



40 Arm Caliper
Magnetic Thickness
Radial Cement Bond Log

Company		Kerr-McGee Oil & Gas Onshore, L.P.					
Well		Dove 8C-13HZ					
Field		Wattenberg					
County		Weld					
State		Colorado					
Location:		API # : 05-123-35906					
Permanent Datum		SHL: 365' FNL & 1356' FEL					
Log Measured From		SEC 12 TWP 2N RGE 66W					
Drilling Measured From		Ground Level Elevation 4970					
		Kelly Bushing (25 FT)					
		Kelly Bushing					
		Elevation					
		K.B. 4995					
		D.F. 4994					
		G.L. 4970					
Date		22-JUL-2013					
Run Number		One					
Depth Driller		14,547					
Depth Logger		7586					
Bottom Logged Interval		7584					
Top Log Interval		Surface					
Open Hole Size		8.750"					
Type Fluid		Water					
Density / Viscosity		8.34 lbm/gal					
Max. Recorded Temp.		245 F					
Estimated Cement Top		22					
Time Well Ready		07:00					
Time Logger on Bottom		11:15					
Equipment Number		HD-0311					
Location		Fort Lupton, CO.					
Recorded By		Greg Jackson					
Witnessed By		George Helwig					
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size			Wgt/Ft		Top	Bottom
Surface String	9-5/8"			36#		0	1041
Prot. String	7"			26#		0	7754
Production String							
Liner	4-1/2"			11.6#		6776	14,542

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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

Radial Cement Bond Log - Multi-finger Inspection Tool - Magnetic Thickness Tool is first recorded log in hole.
Depth reference to Casing Tally reported Top of Liner at 6776'.
Adjusted -24' to TOL at 6776' from a 25' KB zero.
RCBL-MIT-MTT ran at 2000 PSI surface induced pressure.
Estimated Cement Top - 22

Thank you for choosing FMC Technologies Completion Services

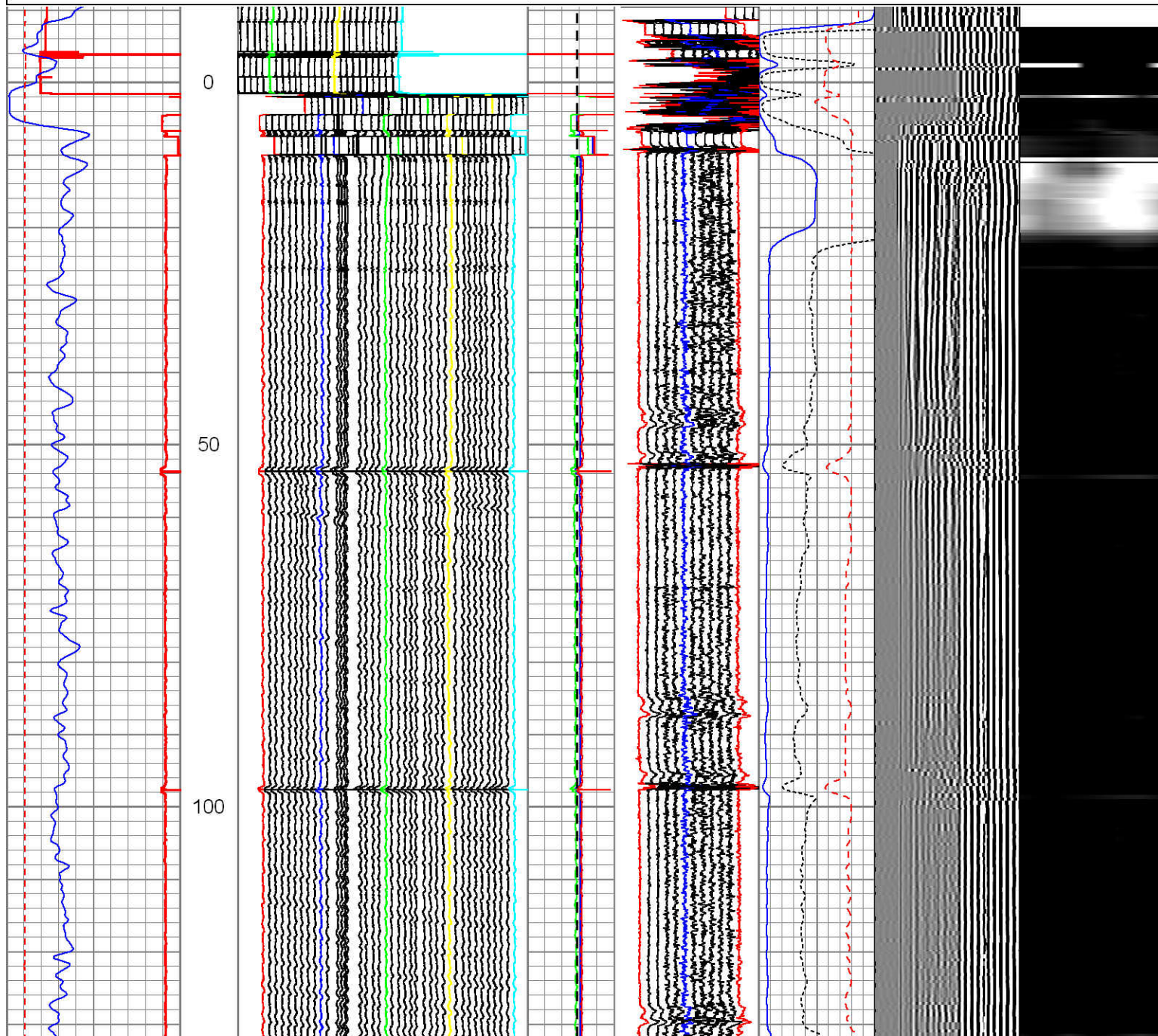


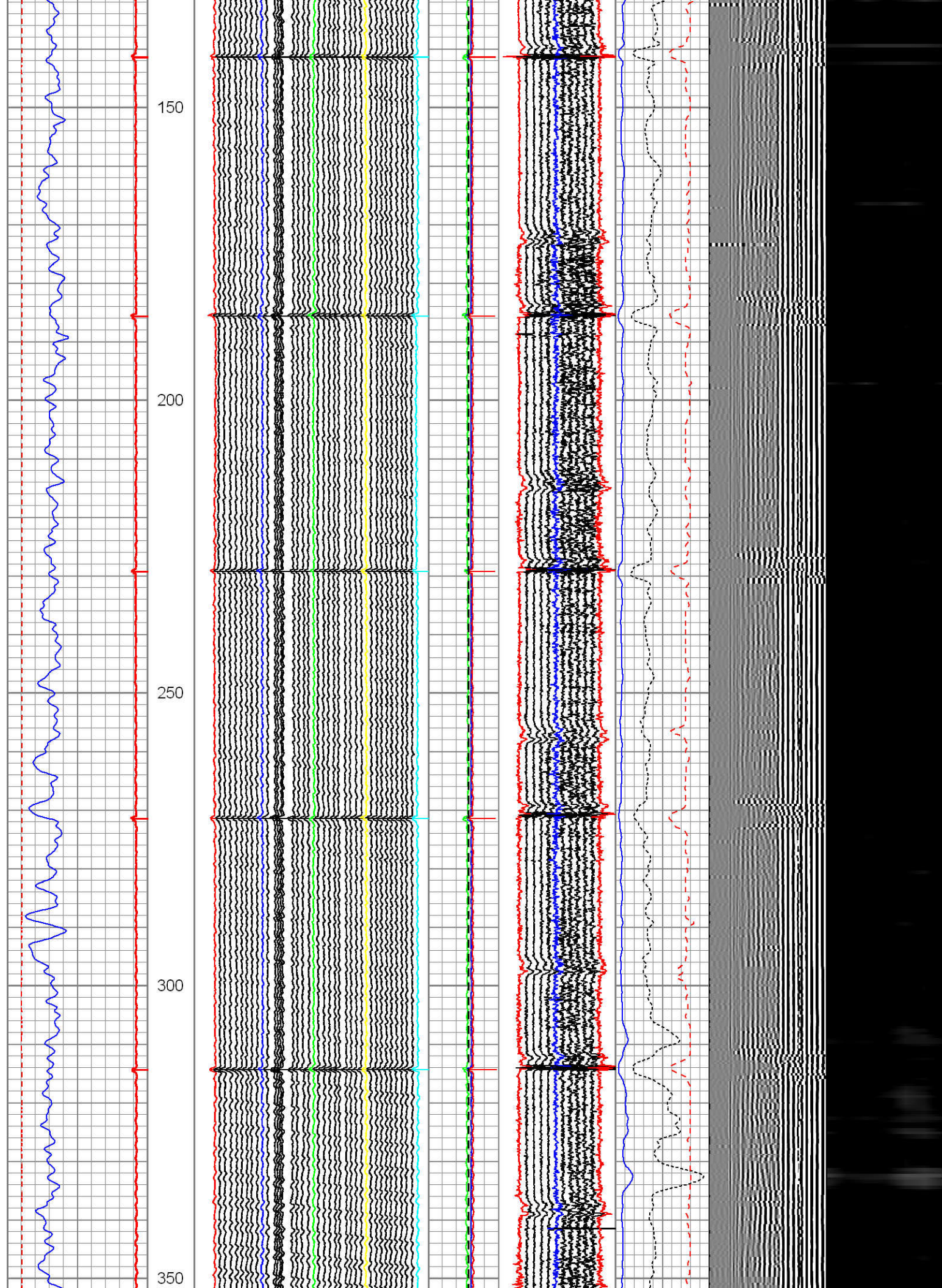
Main Pass

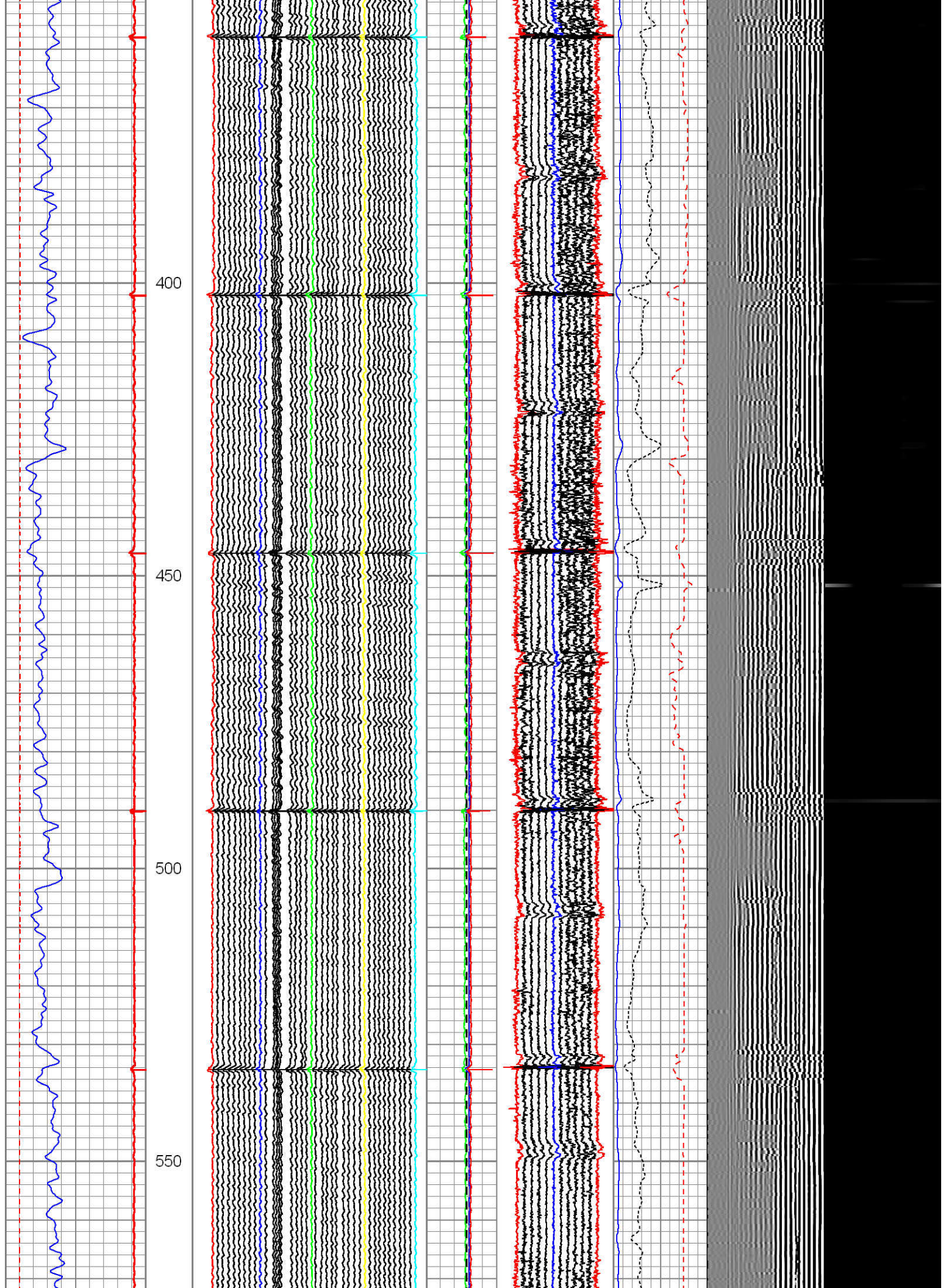
Logged with 2000 PSI induced surface pressure

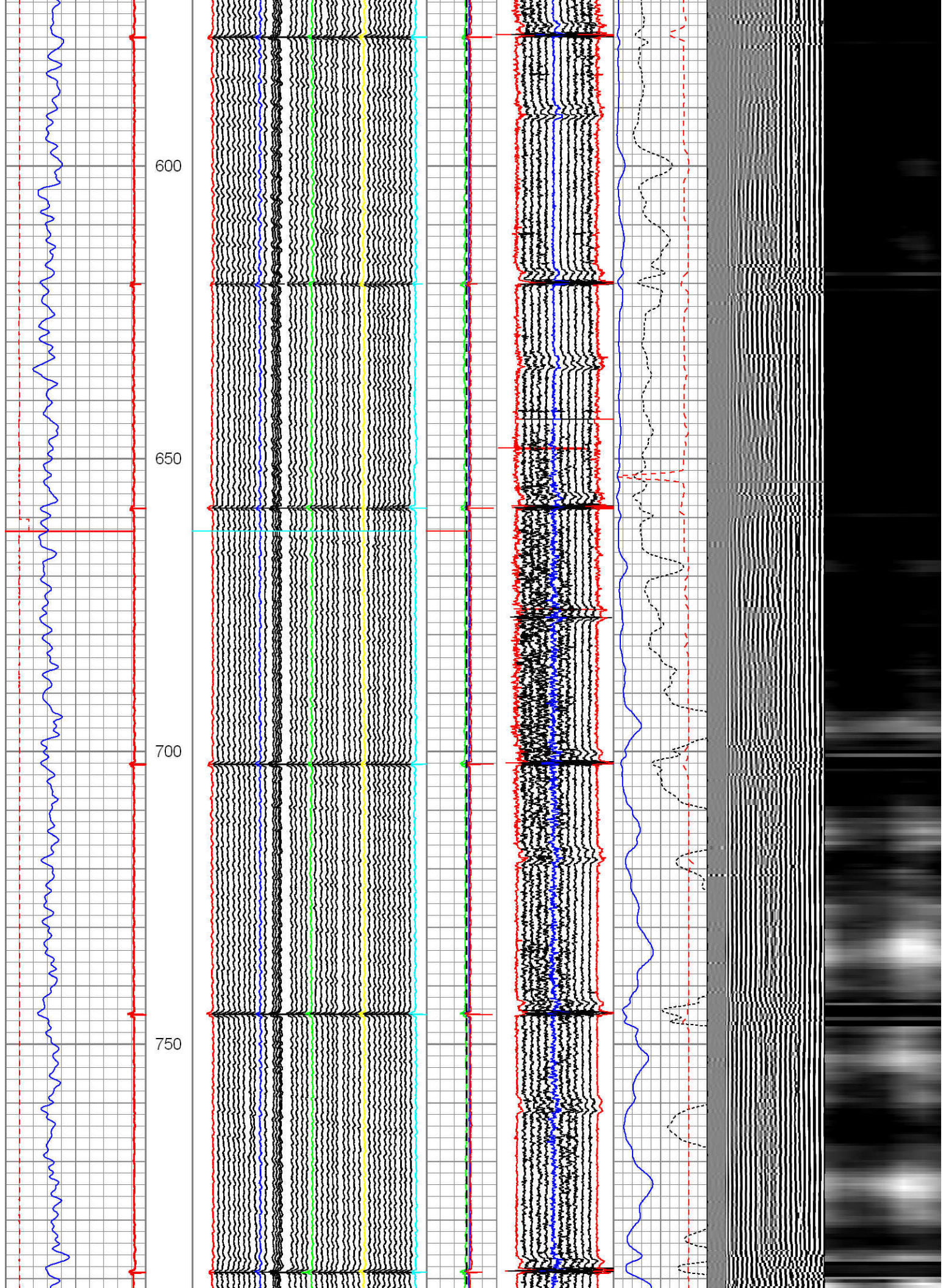
Database File: kmg_dove 8c-13hz_rcbl-cil_w7.db
 Dataset Pathname: main3
 Presentation Format: us40rbl7
 Dataset Creation: Mon Jul 22 12:31:47 2013 by Log Sondex V7.03
 Charted by: Depth in Feet scaled 1:240

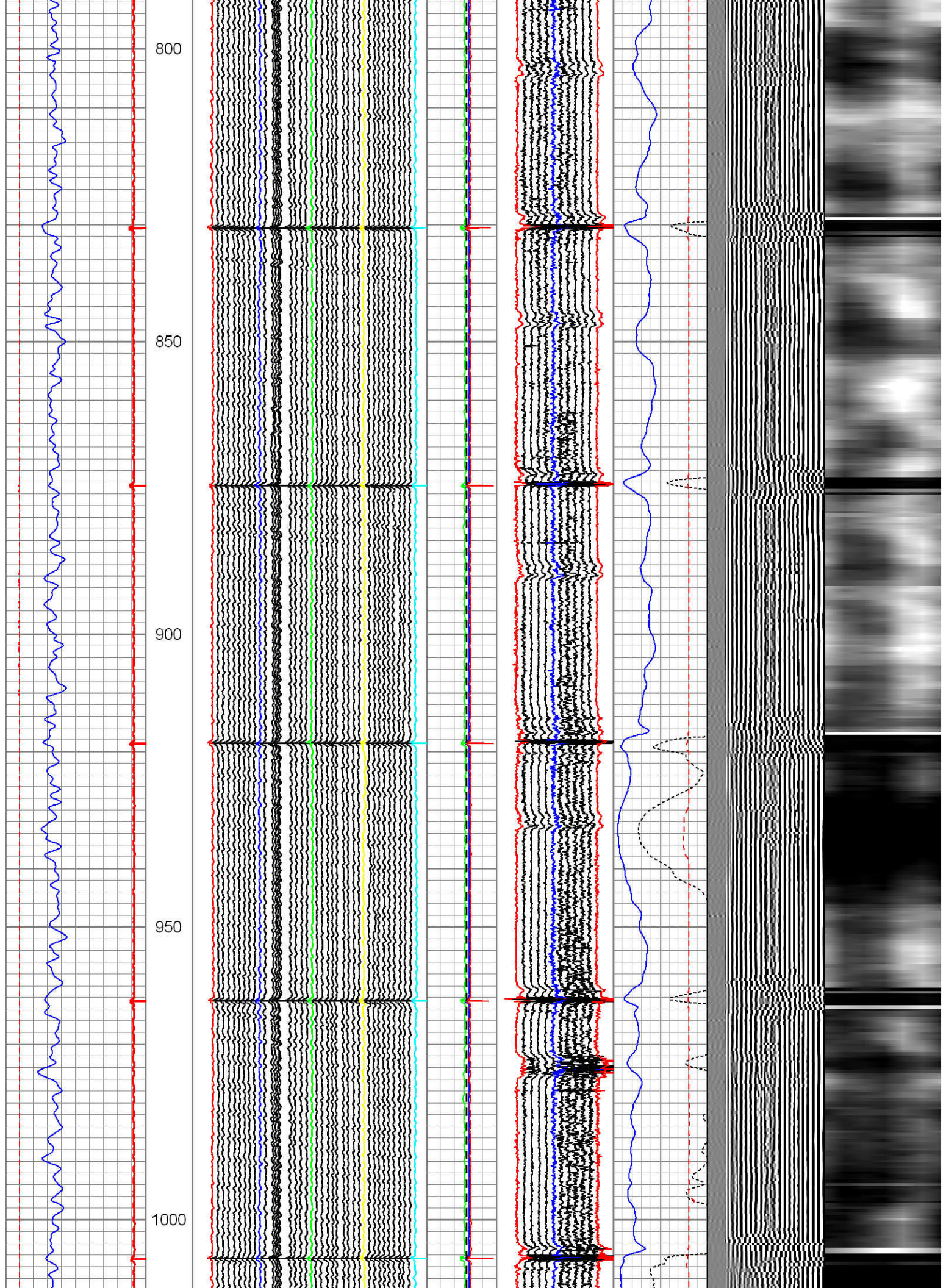
CCL	3	Caliper #1 (in)	4.8	Ave ID	MTTP01	3' Amp	5' VDL	Sector Map
0 GR (GAPI)120	2.64	Caliper #10 (in)	4.44	(in)	1 (rad) 9	(mV)	200 1200	
Deviation	2.24	Caliper #20 (in)	4.04	5.7 6.7	MTTP06	0 100		
-10 (°) 90	1.84	Caliper #30 (in)	3.64	Min ID	-1.5 (rad) 6.5	3' Amp X 5		
	1.44	Caliper #40 (in)	3.24	(in)	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				

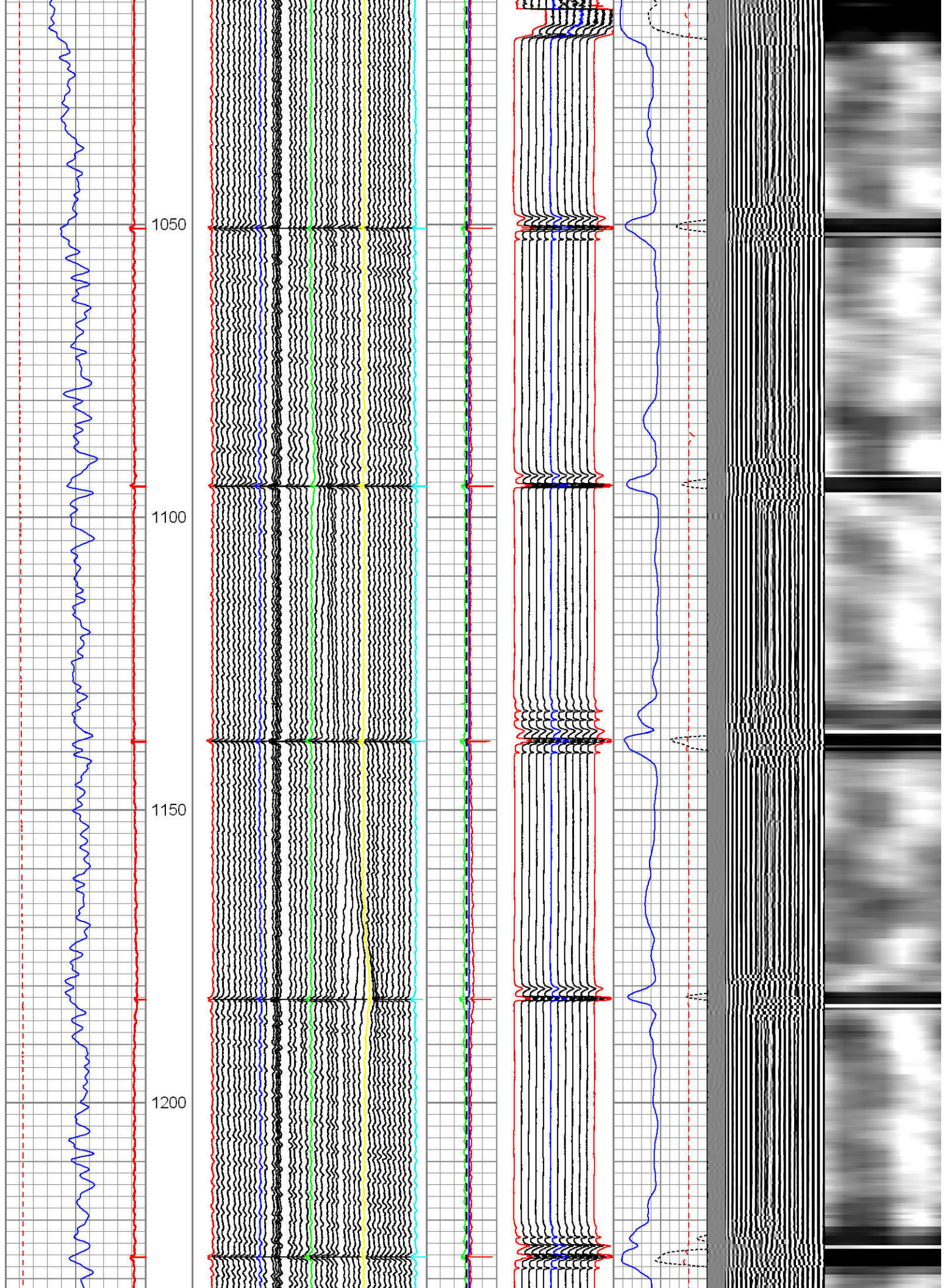


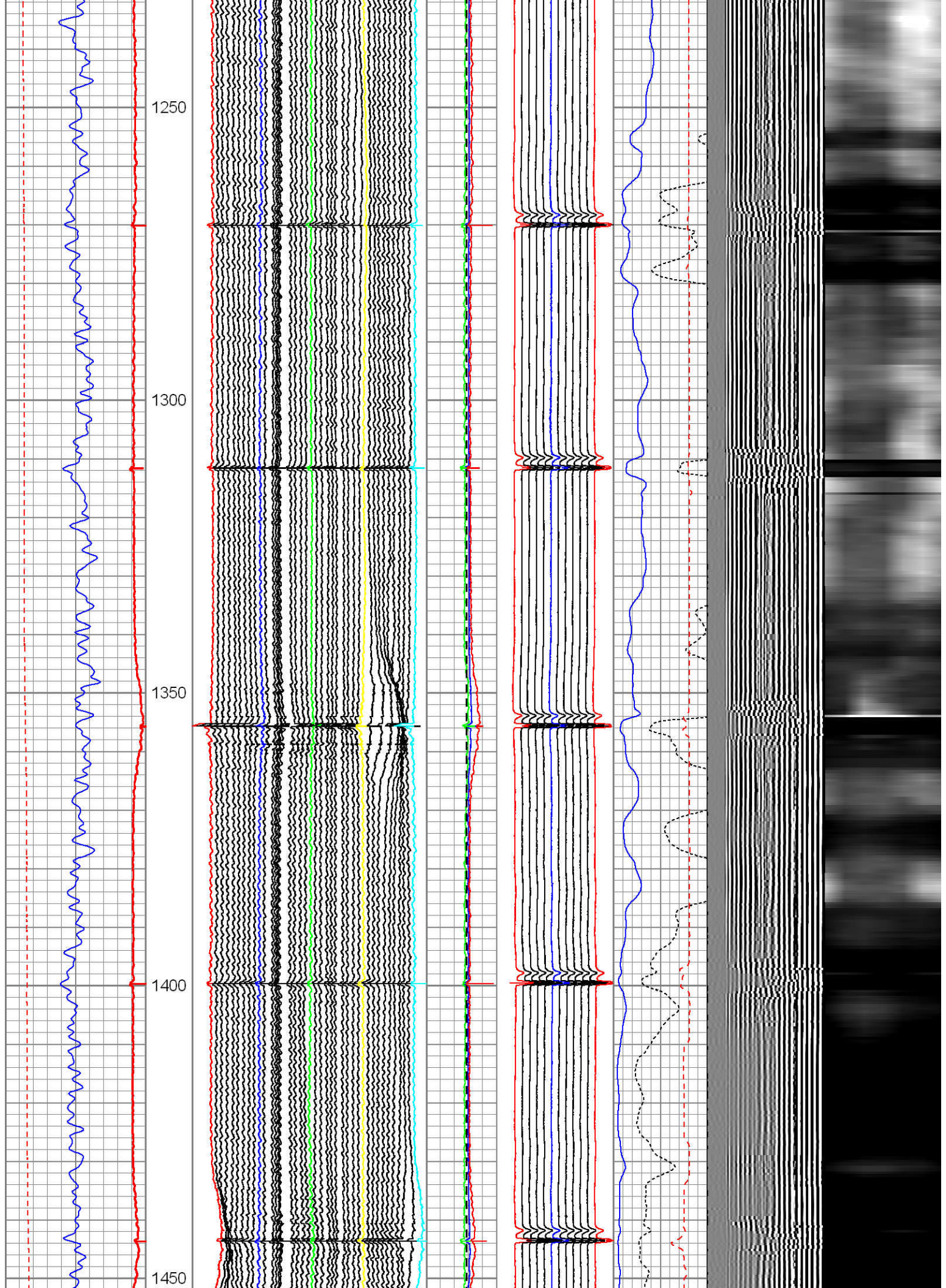


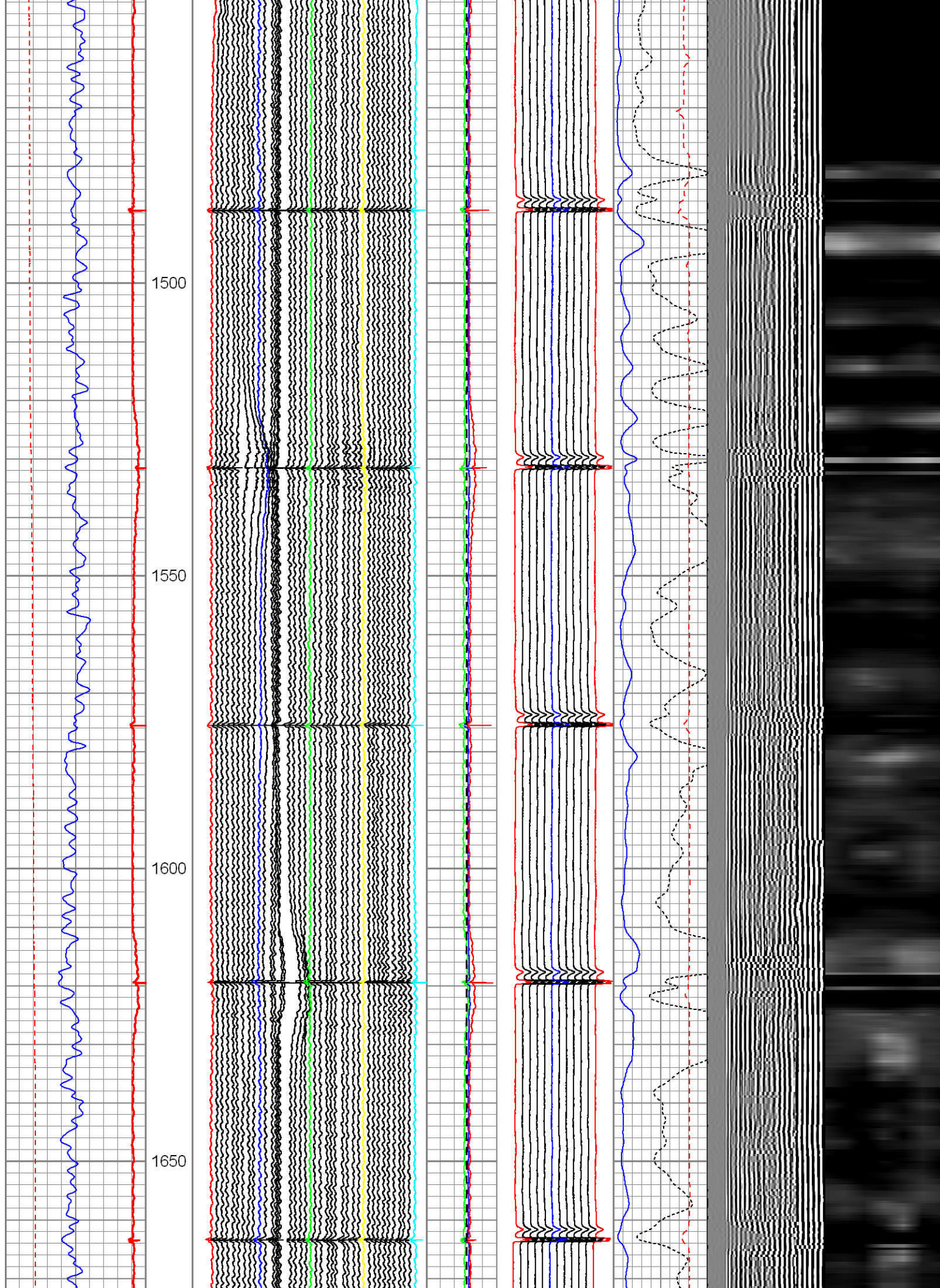


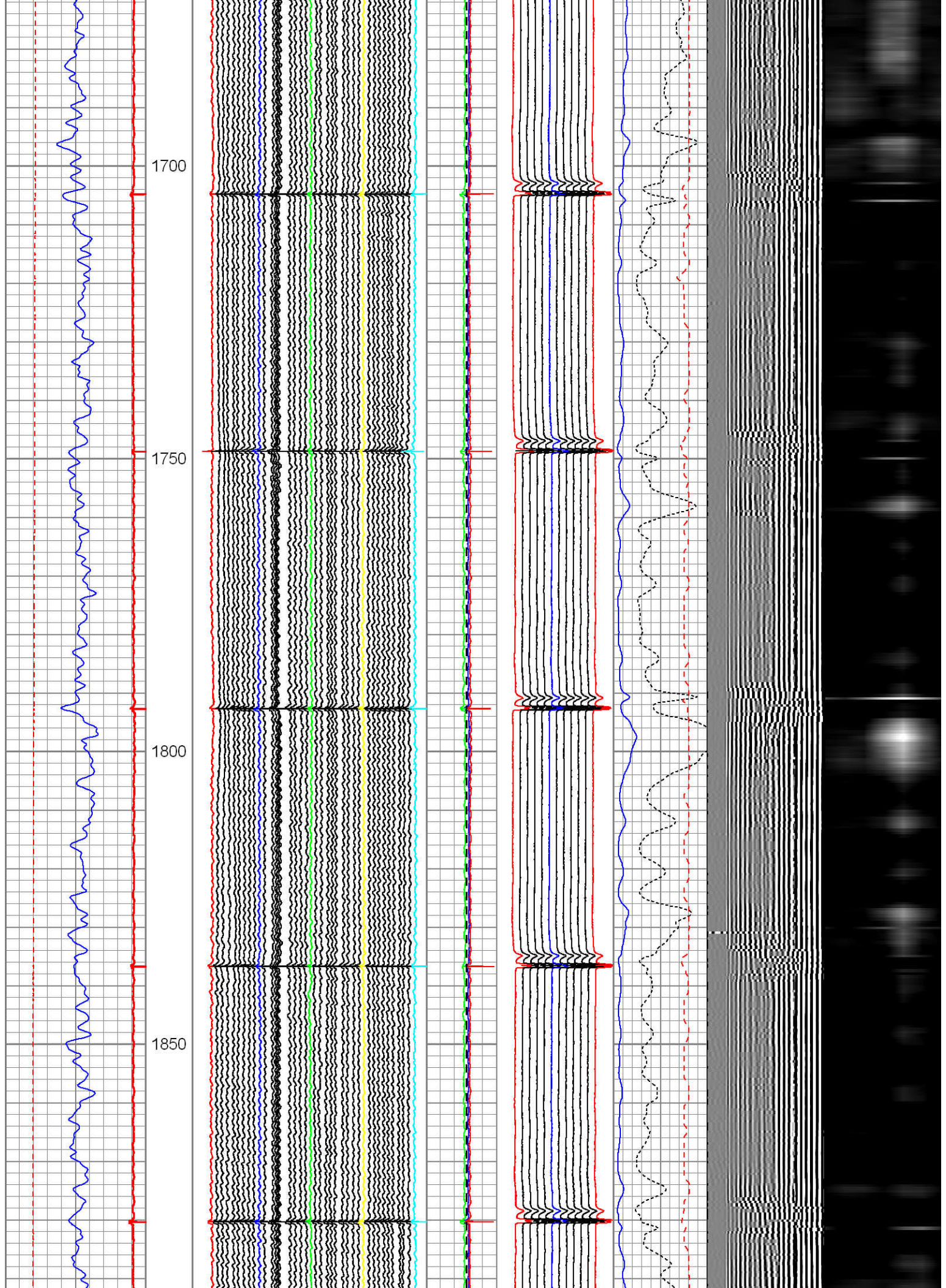


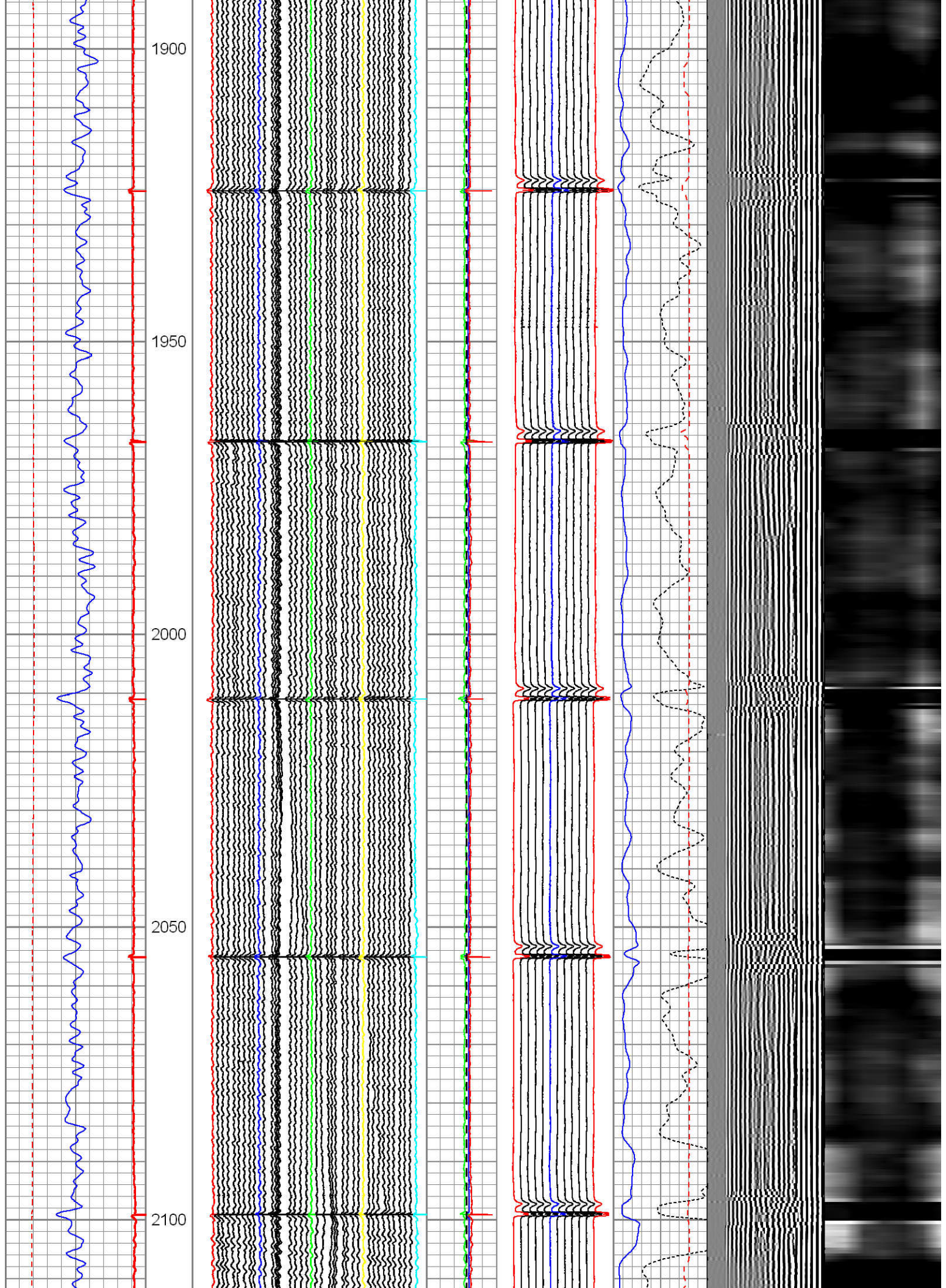


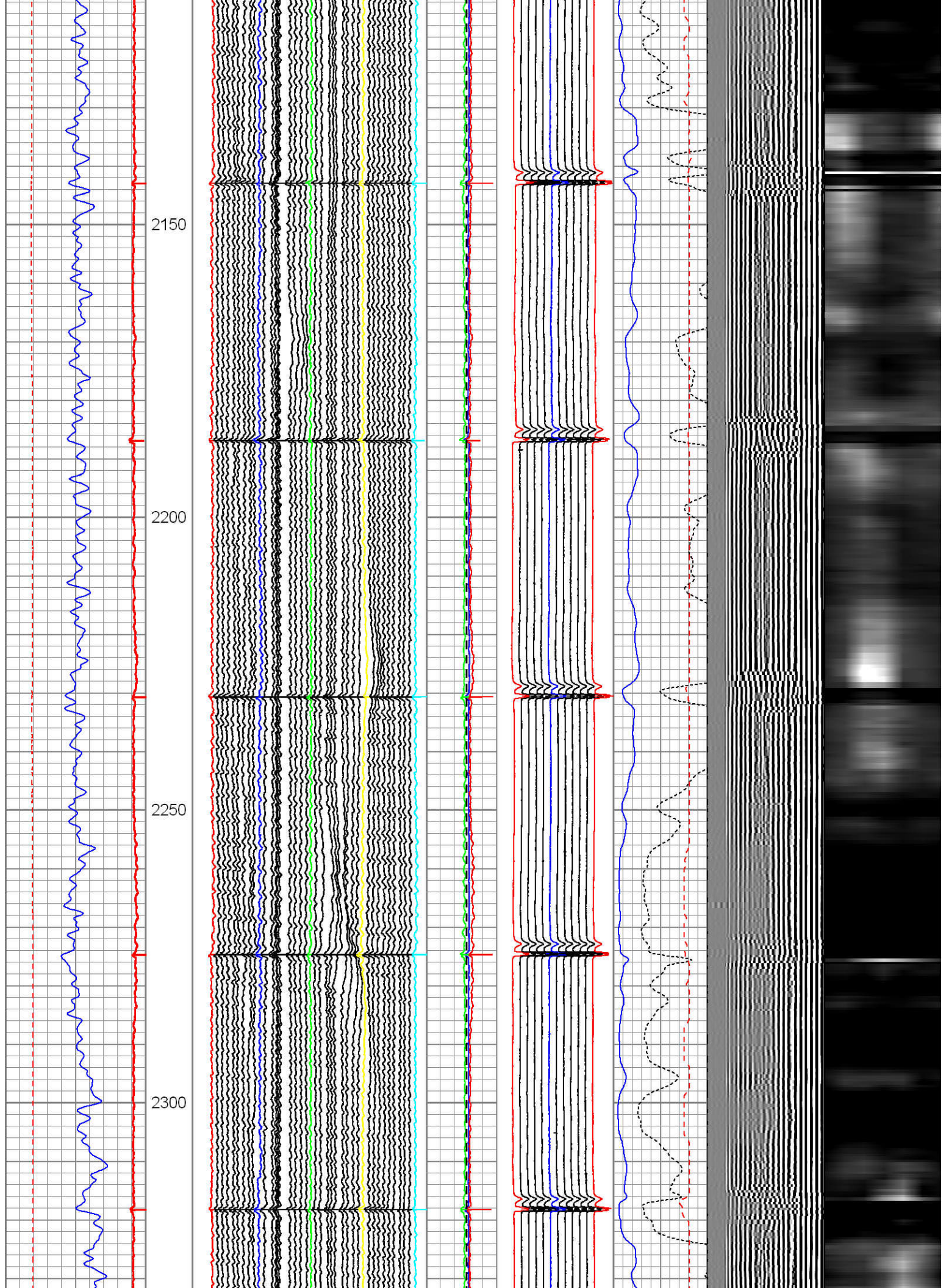


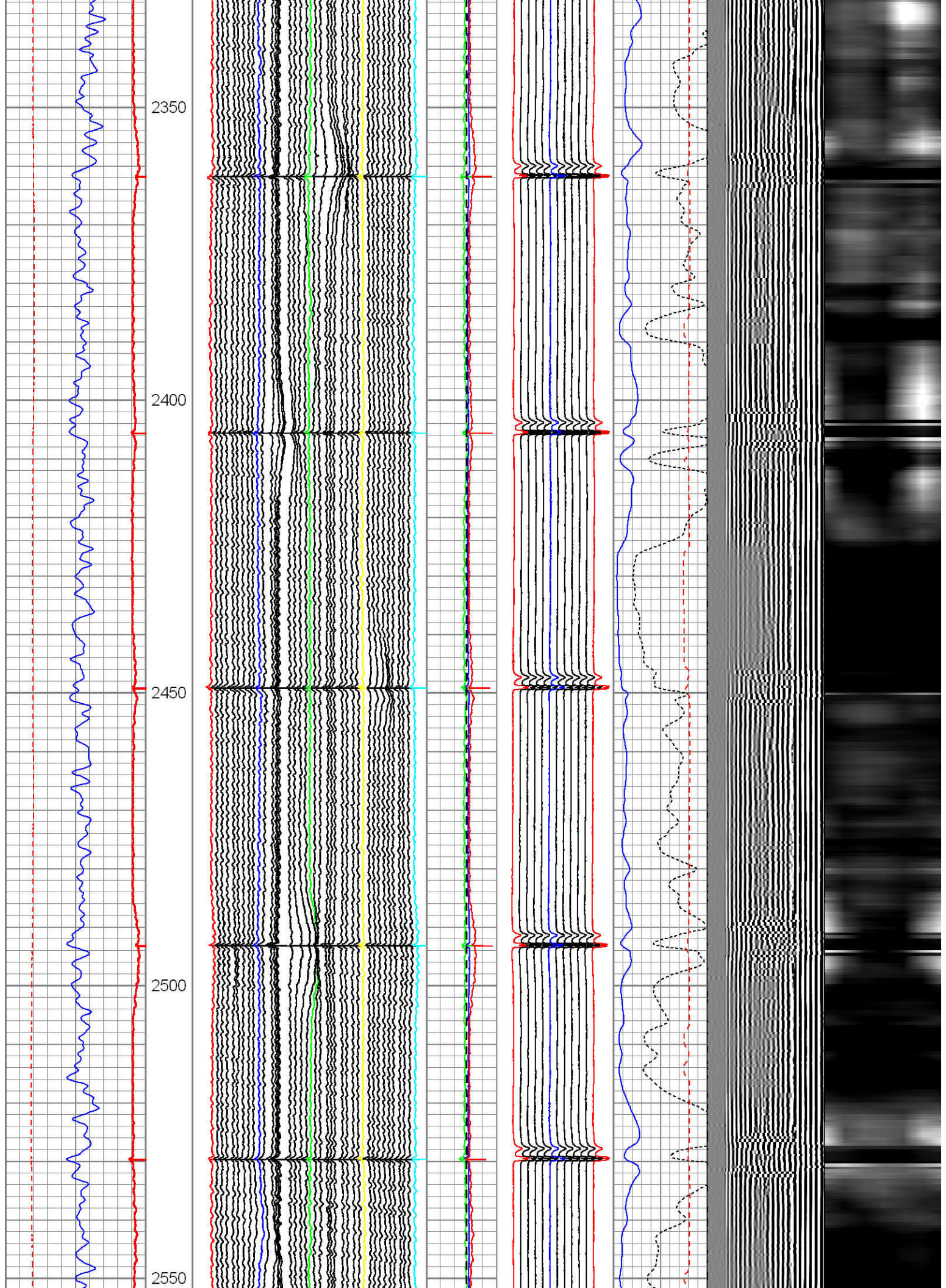


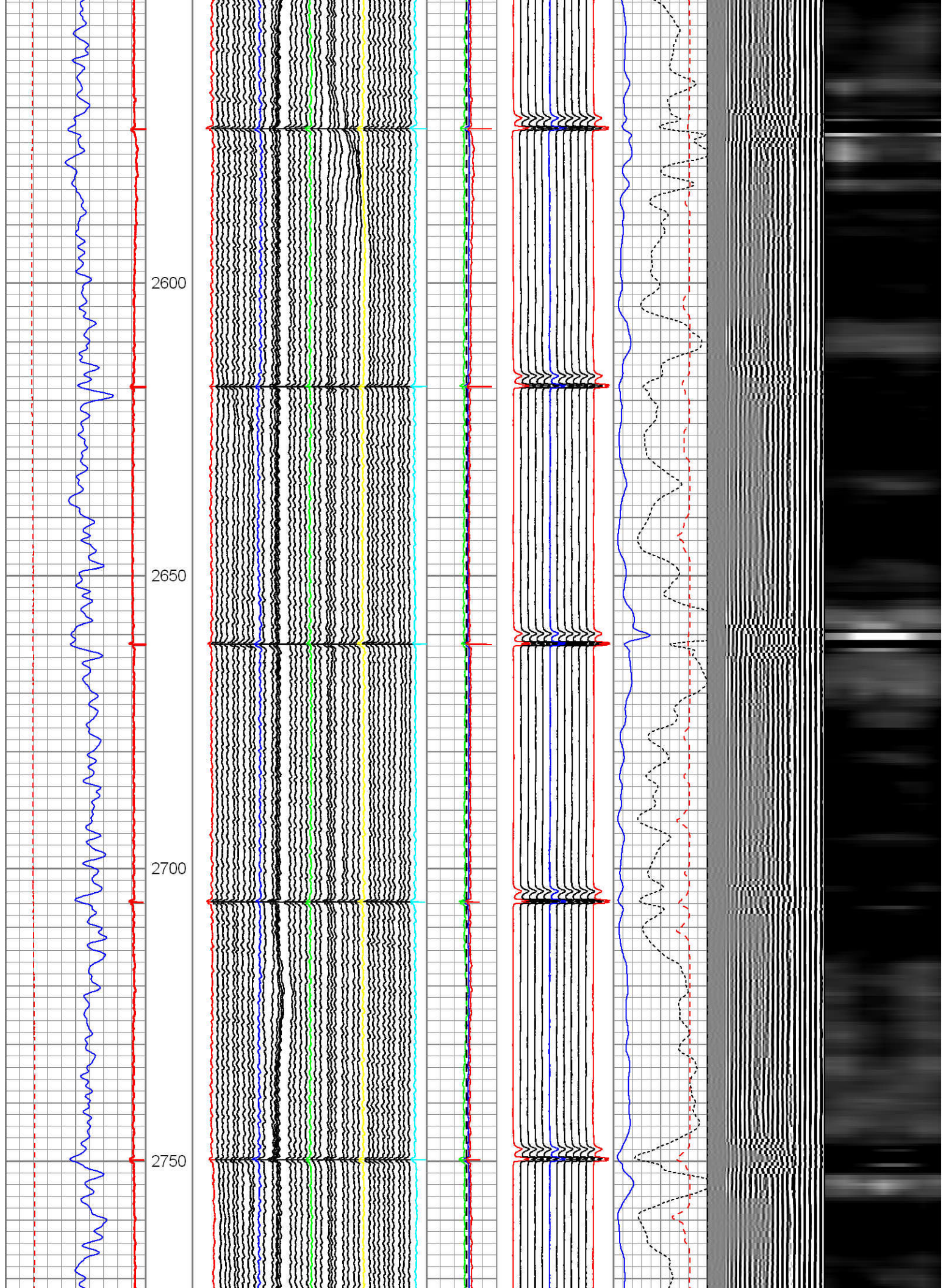


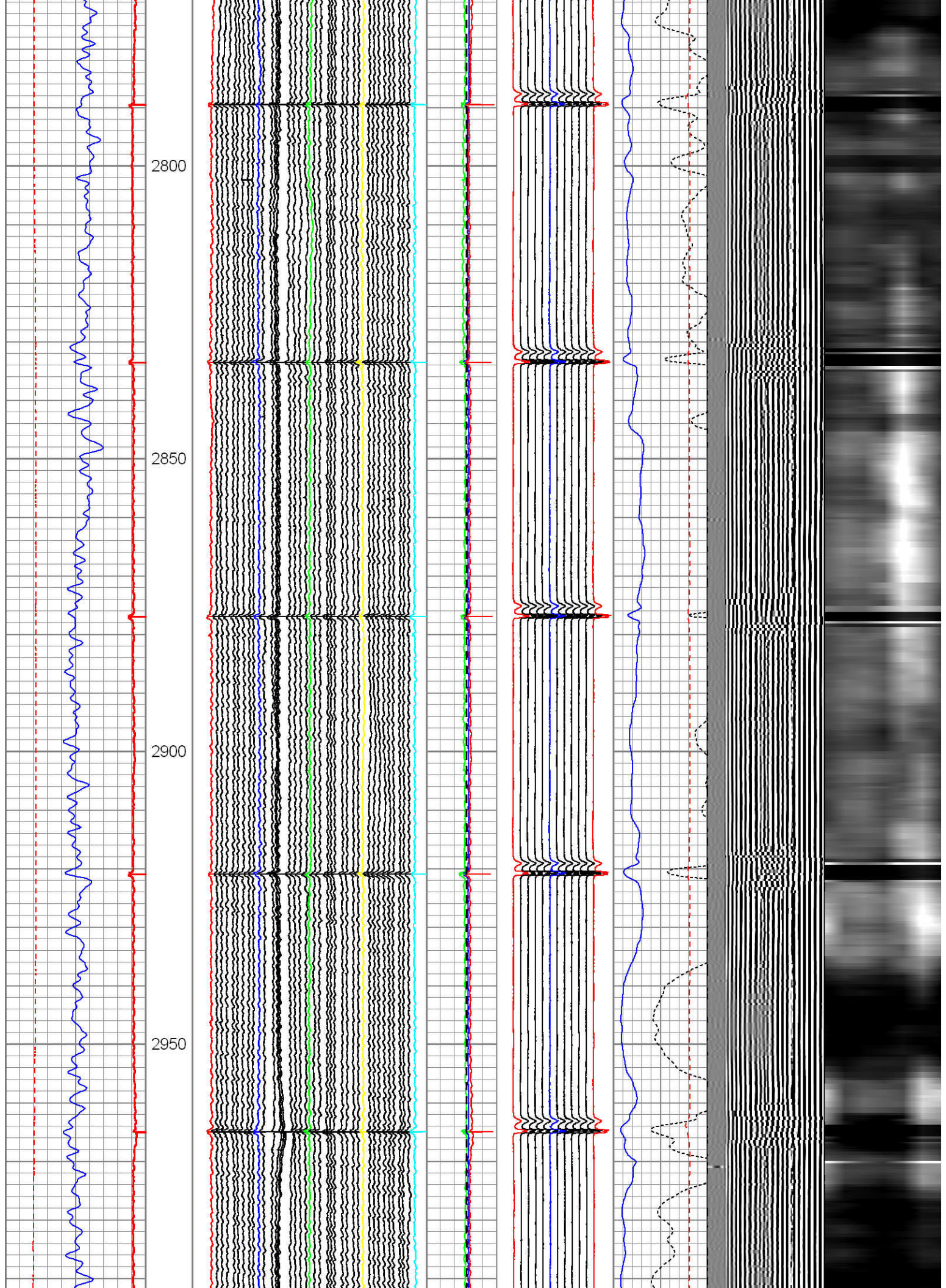


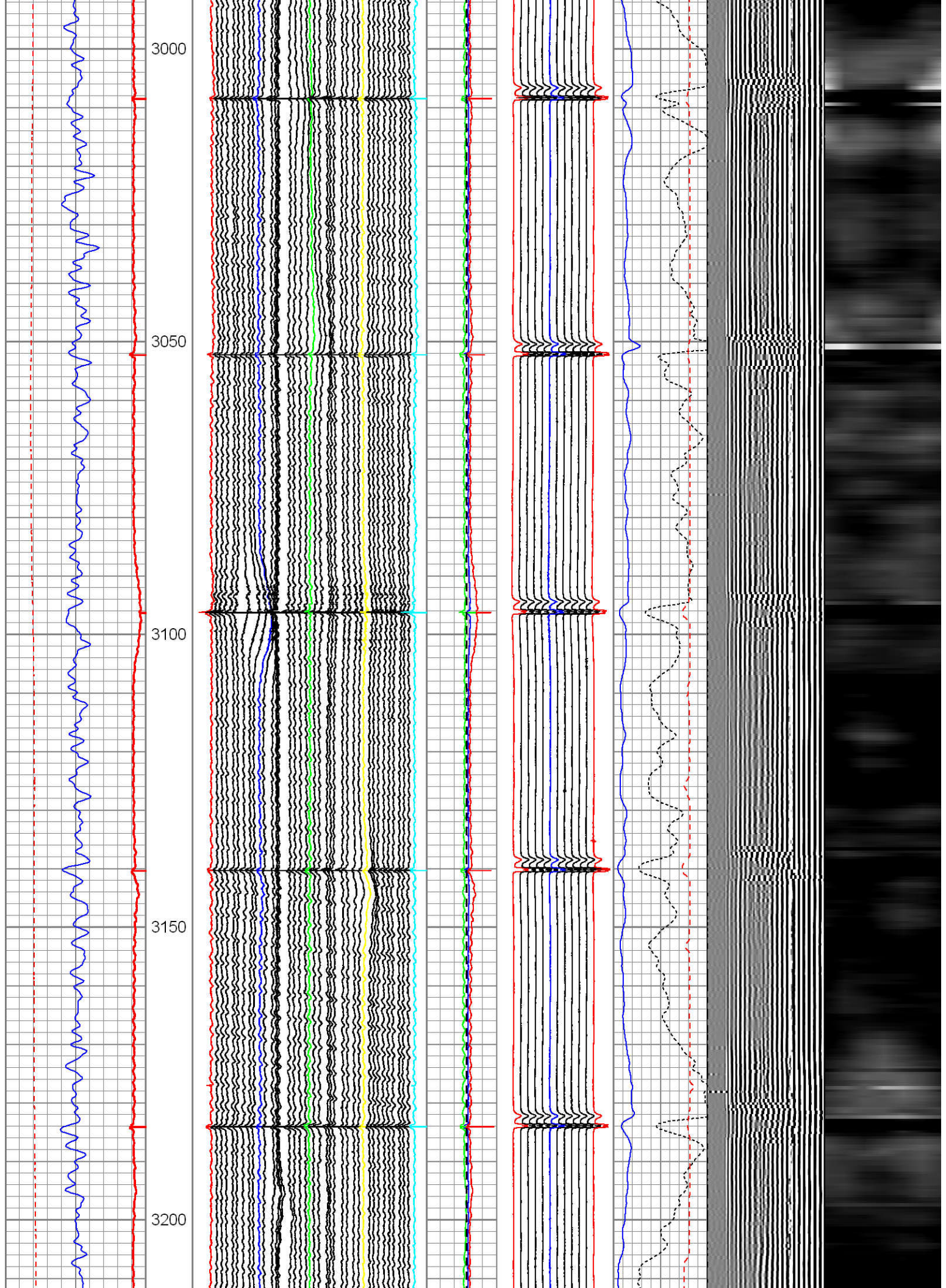


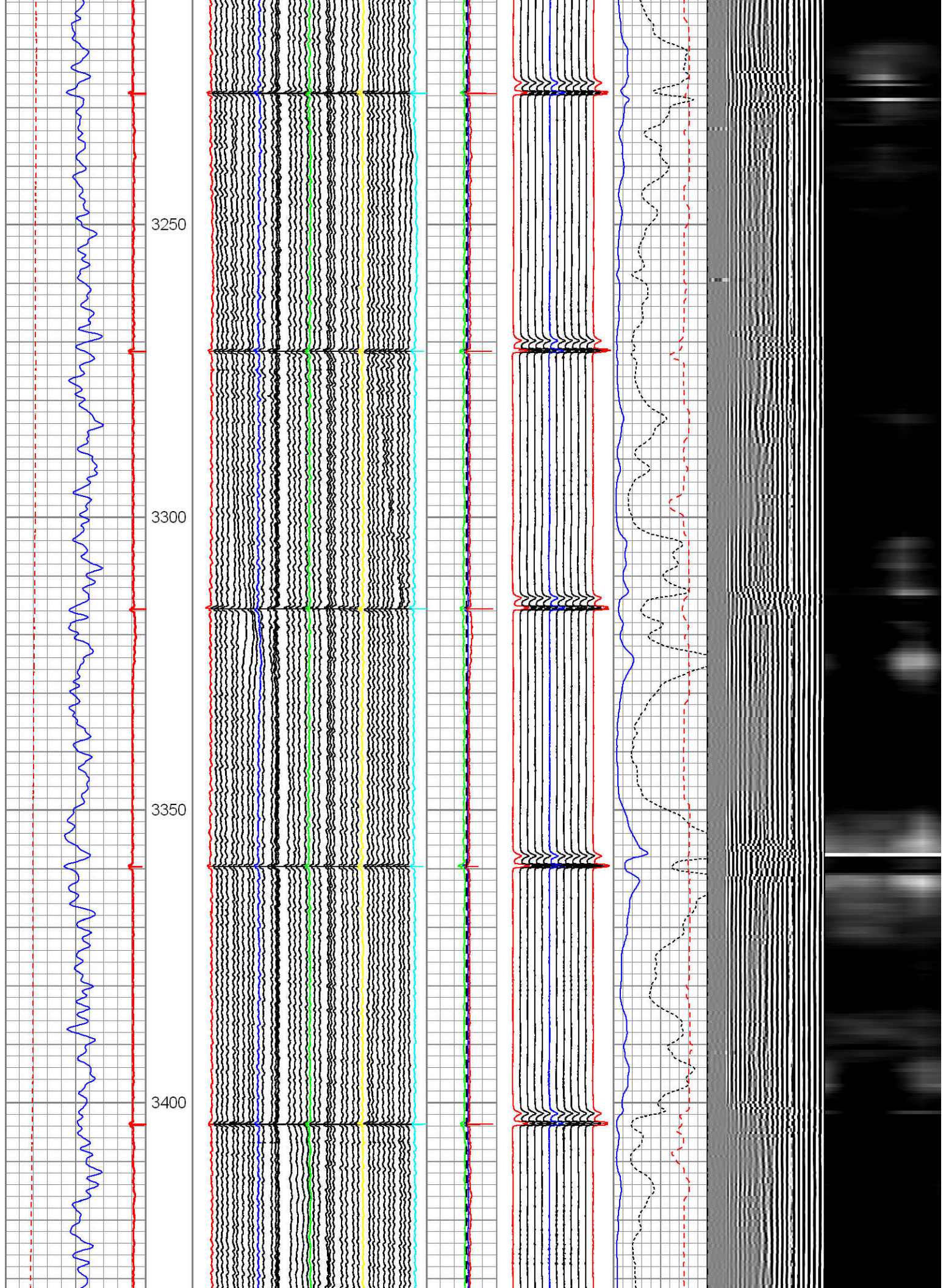


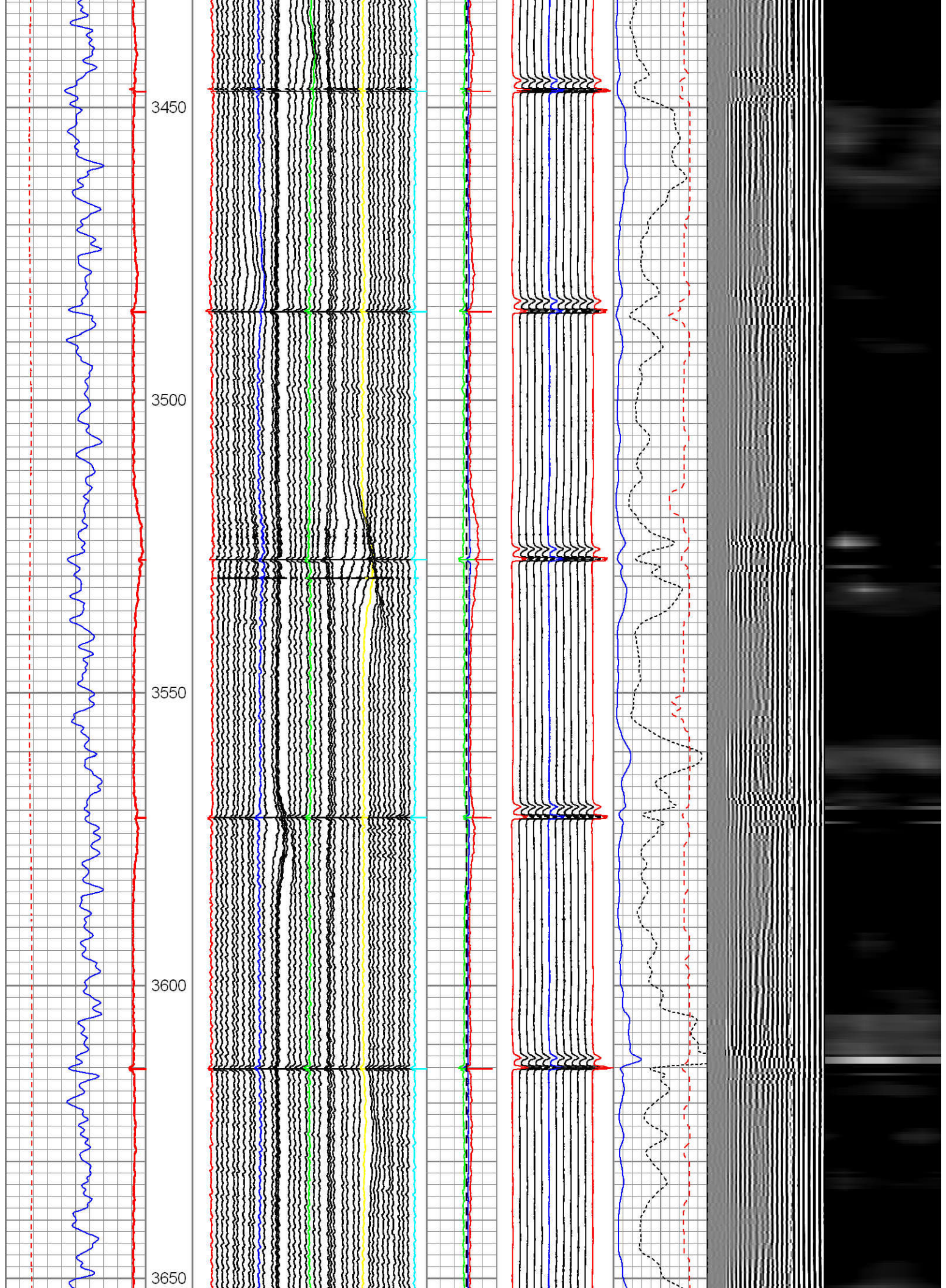


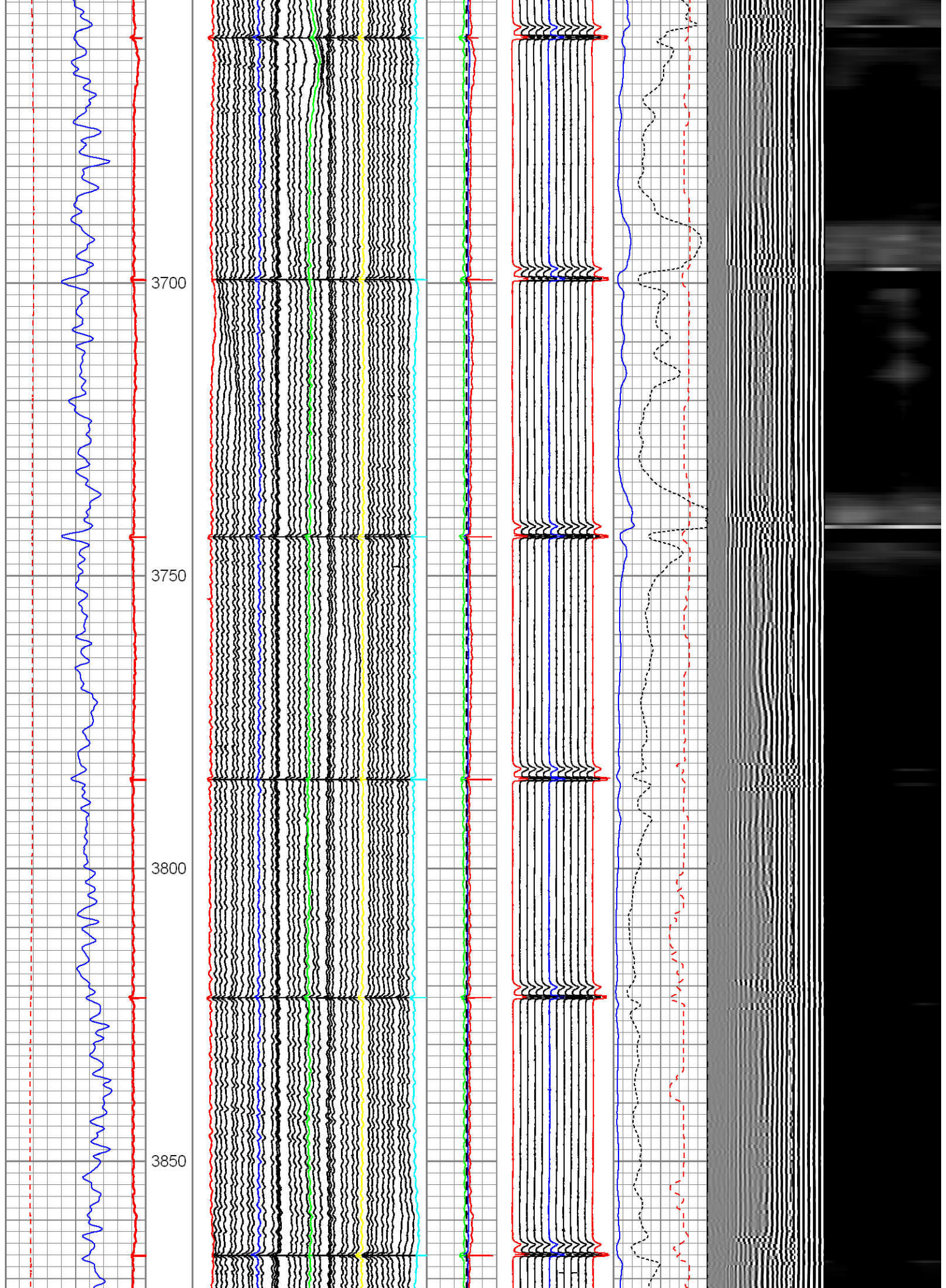


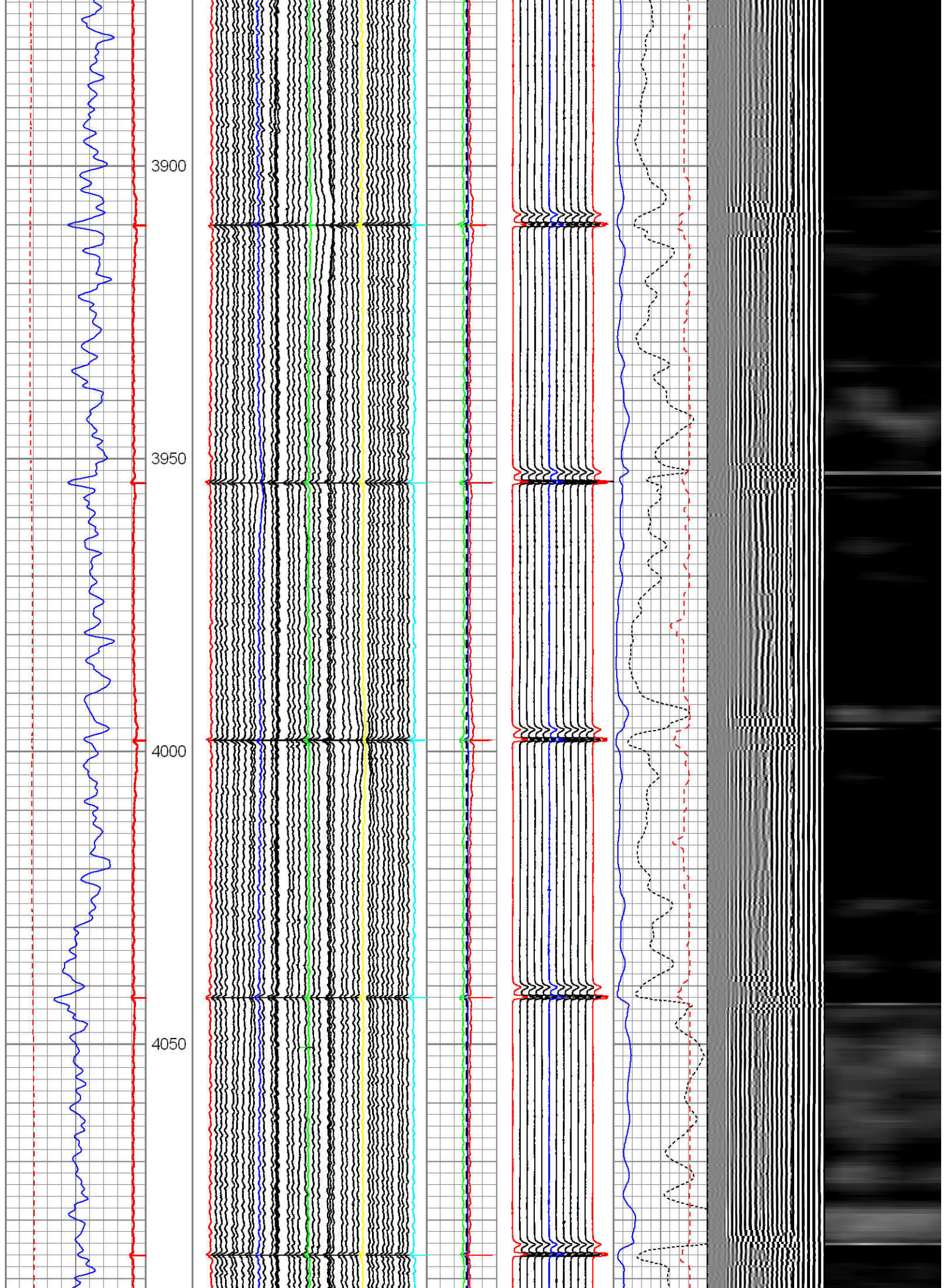


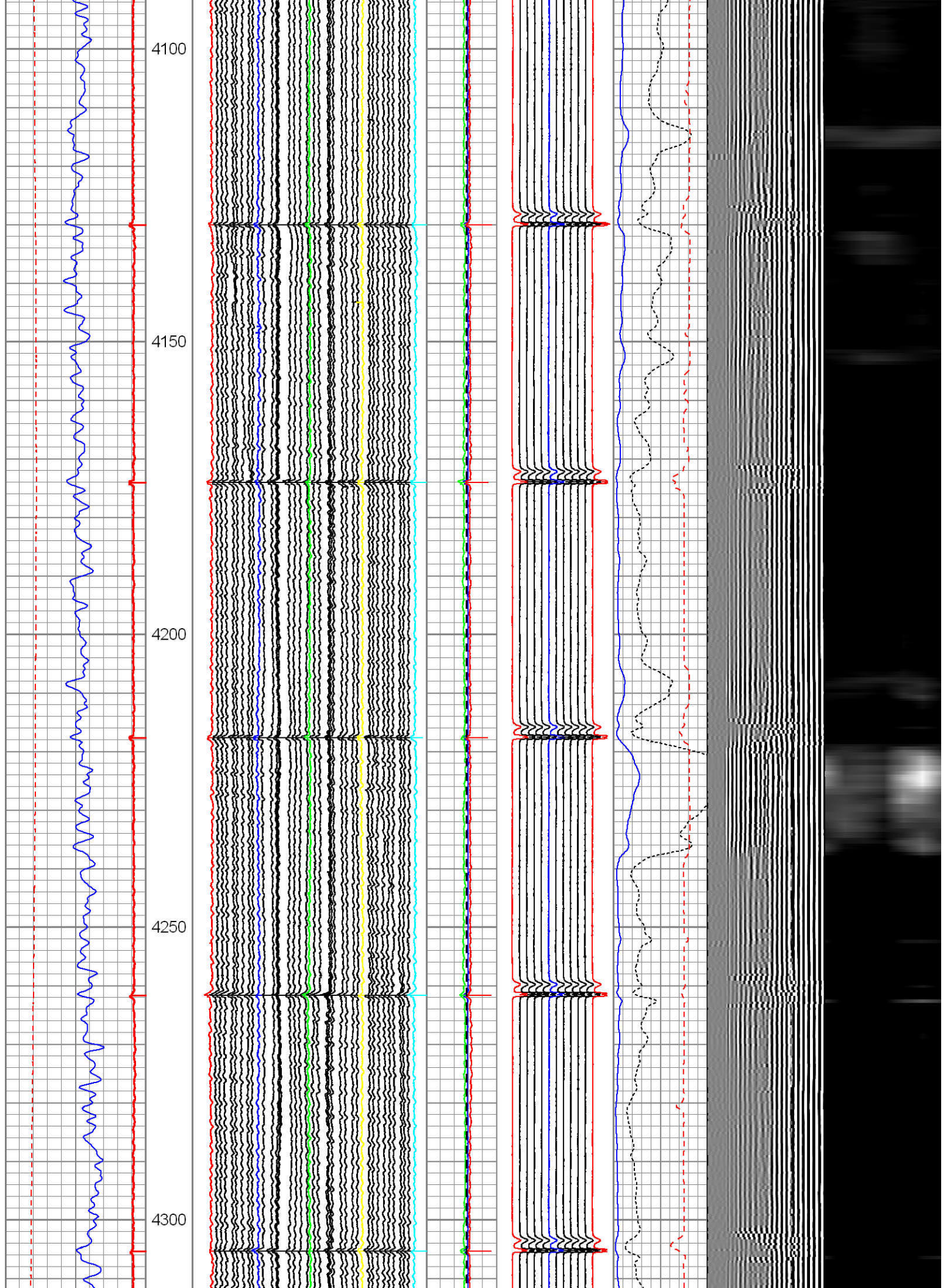


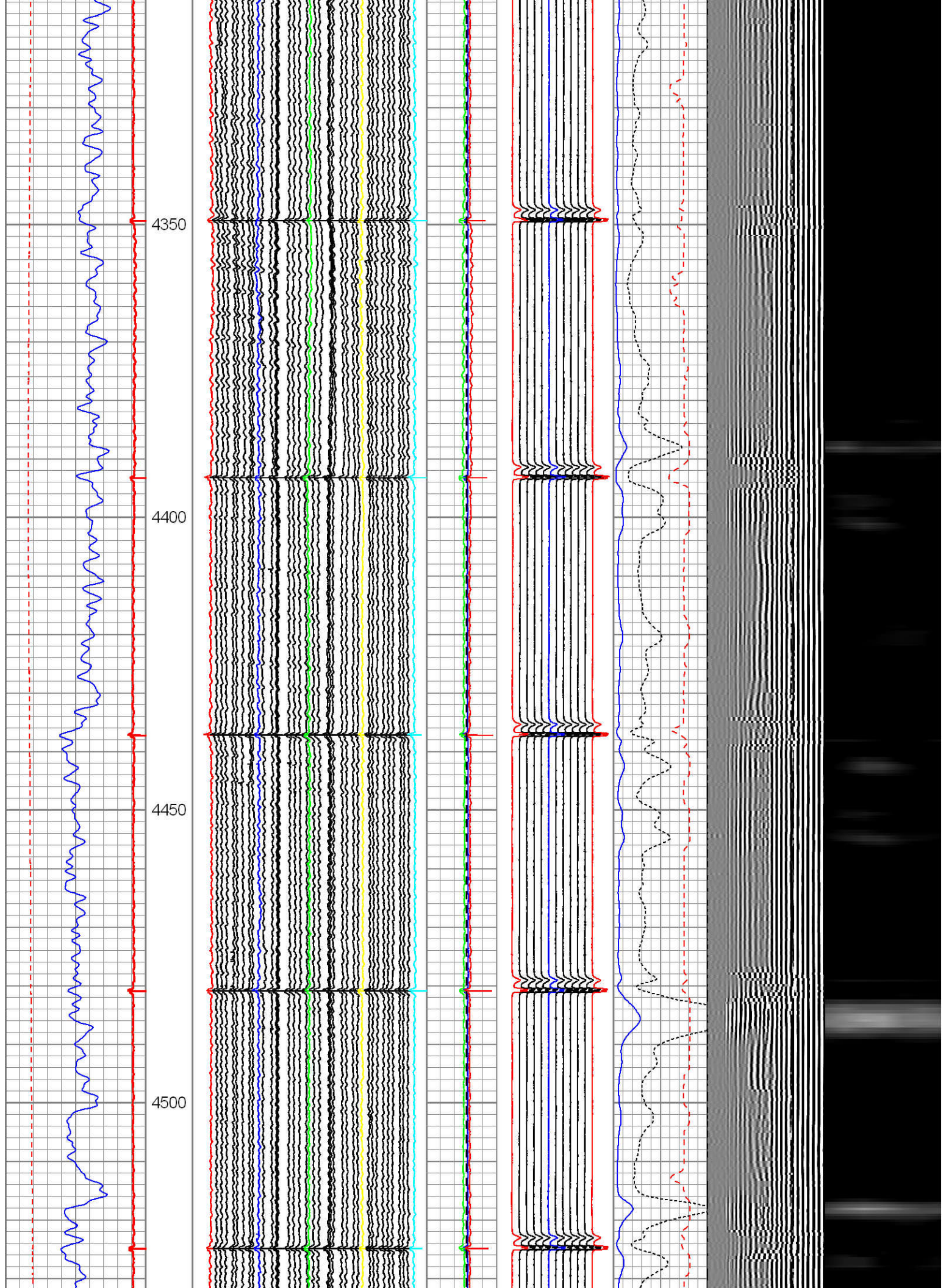


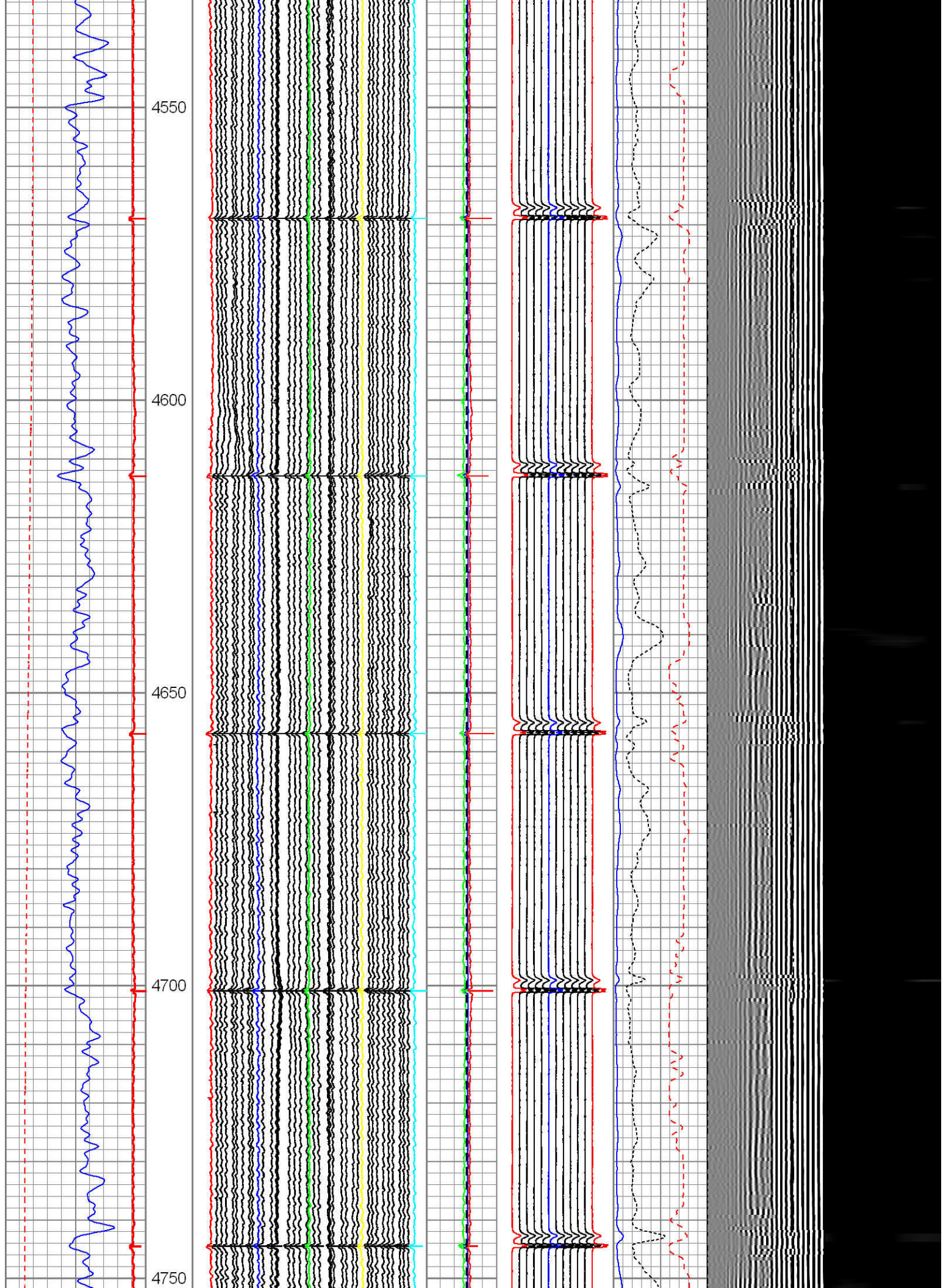


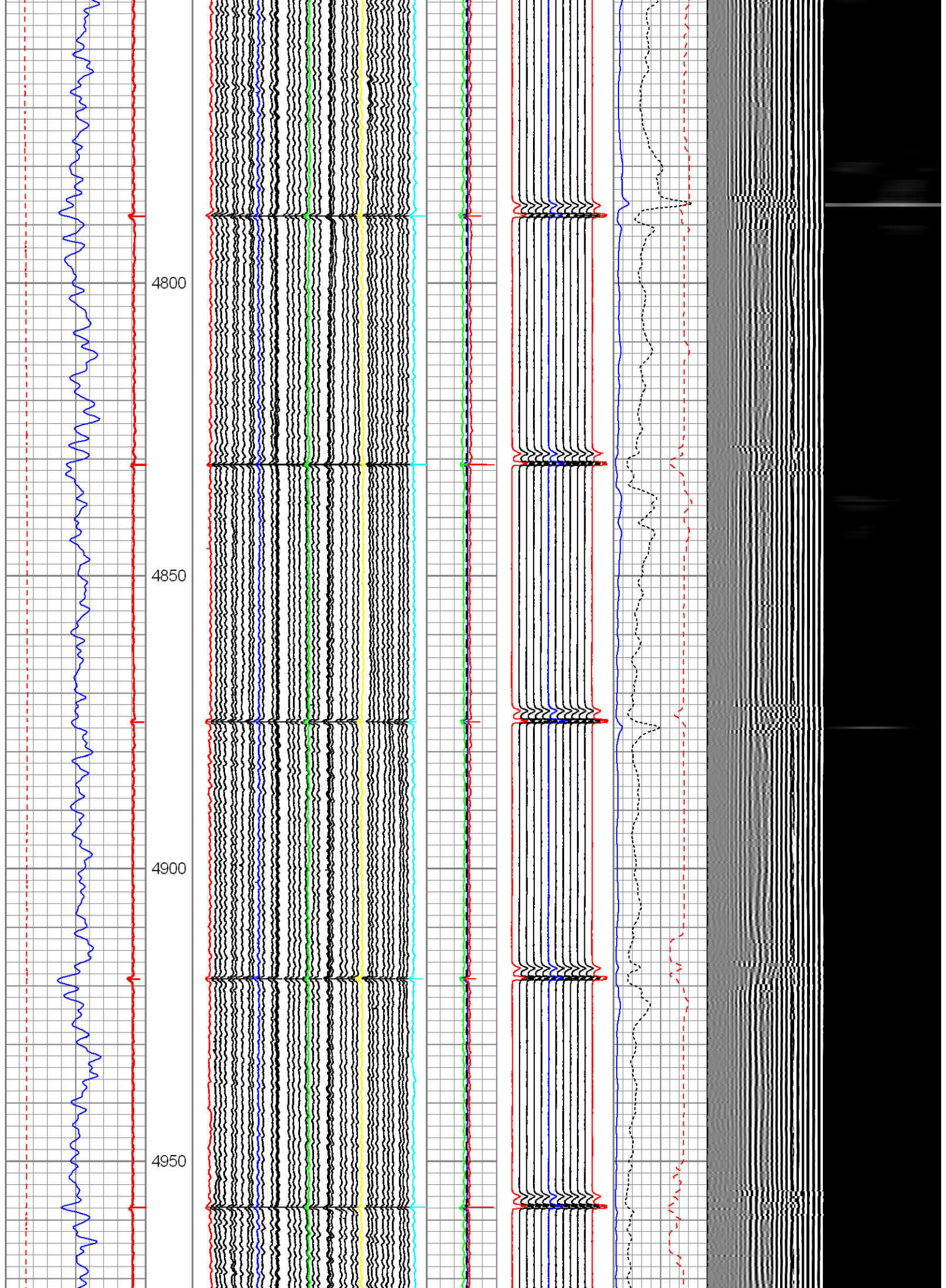


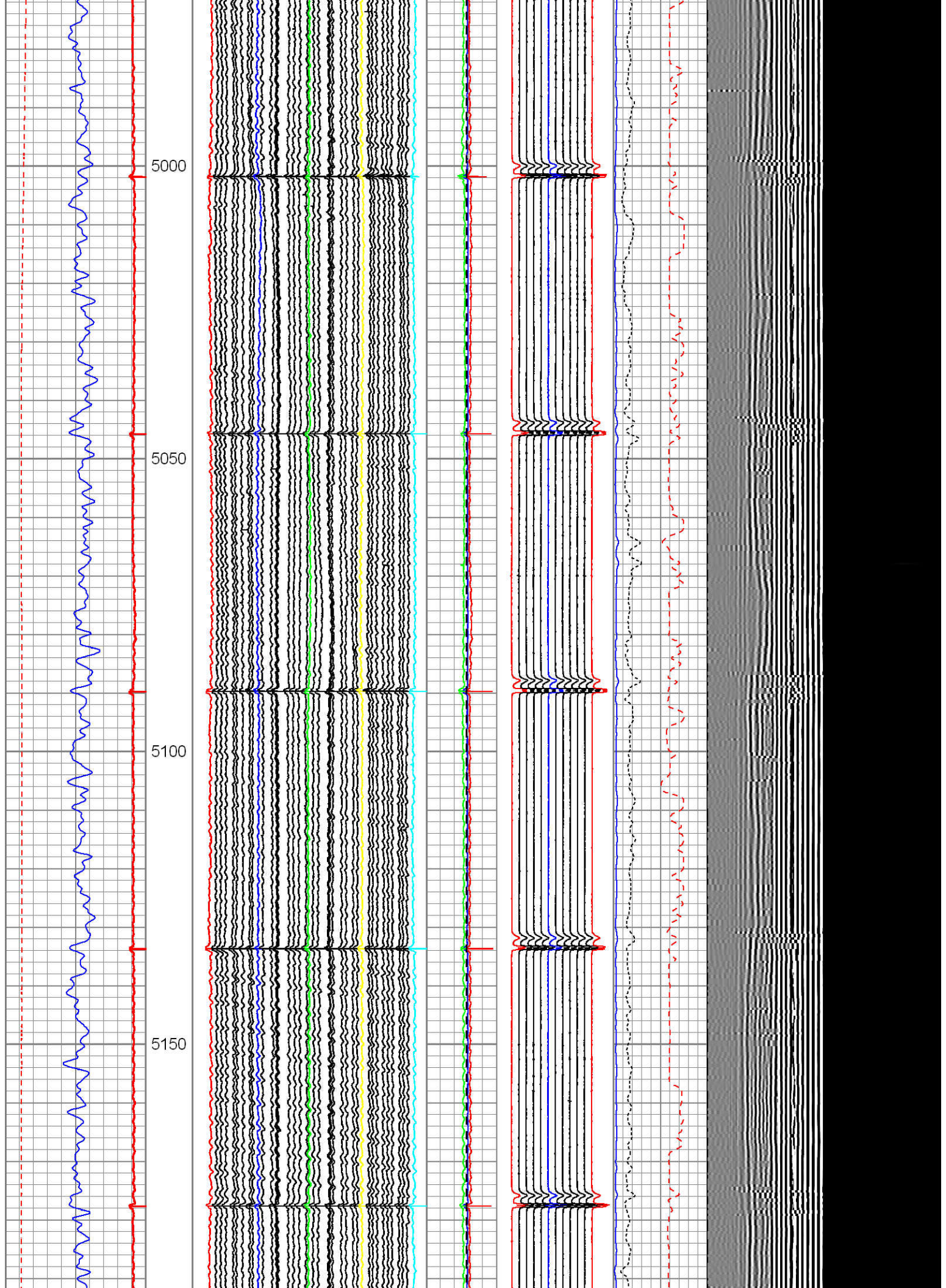


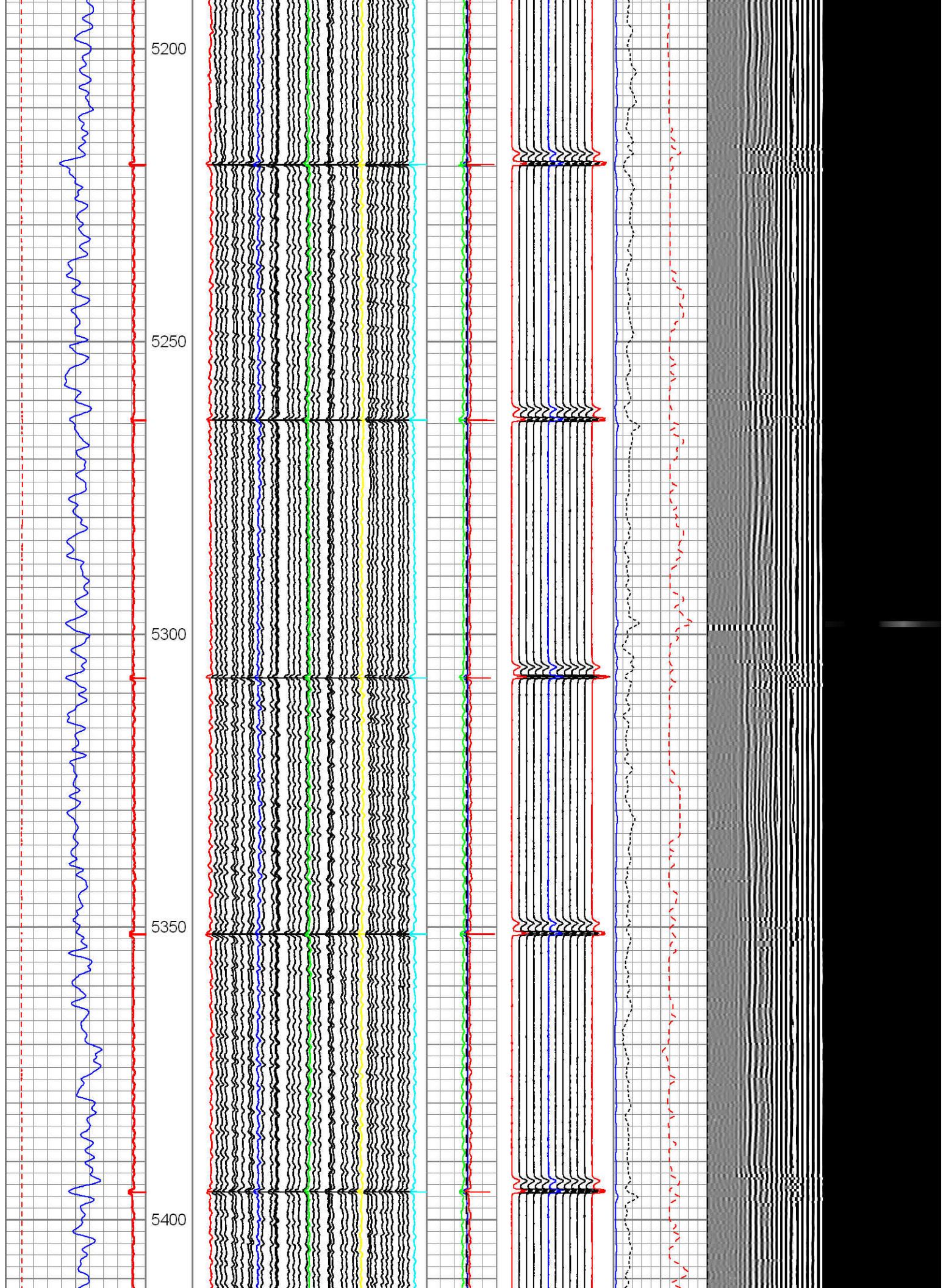


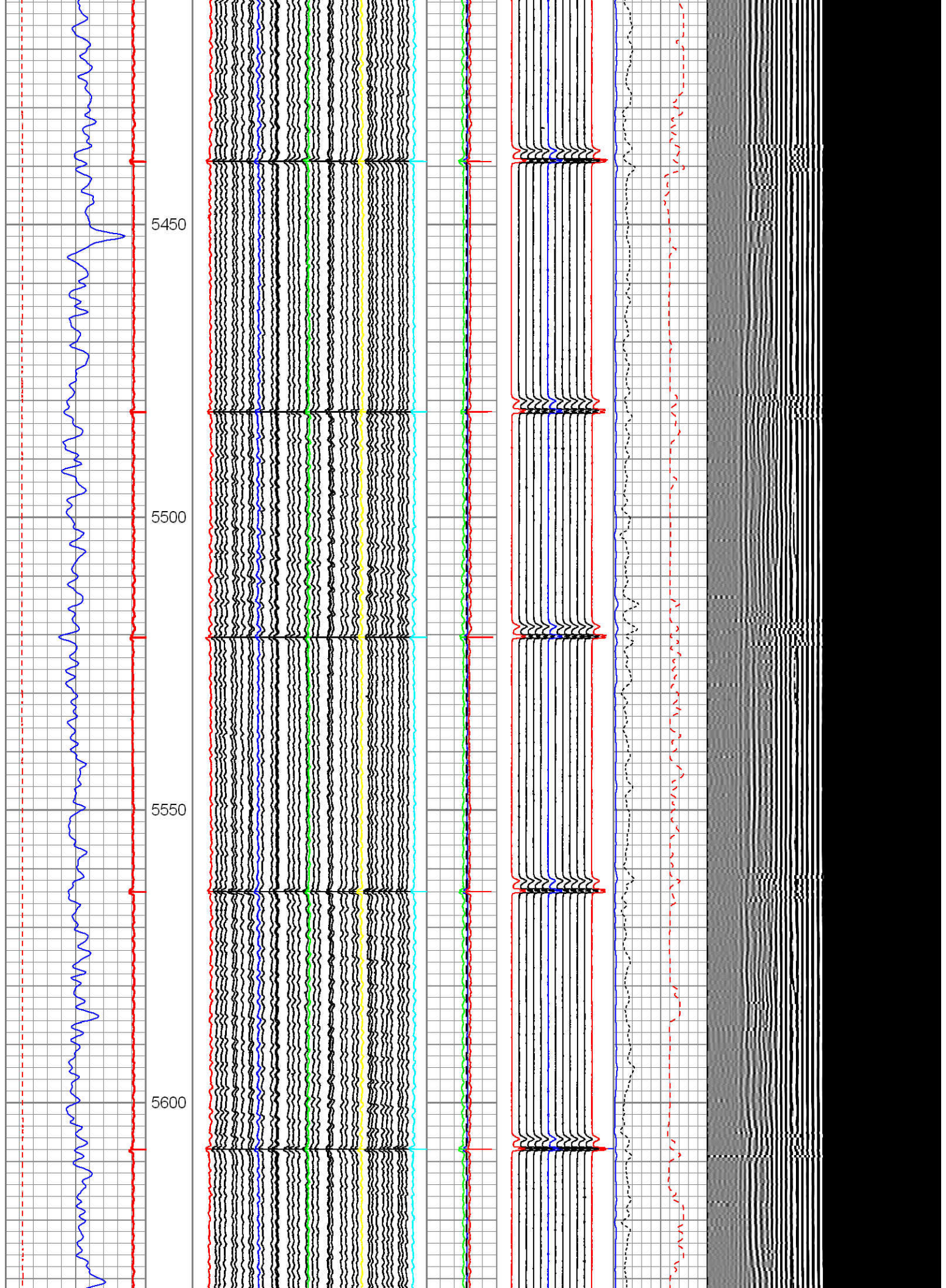


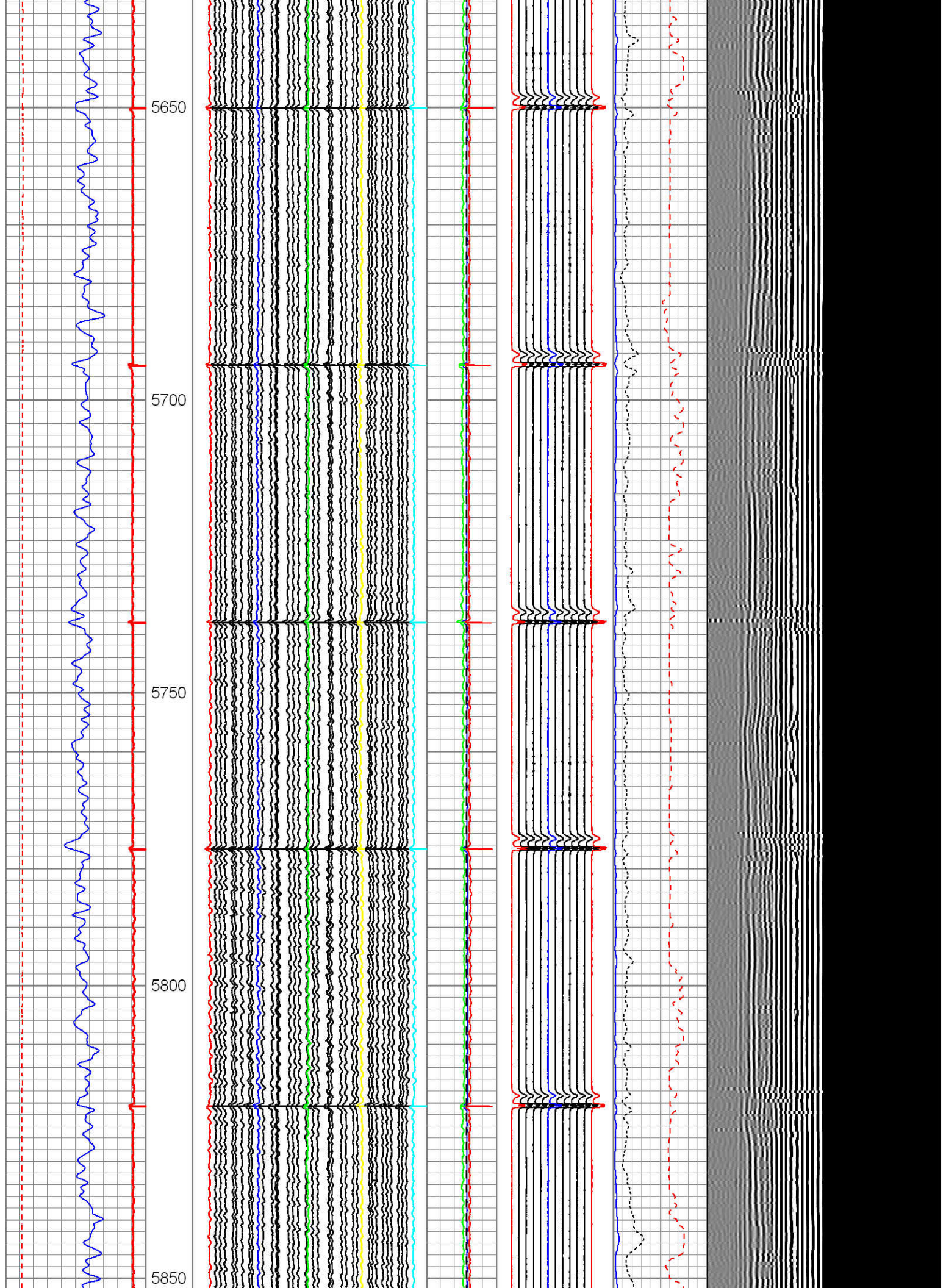


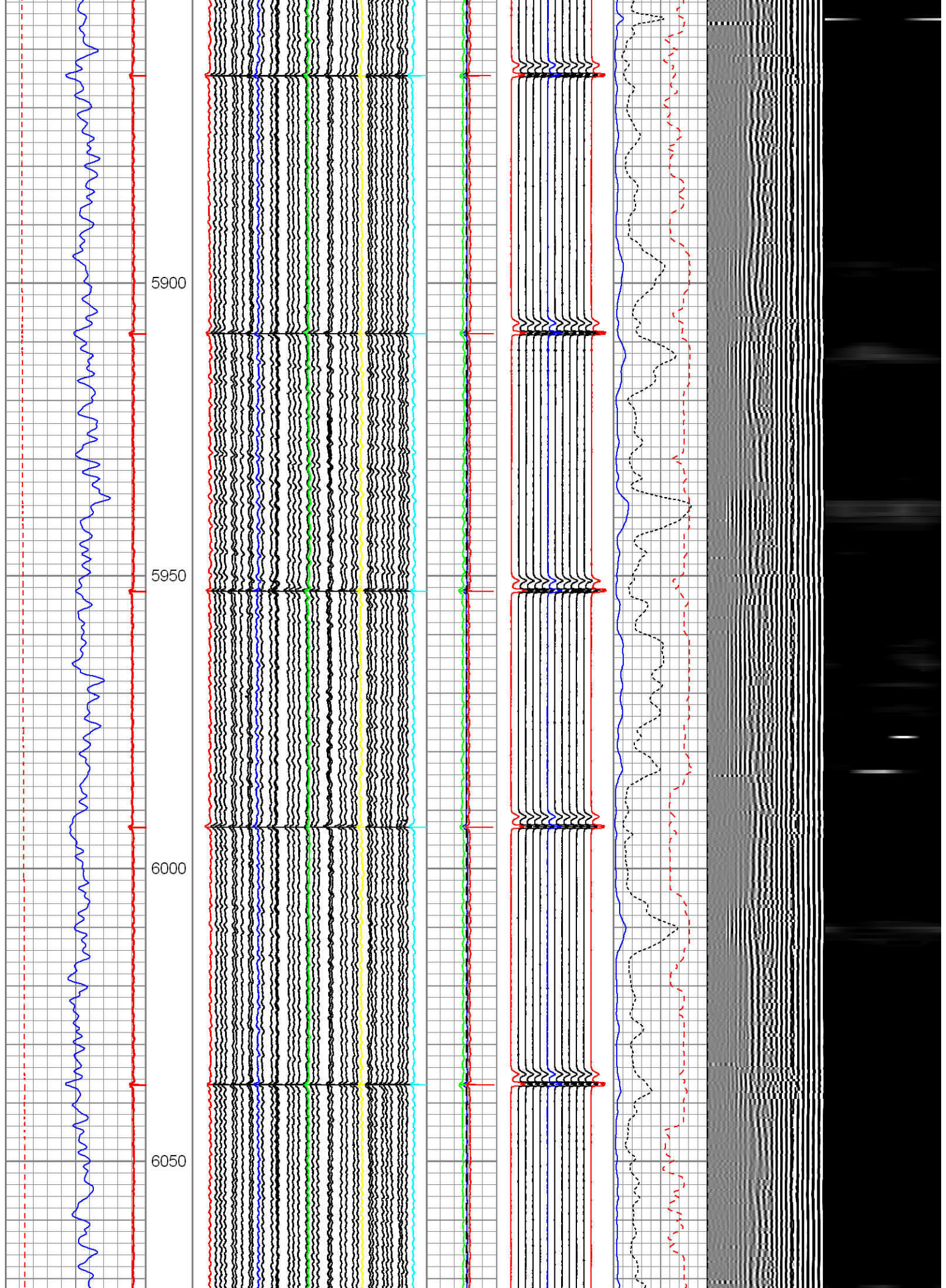


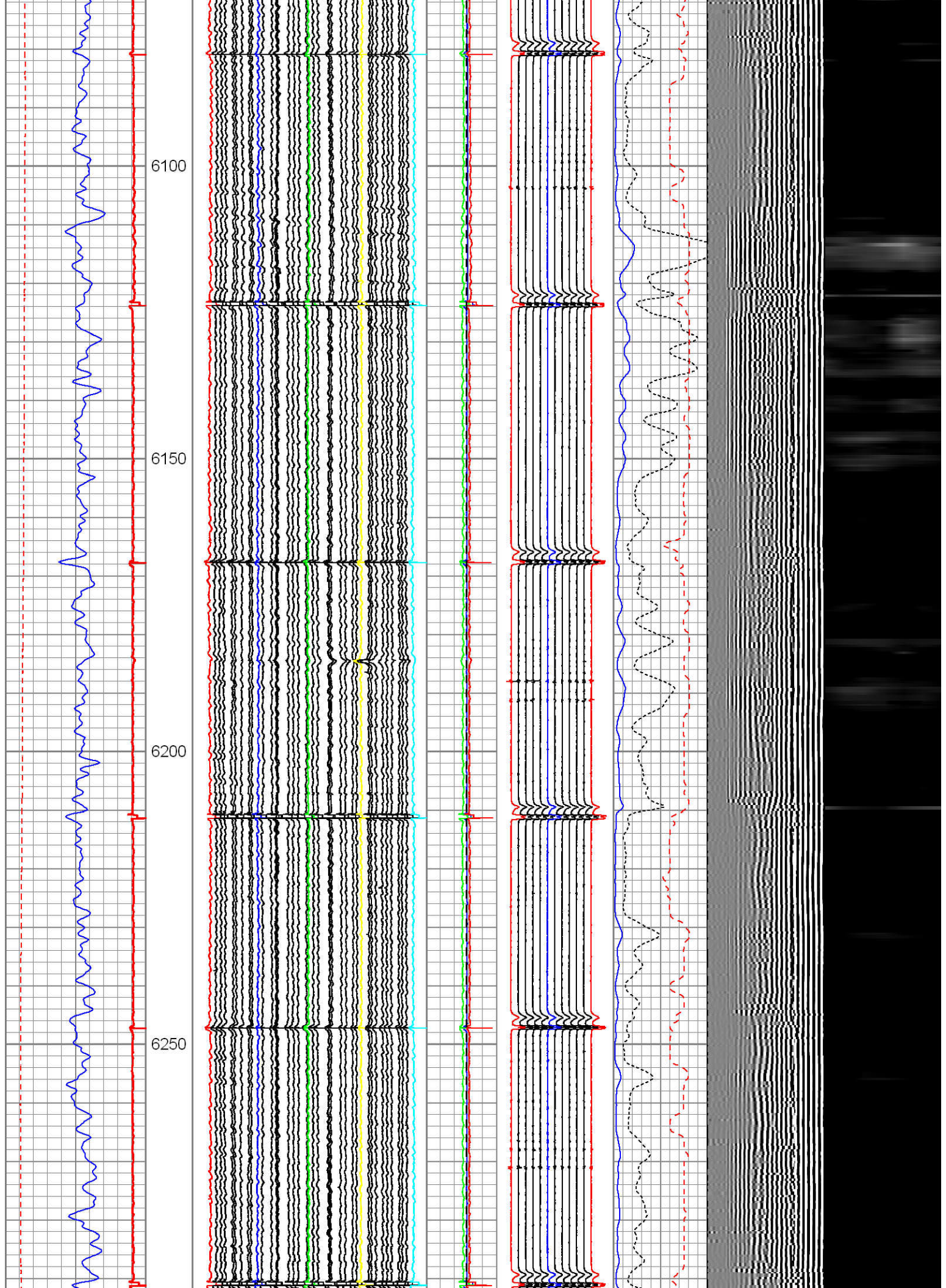


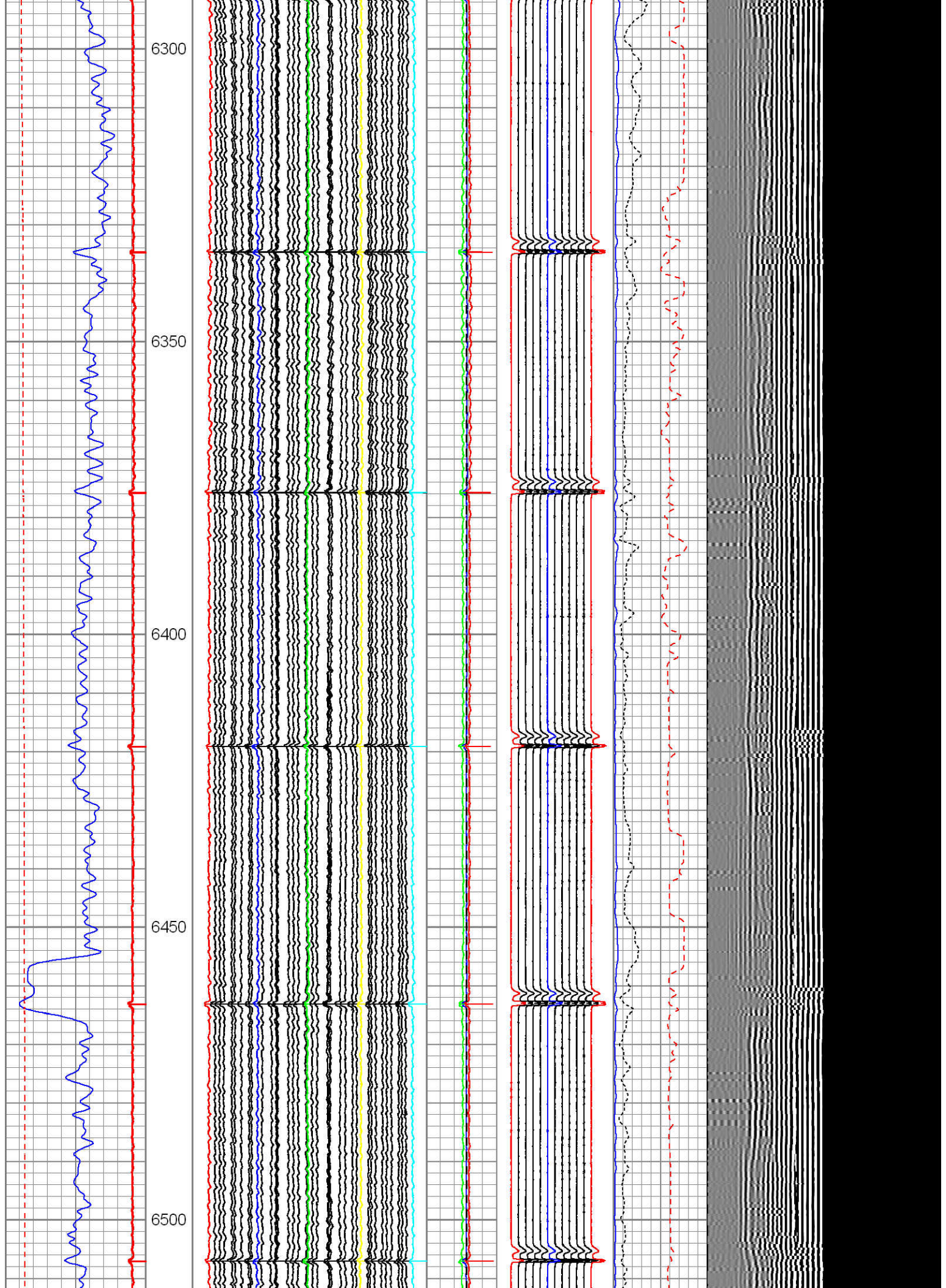


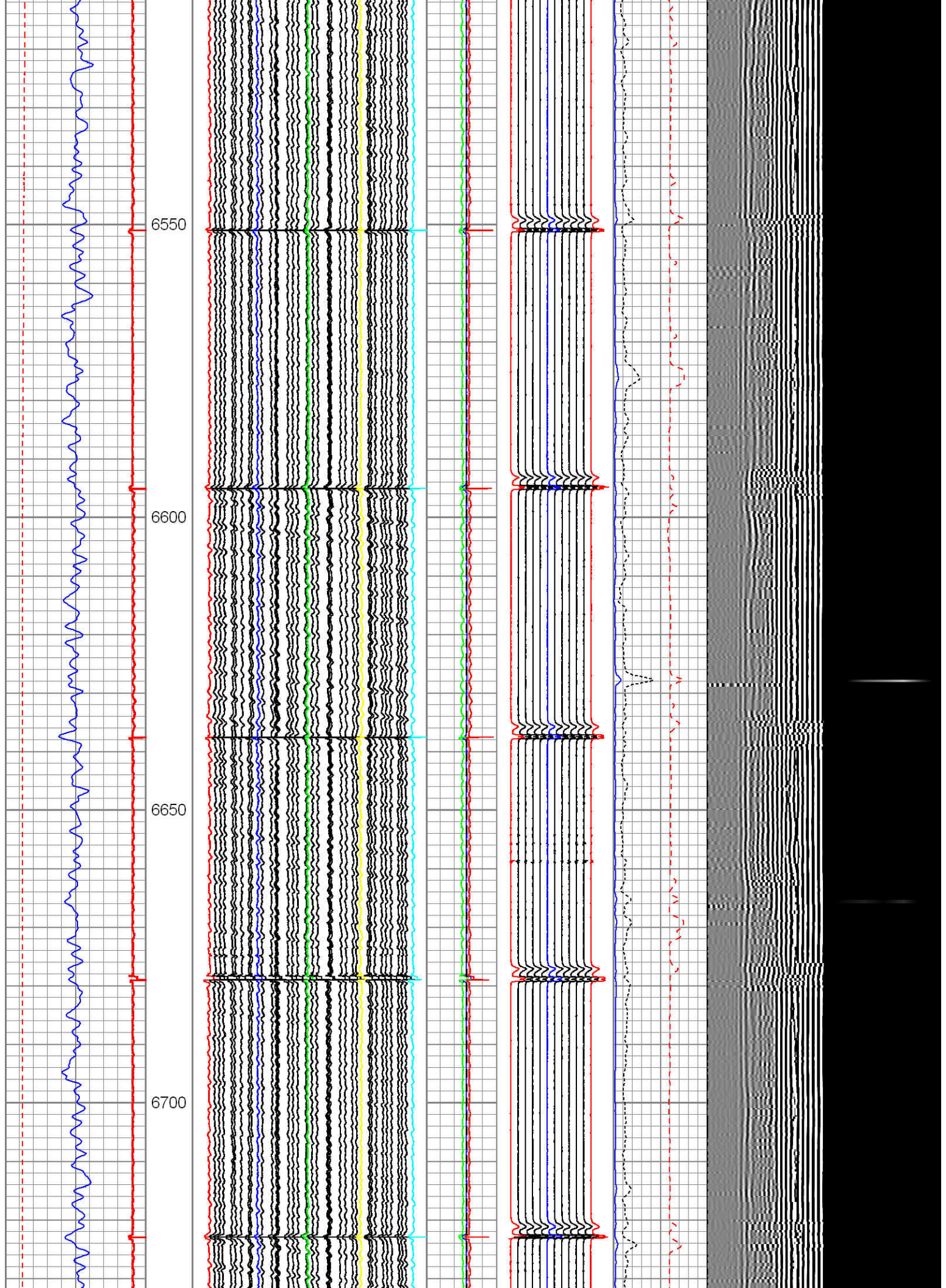


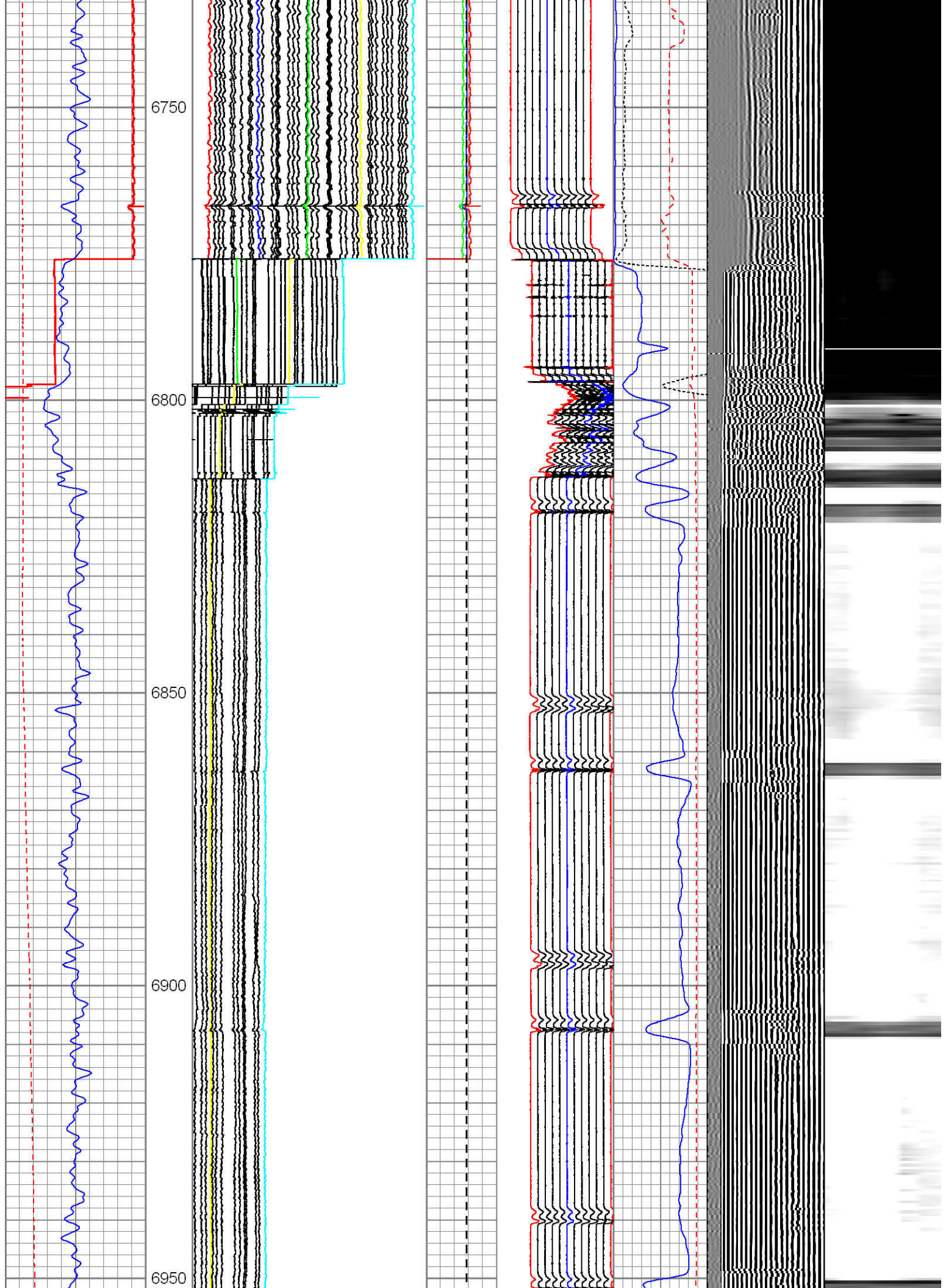


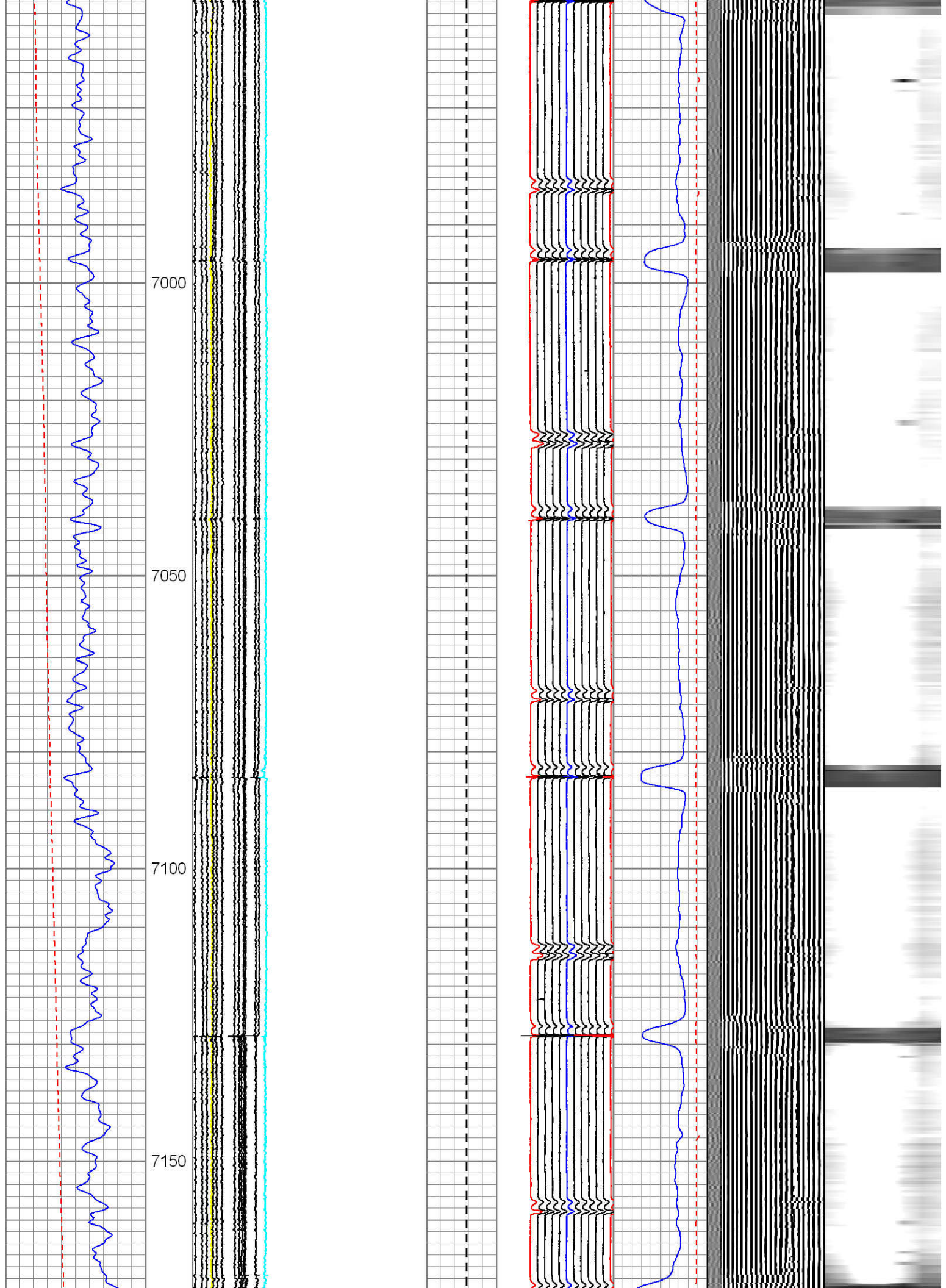


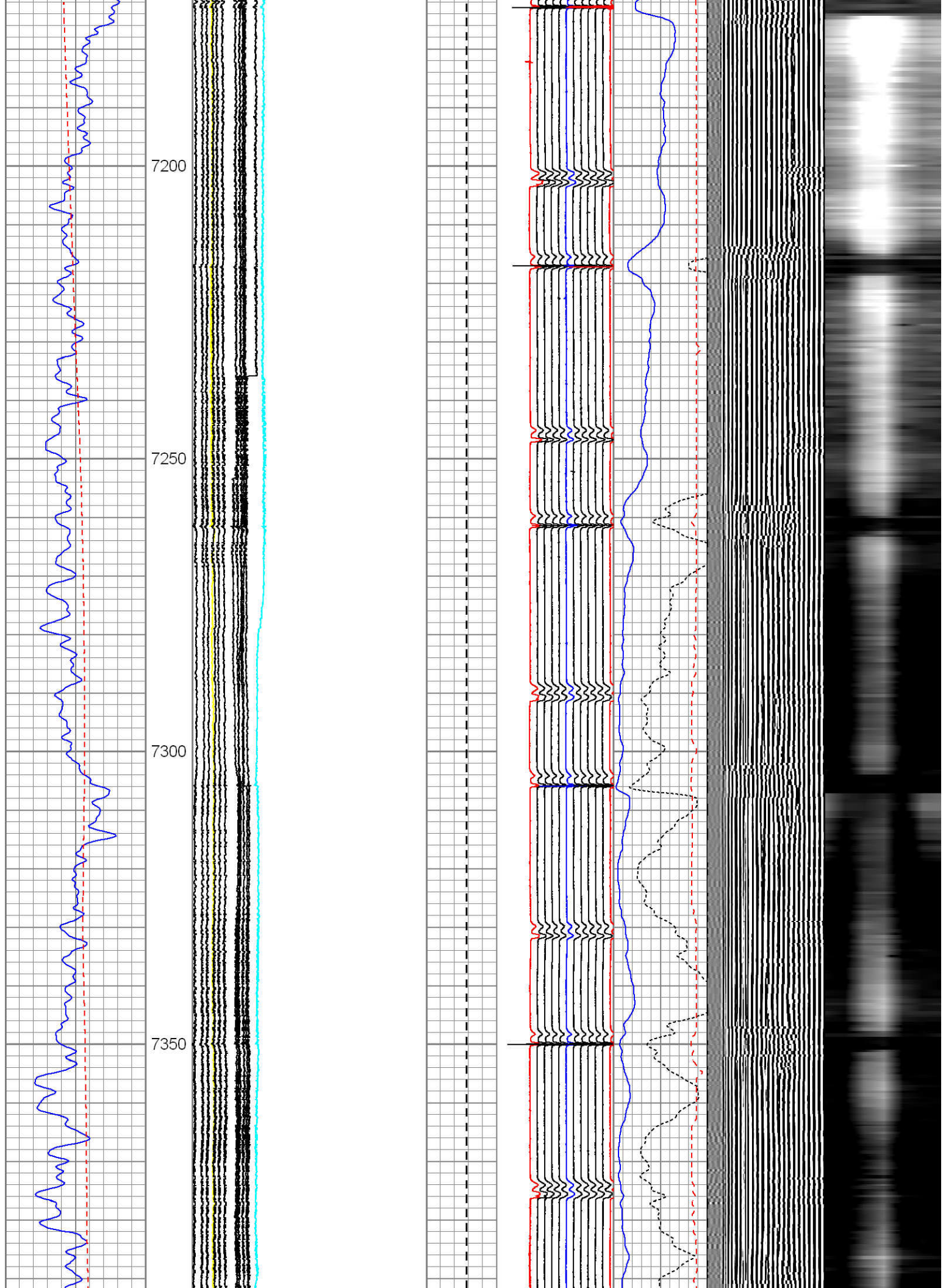


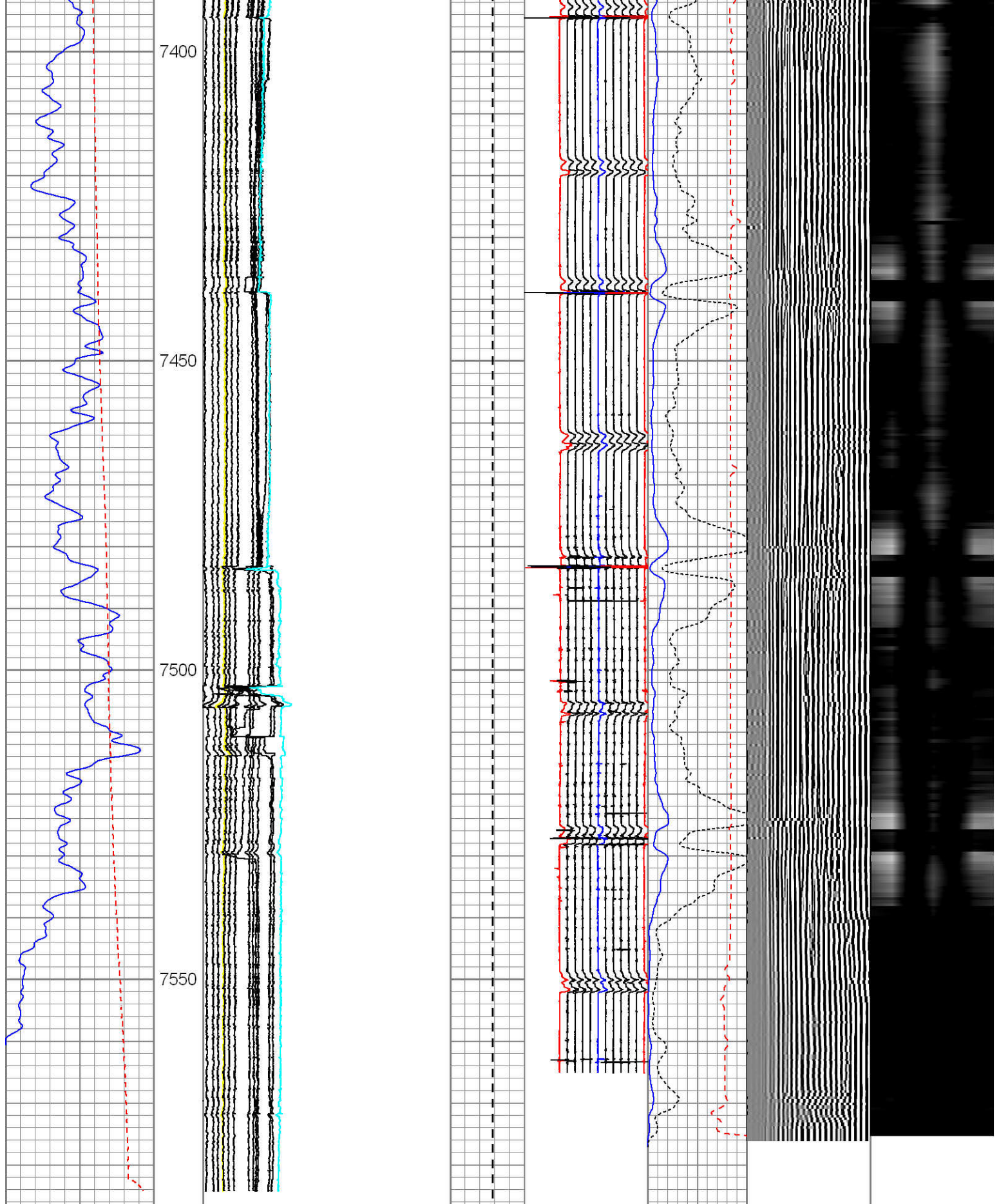












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0	GR (GAPI)120	2.64	Caliper #10 (in)	4.44	(in)	1 (rad) 9	(mV)	200 1200	
Deviation		2.24	Caliper #20 (in)	4.04	5.7 6.7	MTTP06	0 100		
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Max ID				650 150
(in)				
5.7	6.7			
Nom ID				
(in)				
5.7	6.7			

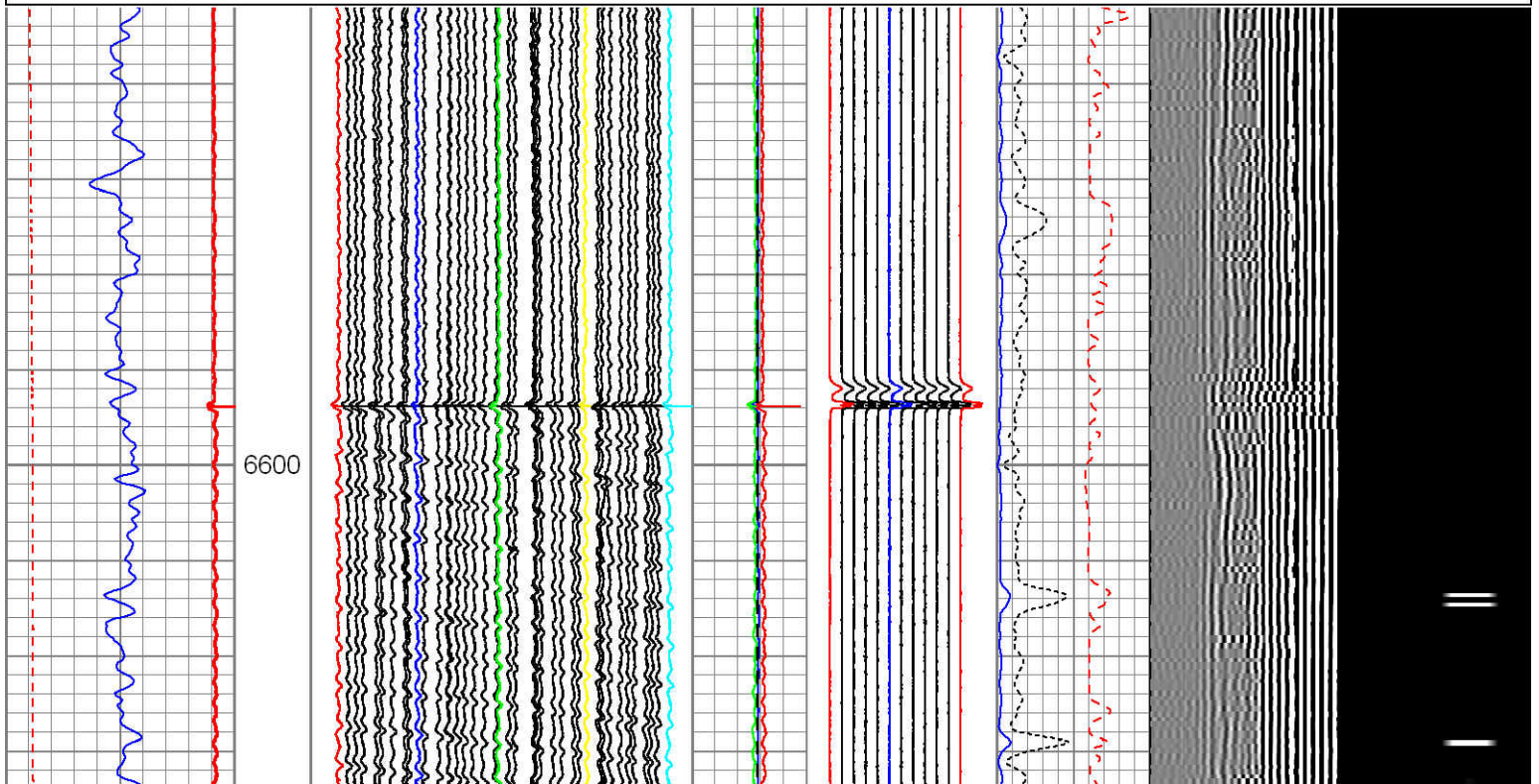


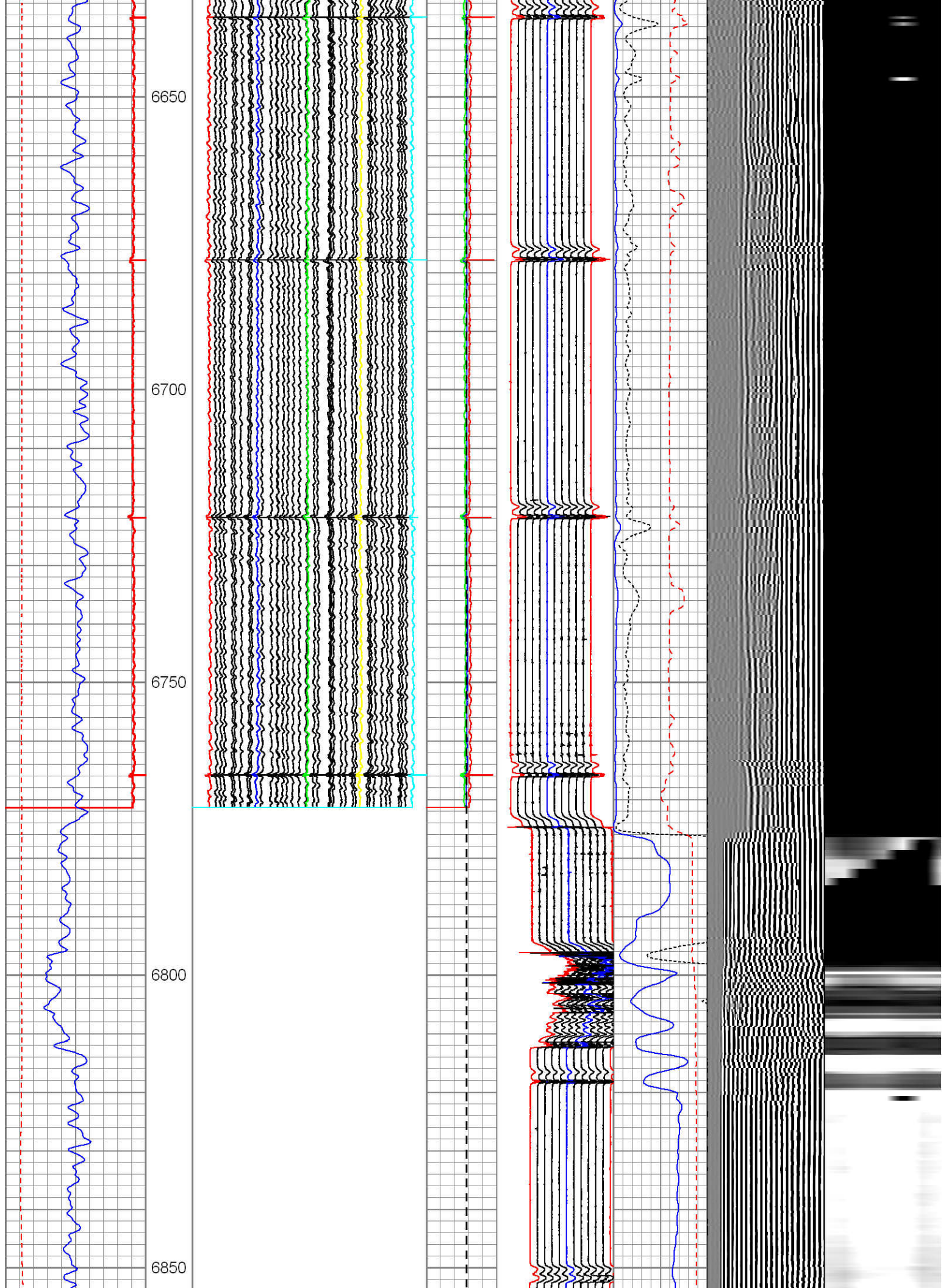
Repeat Pass

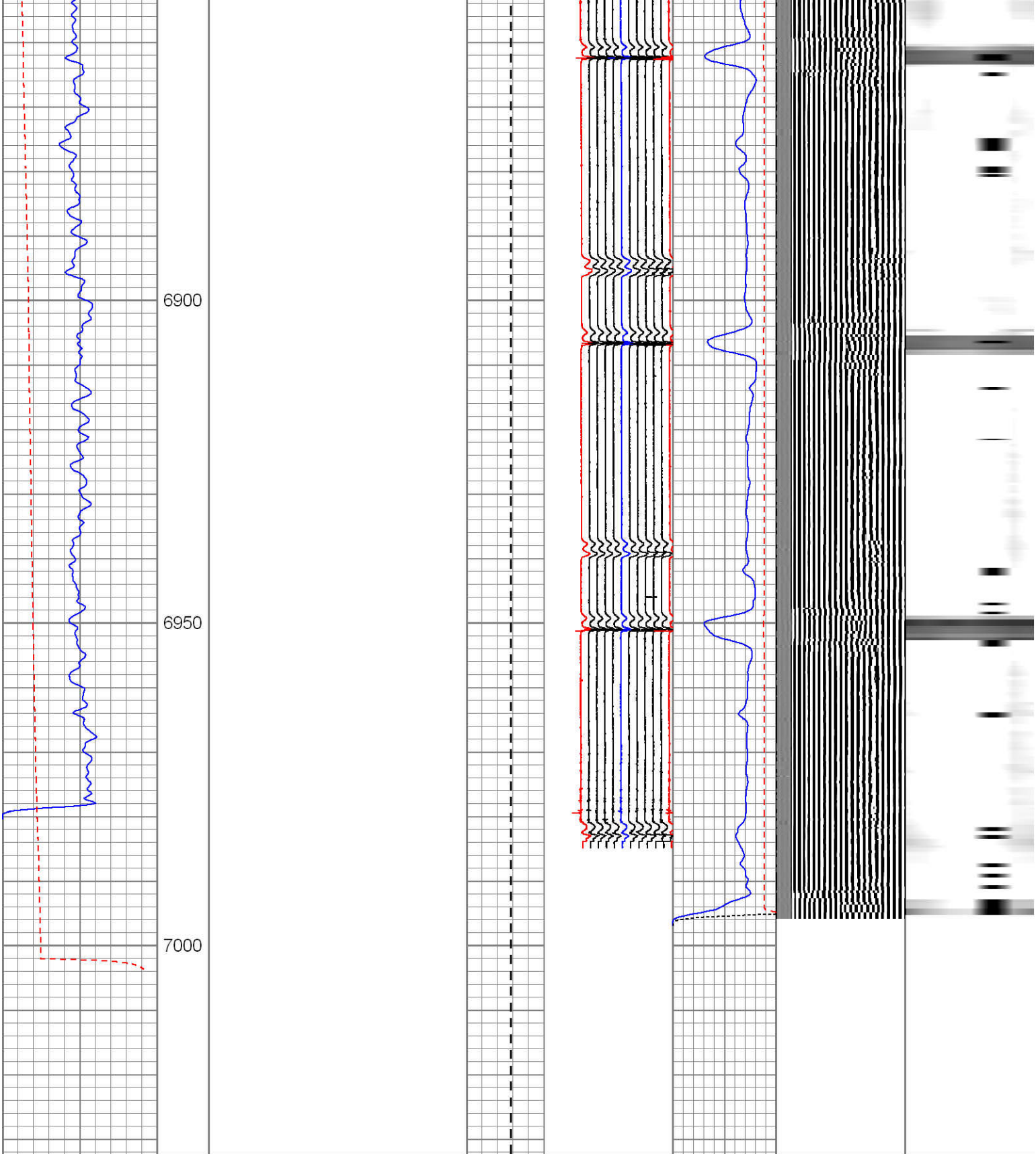
Logged with 2000 PSI induced surface pressure
40 Arm Caliper not opened until inside 7"

Database File: kmg_dove 8c-13hz_rcbl-cil_w7.db
Dataset Pathname: prvdwn6
Presentation Format: us40rbl7
Dataset Creation: Mon Jul 22 10:33:12 2013 by Log Sondex V7.03
Charted by: Depth in Feet scaled 1:240

CCL	3	Caliper #1 (in)	4.8	Ave ID	MTTP01	3' Amp	5' VDL	Sector Map
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				Max ID		650 150		
				(in)				
				5.7 6.7				
				Nom ID				
				(in)				
				5.7 6.7				

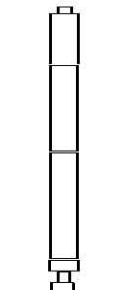
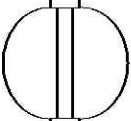
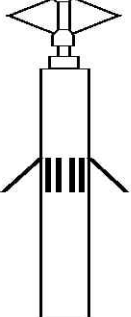









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				5.7 6.7	-4.5 (rad) 3.5	(usec)		
				Max ID		650 150		
				(in)				
				5.7 6.7				

Nom ID	
(in)	
5.7	6.7
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Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	29.82		CHD-AES (000001) Cable Head	1.04	1.69	2.00
			XTU-001 (000001) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			PGR-020 (000001) Production Gamma Ray	1.93	1.69	9.50
			PRC-001 (000001) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
MTT	23.56		MTT-002 (000001) Magnetic Thickness Tool	6.86	1.69	30.00
			PRC-017 (000002) Production Roller Centraliser (3 Arm)	2.01	1.69	7.00
			RBT-003 (000002) Radial Bond Tool (UW 1 11/16)	9.93	1.69	42.00
WVF3FT	13.65		PRC-001 (000008) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
WVFS1	13.65		MIT-027 (218950) Multifinger Imaging Tool (UW 40F)	4.54	2.75	61.10
WVFS2	13.65		PRC-001 (10) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
WVFS3	13.65		PRC-001 (000002) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
WVFS4	13.65					
WVFS5	13.65					
WVFS6	13.65					
CBLTEMP	13.65					
CBLROT	13.65					
WVF5FT	12.65					
MIT	4.48					
TSTAMP	0.00					
ITEMPX	0.00					

ITEM X	0.00				BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: kmg_dove 8c-13hz_rcbl-cil_w7.db: field/well/run1/main3 Total Length: 33.87 ft Total Weight: 180.30 lb O.D. 2.75 in								

		Calibration Report						
Database File:	kmg_dove 8c-13hz_rcbl-cil_w7.db							
Dataset Pathname:	main3							
Dataset Creation:	Mon Jul 22 12:31:47 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:		Mon Jul 22 08:33:35 2013			
Ring size:	4		5		6		7	
(in)		Sens		Sens		Sens		
Finger 01:	1438	259.0	1697	309.0	2006	286.0	2292	
Finger 02:	1507	248.0	1755	290.0	2045	270.0	2315	
Finger 03:	1427	268.0	1695	321.0	2016	303.0	2319	
Finger 04:	1475	257.0	1732	300.0	2032	285.0	2317	
Finger 05:	1512	244.0	1756	280.0	2036	266.0	2302	
Finger 06:	1505	249.0	1754	287.0	2041	281.0	2322	
Finger 07:	1488	262.0	1750	299.0	2049	291.0	2340	
Finger 08:	1561	236.0	1797	262.0	2059	263.0	2322	
Finger 09:	1492	270.0	1762	294.0	2056	298.0	2354	
Finger 10:	1537	255.0	1792	272.0	2064	276.0	2340	
Finger 11:	1517	263.0	1780	277.0	2057	290.0	2347	
Finger 12:	1506	274.0	1780	285.0	2065	307.0	2372	
Finger 13:	1536	269.0	1805	273.0	2078	293.0	2371	
Finger 14:	1518	271.0	1789	274.0	2063	300.0	2363	
Finger 15:	1540	275.0	1815	271.0	2086	303.0	2389	
Finger 16:	1522	277.0	1799	269.0	2068	302.0	2370	
Finger 17:	1511	283.0	1794	273.0	2067	312.0	2379	
Finger 18:	1551	271.0	1822	256.0	2078	291.0	2369	
Finger 19:	1585	262.0	1847	244.0	2091	281.0	2372	
Finger 20:	1508	284.0	1792	266.0	2058	309.0	2367	
Finger 21:	1481	294.0	1775	280.0	2055	324.0	2379	
Finger 22:	1506	292.0	1798	274.0	2072	313.0	2385	
Finger 23:	1555	274.0	1829	258.0	2087	290.0	2377	
Finger 24:	1547	278.0	1825	266.0	2091	301.0	2392	
Finger 25:	1518	289.0	1807	278.0	2085	309.0	2394	
Finger 26:	1483	291.0	1774	283.0	2057	313.0	2370	
Finger 27:	1481	291.0	1772	287.0	2059	311.0	2370	
Finger 28:	1481	293.0	1774	291.0	2065	311.0	2376	
Finger 29:	1465	287.0	1752	289.0	2041	305.0	2346	

Finger 30:	1460	289.0	1749	297.0	2046	307.0	2353
Finger 31:	1524	260.0	1784	270.0	2054	270.0	2324
Finger 32:	1470	283.0	1753	302.0	2055	300.0	2355
Finger 33:	1470	282.0	1752	304.0	2056	288.0	2344
Finger 34:	1441	283.0	1724	311.0	2035	300.0	2335
Finger 35:	1449	276.0	1725	310.0	2035	296.0	2331
Finger 36:	1448	269.0	1717	306.0	2023	290.0	2313
Finger 37:	1494	262.0	1756	296.0	2052	275.0	2327
Finger 38:	1454	273.0	1727	312.0	2039	291.0	2330
Finger 39:	1428	270.0	1698	318.0	2016	292.0	2308
Finger 40:	1438	270.0	1708	320.0	2028	297.0	2325

Segmented Cement Bond Log Calibration Report

Serial Number:	000002
Tool Model:	003
Calibration Casing Diameter:	7.000 in
Calibration Depth:	409.807 ft

Master Calibration, performed Mon Jul 22 13:01:14 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.008	1.086	0.800	62.165	56.925	0.325
5FT	0.012	0.730	0.800	62.165	85.404	-0.203
S1	0.043	1.330	0.000	100.000	77.668	-3.319
S2	0.044	1.145	0.000	100.000	90.834	-3.966
S3	0.035	1.104	0.000	100.000	93.564	-3.260
S4	0.049	1.108	0.000	100.000	94.455	-4.675
S5	0.032	1.208	0.000	100.000	85.008	-2.709
S6	0.028	1.376	0.000	100.000	74.177	-2.044

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



Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Dove 8C-13HZ
Field	Wattenberg
County	Weld
State	Colorado