County: RIO BLANCO

Field: PICEANCE CREEK

Location: 485’ FSL & 1908’ FWL

Com

Well

Field

Coun

Logging

Run Num

Depth Dr

Schlumb

Bottom L

Top Log

Casing F

Salinity

Density

Fluid Lev

BIT/CA

Bit Size

From

To

Casing/T

Weight

Grade

From

To

Maximum

Logger O

Unit Num

Recorde

Witnesse

Schlumberger

pany: **EXXON MOBIL CORPORATION**

: **PCU 296−6A8**
: **PICEANCE CREEK**
nty: **RIO BLANCO** State: **CO**

IMAGING BEHIND CASING
GAMMA RAY
CASING COLLAR LOCATOR

Well: PCU 296−6A8 Company: EXXON MOBIL CORPORATION

LOCATION

485’ FSL & 1908’ FWL

Elev.: K.B. 7393.00 ft
G.L. 7366.00 ft
D.F. 7392.00 ft

Permanent Datum: GROUND LEVEL Elev.: 7366.00 ft
Log Measured From: KELLY BUSHING 27.00 ft above Perm. Datum
Drilling Measured From: KELLY BUSHING

API Serial No.	Section	Township	Range
051031147900	6	2S	96W

	Run 1	Run 2	Run 3
PVT DATA Oil Density			
PVT DATA Water Salinity			
PVT DATA Gas Gravity			
PVT DATA Bo			
PVT DATA Bw			
PVT DATA 1/Bg			
PVT DATA Bubble Point Pressure			
PVT DATA Bubble Point Temperature			
Solution GOR			
Maximum Deviation	14 deg		
CEMENTING DATA			
Primary/Squeeze	Primary		
Casing String No			
Lead Cement Type			
Volume			
Density	11 lbm/gal		
Water Loss			
Additives			
Tail Cement Type			
Volume			
Density	11 lbm/gal		
Water Loss			
Additives			
Expected Cement Top	3900 ft		

Date	18−May−2010	Logging Date	
nber	1	Run Number	
iller	9742 ft	Depth Driller	
erger Depth	9600 ft	Schlumberger Depth	
Log Interval	9600 ft	Bottom Log Interval	
Interval	3500 ft	Top Log Interval	
Fluid Type	WBM	Casing Fluid Type	
		Salinity	
	11.5 lbm/gal	Density	
vel	10 ft	Fluid Level	
SING/TUBING STRING		BIT/CASING/TUBING STRING	
	9.875 in	Bit Size	
	4431 ft	From	
	9742 ft	To	
Tubing Size	7.000 in	Casing/Tubing Size	
	26 lbm/ft	Weight	
		Grade	
	0 ft	From	
	9742 ft	To	
n Recorded Temperatures	184 degF	Maximum Recorded Temperatures	
On Bottom Time	18−May−2010 8:45	Logger On Bottom Time	
nber Location	2379 VERNAL	Unit Number Location	
d By	RYAN STEWART	Recorded By	
ed By	ADAM SIEGEL	Witnessed By	

Run 4

DEPTH SUMMARY LISTING

Date Created: 18−MAY−2010 12:22:17

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−B	Type:	CMTD−B/A	Type:	7−46V XS
Serial Number:	6214	Serial Number:	8093	Serial Number:	709025
Calibration Date:	26−JAN−2010	Calibration Date:	30−APR−201	Length:	29167 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	100518		
Calibration Cable Type:	7−46P	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	−8	Calibration RMS:	3	Rig Type:	LAND
Wheel Correction 2:	−7	Calibration Peak Error:	32		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	327.50 FT
Rig Up Length At Bottom:	326.90 FT
Rig Up Length Correction:	0.60 FT
Stretch Correction:	6.00 FT
Tool Zero Check At Surface:	0.40 FT

Depth Control Remarks

1. ALL SCHUMBERGER DEPTH POLICIES FOLLOWED
2. IDW USED AS PRIMARY METHOD OF DEPTH CONTROL; Z−CHART AS SECONDAR
3.
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: NONE	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
TOOL RAN AS PER TOOL SKETCH	
TOOL CENTRALIZED USING 1 X GEMCO AND 2 X ILC	
UFAO: 8 DB/M	
EXPECTED FLEXURAL ATTENUATION IN FREE PIPE = 59 DB/M	
EXPECTED CASING ID = 6.276 INCH	
EXPECTED CASING THICKNESS = 0.362 INCH	
ECCENTERING AFFECTS NOTED ABOVE 5500 FT	
LOG CONDUCTED FROM 9600 FT TO 3500 FT AT CLIENTS REQUEST	
LOG CORRELATED TO DOWNLOG AT 9500 FT	

RUN 1		
SERVICE ORDER #:	BADQ−00016	
PROGRAM VERSION:	17C0−154	
FLUID LEVEL:	10 ft	
LOGGED INTERVAL	START	STOP

RUN 2		
SERVICE ORDER #:		
PROGRAM VERSION:		
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

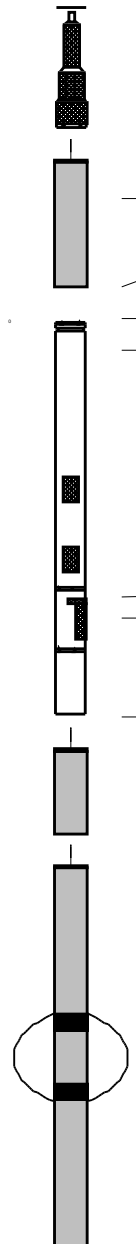
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−U/Y
NCT−B
CNB−AB
WITM (DTS)−A

DOWNHOLE EQUIPMENT



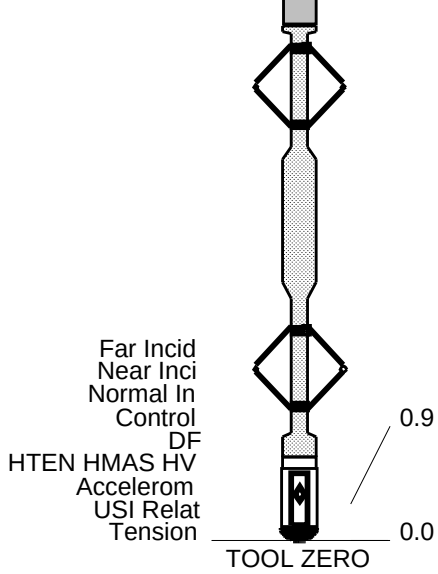
LEH−QT 39.0
LEH−QT

DTC−H 36.1
ECH−KC
DTCH0−A
DTCH1−A

HILTH−FTB 33.1
HGNSD−H
HMCA−H
HGNH
HACCZ−H
HCNT−H
HGR

AH−107 23.7
AH−107

USIT−D 21.7
ECH−MRA
USIC−D
USIS−A
USSC−B
IBCS_B−100158202
Top Transducer
Middle Top Transducer
Middle Bottom Transducer
Bottom Transducer



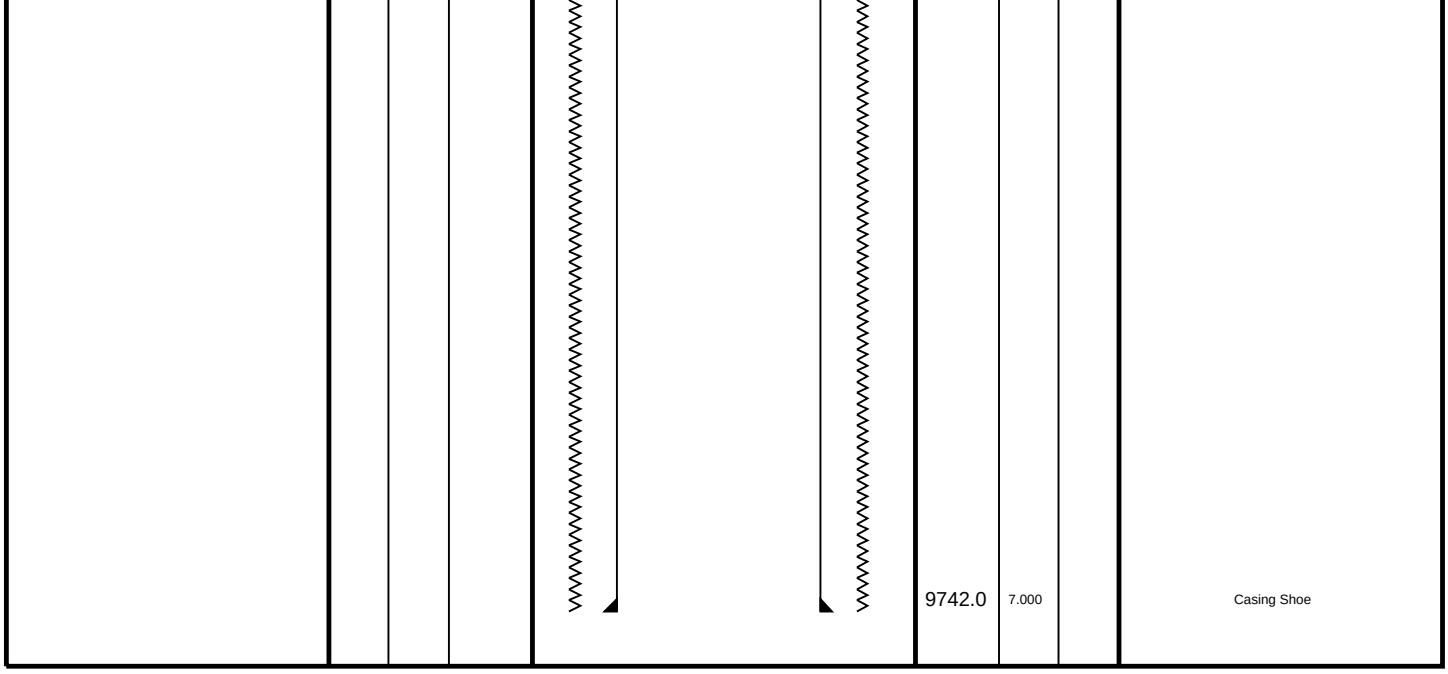
MAXIMUM STRING DIAMETER 7.50 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Client: EXXON MOBIL CORPORATION
Well: PCU 296−6A8
Field: PICEANCE CREEK
State: CO
Country: USA

Drawing Date: 5/18/2010
API #: 51031147900

Rig Name: H&P 239
Reference Datum: GROUND LEVEL
Elevation: 7366.0 ft

Production String	(in) OD	(in) ID	(ft) MD	Well Schematic	(ft) MD	(in) OD	(in) ID	Casing String
					0.0	7.000		Casing String
					4431.0	9.875		Borehole Segment



Schlumberger

IBC SLG COMPOSITE

MAXIS Field Log

Company: EXXON MOBIL CORPORATION **Well: PCU 296−6A8**

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
ZMUD	2.05 MRAY	2.15 MRAY	6501.5 14:25:54
	1.95 MRAY	2.05 MRAY	4801.5 14:30:13

Image rotation (UCAZ) (DEG)
0 360

Tool/Tot. Drag From D4T to STIA

Cable Drag From D4T to STIT

Stuck Stretch (STIT)
0 (F) 50

Gamma Ray (GR) (GAPI)
0 150

RSAV (RSAV) (RPS)
6 7.5

CCL (CCLU) (----
−20 20

Eccent. (ECCE)
0 (IN) 0.5

0.5000
1.5000
2.5000
3.5000
6.5000

Process. flags (UFLG) (----

−500.0000
−6.0000
−5.6000
−5.2000
−4.8000
−4.4000
−4.0000
−3.6000
−3.2000
−2.8000
−2.4000
−2.0000
−1.6000
−1.2000
−0.8000
−0.4000
0.5000

Amplitude of echo minus Max (AWBK) (DB)

Min of Internal radius (IRMN) (IN)
3.7 2.7

Internal radius Maximum (IRMX) (IN)
3.7 2.7

Internal radius Average (IRAV) (IN)
3.7 2.7

External radius Average (ERAV) (IN)
3.7 2.7

Min of Internal radius (IRMN) (IN)
2.7 3.7

Internal radius Maximum (IRMX) (IN)
2.7 3.7

Internal radius Average (IRAV) (IN)
2.7 3.7

External radius Average (ERAV) (IN)
2.7 3.7

−500.0000
−0.0760
−0.0680
−0.0600
−0.0520
−0.0440
−0.0360
−0.0280
−0.0200
−0.0120
−0.0040
0.0040
0.0120
0.0200
0.0280
0.0360
0.0440
0.0520
0.0600
0.0680
0.0760

Internal radii minus Ave (IRBK) (IN)

Maximum of Thickness (THMX) (IN)
0.1 0.6

Average of Thickness (THAV) (IN)
0.1 0.6

Min of Thickness (THMN) (IN)
0.1 0.6

−500.0000
−0.0760
−0.0680
−0.0600
−0.0520
−0.0440
−0.0360
−0.0280
−0.0200
−0.0120
−0.0040
0.0040
0.0120
0.0200
0.0280
0.0360
0.0440
0.0520
0.0600
0.0680
0.0760

Thickness minus Ave (THBK) (IN)

−500.0000
0.5000
1.0000
1.5000
2.0000
2.5000
3.0000
3.5000
4.0000
4.5000
5.0000
5.5000
6.0000
6.5000
7.0000
7.5000
8.0000

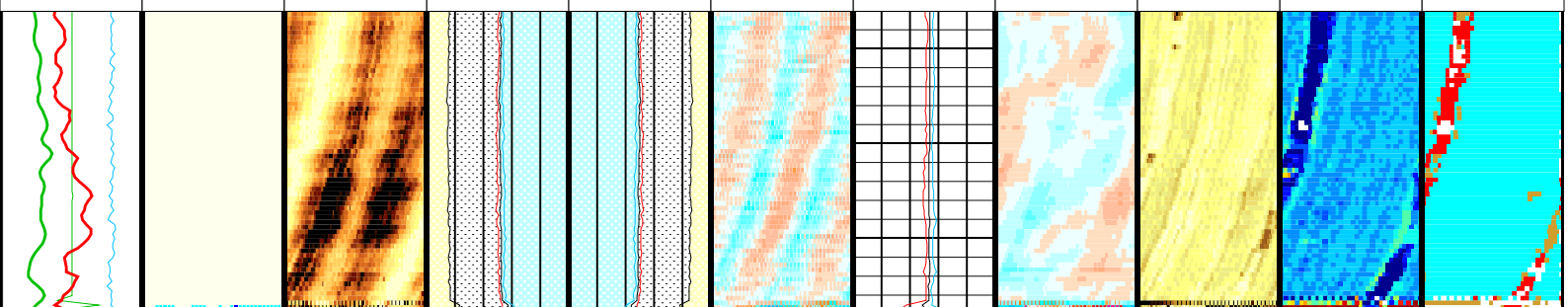
Raw Acoustic Imped. (AIBK) (MRAY)

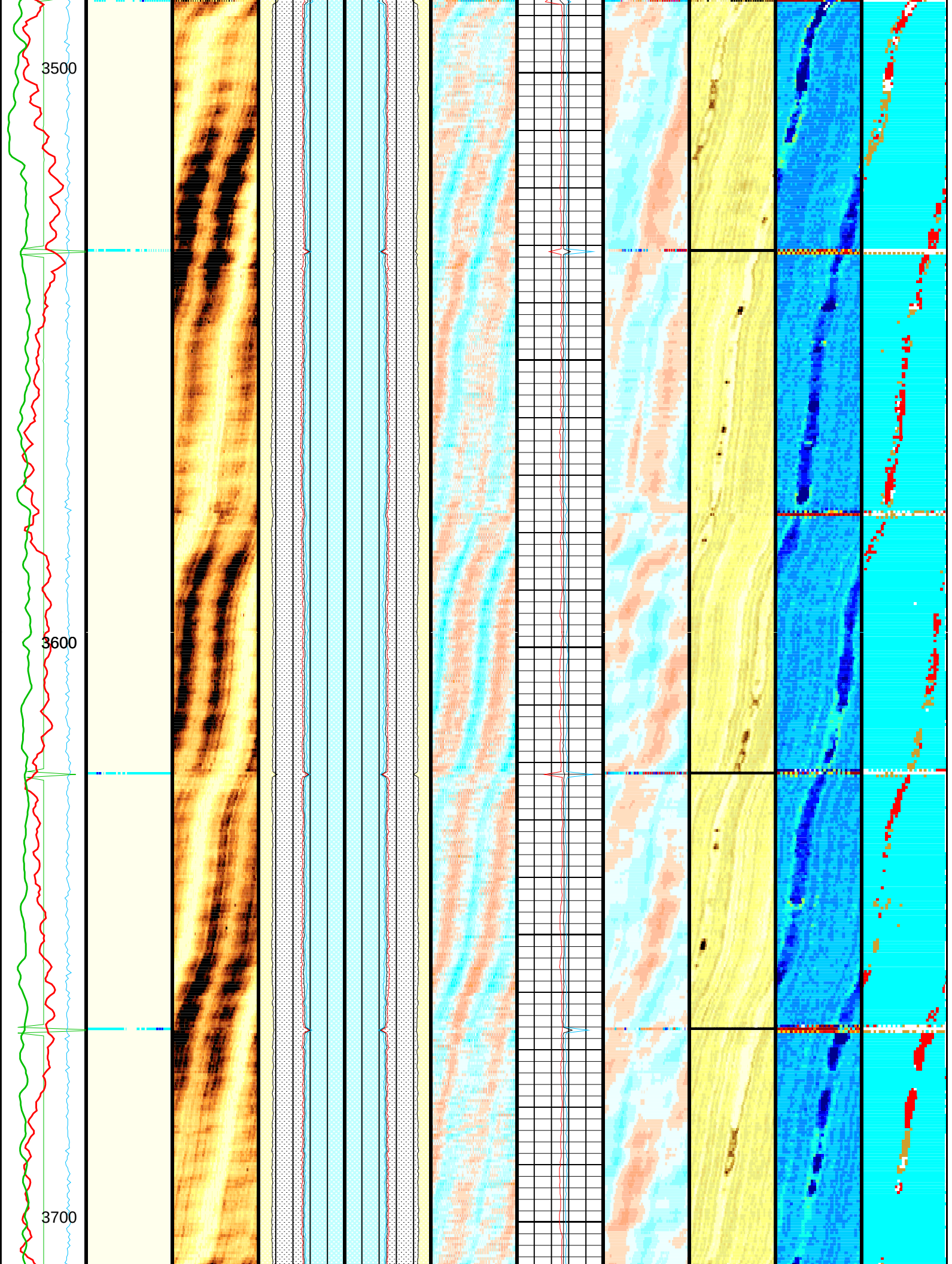
0.0000
50.0000
57.0000
64.0000
71.0000
78.0000
85.0000
92.0000
99.0000
106.0000
113.0000
120.0000
127.0000
134.0000
141.0000
148.0000
155.0000

Flexural Attenuation (U−USIT_UFAK) (DB/M)

0.5000
1.5000
2.5000
3.5000

Solid Liquid Gas Map (U−USIT_USLP) (----

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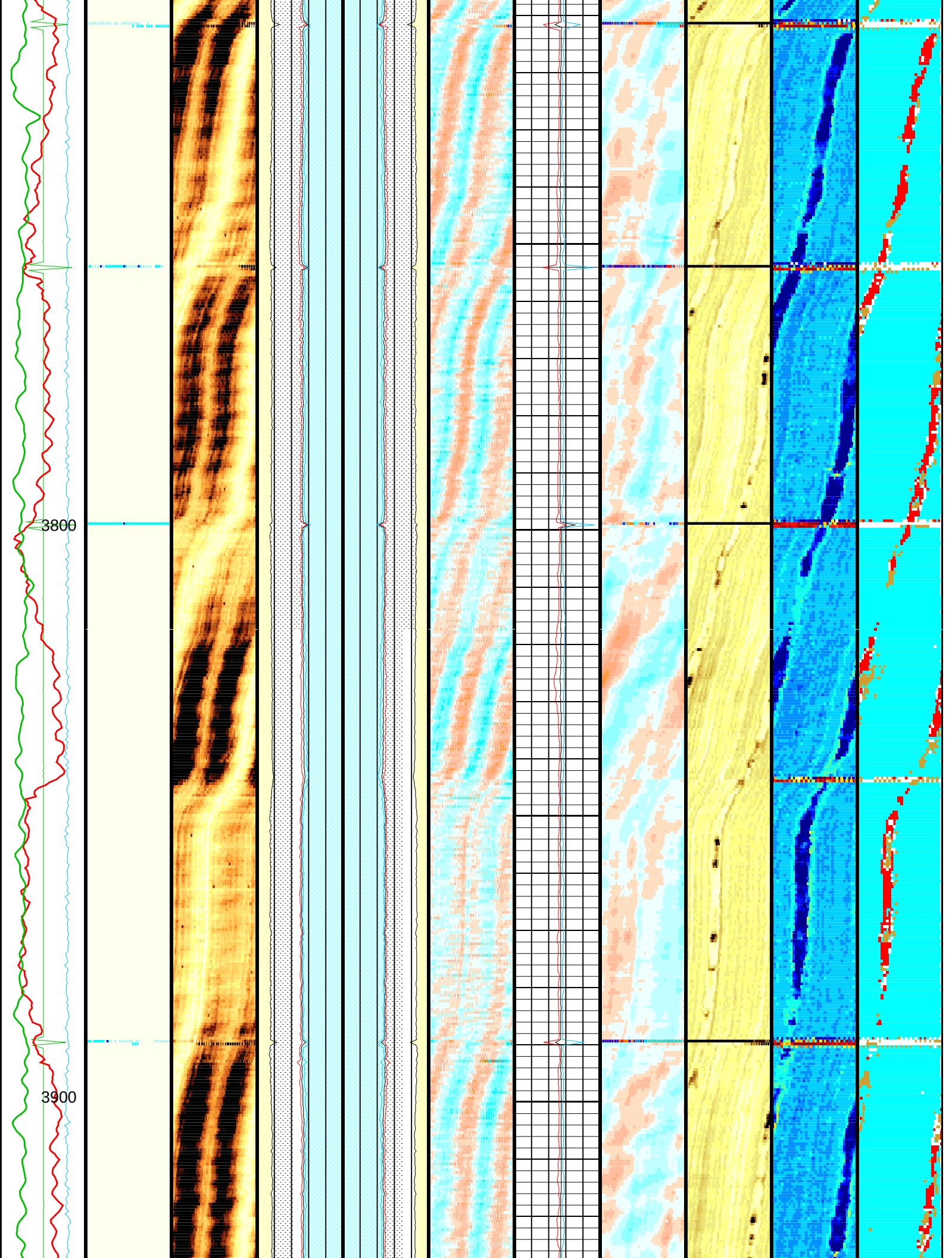
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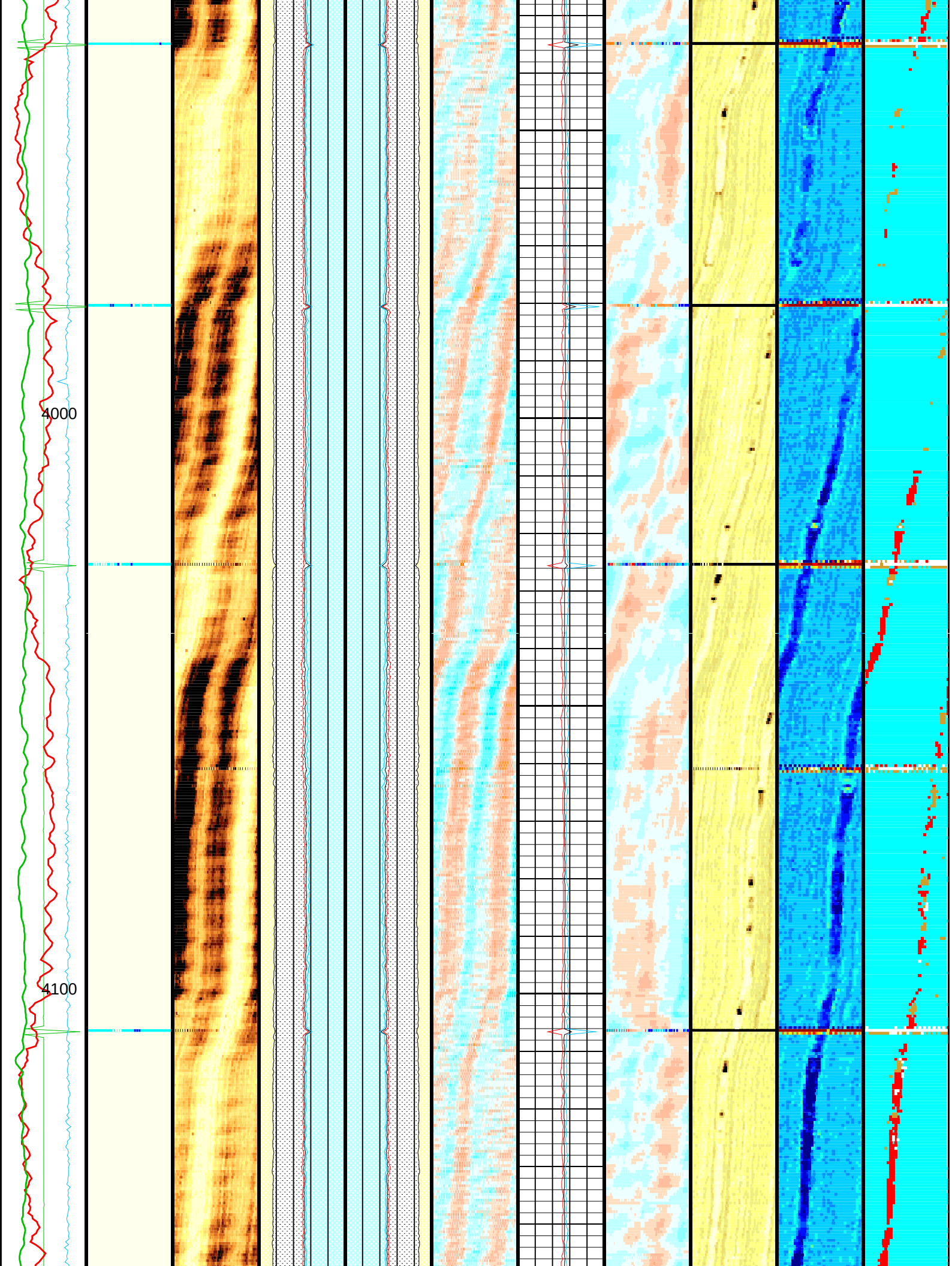
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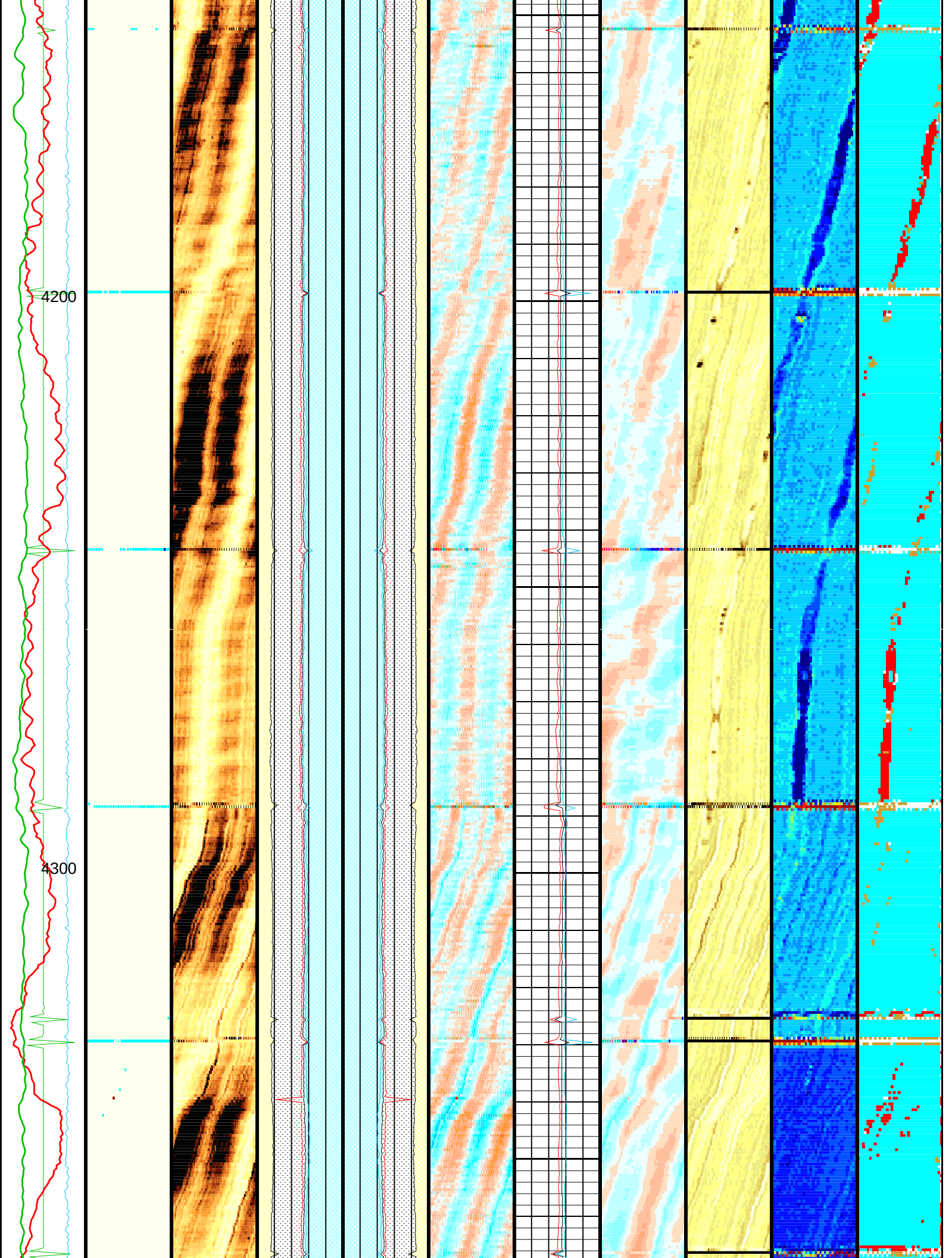
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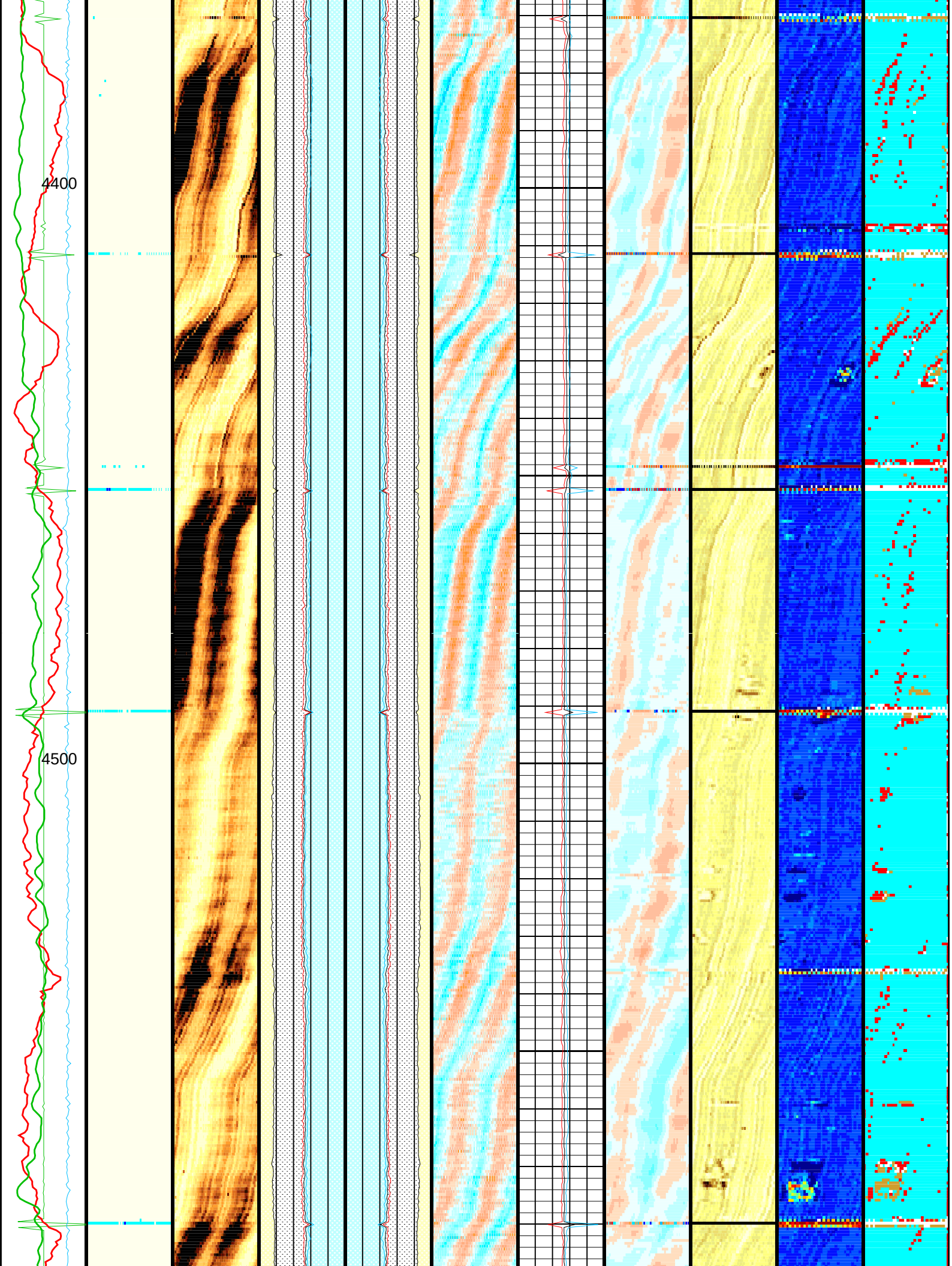
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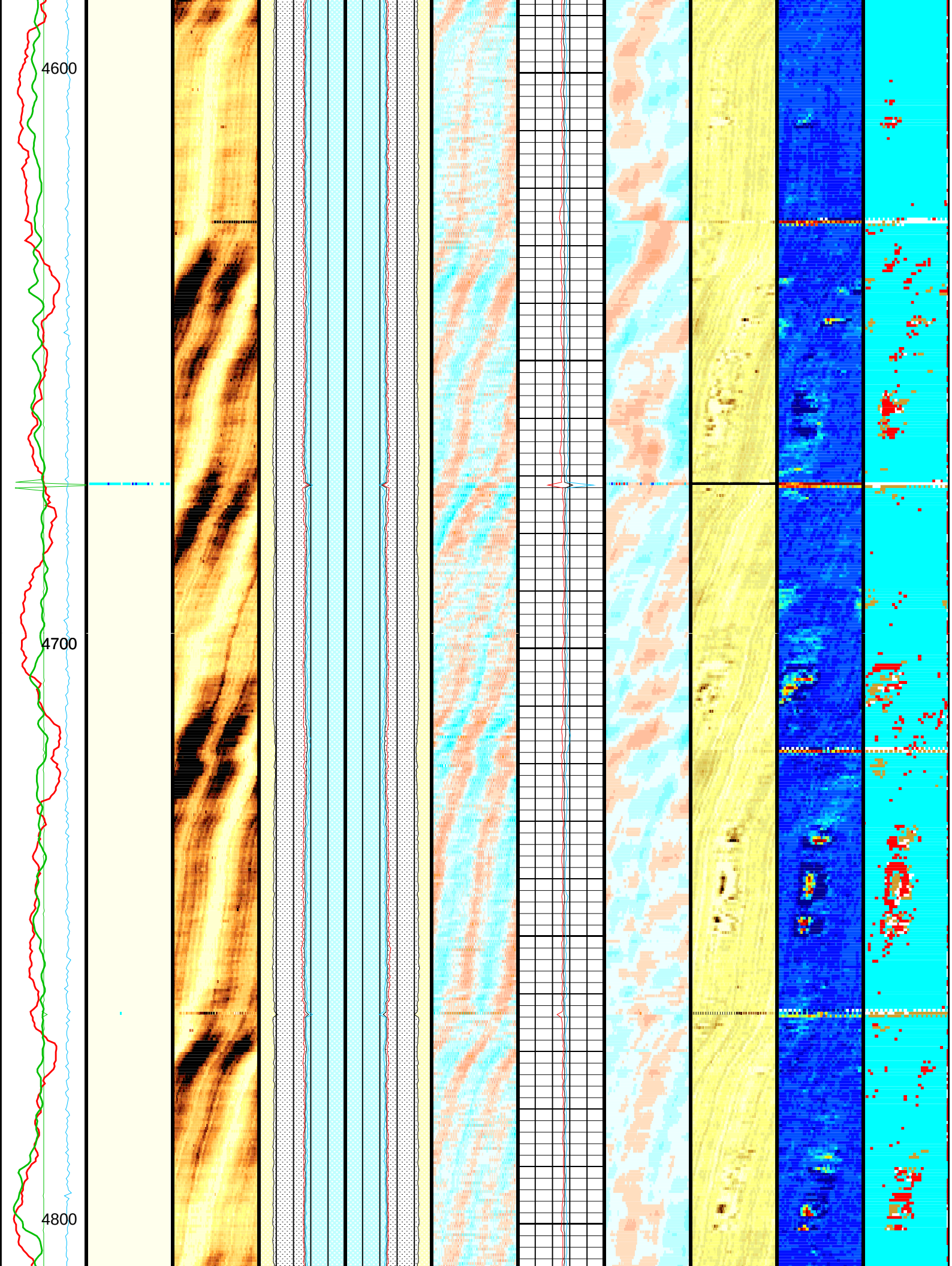
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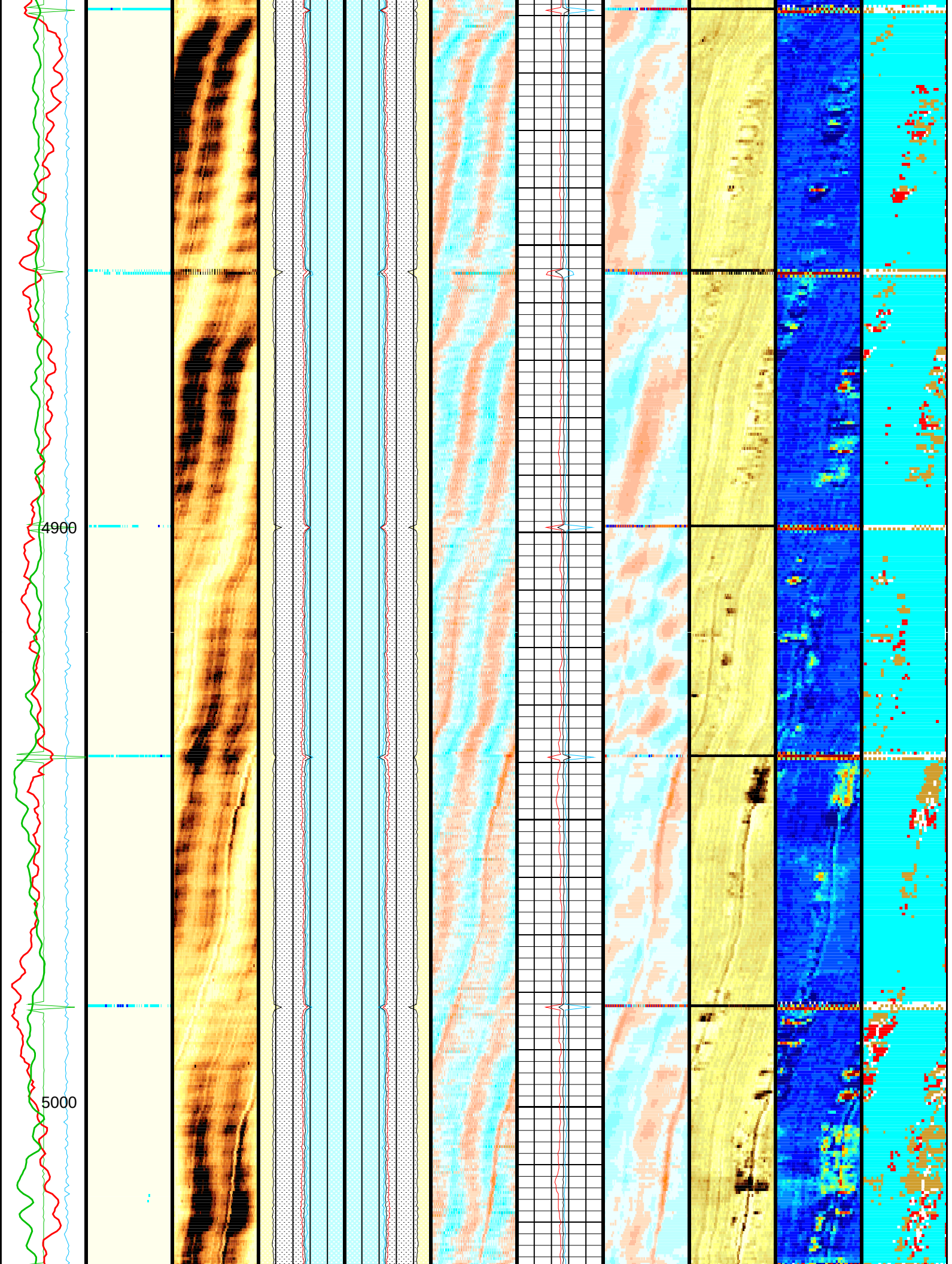
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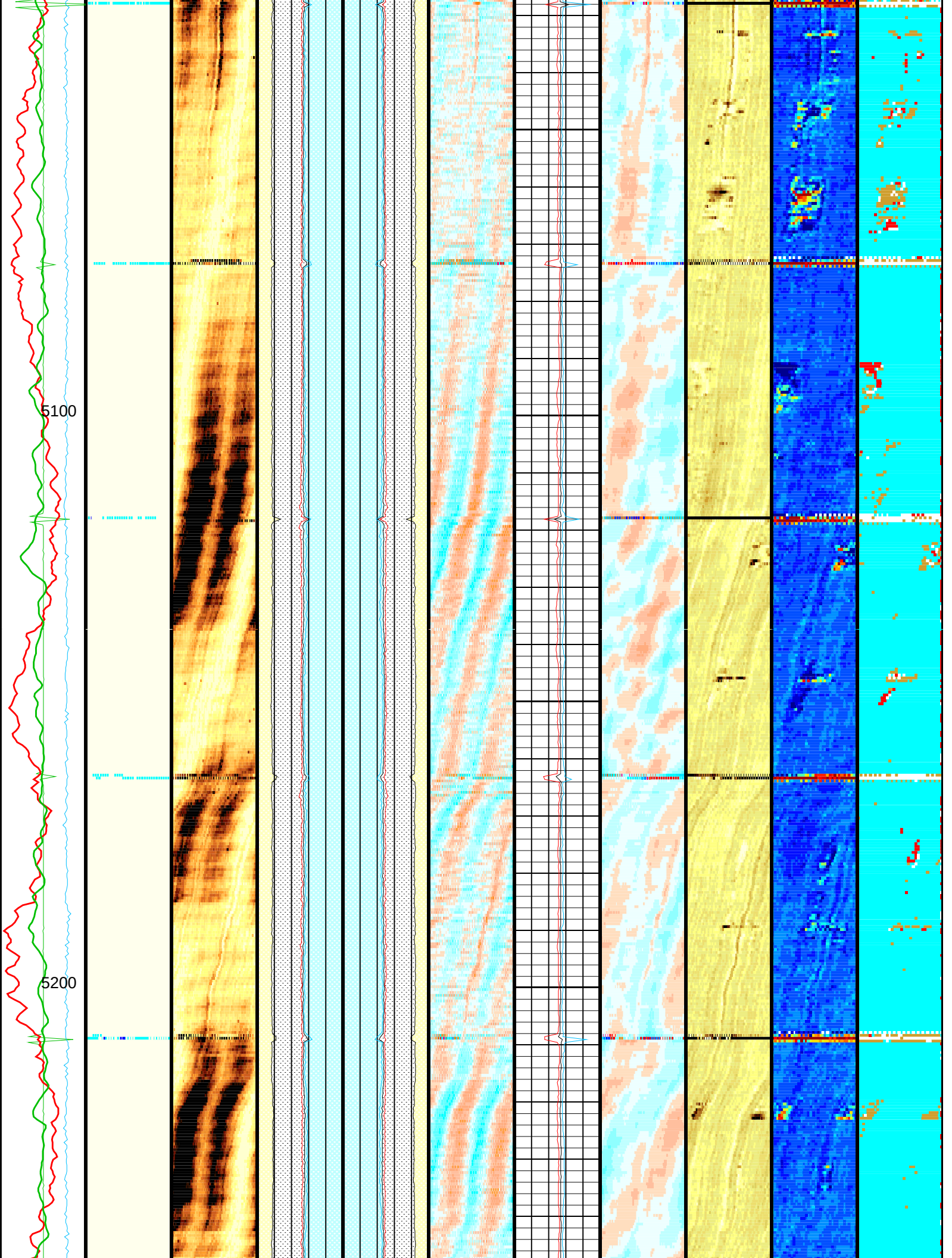
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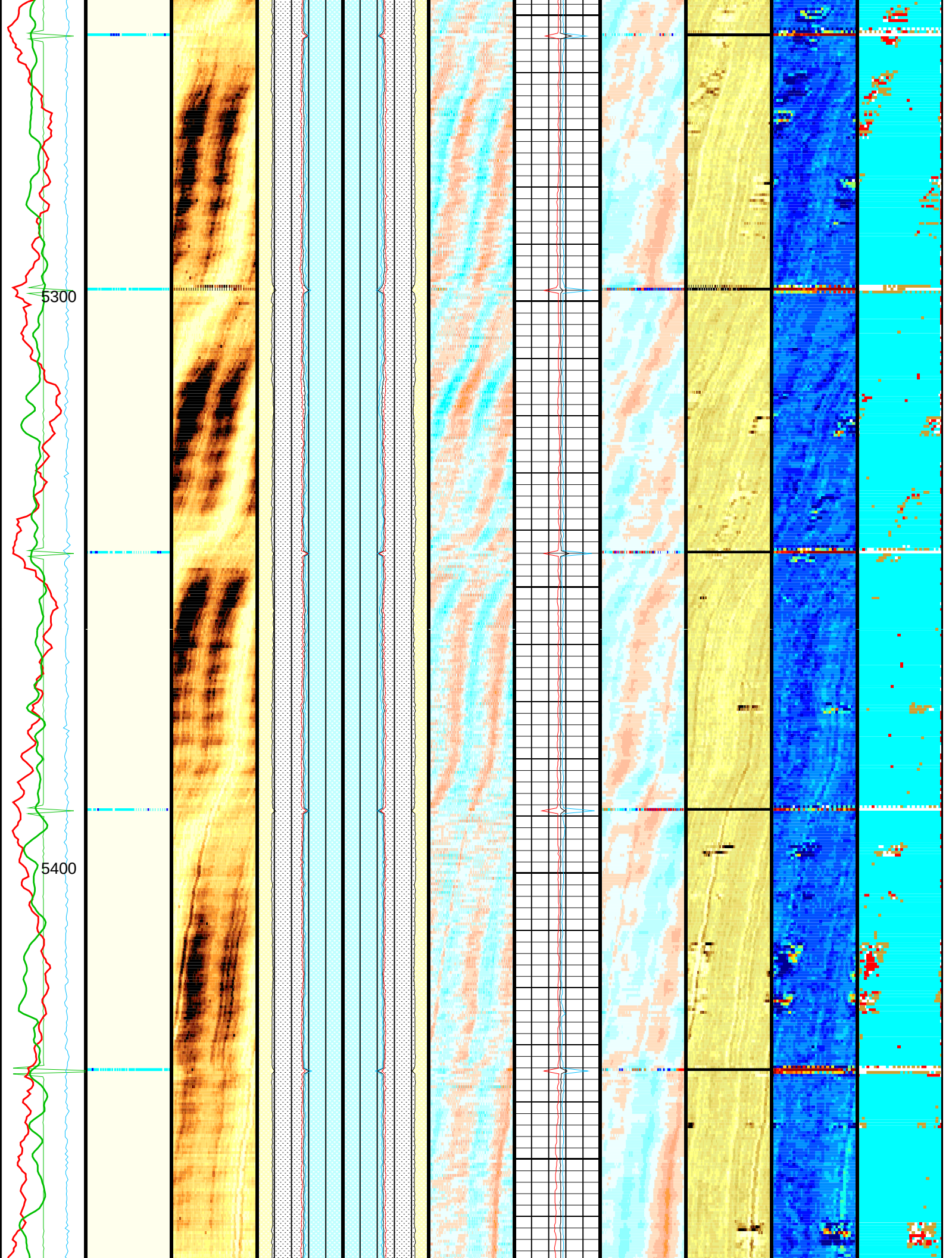
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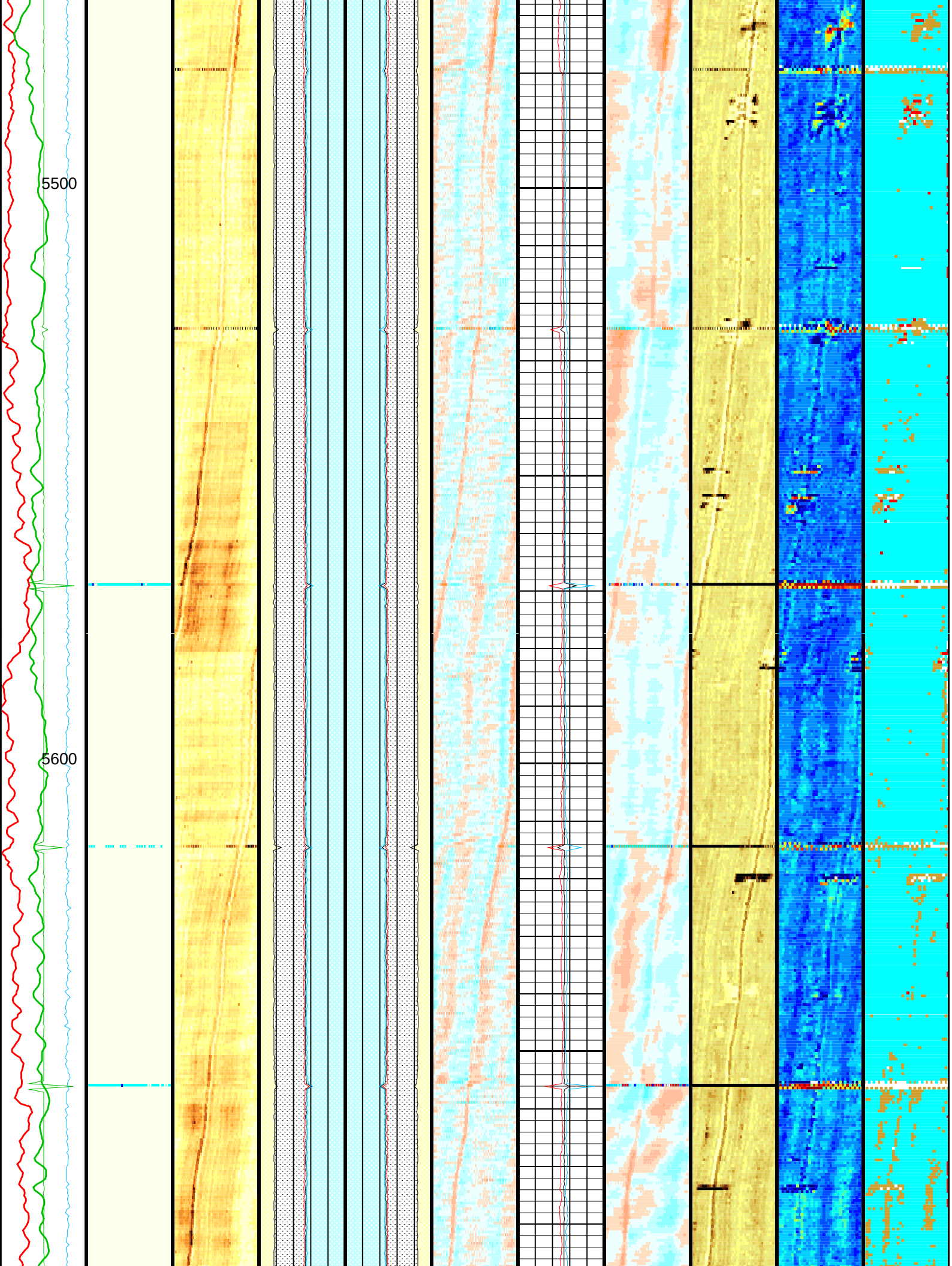
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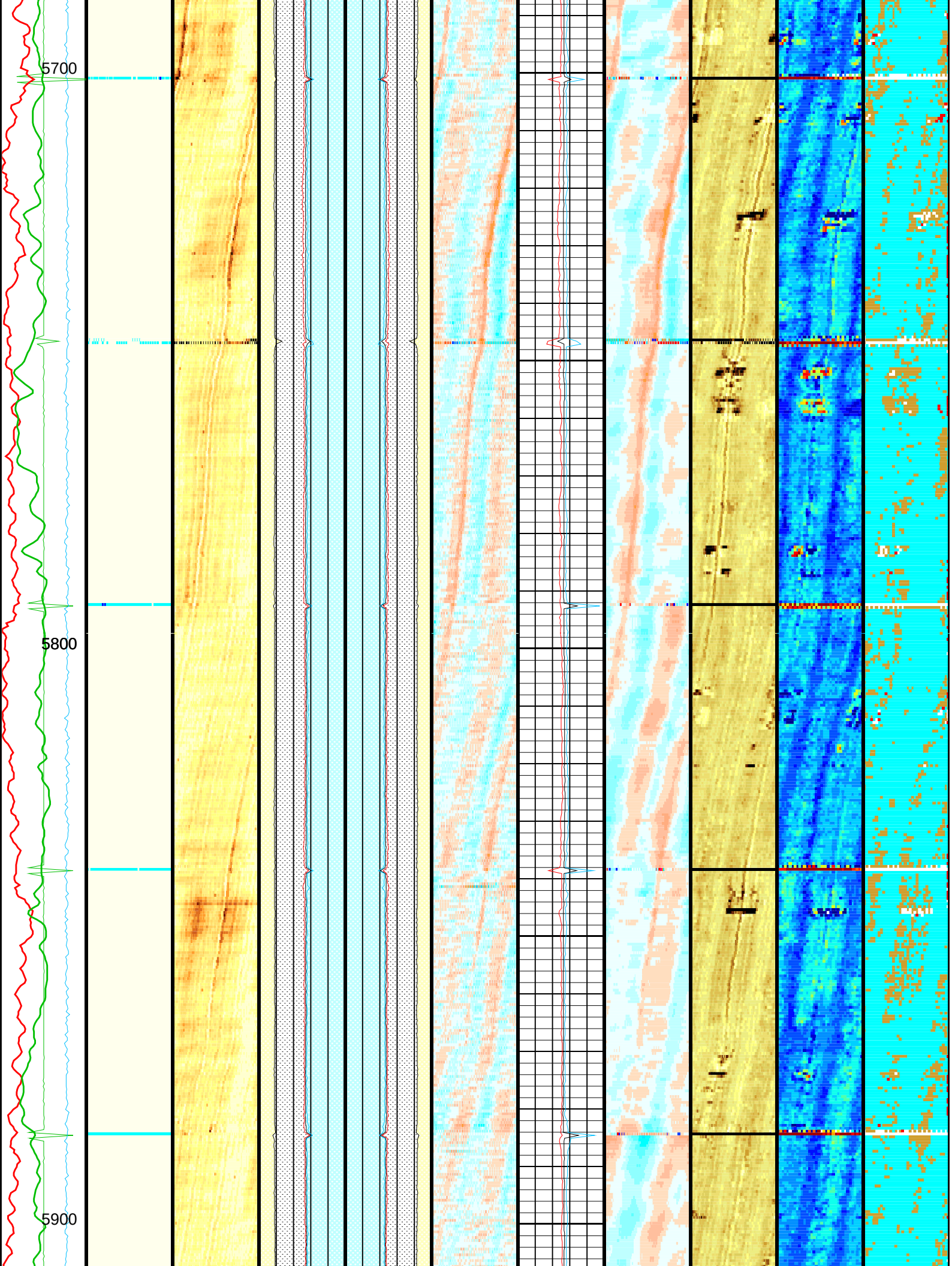
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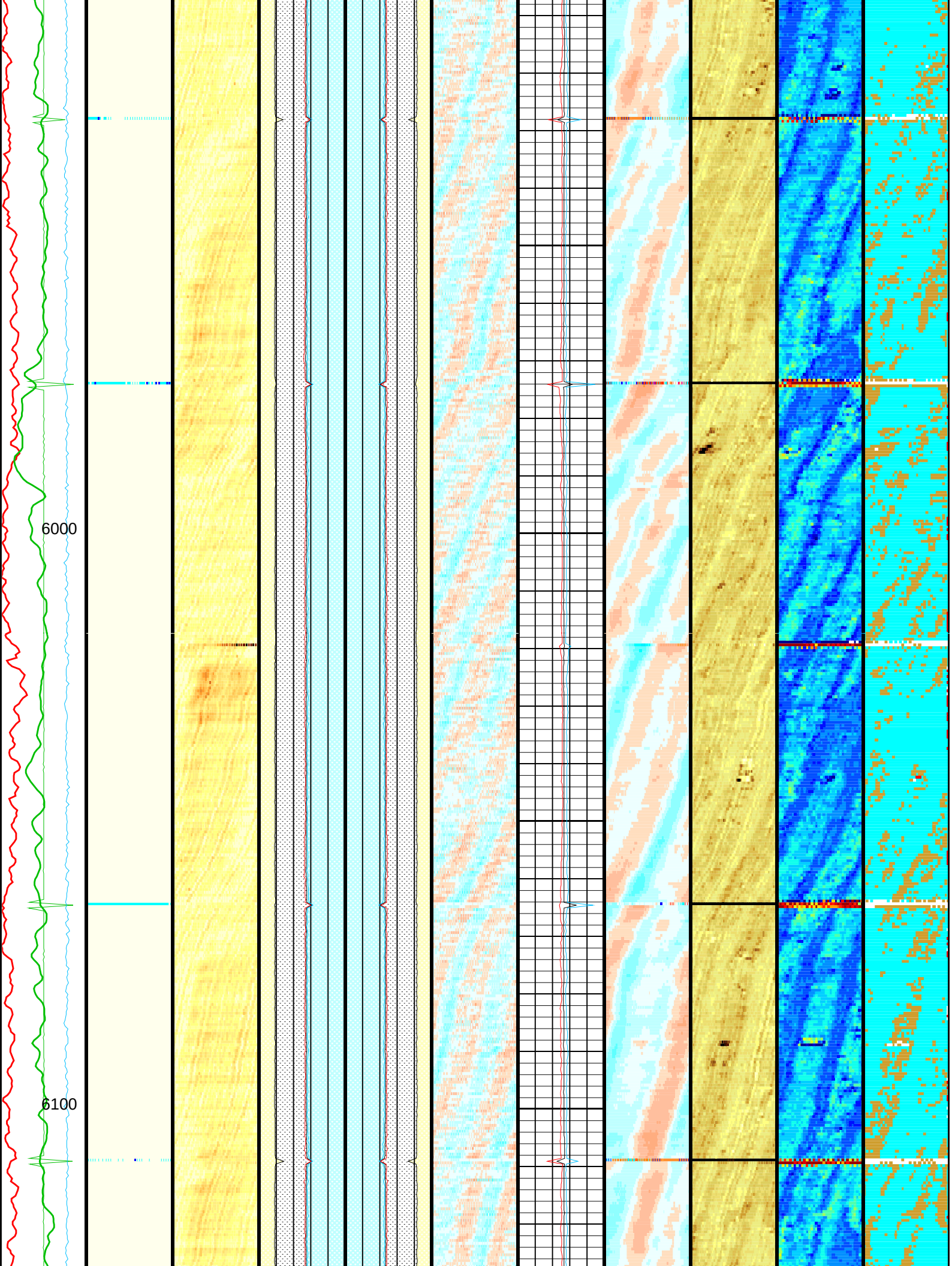
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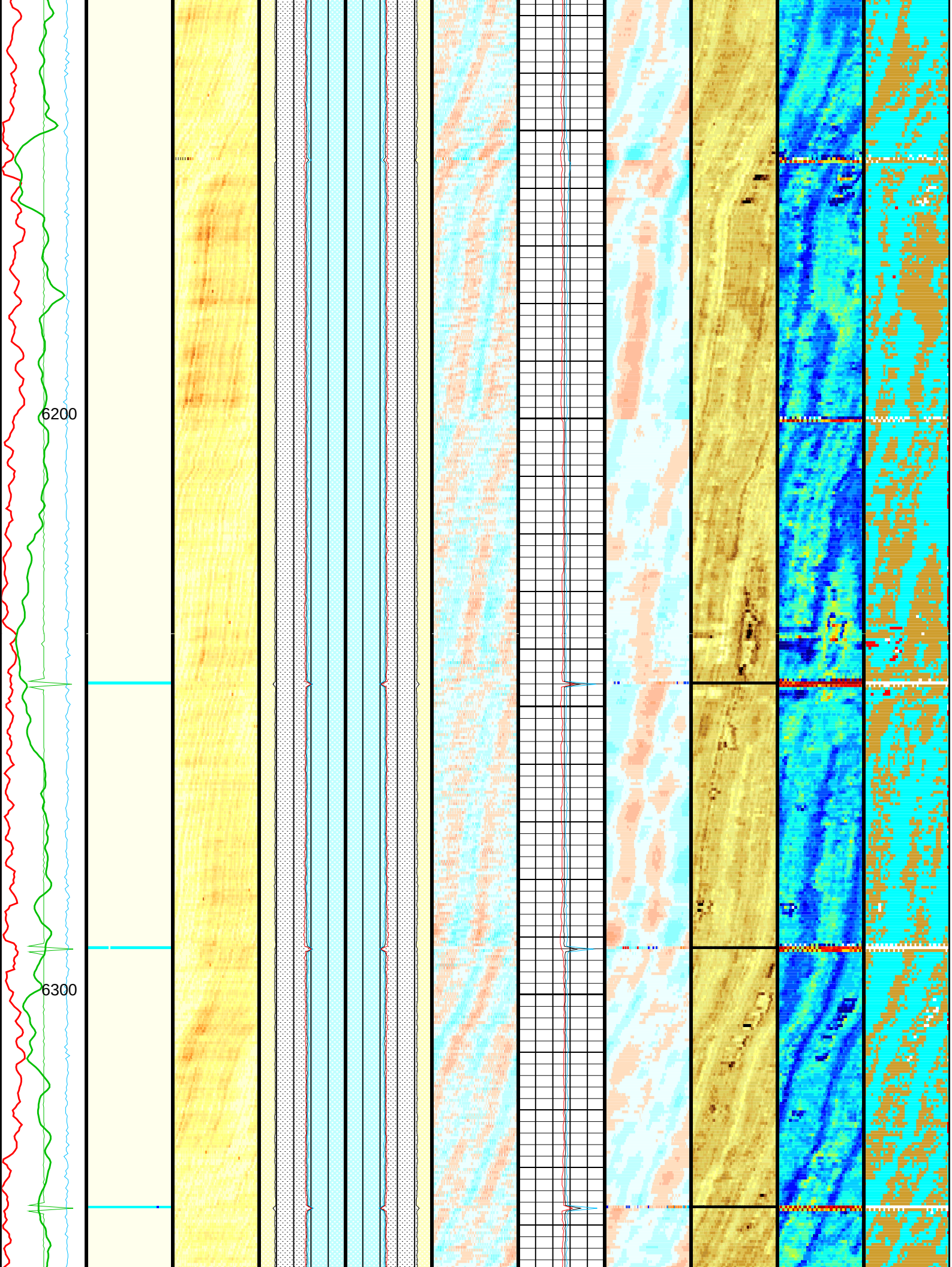
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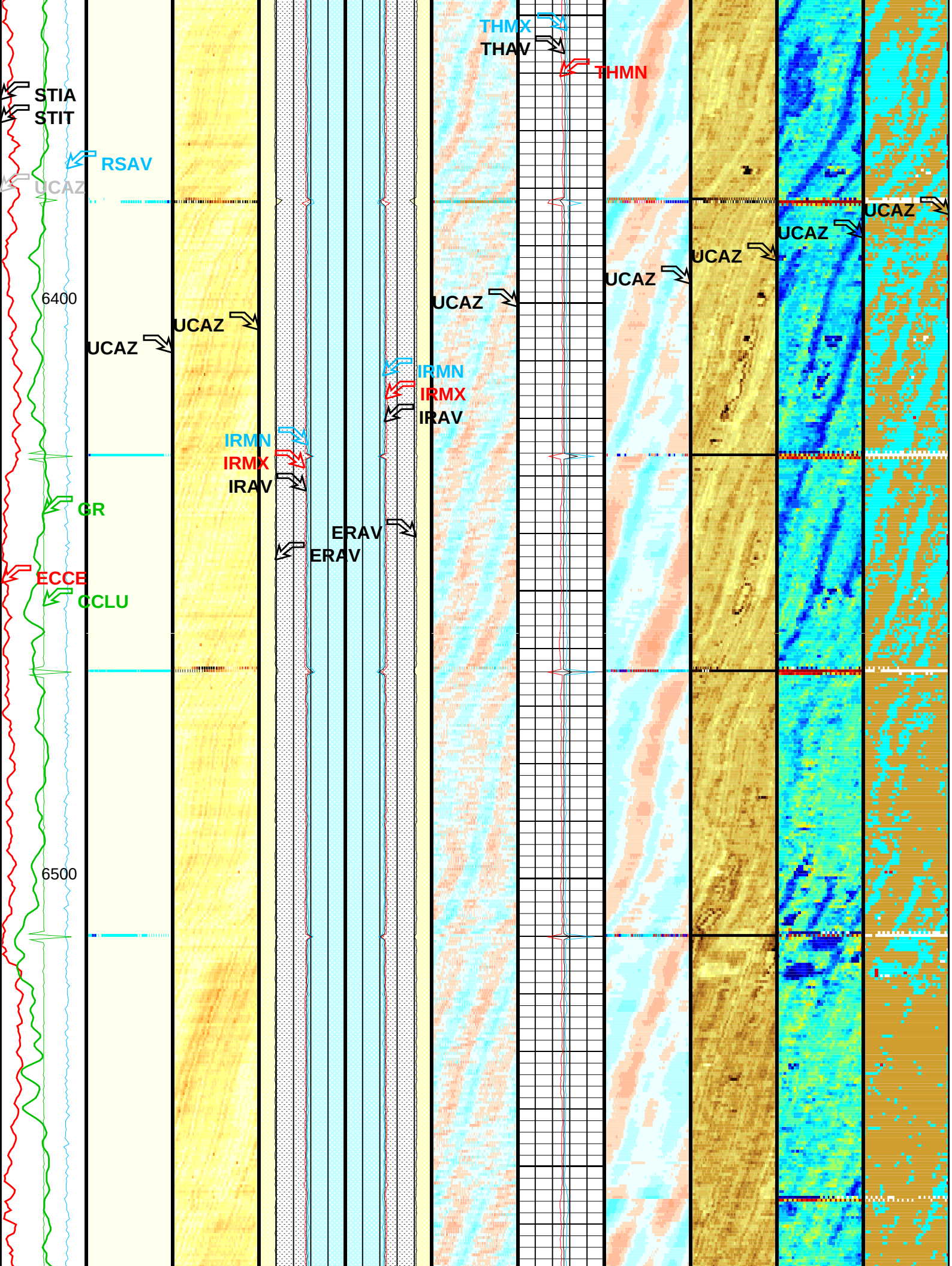
THMX
THAV
THMN
STIA
STIT
RSAV
UCAZ
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IRMN
IRMX
IRAV
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GR
ERAV
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ECCE
CCLU
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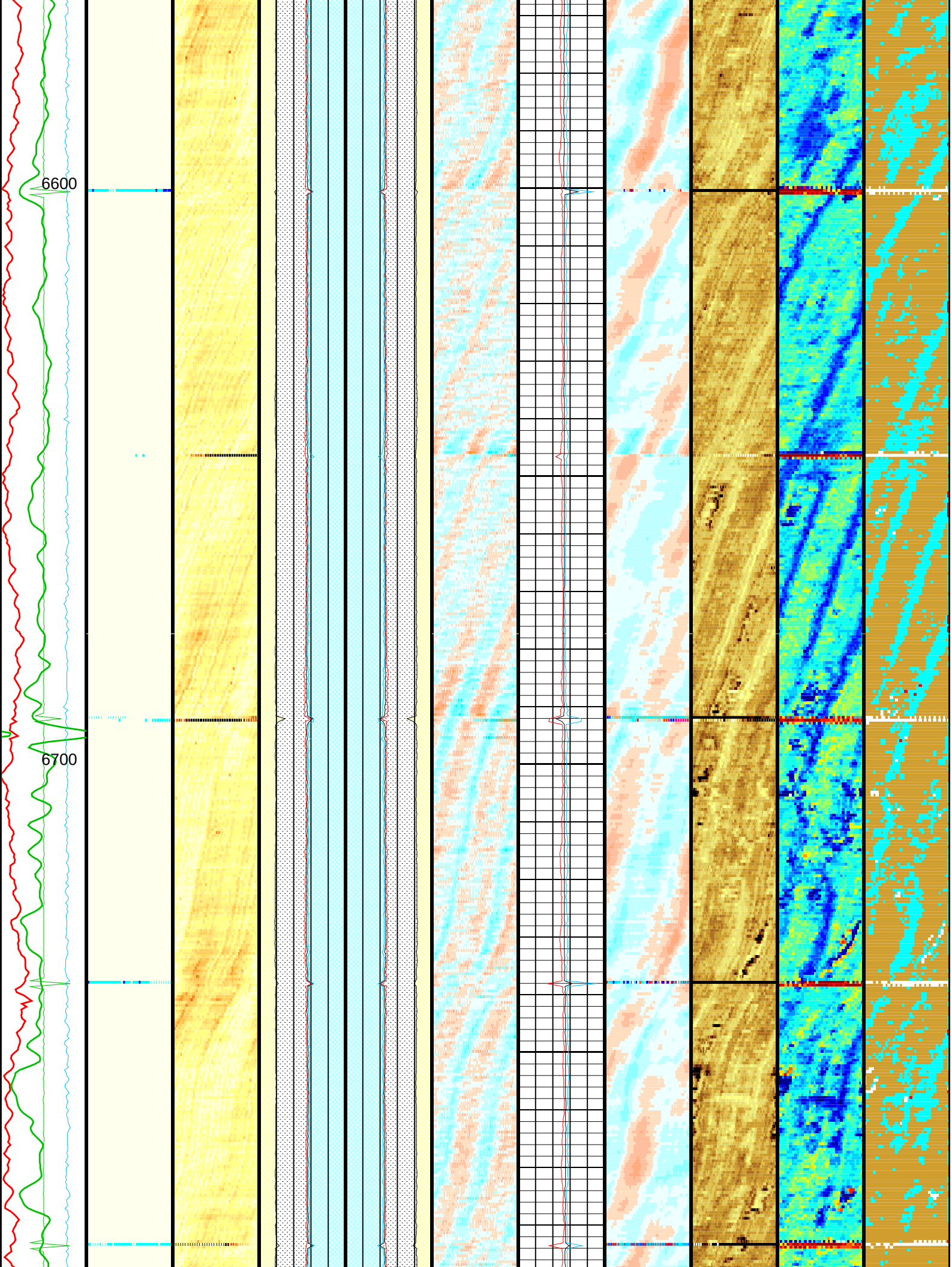
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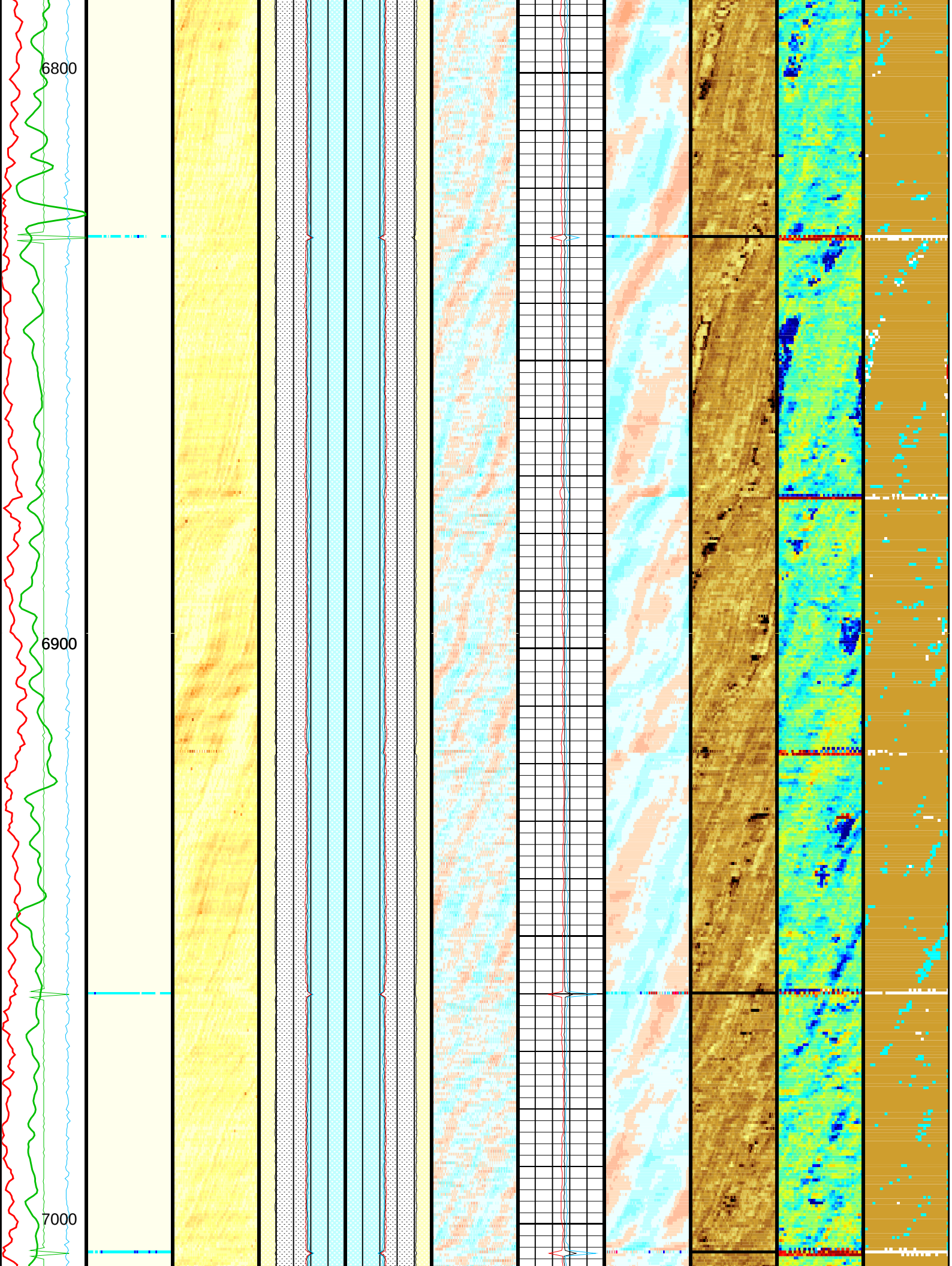
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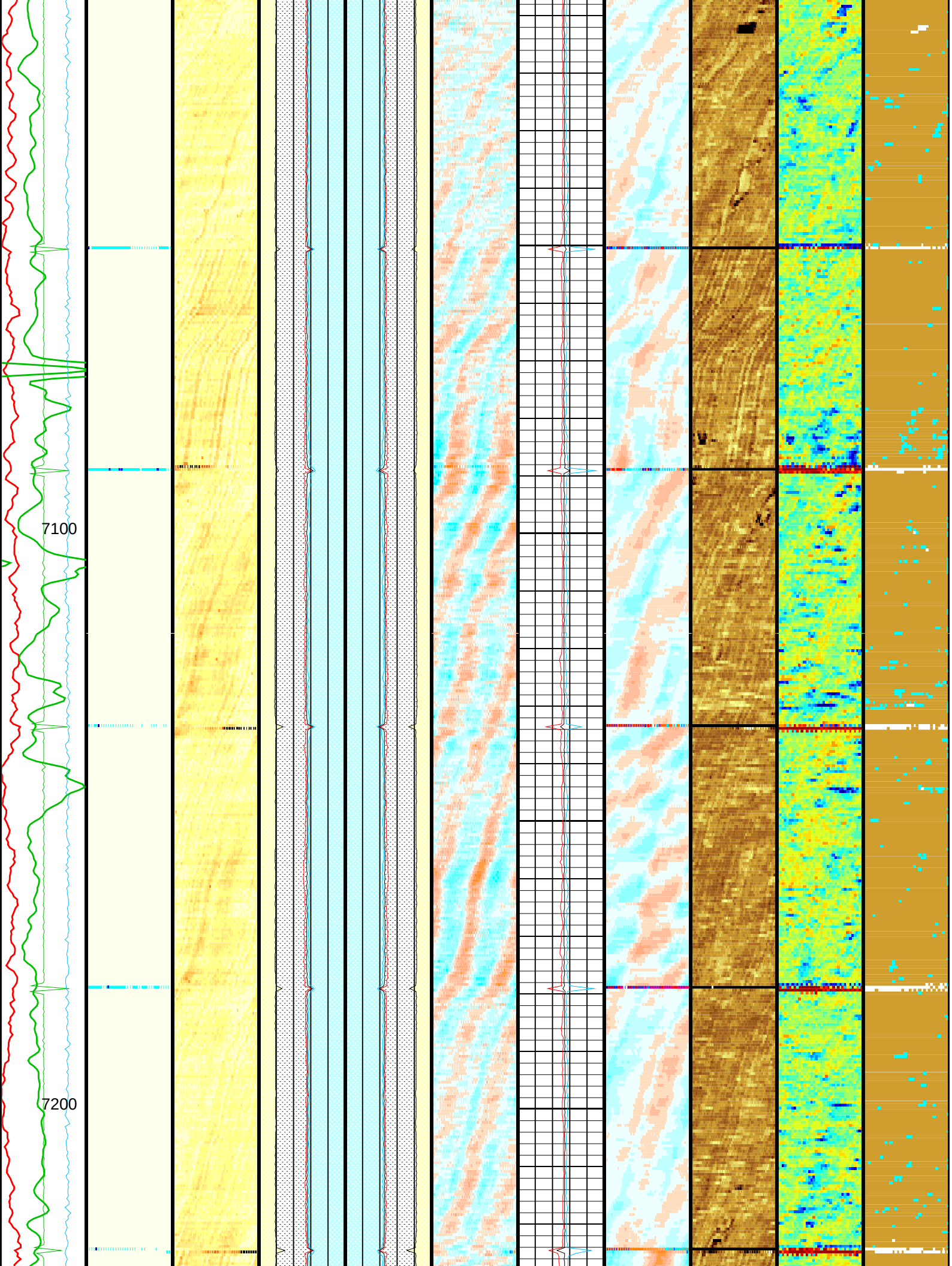
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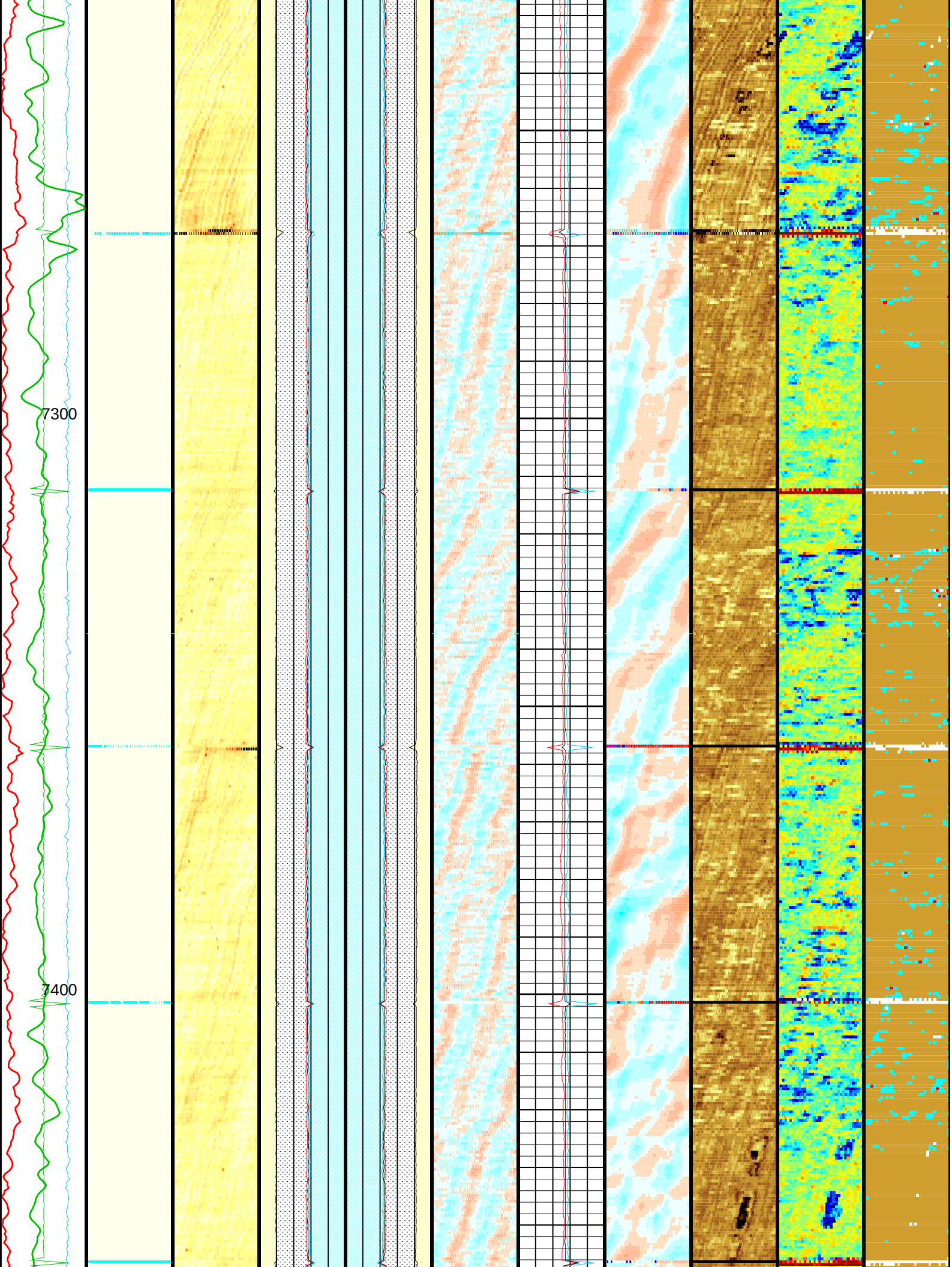
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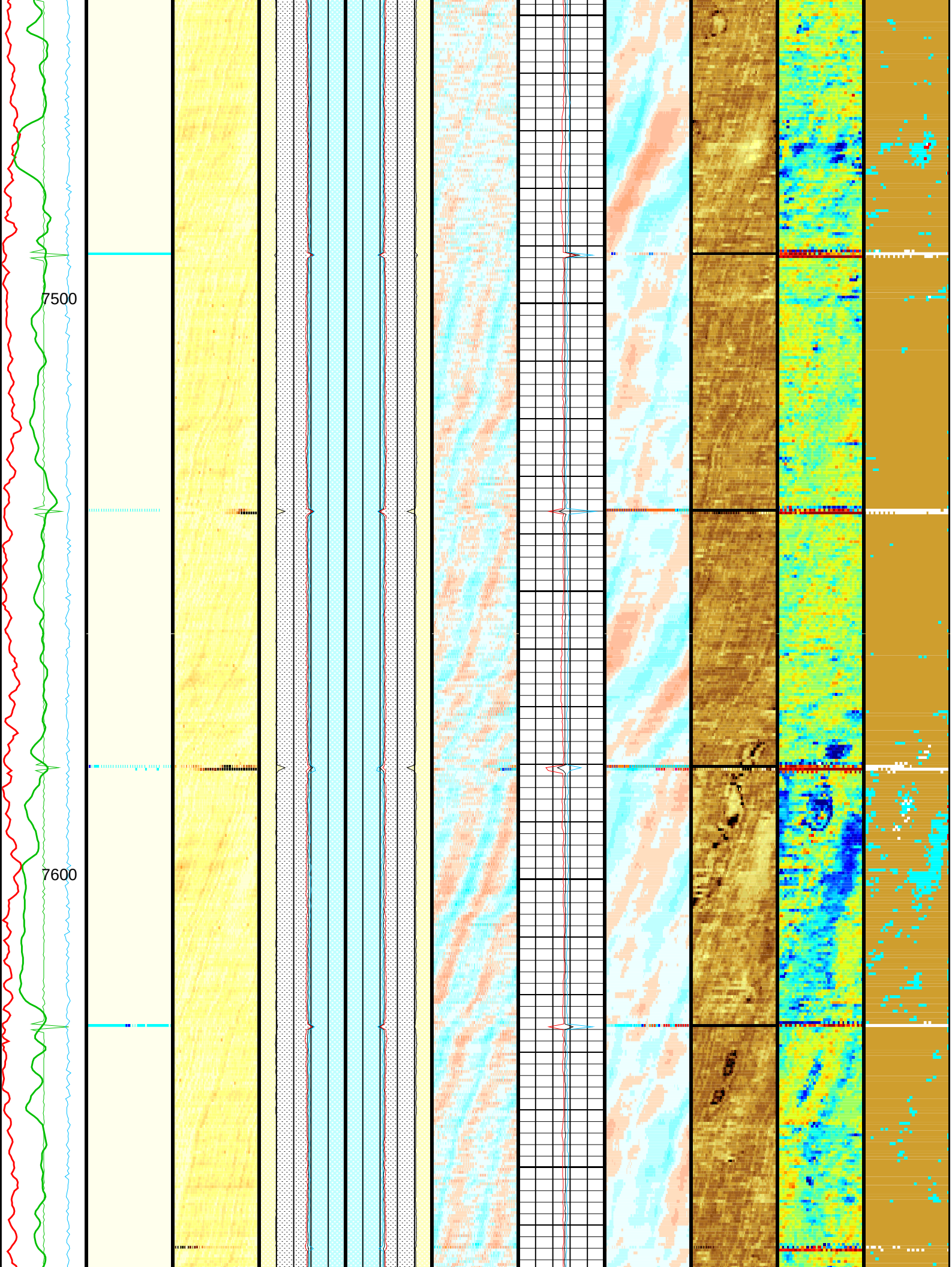
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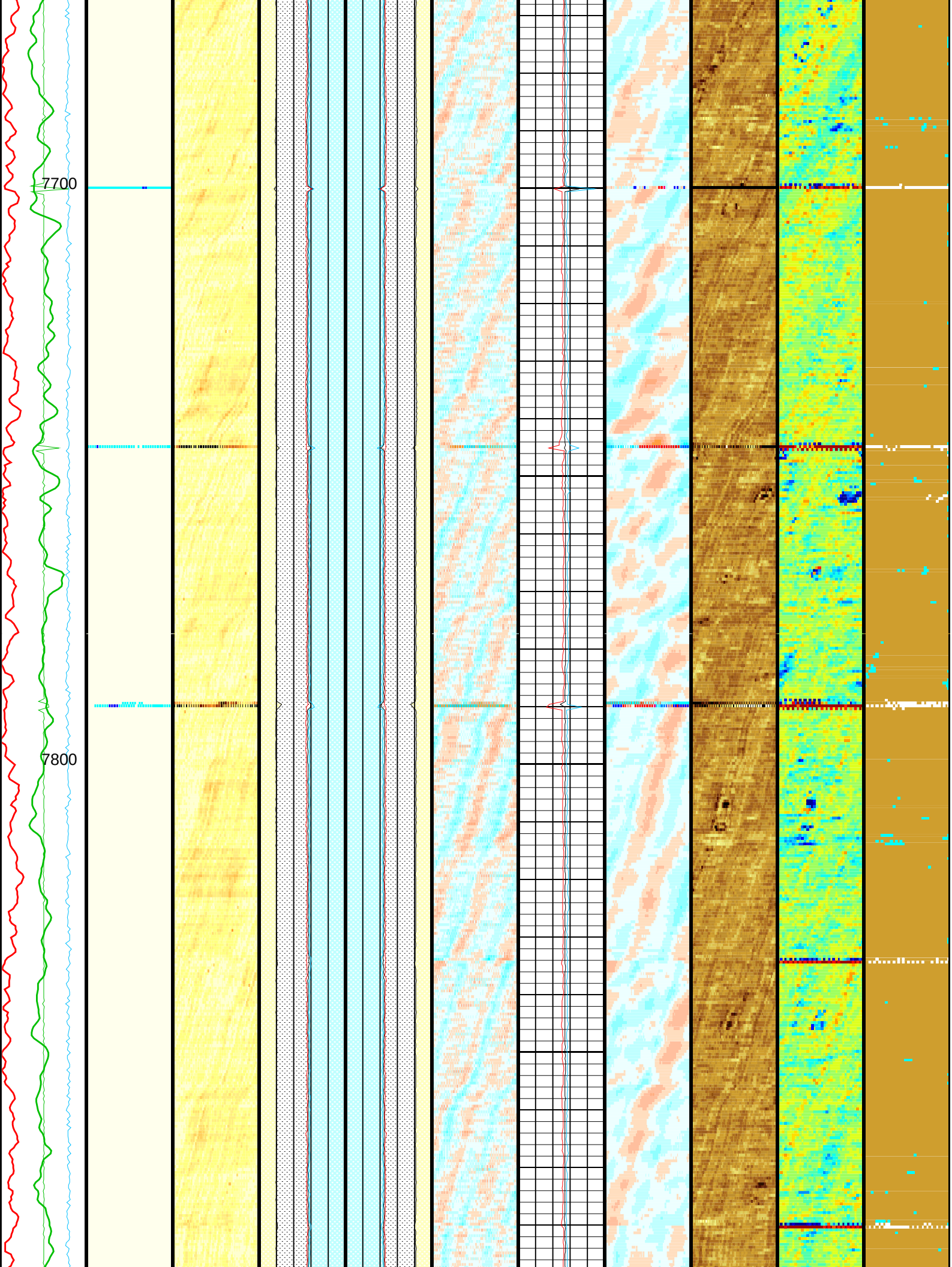
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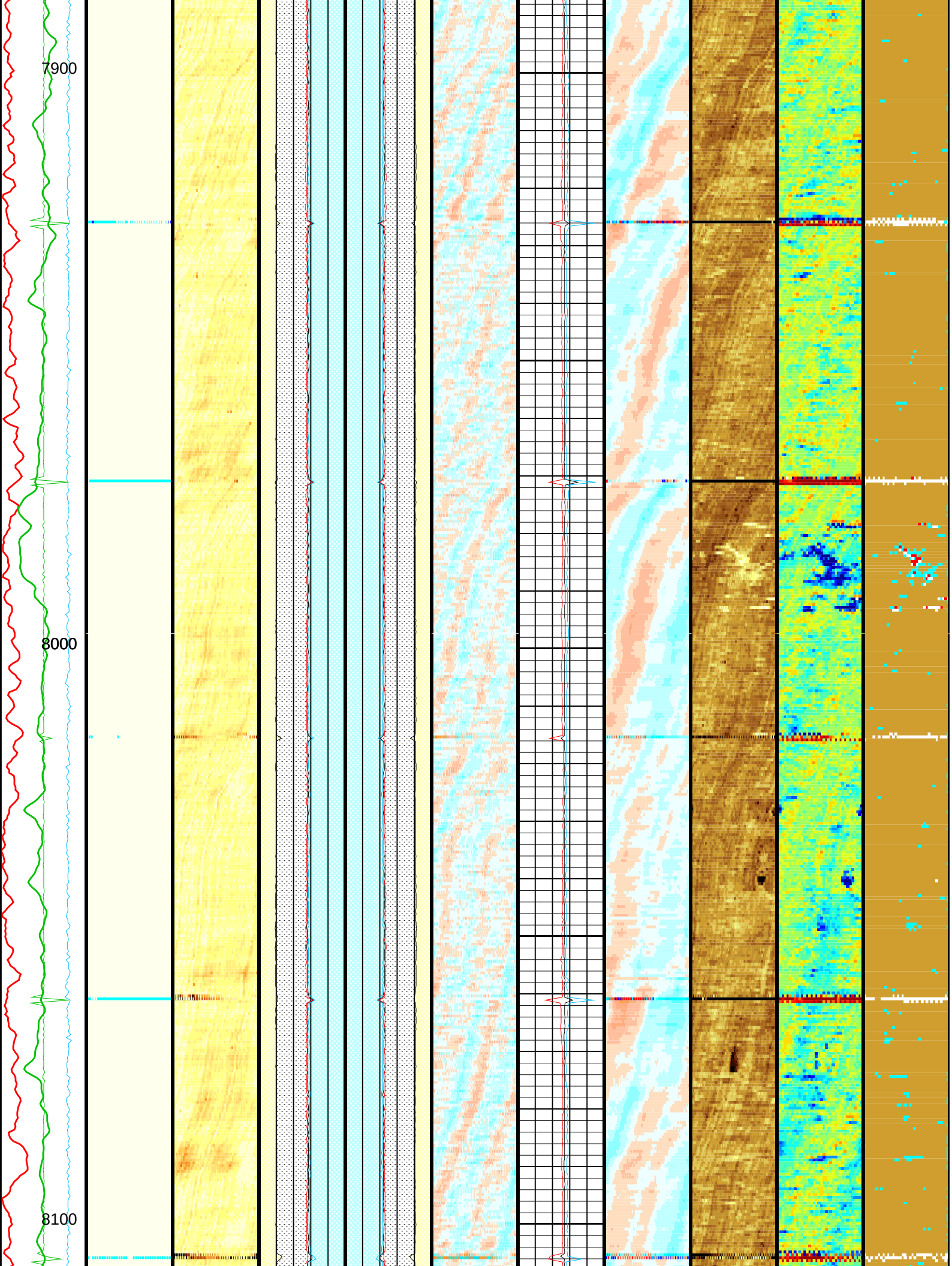
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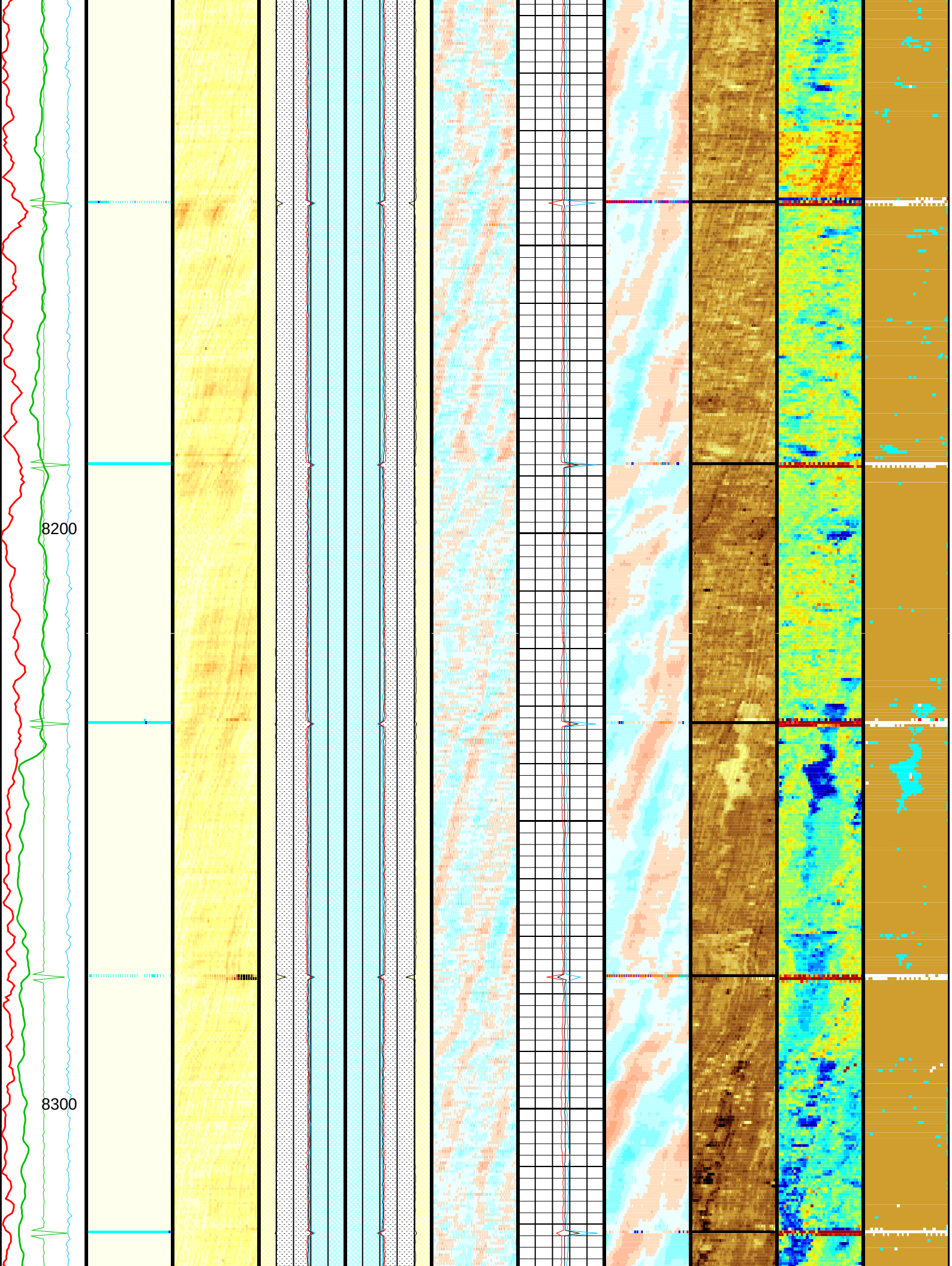
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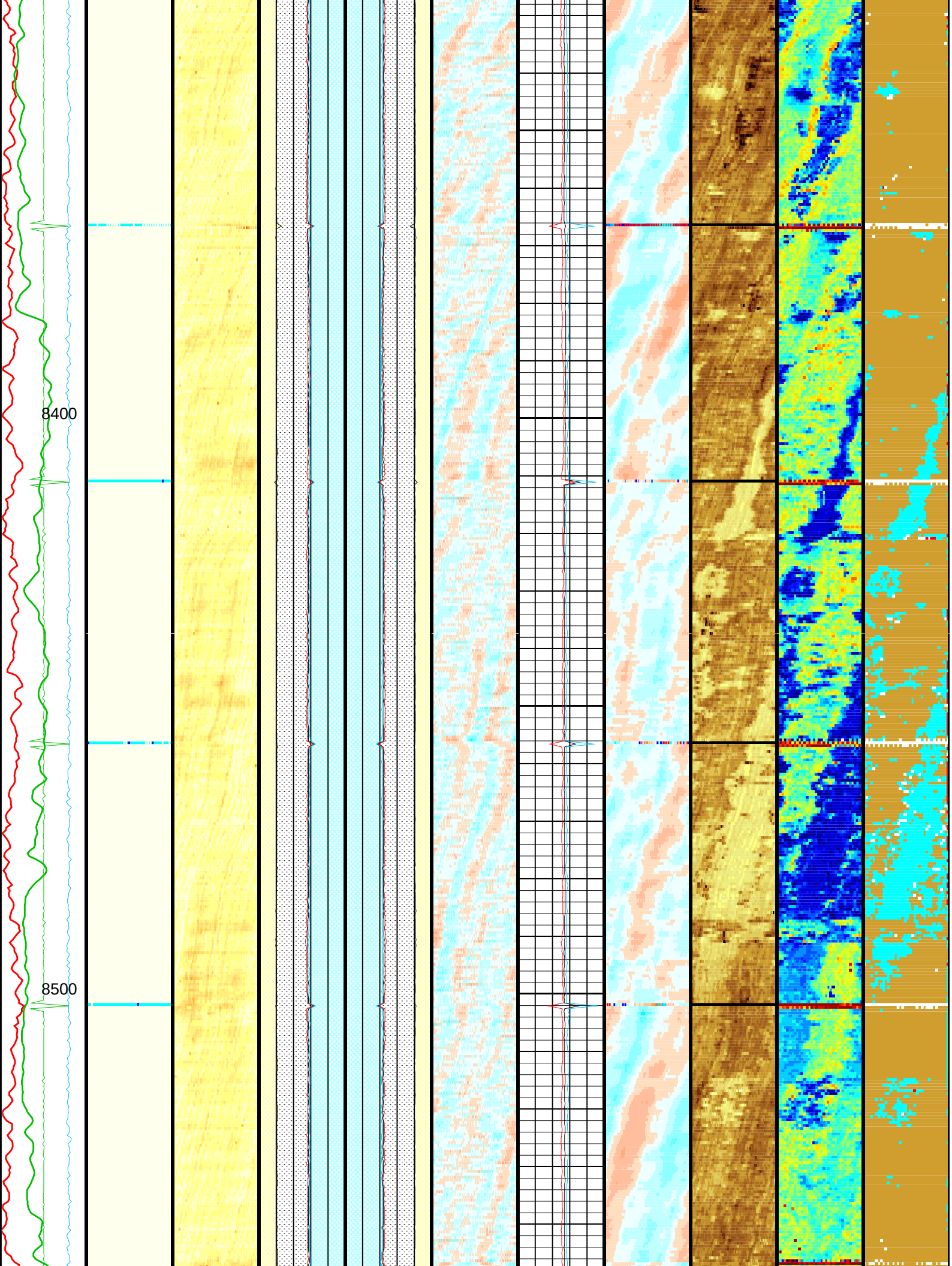
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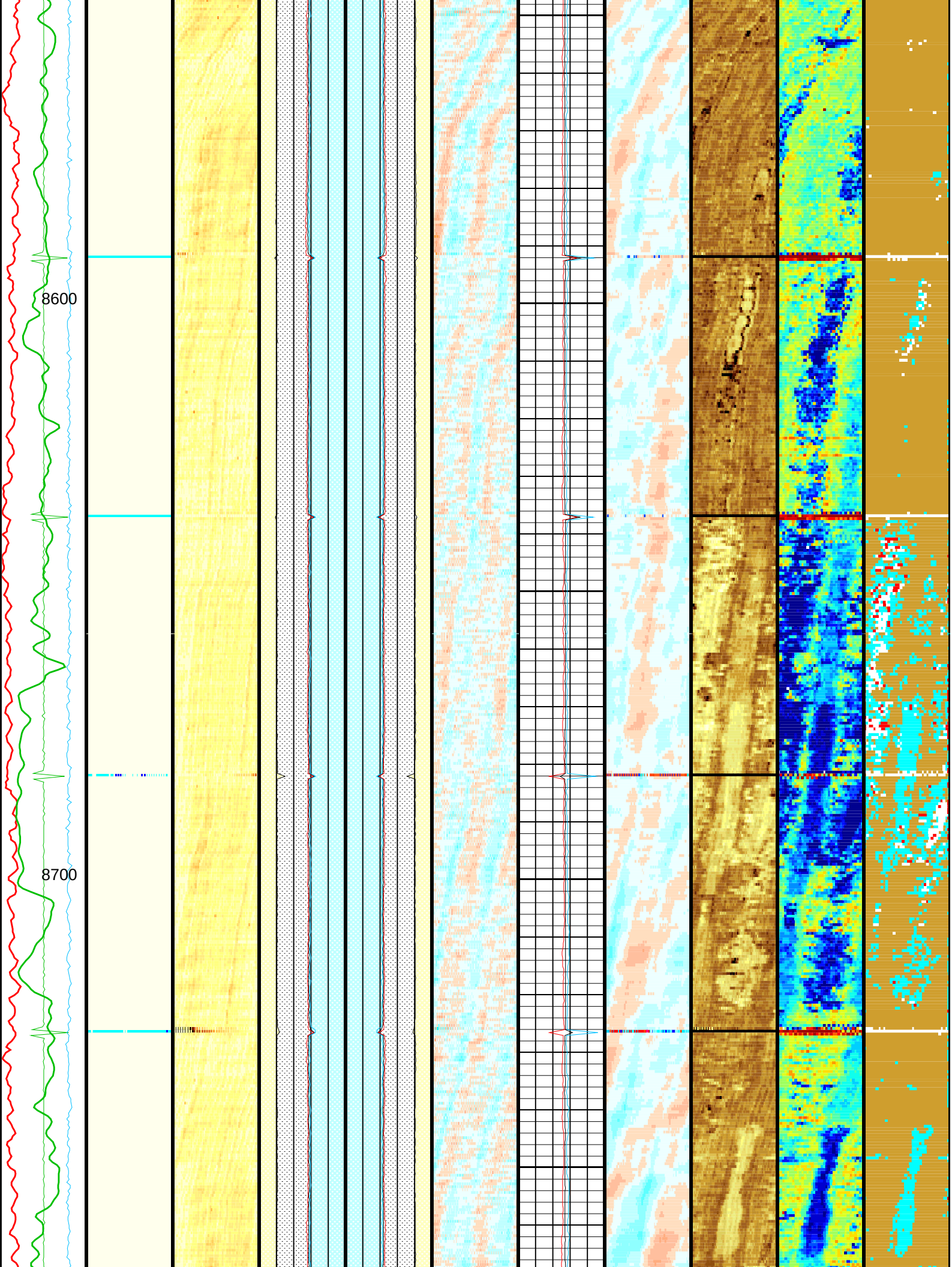
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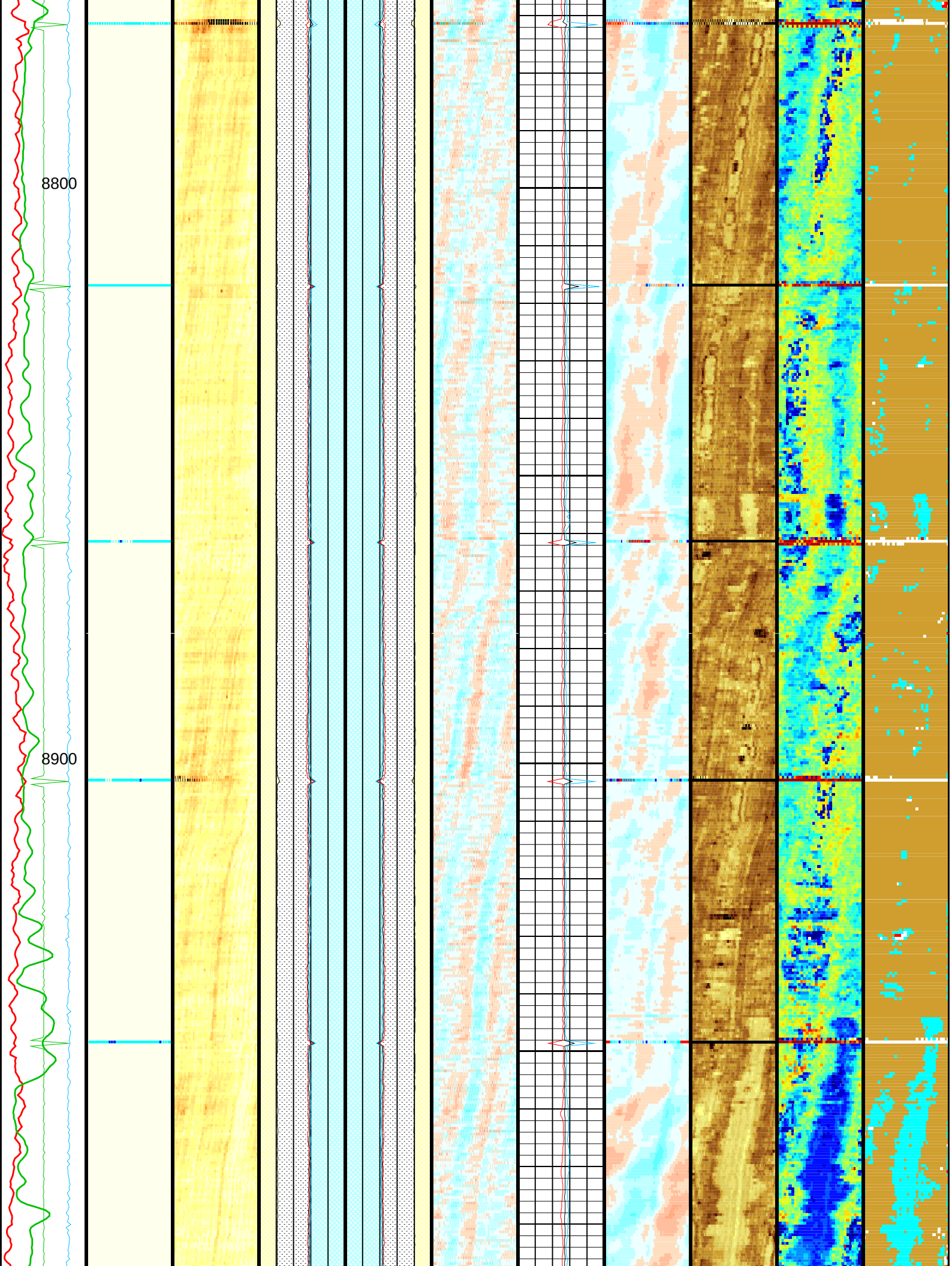
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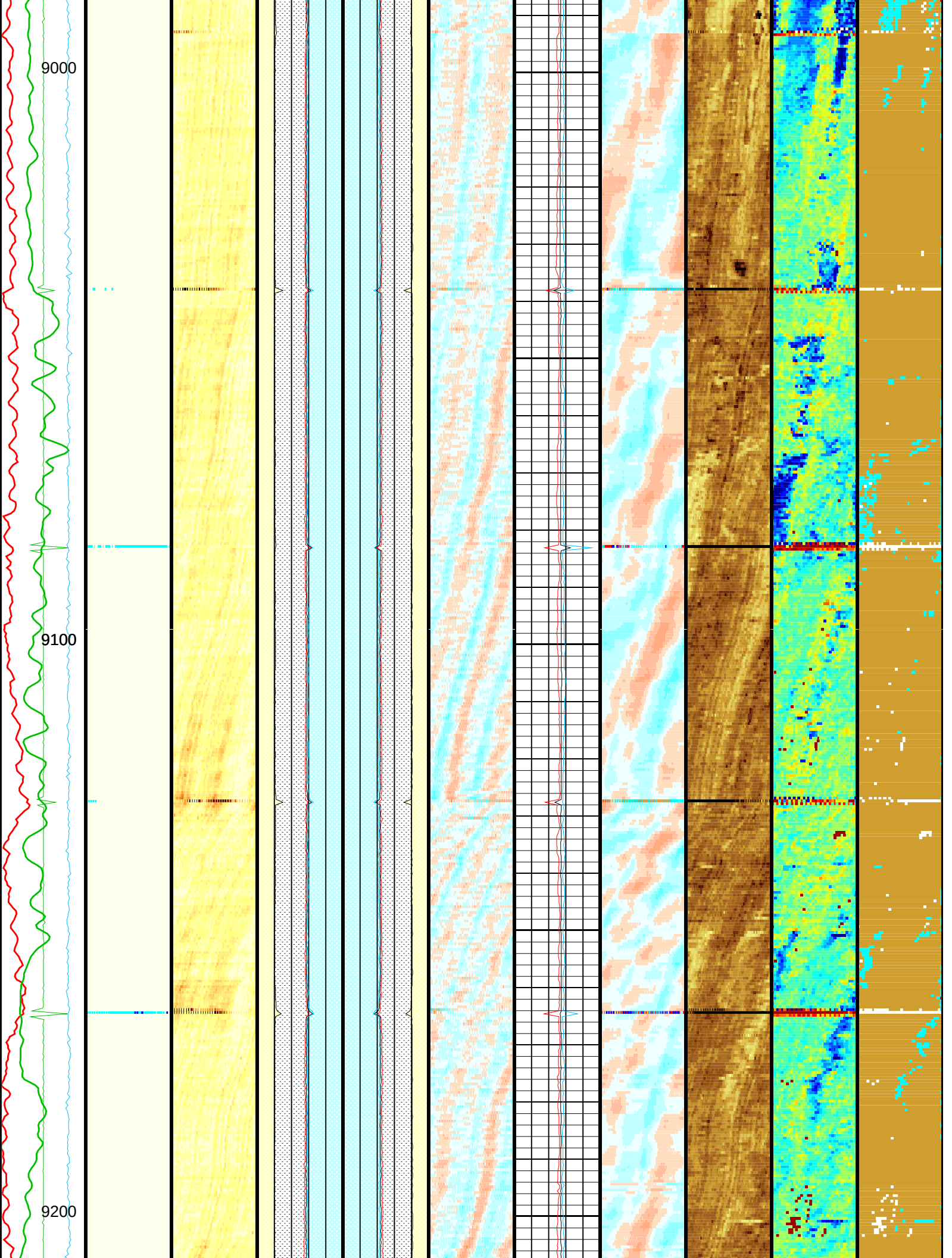
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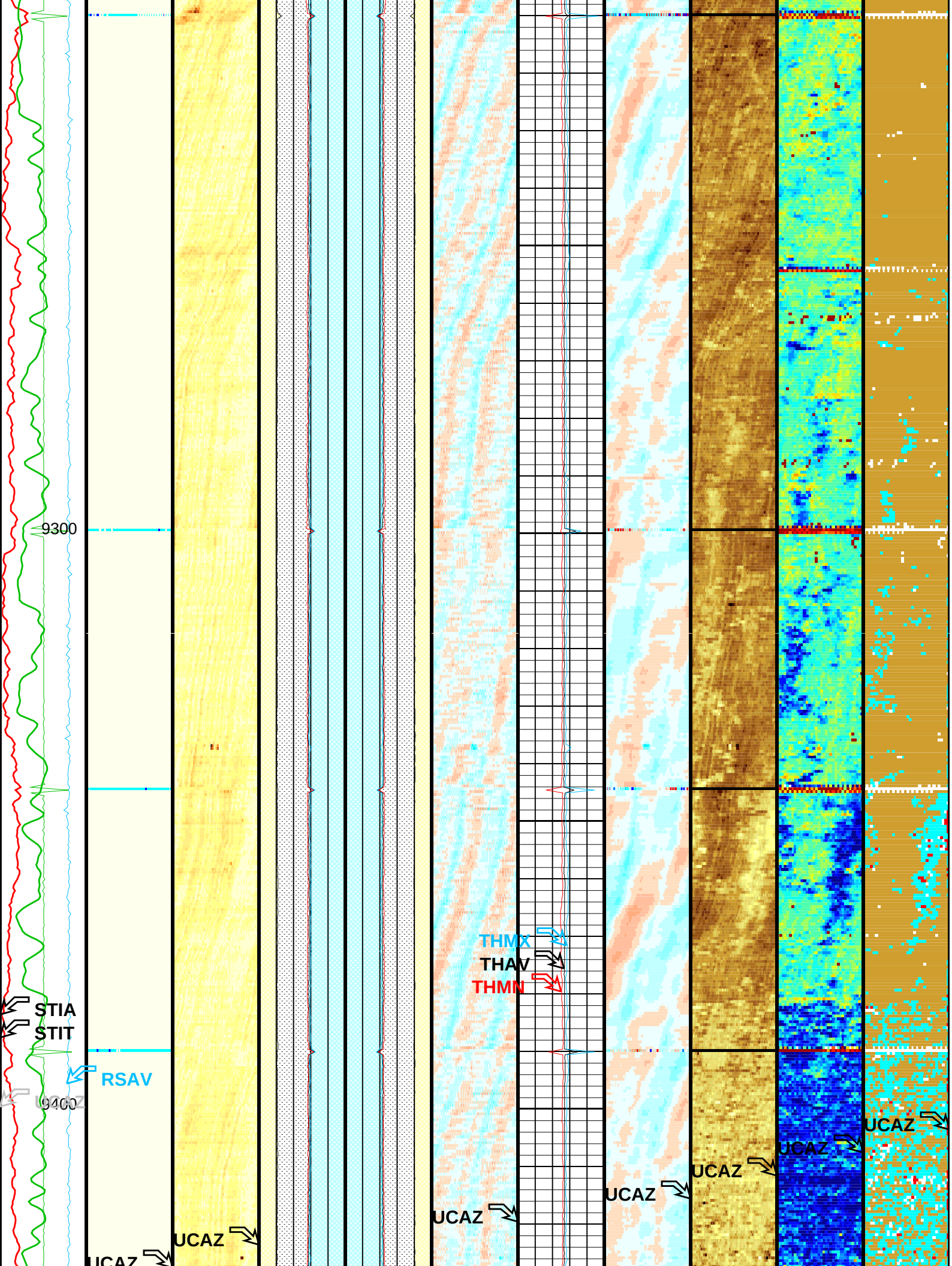
9100
9200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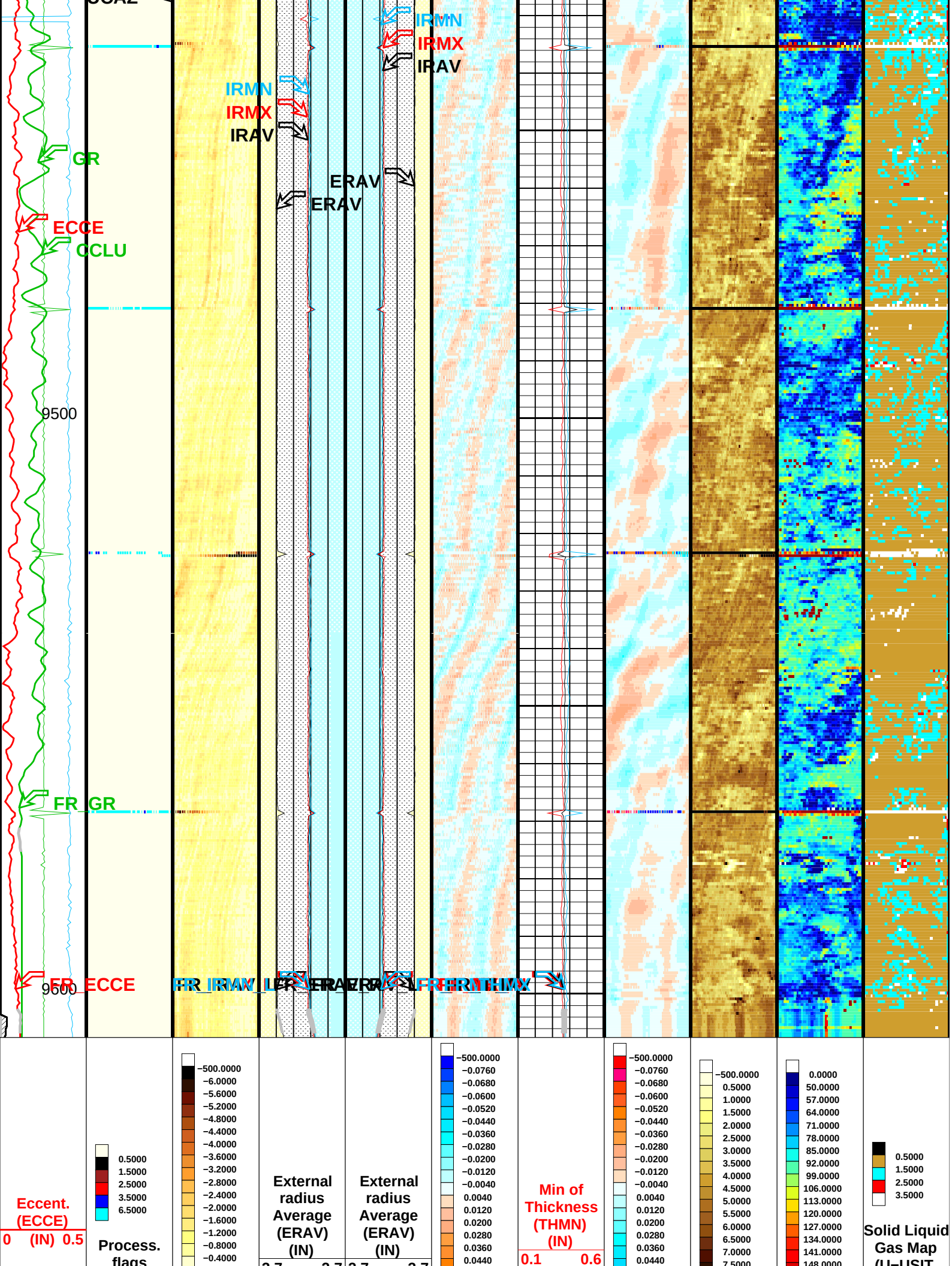
9400
STIA
STIT
RSAV
THMX
THAV
THMN
UCAZ
UCAZ
UCAZ
UCAZ
UCAZ
UCAZ


IRMN
IRMX
IRAV
IRMN
IRMX
IRAV
GR
ERAV
ERAV
ECCE
CCLU
9500
FR GR
9600
FR ECCE
FR IRMN IRMX IRAV ERAV ERAV FR THMN THMX
Eccent. (ECCE)
0 (IN) 0.5
0.5000
1.5000
2.5000
3.5000
6.5000
Process. flags
−500.0000
−6.0000
−5.6000
−5.2000
−4.8000
−4.4000
−4.0000
−3.6000
−3.2000
−2.8000
−2.4000
−2.0000
−1.6000
−1.2000
−0.8000
−0.4000
External radius Average (ERAV) (IN)
External radius Average (ERAV) (IN)
−500.0000
−0.0760
−0.0680
−0.0600
−0.0520
−0.0440
−0.0360
−0.0280
−0.0200
−0.0120
−0.0040
0.0040
0.0120
0.0200
0.0280
0.0360
0.0440
Min of Thickness (THMN) (IN)
0.1 0.6
−500.0000
−0.0760
−0.0680
−0.0600
−0.0520
−0.0440
−0.0360
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0.0040
0.0120
0.0200
0.0280
0.0360
0.0440
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1.5000
2.0000
2.5000
3.0000
3.5000
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5.5000
6.0000
6.5000
7.0000
7.5000
0.0000
50.0000
57.0000
64.0000
71.0000
78.0000
85.0000
92.0000
99.0000
106.0000
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141.0000
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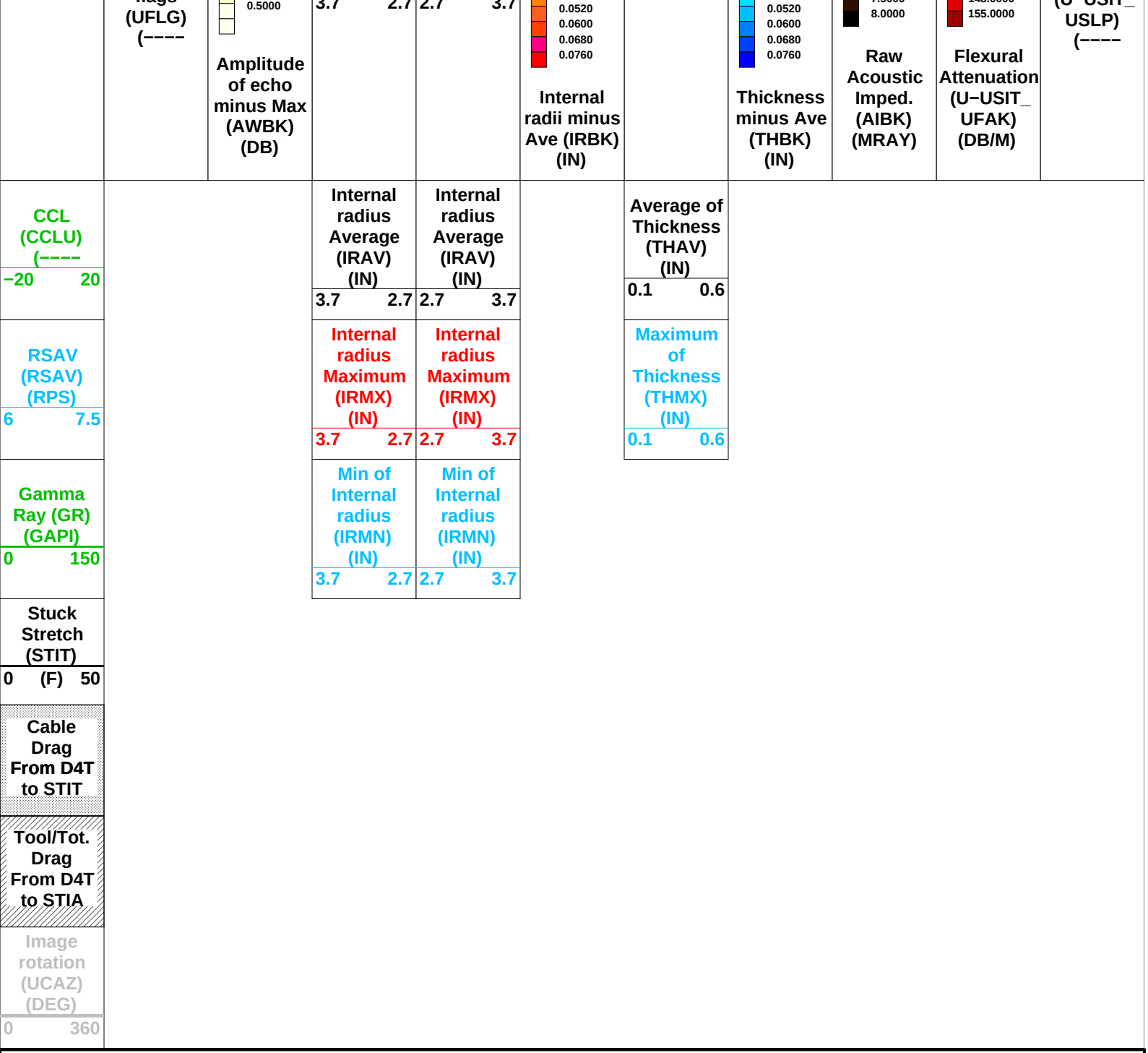
Solid Liquid Gas Map (U=USIT



Format: USI_IBC_SLG_Composite **Vertical Scale: 5" per 100'** **Graphics File Created: 18-May-2010 14:19**

OP System Version: 17C0-154

USIT-D	17C0-154	HILTH-FTB	17C0-154
DTC-H	17C0-154		

All USI Images are outside views

USI : LOW Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.27 to 0.6 IN.

Parameters

DLIS Name	Description	Value

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	7	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	6.276	IN
DFVL	Default Fluid Velocity	206	US/F
DOT	Diameter of Transducer Sensor	2.874	IN
EMXV	EMEX Voltage	110	V
FSOD	Fluid Slowness Fits Casing Outer Diameter	5_UFSL_N_ZMUD	
IMAR	Image Rotation	OFF	
MW	Mud Weight	11.5	LB/G
RCOD	Reference Calibrator Outer Diameter	7	IN
RCSO	Reference Calibrator Standoff	1.1811	IN
RCTH	Reference Calibrator Thickness	0.2952	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	0.362	IN
U−USIT_CEMT	USIT Cement Type	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	8	DB/M
U−USIT_UIAP	USIT IBC Answer Product Enabled	SolidLiquidGasMap	
U−USIT_UIST	Ultrasonic IBC Sonde Type	Sub_Ibcs_B	
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_7_inch	
UWKM	Ultrasonic Working Mode	5DEG_6IN_136UNF_LF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	21.7078	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	−1	MRAY
ZMUD	Acoustic Impedance of Mud	2.15	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.6	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	9742.00	FT
TDL	Total Depth − Logger	9600.00	FT
	System and Miscellaneous		
BS	Bit Size	9.875	IN
CWEI	Casing Weight	26.00	LB/F
DO	Depth Offset for Playback	6.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

Company: EXXON MOBIL CORPORATION **Well: PCU 296−6A8**

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

Output DLIS Files

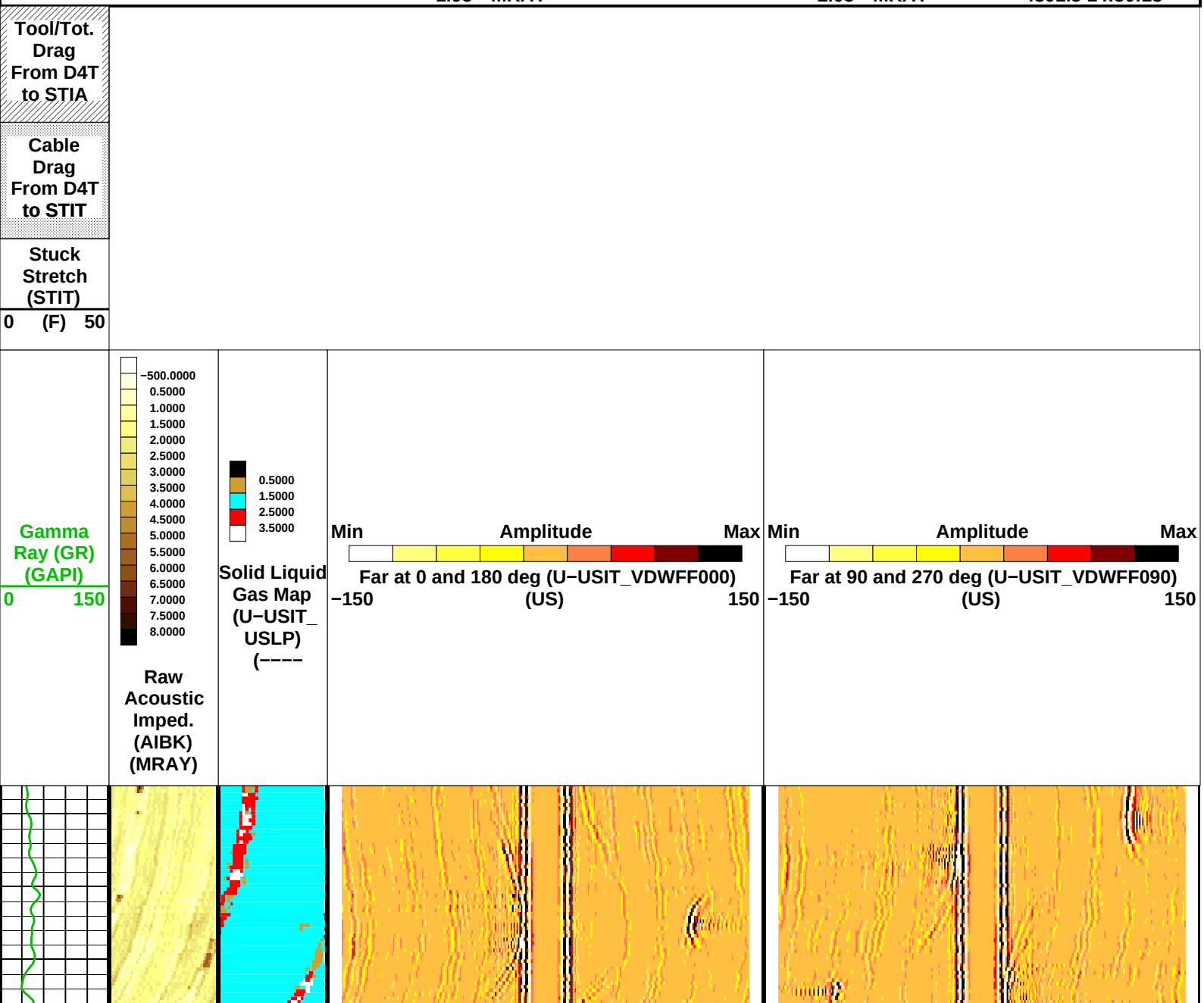
DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

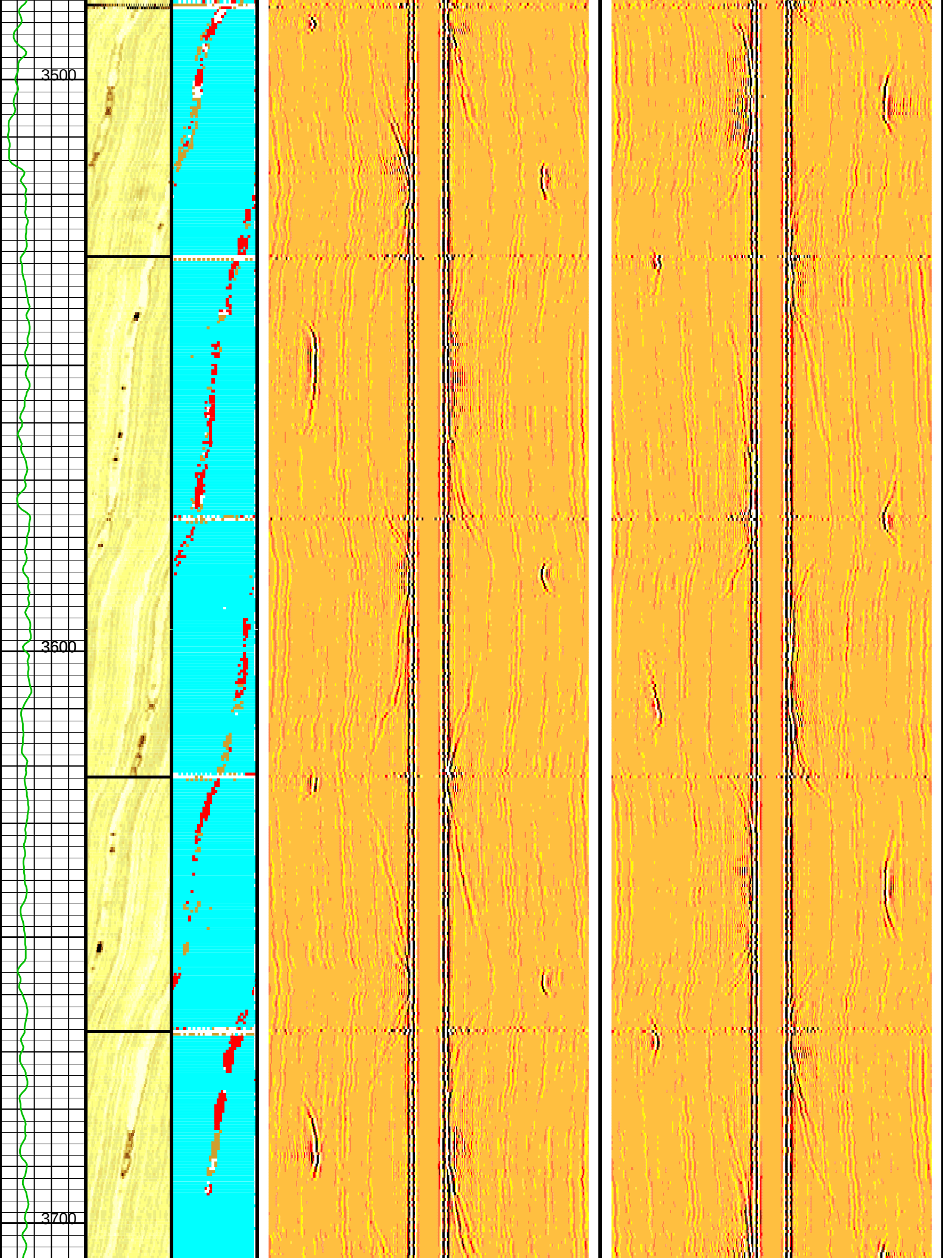
OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
ZMUD	2.05 MRAY	2.15 MRAY	6501.5 14:25:54
	1.95 MRAY	2.05 MRAY	4801.5 14:30:13

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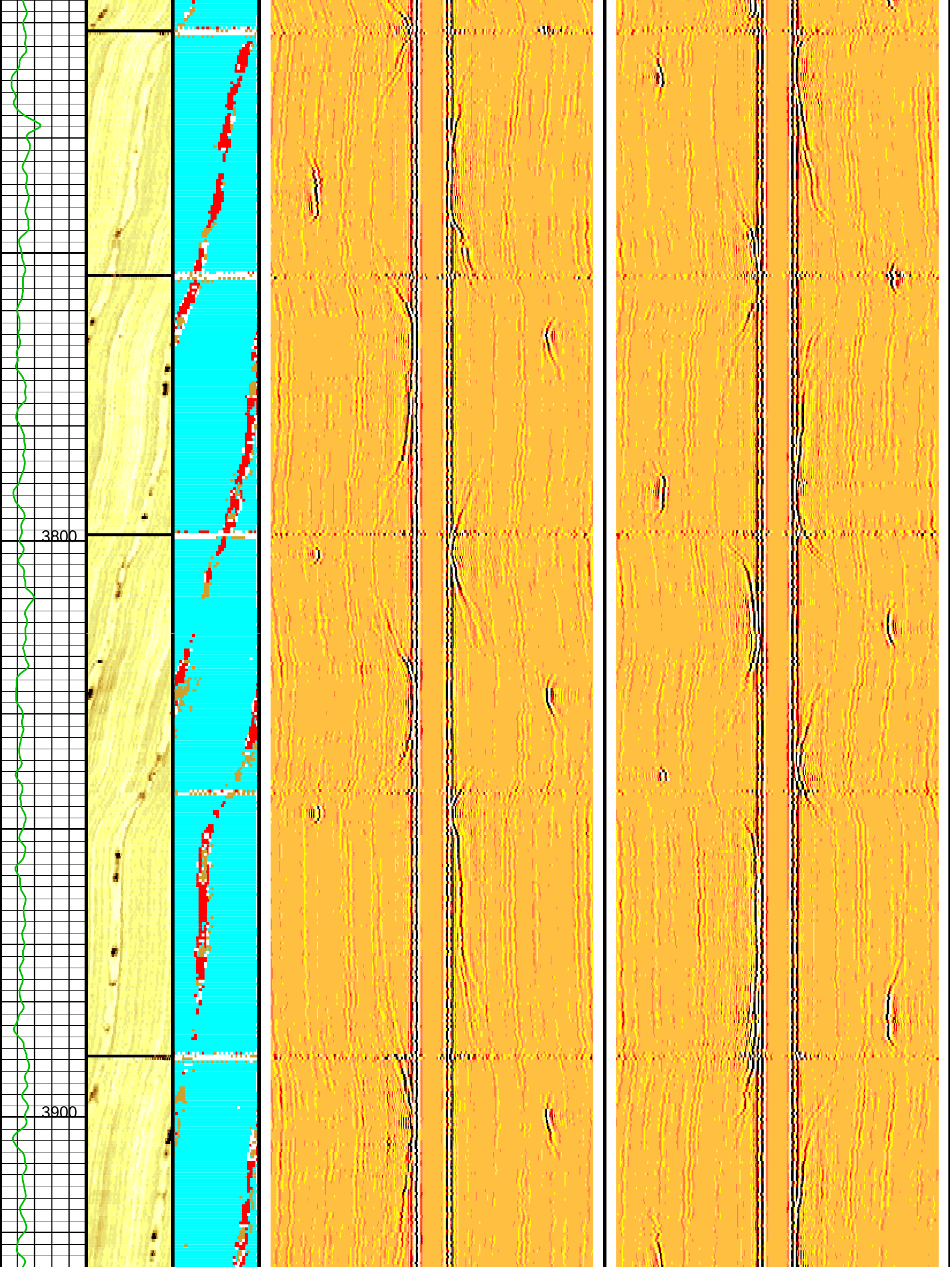
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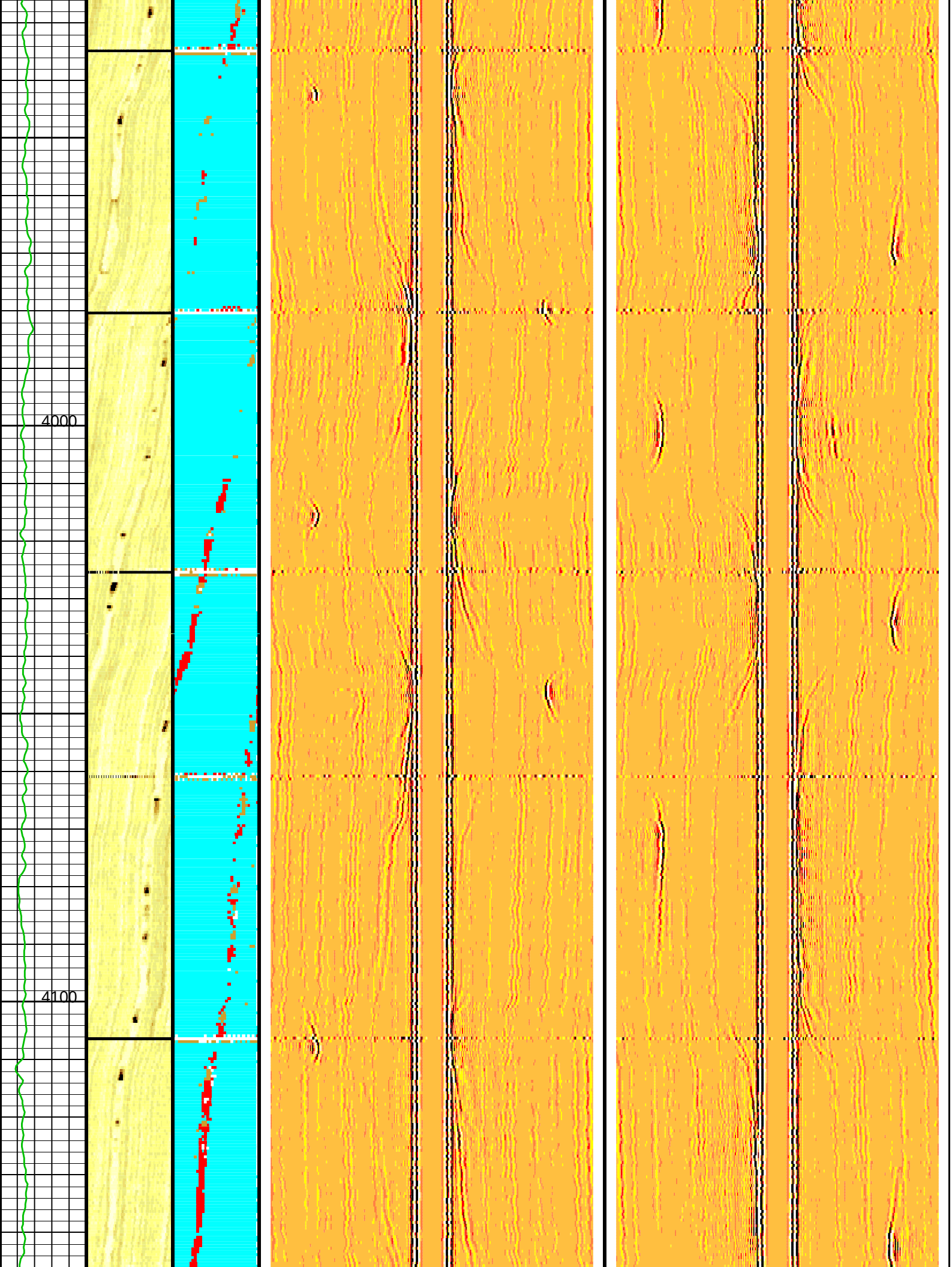
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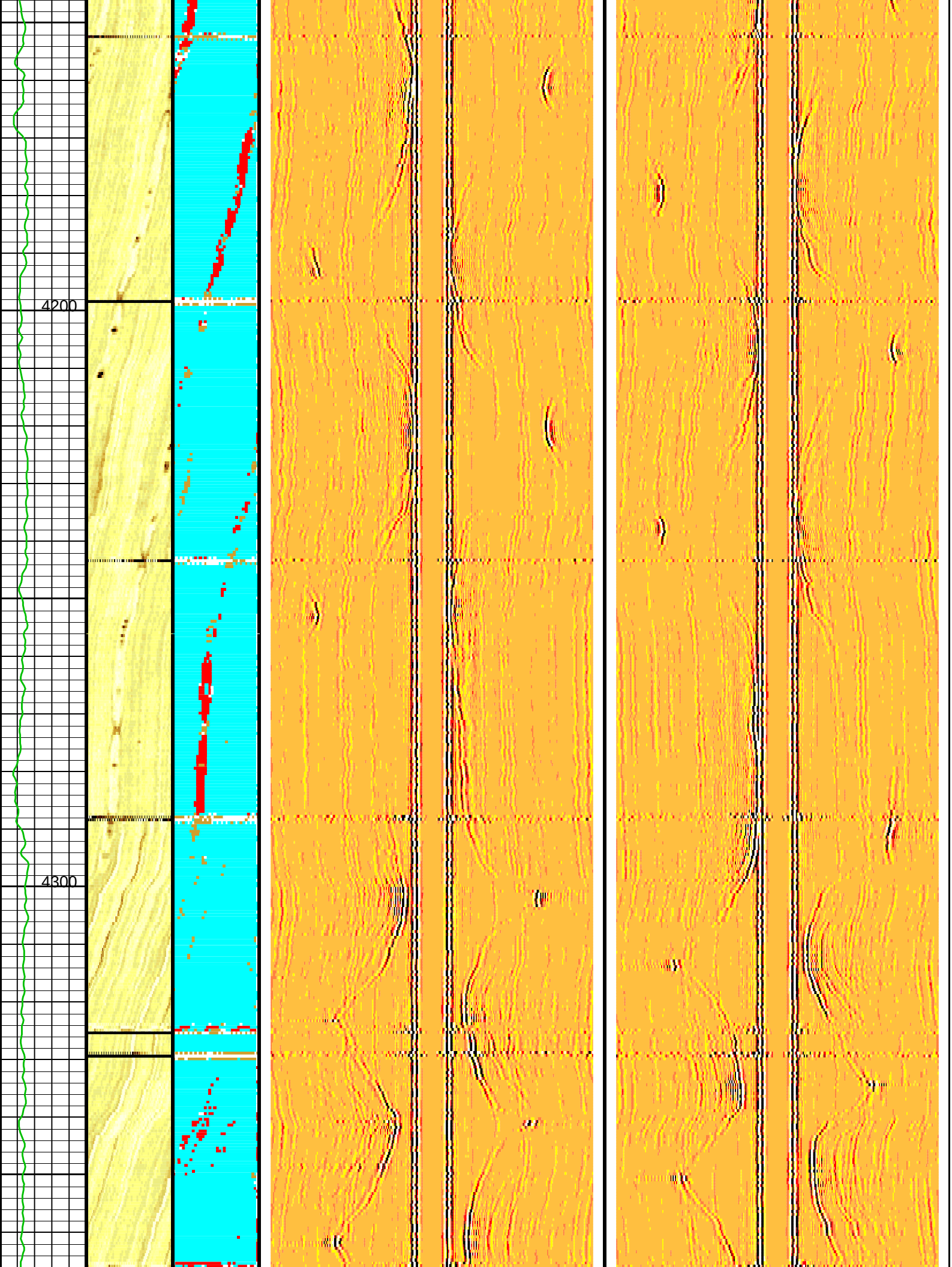
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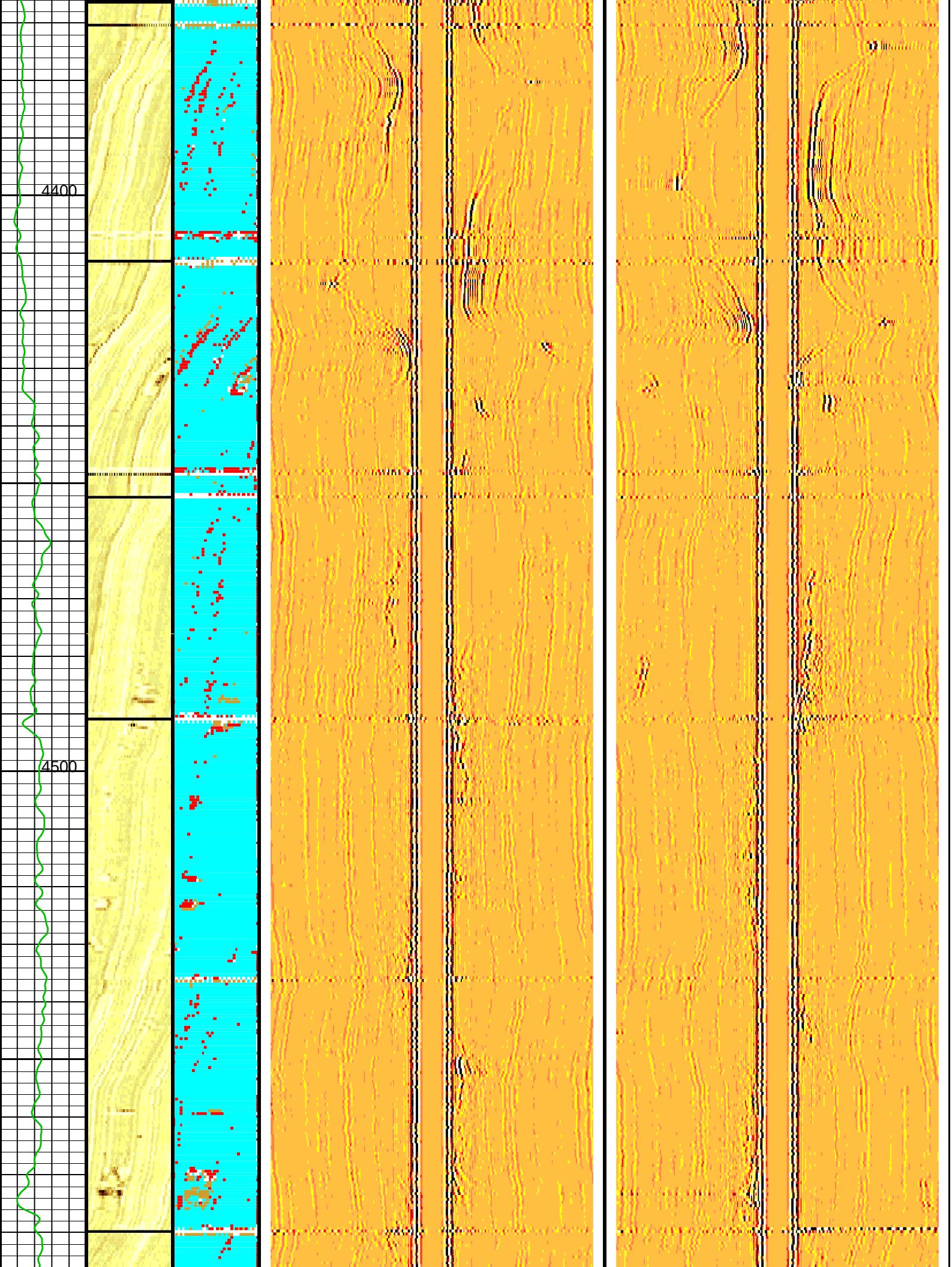
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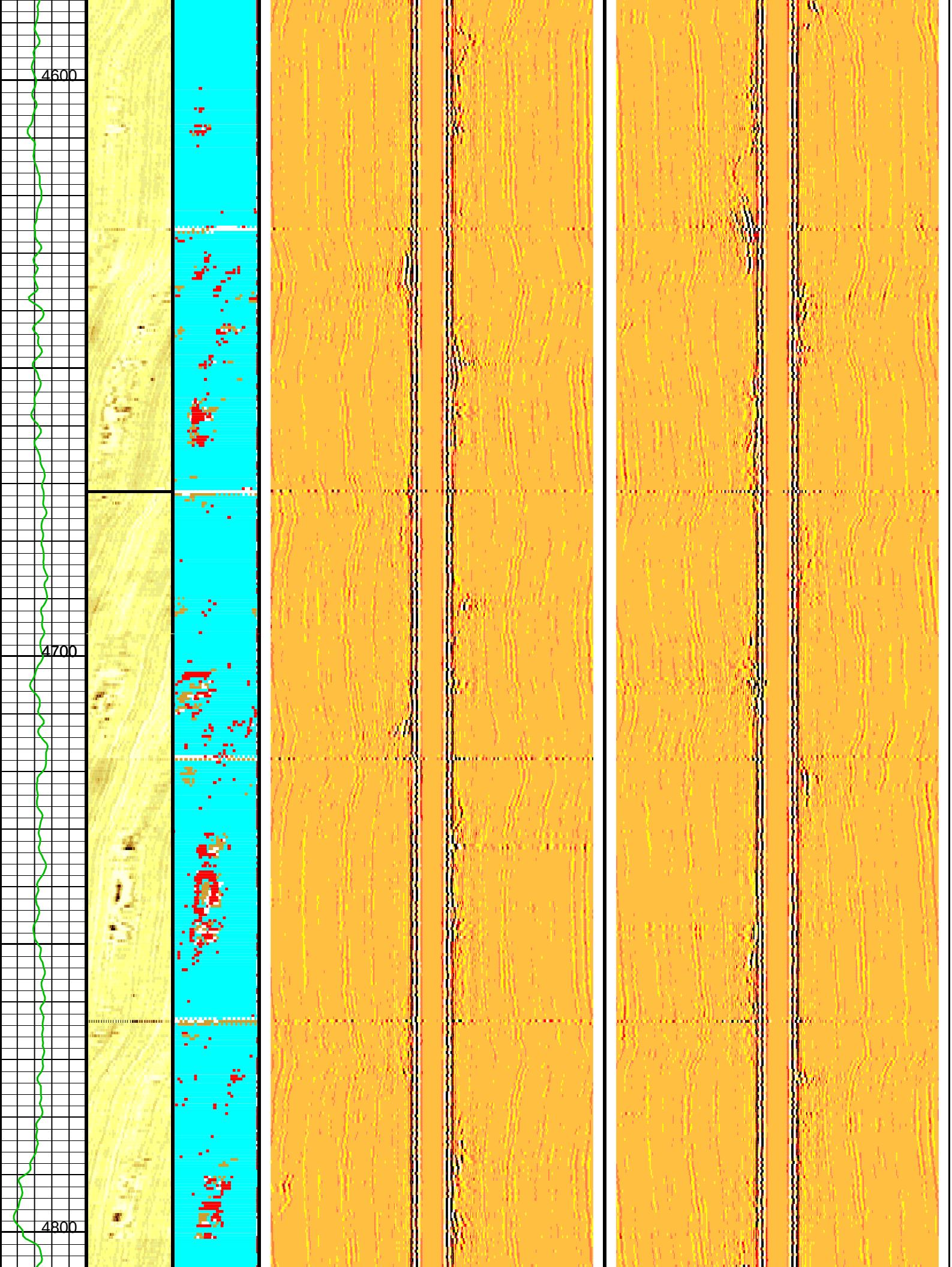
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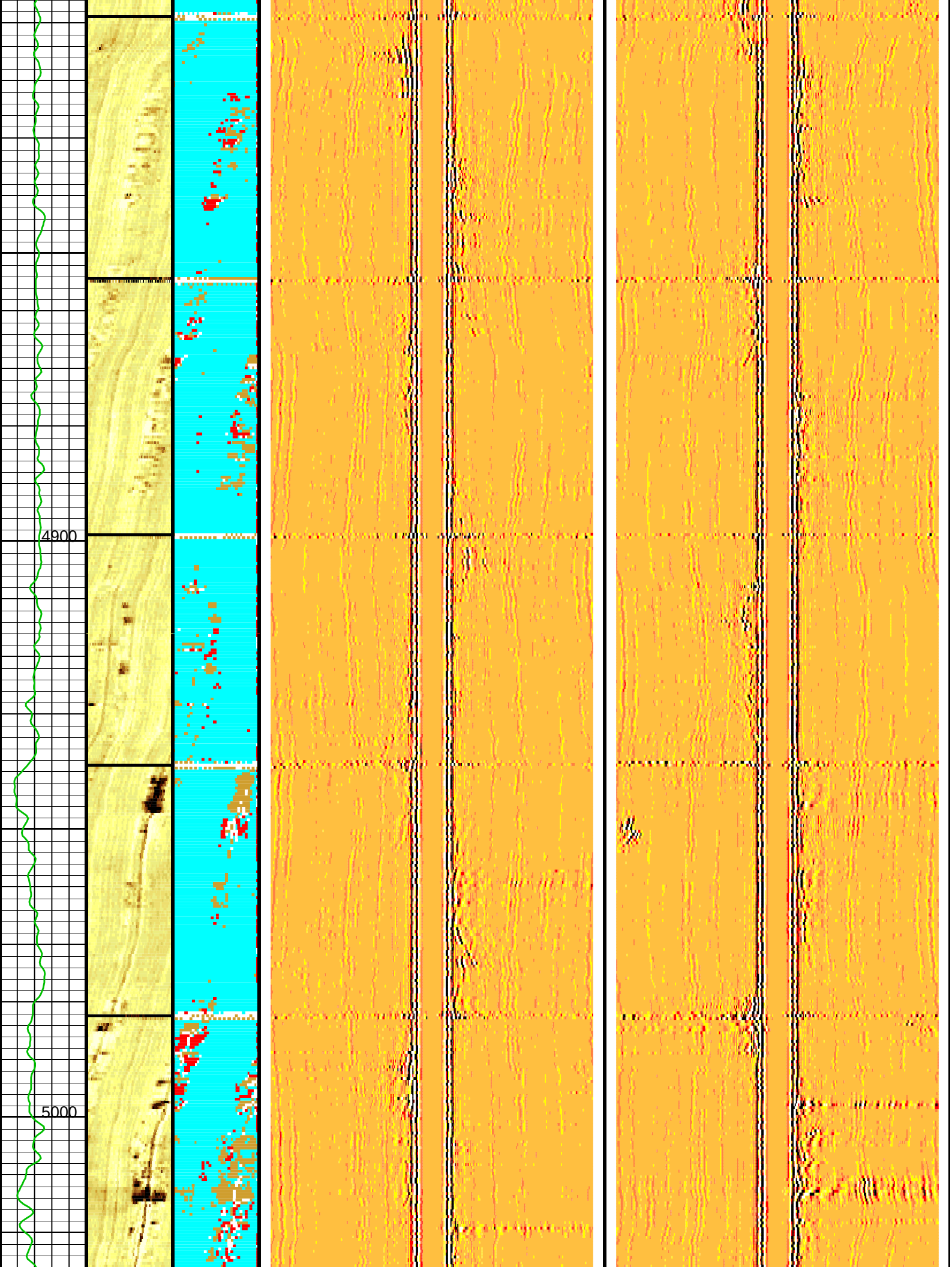
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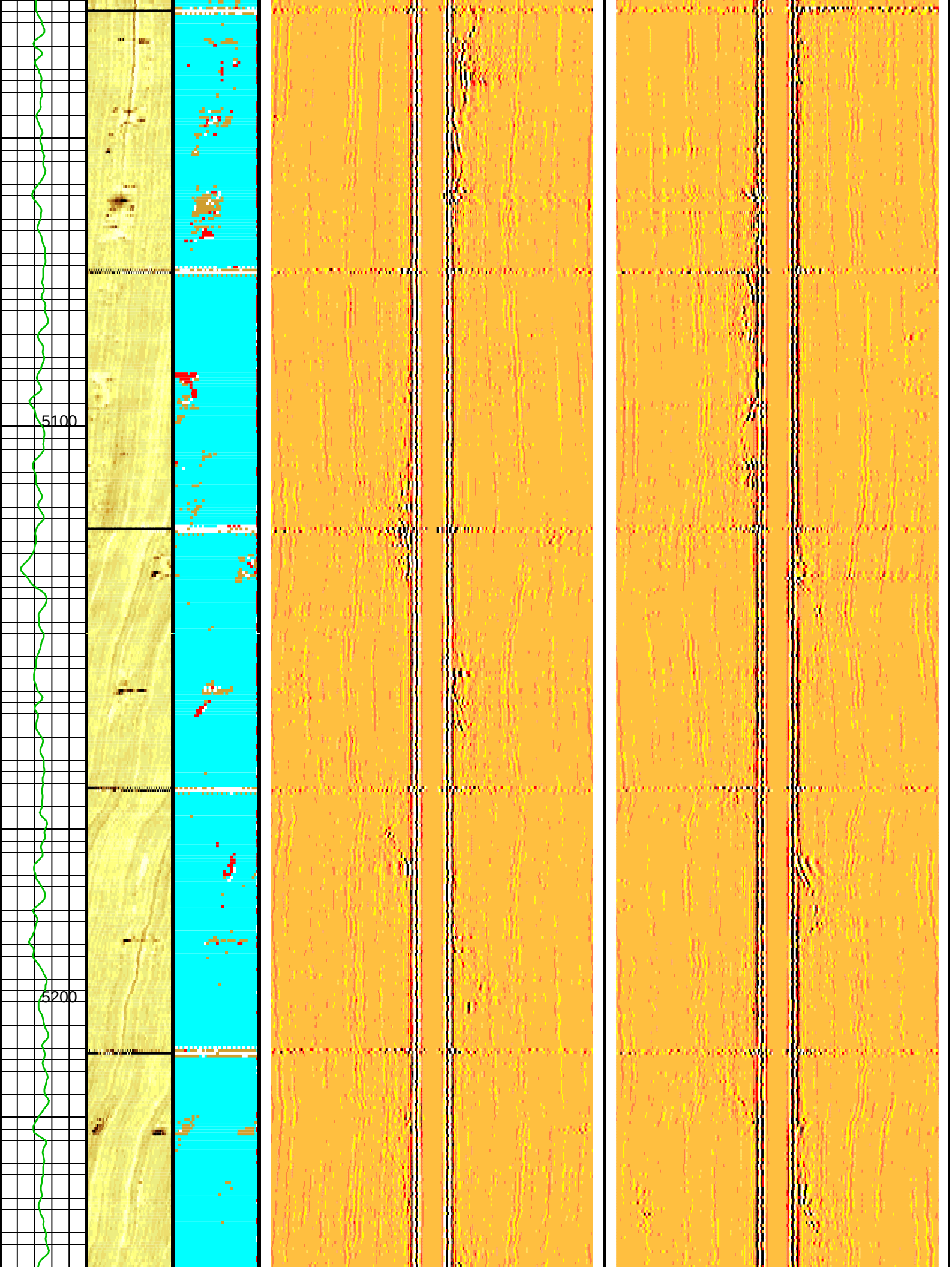
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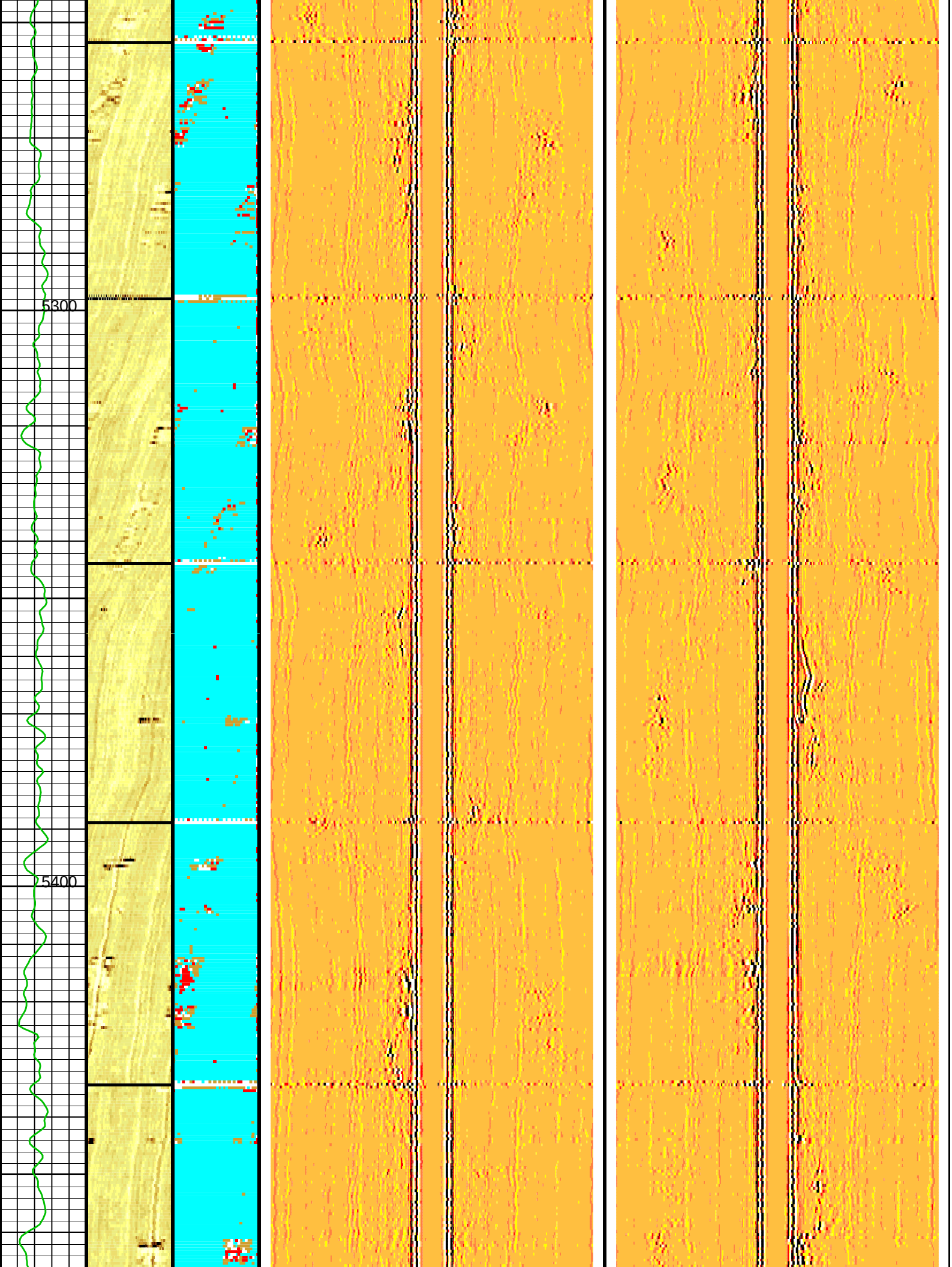
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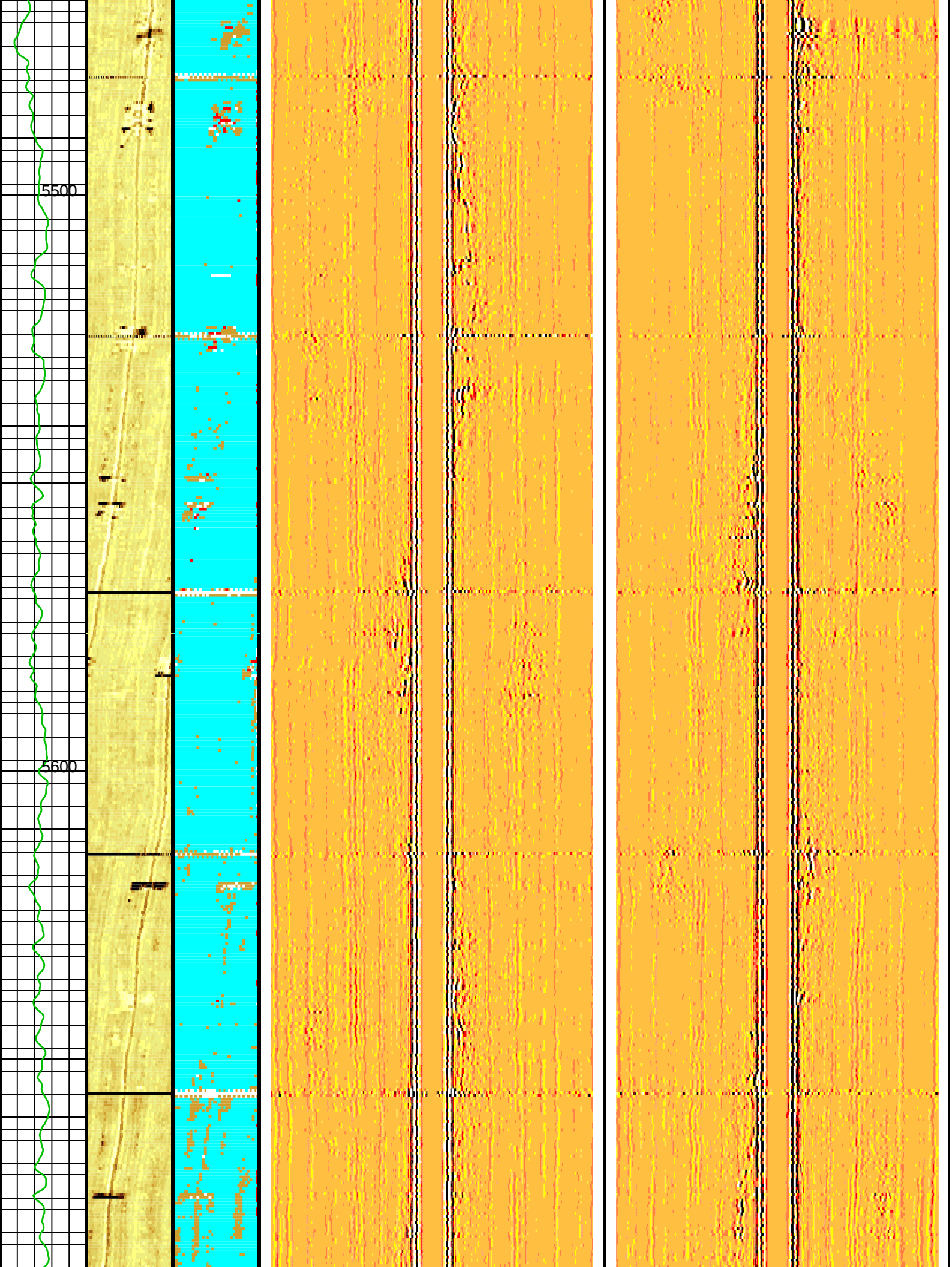
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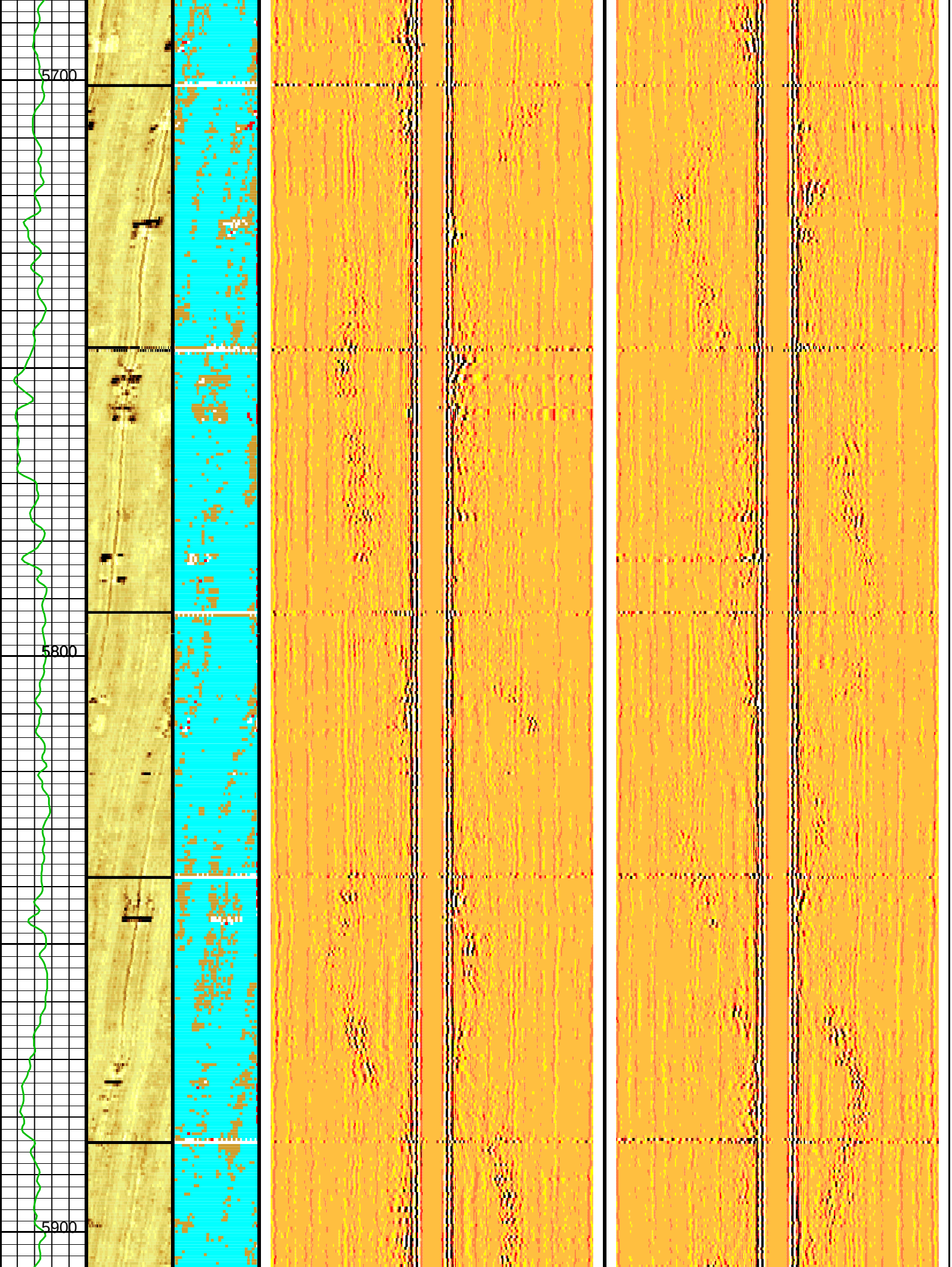
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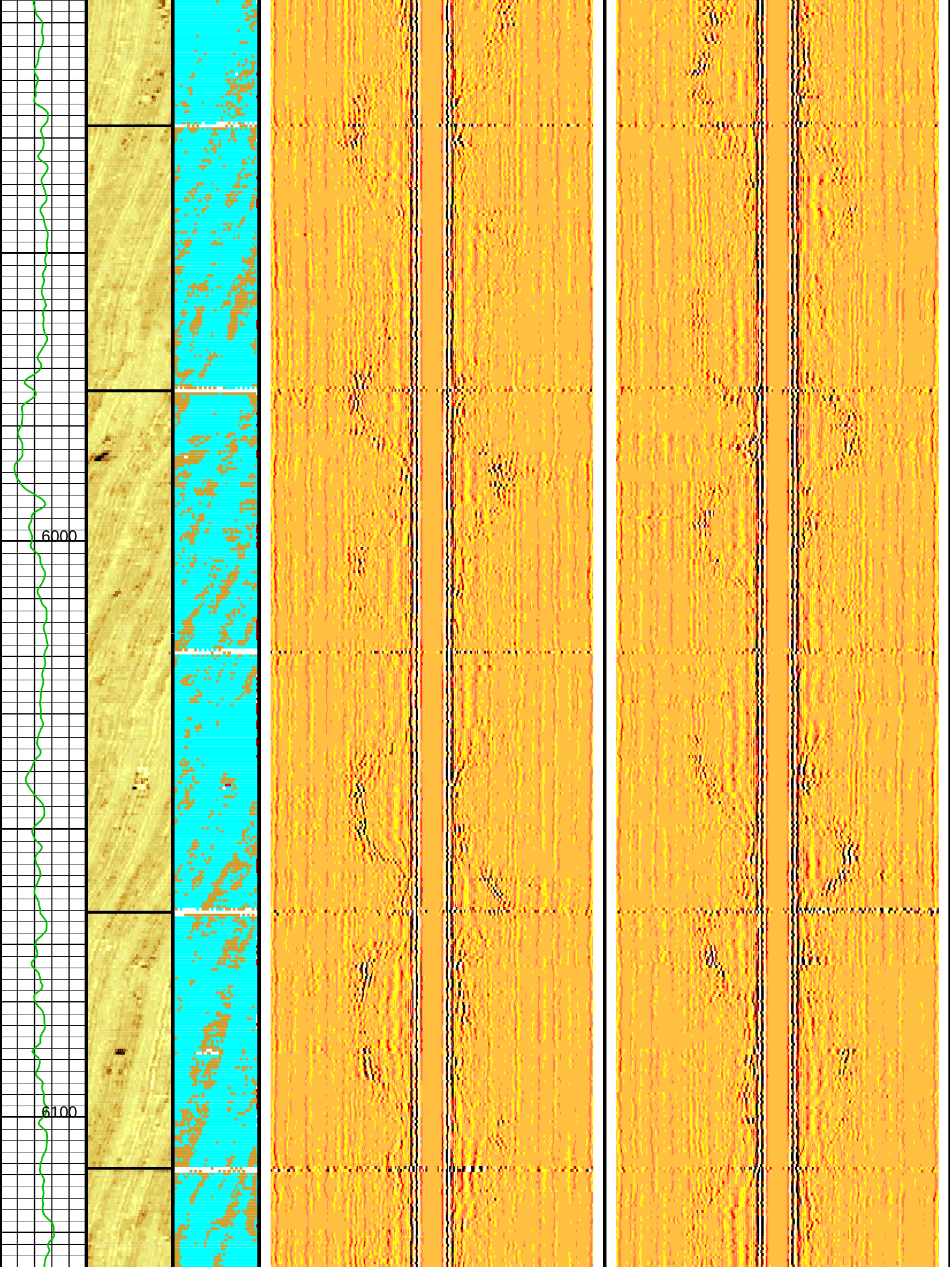
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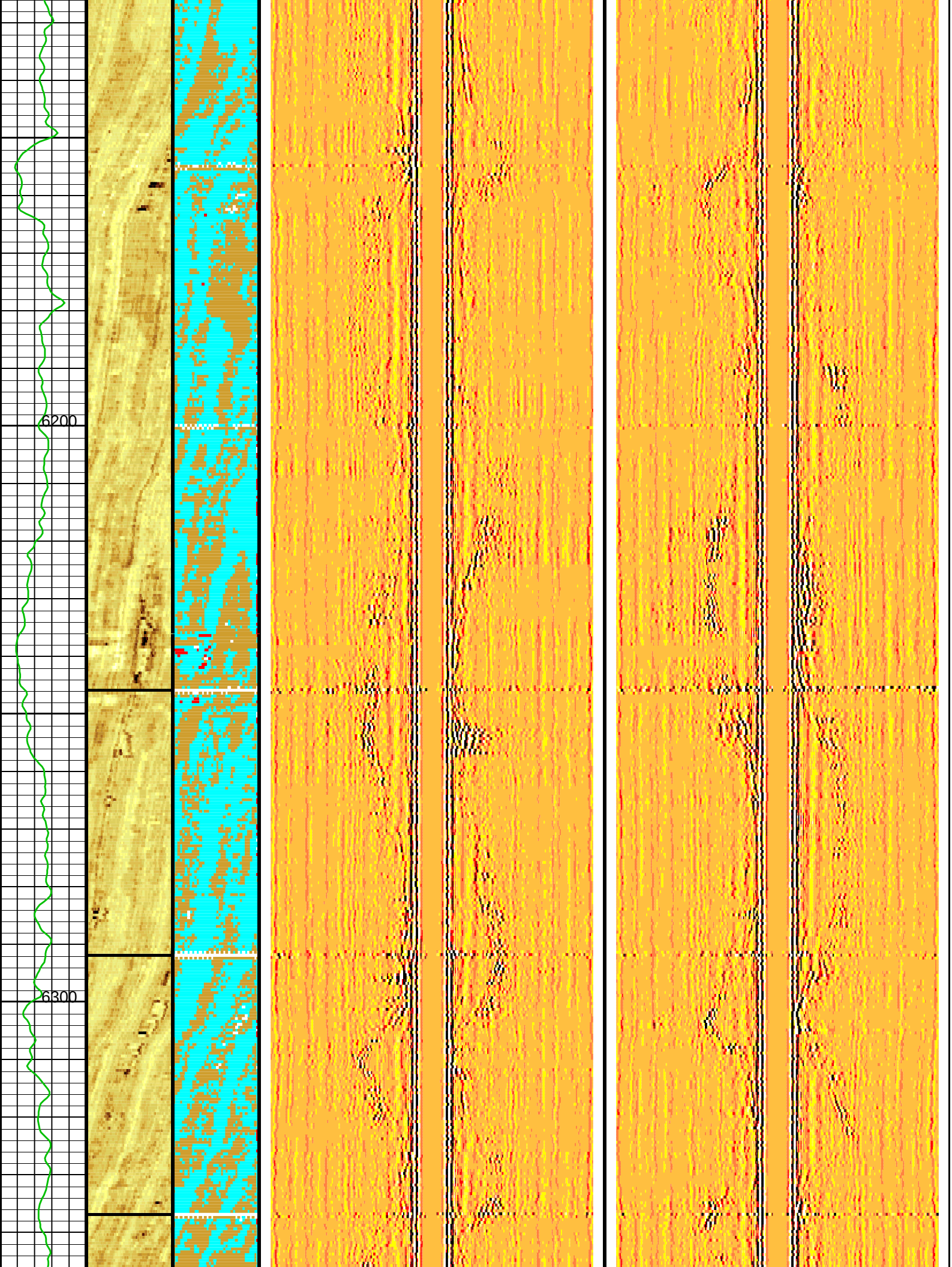
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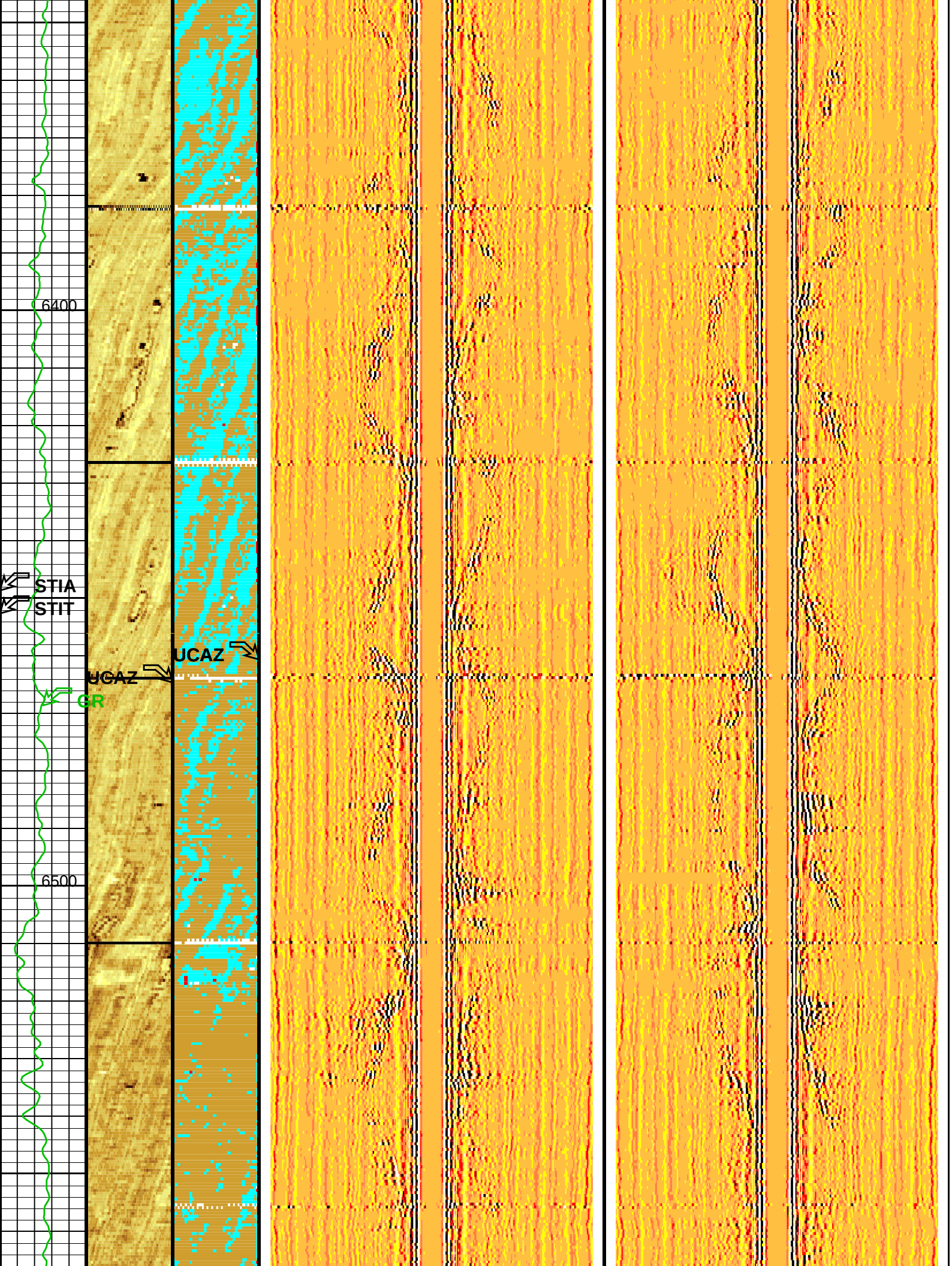
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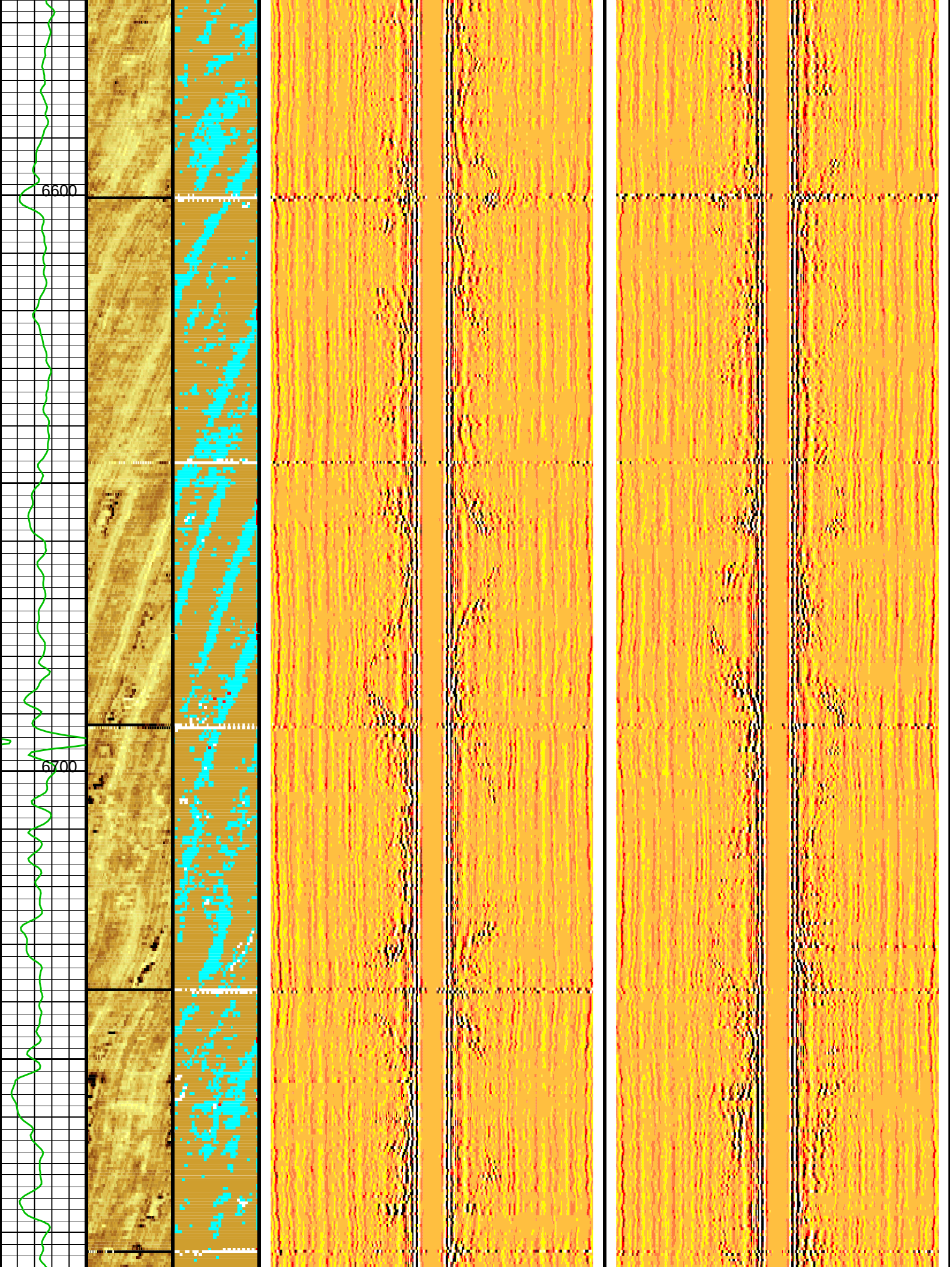
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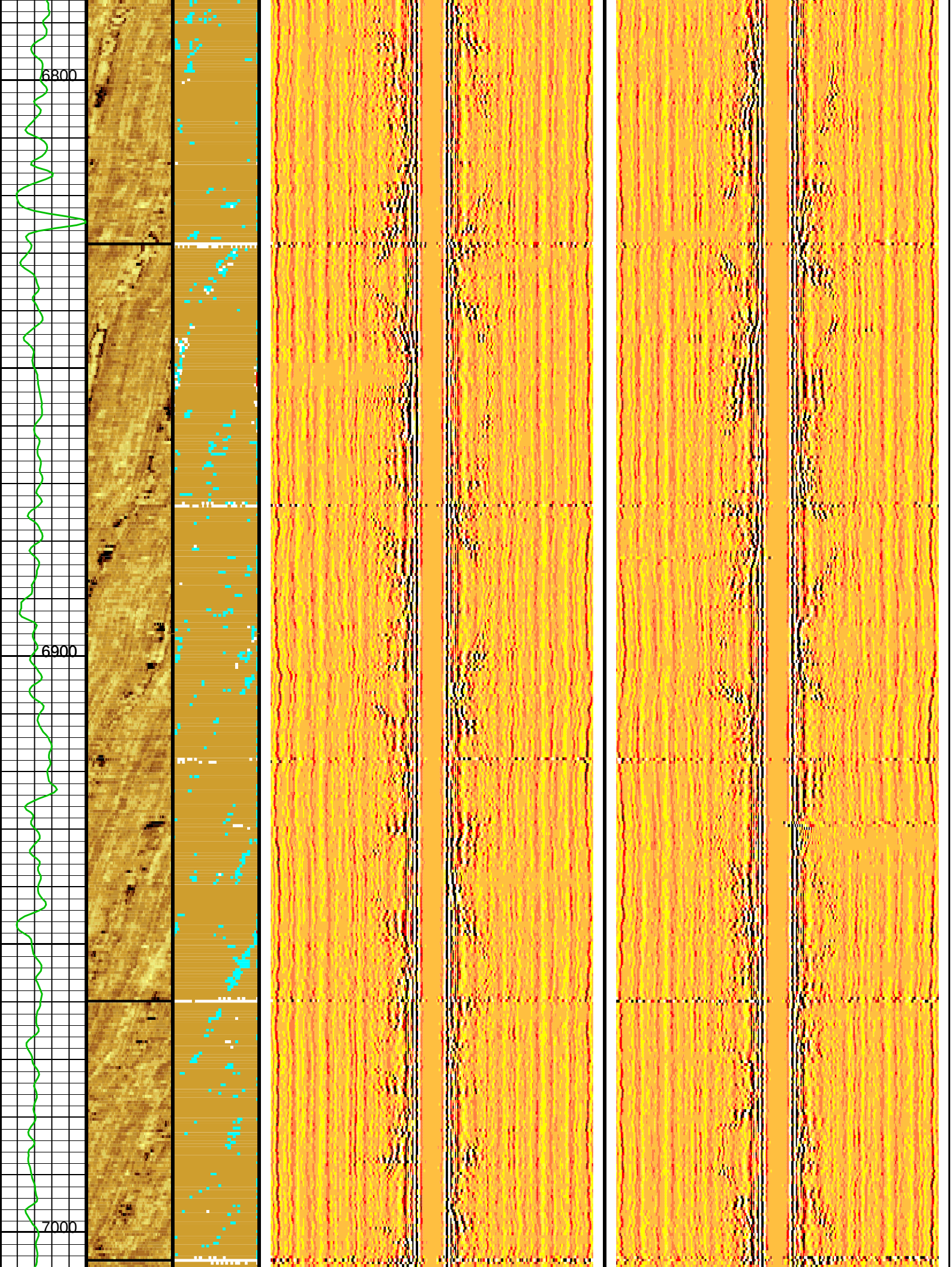
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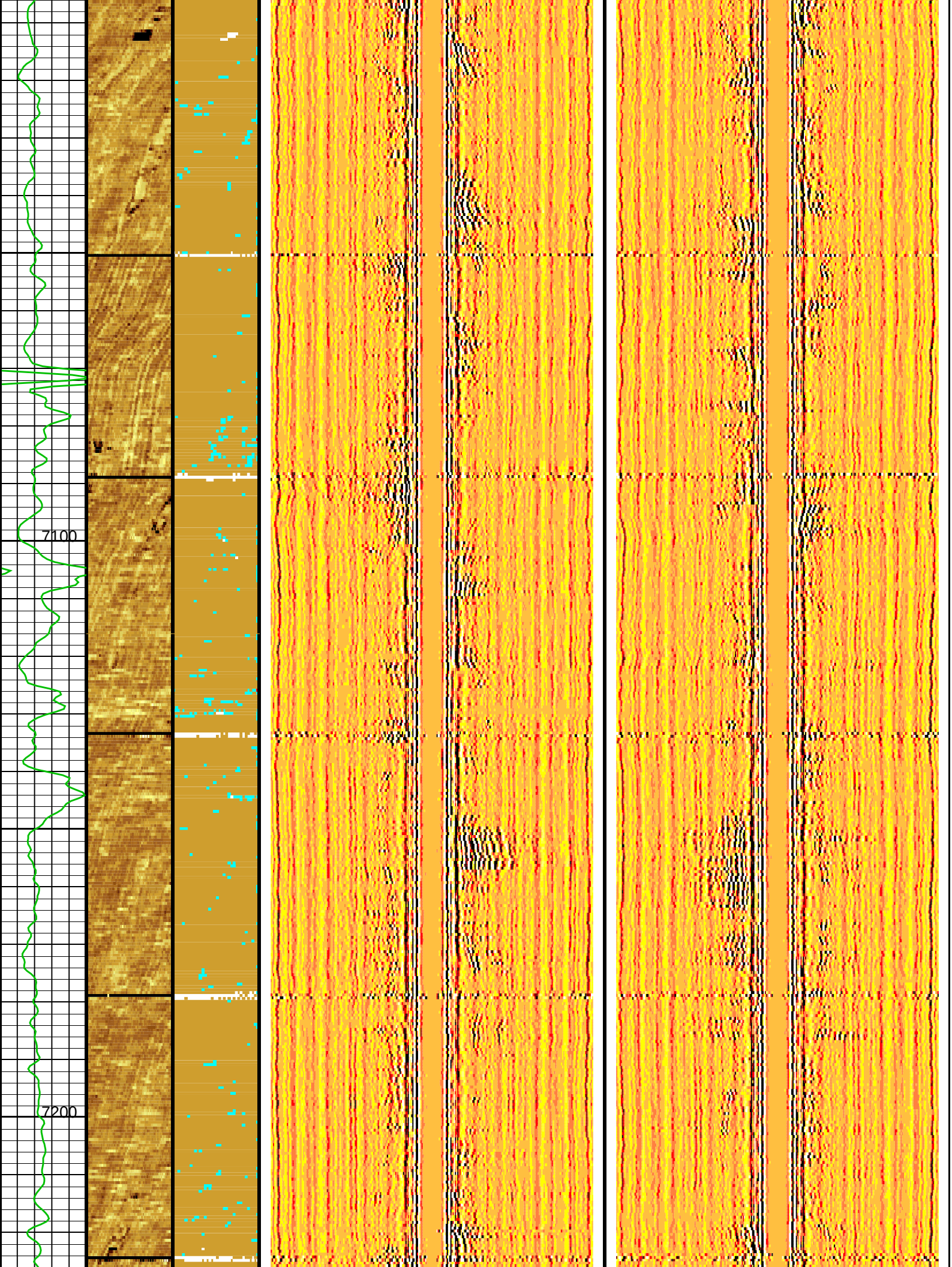
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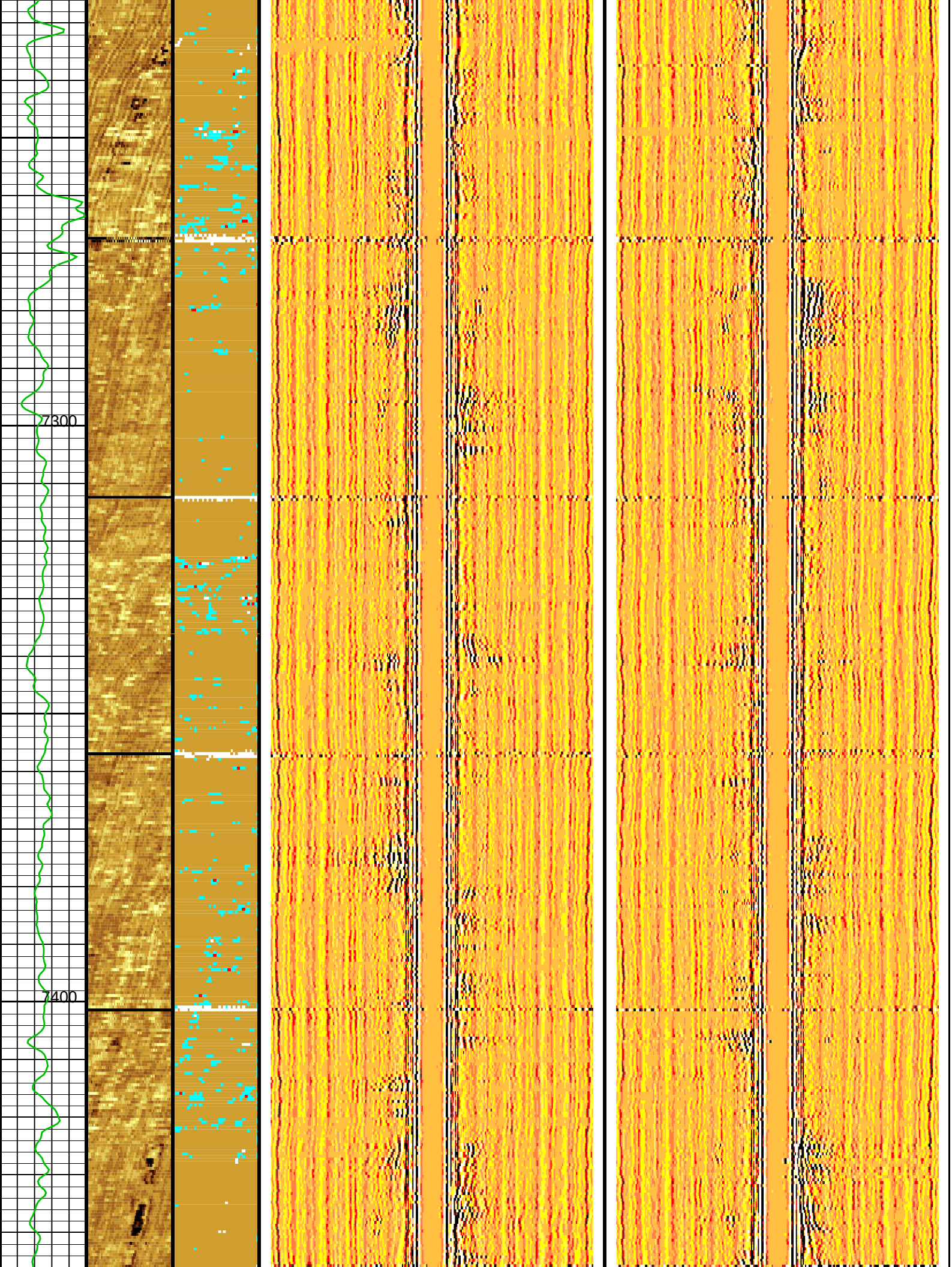
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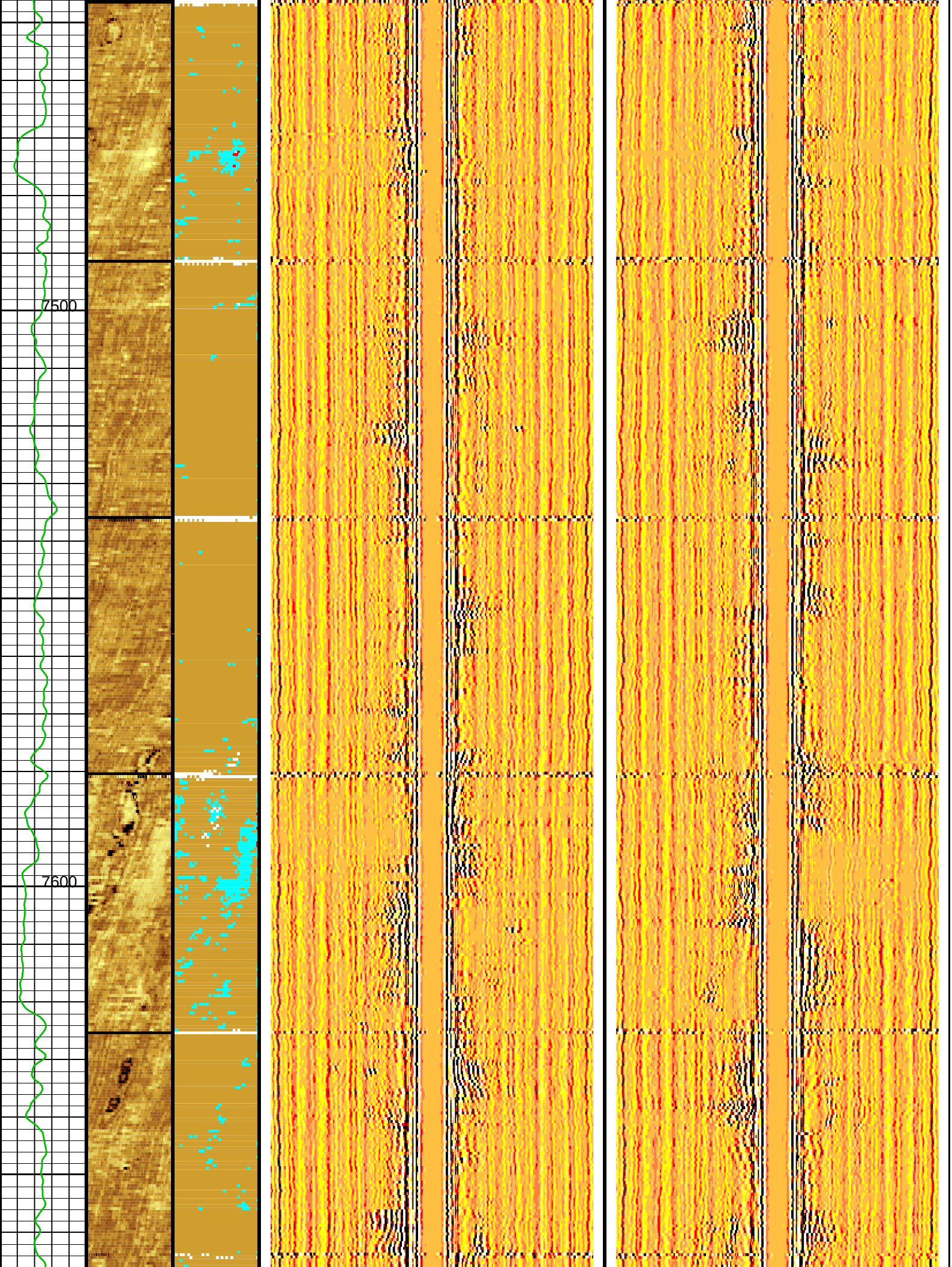
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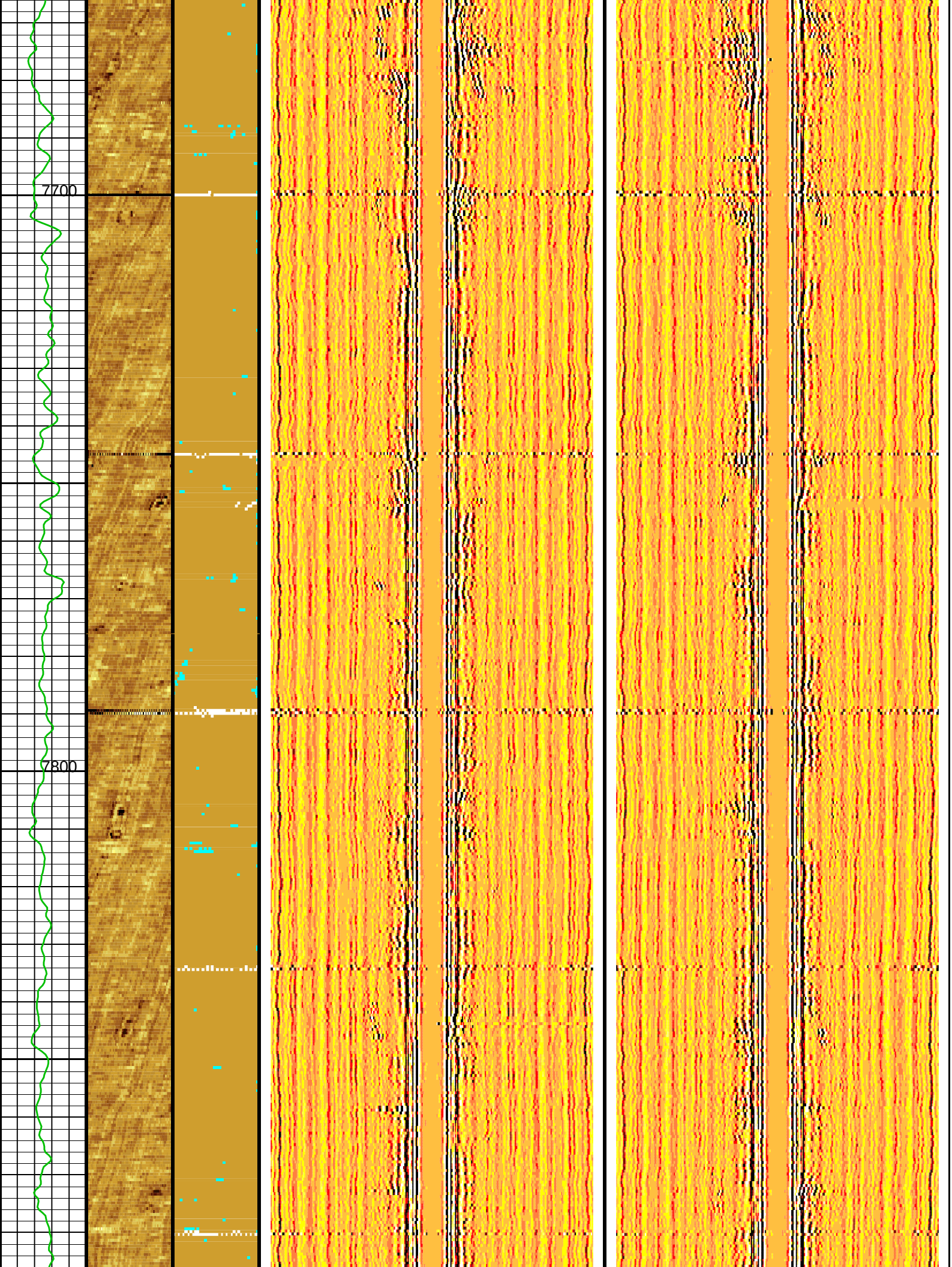
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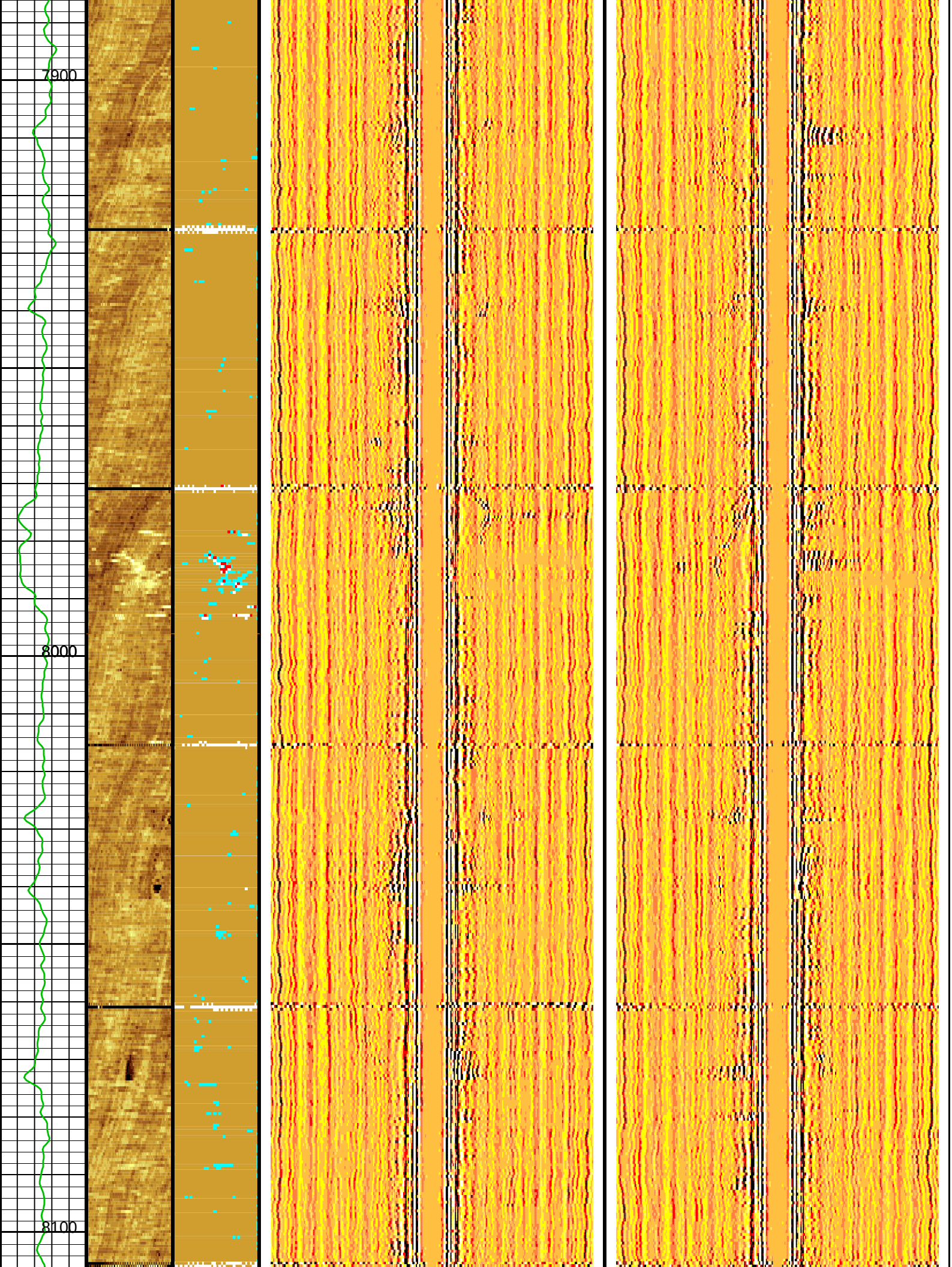
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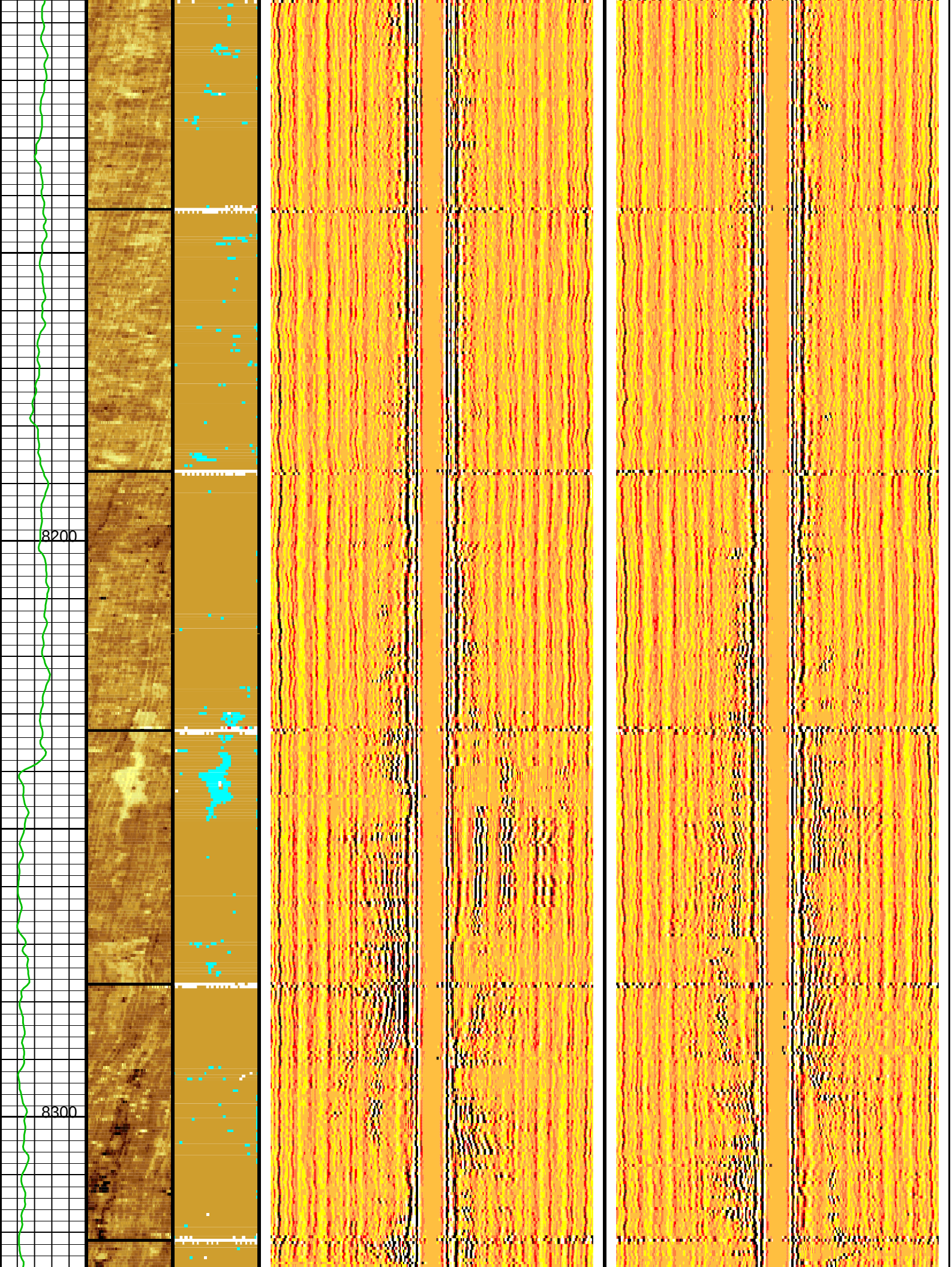
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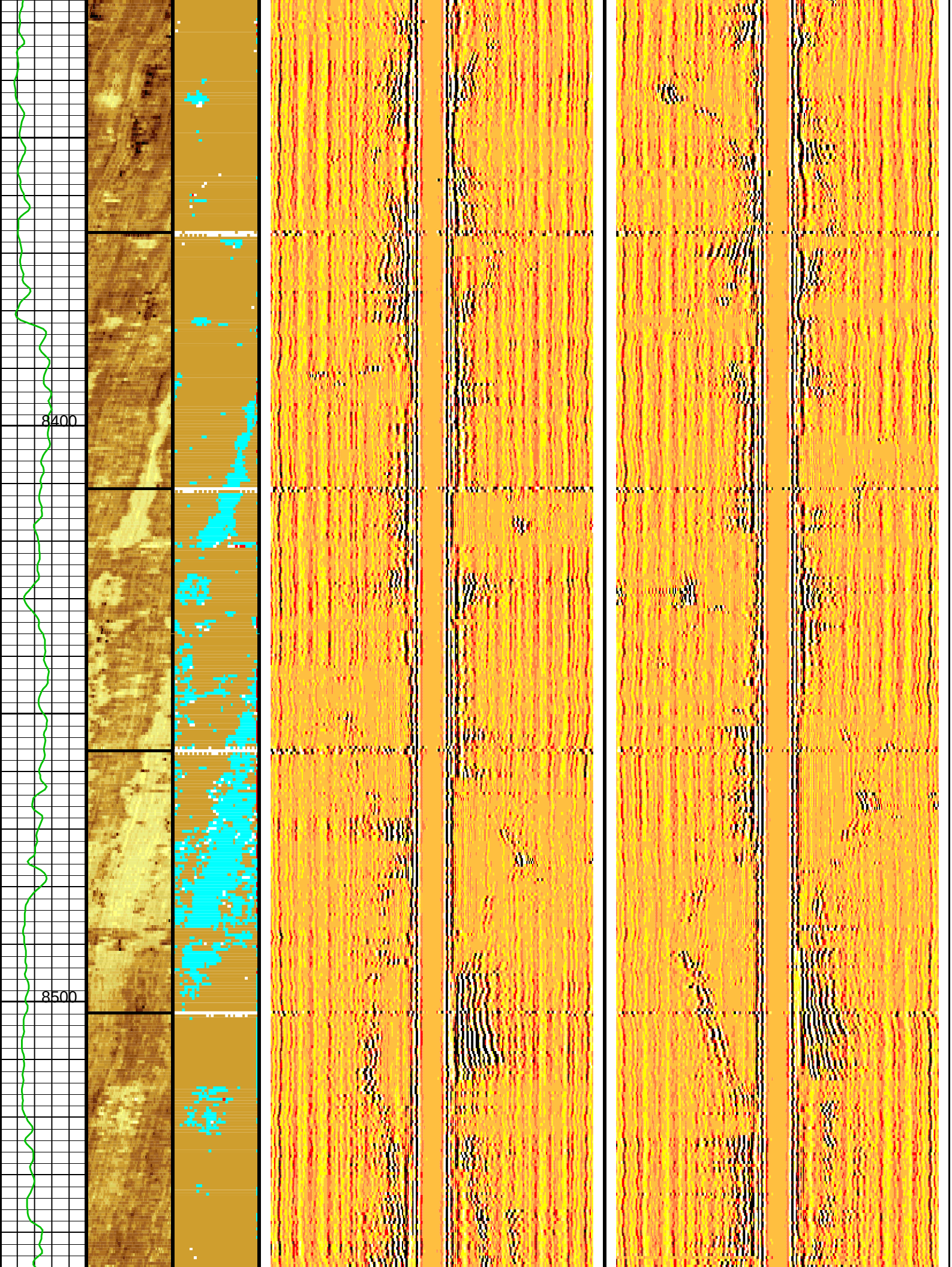
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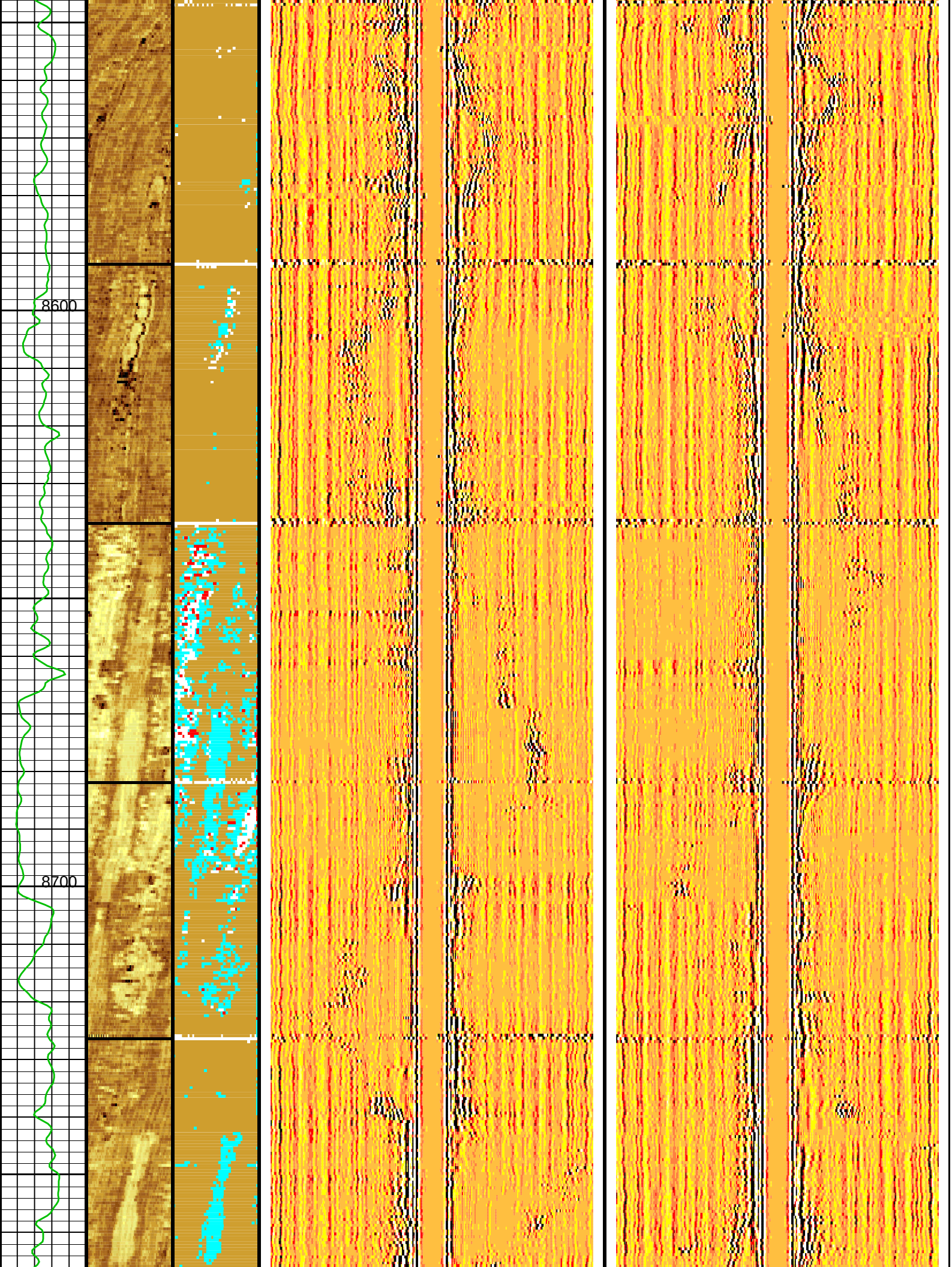
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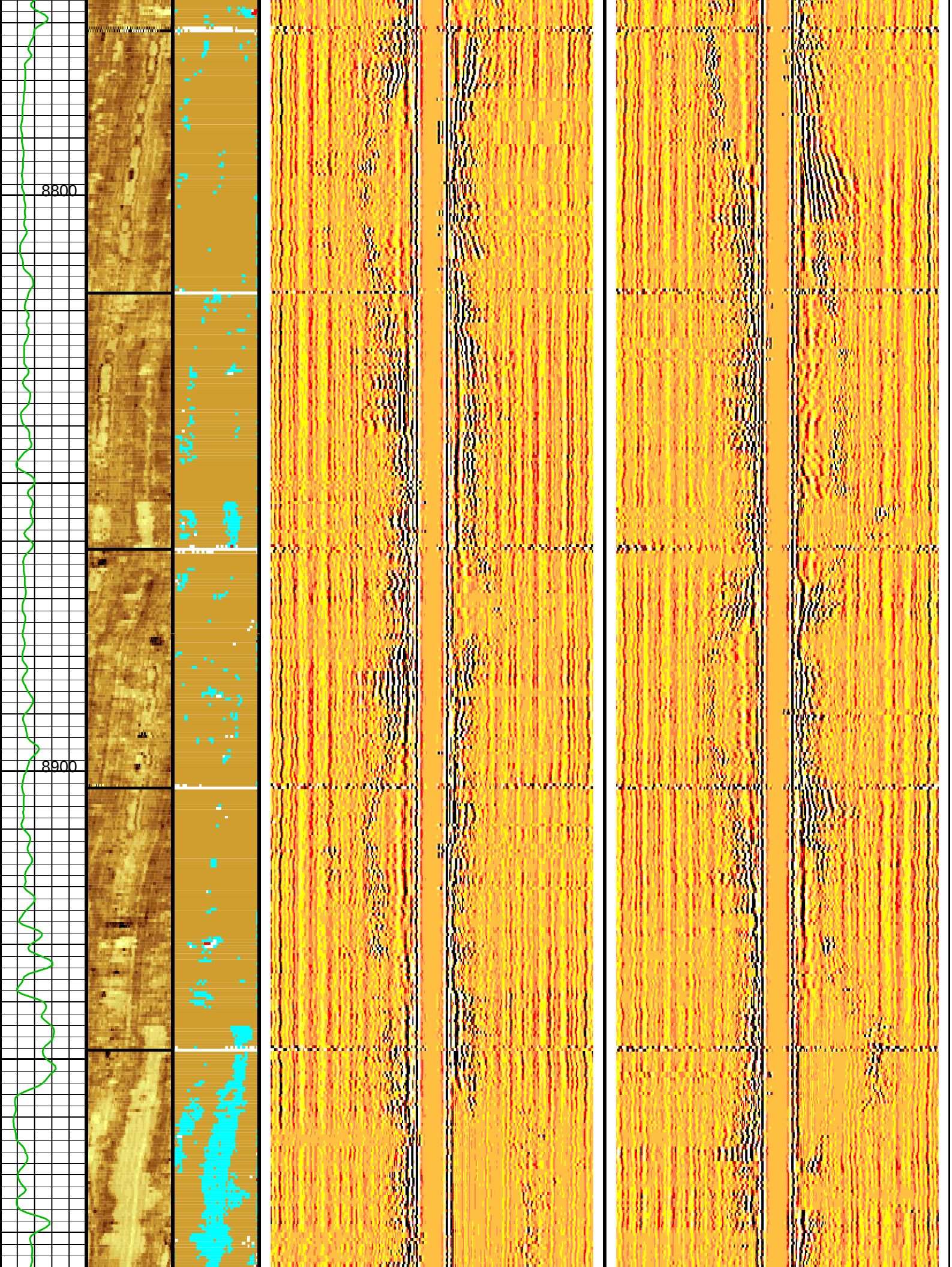
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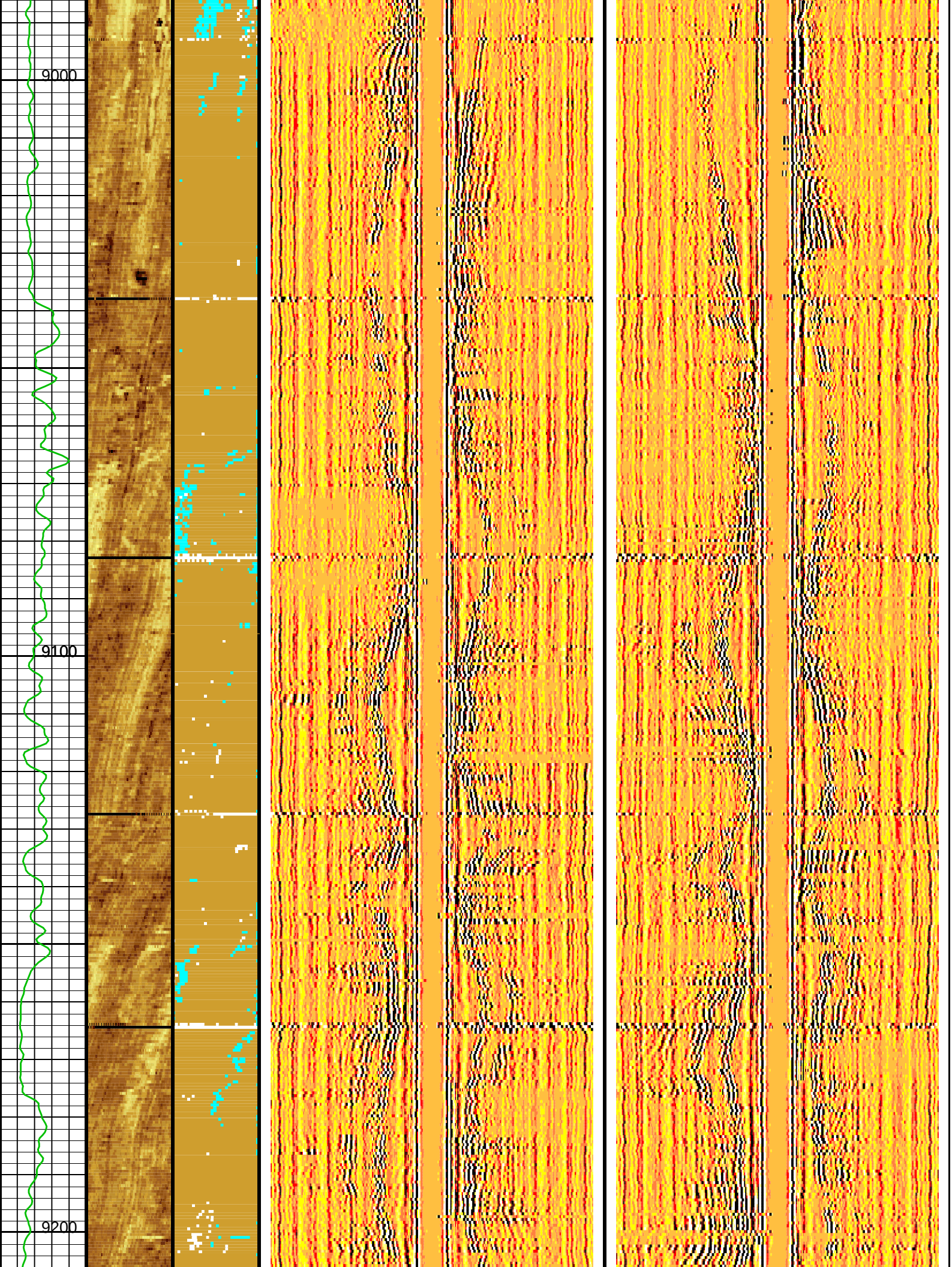
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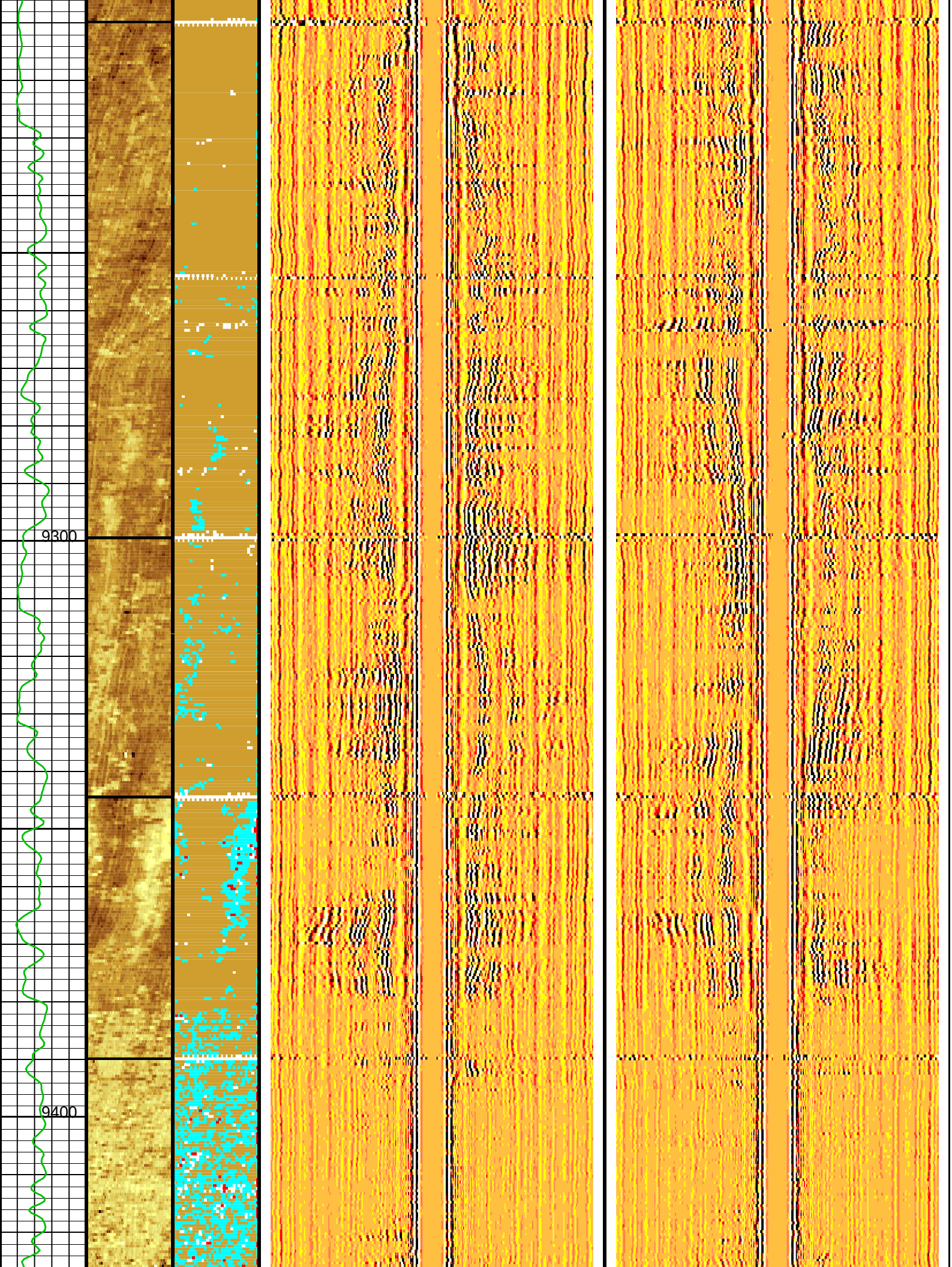
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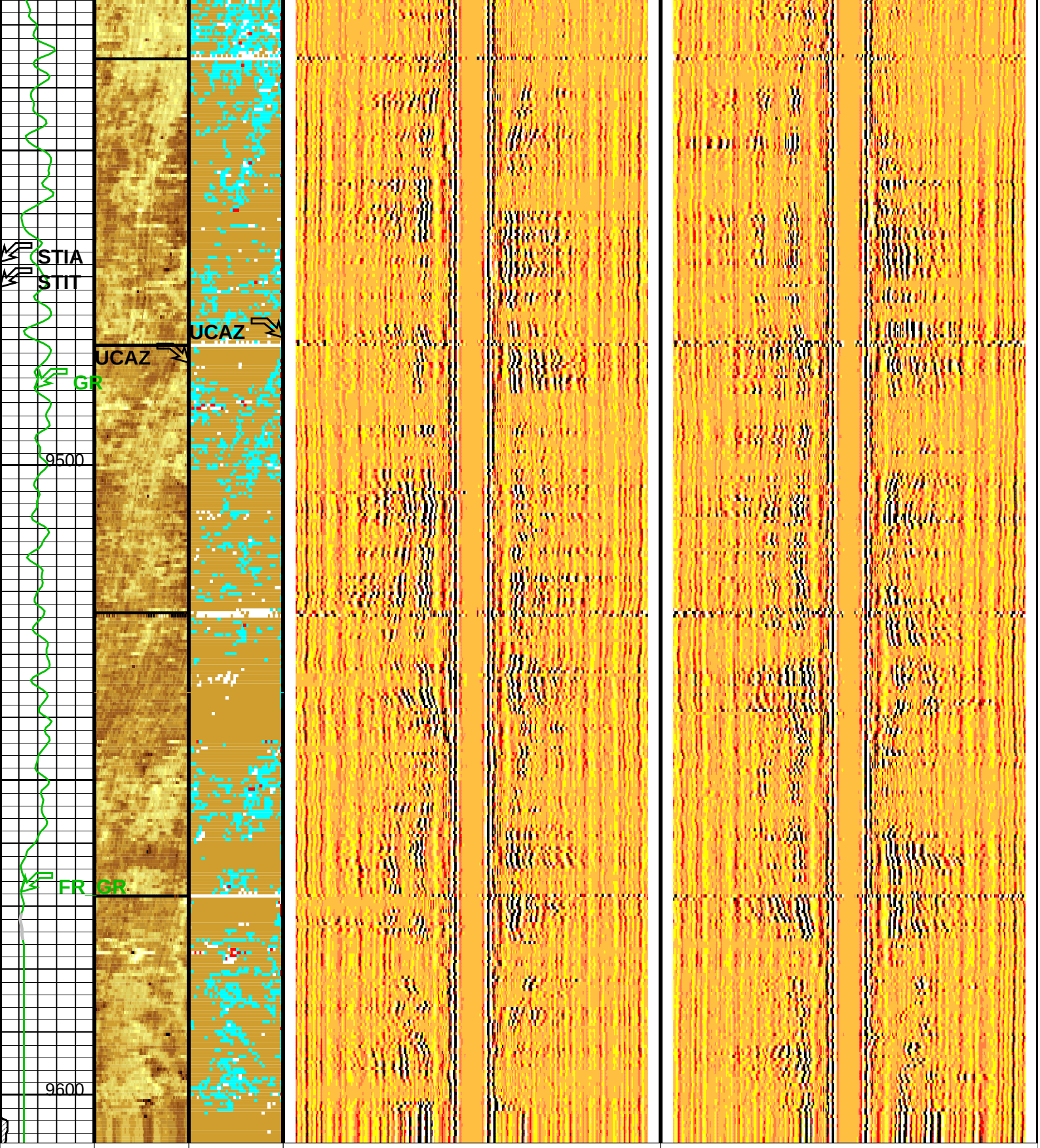

Gamma Ray (GR) (GAPI)
0 150

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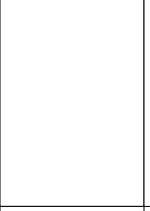
7.5000

0.5000
1.5000
2.5000
3.5000

Solid Liquid Gas Map (U−USIT_

Min Amplitude Max
Far at 0 and 180 deg (U−USIT_VDWFF000)
−150 (US) 150

Min Amplitude Max
Far at 90 and 270 deg (U−USIT_VDWFF090)
−150 (US) 150



Stuck Stretch (STIT)

0 (F) 50

Cable Drag From D4T to STIT

Tool/Tot. Drag From D4T to STIA

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	7	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	6.276	IN
DFVL	Default Fluid Velocity	206	US/F
DOT	Diameter of Transducer Sensor	2.874	IN
EMXV	EMEX Voltage	110	V
FSOD	Fluid Slowness Fits Casing Outer Diameter	5_UFSL_N_ZMUD	
IMAR	Image Rotation	OFF	
MW	Mud Weight	11.5	LB/G
RCOD	Reference Calibrator Outer Diameter	7	IN
RCSO	Reference Calibrator Standoff	1.1811	IN
RCTH	Reference Calibrator Thickness	0.2952	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	0.362	IN
U−USIT_CEMT	USIT Cement Type	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	8	DB/M
U−USIT_UIAP	USIT IBC Answer Product Enabled	SolidLiquidGasMap	
U−USIT_UIST	Ultrasonic IBC Sonde Type	Sub_Ibcs_B	
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_7_inch	
UWKM	Ultrasonic Working Mode	5DEG_6IN_136UNF_LF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	21.7078	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	−1	MRAY
ZMUD	Acoustic Impedance of Mud	2.15	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.6	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

STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth − Driller	9742.00	FT
TDL	Total Depth − Logger	9600.00	FT
	System and Miscellaneous		
BS	Bit Size	9.875	IN
CWEI	Casing Weight	26.00	LB/F
DO	Depth Offset for Playback	6.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	

Format: USI_IBC_VDL_WIDE **Vertical Scale: 5" per 100'** **Graphics File Created: 18−May−2010 14:19**

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

Schlumberger

GOODWIN 5 INCH

MAXIS Field Log

Company: EXXON MOBIL CORPORATION **Well: PCU 296−6A8**

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

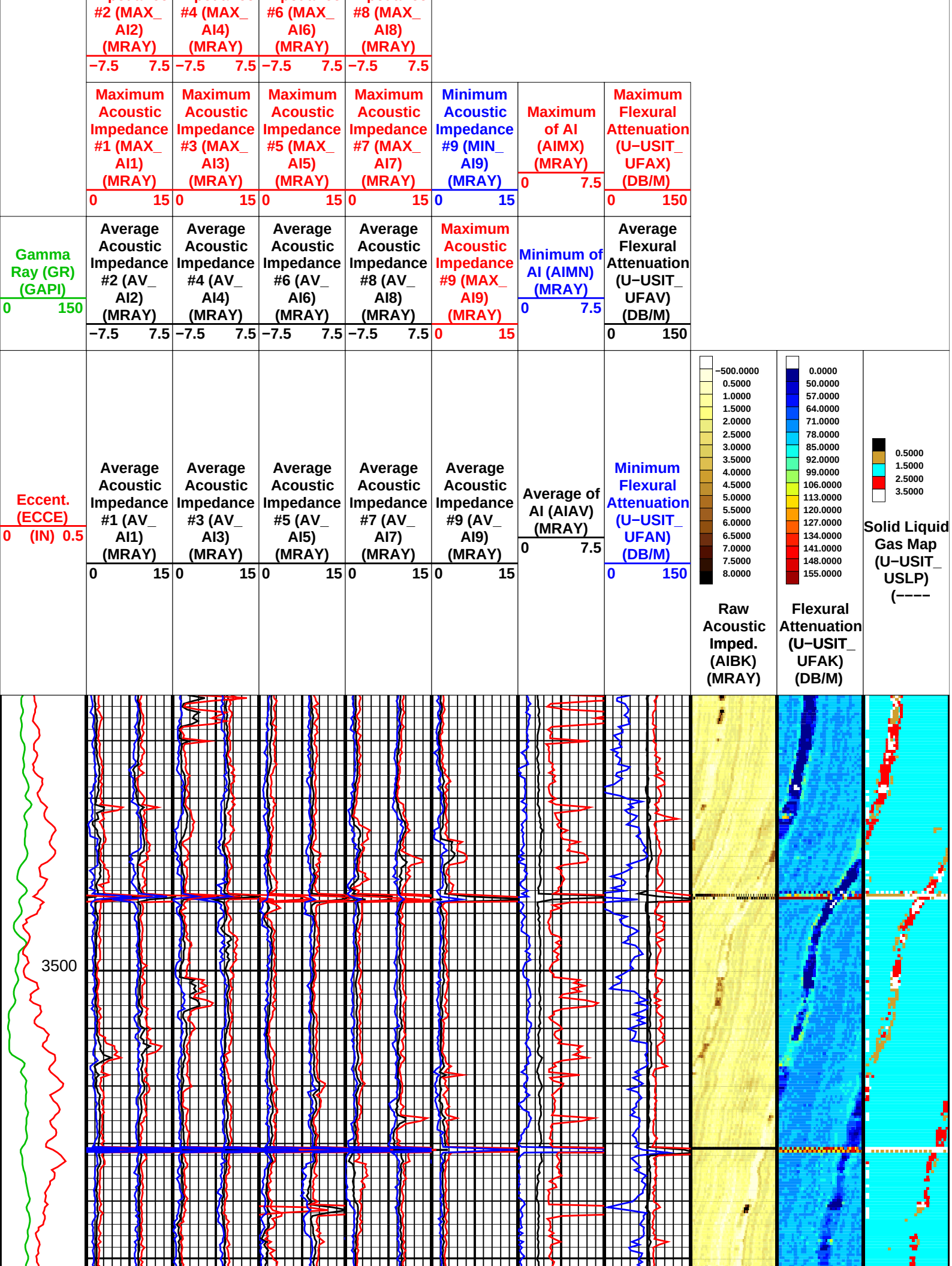
Output DLIS Files

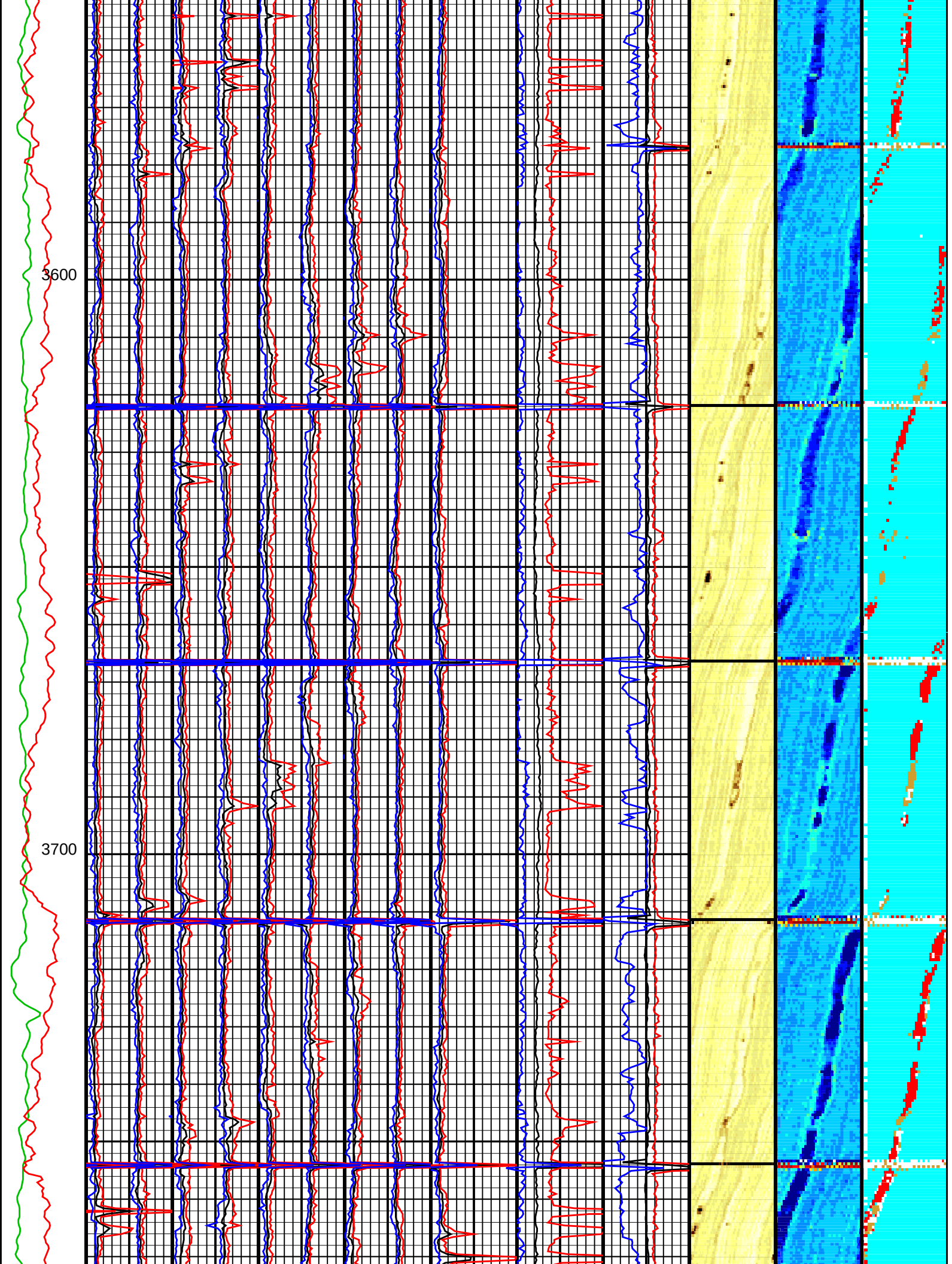
DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

Minimum Acoustic Impedance #2 (MIN_AI2) (MRAY)		Minimum Acoustic Impedance #4 (MIN_AI4) (MRAY)		Minimum Acoustic Impedance #6 (MIN_AI6) (MRAY)		Minimum Acoustic Impedance #8 (MIN_AI8) (MRAY)	
−7.5	7.5	−7.5	7.5	−7.5	7.5	−7.5	7.5
Minimum Acoustic Impedance #1 (MIN_AI1) (MRAY)		**Minimum Acoustic Impedance #3 (MIN_AI3) (MRAY)**		**Minimum Acoustic Impedance #5 (MIN_AI5) (MRAY)**		**Minimum Acoustic Impedance #7 (MIN_AI7) (MRAY)**	
0	15	0	15	0	15	0	15
Maximum Acoustic Impedance		**Maximum Acoustic Impedance**		**Maximum Acoustic Impedance**		**Maximum Acoustic Impedance**	


#2 (MAX_ AI2) (MRAY)
−7.5 7.5
#4 (MAX_ AI4) (MRAY)
−7.5 7.5
#6 (MAX_ AI6) (MRAY)
−7.5 7.5
#8 (MAX_ AI8) (MRAY)
−7.5 7.5
Maximum Acoustic Impedance #1 (MAX_ AI1) (MRAY)
0 15
Maximum Acoustic Impedance #3 (MAX_ AI3) (MRAY)
0 15
Maximum Acoustic Impedance #5 (MAX_ AI5) (MRAY)
0 15
Maximum Acoustic Impedance #7 (MAX_ AI7) (MRAY)
0 15
Minimum Acoustic Impedance #9 (MIN_ AI9) (MRAY)
0 15
Maximum of AI (AIMX) (MRAY)
0 7.5
Maximum Flexural Attenuation (U−USIT_ UFAX) (DB/M)
0 150
Gamma Ray (GR) (GAPI)
0 150
Average Acoustic Impedance #2 (AV_ AI2) (MRAY)
−7.5 7.5
Average Acoustic Impedance #4 (AV_ AI4) (MRAY)
−7.5 7.5
Average Acoustic Impedance #6 (AV_ AI6) (MRAY)
−7.5 7.5
Average Acoustic Impedance #8 (AV_ AI8) (MRAY)
−7.5 7.5
Maximum Acoustic Impedance #9 (MAX_ AI9) (MRAY)
0 15
Minimum of AI (AIMN) (MRAY)
0 7.5
Average Flexural Attenuation (U−USIT_ UFAV) (DB/M)
0 150
Eccent. (ECCE)
0 (IN) 0.5
Average Acoustic Impedance #1 (AV_ AI1) (MRAY)
0 15
Average Acoustic Impedance #3 (AV_ AI3) (MRAY)
0 15
Average Acoustic Impedance #5 (AV_ AI5) (MRAY)
0 15
Average Acoustic Impedance #7 (AV_ AI7) (MRAY)
0 15
Average Acoustic Impedance #9 (AV_ AI9) (MRAY)
0 15
Average of AI (AIAV) (MRAY)
0 7.5
Minimum Flexural Attenuation (U−USIT_ UFAN) (DB/M)
0 150
−500.0000
0.5000
1.0000
1.5000
2.0000
2.5000
3.0000
3.5000
4.0000
4.5000
5.0000
5.5000
6.0000
6.5000
7.0000
7.5000
8.0000
Raw Acoustic Imped. (AIBK) (MRAY)
0.0000
50.0000
57.0000
64.0000
71.0000
78.0000
85.0000
92.0000
99.0000
106.0000
113.0000
120.0000
127.0000
134.0000
141.0000
148.0000
155.0000
Flexural Attenuation (U−USIT_ UFAK) (DB/M)
0.5000
1.5000
2.5000
3.5000
Solid Liquid Gas Map (U−USIT_ USLP) (−−−−
3500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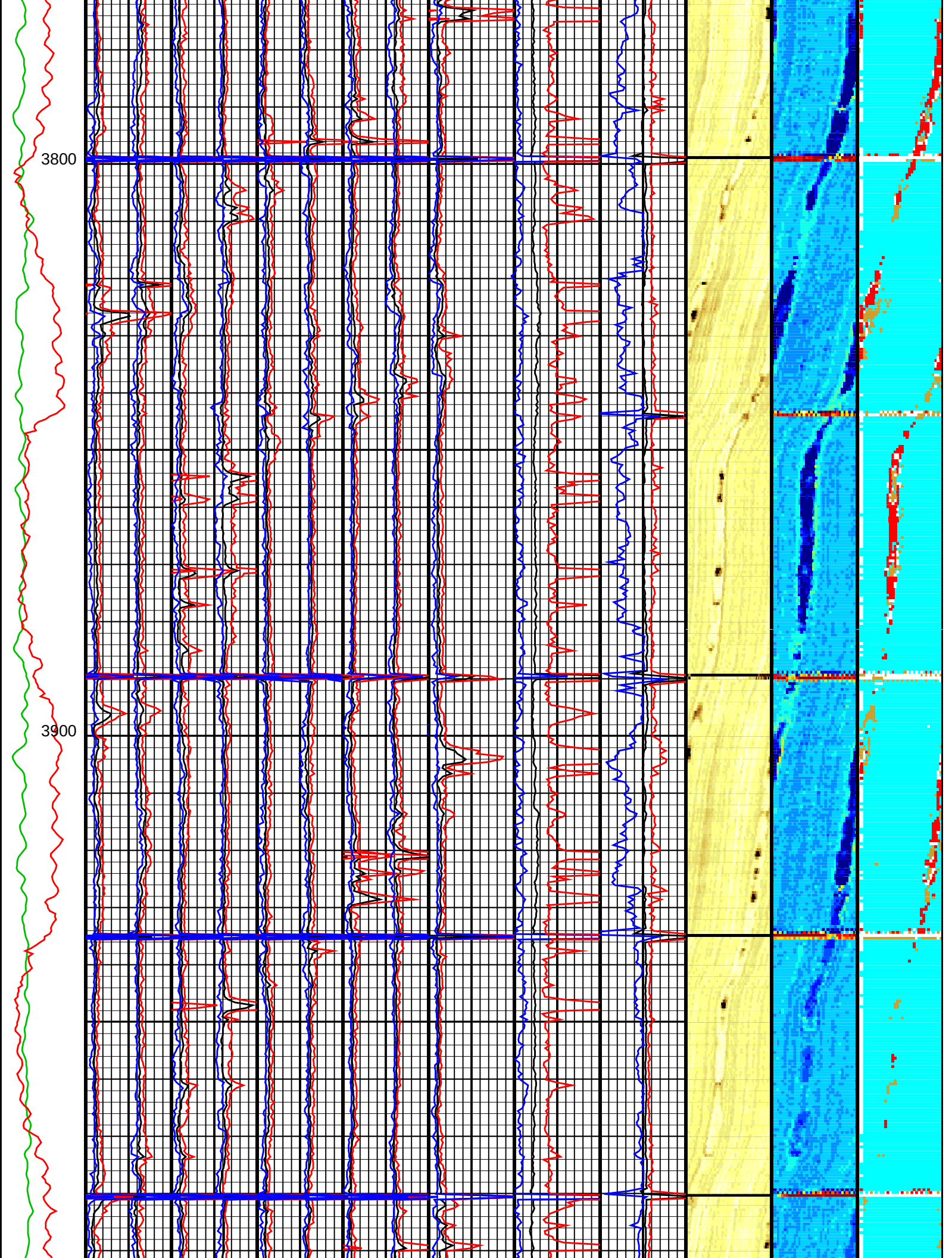
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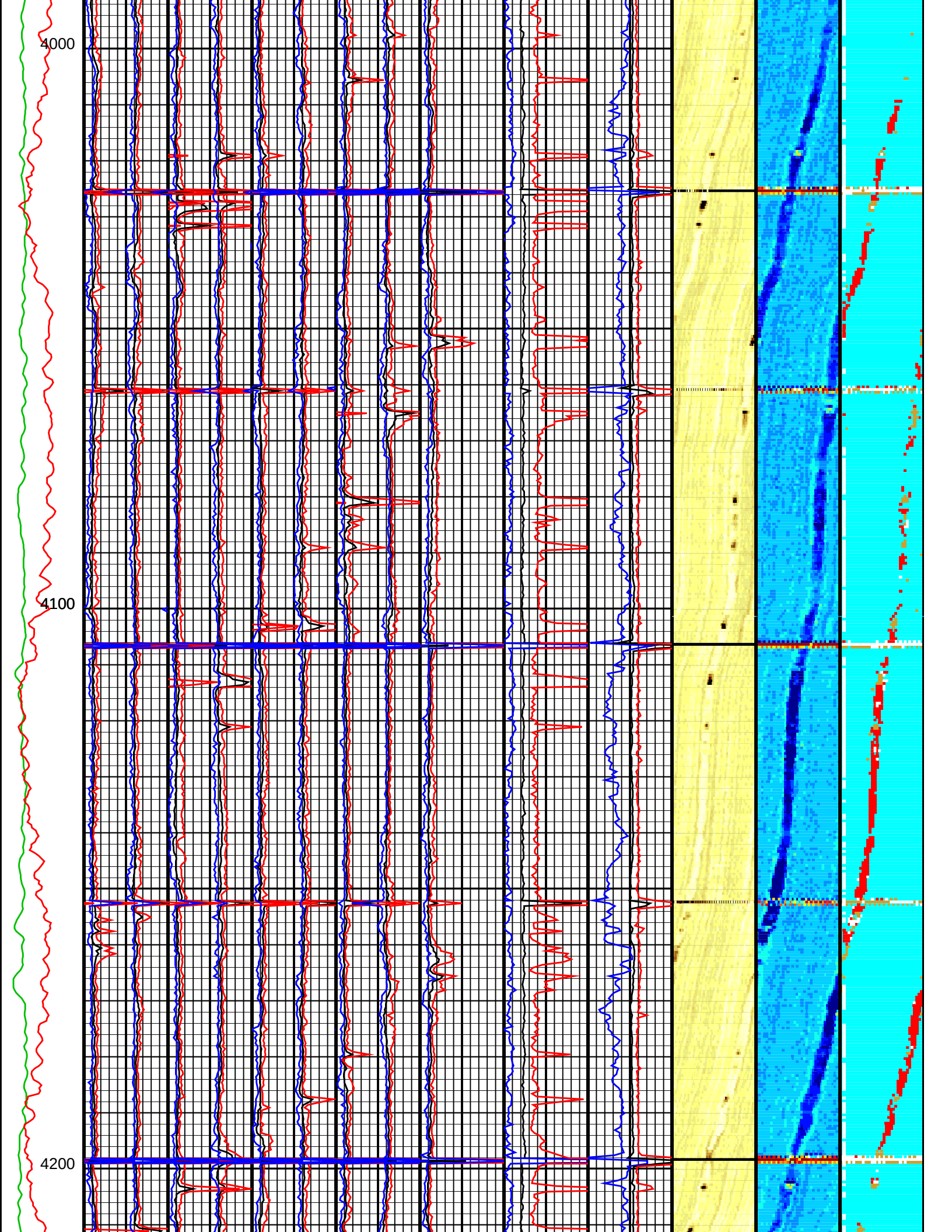
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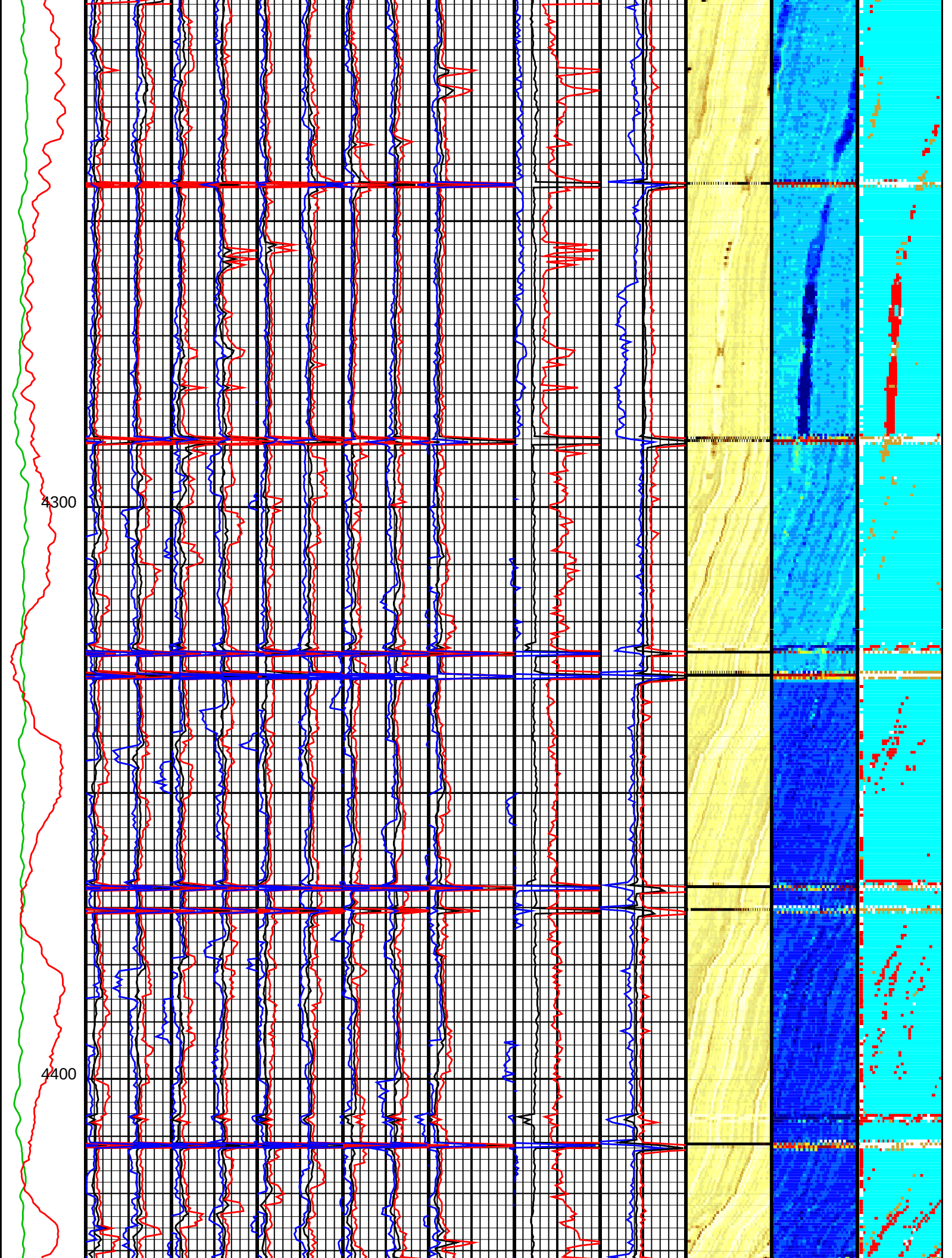
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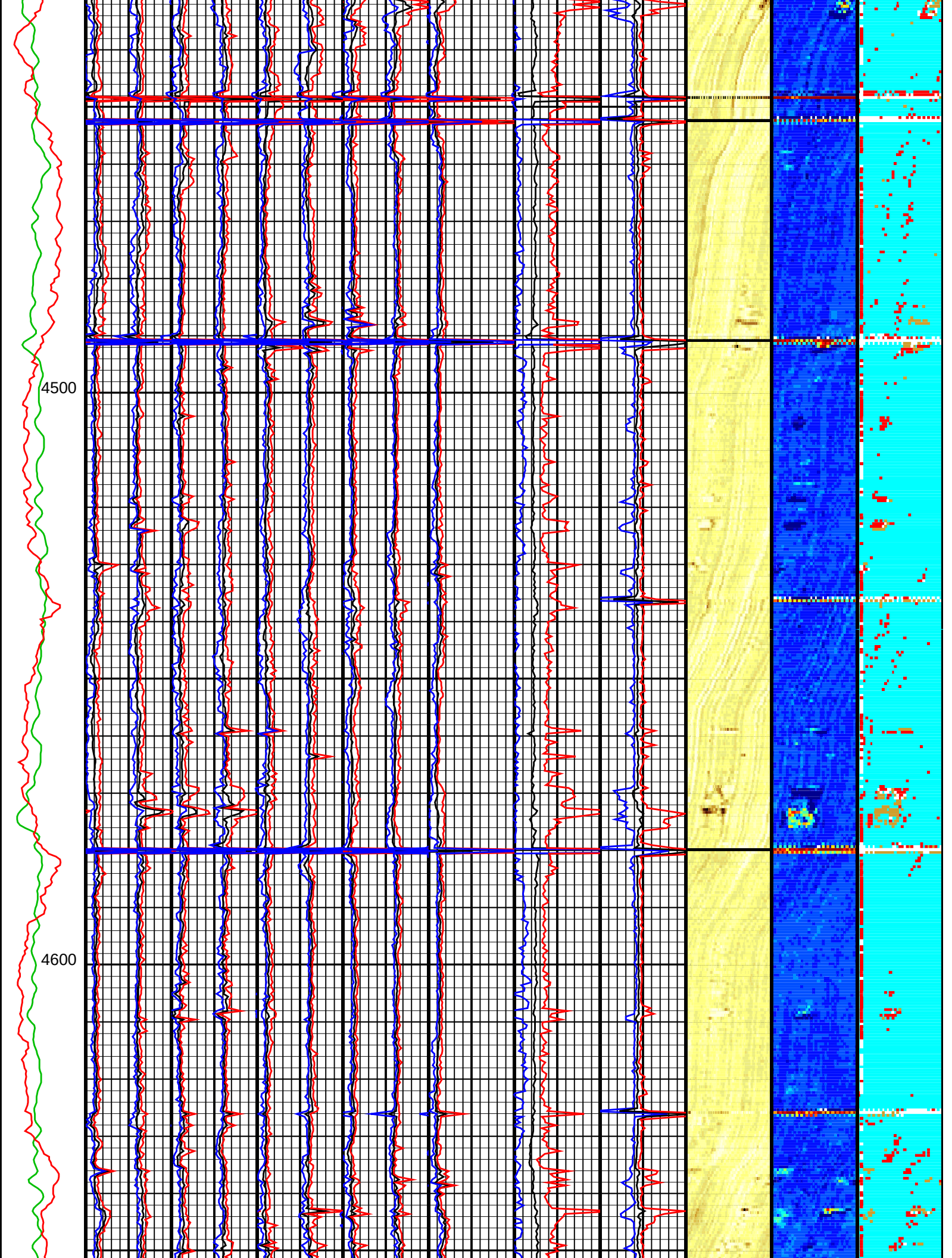
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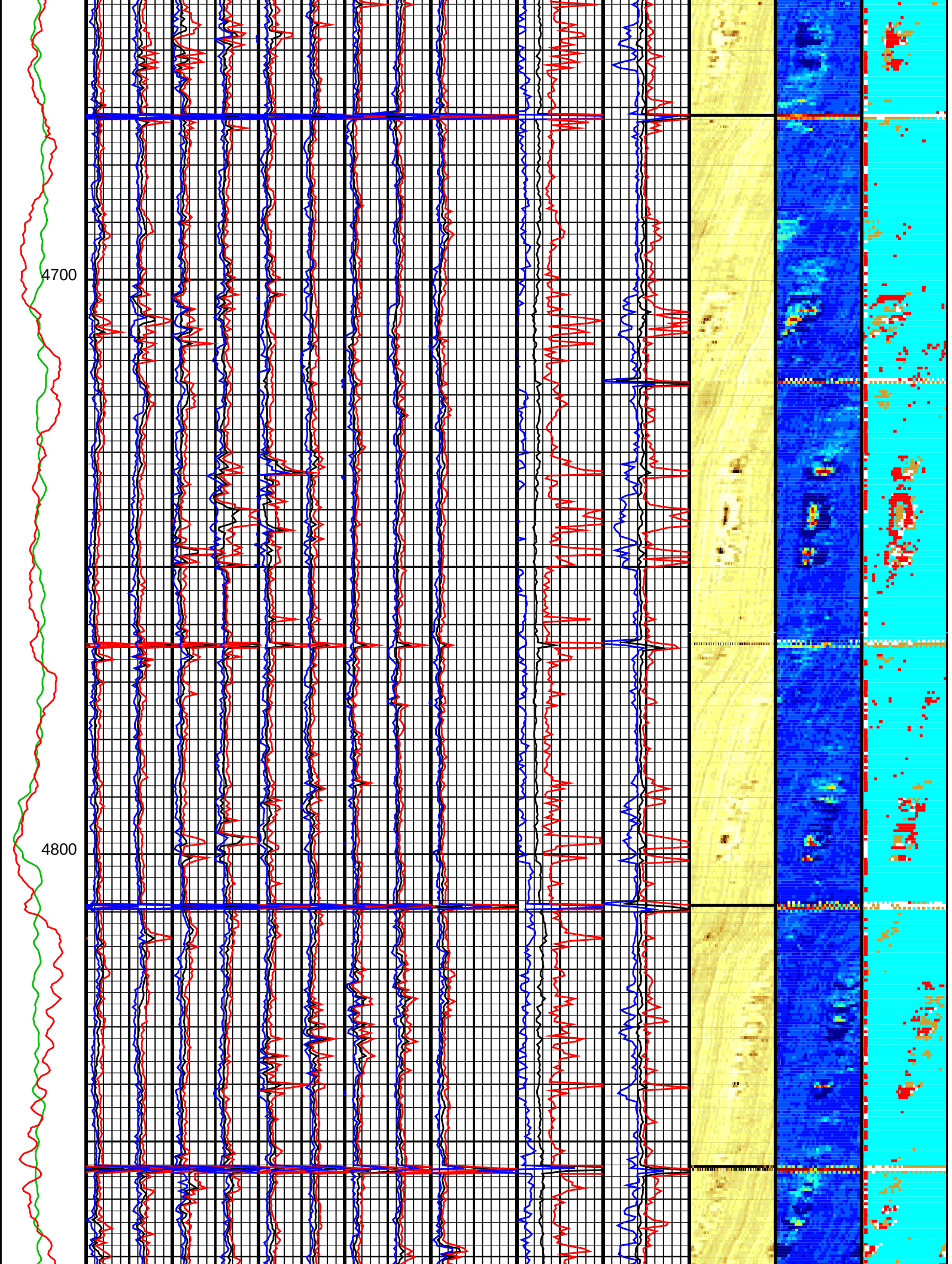
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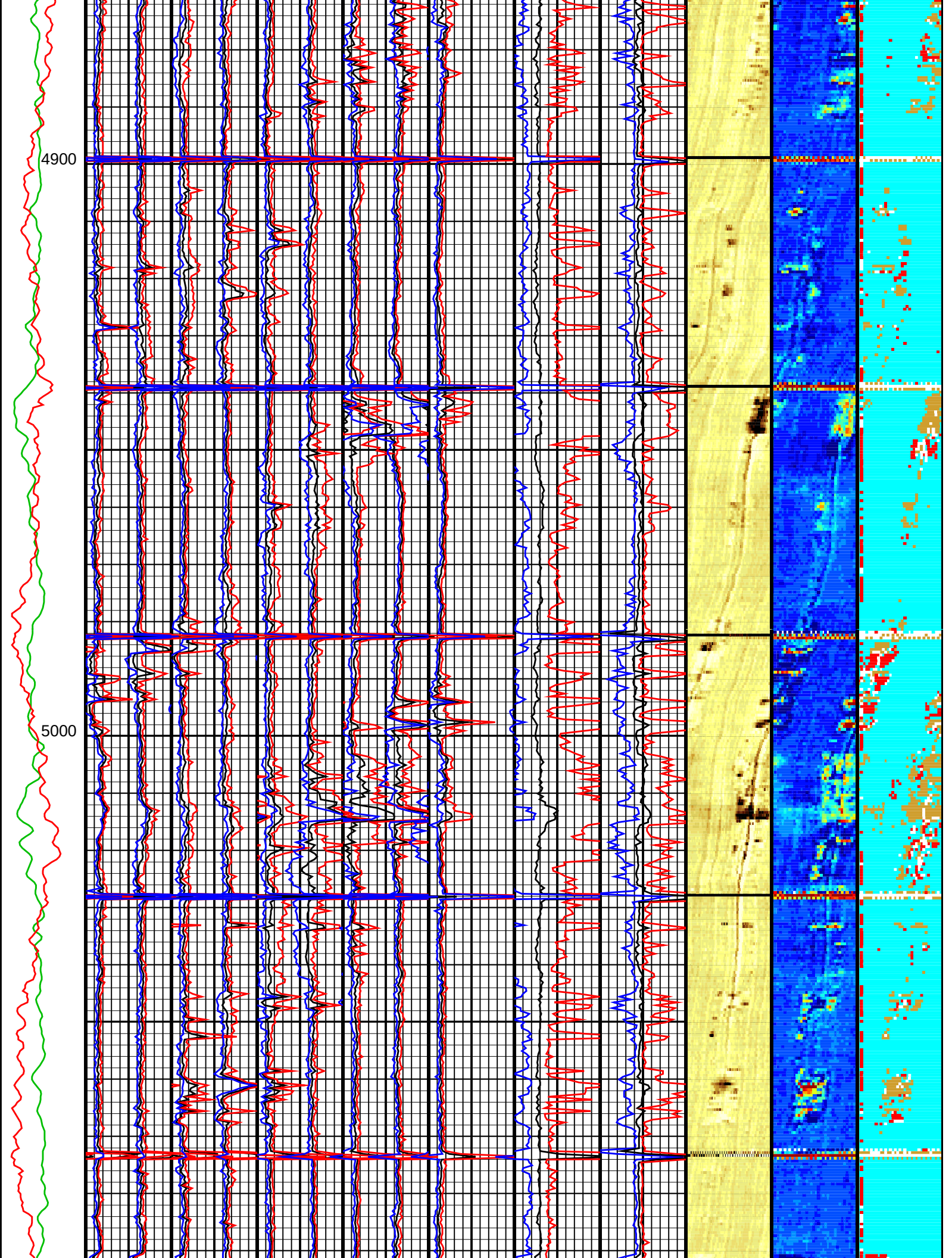
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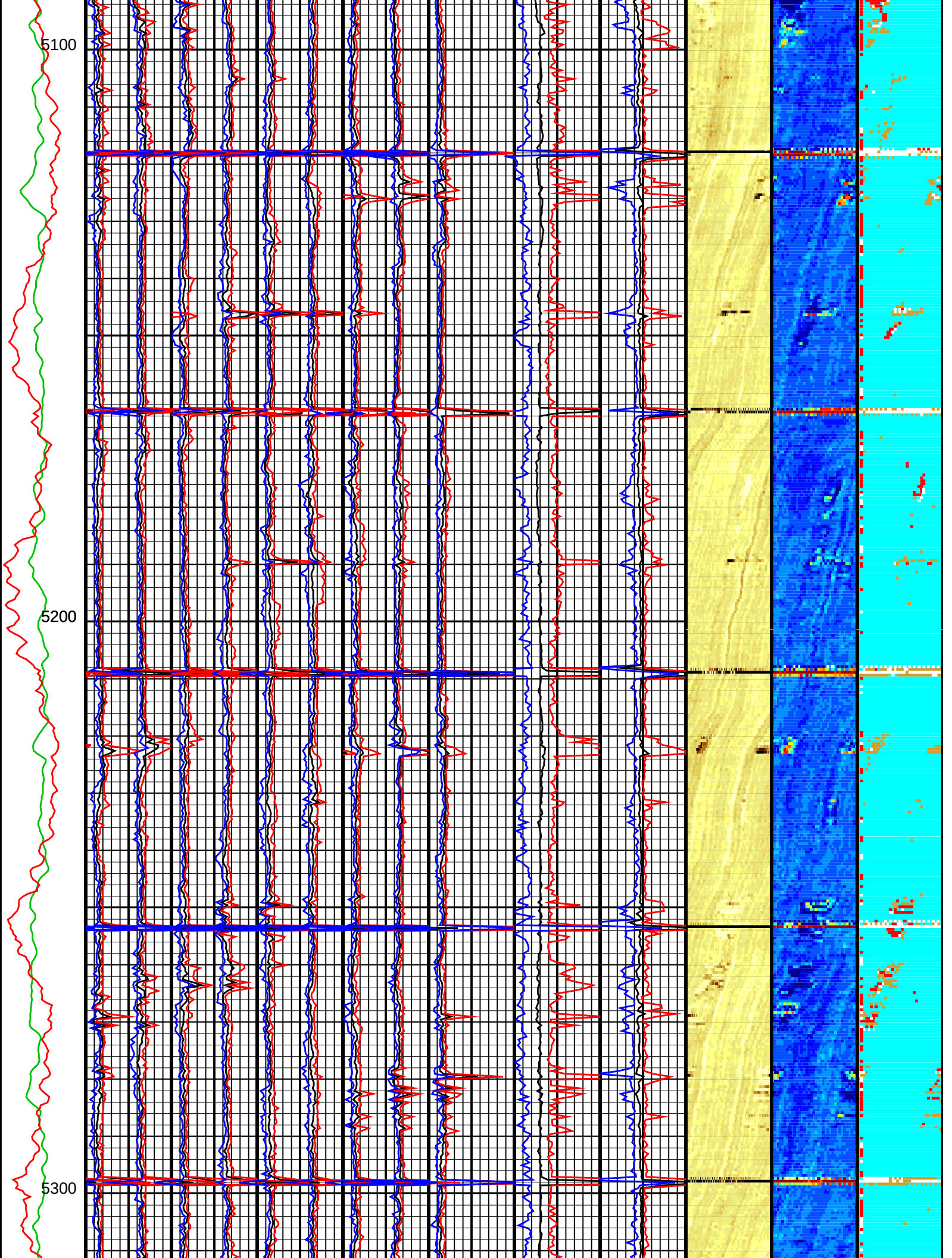
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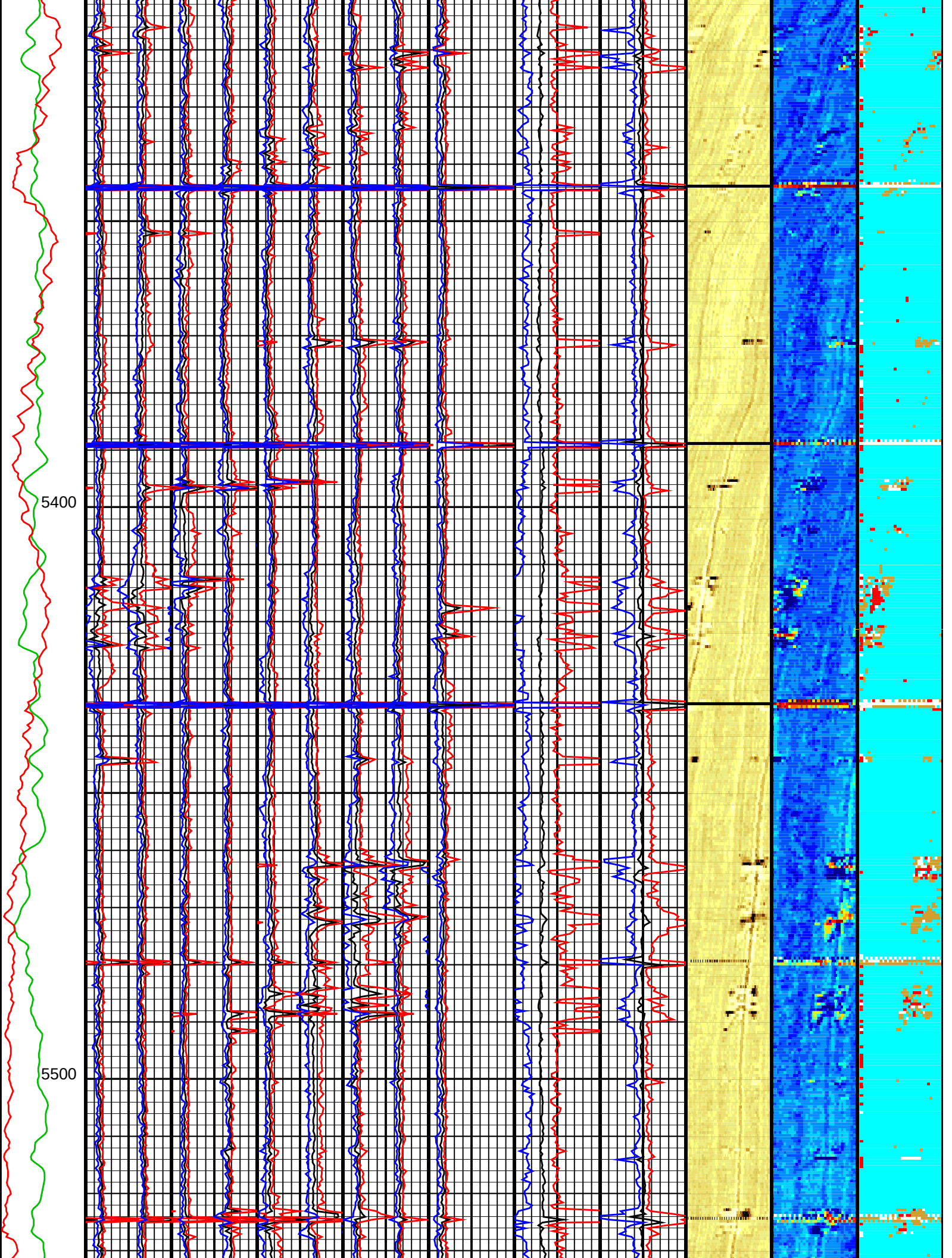
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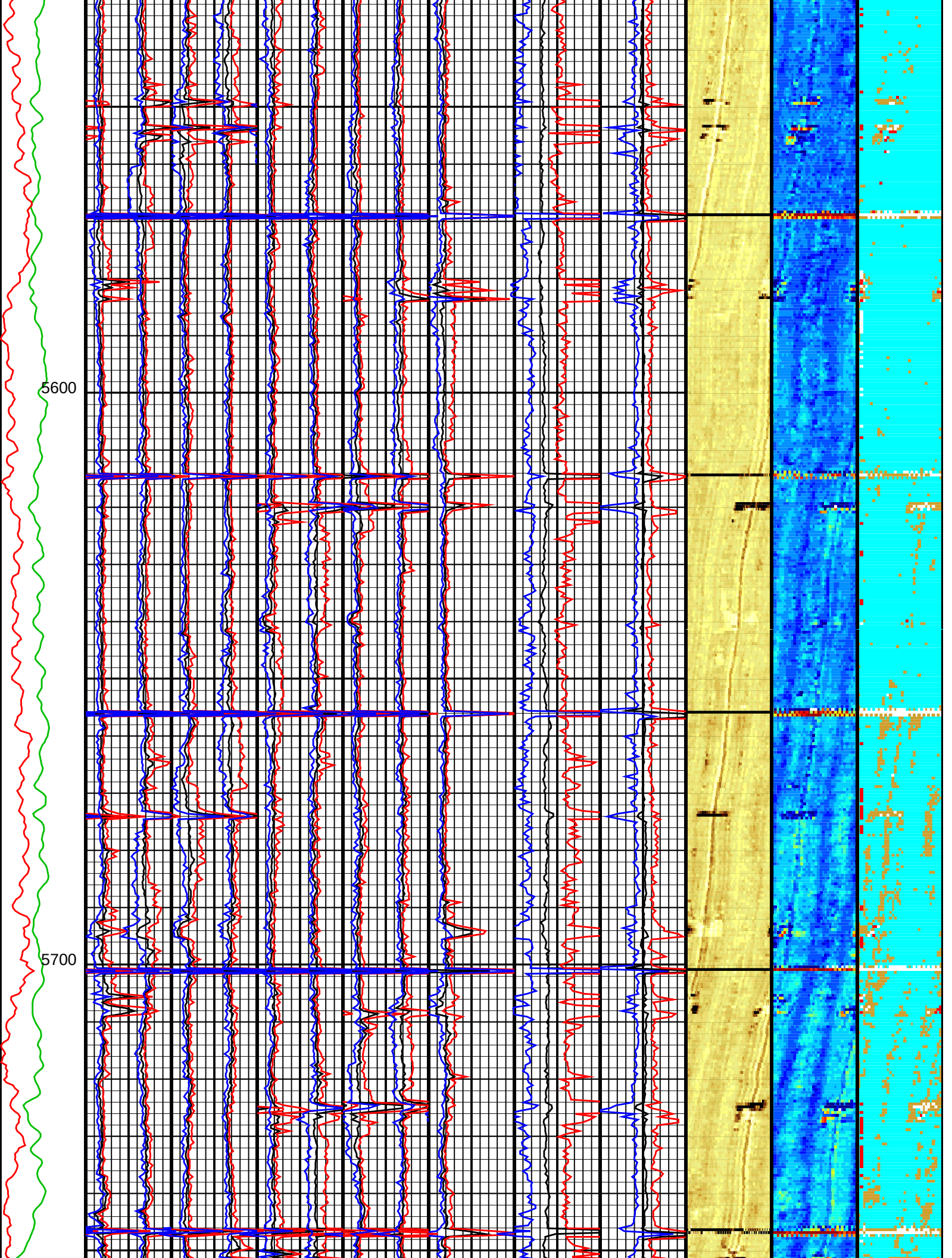
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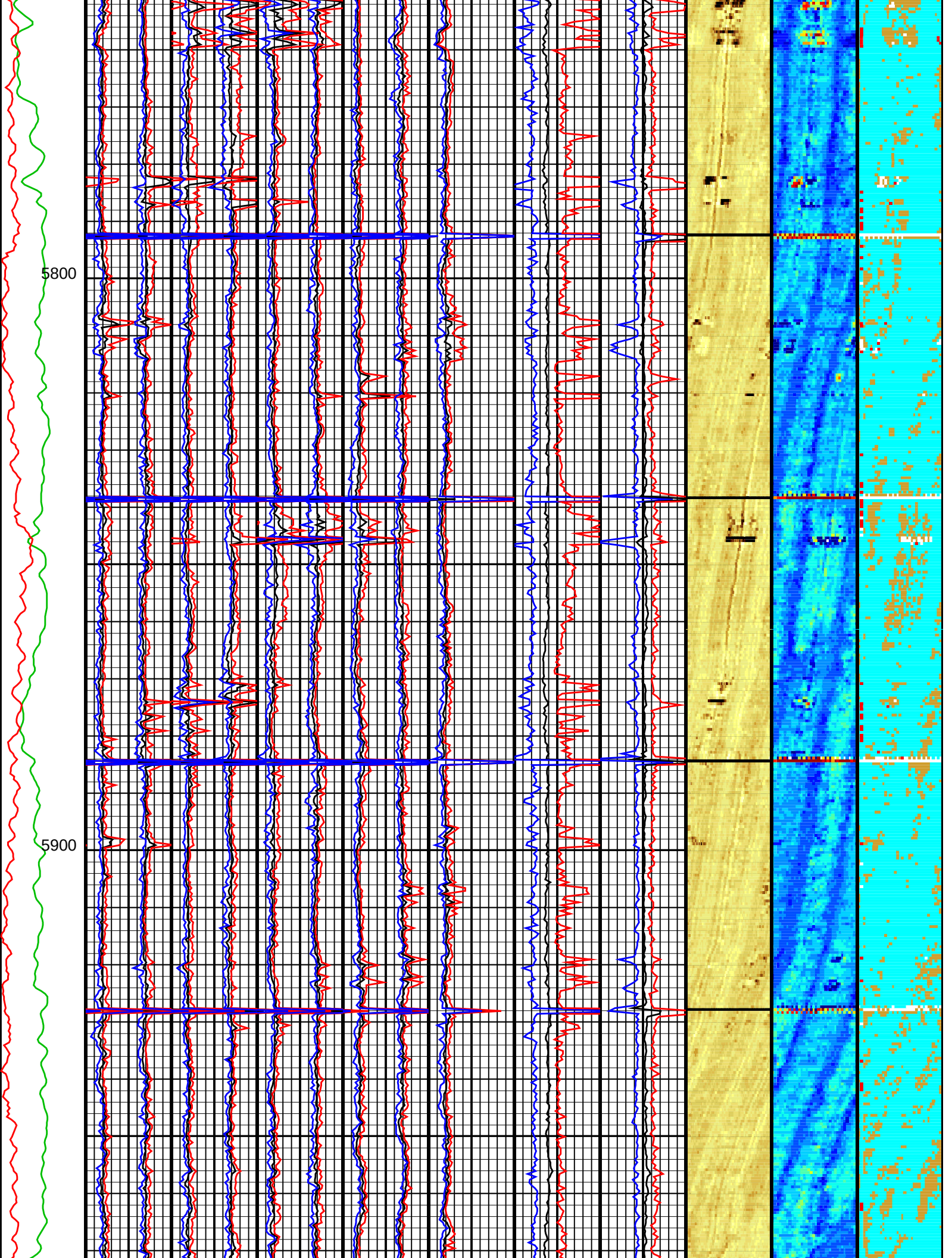
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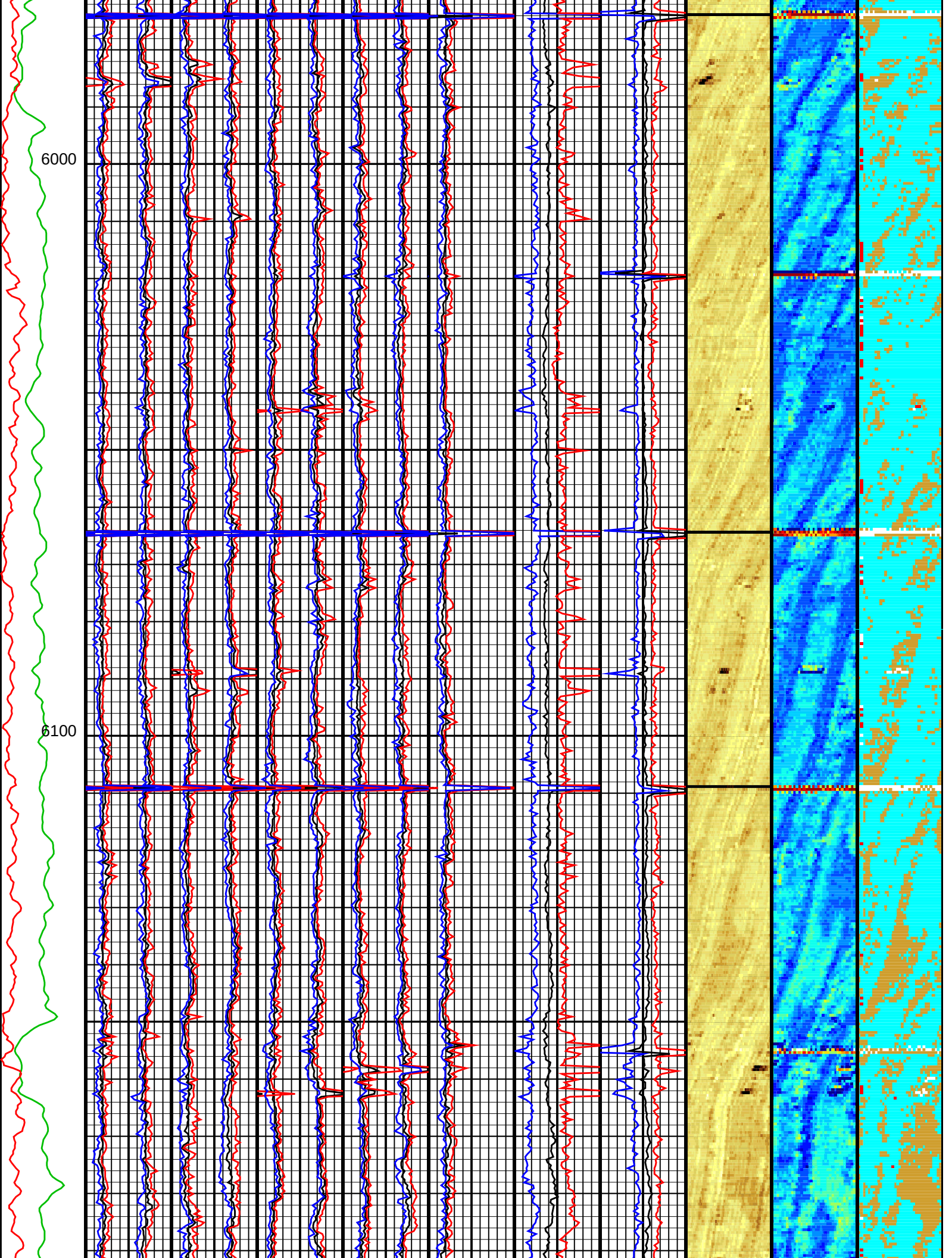
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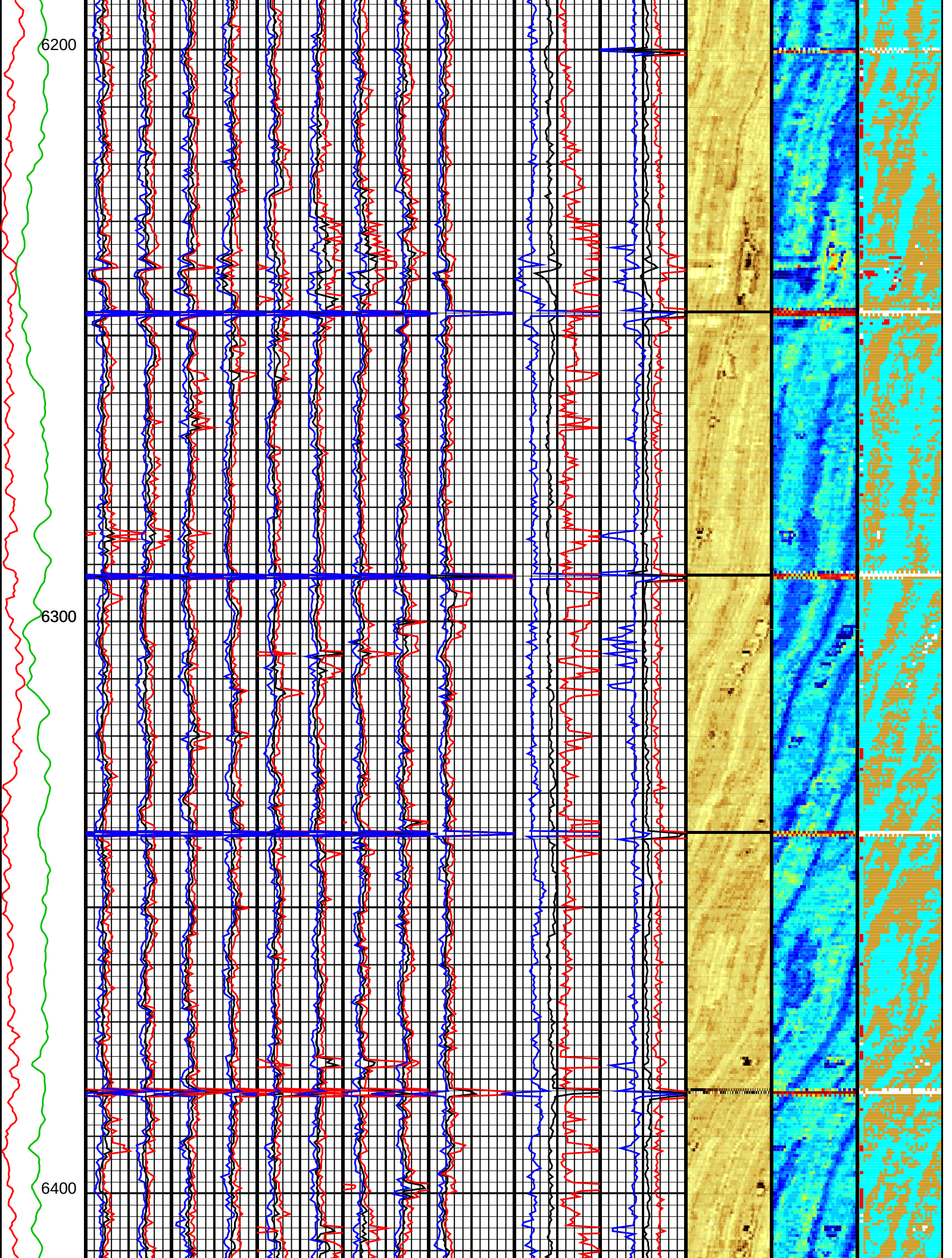
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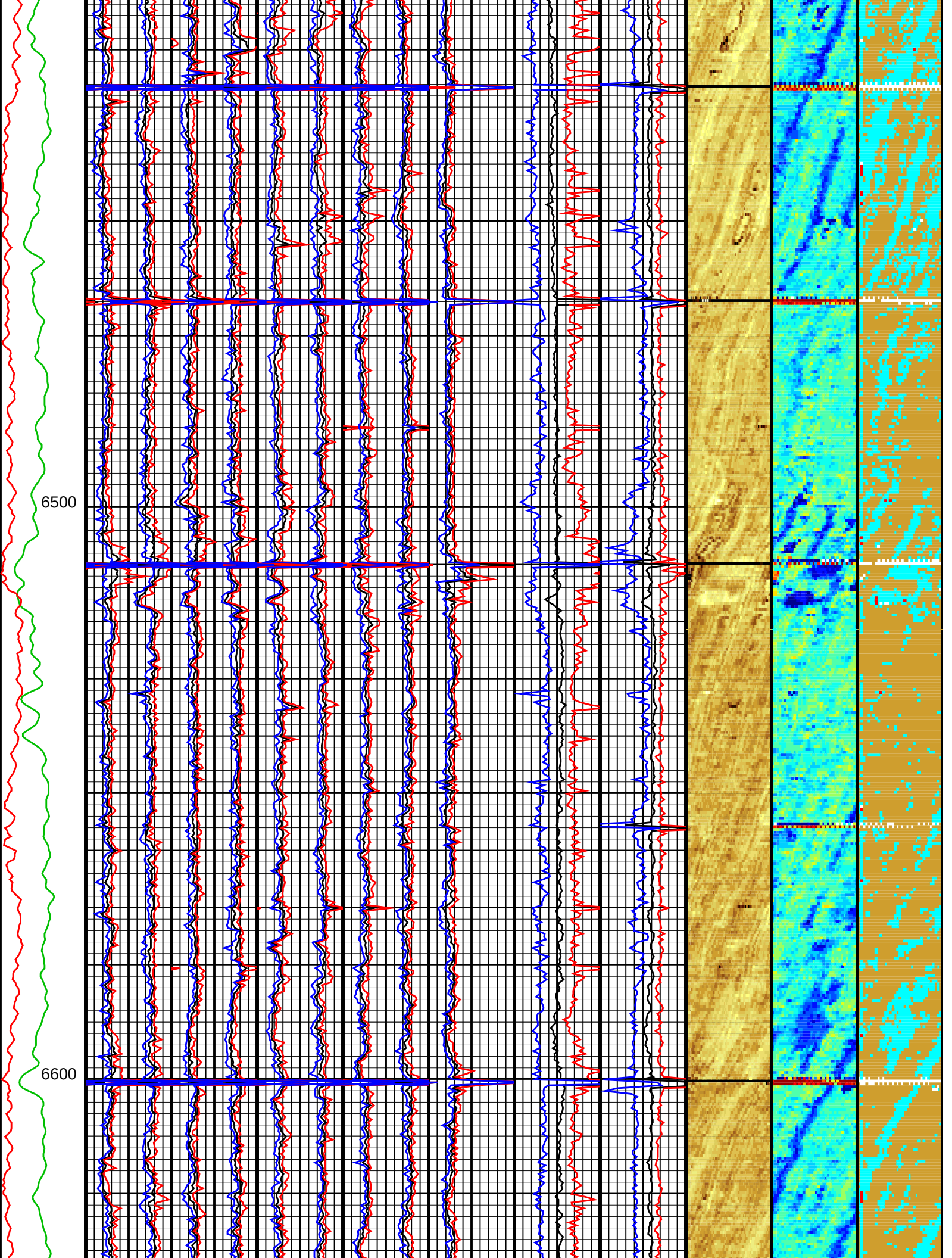
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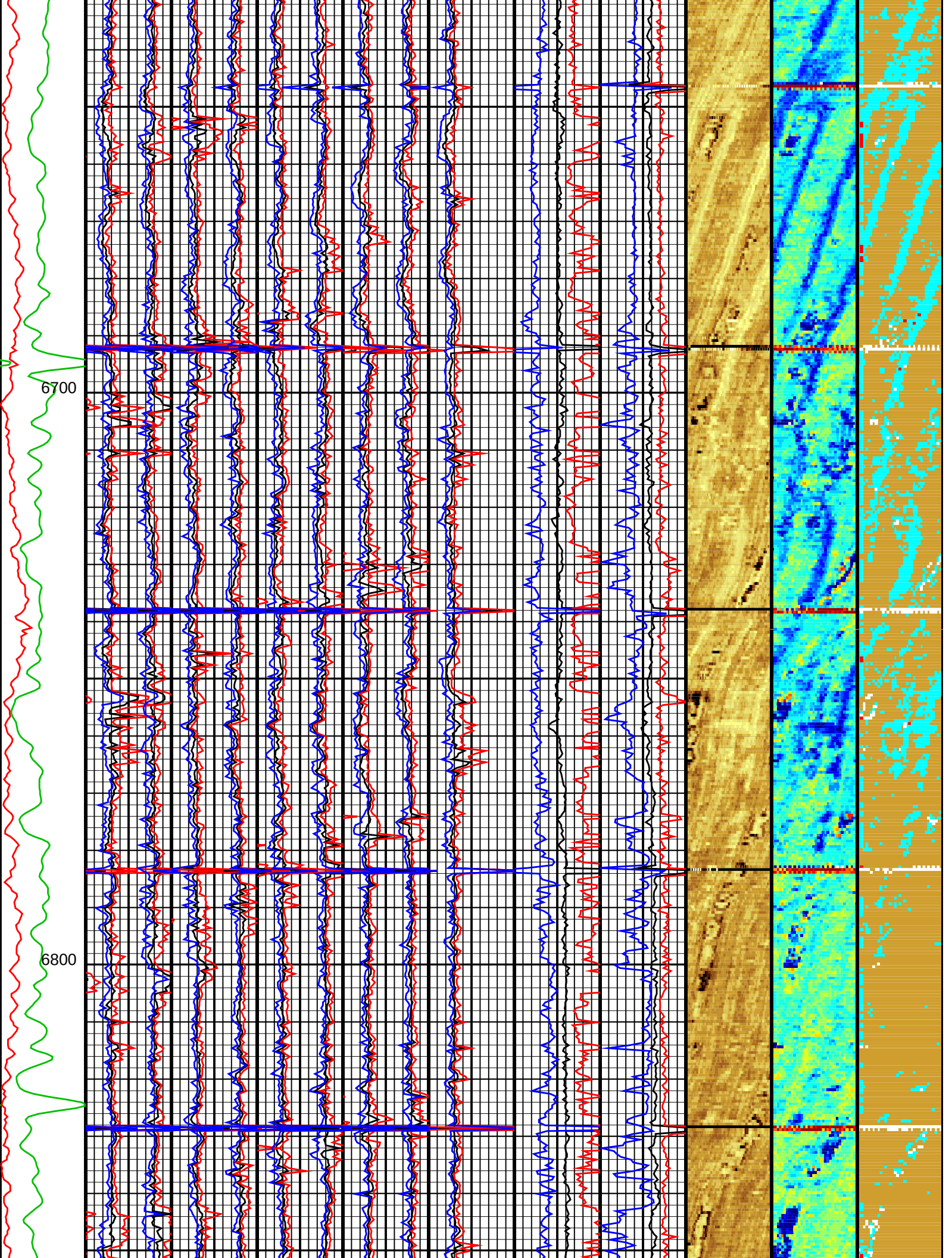
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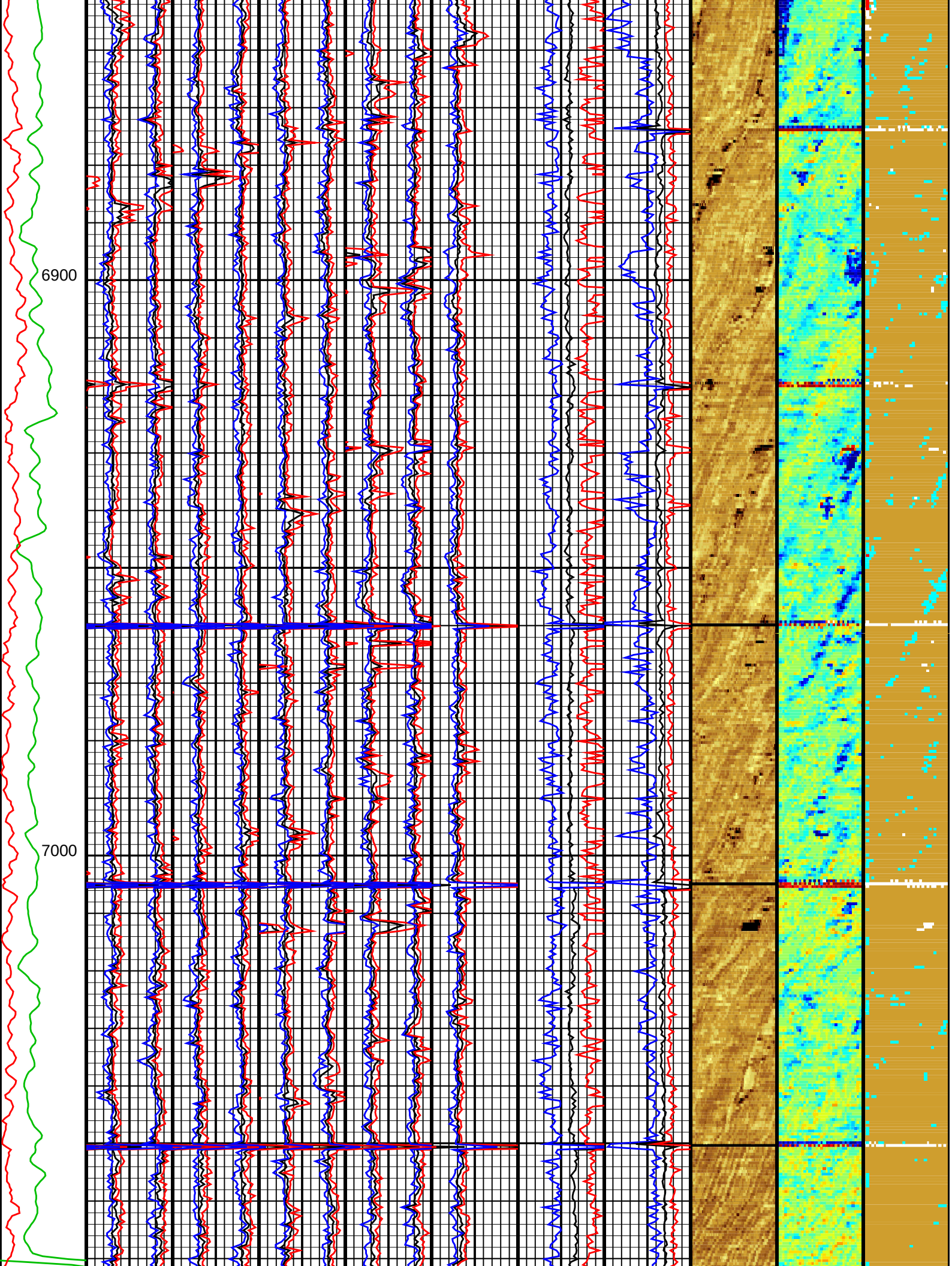
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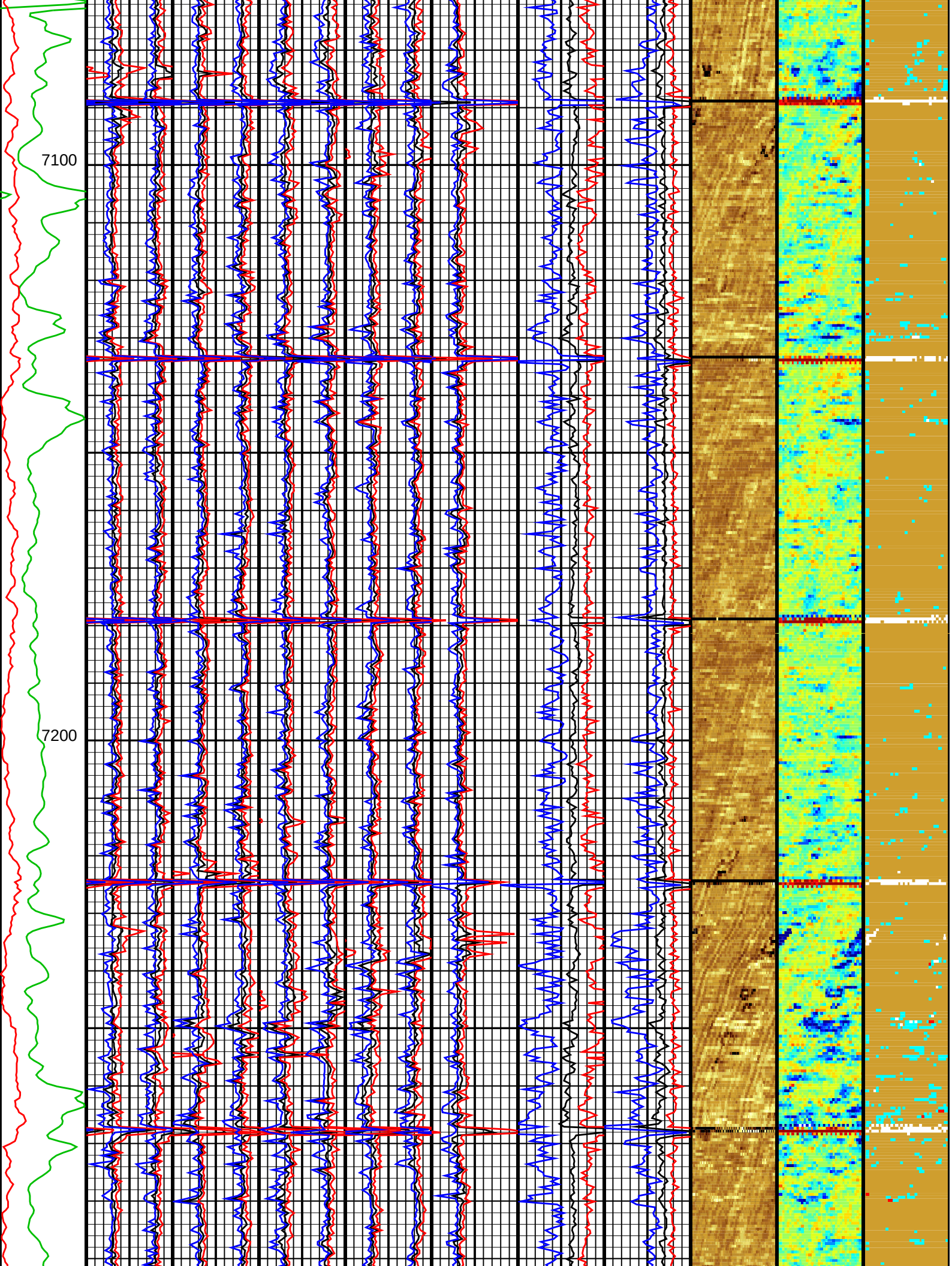
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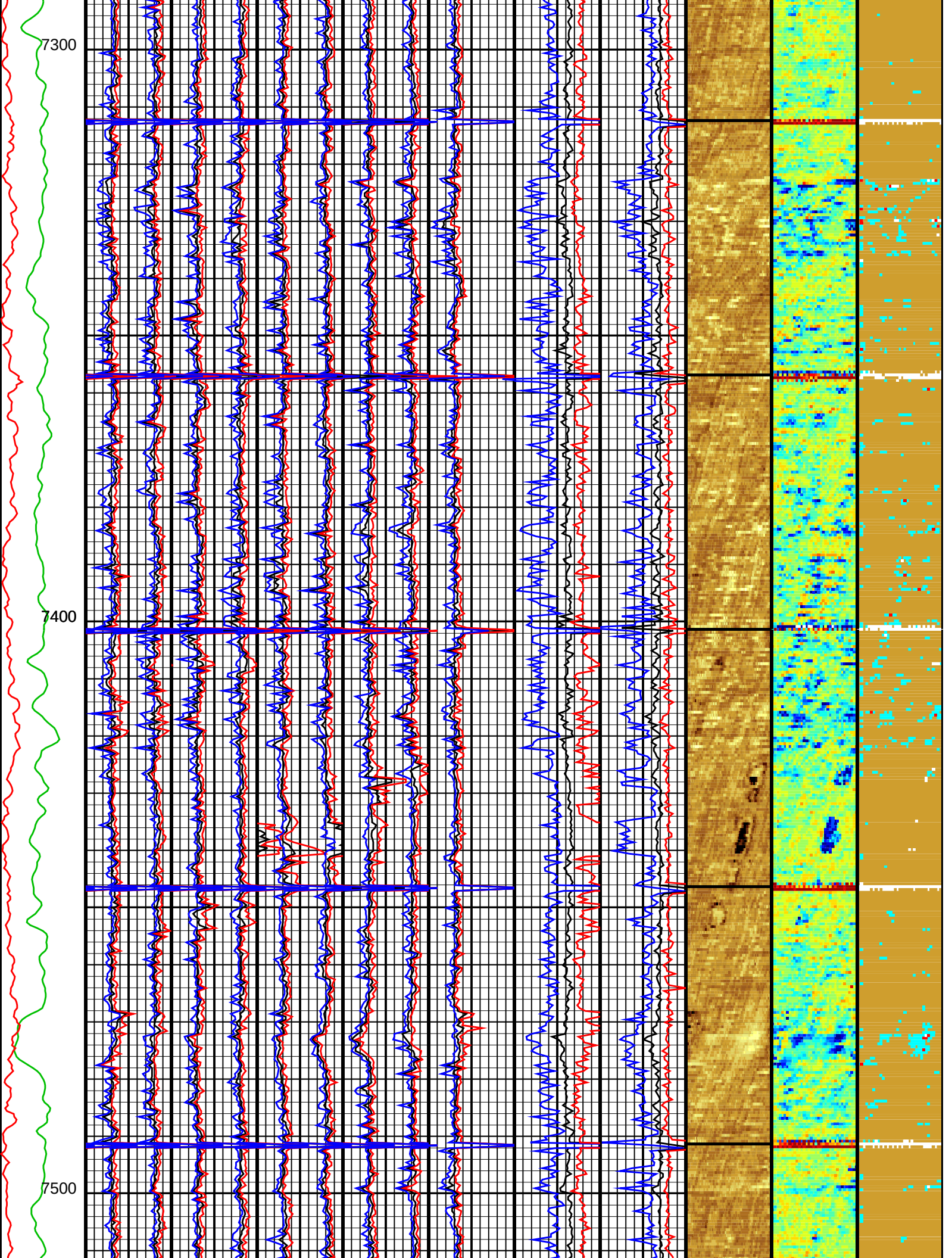
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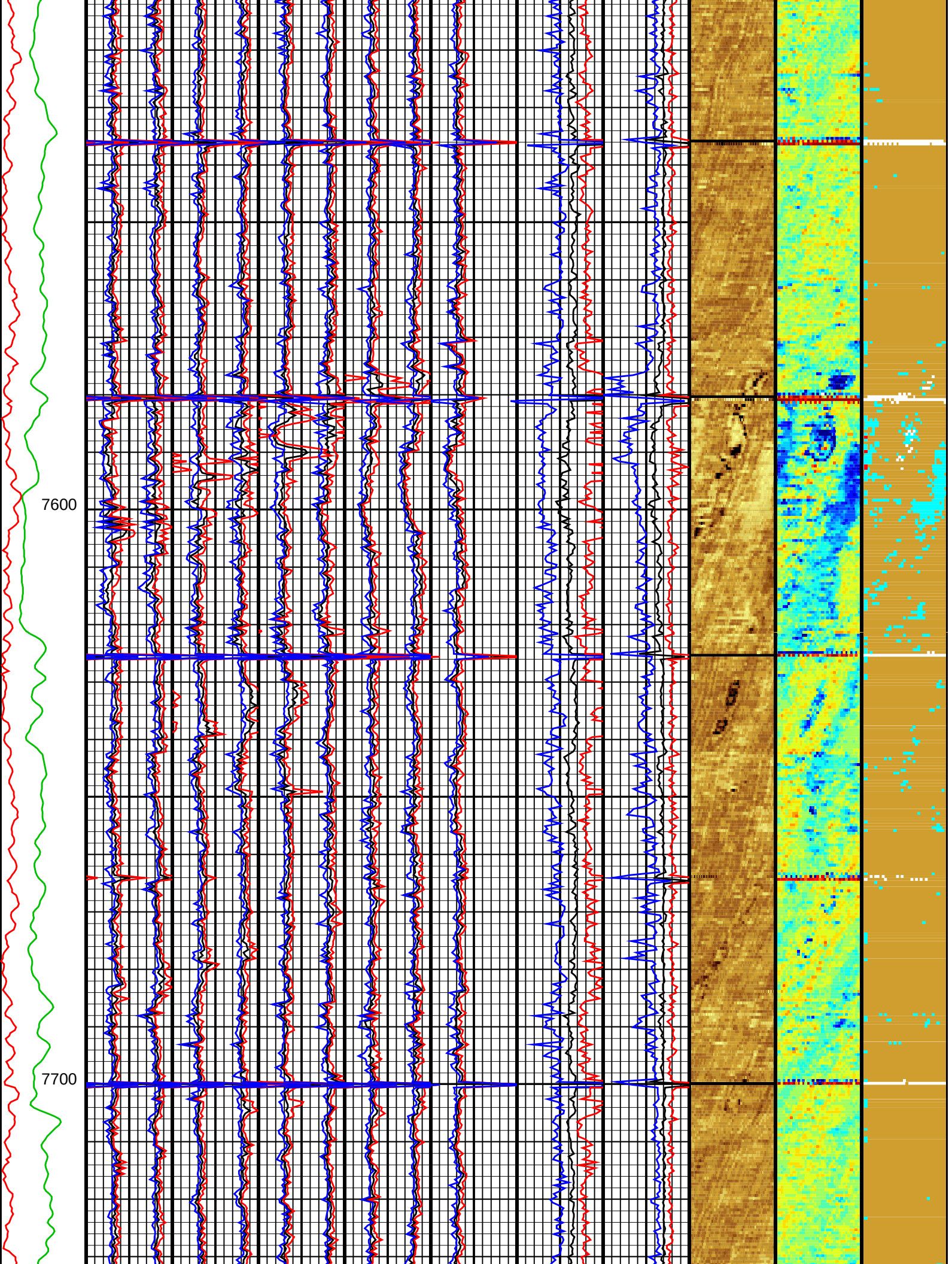
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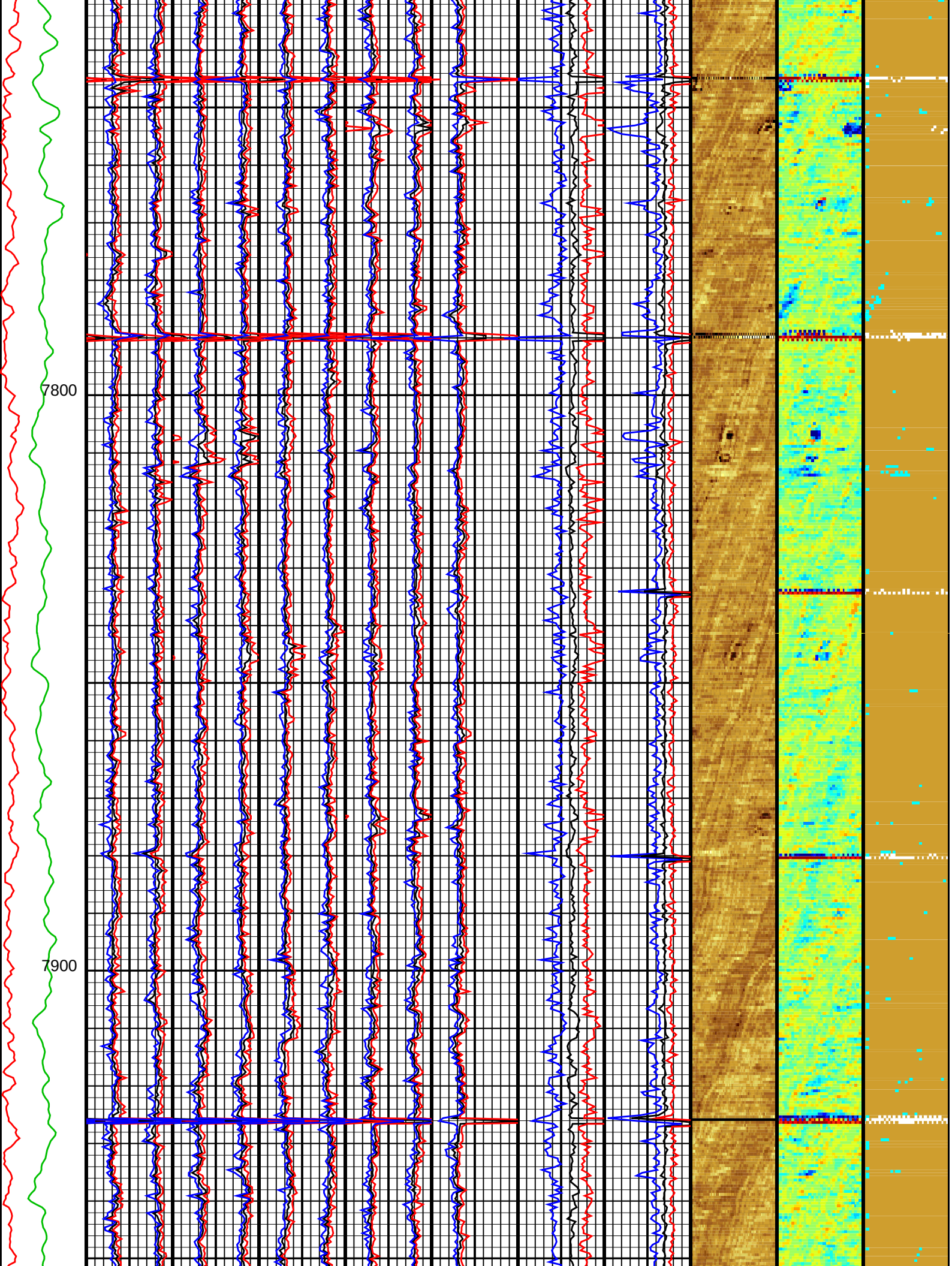
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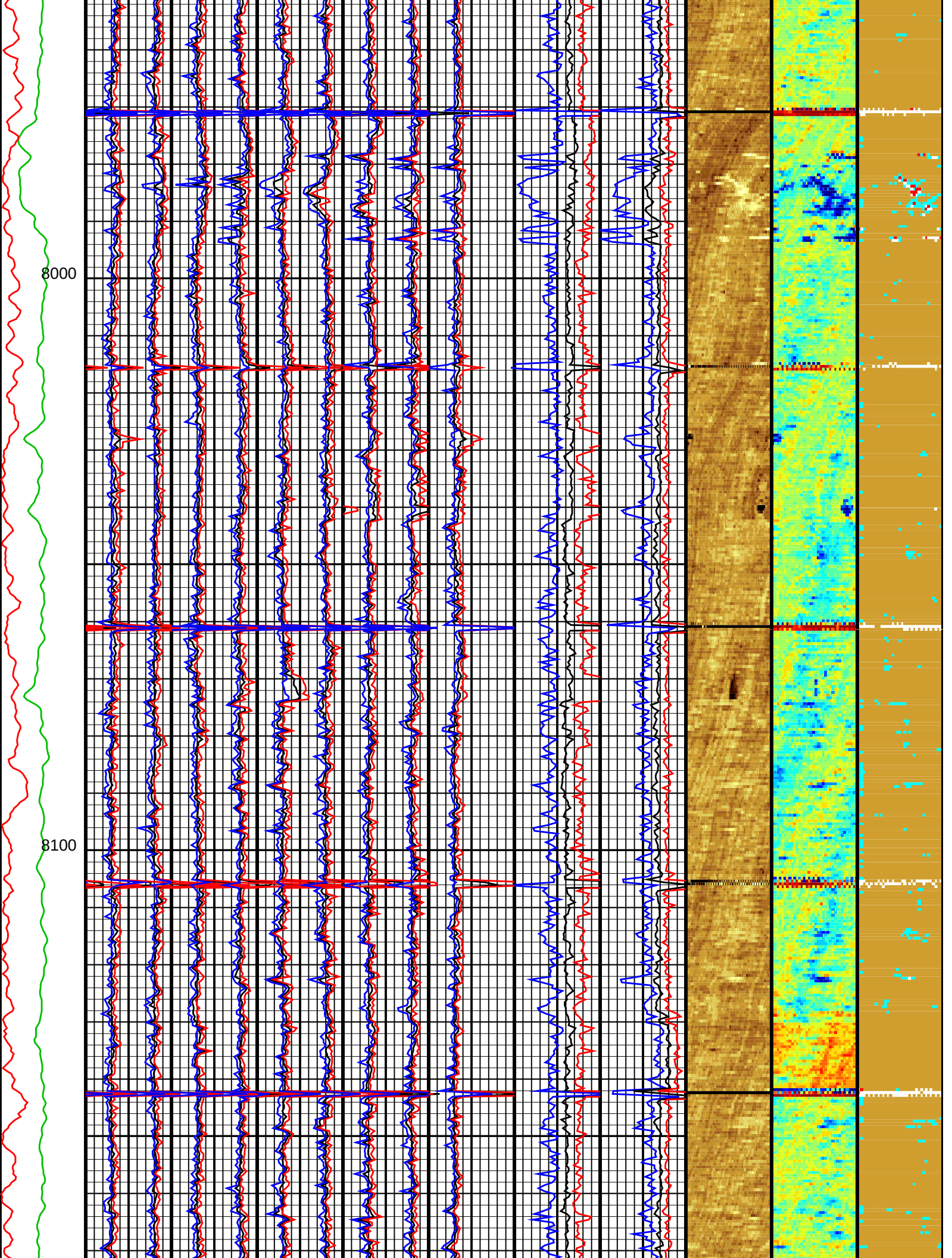
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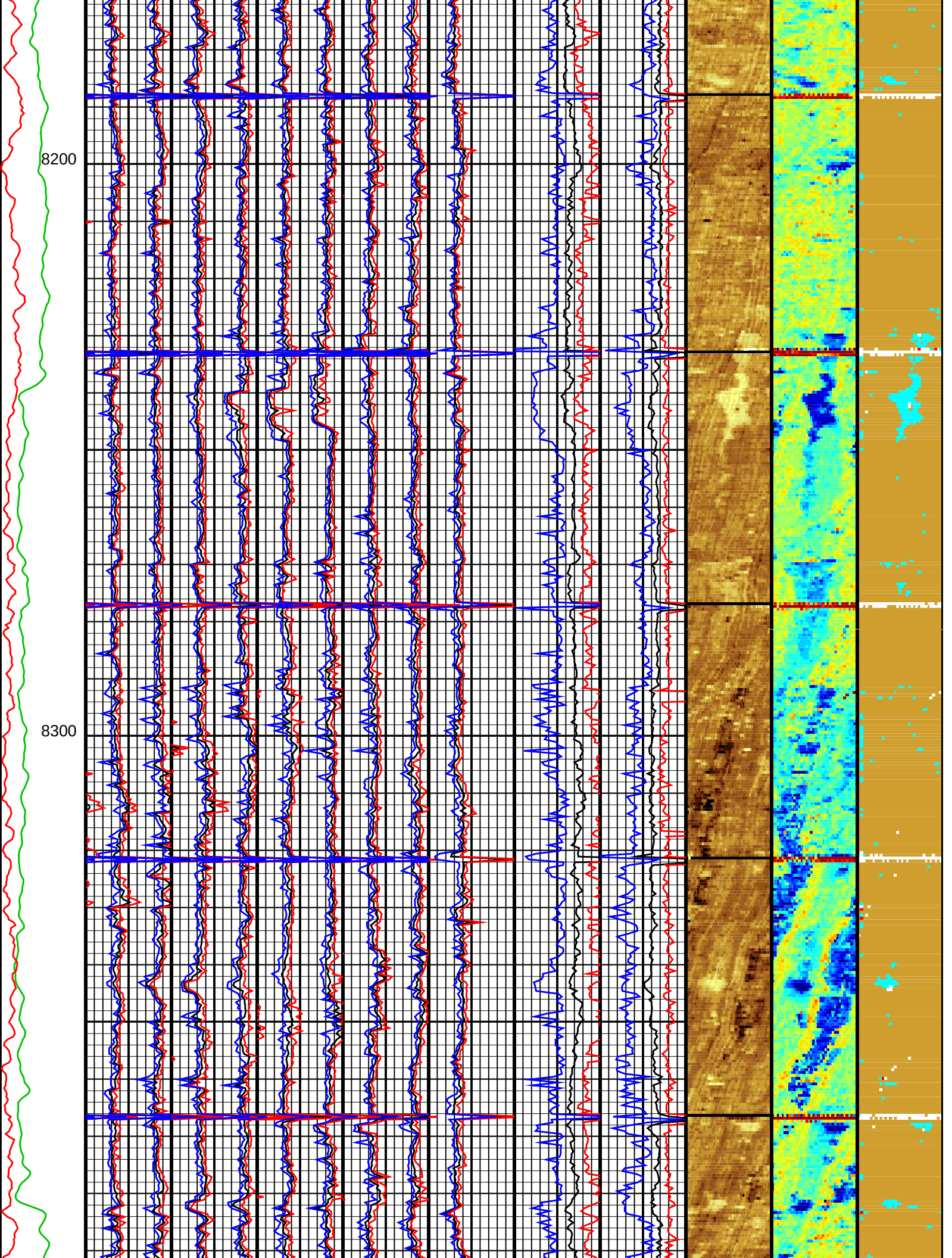
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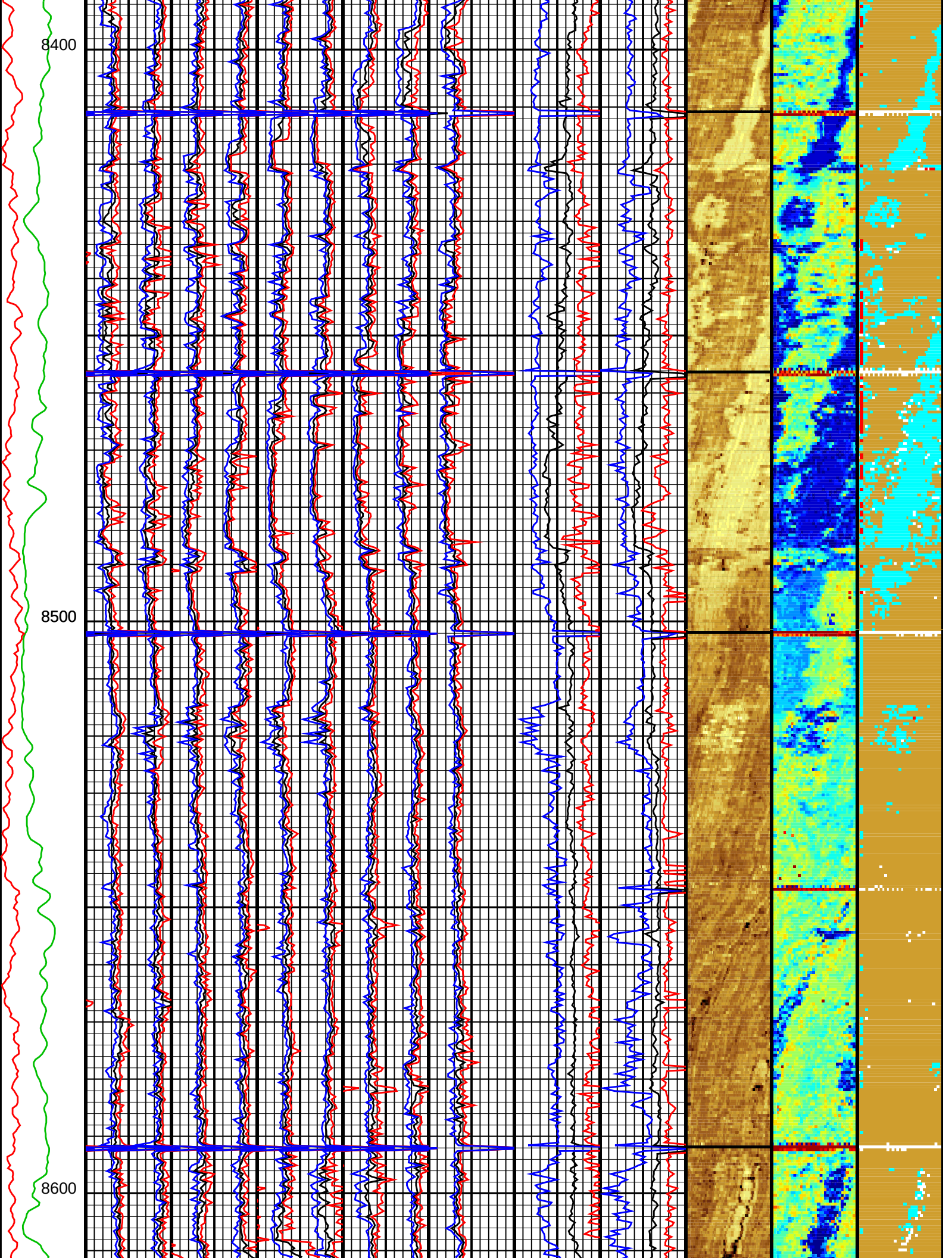
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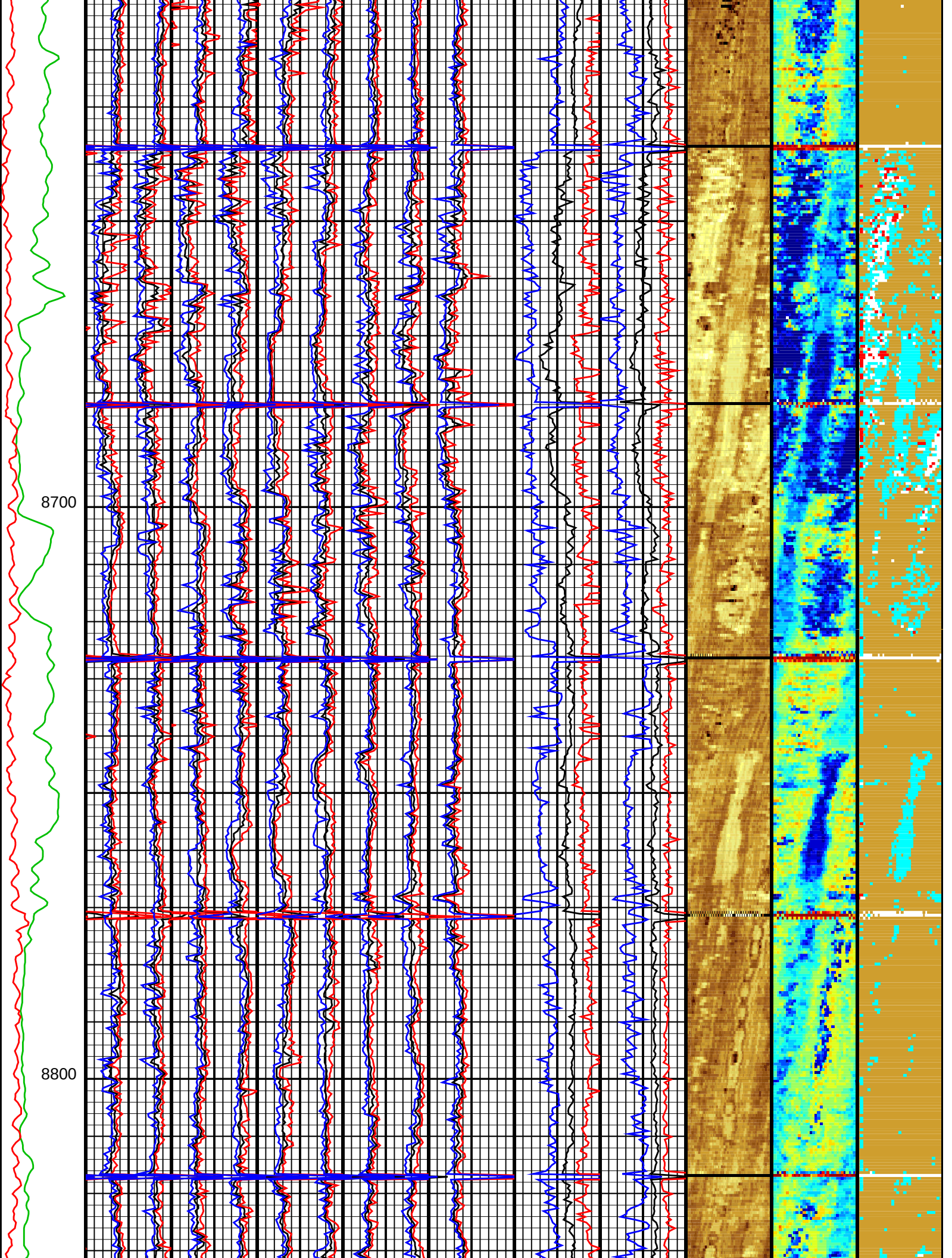
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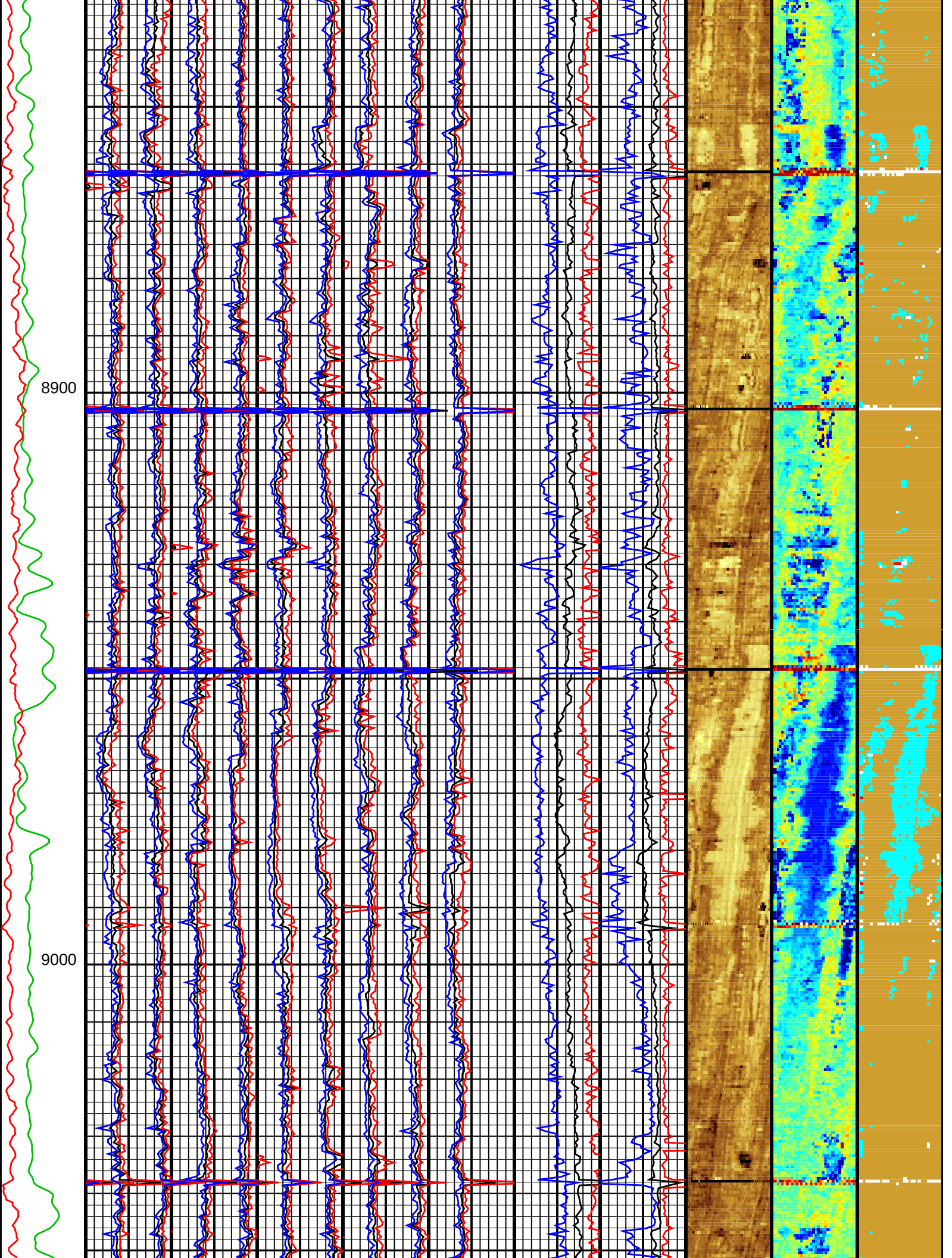
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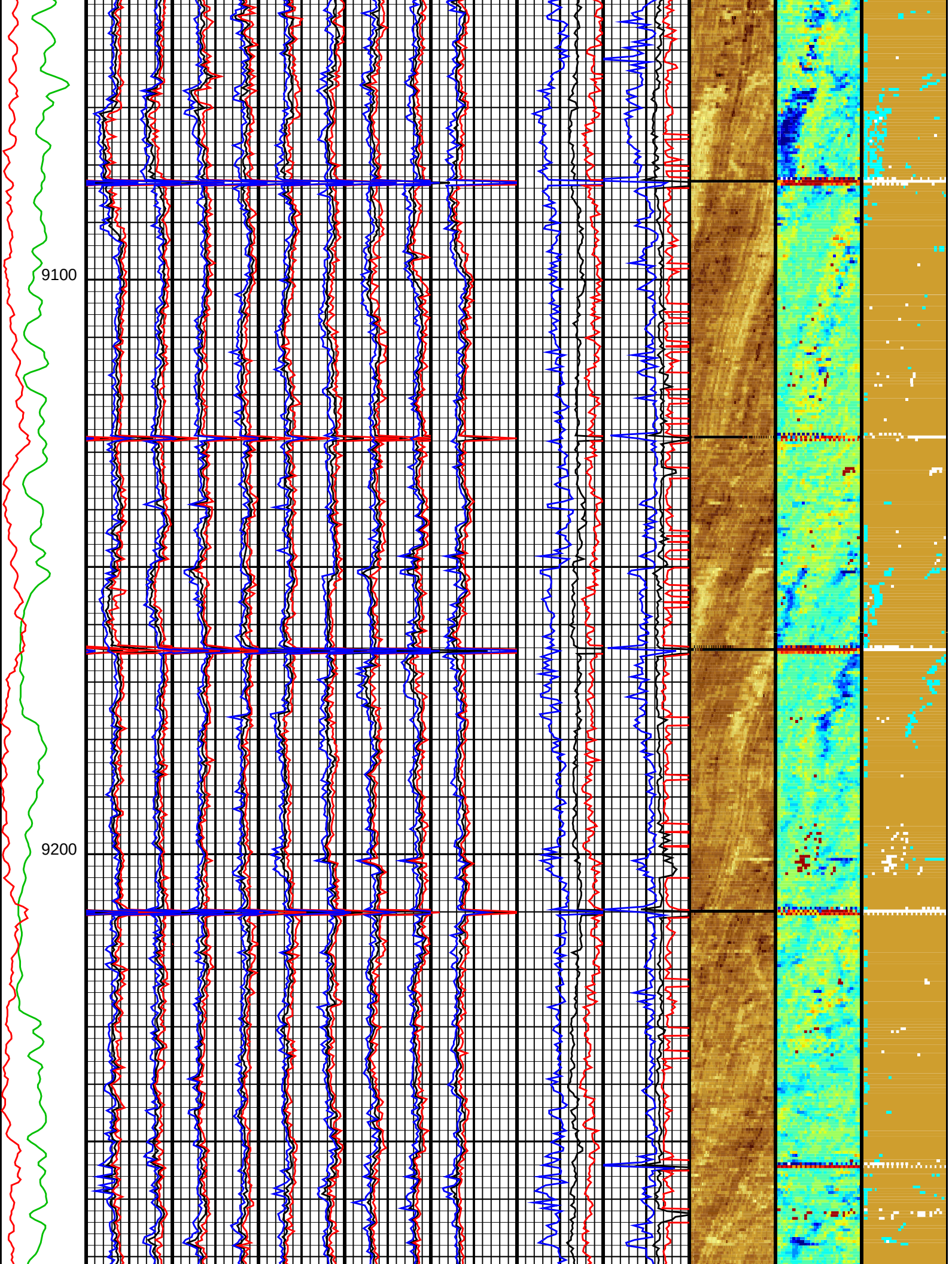
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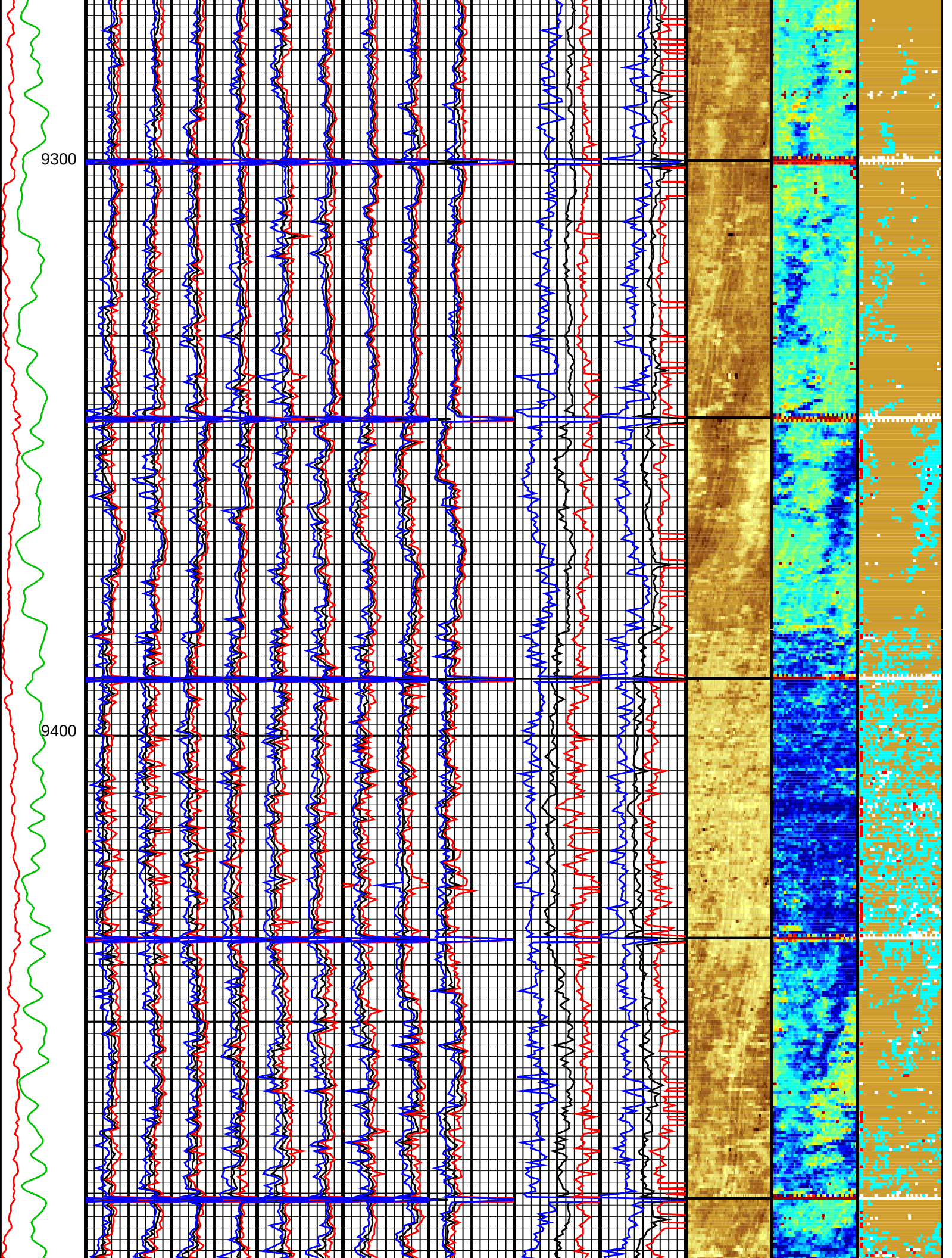
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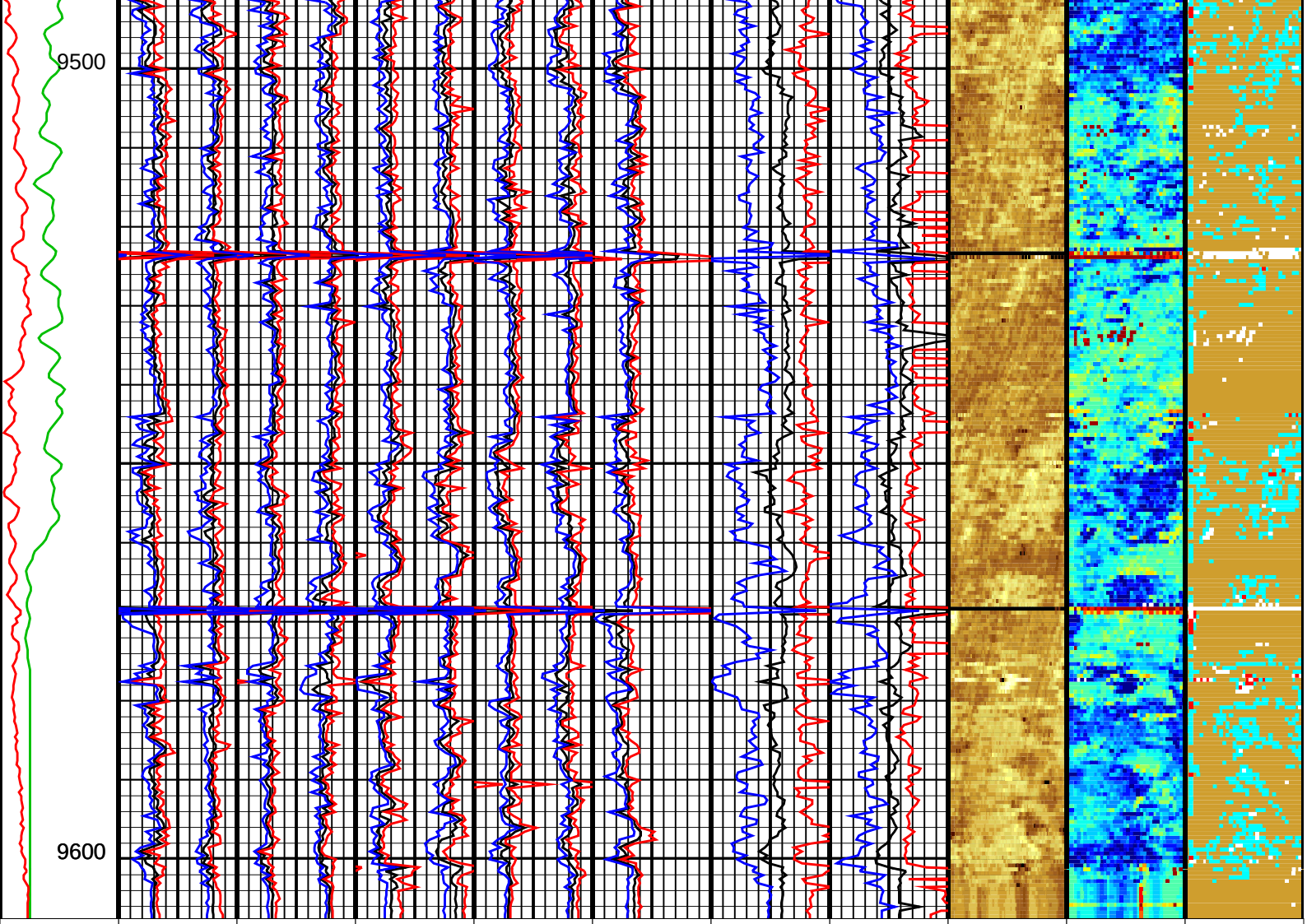


Eccent. (ECCE) 0 (IN) 0.5	Average Acoustic Impedance #1 (AV_AI1) (MRAY) 0 15	Average Acoustic Impedance #3 (AV_AI3) (MRAY) 0 15	Average Acoustic Impedance #5 (AV_AI5) (MRAY) 0 15	Average Acoustic Impedance #7 (AV_AI7) (MRAY) 0 15	Average Acoustic Impedance #9 (AV_AI9) (MRAY) 0 15	Average of AI (AIAV) (MRAY) 0 7.5	Minimum Flexural Attenuation (U−USIT_UFAN) (DB/M) 0 150	−500.0000 0.5000 1.0000 1.5000 2.0000 2.5000 3.0000 3.5000 4.0000 4.5000 5.0000 5.5000 6.0000 6.5000 7.0000 7.5000 8.0000 Raw Acoustic Imped. (AIBK) (MRAY)	0.0000 50.0000 57.0000 64.0000 71.0000 78.0000 85.0000 92.0000 99.0000 106.0000 113.0000 120.0000 127.0000 134.0000 141.0000 148.0000 155.0000 Flexural Attenuation (U−USIT_UFAK) (DB/M)	0.5000 1.5000 2.5000 3.5000 Solid Liquid Gas Map (U−USIT_USLP) (−−−−
Gamma Ray (GR) (GAPI) 0 150	Average Acoustic Impedance #2 (AV_AI2) (MRAY) −7.5 7.5	Average Acoustic Impedance #4 (AV_AI4) (MRAY) −7.5 7.5	Average Acoustic Impedance #6 (AV_AI6) (MRAY) −7.5 7.5	Average Acoustic Impedance #8 (AV_AI8) (MRAY) −7.5 7.5	Maximum Acoustic Impedance #9 (MAX_AI9) (MRAY) 0 15	Minimum of AI (AIMN) (MRAY) 0 7.5	Average Flexural Attenuation (U−USIT_UFAV) (DB/M) 0 150			
	Maximum Acoustic Impedance #1 (MAX_AI1) (MRAY) 0 15	Maximum Acoustic Impedance #3 (MAX_AI3) (MRAY) 0 15	Maximum Acoustic Impedance #5 (MAX_AI5) (MRAY) 0 15	Maximum Acoustic Impedance #7 (MAX_AI7) (MRAY) 0 15	Minimum Acoustic Impedance #9 (MIN_AI9) (MRAY) 0 15	Maximum of AI (AIMX) (MRAY) 0 7.5	Maximum Flexural Attenuation (U−USIT_UFAX) (DB/M) 0 150			

0	15	0	15	0	15	0	15

Maximum Acoustic Impedance #2 (MAX_AI2) (MRAY)		Maximum Acoustic Impedance #4 (MAX_AI4) (MRAY)		Maximum Acoustic Impedance #6 (MAX_AI6) (MRAY)		Maximum Acoustic Impedance #8 (MAX_AI8) (MRAY)	
−7.5	7.5	−7.5	7.5	−7.5	7.5	−7.5	7.5

Minimum Acoustic Impedance #1 (MIN_AI1) (MRAY)		Minimum Acoustic Impedance #3 (MIN_AI3) (MRAY)		Minimum Acoustic Impedance #5 (MIN_AI5) (MRAY)		Minimum Acoustic Impedance #7 (MIN_AI7) (MRAY)	
0	15	0	15	0	15	0	15

Minimum Acoustic Impedance #2 (MIN_AI2) (MRAY)		Minimum Acoustic Impedance #4 (MIN_AI4) (MRAY)		Minimum Acoustic Impedance #6 (MIN_AI6) (MRAY)		Minimum Acoustic Impedance #8 (MIN_AI8) (MRAY)	
−7.5	7.5	−7.5	7.5	−7.5	7.5	−7.5	7.5

Format: M_Goodwin **Vertical Scale: 5" per 100'** **Graphics File Created: 18−May−2010 14:19**

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

All USI Images are outside views

USI : LOW Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.27 to 0.6 IN.

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

Schlumberger

GOODWIN 0.1 INCH

MAXIS Field Log

Company: EXXON MOBIL CORPORATION **Well: PCU 296−6A8**

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

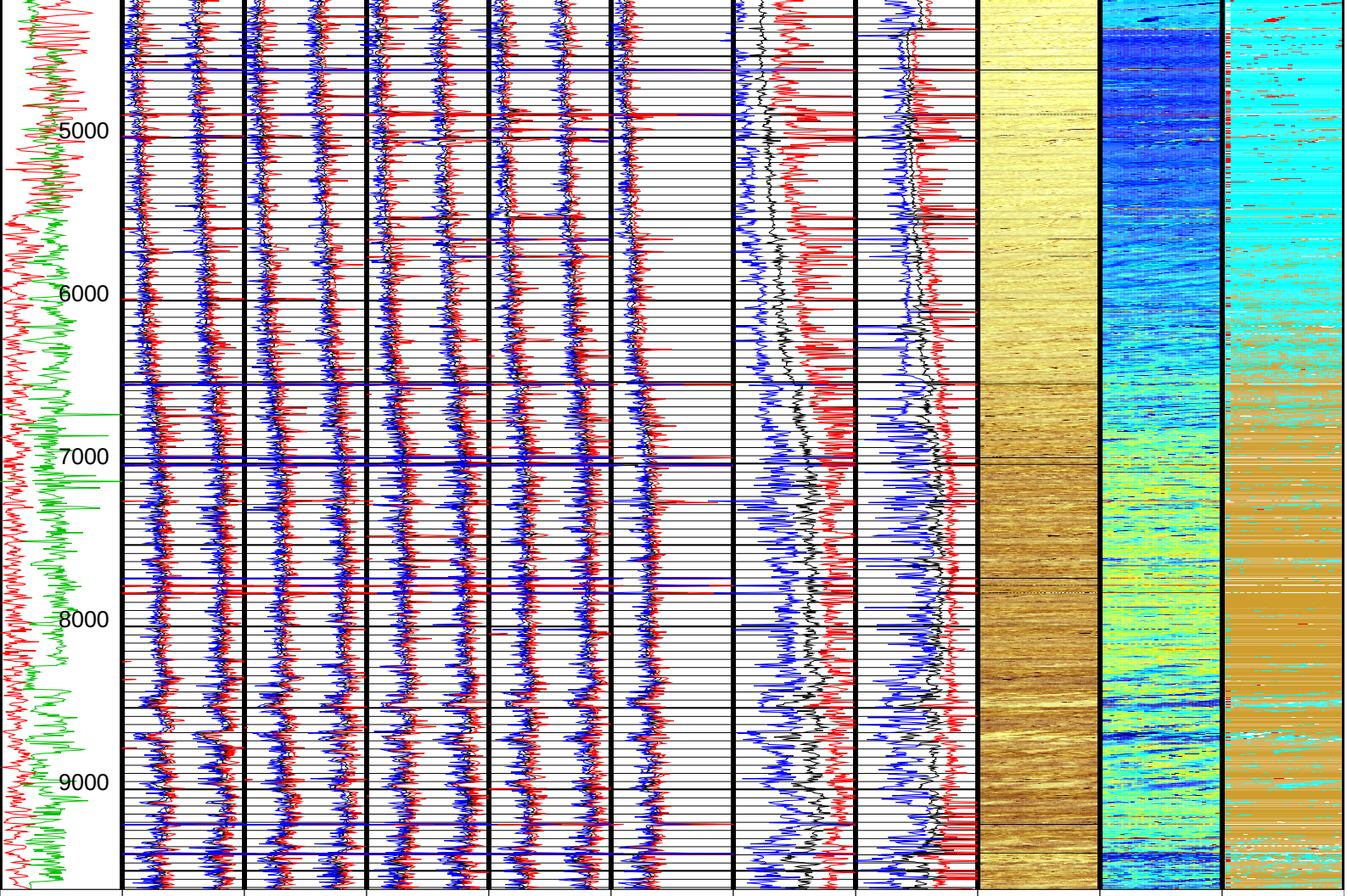
Output DLIS Files

DEFAULT USI_TLD_MCFL_CNL_008PUP FN:7 PRODUCER 18−May−2010 14:19

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

	Minimum Acoustic Impedance #2 (MIN_AI2) (MRAY) −7.5 7.5	Minimum Acoustic Impedance #4 (MIN_AI4) (MRAY) −7.5 7.5	Minimum Acoustic Impedance #6 (MIN_AI6) (MRAY) −7.5 7.5	Minimum Acoustic Impedance #8 (MIN_AI8) (MRAY) −7.5 7.5				
	Minimum Acoustic Impedance #1 (MIN_AI1) (MRAY) 0 15	Minimum Acoustic Impedance #3 (MIN_AI3) (MRAY) 0 15	Minimum Acoustic Impedance #5 (MIN_AI5) (MRAY) 0 15	Minimum Acoustic Impedance #7 (MIN_AI7) (MRAY) 0 15				
	Maximum Acoustic Impedance #2 (MAX_AI2) (MRAY) −7.5 7.5	Maximum Acoustic Impedance #4 (MAX_AI4) (MRAY) −7.5 7.5	Maximum Acoustic Impedance #6 (MAX_AI6) (MRAY) −7.5 7.5	Maximum Acoustic Impedance #8 (MAX_AI8) (MRAY) −7.5 7.5				
	Maximum Acoustic Impedance #1 (MAX_AI1) (MRAY) 0 15	Maximum Acoustic Impedance #3 (MAX_AI3) (MRAY) 0 15	Maximum Acoustic Impedance #5 (MAX_AI5) (MRAY) 0 15	Maximum Acoustic Impedance #7 (MAX_AI7) (MRAY) 0 15	Minimum Acoustic Impedance #9 (MIN_AI9) (MRAY) 0 15	Maximum of AI (AIMX) (MRAY) 0 7.5	Maximum Flexural Attenuation (U−USIT_UFAX) (DB/M) 0 150	
Gamma Ray (GR) (GAPI) 0 150	Average Acoustic Impedance #2 (AV_AI2) (MRAY) −7.5 7.5	Average Acoustic Impedance #4 (AV_AI4) (MRAY) −7.5 7.5	Average Acoustic Impedance #6 (AV_AI6) (MRAY) −7.5 7.5	Average Acoustic Impedance #8 (AV_AI8) (MRAY) −7.5 7.5	Maximum Acoustic Impedance #9 (MAX_AI9) (MRAY) 0 15	Minimum of AI (AIMN) (MRAY) 0 7.5	Average Flexural Attenuation (U−USIT_UFAV) (DB/M) 0 150	
Eccent. (ECCE) 0 (IN) 0.5	Average Acoustic Impedance #1 (AV_AI1) (MRAY) 0 15	Average Acoustic Impedance #3 (AV_AI3) (MRAY) 0 15	Average Acoustic Impedance #5 (AV_AI5) (MRAY) 0 15	Average Acoustic Impedance #7 (AV_AI7) (MRAY) 0 15	Average Acoustic Impedance #9 (AV_AI9) (MRAY) 0 15	Average of AI (AIAV) (MRAY) 0 7.5	Minimum Flexural Attenuation (U−USIT_UFAN) (DB/M) 0 150	−500.0000 0.5000 1.0000 1.5000 2.0000 2.5000 3.0000 3.5000 4.0000 4.5000 5.0000 5.5000 6.0000 6.5000 7.0000 7.5000 8.0000 Raw Acoustic Imped. (AIBK) (MRAY)
								0.0000 50.0000 57.0000 64.0000 71.0000 78.0000 85.0000 92.0000 99.0000 106.0000 113.0000 120.0000 127.0000 134.0000 141.0000 148.0000 155.0000 Flexural Attenuation (U−USIT_UFAK) (DB/M)
								0.5000 1.5000 2.5000 3.5000 Solid Liquid Gas Map (U−USIT_USLP) (−−−−
4000								



Eccent. (ECCE)
0 (IN) 0.5

Average Acoustic Impedance #1 (AV_AI1) (MRAY)
0 15

Average Acoustic Impedance #3 (AV_AI3) (MRAY)
0 15

Average Acoustic Impedance #5 (AV_AI5) (MRAY)
0 15

Average Acoustic Impedance #7 (AV_AI7) (MRAY)
0 15

Average Acoustic Impedance #9 (AV_AI9) (MRAY)
0 15

Average of AI (AIAV) (MRAY)
0 7.5

Minimum Flexural Attenuation (U−USIT_UFAN) (DB/M)
0 150

−500.0000
0.5000
1.0000
1.5000
2.0000
2.5000
3.0000
3.5000
4.0000
4.5000
5.0000
5.5000
6.0000
6.5000
7.0000
7.5000
8.0000

Raw Acoustic Imped. (AIBK) (MRAY)

0.0000
50.0000
57.0000
64.0000
71.0000
78.0000
85.0000
92.0000
99.0000
106.0000
113.0000
120.0000
127.0000
134.0000
141.0000
148.0000
155.0000

Flexural Attenuation (U−USIT_UFAK) (DB/M)

0.5000
1.5000
2.5000
3.5000

Solid Liquid Gas Map (U−USIT_USLP) (−−−−

Gamma Ray (GR) (GAPI)
0 150

Average Acoustic Impedance #2 (AV_AI2) (MRAY)
−7.5 7.5

Average Acoustic Impedance #4 (AV_AI4) (MRAY)
−7.5 7.5

Average Acoustic Impedance #6 (AV_AI6) (MRAY)
−7.5 7.5

Average Acoustic Impedance #8 (AV_AI8) (MRAY)
−7.5 7.5

Maximum Acoustic Impedance #9 (MAX_AI9) (MRAY)
0 15

Minimum of AI (AIMN) (MRAY)
0 7.5

Average Flexural Attenuation (U−USIT_UFAV) (DB/M)
0 150

Maximum Acoustic Impedance #1 (MAX_AI1) (MRAY)
0 15

Maximum Acoustic Impedance #3 (MAX_AI3) (MRAY)
0 15

Maximum Acoustic Impedance #5 (MAX_AI5) (MRAY)
0 15

Maximum Acoustic Impedance #7 (MAX_AI7) (MRAY)
0 15

Minimum Acoustic Impedance #9 (MIN_AI9) (MRAY)
0 15

Maximum of AI (AIMX) (MRAY)
0 7.5

Maximum Flexural Attenuation (U−USIT_UFAX) (DB/M)
0 150

Maximum

Maximum

Maximum

Maximum

Acoustic Impedance #2 (MAX_AI2) (MRAY)		Acoustic Impedance #4 (MAX_AI4) (MRAY)		Acoustic Impedance #6 (MAX_AI6) (MRAY)		Acoustic Impedance #8 (MAX_AI8) (MRAY)	
−7.5	7.5	−7.5	7.5	−7.5	7.5	−7.5	7.5
Minimum Acoustic Impedance #1 (MIN_AI1) (MRAY)		**Minimum Acoustic Impedance #3 (MIN_AI3) (MRAY)**		**Minimum Acoustic Impedance #5 (MIN_AI5) (MRAY)**		**Minimum Acoustic Impedance #7 (MIN_AI7) (MRAY)**	
0	15	0	15	0	15	0	15
Minimum Acoustic Impedance #2 (MIN_AI2) (MRAY)		**Minimum Acoustic Impedance #4 (MIN_AI4) (MRAY)**		**Minimum Acoustic Impedance #6 (MIN_AI6) (MRAY)**		**Minimum Acoustic Impedance #8 (MIN_AI8) (MRAY)**	
−7.5	7.5	−7.5	7.5	−7.5	7.5	−7.5	7.5

Format: M_Goodwin_Compressed **Vertical Scale: 0.1" per 100'** **Graphics File Created: 18−May−2010 14:19**

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

All USI Images are outside views

USI : LOW Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.27 to 0.6 IN.

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_013LUP	FN:12	PRODUCER	18−May−2010 09:11	9601.5 FT	300.0 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_008PUP	FN:7	PRODUCER	18−May−2010 14:19

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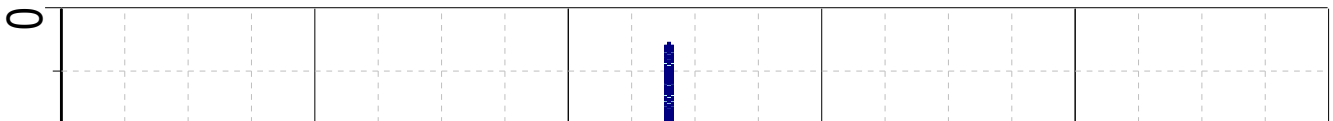
FLUID PROPERTIES

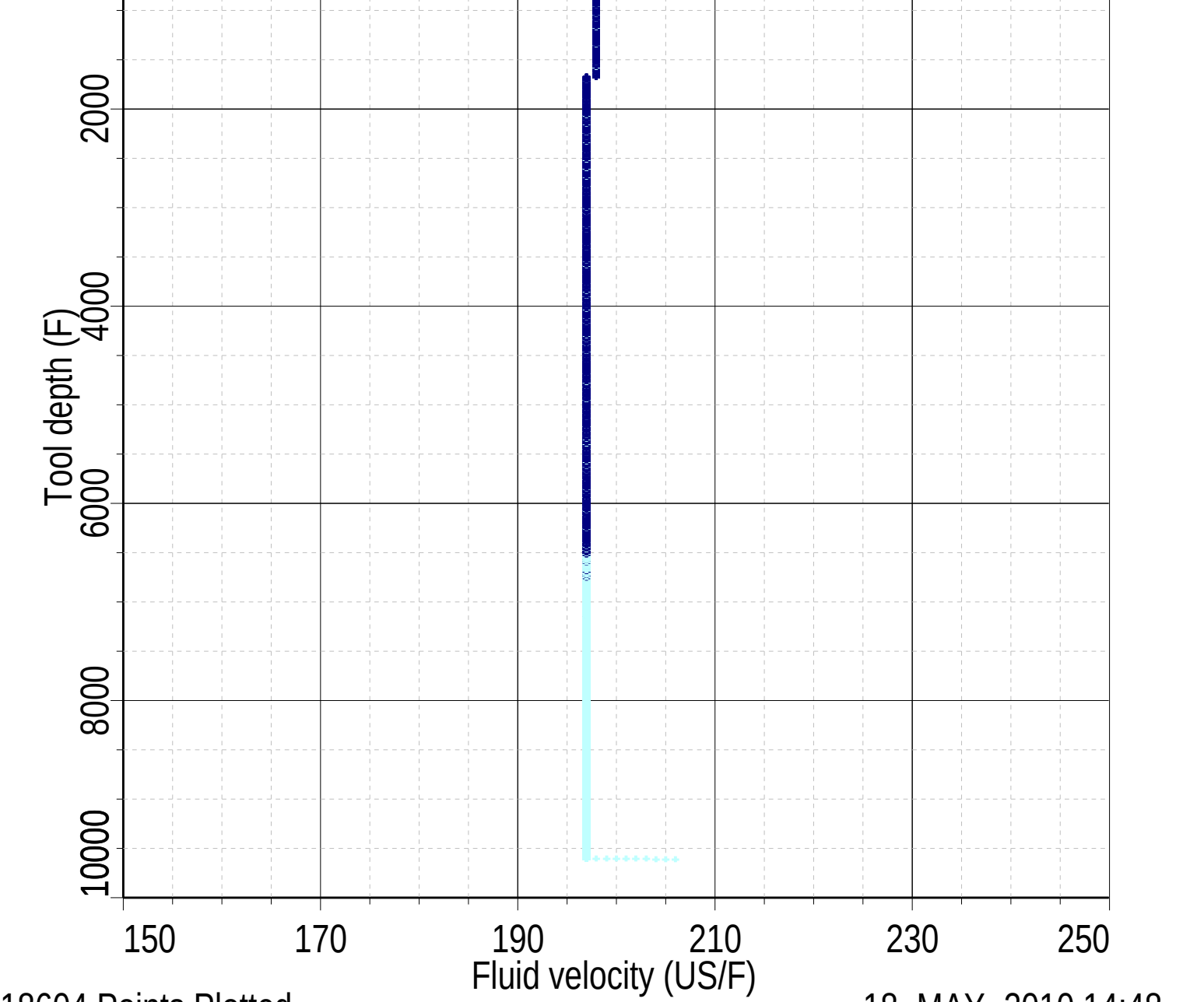
MAXIS Field Log

Index: 9607.5 − 306.0 FT

IBC Inv. Fluid Z QC (−−−−

0. 0.5





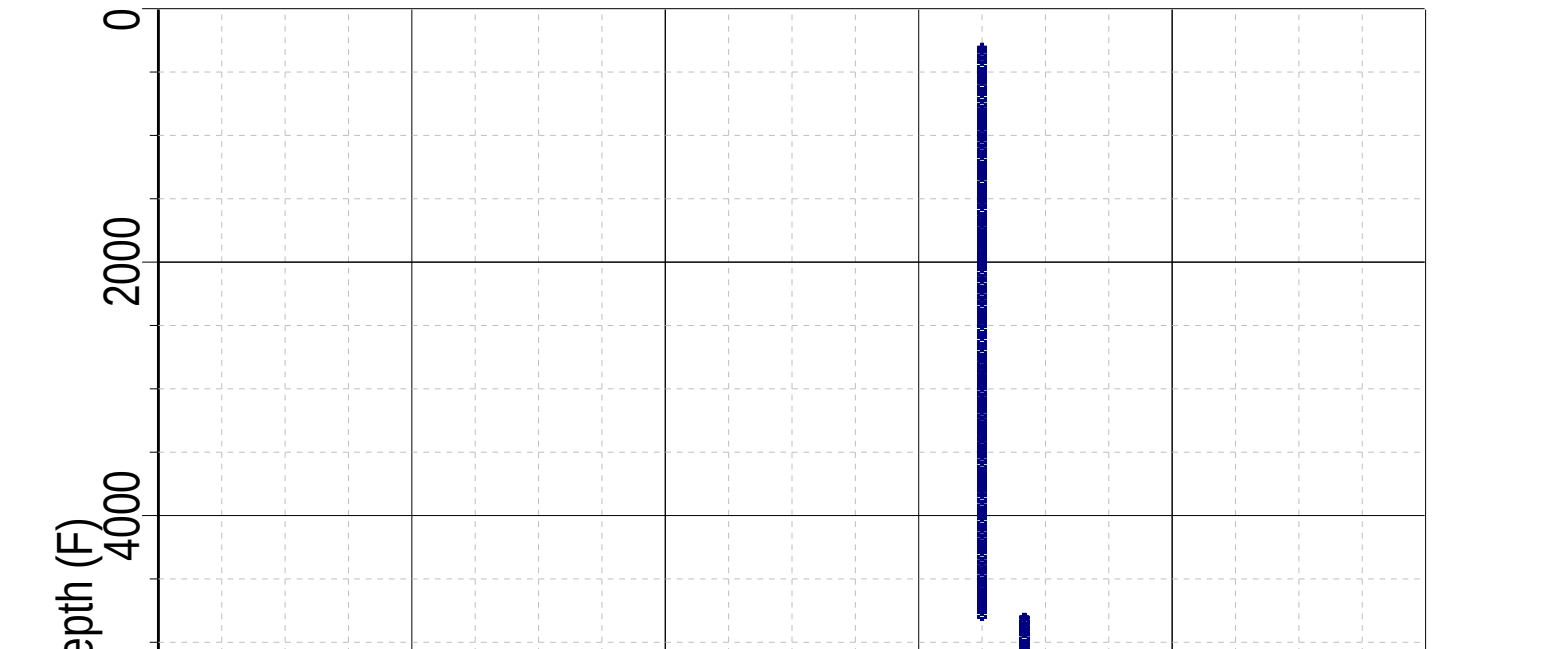
18604 Points Plotted

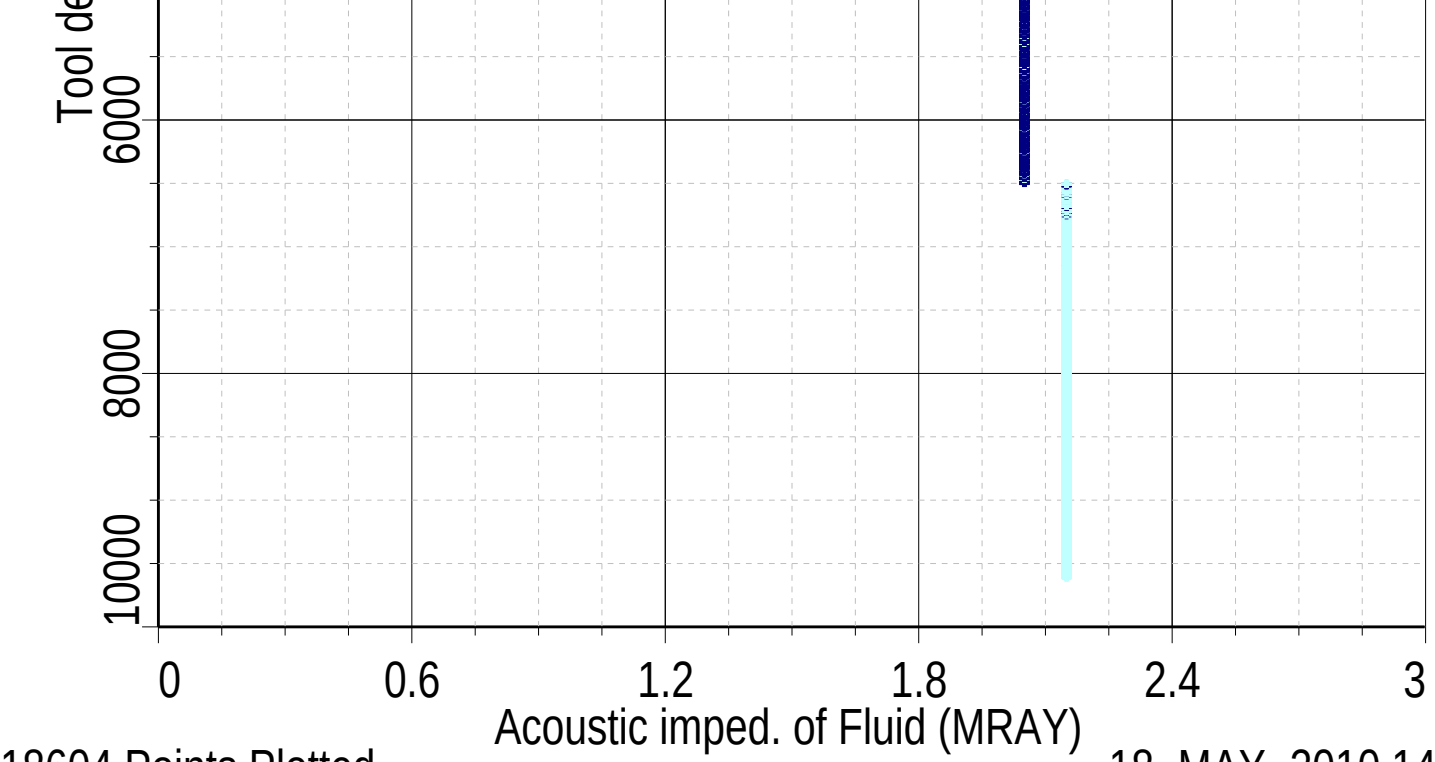
18−MAY−2010 14:48

IBC Inv. Fluid Z QC (−−−−

Index: 9607.5 − 306.0 FT

0. 0.5





18604 Points Plotted

18−MAY−2010 14:48

Schlumberger

REPEAT PASS

MAXIS Field Log

Company: EXXON MOBIL CORPORATION **Well: PCU 296−6A8**

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_012LUP	FN:11	PRODUCER	18−May−2010 08:48	9562.5 FT	9143.5 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_006PUP	FN:5	PRODUCER	18−May−2010 14:07	9568.0 FT	9149.0 FT

OP System Version: 17C0−154

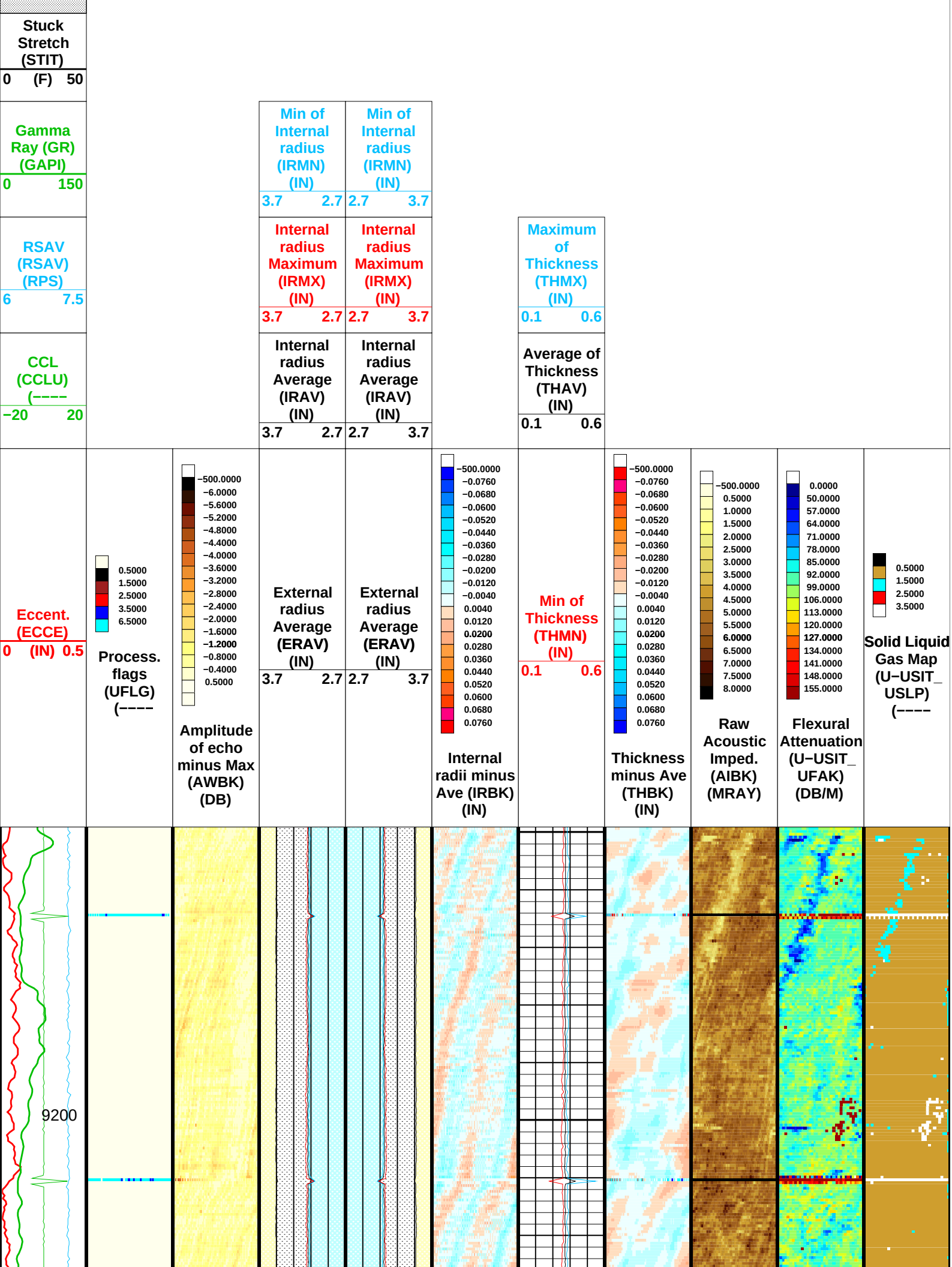
USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

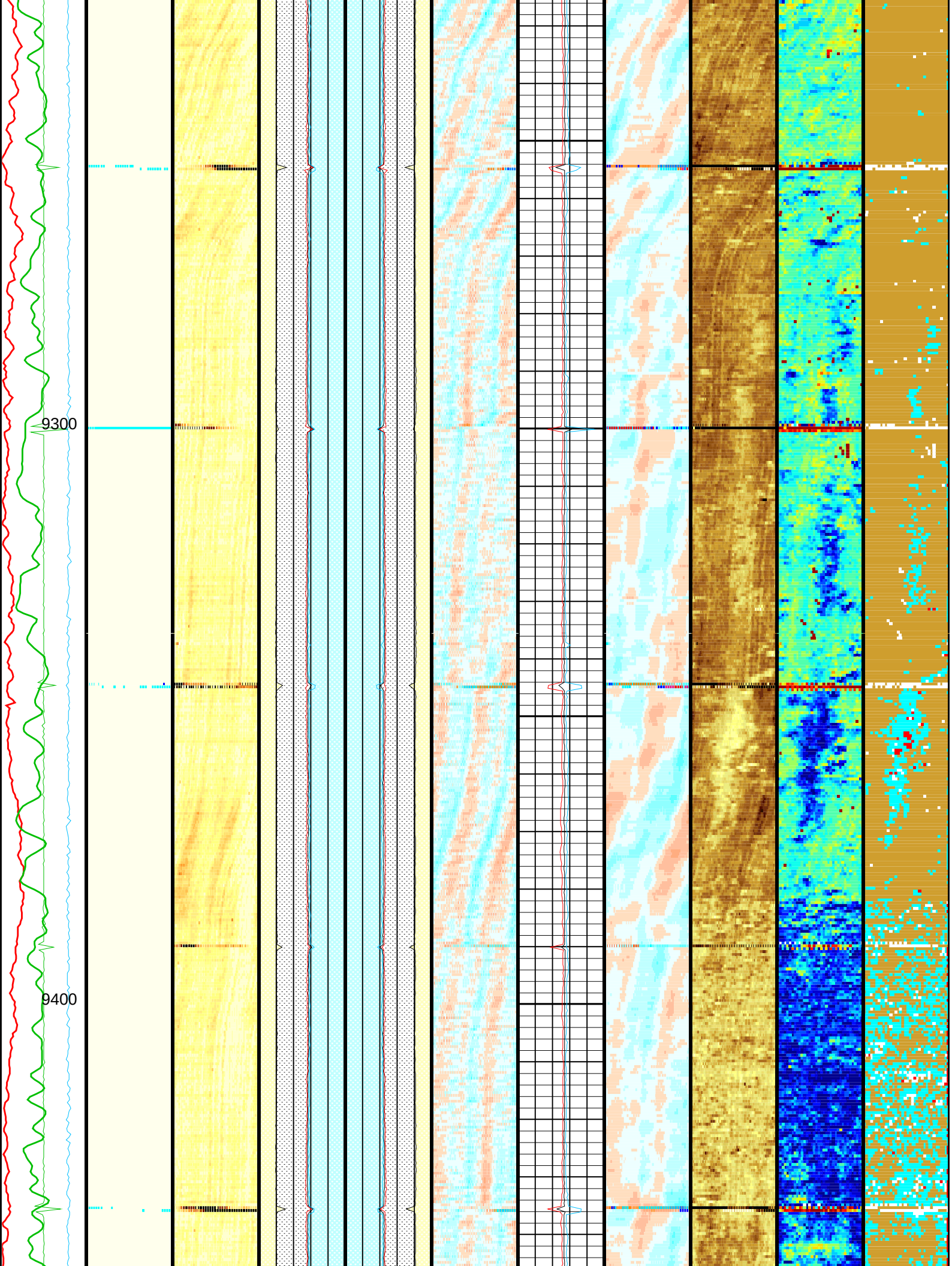
Image rotation (UCAZ) (DEG)

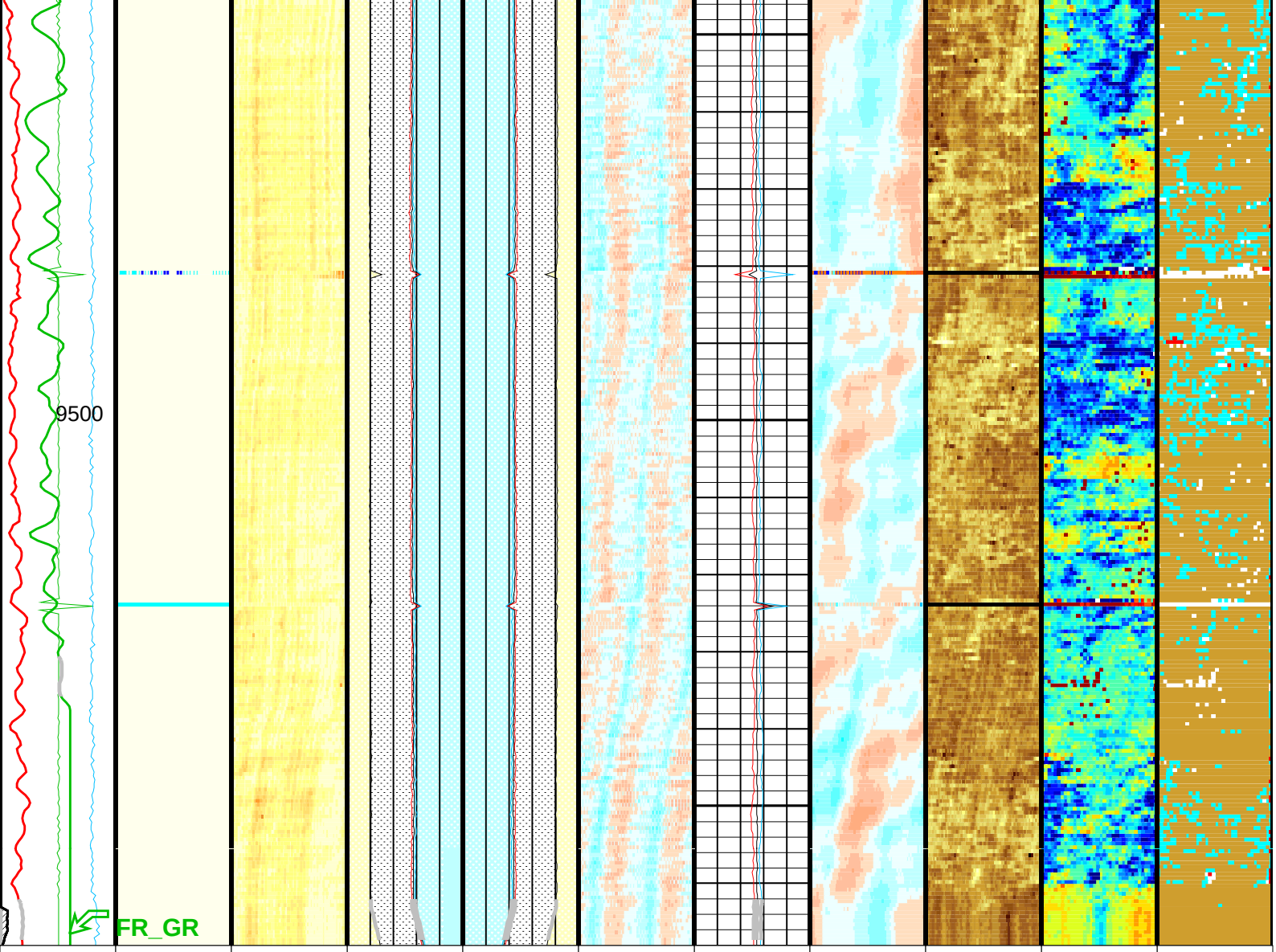
0 360

Tool/Tot. Drag From D4T to STIA

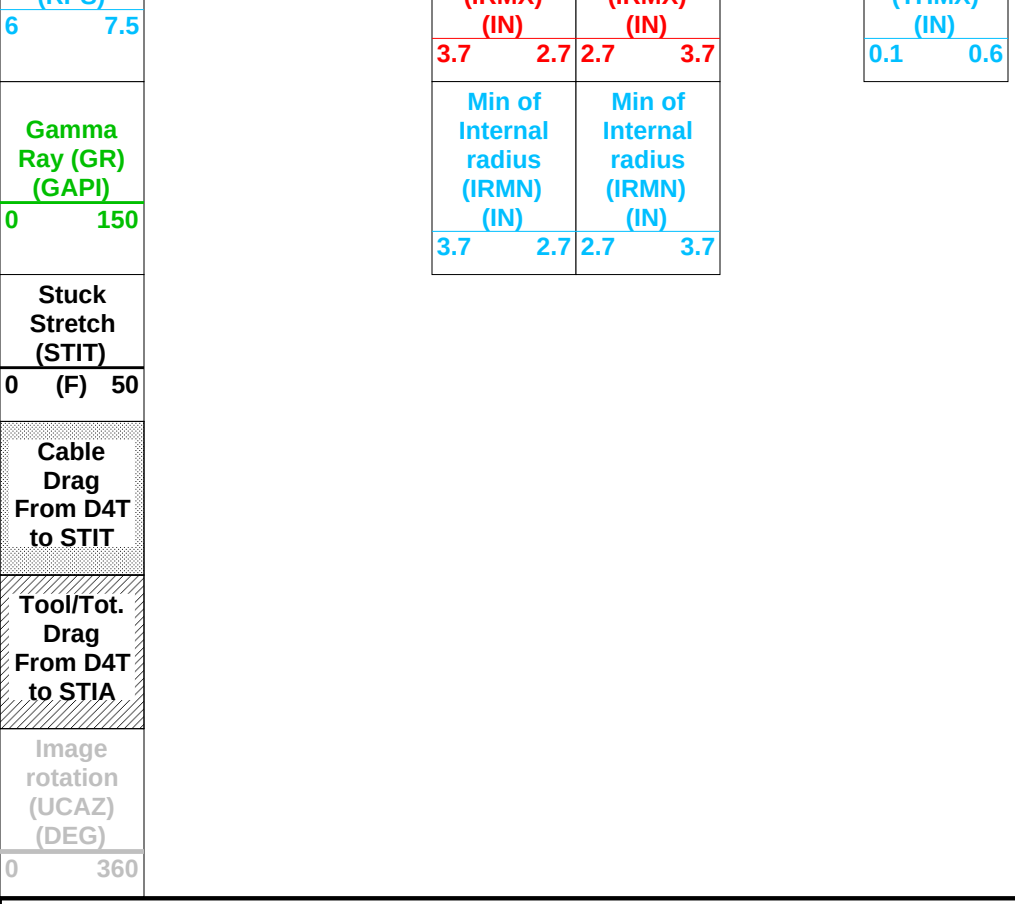
Cable Drag From D4T to STIT


Stuck Stretch (STIT)
0 (F) 50
Gamma Ray (GR) (GAPI)
0 150
RSAV (RSAV) (RPS)
6 7.5
CCL (CCLU) (----
−20 20
Eccent. (ECCE)
0 (IN) 0.5
Process. flags (UFLG) (----
0.5000
1.5000
2.5000
3.5000
6.5000
Amplitude of echo minus Max (AWBK) (DB)
−500.0000
−6.0000
−5.6000
−5.2000
−4.8000
−4.4000
−4.0000
−3.6000
−3.2000
−2.8000
−2.4000
−2.0000
−1.6000
−1.2000
−0.8000
−0.4000
0.5000
Min of Internal radius (IRMN) (IN)
3.7 2.7
Internal radius Maximum (IRMX) (IN)
3.7 2.7
Internal radius Average (IRAV) (IN)
3.7 2.7
External radius Average (ERAV) (IN)
3.7 2.7
Min of Internal radius (IRMN) (IN)
2.7 3.7
Internal radius Maximum (IRMX) (IN)
2.7 3.7
Internal radius Average (IRAV) (IN)
2.7 3.7
External radius Average (ERAV) (IN)
2.7 3.7
Internal radii minus Ave (IRBK) (IN)
−500.0000
−0.0760
−0.0680
−0.0600
−0.0520
−0.0440
−0.0360
−0.0280
−0.0200
−0.0120
−0.0040
0.0040
0.0120
0.0200
0.0280
0.0360
0.0440
0.0520
0.0600
0.0680
0.0760
Maximum of Thickness (THMX) (IN)
0.1 0.6
Average of Thickness (THAV) (IN)
0.1 0.6
Min of Thickness (THMN) (IN)
0.1 0.6
Thickness minus Ave (THBK) (IN)
−500.0000
−0.0760
−0.0680
−0.0600
−0.0520
−0.0440
−0.0360
−0.0280
−0.0200
−0.0120
−0.0040
0.0040
0.0120
0.0200
0.0280
0.0360
0.0440
0.0520
0.0600
0.0680
0.0760
Raw Acoustic Imped. (AIBK) (MRAY)
−500.0000
0.5000
1.0000
1.5000
2.0000
2.5000
3.0000
3.5000
4.0000
4.5000
5.0000
5.5000
6.0000
6.5000
7.0000
7.5000
8.0000
Flexural Attenuation (U−USIT_ UFAK) (DB/M)
0.0000
50.0000
57.0000
64.0000
71.0000
78.0000
85.0000
92.0000
99.0000
106.0000
113.0000
120.0000
127.0000
134.0000
141.0000
148.0000
155.0000
Solid Liquid Gas Map (U−USIT_ USLP) (----
0.5000
1.5000
2.5000
3.5000
9200


9300
9400



Eccent. (ECCE) 0 (IN) 0.5	Process. flags (UFLG) (-----	Amplitude of echo minus Max (AWBK) (DB)	External radius Average (ERAV) (IN) 3.7 2.7	External radius Average (ERAV) (IN) 2.7 3.7	Internal radii minus Ave (IRBK) (IN)	Min of Thickness (THMN) (IN) 0.1 0.6	Thickness minus Ave (THBK) (IN)	Raw Acoustic Imped. (AIBK) (MRAY)	Flexural Attenuation (U-USIT_UFAK) (DB/M)	Solid Liquid Gas Map (U-USIT_USLP) (----
CCL (CCLU) (---- −20 20			Internal radius Average (IRAV) (IN) 3.7 2.7	Internal radius Average (IRAV) (IN) 2.7 3.7		Average of Thickness (THAV) (IN) 0.1 0.6				
RSAV (RSAV) (RPS)			Internal radius Maximum (IRMX)	Internal radius Maximum (IRMX)		Maximum of Thickness (THMX)				



Format: USI_IBC_SLG_Composite Vertical Scale: 5" per 100' Graphics File Created: 18−May−2010 14:07

OP System Version: 17C0−154

USIT−D	17C0−154	HILTH−FTB	17C0−154
DTC−H	17C0−154		

All USI Images are outside views

USI : LOW Frequency Compression Mode Used For Logging.

Recommended casing thickness range for optimum cement impedance measurement : 0.27 to 0.6 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	7	IN
CSDE	Casing Density	486.94	LBCF
CSID	Casing Inner Diameter	6.276	IN
DFVL	Default Fluid Velocity	206	US/F
DOT	Diameter of Transducer Sensor	2.874	IN
EMXV	EMEX Voltage	110	V
FSOD	Fluid Slowness Fits Casing Outer Diameter	5_UFSL_N_ZMUD	
IMAR	Image Rotation	OFF	
MW	Mud Weight	11.5	LB/G
RCOD	Reference Calibrator Outer Diameter	7	IN
RCSO	Reference Calibrator Standoff	1.1811	IN
RCTH	Reference Calibrator Thickness	0.2952	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	0.362	IN

THNO	Nominal Thickness of Casing	0.362	IN
U−USIT_CEMT	USIT Cement Type	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	8	DB/M
U−USIT_UIAP	USIT IBC Answer Product Enabled	SolidLiquidGasMap	
U−USIT_UIST	Ultrasonic IBC Sonde Type	Sub_Ibcs_B	
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_7_inch	
UWKM	Ultrasonic Working Mode	5DEG_6IN_136UNF_LF	
VCAS	Ultrasonic Transversal Velocity in Casing	51.4	US/F
WLEN	T^3 Processing Length	21.7078	US
ZCAS	Acoustic Impedance of Casing	46.25	MRAY
ZINI	Initial Estimate of Cement Impedance	−1	MRAY
ZMUD	Acoustic Impedance of Mud	2.15	MRAY
ZTCM	Acoustic Impedance Threshold for Cement	2.6	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	9742.00	FT
TDL	Total Depth − Logger	9600.00	FT
	System and Miscellaneous		
BS	Bit Size	9.875	IN
CWEI	Casing Weight	26.00	LB/F
DO	Depth Offset for Playback	5.5	FT
PP	Playback Processing	RECOMPUTE	

Input DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_012LUP	FN:11	PRODUCER	18−May−2010 08:48	9562.5 FT	9143.5 FT

Output DLIS Files

DEFAULT	USI_TLD_MCFL_CNL_006PUP	FN:5	PRODUCER	18−May−2010 14:07

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CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Detector Calibration							
Before: 17−May−2010 19:37							
Gamma Ray Background	30.00	N/A	28.00	N/A	N/A	N/A	GAPI
Gamma Ray (Jig − Bkg)	167.3	N/A	167.3	N/A	N/A	15.21	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Zero Measurement							
Master: 19−Feb−2010 15:58 Before: 17−May−2010 19:46							
CNTC Background	26.67	26.67	27.18	N/A	N/A	4.001	CPS

CFTC Background	29.55	29.55	27.93	N/A	N/A	4.432	CPS

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Ratio Measurement
Master: 19−Feb−2010 15:58

Thermal Near Corr. (Tank)	5800	5258	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2175	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.417	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Accelerometer Calibration
Before: 18−May−2010 7:53

Z−Axis Acceleration	32.19	N/A	32.17	N/A	N/A	N/A	F/S2

The HGNS Neutron Master Calibration was done with the following parameters :

NCT−B Water Temperature 59.4 DEGF.
Thermal Housing Size 3.374 IN.
NSR−F serial number 0

High resolution Integrated Logging Tool−DTS / Equipment Identification

Primary Equipment:

HILT Gamma−Ray Neutron Sonde−DTS	HGNS − H	
HGNS Gamma−Ray Device	HGR −	
HGNS Neutron Detector with Alpha Source	HCNT − H	
Z−Axis Accelerometer	HACC − H	3577
Compensated Neutron Box	CNB − AB	
HTBC Communication Assembly DTS Mode	HMCA − H	

Auxiliary Equipment:

Neutron Calibration Tank	NCT − B
Gamma Source Radioactive	GSR − U/Y
HGNS Housing	HGNH −

High resolution Integrated Logging Tool−DTS Wellsite Calibration
Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		28.00	Before		167.3	Before		165.0
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			152.1 (Minimum) 167.3 (Nominal) 182.5 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 17−May−2010 19:37

High resolution Integrated Logging Tool−DTS Wellsite Calibration
Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		26.67	Master		29.55
Before		27.18	Before		27.93
	5.000 (Minimum) 26.67 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 29.55 (Nominal) 40.00 (Maximum)	

Master: 19−Feb−2010 15:58 Before: 17−May−2010 19:46

High resolution Integrated Logging Tool−DTS Wellsite Calibration
Ratio Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5258	Master		2175	Master		2.417
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 19−Feb−2010 15:58

High resolution Integrated Logging Tool−DTS
Wellsite Calibration
Accelerometer Calibration

Phase	Z−Axis Acceleration F/S2	Value
Before		32.17
	31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)	

Before: 18−May−2010 7:53

High resolution Integrated Logging Tool−DTS Master Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		26.67	Master		29.55
	5.000 (Minimum) 26.67 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 29.55 (Nominal) 40.00 (Maximum)	

Master: 19−Feb−2010 15:58

High resolution Integrated Logging Tool−DTS Master Calibration

Tank Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5258	Master		2175	Master		2.417
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 19−Feb−2010 15:58

DTS Telemetry Tool / Equipment Identification

Primary Equipment:	
DTC−H Auxiliary Cartridge	DTCH − A
DTC−H Telemetry Cartridge	DTCH − A
Auxiliary Equipment:	
DTCH Telemetry Cartridge Housing	ECH − KC

Company: **EXXON MOBIL CORPORATION**

Schlumberger

Well: **PCU 296−6A8**
Field: **PICEANCE CREEK**
County: **RIO BLANCO**
State: **CO**

IMAGING BEHIND CASING
GAMMA RAY
CASING COLLAR LOCATOR