Company: Occidental Petroleum Corporation

Well: Burchfield State 23-16

Field: Wattenberg

County: Weld State: Colorado

Isolation Scanner

Cement Evaluation

Gamma Ray - CCL Log

County: Weld
Field: Wattenberg
Location: 1944FSL 2052 FEL
Well: Burchfield State 23-16
Company: Occidental Petroleum Corporation

Location:				
1944FSL 2052 FEL		Elev.:	K.B.	4799.00 ft
Lat/Long: 40.223880 / -104.893530			G.L.	4784.00 ft
ec: 16, Town: 3N, Range: 67W			D.F.	4798.00 ft
Permanent Datum:	Ground Level	Elev.:	4784.00 f	
Log Measured From:	Kelly Bushing	15.00 ft	above Perm.Datum	
Drilling Measured From:	Kelly Bushing			

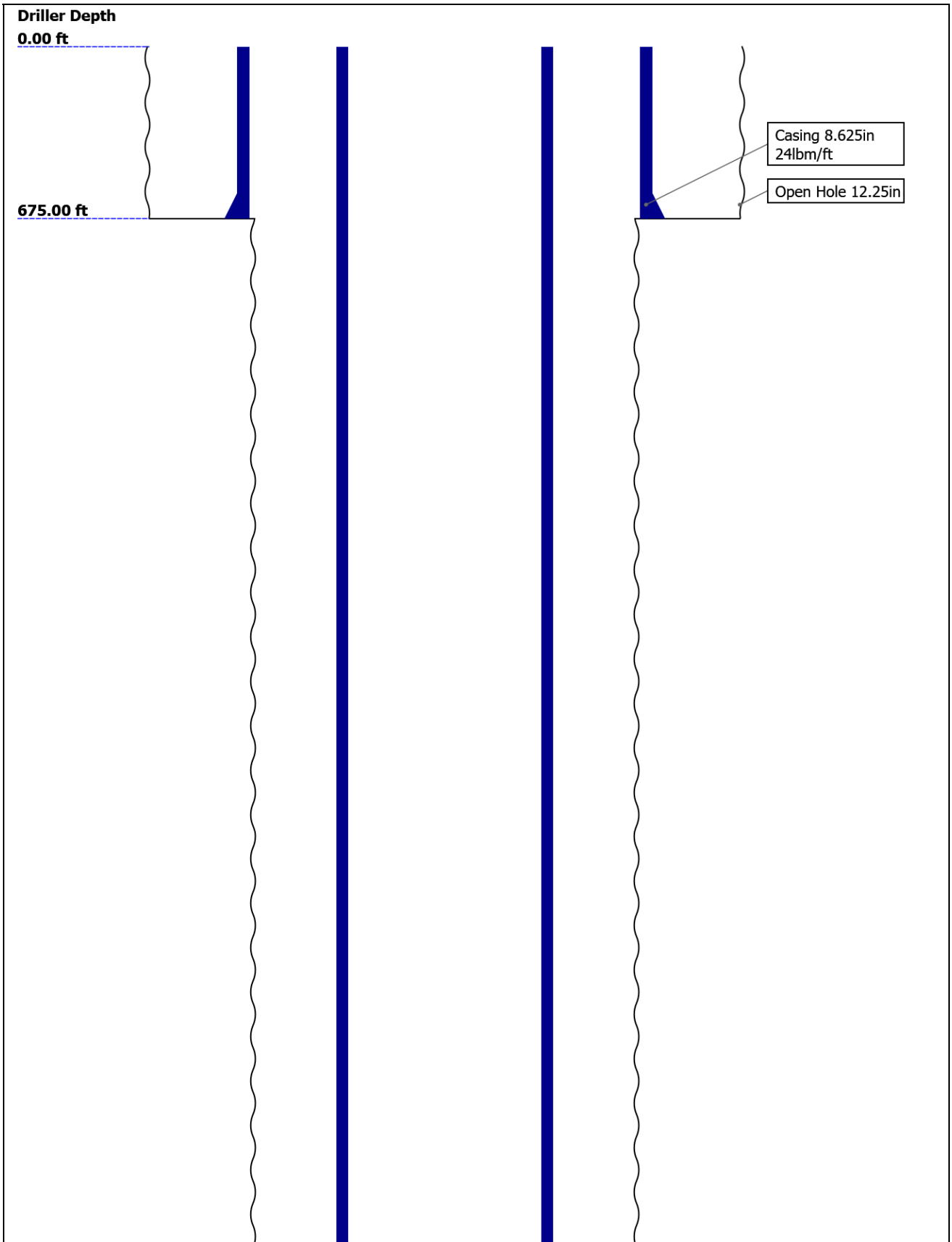
API Serial No.	Section:	Township:	Range:
05-123-31006	16	3N	67W

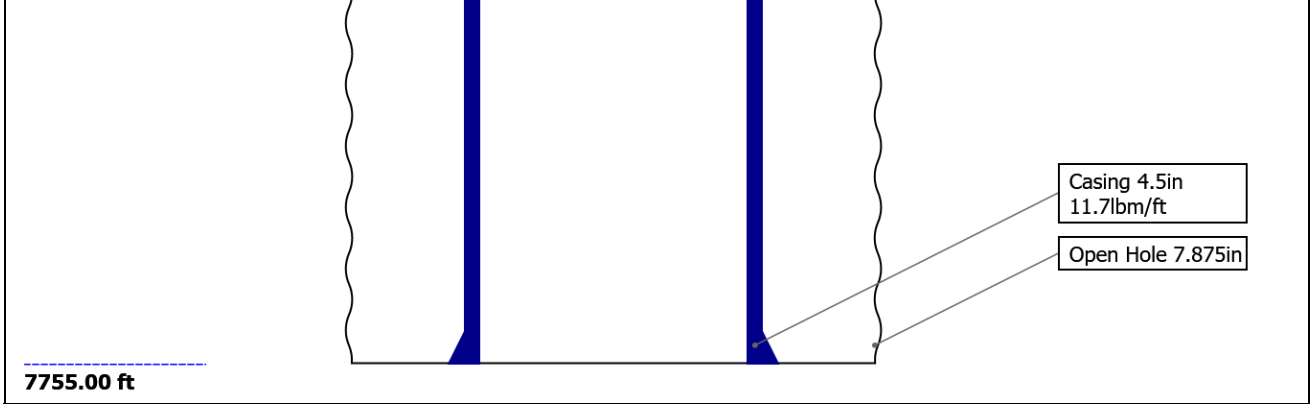
Logging Date	31-Oct-2023		
Run Number	R1D1		
Depth Driller	7755.00 ft		
Schlumberger Depth	TD Not Tagged		
Bottom Log Interval	6300.00 ft		
Top Log Interval	50.00 ft		
Casing Fluid Type	Water		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	8.00 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.88 in		
From	675.00 ft		
To	7755.00 ft		
Casing/Tubing Size	4.5 in		
Weight	11.7 lbm/ft		
Grade	N/A		
From	0.00 ft		
To	7755.00 ft		
Max Recorded Temperatures	199.15 degF		
Logger on Bottom Time	31-Oct-2023 09:17:00		
Unit Number Location:	9115 Fort Morgan		
Recorded By	M. Rhenman / C. Jordan		
Witnessed By	Shane Hart		

Disclaimer

Contents

Well Sketch



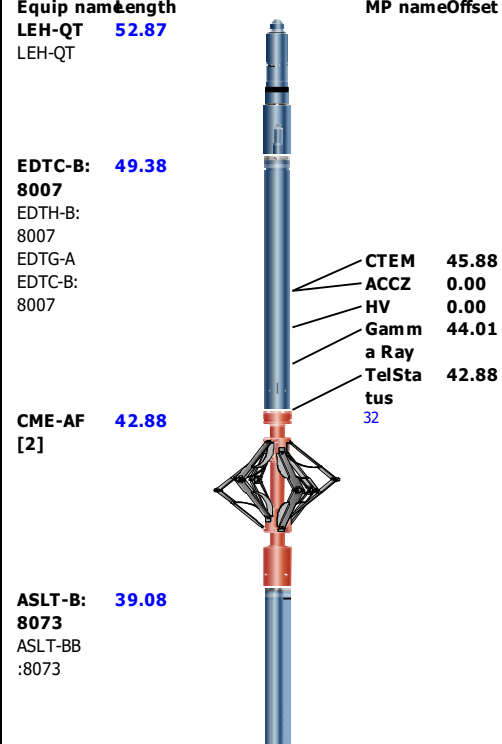


Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	12.25	7.875				
Top Driller (ft)	0	675				
Top Logger (ft)	0	675				
Bottom Driller (ft)	675	7755				
Bottom Logger (ft)	675	7755				
Casing						
Size (in)	8.625	4.5				
Weight (lbm/ft)	24	11.7				
Inner Diameter (in)	8.097	3.996				
Grade	N/A	N/A				
Top Driller (ft)	0	0				
Top Logger (ft)	0	0				
Bottom Driller (ft)	675	7755				
Bottom Logger (ft)	675	7755				

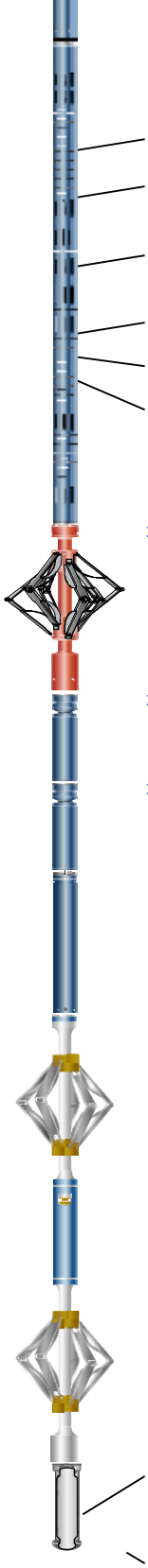
Remarks and Equipment Summary

R1D1: Toolstring



R1D1: Remarks

Tool was run as per tool sketch
All logging intervals as per client request
Logged with 500 psi pressure as per client request.
Log correlated to Radial Cement Bond Log dated 13-SEP-2010
Cycle skipping due to good cement bond observed.



Lengths are in ft
Maximum Outer Diameter = 3.800 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

USIT - Fluid Properties Measurement

Run Name	Pass Name	Start Depth(ft)	Stop Depth(ft)
Run 2	Log[4]:Up	6314.01	34.29

Fluid Velocity = "Automatic".
CFVL equals DFSL channel

Start Depth(ft)	Stop Depth(ft)	Start Value(us/ft)	End Value(us/ft)

Mud Impedance = "Theoretical".
CZMD uses theoretical results.
MUD_N_THE=1.15

DFD=1.01g/cm3(8.40lbm/gal)

Start Depth(ft)	Stop Depth(ft)	Start Value(Mrayl)	End Value(Mrayl)

R1D1

IBC SLG

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
R1D1	Log[4]:Up	Up	34.29 ft	6314.01 ft	31-Oct-2023 9:17:35 AM	31-Oct-2023 11:11:48 AM	ON	3.09 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Occidental Petroleum Corporation Well:Burchfield State 23-16

R1D1: Log[4]:Up:S007

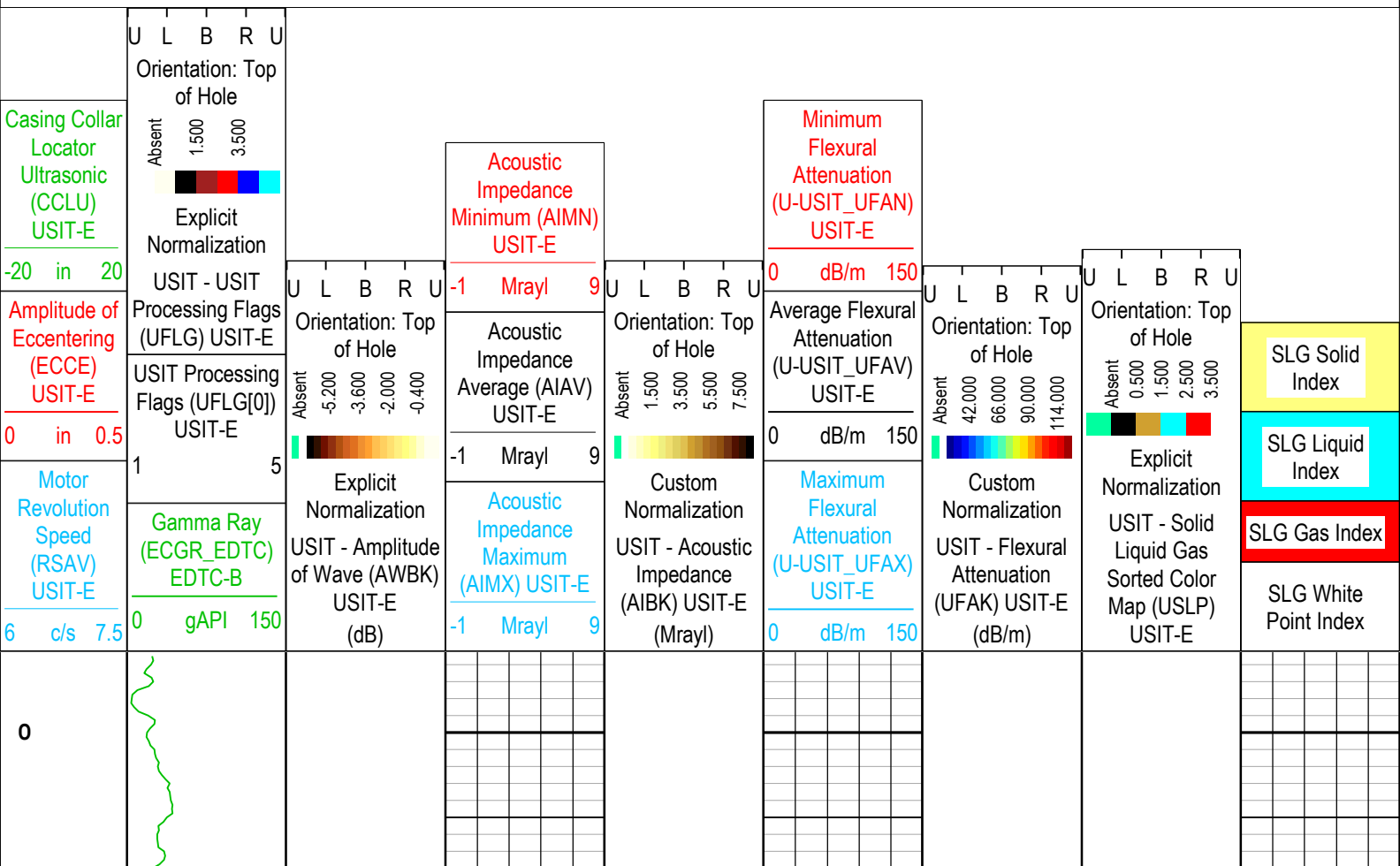
Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 31-Oct-2023 11:55:45

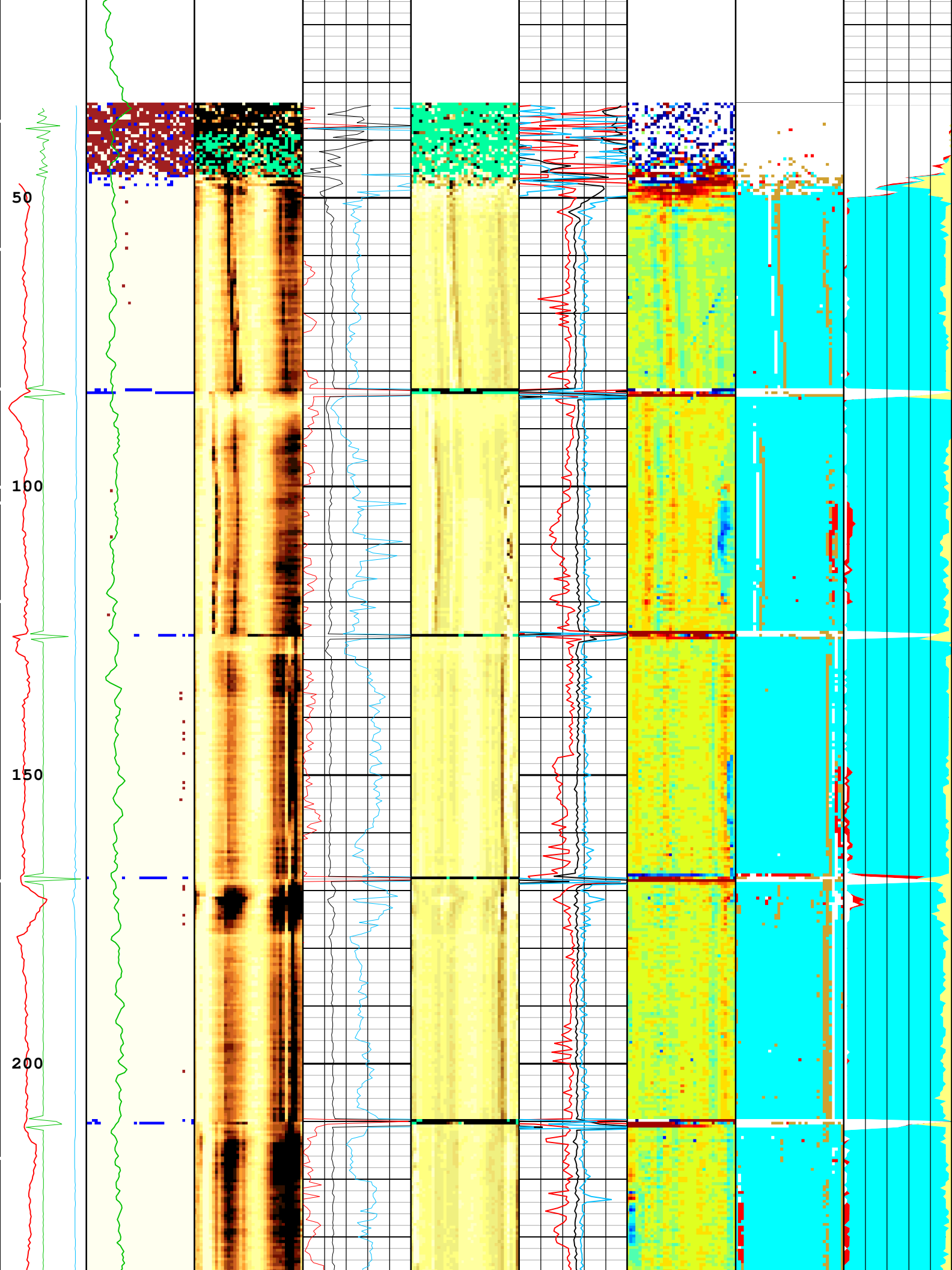
TIME_1900 - Time Marked every 60.00 (s)

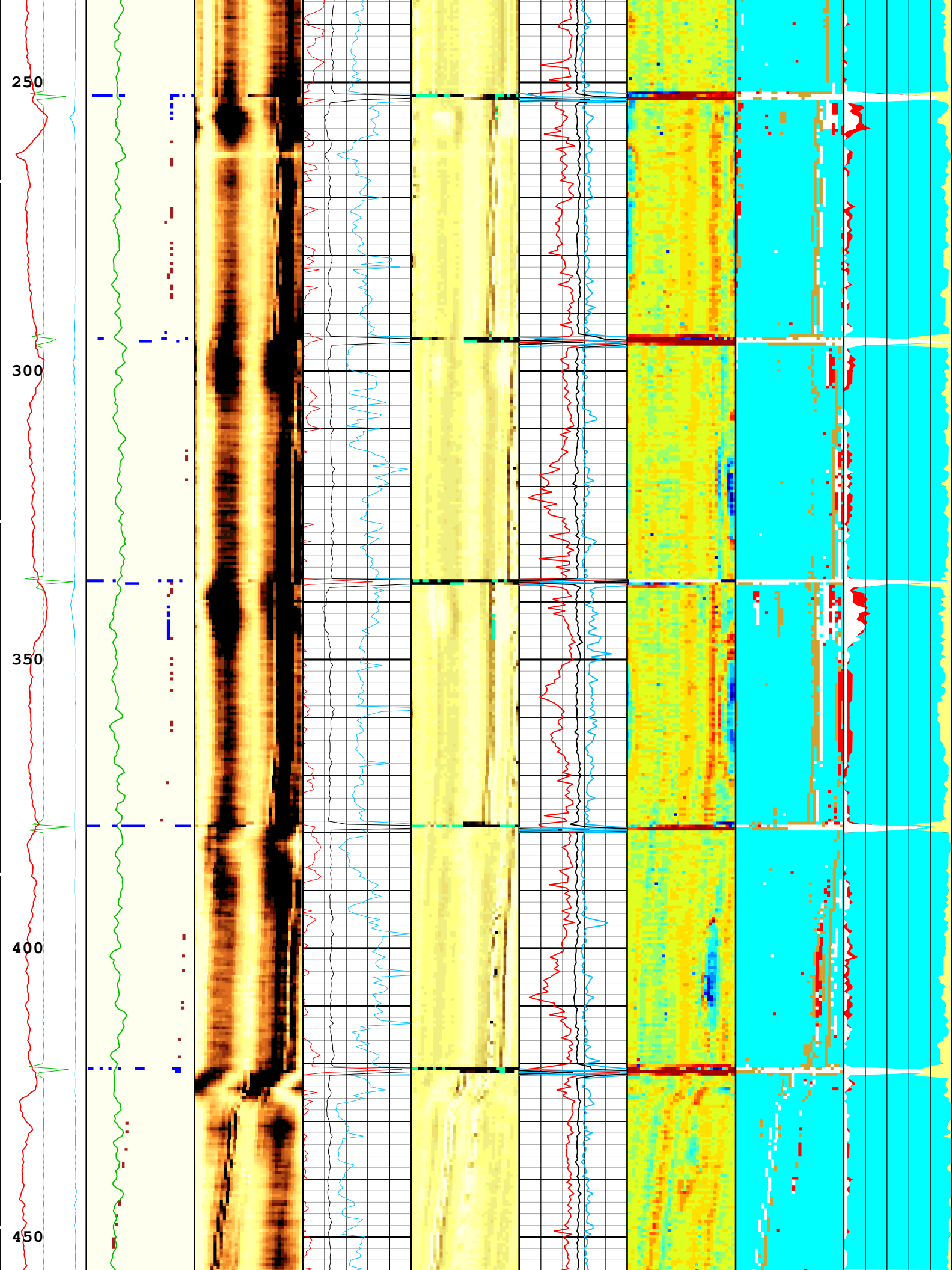
USIT Processing Flags (UFLG[0]) USIT-E

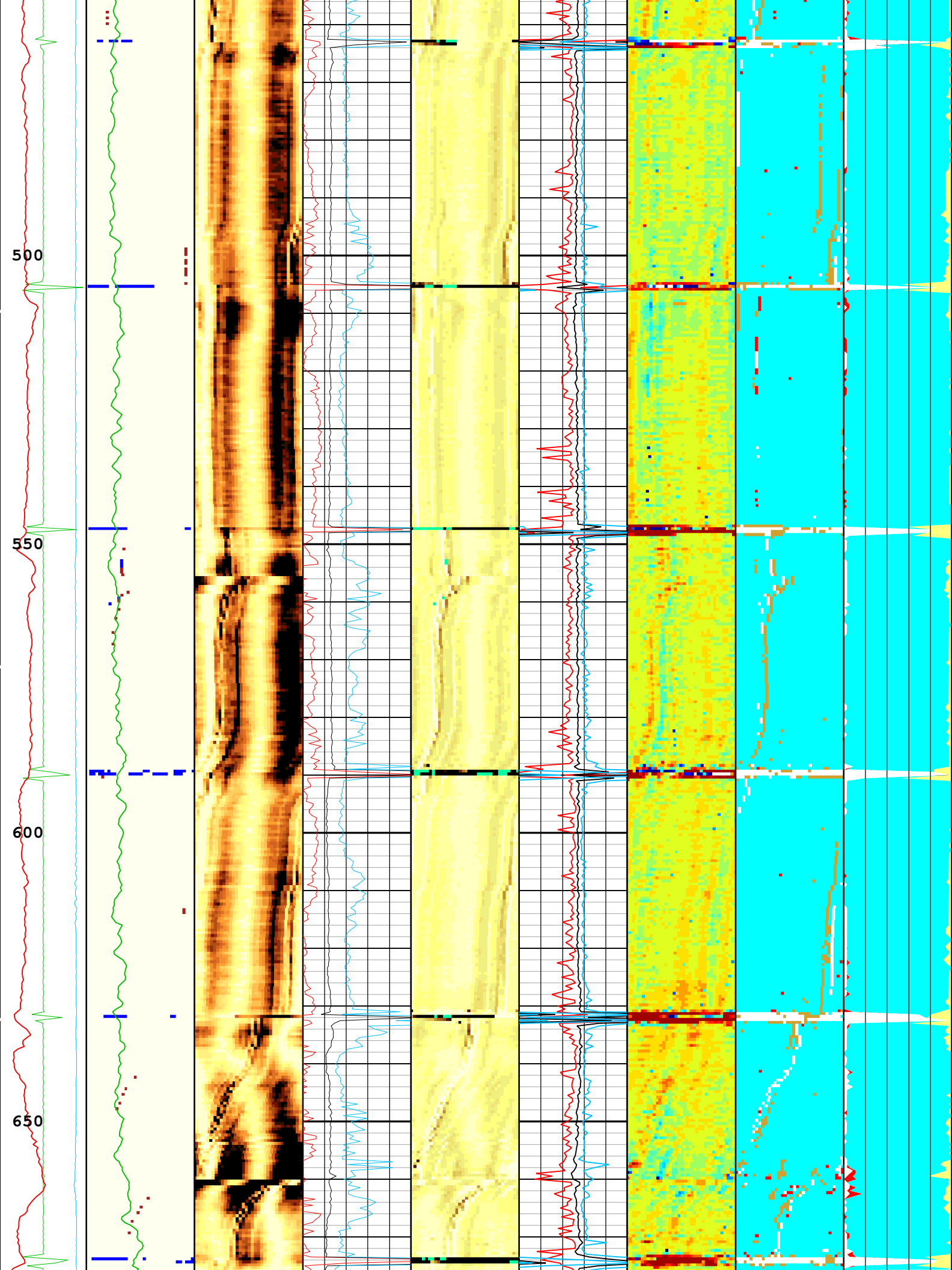
1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

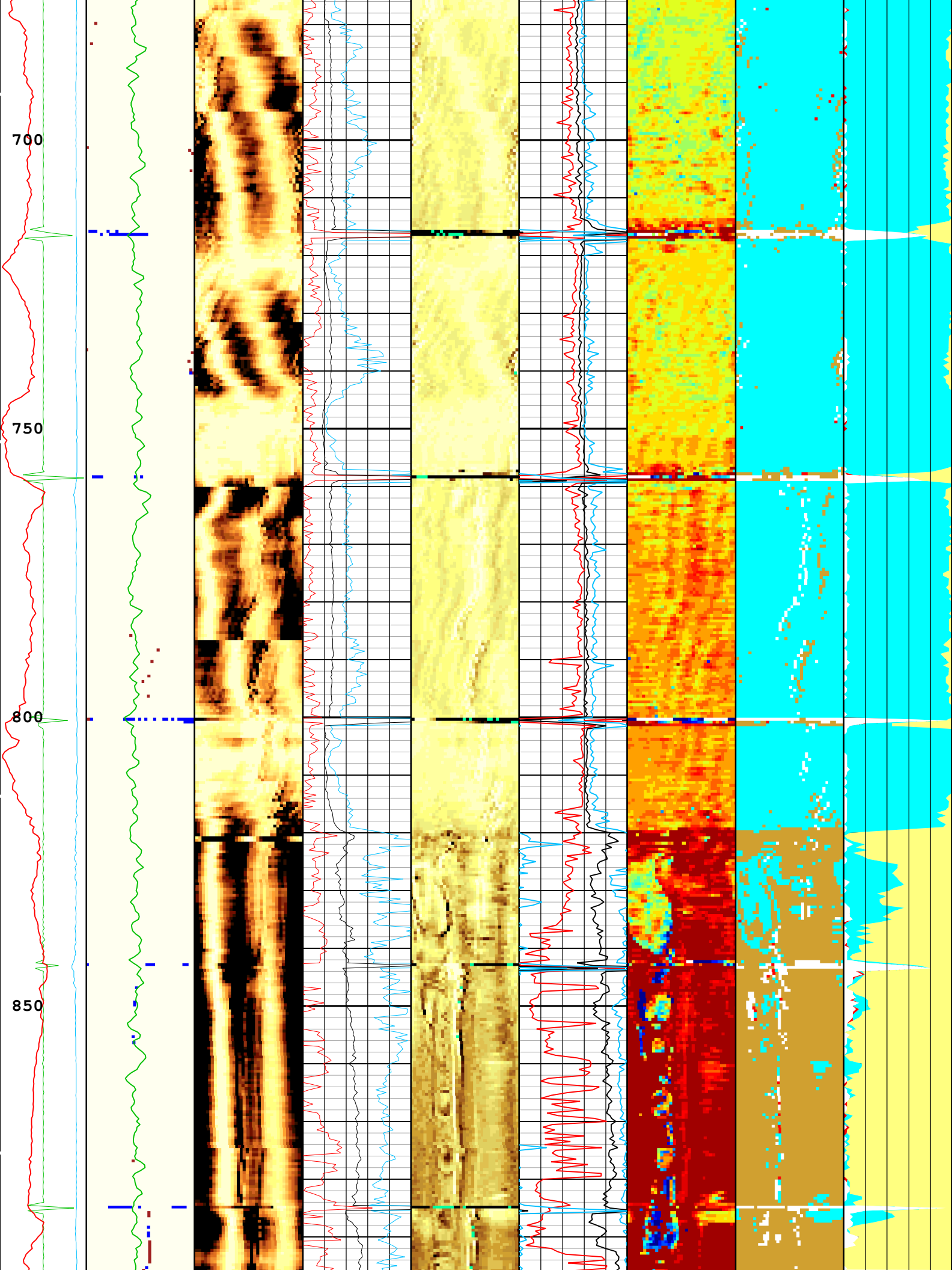
UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error

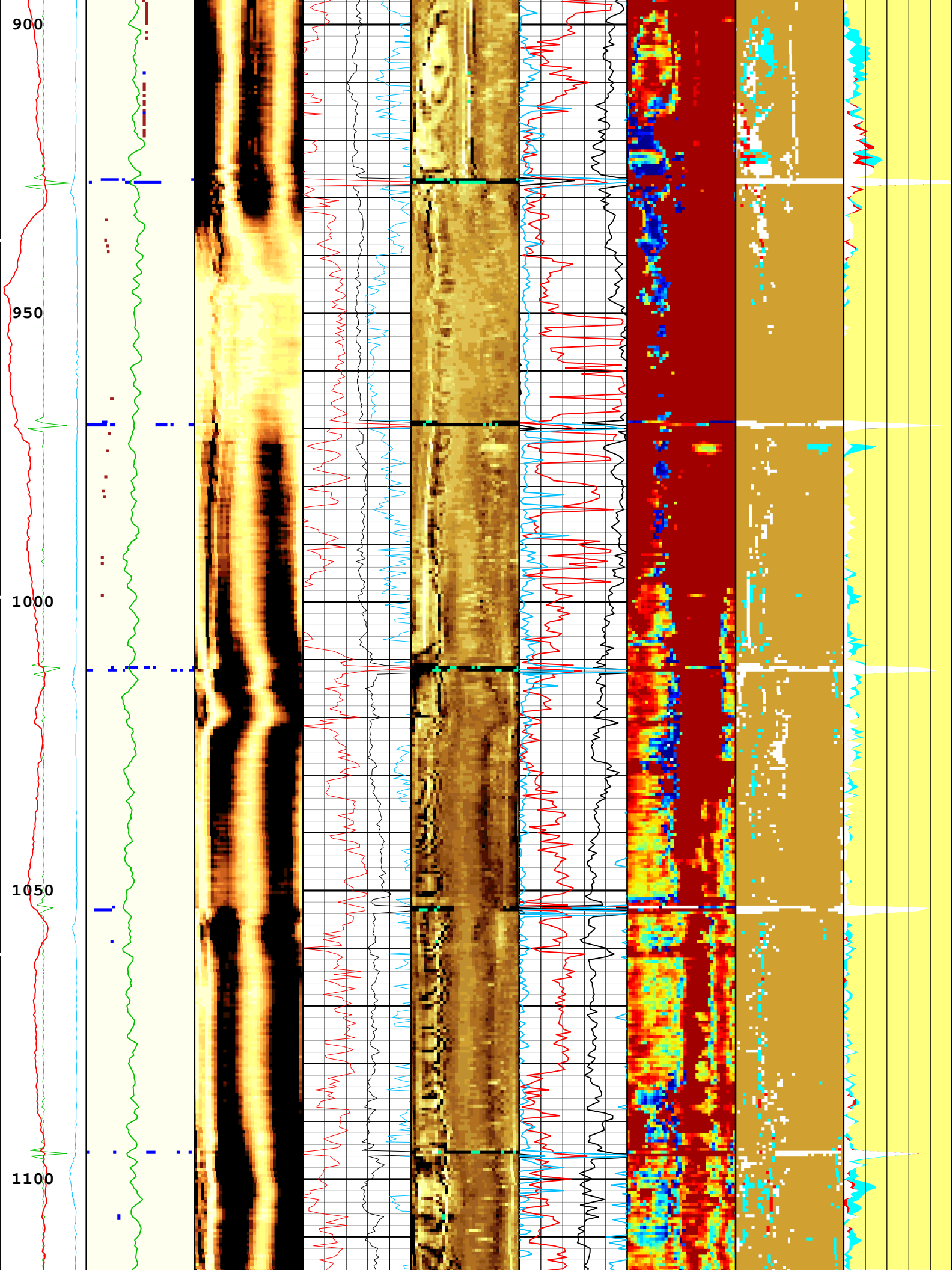


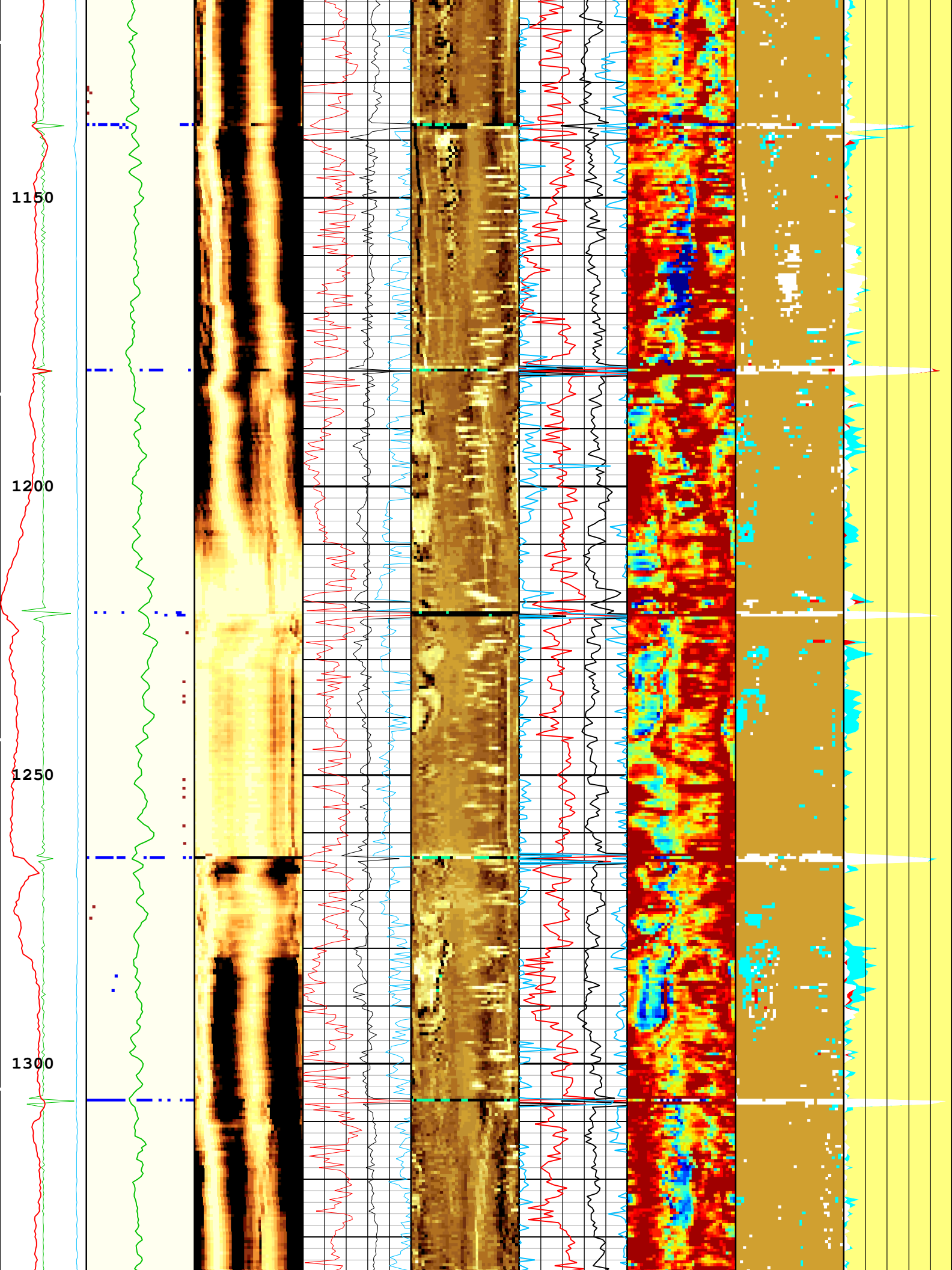

50
100
150
200

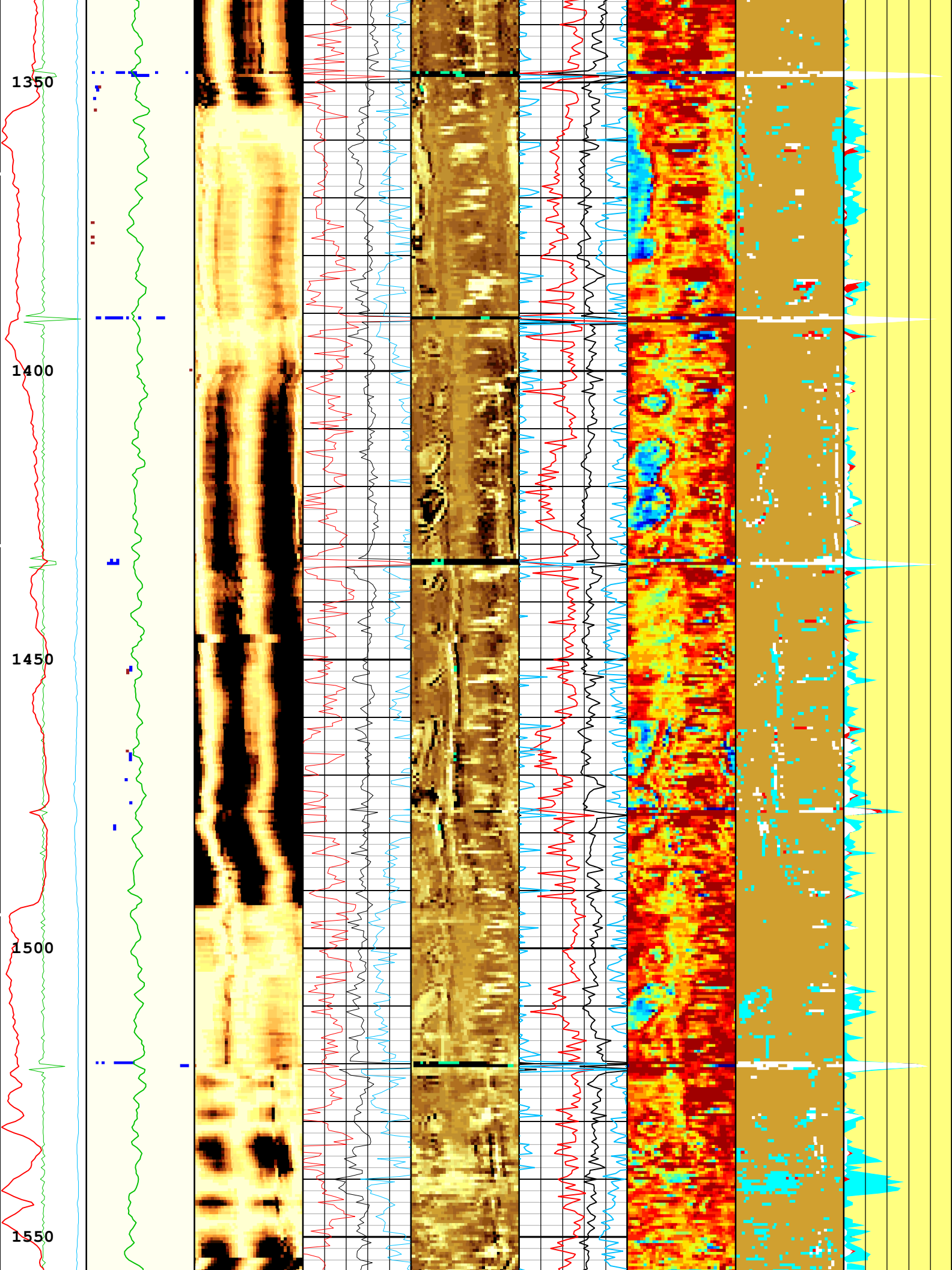

250
300
350
400
450

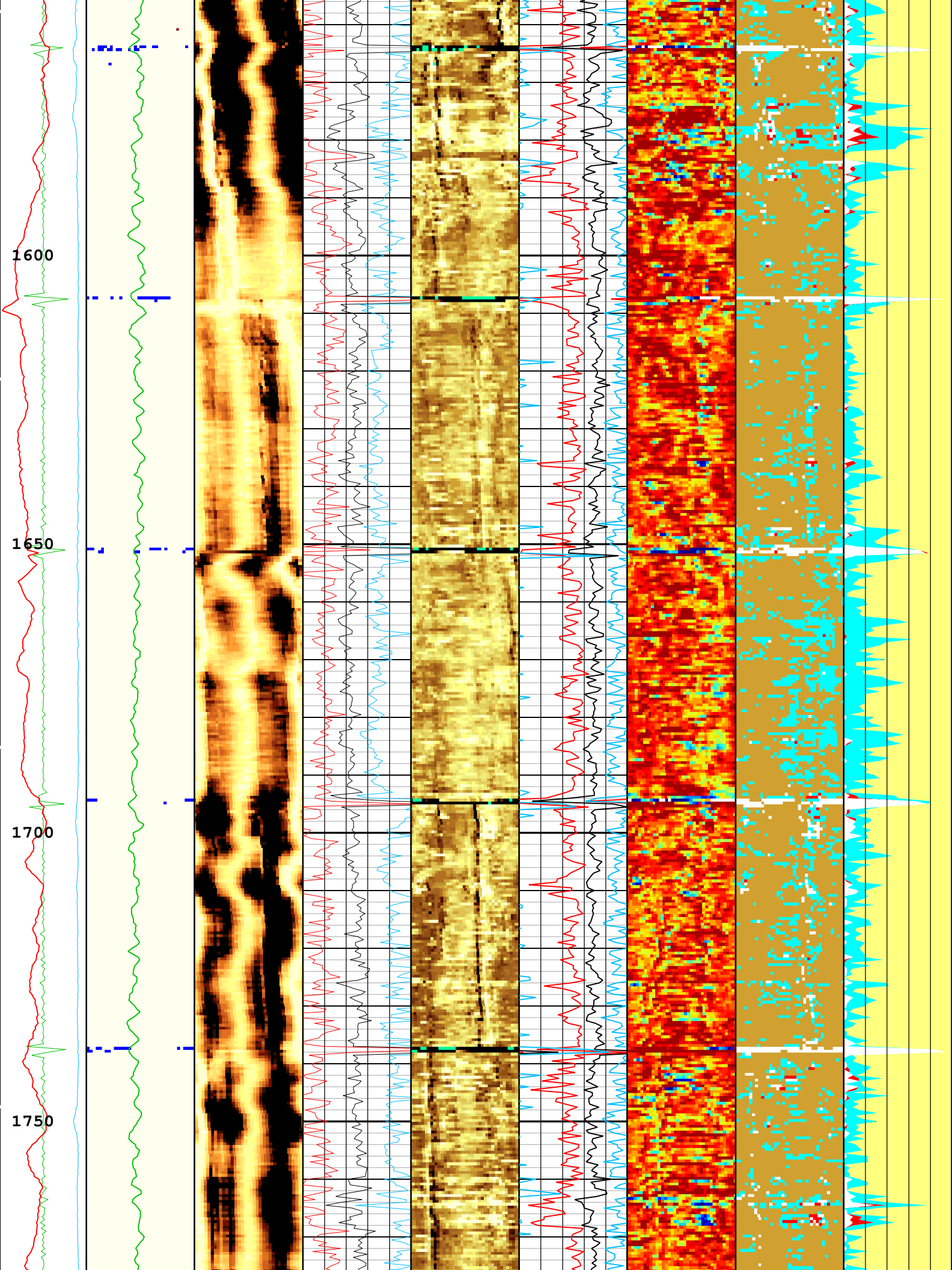

500
550
600
650

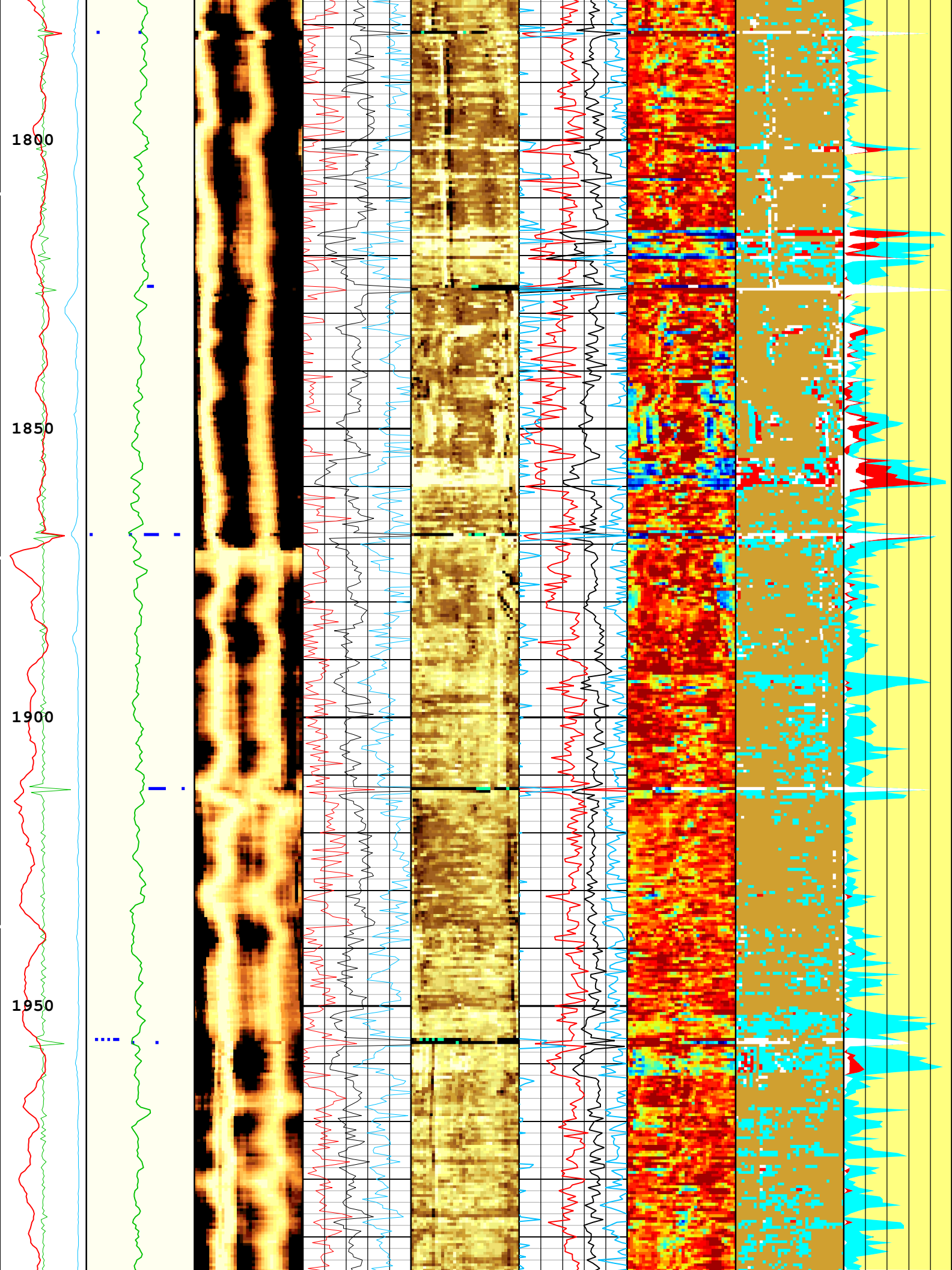

700
750
800
850

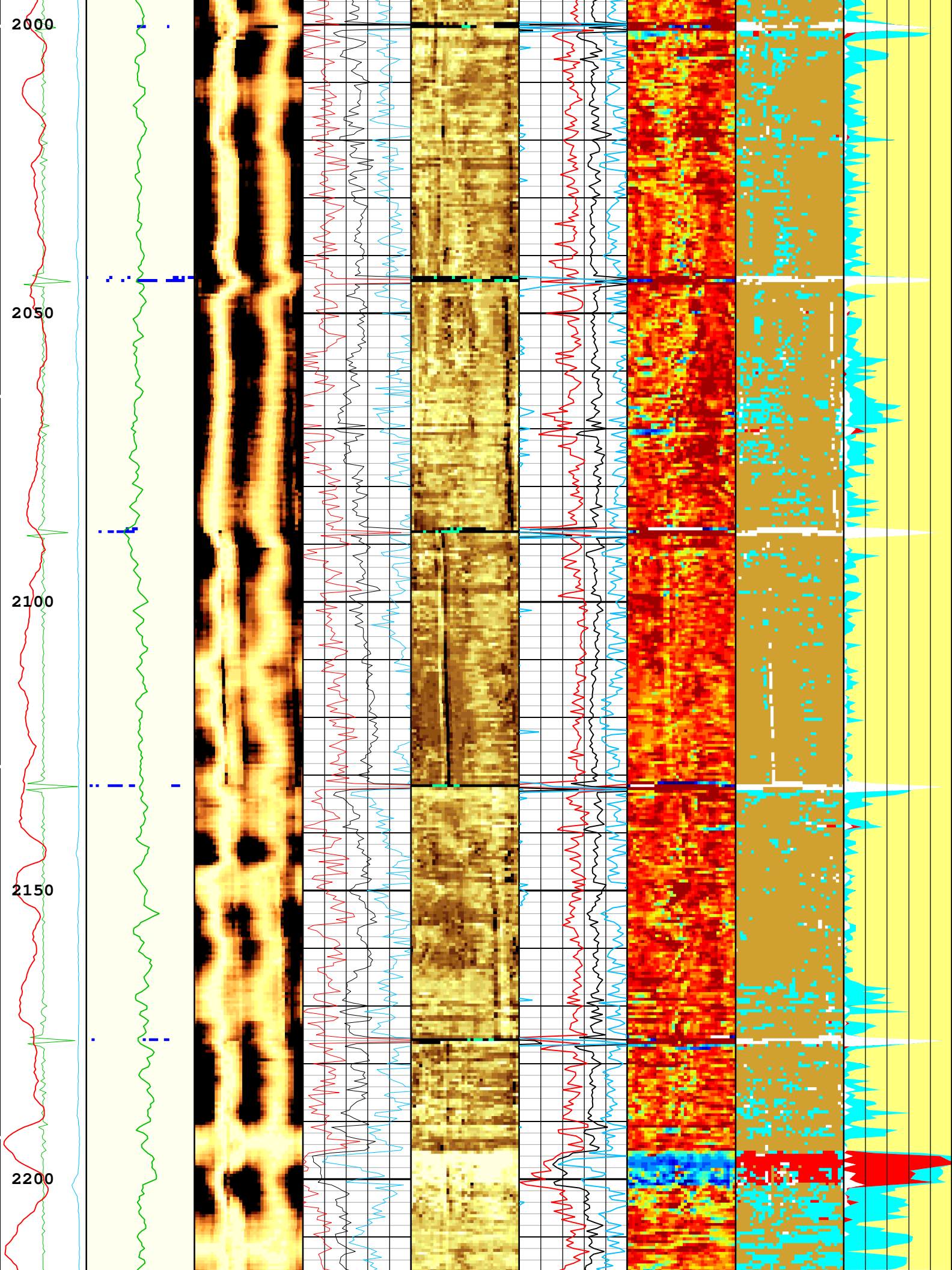

900
950
1000
1050
1100

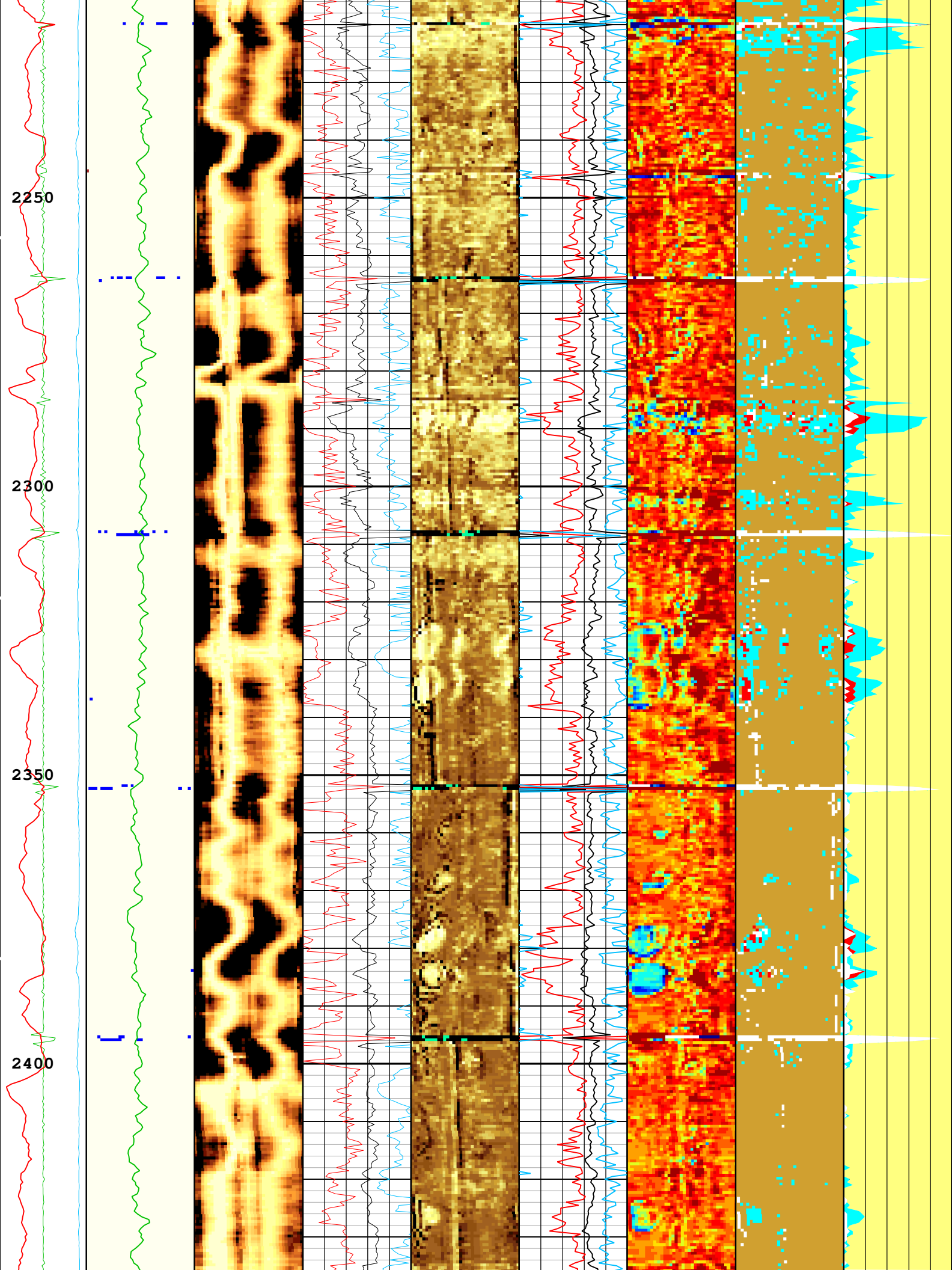

1150
1200
1250
1300

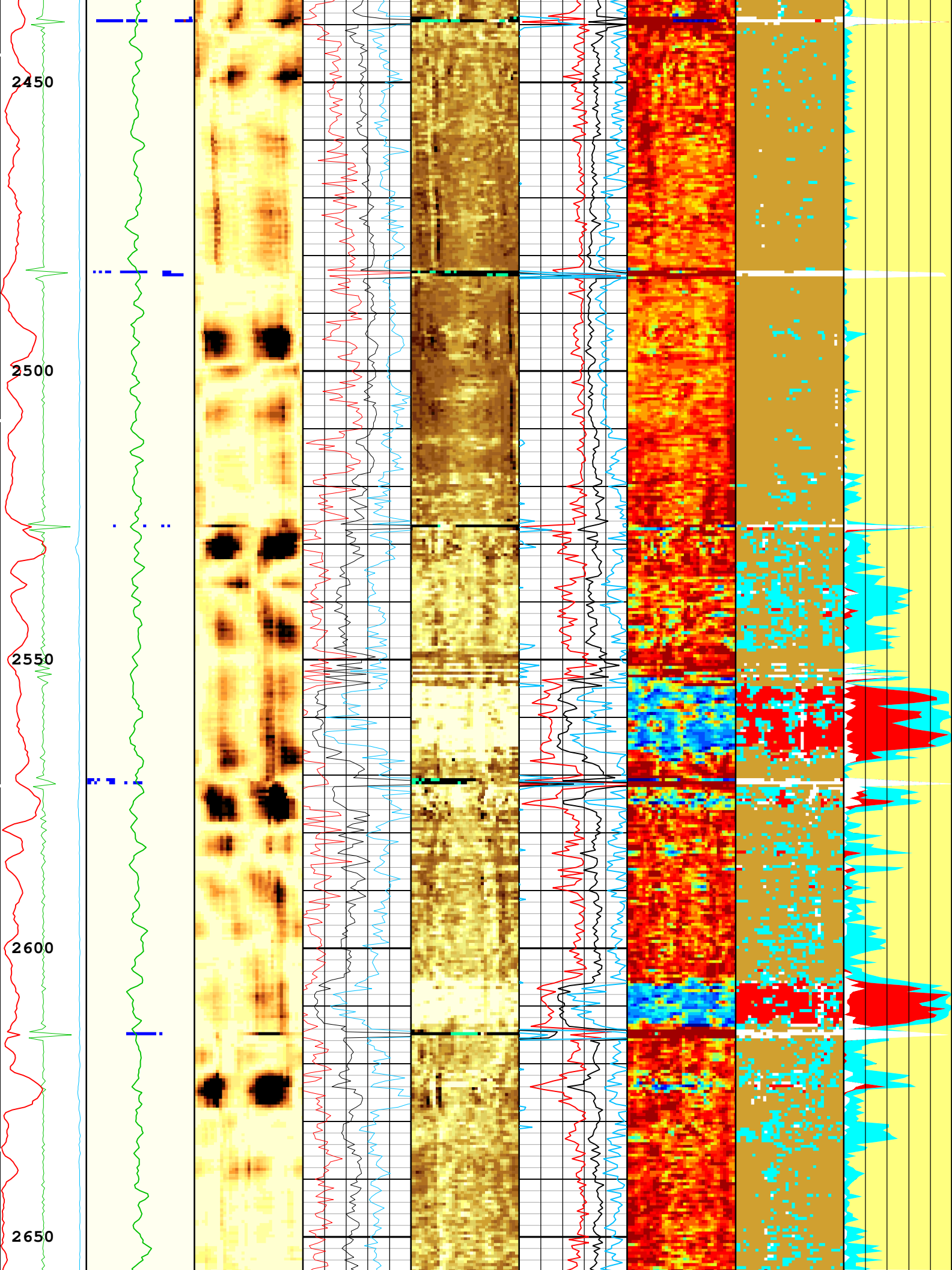

1350
1400
1450
1500
1550

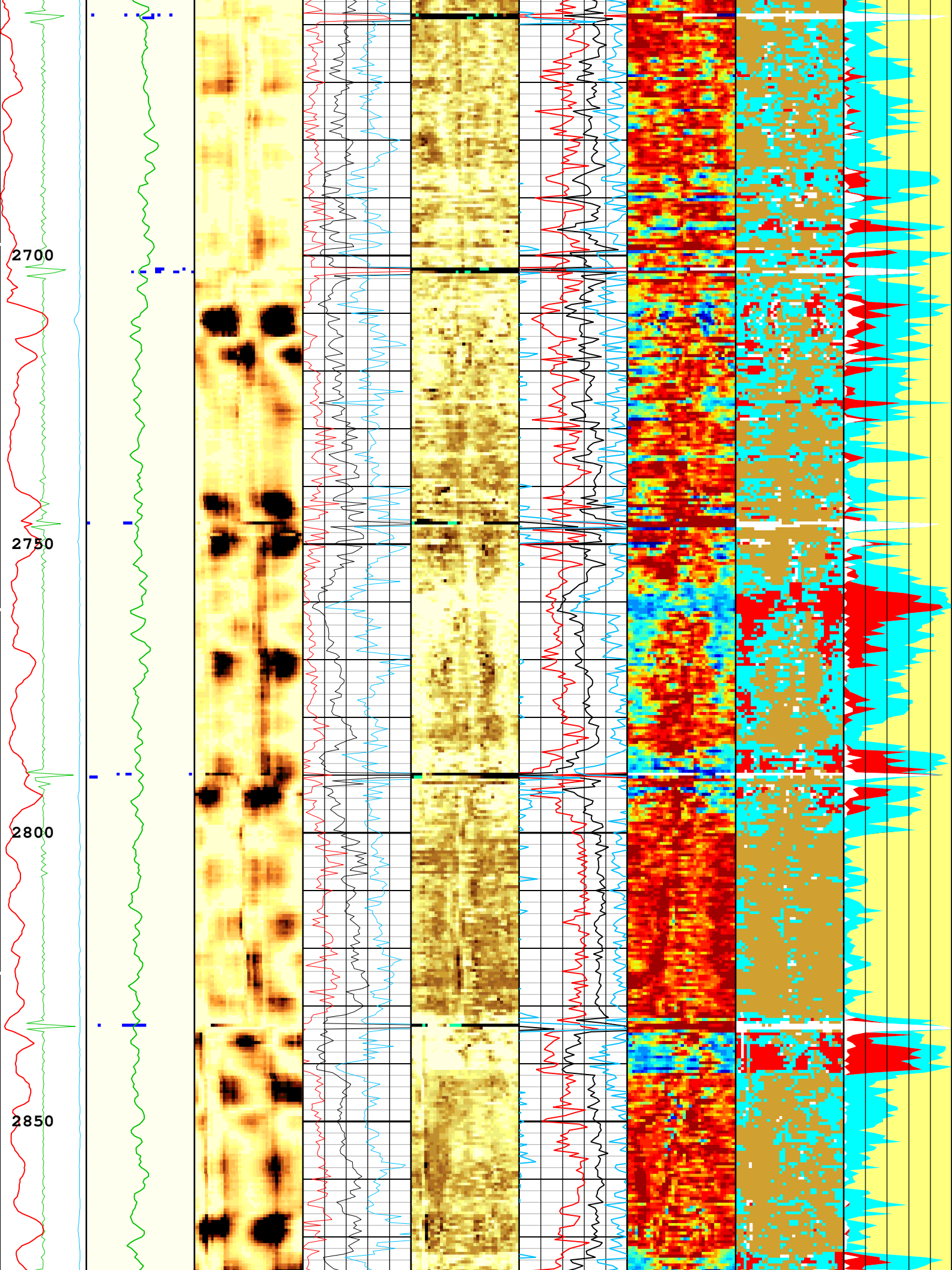

1600
1650
1700
1750

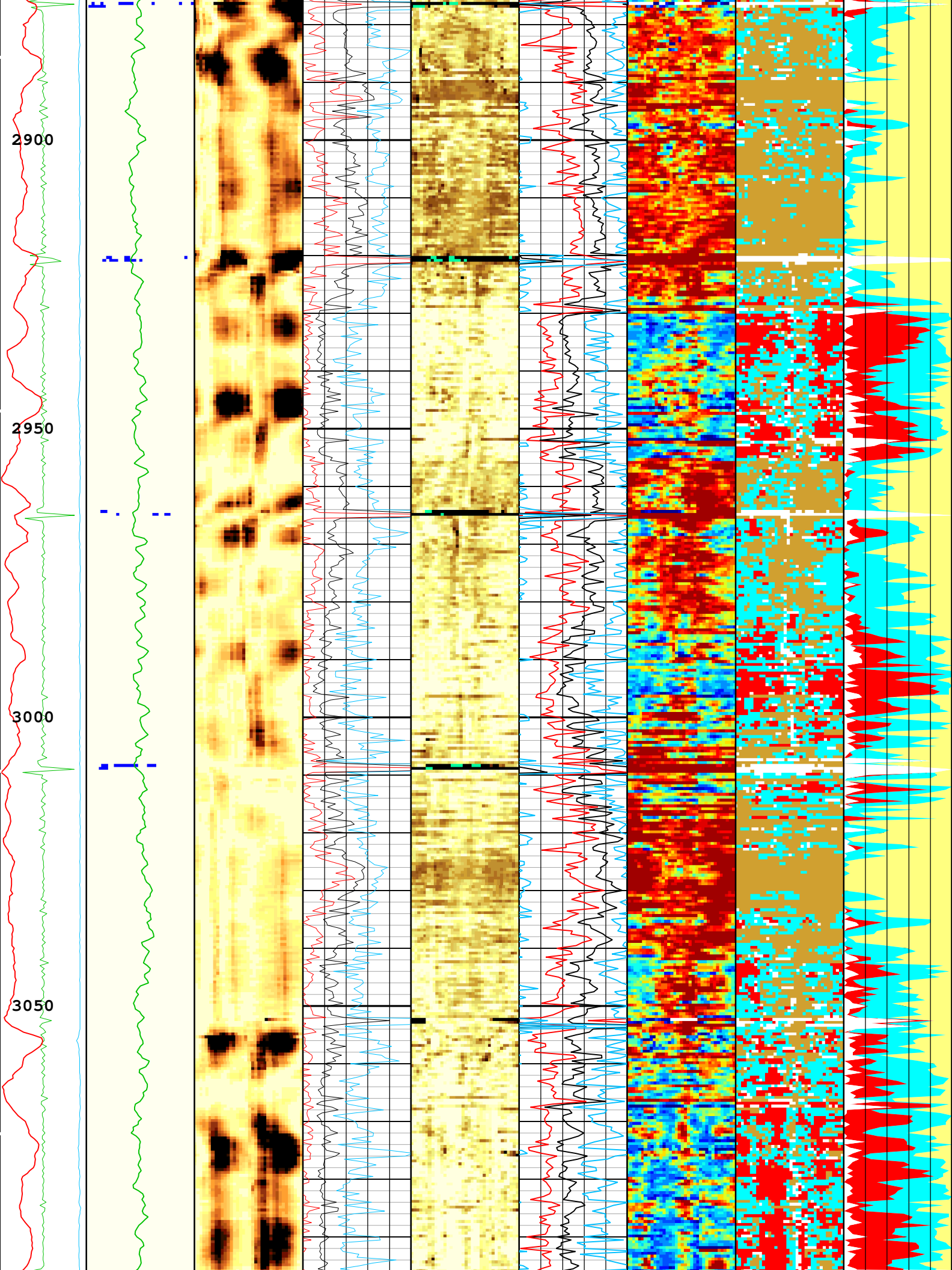

1800
1850
1900
1950

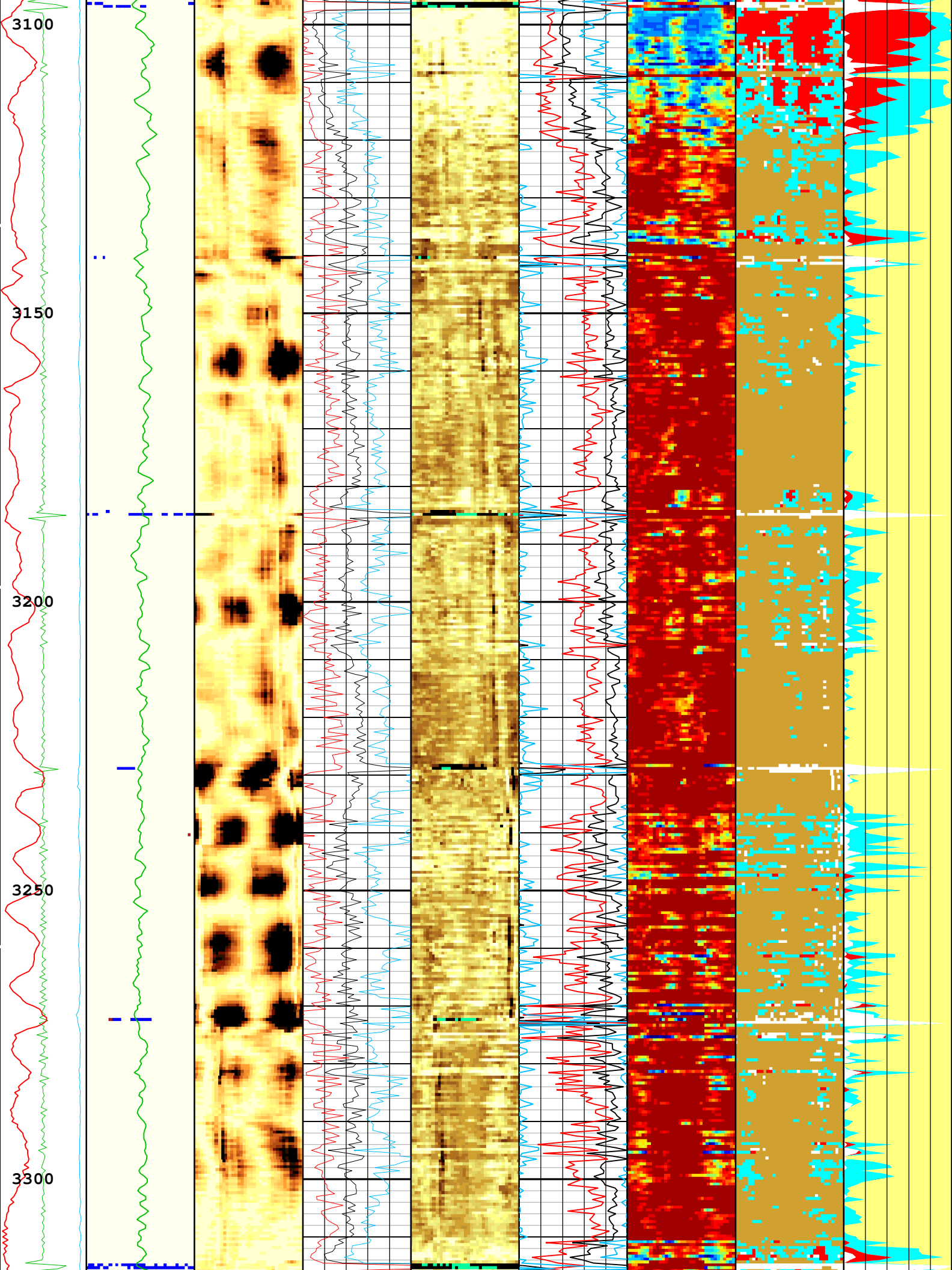

2000
2050
2100
2150
2200

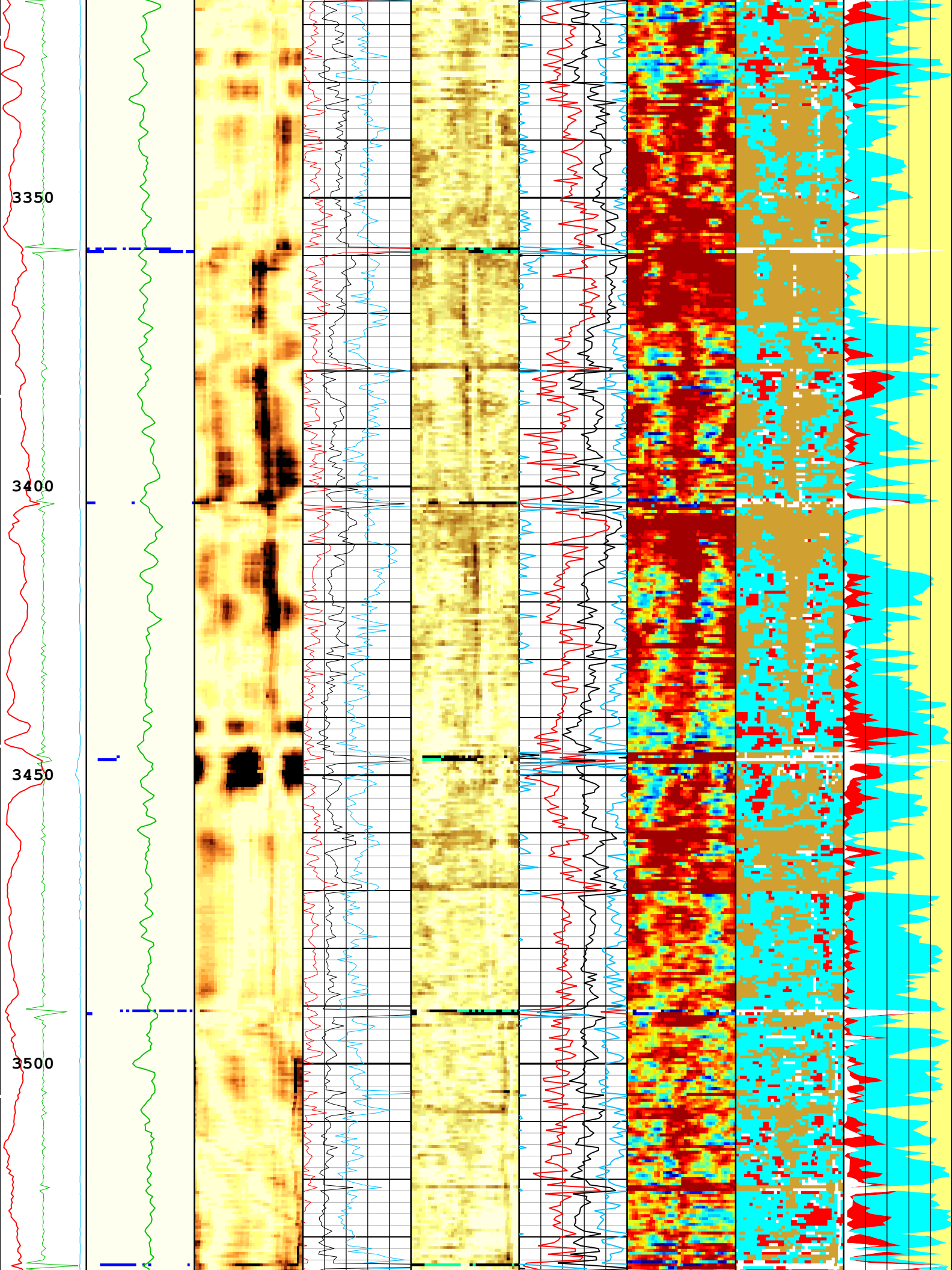

2250
2300
2350
2400

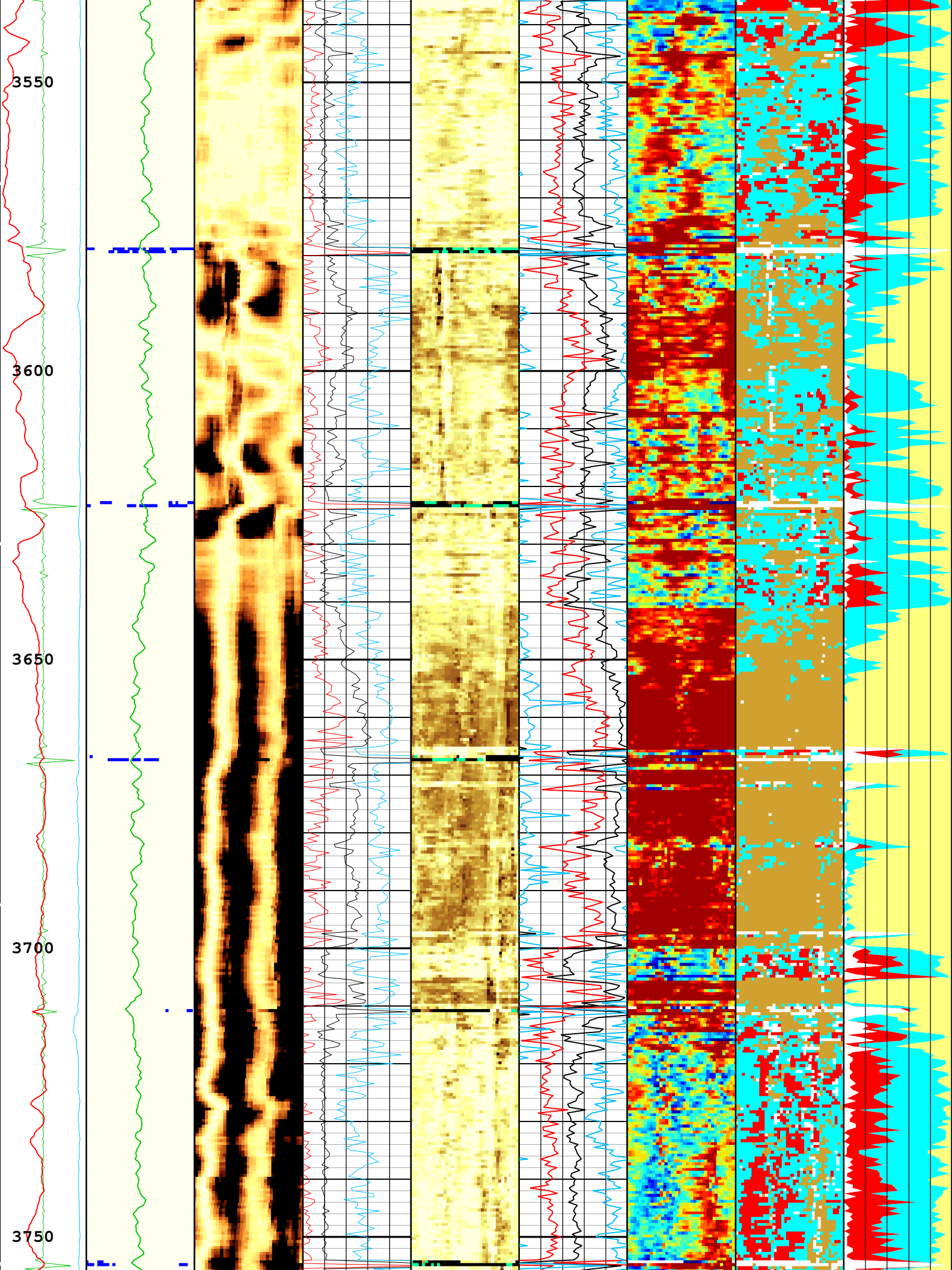

2450
2500
2550
2600
2650

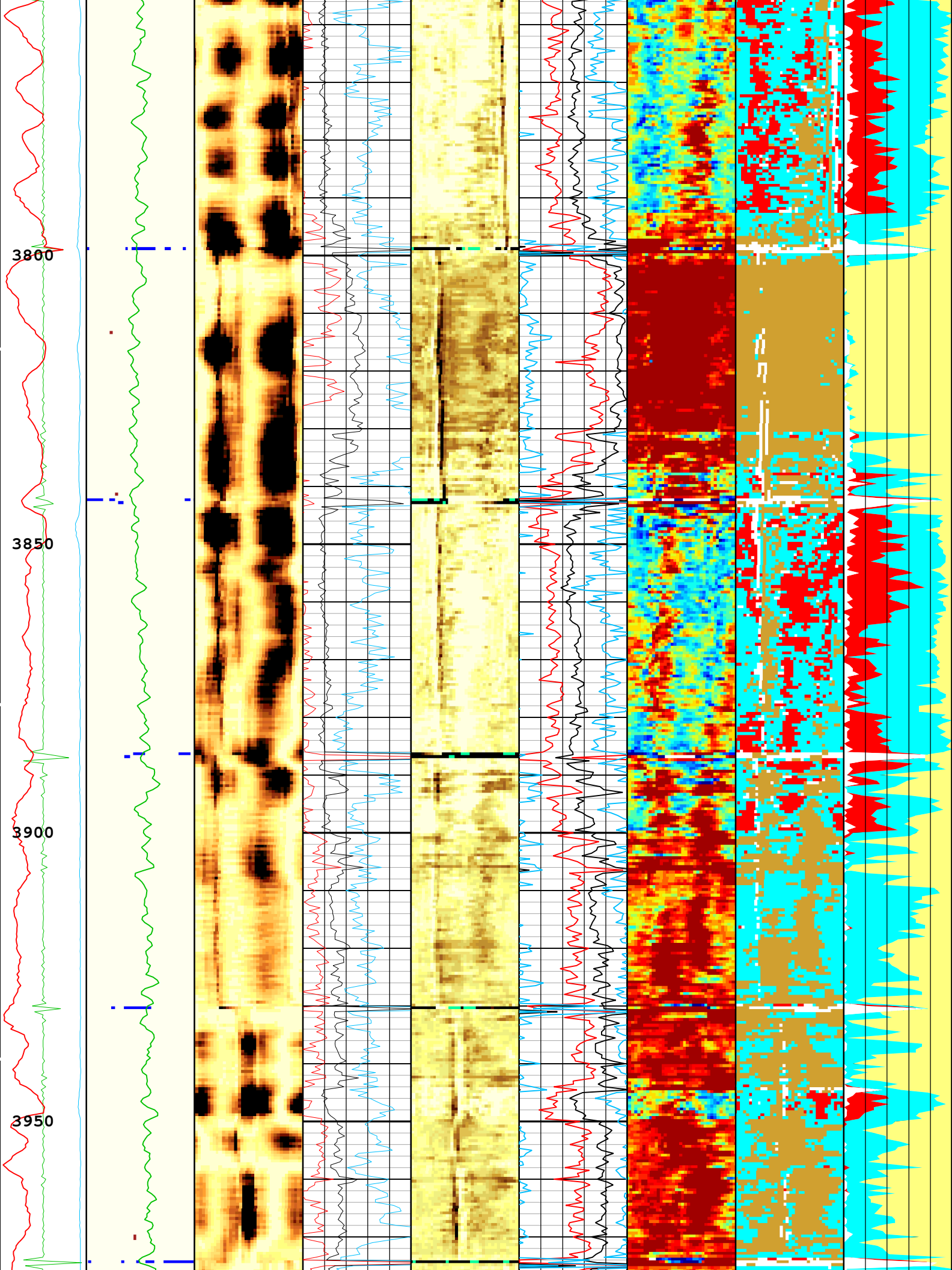

2700
2750
2800
2850

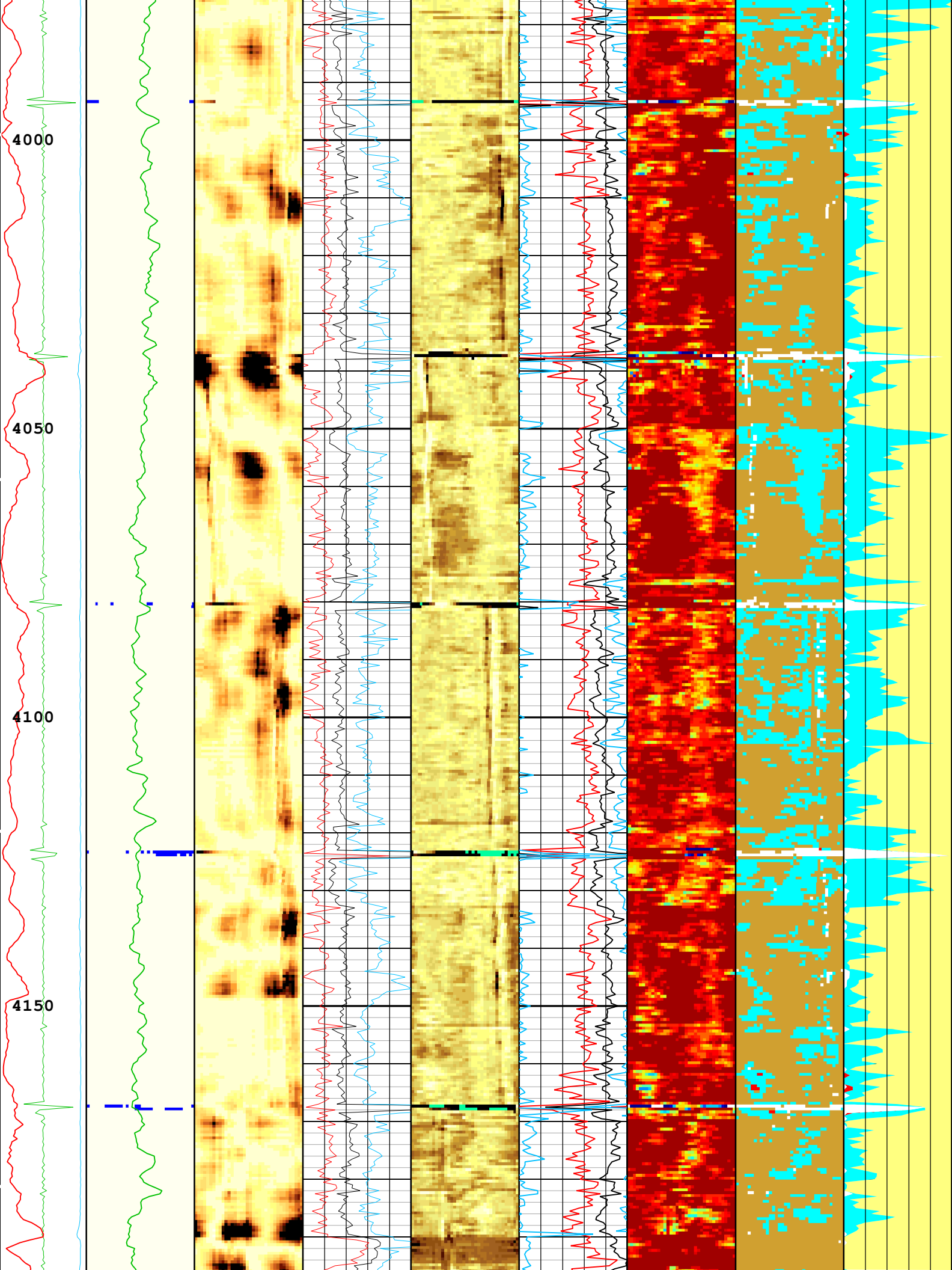

2900
2950
3000
3050

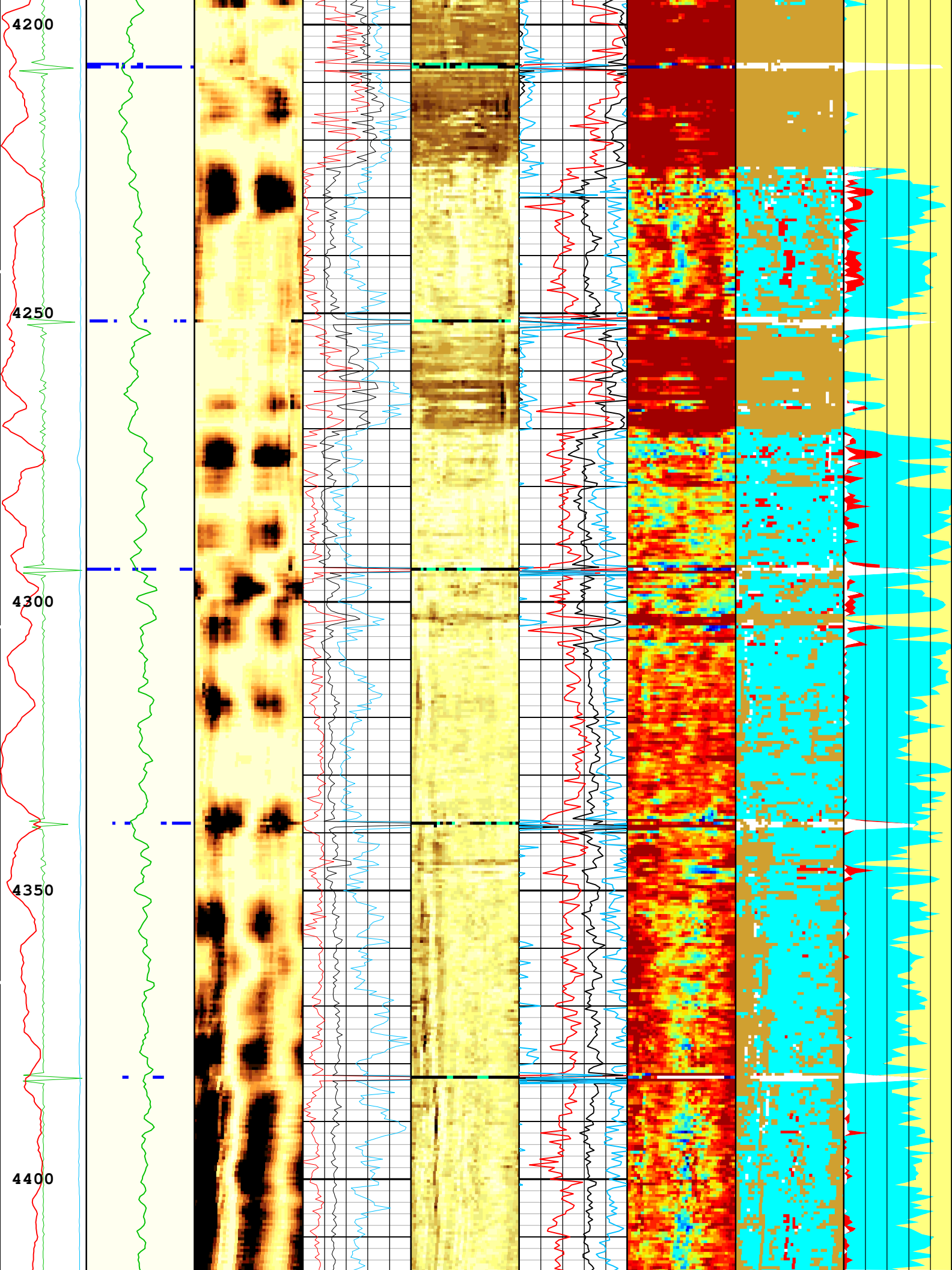

3100
3150
3200
3250
3300

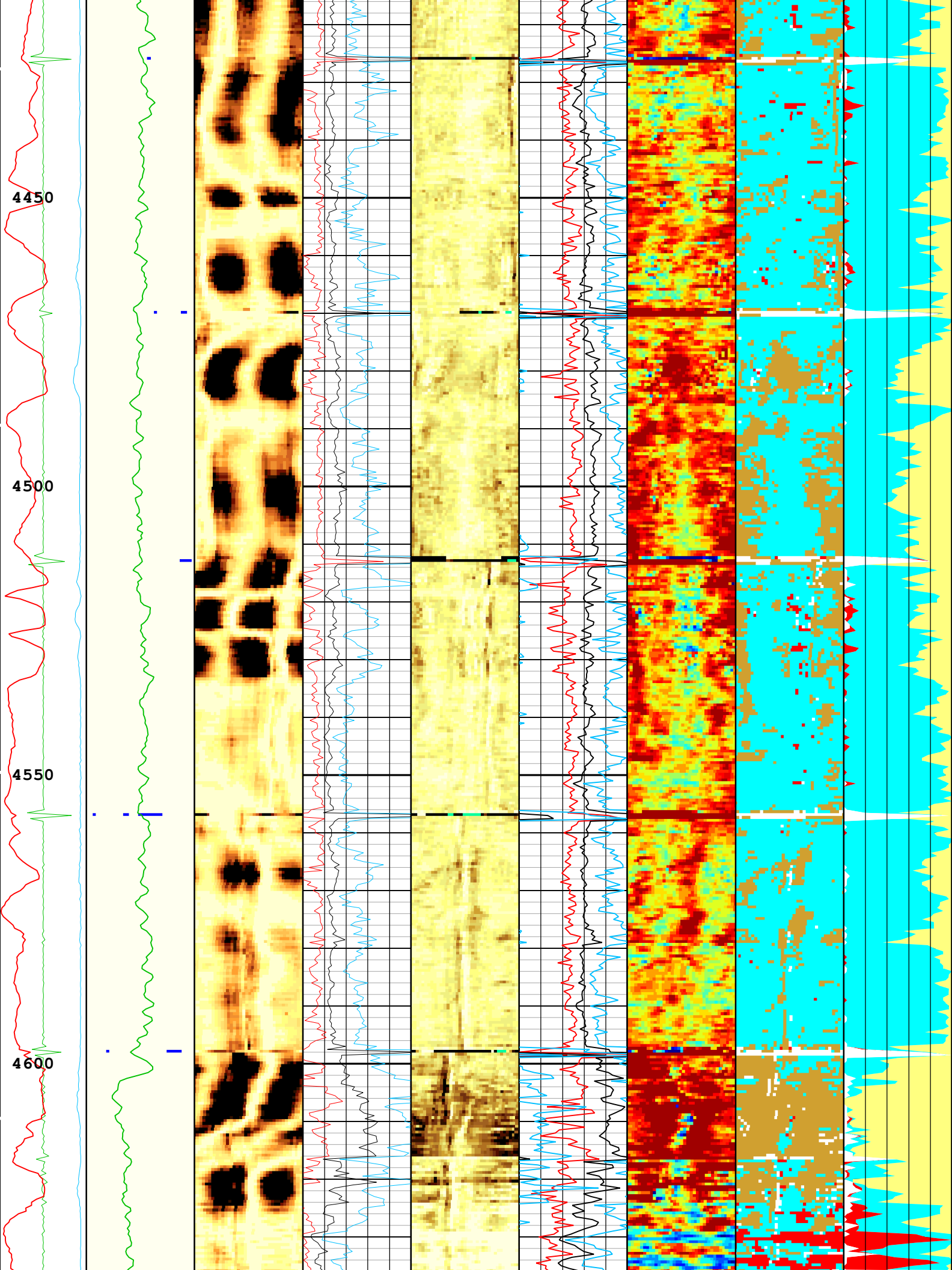

3350
3400
3450
3500

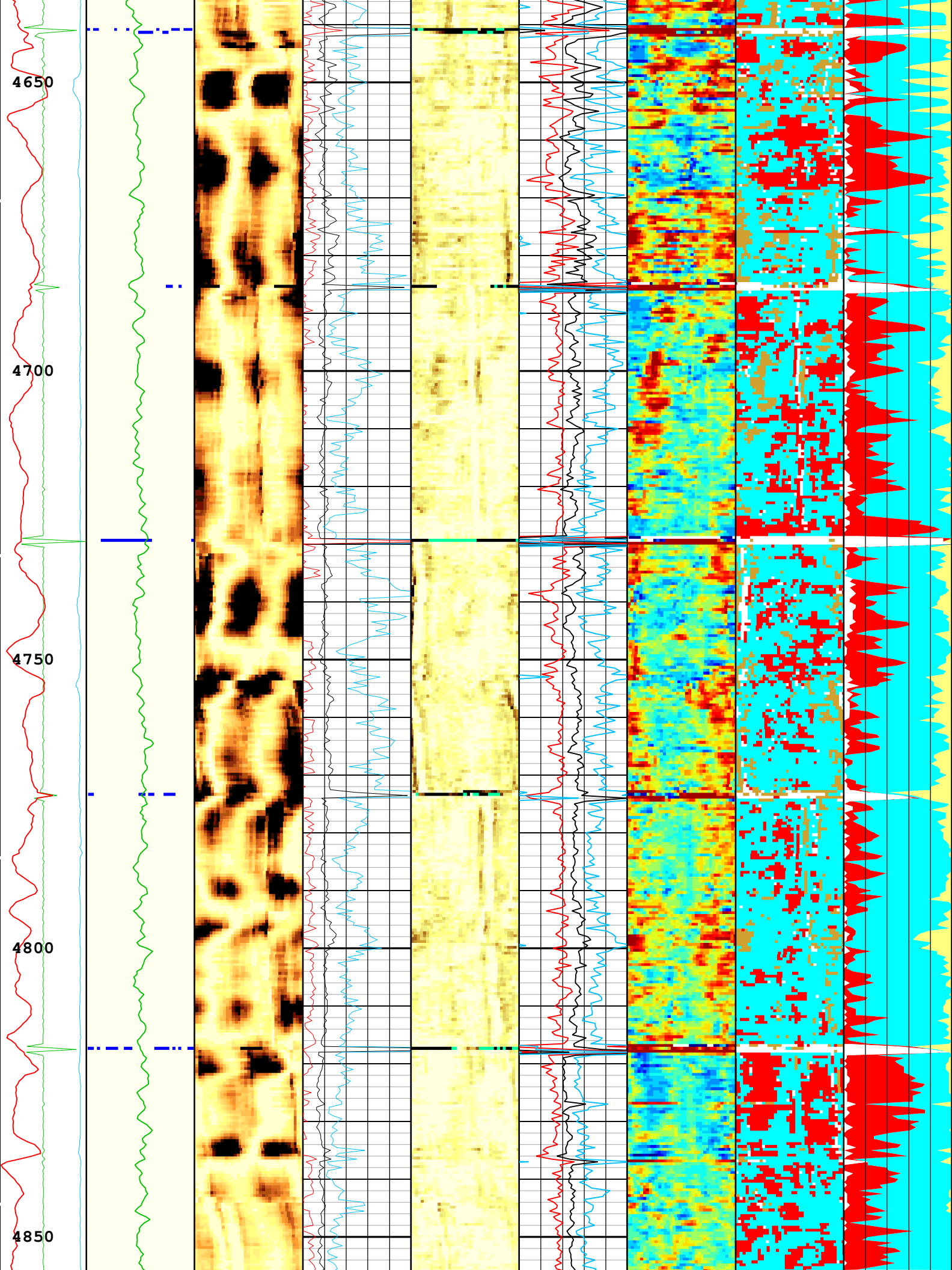

3550
3600
3650
3700
3750

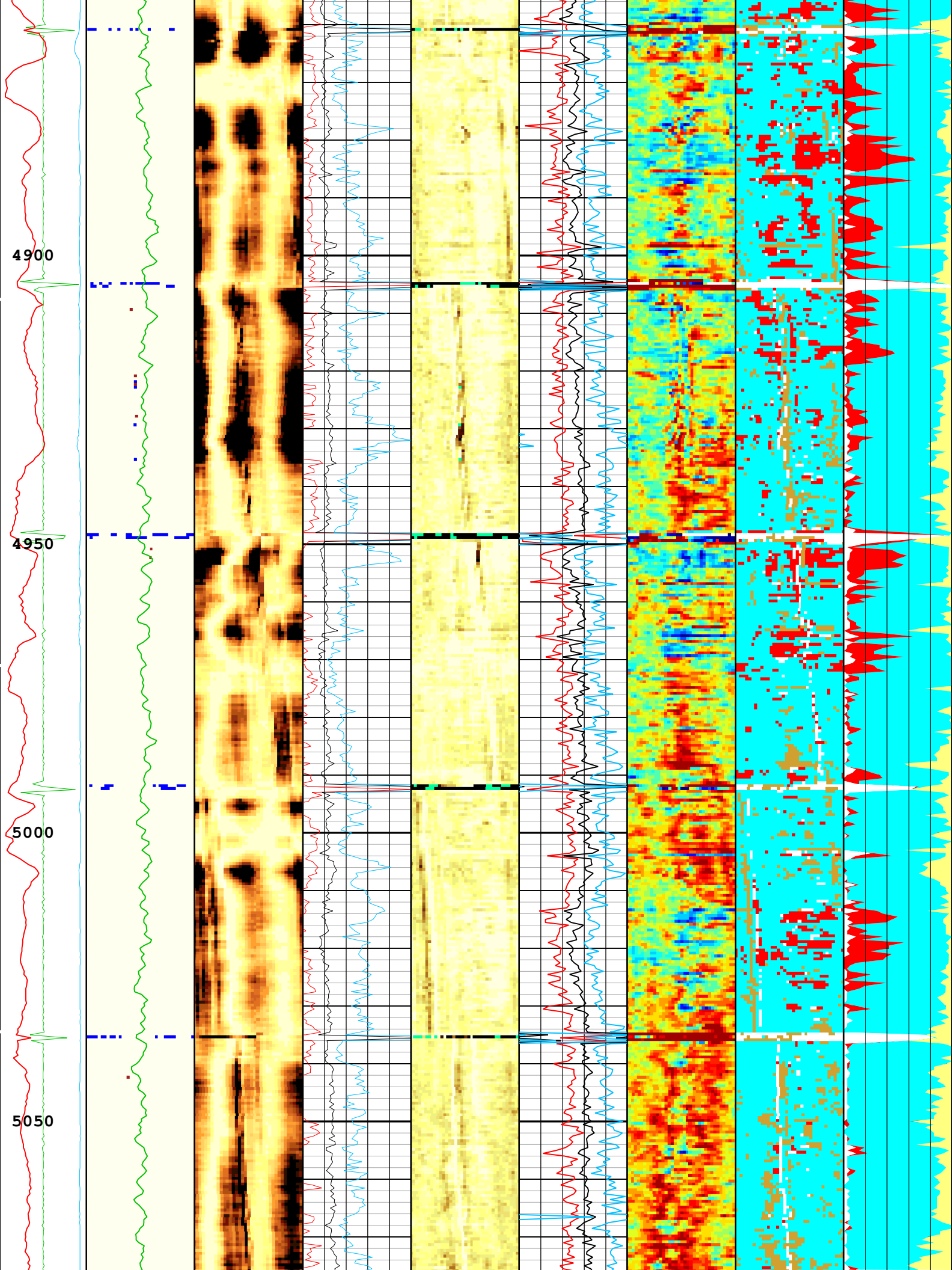

3800
3850
3900
3950

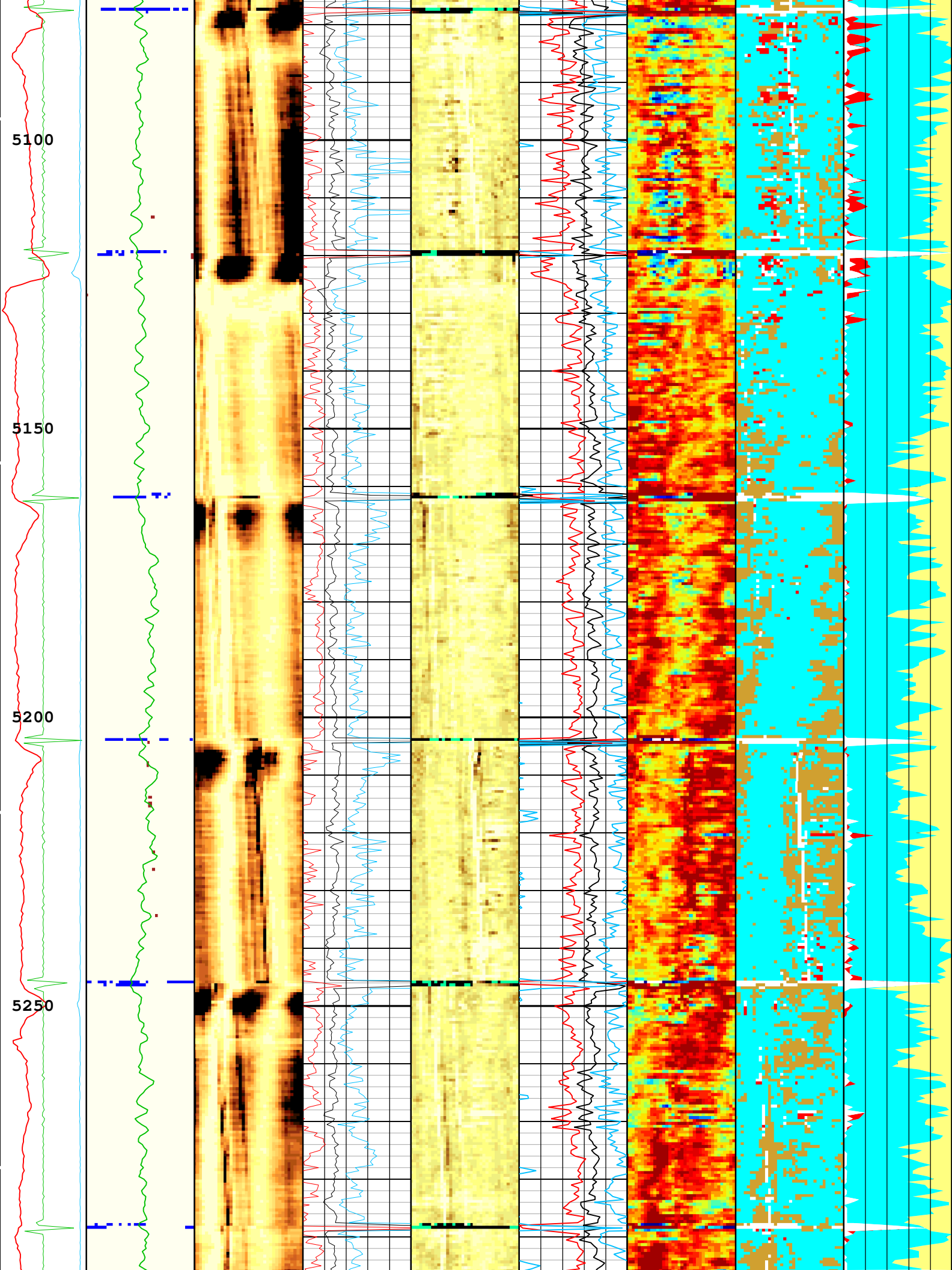

4000
4050
4100
4150

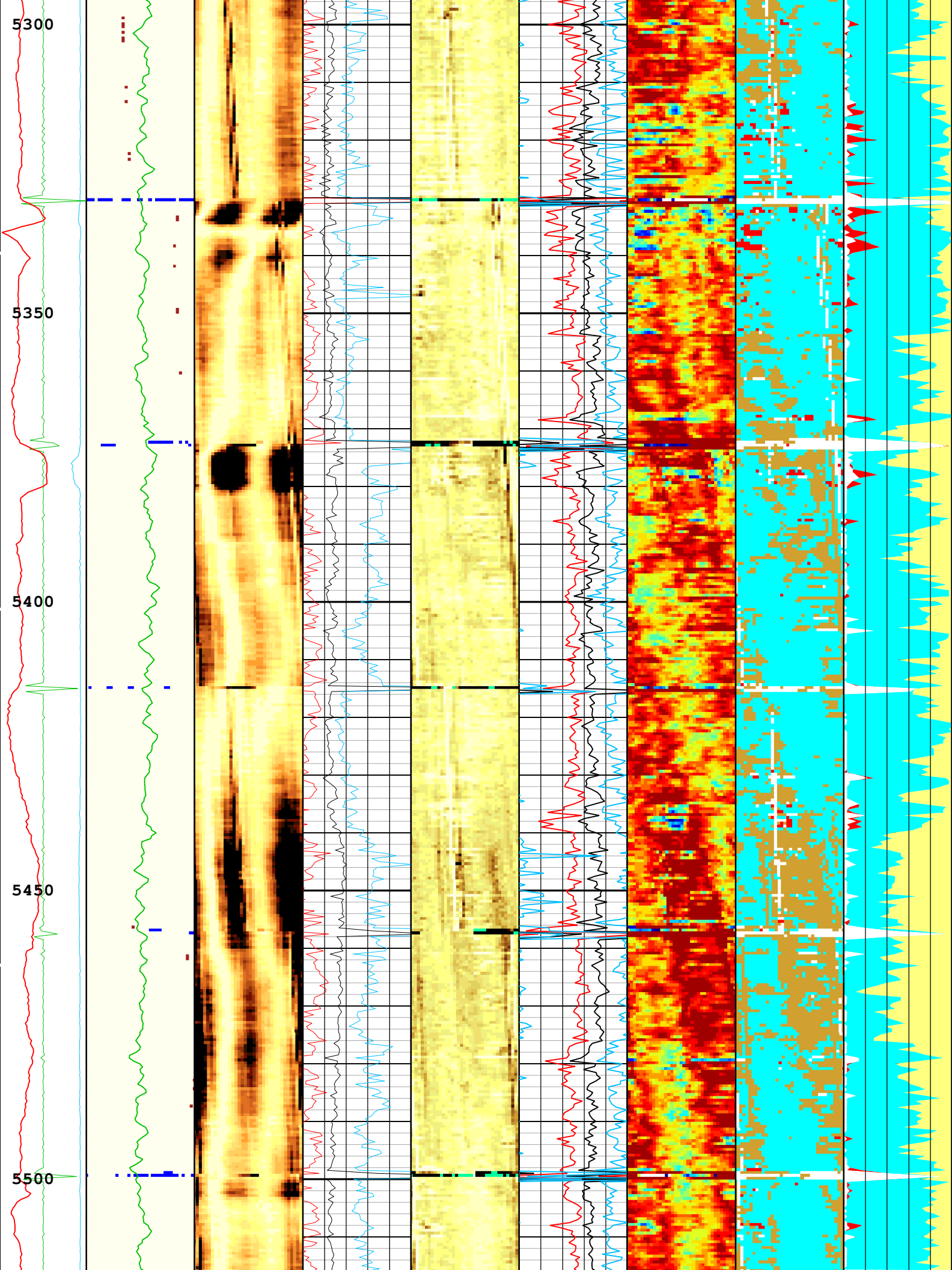

4200
4250
4300
4350
4400

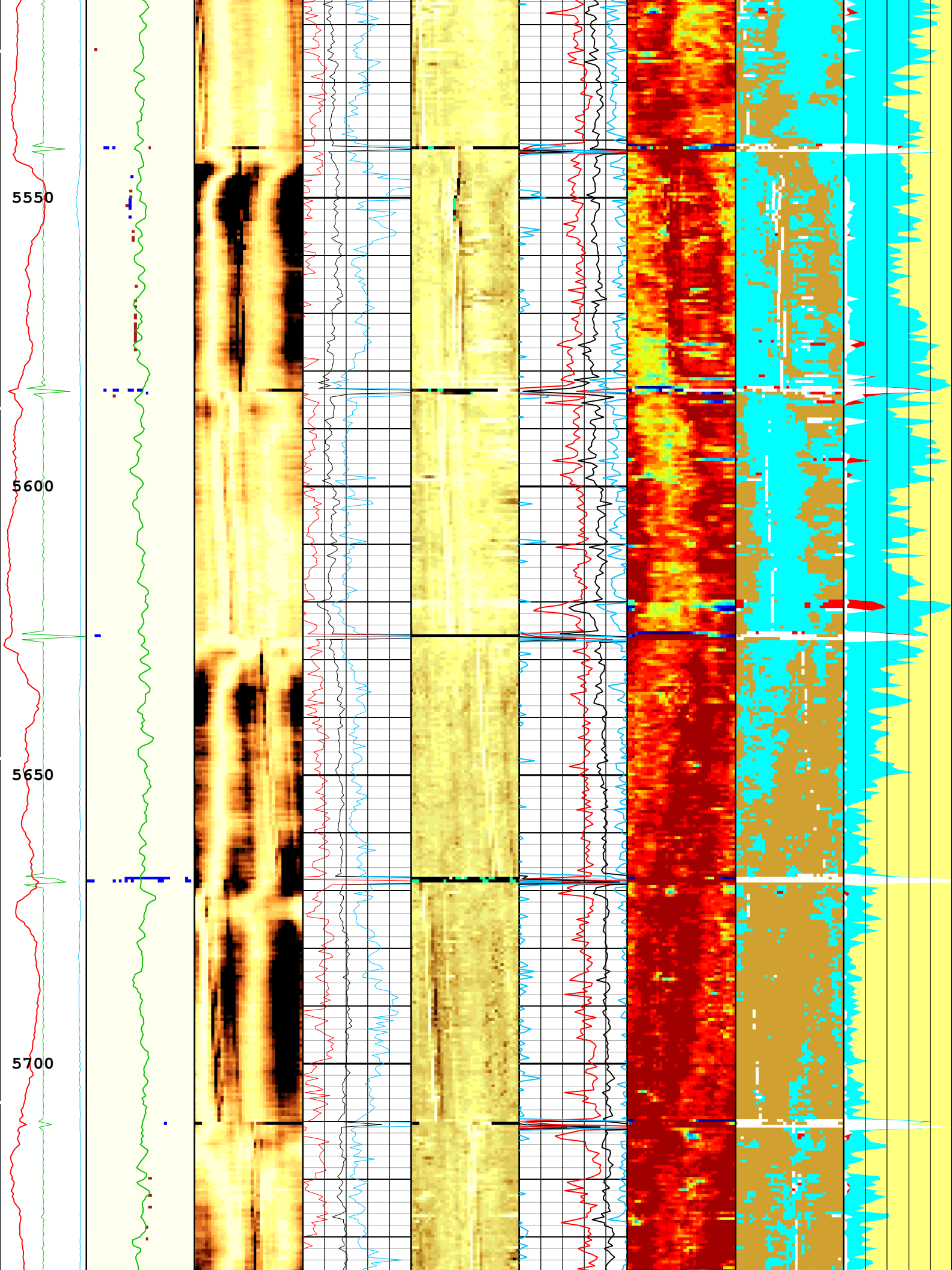

4450
4500
4550
4600

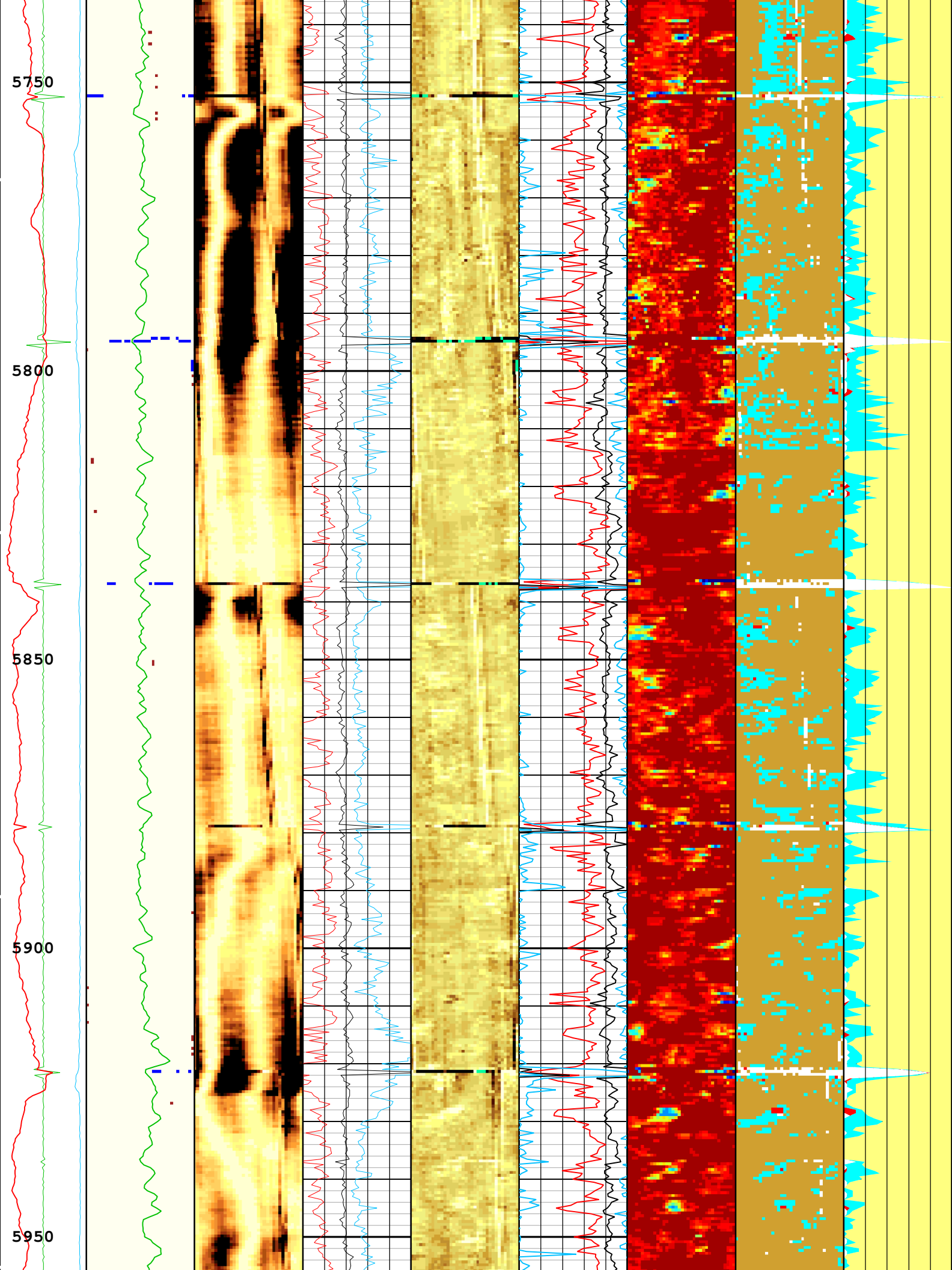

4650
4700
4750
4800
4850

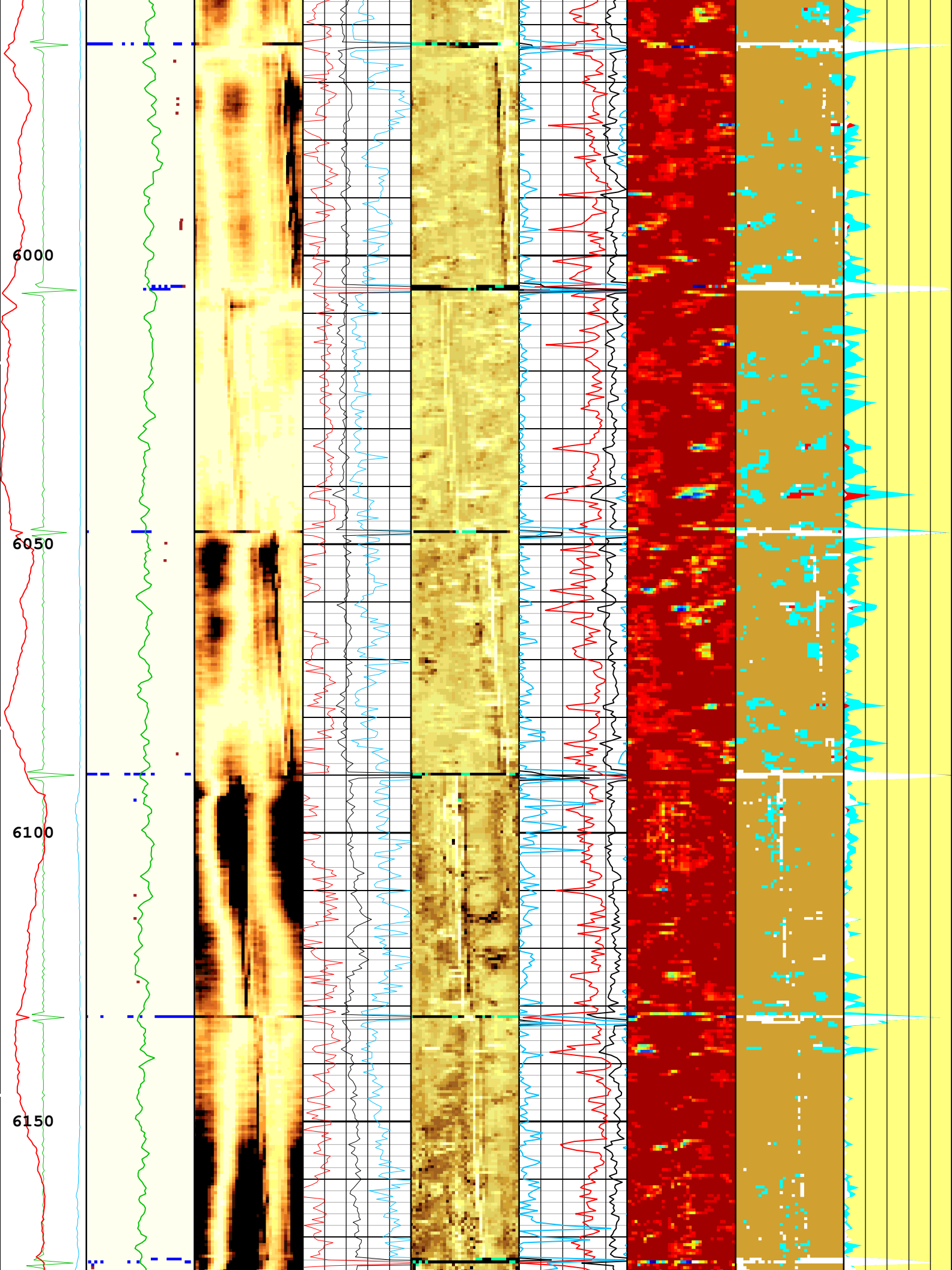

4900
4950
5000
5050

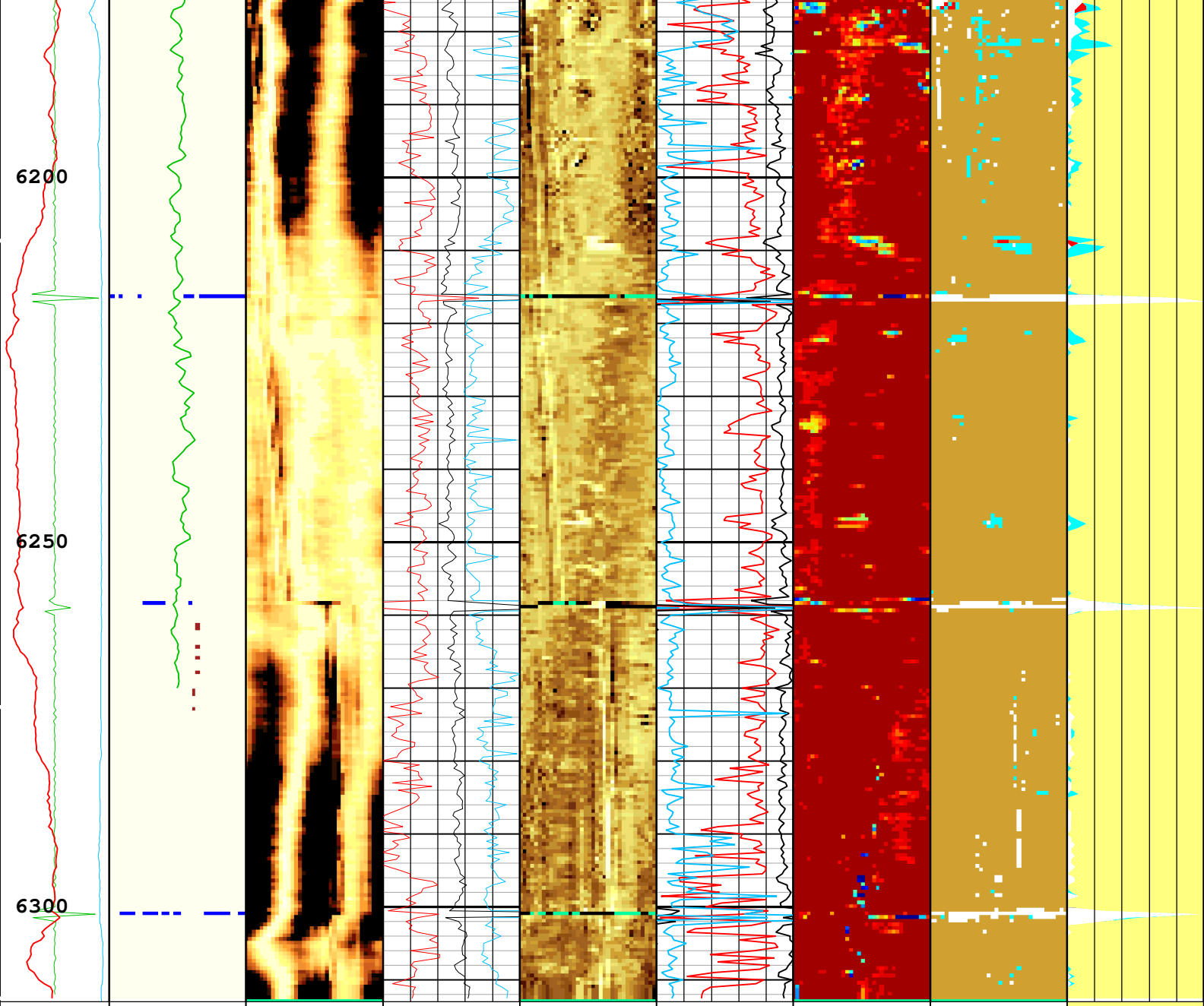

5100
5150
5200
5250


5300
5350
5400
5450
5500


5550
5600
5650
5700


5750
5800
5850
5900
5950


6000
6050
6100
6150



Casing Collar Locator Ultrasonic (CCLU) USIT-E
-20 in 20

Amplitude of Eccentering (ECCE) USIT-E
0 in 0.5

Motor Revolution Speed (RSAV) USIT-E
6 c/s 7.5

Absent 1.500 3.500
Explicit Normalization
USIT - USIT Processing Flags (UFLG) USIT-E
Orientation: Top of Hole
U L B R U

USIT Processing Flags (UFLG[0]) USIT-E
1 5

Gamma Ray (ECGR_EDTC) EDTC-B
0 gAPI 150

Absent -5.200 -3.600 -2.000 -0.400
Explicit Normalization
USIT - Amplitude of Wave (AWBK) USIT-E
(dB)
Orientation: Top of Hole
U L B R U

Acoustic Impedance Minimum (AIMN) USIT-E
-1 Mrayl 9

Acoustic Impedance Average (AIAV) USIT-E
-1 Mrayl 9

Acoustic Impedance Maximum (AIMX) USIT-E
-1 Mrayl 9

Absent 1.500 3.500 5.500 7.500
Custom Normalization
USIT - Acoustic Impedance (AIBK) USIT-E
(Mrayl)
Orientation: Top of Hole
U L B R U

Minimum Flexural Attenuation (U-USIT_UFAN) USIT-E
0 dB/m 150

Average Flexural Attenuation (U-USIT_UFAV) USIT-E
0 dB/m 150

Maximum Flexural Attenuation (U-USIT_UFAX) USIT-E
0 dB/m 150

Absent 42.000 66.000 90.000 114.000
Custom Normalization
USIT - Flexural Attenuation (UFAK) USIT-E
(dB/m)
Orientation: Top of Hole
U L B R U

Absent 0.500 1.500 2.500 3.500
Explicit Normalization
USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E
Orientation: Top of Hole
U L B R U

SLG Solid Index
SLG Liquid Index
SLG Gas Index
SLG White Point Index

USIT Processing Flags (UFLG[0]) USIT-E
1 - UFLG 1 Value within [0.0 - 1.5] -
UTIM Error

1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error

TIME_1900 - Time Marked every 60.00 (s)

Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 31-Oct-2023 11:55:45

Channel Processing Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	7755	ft
CDEN	Cement Density	USIT-E	1.68	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	1.01	g/cm3
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
GR_MULTIPLIER	Gamma Ray Multiplier	EDTC-B	1	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	0	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.5	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.15	
RCOD	Reference Calibrator Outer Diameter	USIT-E	4.5	in
RCSO	Reference Calibrator Standoff	USIT-E	0.842	in
RCTH	Reference Calibrator Thickness	USIT-E	0.216	in
RPLUS_PROCESS	Ultrasonic R+ Processing	USIT-E	No	
SOCN	Standoff Distance	EDTC-B	0.125	in
SOCO	Standoff Correction Option	EDTC-B	No	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	120	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	80	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.5	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
THDP	Thickness Detection Policy	USIT-E	Fundamental	

VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.48	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	12.25	0	675
BS	7.875	675	6313

All depth are actual.

Tool Control Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	1.756	in
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
HRES	Horizontal Resolution	USIT-E	10 deg	
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	Yes	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
USSP	Ultrasonic Service	USIT-E	IBC	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	7	31-Oct-2023 09:17:35	31-Oct-2023 09:26:23	6314.01	6184.02
EMXV	8	31-Oct-2023 09:26:23	31-Oct-2023 09:46:59	6184.02	4908.53
EMXV	7	31-Oct-2023 09:46:59	31-Oct-2023 10:35:14	4908.53	1920.88
EMXV	6	31-Oct-2023 10:35:14	31-Oct-2023 10:46:31	1920.88	1212.22
EMXV	5	31-Oct-2023 10:46:31	31-Oct-2023 11:11:48	1212.22	34.29

All depth are at tool zero.

R1D1

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD_ThruBit_2023.0_13.0.225000

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
R1D1	Log[4]:Up	Up	34.29 ft	6314.01 ft	31-Oct-2023 9:17:35 AM	31-Oct-2023 11:11:48 AM	ON	3.09 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Occidental Petroleum Corporation Well:Burchfield State 23-16

R1D1: Log[4]:Up:S007

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth

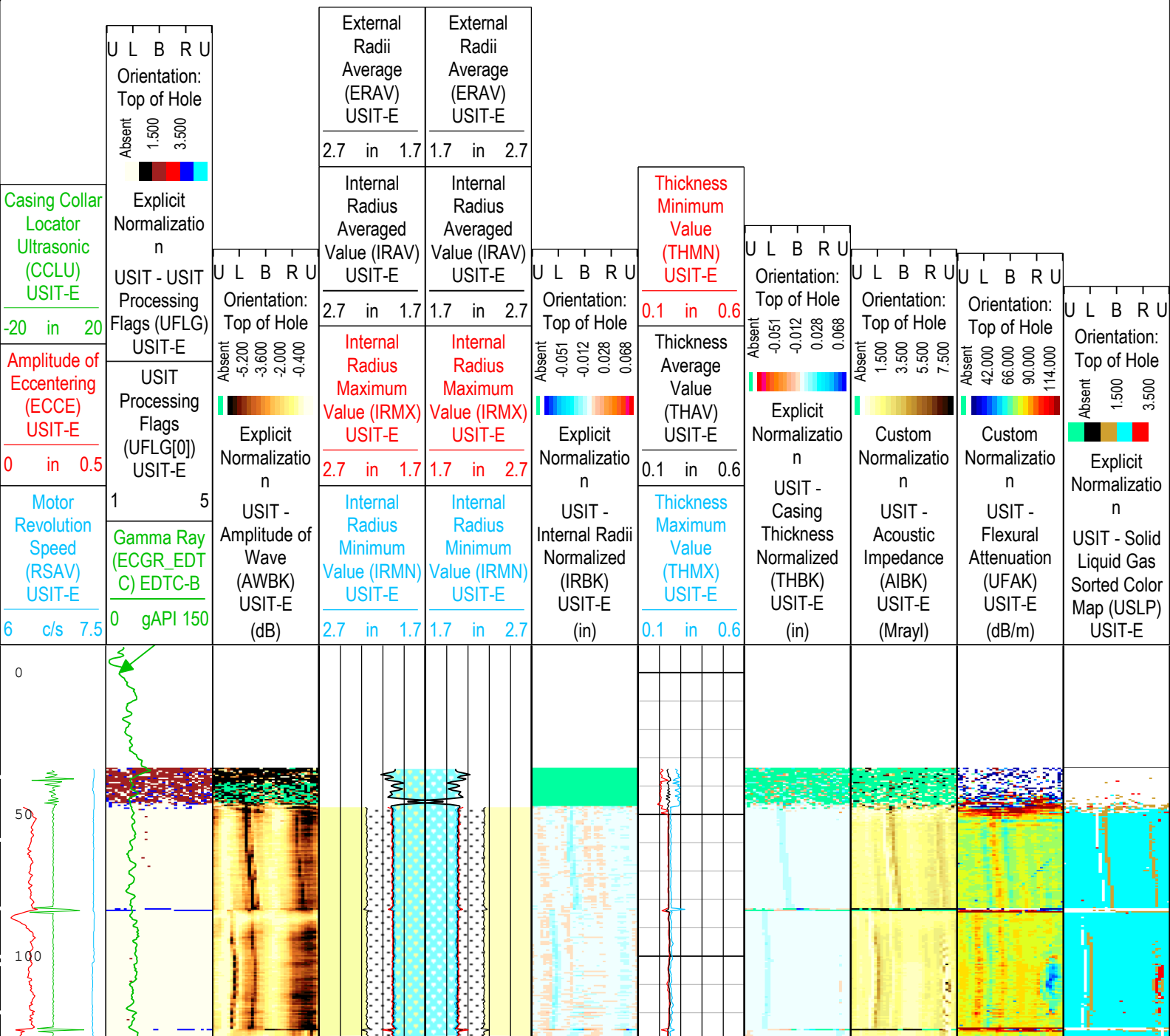
Creation Date: 31-Oct-2023 11:56:01

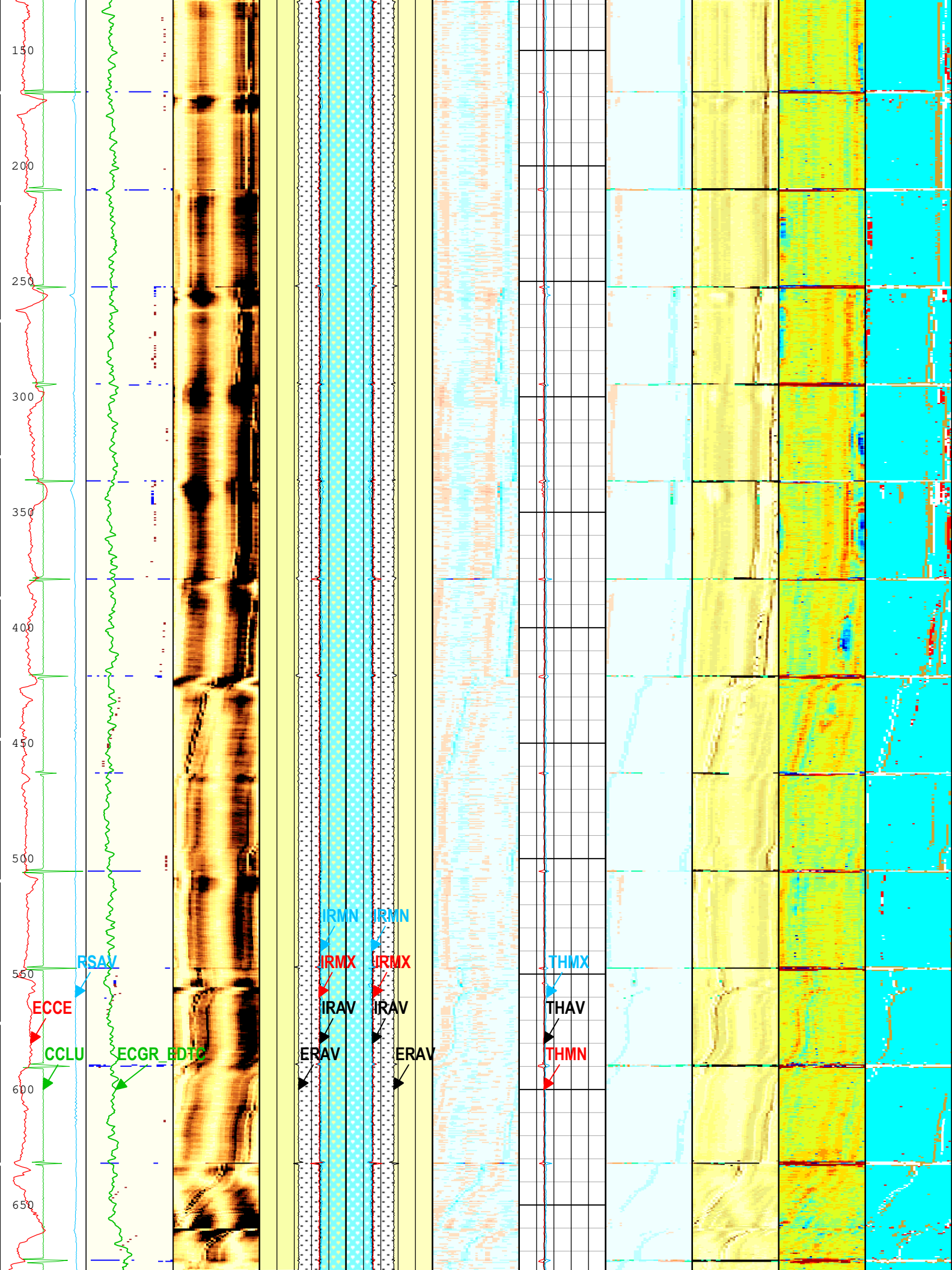
USIT Processing Flags (UFLG[0]) USIT-E

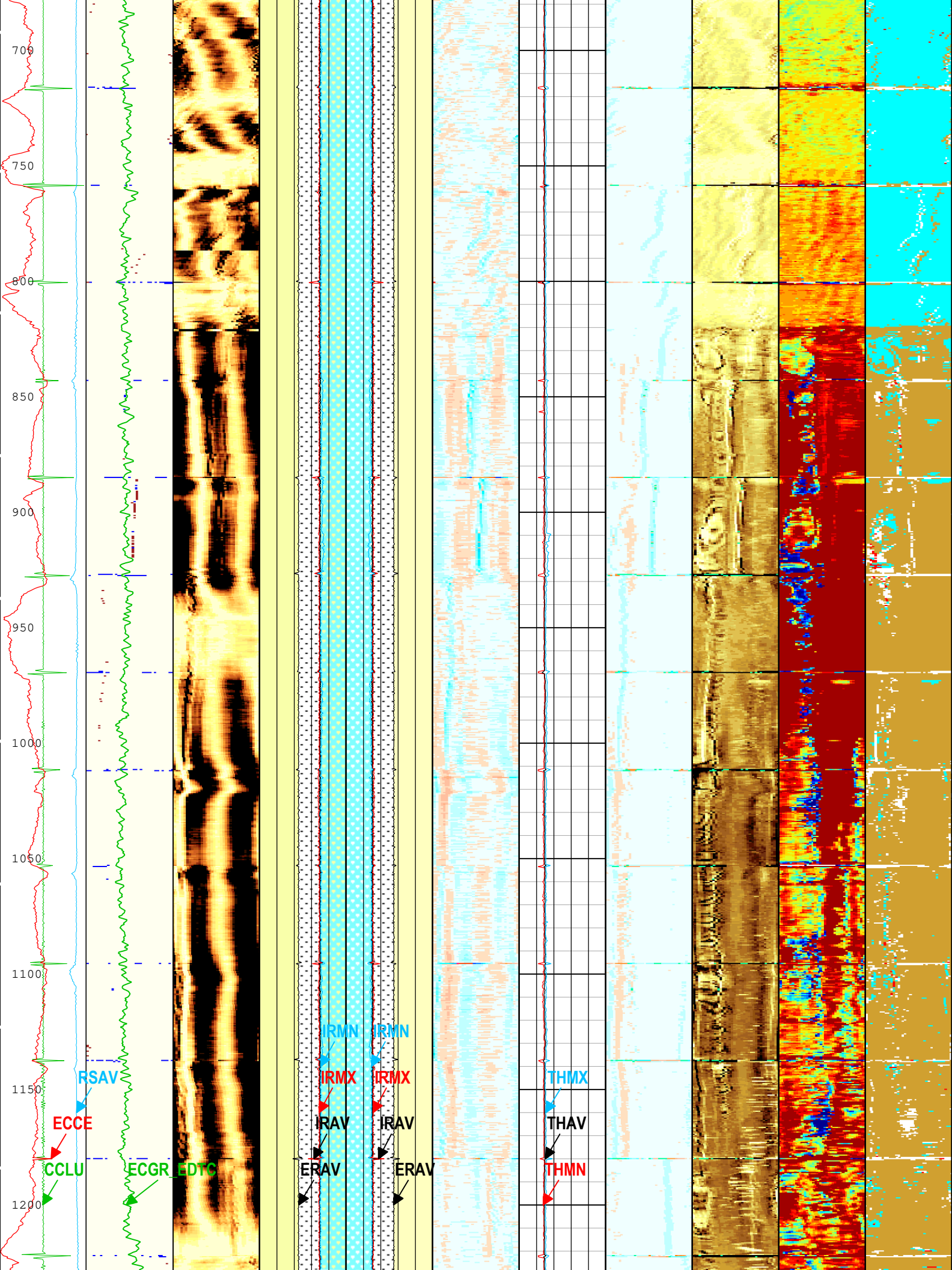
1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

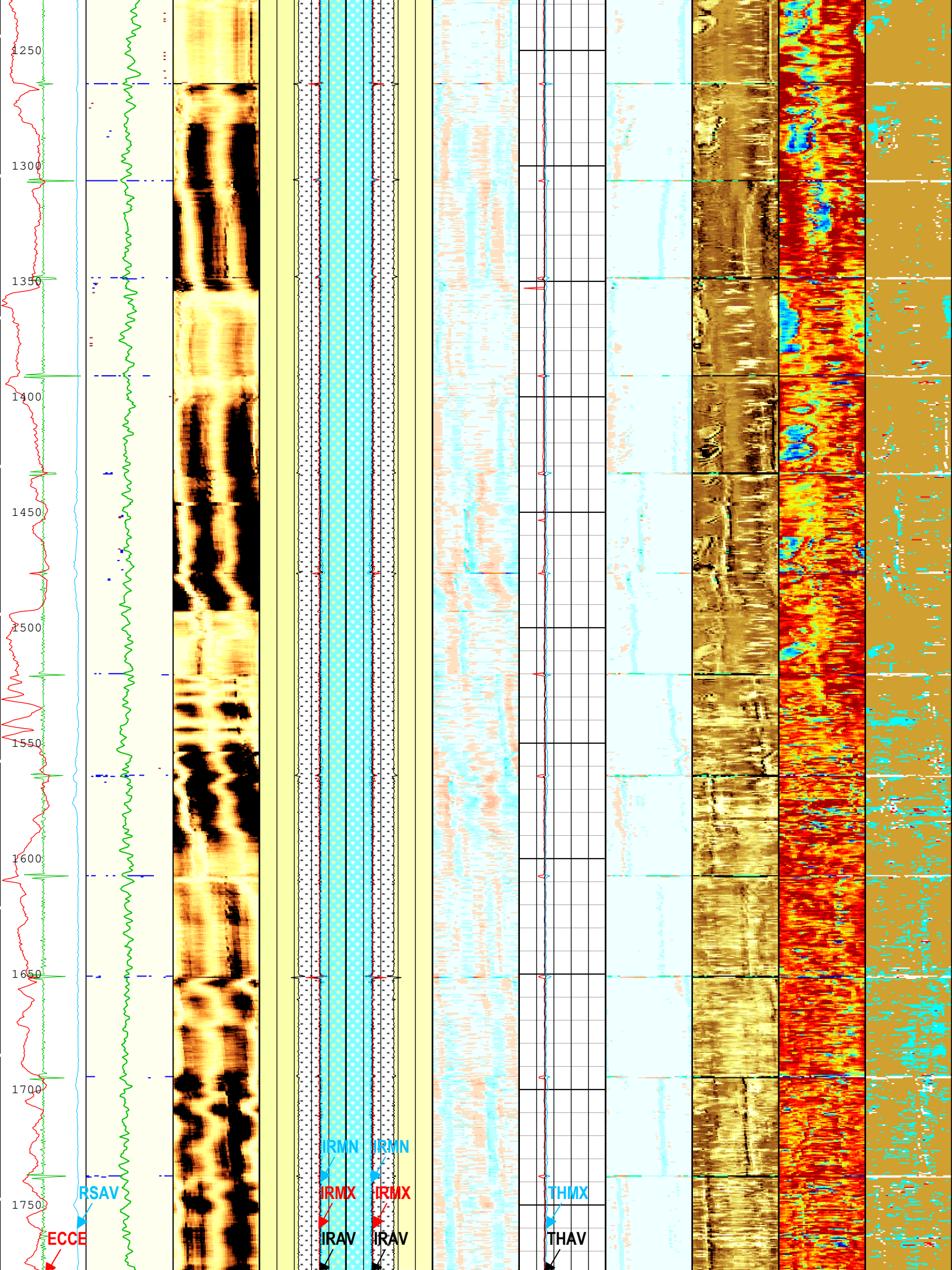
UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error

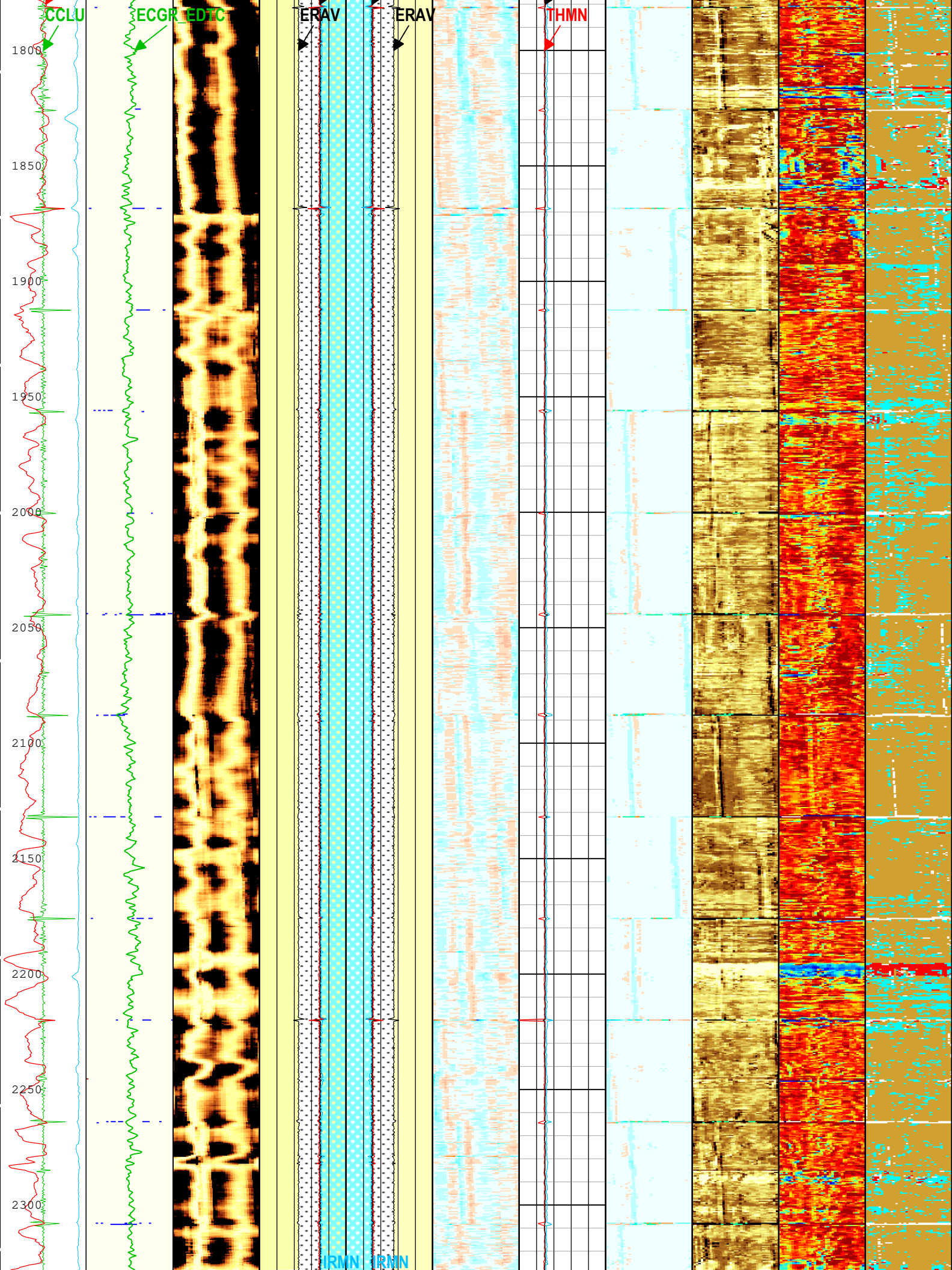
TIME_1900 - Time Marked every 60.00 (s)

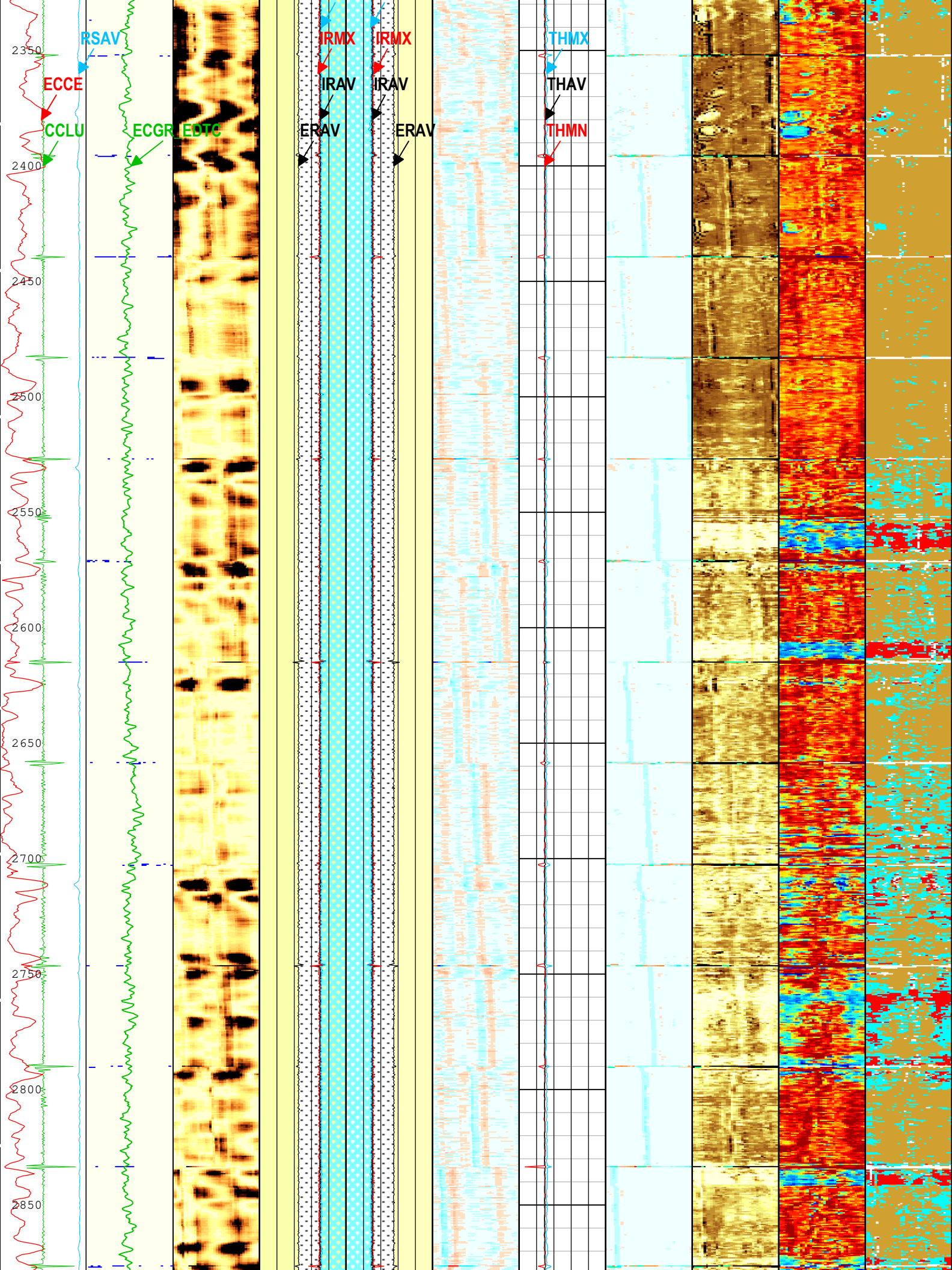


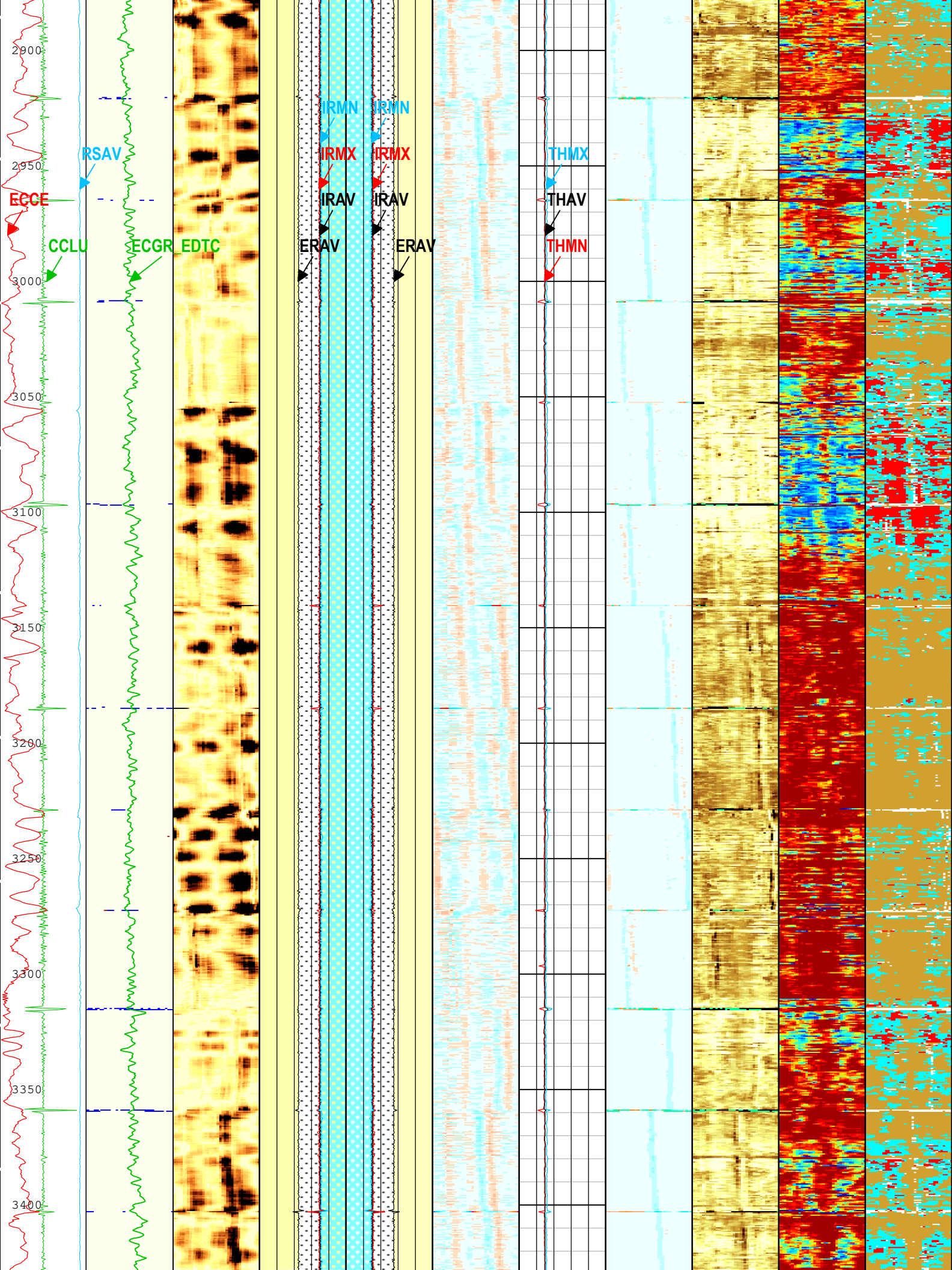

150
200
250
300
350
400
450
500
550
600
650
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMN
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN

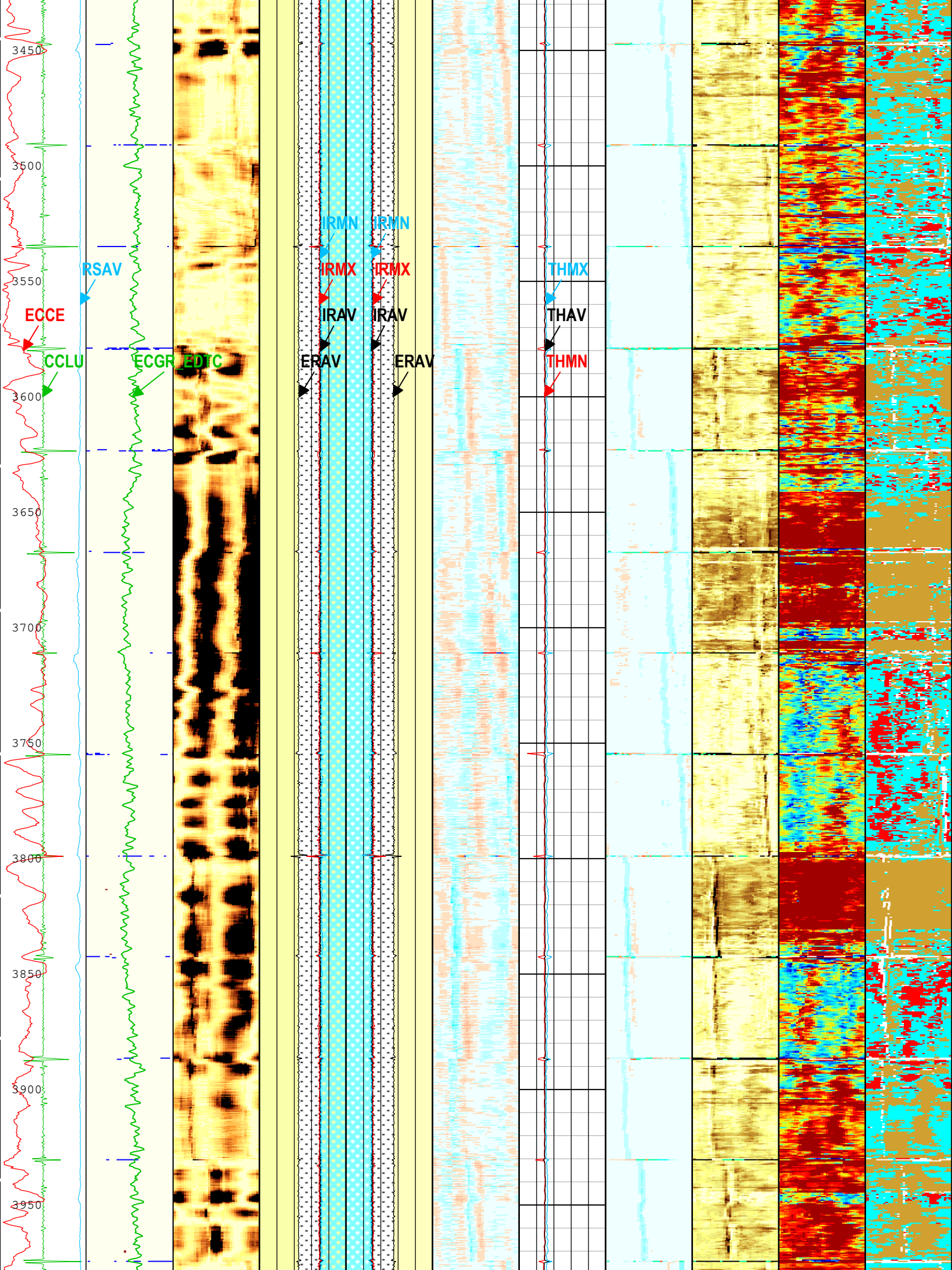

700
750
800
850
900
950
1000
1050
1100
1150
1200
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMX
IRAV
ERAV
IRMN
IRMX
IRAV
ERAV
THMX
THAV
THMN

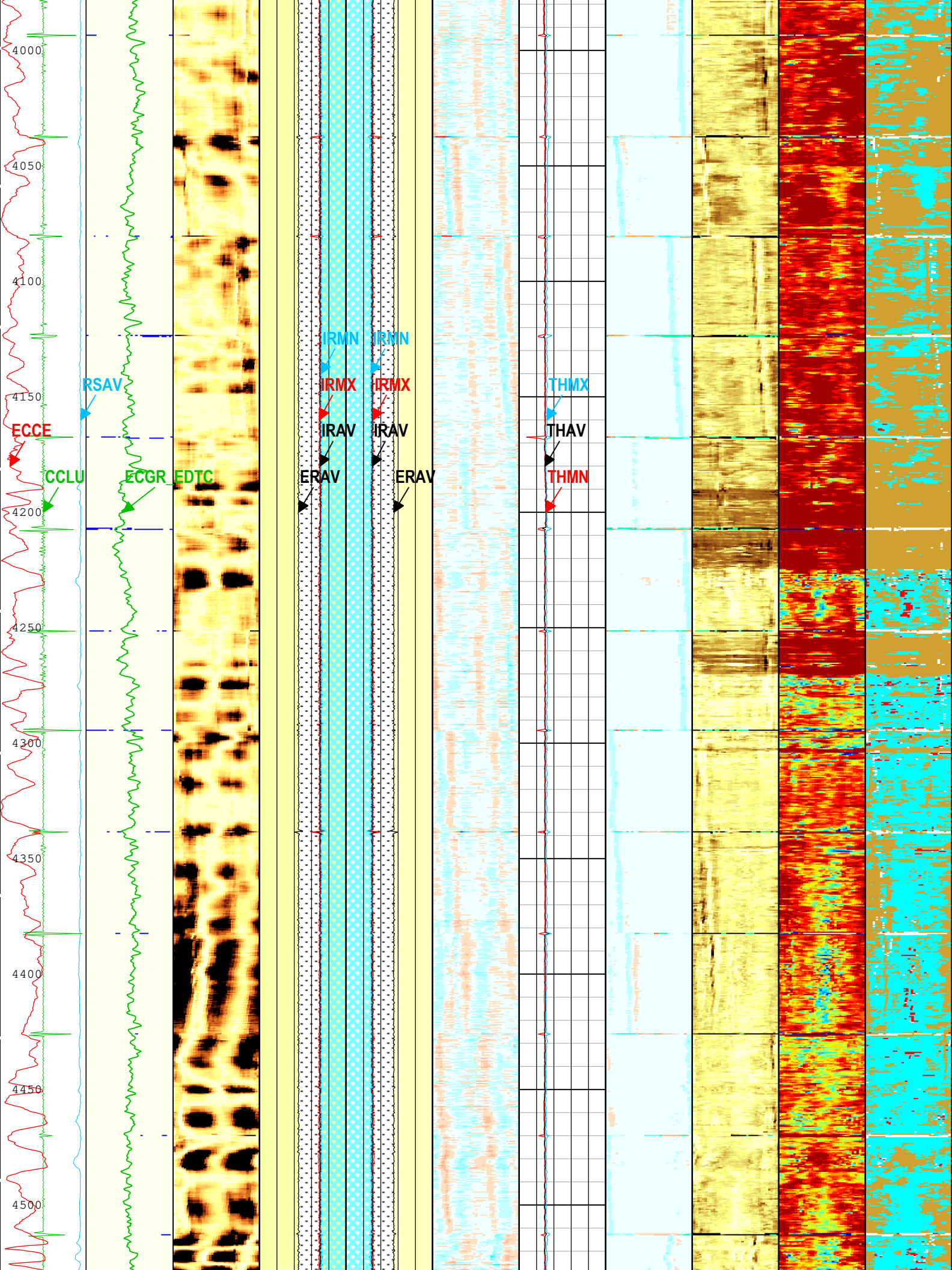

1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
RSAV
ECCE
IRMN
IRMX
IRAV
IRMN
IRMX
IRAV
THMX
THAV

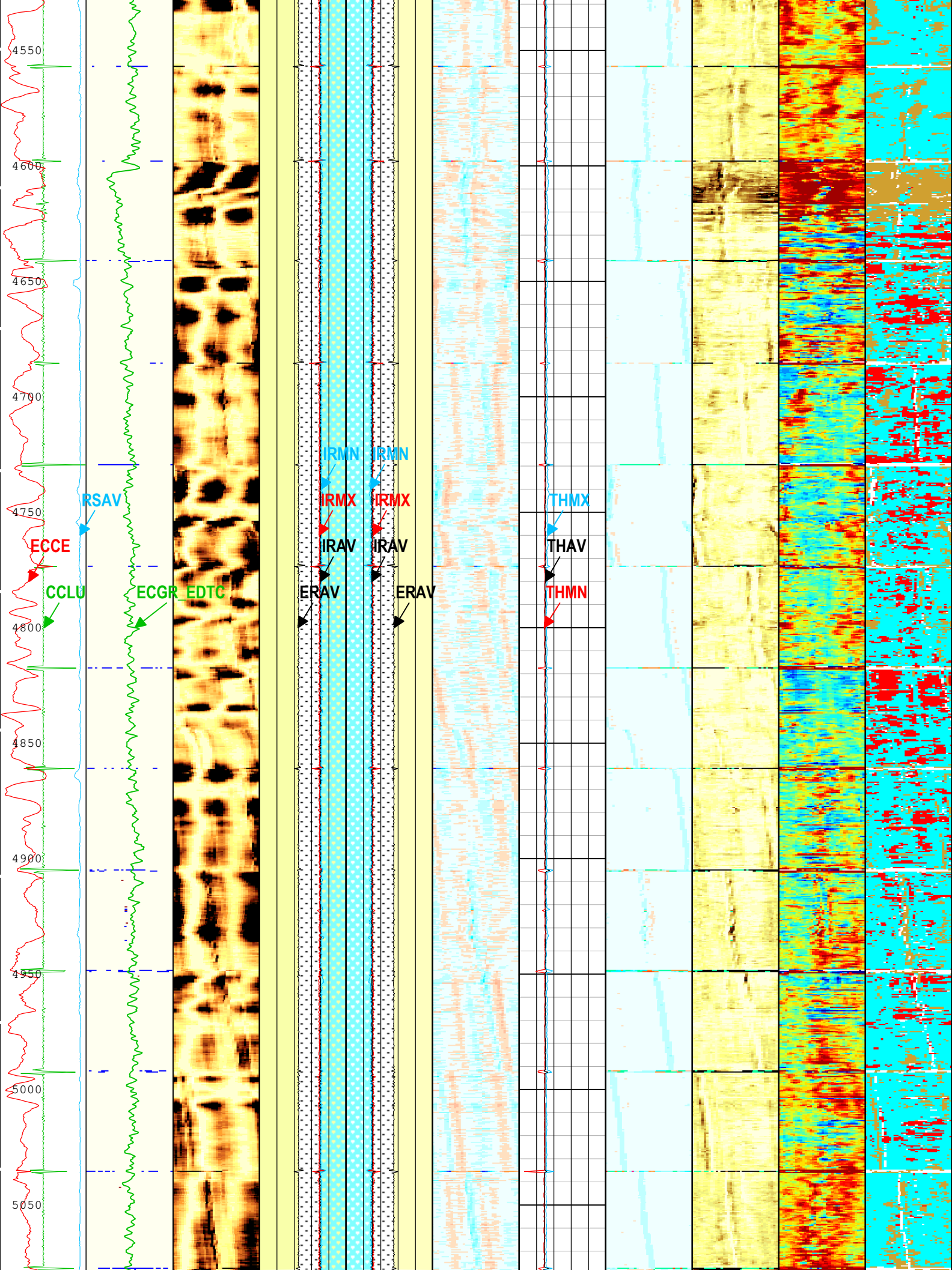

CCLU
ECGR_EDTC
ERAV
ERAV
THMN
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300
IRMN
IRMN

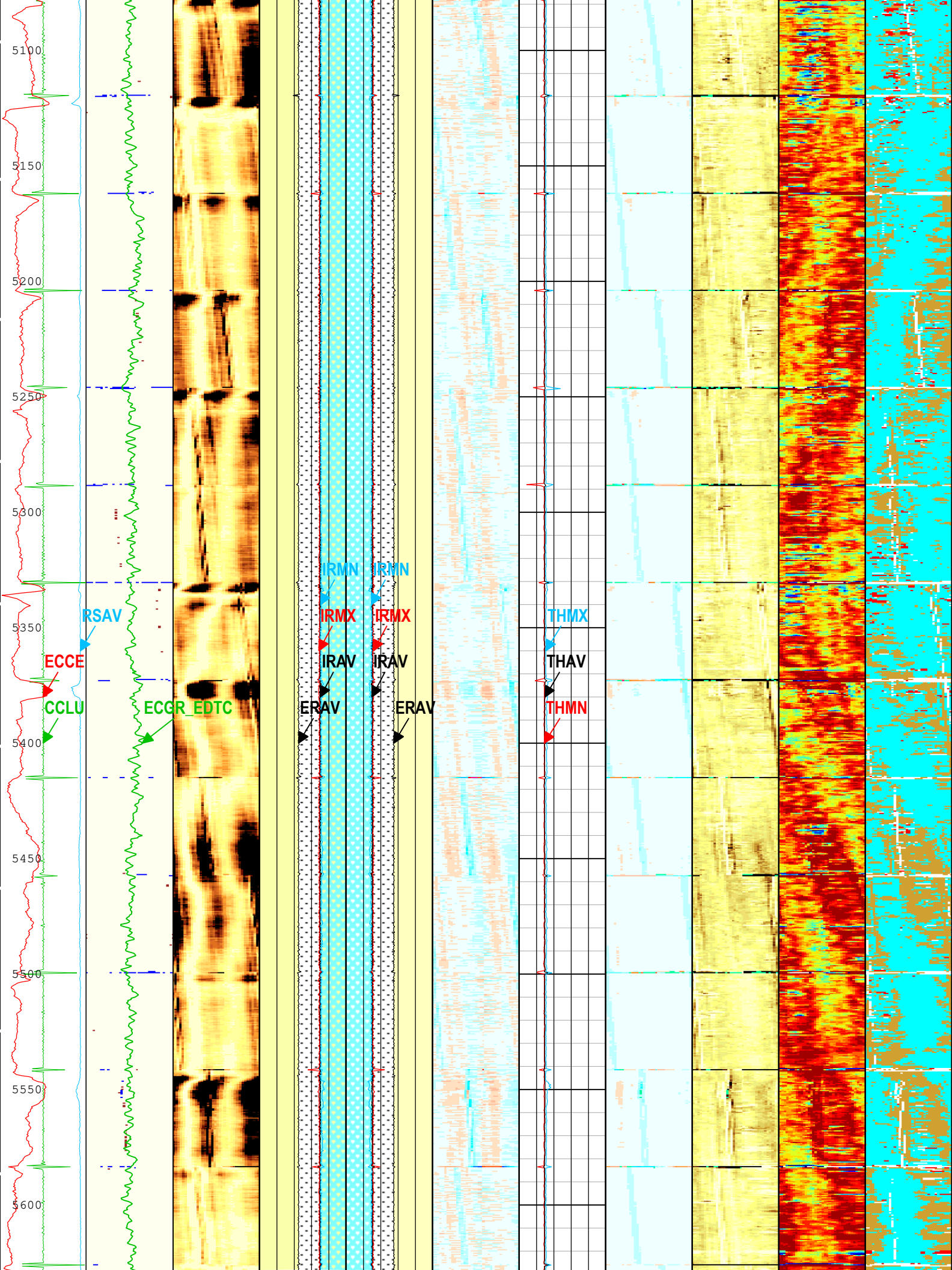

RSAV
ECCE
CCLU
ECGR_EDTC
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850

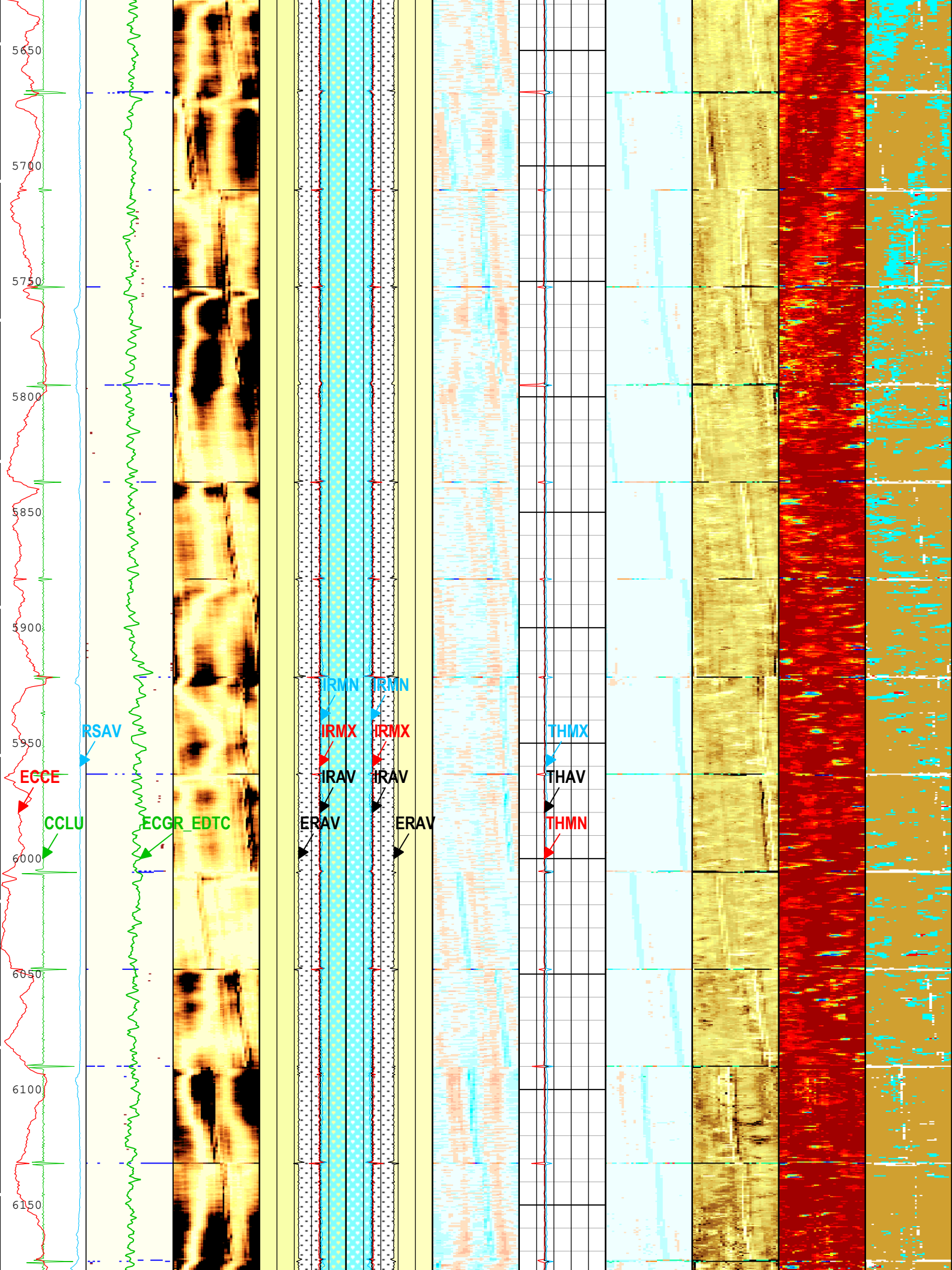

2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMN
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN

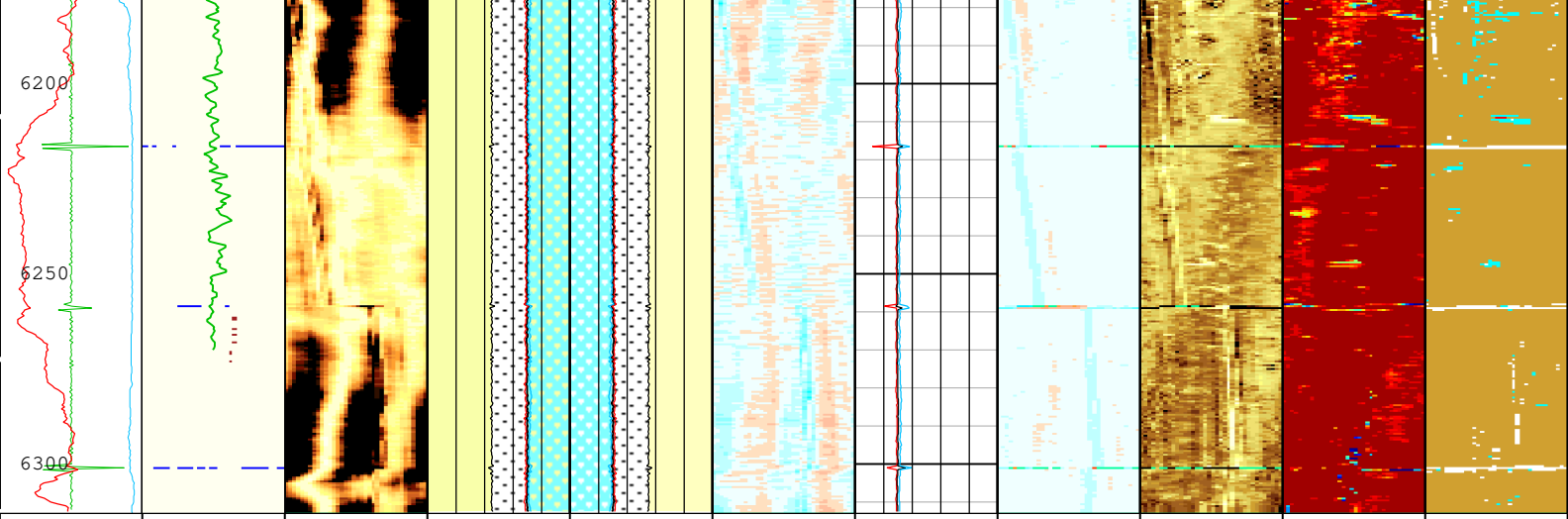

3450
3500
3550
3600
3650
3700
3750
3800
3850
3900
3950
RSAV
ECCE
CCLU
ECGR
EDTC
IRMN
IRMN
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN


4000
4050
4100
4150
4200
4250
4300
4350
4400
4450
4500
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMX
IRAV
ERAV
IRMN
IRMX
IRAV
ERAV
THMX
THAV
THMN


4550
4600
4650
4700
4750
4800
4850
4900
4950
5000
5050
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMN
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN


5100
5150
5200
5250
5300
5350
5400
5450
5500
5550
5600
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMN
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN


5650
5700
5750
5800
5850
5900
5950
6000
6050
6100
6150
RSAV
ECCE
CCLU
ECGR_EDTC
IRMN
IRMN
IRMX
IRMX
IRAV
IRAV
ERAV
ERAV
THMX
THAV
THMN



Casing Collar Locator Ultrasonic (CCLU) USIT-E
-20 in 20

Amplitude of Eccentering (ECCE) USIT-E
0 in 0.5

Motor Revolution Speed (RSAV) USIT-E
6 c/s 7.5

Absent 1.500 3.500
Explicit Normalization
USIT - USIT Processing Flags (UFLG) USIT-E
Orientation: Top of Hole
U L B R U

USIT Processing Flags (UFLG[0]) USIT-E
1 5

Gamma Ray (ECGR_EDTC) EDTC-B
0 gAPI 150

Absent -5.200 -3.600 -2.000 -0.400
Explicit Normalization
USIT - Amplitude of Wave (AWBK) USIT-E
(dB)
Orientation: Top of Hole
U L B R U

External Radii Average (ERAV) USIT-E
2.7 in 1.7

Internal Radius Averaged Value (IRAV) USIT-E
2.7 in 1.7

Internal Radius Maximum Value (IRMX) USIT-E
2.7 in 1.7

Internal Radius Minimum Value (IRMN) USIT-E
2.7 in 1.7

External Radii Average (ERAV) USIT-E
1.7 in 2.7

Internal Radius Averaged Value (IRAV) USIT-E
1.7 in 2.7

Internal Radius Maximum Value (IRMX) USIT-E
1.7 in 2.7

Internal Radius Minimum Value (IRMN) USIT-E
1.7 in 2.7

Absent -0.051 -0.012 0.028 0.068
Explicit Normalization
USIT - Internal Radii Normalized (IRBK) USIT-E
(in)
Orientation: Top of Hole
U L B R U

Thickness Minimum Value (THMN) USIT-E
0.1 in 0.6

Thickness Average Value (THAV) USIT-E
0.1 in 0.6

Thickness Maximum Value (THMX) USIT-E
0.1 in 0.6

Absent -0.051 -0.012 0.028 0.068
Explicit Normalization
USIT - Casing Thickness Normalized (THBK) USIT-E
(in)
Orientation: Top of Hole
U L B R U

Absent 1.500 3.500 5.500 7.500
Custom Normalization
USIT - Acoustic Impedance (AIBK) USIT-E
(Mrayl)
Orientation: Top of Hole
U L B R U

Absent 42.000 66.000 90.000 114.000
Custom Normalization
USIT - Flexural Attenuation (UFAK) USIT-E
(dB/m)
Orientation: Top of Hole
U L B R U

Absent 1.500 3.500
Explicit Normalization
USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E
Orientation: Top of Hole
U L B R U

TIME_1900 - Time Marked every 60.00 (s)

USIT Processing Flags (UFLG[0]) USIT-E

1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 31-Oct-2023 11:56:01

Channel Processing Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	7755	ft
CDEN	Cement Density	USIT-E	1.68	g/cm3

CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	1.01	g/cm3
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.5	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.15	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	120	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	80	%
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.5	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
ZMUD	Acoustic Impedance of Mud	Borehole	1.48	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	12.25	0	675
BS	7.875	675	6313

All depth are actual.

Tool Control Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	7	31-Oct-2023 09:17:35	31-Oct-2023 09:26:23	6314.01	6184.02
EMXV	8	31-Oct-2023 09:26:23	31-Oct-2023 09:46:59	6184.02	4908.53
EMXV	7	31-Oct-2023 09:46:59	31-Oct-2023 10:35:14	4908.53	1920.88

EMXV	6	31-Oct-2023 10:35:14	31-Oct-2023 10:46:31	1920.88	1212.22
EMXV	5	31-Oct-2023 10:46:31	31-Oct-2023 11:11:48	1212.22	34.29

All depth are at tool zero.

R1D1

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
R1D1	Log[4]:Up	Up	34.29 ft	6314.01 ft	31-Oct-2023 9:17:35 AM	31-Oct-2023 11:11:48 AM	ON	3.09 ft	Yes

All depths are referenced to toolstring zero

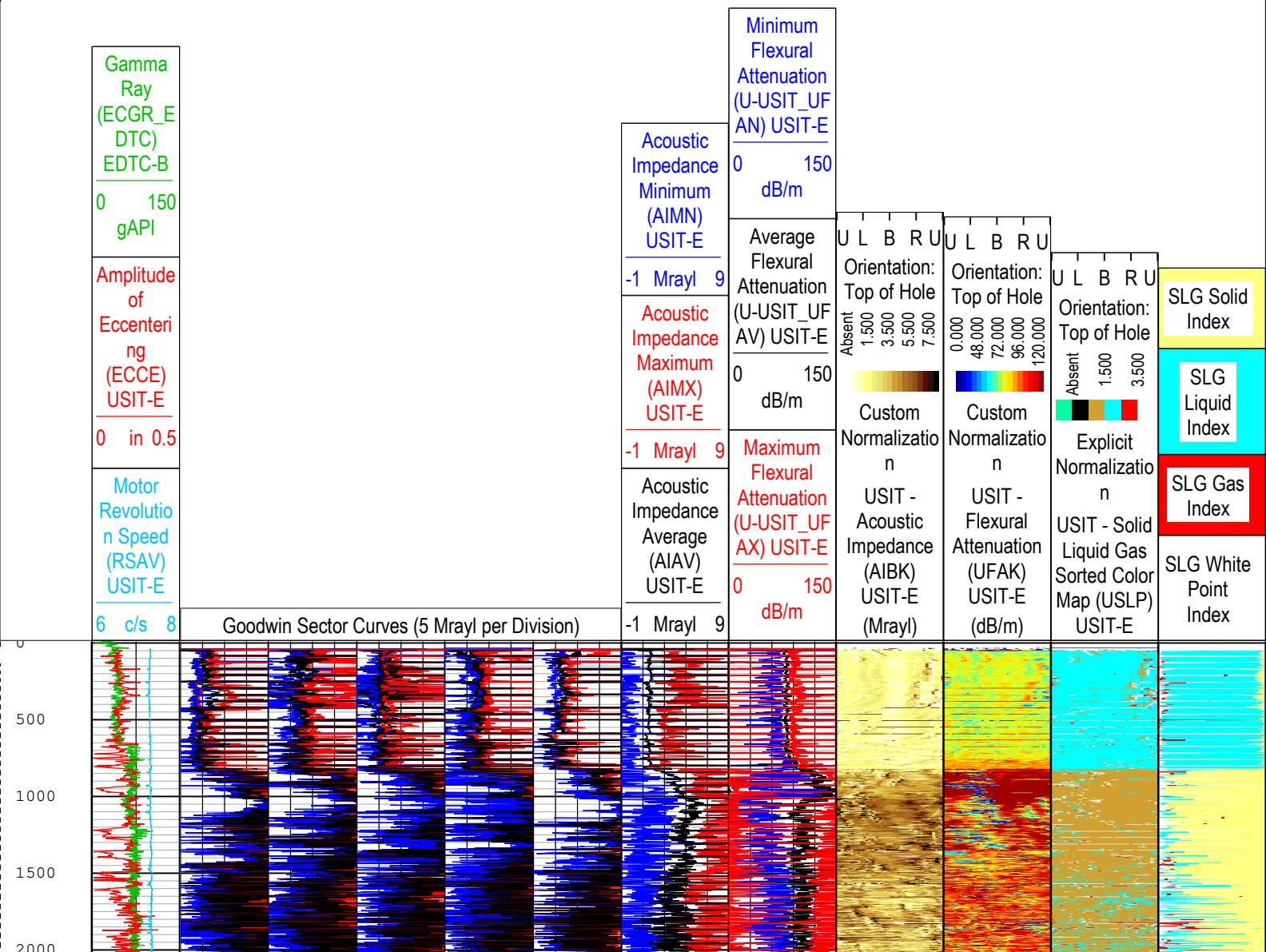
Log

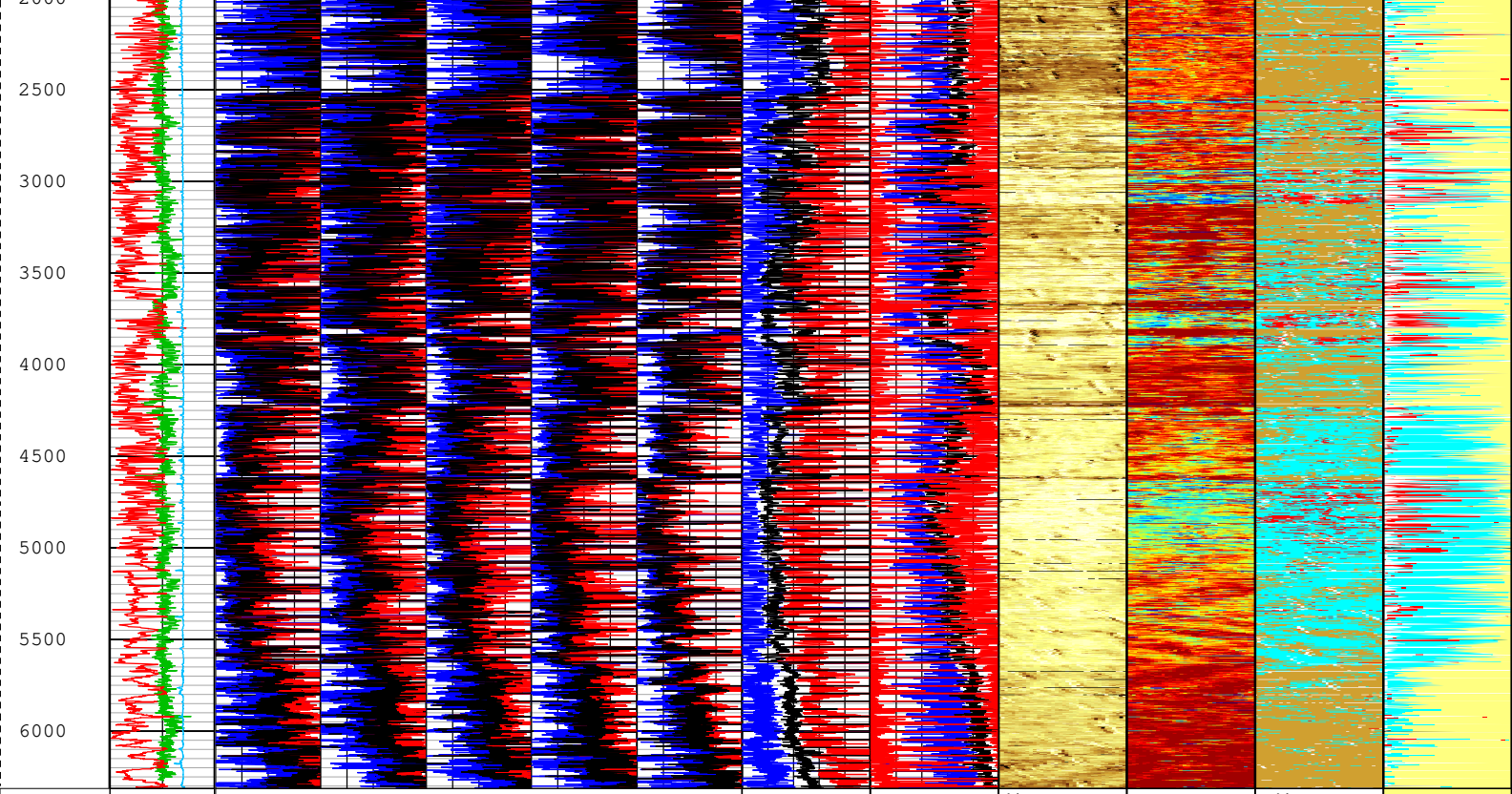
Company:Occidental Petroleum Corporation Well:Burchfield State 23-16

R1D1: Log[4]:Up:S007

Description: USI Goodwin Format: Log (IBC Goodwin) Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 31-Oct-2023 11:56:22

TIME_1900 - Time Marked every 60.00 (s)





Gamma Ray (ECGR_EDTC) EDTC-B
0 150 gAPI

Amplitude of Eccentering (ECCE) USIT-E
0 in 0.5

Motor Revolution Speed (RSAV) USIT-E
6 c/s 8

Goodwin Sector Curves (5 Mrayl per Division)

Acoustic Impedance Minimum (AIMN) USIT-E
-1 Mrayl 9

Acoustic Impedance Maximum (AIMX) USIT-E
-1 Mrayl 9

Acoustic Impedance Average (AIAV) USIT-E
-1 Mrayl 9

Minimum Flexural Attenuation (U-USIT_UFAN) USIT-E
0 150 dB/m

Average Flexural Attenuation (U-USIT_UFAV) USIT-E
0 150 dB/m

Maximum Flexural Attenuation (U-USIT_UFAX) USIT-E
0 150 dB/m

Absent 1.500 3.500 5.500 7.500
Custom Normalization
USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)
Orientation: Top of Hole
U L B R U

0.000 48.000 72.000 96.000 120.000
Custom Normalization
USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)
Orientation: Top of Hole
U L B R U

Absent 1.500 3.500
Explicit Normalization
USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E
Orientation: Top of Hole
U L B R U

SLG Solid Index
SLG Liquid Index
SLG Gas Index
SLG White Point Index

TIME_1900 - Time Marked every 60.00 (s)

Description: USI Goodwin Format: Log (IBC Goodwin) Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 31-Oct-2023 11:56:22

Channel Processing Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	7755	ft
CDEN	Cement Density	USIT-E	1.68	g/cm3

CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	1.01	g/cm3
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.5	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.15	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	120	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	80	%
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.5	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
ZMUD	Acoustic Impedance of Mud	Borehole	1.48	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	12.25	0	675
BS	7.875	675	6313

All depth are actual.

Tool Control Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	7	31-Oct-2023 09:17:35	31-Oct-2023 09:26:23	6314.01	6184.02
EMXV	8	31-Oct-2023 09:26:23	31-Oct-2023 09:46:59	6184.02	4908.53
EMXV	7	31-Oct-2023 09:46:59	31-Oct-2023 10:35:14	4908.53	1920.88
EMXV	6	31-Oct-2023 10:35:14	31-Oct-2023 10:46:31	1920.88	1212.22

EMXV	5	31-Oct-2023 10:46:31	31-Oct-2023 11:11:48	1212.22	34.29

All depth are at tool zero.

R1D1

IBC SLG

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
R1D1	Log[3]:Up	Up	5978.28 ft	6314.25 ft	31-Oct-2023 9:08:49 AM	31-Oct-2023 9:15:08 AM	ON	2.61 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Occidental Petroleum Corporation Well:Burchfield State 23-16

R1D1: Log[3]:Up:S007

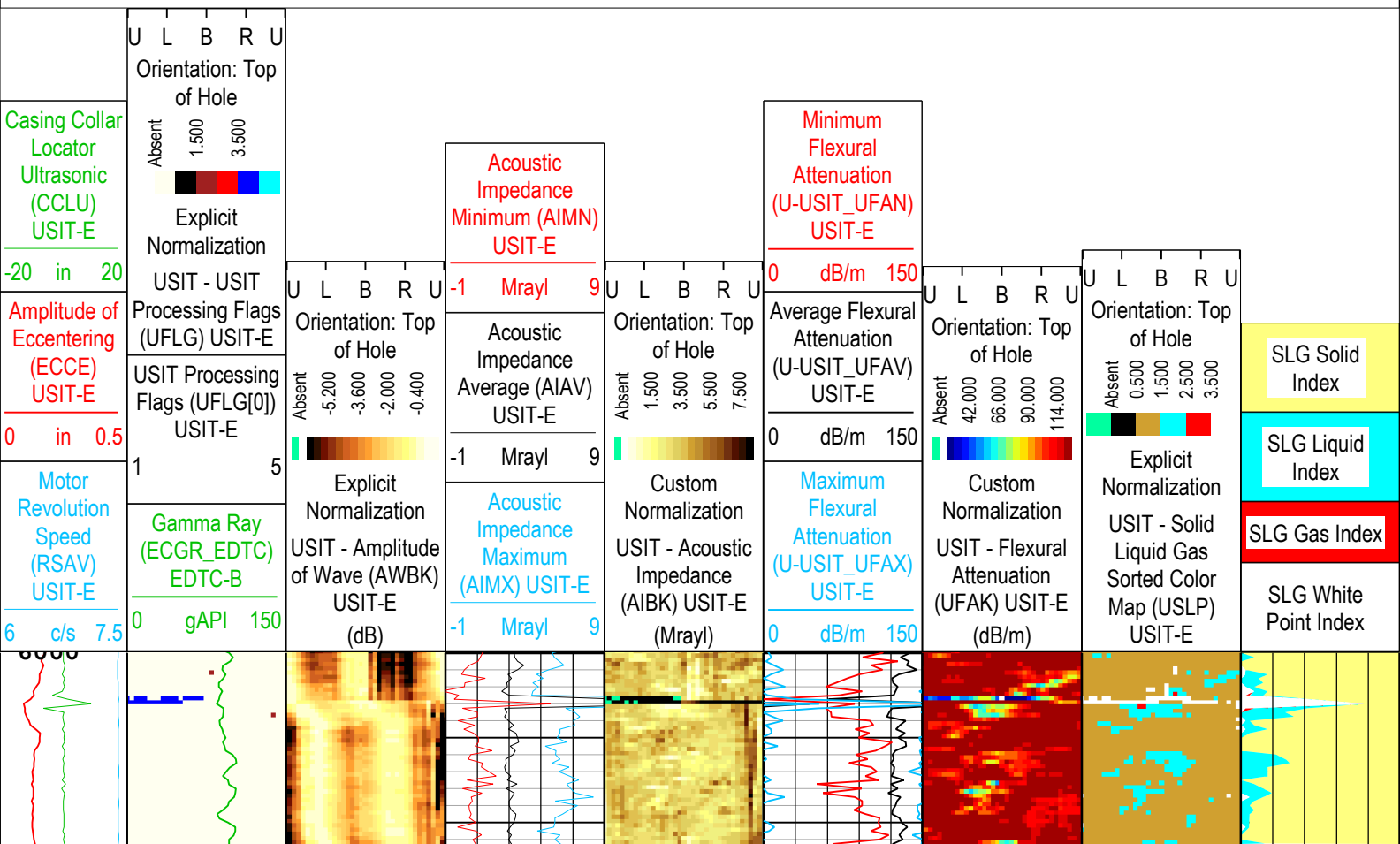
Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 31-Oct-2023 11:56:32

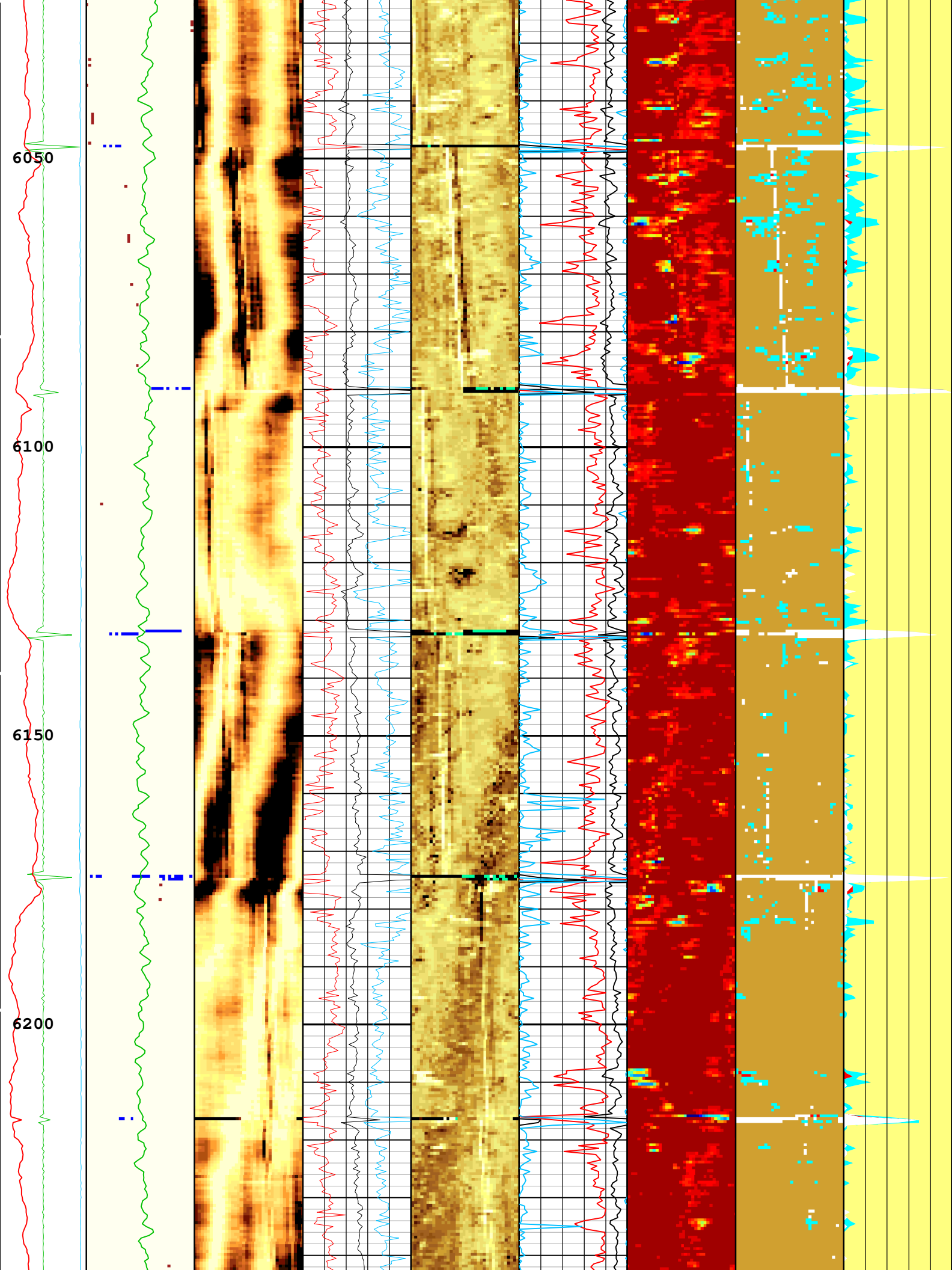
TIME_1900 - Time Marked every 60.00 (s)

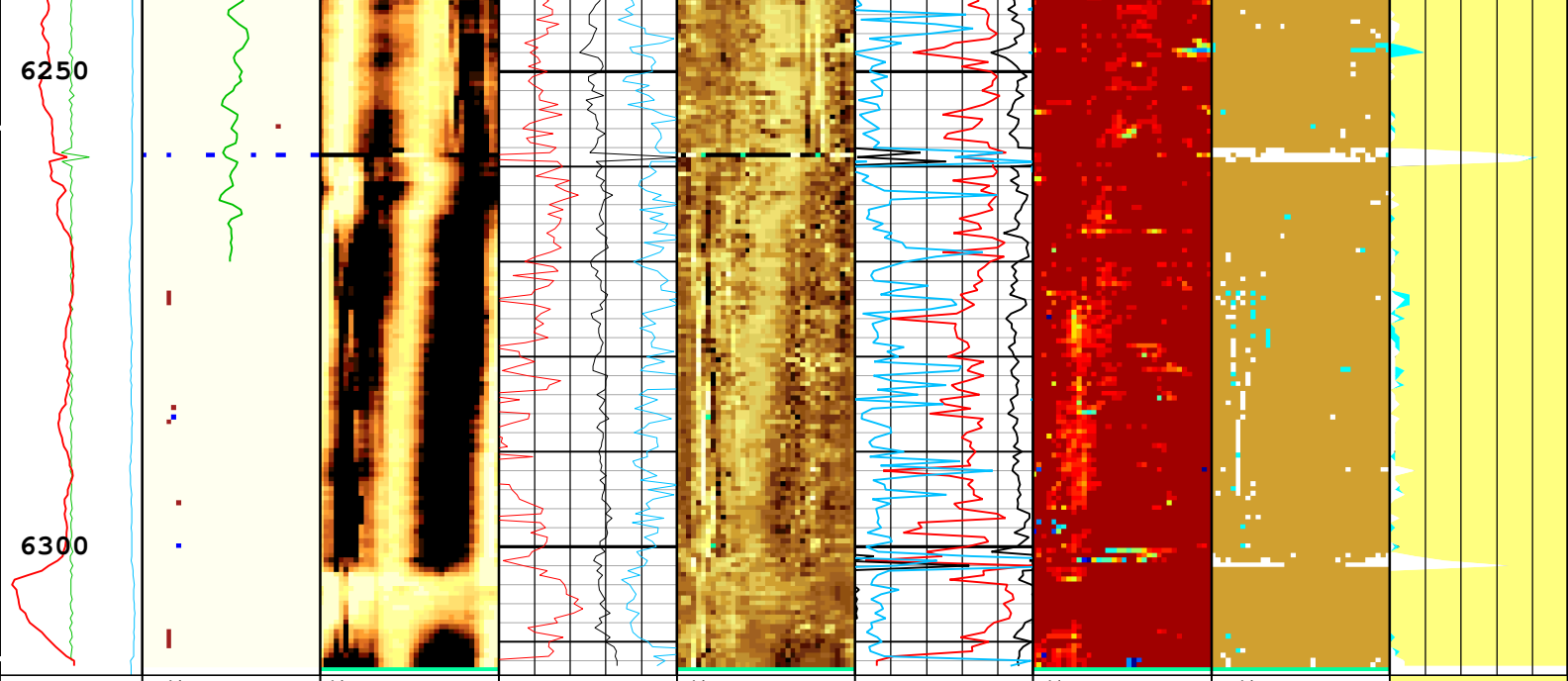
USIT Processing Flags (UFLG[0]) USIT-E

1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error




6050
6100
6150
6200



Casing Collar Locator Ultrasonic (CCLU) USIT-E
-20 in 20

Amplitude of Eccentering (ECCE) USIT-E
0 in 0.5

Motor Revolution Speed (RSAV) USIT-E
6 c/s 7.5

Absent 1.500 3.500
Explicit Normalization
USIT - USIT Processing Flags (UFLG) USIT-E
Orientation: Top of Hole
U L B R U

USIT Processing Flags (UFLG[0]) USIT-E
1 5

Gamma Ray (ECGR_EDTC) EDTC-B
0 gAPI 150

Absent -5.200 -3.600 -2.000 -0.400
Explicit Normalization
USIT - Amplitude of Wave (AWBK) USIT-E
(dB)
Orientation: Top of Hole
U L B R U

Acoustic Impedance Minimum (AIMN) USIT-E
-1 Mrayl 9

Acoustic Impedance Average (AIAV) USIT-E
-1 Mrayl 9

Acoustic Impedance Maximum (AIMX) USIT-E
-1 Mrayl 9

Absent 1.500 3.500 5.500 7.500
Custom Normalization
USIT - Acoustic Impedance (AIBK) USIT-E
(Mrayl)
Orientation: Top of Hole
U L B R U

Minimum Flexural Attenuation (U-USIT_UFAN) USIT-E
0 dB/m 150

Average Flexural Attenuation (U-USIT_UFAV) USIT-E
0 dB/m 150

Maximum Flexural Attenuation (U-USIT_UFAX) USIT-E
0 dB/m 150

Absent 42.000 66.000 90.000 114.000
Custom Normalization
USIT - Flexural Attenuation (UFAK) USIT-E
(dB/m)
Orientation: Top of Hole
U L B R U

Absent 0.500 1.500 2.500 3.500
Explicit Normalization
USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E
Orientation: Top of Hole
U L B R U

SLG Solid Index
SLG Liquid Index
SLG Gas Index
SLG White Point Index

USIT Processing Flags (UFLG[0]) USIT-E

1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error

TIME_1900 - Time Marked every 60.00 (s)

Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 31-Oct-2023 11:56:32

Channel Processing Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	7.875	in

CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	7755	ft
CDEN	Cement Density	USIT-E	1.68	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	1.01	g/cm3
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
GR_MULTIPLIER	Gamma Ray Multiplier	EDTC-B	1	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	0	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.5	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.15	
RCOD	Reference Calibrator Outer Diameter	USIT-E	4.5	in
RCSO	Reference Calibrator Standoff	USIT-E	0.842	in
RCTH	Reference Calibrator Thickness	USIT-E	0.216	in
RPLUS_PROCESS	Ultrasonic R+ Processing	USIT-E	No	
SOCN	Standoff Distance	EDTC-B	0.125	in
SOCO	Standoff Correction Option	EDTC-B	No	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	120	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	80	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.5	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
THDP	Thickness Detection Policy	USIT-E	Fundamental	
VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.48	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Tool Control Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	1.756	in
EMXV	EMEX Voltage	USIT-E	Time Zoned	V

HRES	Horizontal Resolution	USIT-E	10 deg	
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	Yes	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
USSP	Ultrasonic Service	USIT-E	IBC	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	5	31-Oct-2023 09:08:49	31-Oct-2023 09:10:27	6314.25	6229.19
EMXV	7	31-Oct-2023 09:10:27	31-Oct-2023 09:15:08	6229.19	5978.28

All depth are at tool zero.

R1D1

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
R1D1	Log[3]:Up	Up	5978.28 ft	6314.25 ft	31-Oct-2023 9:08:49 AM	31-Oct-2023 9:15:08 AM	ON	2.61 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Occidental Petroleum Corporation Well:Burchfield State 23-16

R1D1: Log[3]:Up:S007

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 31-Oct-2023 11:56:38

USIT Processing Flags (UFLG[0]) USIT-E

1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

UTIM Error
Pulse Origin Not Detected
WINLEN Error
Casing Thickness Error
Loop Processing Error

TIME_1900 - Time Marked every 60.00 (s)

U L B R U
Orientation: Top of Hole
Absent 1.500 3.500
Explicit Normalizatio

Casing Collar Locator

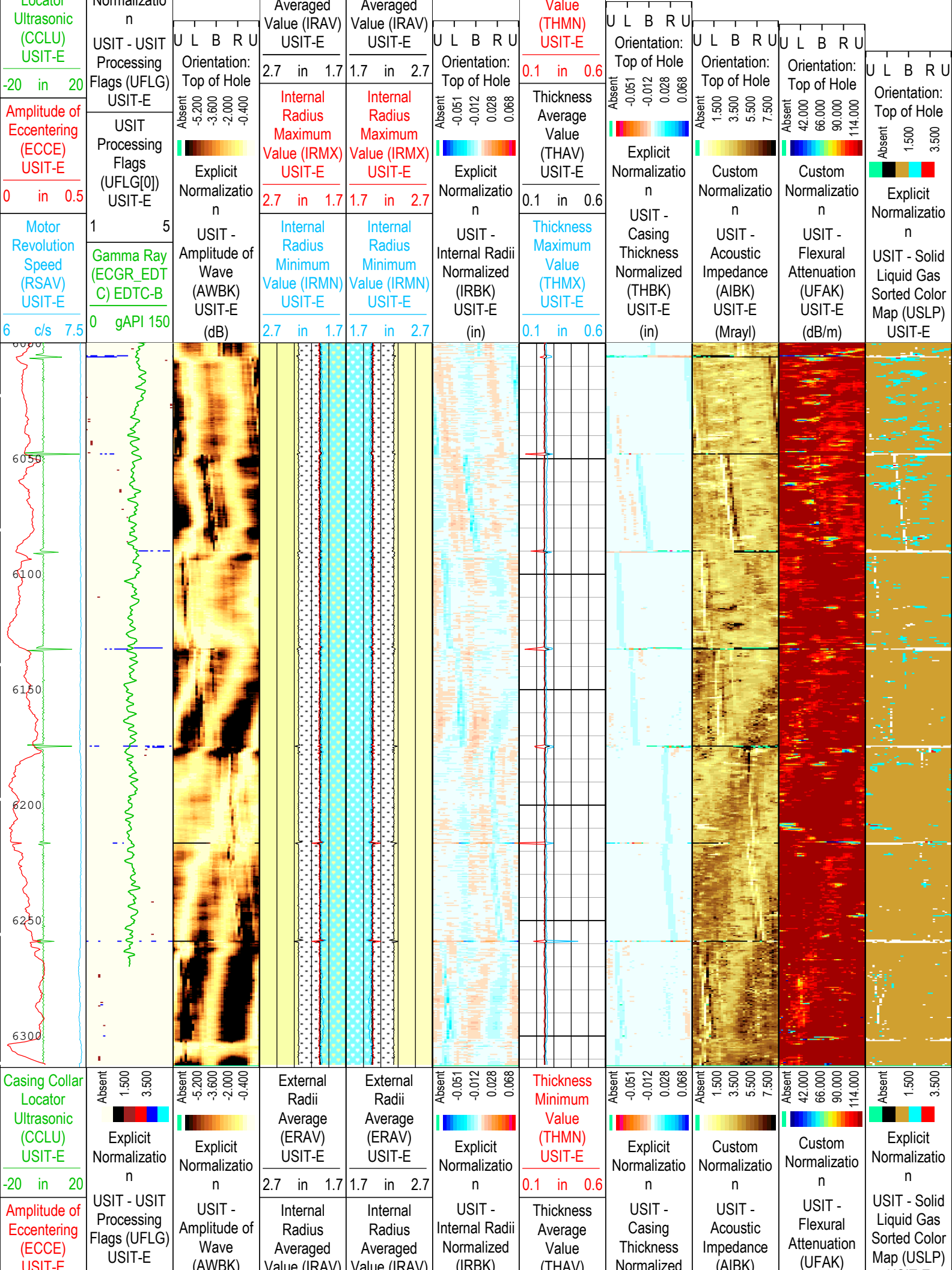
External Radii Average (ERAV) USIT-E
2.7 in 1.7

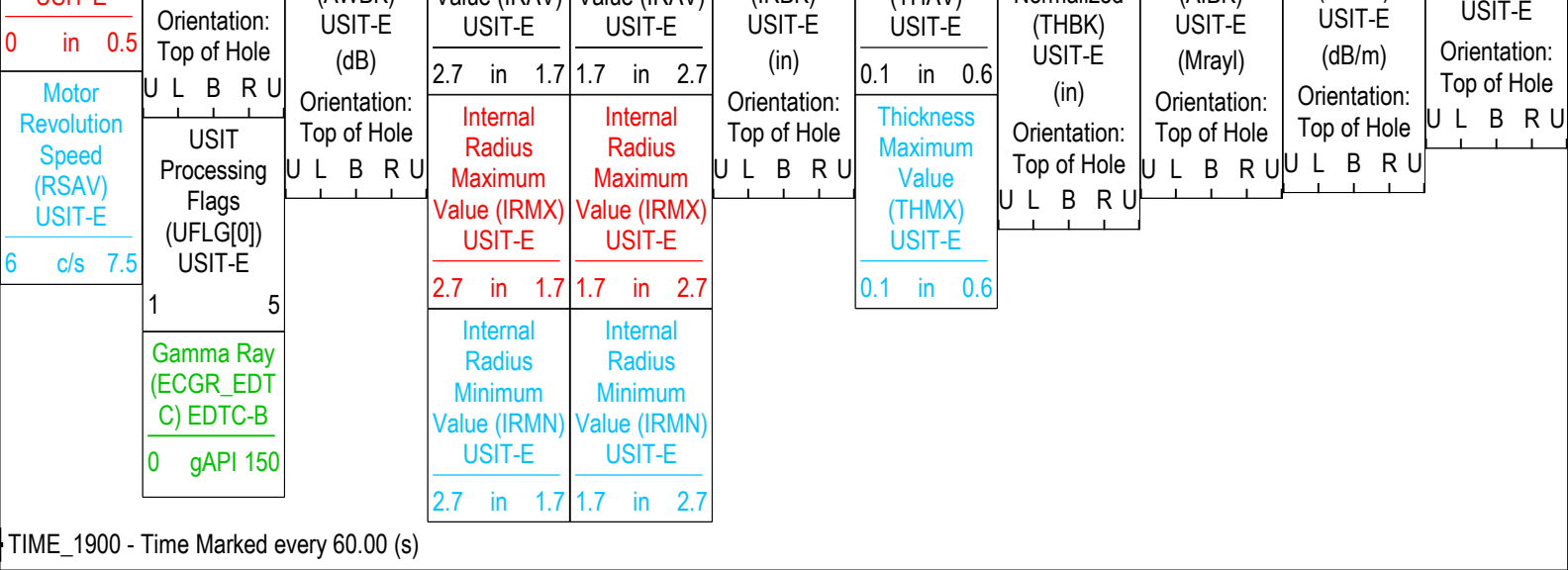
External Radii Average (ERAV) USIT-E
1.7 in 2.7

Internal Radius

Internal Radius

Thickness Minimum


Casing Collar Locator Ultrasonic (CCLU) USIT-E
-20 in 20
Amplitude of Eccentering (ECCE) USIT-E
0 in 0.5
Motor Revolution Speed (RSAV) USIT-E
6 c/s 7.5
Normalization
USIT - USIT Processing Flags (UFLG) USIT-E
USIT Processing Flags (UFLG[0]) USIT-E
1 5
Gamma Ray (ECGR_EDTC) EDTC-B
0 gAPI 150
U L B R U
Orientation: Top of Hole
Absent -5.200 -3.600 -2.000 -0.400
Explicit Normalization
USIT - Amplitude of Wave (AWBK) USIT-E
(dB)
Averaged Value (IRAV) USIT-E
2.7 in 1.7
Internal Radius Maximum Value (IRMX) USIT-E
2.7 in 1.7
Internal Radius Minimum Value (IRMN) USIT-E
2.7 in 1.7
Averaged Value (IRAV) USIT-E
1.7 in 2.7
Internal Radius Maximum Value (IRMX) USIT-E
1.7 in 2.7
Internal Radius Minimum Value (IRMN) USIT-E
1.7 in 2.7
U L B R U
Orientation: Top of Hole
Absent -0.051 -0.012 0.028 0.068
Explicit Normalization
USIT - Internal Radii Normalized (IRBK) USIT-E
(in)
Value (THMN) USIT-E
0.1 in 0.6
Thickness Average Value (THAV) USIT-E
0.1 in 0.6
Thickness Maximum Value (THMX) USIT-E
0.1 in 0.6
U L B R U
Orientation: Top of Hole
Absent -0.051 -0.012 0.028 0.068
Explicit Normalization
USIT - Casing Thickness Normalized (THBK) USIT-E
(in)
U L B R U
Orientation: Top of Hole
Absent 1.500 3.500 5.500 7.500
Custom Normalization
USIT - Acoustic Impedance (AIBK) USIT-E
(Mrayl)
U L B R U
Orientation: Top of Hole
Absent 42.000 66.000 90.000 114.000
Custom Normalization
USIT - Flexural Attenuation (UFAK) USIT-E
(dB/m)
U L B R U
Orientation: Top of Hole
Absent 1.500 3.500
Explicit Normalization
USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E
6050
6100
6150
6200
6250
6300
Casing Collar Locator Ultrasonic (CCLU) USIT-E
-20 in 20
Amplitude of Eccentering (ECCE) USIT-E
Absent 1.500 3.500
Explicit Normalization
USIT - USIT Processing Flags (UFLG) USIT-E
Absent -5.200 -3.600 -2.000 -0.400
Explicit Normalization
USIT - Amplitude of Wave (AWBK) USIT-E
External Radii Average (ERAV) USIT-E
2.7 in 1.7
Internal Radius Averaged Value (IRAV)
External Radii Average (ERAV) USIT-E
1.7 in 2.7
Internal Radius Averaged Value (IRAV)
Absent -0.051 -0.012 0.028 0.068
Explicit Normalization
USIT - Internal Radii Normalized (IRBK) USIT-E
Thickness Minimum Value (THMN) USIT-E
0.1 in 0.6
Thickness Average Value (THAV)
Absent -0.051 -0.012 0.028 0.068
Explicit Normalization
USIT - Casing Thickness Normalized
Absent 1.500 3.500 5.500 7.500
Custom Normalization
USIT - Acoustic Impedance (AIBK)
Absent 42.000 66.000 90.000 114.000
Custom Normalization
USIT - Flexural Attenuation (UFAK)
Absent 1.500 3.500
Explicit Normalization
USIT - Solid Liquid Gas Sorted Color Map (USLP)



USIT Processing Flags (UFLG[0]) USIT-E

1 - UFLG 1 Value within [0.0 - 1.5] - :
2 - UFLG 2 Value within [1.5 - 2.5] - :
3 - UFLG 3 Value within [2.5 - 3.5] - :
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

- UTIM Error
- Pulse Origin Not Detected
- WINLEN Error
- Casing Thickness Error
- Loop Processing Error

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 31-Oct-2023 11:56:38

Channel Processing Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	7.875	in
CBLO	Casing Bottom (Logger)	WLSESSION	7755	ft
CDEN	Cement Density	USIT-E	1.68	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	1.01	g/cm3
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.5	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.15	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	120	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	80	%
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.5	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	

U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
ZMUD	Acoustic Impedance of Mud	Borehole	1.48	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Tool Control Parameters

R1D1: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

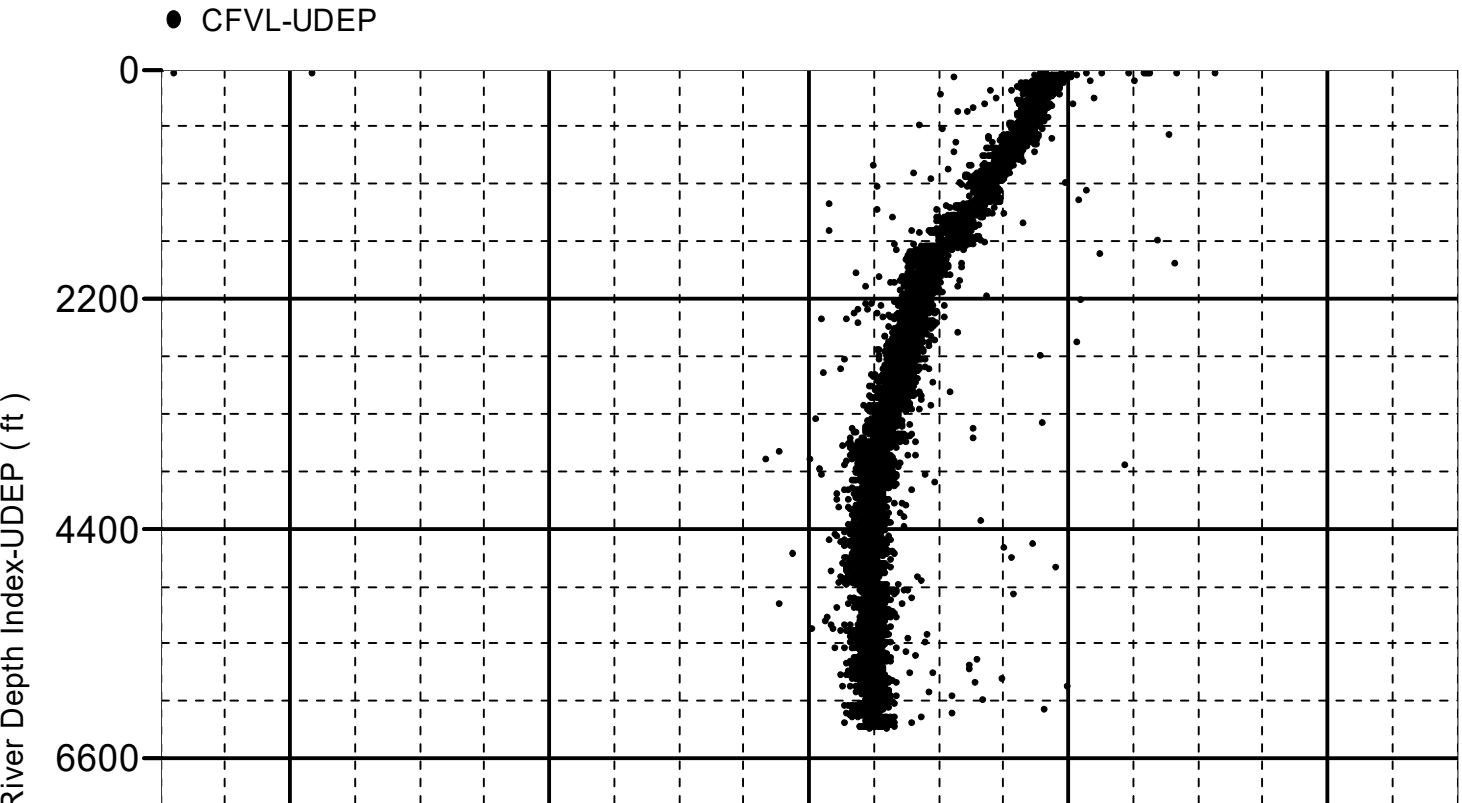
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	5	31-Oct-2023 09:08:49	31-Oct-2023 09:10:27	6314.25	6229.19
EMXV	7	31-Oct-2023 09:10:27	31-Oct-2023 09:15:08	6229.19	5978.28

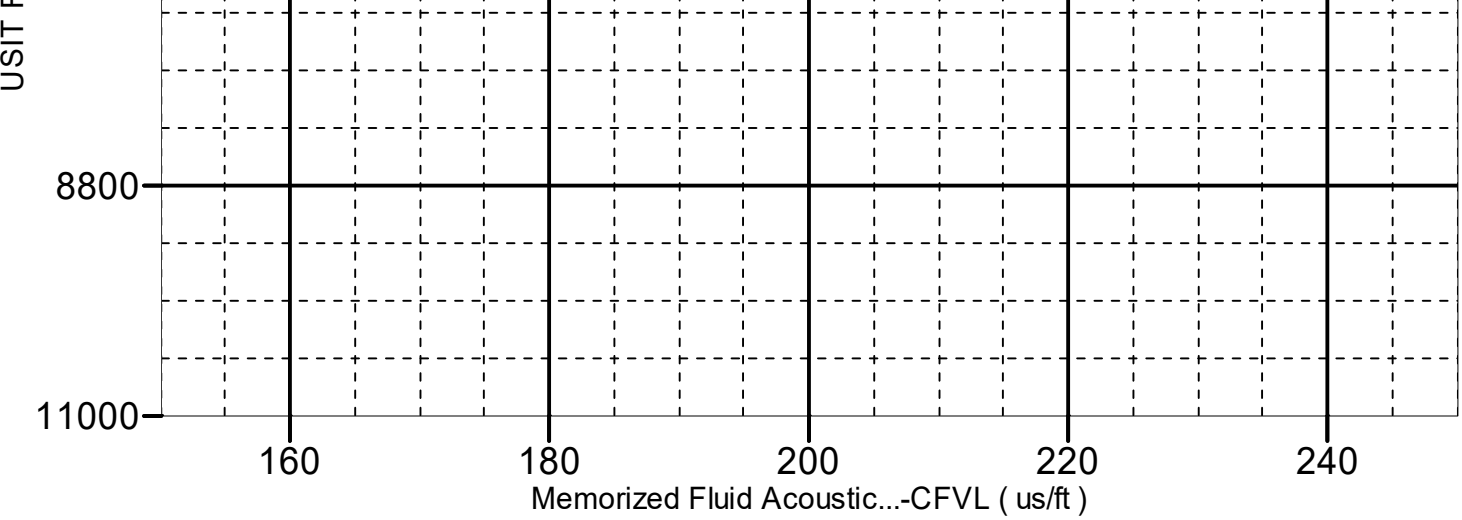
All depth are at tool zero.

Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 6313.00 to 33.50 ft





XYZ

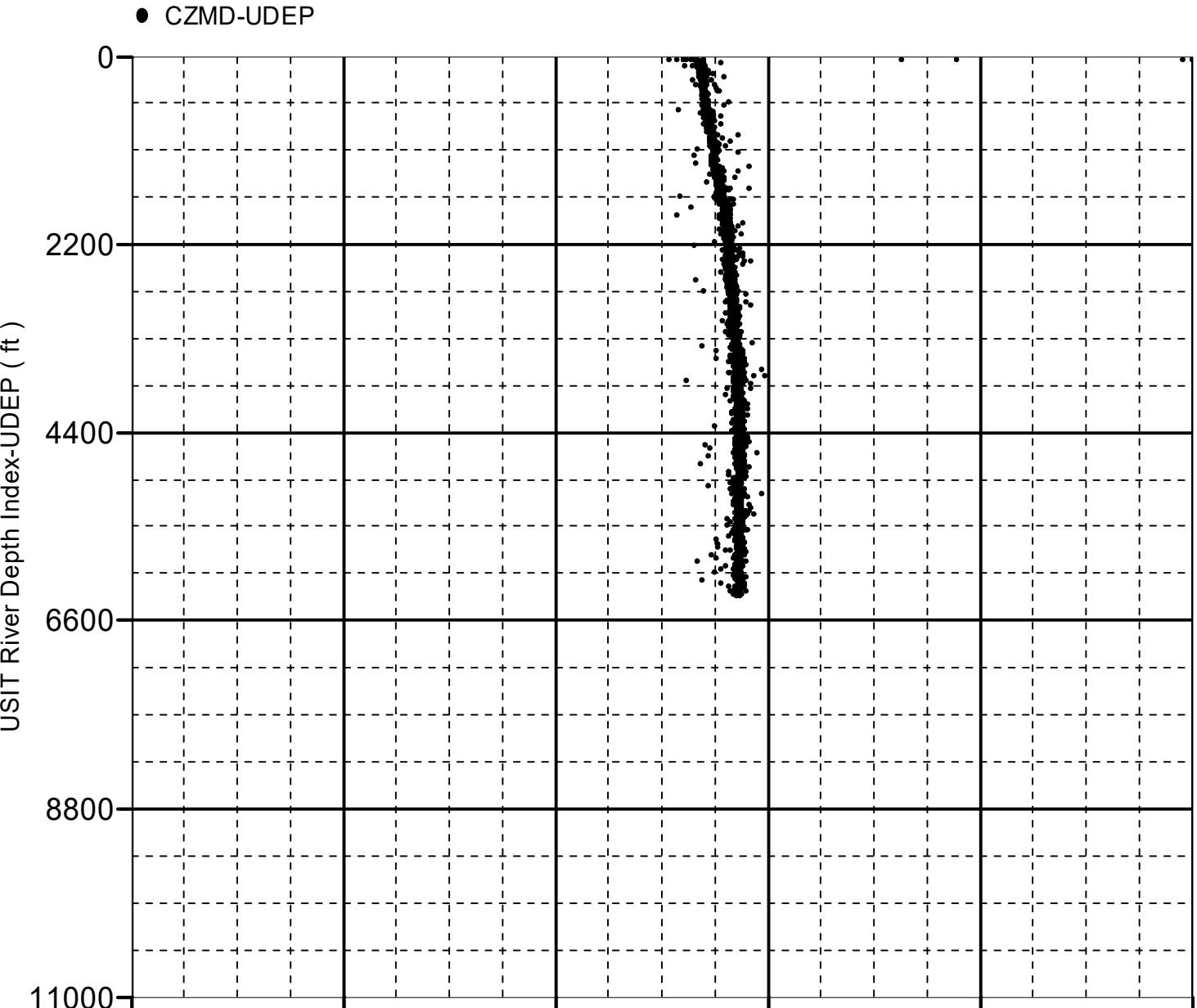
Company:Occidental Petroleum Corporation Well:Burchfield State 23-16

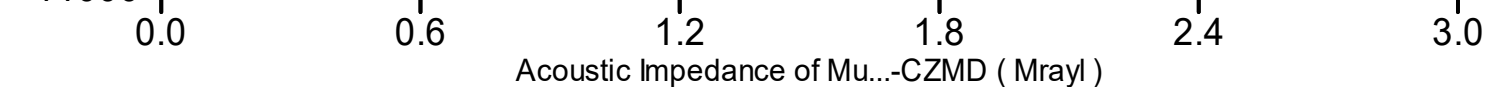
R1D1: Log[4]:Up:S007

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 6313.00 to 33.50 ft





Company:	Occidental Petroleum Corporation
Well:	Burchfield State 23-16
Field:	Wattenberg
County:	Weld
State:	Colorado

Isolation Scanner
Cement Evaluation
Gamma Ray - CCL Log