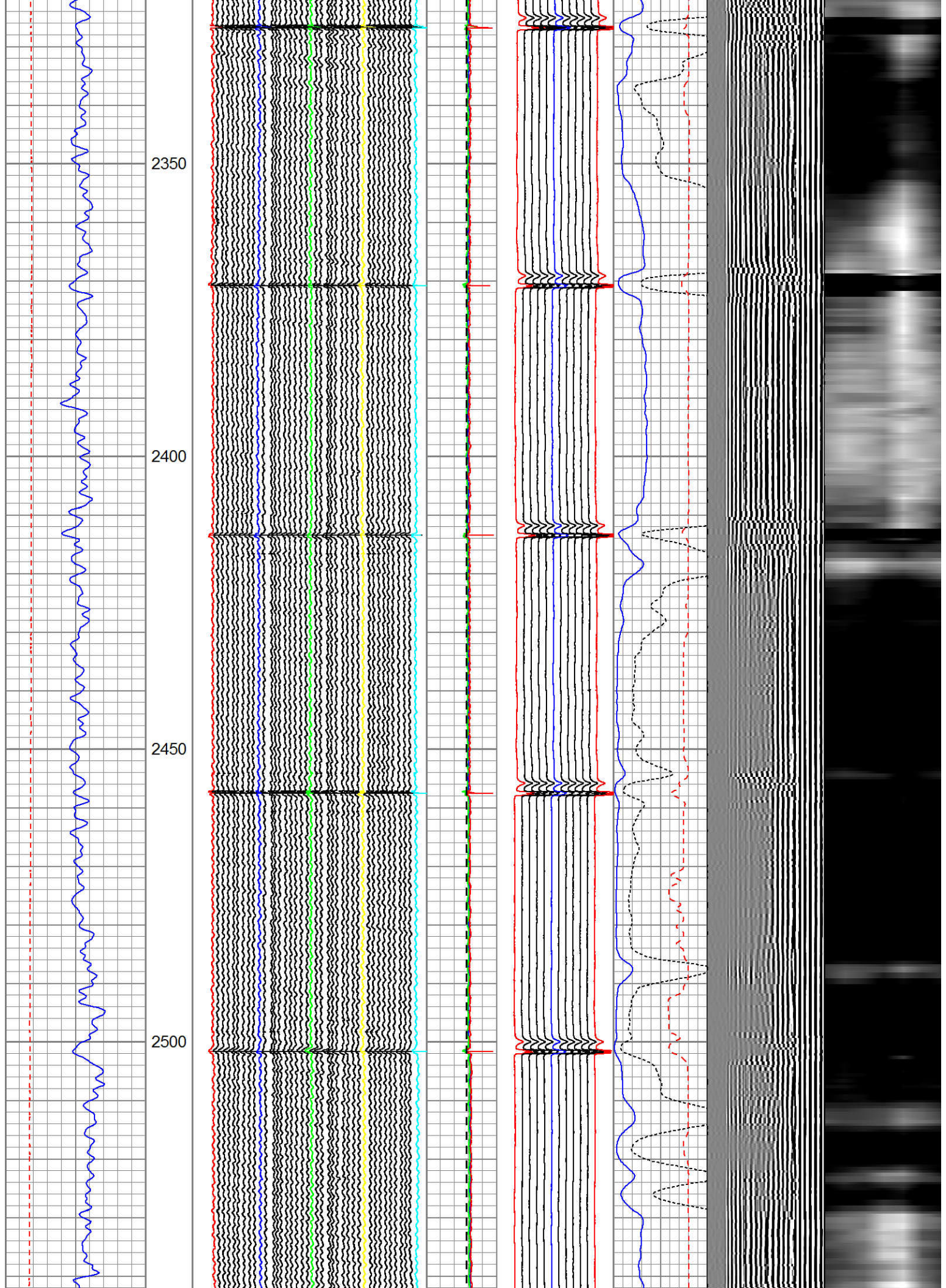


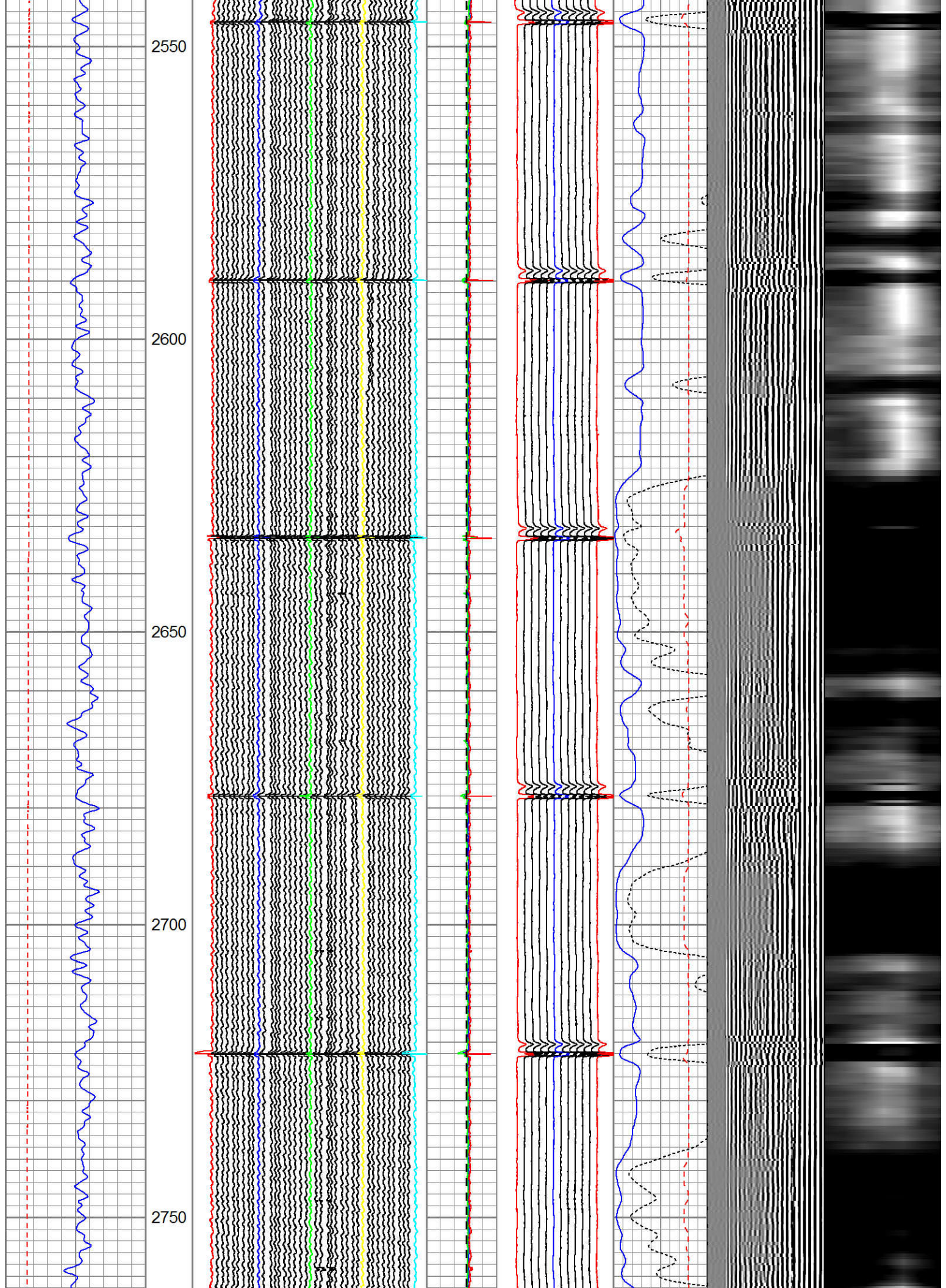


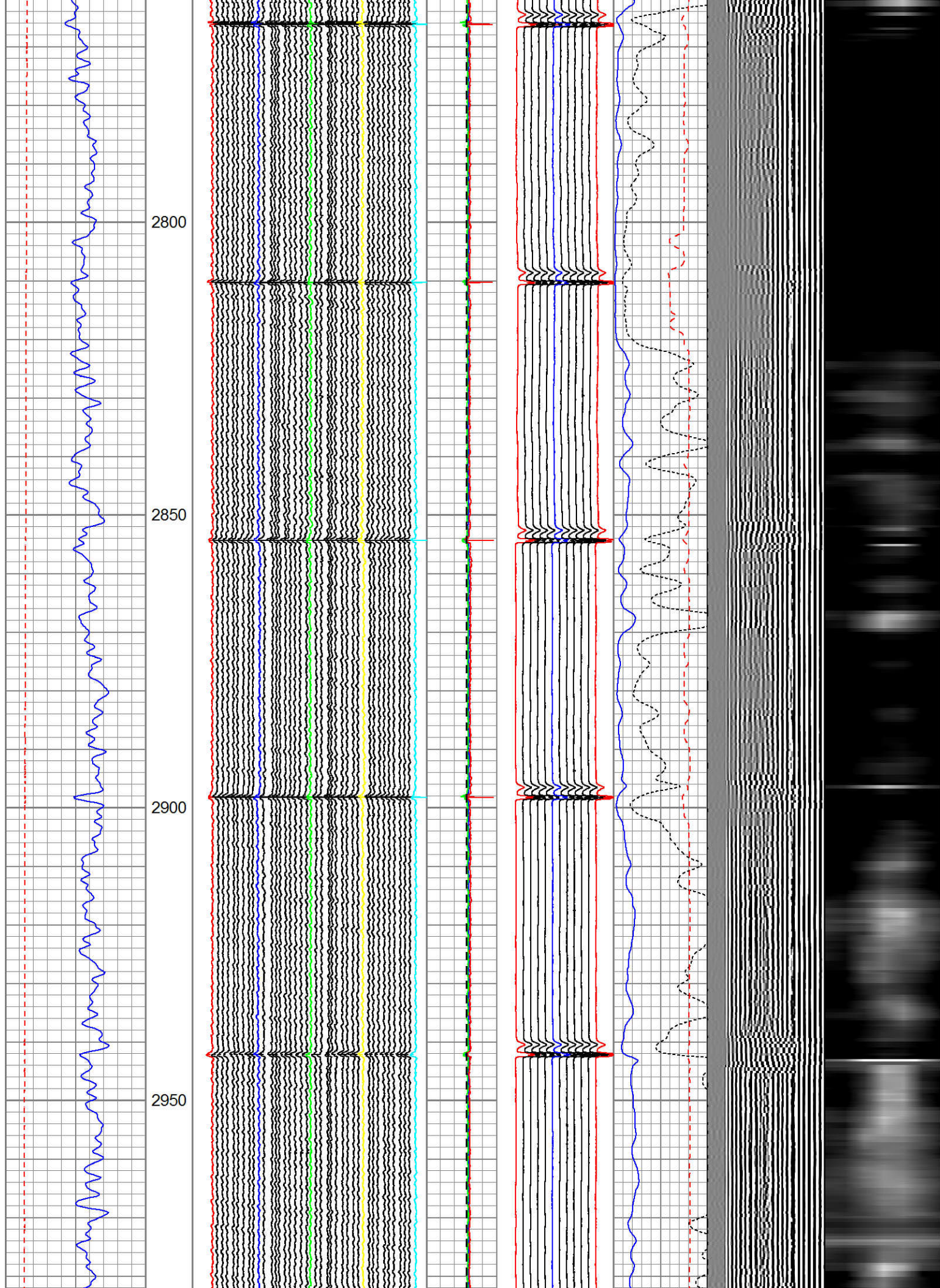


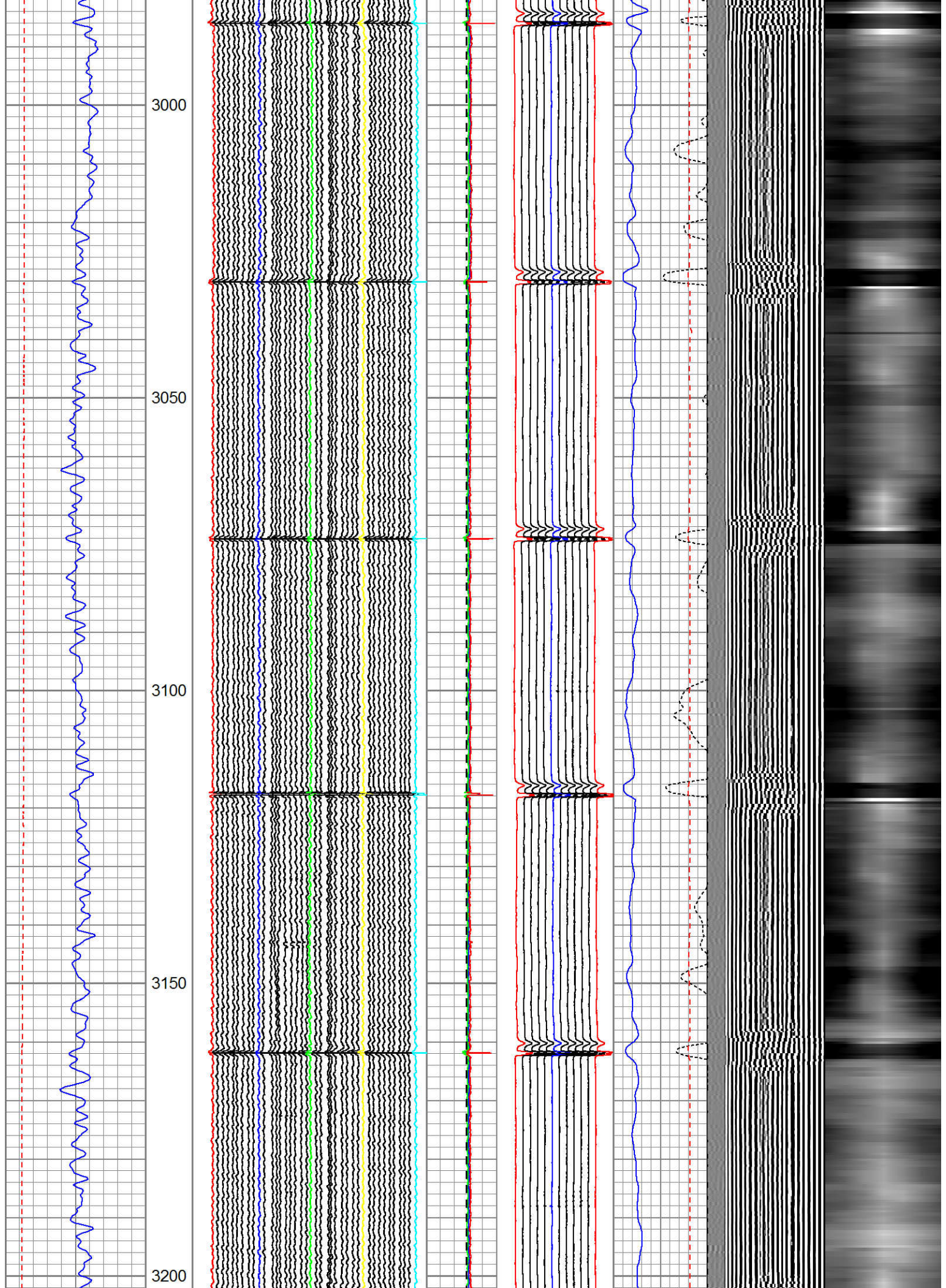


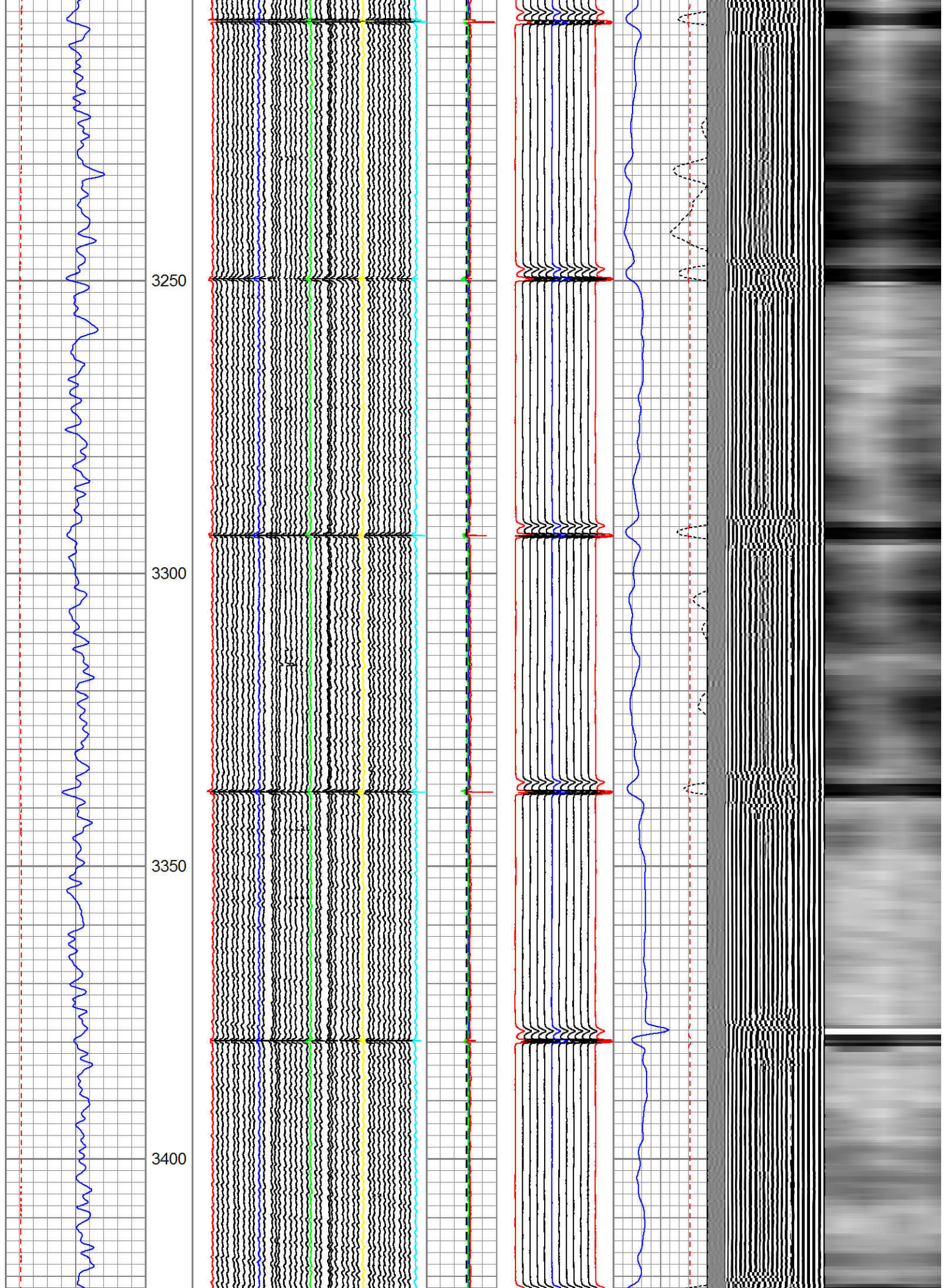


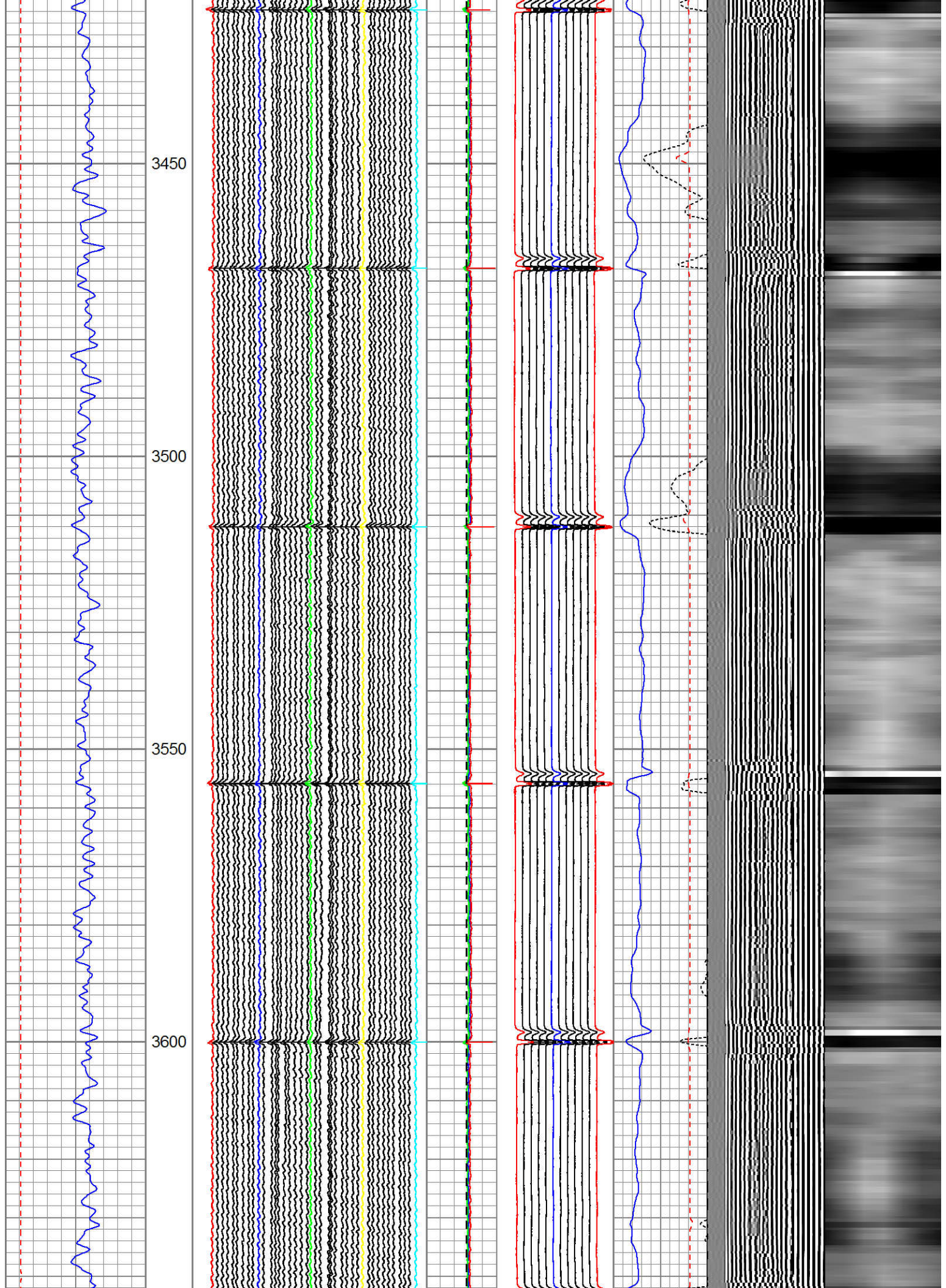


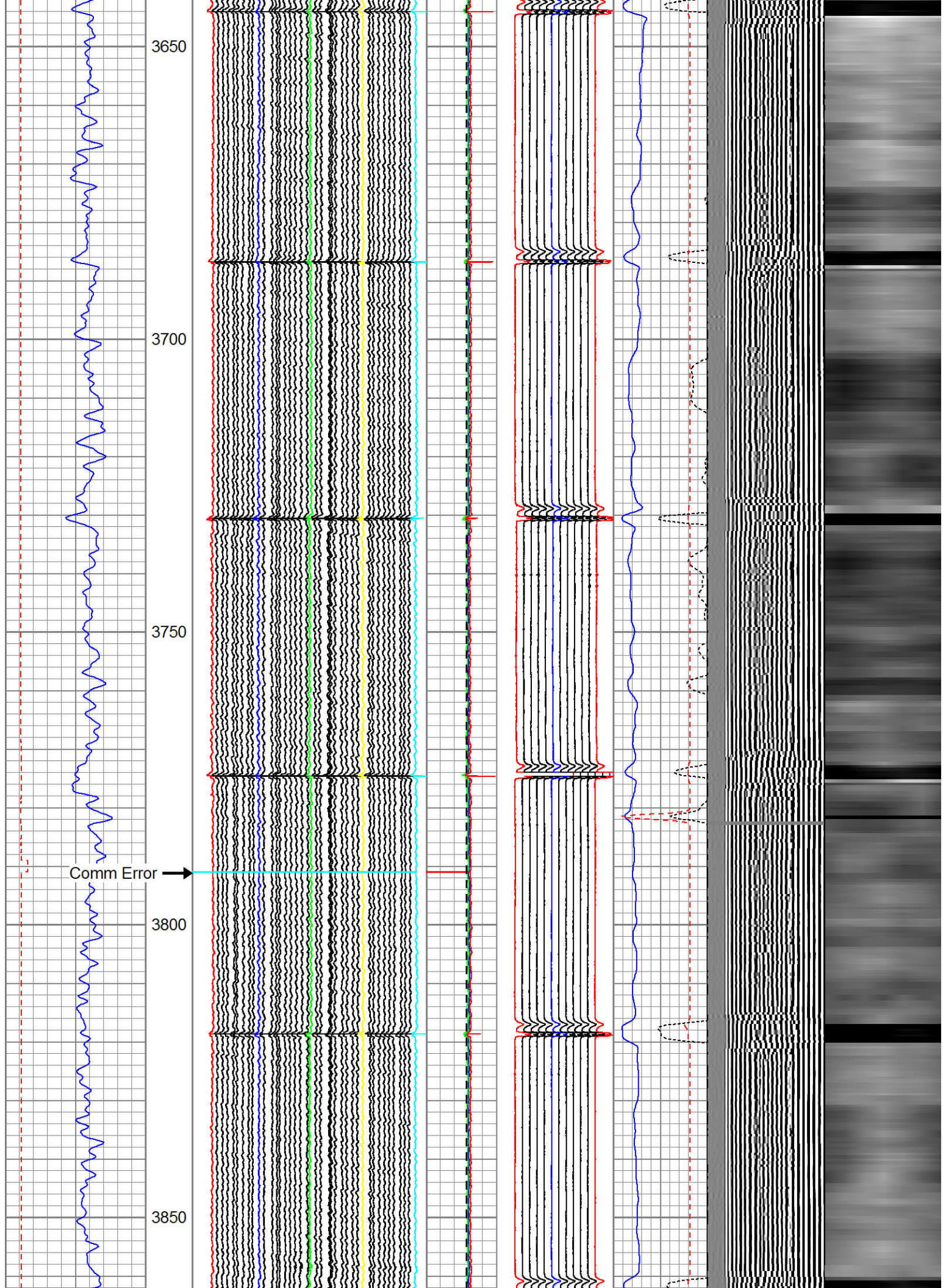


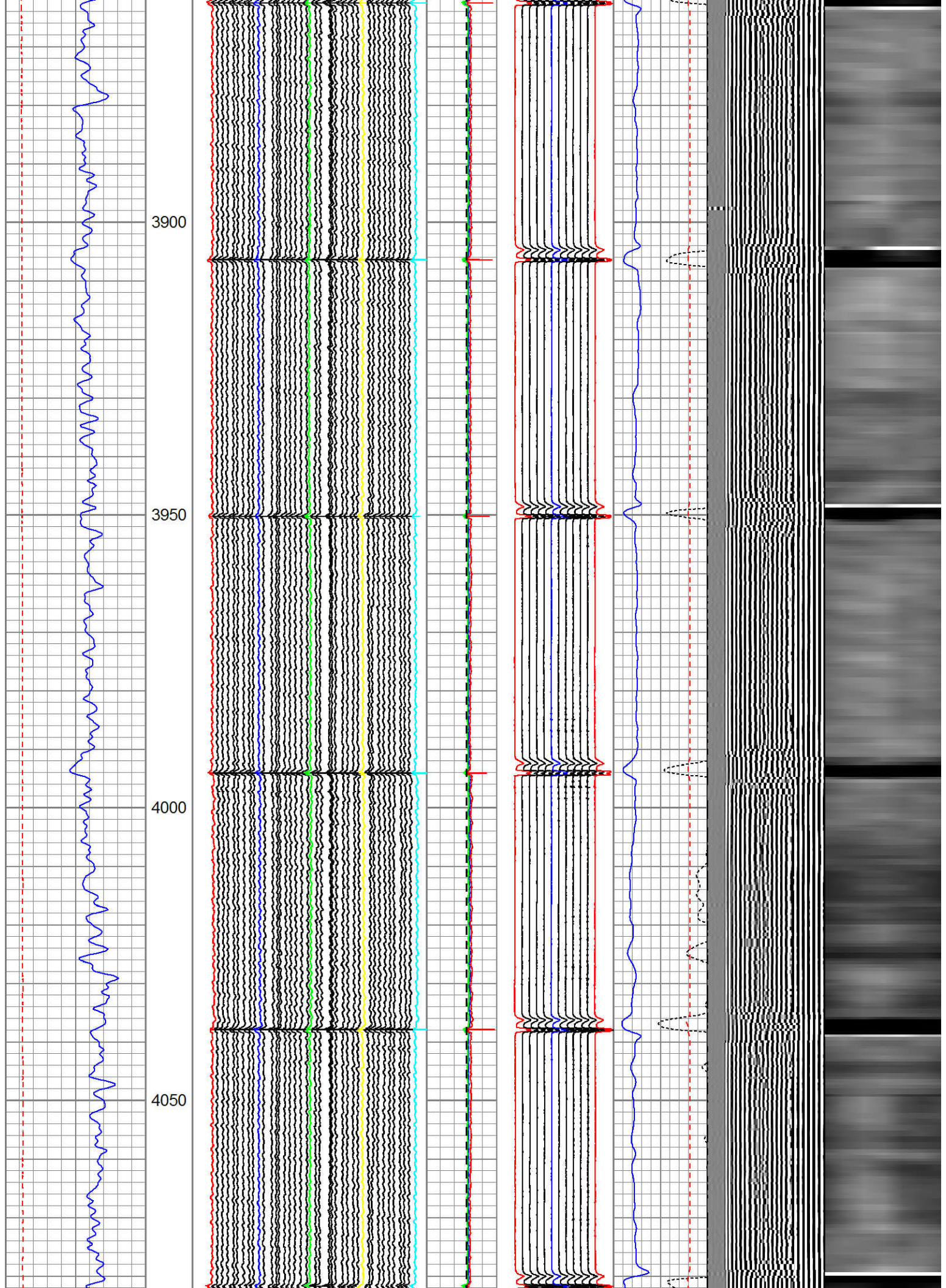


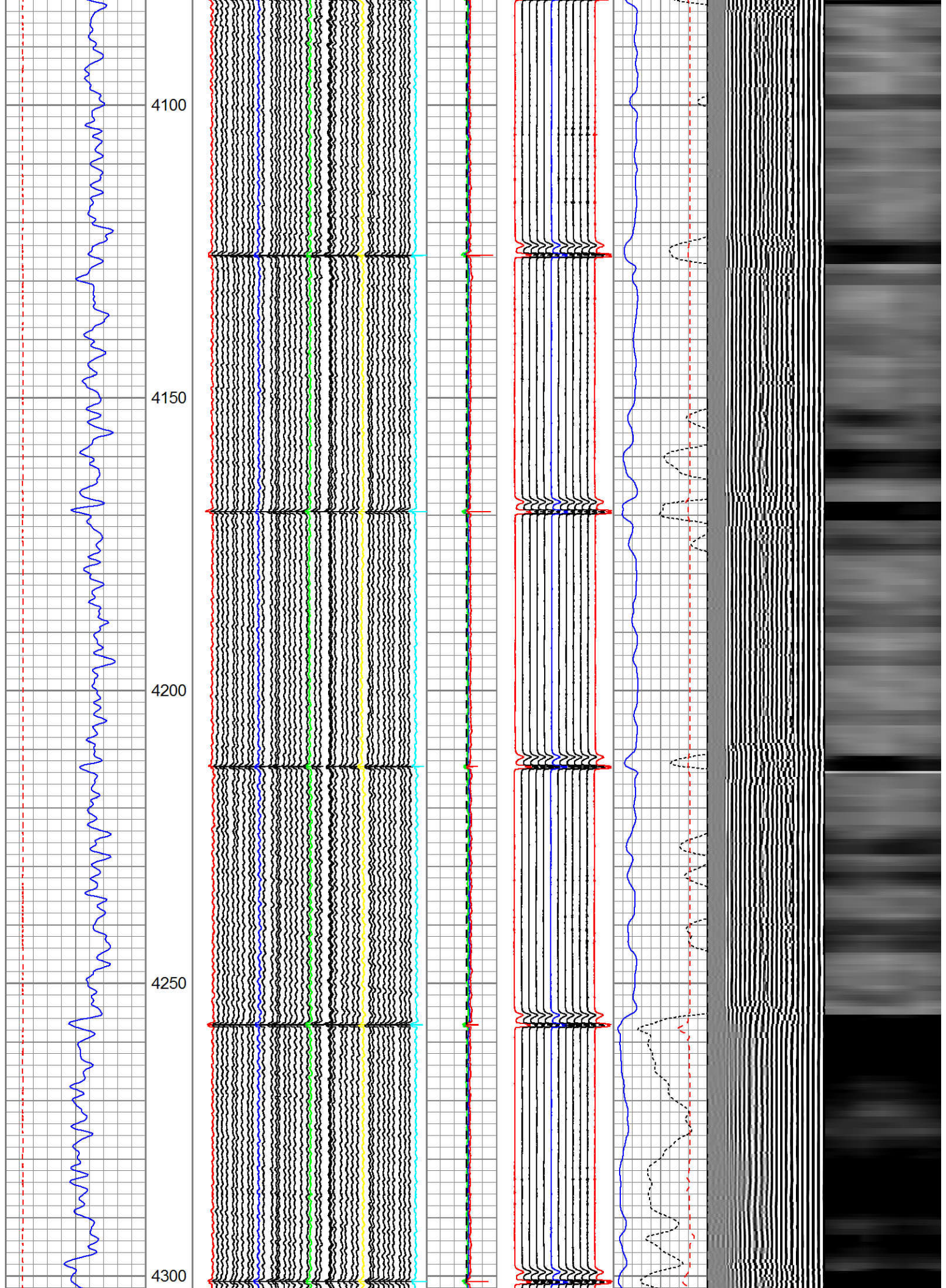


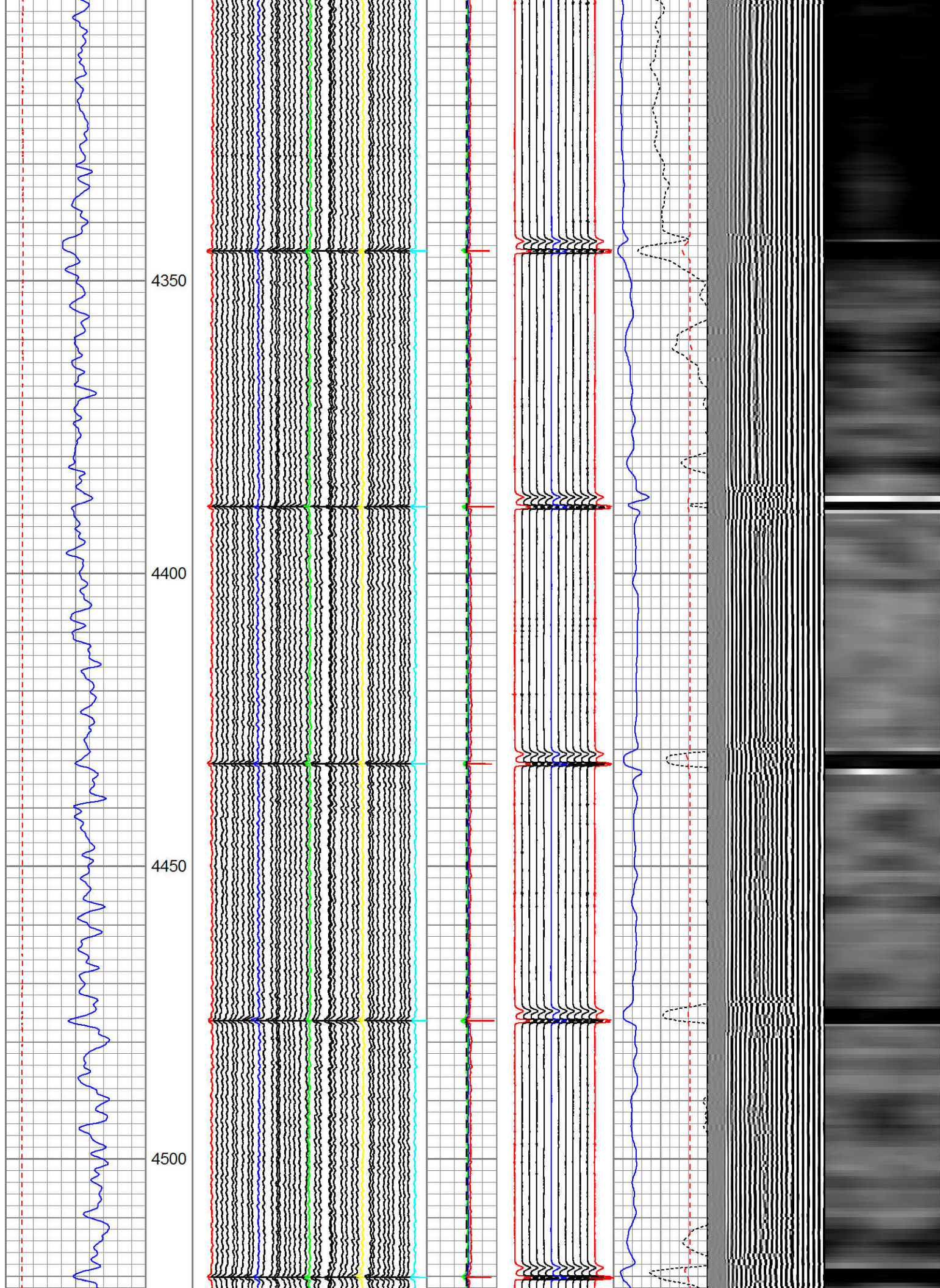


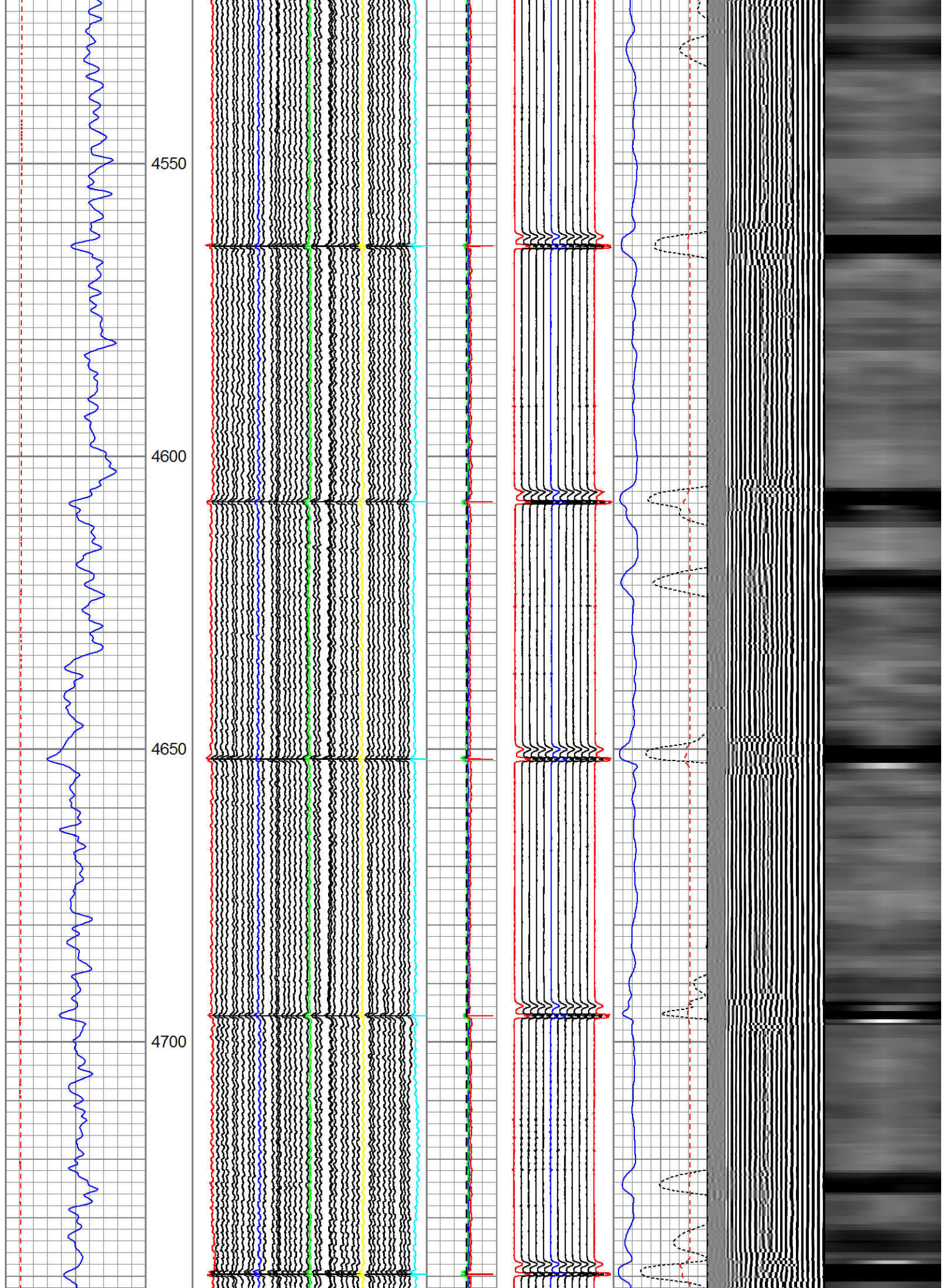


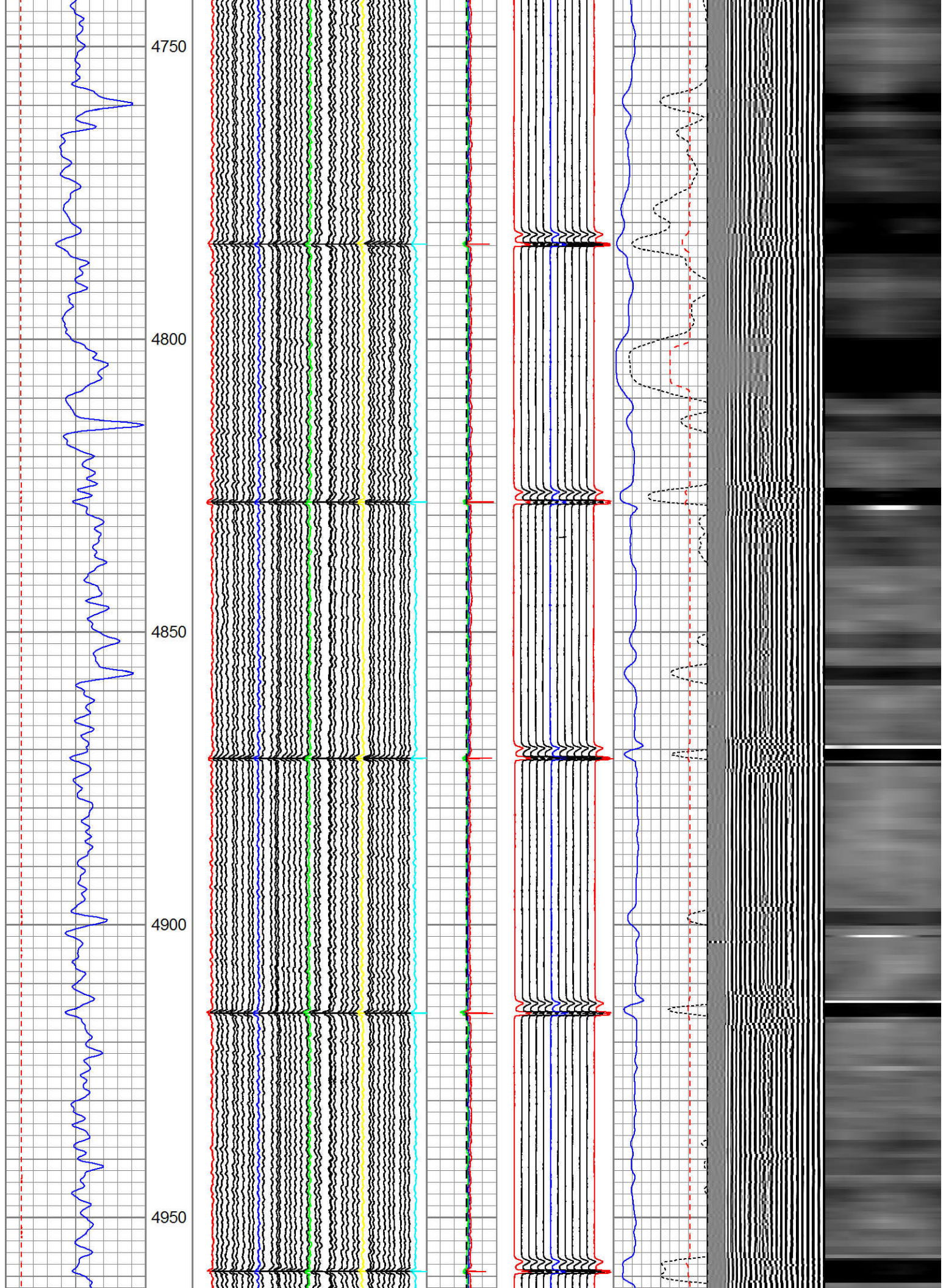


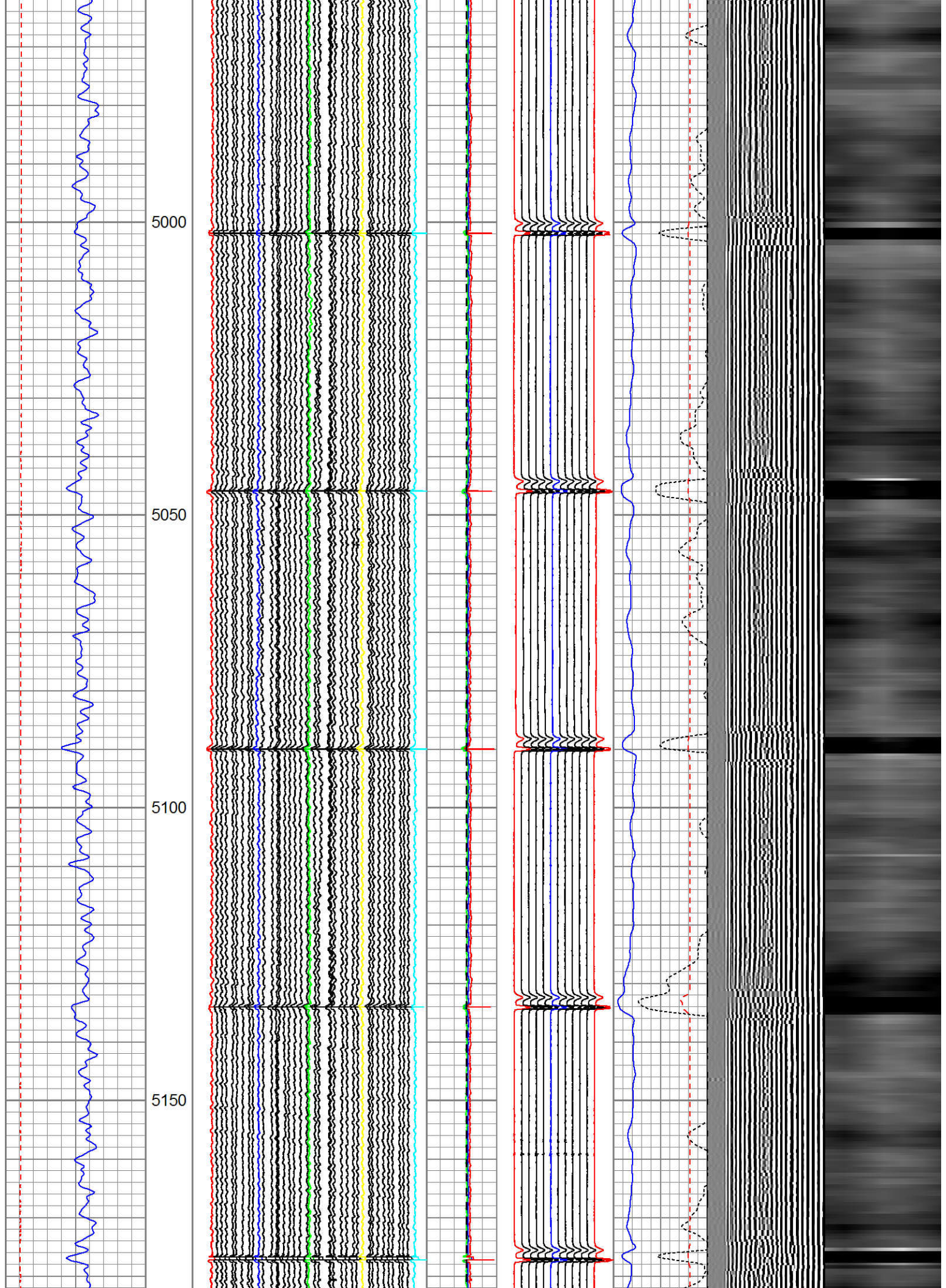


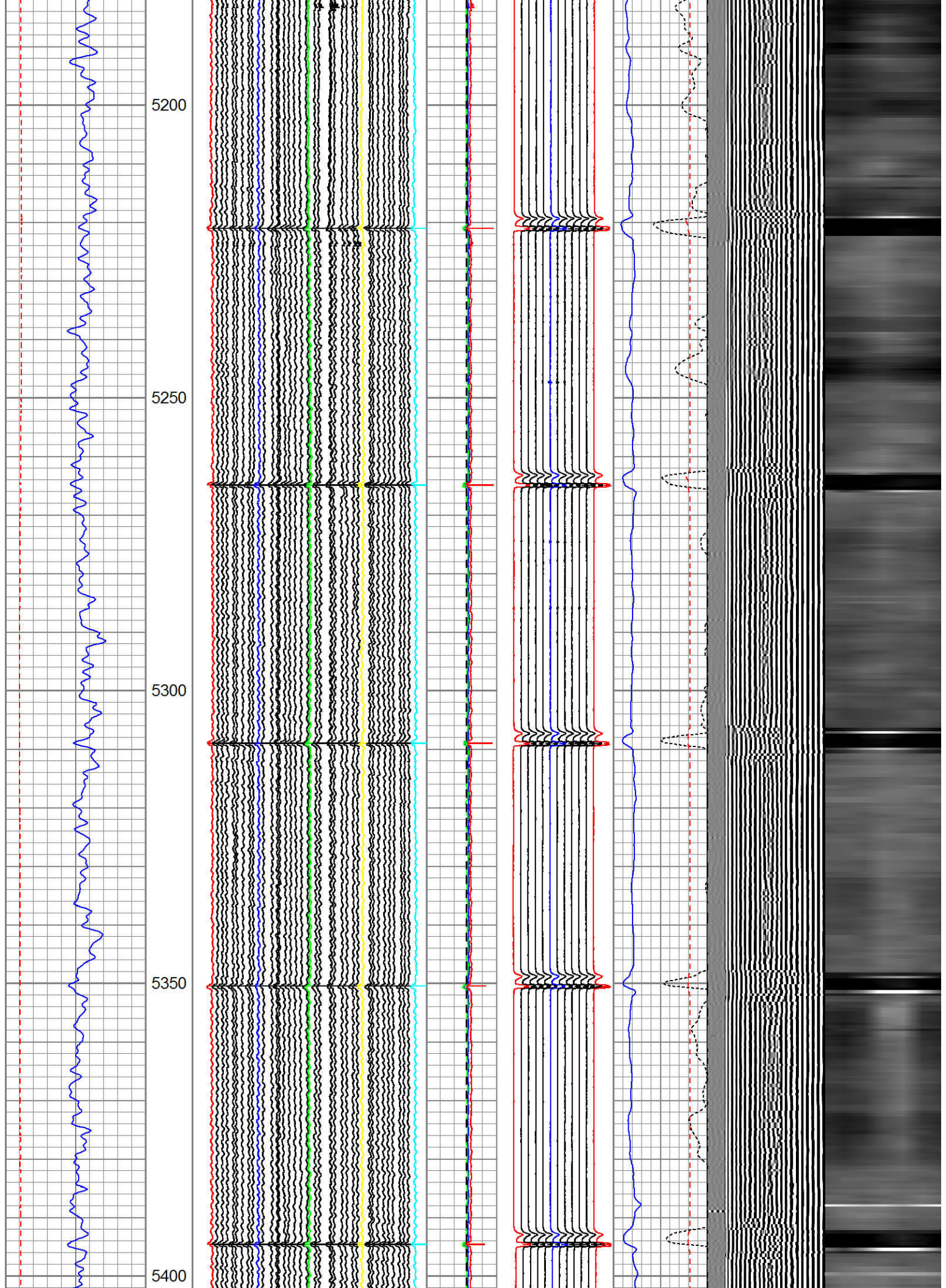


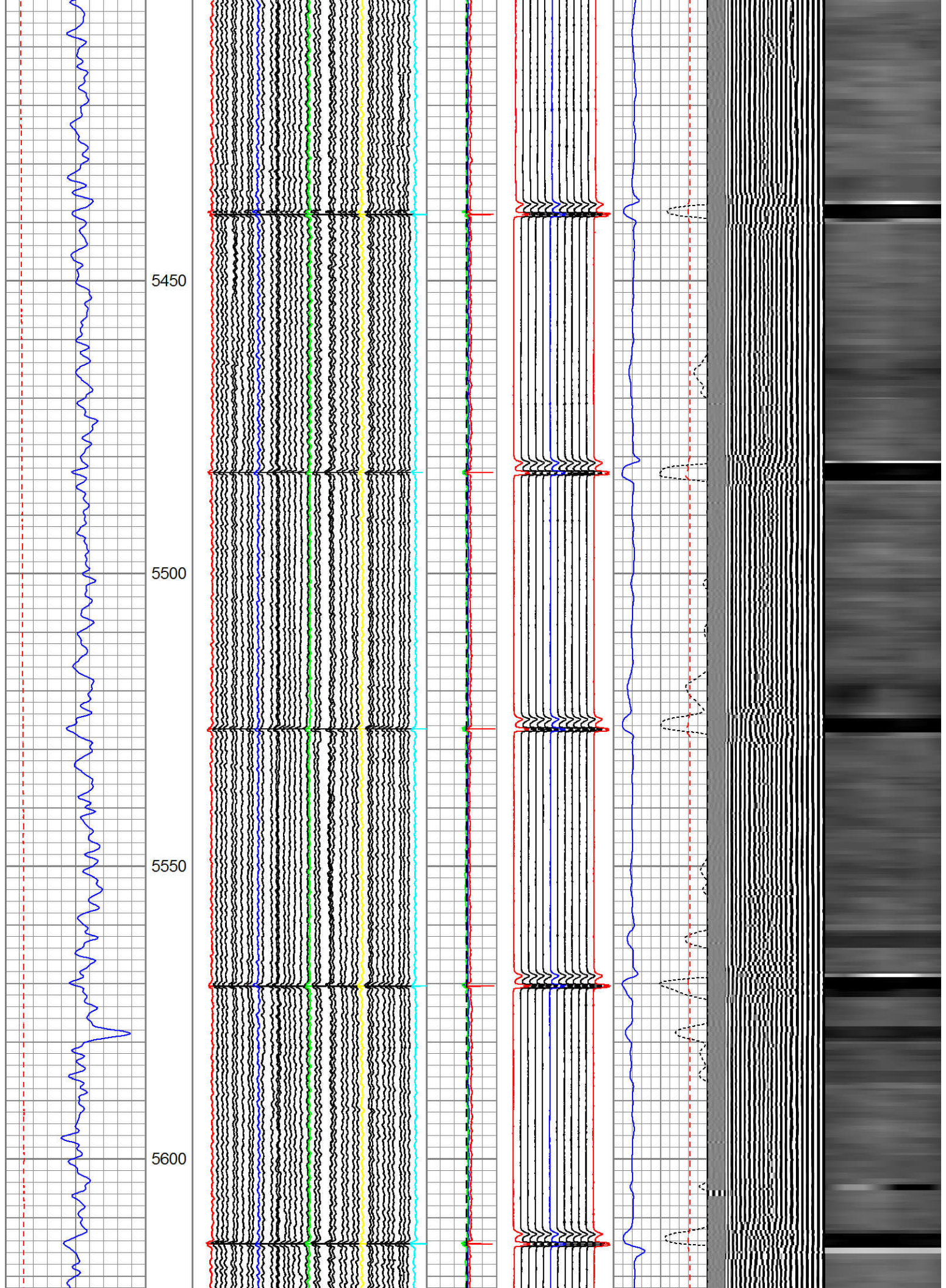


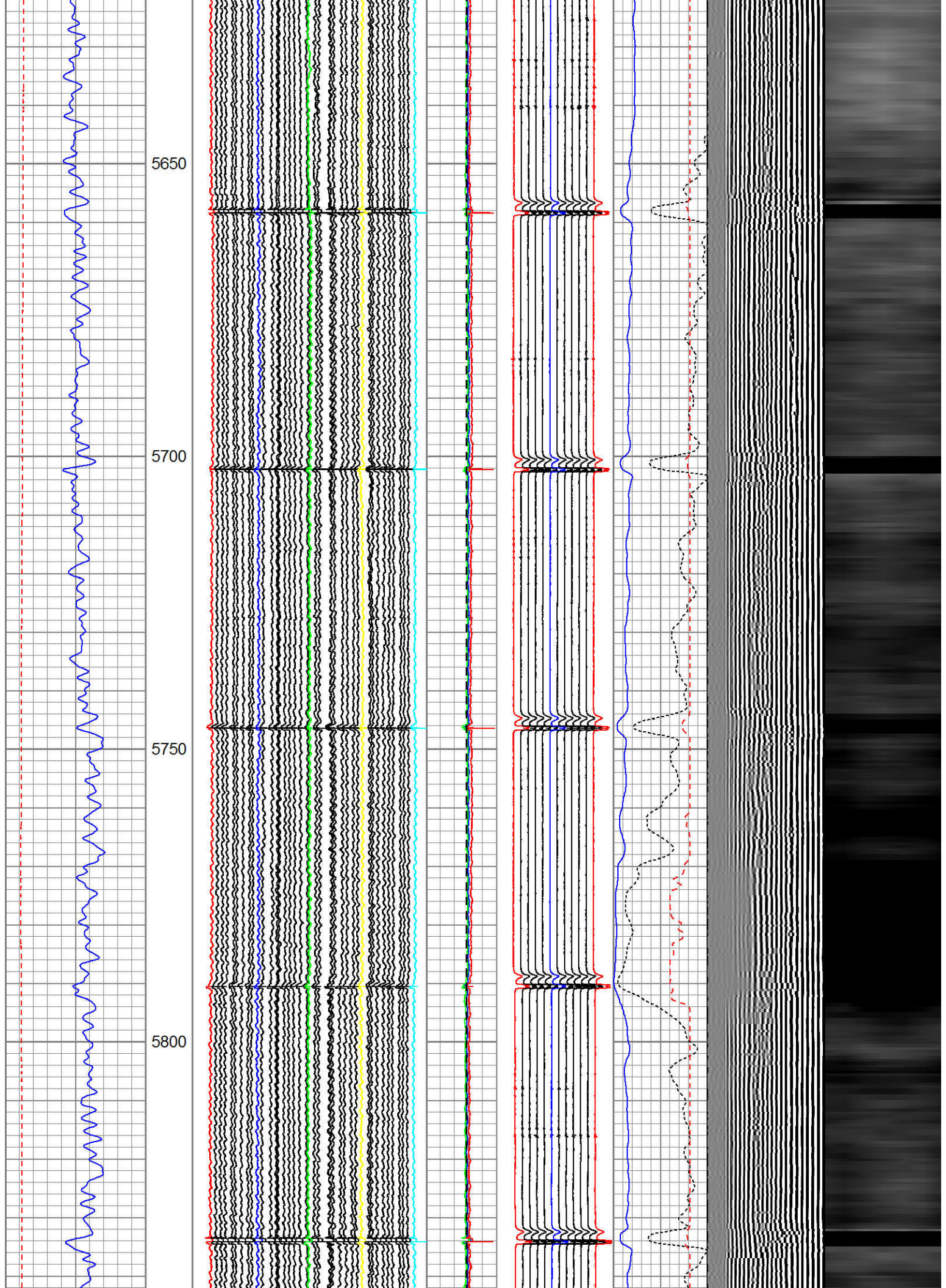


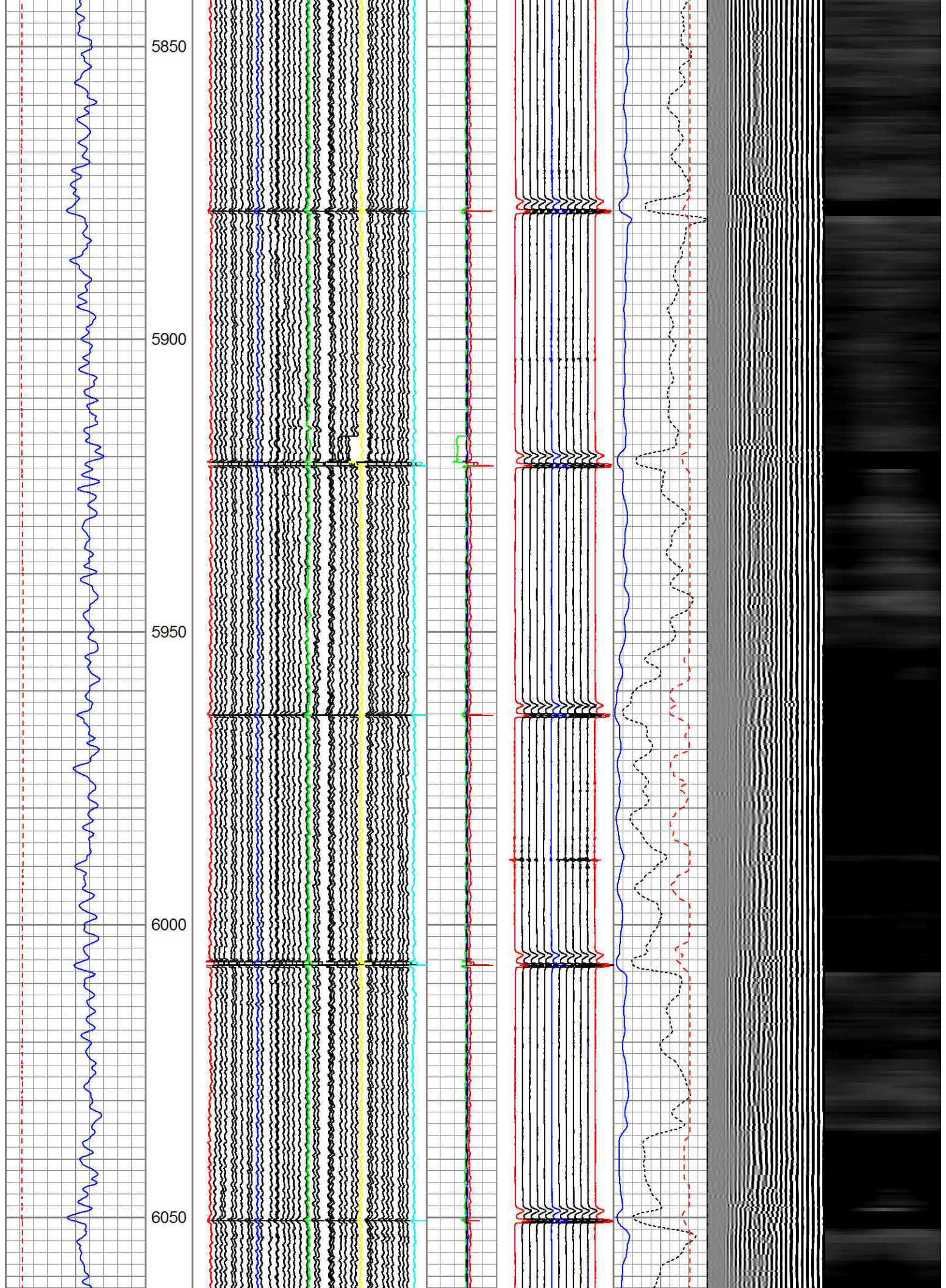


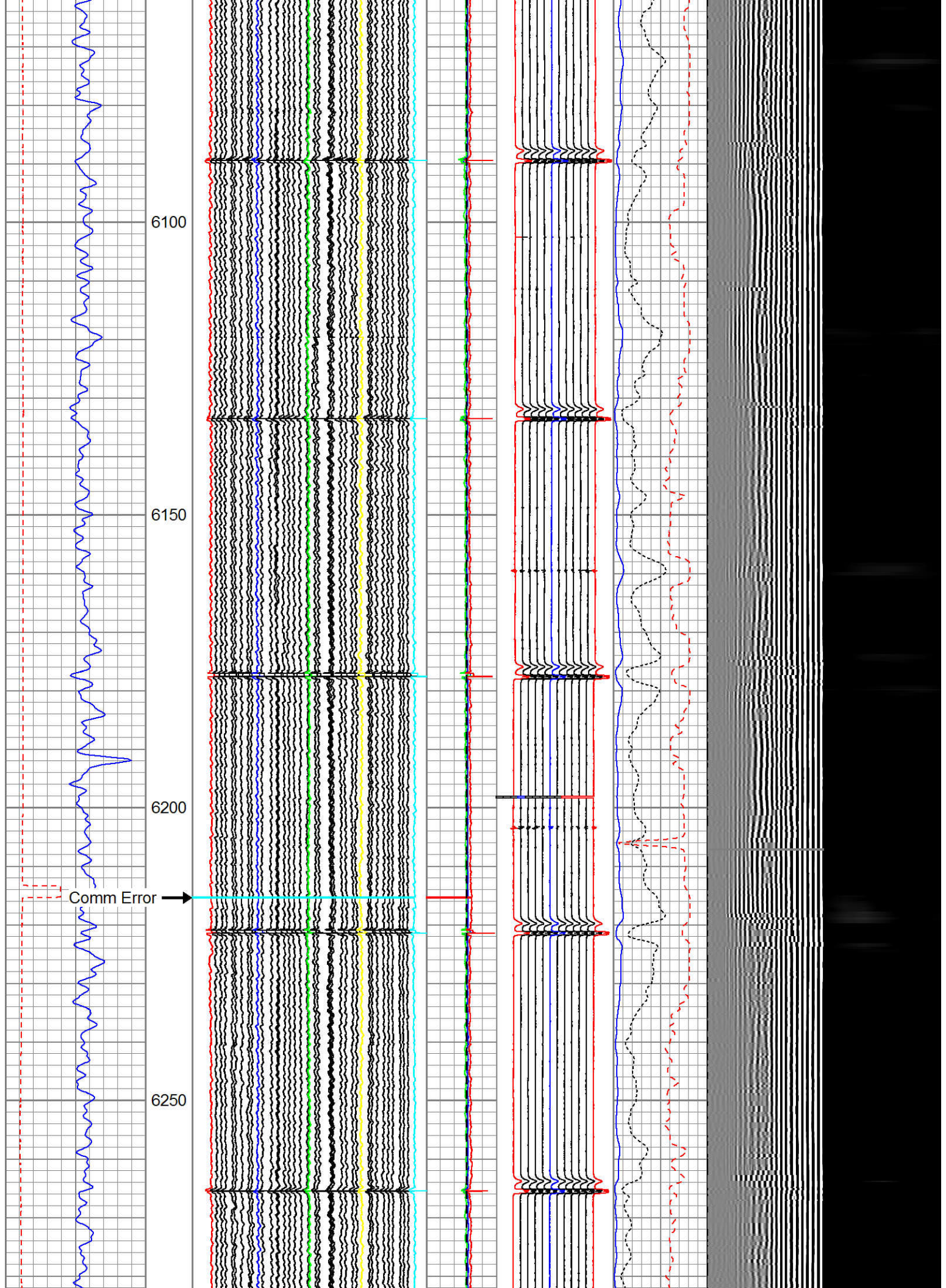


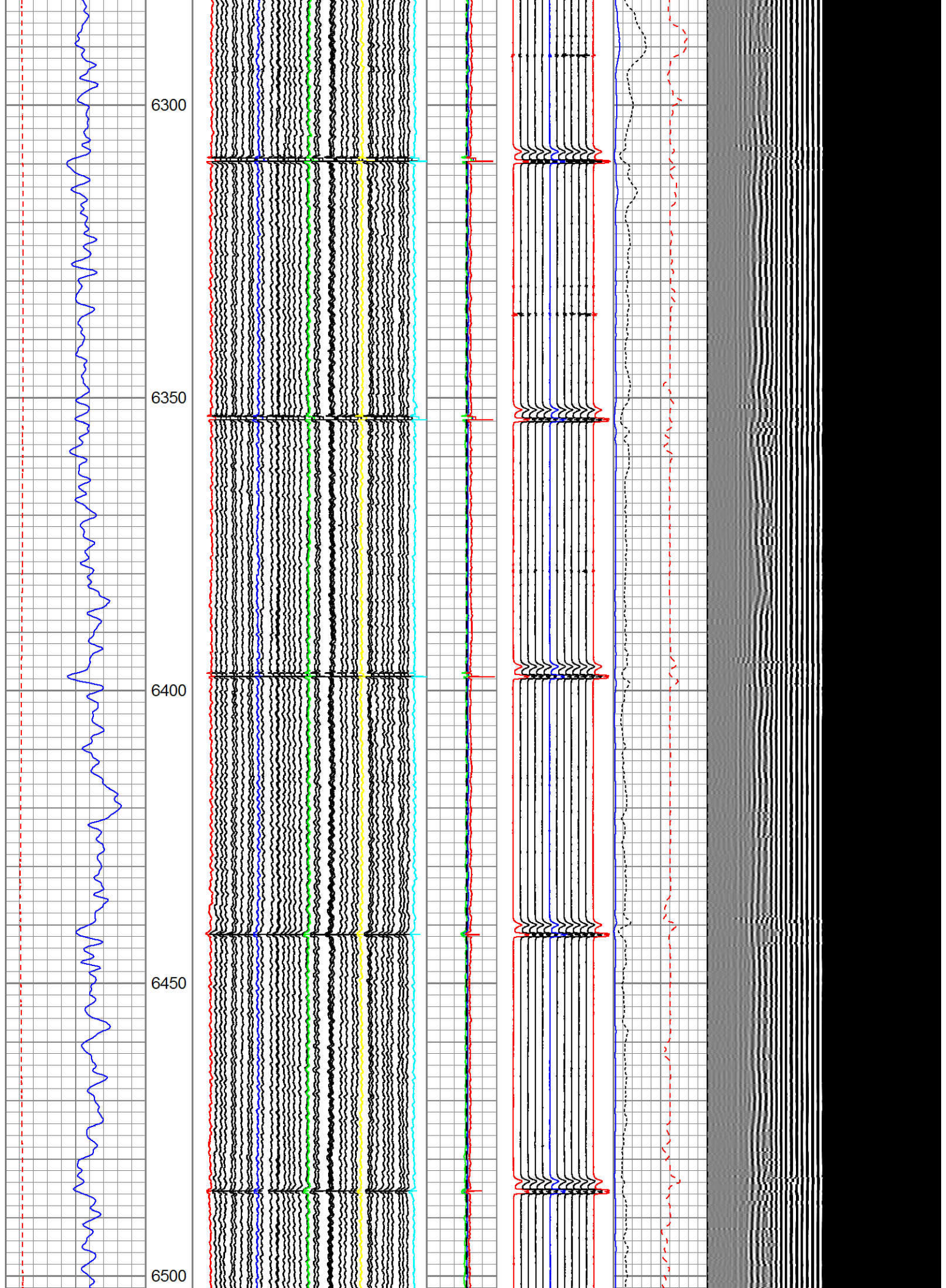


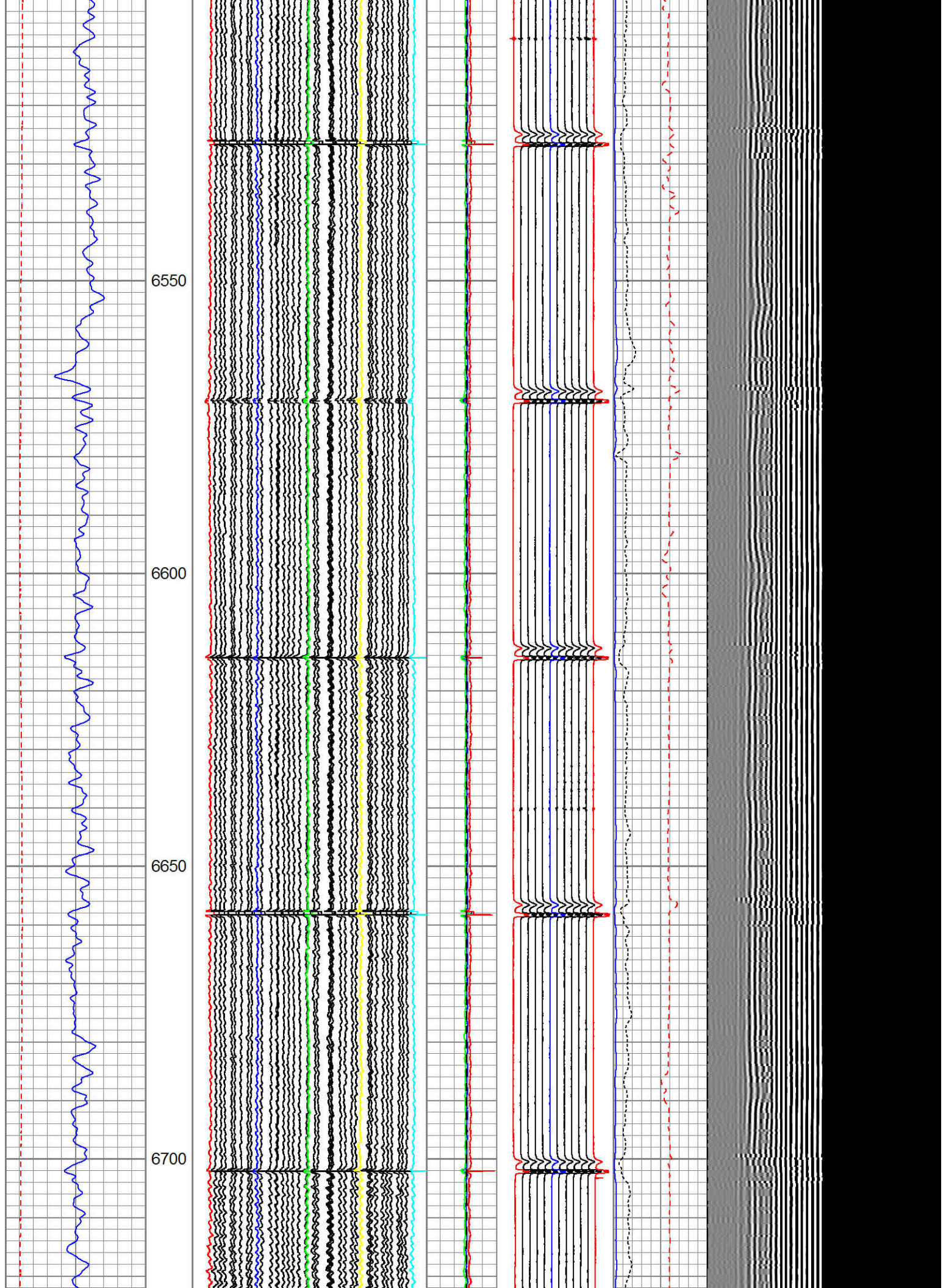


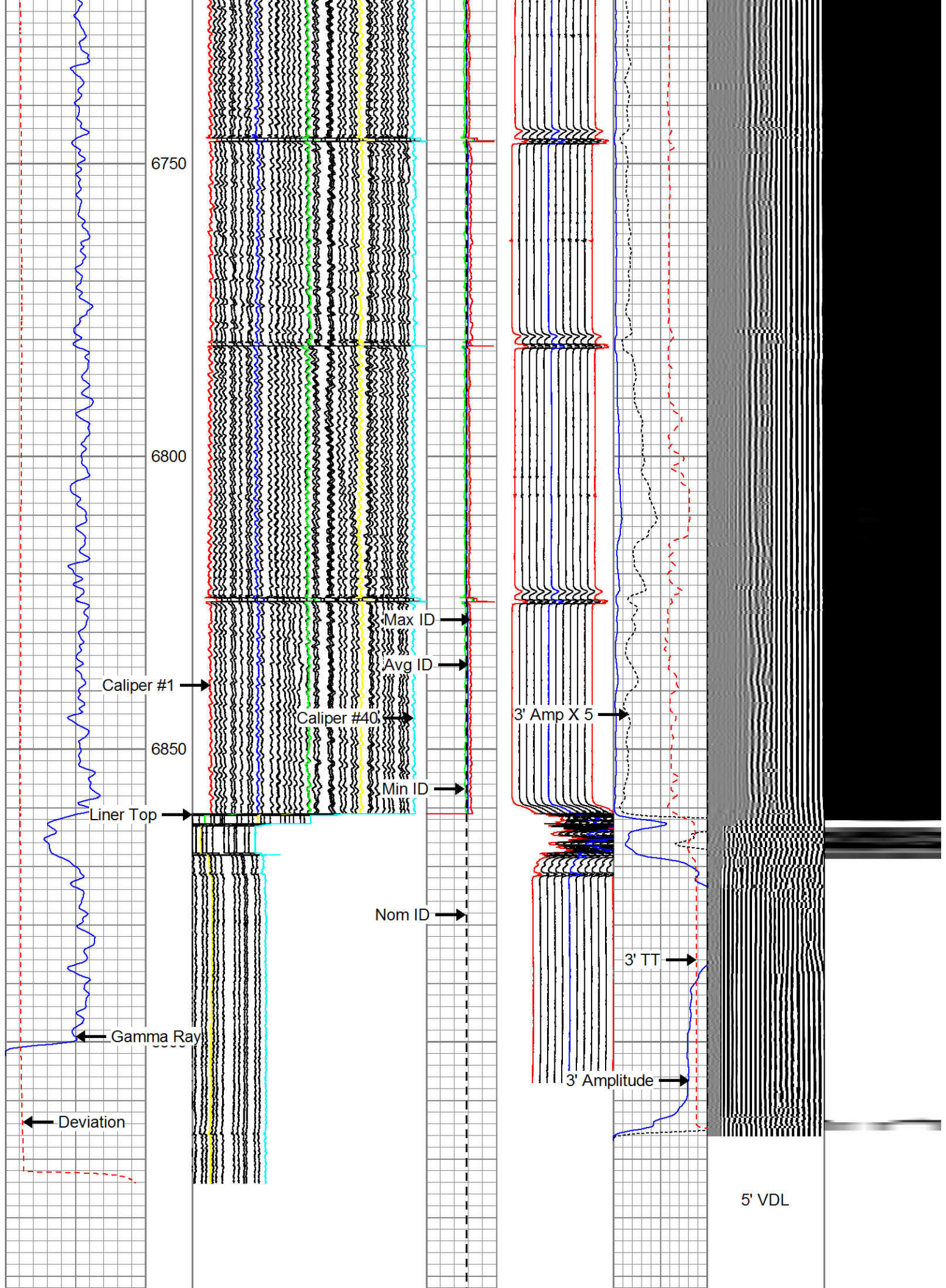


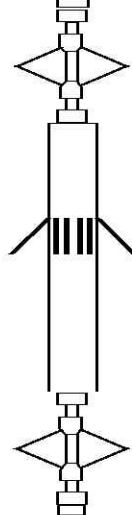











CBLROT	13.65			PRC-001 (10) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
WVF5FT	12.65						
MIT	4.48			MIT-027 (218950) Multifinger Imaging Tool (UW 40F)	4.54	2.75	61.10
TSTAMP	0.00			PRC-001 (kuhyi) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
ITEMPX	0.00			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
HVOLT	0.00						
Dataset: anadarko wishbone 29c-24hz-cil.db: field/well/run1/main							
Total Length: 31.85 ft							
Total Weight: 173.30 lb							
O.D.: 2.75 in							

Calibration Report	
Database File:	anadarko wishbone 29c-24hz-cil.db
Dataset Pathname:	main
Dataset Creation:	Wed Jul 10 11:45:21 2013 by Log Sondex V7.03

Multi-finger Imaging Tool Calibration Report	
Serial Number:	218950
Number of Fingers:	40
Tool Model:	027

Inclinometer Calibration Report		
Performed:	Fri, Oct, 10 10:41:51 2008	
Calibration Angle:	45	
	Inc X	Inc Y
Vertical:	1996	1975
Finger 1 up:	2238	2226
Finger 31 up:	1760	2216
Finger 21 up:	1769	1745
Finger 11 up:	2250	1738
Sensitivity ratio:	1.00023	
X-axis angle:	314.283	
Deviation const.:	339.139	

Finger Calibration Report							
Performed:				Wed Jul 10 09:47:18 2013			
Ring size:	4	5	6	7			
(in)	Sens	Sens	Sens				
Finger 01:	1454	283.0	1737	251.0	1988	319.0	2307
Finger 02:	1526	267.0	1793	240.0	2033	302.0	2335
Finger 03:	1445	286.0	1731	269.0	2000	342.0	2342
Finger 04:	1488	271.0	1759	258.0	2017	325.0	2342
Finger 05:	1518	258.0	1776	249.0	2025	302.0	2327
Finger 06:	1511	261.0	1772	260.0	2032	319.0	2351
Finger 07:	1493	269.0	1762	280.0	2042	329.0	2371
Finger 08:	1563	240.0	1803	253.0	2056	293.0	2349
Finger 09:	1490	271.0	1761	294.0	2055	329.0	2384
Finger 10:	1530	254.0	1784	281.0	2065	300.0	2365
Finger 11:	1507	257.0	1764	297.0	2061	311.0	2372
Finger 12:	1492	267.0	1759	313.0	2072	321.0	2393
Finger 13:	1515	264.0	1779	307.0	2086	303.0	2389
Finger 14:	1496	263.0	1759	313.0	2072	303.0	2375

Finger 15:	1515	264.0	1779	318.0	2097	301.0	2398
Finger 16:	1497	263.0	1760	320.0	2080	295.0	2375
Finger 17:	1481	271.0	1752	330.0	2082	296.0	2378
Finger 18:	1522	259.0	1781	311.0	2092	272.0	2364
Finger 19:	1556	250.0	1806	300.0	2106	259.0	2365
Finger 20:	1477	270.0	1747	326.0	2073	280.0	2353
Finger 21:	1450	282.0	1732	339.0	2071	288.0	2359
Finger 22:	1478	279.0	1757	329.0	2086	275.0	2361
Finger 23:	1531	266.0	1797	304.0	2101	255.0	2356
Finger 24:	1525	270.0	1795	307.0	2102	264.0	2366
Finger 25:	1495	285.0	1780	315.0	2095	269.0	2364
Finger 26:	1460	293.0	1753	313.0	2066	273.0	2339
Finger 27:	1467	289.0	1756	307.0	2063	273.0	2336
Finger 28:	1472	294.0	1766	304.0	2070	275.0	2345
Finger 29:	1460	290.0	1750	290.0	2040	274.0	2314
Finger 30:	1459	294.0	1753	288.0	2041	279.0	2320
Finger 31:	1527	266.0	1793	254.0	2047	251.0	2298
Finger 32:	1475	292.0	1767	277.0	2044	283.0	2327
Finger 33:	1478	296.0	1774	269.0	2043	278.0	2321
Finger 34:	1455	296.0	1751	268.0	2019	295.0	2314
Finger 35:	1465	292.0	1757	262.0	2019	298.0	2317
Finger 36:	1462	290.0	1752	254.0	2006	296.0	2302
Finger 37:	1510	283.0	1793	243.0	2036	287.0	2323
Finger 38:	1476	290.0	1766	254.0	2020	310.0	2330
Finger 39:	1450	290.0	1740	256.0	1996	319.0	2315
Finger 40:	1460	289.0	1749	257.0	2006	327.0	2333

Segmented Cement Bond Log Calibration Report

Serial Number:	000002
Tool Model:	003
Calibration Casing Diameter:	7.000 in
Calibration Depth:	844.936 ft

Master Calibration, performed Wed Jul 10 10:31:36 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.014	1.120	0.800	62.165	55.493	0.035
5FT	0.011	0.812	0.800	62.165	76.611	-0.074
S1	0.029	1.294	0.000	100.000	79.028	-2.253
S2	0.026	1.188	0.000	100.000	86.046	-2.248
S3	0.024	1.165	0.000	100.000	87.610	-2.069
S4	0.046	1.144	0.000	100.000	91.080	-4.160
S5	0.032	1.200	0.000	100.000	85.593	-2.698
S6	0.024	1.314	0.000	100.000	77.498	-1.839

Gamma Ray Calibration Report

Serial Number:	000001	
Tool Model:	020	
Performed:	Sun Jun 13 13:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

