

Company: Occidental Permian Ltd.

Well: South Hobbs (G/GSA) 28

Field: Hobbs (GSA)

County: Lea State: New Mexico

Isolation Scanner
Cement Print
Gamma Ray

County:	Lea	Location:	Section: 5, Township: 19S, Range: 38E.	Elev.:	K.B.	3634.00 ft
Field:	Hobbs (GSA)		1980 FNL & 1980' FWL		G.L.	3621.00 ft
Well:	South Hobbs (G/GSA) 28				D.F.	3633.00 ft
Company:	Occidental Permian Ltd.	Location:	Permanent Datum:	Ground Level	Elev.:	3621.00 f
			Log Measured From:	Kelly Bushing	13.00 ft	above Perm.Datum
			Drilling Measured From:	Kelly Bushing		
		API Serial No.	Section:	Township:	Range:	
		30-025-07630	5	19S	38E	

Logging Date 20-Aug-2019

Run Number 1A

Depth Driller 3950.00 ft

Schlumberger Depth 2610.00 ft

Bottom Log Interval 2610.00 ft

Top Log Interval 0.00 ft

Casing Fluid Type Water

Salinity

Density 9.35 lbm/gal

Fluid Level 8.00 ft

BIT/CASING/TUBING STRING

Bit Size 7.63 in

From 1209.00 ft

To 3950.00 ft

Casing/Tubing Size 6.625 in

Weight 24 lbm/ft

Grade N/A

From 0.00 ft

To 3950.00 ft

Max Recorded Temperatures

Logger on Bottom 21-Aug-2019 10:11:00

Unit Number Location: 2191 Midland

Recorded By Ryan Kennedy

Witnessed By Alfredo Cenicerros

Disclaimer

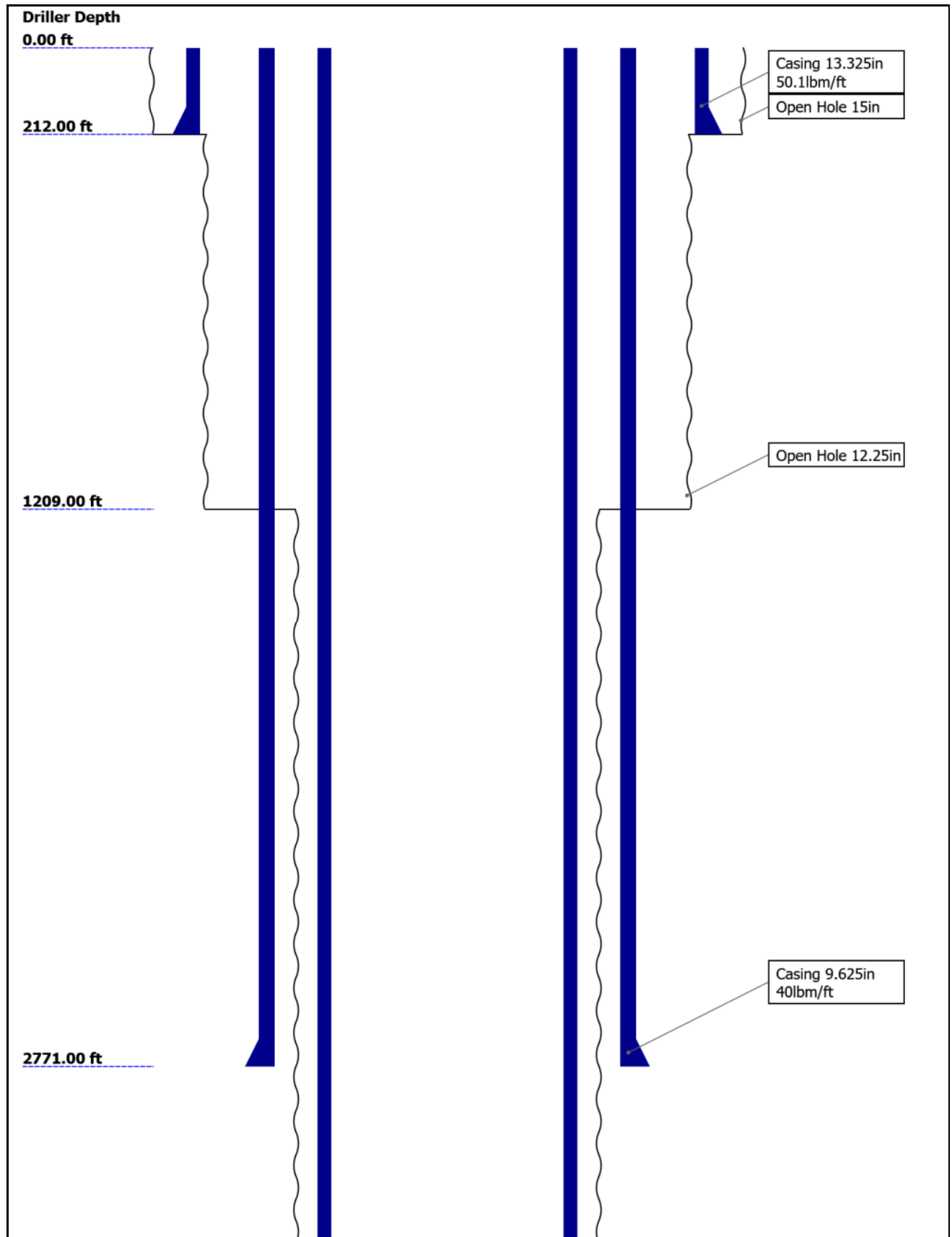
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (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.

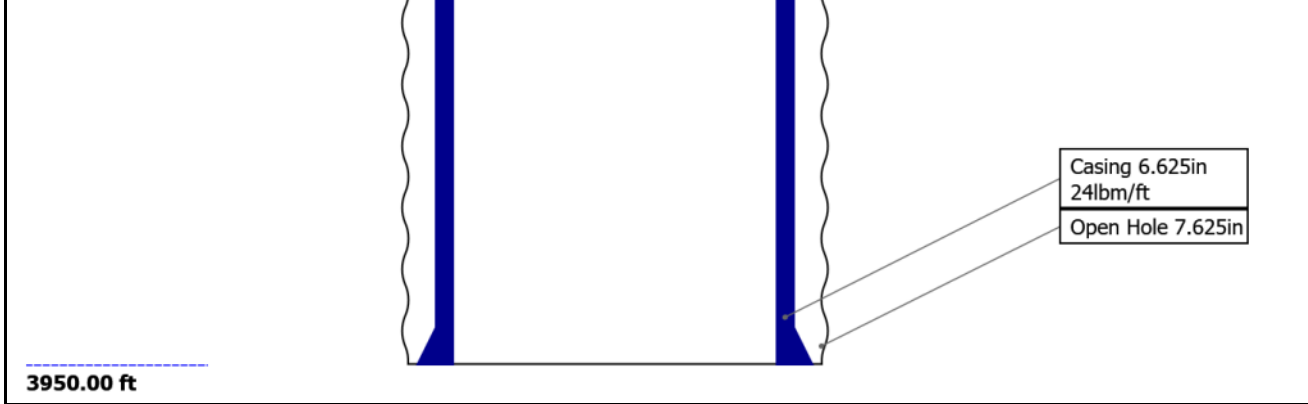
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Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	15	12.25	7.625			
Top Driller (ft)	0	212	1209			
Top Logger (ft)	0	212	1209			
Bottom Driller (ft)	212	1209	3950			
Bottom Logger (ft)	212	1209	3950			
Casing						
Size (in)	13.325	9.625	6.625			
Weight (lbm/ft)	50.1	40	24			
Inner Diameter (in)	12.618	8.835	5.921			
Grade	N/A	N/A	N/A			
Top Driller (ft)	0	0	0			
Top Logger (ft)	0	0	0			
Bottom Driller (ft)	212	2771	3950			
Bottom Logger (ft)	212	2771	3950			

Operational Run Summary

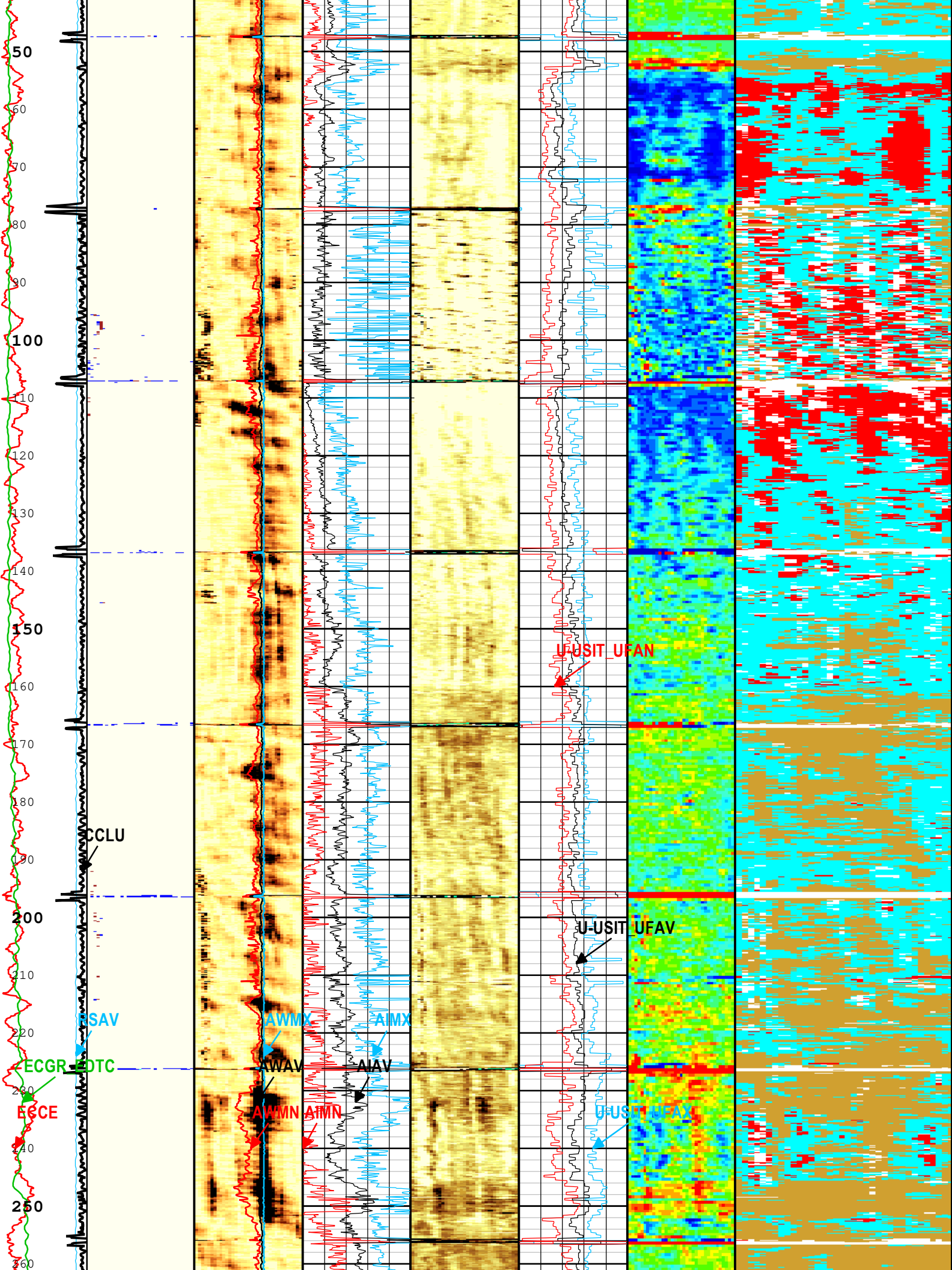
Parameter (unit)	1A					
Date Log Started	20-Aug-2019					
Time Log Started	16:42:08					
Date Log Finished	21-Aug-2019					
Time Log Finished	15:07:40					
Top Log Interval (ft)	0.00					
Bottom Log Interval (ft)	2610.00					
Total Depth (ft)						
Max Hole Deviation (deg)	0.00					
Azimuth of Max Deviation (deg)	0.00					
Bit Size (in)	7.625					
Logging Unit Number	2191					
Logging Unit Location	Midland					
Recorded By	Ryan Kennedy					

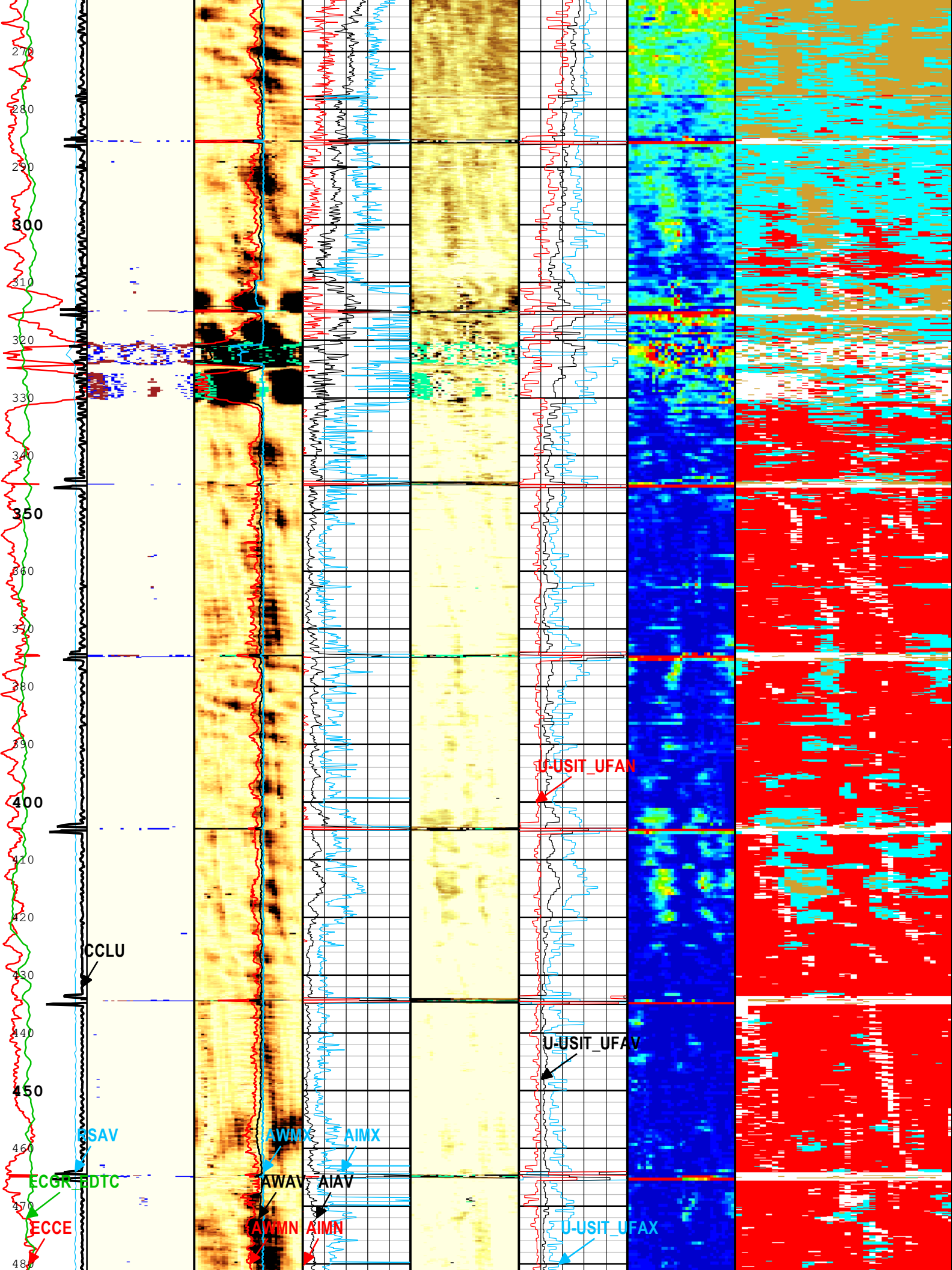
Witnessed By	Alfredo Cenicerros					
Service Order Number	E26L-00088					

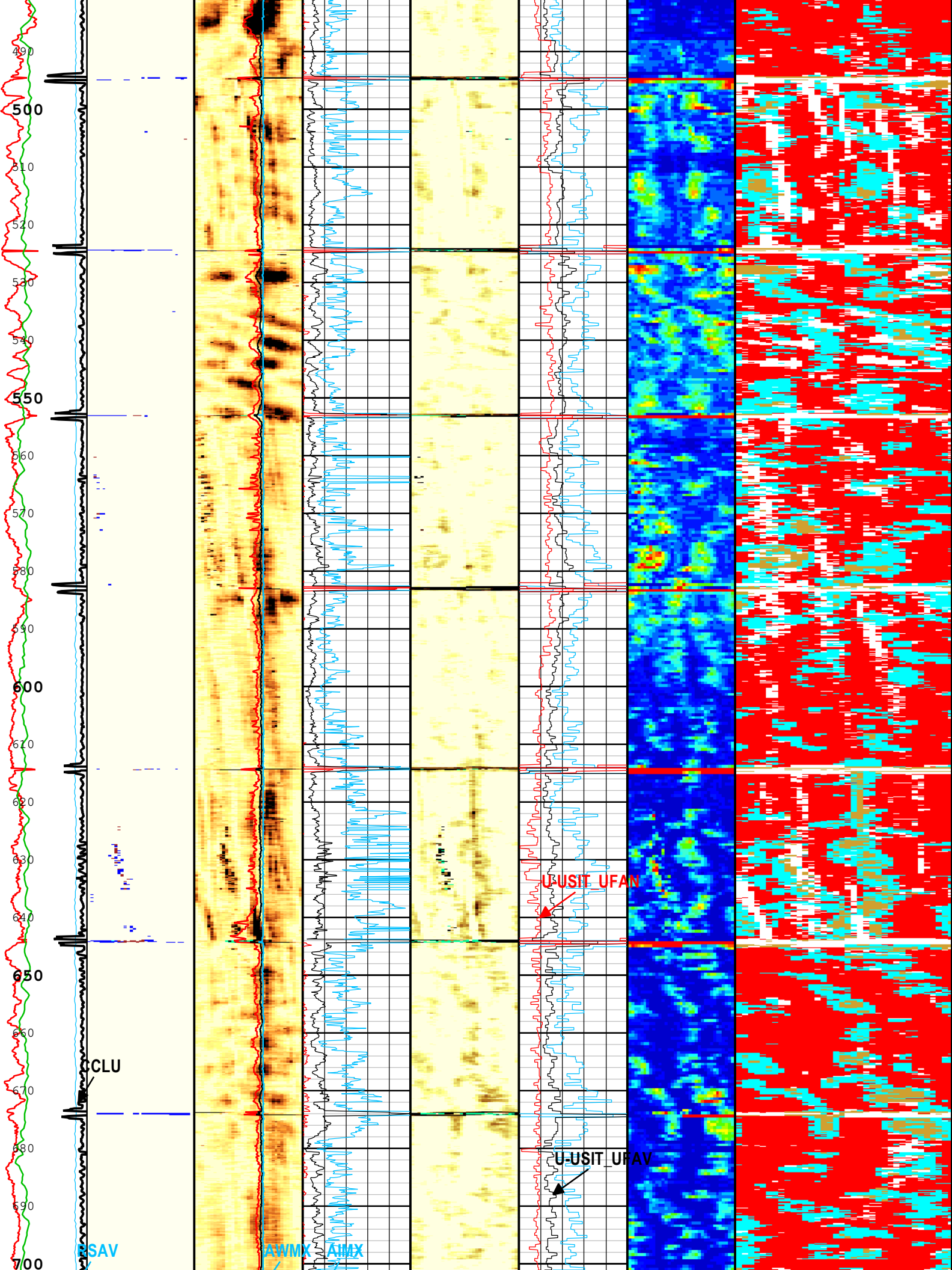
1A: Toolstring				1A: Remarks	
Equip name	Length	MP name	Offset	Logging Objective: Casing and Cement Evaluation	
LEH-QC	29.6			Toolstring ran as per toolsketch.	
EDTC-B	27.14			Small hole kit (.75") and Booster kits used for centralization,	
EDTH-B				Main Pass logged @1000psi and repeat	
EDTG-A				logged @0psi.	
EDTC-B					
		CTEM	23.64		
		ACCZ	0.00		
		HV	0.00		
		Gamma	21.77		
		Ray			
		TelStatu	20.64		
		s			
AH-107[2]	20.64				
AH-107[1]	18.64				
USIT-E:1846	16.64				
ECH-MFA:2830					
USAC-A:1846					
USIS-A:940					
USSC-B:791					
IBCS-A:783					
FAR-SENS OR:4495					
IBC-TX					
NEAR-SENS OR:4690					
IBC-TX					
USI-SENS OR:4715					
IBC-TX					
EMITTER-SENSOR:4612					
IBC-TX					
		USI Sensor	0.84		
		TOOL_ZERO			
Lengths are in ft Maximum Outer Diameter = 3.625 in Line: Sensor Location, Value: Gating Offset All measurements are relative to TOOL_ZERO					

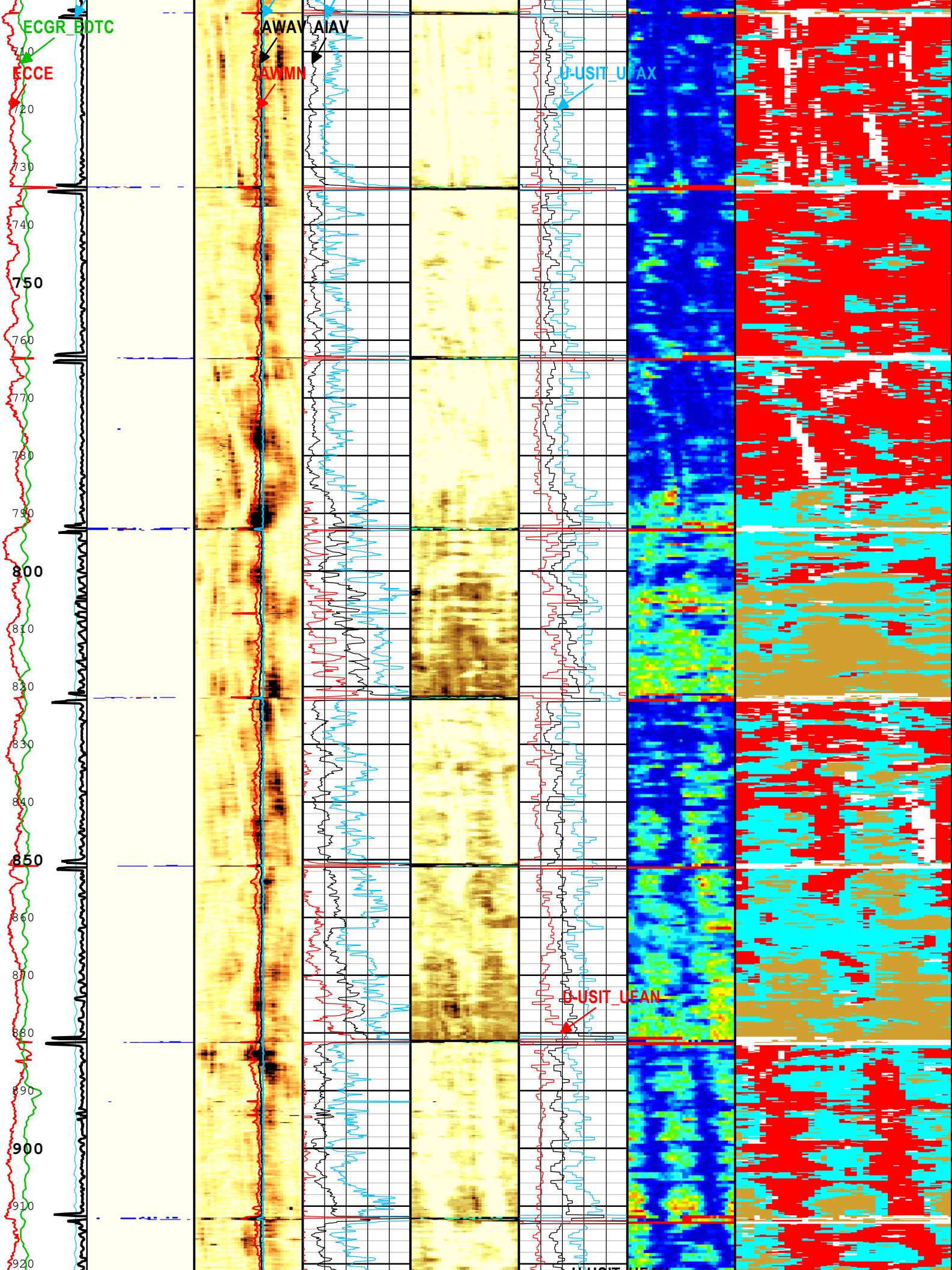
Depth Summary			
	1A		
Depth Measuring Device			
Type	IDW-JA		
Serial Number	6493		
Calibration Date	30-May-2019		
Calibrator Serial Number	IDW-C-57		
Calibration Cable Type	7-32 AS-XS		
Wheel Correction 1	0		

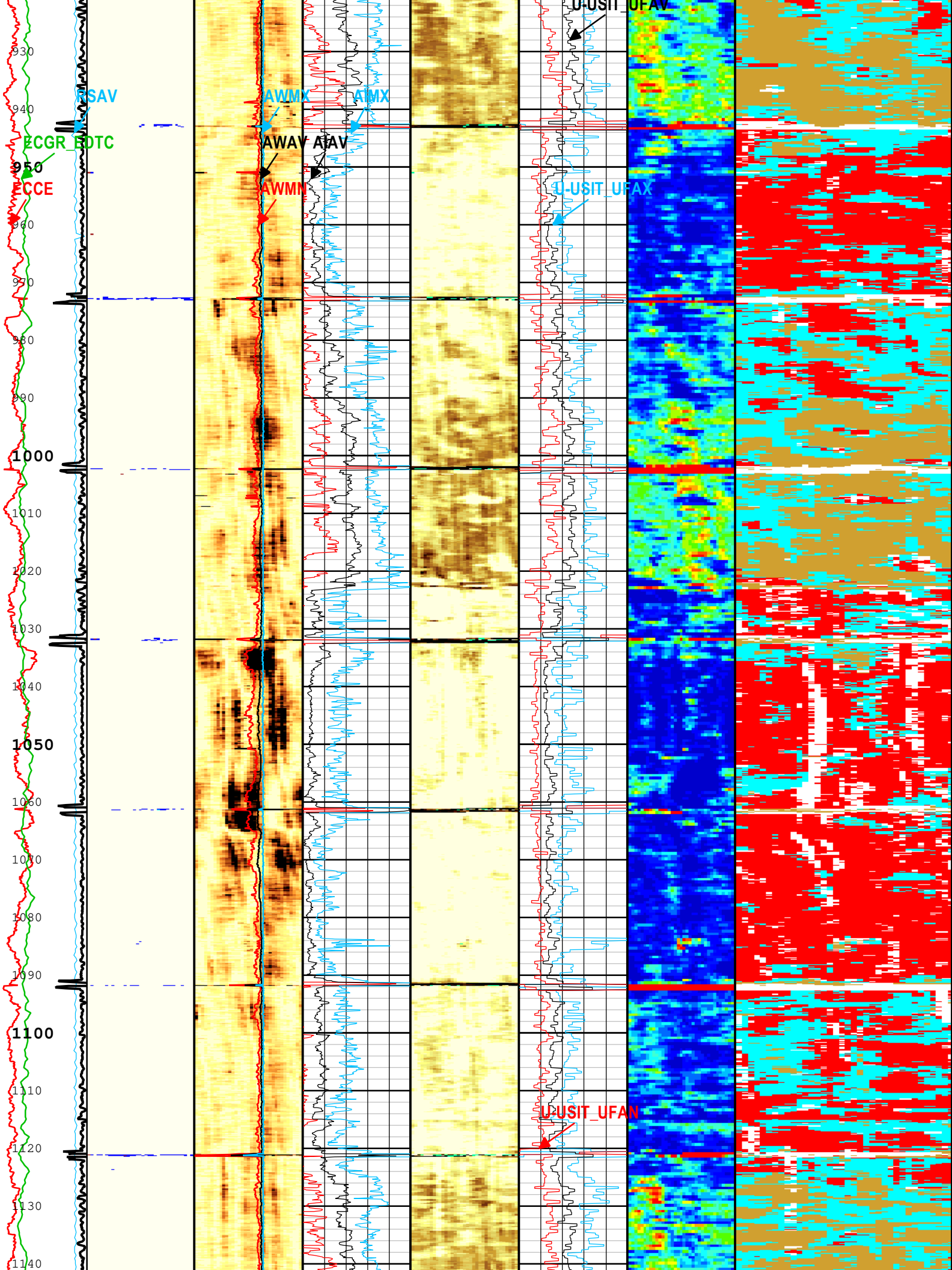
Wheel Correction 2		0		
Tension Device				
Type	CMTD-B/A			
Serial Number	2295			
Calibration Date	15-Aug-2019			
Calibrator Serial Number	13			
Number of Calibration Points	10			
Calibration Root Mean Square Error	7			
Calibration Peak Error	17			
Logging Cable				
Type	7-32AS-XS			
Serial Number				
Length	19000.00 ft			
Conveyance Type	Wireline			
Rig Type				
1A: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 device.	
Rig Up Length At Bottom			Zchart used as secondary depth control.	
Rig Up Length Correction			Log correlated to down log.	
Stretch Correction				
Tool Zero Check At Surface				
USIT - Fluid Properties Measurement				
Run Name	Pass Name	Start Depth(ft)	Stop Depth(ft)	
Run 1	Main[3]:Up	2617.24	13.40	
Fluid Velocity = "Automatic". CFVL equals DFSL channel				
Start Depth(ft)	Stop Depth(ft)	Start Value(us/ft)	End Value(us/ft)	
Mud Impedance = "Inversion Norm." IBC Inversion normalization zone is : 663.63m(2177.28ft) to 664.40m(2179.78ft) MUD_N_INV = 1.20 DFD = 1.12g/cm3(9.35lbm/gal) CZMD median computed in inversion normalization interval = 2.22 MRayl				
Start Depth(ft)	Stop Depth(ft)	Start Value(Mrayl)	End Value(Mrayl)	
No Data Assignment				
IBC Goodwin Compressed				
Software Version				
Acquisition System			Version	
Maxwell 2019			9.0.106845.3100	
Application Patch			Wireline_NPD-PMCT-2019.0_9.0.113037	
Log				
Description: USI Cement Format: Log (IBC Goodwin All Resolutions) Index Scale: 0.2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Aug-2019 16:12:43				
Description: USI Cement Format: Log (IBC Goodwin All Resolutions) Index Scale: 0.2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Aug-2019 16:12:43				
1A				

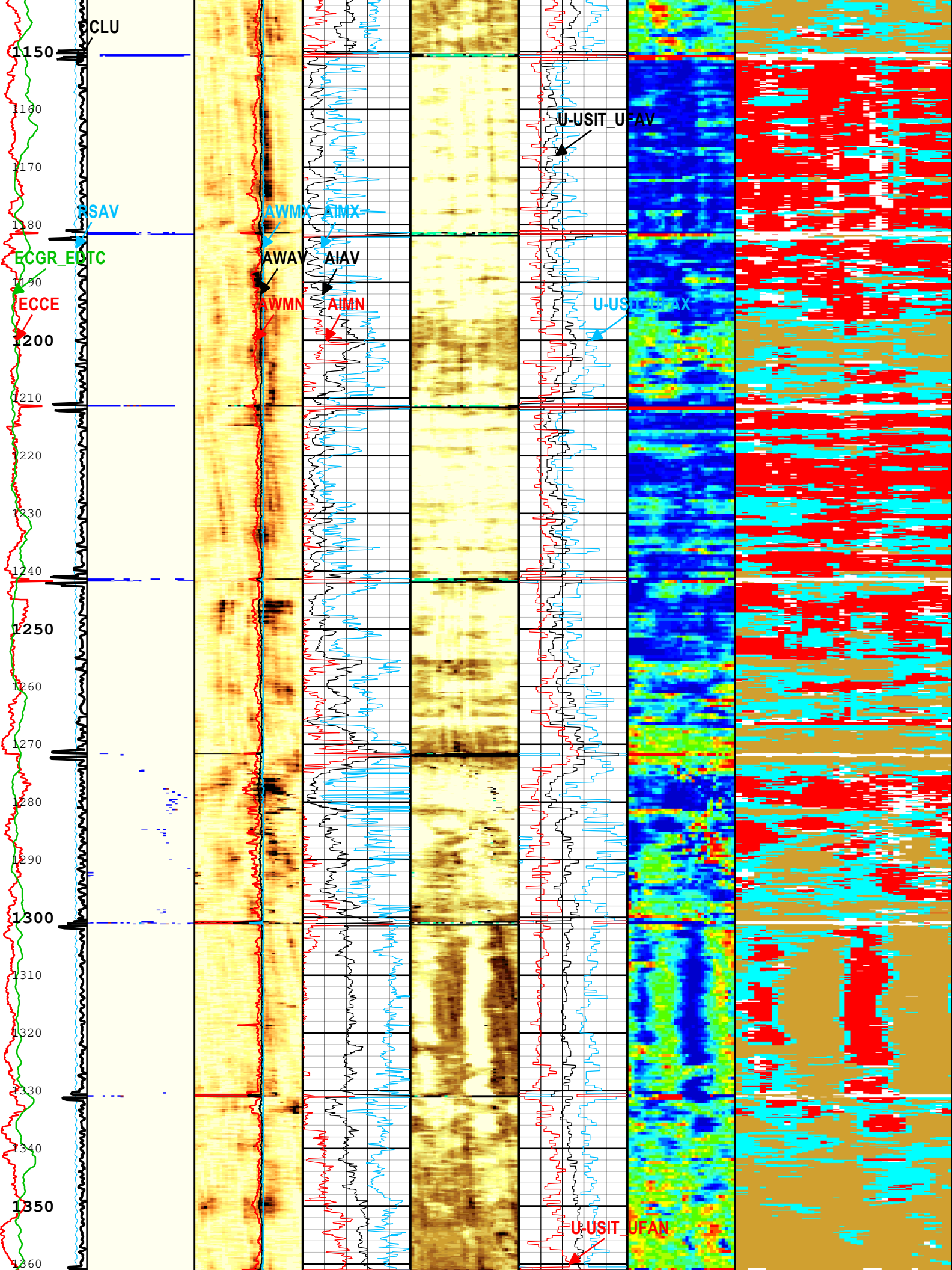


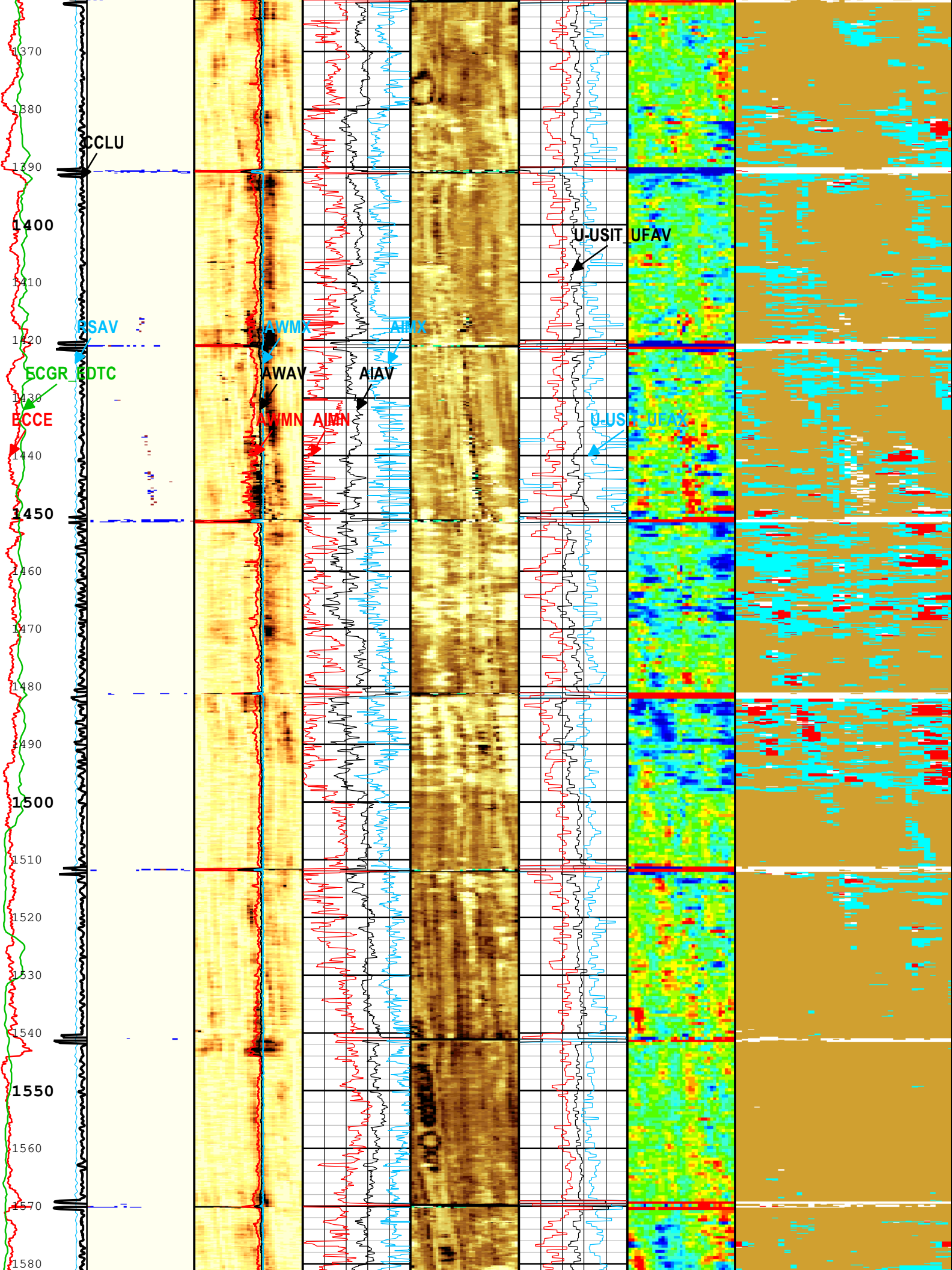


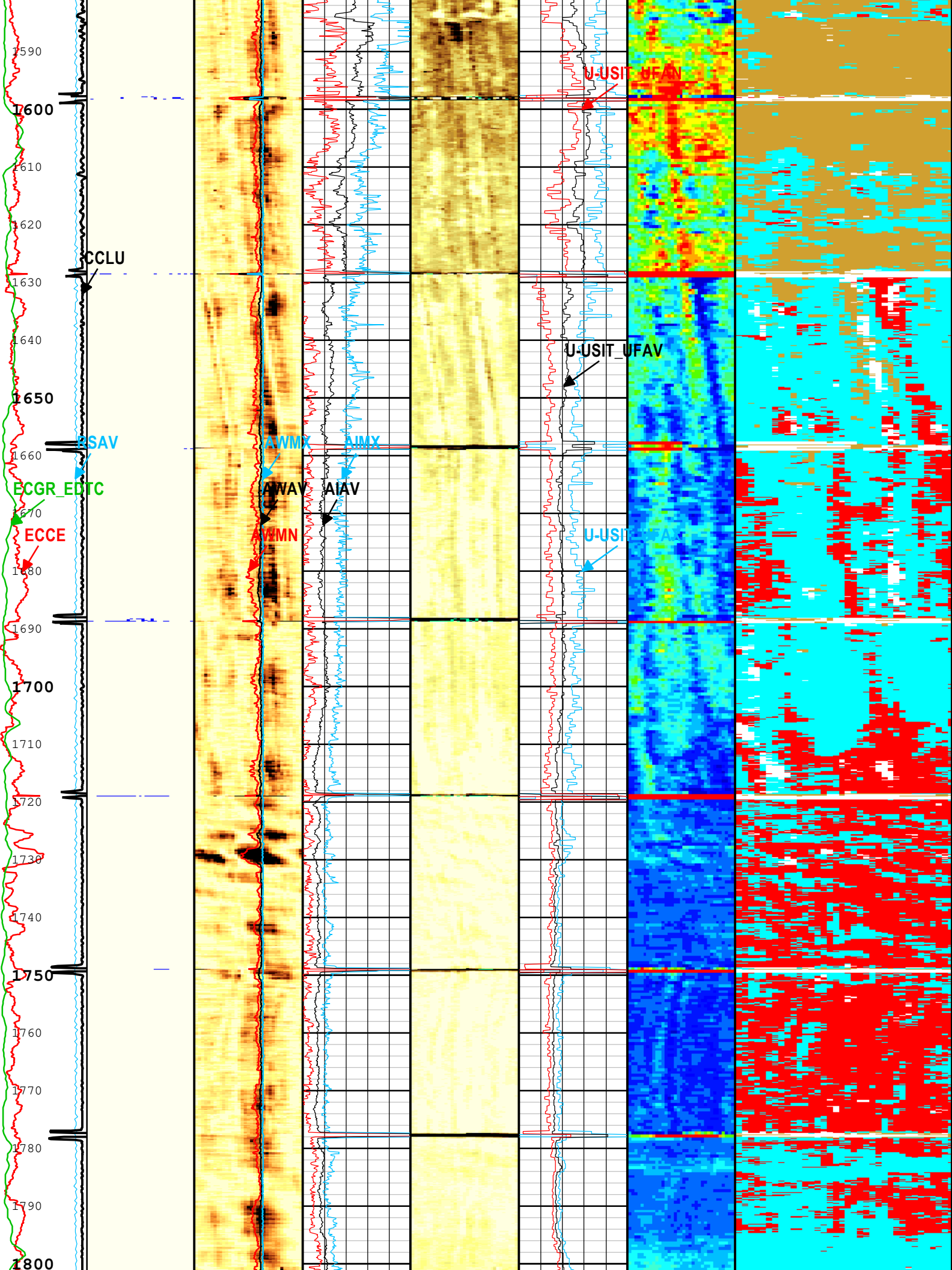


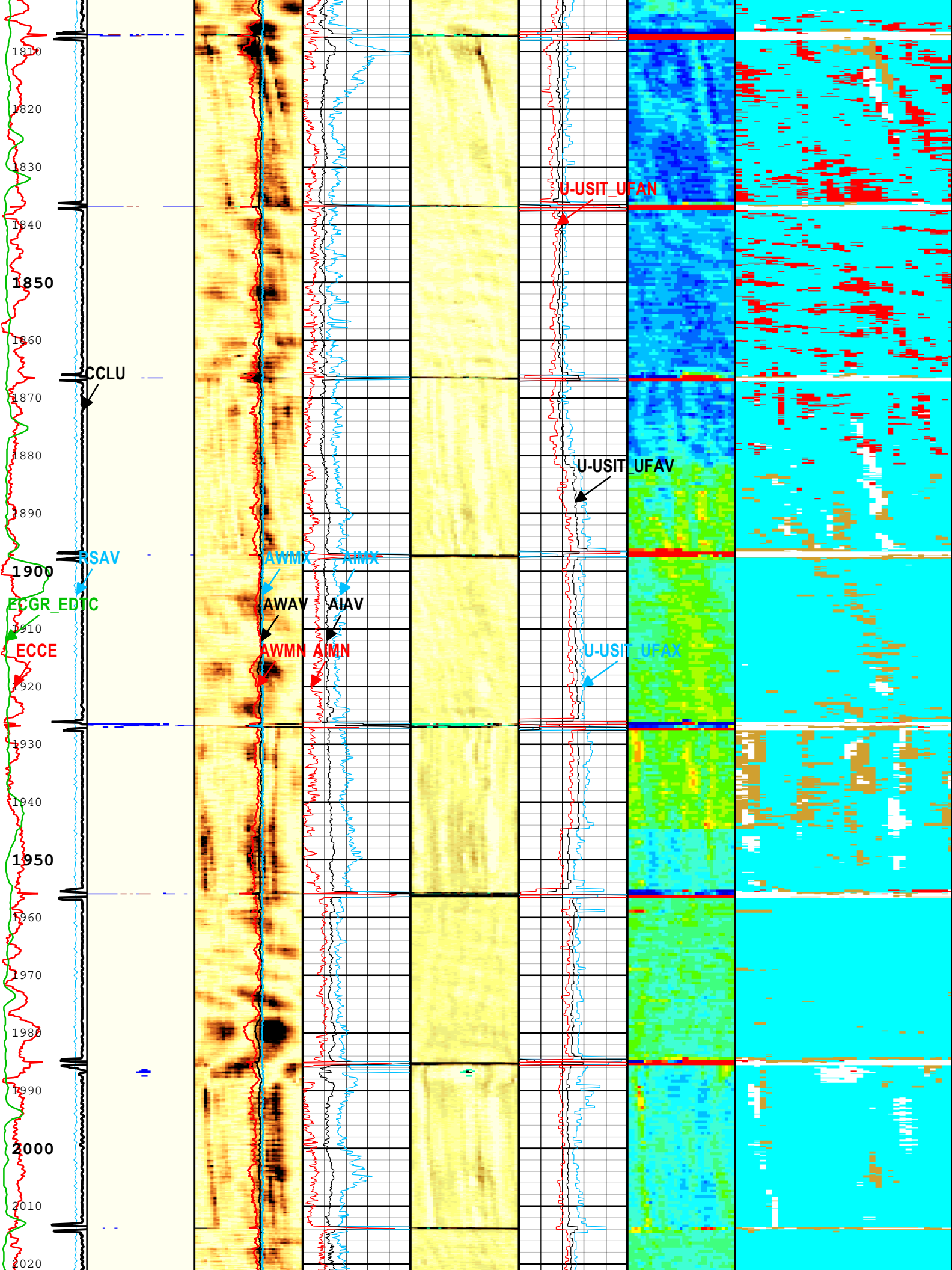


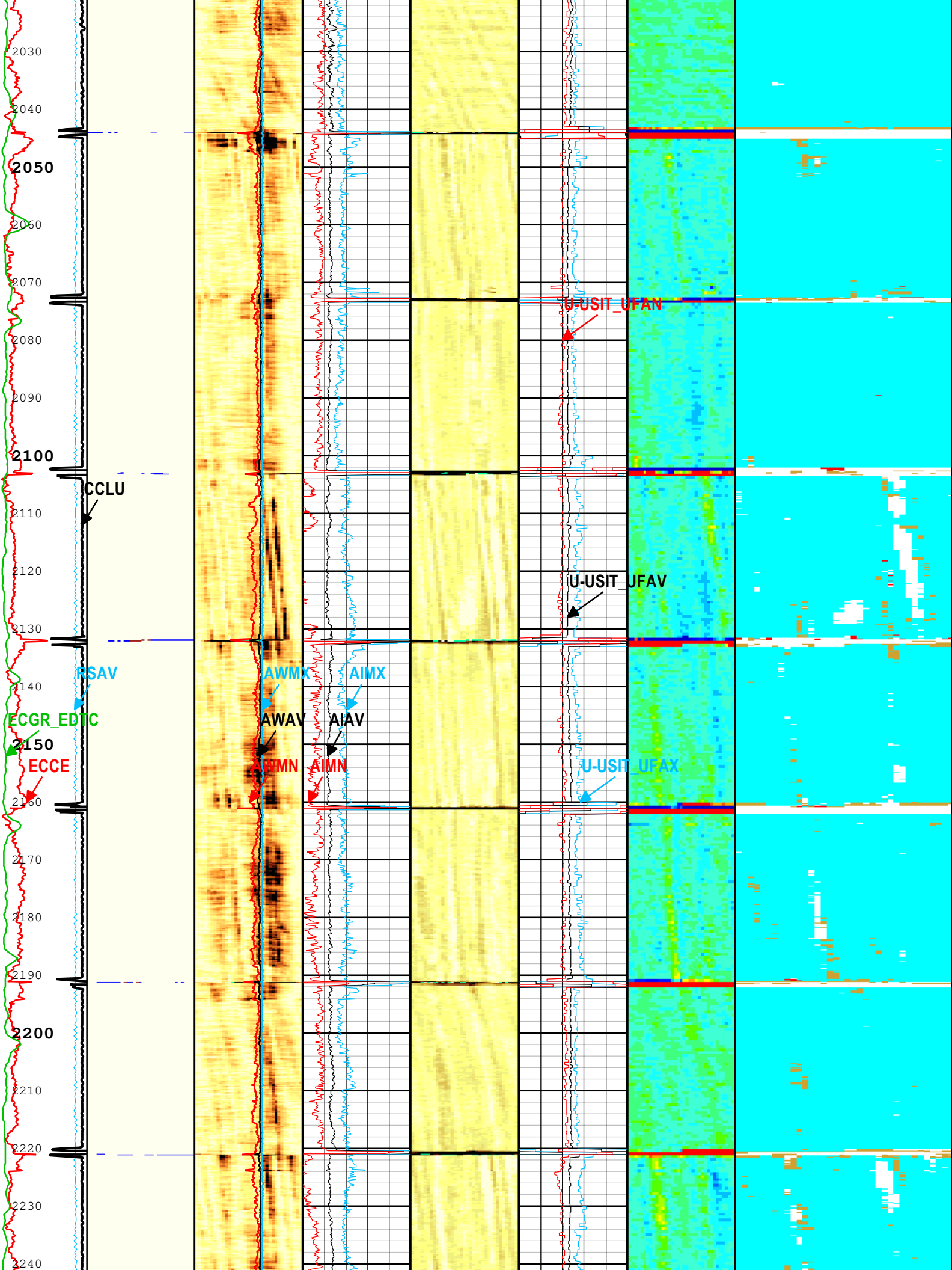


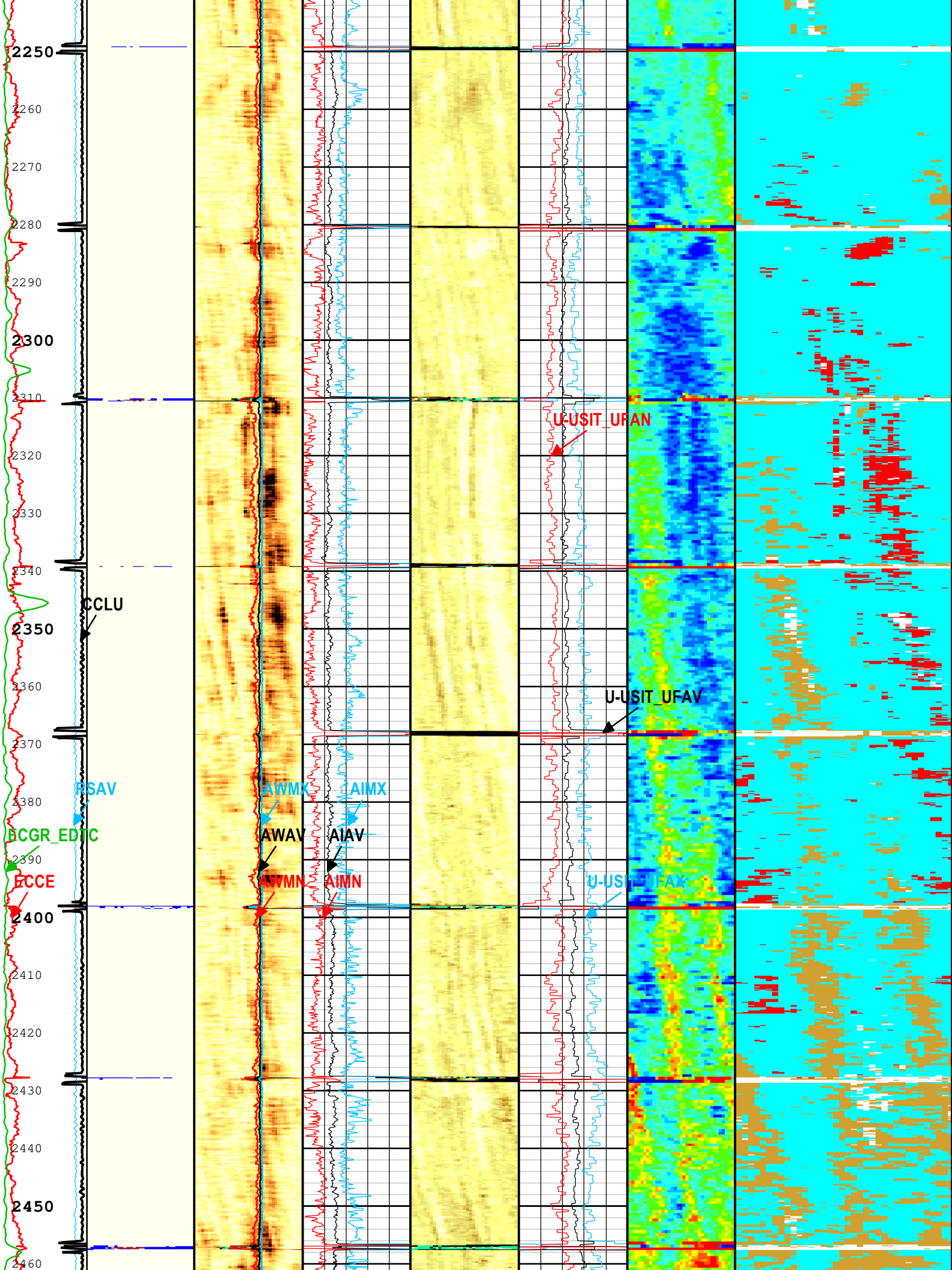


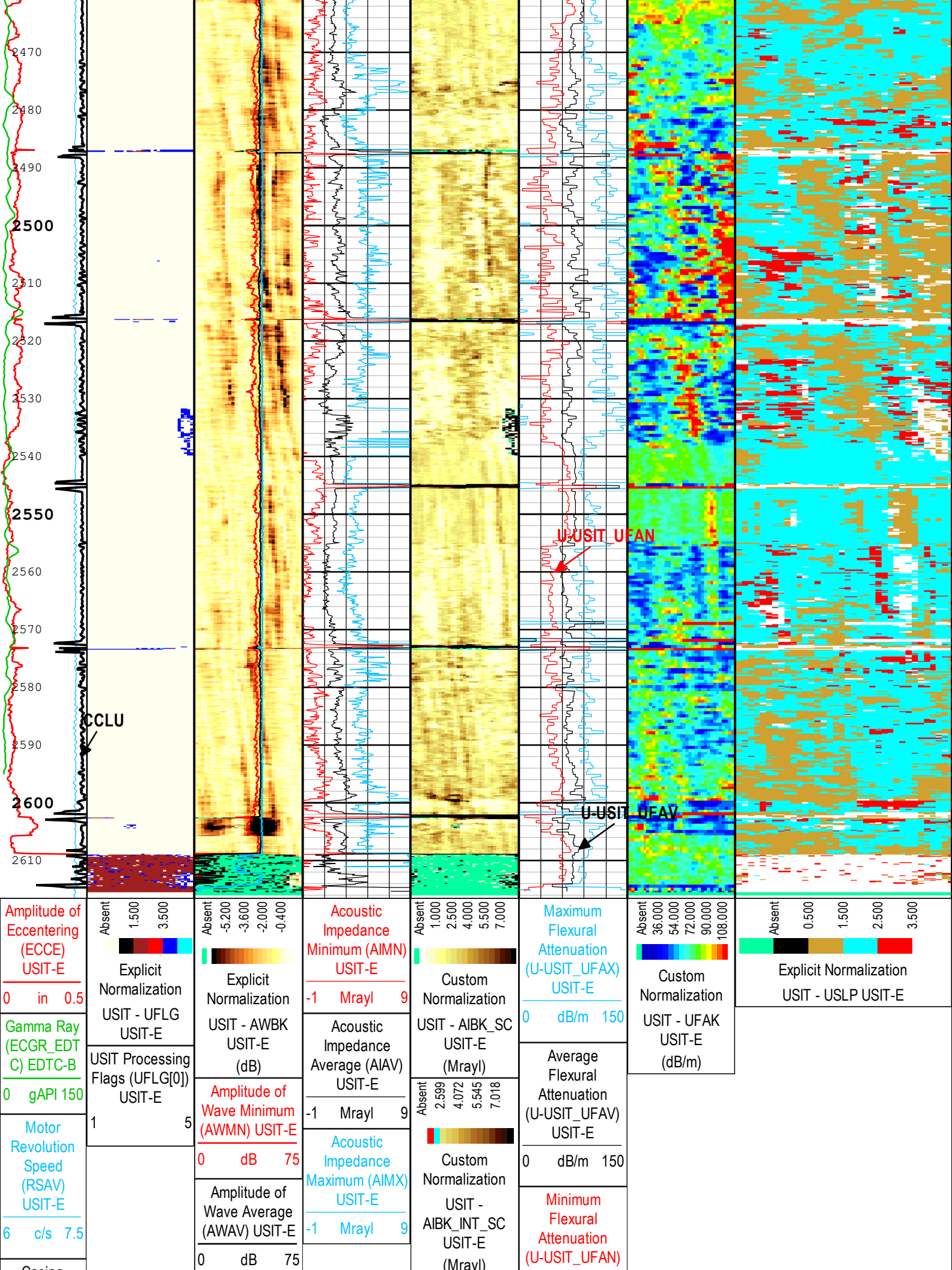


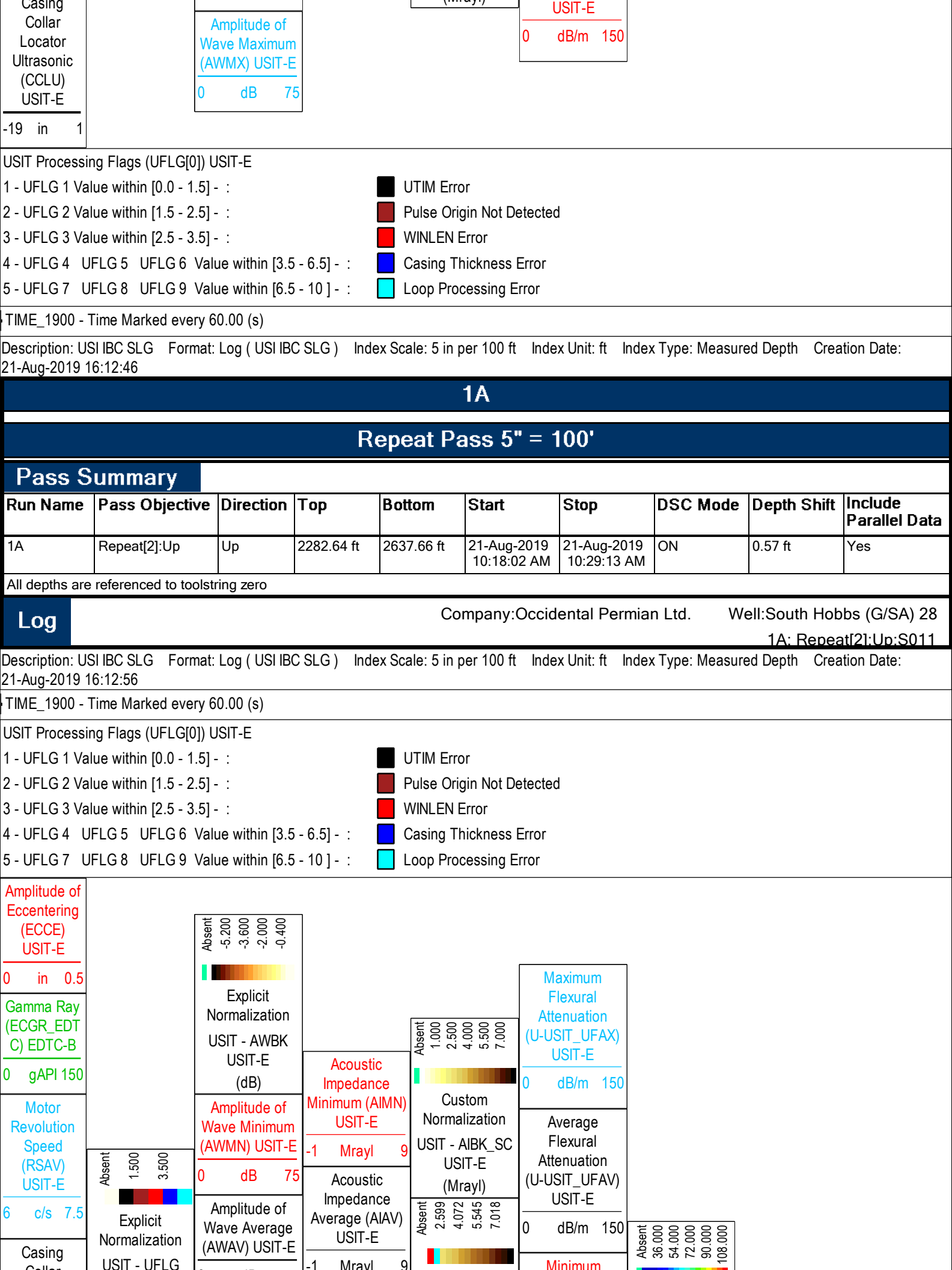


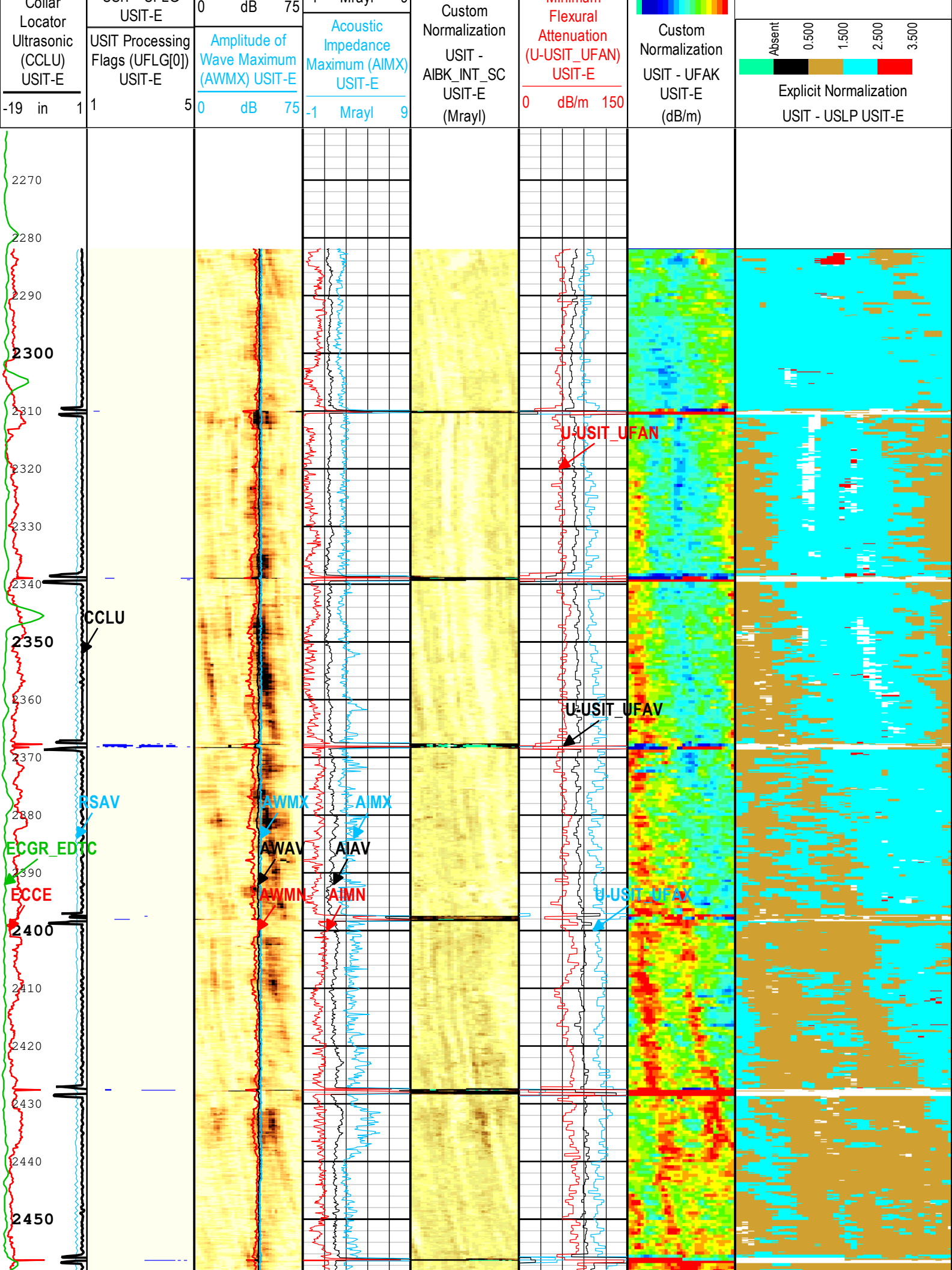


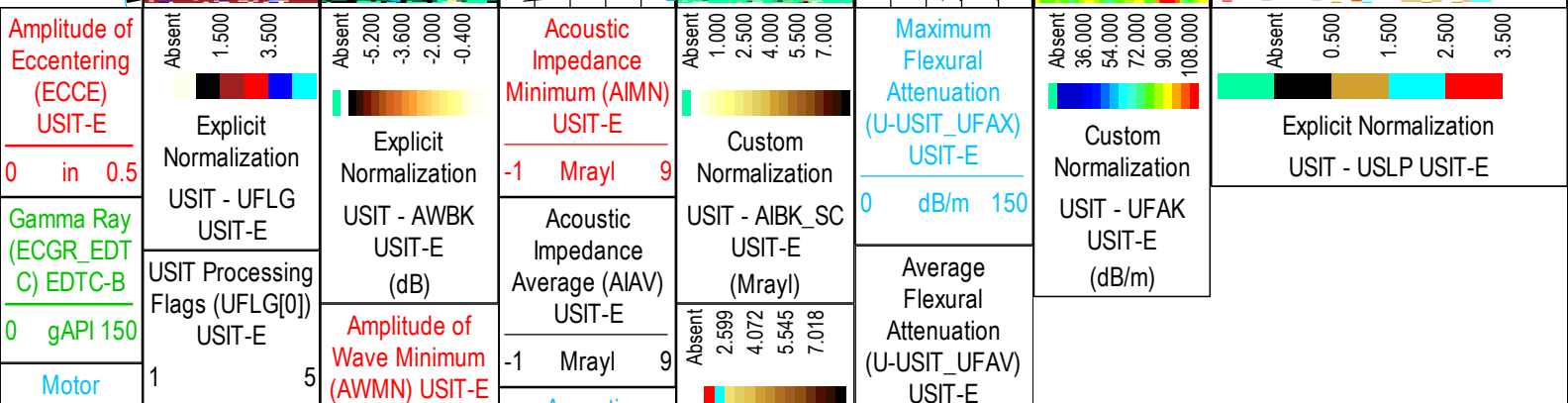
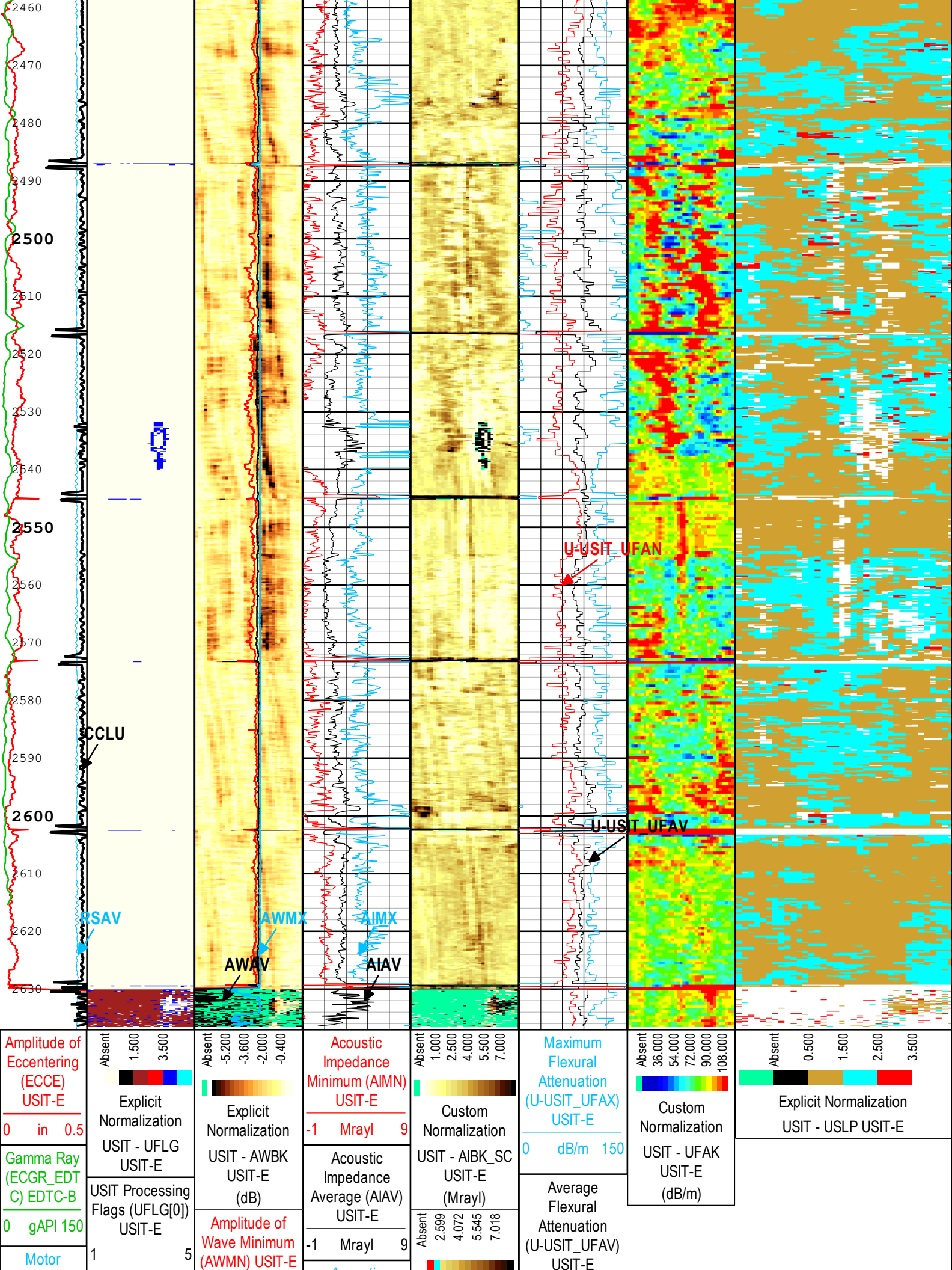


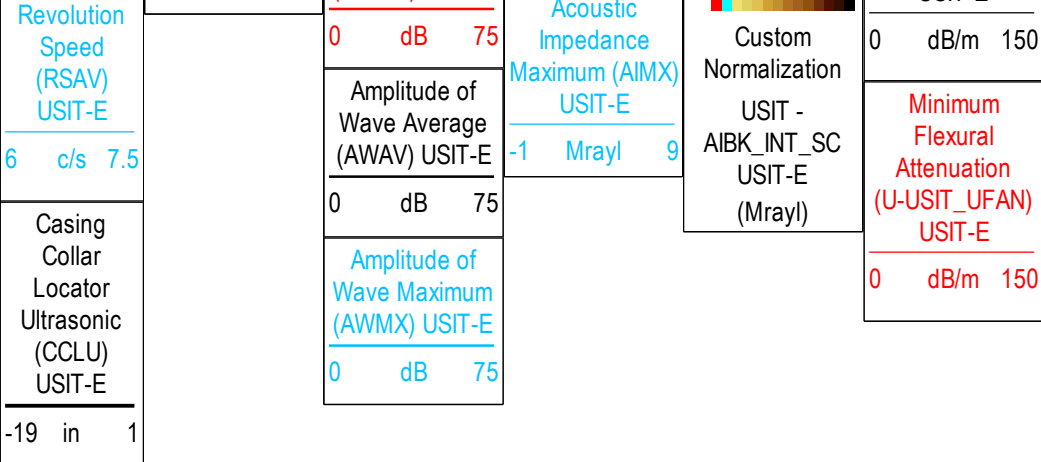












USIT Processing Flags (UFLG[0]) USIT-E

- | | |
|---|---------------------------|
| 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)

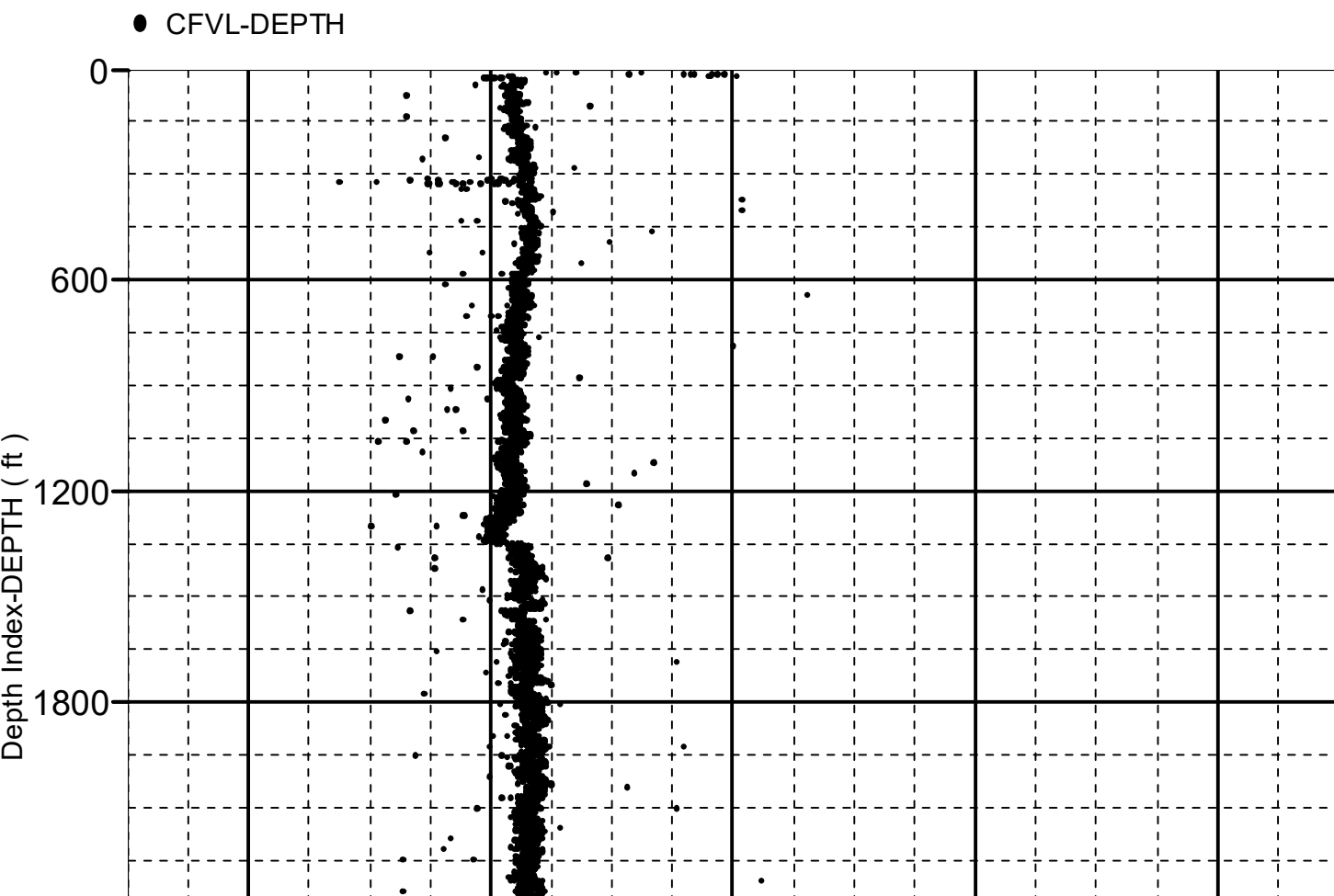
Description: USI IBC SLG Format: Log (USI IBC SLG) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Aug-2019 16:12:56

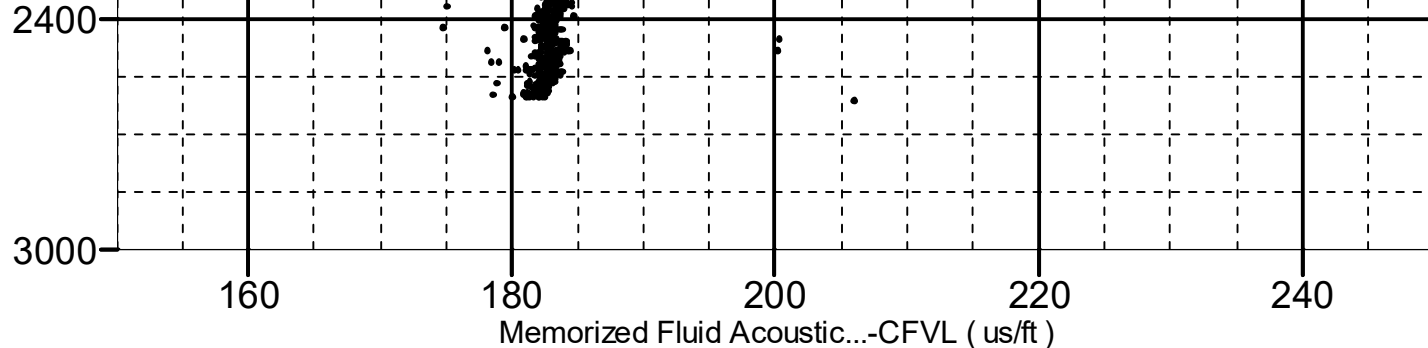
XYZ	Company:Occidental Permian Ltd. Well:South Hobbs (G/SA) 28 1A: Main[3]:Up:S011
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Fluid Acoustic Slowness vs Depth

2D Cross Plot

Index Range: From 2617.00 to 12.62 ft





XYZ

Company:Occidental Permian Ltd. Well:South Hobbs (G/SA) 28

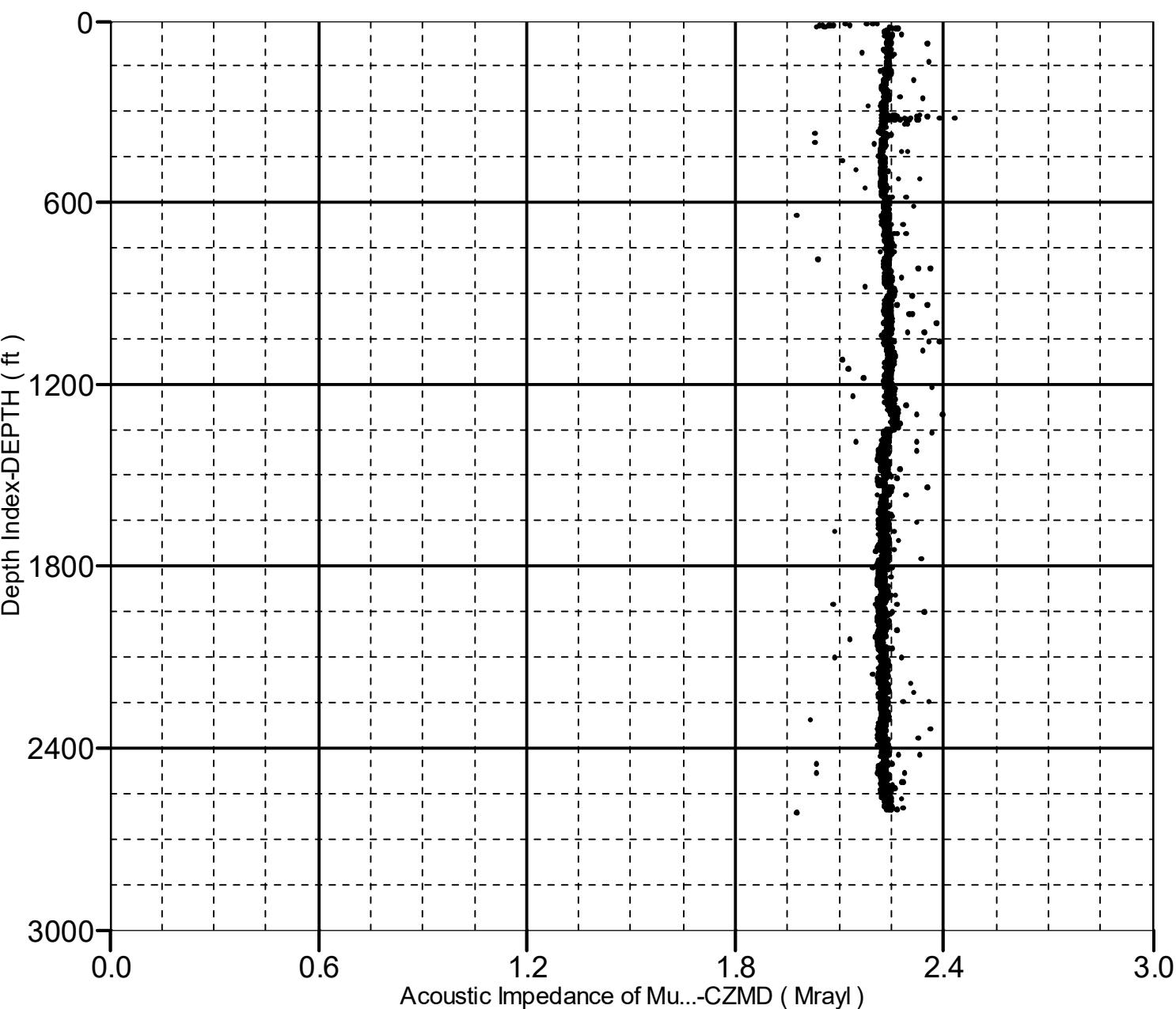
1A: Main[3]:Up:S011

Acoustic Impedance of Mud vs Depth

2D Cross Plot

Index Range: From 2617.00 to 12.62 ft

● CZMD-DEPTH



Calibration Report

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 1A

Primary Equipment :

EDTC-B

EDTC-B

Calibration Parameter :

Plus Reference

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
AZ Vertical Measurement - 0	ft/s2	Before	----	----	----	----		

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM): 09:16:35 21-Aug-2019

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Initial PMT HV	V	Master			1537.000			
Accelerometer Serial Number		Master			514			
Accelerometer Coefficients - 0		Master	----	----	3.032E+000	----		
Accelerometer Coefficients - 1		Master	----	----	2.801E-004	----		
Accelerometer Coefficients - 2		Master	----	----	2.928E-007	----		
Accelerometer Coefficients - 3		Master	----	----	-5.661E-008	----		
Accelerometer Coefficients - 4		Master	----	----	1.353E-009	----		
Accelerometer Coefficients - 5		Master	----	----	-1.011E-011	----		
Accelerometer Coefficients - 6		Master	----	----	2.565E-014	----		
Accelerometer Coefficients - 7		Master	----	----	1.283E-004	----		
Accelerometer Coefficients - 8		Master	----	----	8.603E-005	----		
Accelerometer Coefficients - 9		Master	----	----	5.316E-008	----		
Accelerometer Coefficients - 10		Master	----	----	9.099E-011	----		
Accelerometer Coefficients - 11		Master	----	----	-1.094E-012	----		
Gamma-Ray Detector Serial Number		Master			77401			

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured): 16:44:15 20-Aug-2019

After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Gamma Ray Gain - 0		Before	----	----	----	----		
		After	----	----	----	----		
		After-Before	----	----	----	----		

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before (Measured): 16:44:15 20-Aug-2019

After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RGR Zero Measurement	gAPI	Before		0	28.224	120.000		
		After	----	----	----	----		
		After-Before	----	----	----	----		
RGR Plus Measurement - 0	gAPI	Before						
		After	----	----	NOT DONE	----		
		After-Before	----	----	----	----		

Company:	Occidental Permian Ltd.	Schlumberger
Well:	South Hobbs (G/SA) 28	
Field:	Hobbs (GSA)	
County:	Lea	
State:	New Mexico	

Isolation Scanner
Cement Print
Gamma Ray