

Company: CRESTONE PEAK RESOURCES OPERATING LLC

Well: KIYOTA 40-35H-O367

Field: WATTENBERG

County: WELD State: COLORADO

Isolation Scanner	
Cement Evaluation	
Gamma Ray - CCL Log	
SHL: 452' FSL & 1419' FNL	Elev.: K.B. 4864.00 ft G.L. 4841.00 ft D.F. 4864.00 ft
Permanent Datum: Log Measured From: Drilling Measured From:	Ground Level Kelly Bushing Kelly Bushing
API Serial No. 05-123-45806	Section: 35 Township: 3N Range: 67W
Location:	Elev.: 4841.00 f above Perm.Datum

Logging Date	09-Dec-2017
Run Number	ONE
Depth Driller	8000.00 ft
Schlumberger Depth	7200.00 ft
Bottom Log Interval	7200.00 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	8.50 in
From	2075.00 ft
To	7200.00 ft
Casing/Tubing Size	5.5 in
Weight	20 lbm/ft
Grade	N/A
From	0.00 ft
To	7200.00 ft
Max Recorded Temperatures	163 degF
Logger on Bottom	09-Dec-2017 11:00:00
Unit Number	2161
Recorded By	MEGAN LEONE
Witnessed By	CASEY

Disclaimer

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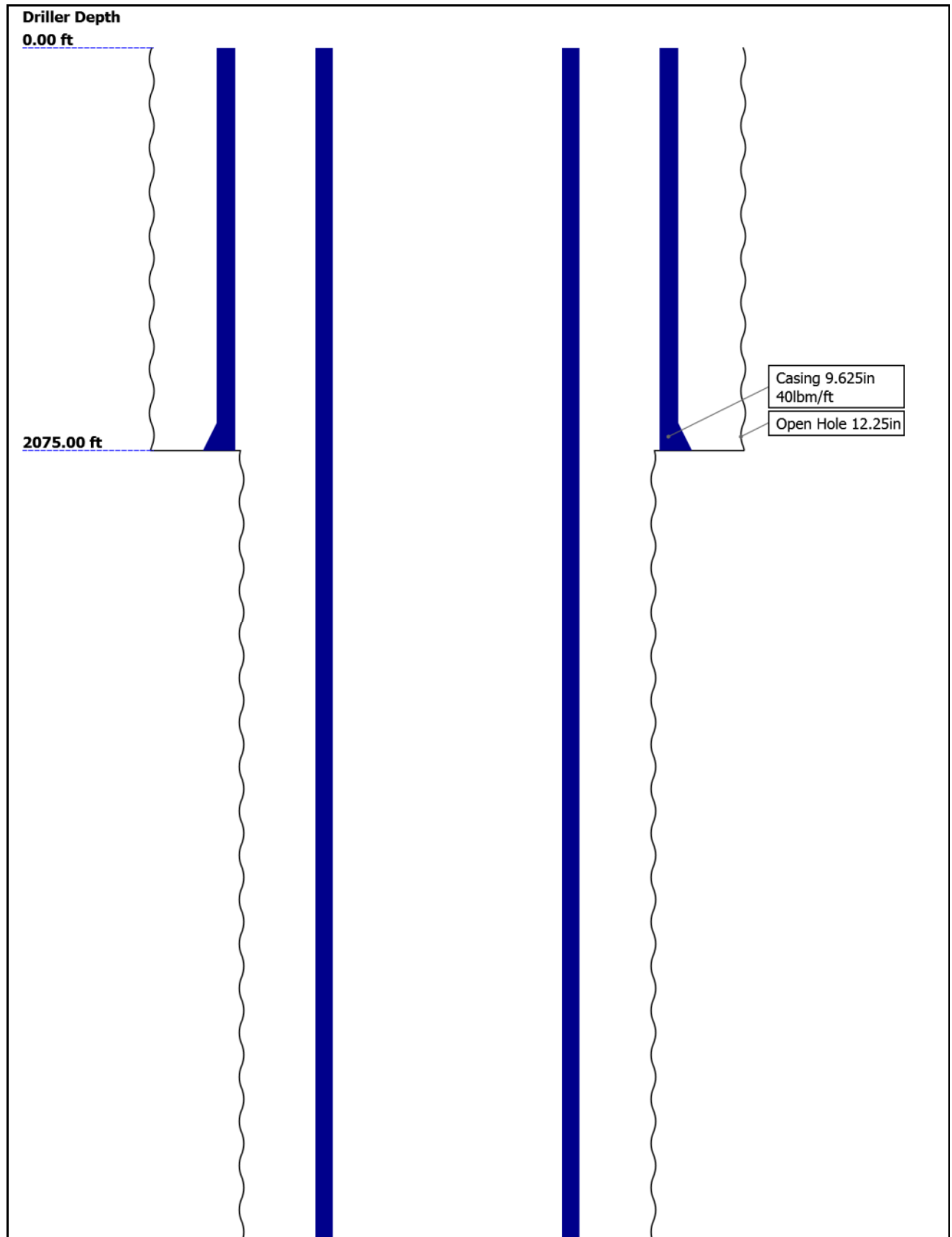
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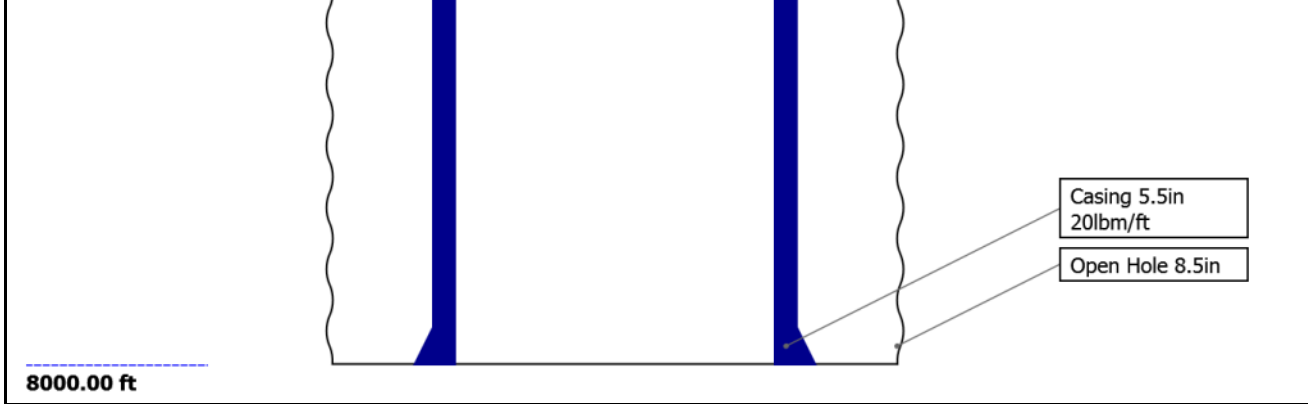
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Well Sketch






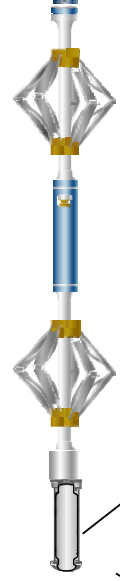
Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	12.25	8.5				
Top Driller (ft)	0	2075				
Top Logger (ft)	0	2075				
Bottom Driller (ft)	2075	8000				
Bottom Logger (ft)	2075	7200				
Casing						
Size (in)	9.625	5.5				
Weight (lbm/ft)	40	20				
Inner Diameter (in)	8.835	4.778				
Grade	N/A	N/A				
Top Driller (ft)	0	0				
Top Logger (ft)	0	0				
Bottom Driller (ft)	2075	8000				
Bottom Logger (ft)	2075	7200				

Remarks and Equipment Summary

ONE: Toolstring			ONE: Remarks		
<div><div><div>Equip nameLength</div><div>LEH-QT30.16</div><div>LEH-QT</div></div><div><div>EDTC-B27.24</div><div>EDTH-B</div><div>EDTG-A</div><div>EDTC-B</div></div><div><div>AH-184[2]20.74</div><div>AH-184[1]18.74</div><div>USIT-E:93316.74</div><div>ECH-MFA:1917</div><div>USAC-A:933</div><div>USIT-A:27</div></div></div> <div><div><div>CTEM23.74</div><div>ACCZ0.00</div><div>HV0.00</div><div>Gamma Ray21.87</div><div>TelStatu s20.74</div></div></div>	MP nameOffset		THANK YOU FOR CHOOSING SCHLUMBERGER!		
			TOOLSTRING RUN AS PER TOOLSKETCH		
			GEMCO'S AND IN-;INE CENTRALIZERS USED FOR CENTRALIZATION		
			TAIL 13.5 PPG		
			LEAD 12 PPG		
			ALL PASSES RUN UNDER 0 PSI		

USIS-A:27
55
USSC-B
IBCS-A:75
3
FAR-SENS
OR:4615
IBC-TX
NEAR-SEN
SOR:4495
IBC-TX
USI-SENS
OR:4748
IBC-TX
EMITTER-
SENSOR:3
636
IBC-TX



USI Sen 0.84
sor
Head Te
nsion
TOOL_ZERO

Lengths are in ft
Maximum Outer Diameter = 3.625 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 1	Log[4]:Up	7205.83	61.98

Fluid Velocity = "Automatic".
CFVL equals DFSL channel

Start Depth(ft)	Stop Depth(ft)	Start Value(us/ft)	End Value(us/ft)
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Mud Impedance = "Inversion Norm."
IBC Inversion normalization zone is : 605.92m(1987.91ft) to 609.46m(1999.54ft)
MUD_N_INV = 1.18
DFD = 1.01g/cm3(8.40lbm/gal)
CZMD median computed in inversion normalization interval = 1.74 MRayl

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

IBC SLG

Software Version

Acquisition System	Version
Maxwell 2018	8.0.95333.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[4]:Up	Up	61.98 ft	7205.83 ft	09-Dec-2017 10:44:45 AM	09-Dec-2017 12:28:16 PM	ON	4.17 ft	Yes

All depths are referenced to toolstring zero

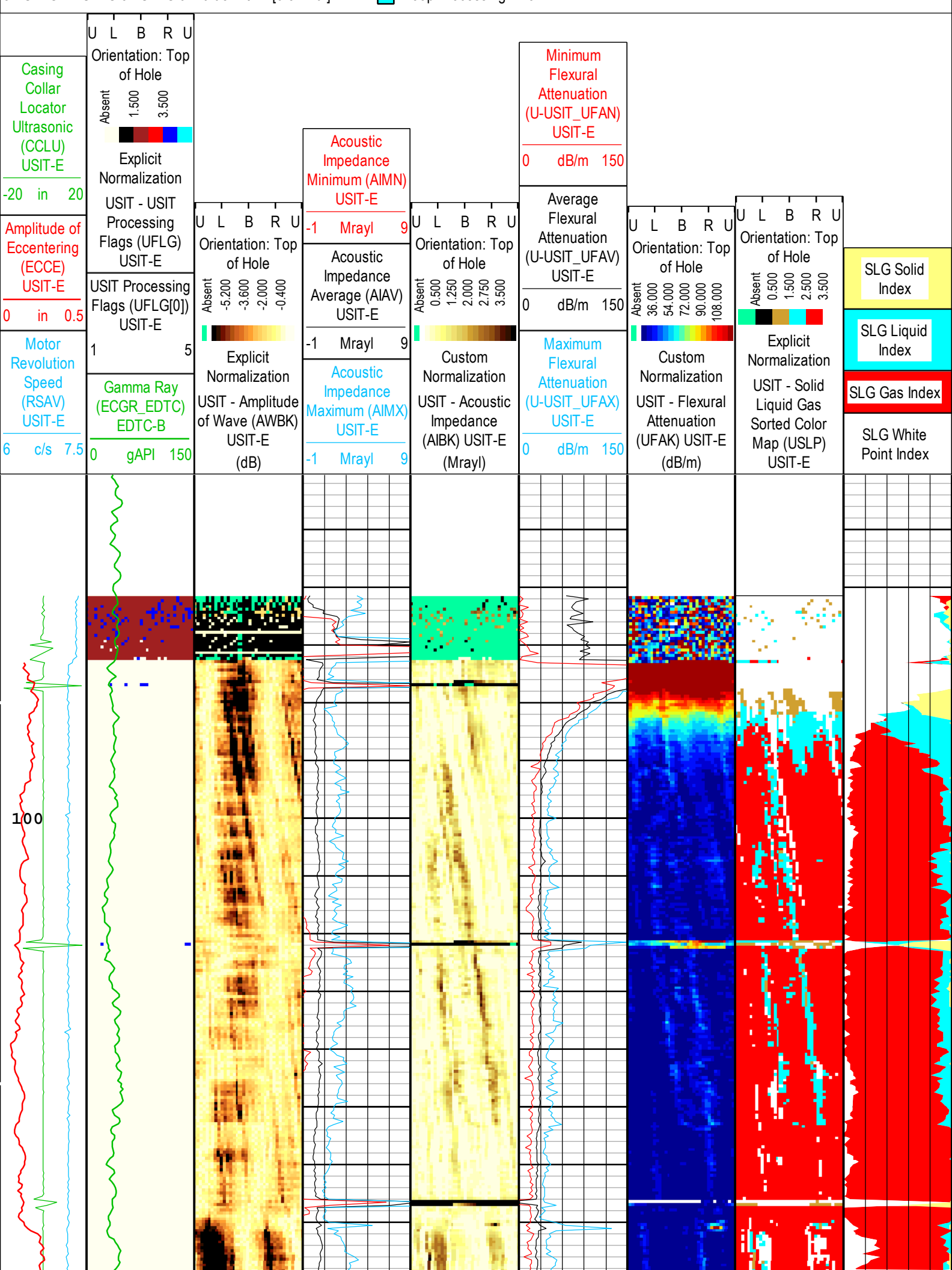
Log	Company:CRESTONE PEAK RESOURCES OPERATING LLC	Well:KIYOTA 40-35H-O367
		ONE: Log[4]:Up:S013

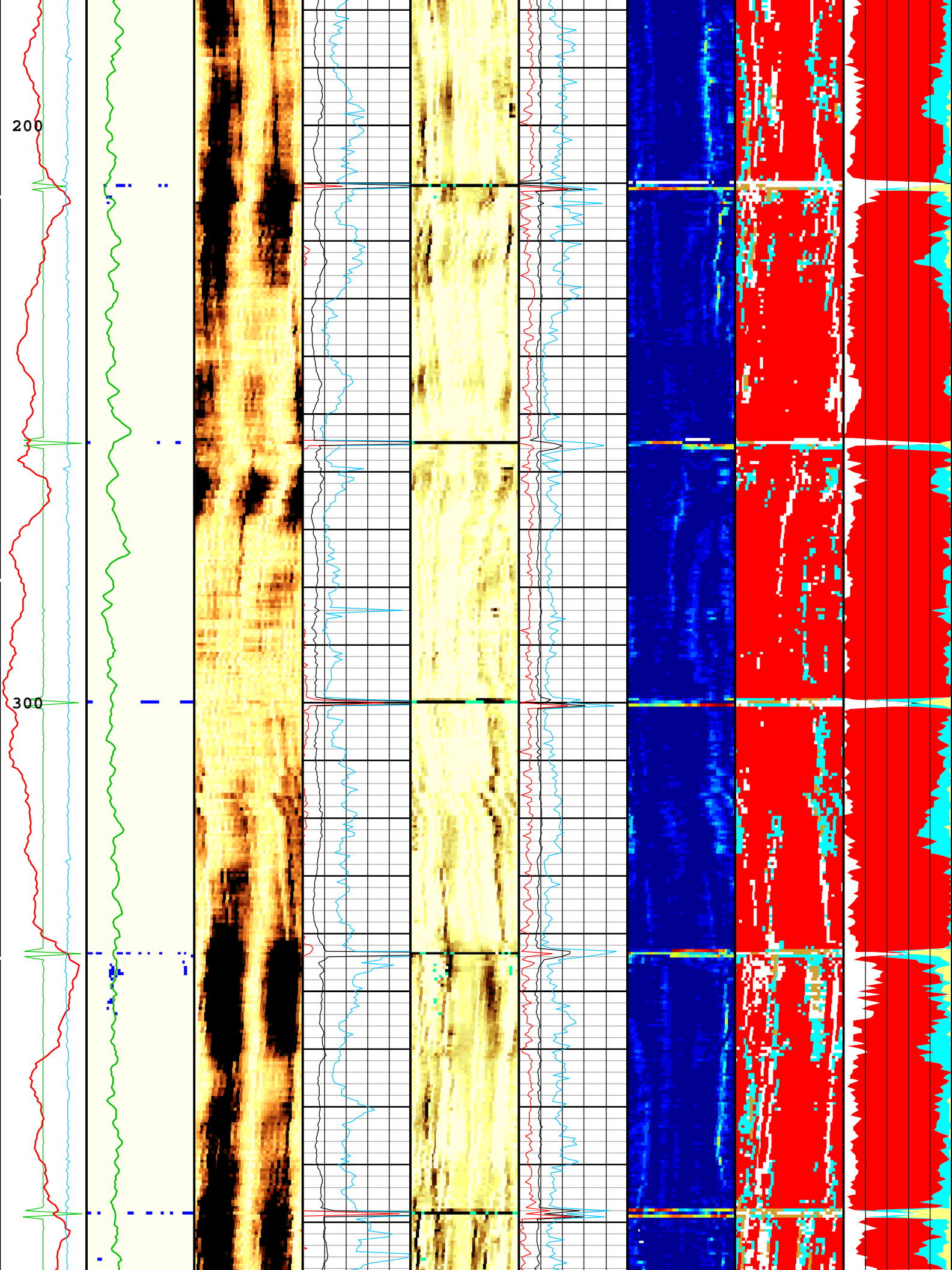
Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 17-Dec-2017 16:29:10

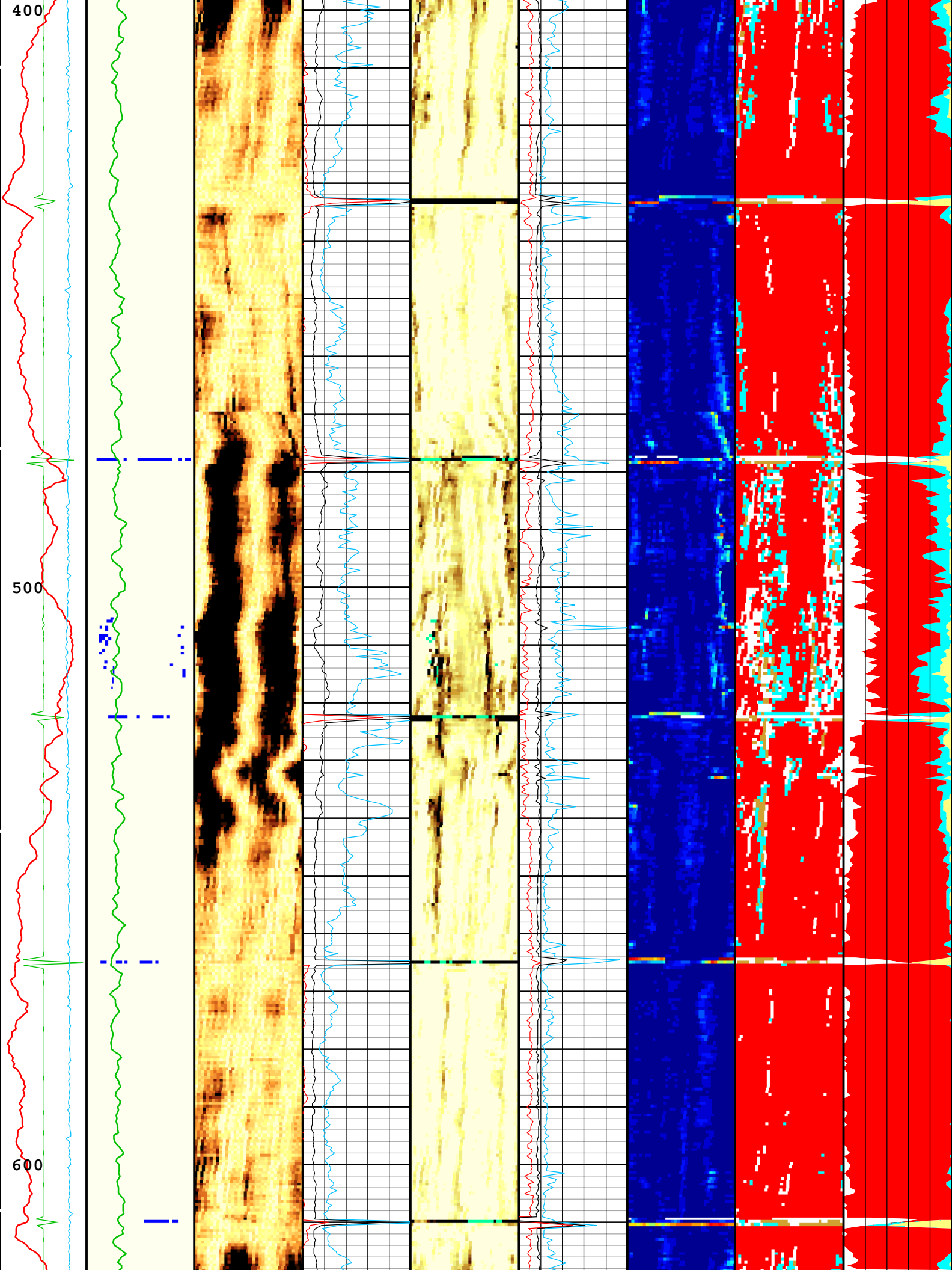
TIME_1900 - Time Marked every 60.00 (s)

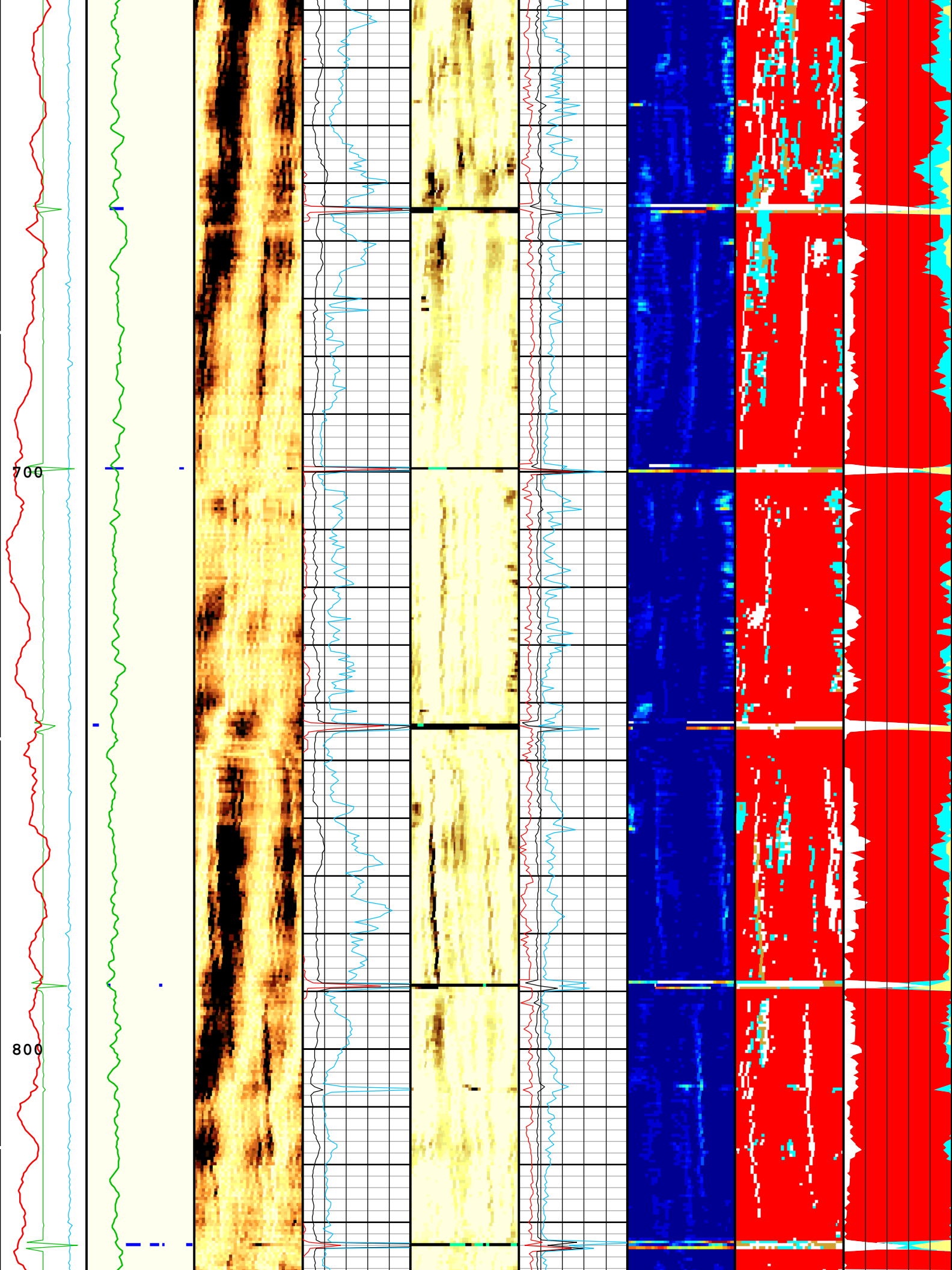
USIT Processing Flags (UFLG[0]) USIT-E

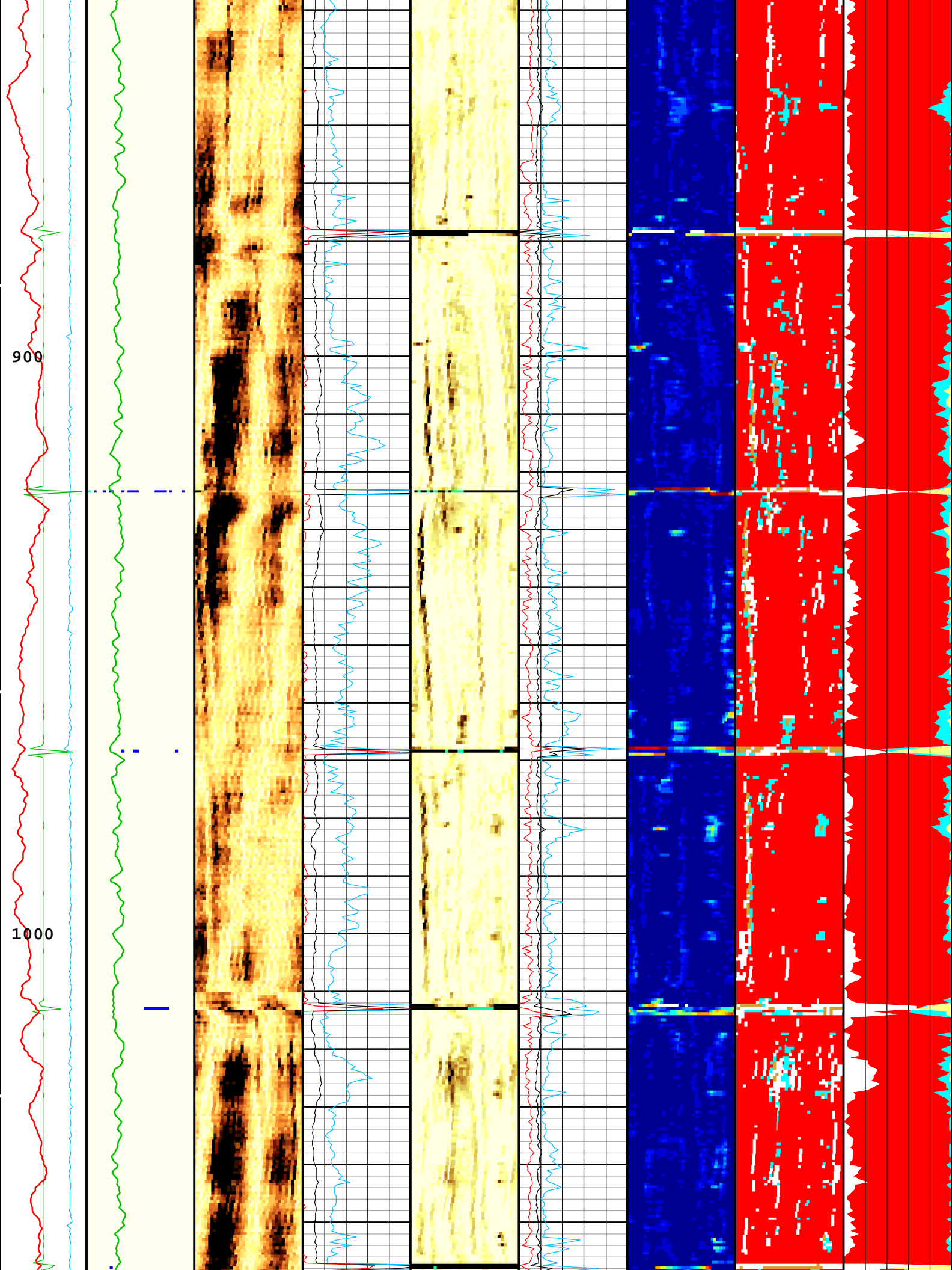
- | | |
|---|---------------------------|
| 1 - UFLG 1 Value within [0.0 - 1.5] - : | UTIM Error |
| 2 - UFLG 2 Value within [1.5 - 2.5] - : | Pulse Origin Not Detected |
| 3 - UFLG 3 Value within [2.5 - 3.5] - : | WINLEN Error |
| 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : | Casing Thickness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

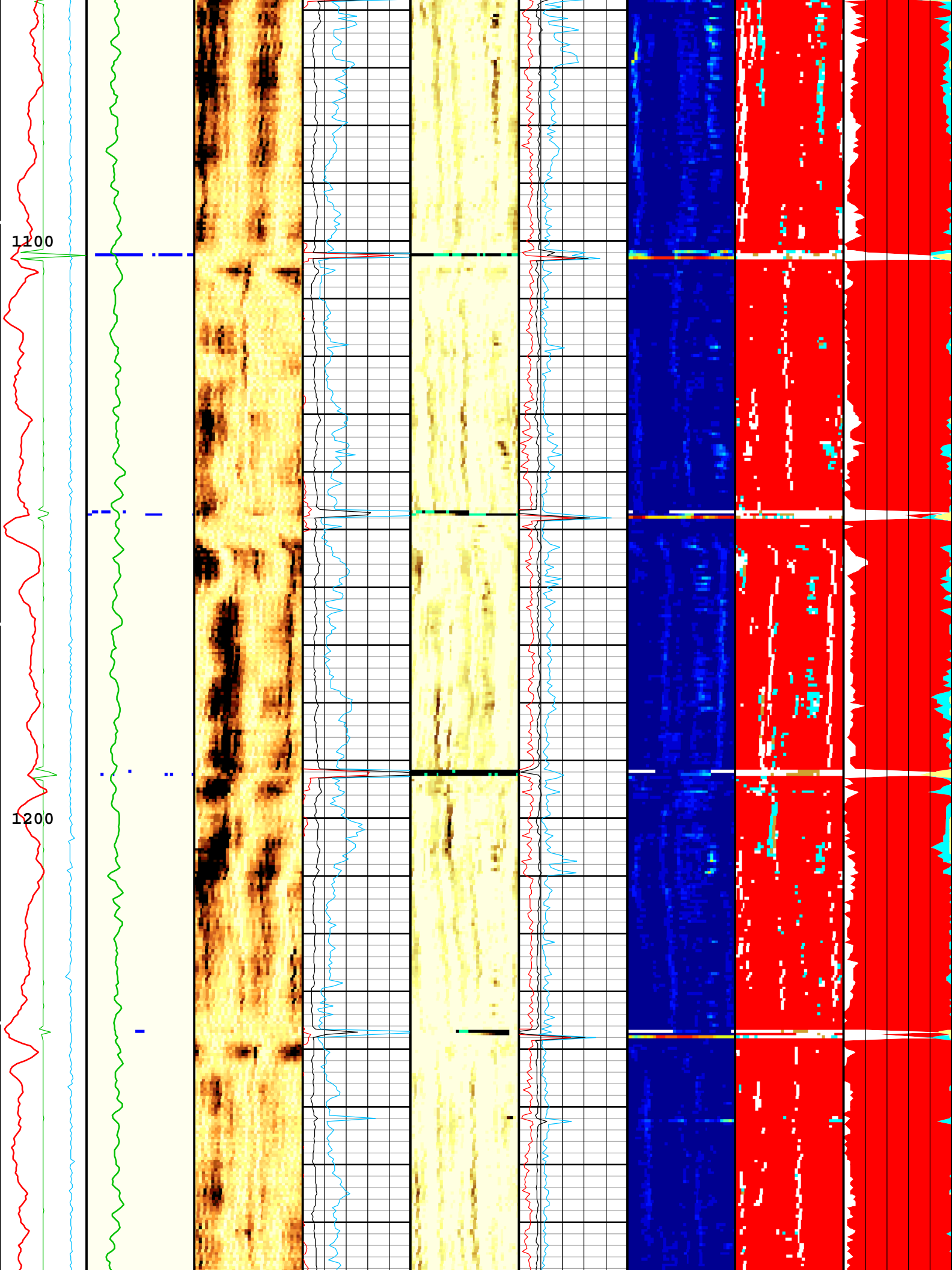


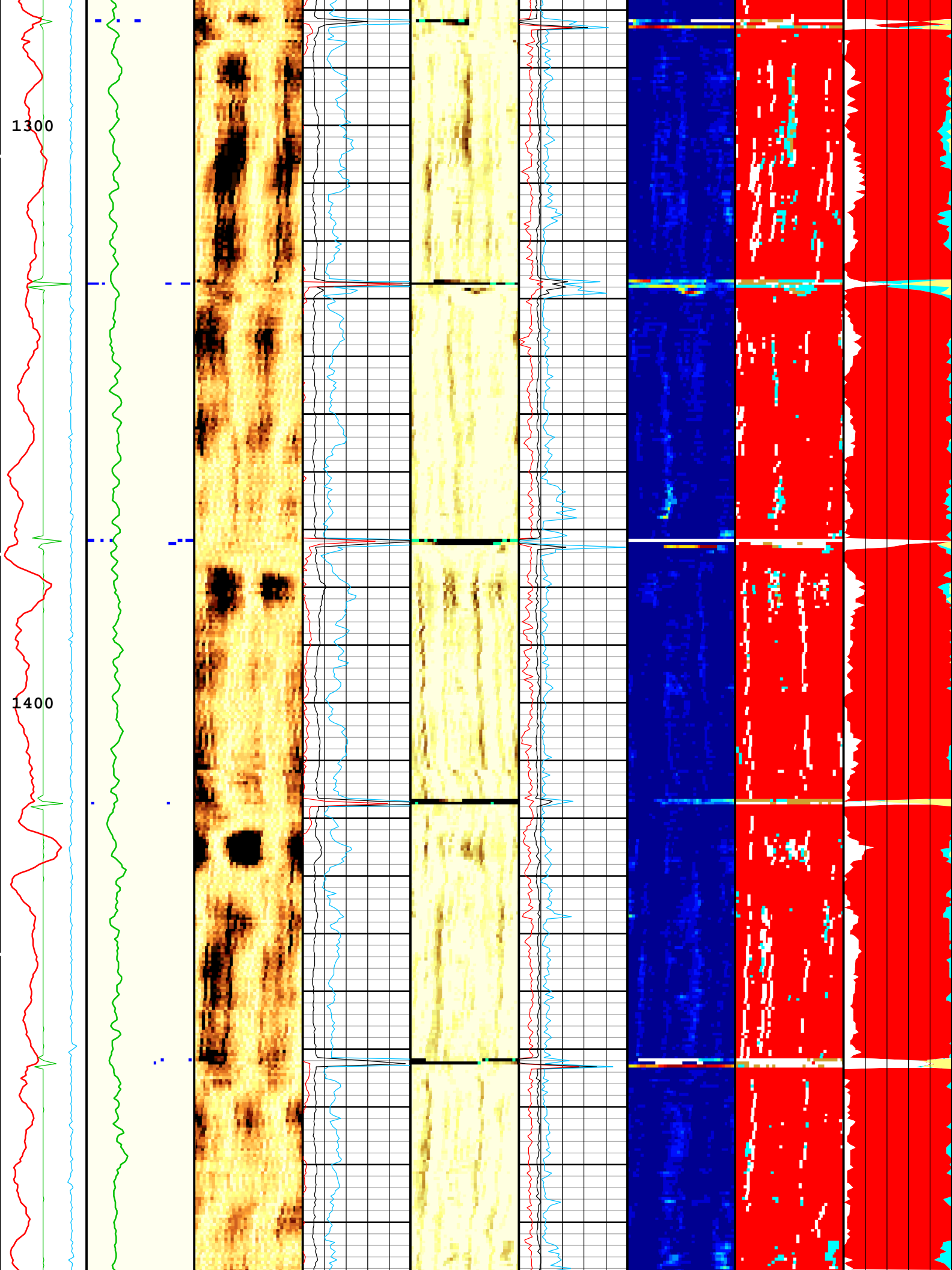


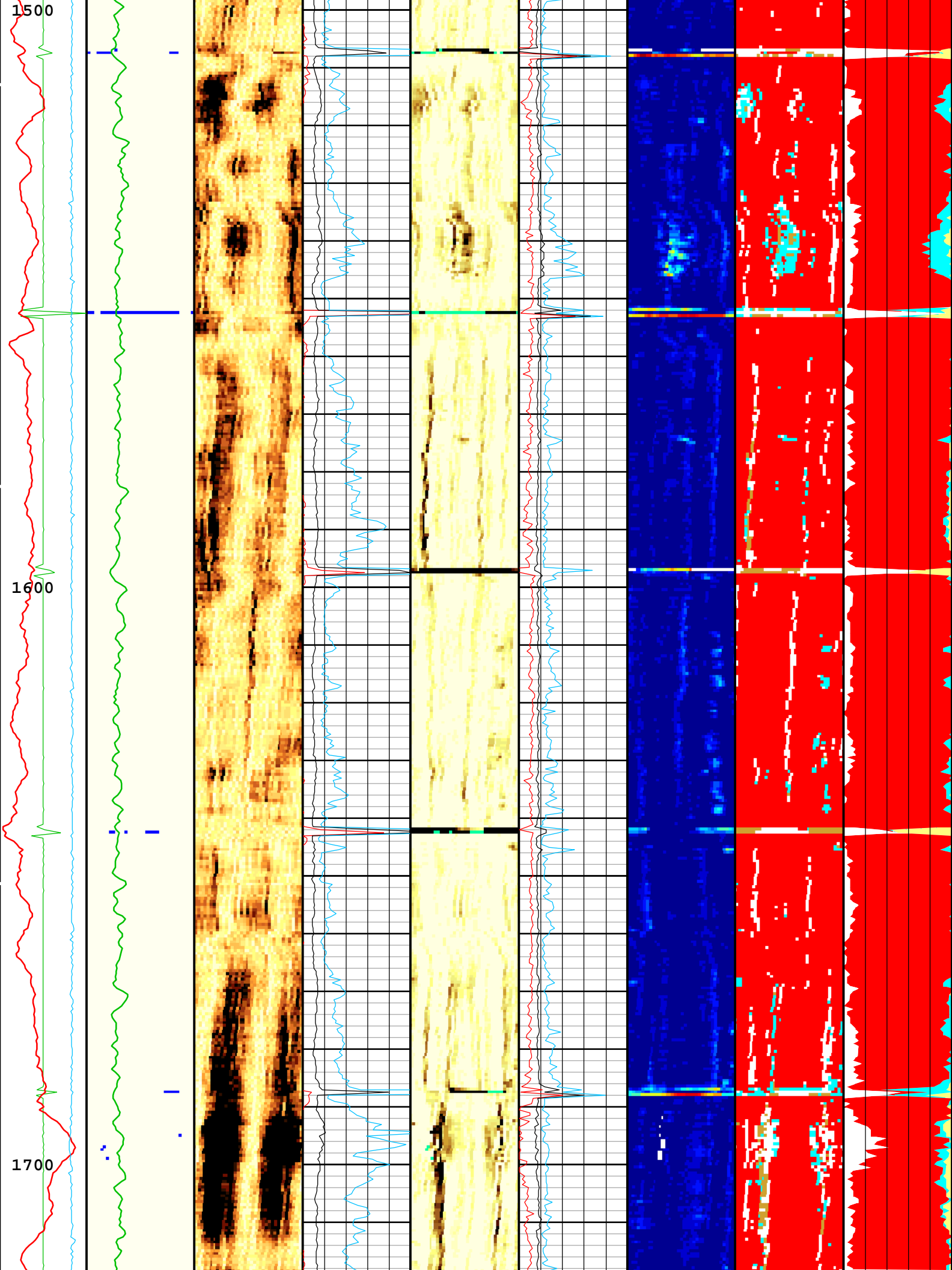


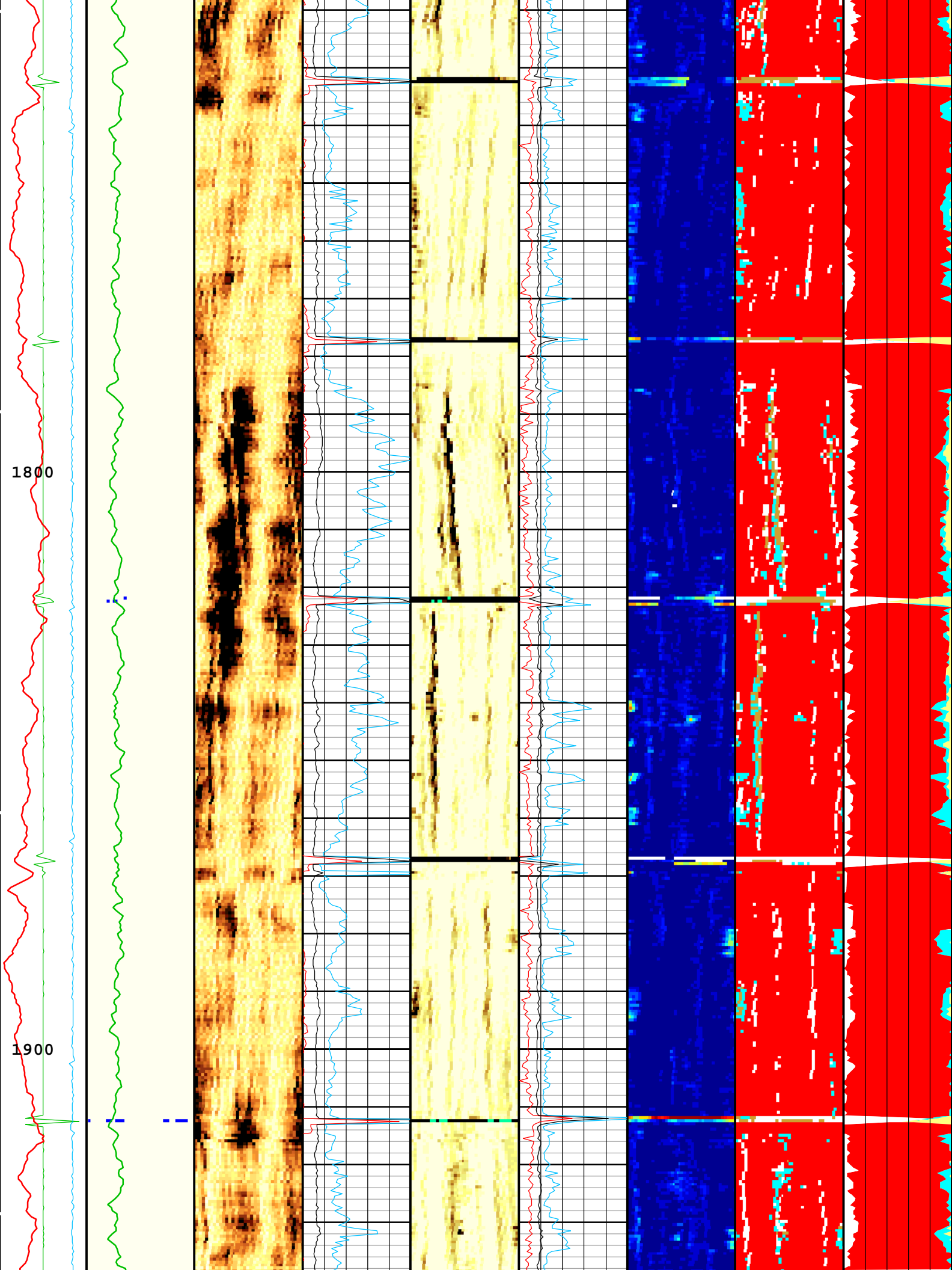


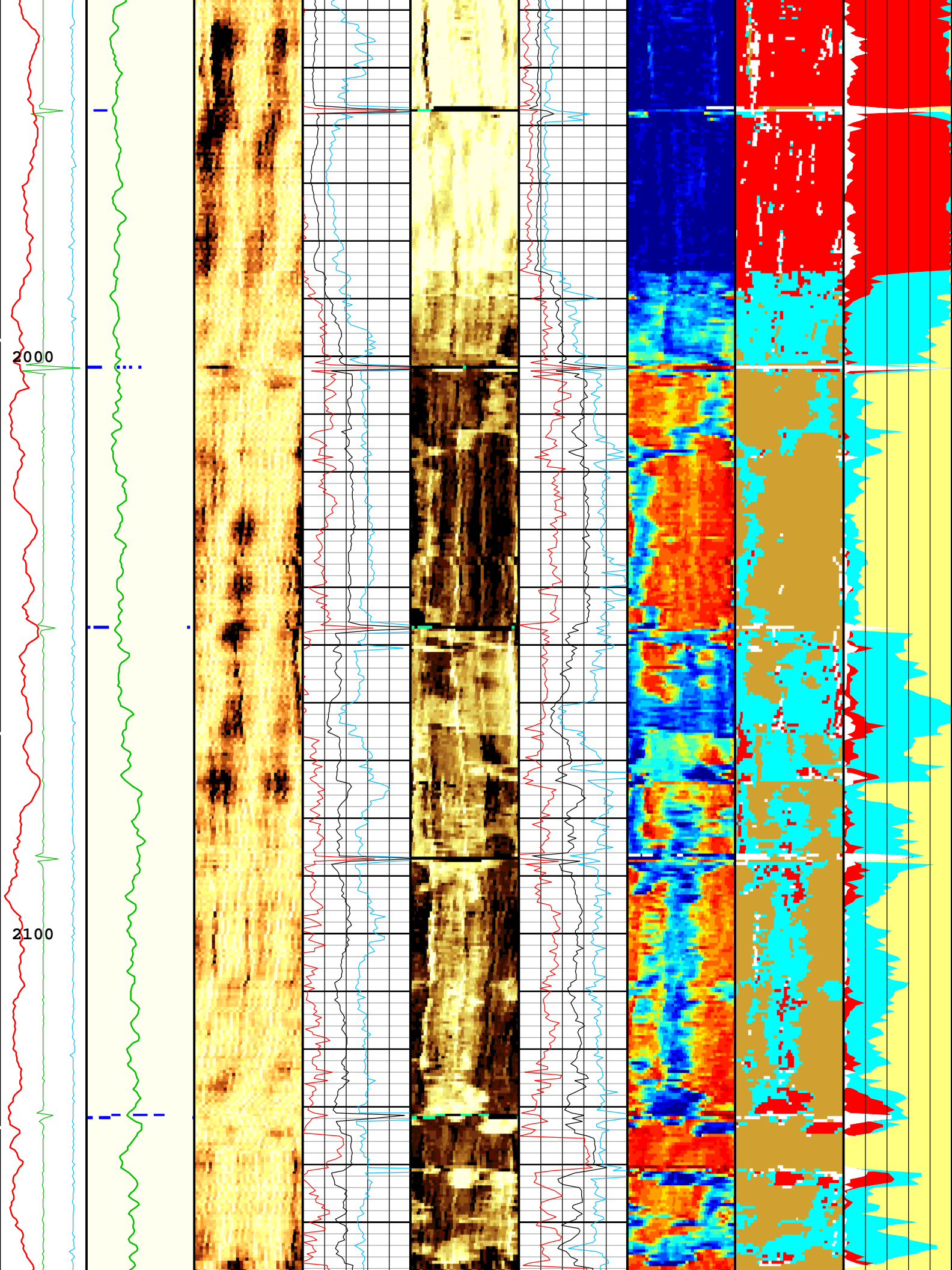


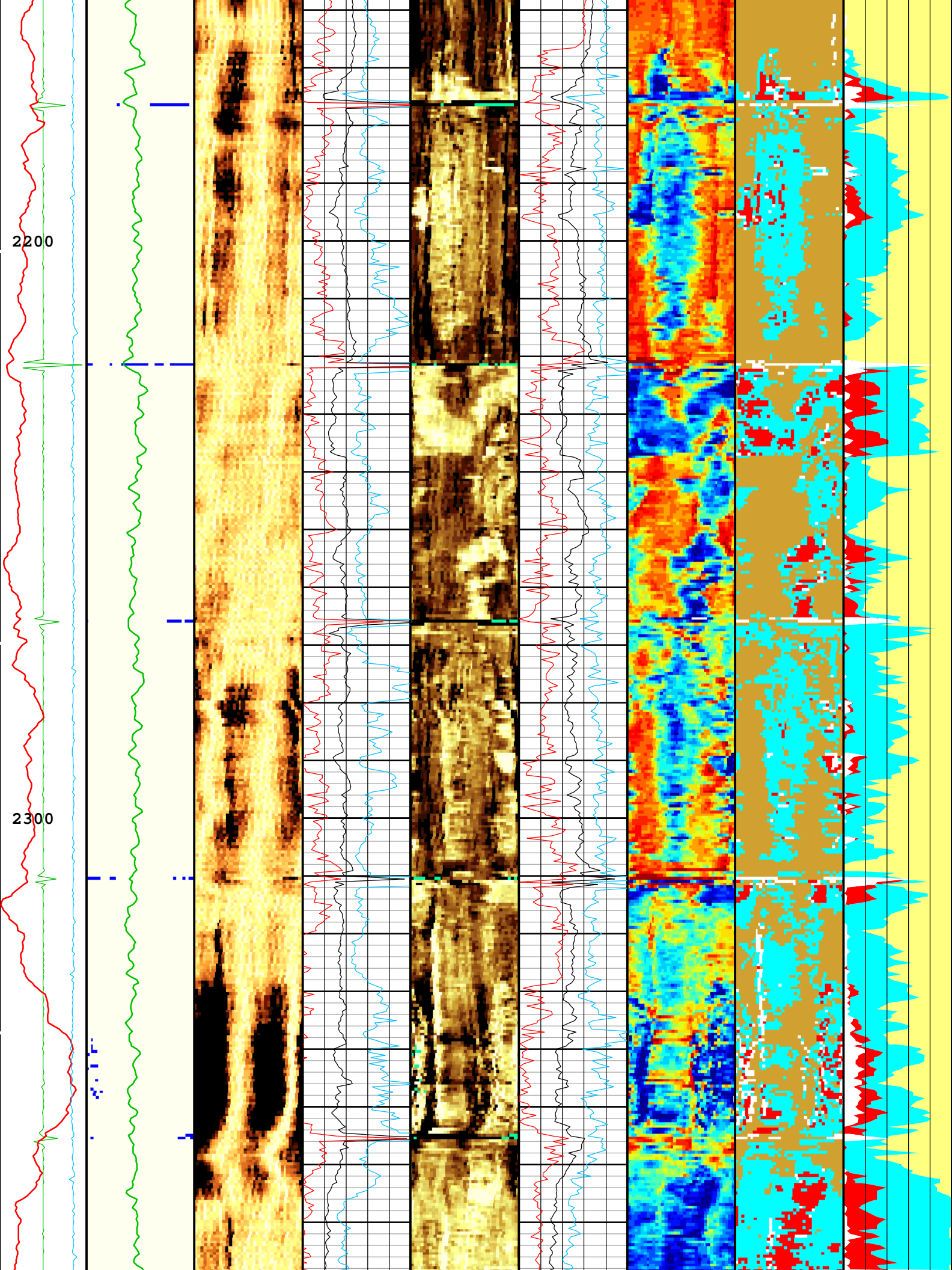


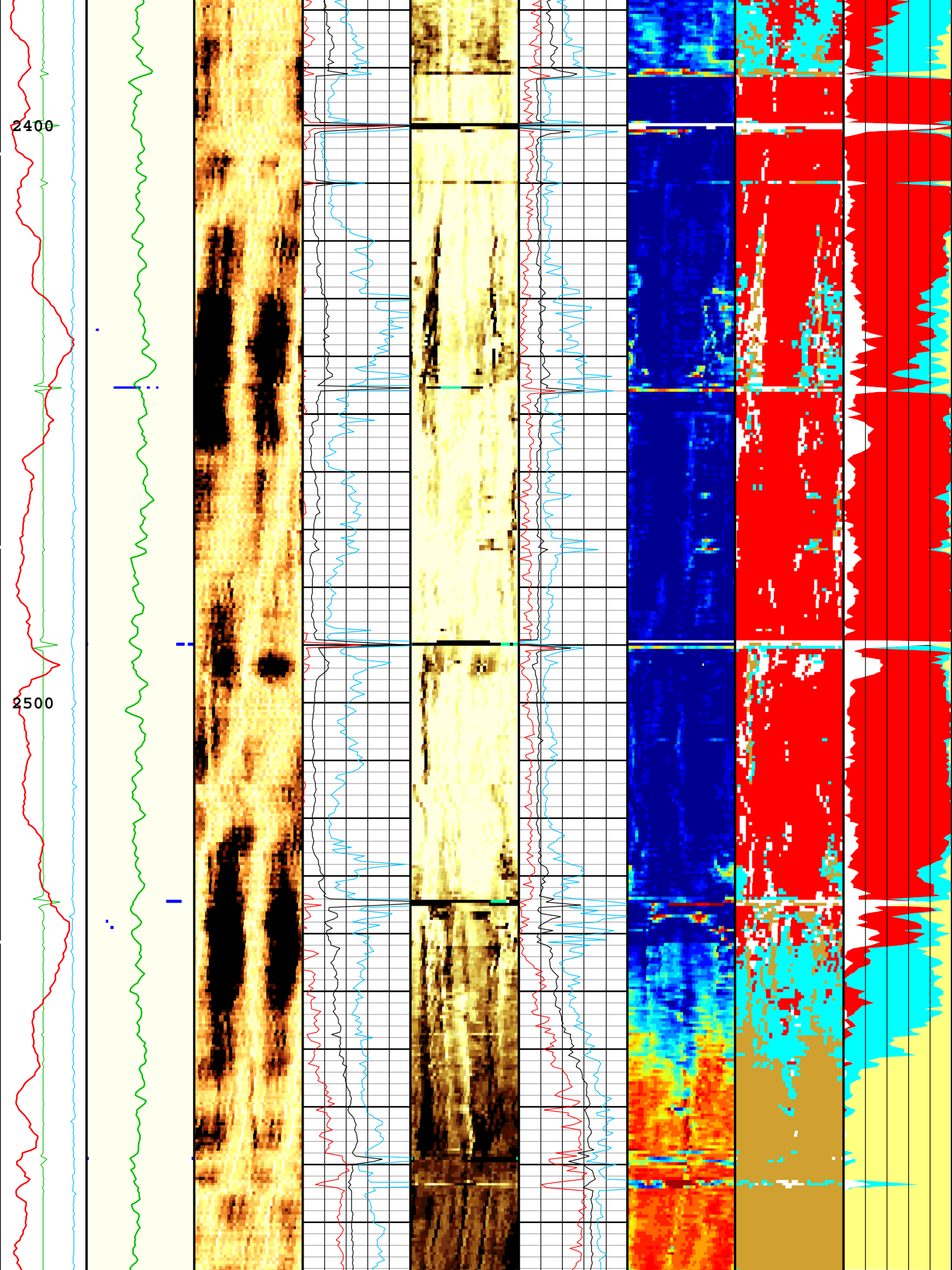


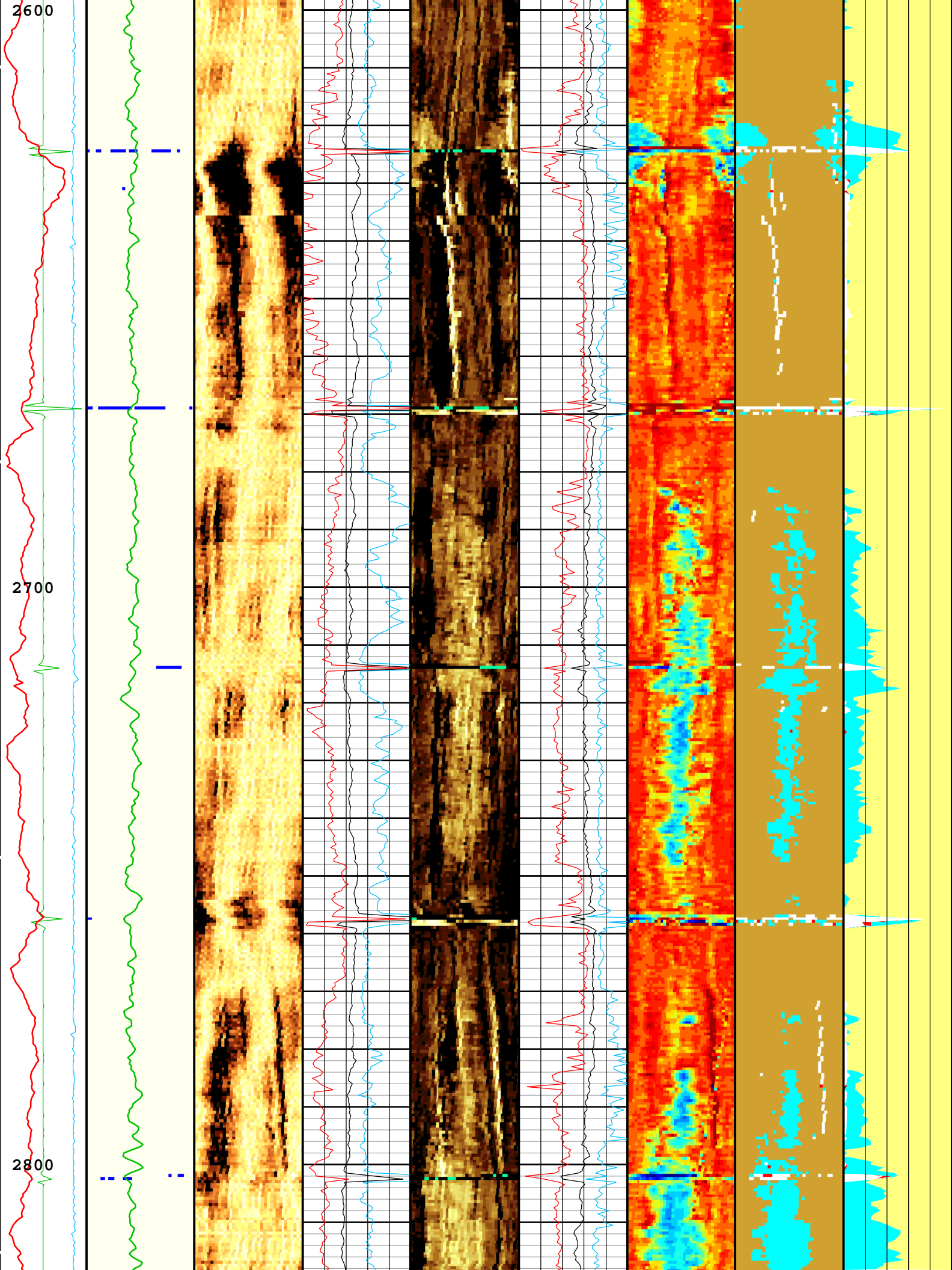


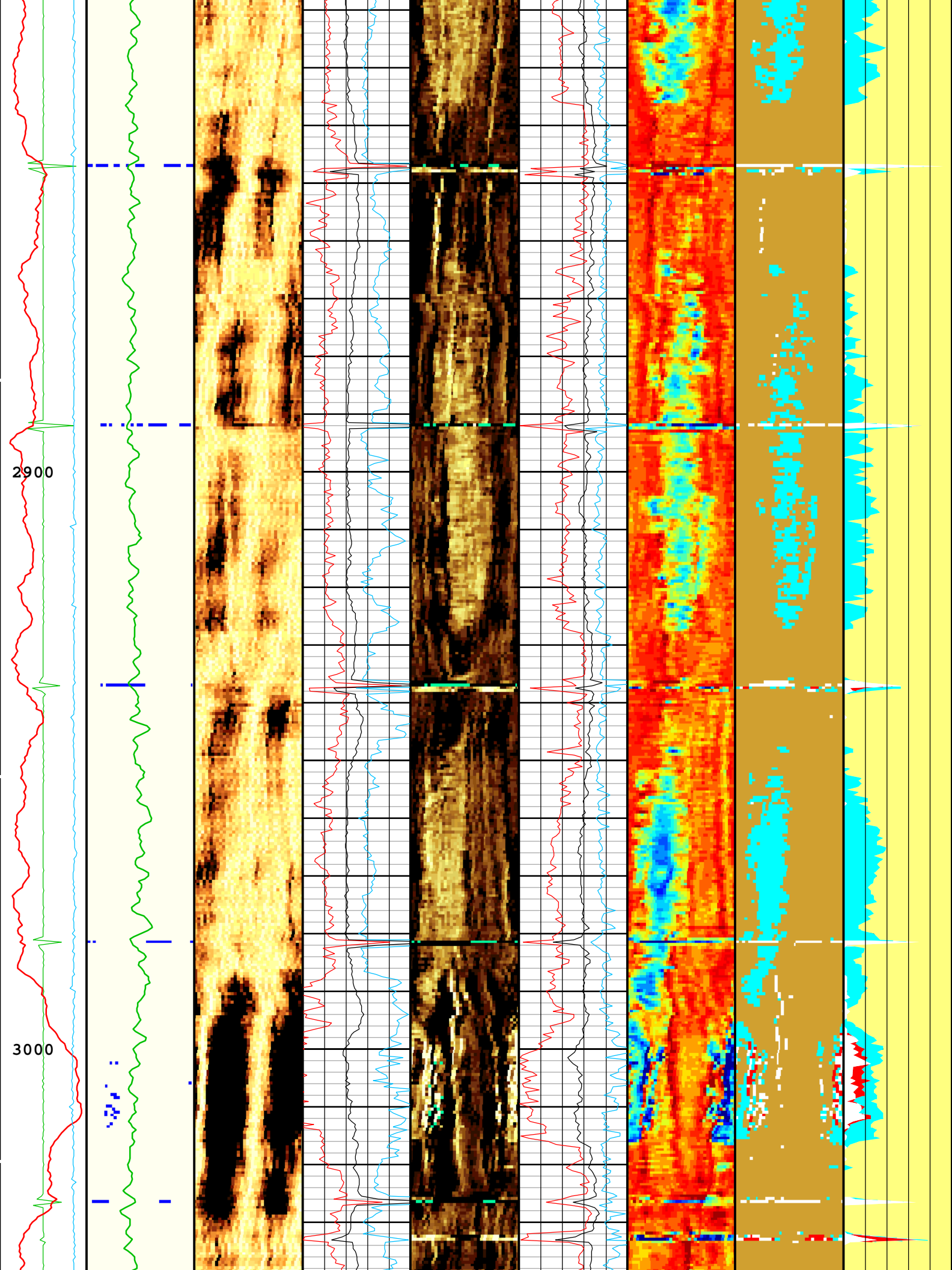


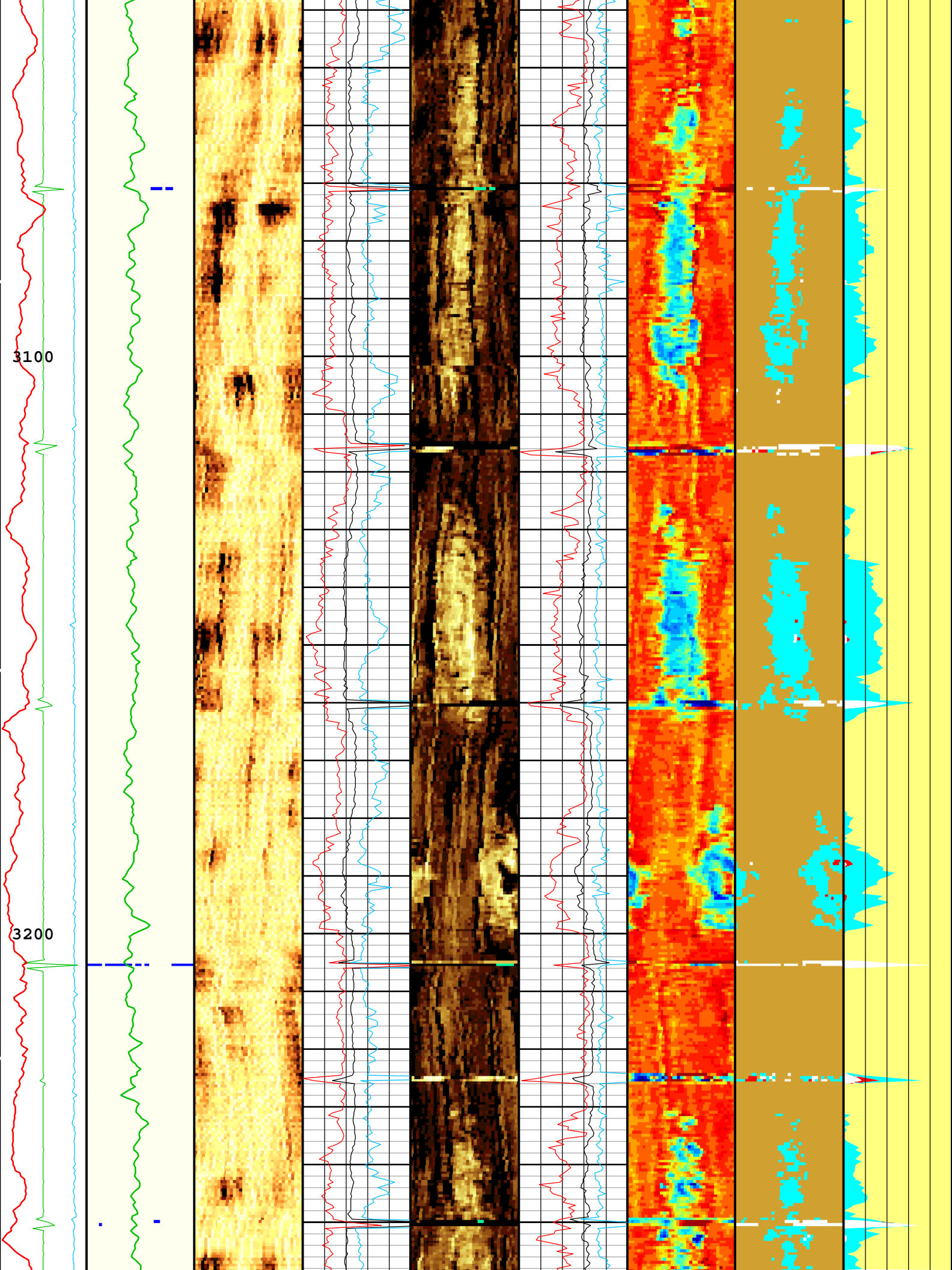


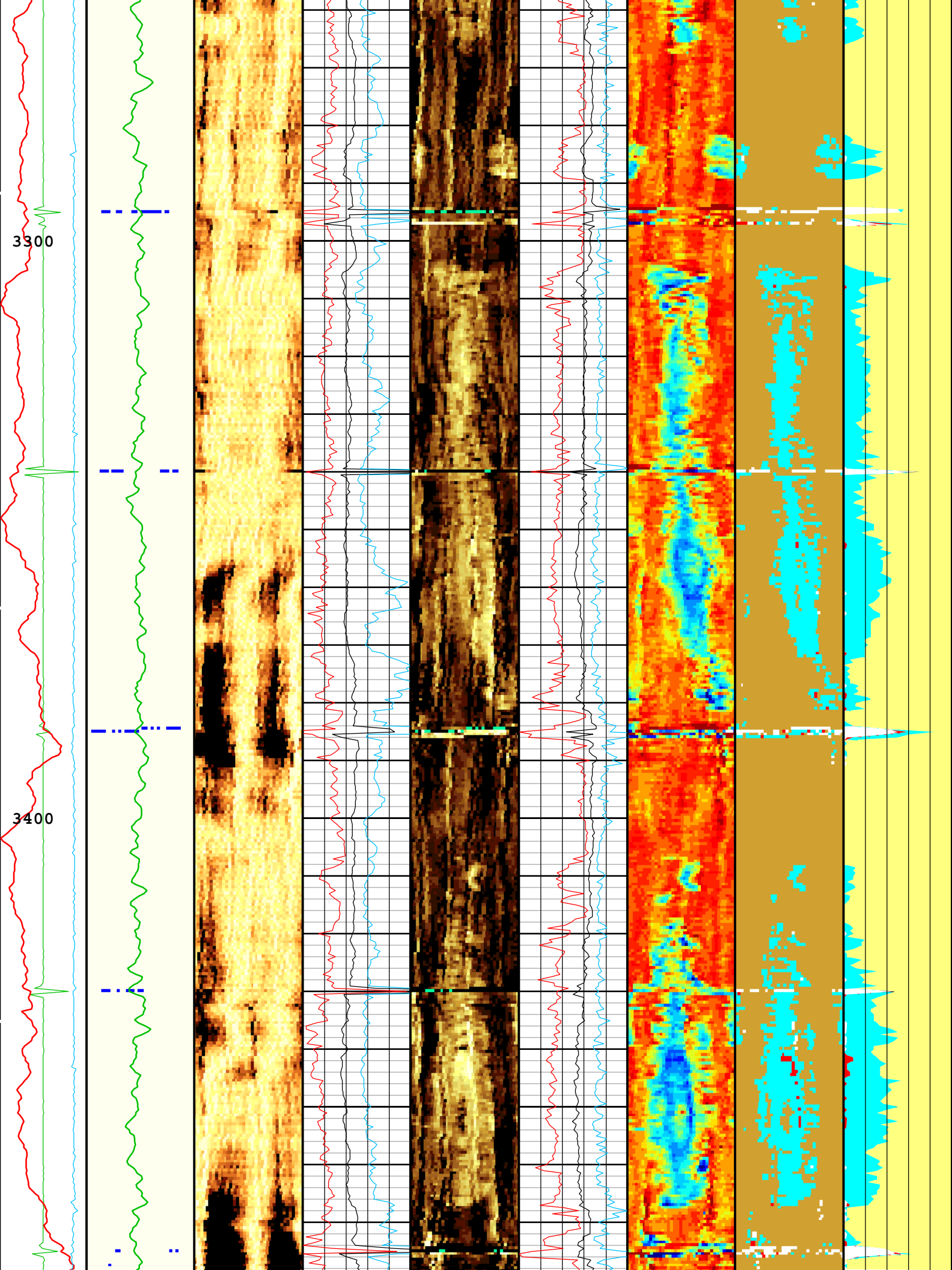


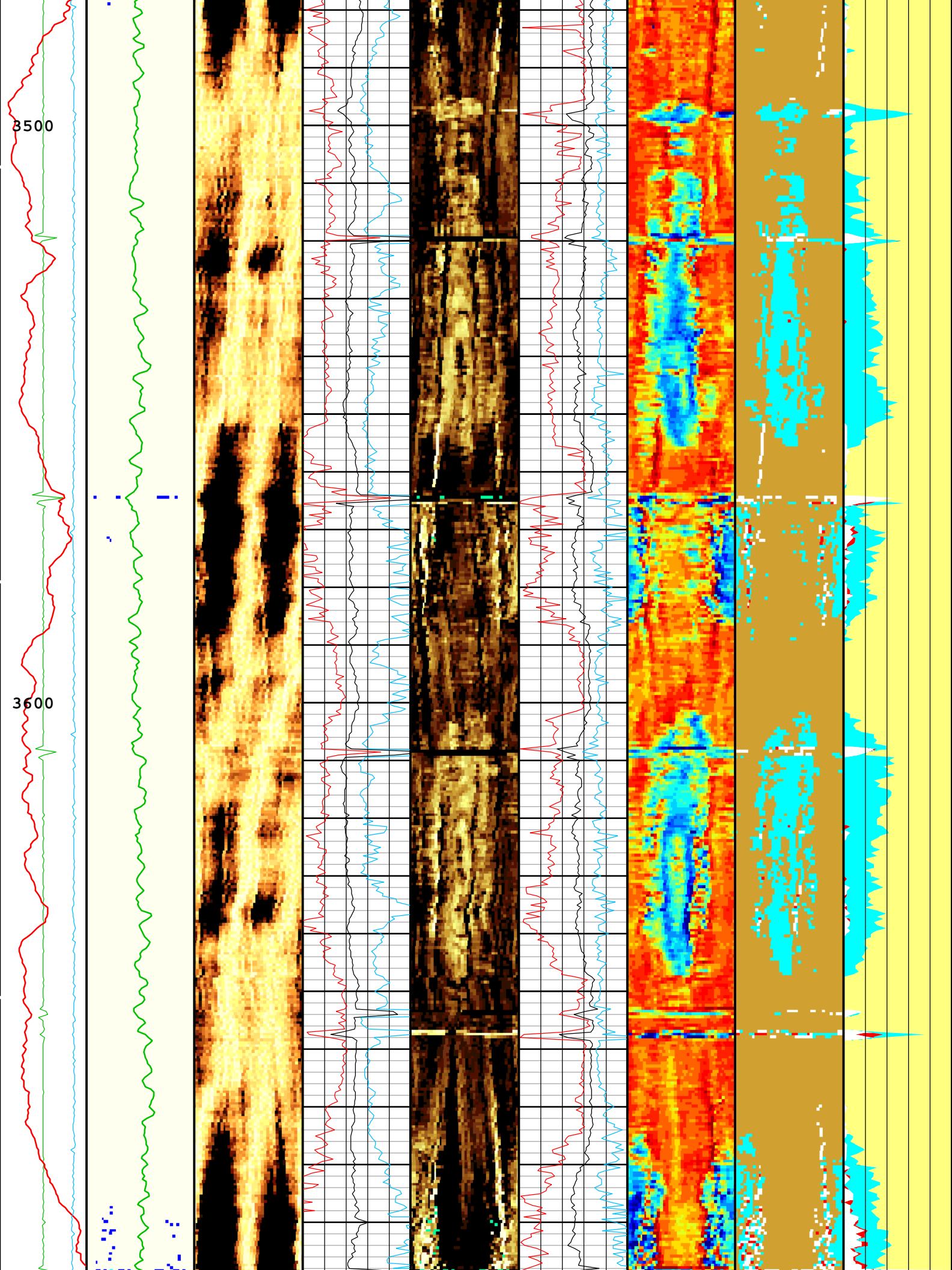


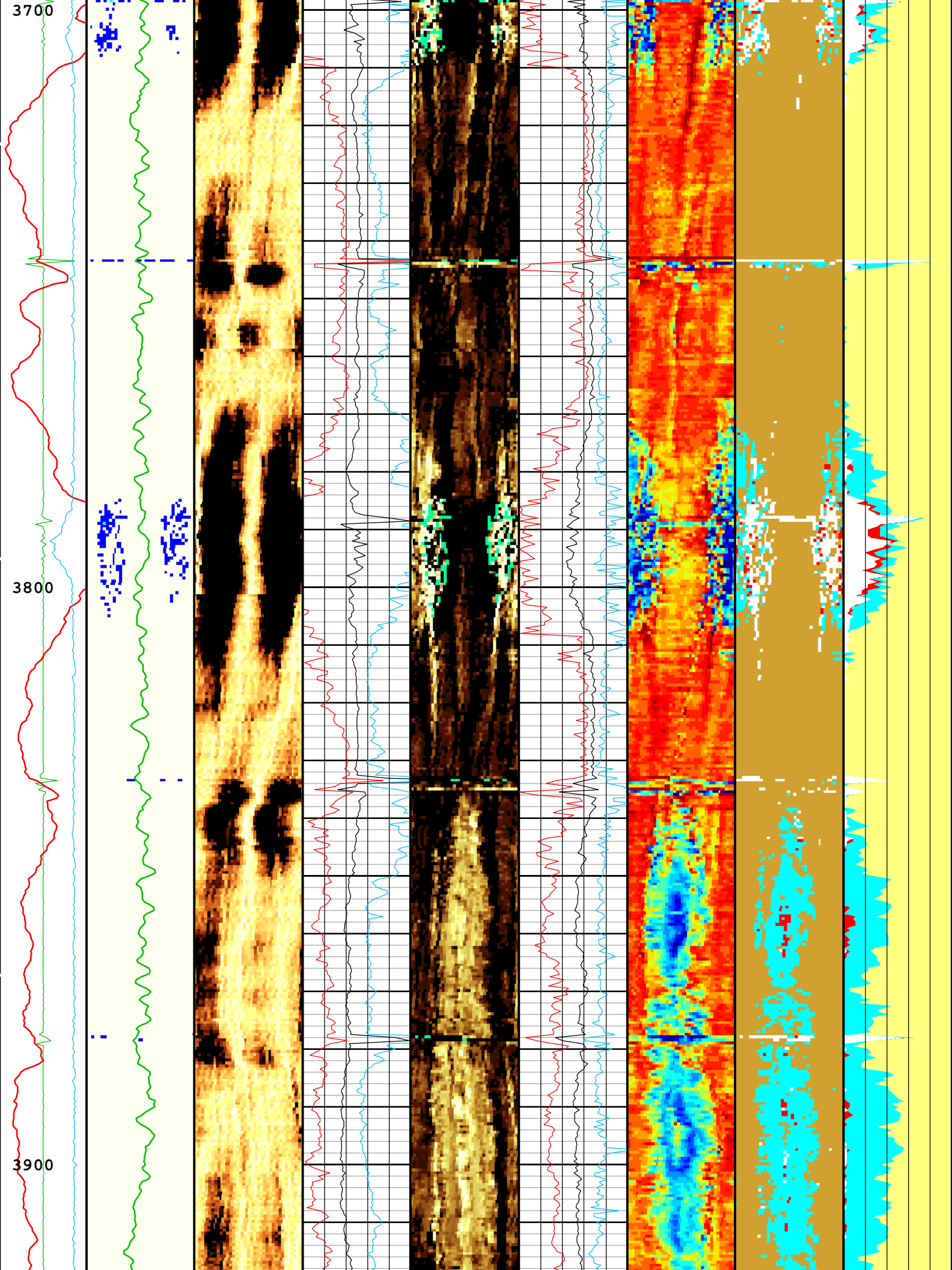


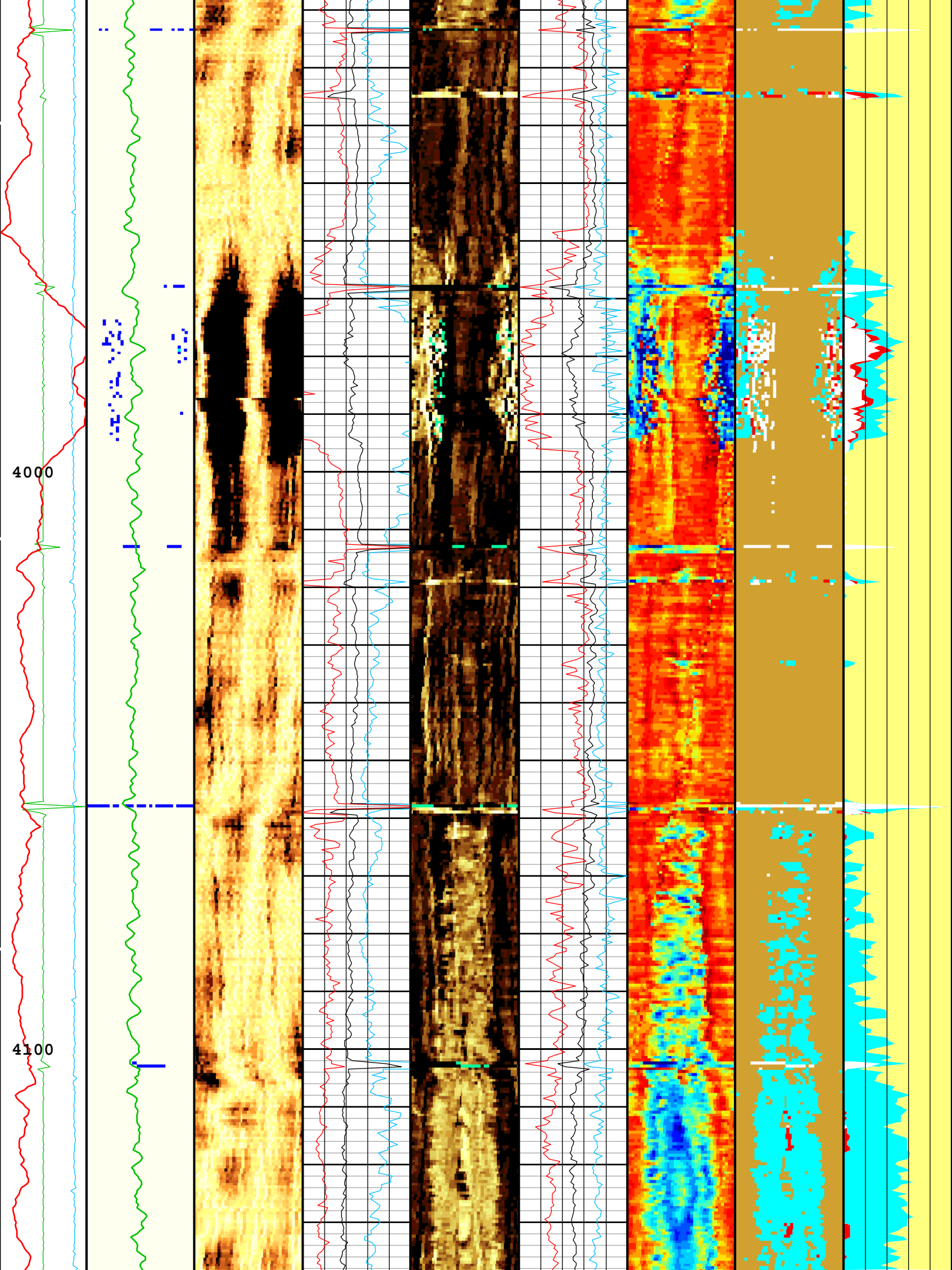


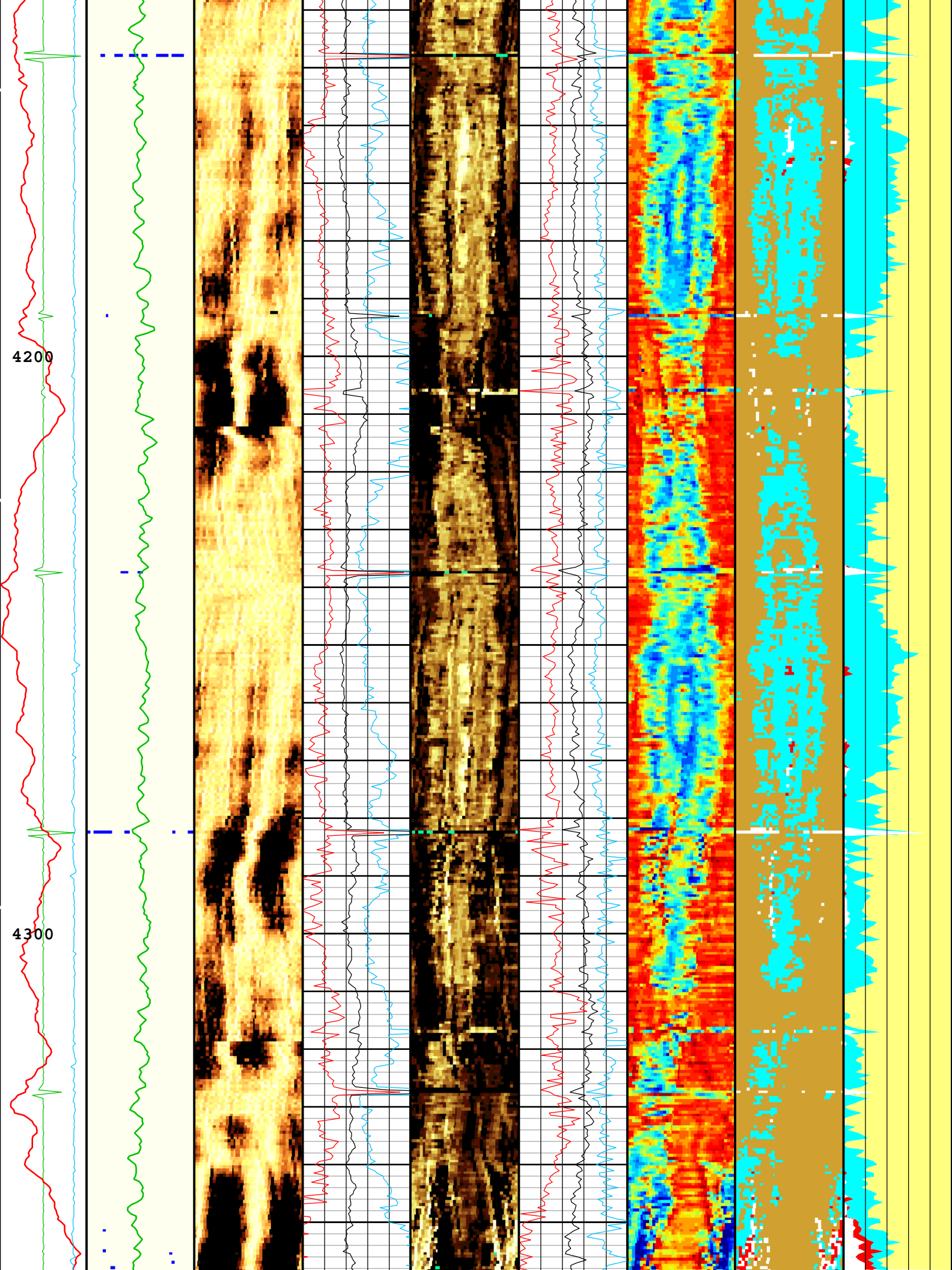


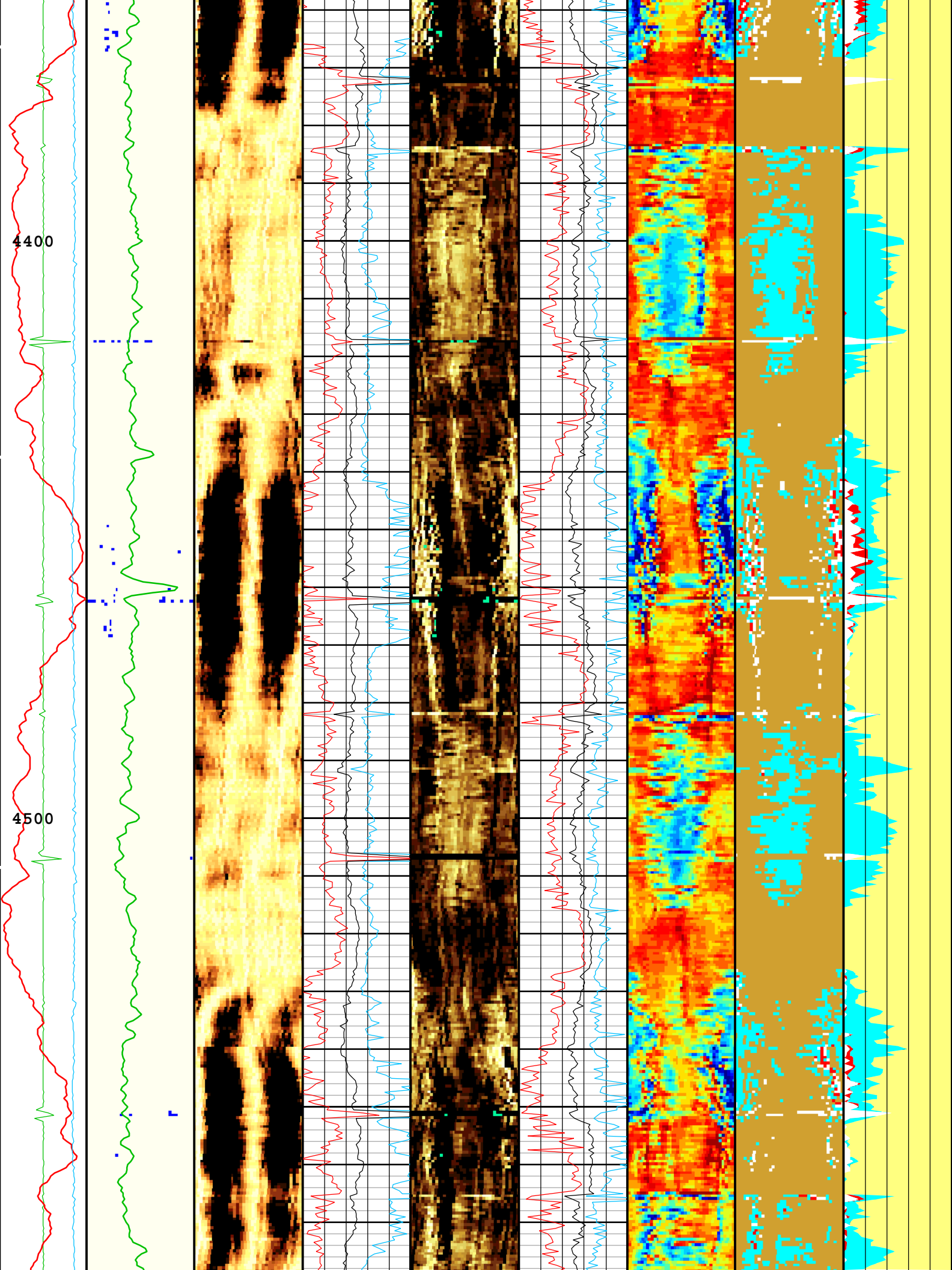


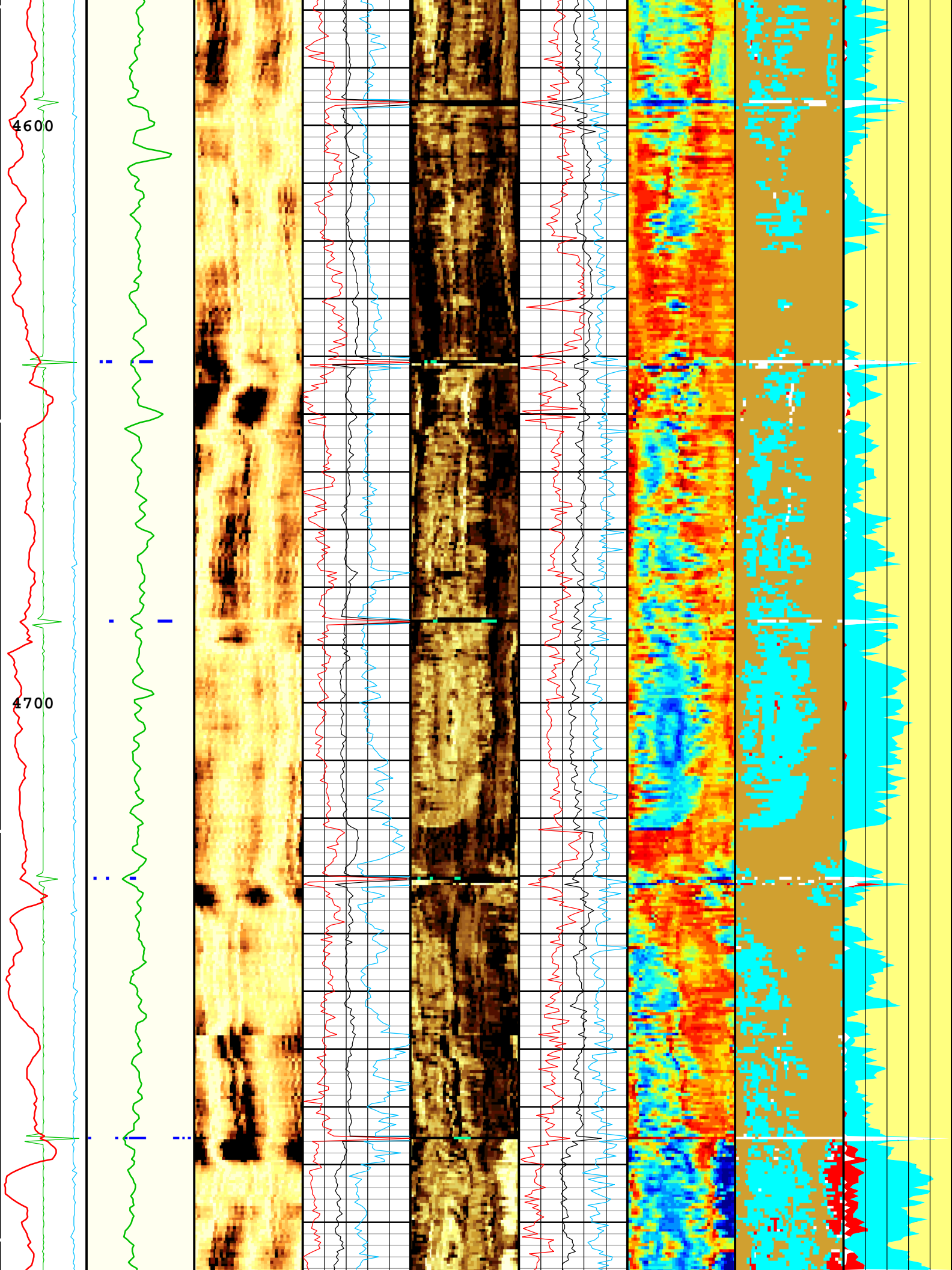


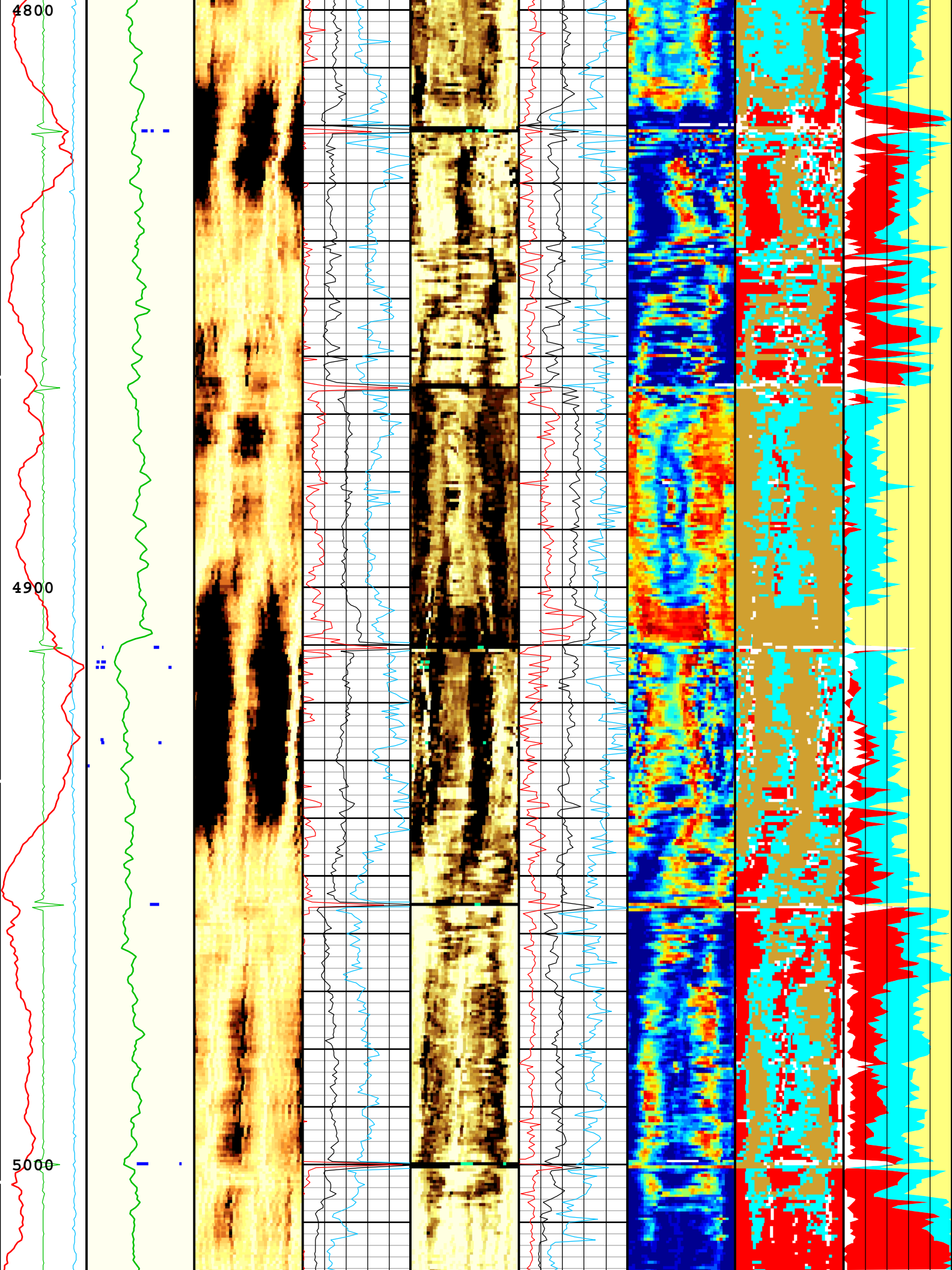


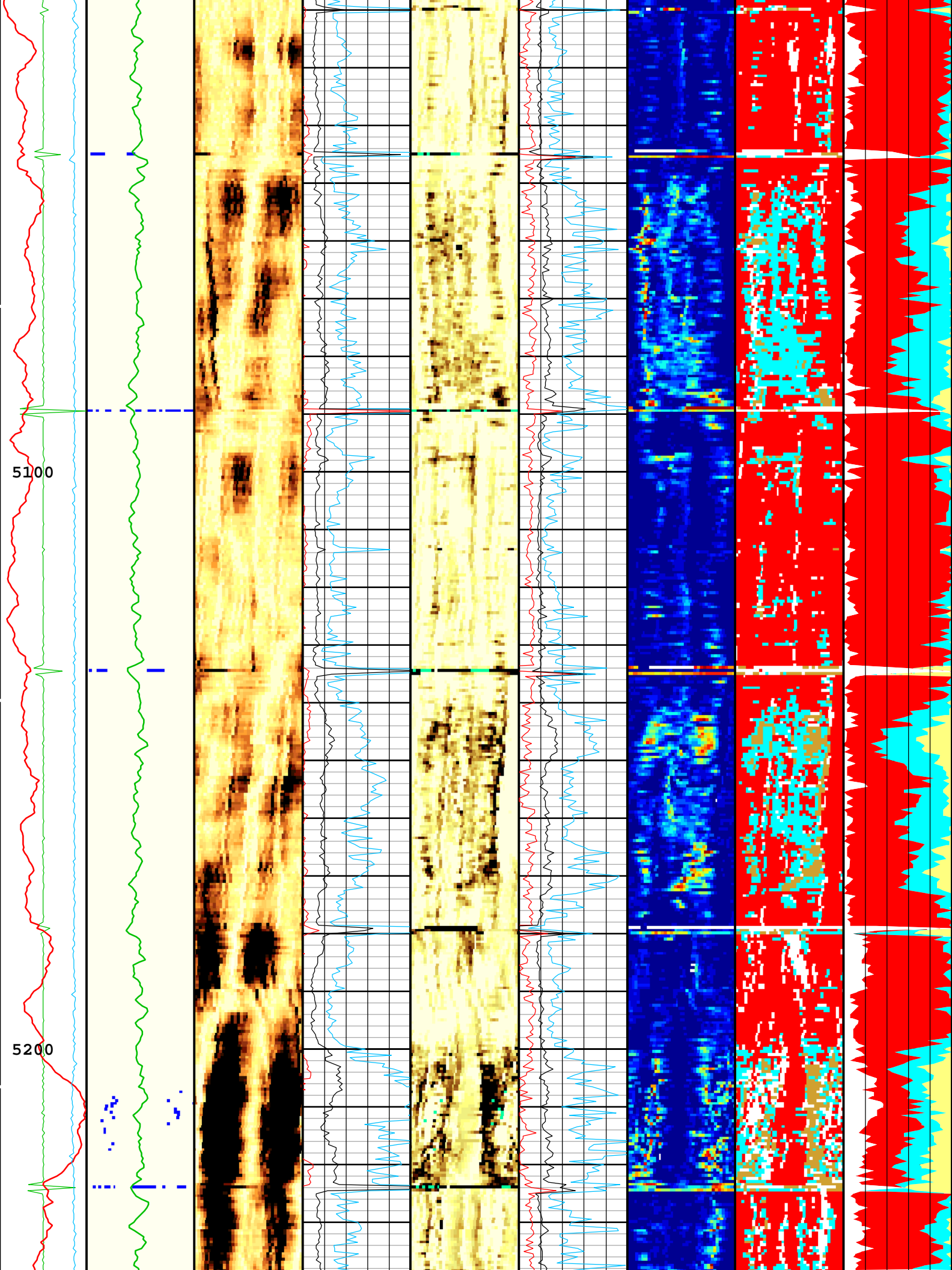


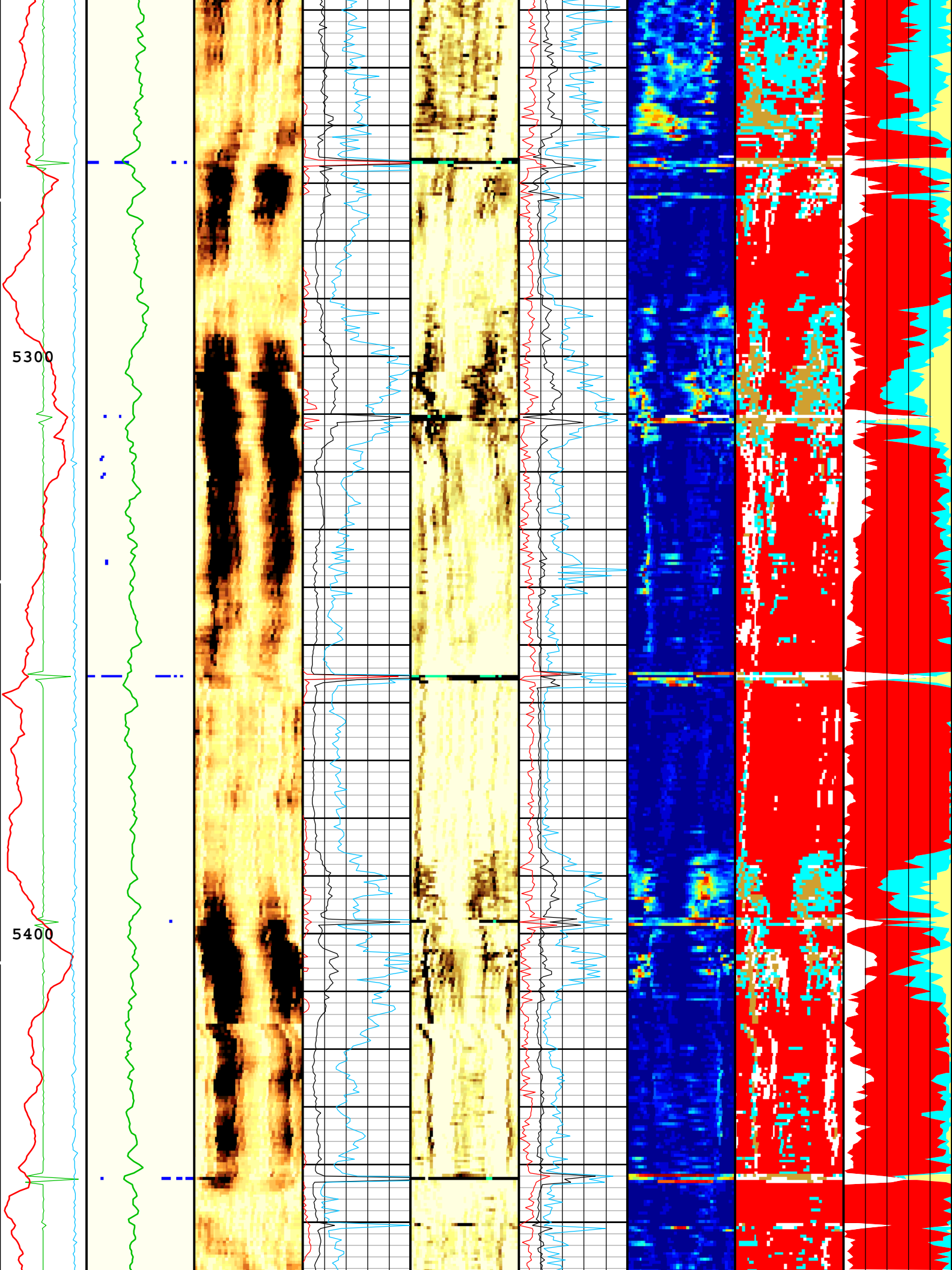


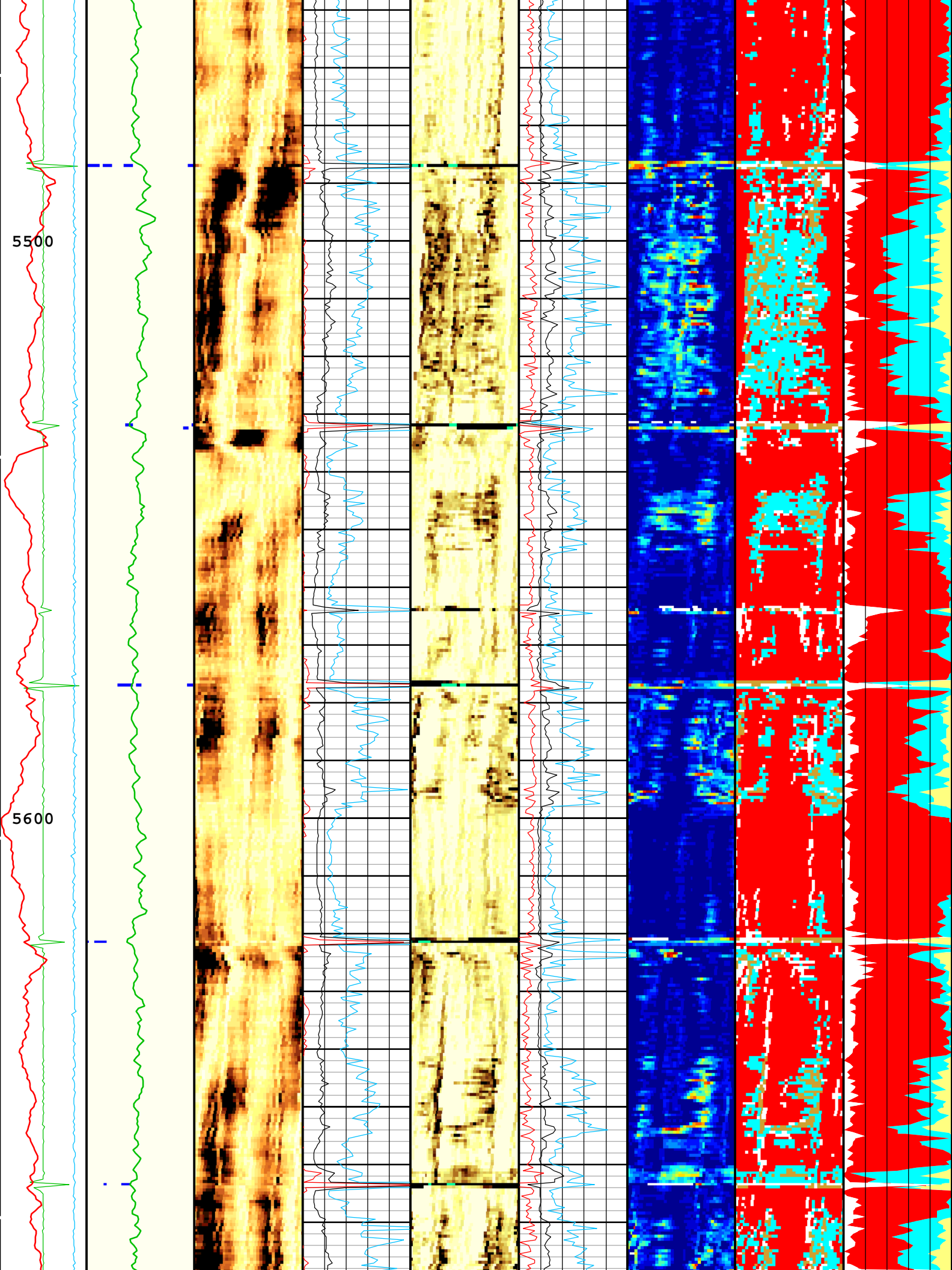


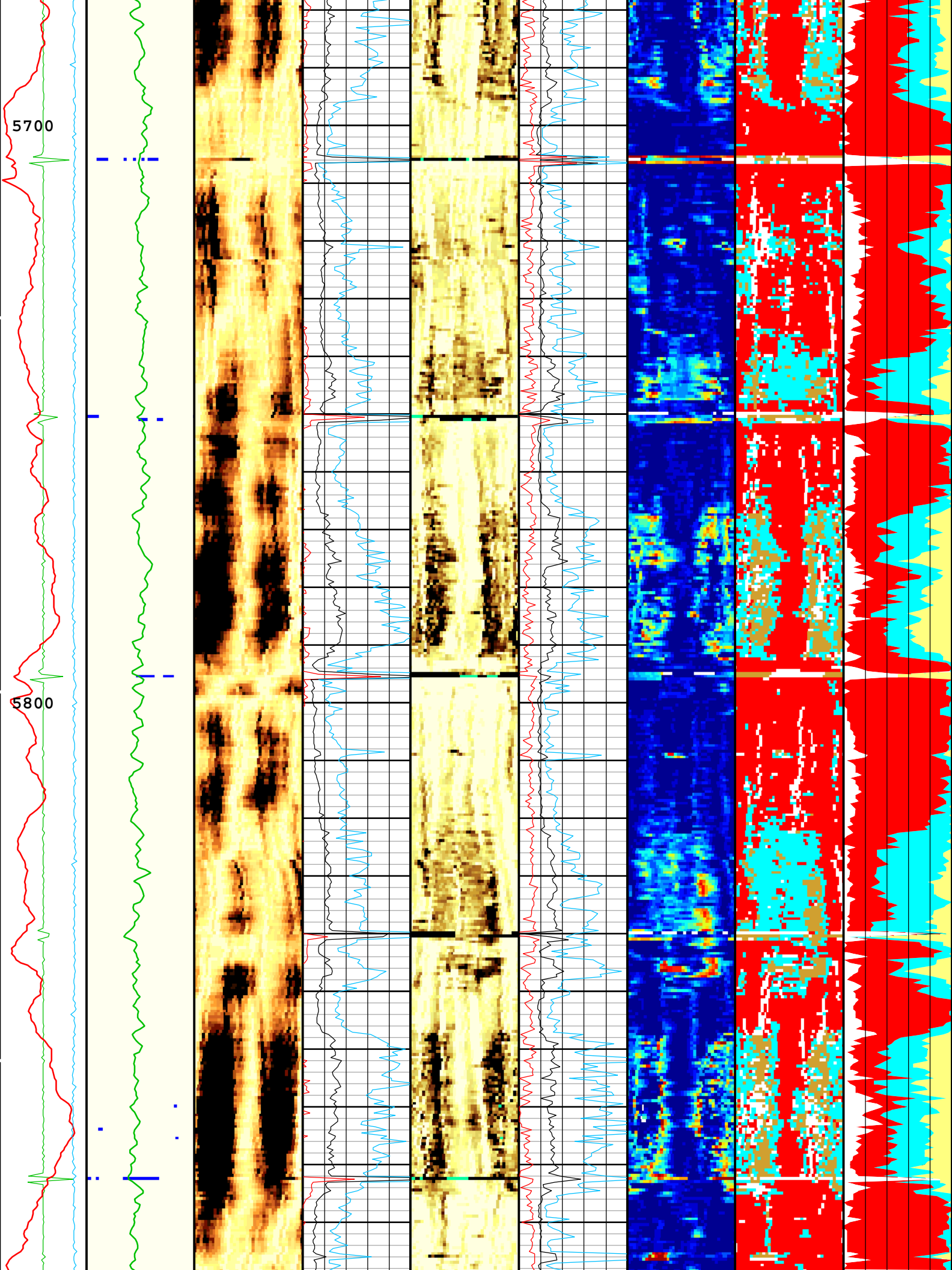


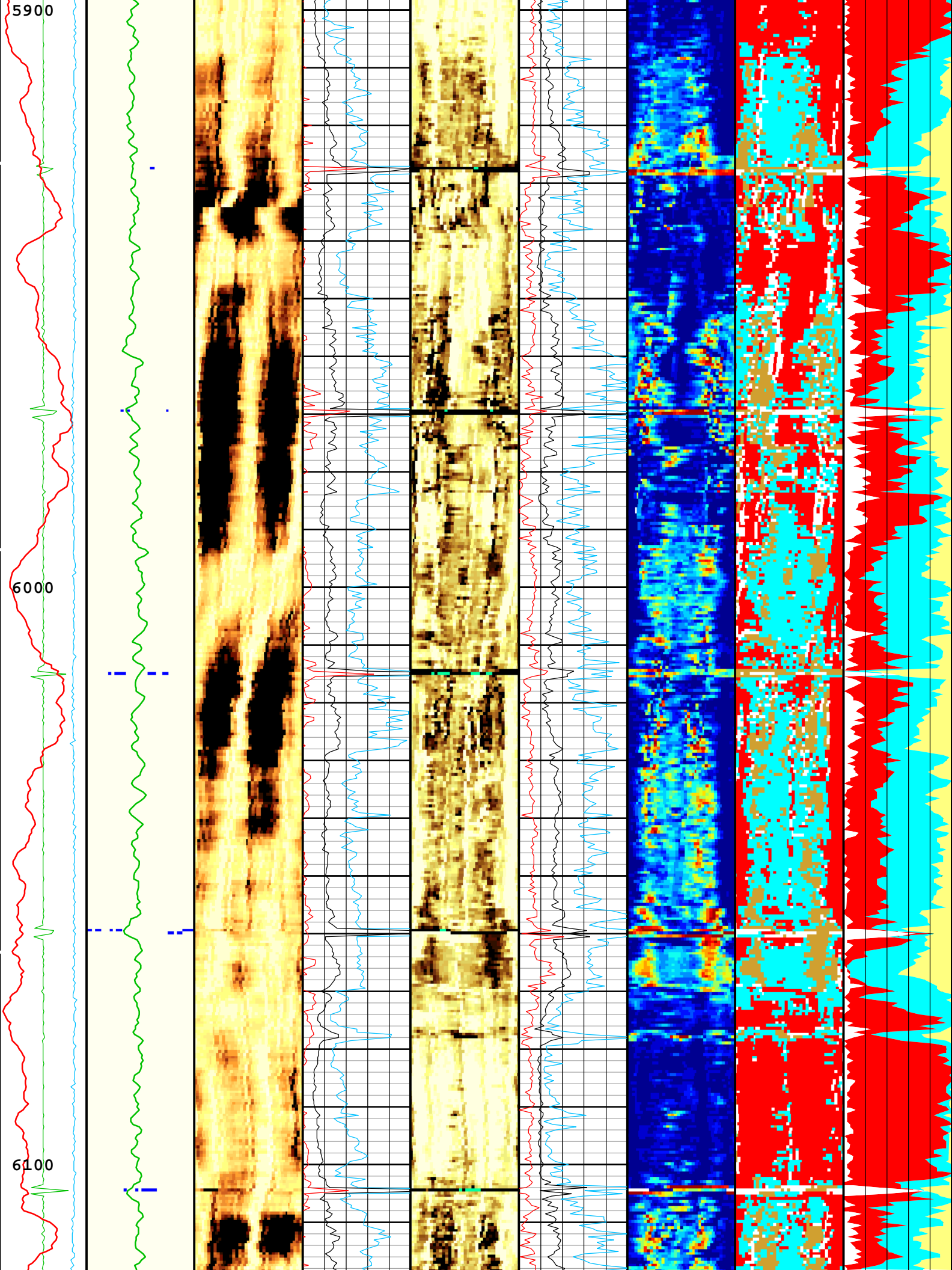


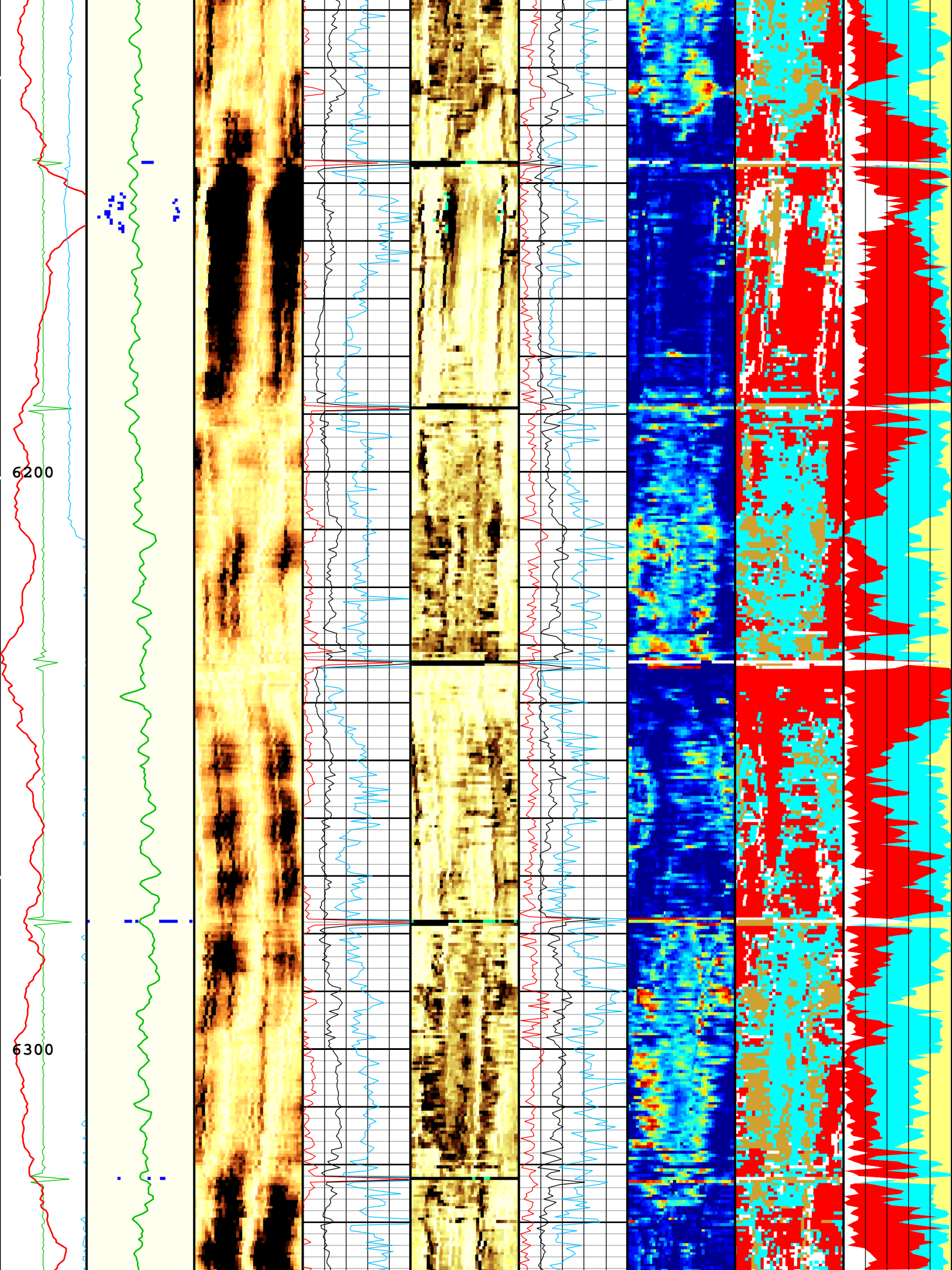


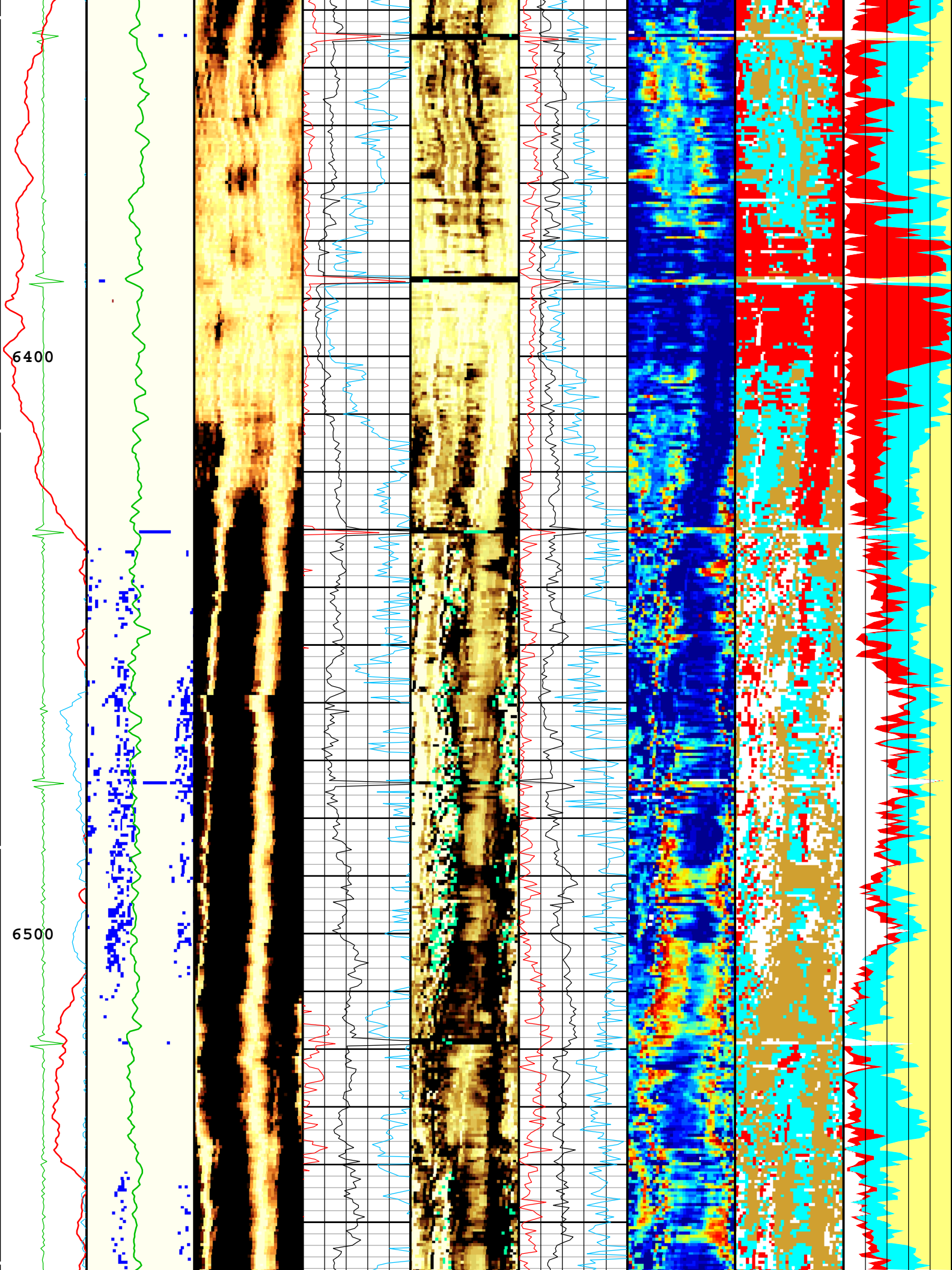


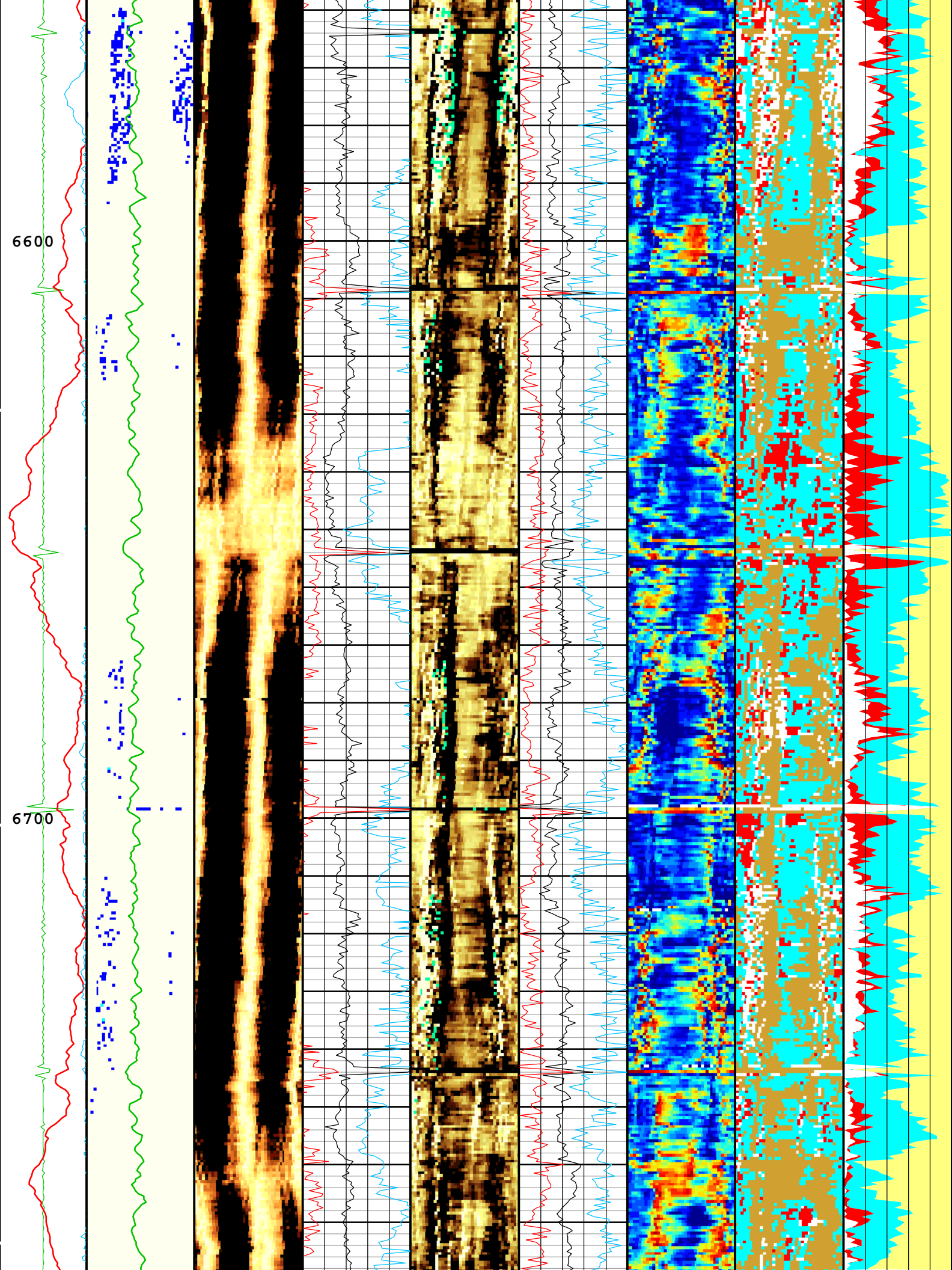


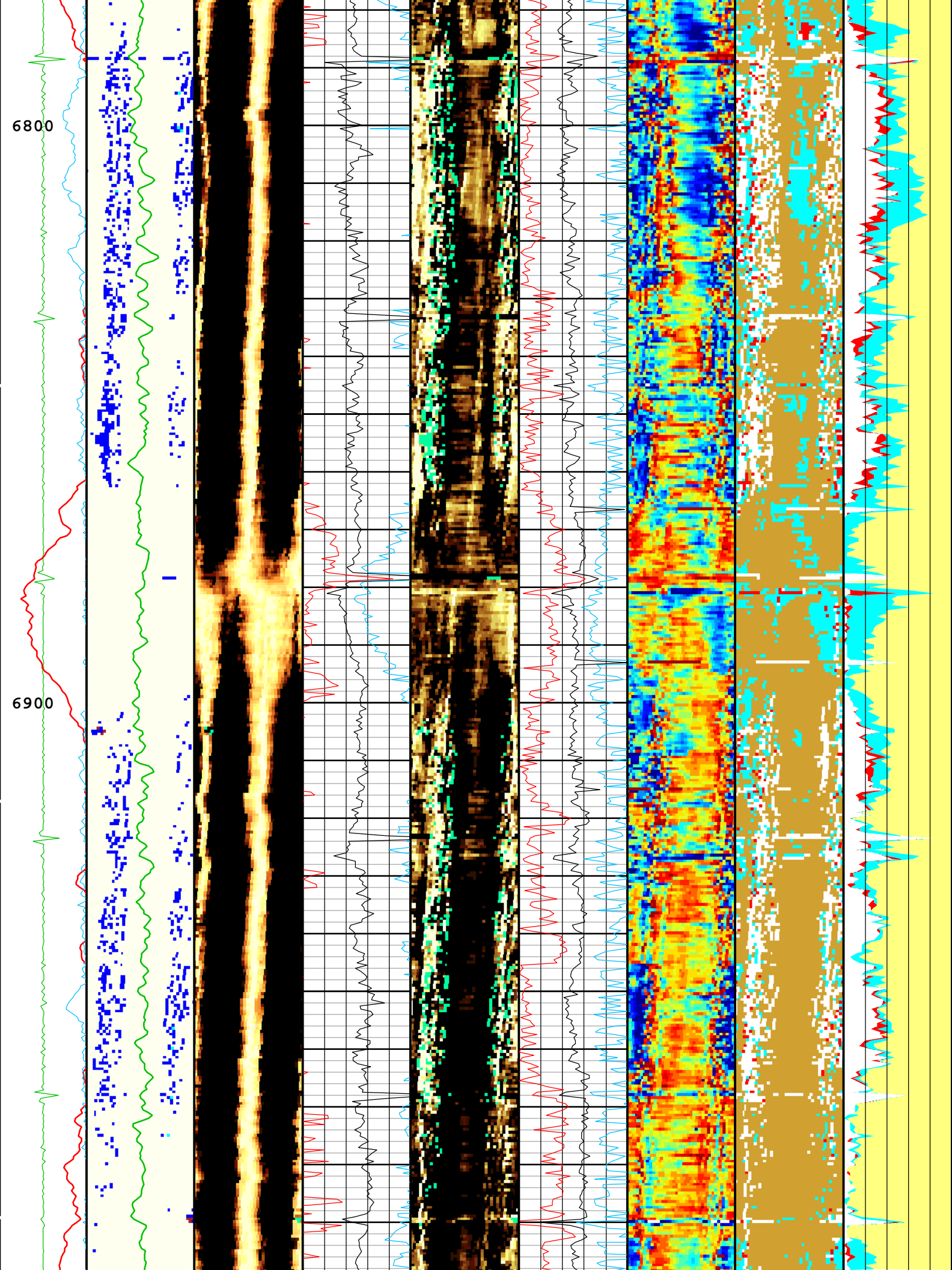


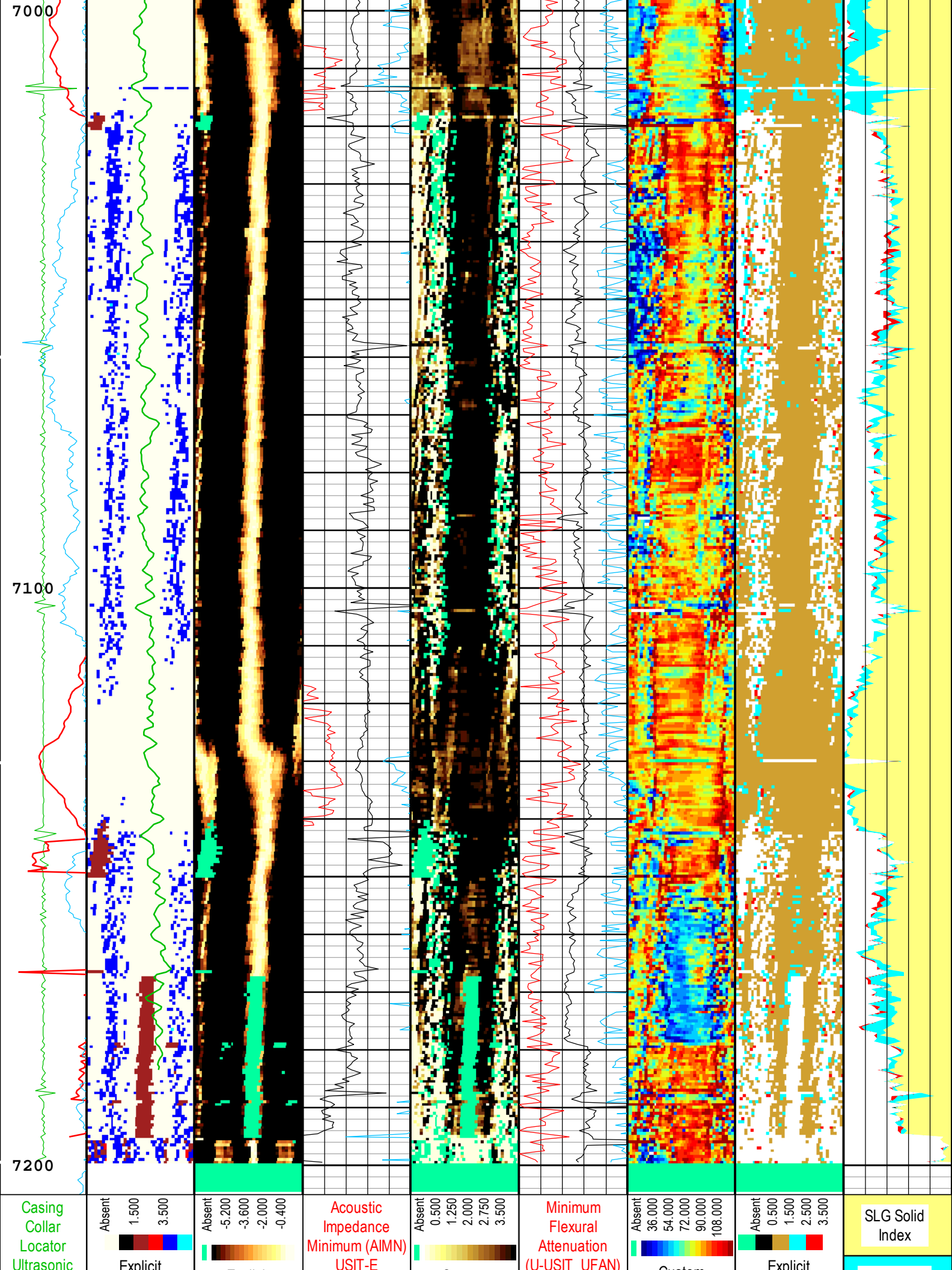












Channel Processing Parameters				
ONE: Parameters				
Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	7200	ft
CDEN	Cement Density	USIT-E	12	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Light 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	10	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	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	Inversion Norm.	

ICE_PROCESS	ICE Processing	USIT-E	Yes	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	Depth Zoned	us
MUD_N_INV	IBC Inversion Mud Normalization Factor	USIT-E	1.18	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1	
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
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	1.8	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	20.11	dB/m
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
USI_RPLUS	Ultrasonic R+ Processing	USIT-E	No	
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	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.3	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters			
Parameter	Value	Start (ft)	Stop (ft)
BS	12.25	40.5	2075
BS	8.5	2075	7200
MEAS_WLEN	22.44	40.5	7200
MEAS_WLEN	20	7200	7205
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	18	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	
U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	Time Zoned	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	Time Zoned	us

USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 375 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	
WINB	Window Begin Time	USIT-E	Time Zoned	us
WINE	Window End Time	USIT-E	Time Zoned	us

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	120	09-Dec-2017 10:44:45	09-Dec-2017 10:56:53	7205.83	6348.95
EMXV	90	09-Dec-2017 10:56:53	09-Dec-2017 10:58:47	6348.95	6215.97
EMXV	80	09-Dec-2017 10:58:47	09-Dec-2017 10:58:52	6215.97	6209.92
EMXV	60	09-Dec-2017 10:58:52	09-Dec-2017 11:26:07	6209.92	4358.06
EMXV	120	09-Dec-2017 11:26:07	09-Dec-2017 11:26:26	4358.06	4334.88
EMXV	80	09-Dec-2017 11:26:26	09-Dec-2017 11:26:50	4334.88	4307.27
EMXV	70	09-Dec-2017 11:26:50	09-Dec-2017 12:28:16	4307.27	61.98
U-USIT_UFWB	136	09-Dec-2017 10:44:45	09-Dec-2017 10:47:18	7205.83	7037.95
U-USIT_UFWB	107.06	09-Dec-2017 10:47:18	09-Dec-2017 12:28:16	7037.95	61.98
U-USIT_UFWE	176	09-Dec-2017 10:44:45	09-Dec-2017 10:47:36	7205.83	7017.42
U-USIT_UFWE	175.89	09-Dec-2017 10:47:36	09-Dec-2017 12:28:16	7017.42	61.98
U-USIT_UNWB	105	09-Dec-2017 10:44:45	09-Dec-2017 10:47:22	7205.83	7033.25
U-USIT_UNWB	71.6	09-Dec-2017 10:47:22	09-Dec-2017 12:28:16	7033.25	61.98
U-USIT_UNWE	145	09-Dec-2017 10:44:45	09-Dec-2017 10:47:30	7205.83	7023.8
U-USIT_UNWE	149.82	09-Dec-2017 10:47:30	09-Dec-2017 12:28:16	7023.8	61.98
WINB	31.17	09-Dec-2017 10:44:45	09-Dec-2017 10:45:27	7205.83	7168.14
WINB	21.15	09-Dec-2017 10:45:27	09-Dec-2017 12:28:16	7168.14	61.98
WINE	71.17	09-Dec-2017 10:44:45	09-Dec-2017 10:44:57	7205.83	7201.65
WINE	220	09-Dec-2017 10:44:57	09-Dec-2017 10:45:02	7201.65	7197.26
WINE	122.1	09-Dec-2017 10:45:02	09-Dec-2017 10:45:08	7197.26	7190.57
WINE	105.28	09-Dec-2017 10:45:08	09-Dec-2017 10:45:16	7190.57	7180.63
WINE	80.8	09-Dec-2017 10:45:16	09-Dec-2017 10:45:21	7180.63	7174.93
WINE	76.98	09-Dec-2017 10:45:21	09-Dec-2017 10:45:41	7174.93	7151.28
WINE	66.27	09-Dec-2017 10:45:41	09-Dec-2017 10:45:59	7151.28	7131.34
WINE	70.1	09-Dec-2017 10:45:59	09-Dec-2017 10:46:01	7131.34	7128.13
WINE	76.98	09-Dec-2017 10:46:01	09-Dec-2017 10:47:32	7128.13	7021.59
WINE	67.04	09-Dec-2017 10:47:32	09-Dec-2017 10:47:59	7021.59	6990.06
WINE	69.33	09-Dec-2017 10:47:59	09-Dec-2017 10:48:04	6990.06	6983.95
WINE	76.22	09-Dec-2017 10:48:04	09-Dec-2017 10:49:00	6983.95	6916.23
WINE	71.63	09-Dec-2017 10:49:00	09-Dec-2017 10:49:07	6916.23	6908.05
WINE	67.04	09-Dec-2017 10:49:07	09-Dec-2017 10:49:19	6908.05	6894.25
WINE	72.39	09-Dec-2017 10:49:19	09-Dec-2017 10:49:40	6894.25	6868.17
WINE	76.22	09-Dec-2017 10:49:40	09-Dec-2017 12:28:16	6868.17	61.98

All depth are at tool zero.

IBC SLG Composite

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[4]:Up	Up	61.98 ft	7205.83 ft	09-Dec-2017 10:44:45 AM	09-Dec-2017 12:28:16 PM	ON	4.17 ft	Yes

All depths are referenced to toolstring zero

Log

Company:CRESTONE PEAK RESOURCES OPERATING LLC

Well:KIYOTA 40-35H-O367






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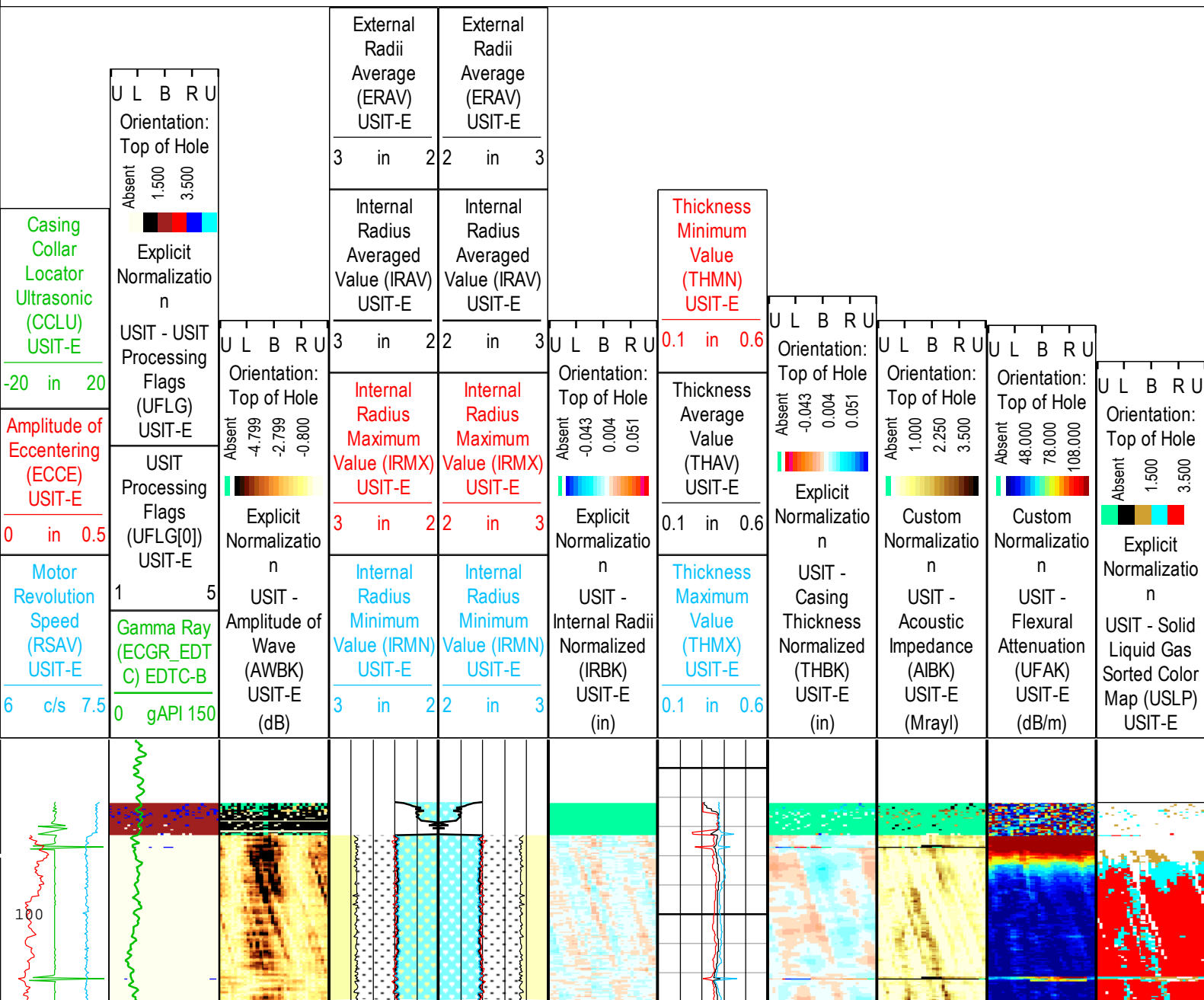
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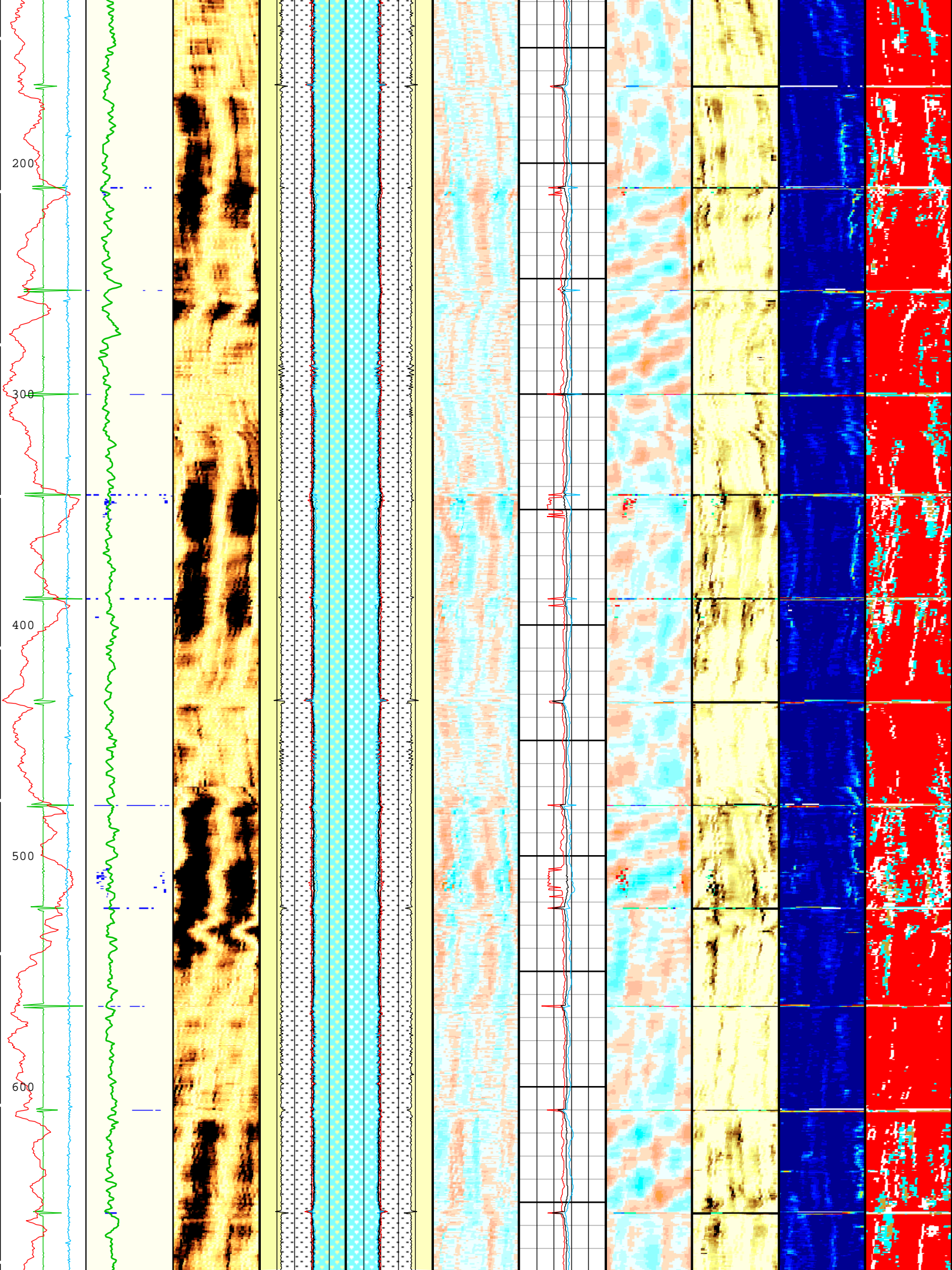
Creation Date: 17-Dec-2017 16:29:41

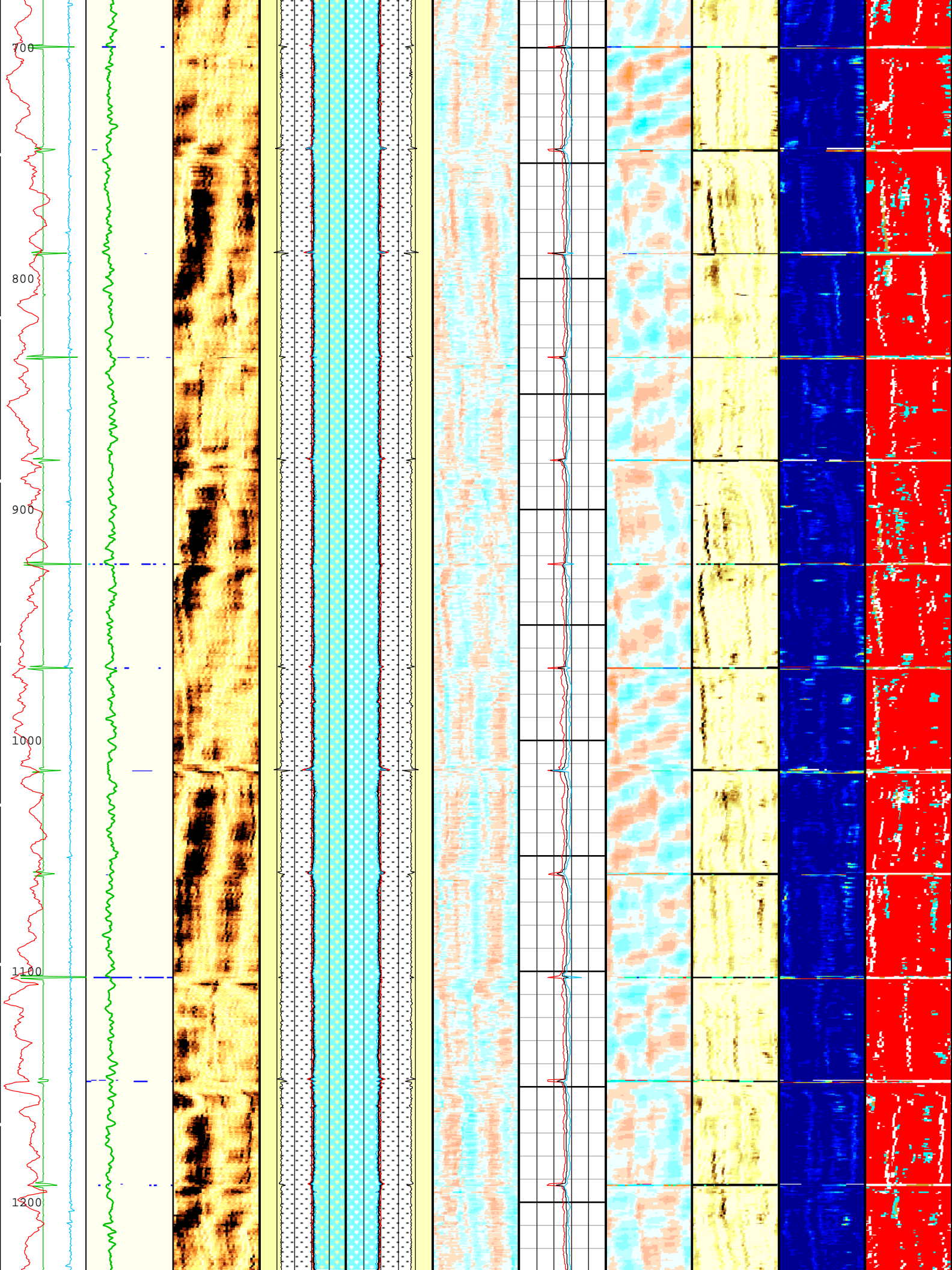
TIME_1900 - Time Marked every 60.00 (s)

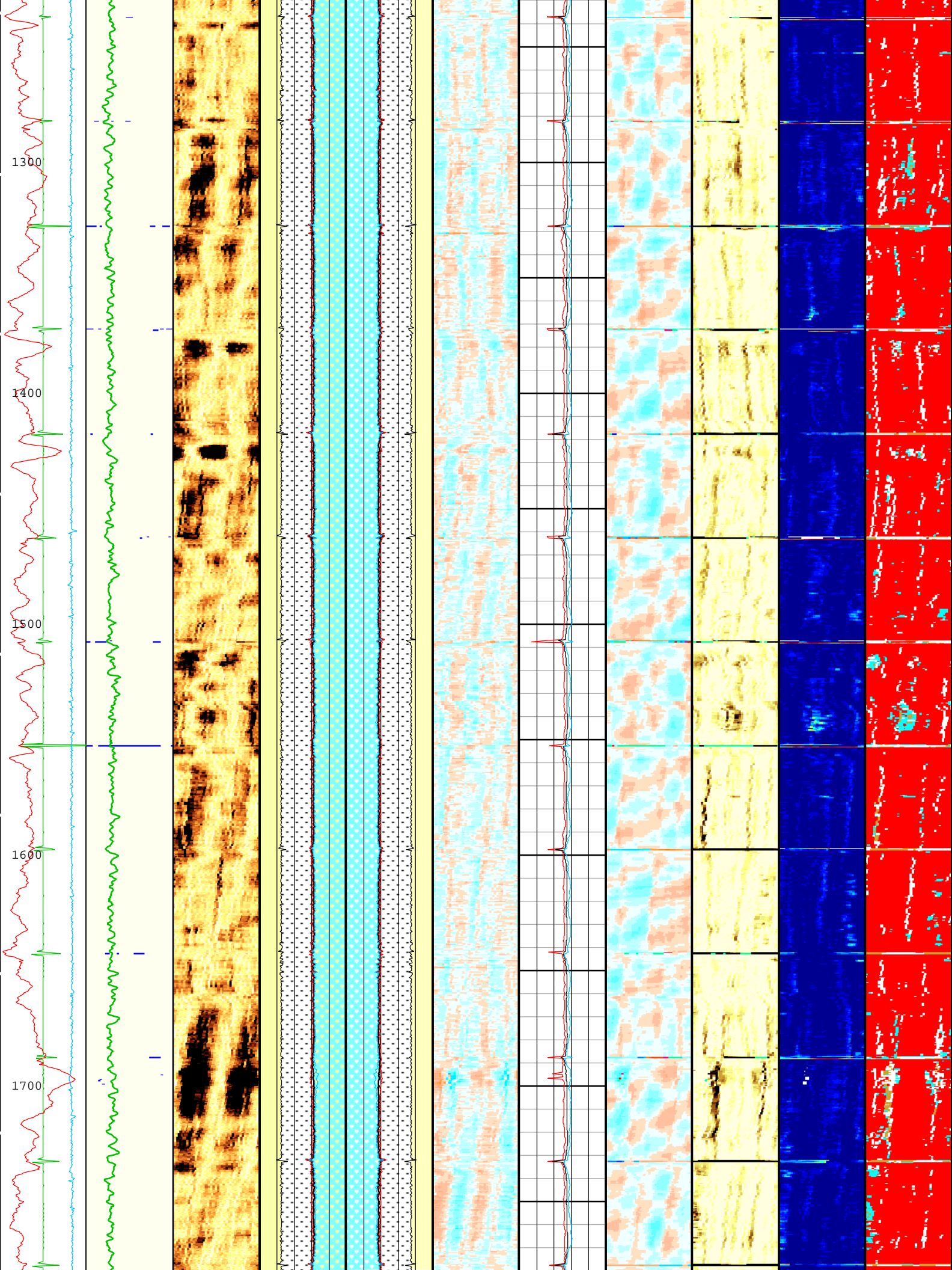
USIT Processing Flags (UFLG[0]) USIT-E

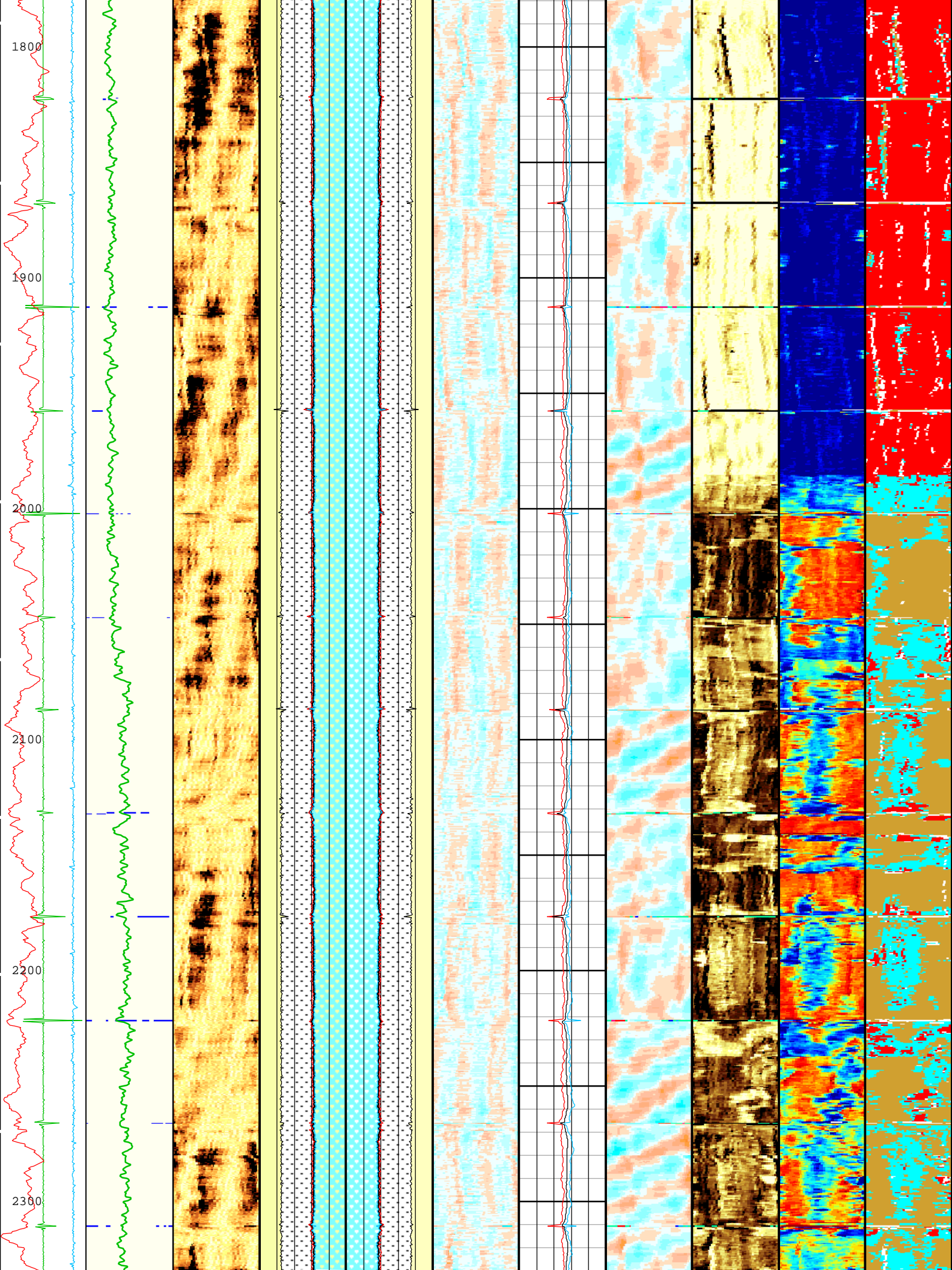
- 1 - UFLG 1 Value within [0.0 - 1.5] - :  UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - :  Pulse Origin Not Detected
- 3 - UFLG 3 Value within [2.5 - 3.5] - :  WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :  Casing Thickness Error
- 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5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

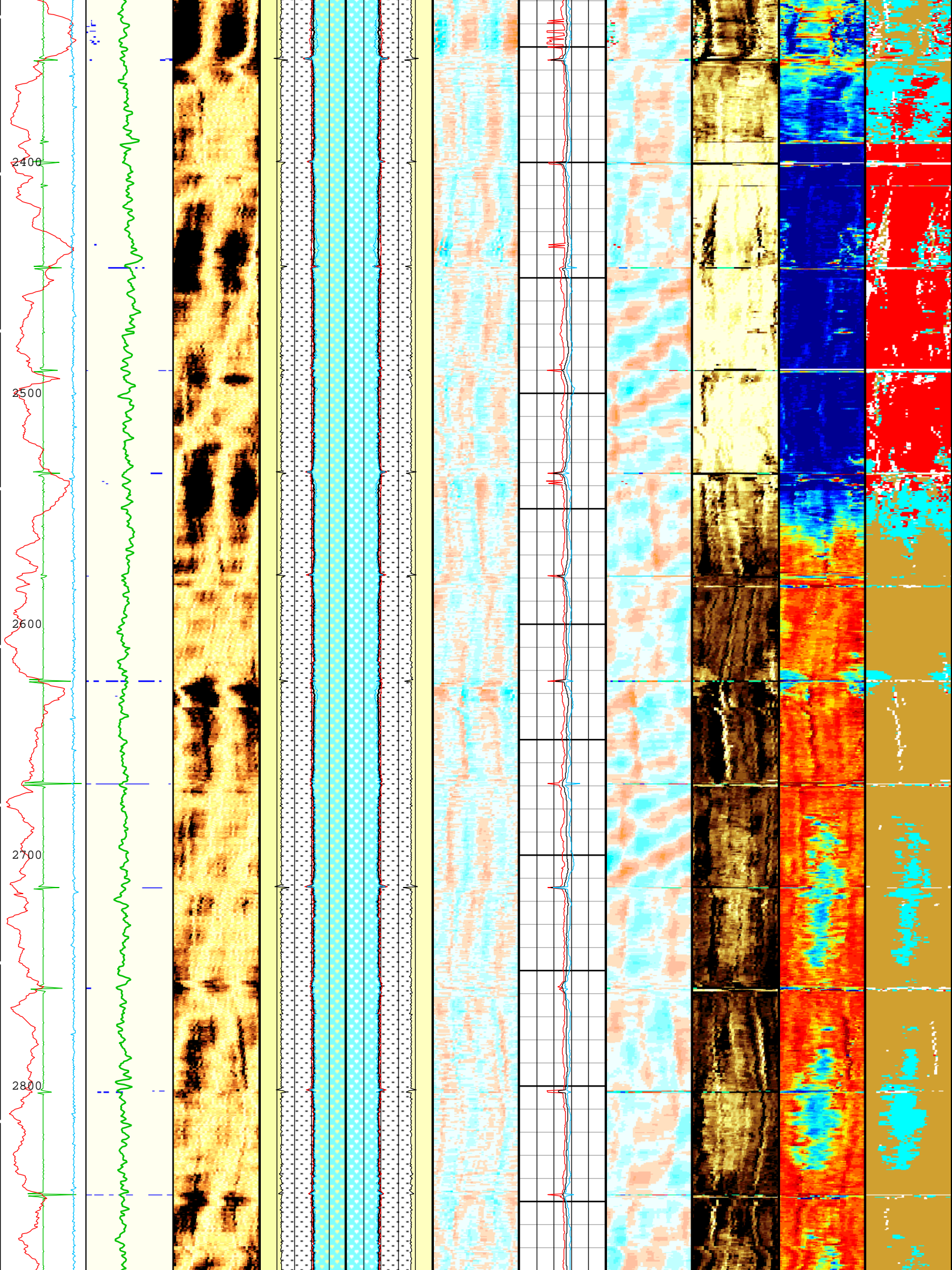


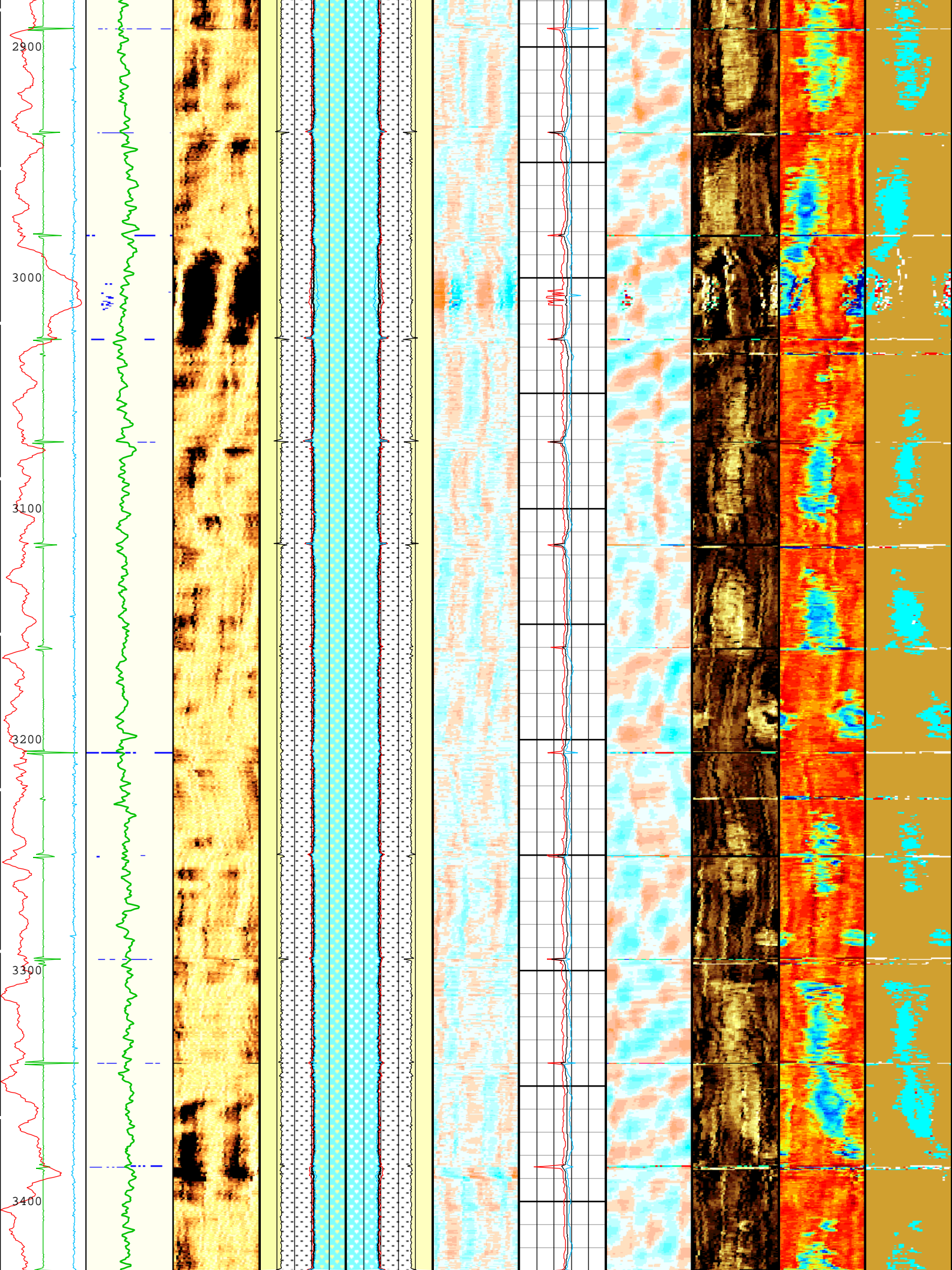


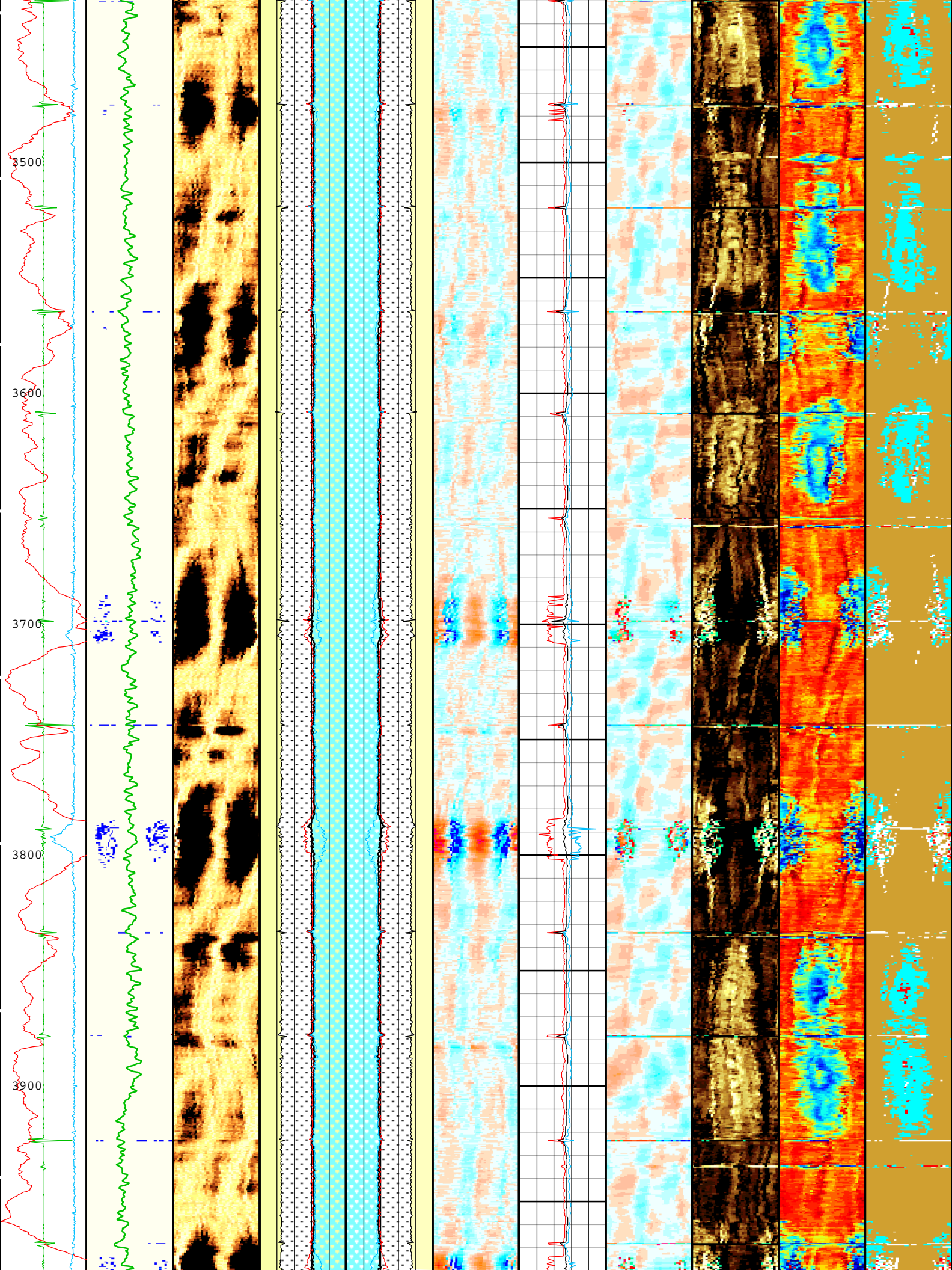


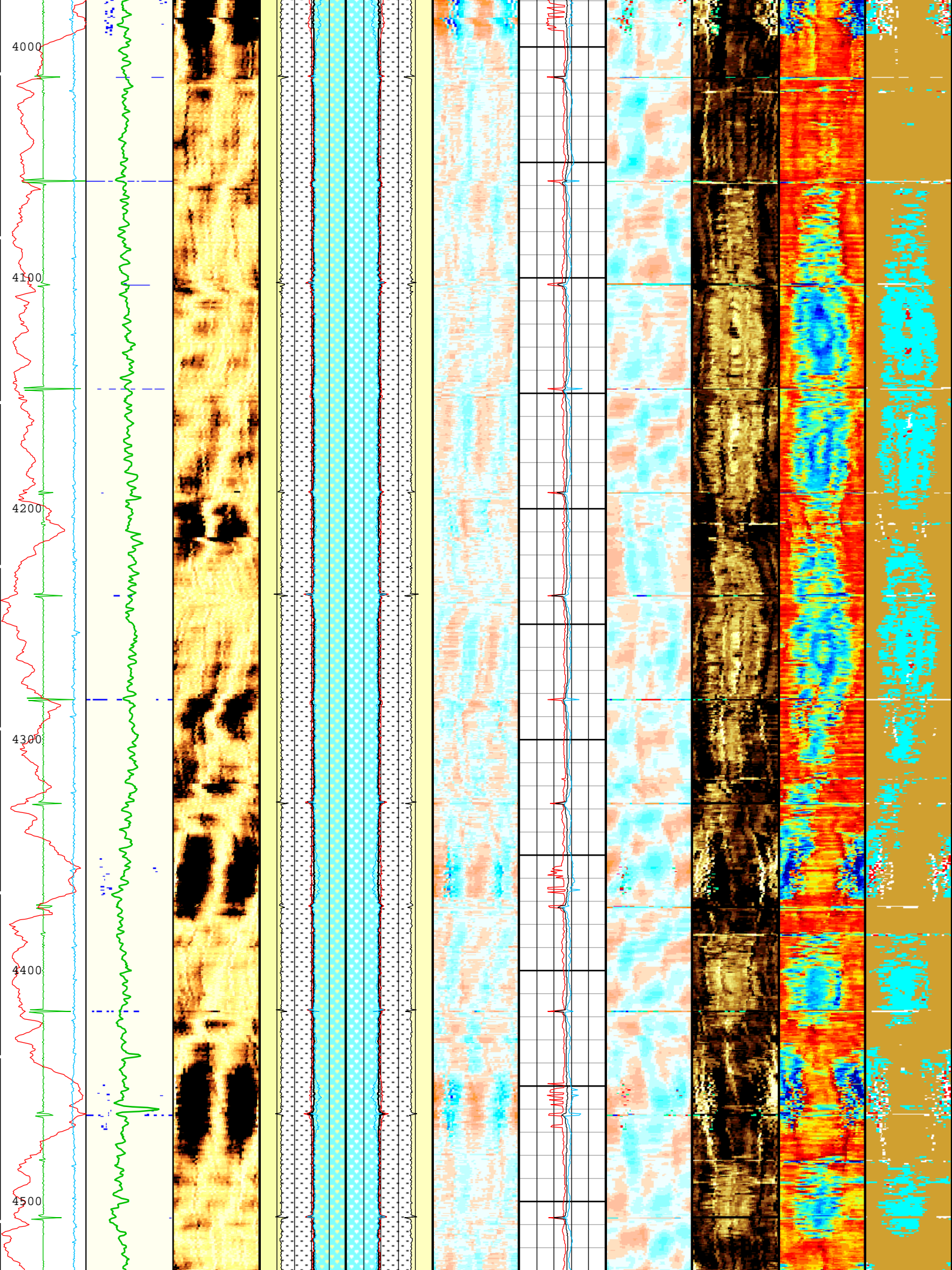


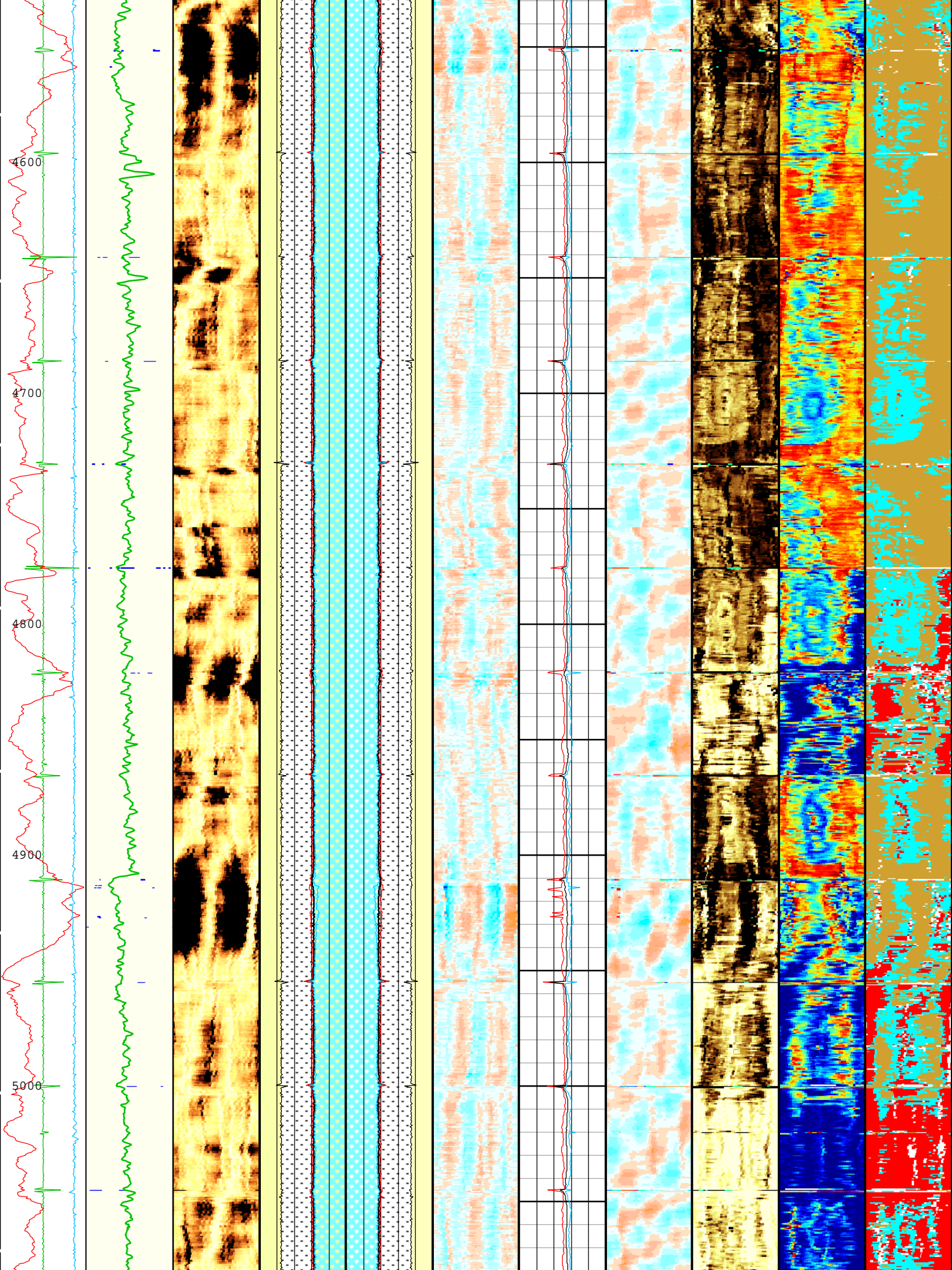


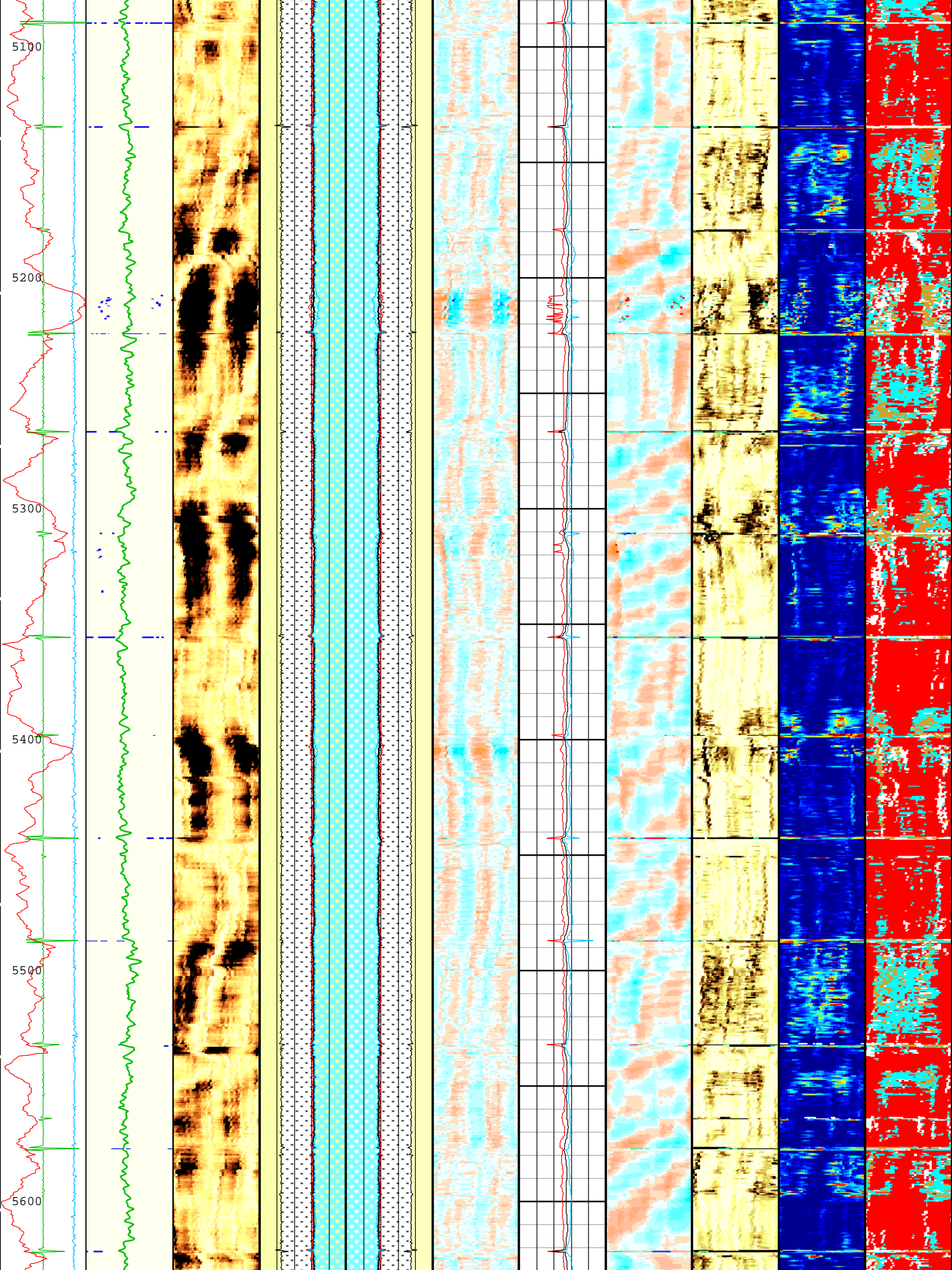


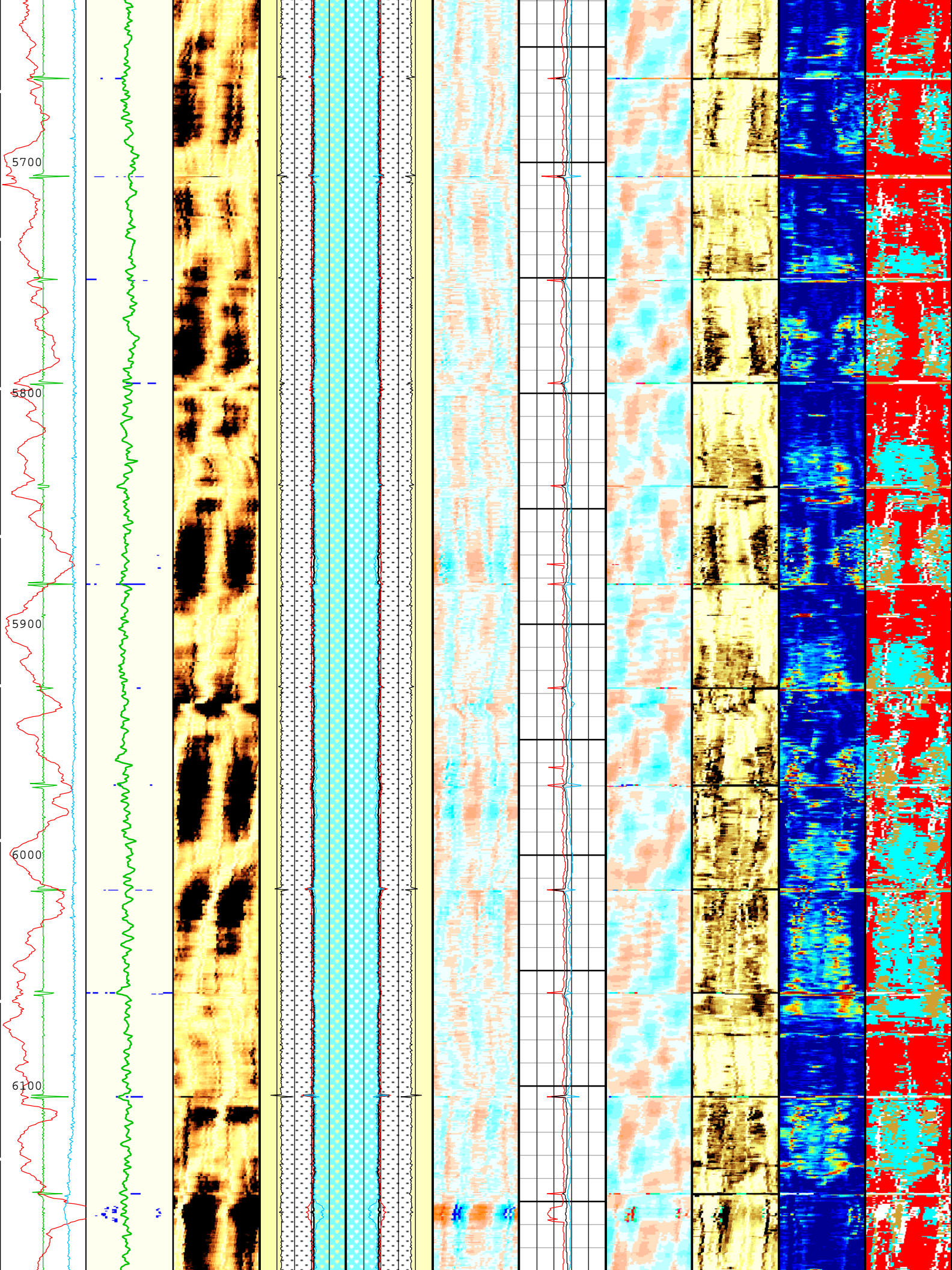


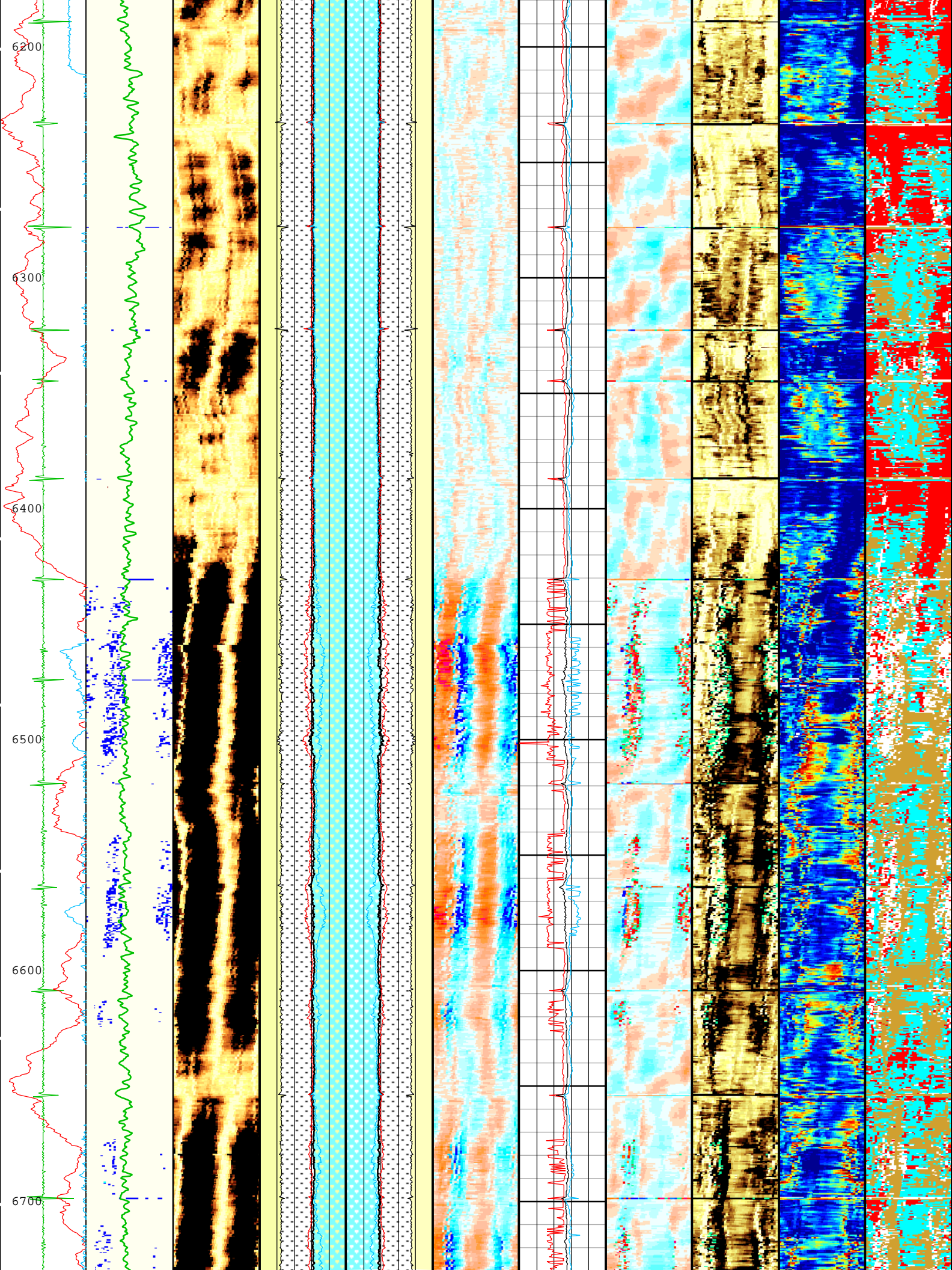


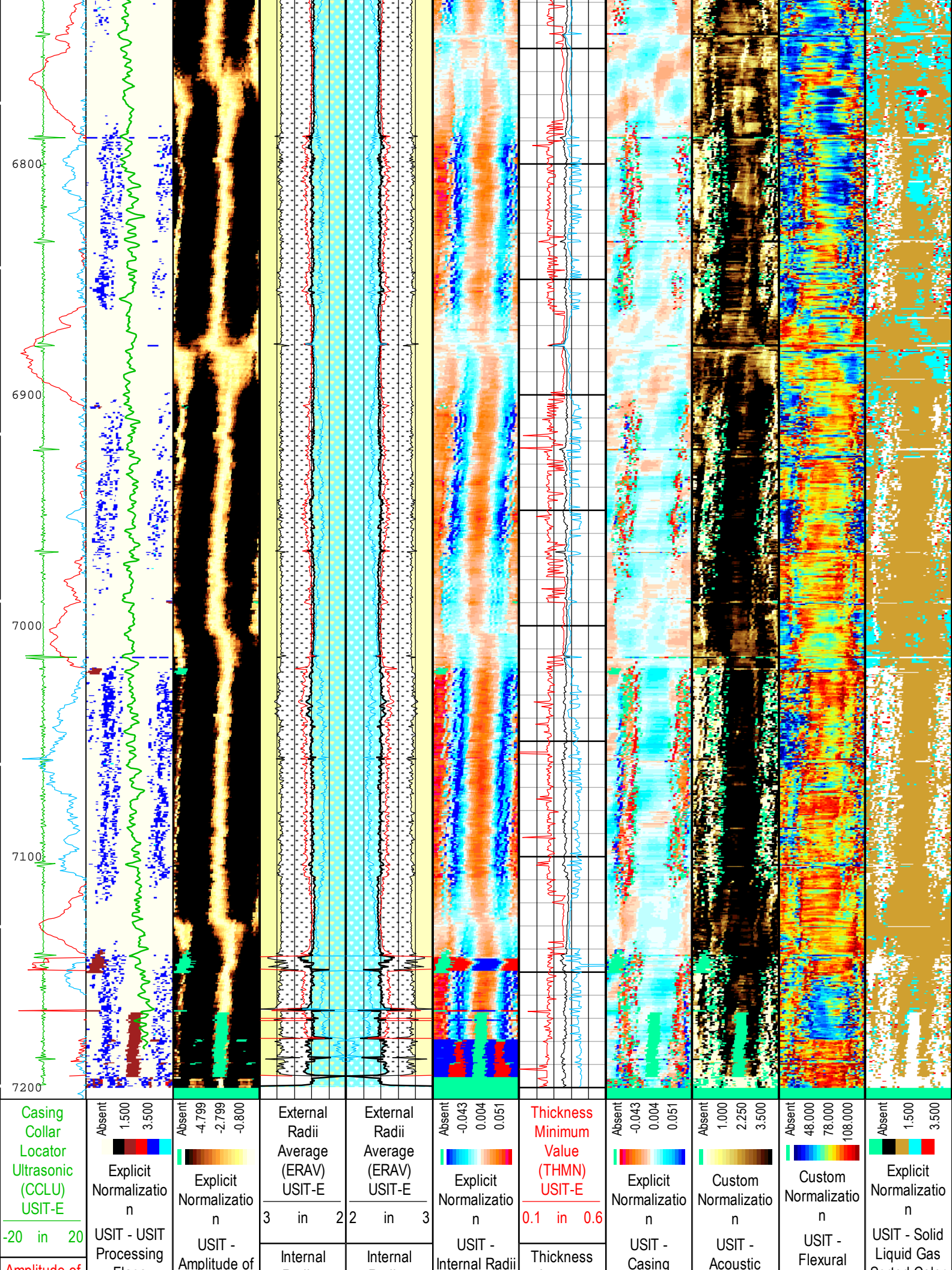

















Amplitude of Eccentering (ECCE) USIT-E 0 in 0.5	Flags (UFLG) USIT-E Orientation: Top of Hole U L B R U	Wave (AWBK) USIT-E (dB) Orientation: Top of Hole U L B R U	Radius Averaged Value (IRAV) USIT-E 3 in 2	Radius Averaged Value (IRAV) USIT-E 2 in 3	Normalized (IRBK) USIT-E (in) Orientation: Top of Hole U L B R U	Average Value (THAV) USIT-E 0.1 in 0.6	Thickness Normalized (THBK) USIT-E (in) Orientation: Top of Hole U L B R U	Impedance (AIBK) USIT-E (Mrayl) Orientation: Top of Hole U L B R U	Attenuation (UFAK) USIT-E (dB/m) Orientation: Top of Hole U L B R U	Sorted Color Map (USLP) USIT-E Orientation: Top of Hole U L B R U
Motor Revolution Speed (RSAV) USIT-E 6 c/s 7.5	USIT Processing Flags (UFLG[0]) USIT-E 1 5		Internal Radius Maximum Value (IRMX) USIT-E 3 in 2	Internal Radius Maximum Value (IRMX) USIT-E 2 in 3		Thickness Maximum Value (THMX) USIT-E 0.1 in 0.6				
	Gamma Ray (ECGR_EDT C) EDTC-B 0 gAPI 150		Internal Radius Minimum Value (IRMN) USIT-E 3 in 2	Internal Radius Minimum Value (IRMN) USIT-E 2 in 3						

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 Composite Format: Log (IBC SLG Composite) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 17-Dec-2017 16:29:41

Channel Processing Parameters				
ONE: Parameters				
Parameter	Description	Tool	Value	Unit
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	7200	ft
CDEN	Cement Density	USIT-E	12	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CENT)	Cement Type	USIT-E	Light 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	10	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_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	Inversion Norm.	
ICE_PROCESS	ICE Processing	USIT-E	Yes	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	Depth Zoned	us
MUD_N_INV	IBC Inversion Mud Normalization Factor	USIT-E	1.18	

U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.8	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	20.11	dB/m
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.3	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	12.25	40.5	2075
BS	8.5	2075	7200
MEAS_WLEN	22.44	40.5	7200
MEAS_WLEN	20	7200	7205

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	18	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	
U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	Time Zoned	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	Time Zoned	us
UPAT	USIT Emission Pattern	USIT-E	Pattern 375 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	
WINB	Window Begin Time	USIT-E	Time Zoned	us
WINE	Window End Time	USIT-E	Time Zoned	us

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	120	09-Dec-2017 10:44:45	09-Dec-2017 10:56:53	7205.83	6348.95
EMXV	90	09-Dec-2017 10:56:53	09-Dec-2017 10:58:47	6348.95	6215.97
EMXV	80	09-Dec-2017 10:58:47	09-Dec-2017 10:58:52	6215.97	6209.92
EMXV	60	09-Dec-2017 10:58:52	09-Dec-2017 11:26:07	6209.92	4358.06
EMXV	120	09-Dec-2017 11:26:07	09-Dec-2017 11:26:26	4358.06	4334.88
EMXV	80	09-Dec-2017 11:26:26	09-Dec-2017 11:26:50	4334.88	4307.27
EMXV	70	09-Dec-2017 11:26:50	09-Dec-2017 12:28:16	4307.27	61.98
U-USIT_UFWB	136	09-Dec-2017 10:44:45	09-Dec-2017 10:47:18	7205.83	7037.95
U-USIT_UFWB	107.06	09-Dec-2017 10:47:18	09-Dec-2017 12:28:16	7037.95	61.98
U-USIT_UFWE	176	09-Dec-2017 10:44:45	09-Dec-2017 10:47:36	7205.83	7017.42
U-USIT_UFWE	175.89	09-Dec-2017 10:47:36	09-Dec-2017 12:28:16	7017.42	61.98
U-USIT_UNWB	105	09-Dec-2017 10:44:45	09-Dec-2017 10:47:22	7205.83	7033.25
U-USIT_UNWB	71.6	09-Dec-2017 10:47:22	09-Dec-2017 12:28:16	7033.25	61.98

U-USIT_UNWE	145	09-Dec-2017 10:44:45	09-Dec-2017 10:47:30	7205.83	7023.8
U-USIT_UNWE	149.82	09-Dec-2017 10:47:30	09-Dec-2017 12:28:16	7023.8	61.98
WINB	31.17	09-Dec-2017 10:44:45	09-Dec-2017 10:45:27	7205.83	7168.14
WINB	21.15	09-Dec-2017 10:45:27	09-Dec-2017 12:28:16	7168.14	61.98
WINE	71.17	09-Dec-2017 10:44:45	09-Dec-2017 10:44:57	7205.83	7201.65
WINE	220	09-Dec-2017 10:44:57	09-Dec-2017 10:45:02	7201.65	7197.26
WINE	122.1	09-Dec-2017 10:45:02	09-Dec-2017 10:45:08	7197.26	7190.57
WINE	105.28	09-Dec-2017 10:45:08	09-Dec-2017 10:45:16	7190.57	7180.63
WINE	80.8	09-Dec-2017 10:45:16	09-Dec-2017 10:45:21	7180.63	7174.93
WINE	76.98	09-Dec-2017 10:45:21	09-Dec-2017 10:45:41	7174.93	7151.28
WINE	66.27	09-Dec-2017 10:45:41	09-Dec-2017 10:45:59	7151.28	7131.34
WINE	70.1	09-Dec-2017 10:45:59	09-Dec-2017 10:46:01	7131.34	7128.13
WINE	76.98	09-Dec-2017 10:46:01	09-Dec-2017 10:47:32	7128.13	7021.59
WINE	67.04	09-Dec-2017 10:47:32	09-Dec-2017 10:47:59	7021.59	6990.06
WINE	69.33	09-Dec-2017 10:47:59	09-Dec-2017 10:48:04	6990.06	6983.95
WINE	76.22	09-Dec-2017 10:48:04	09-Dec-2017 10:49:00	6983.95	6916.23
WINE	71.63	09-Dec-2017 10:49:00	09-Dec-2017 10:49:07	6916.23	6908.05
WINE	67.04	09-Dec-2017 10:49:07	09-Dec-2017 10:49:19	6908.05	6894.25
WINE	72.39	09-Dec-2017 10:49:19	09-Dec-2017 10:49:40	6894.25	6868.17
WINE	76.22	09-Dec-2017 10:49:40	09-Dec-2017 12:28:16	6868.17	61.98

All depth are at tool zero.

ONE

IBC Goodwin Compressed

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[4]:Up	Up	61.98 ft	7205.83 ft	09-Dec-2017 10:44:45 AM	09-Dec-2017 12:28:16 PM	ON	4.17 ft	Yes

All depths are referenced to toolstring zero

Log

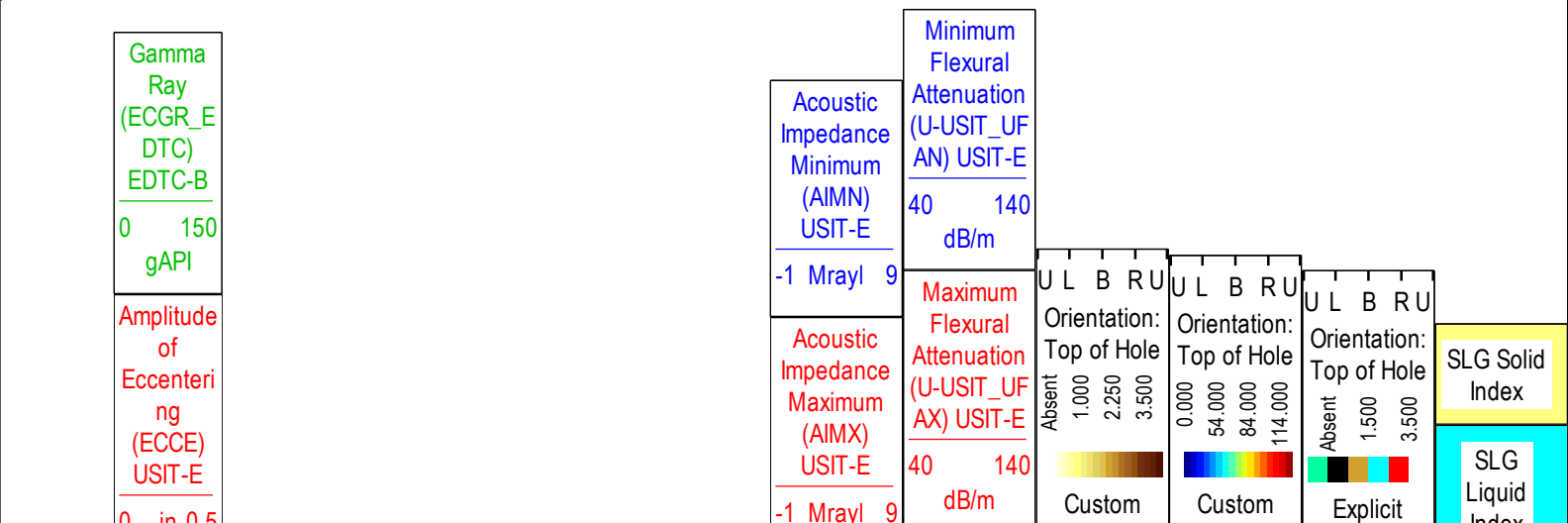
Company:CRESTONE PEAK RESOURCES OPERATING LLC

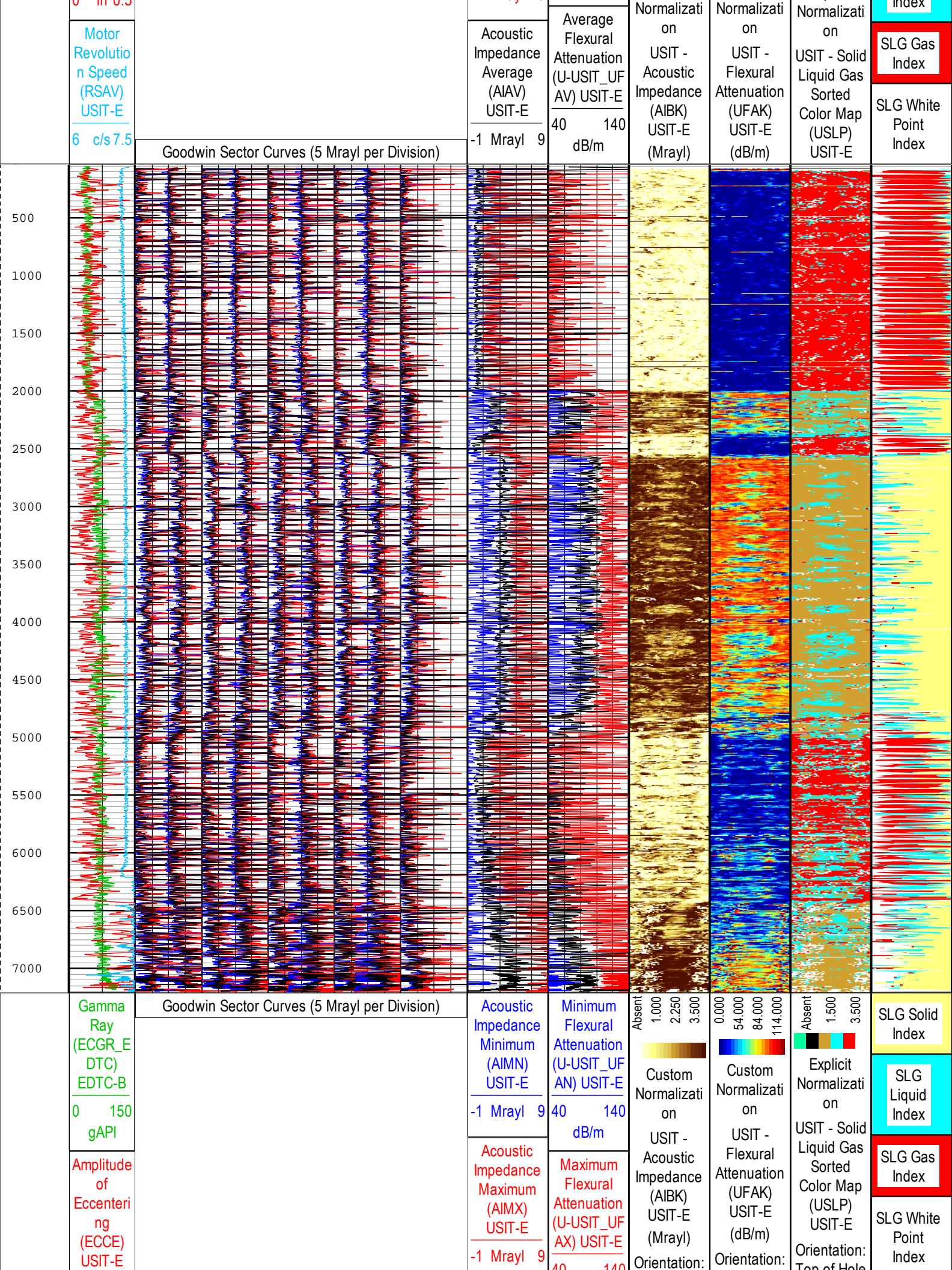
Well:KIYOTA 40-35H-O367

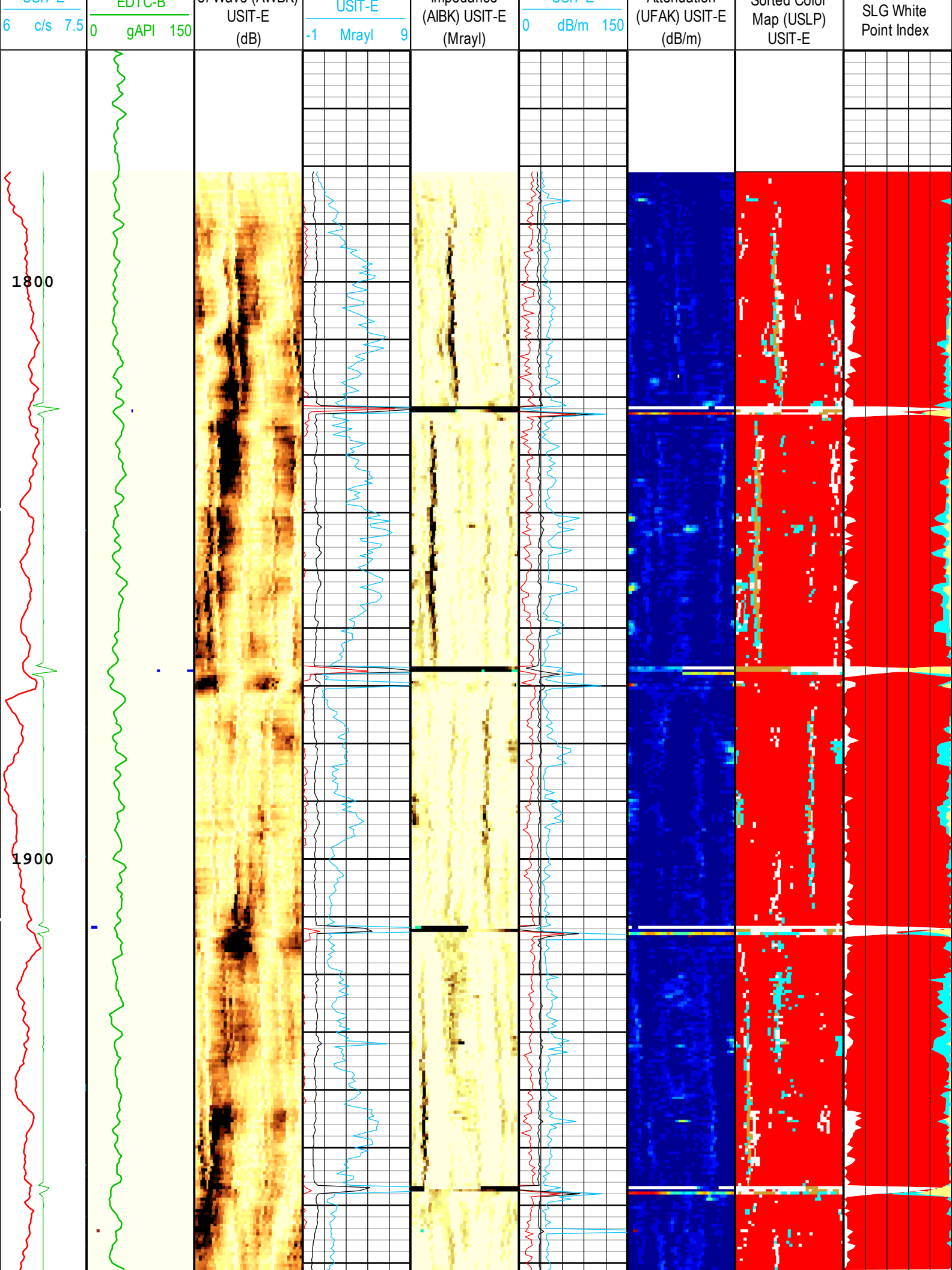
ONE: Log[4]:Up:S013

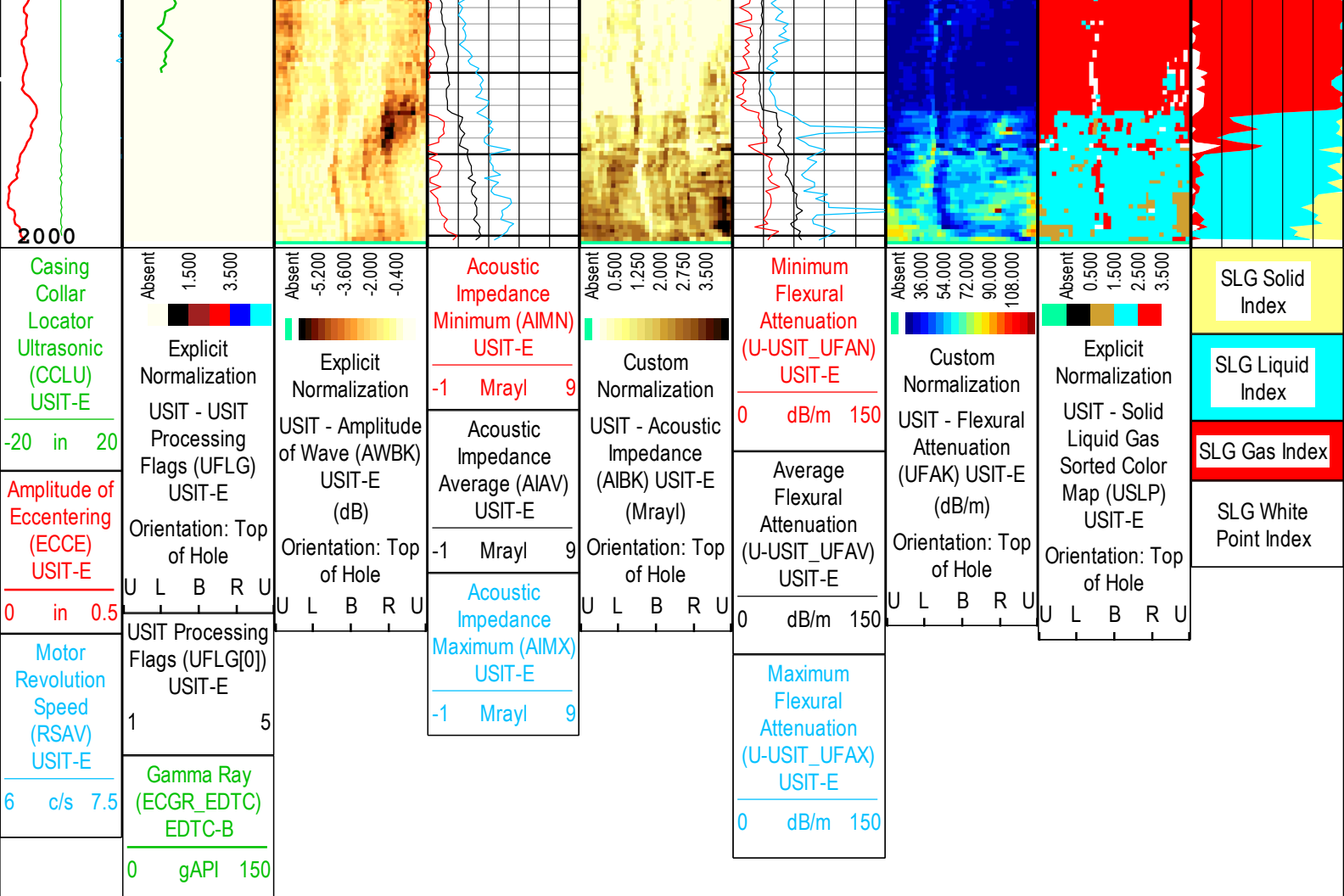
Description: USI Goodwin Format: Log (IBC Goodwin) Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 17-Dec-2017 16:29:54

TIME_1900 - Time Marked every 60.00 (s)














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 Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 17-Dec-2017 16:30:03

Channel Processing Parameters				
ONE: Parameters				
Parameter	Description	Tool	Value	Unit
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	12.25	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	7200	ft
CDEN	Cement Density	USIT-E	12	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Light 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	10	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	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	Inversion Norm.	
ICE_PROCESS	ICE Processing	USIT-E	Yes	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	22.44	us
MUD_N_INV	IBC Inversion Mud Normalization Factor	USIT-E	1.18	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1	
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
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	1.8	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	20.11	dB/m
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
USI_RPLUS	Ultrasonic R+ Processing	USIT-E	No	
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	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.3	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	18	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	
U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	136	us

U-USIT_UFWE	Far Receiver Window End Time	USIT-E	176	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	105	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	145	us
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 375 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	
WINB	Window Begin Time	USIT-E	31.17	us
WINE	Window End Time	USIT-E	71.17	us

Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	80	09-Dec-2017 10:19:36	09-Dec-2017 10:22:10	2002.3	1826.27
EMXV	60	09-Dec-2017 10:22:10	09-Dec-2017 10:22:47	1826.27	1781.76

All depth are at tool zero.

ONE

IBC SLG Composite

Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[2]:Up	Up	1781.76 ft	2002.30 ft	09-Dec-2017 10:19:36 AM	09-Dec-2017 10:22:47 AM	ON	2.73 ft	Yes

All depths are referenced to toolstring zero

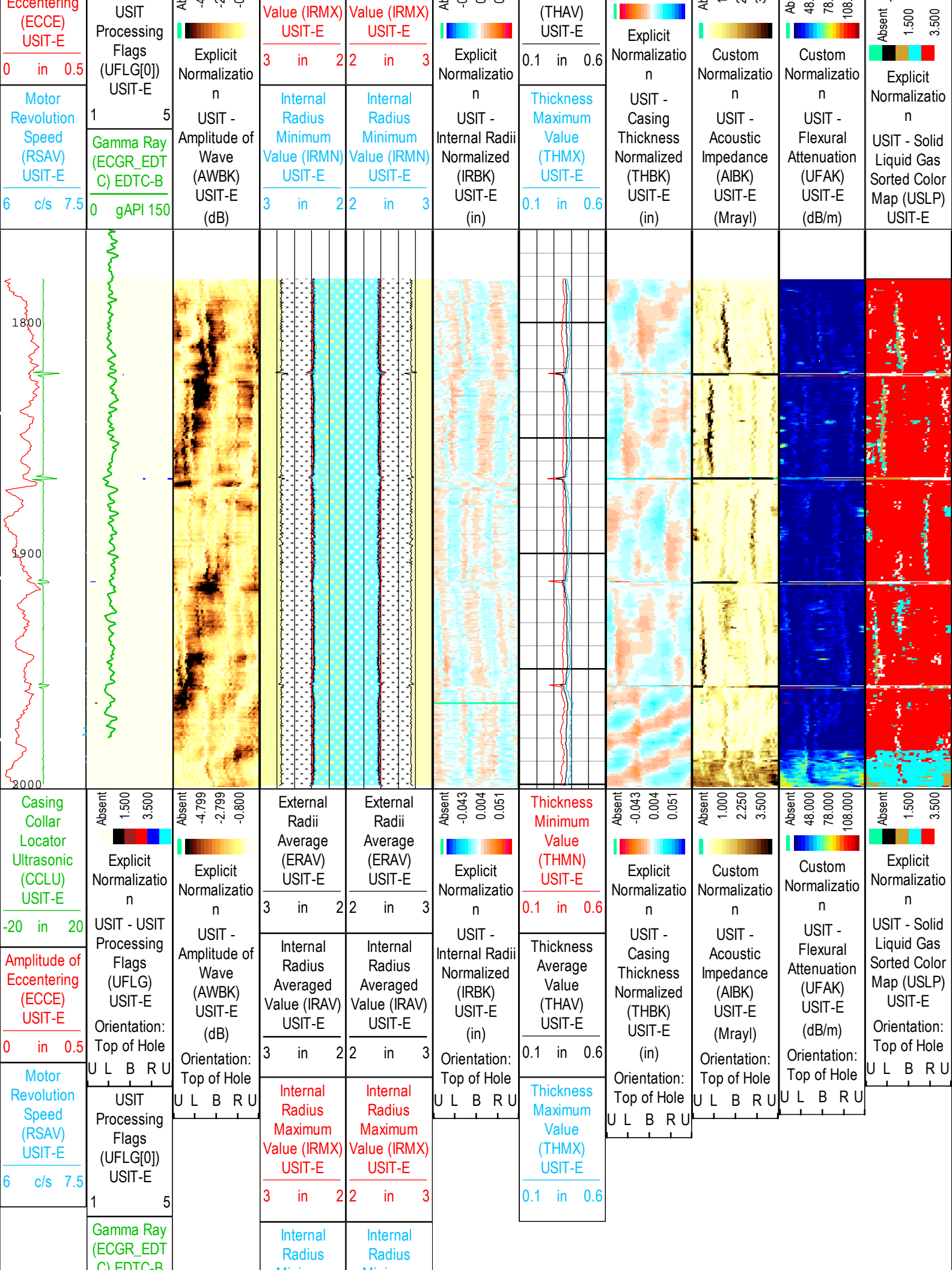
Log	Company:CRESTONE PEAK RESOURCES OPERATING LLC Well:KIYOTA 40-35H-O367 ONE: Log[2]:Up:S013
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Description: USI IBC SLG Composite Format: Log (IBC SLG Composite) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 17-Dec-2017 16:30:10

TIME_1900 - Time Marked every 60.00 (s)

USIT Processing Flags (UFLG[0]) USIT-E	
1 - UFLG 1 Value within [0.0 - 1.5] - :	<div></div> UTIM Error
2 - UFLG 2 Value within [1.5 - 2.5] - :	<div></div> Pulse Origin Not Detected
3 - UFLG 3 Value within [2.5 - 3.5] - :	<div></div> WINLEN Error
4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :	<div></div> Casing Thickness Error
5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :	<div></div> Loop Processing Error

		External Radii Average (ERAV) USIT-E		External Radii Average (ERAV) USIT-E					
		3	in	2	2	in	3		
		Internal Radius Averaged Value (IRAV) USIT-E		Internal Radius Averaged Value (IRAV) USIT-E					
		3	in	2	2	in	3		
		Internal Radius Maximum		Internal Radius Maximum					



<div> <div>0</div> <div>gAPI 150</div> </div>	<div> <div>Minimum</div> <div>Value (IRMN) USIT-E</div> <div>3 in 2</div> </div>	<div> <div>Minimum</div> <div>Value (IRMN) USIT-E</div> <div>2 in 3</div> </div>
USIT Processing Flags (UFLG[0]) USIT-E <div> <div>1 - UFLG 1 Value within [0.0 - 1.5] - :</div> <div>2 - UFLG 2 Value within [1.5 - 2.5] - :</div> <div>3 - UFLG 3 Value within [2.5 - 3.5] - :</div> <div>4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :</div> <div>5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :</div> </div> <div> <div>UTIM Error</div> <div>Pulse Origin Not Detected</div> <div>WINLEN Error</div> <div>Casing Thickness Error</div> <div>Loop Processing Error</div> </div>		
TIME_1900 - Time Marked every 60.00 (s)		
Description: USI IBC SLG Composite Format: Log (IBC SLG Composite) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 17-Dec-2017 16:30:10		

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	12.25	in
CBLO	Casing Bottom (Logger)	WLSESSION	7200	ft
CDEN	Cement Density	USIT-E	12	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CENT)	Cement Type	USIT-E	Light 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	10	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_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	Inversion Norm.	
ICE_PROCESS	ICE Processing	USIT-E	Yes	
IMAR	Image Rotation	USIT-E	RB	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	22.44	us
MUD_N_INV	IBC Inversion Mud Normalization Factor	USIT-E	1.18	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.8	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	20.11	dB/m
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.3	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

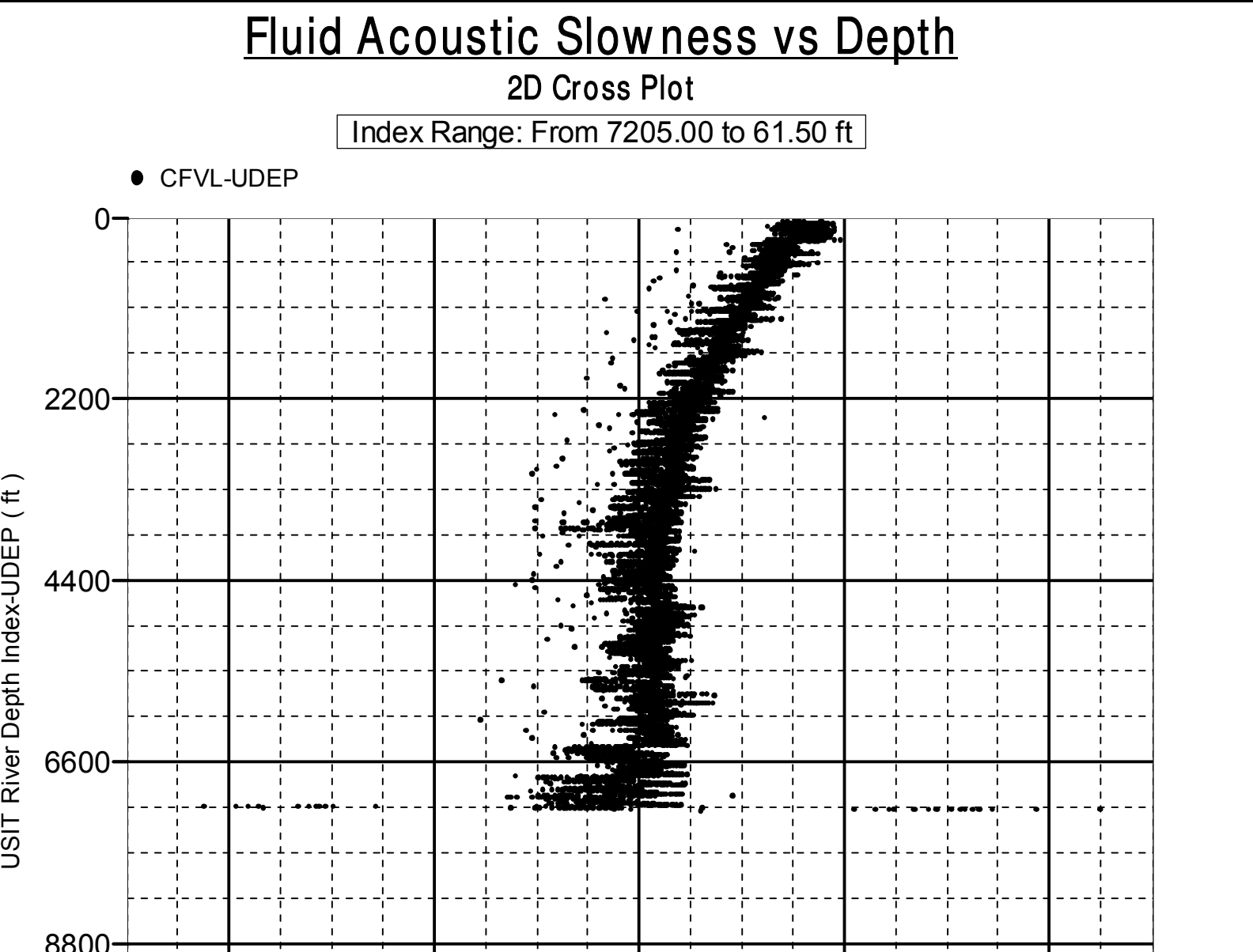
Tool Control Parameters

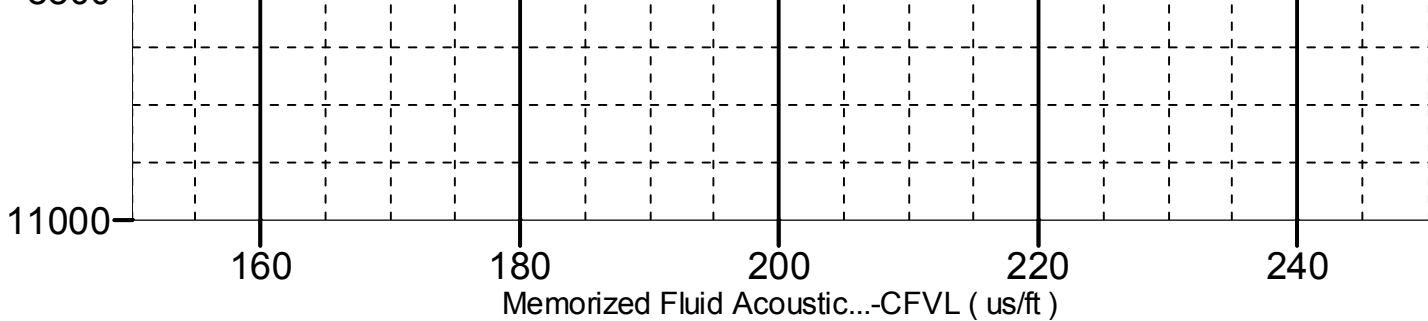
ONE: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	18	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V

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	
U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	136	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	176	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	105	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	145	us
UPAT	USIT Emission Pattern	USIT-E	Pattern 375 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	
WINB	Window Begin Time	USIT-E	31.17	us
WINE	Window End Time	USIT-E	71.17	us

Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	80	09-Dec-2017 10:19:36	09-Dec-2017 10:22:10	2002.3	1826.27
EMXV	60	09-Dec-2017 10:22:10	09-Dec-2017 10:22:47	1826.27	1781.76
All depth are at tool zero.					
XYZ	Company:CRESTONE PEAK RESOURCES OPERATING LLC Well:KIYOTA 40-35H-O367 ONE: Log[4]:Up:S013				





XYZ

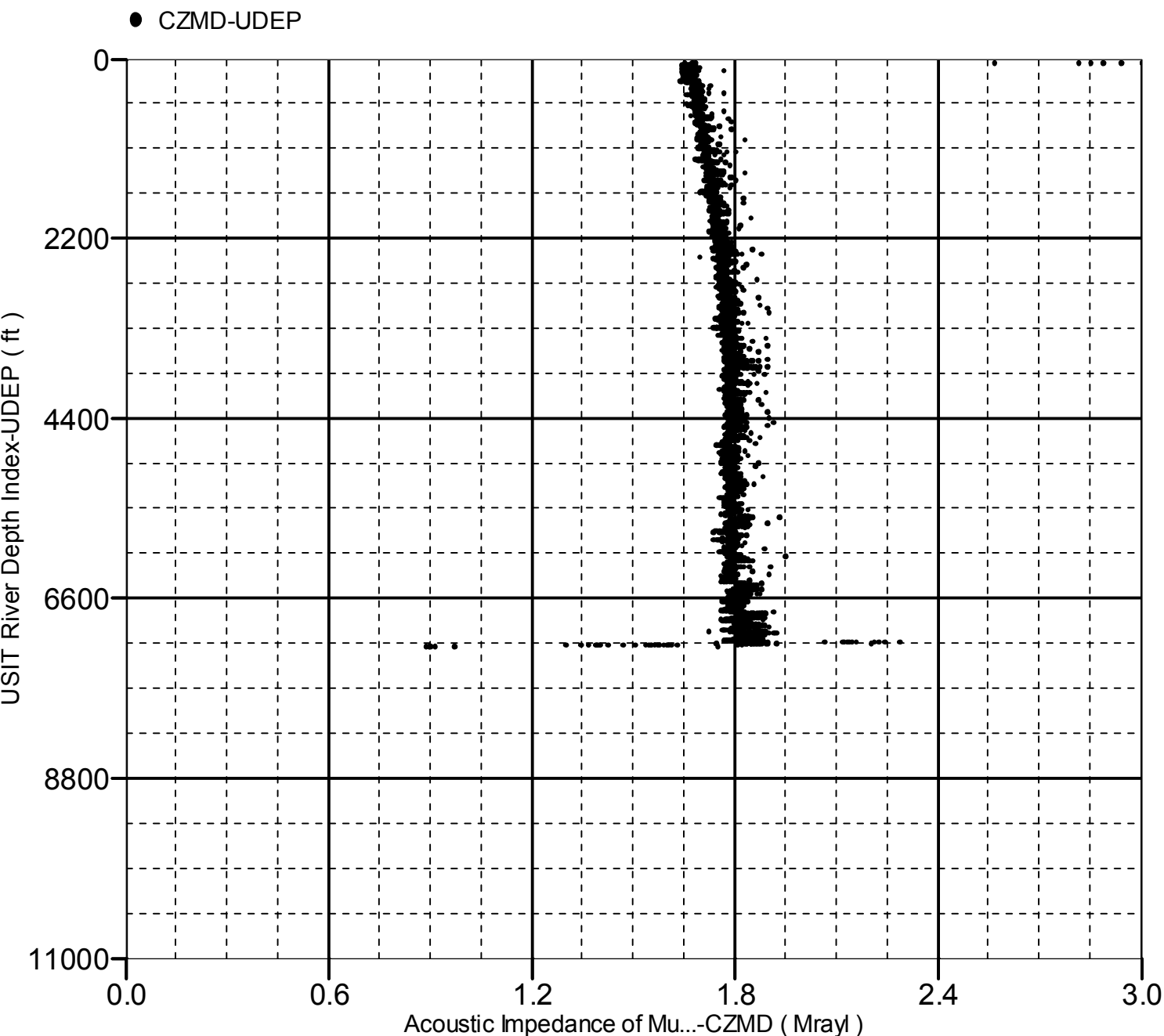
Company:CRESTONE PEAK RESOURCES OPERATING LLC Well:KIYOTA 40-35H-O367

ONE: Log[4]:Up:S013

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 7205.00 to 61.50 ft



Company: CRESTONE PEAK RESOURCES OPERATING LLC

Schlumberger

Well: KIYOTA 4O-35H-O367

Field: WATTENBERG

County:	WELD
State:	COLORADO
Isolation Scanner	
Cement Evaluation	
Gamma Ray - CCL Log	