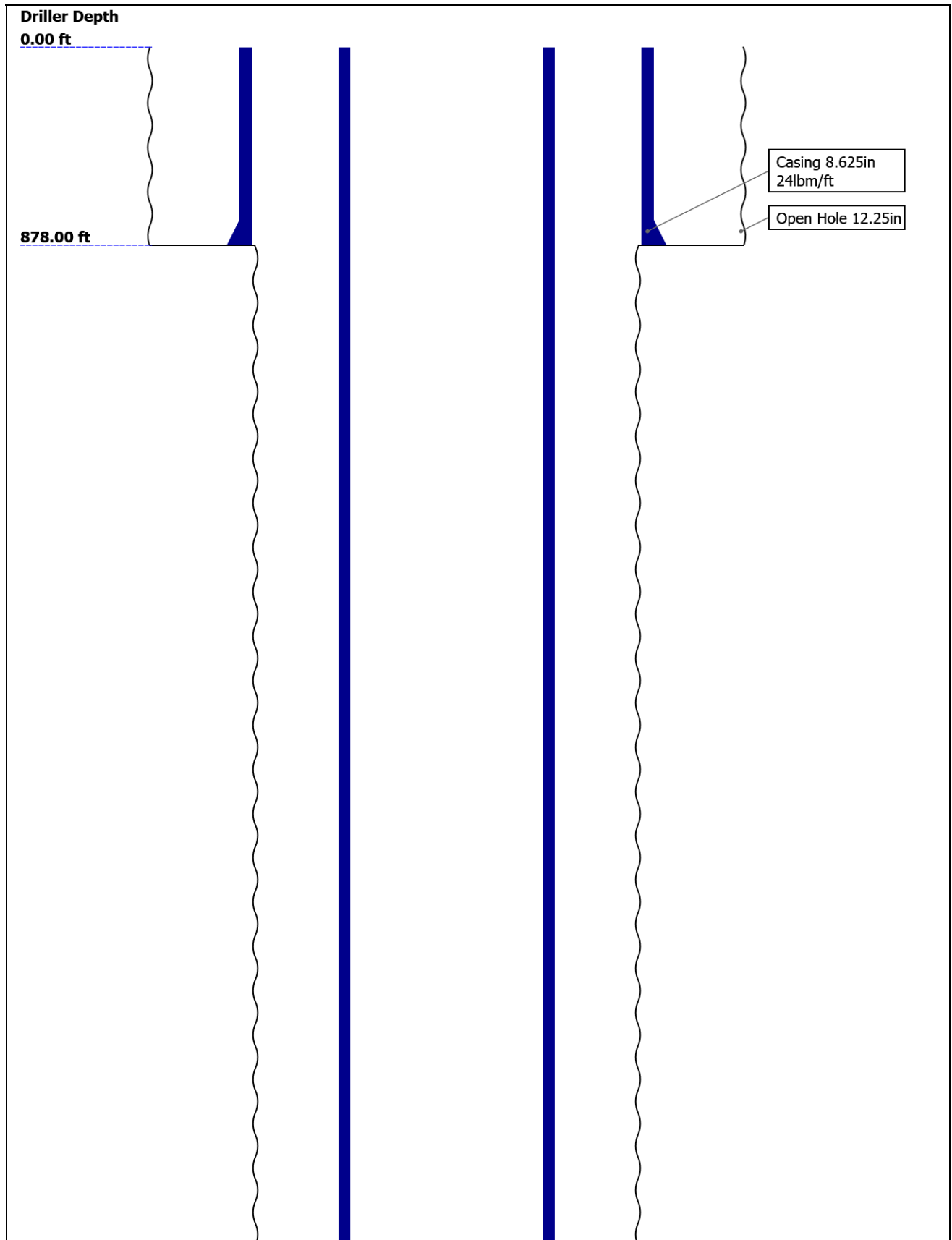
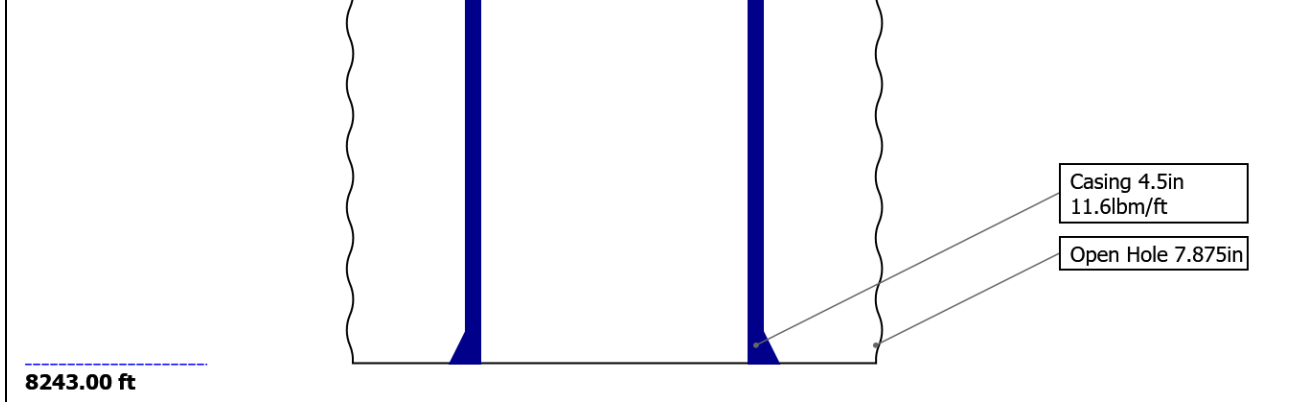


- 10.3 Log (IBC SLG Composite 5.5IN)
- 10.4 Parameter Listing
- 11. One IBC Goodwin Compressed
 - 11.1 Integration Summary
 - 11.2 Composite Summary
 - 11.3 Log (IBC Goodwin)
- 12. One IBC SLG

Well Sketch





Borehole Size/Casing/Tubing Record

Bit					
Bit Size (in)	12.25	7.875			
Top Driller (ft)	0	878			
Top Logger (ft)	0	878			
Bottom Driller (ft)	878	8243			
Bottom Logger (ft)	878	6609			
Casing					
Size (in)	8.625	4.5			
Weight (lbm/ft)	24	11.6			
Inner Diameter (in)	8.097	4			
Grade	N/A	N/A			
Top Driller (ft)	0	0			
Top Logger (ft)	0	0			
Bottom Driller (ft)	878	8243			
Bottom Logger (ft)	878	8243			

Remarks and Equipment Summary

One: Toolstring	One: Remarks		
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Equip nam&length</p> <p>LEH-QT 54.87</p> <p>LEH-QT</p> <p>EDTC-B: 51.38</p> <p>9301</p> <p>EDTH-B:</p> <p>8442</p> <p>EDTG-A</p> <p>EDTC-B:</p> <p>9301</p> <p>AH-184 44.88</p> <p>[2]</p> <p>CME-AF 42.88</p> <p>[2]:330</p> <p>8</p> <p>ASLT-B: 39.08</p> <p>8073</p> <p>ASLT-BR</p> </div> <div style="flex: 1; text-align: right;"> <p>MP nameOffset</p> <p>CTEM 47.88</p> <p>ACCZ 0.00</p> <p>HV 0.00</p> <p>Gamm 46.01</p> <p>a Ray</p> <p>TelSta 44.88</p> <p>tus</p> </div> <div style="flex: 1;"> </div> </div>	<p>Tool was run as per tool sketch</p>		
	<p>All logging intervals as per client request</p>		
	<p>All passes recorded at 10 deg 6 inch resolution</p>		
	<p>Main pass recorded at 500 PSI, surfaced induced</p>		
	<p>Repeat pass recorded at 0 PSI</p>		



CME-AF 24.43
[1]

AH-107 20.64
:3897

AH-184 18.64
[1]

USIT-E:9 16.64
00

ECH-MFA
:1818
USAC-A:
900
USIS-A:9
02
USSC-B
IBCS-A:8
15
FAR-SEN
SOR:4775
IBC-TX
NEAR-SE
NSOR:48
25
IBC-TX
USI-SEN
SOR:4522
IBC-TX
EMITTER
-SENSOR
:4776
IBC-TX

USI Se 0.84
nsor
Head T
ension

TOOL_ZERO

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

Depth Summary

	One		
Depth Measuring Device			
Type	IDW-B		
Serial Number	5744		

Calibration Date	22-Sep-2021		
Calibrator Serial Number	57		
Calibration Cable Type	7-46A-XS		
Wheel Correction 1	-9		
Wheel Correction 2	-7		

Tension Device			
Type	CMTD-B/A		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Number of Calibration Points	0		

Logging Cable			
Type	7-46A-XS		
Serial Number	1234		
Length	30000.00 ft		
Conveyance Type	Wireline		
Rig Type			

One:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	Schlumberger depth control procedures followed	
Rig Up Length At Surface		IDW used as primary depth control system	
Rig Up Length At Bottom		Z-Chart used as secondary depth control system	
Rig Up Length Correction			
Stretch Correction			
Tool Zero Check At Surface			

USIT - Fluid Properties Measurement

Run Name	Pass Name	Start Depth(ft)	Stop Depth(ft)
Run 1	Log[6]:Up	6610.38	32.35

**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=1.05
DFD=1.08g/cm3(9.00lbm/gal)**

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

One

IBC SLG

Software Version

Acquisition System	Version
Maxwell 2021.1	11.1.211946.3100
Application Patch	Wireline_NPD-ThruBit-2021.1_11.1.214024

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[6]:Up	Up	32.35 ft	6610.38 ft	28-Oct-2021 8:53:21 AM	28-Oct-2021 10:46:06 AM	ON	9.11 ft	Yes

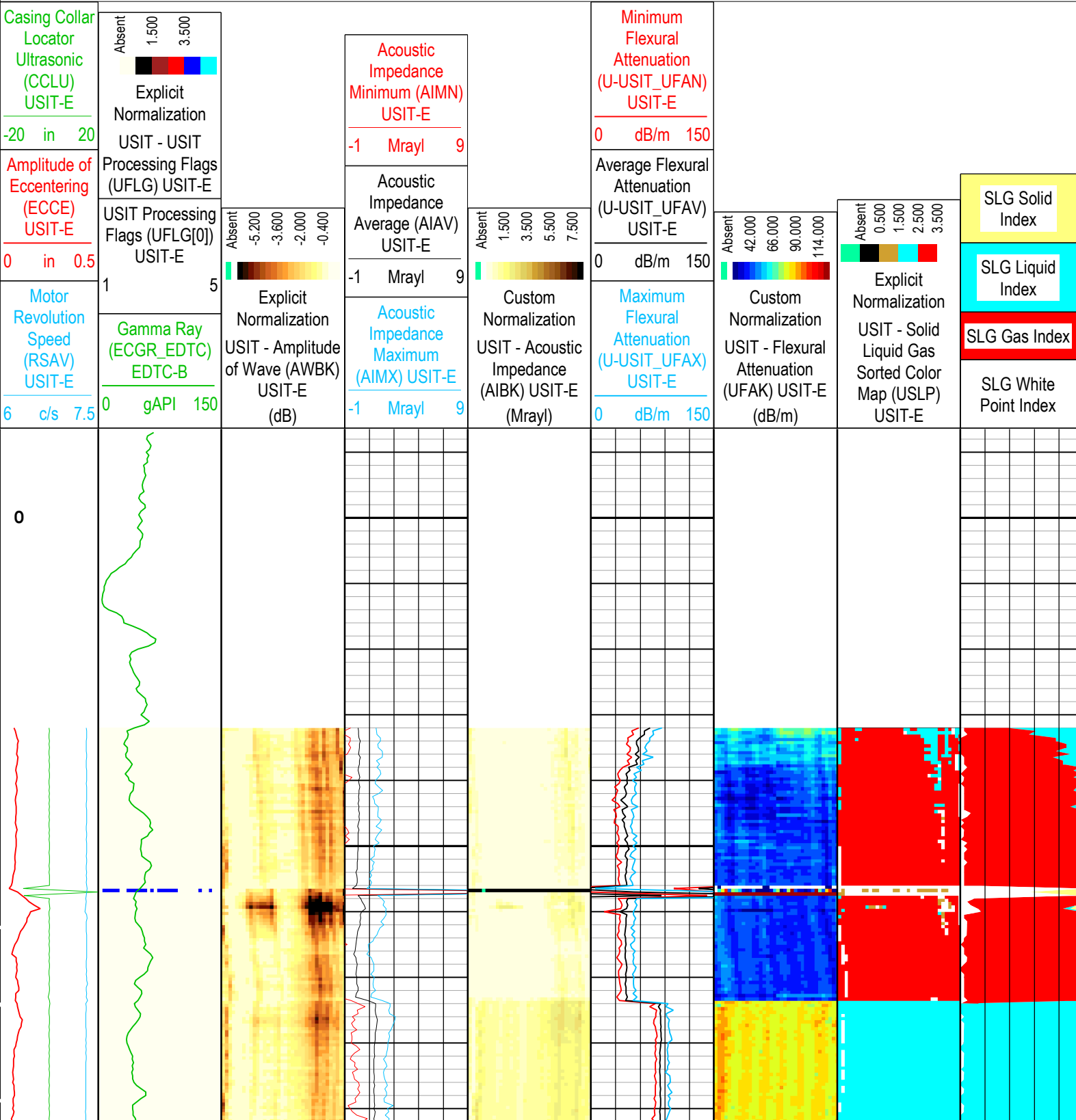
All depths are referenced to toolstring zero

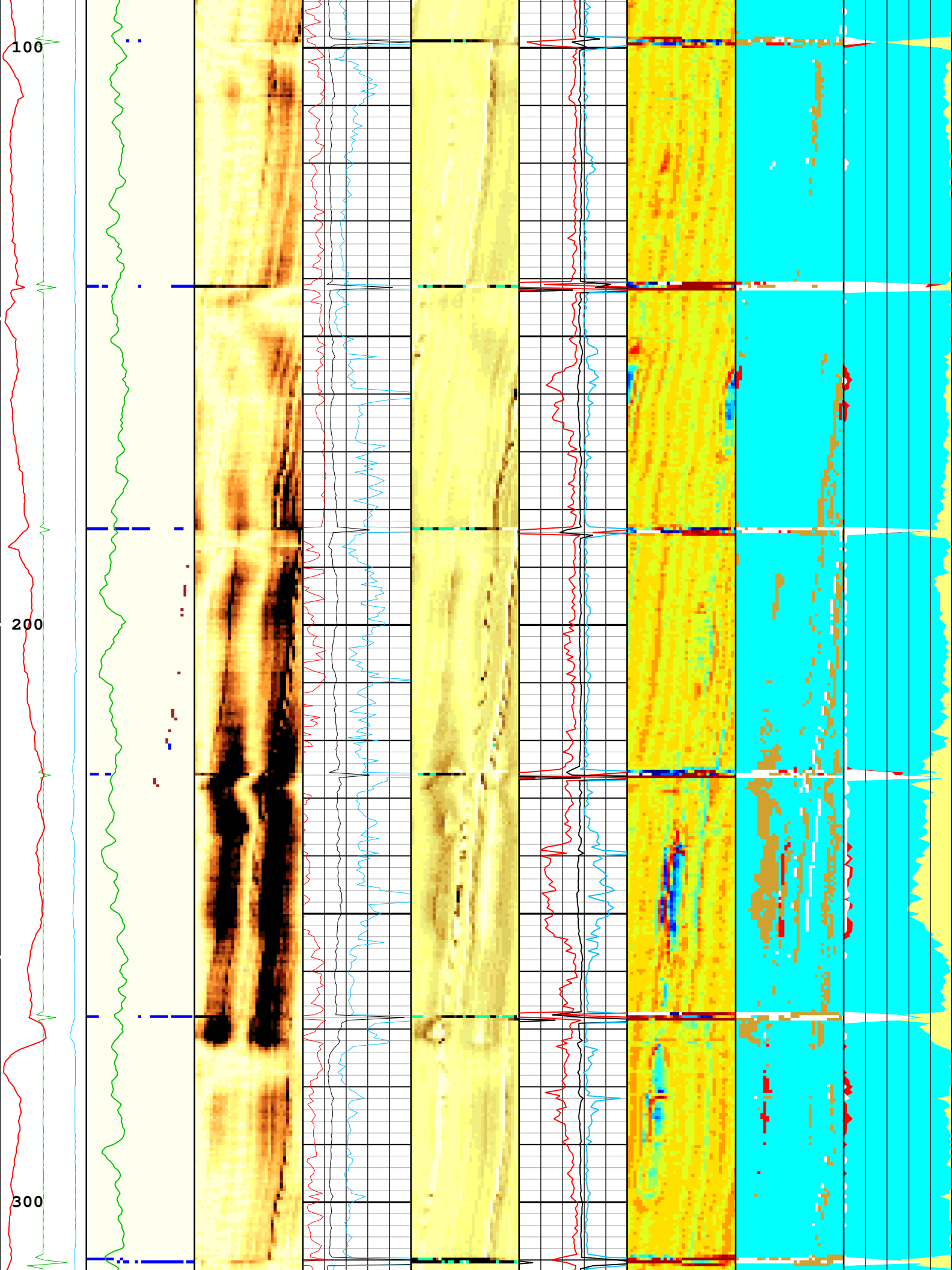
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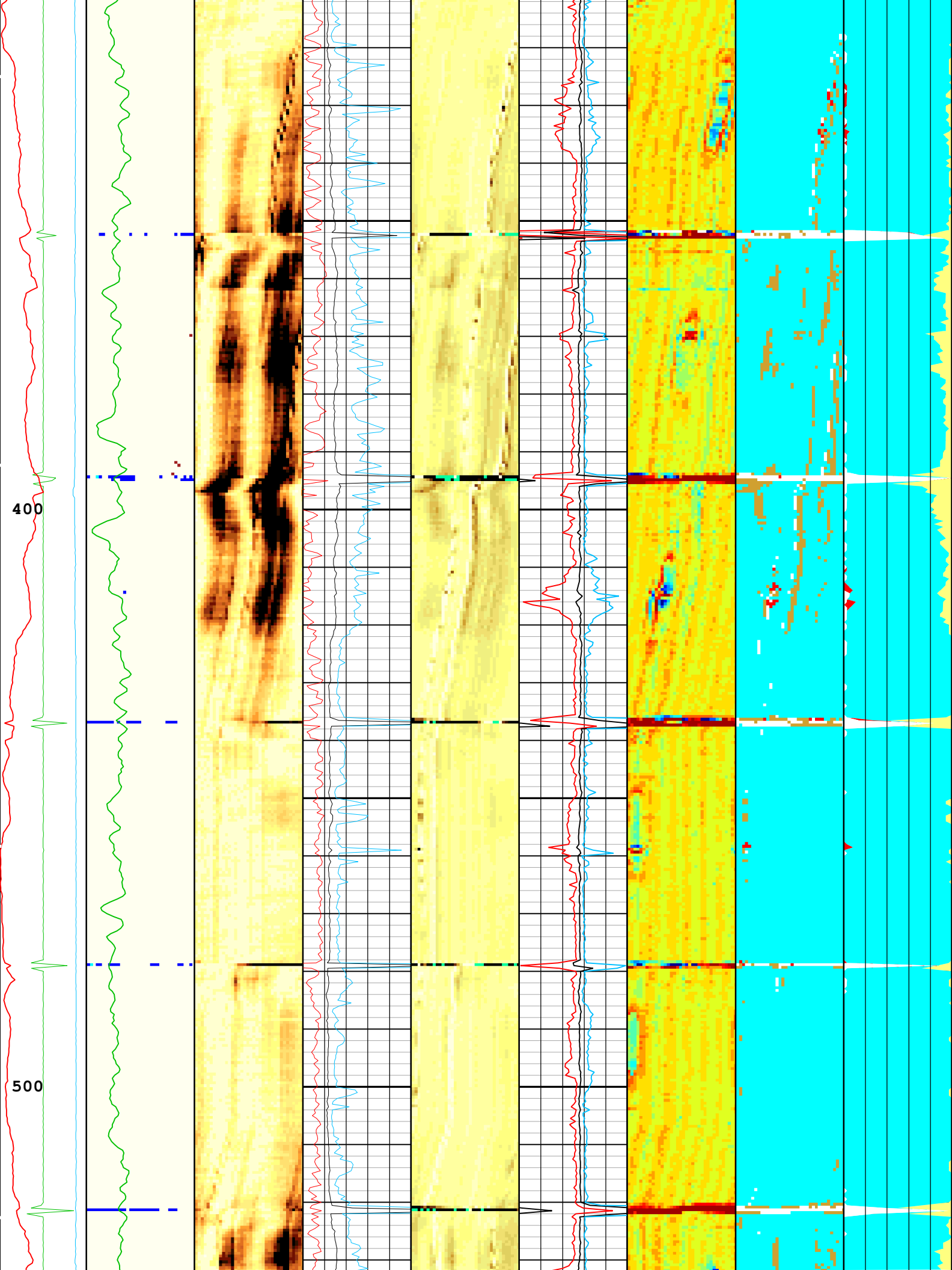
TIME_1900 - Time Marked every 60.00 (s)

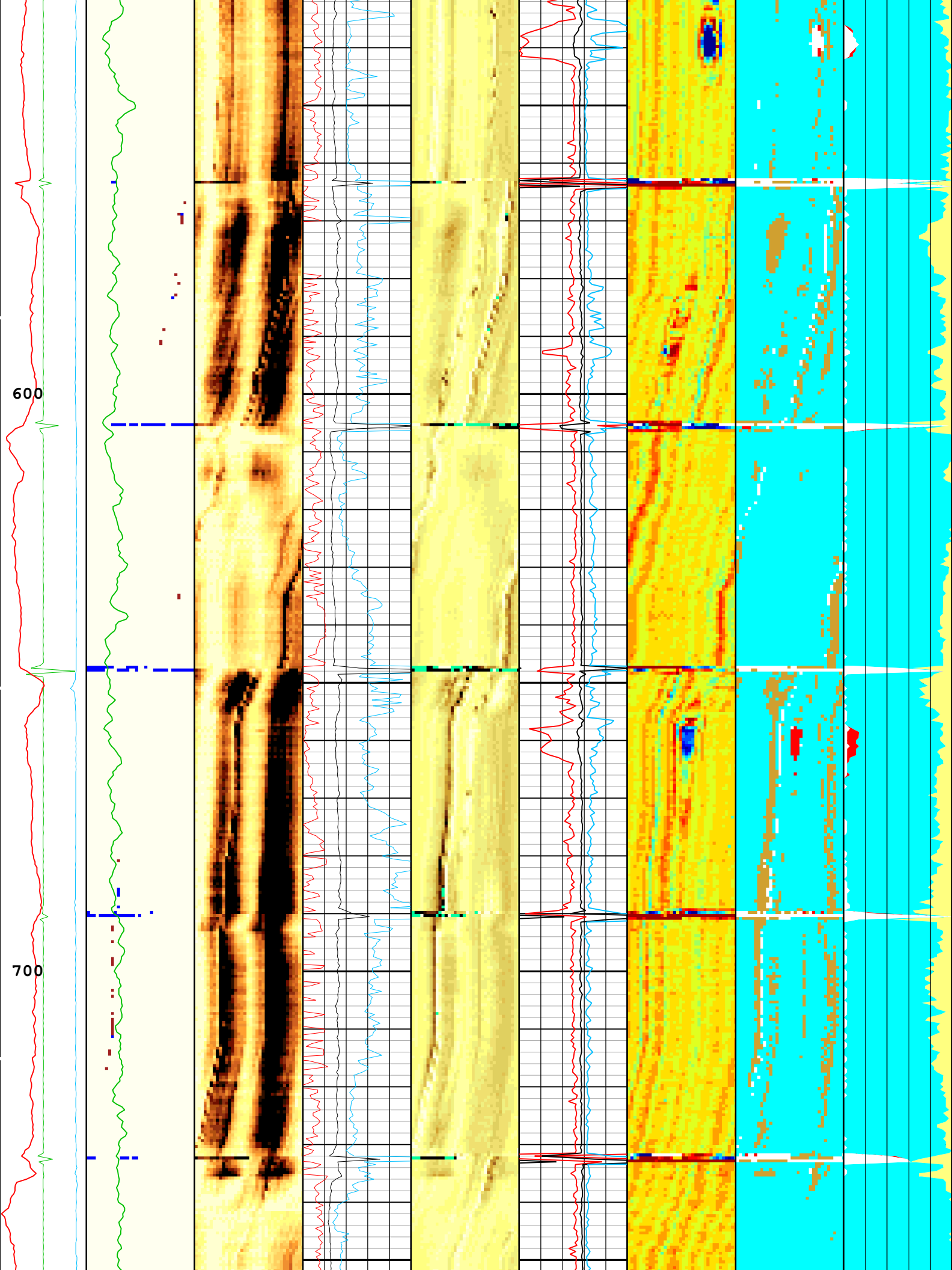
USIT Processing Flags (UFLG[0]) USIT-E

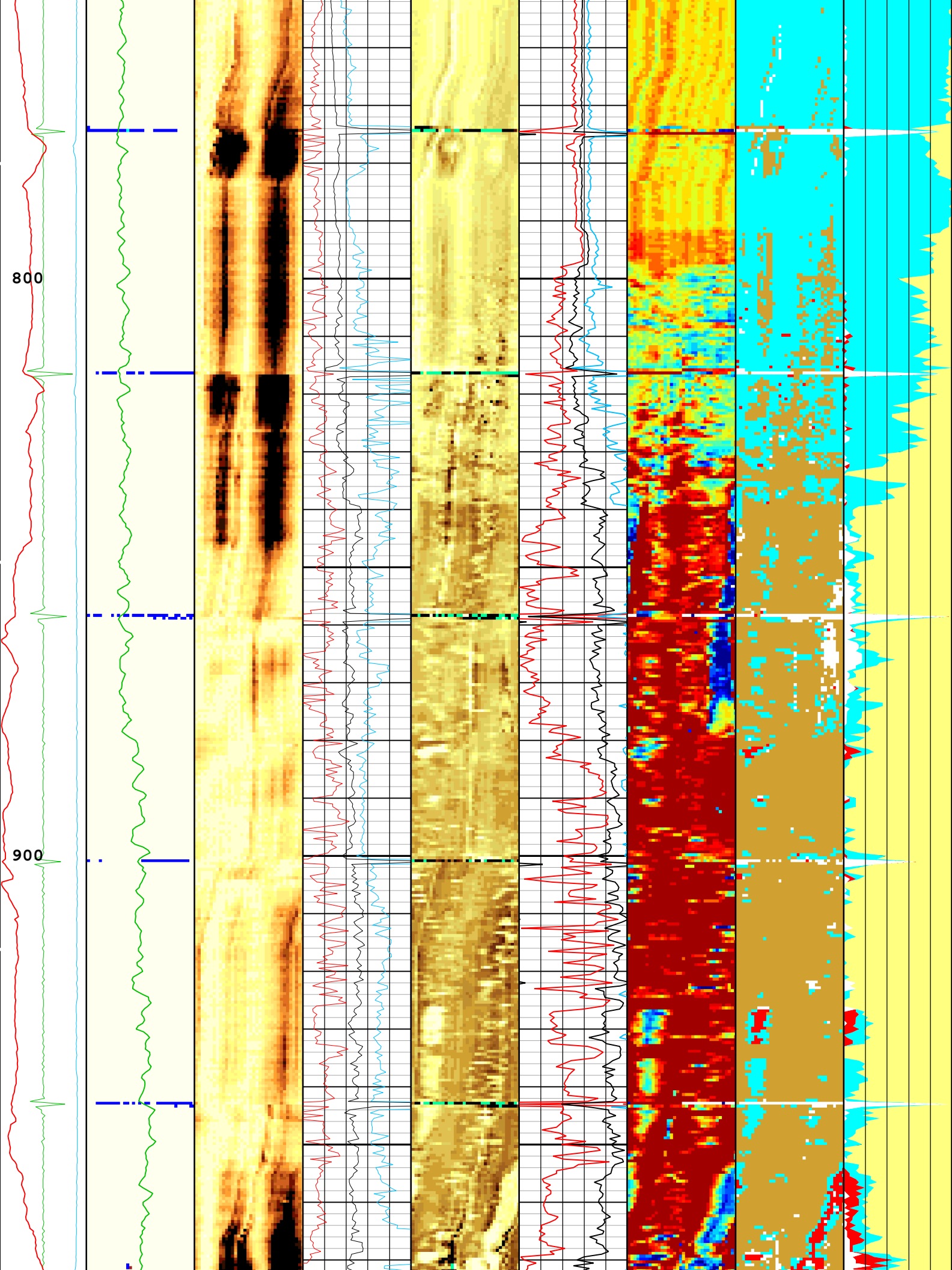
- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - : Pulse Origin Not Detected
- 3 - UFLG 3 Value within [2.5 - 3.5] - : WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error
- 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : Loop Processing Error

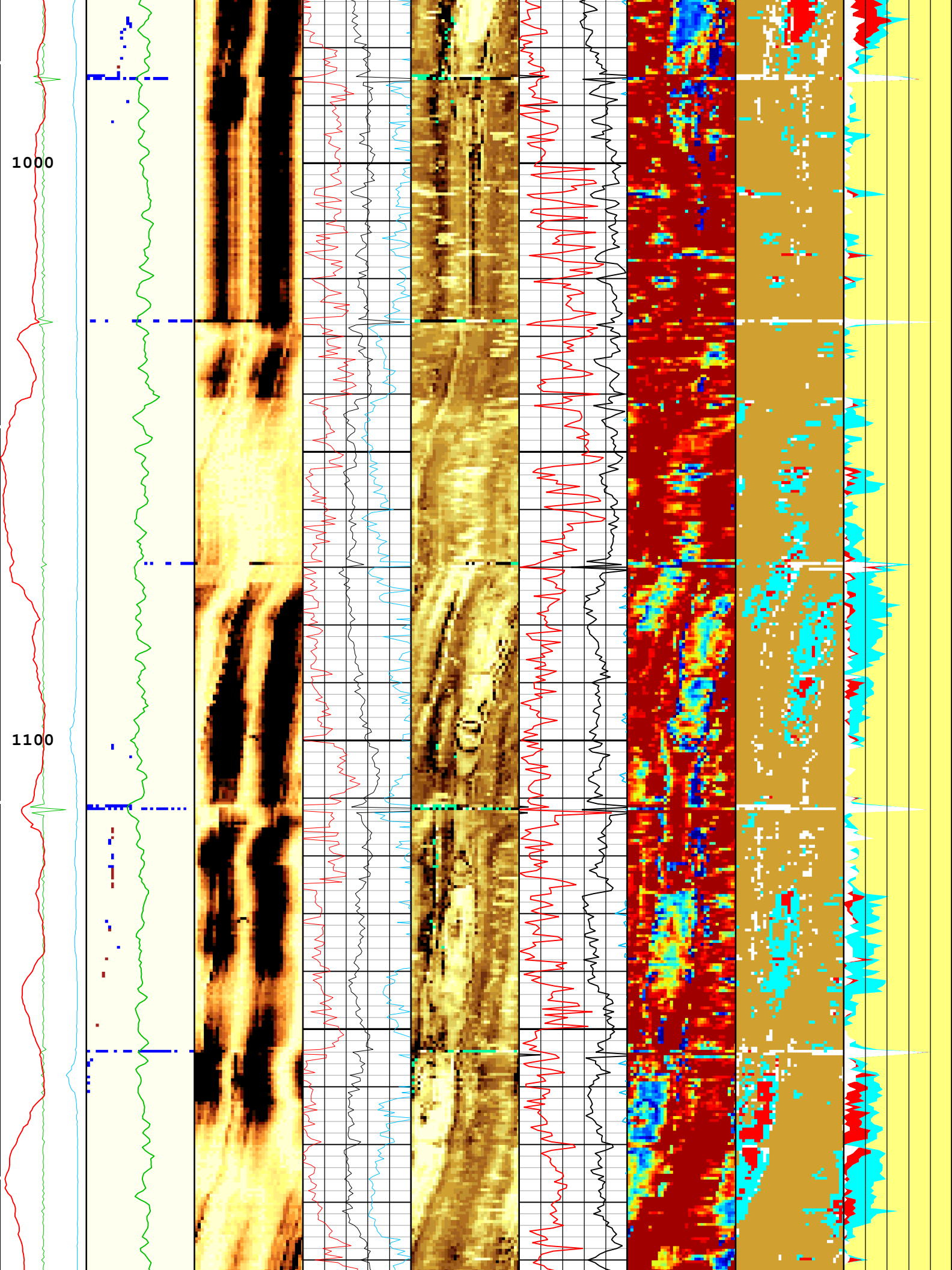


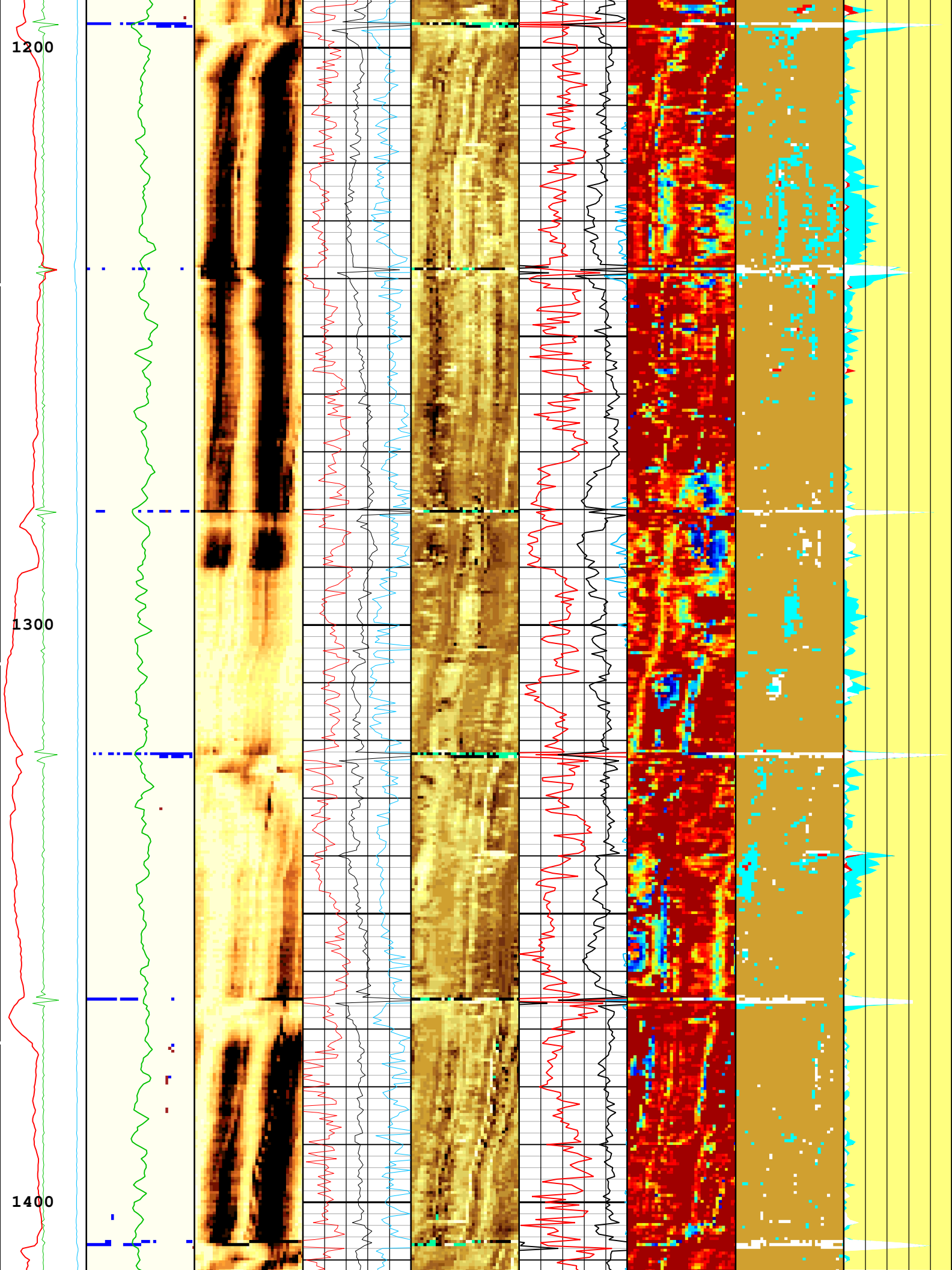


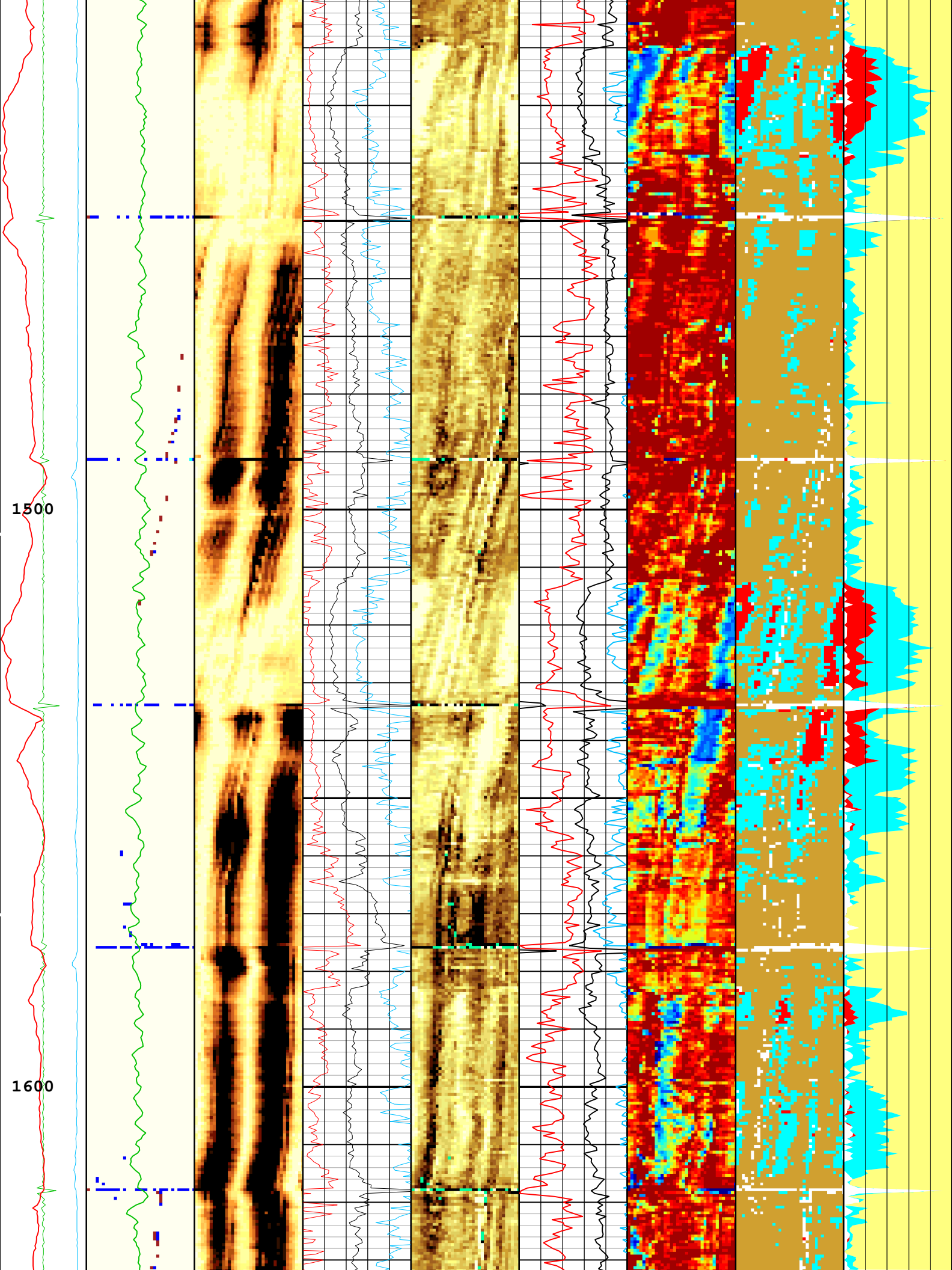


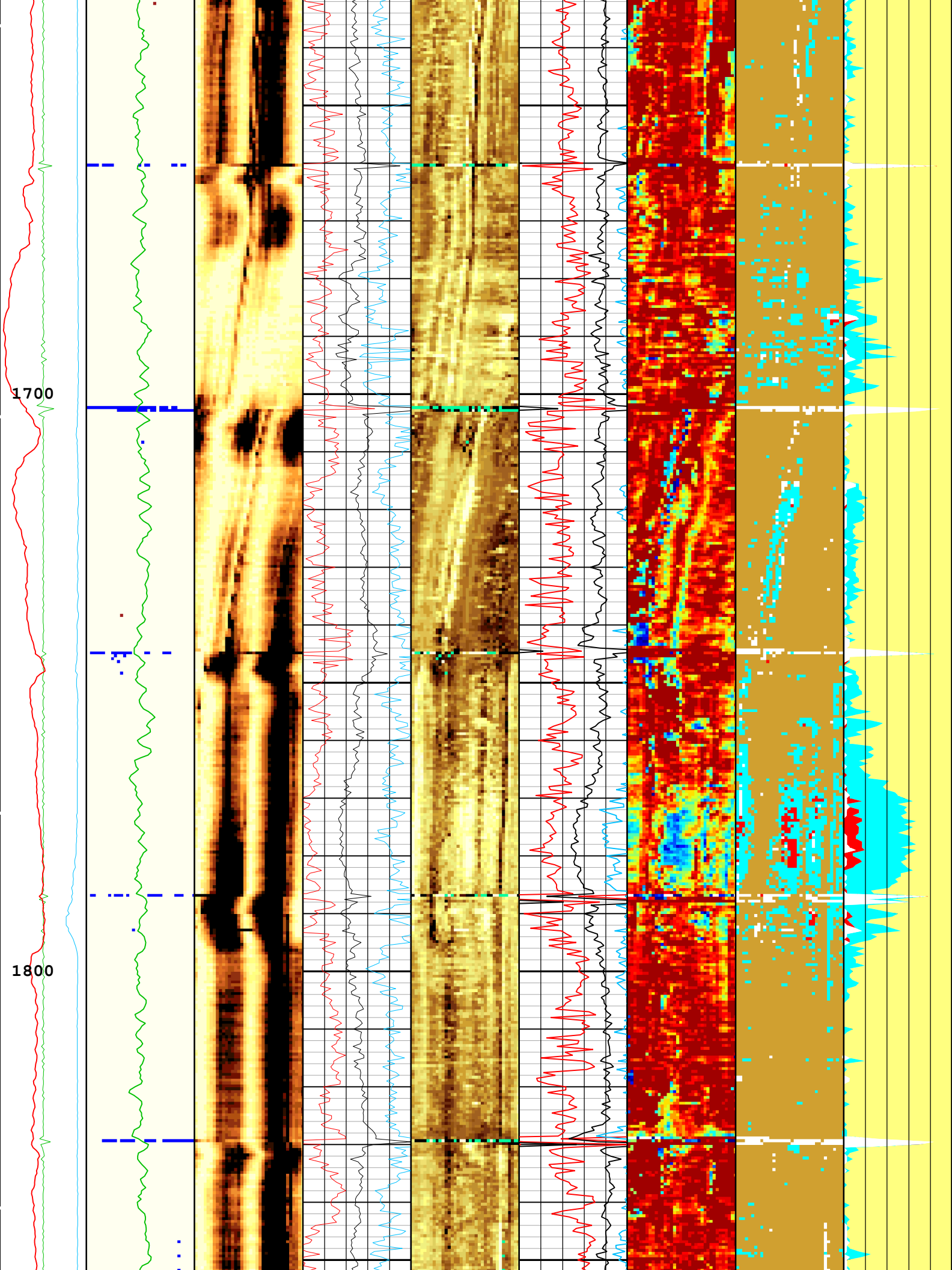


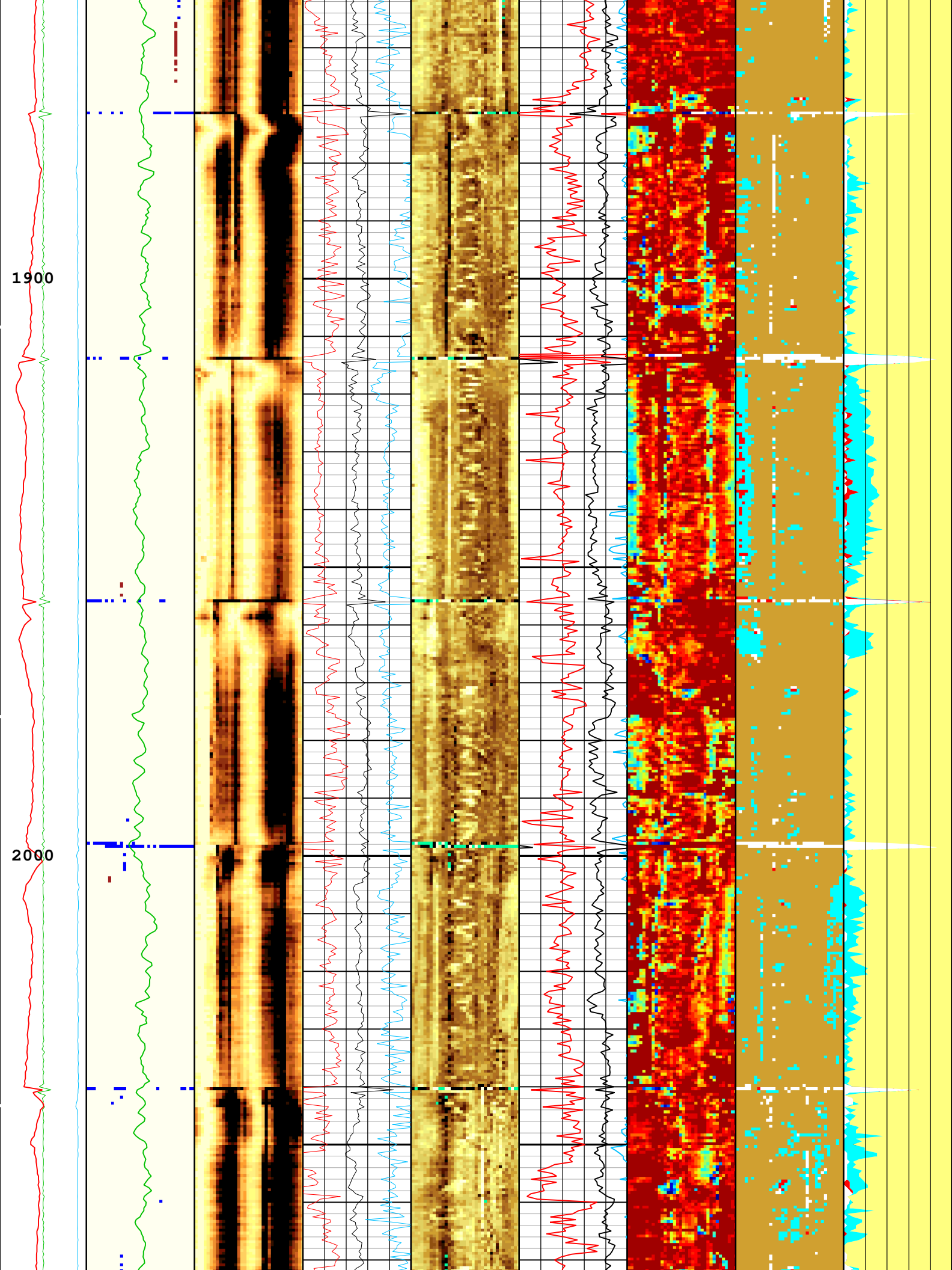


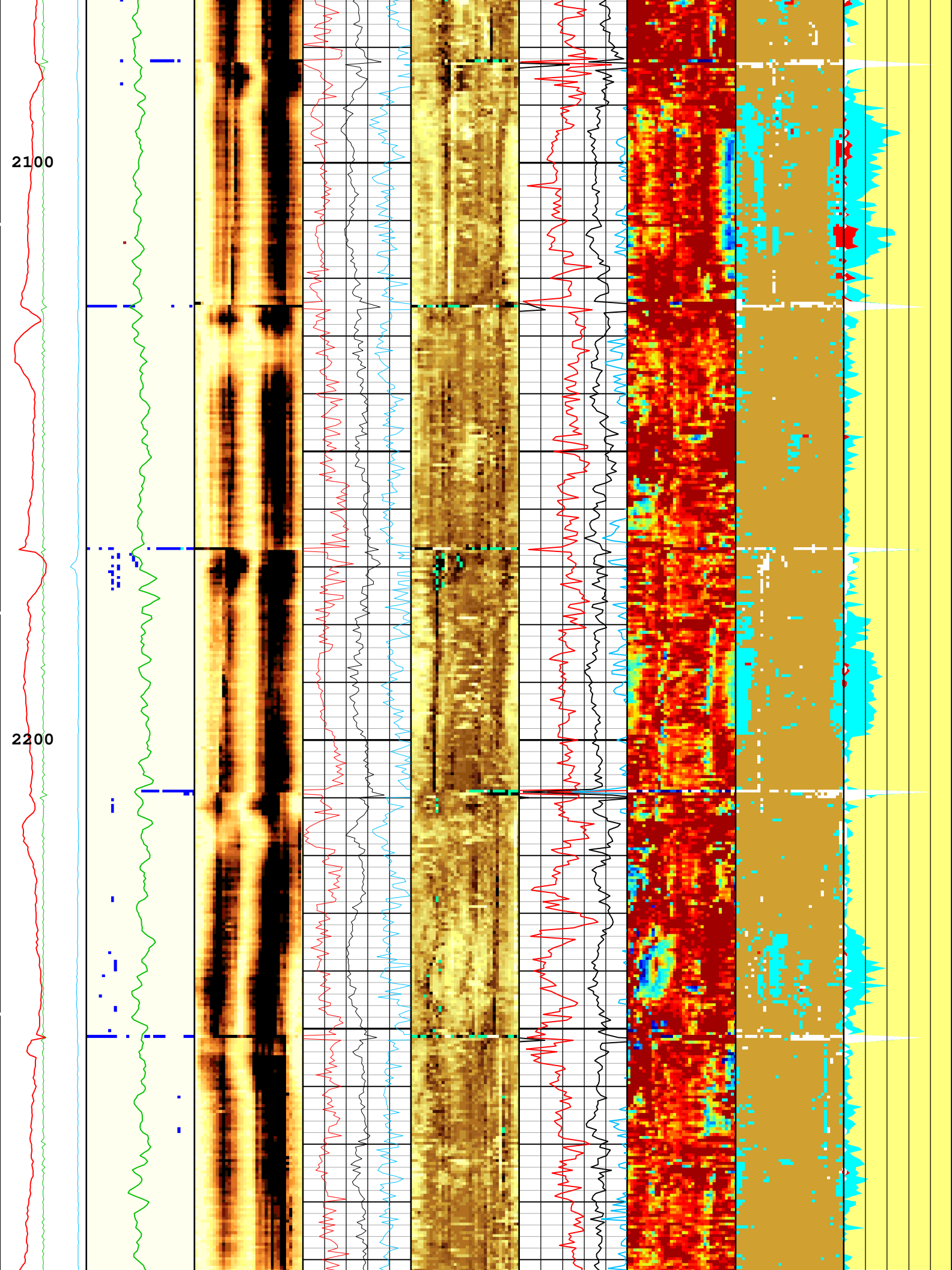


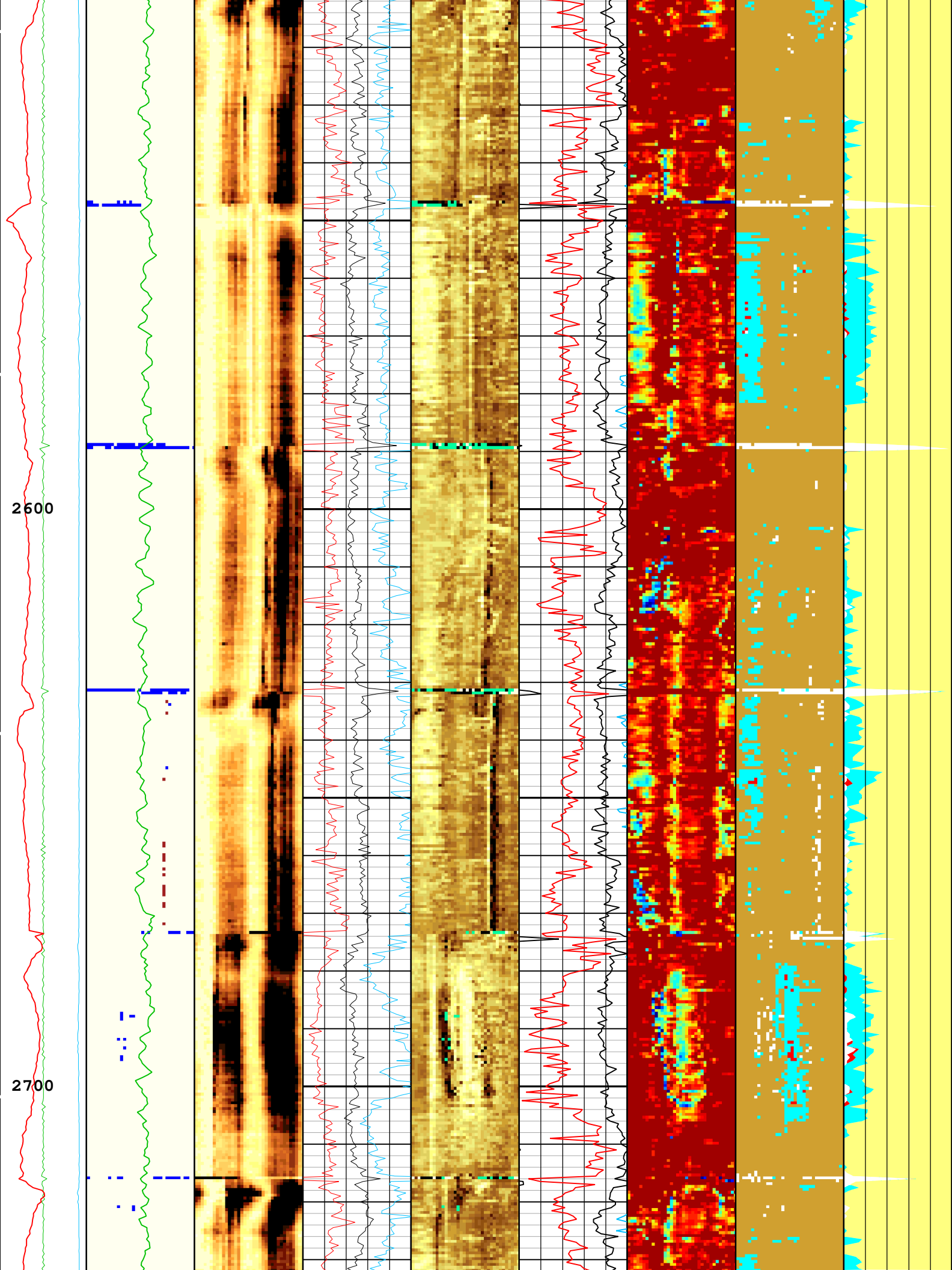


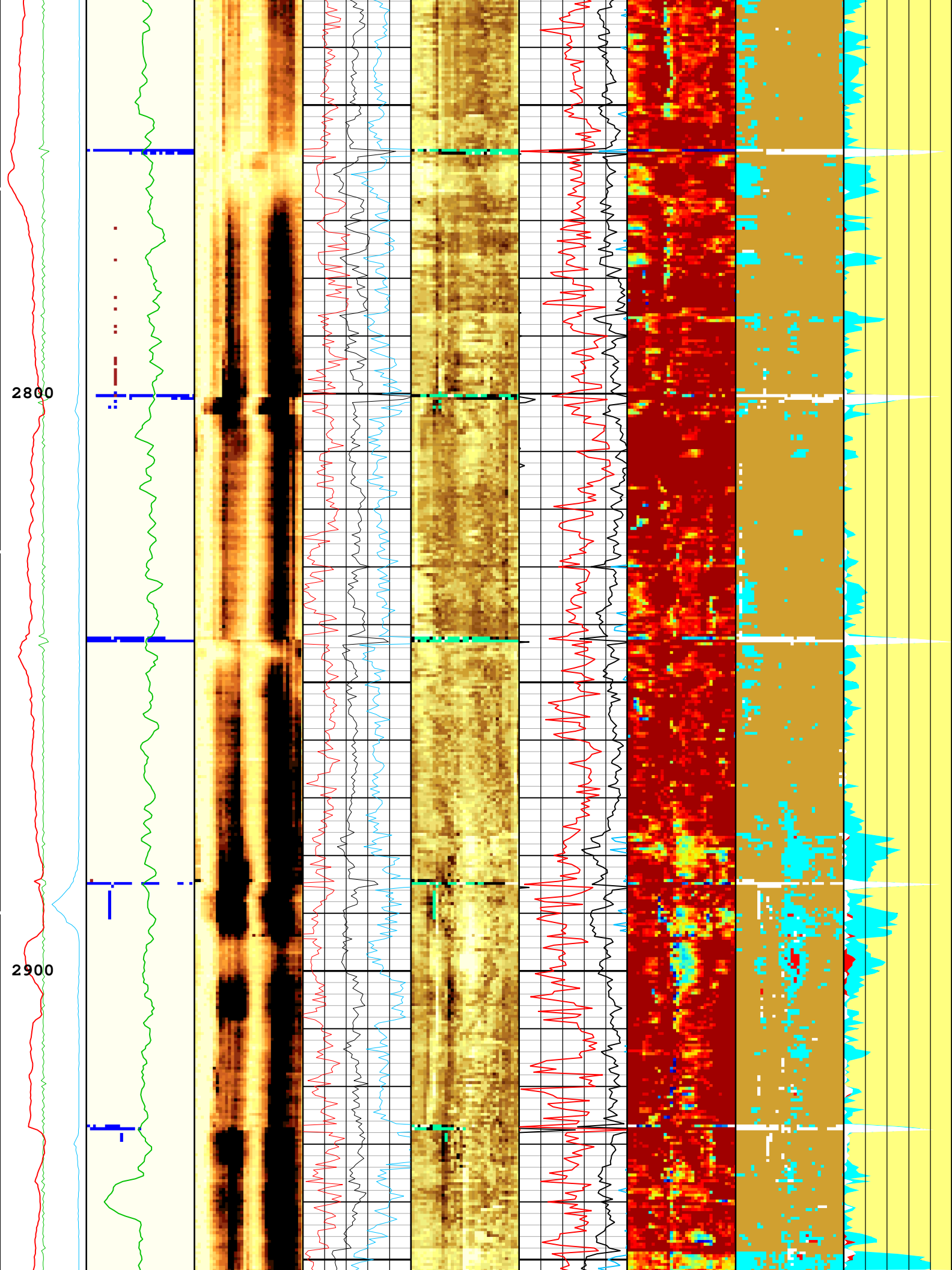


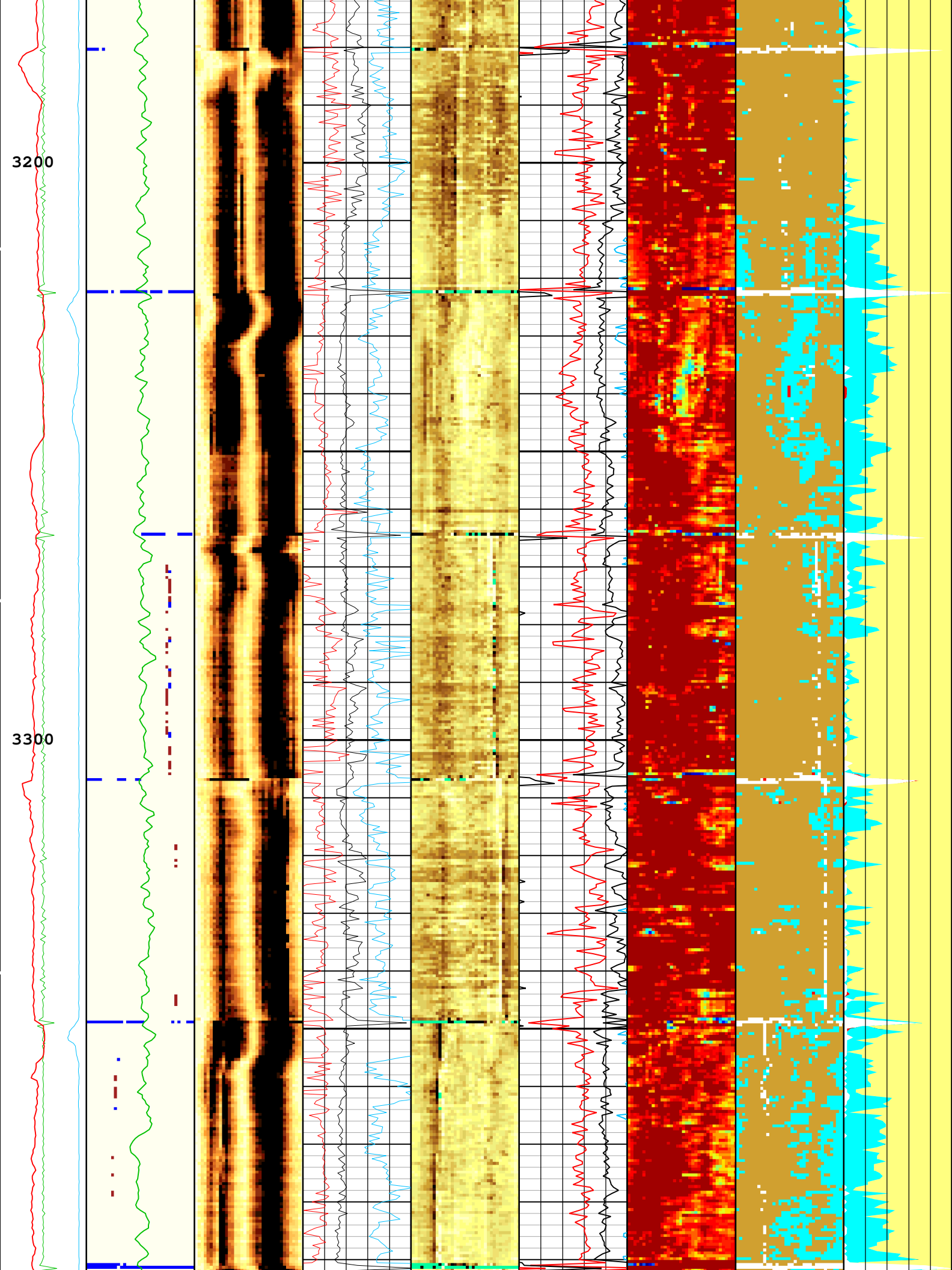


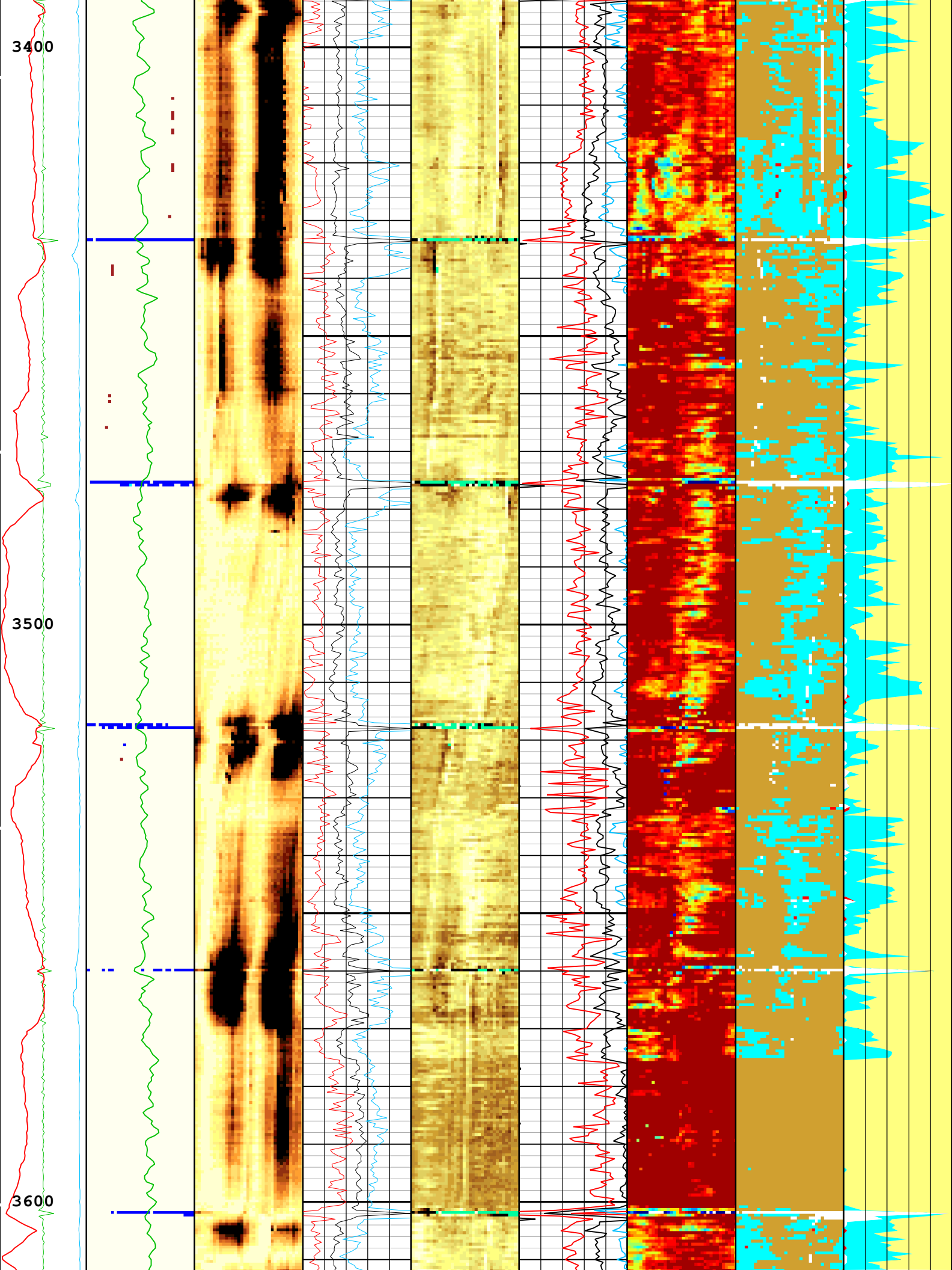


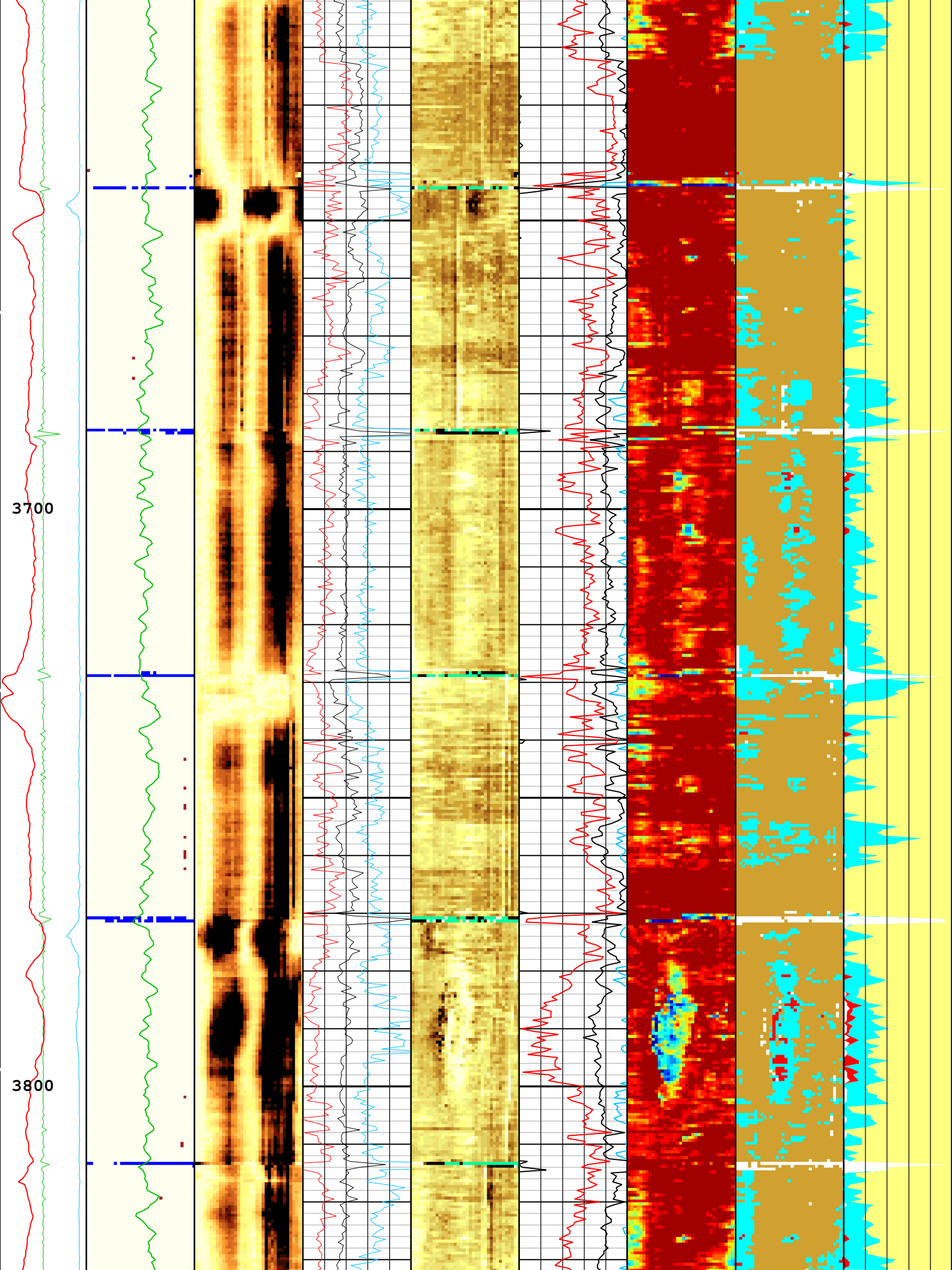


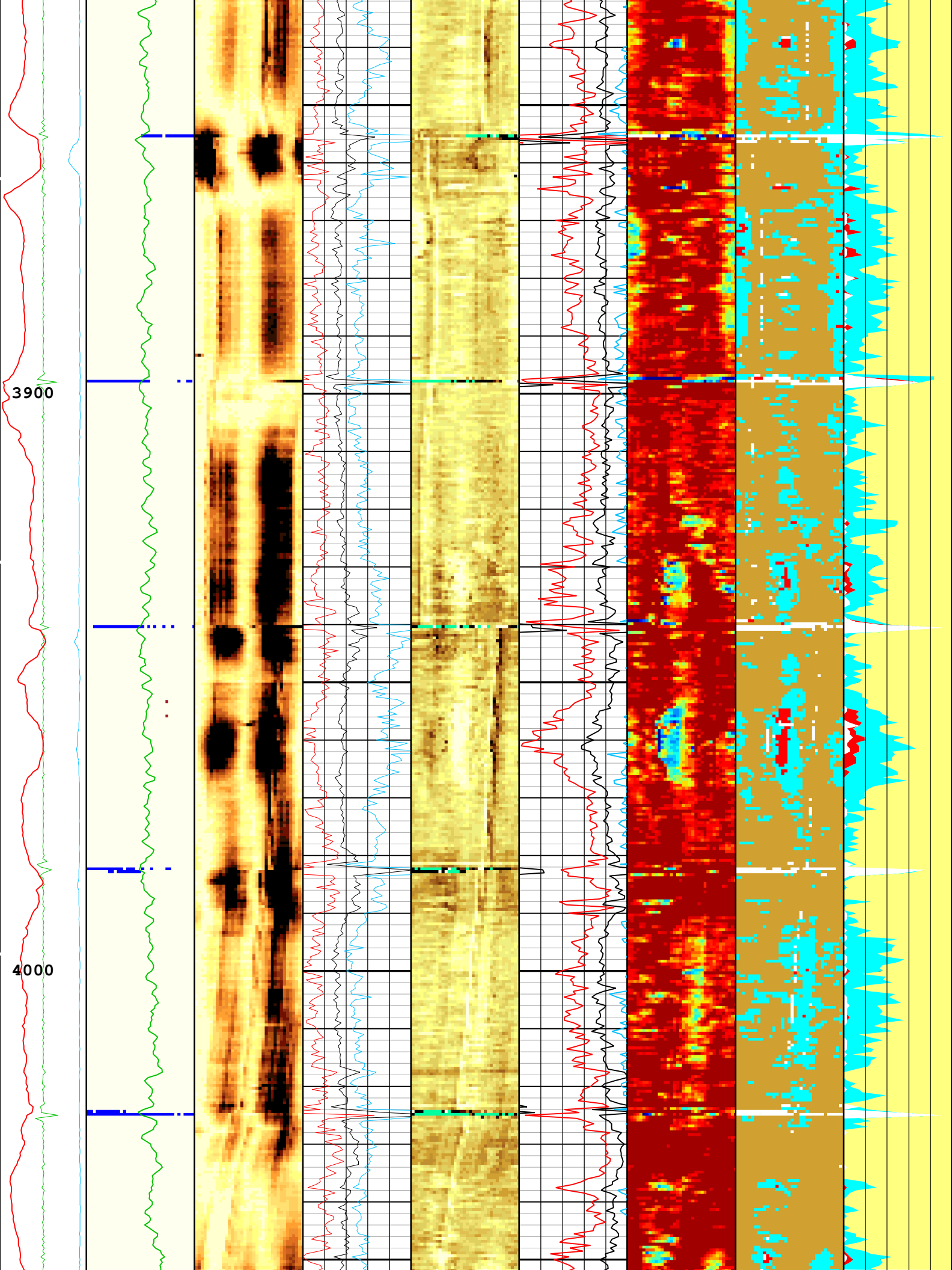


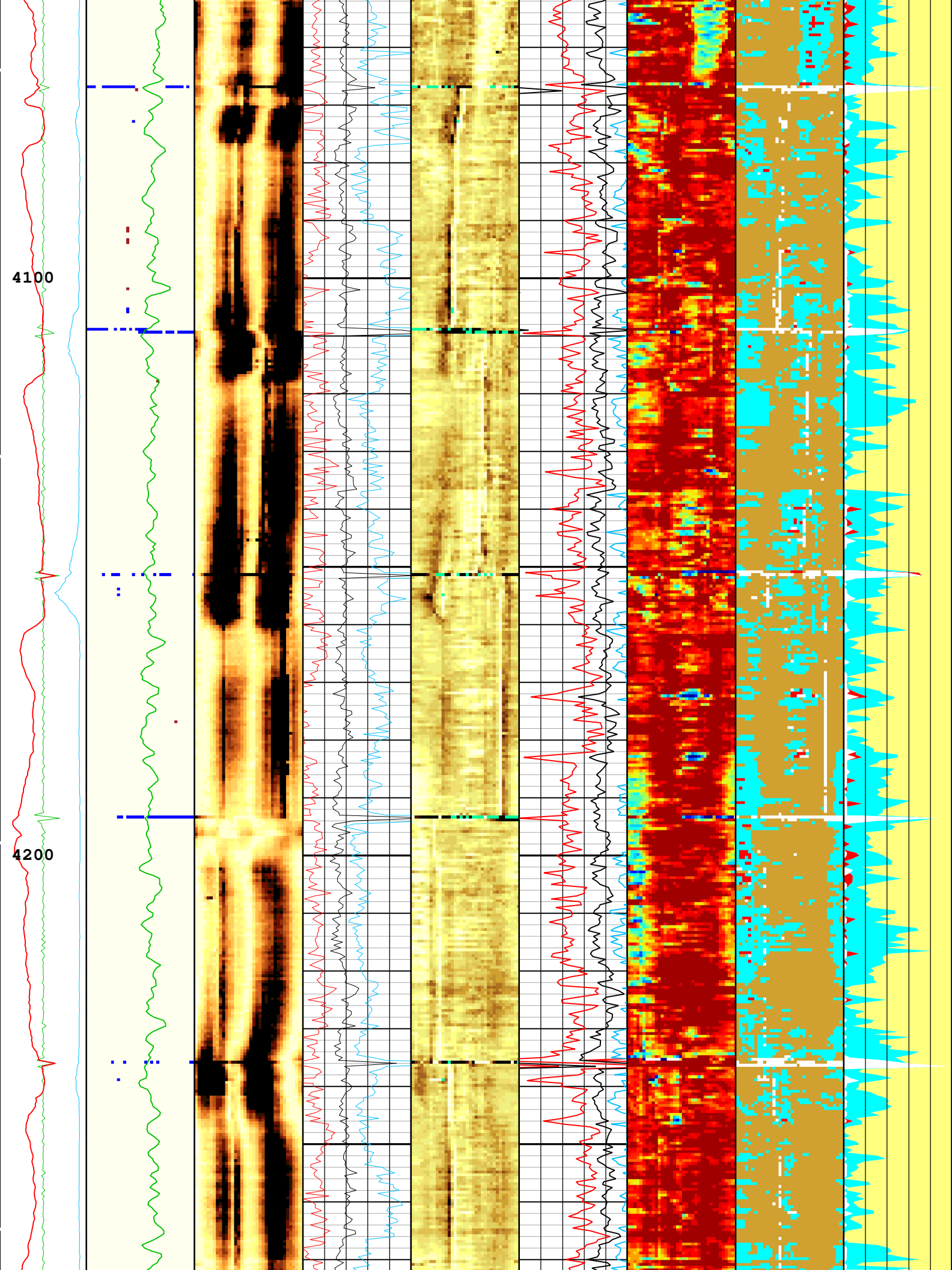


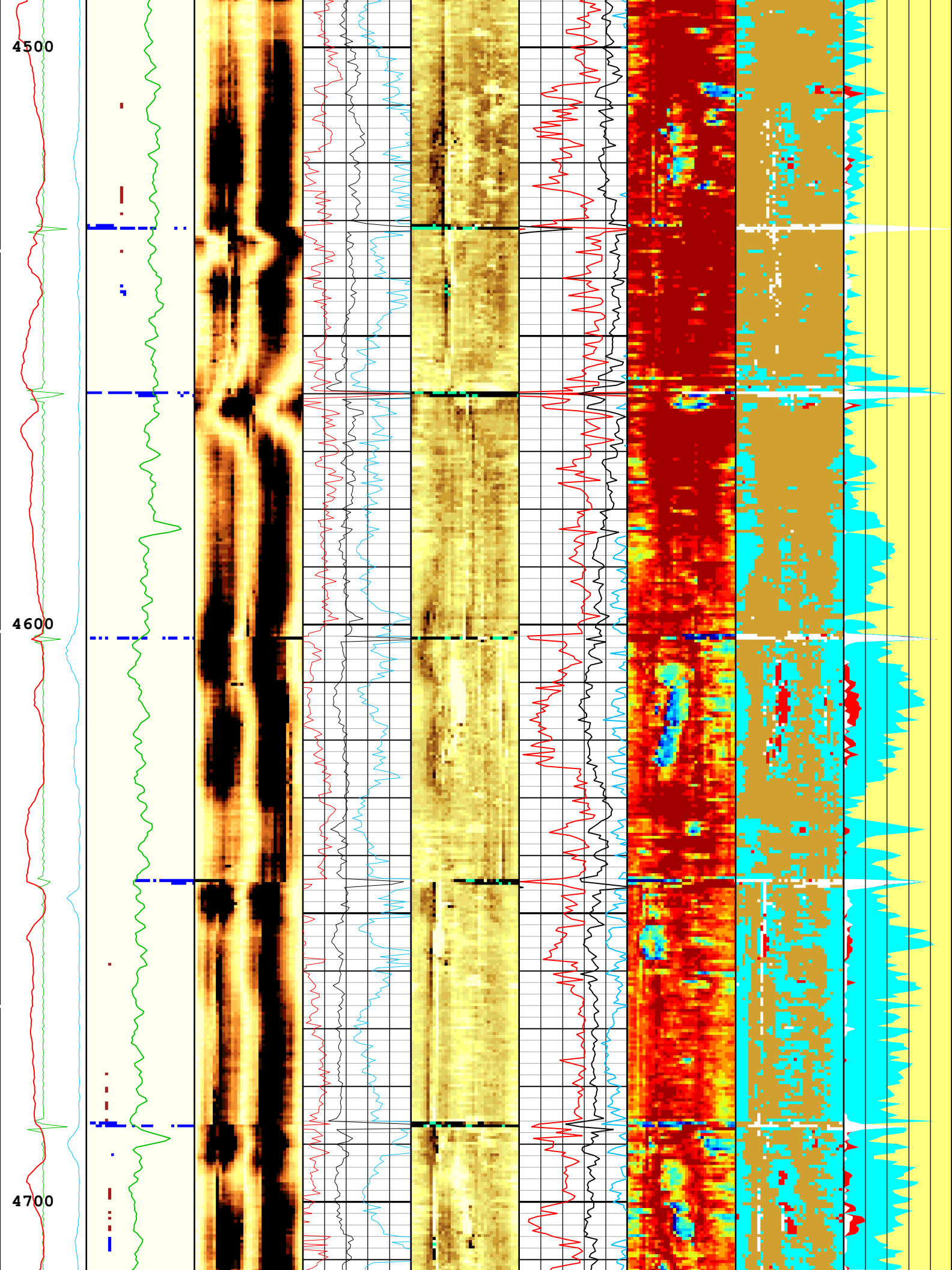


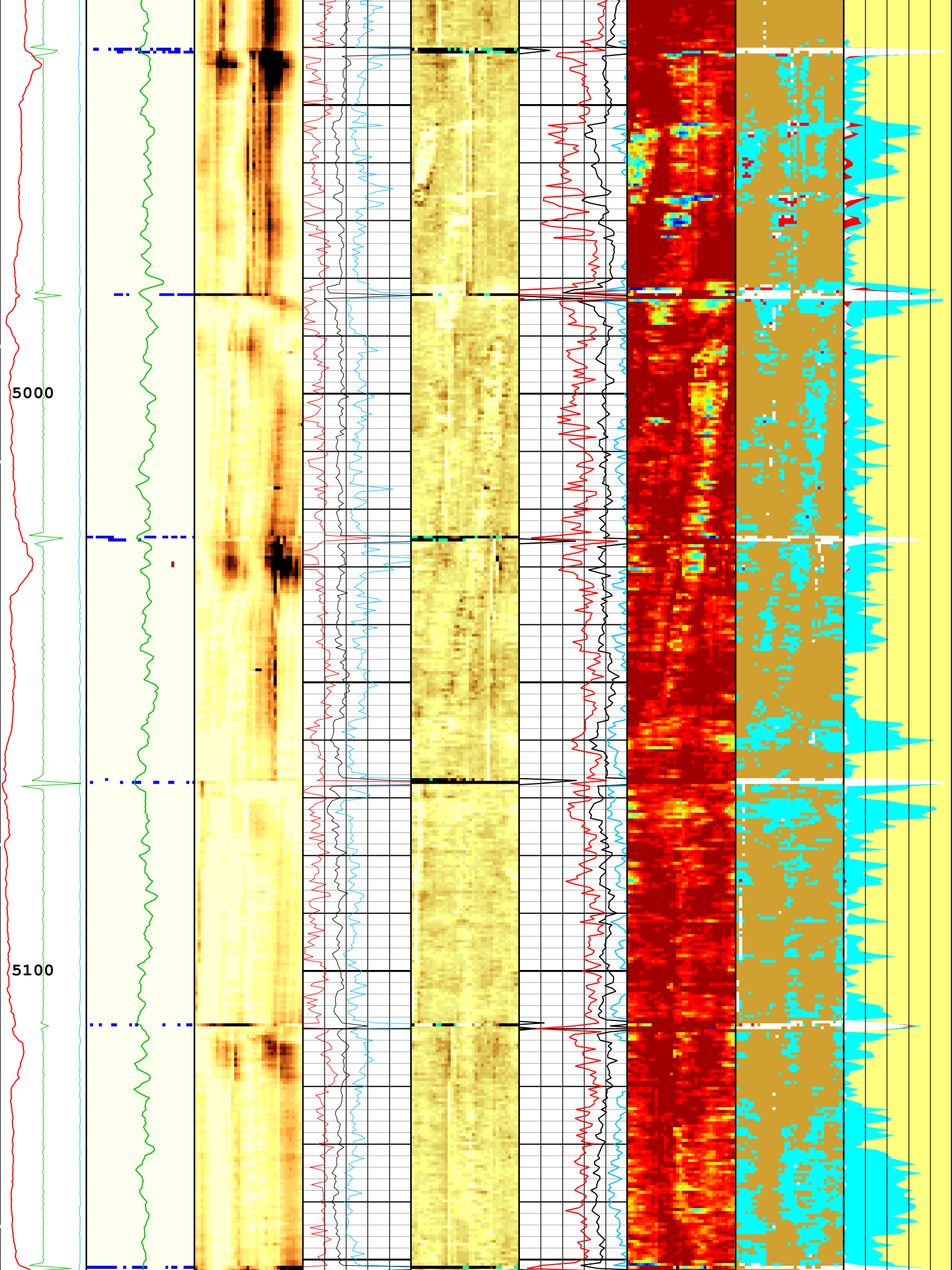


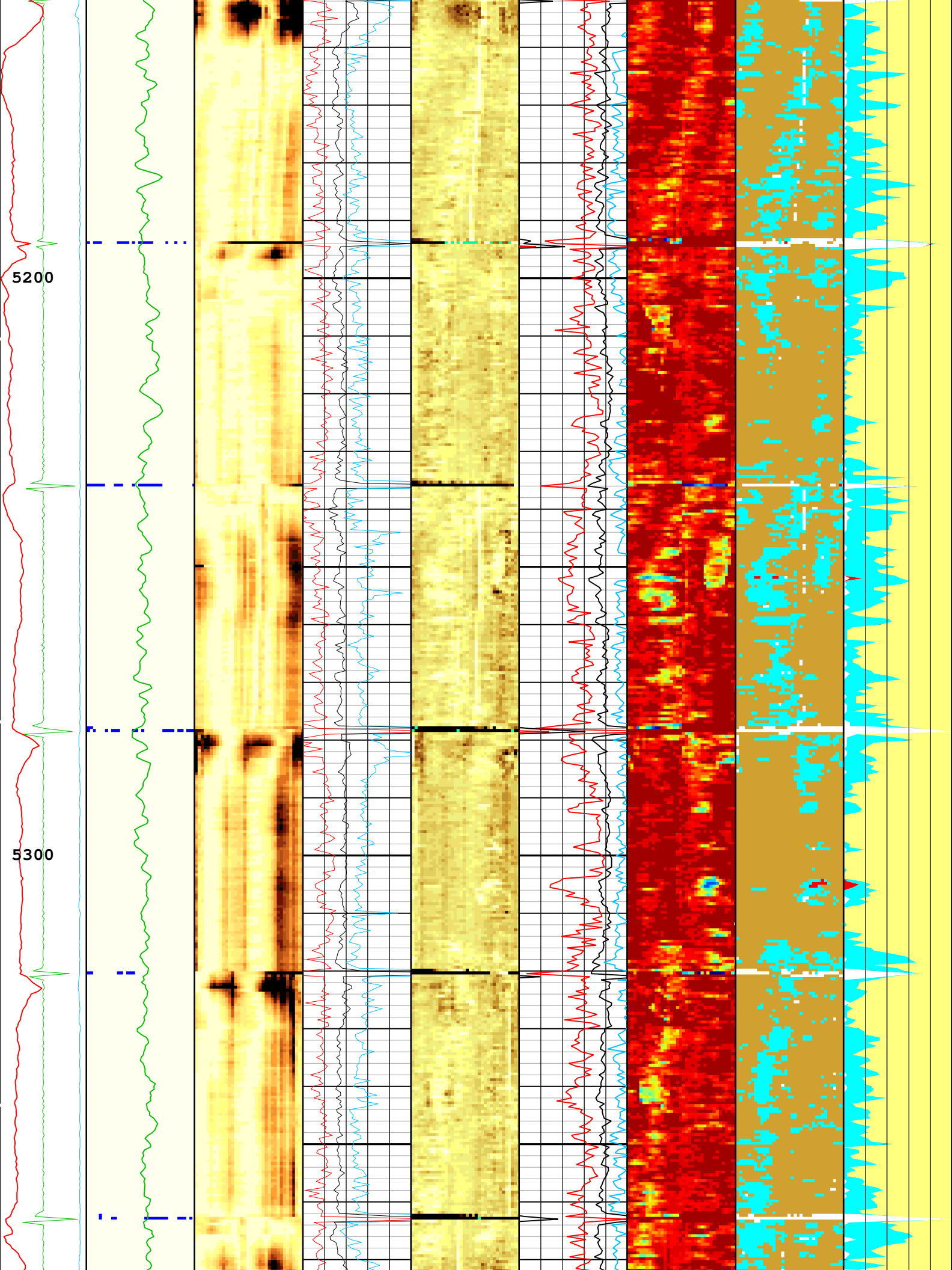


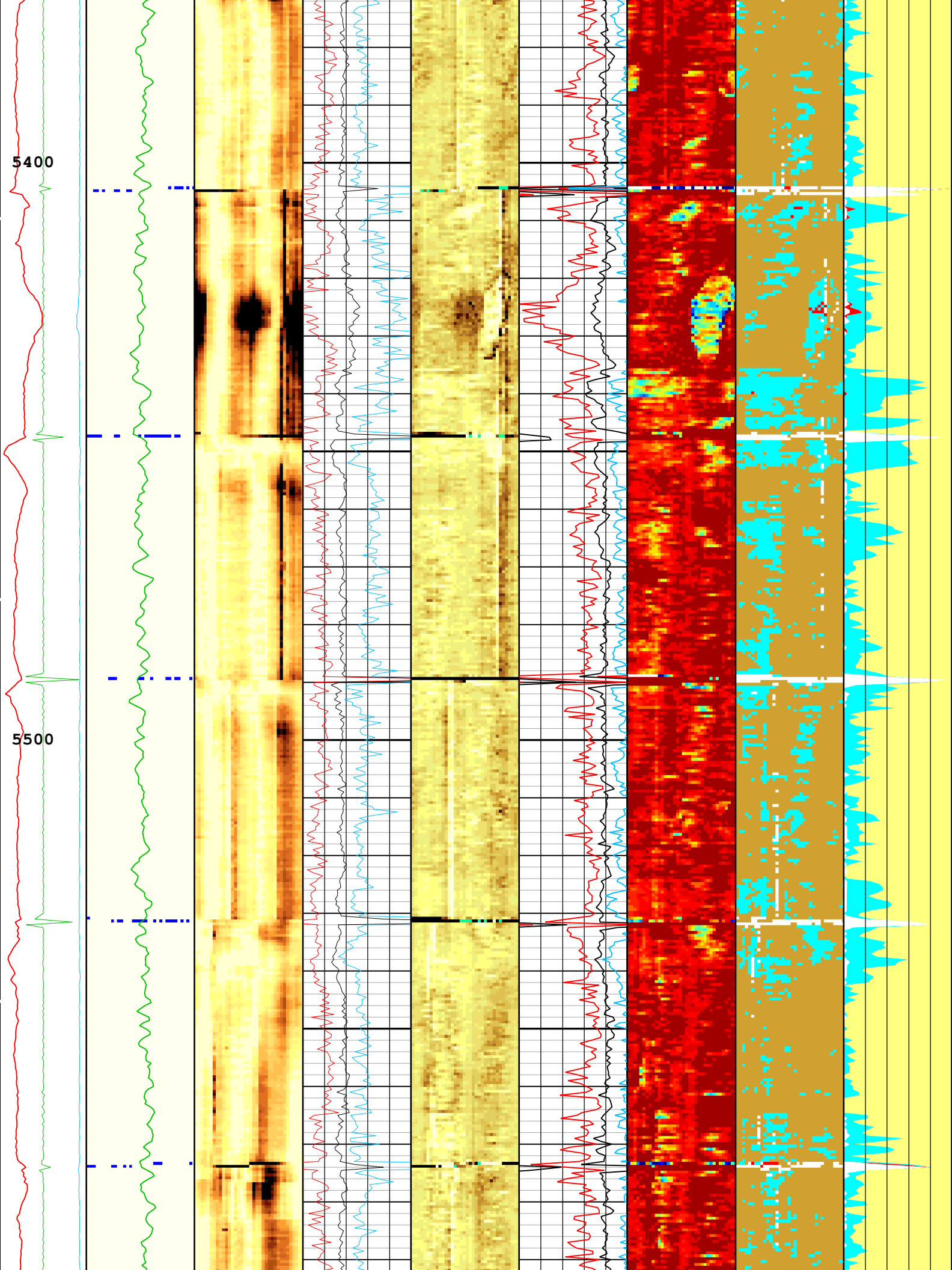


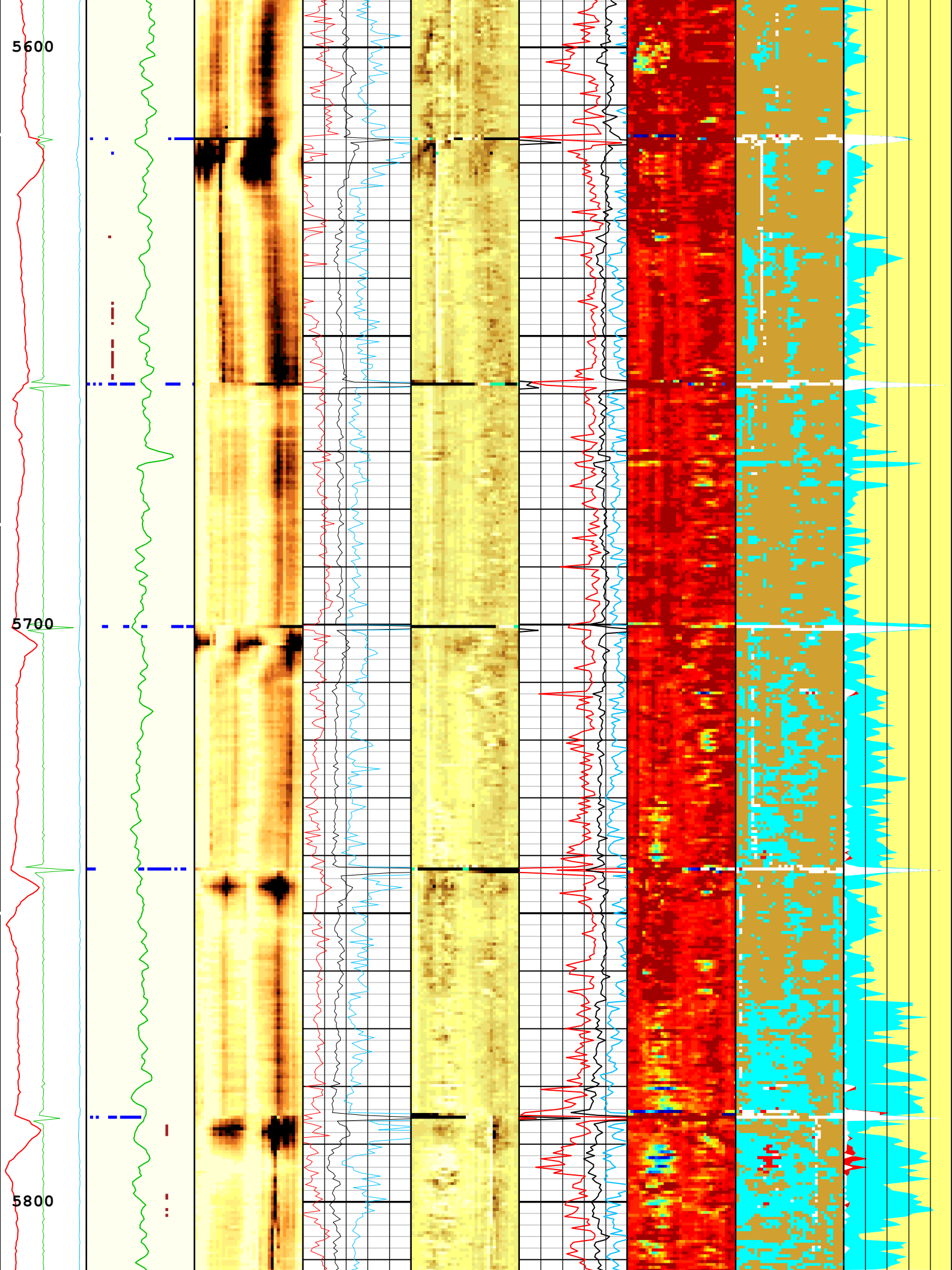


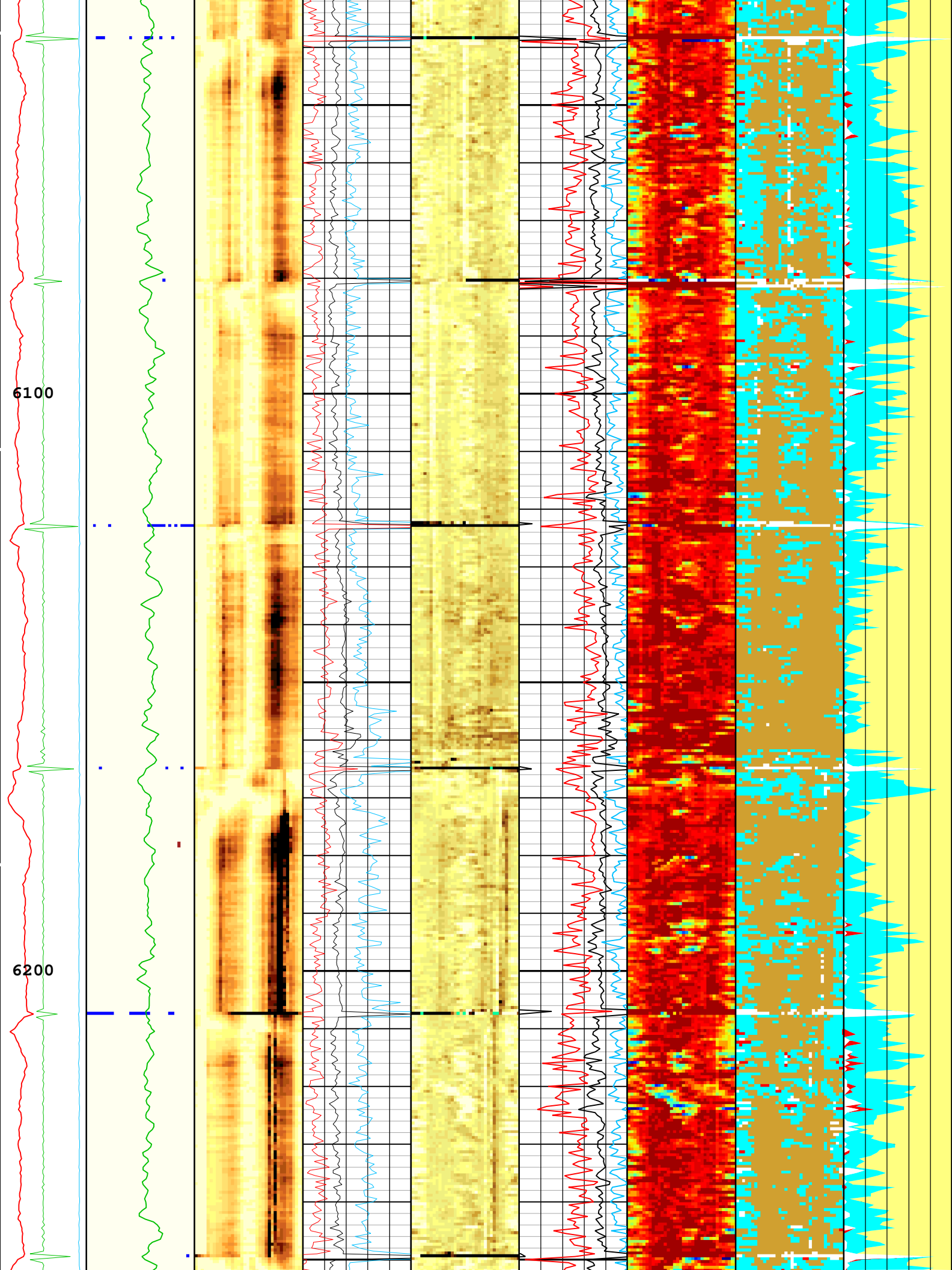


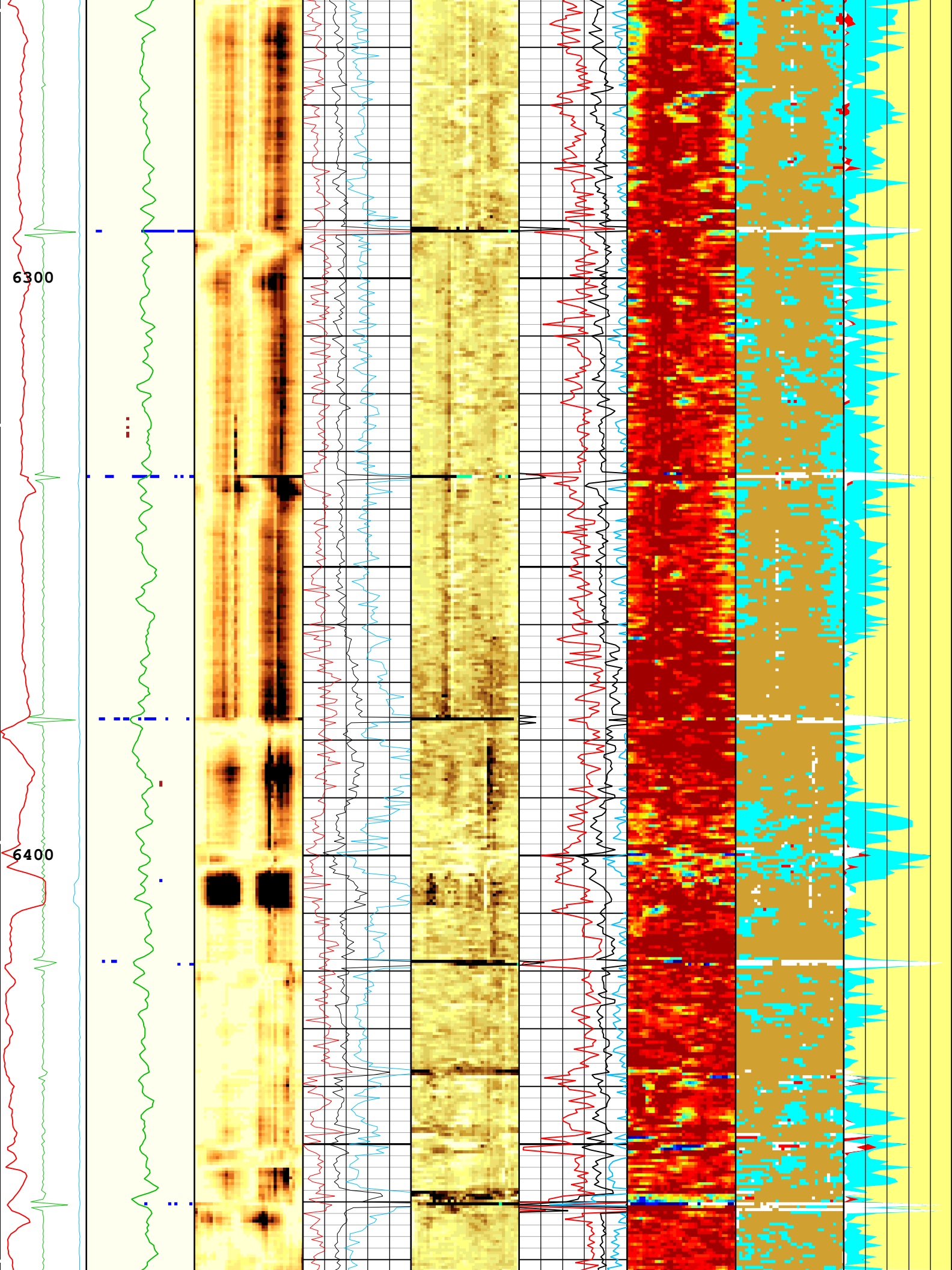


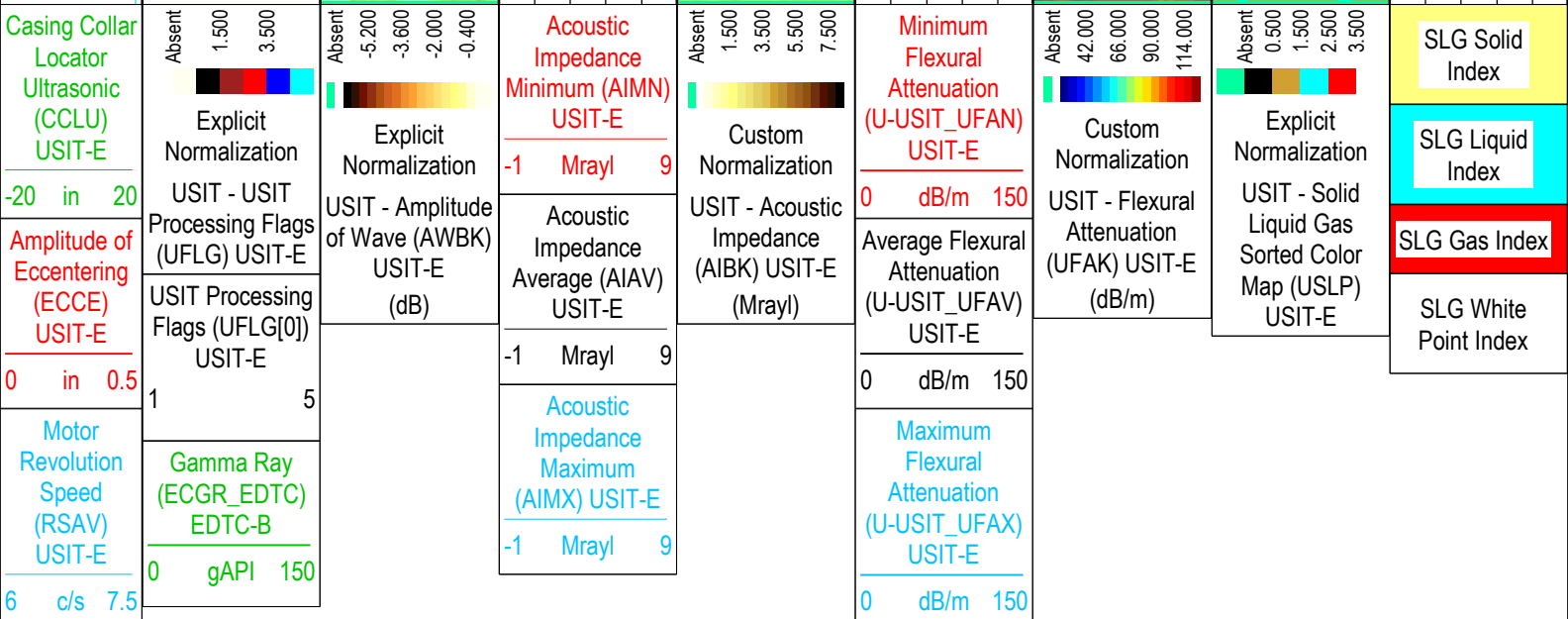
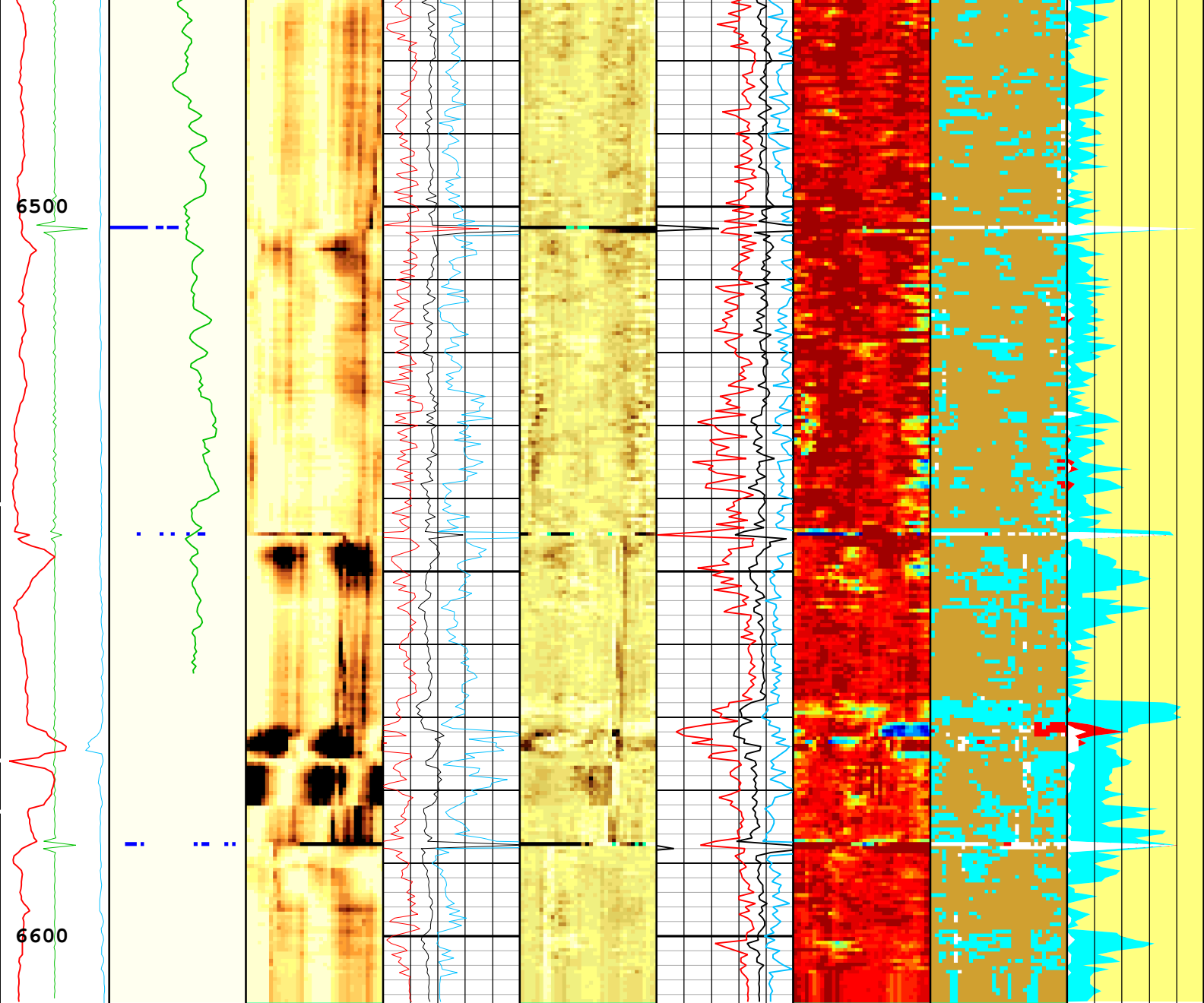












USIT Processing Flags (UFLG[0]) USIT-E

- 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] - :

- UTIM Error
- Pulse Origin Not Detected
- WINLEN Error

4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : ■ Casing Thickness Error

5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : ■ 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: 28-Oct-2021 18:51:20

Channel Processing Parameters

One: 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	8243	ft
CDEN	Cement Density	USIT-E	14.6	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	9.01	lbm/gal
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	-8.35	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	IBC_FRP_OFFSET	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.05	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.05	
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	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.6	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-10.29	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	1.75	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	878
BS	7.875	878	6609

All depth are actual.

Tool Control Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	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	100	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	

One

IBC SLG Composite

Pass Summary






Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[6]:Up	Up	32.35 ft	6610.38 ft	28-Oct-2021 8:53:21 AM	28-Oct-2021 10:46:06 AM	ON	9.11 ft	Yes

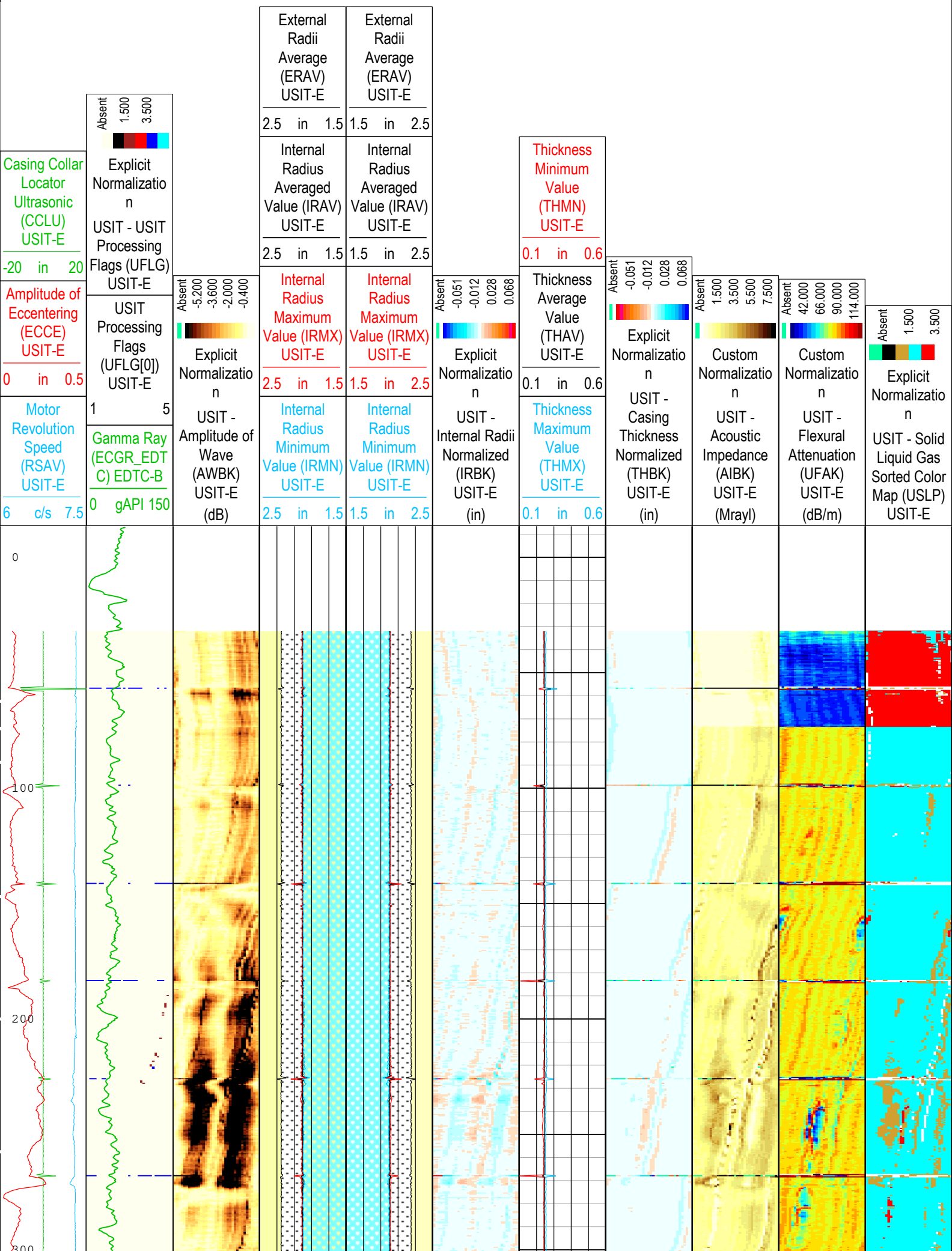
All depths are referenced to toolstring zero

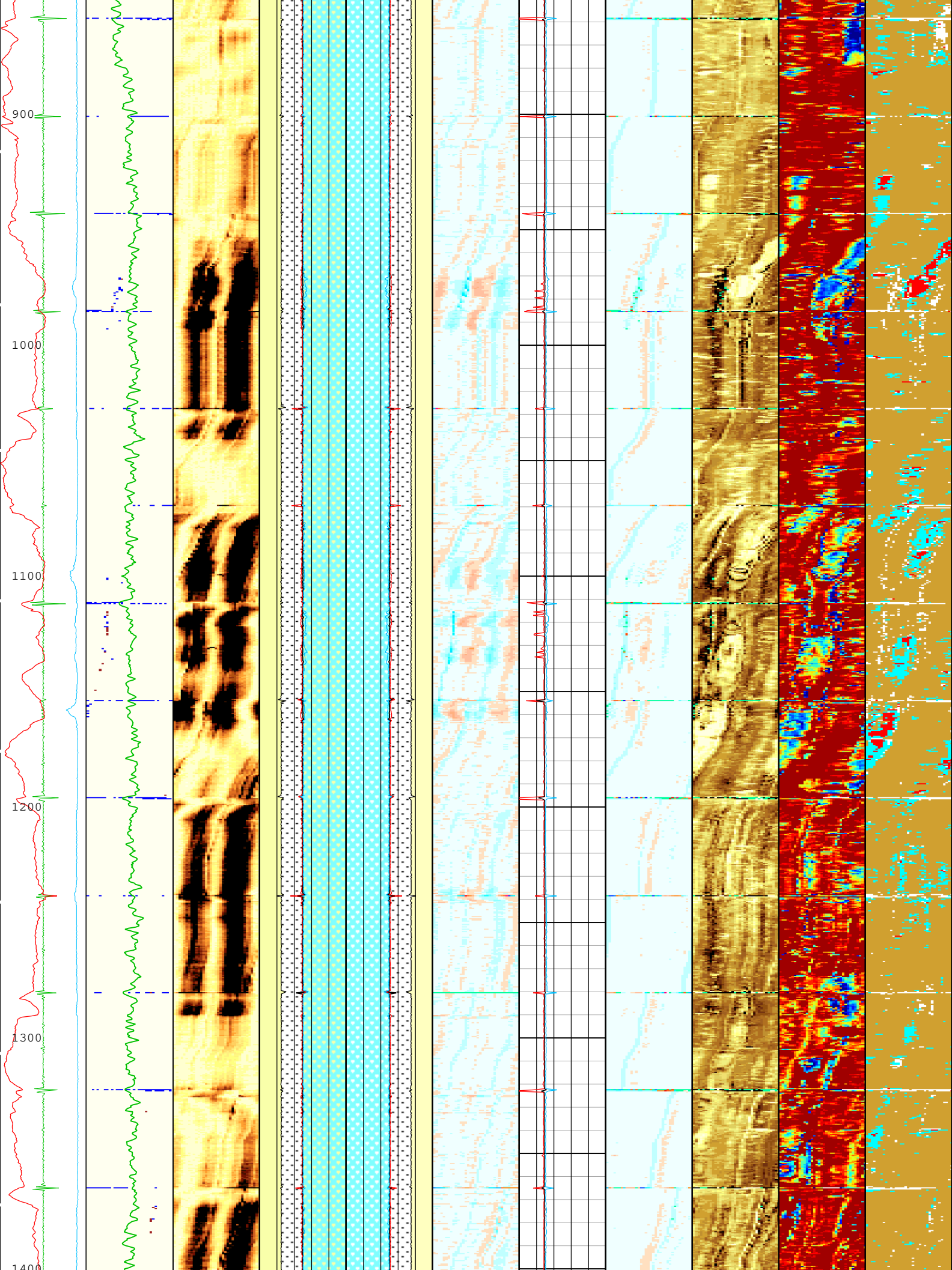
Log Company: Occidental Petroleum Well: Morton 37-1
One: Log[6]:Up:S007

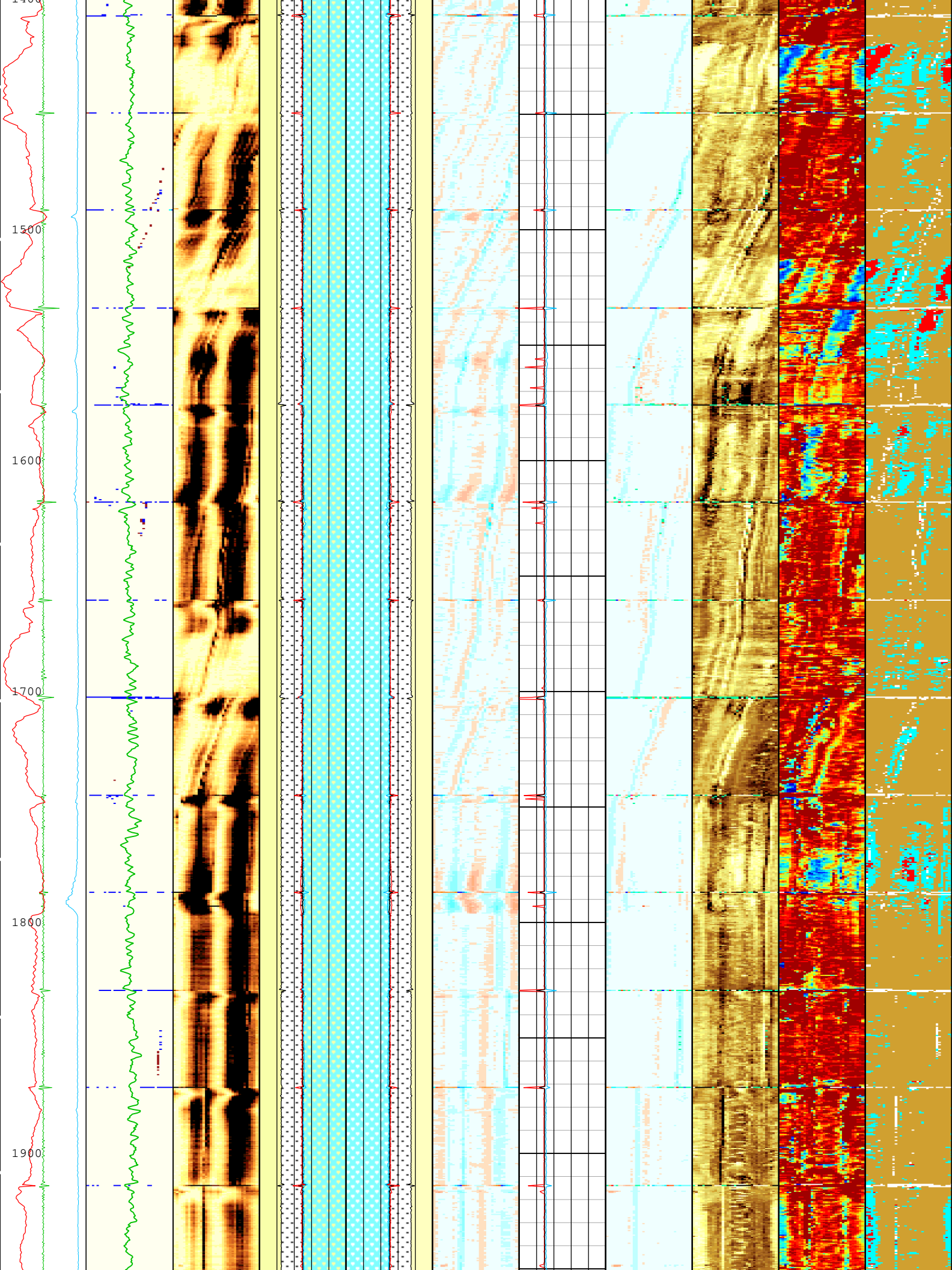
Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 5.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 28-Oct-2021 18:51:34

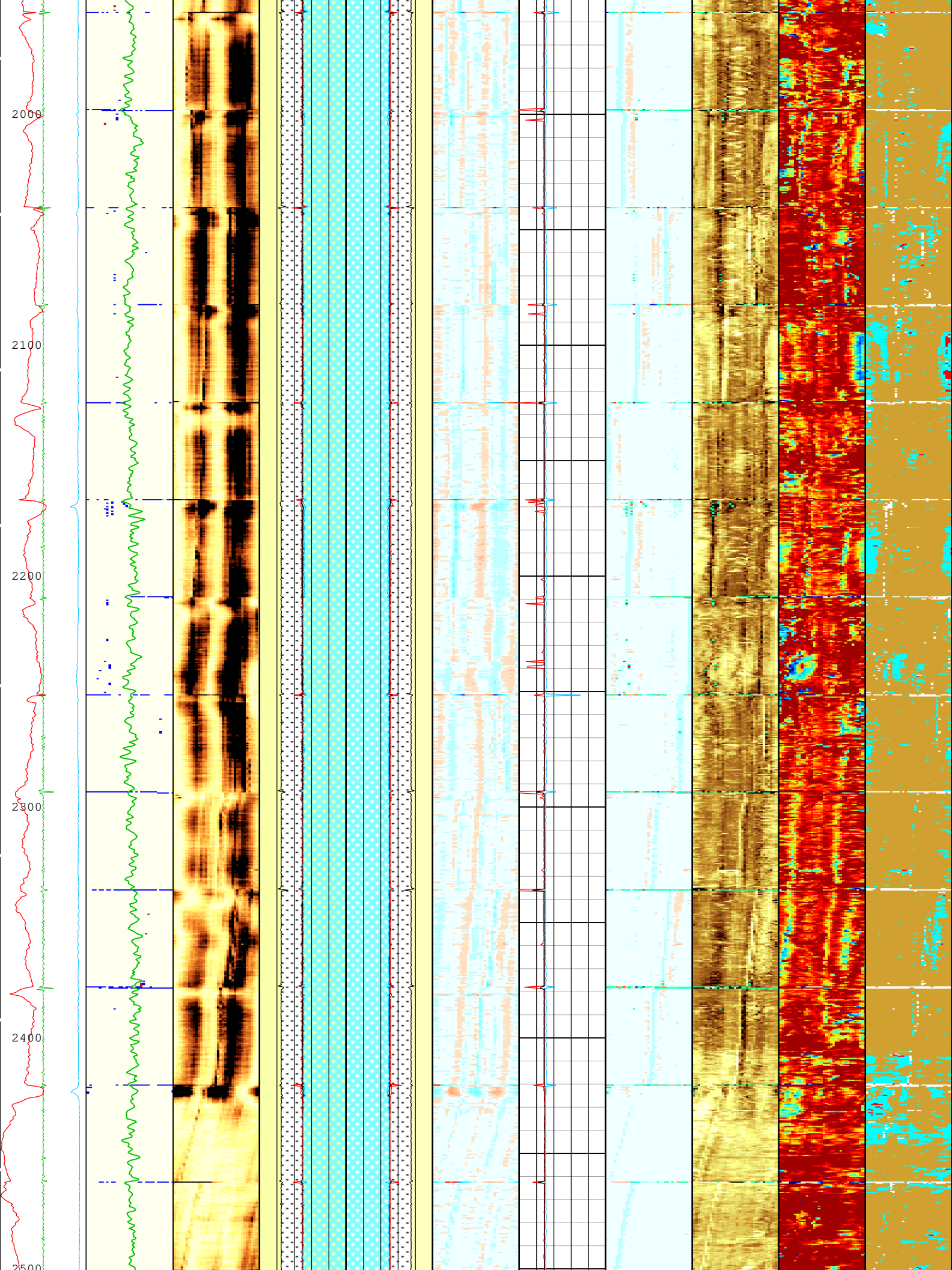
USIT Processing Flags (UFLG[0]) USIT-E

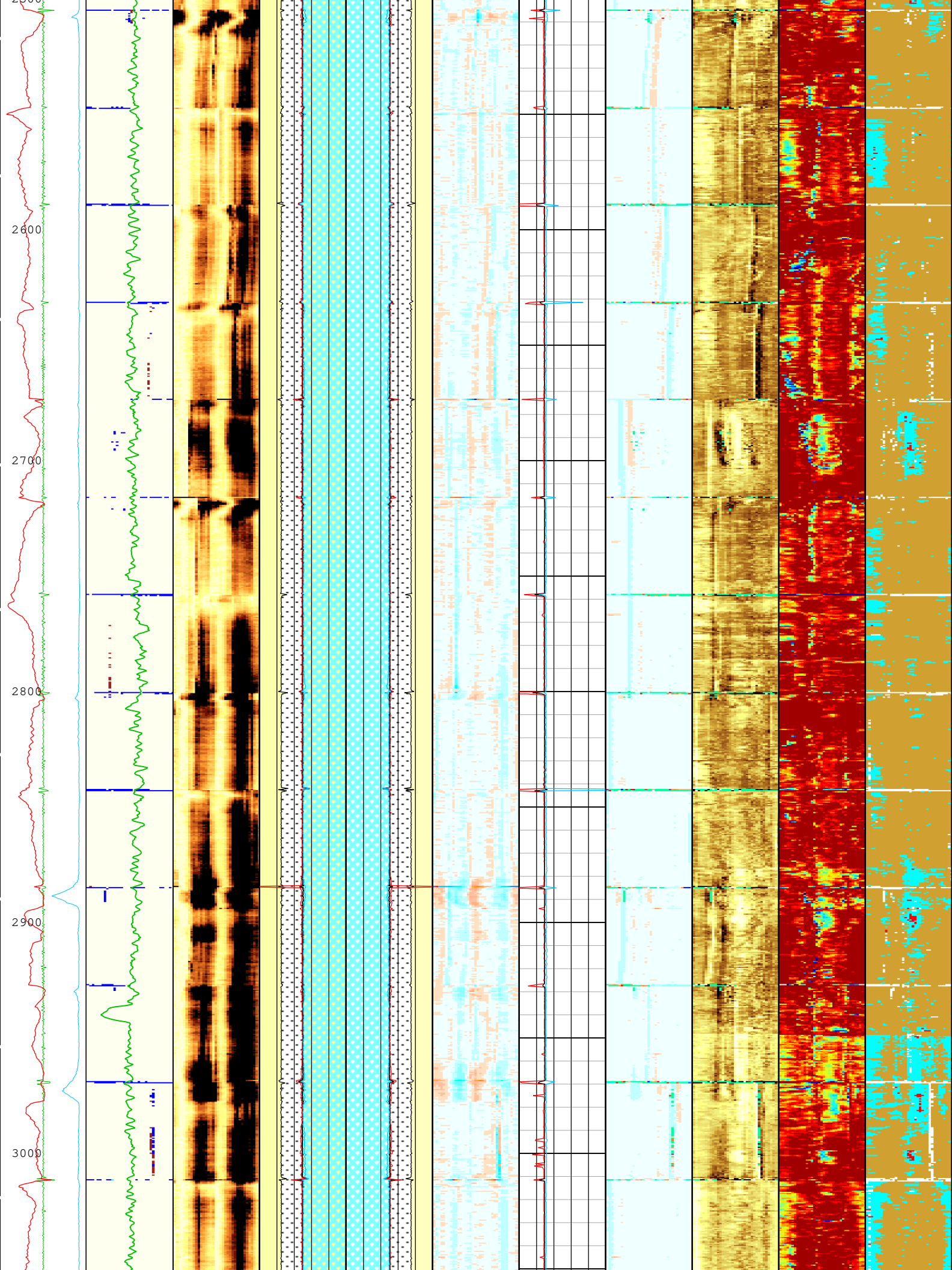
1 - UFLG 1 Value within [0.0 - 1.5] - :	 UTIM Error
2 - UFLG 2 Value within [1.5 - 2.5] - :	 Pulse Origin Not Detected
3 - UFLG 3 Value within [2.5 - 3.5] - :	 WINLEN Error
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :	 Casing Thickness Error
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :	 Loop Processing Error

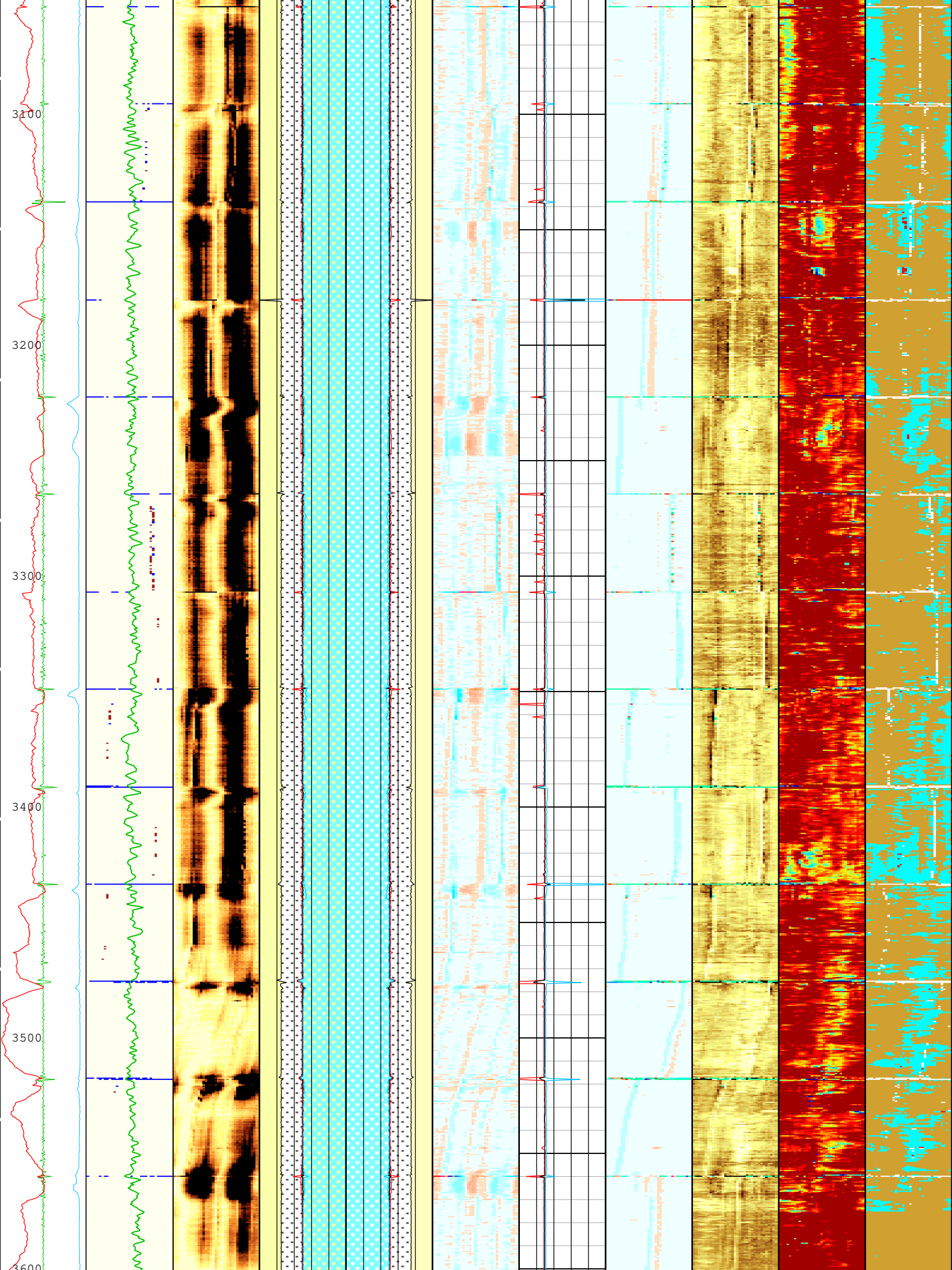


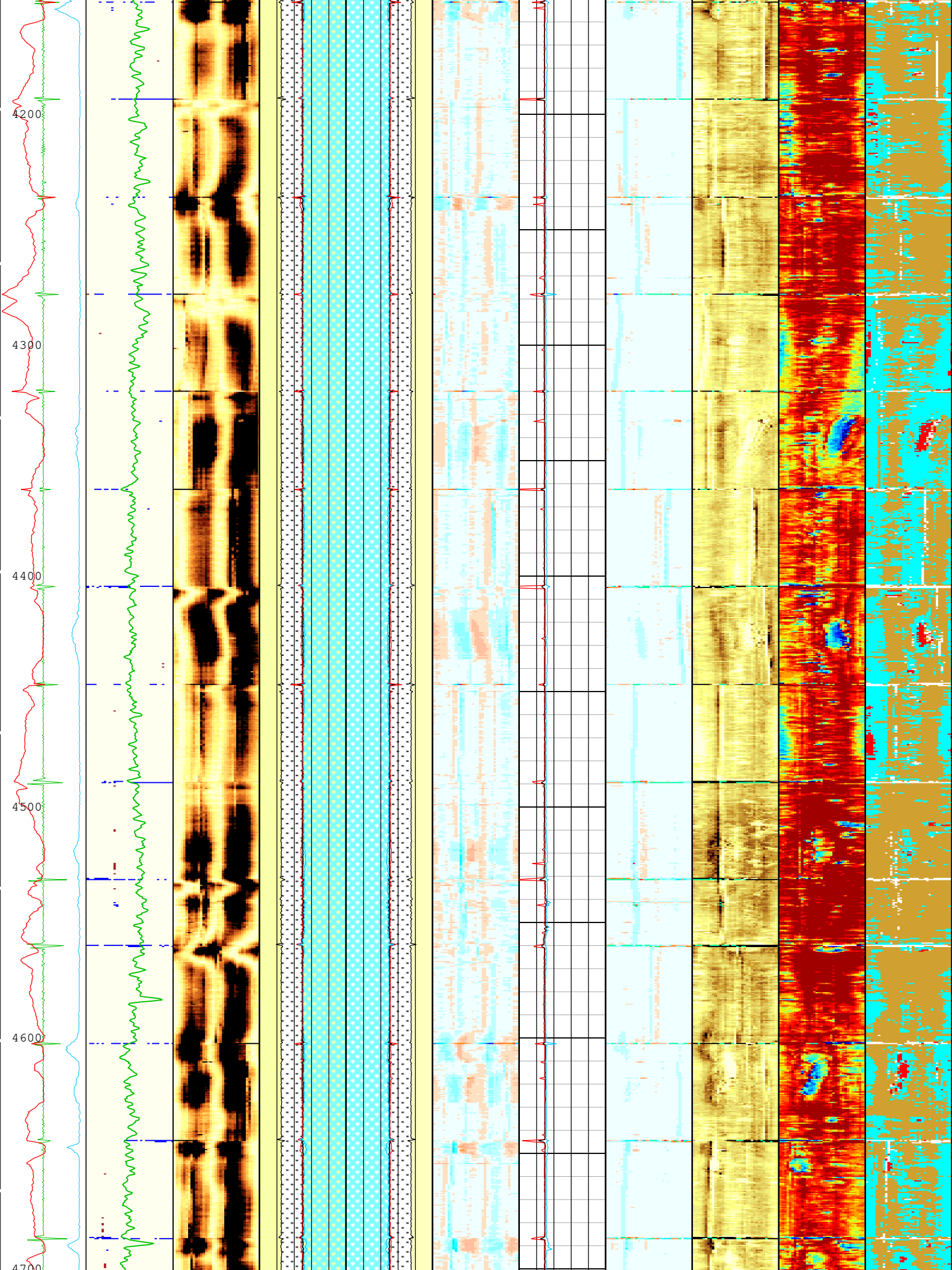


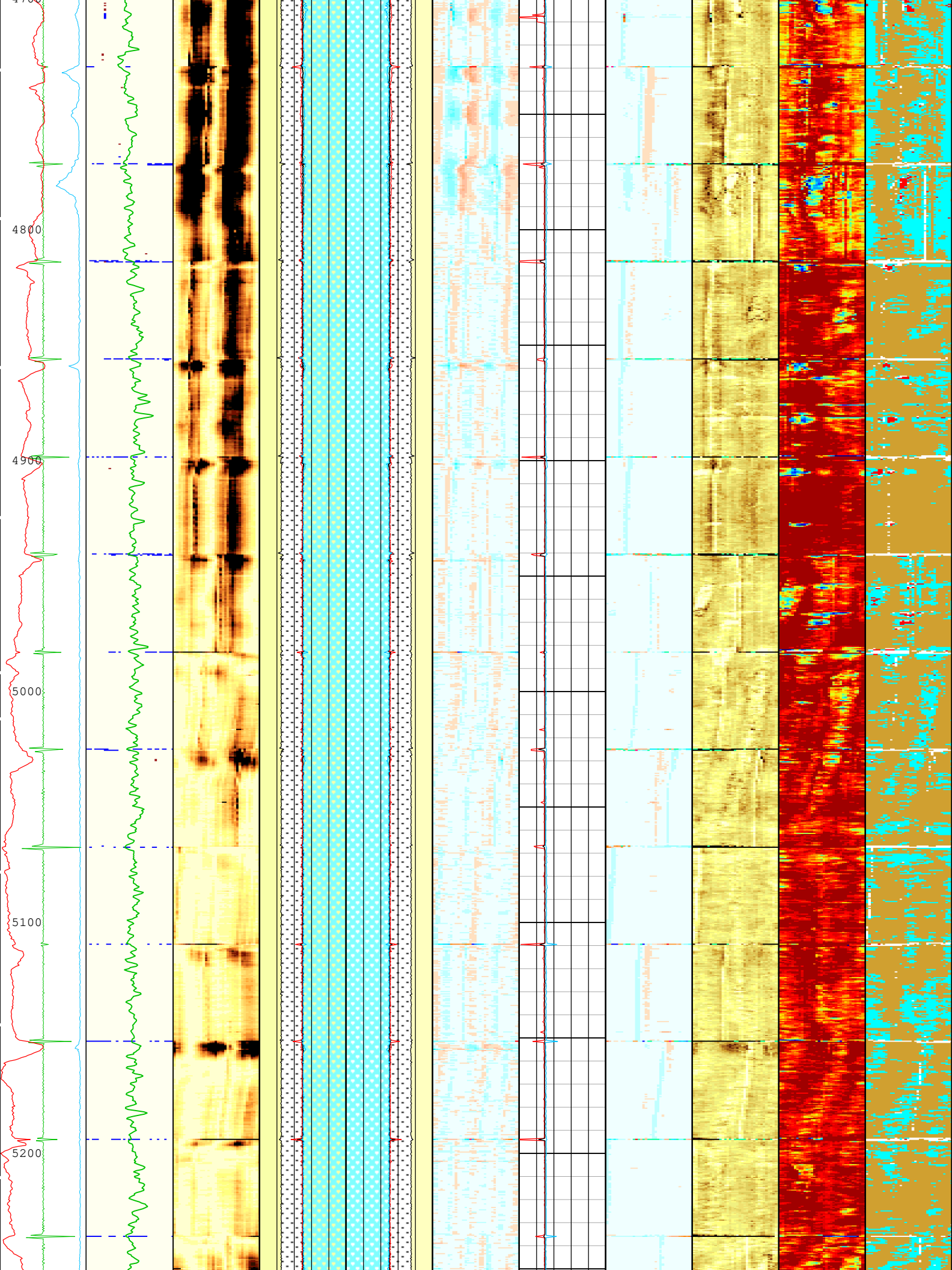


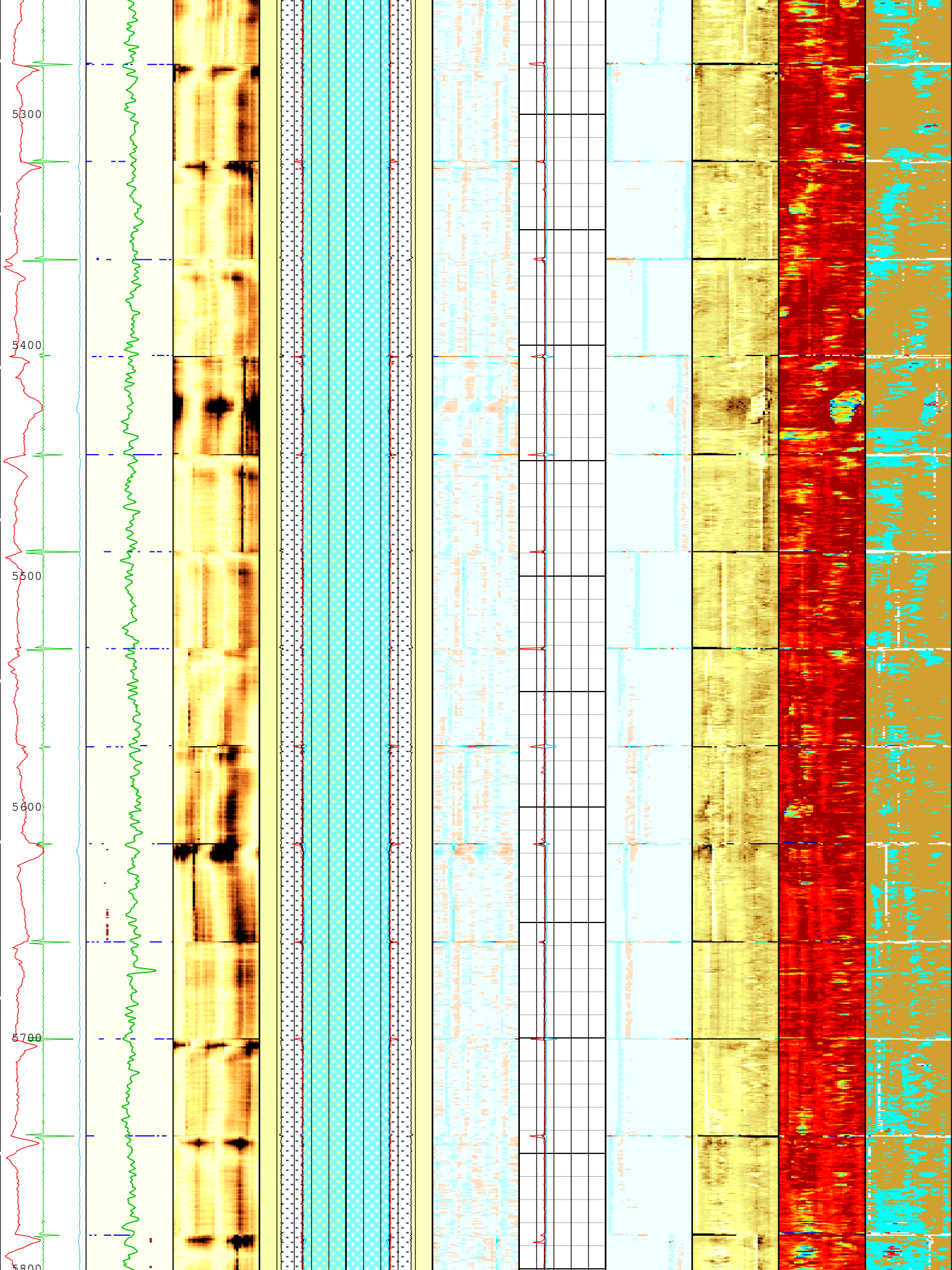


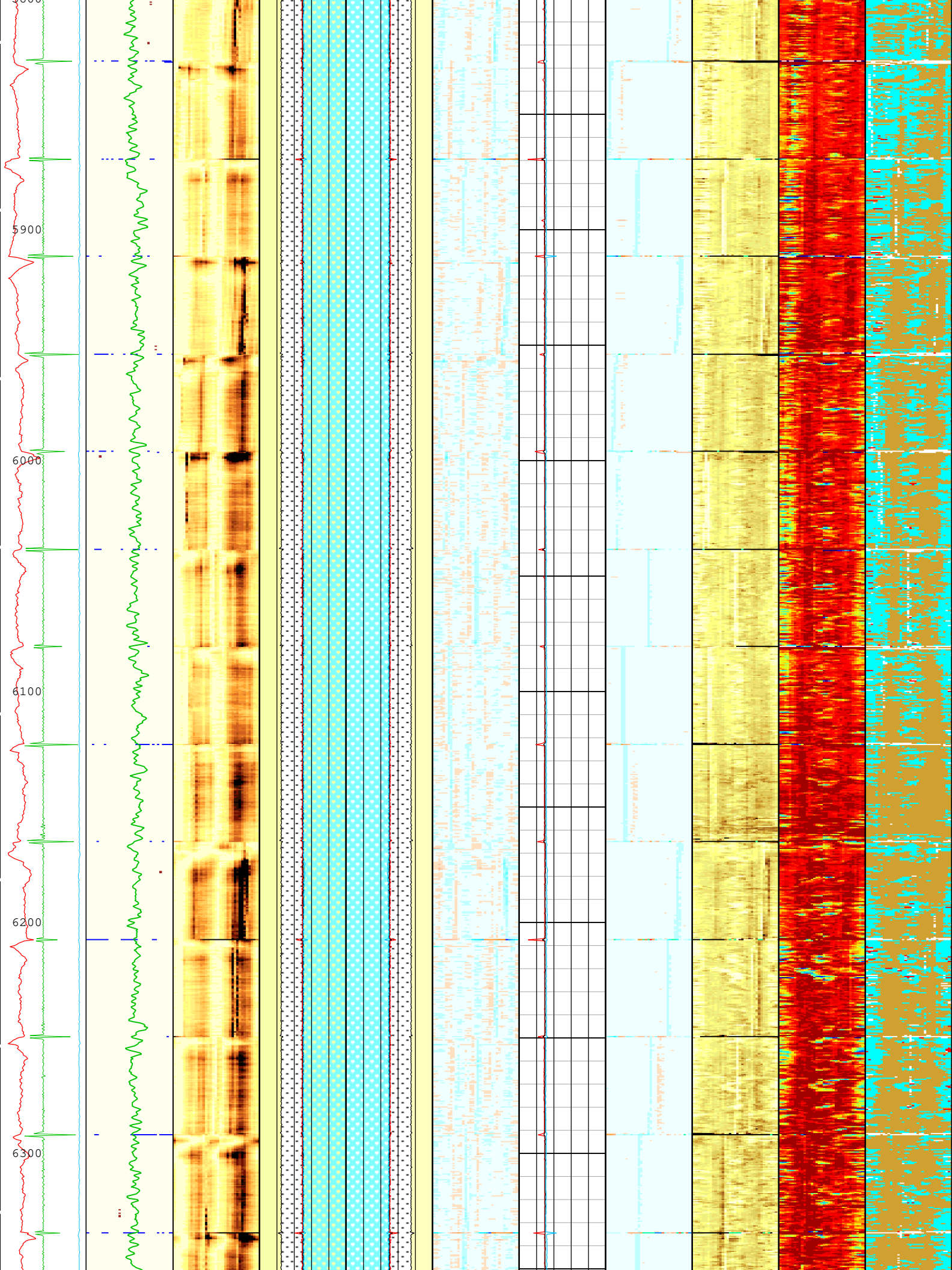


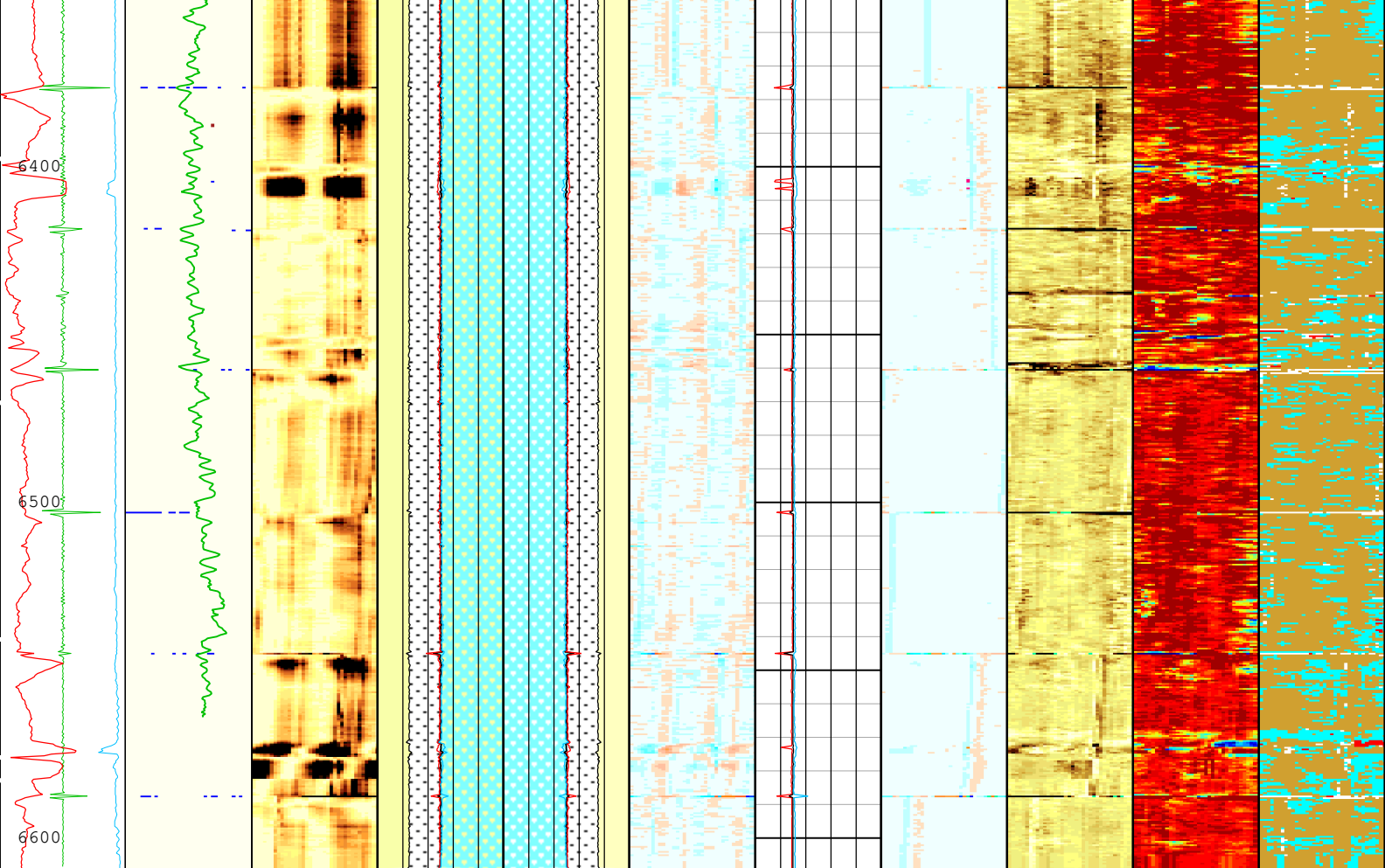












<p>Casing Collar Locator (CCLU) USIT-E</p> <p>Explicit Normalization</p> <p>1.500 3.500</p> <p>USIT - USIT Processing Flags (UFLG) USIT-E</p> <p>USIT Processing Flags (UFLG[0]) USIT-E</p> <p>1 5</p>	<p>Amplitude of Eccentering (ECCE) USIT-E</p> <p>Explicit Normalization</p> <p>-5.200 -3.600 -2.000 -0.400</p> <p>USIT - Amplitude of Wave (AWBK) USIT-E (dB)</p>	<p>External Radii Average (ERAV) USIT-E</p> <p>Explicit Normalization</p> <p>2.5 in 1.5</p> <p>Internal Radius Averaged Value (IRAV) USIT-E</p> <p>2.5 in 1.5</p> <p>Internal Radius Maximum Value (IRMX) USIT-E</p> <p>2.5 in 1.5</p> <p>Internal Radius Minimum Value (IRMN) USIT-E</p> <p>2.5 in 1.5</p>	<p>External Radii Average (ERAV) USIT-E</p> <p>Explicit Normalization</p> <p>1.5 in 2.5</p> <p>Internal Radius Averaged Value (IRAV) USIT-E</p> <p>1.5 in 2.5</p> <p>Internal Radius Maximum Value (IRMX) USIT-E</p> <p>1.5 in 2.5</p> <p>Internal Radius Minimum Value (IRMN) USIT-E</p> <p>1.5 in 2.5</p>	<p>USIT - Internal Radii Normalized (IRBK) USIT-E (in)</p> <p>Explicit Normalization</p> <p>-0.051 -0.012 0.028 0.068</p>	<p>Thickness Minimum Value (THMN) USIT-E</p> <p>Explicit Normalization</p> <p>0.1 in 0.6</p> <p>Thickness Average Value (THAV) USIT-E</p> <p>0.1 in 0.6</p> <p>Thickness Maximum Value (THMX) USIT-E</p> <p>0.1 in 0.6</p>	<p>USIT - Casing Thickness Normalized (THBK) USIT-E (in)</p> <p>Explicit Normalization</p> <p>-0.051 -0.012 0.028 0.068</p>	<p>USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)</p> <p>Custom Normalization</p> <p>1.500 3.500 5.500 7.500</p>	<p>USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)</p> <p>Custom Normalization</p> <p>Absent 42.000 66.000 90.000 114.000</p>	<p>USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E</p> <p>Explicit Normalization</p> <p>Absent 1.500 3.500</p>
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TIME_1900 - Time Marked every 60.00 (s)

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

- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - : Pulse Origin Not Detected
- 3 - UFLG 3 Value within [2.5 - 3.5] - : WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 5.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 28-Oct-2021 18:51:34

Channel Processing Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
BAR(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	8243	ft
CDEN	Cement Density	USIT-E	14.6	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	9.01	lbm/gal
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_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	-8.35	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	IBC_FRP_OFFSET	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.05	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.05	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.6	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-10.29	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	1.75	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	878
BS	7.875	878	6609

All depth are actual.

Tool Control Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	100	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	

One

IBC Goodwin Compressed

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[6]:Up	Up	32.35 ft	6610.38 ft	28-Oct-2021 8:53:21 AM	28-Oct-2021 10:46:06 AM	ON	9.11 ft	Yes

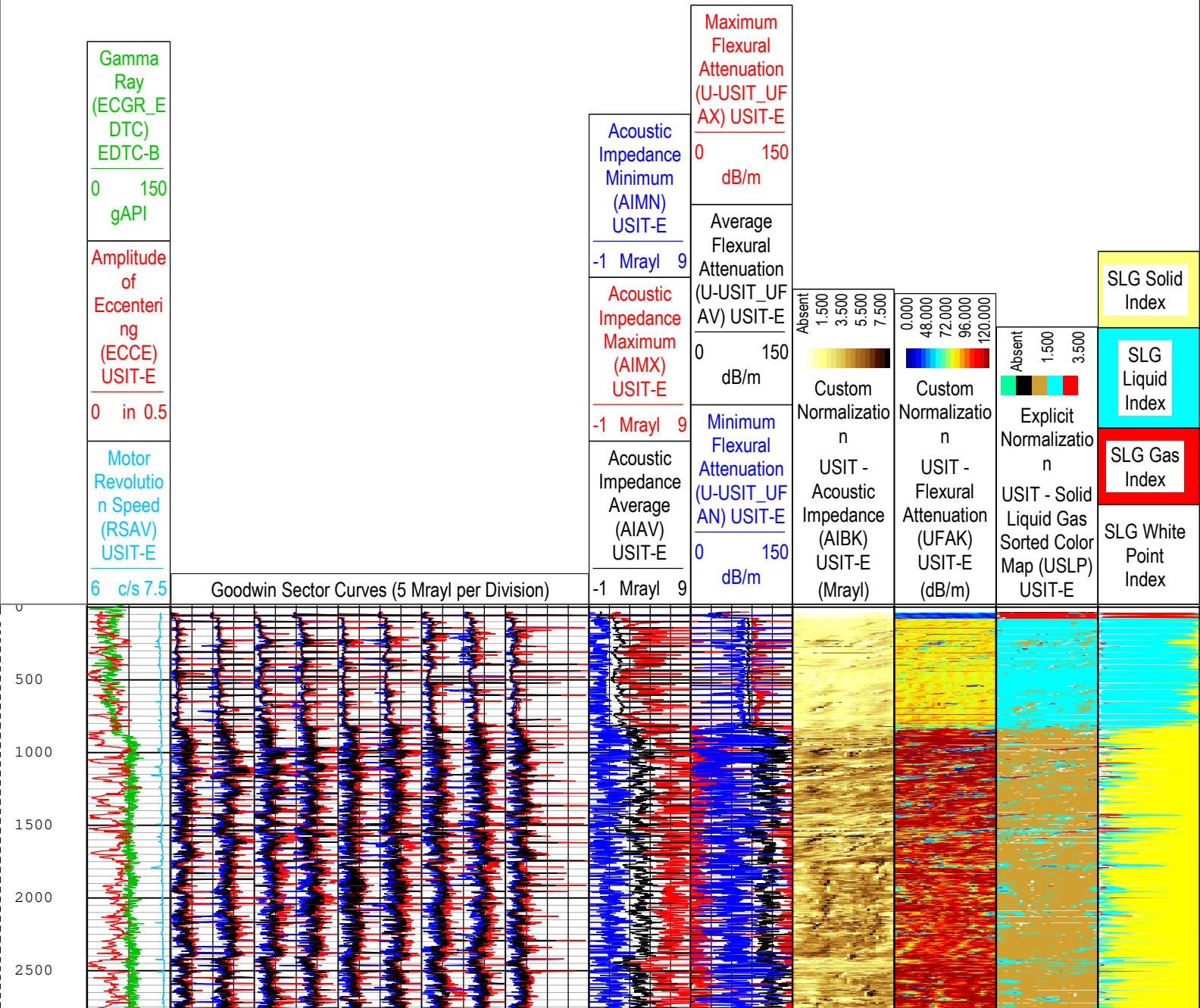
All depths are referenced to toolstring zero

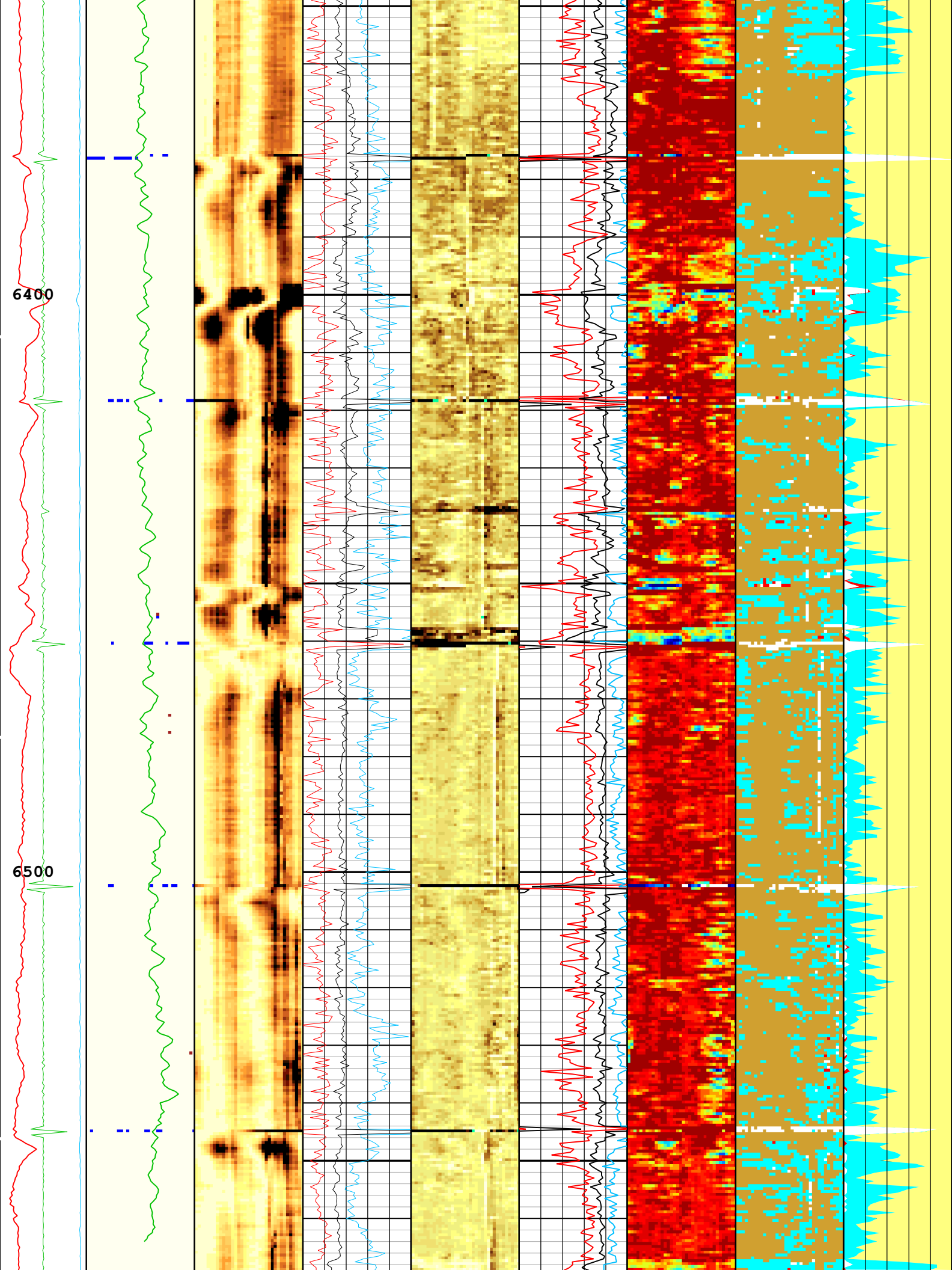
Log

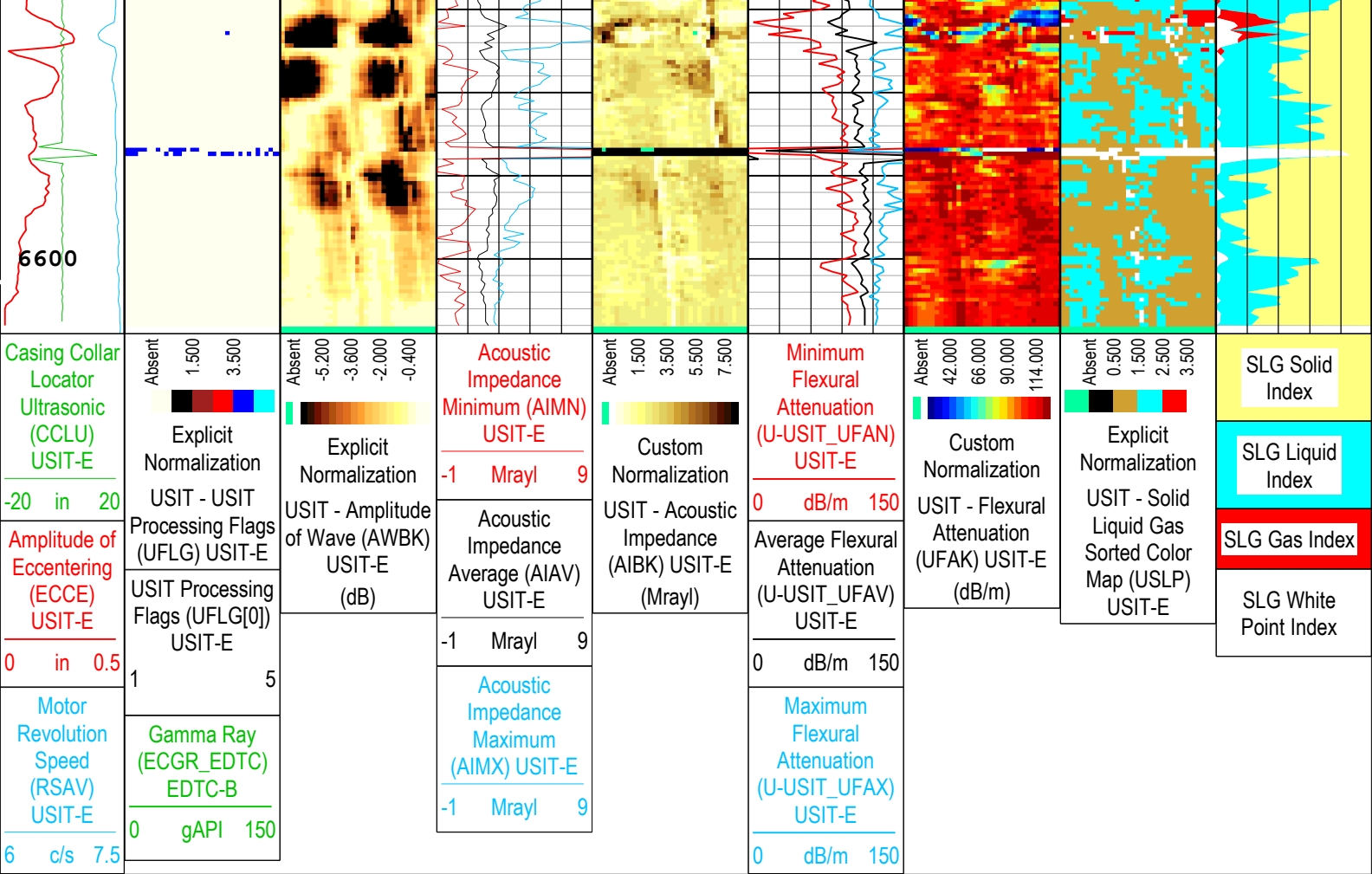
Company: Occidental Petroleum Well: Morton 37-1
One: Log[6]:Up:S007

Description: USI Goodwin Format: Log (IBC Goodwin) Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 28-Oct-2021 18:51:44

TIME_1900 - Time Marked every 60.00 (s)







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

- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - : Pulse Origin Not Detected
- 3 - UFLG 3 Value within [2.5 - 3.5] - : WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error
- 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : 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: 28-Oct-2021 18:51:50

Channel Processing Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
BAR(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	8243	ft
CDEN	Cement Density	USIT-E	14.6	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	9.01	lbm/gal

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	-8.35	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	IBC_FRP_OFFSET	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.05	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.05	
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	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.6	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-10.29	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	1.75	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

One: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	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	100	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	
UW/KM	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

One

IBC SLG Composite

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Log[5]:Up	Up	6298.00 ft	6610.06 ft	28-Oct-2021 8:45:41 AM	28-Oct-2021 8:50:35 AM	ON	8.07 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Occidental Petroleum Well:Morton 37-1

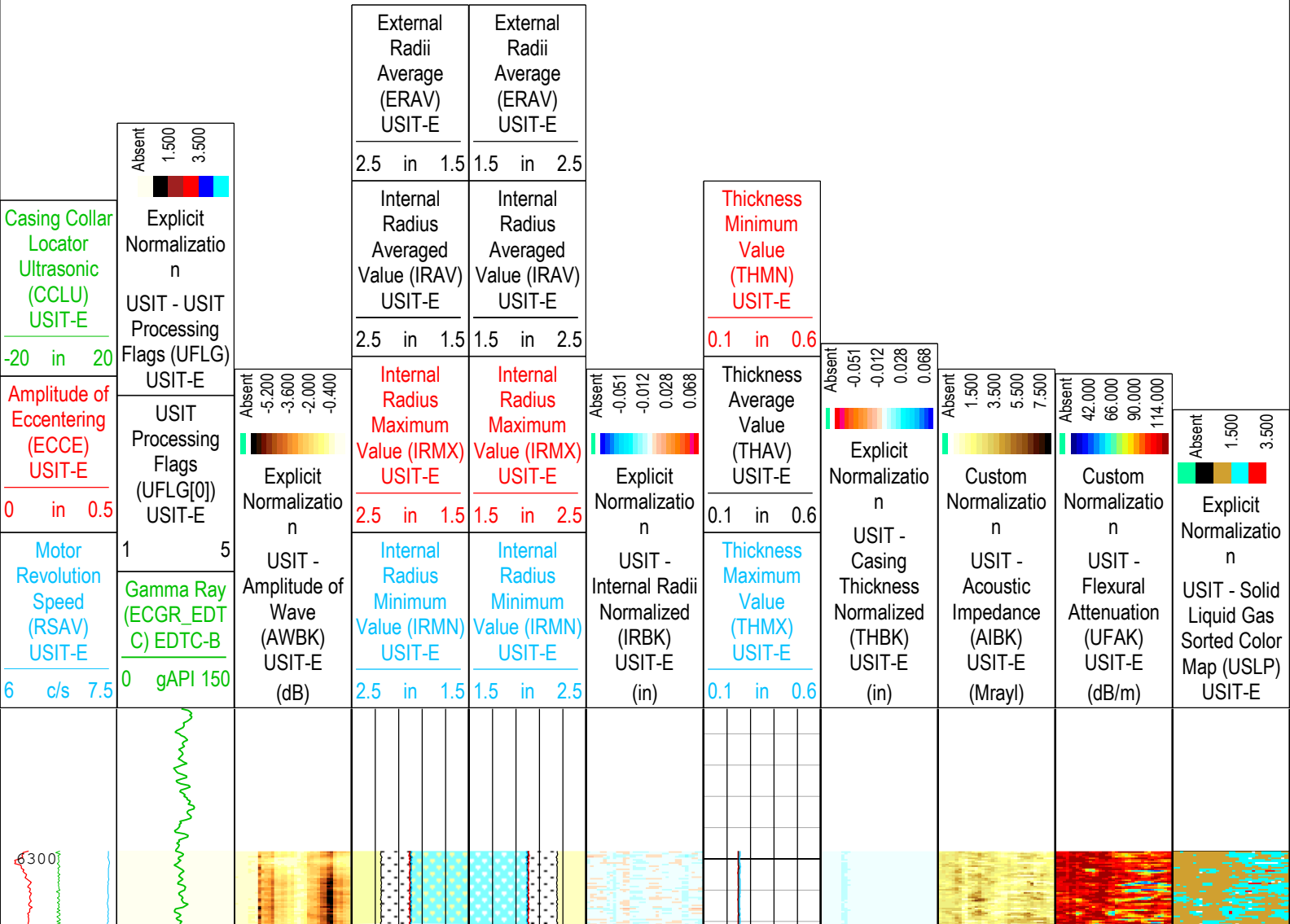
One: Log[5]:Up:S007

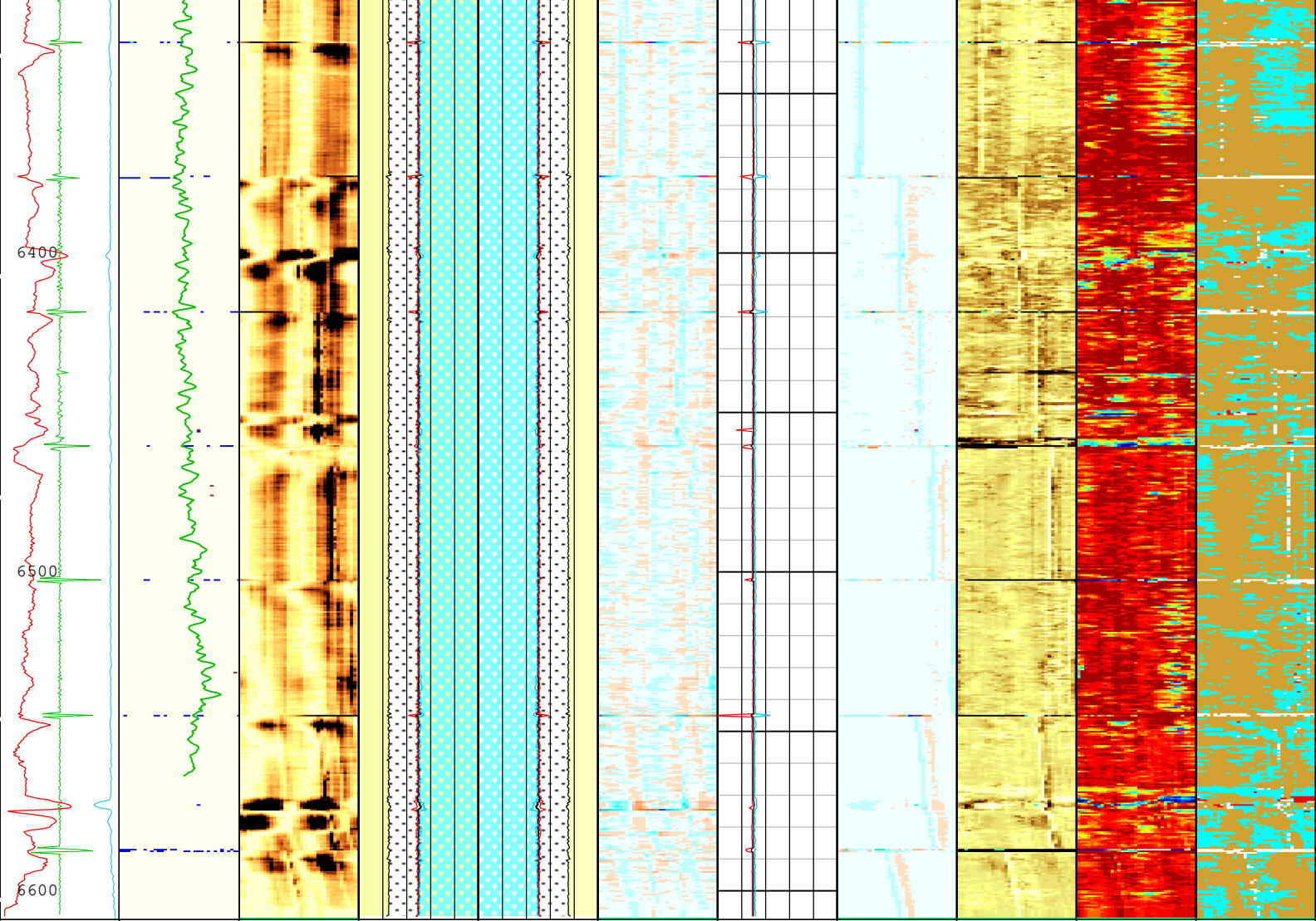
Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 5.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
 Creation Date: 28-Oct-2021 18:51:55

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

- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - : Pulse Origin Not Detected
- 3 - UFLG 3 Value within [2.5 - 3.5] - : WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error
- 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : Loop Processing Error

TIME_1900 - Time Marked every 60.00 (s)





<p>Casing Collar Locator (CCLU) USIT-E</p> <p>-20 in 20</p>	<p>Absent 1.500 3.500</p> <p>Explicit Normalization</p>	<p>Absent -5.200 -3.600 -2.000 -0.400</p> <p>Explicit Normalization</p>	<p>External Radii Average (ERAV) USIT-E</p> <p>2.5 in 1.5</p>	<p>External Radii Average (ERAV) USIT-E</p> <p>1.5 in 2.5</p>	<p>Absent -0.051 -0.012 0.028 0.068</p> <p>Explicit Normalization</p>	<p>Thickness Minimum Value (THMN) USIT-E</p> <p>0.1 in 0.6</p>	<p>Absent -0.051 -0.012 0.028 0.068</p> <p>Explicit Normalization</p>	<p>Absent 1.500 3.500 5.500 7.500</p> <p>Custom Normalization</p>	<p>Absent 42.000 66.000 90.000 114.000</p> <p>Custom Normalization</p>	<p>Absent 1.500 3.500</p> <p>Explicit Normalization</p>
<p>Amplitude of Eccentering (ECCE) USIT-E</p> <p>0 in 0.5</p>	<p>USIT - USIT Processing Flags (UFLG) USIT-E</p> <p>USIT Processing Flags (UFLG[0]) USIT-E</p> <p>1 5</p>	<p>USIT - Amplitude of Wave (AWBK) USIT-E (dB)</p>	<p>Internal Radius Averaged Value (IRAV) USIT-E</p> <p>2.5 in 1.5</p>	<p>Internal Radius Averaged Value (IRAV) USIT-E</p> <p>1.5 in 2.5</p>	<p>USIT - Internal Radii Normalized (IRBK) USIT-E (in)</p>	<p>Thickness Average Value (THAV) USIT-E</p> <p>0.1 in 0.6</p>	<p>USIT - Casing Thickness Normalized (THBK) USIT-E (in)</p>	<p>USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)</p>	<p>USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)</p>	<p>USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E</p>
<p>Motor Revolution Speed (RSAV) USIT-E</p> <p>6 c/s 7.5</p>	<p>Gamma Ray (ECGR_EDT C) EDTC-B</p> <p>0 gAPI 150</p>		<p>Internal Radius Maximum Value (IRMX) USIT-E</p> <p>2.5 in 1.5</p>	<p>Internal Radius Maximum Value (IRMX) USIT-E</p> <p>1.5 in 2.5</p>		<p>Thickness Maximum Value (THMX) USIT-E</p> <p>0.1 in 0.6</p>				
			<p>Internal Radius Minimum Value (IRMN) USIT-E</p> <p>2.5 in 1.5</p>	<p>Internal Radius Minimum Value (IRMN) USIT-E</p> <p>1.5 in 2.5</p>						

TIME_1900 - Time Marked every 60.00 (s)

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

1 - UFLG 1 Value within [0.0 - 1.5] - :

■ UTIM Error

2 - UFLG 2 Value within [1.5 - 2.5] - : ■ Pulse Origin Not Detected
 3 - UFLG 3 Value within [2.5 - 3.5] - : ■ WINLEN Error
 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : ■ Casing Thickness Error
 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : ■ Loop Processing Error

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 5.5IN) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
 Creation Date: 28-Oct-2021 18:51:55

Channel Processing Parameters

One: Parameters

Parameter	Description	Tool	Value	Unit
BAR(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	8243	ft
CDEN	Cement Density	USIT-E	14.6	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	9.01	lbm/gal
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_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	-8.35	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	IBC_FRP_OFFSET	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.05	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.05	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.6	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-10.29	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	1.75	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

One: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	100	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

XYZ

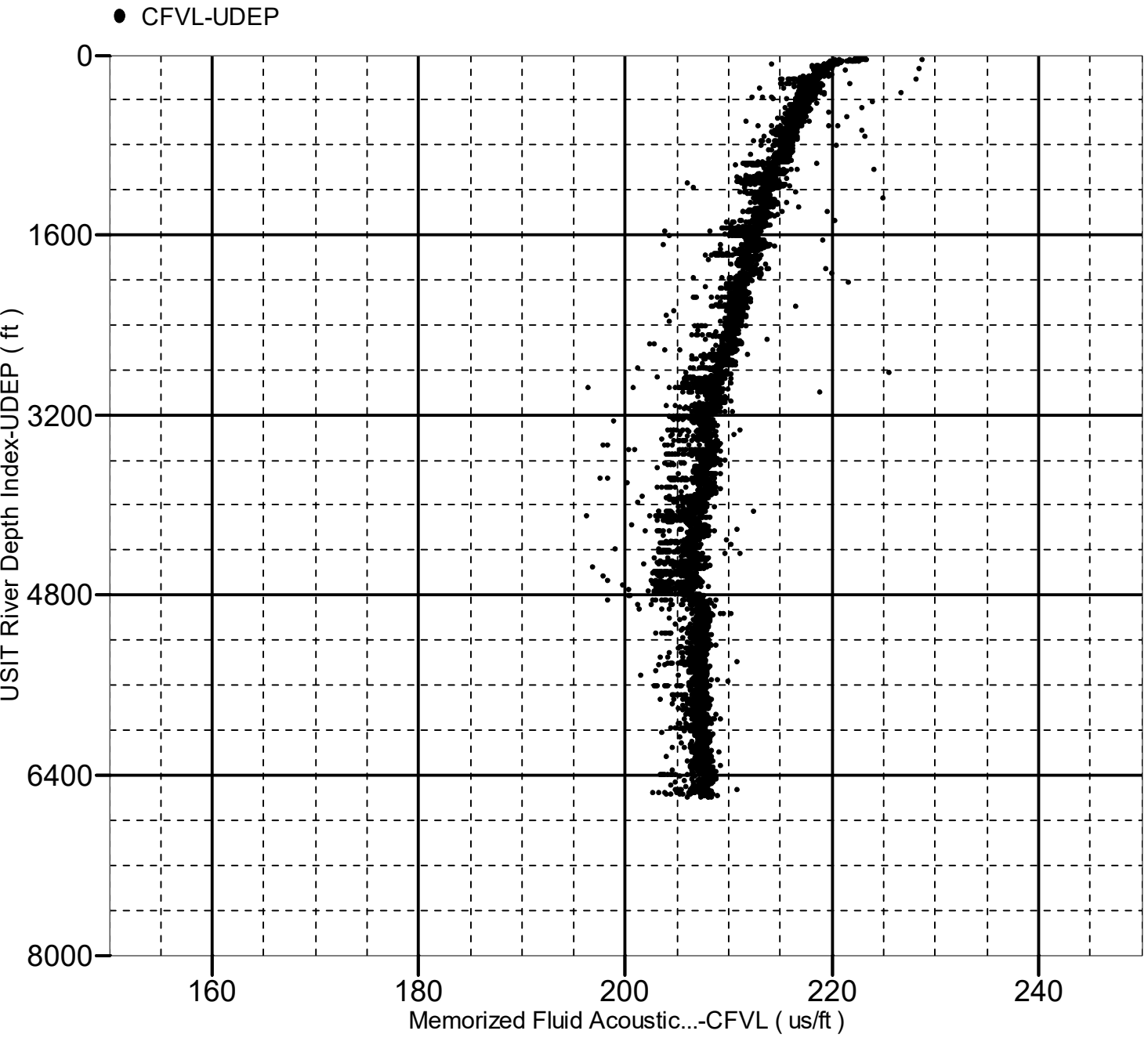
Company:Occidental Petroleum Well:Morton 37-1

One: Log[6]:Up:S007

Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 6609.50 to 32.00 ft



XYZ

Company:Occidental Petroleum Well:Morton 37-1

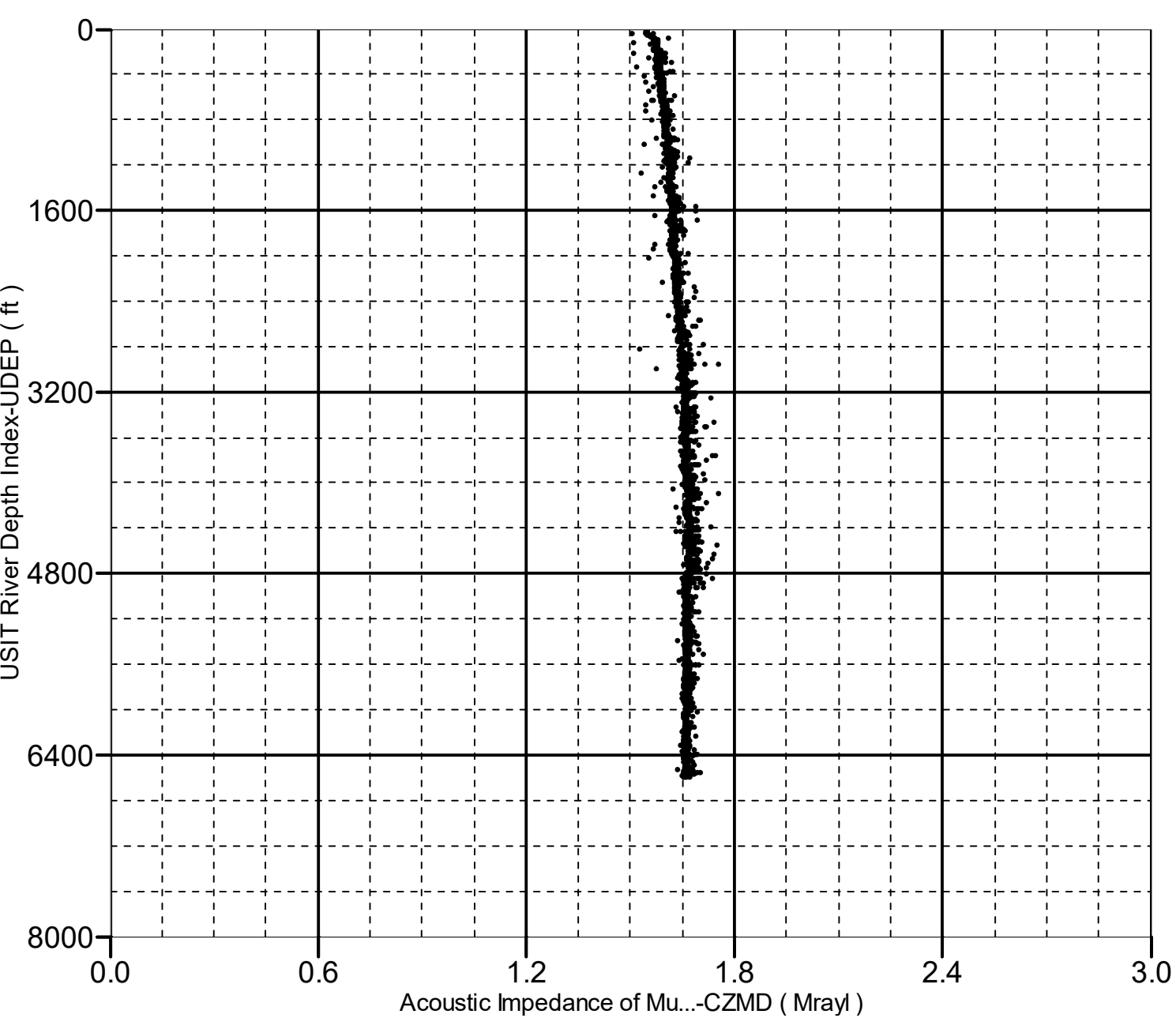
One: Log[6]:Up:S007

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 6609.50 to 32.00 ft

● CZMD-UDEP



Company: Occidental Petroleum

Schlumberger

Well: Morton 37-1

Field: Wattenberg

County: Weld

State: Colorado

Isolation Scanner

Cement Evaluation

Gamma Ray - CCL