



Company: Chevron Energy Corporation

Well: Frico #16-15

Field: Wattenberg

County: Weld

Country: USA

Isolation Scanner

Cement Evaluation

Gamma Ray - CCL Log

County: Weld
Field: Wattenberg
Location: SWSW
Well: Frico #16-15
Company: Chevron Energy Corporation

Location:	SWSW	Elev.:	K.B. 4821.00 ft
	480 FSL 1185 FWL		G.L. 4805.00 ft
	40 219397, -104.655146		D.F. 4821.00 ft
Permanent Datum:		Ground Level	Elev.: 4805.00 f
Log Measured From:		Kelly Bushing	16.00 ft
Drilling Measured From:		Kelly Bushing	above Perm.Datum
API Serial No.	05-123-21639	Max.Hole Deviation	0 deg
		Longitude:	-104.65515 degrees
		Latitude:	40.219397 degrees

Logging Date	14-Oct-2024
Run Number	ONE
Depth Driller	8133.00 ft
Schlumberger Depth	8133.00 ft
Bottom Log Interval	1956.00 ft
Top Log Interval	50.00 ft
Casing Fluid Type	Water
Salinity	
Density	8.6 lbm/gal
Fluid Level	8.00 ft
BIT/CASING/TUBING STRING	
Bit Size	7.88 in
From	1856.00 ft
To	8133.00 ft
Casing/Tubing Size	4.5 in
Weight	11.6 lbm/ft
Grade	N/A
From	0.00 ft
To	8133.00 ft
Max Recorded Temperatures	150 degF
Logger on Bottom	14-Oct-2024
Unit Number	512 - TAM
Recorded By	Erk Leslie
Witnessed By	Matt Morgan

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.

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10.4 Log (IBC SLG Composite 4.5IN)

10.5 Parameter Listing

11. ONE

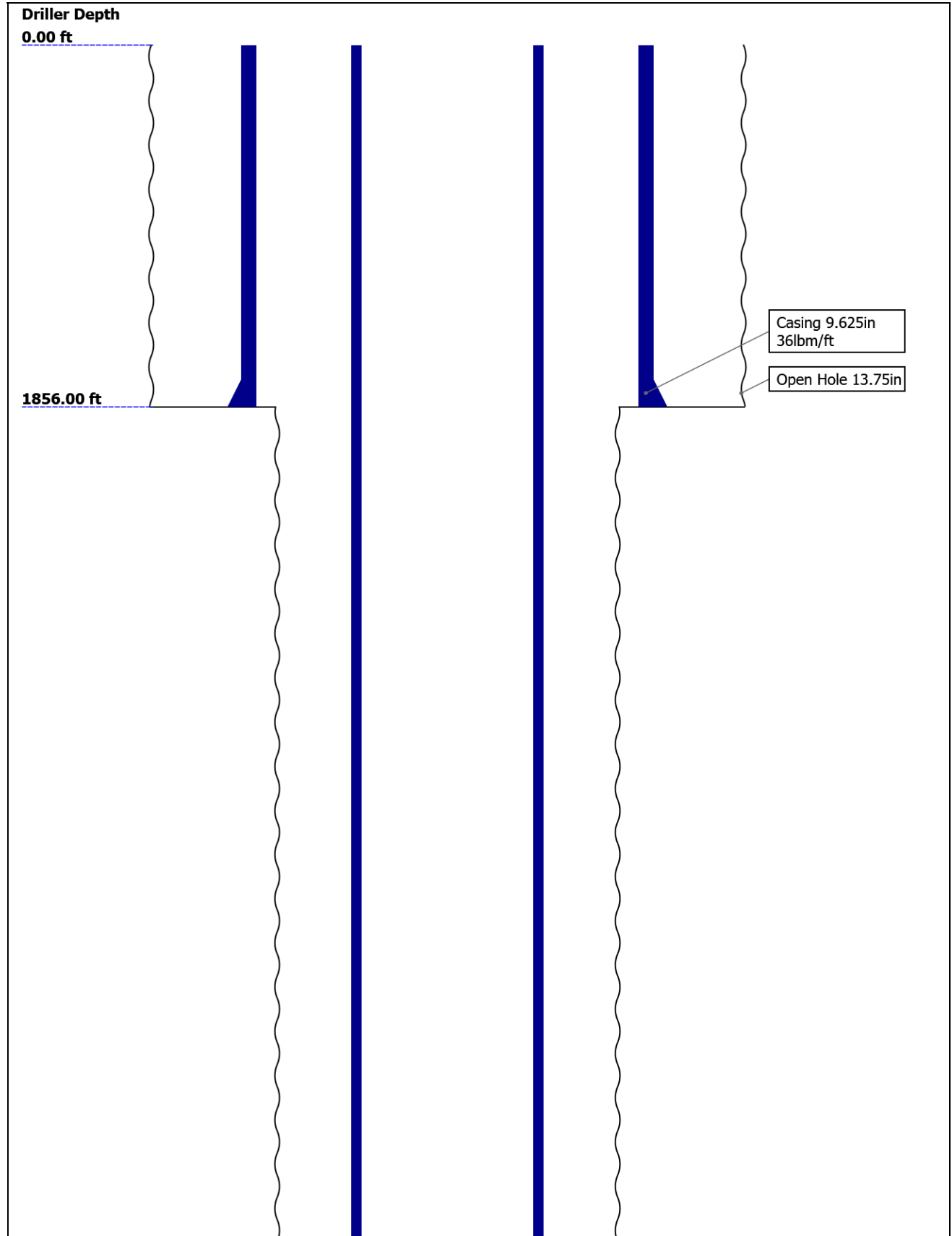
11.1 Integration Summary

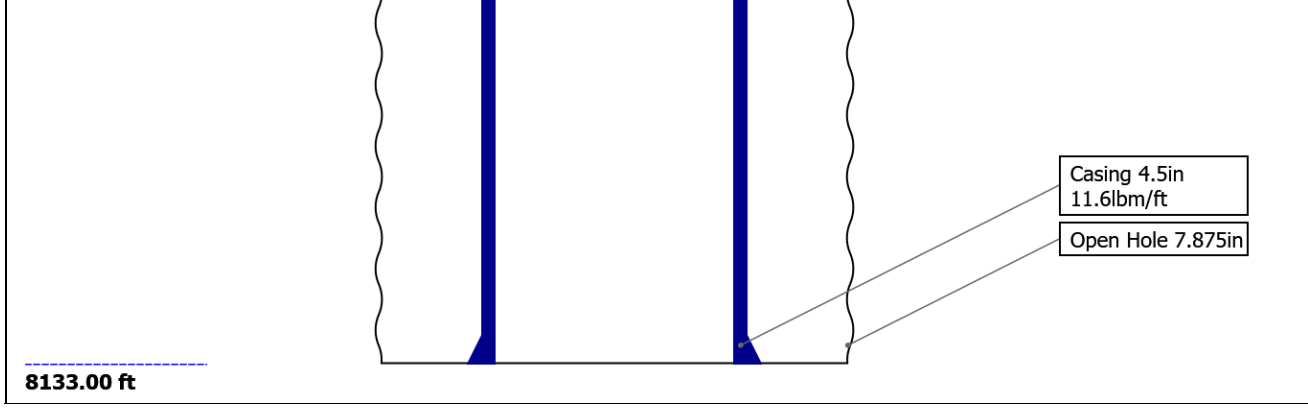
11.2 Software Version

11.3 Composite Summary

16. Tail

Well Sketch



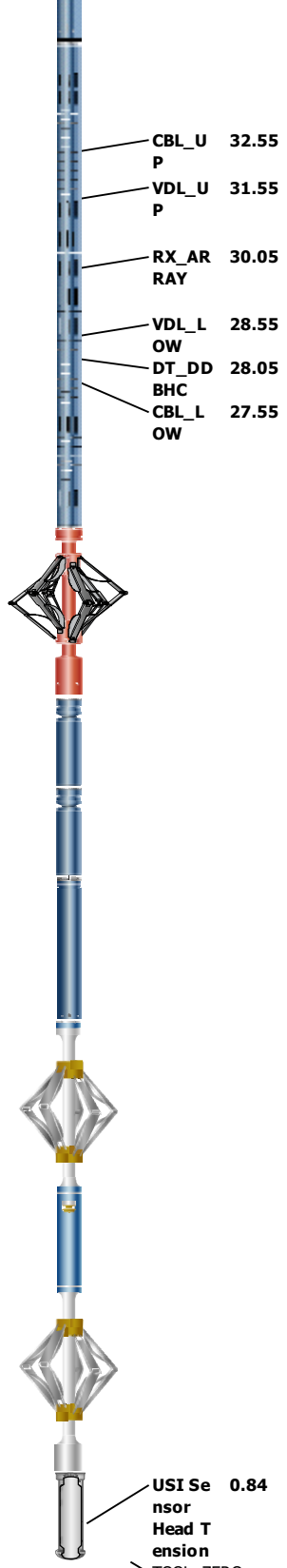


Borehole Size/Casing/Tubing Record

Bit					
Bit Size (in)	13.75	7.875			
Top Driller (ft)	0	1856			
Top Logger (ft)	0	1856			
Bottom Driller (ft)	1856	8133			
Bottom Logger (ft)	1856	8133			
Casing					
Size (in)	9.625	4.5			
Weight (lbm/ft)	36	11.6			
Inner Diameter (in)	8.921	4			
Grade	N/A	N/A			
Top Driller (ft)	0	0			
Top Logger (ft)	0	0			
Bottom Driller (ft)	1856	8133			
Bottom Logger (ft)	1856	8133			

Remarks and Equipment Summary

ONE: Toolstring	ONE: Remarks	
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Equip name & length</p> <p>LEH-QT 52.87 LEH-QT</p> <p>EDTC-B 49.38 EDTH-B EDTG-A EDTC-B</p> <p>CME-AF 42.88 [2]</p> <p>ASLT-B: 39.08 8073 ASLT-BB :8073</p> </div> <div style="flex: 1;"> <p>MP name Offset</p> <p>CTEM 45.88</p> <p>ACCZ 0.00</p> <p>HV 0.00</p> <p>Gamm a Ray 44.01</p> <p>TelSta tus 42.88</p> </div> </div>	Thank you for choosing Schlumberger	
	Log run for cement evaluation	
	IBCS-A sub used with ICE transducers	
	Log not run under pressure	
	Log correlated to downlog	
	Tool run centralized using houma kit and small hole kit	
Crew: Surefire		



CBL_U P 32.55
 VDL_U P 31.55
 RX_AR RAY 30.05
 VDL_L OW 28.55
 DT_DD 28.05
 BHC
 CBL_L OW 27.55

CME-AF [1] 24.43
 AH-184 [2] 20.64
 AH-184 [1] 18.64

USIT-E 16.64
 ECH-MFA
 USAC-A
 USIS-A
 USSC-B
 IBCS-A
 FAR-SEN
 SOR
 ICE-GB
 NEAR-SE
 NSOR
 ICE-GB
 USI-SEN
 SOR
 ICE-GB
 EMITTER
 -SENSOR
 ICE-BB

USI Sensor Head Tension 0.84
 TOOL_ZERO

Lengths are in ft
 Maximum Outer Diameter = 3.800 in
 Line: Sensor Location, Value: Gating Offset
 All measurements are relative to TOOL_ZERO

Depth Summary

	ONE		
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	7-46ZVI-XS		
Serial Number	SHOP		
Length	24000.00 ft		
Conveyance Type	Wireline		
Rig Type	Workover		

ONE:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	Schlumberger depth control procedures followed	
Rig Up Length At Surface		IDW used as primary depth control system	
Rig Up Length At Bottom		Z-Chart used as secondary depth control system	
Rig Up Length Correction			
Stretch Correction			
Tool Zero Check At Surface			

USIT - Fluid Properties Measurement

Run Name	Pass Name	Start Depth(ft)	Stop Depth(ft)
Run 1	Log[3]:Up	1961.24	69.15

**Fluid Velocity = "Automatic".
CFVL equals DFSL channel**

Start Depth(ft)	Stop Depth(ft)	Start Value(us/ft)	End Value(us/ft)

**Mud Impedance = "Theoretical".
CZMD uses theoretical results.
MUD_N_THE=1.09
DFD=1.03g/cm3(8.60lbm/gal)**

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

ONE

IBC SLG

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000
	Wireline_NPD-MMCT-2023.0_13.0.226705

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	69.15 ft	1961.24 ft	14-Oct-2024 3:22:13 PM	14-Oct-2024 3:50:14 PM	ON	4.43 ft	Yes

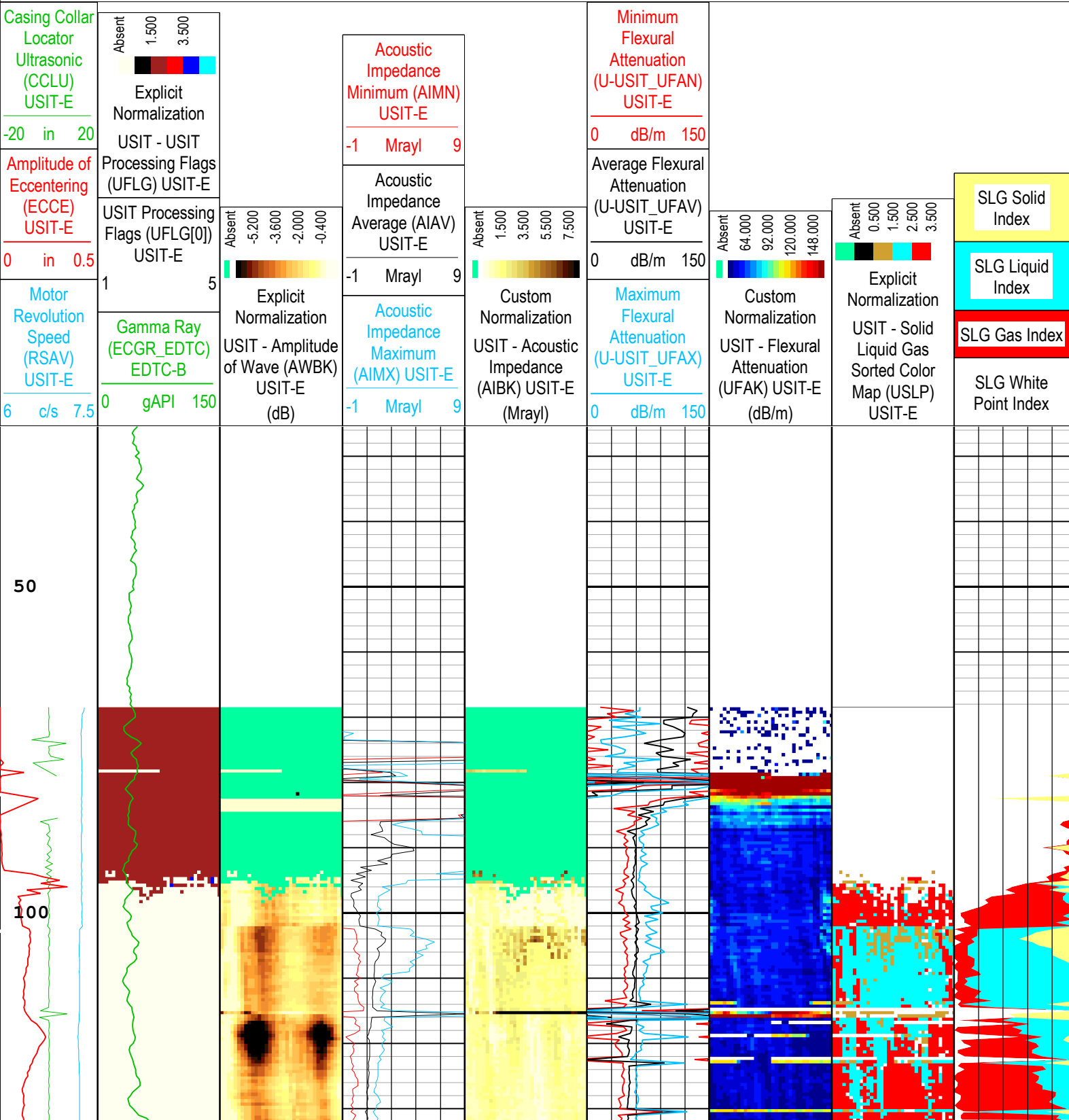
All depths are referenced to toolstring zero

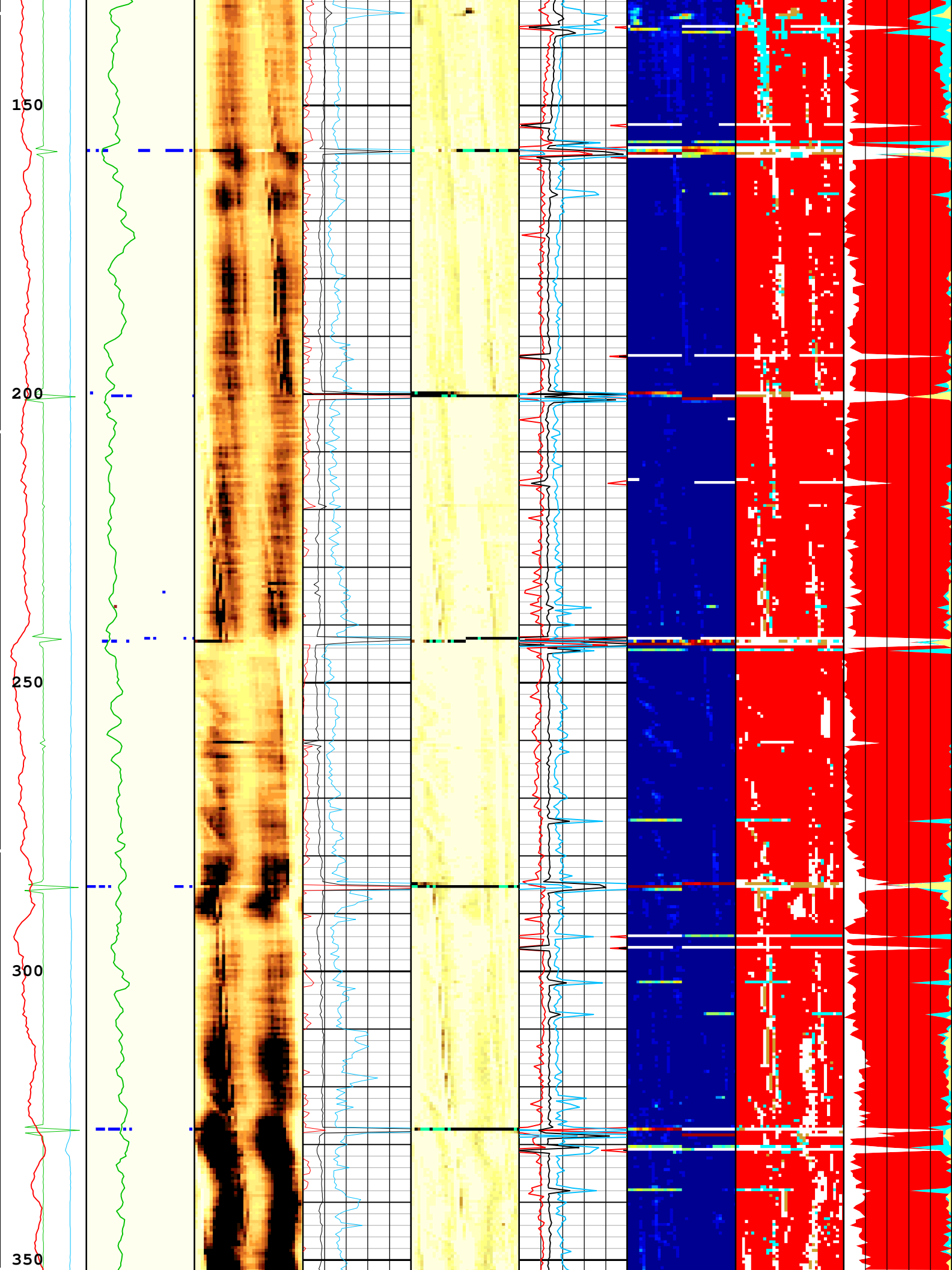
Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Oct-2024 16:21:35

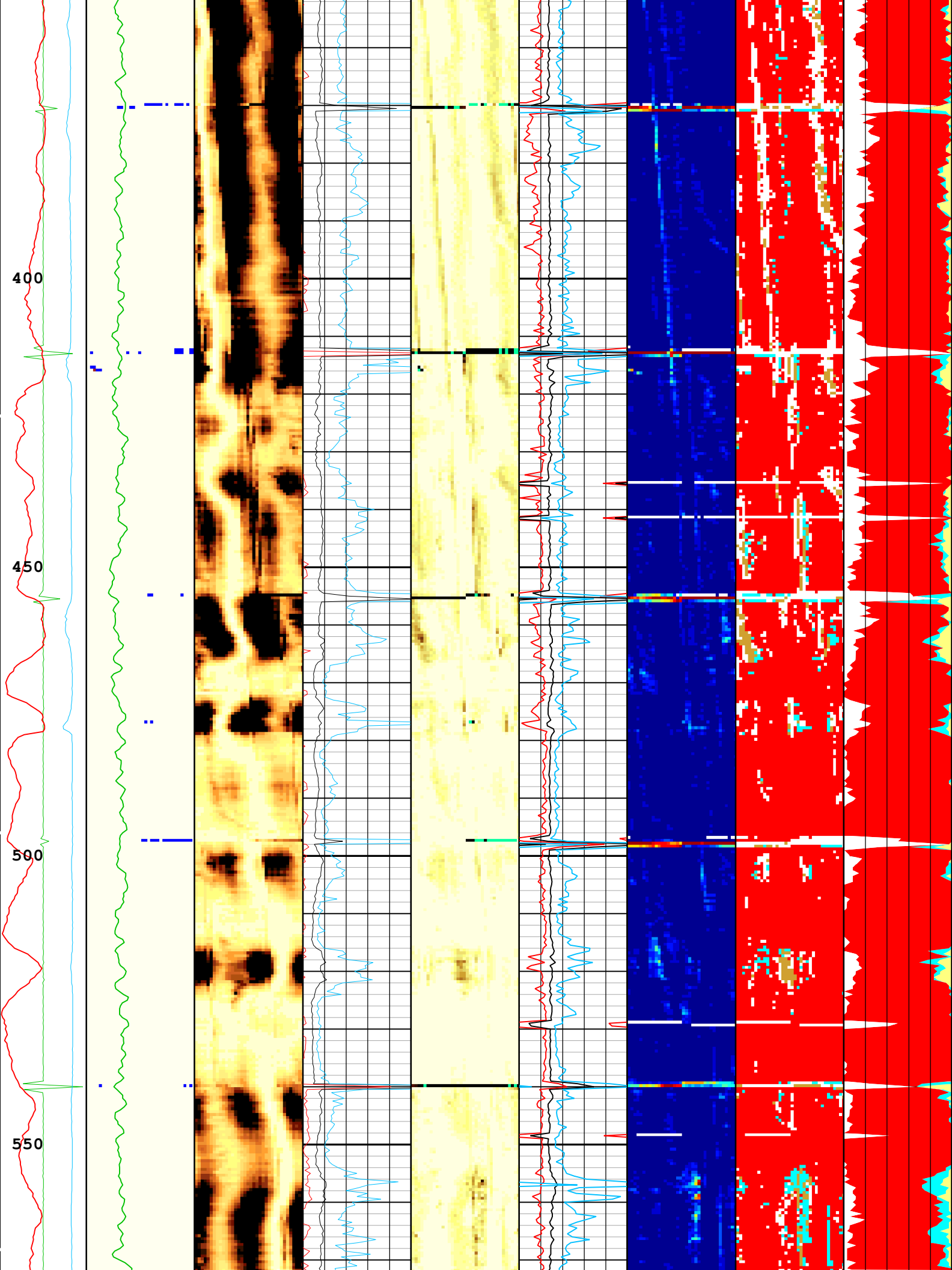
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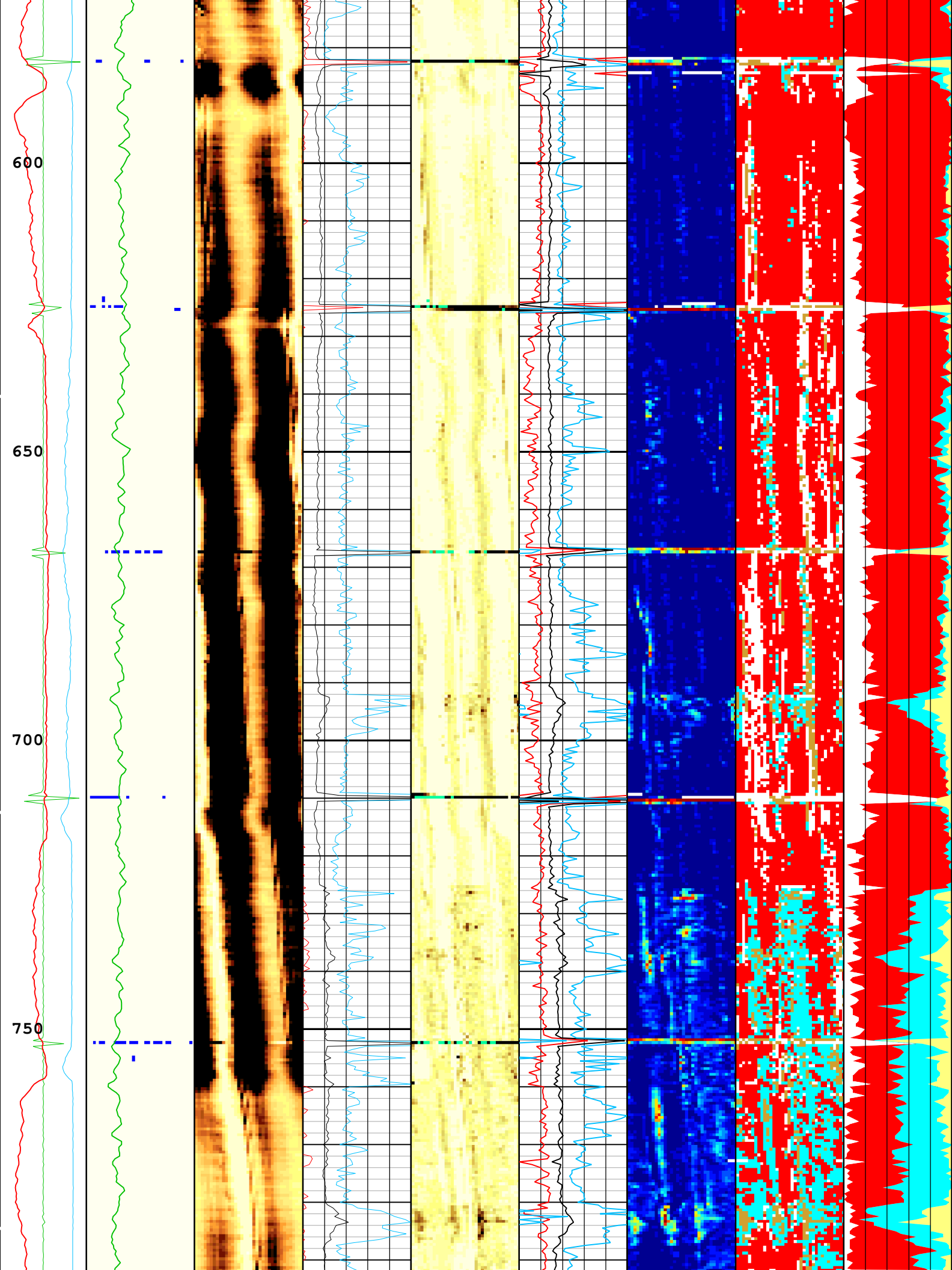
USIT Processing Flags (UFLG[0]) USIT-E

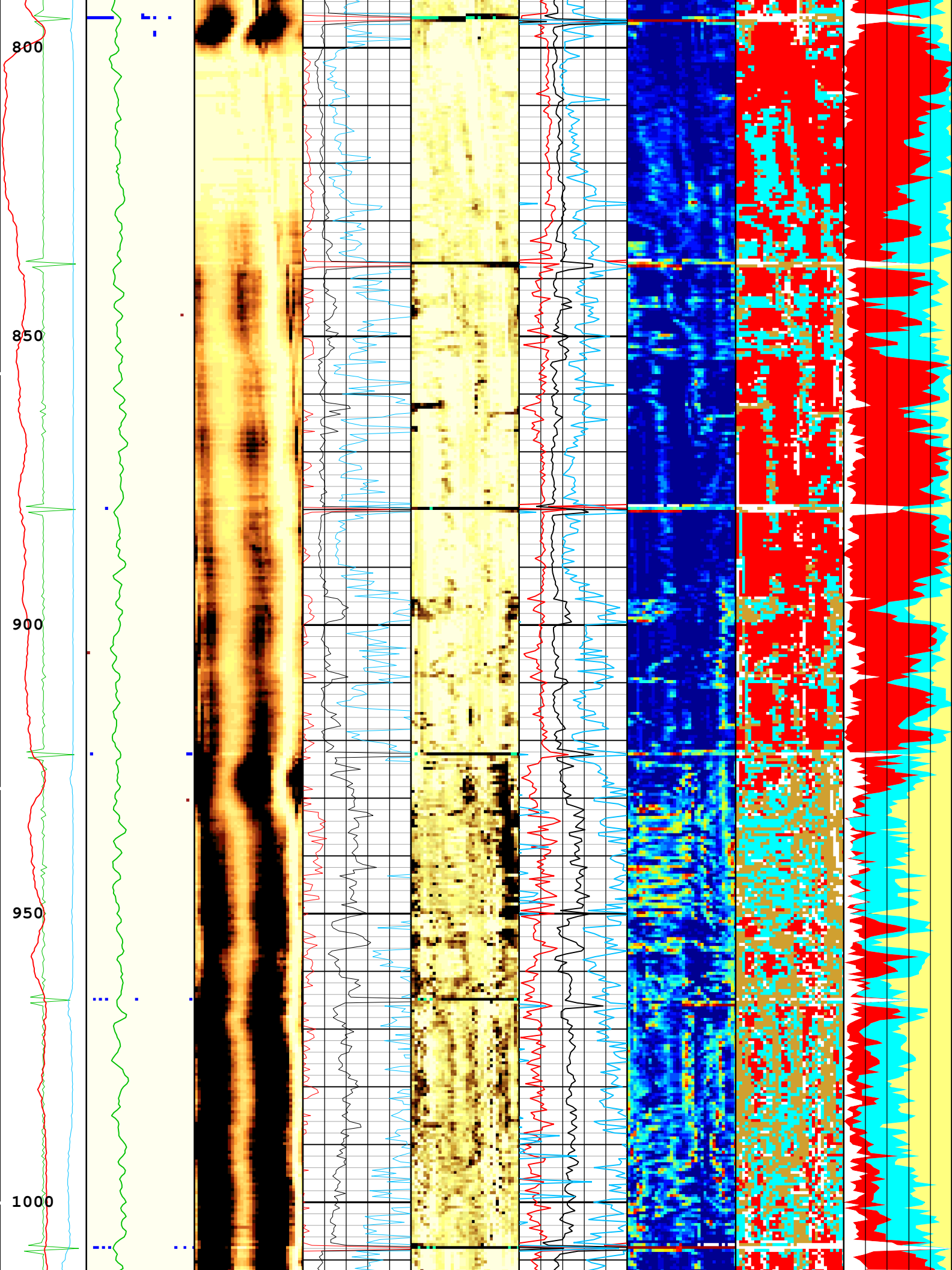
- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - : Pulse Origin Not Detected
- 3 - UFLG 3 Value within [2.5 - 3.5] - : WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error
- 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 -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

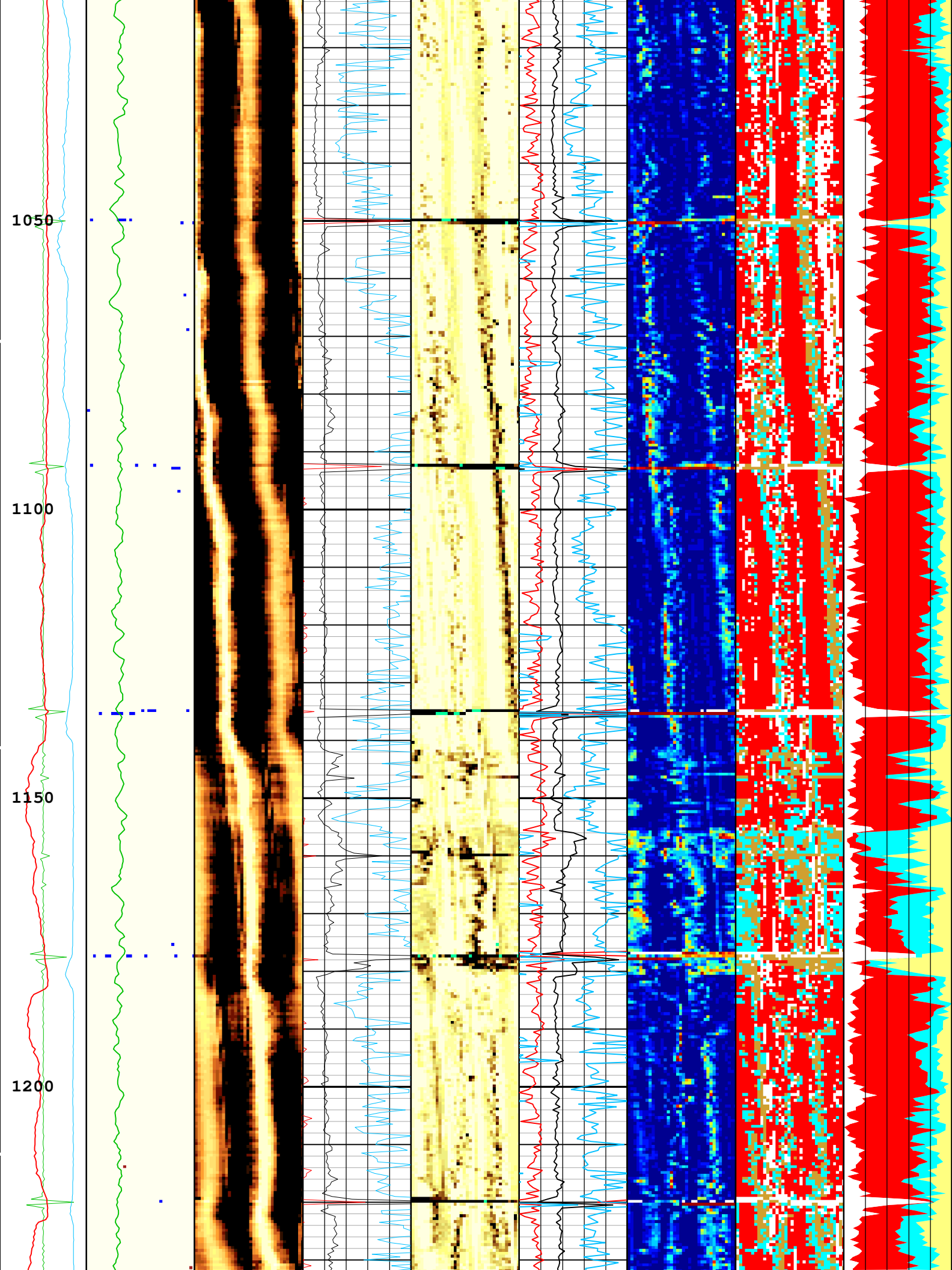


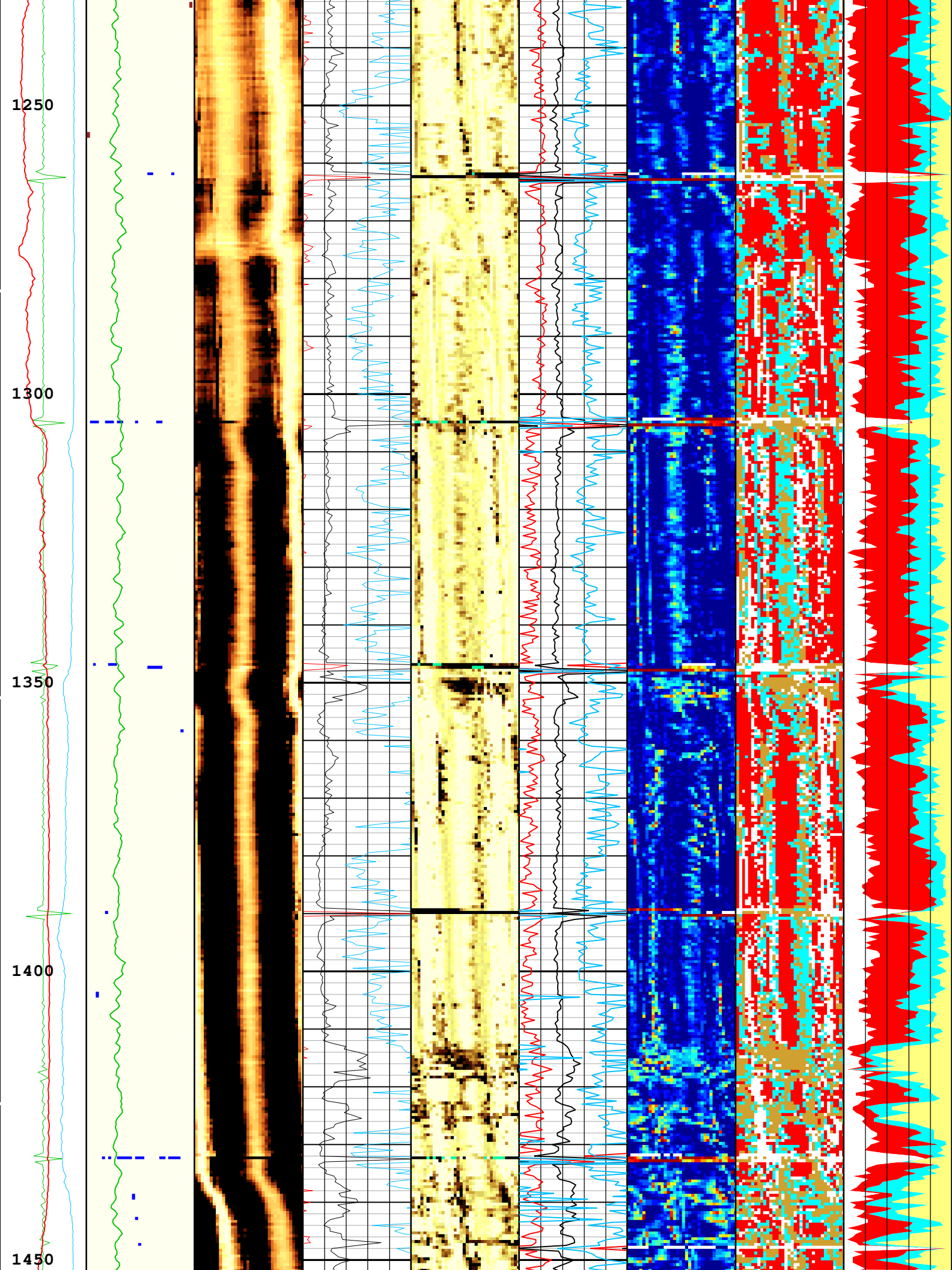


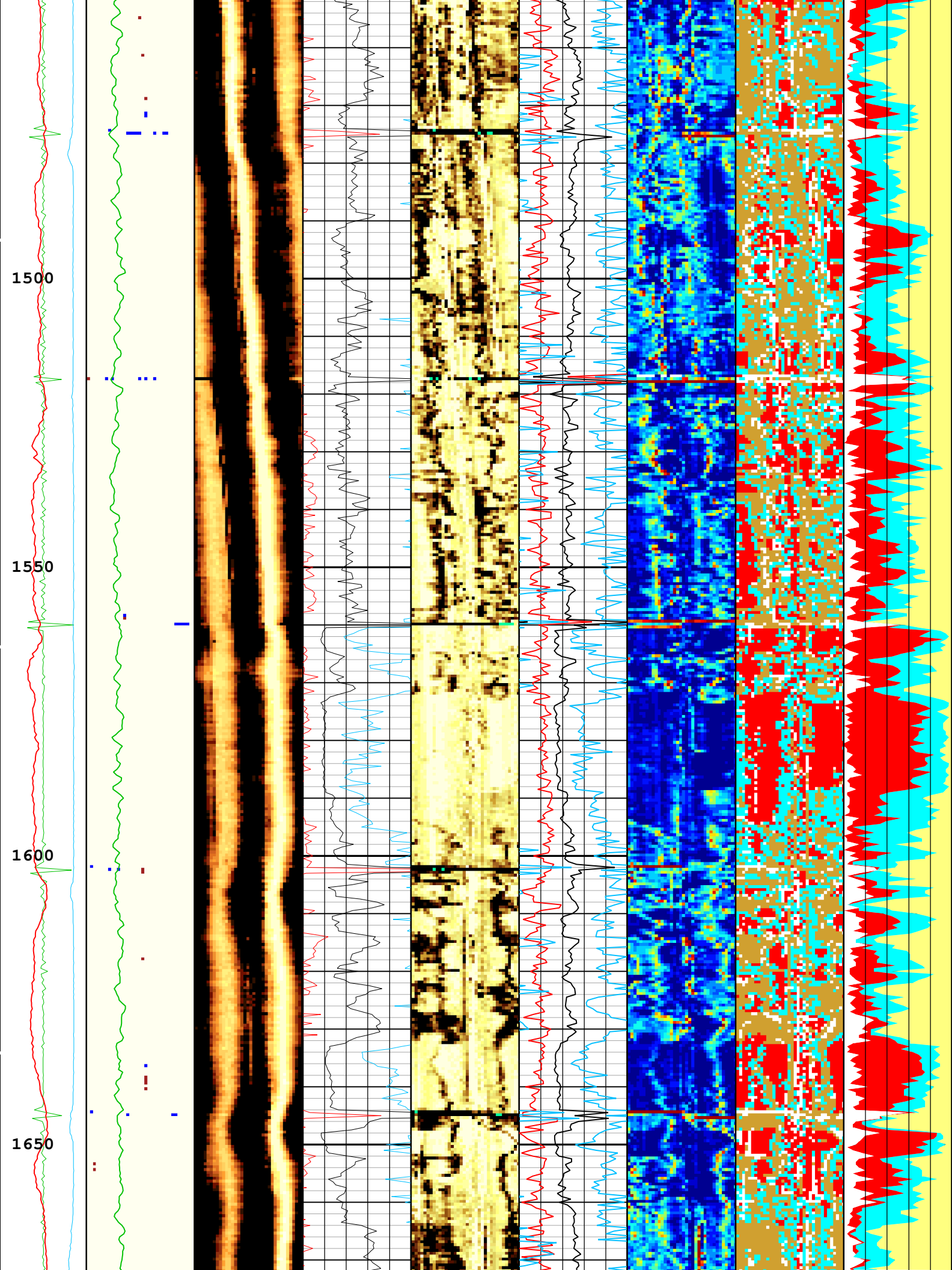


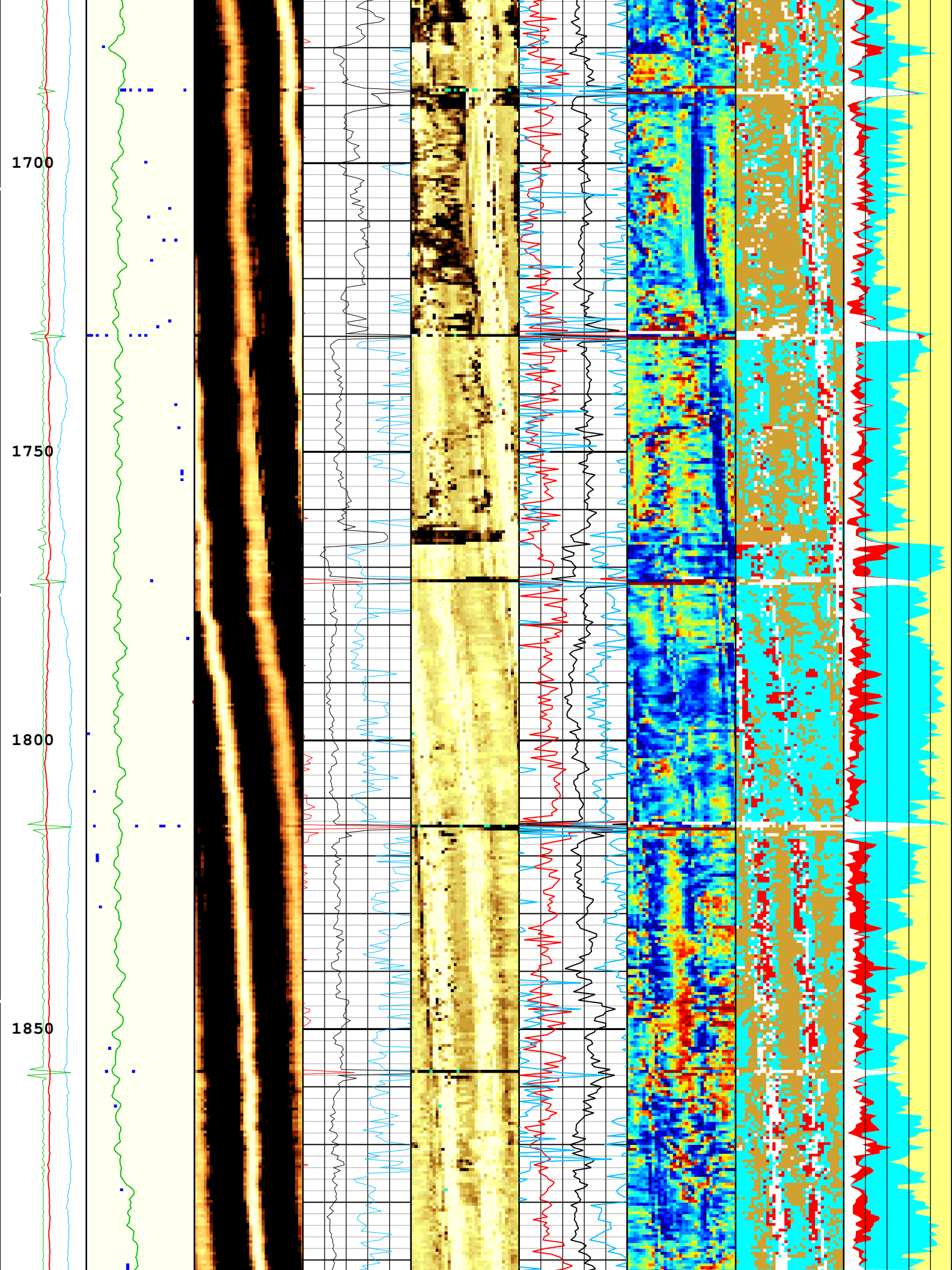


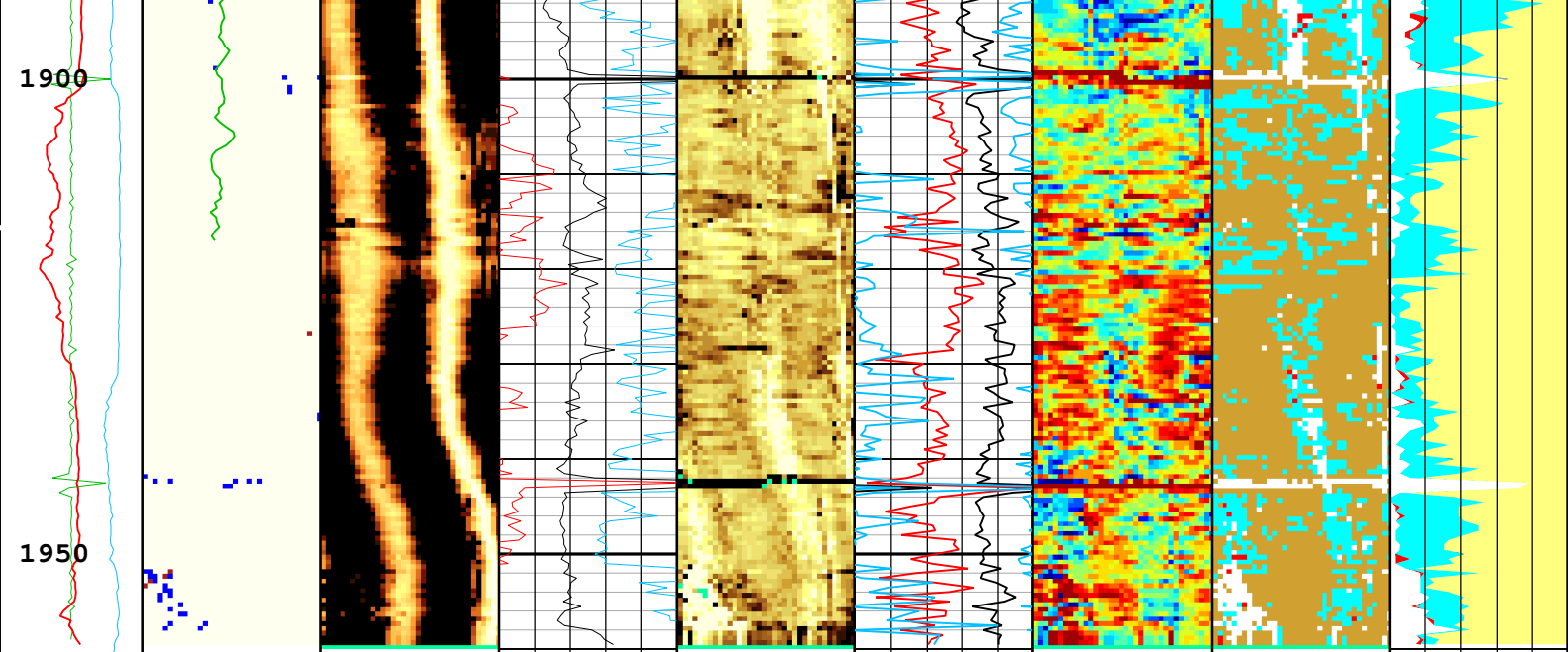












Casing Collar Locator Ultrasonic (CCLU) USIT-E -20 in 20	Absent 1,500 3,500 Explicit Normalization USIT - USIT Processing Flags (UFLG) USIT-E	Absent -5,200 -3,600 -2,000 -0,400 Explicit Normalization USIT - Amplitude of Wave (AWBK) USIT-E (dB)	Acoustic Impedance Minimum (AIMN) USIT-E -1 Mrayl 9	Absent 1,500 3,500 5,500 7,500 Custom Normalization USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	Minimum Flexural Attenuation (U-USIT_UFAN) USIT-E 0 dB/m 150	Absent 64,000 92,000 120,000 148,000 Custom Normalization USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)	Absent 0,500 1,500 2,500 3,500 Explicit Normalization USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E	SLG Solid Index SLG Liquid Index SLG Gas Index SLG White Point Index
Amplitude of Eccentering (ECCE) USIT-E 0 in 0.5	USIT Processing Flags (UFLG[0]) USIT-E 1 5		Acoustic Impedance Average (AIAV) USIT-E -1 Mrayl 9		Average Flexural Attenuation (U-USIT_UFAV) USIT-E 0 dB/m 150			
Motor Revolution Speed (RSAV) USIT-E 6 c/s 7.5	Gamma Ray (ECGR_EDTC) EDTC-B 0 gAPI 150		Acoustic Impedance Maximum (AIMX) USIT-E -1 Mrayl 9		Maximum Flexural Attenuation (U-USIT_UFAX) USIT-E 0 dB/m 150			

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

- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
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- 3 - UFLG 3 Value within [2.5 - 3.5] - : WINLEN Error
- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error
- 5 - UFLG 7 UFLG 8 UFLG 9 Value within [6.5 - 10] - : Loop Processing Error

TIME_1900 - Time Marked every 60.00 (s)

Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Oct-2024 16:21:35

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	8133	ft
CDEN	Cement Density	USIT-E	0	g/cm3

CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.6	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	198	us/ft
FD	Fluid Density	USIT-E	1.2	g/cm3
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
GR_MULTIPLIER	Gamma Ray Multiplier	EDTC-B	1	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	0	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	Theoretical	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.09	
RCOD	Reference Calibrator Outer Diameter	USIT-E	4.5	in
RCSO	Reference Calibrator Standoff	USIT-E	0.842	in
RCTH	Reference Calibrator Thickness	USIT-E	0.216	in
RPLUS_PROCESS	Ultrasonic R+ Processing	USIT-E	No	
SOCN	Standoff Distance	EDTC-B	0.125	in
SOCO	Standoff Correction Option	EDTC-B	No	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.67	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
THDP	Thickness Detection Policy	USIT-E	Fundamental	
VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	13.75	25.5	1856
BS	7.875	1856	1960.5

All depth are actual.

Tool Control Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
U-USIT_DDT5	USIT Downhole Decimation for T5 only	USIT-E	0 NONE	

U-USIT_DD13	USIT Downhole Declaration for US Only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	1.756	in
EMXV	EMEX Voltage	USIT-E	6	V
HRES	Horizontal Resolution	USIT-E	10 deg	
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	Yes	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
USSP	Ultrasonic Service	USIT-E	IBC	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

ONE

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000
	Wireline_NPD-MMCT-2023.0_13.0.226705

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	69.15 ft	1961.24 ft	14-Oct-2024 3:22:13 PM	14-Oct-2024 3:50:14 PM	ON	4.43 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Chevron Energy Corporation Well:Frico #16-15
ONE: Log[3]:Up:S009

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 14-Oct-2024 16:21:40

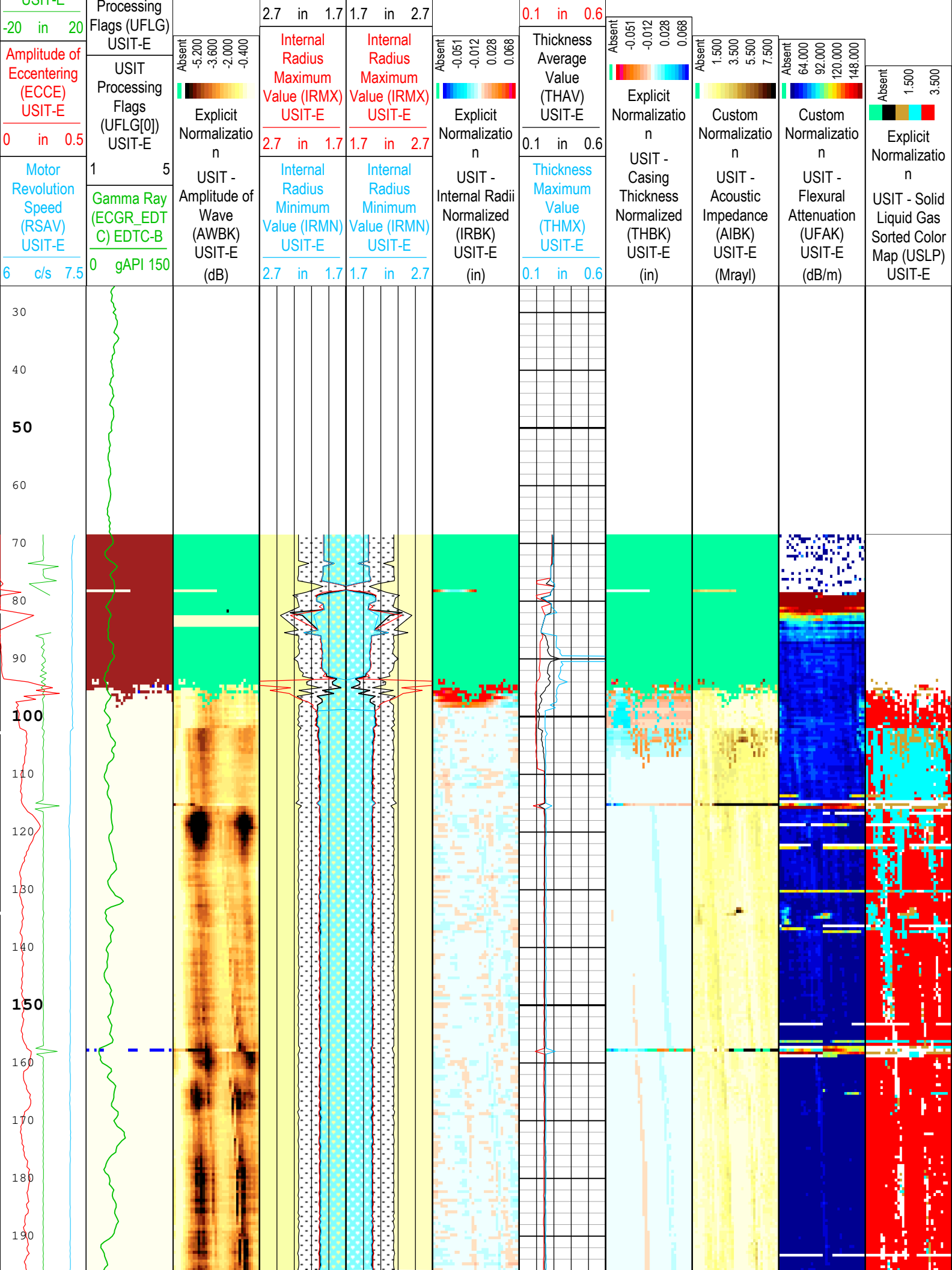
TIME_1900 - Time Marked every 60.00 (s)

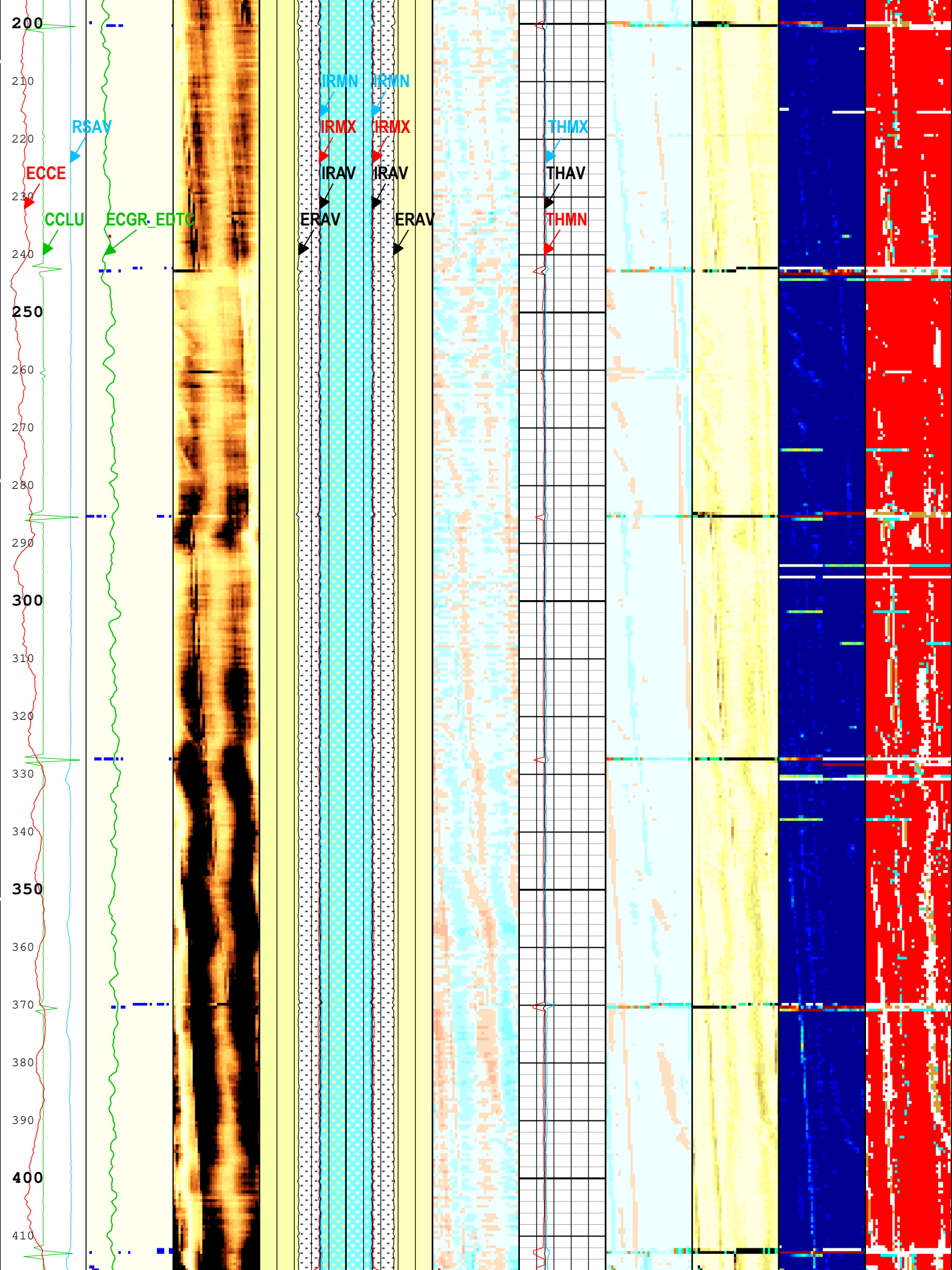
USIT Processing Flags (UFLG[0]) USIT-E

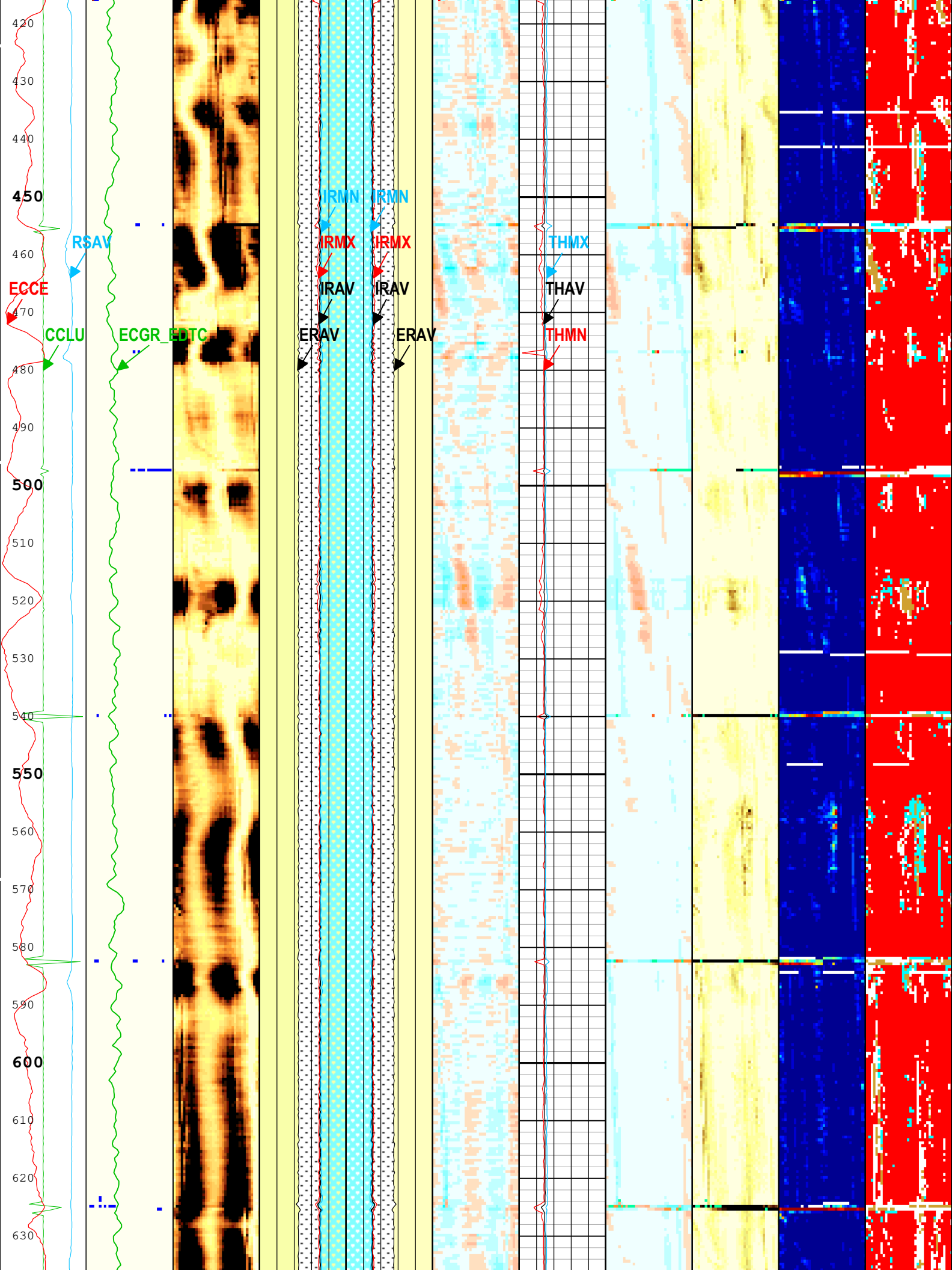
- 1 - UFLG 1 Value within [0.0 - 1.5] - : UTIM Error
- 2 - UFLG 2 Value within [1.5 - 2.5] - : Pulse Origin Not Detected
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- 4 - UFLG 4 UFLG 5 UFLG 6 Value within [3.5 - 6.5] - : Casing Thickness Error
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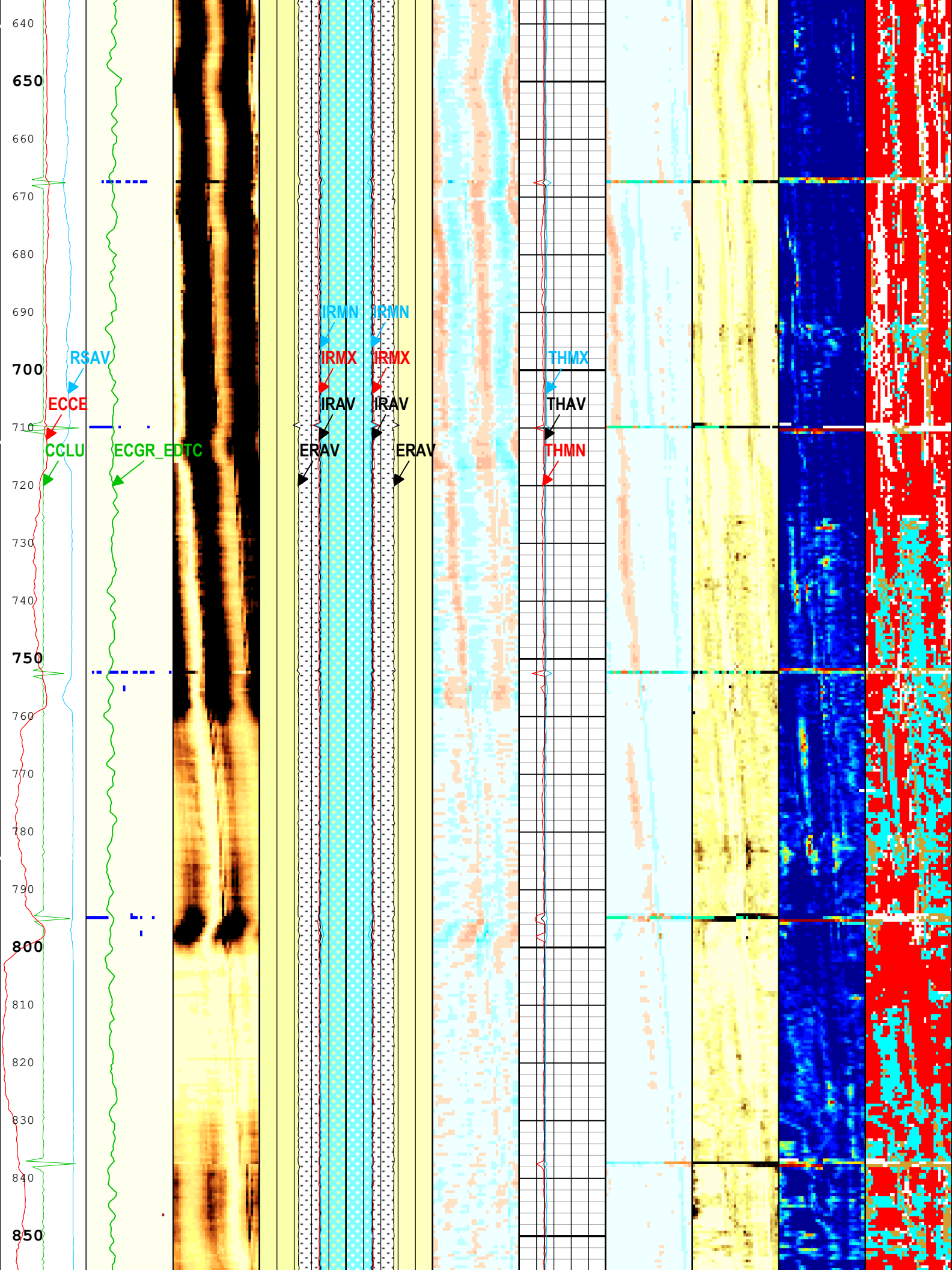
<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> <p style="font-size: 8px;">Absent</p> <p style="font-size: 8px;">1.500</p> <p style="font-size: 8px;">3.500</p> </div> <div style="text-align: center;"> <p style="font-size: 8px;">Explicit Normalization</p> <p style="font-size: 8px;">USIT - USIT</p> </div> </div>	<p style="font-size: 8px;">External Radii Average (ERAV) USIT-E</p> <p style="font-size: 10px;">2.7 in 1.7</p>	<p style="font-size: 8px;">External Radii Average (ERAV) USIT-E</p> <p style="font-size: 10px;">1.7 in 2.7</p>	
	<p style="font-size: 8px;">Internal Radius Averaged Value (IRAV) USIT-E</p>	<p style="font-size: 8px;">Internal Radius Averaged Value (IRAV) USIT-E</p>	

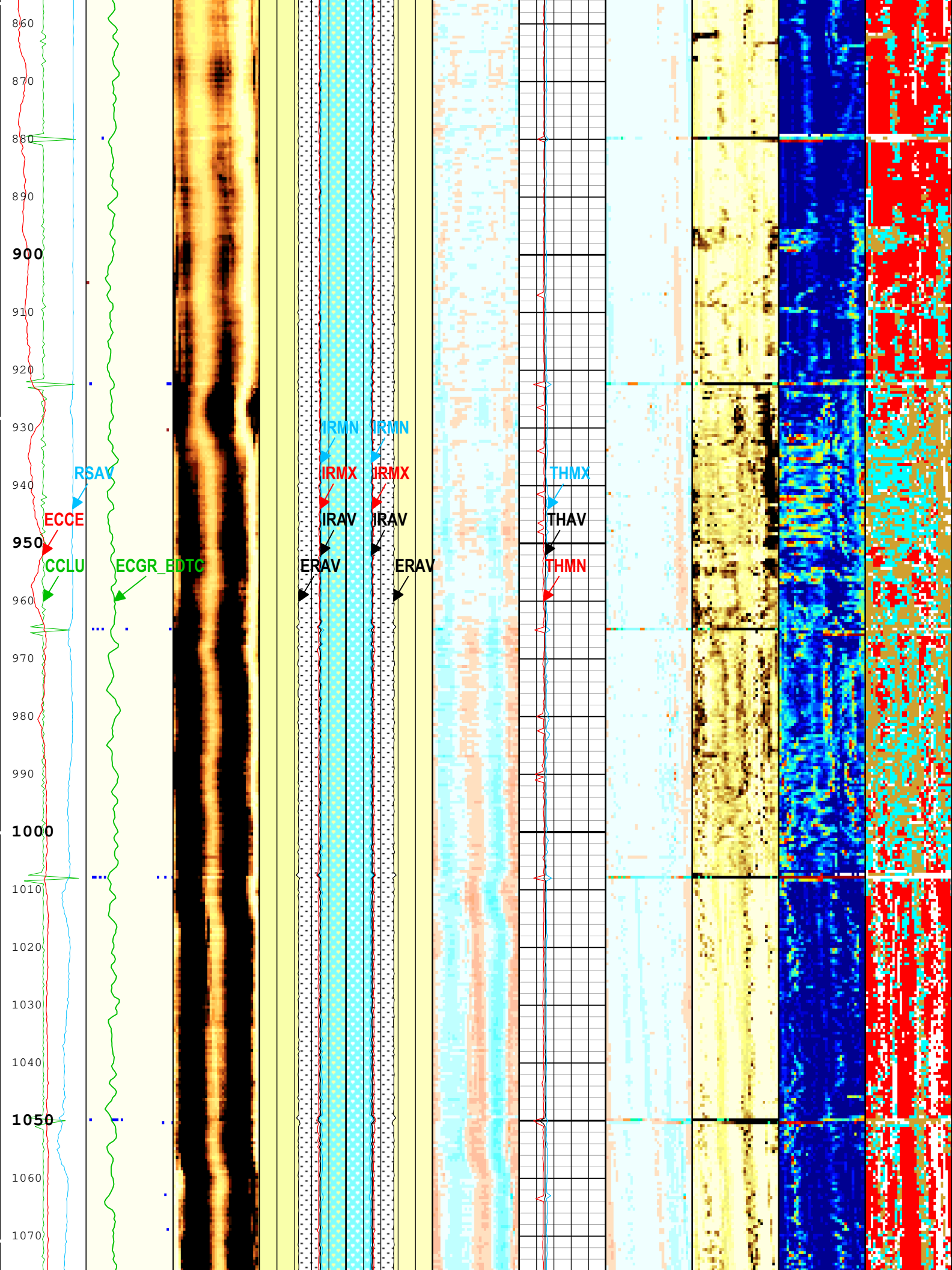
Thickness Minimum Value (THMN) USIT-E

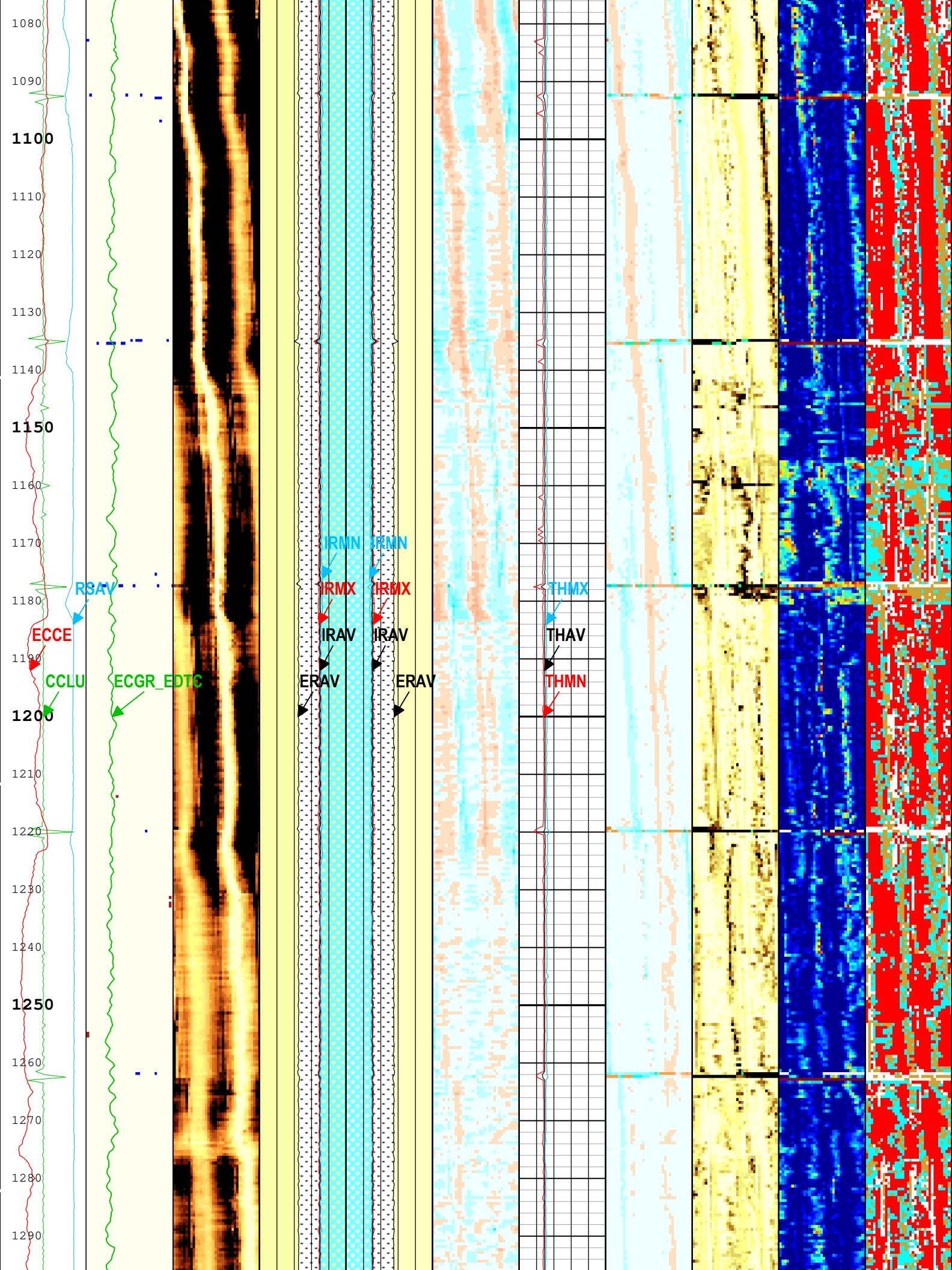


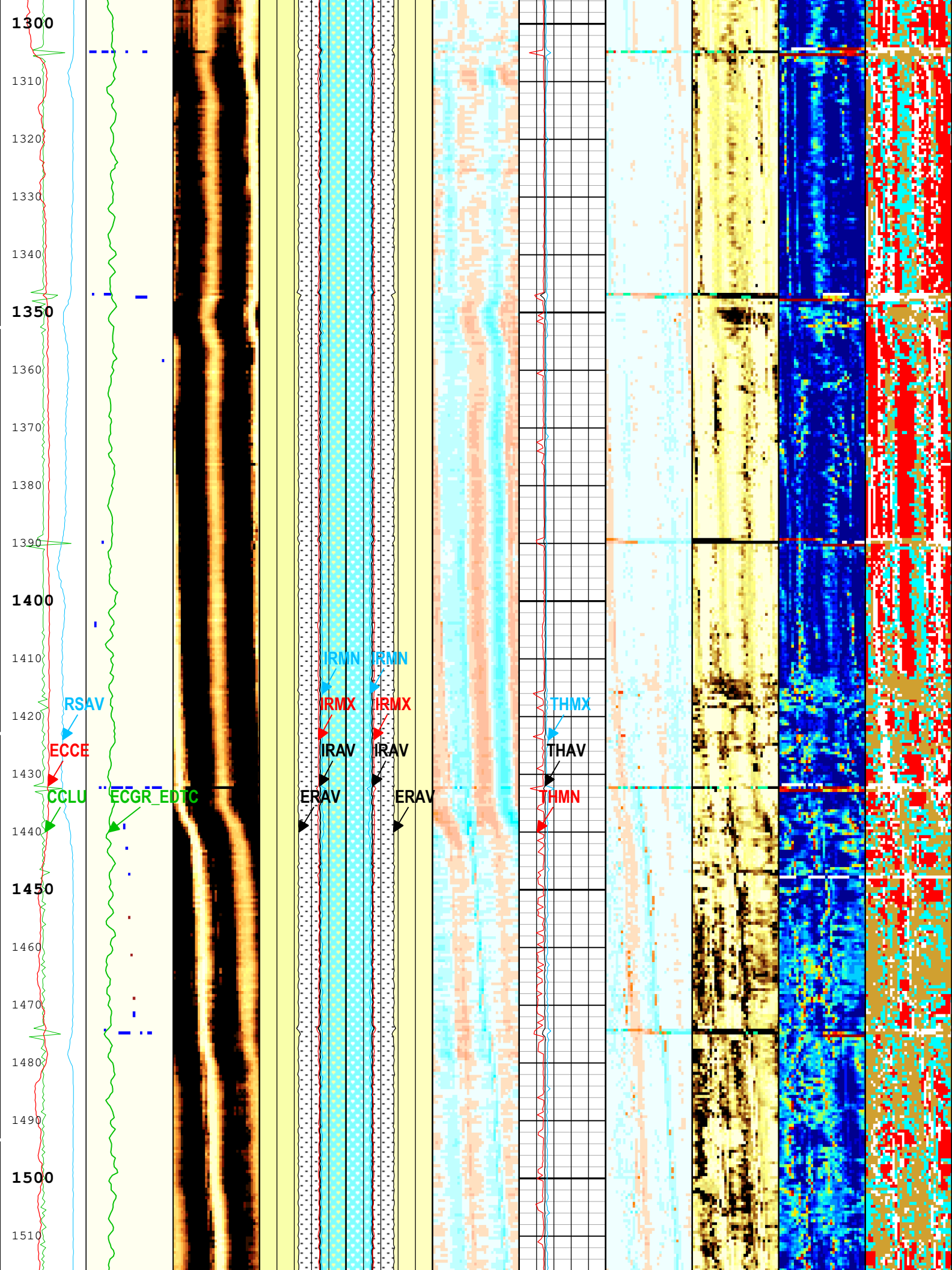


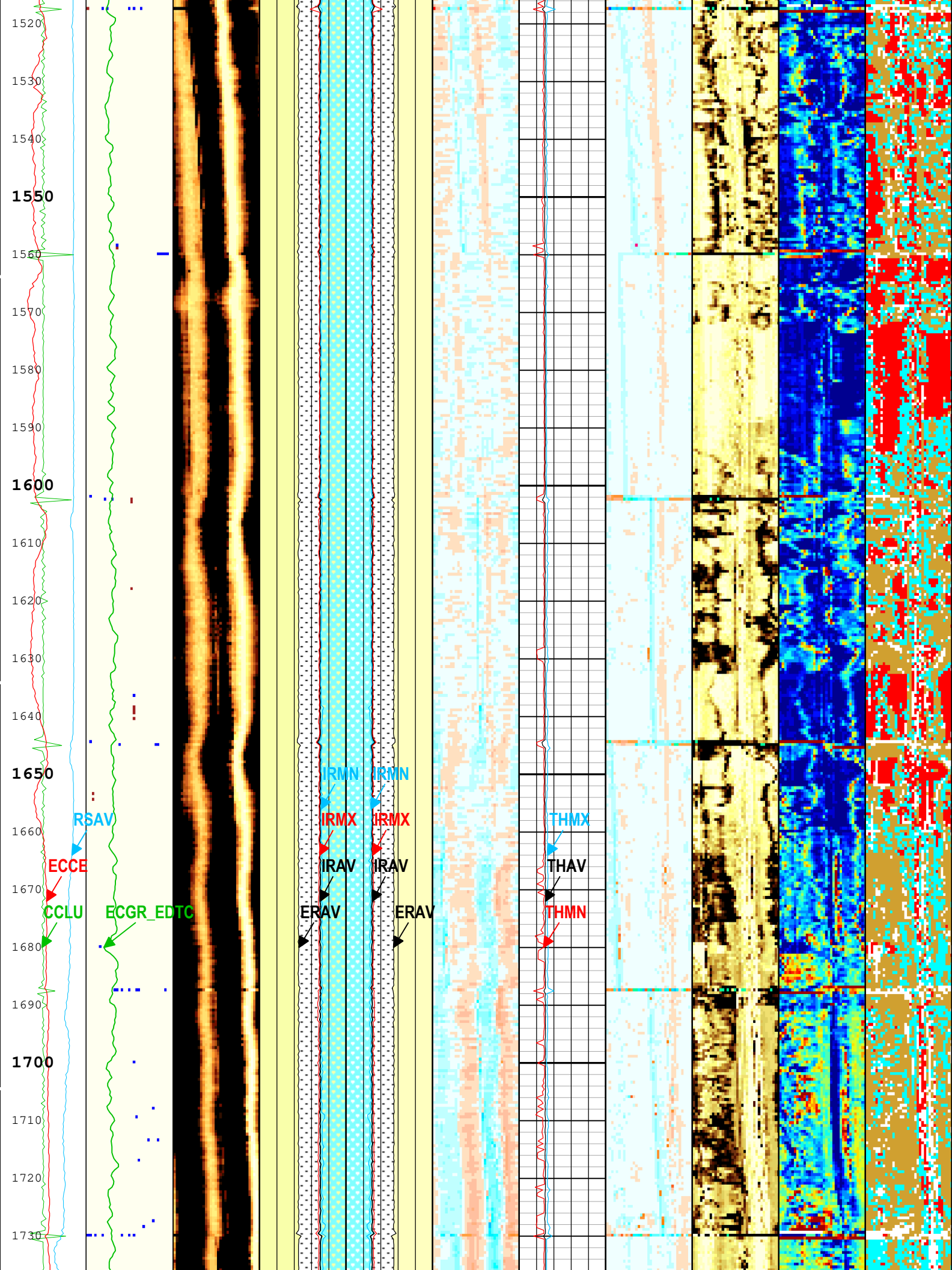


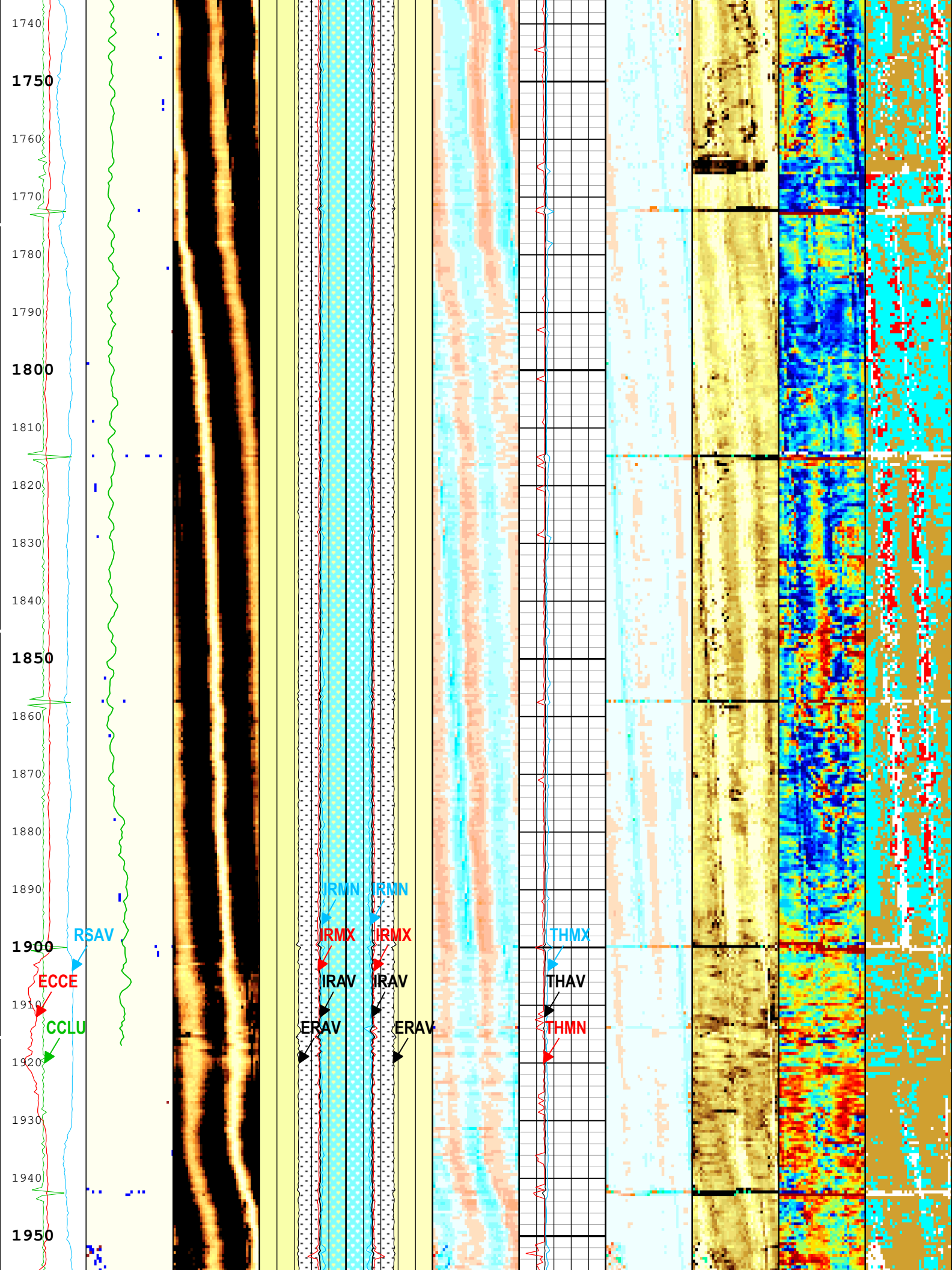












1960										
Casing Collar Locator Ultrasonic (CCLU) USIT-E	Explicit Normalization n USIT - USIT Processing Flags (UFLG) USIT-E USIT Processing Flags (UFLG[0]) USIT-E 1 5 Gamma Ray (ECGR_EDT C) EDTC-B 0 gAPI 150	Explicit Normalization n USIT - Amplitude of Wave (AWBK) USIT-E (dB)	External Radii Average (ERAV) USIT-E 2.7 in 1.7	External Radii Average (ERAV) USIT-E 1.7 in 2.7	Explicit Normalization n USIT - Internal Radii Normalized (IRBK) USIT-E (in)	Thickness Minimum Value (THMN) USIT-E 0.1 in 0.6	Explicit Normalization n USIT - Casing Thickness Normalized (THBK) USIT-E (in)	Custom Normalization n USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	Custom Normalization n USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)	Explicit Normalization n USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E
-20 in 20			Internal Radius Averaged Value (IRAV) USIT-E 2.7 in 1.7	Internal Radius Averaged Value (IRAV) USIT-E 1.7 in 2.7		Thickness Average Value (THAV) USIT-E 0.1 in 0.6				
Amplitude of Eccentering (ECCE) USIT-E 0 in 0.5			Internal Radius Maximum Value (IRMX) USIT-E 2.7 in 1.7	Internal Radius Maximum Value (IRMX) USIT-E 1.7 in 2.7		Thickness Maximum Value (THMX) USIT-E 0.1 in 0.6				
Motor Revolution Speed (RSAV) USIT-E 6 c/s 7.5			Internal Radius Minimum Value (IRMN) USIT-E 2.7 in 1.7	Internal Radius Minimum Value (IRMN) USIT-E 1.7 in 2.7						

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

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

TIME_1900 - Time Marked every 60.00 (s)

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
 Creation Date: 14-Oct-2024 16:21:40

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	8133	ft
CDEN	Cement Density	USIT-E	0	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.6	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	198	us/ft
FD	Fluid Density	USIT-E	1.2	g/cm3
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_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	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.09	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.67	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	13.75	25.5	1856
BS	7.875	1856	1960.5

All depth are actual.

Tool Control Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	6	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 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

ONE

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000
	Wireline_NPD-MMCT-2023.0_13.0.226705

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	69.15 ft	1961.24 ft	14-Oct-2024 3:22:13 PM	14-Oct-2024 3:50:14 PM	ON	4.43 ft	Yes

All depths are referenced to toolstring zero

Log Company:Chevron Energy Corporation Well:Frico #16-15
ONE: Log[3]:Up:S009

Description: USI Goodwin Format: Log (IBC Goodwin) Index Scale: 0.1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Oct-2024 16:21:44

TIME: 1000 Time Marked every: 60.00 (s)

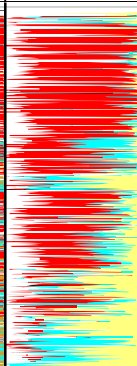
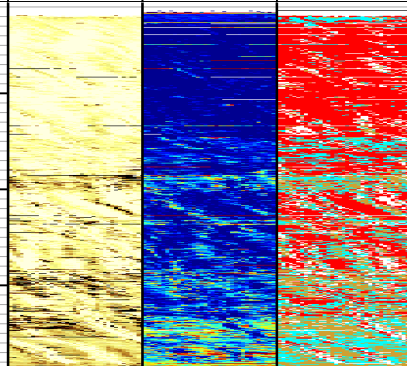
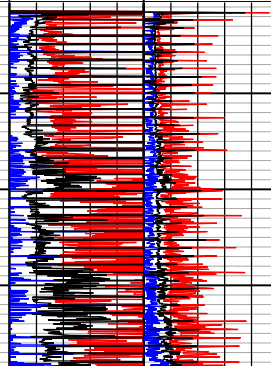
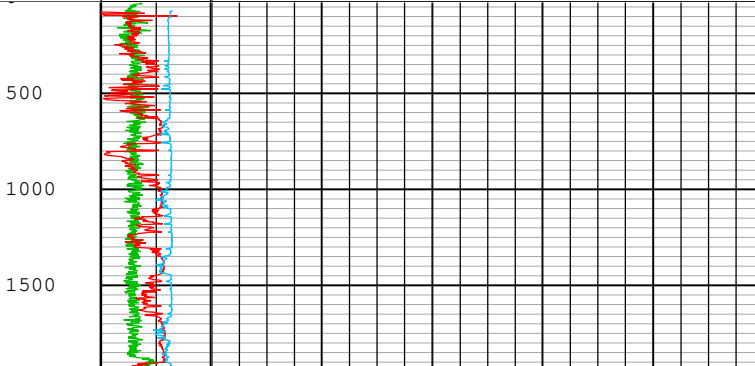
Gamma Ray (ECGR_E DTC) EDTC-B
 0 150 gAPI
 Amplitude of Eccentering (ECCE) USIT-E
 0 in 0.5
 Motor Revolution Speed (RSAV) USIT-E
 6 c/s 8

Goodwin Sector Curves (5 Mrayl per Division)

Acoustic Impedance Minimum (AIMN) USIT-E	Minimum Flexural Attenuation (U-USIT_UF AN) USIT-E
-1 Mrayl 9	0 dB/ft 150
Acoustic Impedance Maximum (AIMX) USIT-E	Maximum Flexural Attenuation (U-USIT_UF AX) USIT-E
-1 Mrayl 9	0 dB/ft 150
Acoustic Impedance Average (AIAV) USIT-E	Average Flexural Attenuation (U-USIT_UF AV) USIT-E
-1 Mrayl 9	0 dB/ft 150

Custom Normalization	Custom Normalization	Explicit Normalization
USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)	USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E

SLG Solid Index
SLG Liquid Index
SLG Gas Index
SLG White Point Index



Goodwin Sector Curves (5 Mrayl per Division)

Acoustic Impedance Minimum (AIMN) USIT-E	Minimum Flexural Attenuation (U-USIT_UF AN) USIT-E
-1 Mrayl 9	0 dB/ft 150
Acoustic Impedance Maximum (AIMX) USIT-E	Maximum Flexural Attenuation (U-USIT_UF AX) USIT-E
-1 Mrayl 9	0 dB/ft 150
Acoustic Impedance Average (AIAV) USIT-E	Average Flexural Attenuation (U-USIT_UF AV) USIT-E
-1 Mrayl 9	0 dB/ft 150

Custom Normalization	Custom Normalization	Explicit Normalization
USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)	USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E

SLG Solid Index
SLG Liquid Index
SLG Gas Index
SLG White Point Index

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	8133	ft
CDEN	Cement Density	USIT-E	0	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.6	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	198	us/ft
FD	Fluid Density	USIT-E	1.2	g/cm3
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_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	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.09	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.67	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Depth Zone Parameters

Parameter	Value	Start (ft)	Stop (ft)
BS	13.75	25.5	1856
BS	7.875	1856	1960.5

All depth are actual.

Tool Control Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	6	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 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

ONE

IBC SLC

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000
	Wireline_NPD-MMCT-2023.0_13.0.226705

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[1]:Up	Up	297.28 ft	504.68 ft	14-Oct-2024 3:09:23 PM	14-Oct-2024 3:12:33 PM	ON	1.82 ft	Yes

All depths are referenced to toolstring zero

Log

Company:Chevron Energy Corporation Well:Frico #16-15

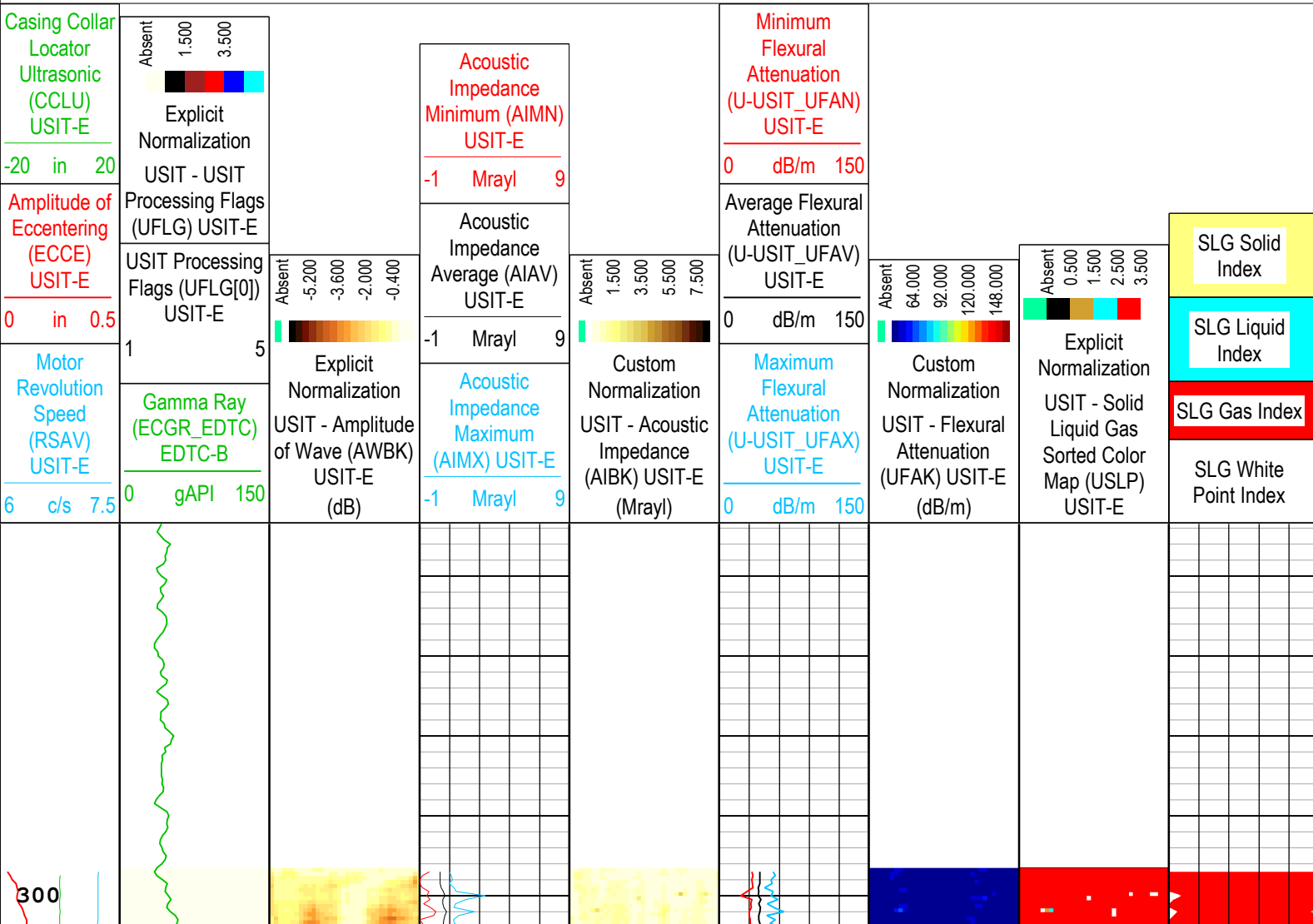
ONE: Log[1]:Up:S009

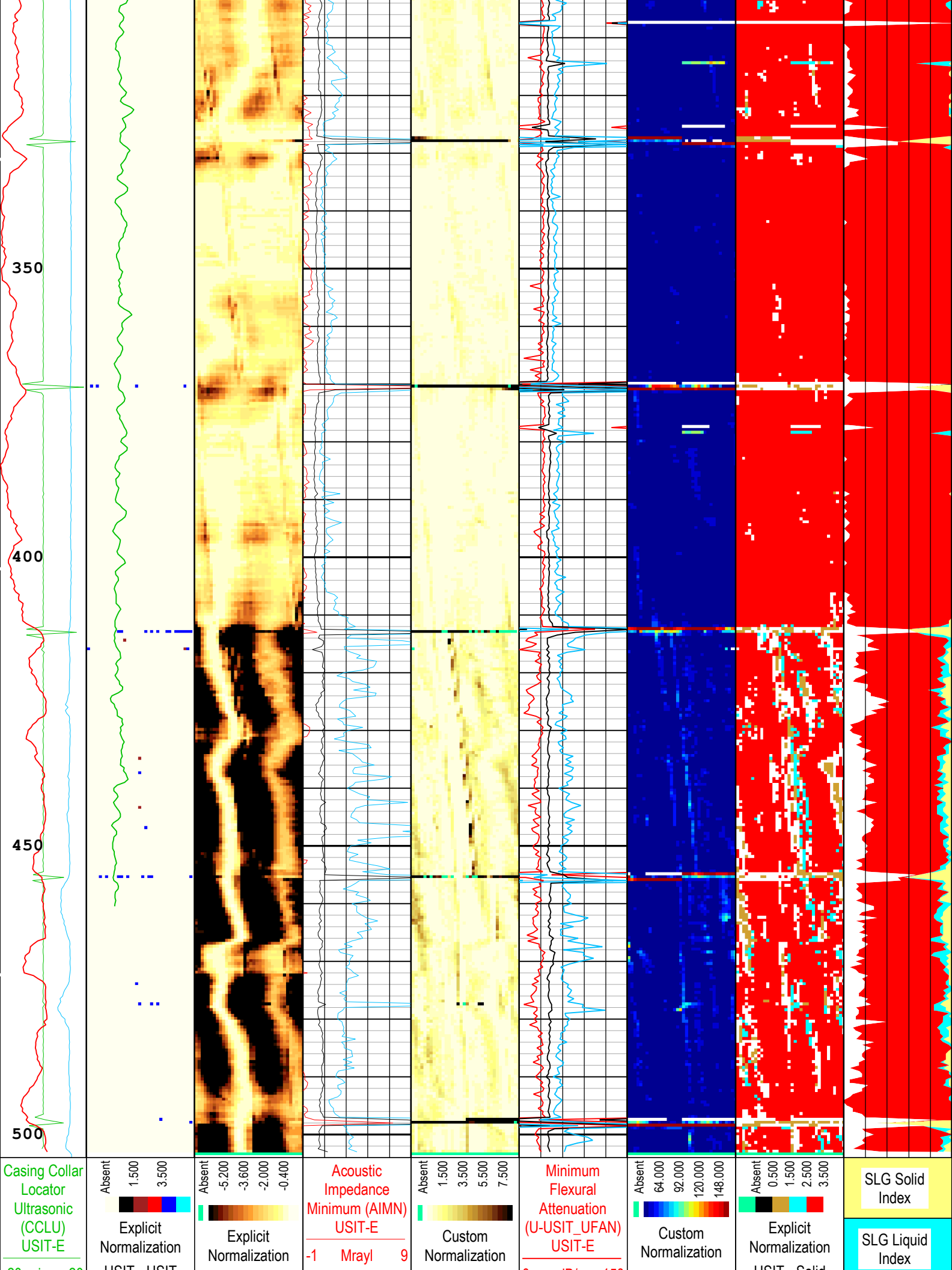
Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Oct-2024 16:21:47

TIME_1900 - Time Marked every 60.00 (s)

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

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





Casing Collar
Locator
Ultrasonic
(CCLU)
USIT-E

Absent 1.500 3.500
Explicit
Normalization
USIT-E USIT-E

Absent -5.200 -3.600 -2.000 -0.400
Explicit
Normalization

Acoustic
Impedance
Minimum (AIMN)
USIT-E
-1 Mrayl 9

Absent 1.500 3.500 5.500 7.500
Custom
Normalization

Minimum
Flexural
Attenuation
(U-USIT_UFAN)
USIT-E

Absent 64,000 92,000 120,000 148,000
Custom
Normalization

Absent 0.500 1.500 2.500 3.500
Explicit
Normalization
USIT-E Solid

SLG Solid
Index
SLG Liquid
Index

20 in 20	USIT - USIT Processing Flags (UFLG) USIT-E	USIT - Amplitude of Wave (AWBK) USIT-E (dB)	Acoustic Impedance Average (AIAV) USIT-E	USIT - Acoustic Impedance (AIBK) USIT-E (Mrayl)	0 dB/m 150	USIT - Flexural Attenuation (UFAK) USIT-E (dB/m)	USIT - Solid Liquid Gas Sorted Color Map (USLP) USIT-E	SLG Gas Index
Amplitude of Eccentering (ECCE) USIT-E	USIT Processing Flags (UFLG[0]) USIT-E		-1 Mrayl 9		Average Flexural Attenuation (U-USIT_UFAV) USIT-E			SLG White Point Index
0 in 0.5	1 5		Acoustic Impedance Maximum (AIMX) USIT-E		0 dB/m 150			
Motor Revolution Speed (RSAV) USIT-E	Gamma Ray (ECGR_EDTC) EDTC-B		-1 Mrayl 9		Maximum Flexural Attenuation (U-USIT_UFAX) USIT-E			
6 c/s 7.5	0 gAPI 150				0 dB/m 150			

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

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

TIME_1900 - Time Marked every 60.00 (s)

Description: USI IBC SLG Format: Log (IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 14-Oct-2024 16:21:47

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BERJ	Bad Echo Rejection	USIT-E	On	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	13.75	in
CASING_PRATIO	Casing Poisson Ratio	USIT-E	Standard Poisson Ratio	
CBLO	Casing Bottom (Logger)	WLSESSION	8133	ft
CDEN	Cement Density	USIT-E	0	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.6	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	198	us/ft
FD	Fluid Density	USIT-E	1.2	g/cm3
FDII	FPM Data Interpolation Interval	USIT-E	0	ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS(RT)	
GR_MULTIPLIER	Gamma Ray Multiplier	EDTC-B	1	
HEMA	Hematite Presence Flag	Borehole	No	
IBC_FRP_OFFSET	IBC Flexural Offset from Free Pipe	USIT-E	0	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	Theoretical	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.09	
RCOD	Reference Calibrator Outer Diameter	USIT-E	4.5	in
RCSO	Reference Calibrator Standoff	USIT-E	0.842	in

RCTH	Reference Calibrator Thickness	USIT-E	0.216	in
RPLUS_PROCESS	Ultrasonic R+ Processing	USIT-E	No	
SOCN	Standoff Distance	EDTC-B	0.125	in
SOCO	Standoff Correction Option	EDTC-B	No	
THDH	Maximum Search Thickness (percentage of nominal)	USIT-E	130	%
THDL	Minimum Search Thickness (percentage of nominal)	USIT-E	70	%
TPOS_EDTC	Tool Position: Centered or Eccentered	EDTC-B	Eccentered	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.67	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	
THDP	Thickness Detection Policy	USIT-E	Fundamental	
VCAS	Ultrasonic Transversal Velocity in Casing	USIT-E	51.4	us/ft
ZCAS	Acoustic Impedance of Casing	USIT-E	46.25	Mrayl
ZINI	Initial Estimate of Cement Impedance	USIT-E	-1	Mrayl
ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Tool Control Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
U-USIT_DDT5	USIC Downhole Decimation for T5 only	USIT-E	0_NONE	
DOT(DOS)	Distance between Opposite Transducer Faces	USIT-E	1.756	in
EMXV	EMEX Voltage	USIT-E	6	V
HRES	Horizontal Resolution	USIT-E	10 deg	
IBC_ACQTYPE	IBC Acquisition type	USIT-E	1 MHz	
IBC_FLEXDBP	IBC Flex Duration Before Peak	USIT-E	30	us
ICE2_ACQ	Ultrasonic ICE2 Acquisition	USIT-E	Yes	
MOTOR_PROTECT	Motor Protection	USIT-E	On	
UACLV_PERM	Ultrasonic ACLV Permanent	USIT-E	Yes	
USFR	Ultrasonic Sampling Frequency	USIT-E	666667	Hz
UPAT	USIT Emission Pattern	USIT-E	Pattern 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
USSP	Ultrasonic Service	USIT-E	IBC	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

ONE

Software Version

Acquisition System	Version
Maxwell 2023.0	13.0.221437.3100
Application Patch	Wireline_Hotfix-Mandatory-2023.0_13.0.224590
	Wireline_NPD-ThruBit-2023.0_13.0.225000
	Wireline_NPD-MMCT-2023.0_13.0.226705

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[1]:Up	Up	297.28 ft	504.68 ft	14-Oct-2024 3:09:23 PM	14-Oct-2024 3:12:33 PM	ON	1.82 ft	Yes

All depths are referenced to toolstring zero

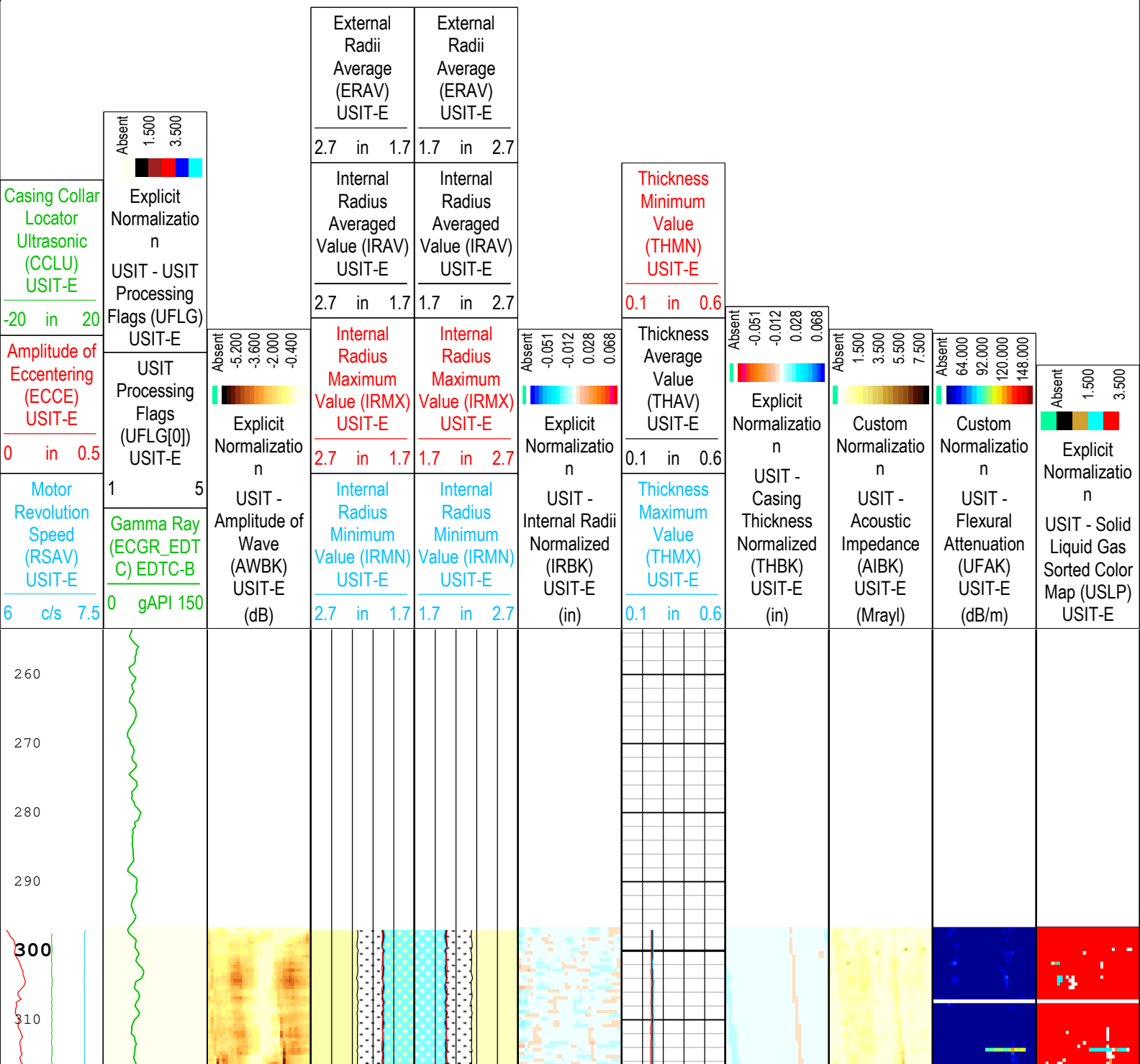
Log	Company:Chevron Energy Corporation	Well:Frico #16-15
	ONE: Log[1]:Up:S009	

Description: USIT IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
 Creation Date: 14-Oct-2024 16:21:50

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

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

TIME_1900 - Time Marked every 60.00 (s)



USIT-E	USIT-E	(AWBK) USIT-E	Value (IRAV) USIT-E	Value (IRAV) USIT-E	(IRBK) USIT-E	(THAV) USIT-E	Normalized (THBK) USIT-E	(AIBK) USIT-E	(UFAK) USIT-E	Map (USLP) USIT-E
0 in 0.5	USIT Processing Flags (UFLG[0]) USIT-E	(dB)	2.7 in 1.7	1.7 in 2.7	(in)	0.1 in 0.6	(in)	(Mrayl)	(dB/m)	
Motor Revolution Speed (RSAV) USIT-E	1 5		Internal Radius Maximum Value (IRMX) USIT-E	Internal Radius Maximum Value (IRMX) USIT-E		Thickness Maximum Value (THMX) USIT-E				
6 c/s 7.5	Gamma Ray (ECGR_EDT C) EDTC-B		2.7 in 1.7	1.7 in 2.7		0.1 in 0.6				
	0 gAPI 150		Internal Radius Minimum Value (IRMN) USIT-E	Internal Radius Minimum Value (IRMN) USIT-E						
			2.7 in 1.7	1.7 in 2.7						

TIME_1900 - Time Marked every 60.00 (s)

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

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

Description: USI IBC SLG Composite Format: Log (IBC SLG Composite 4.5IN) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth
 Creation Date: 14-Oct-2024 16:21:50

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
BARI(ISSBAR)	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Cased	
BS	Bit Size	WLSESSION	13.75	in
CBLO	Casing Bottom (Logger)	WLSESSION	8133	ft
CDEN	Cement Density	USIT-E	0	g/cm3
CDEN	Cement Density	EDTC-B	2	g/cm3
CMTY(U-USIT_CEMT)	Cement Type	USIT-E	Regular Cement	
DFD	Drilling Fluid Density	Borehole	8.6	lbm/gal
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	198	us/ft
FD	Fluid Density	USIT-E	1.2	g/cm3
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_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	
IMAR	Image Rotation	USIT-E	Off	
MEAS_WLEN	Tcube Processing Window Length in Measurement Mode	USIT-E	15.37	us
MUD_N_THE	Theoretical Mud Normalization Factor	USIT-E	1.09	
U-USIT_DFSZ	Drilling Fluid Specific Acoustic Impedance	USIT-E	1.67	Mrayl
U-USIT_UFAO	USIT Flexural Attenuation Offset	USIT-E	-15	dB/m
UFSFILT	Ultrasonic Flexural Surface Filter	USIT-E	LPF 250k	
U-USIT_UIAP	IBC Answer Product Enabled	USIT-E	ThirdInterfaceEcho	

ZMUD	Acoustic Impedance of Mud	Borehole	1.7	Mrayl
ZTCM	Acoustic Impedance Threshold for Cement	USIT-E	2.6	Mrayl
ZTGS	Acoustic Impedance Threshold for Gas	USIT-E	0.3	Mrayl

Tool Control Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
AGMN	Minimum Gain of Cartridge	USIT-E	-12	dB
AGMX	Maximum Gain of Cartridge	USIT-E	48	dB
EMXV	EMEX Voltage	USIT-E	6	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 750 KHz	
UWKM	USIT Working Mode	USIT-E	10 deg at 6.0 in	
U-USIT_UTAN	Transducer Angles	USIT-E	33_DEG	
VRES	Vertical Resolution	USIT-E	6.0 in	

XYZ

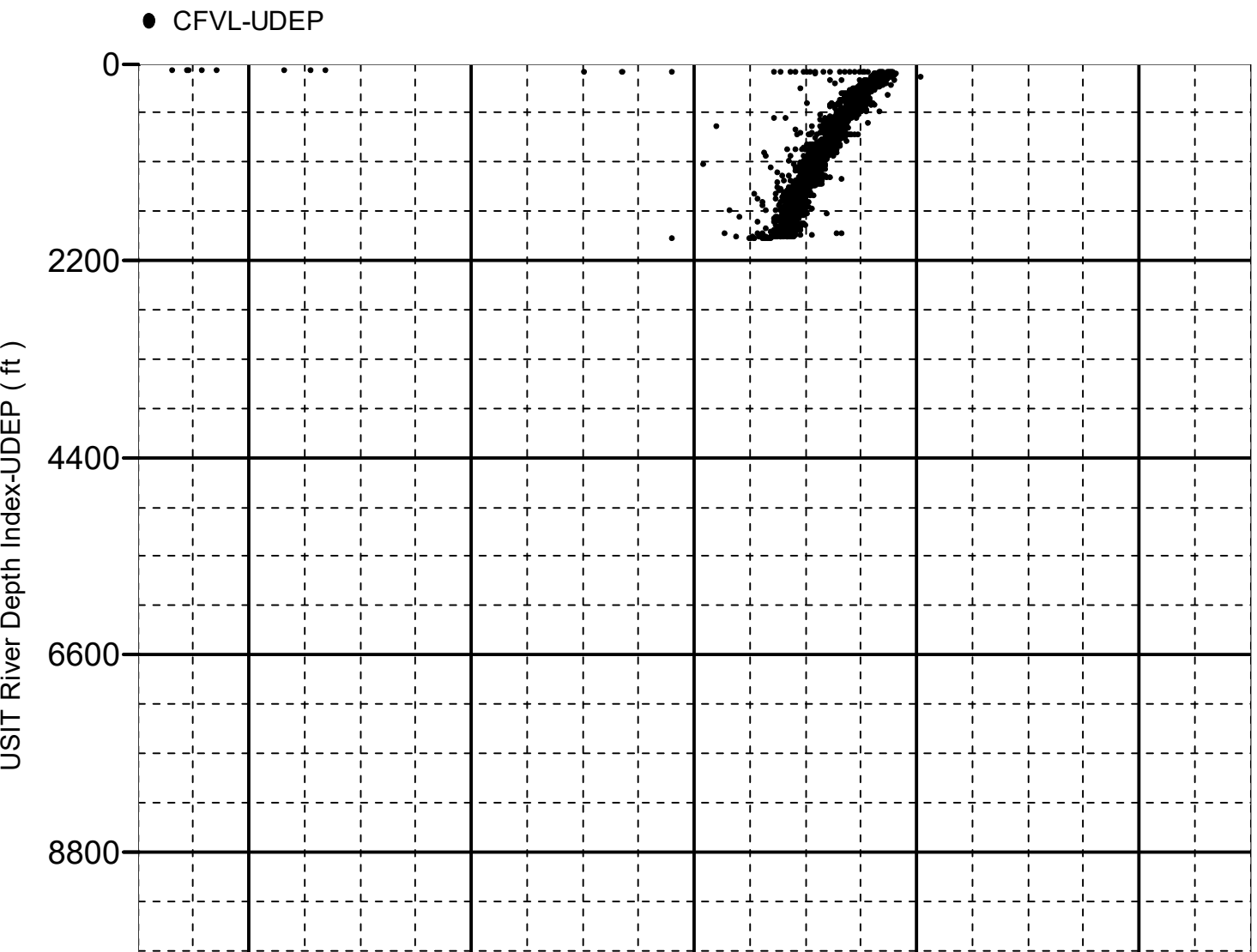
Company:Chevron Energy Corporation Well:Frico #16-15

ONE: Log[3]:Up:S009

Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 1960.50 to 68.50 ft



11000

160

180

200

220

240

Memorized Fluid Acoustic...-CFVL (us/ft)

XYZ

Company:Chevron Energy Corporation Well:Frico #16-15

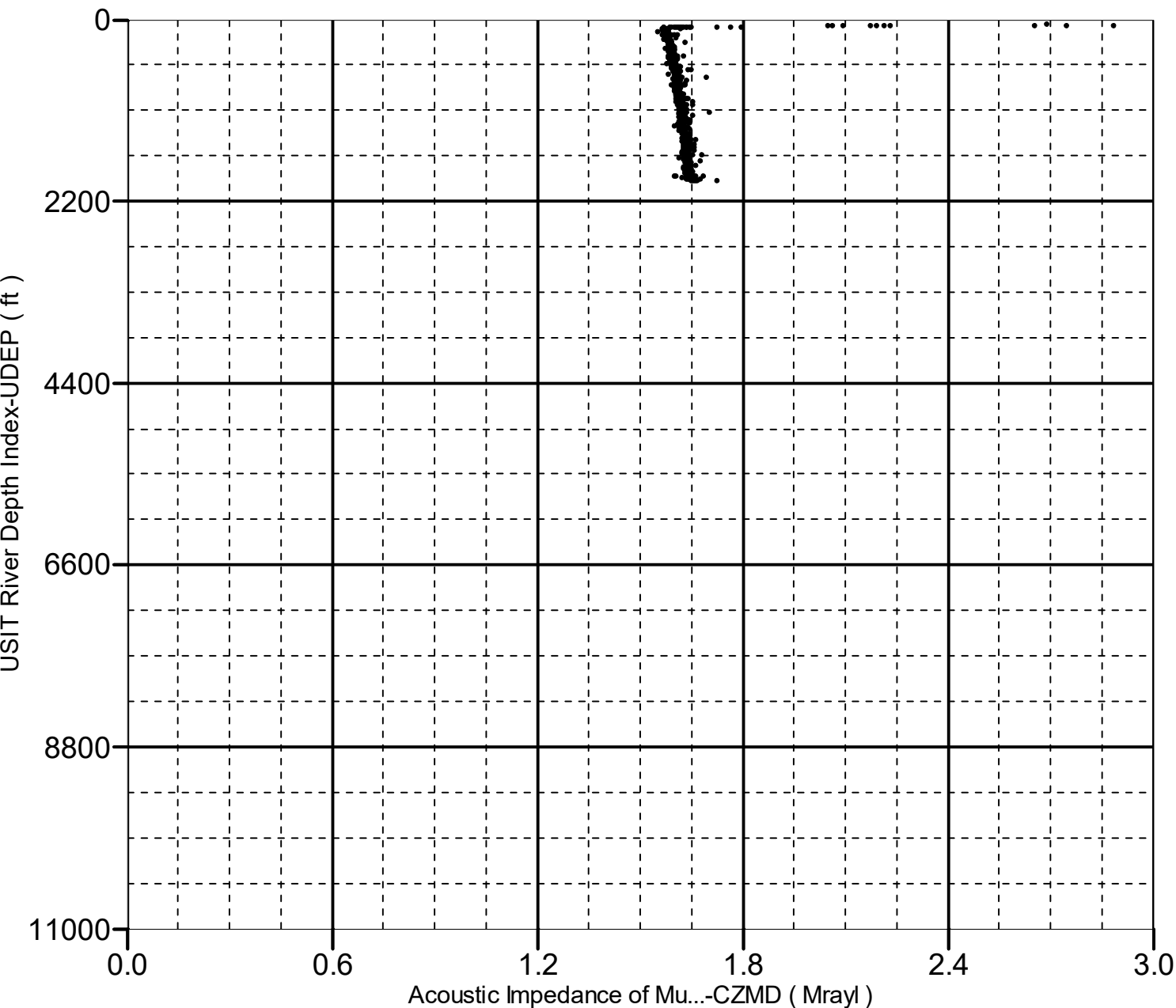
ONE: Log[3]:Up:S009

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 1960.50 to 68.50 ft

● CZMD-UDEP



Company: Chevron Energy Corporation



Well: Frico #16-15

Field: Wattenberg

County: Weld

Country: USA

Isolation Scanner

Cement Evaluation

Gamma Ray - CCL Log