

Company: ENCANA OIL & GAS (USA) INC.

Well: SGU 8504C-25 F25496 (F25)

Field: STORY GULCH

County: GARFIELD State: COLORADO

ISOLATION SCANNER
CEMENT EVALUATION
GAMMA RAY

County: GARFIELD

Field: STORY GULCH

Location: SHL: SENW 2306' FNL & 1883' FEL

Well: SGU 8504C-25 F25496 (F25)

Company: ENCANA OIL & GAS (USA) INC.

LOCATION			
SHL: SENW 2306' FNL & 1883' FEL	Elev.: K.B.	8320.00 ft	
BHL: SENW 895' FNL & 690' FWL	G.L.	8298.00 ft	
	D.F.	8319.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 8298.00 ft	
Log Measured From: KELLY BUSHING	22.00 ft	above Perm. Datum	
Drilling Measured From: KELLY BUSHING			
API Serial No. 05-045-19078-0000	Section 25	Township 4S	Range 96W

Logging Date	30-Aug-2010		
Run Number	1		
Depth Driller	12537 ft		
Schlumberger Depth	12450 ft		
Bottom Log Interval	12450 ft		
Top Log Interval	200 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.35 lbm/gal		
Fluid Level	22 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	22 ft		
To	12537 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	I-80		
From	22 ft		
To	12537 ft		
Maximum Recorded Temperatures	280 degF		
Logger On Bottom	30-Aug-2010	19:23	
Unit Number	Location	2105 GRAND JUNCTION, CO	
Recorded By	M. ARNETT		
Witnessed By	UNATTENDED		

	Run 1	Run 2	Run 3
PVT DATA			
Oil Density			
Water Salinity			
Gas Gravity			
Bo			
Bw			
1/Bg			
Bubble Point Pressure			
Bubble Point Temperature			
Solution GOR			
Maximum Deviation			
CEMENTING DATA			
Primary/Squeeze	Primary		
Casing String No			
Lead Cement Type			
Volume			
Density	9 lbm/gal		
Water Loss			
Additives			
Tail Cement Type			
Volume			
Density			
Water Loss			
Additives			
Expected Cement Top			
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Fluid Type			
Salinity			
Density			
Fluid Level			
BIT/CASING/TUBING STRING			
Bit Size			
From			
To			
Casing/Tubing Size			
Weight			
Grade			
From			
To			
Maximum Recorded Temperatures			
Logger On Bottom			
Unit Number	Location		
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 30-AUG-2010 20:20:54

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-46ZV XS
Serial Number:	6122	Serial Number:	2537	Serial Number:	
Calibration Date:	29-JUN-2010	Calibration Date:	21-AUG-2010	Length:	13500 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	1159		
Calibration Cable Type:	7-46P	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	-5	Calibration RMS:	33	Rig Type:	LAND
Wheel Correction 2:	-4	Calibration Peak Error:	64		

Depth Control Parameters

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	RESERVOIR SATURATION TOOL
Reference Log Run Number:	1
Reference Log Date:	24-AUG-2010
Subsequent Trip Down Log Correction:	-1.00 FT

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL POLICIES APPLIED
2. IDW USED AS PRIMARY DEPTH REFERENCE, Z-CHART USED AS SECONDARY
- 3.
- 4.
- 5.
- 6.

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1 OS1: NONE OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
THIS IS A SUBSEQUENT TRIP TO WELL CORRELATED TO RST RAN 24-AUG-2010	
TOOLSTRING RUN AS PER TOOLSKETCH	
IBC RAN WITH TWO INLINE CENTRALIZERS WITH SMALL HOLE KIT	
UFAO: -15 DB/M	
SOME EFFECTS ON INTERNAL RADIUS DUE TO SUB SHAKE - CEMENT DATA UNAFFECTED	

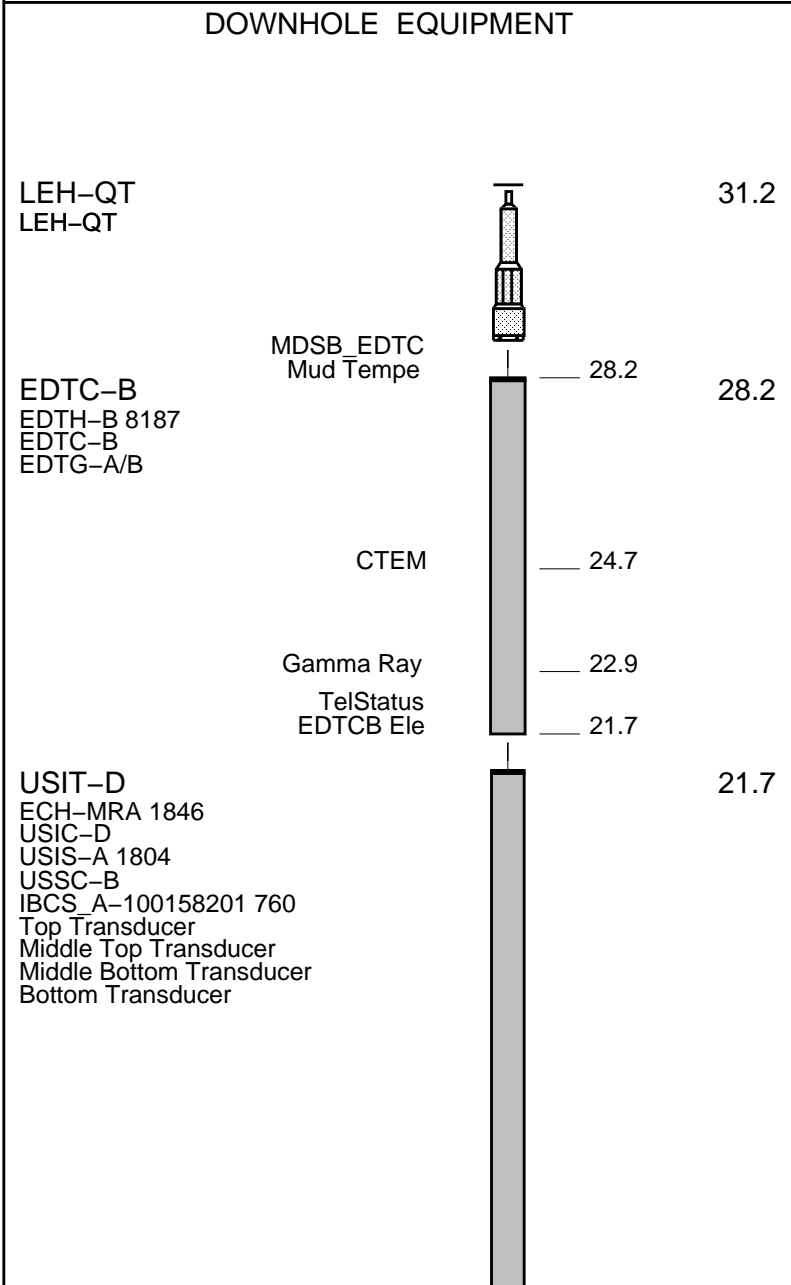
AFE: 10135873	
CRANE: 5044	
YOUR CREW: JESSE & ROGER	
THANK YOU FOR CHOOSING SCHLUMBERGER!	

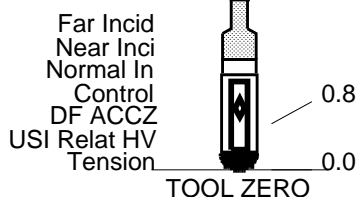
RUN 1			RUN 2		
SERVICE ORDER #:		BCVF-00051	SERVICE ORDER #:		
PROGRAM VERSION:		17C0-154	PROGRAM VERSION:		
FLUID LEVEL:		22 ft	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT

WITM (EDTS)-A





MAXIMUM STRING DIAMETER 3.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

MAIN SLG COMPOSITE

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC.

Well: SGU 8504C-25 F25496 (F25)

Input DLIS Files

DEFAULT	USI_040LUP	FN:68	PRODUCER	30-Aug-2010 19:32	12455.5 FT	194.5 FT
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Output DLIS Files

DEFAULT	USI_043PUP	FN:73	PRODUCER	31-Aug-2010 00:22	12455.5 FT	194.5 FT
RTB	USI_043PUP	FN:74	PRODUCER	30-Aug-2010 18:37	12455.5 FT	194.5 FT

OP System Version: 17C0-154

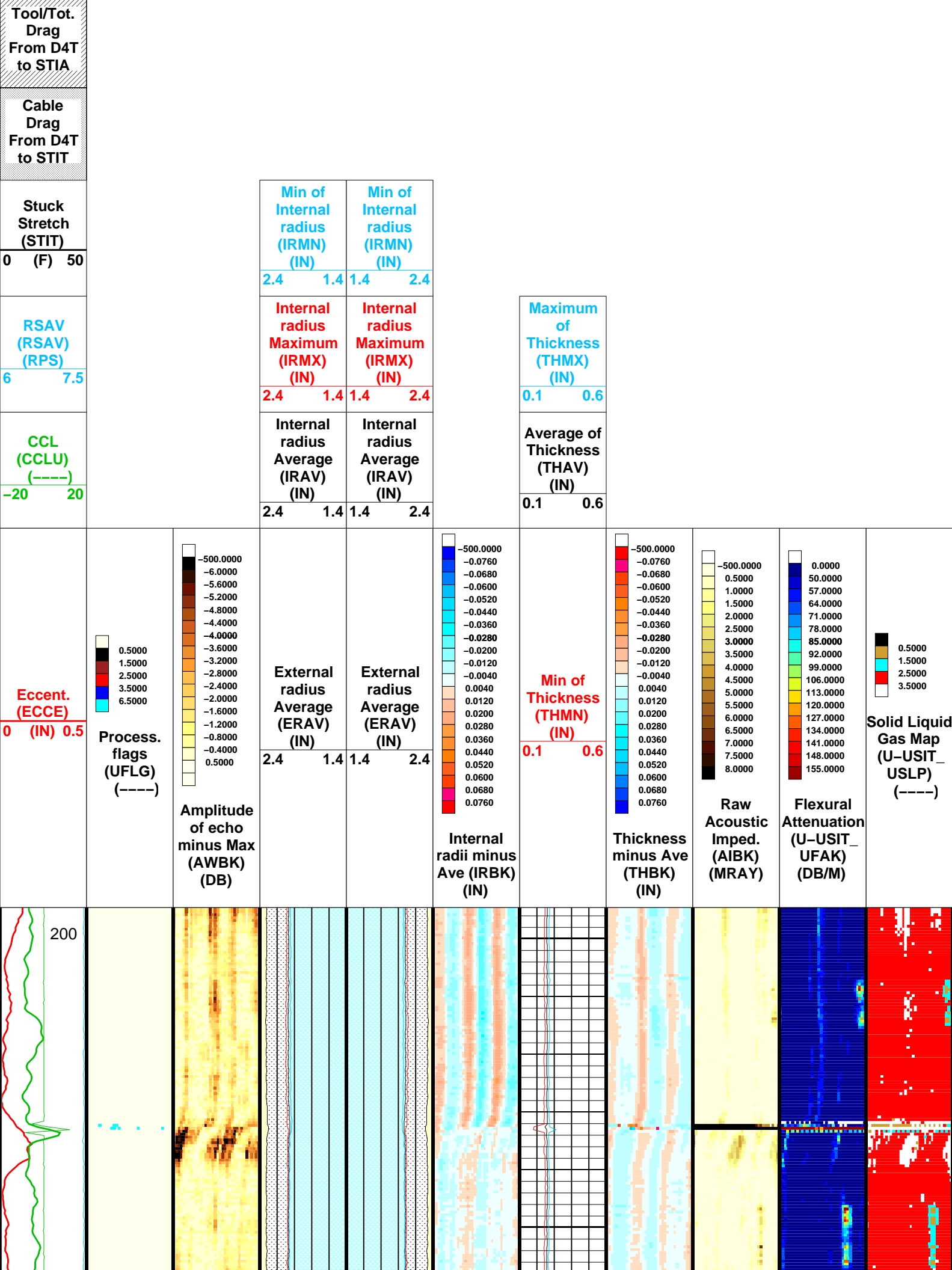
USIT-D	17C0-154	EDTC-B	SRPC-3870_Q3_2009_OP17_V3_b
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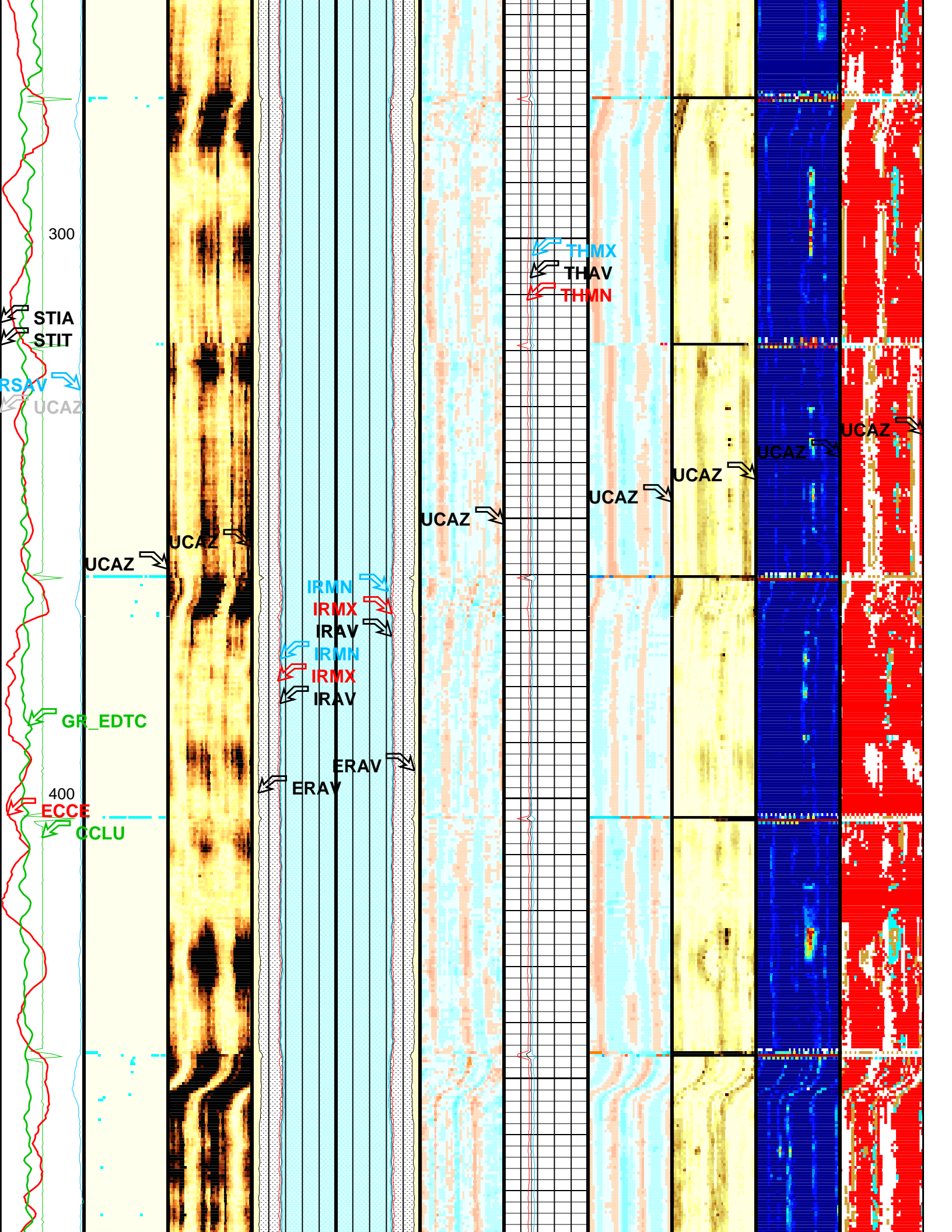
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rotation
(UCAZ)
(DEG)

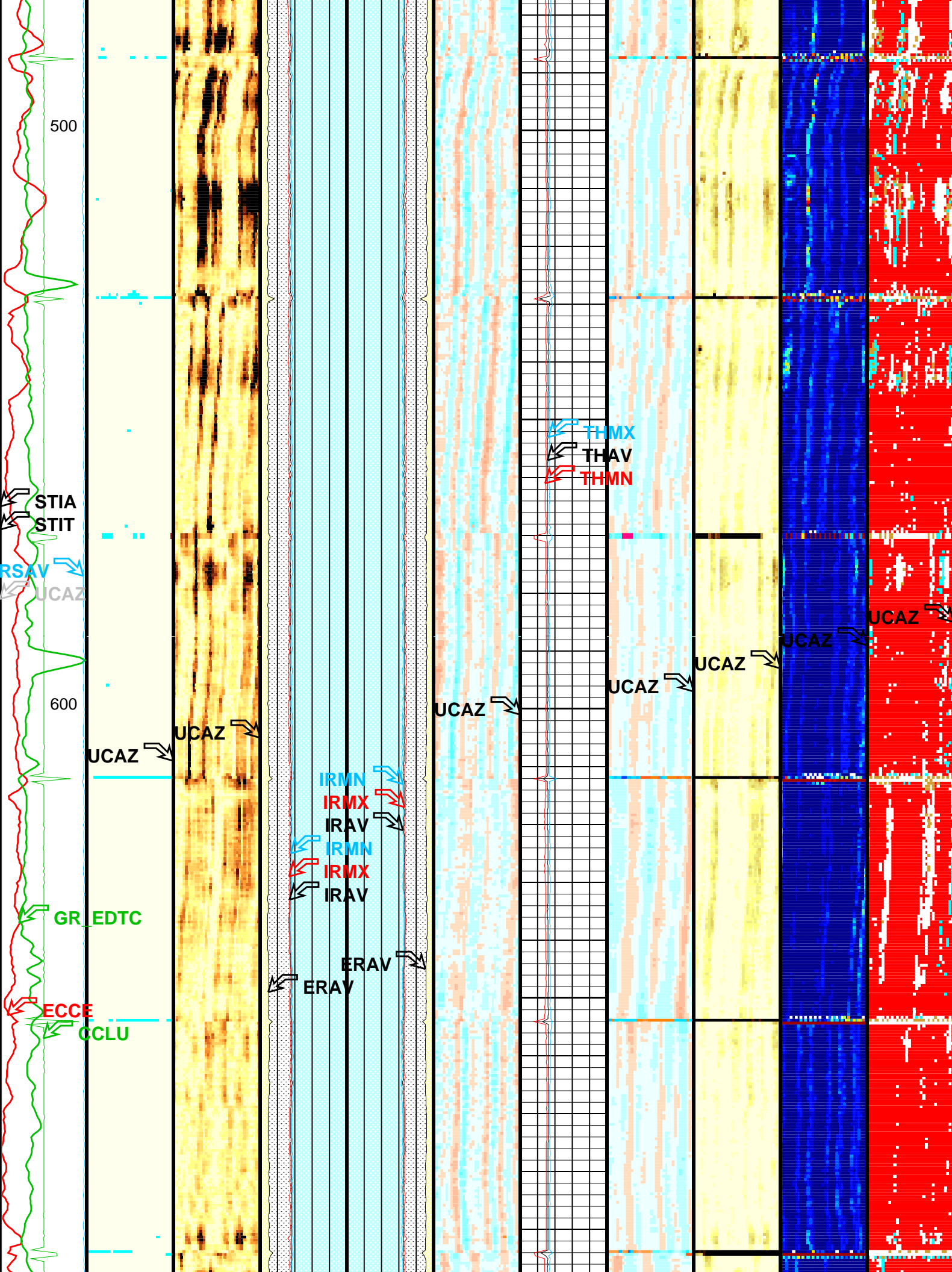
0 360

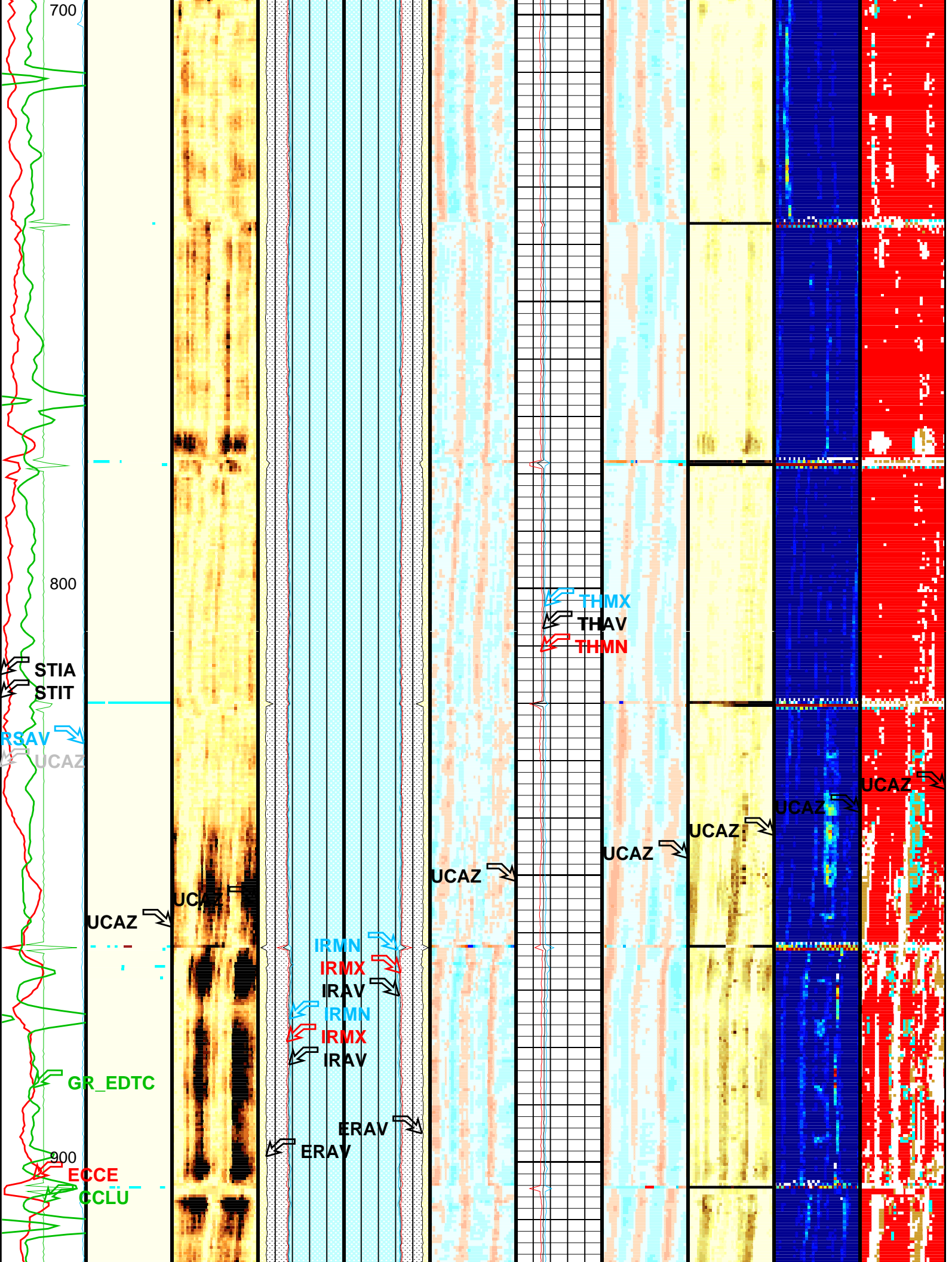
Gamma
Ray (GR_
EDTC)
(GAPI)

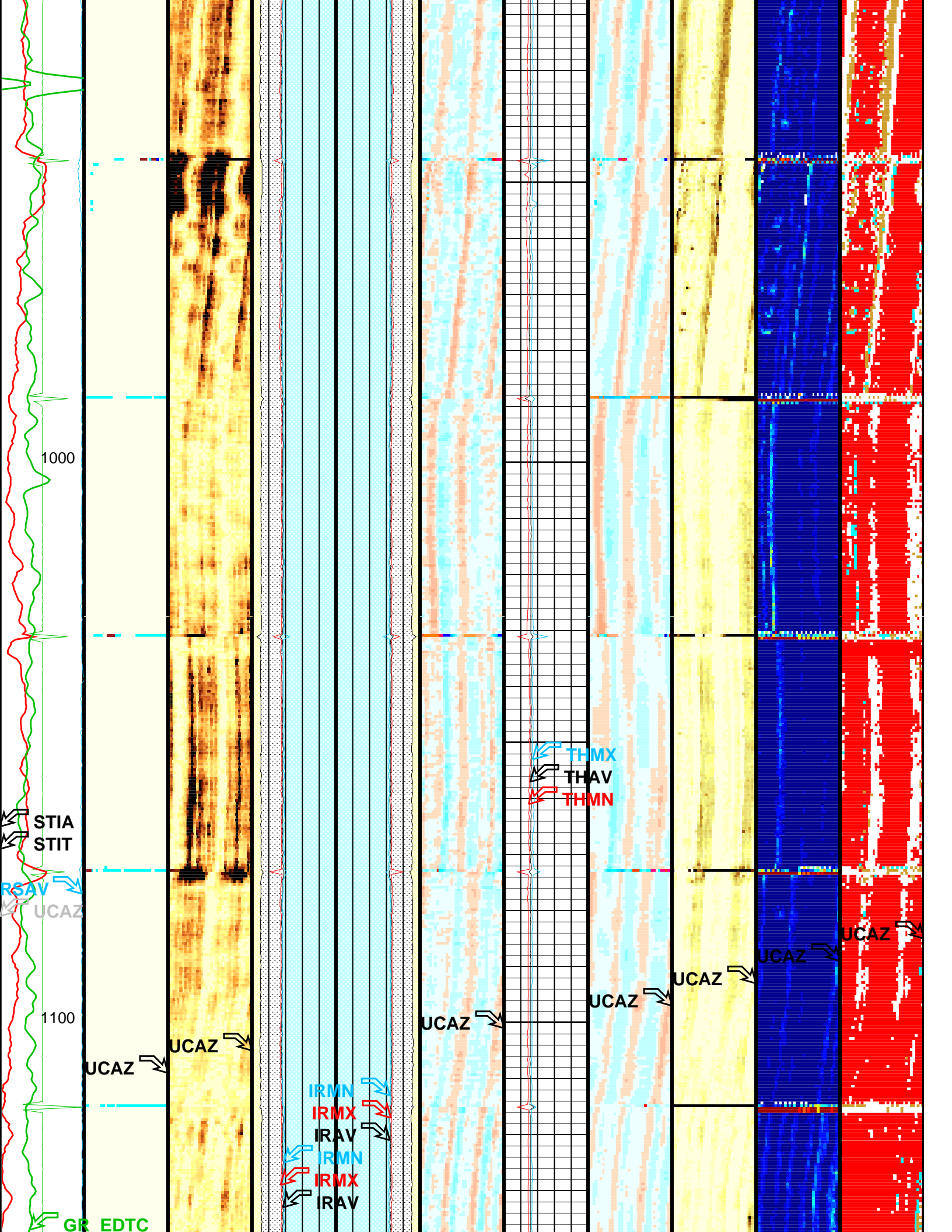
0 150

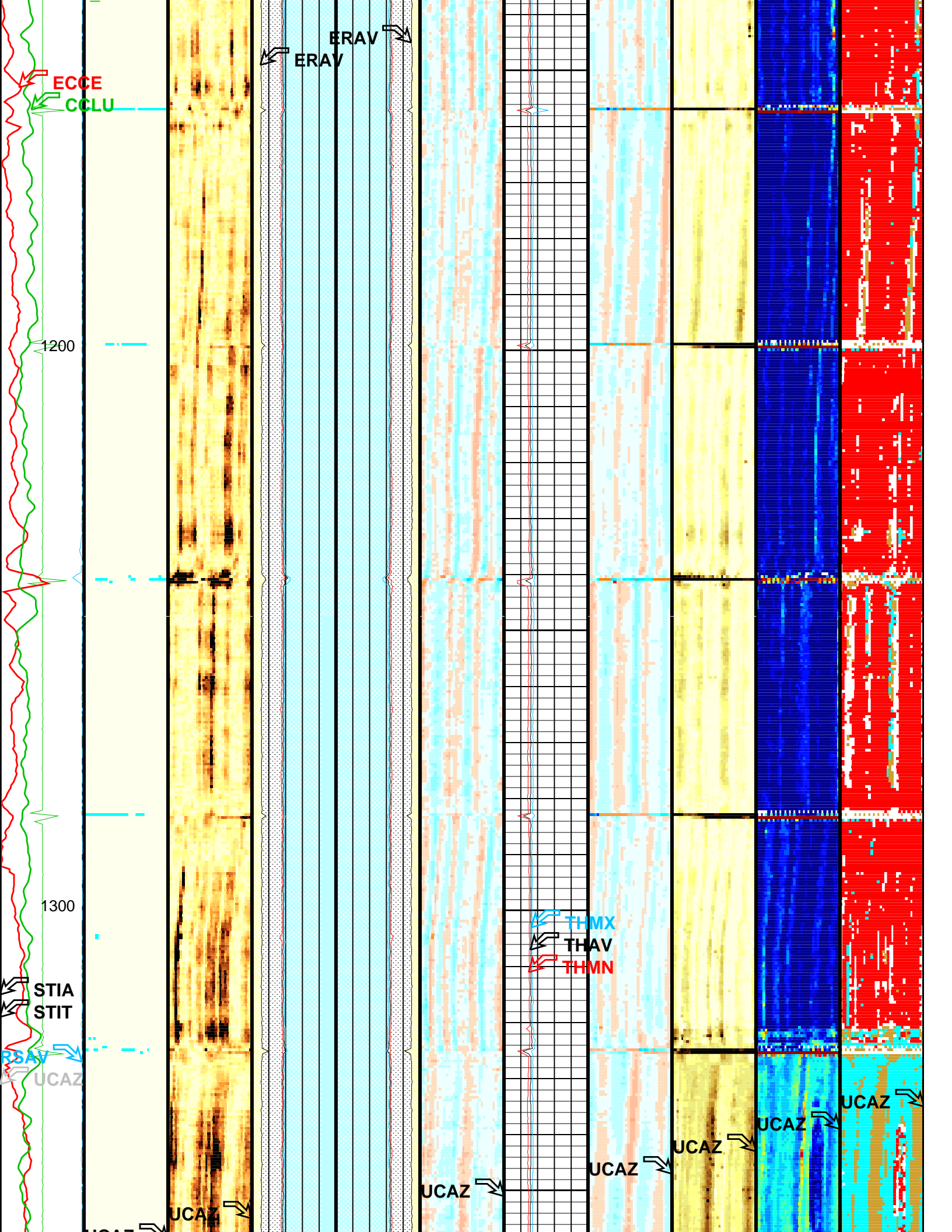


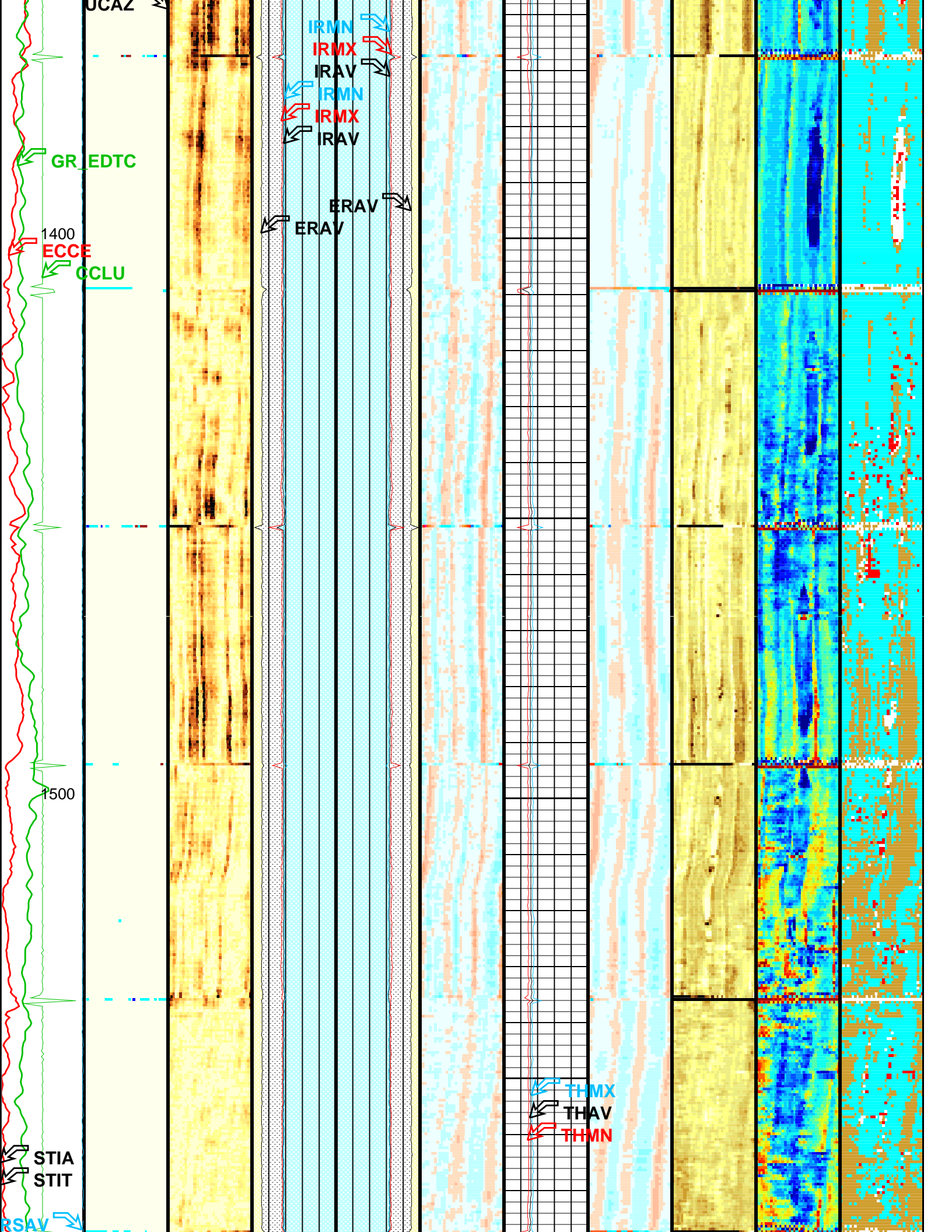


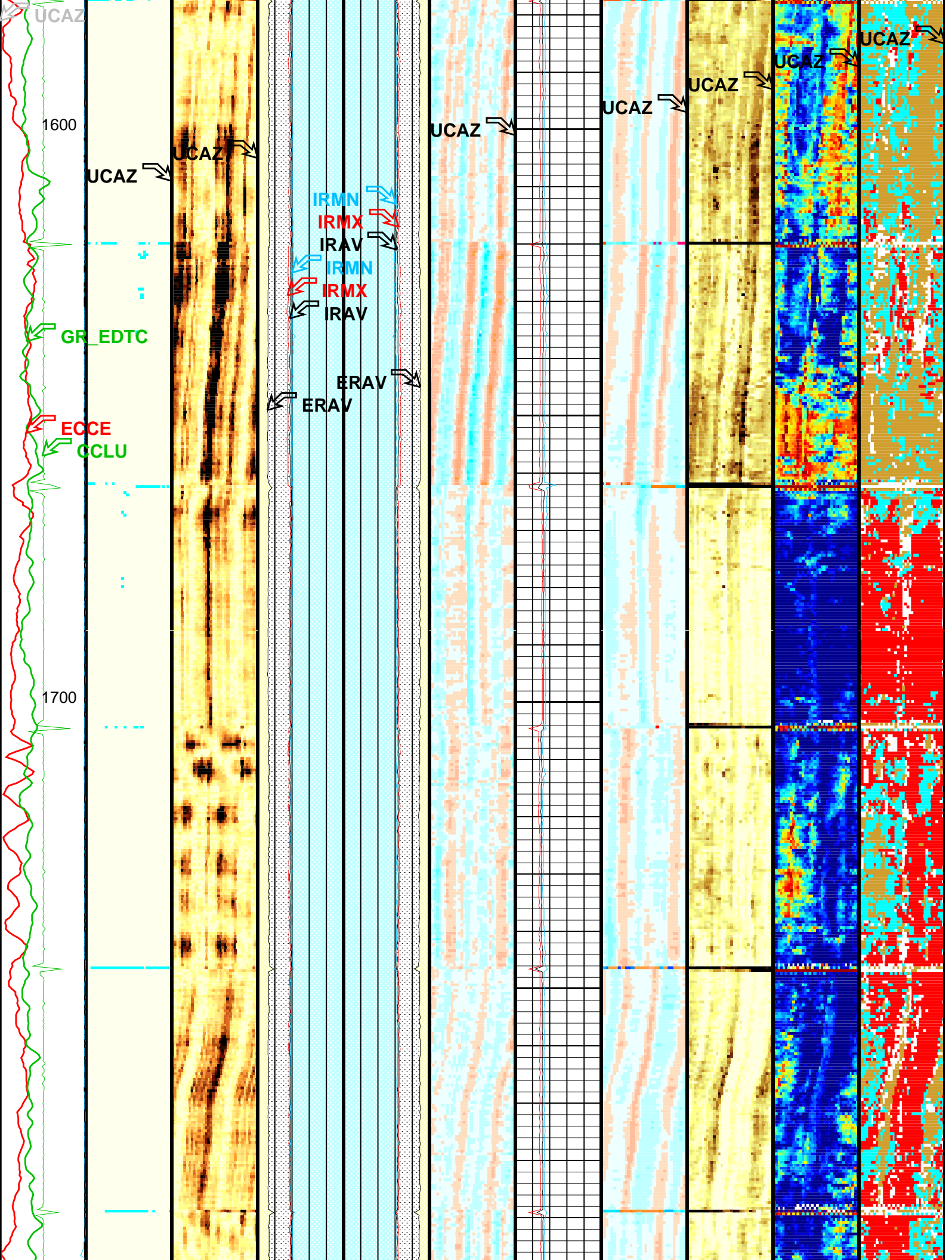


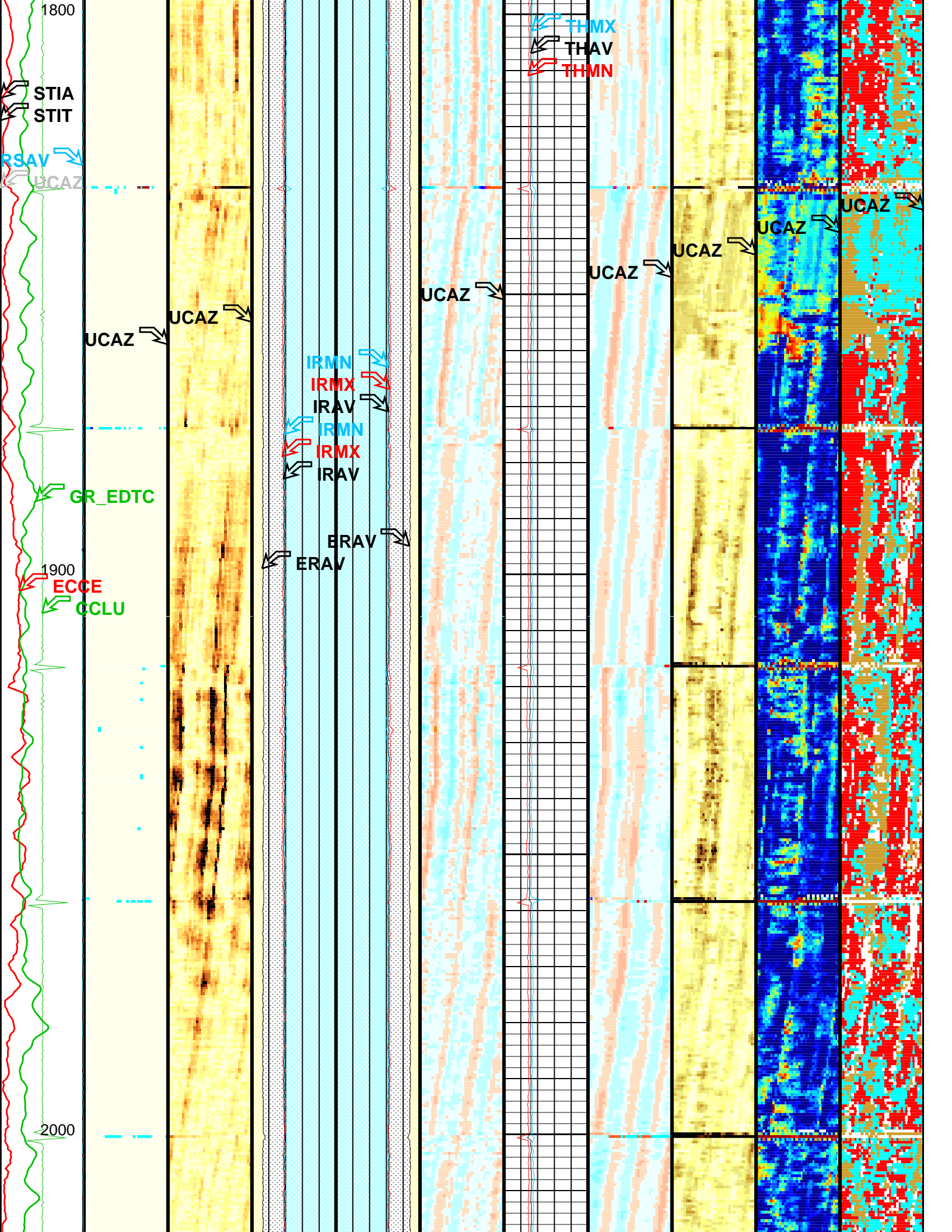


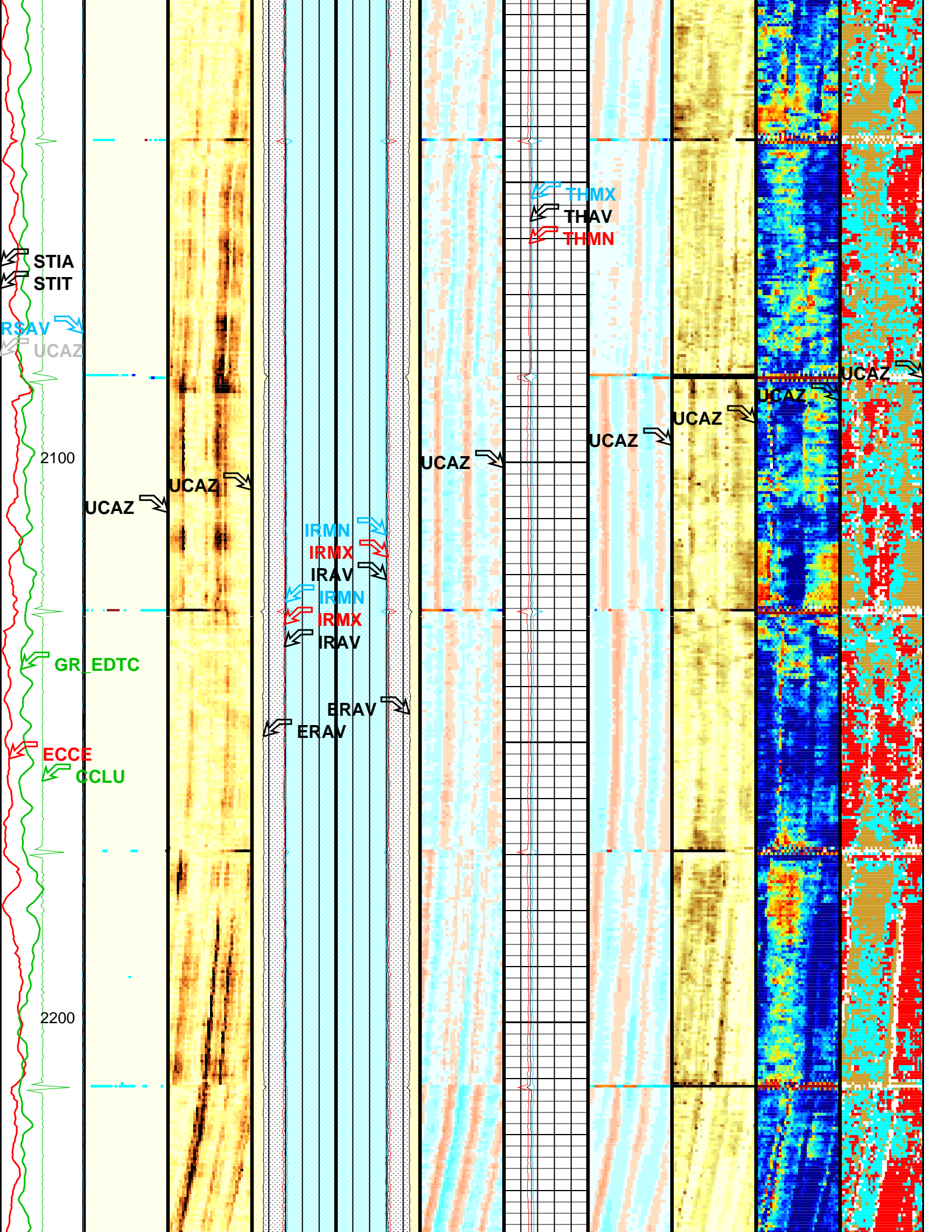


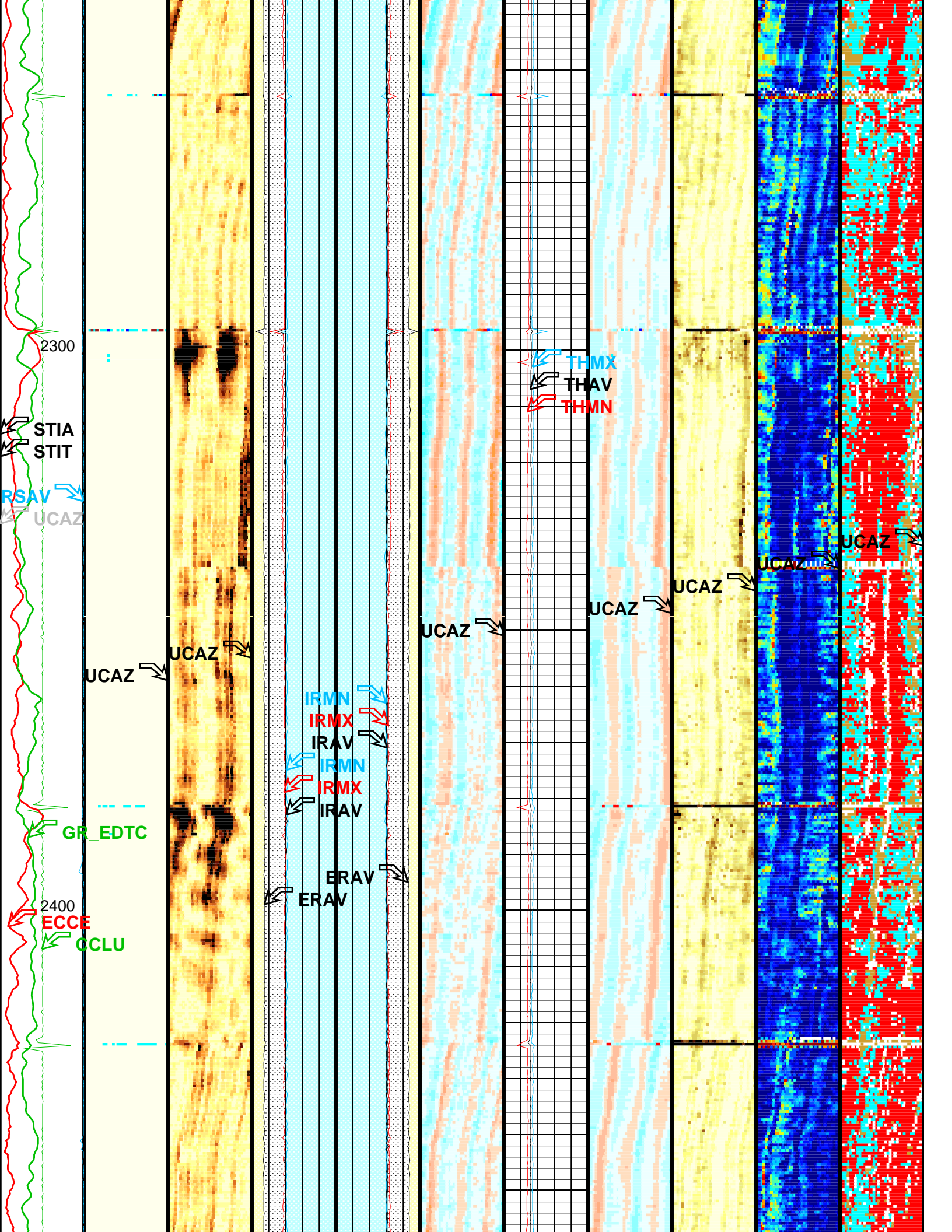


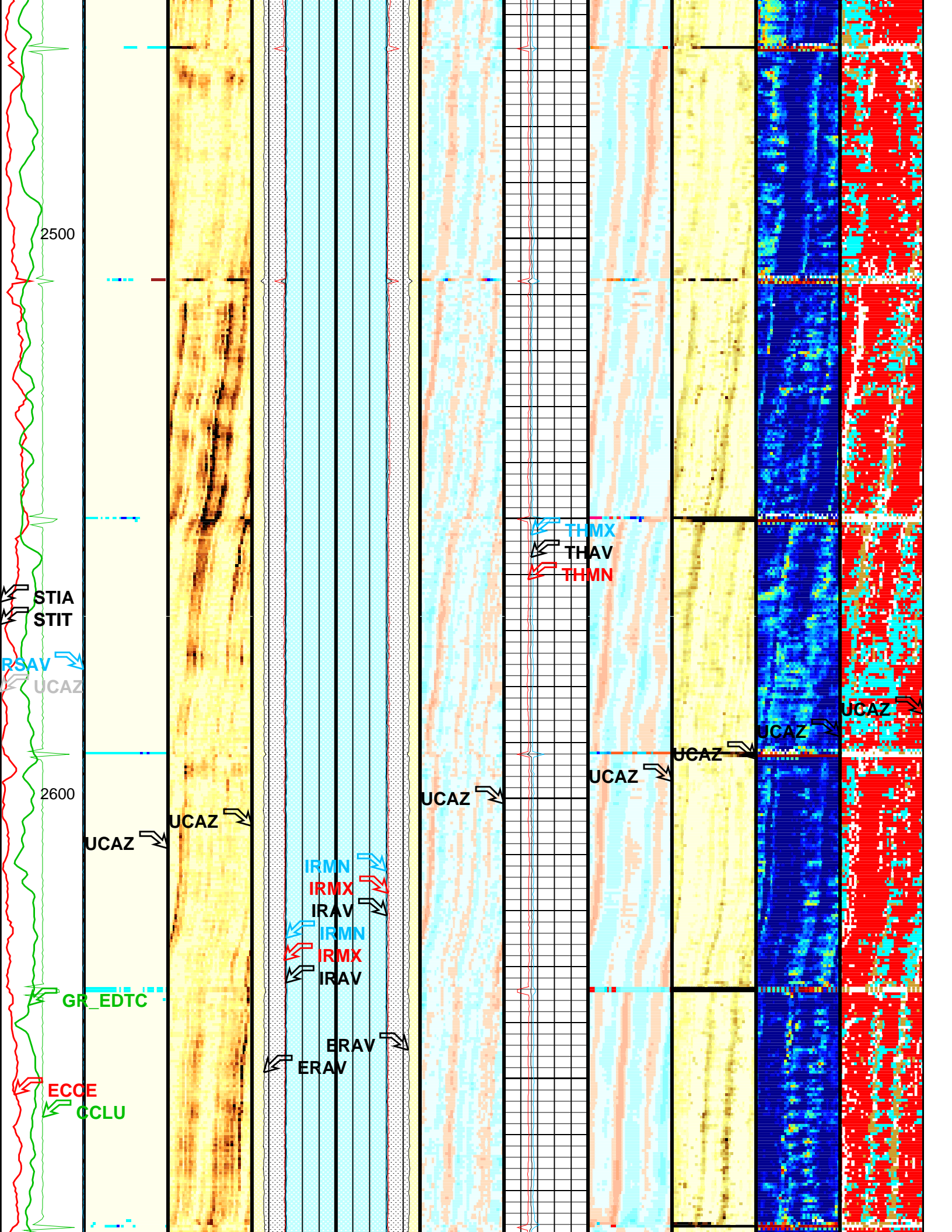


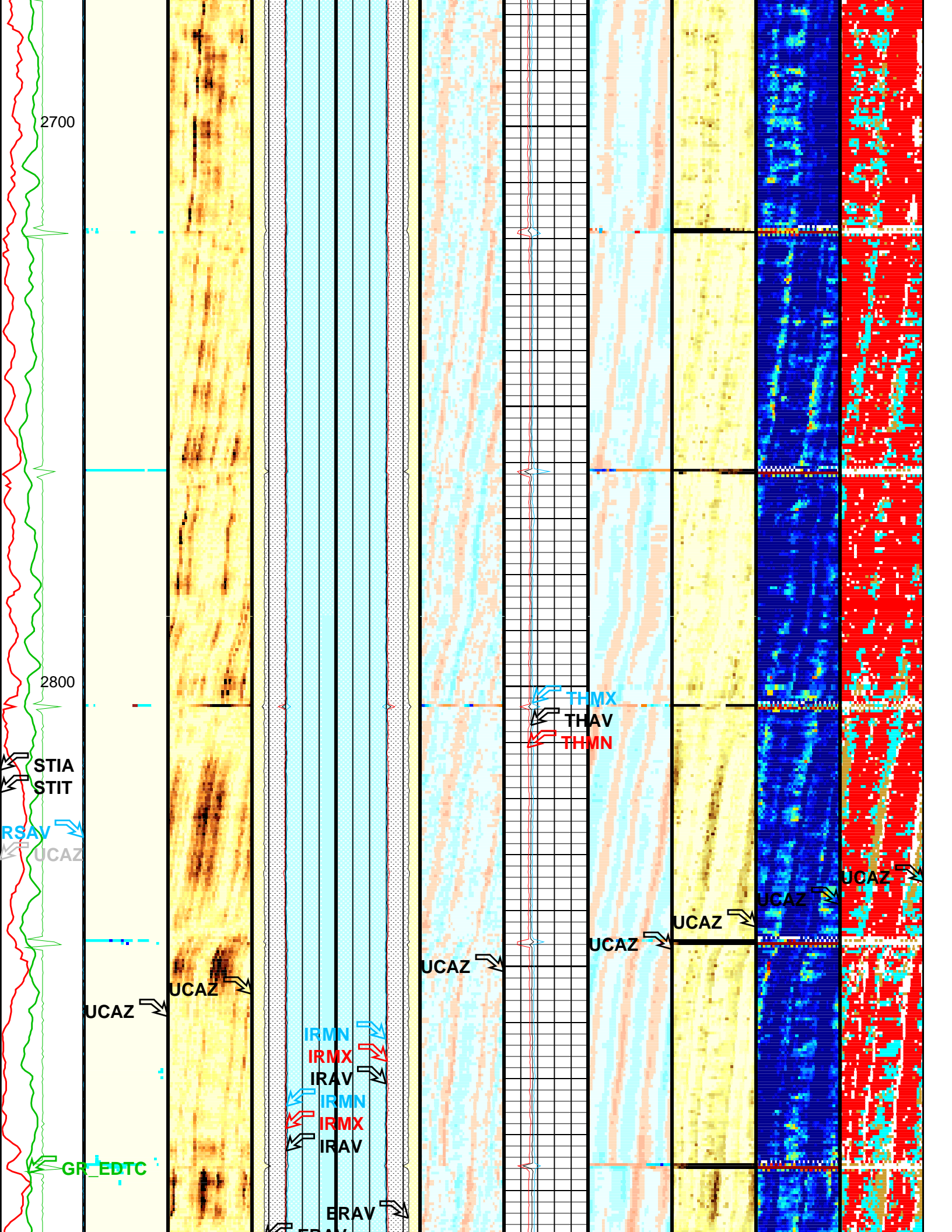


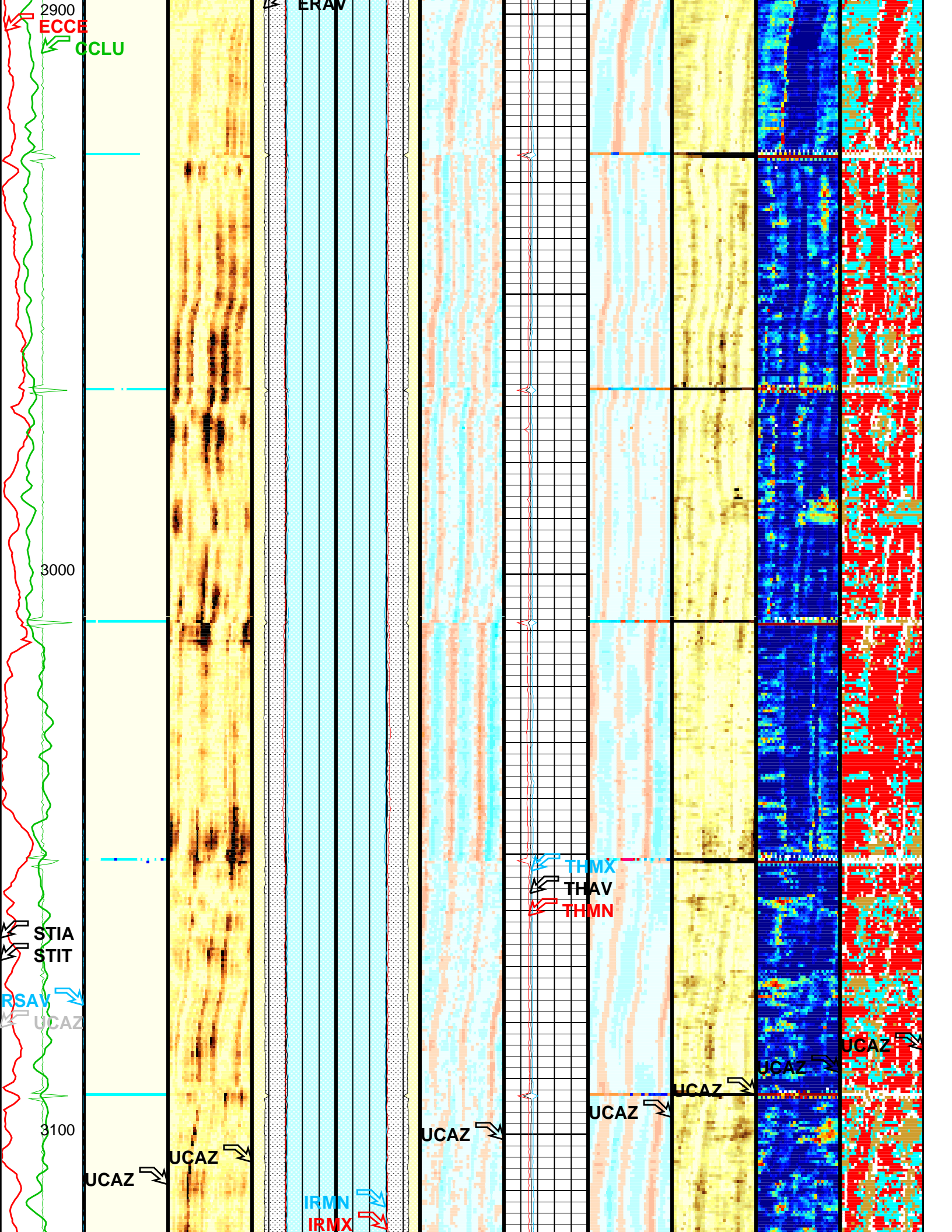


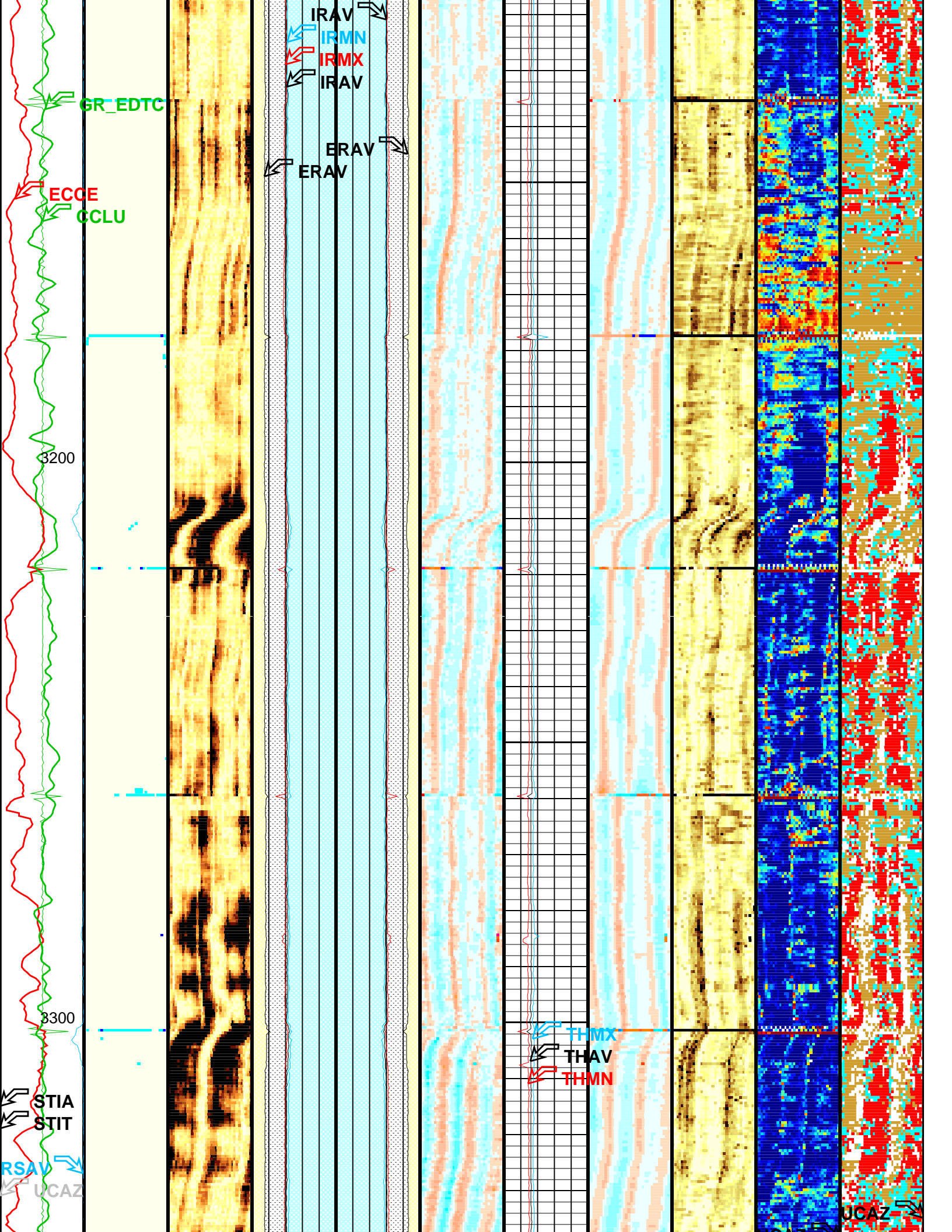


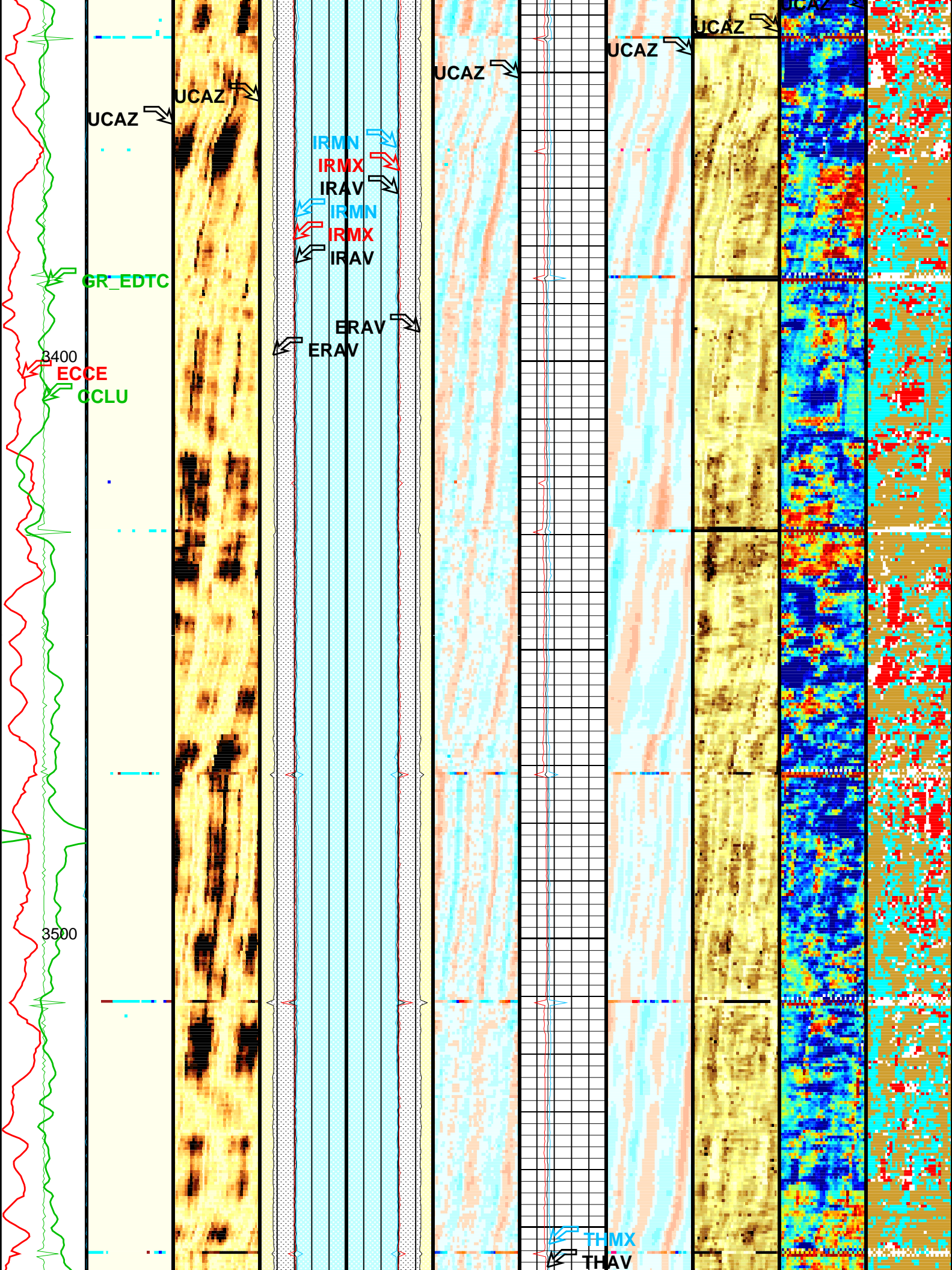


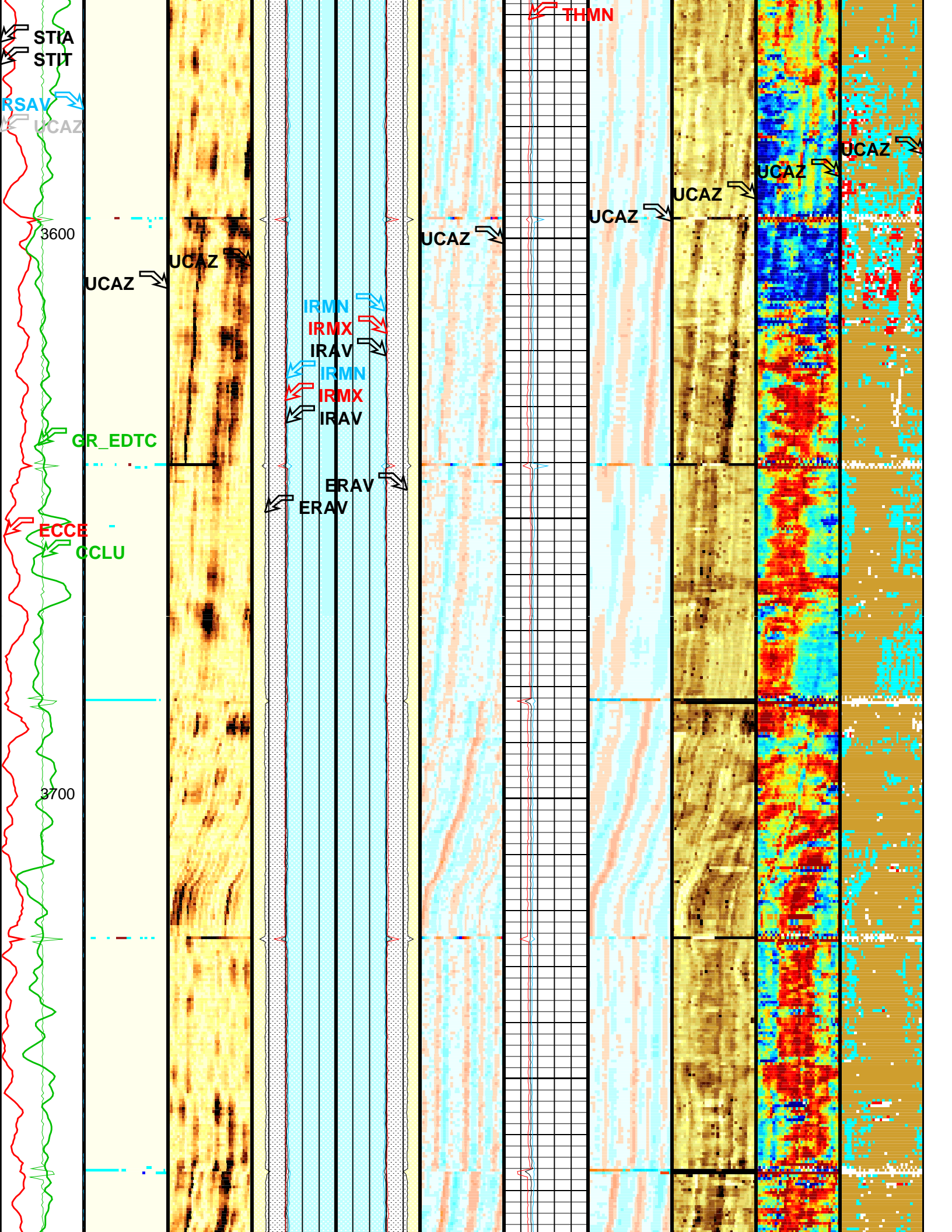


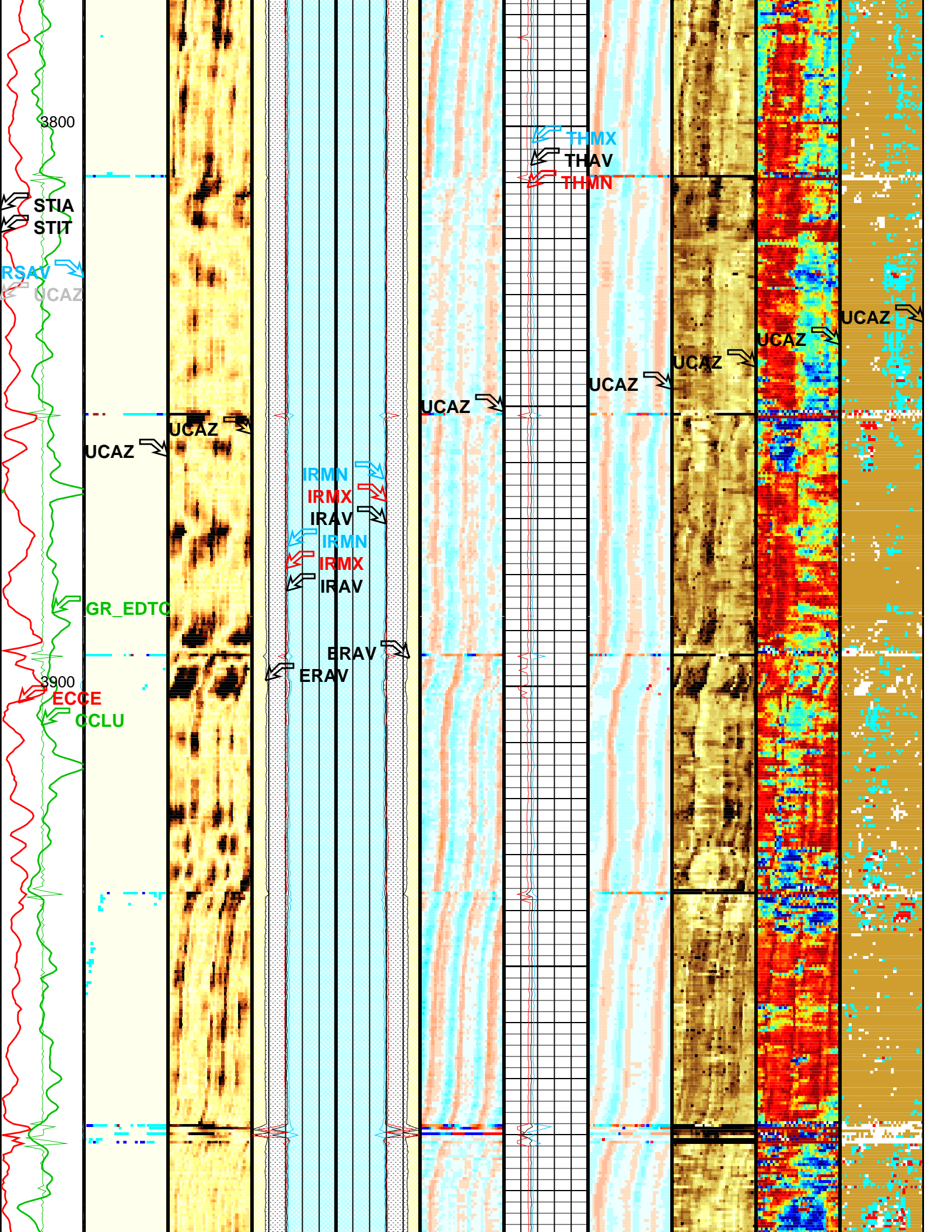


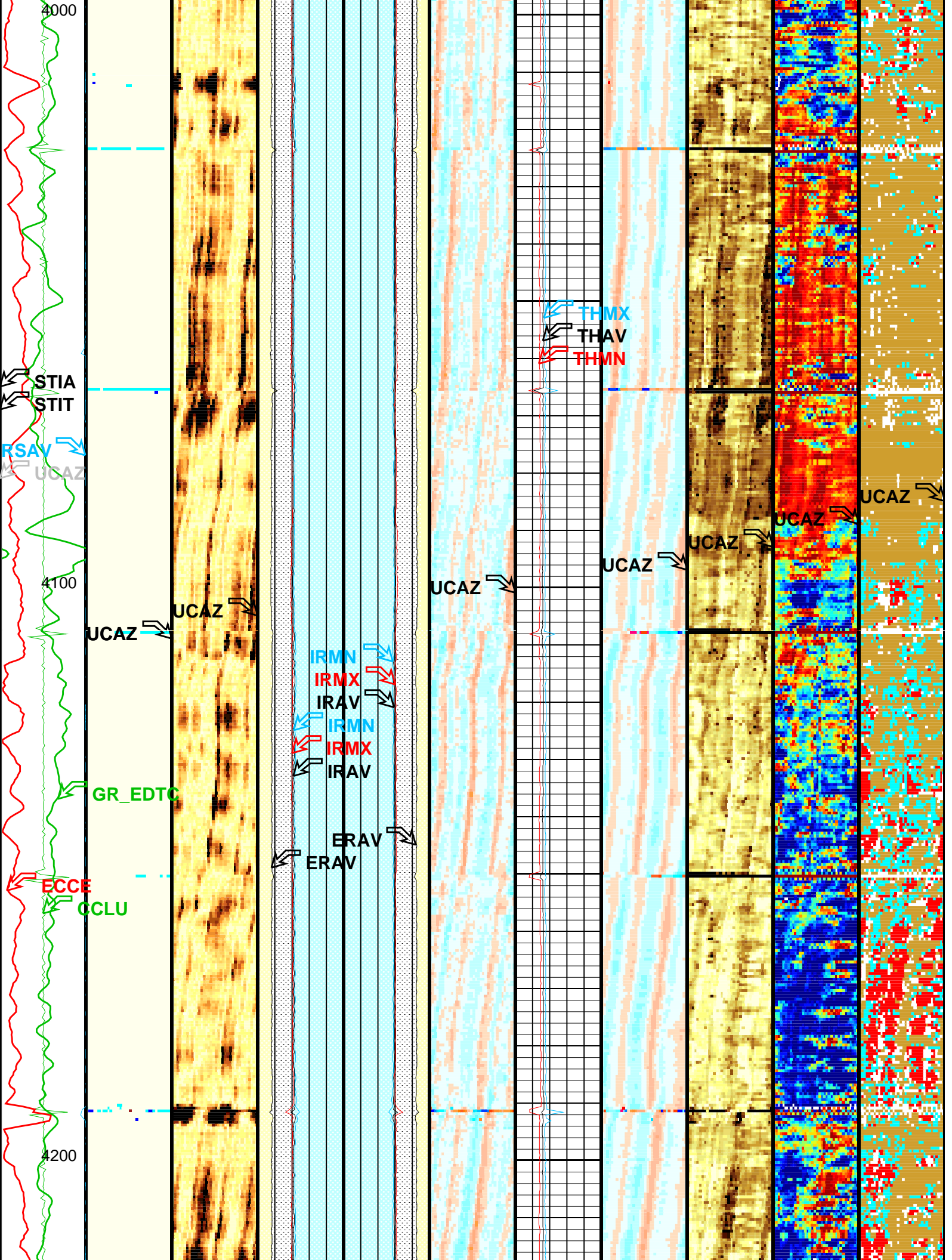


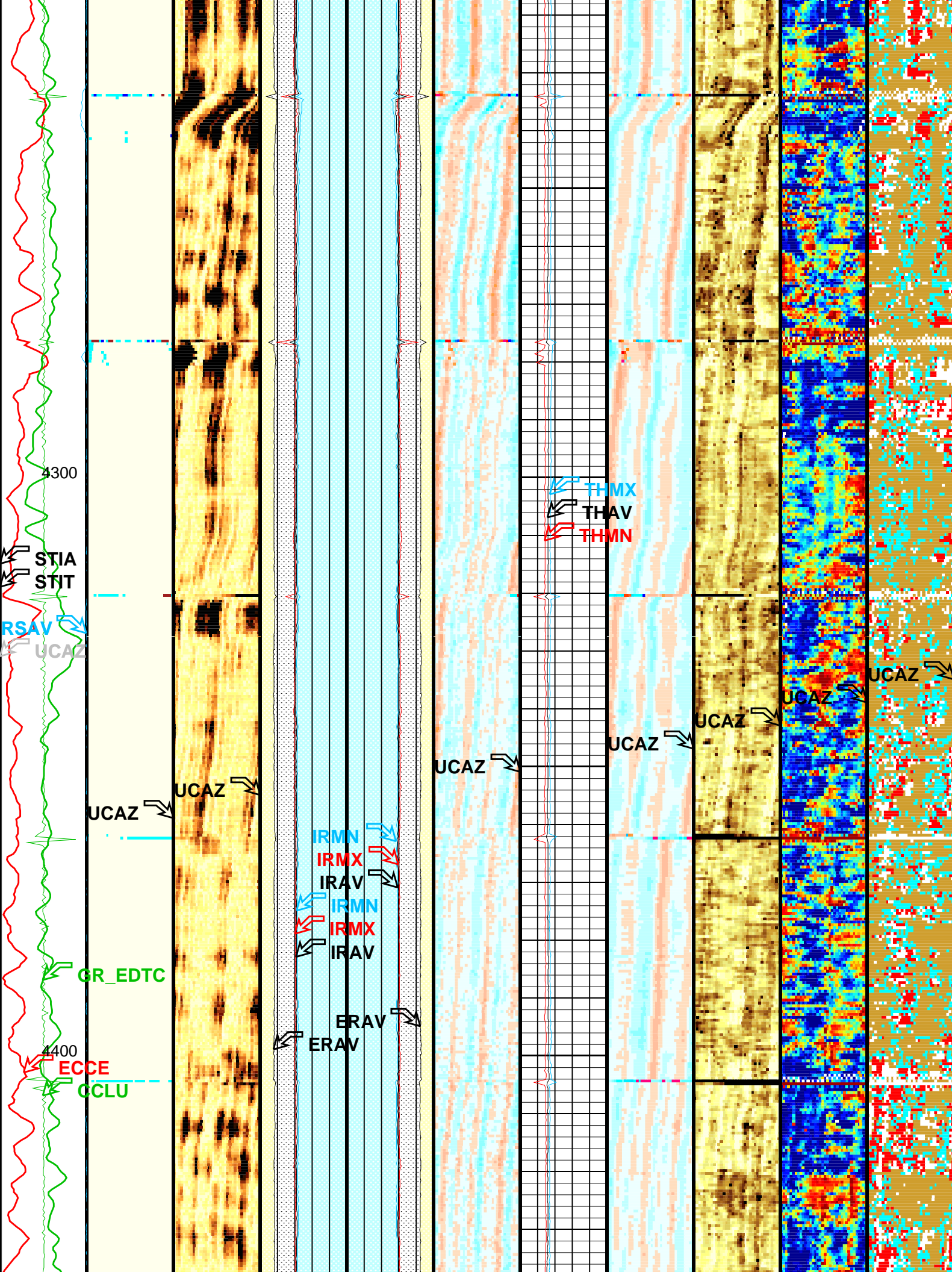


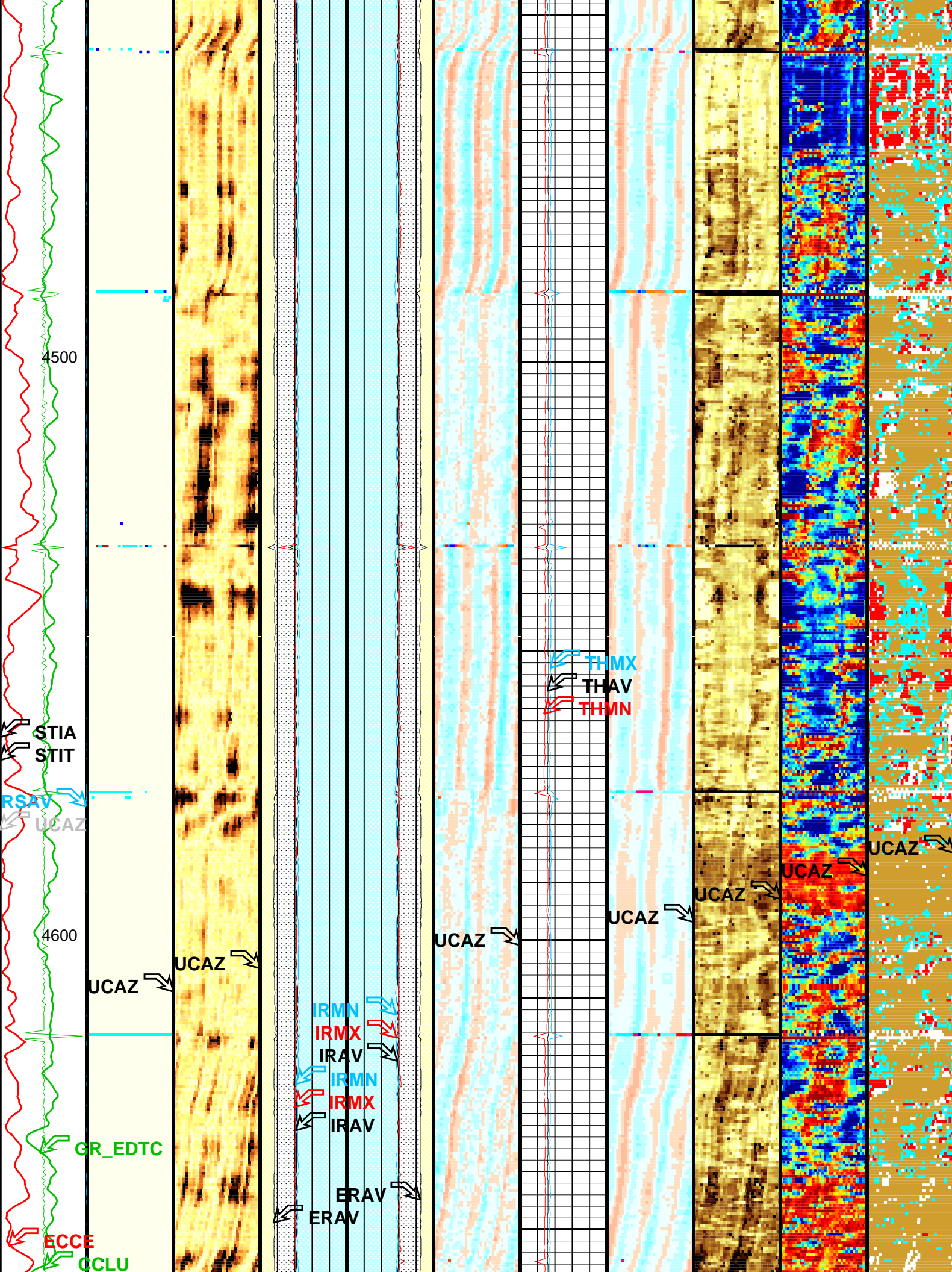


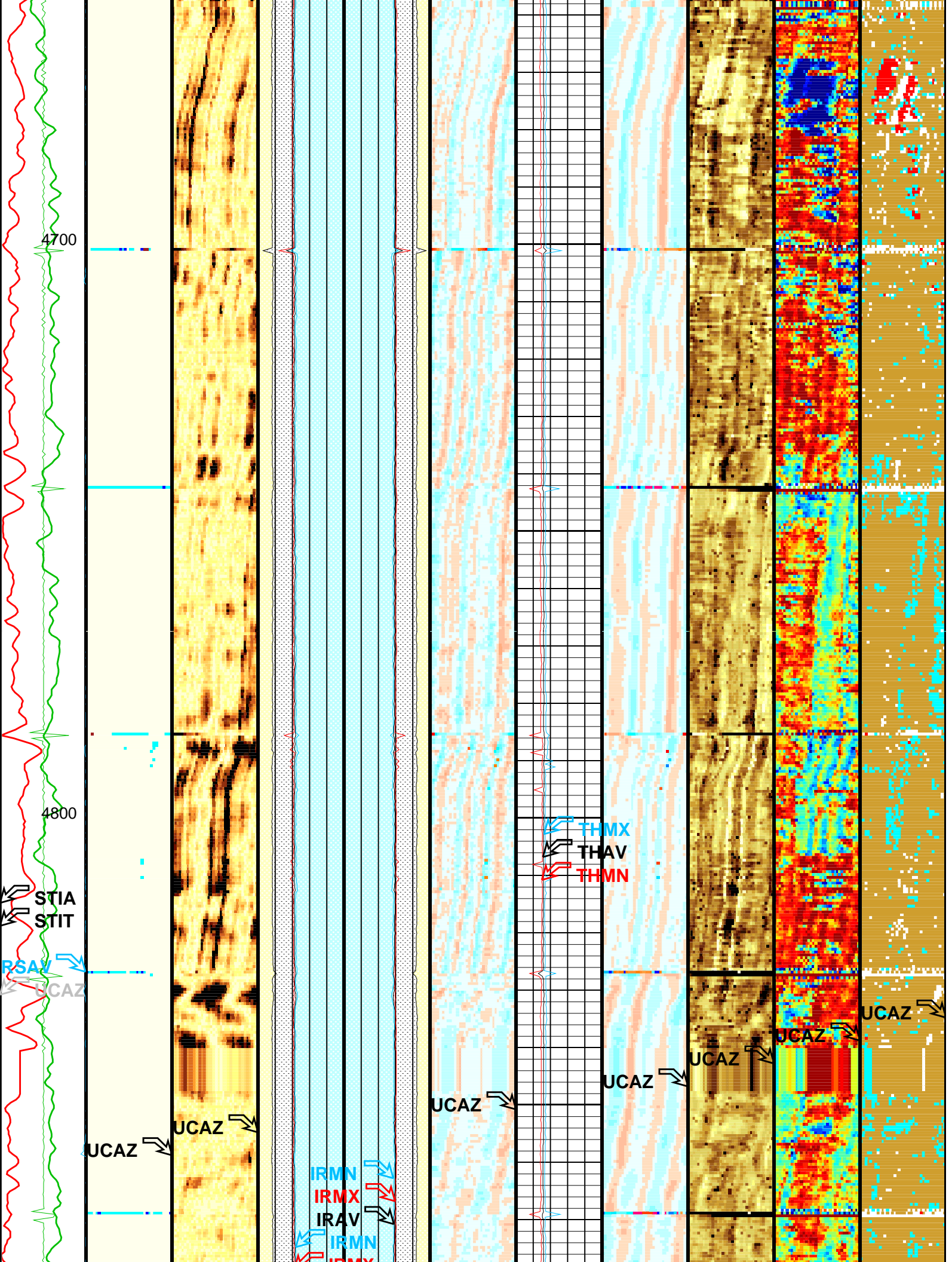


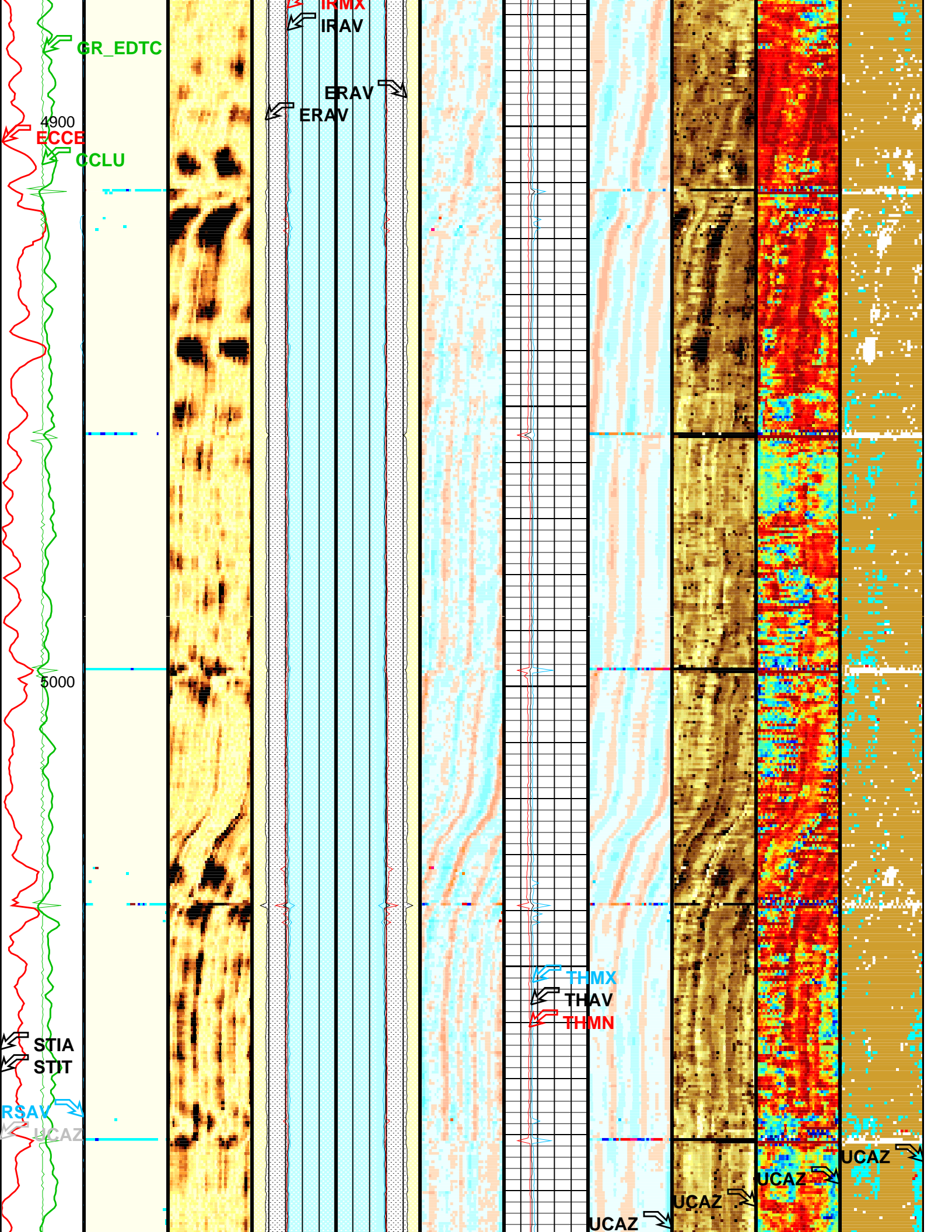


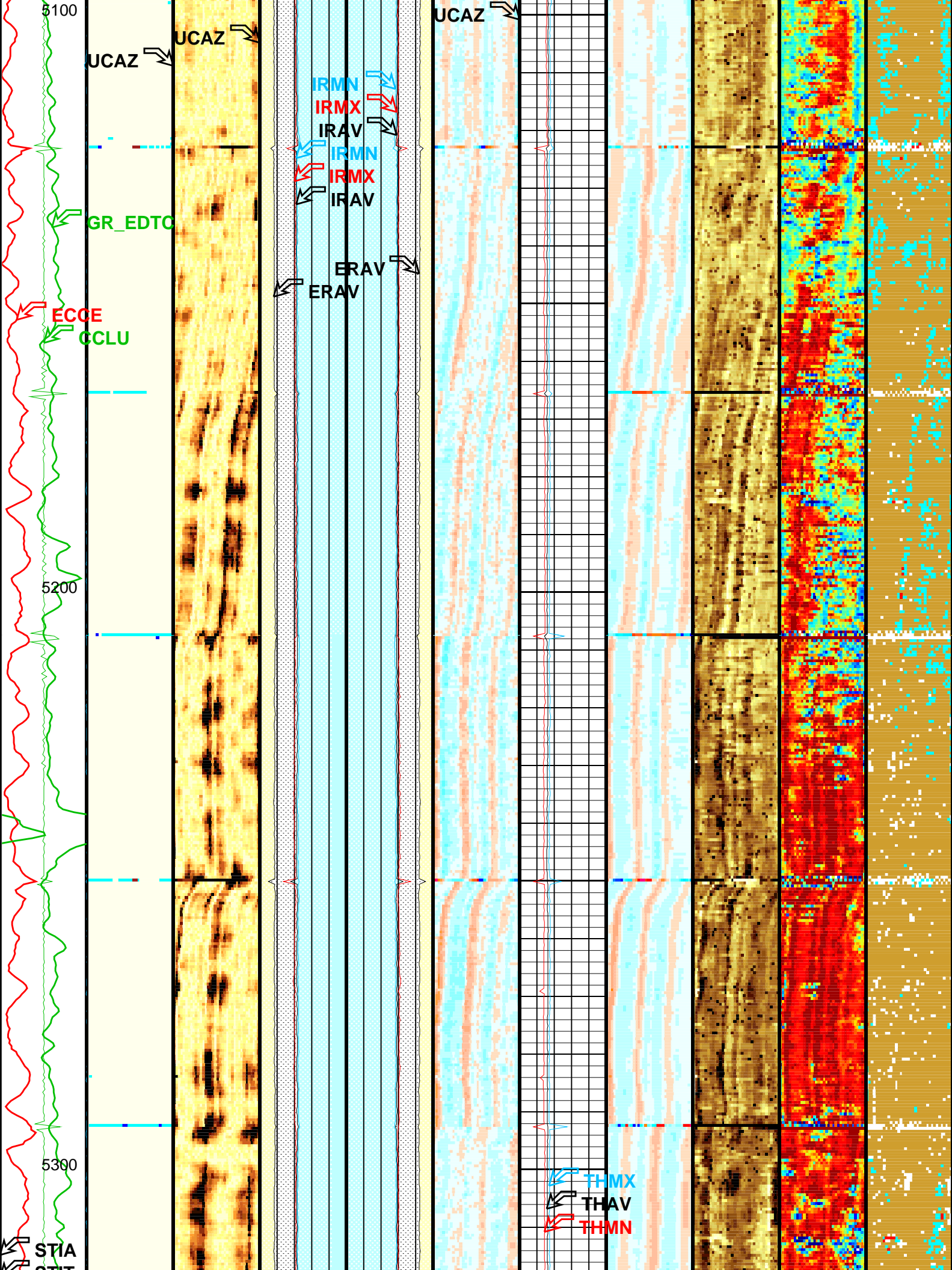


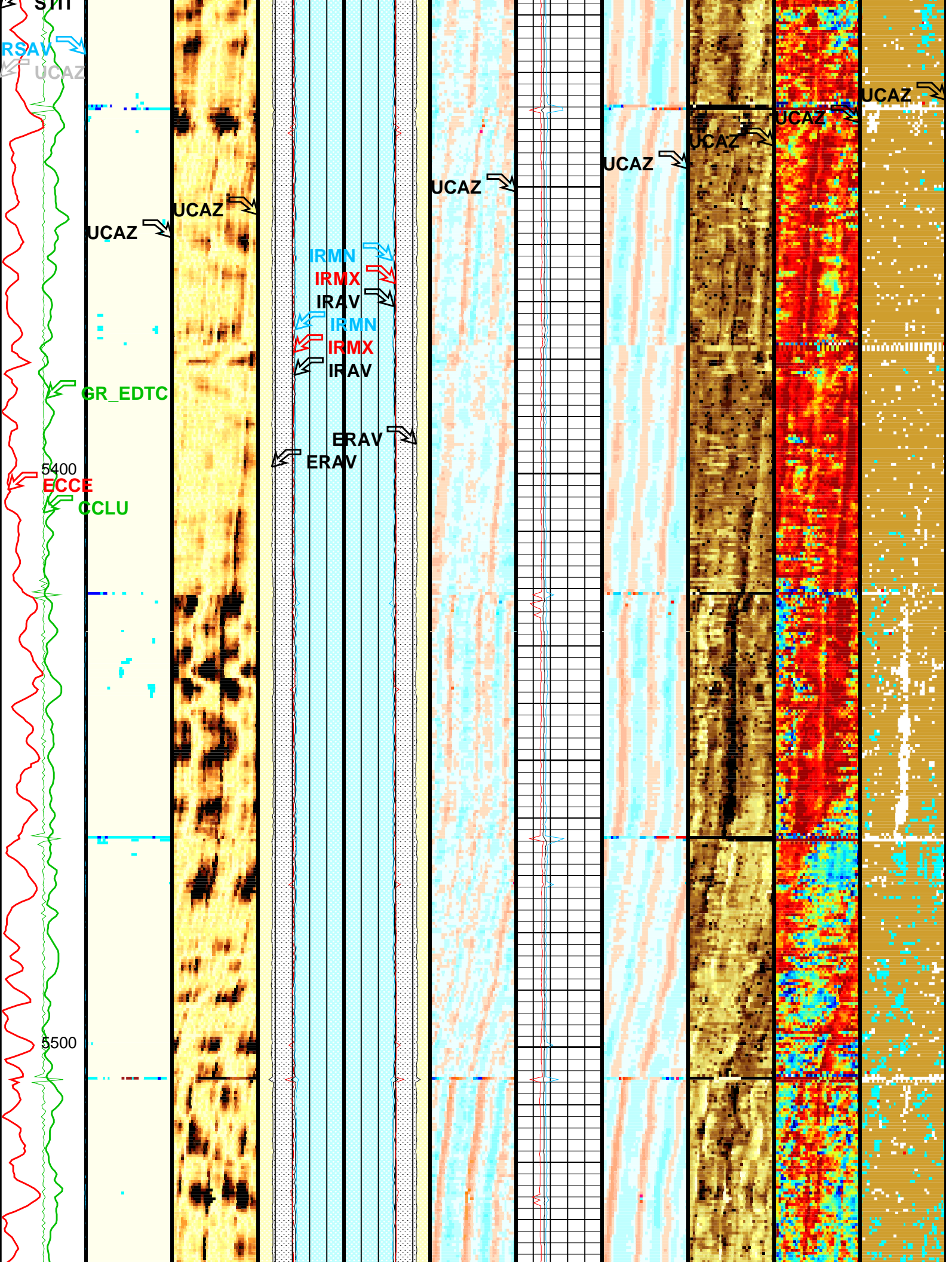


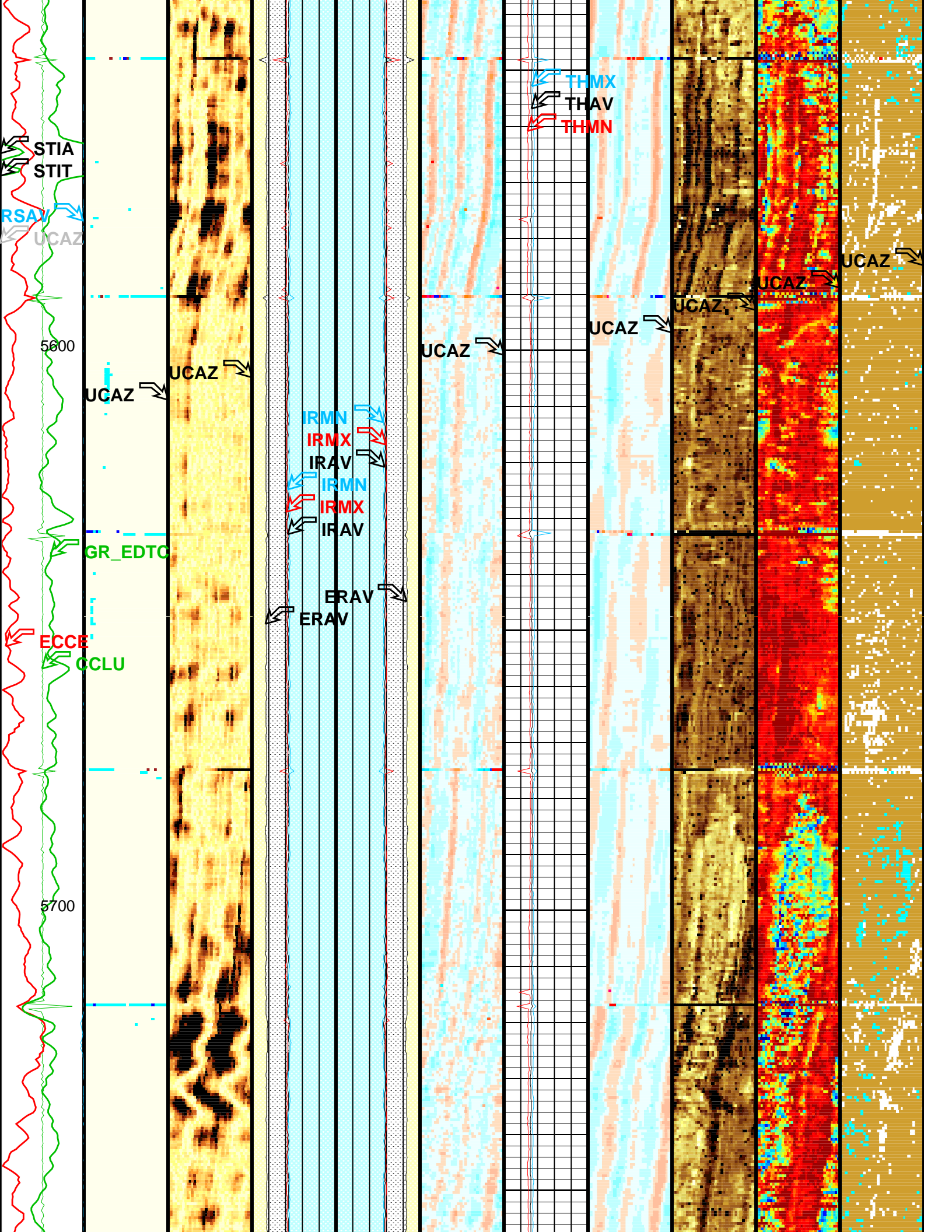


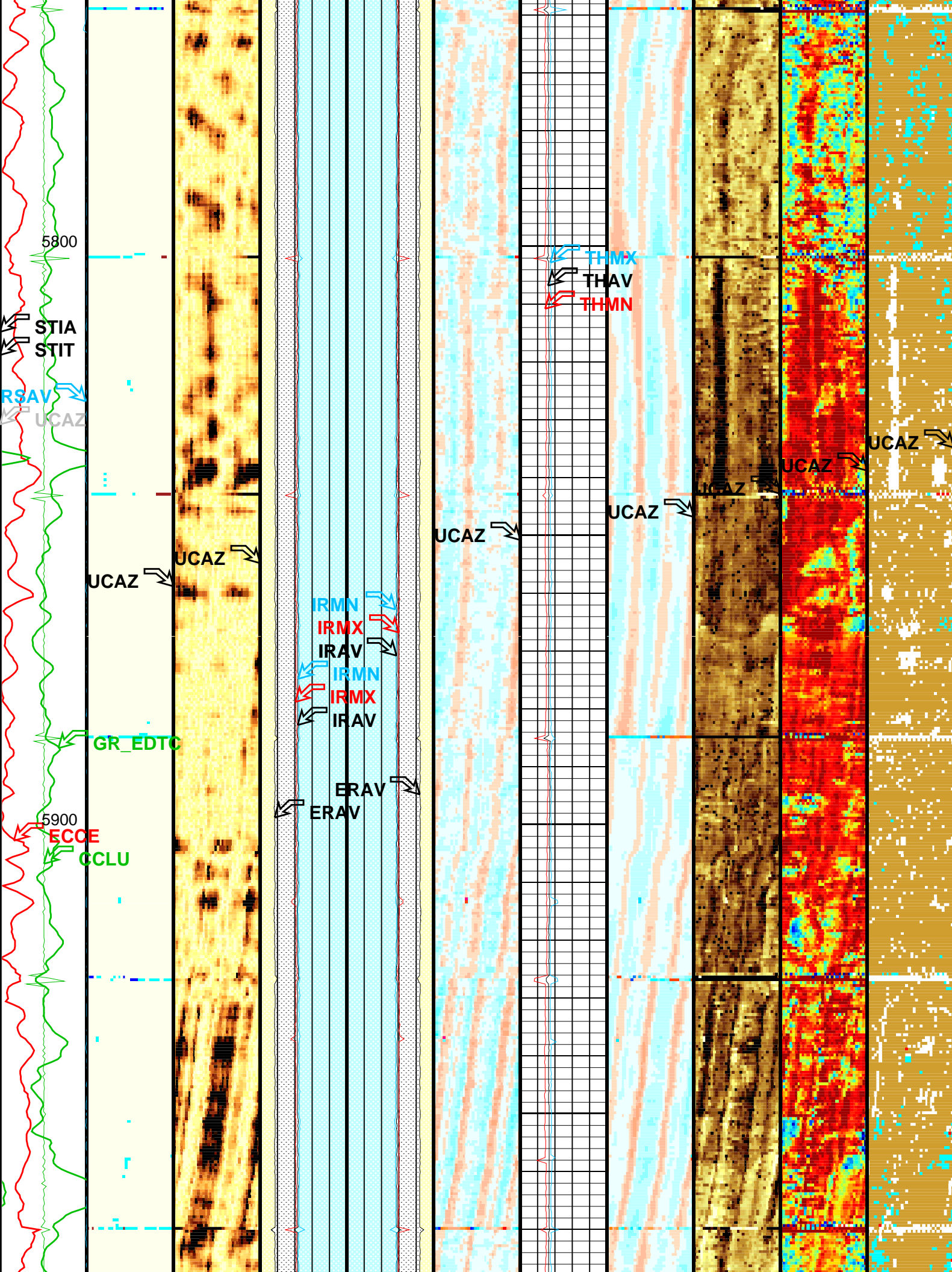


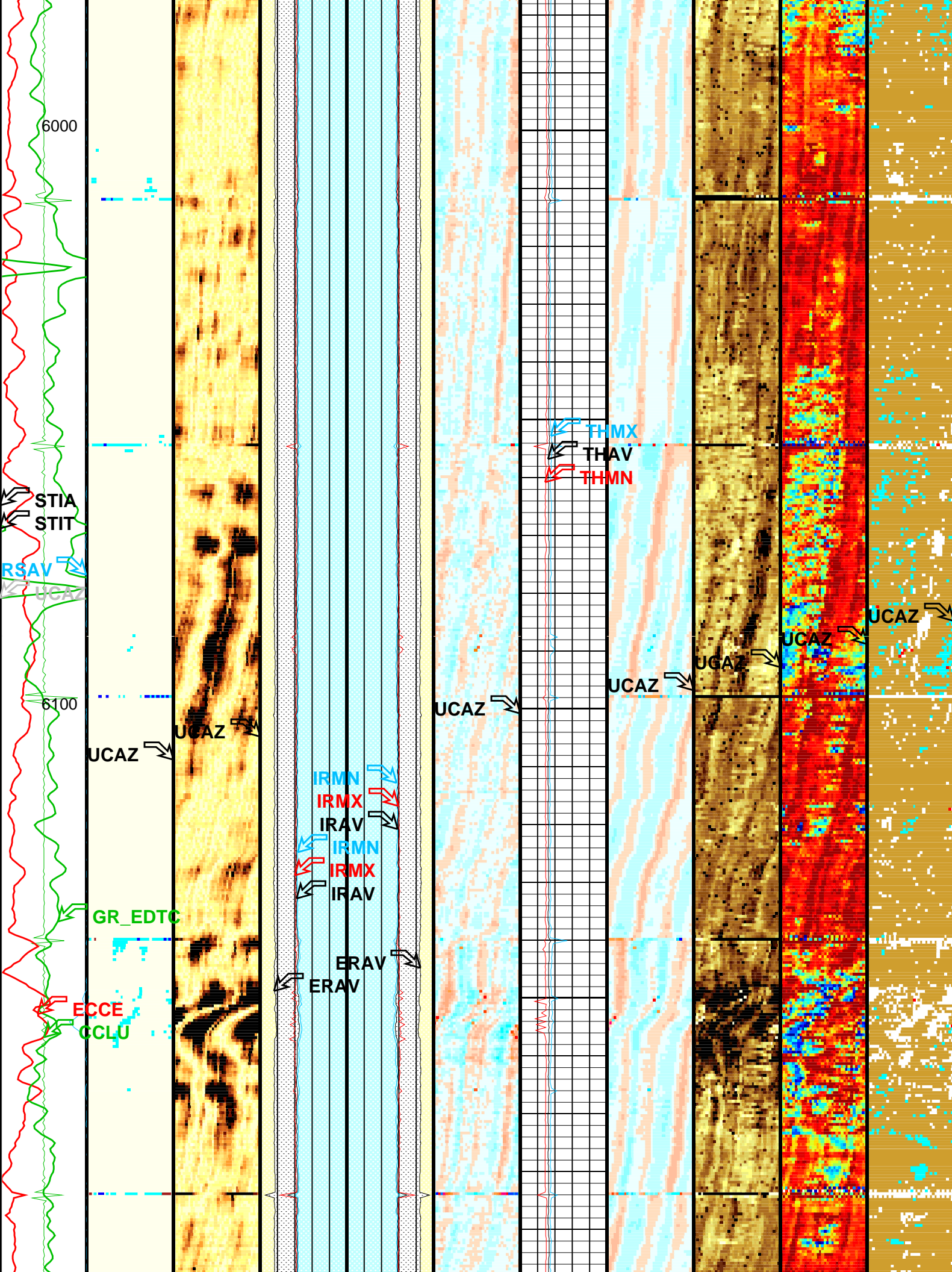


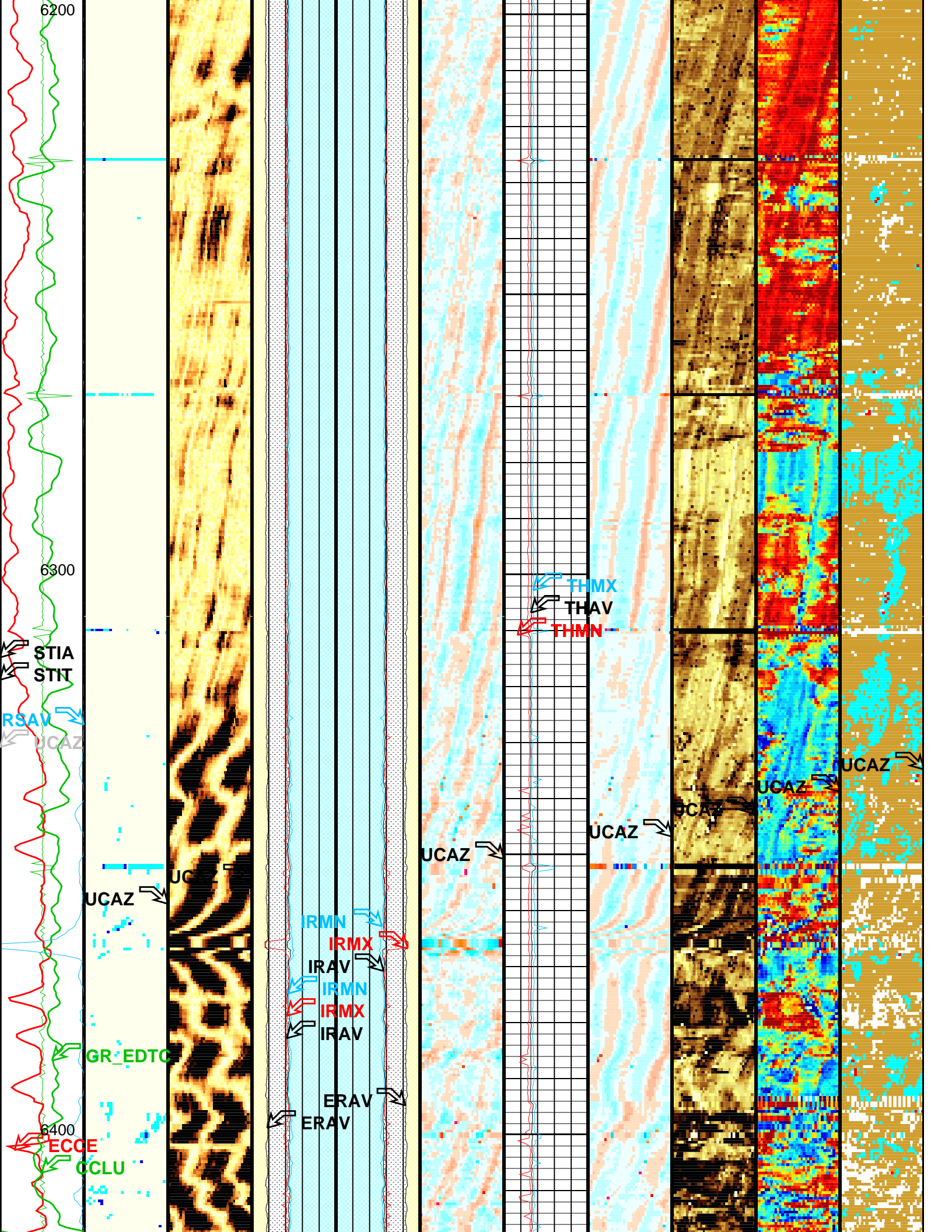


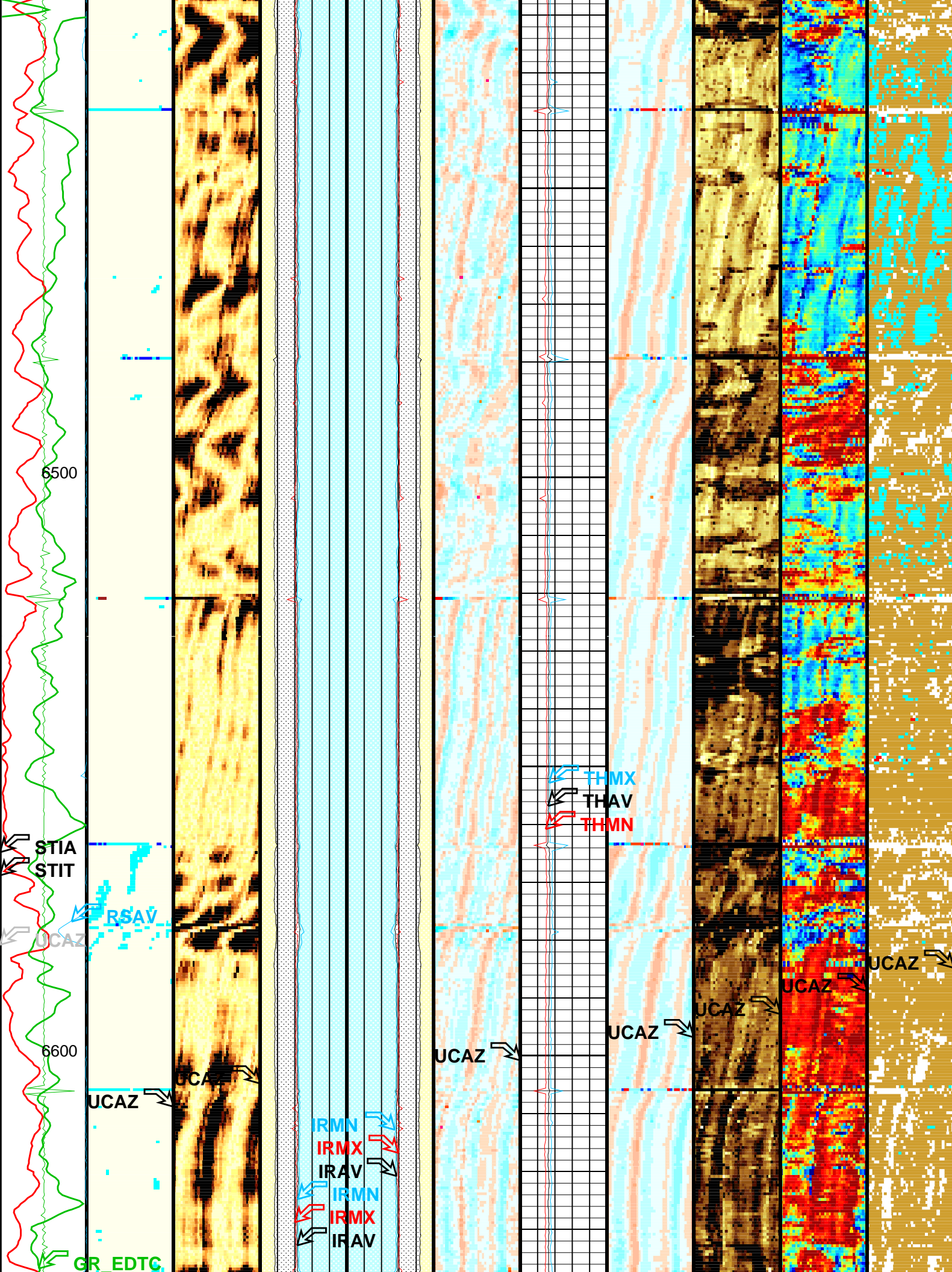


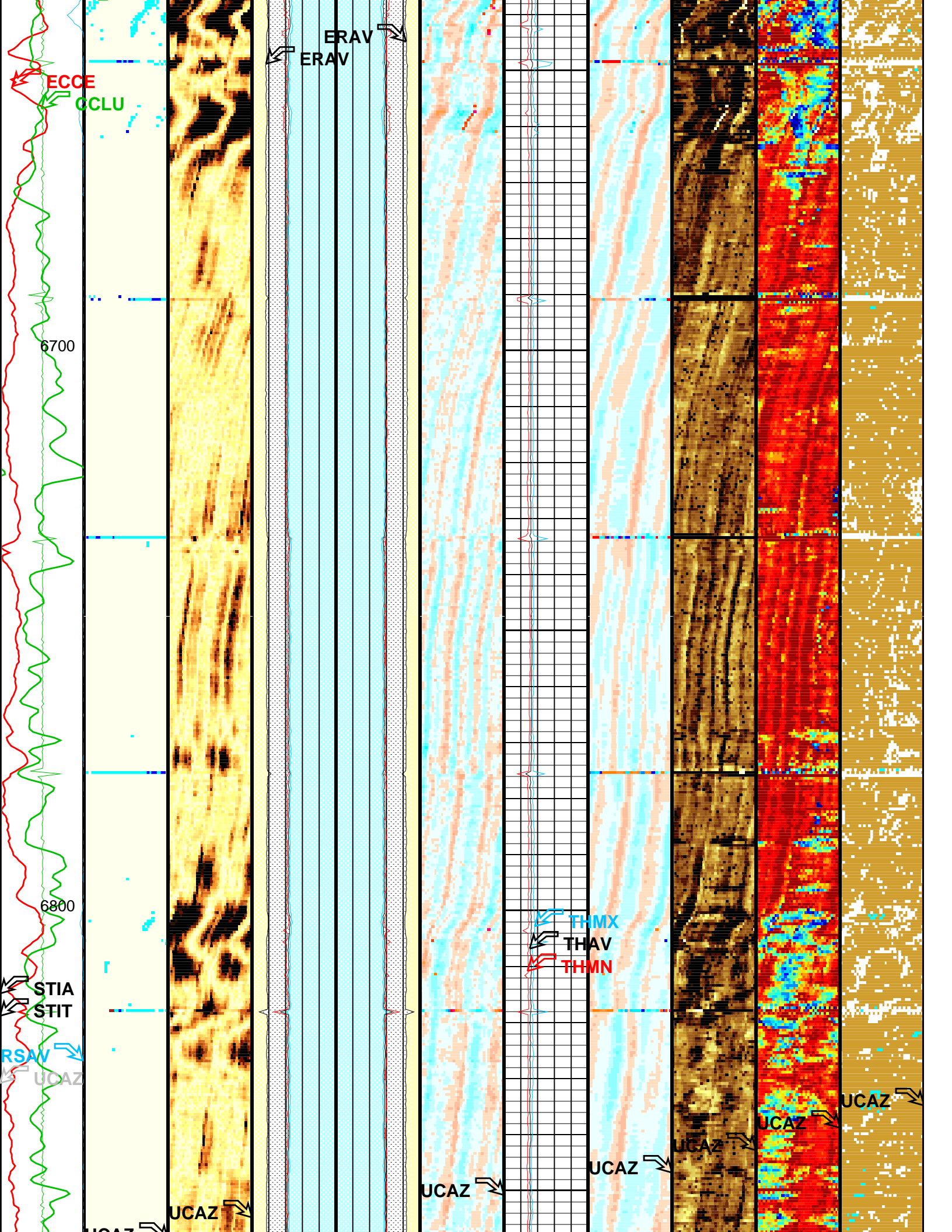


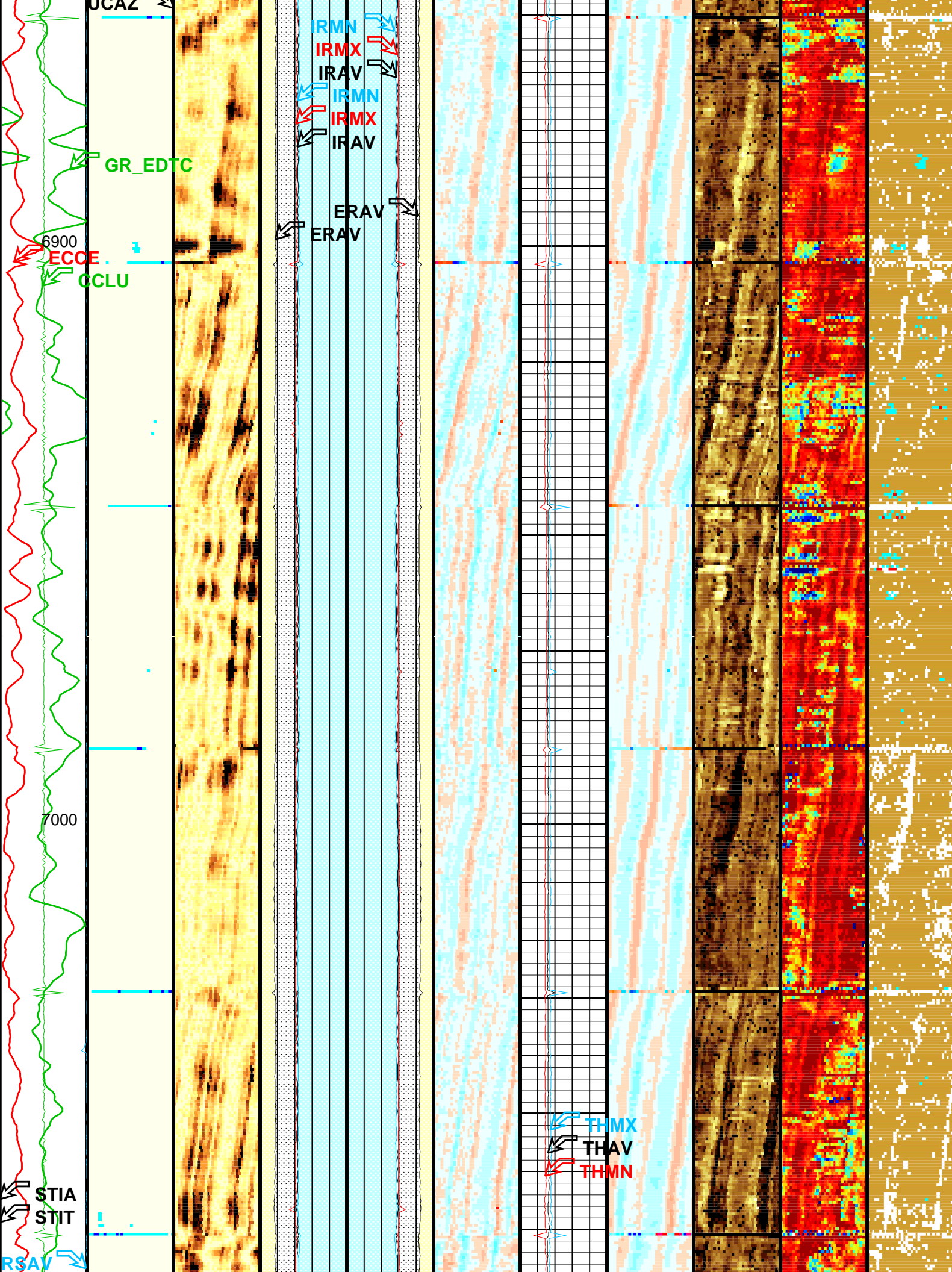


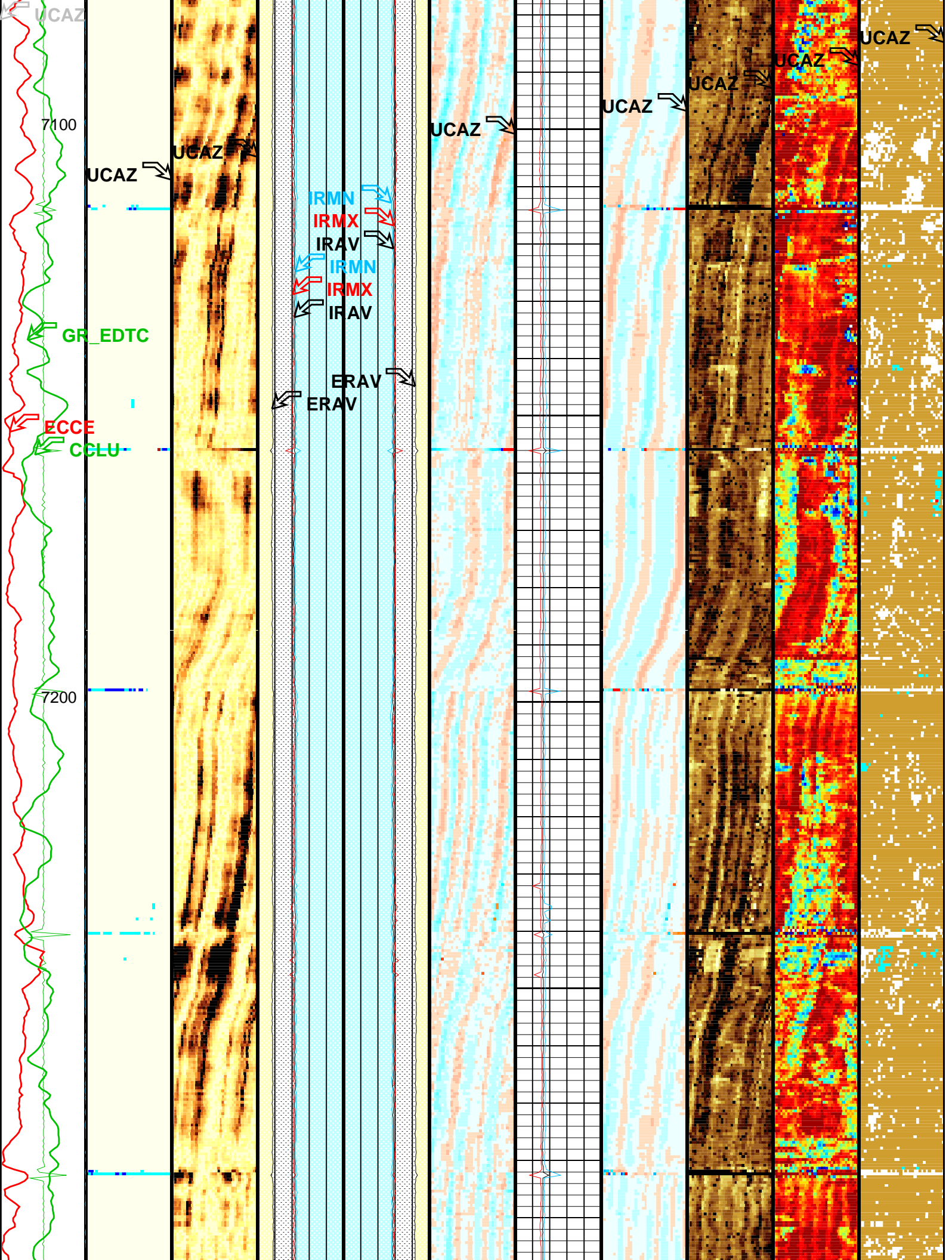


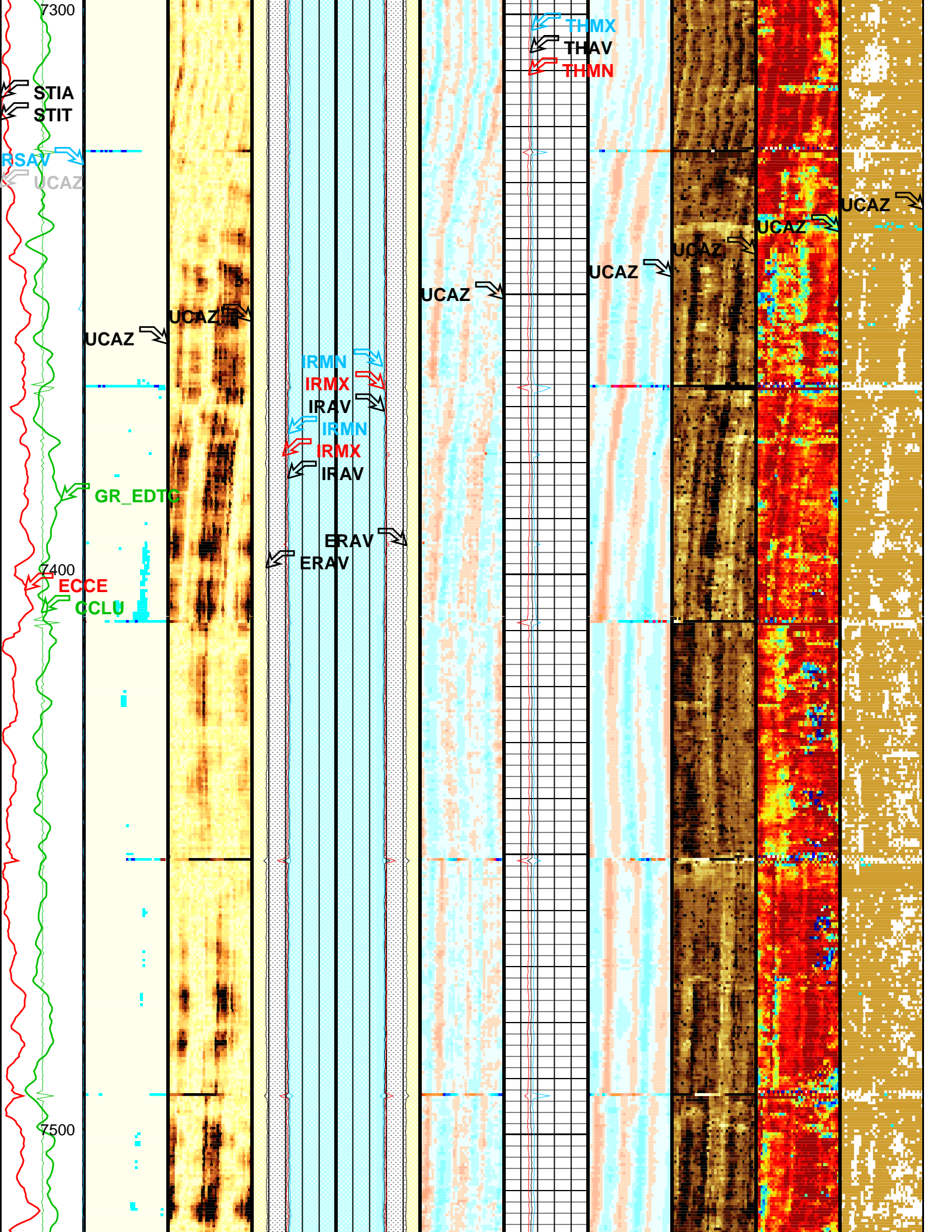


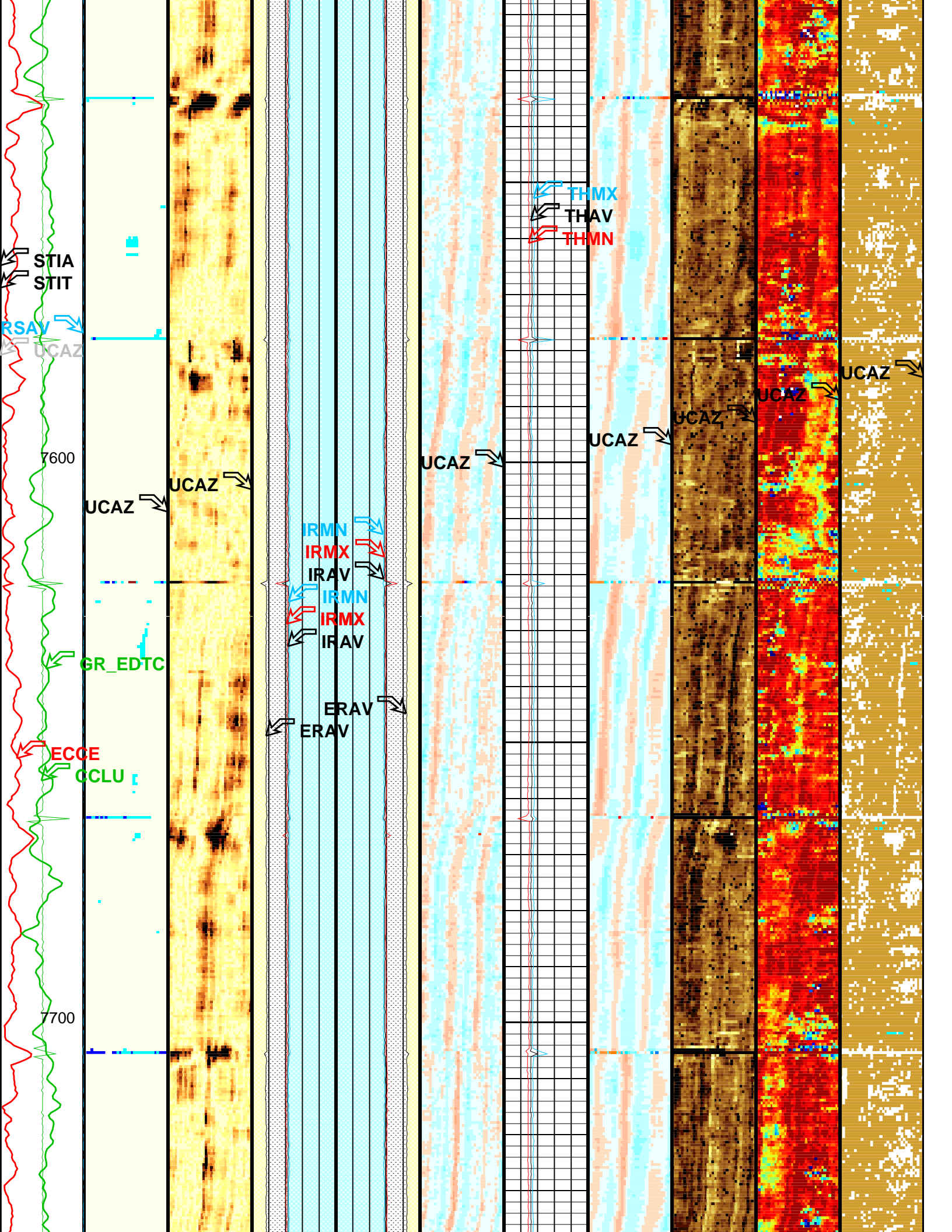


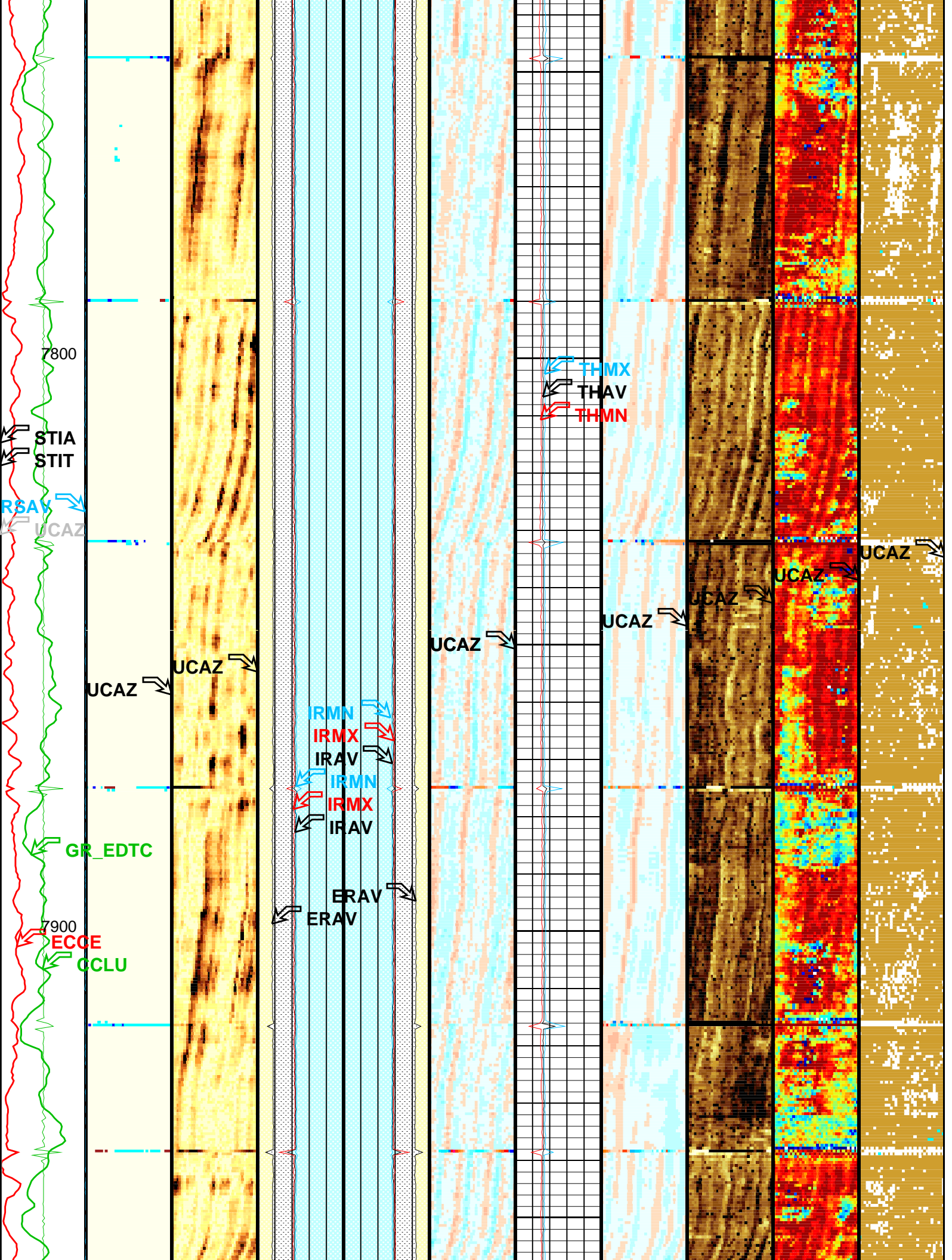


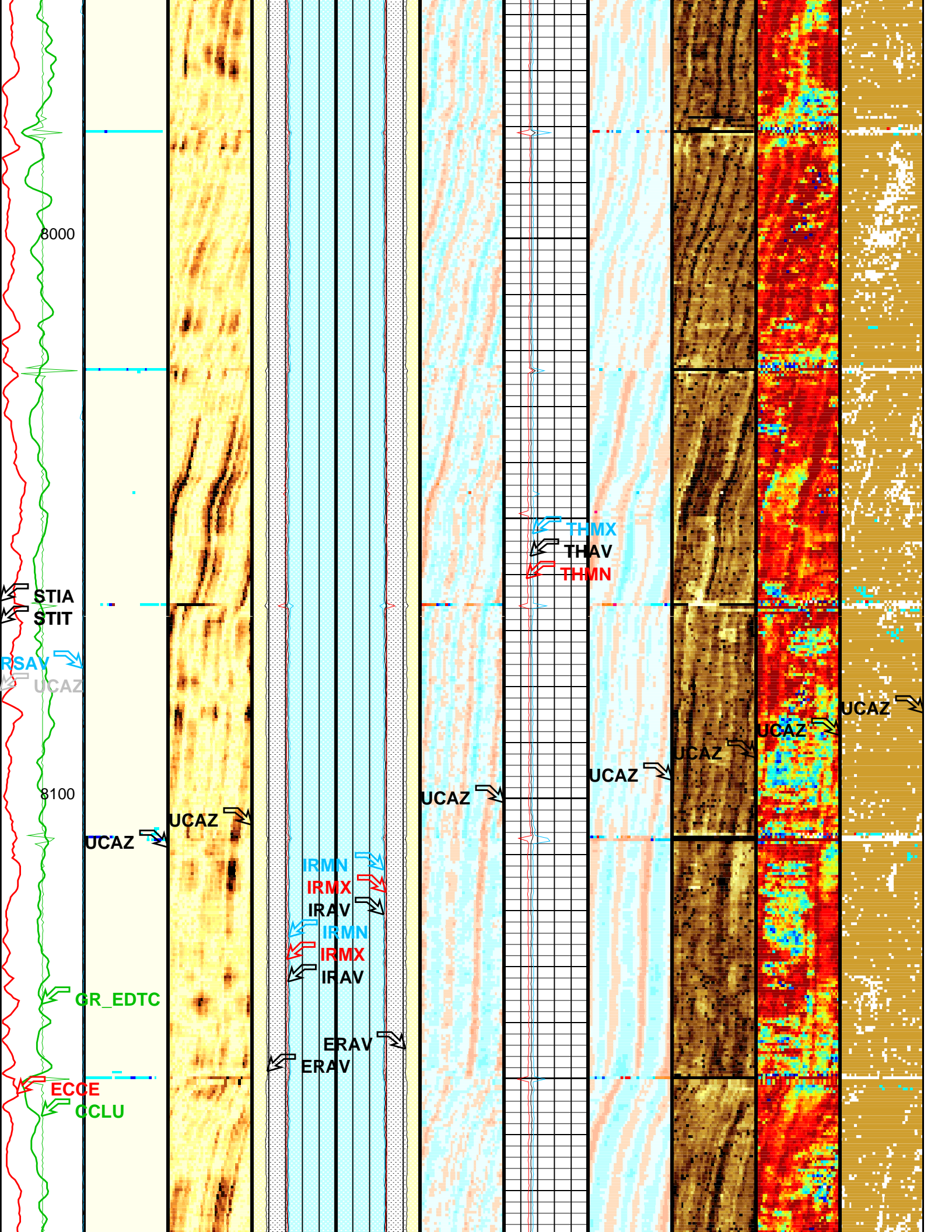


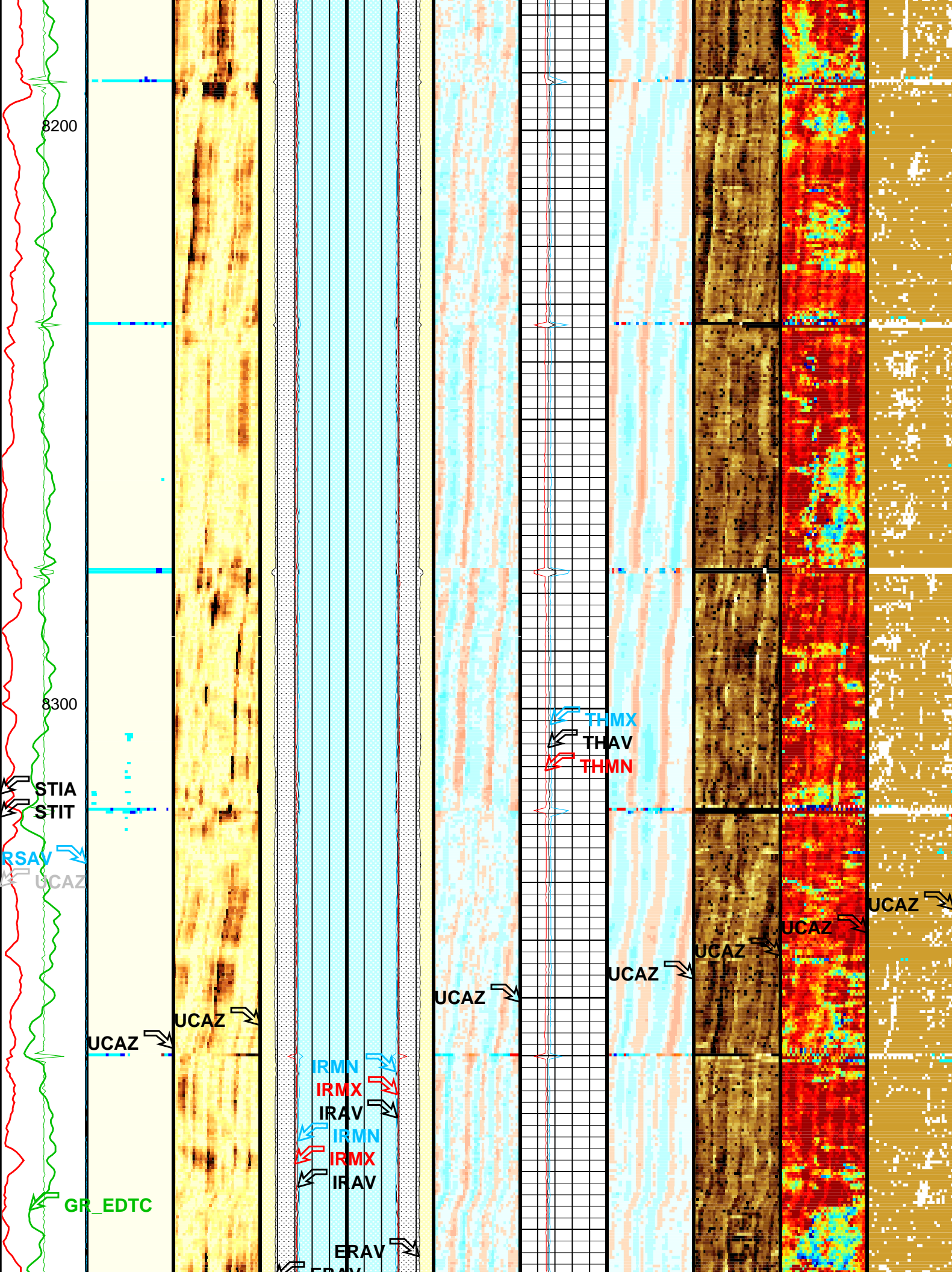


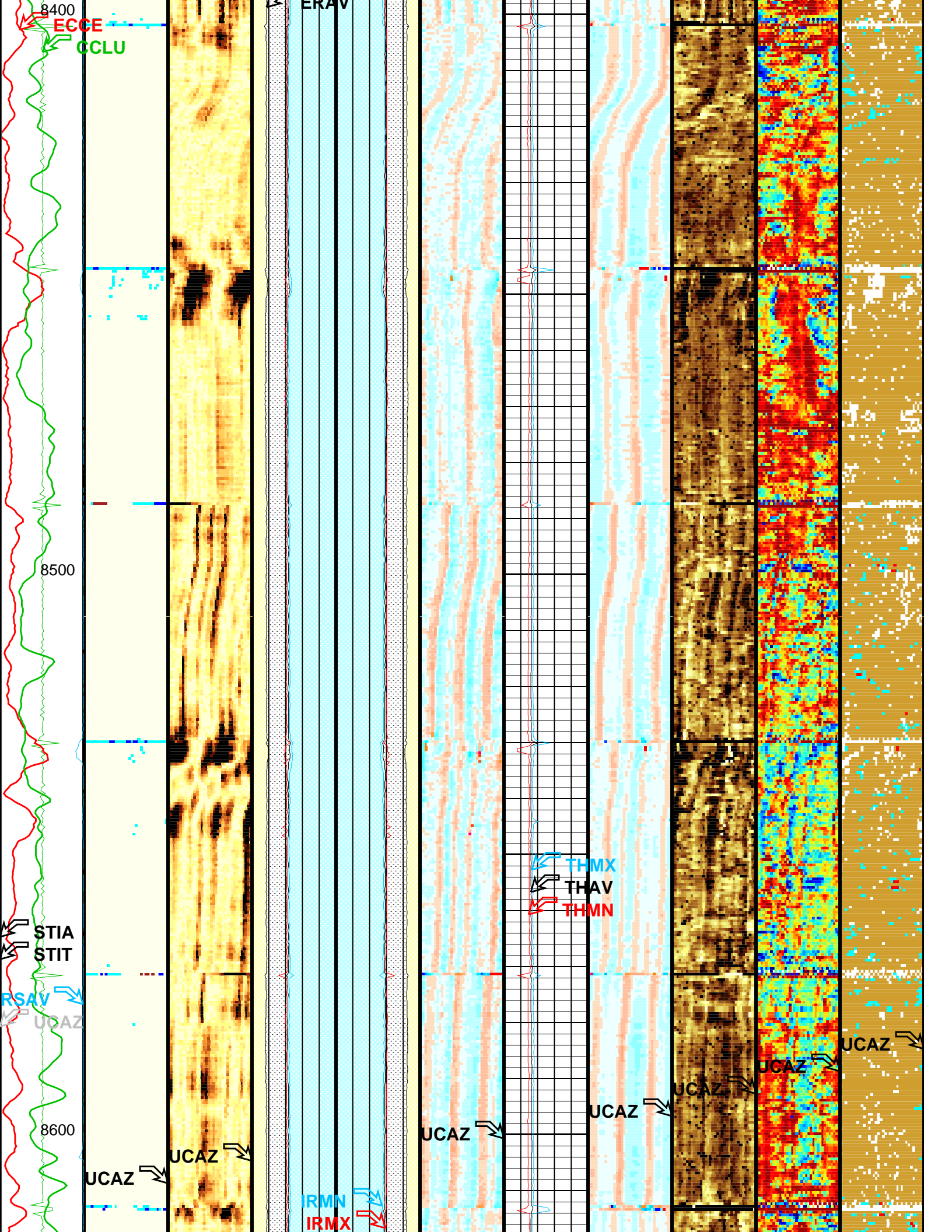


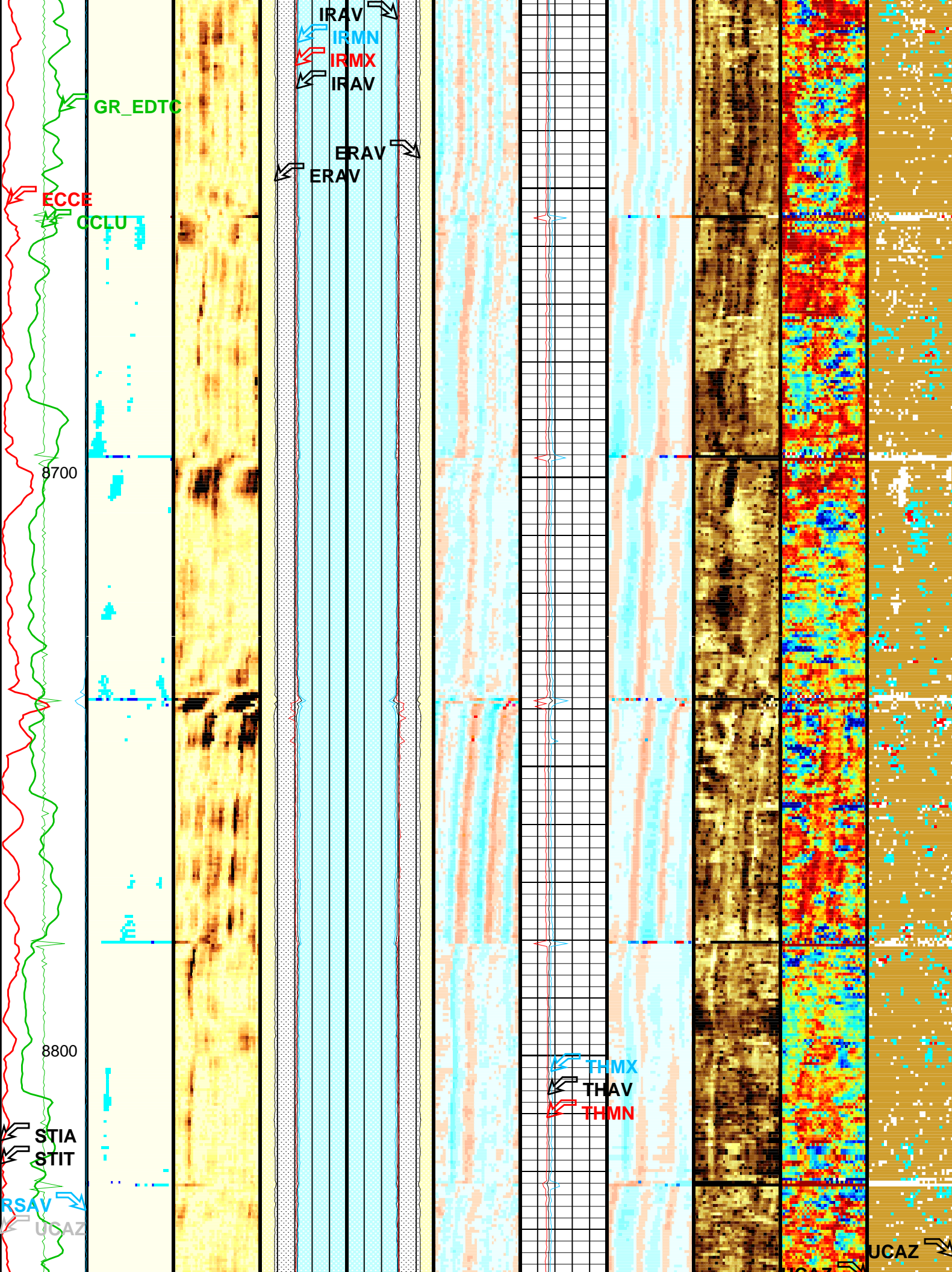


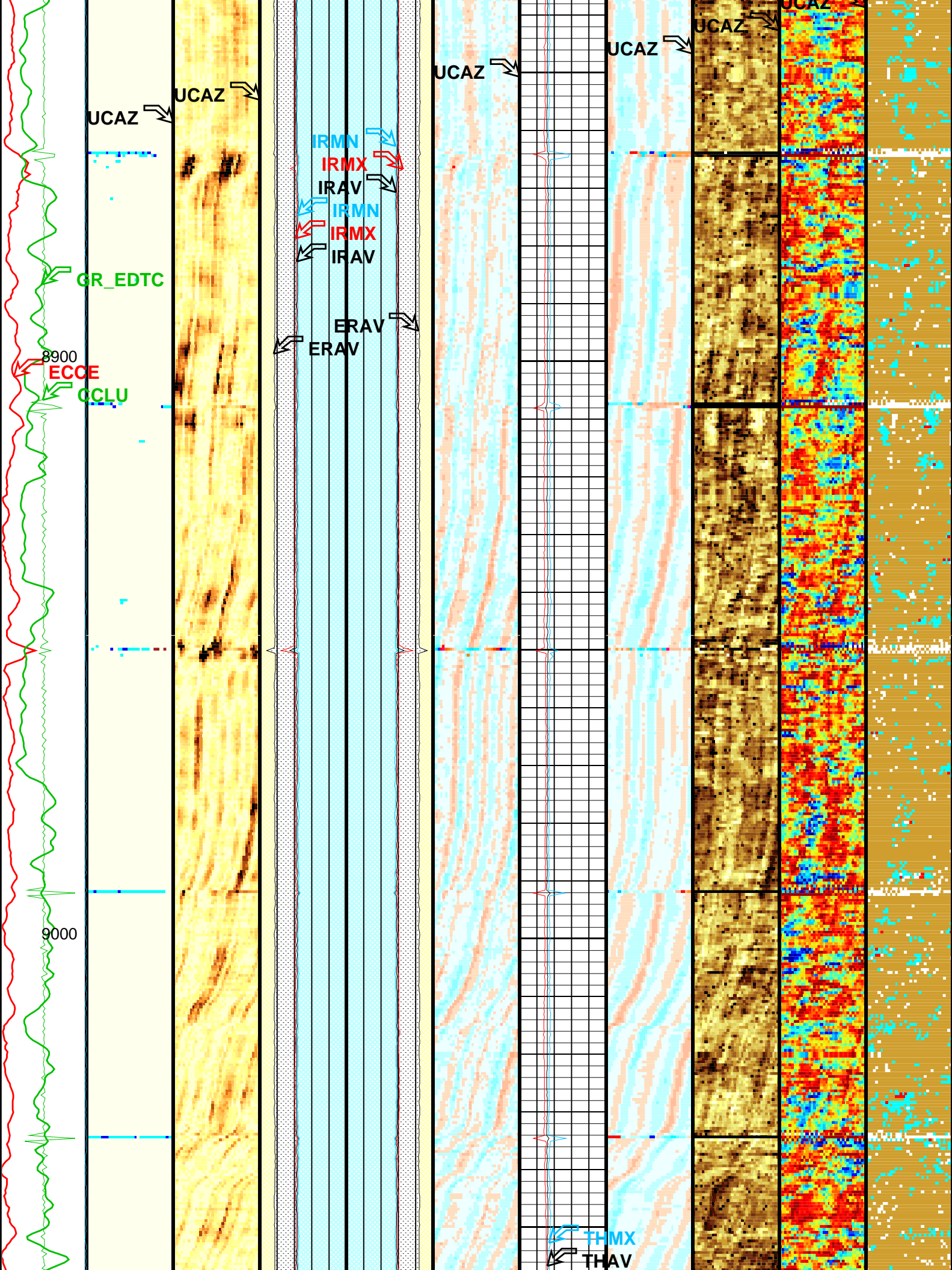


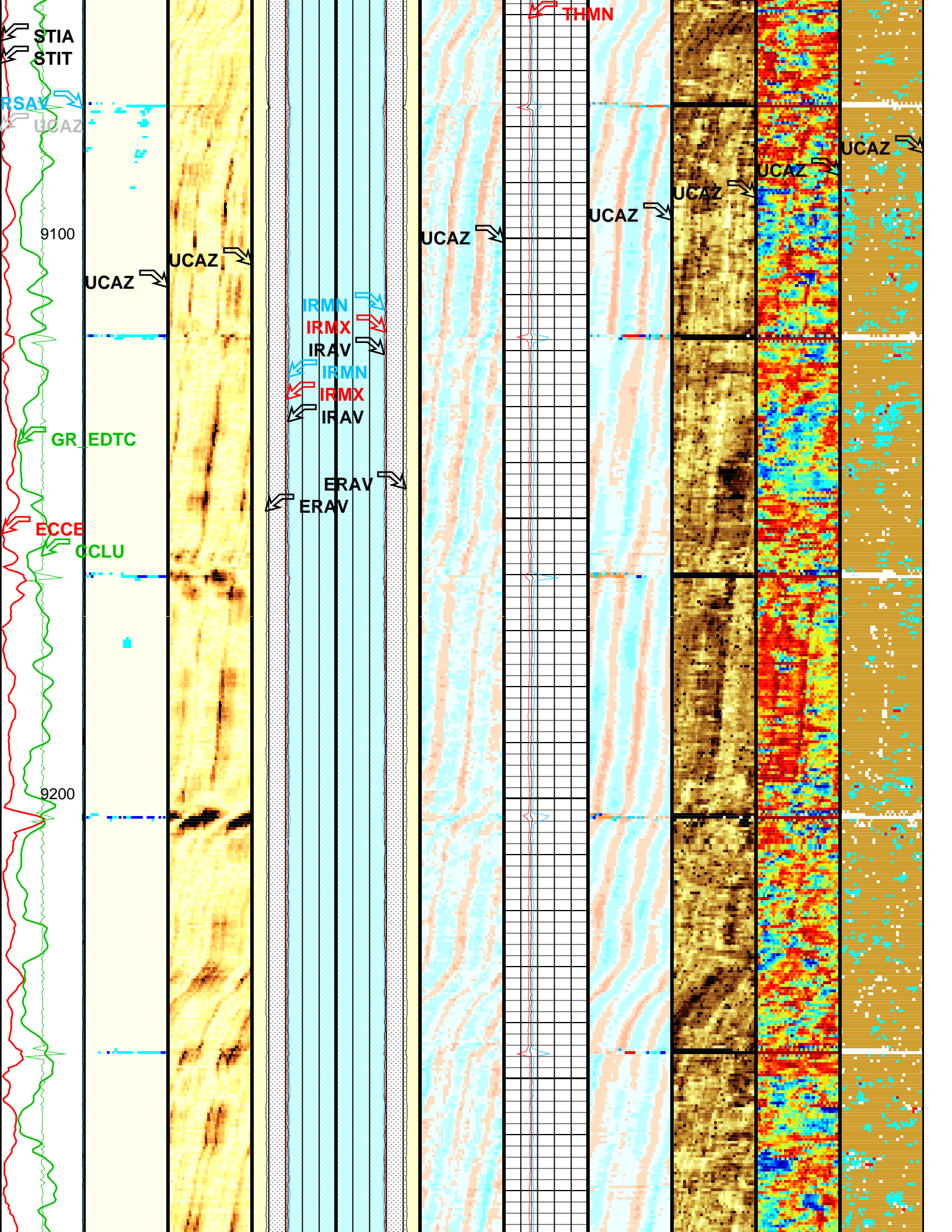


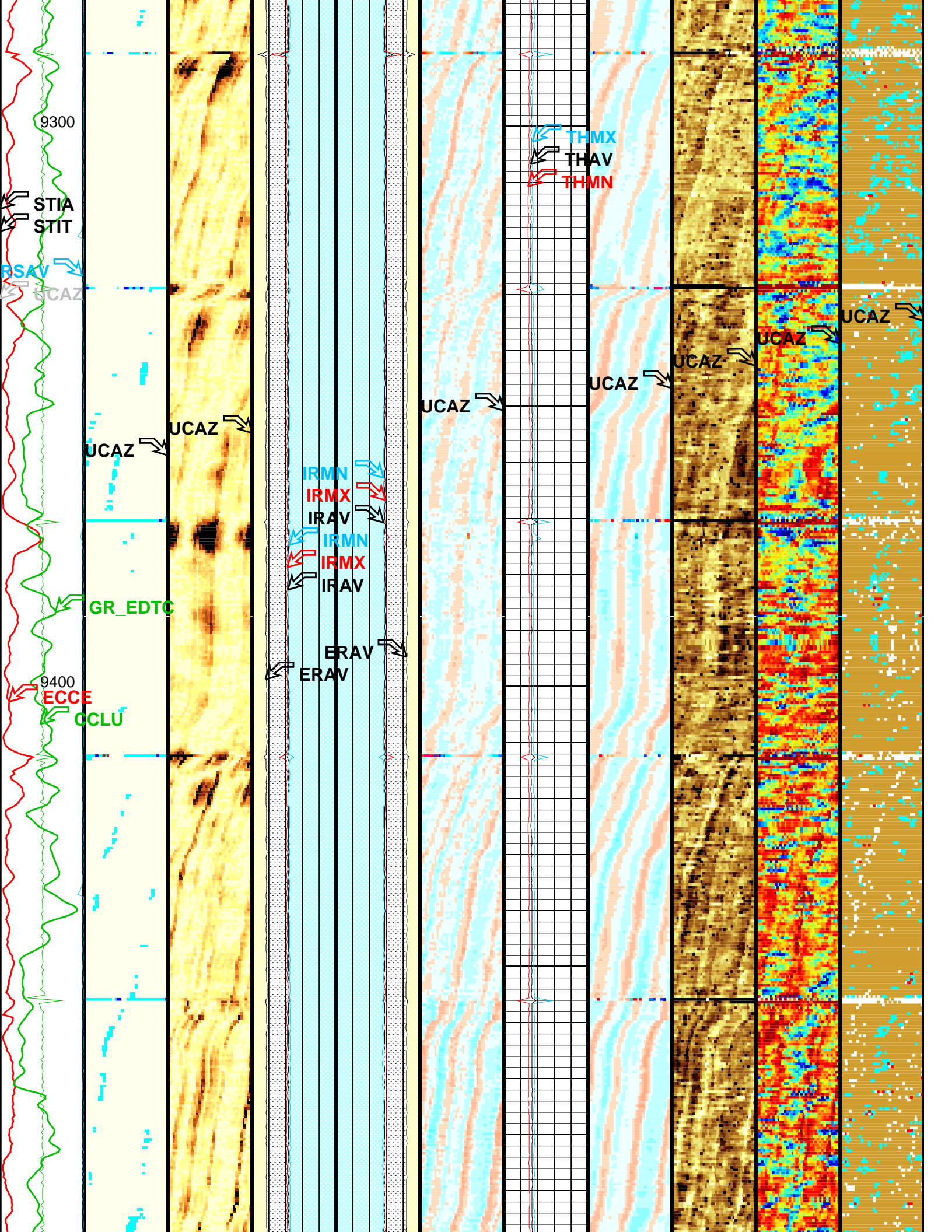


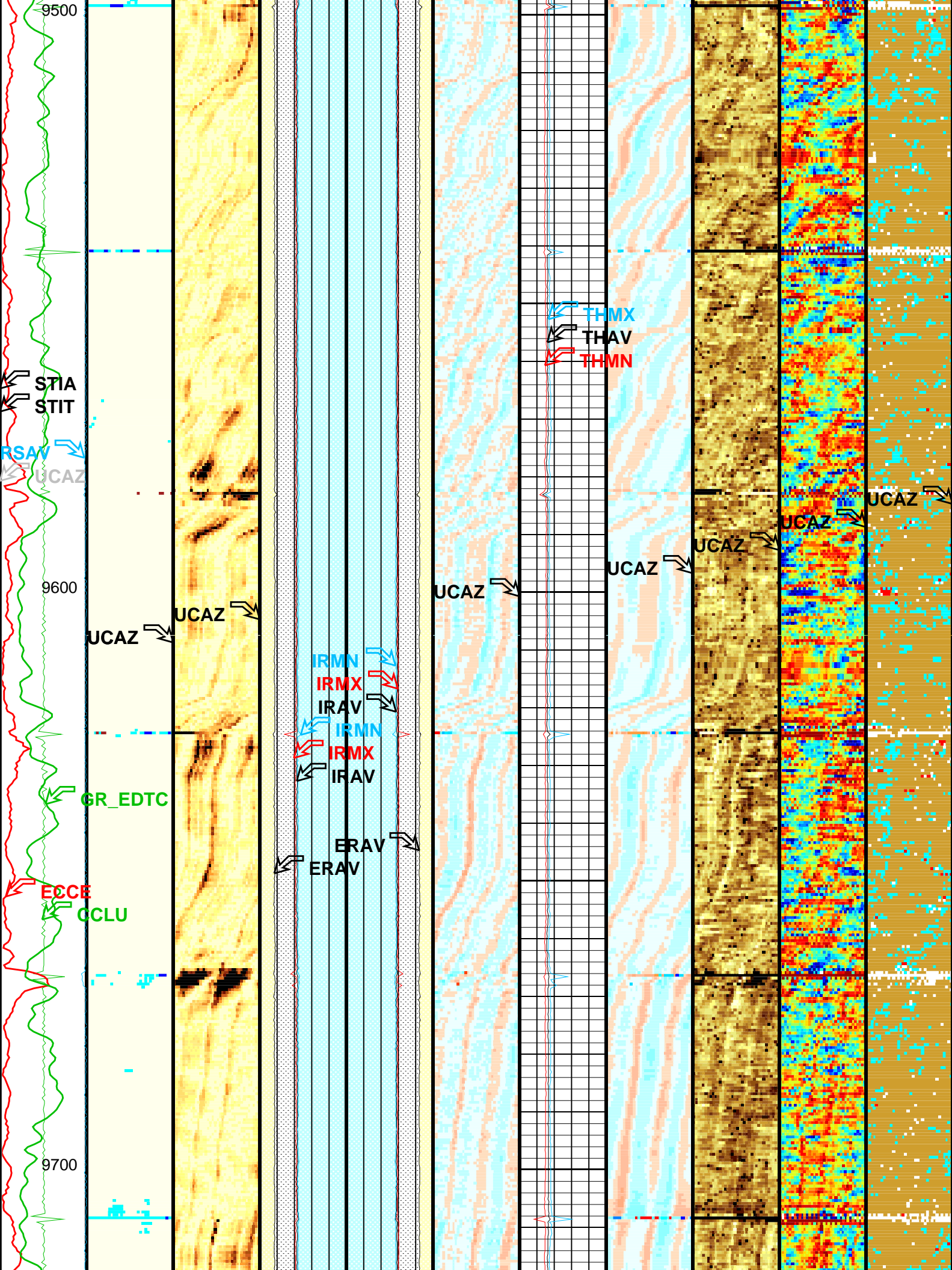


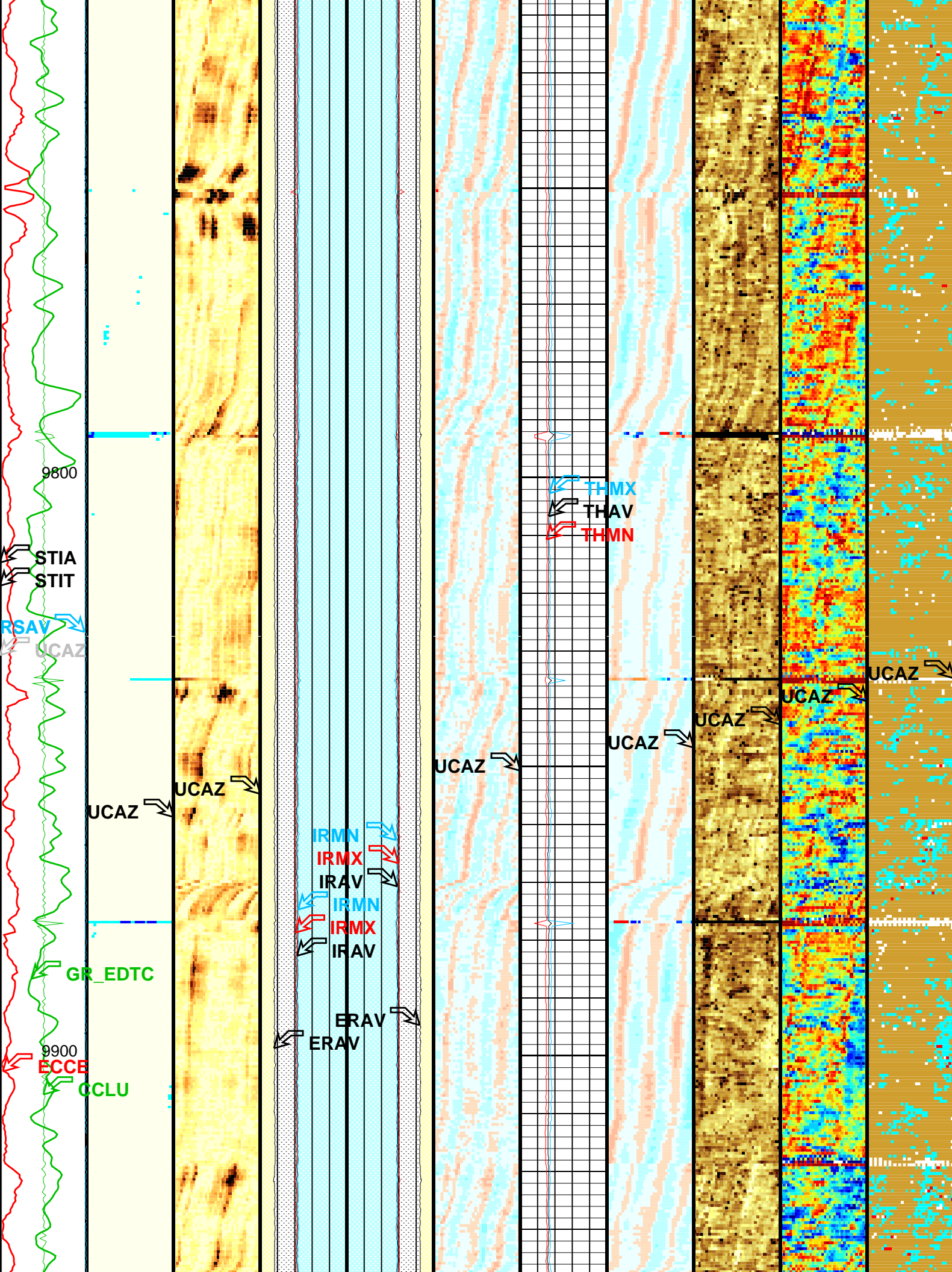


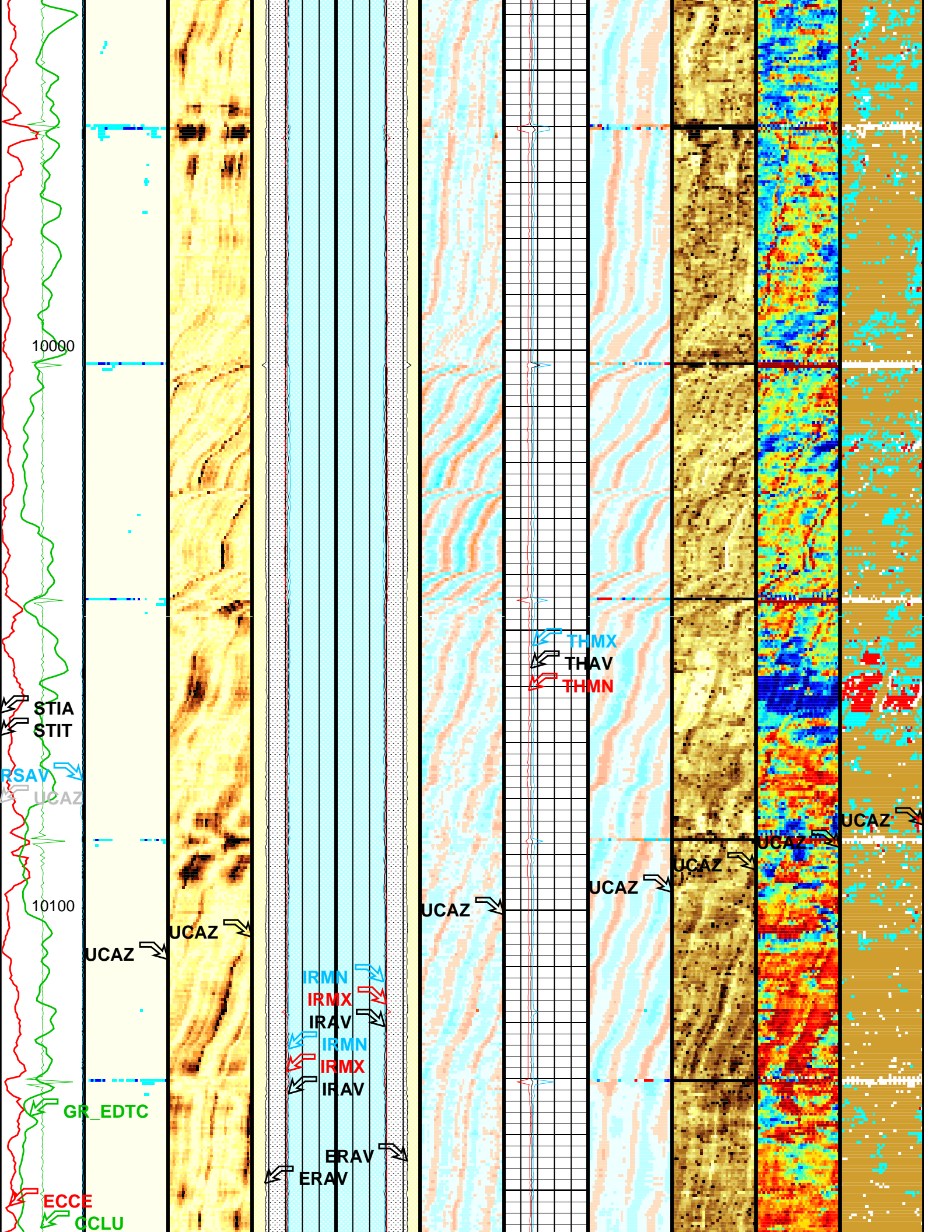


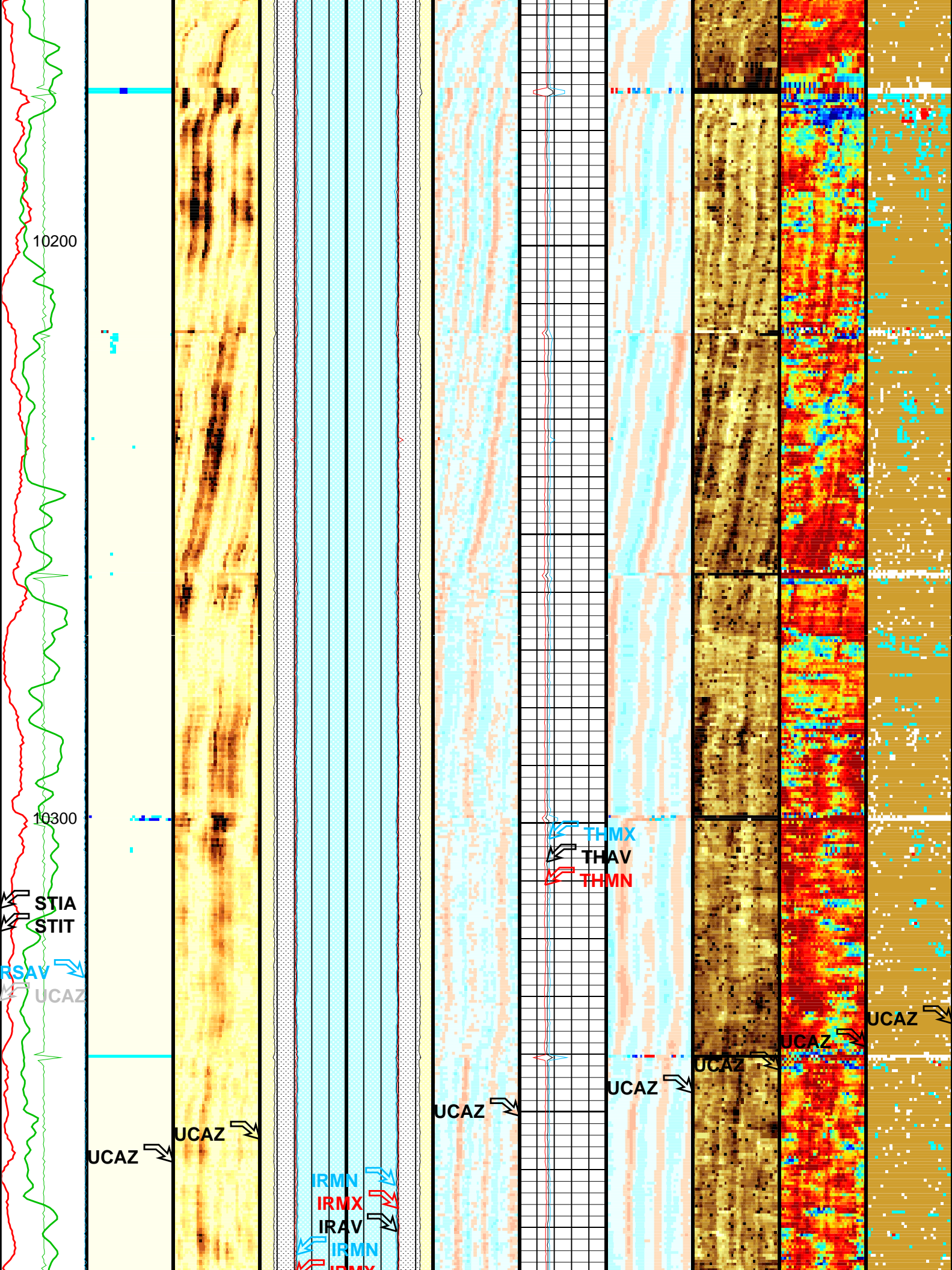


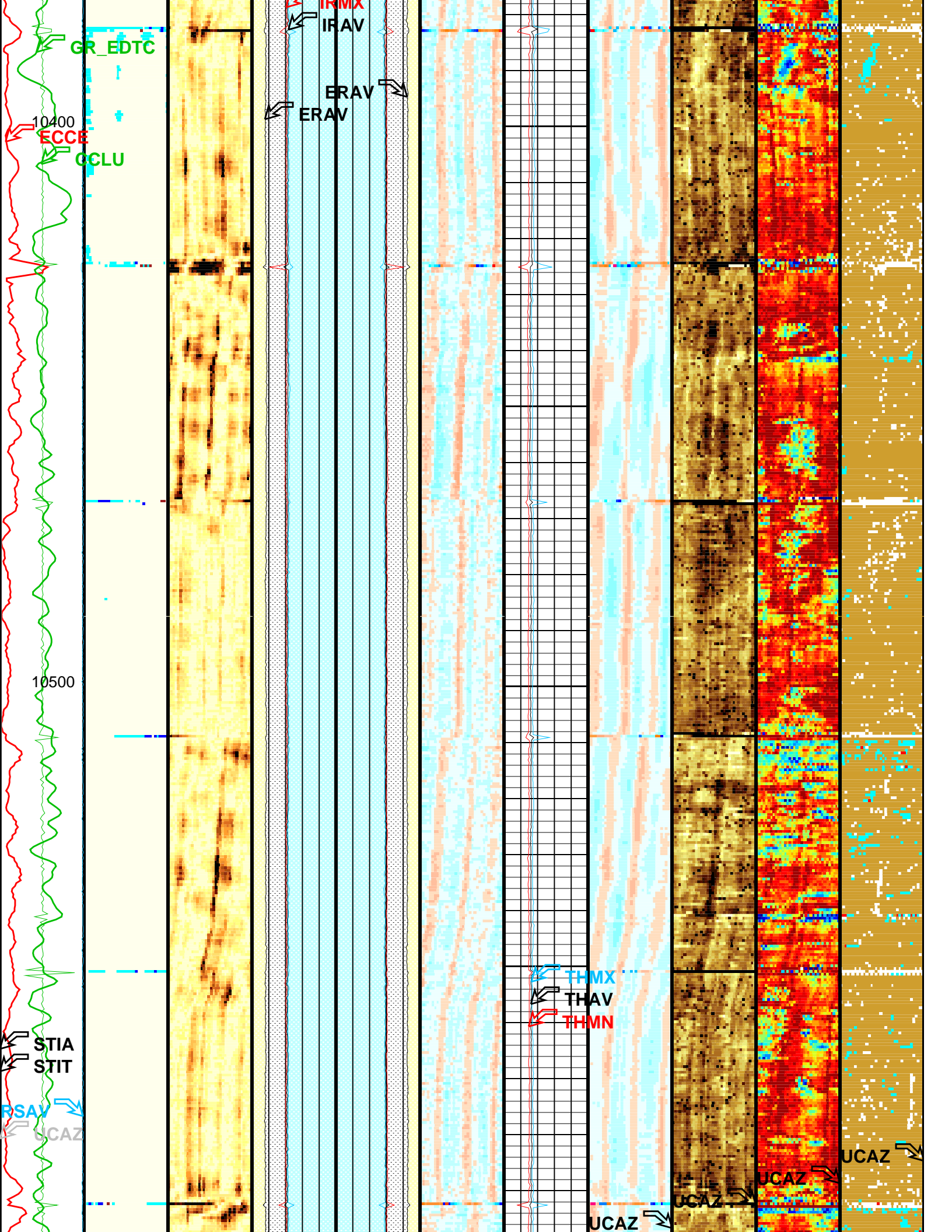


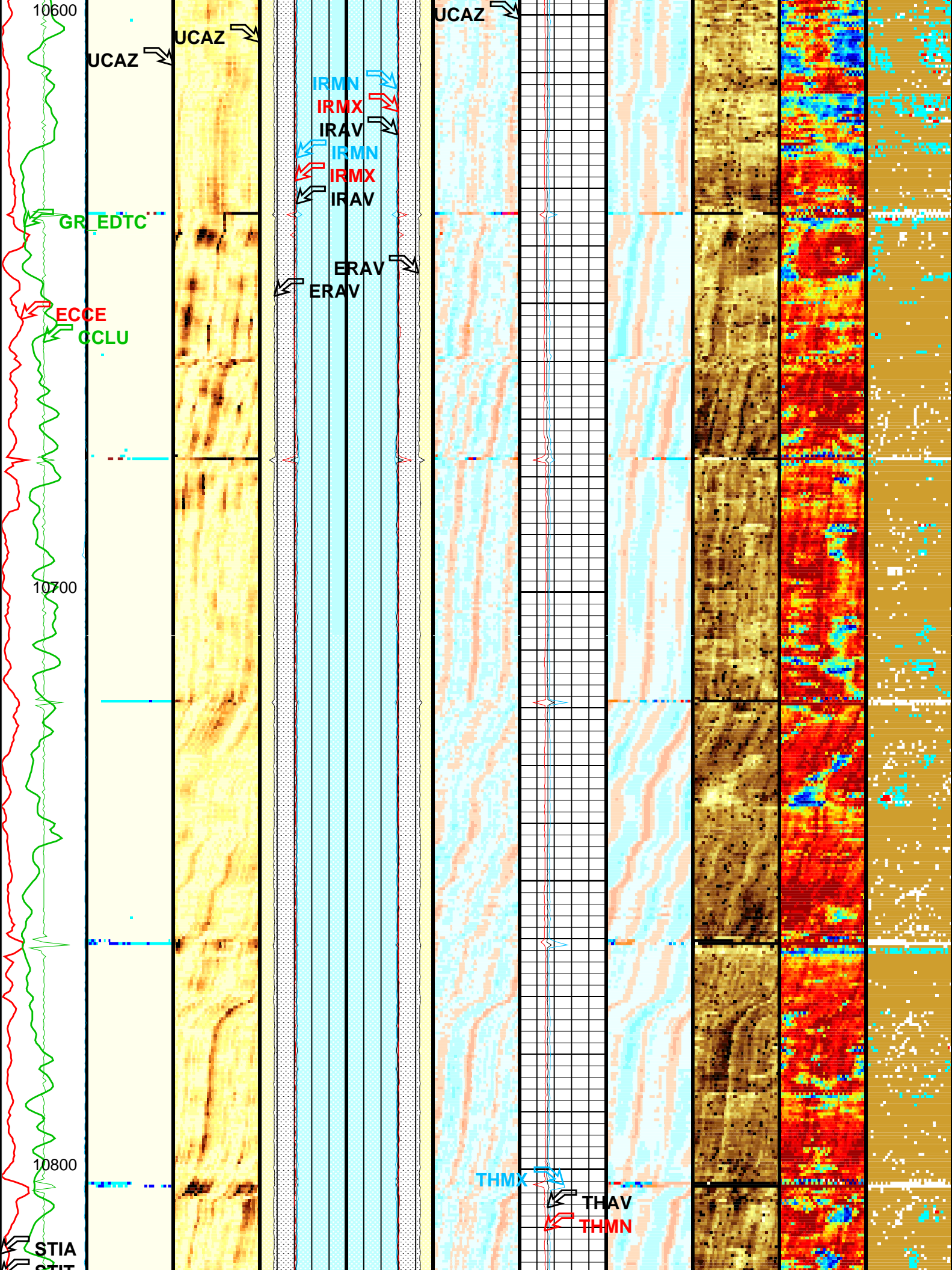


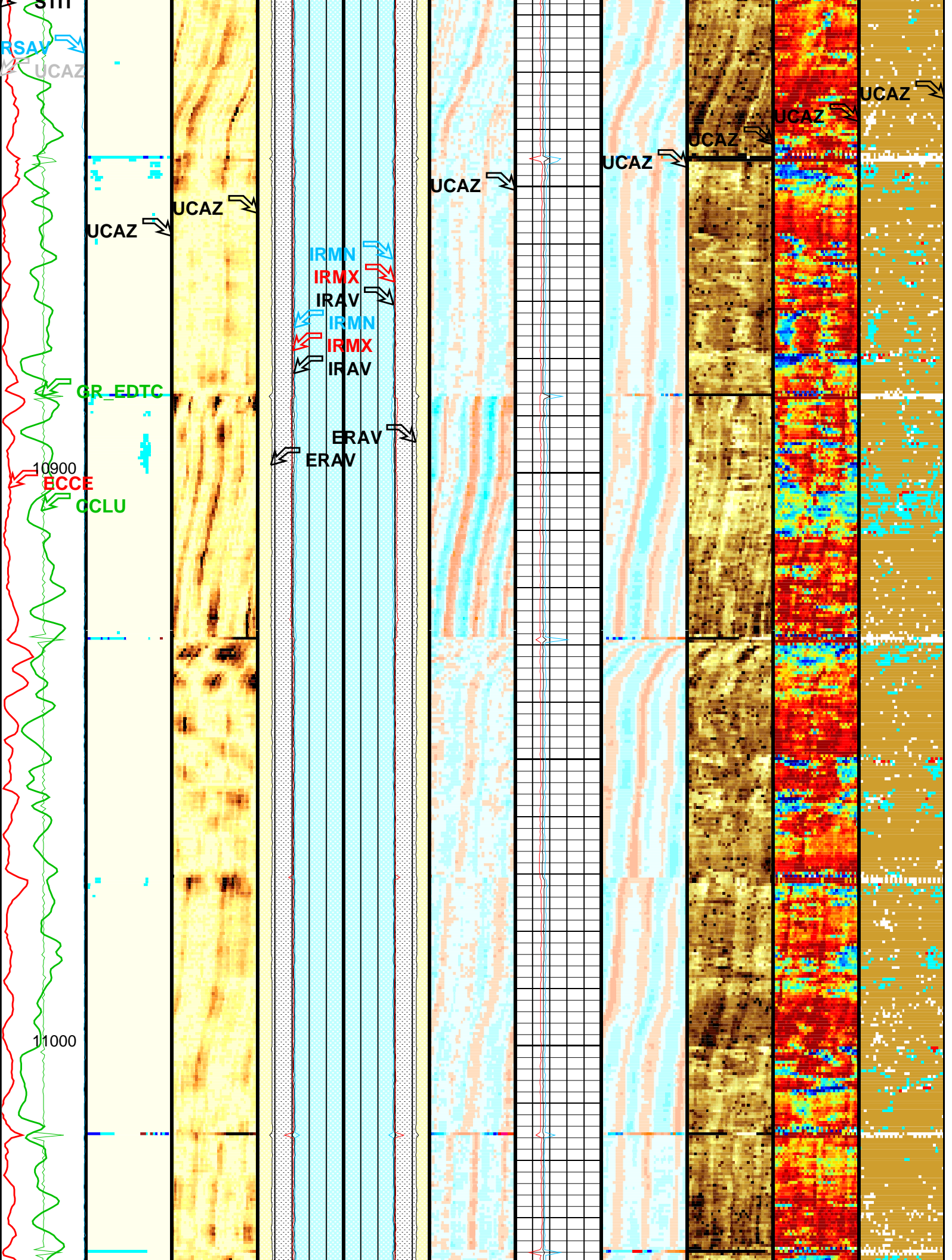


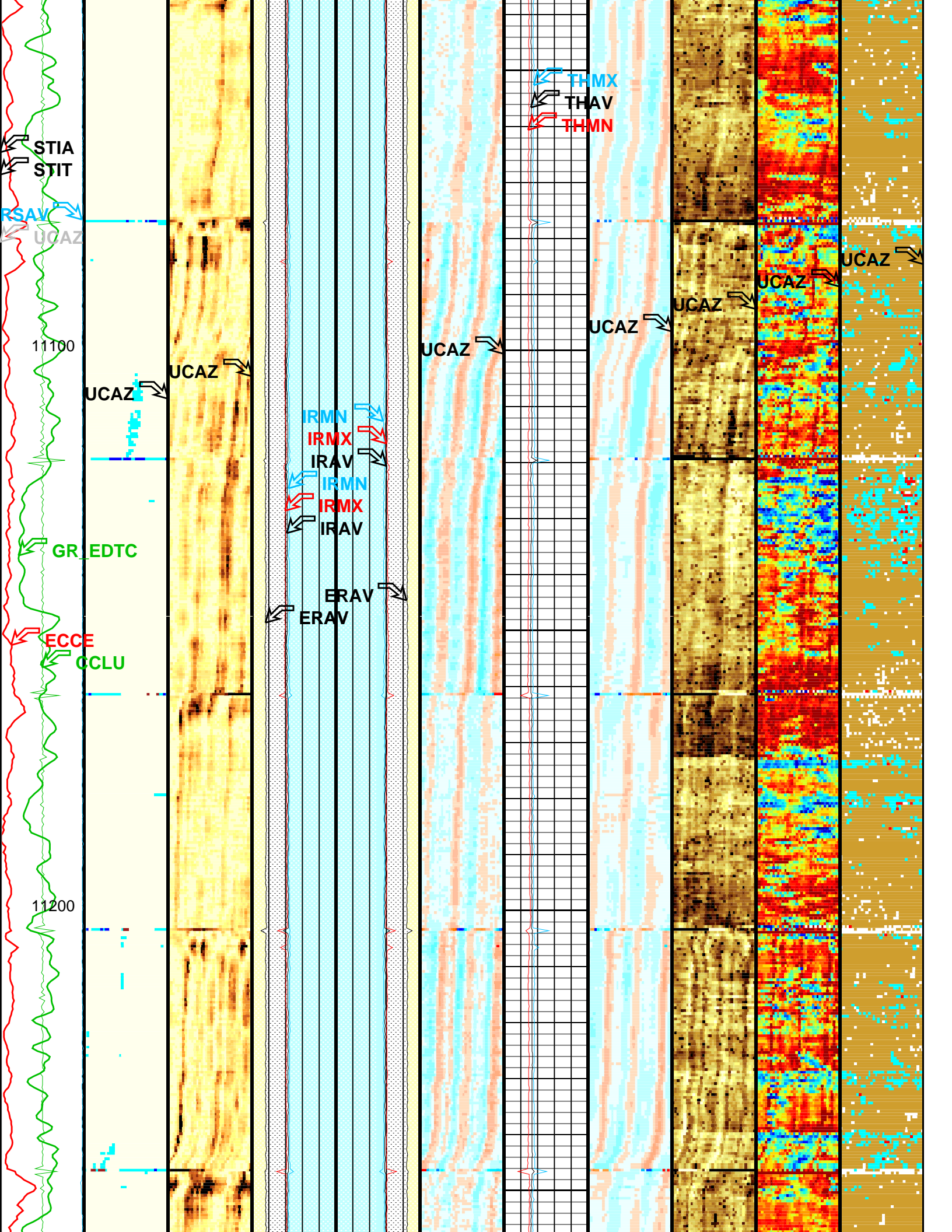


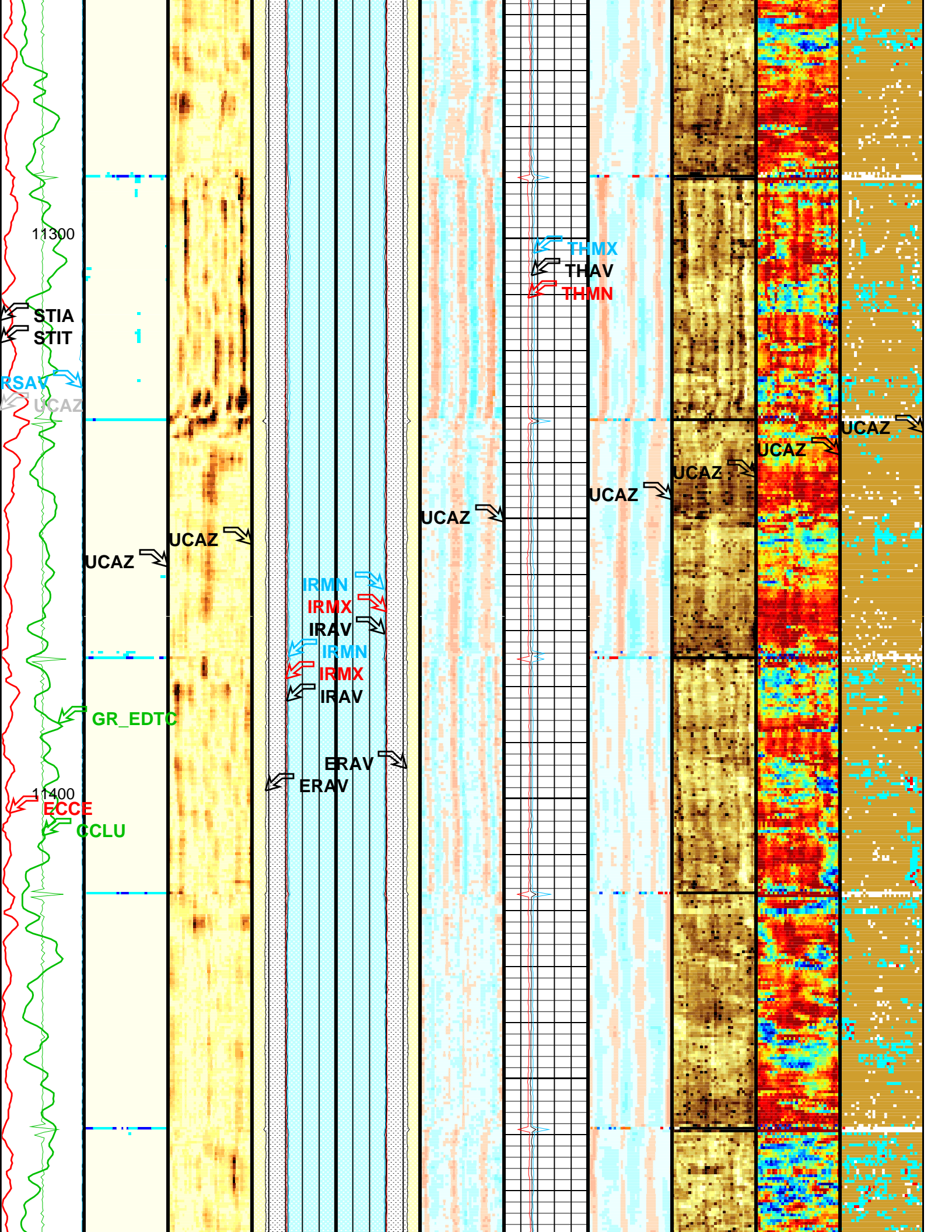


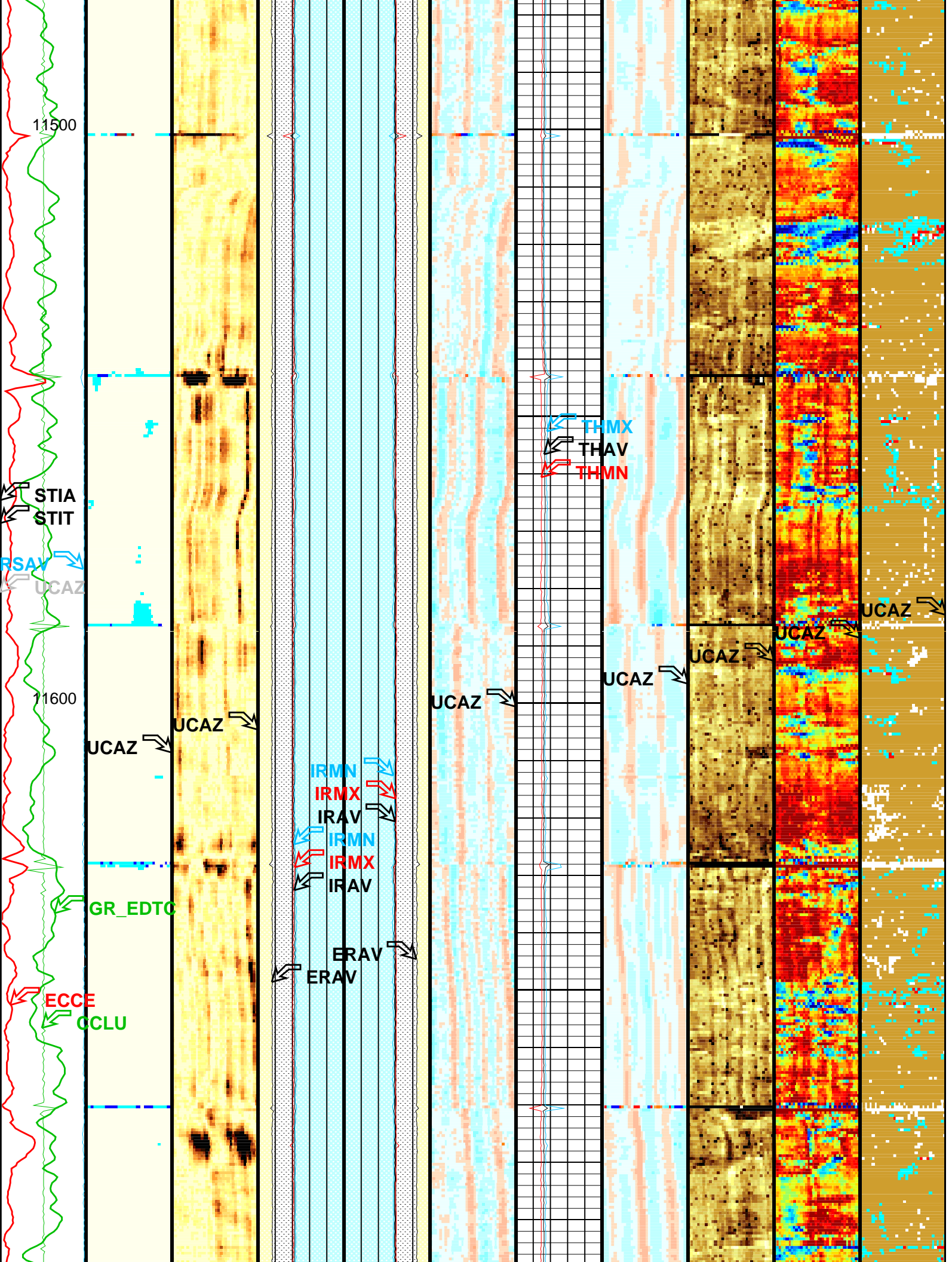


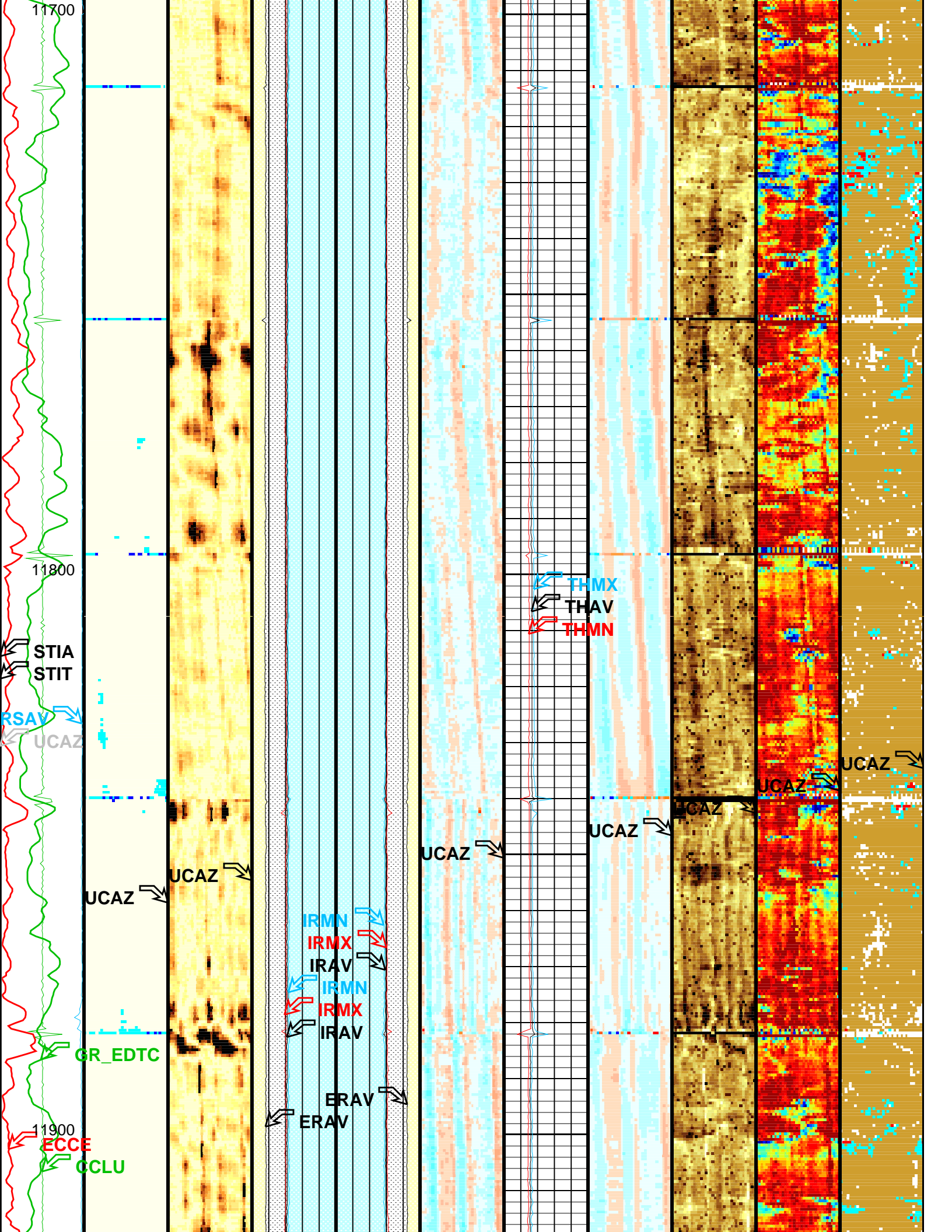


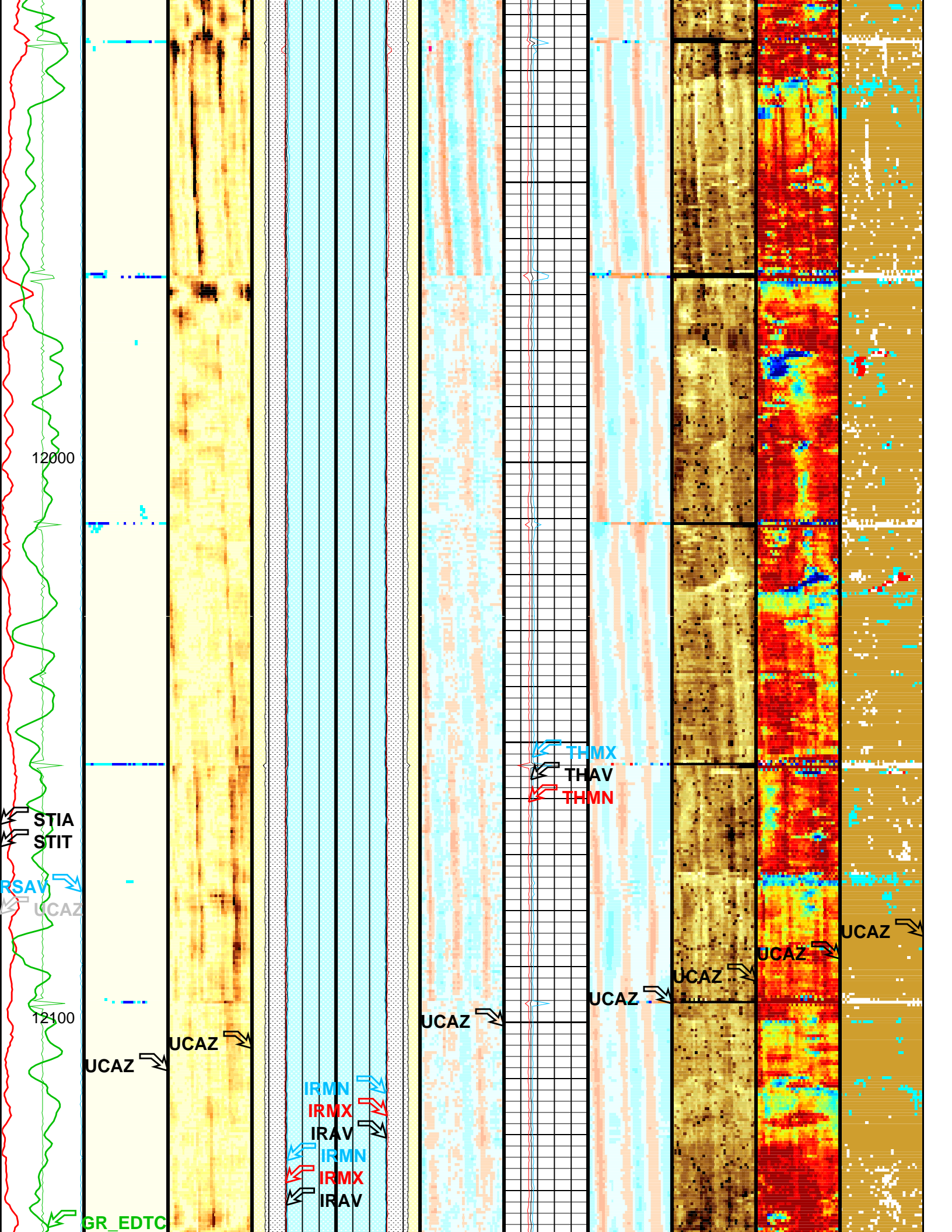


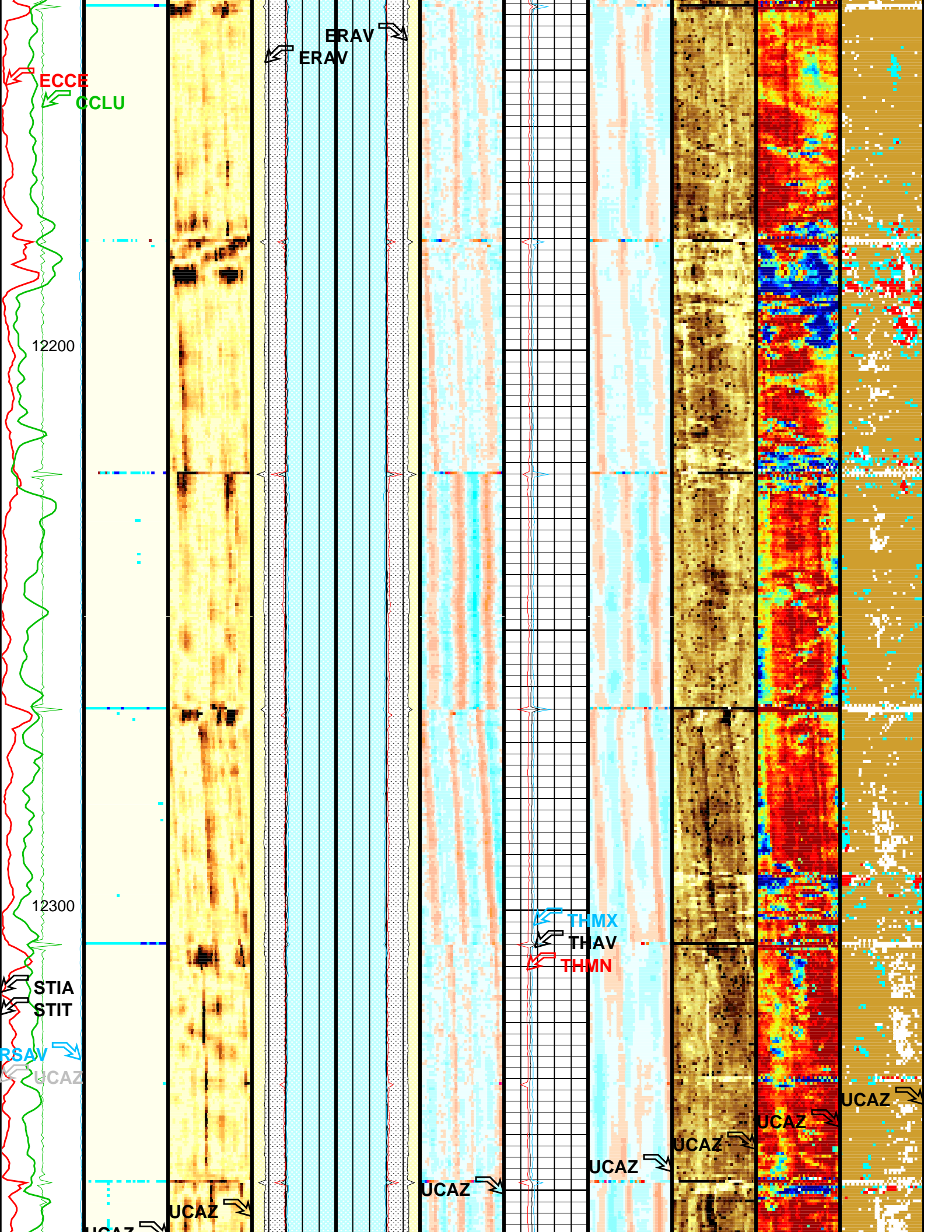












	2.4	1.4	1.4	2.4
Cable Drag From D4T to STIT				
Tool/Tot. Drag From D4T to STIA				
Gamma Ray (GR_EDTC) (GAPI)				
0	150			
Image rotation (UCAZ) (DEG)				
0	360			

Format: USI_IBC_SLG_Composite Vertical Scale: 5" per 100' Graphics File Created: 31-Aug-2010 00:22

OP System Version: 17C0-154

USIT-D 17C0-154 EDTC-B SRPC-3870_Q3_2009_OP17_V3_b

All USI Images are outside views

USI : HIGH Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.18 to 0.31 IN.

Parameters

DLIS Name	Description	Value	
USIT-D: Ultrasonic Imaging – D			
AGMN	Minimum Gain of Cartridge	–4	DB
AGMX	Maximum Gain of Cartridge	20	DB
BERJ	Bad Echo Rejection	ON	
CDIA	Casing Outer Diameter	4.5	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	4	IN
DFVL	Default Fluid Velocity	204	US/F
DOT	Diameter of Transducer Sensor	1.756	IN
EMXV	EMEX Voltage	60	V
FSOD	Fluid Slowness Fits Casing Outer Diameter	2_UFSL_N_UFAI	
IMAR	Image Rotation	OFF	
MW	Mud Weight	8.4	LB/G
RCOD	Reference Calibrator Outer Diameter	4.5	IN
RCSO	Reference Calibrator Standoff	0.8425	IN
RCTH	Reference Calibrator Thickness	0.2165	IN
TCUB	T^3 Processing Level	Vax_Loop	
THDH	Maximum Search Thickness (percentage of nominal)	130	
THDL	Minimum Search Thickness (percentage of nominal)	70	
THDP	Thickness Detection Policy	Fundamental	
THNO	Nominal Thickness of Casing	0.25	IN
U-USIT_CEMT	USIT Cement Type	ULTRA_LIGHT	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	0	MRAY
U-USIT_IISR	USIT IBC Inverted Fluid Slowness Resolution	1.0_US_P_FT	
U-USIT_IIZR	USIT IBC Inverted ZMUD Resolution	0.050_MRAY	
U-USIT_OCDI	USIT Outer Casing Diameter	0	IN
U-USIT_OCSH	USIT Outer Casing Shoe	0	FT
U-USIT_OCWE	USIT Outer Casing Weight	0	LB/F
U-USIT_TIEB	IBC Third Interface Echo Bin Processing	YES	
U-USIT_TIEC	IBC Third Interface Echo Cleaning	NONE	

U-USIT_TIEM	IBC Third Interface Echo Multi Tracking	NO	
U-USIT_TIEP	IBC Third Interface Echo Policy	BFEP	
U-USIT_TIER	IBC Third Interface Echo Receivers	BOTH	
U-USIT_U3WE	Third Interface Echo Window End	110	US
U-USIT_UBTP	USIT Bottom Transducer Position	UNKNOWN	
U-USIT_UFAO	USIT Flexural Attenuation Offset	-15	DB/M
U-USIT_UIAP	USIT IBC Answer Product Enabled	SolidLiquidGasMap	
U-USIT_UIST	Ultrasonic IBC Sonde Type	Sub_ibcs_A	
U-USIT_UTAN	USIT Transducer Angles	33_DEG	
UMAO	USIT Measurement Angular Offset	-10	DEG
USTO	Ultrasonic Time Offset	-2	US
USUB	Ultrasonic Subassembly Identifier	Sub_5_inch	
UWKM	Ultrasonic Working Mode	10DEG_6IN_136UNF_HF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	14.9916	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	-1	MRAY
ZMUD	Acoustic Impedance of Mud	1.8	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.45	MRAY
ZTGS	Acoustic Impedance Threshold for Gas	0.3	MRAY
USPS: USIT Pipe Stats			
AGMN	Minimum Gain of Cartridge	-4	DB
AGMX	Maximum Gain of Cartridge	20	DB
BERJ	Bad Echo Rejection	ON	
CDIA	Casing Outer Diameter	4.5	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	4	IN
DFVL	Default Fluid Velocity	204	US/F
DOT	Diameter of Transducer Sensor	1.756	IN
EMXV	EMEX Voltage	60	V
IMAR	Image Rotation	OFF	
MW	Mud Weight	8.4	LB/G
RCOD	Reference Calibrator Outer Diameter	4.5	IN
RCSO	Reference Calibrator Standoff	0.8425	IN
RCTH	Reference Calibrator Thickness	0.2165	IN
TCUB	T^3 Processing Level	Vax_Loop	
THDH	Maximum Search Thickness (percentage of nominal)	130	
THDL	Minimum Search Thickness (percentage of nominal)	70	
THNO	Nominal Thickness of Casing	0.25	IN
UMAO	USIT Measurement Angular Offset	-10	DEG
USTO	Ultrasonic Time Offset	-2	US
USUB	Ultrasonic Subassembly Identifier	Sub_5_inch	
UWKM	Ultrasonic Working Mode	10DEG_6IN_136UNF_HF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	14.9916	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	-1	MRAY
ZMUD	Acoustic Impedance of Mud	1.8	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.45	MRAY
ZTGS	Acoustic Impedance Threshold for Gas	0.3	MRAY
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	12537.00	FT
TDL	Total Depth - Logger	12450.00	FT
System and Miscellaneous			
BS	Bit Size	7.875	IN
CWEI	Casing Weight	11.60	LB/F
DO	Depth Offset for Playback	0.0	FT
PP	Playback Processing	RECOMPUTE	

Input DLIS Files

DEFAULT	USI_040LUP	FN:68	PRODUCER	30-Aug-2010 19:32	12455.5 FT	194.5 FT
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Output DLIS Files

DEFAULT	USI_043PUP	FN:73	PRODUCER	31-Aug-2010 00:22
RTB	USI_043PUP	FN:74	PRODUCER	30-Aug-2010 18:37

Company: ENCANA OIL & GAS (USA) INC.

Well: SGU 8504C-25 F25496 (F25)

Input DLIS Files

DEFAULT	USI_040LUP	FN:68	PRODUCER	30-Aug-2010 19:32	12455.5 FT	194.5 FT
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Output DLIS Files

DEFAULT	USI_043PUP	FN:73	PRODUCER	31-Aug-2010 00:22	12455.5 FT	194.5 FT
RTB	USI_043PUP	FN:74	PRODUCER	30-Aug-2010 18:37	12455.5 FT	194.5 FT

OP System Version: 17C0-154

USIT-D	17C0-154	EDTC-B	SRPC-3870_Q3_2009_OP17_V3_b
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Image
rotation
(UCAZ)
(DEG)

0 360

Gamma
Ray (GR_
EDTC)
(GAPI)

0 150

Tool/Tot.
Drag
From D4T
to STIA

Cable
Drag
From D4T
to STIT

Stuck
Stretch
(STIT)

0 (F) 50

RSBV
(RSBV)
(RPS)

6 7.5

CCL
(CCLU)
(-----)

-20 20

Maximum of AI
(AIMX)

-1 (MRAY) 9

Maximum
Flexural
Attenuation
(U-USIT_
UFAX)

20 (DB/F) 70

Average of AI
(AIAV)

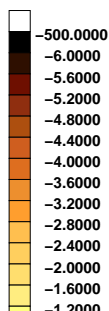
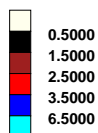
-1 (MRAY) 9

Average
Flexural
Attenuation
(U-USIT_
UFAV)

20 (DB/F) 70

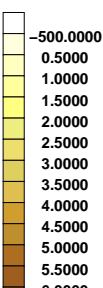
Eccent.
(ECCE)

0 (IN) 0.5

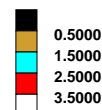
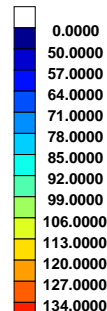


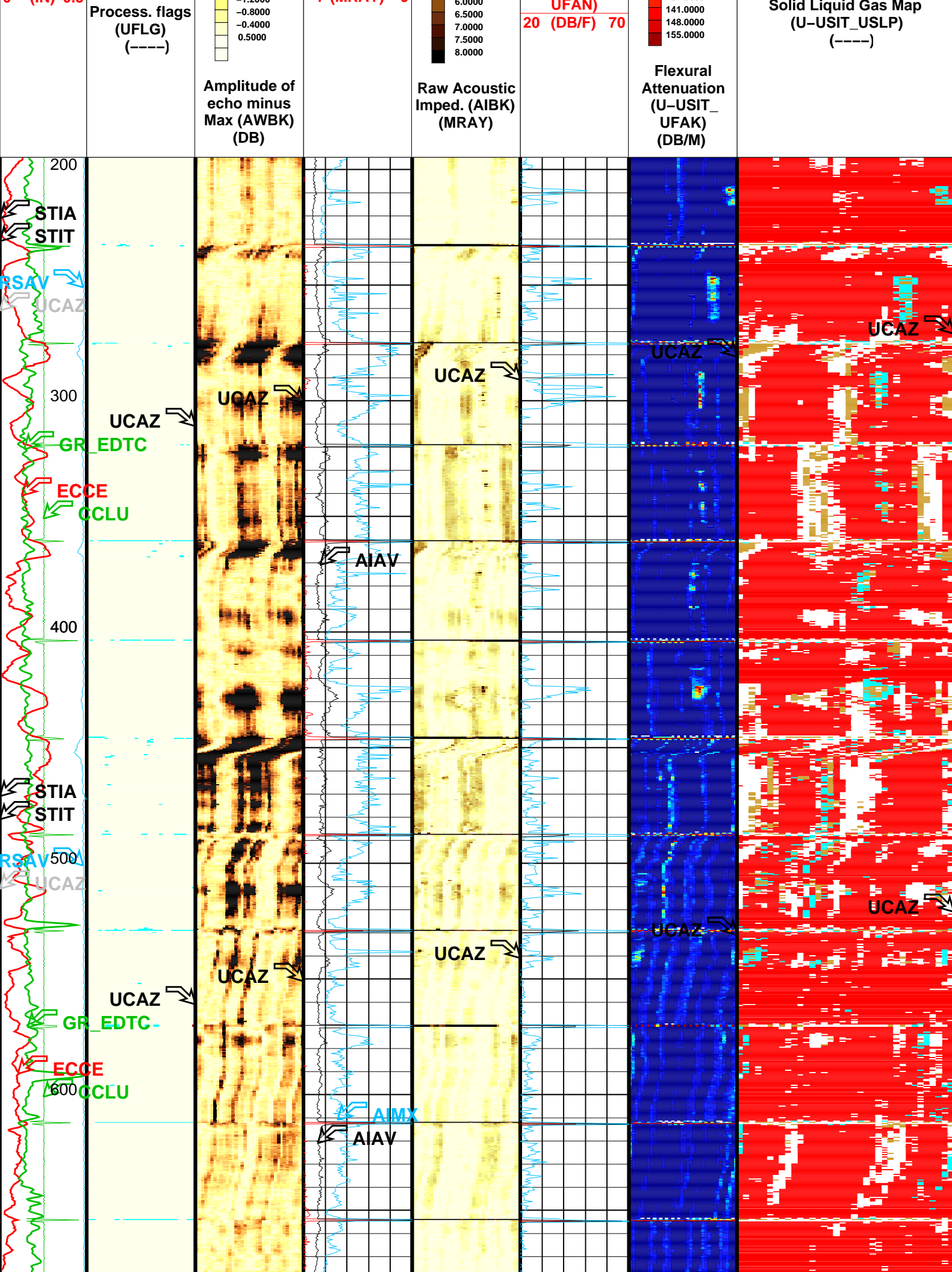
Minimum of AI
(AIMN)

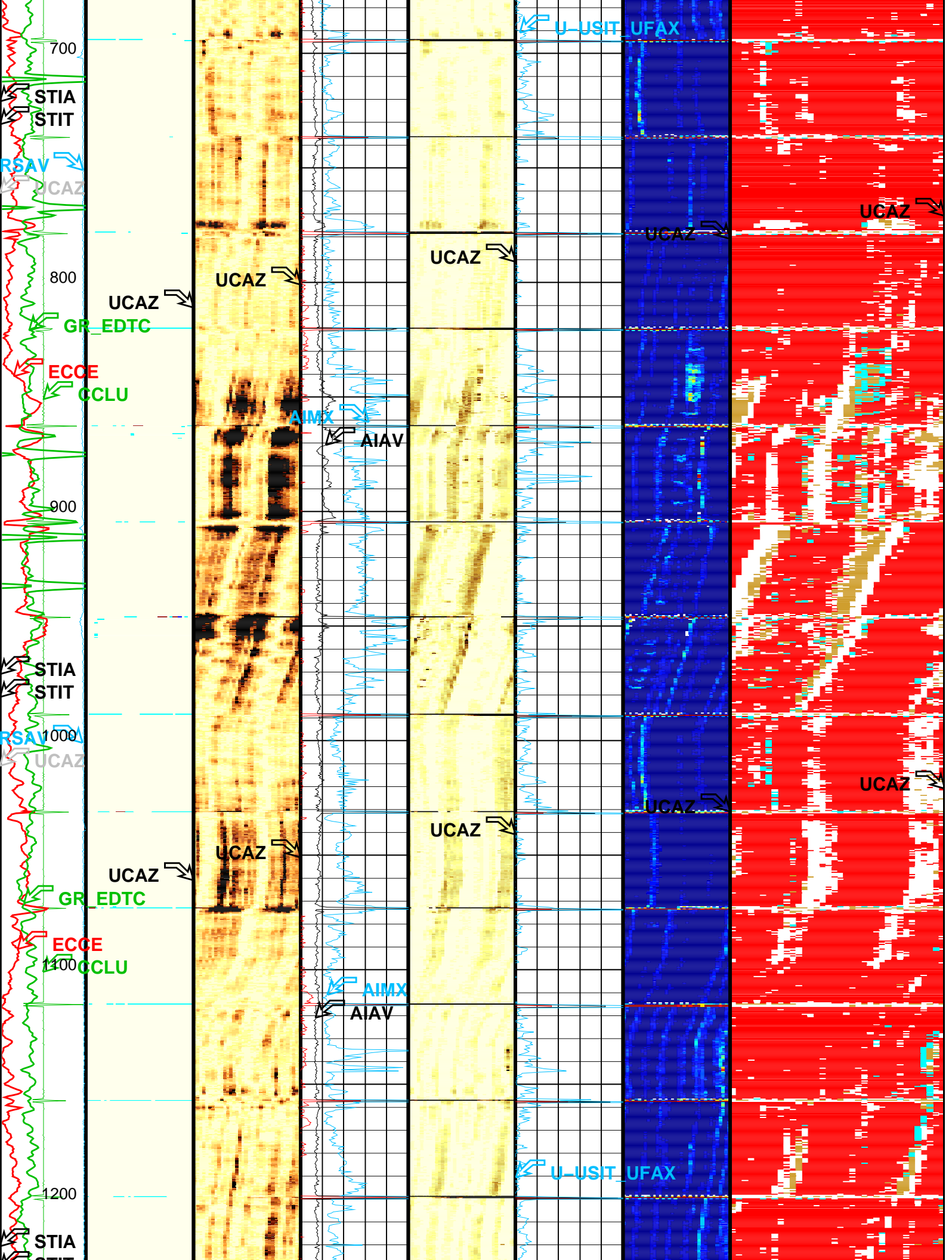
-1 (MRAY) 9

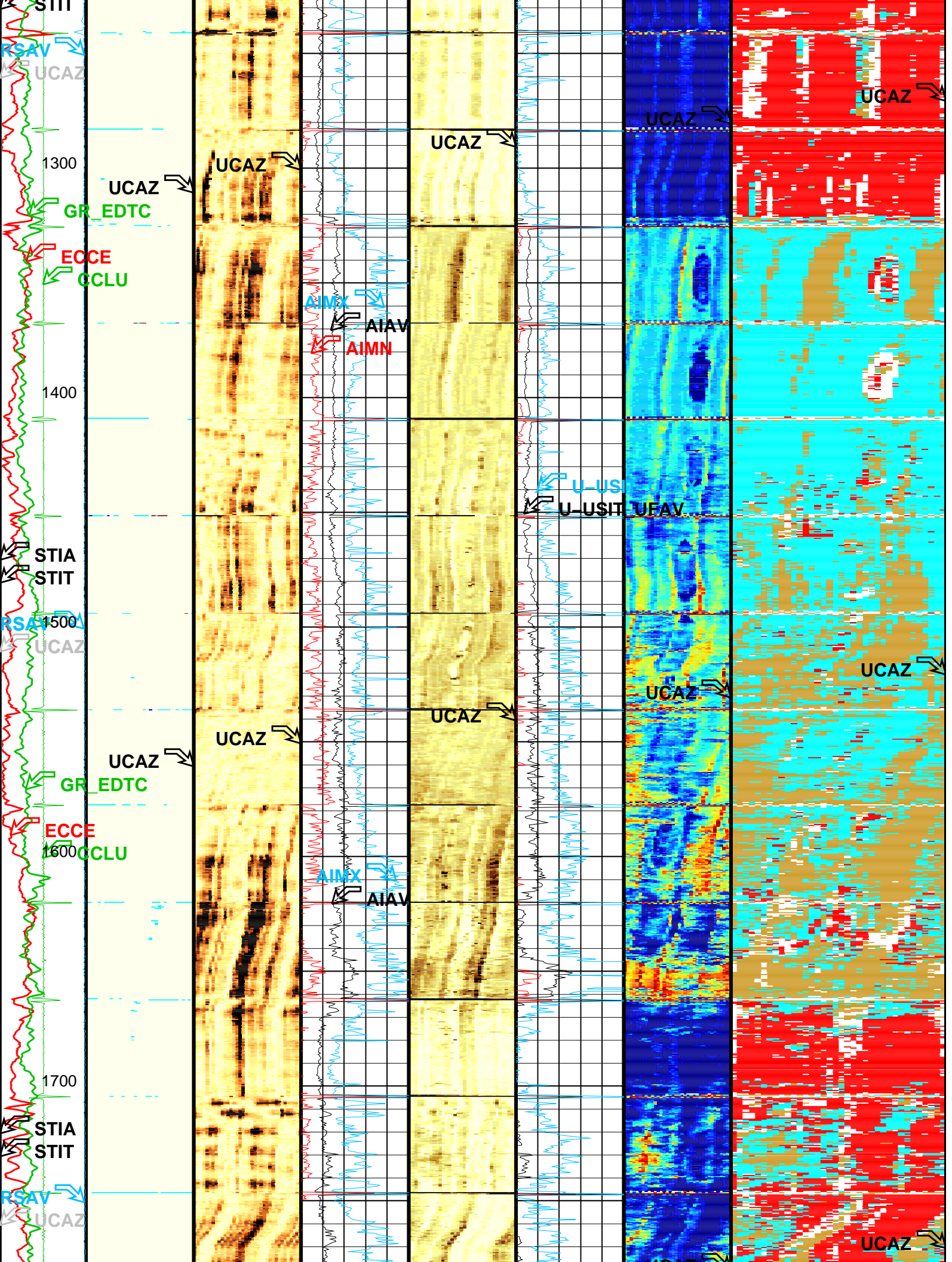


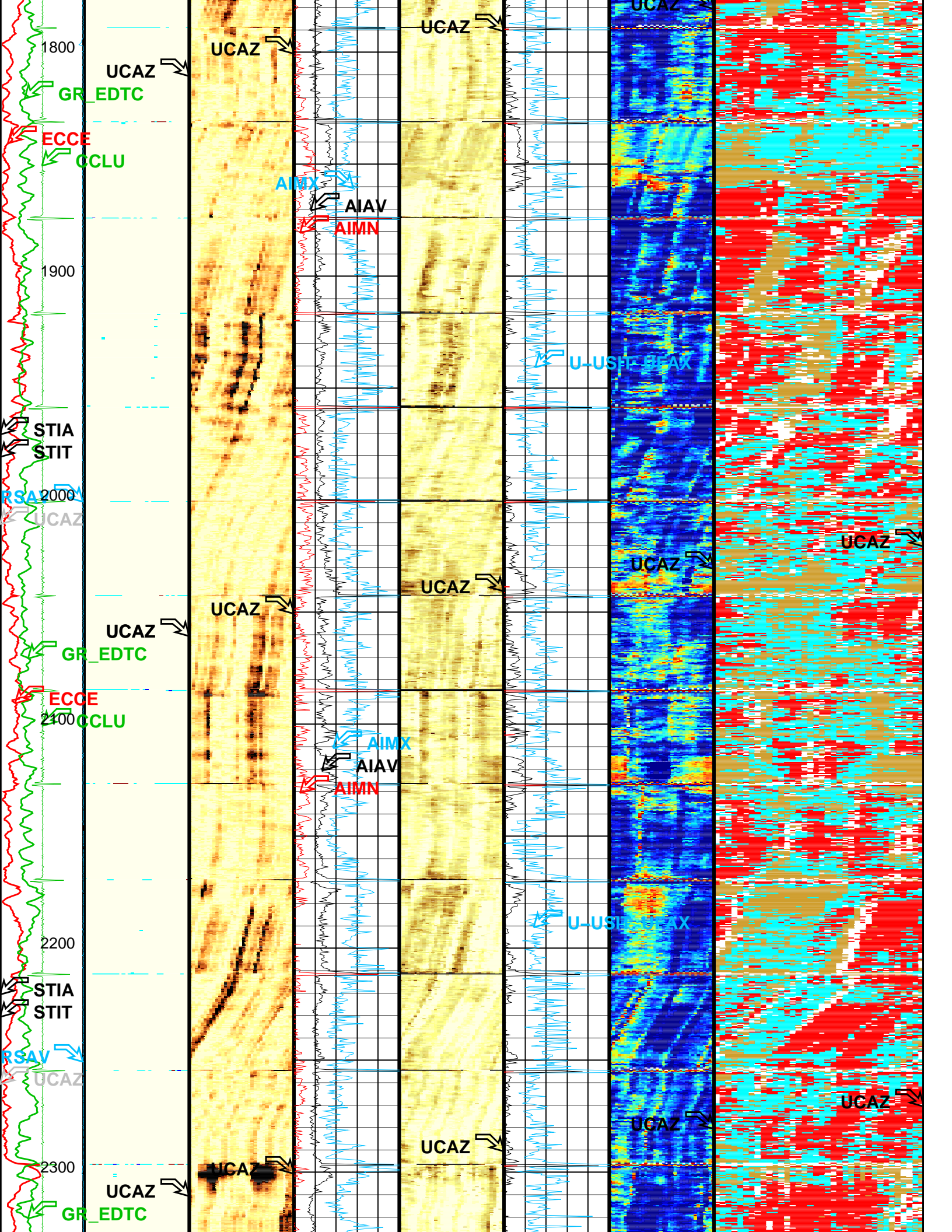
Minimum
Flexural
Attenuation
(U-USIT_
UFAX)

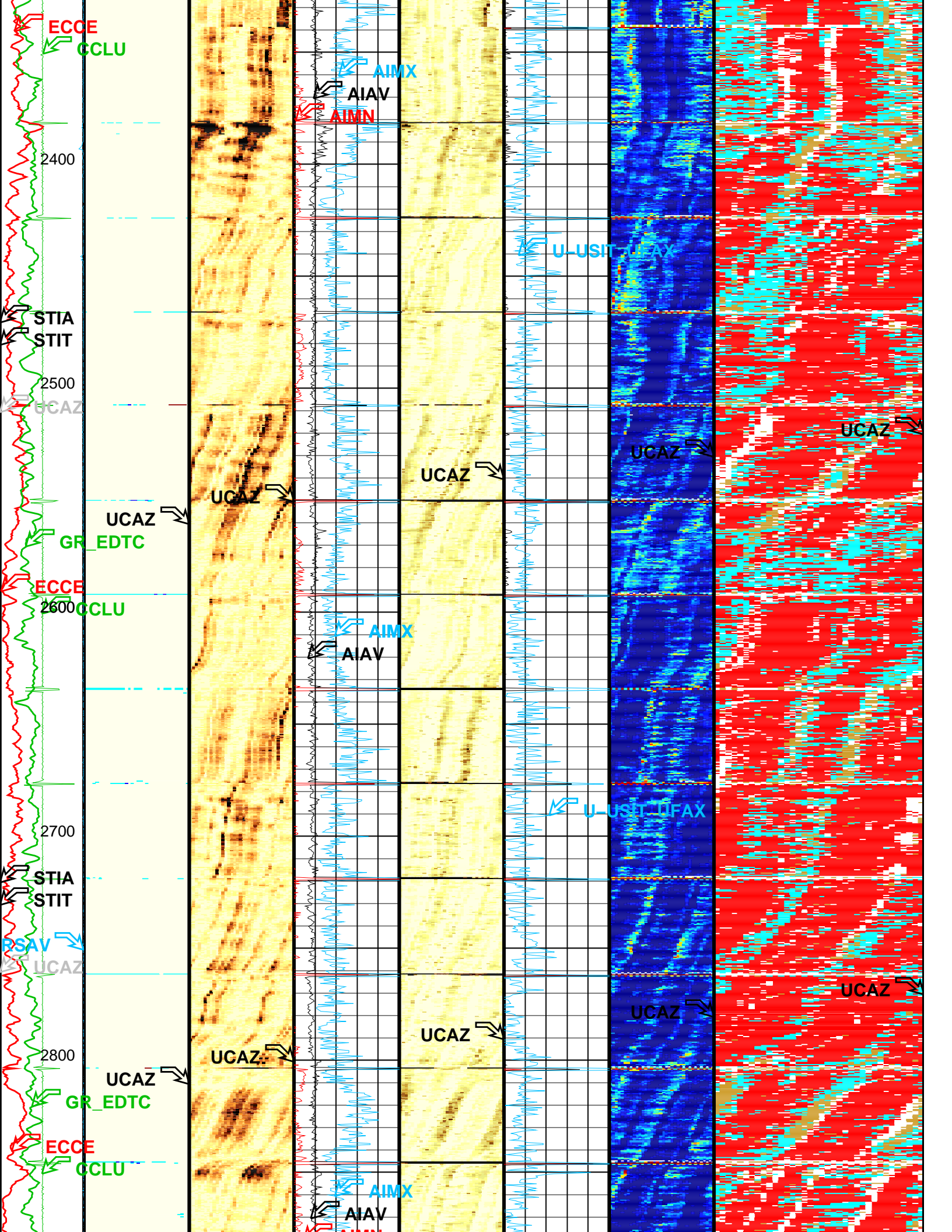


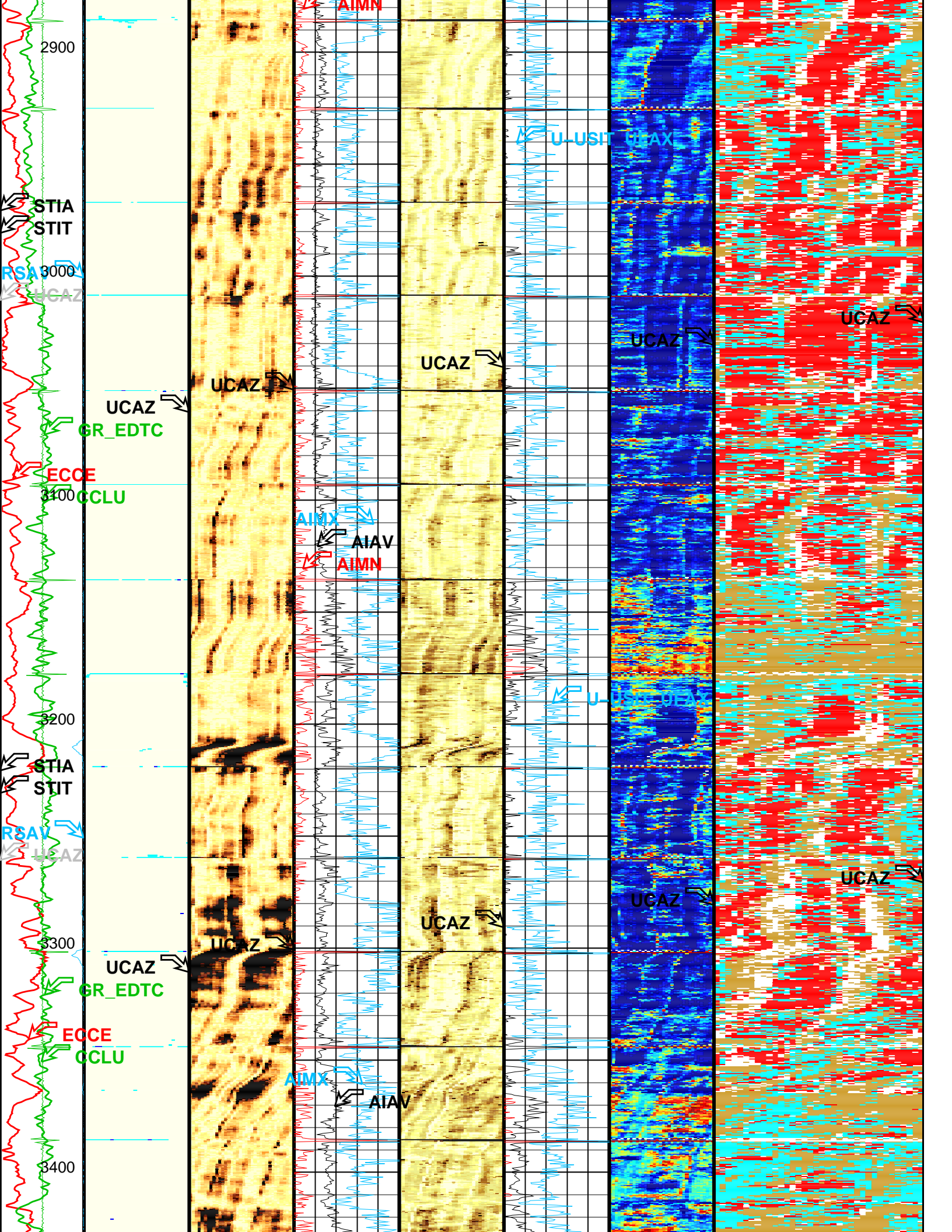


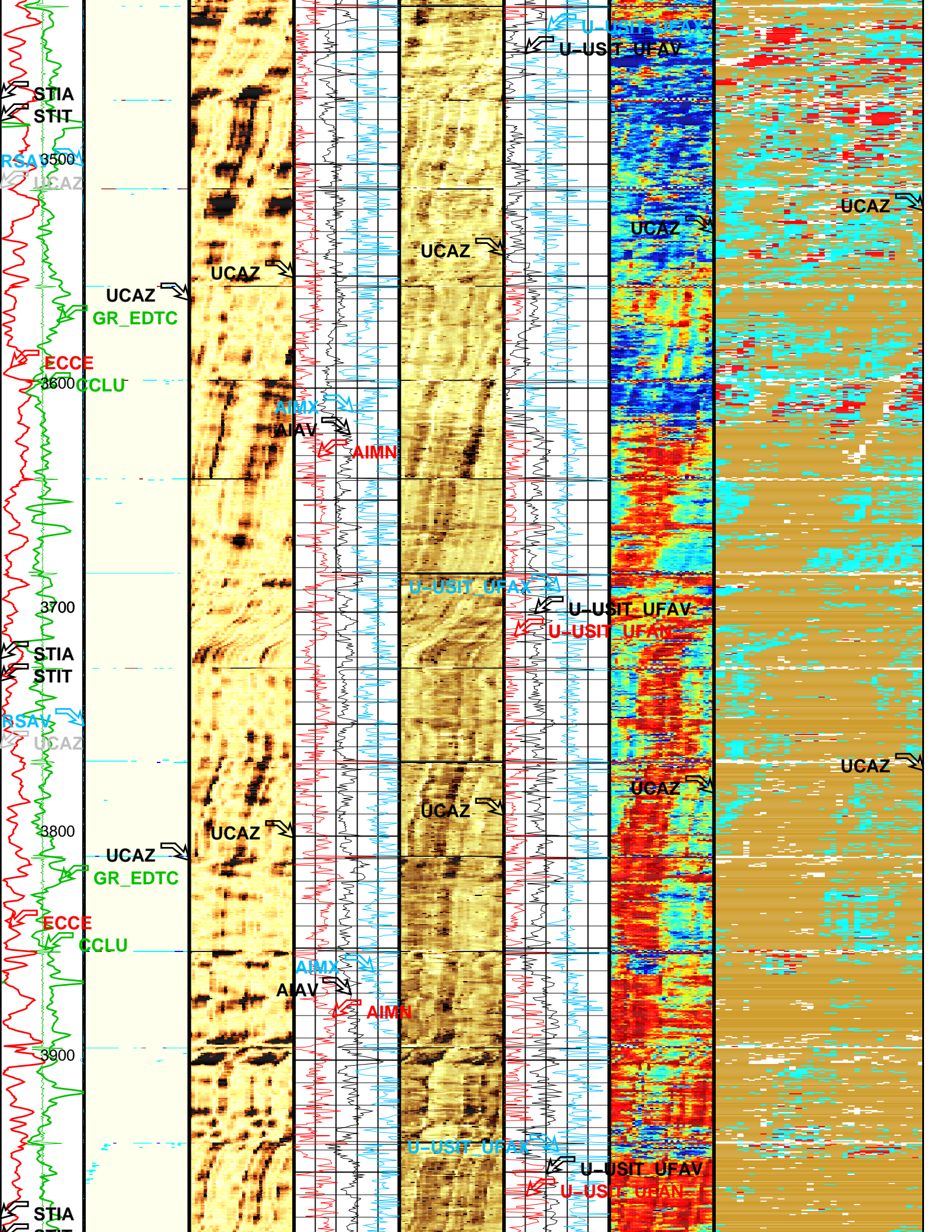


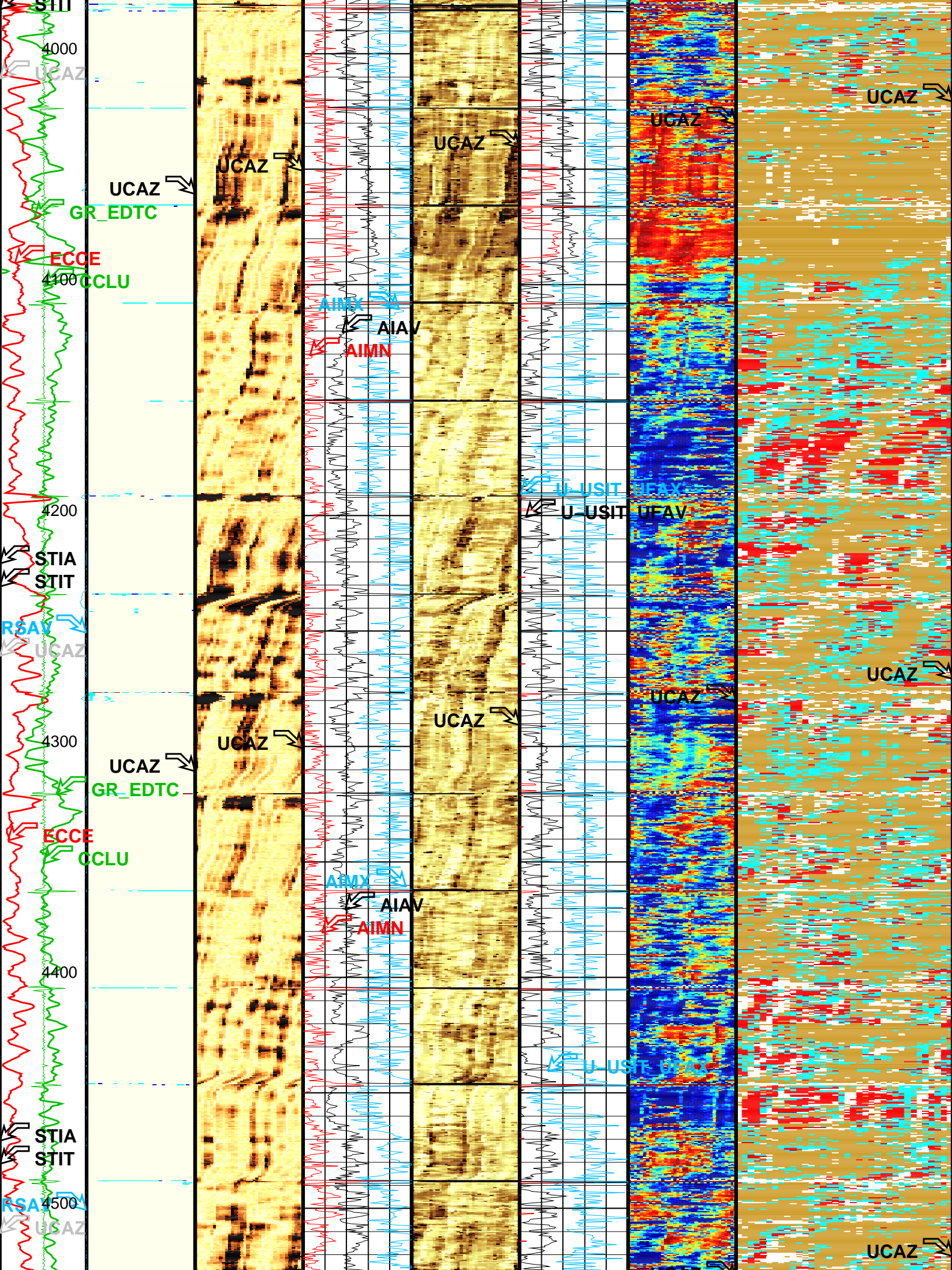


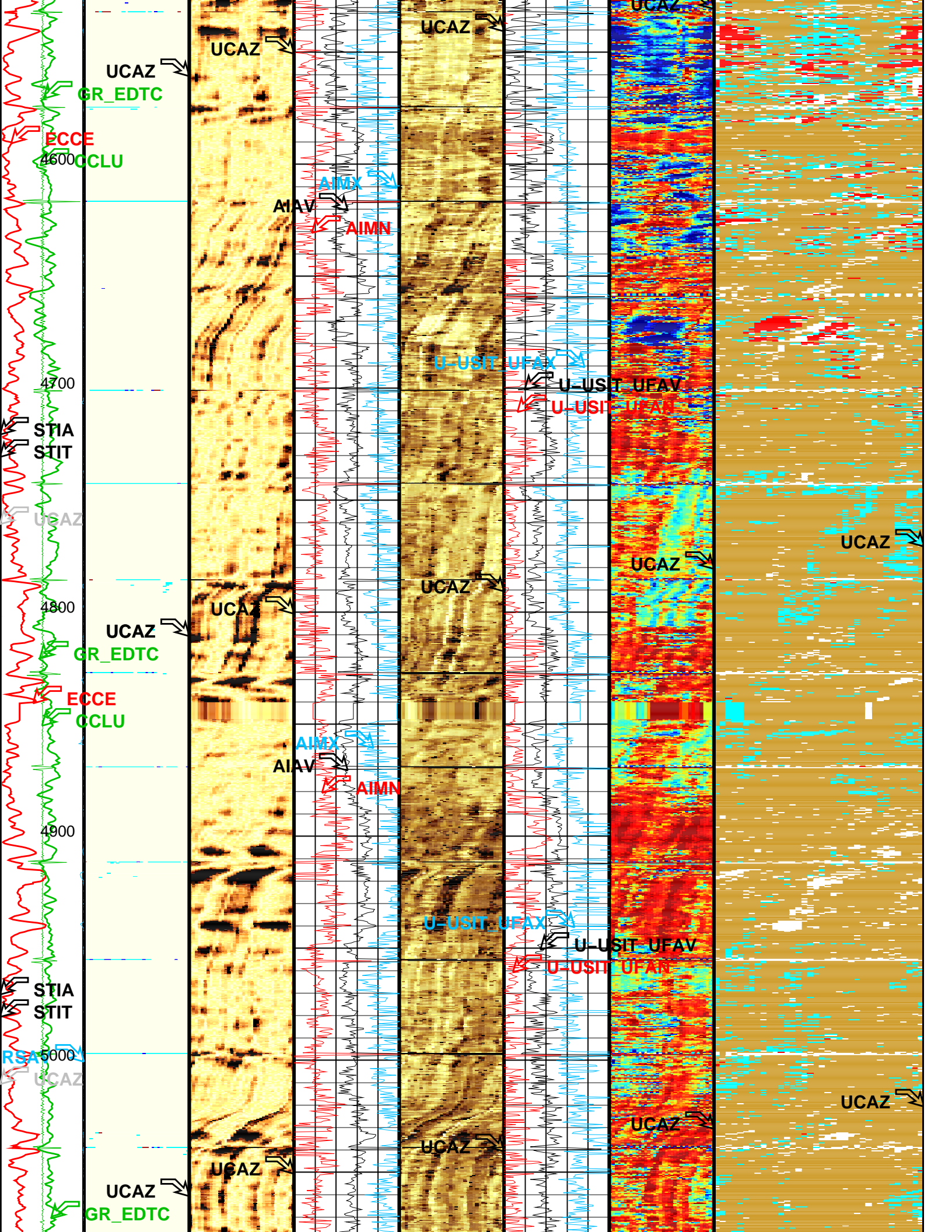


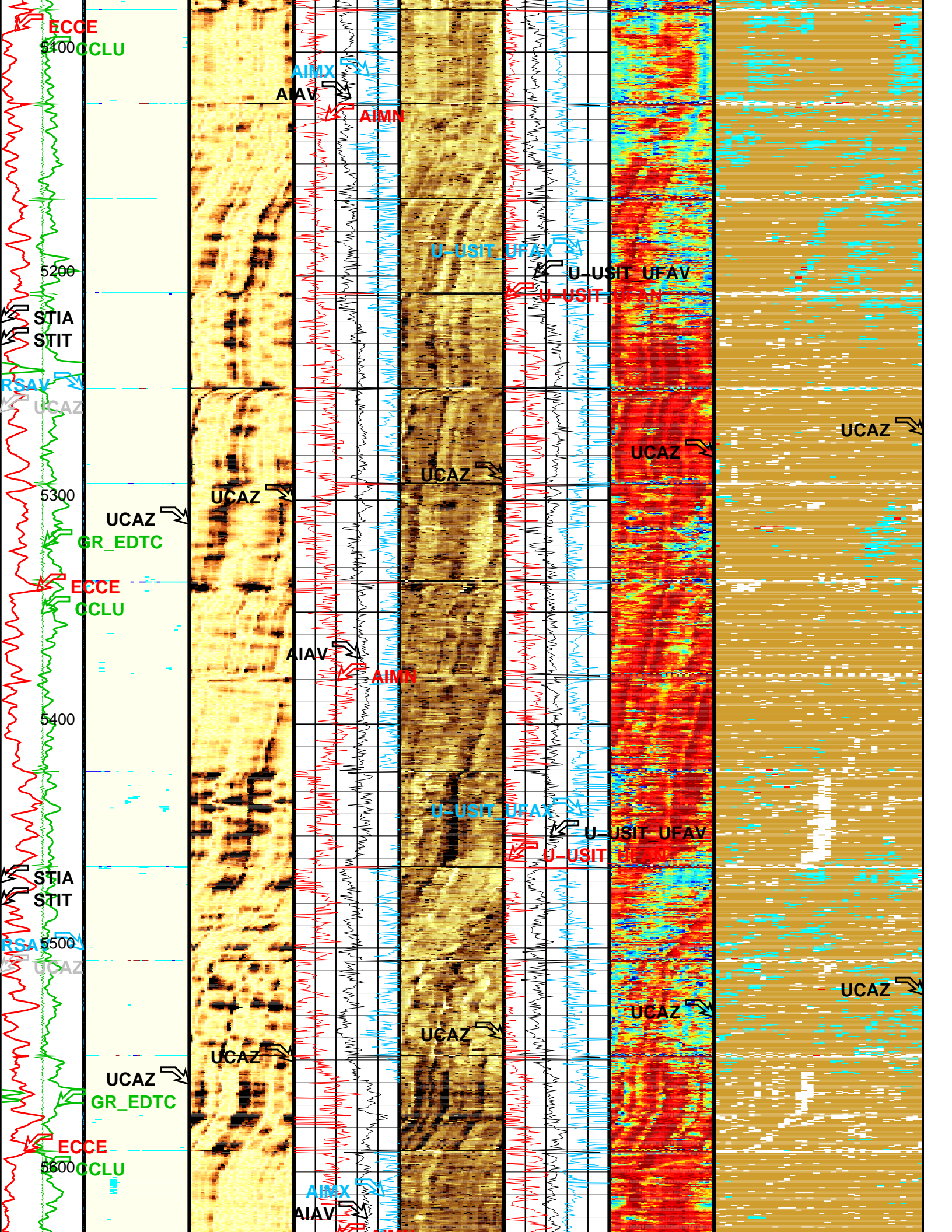


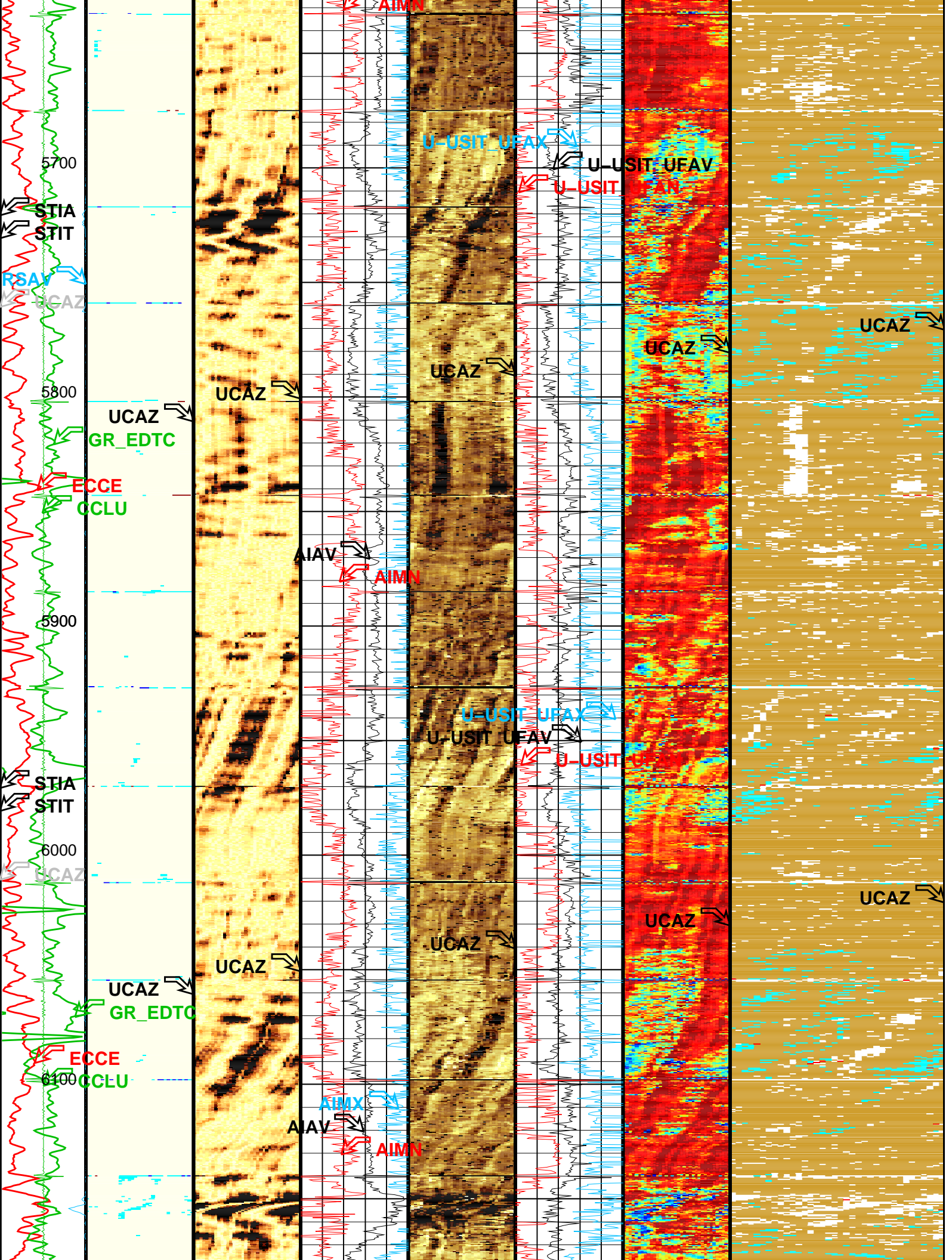


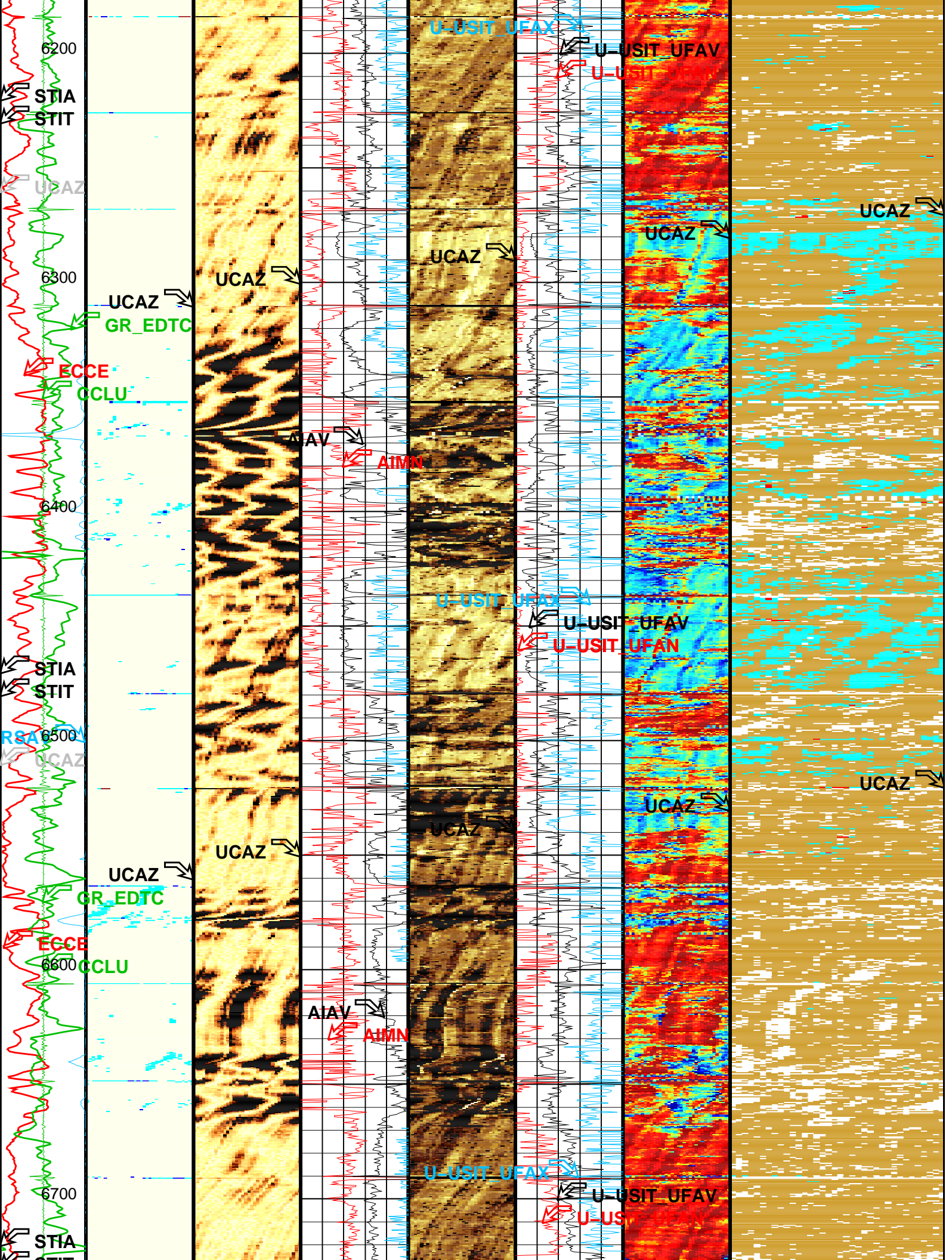


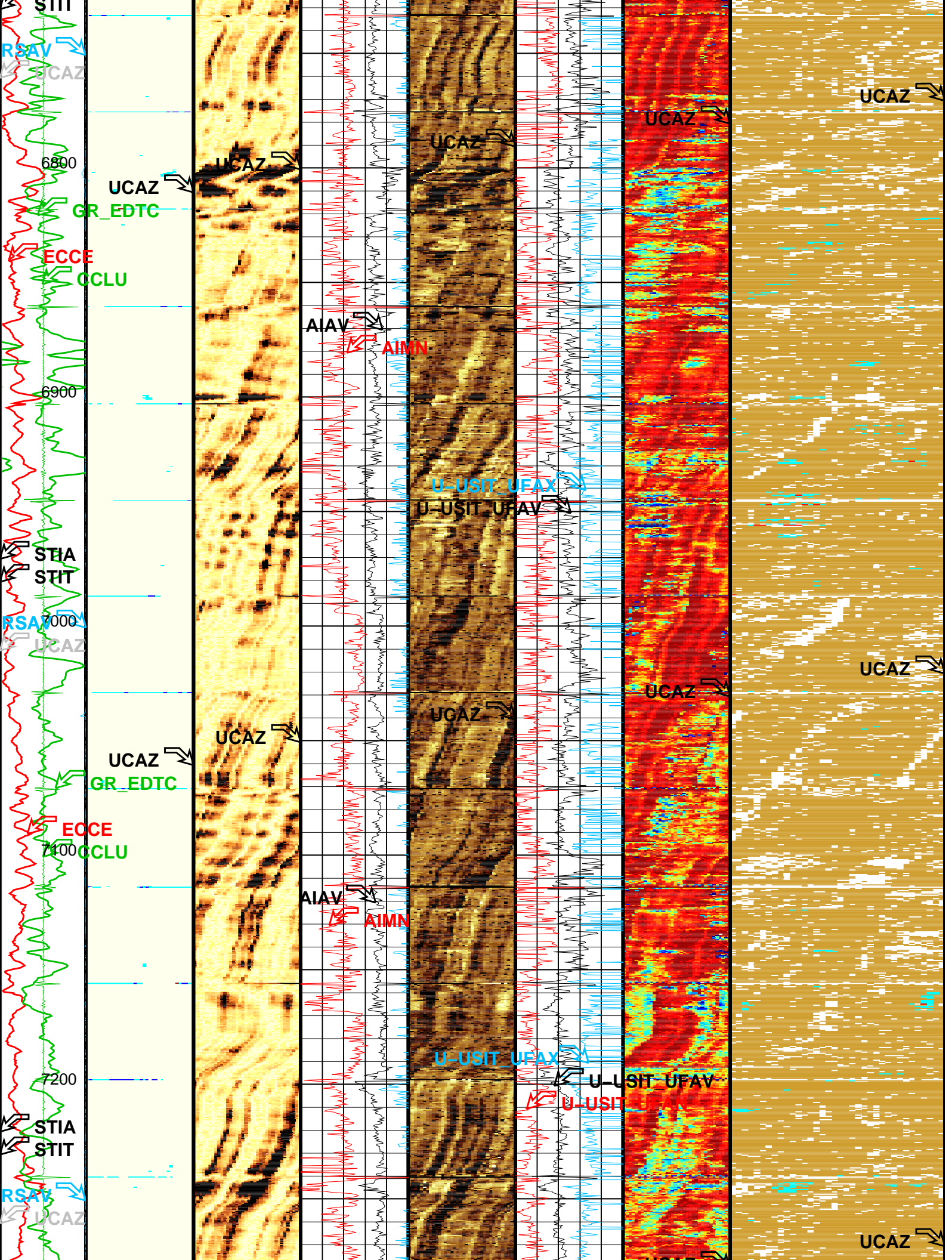


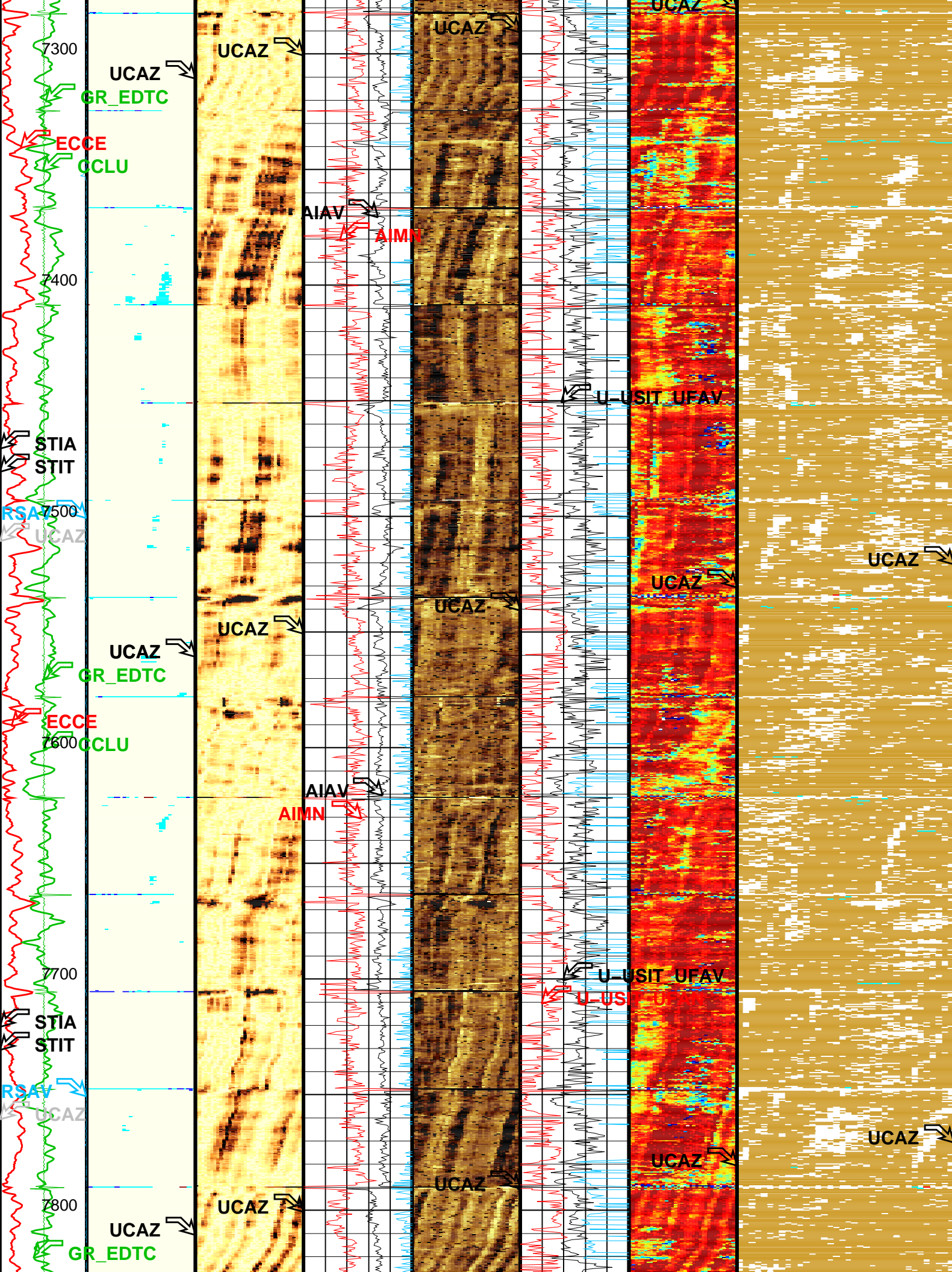


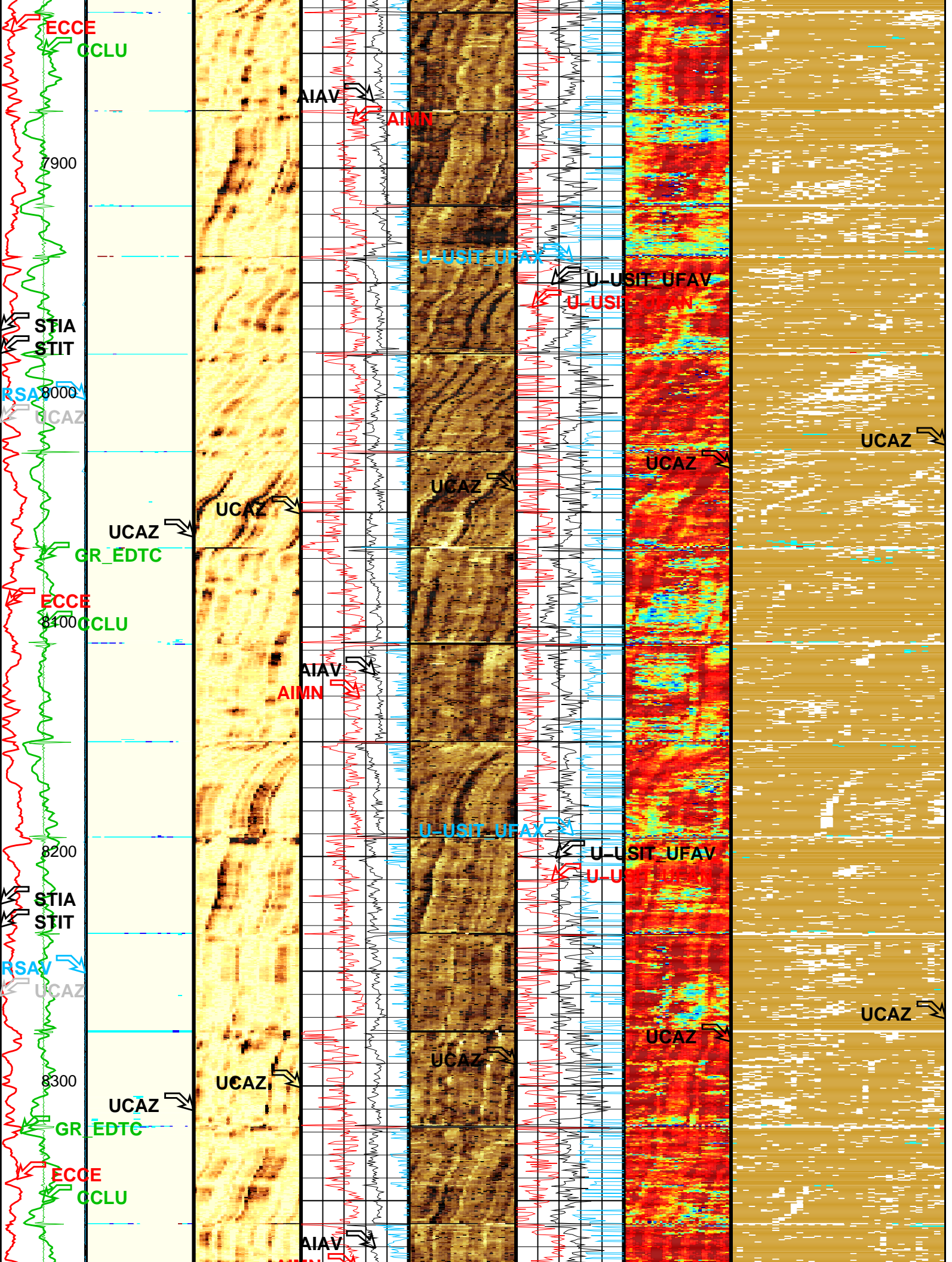


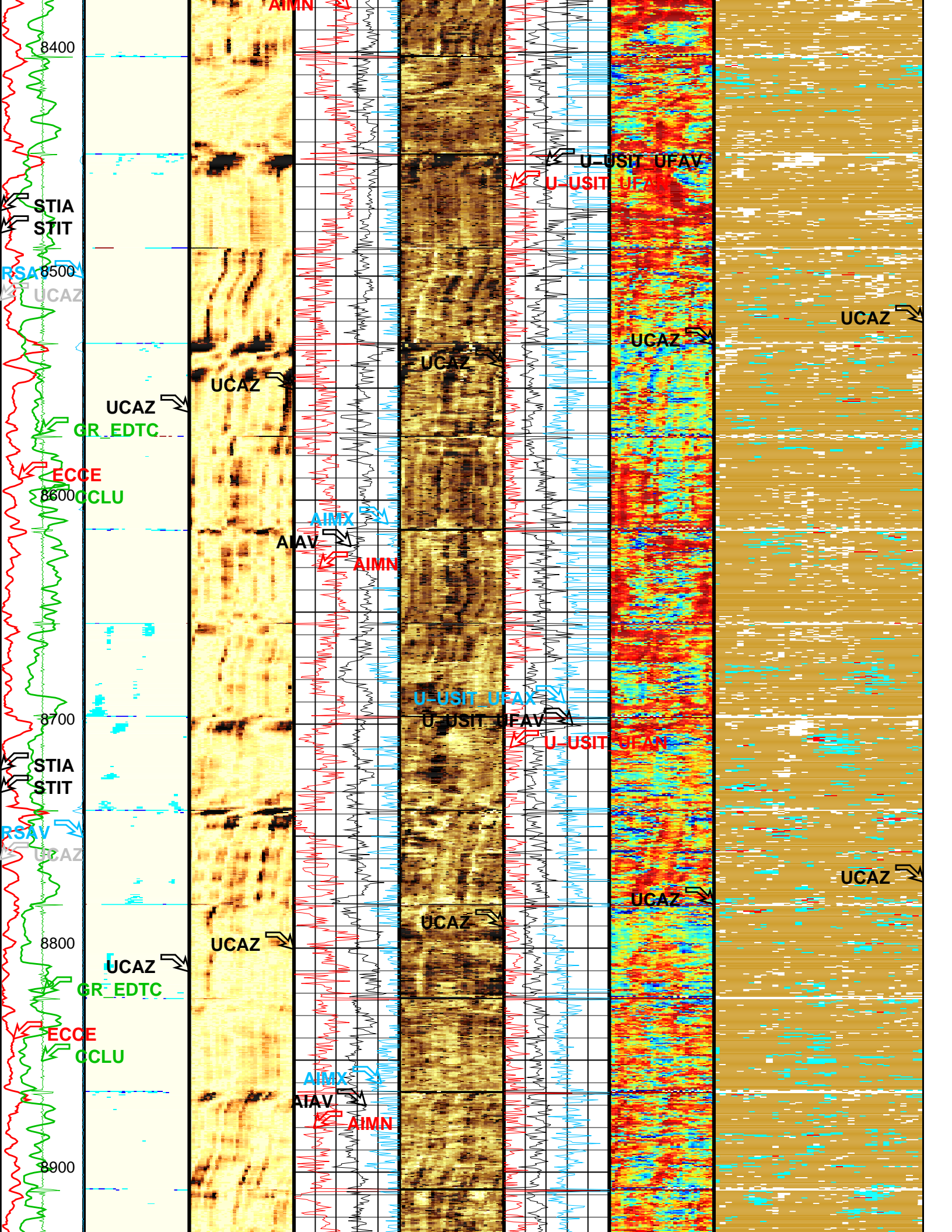


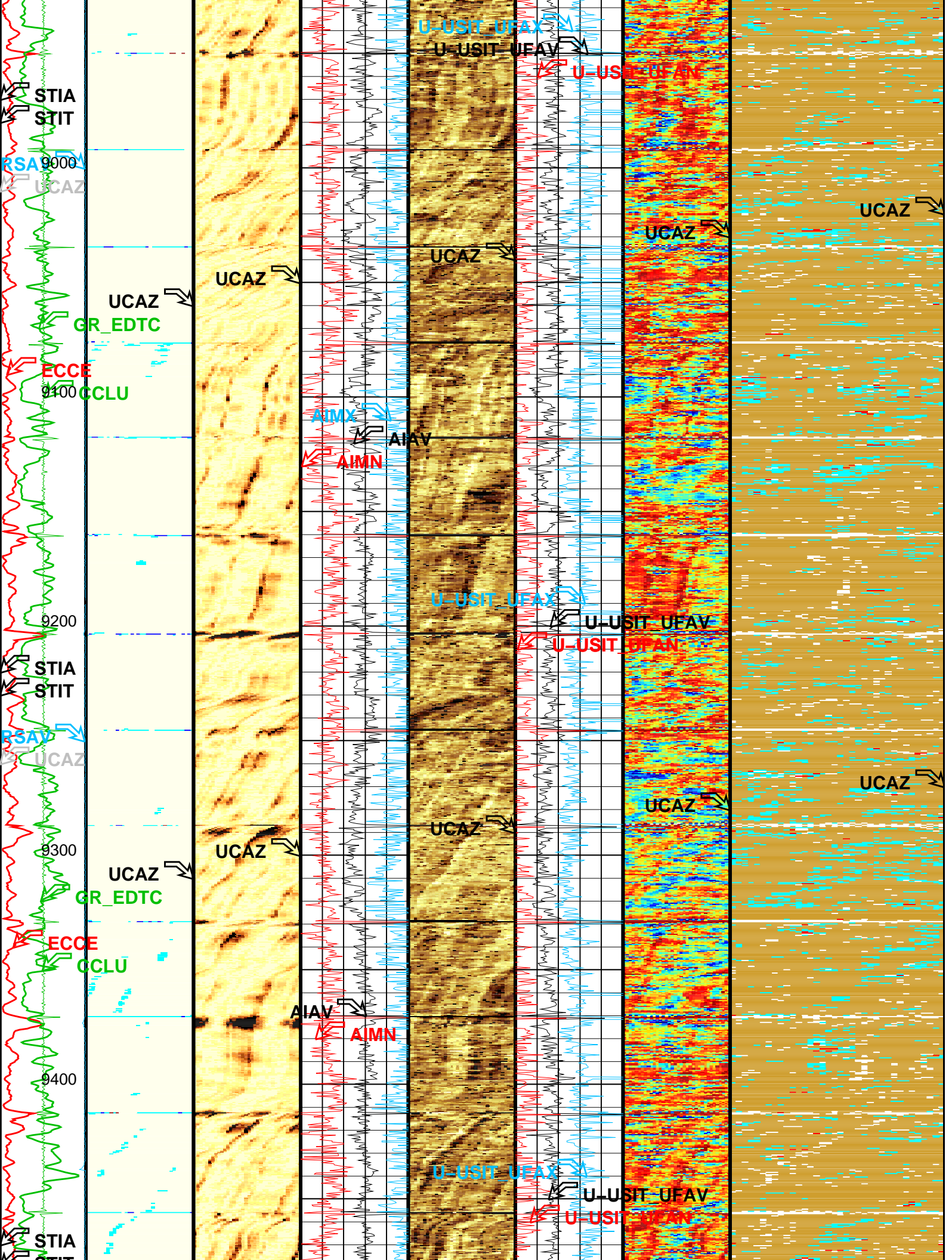


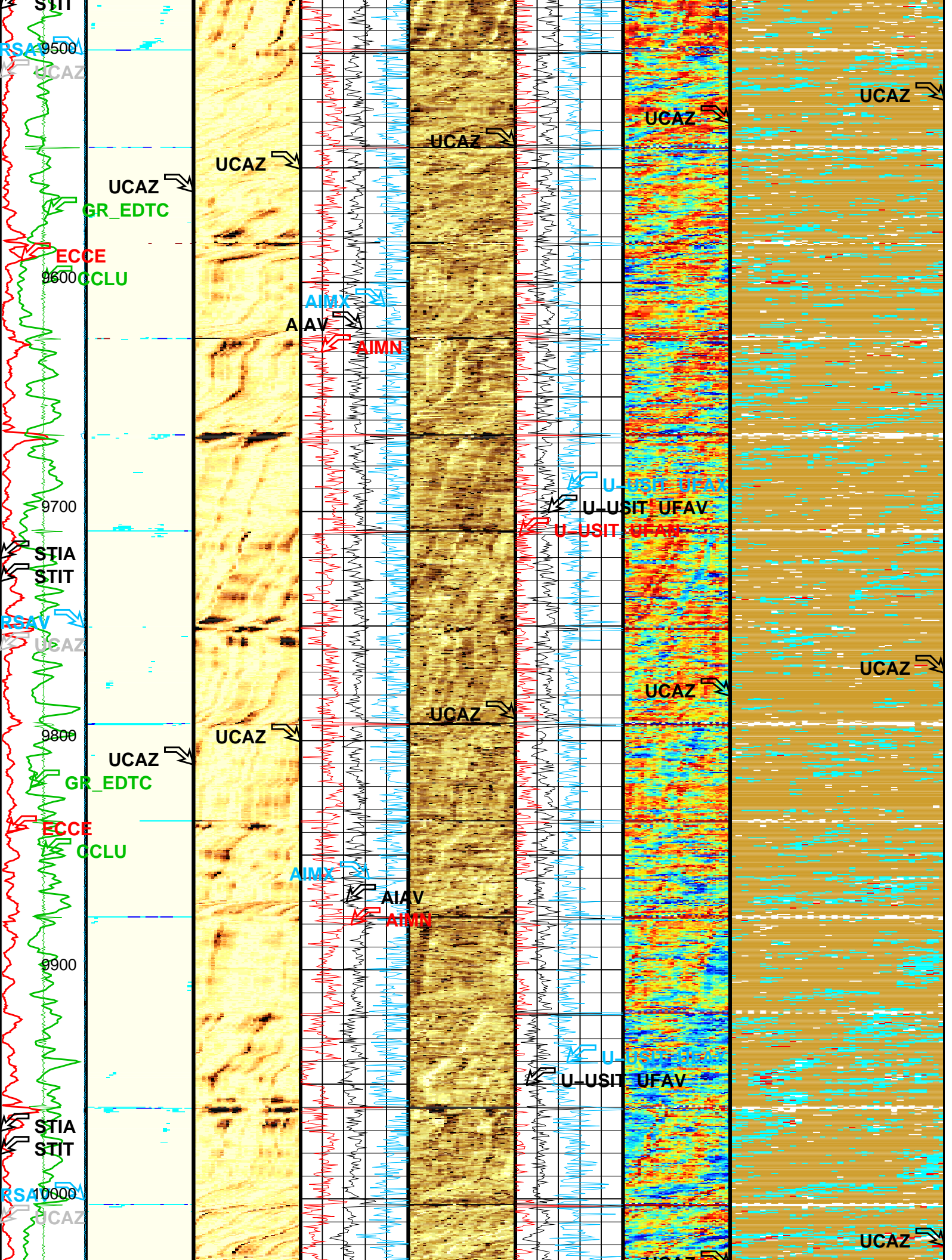


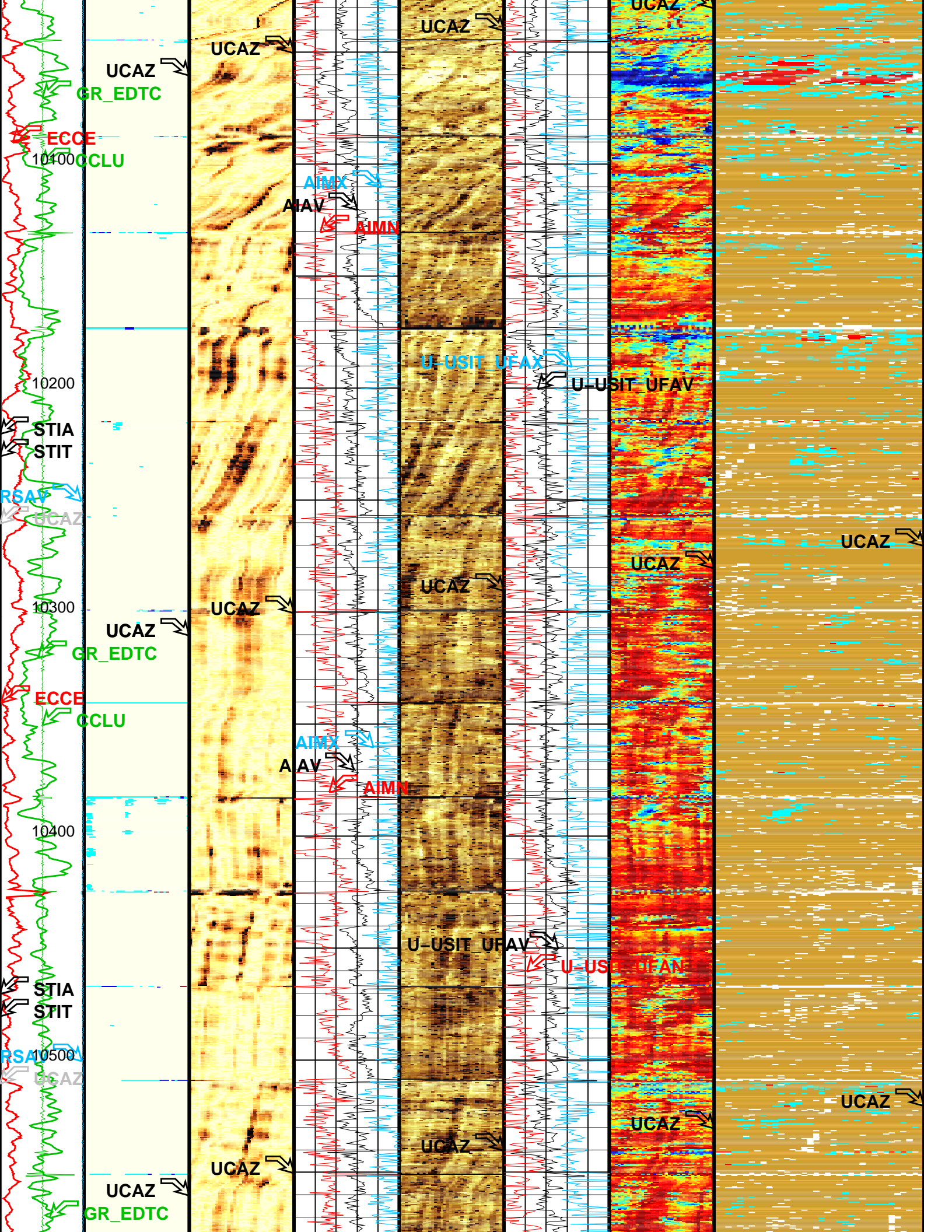


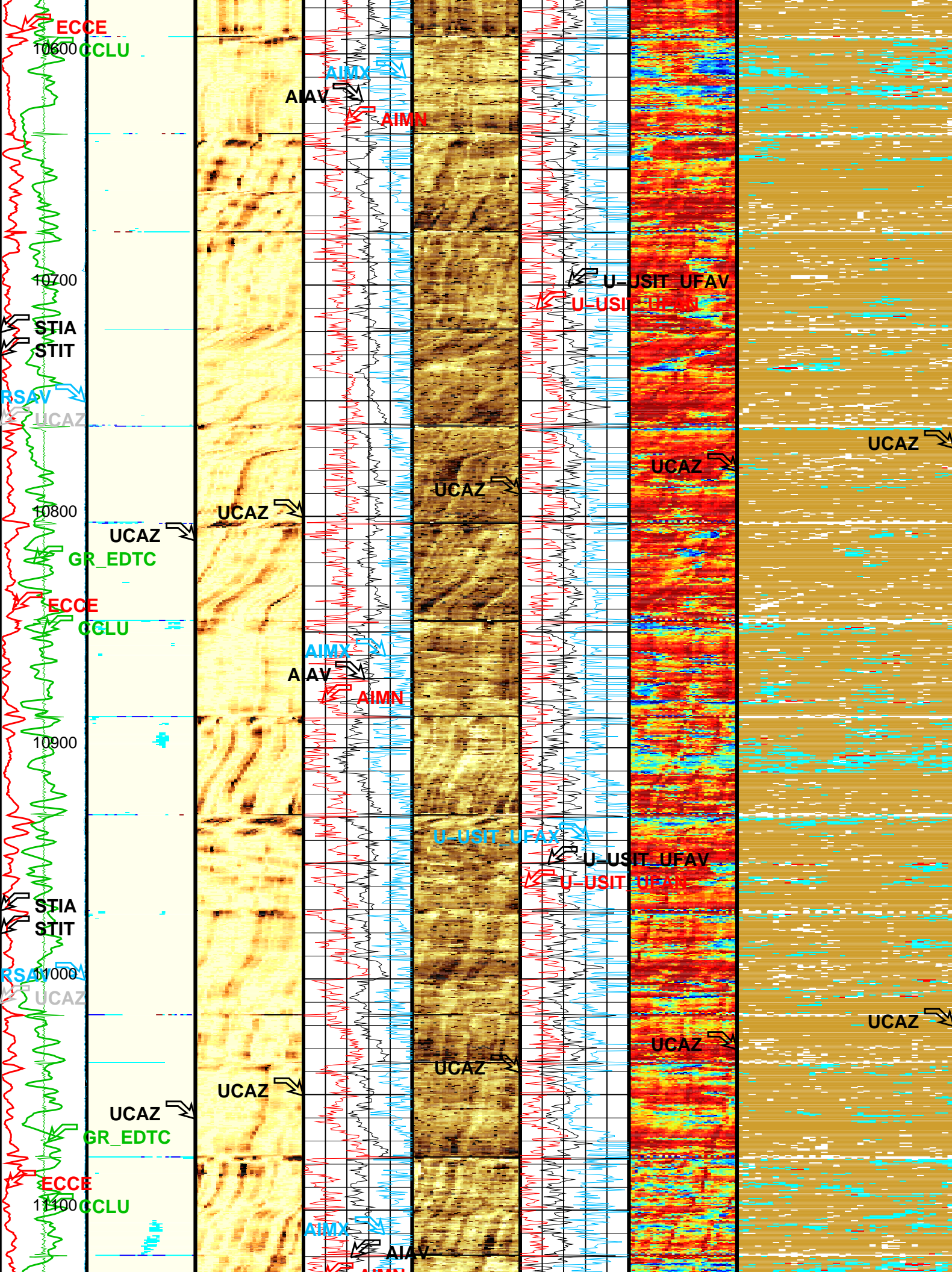


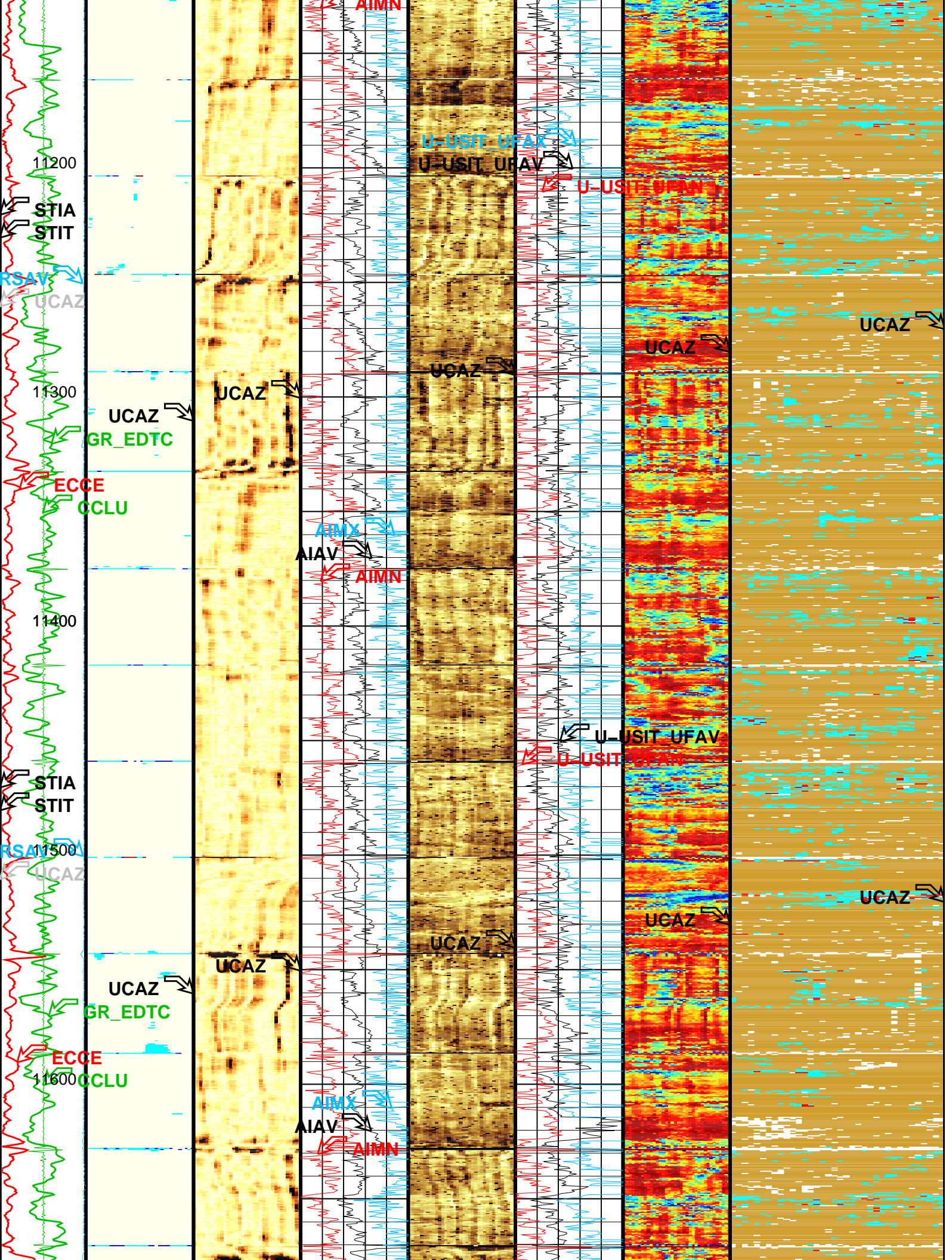


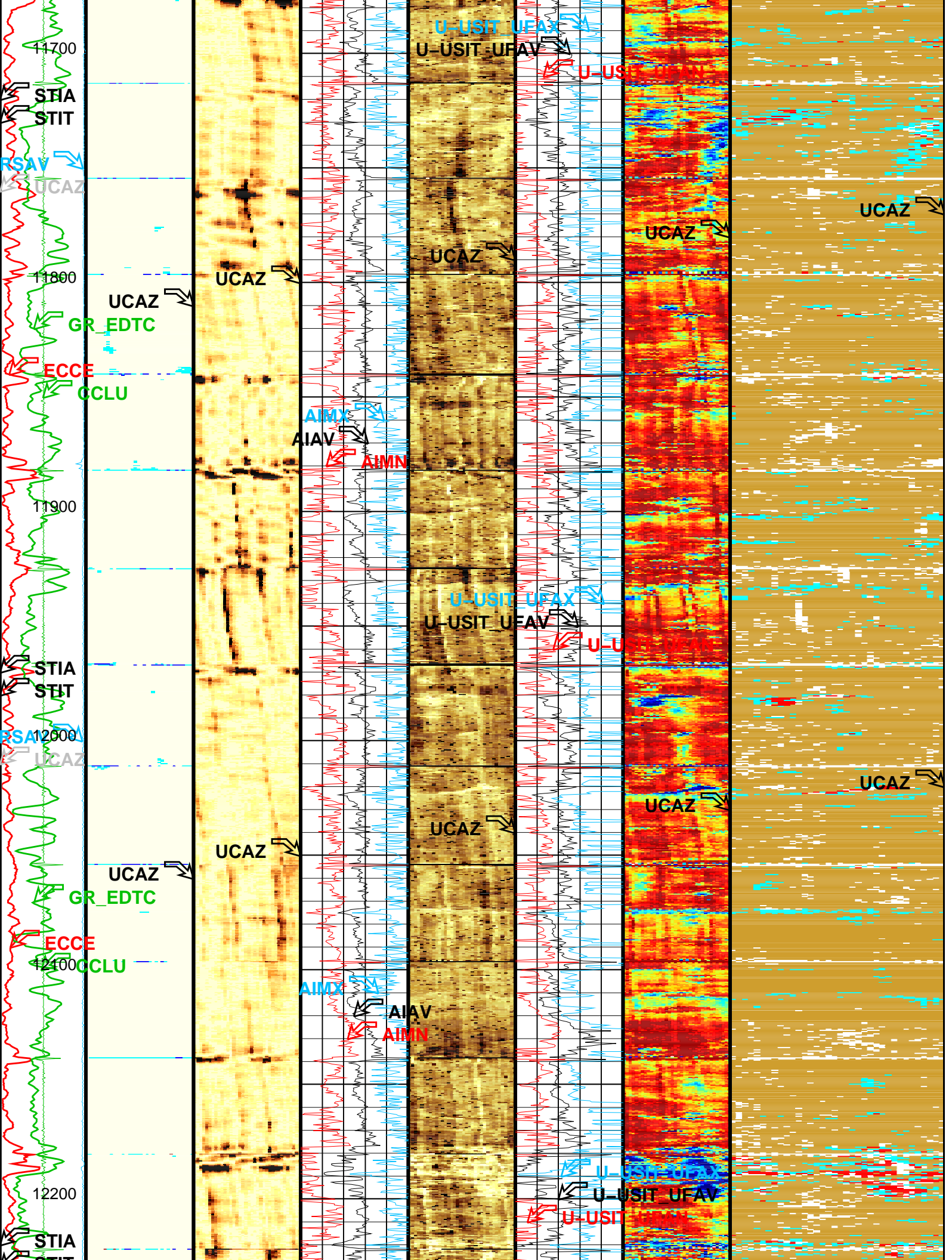


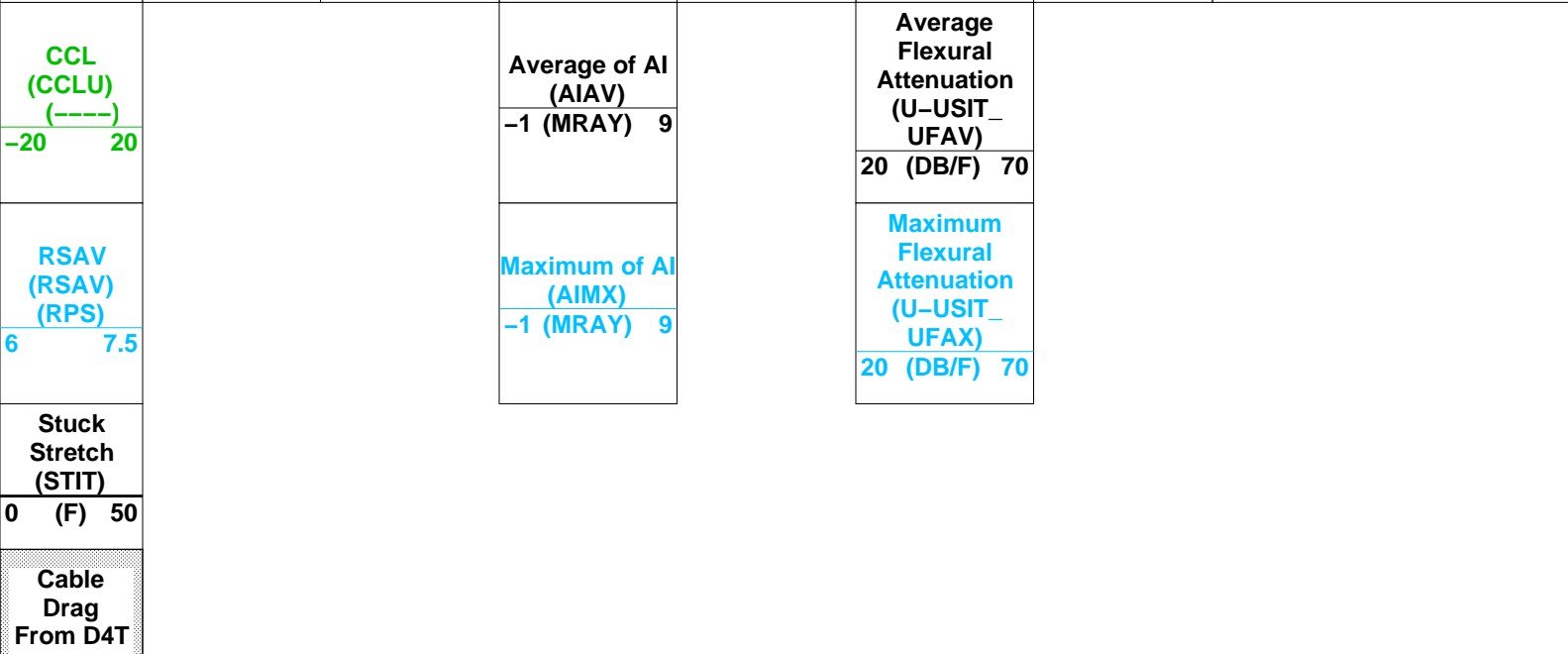
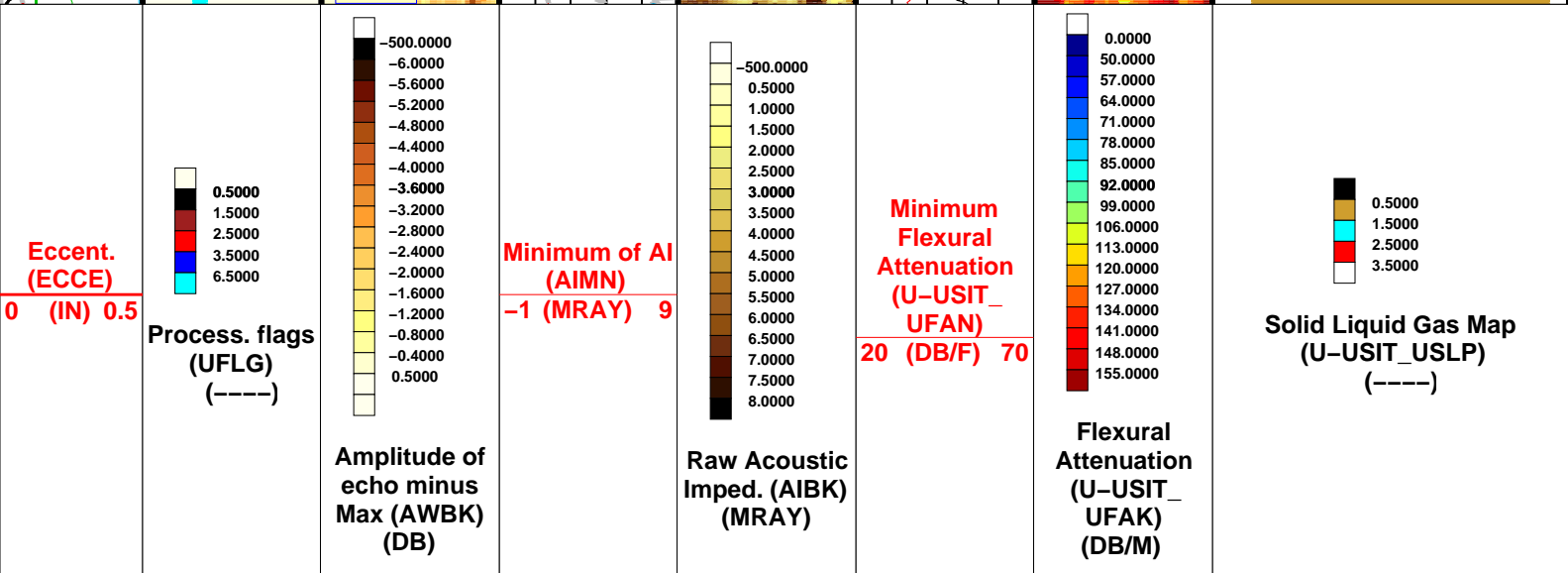
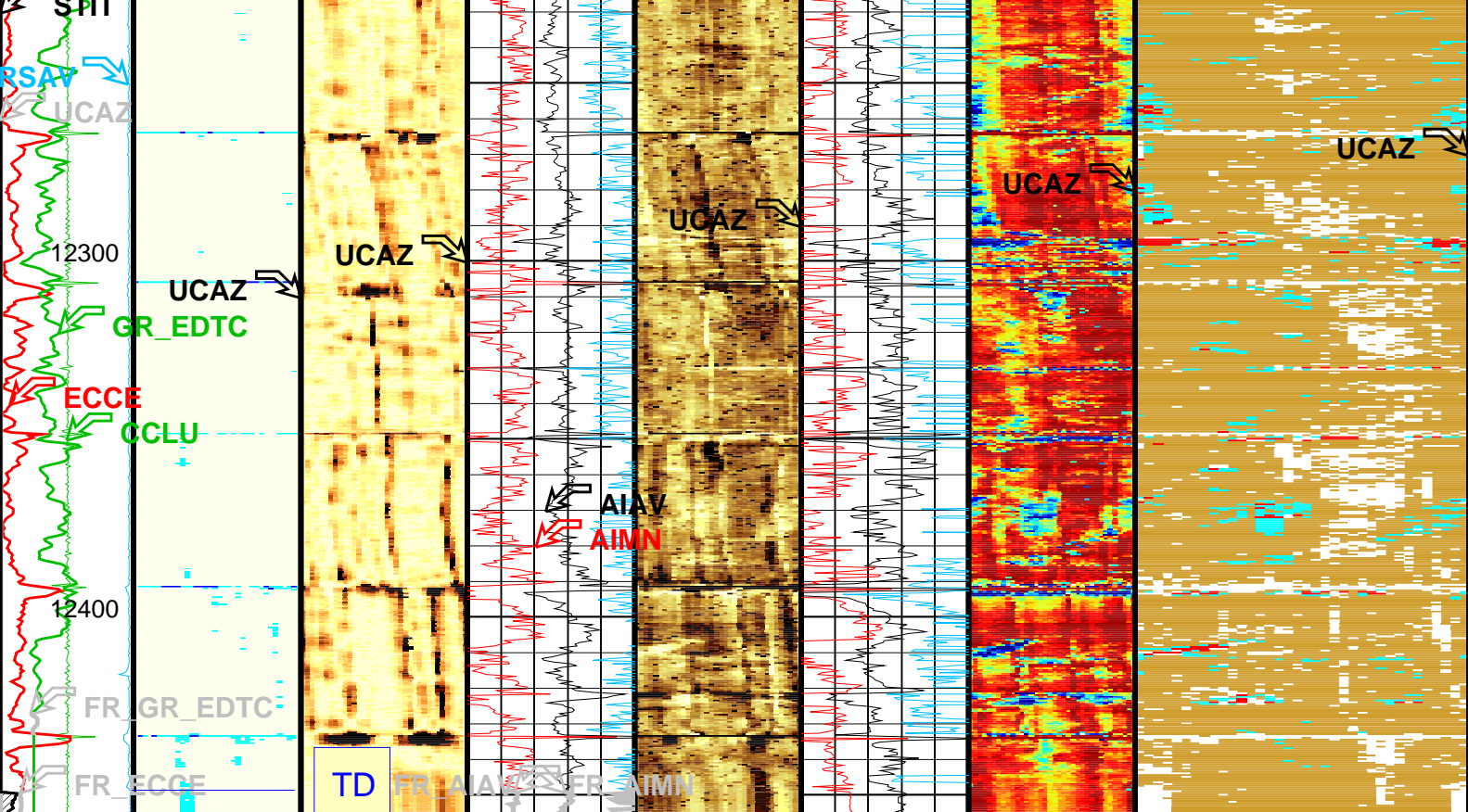












to STIT
Tool/Tot. Drag From D4T to STIA
Gamma Ray (GR_ EDTC) (GAPI)
0 150
Image rotation (UCAZ) (DEG)
0 360

OP System Version: 17C0-154

USIT-D

17C0-154

EDTC-B

SRPC-3870_Q3_2009_OP17_V3_b

All USI Images are outside views

USI : HIGH Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.18 to 0.31 IN.

Parameters

DLIS Name	Description	Value	
USIT-D: Ultrasonic Imaging – D			
AGMN	Minimum Gain of Cartridge	–4	DB
AGMX	Maximum Gain of Cartridge	20	DB
BERJ	Bad Echo Rejection	ON	
CDIA	Casing Outer Diameter	4.5	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	4	IN
DFVL	Default Fluid Velocity	204	US/F
DOT	Diameter of Transducer Sensor	1.756	IN
EMXV	EMEX Voltage	60	V
FSOD	Fluid Slowness Fits Casing Outer Diameter	2_UFSL_N_UFAI	
IMAR	Image Rotation	OFF	
MW	Mud Weight	8.4	LB/G
RCOD	Reference Calibrator Outer Diameter	4.5	IN
RCSO	Reference Calibrator Standoff	0.8425	IN
RCTH	Reference Calibrator Thickness	0.2165	IN
TCUB	T^3 Processing Level	Vax_Loop	
THDH	Maximum Search Thickness (percentage of nominal)	130	
THDL	Minimum Search Thickness (percentage of nominal)	70	
THDP	Thickness Detection Policy	Fundamental	
THNO	Nominal Thickness of Casing	0.25	IN
U-USIT_CENT	USIT Cement Type	ULTRA_LIGHT	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	0	MRAY
U-USIT_IISR	USIT IBC Inverted Fluid Slowness Resolution	1.0_US_P_FT	
U-USIT_IIZR	USIT IBC Inverted ZMUD Resolution	0.050_MRAY	
U-USIT_OCDI	USIT Outer Casing Diameter	0	IN
U-USIT_OCSH	USIT Outer Casing Shoe	0	FT
U-USIT_OCWE	USIT Outer Casing Weight	0	LB/F
U-USIT_TIEB	IBC Third Interface Echo Bin Processing	YES	
U-USIT_TIEC	IBC Third Interface Echo Cleaning	NONE	
U-USIT_TIEM	IBC Third Interface Echo Multi Tracking	NO	
U-USIT_TIEP	IBC Third Interface Echo Policy	BFEP	
U-USIT_TIER	IBC Third Interface Echo Receivers	BOTH	
U-USIT_U3WE	Third Interface Echo Window End	110	US
U-USIT_UBTP	USIT Bottom Transducer Position	UNKNOWN	
U-USIT_UFAO	USIT Flexural Attenuation Offset	15	DB/M

U-USIT_UIAP	USIT Flexural Attenuation Onset	-13	DB/M
U-USIT_UIST	USIT IBC Answer Product Enabled	SolidLiquidGasMap	
U-USIT_UTAN	USIT Transducer Angles	Sub_Ibcs_A	
UMAO	USIT Measurement Angular Offset	33_DEG	
USTO	Ultrasonic Time Offset	-10	DEG
USUB	Ultrasonic Subassembly Identifier	-2	US
UWKM	Ultrasonic Working Mode	Sub_5_inch	
VCAS	Ultrasonic Transversal Velocity in Casing	10DEG_6IN_136UNF_HF	
WLEN	T^3 Processing Length	51.4	US/F
ZCAS	Acoustic Impedance of Casing	14.9916	US
ZINI	Initial Estimate of Cement Impedance	46.25	MRAY
ZMUD	Acoustic Impedance of Mud	-1	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	1.8	MRAY
ZTGS	Acoustic Impedance Threshold for Gas	2.45	MRAY
		0.3	MRAY
USPS: USIT Pipe Stats			
AGMN	Minimum Gain of Cartridge	-4	DB
AGMX	Maximum Gain of Cartridge	20	DB
BERJ	Bad Echo Rejection	ON	
CDIA	Casing Outer Diameter	4.5	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	4	IN
DFVL	Default Fluid Velocity	204	US/F
DOT	Diameter of Transducer Sensor	1.756	IN
EMXV	EMEX Voltage	60	V
IMAR	Image Rotation	OFF	
MW	Mud Weight	8.4	LB/G
RCOD	Reference Calibrator Outer Diameter	4.5	IN
RCSO	Reference Calibrator Standoff	0.8425	IN
RCTH	Reference Calibrator Thickness	0.2165	IN
TCUB	T^3 Processing Level	Vax_Loop	
THDH	Maximum Search Thickness (percentage of nominal)	130	
THDL	Minimum Search Thickness (percentage of nominal)	70	
THNO	Nominal Thickness of Casing	0.25	IN
UMAO	USIT Measurement Angular Offset	-10	DEG
USTO	Ultrasonic Time Offset	-2	US
USUB	Ultrasonic Subassembly Identifier	Sub_5_inch	
UWKM	Ultrasonic Working Mode	10DEG_6IN_136UNF_HF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	14.9916	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	-1	MRAY
ZMUD	Acoustic Impedance of Mud	1.8	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.45	MRAY
ZTGS	Acoustic Impedance Threshold for Gas	0.3	MRAY
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	12537.00	FT
TDL	Total Depth - Logger	12450.00	FT
System and Miscellaneous			
BS	Bit Size	7.875	IN
CWEI	Casing Weight	11.60	LB/F
DO	Depth Offset for Playback	0.0	FT
PP	Playback Processing	RECOMPUTE	

Input DLIS Files

DEFAULT	USI_040LUP	FN:68	PRODUCER	30-Aug-2010 19:32	12455.5 FT	194.5 FT
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Output DLIS Files

DEFAULT	USI_043PUP	FN:73	PRODUCER	31-Aug-2010 00:22
RTB	USI_043PUP	FN:74	PRODUCER	30-Aug-2010 18:37

Schlumberger

**FLUID PROPERTIES
FVEL**

MAXIS Field Log

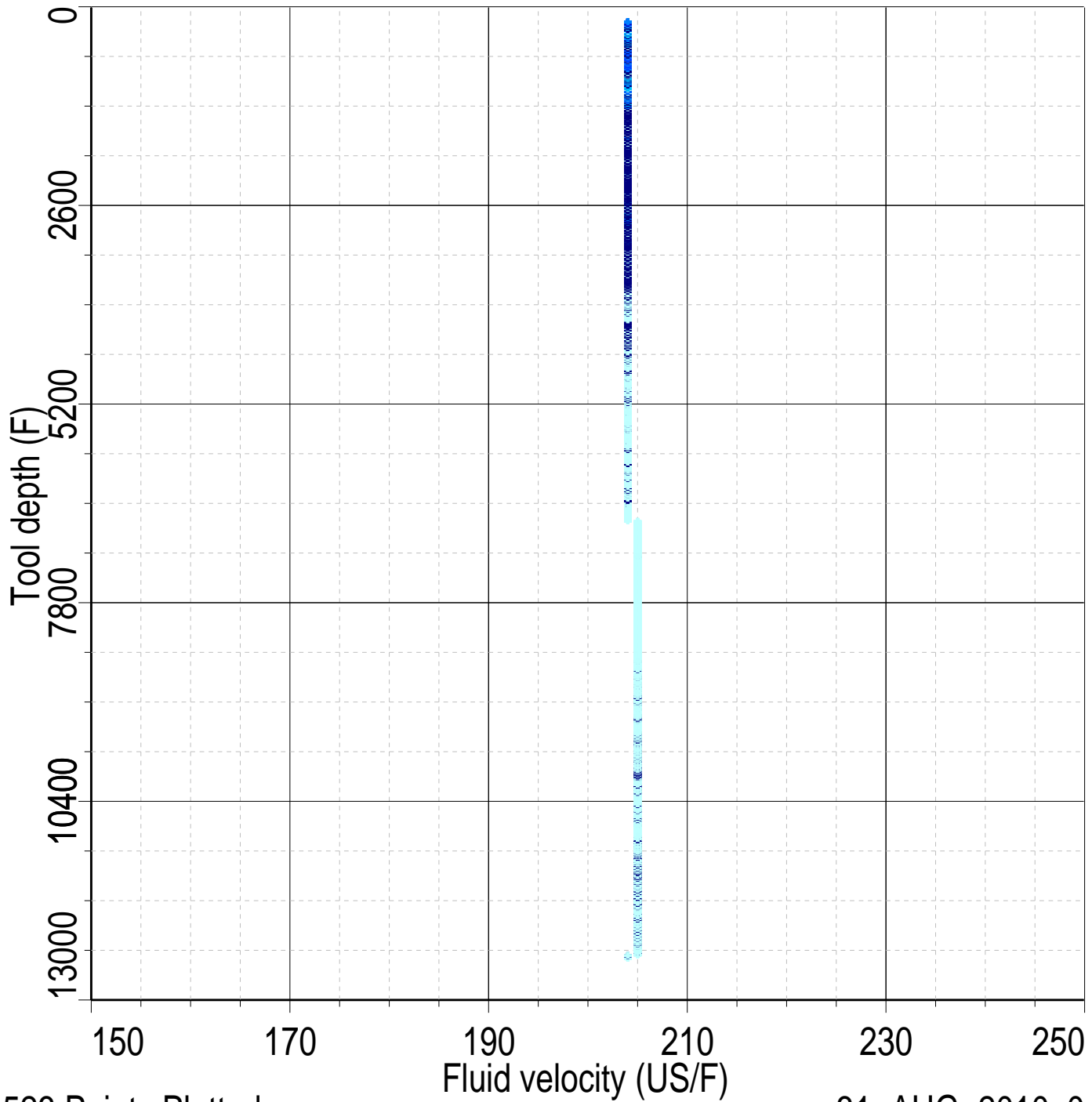
IBC Inv. Fluid Z QC (----)

Index: 12455.5 – 194.5 FT

0.



0.5



24523 Points Plotted

31-AUG-2010 0:43

Schlumberger

FLUID PROPERTIES ZMUD

MAXIS Field Log

IBC Inv. Fluid Z QC (----)

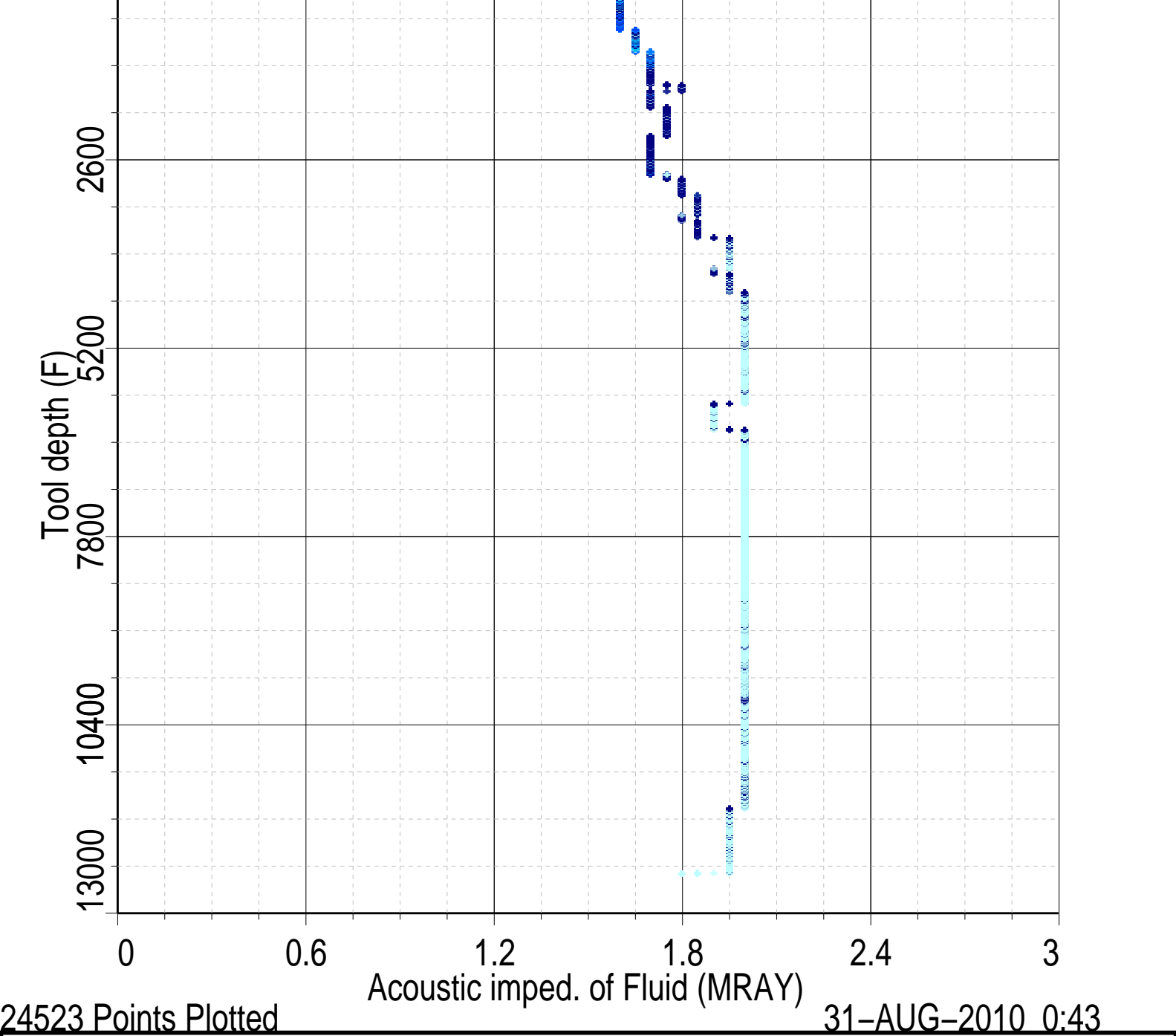
Index: 12455.5 – 194.5 FT

0.



0.5

0



REPEAT PASS

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC. Well: SGU 8504C-25 F25496 (F25)

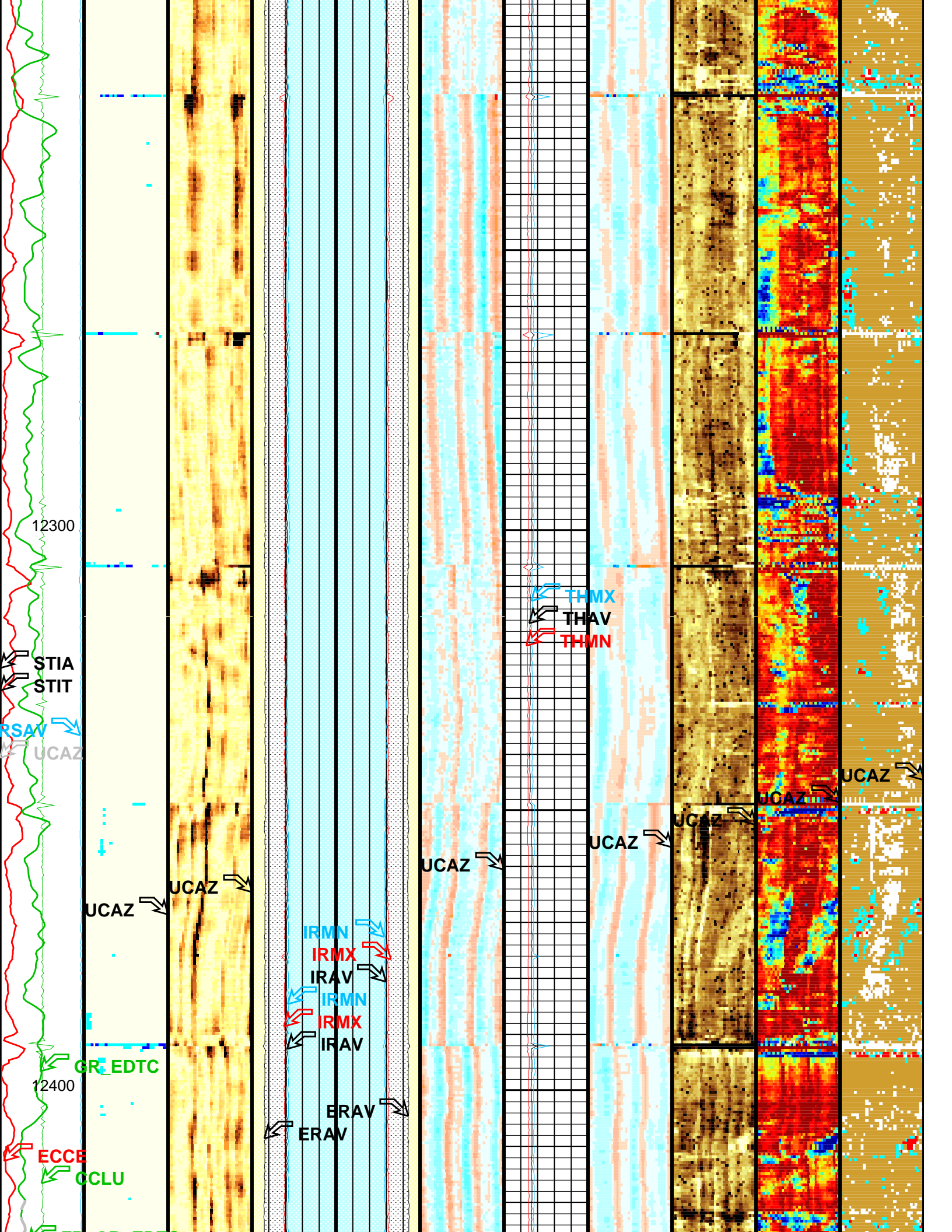
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Output DLIS Files						
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RTB	USI_042PUP	FN:72	PRODUCER	30-Aug-2010 18:31	12449.5 FT	12196.0 FT

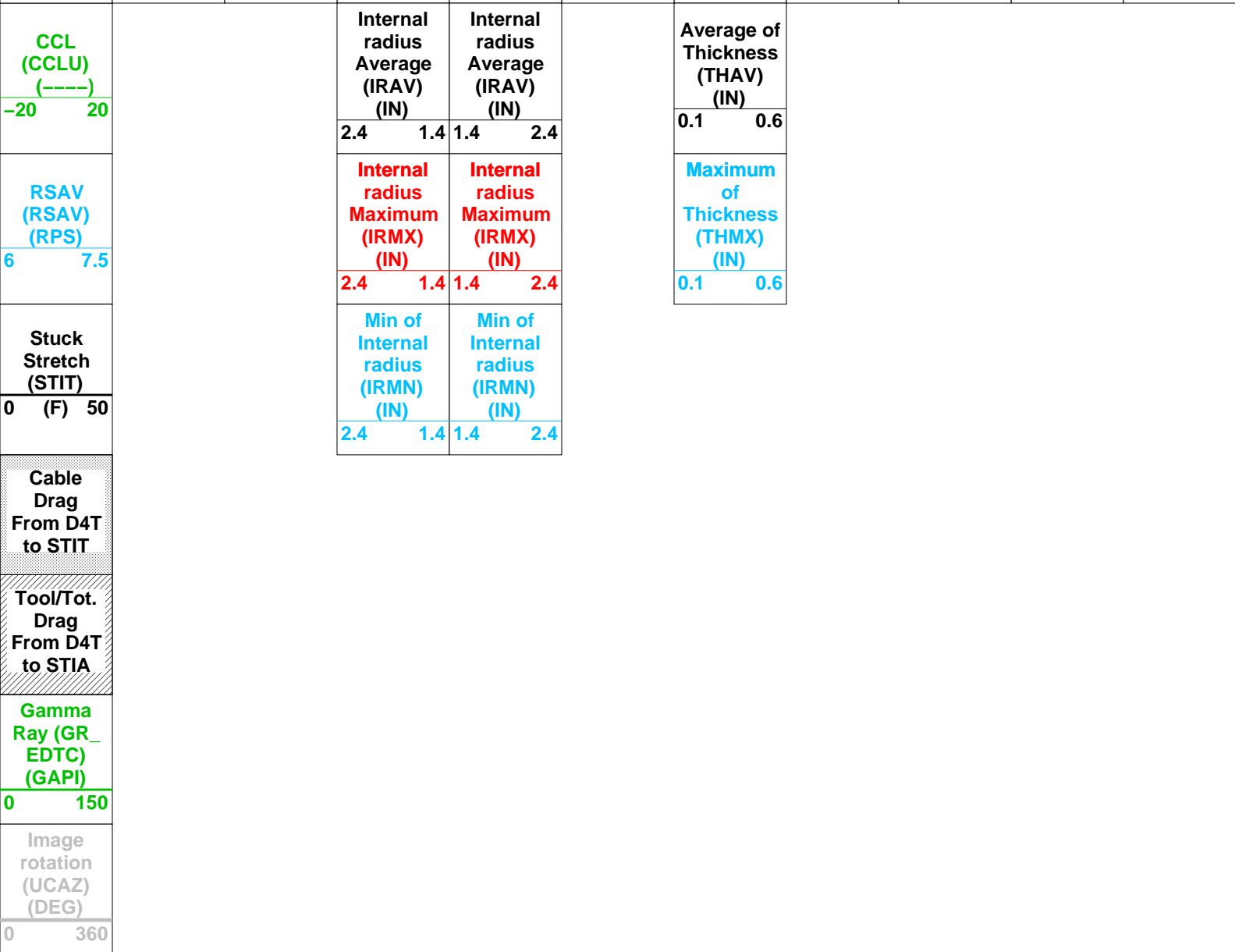
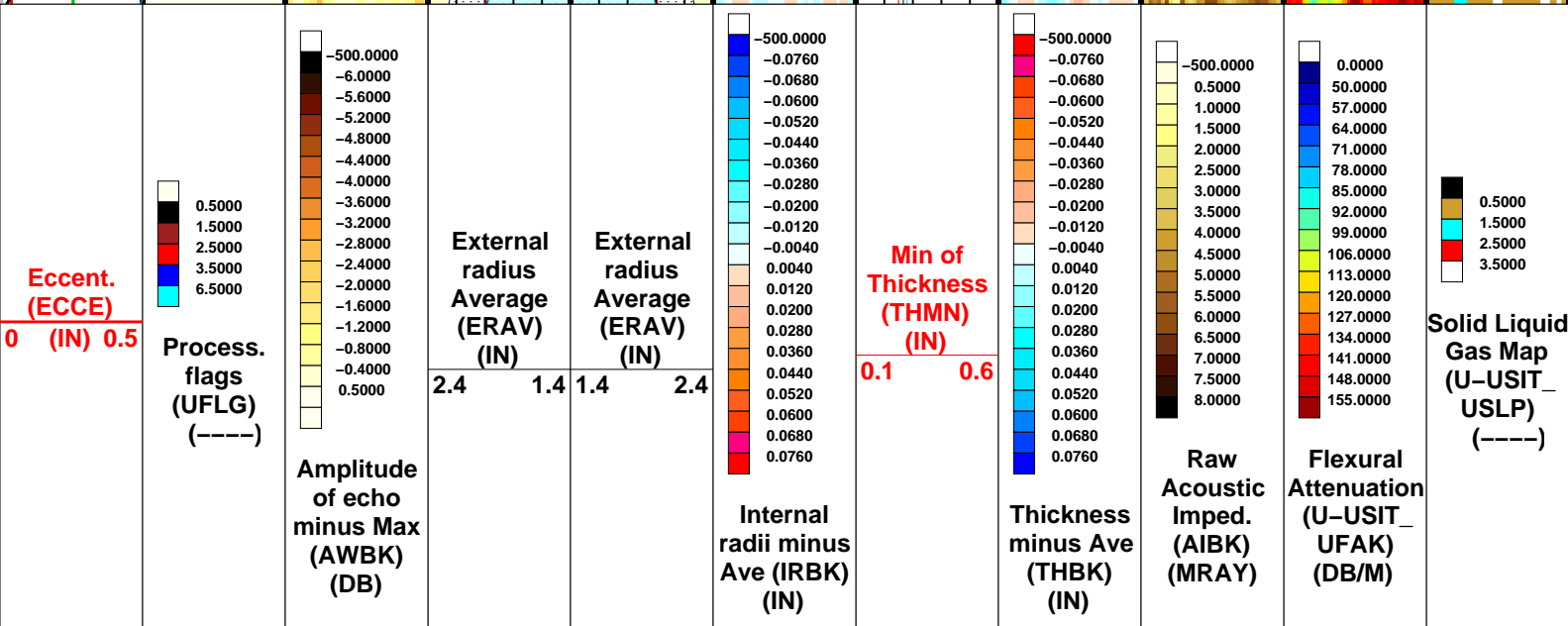
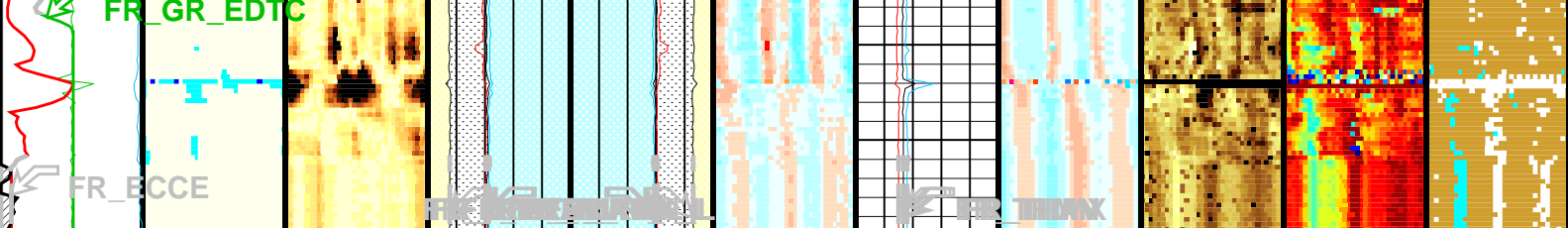
OP System Version: 17C0-154			
USIT-D	17C0-154	EDTC-B	SRPC-3870_Q3_2009_OP17_V3_b

SRPC-3870_Q3_2009_OP17_V3_b

Average of Thickness (THAV) (IN)

**Solid Liquid
Gas Map
(U-USIT_
USLP)
(----)**





OP System Version: 17C0-154

USIT-D 17C0-154 EDTC-B SRPC-3870_Q3_2009_OP17_V3_b

All USI Images are outside views

USI : HIGH Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.18 to 0.31 IN.

Parameters

DLIS Name	Description	Value	
USIT-D: Ultrasonic Imaging - D			
AGMN	Minimum Gain of Cartridge	-4	DB
AGMX	Maximum Gain of Cartridge	20	DB
BERJ	Bad Echo Rejection	ON	
CDIA	Casing Outer Diameter	4.5	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	4	IN
DFVL	Default Fluid Velocity	204	US/F
DOT	Diameter of Transducer Sensor	1.756	IN
EMXV	EMEX Voltage	60	V
FSOD	Fluid Slowness Fits Casing Outer Diameter	2_UFSL_N_UFAI	
IMAR	Image Rotation	OFF	
MW	Mud Weight	8.4	LB/G
RCOD	Reference Calibrator Outer Diameter	4.5	IN
RCSO	Reference Calibrator Standoff	0.8425	IN
RCTH	Reference Calibrator Thickness	0.2165	IN
TCUB	T^3 Processing Level	Vax_Loop	
THDH	Maximum Search Thickness (percentage of nominal)	130	
THDL	Minimum Search Thickness (percentage of nominal)	70	
THDP	Thickness Detection Policy	Fundamental	
THNO	Nominal Thickness of Casing	0.25	IN
U-USIT_CENT	USIT Cement Type	ULTRA_LIGHT	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	0	MRAY
U-USIT_IISR	USIT IBC Inverted Fluid Slowness Resolution	1.0_US_P_FT	
U-USIT_IIZR	USIT IBC Inverted ZMUD Resolution	0.050_MRAY	
U-USIT_OCDI	USIT Outer Casing Diameter	0	IN
U-USIT_OCSH	USIT Outer Casing Shoe	0	FT
U-USIT_OCWE	USIT Outer Casing Weight	0	LB/F
U-USIT_TIEB	IBC Third Interface Echo Bin Processing	YES	
U-USIT_TIEC	IBC Third Interface Echo Cleaning	NONE	
U-USIT_TIEM	IBC Third Interface Echo Multi Tracking	NO	
U-USIT_TIEP	IBC Third Interface Echo Policy	BFEP	
U-USIT_TIER	IBC Third Interface Echo Receivers	BOTH	
U-USIT_U3WE	Third Interface Echo Window End	110	US
U-USIT_UBTP	USIT Bottom Transducer Position	UNKNOWN	
U-USIT_UFAO	USIT Flexural Attenuation Offset	-15	DB/M
U-USIT_UIAP	USIT IBC Answer Product Enabled	SolidLiquidGasMap	
U-USIT_UIST	Ultrasonic IBC Sonde Type	Sub_ibcs_A	
U-USIT_UTAN	USIT Transducer Angles	33_DEG	
UMAO	USIT Measurement Angular Offset	-10	DEG
USTO	Ultrasonic Time Offset	-2	US
USUB	Ultrasonic Subassembly Identifier	Sub_5_inch	
UWKM	Ultrasonic Working Mode	10DEG_6IN_136UNF_HF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	14.9916	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	-1	MRAY
ZMUD	Acoustic Impedance of Mud	1.8	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.45	MRAY
ZTGS	Acoustic Impedance Threshold for Gas	0.3	MRAY
USPS: USIT Pipe Stats			
AGMN	Minimum Gain of Cartridge	-4	DB
AGMX	Maximum Gain of Cartridge	20	DB
BERJ	Bad Echo Rejection	ON	
CDIA	Casing Outer Diameter	4.5	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	4	IN
DFVL	Default Fluid Velocity	204	US/F

DOT	Diameter of Transducer Sensor	1.756	IN
EMXV	EMEX Voltage	60	V
IMAR	Image Rotation	OFF	
MW	Mud Weight	8.4	LB/G
RCOD	Reference Calibrator Outer Diameter	4.5	IN
RCSO	Reference Calibrator Standoff	0.8425	IN
RCTH	Reference Calibrator Thickness	0.2165	IN
TCUB	T^3 Processing Level	Vax_Loop	
THDH	Maximum Search Thickness (percentage of nominal)	130	
THDL	Minimum Search Thickness (percentage of nominal)	70	
THNO	Nominal Thickness of Casing	0.25	IN
UMAO	USIT Measurement Angular Offset	-10	DEG
USTO	Ultrasonic Time Offset	-2	US
USUB	Ultrasonic Subassembly Identifier	Sub_5_inch	
UWKM	Ultrasonic Working Mode	10DEG_6IN_136UNF_HF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	14.9916	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	-1	MRAY
ZMUD	Acoustic Impedance of Mud	1.8	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.45	MRAY
ZTGS	Acoustic Impedance Threshold for Gas	0.3	MRAY
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	12537.00	FT
TDL	Total Depth - Logger	12450.00	FT
System and Miscellaneous			
BS	Bit Size	7.875	IN
CWEI	Casing Weight	11.60	LB/F
DO	Depth Offset for Playback	-1.0	FT
PP	Playback Processing	RECOMPUTE	

Input DLIS Files

DEFAULT	USI_039LUP	FN:66	PRODUCER	30-Aug-2010 19:23	12450.5 FT	12196.7 FT
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Output DLIS Files

DEFAULT	USI_042PUP	FN:71	PRODUCER	31-Aug-2010 00:15
RTB	USI_042PUP	FN:72	PRODUCER	30-Aug-2010 18:31

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CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 29-Aug-2010 16:15							
EDTC Z-Axis Acceleration	32.19	N/A	32.44	N/A	N/A	N/A	F/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 29-Aug-2010 11:12							
Gamma Ray (Jig – Bkg)	159.4	N/A	159.4	N/A	N/A	14.49	GAPI
Gamma Ray (Calibrated)	160.0	N/A	160.0	N/A	N/A	15.00	GAPI

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:


Primary Equipment:
EDTC Gamma Ray Detector
Enhanced DTS Cartridge




EDTG – A/B
EDTC – B

Auxiliary Equipment:
EDTC Housing

EDTH – B

8187

Enhanced DTS Cartridge Wellsite Calibration			
EDTC Accelerometer Calibration			
Phase	EDTC Z-Axis Acceleration F/S2		Value
Before			32.44
	31.53 (Minimum)	32.19 (Nominal)	32.84 (Maximum)
Before: 29-Aug-2010 16:15			

Enhanced DTS Cartridge Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig – Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			55.74	Before			159.4	Before			160.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		144.9 (Minimum)	159.4 (Nominal)	173.8 (Maximum)		145.0 (Minimum)	160.0 (Nominal)	175.0 (Maximum)
Before: 29-Aug-2010 11:12											

Company: **ENCANA OIL & GAS (USA) INC.**

Schlumberger

Well: **SGU 8504C-25 F25496 (F25)**

Field: **STORY GULCH**

County: **GARFIELD**

State: **COLORADO**

ISOLATION SCANNER
CEMENT EVALUATION
GAMMA RAY