

Company: New Mexico Institute of Mining & Technology

Well: SJB Carbon Safe Strat Test #001

Field: Entrada Formation

County: San Juan State: New Mexico

Corrosion Print

Gamma Ray

Casing Collar Locator

County: San Juan
Field: Entrada Formation
Location: Section: 14, Township: 31N, Range: 12W
Well: SJB Carbon Safe Strat Test #001
Company: New Mexico Institute of Mining & Technology

Location:		Permanent Datum:		Ground Level		Elev.:		K.B.		6207.00 f	
2236 FNL & 1021' FEL		Log Measured From:		Kelly Bushing		16.00 ft		G.L.		6207.00 ft	
Drilling Measured From:		Kelly Bushing				above Perm.Datum		D.F.			
API Serial No.		Section:		Township:		Range:					
30-045-38272		14		31N		12W					

Logging Date 12-Feb-2023

Run Number 6A

Depth Driller 8800.00 ft

Schlumberger Depth 8800.00 ft

Bottom Log Interval 8750.00 ft

Top Log Interval

Casing Fluid Type Water

Salinity

Density 8.7 lbm/gal

Fluid Level 8.00 ft

Bit Size 8.75 in

Bit Size 5500.00 ft

Bit Size 8800.00 ft

Casing/Tubing Size 5.5 in

Weight 23 lbm/ft

Grade N/A

Flow 5000.00 ft

Flow 8800.00 ft

Temperature 214 degF

Temperature 12-Feb-2023

Temperature 20:44:00

Location: 9103

Location: Ryan Kennedy

Location: Midland

Witnessed By Santiago Flores

Disclaimer

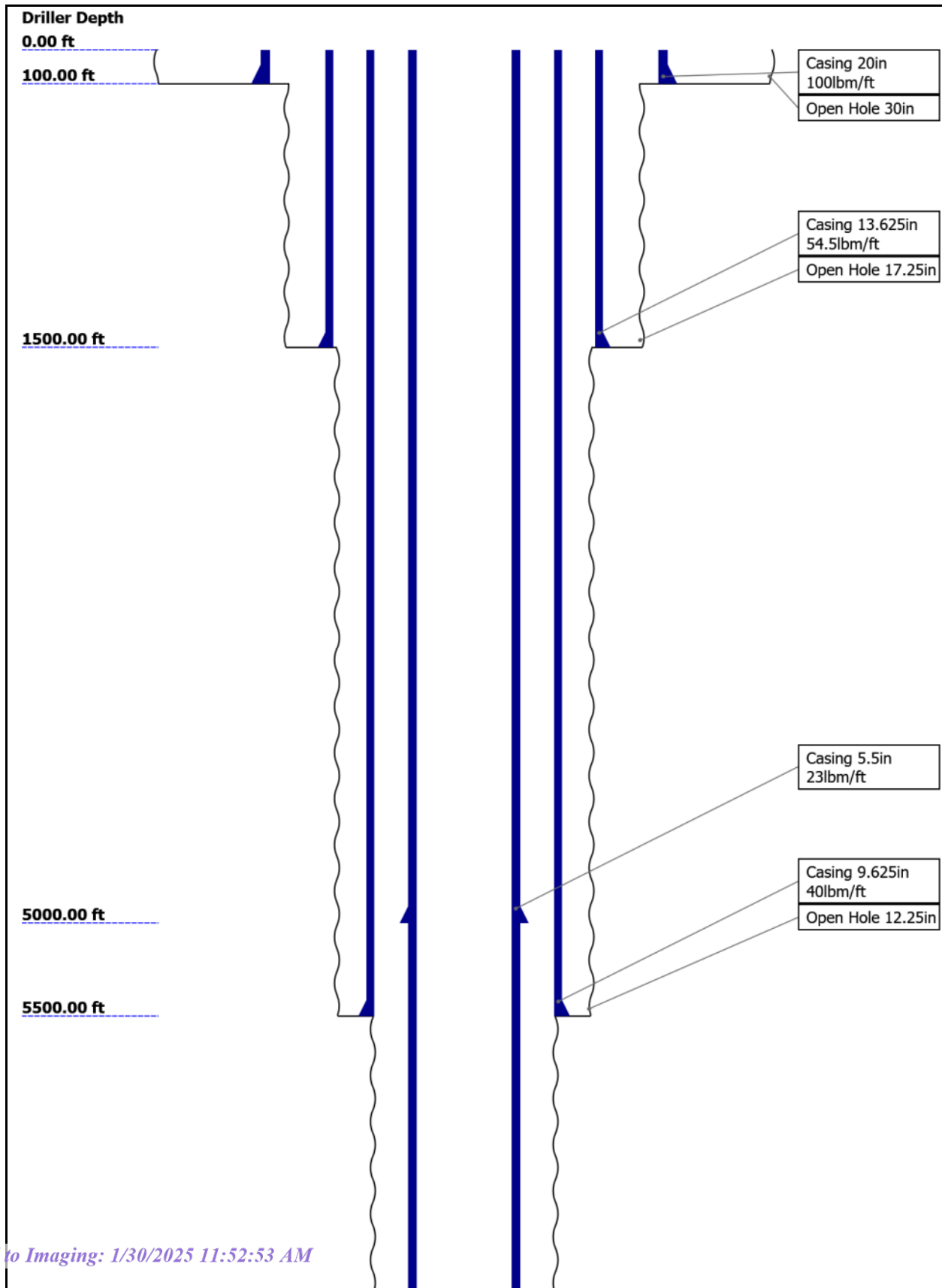
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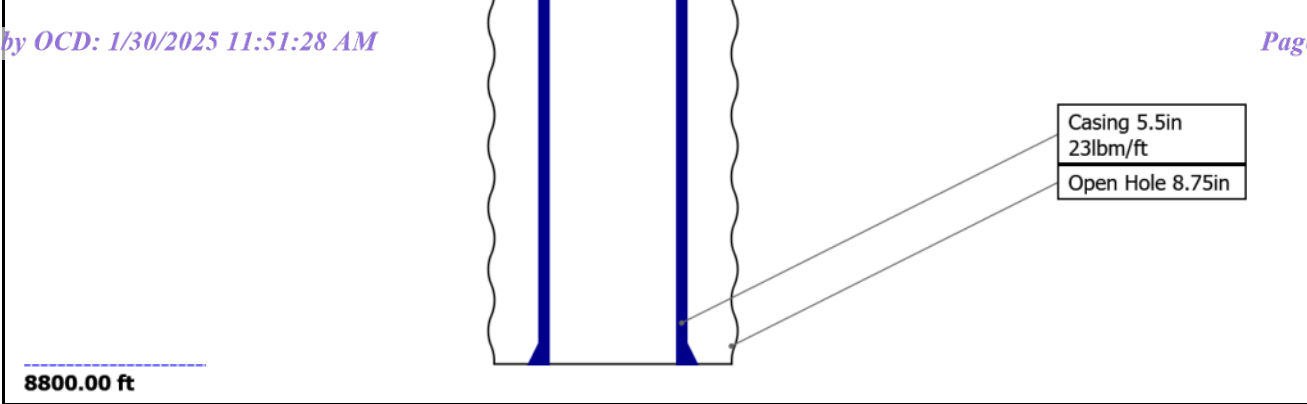
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Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	30	17.25	12.25	8.75		
Top Driller (ft)	0	100	1500	5500		
Top Logger (ft)	0	100	1500	5500		
Bottom Driller (ft)	100	1500	5500	8800		
Bottom Logger (ft)	100	1500	5500	8800		
Casing						
Size (in)	20	13.625	9.625	5.5	5.5	
Weight (lbm/ft)	100	54.5	40	23	23	
Inner Diameter (in)	19.063	12.872	8.835	4.67	4.67	
Grade	N/A	J55	L80	L80	N/A	
Top Driller (ft)	0	0	0	0	5000	
Top Logger (ft)	0	0	0	0	5000	
Bottom Driller (ft)	100	1500	5500	5000	8800	
Bottom Logger (ft)	100	1500	5500	5000	8800	

Remarks and Equipment Summary

6A: Toolstring		6A: Remarks	
Equip name Length	MP name Offset	Log Objective: Cement and Casing Evaluation	
LEH-QT 47.28		Main Pass logged @1000psi & Repeats @0psi.	
LEH-QT		Main logged @ 10deg 6" and Repeats @ 10deg 1.5"	
		Expected Free pipe amplitude 71 +/- 7mV.	
EDTC-B 43.79			
EDTH-B			
EDTG-A			
EDTC-B			
	CTEM 40.29		
	ACCZ 0.00		
	HV 0.00		
	Gamma 38.42		
	Ray		
	TelStatu 37.29		
	s		
AH-320 37.29			
ASLT-B:8 35.29			
074			
ASLT-BB:8			
074			

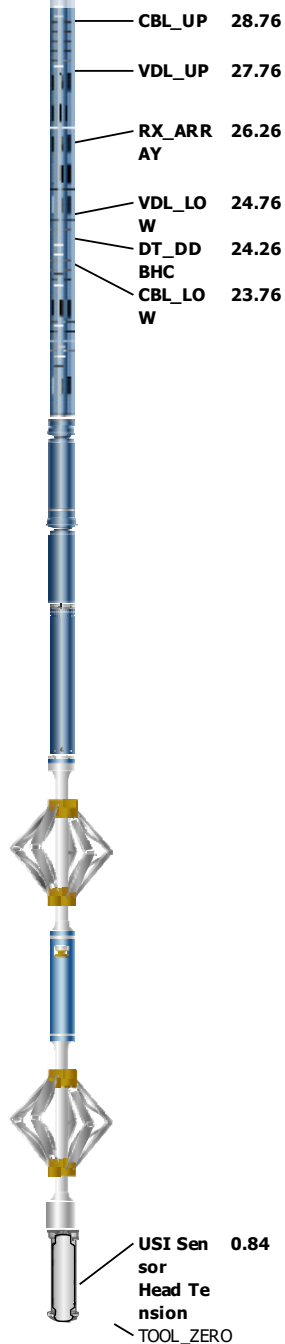
Released to Imaging 1/30/2025 11:52:53 AM

Log Objective: Cement and Casing Evaluation

Main Pass logged @1000psi & Repeats @0psi.

Main logged @ 10deg 6" and Repeats @ 10deg 1.5"

Expected Free pipe amplitude 71 +/- 7mV.



Depth Summary

6A

Depth Measuring Device

Type	IDW-JA
Serial Number	7293
Calibration Date	27-Oct-2022
Calibrator Serial Number	57
Calibration Cable Type	7-32AS-XS
Wheel Correction 1	-1
Wheel Correction 2	1

Tension Device

Type	OMT-5A
Serial Number	2795

Serial Number	2565		
Calibration Date	05-Nov-2022		Page 5 of 56
Calibrator Serial Number	75		
Number of Calibration Points	10		
Calibration Root Mean Square Error	17		
Calibration Peak Error	31		

Logging Cable			
Type	7-32AS-XS		
Serial Number	0060084688		
Length	28500.00 ft		
Conveyance Type	Wireline		
Rig Type			

6A:Depth Control Parameters		Depth Control Remarks
Log Sequence	Subsequent Trip To the Well	Schlumberger depth control procedures followed
Reference Log Name	Isolation Scanner	IDW used as primary depth control system
Reference Log Run Number	3A	Z-Chart used as secondary depth control system
Reference Log Date	25-Dec-2022	Log Correlated to SLB Isolation Scanner Log, 25-Dec-2022
Subsequent Trip Down Log Correction		

Survey Record

Survey Calculation			
Method :	Minimum Radius of Curvature	DLS Method :	Lubinski
North Reference :	True North	Total Correction Formula :	Magnetic Dec

Rig Location			
Latitude :	36.899887 degrees	Longitude :	-108.06171 degrees
Tie In Point			
Measured Depth:	0.00 ft	Inclination:	0.00 deg
True Vertical Depth:	0.00 ft	North Displacement:	0.00 ft
		Azimuth:	0.00 deg
		East Displacement:	0.00 ft

Survey Quality Index	
28 : Tie-In Point	

Survey Correction Index	
0 : No correction	

Survey Description Index	
0 : Not Flagged Survey	

Seq	MD (ft)	Incl (deg)	Azim (deg)	Course	TVD (ft)	V Sec (ft)	N/ -S (ft)	E/ -W (ft)	Closure (ft)	at Azim (deg)	DLS deg/100ft	Tool Type	QI	CI	DI
1	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0

USIT - Fluid Properties Measurement

Run Name	Pass Name	Start Depth(ft)	Stop Depth(ft)
Run 2	Main[5]:Up	8742.51	60.76

Fluid Velocity = "Automatic".
CFVL equals DFSL channel

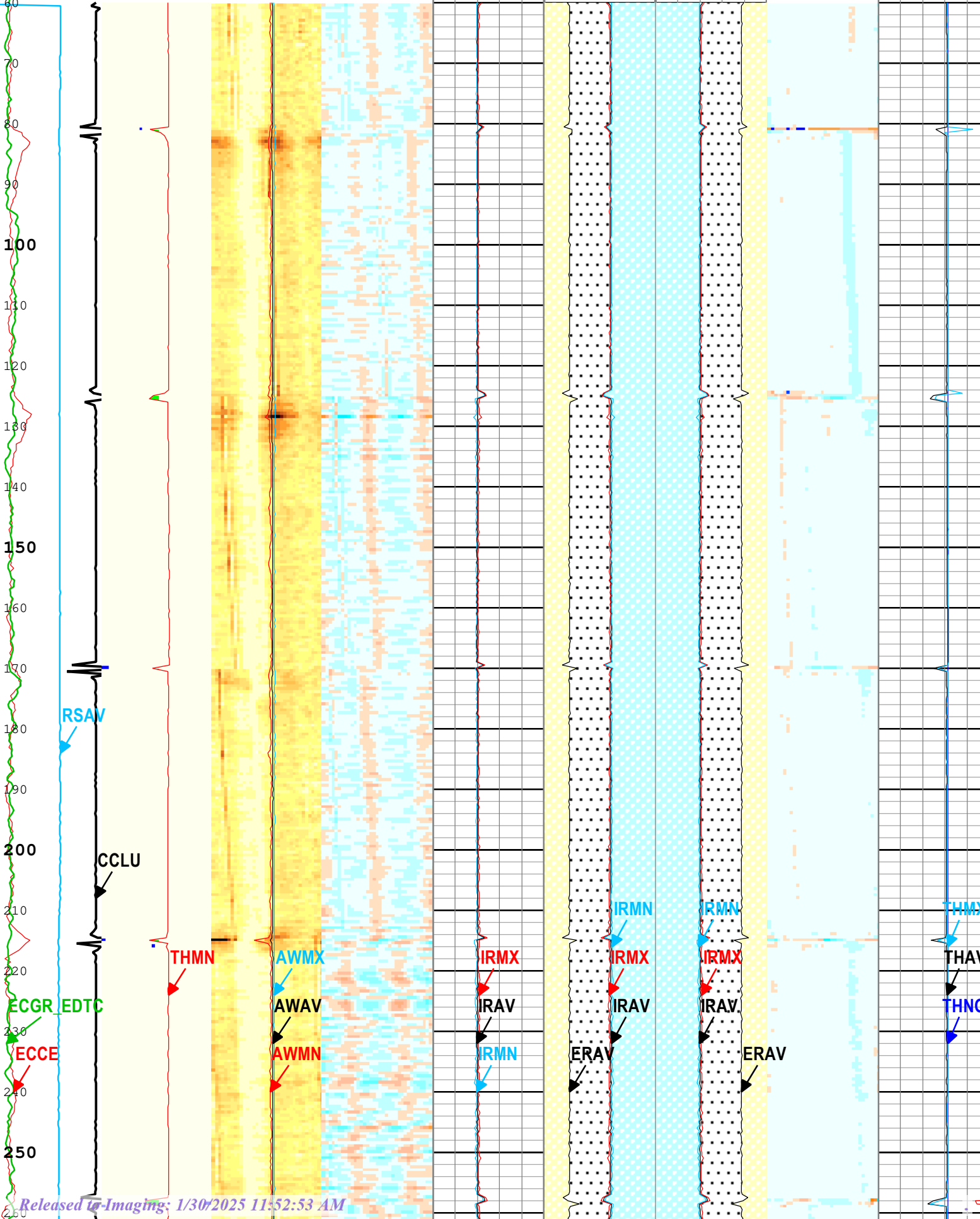
Start Depth(ft)	Stop Depth(ft)	Start Value(us/ft)	End Value(us/ft)
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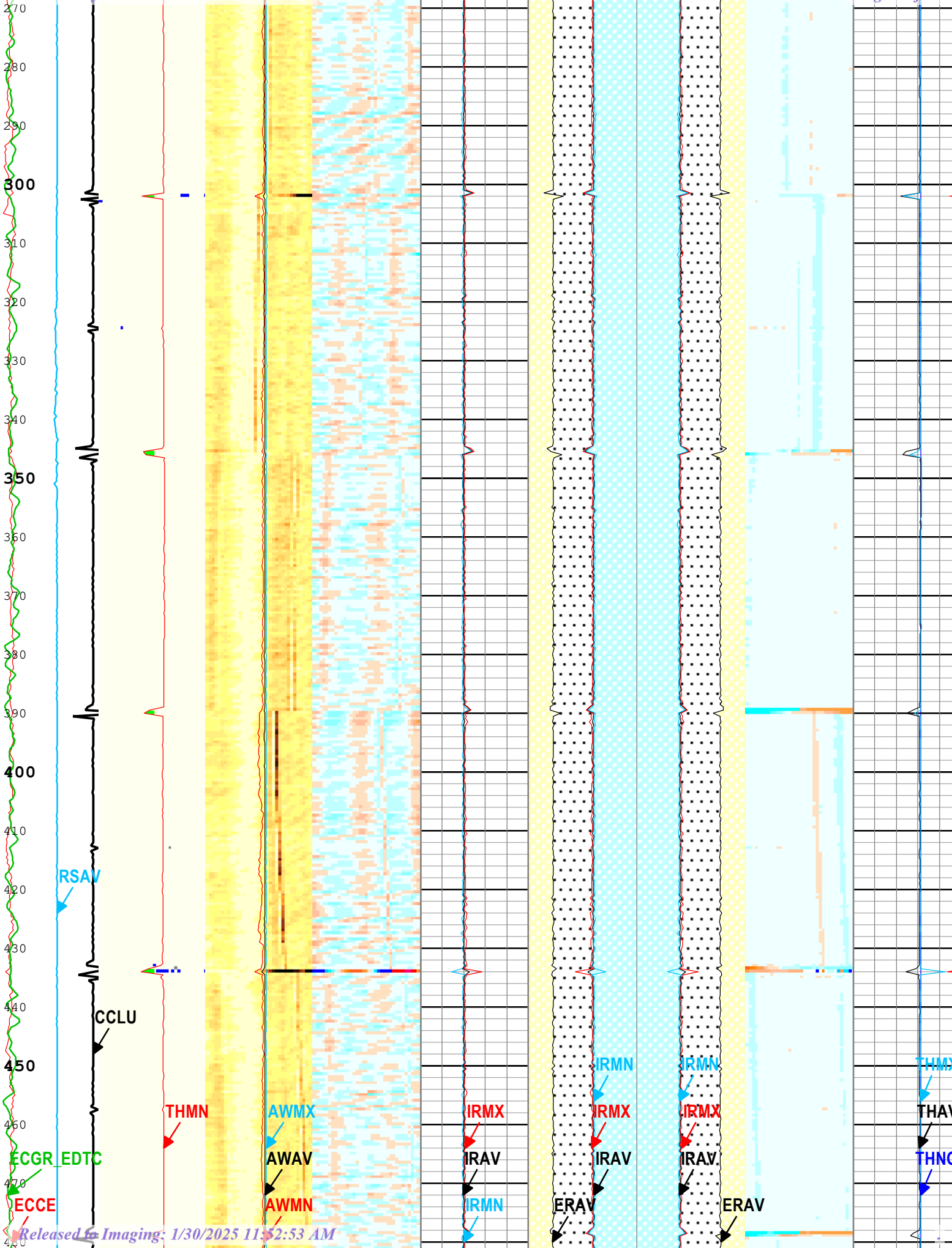
Mud Impedance = "Manual".
CZMD uses ZMUD parameter zoned table below

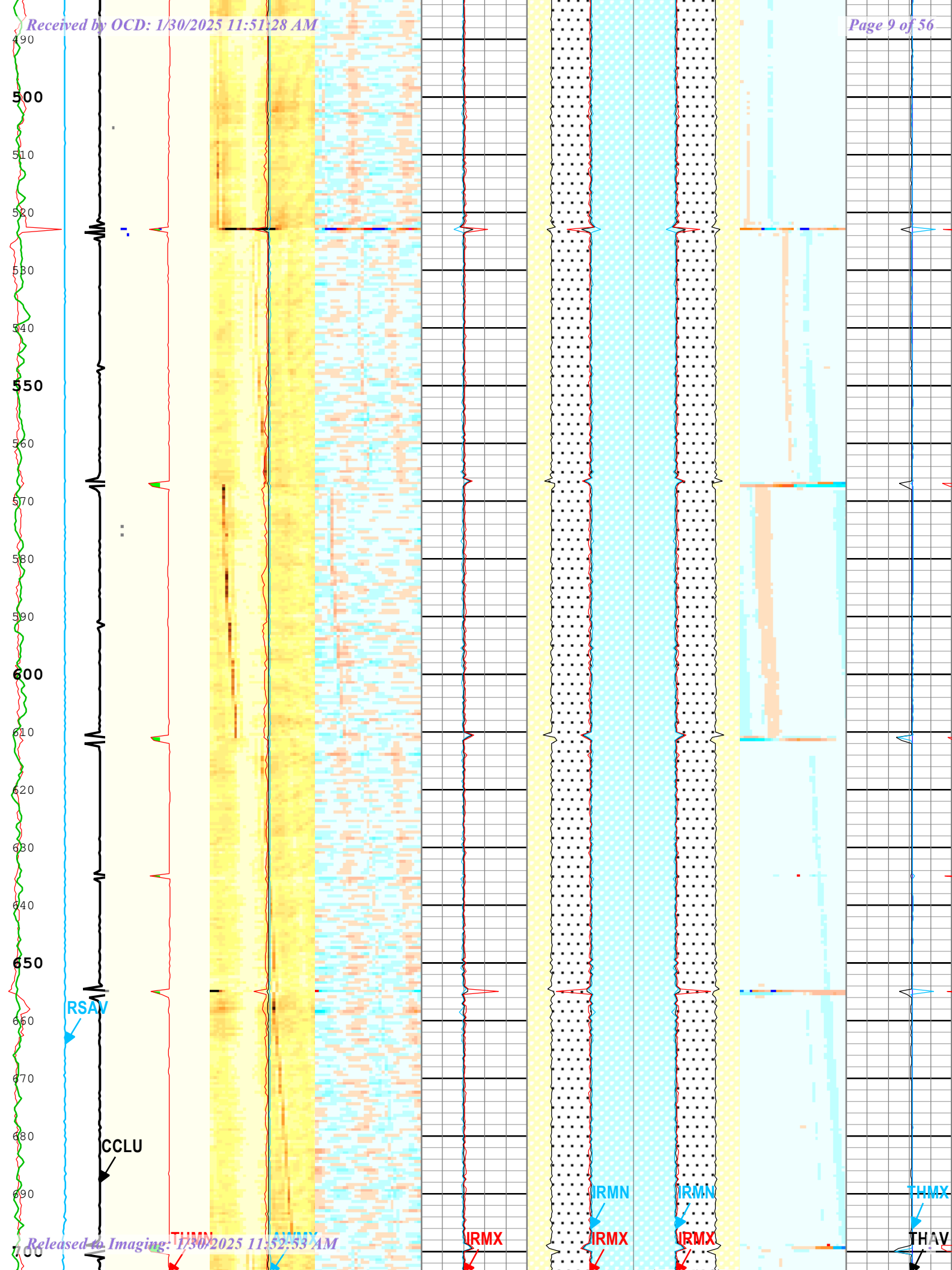
Start Depth(ft)	Stop Depth(ft)	Start Value(Mrayl)	End Value(Mrayl)
0		1.5	1.5

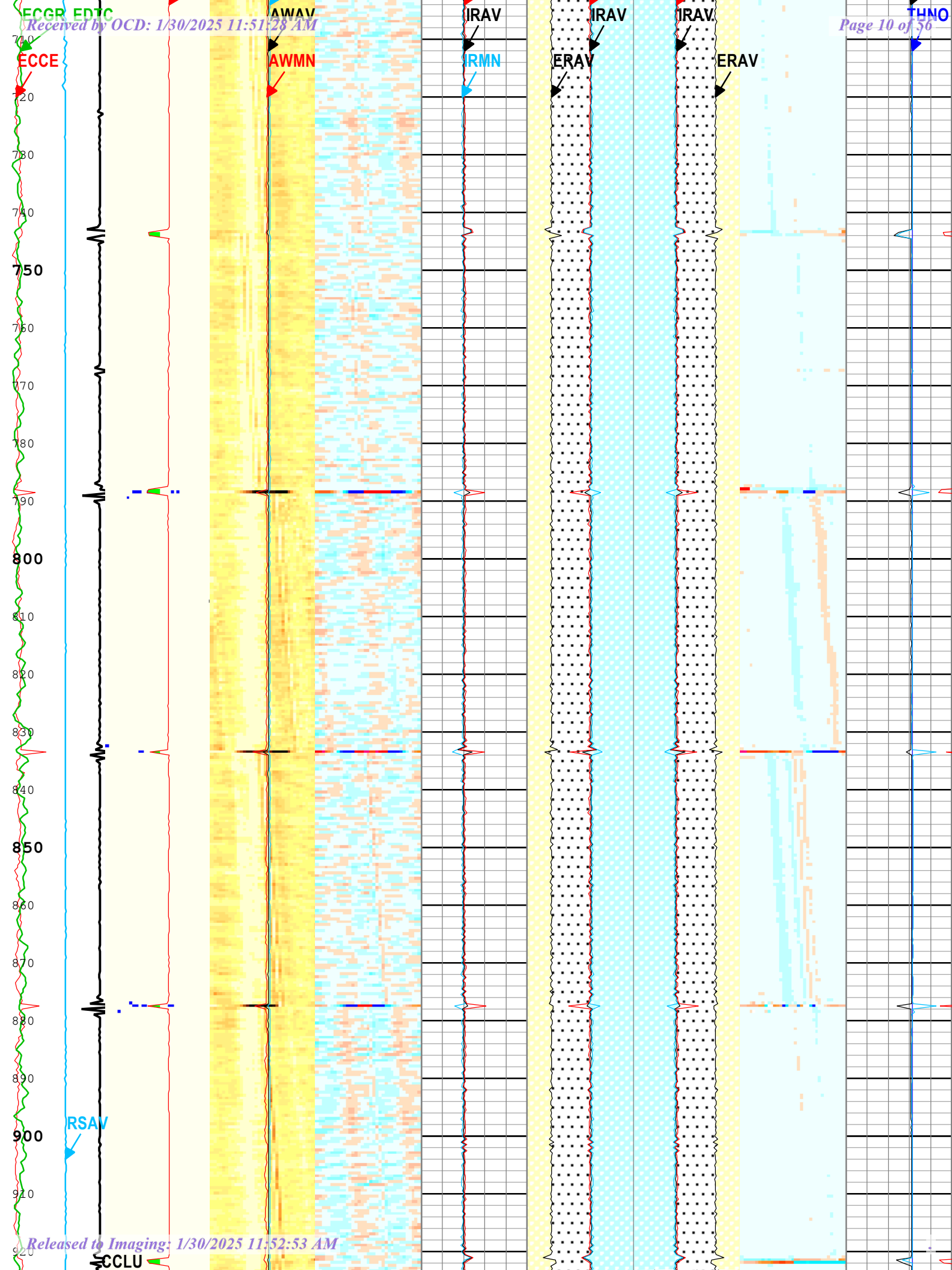
6A

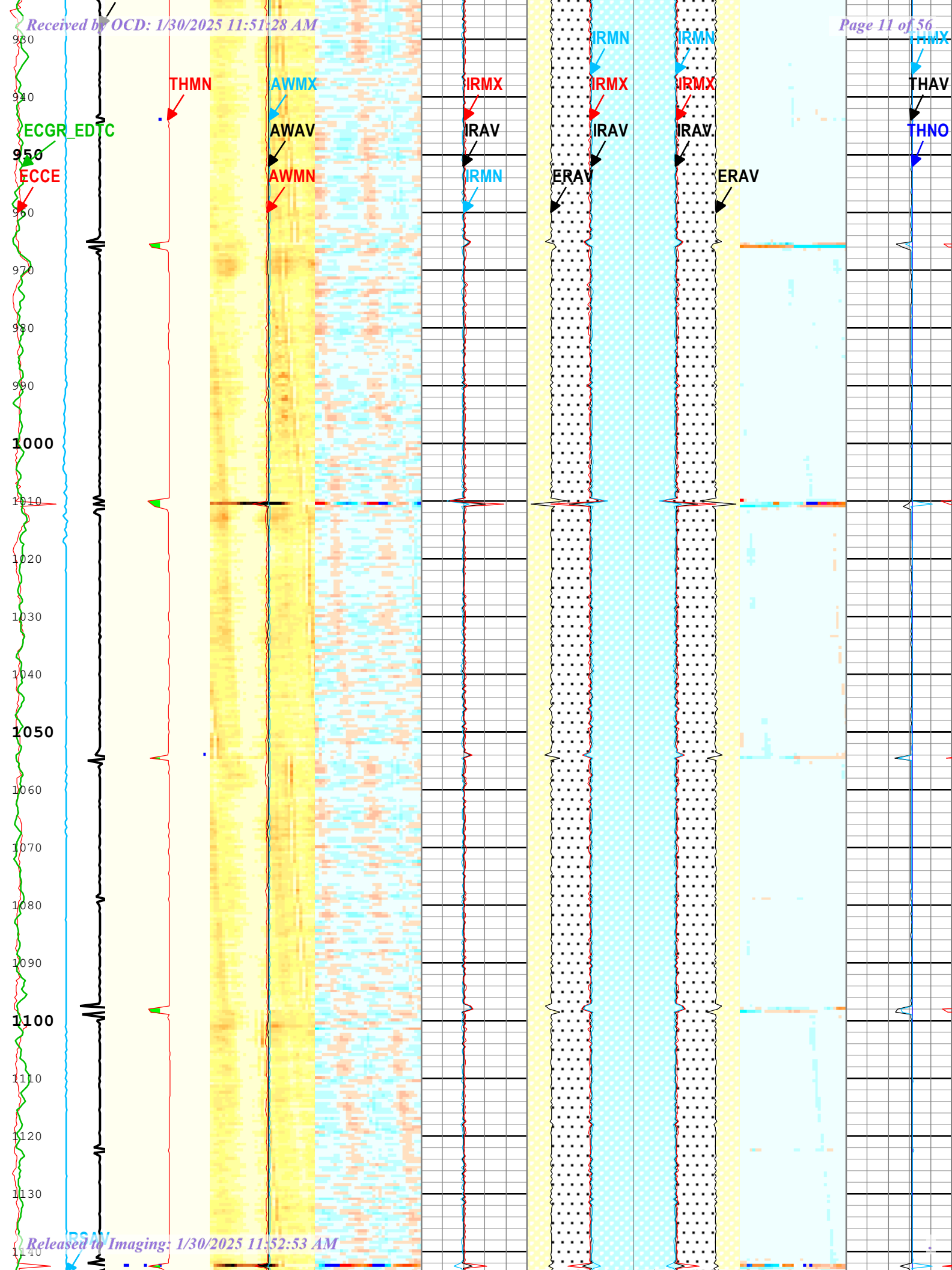
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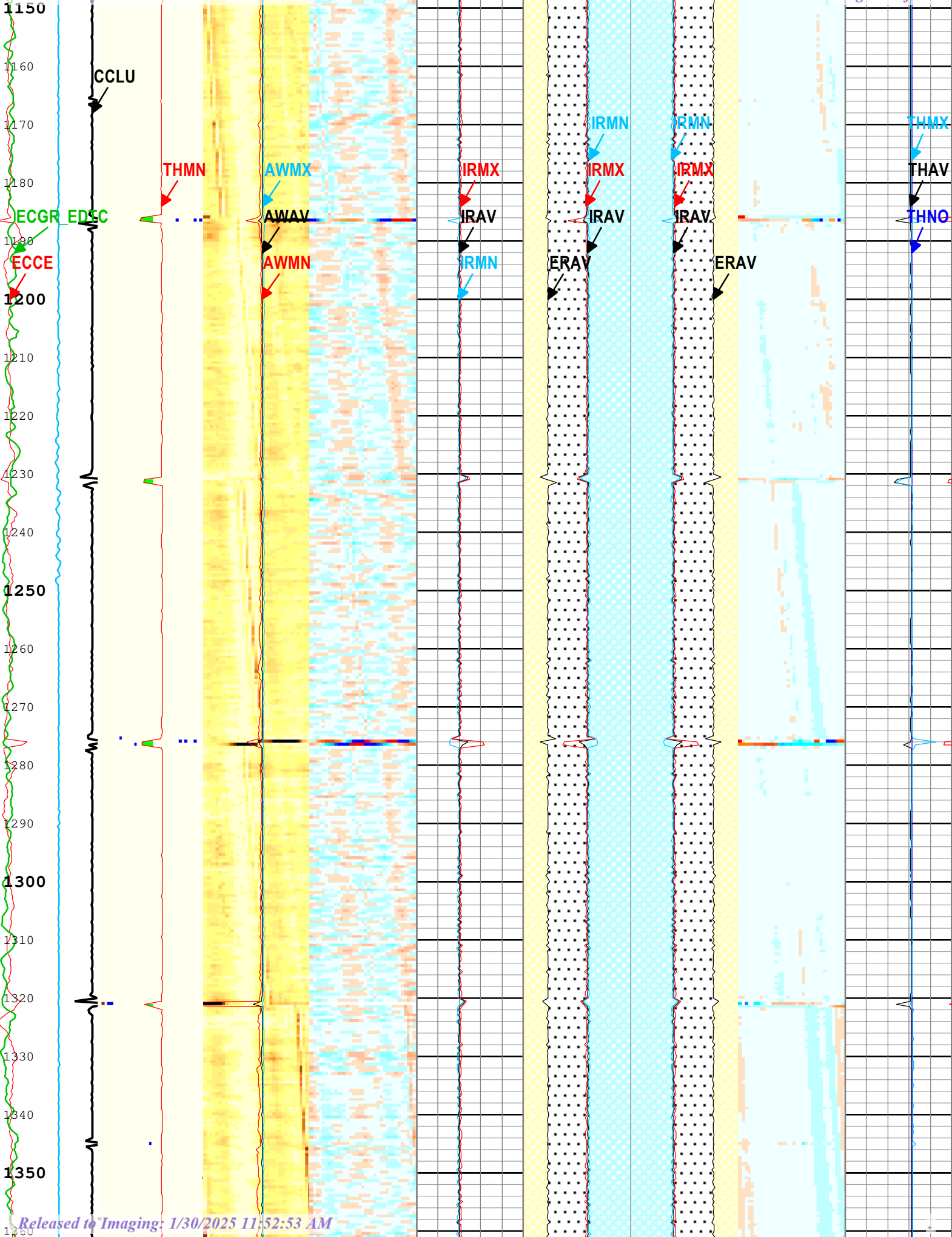


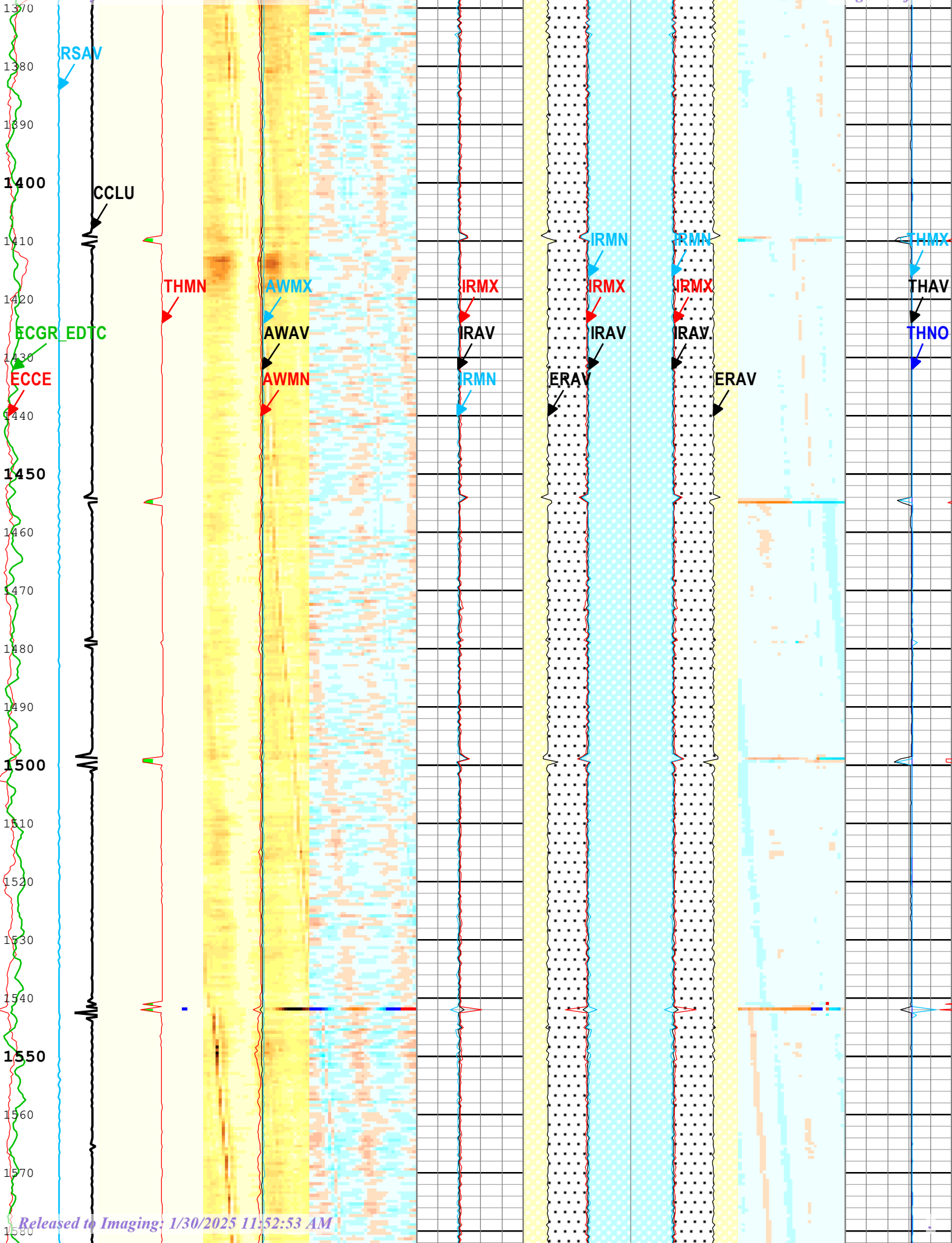


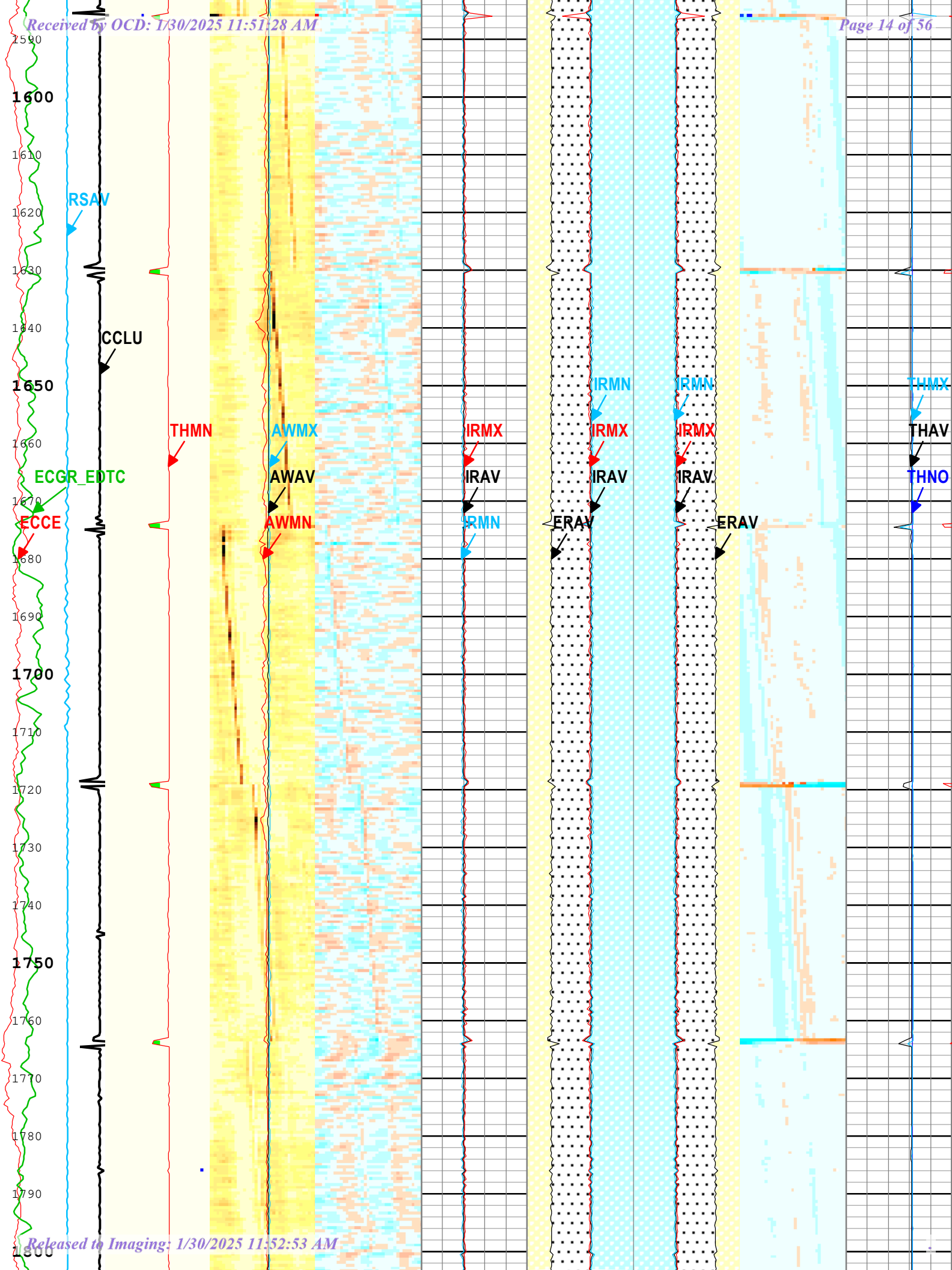


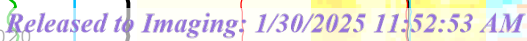


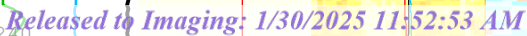


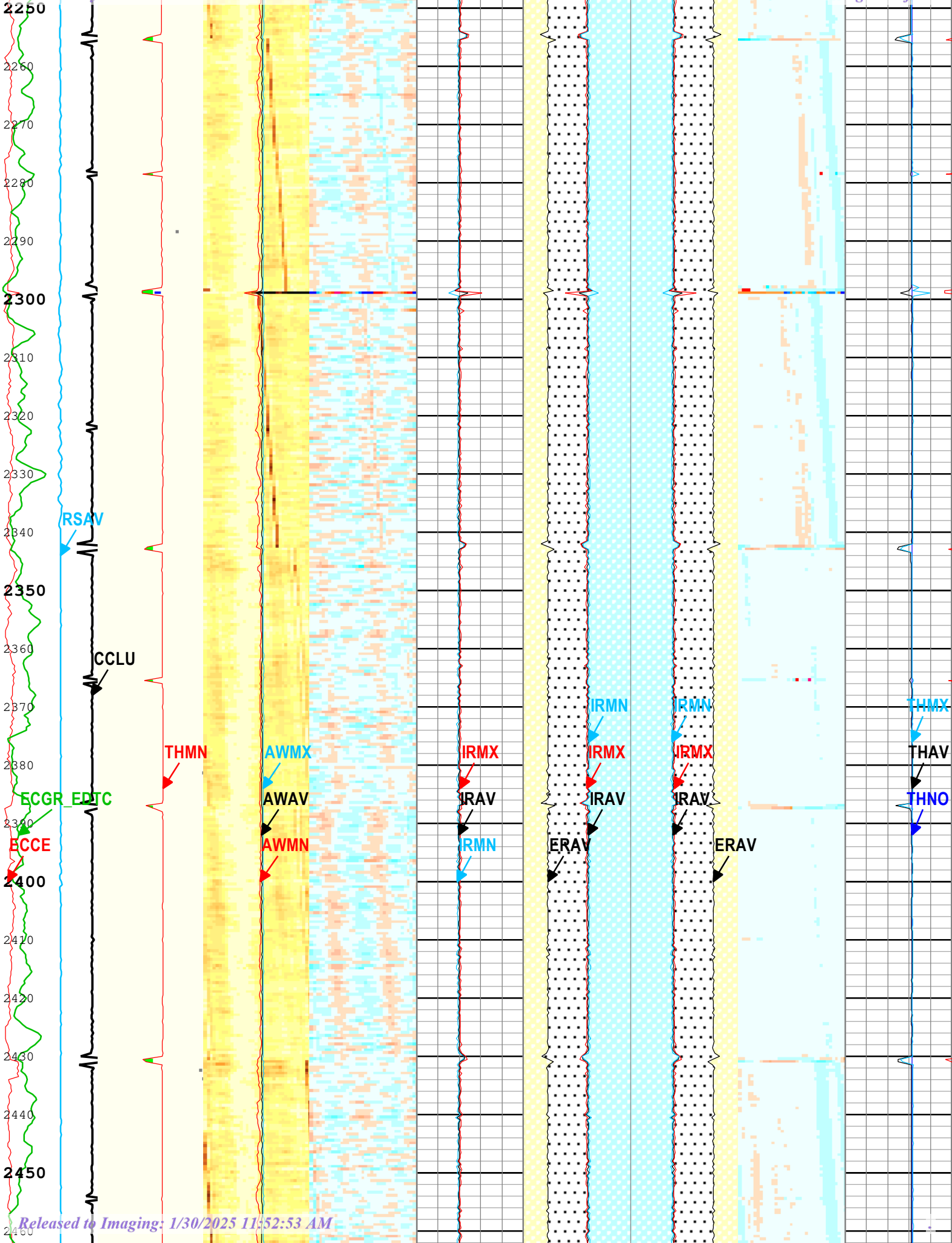


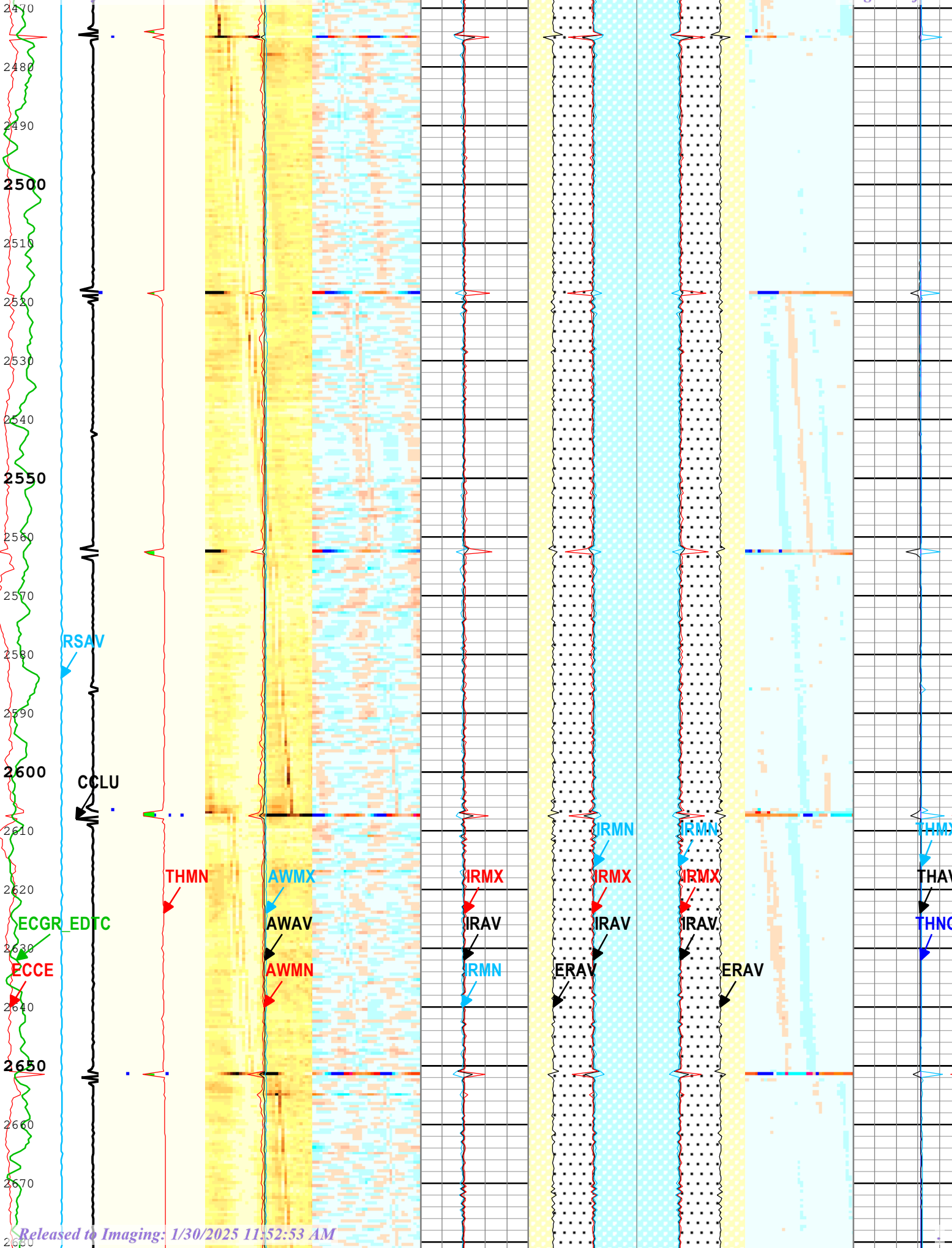


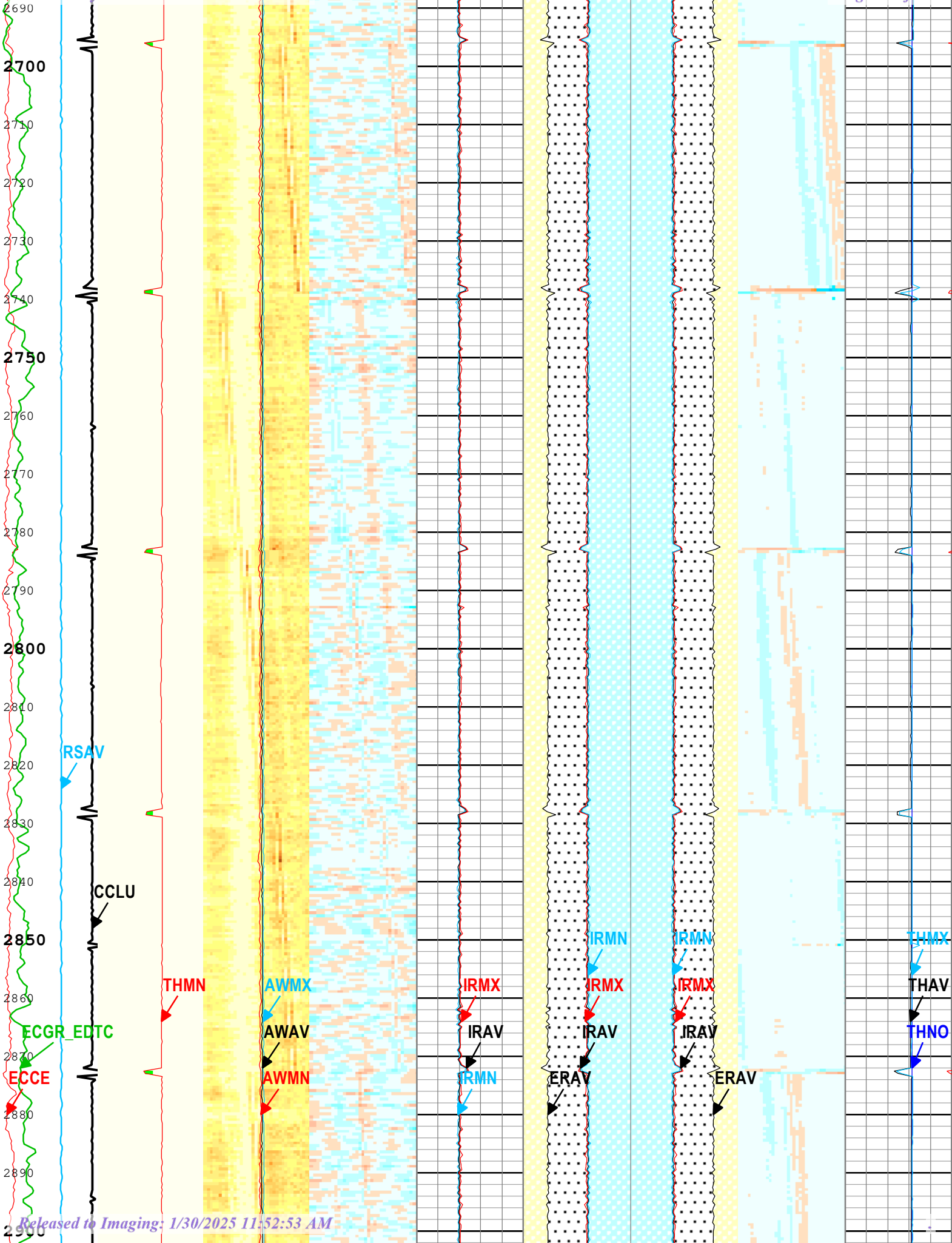


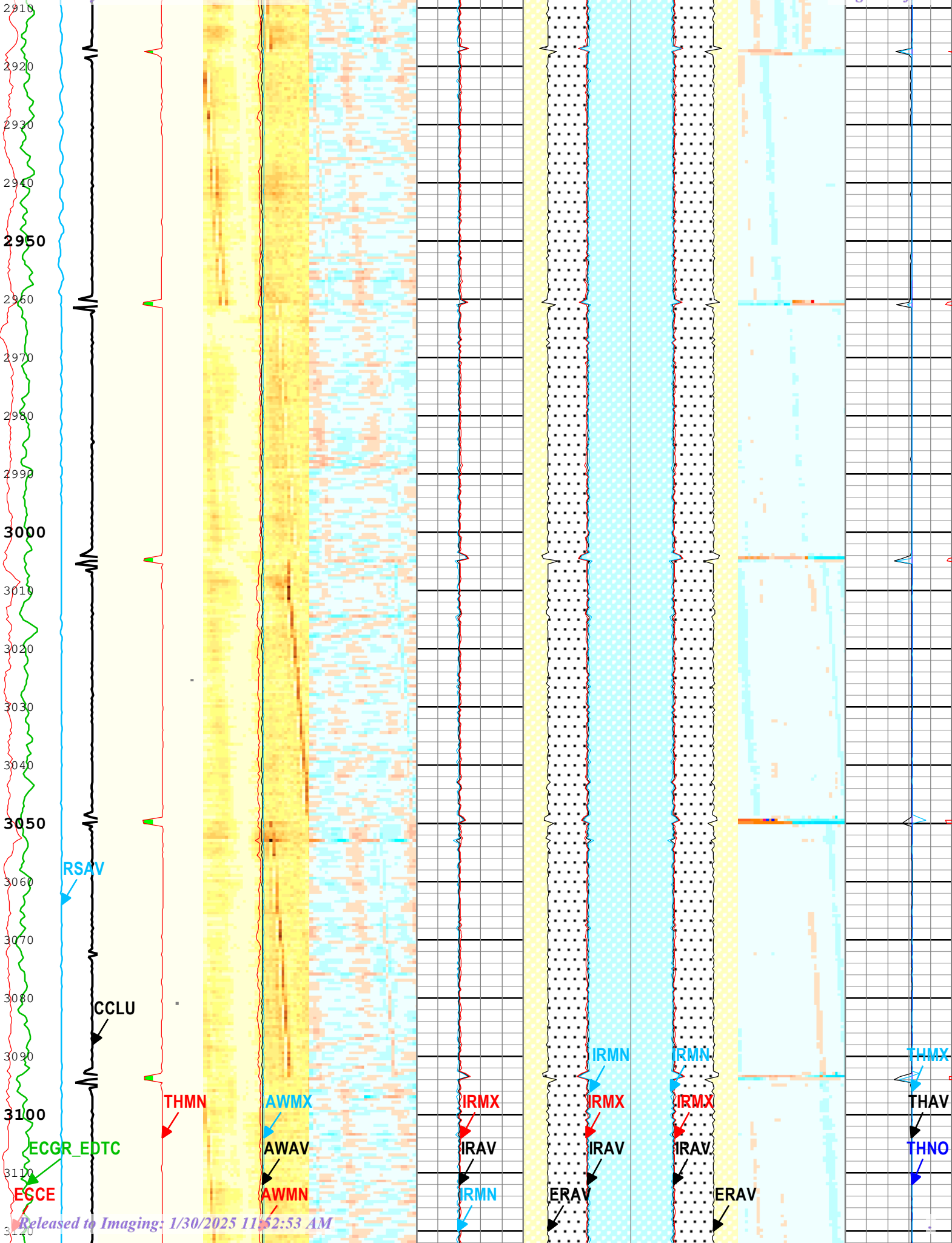




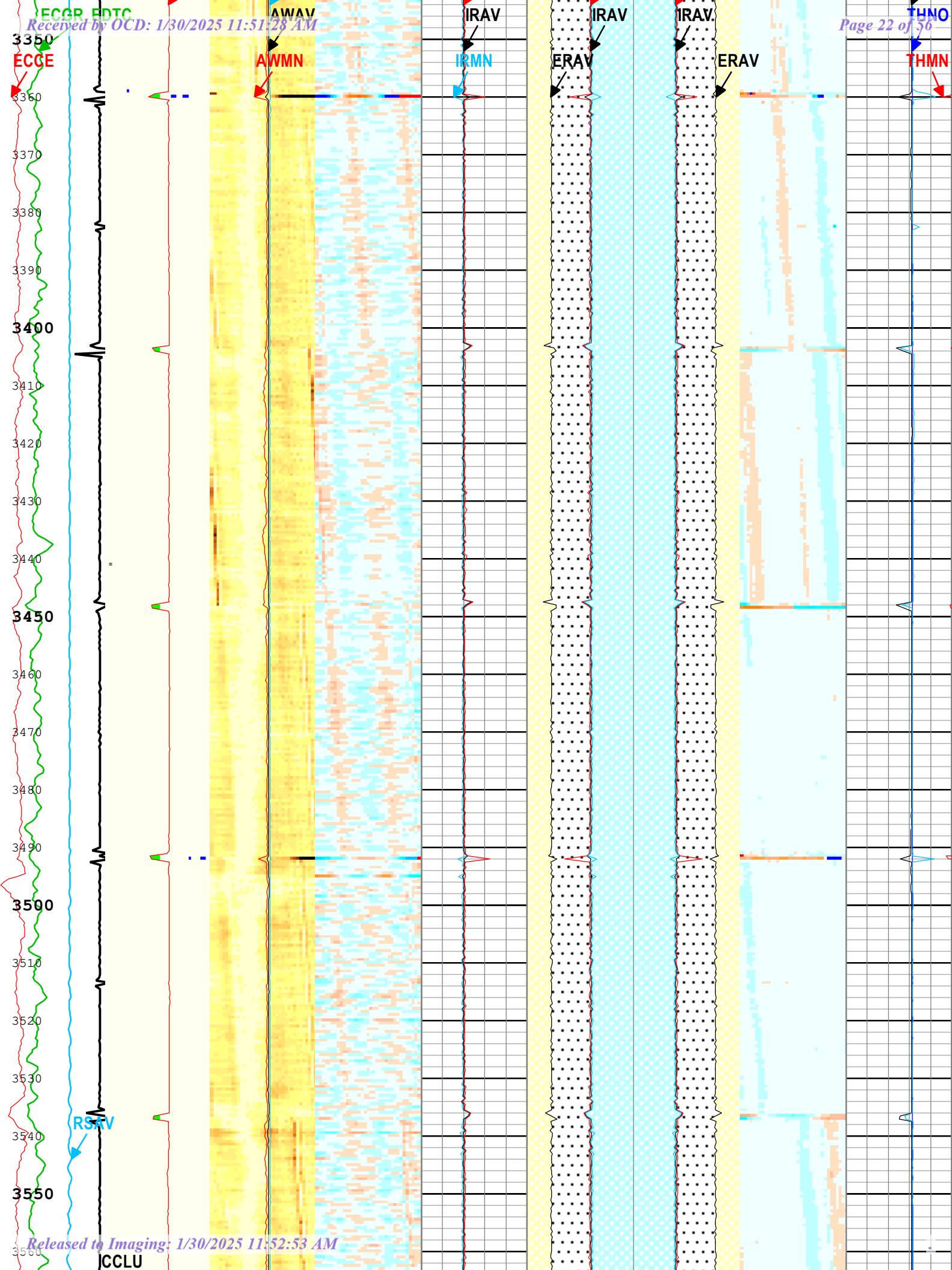


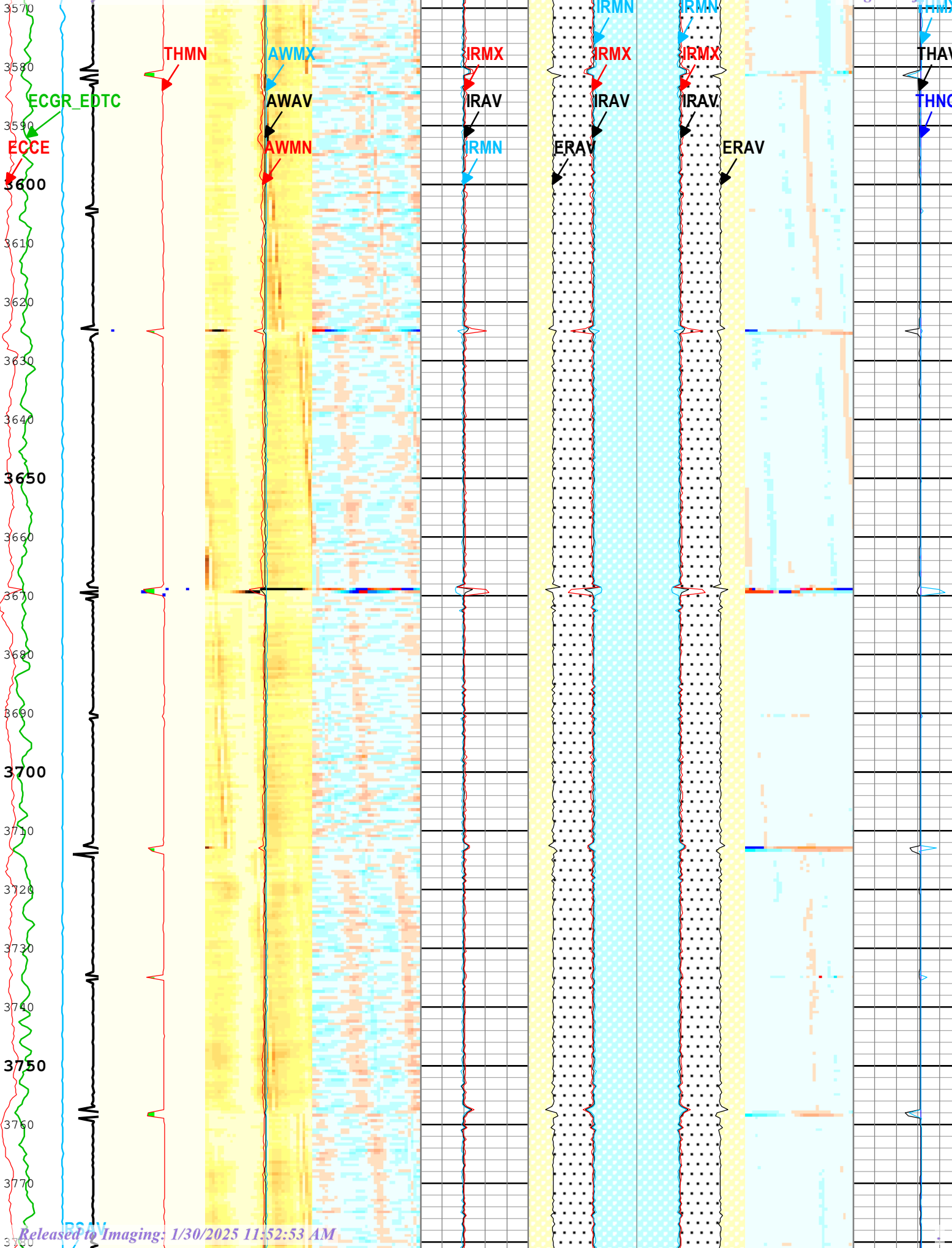


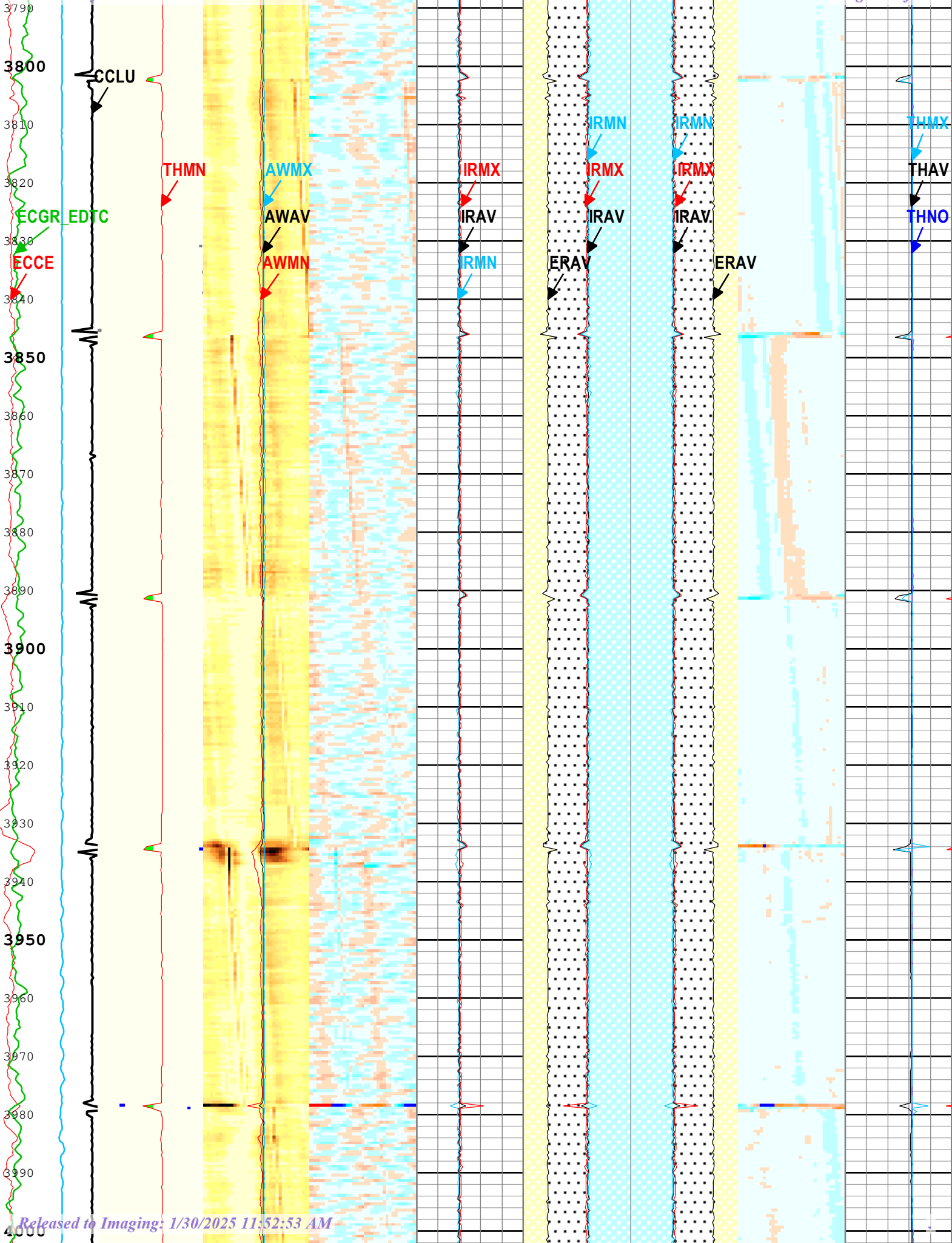


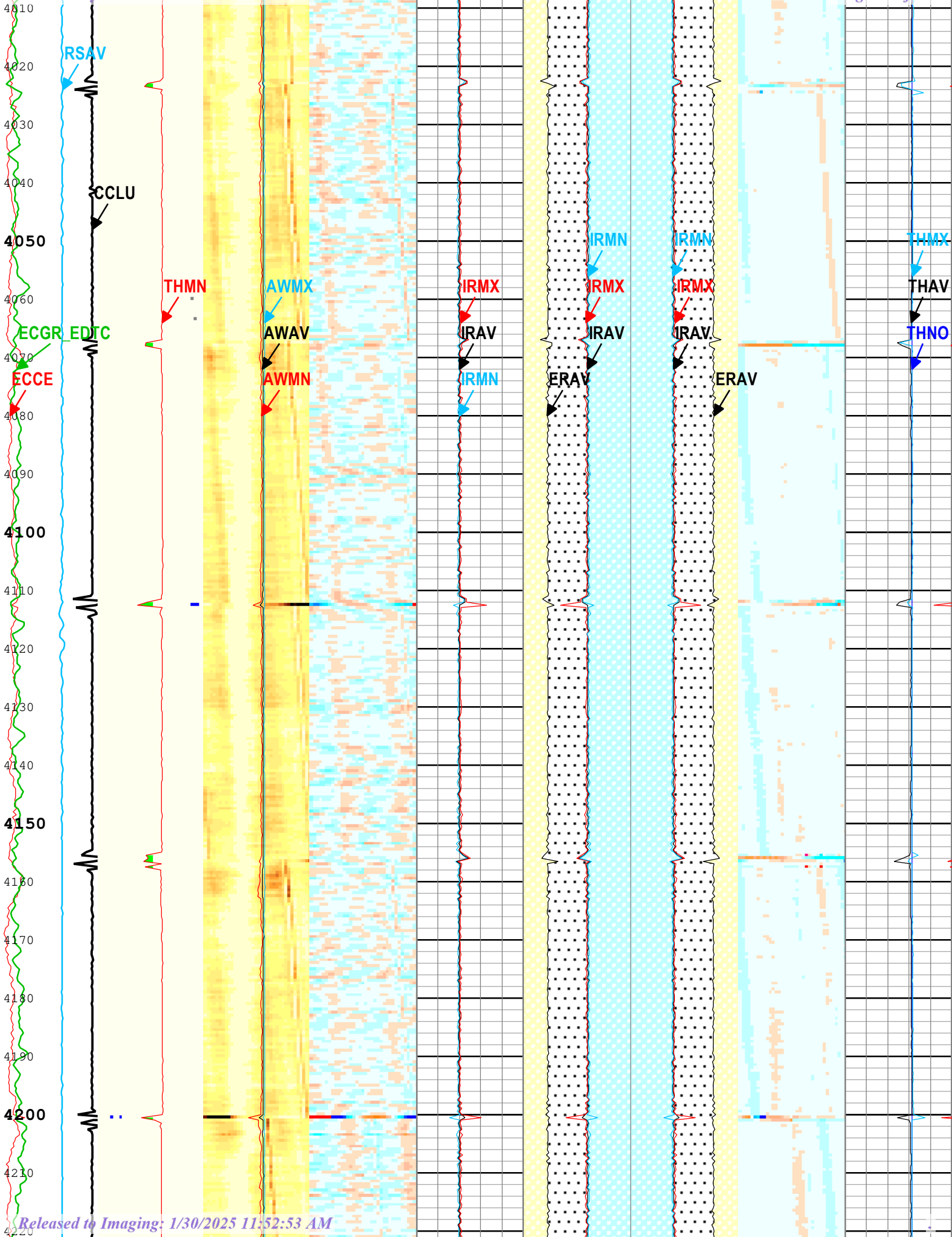


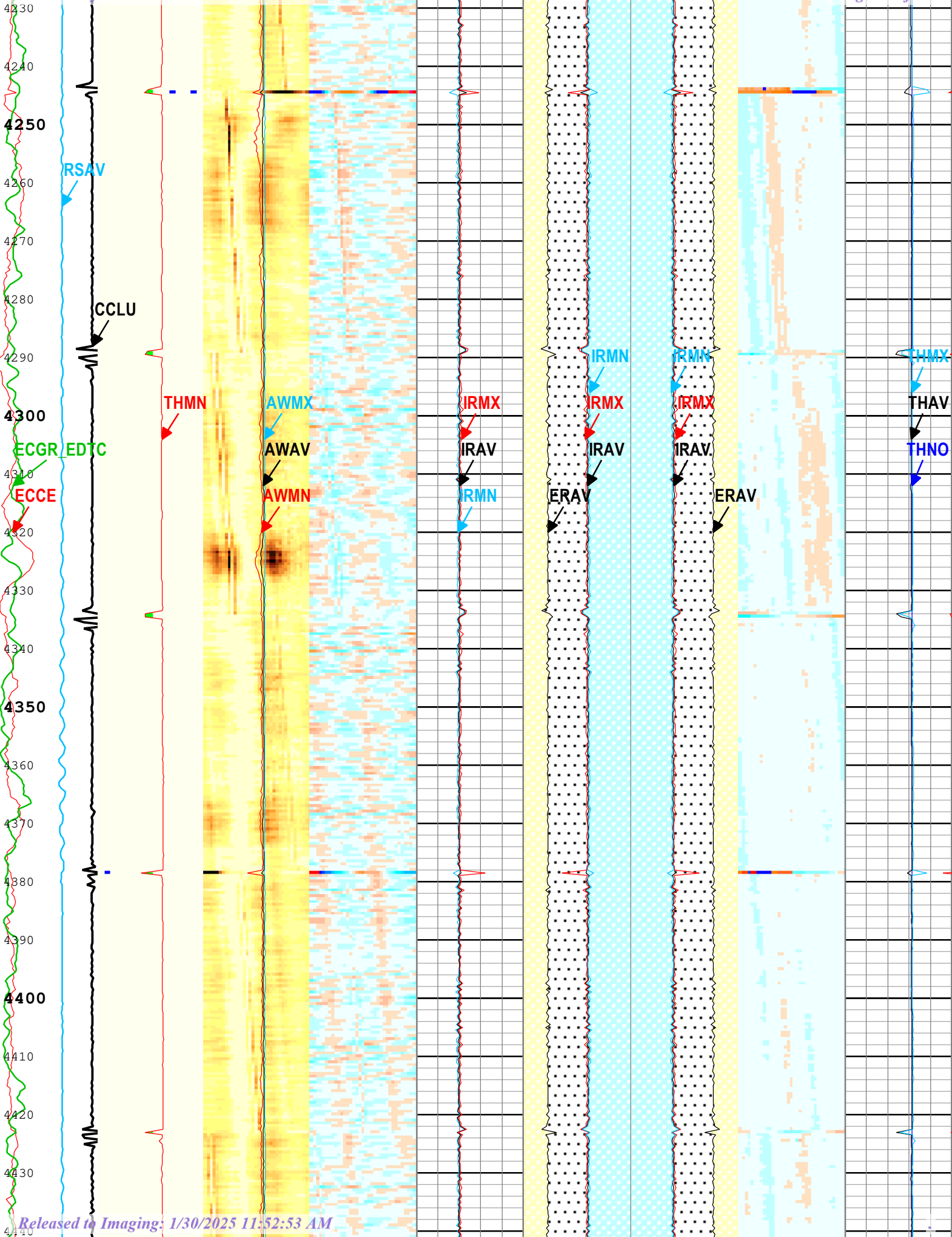


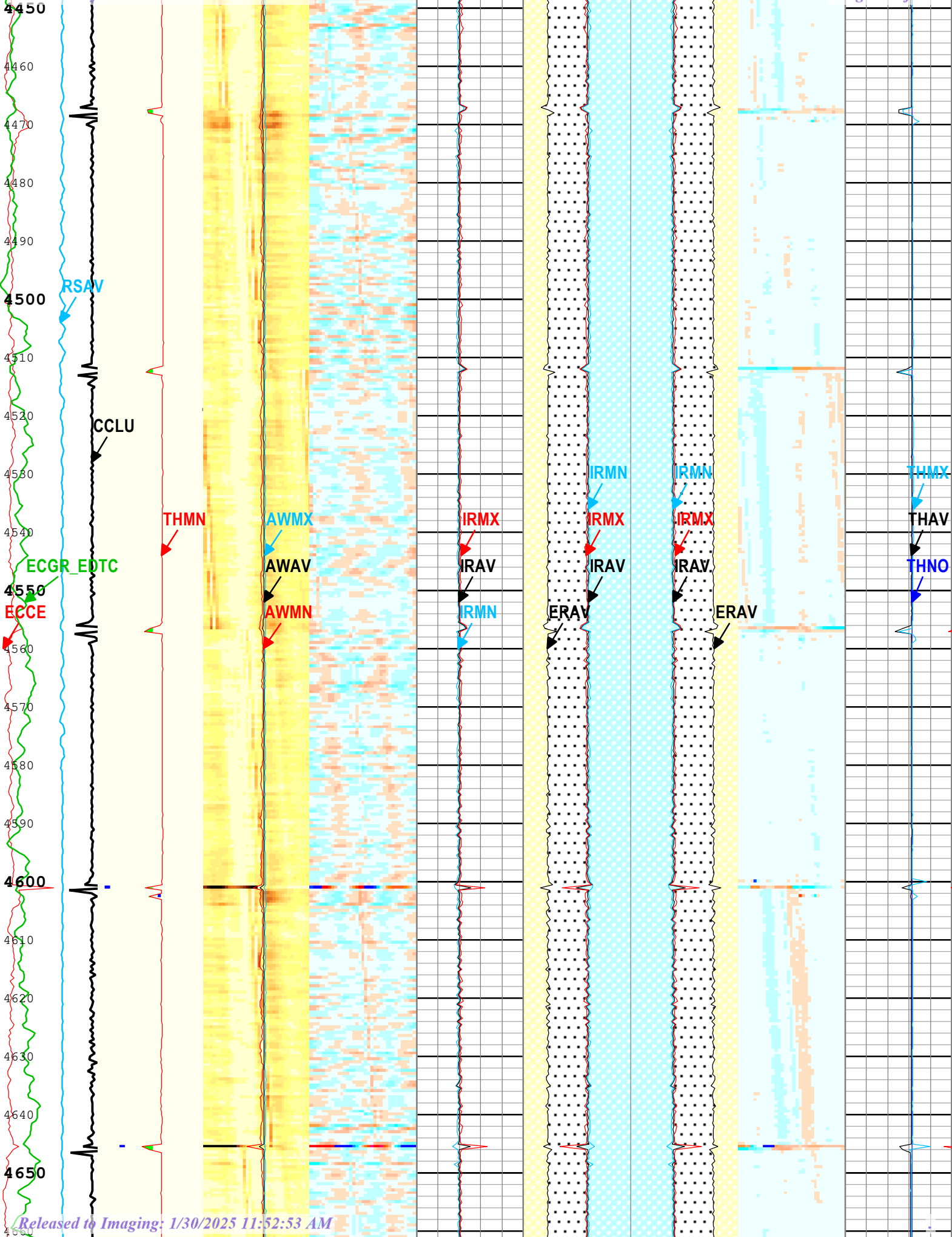


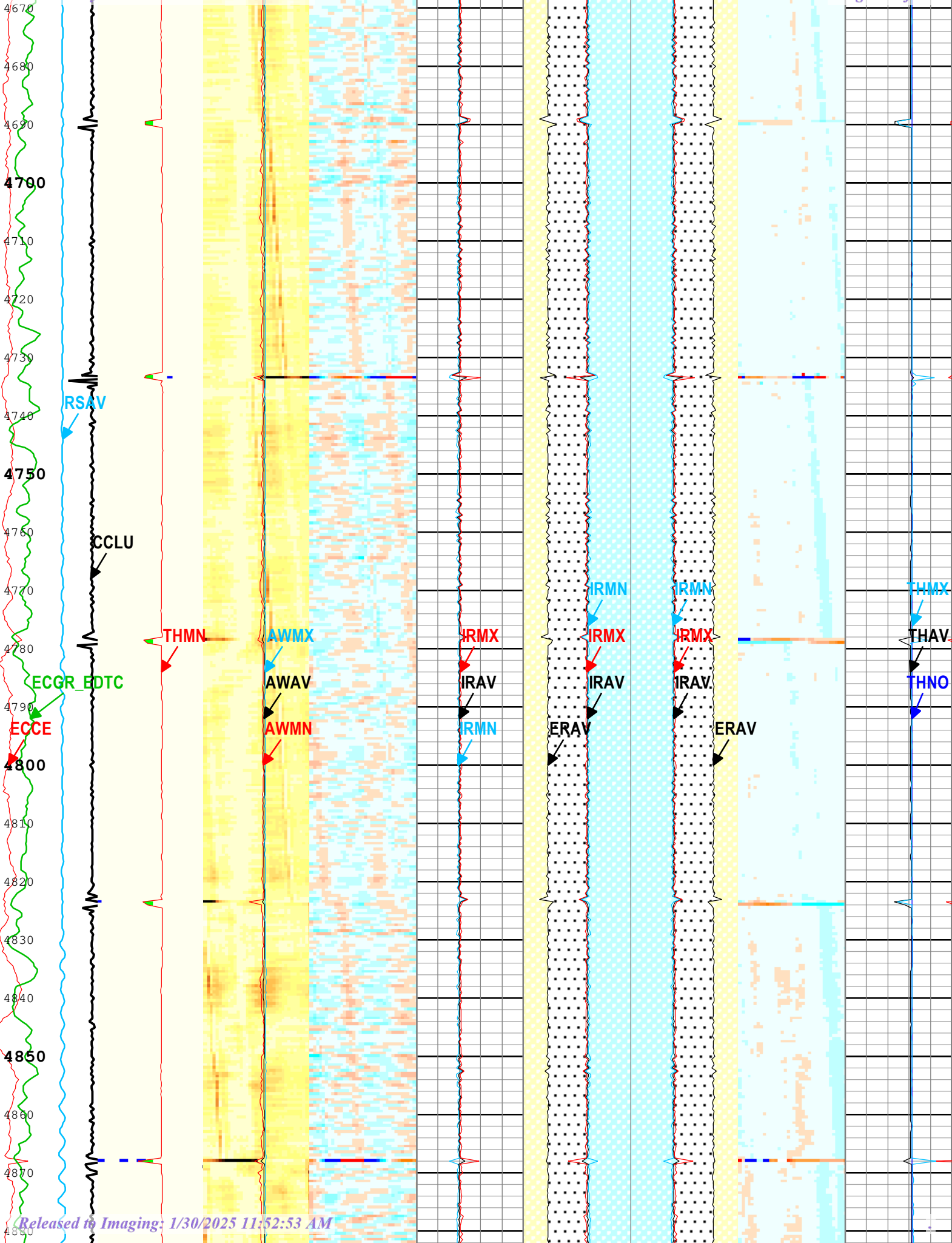


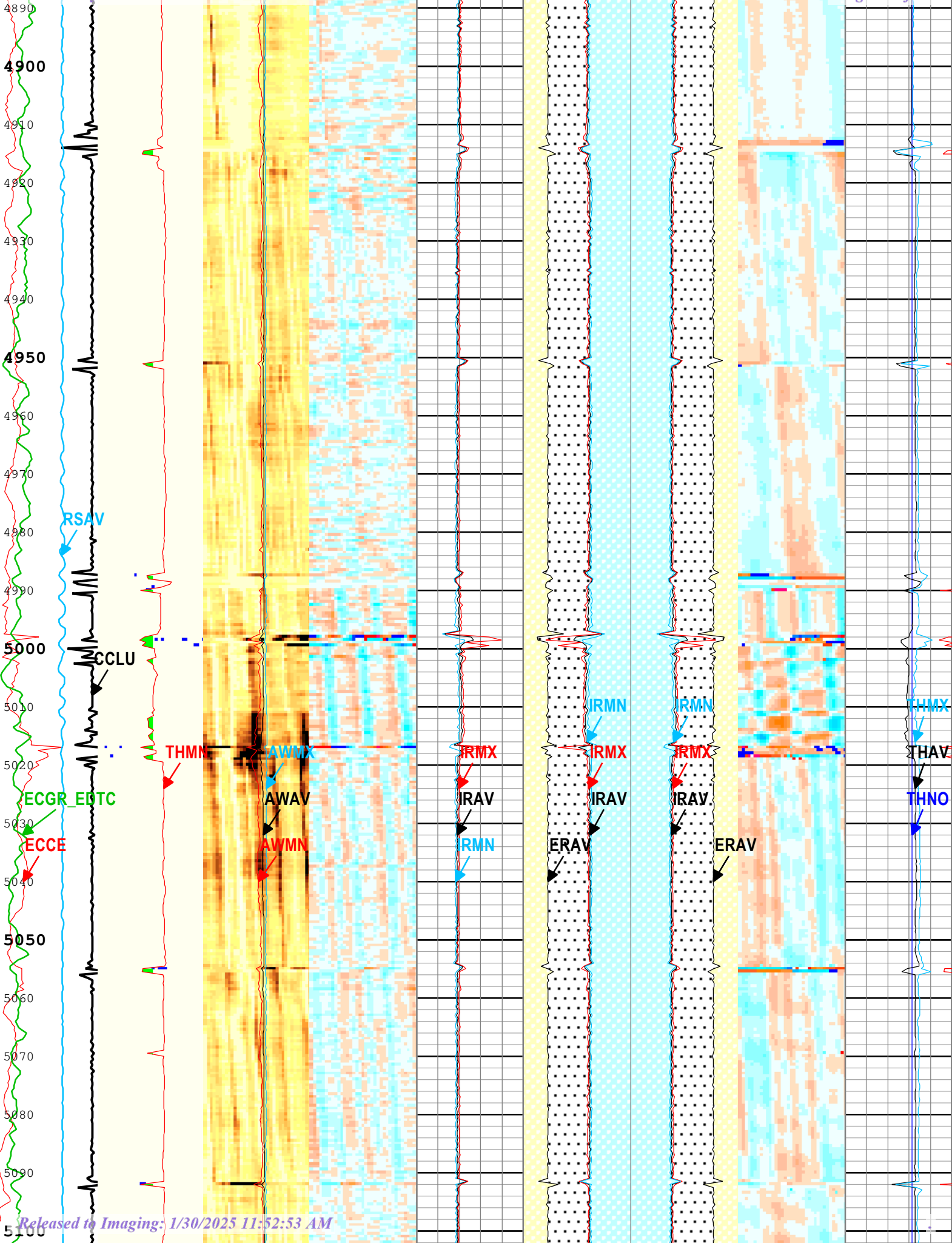


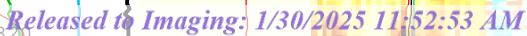


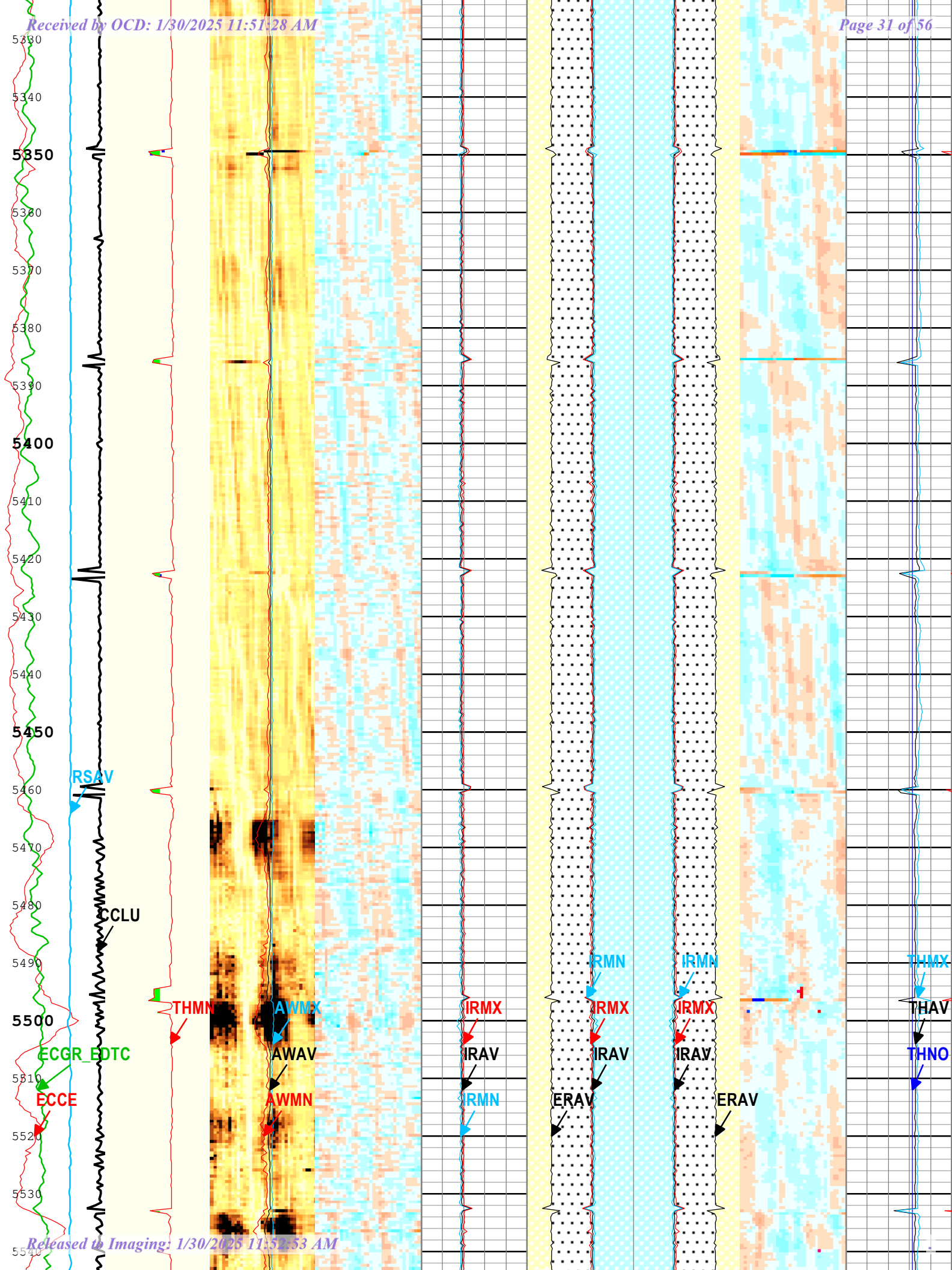


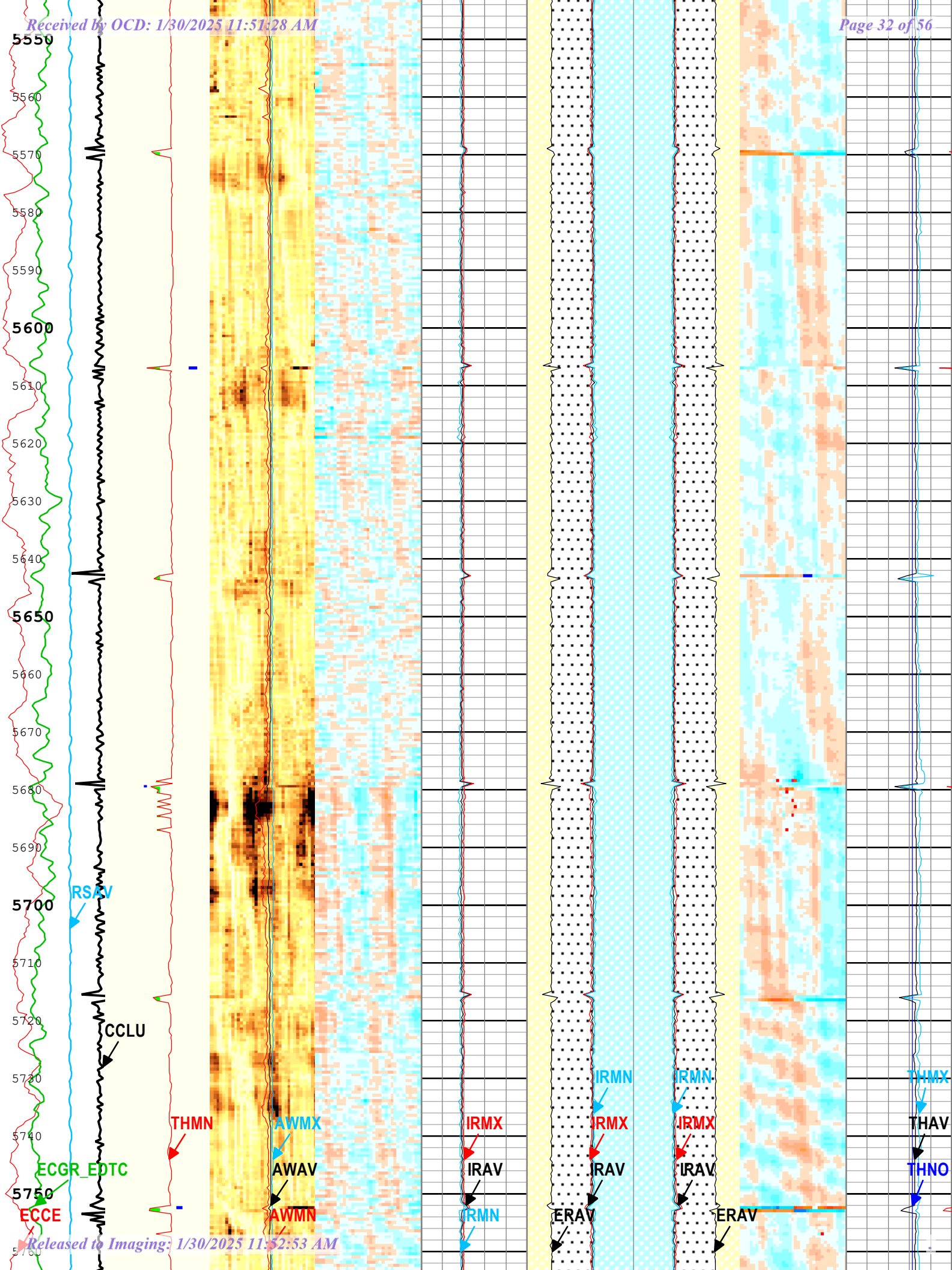


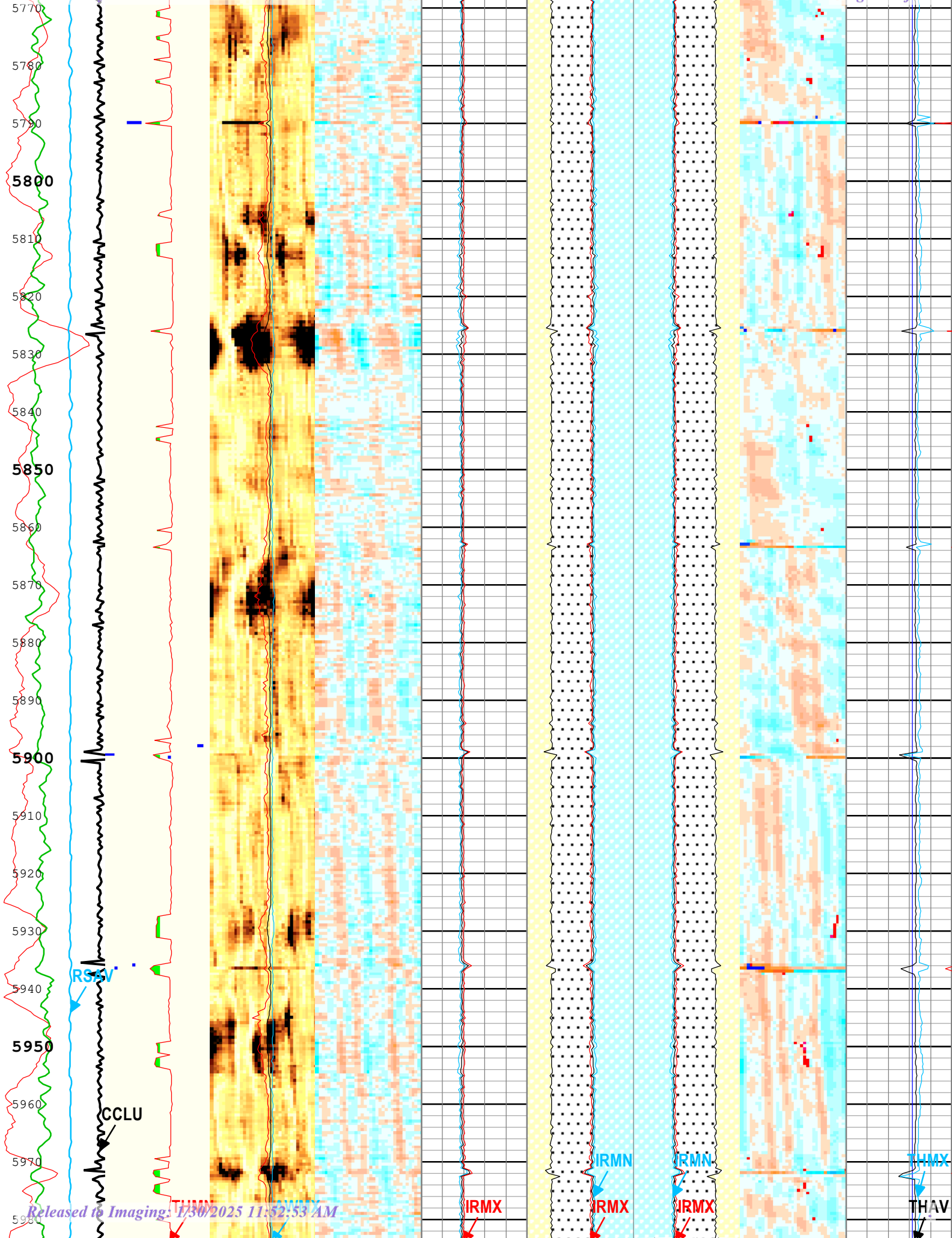


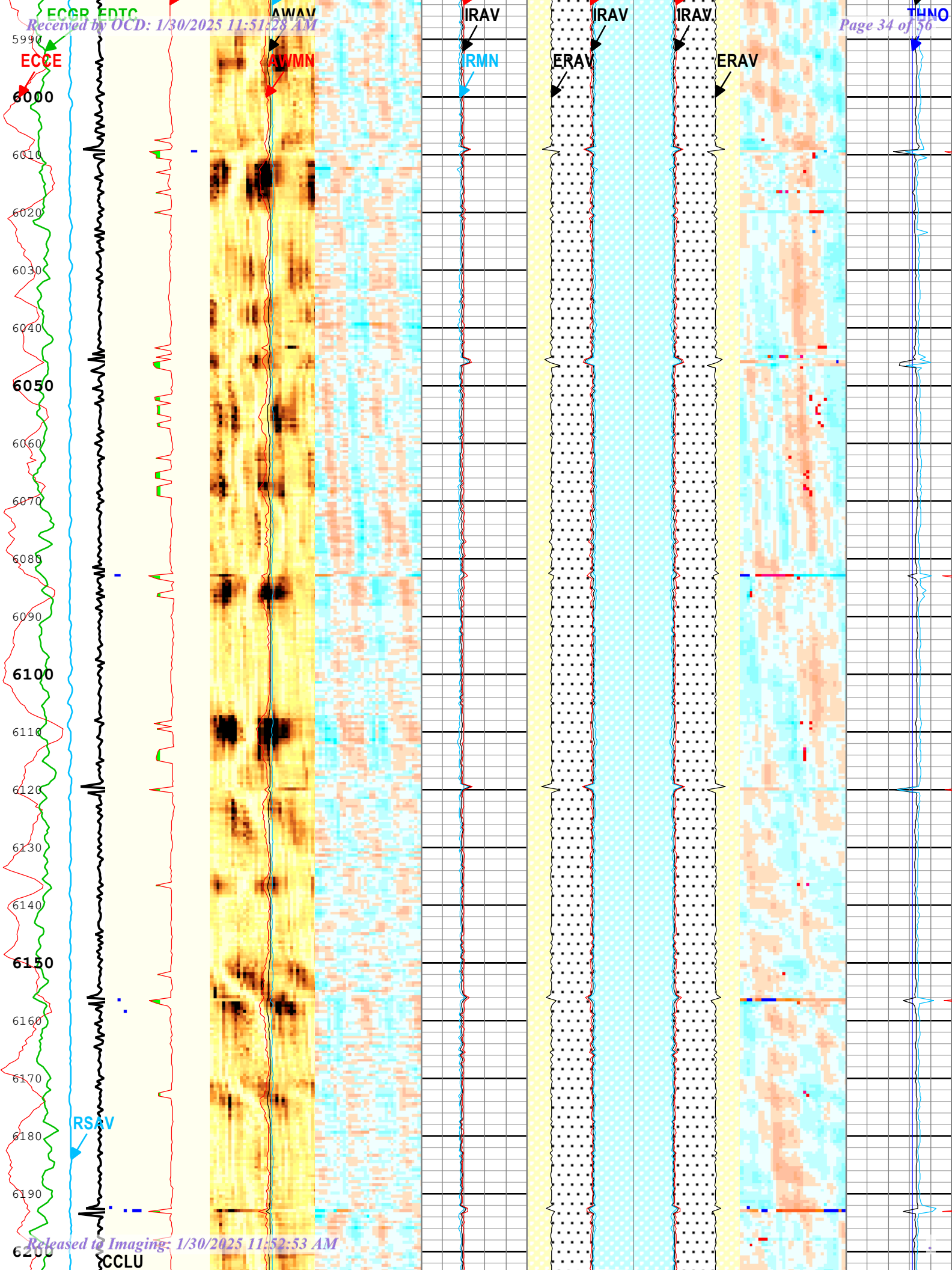


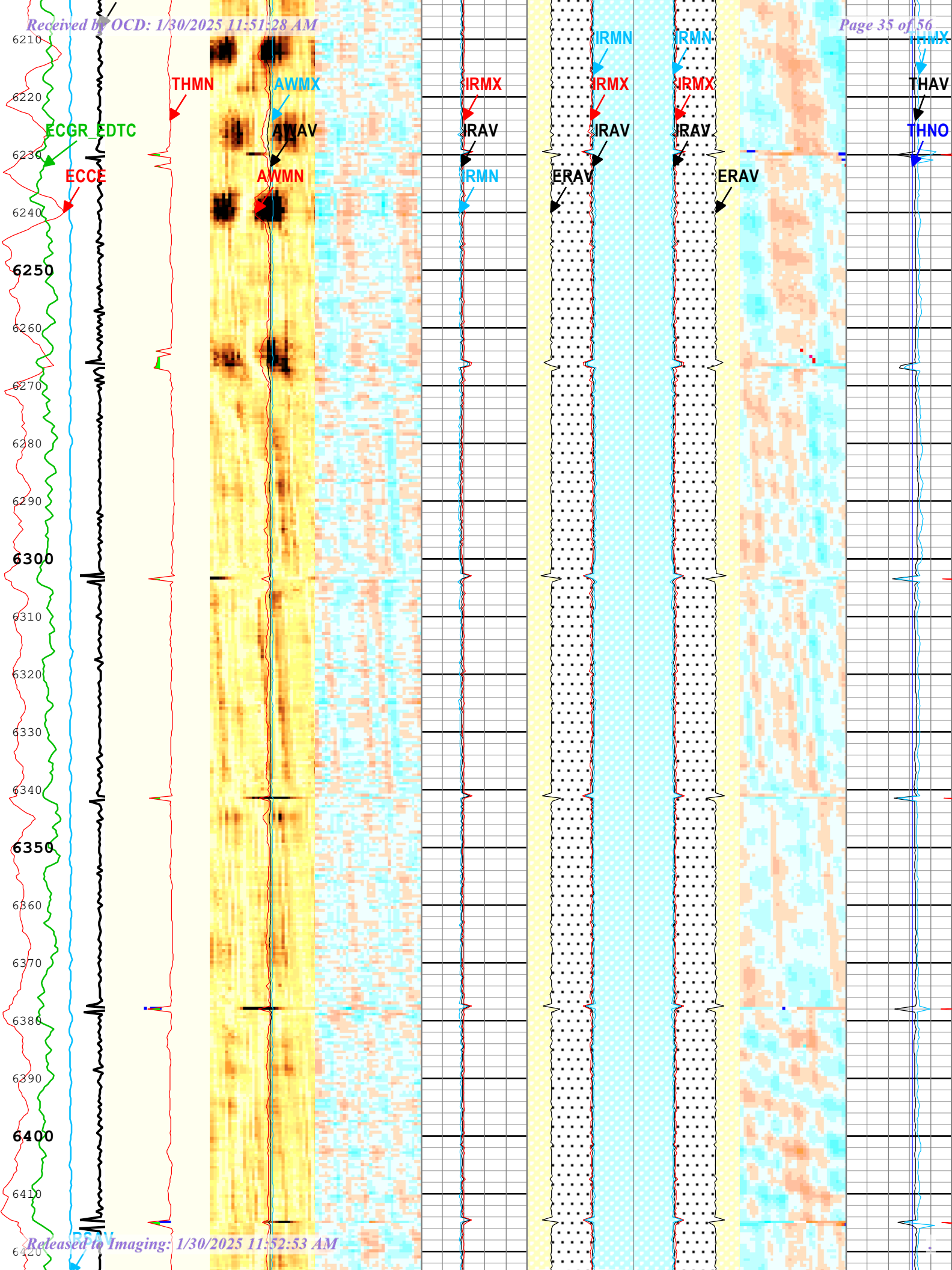


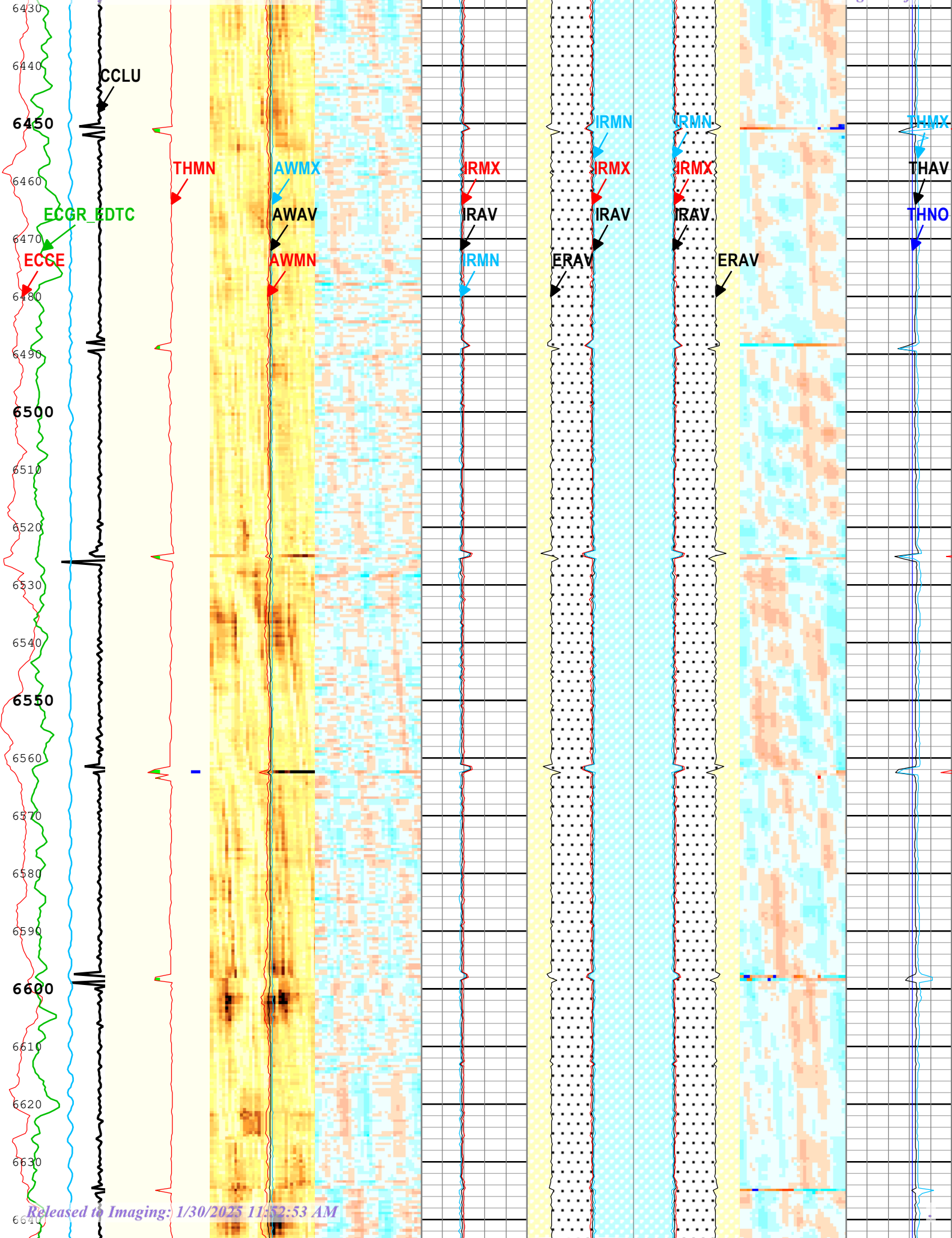


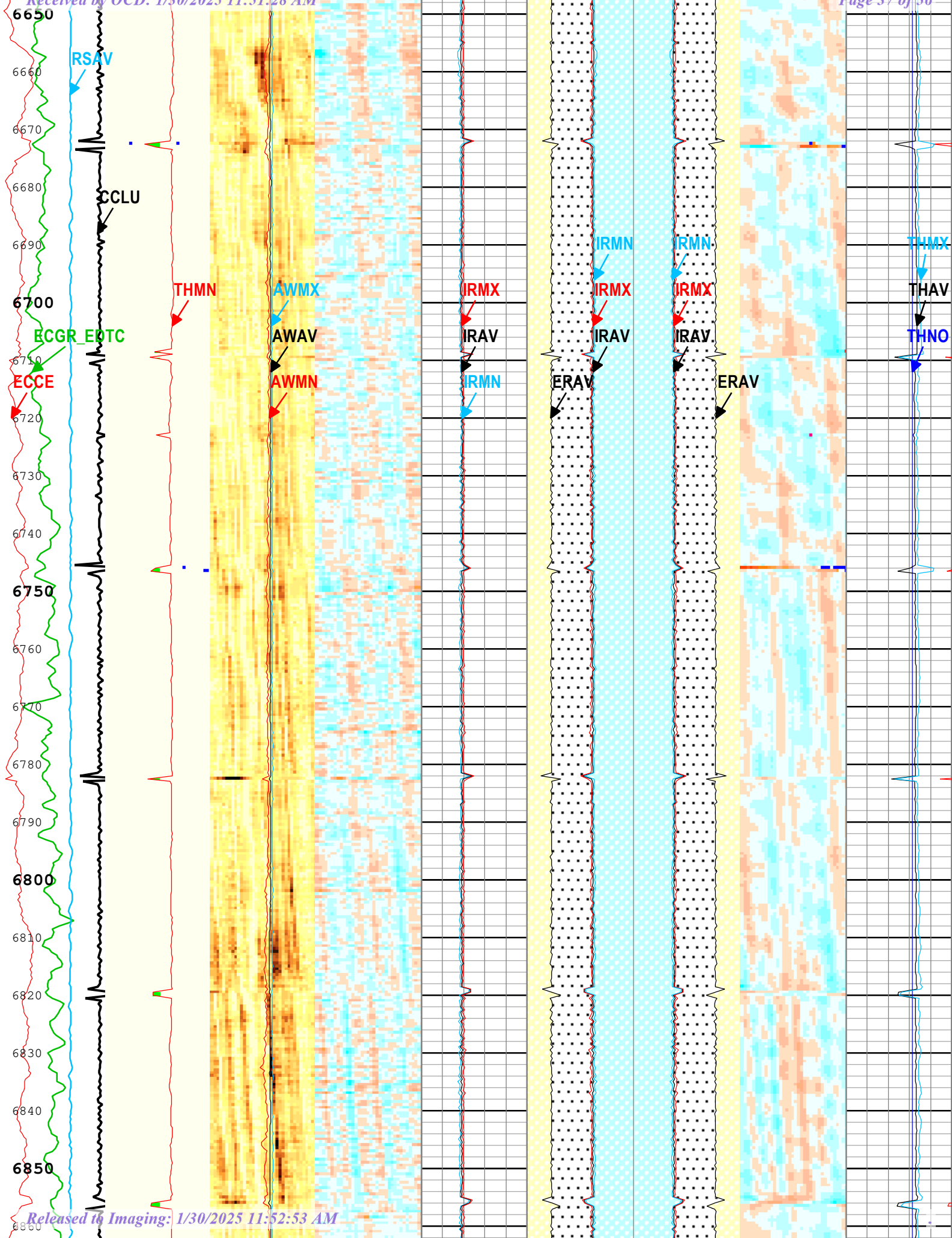


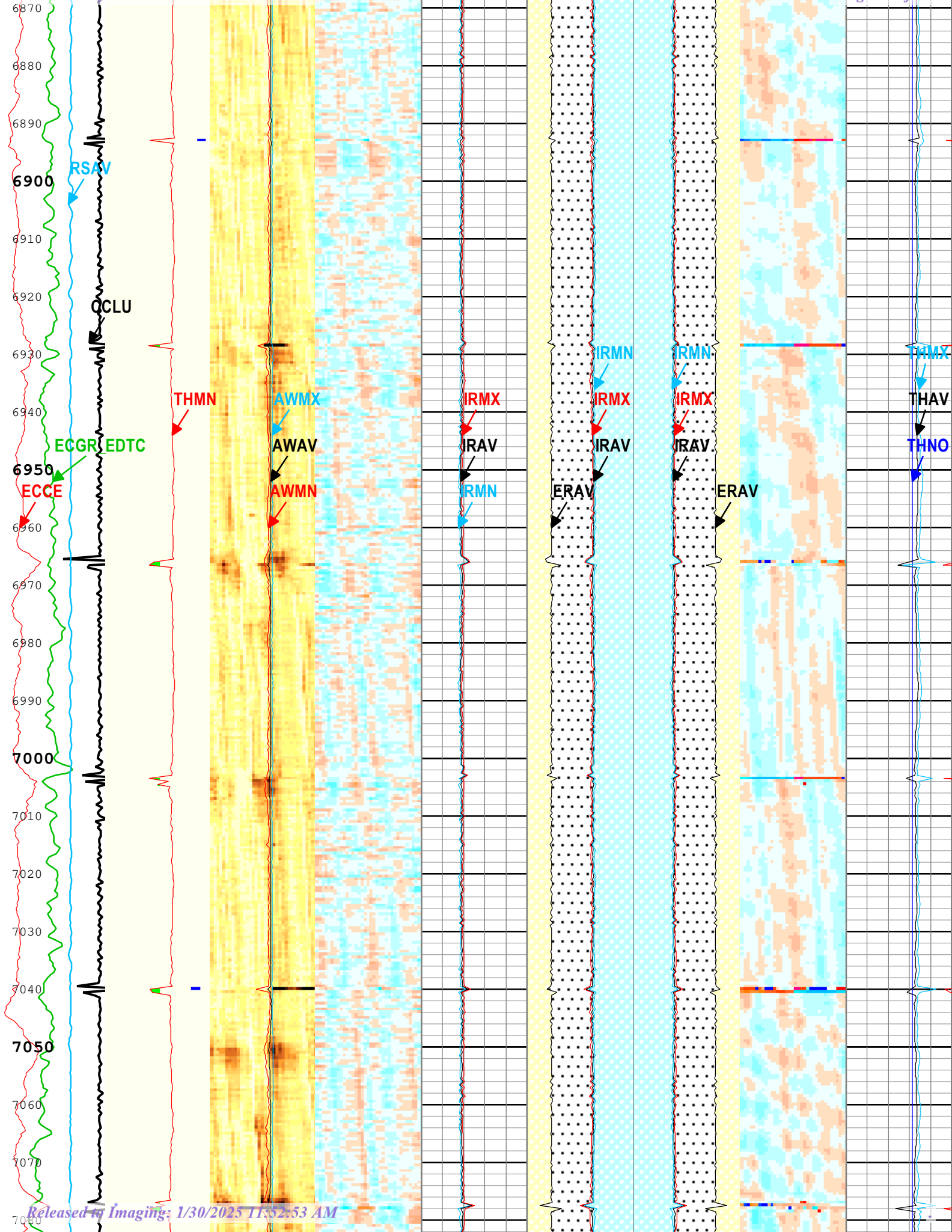


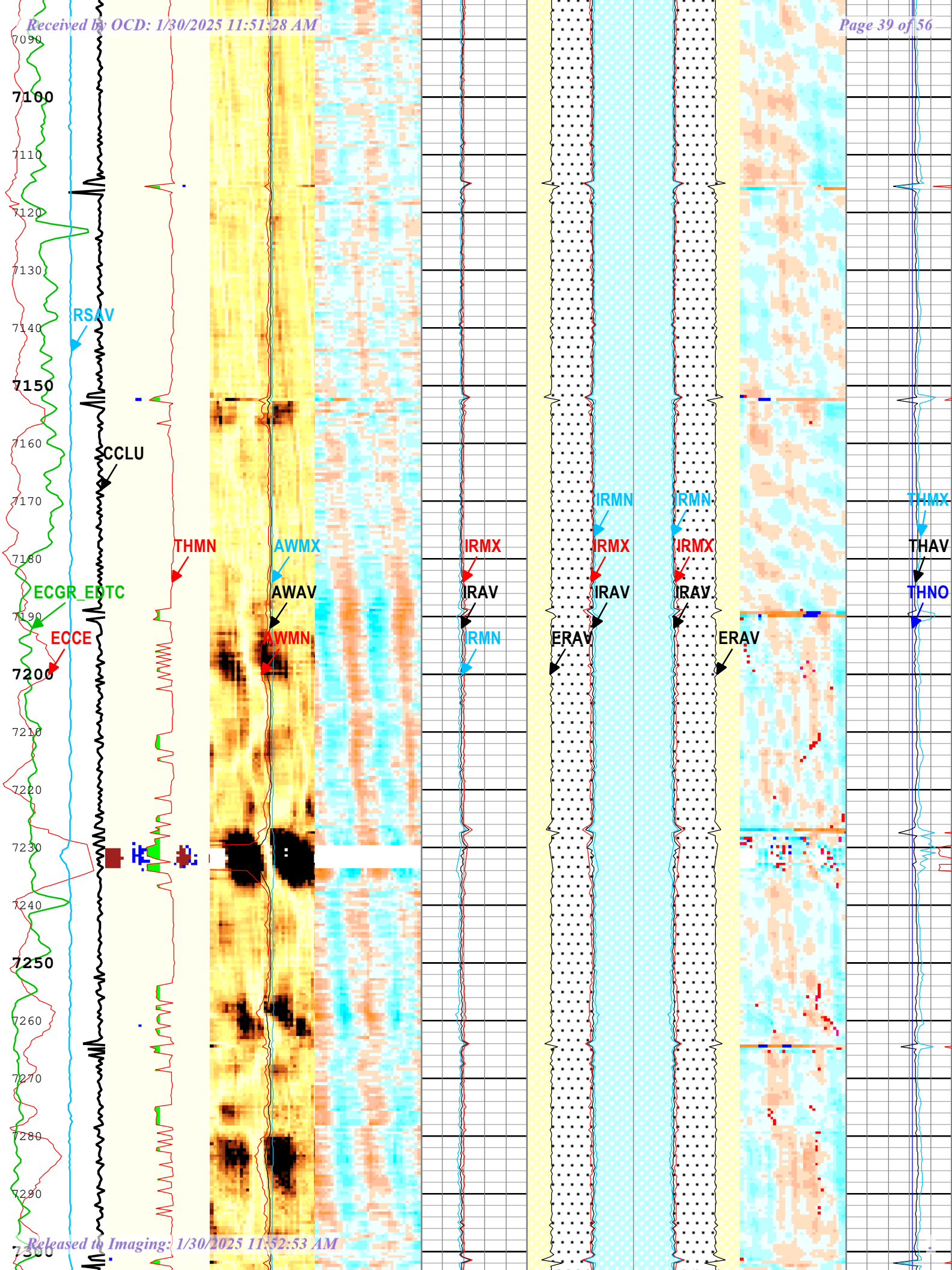


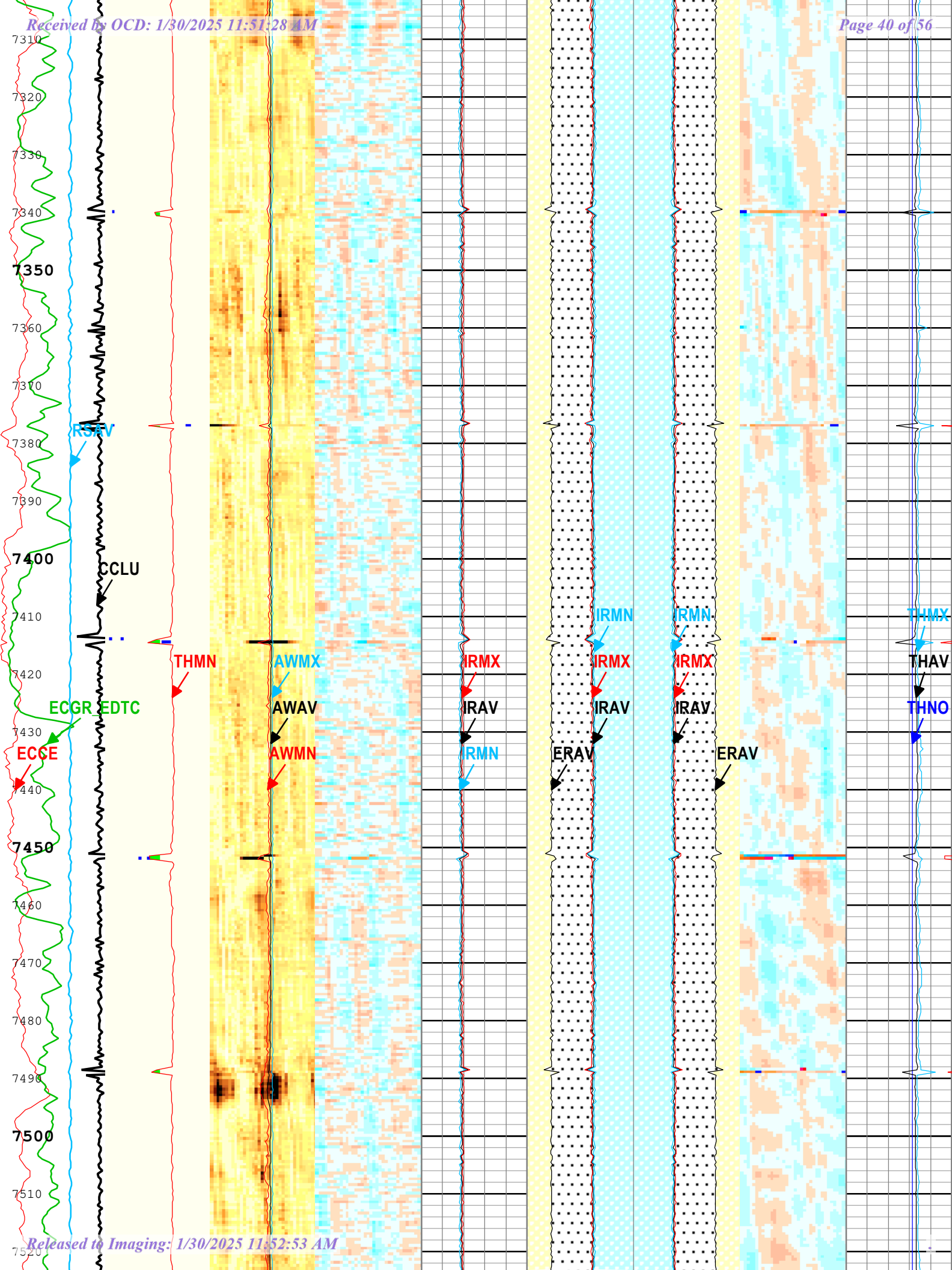


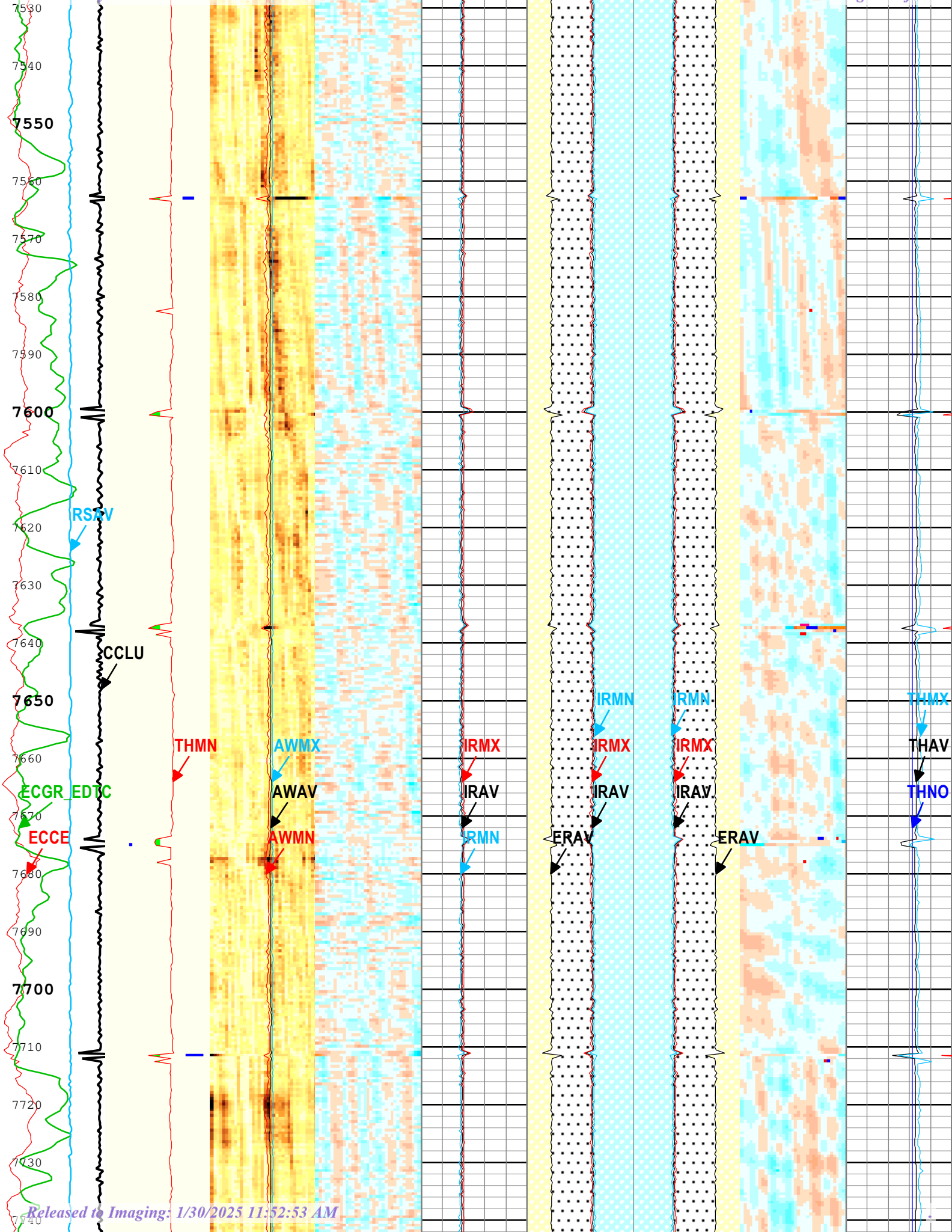


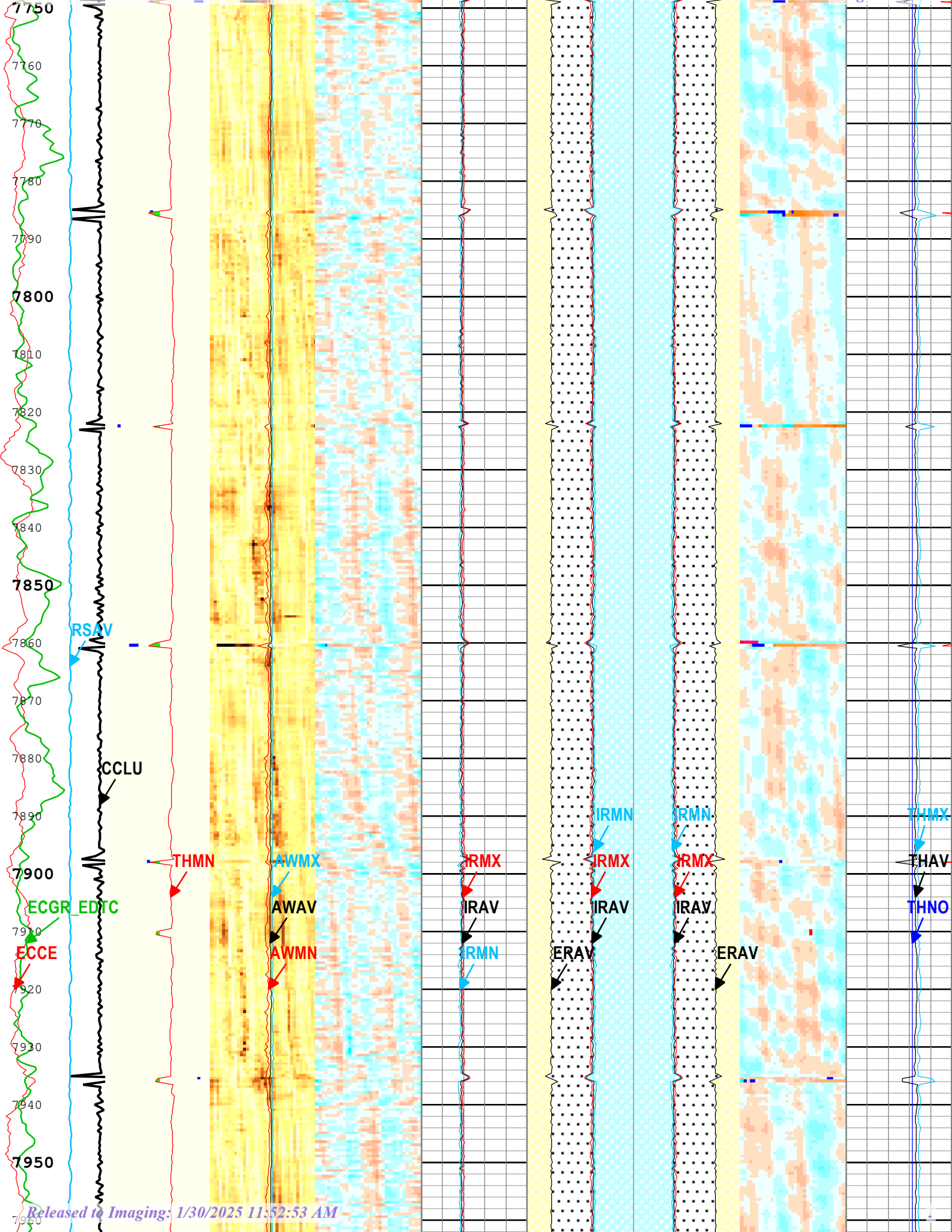


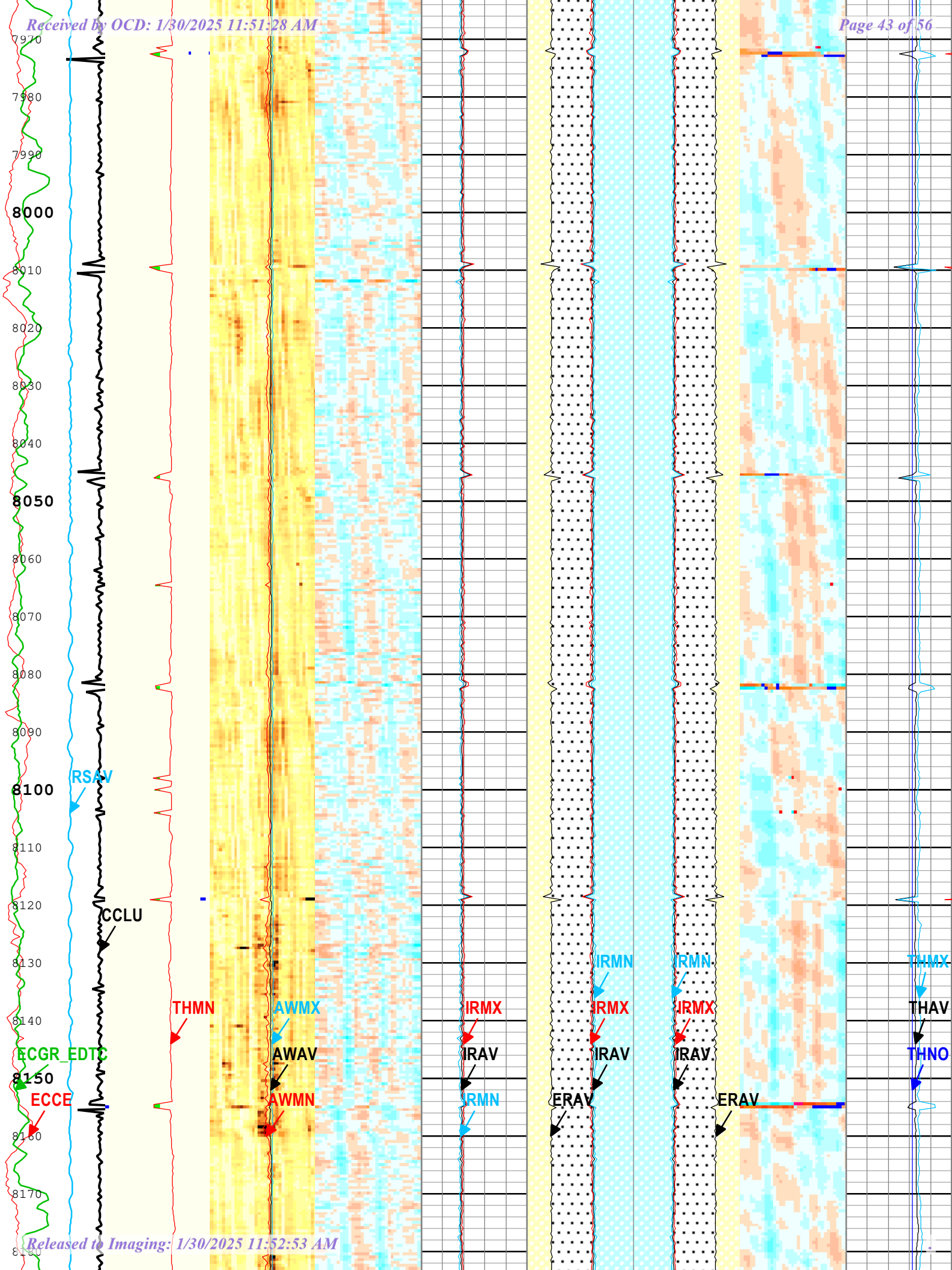


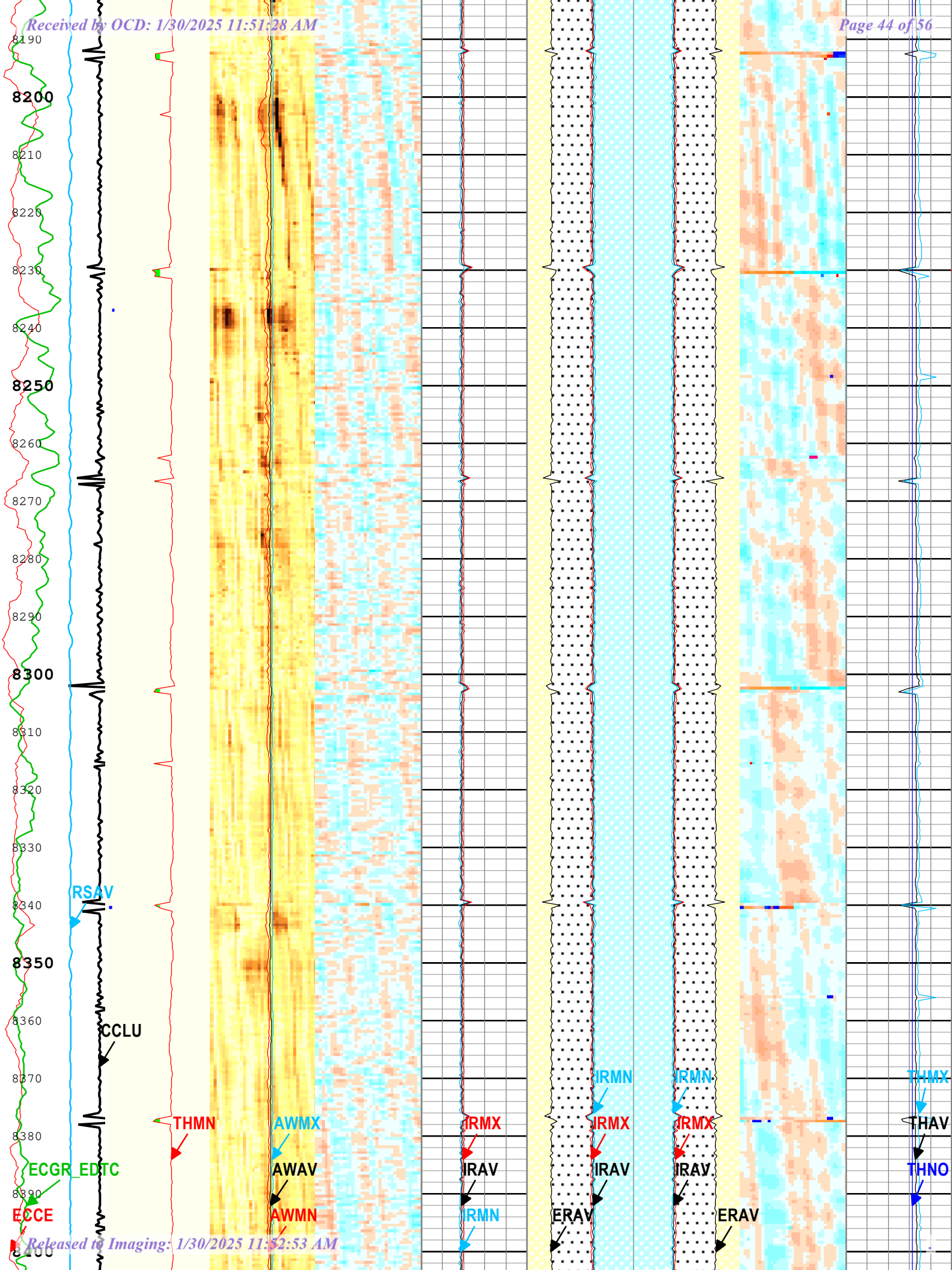


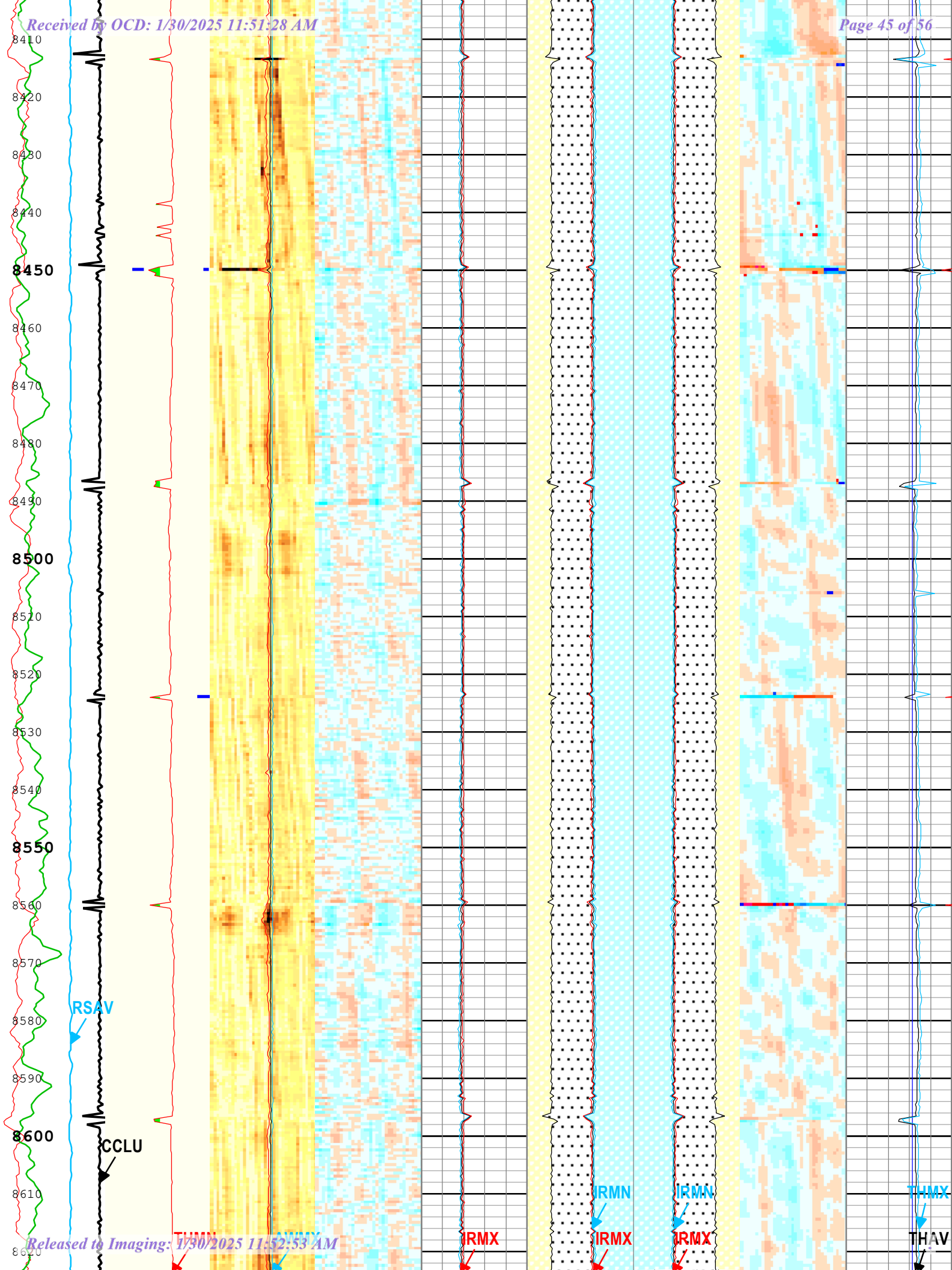


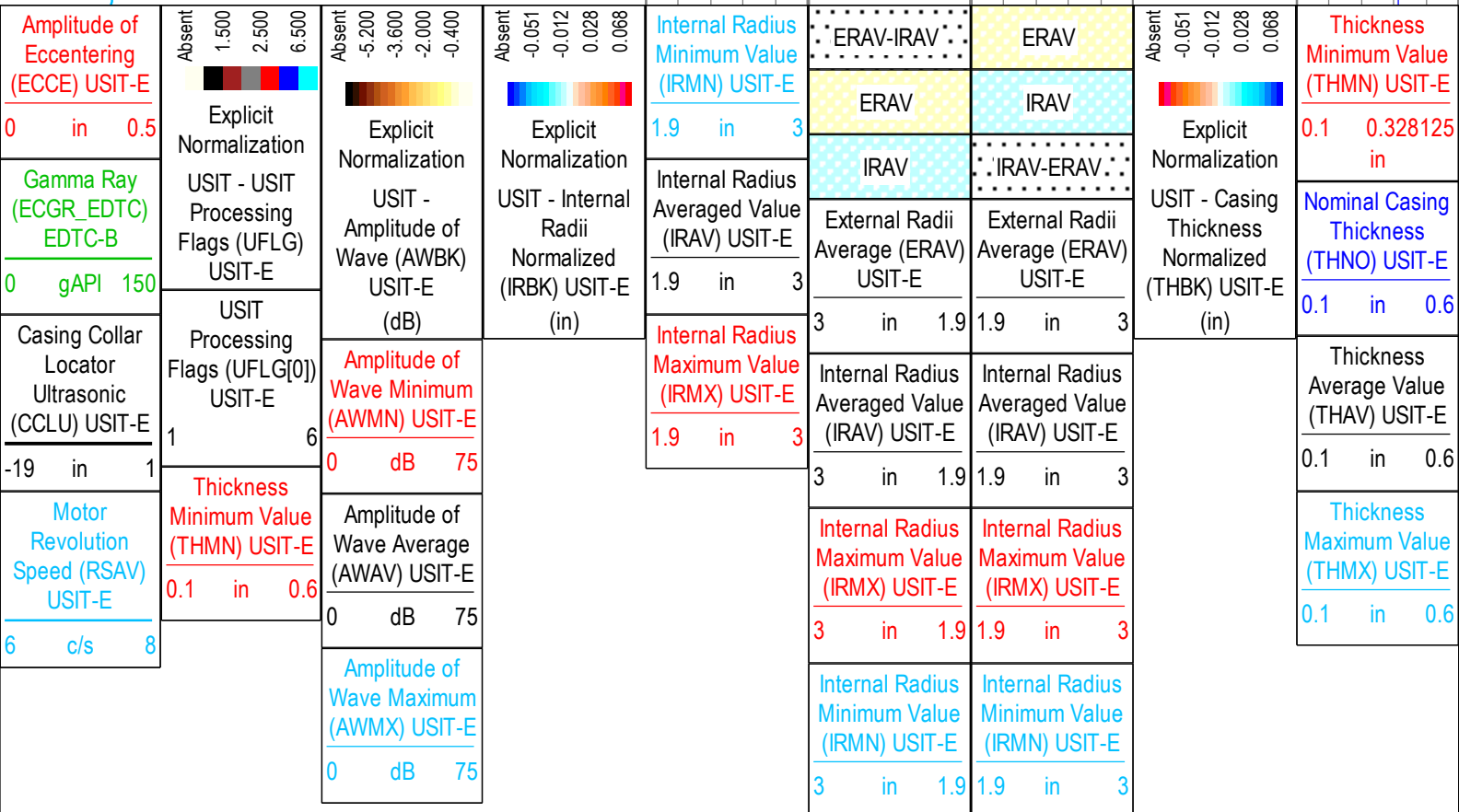












3 - UFLG 2 Value within [2.44 - 2.5] - :

4 - UFLG 3 Value within [2.5 - 3.5] - :

5 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - :

6 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - :

 Spiky Waveform

■ WINLEN Error

■ Casing Thickness Error

■ Loop Processing Error

TIME_1900 - Time Marked every 60.00 (s)

Description: USI Corrosion Format: Log (Import (2) of USI Local Comp) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth

Creation Date: 13-Feb-2023 01:35:07

Channel Processing Parameters

6A: Parameters

Parameter	Description	Tool	Value	Unit
BAR(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	8800	ft
CDEN	Cement Density	USIT-E	10.01	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
THNO	Nominal Casing Thickness - Zoned along logger depths	WLSESSION	0.415	in
CYSTLGR	Casing Yield Strength - Zoned along logger depths	WLSESSION	Depth Zoned	psi
DFD	Drilling Fluid Density	Borehole	8.7	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	8.61	lbm/gal
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	-33.35	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Manual	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	25.94	us
MUD_N_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.06	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.07	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.58	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	Time Zoned	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
ZMUD	Acoustic Impedance of Mud	Borehole	1.5	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.1	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	30	22.5	100
BS	17.25	100	1500
BS	12.25	1500	5500
BS	8.75	5500	8741.5
CYSTLGR	80000	22.5	5000

All depth are actual.

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
U-USIT_UFAO	-34.62	12-Feb-2023 14:00:09	12-Feb-2023 16:01:10	8742.51	893.17
U-USIT_UFAO	-47	12-Feb-2023 16:01:10	12-Feb-2023 16:02:02	893.17	836.47
U-USIT_UFAO	13	12-Feb-2023 16:02:02	12-Feb-2023 16:17:10	836.47	60.76

All depth are at tool zero.

Tool Control Parameters

6A: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
UPAT	USIT Emission Pattern	USIT-E	Pattern 300 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	38_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	110	12-Feb-2023 14:00:09	12-Feb-2023 15:00:15	8742.51	4902.04
EMXV	115	12-Feb-2023 15:00:15	12-Feb-2023 16:17:10	4902.04	60.76

All depth are at tool zero.

6A

Software Version

Acquisition System	Version
Maxwell 2022.1	12.1.217729.3100
Application Patch	Wireline_NPD-PLUGEM-2022.1_12.1.219531
	Wireline_NPD-HFND-2022.1_12.1.219128
	Wireline_Hotfix-Mandatory-2022.1_12.1.220287

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
6A	Repeat[4]:Up	Up	8308.79 ft	8744.87 ft	12-Feb-2023 1:39:45 PM	12-Feb-2023 1:46:56 PM	ON	9.56 ft	Yes

All depths are referenced to toolstring zero

Log

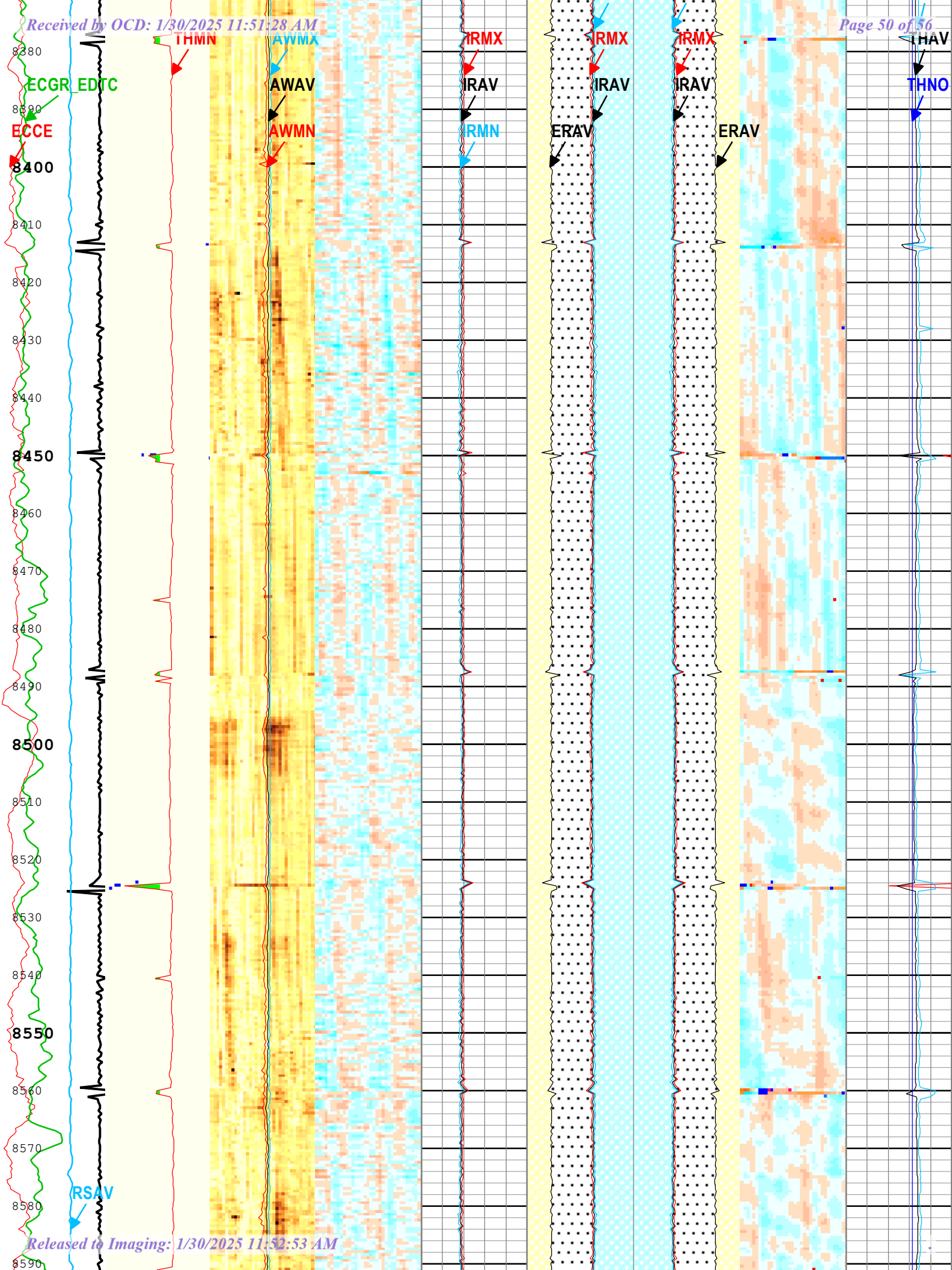
Company:New Mexico Institute of Mining & Technology

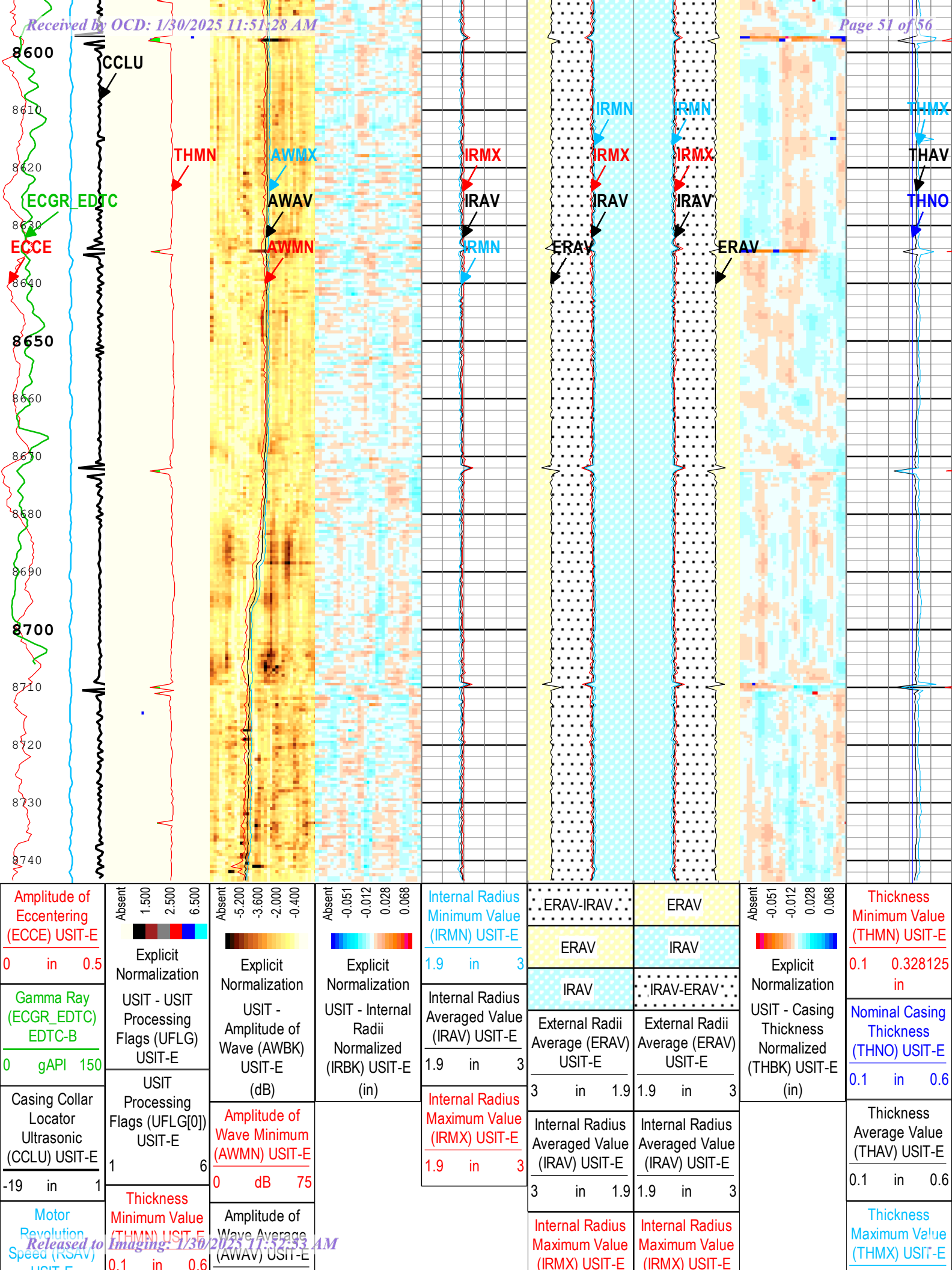
Well:SJB Carbon Safe Strat Test #001

6A: Repeat[4]:Up:S021

-  Pulse Origin Not Detected
-  Spiky Waveform
-  WINLEN Error
-  Casing Thickness Error
-  Loop Processing Error







USIT-E	0.1 in 0.6	0.1 in 0.6
Received by OCD: 1/30/2025 11:51:28 AM	3 in 1.9	1.9 in 3
Amplitude of Wave Maximum (AWMX) USIT-E	Internal Radius Minimum Value (IRMN) USIT-E	Internal Radius Minimum Value (IRMN) USIT-E
0 dB 75	3 in 1.9	1.9 in 3

USIT Processing Flags (UFLG[0]) USIT-E	
1 - UFLG 1 Value within [0.0 - 1.5] - :	UTIM Error
2 - UFLG 2 Value within [1.5 - 2.44] - :	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 Corrosion Format: Log (Import (2) of USI Local Comp) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 13-Feb-2023 01:38:49

Channel Processing Parameters

6A: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	8.75	in
CBLO	Casing Bottom (Logger)	WLSESSION	8800	ft
CDEN	Cement Density	USIT-E	10.01	lbm/gal
CDEN	Cement Density	EDTC-B	16.69	lbm/gal
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
THNO	Nominal Casing Thickness - Zoned along logger depths	WLSESSION	0.415	in
CYSTLGR	Casing Yield Strength - Zoned along logger depths	WLSESSION	0	psi
DFD	Drilling Fluid Density	Borehole	8.7	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FD	Fluid Density	USIT-E	8.61	lbm/gal
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	-33.35	dB/m
IBC_FVEL_SEL	IBC Fluid Velocity Selection	USIT-E	Automatic	
IBC_OFFSET_SEL	IBC Flexural Offset Selector	USIT-E	UFAO	
IBC_ZMUD_SEL	IBC Mud Impedance Selection	USIT-E	Manual	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	25.94	us
MUD_N_FRP	Free Pipe Mud Normalization Factor	USIT-E	1.06	
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.07	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.58	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-34.62	dB/m
UFSFLT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	SolidLiquidGasMap	
ZMUD	Acoustic Impedance of Mud	Borehole	1.5	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.1	Mrayl

Tool Control Parameters

6A: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	54	dB
EMXV	EMEX Voltage	USIT-E	Time Zoned	V
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
UPAT	USIT Emission Pattern	USIT-E	Pattern 300 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	38_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
EMXV	50	12-Feb-2023 13:39:45	12-Feb-2023 13:40:59	8744.87	8697.28
EMXV	70	12-Feb-2023 13:40:59	12-Feb-2023 13:41:05	8697.28	8690.02
EMXV	95	12-Feb-2023 13:41:05	12-Feb-2023 13:41:15	8690.02	8679.35
EMXV	100	12-Feb-2023 13:41:15	12-Feb-2023 13:41:23	8679.35	8670.26
EMXV	110	12-Feb-2023 13:41:23	12-Feb-2023 13:46:56	8670.26	8308.79

All depth are at tool zero.

XYZ

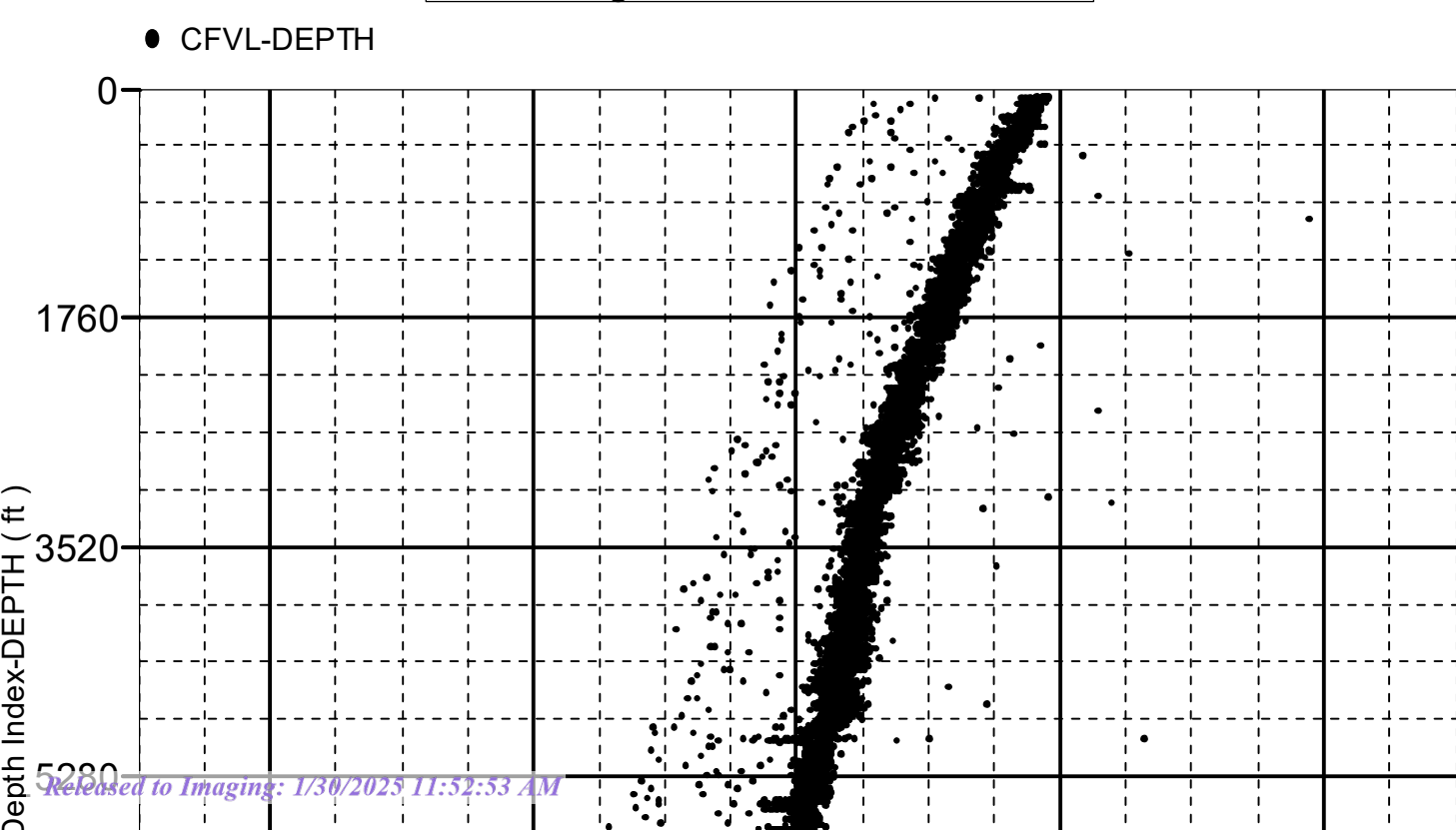
Company:New Mexico Institute of Mining & Technology Well:SJB Carbon Safe Strat Test #001

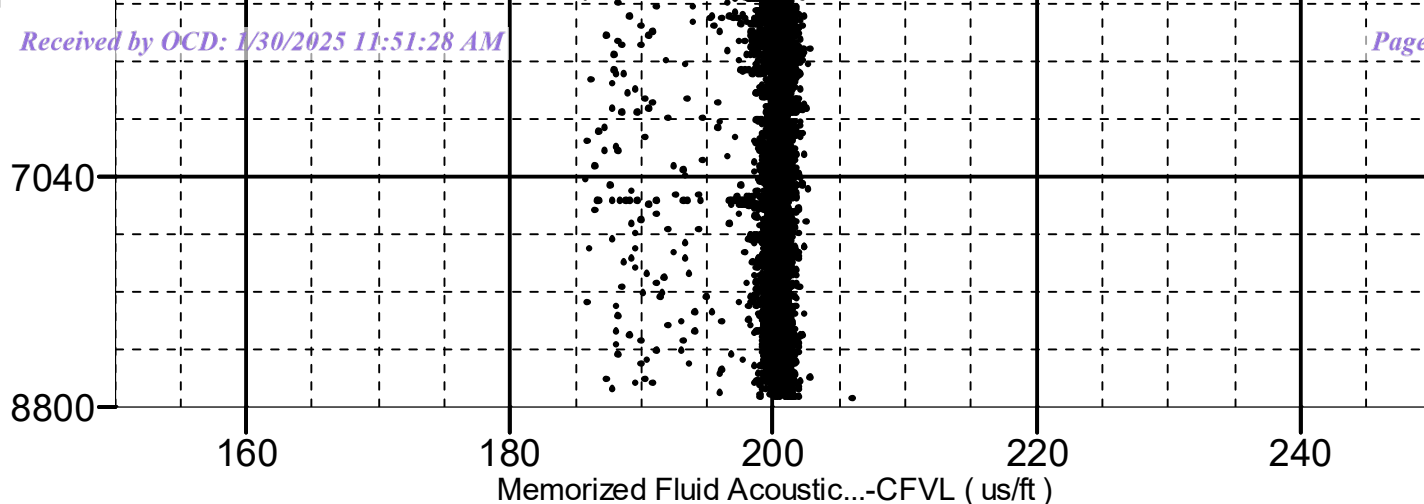
6A: Main[5]:Up:S021

Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 8742.50 to 60.00 ft





XYZ

Company:New Mexico Institute of Mining & Technology Well:SJB Carbon Safe Strat Test #001

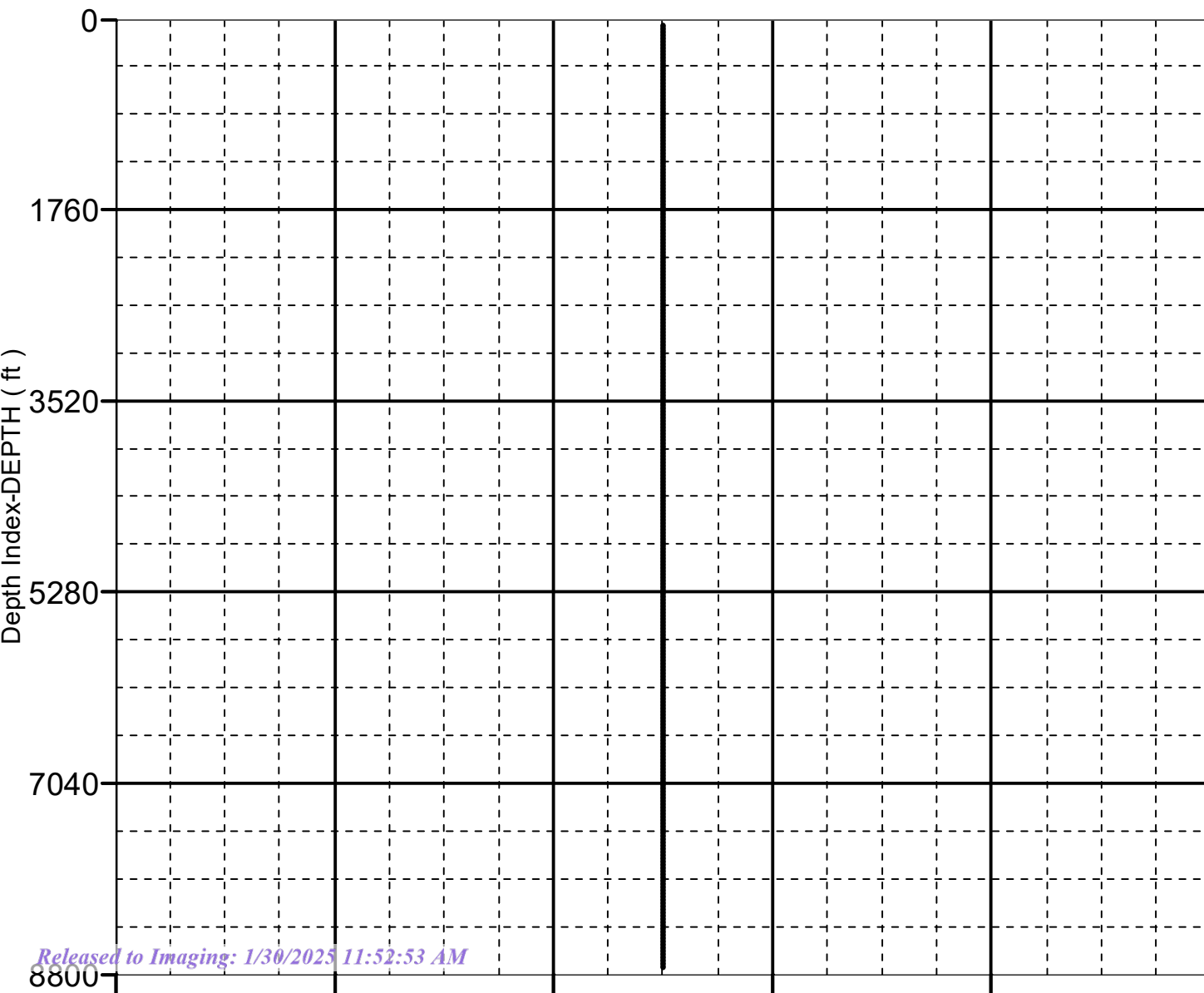
6A: Main[5]:Up:S021

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 8742.50 to 60.00 ft

● CZMD-DEPTH



Company:	New Mexico Institute of Mining & Technology	Schlumberger
Well:	SJB Carbon Safe Strat Test #001	
Field:	Entrada Formation	
County:	San Juan	
State:	New Mexico	
Corrosion Print		
Gamma Ray		
Casing Collar Locator		

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<https://www.emnrd.nm.gov/oed/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 426693

CONDITIONS

Operator: NEW MEXICO ENERGY MINERALS & NATURAL RESOURCE 1220 S St Francis Dr Santa Fe , NM 87504	OGRID: 264235
	Action Number: 426693
	Action Type: [IM-SD] Well File Support Doc (ENG) (IM-AWF)

CONDITIONS

Created By	Condition	Condition Date
pgoetze	None	1/30/2025