

Company: Crestone Peak Resources Operating LLC

Well: Davis 1G-9H-G266

Field: Wattenberg

County: Weld State: Colorado

Isolation Scanner
Cement Evaluation
Gamma Ray - CCL Log

County: Weld
Field: Wattenberg
Location: SWSE Sec. 9, T2N, R66W
Well: Davis 1G-9H-G266
Company: Crestone Peak Resources Operating LLC

Location:		SWSE Sec. 9, T2N, R66W SHL: 1934' FSL & 1408' FEL Lat/Long: 40.154511, -104.777840	Elev.: K.B. 4940.00 ft G.L. 4917.00 ft D.F. 4940.00 ft
Permanent Datum:		Ground Level	Elev.: 4917.00 f
Log Measured From:		Kelly Bushing	23.00 ft above Perm.Datum
Drilling Measured From:		Kelly Bushing	
API Serial No.	Section:	Township:	Range:
05-123-46507	9	2N	66W

Logging Date 20-Sep-2018

Run Number ONE

Depth Driller 14892.00 ft

Schlumberger Depth 14892.00 ft

Bottom Log Interval 6803.00 ft

Top Log Interval 63.00 ft

Casing Fluid Type Water

Salinity

Density 8.4 lbm/gal

Fluid Level 0.00 ft

BIT/CASING/TUBING STRING

Bit Size 8.50 in

From 2130.00 ft

To 14892.00 ft

Casing/Tubing Size 5.5 in

Weight 20 lbm/ft

Grade P110

From 0.00 ft

To 14892.00 ft

Max Recorded Temperatures 200.2 degF

Logger on Bottom 20-Sep-2018

Unit Number 9108

Recorded By A.BLOCHOWICZ

Witnessed By DUANE DUNN

Disclaimer

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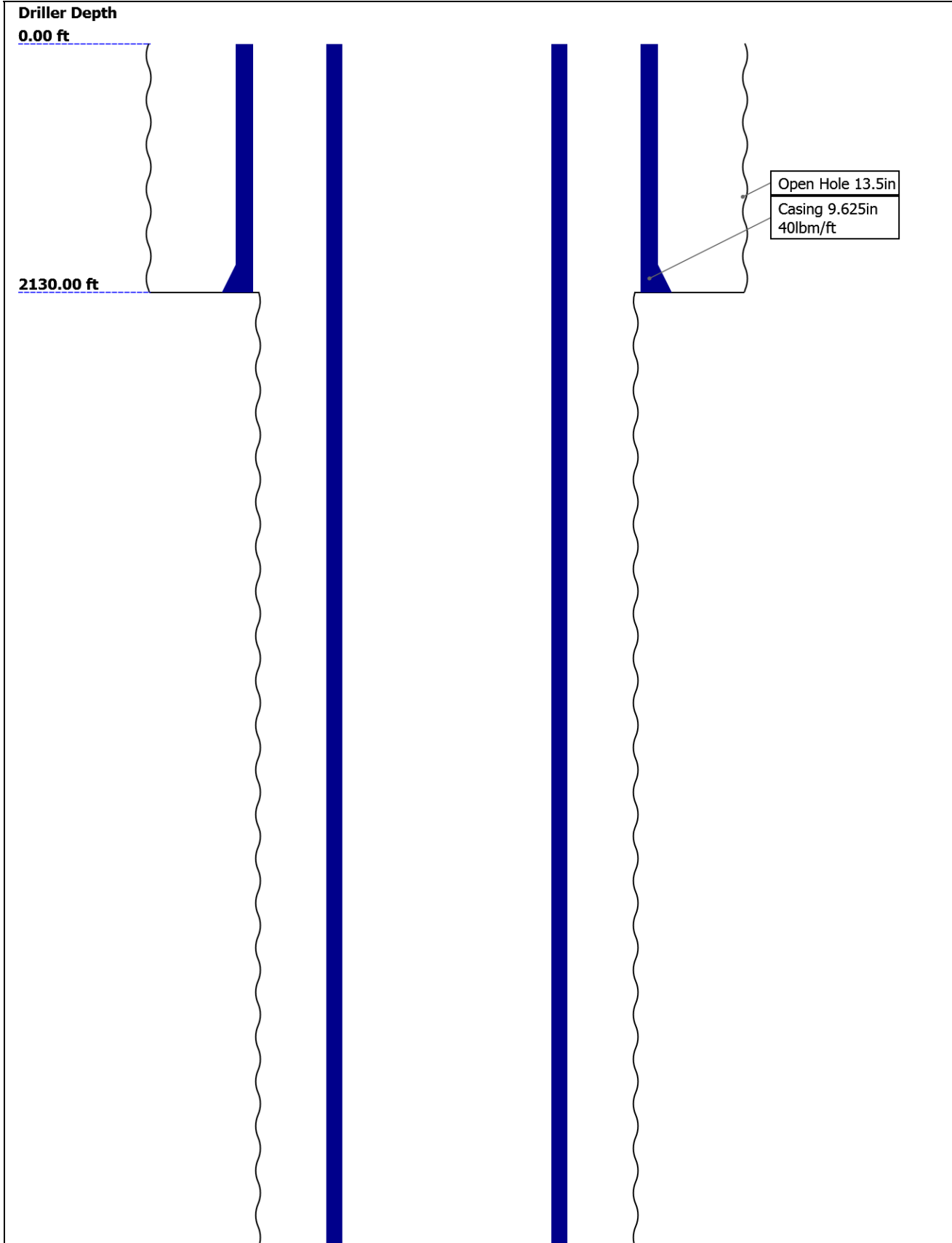
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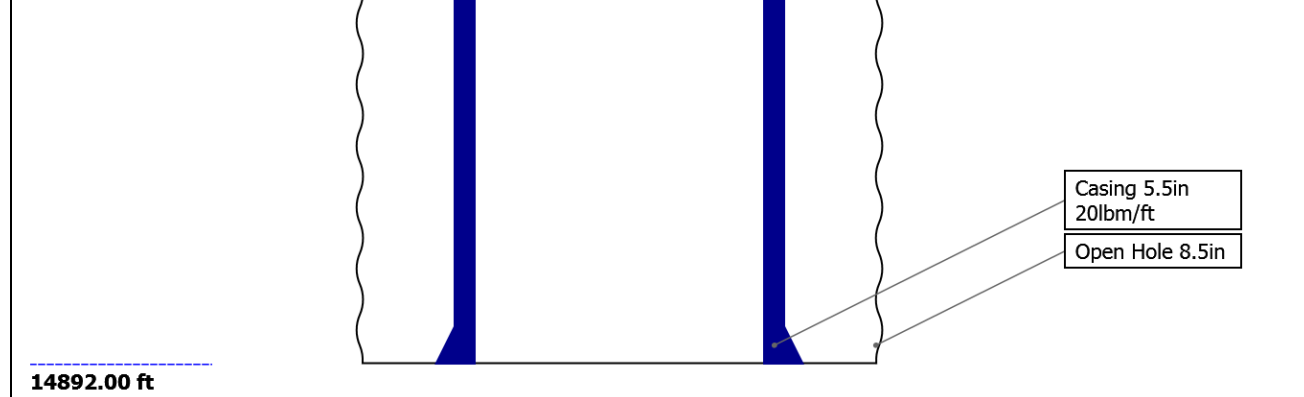
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Well Sketch

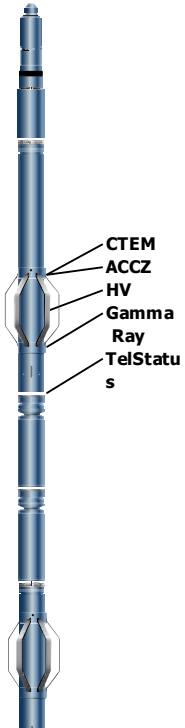


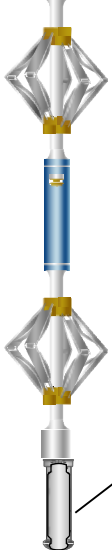


Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	13.5	8.5				
Top Driller (ft)	0	2130				
Top Logger (ft)	0	2130				
Bottom Driller (ft)	2130	14892				
Bottom Logger (ft)	2130	14892				
Casing						
Size (in)	9.625	5.5				
Weight (lbm/ft)	40	20				
Inner Diameter (in)	8.835	4.778				
Grade	J55	P110				
Top Driller (ft)	0	0				
Top Logger (ft)	0	0				
Bottom Driller (ft)	2130	14892				
Bottom Logger (ft)	2130	14892				

Remarks and Equipment Summary

ONE: Toolstring			ONE: Remarks	
Equip name LEH-QT LEH-QT	Length 30.73	MP name Offset	Thank you for choosing Schlumberger!	
EDTC-B:8 473M EDTH-B:86 24 EDTG-A:7 7434 EDTC-B:84 73M	27.24		Tool string run as per tool sketch and client logging program.	
			5" Gemcos and in-line centralizaers with small hole kit used for centralization.	
			All passes run under 0 PSI	
			Lead: 12.5 ppg Tail: 13.5 ppg Spacer: 12 ppg	
			Data near bottom of interval affected by deviation and dogleg severity.	
AH-184[2]:5941	20.74			
AH-184[1]:5965	18.74			
USIT-E:1725 ECH-MFA: 1991 USAC-A:1 725 USIT-A:18	16.74			

USIS-A:18 32 USSC-B:17 78 IBCS-A:76 3 FAR-SENS OR:4690 IBC-TX NEAR-SEN SOR:4722 IBC-TX USI-SENS OR:4687 IBC-TX EMITTER- SENSOR:4 684 IBC-TX	 <p>USI Sensor Head Tension TOOL_ZERO</p> <p>Lengths are in ft Maximum Outer Diameter = 5.000 in Line: Sensor Location, Value: Gating Offset All measurements are relative to TOOL_ZERO</p>	
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Depth Summary			
		ONE	
Depth Measuring Device			
Type	IDW-JA		
Serial Number	6455		
Calibration Date	26-JUL-2018		
Calibrator Serial Number	IDWC-C-57		
Calibration Cable Type	7-32 ASXS		
Wheel Correction 1	-1		
Wheel Correction 2	1		
Tension Device			
Type	CMTD-B/A		
Serial Number	1703		
Calibration Date	29-Jul-2018		
Calibrator Serial Number	88310A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	6		
Calibration Peak Error	9		
Logging Cable			
Type	7-32AS-XS		
Serial Number	U718001		
Length	20000.00 ft		
Conveyance Type	Wireline		
Rig Type	Crane USA		
ONE:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	All Schlumberger depth control policies followed.	
Rig Up Length At Surface		IDW used as primary depth reference.	
Rig Up Length At Bottom		Z-chart used as secondary depth reference.	
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[4]:Up	6808.18	56

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 = "FreePipe Norm."
Free Pipe normalization zone is : 40.37m(132.44ft) to 44.30m(145.36ft)
MUD_N_FRP = 1.21
DFD = 1.01g/cm3(8.40lbm/gal)
CZMD median computed in free pipe normalization interval = 1.67 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 SP2	8.2.104493.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[4]:Up	Up	56.00 ft	6808.18 ft	20-Sep-2018 11:17:27 AM	20-Sep-2018 12:54:33 PM	ON	6.58 ft	Yes

All depths are referenced to toolstring zero

Log	Company:Crestone Peak Resources Operating LLC Well:Davis 1G-9H-G266 ONE: Log[4]:Up:S004
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Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Sep-2018 17:12:10

TIME_1900 - Time Marked every 60.00 (s)

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

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

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

Casing Collar Locator Ultrasonic (CCLU) USIT-E

-20 in 20

Amplitude of Eccentering (ECCE) USIT-E

0 in 0.5

Motor Revolution

U L B R U

Orientation: Top of Hole

Absent 1.500 3.500

Explicit Normalization

USIT - USIT

Processing Flags (UFLG) USIT-E

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

1 5

Gamma Ray

U L B R U

Orientation: Top of Hole

Absent -5.200 -3.600 -2.000 -0.400

Explicit Normalization

Acoustic Impedance Minimum (AIMN) USIT-E

-1 Mrayl 9

Acoustic Impedance Average (AIAV) USIT-E

-1 Mrayl 9

Acoustic Impedance

U L B R U

Orientation: Top of Hole

Absent 0.750 1.750 2.750 3.750

Custom Normalization

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

U L B R U

Orientation: Top of Hole

Absent 42.000 66.000 90.000 114.000

Custom Normalization

U L B R U

Orientation: Top of Hole

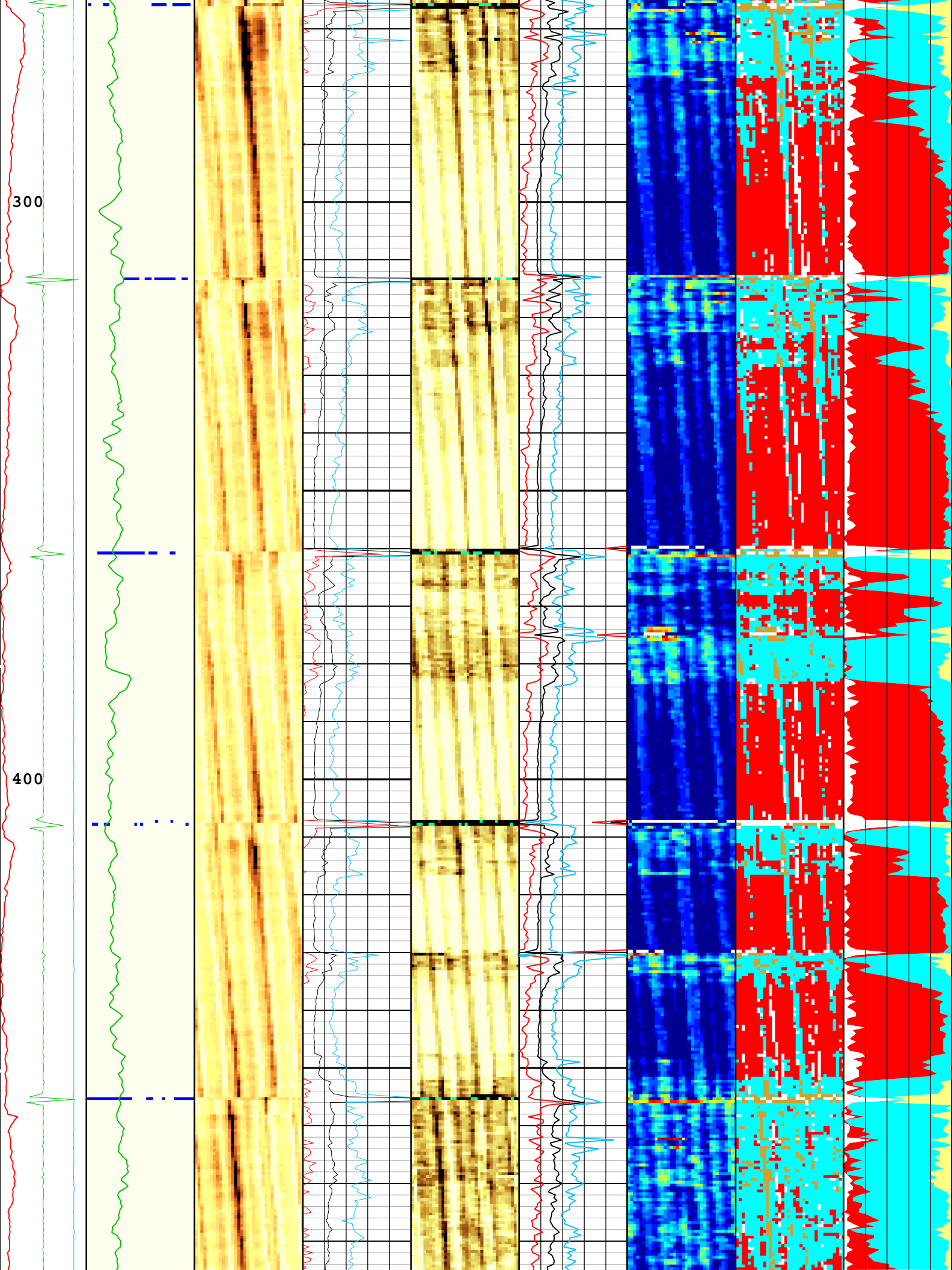
Absent 0.500 1.500 2.500 3.500

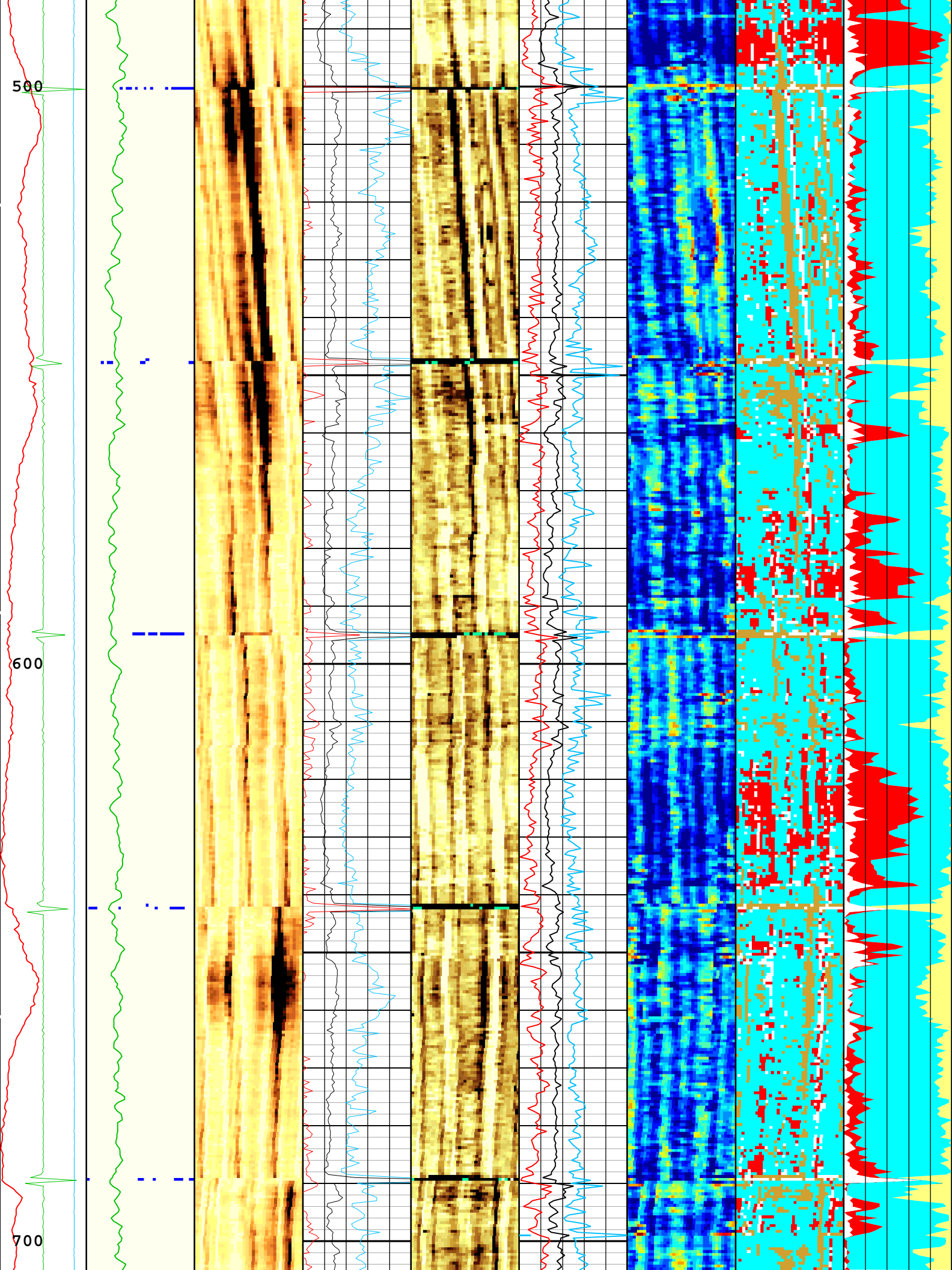
Explicit Normalization

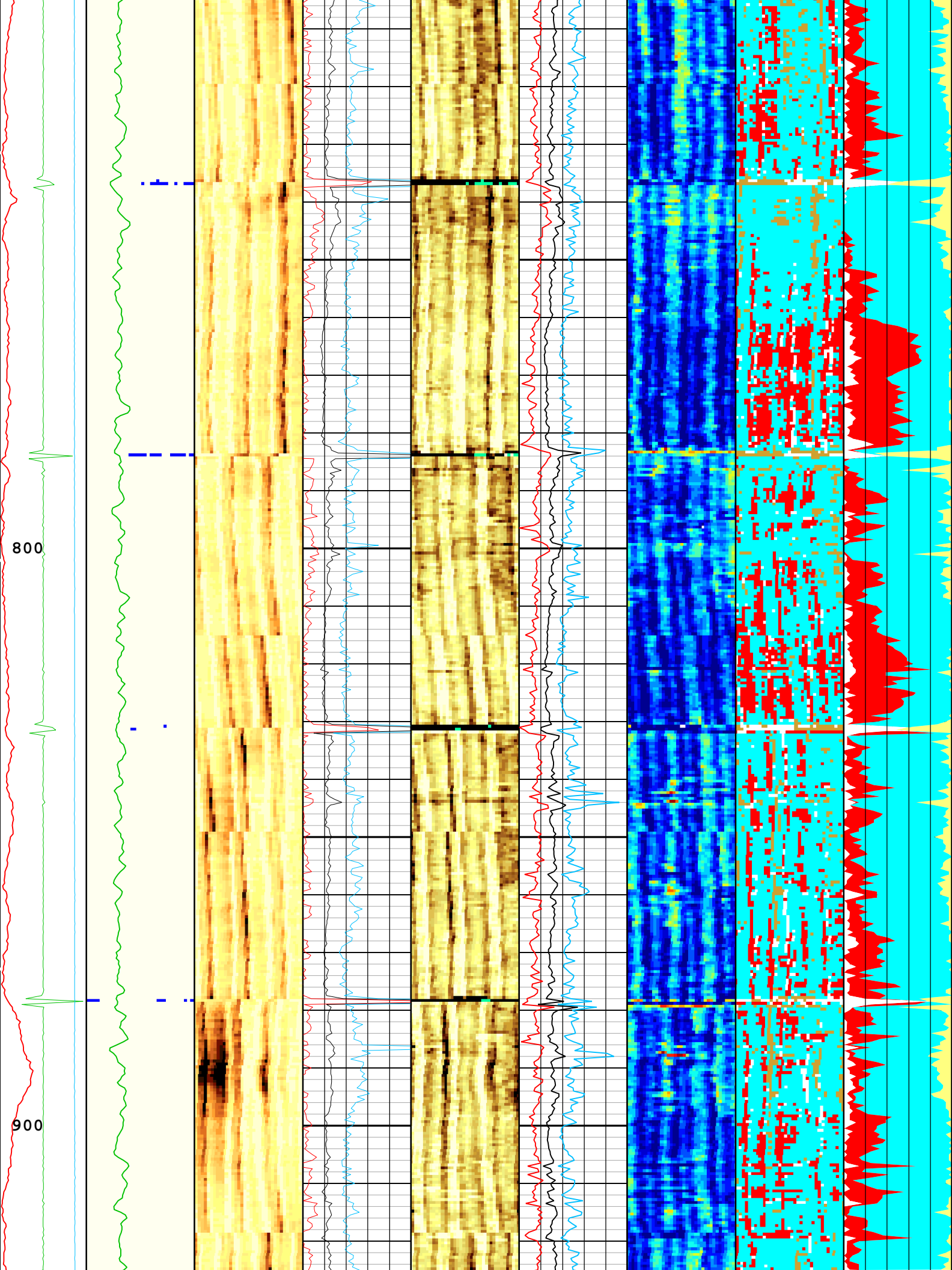
USIT - Solid

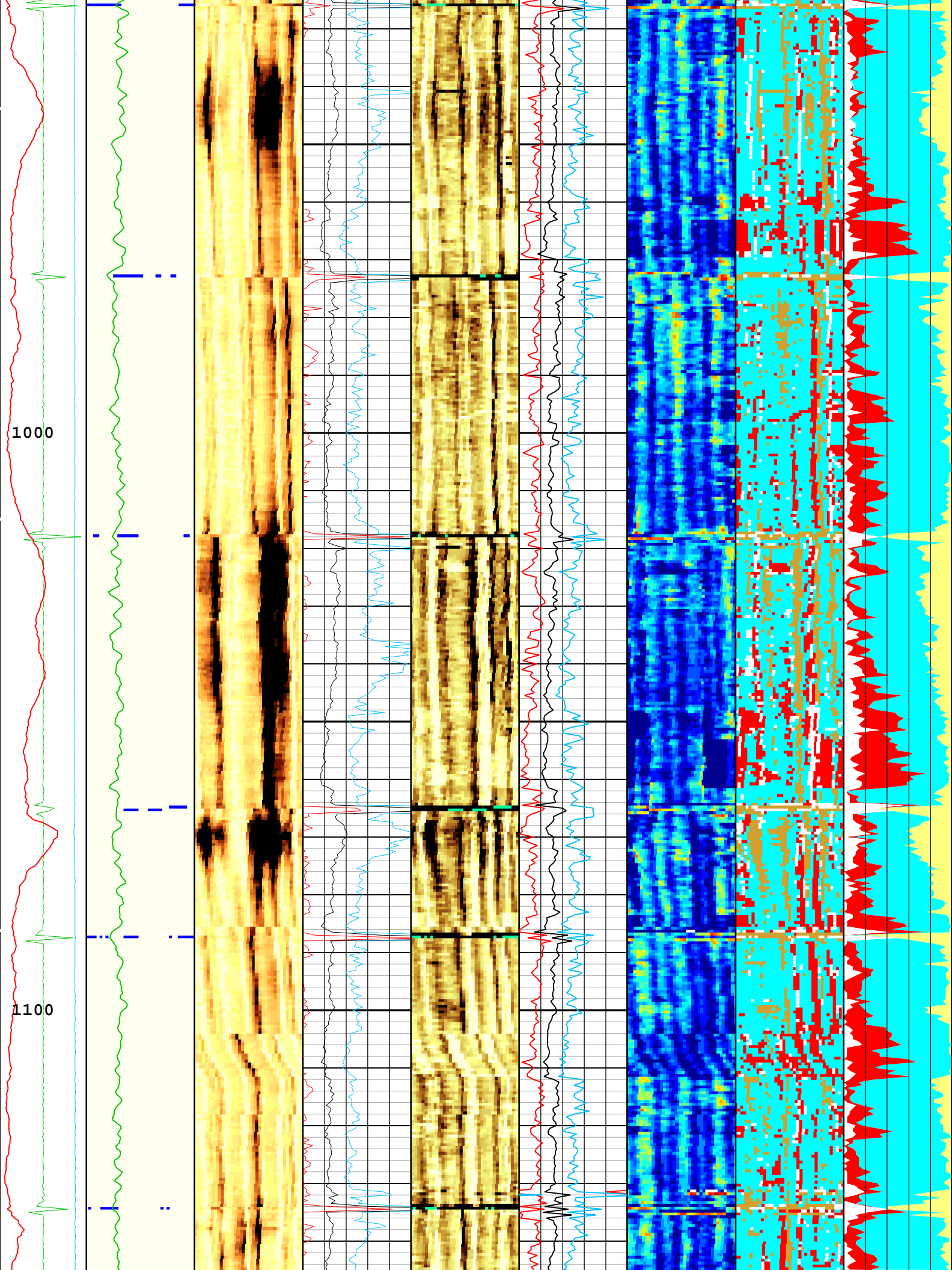
SLG Solid Index

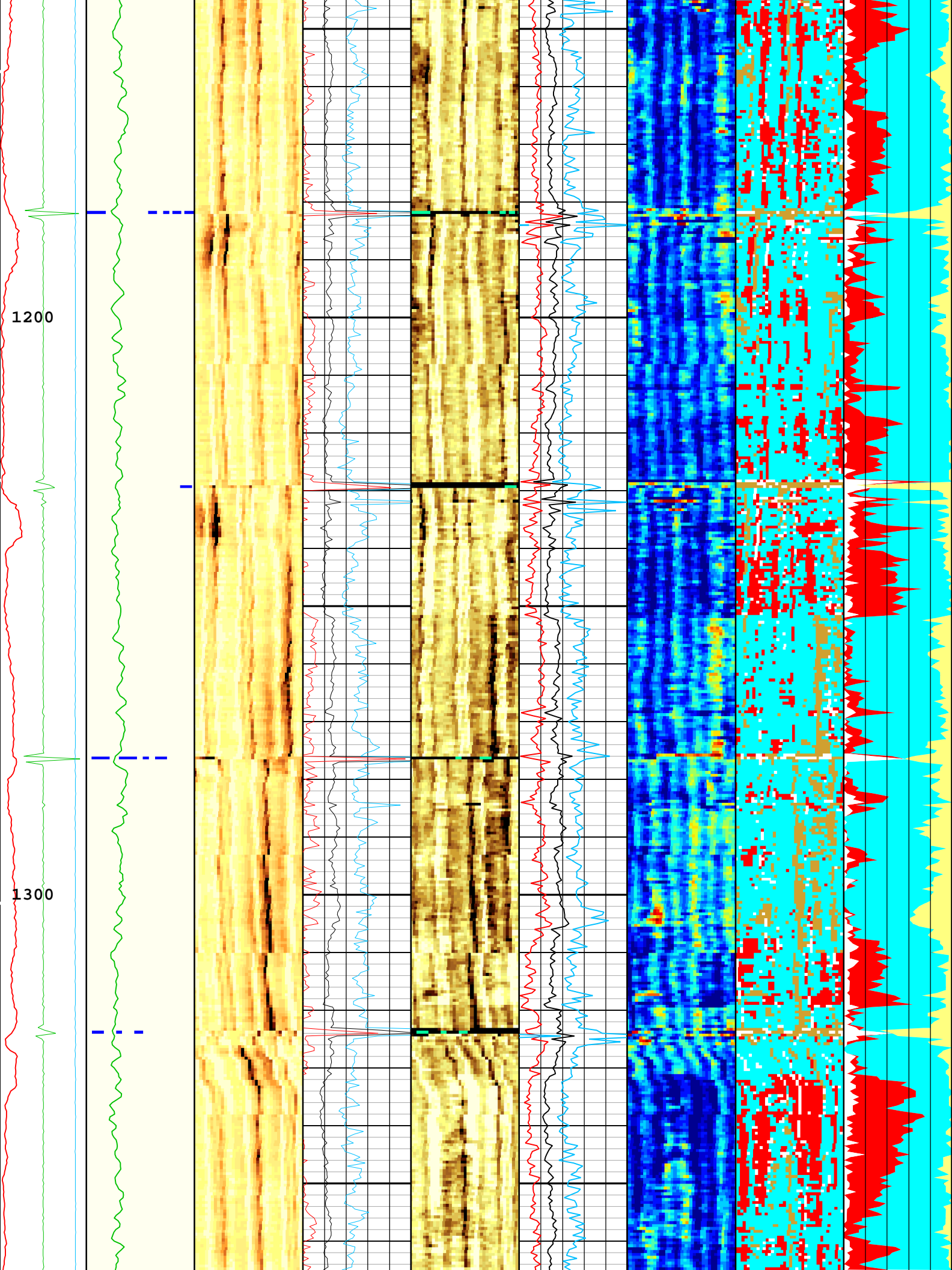
SLG Liquid Index

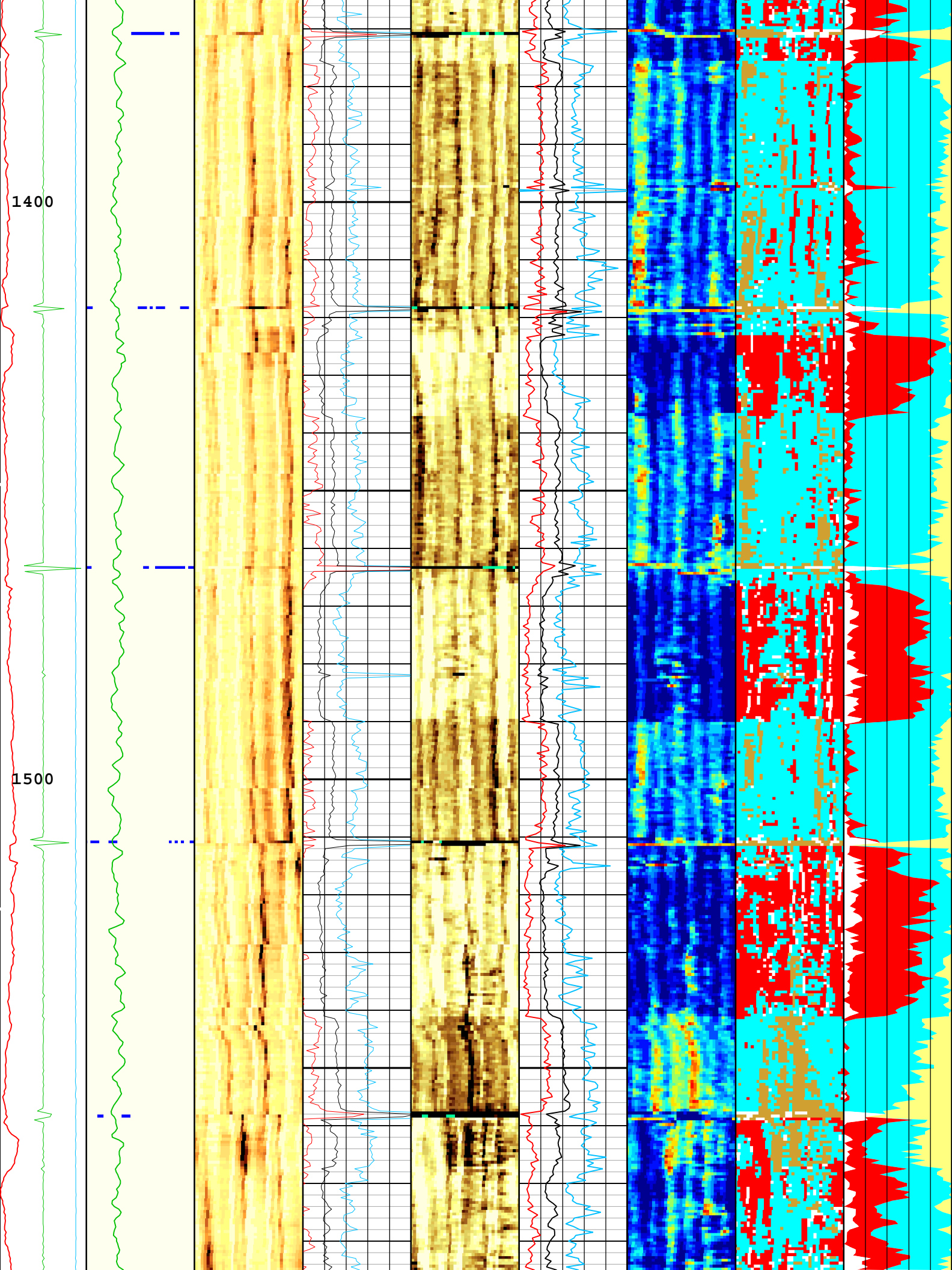


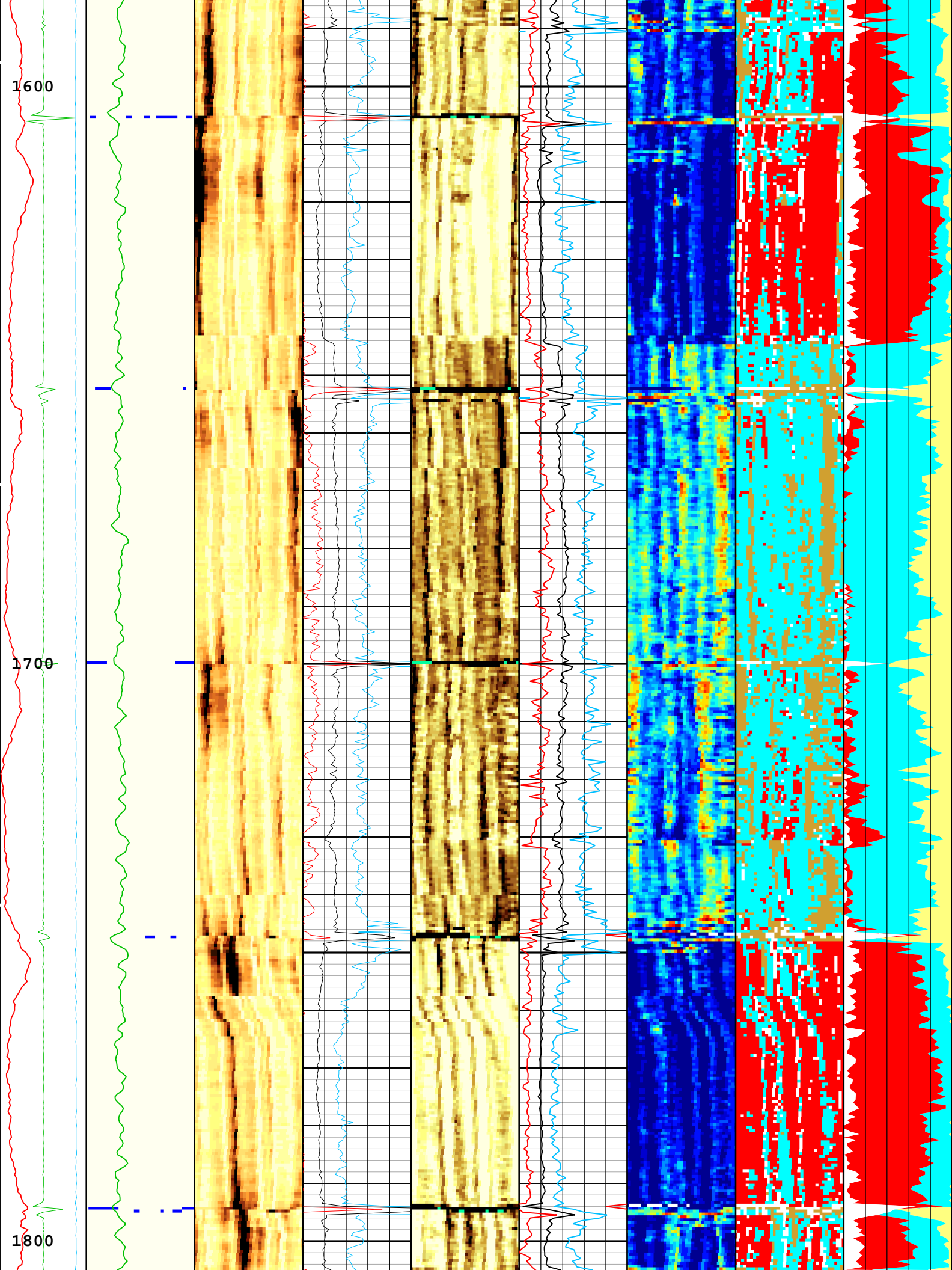


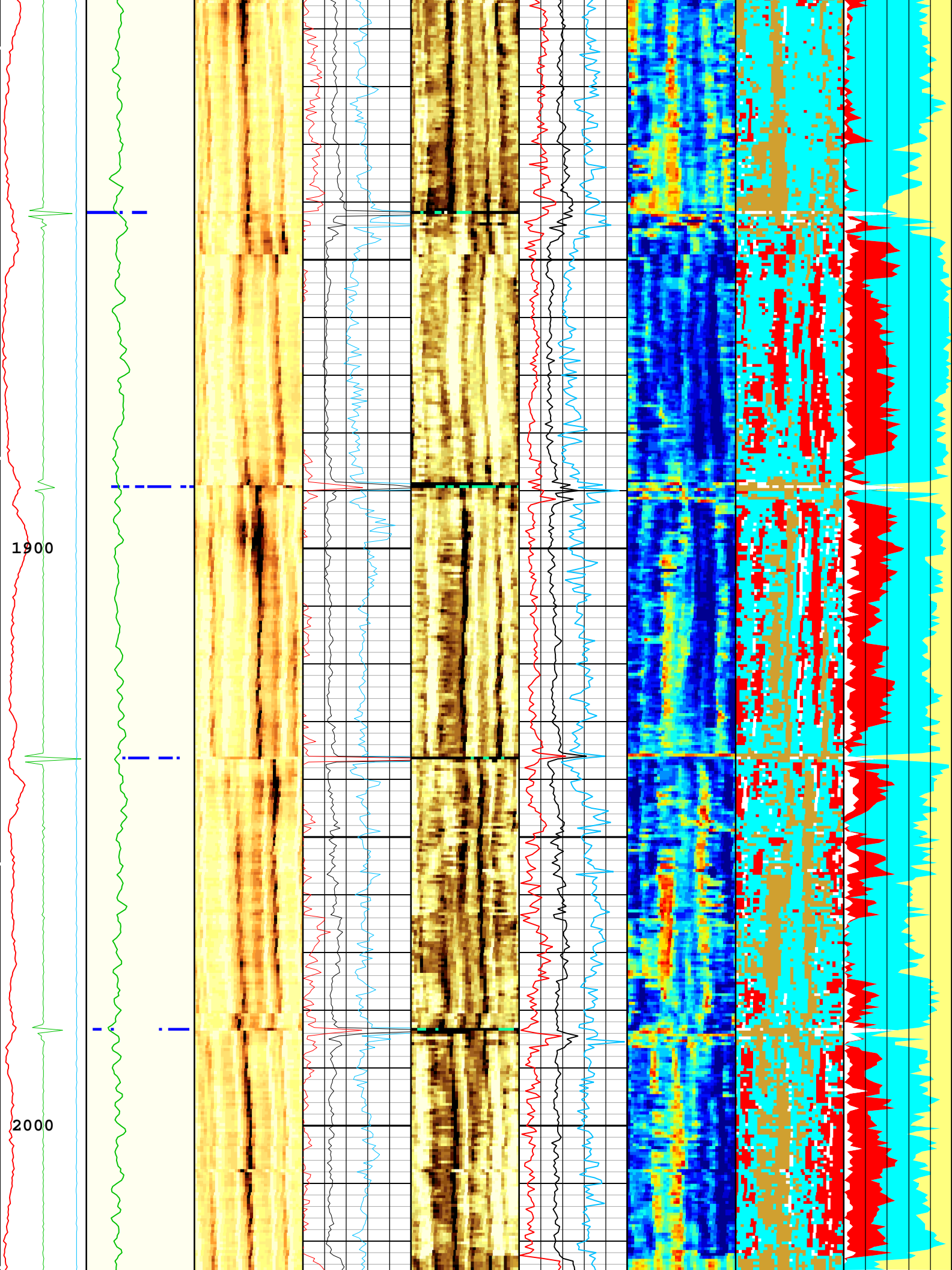


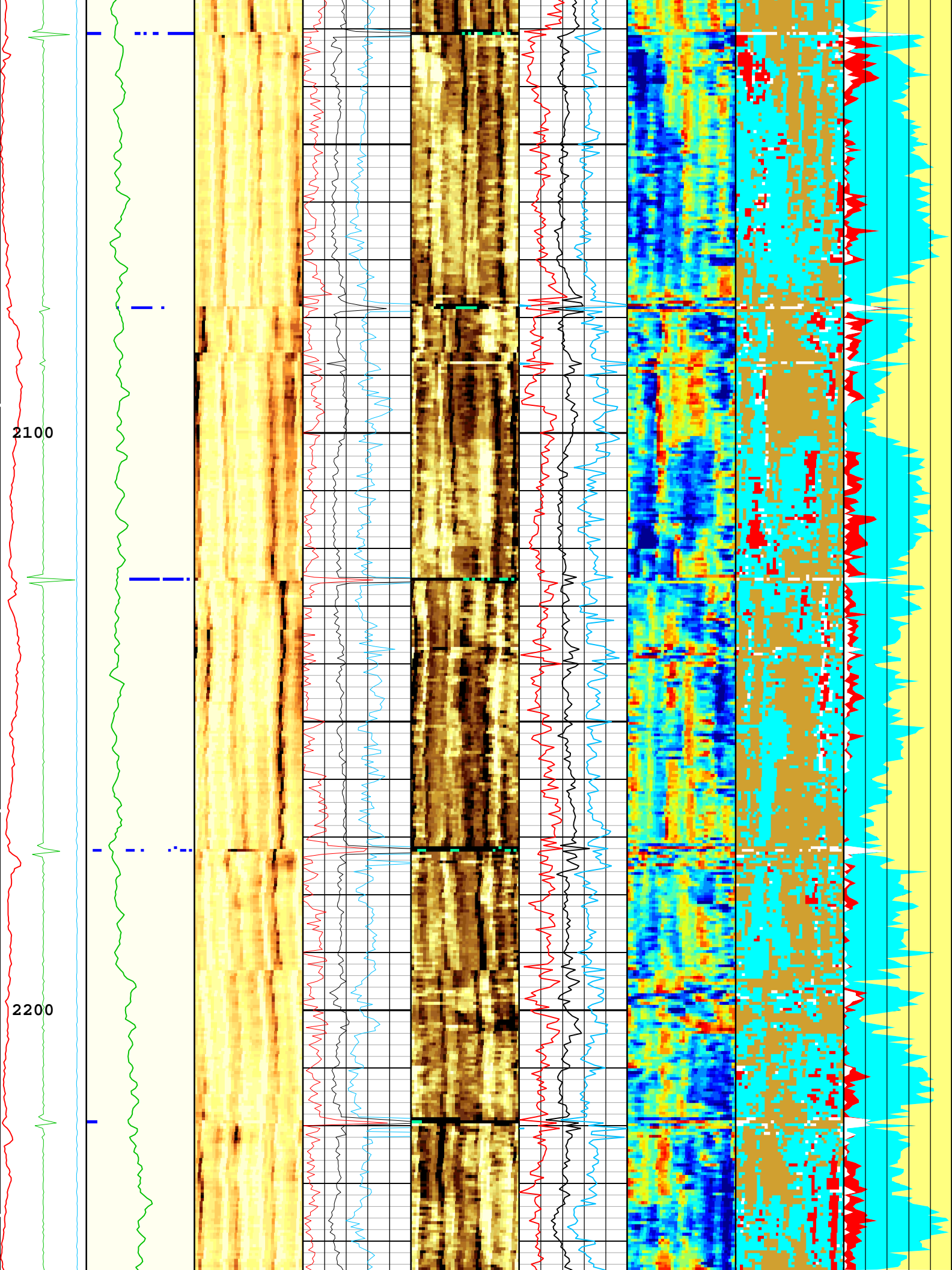


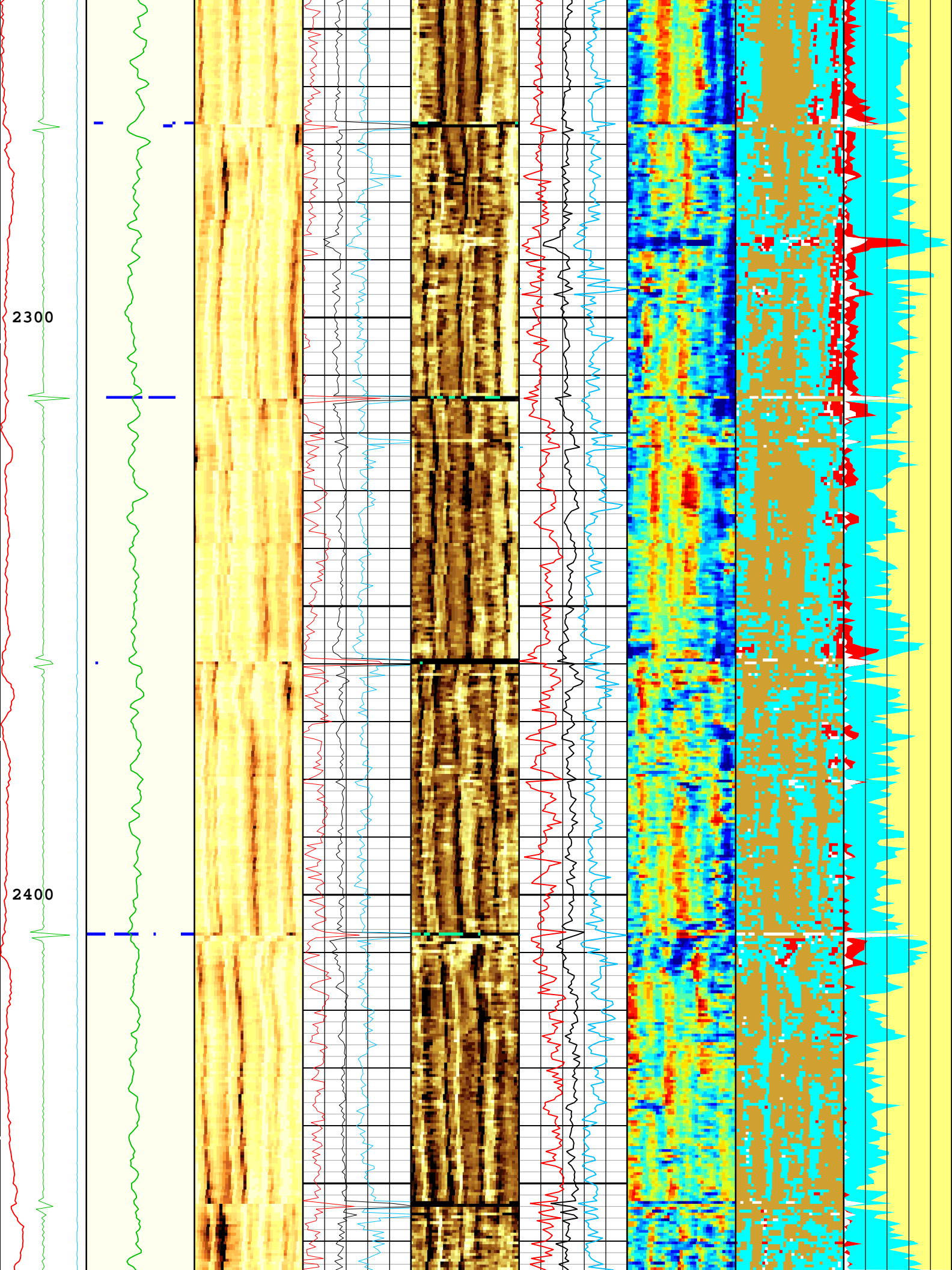


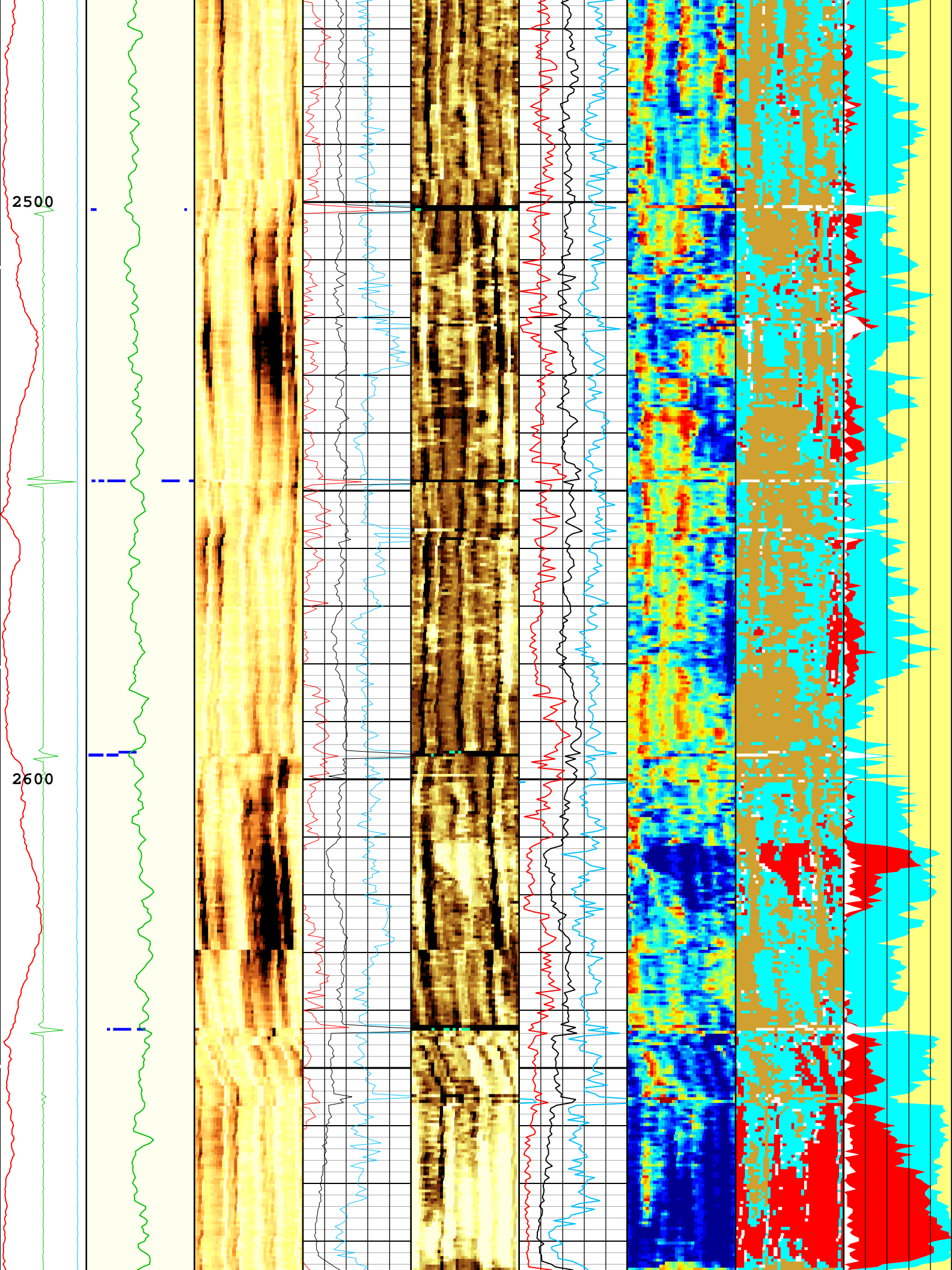


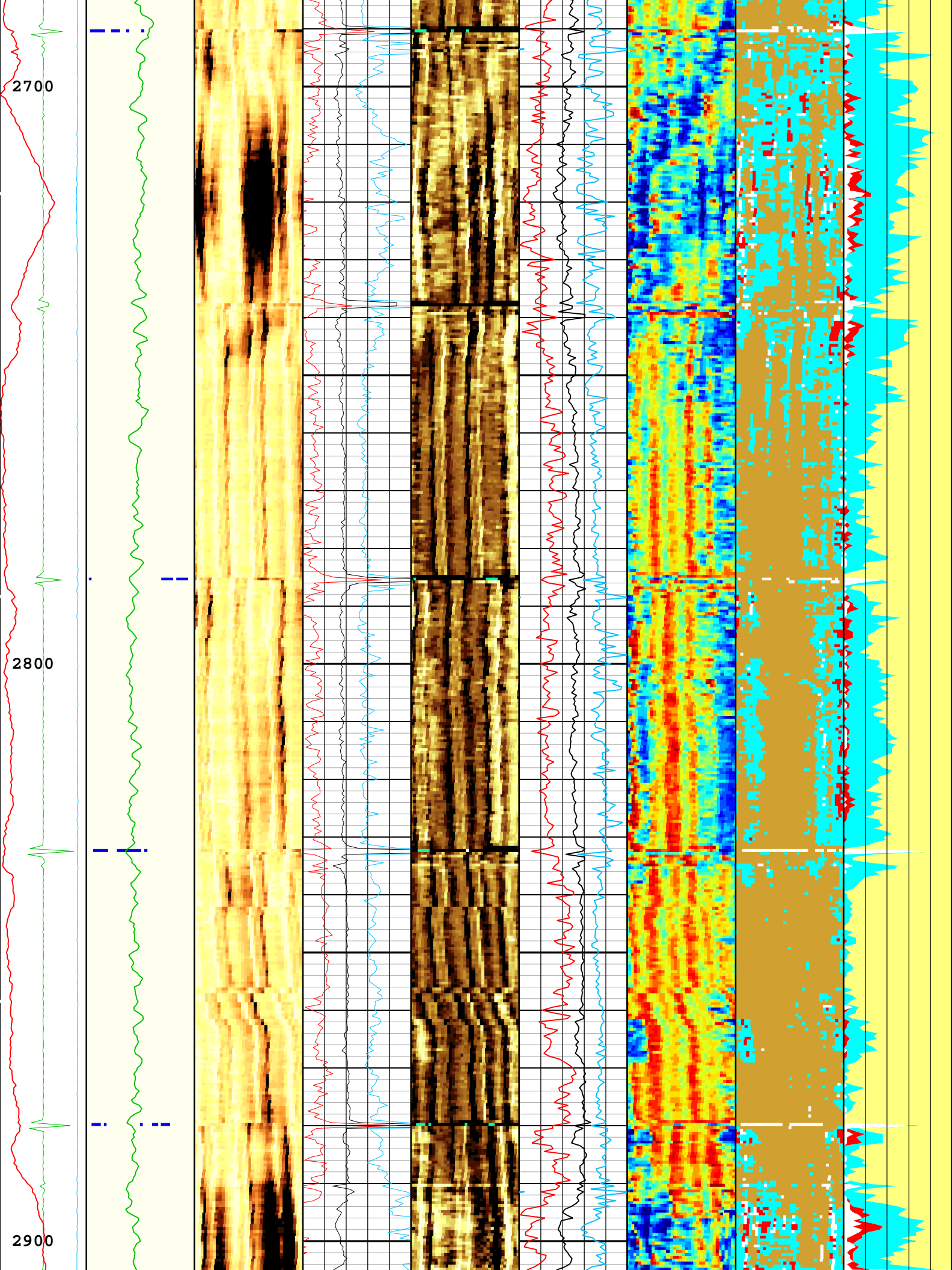


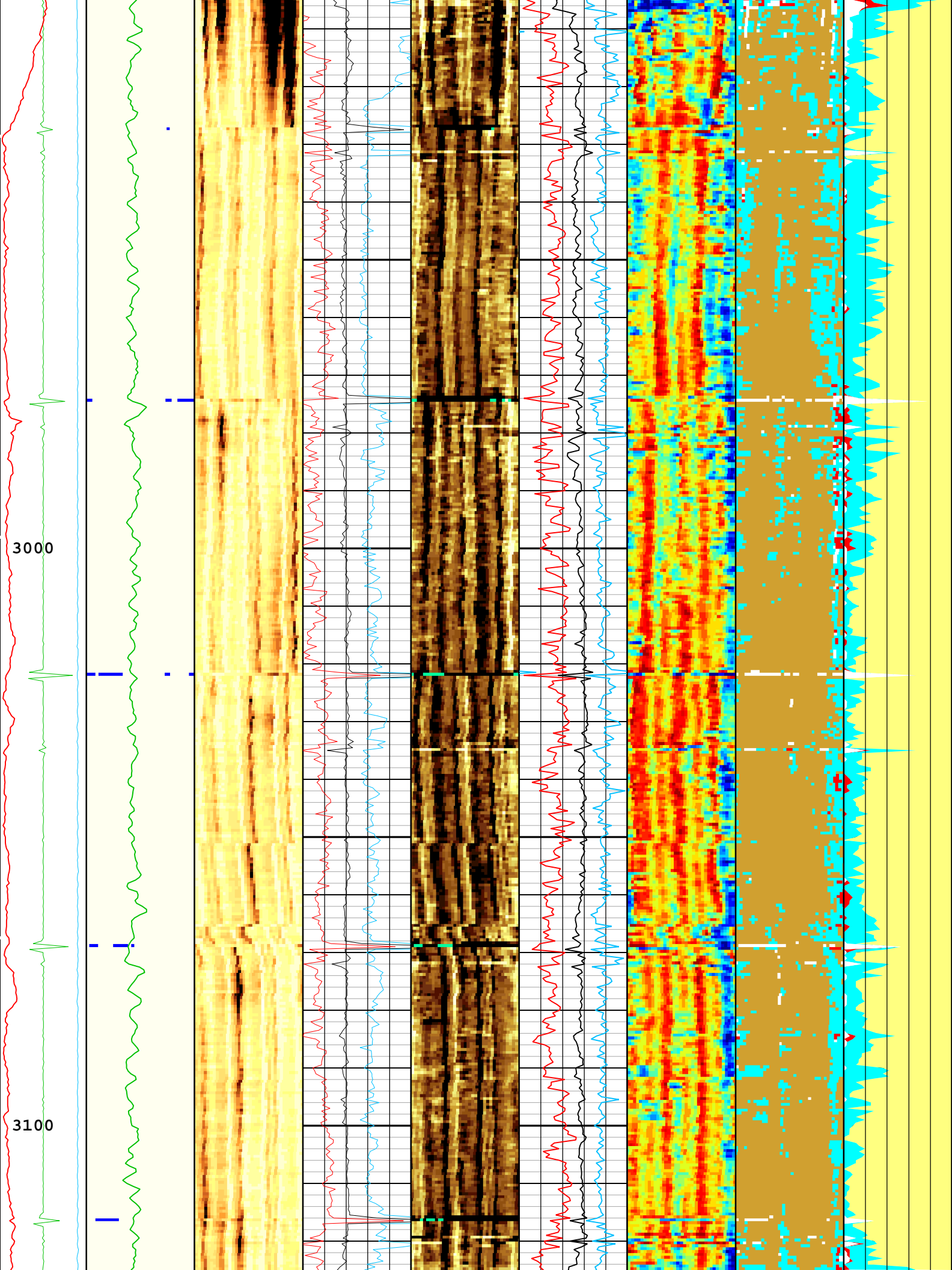


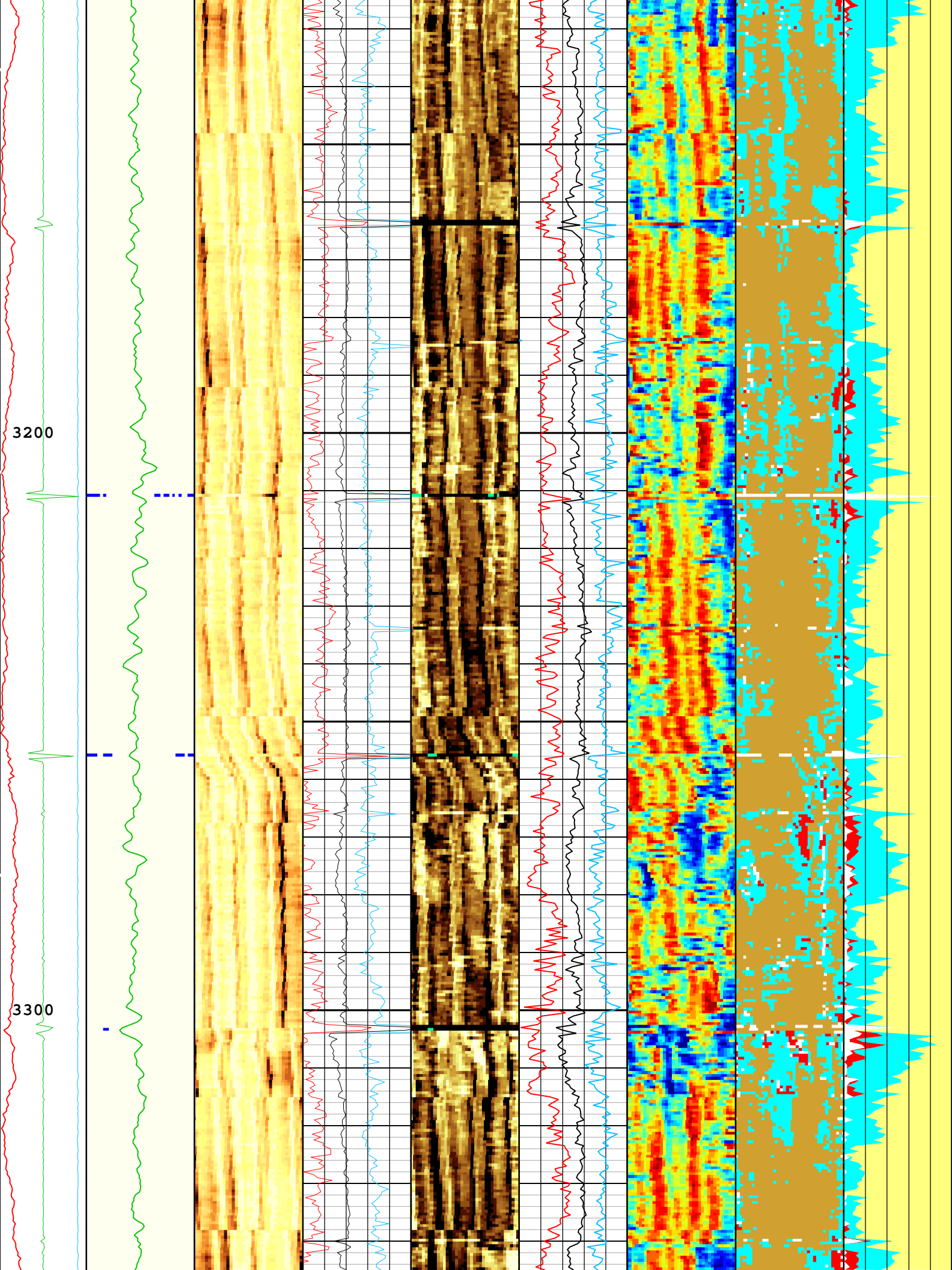


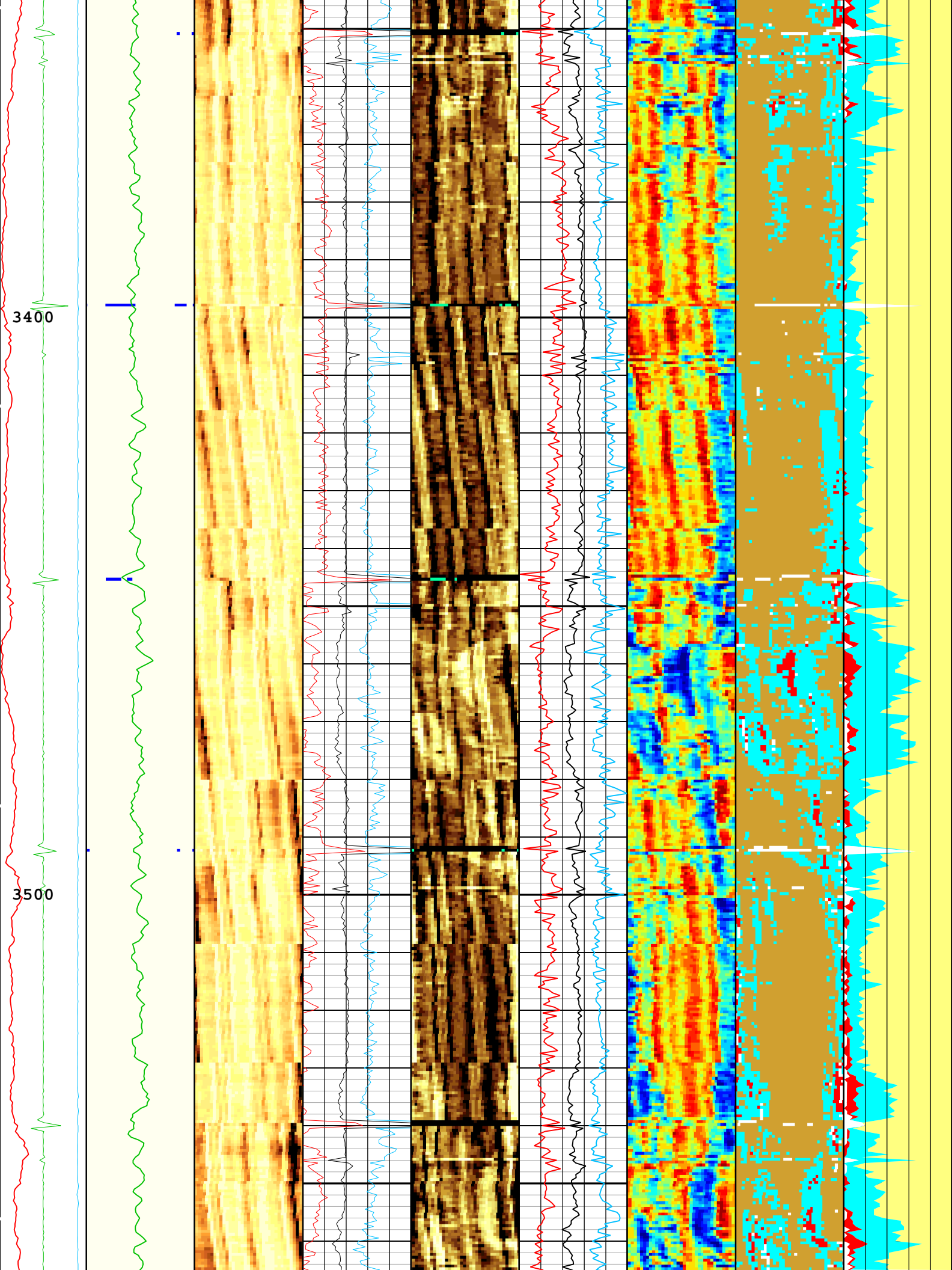


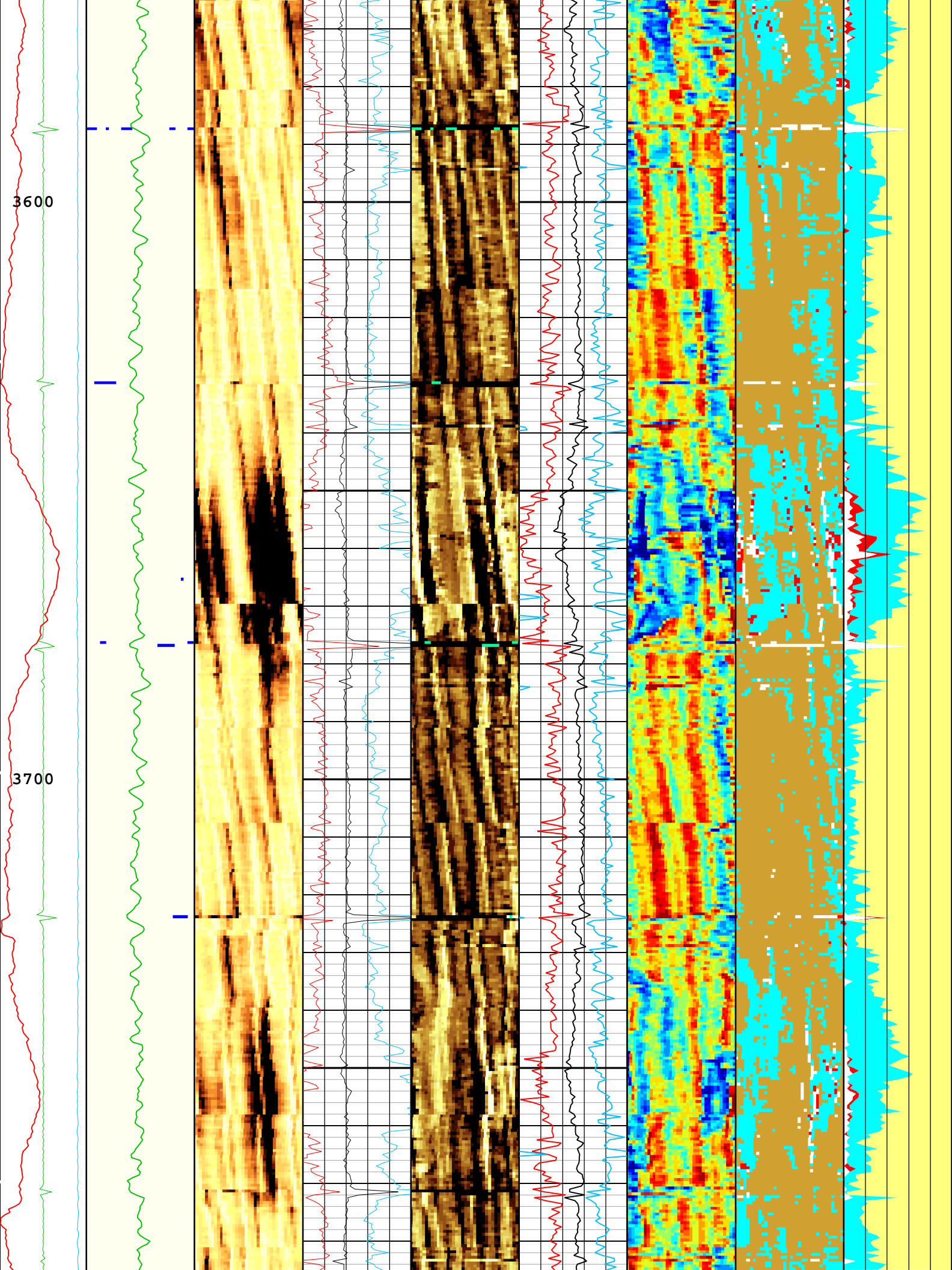


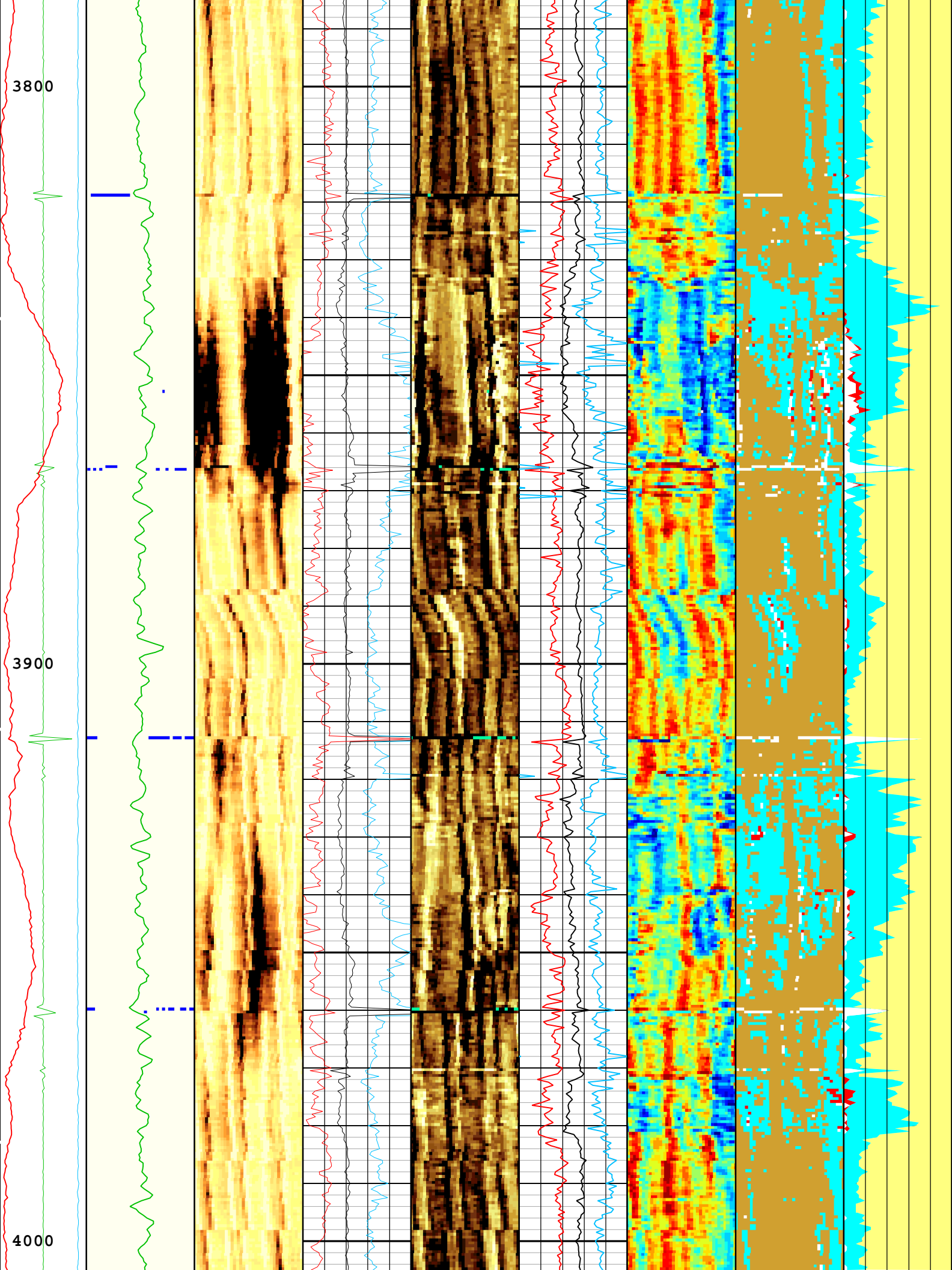


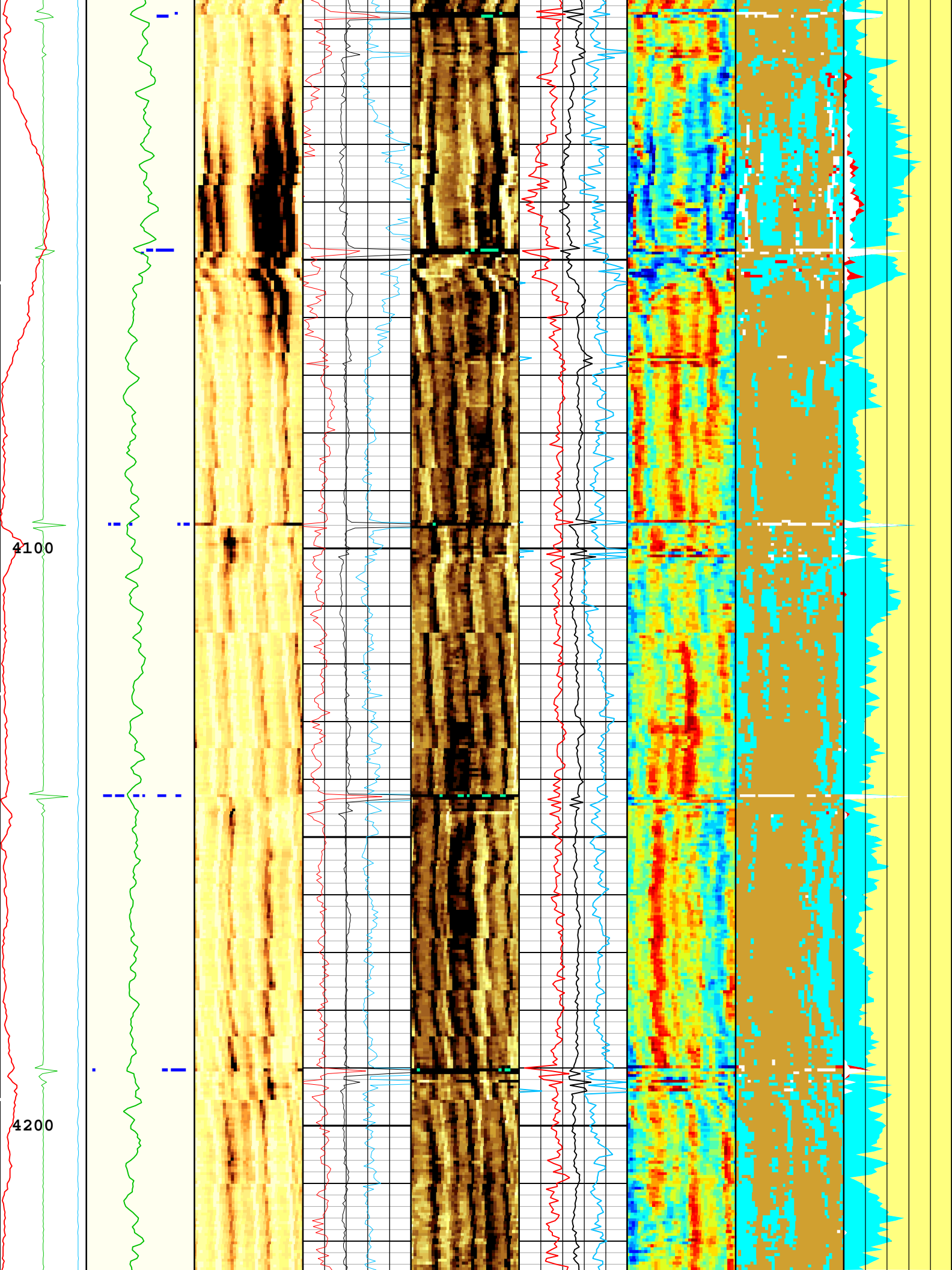


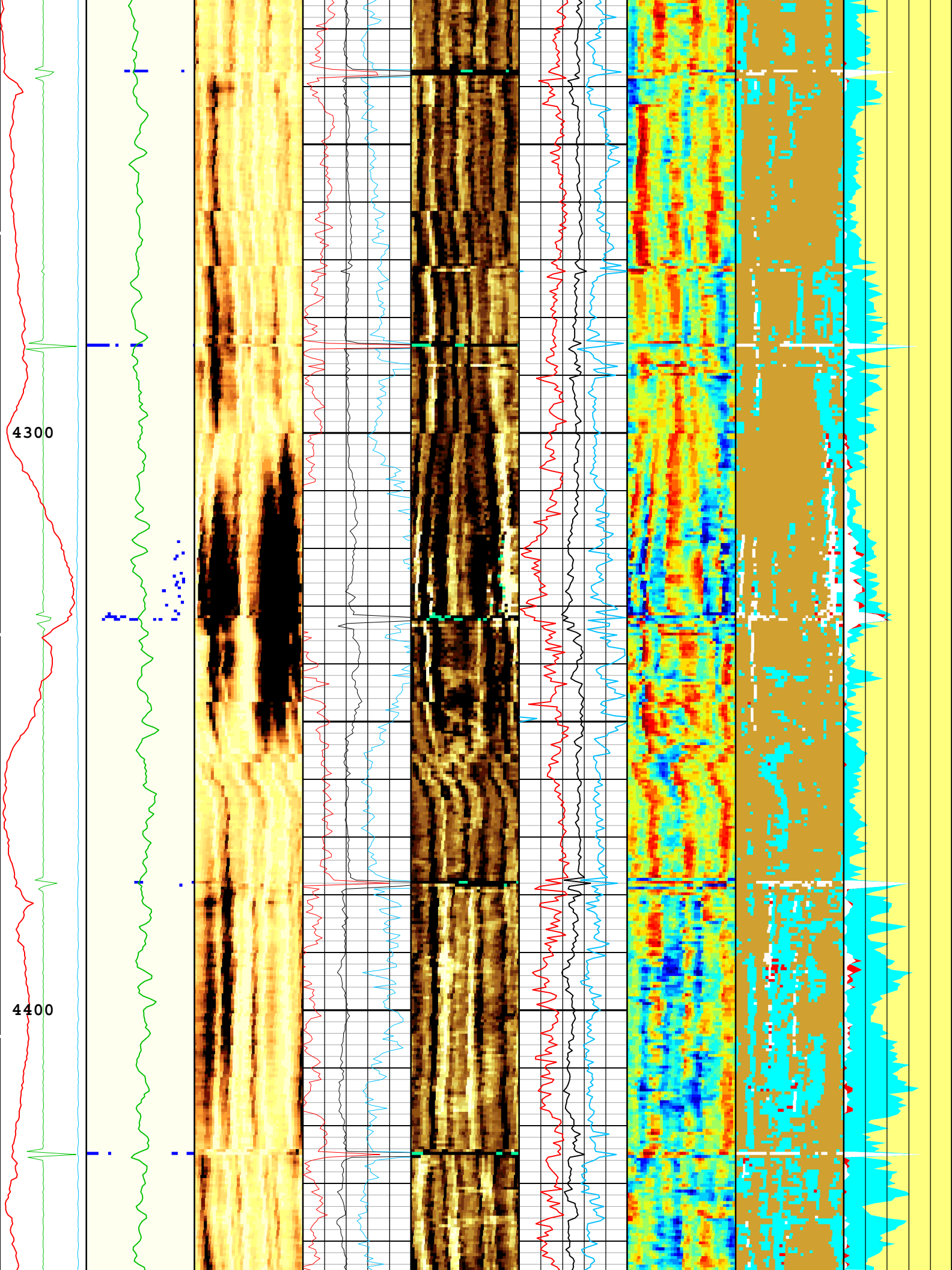


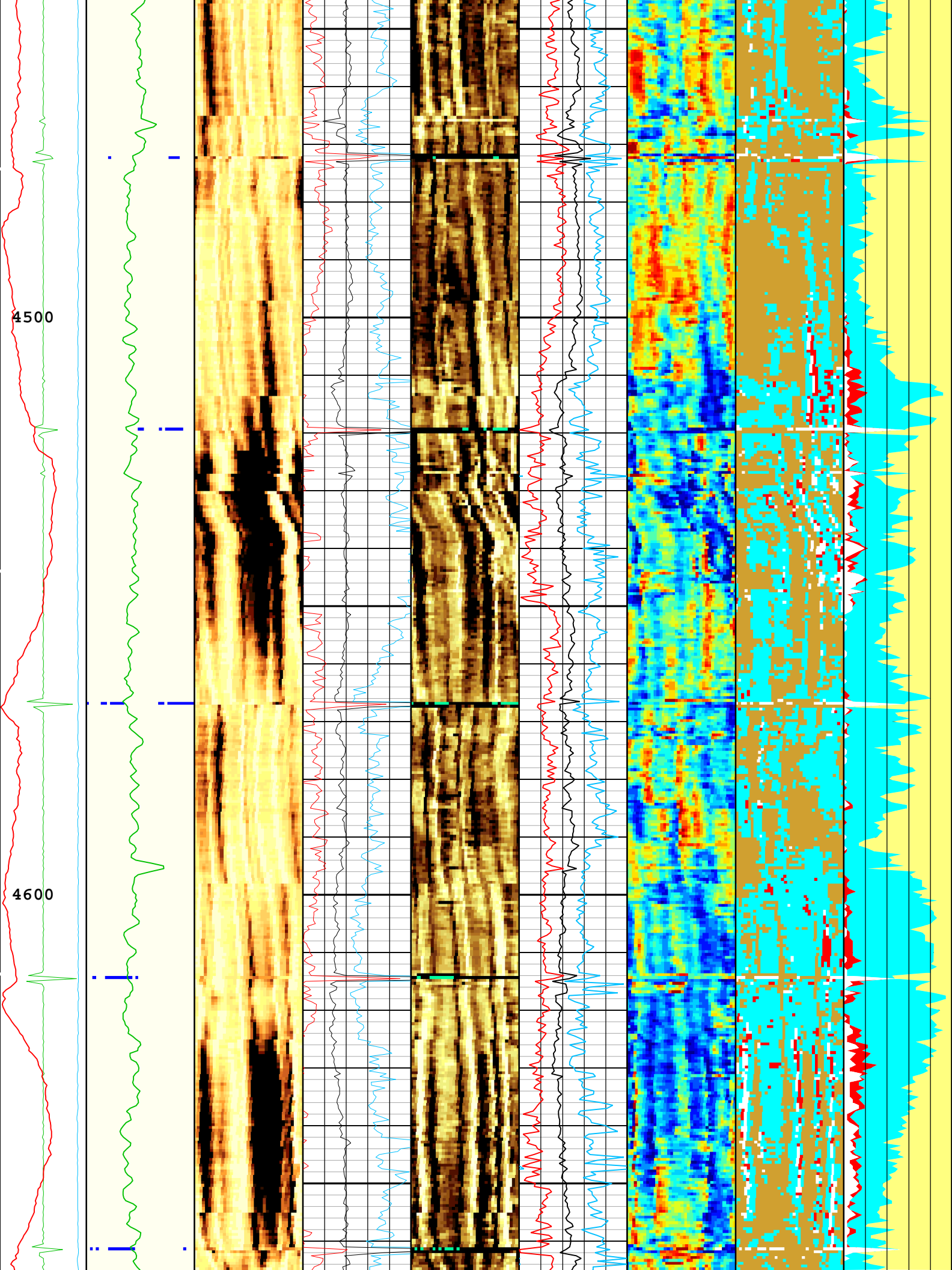


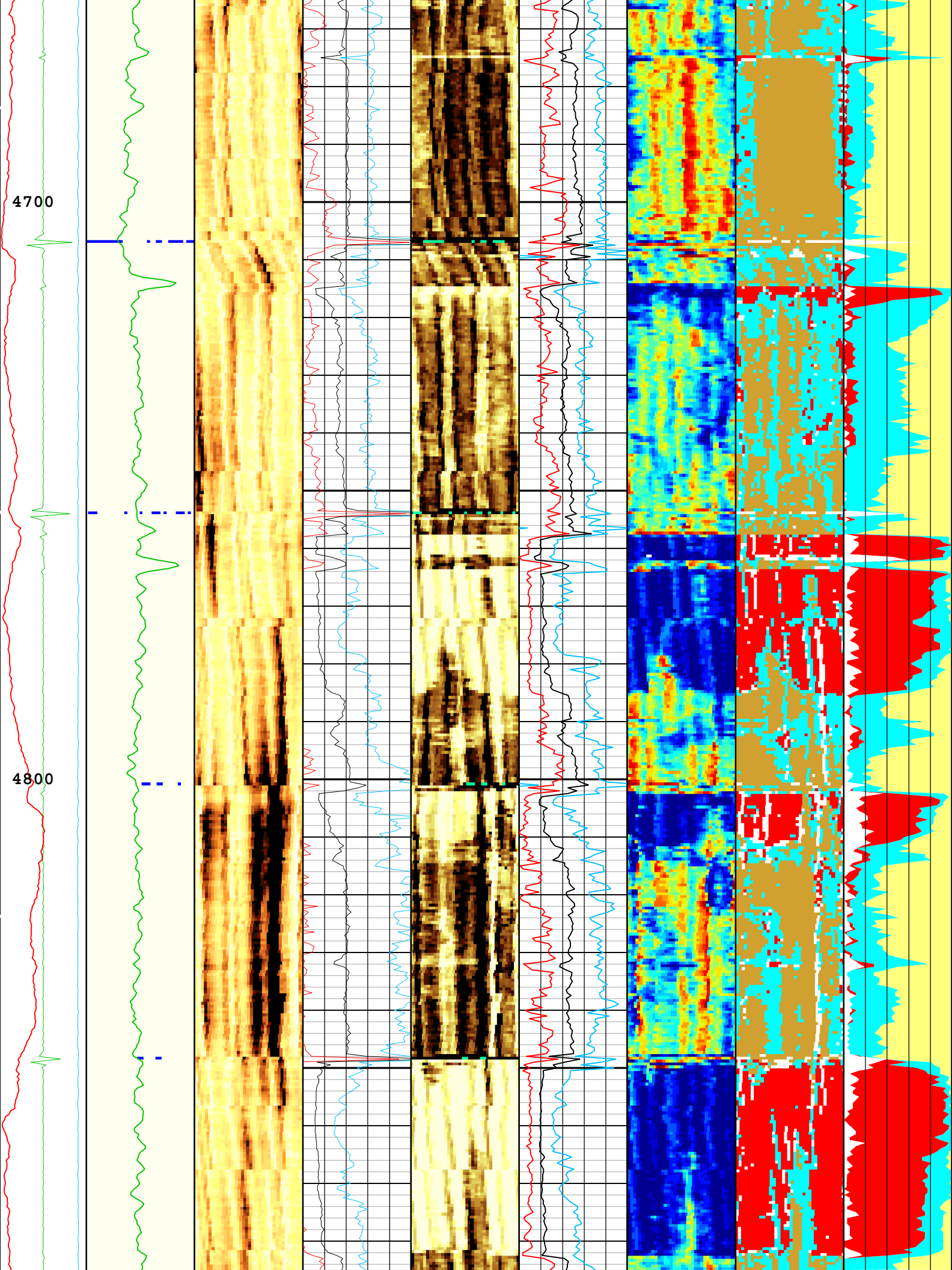


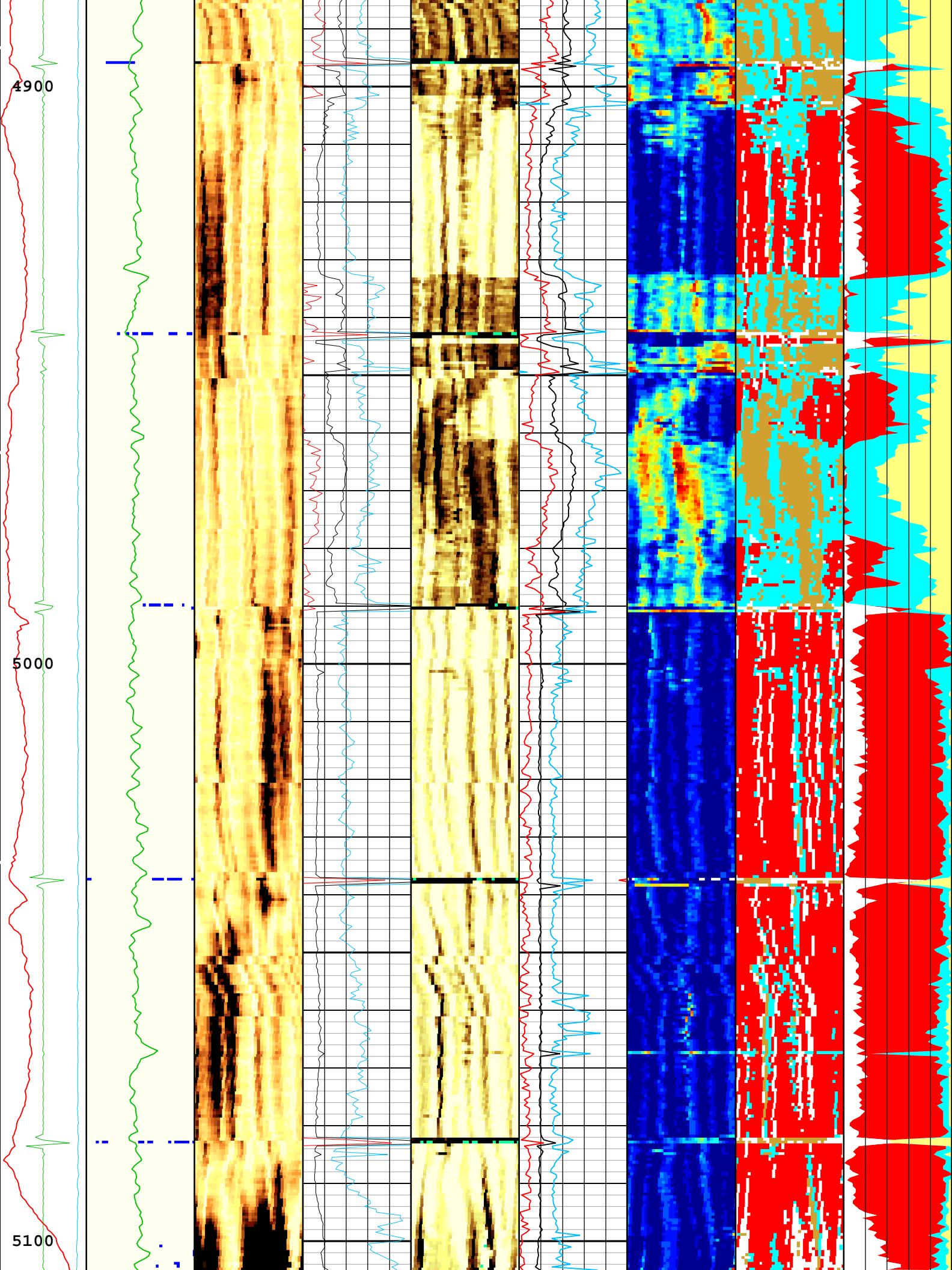


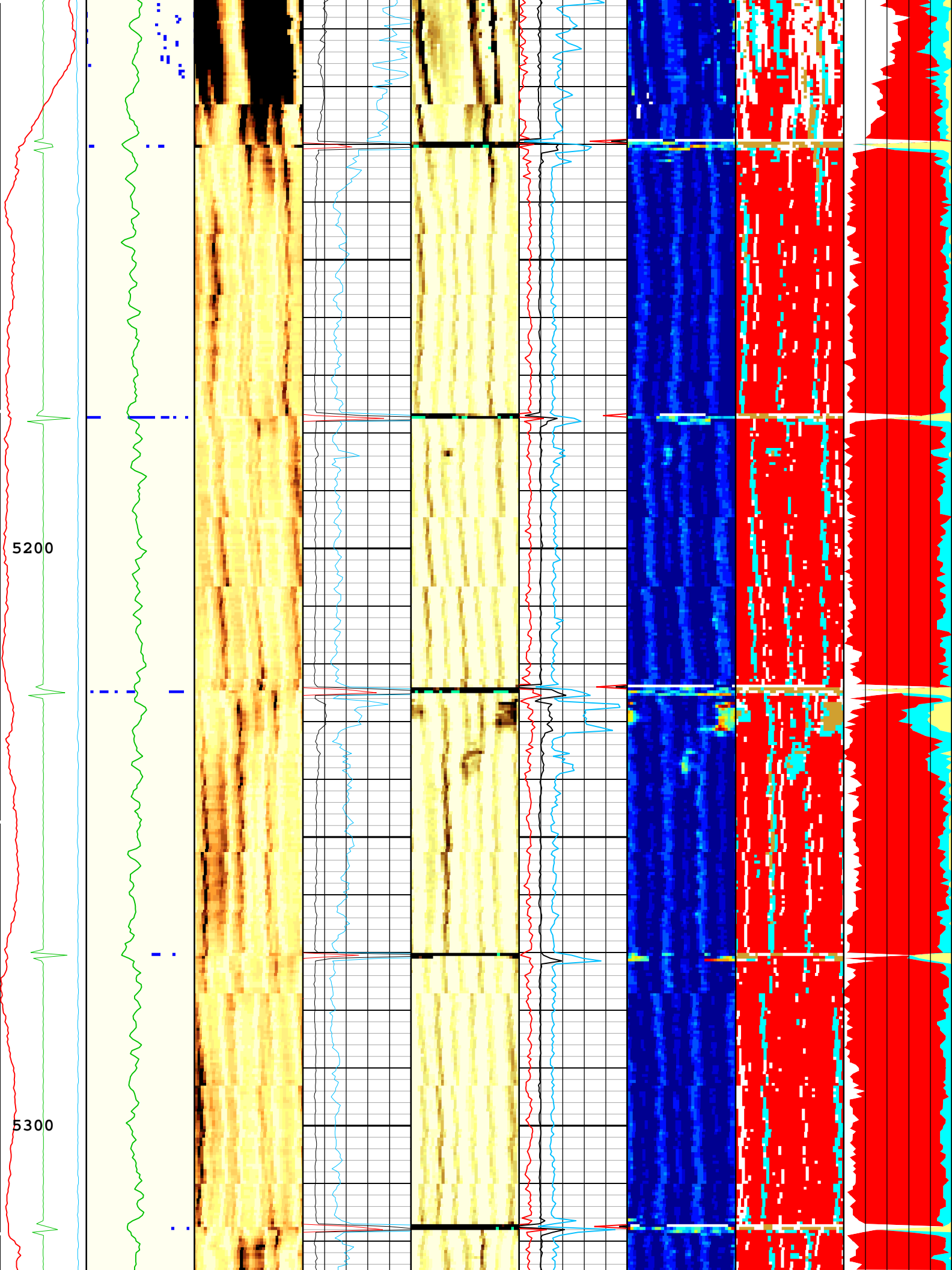


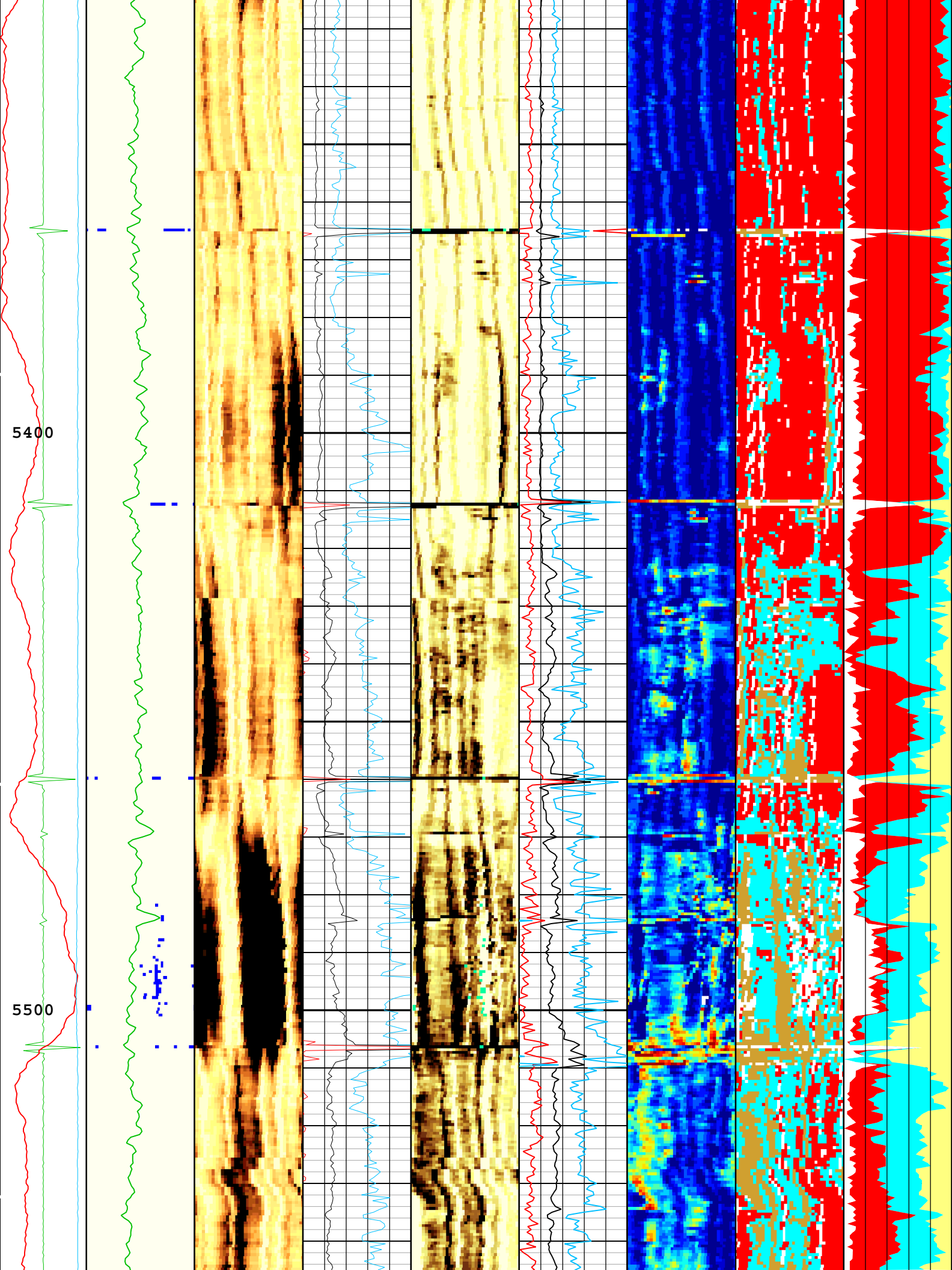


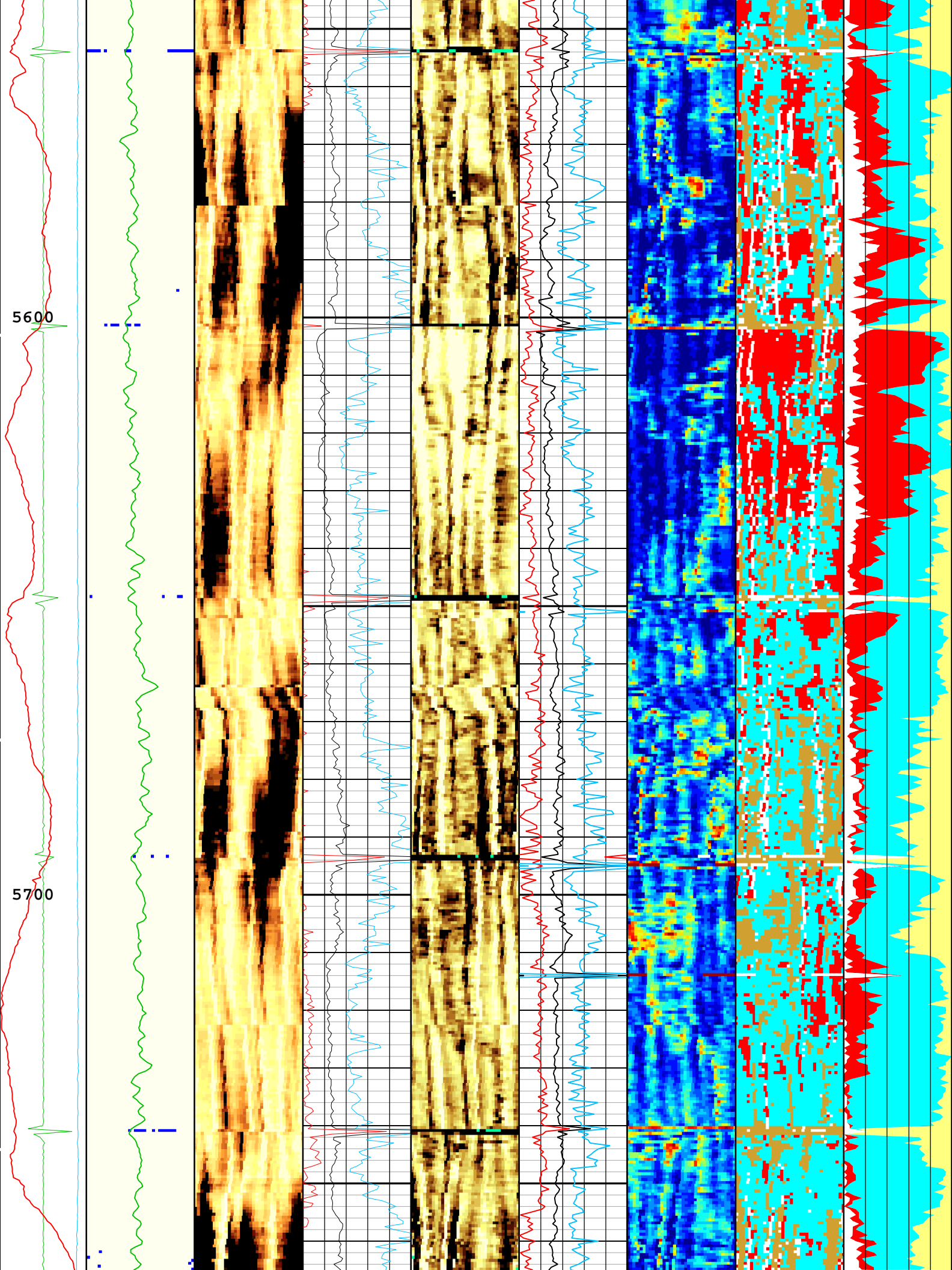


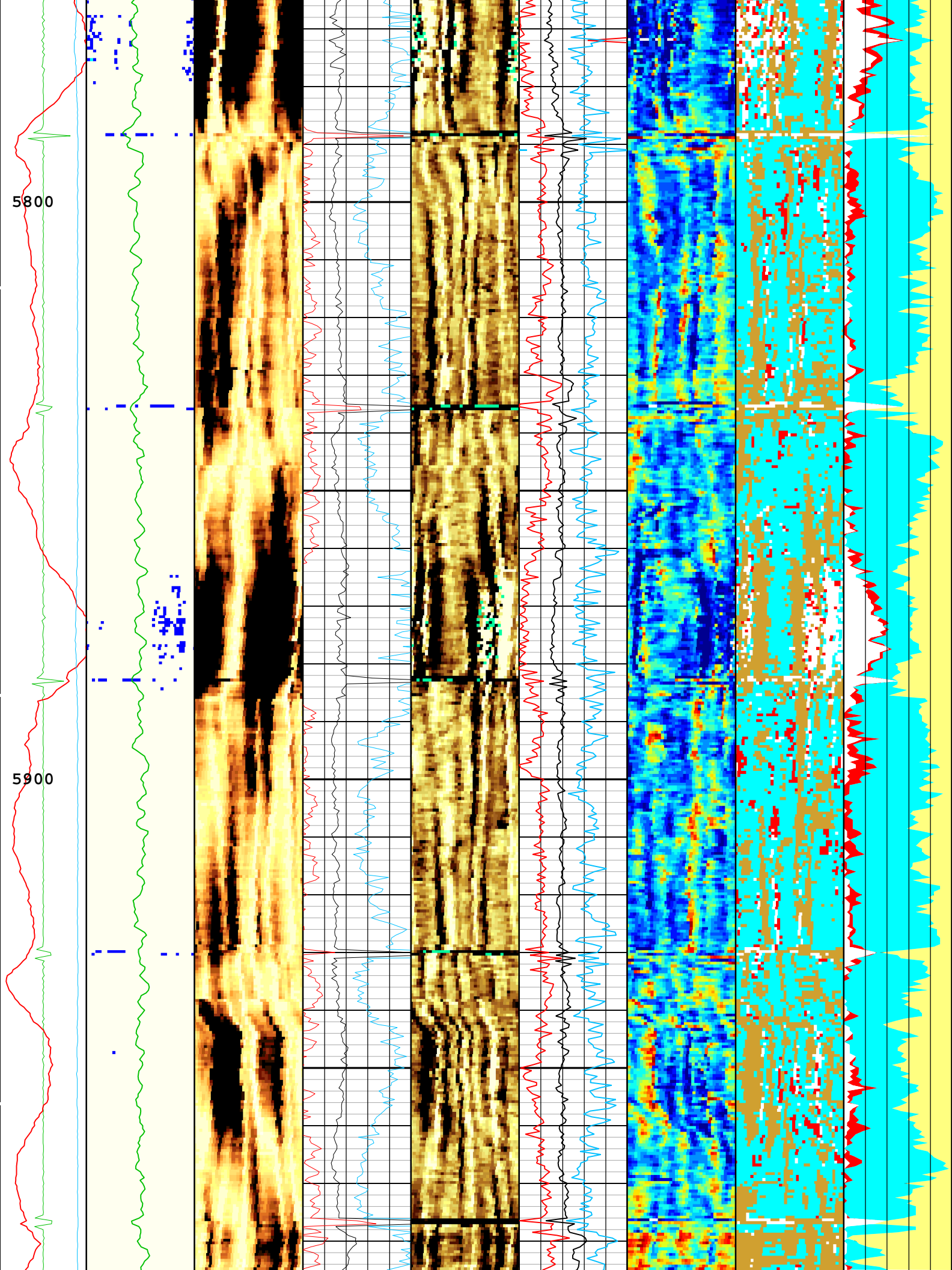


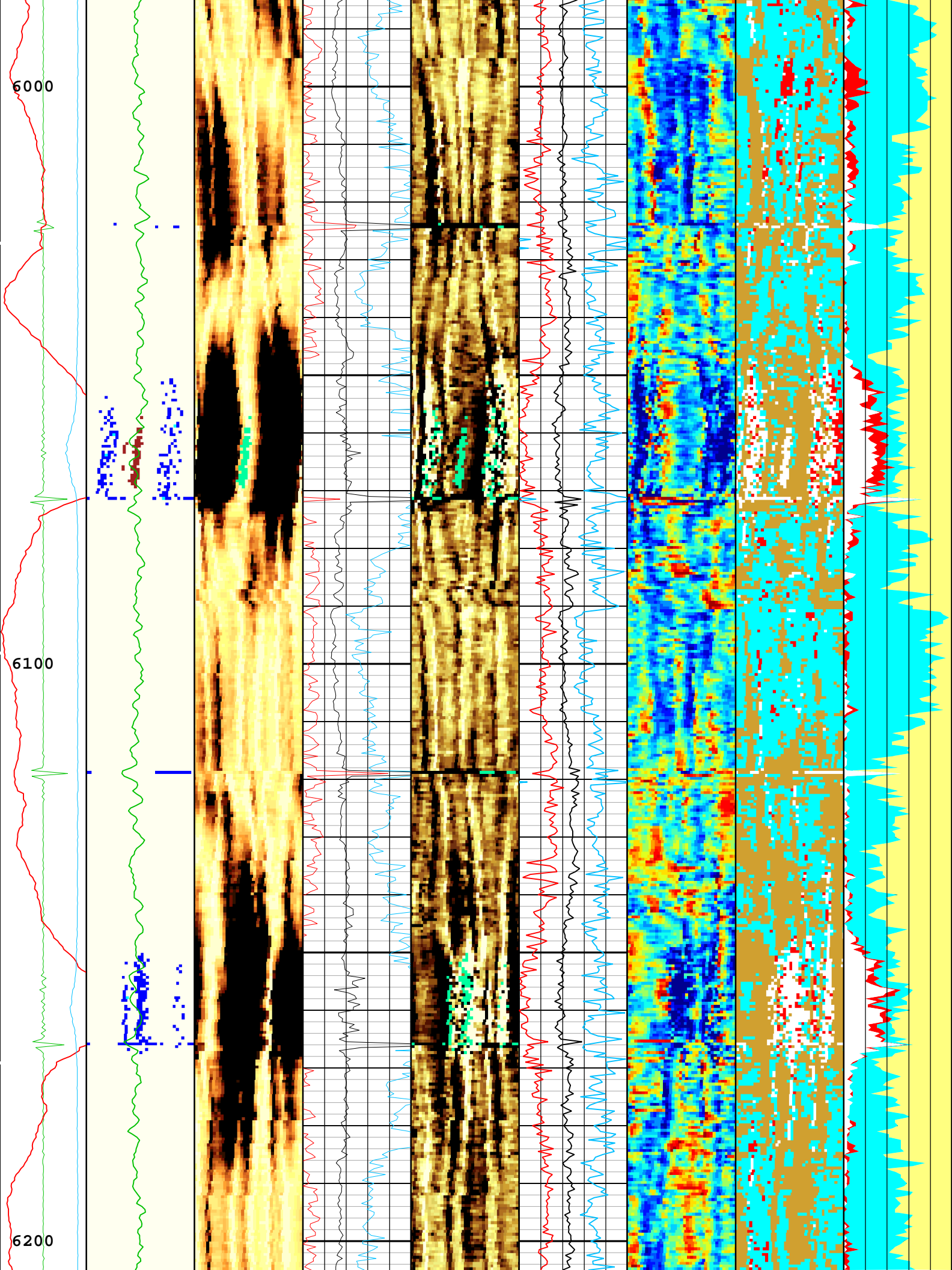


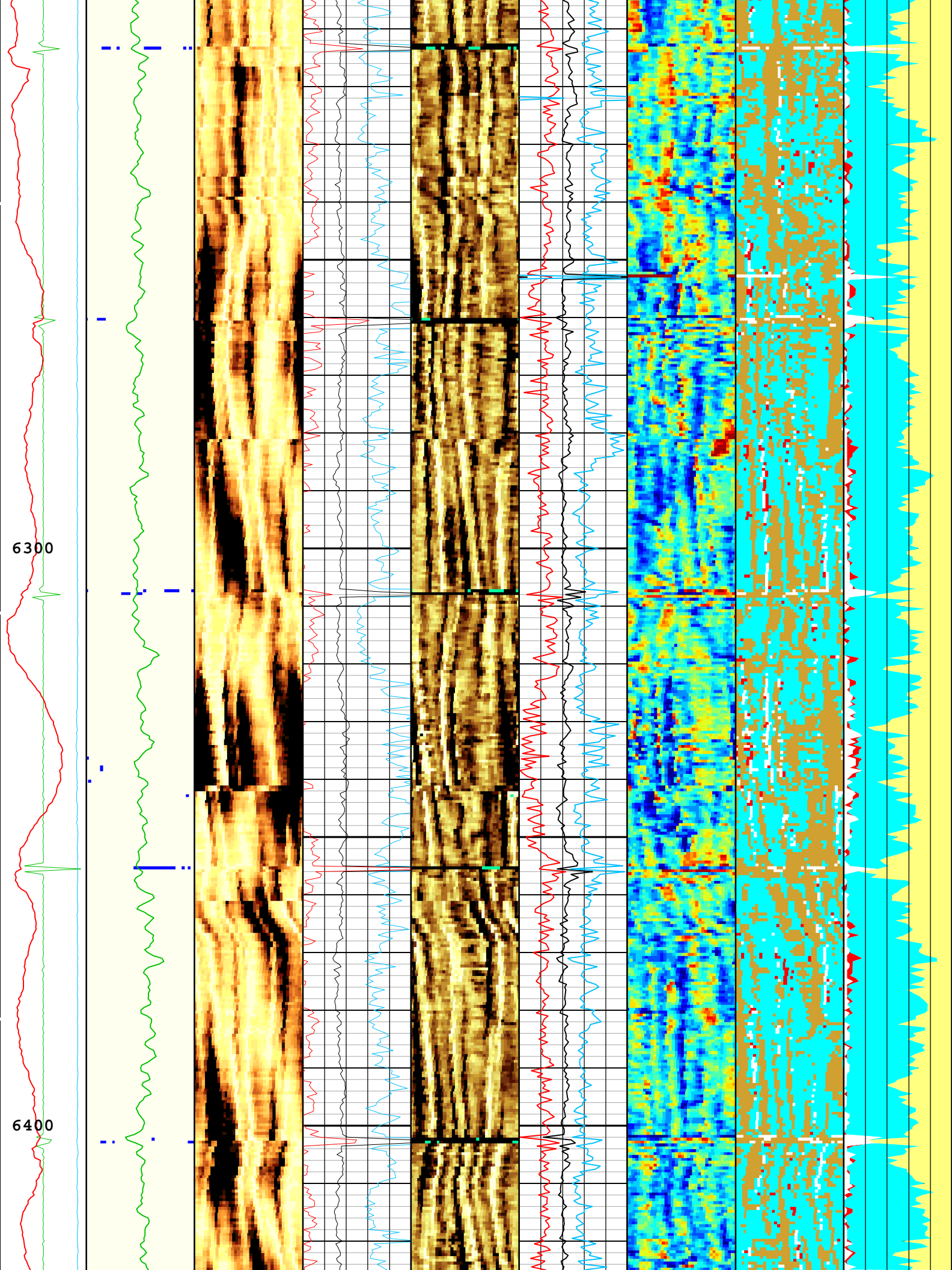


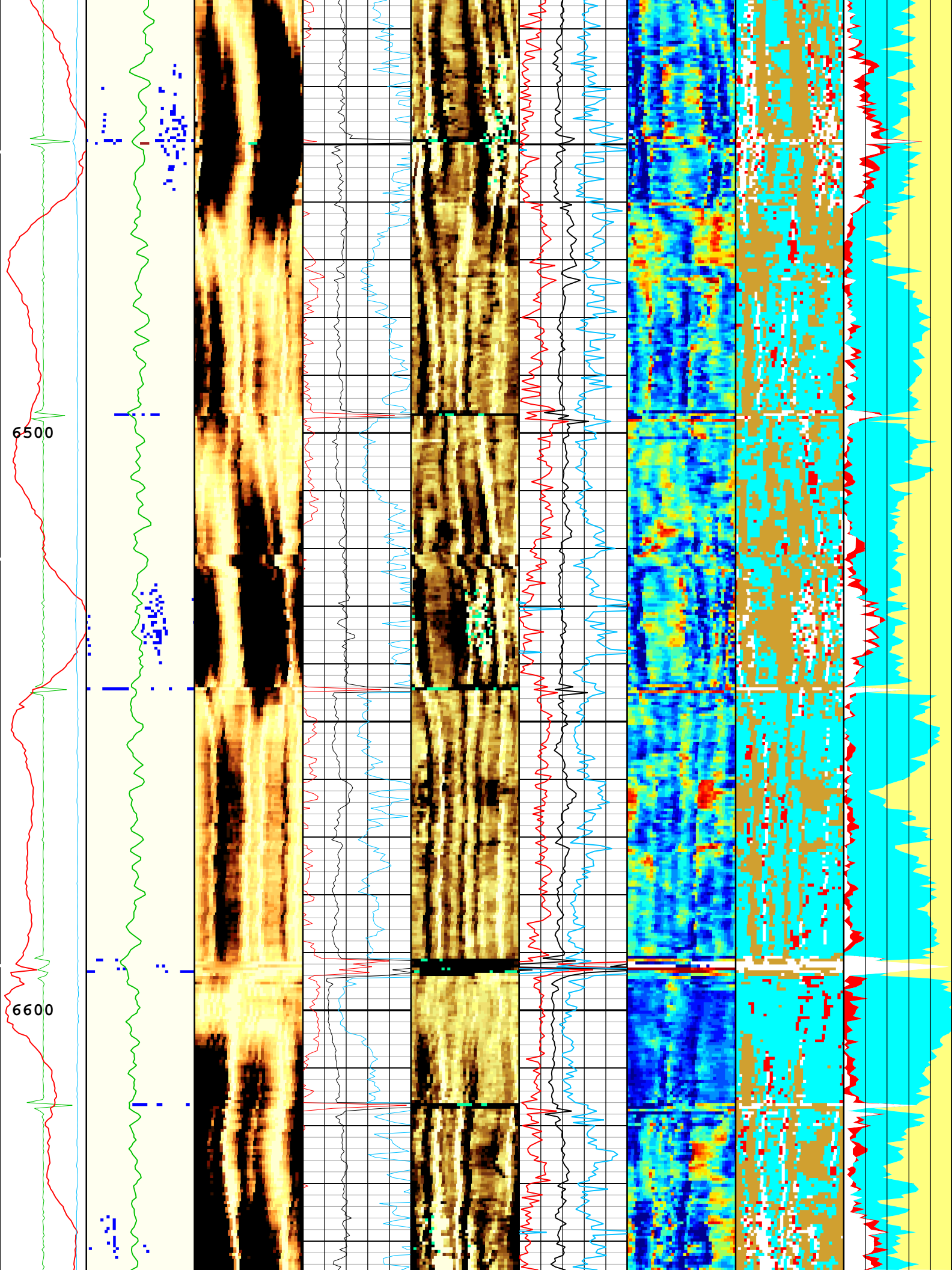


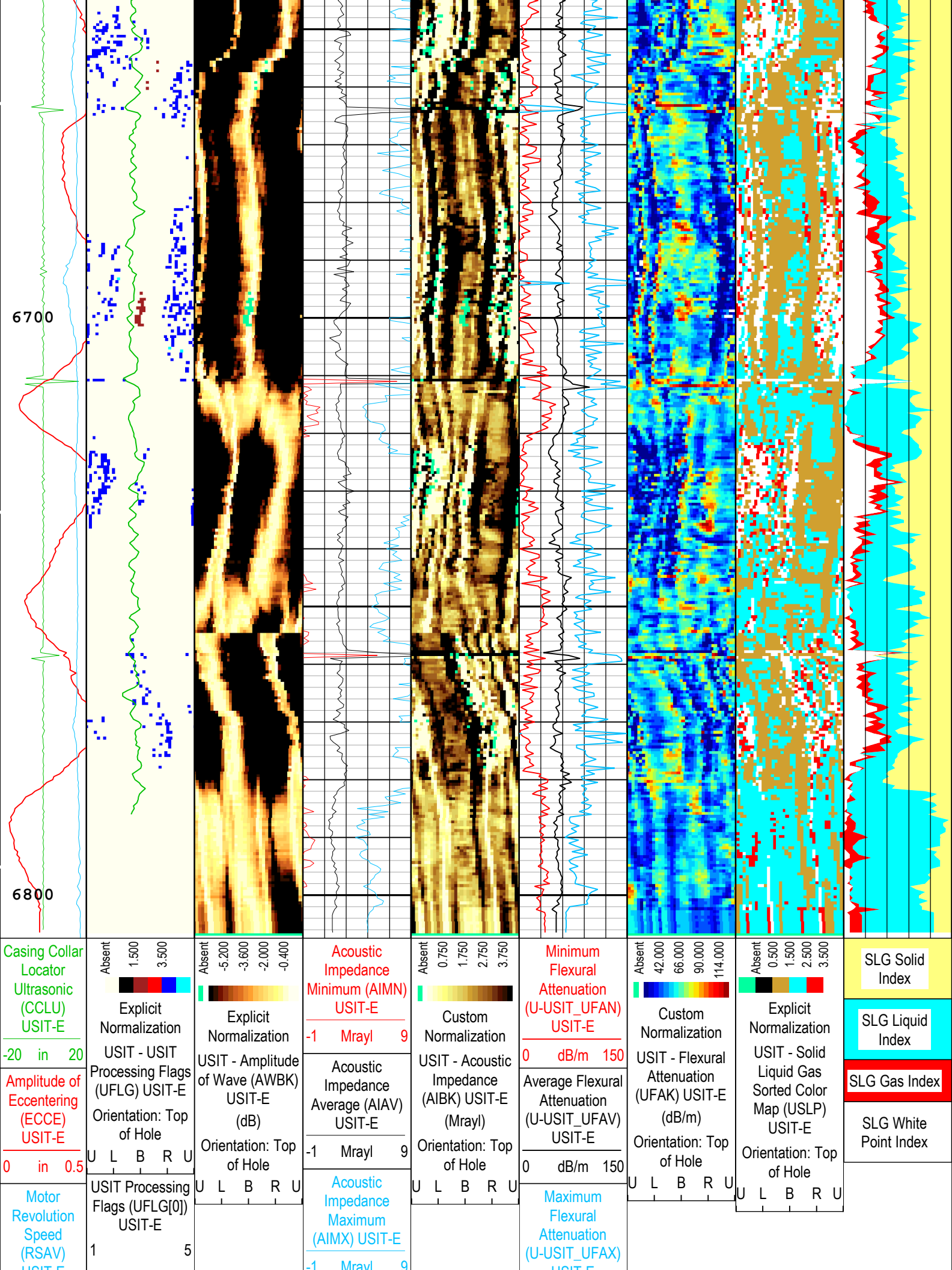












USIT-E	Gamma Ray (ECGR_EDTC) EDTC-B	USIT-E
6 c/s 7.5	0 gAPI 150	0 dB/m 150

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: 21-Sep-2018 17:12:10

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	14892	ft
CDEN	Cement Density	USIT-E	12.5	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	8.4	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	-25.74	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	FreePipe 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_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.21	
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	1.64	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	-30.5	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	1.75	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	13.5	60	2130
BS	8.5	2130	6807.5
All depth are actual.			

Tool Control Parameters	
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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	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	137	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	177	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	106	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	146	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	31.88	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	60	20-Sep-2018 11:17:27	20-Sep-2018 11:25:20	6808.18	6287.15
EMXV	70	20-Sep-2018 11:25:20	20-Sep-2018 11:40:49	6287.15	5188.25

EMXV	75	20-Sep-2018 11:40:49	20-Sep-2018 12:03:26	5188.25	3595.85
EMXV	80	20-Sep-2018 12:03:26	20-Sep-2018 12:54:33	3595.85	56
WINE	78.89	20-Sep-2018 11:17:27	20-Sep-2018 11:25:48	6808.18	6254.1
WINE	79.77	20-Sep-2018 11:25:48	20-Sep-2018 11:33:24	6254.1	5715.4
WINE	78.12	20-Sep-2018 11:33:24	20-Sep-2018 11:33:40	5715.4	5696.08
WINE	77.28	20-Sep-2018 11:33:40	20-Sep-2018 11:39:11	5696.08	5305.48
WINE	76.22	20-Sep-2018 11:39:11	20-Sep-2018 12:54:33	5305.48	56

All depth are at tool zero.

No Data Assignment

IBC SLG Composite

Log

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: 21-Sep-2018 17:12:38

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: 21-Sep-2018 17:12:38

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	56.00 ft	6808.18 ft	20-Sep-2018 11:17:27 AM	20-Sep-2018 12:54:33 PM	ON	6.58 ft	Yes

All depths are referenced to toolstring zero

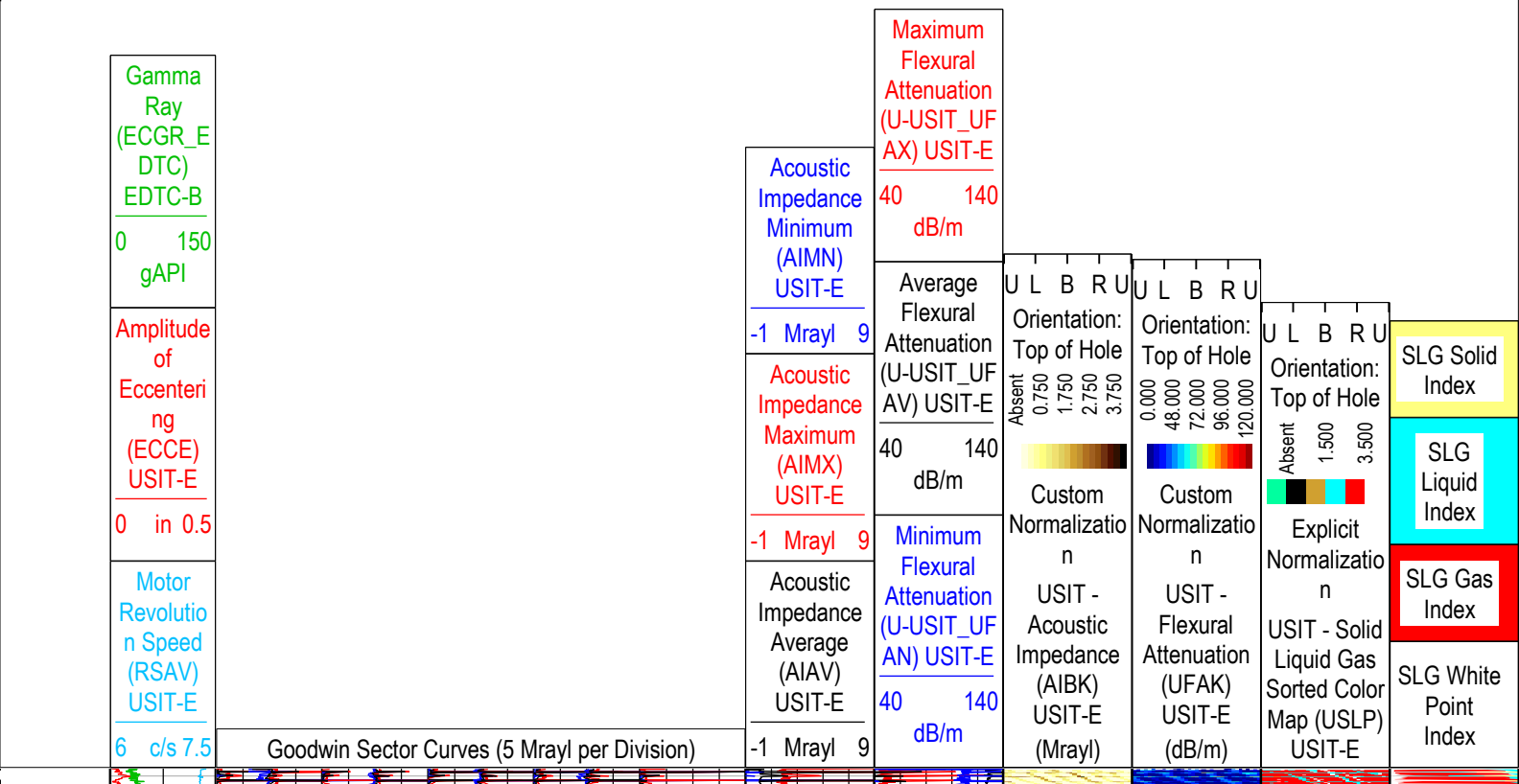
Log

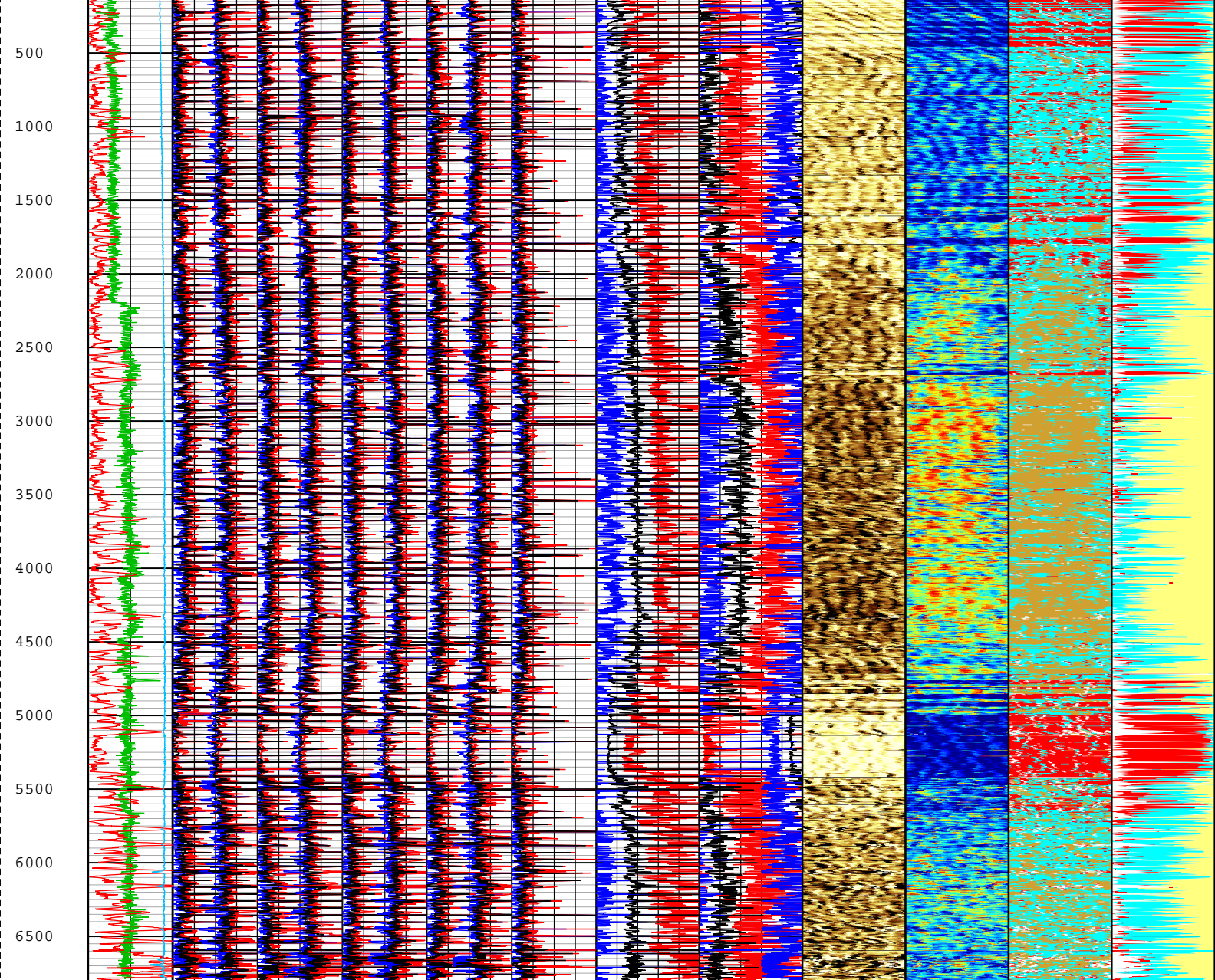
Company:Crestone Peak Resources Operating LLC Well:Davis 1G-9H-G266

ONE: Log[4]:Up:S004

Description: USI Goodwin Format: Log (IBC Goodwin) Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Sep-2018 17:12:43

TIME_1900 - Time Marked every 60.00 (s)





	Goodwin Sector Curves (5 Mrayl per Division)		Acoustic Impedance Minimum (AIMN) USIT-E	Maximum Flexural Attenuation (U-USIT_UF AX) USIT-E	Absent 0.750 1.750 2.750 3.750	0.000 48.000 72.000 96.000 120.000	Absent 1.500 3.500	SLG Solid Index
	Gamma Ray (ECGR_E DTC) EDTC-B		-1 Mrayl 9	40 140 dB/m	Custom Normalization	Custom Normalization	Explicit Normalization	SLG Liquid Index
	0 150 gAPI		Acoustic Impedance Maximum (AIMX) USIT-E	Average Flexural Attenuation (U-USIT_UF AV) USIT-E	USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)	USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E	SLG Gas Index
	Amplitude of Eccentering (ECCE) USIT-E		-1 Mrayl 9	40 140 dB/m	Orientation: Top of Hole U L B R U	Orientation: Top of Hole U L B R U	Orientation: Top of Hole U L B R U	SLG White Point Index
	0 in 0.5		Acoustic Impedance Average (AIAV) USIT-E	Minimum Flexural Attenuation (U-USIT_UF AN) USIT-E				
	Motor Revolution Speed (RSAV) USIT-E		-1 Mrayl 9	40 140 dB/m				
	6 c/s 7.5							

ONE

IBC SLG

Software Version

Acquisition System	Version
Maxwell 2018 SP2	8.2.104493.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[2]:Up	Up	1987.18 ft	2315.72 ft	20-Sep-2018 10:49:24 AM	20-Sep-2018 10:54:35 AM	ON	1.56 ft	Yes

All depths are referenced to toolstring zero

Log






Company:Crestone Peak Resources Operating LLC Well:Davis 1G-9H-G266

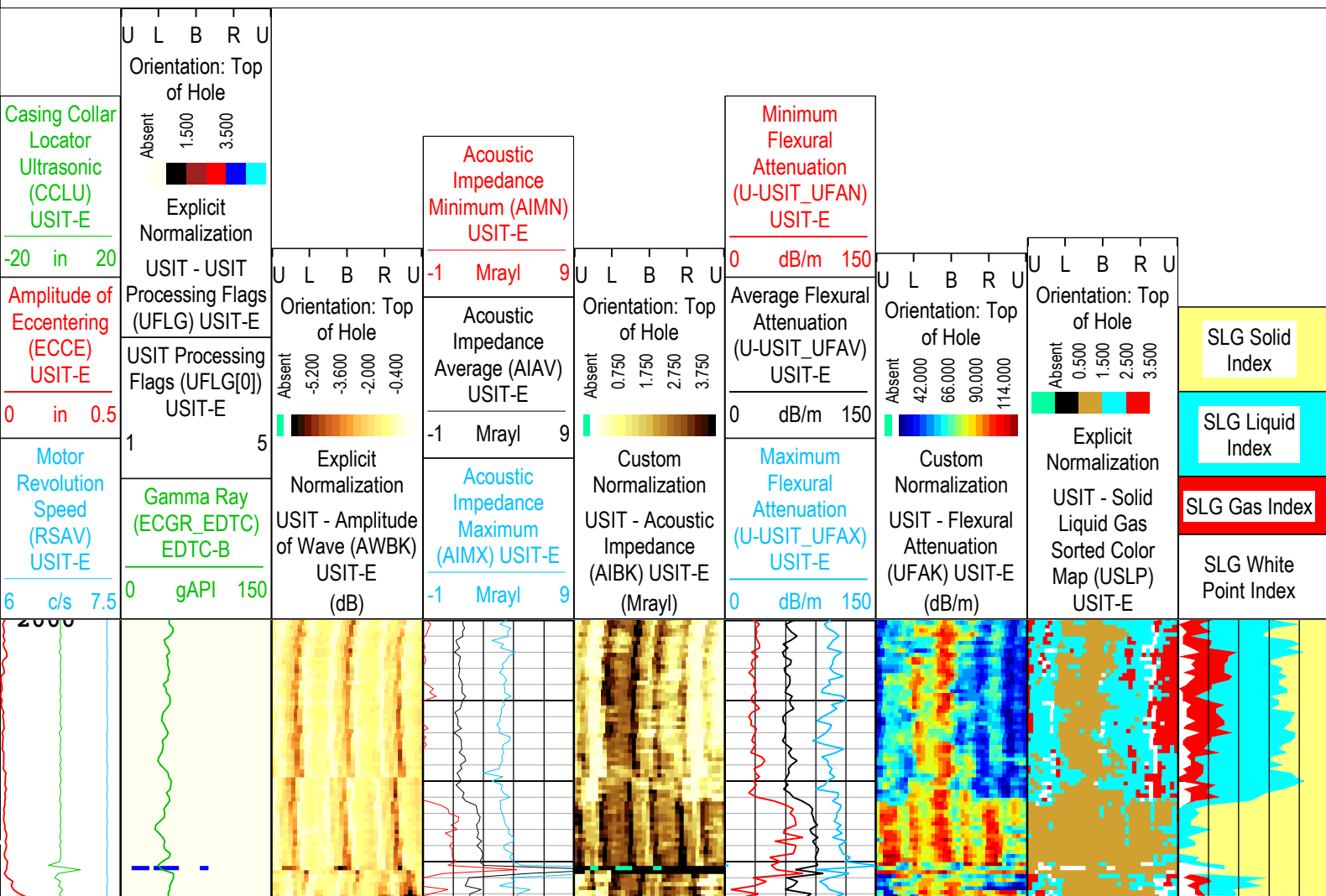
ONE: Log[2]:Up:S004

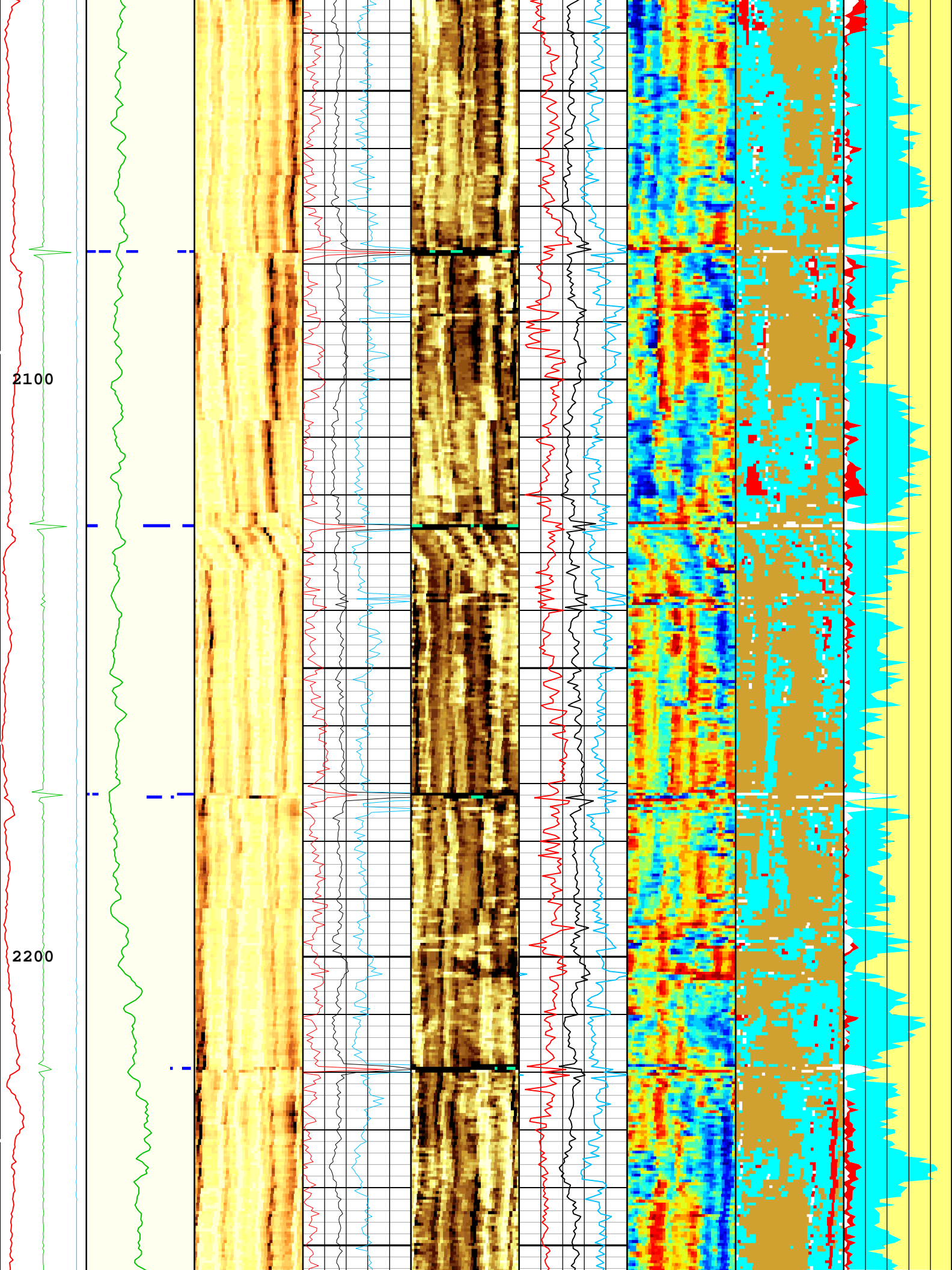
Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Sep-2018 17:12:53

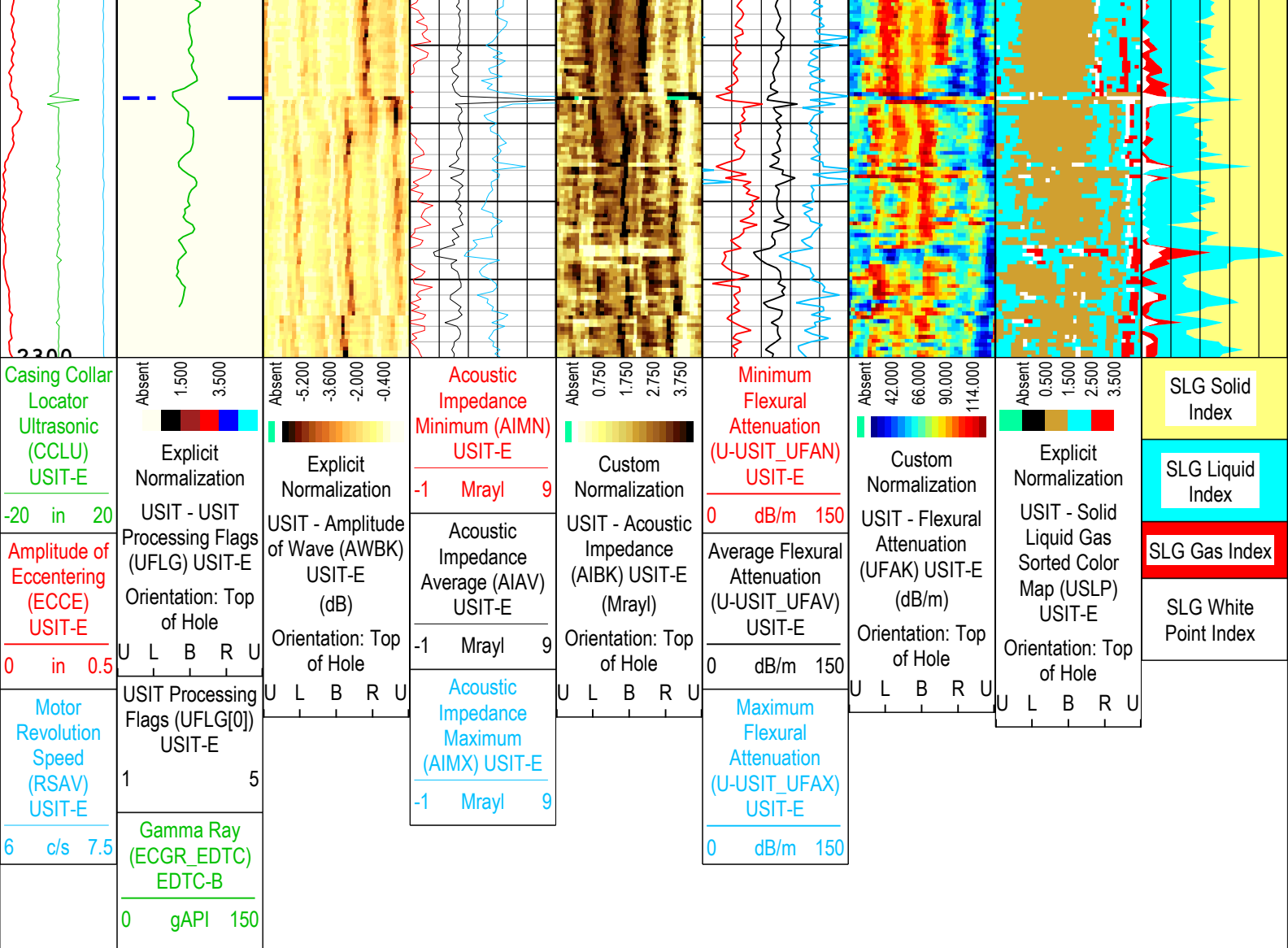
TIME_1900 - Time Marked every 60.00 (s)

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] - :		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: 21-Sep-2018 17:12:53

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	14892	ft
CDEN	Cement Density	USIT-E	12.5	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	8.4	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	-25.74	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	FreePipe 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_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.21	
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	1.64	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	-30.5	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	1.75	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	13.5	2000	2130
BS	8.5	2130	2300
All depth are actual.			

Tool Control Parameters				
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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	60	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	137	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	177	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	106	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	146	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	31.88	us
WINE	Window End Time	USIT-E	78.89	us

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	1987.18 ft	2315.72 ft	20-Sep-2018 10:49:24 AM	20-Sep-2018 10:54:35 AM	ON	1.56 ft	Yes

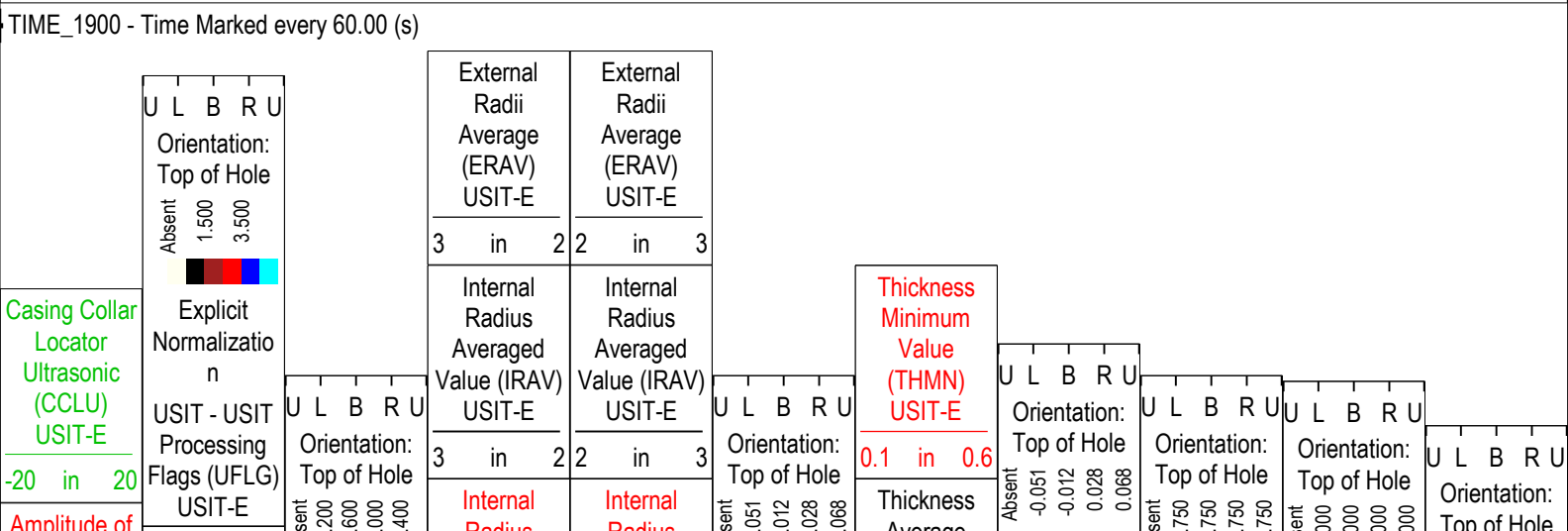
All depths are referenced to toolstring zero

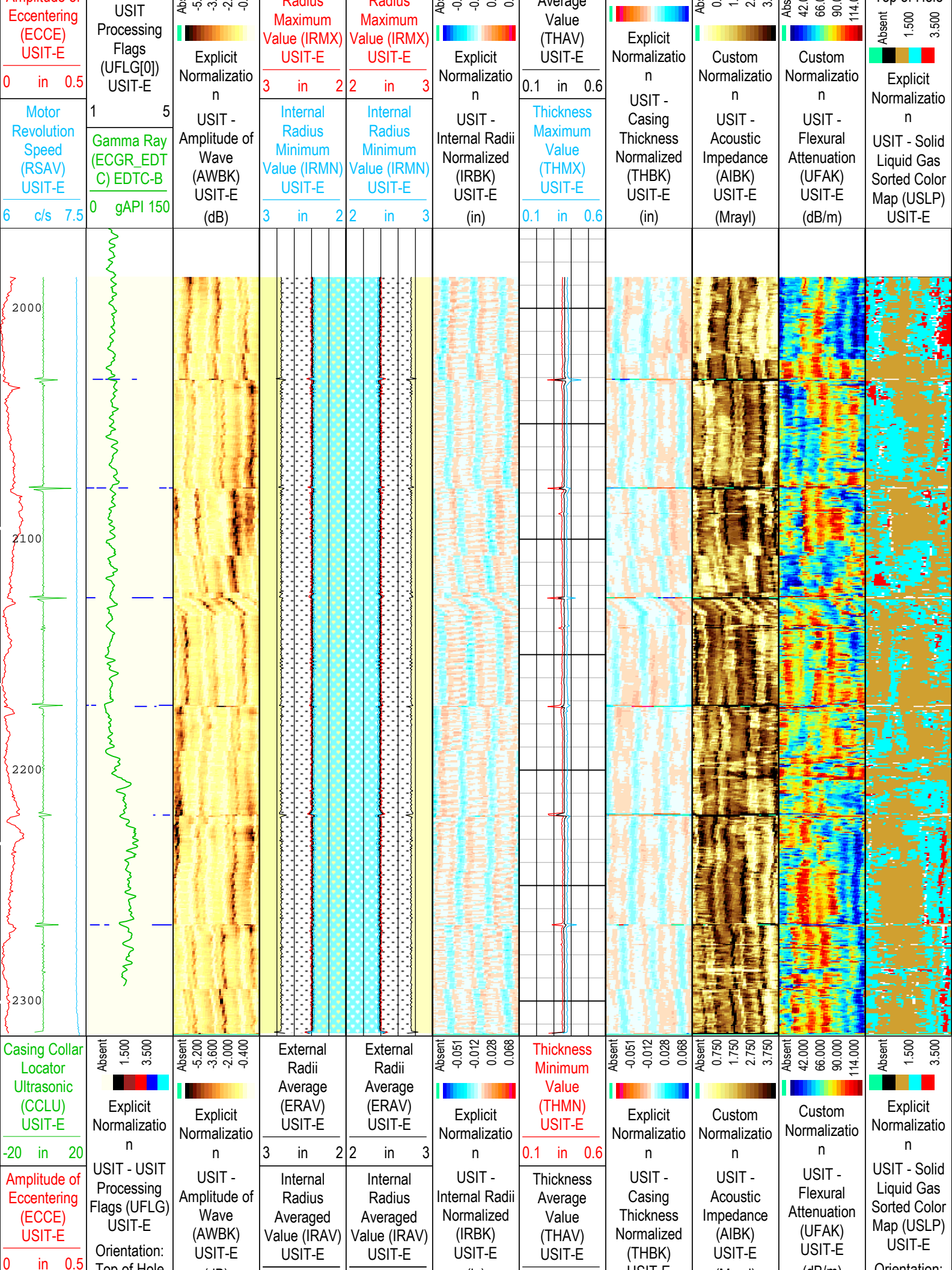
Log	Company:Crestone Peak Resources Operating LLC	Well:Davis 1G-9H-G266
	ONE: Log[2]:Up:S004	

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: 21-Sep-2018 17:13:02

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





<div>Motor Revolution Speed (RSAV) USIT-E</div> <div>6 c/s 7.5</div>	Top of Hole				(dB)				Orientation: Top of Hole				3 in 2 in 3				Orientation: Top of Hole				0.1 in 0.6				USIT-E (in)				(Mrayl)				(dB/m)				Orientation: Top of Hole							
	U L B R U				U L B R U				U L B R U				U L B R U				U L B R U				U L B R U				U L B R U				U L B R U				U L B R U				U L B R U				U L B R U			
	USIT Processing Flags (UFLG[0]) USIT-E				Internal Radius Maximum Value (IRMX) USIT-E				Internal Radius Maximum Value (IRMX) USIT-E				Thickness Maximum Value (THMX) USIT-E				Gamma Ray (ECGR_EDT C) EDTC-B				Internal Radius Minimum Value (IRMN) USIT-E				Internal Radius Minimum Value (IRMN) USIT-E				0 gAPI 150															
	1 5				3 in 2 2 in 3				3 in 2 2 in 3				0.1 in 0.6								3 in 2 2 in 3				3 in 2 2 in 3																			

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) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 21-Sep-2018 17:13:02

Channel Processing Parameters				
ONE: 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	14892	ft
CDEN	Cement Density	USIT-E	12.5	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	8.4	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	-25.74	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	FreePipe 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_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.21	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.64	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	-30.5	dB/m
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
ZMUD	Acoustic Impedance of Mud	Borehole	1.75	Mrayl

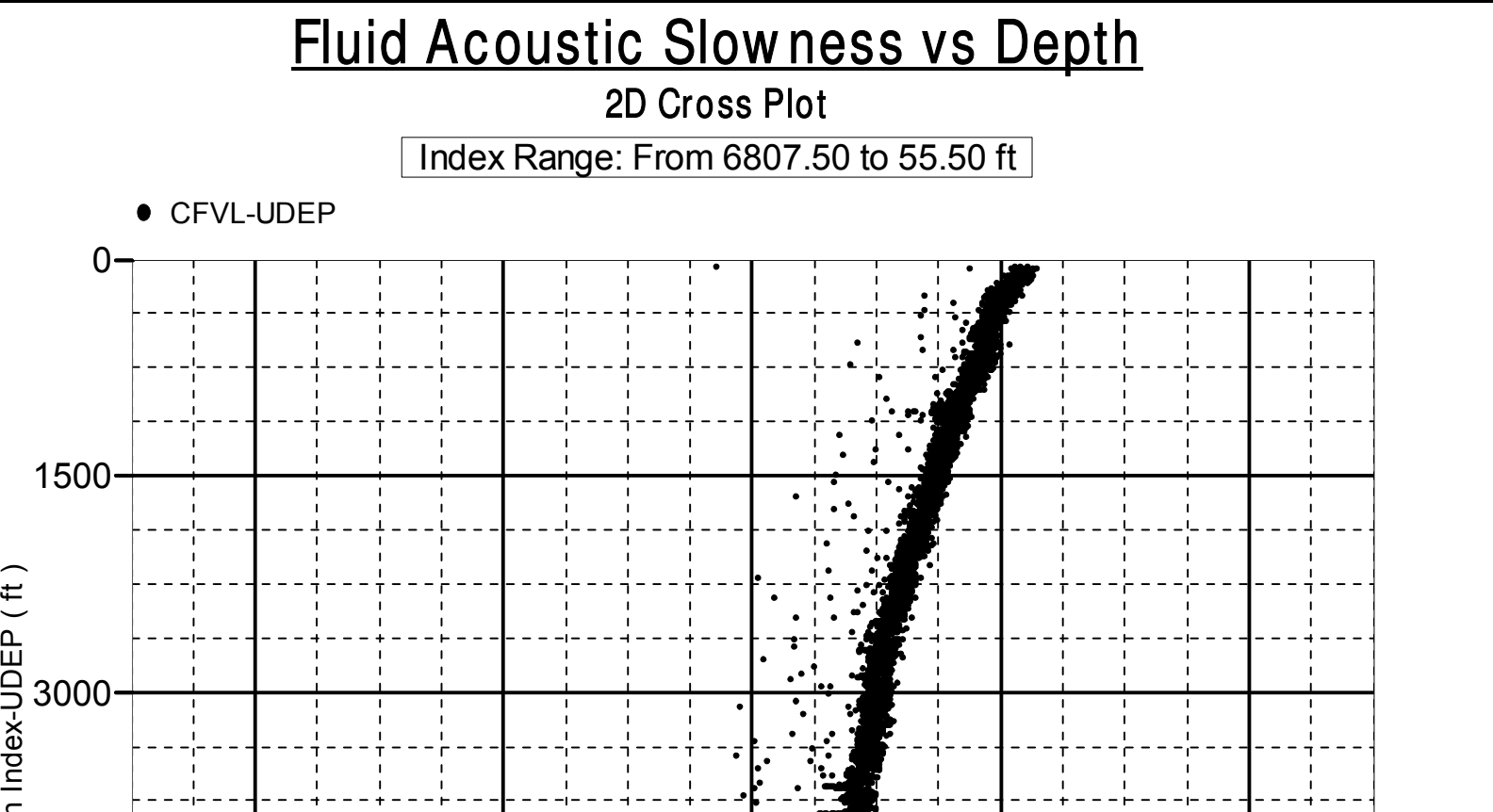
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

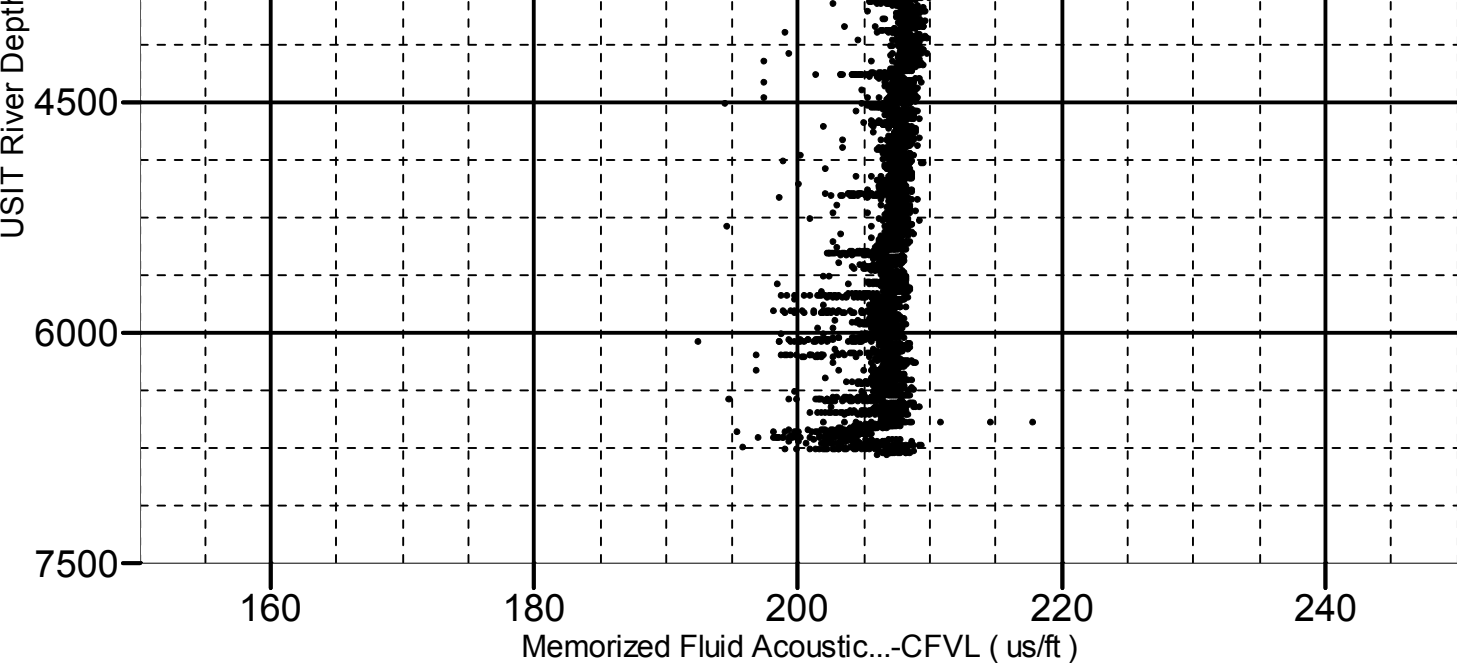
Depth Zone Parameters			
Parameter	Value	Start (ft)	Stop (ft)
BS	13.5	1965.5	2130
BS	8.5	2130	2315
All depth are actual.			

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	60	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	137	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	177	us
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	106	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	146	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	31.88	us
WINE	Window End Time	USIT-E	78.89	us

XYZ	Company:Crestone Peak Resources Operating LLC Well:Davis 1G-9H-G266 ONE: Log[4]:Up:S004
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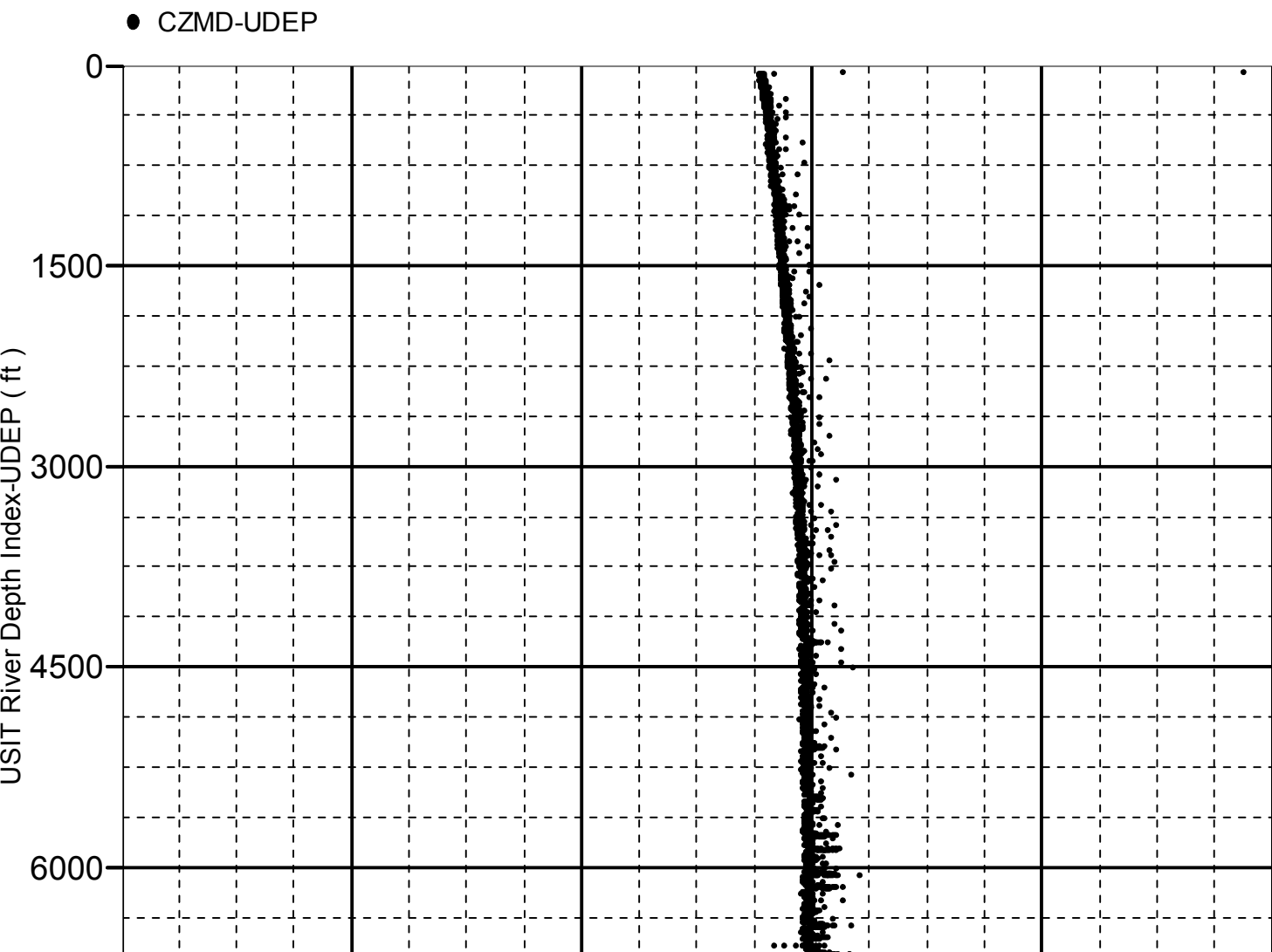


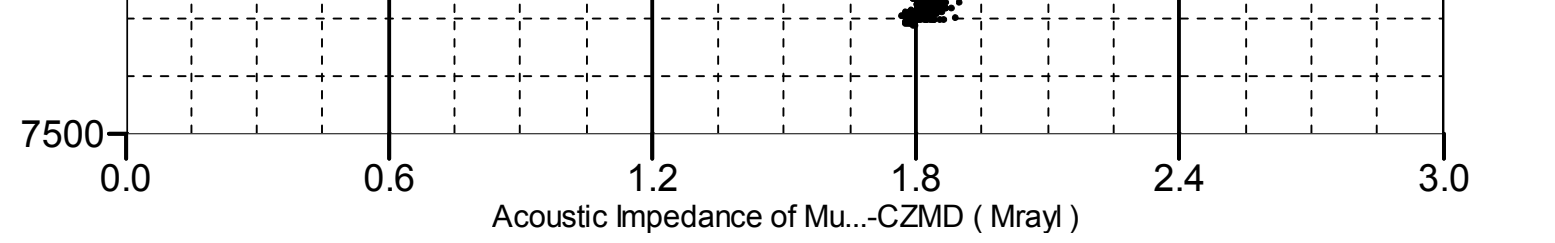


Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 6807.50 to 55.50 ft





Company:	Crestone Peak Resources Operating LLC	Schlumberger
Well:	Davis 1G-9H-G266	
Field:	Wattenberg	
County:	Weld	
State:	Colorado	

Isolation Scanner
Cement Evaluation
Gamma Ray - CCL Log