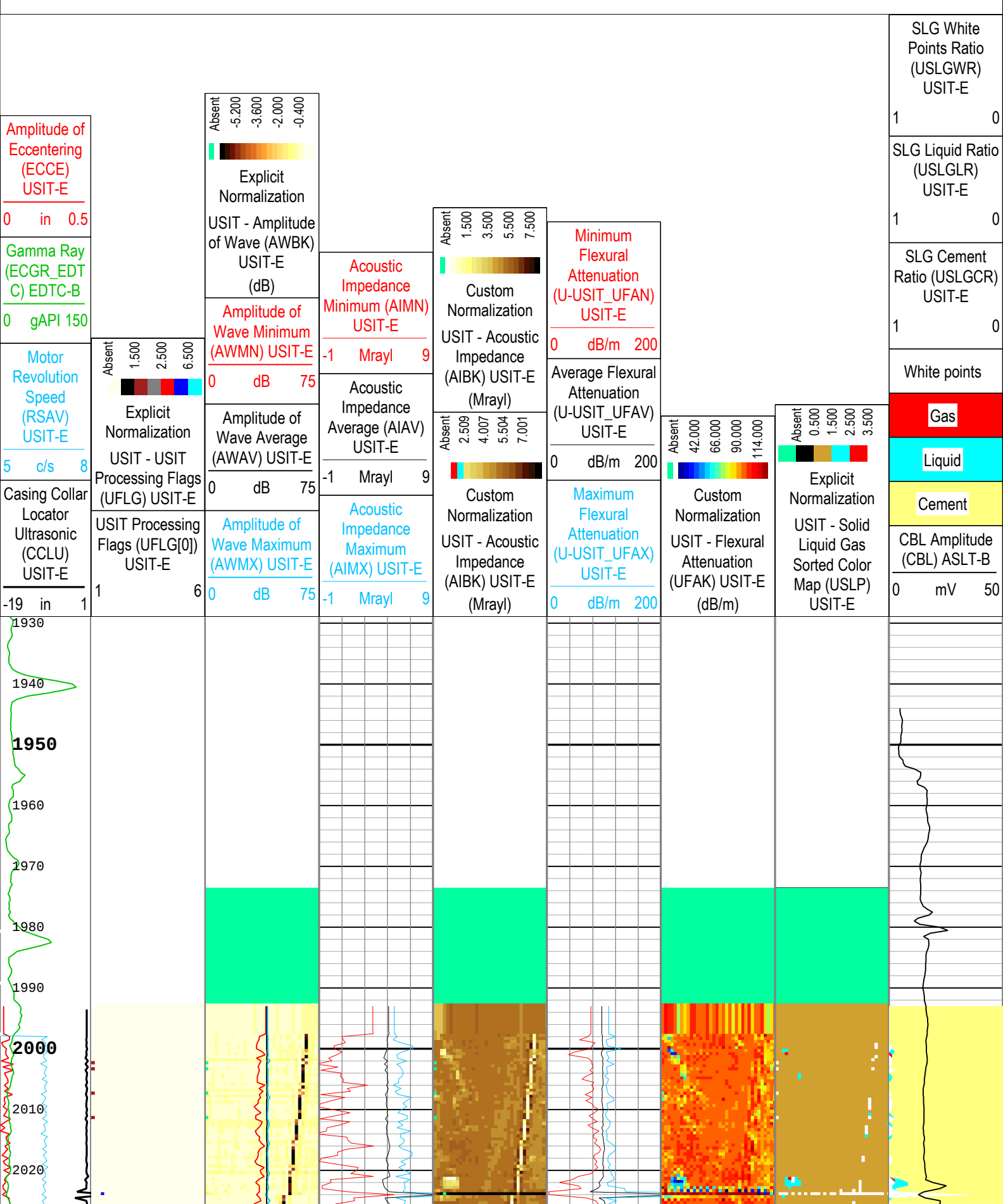


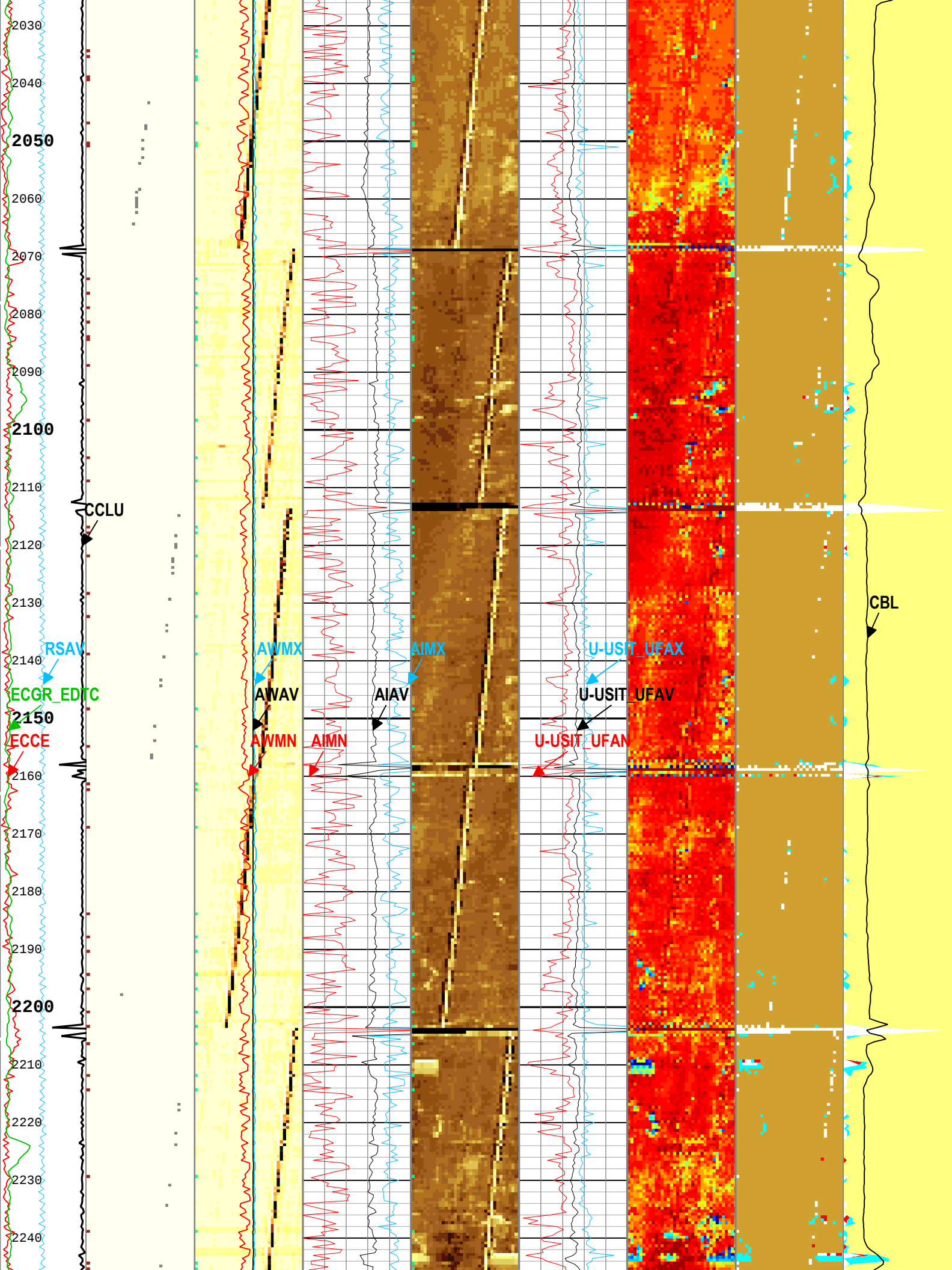
APPENDIX L

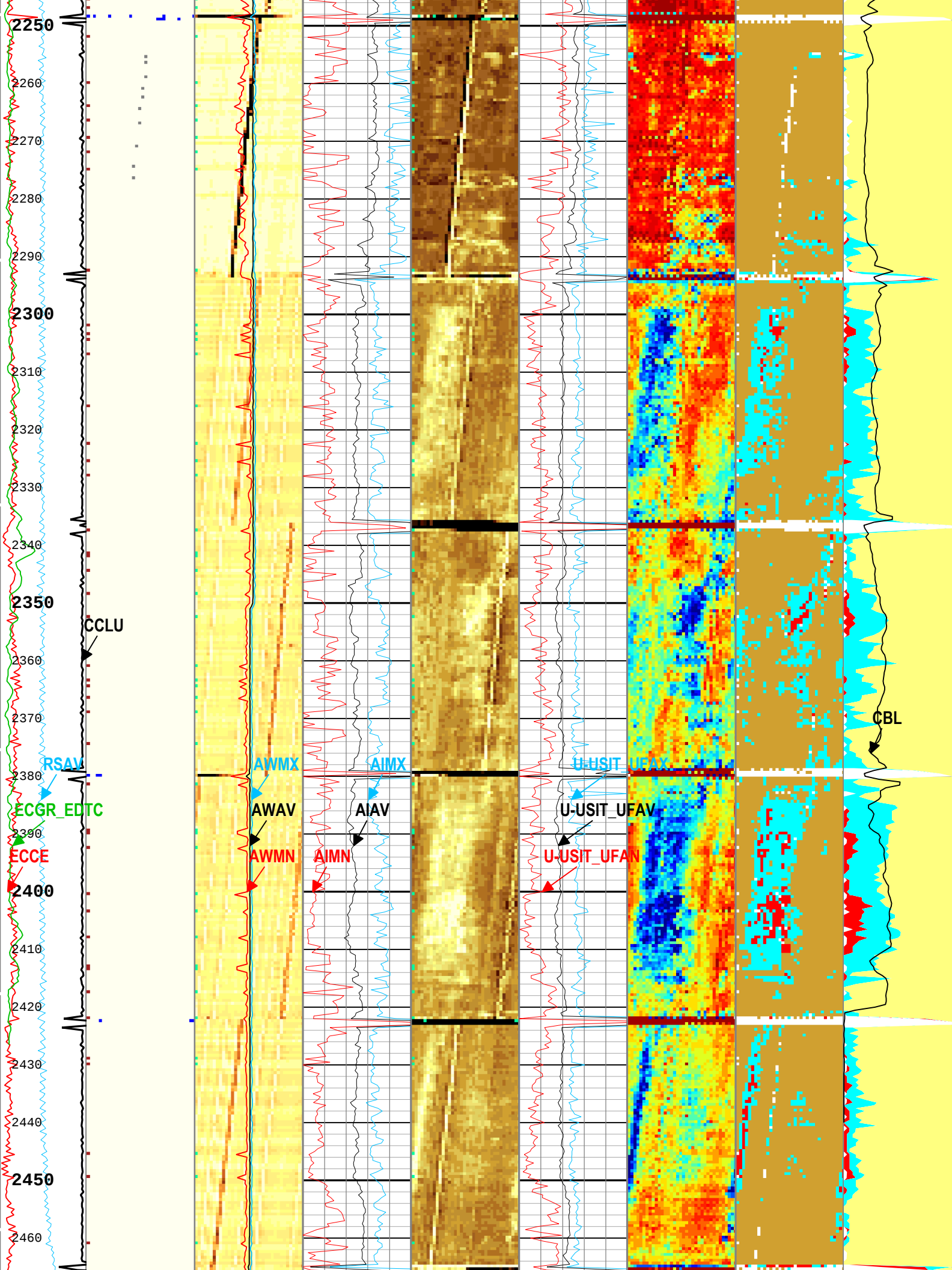
CEMENT BOND LOG

2 of 9

2 - UFLG 2 Value within [1.5 - 2.44] - :	 Pulse Origin Not Detected
3 - UFLG 2 Value within [2.44 - 2.5] - :	 Spiky Waveform
4 - UFLG 3 Value within [2.5 - 3.5] - :	 WINLEN Error
5 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :	 Casing Thickness Error
6 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :	 Loop Processing Error







[illegible]

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

- | | |
|---|---|
| 1 - UFLG 1 Value within [0.0 - 1.5] - : |  UTIM Error |
| 2 - UFLG 2 Value within [1.5 - 2.44] - : |  Pulse Origin Not Detected |
| 3 - UFLG 2 Value within [2.44 - 2.5] - : |  Spiky Waveform |
| 4 - UFLG 3 Value within [2.5 - 3.5] - : |  WINLEN Error |
| 5 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : |  Casing Thickness Error |
| 6 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : |  Loop Processing Error |

TIME_1900 - Time Marked every 60.00 (s)

Description: USI IBC SLG	Format: Log (Import of USI IBC SLG)	Index Scale: 5 in per 100 ft	Index Unit: ft	Index Type: Measured Depth	Creation Date: 10-Nov-2016 16:20:29
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Channel Processing Parameters

3A: Parameters

Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	17.5	in
CBLO	Casing Bottom (Logger)	WLSESSION	2550	ft
CBRA	CBL LQC Reference Amplitude in Free Pipe	ASLT-B	43	mV
CDEN	Cement Density	USIT-E	0	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	192	us/ft
FLUID	Drilling Fluid	USIT-E	Water	lbm/gal

	Fluid Density	USIT-E	10	lbm/gal
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS	
GOBO_CURR	Good Bond in Arbitrary Cement	ASLT-B	4.14	mV
HEMA	Hematite Presence Flag	Borehole	No	
FSOD	USIT IBC Fluid Slowness Fits Casing Outer Diameter	USIT-E	0_OFF	
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Inversion Norm.	
ICE_PROCESS	ICE Processing	USIT-E	Yes	
IMAR	Image Rotation	USIT-E	Off	
MATT_CURR	Maximum Attenuation in Arbitrary Cement	ASLT-B	33.15	dB/m
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	26.92	us
MSA	Minimum Sonic Amplitude	ASLT-B	2.31	mV
MSA_CURR	Minimum Sonic Amplitude in Arbitrary Cement	ASLT-B	2.31	mV
MUD_N_INV	IBC Inversion Mud Normalization Factor	USIT-E	1.04	
U-USIT_OCDI	Outer Casing Diameter	USIT-E	0	in
U-USIT_OCSH	Outer Casing Shoe	USIT-E	0	ft
U-USIT_OCWE	Outer Casing Weight	USIT-E	0	lbm/ft
RUN_SNUM	Run Sequence Number	WSDRUN	2	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	2.01	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	0	dB/m
UFGDE	Fiberglass Density	USIT-E	16.27	lbm/gal
UFGPS	Fiberglass Processing Selection	USIT-E	No	
UFGVL	Fiberglass Velocity	USIT-E	9678.48	ft/s
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
ZMUD	Acoustic Impedance of Mud	Borehole	1.55	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.51	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Tool Control Parameters				
3A: Parameters				
Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	Time Zoned	dB
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	2700	ft/h
MODE	SSLT Firing Mode	ASLT-B	CBL	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
RATE	Firing Rate	ASLT-B	4.46	Hz
TMUC	Type of Mud	USIT-E	BRI	
U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	233	us
ULOG	Logging Objective	USIT-E	MEASUREMENT	
UMFR	Modulation Frequency	USIT-E	333333	Hz
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	202	us
USFR	Ultrasonic Sampling Frequency	USIT-E	500000	Hz
URAT	USIT Emission Pattern	USIT-E	Pattern 300 KHz	

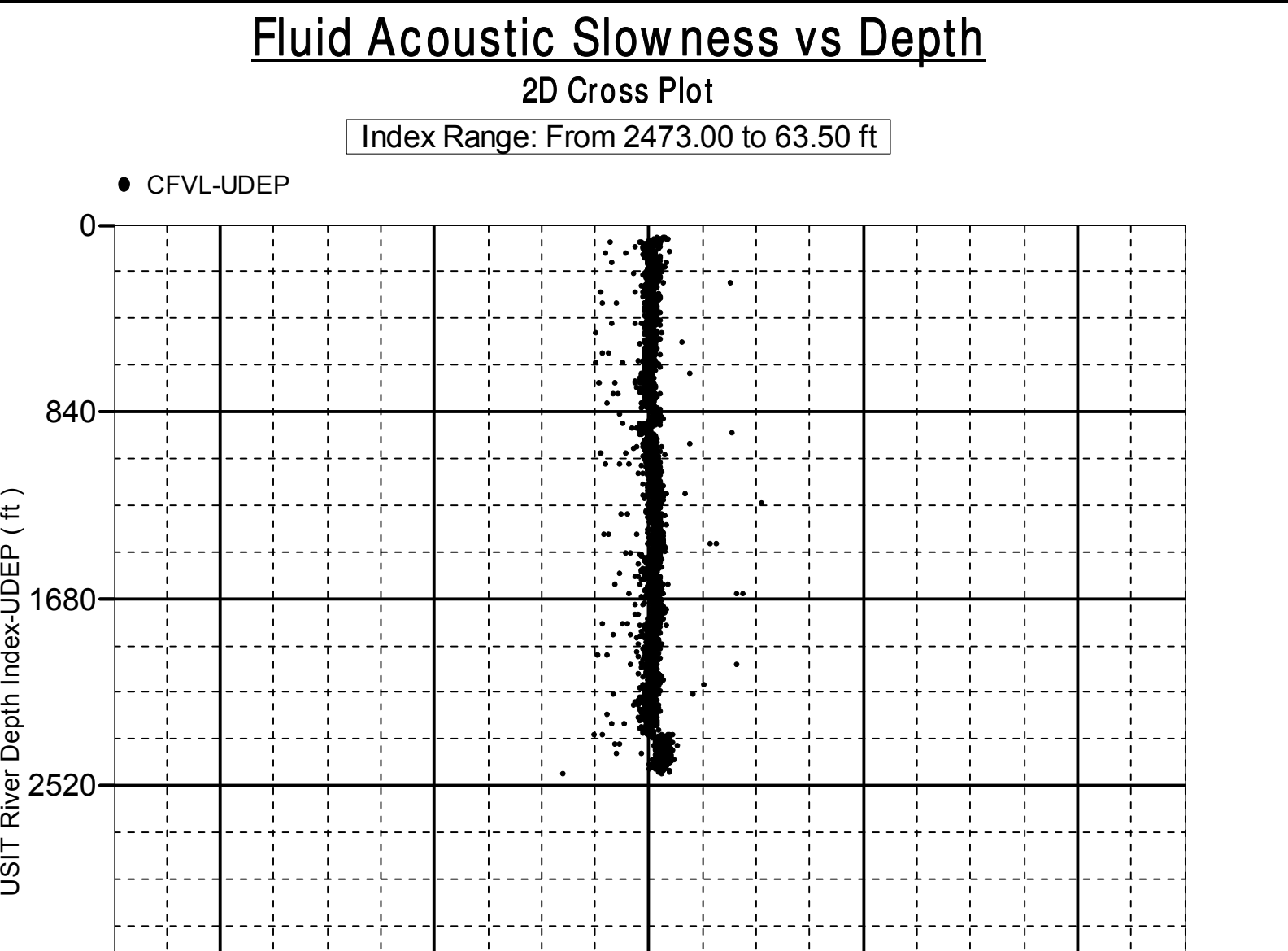
UPAT	USIT Emission Pattern	USIT-E	Pattern 300 kHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in LF	
USIT_DEPTHLOG	Starting Depth Log for Ultrasonics	USIT-E	2470	ft
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VDM	SSLT VDL Display Mode	ASLT-B	R5	
VRES	Vertical Resolution	USIT-E	6.0 in	
WINB	Window Begin Time	USIT-E	109.39	us
WINE	Window End Time	USIT-E	149.39	us

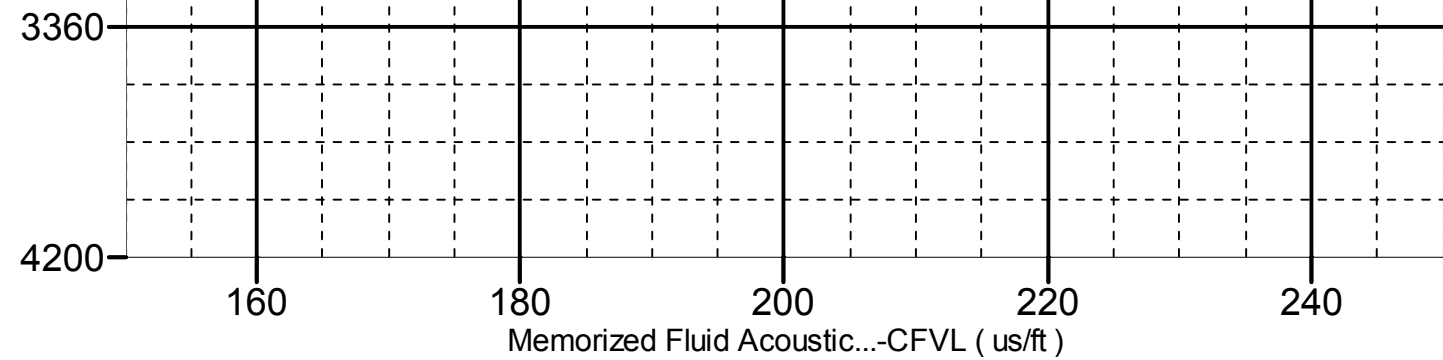
Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
AGMX	18	10-Nov-2016 13:54:55	10-Nov-2016 13:55:49	2472.06	2464.14
AGMX	54	10-Nov-2016 13:55:49	10-Nov-2016 14:09:43	2464.14	1974.51
EMXV	40	10-Nov-2016 13:54:55	10-Nov-2016 13:58:32	2472.06	2352.21
EMXV	50	10-Nov-2016 13:58:32	10-Nov-2016 14:09:43	2352.21	1974.51
U-USIT_UFWB	193	10-Nov-2016 13:54:55	10-Nov-2016 13:58:15	2472.06	2364.65
U-USIT_UFWB	189.71	10-Nov-2016 13:58:15	10-Nov-2016 14:09:43	2364.65	1974.51
U-USIT_UNWB	162	10-Nov-2016 13:54:55	10-Nov-2016 13:58:13	2472.06	2366.06
U-USIT_UNWB	158.61	10-Nov-2016 13:58:13	10-Nov-2016 14:09:43	2366.06	1974.51

All depth are at tool zero.

XYZ	Company:DCP Midstream LP Well:Zia AGI D2 3A: Main[2]:Up:S007
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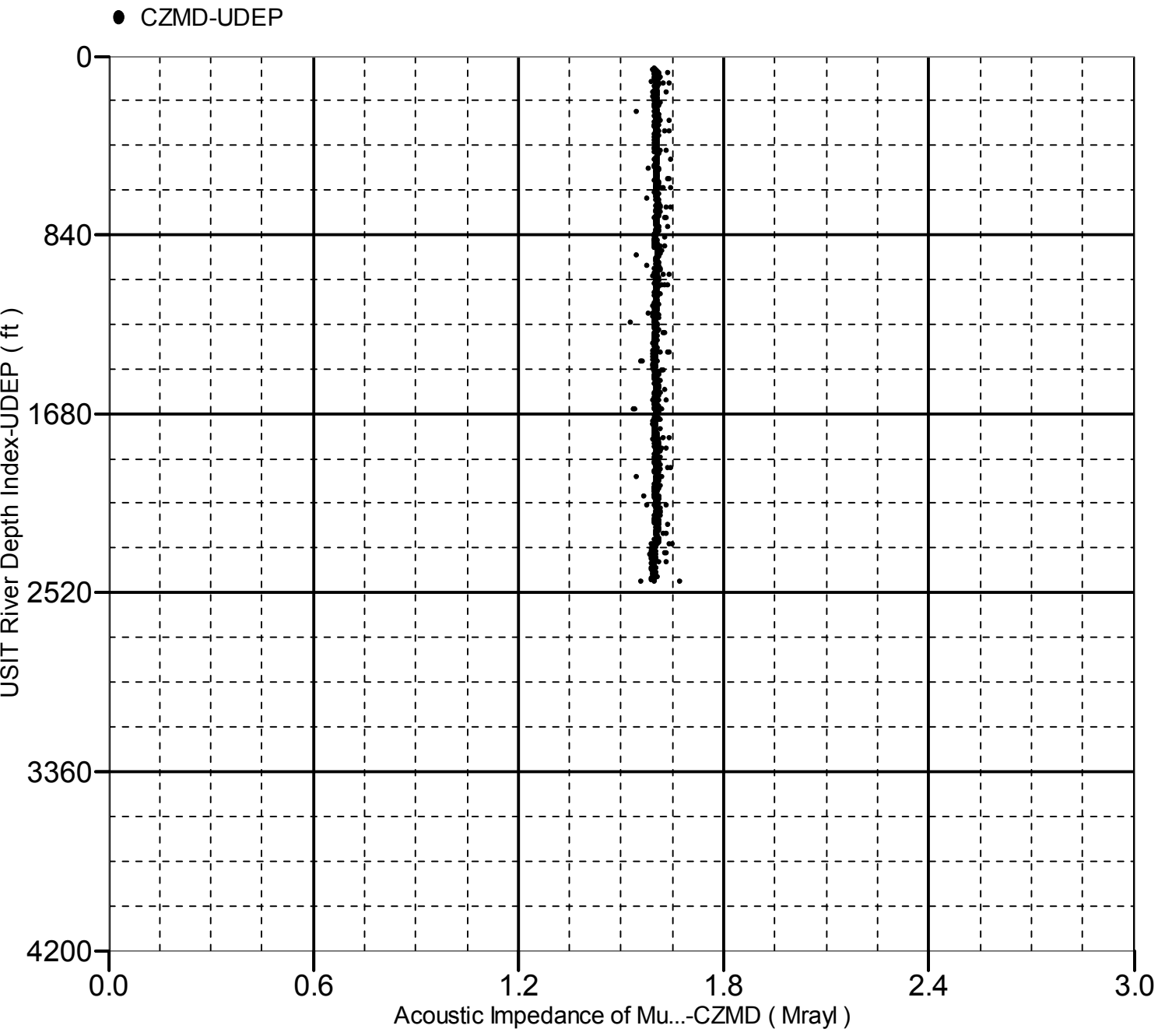
XYZ

Company:DCP Midstream LP Well:Zia AGI D2
3A: Main[2]:Up:S007

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 2473.00 to 63.50 ft



Company: DCP Midstream LP

Schlumberger

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea

State: New Mexico

Isolation Scanner

Cement Evaluation

** FIELD PRINT**

SECOND INTERMEDIATE CASING CEMENT BOND LOGS

- Ultrasonic Imager / Composite Print / Gamma Ray
- Cement Bond Log / SSLT-GR-CCL
- UltraSonic Imager / Cement Evaluation / Gamma Ray
- VDL Wide Print

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: Texas

Ultrasonic Imager

Composite Print

Gamma Ray

County: Lea

Field: AGI Devonian Exploration

Location: 1893' FSL & 950' FWL

Well: Zia AGI D2

Company: DCP Midstream LP

Location: 1893' FSL & 950' FWL

Section: 19, Township: T19S, Abstract: R32E

Elev.: K.B. 7119.00 ft

G.L. 3547.00 ft

D.F. 7118.00 ft

Permanent Datum: _____

Ground Level _____

Elev.: _____

3547.00 f

Log Measured From: _____

Kelly Bushing _____

3572.00 ft

above Perm.Datum

Drilling Measured From: _____

Kelly Bushing _____

API Serial No. 30-025-42207

Section: 19

Township: T19S

Range: R32E

Logging Date	15-Nov-2016
Run Number	4A
Depth Driller	4700.00 ft
Schlumberger Depth	9790.00 ft
Bottom Log Interval	9790.00 ft
Top Log Interval	7400.00 ft
Casing Fluid Type	Salt Brine
Salinity	83000 ppm
Density	9.6 lbm/gal
Fluid Level	8.00 ft
BIT/CASING/TUBING STRING	
Bit Size	12.25 in
From	2600.00 ft
To	4700.00 ft
Casing/Tubing Size	9.625 in
Weight	40 lbm/ft
Grade	N/A
From	0.00 ft
To	4696.00 ft
Max Recorded Temperatures	115 degF
Logger on Bottom	15-Nov-2016 10:02:00
Unit Number	2140
Location:	Midland, TX
Recorded By	Brett Dobinsky
Witnessed By	James Hunter

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 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.

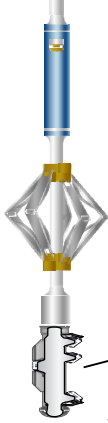
Contents

1. Header	
2. Disclaimer	
3. Contents	
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5. Depth Summary	
6. 4A Main Pass 5" = 100'	
6.1 Integration Summary	
6.2 Composite Summary	
6.3 Log (USI IBC CBL Combo Flyer)	
6.4 Parameter Listing	
7. 4A Repeat Pass 5" = 100'	
7.1 Integration Summary	
7.2 Composite Summary	
7.3 Log (USI IBC CBL Combo Flyer)	
7.4 Parameter Listing	
8. Tail	

Remarks and Equipment Summary

4A: Toolstring				4A: Remarks
Equip name LEH-QC	Length 45.82	MP name	Offset	Logging Objective: Cement and corrosion evaluation from TD to Surface.
				Toolstring run as per toolsketch. 2 gemcos used on ASLT.
				SLB TD: 4635 ft.
				Logs correlated to DV tool as per client.
				No pressure applied as per client request.
				As per the client: drilling fluid Brine 9.25 # and 10# brine in annulus.
				No spacer used during cement job as per client.
				Stage 1: Lead - 12.7 ppg and Tail - 14.8 ppg
				DV tool at 2608 ft.
				Stage 2: Lead - 13.5 and Tail - 14.8 ppg
				Casing: 9.625 in. 40#.
CAL-YA CAL-YA	43.37	CCL	42.57	Casing ER: 4.8125 in., IR: 4.8125 in., Thickness: 0.395 in.
DTC-H ECH-KC DTC-H	39.87	CTEM HV TelStatus	38.97 0.00 36.87	Fluid Slowness: Automatic, Acoustic Impedence: Theoretical.
SGT-N SGH-K SGC-TB SGD-TAA	36.87	ToolStatus GR	36.87 35.95	3 fluids observed in the well. Fluid change at 300 ft and 2875 ft.
ASLT-B ASLT-BB	31.37			IBC main pass logged at 10deg 6in.
		CBL_UP	24.83	
		VDL_UP	23.83	
		RX_ARRAY	22.33	
		VDL_LOW	20.83	
		DT_DD BHC	20.33	
		CBL_LOW	19.83	
USIT-E:98 1 ECH-MFA: 1923 USAC-A:9 81 USIS-A:17 39 USSC-B:93 8 IBCS-C:87 4 FAR-SENS	16.71			

OR:2075
NEAR-SEN
SOR:3553
USI-SENS
OR:4516
EMITTER-
SENSOR:3
780



Lengths are in ft
Maximum Outer Diameter = 9.000 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

	4A		
--	----	--	--

Depth Measuring Device

Type	IDW-B		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Calibration Cable Type			
Wheel Correction 1	0		
Wheel Correction 2	0		

Tension Device

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

Logging Cable

Type	7-46NT-XS		
Serial Number			
Length	24000.00 ft		
Conveyance Type	Wireline		
Rig Type	Triple		

4A:Depth Control Parameters

Log Sequence	Subsequent Trip To the Well	Depth Control Remarks
Reference Log Name		Schlumberger Wireline Depth Procedures followed.
Reference Log Run Number		IDW used as primary depth control device.
Reference Log Date		Z-Chart used as secondary depth control.
Subsequent Trip Down Log Correction	5.00 ft	Log correlated to DV tool as per client request.

4A

Main Pass 5" = 100'

Pass Summary

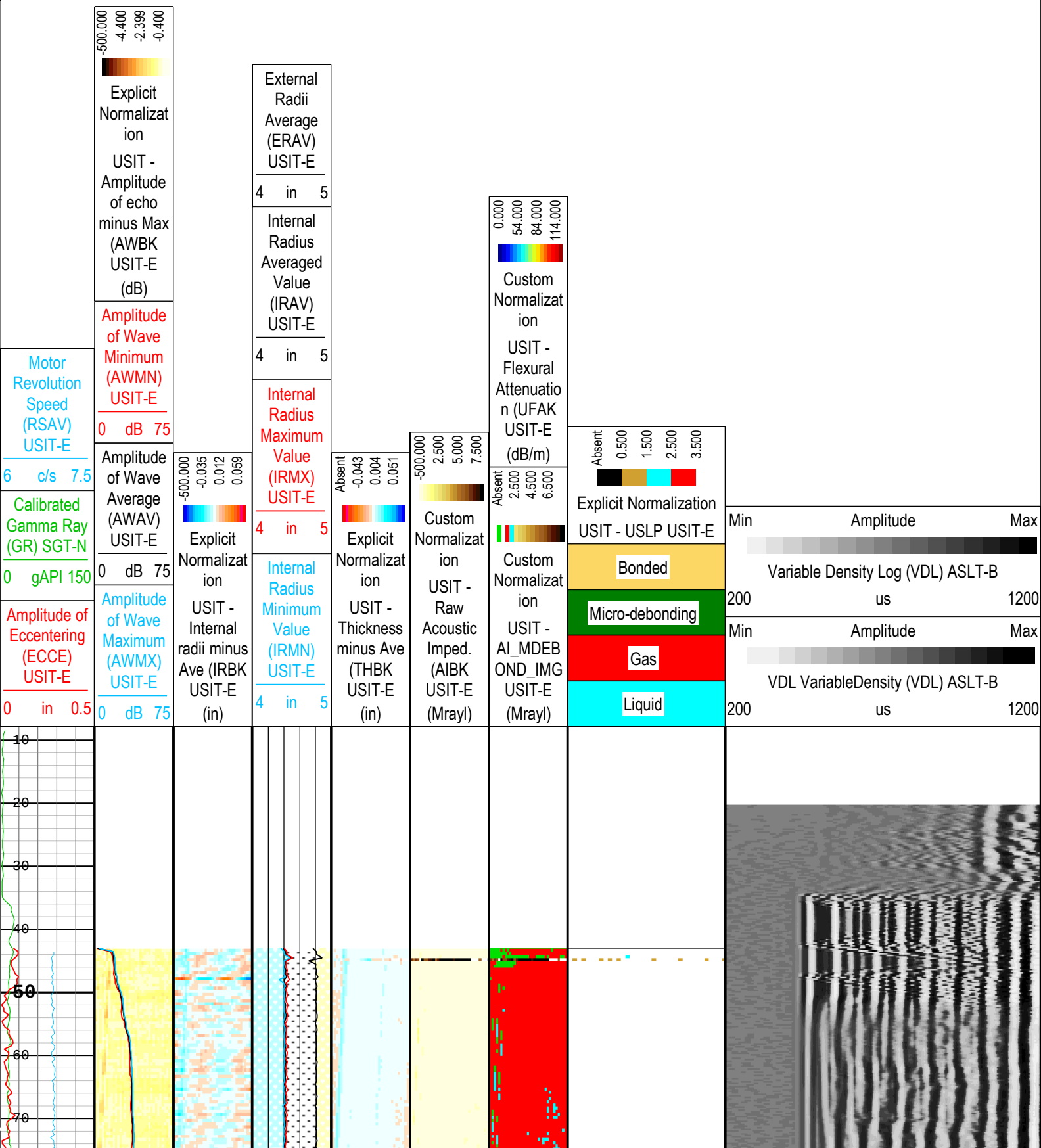
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
4A	Main[3]:Up	Up	43.94 ft	4637.08 ft	15-Nov-2016 7:49:50 AM	15-Nov-2016 9:55:41 AM	ON	5.00 ft	Yes

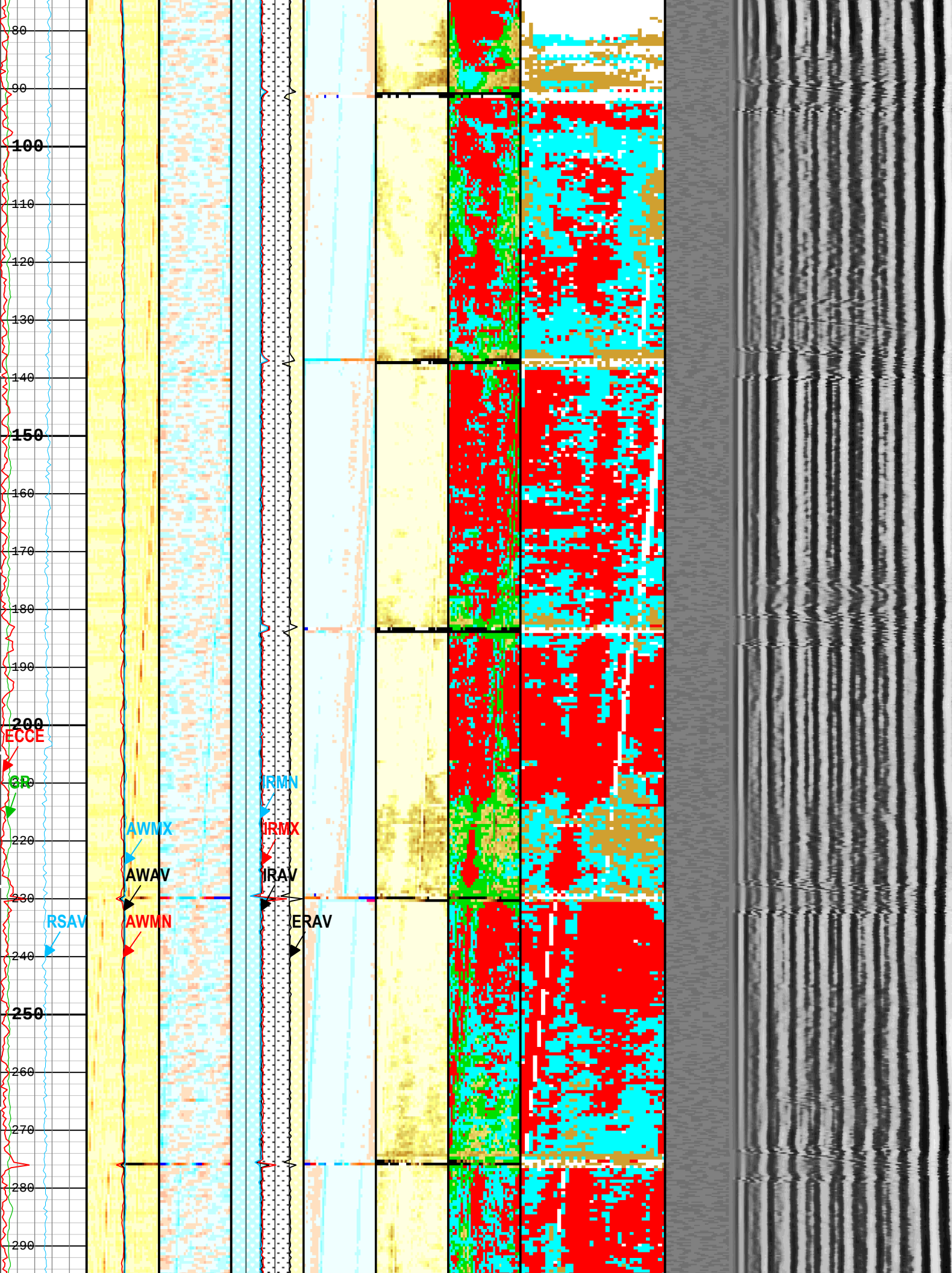
All depths are referenced to toolstring zero

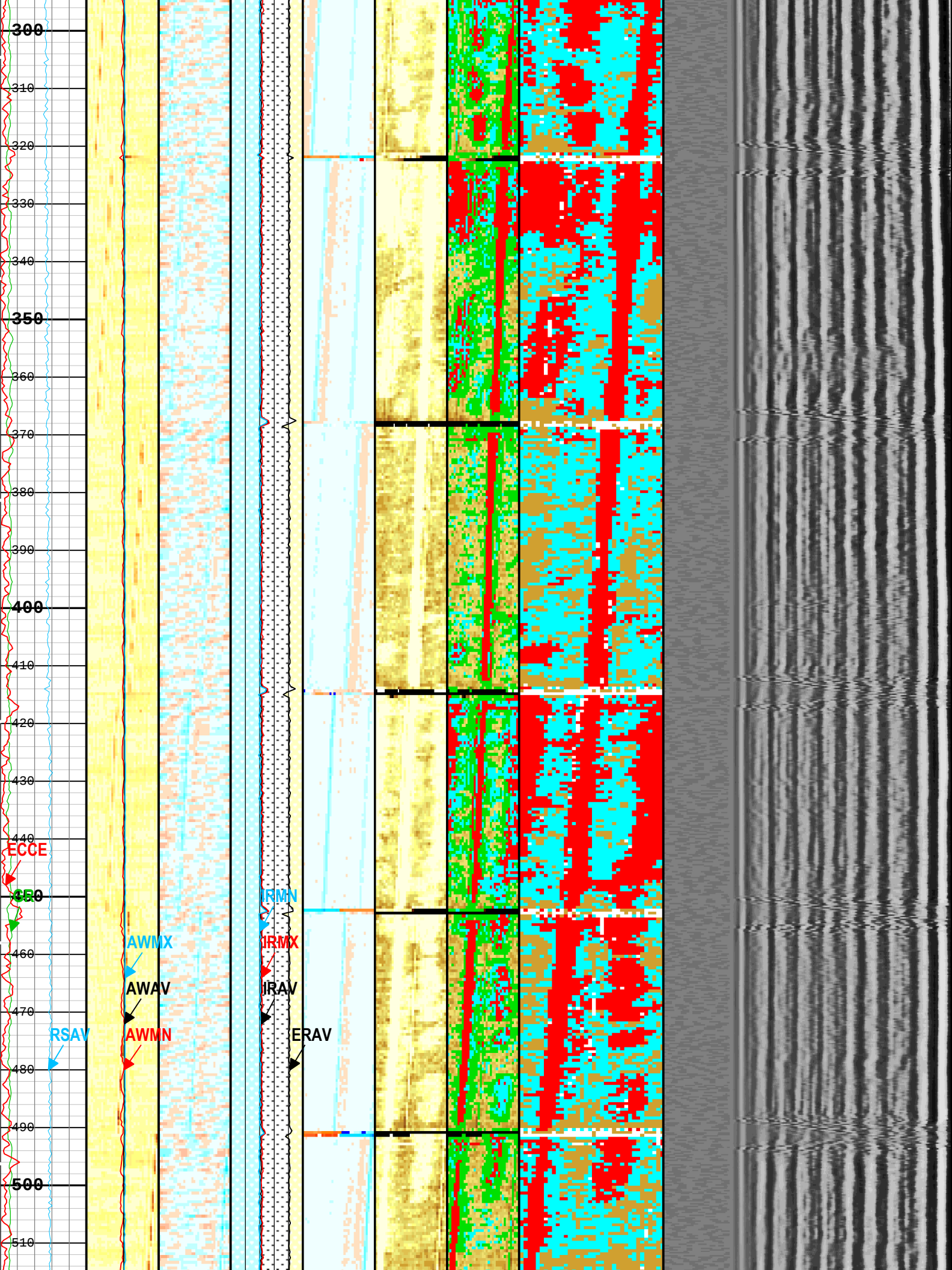
Log	Company:DCP Midstream LP Well:Zia AGI D2
	4A: Main[3]:Up:S016

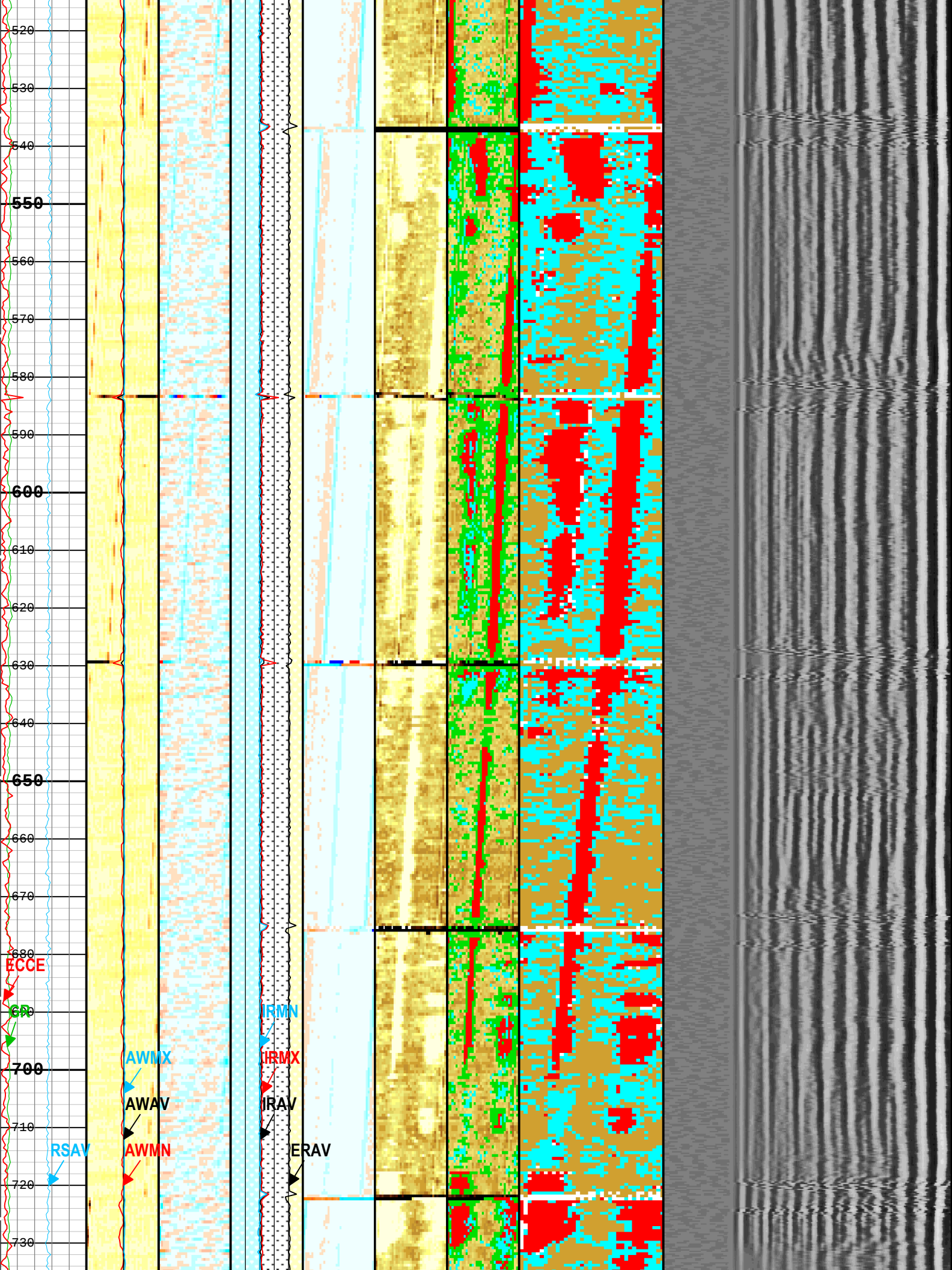
Description: USI IBC SLG Comp Flyer Format: Log (USI IBC CBL Combo Flyer) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 15-Nov-2016 15:10:00

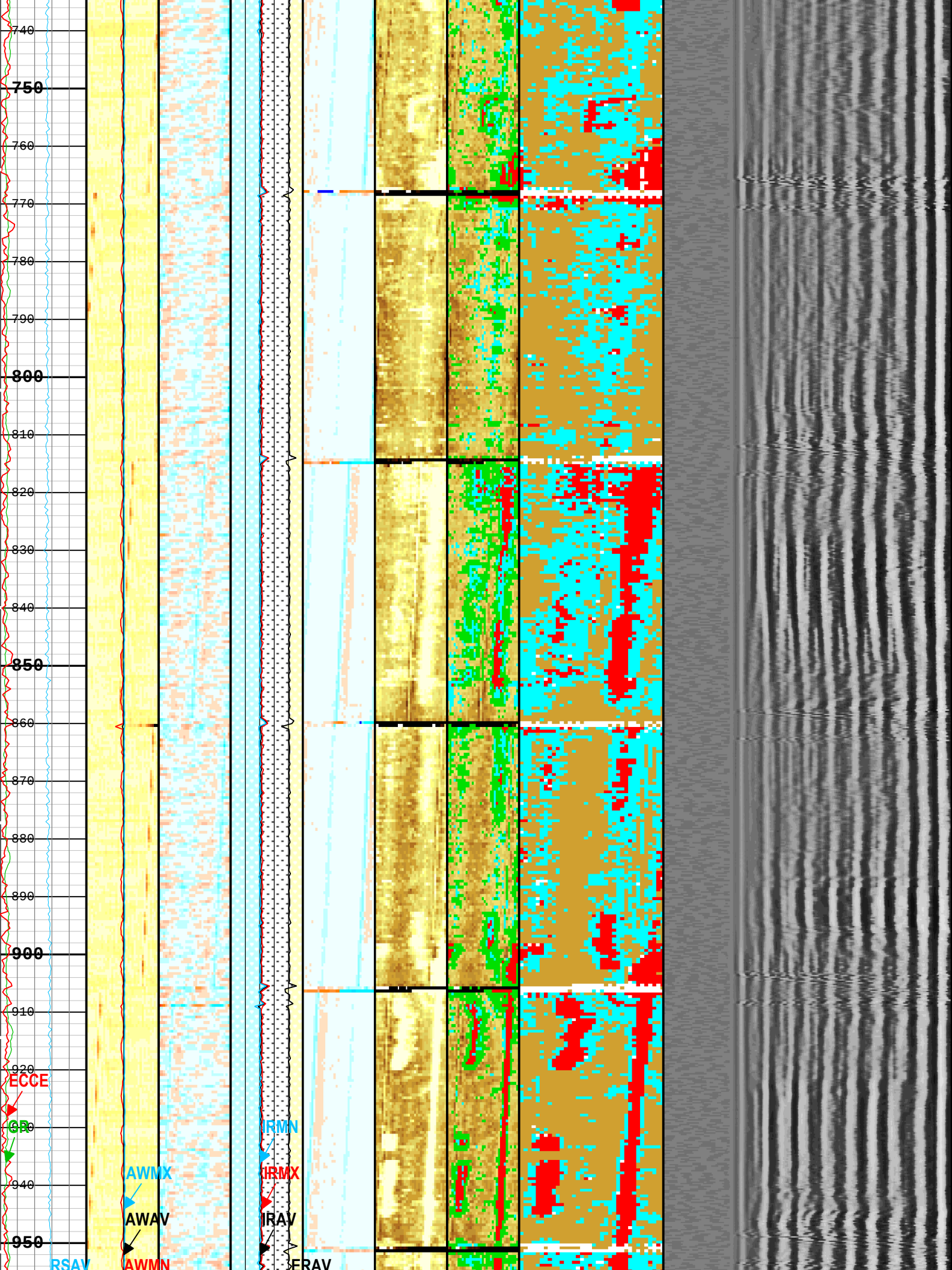
TIME_1900 - Time Marked every 60.00 (s)

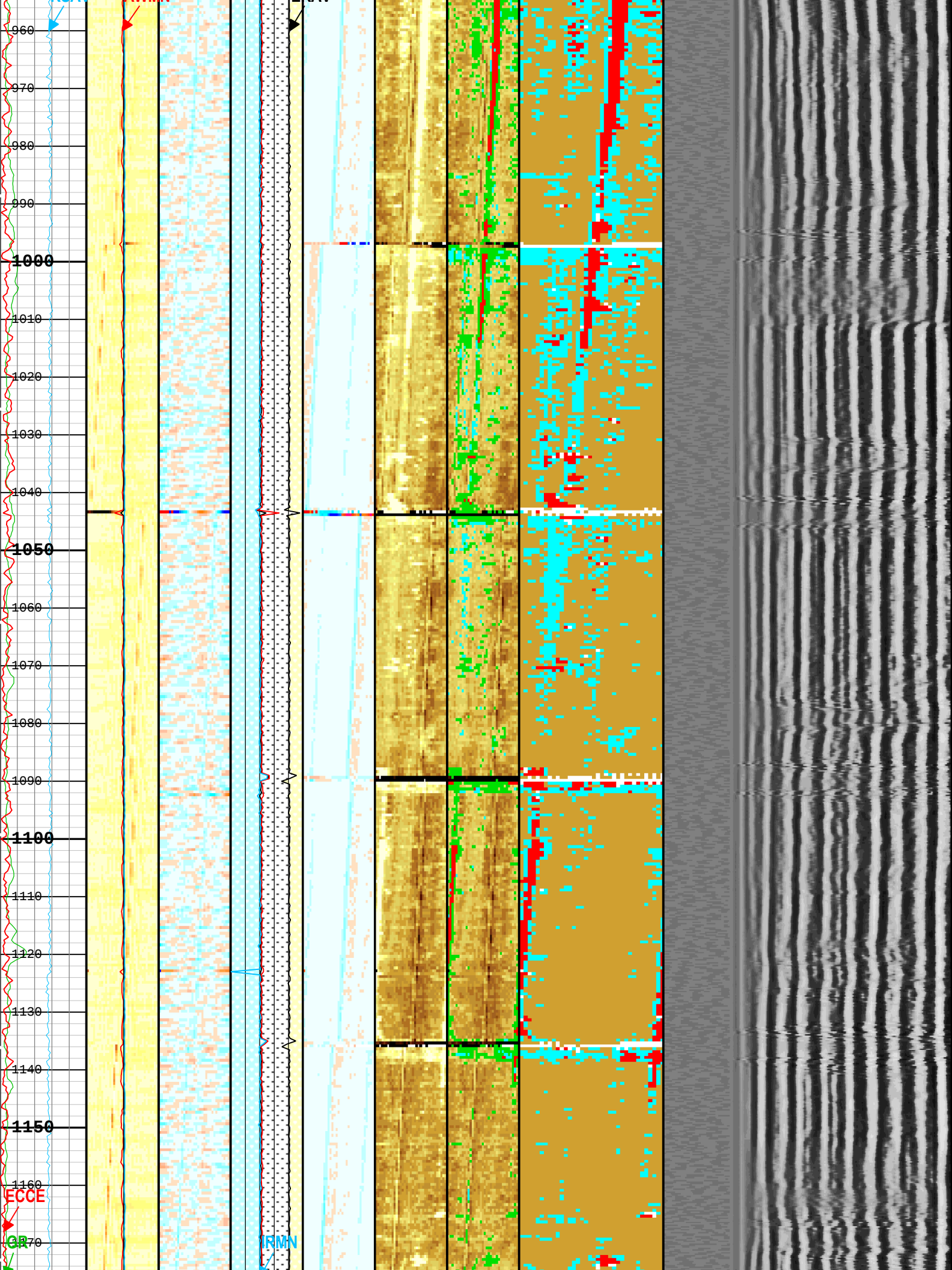


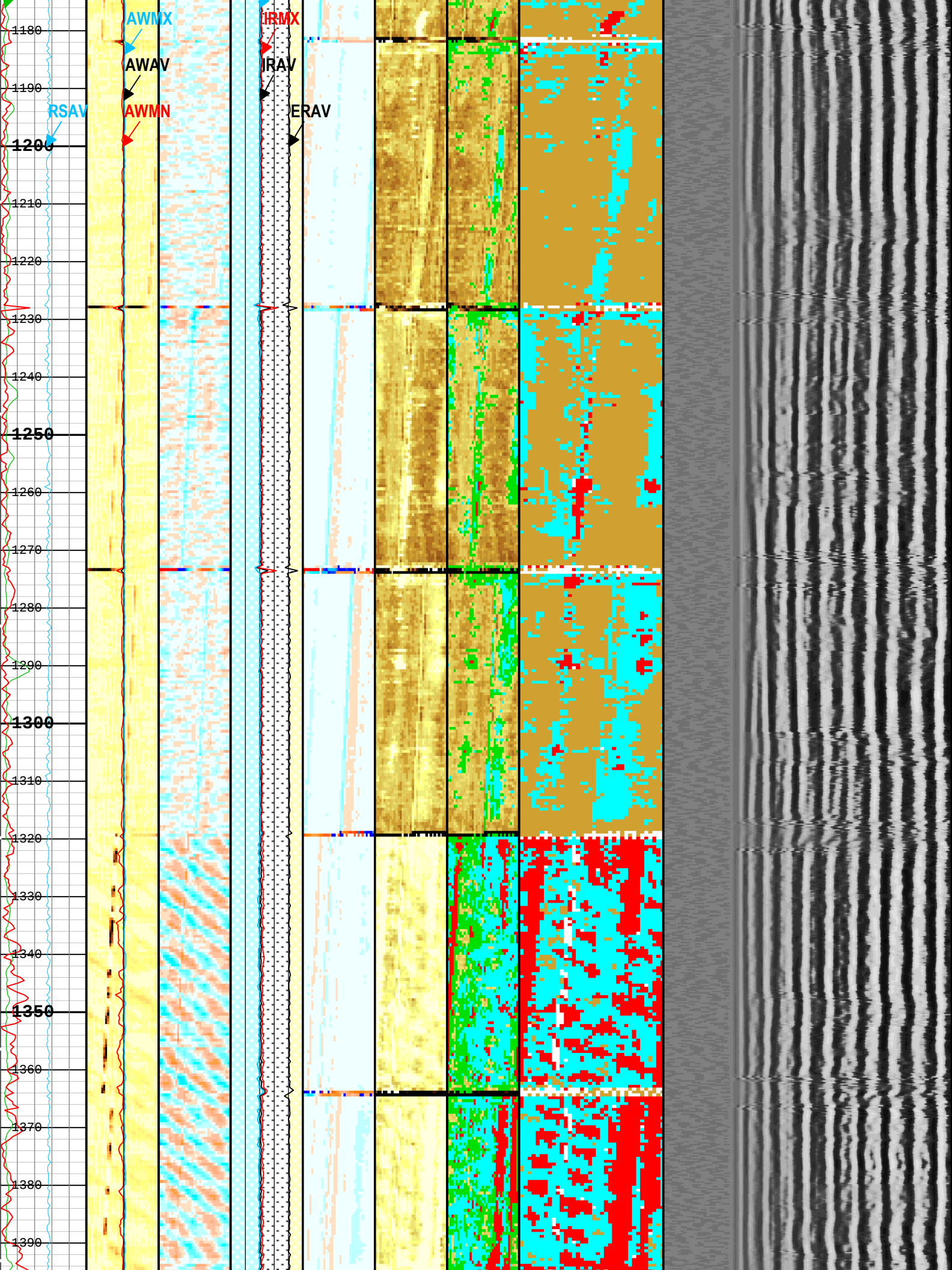


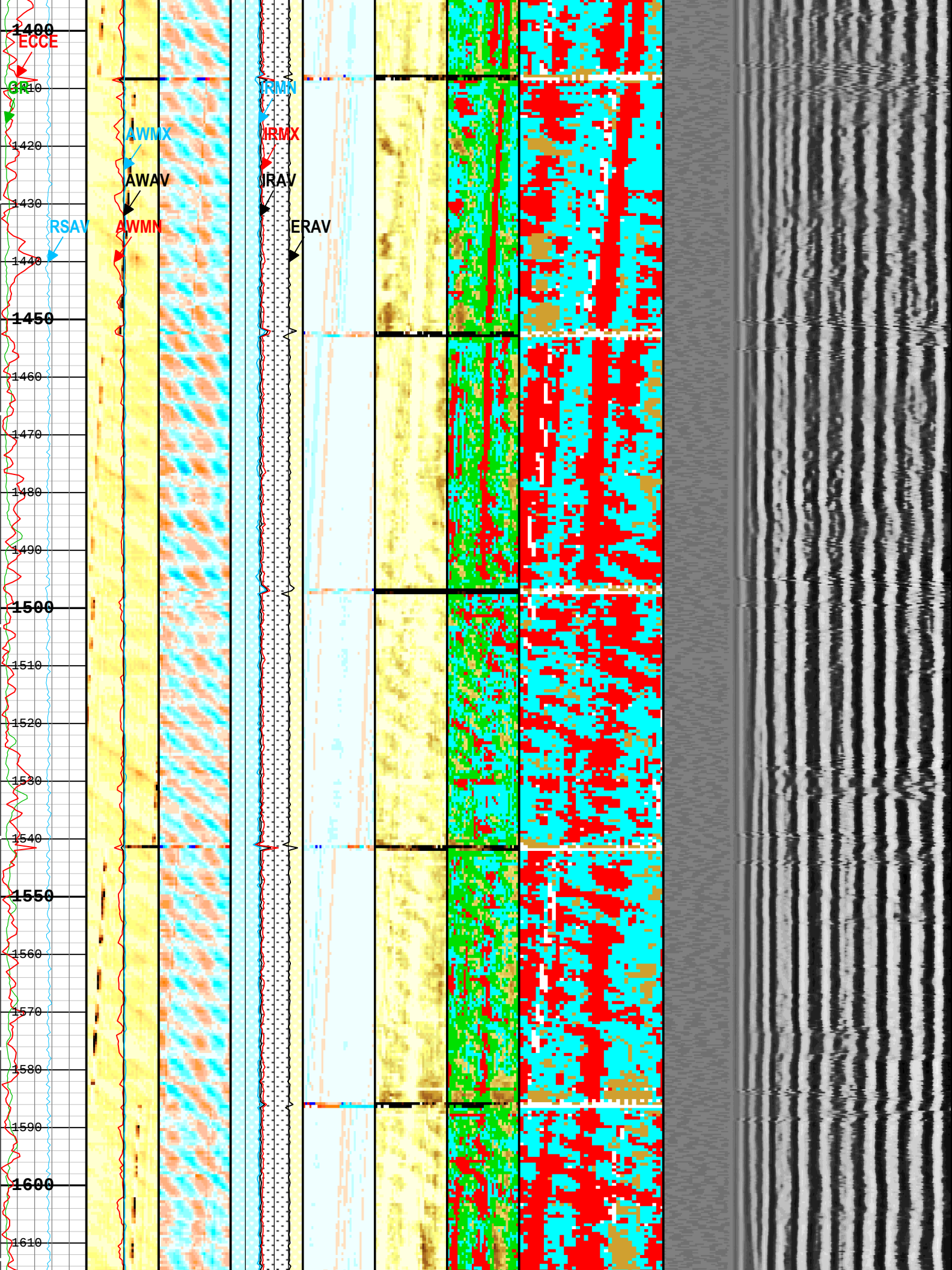


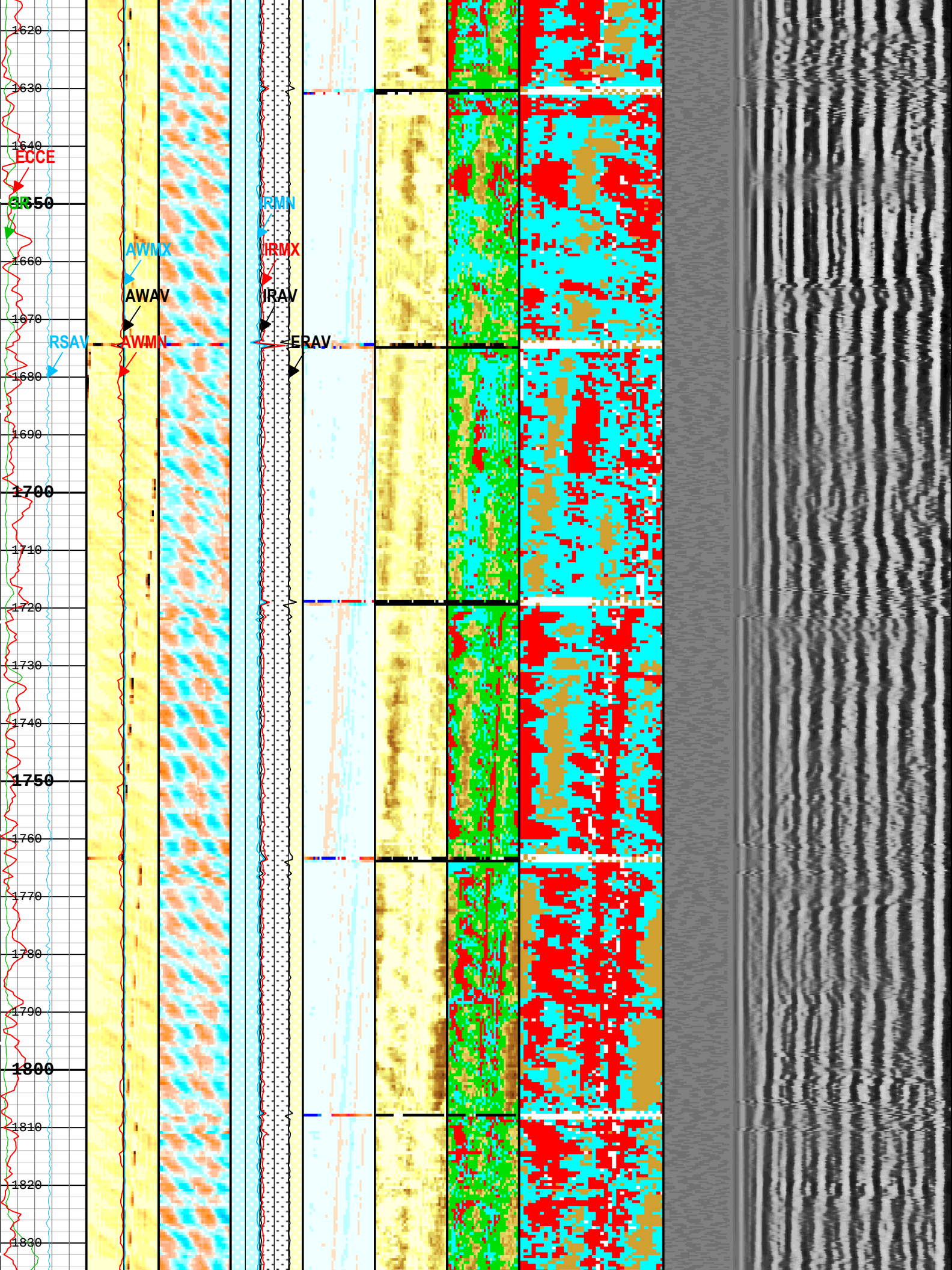


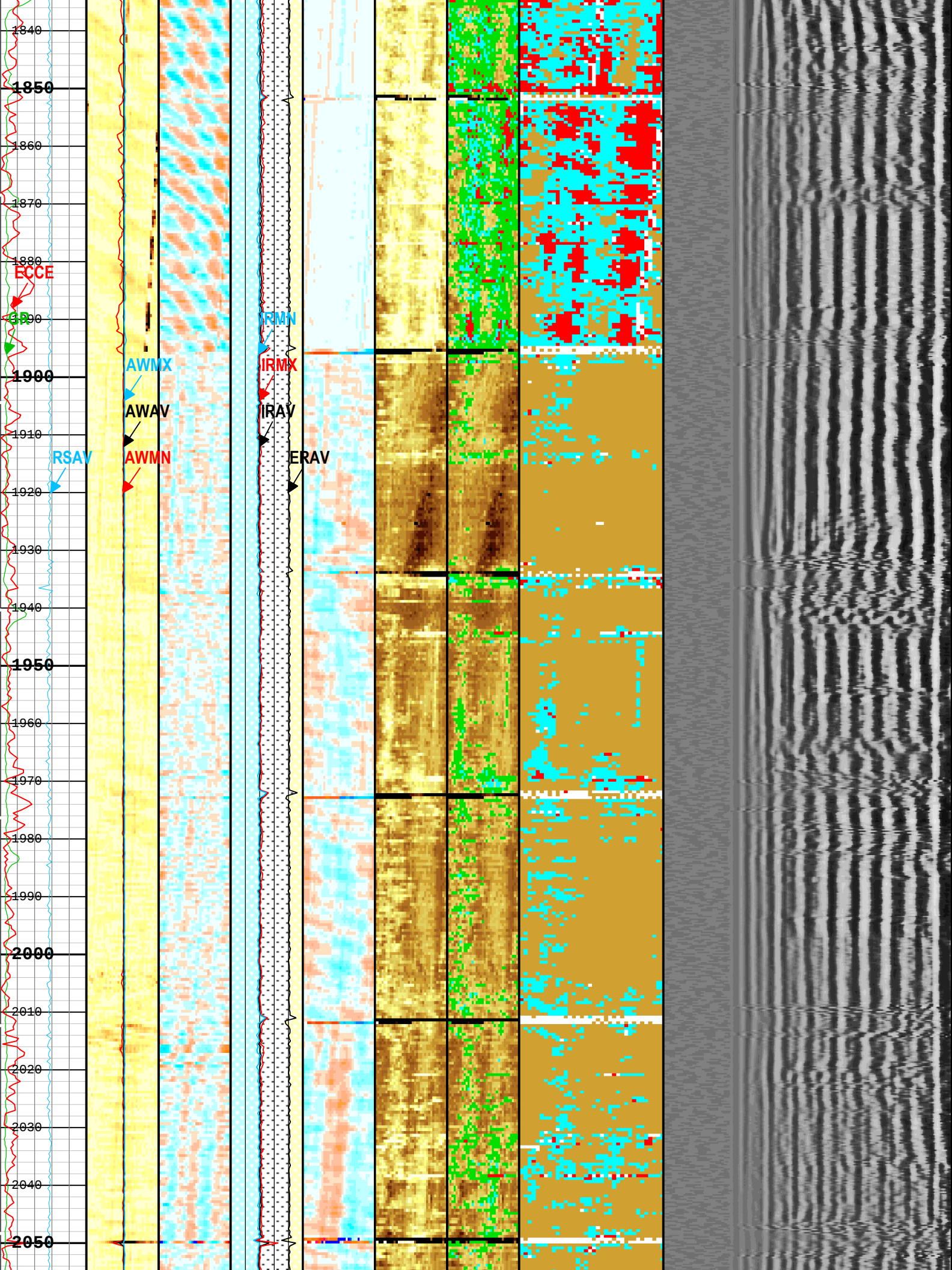


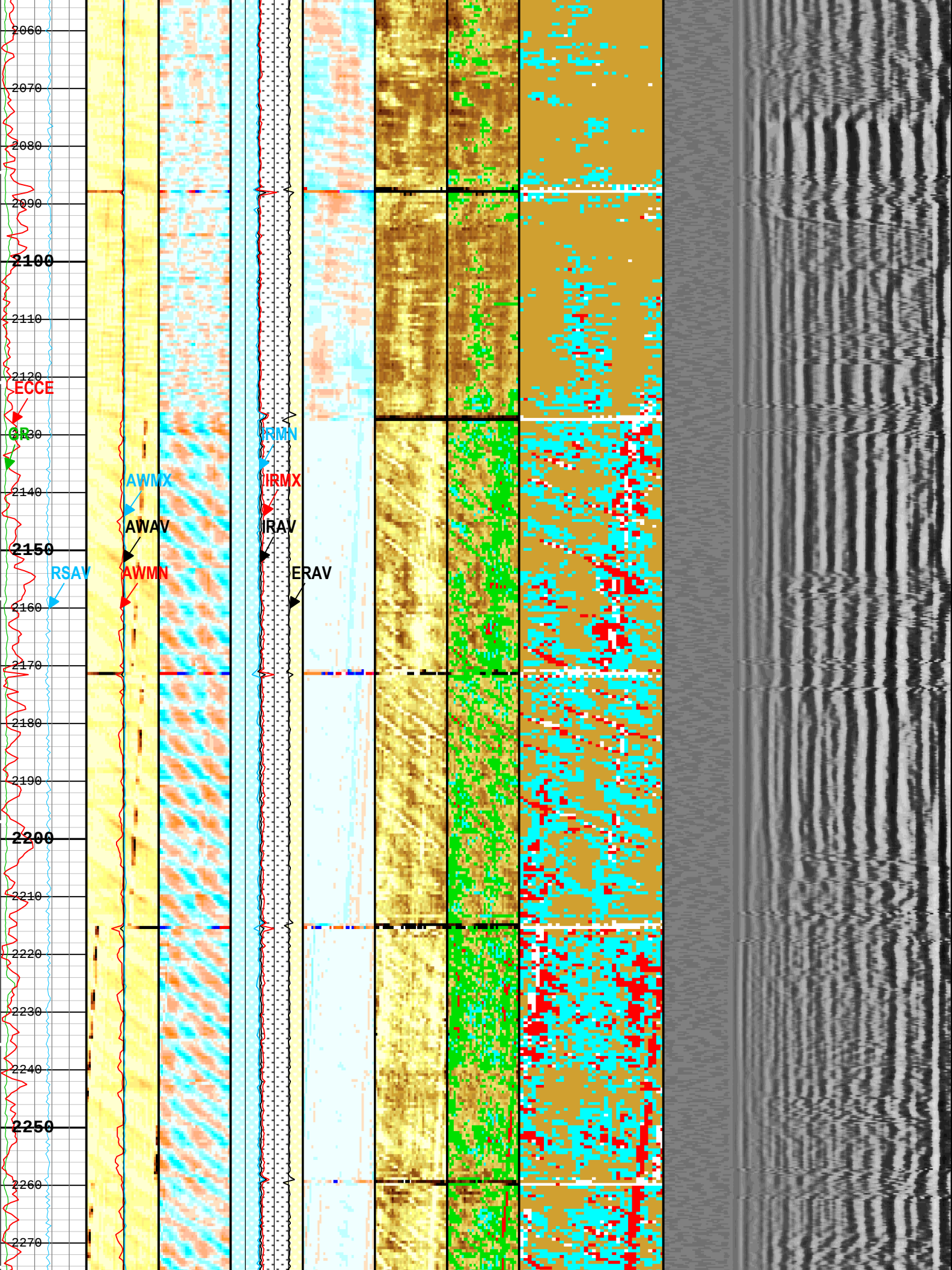


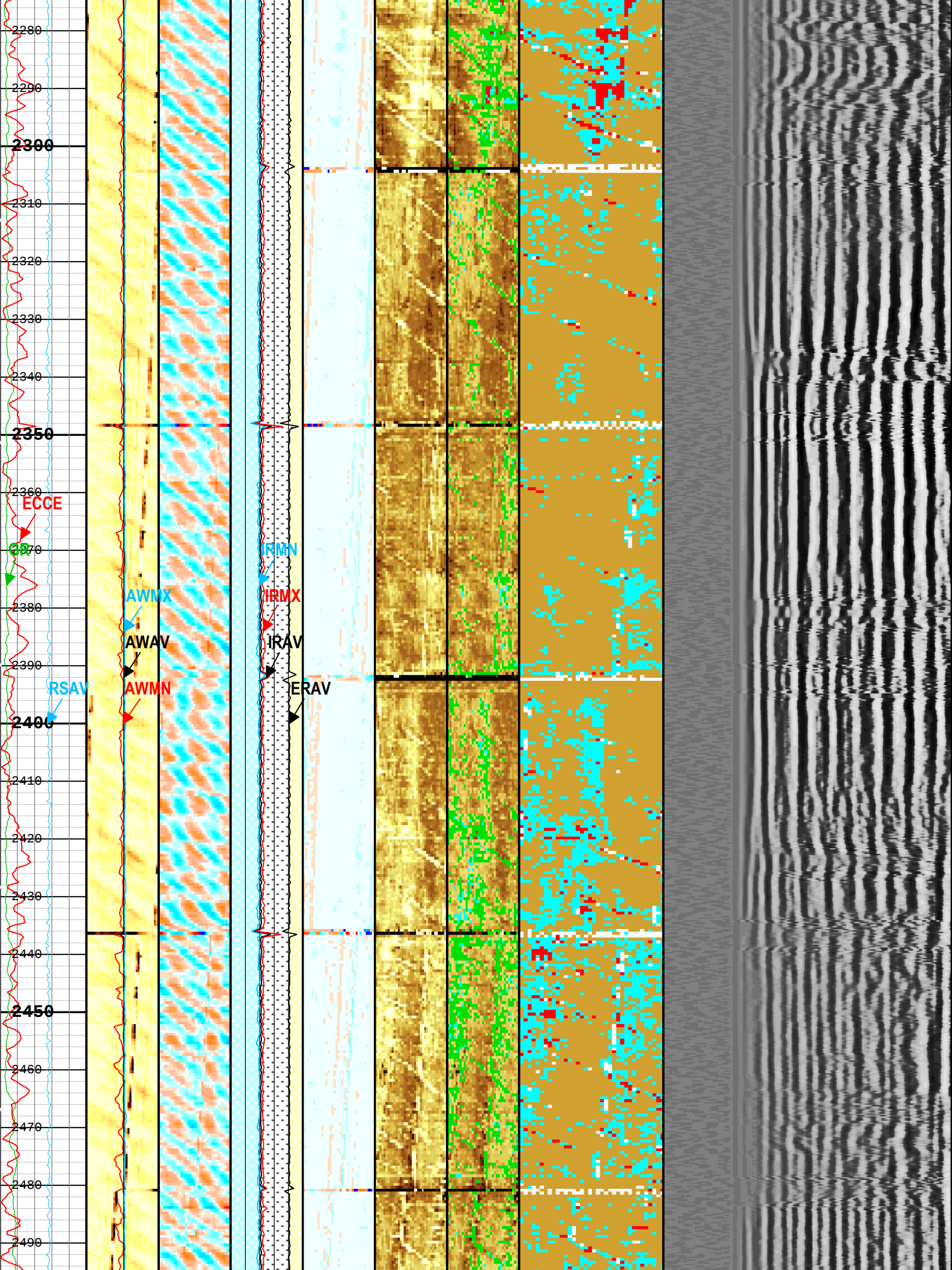


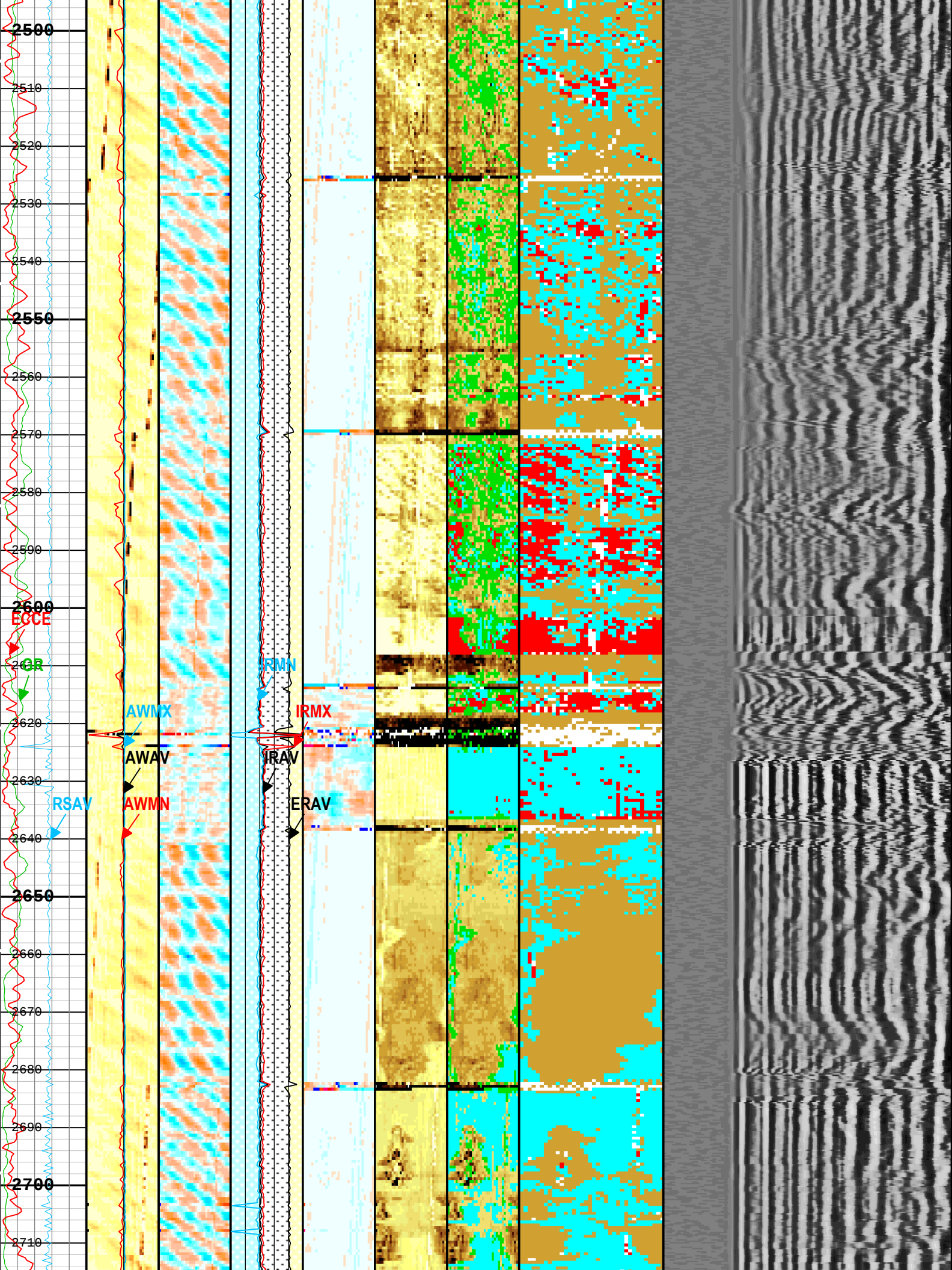


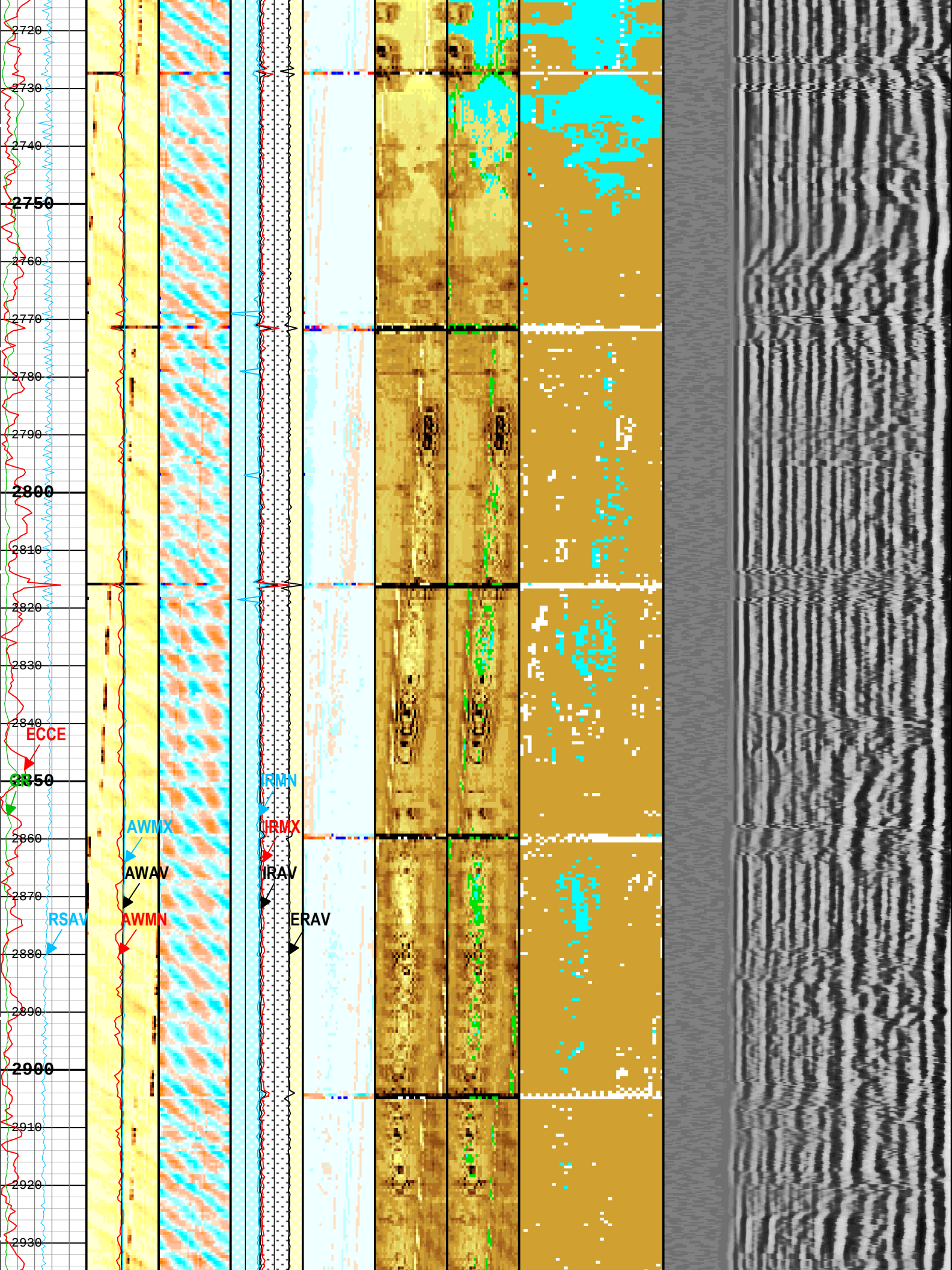


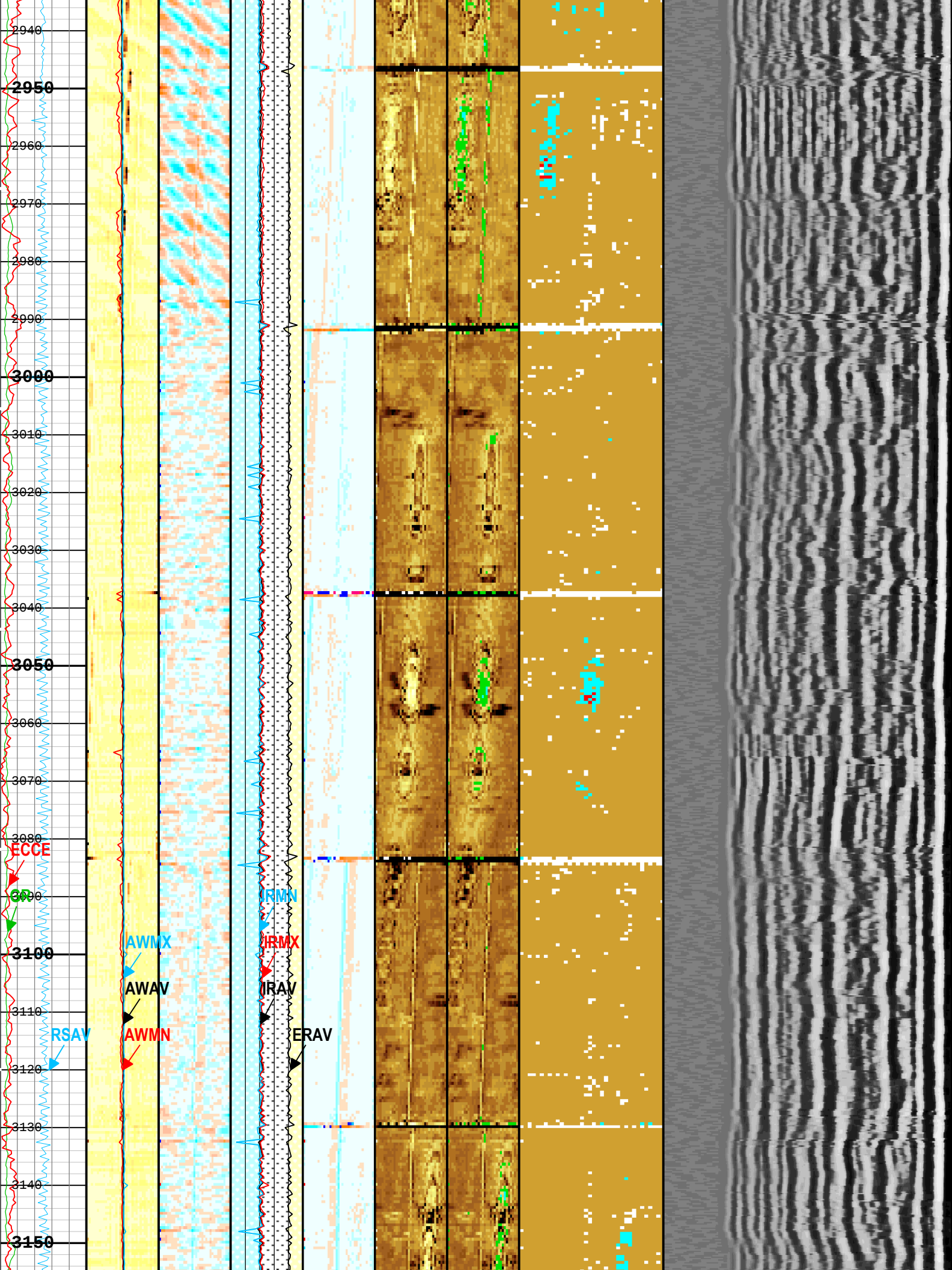


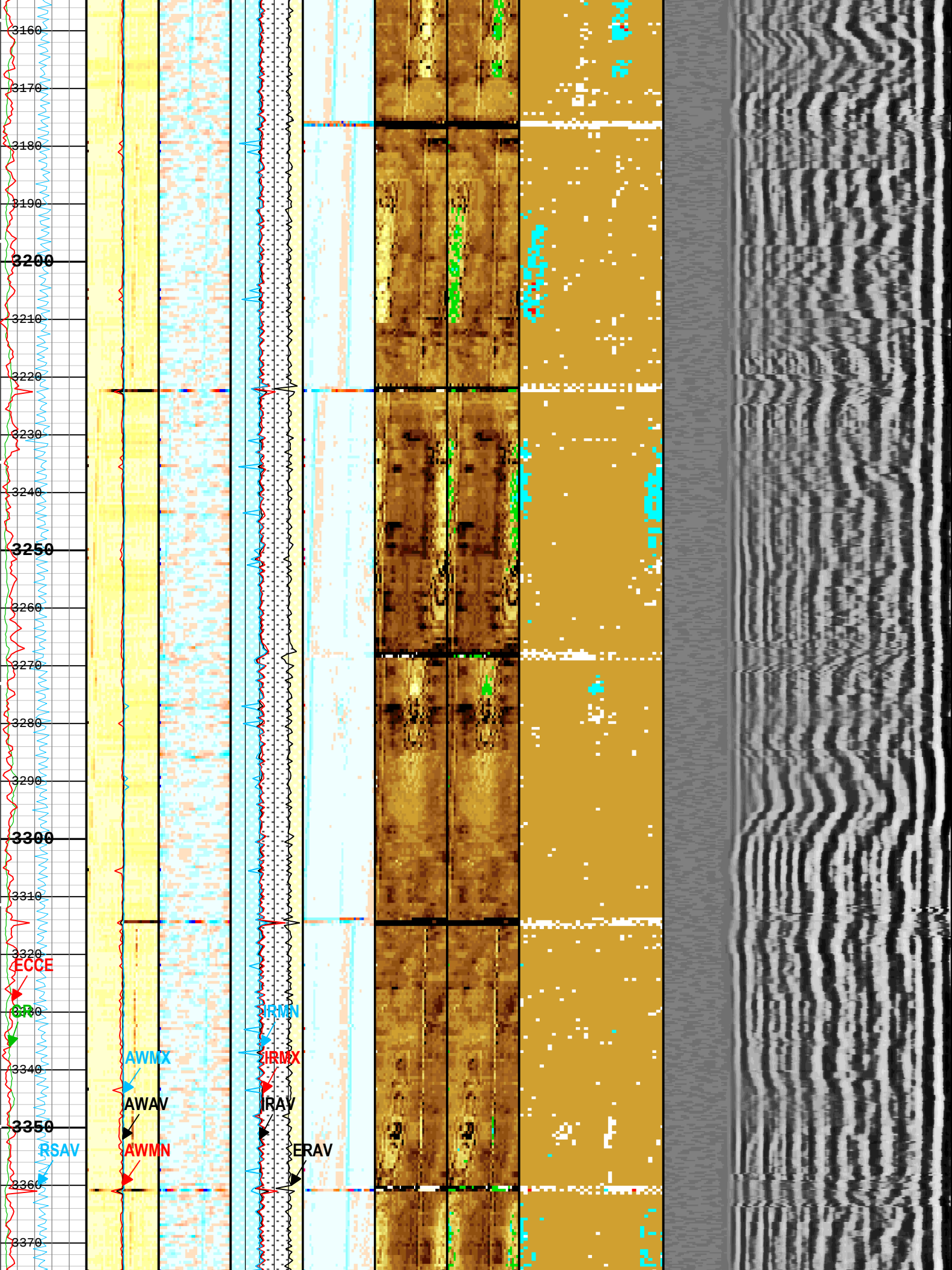


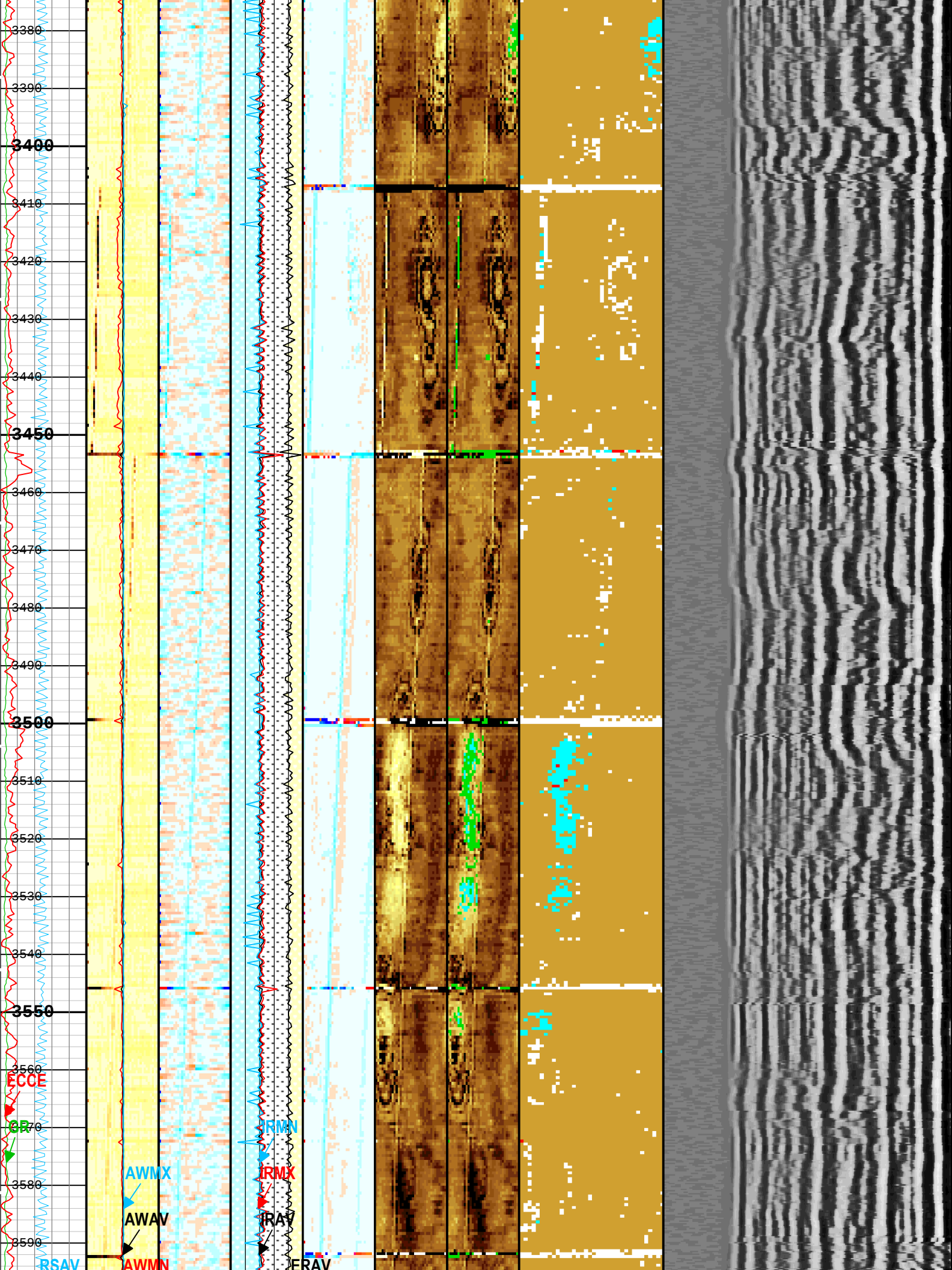


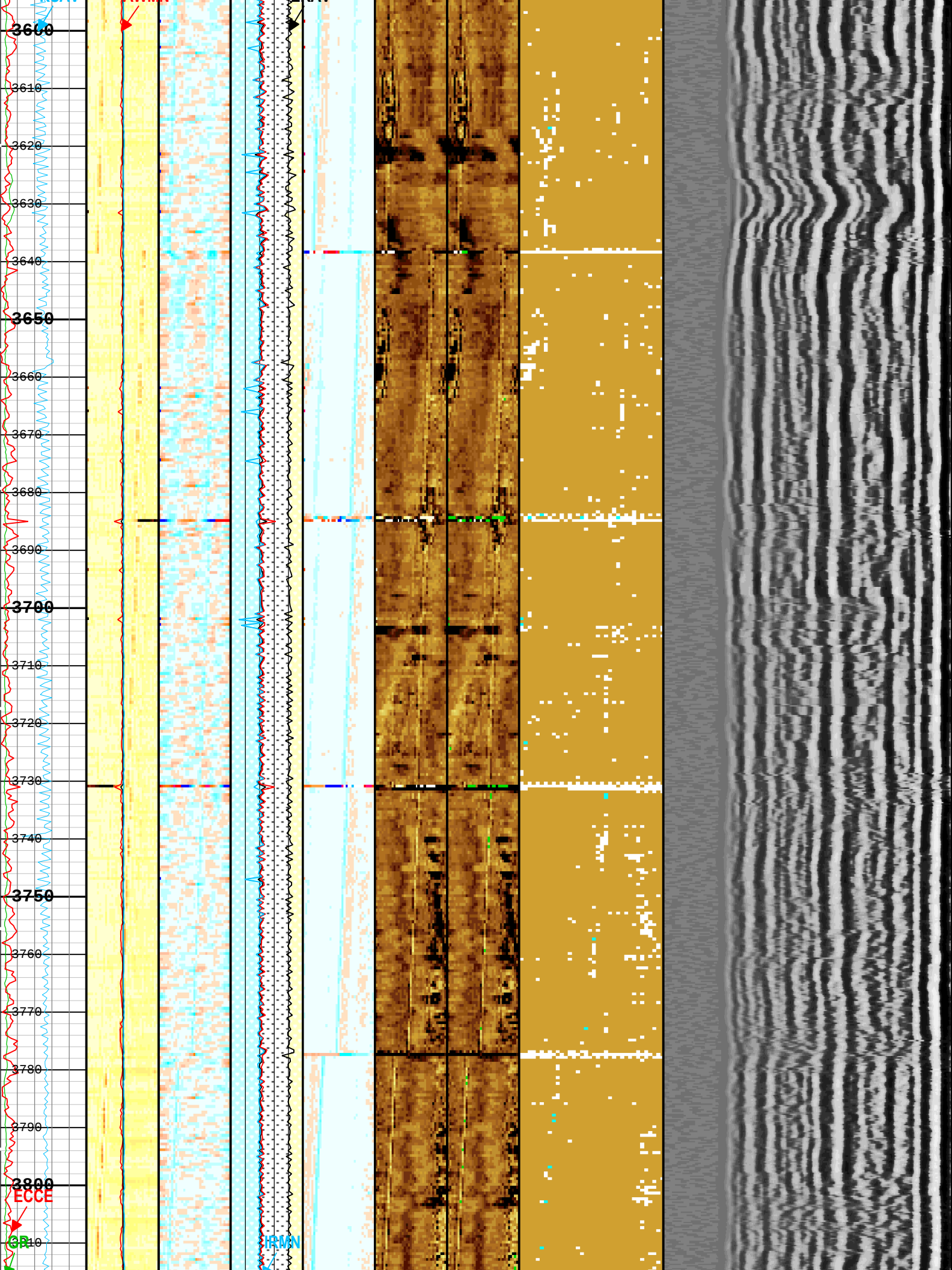


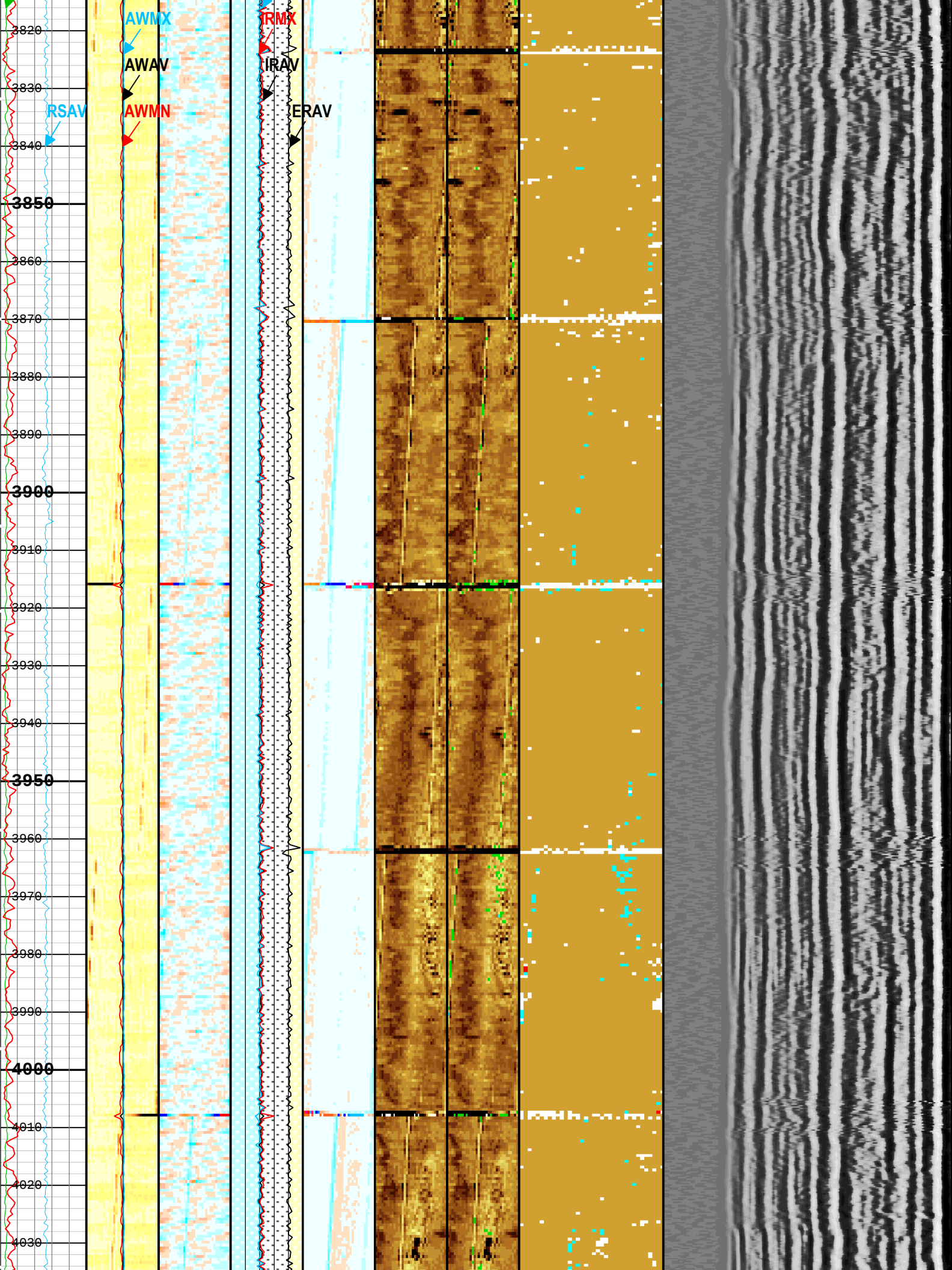


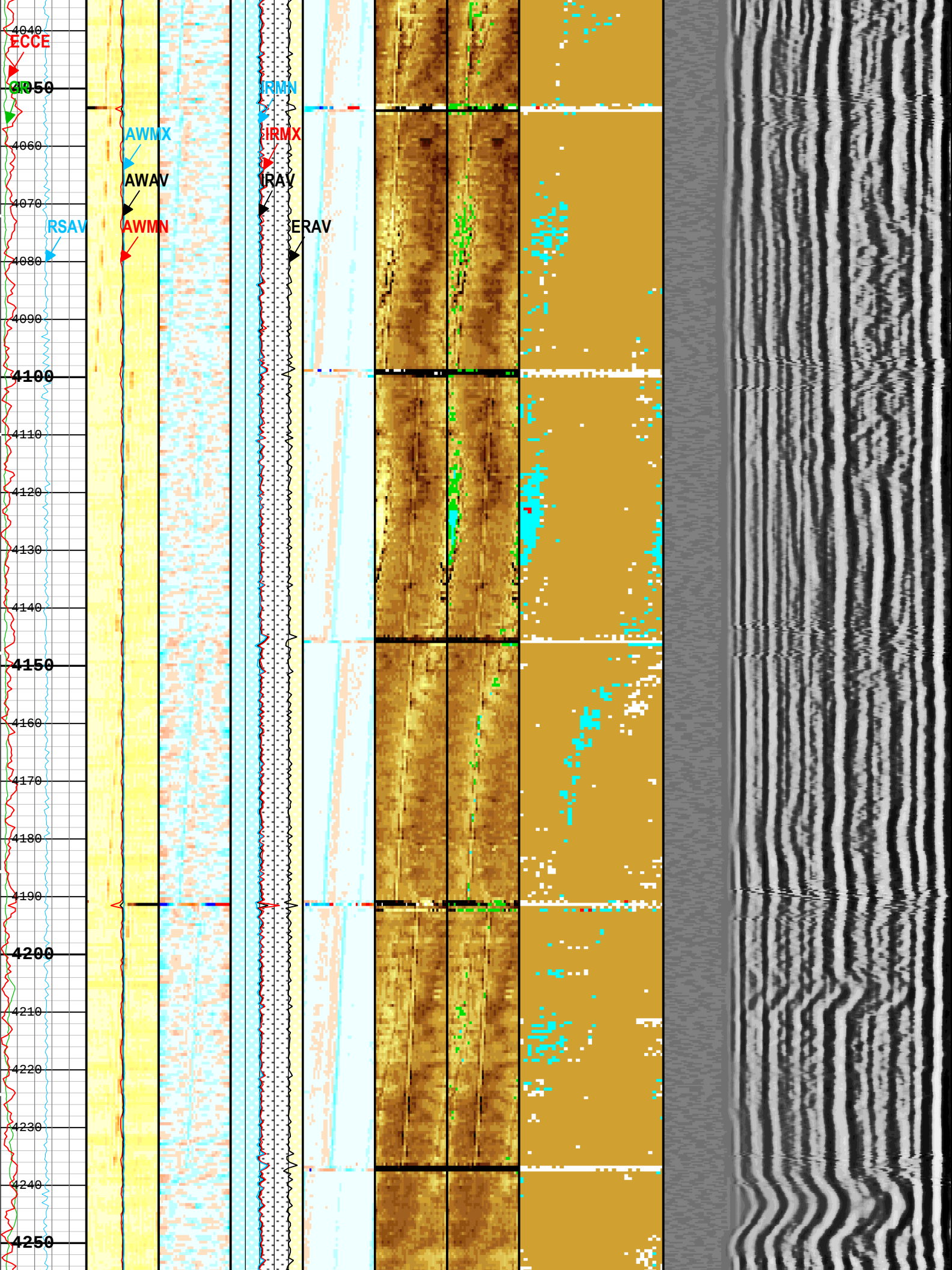


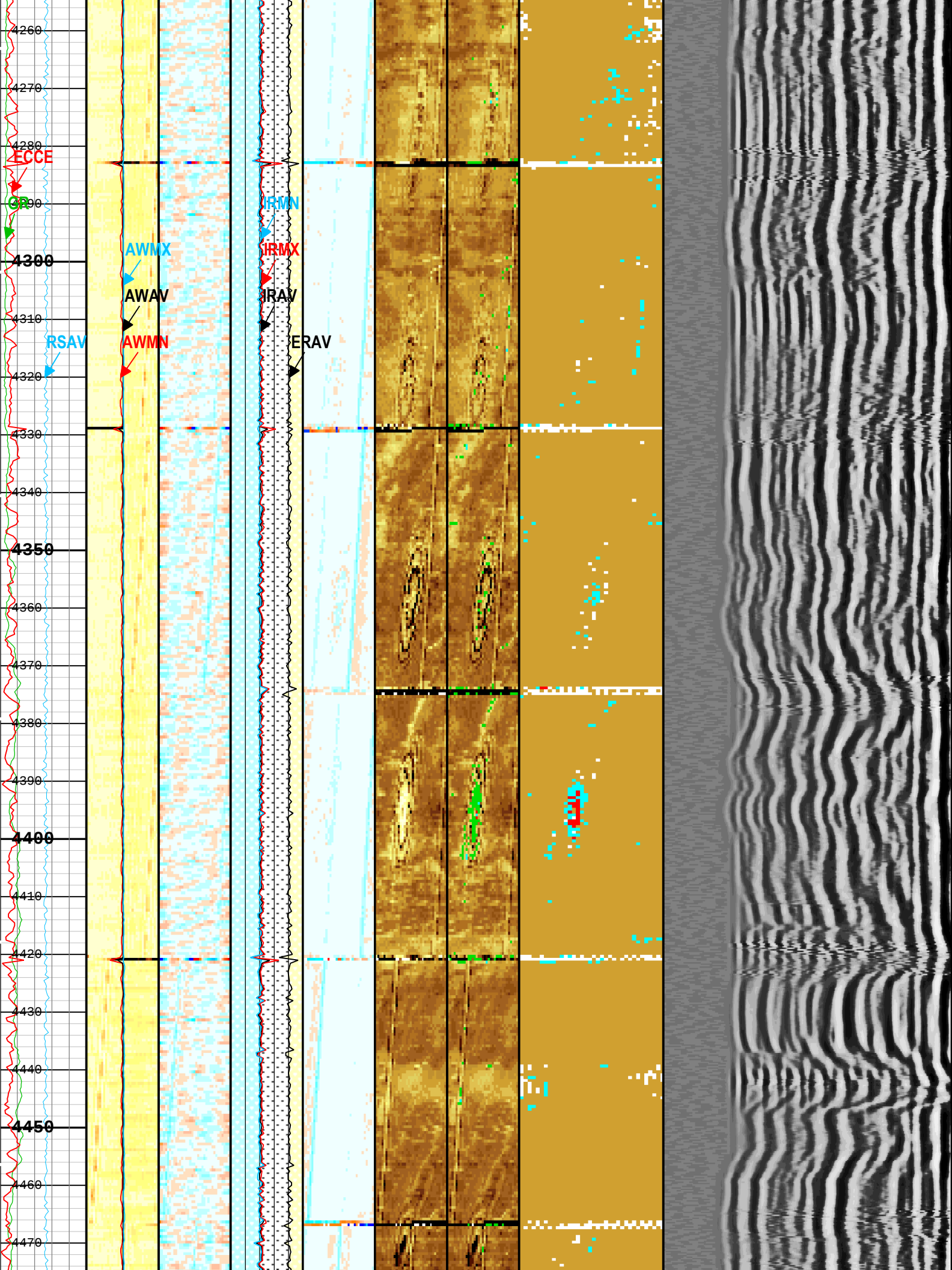


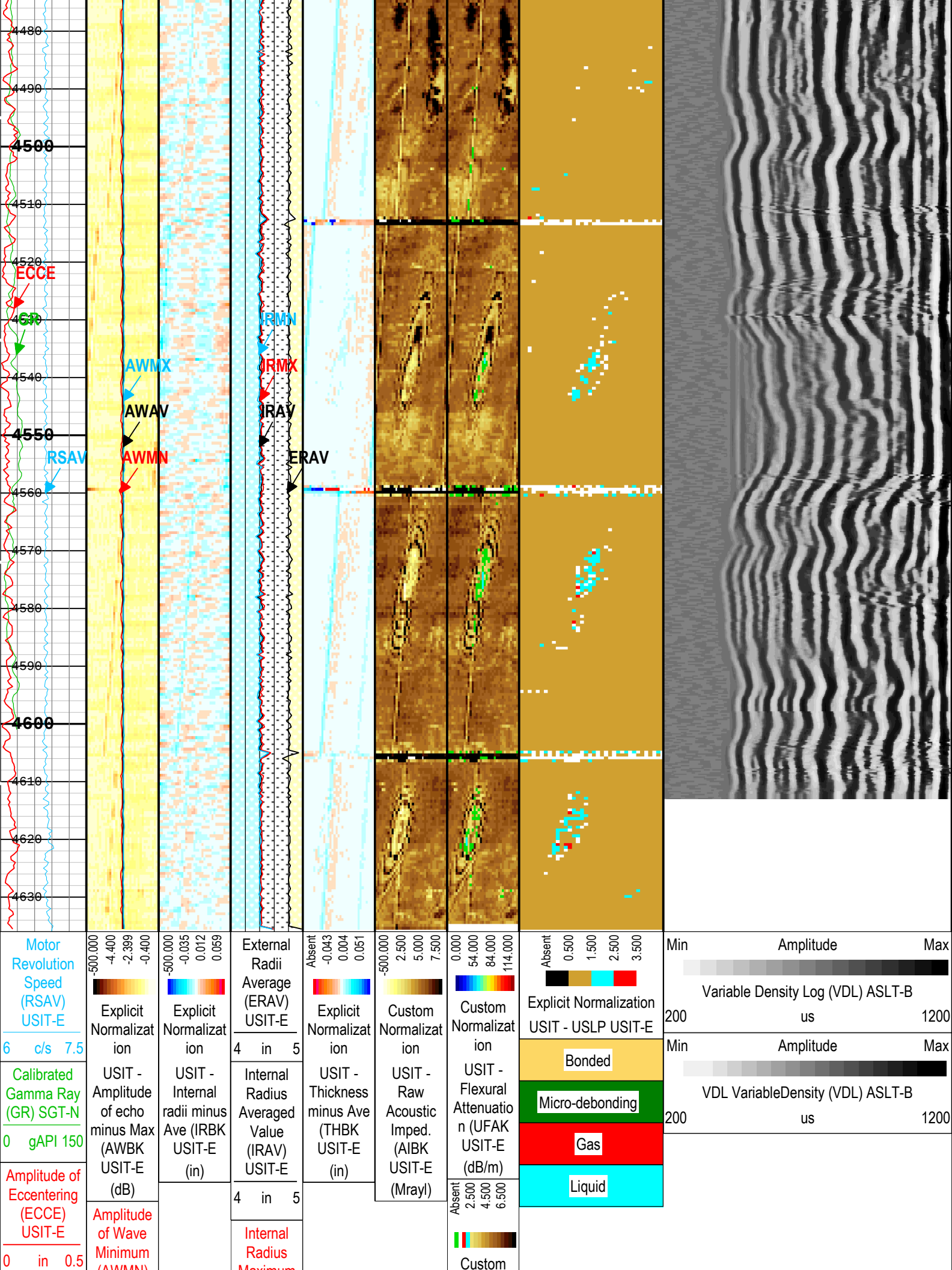












TIME_1900 - Time Marked every 60.00 (s)				
Description: USI IBC SLG Comp Flyer	Format: Log (USI IBC CBL Combo Flyer)	Index Scale: 5 in per 100 ft	Index Unit: ft	Index Type: Measured Depth
Creation Date: 15-Nov-2016 15:10:00				

TCUB	T*3 Processing Level	USIT-E	Loop	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	2.07	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	-29.09	dB/m
UFGDE	Fiberglass Density	USIT-E	1.95	g/cm3
UFGPS	Fiberglass Processing Selection	USIT-E	No	
UFGVL	Fiberglass Velocity	USIT-E	9678.48	ft/s
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
THDP	Thickness Detection Policy	USIT-E	Fundamental	
VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
VDLG	VDL Manual Gain	ASLT-B	2.2	
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.86	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.5	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	26	8	840
BS	17.5	840	2600
BS	12.25	2600	4636
DFD	9.6	8	300
DFD	9	300	2875
DFD	9.8	2875	4636

All depth are actual.

Tool Control Parameters

4A: Parameters

Parameter	Description	Tool	Value	Unit
ACSS	Attenuation Mode CBL Source Switch	ASLT-B	CBL	
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
DDE1	Digitizing Delay 1	ASLT-B	40	us
DDE2	Digitizing Delay 2	ASLT-B	40	us
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	4.874	in
DSIN	Digitizer Sample Interval	ASLT-B	10	us
DWCO	Digitizer Word Count	ASLT-B	256	
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
GAI1	SSLT Manual Gain 1	ASLT-B	High	
GAI2	SSLT Manual Gain 2	ASLT-B	High	
HRES	Horizontal Resolution	USIT-E	10 deg	
MODE	SSLT Firing Mode	ASLT-B	CBL	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
RATE	Firing Rate	ASLT-B	4.46	Hz
SDTH	Switch Down Threshold	ASLT-B	29490	
SUTH	Switch Up Threshold	ASLT-B	3276	
TMUC	Type of Mud	USIT-E	BRI	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	No	

U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	Time Zoned	us
ULOG	Logging Objective	USIT-E	MEASUREMENT	
UMFR	Modulation Frequency	USIT-E	333333	Hz
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	Time Zoned	us
USFR	Ultrasonic Sampling Frequency	USIT-E	500000	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 375 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in LF	
USIT_DEPTHLOG	Starting Depth Log for Ultrasonics	USIT-E	4635	ft
USSP	Ultrasonic Service	USIT-E	IBC	
U-USIT_UTAN	Transducer Angles	USIT-E	38_DEG	
VDM	SSLT VDL Display Mode	ASLT-B	R5	
VRES	Vertical Resolution	USIT-E	6.0 in	
WINB	Window Begin Time	USIT-E	44.08	us
WINE	Window End Time	USIT-E	Time Zoned	us

Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	65	15-Nov-2016 07:49:50	15-Nov-2016 08:25:58	4637.08	3312.12
EMXV	70	15-Nov-2016 08:25:58	15-Nov-2016 09:41:02	3312.12	494.91
EMXV	75	15-Nov-2016 09:41:02	15-Nov-2016 09:55:41	494.91	43.94
U-USIT_UFWB	135	15-Nov-2016 07:49:50	15-Nov-2016 07:51:22	4637.08	4596.05
U-USIT_UFWB	126.54	15-Nov-2016 07:51:22	15-Nov-2016 09:55:41	4596.05	43.94
U-USIT_UFWE	175	15-Nov-2016 07:49:50	15-Nov-2016 08:13:30	4637.08	3774.62
U-USIT_UFWE	172.35	15-Nov-2016 08:13:30	15-Nov-2016 09:55:41	3774.62	43.94
U-USIT_UNWB	104	15-Nov-2016 07:49:50	15-Nov-2016 07:51:03	4637.08	4608.24
U-USIT_UNWB	91.36	15-Nov-2016 07:51:03	15-Nov-2016 09:55:41	4608.24	43.94
U-USIT_UNWE	144	15-Nov-2016 07:49:50	15-Nov-2016 08:13:41	4637.08	3767.47
U-USIT_UNWE	139.63	15-Nov-2016 08:13:41	15-Nov-2016 09:55:41	3767.47	43.94
WINE	84.08	15-Nov-2016 07:49:50	15-Nov-2016 07:53:12	4637.08	4525.66
WINE	87.99	15-Nov-2016 07:53:12	15-Nov-2016 09:55:41	4525.66	43.94
All depth are at tool zero.					

4A									
Repeat Pass 5" = 100'									

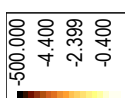
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
4A	Repeat[2]:Up	Up	4206.23 ft	4629.52 ft	15-Nov-2016 7:19:23 AM	15-Nov-2016 7:30:34 AM	ON	0.00 ft	Yes

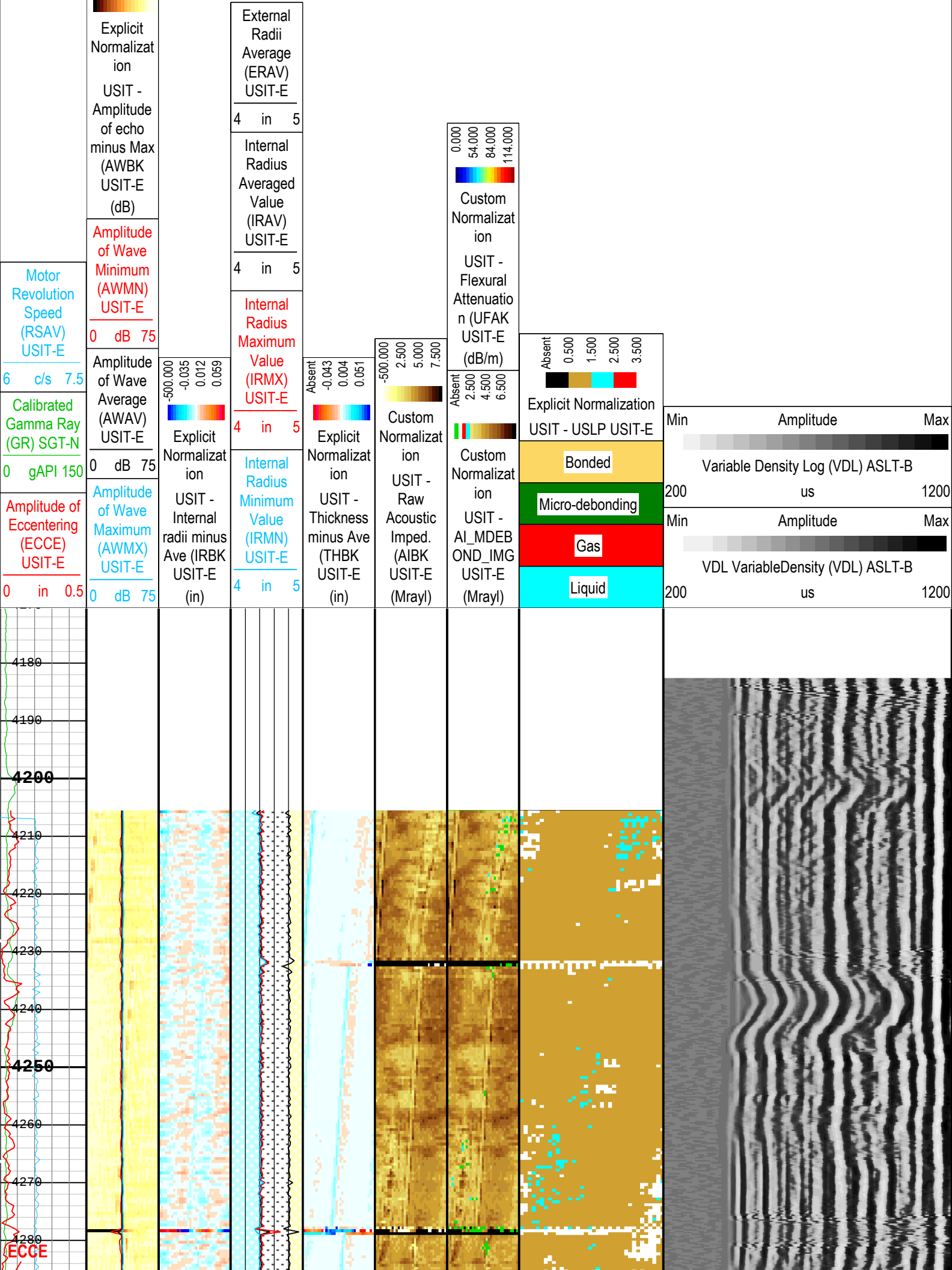
All depths are referenced to toolstring zero

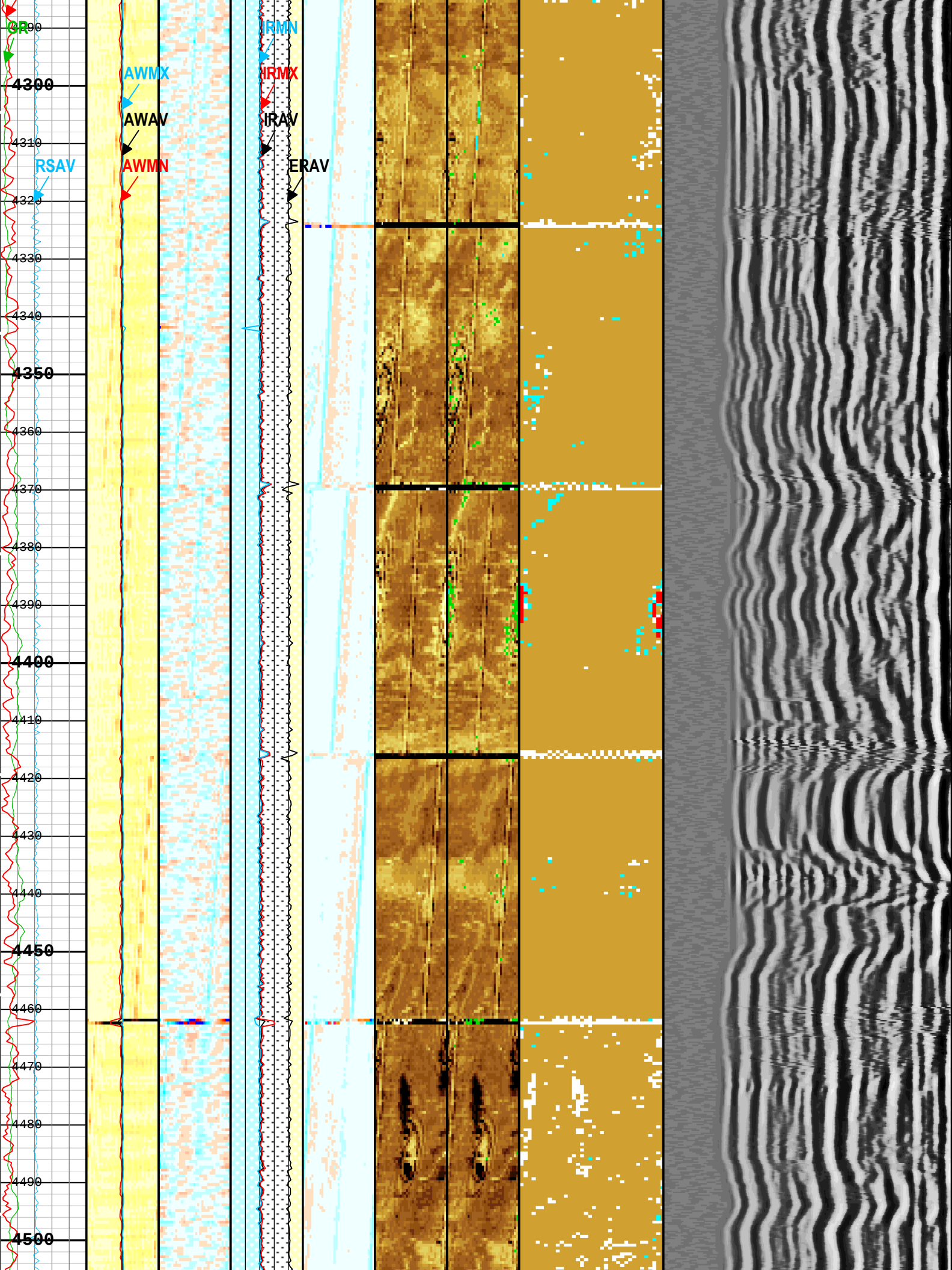
Log	Company:DCP Midstream LP Well:Zia AGI D2
	4A: Repeat[2]:Up:S016

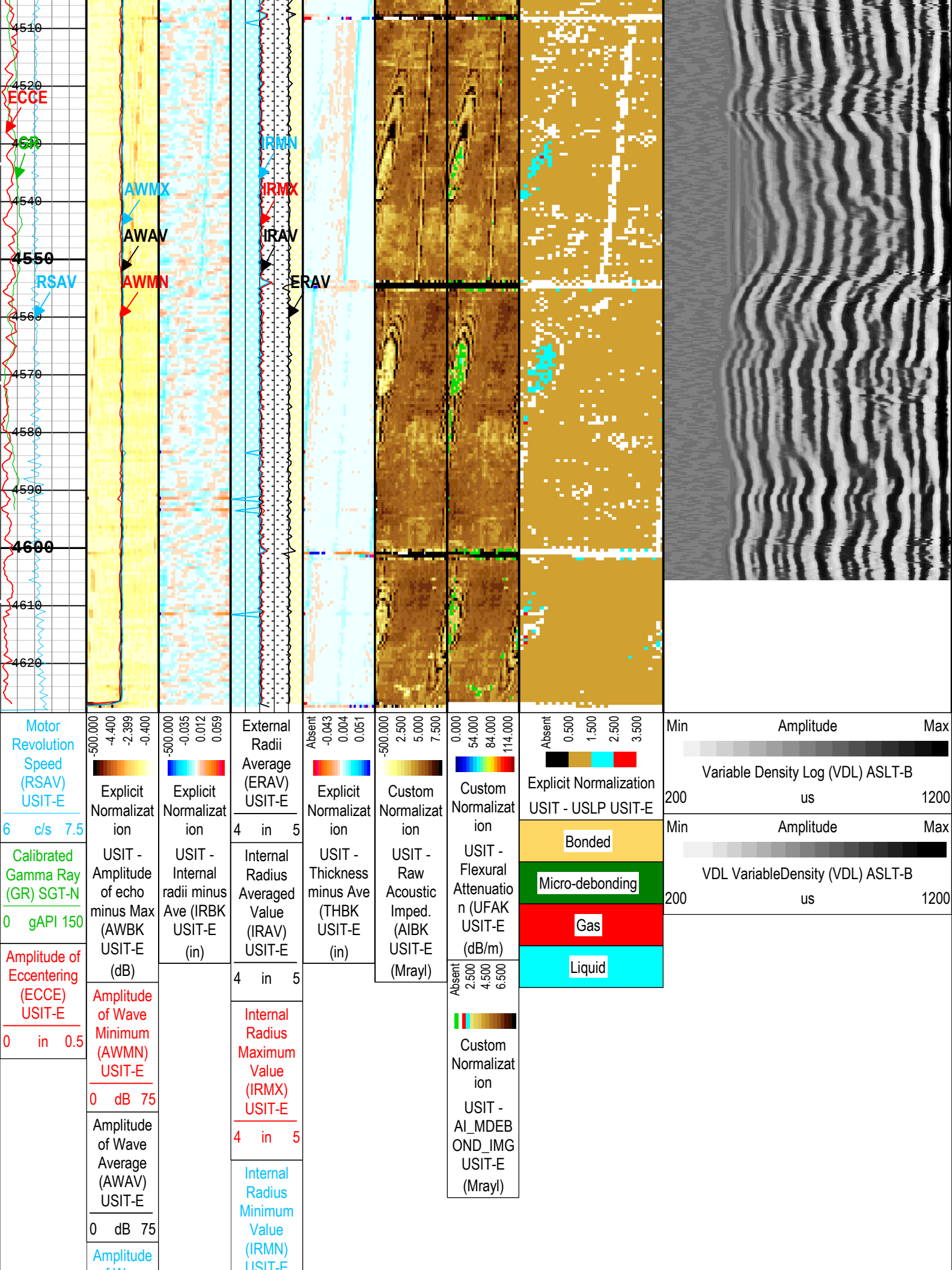
Description: USI IBC SLG Comp Flyer Format: Log (USI IBC CBL Combo Flyer) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 15-Nov-2016 15:10:11

TIME_1900 - Time Marked every 60.00 (s)









Channel Processing Parameters				
4A: Parameters				
Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BS	Bit Size	WLSESSION	12.25	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CDEN	Cement Density	USIT-E	1.52	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	9.8	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	182	us/ft
FD	Fluid Density	USIT-E	1.2	g/cm3
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GR_MULTIPLIER	Gamma Ray Multiplier	SGT-N	1	
HEMA	Hematite Presence Flag	Borehole	No	
FSOD	USIT IBC Fluid Slowness Fits Casing Outer Diameter	USIT-E	0_OFF	
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Theoretical	
ICE_PROCESS	ICE Processing	USIT-E	Yes	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	24.64	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.05	
U-USIT_OCDI	Outer Casing Diameter	USIT-E	0	in
U-USIT_OCSH	Outer Casing Shoe	USIT-E	0	ft
U-USIT_OCWE	Outer Casing Weight	USIT-E	0	lbm/ft
RCOD	Reference Calibrator Outer Diameter	USIT-E	7	in
RCSO	Reference Calibrator Standoff	USIT-E	1.378	in
RCTH	Reference Calibrator Thickness	USIT-E	0.295	in
SDNV	Number of Vertical Samples used for Micro-debonding Computation	USIT-E	5	
SDTHOR	Acoustic Impedance STD Horizontal Threshold for Micro-debonding	USIT-E	0.5	Mrayl
SDTVER	Acoustic Impedance STD Vertical Threshold for Micro-debonding	USIT-E	0.3	Mrayl
TCUB	T^3 Processing Level	USIT-E	Loop	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	2.07	Mrayl
U-USIT_UFAO	SIT Flexural Attenuation Offset	USIT-E	-29.09	dB/m
UFGDE	Fiberglass Density	USIT-E	1.95	g/cm3
UFGPS	Fiberglass Processing Selection	USIT-E	No	
UFGVL	Fiberglass Velocity	USIT-E	9678.48	ft/s
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	

THDP	Thickness Detection Policy	USIT-E	Fundamental	
VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
VDLG	VDL Manual Gain	ASLT-B	2.2	
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.86	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.5	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Tool Control Parameters

4A: Parameters

Parameter	Description	Tool	Value	Unit
ACSS	Attenuation Mode CBL Source Switch	ASLT-B	CBL	
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
DDE1	Digitizing Delay 1	ASLT-B	40	us
DDE2	Digitizing Delay 2	ASLT-B	40	us
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	4.874	in
DSIN	Digitizer Sample Interval	ASLT-B	10	us
DWCO	Digitizer Word Count	ASLT-B	256	
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
GAI1	SSLT Manual Gain 1	ASLT-B	High	
GAI2	SSLT Manual Gain 2	ASLT-B	High	
HRES	Horizontal Resolution	USIT-E	10 deg	
MODE	SSLT Firing Mode	ASLT-B	CBL	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
RATE	Firing Rate	ASLT-B	4.46	Hz
SDTH	Switch Down Threshold	ASLT-B	29490	
SUTH	Switch Up Threshold	ASLT-B	3276	
TMUC	Type of Mud	USIT-E	BRI	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	No	
U-USIT_UFWB	Far Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UFWE	Far Receiver Window End Time	USIT-E	175	us
ULOG	Logging Objective	USIT-E	MEASUREMENT	
UMFR	Modulation Frequency	USIT-E	333333	Hz
U-USIT_UNWB	Near Receiver Window Begin Time	USIT-E	Time Zoned	us
U-USIT_UNWE	Near Receiver Window End Time	USIT-E	144	us
USFR	Ultrasonic Sampling Frequency	USIT-E	500000	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 375 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in LF	
USIT_DEPTHLOG	Starting Depth Log for Ultrasonics	USIT-E	4635	ft
USSP	Ultrasonic Service	USIT-E	IBC	
U-USIT_UTAN	Transducer Angles	USIT-E	38_DEG	
VDM	SSLT VDL Display Mode	ASLT-B	R5	
VRES	Vertical Resolution	USIT-E	6.0 in	
WINB	Window Begin Time	USIT-E	44.08	us
WINE	Window End Time	USIT-E	84.08	us

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
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Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	55	15-Nov-2016 07:19:23	15-Nov-2016 07:20:10	4629.52	4602.73
EMXV	60	15-Nov-2016 07:20:10	15-Nov-2016 07:30:34	4602.73	4206.23
U-USIT_UFWB	135	15-Nov-2016 07:19:23	15-Nov-2016 07:20:36	4629.52	4586.56
U-USIT_UFWB	128.17	15-Nov-2016 07:20:36	15-Nov-2016 07:30:34	4586.56	4206.23
U-USIT_UNWB	104	15-Nov-2016 07:19:23	15-Nov-2016 07:20:41	4629.52	4582.88
U-USIT_UNWB	97.9	15-Nov-2016 07:20:41	15-Nov-2016 07:30:34	4582.88	4206.23

All depth are at tool zero.

Company:	DCP Midstream LP	Schlumberger
Well:	Zia AGI D2	
Field:	AGI Devonian Exploration	
County:	Lea	
State:	Texas	

Ultrasonic Imager

Ultrasonic Imager

Composite Print

Gamma Ray