

CAST-M ADVANCED CEMENT EVALUATION

COMPANY	KINDER MORGAN
WELL	DOE CANYON # 10
FIELD	DOE CANYON
COUNTY	DOLORES
STATE	CO

Elevations: K.B.: 7744.2' R.T.: 7743.2' G.L.: 7724.7'

Date Processed	11/28/2011	Logs Processed	ACE
Job Number		Date Logged	11/26/2011
Interval Processed	100'-8770'	Type Fluid In Hole	WATER
Processed By	Adam Bobay	Location	WY
Processed At	DENVER FRS		

Fold Here

Service Ticket No.:	9050472	API Serial No.:	0503361120000	PGM Version:	
DIRECTIONAL INFORMATION					
Maximum Deviation		deg. @		KOP	
Remarks:					
THANK YOU FOR CHOOSING HALLIBURTON ENEGRY SERVICES.					
<p>*NOTE-AT LOG DEPTH OF 5489' THERE IS A CHANGE IN CASING WEIGHT THAT IS ABOVE THE TANSDUCERS ABILITY AT THE LOGGED FREQUENCY TO GET AN ACCURATE READING. THE CAST-M DATA MAY BE INACCURATE BELOW THIS DEPTH. ALTHOUGH DATA COMING FROM THE CBL IS NOT AFFECTED BY THIS SO IT IS STILL ACCURATE.</p>					
<p>HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.</p>					
HALLIBURTON					

THE MAXIMUM IMPEDANCE FOR FREE GAS : 0.38 RED
 THE MAXIMUM IMPEDANCE FOR LIQUID : 2.30 MEDIUM BLUE
 THE MAXIMUM IMPEDANCE FOR SOLID-LIQUID TRANSITION : 2.70 YELLOW
 THE MAXIMUM IMPEDANCE FOR LOW Z CEMENT : 3.85 LIGHT BROWN
 THE MAXIMUM IMPEDANCE FOR MED Z CEMENT : 5.00 DARK BROWN
 THE MINIMUM FOR HIGH Z CEMENT IS : 5.00 BLACK

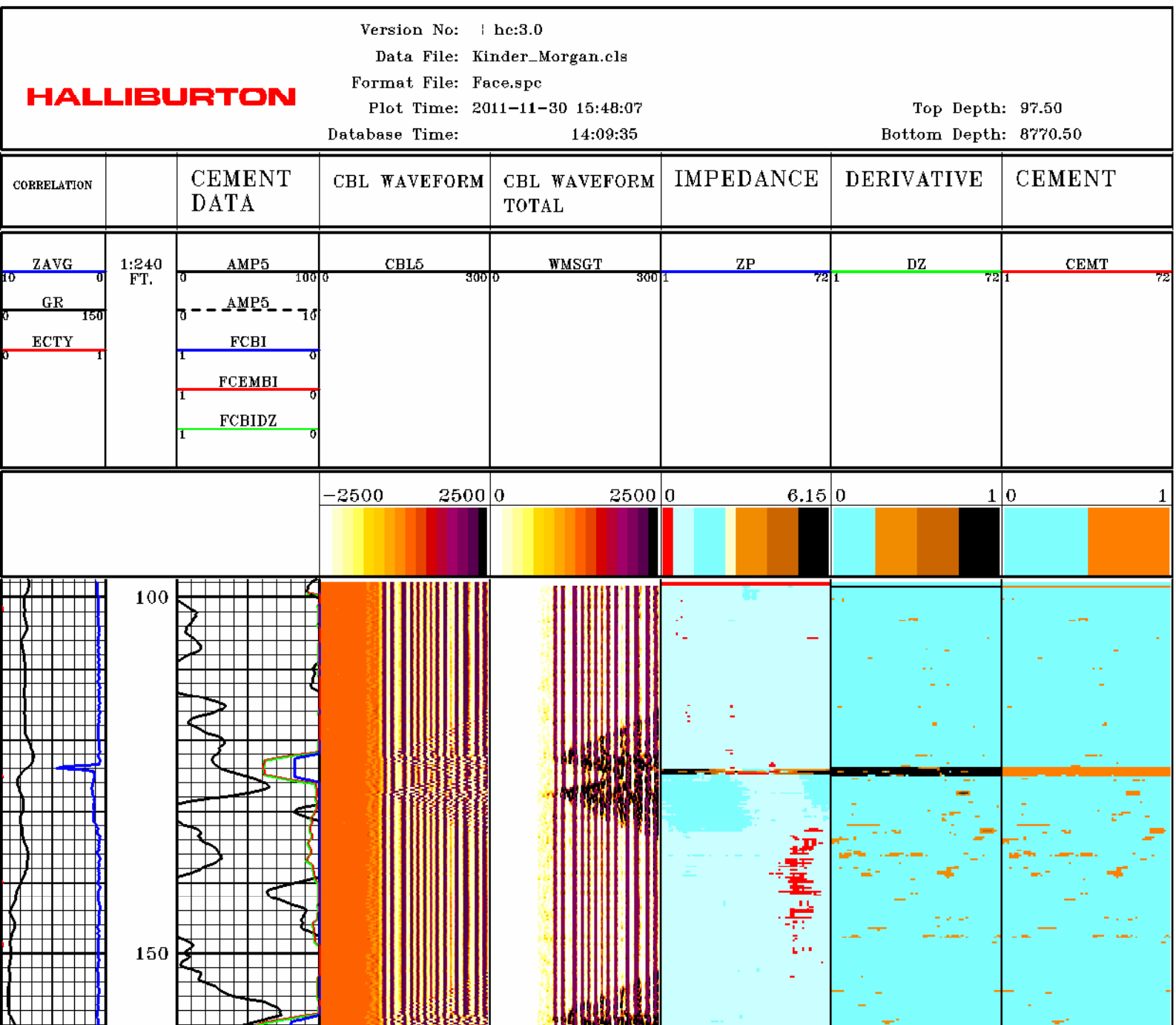
DERIVATIVE MAP

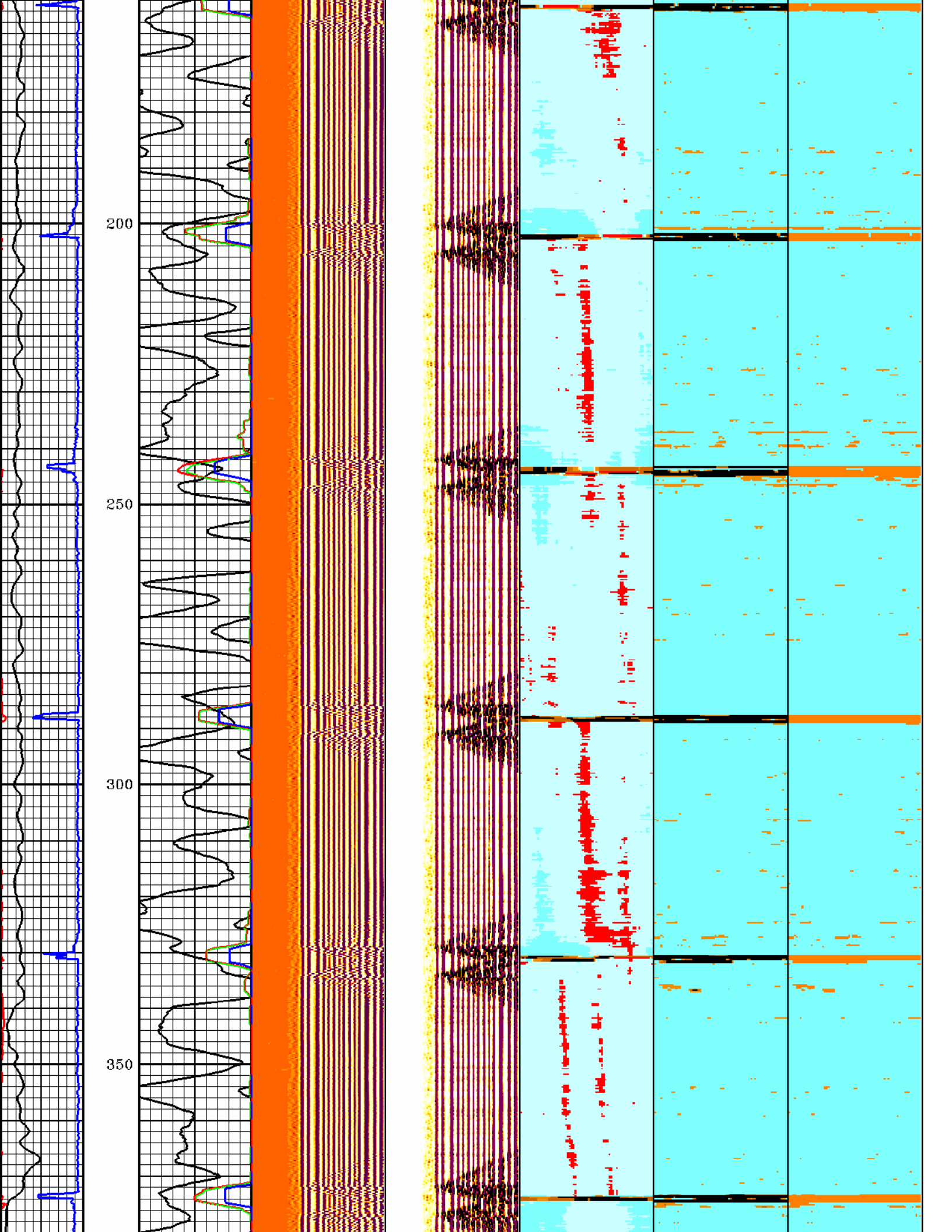
THE MAXIMUM DERIVATIVE FOR LIQUID : 0.25 MEDIUM BLUE
 THE MAXIMUM DERIVATIVE FOR LOW DERIVATIVE CEMENT : 0.50 LIGHT BROWN
 THE MAXIMUM DERIVATIVE FOR MED DERIVATIVE CEMENT : 0.75 DARK BROWN
 THE MINIMUM DERIVATIVE FOR HIGH DERIVATIVE CEMENT : 0.75 BLACK

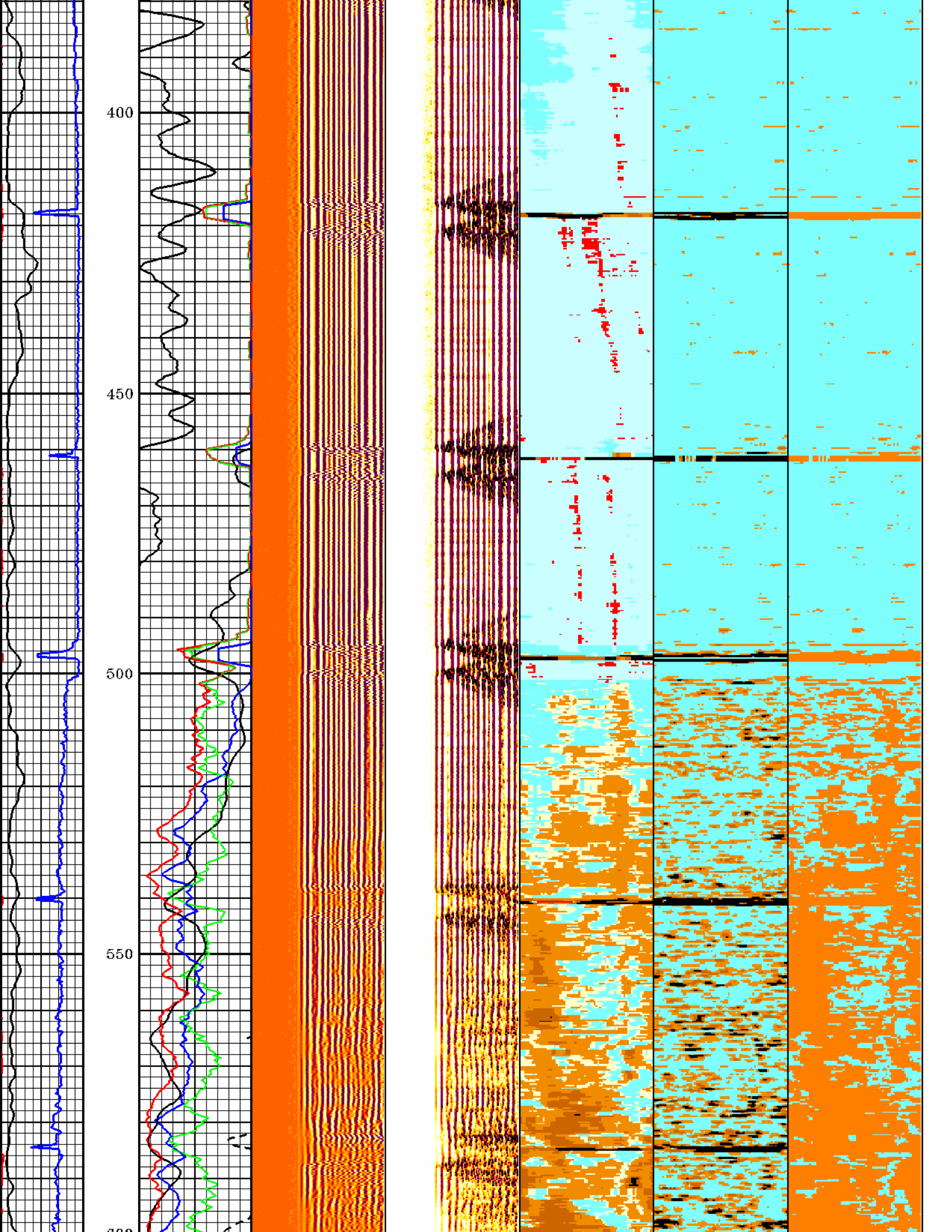
CEMENT MAP

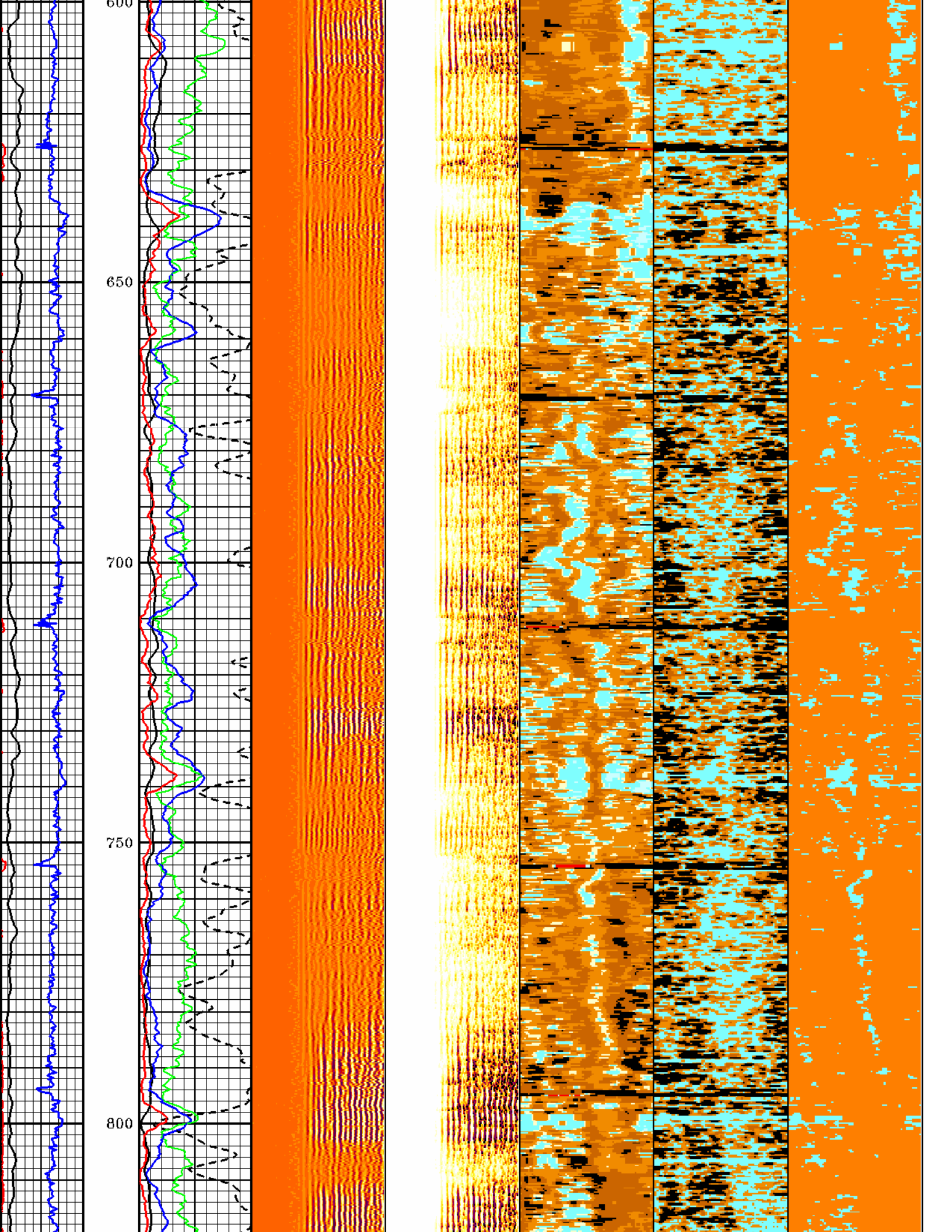
FOR FLUIDS DZ IS LESS THAN DZWAT OF : 0.25
 AND ZP IS LESS THAN CEMLM OF : 2.70

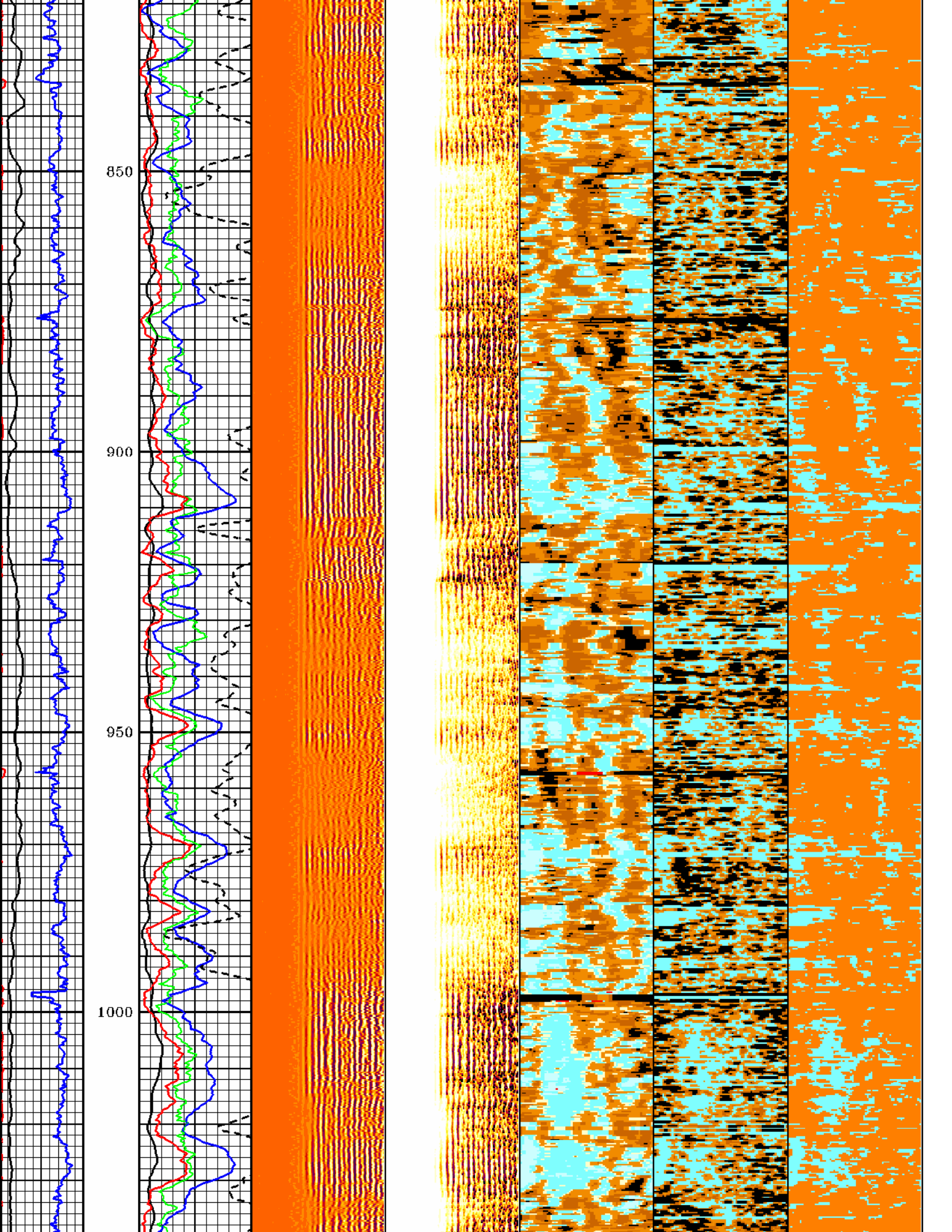
FLUIDS ARE MEDIUM BLUE WHILE SOLIDS OR CEMENTS ARE DARK BROWN

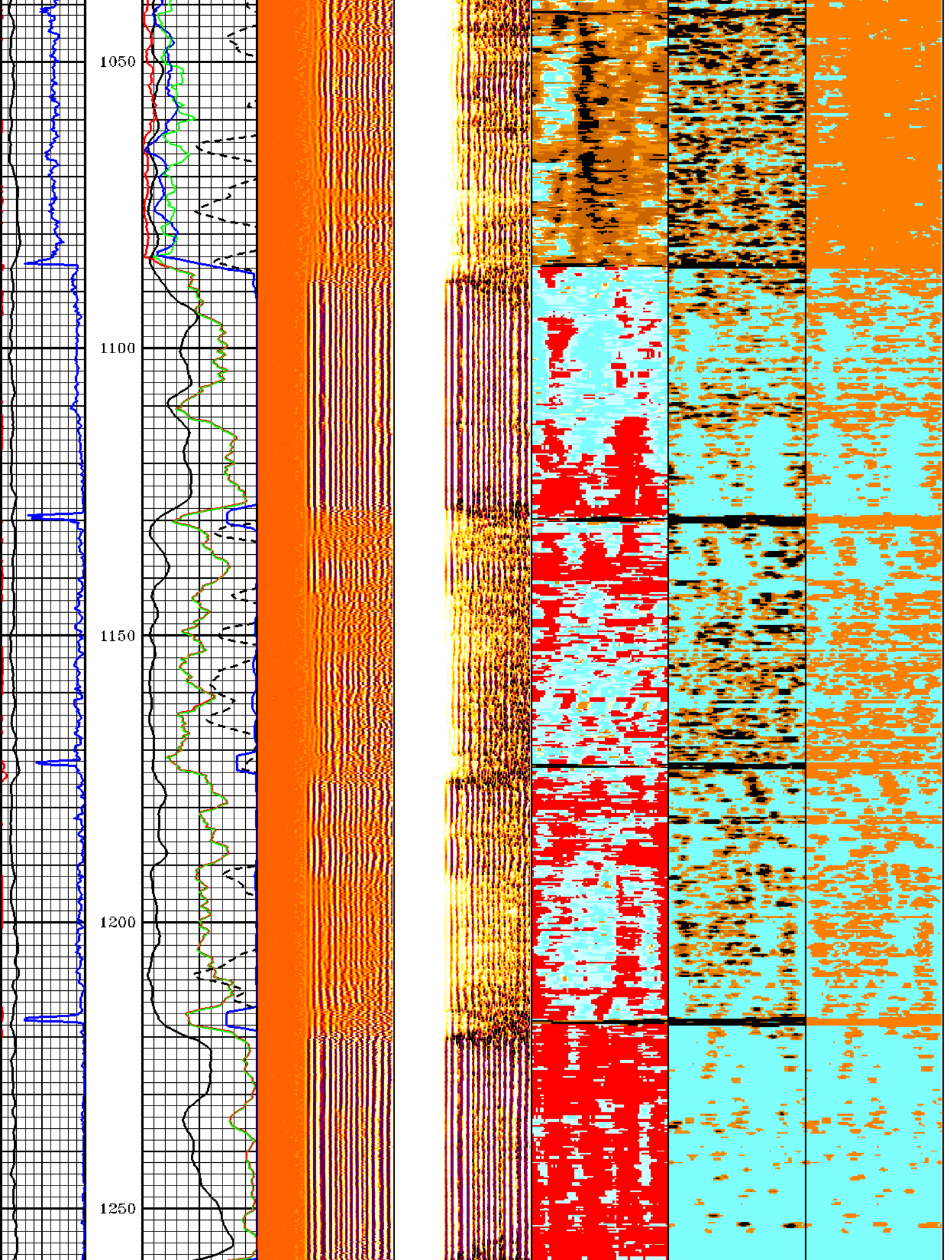


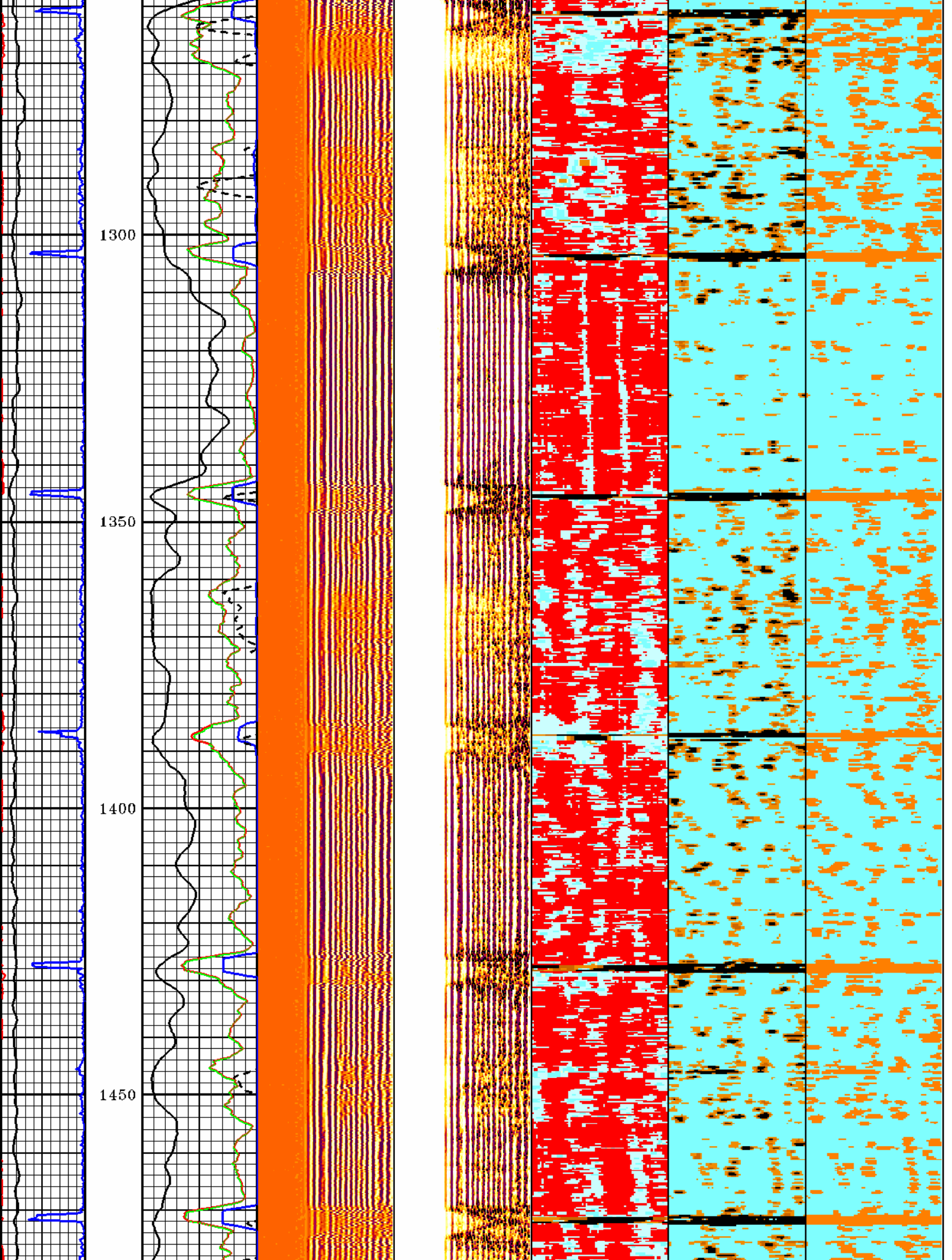


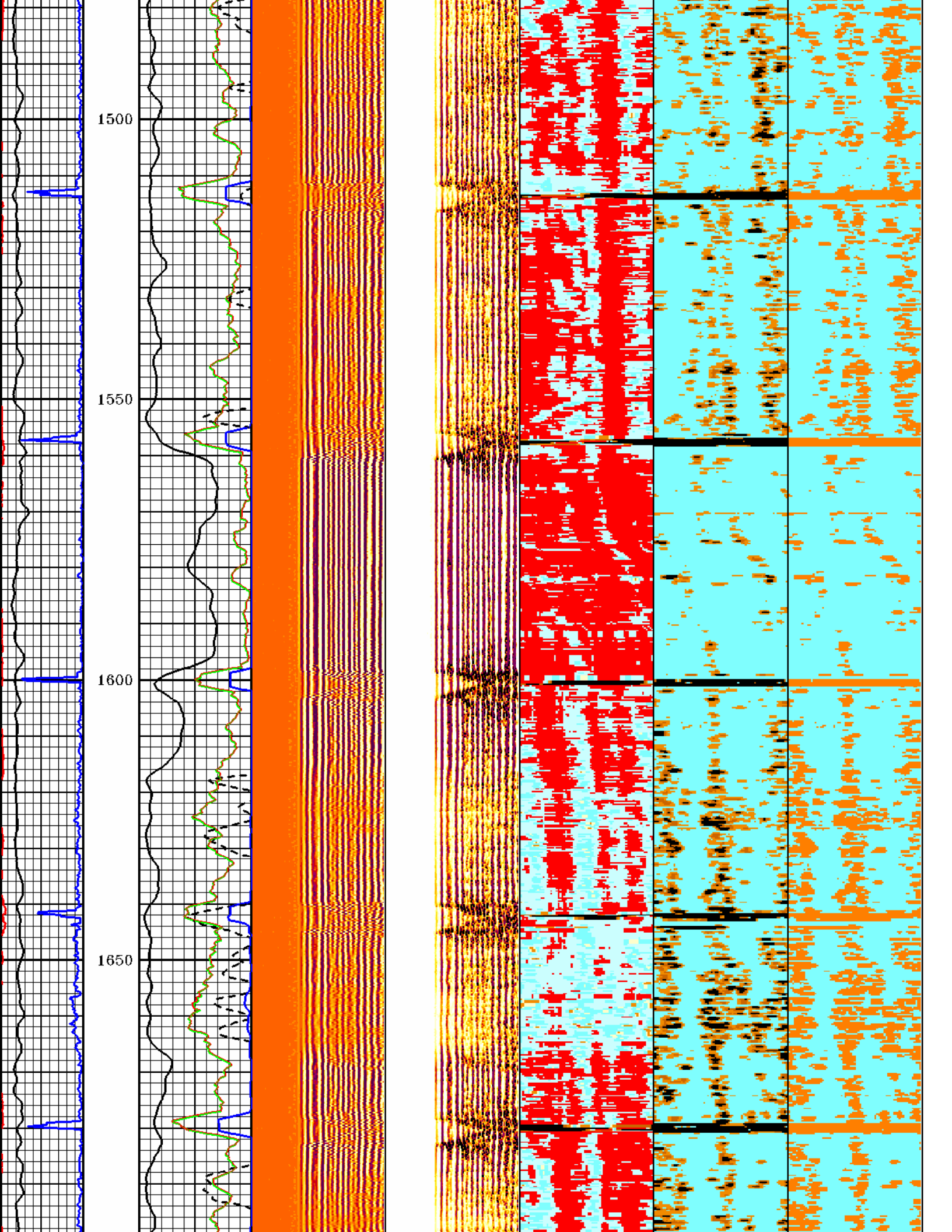


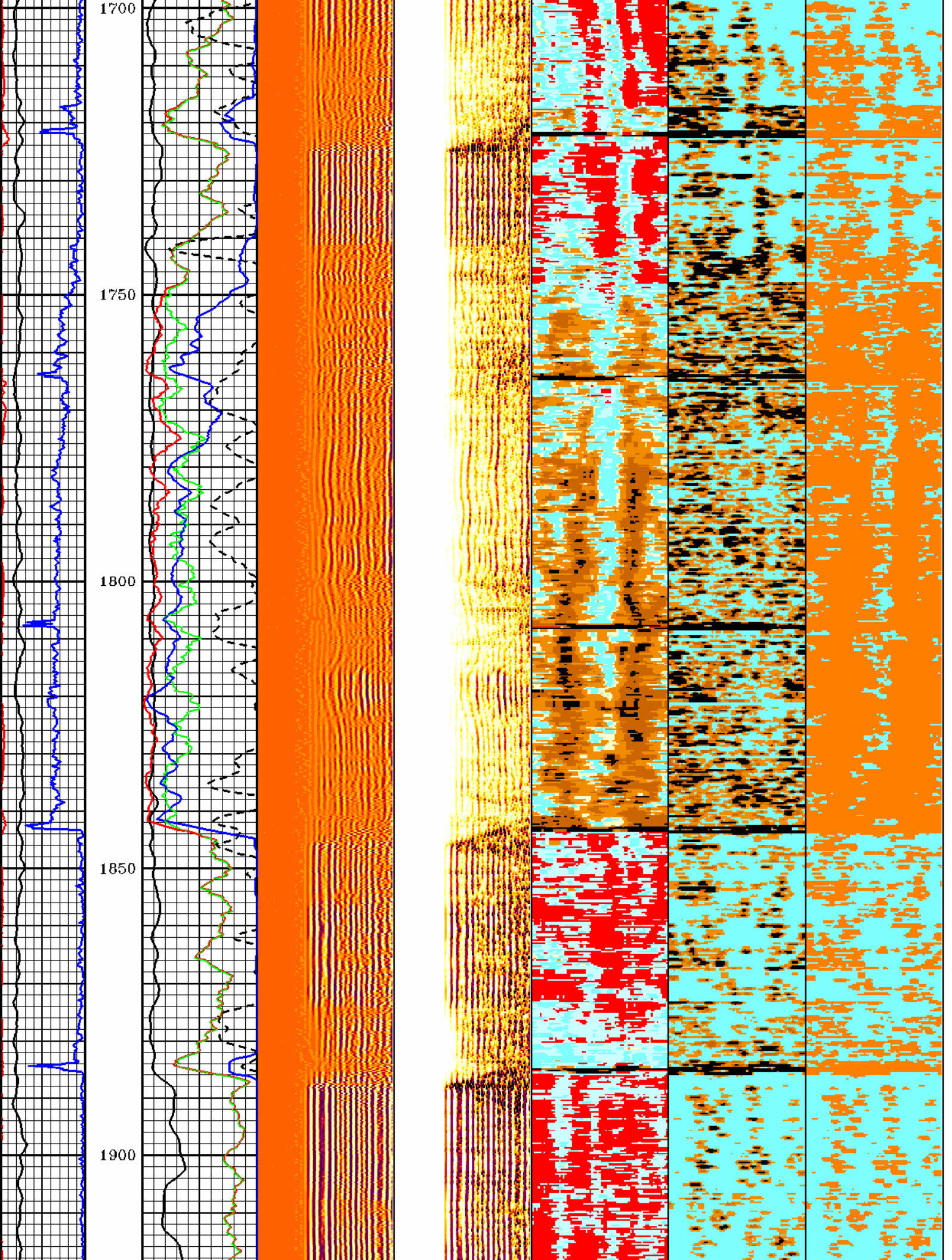


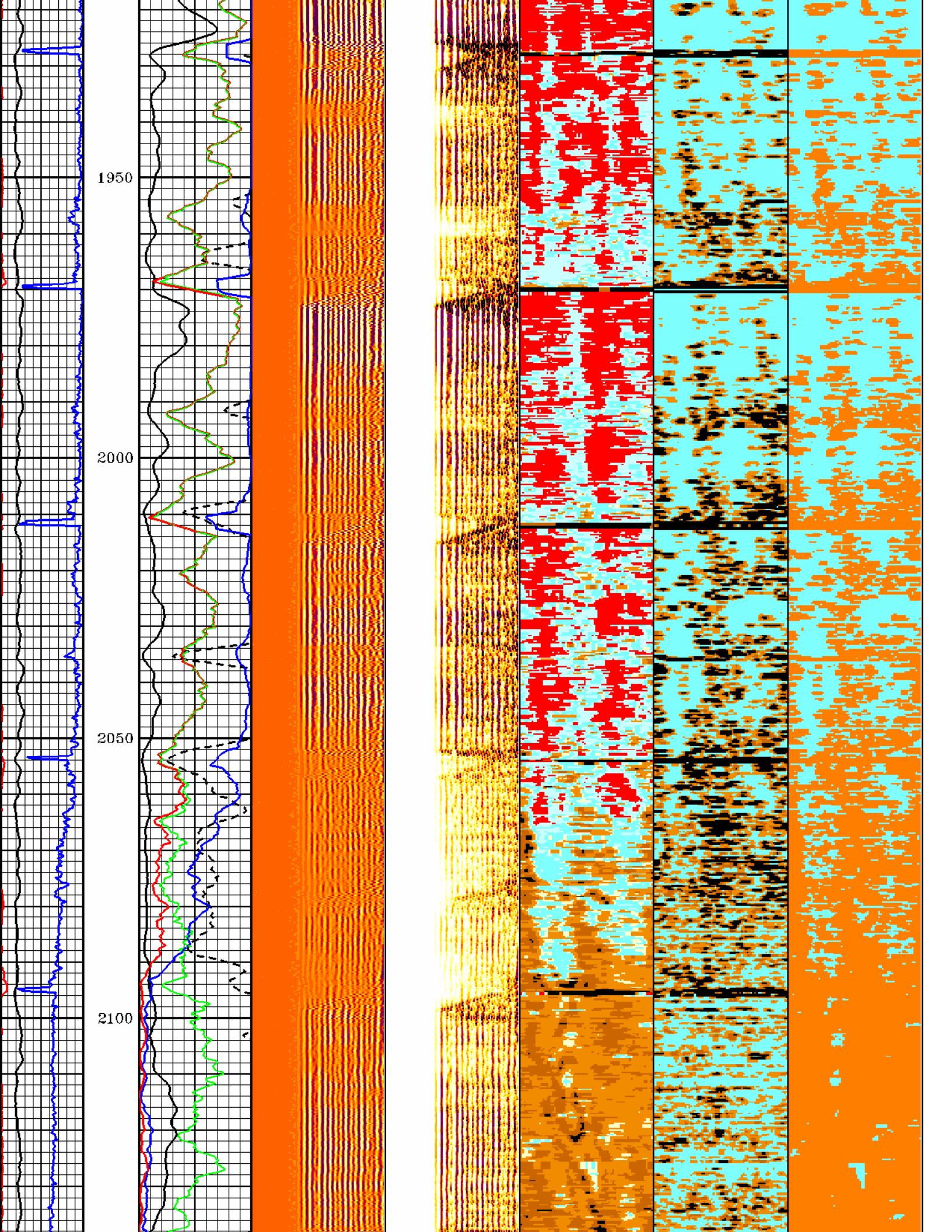


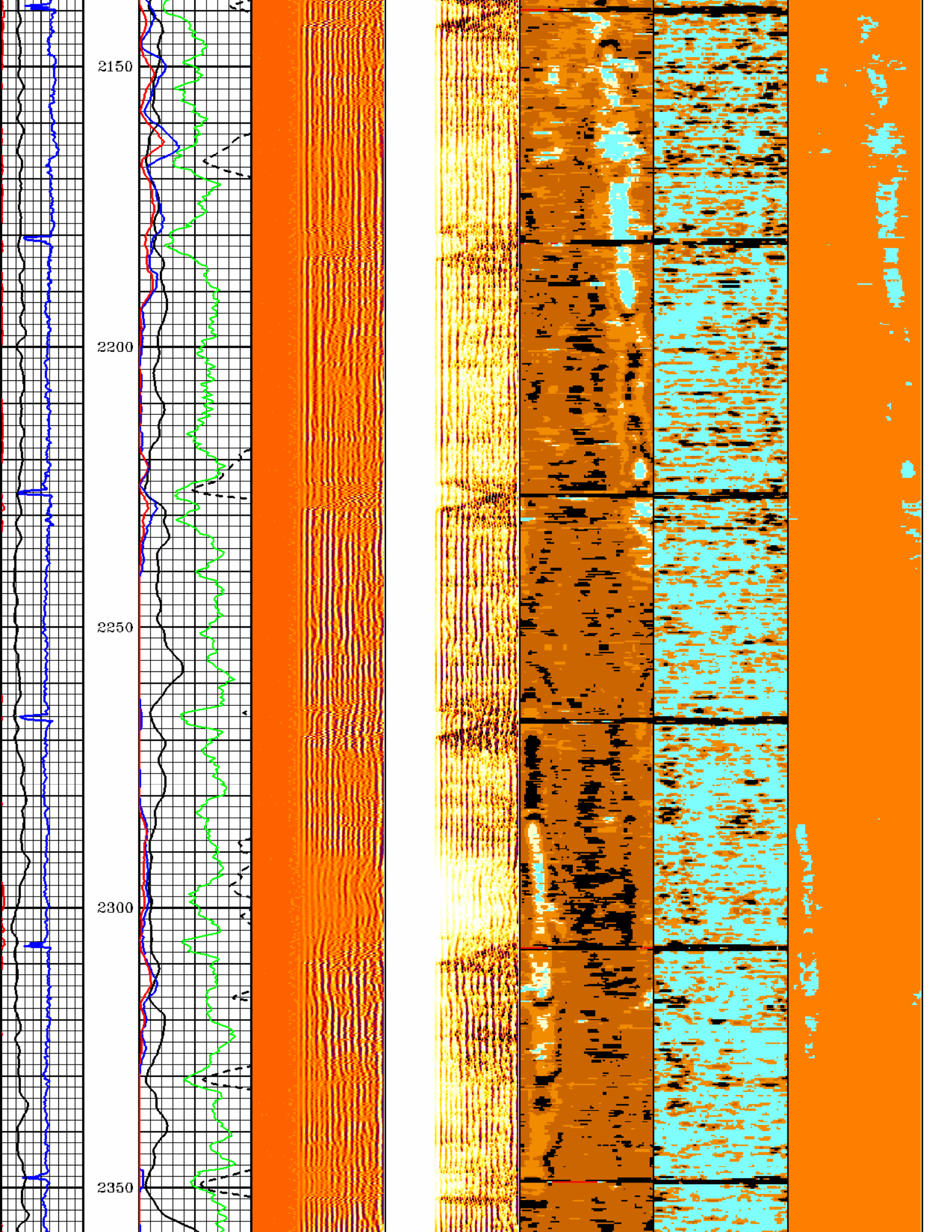


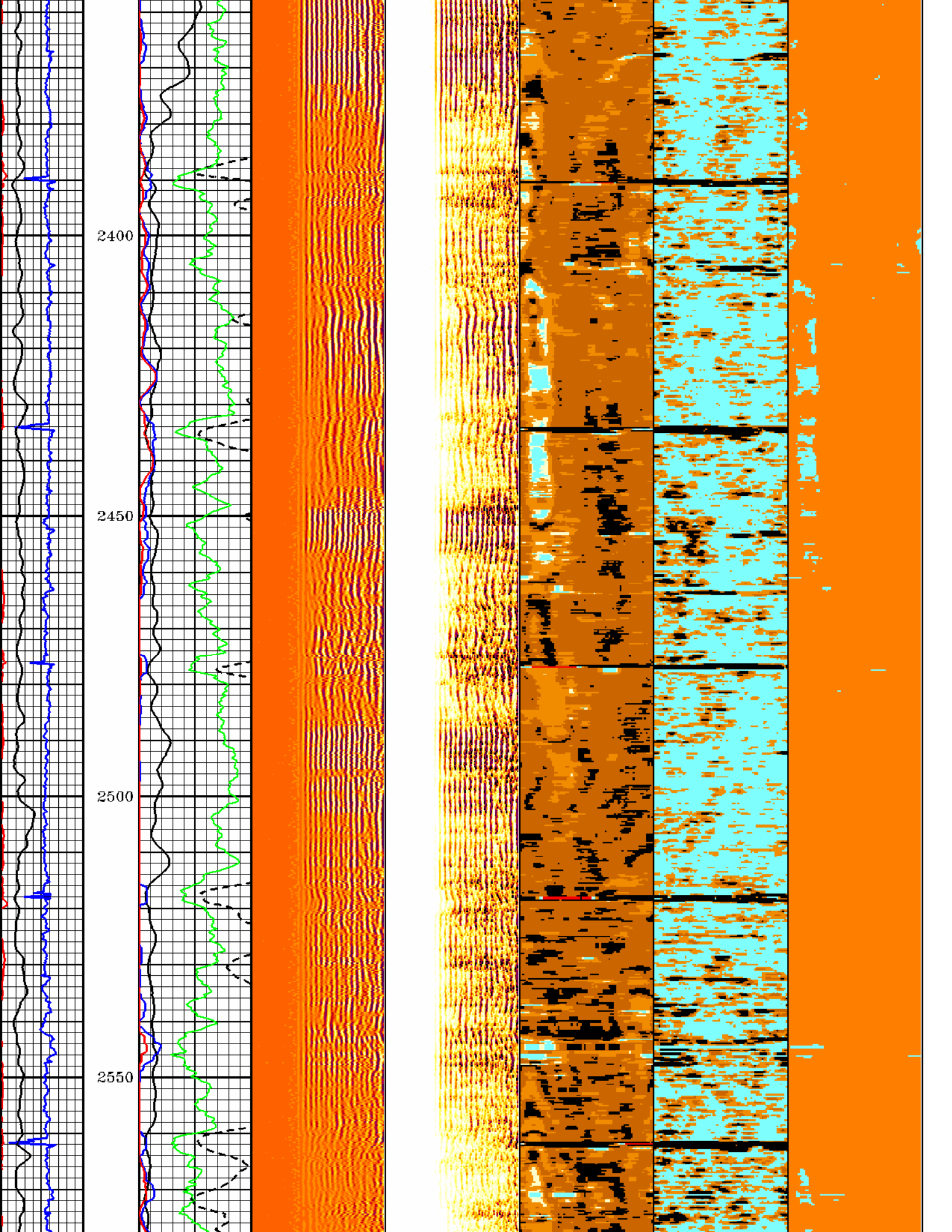


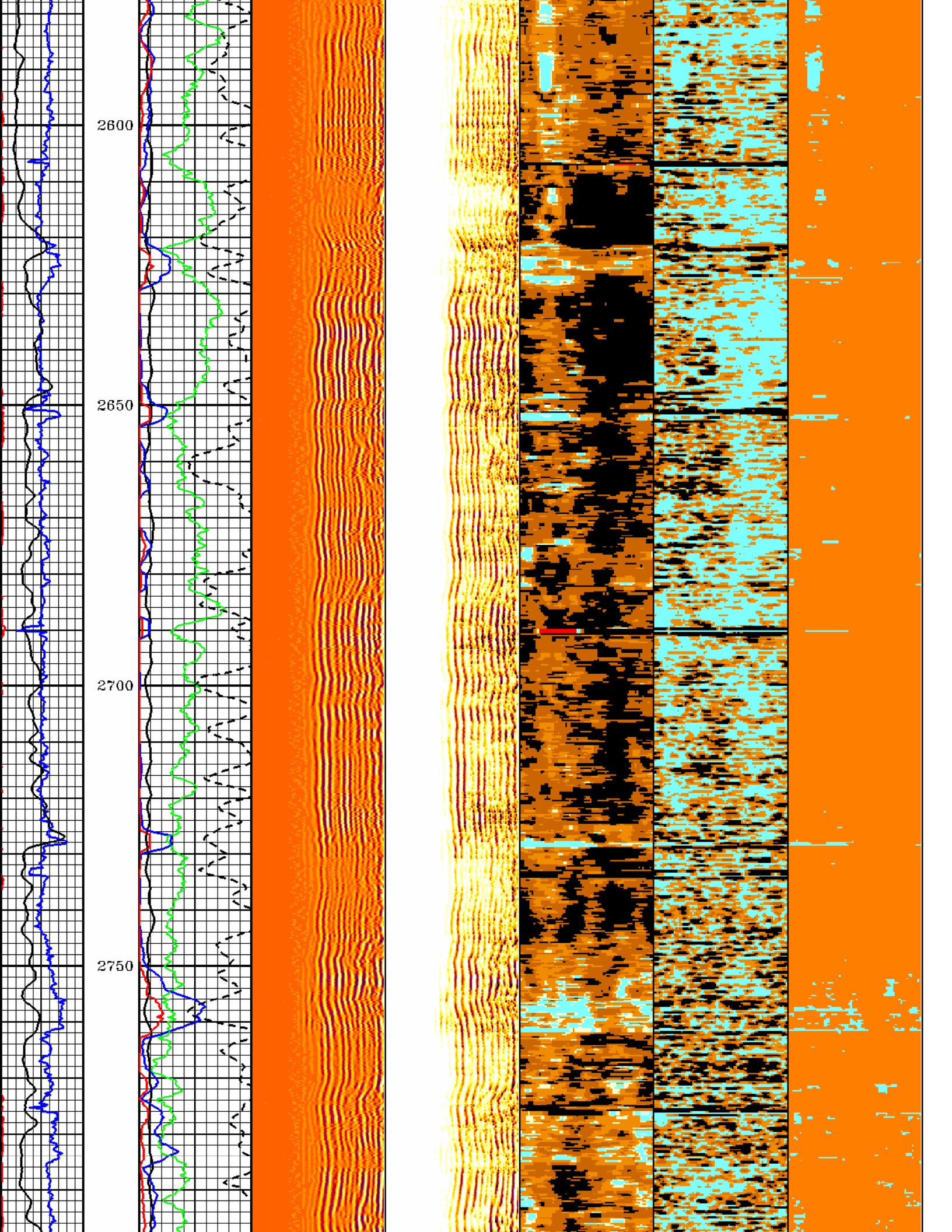


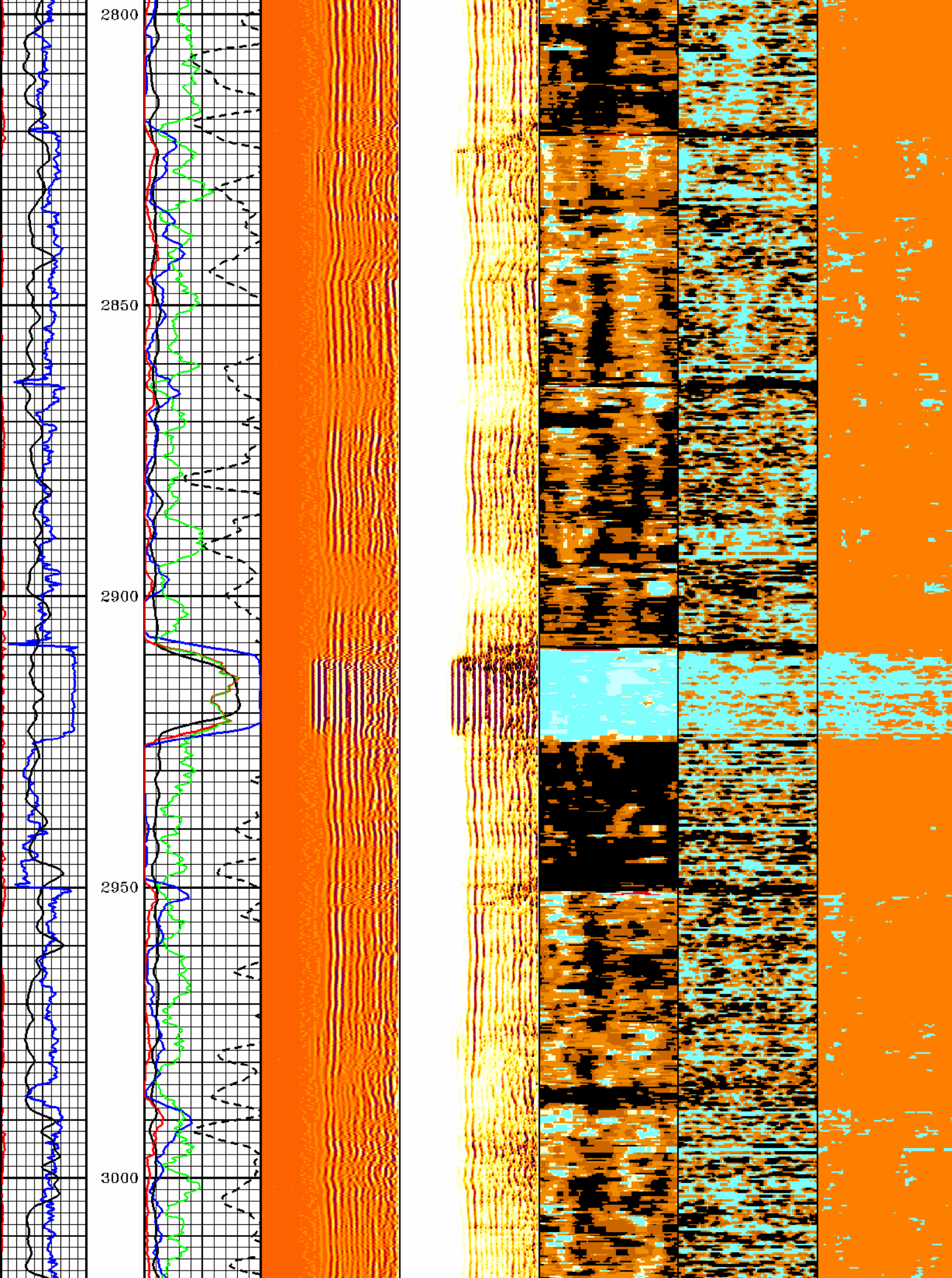


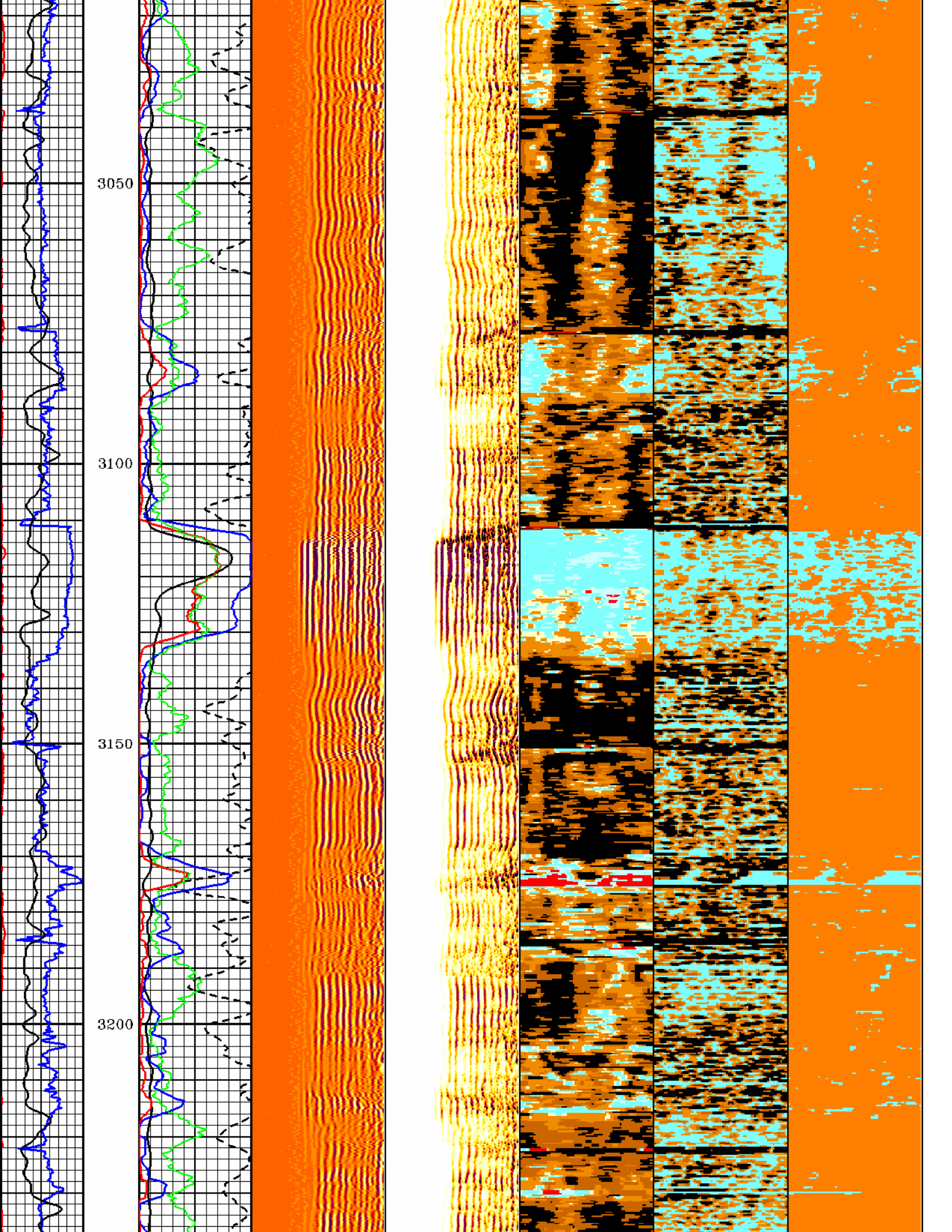


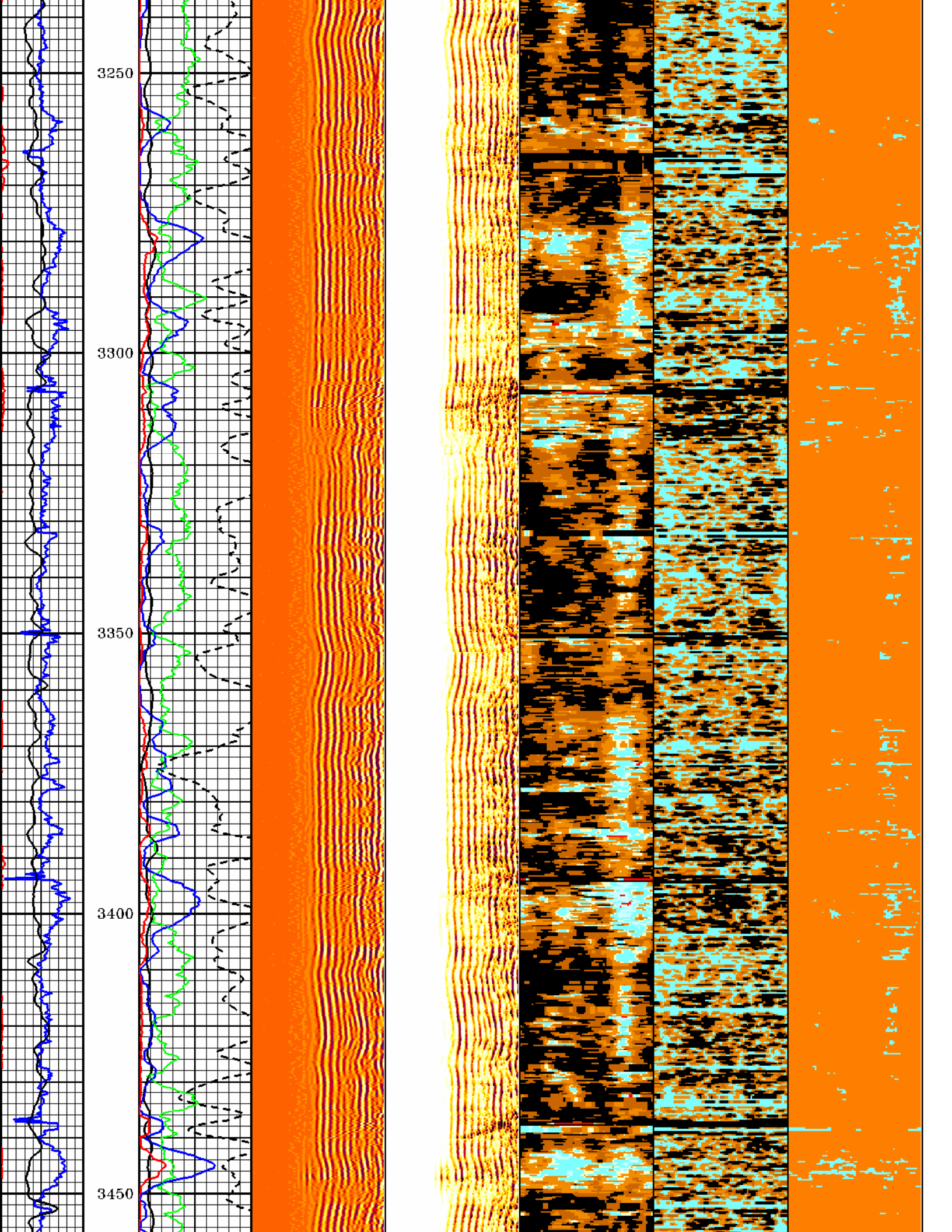


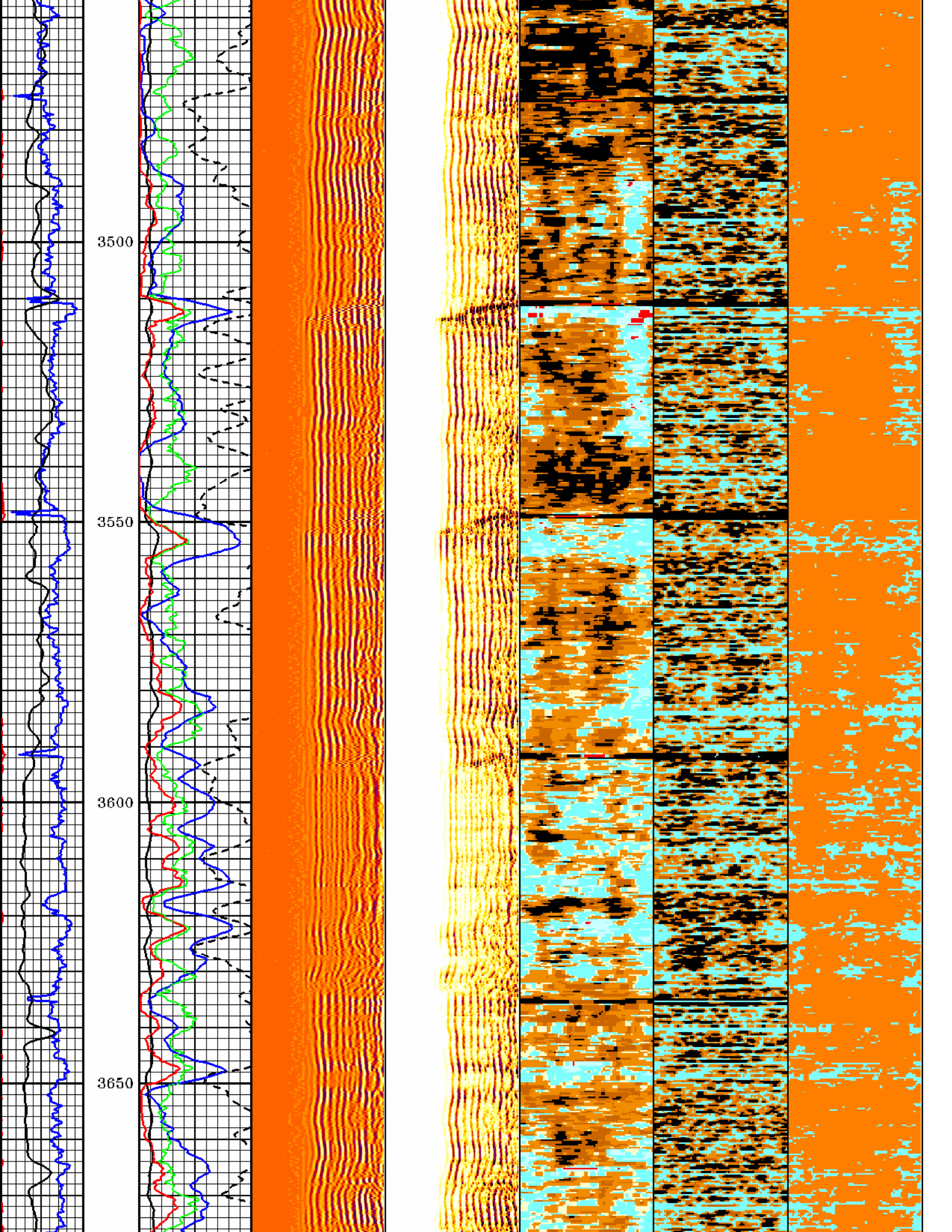


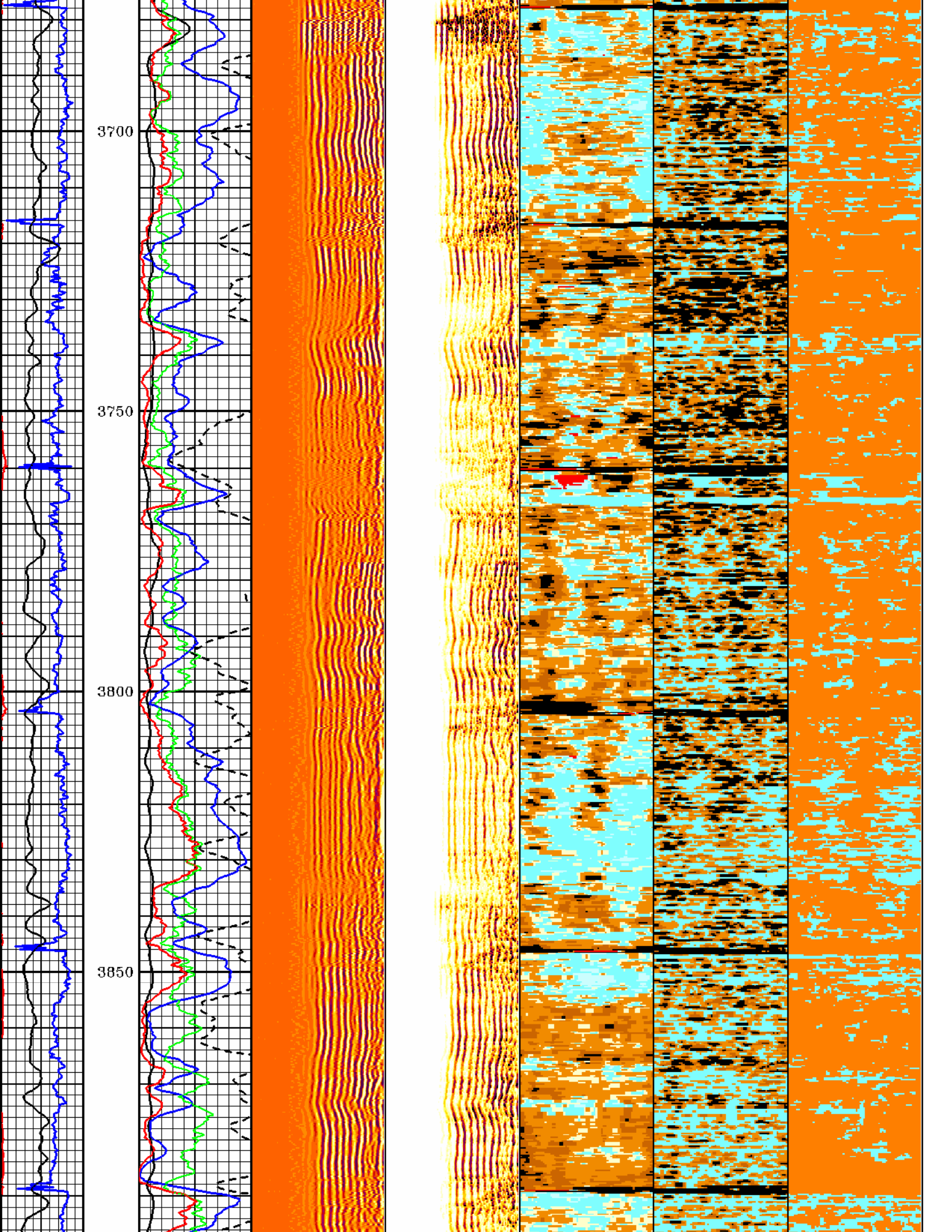


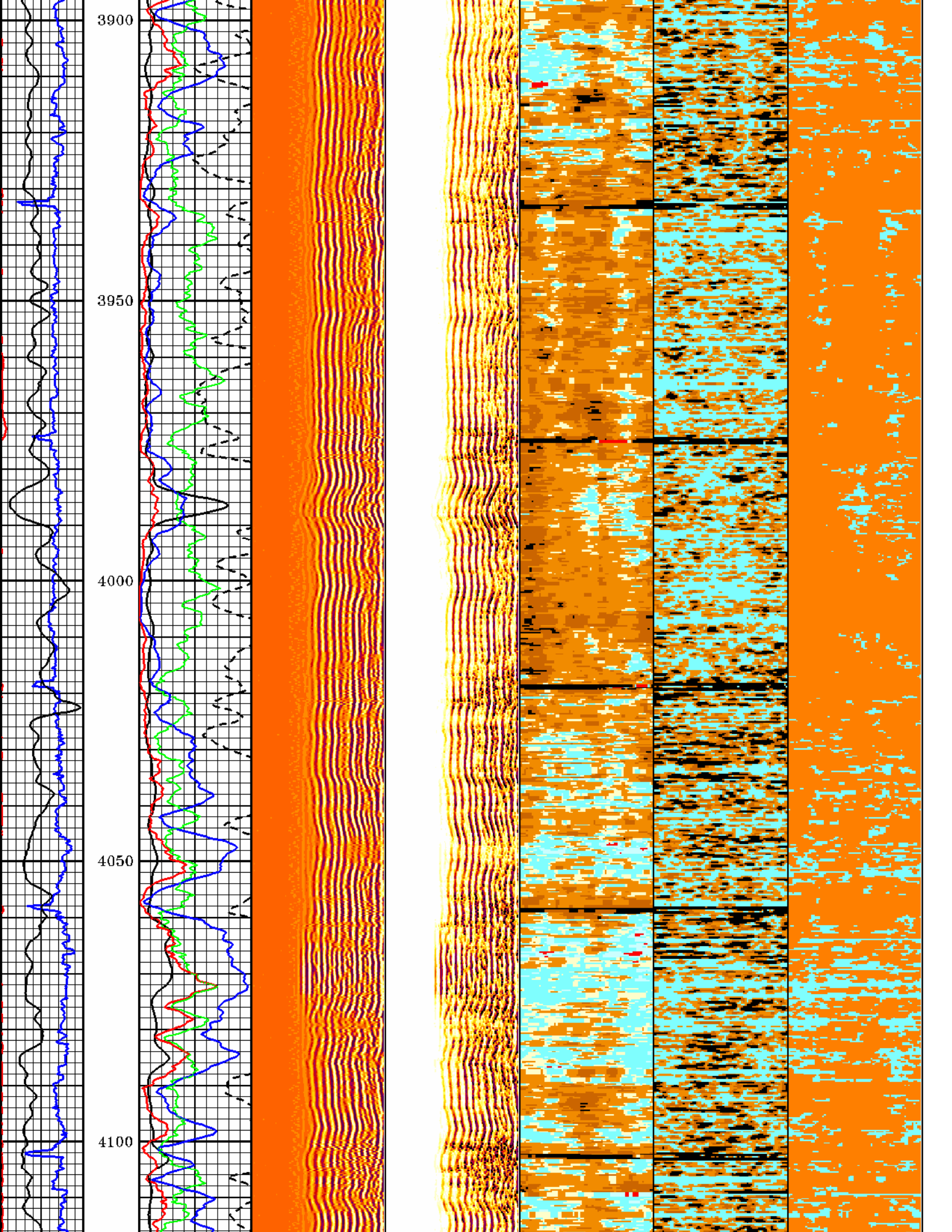


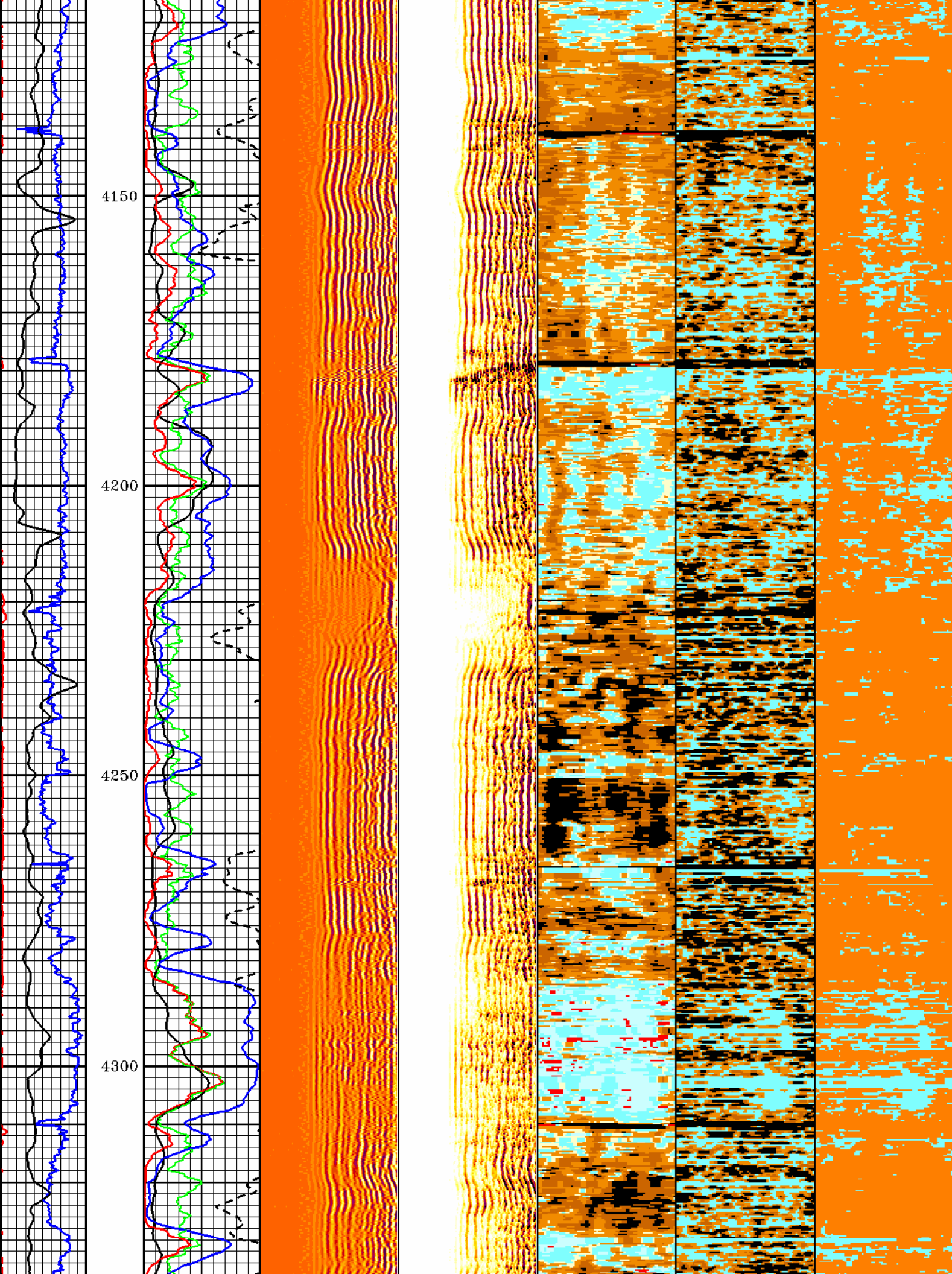


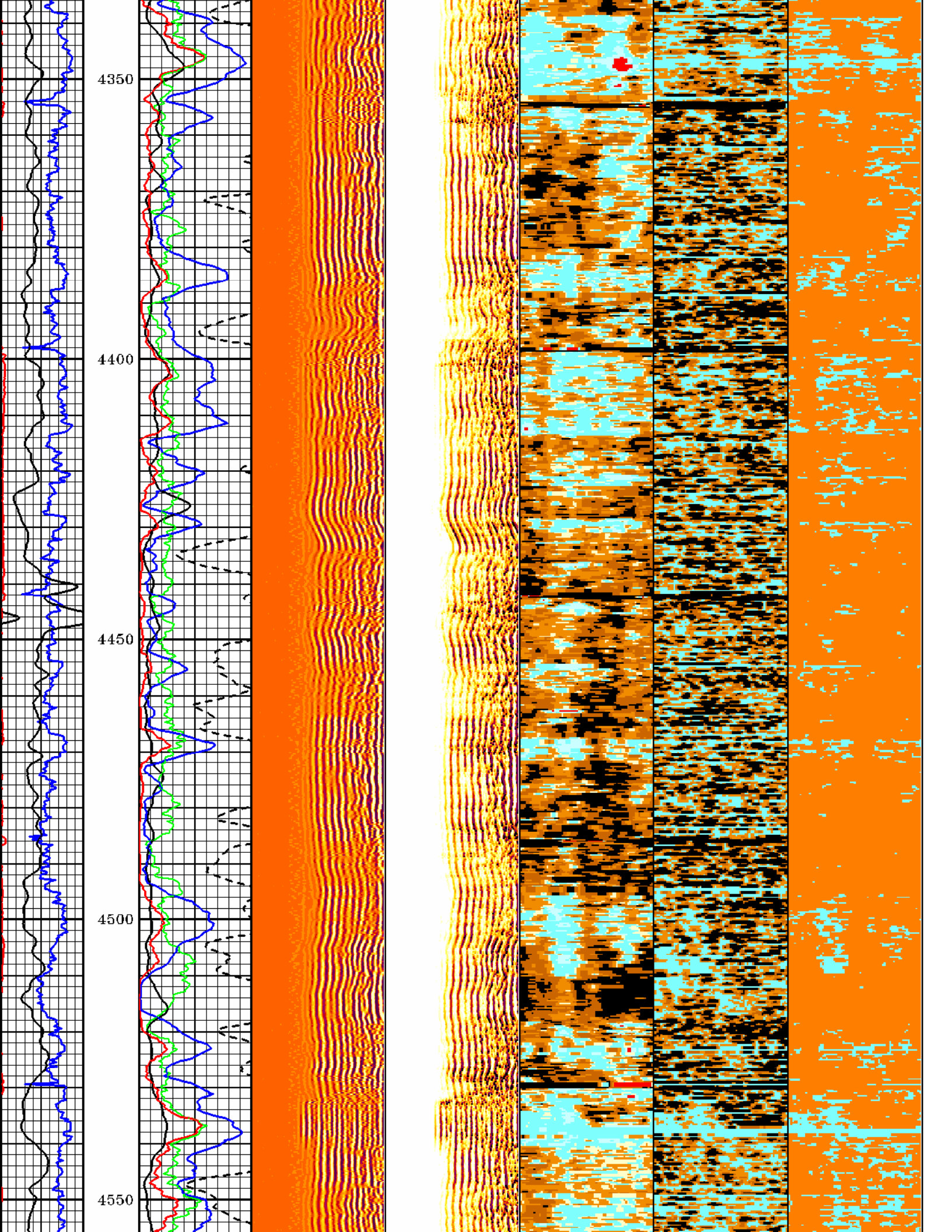


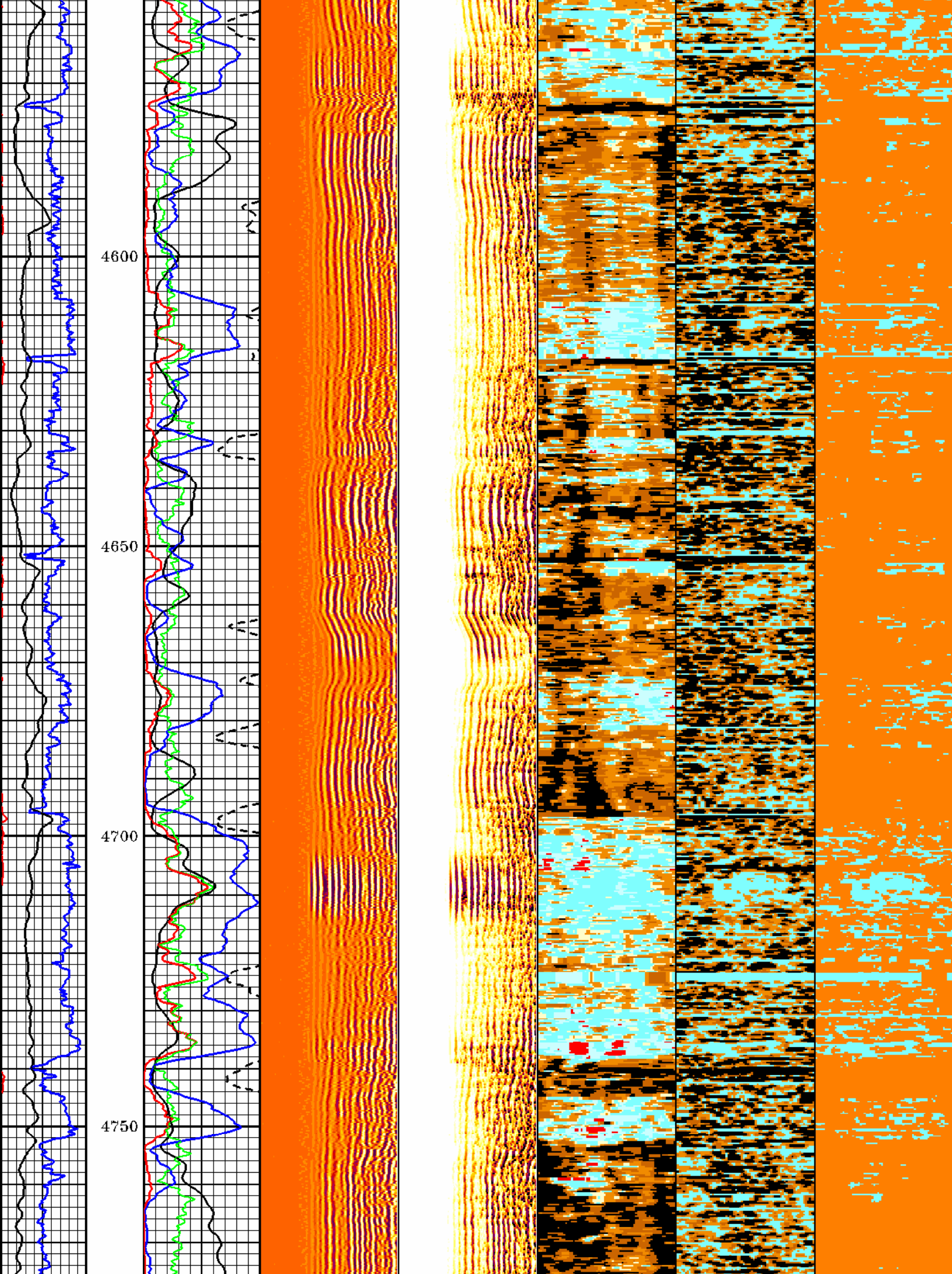


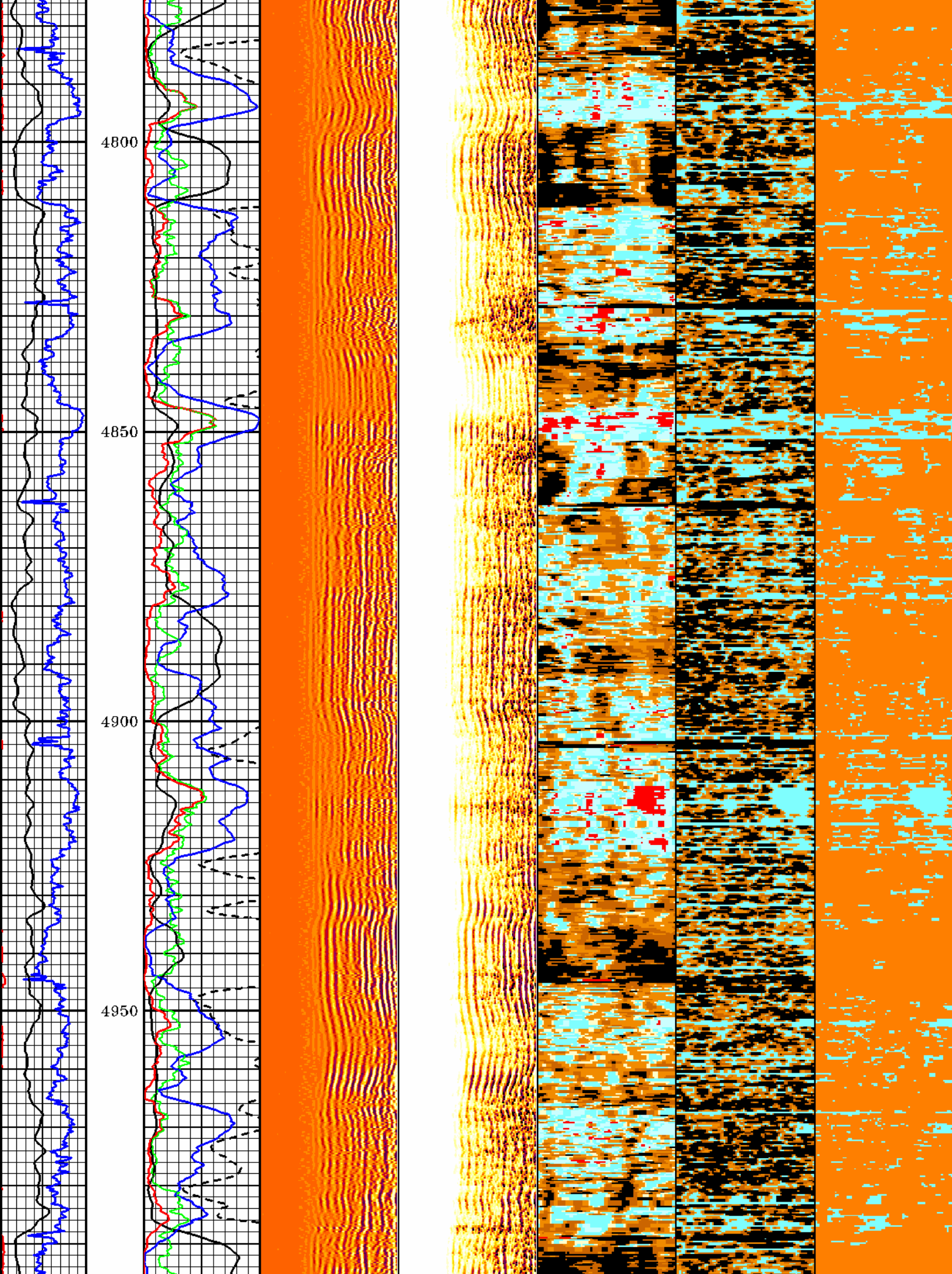


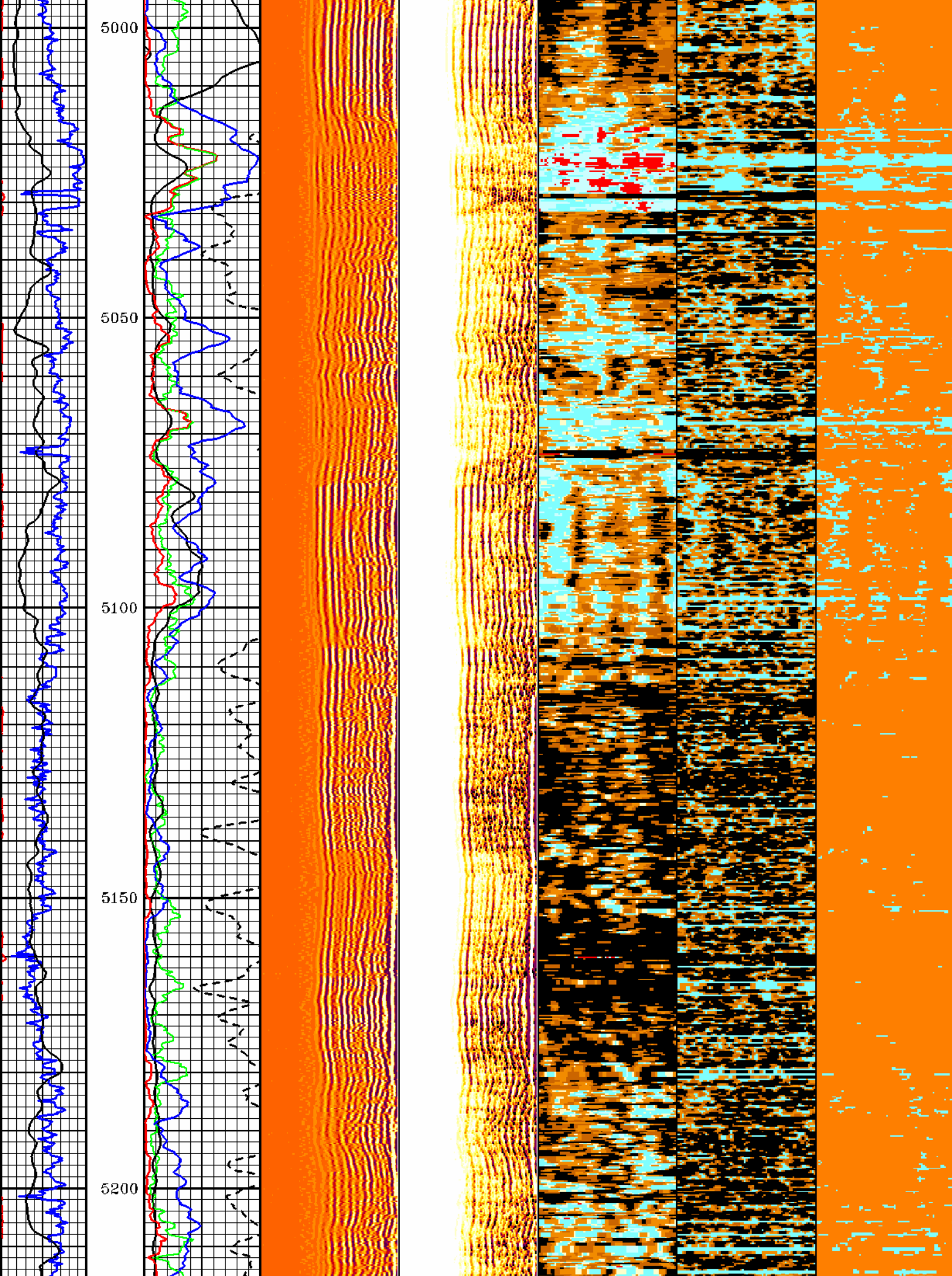


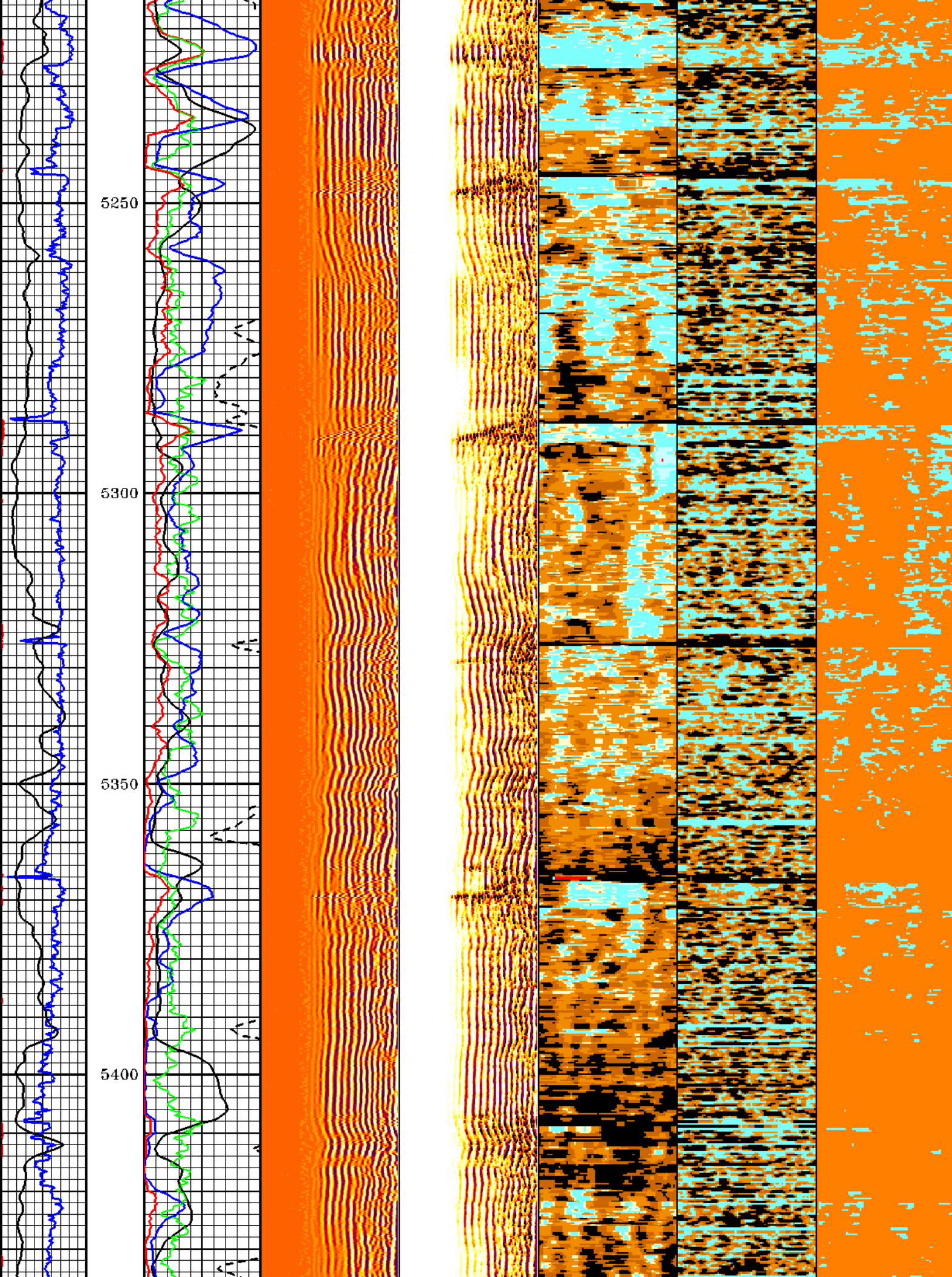


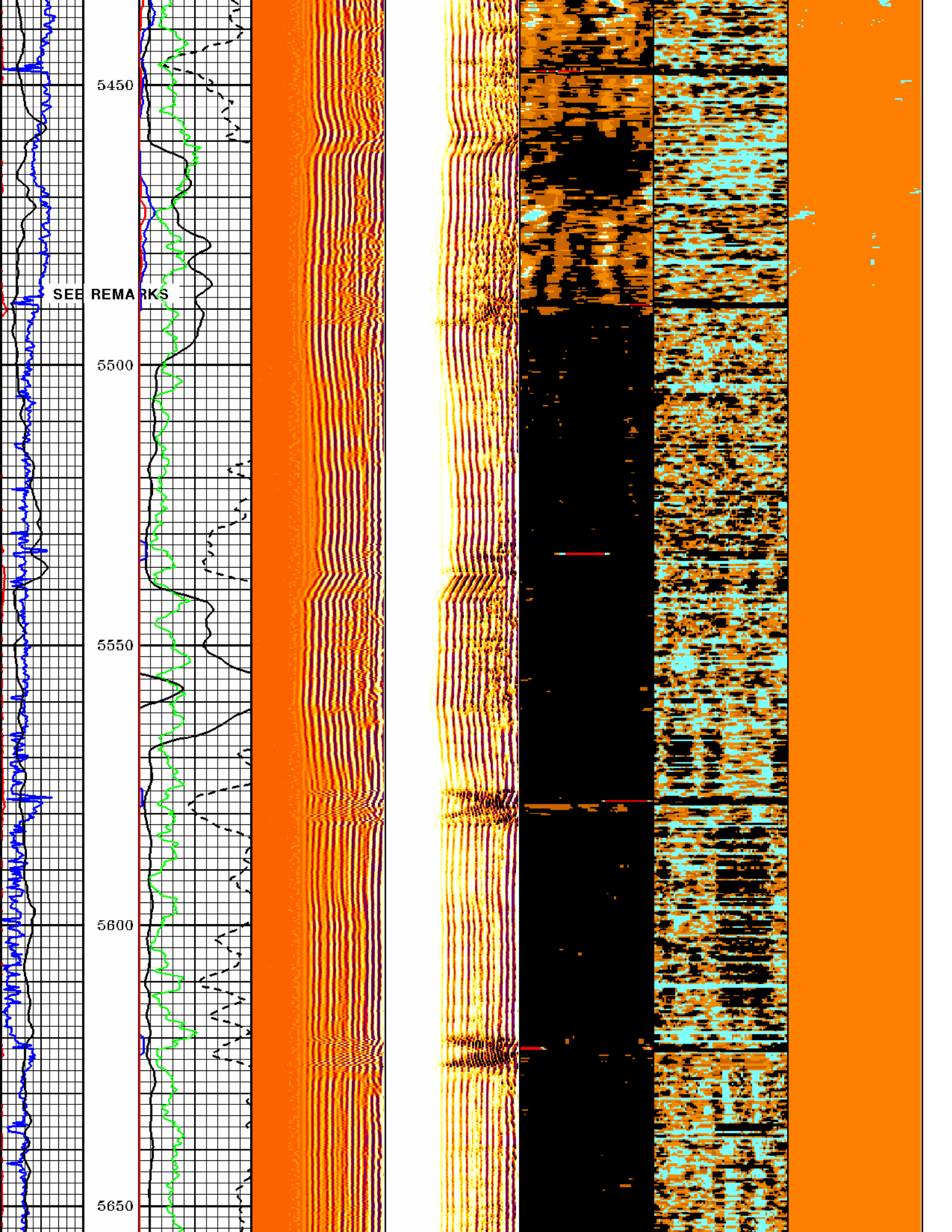


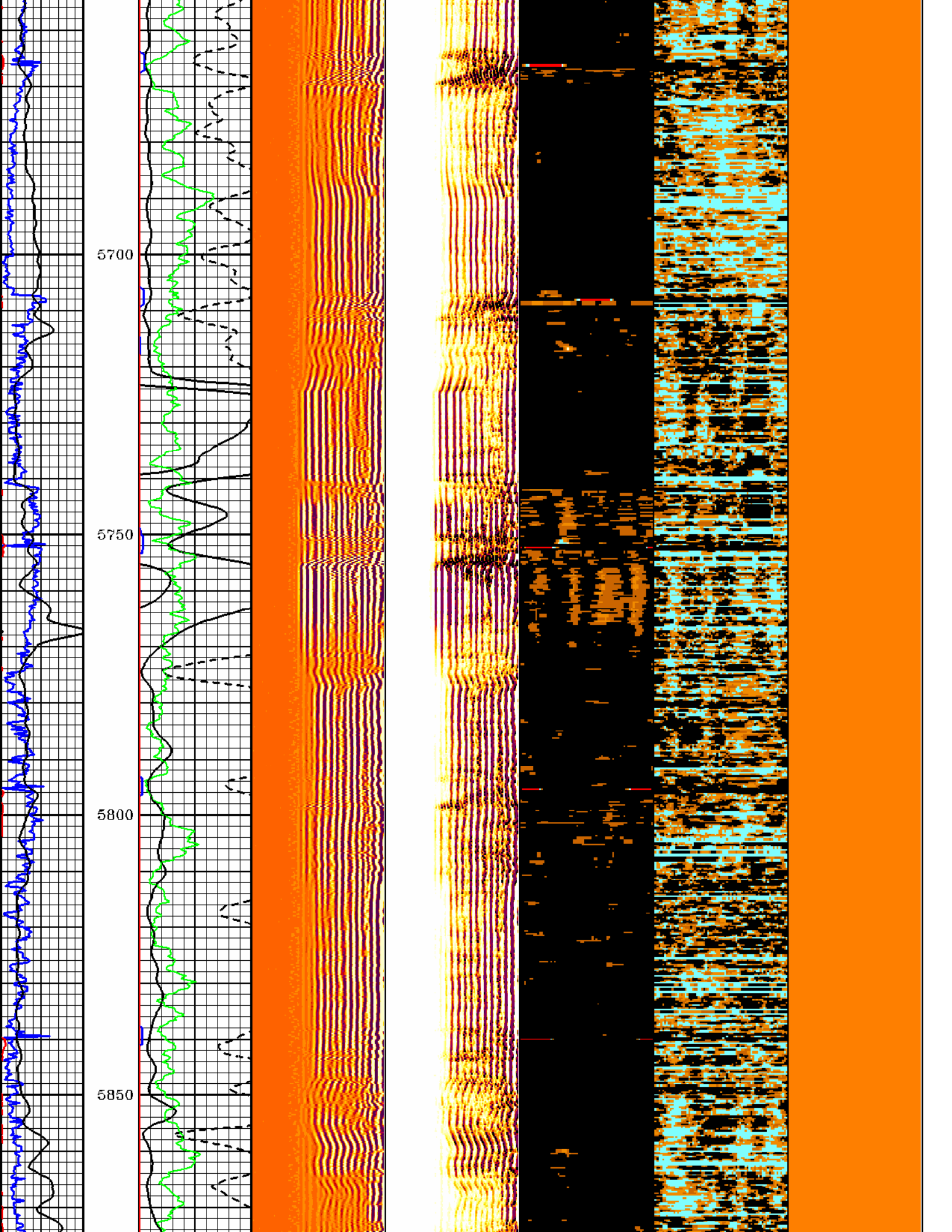


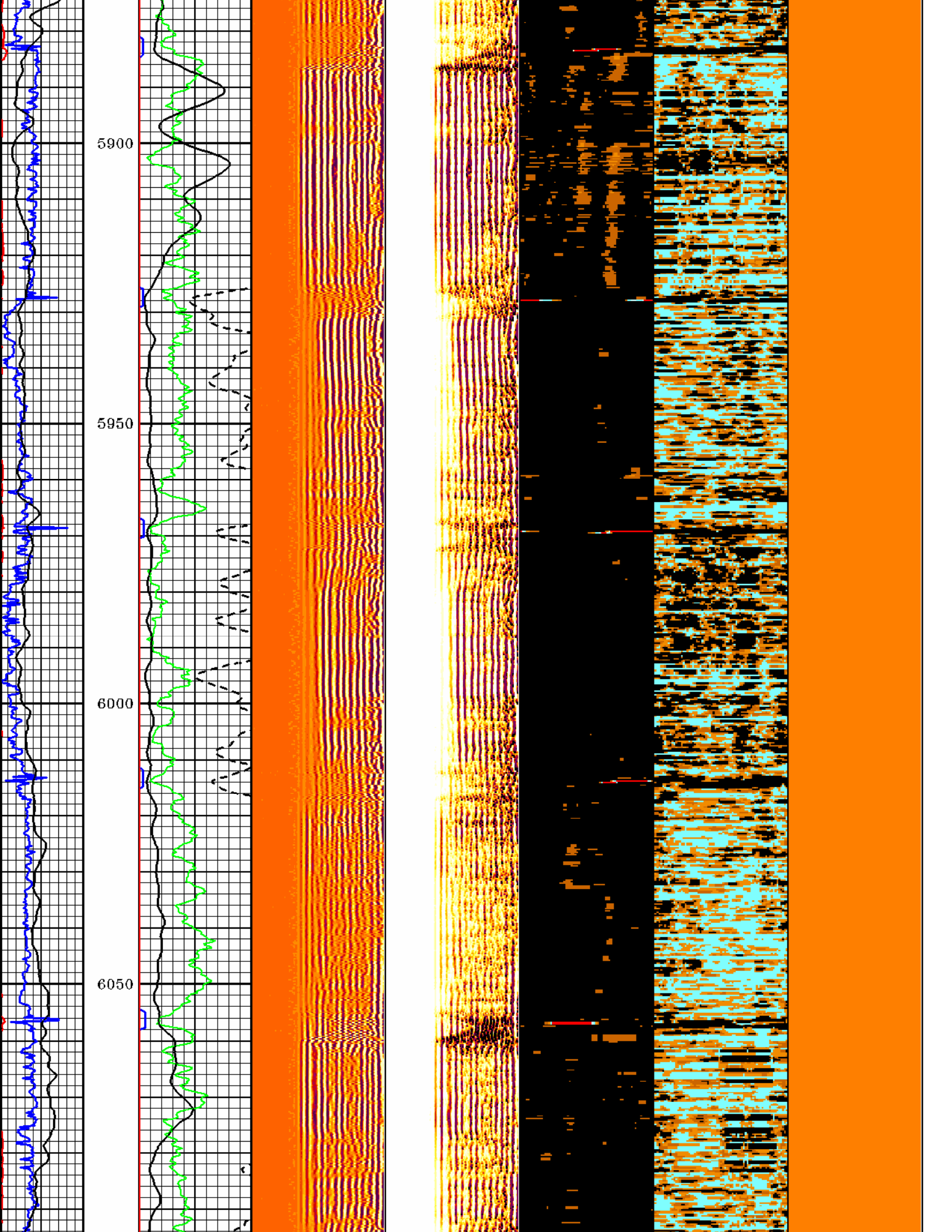


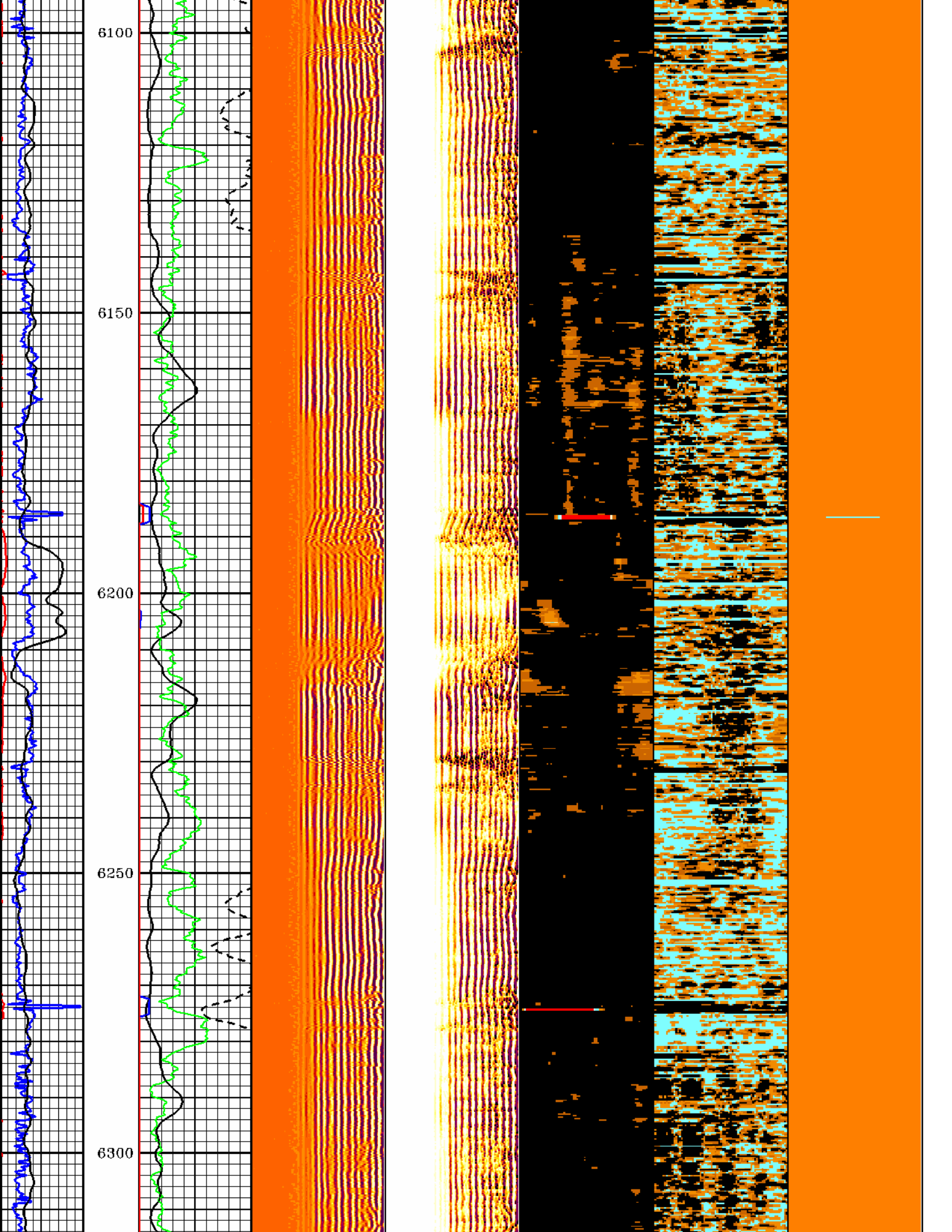


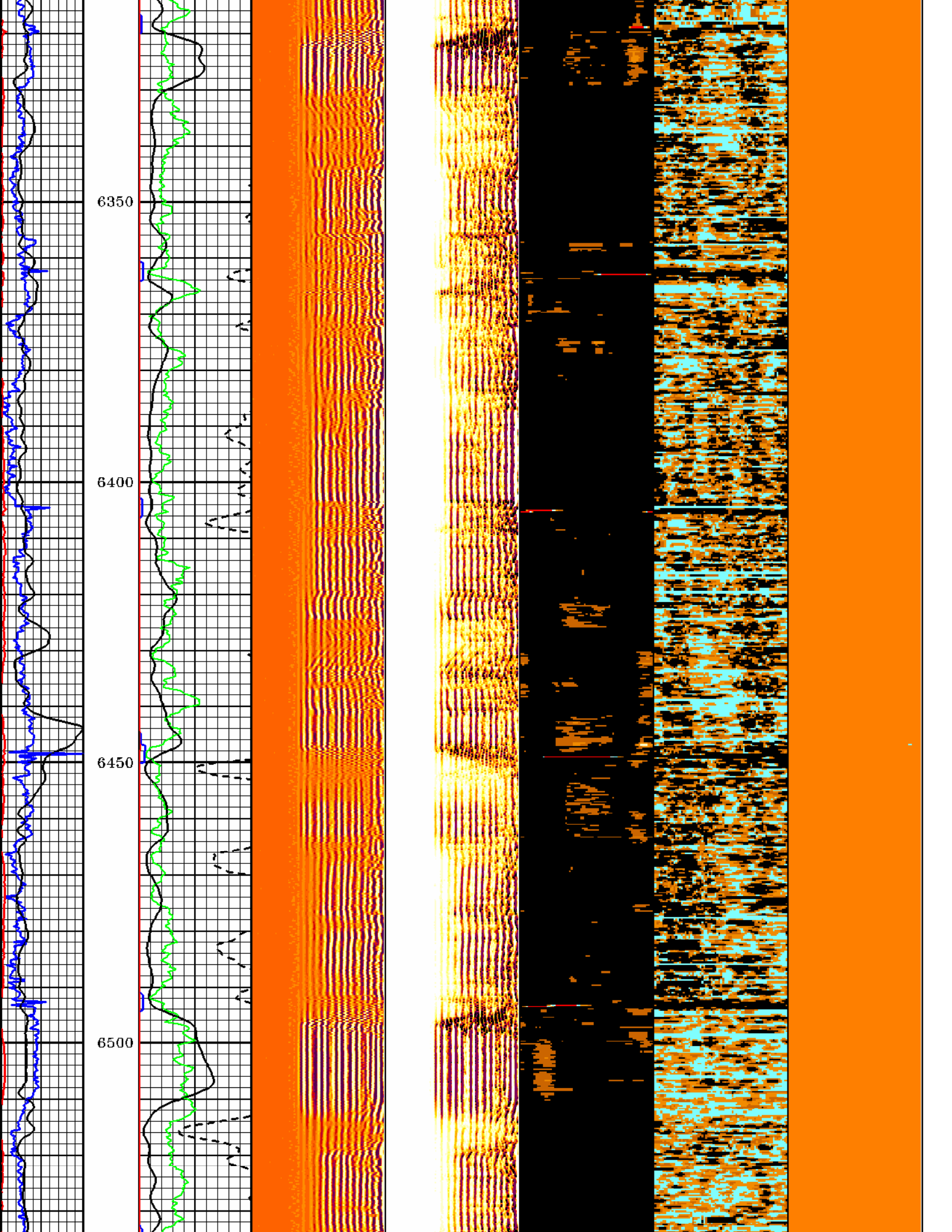


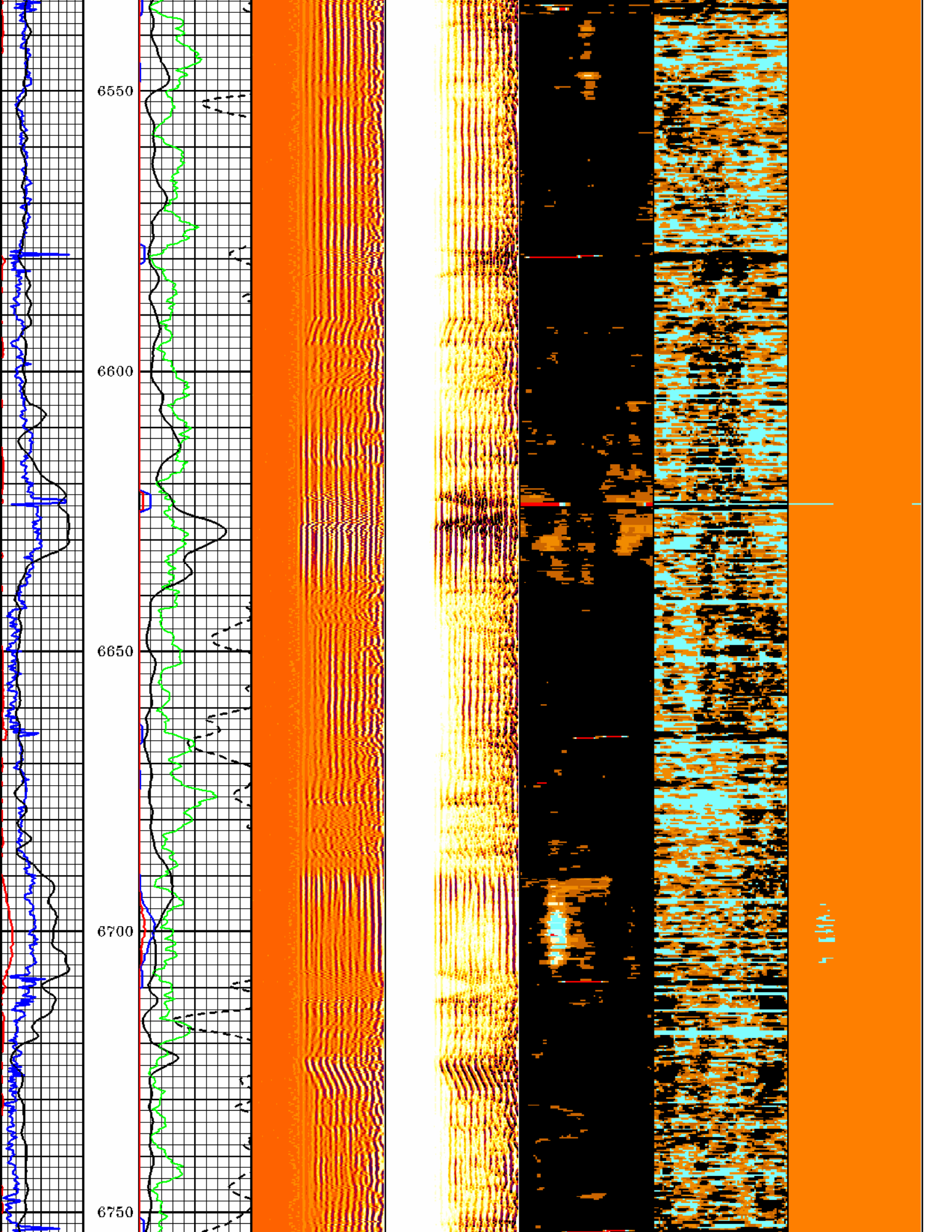


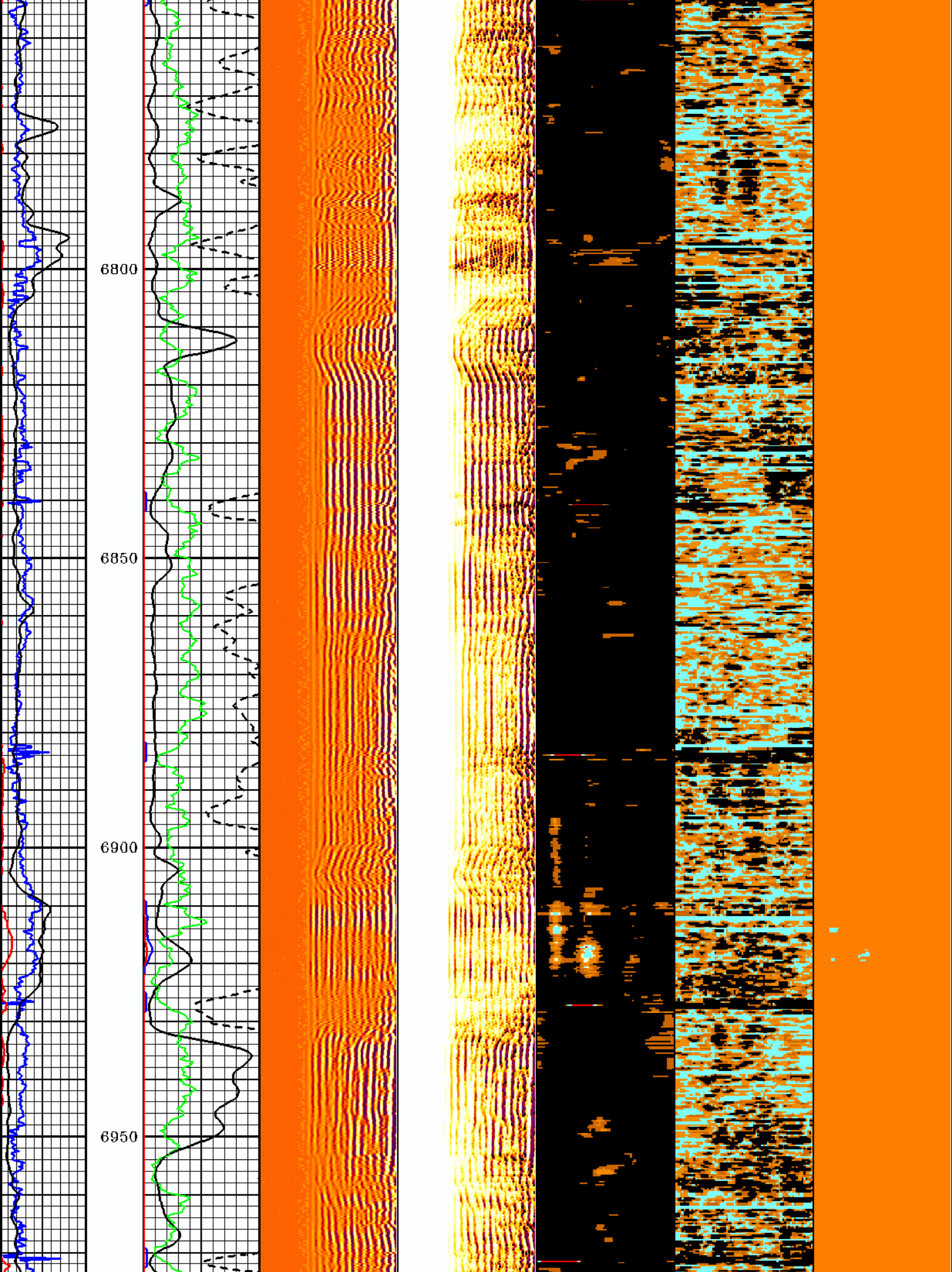


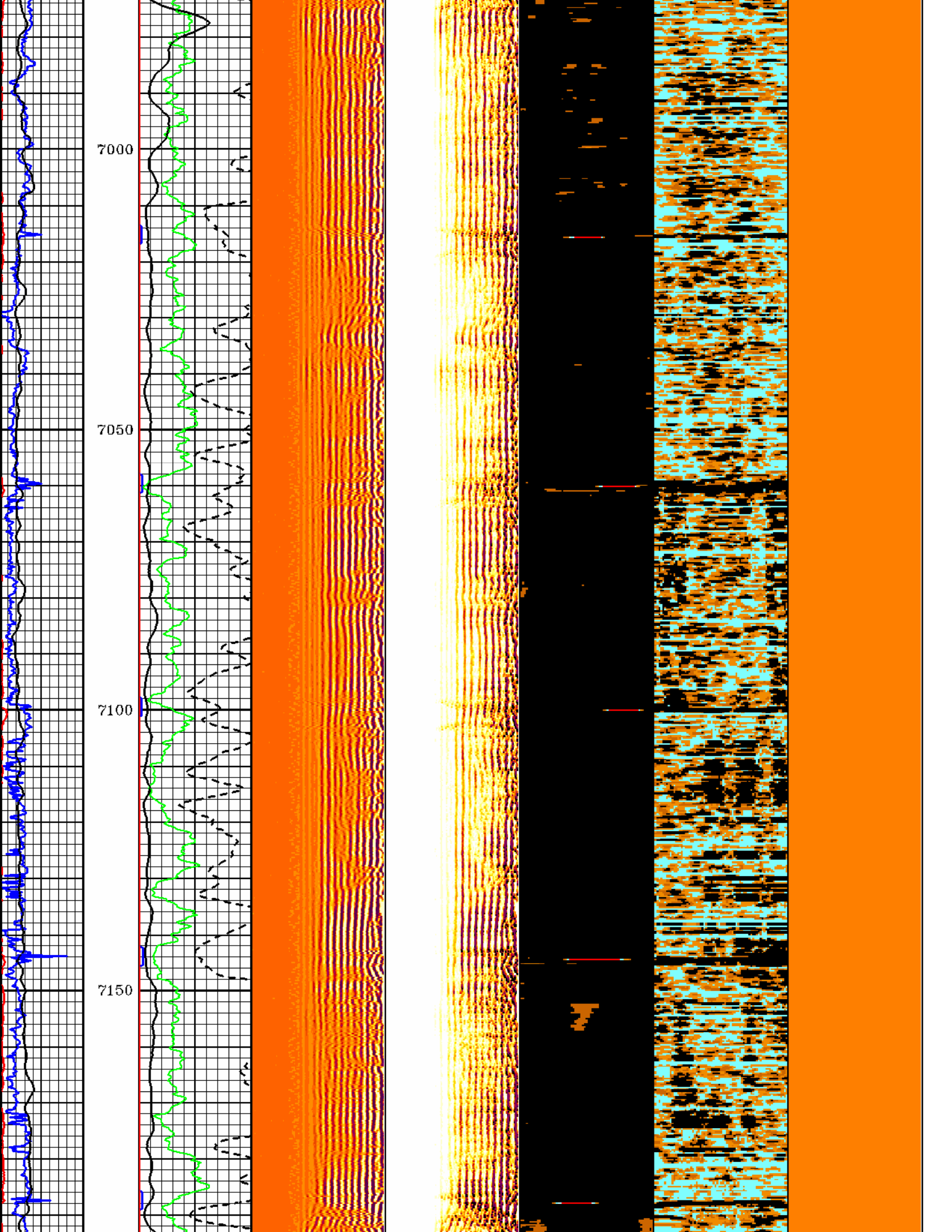


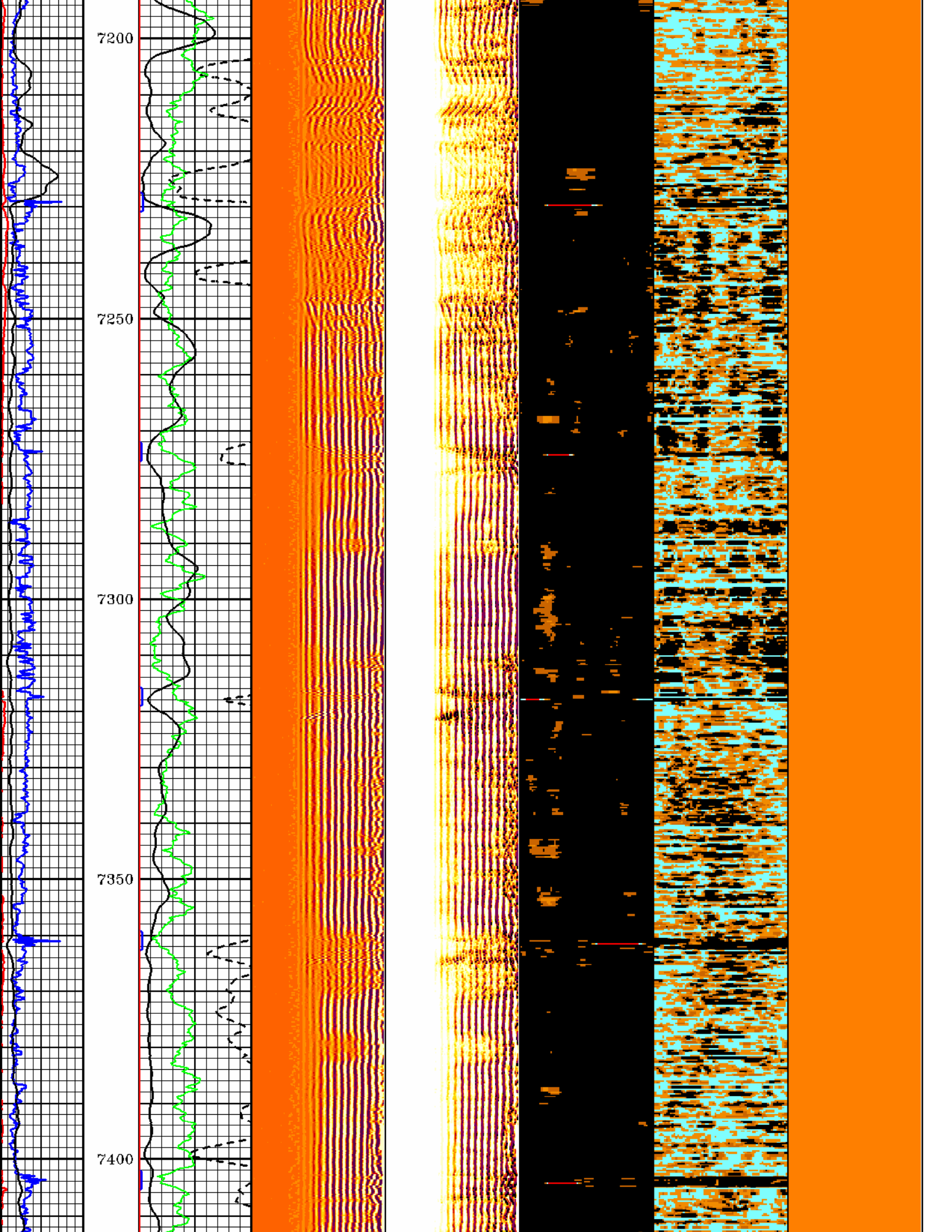


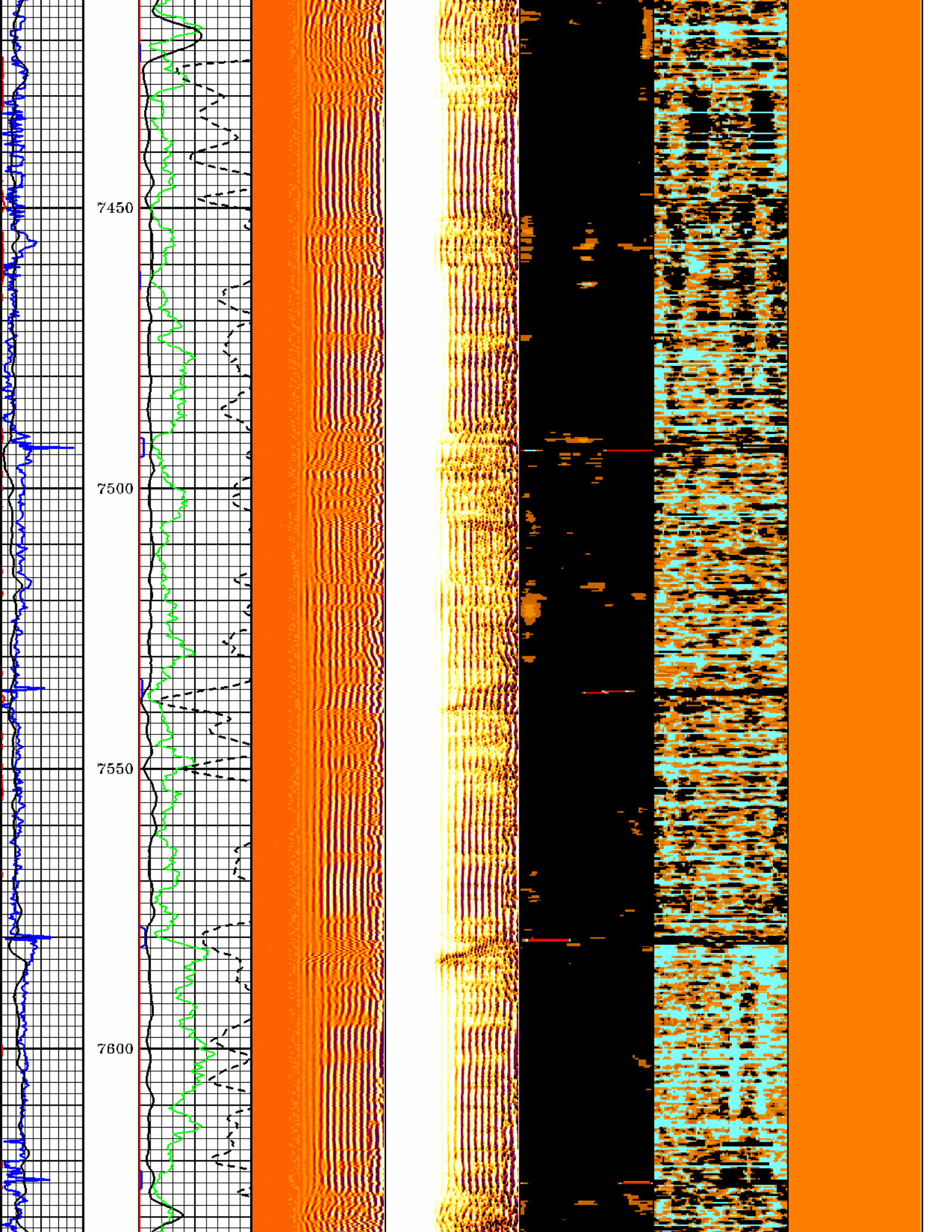


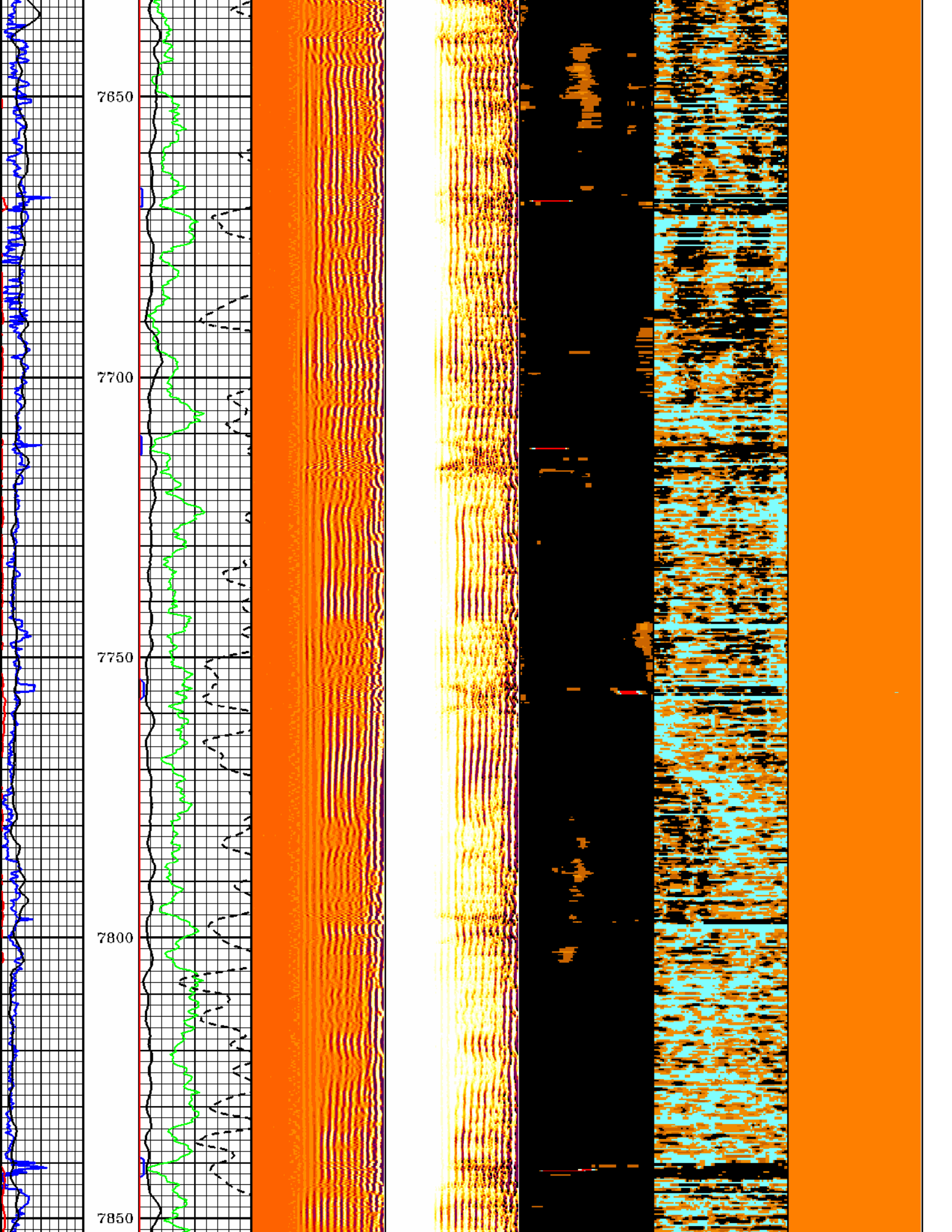


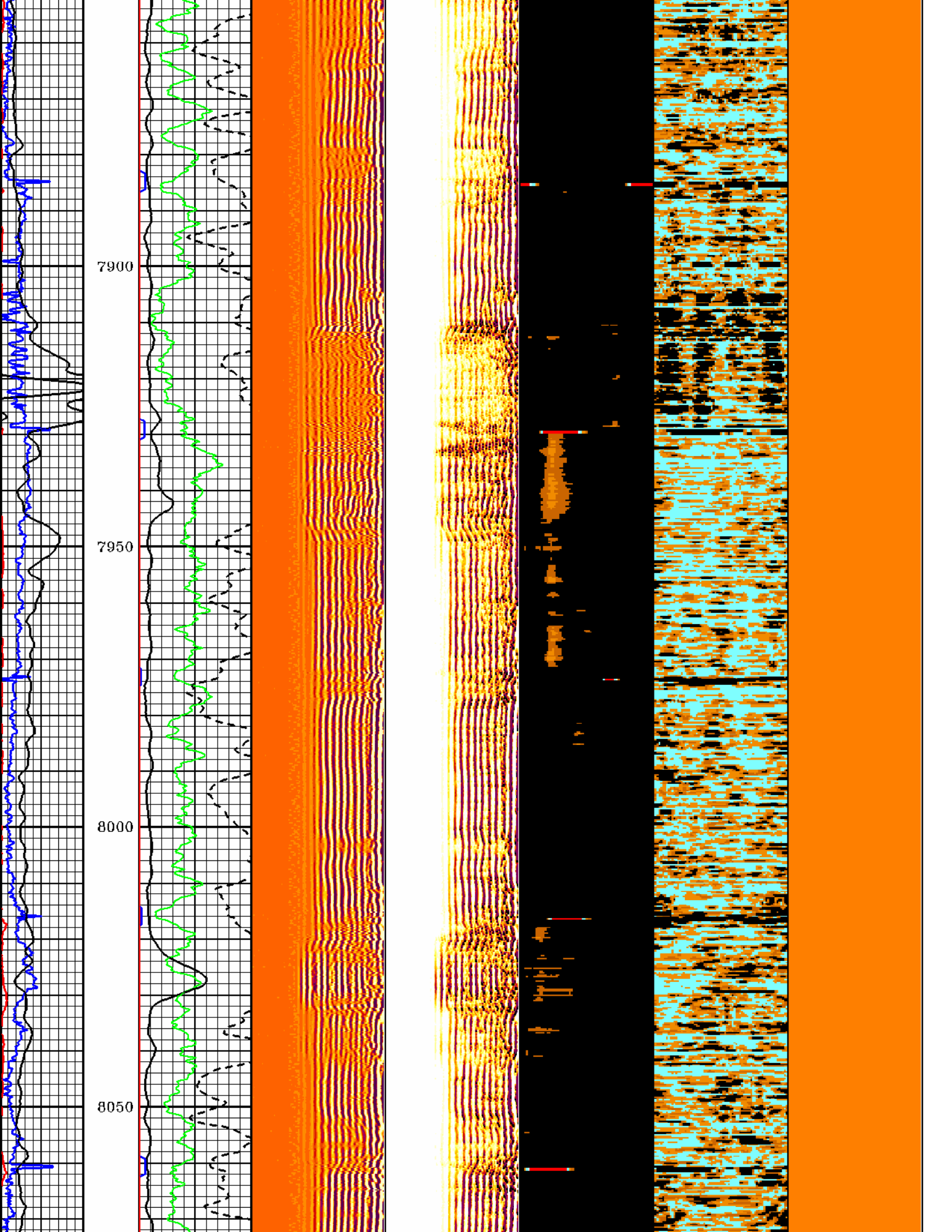


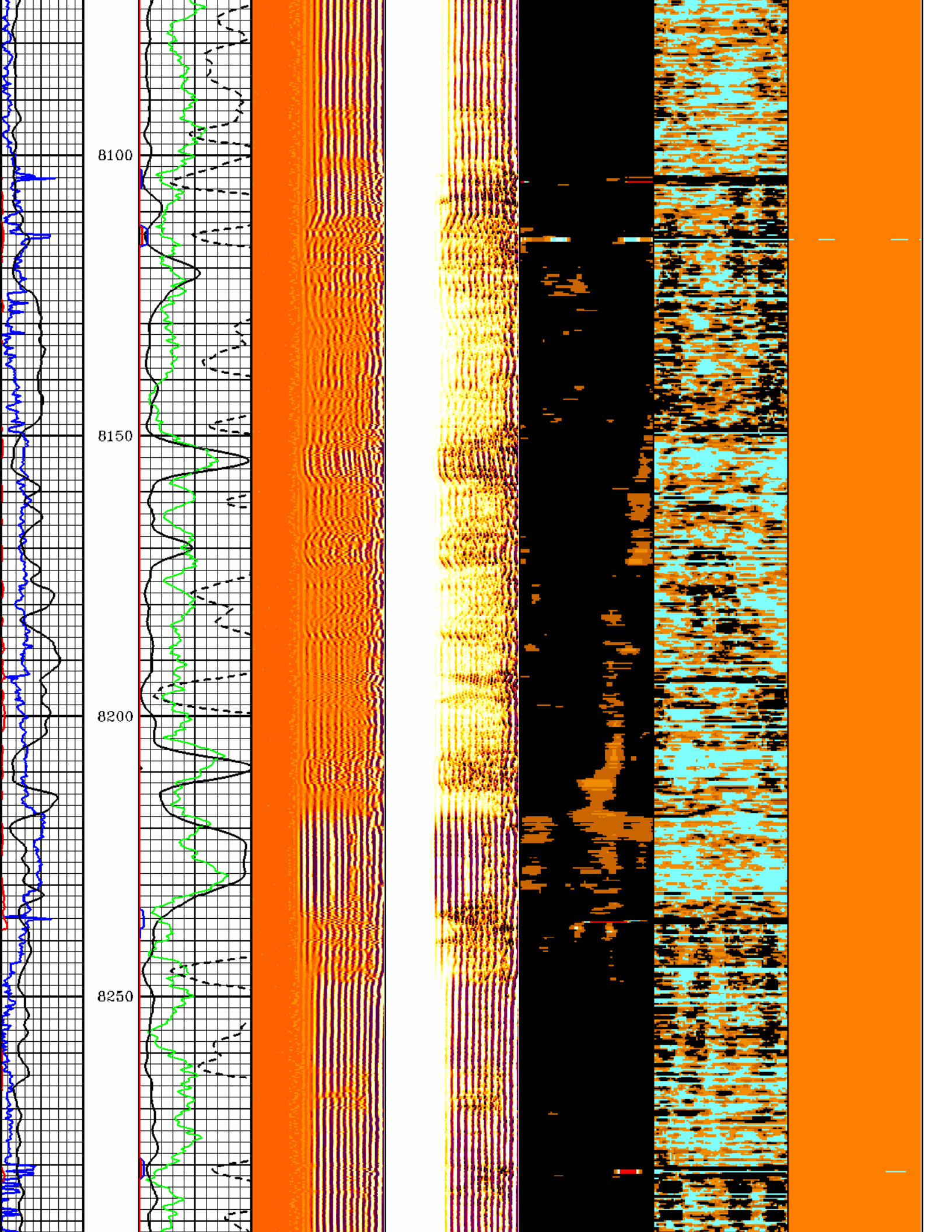


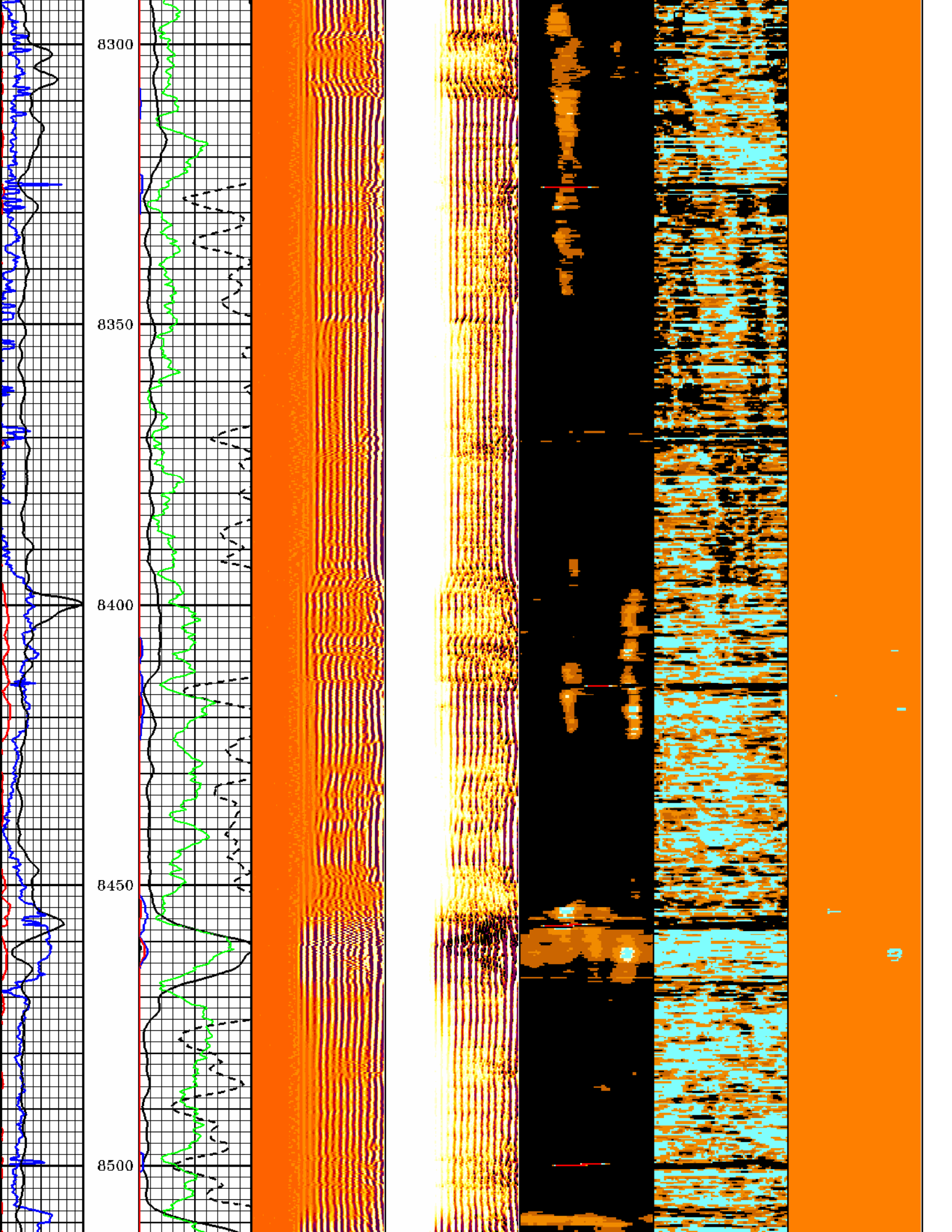


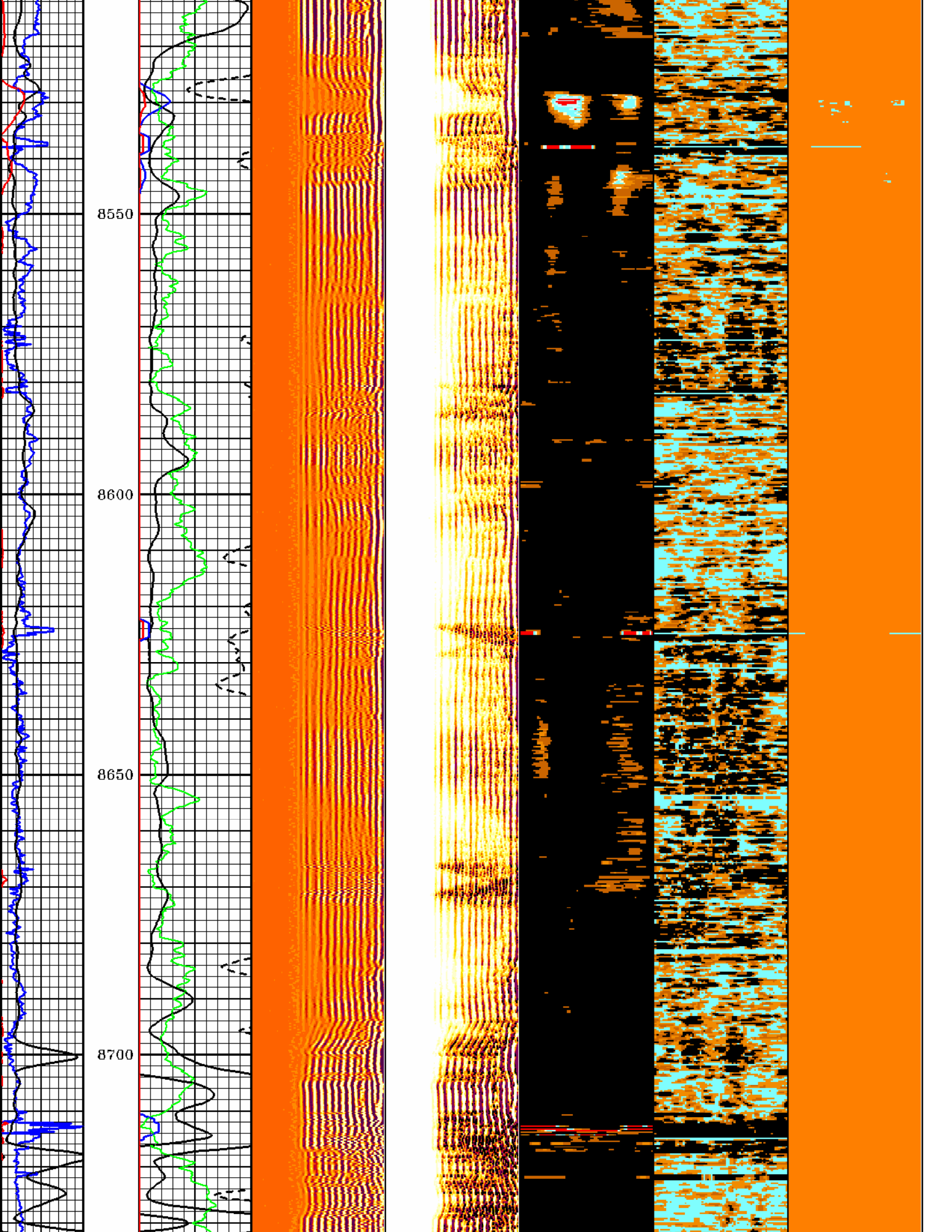


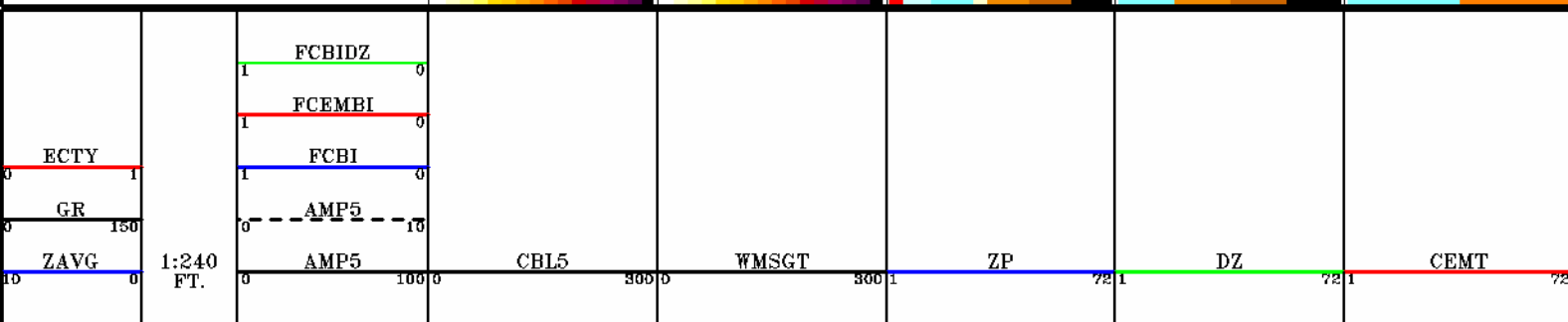
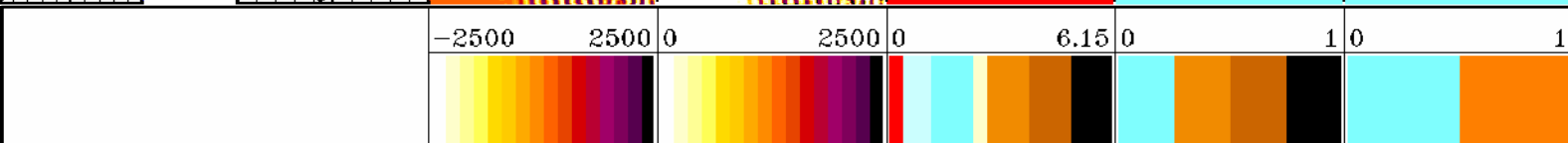
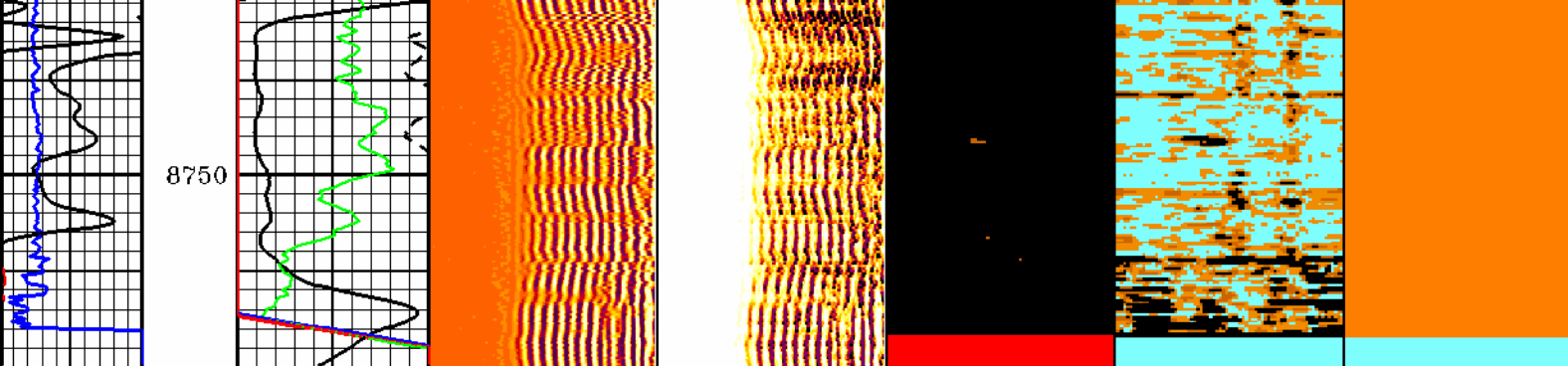












CORRELATION	CEMENT DATA	CBL WAVEFORM	CBL WAVEFORM TOTAL	IMPEDANCE	DERIVATIVE	CEMENT
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Version No: | hc:3.0
 Data File: Kinder_Morgan.cls
 Format File: Face.spc
 Plot Time: 2011-11-30 15:48:39
 Database Time: 14:09:35

HALLIBURTON

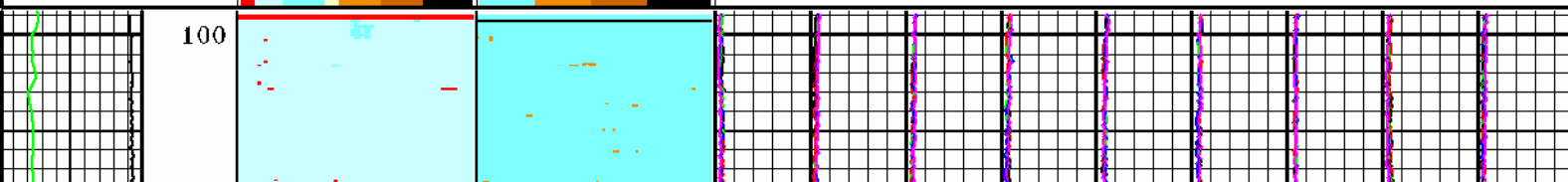
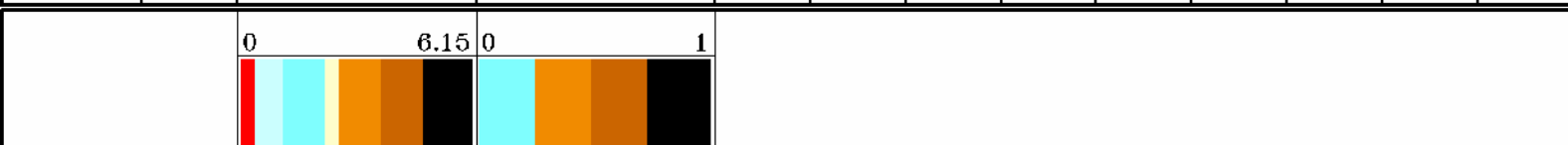
Top Depth: 97.50
 Bottom Depth: 8770.50

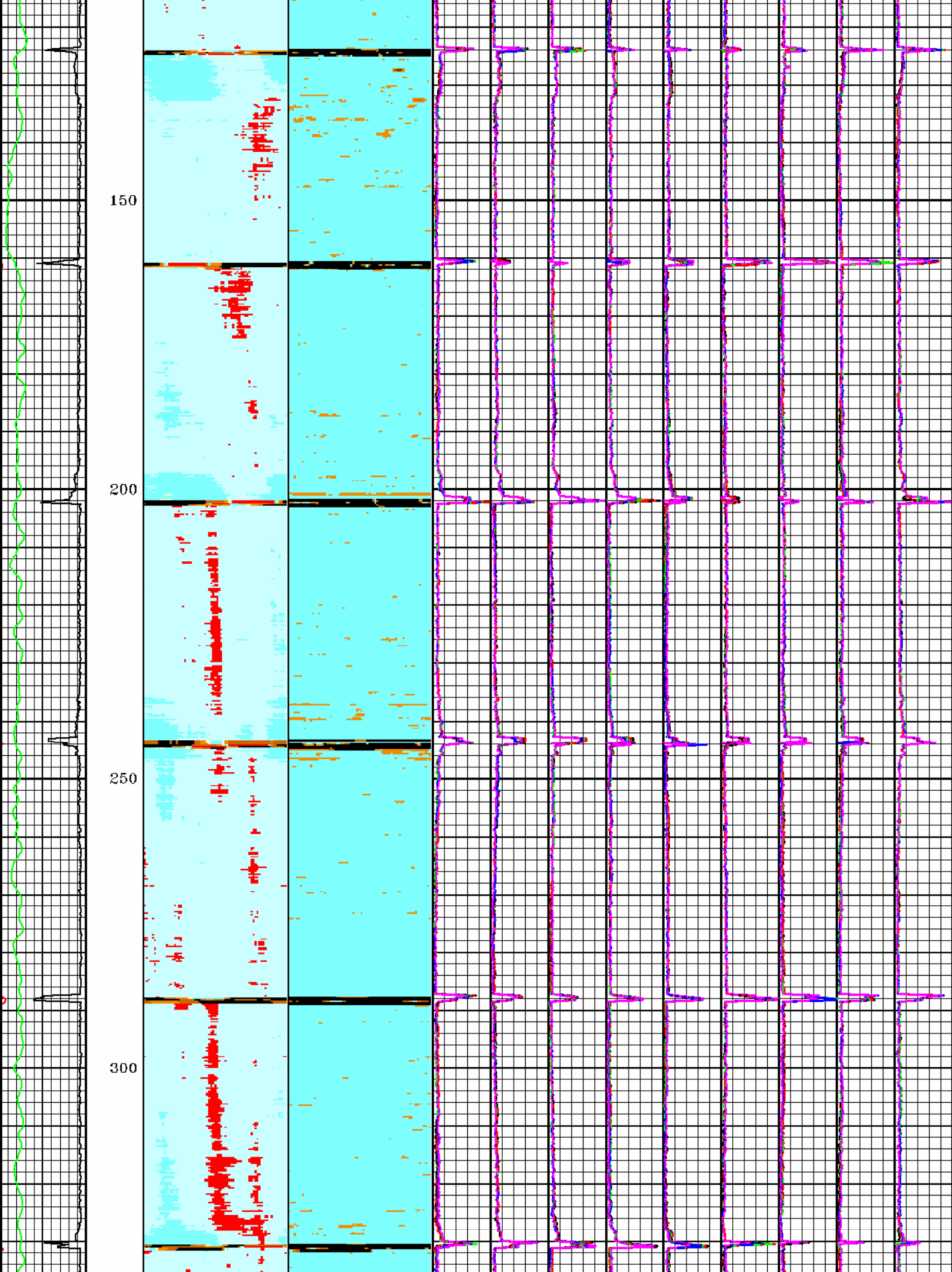
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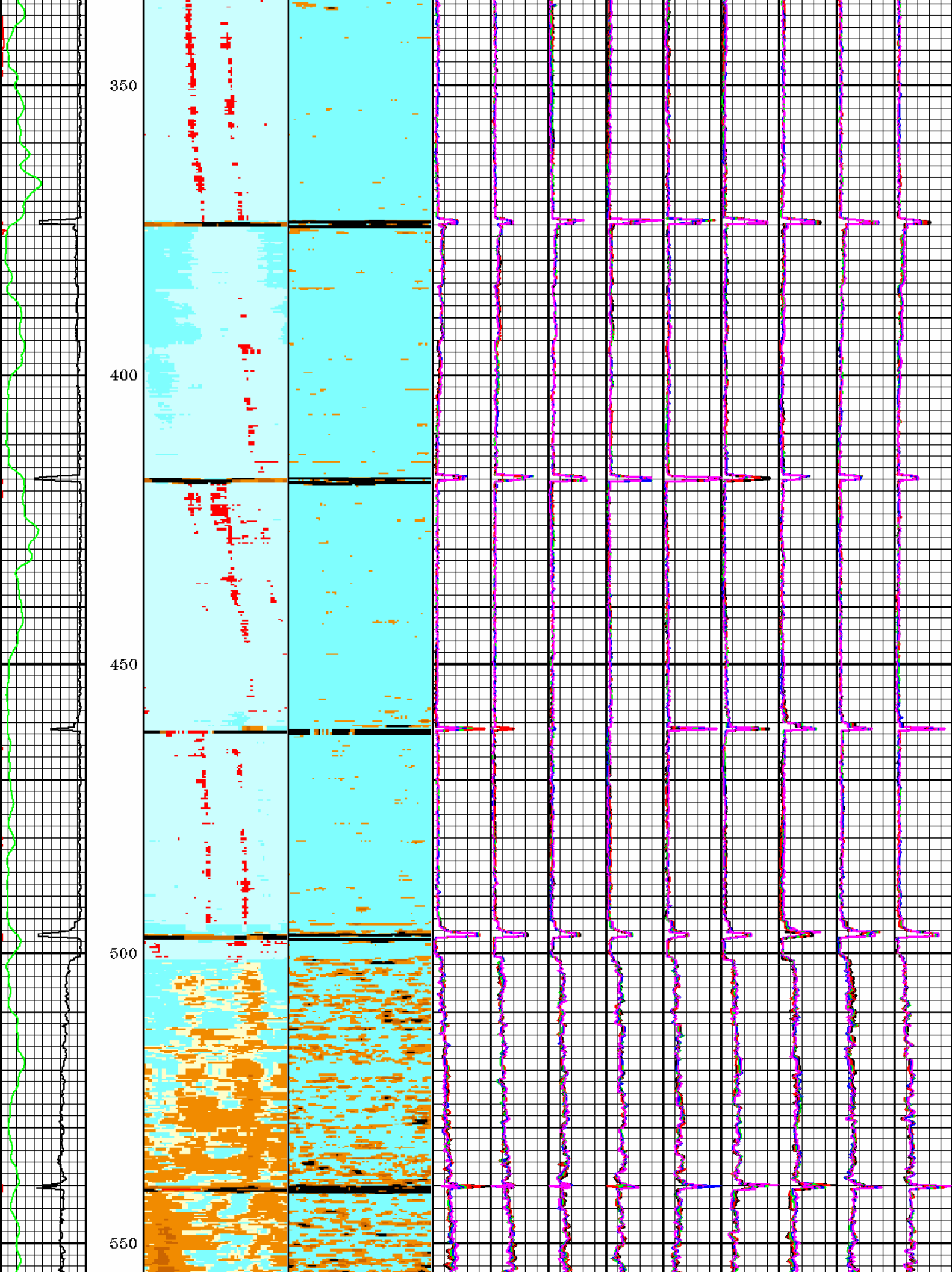
HALLIBURTON

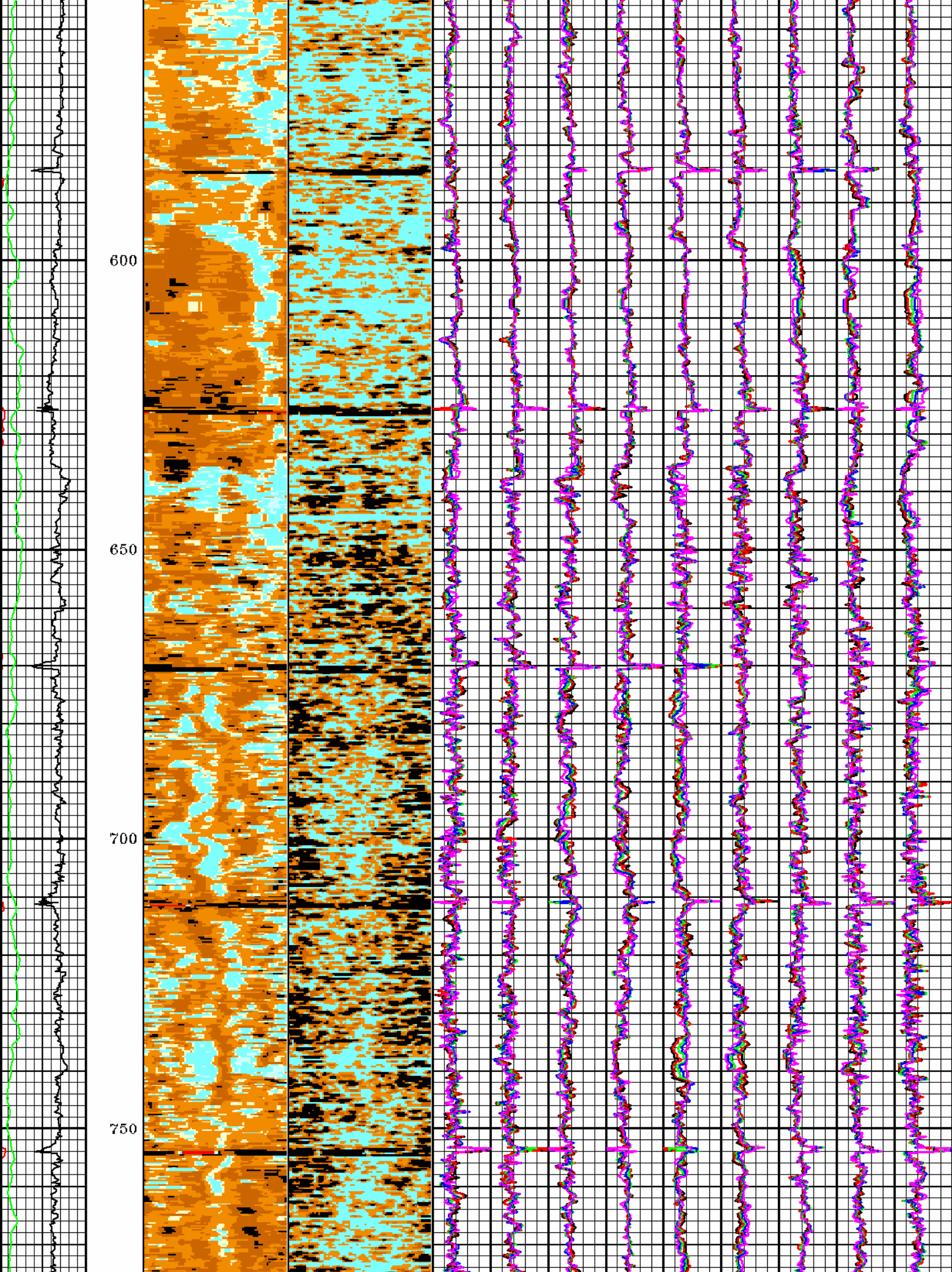
Top Depth: 97.50
 Bottom Depth: 8770.50

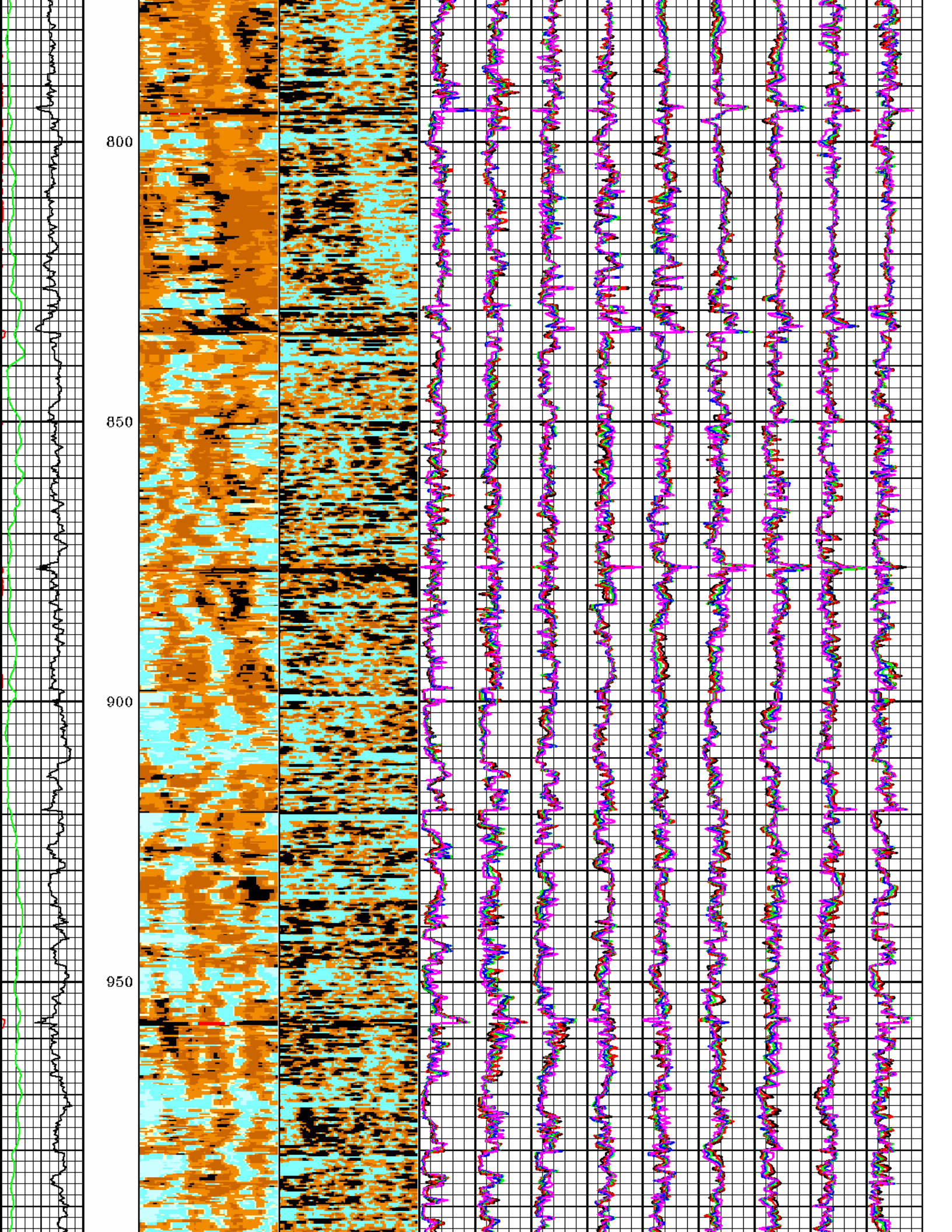
WELLBORE DATA	IMPEDANCE MAP	DZ	SEG. A	SEG. B	SEG. C	SEG. D	SEG. E	SEG. F	SEG. G	SEG. H	SEG. I
ZAVG	1:240 FT.	ZP	CA1	CB1	CC1	CD1	CE1	CF1	CG1	CH1	CI1
ECTY			CA2	CB2	CC2	CD2	CE2	CF2	CG2	CH2	CI2
GR			CA3	CB3	CC3	CD3	CE3	CF3	CG3	CH3	CI3
OVAL			CA4	CB4	CC4	CD4	CE4	CF4	CG4	CH4	CI4
			CA5	CB5	CC5	CD5	CE5	CF5	CG5	CH5	CI5

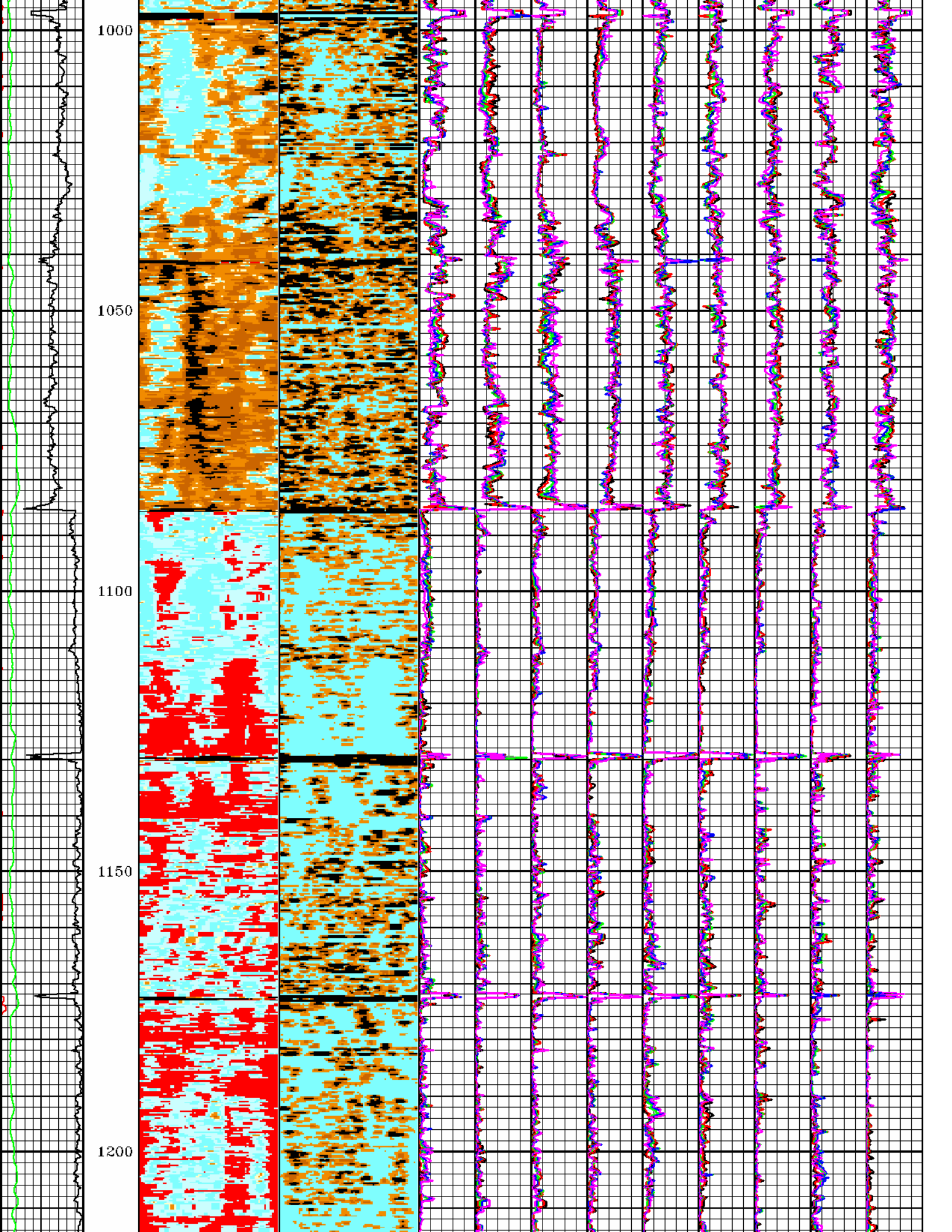


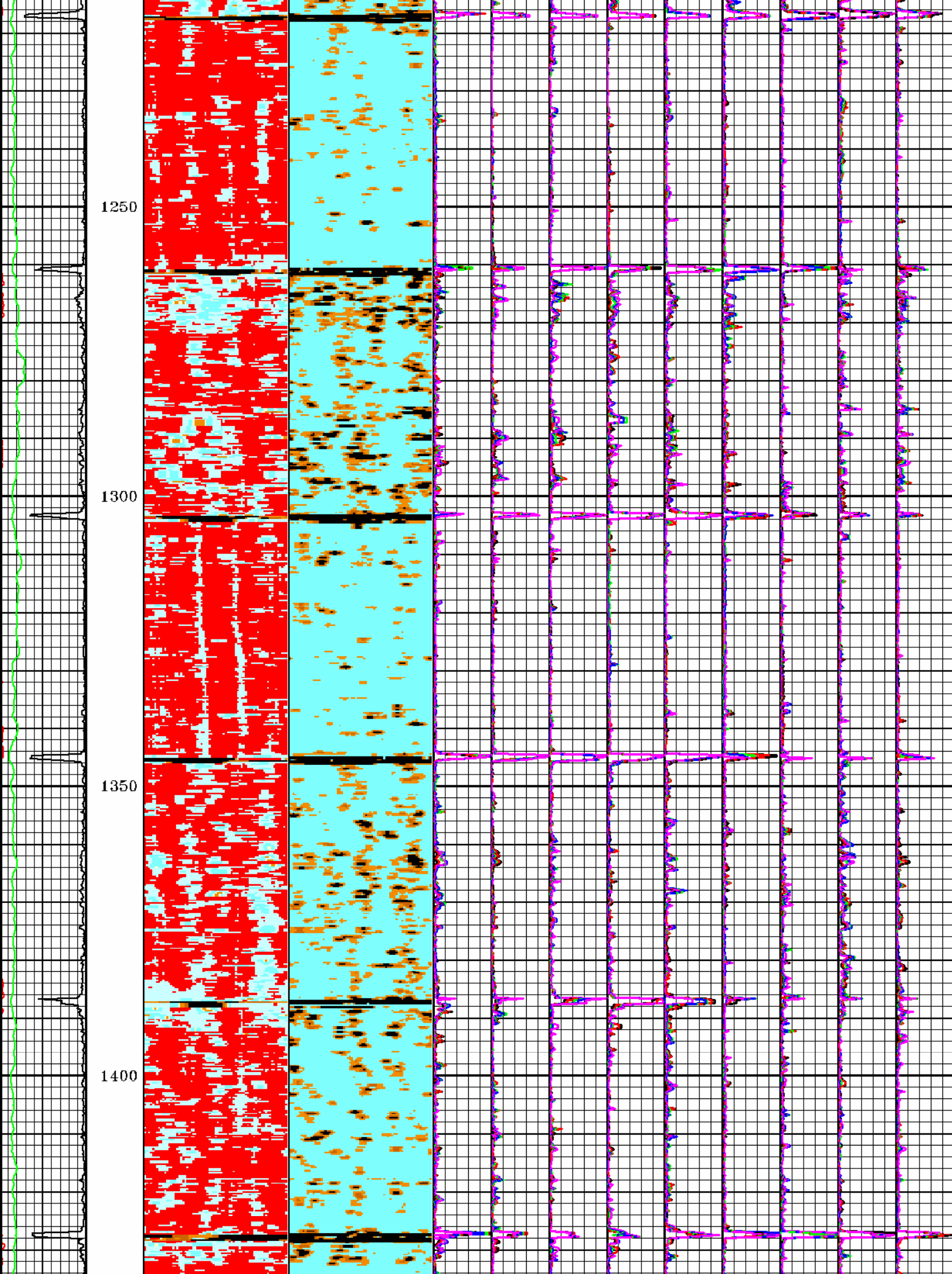


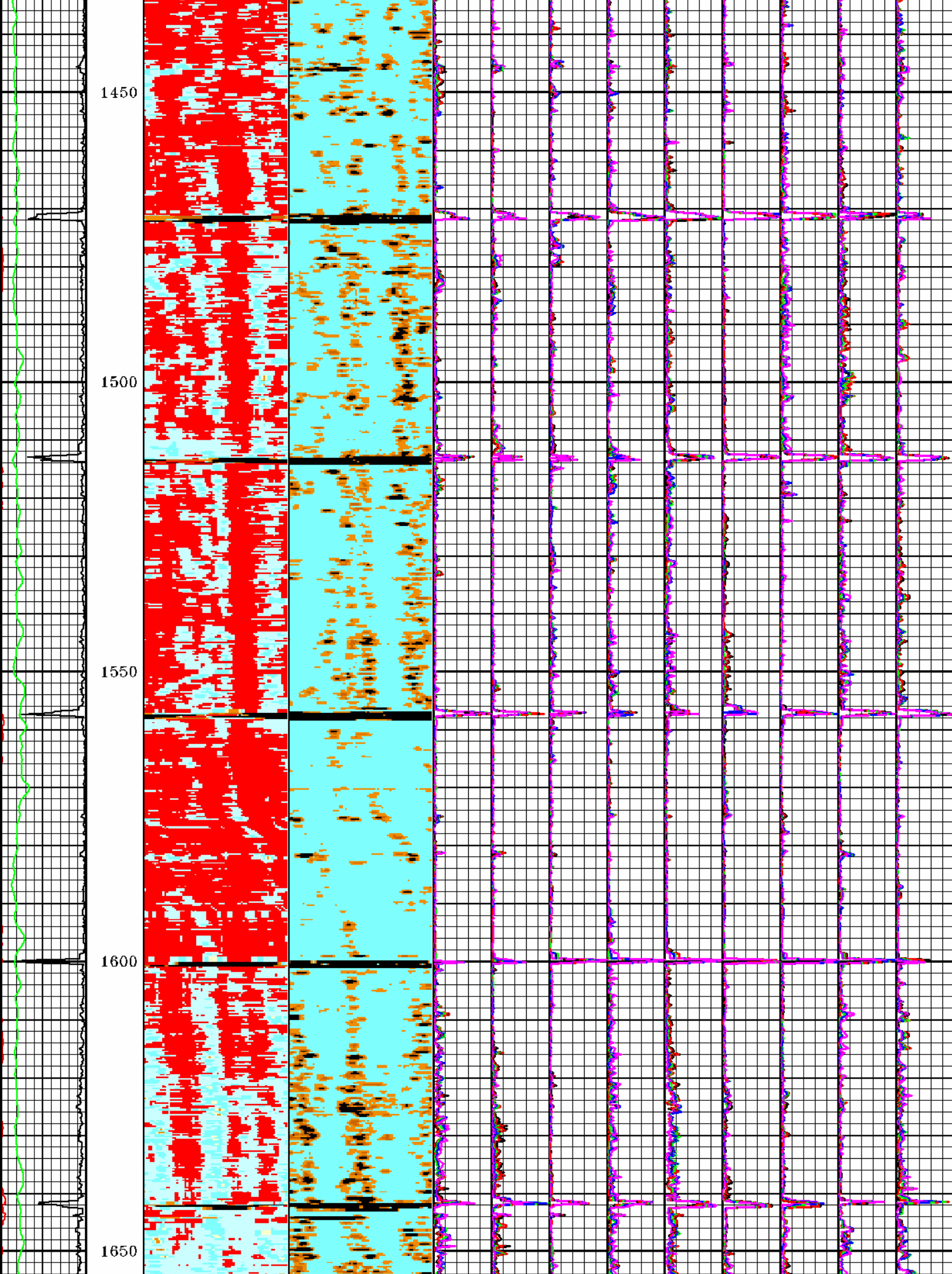


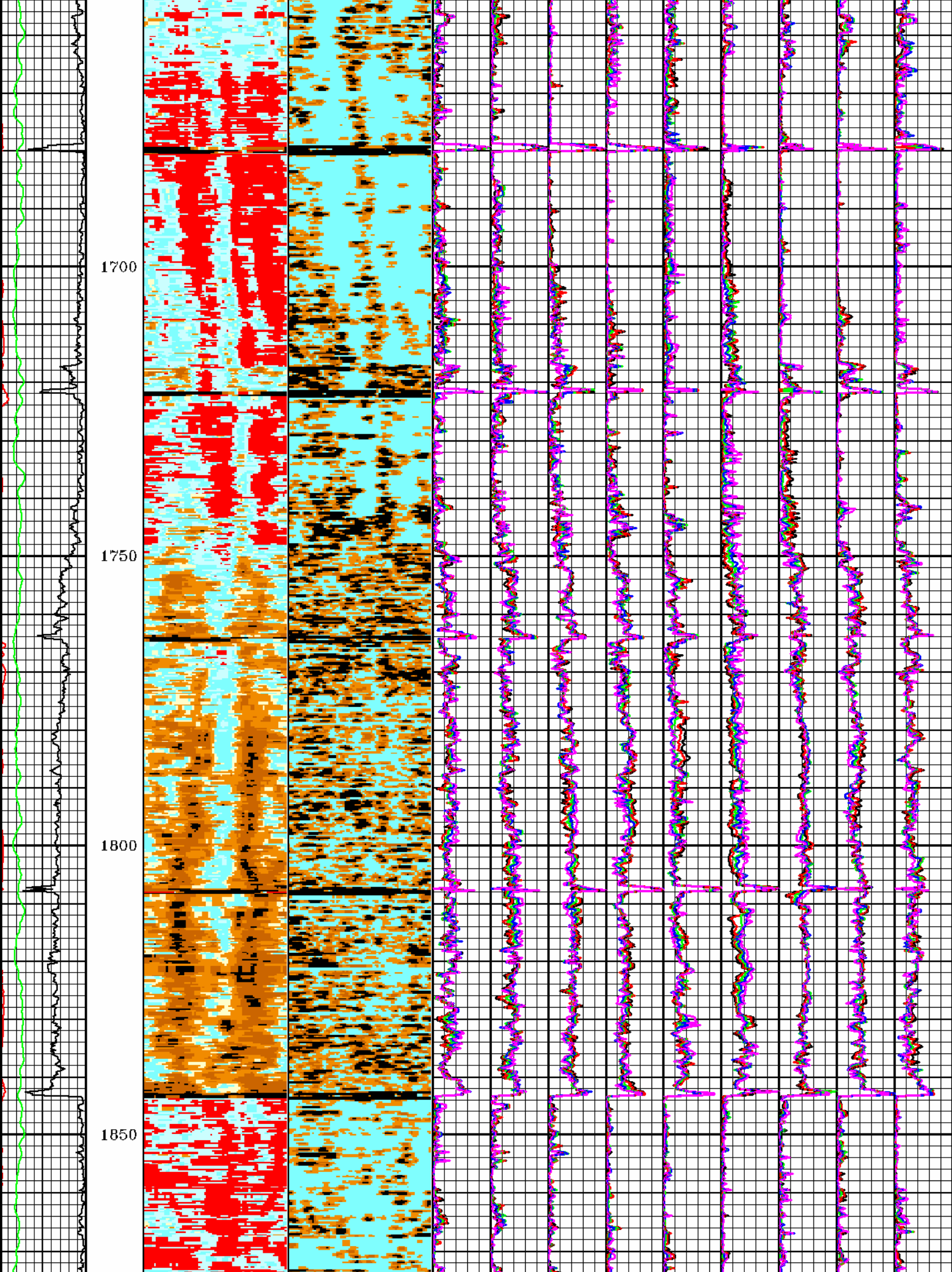


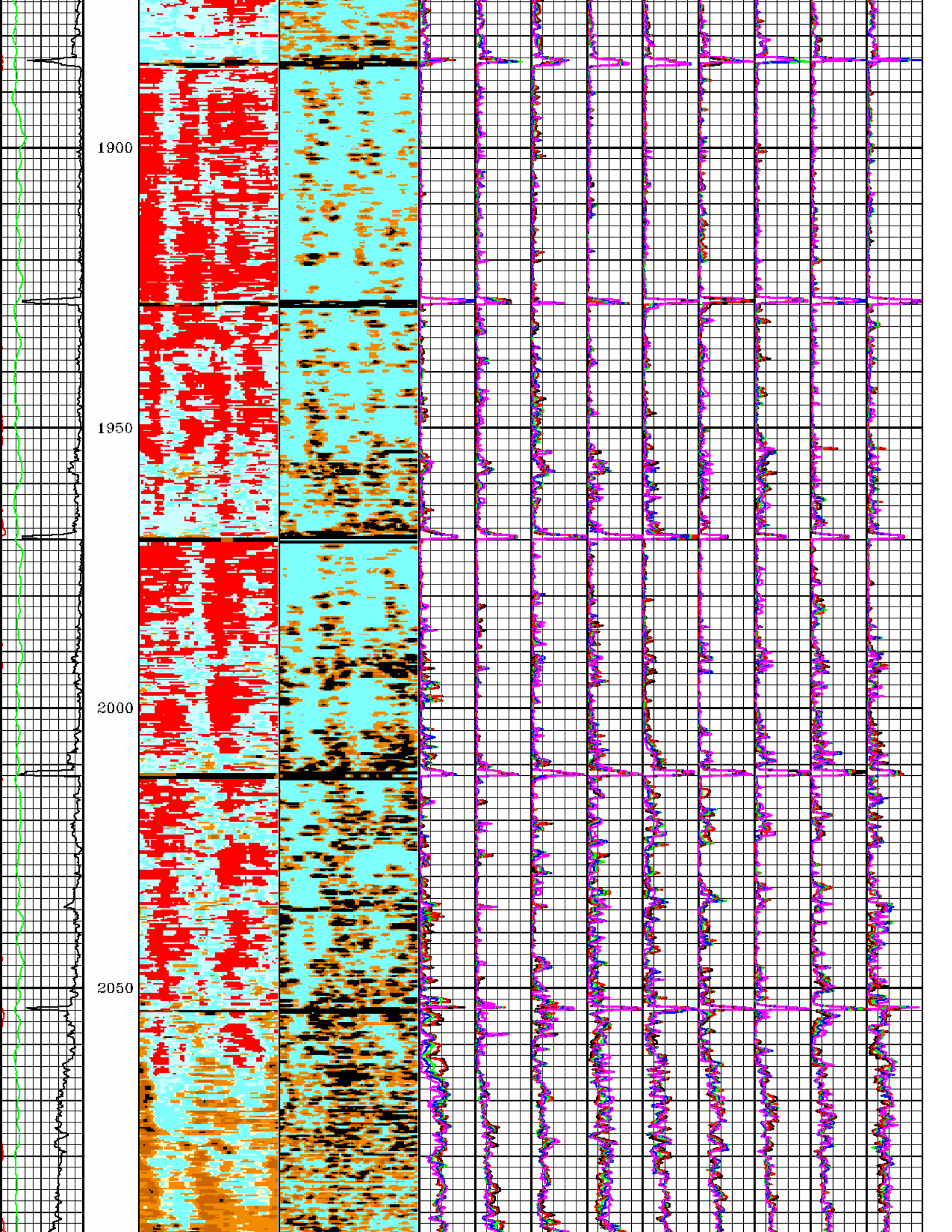


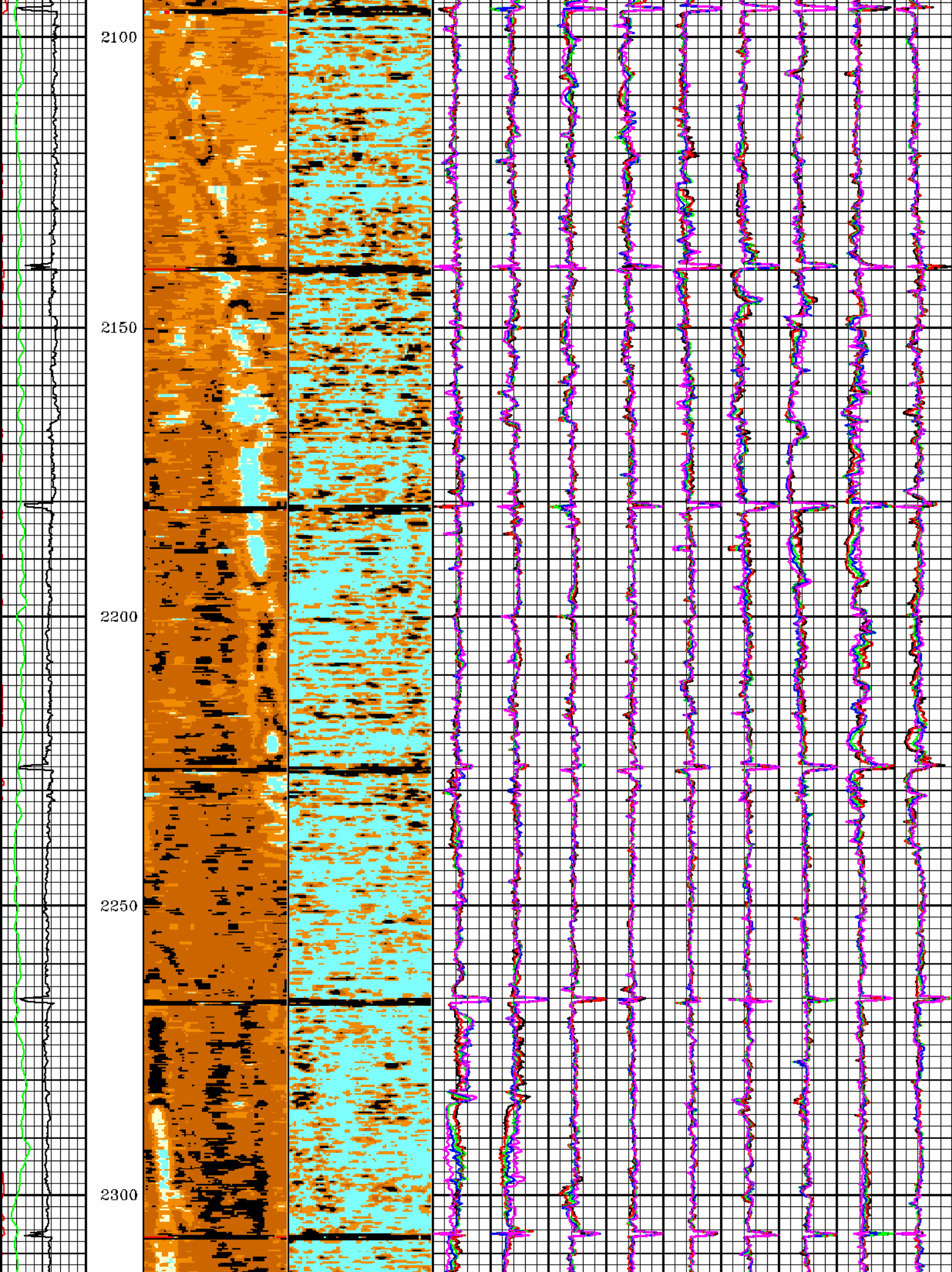


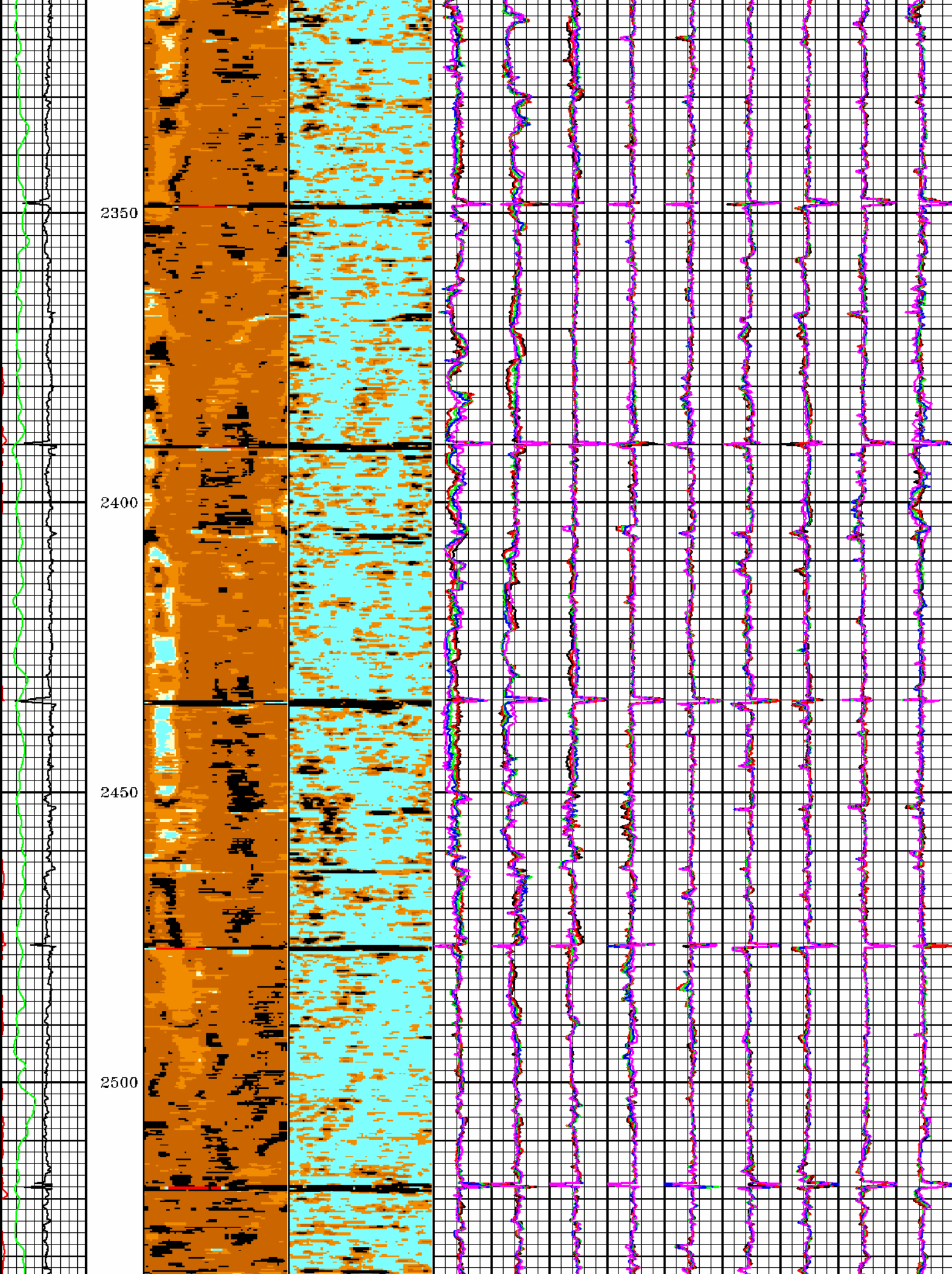


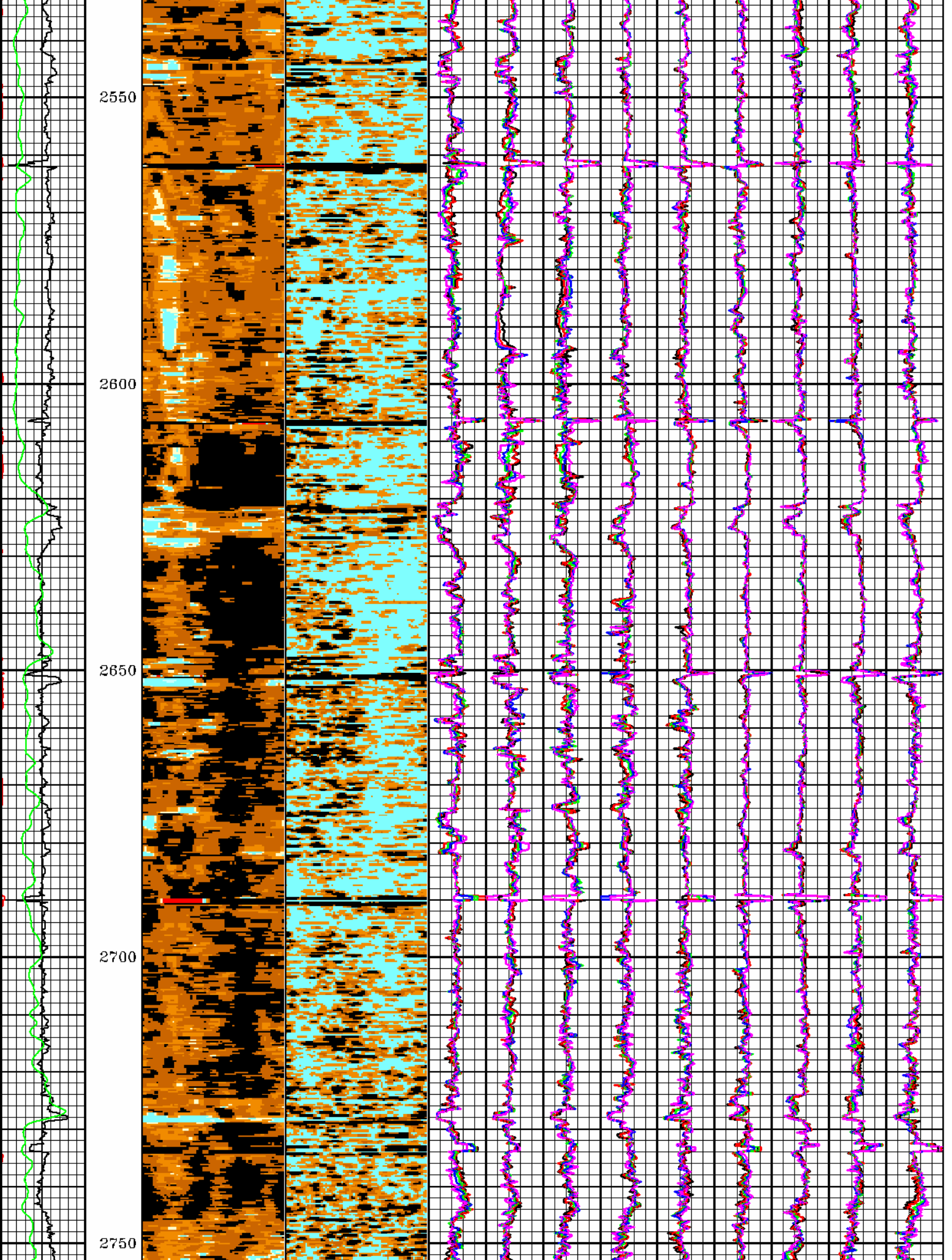


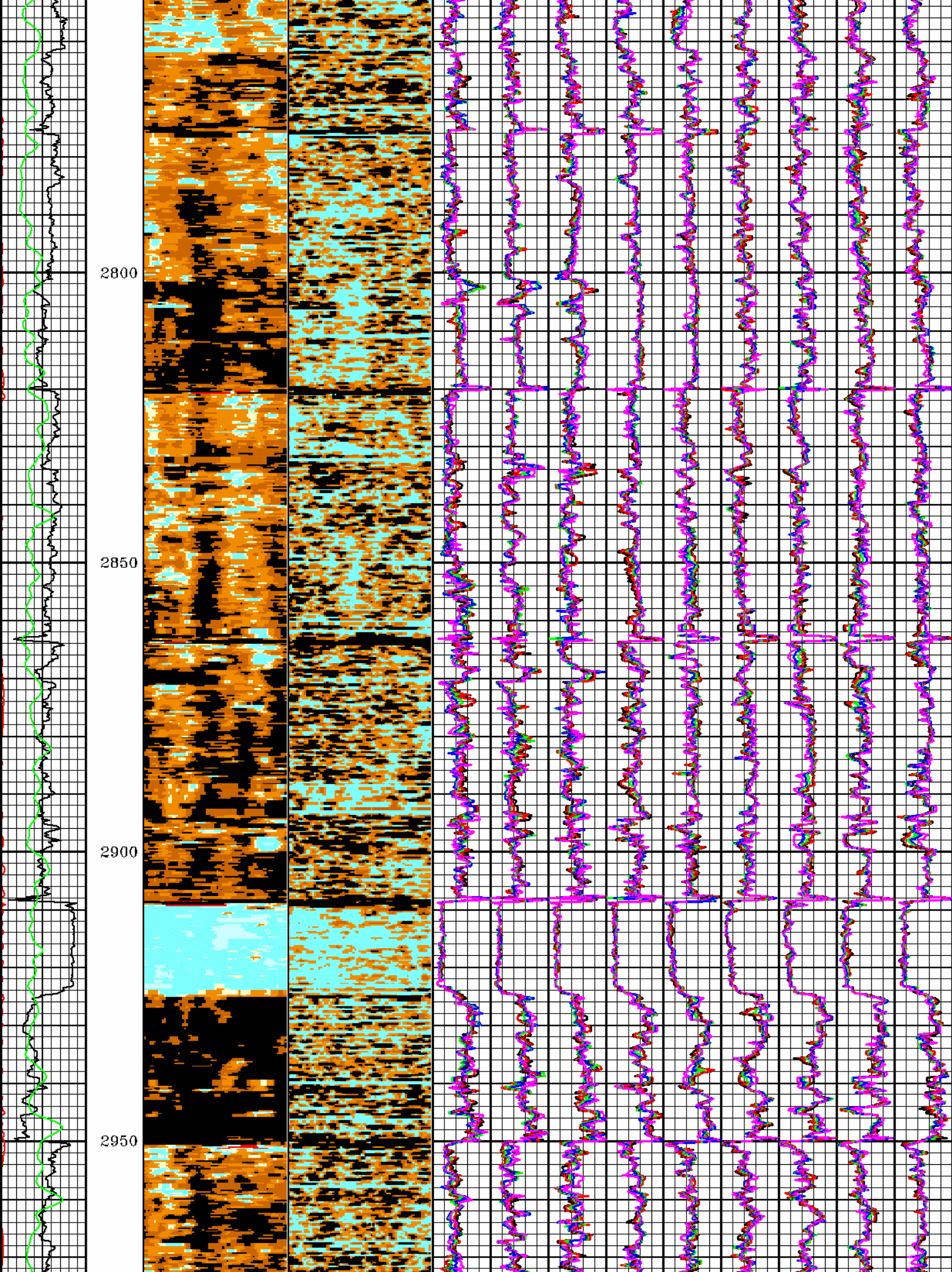


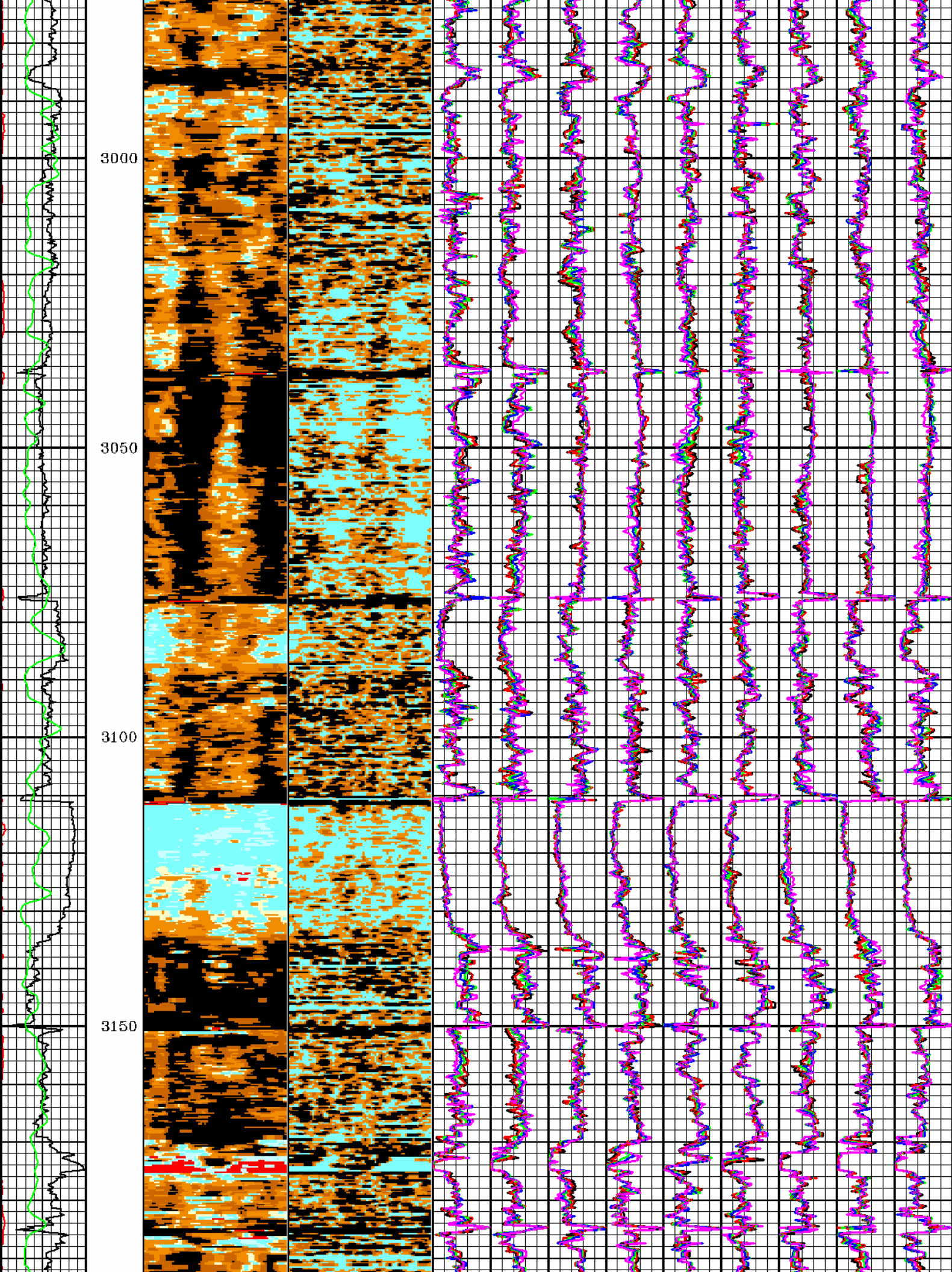


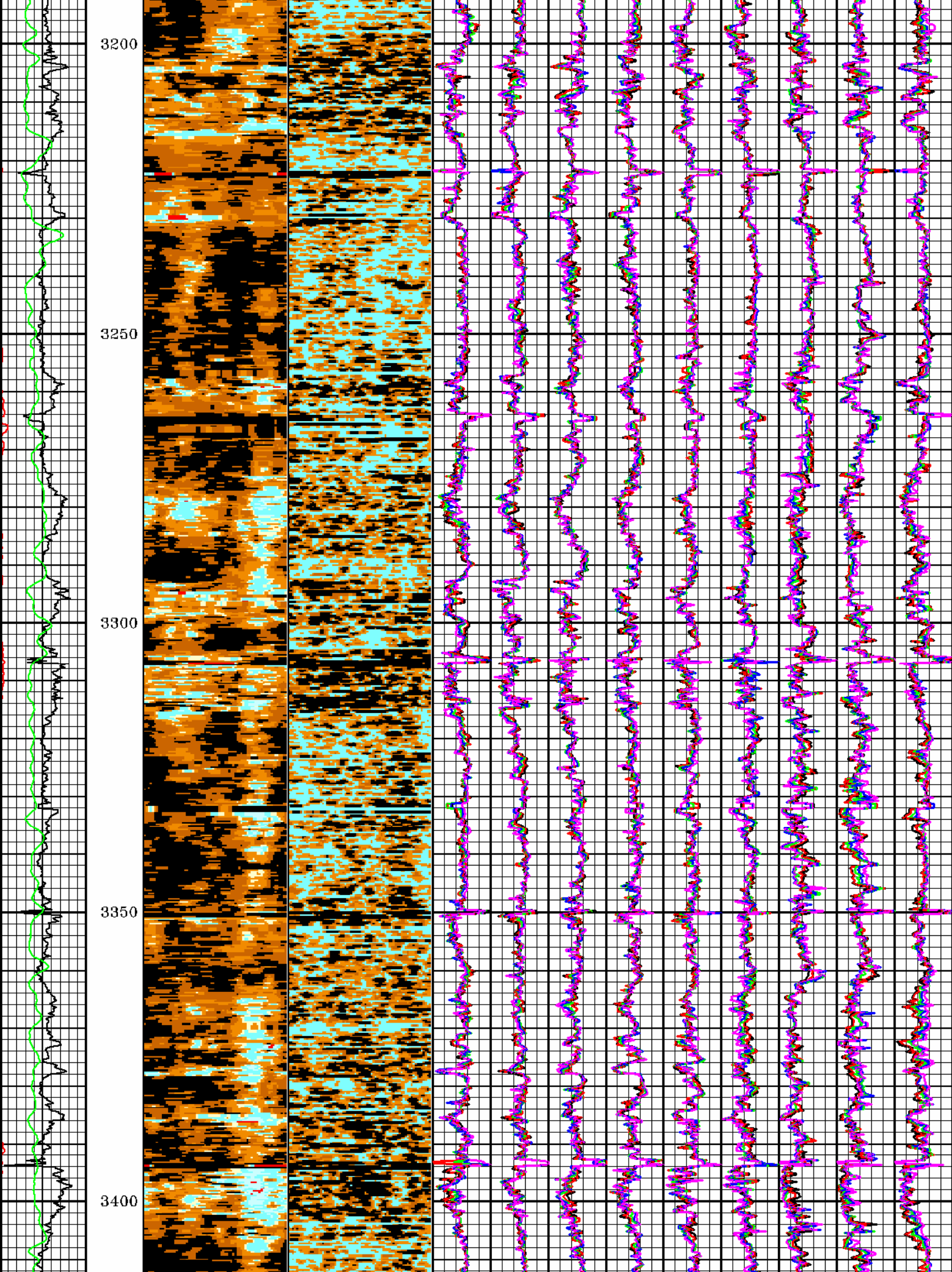


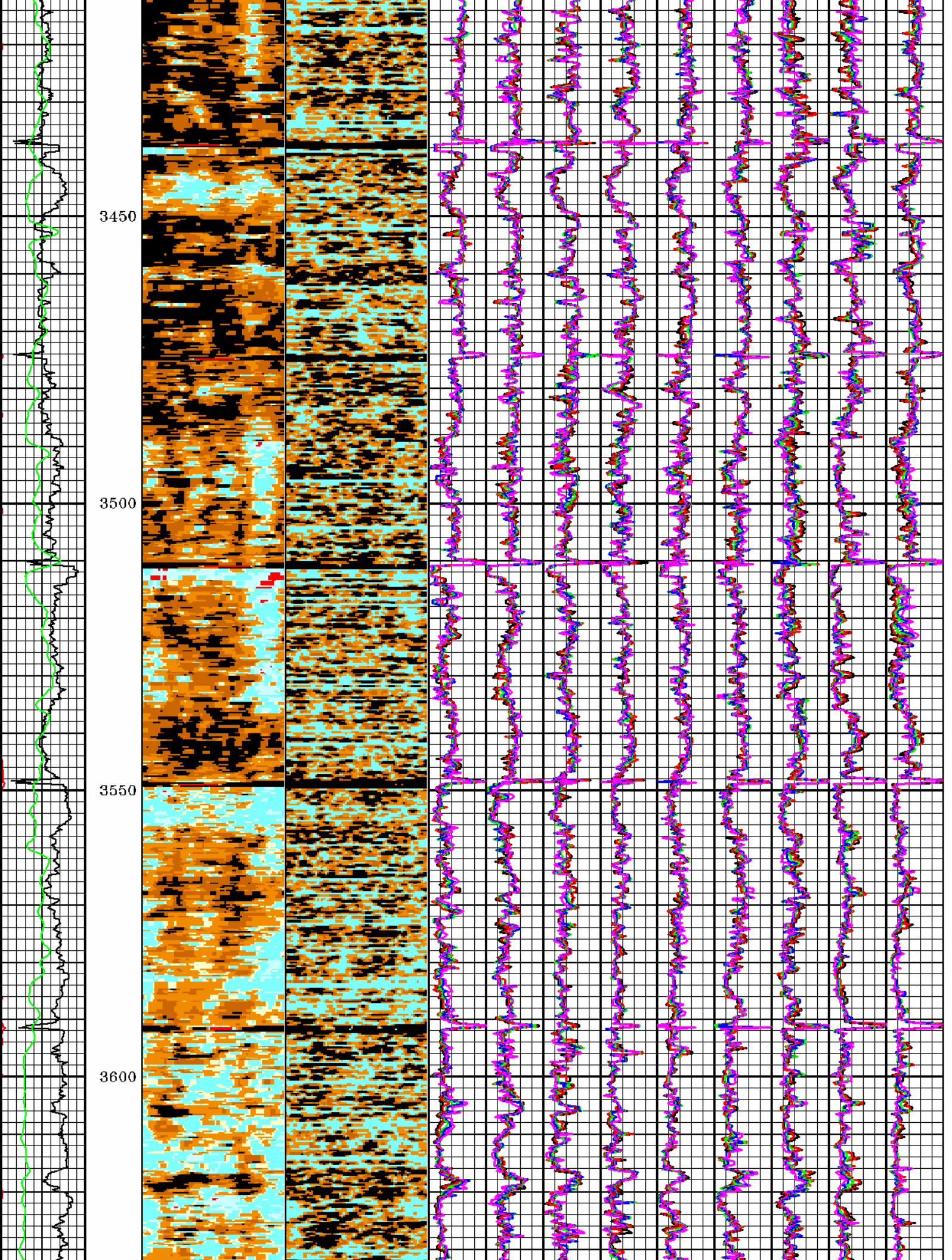


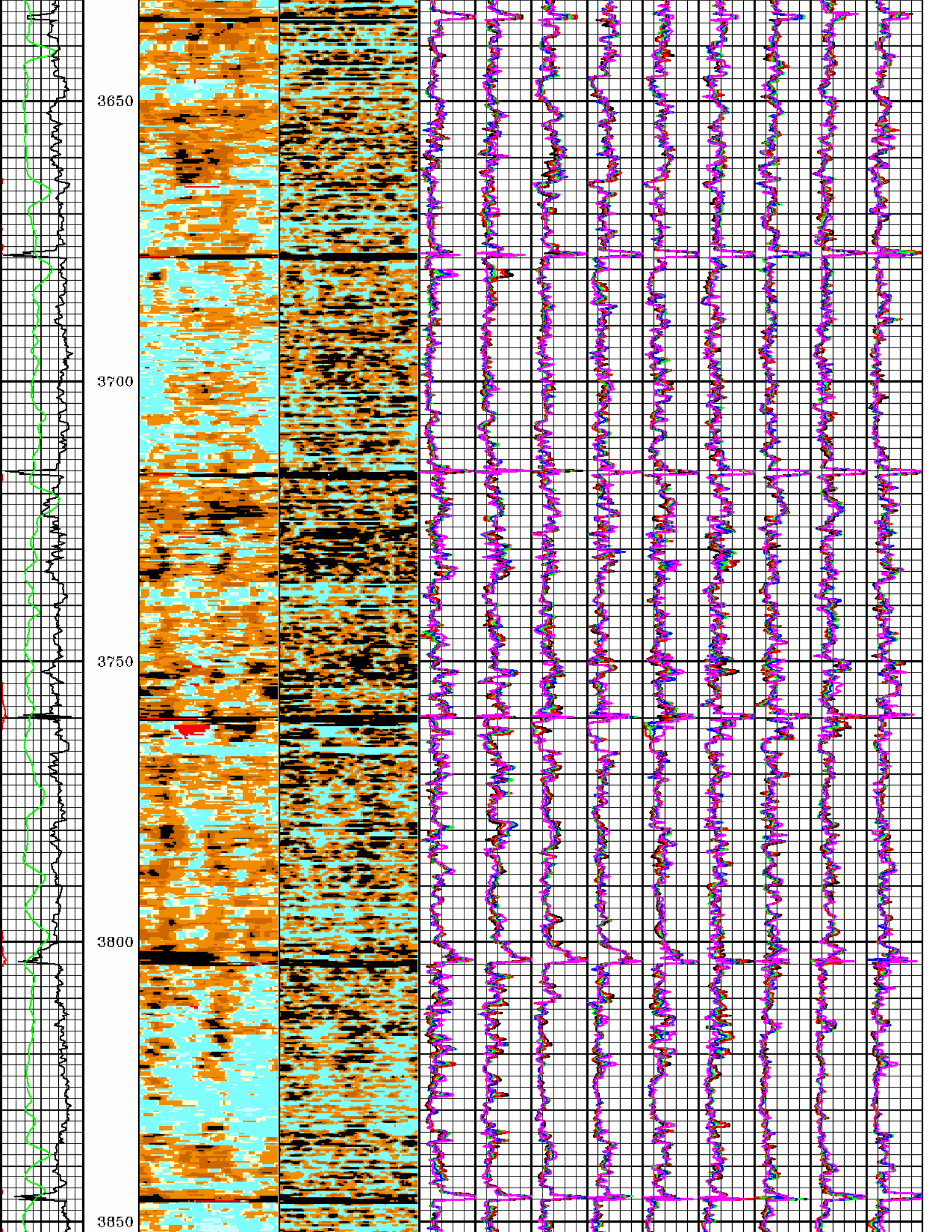


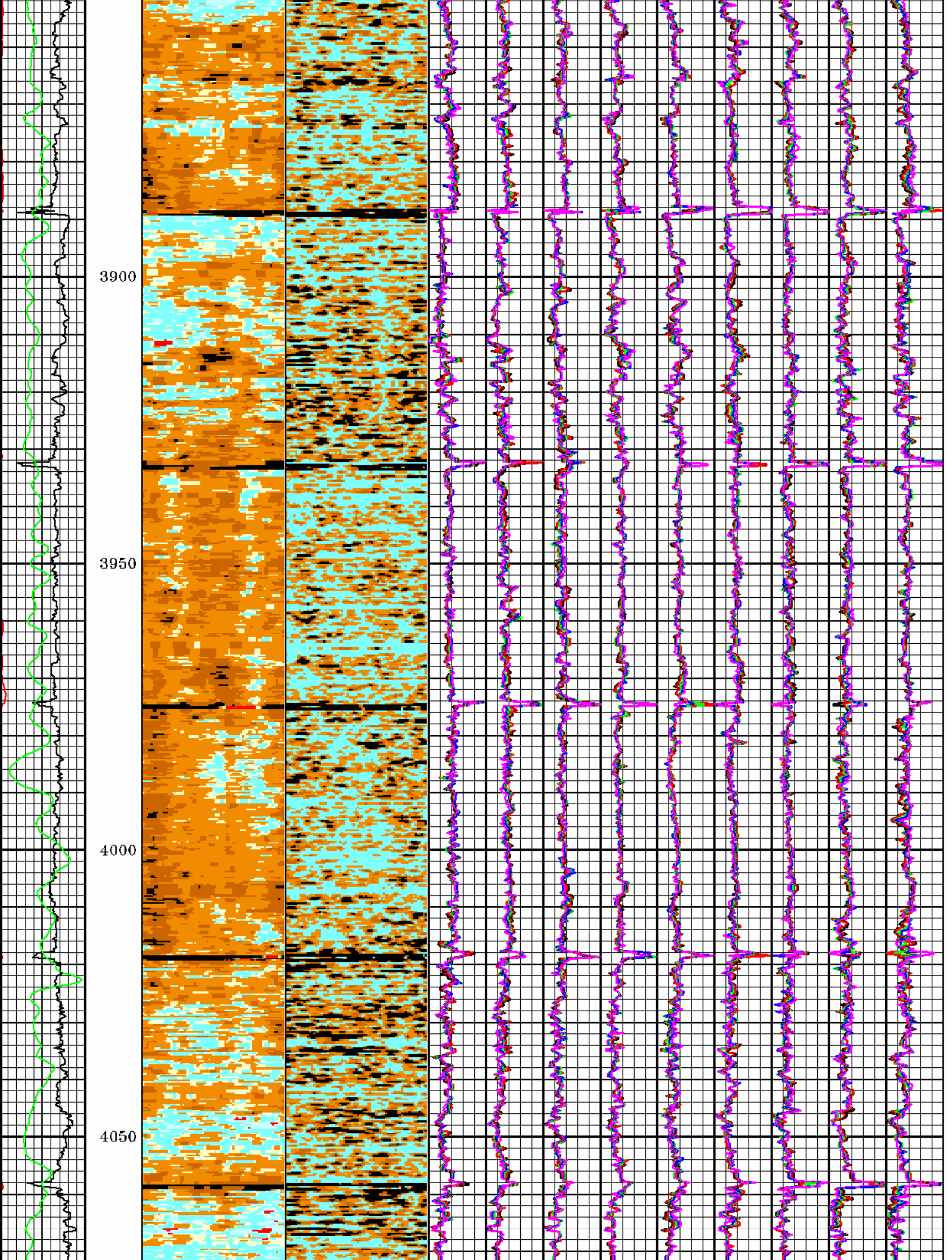


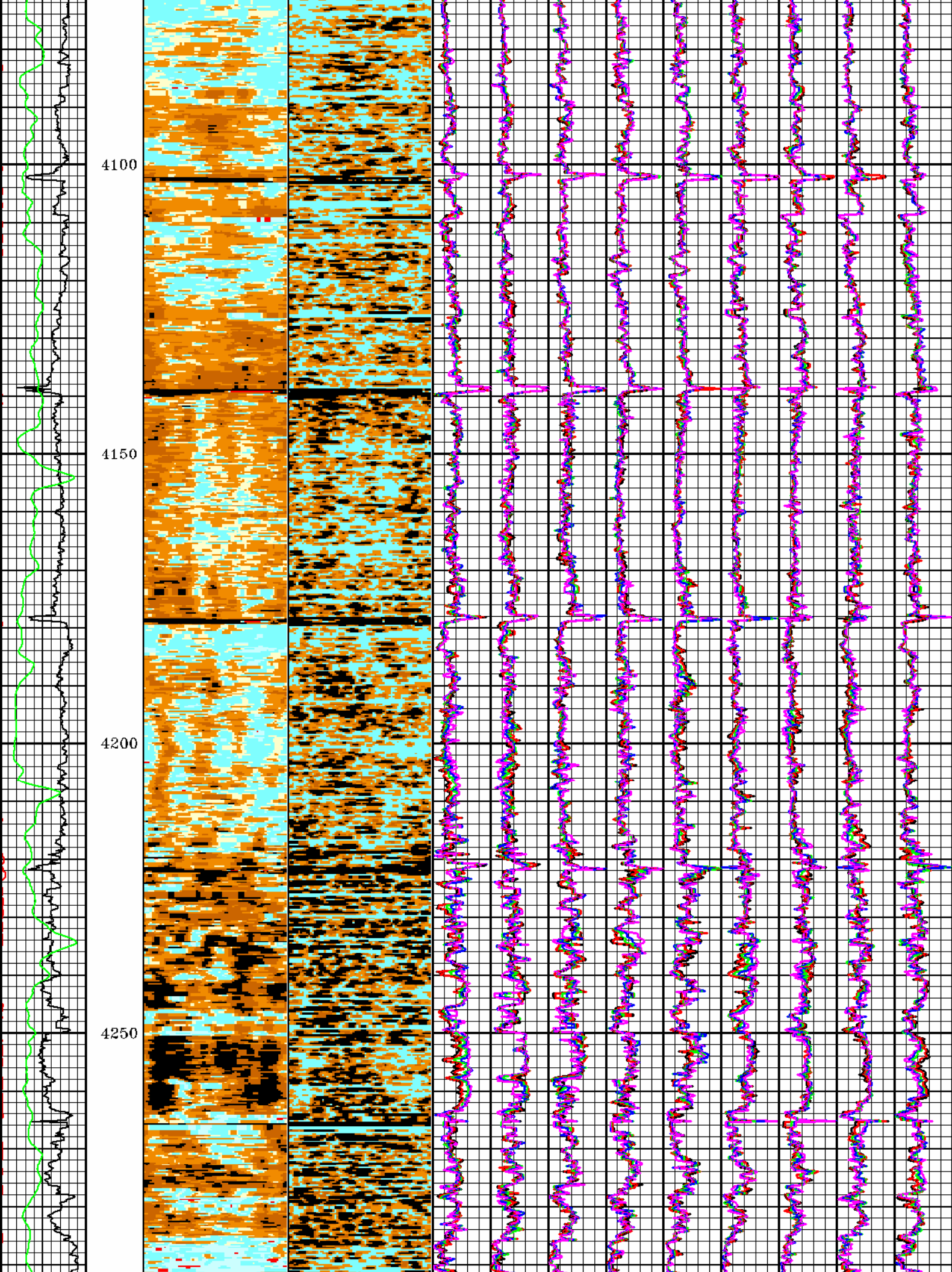


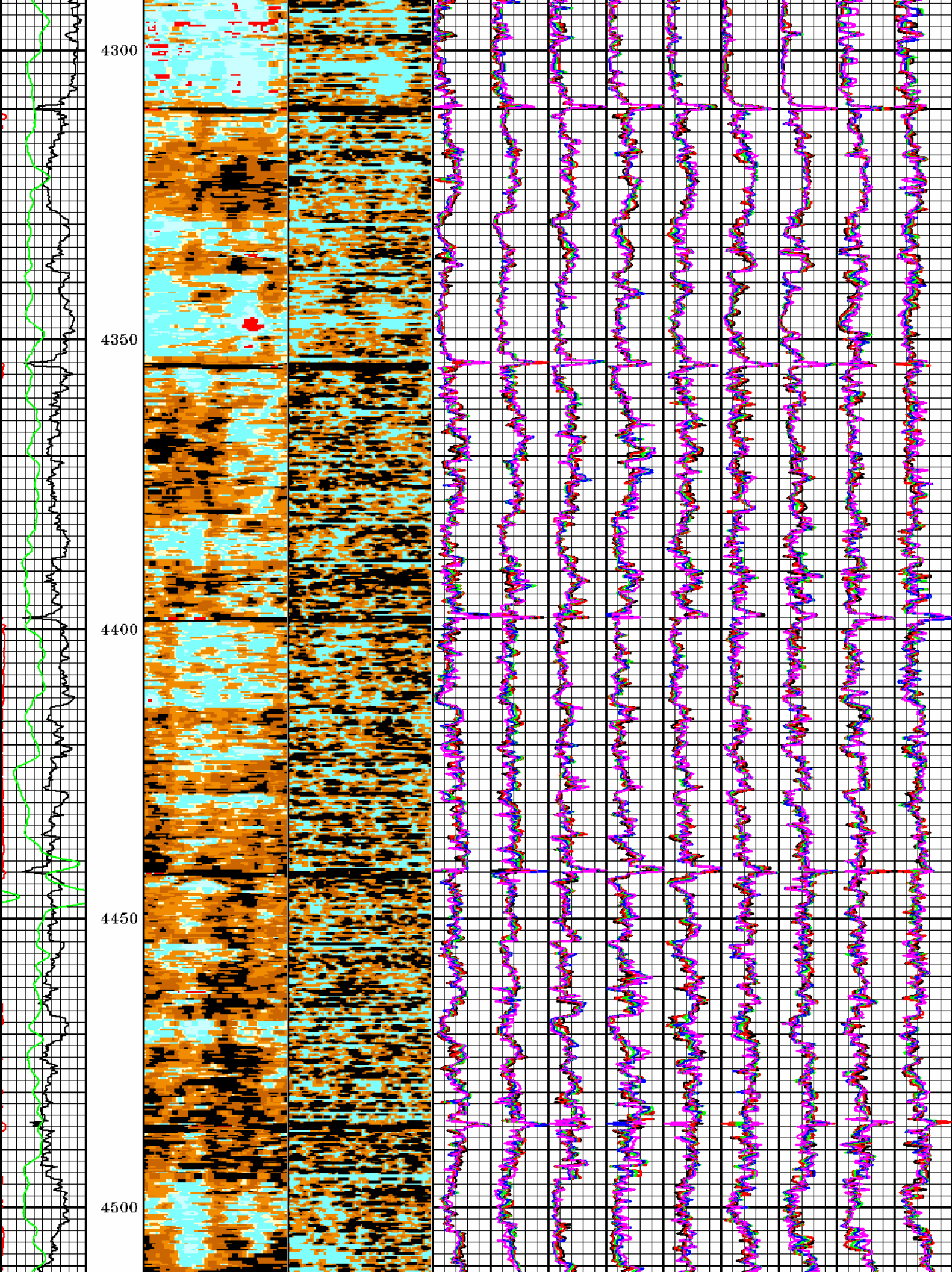


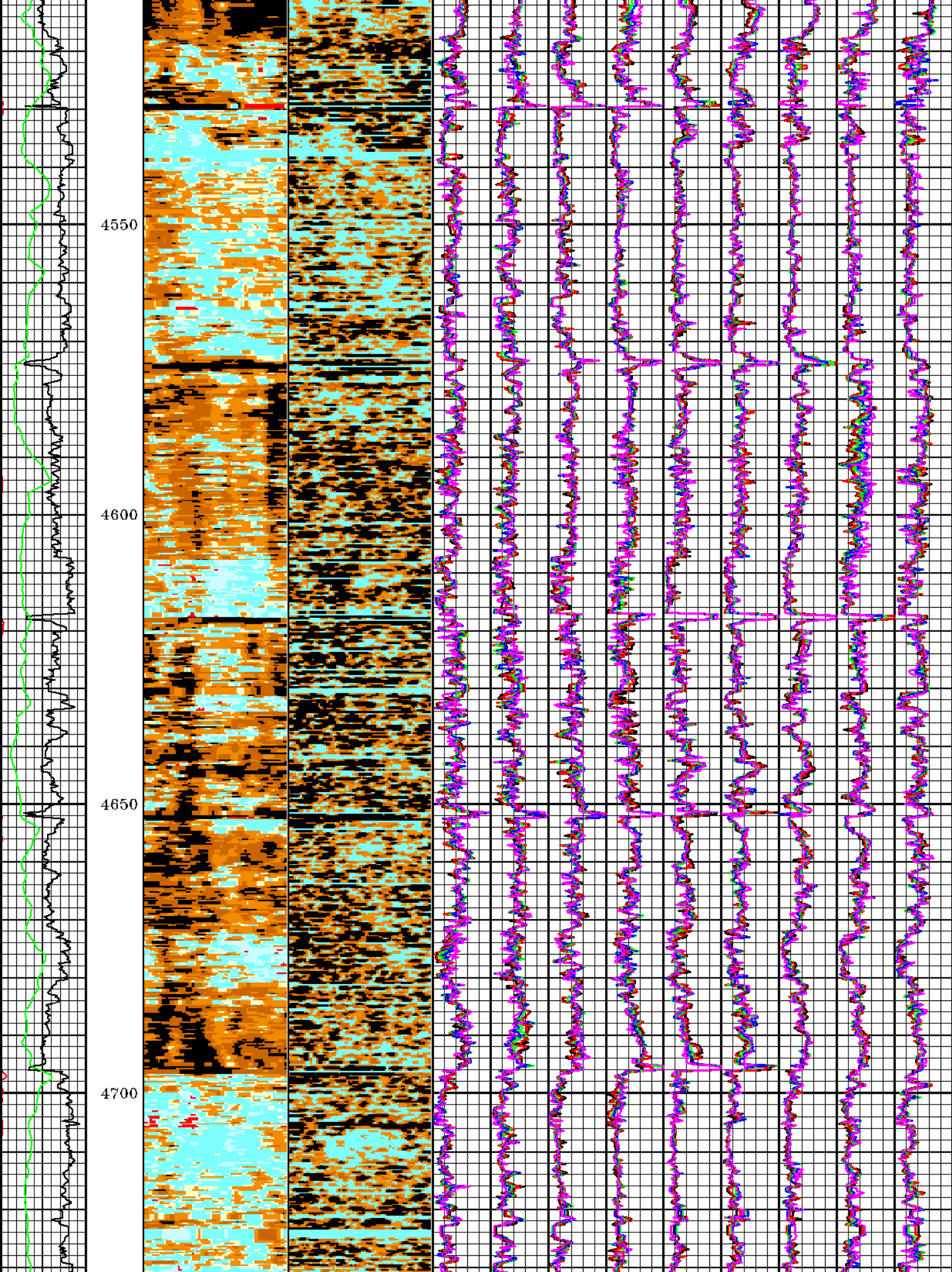


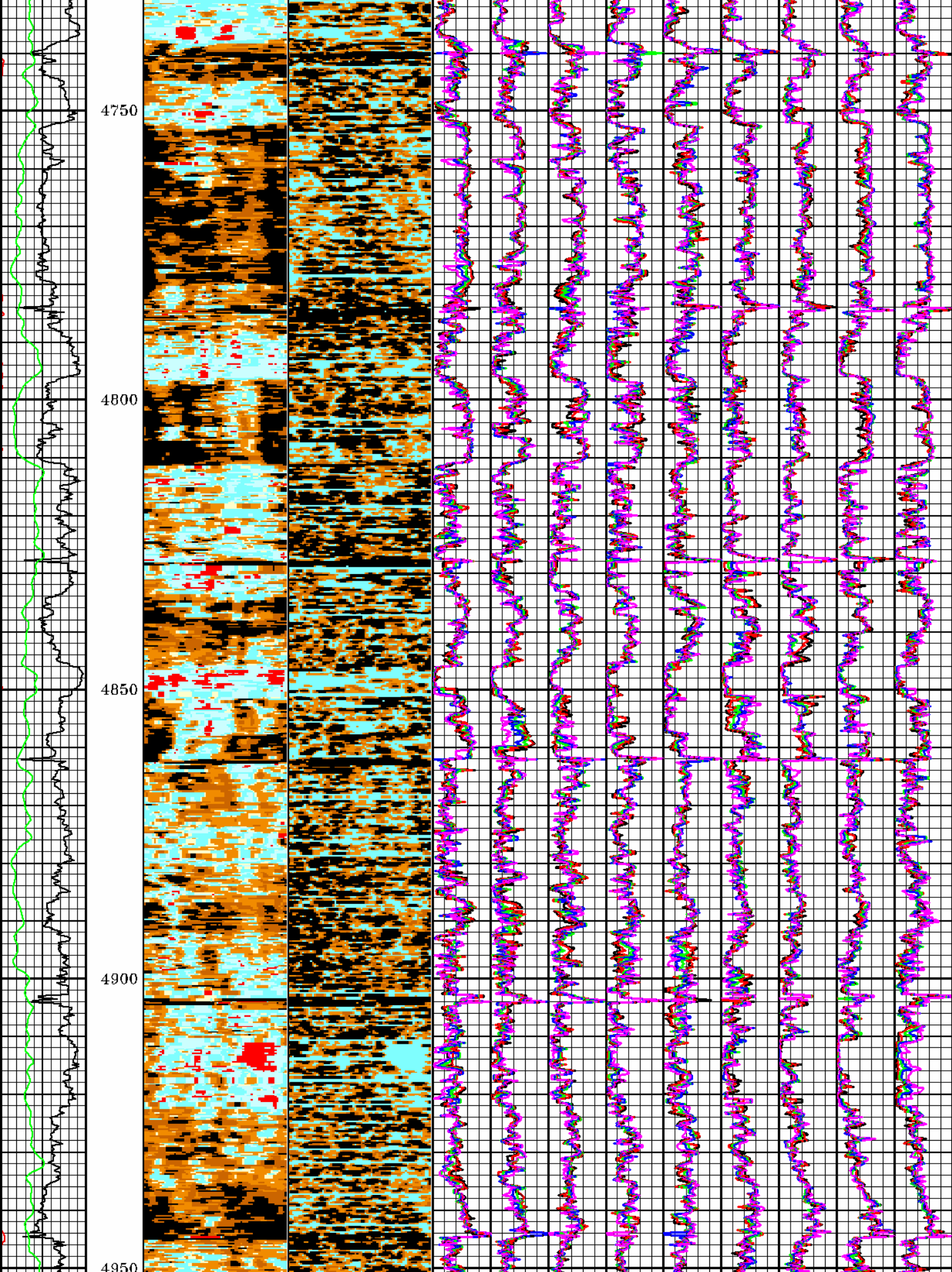


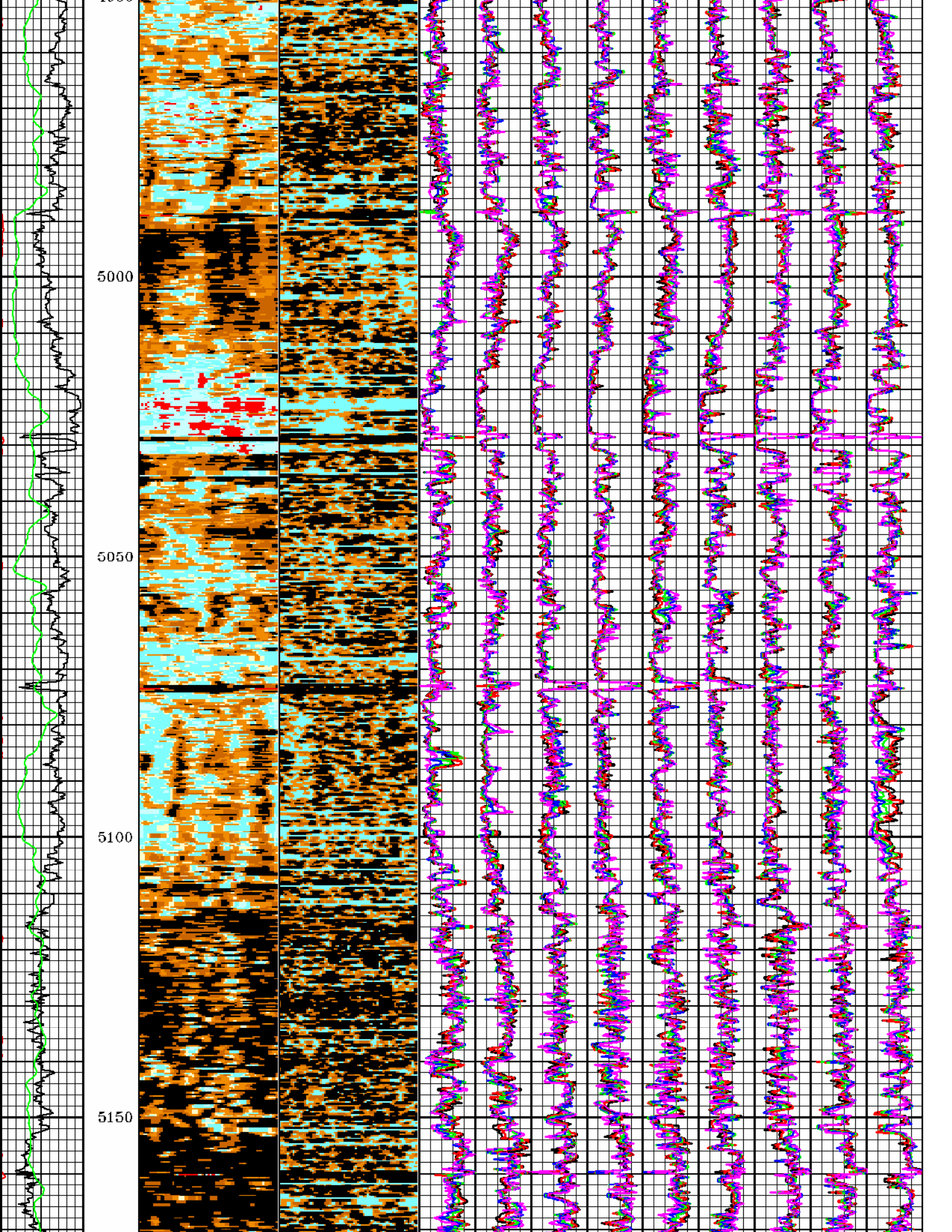


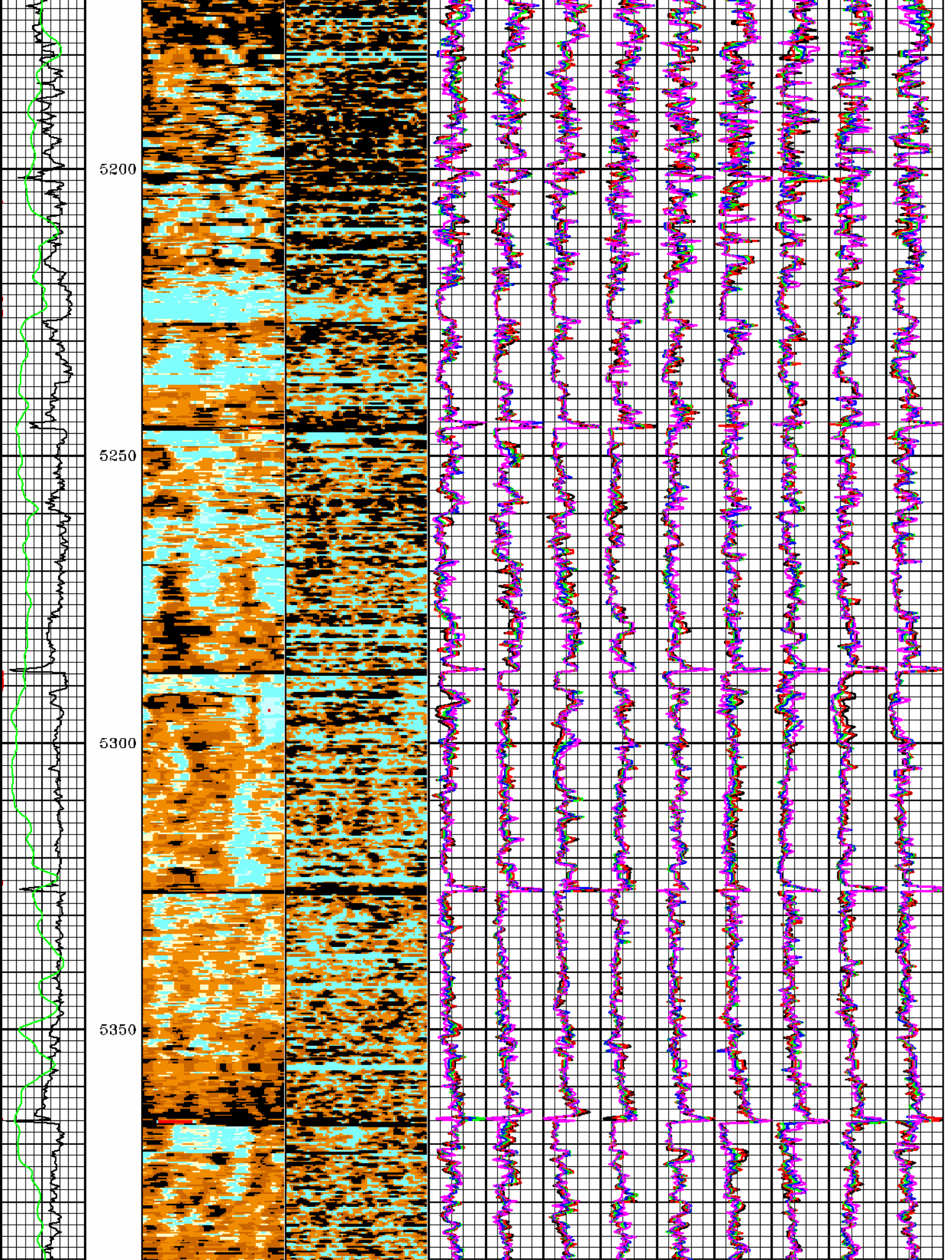


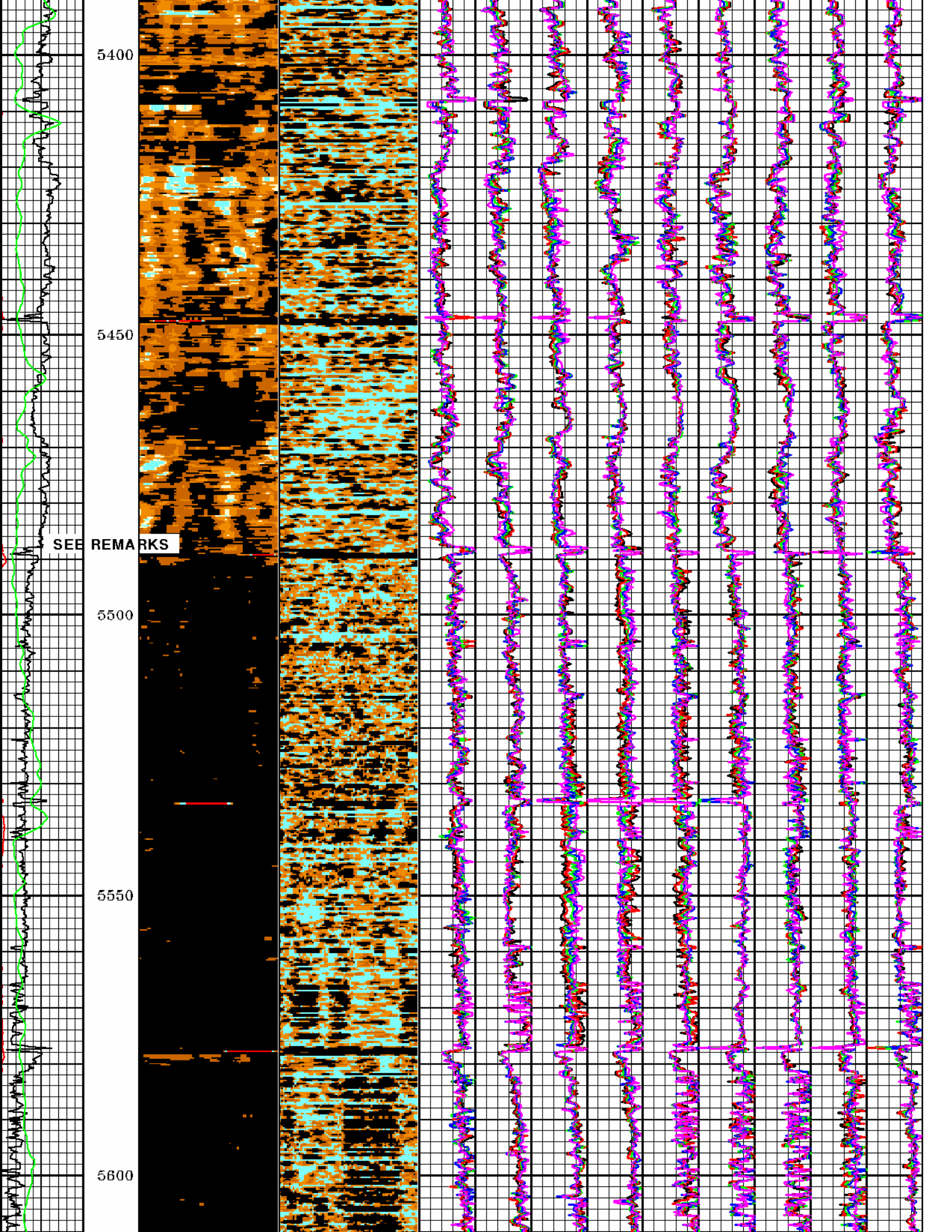


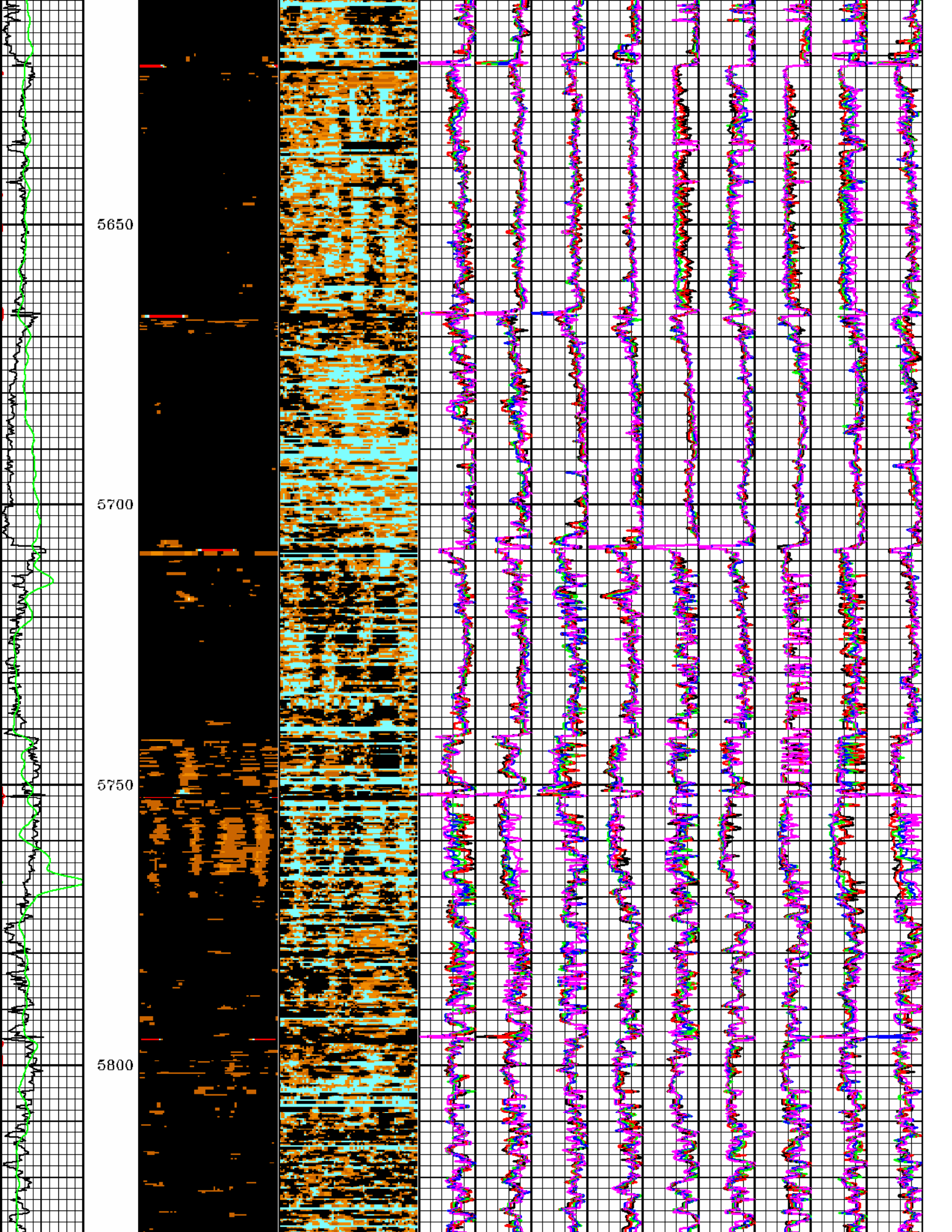


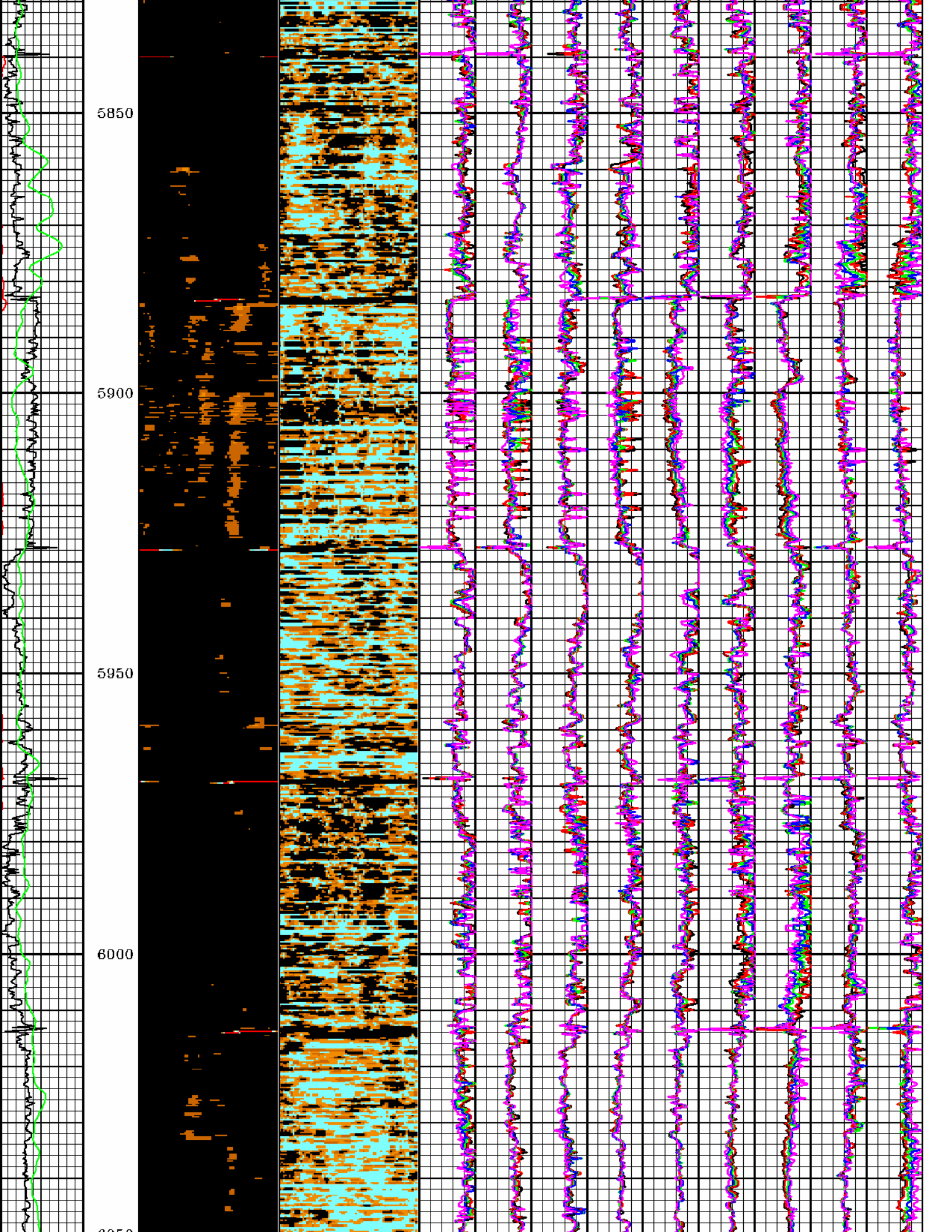


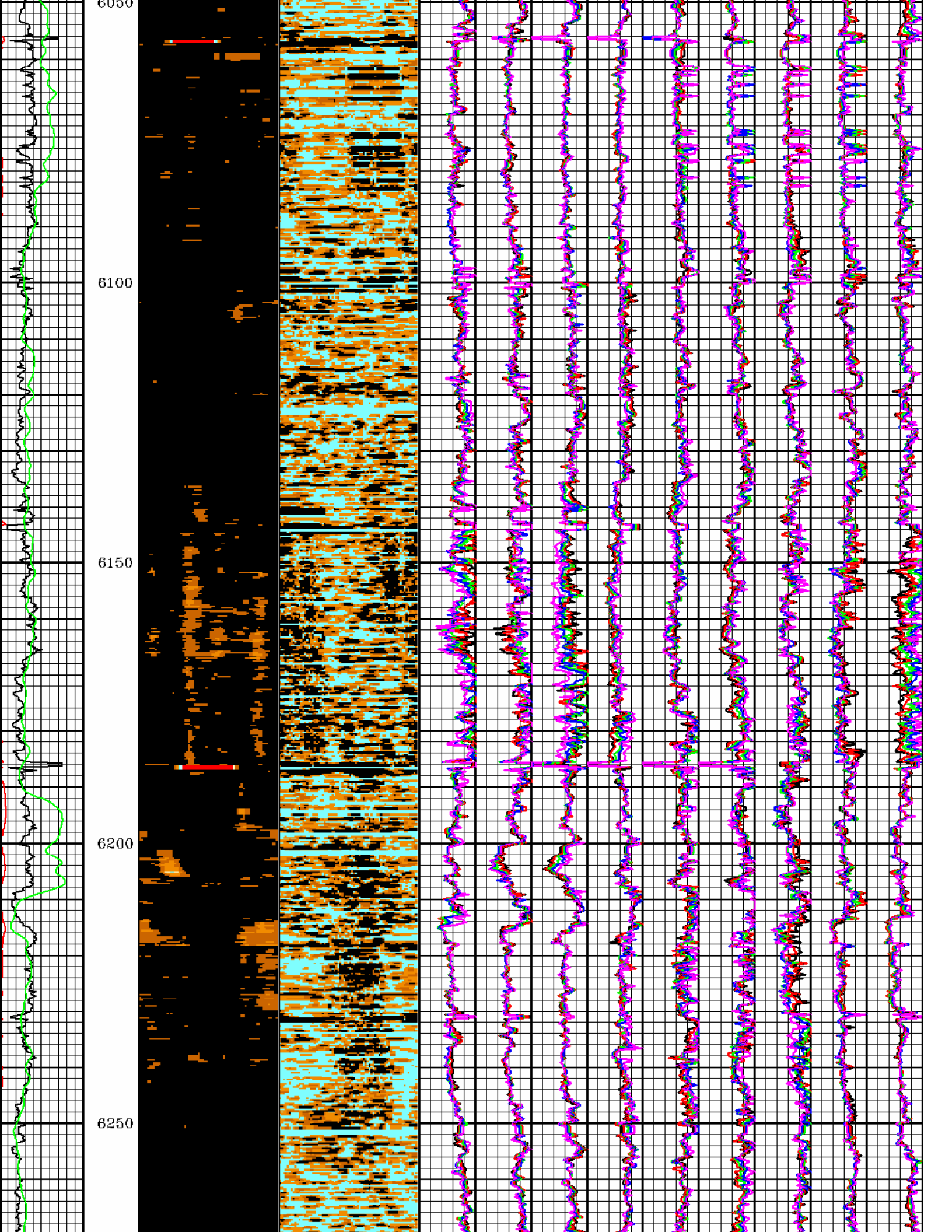


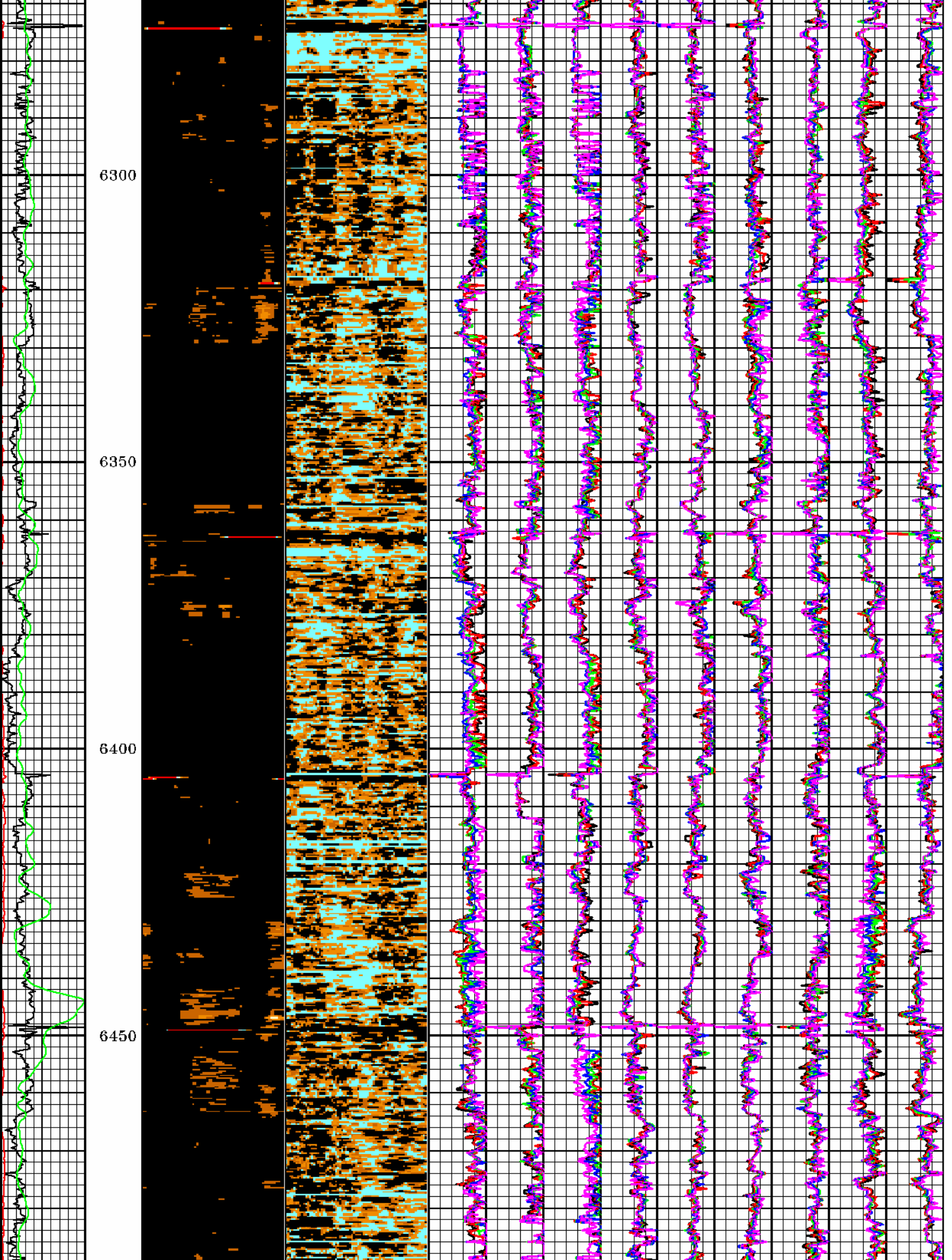


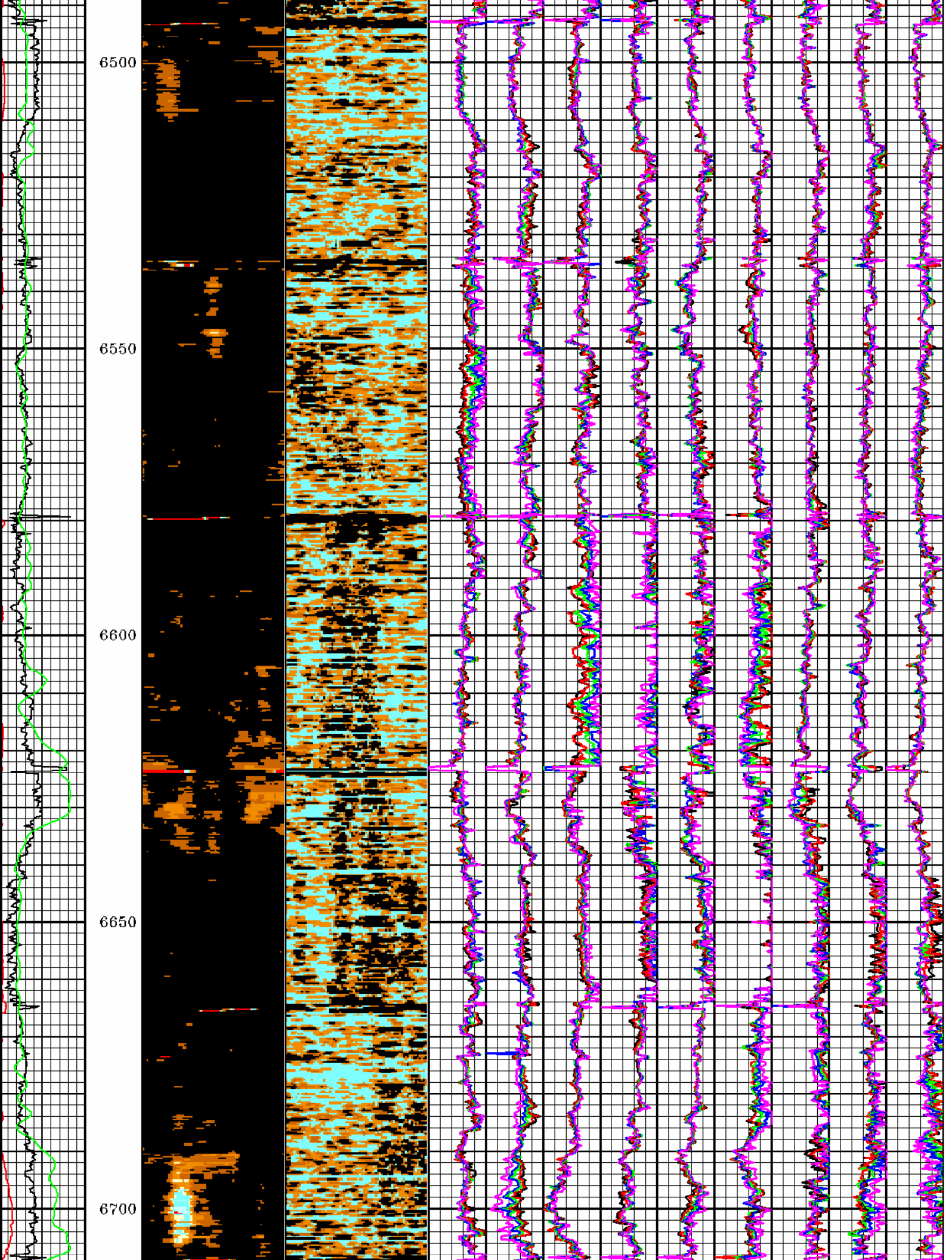


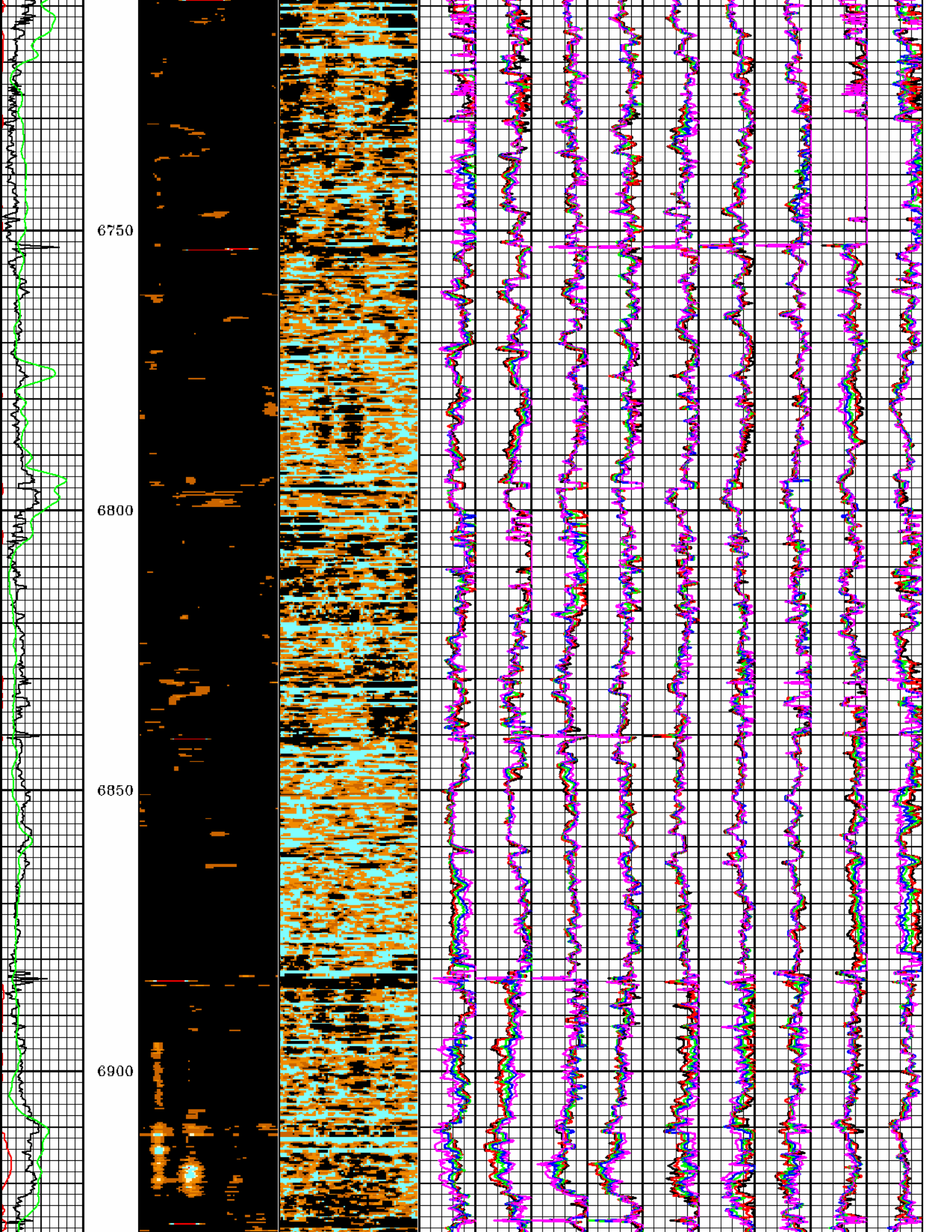


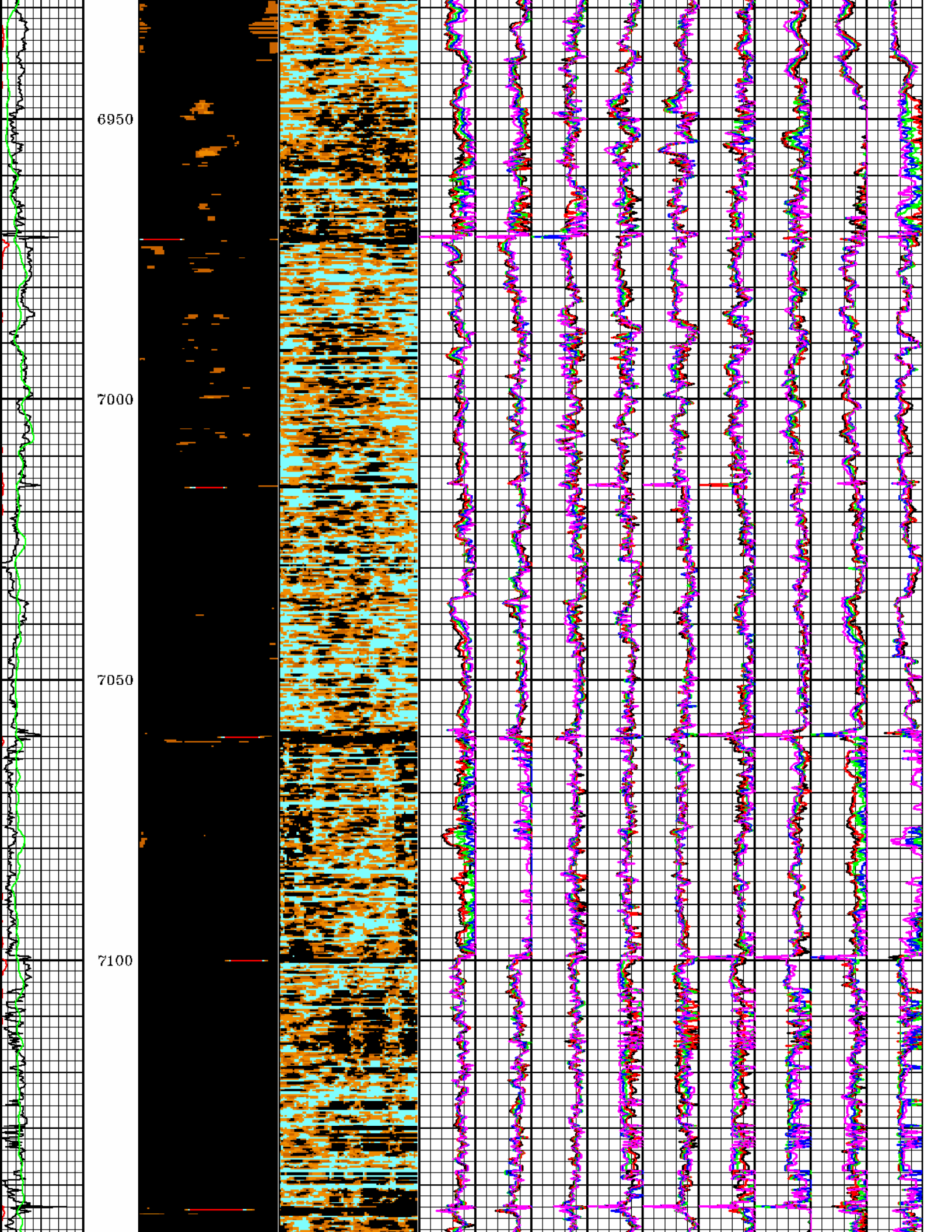


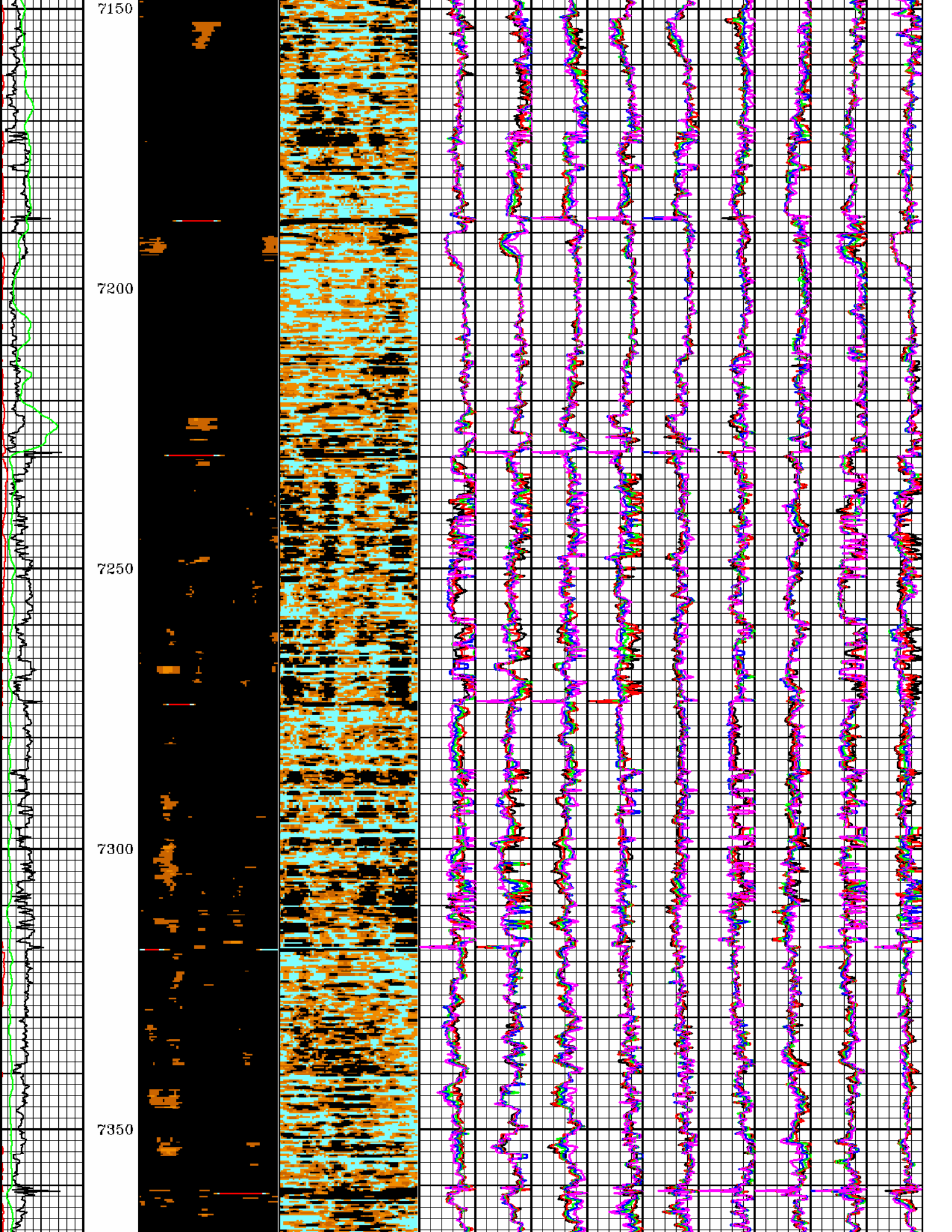


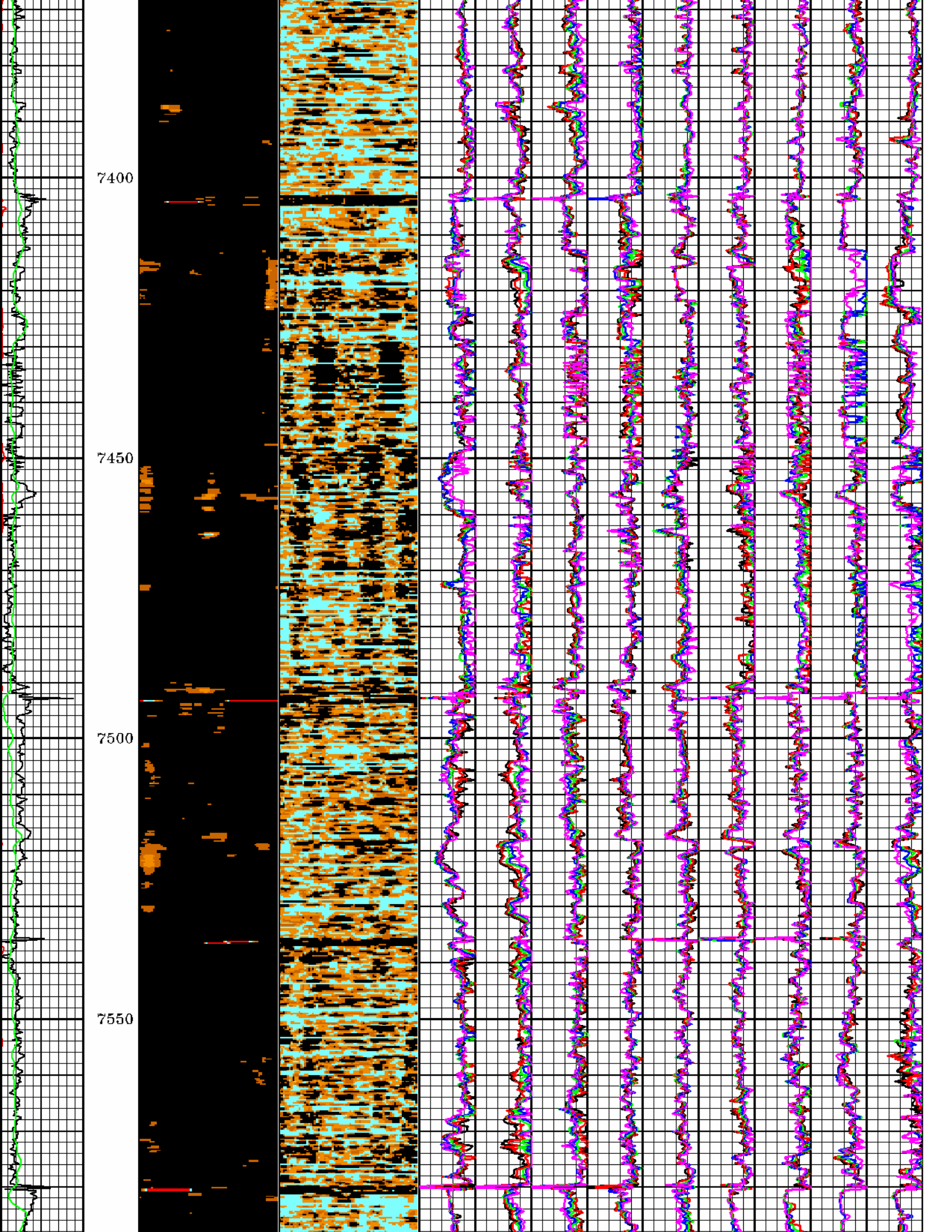


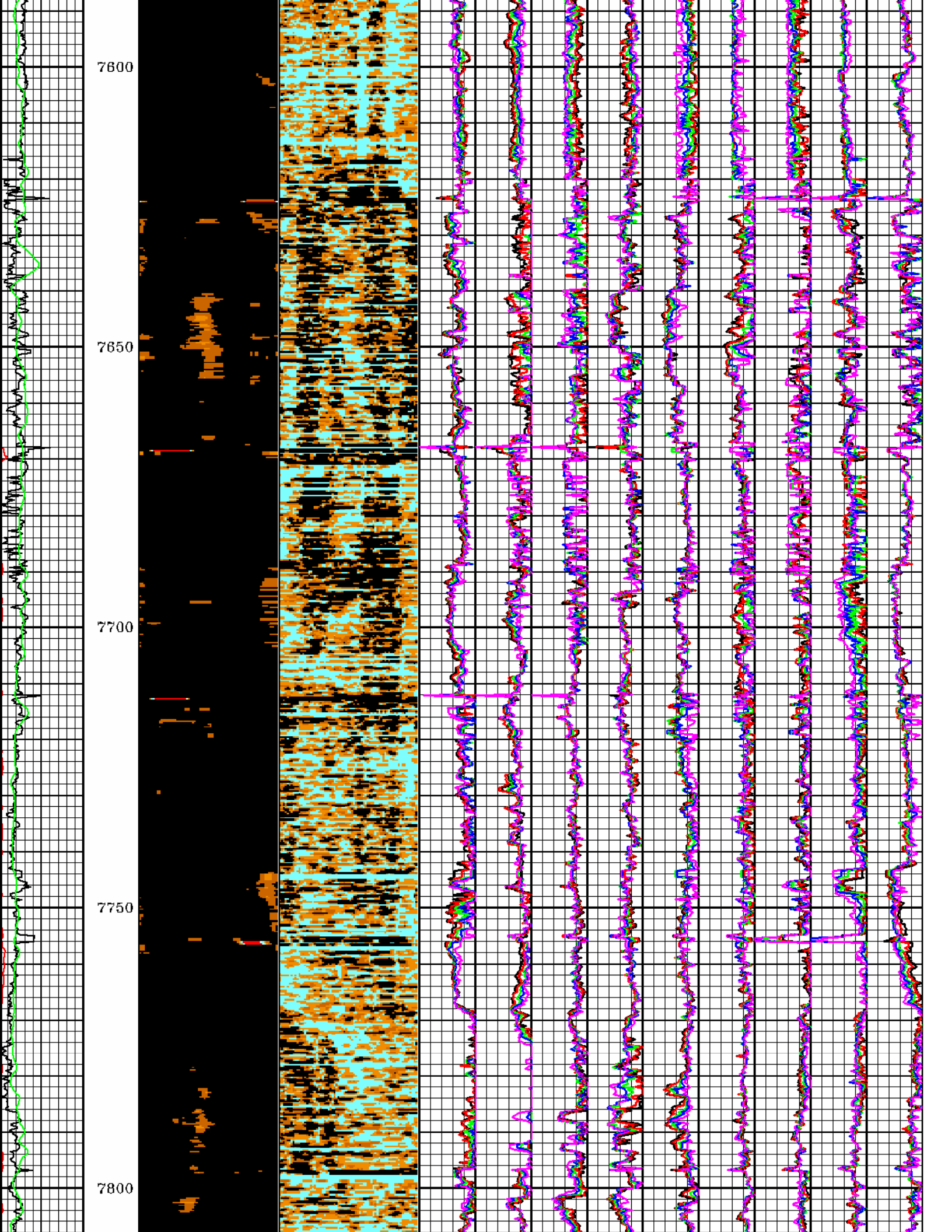


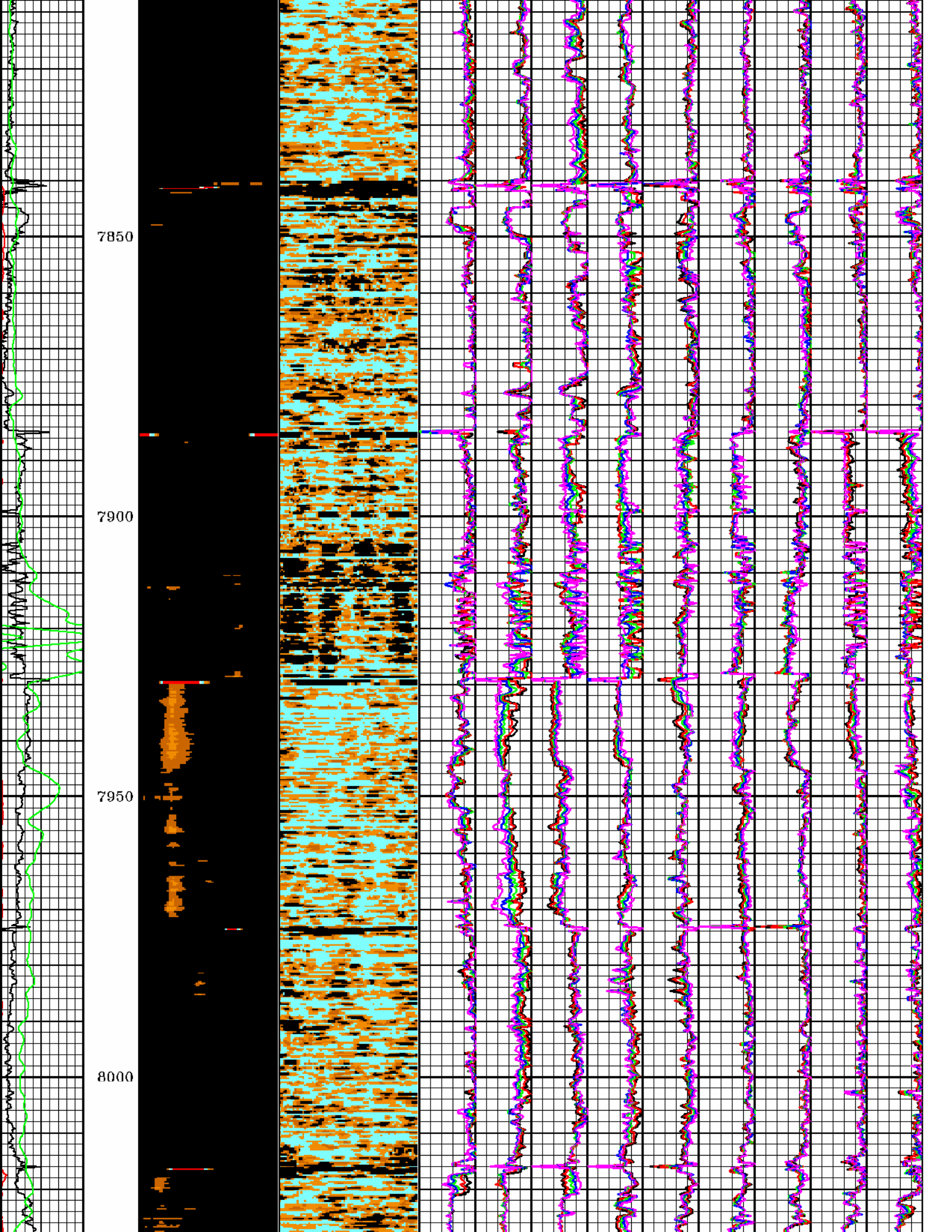


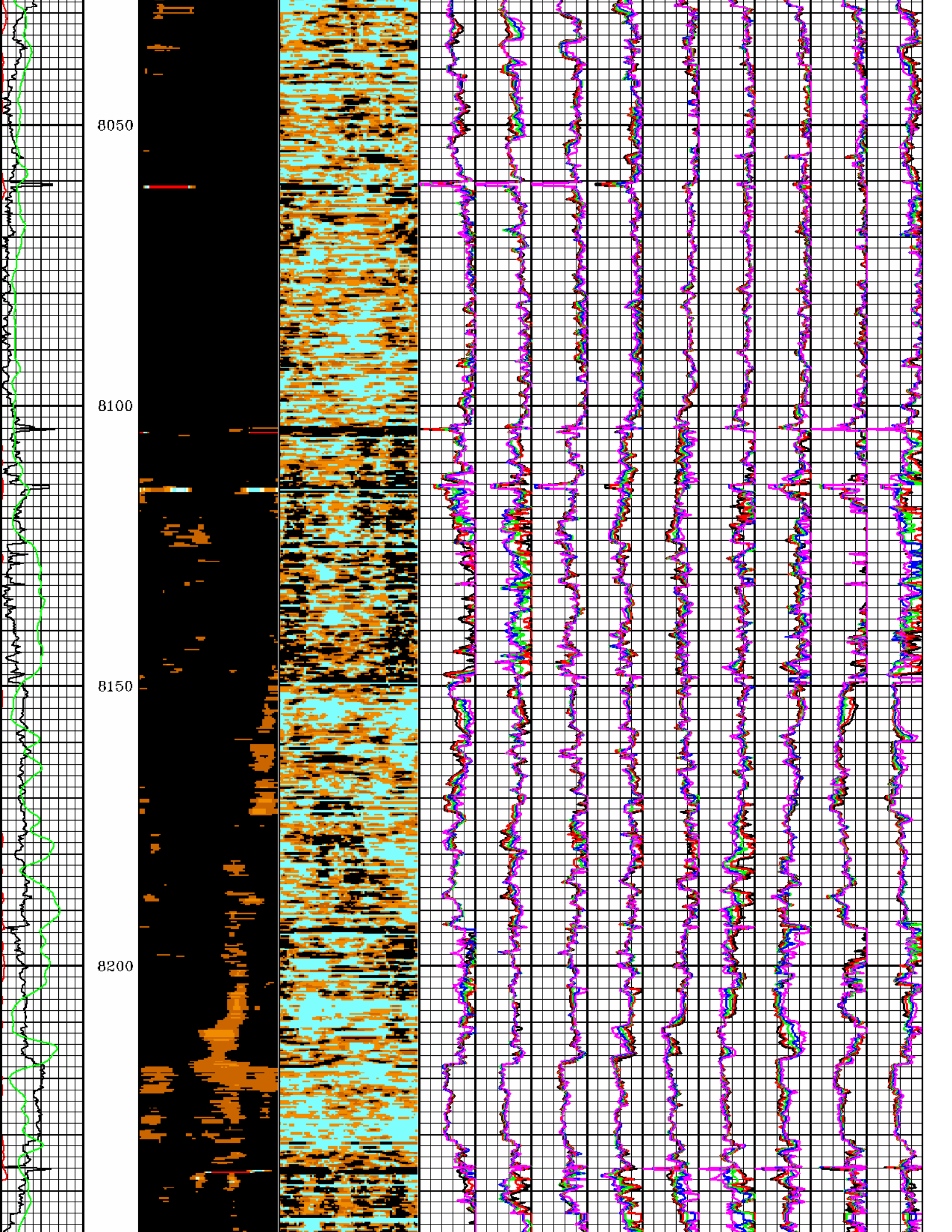


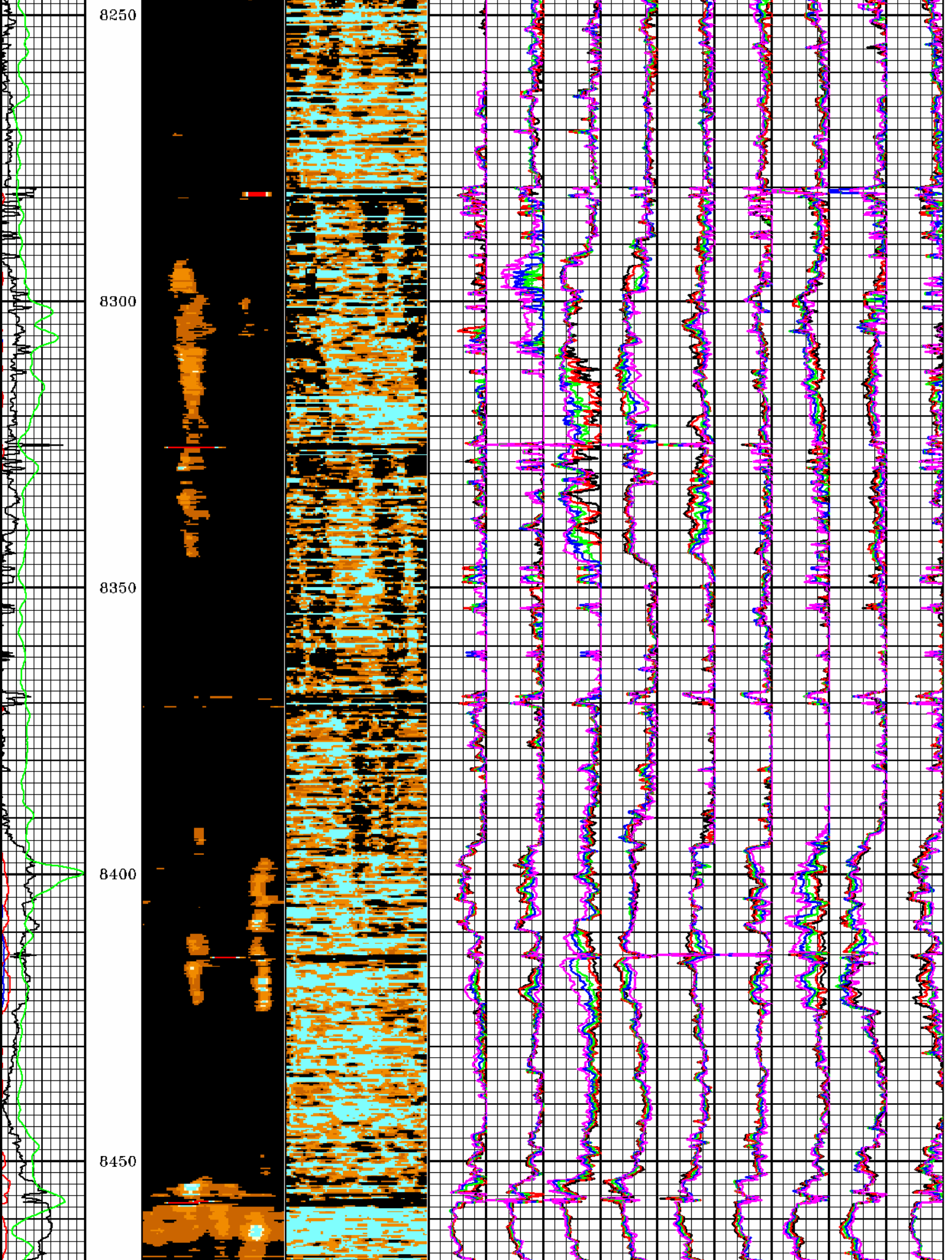


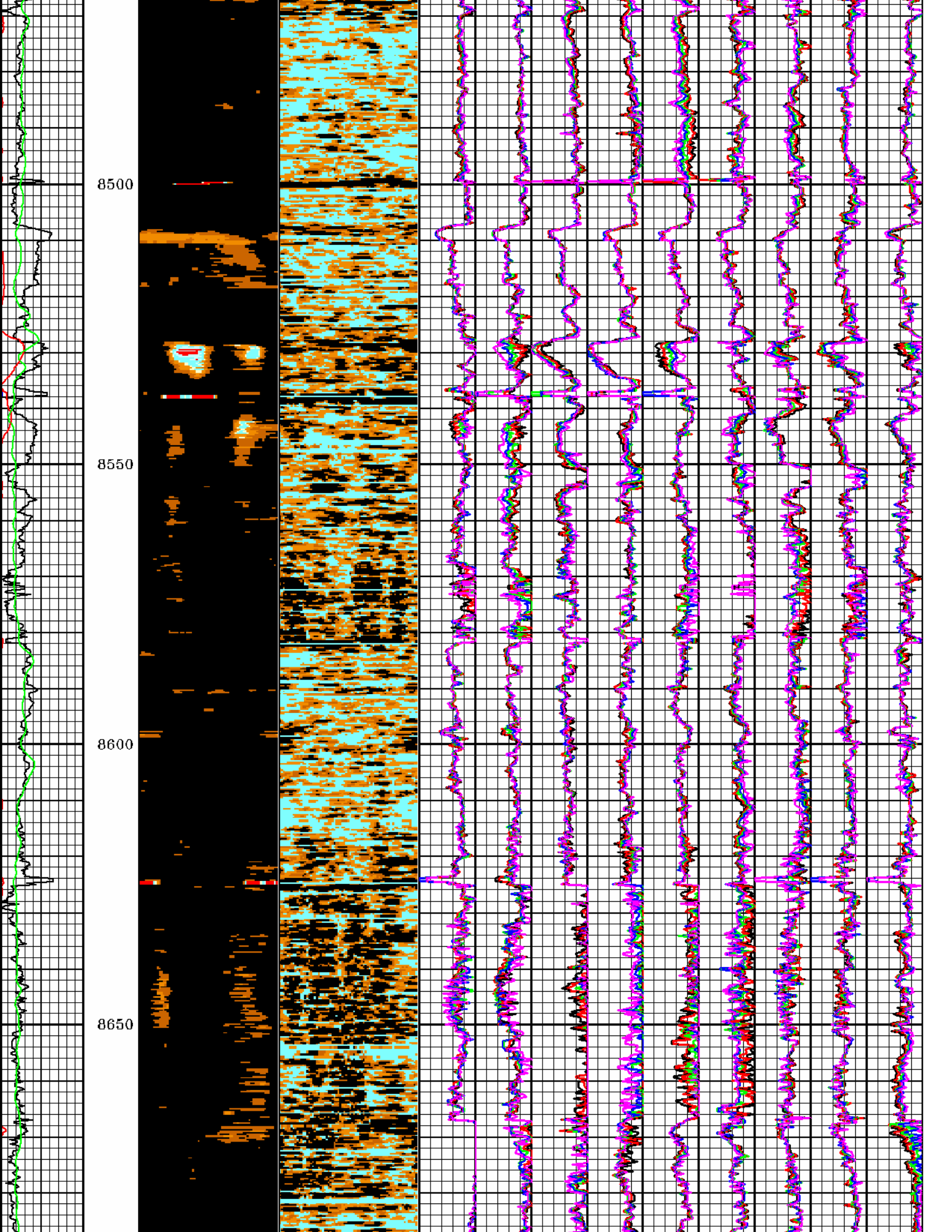


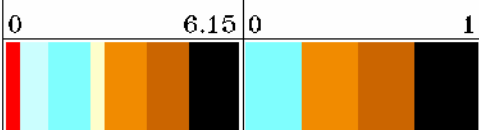
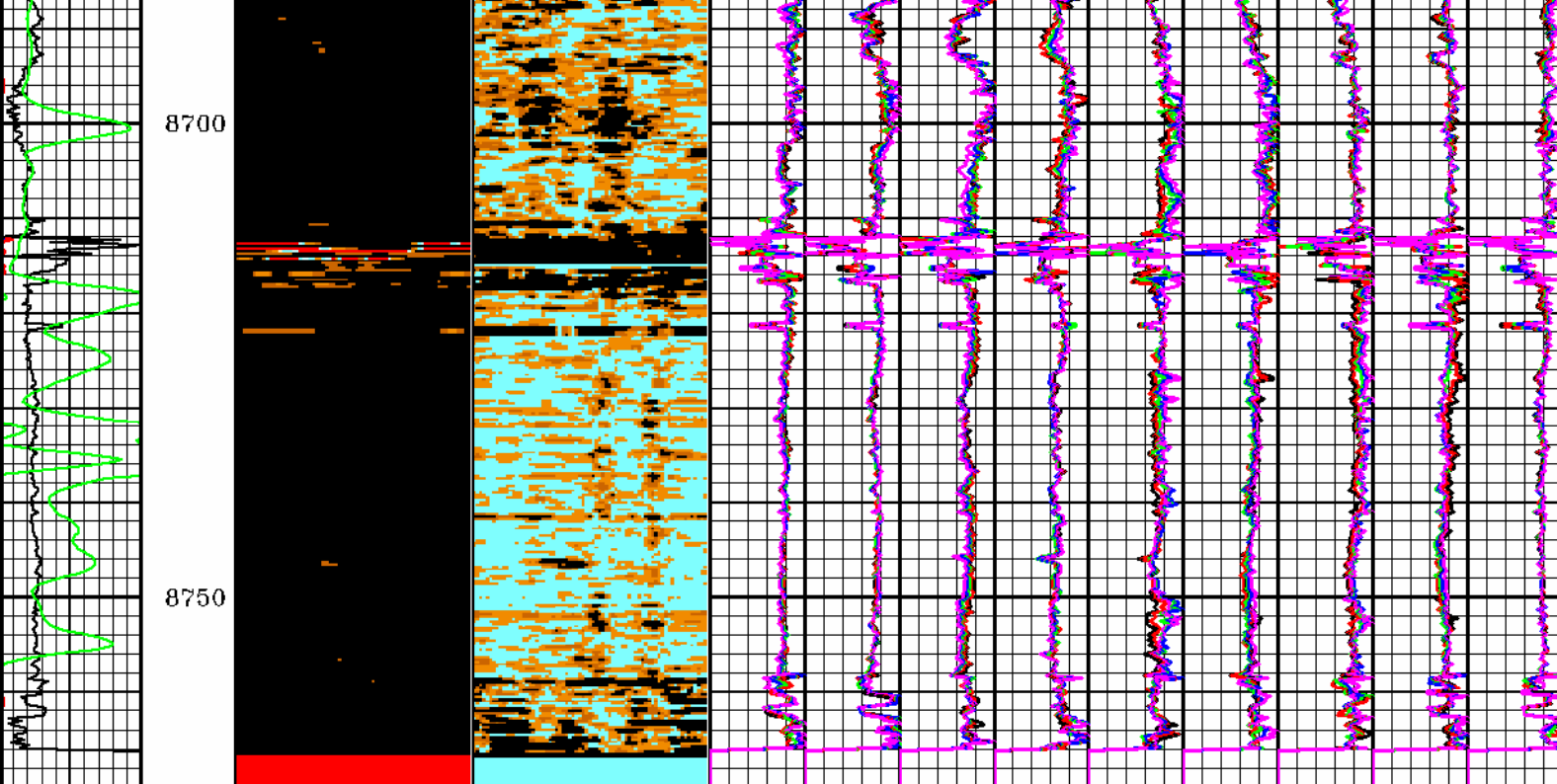












				CA5	CB5	CC5	CD5	CE5	CF5	CG5	CH5	CI5
				CA4	CB4	CC4	CD4	CE4	CF4	CG4	CH4	CI4
				CA3	CB3	CC3	CD3	CE3	CF3	CG3	CH3	CI3
				CA2	CB2	CC2	CD2	CE2	CF2	CG2	CH2	CI2
				CA1	CB1	CC1	CD1	CE1	CF1	CG1	CH1	CI1

WELLBORE DATA	IMPEDANCE MAP	DZ	SEG. A	SEG. B	SEG. C	SEG. D	SEG. E	SEG. F	SEG. G	SEG. H	SEG. I
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HALLIBURTON

Version No: | hc:3.0
Data File: Kinder_Morgan.cls
Format File: ACE_SEG_CURVES_60.spc
Plot Time: 2011-11-30 15:50:55
Database Time: 14:09:35

Top Depth: 97.50
Bottom Depth: 8770.50

COMPANY	KINDER MORGAN		
WELL	DOE CANYON # 10		
FIELD	DOE CANYON		
COUNTY	DOLORES	STATE	CO

HALLIBURTON

CAST-M
ADVANCED CEMENT
EVALUATION

