

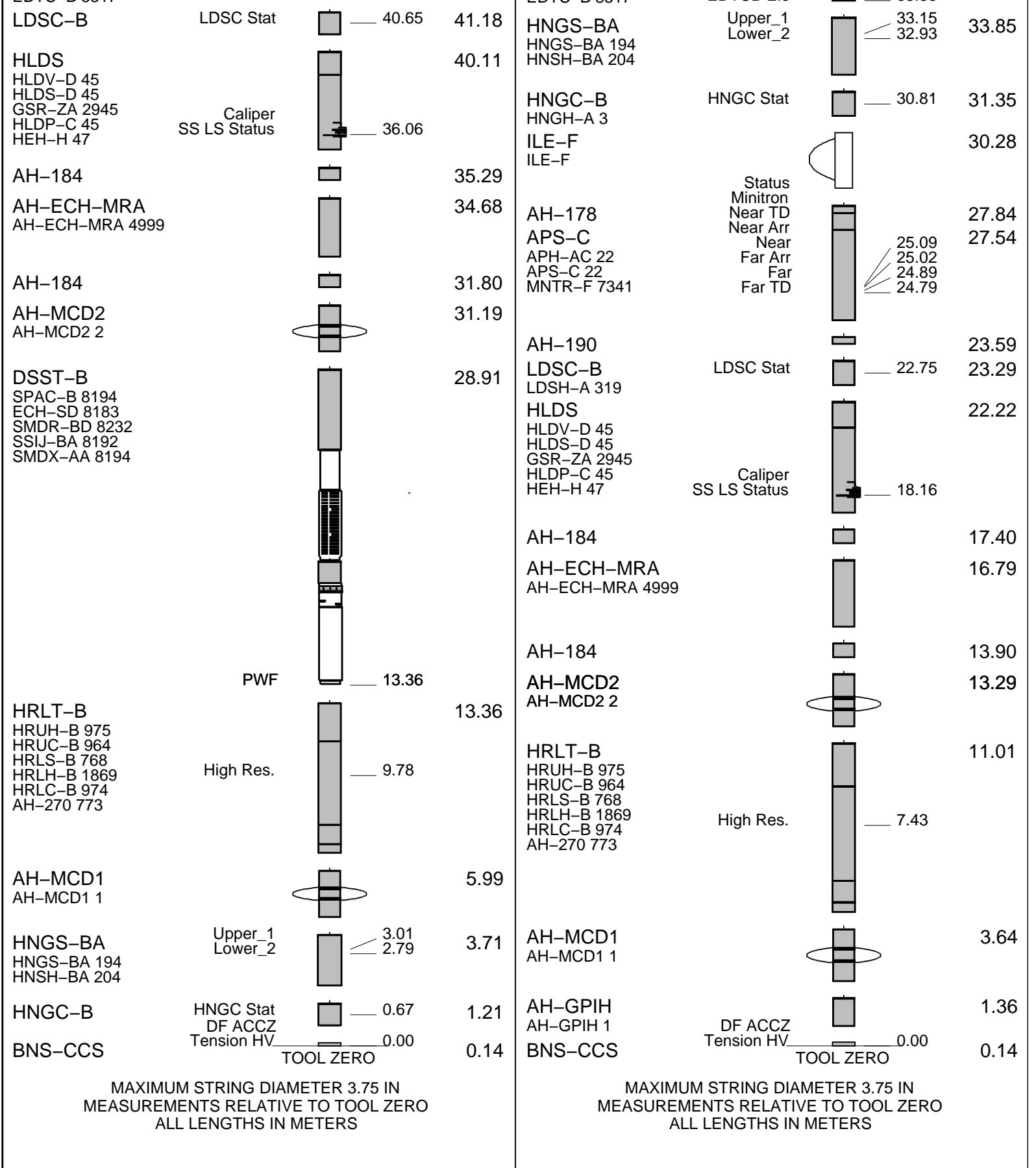


Well: **Expedition 369, Site U1513E**
Field: **Australia Cretaceous Climate & Tectonics**
Rig: **JOIDES Resolution** Ocean: **Indian**

Rig:	JOIDES Resolution	Field:	Australia Cretaceous Climate & T	Location:	Latitude: S 33.79365**	Well:	Expedition 369, Site U1513E	Company:	International Ocean Discovery Pr	High Resolution Laterolog Array (HRLA) Natural Gamma Ray, Density (HNGS, HLDS) Accelerator Porosity Sonde (APS)				
										LOCATION	Latitude: S 33.79365** Longitude: E 112.48534*		Elev.: K.B. 0.00 m G.L. -2800.00 m D.F. 0.00 m	
											Permanent Datum: <u>Sea Floor</u>		Elev.: <u>-2800.00 m</u>	
											Log Measured From: <u>Rig Floor</u>		2800.00 m above Perm. Datum	
											Drilling Measured From: <u>Rig Floor</u>			
API Serial No.		Max. Hole Devi. 1.79 deg		Longitude E 112.48534		Latitude S 33.79365								

Logging Date			23–Nov–2017					
Run Number			1					
Depth Driller			3574 m					
Schlumberger Depth			3413 m					
Bottom Log Interval			3413 m					
Top Log Interval			2798 m					
Casing Driller Size @ Depth			5.500 in @ 2919.3 m			@		
Casing Schlumberger			2915 m					
Bit Size			9.875 in					
Type Fluid In Hole			Sepiolite					
MUD	Density	Viscosity	1.258 g/cm3					
	Fluid Loss	PH		8.07				
	Source Of Sample		Mudpit					
	RM @ Measured Temperature		@			@		
	RMF @ Measured Temperature		@			@		
RMC @ Measured Temperature		@			@			
Source RMF	RMC	N/A	N/A					
RM @ MRT	RMF @ MRT	@ 19	@ 19		@		@	
Maximum Recorded Temperatures			19 degC					
Circulation Stopped		Time	22–Nov–2017		20:00			
Logger On Bottom		Time	24–Nov–2017		23:15			
Unit Number		Location	627314 Larose, LA					
Recorded By			K. Swain					
Witnessed By			M. Jones, Z. Mateo, L. White					

[illegible]



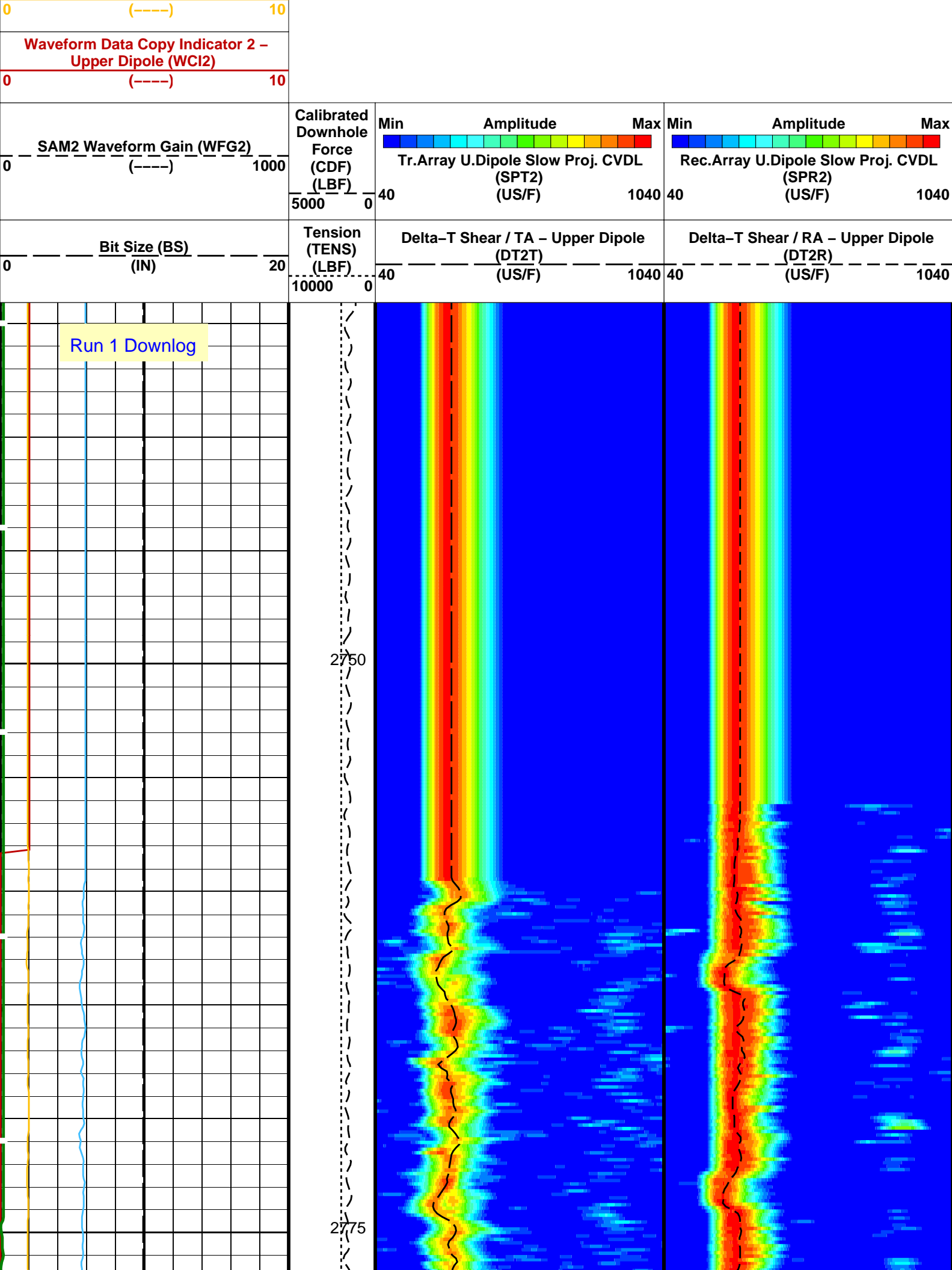
Production String	(in)	(M)	Well Schematic	(M)	(in)	Casing String
OP	ID	MD		MD	OP	ID

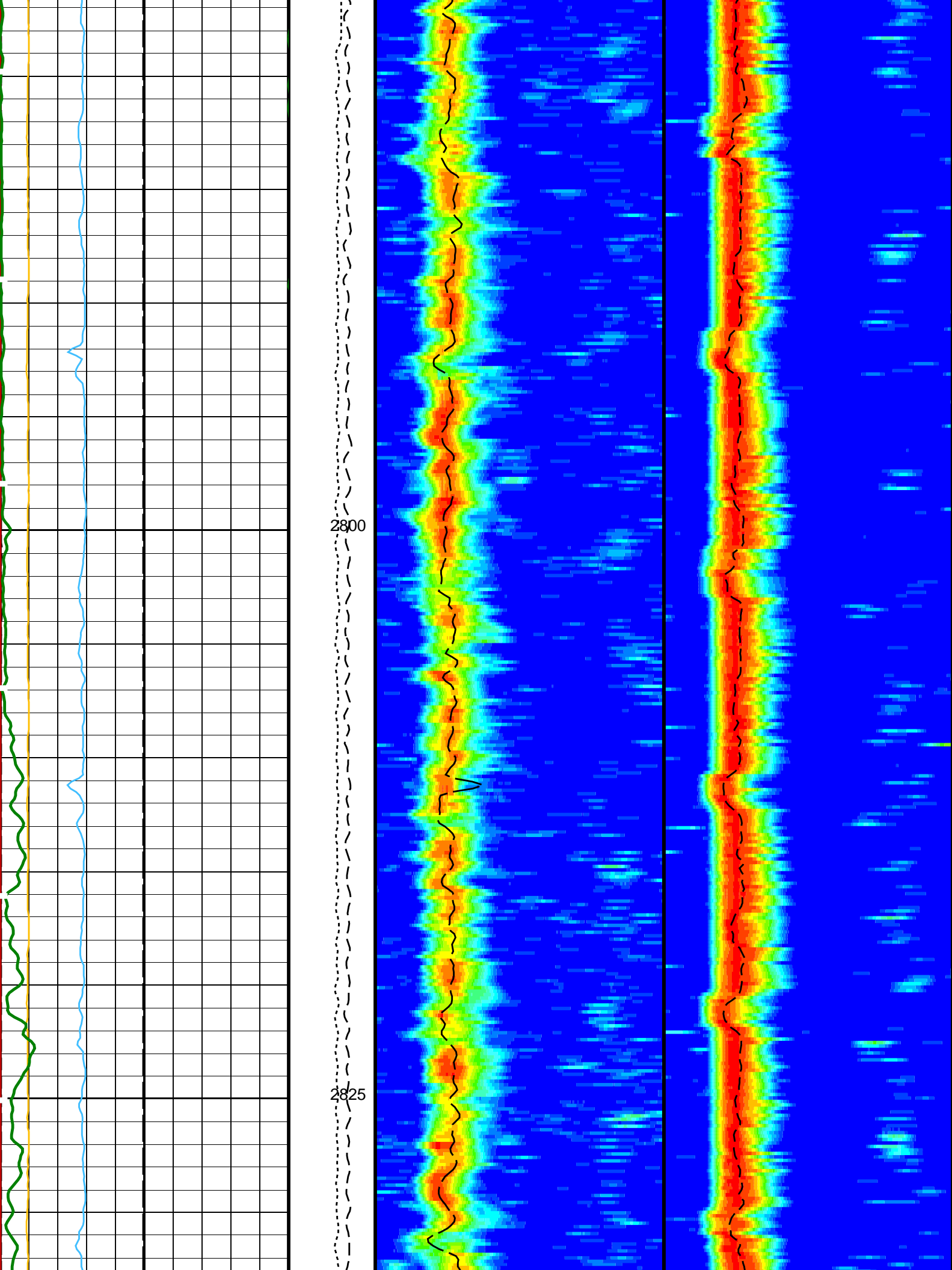
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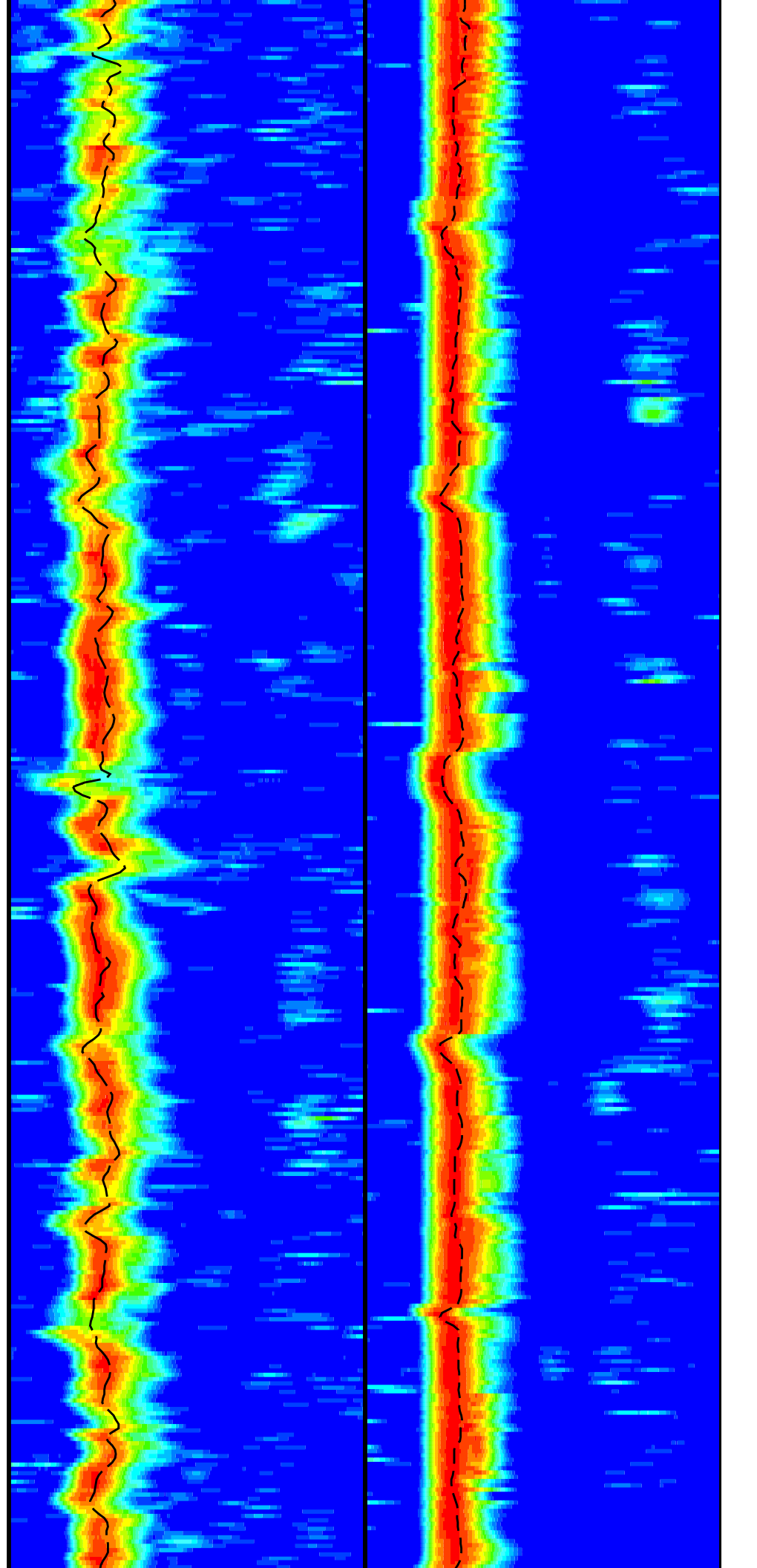
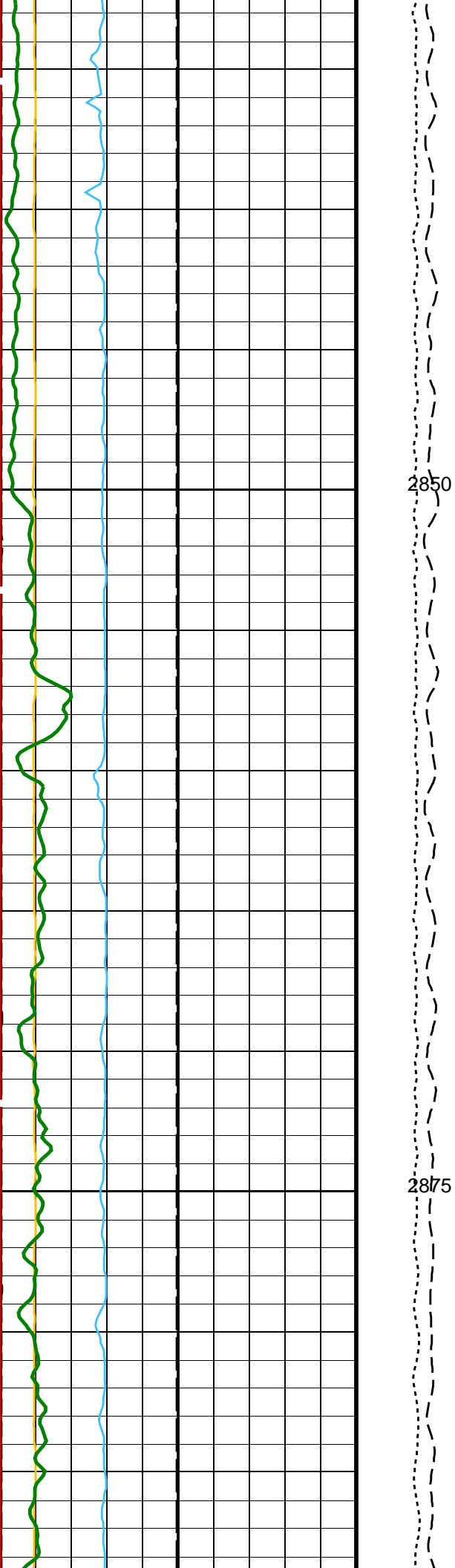
Input DLIS Files						
DEFAULT	Flip_NGS_HRLA_DSI_055LUP		PRODUCER	25-Nov-2017 16:01	3128.8 M	2734.1 M
Output DLIS Files						
DEFAULT	NGS_HRLA_DSI_LDL_060PUP	FN:81	PRODUCER	25-Nov-2017 18:29	3128.8 M	2734.1 M
OP System Version: 19C0-187						
HNGC-B	19C0-187		HNGS-BA	19C0-187		
HRLT-B	19C0-187		DSST-B	19C0-187		
HLDS	19C0-187		LDSC-B	19C0-187		
EDTC-B	SKK-5169-EDTCB					

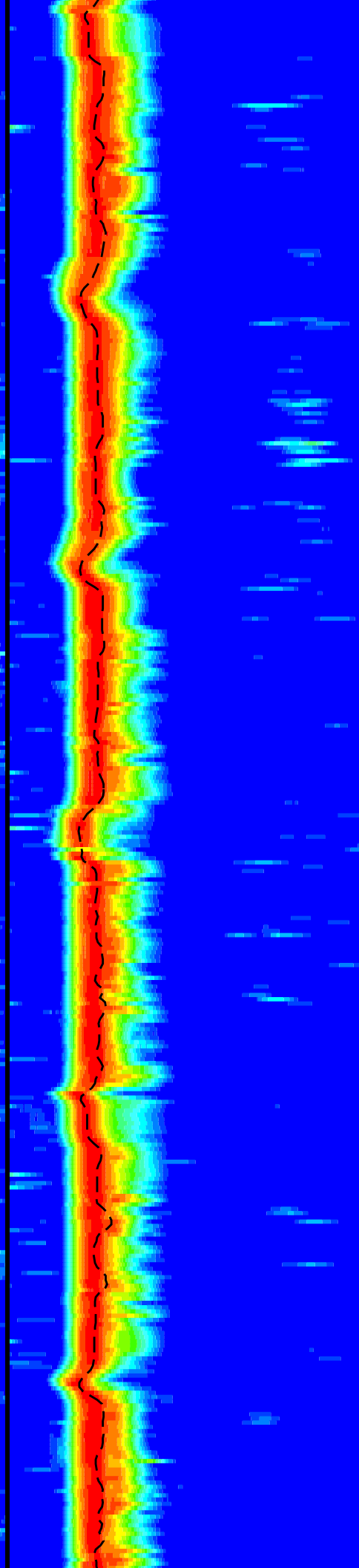
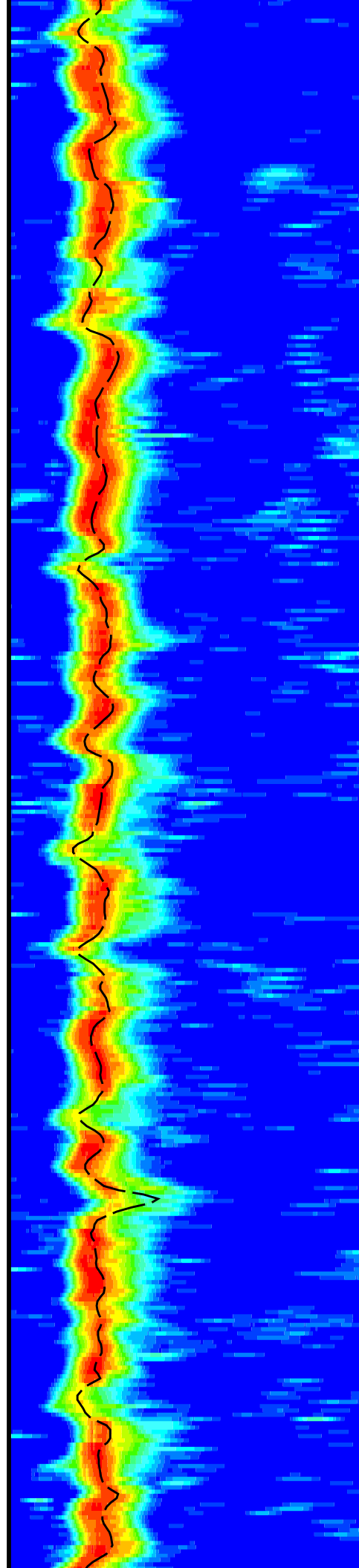
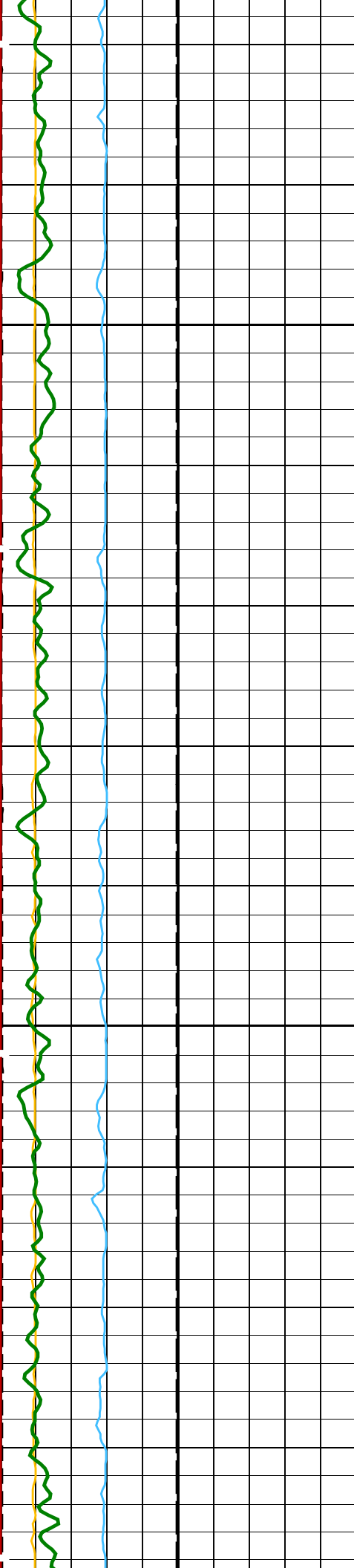
PIP SUMMARY	
 Time Mark Every 60 S	

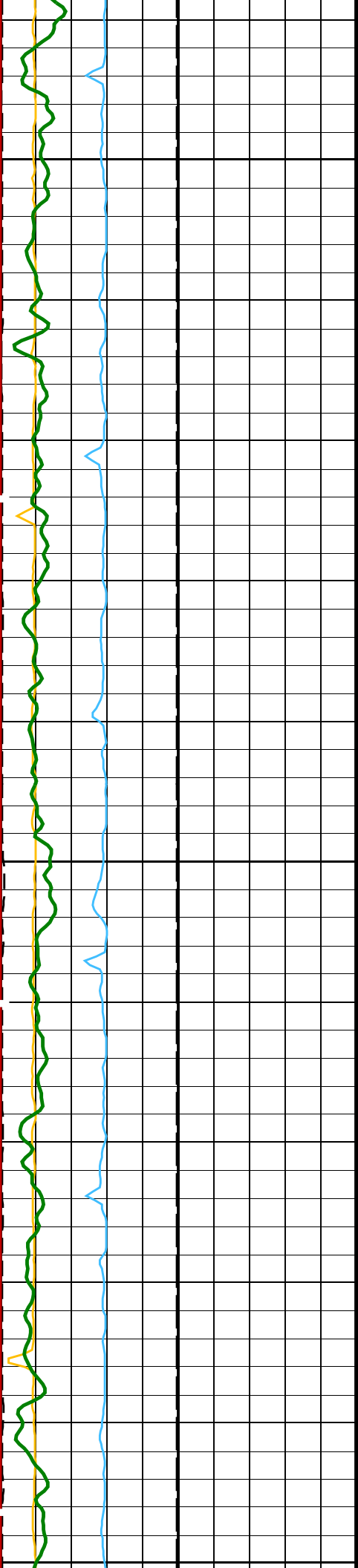
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA - Upper Dipole (CHT2)		
-2	(-----)	8
Peak Coherence / RA - Upper Dipole (CHR2)		







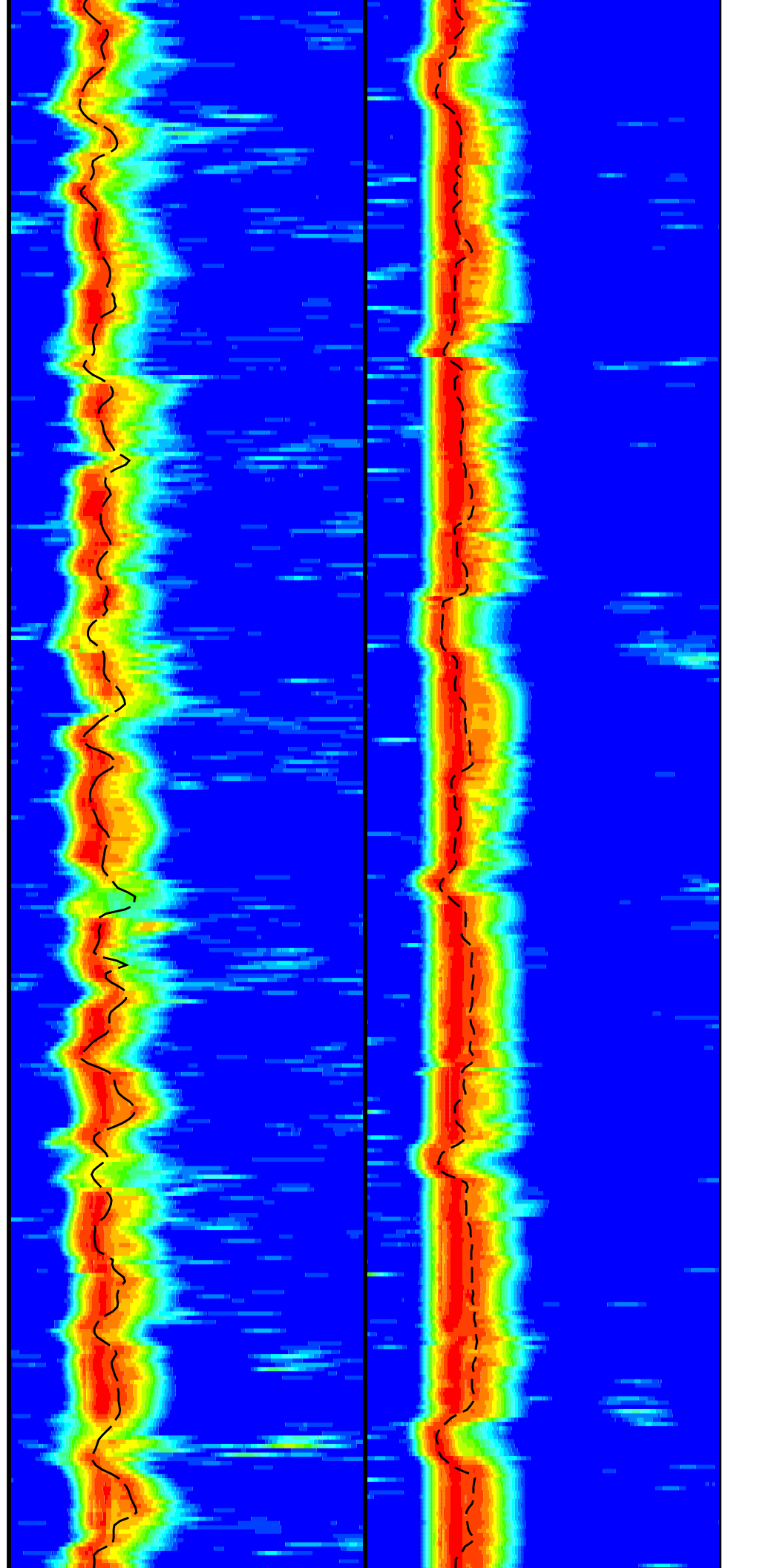


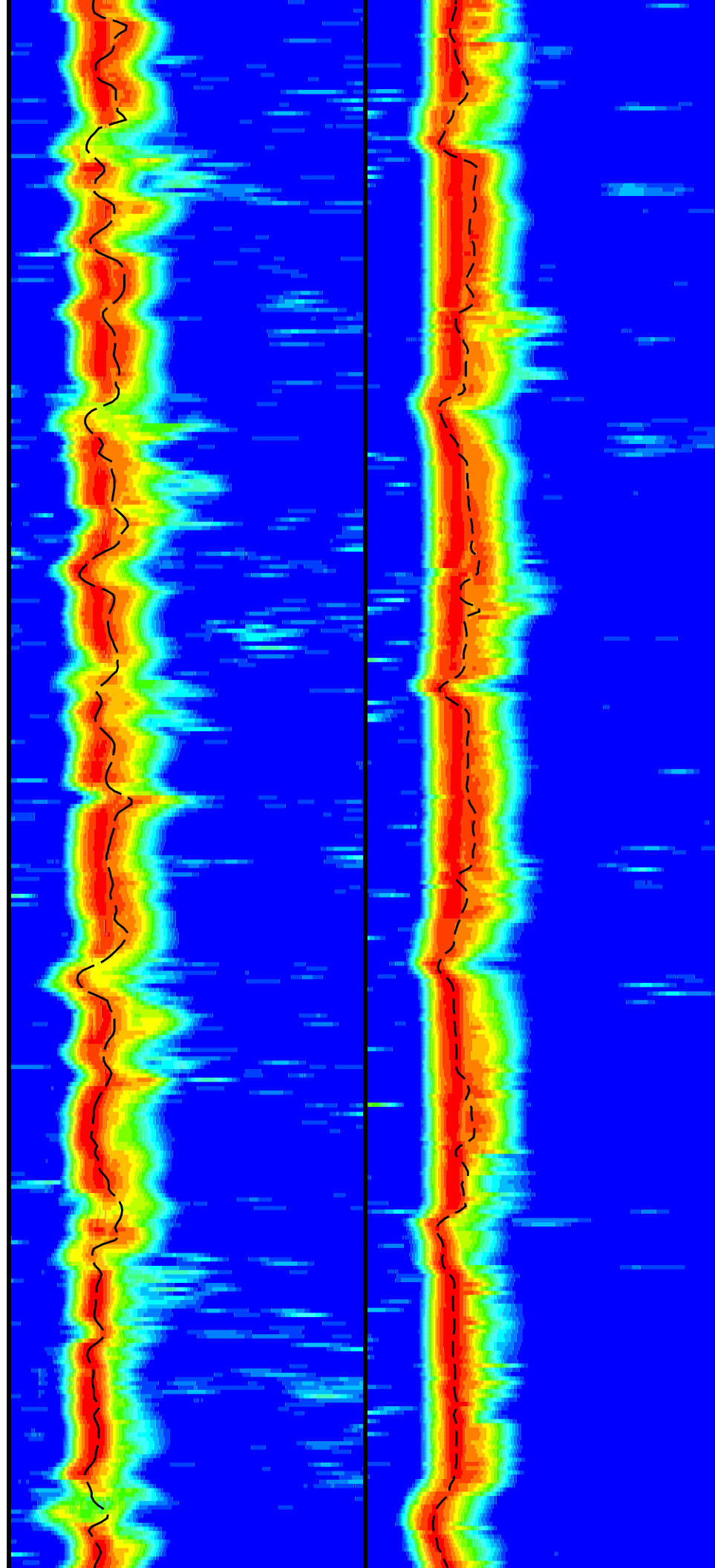
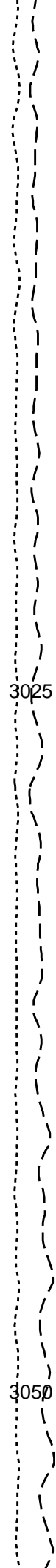
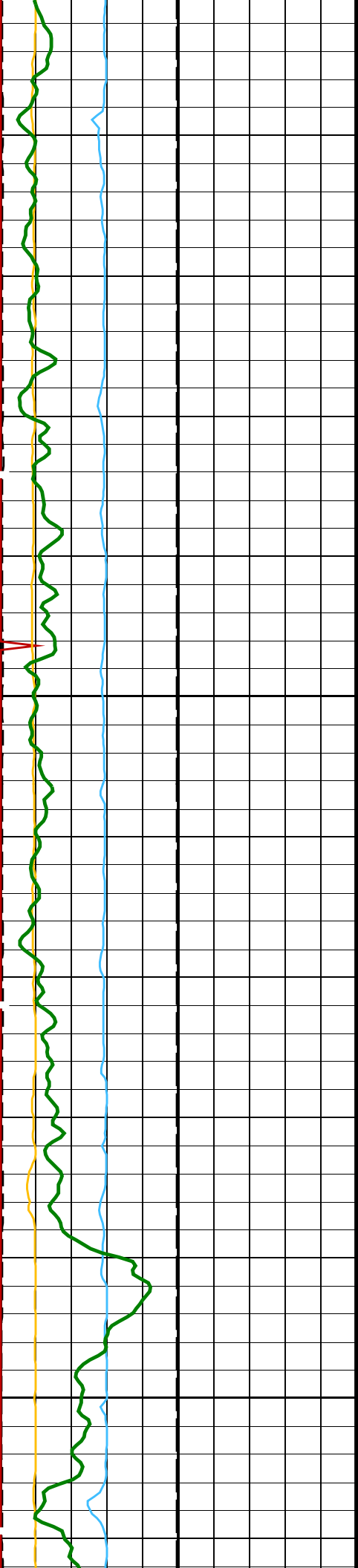


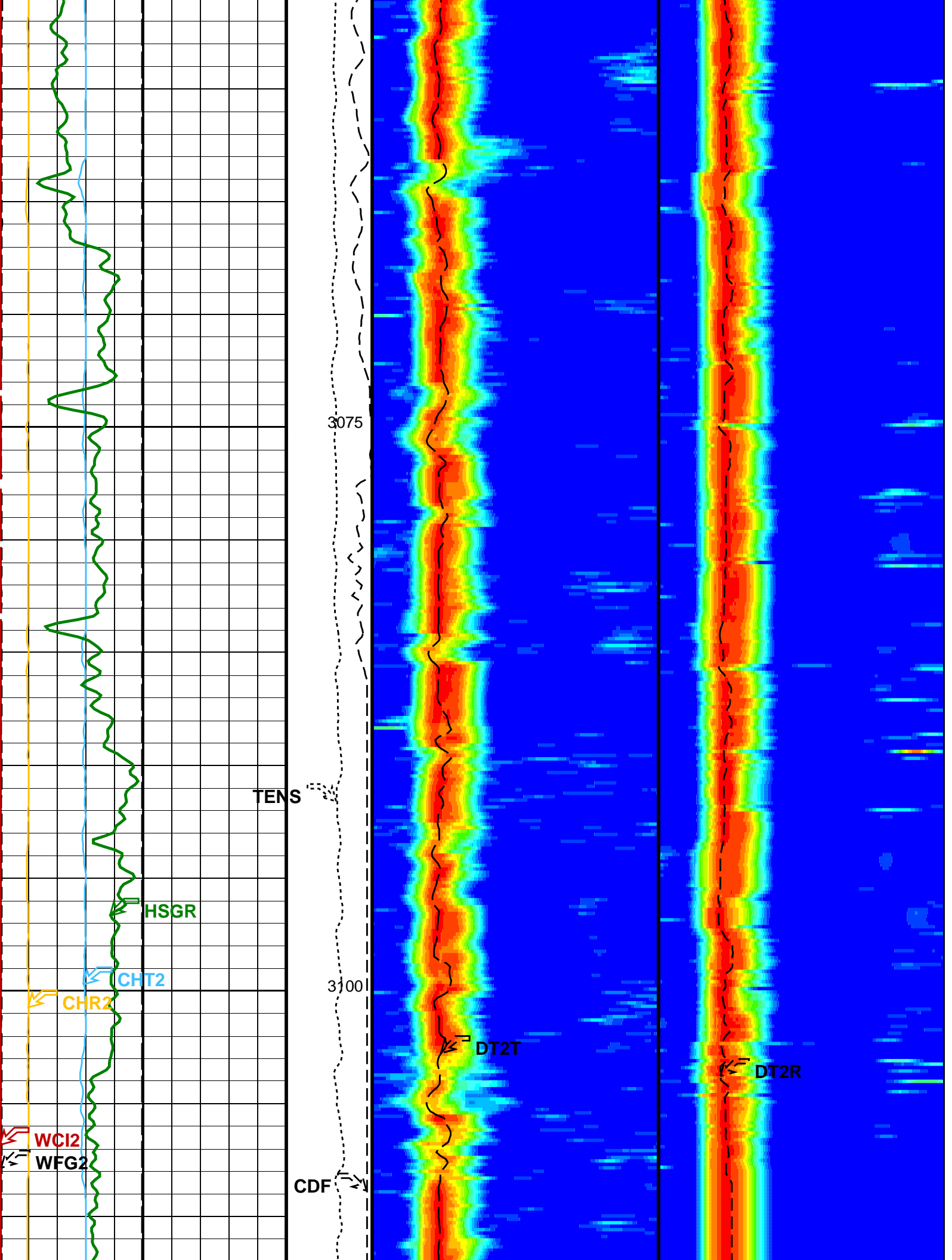
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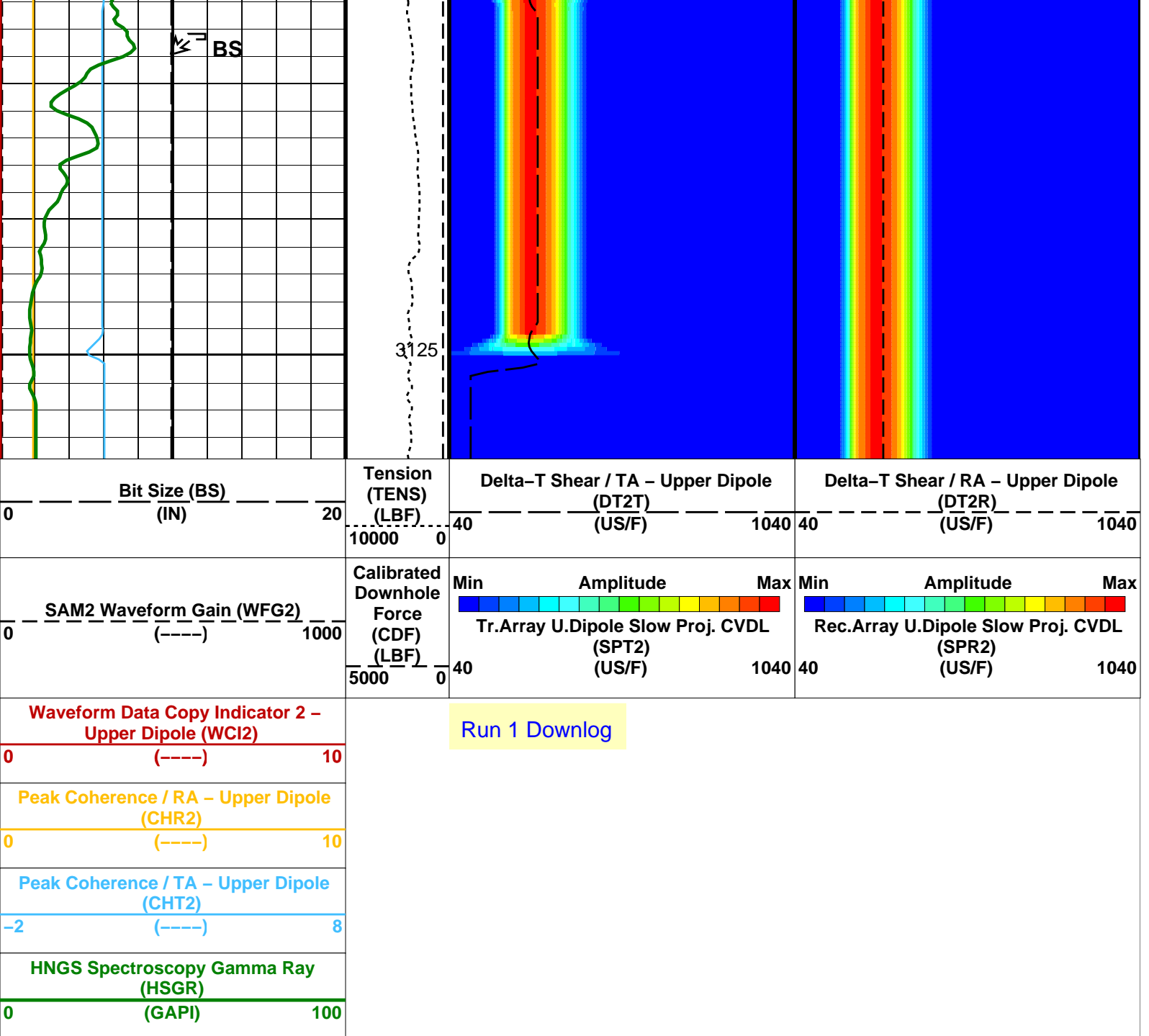
2975

3000









PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00117734	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	

S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.987236	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998714	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
DDE2	Digitizing Delay 2	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source - Dipole Shear	USE	
DSHL	Label Slowness Lower Limit - Dipole Shear	40	US/F
DSHU	Label Slowness Upper Limit - Dipole Shear	1040	US/F
DSI2	Digitizer Sample Interval 2	40	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DWC2	Digitizer Word Count 2	512	
DWCX	Digitizer Word Count X	512	
GCSE	Generalized Caliper Selection	BS	
NWI2	Number Waveform Items 2	8	
NWIX	Number Waveform Items X	0	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM2	DSST Sonic Acquisition Mode 2 - Upper Dipole Mode	ODD	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS2	STC Sonic Array Status - Upper Dipole	255	
SBO2	STC Search Band Offset - Upper Dipole	3000	US
SBW2	STC Search Bandwidth - Upper Dipole	8000	US
SFC2	STC Formation Character - Upper Dipole	SELECTABLE	
SFM2	STC Filter - Upper Dipole	B1-2K	
SLL2	STC Slowness Lower Limit - Upper Dipole	40	US/F
SST2	STC Slowness Step - Upper Dipole	4	US/F
SSW2	STC Source Waveform - Upper Dipole	WF_SAM2	
SUL2	STC Slowness Upper Limit - Upper Dipole	1040	US/F
SWD2	STC Slowness Width - Upper Dipole	40	US/F
TBF2	STC Time for Baseline Fill - Upper Dipole	0	US
TLL2	STC Time Lower Limit - Upper Dipole	600	US
TST2	STC Time Step - Upper Dipole	200	US
TUL2	STC Time Upper Limit - Upper Dipole	18440	US
TWD2	STC Time Width - Upper Dipole	2000	US
TWI2	STC Integration Time Window - Upper Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
UTXG	Upper Dipole Transmitter Geometry	162	IN
WFM2	Waveform Mode 2	W1	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSST_UPPER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 25-Nov-2017 18:29

OP System Version: 19C0-187

HNGC-B	19C0-187	HNGS-BA	19C0-187
HRLT-B	19C0-187	DSST-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	SKK-5169-EDTCB		

Input DLIS Files

DEFAULT	Flip_NGS_HRLA_DSI_055LUP	PRODUCER	25-Nov-2017 16:01	3128.8 M	2734.1 M
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Output DLIS Files

DEFAULT	NGS_HRLA_DSI_LDL_060PUP	FN:81	PRODUCER	25-Nov-2017 18:29
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Input DLIS Files

DEFAULT Flip_NGS_HRLA_DSI_055LUP PRODUCER 25-Nov-2017 16:01 3128.8 M 2734.1 M

Output DLIS Files

DEFAULT NGS_HRLA_DSI_LDL_060PUP FN:81 PRODUCER 25-Nov-2017 18:29 3128.8 M 2734.1 M

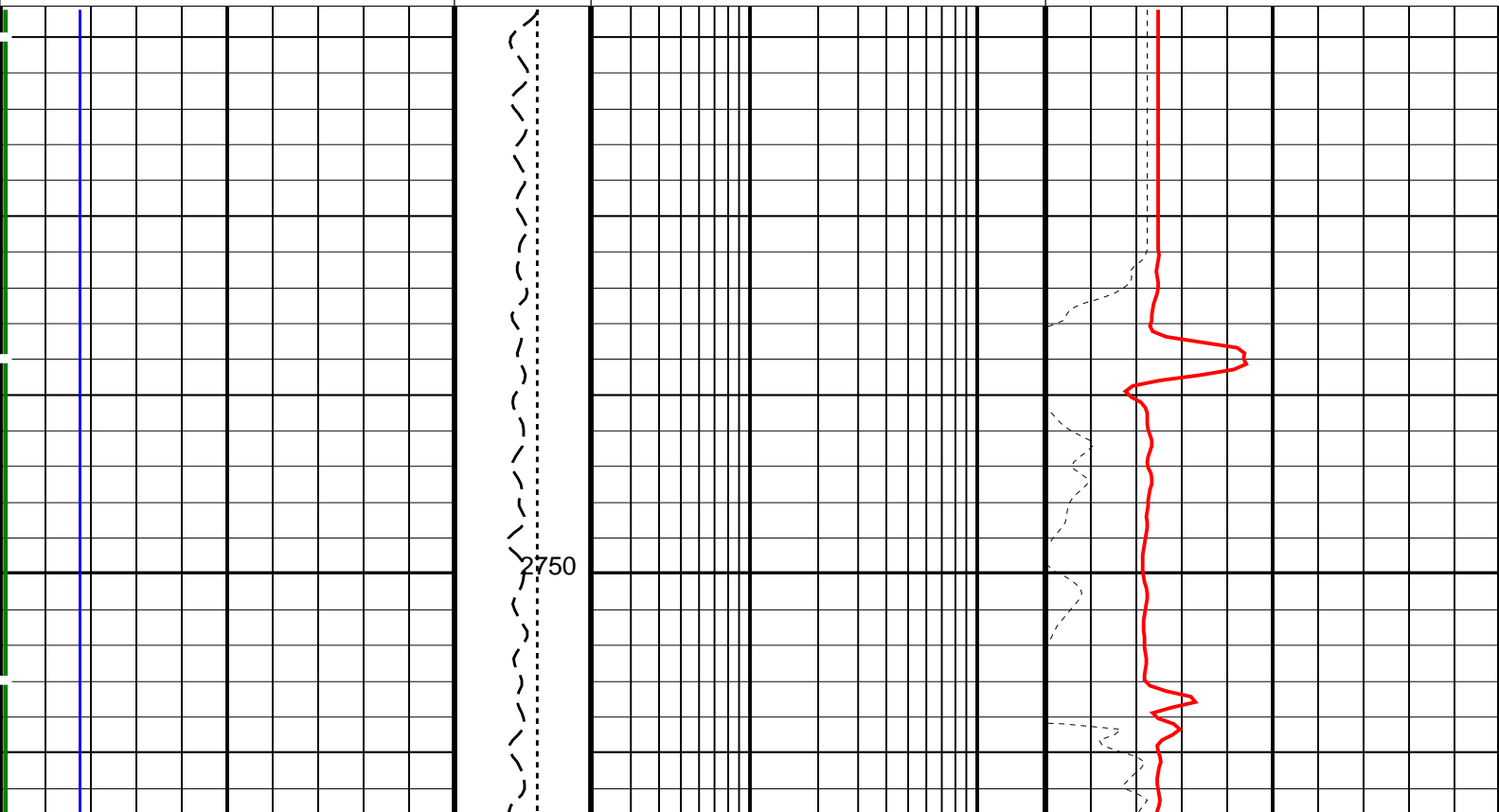
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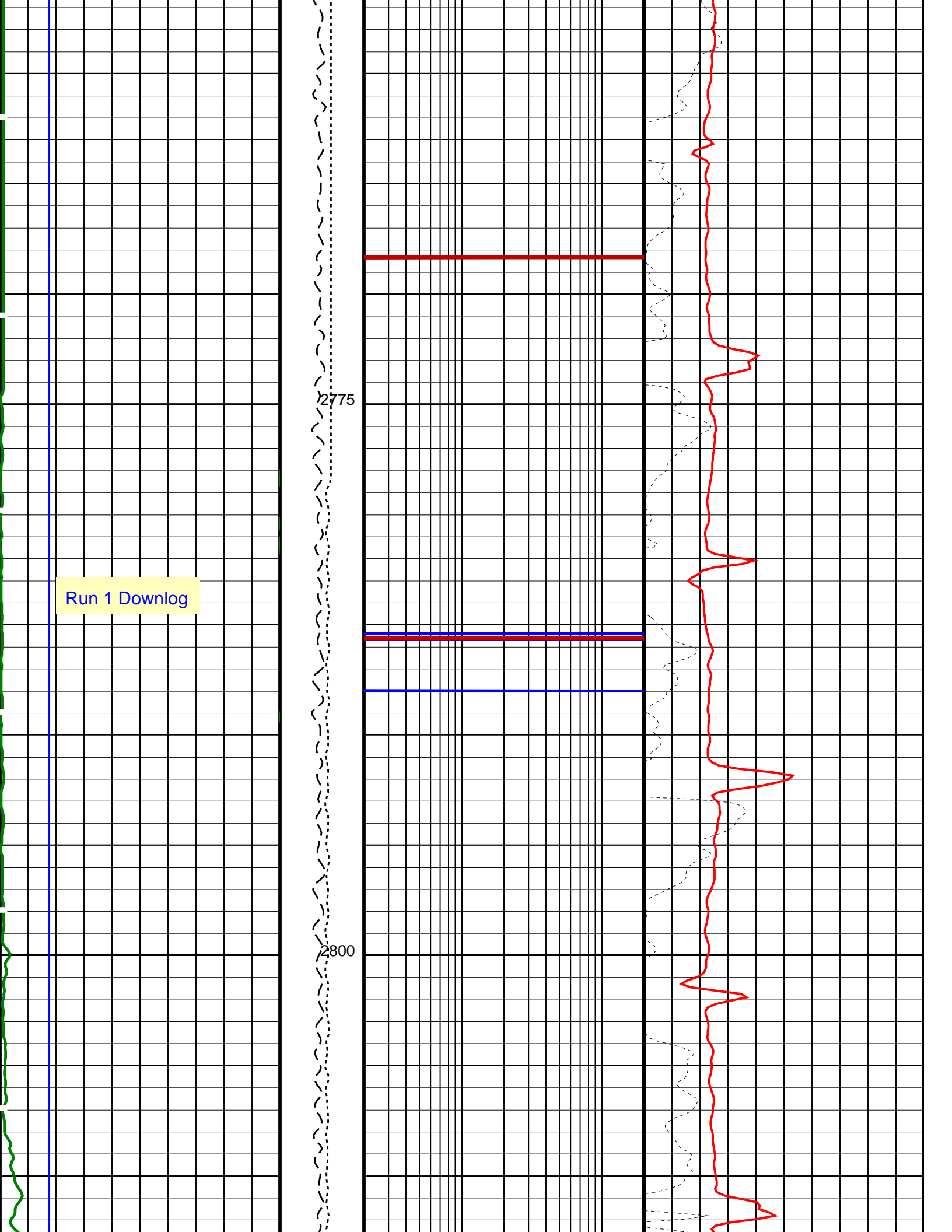
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HRLT-B	19C0-187	DSST-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	SKK-5169-EDTCB		

PIP SUMMARY

Time Mark Every 60 S

		HRLT True Resistivity (RT_HRLT)				
		0.2	(OHMM)			20
		HRLT Resistivity 1 (RLA1)				
		0.2	(OHMM)			20
		HRLT Resistivity 2 (RLA2)				
		0.2	(OHMM)			20
		HRLT Resistivity 3 (RLA3)		HLDS Bulk Density Correction (DRH)		
		0.2	(OHMM)	20	-0.25	(G/C3)
HNGS Spectroscopy Gamma Ray (HSGR)		Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5)		HLDS Bulk Density (RHOM)	
0	(GAPI)					
		3000	0			
HLDS Caliper (LCAL)		Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4)		HLDS Long Spaced Photoelectric Effect (PEFL)	
0	(IN)					
		10000	0			

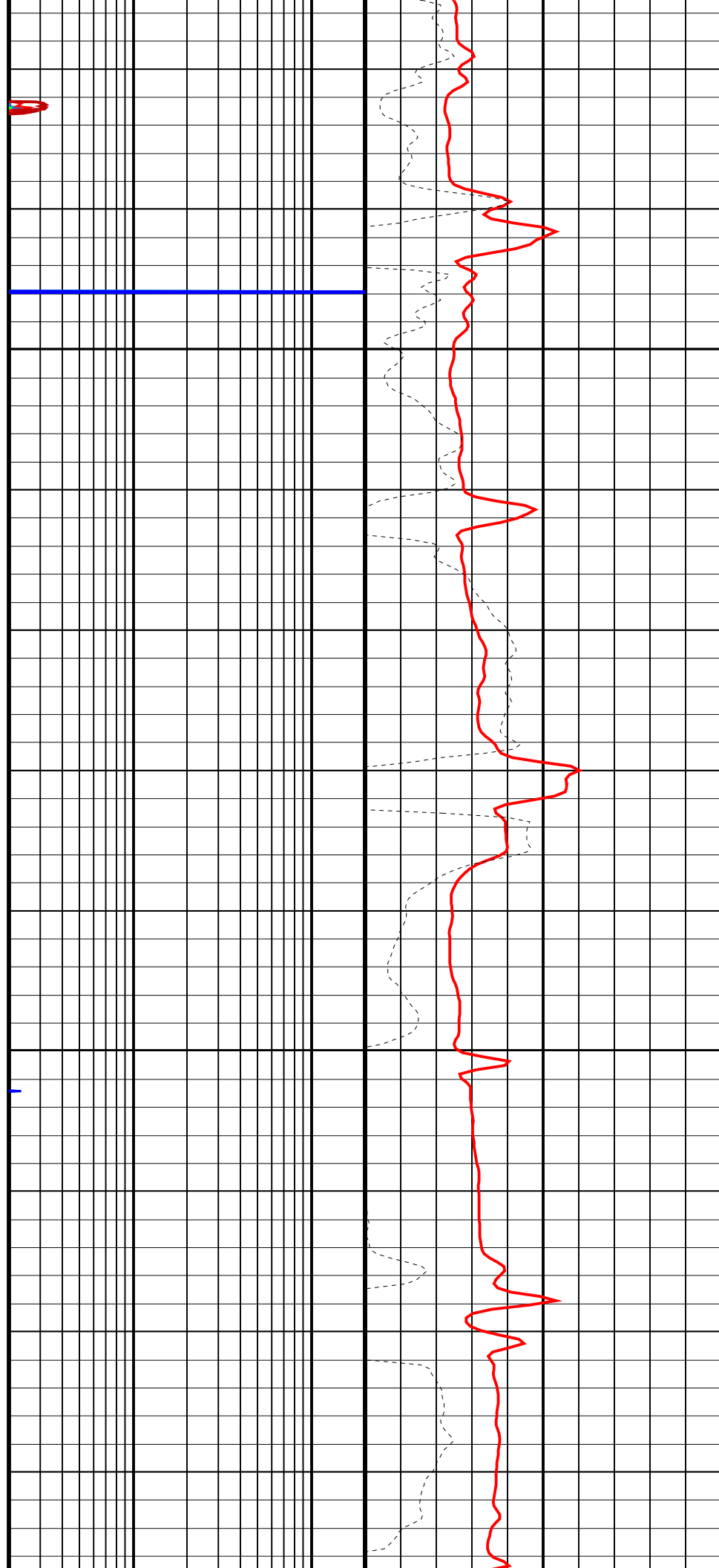
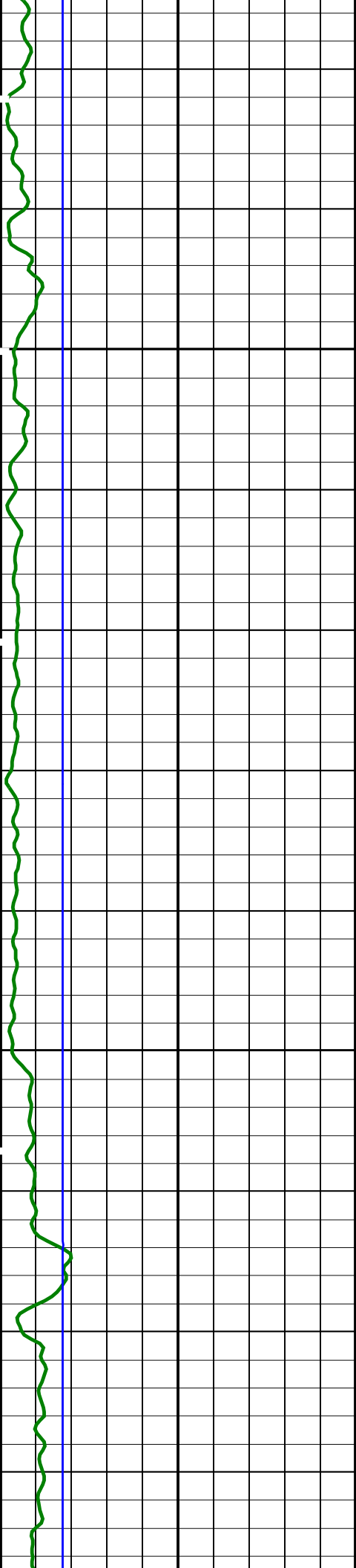


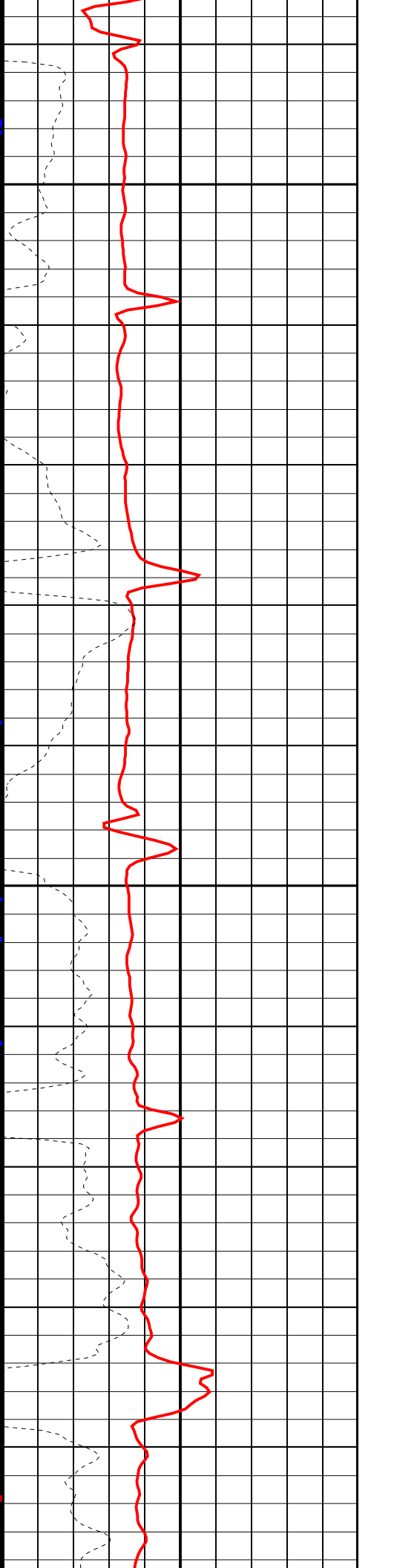
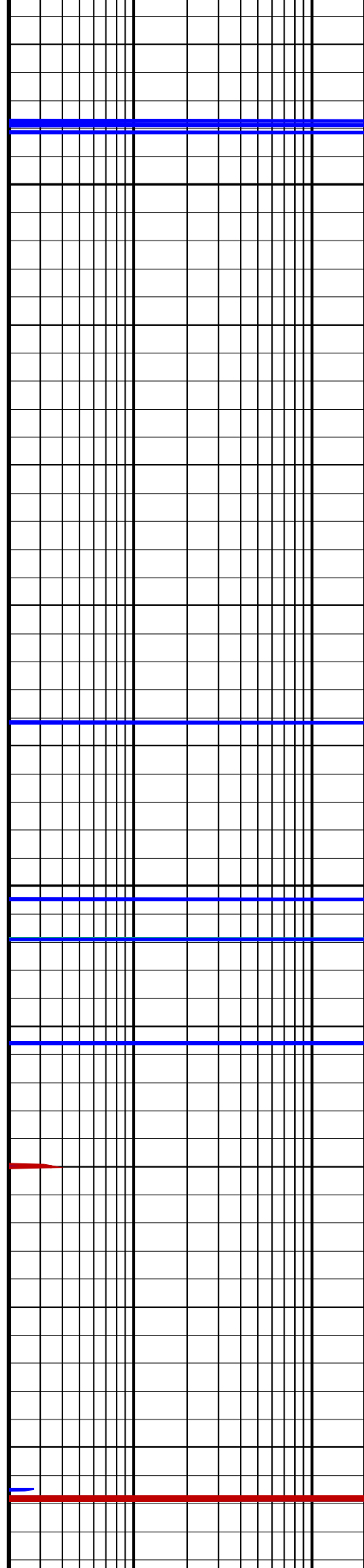
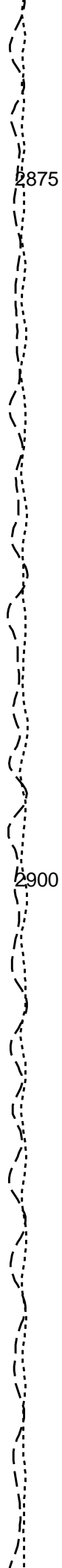
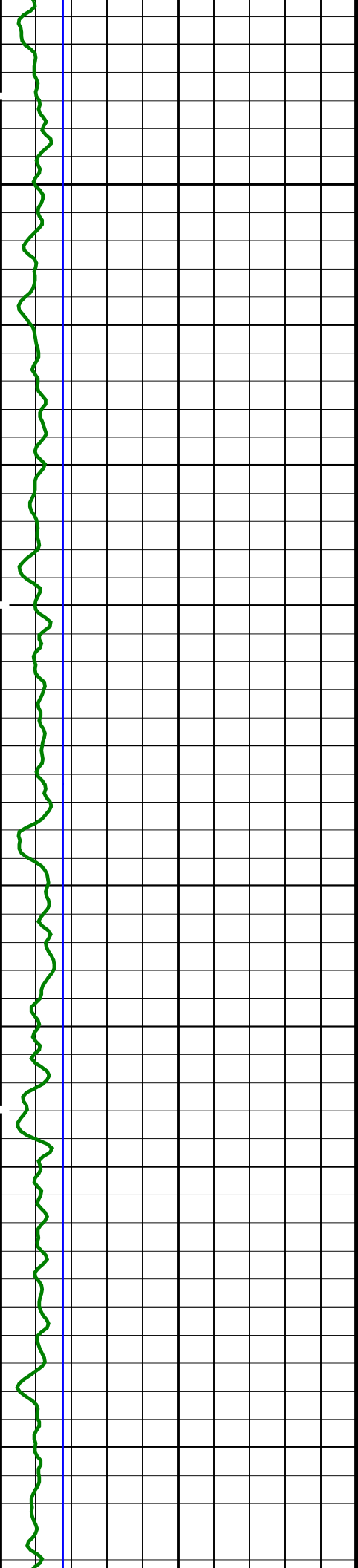


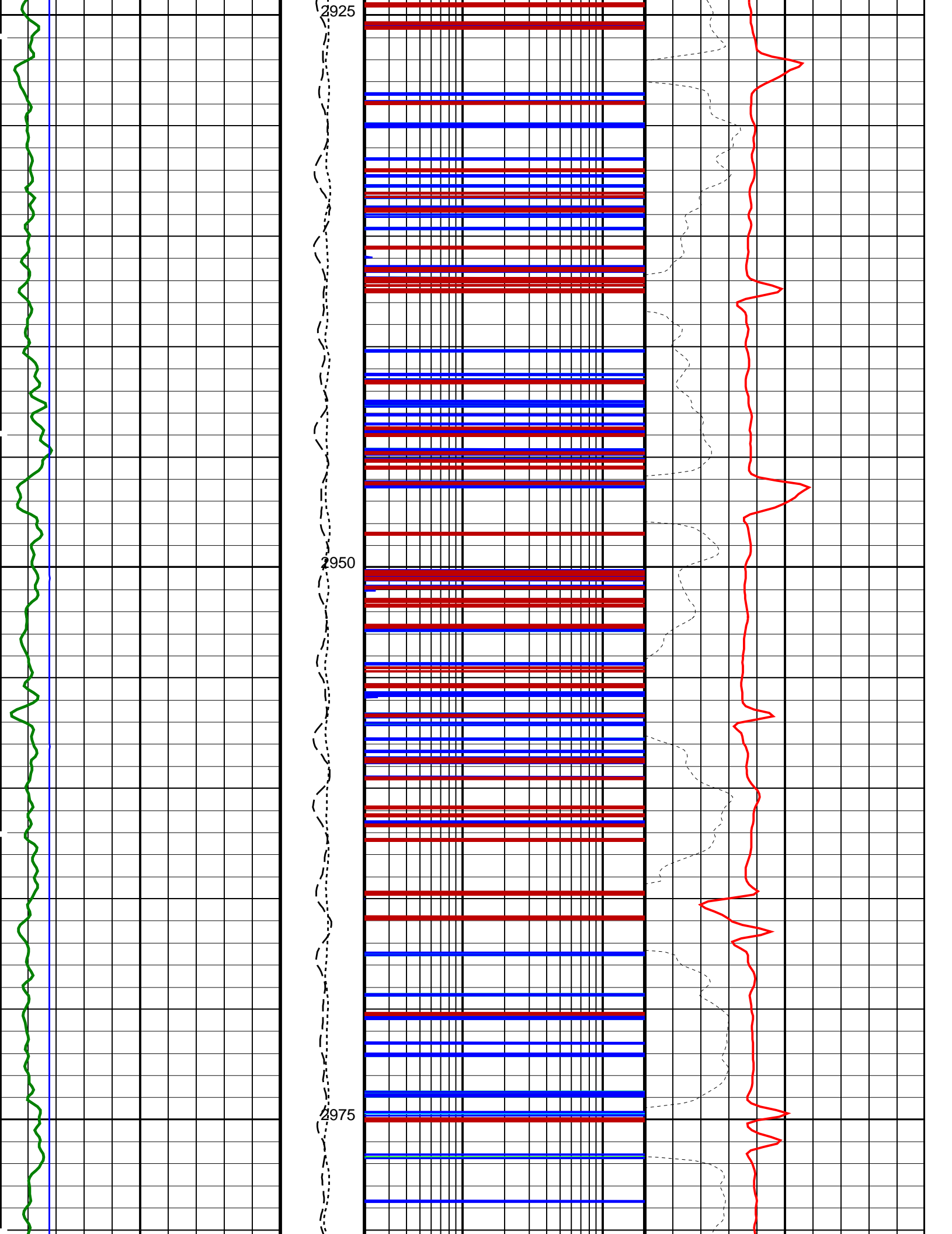
Run 1 Downlog

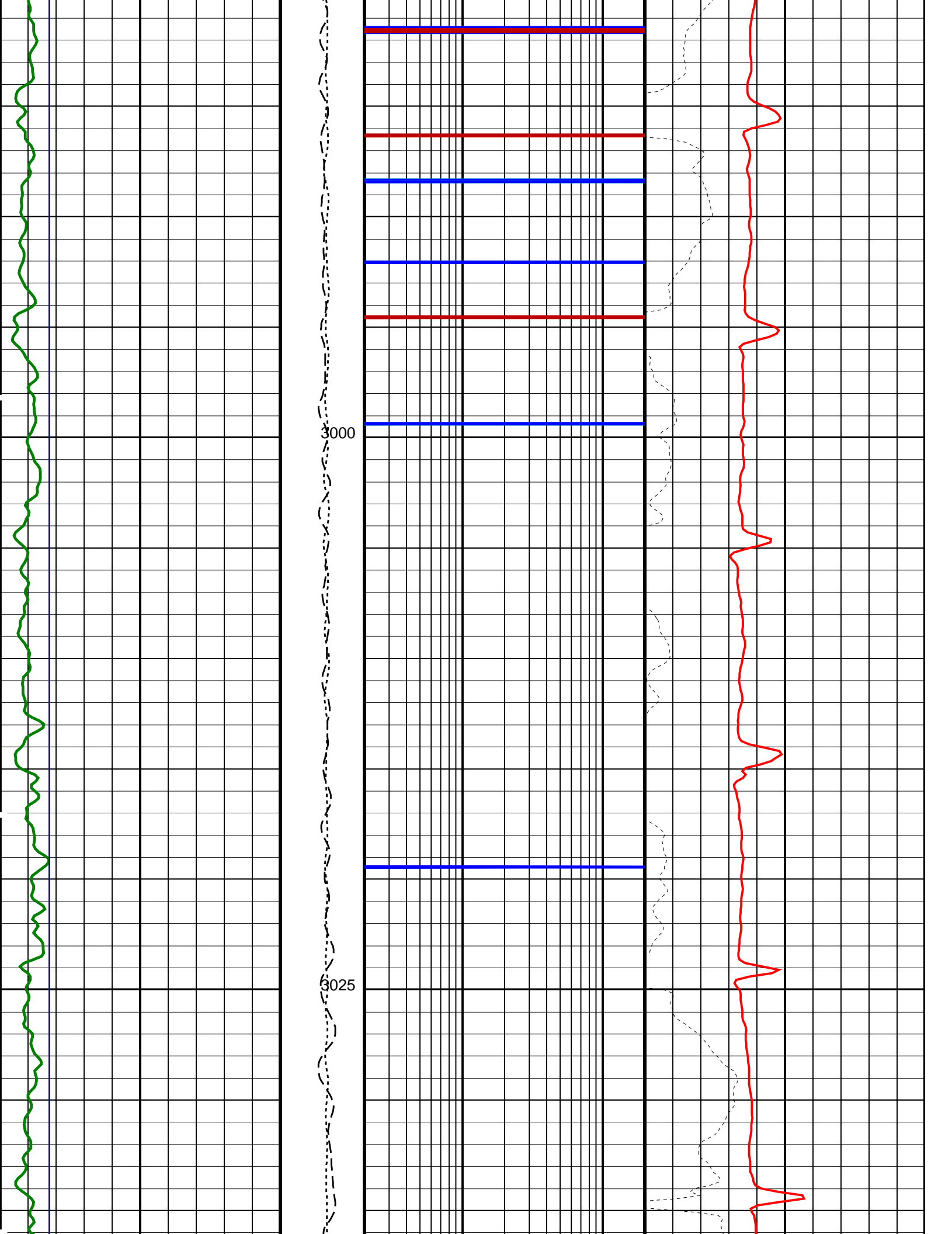
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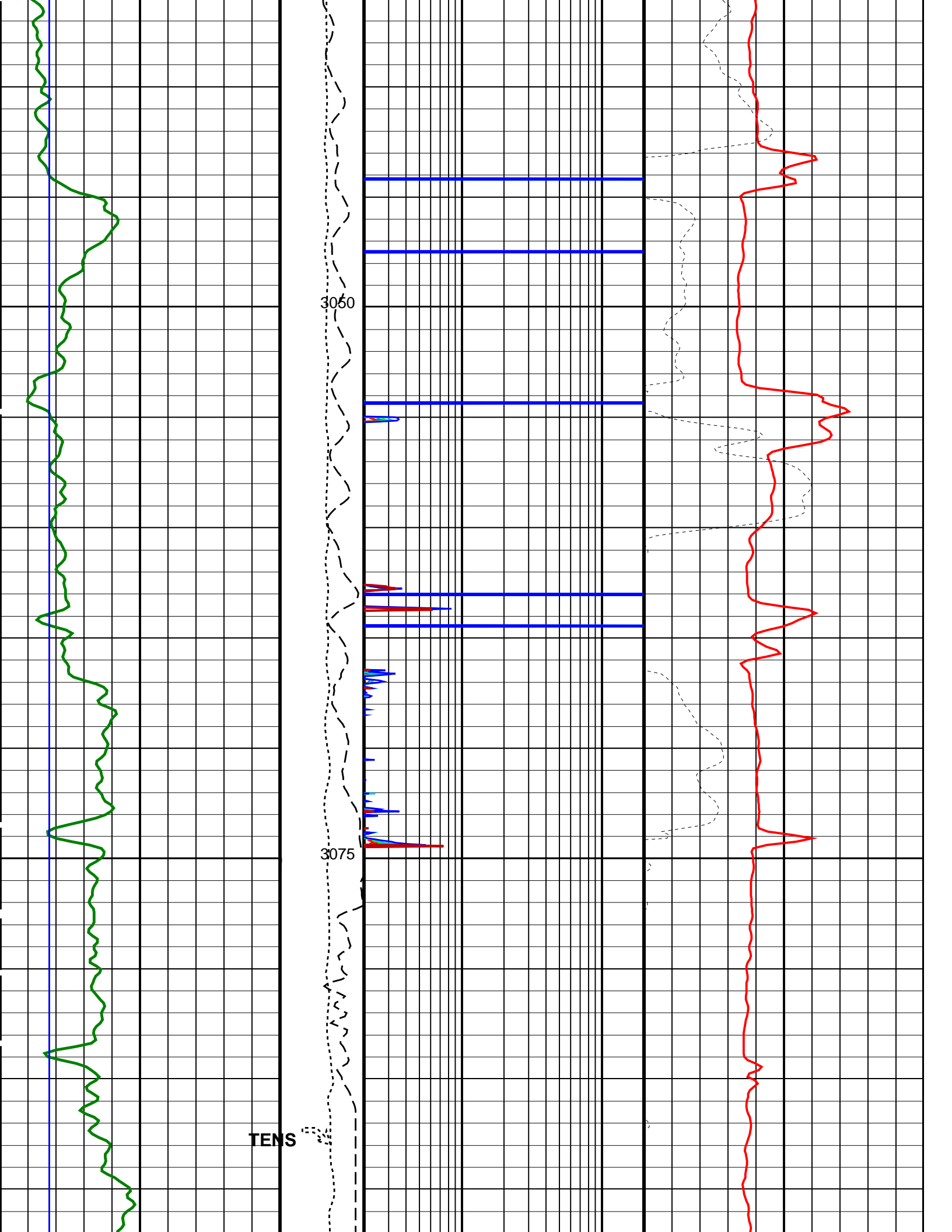
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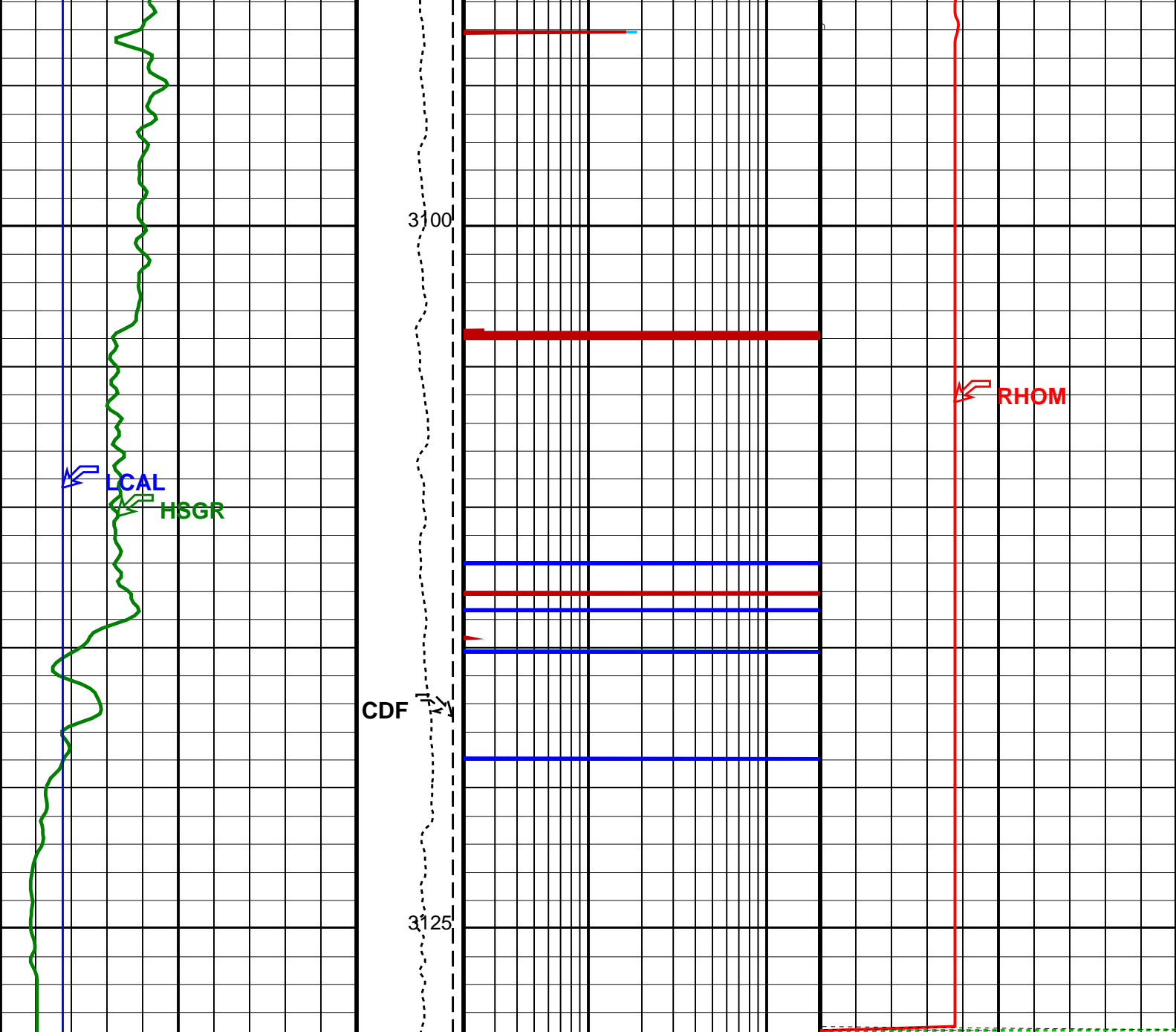












HLDS Caliper (LCAL) (IN)		Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	HLDS Long Spaced Photoelectric Effect (PEFL) (-----)
0	20	10000 0	0.2 20	0 10
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5) (OHMM)	HLDS Bulk Density (RHOM) (G/C3)
0	100	3000 0	0.2 20	0 4
Run 1 Downlog			HRLT Resistivity 3 (RLA3) (OHMM)	HLDS Bulk Density Correction (DRH) (G/C3)
			0.2 20	-0.25 0.25
			HRLT Resistivity 2 (RLA2) (OHMM)	
			0.2 20	
			HRLT Resistivity 1 (RLA1) (OHMM)	
			0.2 20	
			HRLT True Resistivity (RT_HRLT) (OHMM)	
			0.2 20	

Parameters

DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00117734	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	55	DEGF
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.987236	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998714	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCML	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSP0	Sonde Position	Centered	
SHT	Surface Hole Temperature	55	DEGF
DSST-B: Dipole Shear Imager - B			
AGC1	Automatic Gain Control 1	ON	
AGC2	Automatic Gain Control 2	ON	
AGC3	Automatic Gain Control 3	ON	
AGC4	Automatic Gain Control 4	ON	
AGC5	Automatic Gain Control 5	ON	
AGCX	Automatic Gain Control X	ON	
BARS_MTR1	Length for Monopole Transmitter to Receiver 1	2.7432	M
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CASF	Label Casing Function - Monopole P&S	50	

CDTS	C-Delta-T Shale		700	US/F
COLL	Label Slowness Lower Limit – Monopole P&S Compressional		120	US/F
COUL	Label Slowness Upper Limit – Monopole P&S Compressional		195	US/F
DDE1	Digitizing Delay 1		0	US
DDE2	Digitizing Delay 2		0	US
DDE3	Digitizing Delay 3		0	US
DDE4	Digitizing Delay 4		0	US
DDE5	Digitizing Delay 5		0	US
DDEX	Digitizing Delay X		0	US
DLCS	Label Compressional Source – Dipole Shear		USE	
DLHS	Label Hole Diameter Source for SOBS Channel		AUTO	
DSHL	Label Slowness Lower Limit – Dipole Shear		40	US/F
DSHU	Label Slowness Upper Limit – Dipole Shear		1040	US/F
DSI1	Digitizer Sample Interval 1		40	US
DSI2	Digitizer Sample Interval 2		40	US
DSI3	Digitizer Sample Interval 3		40	US
DSI4	Digitizer Sample Interval 4		10	US
DSI5	Digitizer Sample Interval 5		10	US
DSIX	Digitizer Sample Interval X		40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP		
DTF	Delta-T Fluid		196	US/F
DTM	Delta-T Matrix		56	US/F
DTSS	Shear Delta-T Source for DTSM Channel	LOWER_DIPOLE		
DWC1	Digitizer Word Count 1		512	
DWC2	Digitizer Word Count 2		512	
DWC3	Digitizer Word Count 3		512	
DWC4	Digitizer Word Count 4		512	
DWC5	Digitizer Word Count 5		512	
DWCX	Digitizer Word Count X		512	
FDE1	Firing Delay 1		0	
FDE2	Firing Delay 2		0	
FDE3	Firing Delay 3		0	
FDE4	Firing Delay 4		0	
FDE5	Firing Delay 5		0	
FDEX	Firing Delay X		0	
FGM5	First Motion Gate Moveout 5		40	US/F
FGMX	First Motion Gate Moveout X		40	US/F
FILG	Label Fill Gap Control – Monopole P&S	COMP_SHEAR		
FMG5	First Motion Minimum Gate 5		500	US
FMGX	First Motion Minimum Gate X		500	US
FMLL	Slowness Lower Limit – FMD		40	US/F
FMRC	Restart Control – FMD	CONTINUE		
FMT5	First Motion Threshold 5	UP		
FMTX	First Motion Threshold X	NONE		
FMUL	Slowness Upper Limit – FMD		180	US/F
FNC5	First Motion Noise Counter Input 5	ALO		
FNCX	First Motion Noise Counter Input X	ALO		
FPM	Processing Mode – FMD	NONE		
FTD5	First Motion Threshold Direction 5	UP		
FTDX	First Motion Threshold Direction X	UP		
GAI1	Manual Gain 1		10	
GAI2	Manual Gain 2		10	
GAI3	Manual Gain 3		6	
GAI4	Manual Gain 4		16	
GAI5	Manual Gain 5		16	
GAIX	Manual Gain X		10	
GCSE	Generalized Caliper Selection	BS		
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GDT1	Gain Delta-T 1		800	US/F
GDT2	Gain Delta-T 2		800	US/F
GDT3	Gain Delta-T 3		800	US/F
GDT4	Gain Delta-T 4		160	US/F
GDT5	Gain Delta-T 5		160	US/F
GDTX	Gain Delta-T X		800	US/F
GGRD	Geothermal Gradient		0.01	DF/F
GIN1	Gain Interval 1		15360	US
GIN2	Gain Interval 2		15360	US
GIN3	Gain Interval 3		15360	US
GIN4	Gain Interval 4		2560	US
GIN5	Gain Interval 5		1600	US
GINX	Gain Interval X		15360	US
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9		
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE		
HPF1	High Pass Filter 1		F80	
HPF2	High Pass Filter 2		F80	
HPF3	High Pass Filter 3		F80	
HPF4	High Pass Filter 4		F8K	
HPF5	High Pass Filter 5		F8K	
HPFX	High Pass Filter X		F80	
ISSBAR	Barite Mud Switch	BARITE		
ITTS	Integrated Transit Time Source	DTCO		
LFC	Label Formation Character – Monopole P&S	DYNAMIC		
LPF1	Low Pass Filter 1		F5K	
LPF2	Low Pass Filter 2		F5K	
LPF3	Low Pass Filter 3		F5K	

LPF3	Low Pass Filter 3	F30K	
LPF4	Low Pass Filter 4	F30K	
LPF5	Low Pass Filter 5	F30K	
LPFX	Low Pass Filter X	F5K	
LTXG	Lower Dipole Transmitter Geometry	156	IN
MAI5	Slowness Averaging Interval – FMD	42	IN
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCS	Mean Casing Slowness	57	US/F
MDS5	Multishot Delta-T Scatter – FMD	20	US
MTXG	Monopole Transmitter Geometry	186	IN
MUX1	Sum Difference Multiplexor Input 1	RR	
MUX2	Sum Difference Multiplexor Input 2	RR	
MUX3	Sum Difference Multiplexor Input 3	RR	
MUX4	Sum Difference Multiplexor Input 4	RR	
MUX5	Sum Difference Multiplexor Input 5	RR	
MUXX	Sum Difference Multiplexor Input X	RR	
NTI5	Number Threshold Items 5	0	
NTIX	Number Threshold Items X	0	
NWI1	Number Waveform Items 1	8	
NWI2	Number Waveform Items 2	8	
NWI3	Number Waveform Items 3	0	
NWI4	Number Waveform Items 4	8	
NWI5	Number Waveform Items 5	0	
NWIX	Number Waveform Items X	0	
NWS1	Number Waveforms Stacked 1	1	
NWS2	Number Waveforms Stacked 2	1	
NWS3	Number Waveforms Stacked 3	1	
NWS4	Number Waveforms Stacked 4	1	
NWS5	Number Waveforms Stacked 5	1	
NWSX	Number Waveforms Stacked X	1	
RATE	Firing Rate	R7	
RSMN	Label Shear/Compressional Minimum Ratio – Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio – Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM1	DSST Sonic Acquisition Mode 1 – Lower Dipole Mode	LFD_EVEN	
SAM2	DSST Sonic Acquisition Mode 2 – Upper Dipole Mode	ODD	
SAM3	DSST Sonic Acquisition Mode 3 – Monopole Mode for Stoneley	OFF	
SAM4	DSST Sonic Acquisition Mode 4 – Monopole Mode for P&S	EVEN	
SAM5	DSST Sonic Acquisition Mode 5 – Monopole Mode for FMD	OFF	
SAMX	DSST Sonic Acquisition Mode X – Both Dipoles or Monopole Mode for Expert	OFF	
SAS1	STC Sonic Array Status – Lower Dipole	255	
SAS2	STC Sonic Array Status – Upper Dipole	255	
SAS3	STC Sonic Array Status – Monopole Stoneley	255	
SAS4	STC Sonic Array Status – Monopole P&S	255	
SAS5	Sonic Array Status – FMD	255	
SBO1	STC Search Band Offset – Lower Dipole	3000	US
SBO2	STC Search Band Offset – Upper Dipole	3000	US
SBO3	STC Search Band Offset – Monopole Stoneley	3000	US
SBO4	STC Search Band Offset – Monopole P&S	500	US
SBR4	STC Baseline Removal – Monopole P&S	ON	
SBW1	STC Search Bandwidth – Lower Dipole	8000	US
SBW2	STC Search Bandwidth – Upper Dipole	8000	US
SBW3	STC Search Bandwidth – Monopole Stoneley	8000	US
SBW4	STC Search Bandwidth – Monopole P&S	2000	US
SFC1	STC Formation Character – Lower Dipole	SELECTABLE	
SFC2	STC Formation Character – Upper Dipole	SELECTABLE	
SFC3	STC Formation Character – Monopole Stoneley	SELECTABLE	
SFC4	STC Formation Character – Monopole P&S	SELECTABLE	
SFM1	STC Filter – Lower Dipole	B.3–1.5K	
SFM2	STC Filter – Upper Dipole	B1–2K	
SFM3	STC Filter – Monopole Stoneley	B.5–1.5K	
SFM4	STC Filter – Monopole P&S	B3–20K	
SHLL	Label Slowness Lower Limit – Monopole P&S Shear	235	US/F
SHT	Surface Hole Temperature	55	DEGF
SHUL	Label Slowness Upper Limit – Monopole P&S Shear	240	US/F
SLL1	STC Slowness Lower Limit – Lower Dipole	40	US/F
SLL2	STC Slowness Lower Limit – Upper Dipole	40	US/F
SLL3	STC Slowness Lower Limit – Monopole Stoneley	180	US/F
SLL4	STC Slowness Lower Limit – Monopole P&S	40	US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DTCO	
SST1	STC Slowness Step – Lower Dipole	4	US/F
SST2	STC Slowness Step – Upper Dipole	4	US/F
SST3	STC Slowness Step – Monopole Stoneley	4	US/F
SST4	STC Slowness Step – Monopole P&S	2	US/F
SSW1	STC Source Waveform – Lower Dipole	WF_SAM1	
SSW2	STC Source Waveform – Upper Dipole	WF_SAM2	

SSW3	STC Source Waveform – Monopole Stoneley	WF_SAM3	
SSW4	STC Source Waveform – Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit – Monopole Stoneley	180	US/F
STUL	Label Slowness Upper Limit – Monopole Stoneley	780	US/F
SUL1	STC Slowness Upper Limit – Lower Dipole	1040	US/F
SUL2	STC Slowness Upper Limit – Upper Dipole	1040	US/F
SUL3	STC Slowness Upper Limit – Monopole Stoneley	780	US/F
SUL4	STC Slowness Upper Limit – Monopole P&S	240	US/F
SWD1	STC Slowness Width – Lower Dipole	40	US/F
SWD2	STC Slowness Width – Upper Dipole	40	US/F
SWD3	STC Slowness Width – Monopole Stoneley	40	US/F
SWD4	STC Slowness Width – Monopole P&S	10	US/F
TBDB	Tool String Bottom to DSST Bottom	561.05	IN
TBF1	STC Time for Baseline Fill – Lower Dipole	0	US
TBF2	STC Time for Baseline Fill – Upper Dipole	0	US
TBF3	STC Time for Baseline Fill – Monopole Stoneley	0	US
TBF4	STC Time for Baseline Fill – Monopole P&S	300	US
TLL1	STC Time Lower Limit – Lower Dipole	600	US
TLL2	STC Time Lower Limit – Upper Dipole	600	US
TLL3	STC Time Lower Limit – Monopole Stoneley	600	US
TLL4	STC Time Lower Limit – Monopole P&S	150	US
TST1	STC Time Step – Lower Dipole	200	US
TST2	STC Time Step – Upper Dipole	200	US
TST3	STC Time Step – Monopole Stoneley	200	US
TST4	STC Time Step – Monopole P&S	50	US
TTDB	Tool String Top to DSST Bottom	1225.31	IN
TUL1	STC Time Upper Limit – Lower Dipole	18960	US
TUL2	STC Time Upper Limit – Upper Dipole	18440	US
TUL3	STC Time Upper Limit – Monopole Stoneley	12000	US
TUL4	STC Time Upper Limit – Monopole P&S	3660	US
TWA1	Transmitter Waveform Amplitude 1	179	
TWA2	Transmitter Waveform Amplitude 2	179	
TWA3	Transmitter Waveform Amplitude 3	166	
TWA4	Transmitter Waveform Amplitude 4	150	
TWA5	Transmitter Waveform Amplitude 5	150	
TWAX	Transmitter Waveform Amplitude X	179	
TWD1	STC Time Width – Lower Dipole	2000	US
TWD2	STC Time Width – Upper Dipole	2000	US
TWD3	STC Time Width – Monopole Stoneley	2000	US
TWD4	STC Time Width – Monopole P&S	1000	US
TWI1	STC Integration Time Window – Lower Dipole	1600	US
TWI2	STC Integration Time Window – Upper Dipole	1600	US
TWI3	STC Integration Time Window – Monopole Stoneley	2400	US
TWI4	STC Integration Time Window – Monopole P&S	500	US
TWR1	Transmitter Waveform Sample Rate 1	20	US
TWR2	Transmitter Waveform Sample Rate 2	5	US
TWR3	Transmitter Waveform Sample Rate 3	5	US
TWR4	Transmitter Waveform Sample Rate 4	5	US
TWR5	Transmitter Waveform Sample Rate 5	5	US
TWRX	Transmitter Waveform Sample Rate X	5	US
TWS1	Transmitter Waveform Select 1	2	
TWS2	Transmitter Waveform Select 2	0	
TWS3	Transmitter Waveform Select 3	4	
TWS4	Transmitter Waveform Select 4	6	
TWS5	Transmitter Waveform Select 5	6	
TWSX	Transmitter Waveform Select X	0	
UTXG	Upper Dipole Transmitter Geometry	162	IN
WFDTS1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTS2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTS3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTS4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSX	SAMX Waveform Delta for Spectrum	0	US/F
WFLLS1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLLS2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLS3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLS4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSX	SAMX Waveform Lower Limit for Spectrum	0	US
WFM1	Waveform Mode 1	W1	
WFM2	Waveform Mode 2	W1	
WFM3	Waveform Mode 3	W1	
WFM4	Waveform Mode 4	W1	
WFM5	Waveform Mode 5	W1	
WFMX	Waveform Mode X	W1	
WFULSP1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFULSP2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULSP3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULSP4	SAM4 Waveform Upper Limit for Spectrum	5000	US
WFULSPX	SAMX Waveform Upper Limit for Spectrum	20000	US
XMT1	Transmitter Select 1	DLO	
XMT2	Transmitter Select 2	DUP	
XMT3	Transmitter Select 3	MONO	
XMT4	Transmitter Select 4	MONO	
XMT5	Transmitter Select 5	MONO	
XMTX	Transmitter Select X	DUP	

HLDS: Hostile Litho-Density Sonde

CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	OFF	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	55	DEGF
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	11726	FT
TDD	Total Depth - Driller	3574.00	M
TDL	Total Depth - Logger	3413.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo		Vertical Scale: 1:200		Graphics File Created: 25-Nov-2017 18:29	
OP System Version: 19C0-187					
HNGC-B	19C0-187	HNGS-BA	19C0-187		
HRLT-B	19C0-187	DSST-B	19C0-187		
HLDS	19C0-187	LDSC-B	19C0-187		
EDTC-B	SKK-5169-EDTCB				

Input DLIS Files				
DEFAULT	Flip_NGS_HRLA_DSI_055LUP	PRODUCER	25-Nov-2017 16:01	3128.8 M
Output DLIS Files				
			2734.1 M	

Company: International Ocean Discovery Program

Well: Expedition 369, Site U1513E

Input DLIS Files					
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Output DLIS Files					
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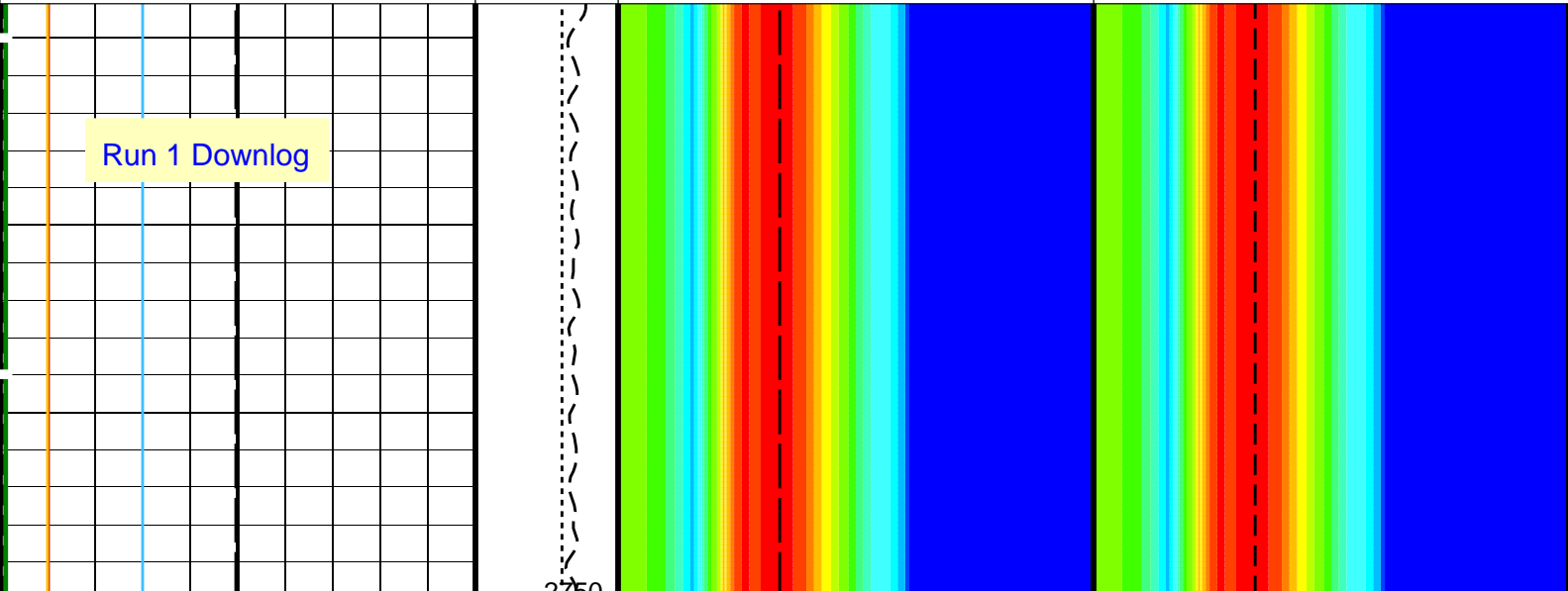
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HNGC-B	19C0-187	HNGS-BA	19C0-187		
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HLDS	19C0-187	LDSC-B	19C0-187		
EDTC-B	SKK-5169-EDTCB				

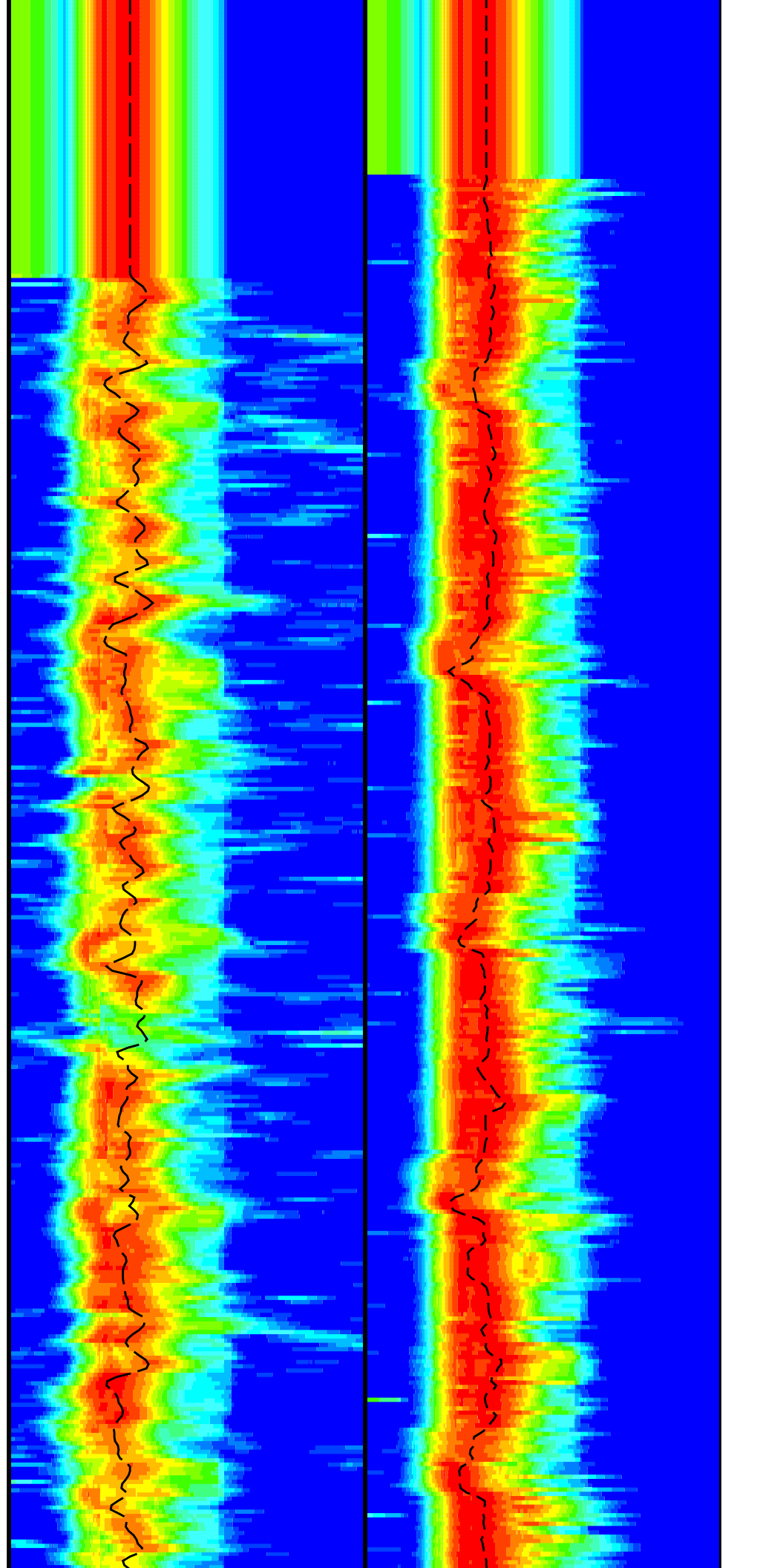
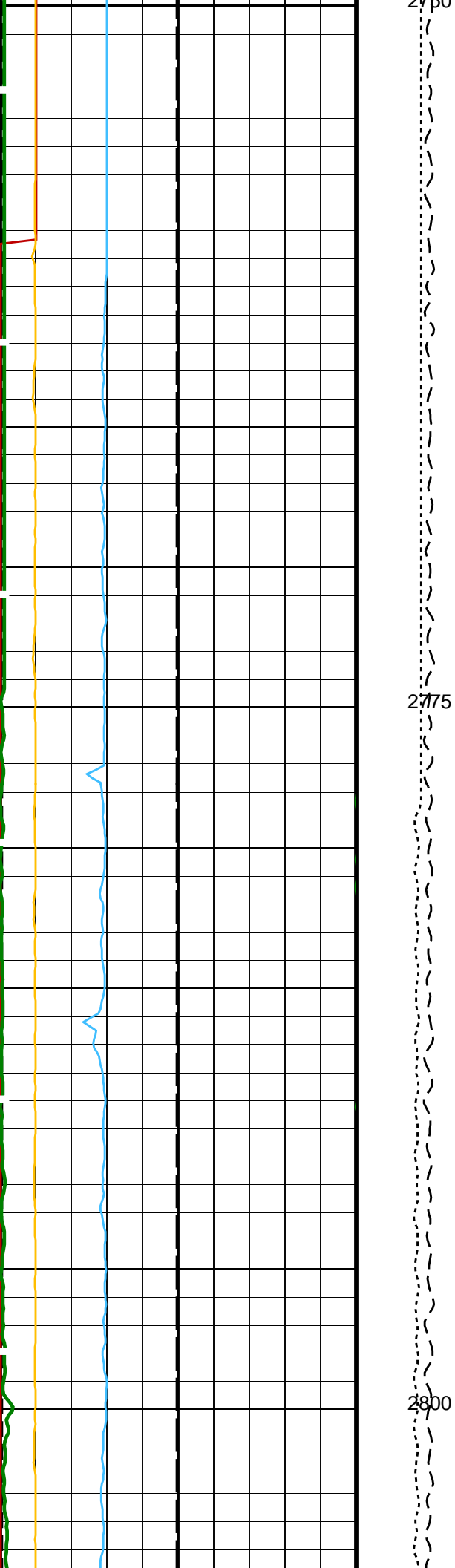
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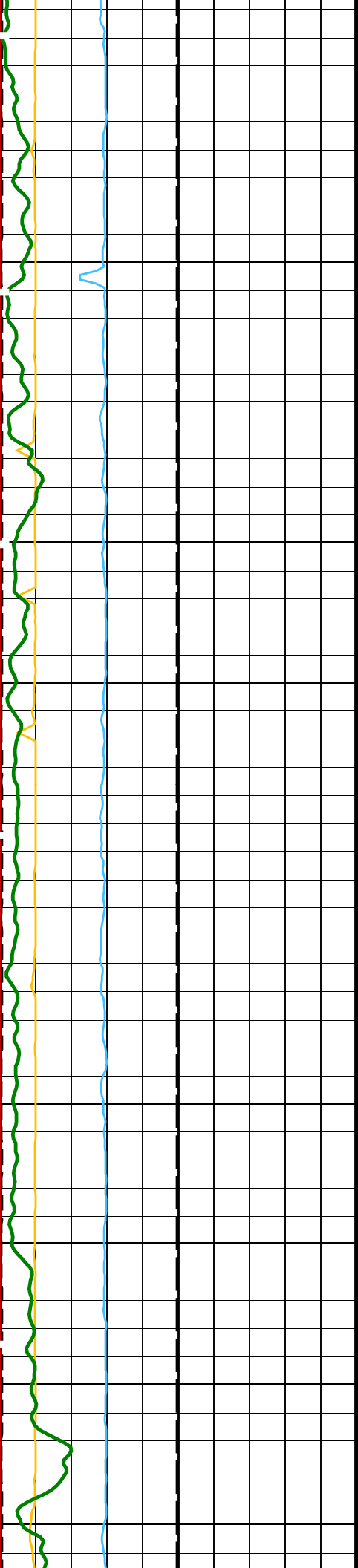
Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)	
0 (GAPI) 100	
Peak Coherence / TA - Lower Dipole (CHT1)	
-2 (----) 8	
Peak Coherence / RA - Lower Dipole (CHR1)	
0 (----) 10	
Waveform Data Copy Indicator 1 - Lower Dipole (WC11)	
0 (----) 10	

SAM1 Waveform Gain (WFG1)	Calibrated Downhole Force (CDF) (LBF)	Min Amplitude Max	Min Amplitude Max
0 (----) 1000	5000 0	Tr.Array L.Dipole Slow Proj. CVDL (SPT1) (US/F)	Rec.Array L.Dipole Slow Proj. CVDL (SPR1) (US/F)
		40 1040	40 1040
Bit Size (BS) (IN)	Tension (TENS) (LBF)	Delta-T Shear / TA - Lower Dipole (DT1T) (US/F)	Delta-T Shear / RA - Lower Dipole (DT1R) (US/F)
0 20	10000 0	40 1040	40 1040

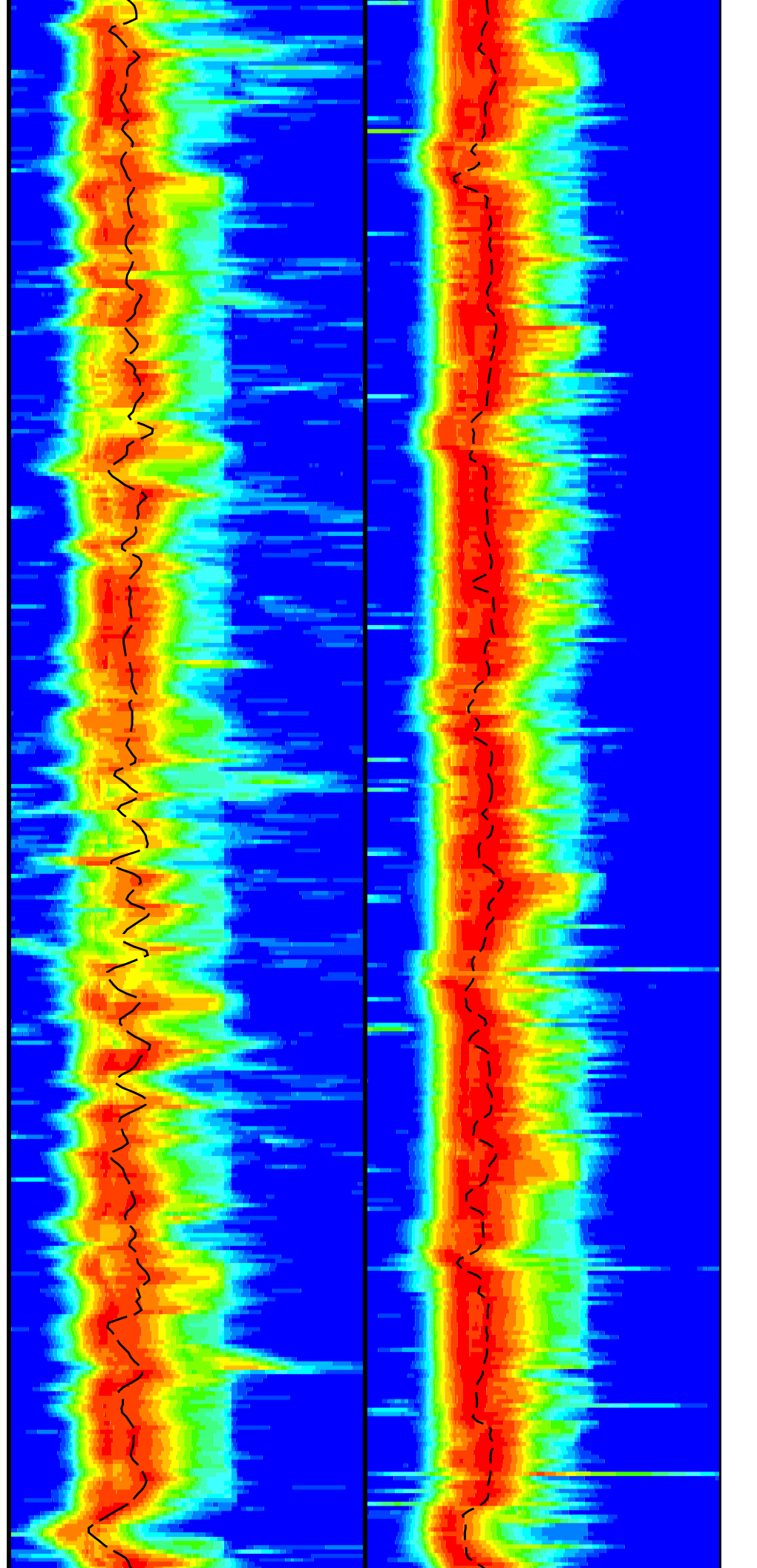


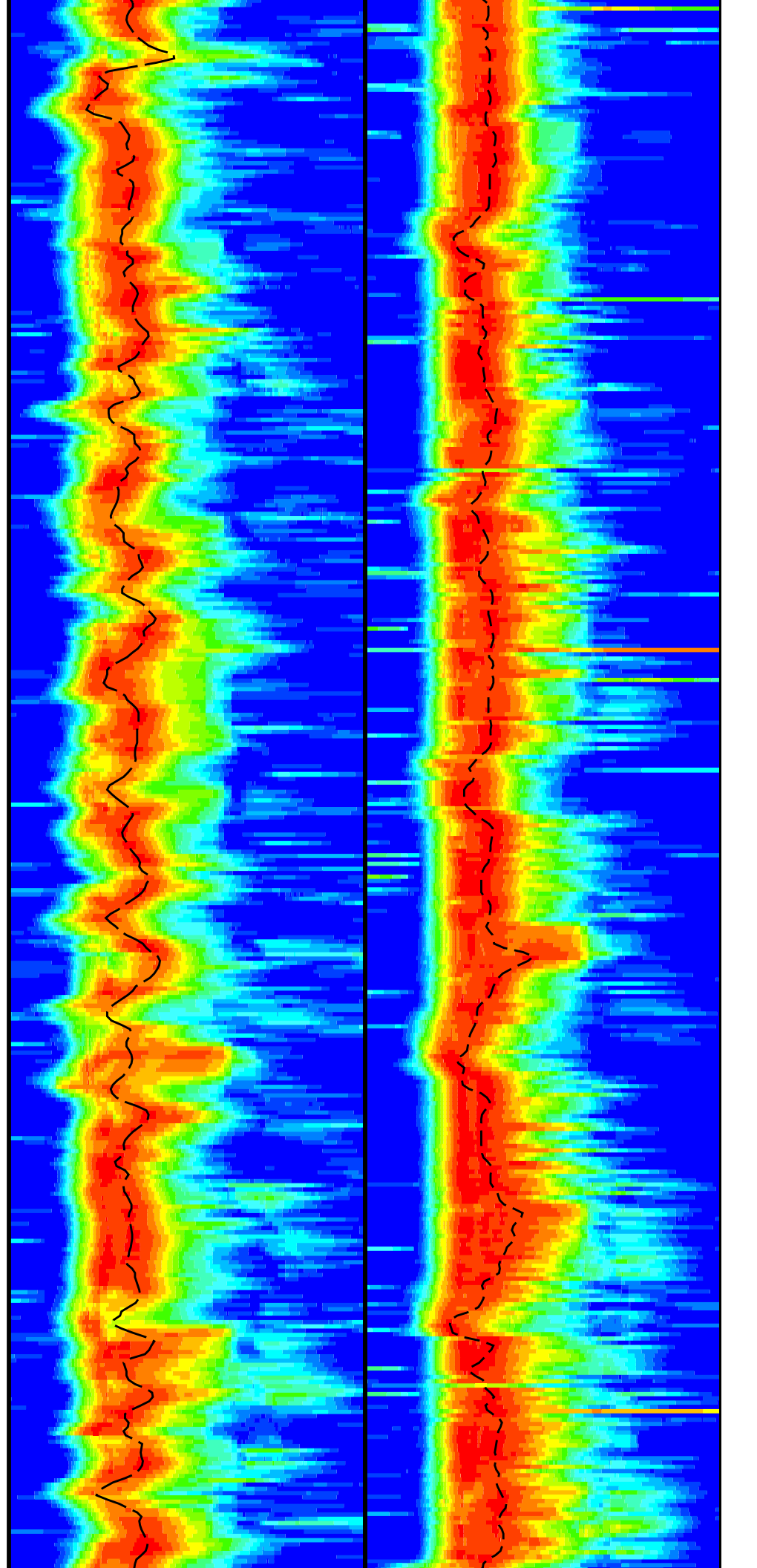
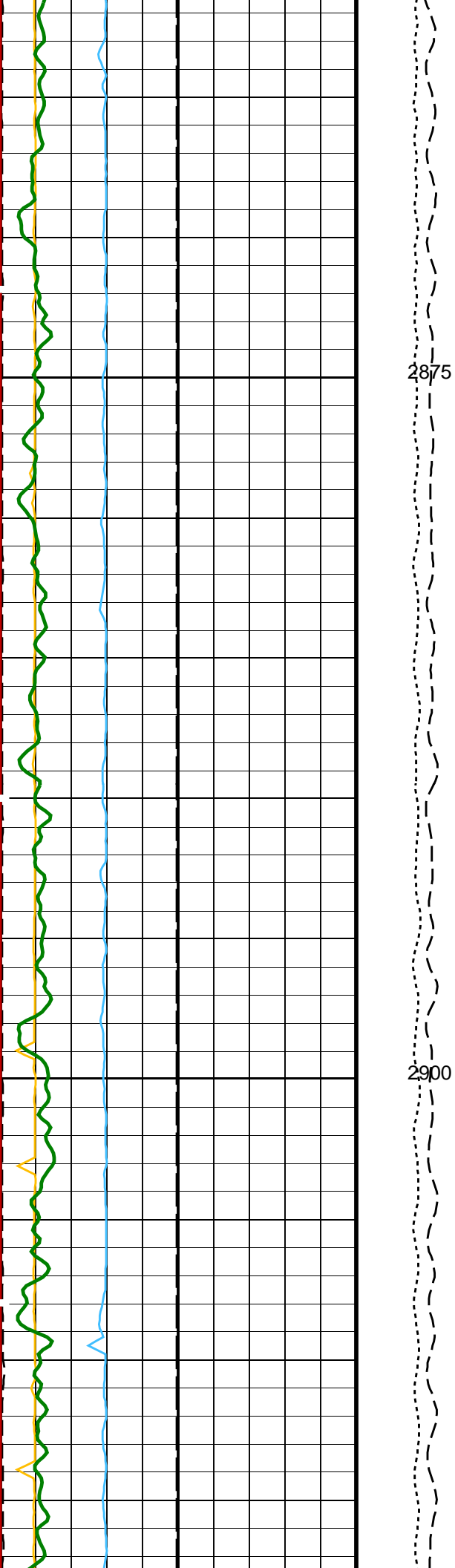


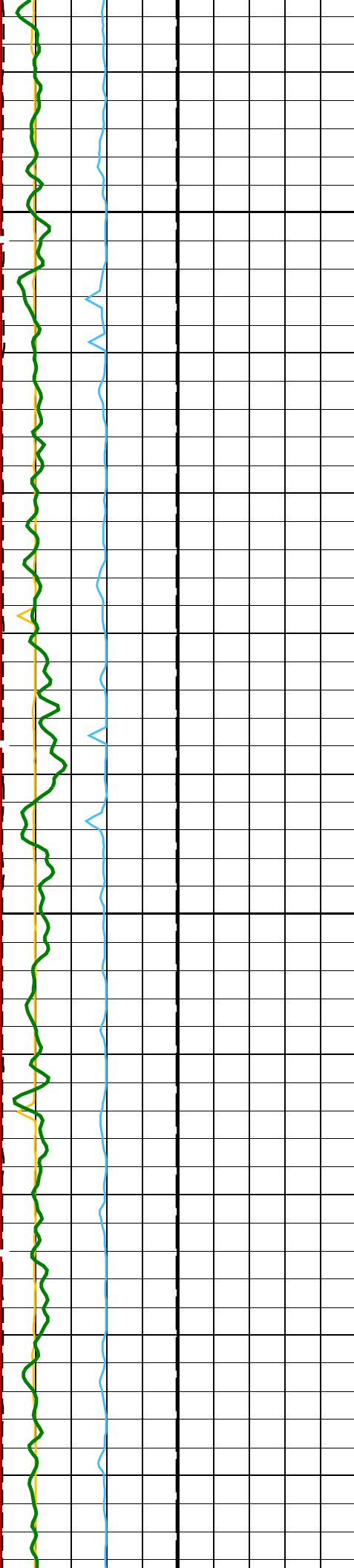


2825

2850

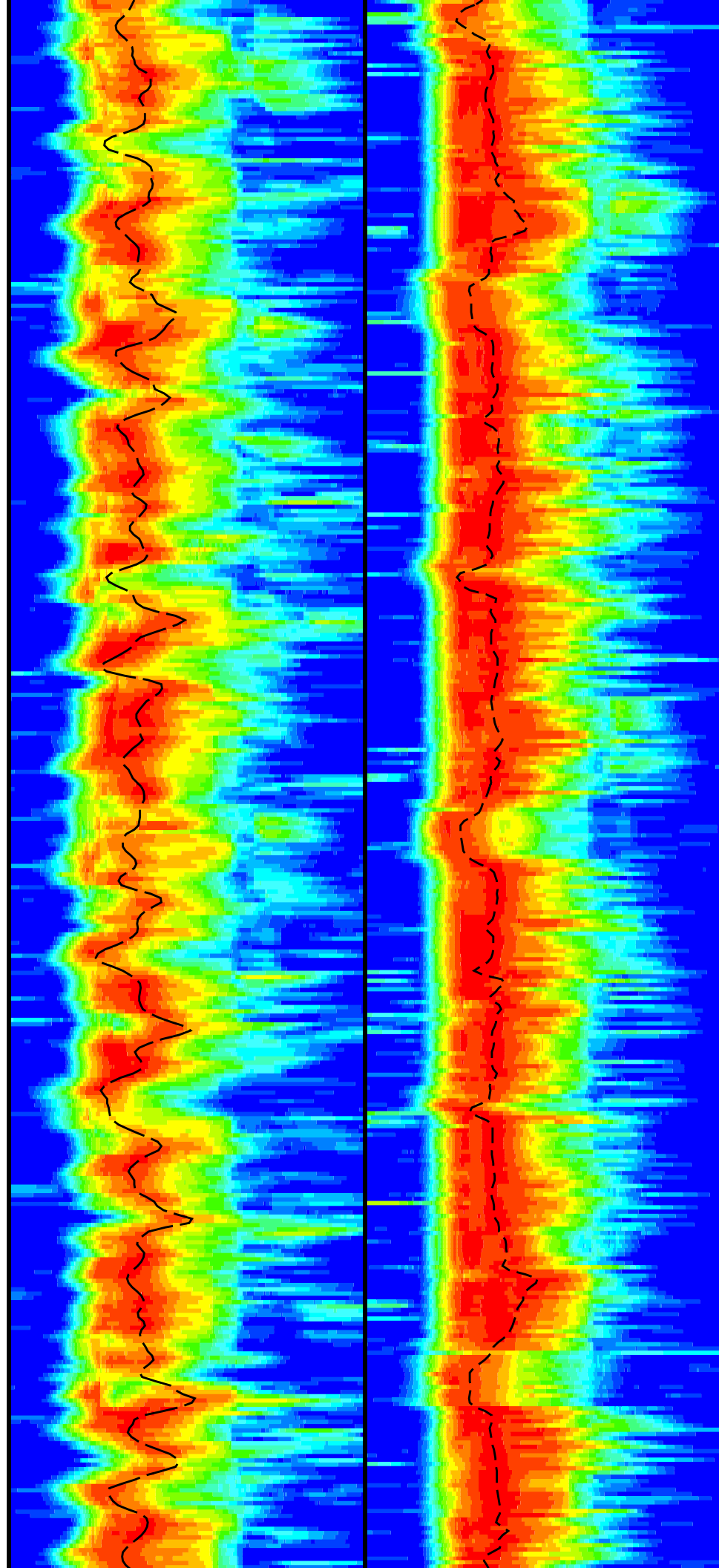


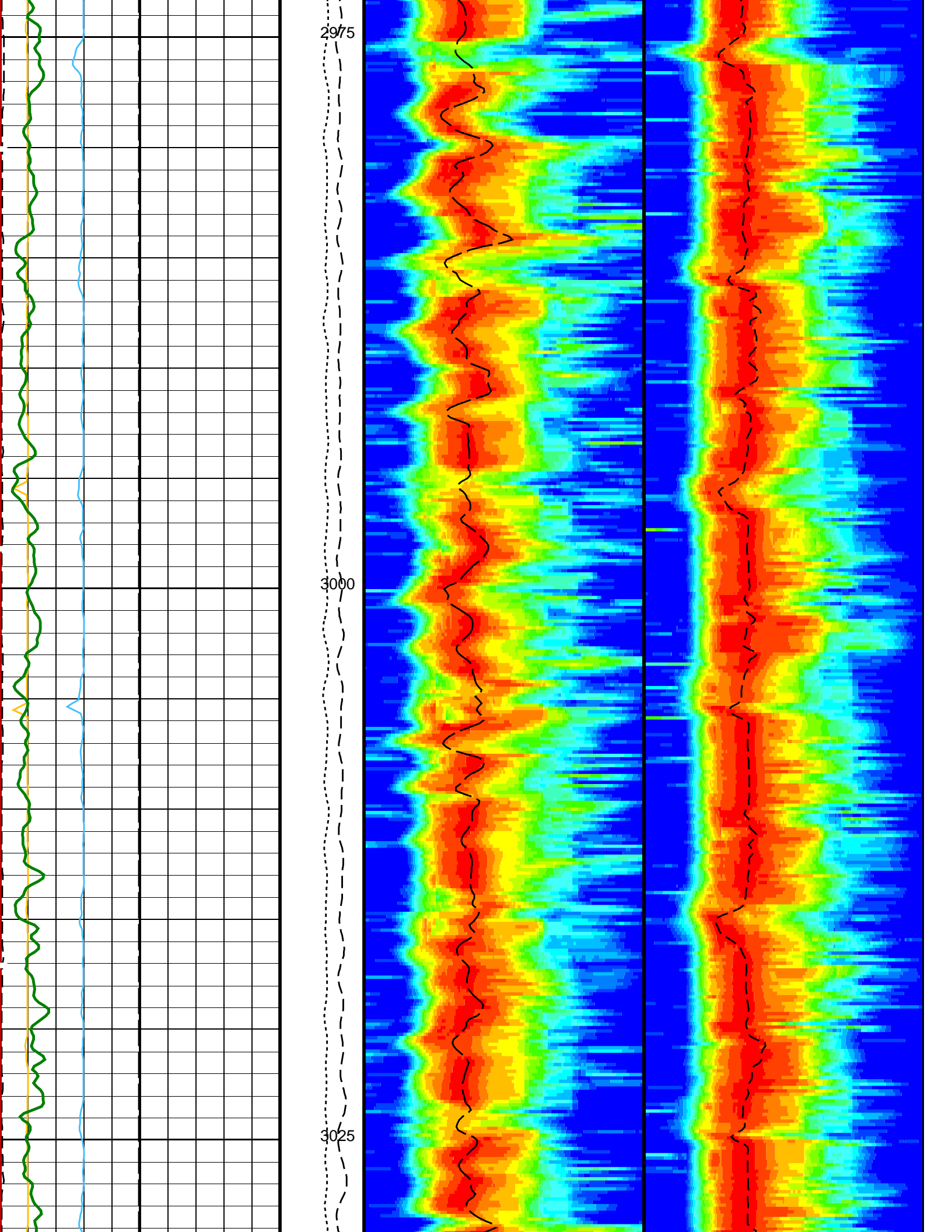


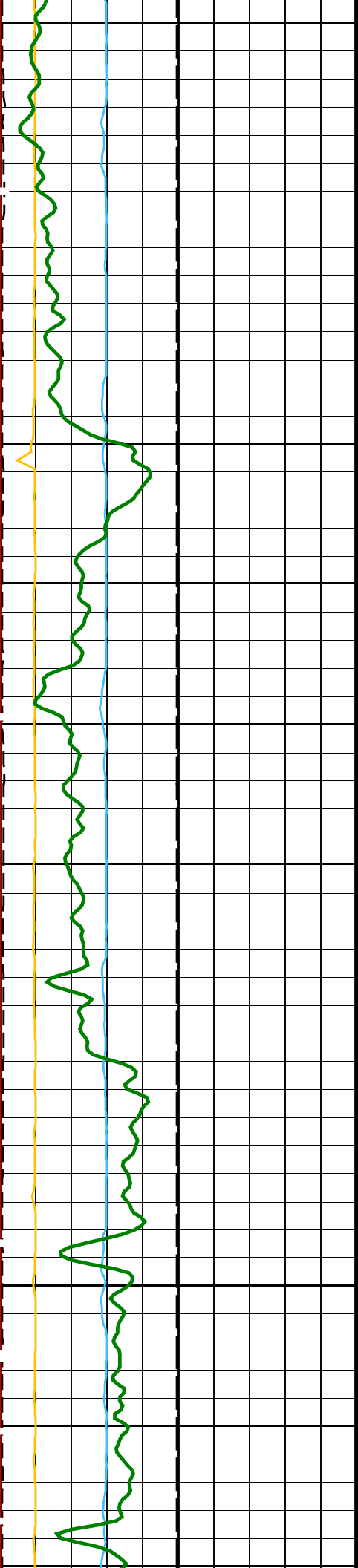


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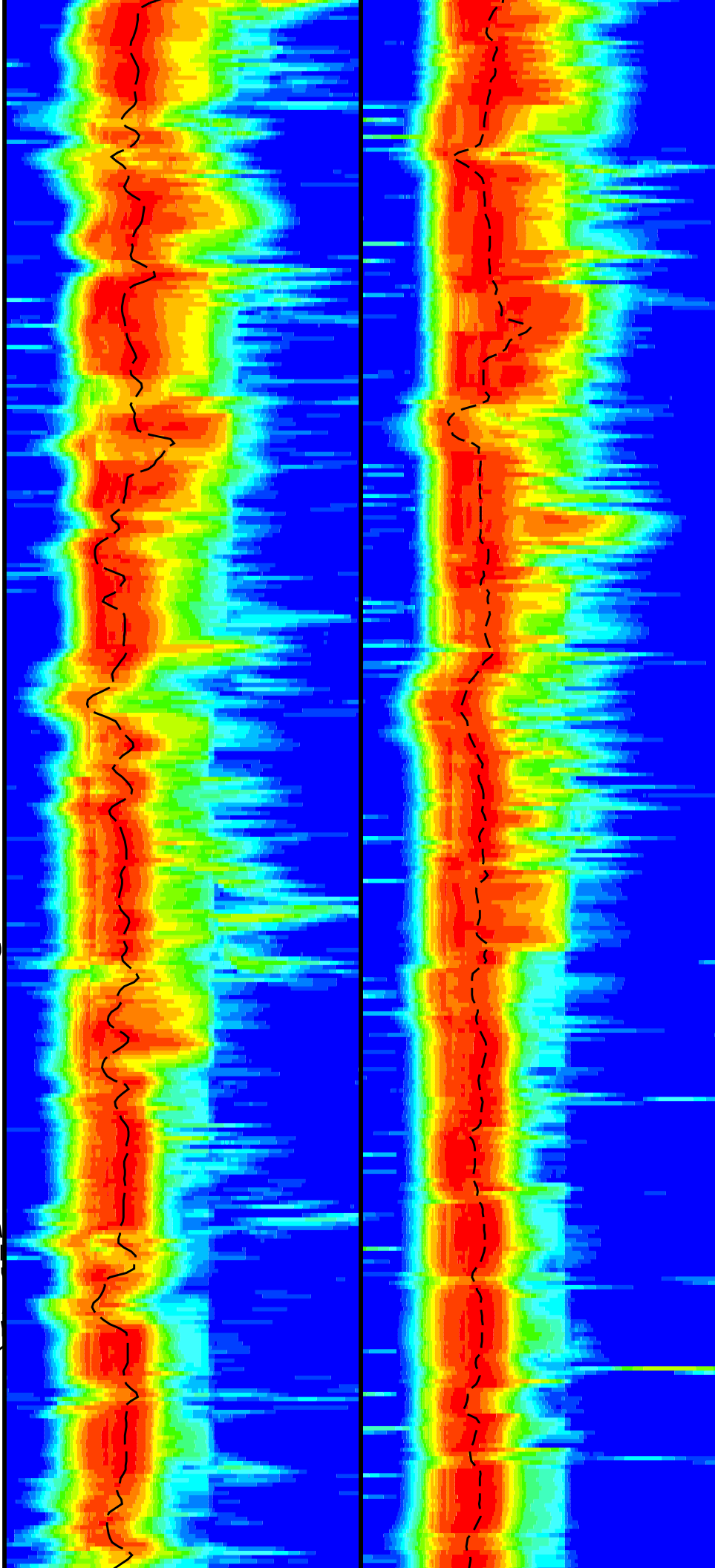


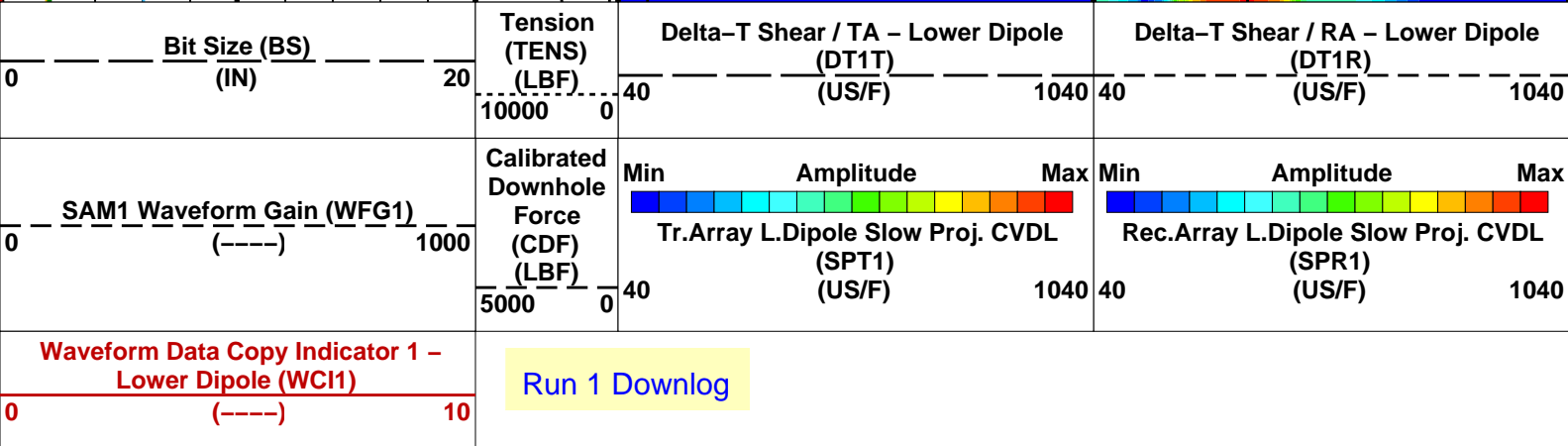
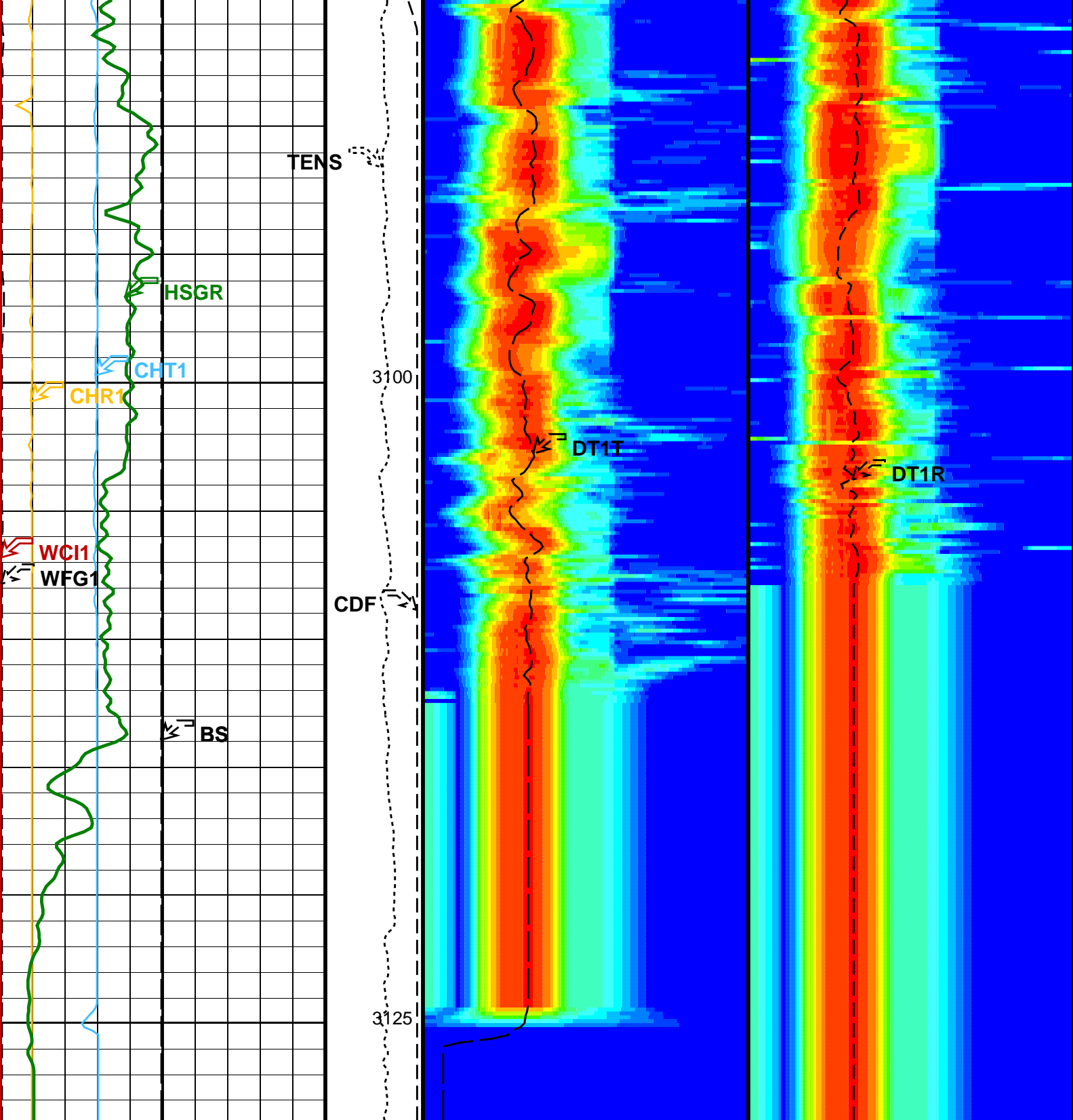




3050

3075





Peak Coherence / RA – Lower Dipole (CHR1)		
0	(----)	10
Peak Coherence / TA – Lower Dipole (CHT1)		
-2	(----)	8
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00117734	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.987236	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998714	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
DDE1	Digitizing Delay 1	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source - Dipole Shear	USE	
DSHL	Label Slowness Lower Limit - Dipole Shear	40	US/F
DSHU	Label Slowness Upper Limit - Dipole Shear	1040	US/F
DSI1	Digitizer Sample Interval 1	40	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DWC1	Digitizer Word Count 1	512	
DWCX	Digitizer Word Count X	512	
GCSE	Generalized Caliper Selection	BS	
LTXG	Lower Dipole Transmitter Geometry	156	IN
NWI1	Number Waveform Items 1	8	
NWIX	Number Waveform Items X	0	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM1	DSST Sonic Acquisition Mode 1 - Lower Dipole Mode	LFD_EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS1	STC Sonic Array Status - Lower Dipole	255	
SBO1	STC Search Band Offset - Lower Dipole	3000	US
SBW1	STC Search Bandwidth - Lower Dipole	8000	US
SFC1	STC Formation Character - Lower Dipole	SELECTABLE	
SFM1	STC Filter - Lower Dipole	B.3-1.5K	
SLL1	STC Slowness Lower Limit - Lower Dipole	40	US/F
SST1	STC Slowness Step - Lower Dipole	4	US/F
SSW1	STC Source Waveform - Lower Dipole	WF SAM1	

SUL1	STC Slowness Upper Limit – Lower Dipole	1040	US/F
SWD1	STC Slowness Width – Lower Dipole	40	US/F
TBF1	STC Time for Baseline Fill – Lower Dipole	0	US
TLL1	STC Time Lower Limit – Lower Dipole	600	US
TST1	STC Time Step – Lower Dipole	200	US
TUL1	STC Time Upper Limit – Lower Dipole	18960	US
TWD1	STC Time Width – Lower Dipole	2000	US
TWI1	STC Integration Time Window – Lower Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
WFM1	Waveform Mode 1	W1	
EDTC–B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSST_LOWER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 25–Nov–2017 18:29

OP System Version: 19C0–187

HNGC–B	19C0–187	HNGS–BA	19C0–187
HRLT–B	19C0–187	DSST–B	19C0–187
HLDS	19C0–187	LDSC–B	19C0–187
EDTC–B	SKK–5169–EDTCB		

Input DLIS Files

DEFAULT	Flip_NGS_HRLA_DSI_055LUP	PRODUCER	25–Nov–2017 16:01	3128.8 M	2734.1 M
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Output DLIS Files

DEFAULT	NGS_HRLA_DSI_LDL_060PUP	FN:81	PRODUCER	25–Nov–2017 18:29
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Company: International Ocean Discovery Program Well: Expedition 369, Site U1513E

Input DLIS Files

DEFAULT	Flip_NGS_HRLA_DSI_055LUP	PRODUCER	25–Nov–2017 16:01	3128.8 M	2734.1 M
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Output DLIS Files

DEFAULT	NGS_HRLA_DSI_LDL_060PUP	FN:81	PRODUCER	25–Nov–2017 18:29	3128.8 M	2734.1 M
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OP System Version: 19C0–187

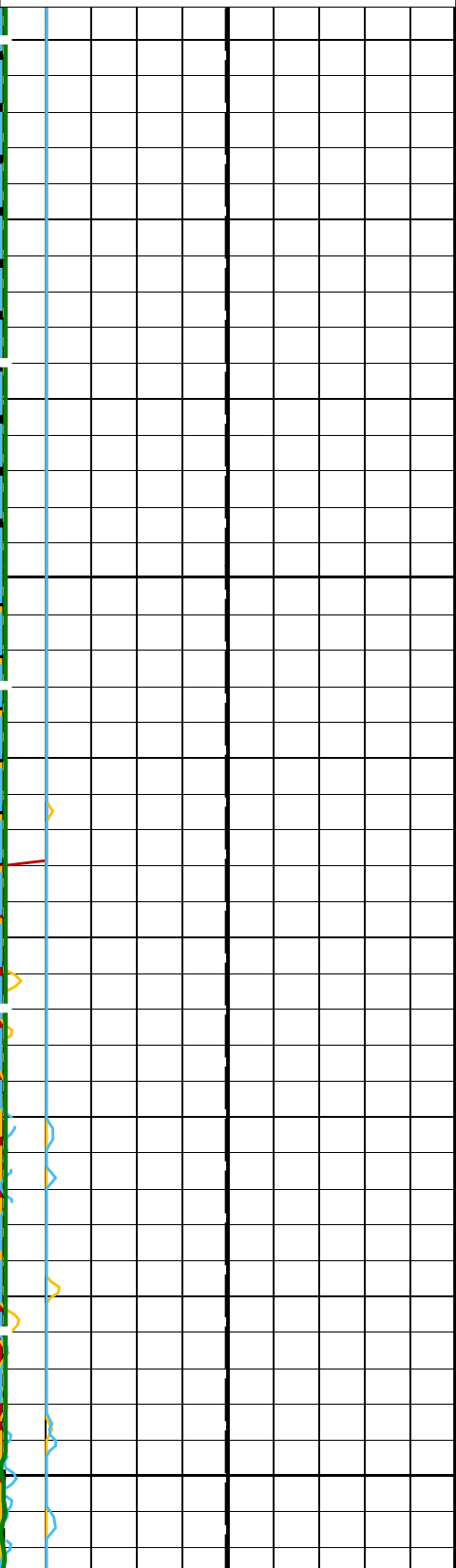
HNGC–B	19C0–187	HNGS–BA	19C0–187
HRLT–B	19C0–187	DSST–B	19C0–187
HLDS	19C0–187	LDSC–B	19C0–187
EDTC–B	SKK–5169–EDTCB		

PIP SUMMARY

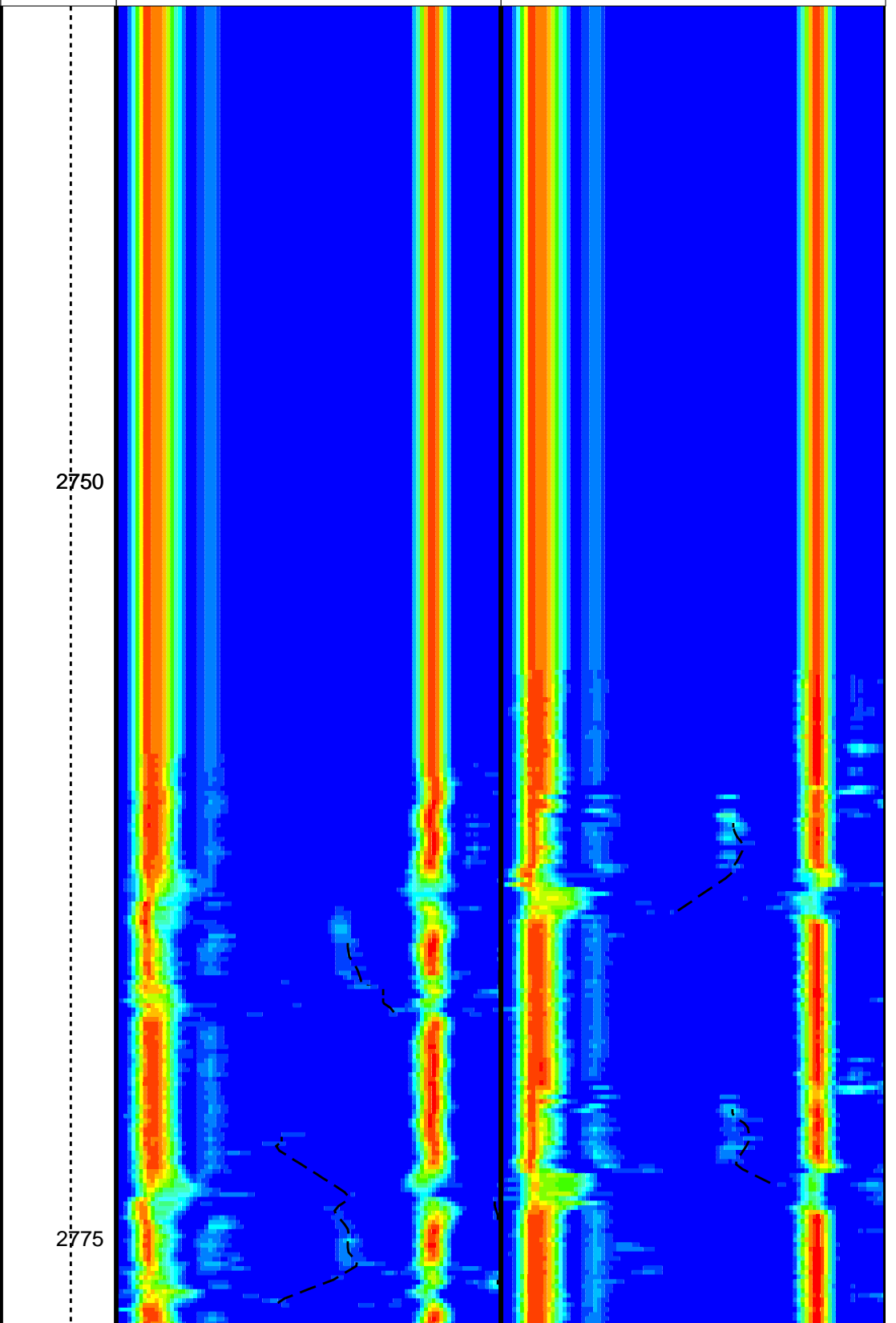
Time Mark Every 60 S

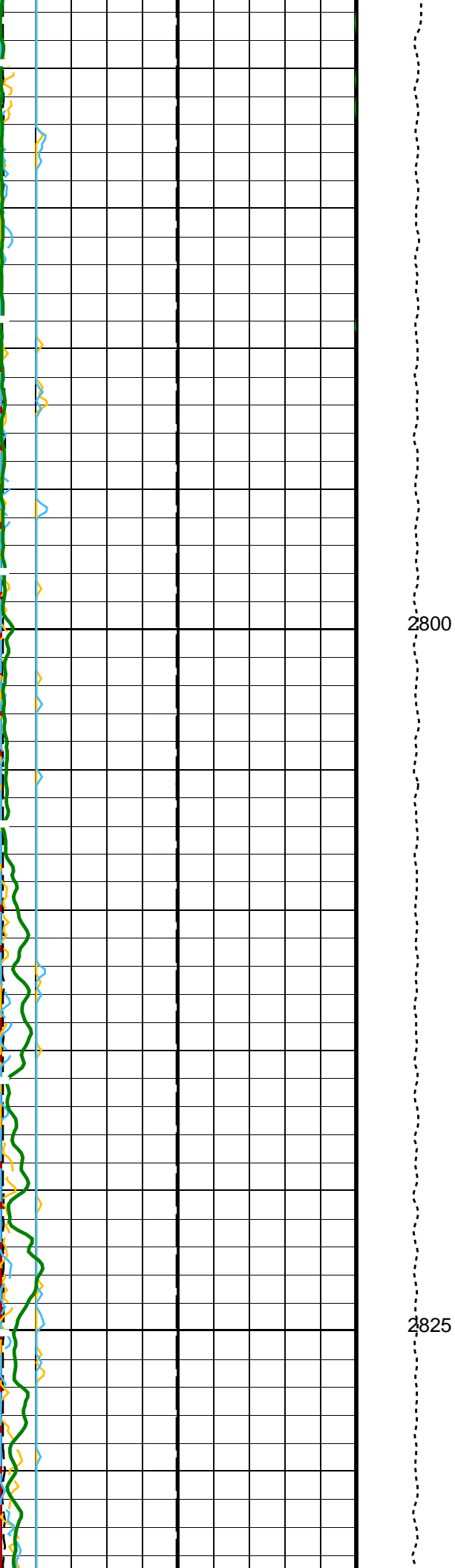
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA – P & S Shear (CHTS)		
–1	(----	9
Peak Coherence / RA – P & S Shear (CHRS)		
–1	(----	9
Peak Coherence / TA – P & S Comp (CHTP)		
0	(----	10

Peak Coherence / RA - P & S Comp (CHRP)		
0	(-----)	10
Waveform Data Copy Indicator 4 - Monopole P&S (WCI4)		
0	(-----)	10
SAM4 Waveform Gain (WFG4)		
0	(-----)	1000
Bit Size (BS) (IN)		
0		20



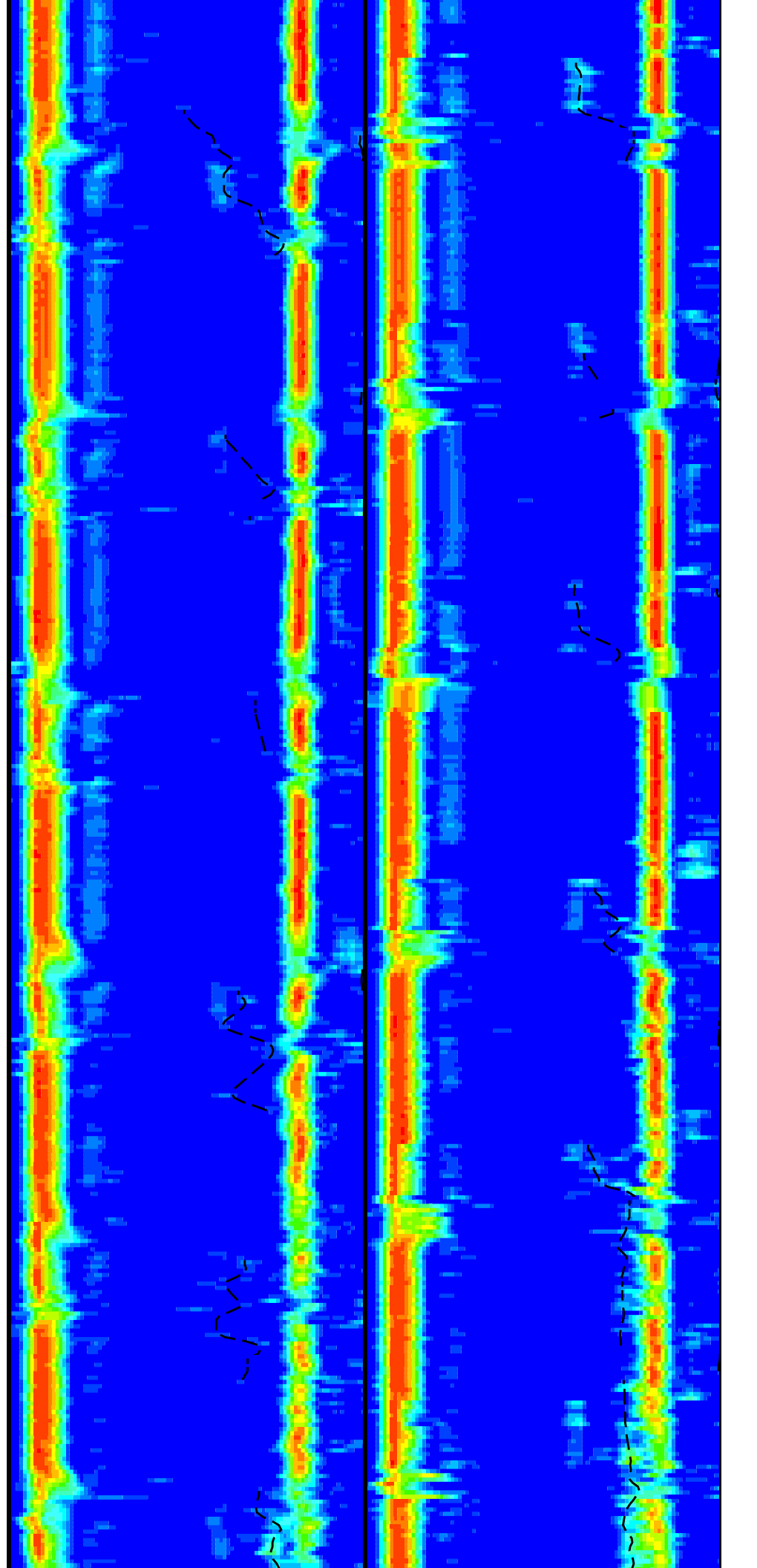
Min		Amplitude	Max	Min		Amplitude	Max
40		Tr.Array P&S Slow Proj. CVDL (SPT4) (US/F)	240	40		Rec.Array P&S Slow Proj. CVDL (SPR4) (US/F)	240
40		Delta-T Shear / TA - P & S (DTTS) (US/F)	240	40		Delta-T Shear / RA - P & S (DTRS) (US/F)	240
40		Delta-T Comp / TA - P & S (DTPP) (US/F)	240	40		Delta-T Comp / RA - P & S (DTRP) (US/F)	240

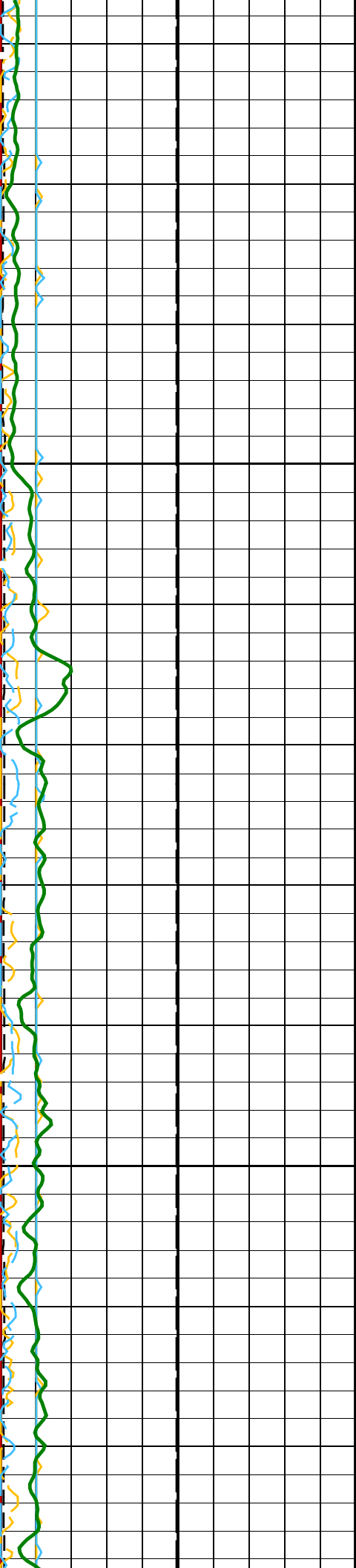




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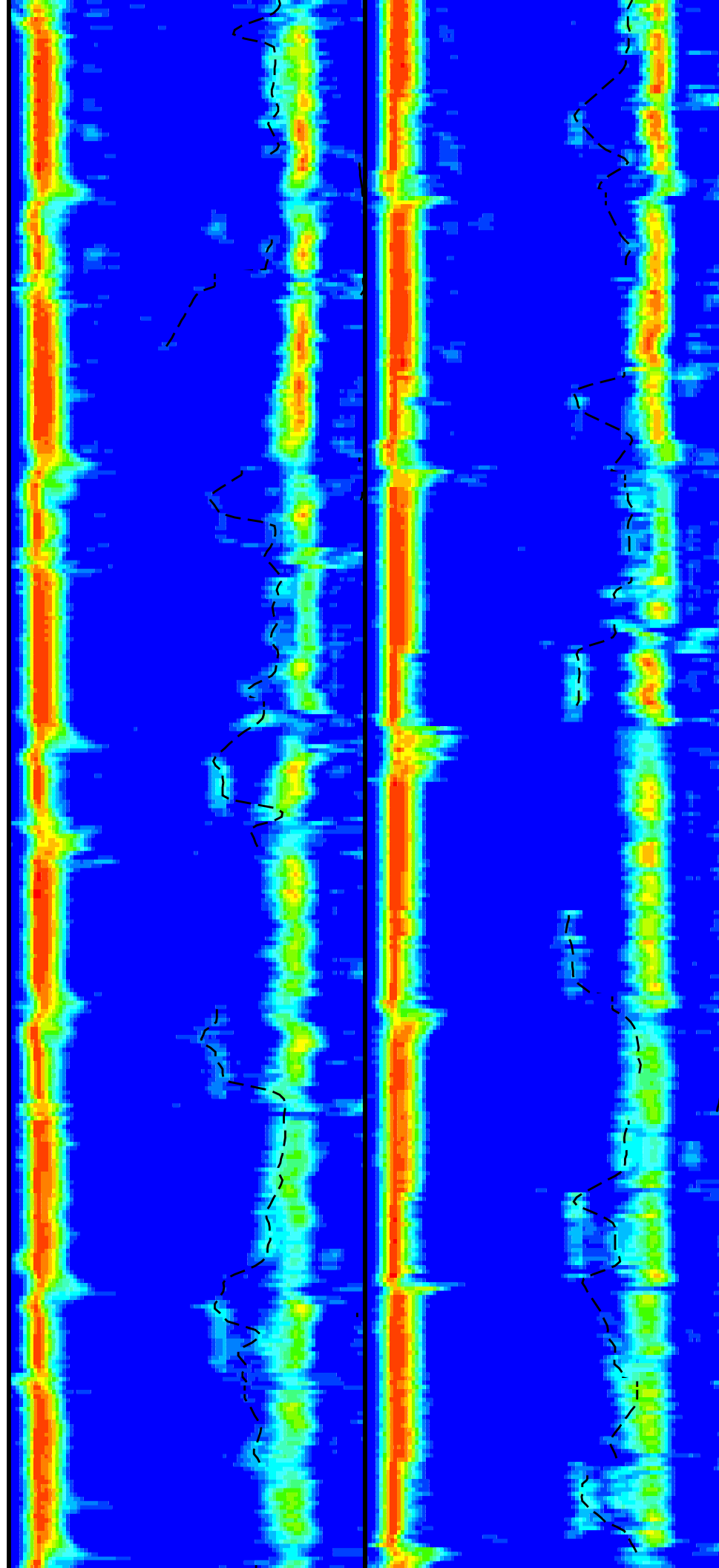
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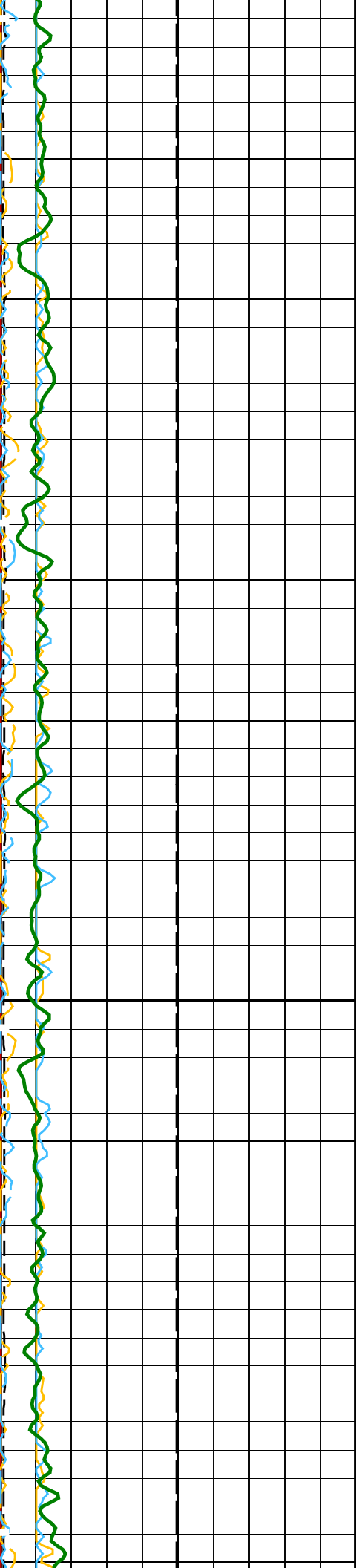




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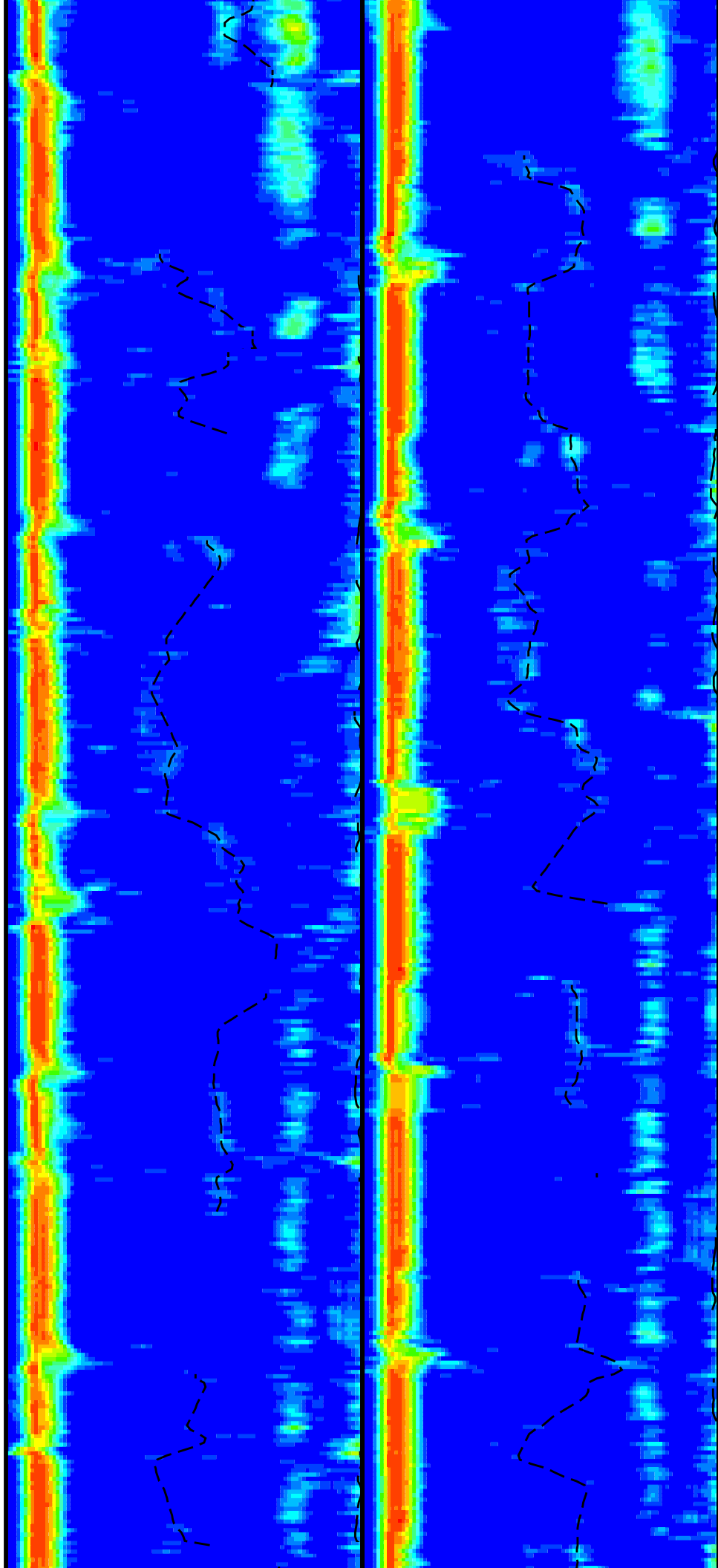
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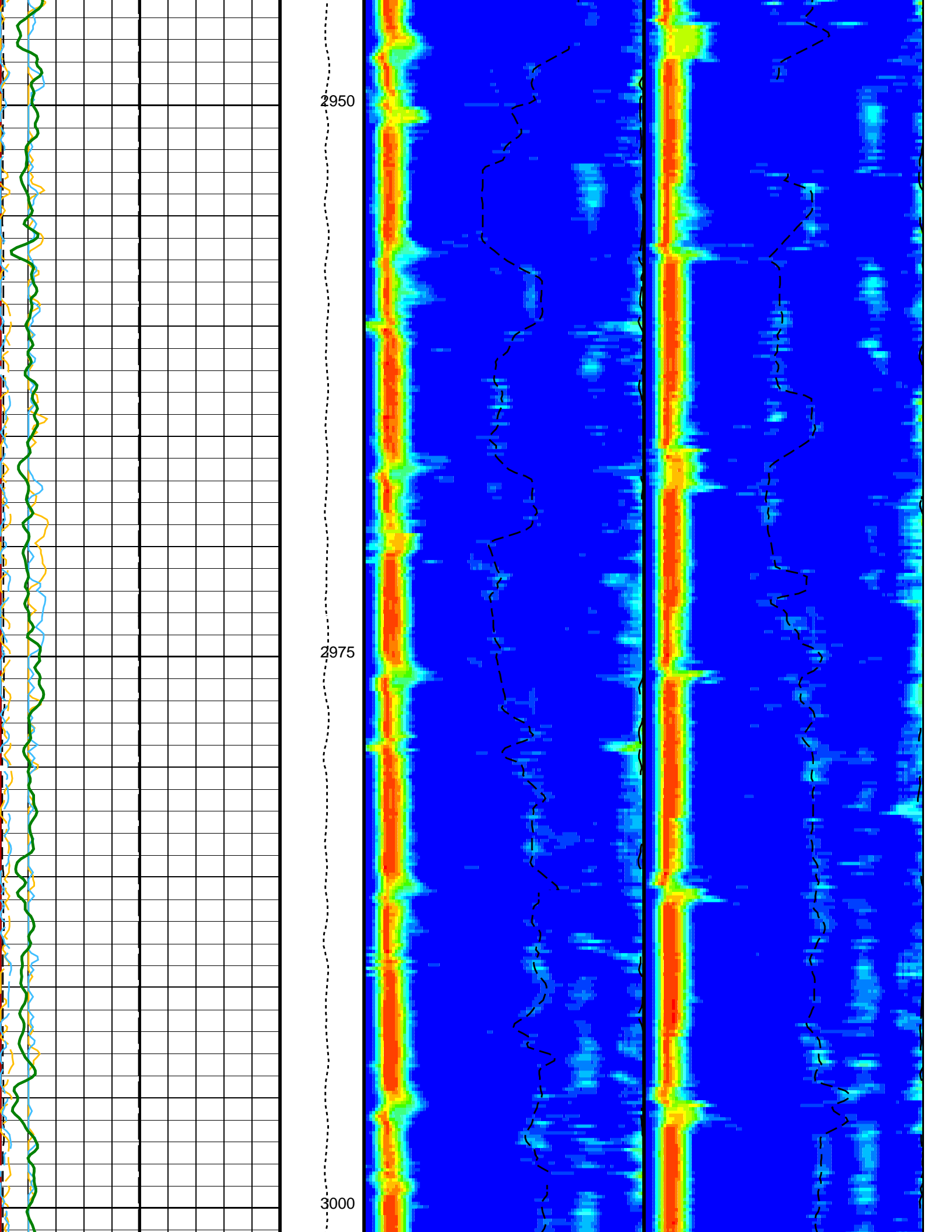


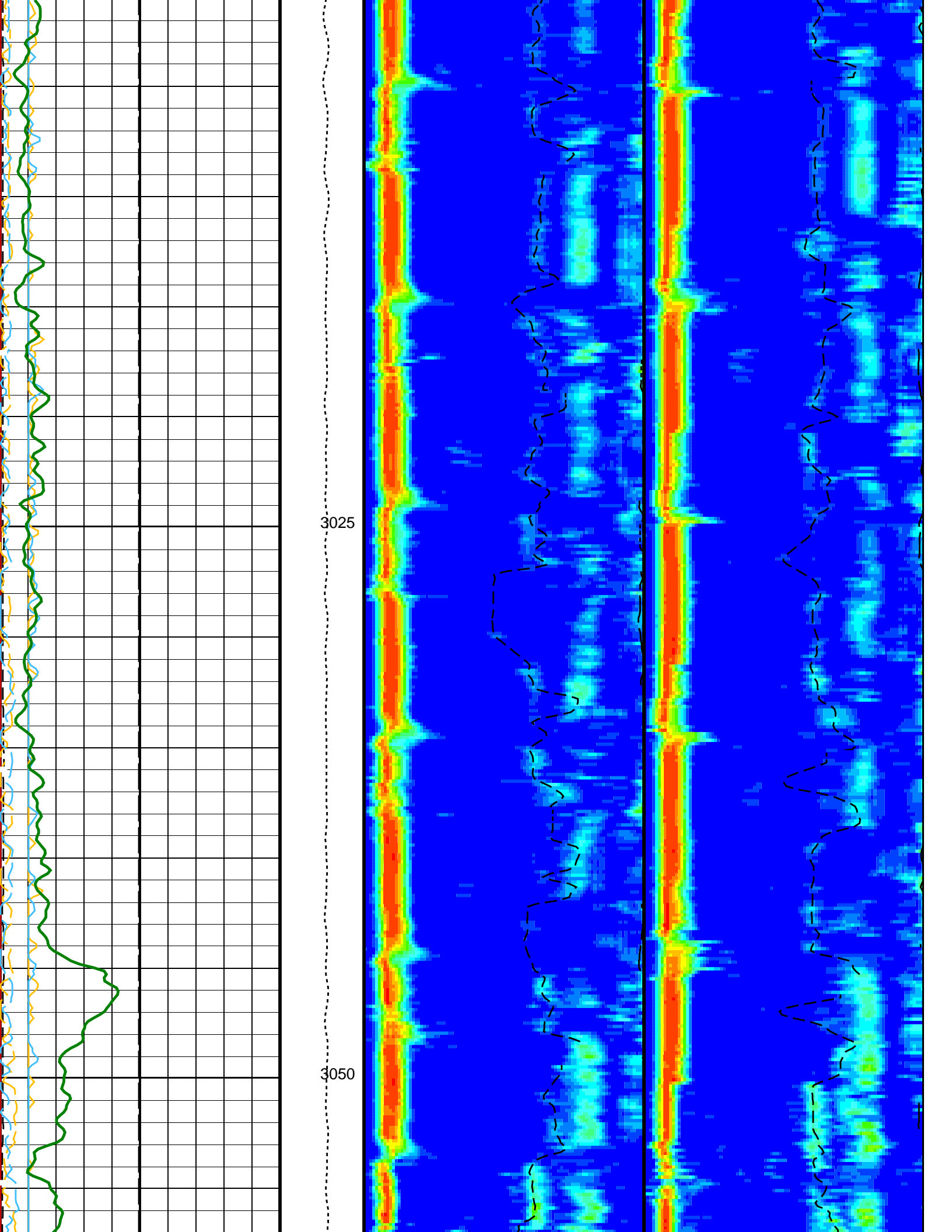


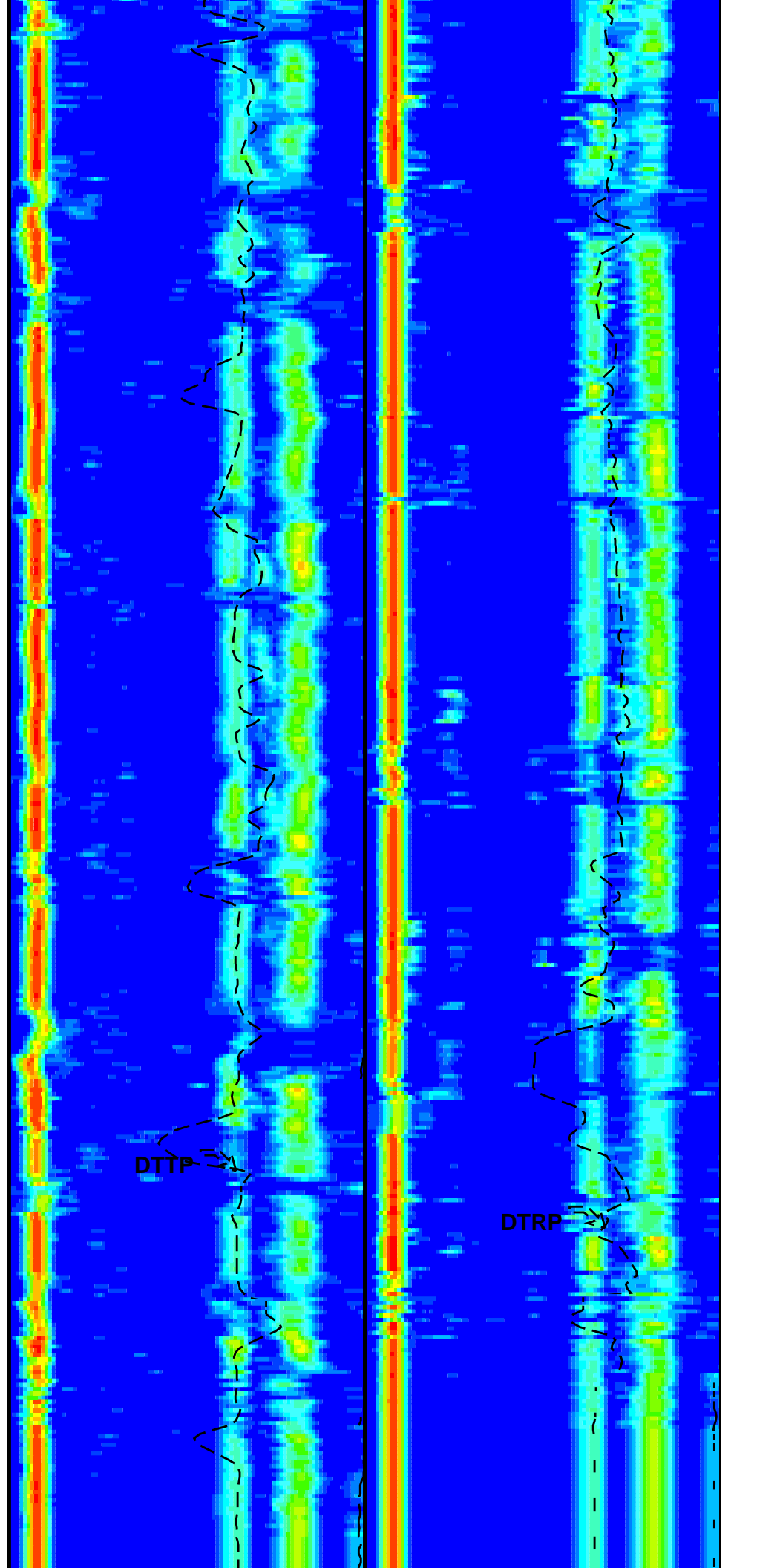
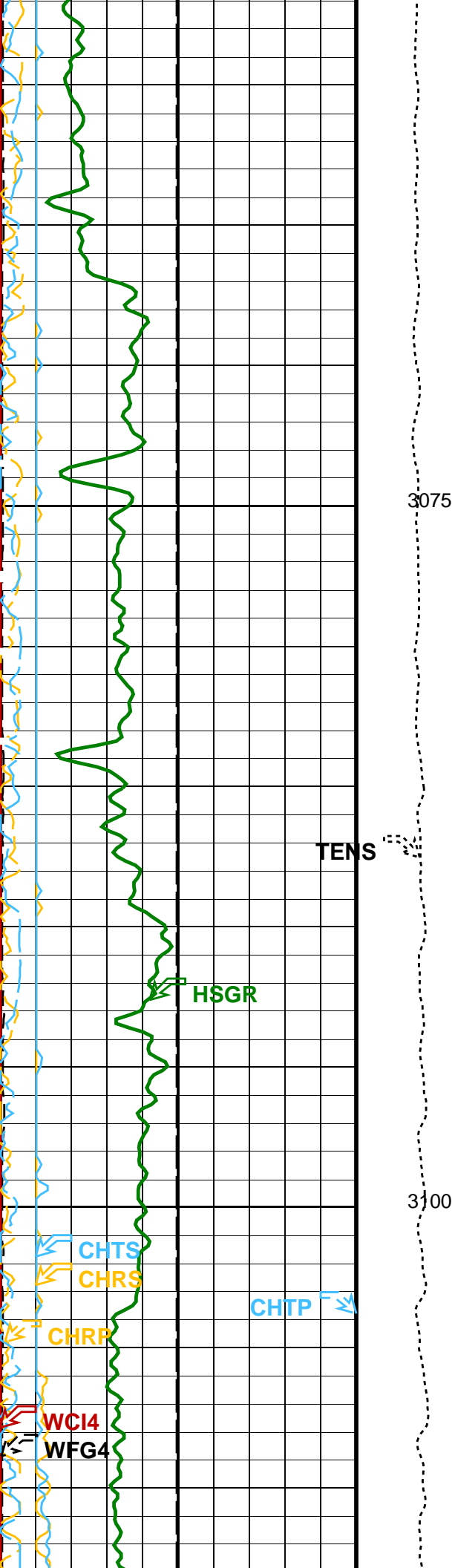
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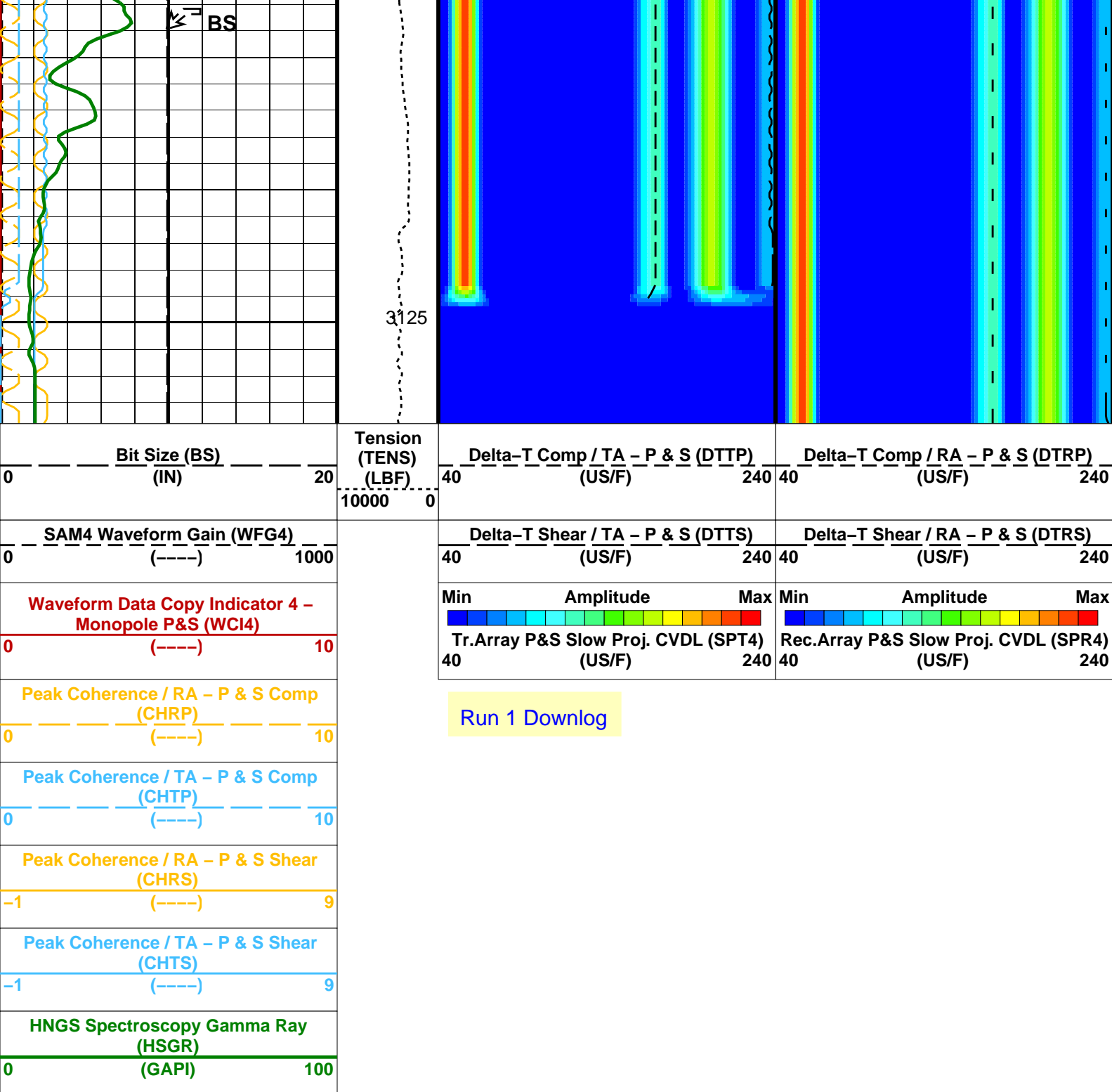
2925











PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
H2PK	HNGS Borehole Potassium Correction Concentration	0.004473324	

HABK	HNGS Borehole Potassium Running Average	-0.00117734	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.987236	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998714	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
CASF	Label Casing Function - Monopole P&S	50	
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	120	US/F
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	195	US/F
DDE4	Digitizing Delay 4	0	US
DDEX	Digitizing Delay X	0	US
DSI4	Digitizer Sample Interval 4	10	US
DSIX	Digitizer Sample Interval X	40	US
DTF	Delta-T Fluid	196	US/F
DWC4	Digitizer Word Count 4	512	
DWCX	Digitizer Word Count X	512	
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
GCSE	Generalized Caliper Selection	BS	
LFC	Label Formation Character - Monopole P&S	DYNAMIC	
MCS	Mean Casing Slowness	57	US/F
MTXG	Monopole Transmitter Geometry	186	IN
NWI4	Number Waveform Items 4	8	
NWIX	Number Waveform Items X	0	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS4	STC Sonic Array Status - Monopole P&S	255	
SBO4	STC Search Band Offset - Monopole P&S	500	US
SBR4	STC Baseline Removal - Monopole P&S	ON	
SBW4	STC Search Bandwidth - Monopole P&S	2000	US
SFC4	STC Formation Character - Monopole P&S	SELECTABLE	
SFM4	STC Filter - Monopole P&S	B3-20K	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	235	US/F
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	240	US/F
SLL4	STC Slowness Lower Limit - Monopole P&S	40	US/F
SST4	STC Slowness Step - Monopole P&S	2	US/F
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	180	US/F
STUL	Label Slowness Upper Limit - Monopole Stoneley	780	US/F
SUL4	STC Slowness Upper Limit - Monopole P&S	240	US/F
SWD4	STC Slowness Width - Monopole P&S	10	US/F
TBF4	STC Time for Baseline Fill - Monopole P&S	300	US
TLL4	STC Time Lower Limit - Monopole P&S	150	US
TST4	STC Time Step - Monopole P&S	50	US
TUL4	STC Time Upper Limit - Monopole P&S	3660	US
TWD4	STC Time Width - Monopole P&S	1000	US
TWI4	STC Integration Time Window - Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
WFM4	Waveform Mode 4	W1	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSST_P_S_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 25-Nov-2017 18:29

OP System Version: 19C0-187

HNGC-B	19C0-187	HNGS-BA	19C0-187
HRI T-B	19C0-187	DSST-B	19C0-187

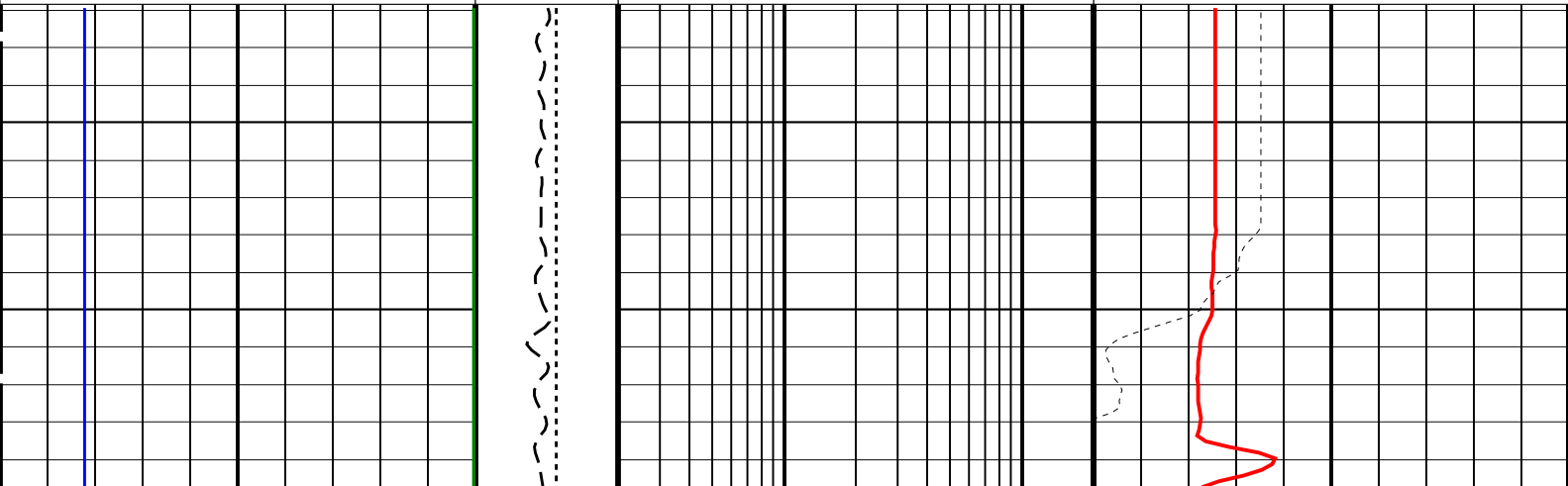
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	SKK-5169-EDTCB		
Input DLIS Files			
DEFAULT	Flip_NGS_HRLA_DSI_055LUP	PRODUCER	25-Nov-2017 16:01 3128.8 M 2734.1 M
Output DLIS Files			
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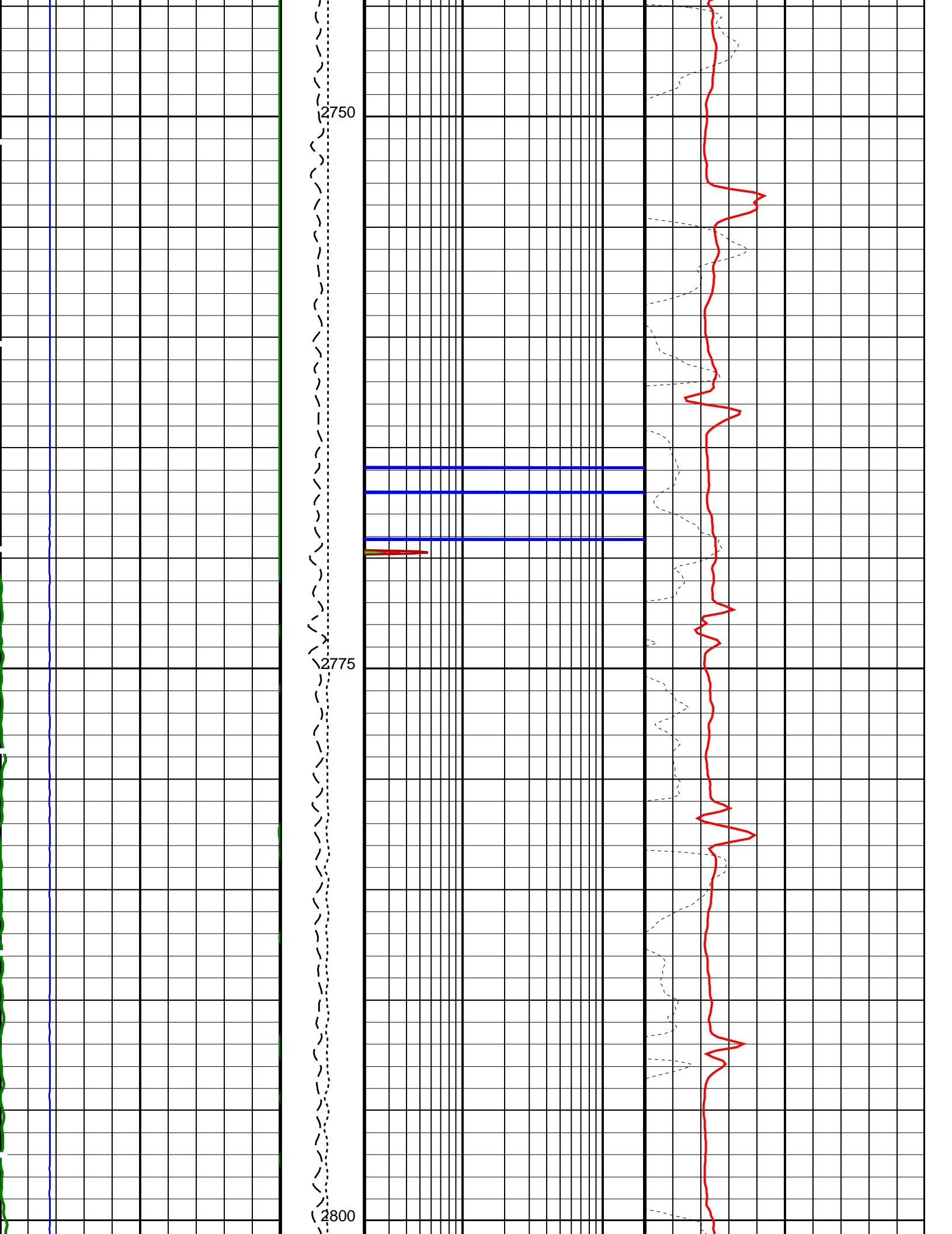
Input DLIS Files			
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Output DLIS Files			
DEFAULT	NGS_HRLA_DSI_LDL_062PUP	FN:83 PRODUCER	25-Nov-2017 18:50 3415.7 M 2731.8 M

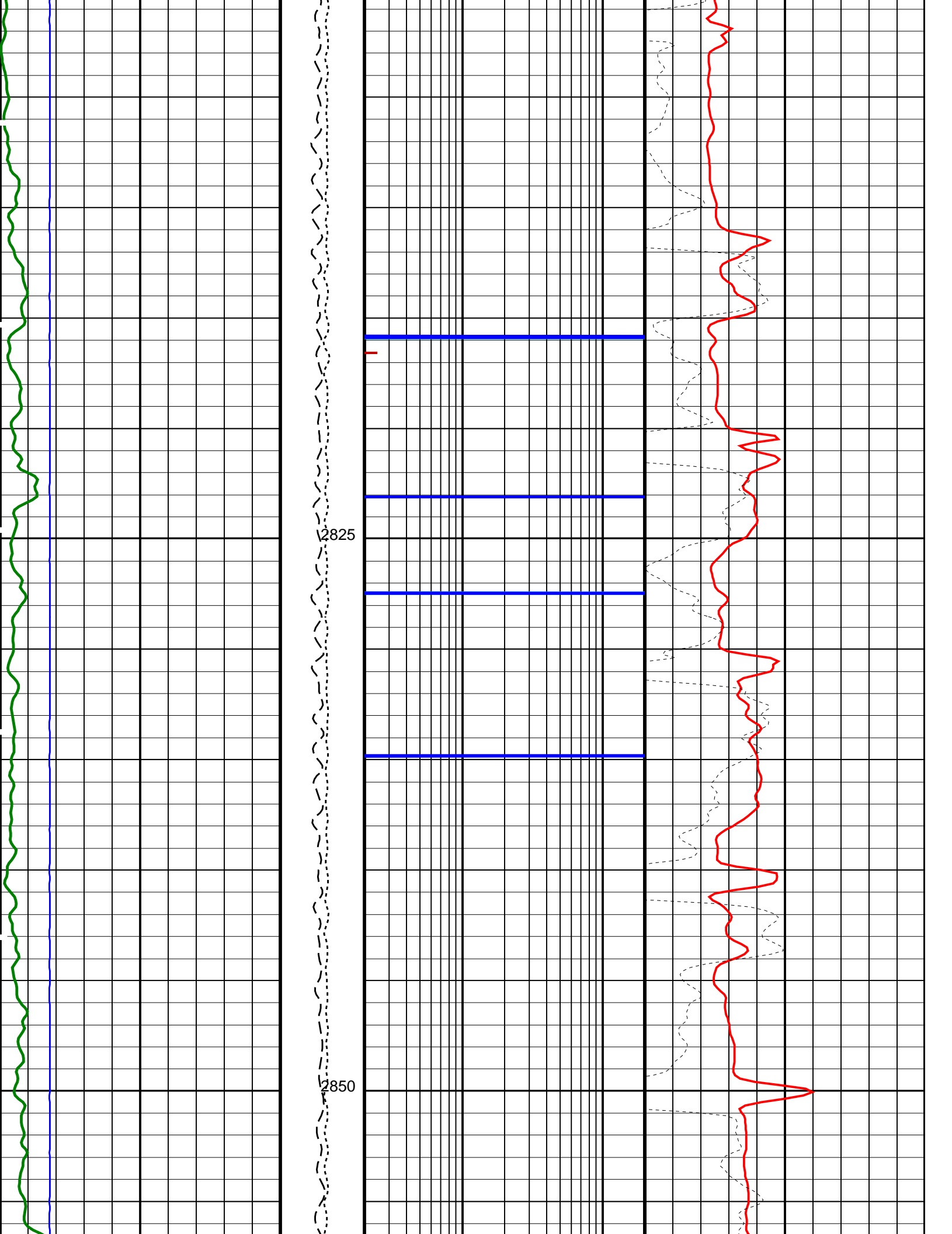
OP System Version: 19C0-187			
HNGC-B	19C0-187	HNGS-BA	19C0-187
HRLT-B	19C0-187	DSST-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	SKK-5169-EDTCB		

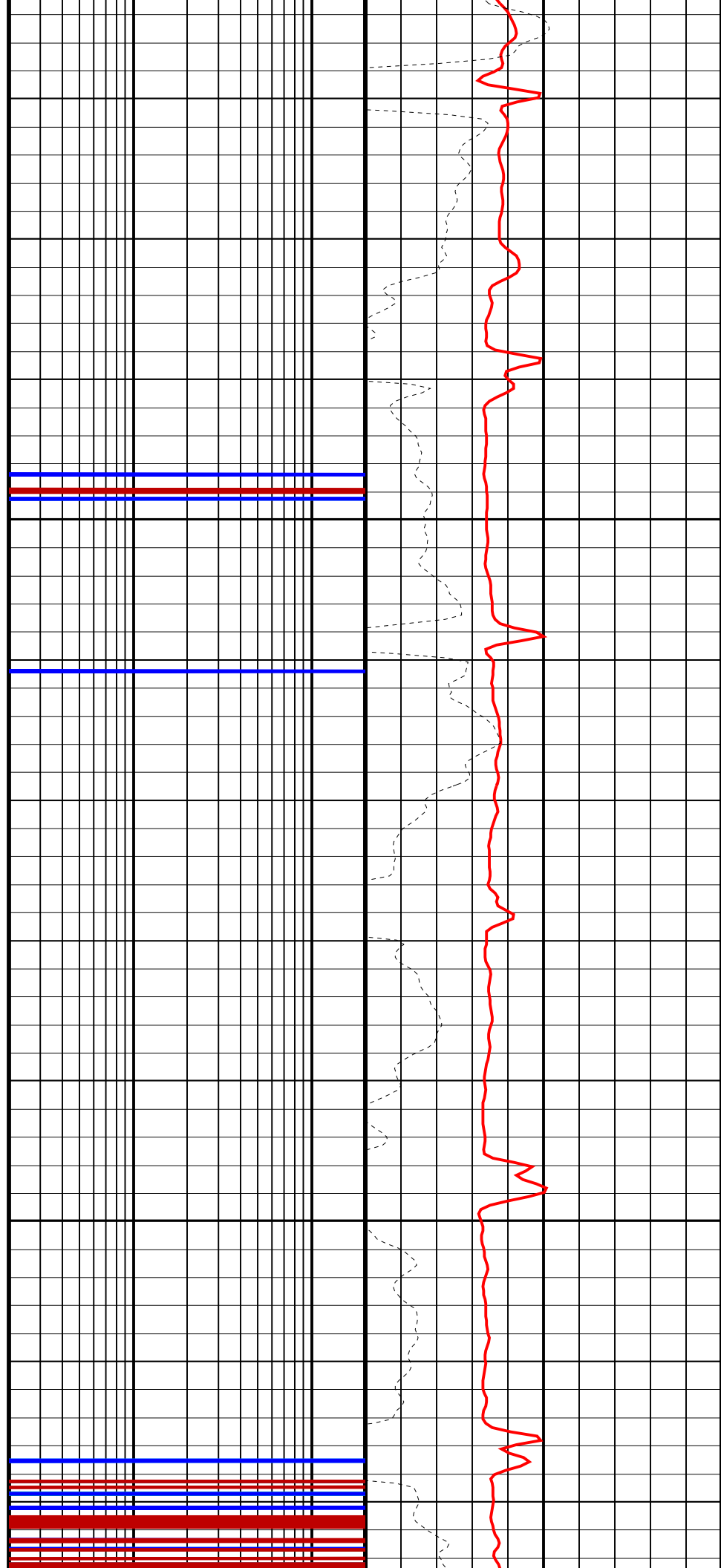
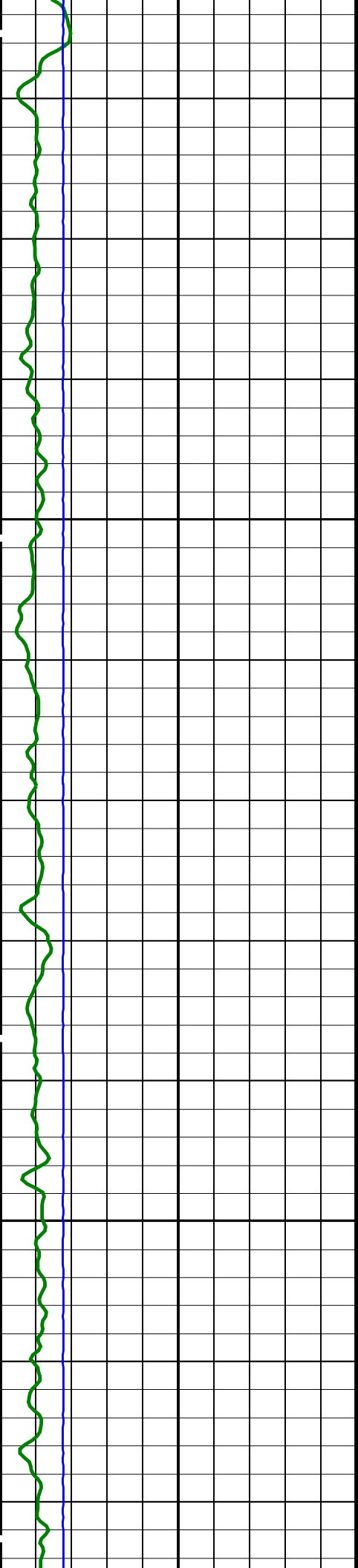
PIP SUMMARY			
Time Mark Every 60 S			

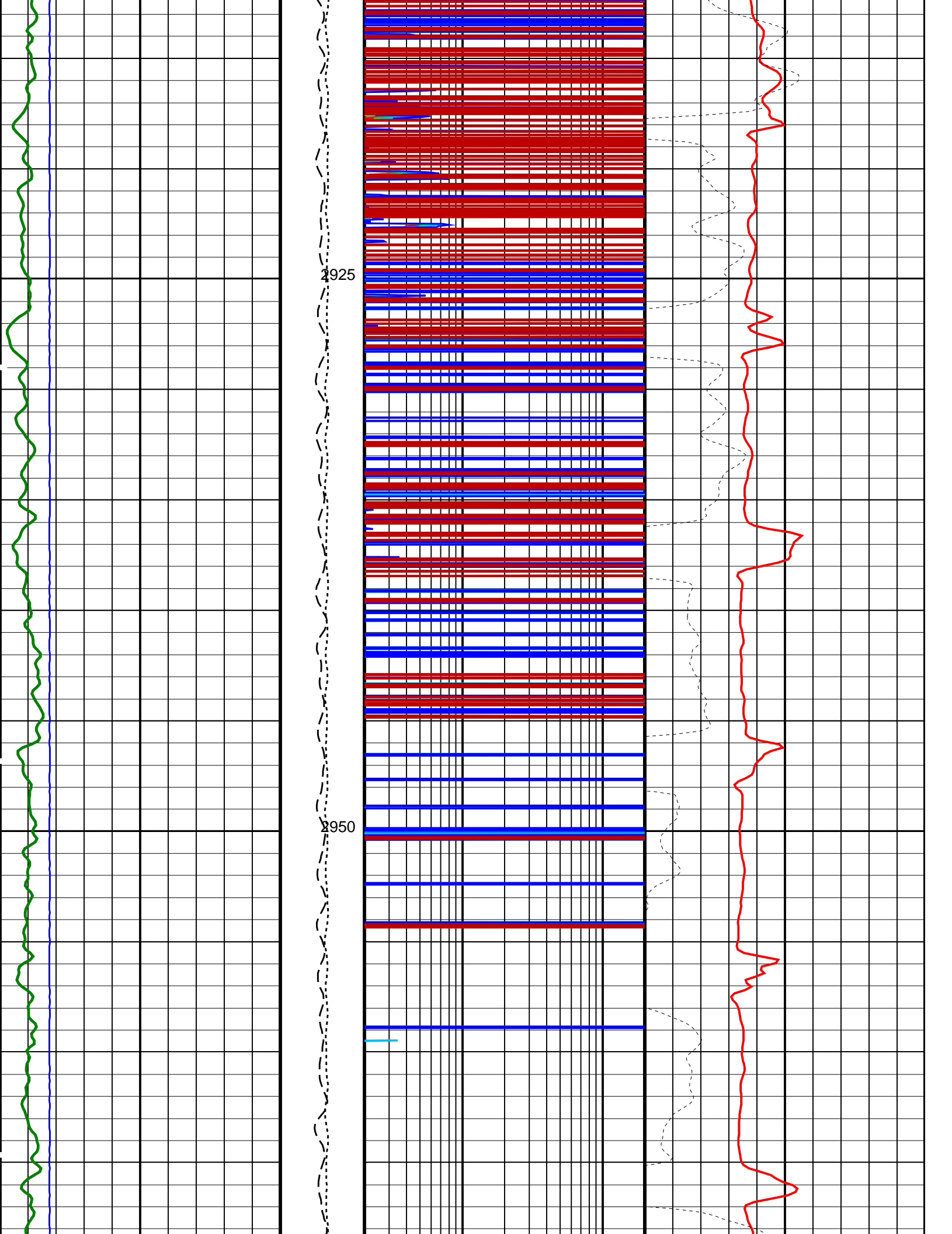
		HRLT True Resistivity (RT_HRLT)	
		0.2 (OHMM)	20
		HRLT Resistivity 1 (RLA1)	
		0.2 (OHMM)	20
		HRLT Resistivity 2 (RLA2)	
		0.2 (OHMM)	20
		HRLT Resistivity 3 (RLA3)	
		0.2 (OHMM)	20
		HLDS Bulk Density Correction (DRH)	
		-0.25 (G/C3)	0.25
HNGS Spectroscopy Gamma Ray (HSGR)		HRLT Resistivity 5 (RLA5)	
0 (GAPI)	100	0.2 (OHMM)	20
Calibrated Downhole Force (CDF) (LBF)		HLDS Bulk Density (RHOM)	
3000	0	0 (G/C3)	4
HLDS Caliper (LCAL)		HRLT Resistivity 4 (RLA4)	
0 (IN)	20	0.2 (OHMM)	20
Tension (TENS) (LBF)		HLDS Long Spaced Photoelectric Effect (PEFL)	
10000	0	0 (-----)	10

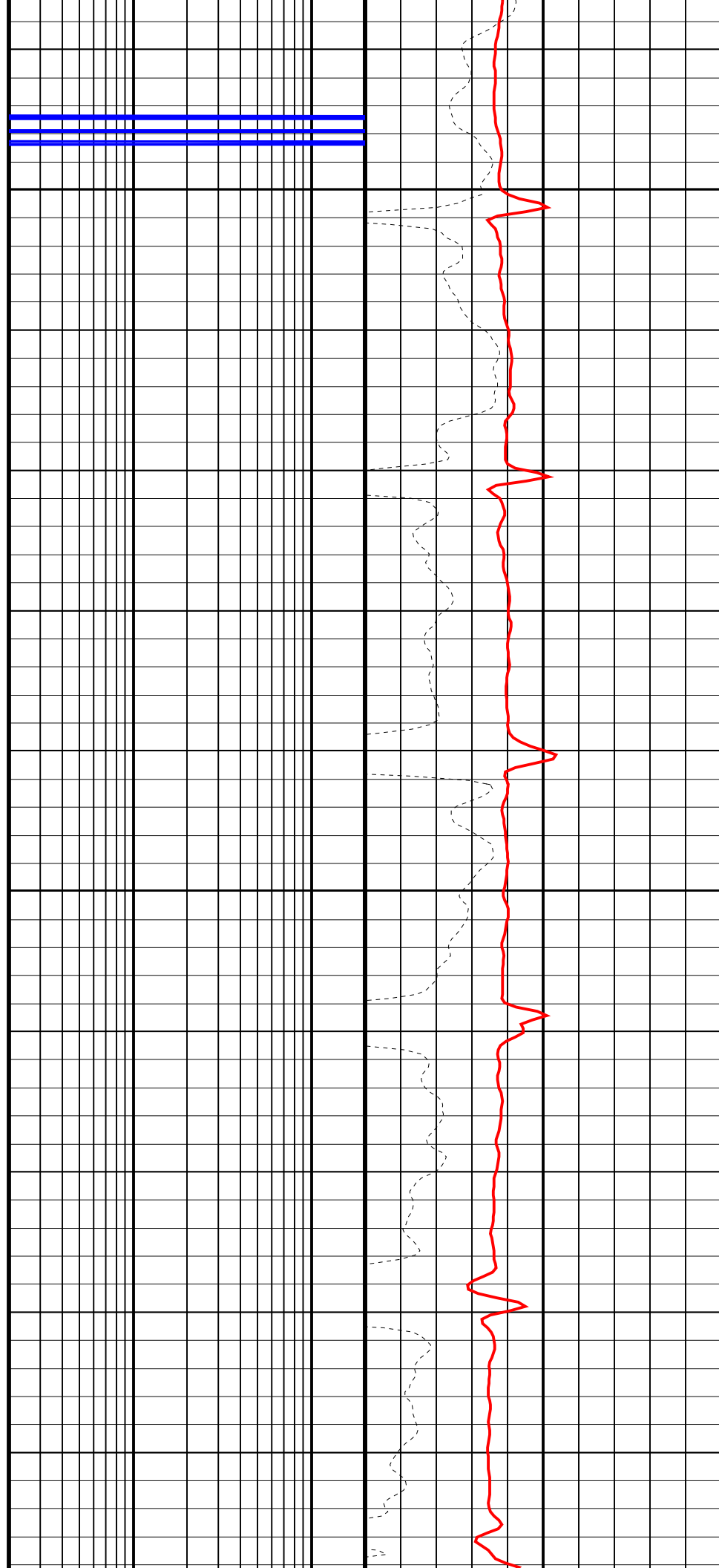
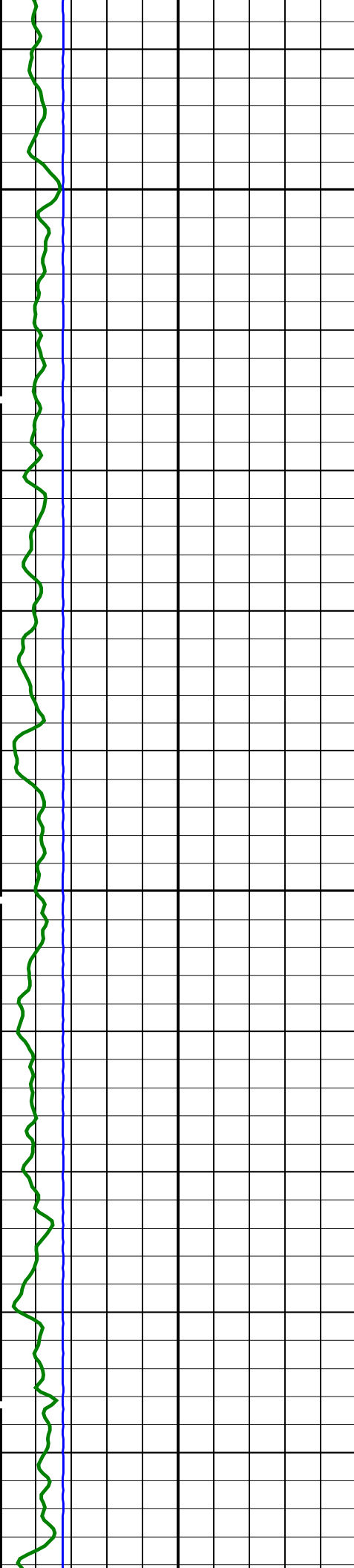


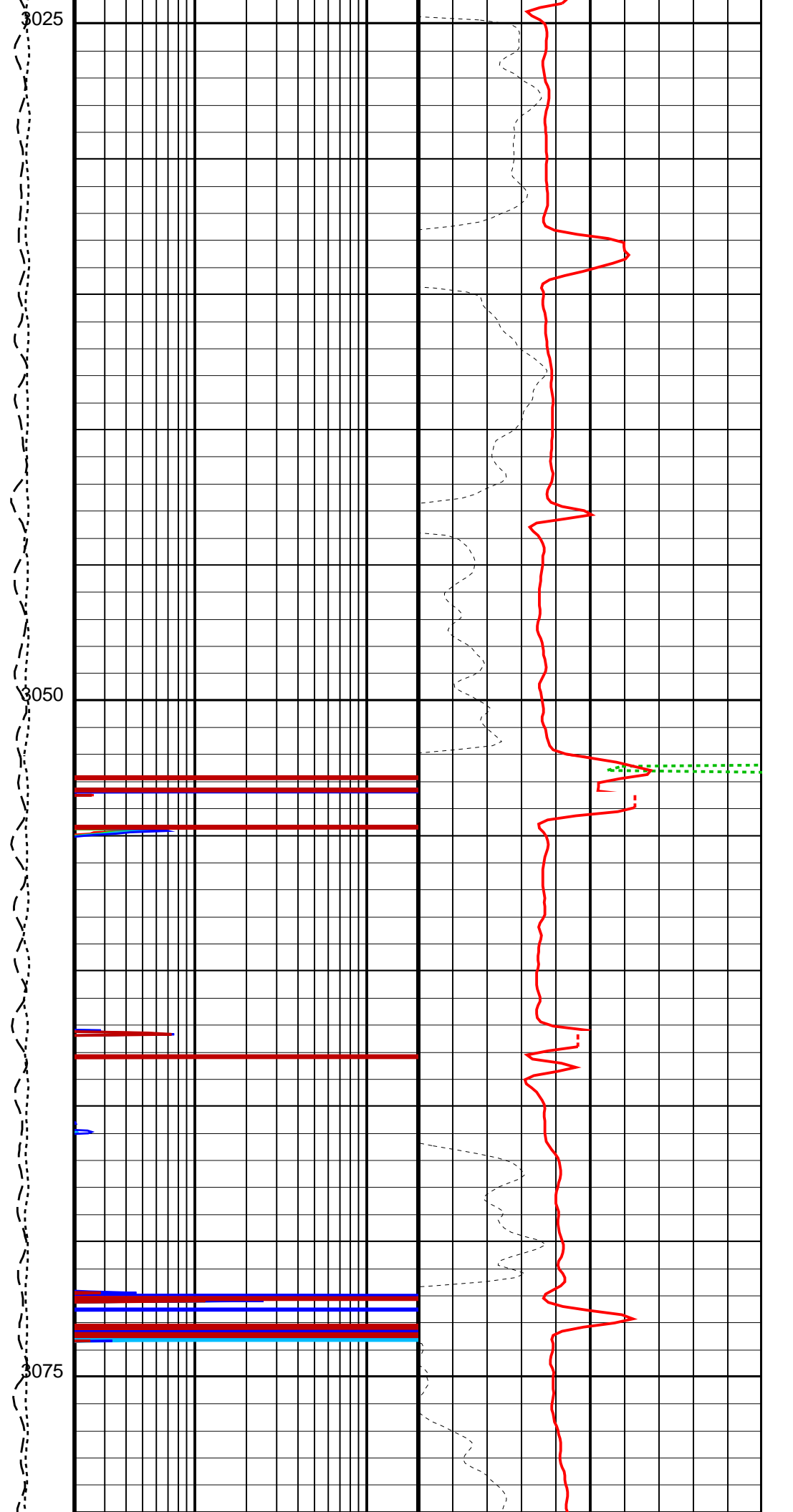
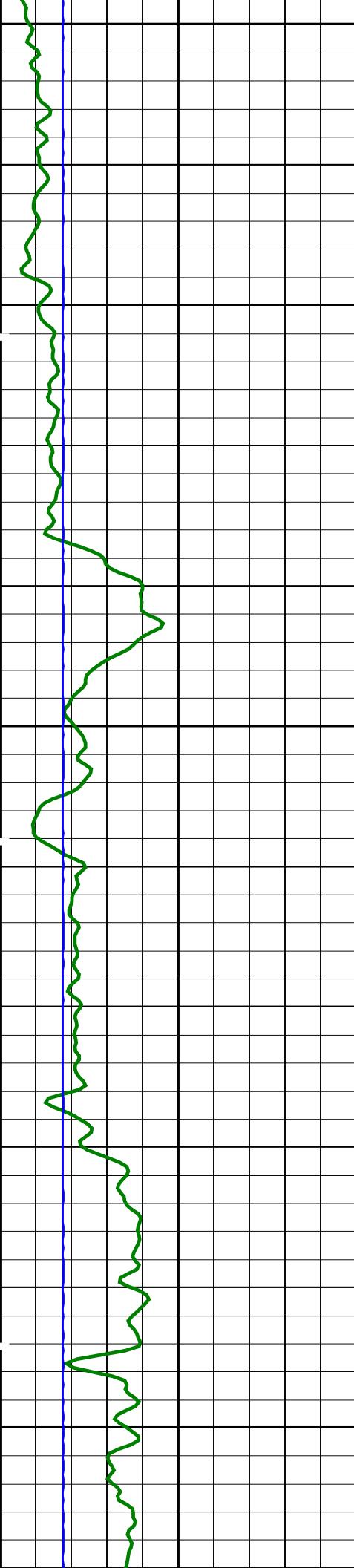


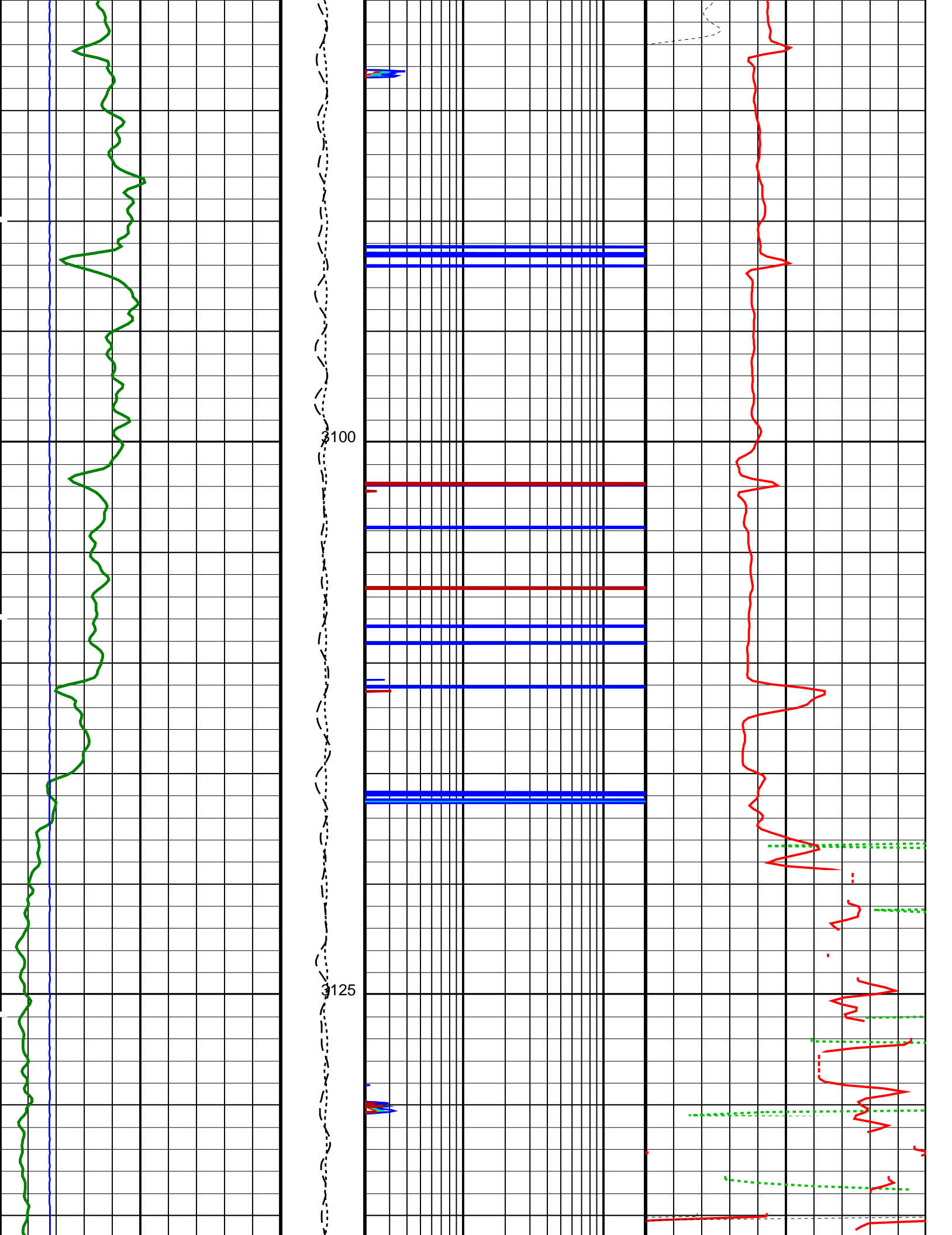


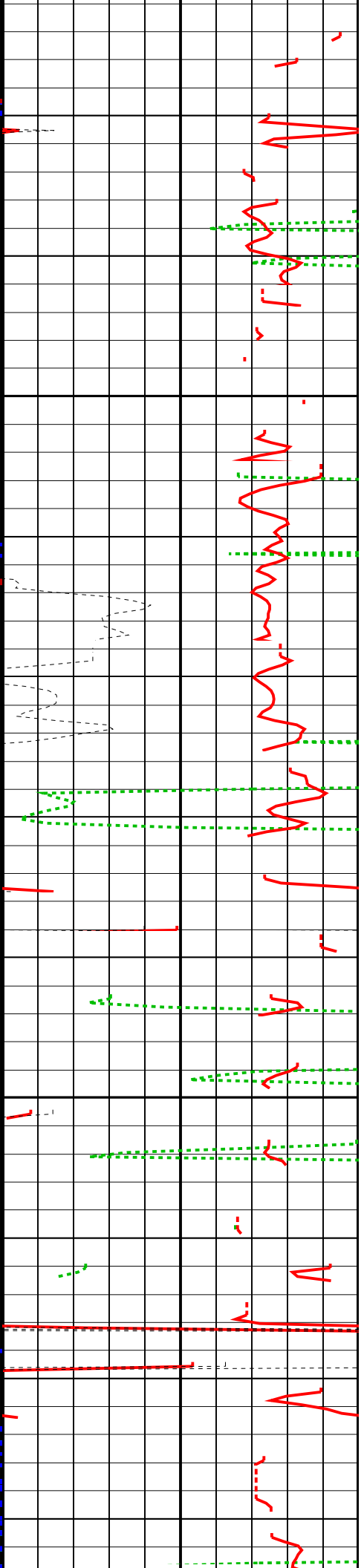
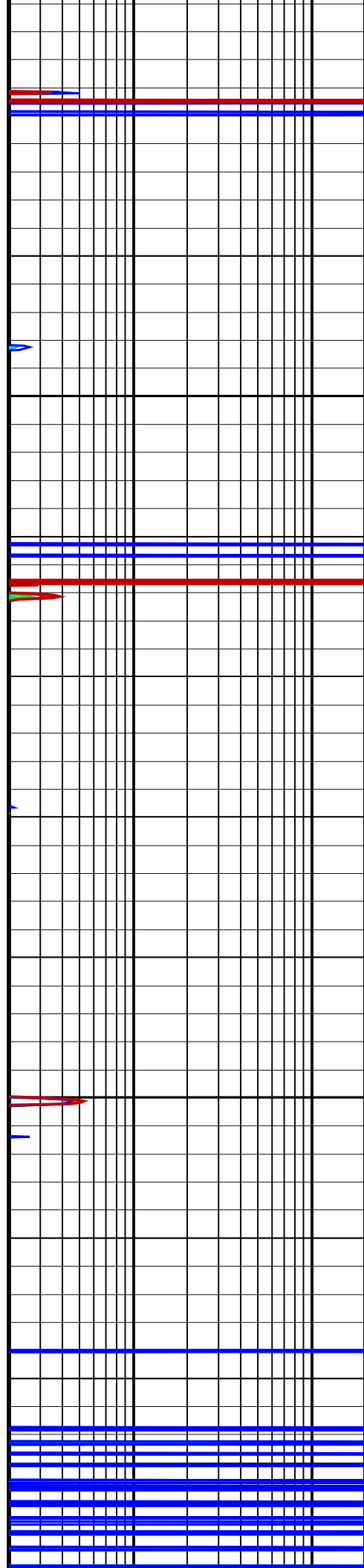
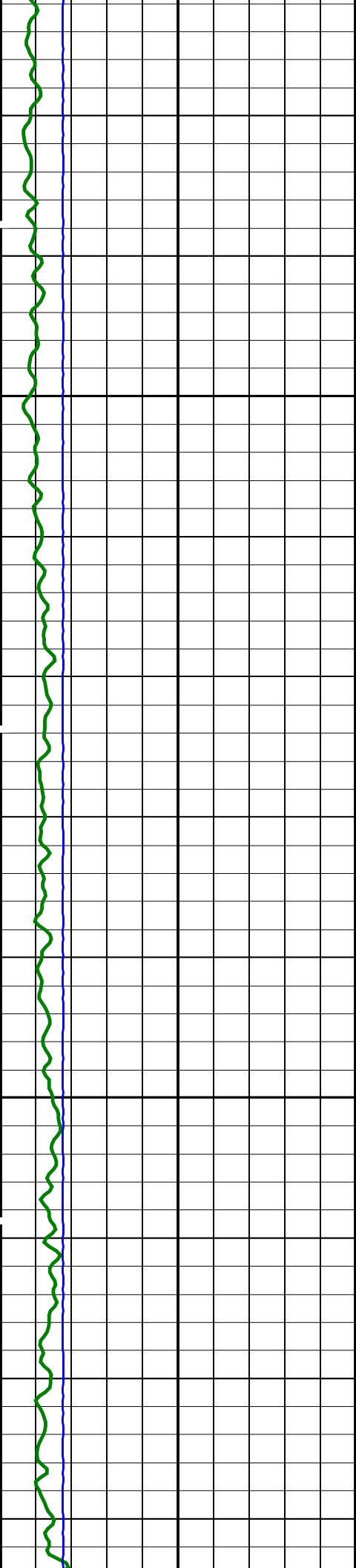


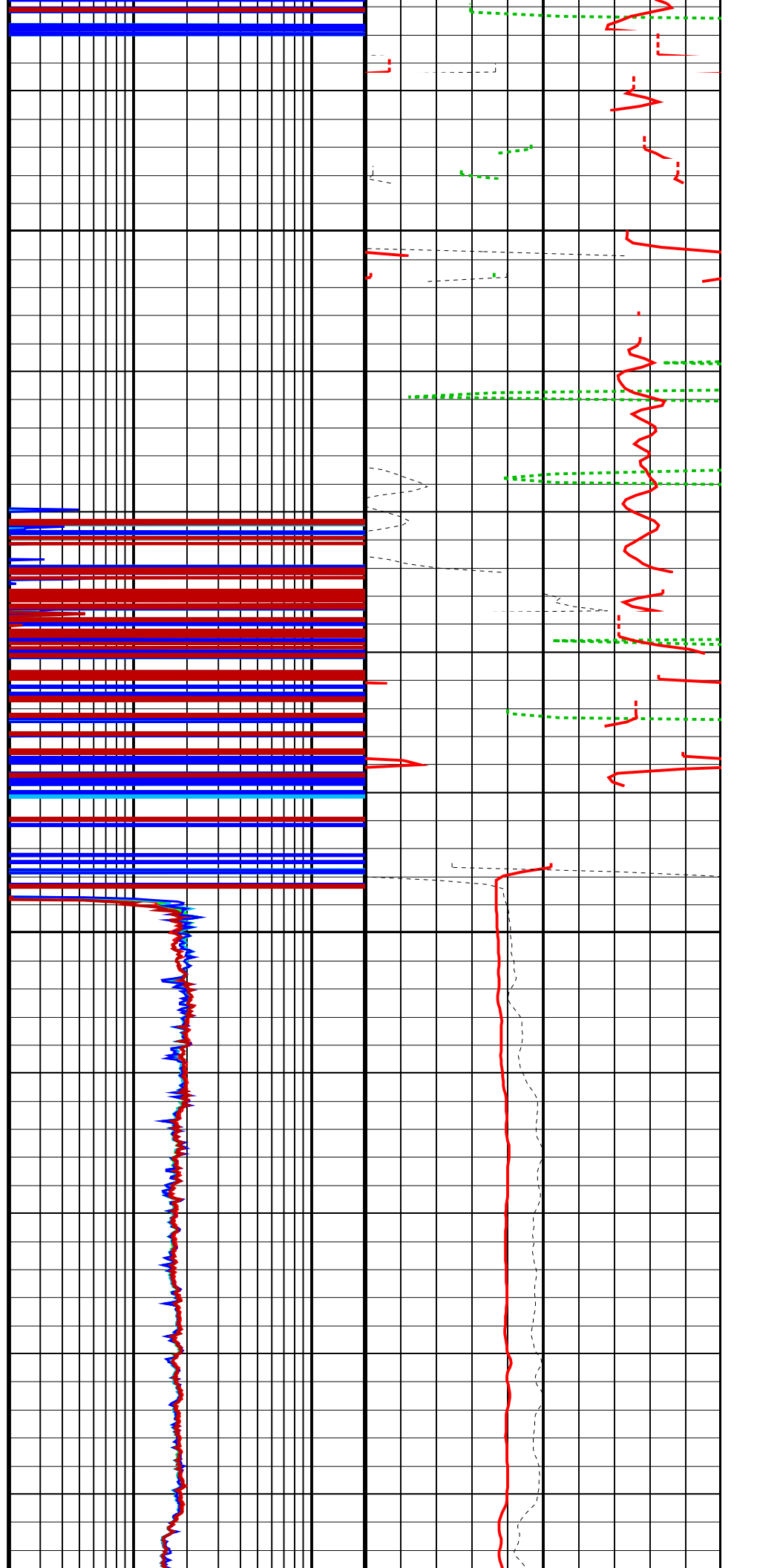
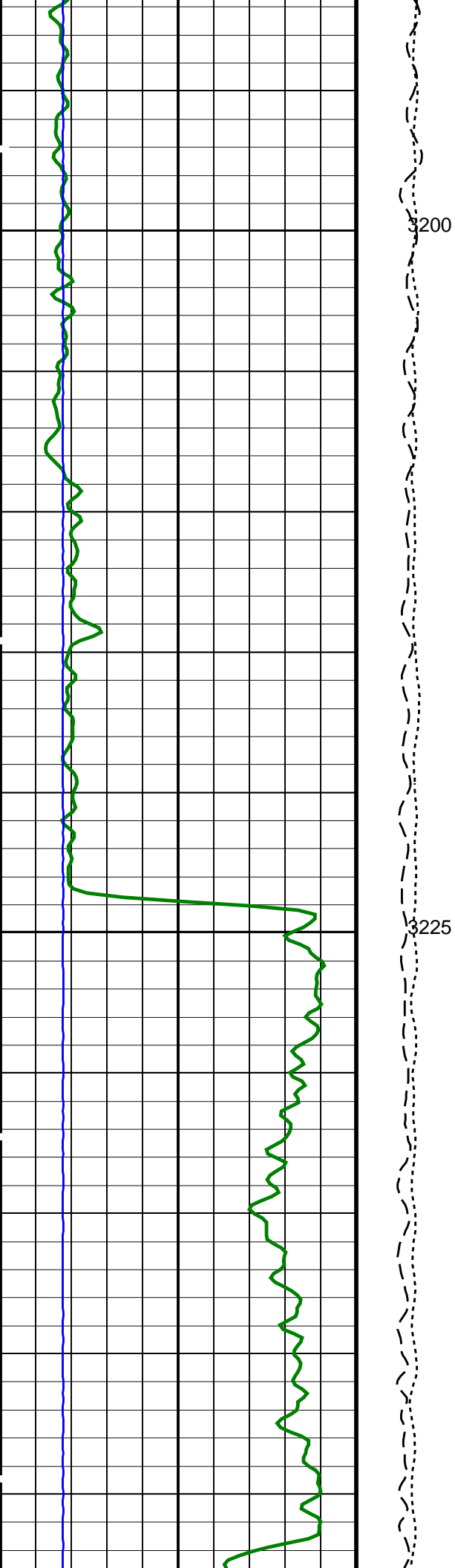


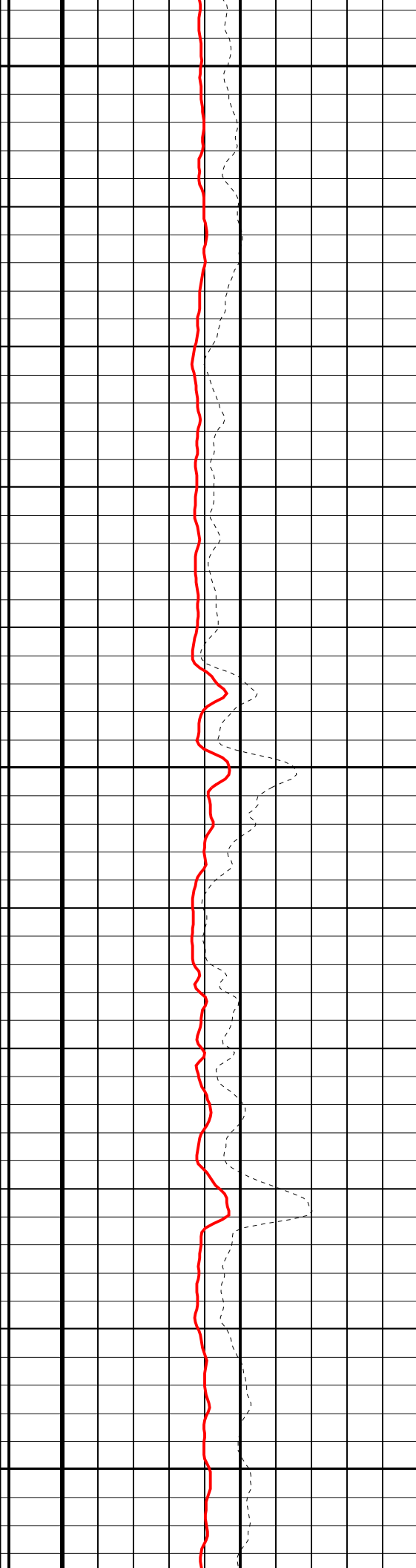
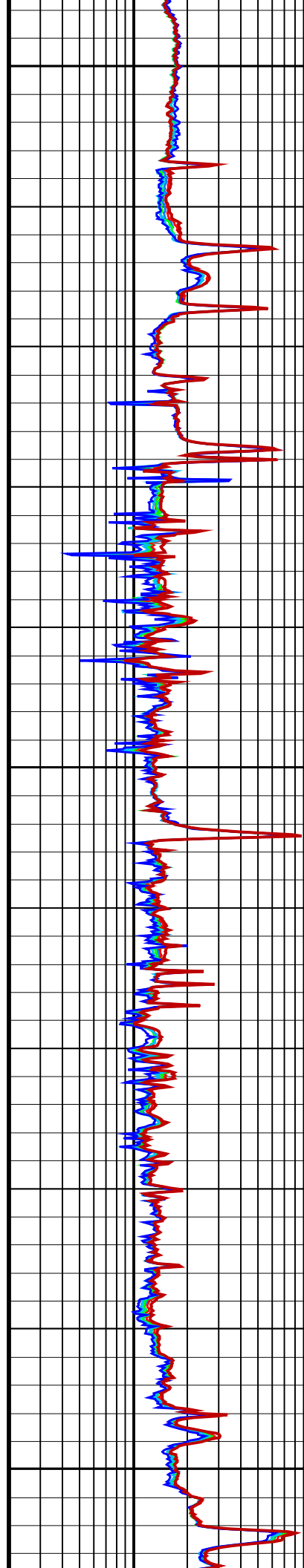
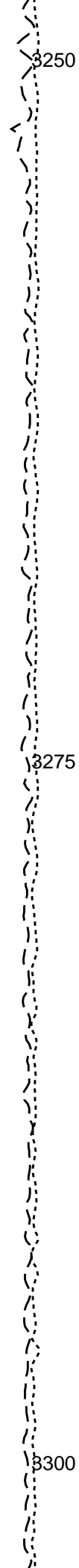
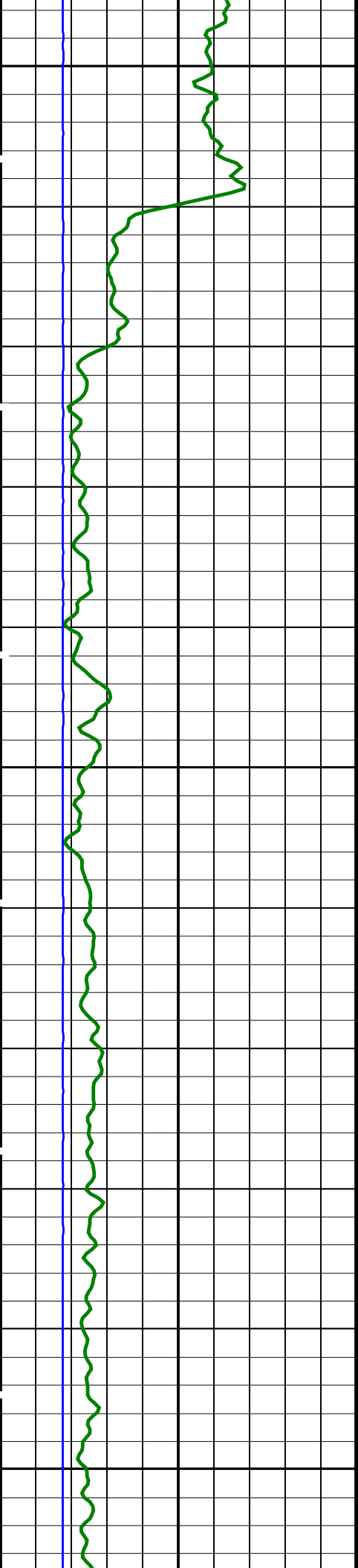


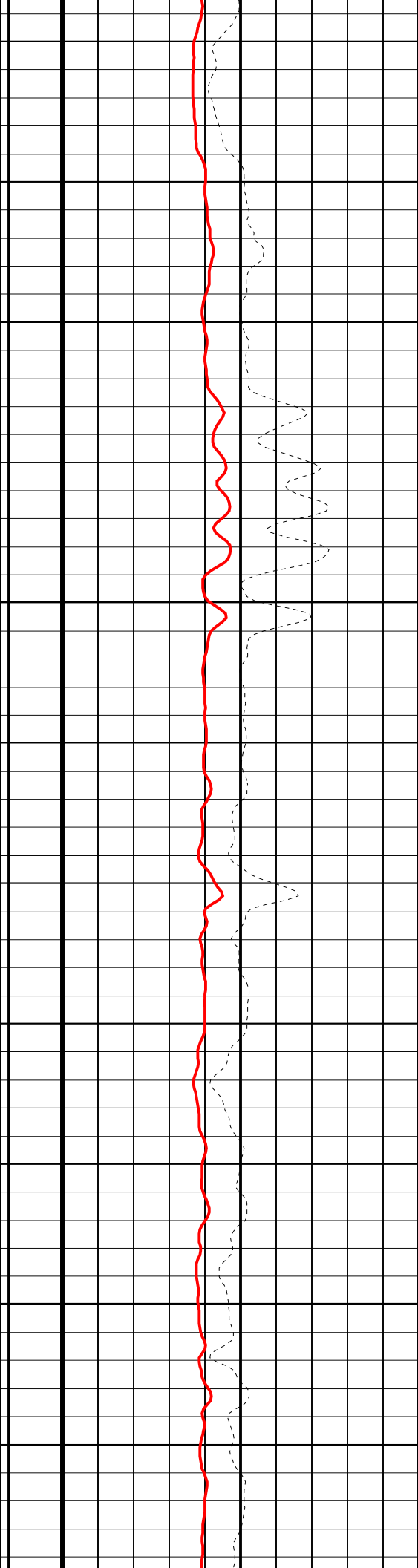
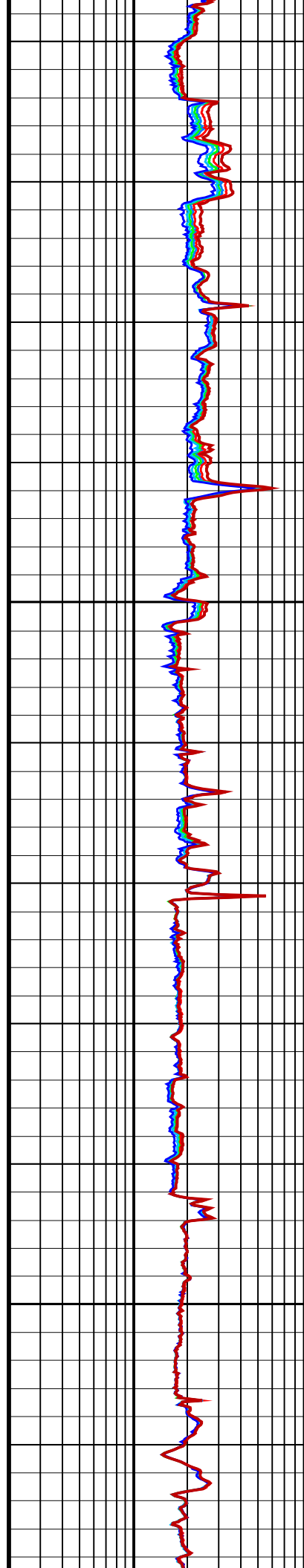
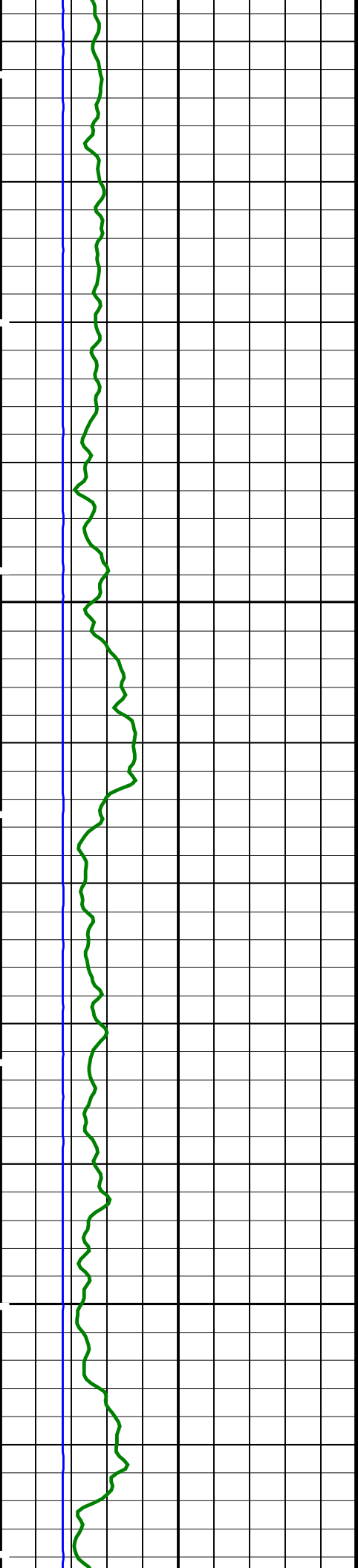


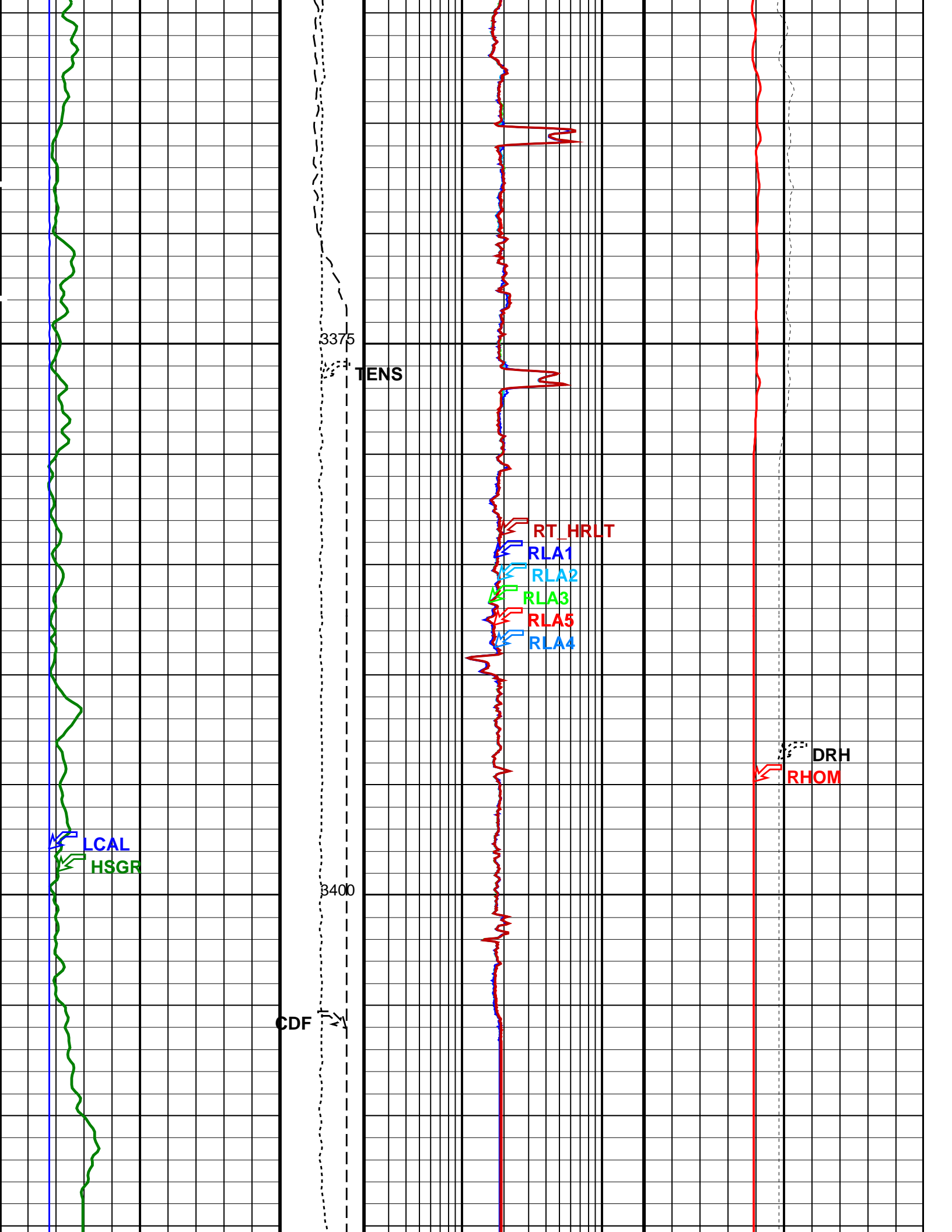












HLDS Caliper (LCAL) (IN)	Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	HLDS Long Spaced Photoelectric Effect (PEFL) (-----)
020	100000	0.220	010
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5) (OHMM)	HLDS Bulk Density (RHOM) (G/C3)
0100	30000	0.220	04
		HRLT Resistivity 3 (RLA3) (OHMM)	HLDS Bulk Density Correction (DRH) (G/C3)
		0.220	-0.250.25
		HRLT Resistivity 2 (RLA2) (OHMM)	
		0.220	
		HRLT Resistivity 1 (RLA1) (OHMM)	
		0.220	
		HRLT True Resistivity (RT_HRLT) (OHMM)	
		0.220	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00106006	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	55	DEGF
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.962555	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.07716	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	15.5744	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	

GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCNFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	55	DEGF
DSST-B: Dipole Shear Imager - B			
AGC1	Automatic Gain Control 1	ON	
AGC2	Automatic Gain Control 2	ON	
AGC3	Automatic Gain Control 3	ON	
AGC4	Automatic Gain Control 4	ON	
AGC5	Automatic Gain Control 5	ON	
AGCX	Automatic Gain Control X	ON	
BARS_MTR1	Length for Monopole Transmitter to Receiver 1	2.7432	M
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CASF	Label Casing Function - Monopole P&S	50	
CDTS	C-Delta-T Shale	100	US/F
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	120	US/F
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	195	US/F
DDE1	Digitizing Delay 1	0	US
DDE2	Digitizing Delay 2	0	US
DDE3	Digitizing Delay 3	0	US
DDE4	Digitizing Delay 4	0	US
DDE5	Digitizing Delay 5	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source - Dipole Shear	USE	
DLHS	Label Hole Diameter Source for SOBS Channel	AUTO	
DSHL	Label Slowness Lower Limit - Dipole Shear	40	US/F
DSHU	Label Slowness Upper Limit - Dipole Shear	1040	US/F
DSI1	Digitizer Sample Interval 1	40	US
DSI2	Digitizer Sample Interval 2	40	US
DSI3	Digitizer Sample Interval 3	40	US
DSI4	Digitizer Sample Interval 4	10	US
DSI5	Digitizer Sample Interval 5	10	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DTF	Delta-T Fluid	196	US/F
DTM	Delta-T Matrix	56	US/F
DTSS	Shear Delta-T Source for DTSM Channel	LOWER_DIPOLE	
DWC1	Digitizer Word Count 1	512	
DWC2	Digitizer Word Count 2	512	
DWC3	Digitizer Word Count 3	512	
DWC4	Digitizer Word Count 4	512	
DWC5	Digitizer Word Count 5	512	
DWCX	Digitizer Word Count X	512	
FDE1	Firing Delay 1	0	
FDE2	Firing Delay 2	0	
FDE3	Firing Delay 3	0	
FDE4	Firing Delay 4	0	
FDE5	Firing Delay 5	0	
FDEX	Firing Delay X	0	
FGM5	First Motion Gate Moveout 5	40	US/F
FGMX	First Motion Gate Moveout X	40	US/F
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
FMG5	First Motion Minimum Gate 5	500	US
FMGX	First Motion Minimum Gate X	500	US
FMLL	Slowness Lower Limit - FMD	40	US/F
FMRC	Restart Control - FMD	CONTINUE	
FMT5	First Motion Threshold 5	UP	
FMTX	First Motion Threshold X	NONE	
FMUL	Slowness Upper Limit - FMD	180	US/F
FNC5	First Motion Noise Counter Input 5	ALO	
FNCX	First Motion Noise Counter Input X	ALO	
FPM	Processing Mode - FMD	NONE	
FTD5	First Motion Threshold Direction 5	UP	
FTDX	First Motion Threshold Direction X	UP	
GAI1	Manual Gain 1	10	
GAI2	Manual Gain 2	10	
GAI3	Manual Gain 3	6	
GAI4	Manual Gain 4	16	
GAI5	Manual Gain 5	16	

GAI	Manual Gain X	10	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GDT1	Gain Delta-T 1	800	US/F
GDT2	Gain Delta-T 2	800	US/F
GDT3	Gain Delta-T 3	800	US/F
GDT4	Gain Delta-T 4	160	US/F
GDT5	Gain Delta-T 5	160	US/F
GDTX	Gain Delta-T X	800	US/F
GGRD	Geothermal Gradient	0.01	DF/F
GIN1	Gain Interval 1	15360	US
GIN2	Gain Interval 2	15360	US
GIN3	Gain Interval 3	15360	US
GIN4	Gain Interval 4	2560	US
GIN5	Gain Interval 5	1600	US
GINX	Gain Interval X	15360	US
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HPF1	High Pass Filter 1	F80	
HPF2	High Pass Filter 2	F80	
HPF3	High Pass Filter 3	F80	
HPF4	High Pass Filter 4	F8K	
HPF5	High Pass Filter 5	F8K	
HPFX	High Pass Filter X	F80	
ISSBAR	Barite Mud Switch	BARITE	
ITTS	Integrated Transit Time Source	DTCO	
LFC	Label Formation Character - Monopole P&S	DYNAMIC	
LPF1	Low Pass Filter 1	F5K	
LPF2	Low Pass Filter 2	F5K	
LPF3	Low Pass Filter 3	F5K	
LPF4	Low Pass Filter 4	F30K	
LPF5	Low Pass Filter 5	F30K	
LPFX	Low Pass Filter X	F5K	
LTXG	Lower Dipole Transmitter Geometry	156	IN
MAI5	Slowness Averaging Interval - FMD	42	IN
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCS	Mean Casing Slowness	57	US/F
MDS5	Multishot Delta-T Scatter - FMD	20	US
MTXG	Monopole Transmitter Geometry	186	IN
MUX1	Sum Difference Multiplexor Input 1	RR	
MUX2	Sum Difference Multiplexor Input 2	RR	
MUX3	Sum Difference Multiplexor Input 3	RR	
MUX4	Sum Difference Multiplexor Input 4	RR	
MUX5	Sum Difference Multiplexor Input 5	RR	
MUXX	Sum Difference Multiplexor Input X	RR	
NTI5	Number Threshold Items 5	0	
NTIX	Number Threshold Items X	0	
NWI1	Number Waveform Items 1	8	
NWI2	Number Waveform Items 2	8	
NWI3	Number Waveform Items 3	0	
NWI4	Number Waveform Items 4	8	
NWI5	Number Waveform Items 5	0	
NWIX	Number Waveform Items X	0	
NWS1	Number Waveforms Stacked 1	1	
NWS2	Number Waveforms Stacked 2	1	
NWS3	Number Waveforms Stacked 3	1	
NWS4	Number Waveforms Stacked 4	1	
NWS5	Number Waveforms Stacked 5	1	
NWSX	Number Waveforms Stacked X	1	
RATE	Firing Rate	R7	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM1	DSST Sonic Acquisition Mode 1 - Lower Dipole Mode	LFD_EVEN	
SAM2	DSST Sonic Acquisition Mode 2 - Upper Dipole Mode	ODD	
SAM3	DSST Sonic Acquisition Mode 3 - Monopole Mode for Stoneley	OFF	
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	EVEN	
SAM5	DSST Sonic Acquisition Mode 5 - Monopole Mode for FMD	OFF	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS1	STC Sonic Array Status - Lower Dipole	255	
SAS2	STC Sonic Array Status - Upper Dipole	255	
SAS3	STC Sonic Array Status - Monopole Stoneley	255	
SAS4	STC Sonic Array Status - Monopole P&S	255	
SAS5	Sonic Array Status - FMD	255	
SBO1	STC Search Band Offset - Lower Dipole	3000	US
SBO2	STC Search Band Offset - Upper Dipole	3000	US
SBO3	STC Search Band Offset - Monopole Stoneley	3000	US

SBO4	STC Search Band Offset – Monopole P&S	500	US
SBR4	STC Baseline Removal – Monopole P&S	ON	
SBW1	STC Search Bandwidth – Lower Dipole	8000	US
SBW2	STC Search Bandwidth – Upper Dipole	8000	US
SBW3	STC Search Bandwidth – Monopole Stoneley	8000	US
SBW4	STC Search Bandwidth – Monopole P&S	2000	US
SFC1	STC Formation Character – Lower Dipole	SELECTABLE	
SFC2	STC Formation Character – Upper Dipole	SELECTABLE	
SFC3	STC Formation Character – Monopole Stoneley	SELECTABLE	
SFC4	STC Formation Character – Monopole P&S	SELECTABLE	
SFM1	STC Filter – Lower Dipole	B.3–1.5K	
SFM2	STC Filter – Upper Dipole	B1–2K	
SFM3	STC Filter – Monopole Stoneley	B.5–1.5K	
SFM4	STC Filter – Monopole P&S	B3–20K	
SHLL	Label Slowness Lower Limit – Monopole P&S Shear	235	US/F
SHT	Surface Hole Temperature	55	DEGF
SHUL	Label Slowness Upper Limit – Monopole P&S Shear	240	US/F
SLL1	STC Slowness Lower Limit – Lower Dipole	40	US/F
SLL2	STC Slowness Lower Limit – Upper Dipole	40	US/F
SLL3	STC Slowness Lower Limit – Monopole Stoneley	180	US/F
SLL4	STC Slowness Lower Limit – Monopole P&S	40	US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DTCO	
SST1	STC Slowness Step – Lower Dipole	4	US/F
SST2	STC Slowness Step – Upper Dipole	4	US/F
SST3	STC Slowness Step – Monopole Stoneley	4	US/F
SST4	STC Slowness Step – Monopole P&S	2	US/F
SSW1	STC Source Waveform – Lower Dipole	WF_SAM1	
SSW2	STC Source Waveform – Upper Dipole	WF_SAM2	
SSW3	STC Source Waveform – Monopole Stoneley	WF_SAM3	
SSW4	STC Source Waveform – Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit – Monopole Stoneley	180	US/F
STUL	Label Slowness Upper Limit – Monopole Stoneley	780	US/F
SUL1	STC Slowness Upper Limit – Lower Dipole	1040	US/F
SUL2	STC Slowness Upper Limit – Upper Dipole	1040	US/F
SUL3	STC Slowness Upper Limit – Monopole Stoneley	780	US/F
SUL4	STC Slowness Upper Limit – Monopole P&S	240	US/F
SWD1	STC Slowness Width – Lower Dipole	40	US/F
SWD2	STC Slowness Width – Upper Dipole	40	US/F
SWD3	STC Slowness Width – Monopole Stoneley	40	US/F
SWD4	STC Slowness Width – Monopole P&S	10	US/F
TBDB	Tool String Bottom to DSST Bottom	526.05	IN
TBF1	STC Time for Baseline Fill – Lower Dipole	0	US
TBF2	STC Time for Baseline Fill – Upper Dipole	0	US
TBF3	STC Time for Baseline Fill – Monopole Stoneley	0	US
TBF4	STC Time for Baseline Fill – Monopole P&S	300	US
TLL1	STC Time Lower Limit – Lower Dipole	600	US
TLL2	STC Time Lower Limit – Upper Dipole	600	US
TLL3	STC Time Lower Limit – Monopole Stoneley	600	US
TLL4	STC Time Lower Limit – Monopole P&S	150	US
TST1	STC Time Step – Lower Dipole	200	US
TST2	STC Time Step – Upper Dipole	200	US
TST3	STC Time Step – Monopole Stoneley	200	US
TST4	STC Time Step – Monopole P&S	50	US
TTDB	Tool String Top to DSST Bottom	1225.31	IN
TUL1	STC Time Upper Limit – Lower Dipole	18960	US
TUL2	STC Time Upper Limit – Upper Dipole	18440	US
TUL3	STC Time Upper Limit – Monopole Stoneley	12000	US
TUL4	STC Time Upper Limit – Monopole P&S	3660	US
TWA1	Transmitter Waveform Amplitude 1	179	
TWA2	Transmitter Waveform Amplitude 2	179	
TWA3	Transmitter Waveform Amplitude 3	166	
TWA4	Transmitter Waveform Amplitude 4	150	
TWA5	Transmitter Waveform Amplitude 5	150	
TWAX	Transmitter Waveform Amplitude X	179	
TWD1	STC Time Width – Lower Dipole	2000	US
TWD2	STC Time Width – Upper Dipole	2000	US
TWD3	STC Time Width – Monopole Stoneley	2000	US
TWD4	STC Time Width – Monopole P&S	1000	US
TWI1	STC Integration Time Window – Lower Dipole	1600	US
TWI2	STC Integration Time Window – Upper Dipole	1600	US
TWI3	STC Integration Time Window – Monopole Stoneley	2400	US
TWI4	STC Integration Time Window – Monopole P&S	500	US
TWR1	Transmitter Waveform Sample Rate 1	20	US
TWR2	Transmitter Waveform Sample Rate 2	5	US
TWR3	Transmitter Waveform Sample Rate 3	5	US
TWR4	Transmitter Waveform Sample Rate 4	5	US
TWR5	Transmitter Waveform Sample Rate 5	5	US
TWRX	Transmitter Waveform Sample Rate X	5	US
TWS1	Transmitter Waveform Select 1	2	
TWS2	Transmitter Waveform Select 2	0	
TWS3	Transmitter Waveform Select 3	4	
TWS4	Transmitter Waveform Select 4	6	
TWS5	Transmitter Waveform Select 5	6	
TWSX	Transmitter Waveform Select X	0	

UTSX	Transmitter Waveform Select X	162	IN
UTXG	Upper Dipole Transmitter Geometry	0	US/F
WFDTS1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTS2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTS3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTS4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSX	SAMX Waveform Delta for Spectrum	0	US/F
WFLLS1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLLS2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLS3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLS4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSX	SAMX Waveform Lower Limit for Spectrum	0	US
WFM1	Waveform Mode 1	W1	
WFM2	Waveform Mode 2	W1	
WFM3	Waveform Mode 3	W1	
WFM4	Waveform Mode 4	W1	
WFM5	Waveform Mode 5	W1	
WFMX	Waveform Mode X	W1	
WFULS1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFULS2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULS3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULS4	SAM4 Waveform Upper Limit for Spectrum	5000	US
WFULSX	SAMX Waveform Upper Limit for Spectrum	20000	US
XMT1	Transmitter Select 1	DLO	
XMT2	Transmitter Select 2	DUP	
XMT3	Transmitter Select 3	MONO	
XMT4	Transmitter Select 4	MONO	
XMT5	Transmitter Select 5	MONO	
XMTX	Transmitter Select X	DUP	
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	OFF	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	55	DEGF
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3

DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	11726	FT
TDD	Total Depth – Driller	3574.00	M
TDL	Total Depth – Logger	3413.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo

Vertical Scale: 1:200

Graphics File Created: 25-Nov-2017 18:50

OP System Version: 19C0-187			
HNGC-B	19C0-187	HNGS-BA	19C0-187
HRLT-B	19C0-187	DSST-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	SKK-5169-EDTCB		

Input DLIS Files					
DEFAULT	Flip_NGS_HRLA_DSI_057LUP	PRODUCER	25-Nov-2017 17:16	3415.7 M	2731.8 M
Output DLIS Files					
DEFAULT	NGS_HRLA_DSI_LDL_062PUP	FN:83	PRODUCER	25-Nov-2017 18:50	

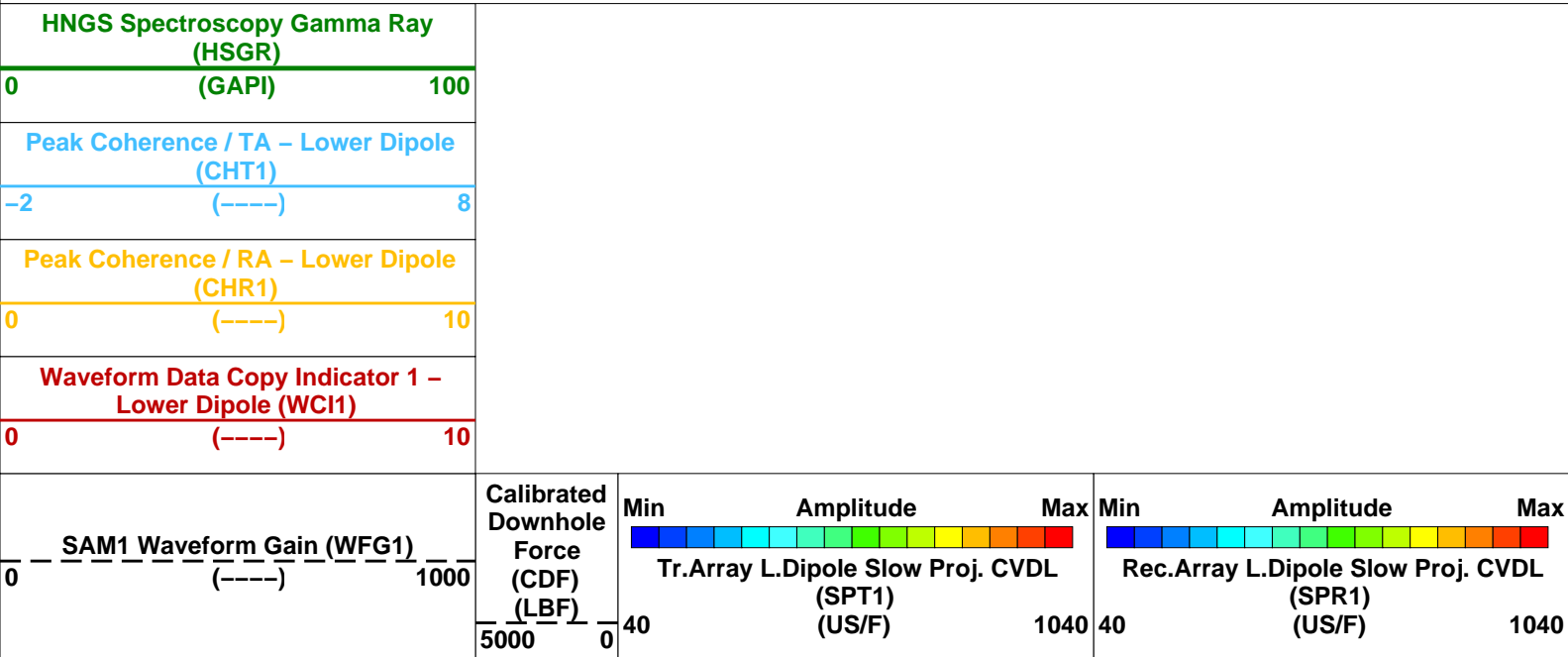
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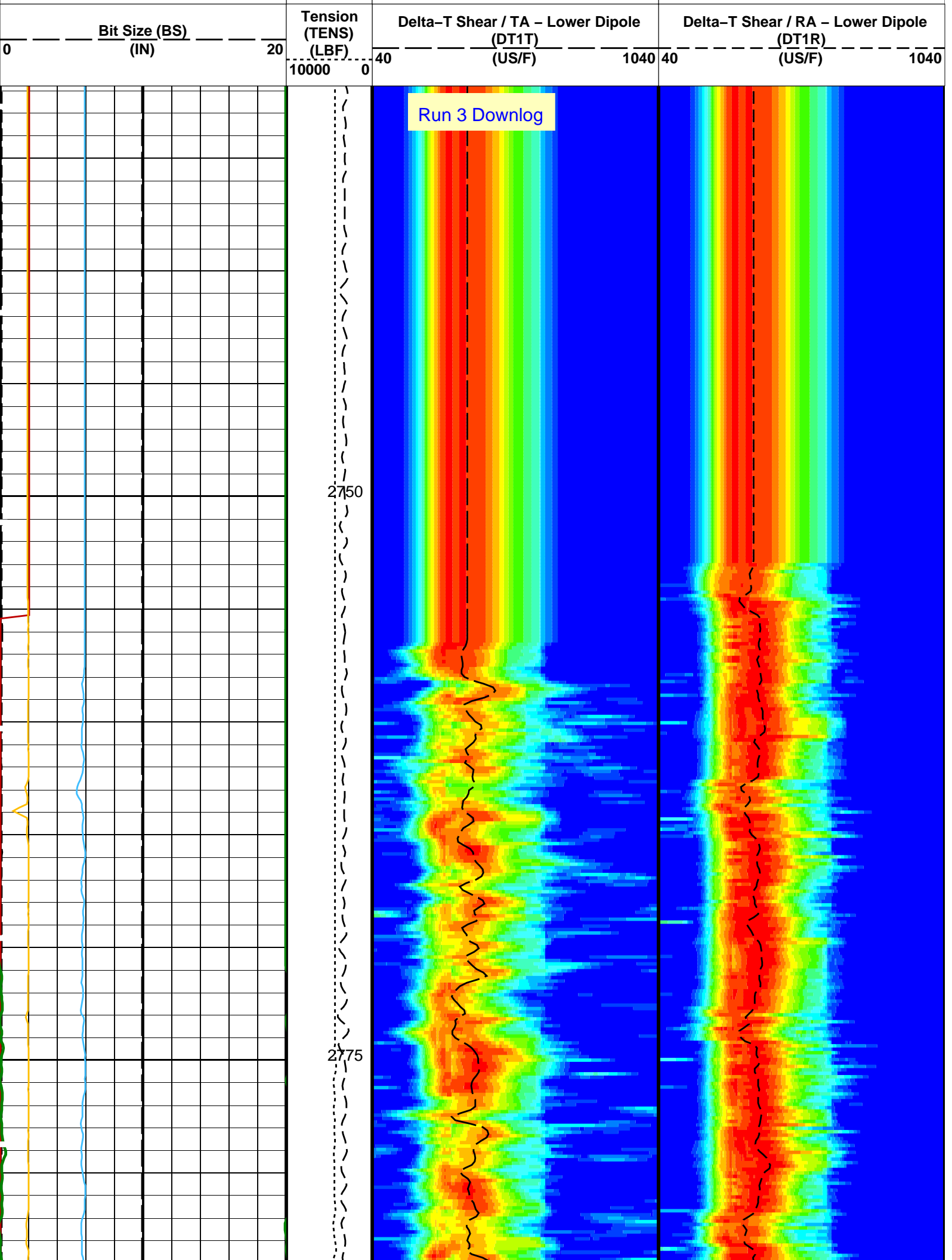
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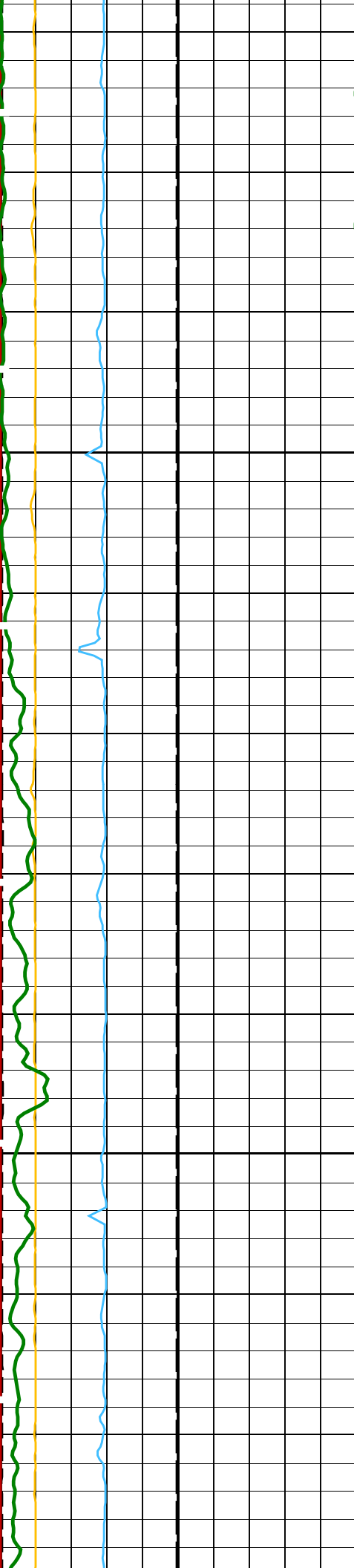
Input DLIS Files					
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Output DLIS Files					
DEFAULT	NGS_HRLA_DSI_LDL_062PUP	FN:83	PRODUCER	25-Nov-2017 18:50	3415.7 M 2731.8 M

OP System Version: 19C0-187			
HNGC-B	19C0-187	HNGS-BA	19C0-187
HRLT-B	19C0-187	DSST-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	SKK-5169-EDTCB		

PIP SUMMARY	
Time Mark Every 60 S	

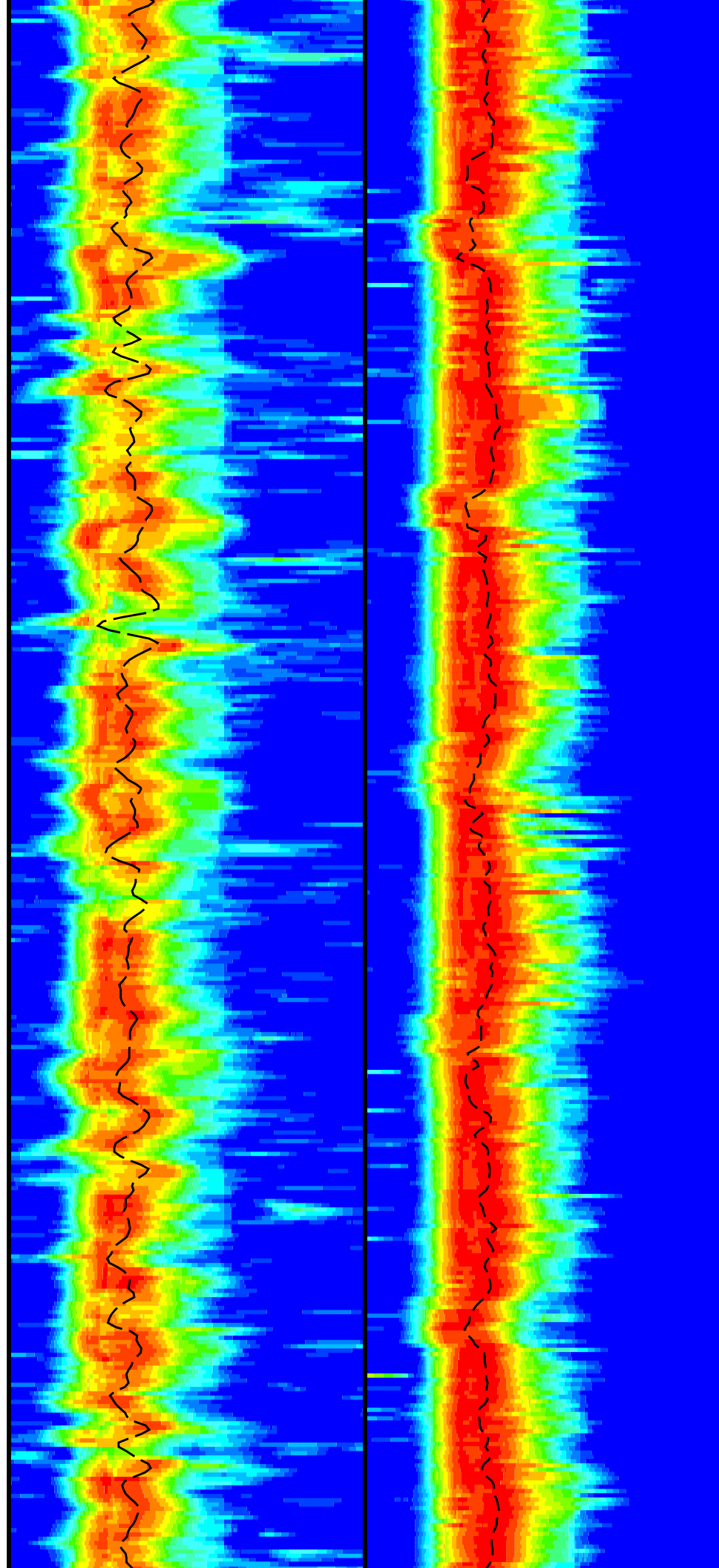


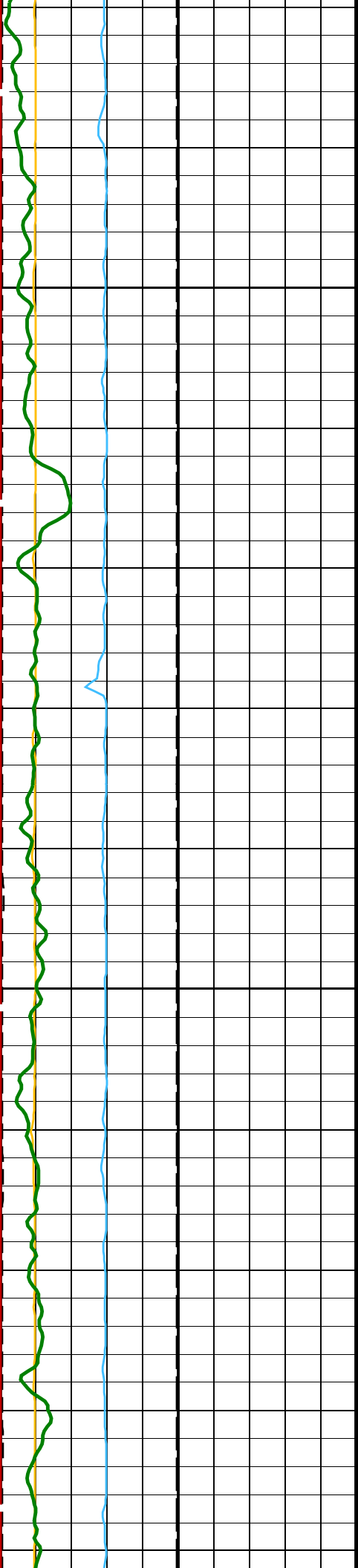




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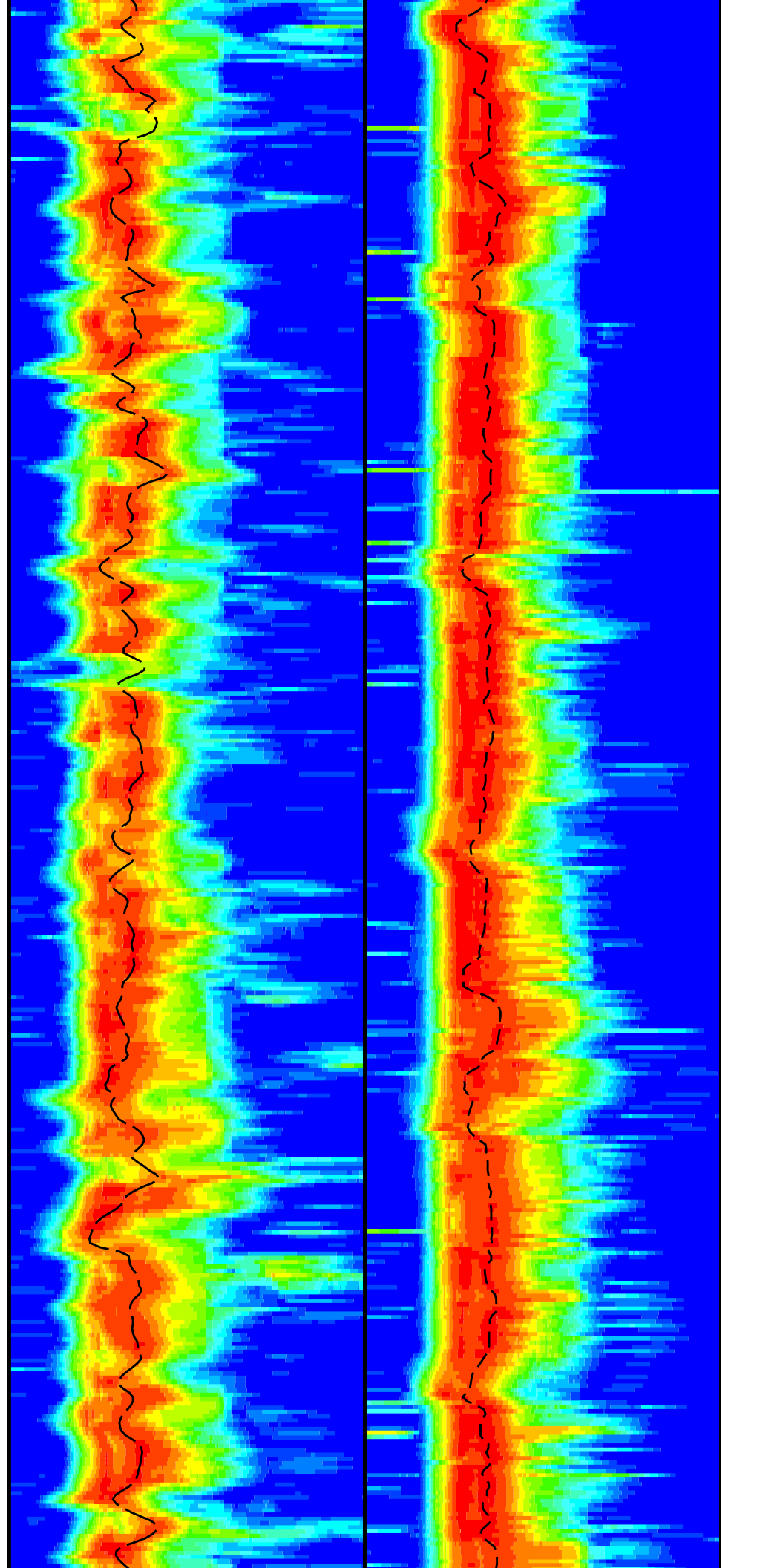
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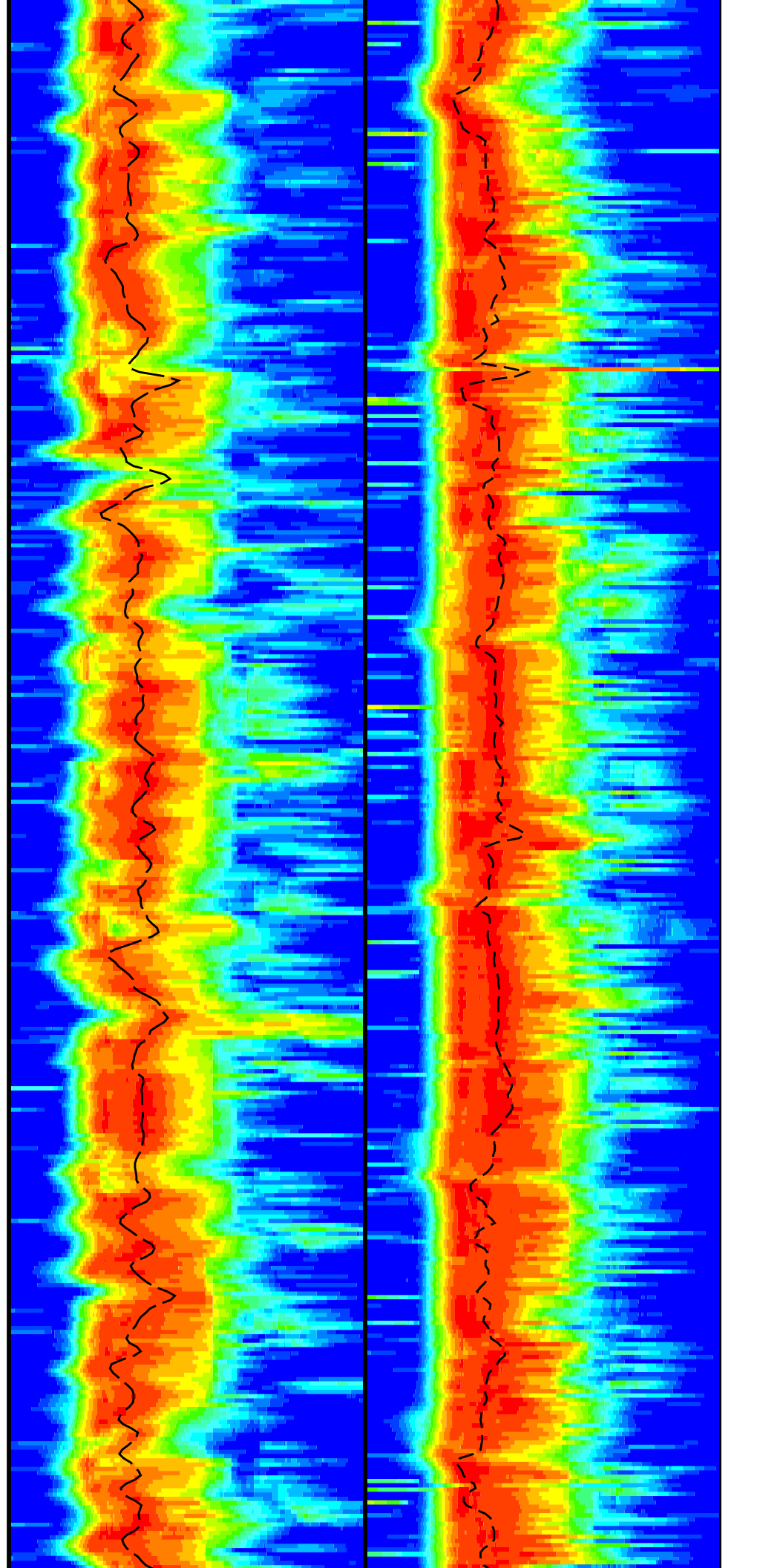
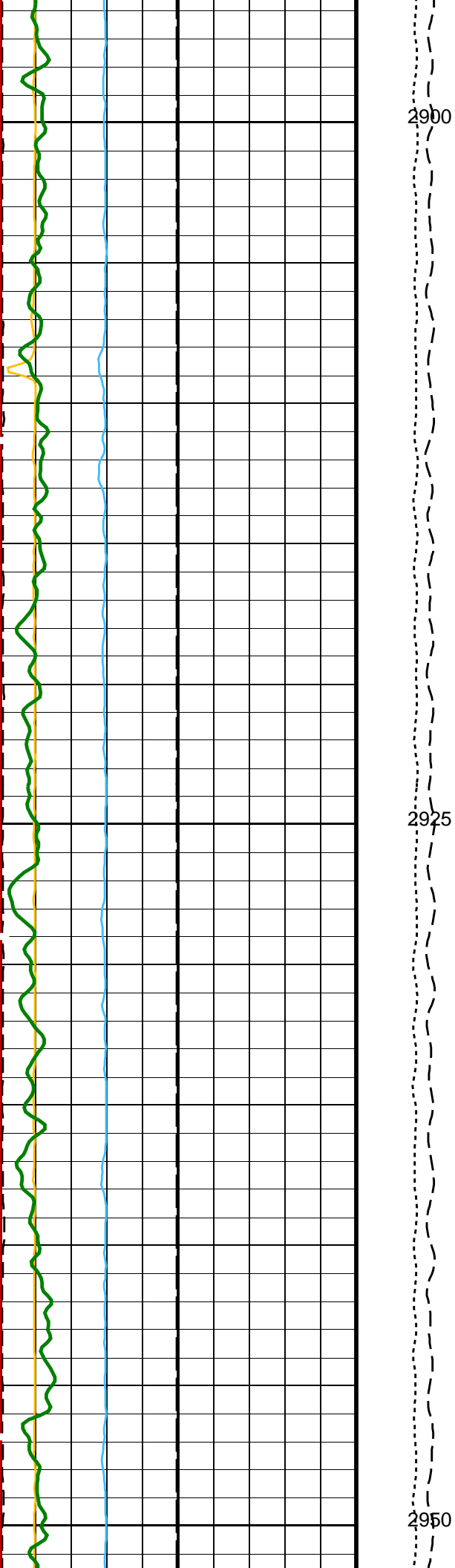


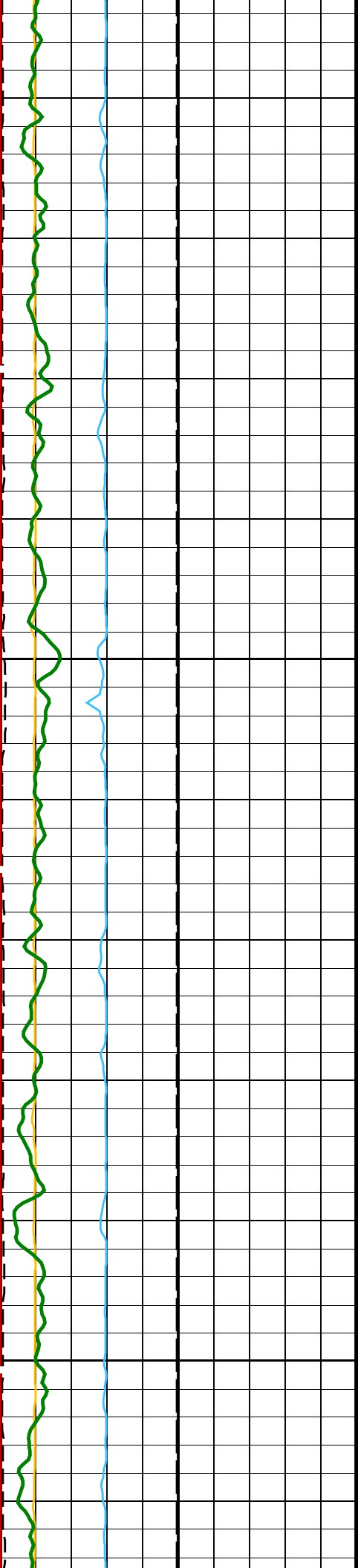


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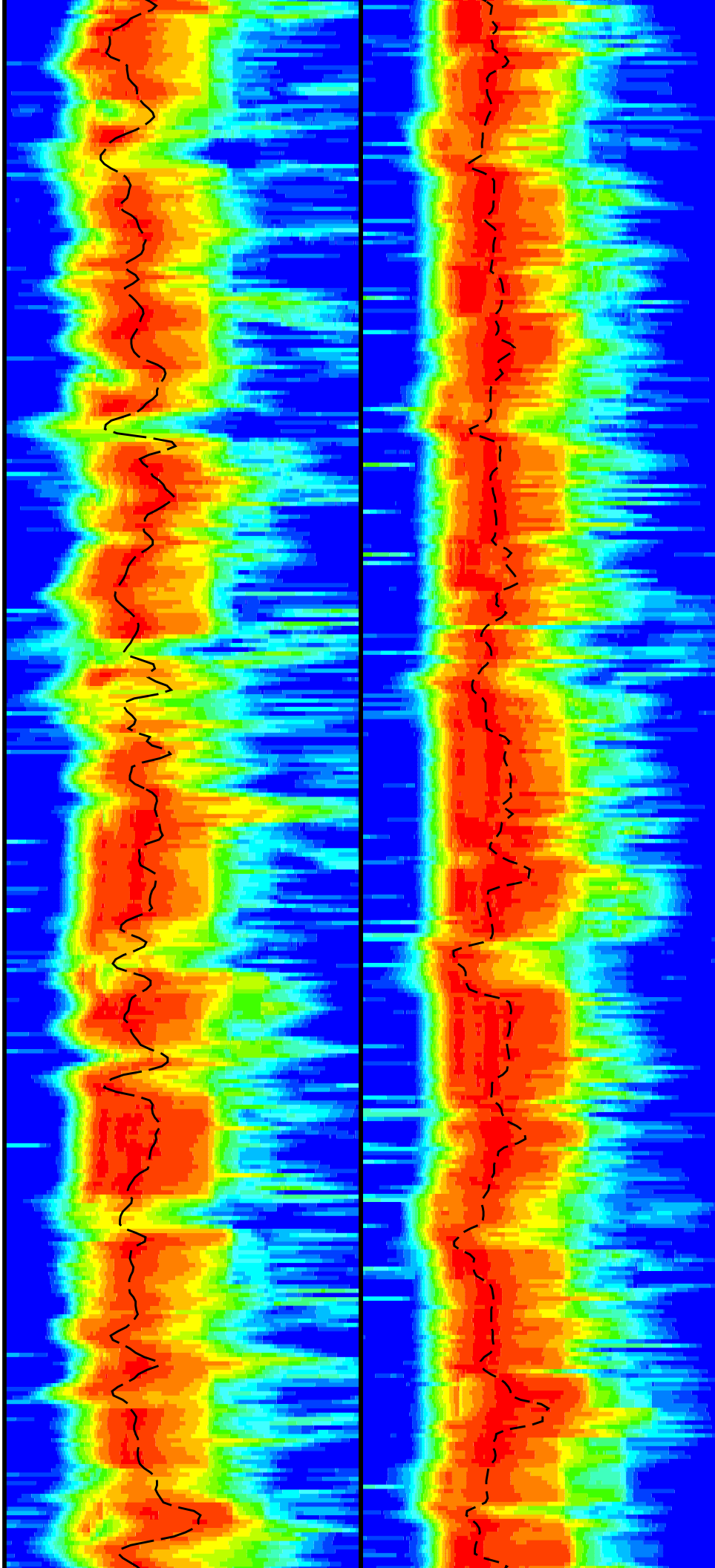


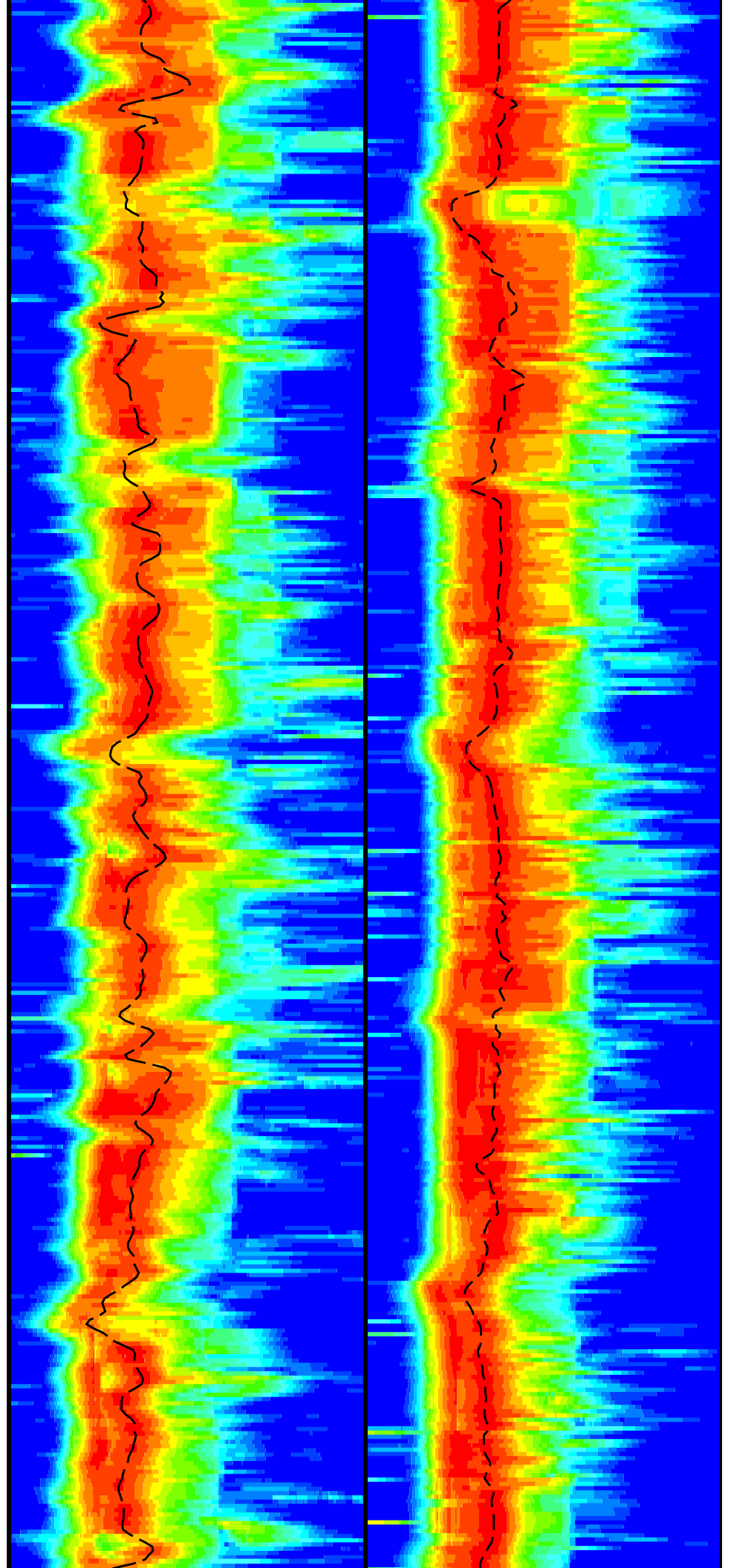
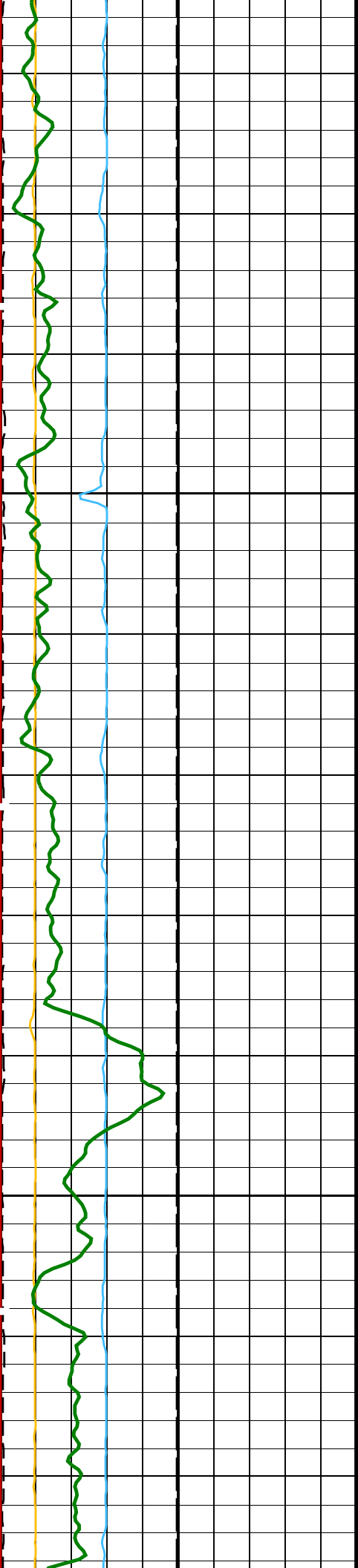


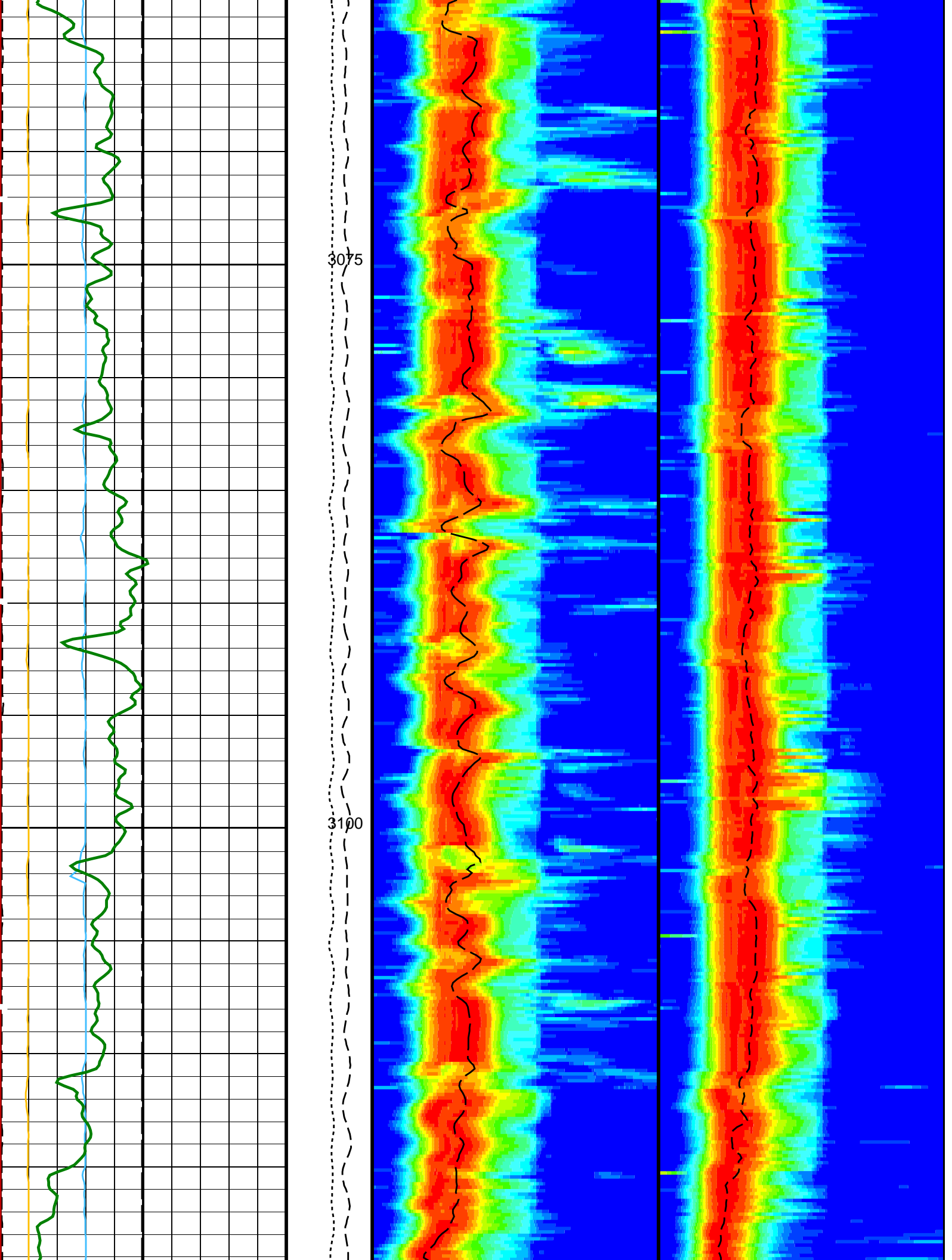


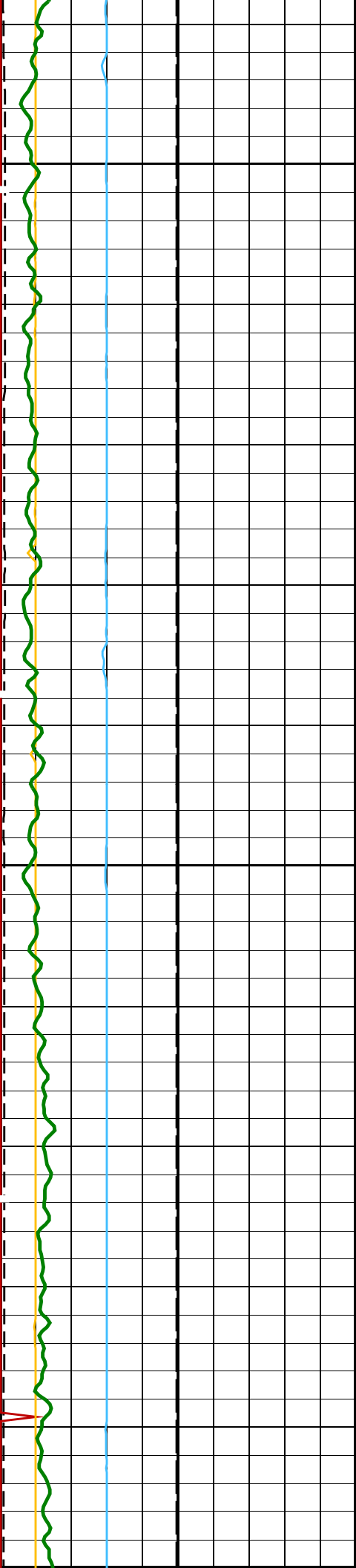
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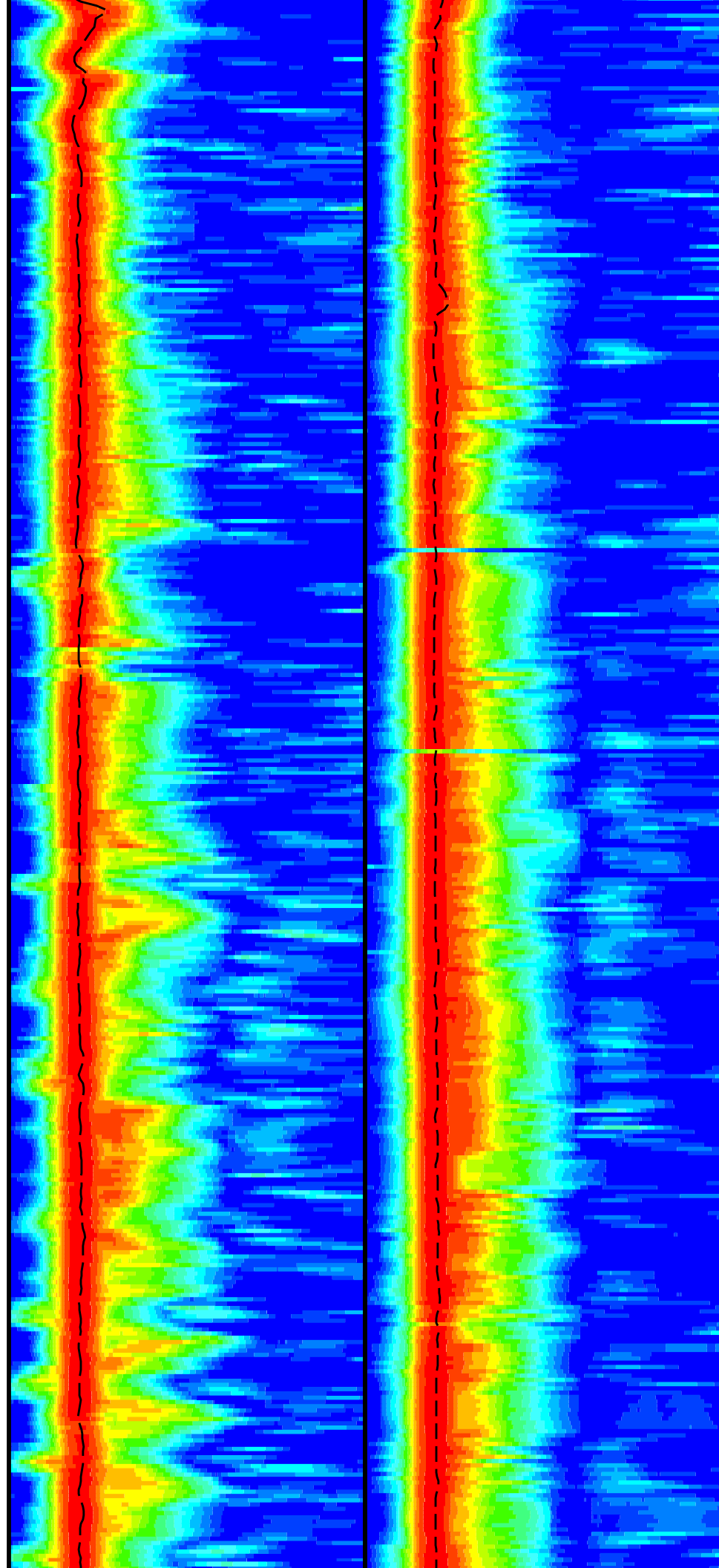


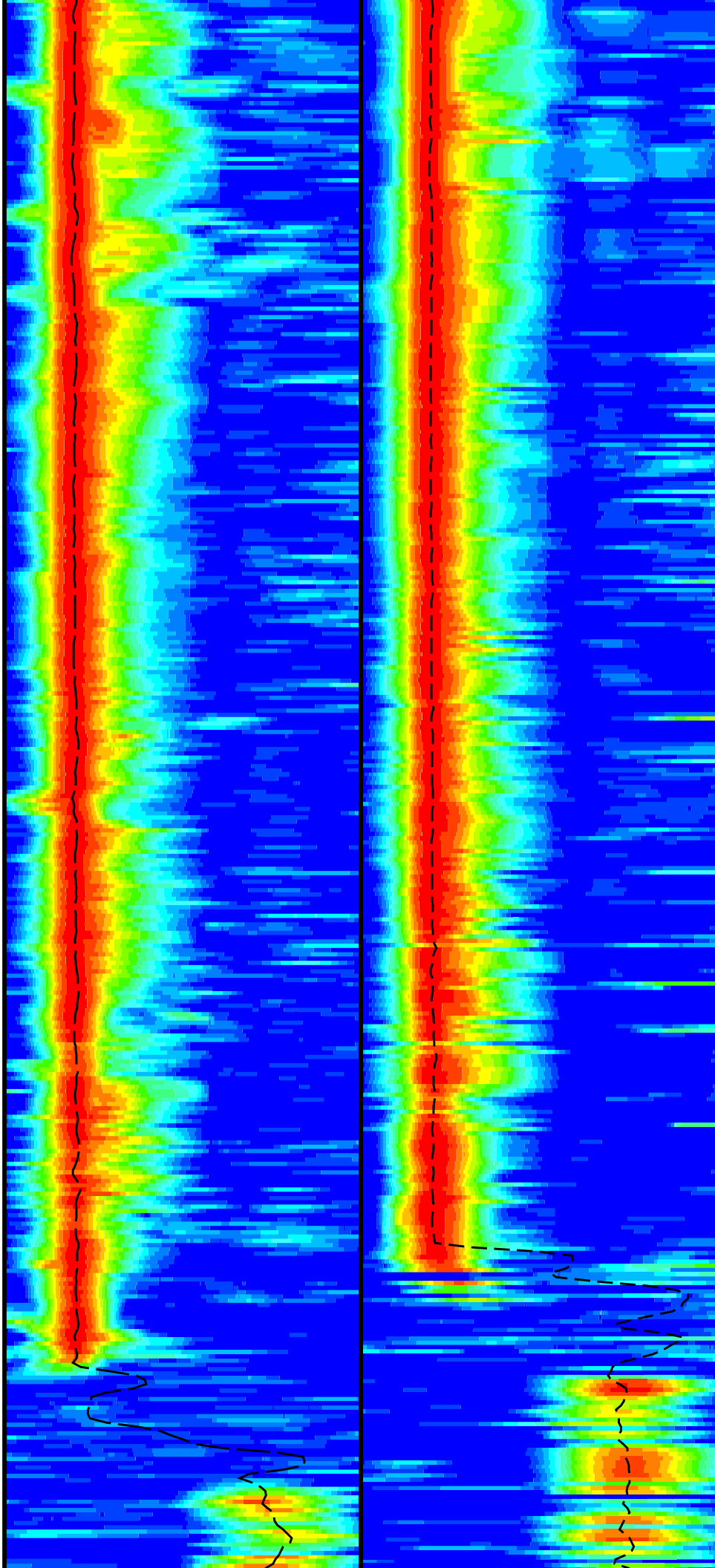
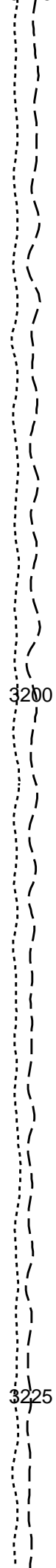
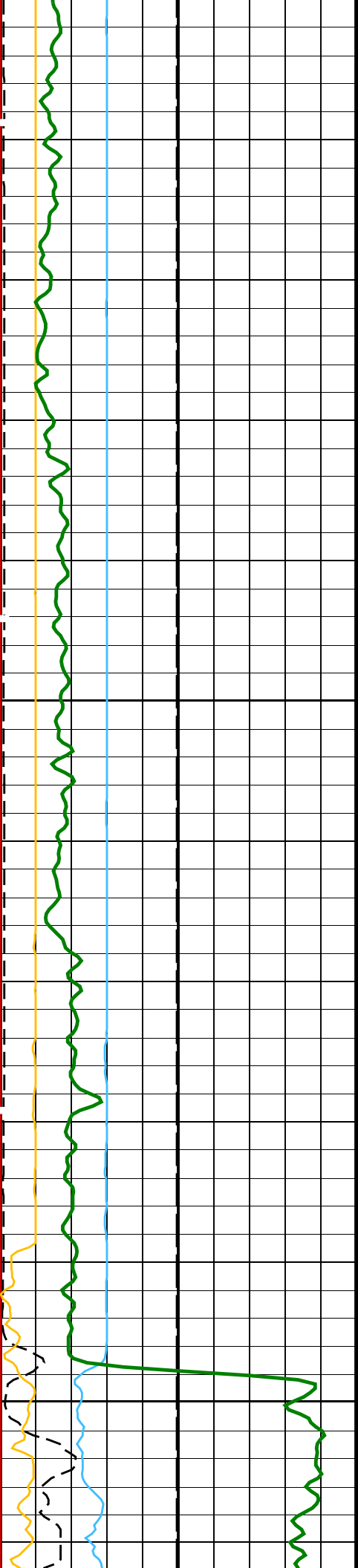


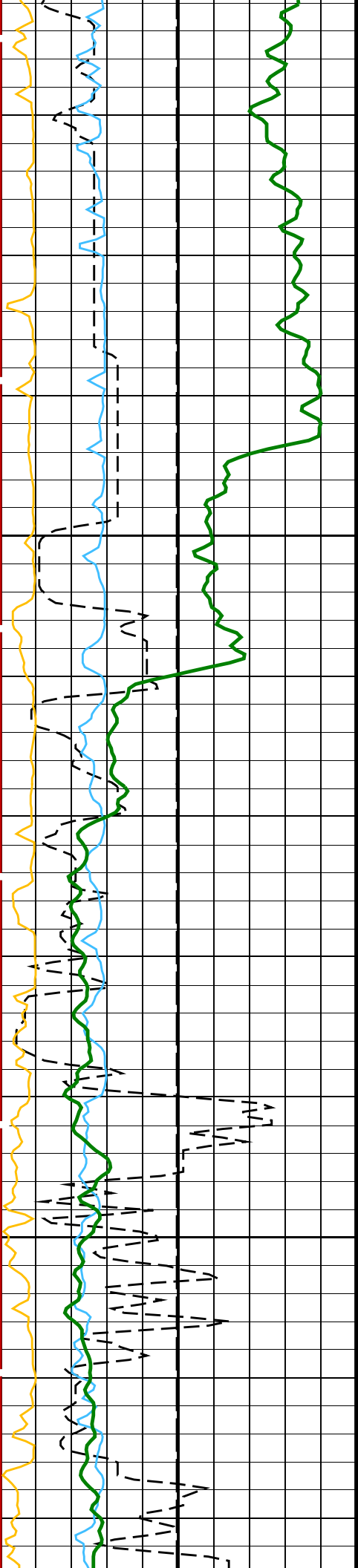




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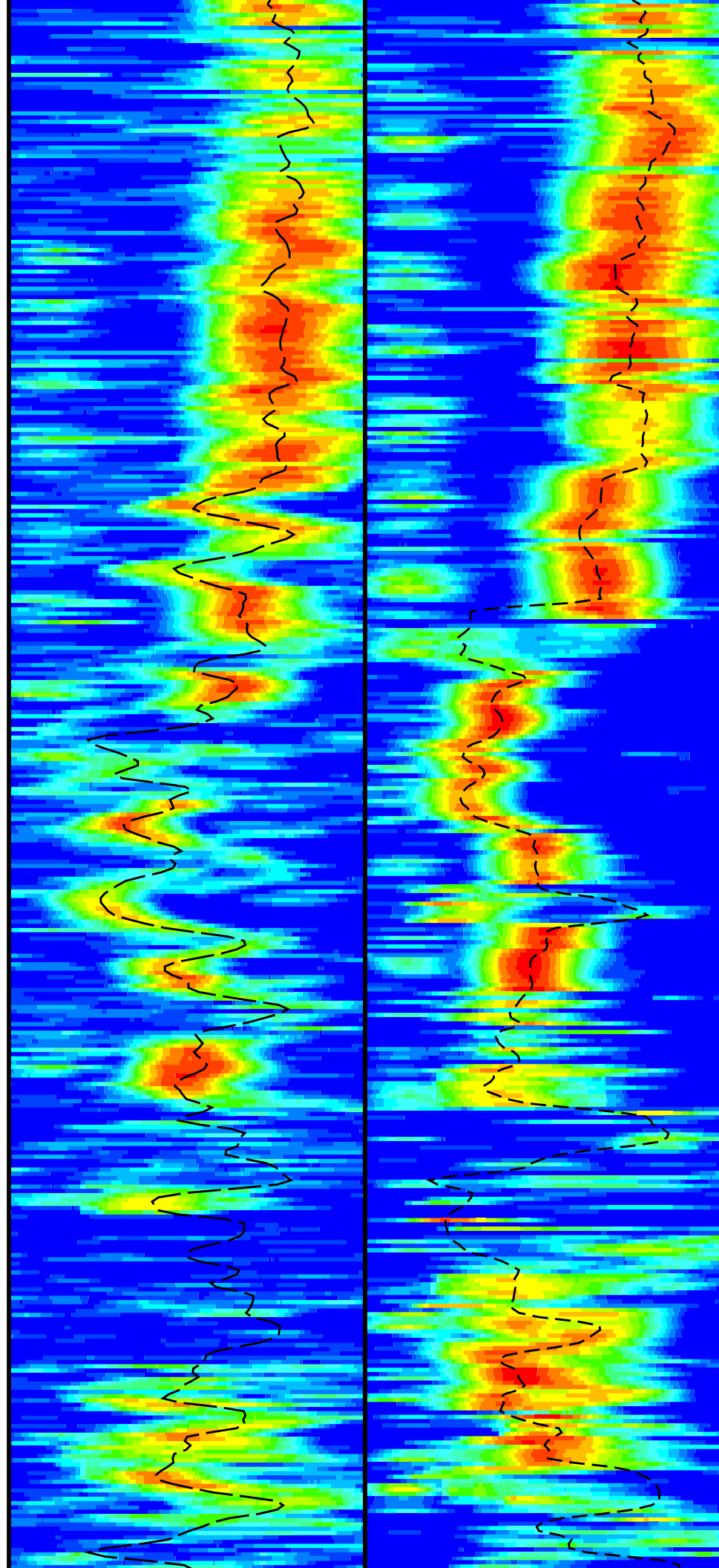


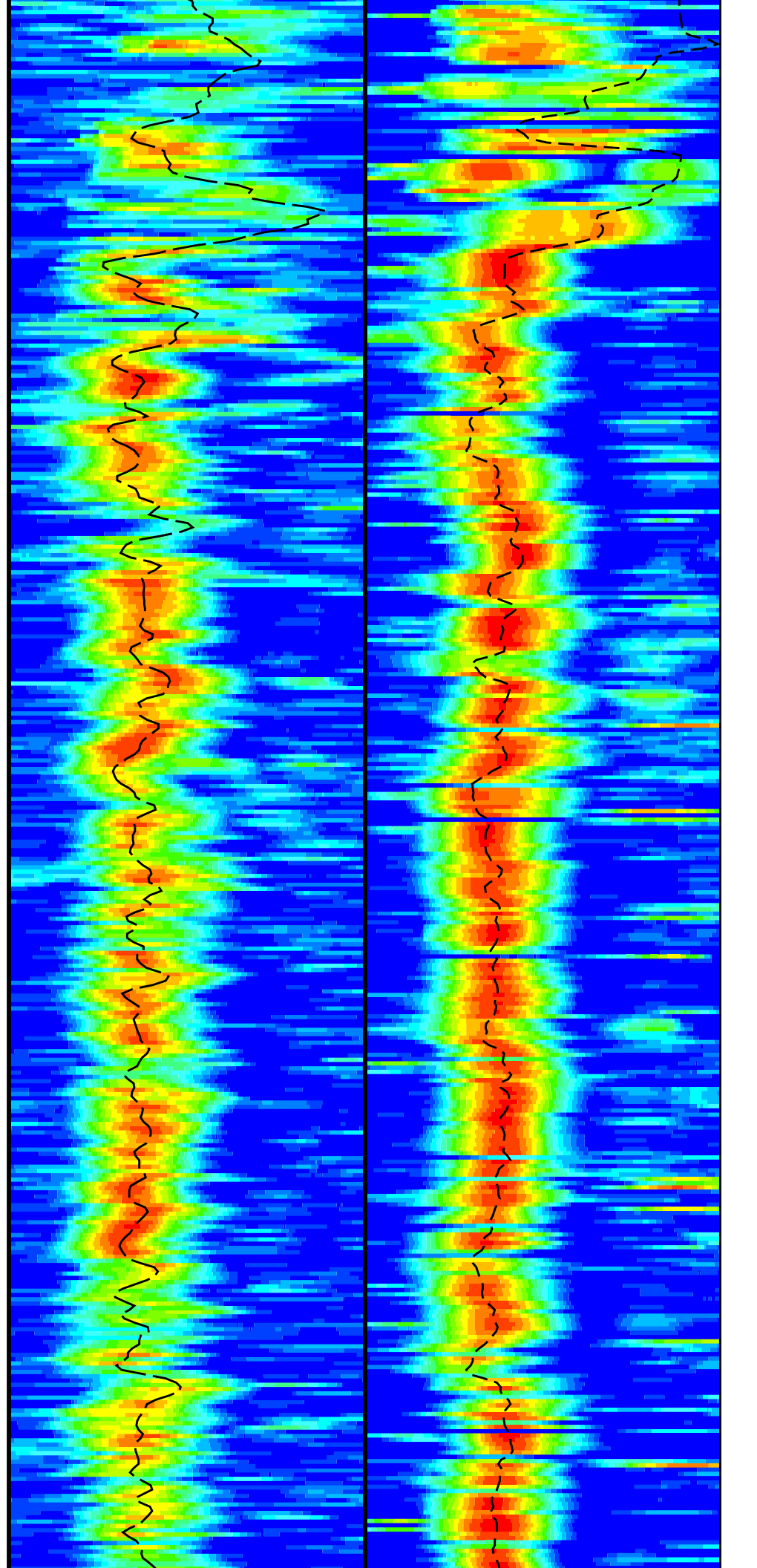
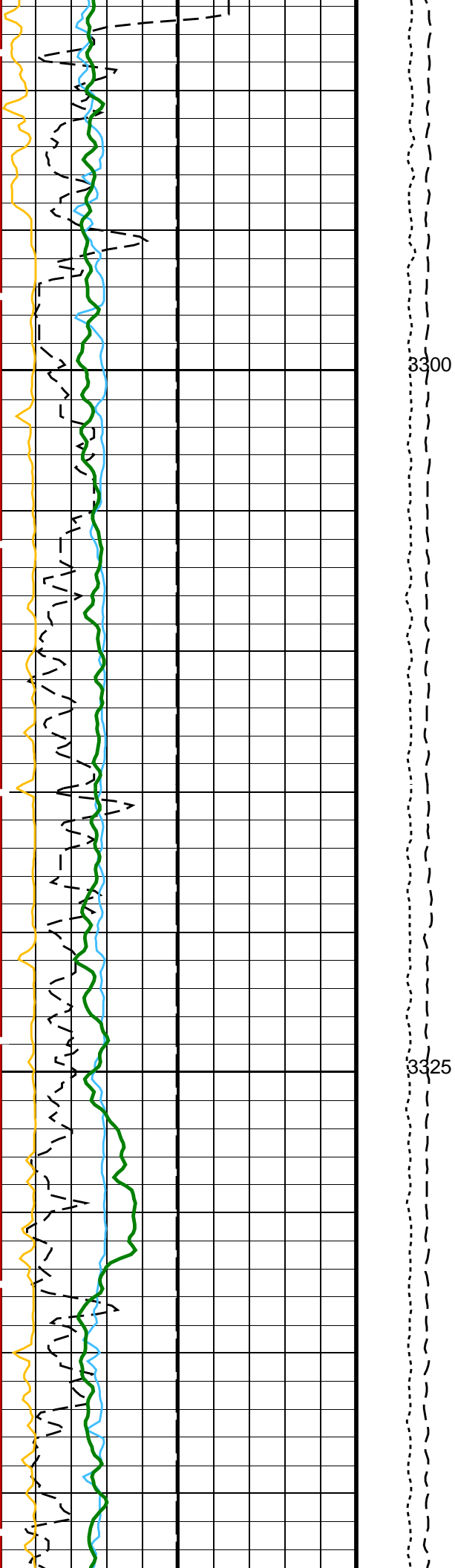


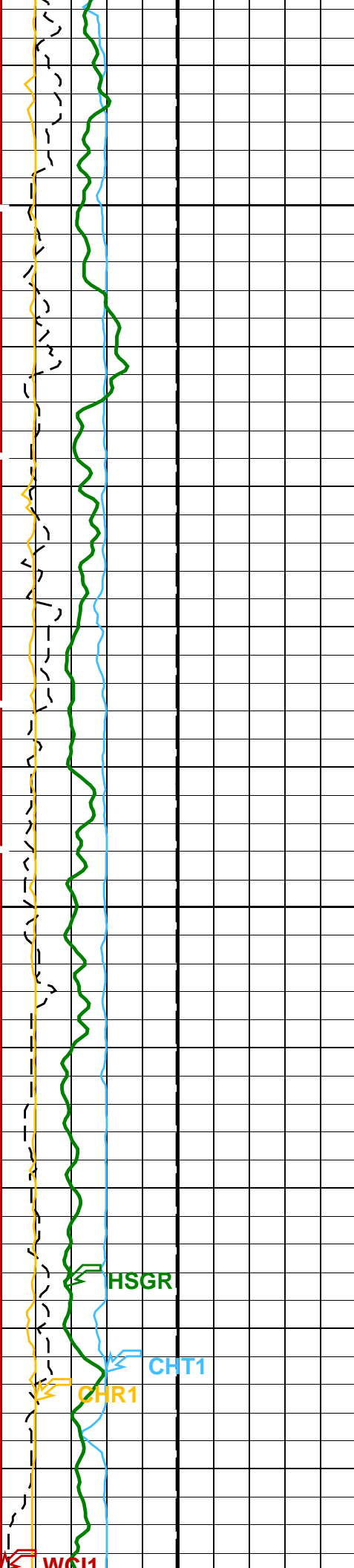


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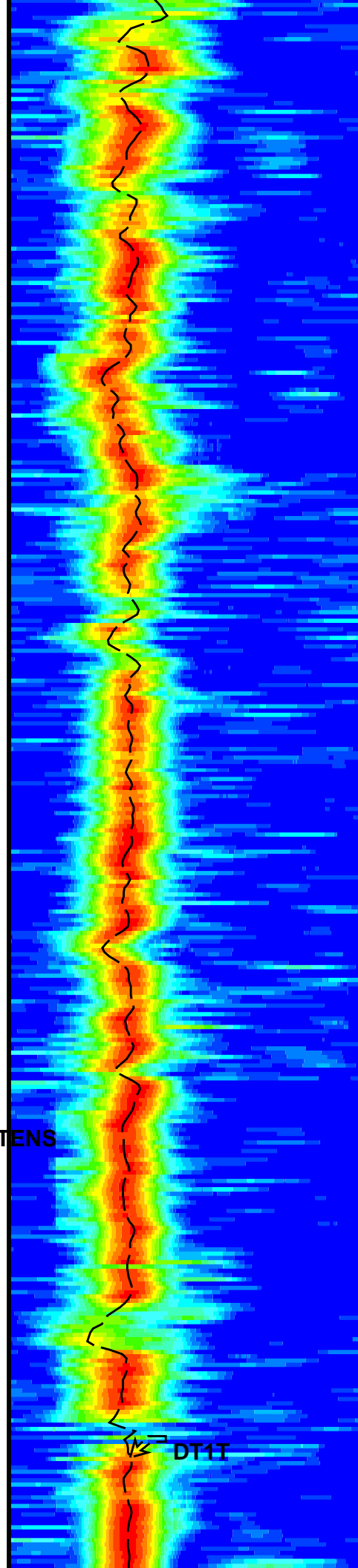




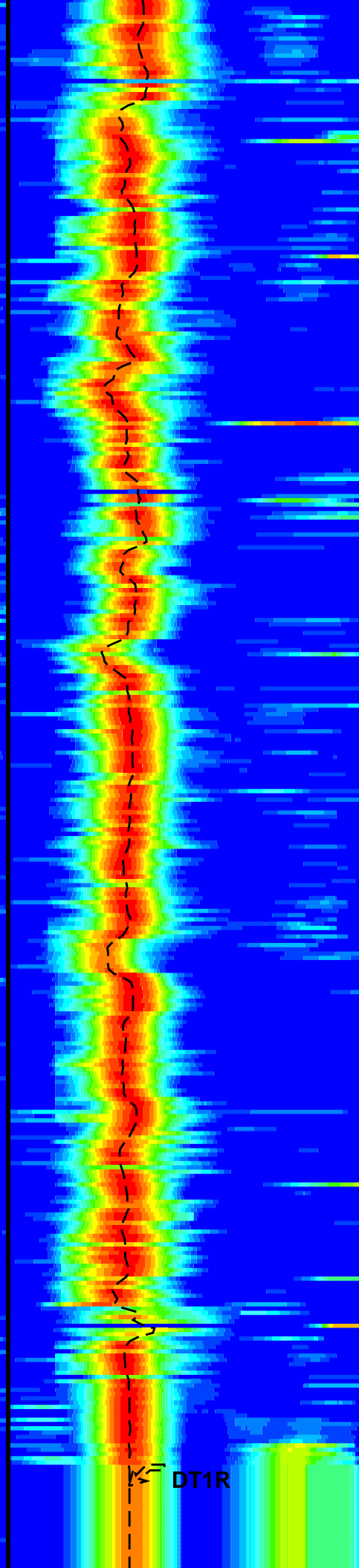
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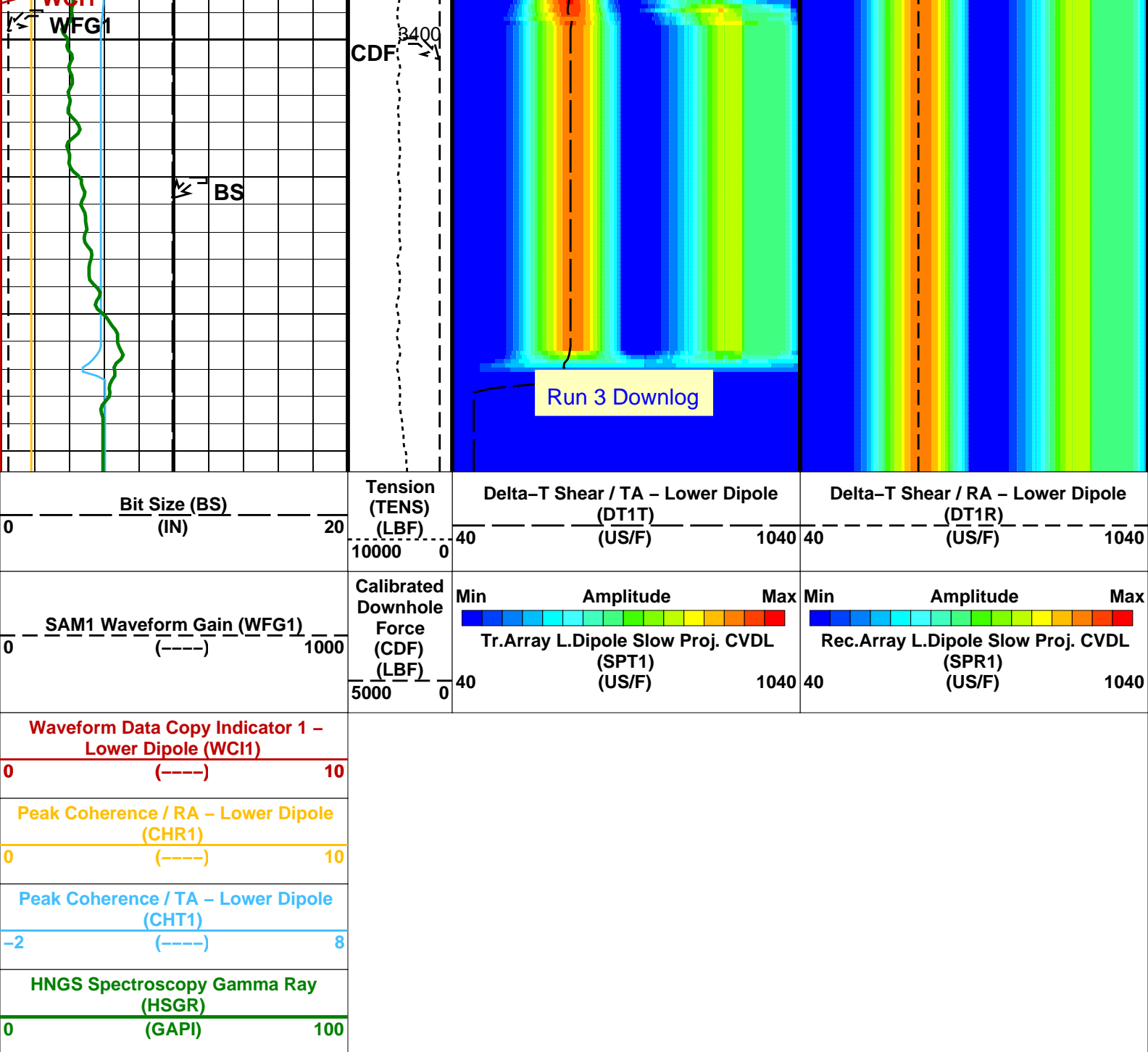
TENS



DT1T



DT1R



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	BS
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	-0.00106006
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	BARI
HNGS	HNGS Processing Enable	YES

HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.962555	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.07716	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
DSST-B: Dipole Shear Imager – B			
BHS	Borehole Status	OPEN	
DDE1	Digitizing Delay 1	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source – Dipole Shear	USE	
DSHL	Label Slowness Lower Limit – Dipole Shear	40	US/F
DSHU	Label Slowness Upper Limit – Dipole Shear	1040	US/F
DSI1	Digitizer Sample Interval 1	40	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DWC1	Digitizer Word Count 1	512	
DWCX	Digitizer Word Count X	512	
GCSE	Generalized Caliper Selection	BS	
LTXG	Lower Dipole Transmitter Geometry	156	IN
NWI1	Number Waveform Items 1	8	
NWIX	Number Waveform Items X	0	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM1	DSST Sonic Acquisition Mode 1 – Lower Dipole Mode	LFD_EVEN	
SAMX	DSST Sonic Acquisition Mode X – Both Dipoles or Monopole Mode for Expert	OFF	
SAS1	STC Sonic Array Status – Lower Dipole	255	
SBO1	STC Search Band Offset – Lower Dipole	3000	US
SBW1	STC Search Bandwidth – Lower Dipole	8000	US
SFC1	STC Formation Character – Lower Dipole	SELECTABLE	
SFM1	STC Filter – Lower Dipole	B.3–1.5K	
SLL1	STC Slowness Lower Limit – Lower Dipole	40	US/F
SST1	STC Slowness Step – Lower Dipole	4	US/F
SSW1	STC Source Waveform – Lower Dipole	WF_SAM1	
SUL1	STC Slowness Upper Limit – Lower Dipole	1040	US/F
SWD1	STC Slowness Width – Lower Dipole	40	US/F
TBF1	STC Time for Baseline Fill – Lower Dipole	0	US
TLL1	STC Time Lower Limit – Lower Dipole	600	US
TST1	STC Time Step – Lower Dipole	200	US
TUL1	STC Time Upper Limit – Lower Dipole	18960	US
TWD1	STC Time Width – Lower Dipole	2000	US
TWI1	STC Integration Time Window – Lower Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
WFM1	Waveform Mode 1	W1	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSST_LOWER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 25–Nov–2017 18:50

OP System Version: 19C0–187

HNGC–B	19C0–187	HNGS–BA	19C0–187
HRLT–B	19C0–187	DSST–B	19C0–187
HLDS	19C0–187	LDSC–B	19C0–187
EDTC–B	SKK–5169–EDTCB		

Input DLIS Files

DEFAULT	Flip_NGS_HRLA_DSI_057LUP	PRODUCER	25–Nov–2017 17:16	3415.7 M	2731.8 M
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Output DLIS Files

DEFAULT	NGS_HRLA_DSI_LDL_062PUP	FN:83	PRODUCER	25–Nov–2017 18:50
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Input DLIS Files

DEFAULT

Flip_NGS_HRLA_DSI_057LUP

PRODUCER

25-Nov-2017 17:16

3415.7 M

2731.8 M

Output DLIS Files

DEFAULT

NGS_HRLA_DSI_LDL_062PUP

FN:83

PRODUCER

25-Nov-2017 18:50

3415.7 M

2731.8 M

OP System Version: 19C0-187

HNGC-B

19C0-187

HNGS-BA

19C0-187

HRLT-B

19C0-187

DSST-B

19C0-187

HLDS

19C0-187

LDSC-B

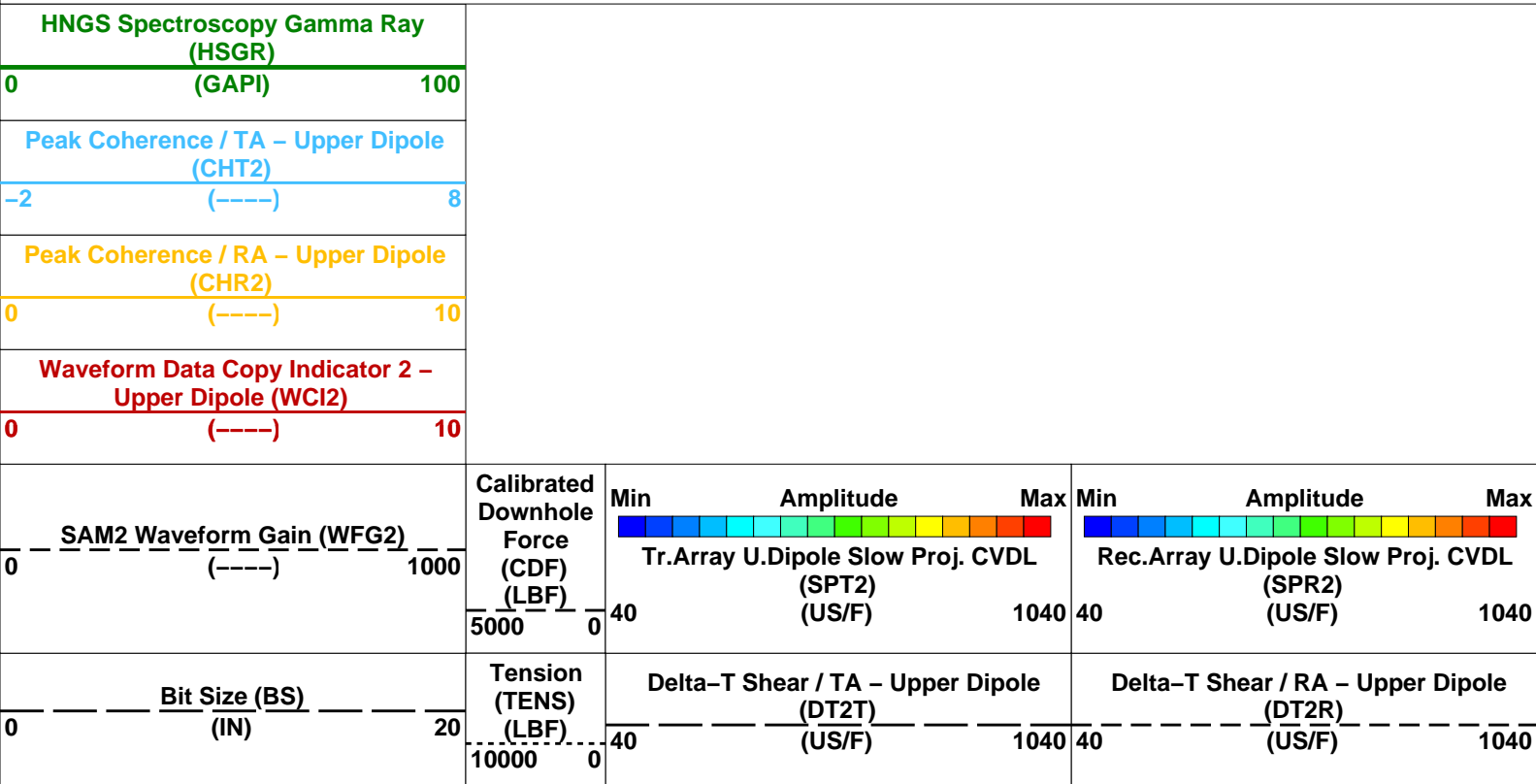
19C0-187

EDTC-B

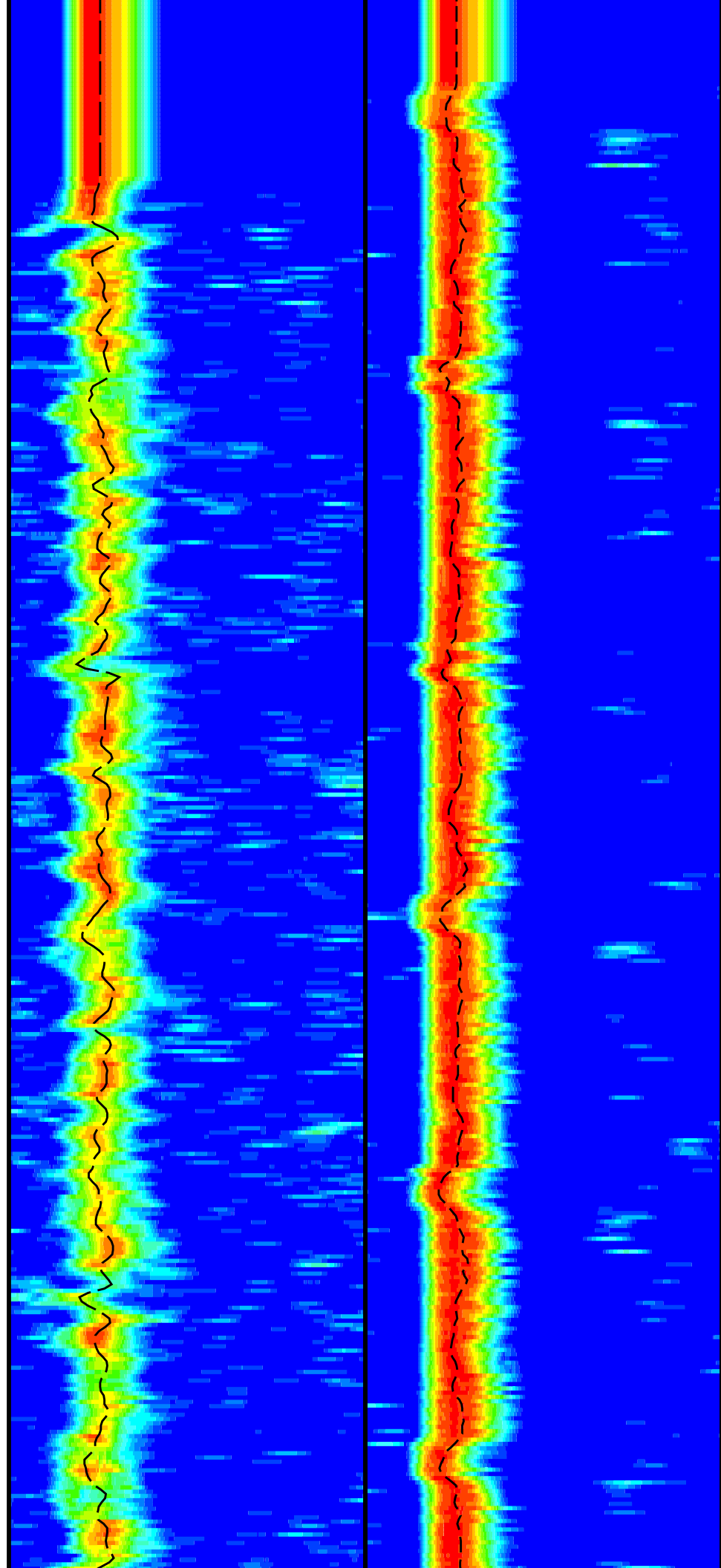
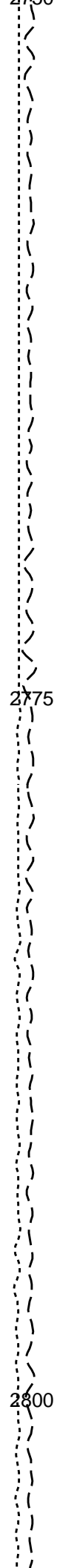
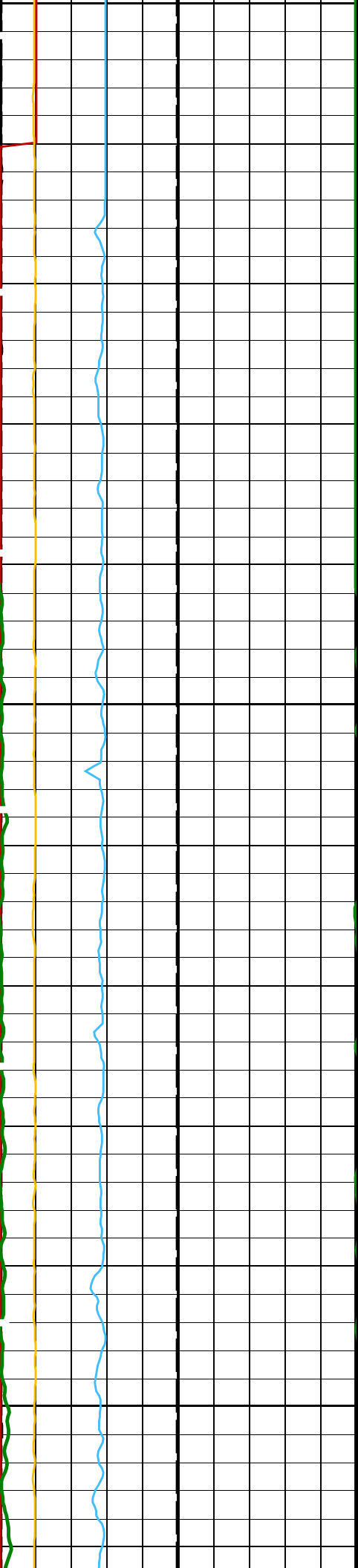
SKK-5169-EDTCB

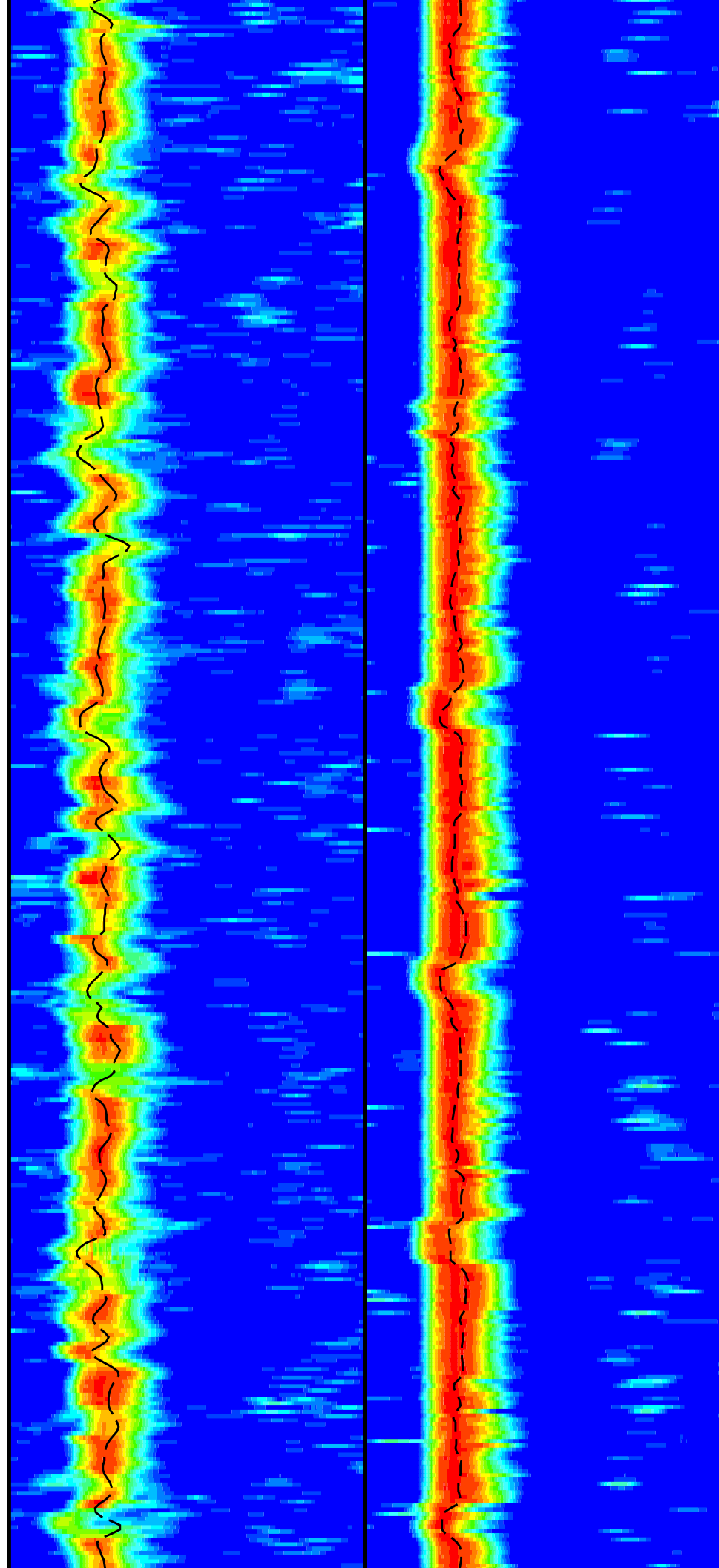
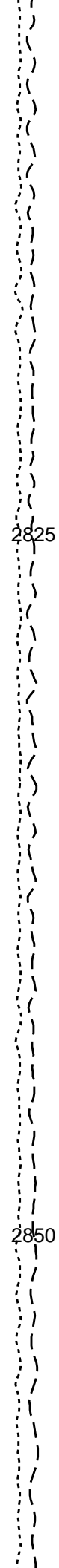
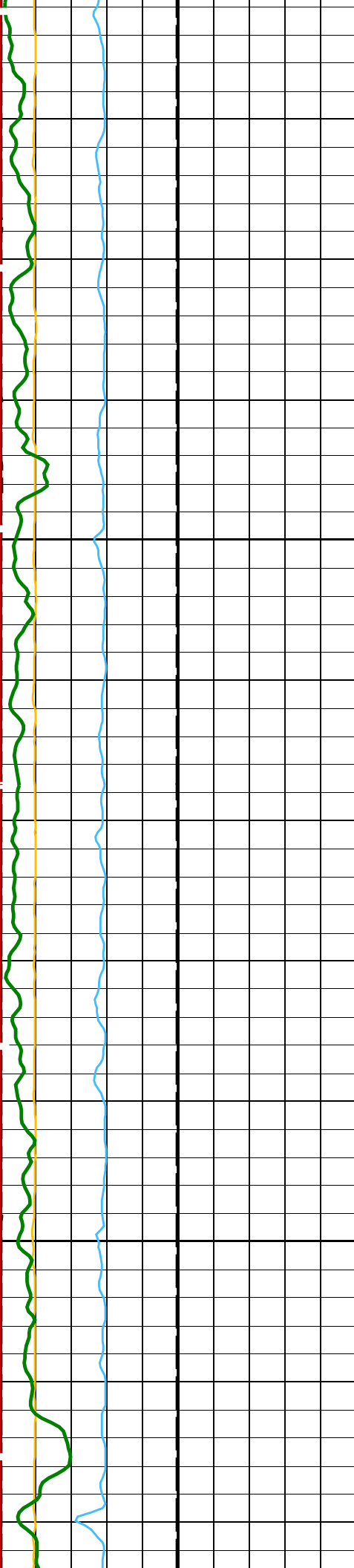
PIP SUMMARY

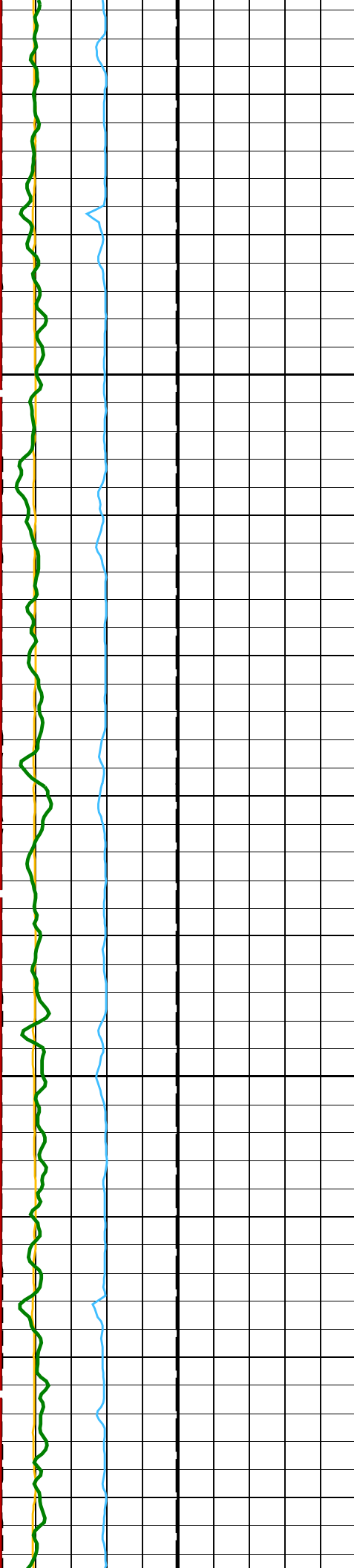
☒ Time Mark Every 60 S



Run 3 Downlog

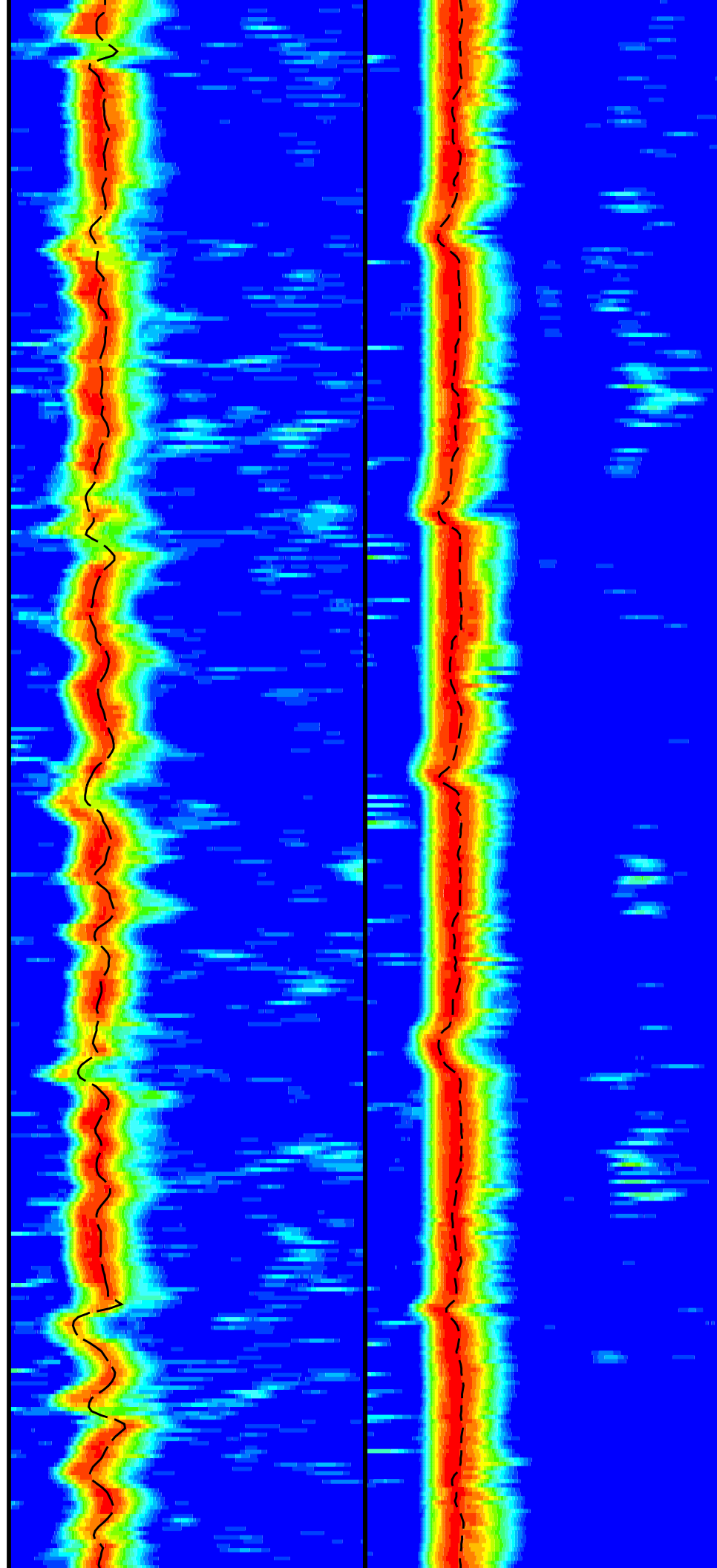


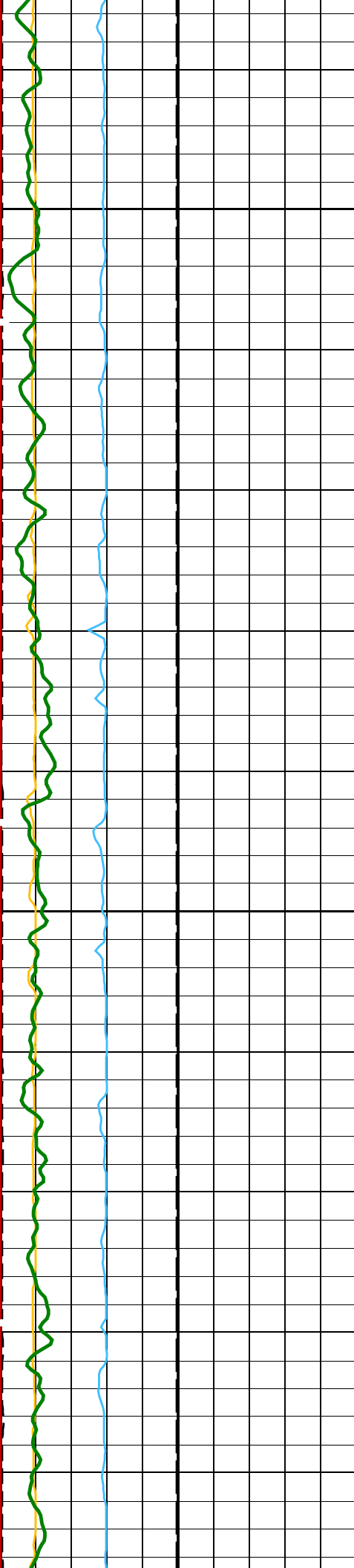




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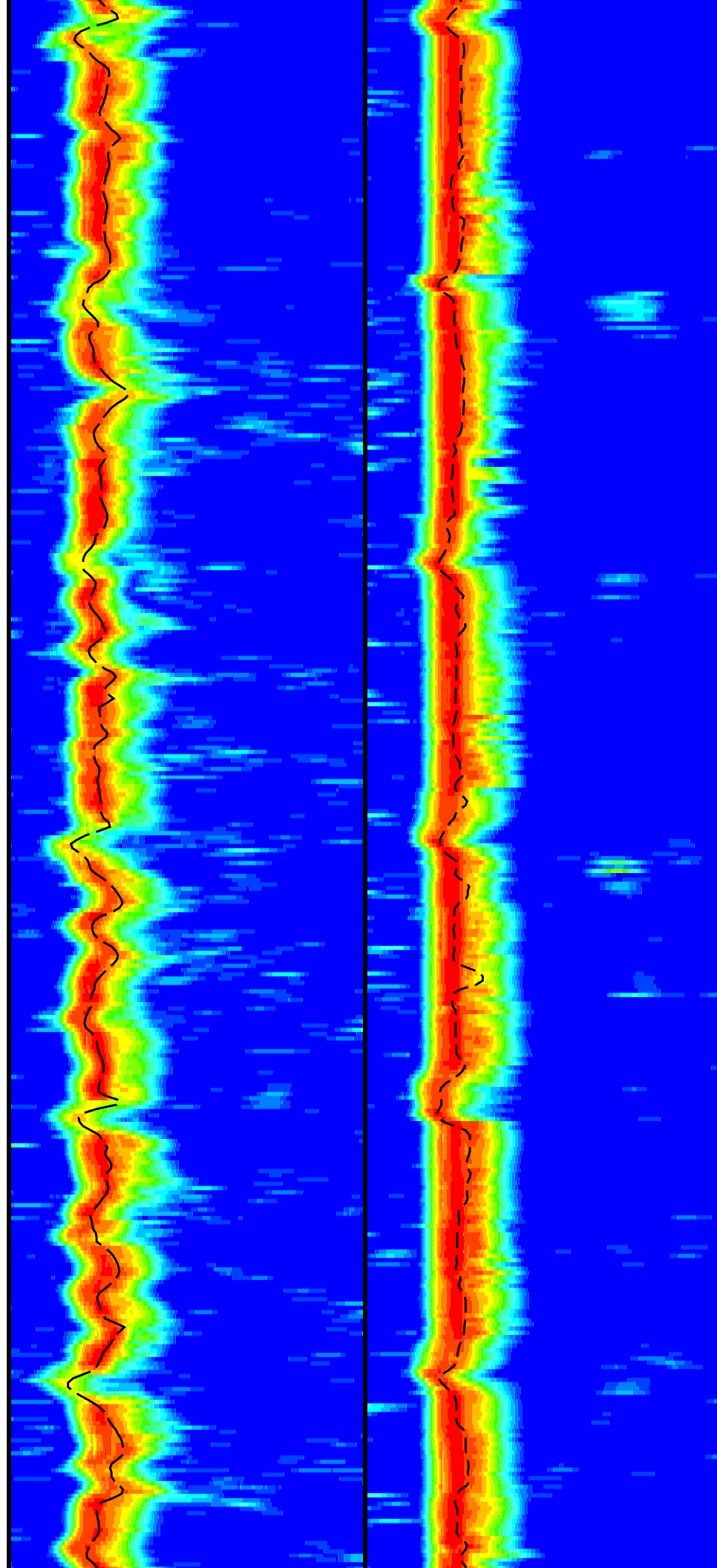
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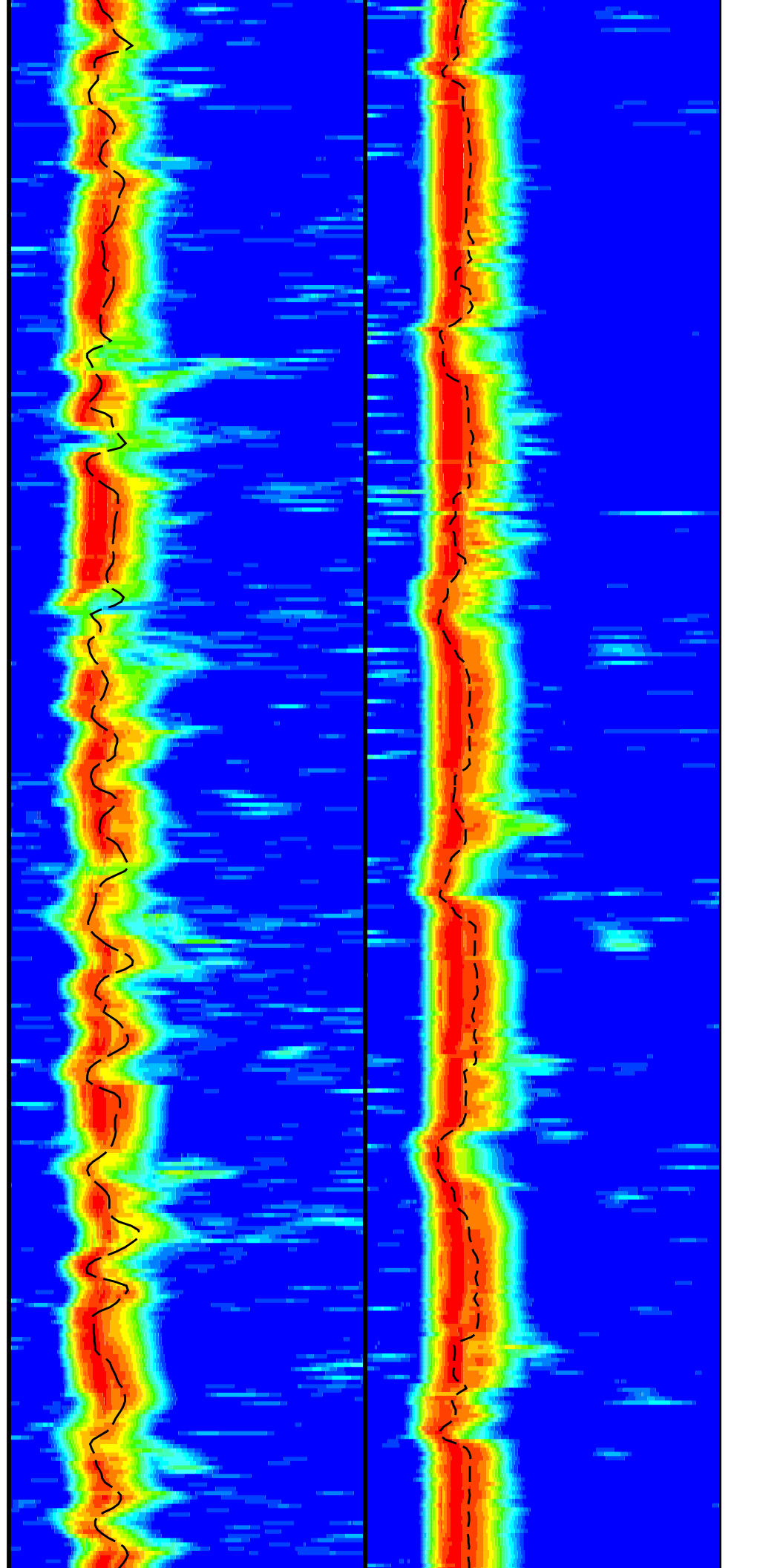
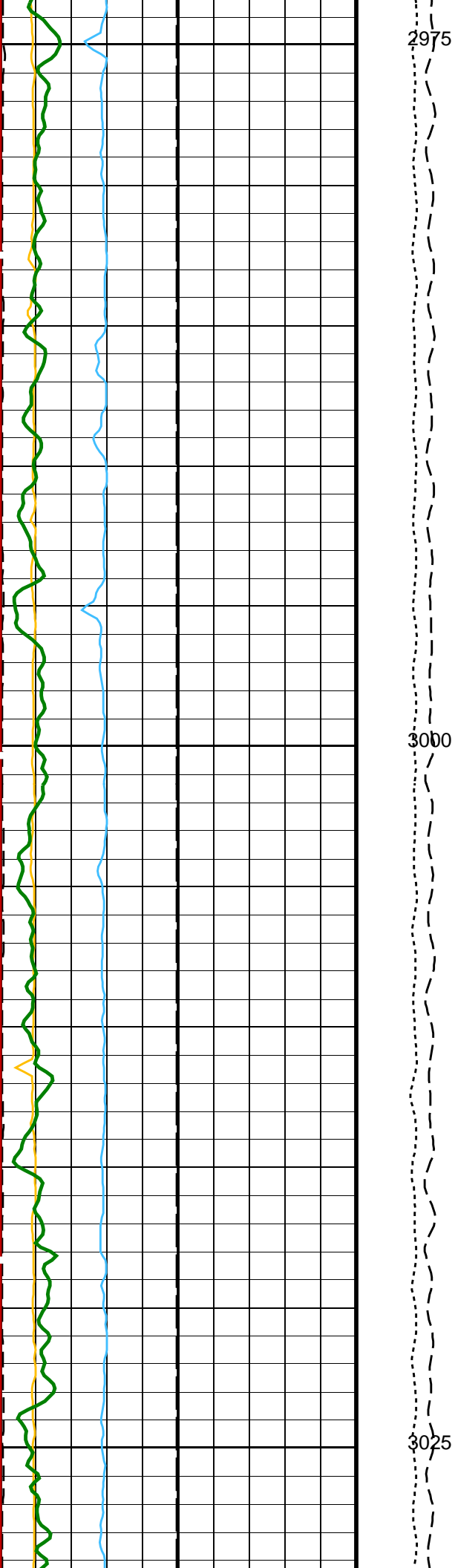


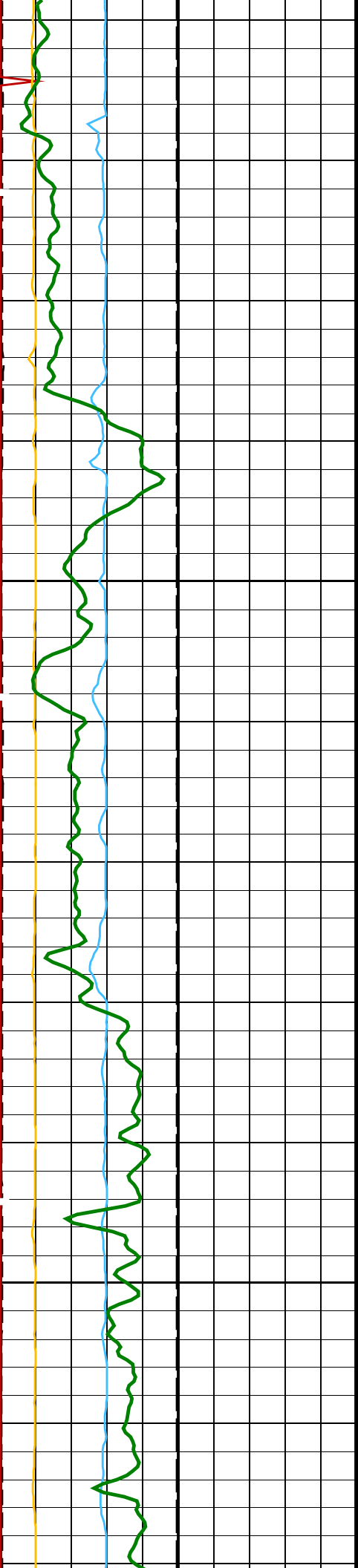


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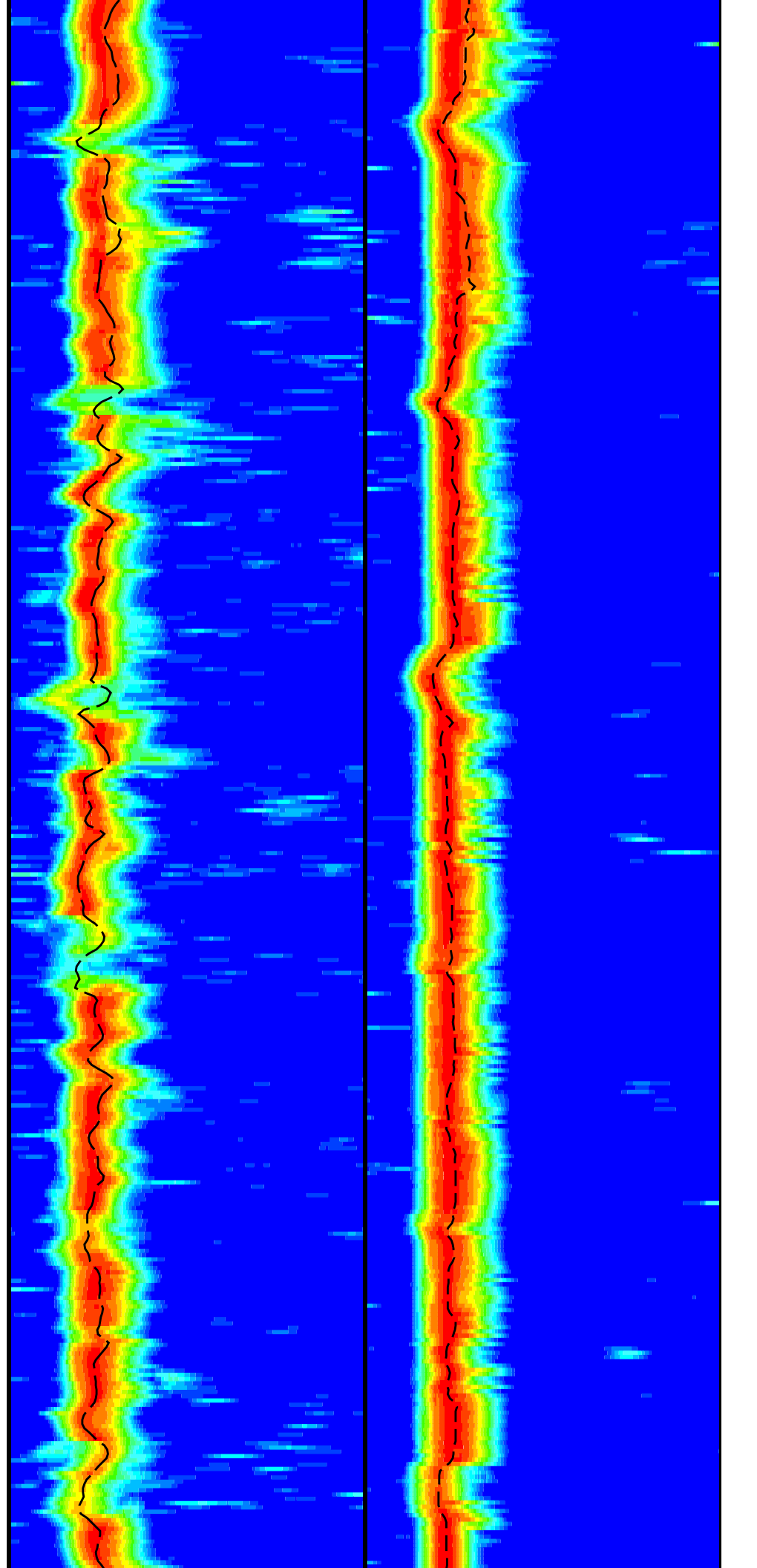


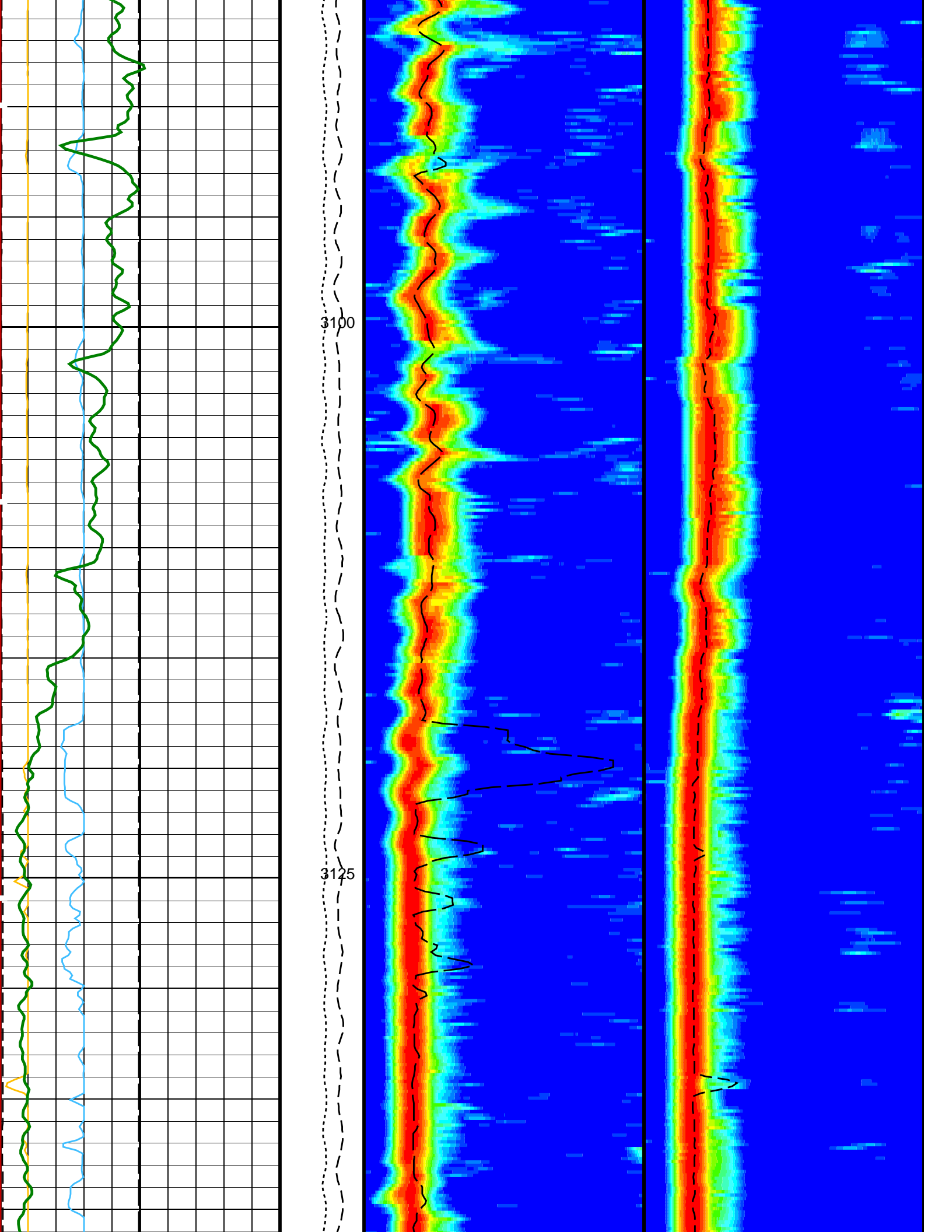


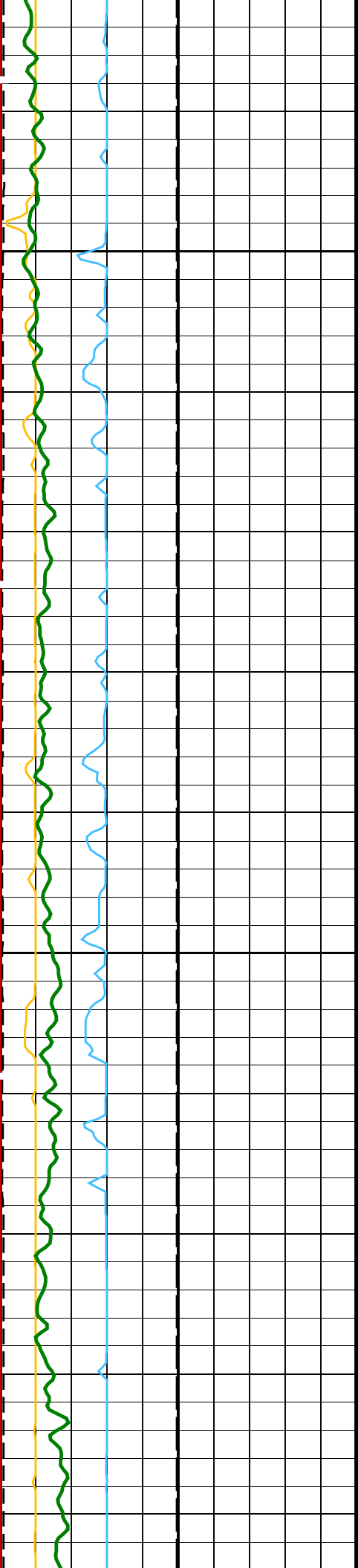


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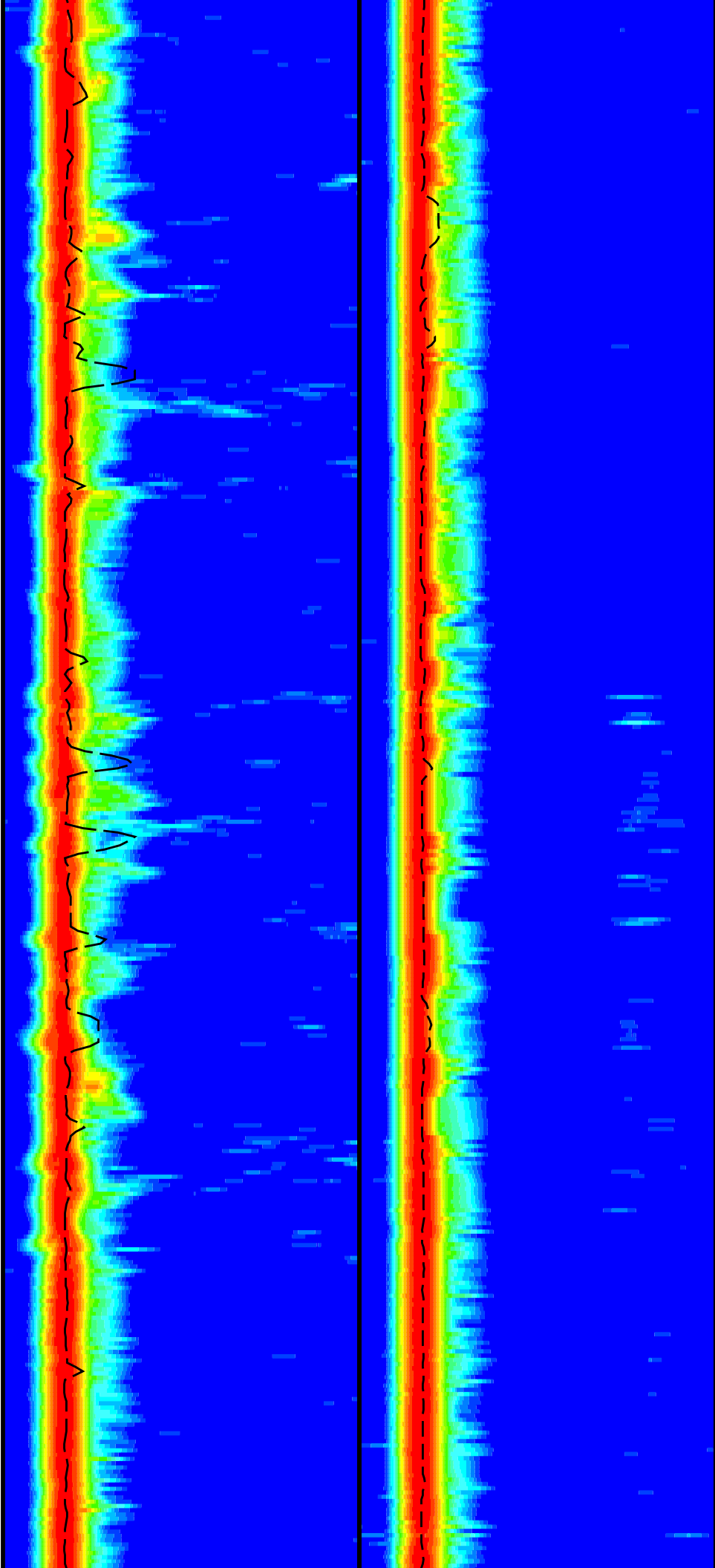


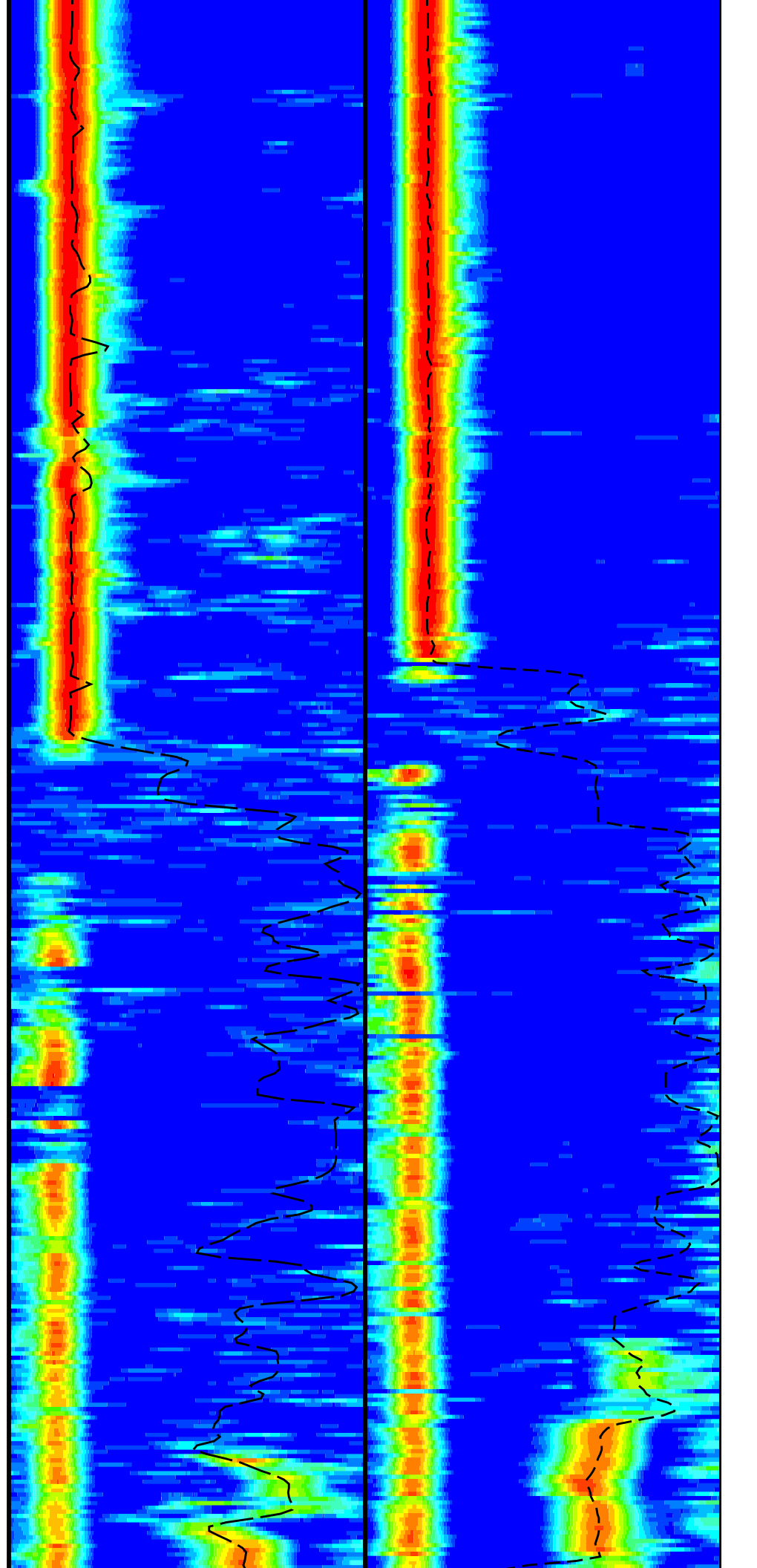
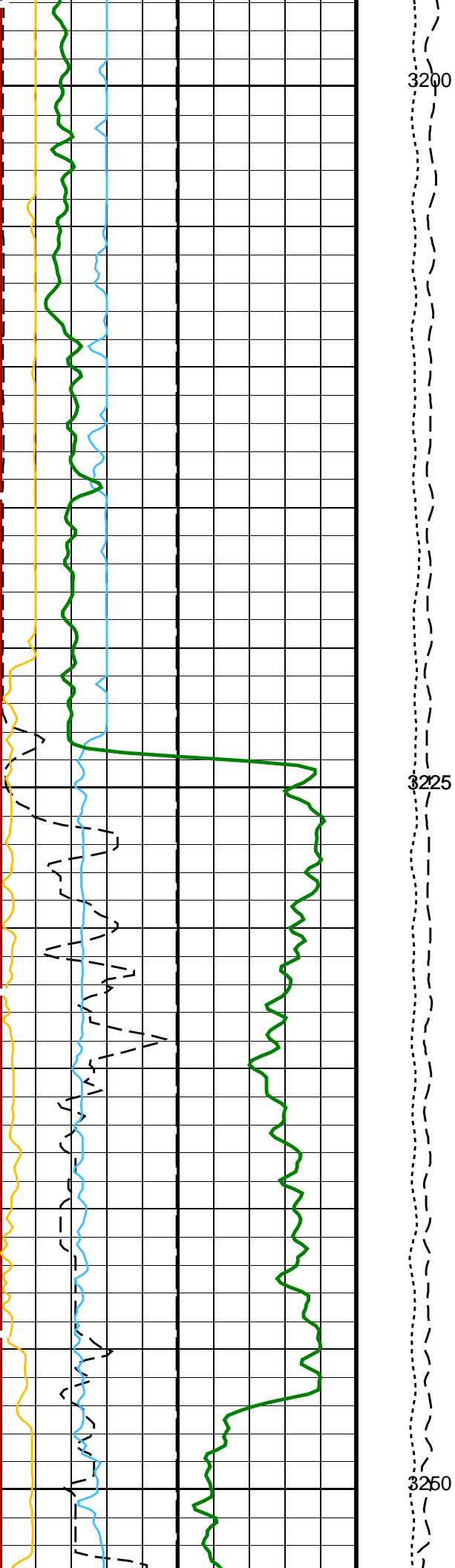


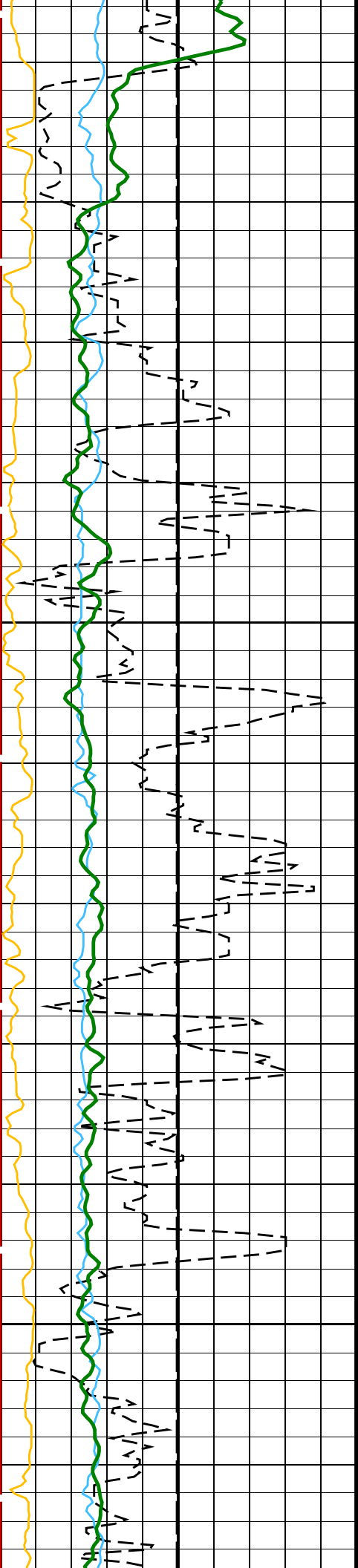


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3175

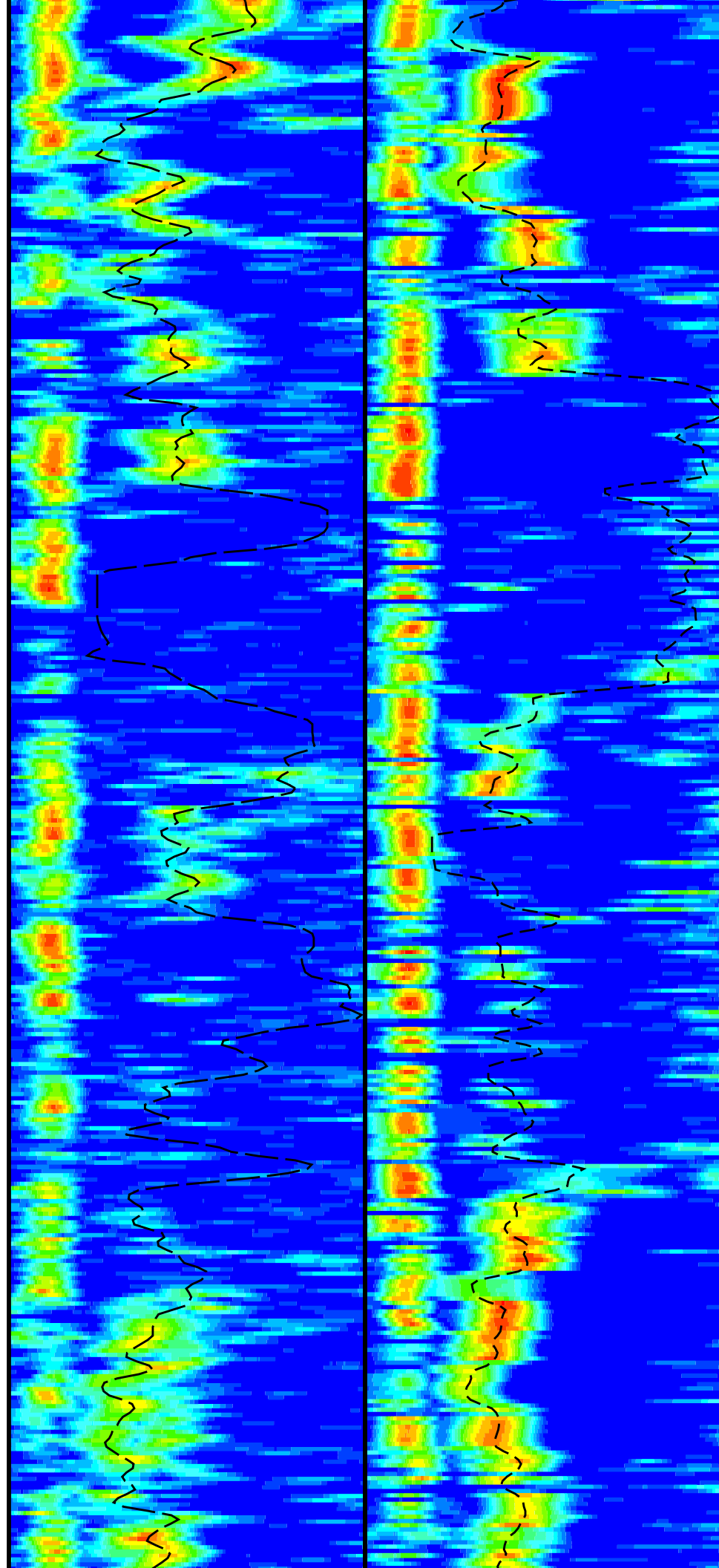


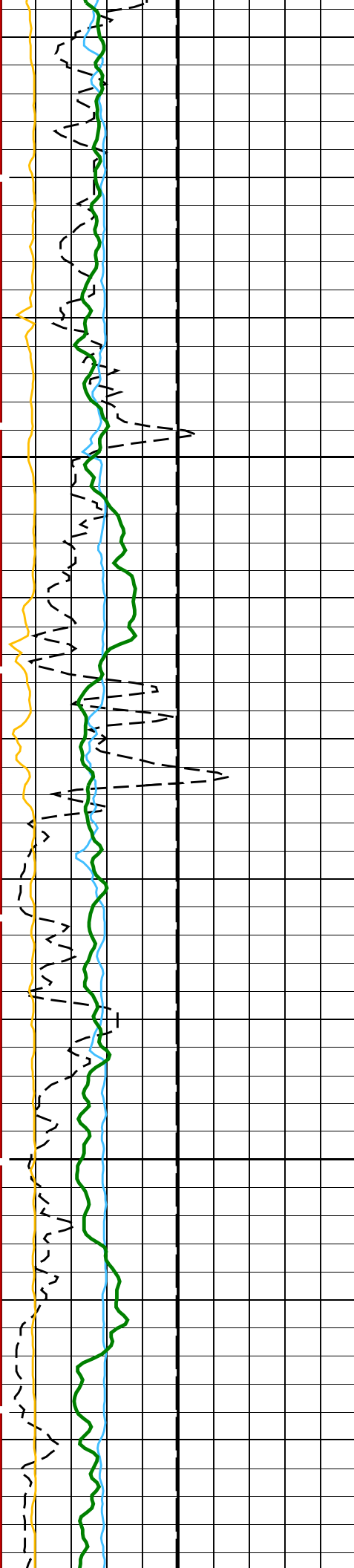




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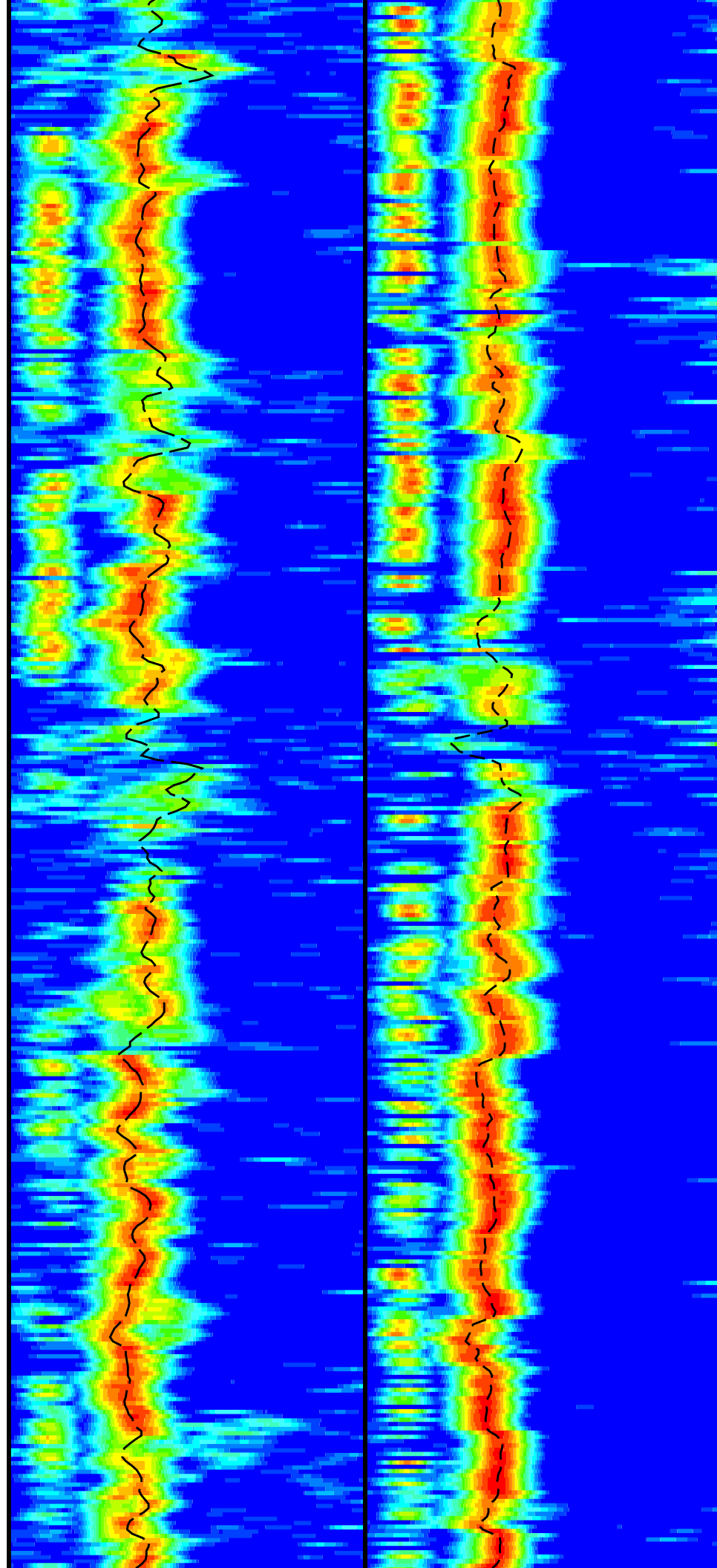
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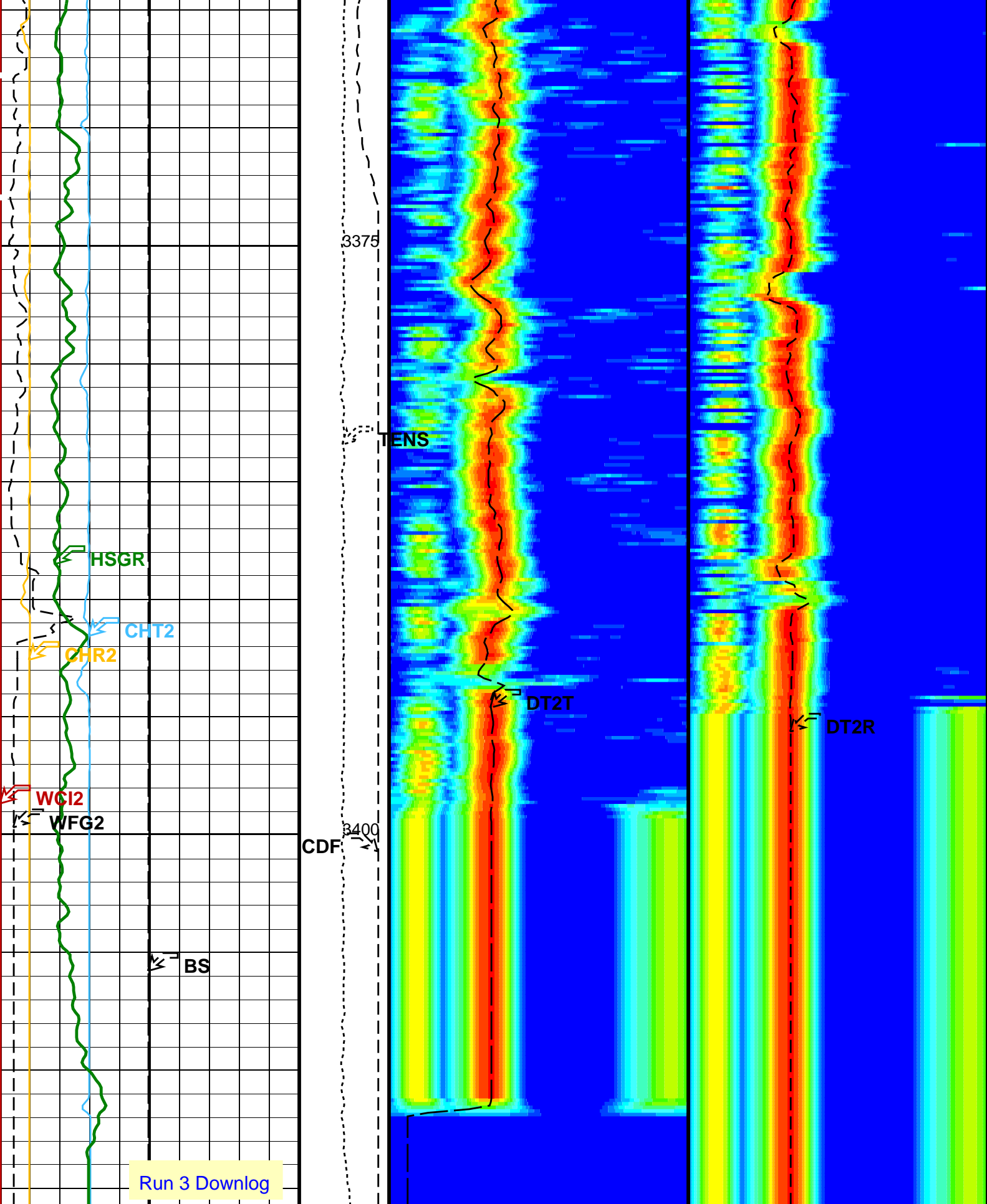




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Bit Size (BS) (IN)	Tension (TENS) (LBF)	Delta-T Shear / TA - Upper Dipole (DT2T) (US/F)	Delta-T Shear / RA - Upper Dipole (DT2R) (US/F)
0	10000	40	40
20	0	1040	1040

SAM2 Waveform Gain (WFG2) (-----)			0	1000	<div>Downhole Force (CDF) (LBF)</div> <div>5000</div> <div>0</div> <div>40</div> <div>1040</div> <div>40</div> <div>1040</div>	<div>Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F)</div>			<div>Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)</div>		
Waveform Data Copy Indicator 2 – Upper Dipole (WCI2)											
0 (-----) 10											
Peak Coherence / RA – Upper Dipole (CHR2)											
0 (-----) 10											
Peak Coherence / TA – Upper Dipole (CHT2)											
-2 (-----) 8											
HNGS Spectroscopy Gamma Ray (HSGR)											
0 (GAPI) 100											

PIP SUMMARY															
Time Mark Every 60 S															

Parameters			
DLIS Name	Description	Value	
HNGS–BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	–0.00106006	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma–Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.962555	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.07716	
HRLT–B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
DSST–B: Dipole Shear Imager – B			
BHS	Borehole Status	OPEN	
DDE2	Digitizing Delay 2	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source – Dipole Shear	USE	
DSHL	Label Slowness Lower Limit – Dipole Shear	40	US/F
DSHU	Label Slowness Upper Limit – Dipole Shear	1040	US/F
DSI2	Digitizer Sample Interval 2	40	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta–T Source for DTCO Channel	PS_COMP	
DWC2	Digitizer Word Count 2	512	
DWCX	Digitizer Word Count X	512	
GCSE	Generalized Caliper Selection	BS	
NWI2	Number Waveform Items 2	8	
NWIX	Number Waveform Items X	0	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM2	DSST Sonic Acquisition Mode 2 – Upper Dipole Mode	ODD	

SAM2	DSST Sonic Acquisition Mode 2 – Upper Dipole Mode	OFF	
SAMX	DSST Sonic Acquisition Mode X – Both Dipoles or Monopole Mode for Expert	255	
SAS2	STC Sonic Array Status – Upper Dipole	3000	US
SBO2	STC Search Band Offset – Upper Dipole	8000	US
SBW2	STC Search Bandwidth – Upper Dipole	SELECTABLE	
SFC2	STC Formation Character – Upper Dipole	B1–2K	
SFM2	STC Filter – Upper Dipole	40	US/F
SLL2	STC Slowness Lower Limit – Upper Dipole	4	US/F
SST2	STC Slowness Step – Upper Dipole	WF_SAM2	
SSW2	STC Source Waveform – Upper Dipole	1040	US/F
SUL2	STC Slowness Upper Limit – Upper Dipole	40	US/F
SWD2	STC Slowness Width – Upper Dipole	0	US
TBF2	STC Time for Baseline Fill – Upper Dipole	600	US
TLL2	STC Time Lower Limit – Upper Dipole	200	US
TST2	STC Time Step – Upper Dipole	18440	US
TUL2	STC Time Upper Limit – Upper Dipole	2000	US
TWD2	STC Time Width – Upper Dipole	1600	US
TWI2	STC Integration Time Window – Upper Dipole	0	
TWSX	Transmitter Waveform Select X	162	IN
UTXG	Upper Dipole Transmitter Geometry	W1	
WFM2	Waveform Mode 2		
BHS	EDTC–B: Enhanced DTS Cartridge	OPEN	
GCSE	Borehole Status	BS	
	Generalized Caliper Selection		
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSST_UPPER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 25–Nov–2017 18:50

OP System Version: 19C0–187

HNGC–B	19C0–187	HNGS–BA	19C0–187
HRLT–B	19C0–187	DSST–B	19C0–187
HLDS	19C0–187	LDSC–B	19C0–187
EDTC–B	SKK–5169–EDTCB		

Input DLIS Files

DEFAULT	Flip_NGS_HRLA_DSI_057LUP	PRODUCER	25–Nov–2017 17:16	3415.7 M	2731.8 M
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Output DLIS Files

DEFAULT	NGS_HRLA_DSI_LDL_062PUP	FN:83	PRODUCER	25–Nov–2017 18:50
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Company: International Ocean Discovery Program Well: Expedition 369, Site U1513E

Input DLIS Files

DEFAULT	Flip_NGS_HRLA_DSI_057LUP	PRODUCER	25–Nov–2017 17:16	3415.7 M	2731.8 M
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Output DLIS Files

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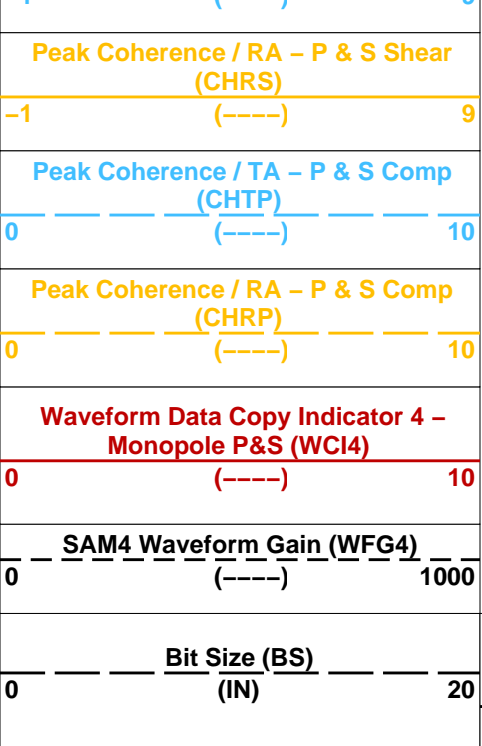
OP System Version: 19C0–187

HNGC–B	19C0–187	HNGS–BA	19C0–187
HRLT–B	19C0–187	DSST–B	19C0–187
HLDS	19C0–187	LDSC–B	19C0–187
EDTC–B	SKK–5169–EDTCB		

PIP SUMMARY

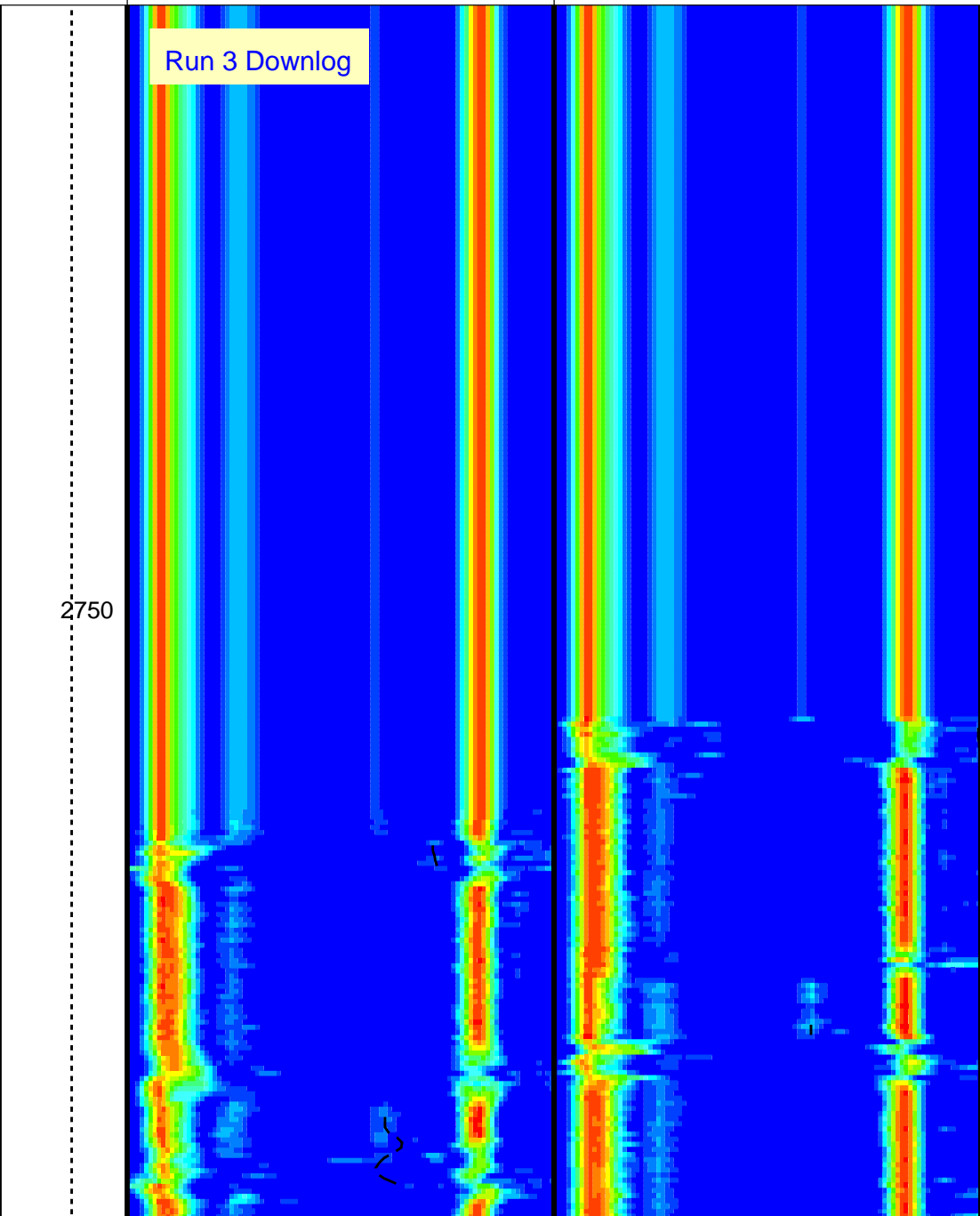
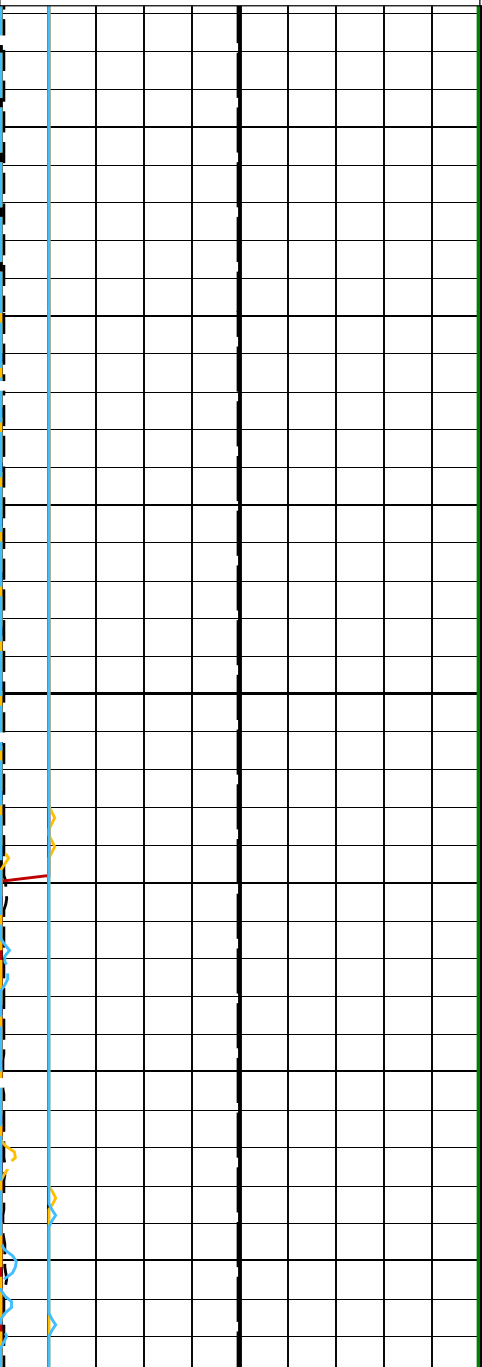
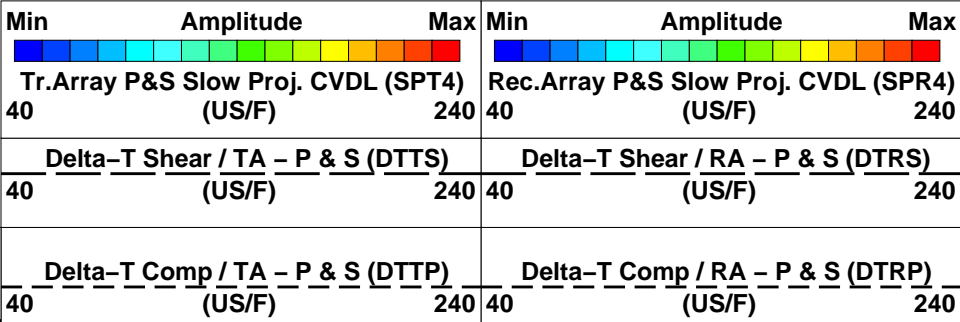
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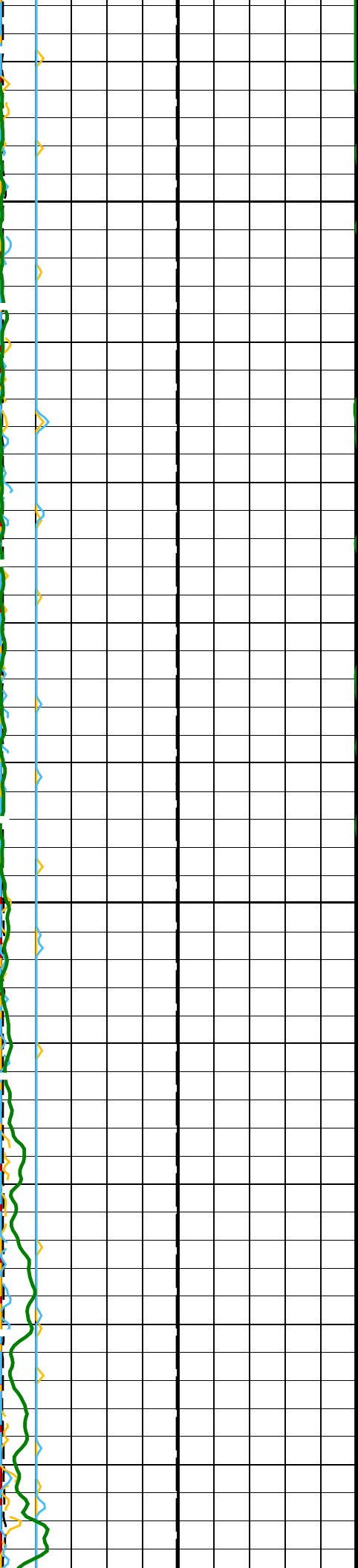
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA – P & S Shear (CHTS)		
–1	(-----)	9



Tension (TENS) (LBF)

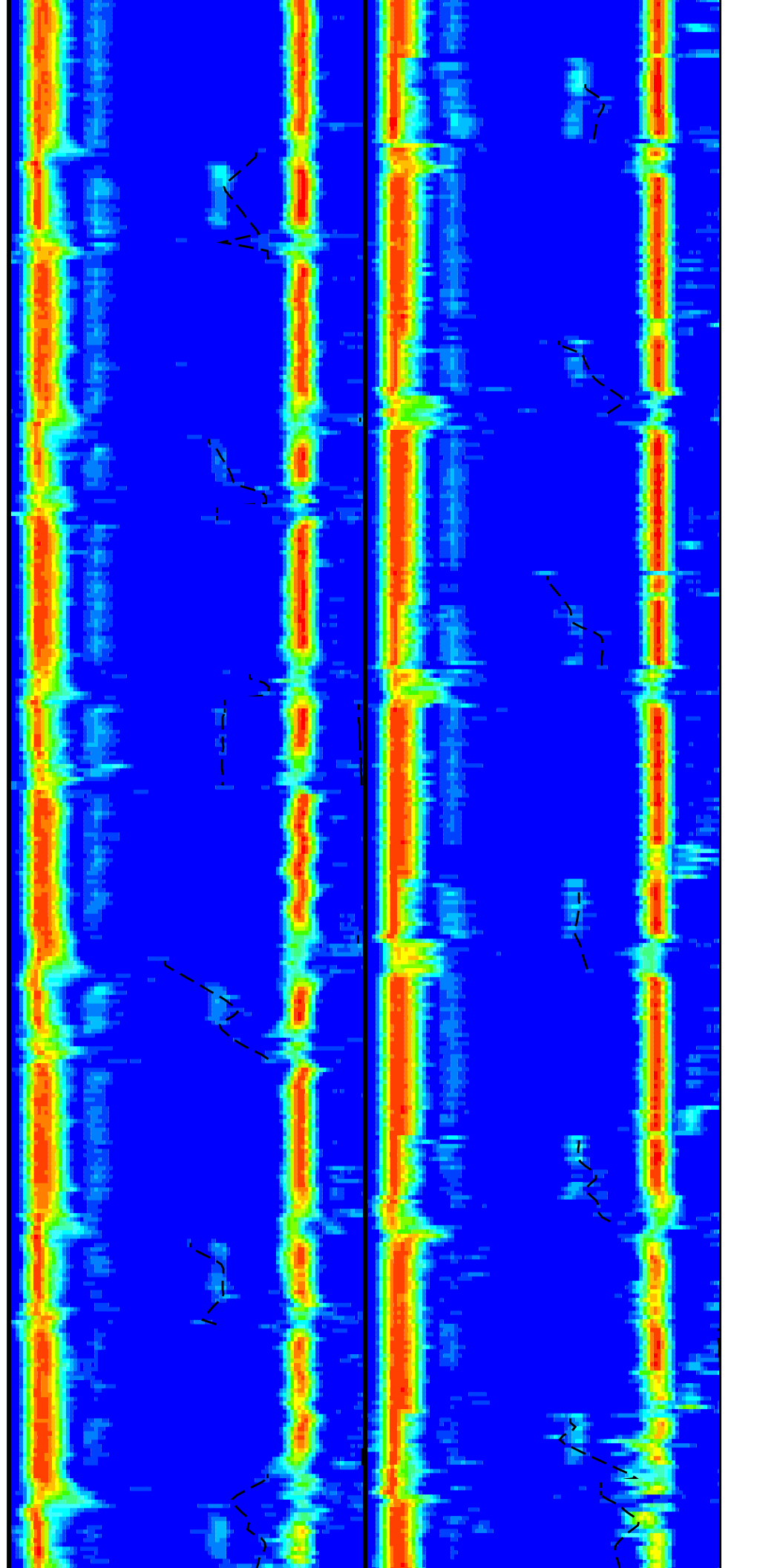
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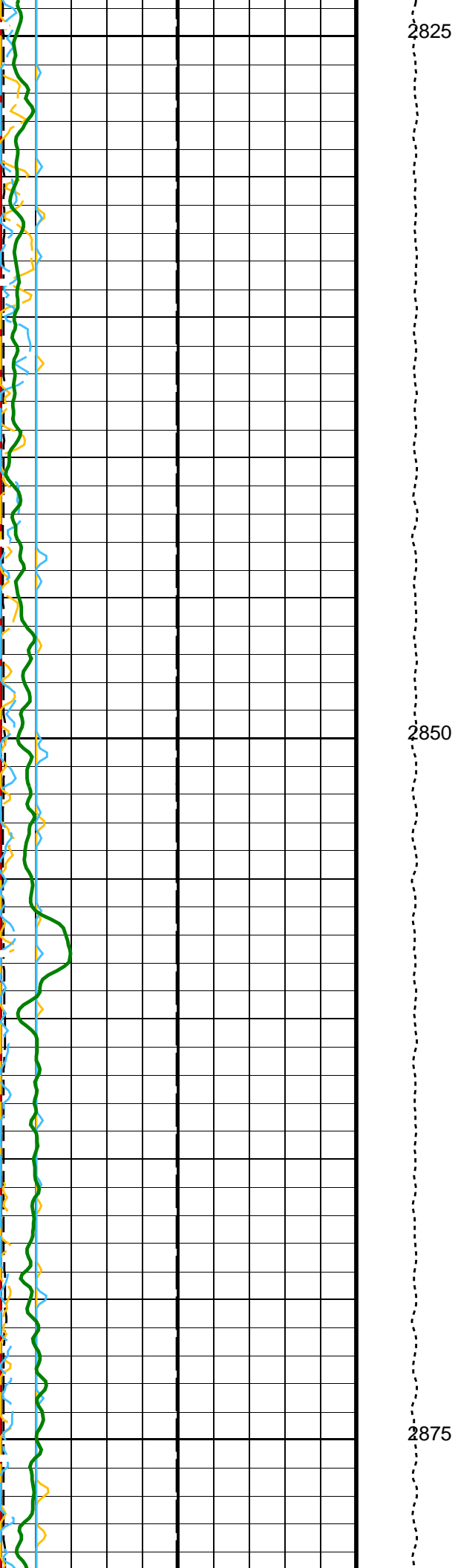




2775

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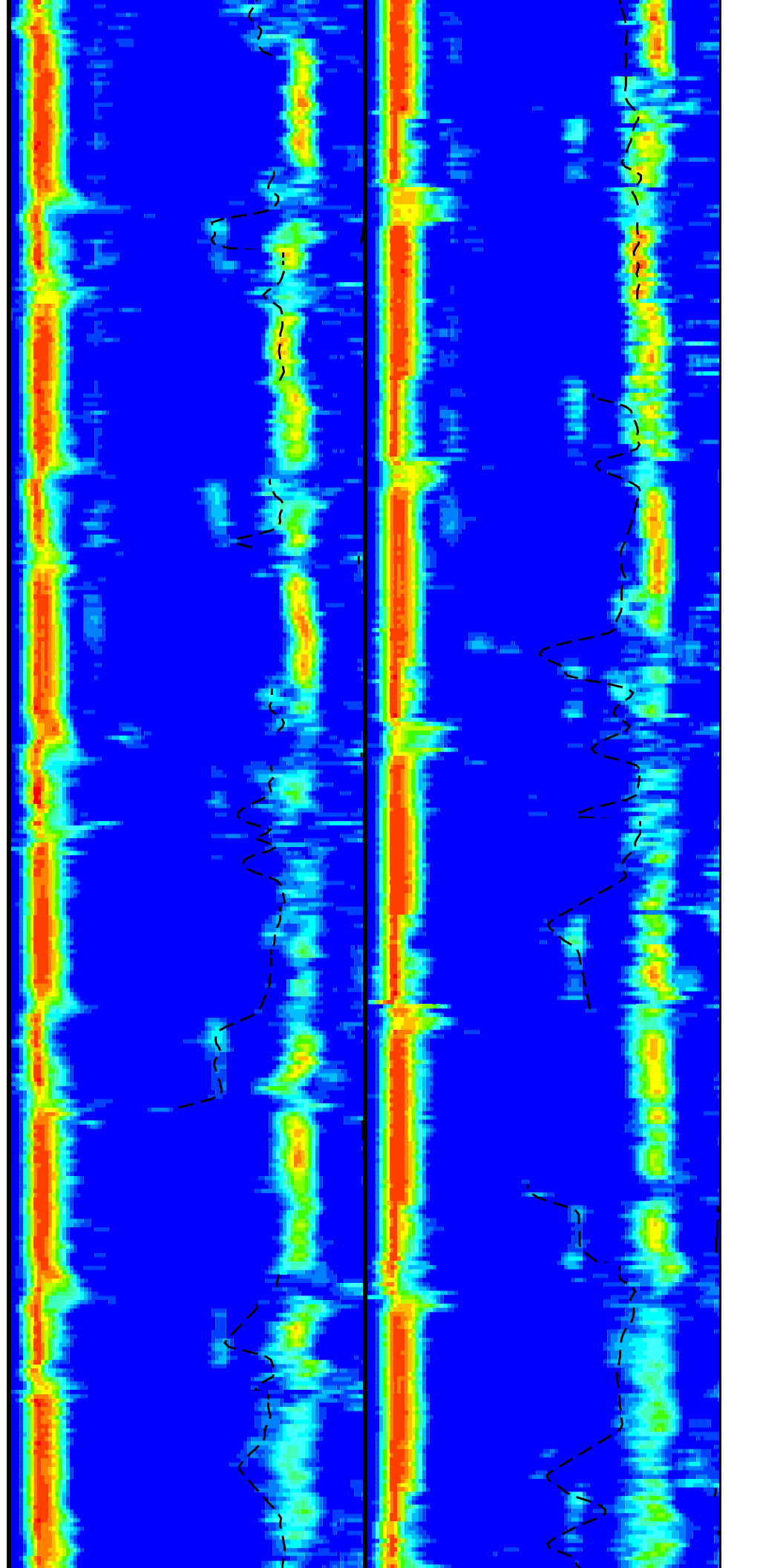


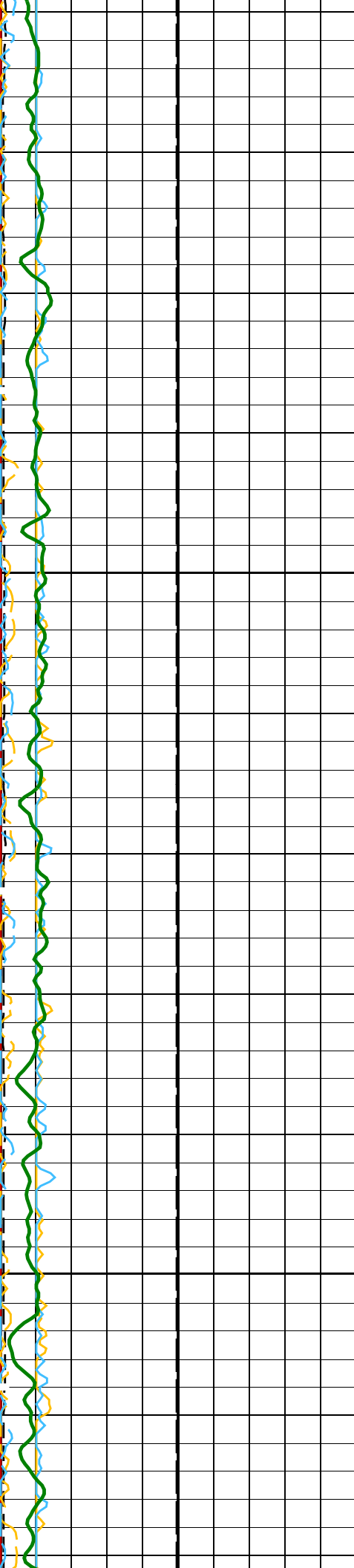


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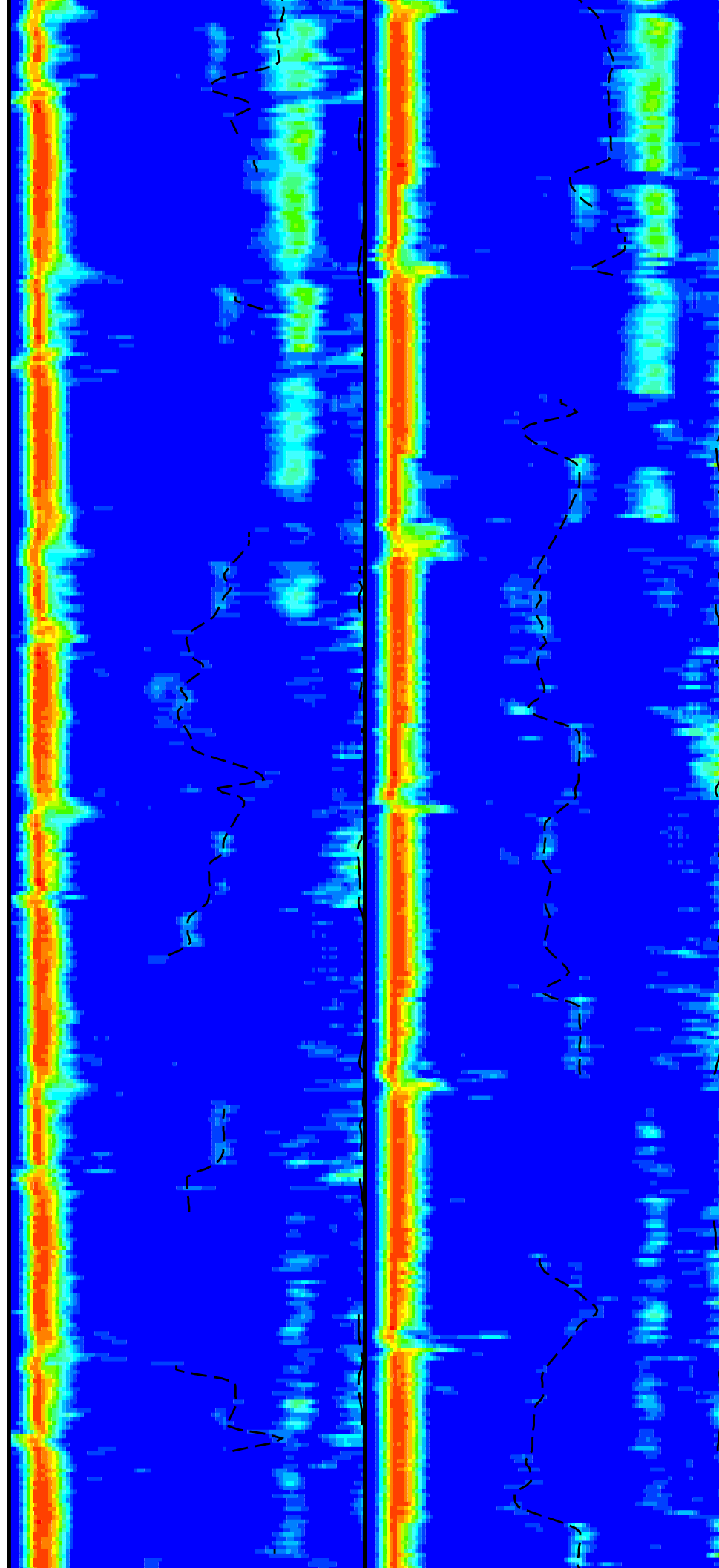
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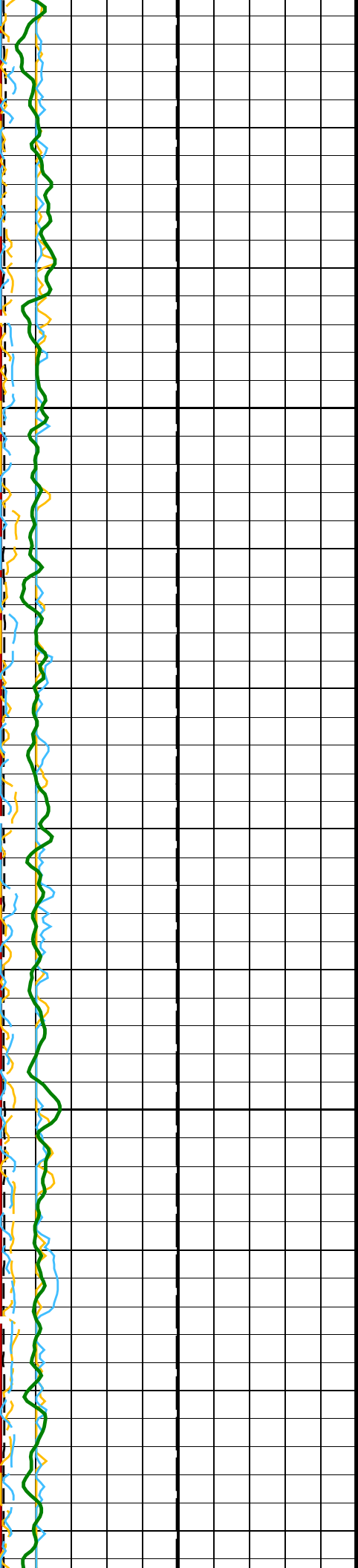




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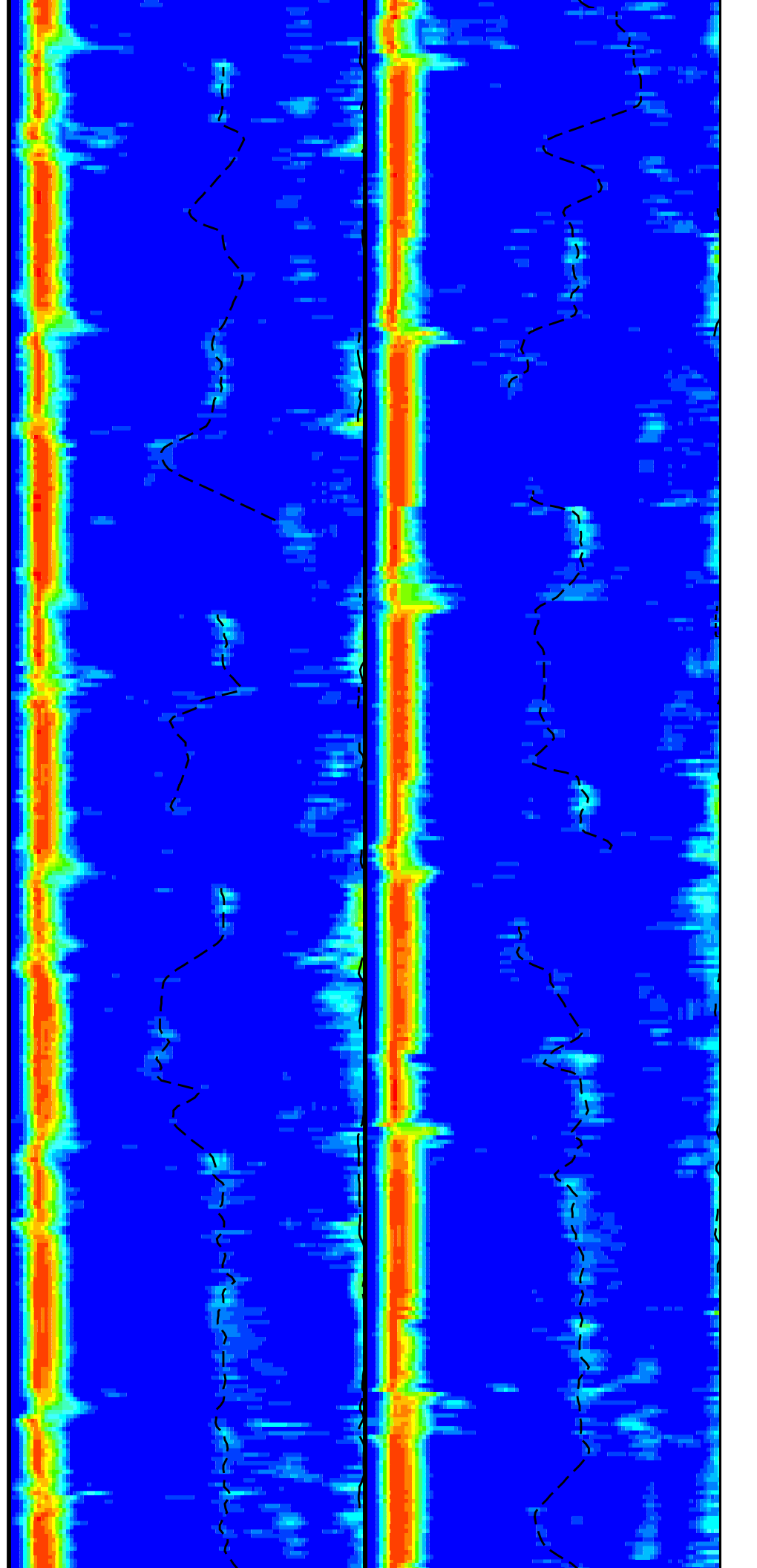
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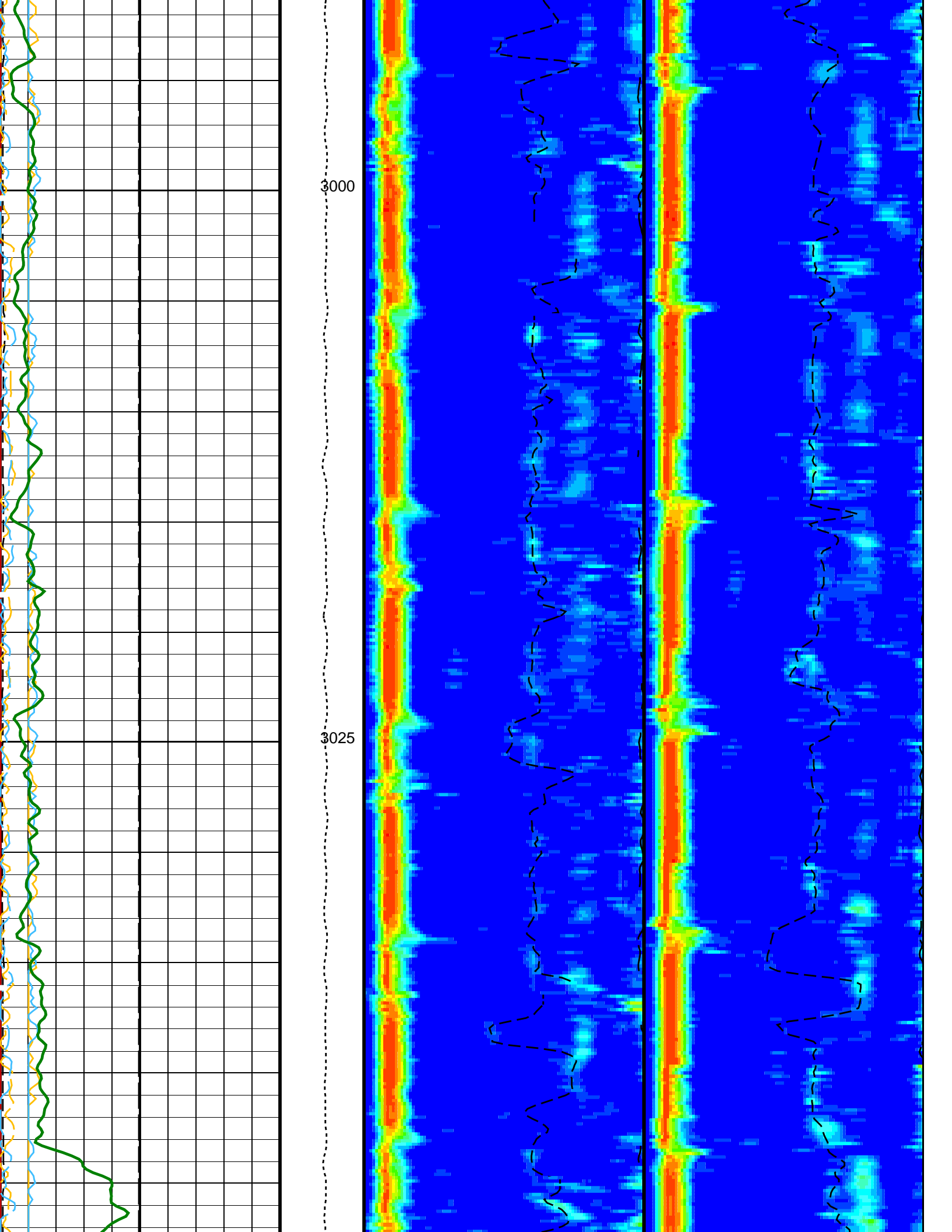


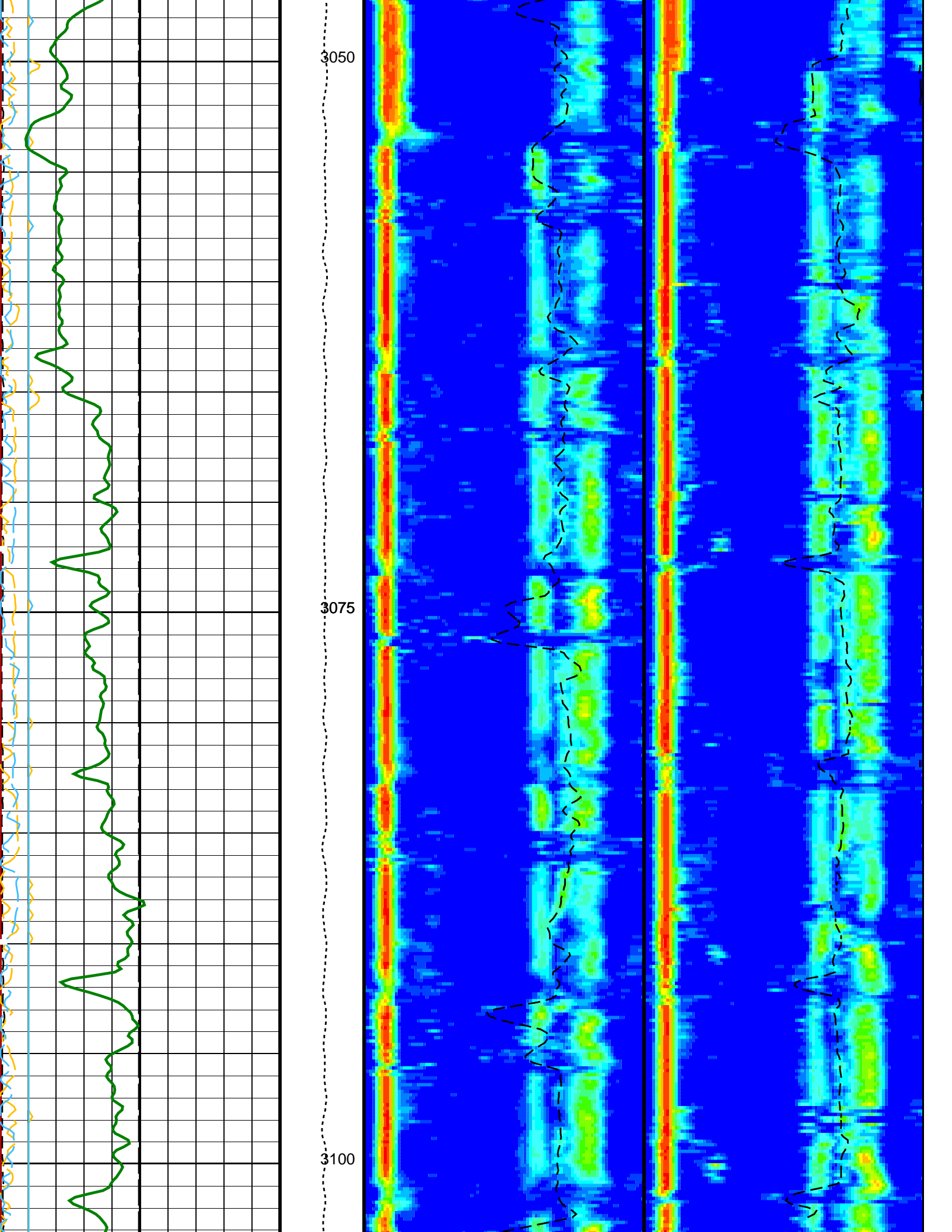


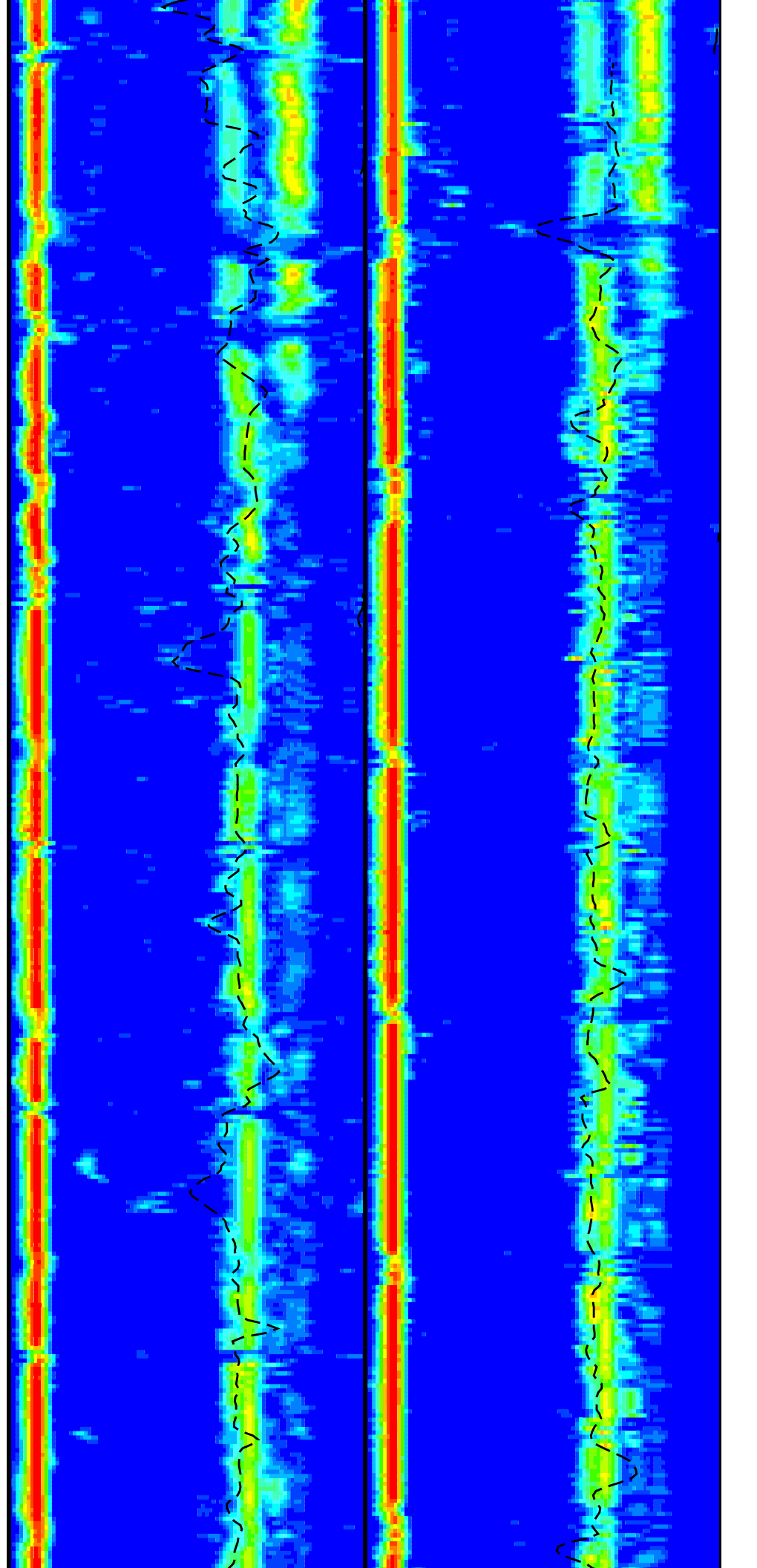
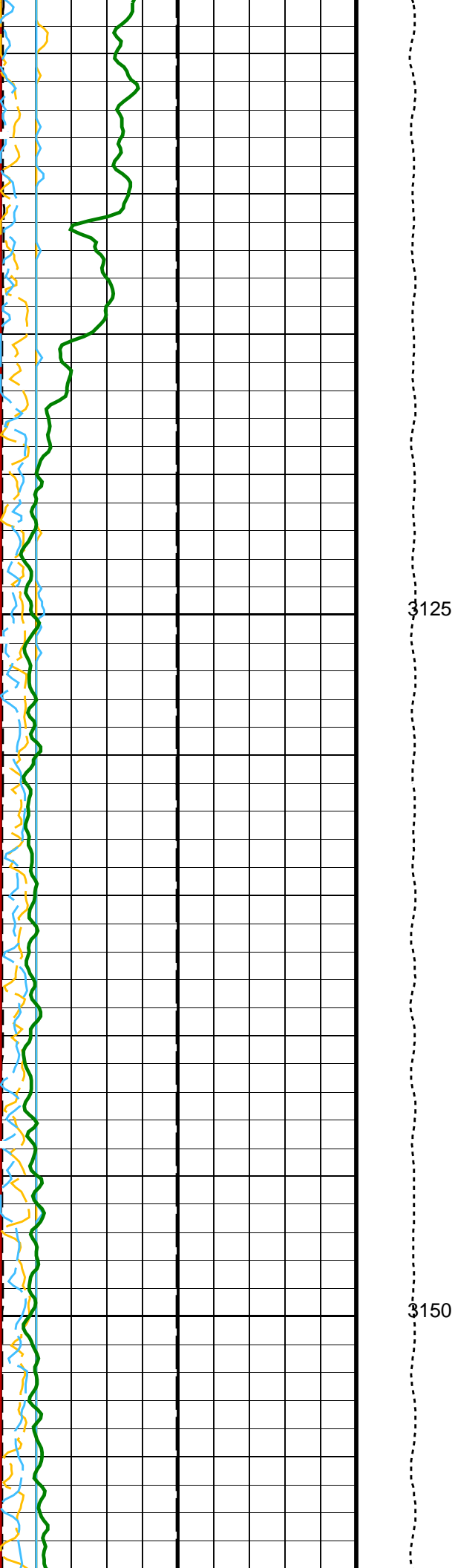
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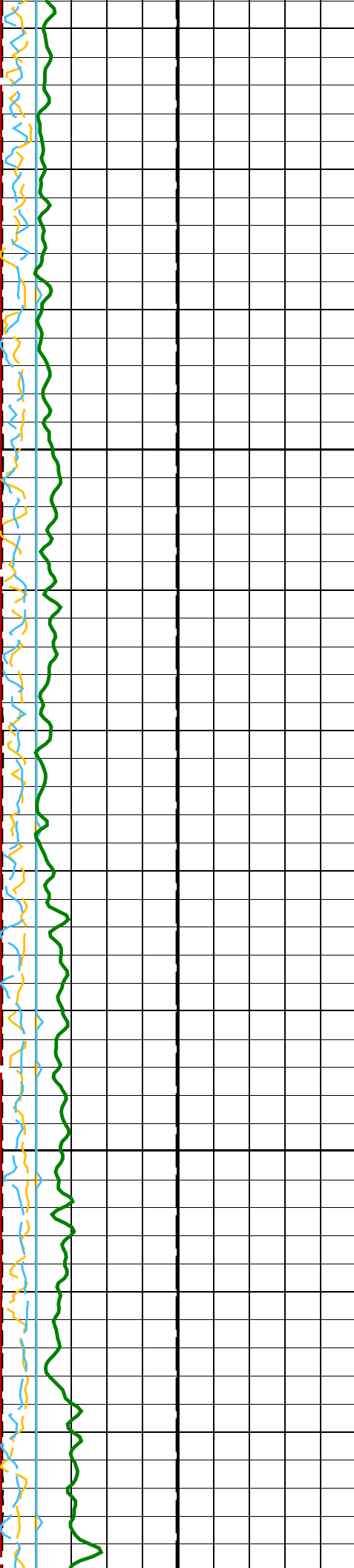
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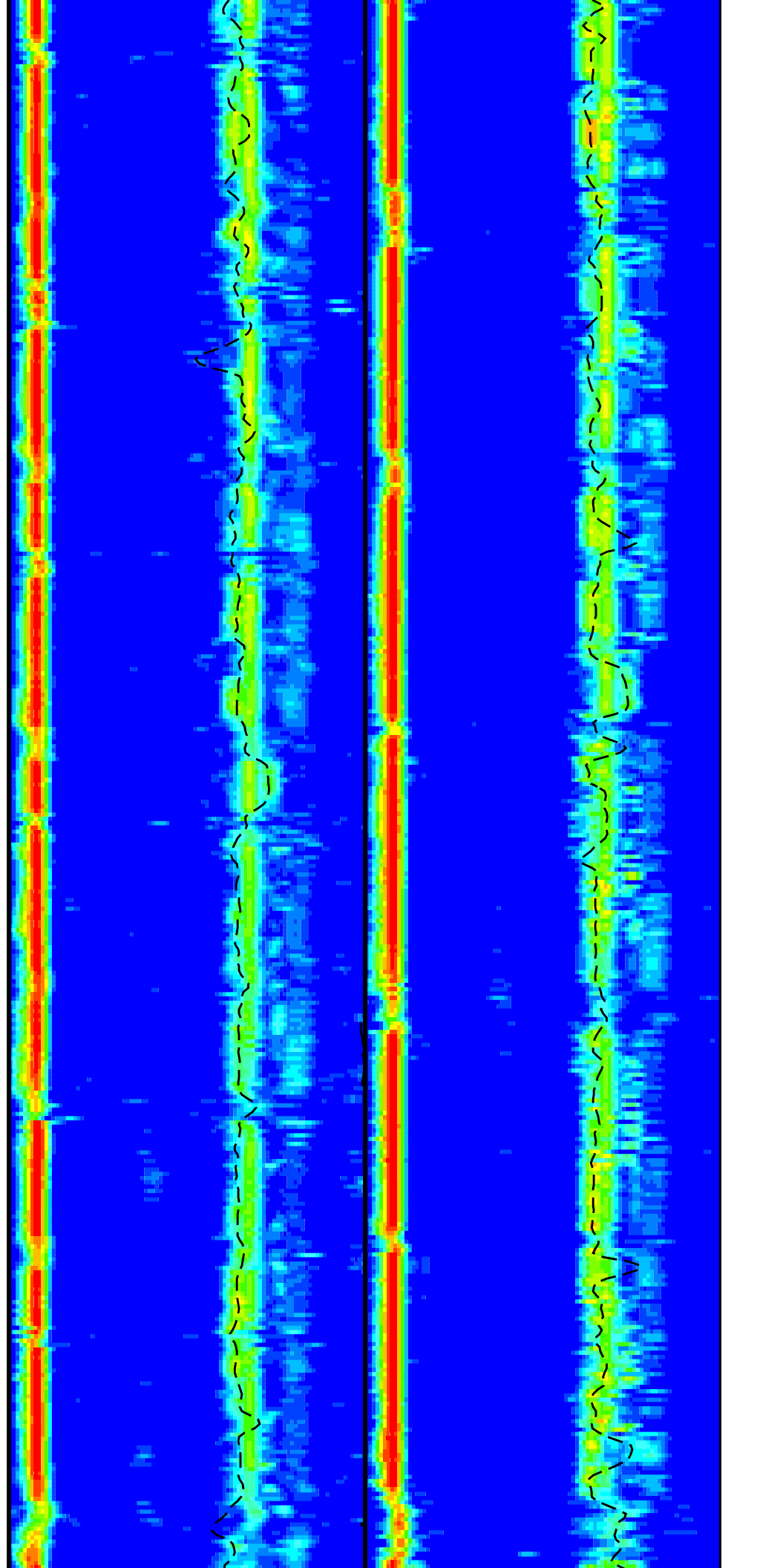


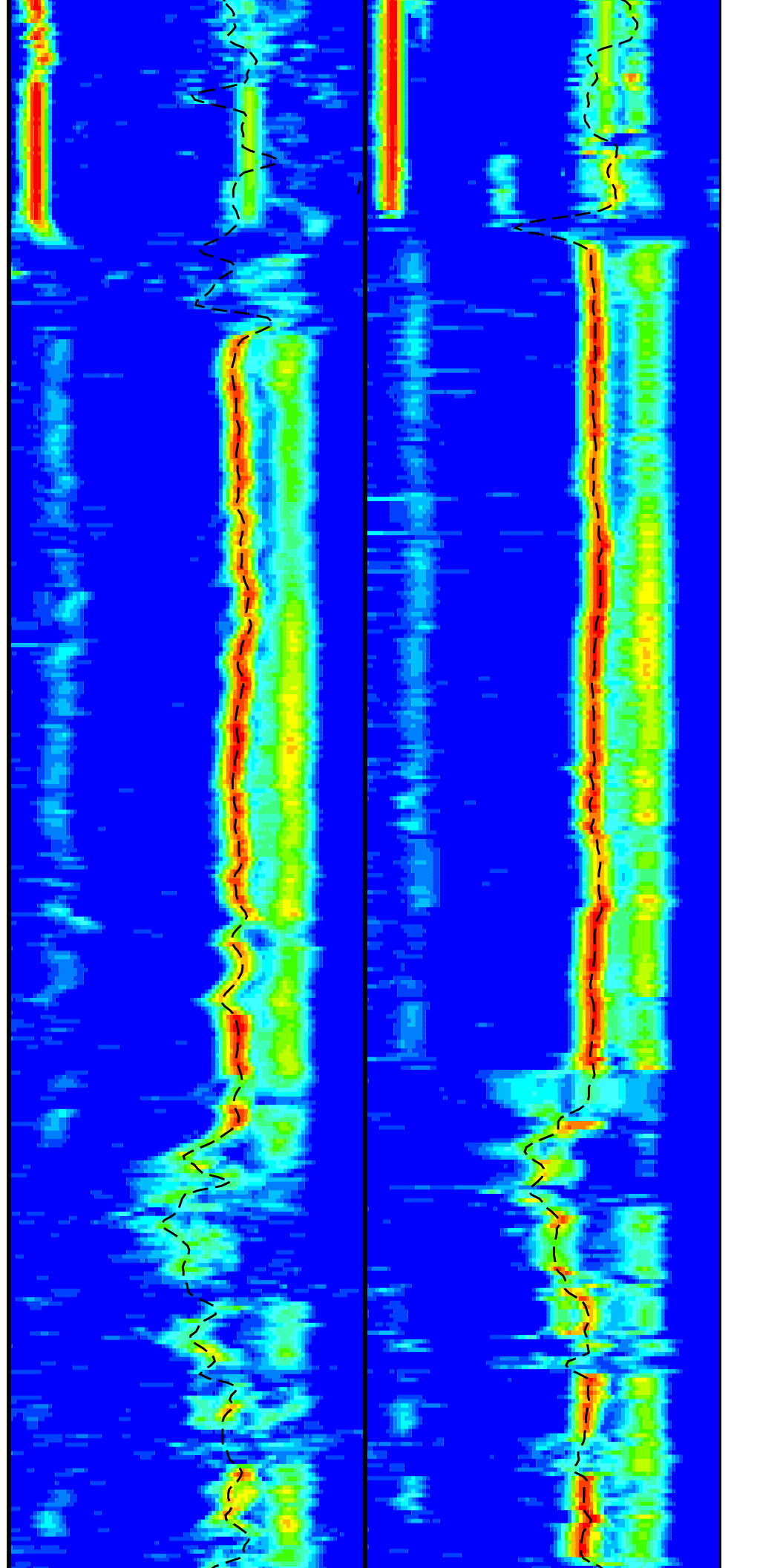
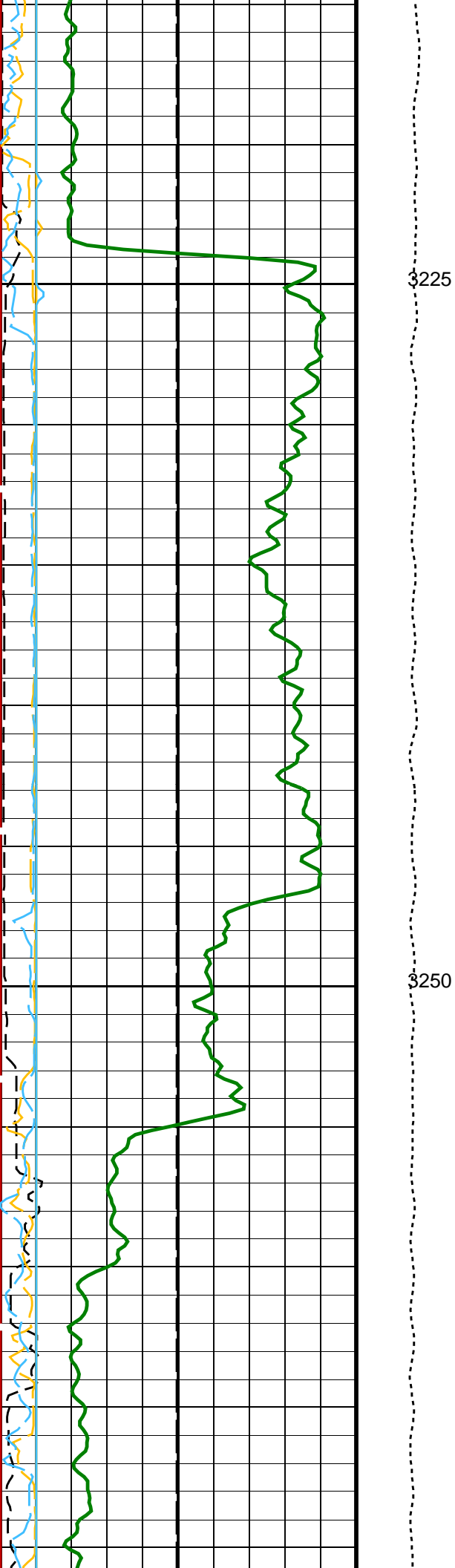


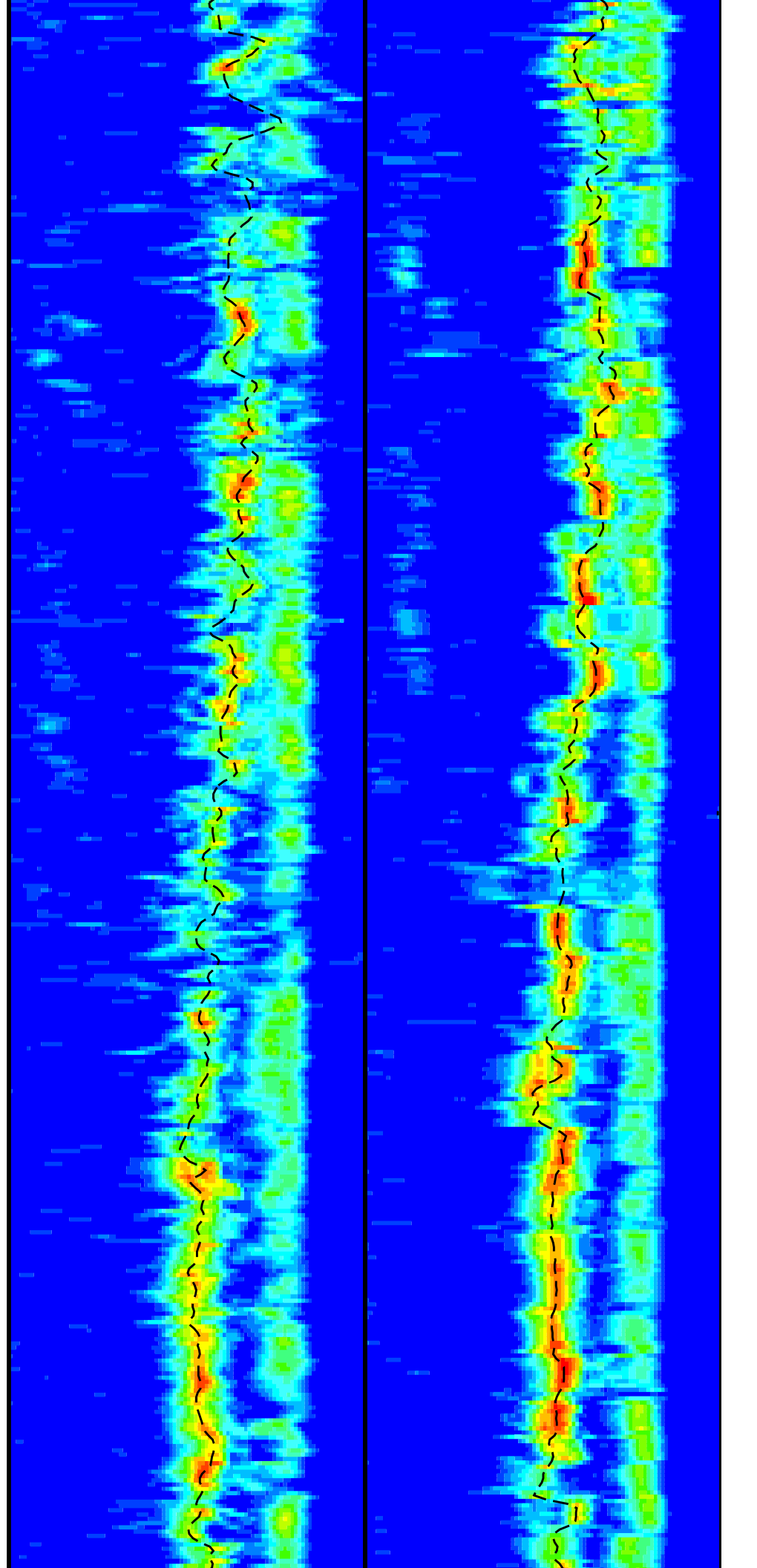
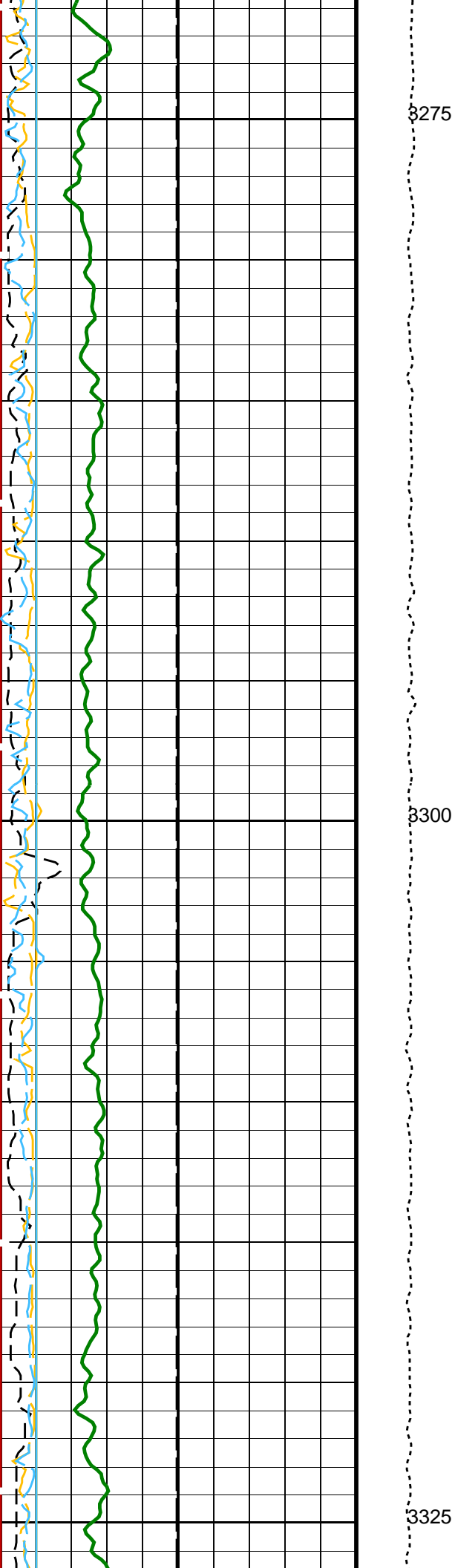


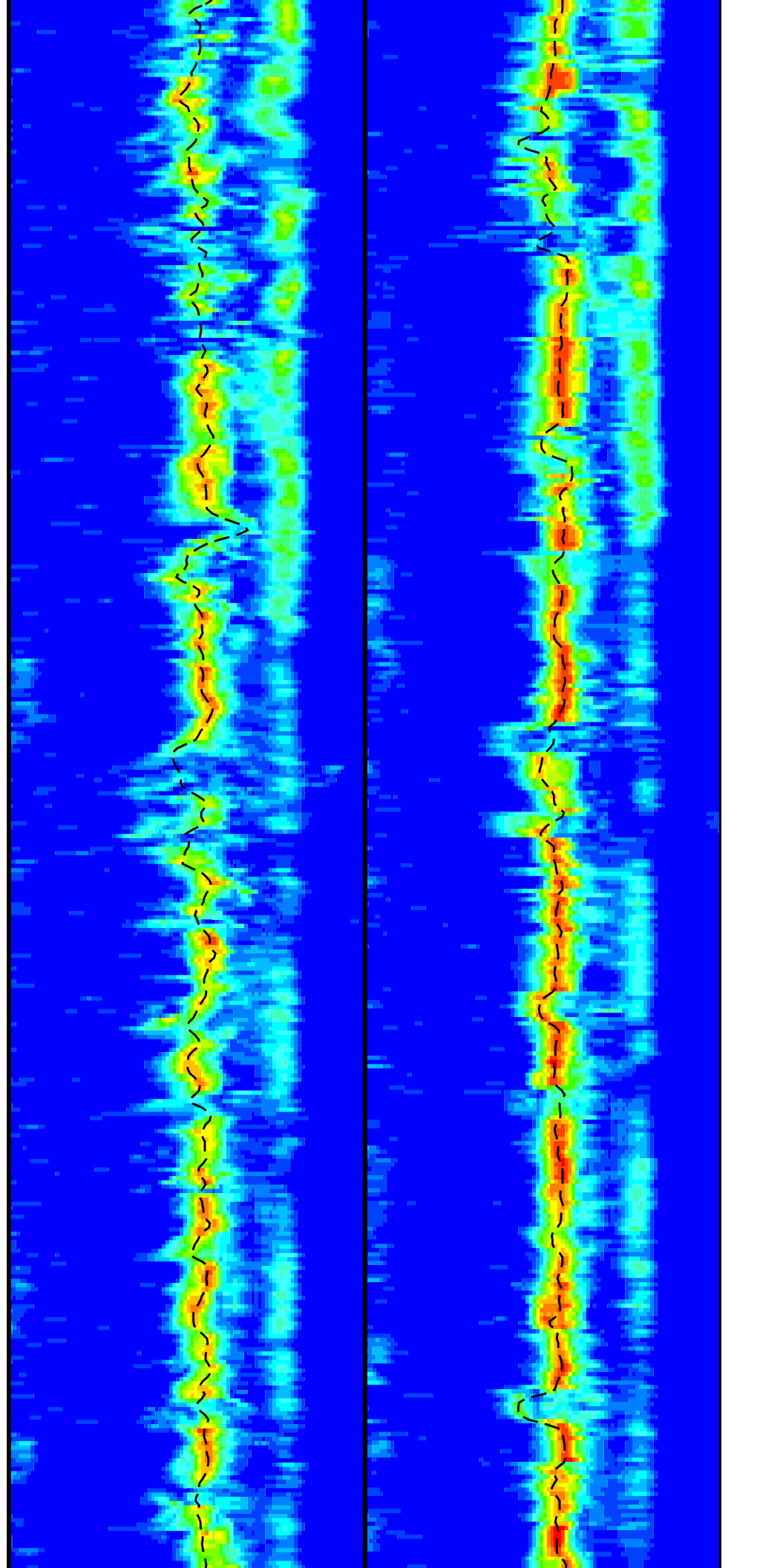
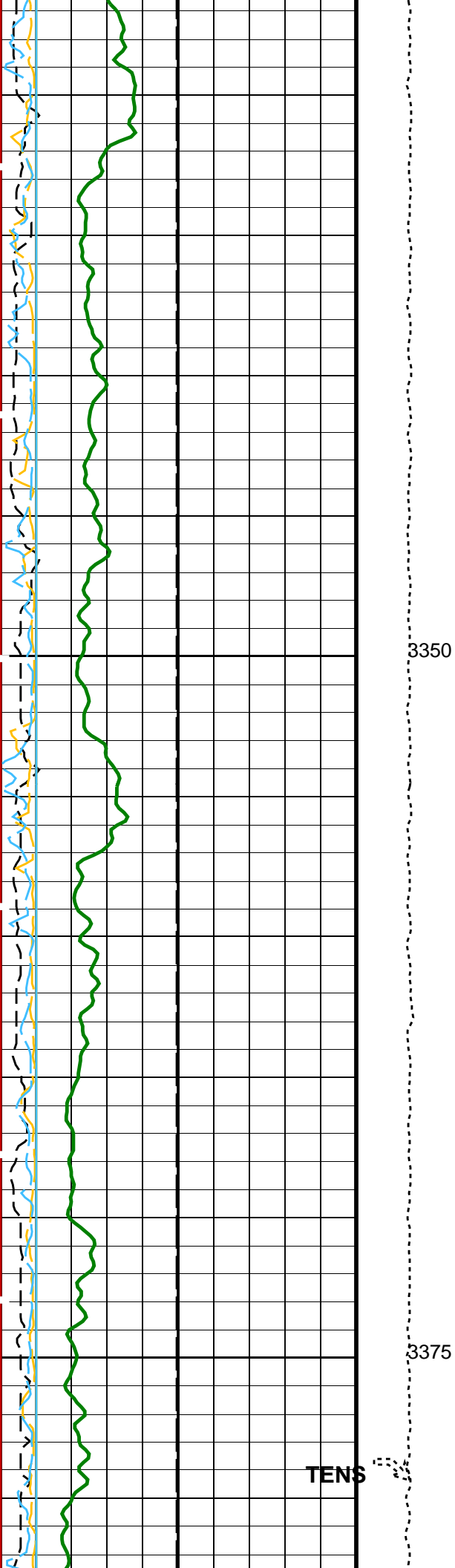
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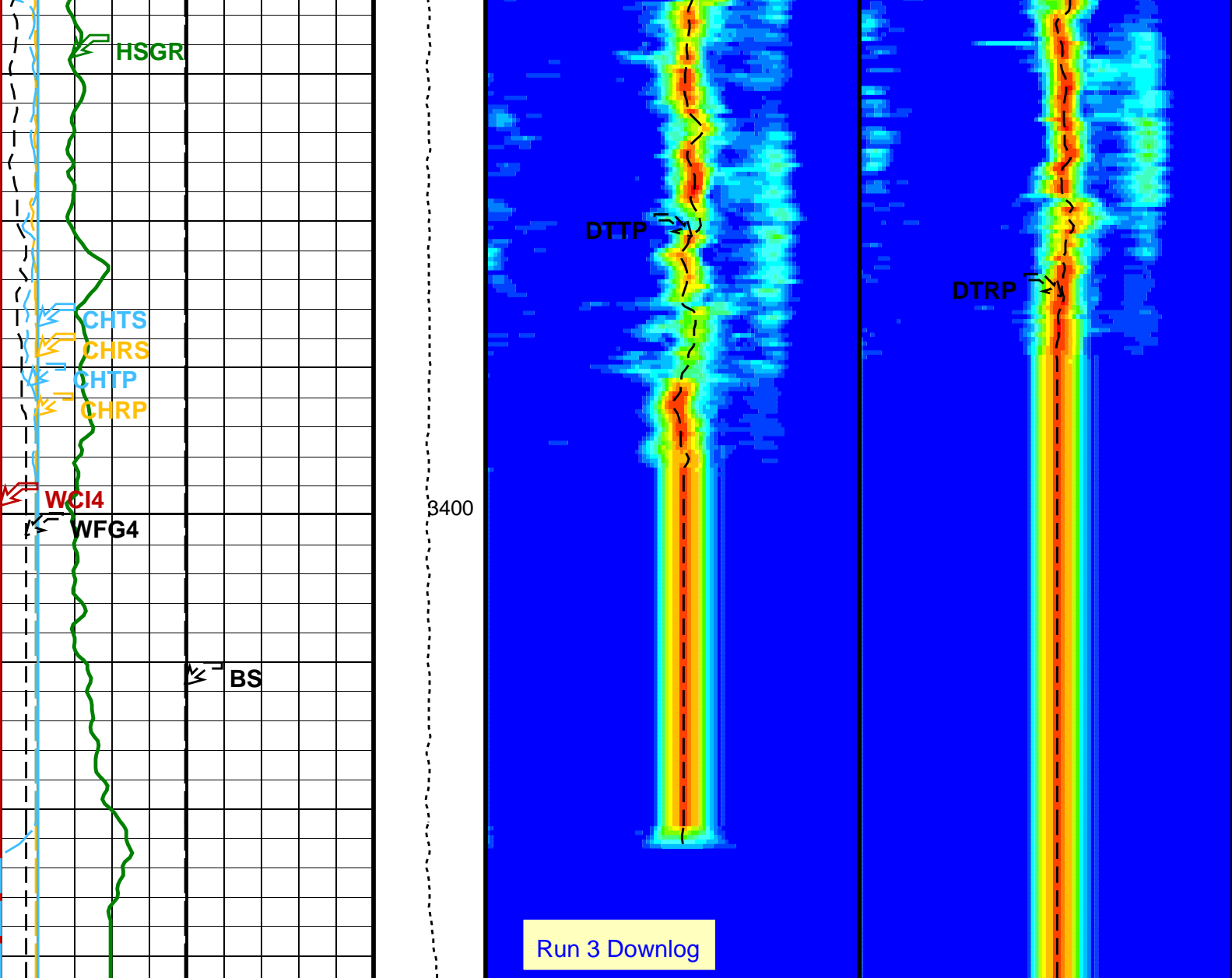
3200











Bit Size (BS) (IN)		Tension (TENS) (LBF)	Delta-T Comp / TA – P & S (DTTP) (US/F)		Delta-T Comp / RA – P & S (DTRP) (US/F)	
0 20			40 240		40 240	
		10000 0				
SAM4 Waveform Gain (WFG4) (-----)			Delta-T Shear / TA – P & S (DTTS) (US/F)		Delta-T Shear / RA – P & S (DTRS) (US/F)	
0 1000			40 240		40 240	
Waveform Data Copy Indicator 4 – Monopole P&S (WCI4)			Min Amplitude Max		Min Amplitude Max	
0 (-----) 10			Tr.Array P&S Slow Proj. CVDL (SPT4) 40 (US/F) 240		Rec.Array P&S Slow Proj. CVDL (SPR4) 40 (US/F) 240	
Peak Coherence / RA – P & S Comp (CHRP)						
0 (-----) 10						
Peak Coherence / TA – P & S Comp (CHTP)						
0 (-----) 10						
Peak Coherence / RA – P & S Shear (CHRS)						
-1 (-----) 9						
Peak Coherence / TA – P & S Shear (CHTS)						
-1 (-----) 9						
UNGS Spectroscopy Gamma Ray						

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00106006	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.962555	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.07716	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
CASF	Label Casing Function - Monopole P&S	50	
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	120	US/F
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	195	US/F
DDE4	Digitizing Delay 4	0	US
DDEX	Digitizing Delay X	0	US
DSI4	Digitizer Sample Interval 4	10	US
DSIX	Digitizer Sample Interval X	40	US
DTF	Delta-T Fluid	196	US/F
DWC4	Digitizer Word Count 4	512	
DWCX	Digitizer Word Count X	512	
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
GCSE	Generalized Caliper Selection	BS	
LFC	Label Formation Character - Monopole P&S	DYNAMIC	
MCS	Mean Casing Slowness	57	US/F
MTXG	Monopole Transmitter Geometry	186	IN
NWI4	Number Waveform Items 4	8	
NWIX	Number Waveform Items X	0	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	294	IN
RX2G	Receiver 2 Geometry	300	IN
RX3G	Receiver 3 Geometry	306	IN
RX4G	Receiver 4 Geometry	312	IN
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
STC Sonic Array Status - Monopole P&S			
SAS4	STC Search Band Offset - Monopole P&S	255	
SBO4	STC Search Band Offset - Monopole P&S	500	US
SBR4	STC Baseline Removal - Monopole P&S	ON	
SBW4	STC Search Bandwidth - Monopole P&S	2000	US
SFC4	STC Formation Character - Monopole P&S	SELECTABLE	
SFM4	STC Filter - Monopole P&S	B3-20K	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	235	US/F
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	240	US/F
SLL4	STC Slowness Lower Limit - Monopole P&S	40	US/F
SST4	STC Slowness Step - Monopole P&S	2	US/F
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	180	US/F
STUL	Label Slowness Upper Limit - Monopole Stoneley	780	US/F

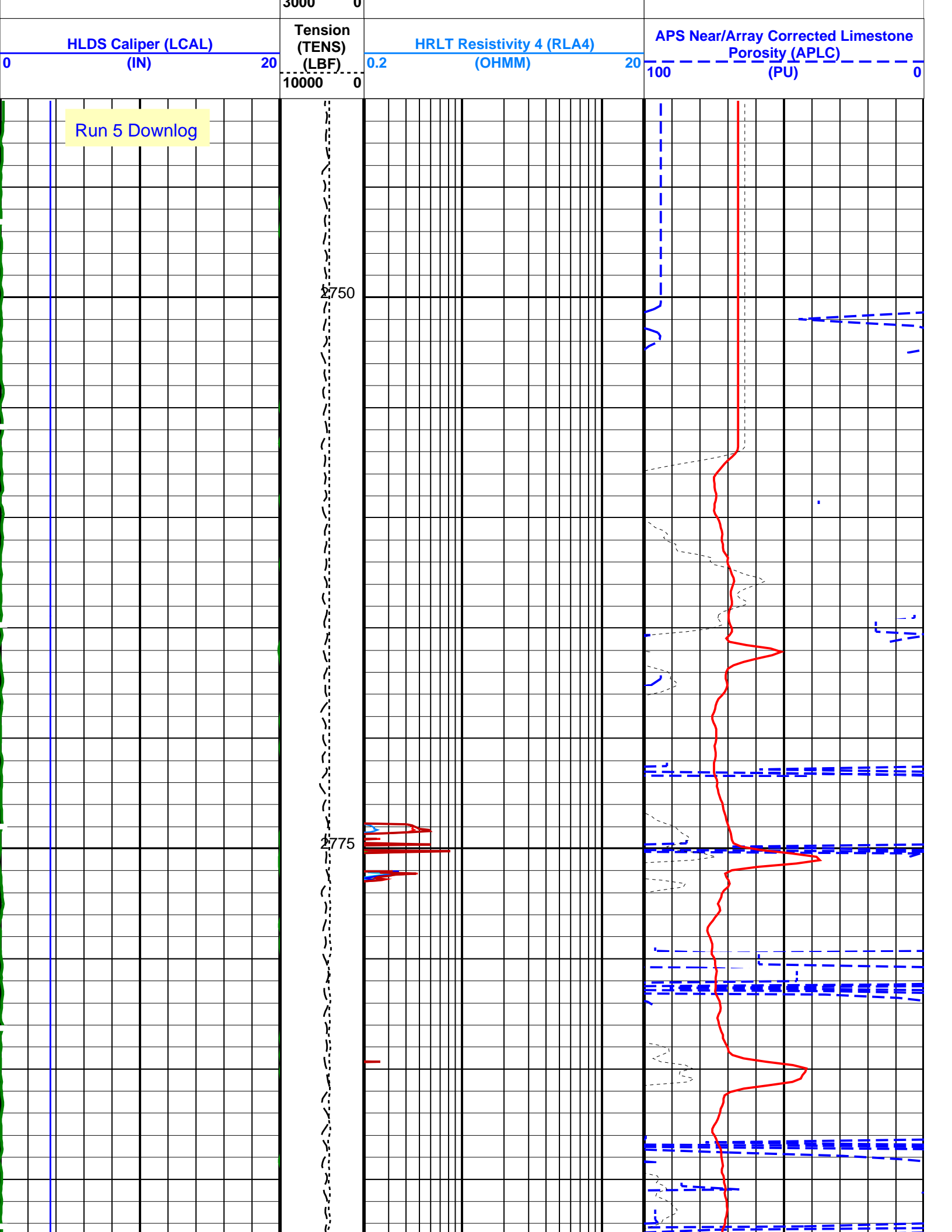
SUL4	STC Slowness Upper Limit – Monopole P&S	240	US/F
SWD4	STC Slowness Width – Monopole P&S	10	US/F
TBF4	STC Time for Baseline Fill – Monopole P&S	300	US
TLL4	STC Time Lower Limit – Monopole P&S	150	US
TST4	STC Time Step – Monopole P&S	50	US
TUL4	STC Time Upper Limit – Monopole P&S	3660	US
TWD4	STC Time Width – Monopole P&S	1000	US
TWI4	STC Integration Time Window – Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
WFM4	Waveform Mode 4	W1	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

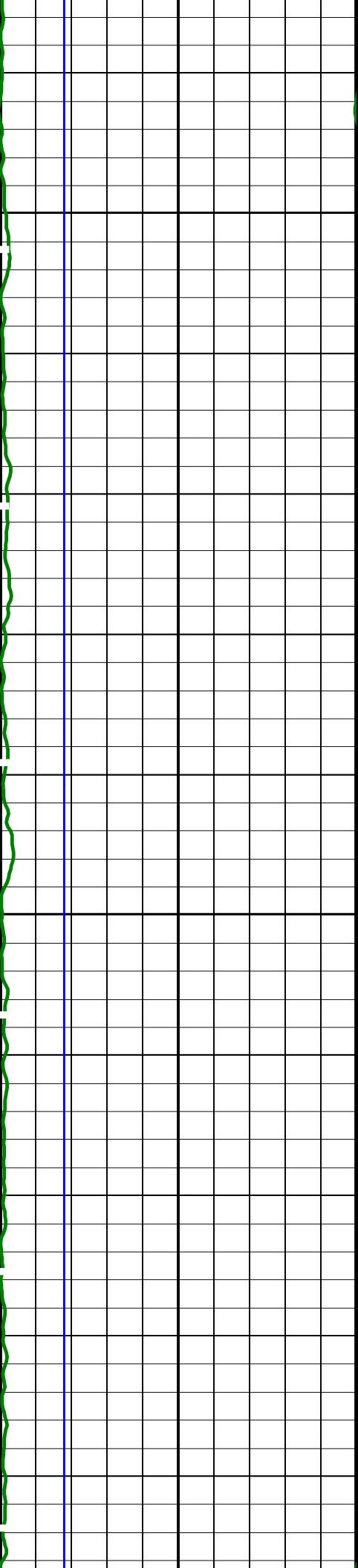
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HRLT-B	19C0-187	DSST-B	19C0-187		
HLDS	19C0-187	LDSC-B	19C0-187		
EDTC-B	SKK-5169-EDTCB				
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Output DLIS Files					
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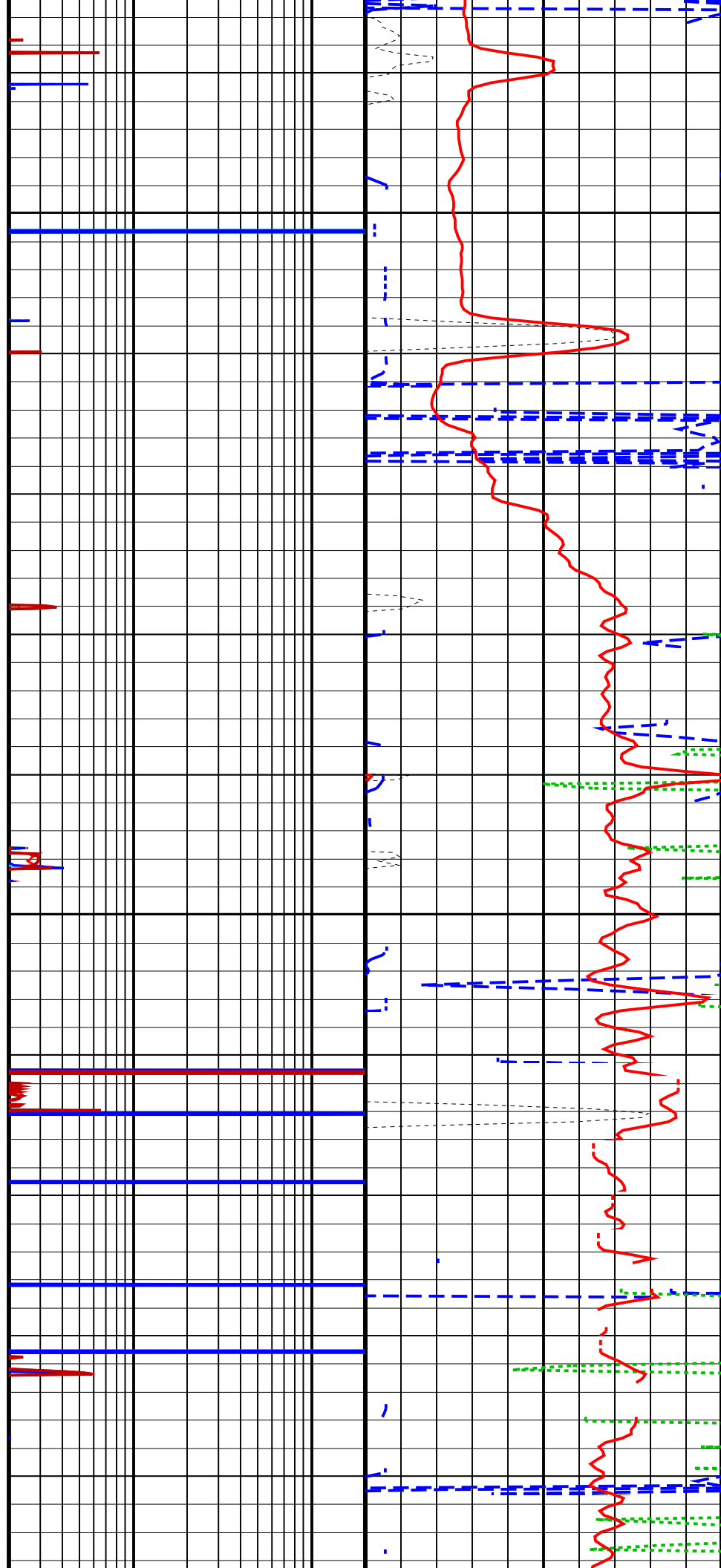
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OP System Version: 19C0-187					
HRLT-B	19C0-187	HLDS	19C0-187		
LDSC-B	19C0-187	APS-C	19C0-187		
HNGC-B	19C0-187	HNGS-BA	19C0-187		
EDTC-B	SKK-5169-EDTCB				

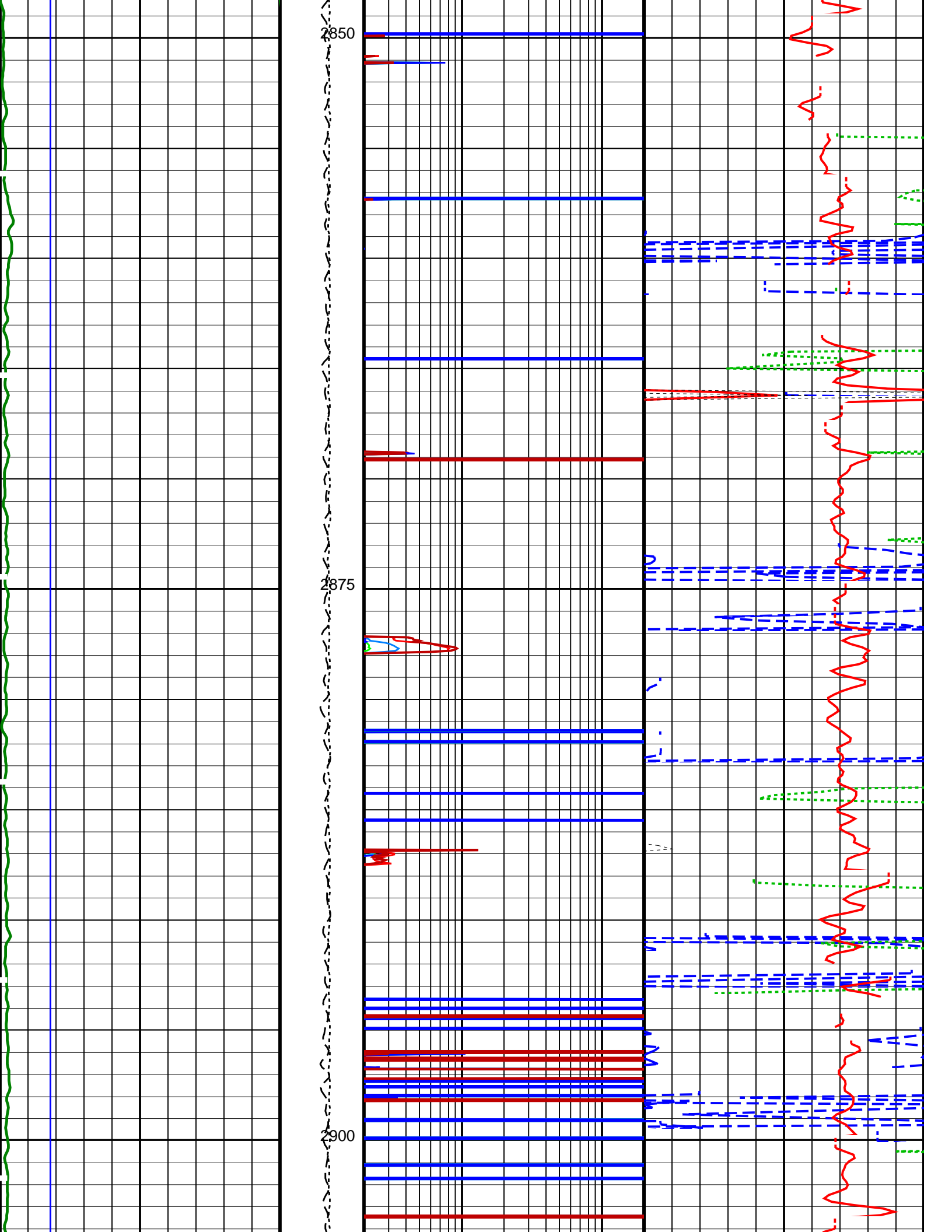
PIP SUMMARY					
Time Mark Every 60 S					
		HRLT True Resistivity (RT_HRLT)			
		0.2	(OHMM)	20	
		HRLT Resistivity 1 (RLA1)			
		0.2	(OHMM)	20	
		HRLT Resistivity 2 (RLA2)			
		0.2	(OHMM)	20	HLDS Bulk Density Correction (DRH)
					-0.25 (G/C3) 0.25
		HRLT Resistivity 3 (RLA3)			
		0.2	(OHMM)	20	HLDS Bulk Density (RHOM)
					0 (G/C3) 4
HNGS Spectroscopy Gamma Ray (HSGR)		Calibrated Downhole Force (CDF) (LBF)		HLDS Long Spaced Photoelectric Effect (PEFL)	
0 (GAPI) 100		0.2 (OHMM) 20		0 (----) 10	

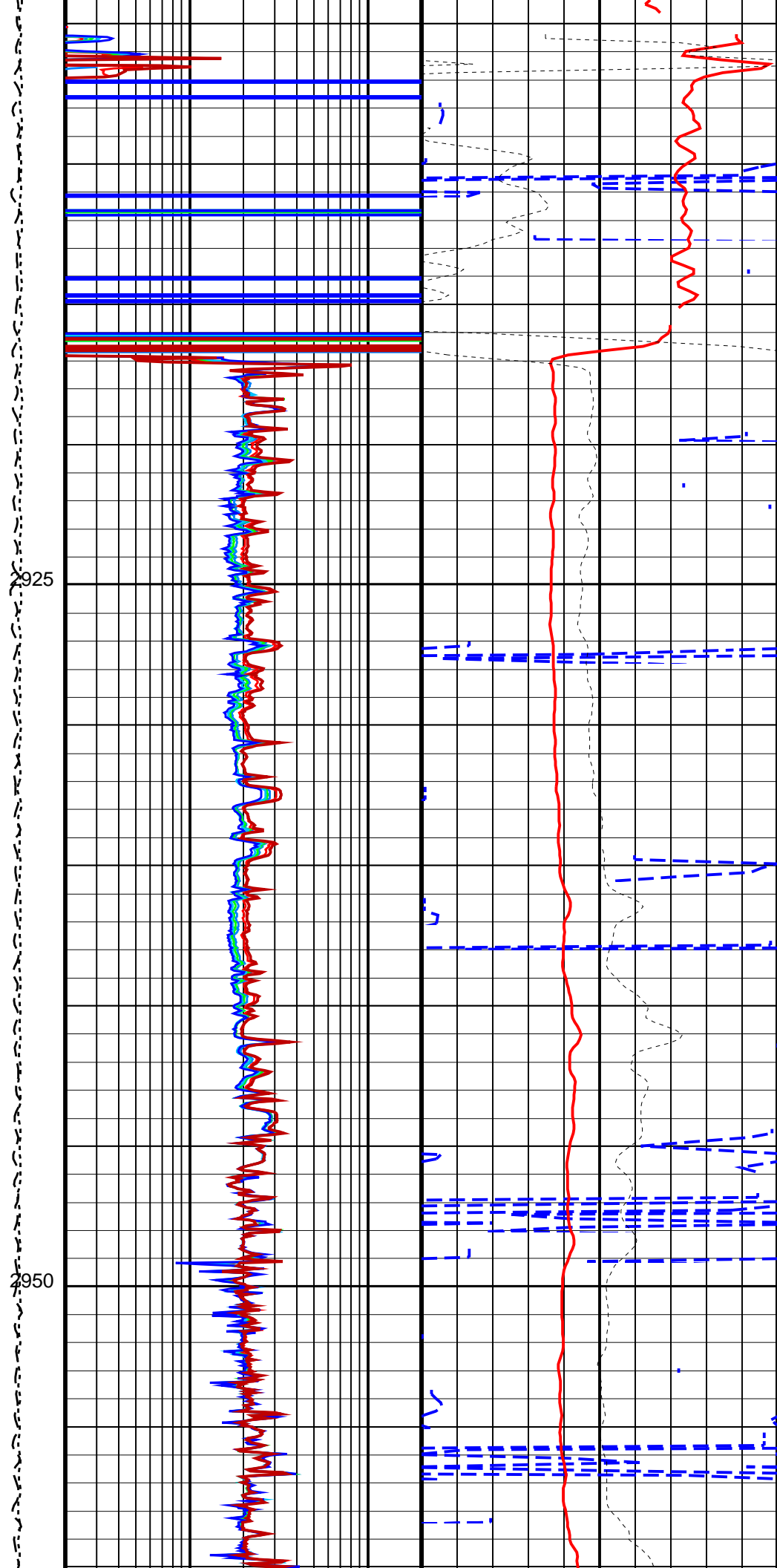
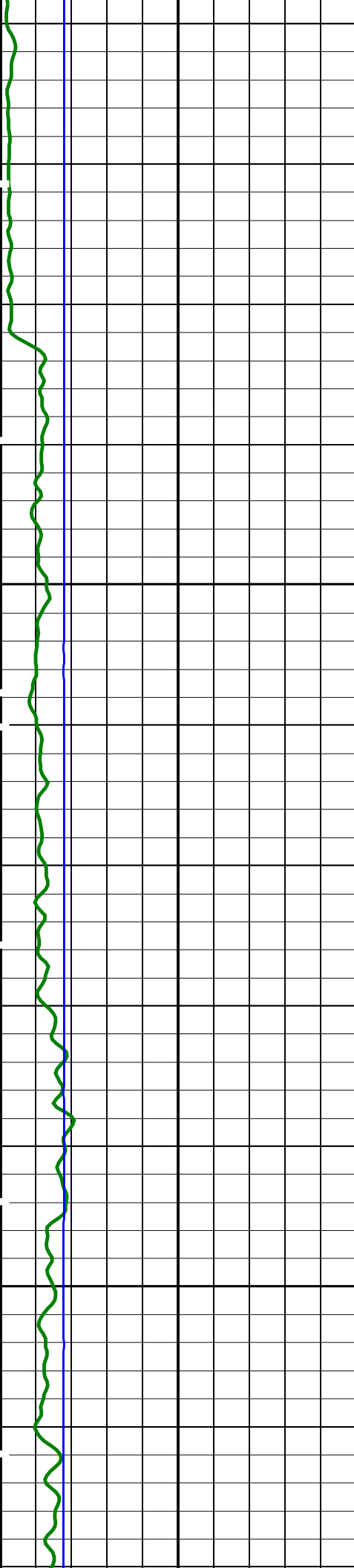


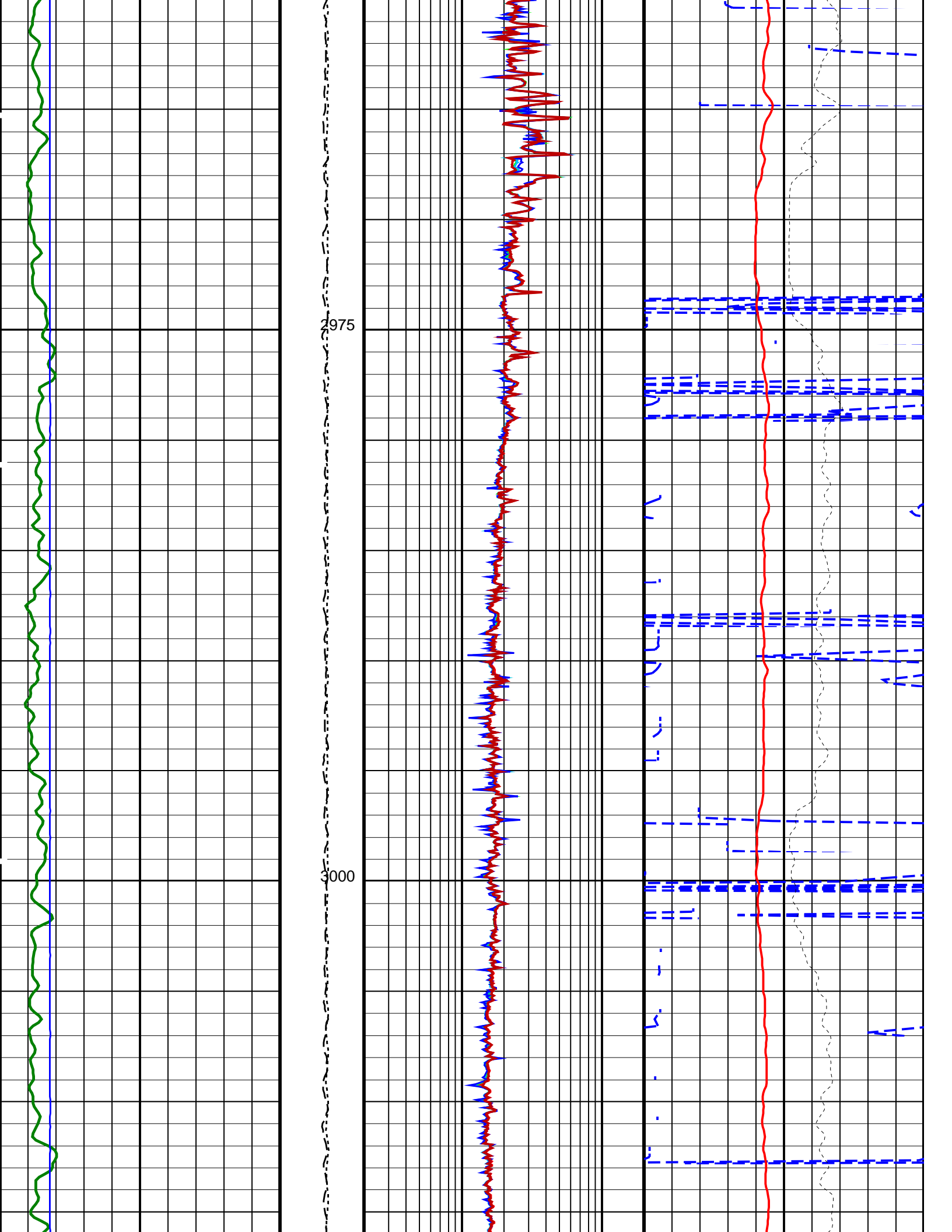


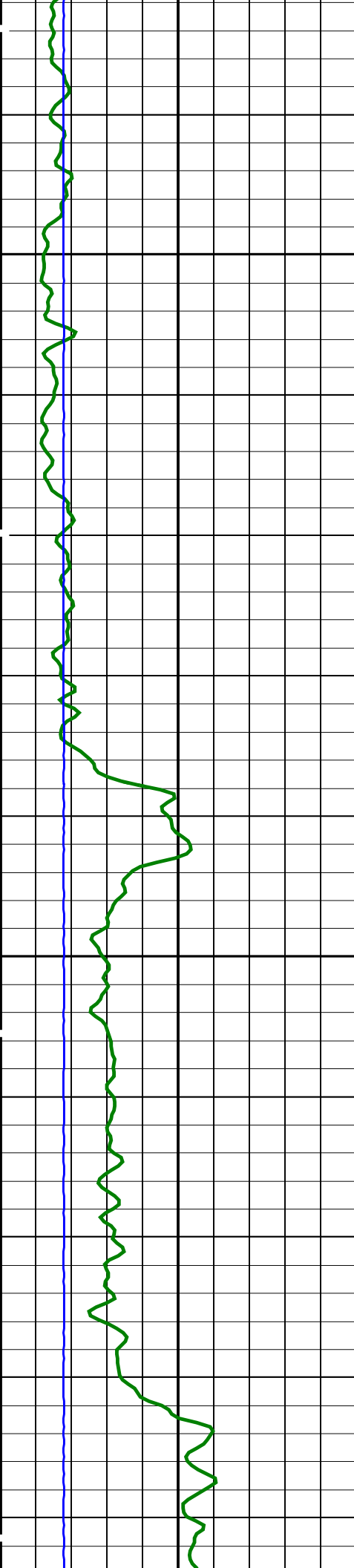
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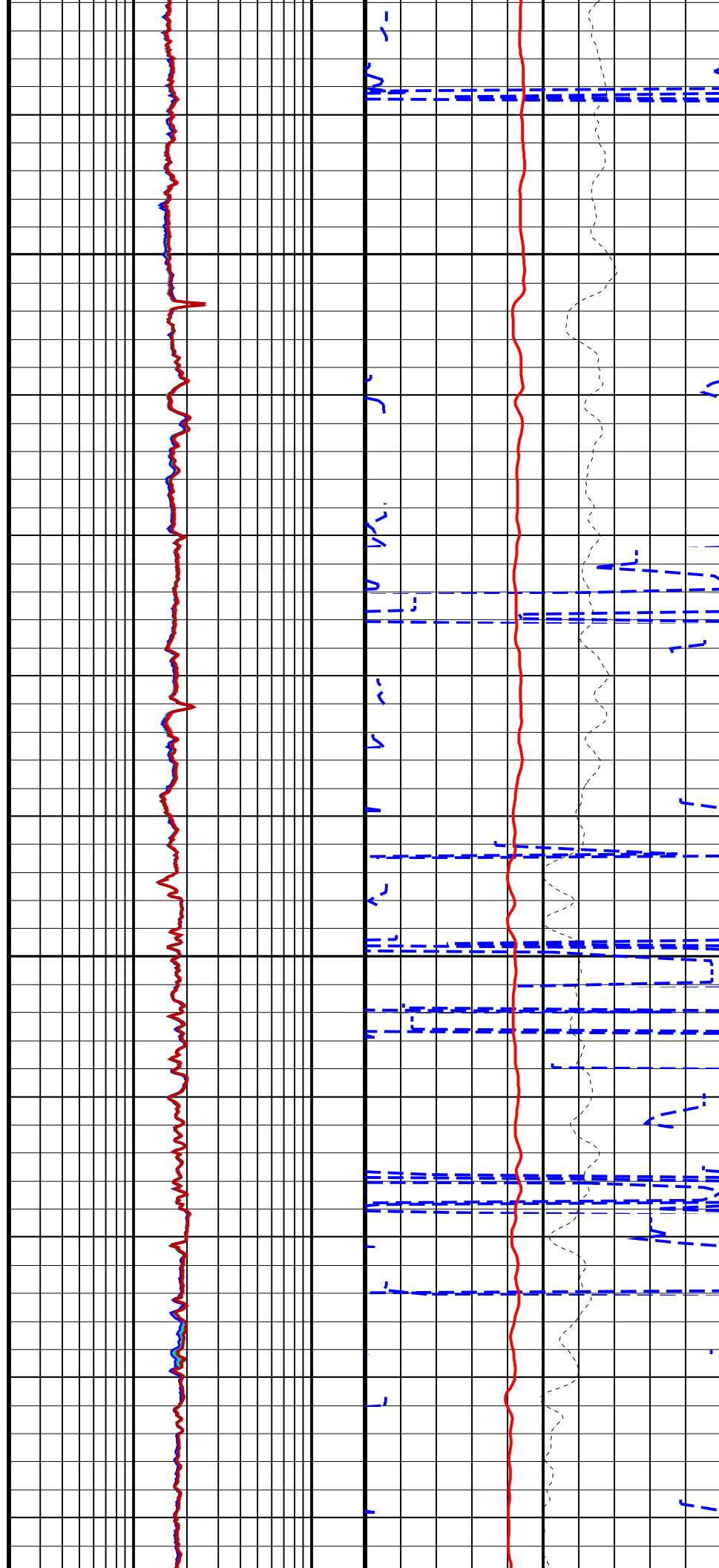


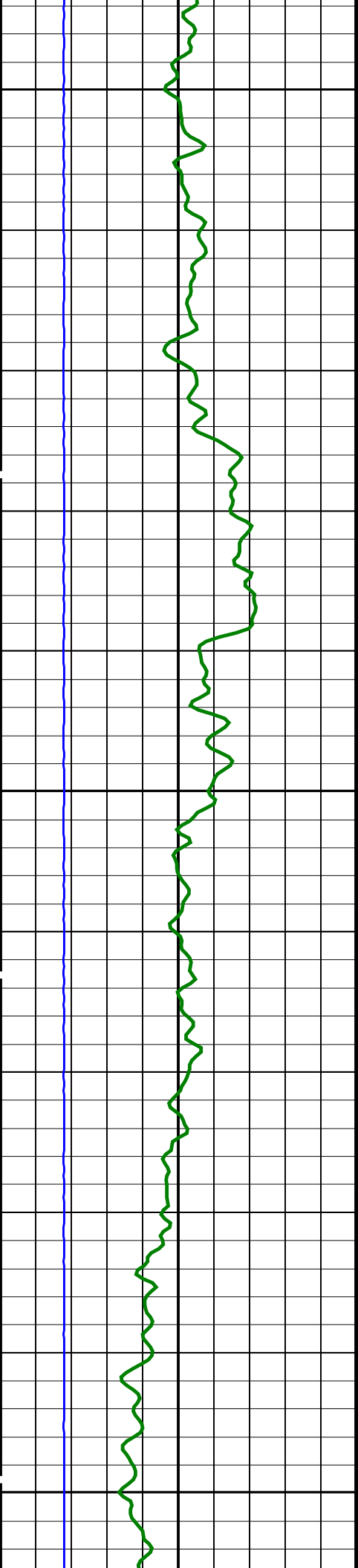




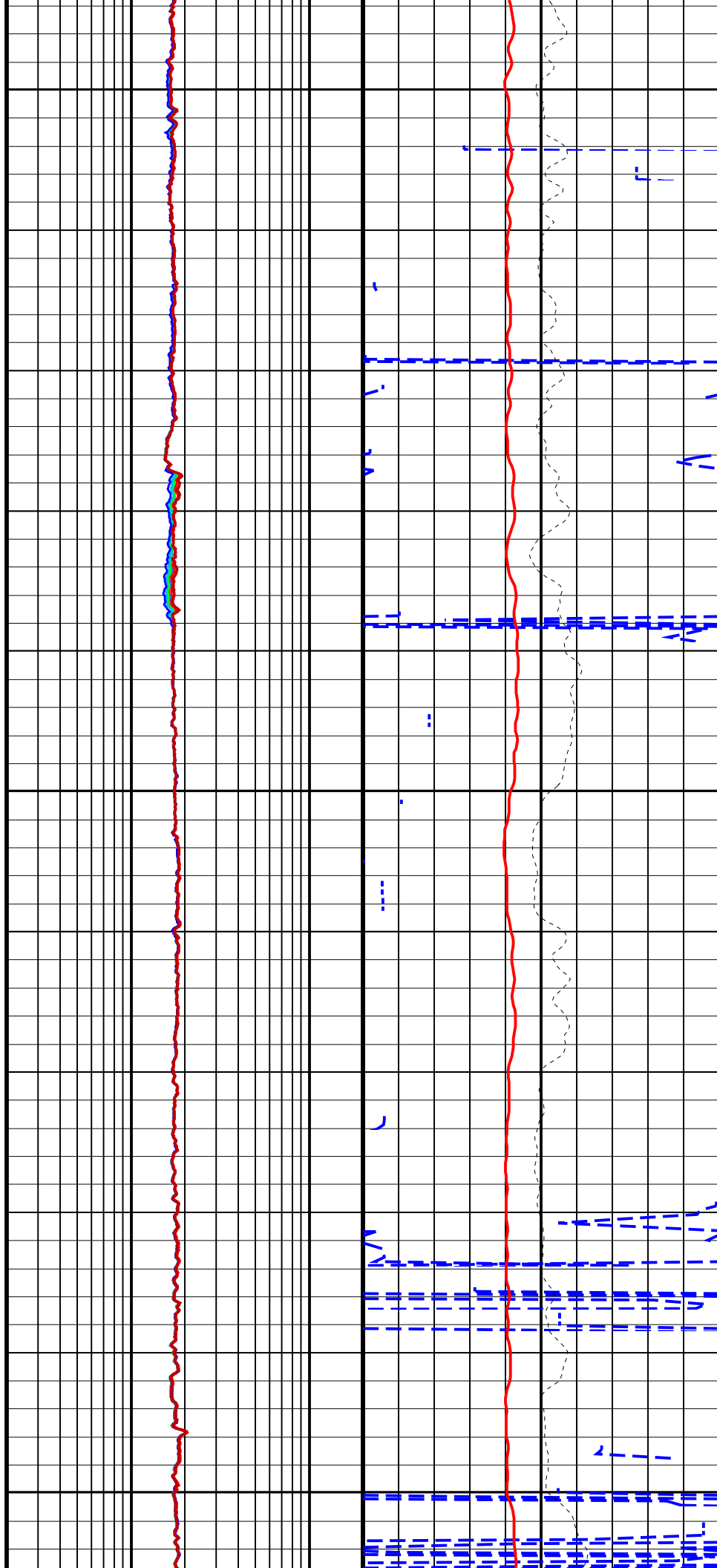
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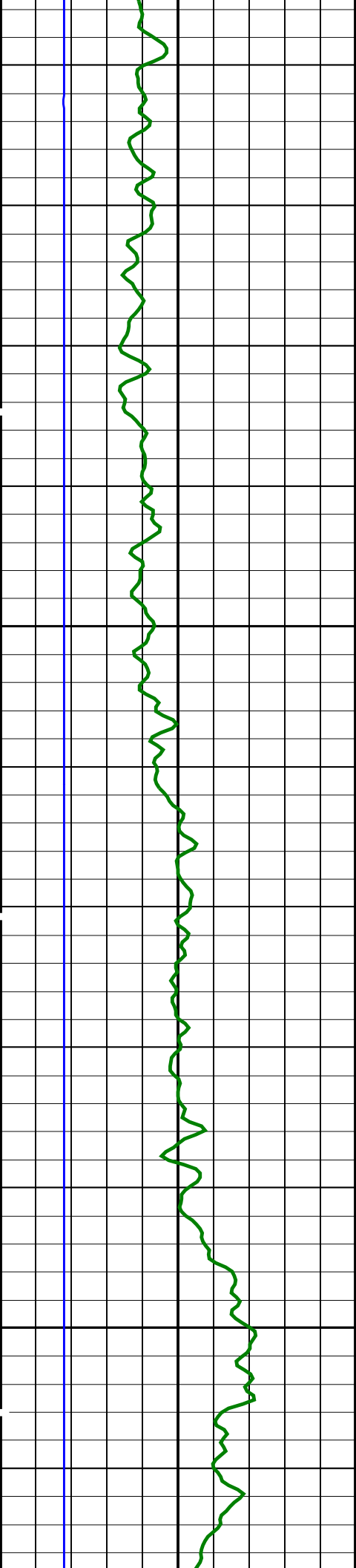
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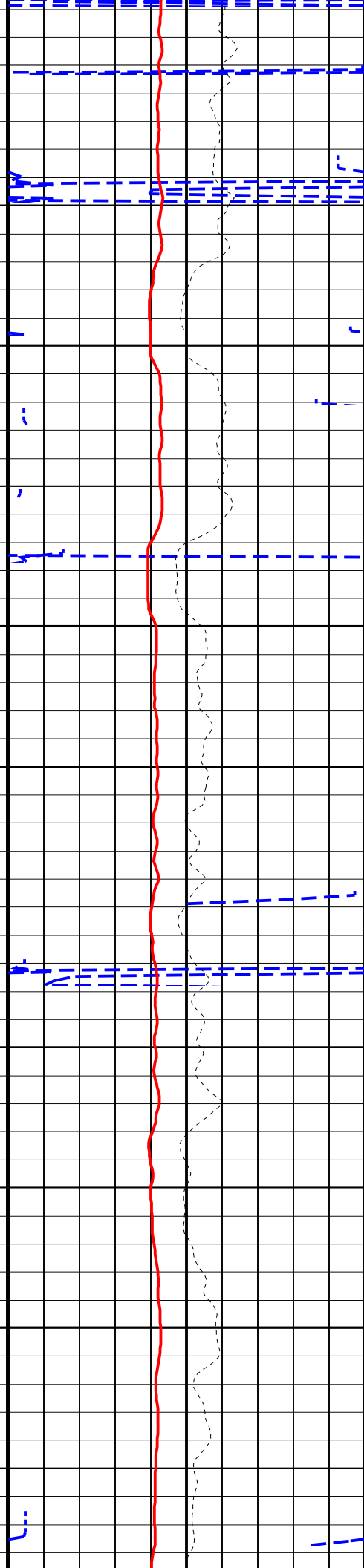
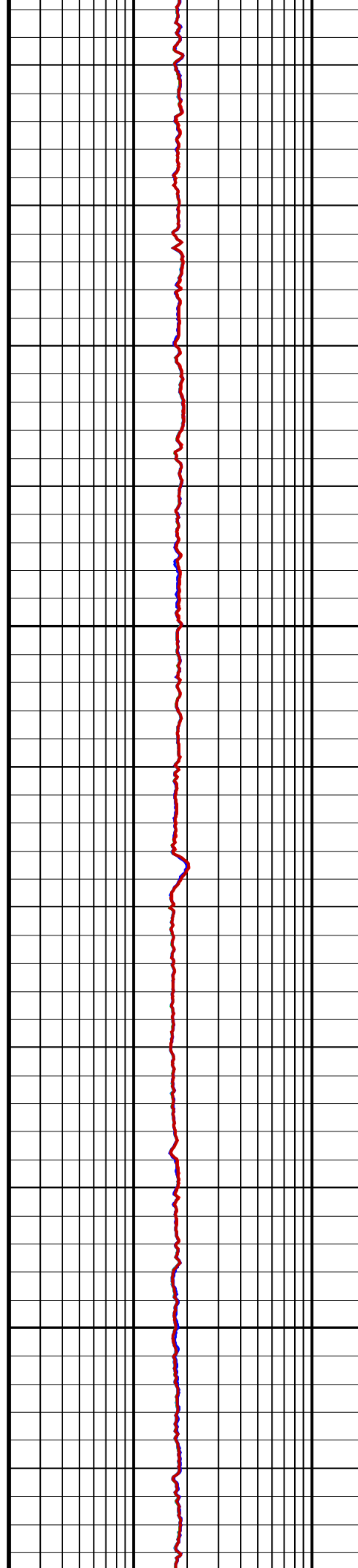
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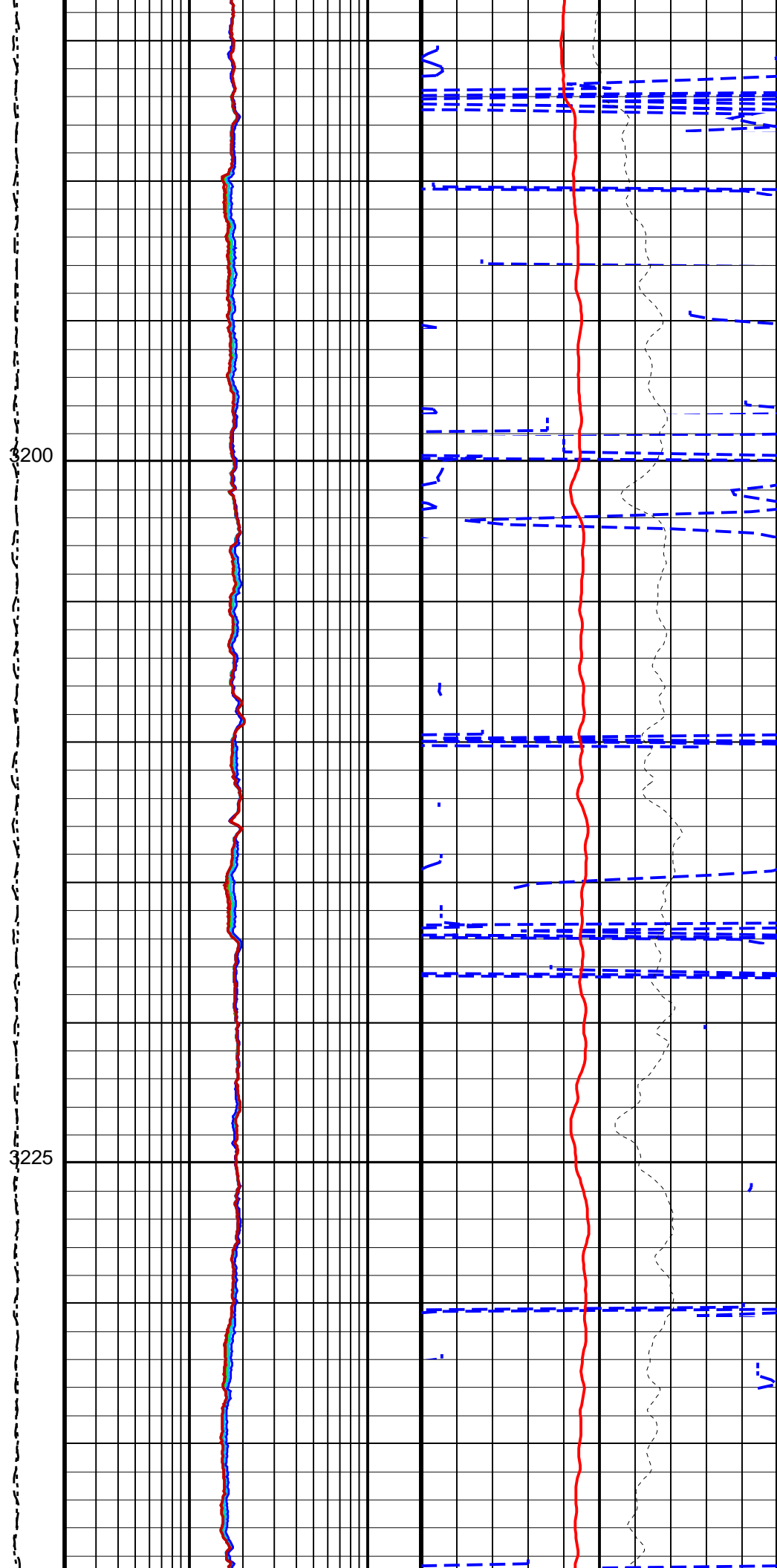
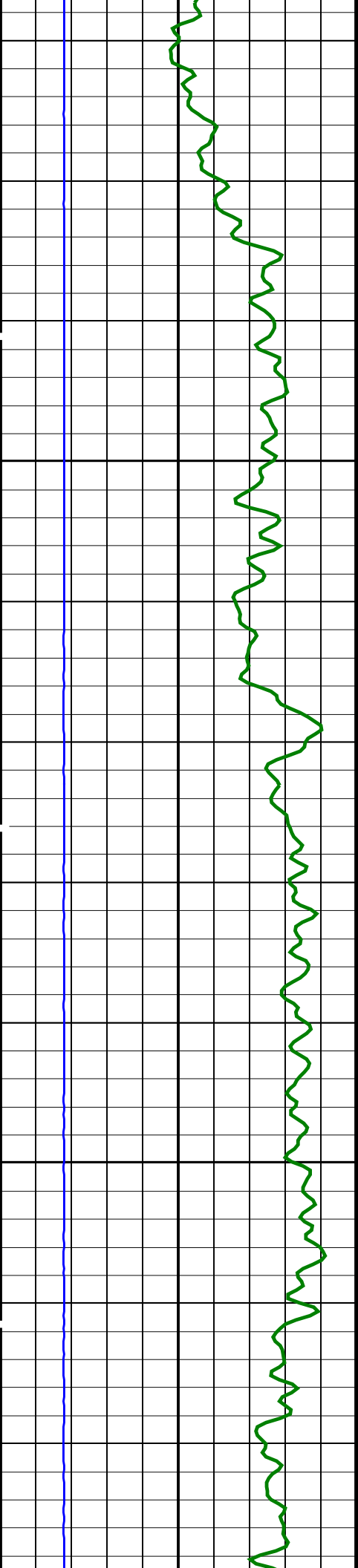


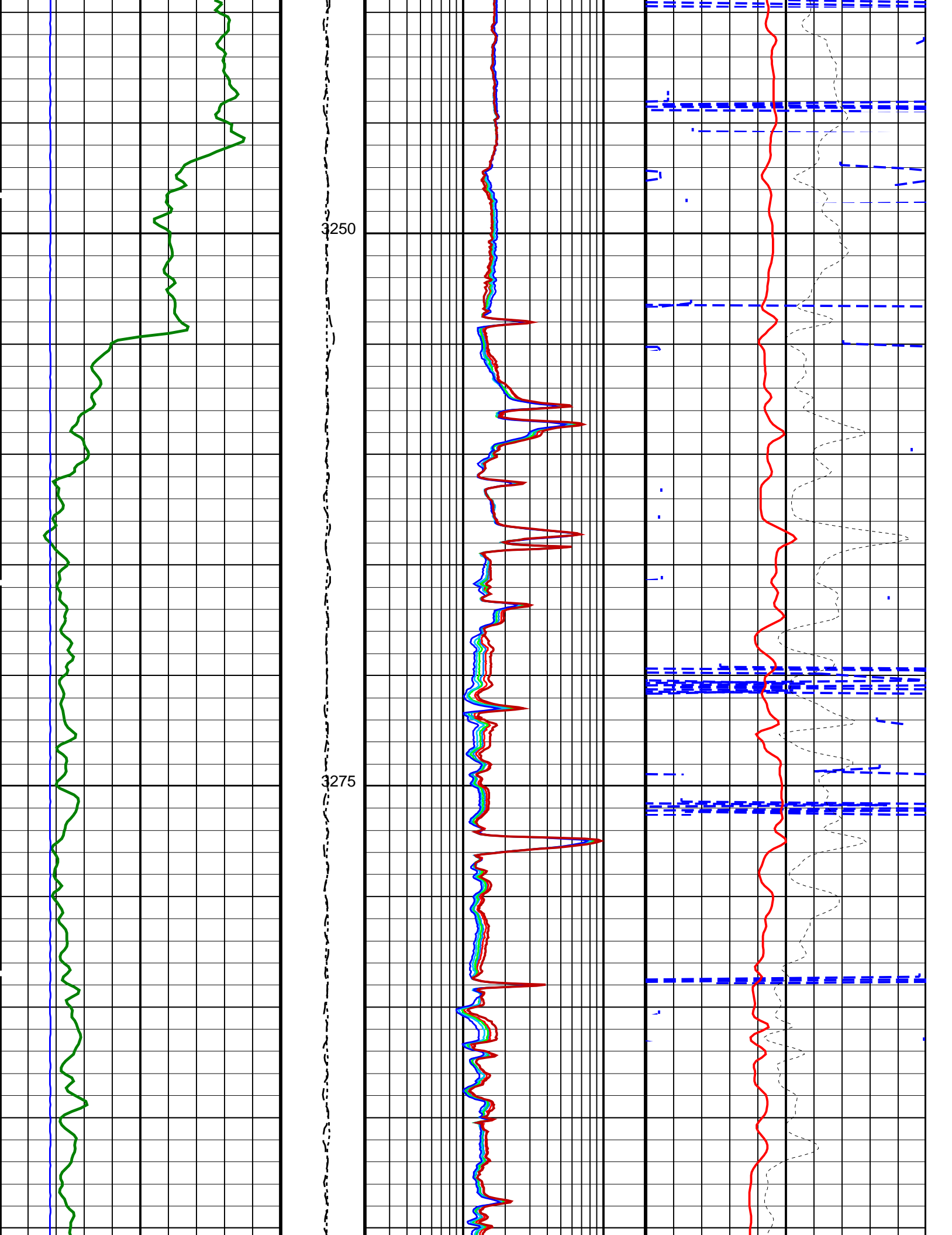


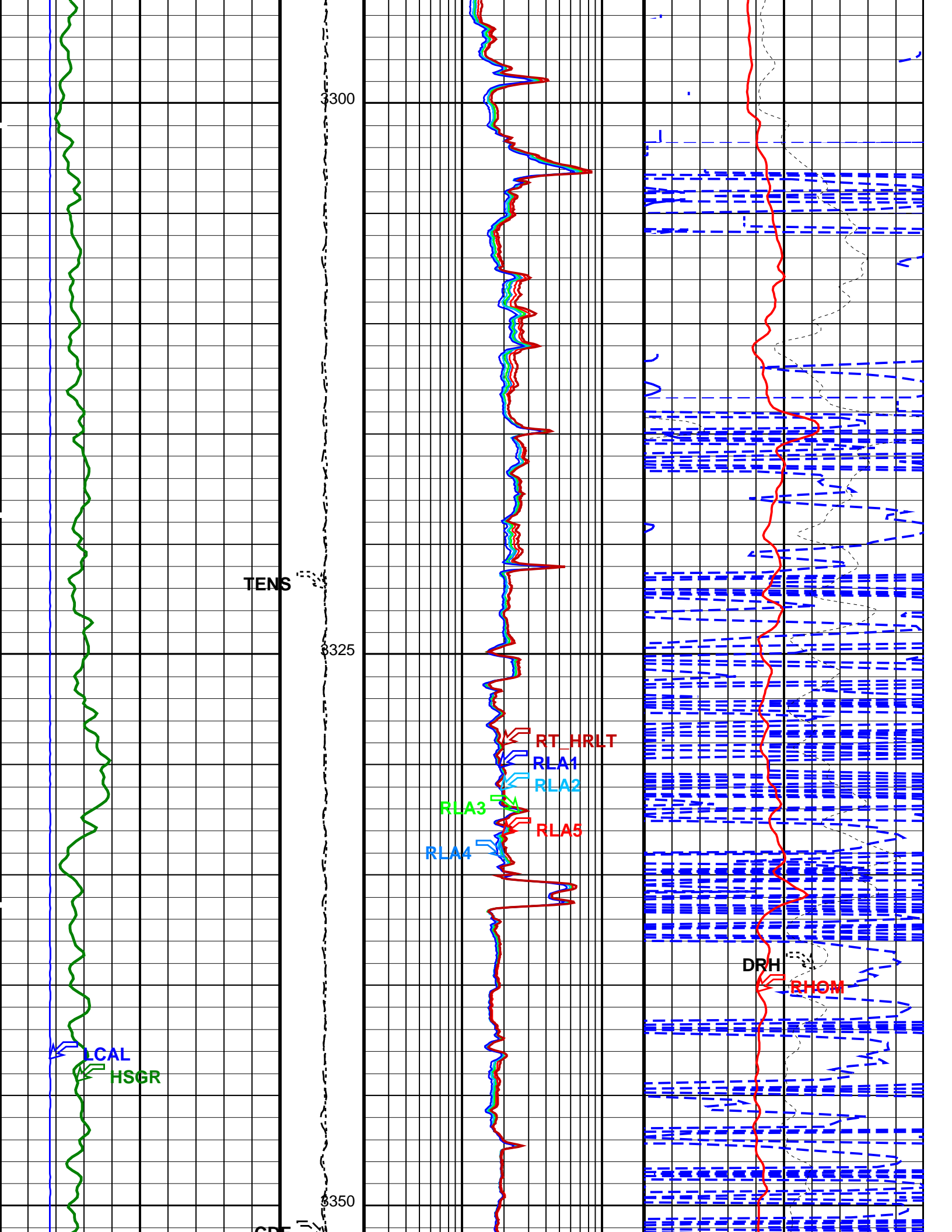
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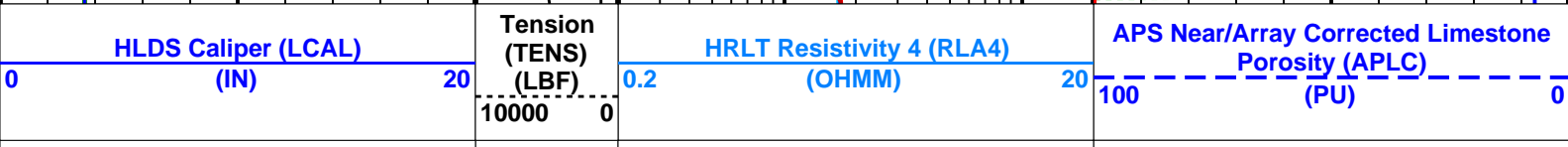
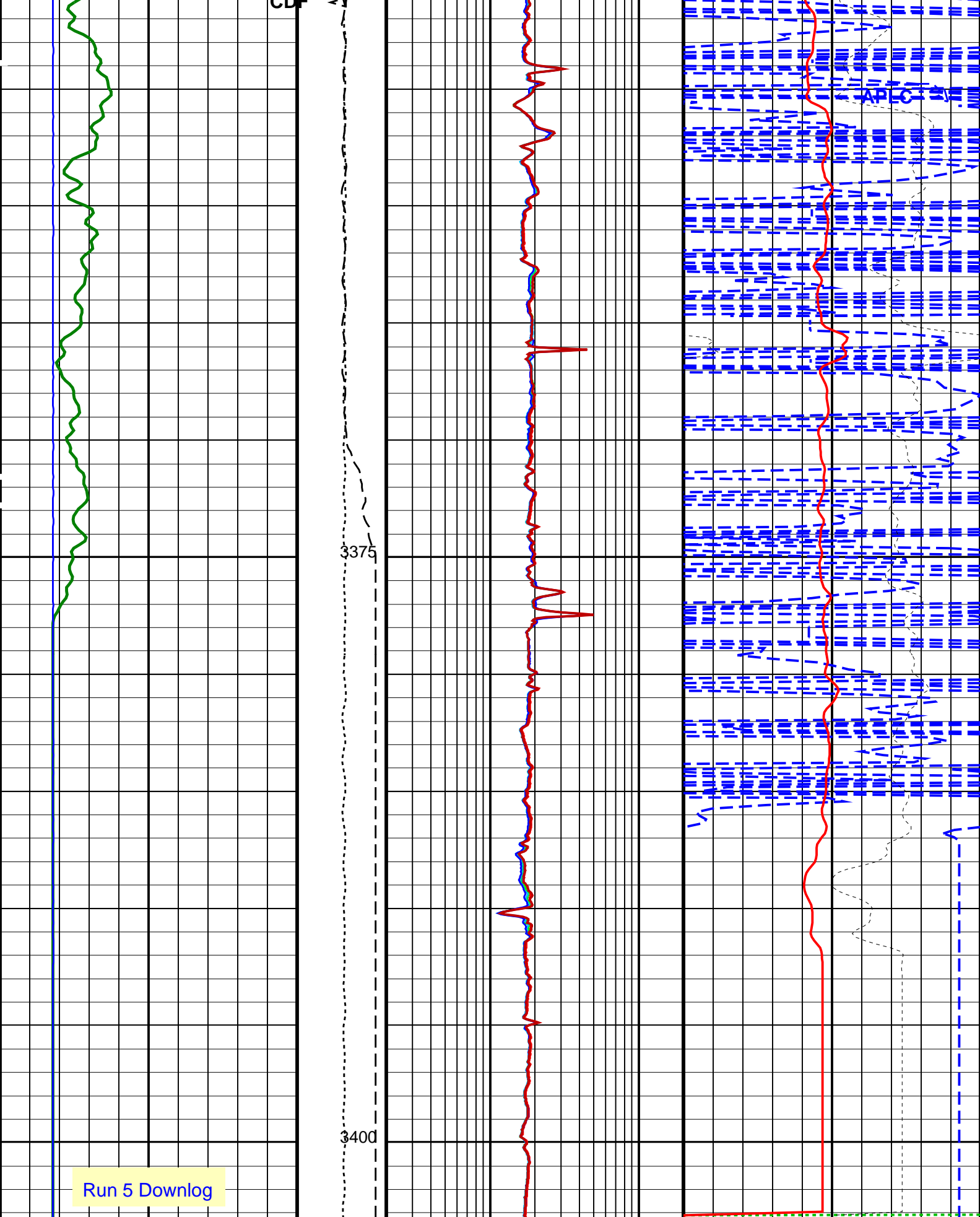
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HNGS Spectroscopy Gamma Ray (HSGR)	Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5)		HLDS Long Spaced Photoelectric Effect (PEFL)	
		0.2	20	0	10
(GAPI)	3000	(OHMM)		(-----)	
100	0				
		HRLT Resistivity 3 (RLA3)		HLDS Bulk Density (RHOM)	
		0.2	20	0	4
		(OHMM)		(G/C3)	
		HRLT Resistivity 2 (RLA2)		HLDS Bulk Density Correction (DRH)	
		0.2	20	-0.25	0.25
(OHMM)		(G/C3)			
HRLT Resistivity 1 (RLA1)					
0.2	20				
(OHMM)					
HRLT True Resistivity (RT_HRLT)					
0.2	20				
(OHMM)					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.4807	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	55	DEGF
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	

APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	5	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1963.18	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2080.01	V
AHSS	APS Holesize Correction Source	BS	
AMTY	APS Holesize Correction Switch	ON	
ANSD	APS Environmental Corrections Mud Type	WaterBaseBarite	
ASOS	APS Near Detector High Voltage Setting	1738.35	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	APS TNPH Borehole Fluid Type	WATER	
BHT	Borehole Status	OPEN	
BSCO_APS	Bottom Hole Temperature (used in calculations)	212	DEGF
DPPM	APS TNPH Borehole Salinity Correction Option	YES	
DSCO_APS	Density Porosity Processing Mode	HIRS	
FSAL	APS TNPH Density Source Correction Option	MEASURED	
FSCO_APS	Formation Salinity	-50000	PPM
GCSE	APS TNPH Formation Salinity Correction Option	NO	
GDEV	Generalized Caliper Selection	BS	
GGRD	Average Angular Deviation of Borehole from Normal	0	DEG
GRSE	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
HSCO_APS	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	APS TNPH Hole Size Correction Option	YES	
MATR	Barite Mud Switch	BARITE	
MCCO_APS	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCOR_APS	APS TNPH Mud Cake Correction Option	YES	
MWCO_APS	APS TNPH Mud Correction	BARI	
NARC	APS TNPH Mud Weight Correction Option	YES	
NFRC	APS Near/Array Calibration Ratio	1.07112	
PTCO_APS	APS Near/Far Calibration Ratio	0.896577	
SHT	APS TNPH Pressure/Temperature Correction Option	NO	
TNCO_APS	Surface Hole Temperature	55	DEGF
	APS TNPH Computation Option	YES	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00313803	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	55	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.960051	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.992977	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	

MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	NO	
MCCO	Mud Cake Correction Option	BARI	YES	
MCOR	Mud Weight Correction Option	NO		
MWCO	Pressure/Temperature Correction Option	SOCN	55	DEGF
PTCO	Standoff Data Source	0.5		IN
SDAT	Surface Hole Temperature	NO		
SHT	Standoff Distance	Eccentered		
SOCN	Standoff Correction Option	Standard_EDTS		
SOCO	EDTC Tool Centered/Eccentered	Standard_EDTS		
TPOS_EDTC	Telemetry Mode for eWAFE			
U-ETELM_EDTS	Telemetry Mode for WAFE			
U-TELM_EDTS				
System and Miscellaneous				
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth		
BS	Bit Size	9.875		IN
BSAL	Borehole Salinity	38000.00		PPM
CSIZ	Current Casing Size	5.500		IN
CWEI	Casing Weight	168.00		LB/F
DFD	Drilling Fluid Density	1.26		G/C3
DO	Depth Offset for Playback	0.0		M
FLEV	Fluid Level	-50000.00		M
MST	Mud Sample Temperature	23.00		DEGC
PBVSADP	Use alternate depth channel for playback	NO		
PP	Playback Processing	RECOMPUTE		
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000		OHMM
RW	Resistivity of Connate Water	1.0000		OHMM
TD	Total Depth	11726		FT
TDD	Total Depth - Driller	3574.00		M
TDL	Total Depth - Logger	3413.00		M
TWS	Temperature of Connate Water Sample	37.78		DEGC

Format: TripleCombo

Vertical Scale: 1:200

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OP System Version: 19C0-187				
HRLT-B	19C0-187	HLDS	19C0-187	
LDSC-B	19C0-187	APS-C	19C0-187	
HNGC-B	19C0-187	HNGS-BA	19C0-187	
EDTC-B	SKK-5169-EDTCB			

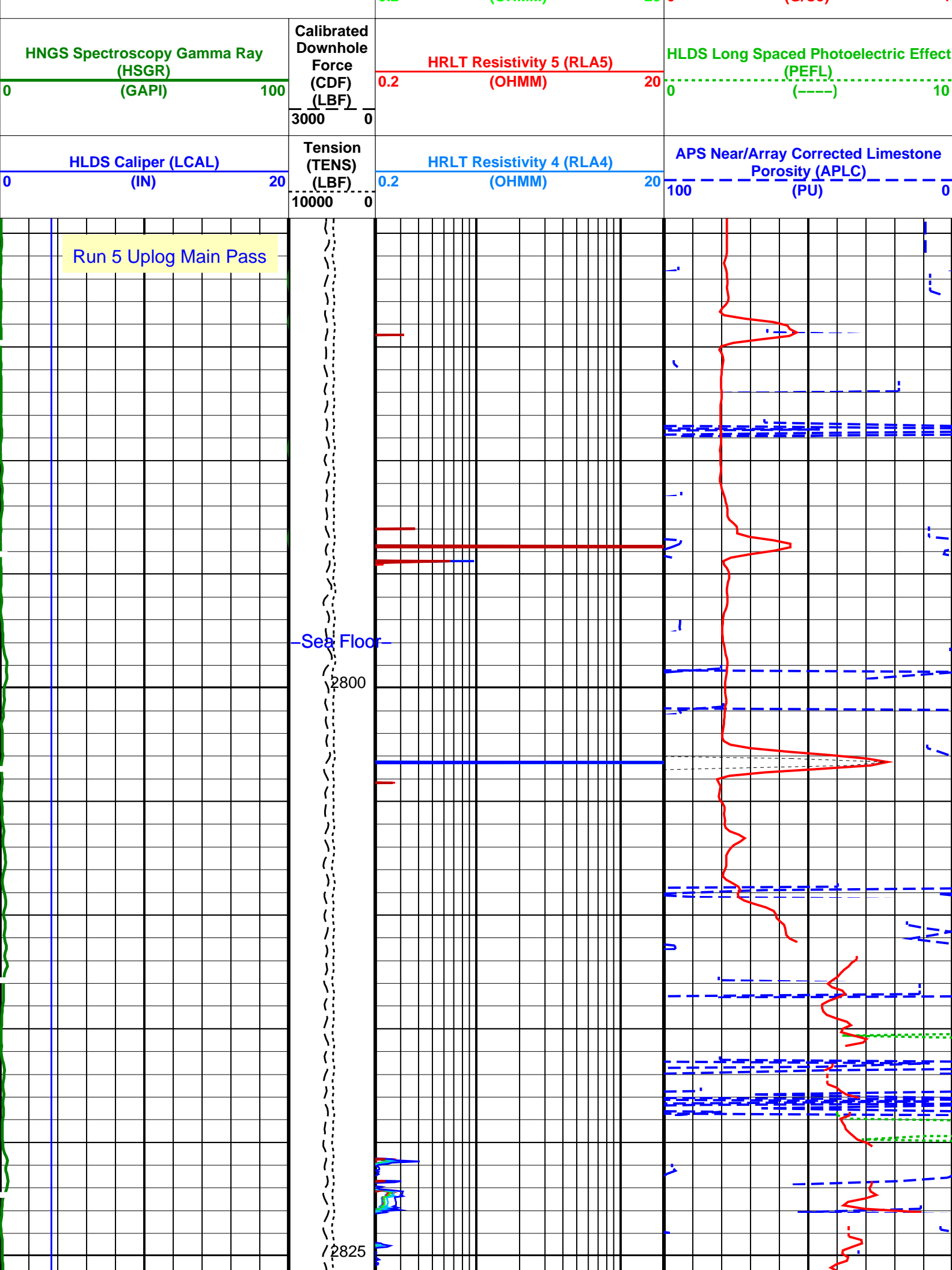
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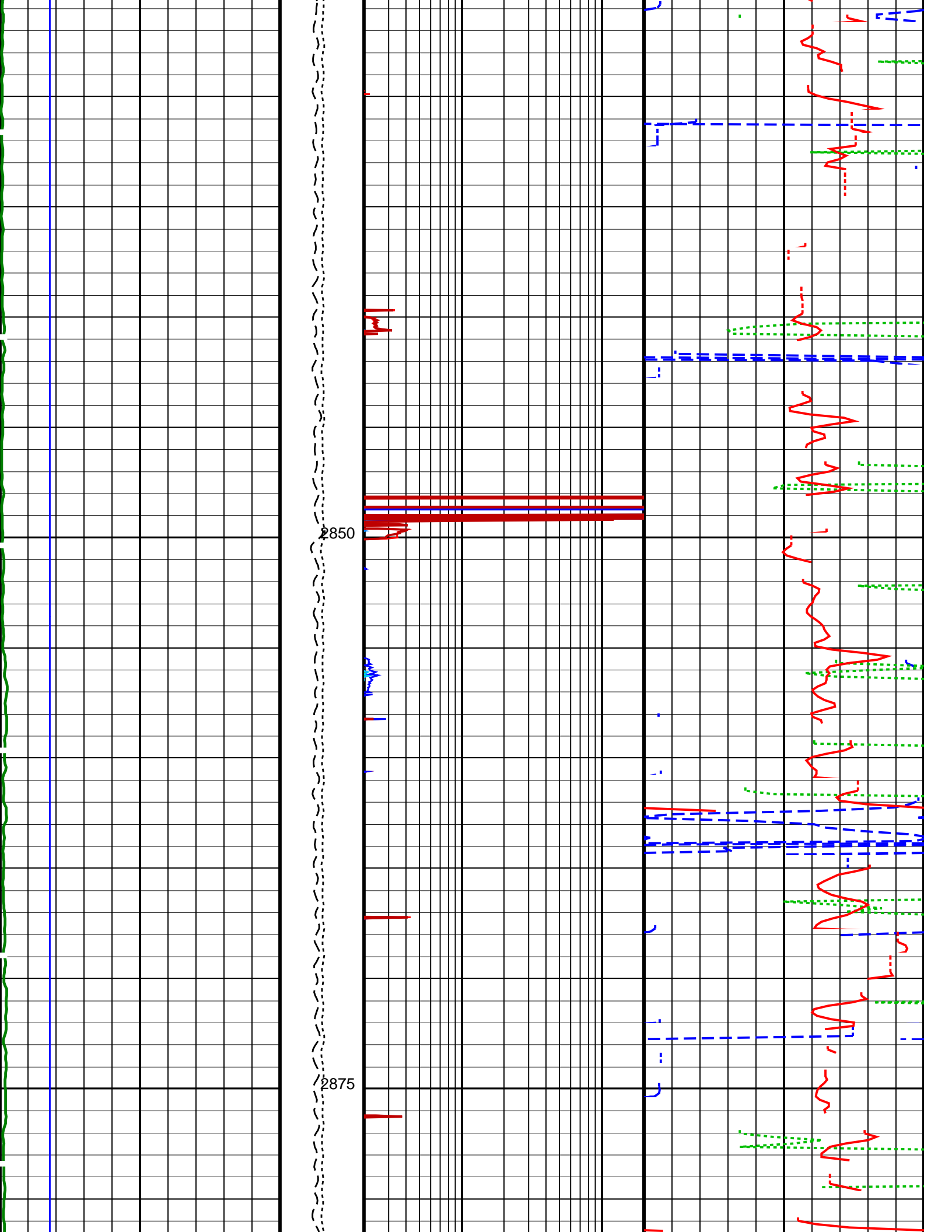
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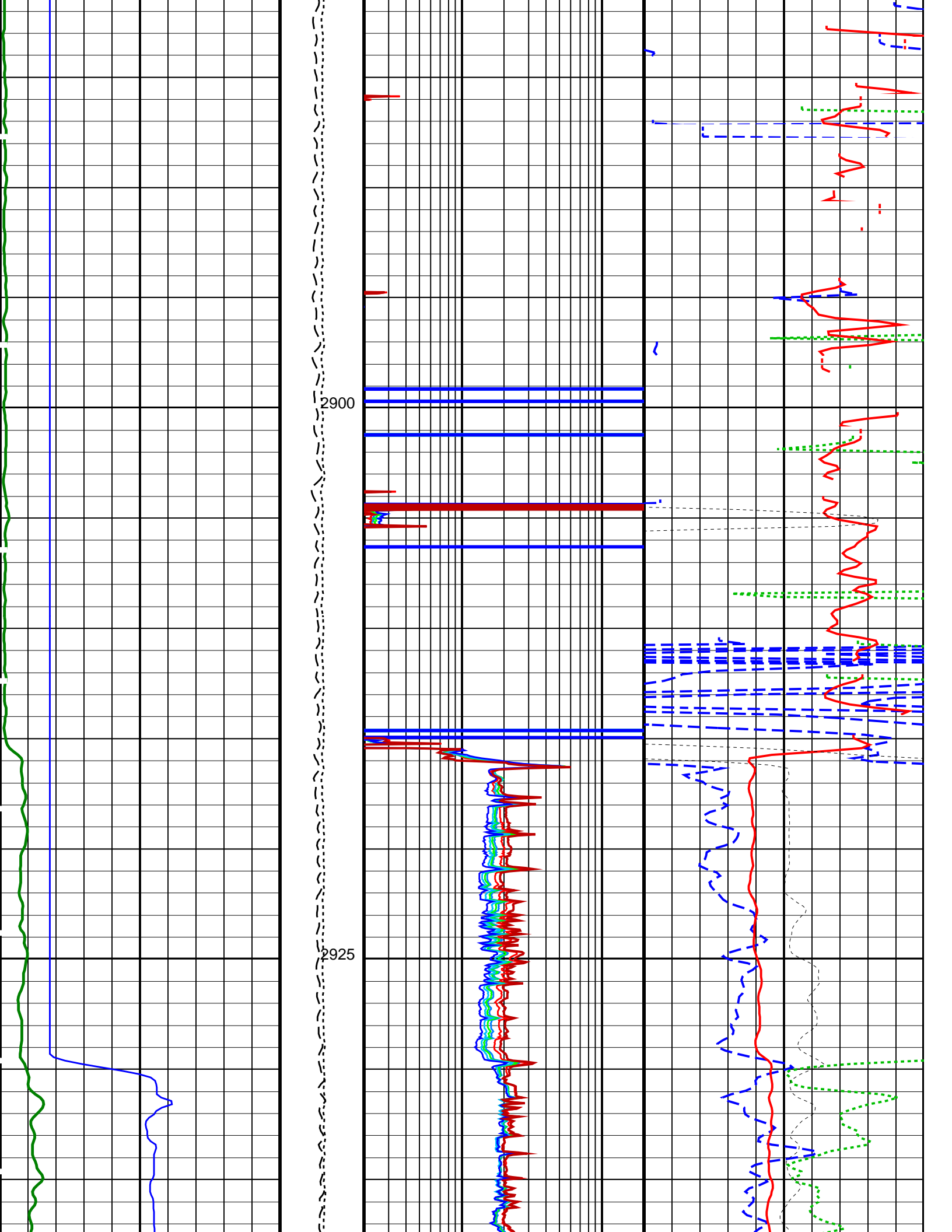
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LDSC-B	19C0-187	APS-C	19C0-187	
HNGC-B	19C0-187	HNGS-BA	19C0-187	
EDTC-B	SKK-5169-EDTCB			

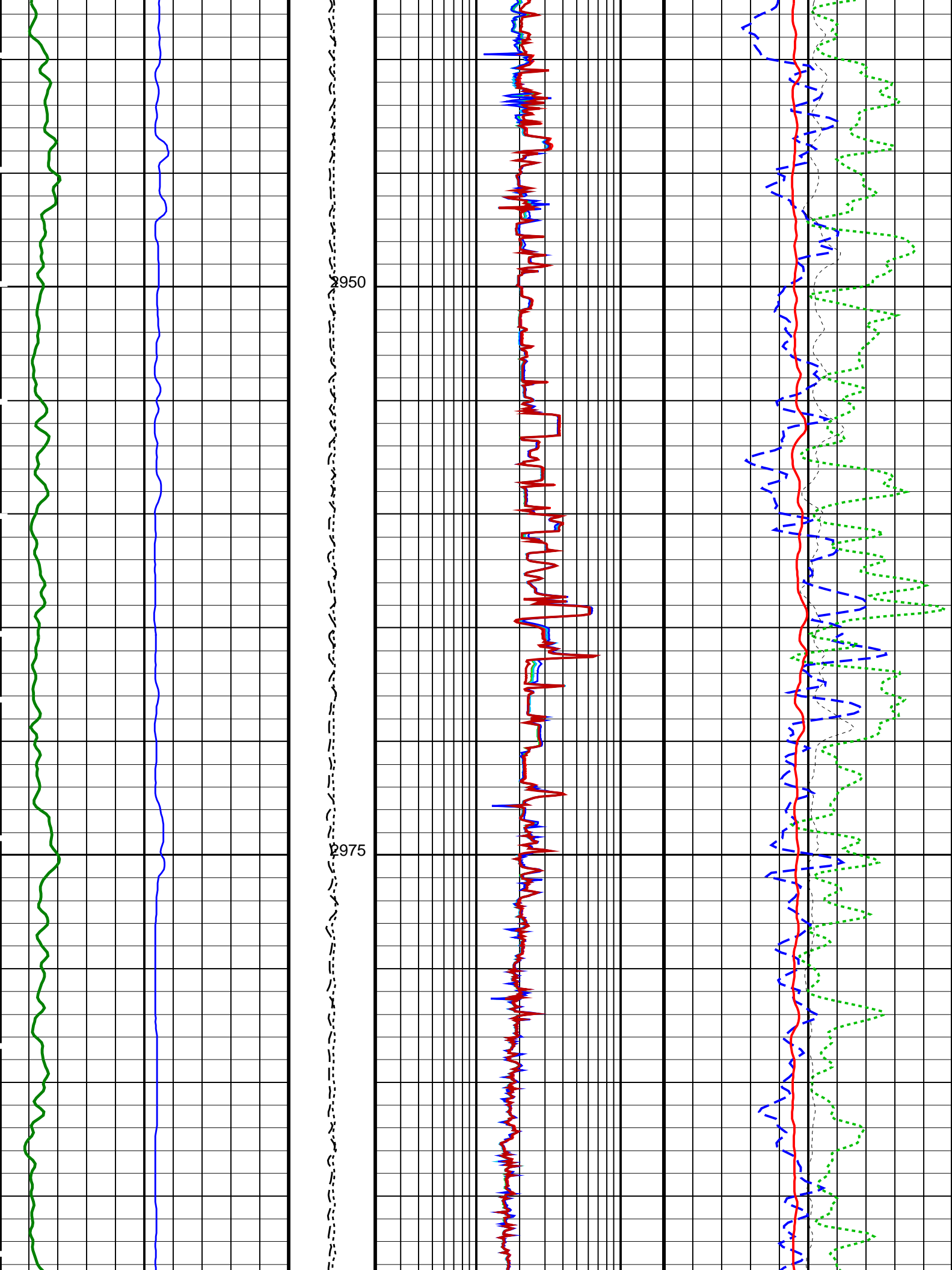
PIP SUMMARY				
Time Mark Every 60 S				

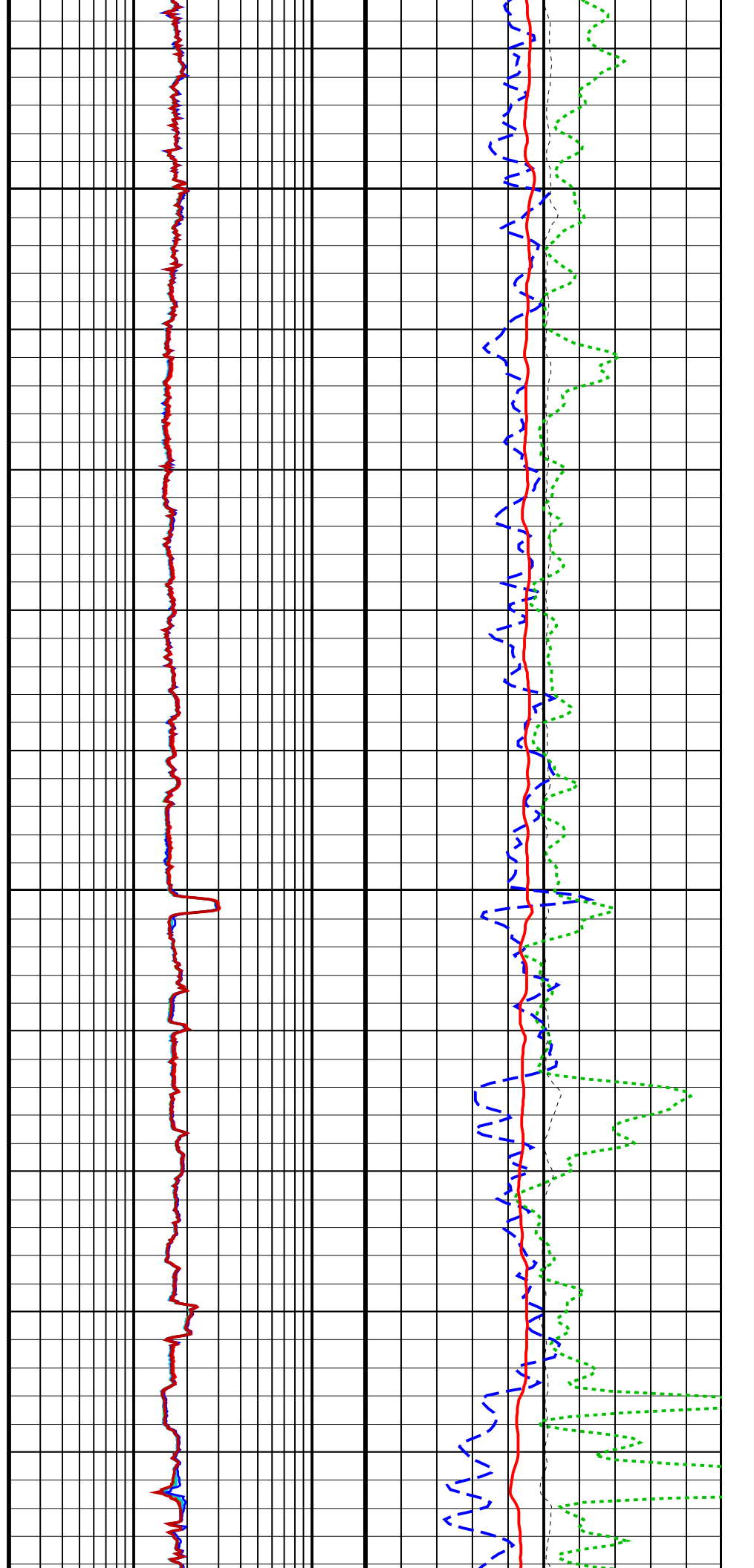
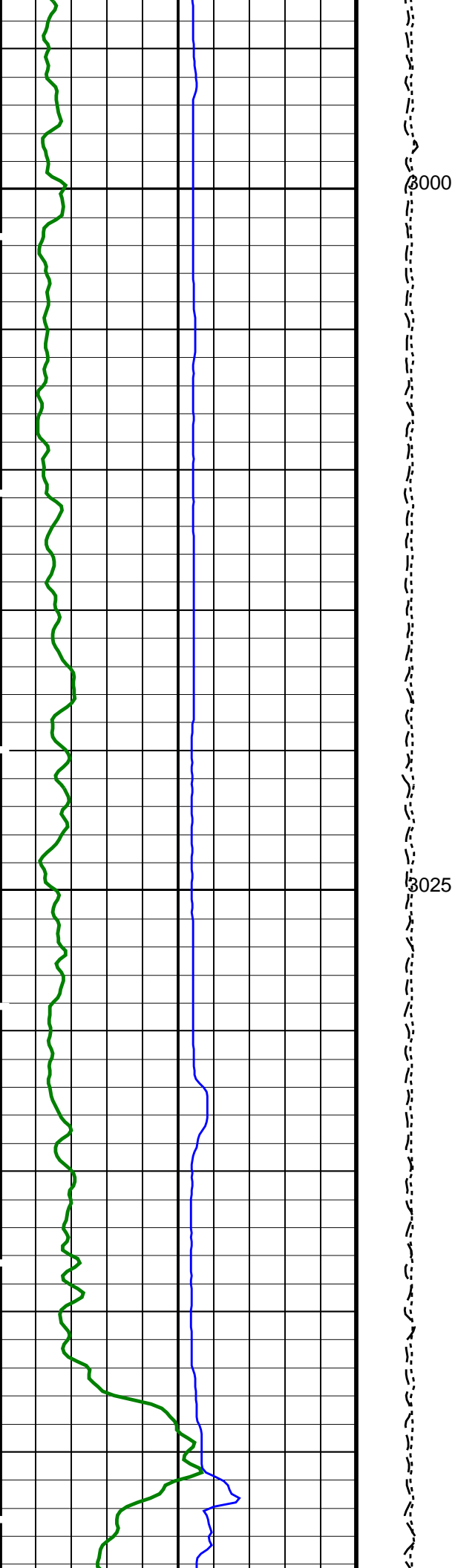
HRLT True Resistivity (RT_HRLT)				
0.2	(OHMM)	20		
HRLT Resistivity 1 (RLA1)				
0.2	(OHMM)	20		
HRLT Resistivity 2 (RLA2)				
0.2	(OHMM)	20	HLDS Bulk Density Correction (DRH)	
			(G/C3)	0.25
HRLT Resistivity 3 (RLA3)				
0.2	(OHMM)	20	HLDS Bulk Density (RHOM)	
			(G/C3)	4

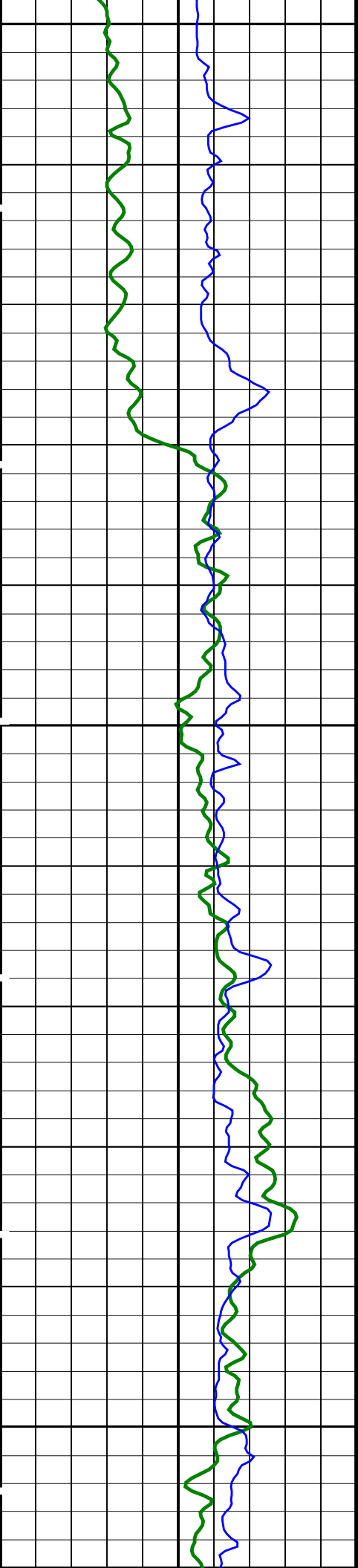








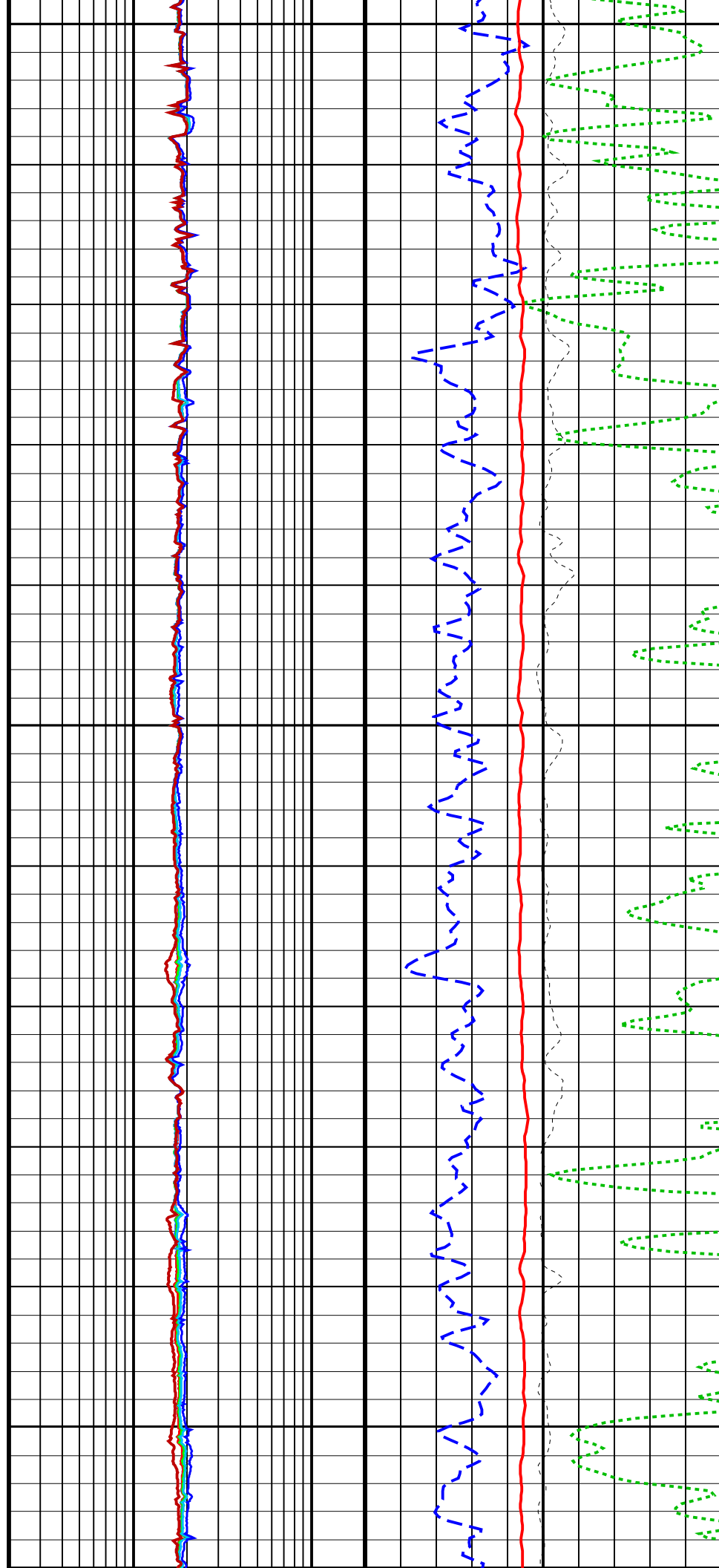


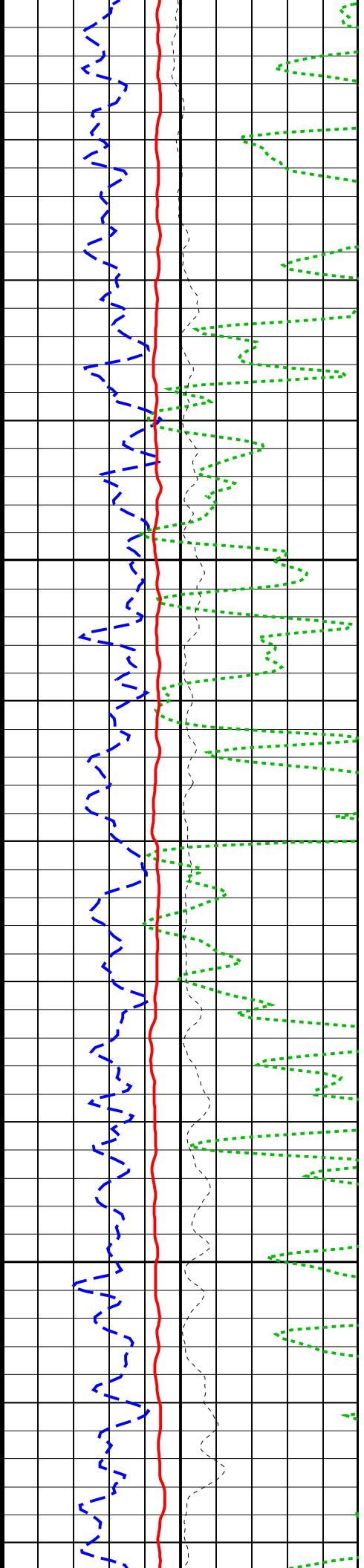
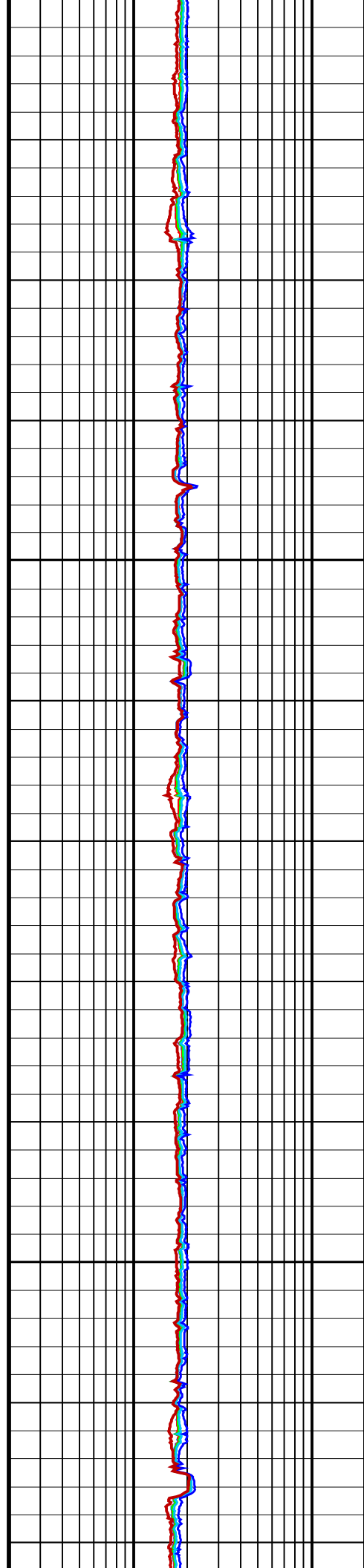
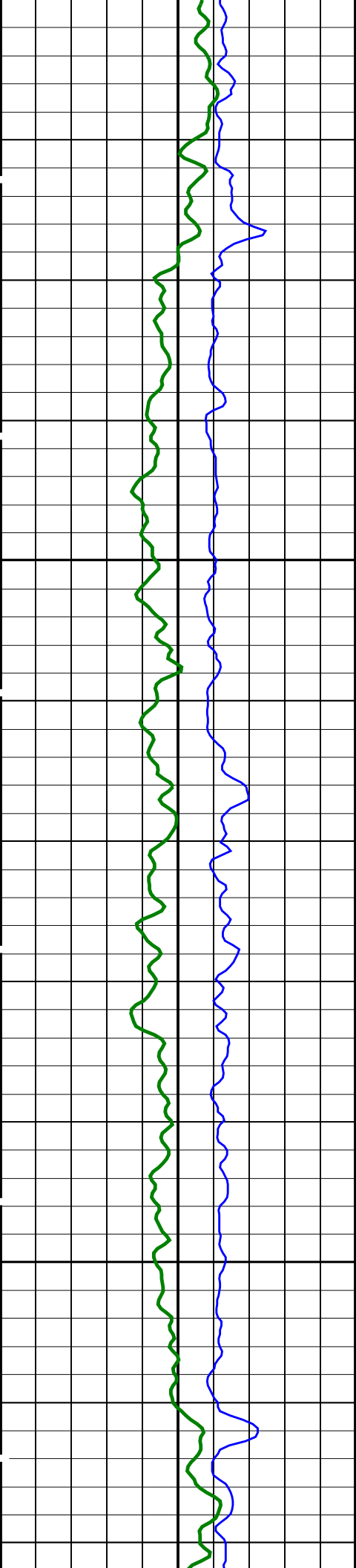


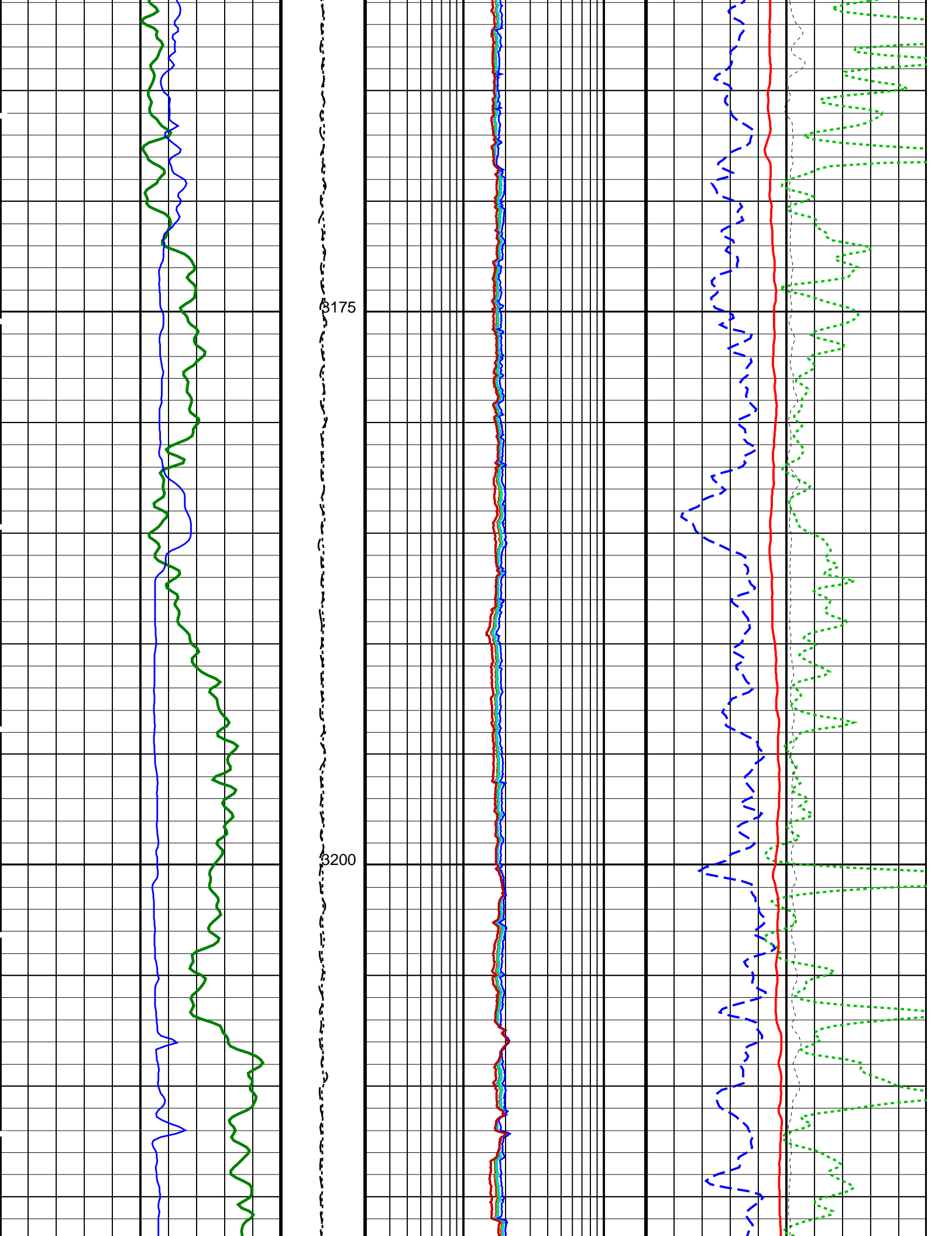
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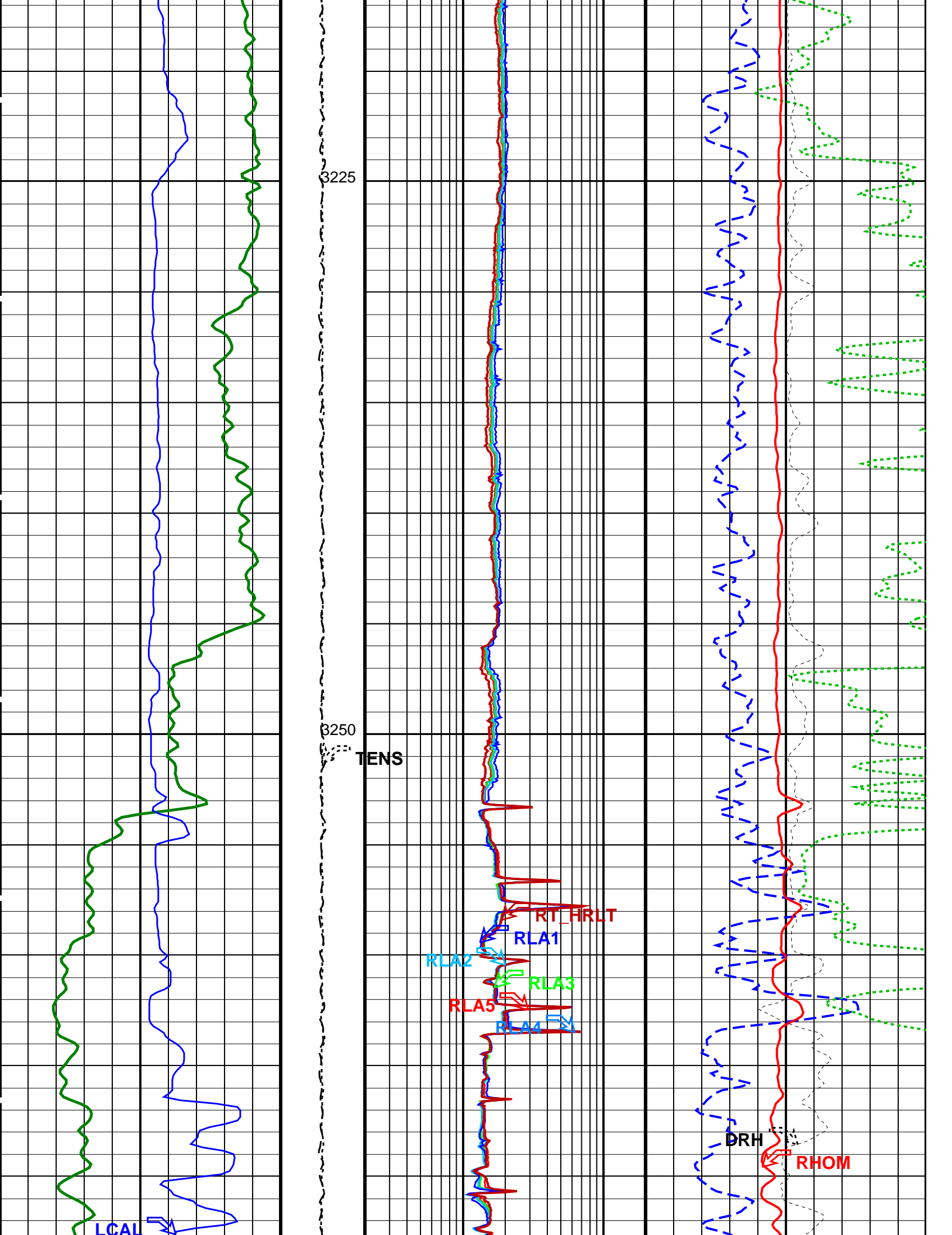
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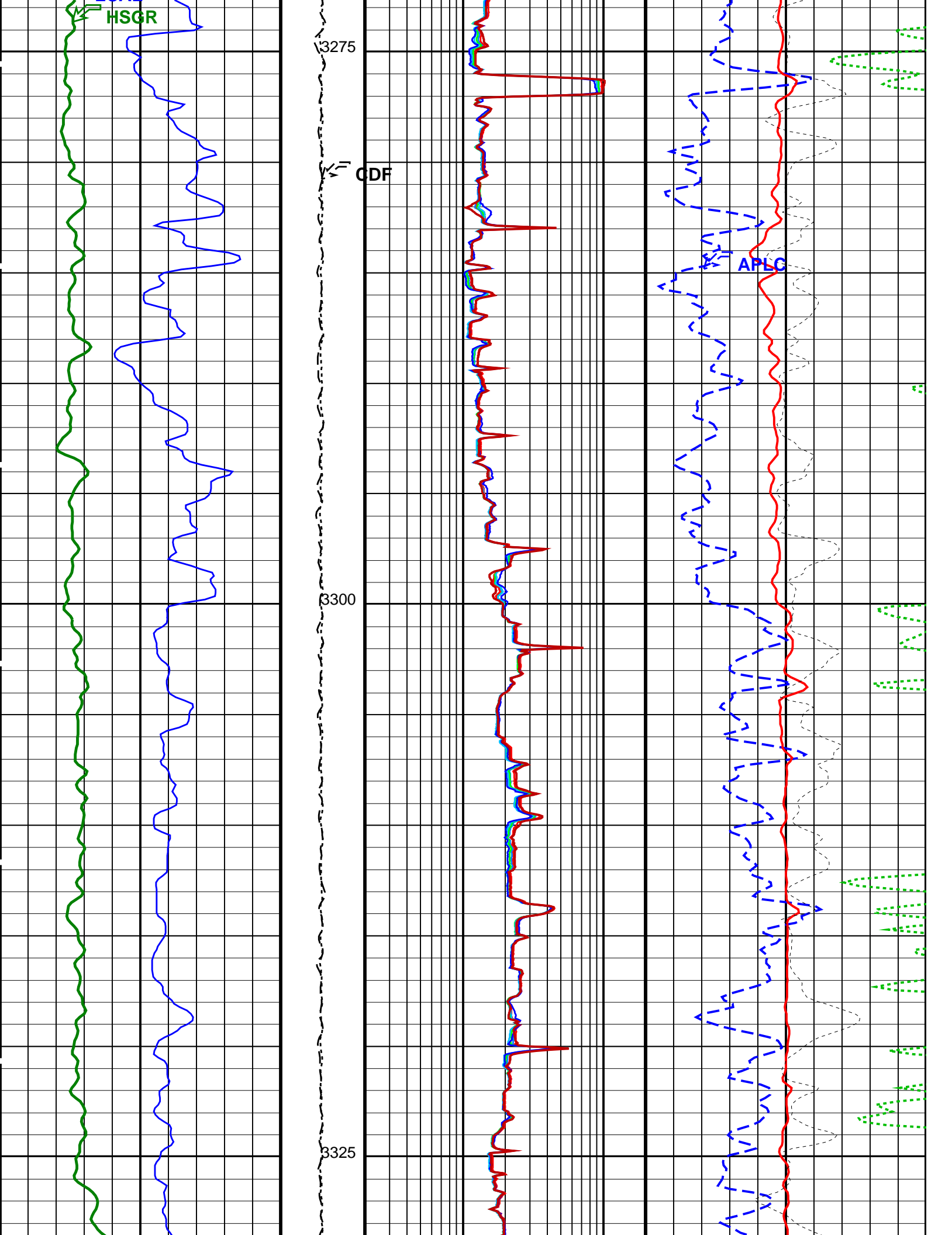
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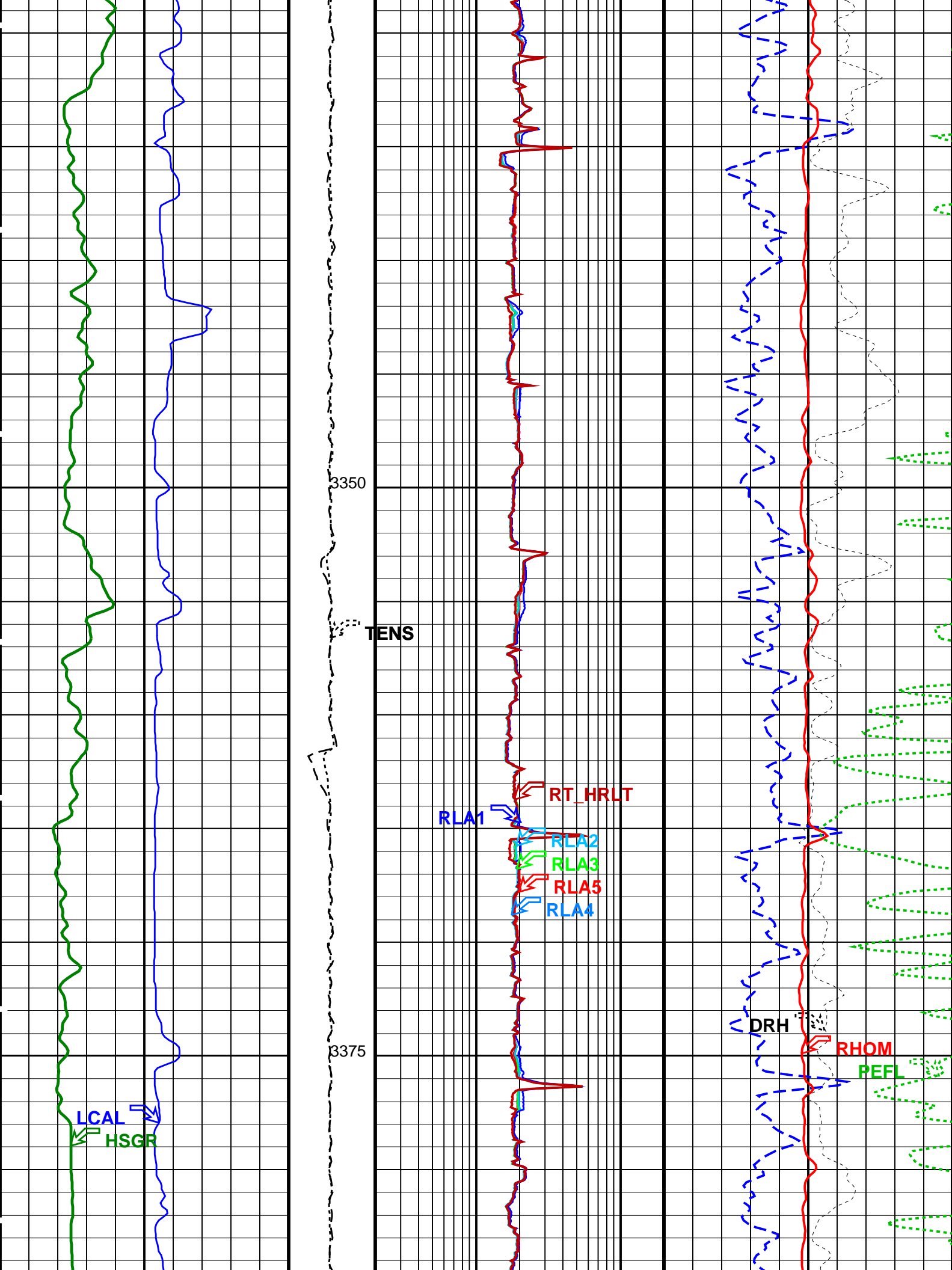


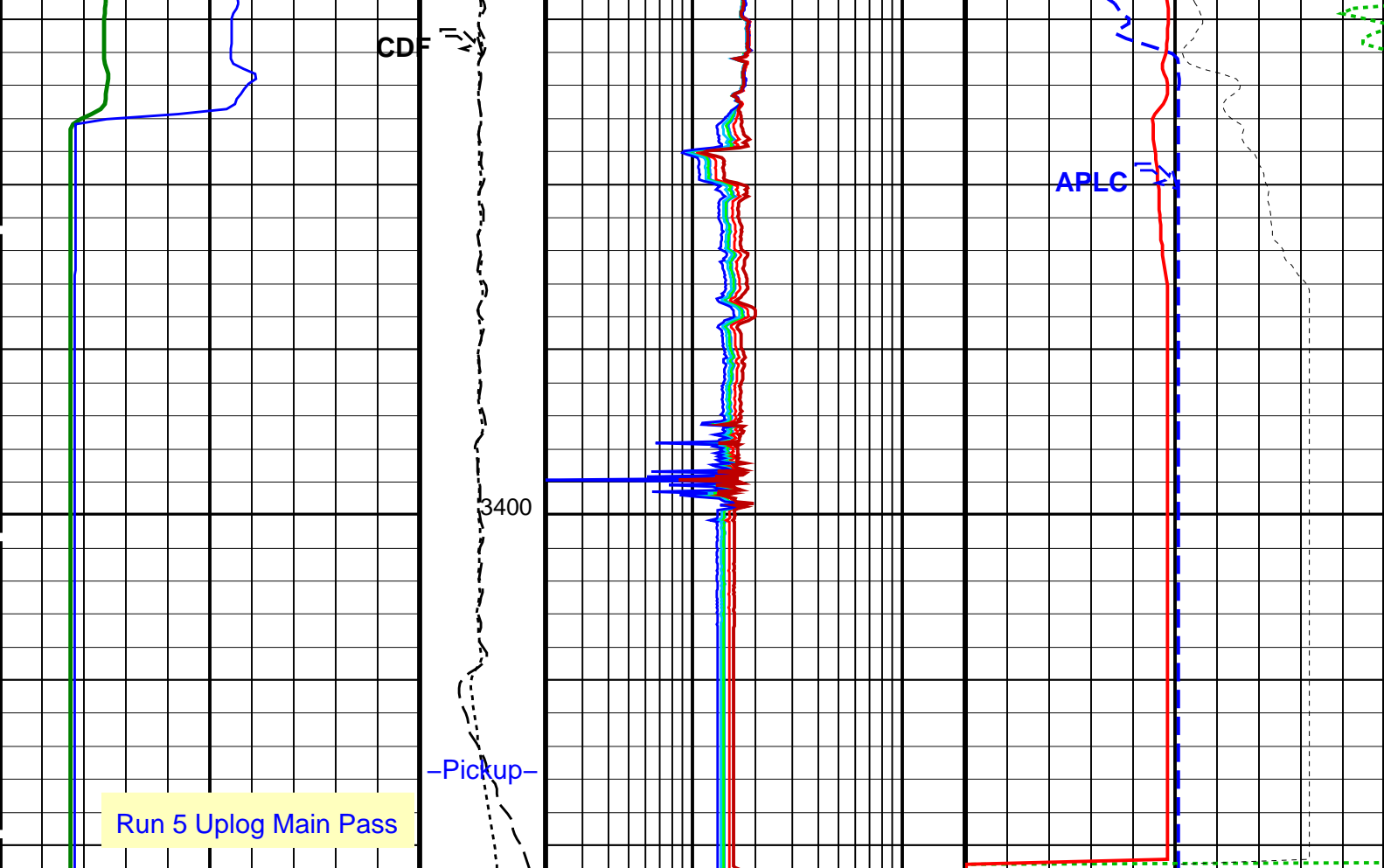












HLDS Caliper (LCAL) (IN)		Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	APS Near/Array Corrected Limestone Porosity (APLC) (PU)	
0	20	10000 0	0.2 20	100	0
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5) (OHMM)	HLDS Long Spaced Photoelectric Effect (PEFL) (-----)	
0	100	3000 0	0.2 20	0	10
			HRLT Resistivity 3 (RLA3) (OHMM)	HLDS Bulk Density (RHOM) (G/C3)	
			0.2 20	0 4	
			HRLT Resistivity 2 (RLA2) (OHMM)	HLDS Bulk Density Correction (DRH) (G/C3)	
			0.2 20	-0.25 0.25	
			HRLT Resistivity 1 (RLA1) (OHMM)		
			0.2 20		
			HRLT True Resistivity (RT_HRLT) (OHMM)		
			0.2 20		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	19.4807	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	80	

FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCVN	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	55	DEGF
HLDS: Hostile Litho-Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.6	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
APS-C: Accelerator-Porosity Tool			
AASD	APS Software Version	5	
ADSO	APS Thermal and Array Detectors High Voltage Setting	1963.18	V
AFSD	APS Array Detectors Data Source Switch	Both	
AHCS	APS Far Detector High Voltage Setting	2080.01	V
AHSS	APS Holesize Correction Source	BS	
AMTY	APS Holesize Correction Switch	ON	
ANSD	APS Environmental Corrections Mud Type	WaterBaseBarite	
ASOS	APS Near Detector High Voltage Setting	1738.35	V
ATSS	APS Standoff Correction Switch	ON	
BHFL_APS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	APS TNPH Borehole Fluid Type	WATER	
BHT	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO_APS	APS TNPH Borehole Salinity Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
DSCO_APS	APS TNPH Density Source Correction Option	MEASURED	
FSAL	Formation Salinity	-50000	PPM
FSCO_APS	APS TNPH Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO_APS	APS TNPH Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO_APS	APS TNPH Mud Cake Correction Option	YES	
MCOR_APS	APS TNPH Mud Correction	BARI	
MWCO_APS	APS TNPH Mud Weight Correction Option	YES	
NARC	APS Near/Array Calibration Ratio	1.07112	
NFRC	APS Near/Far Calibration Ratio	0.896577	
PTCO_APS	APS TNPH Pressure/Temperature Correction Option	NO	
SHT	Surface Hole Temperature	55	DEGF
TNCO_APS	APS TNPH Computation Option	YES	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00059776	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	55	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.16321	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.39619	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	55	DEGF
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	11726	FT
TDD	Total Depth - Driller	3574.00	M
TDL	Total Depth - Logger	3413.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 24-Nov-2017 19:48

OP System Version: 19C0-187

HRLT-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	APS-C	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

Output DLIS Files

DEFAULT	HRLA_LDL_APS_NGS_047LUP	FN:73	PRODUCER	24-Nov-2017 19:48
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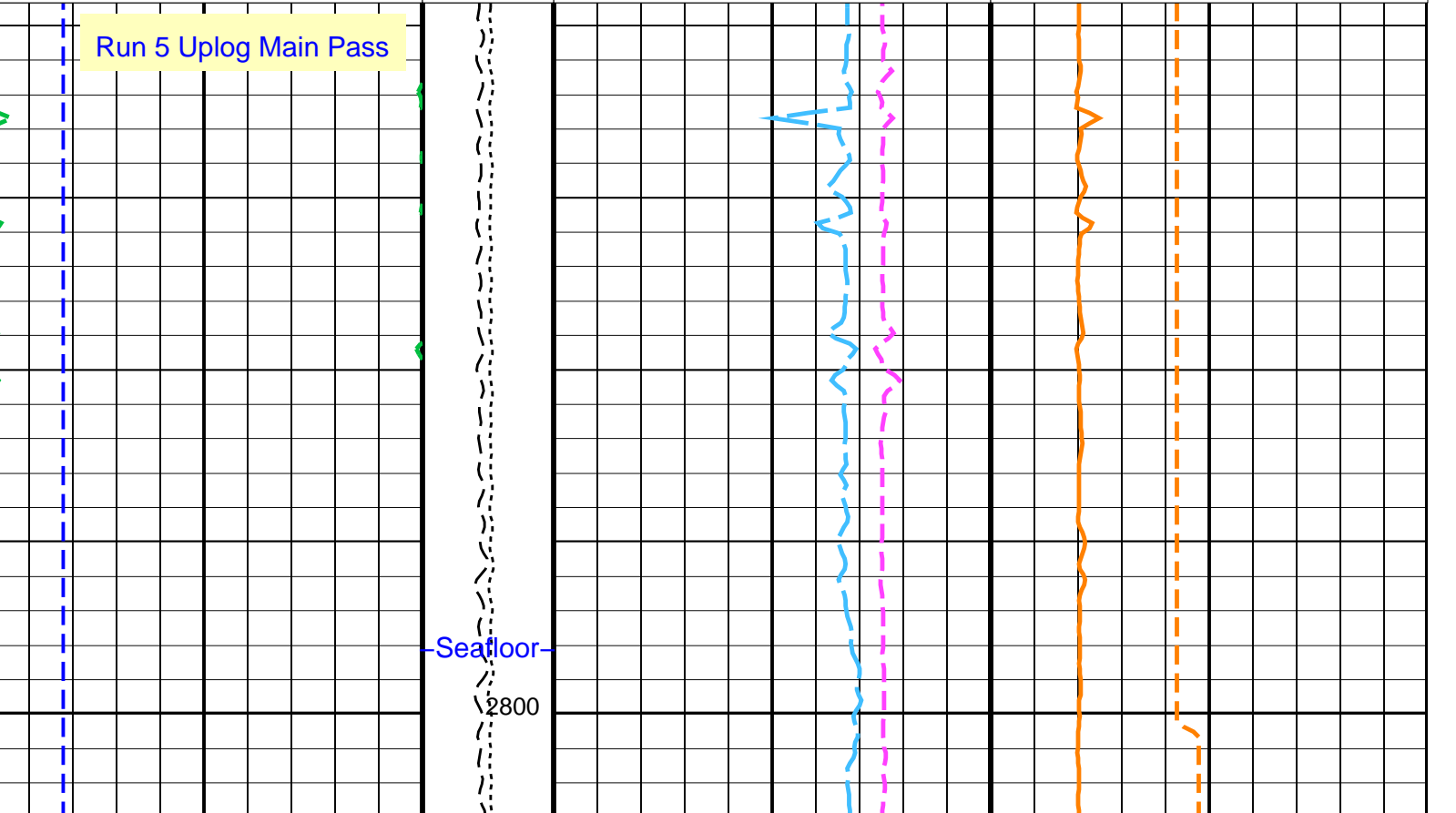
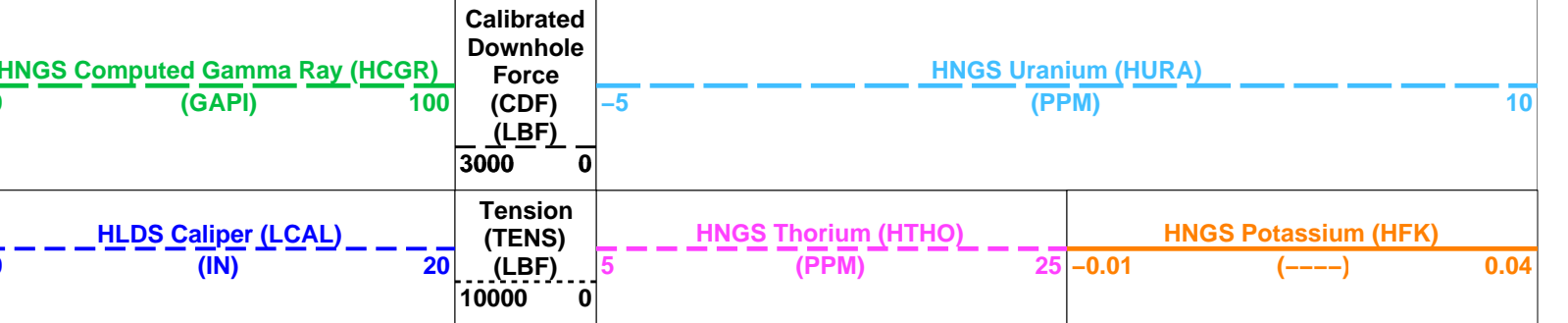
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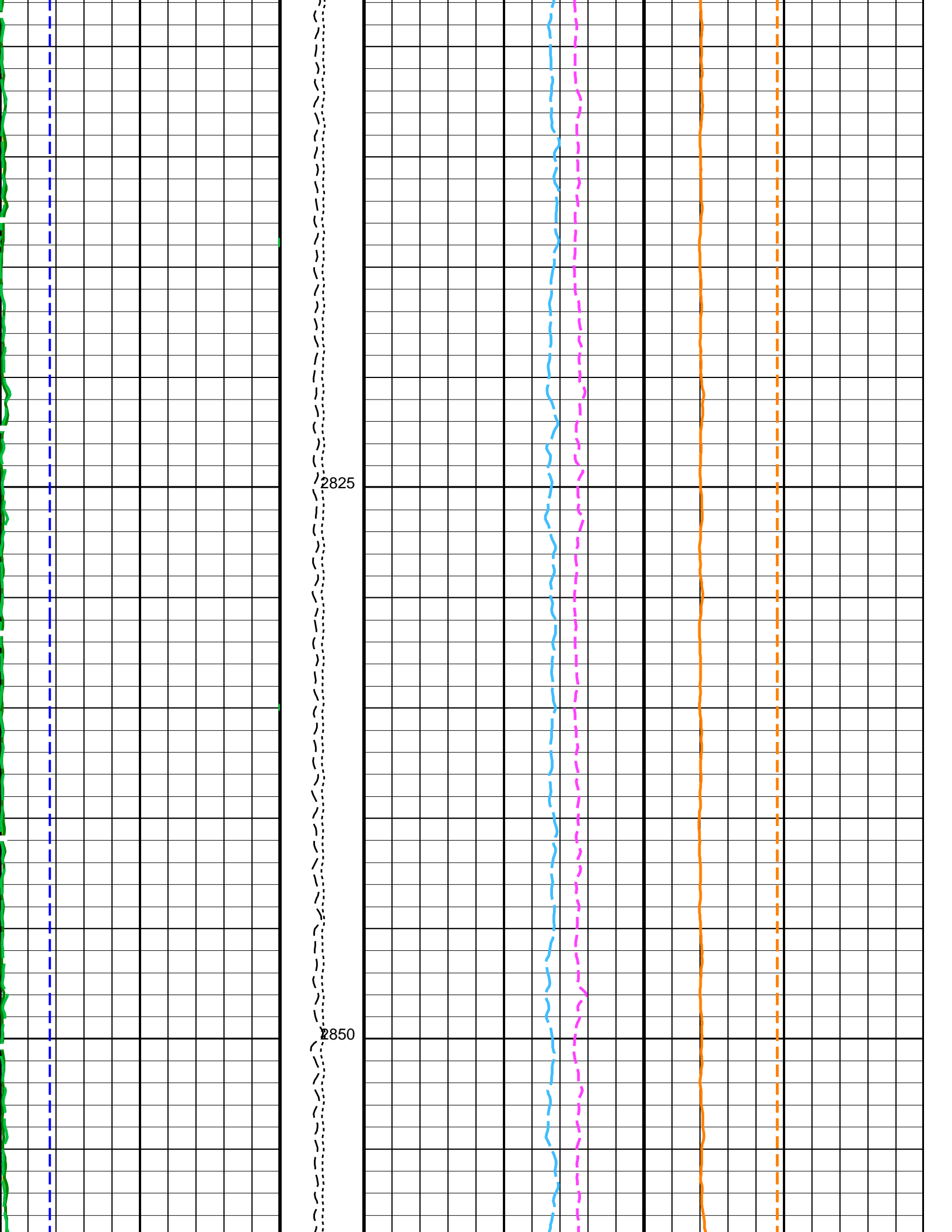
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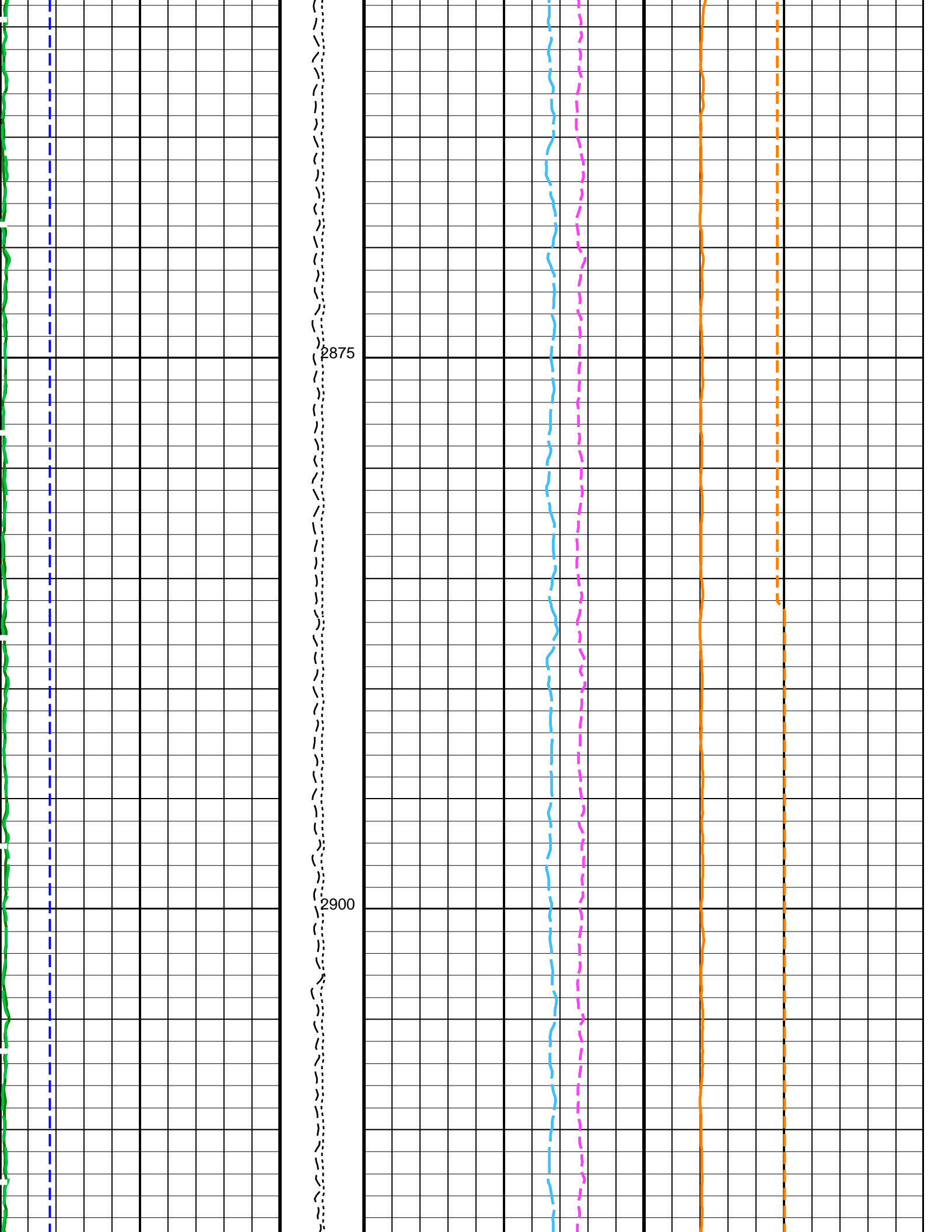
OP System Version: 19C0-187

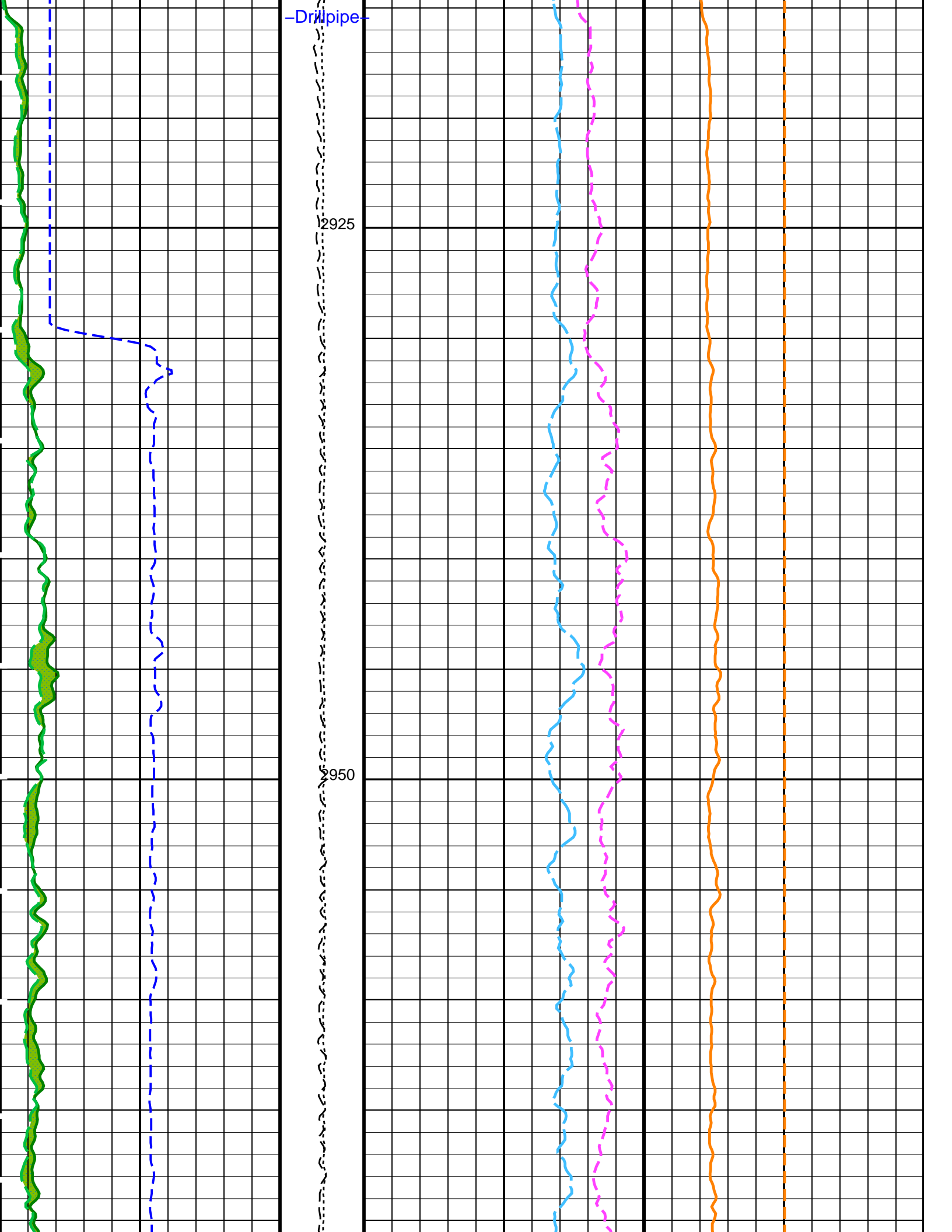
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LDSC-B	19C0-187	APS-C	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

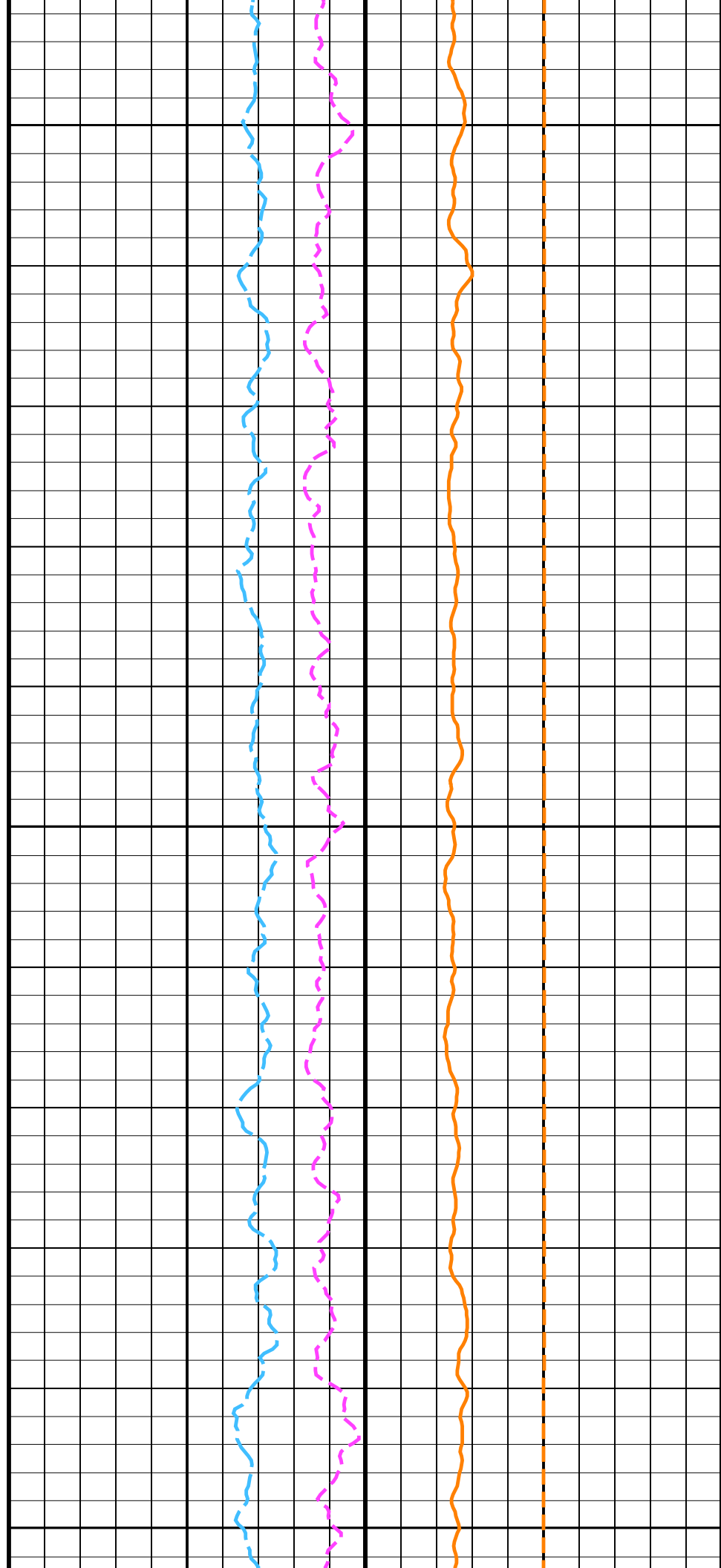
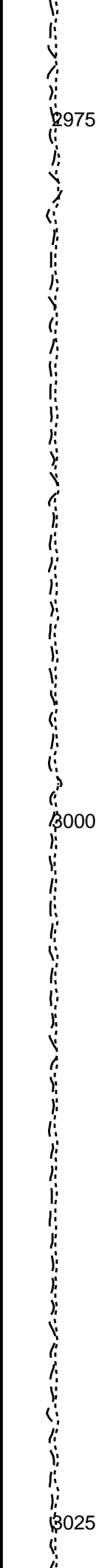
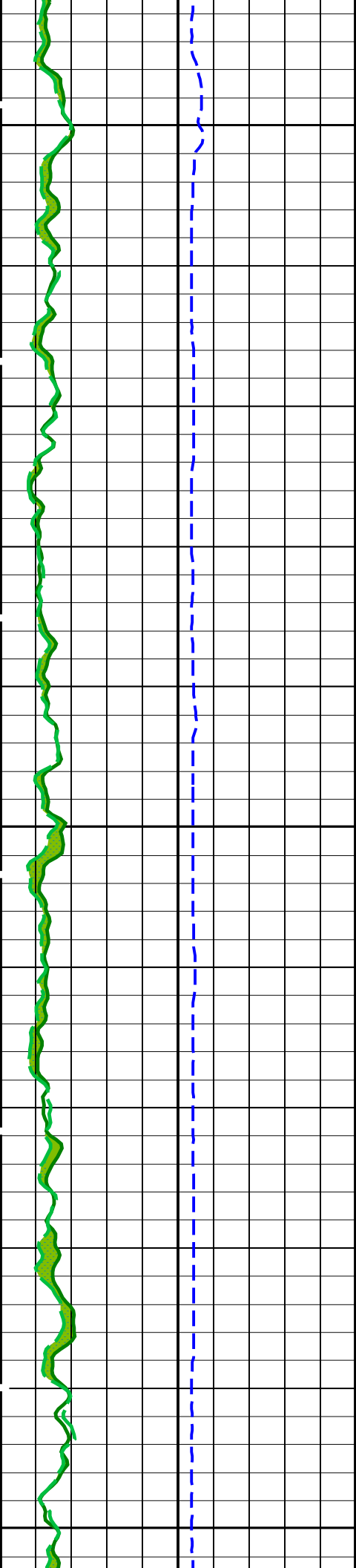
PIP SUMMARY

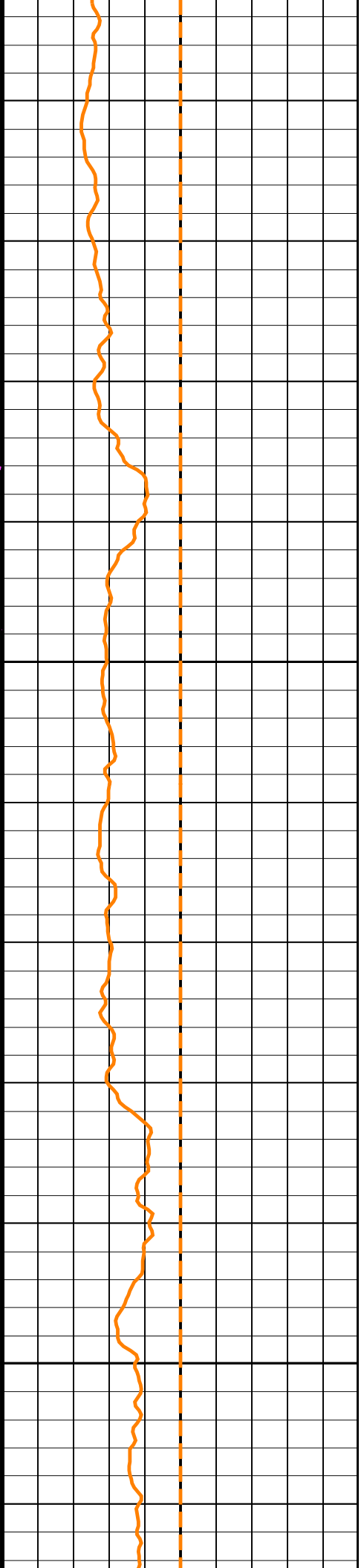
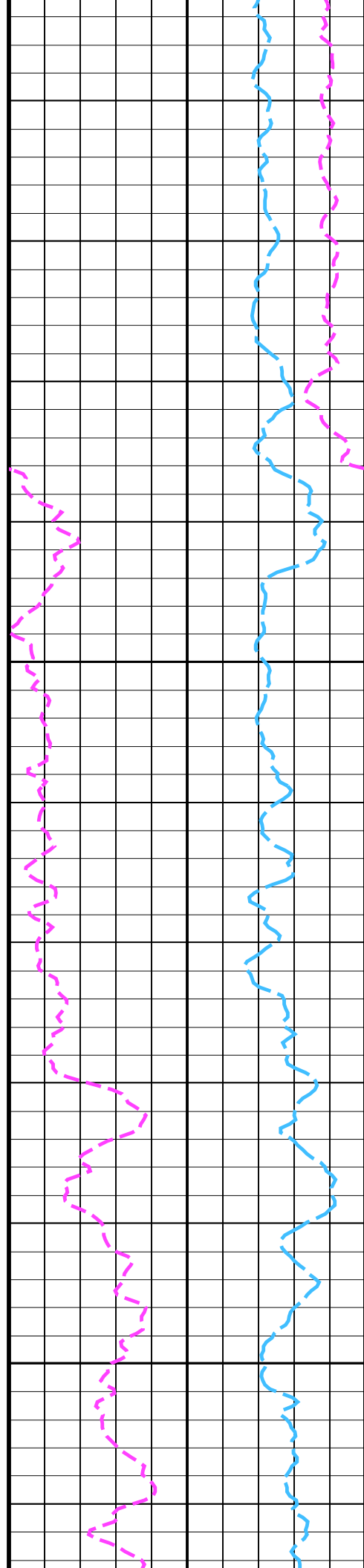
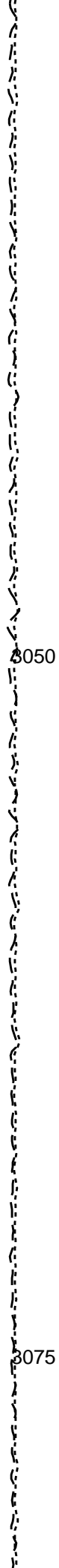
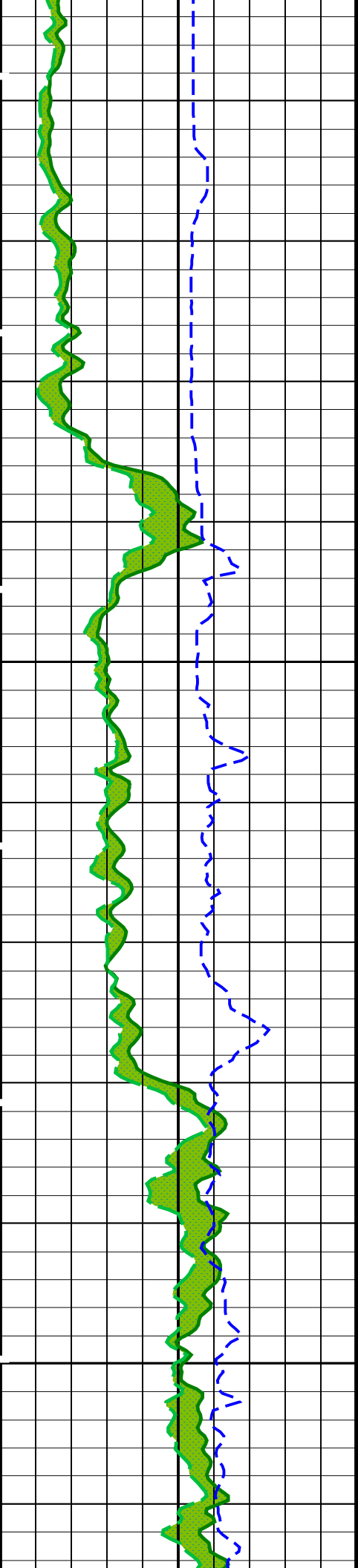


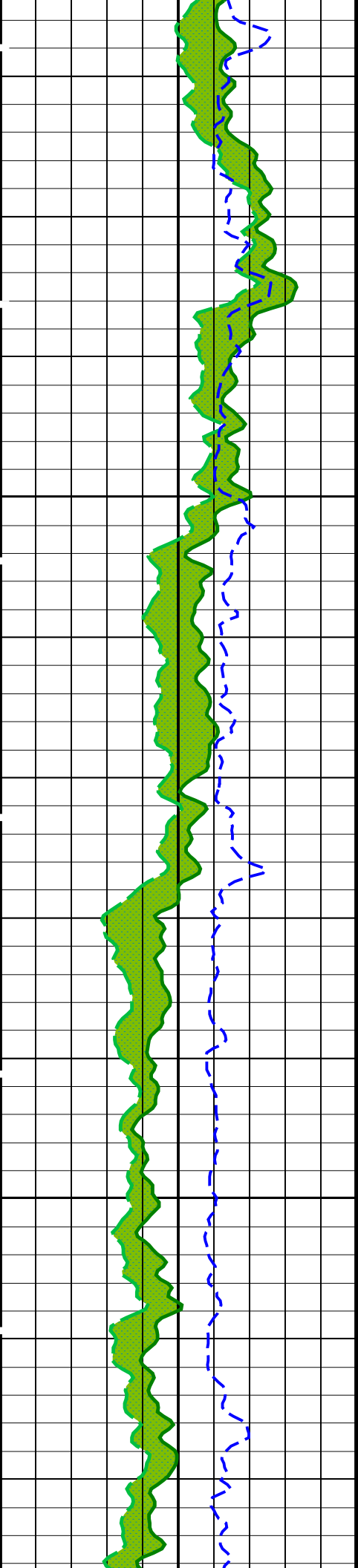






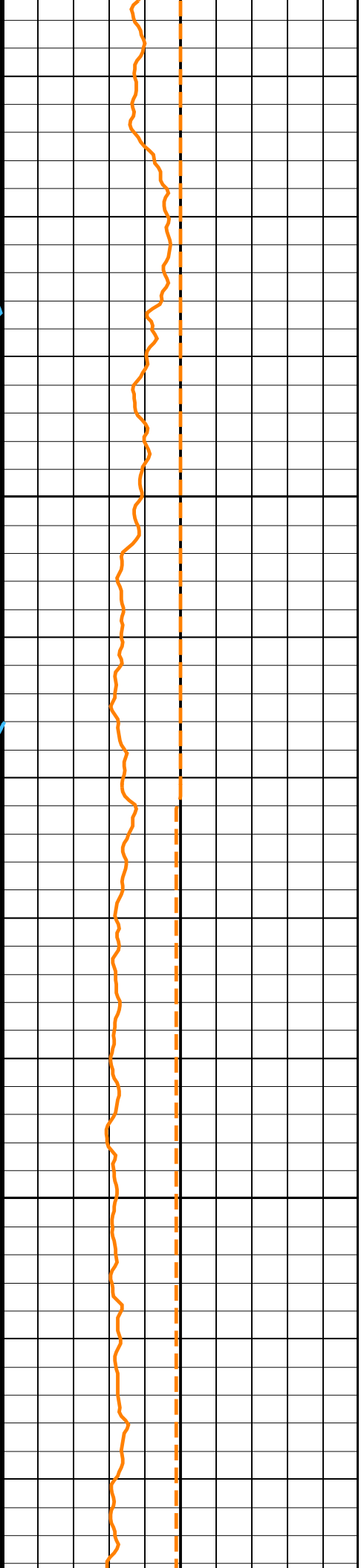
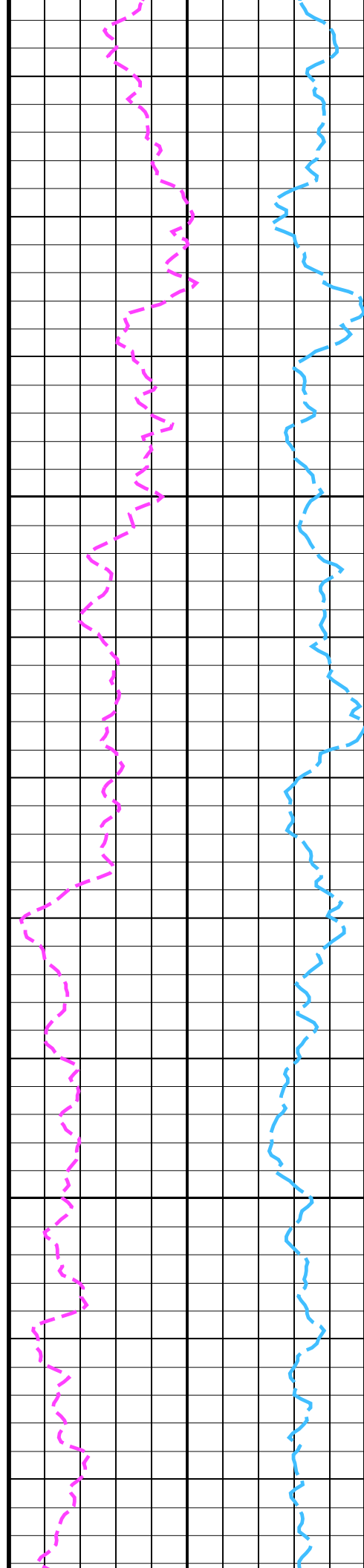


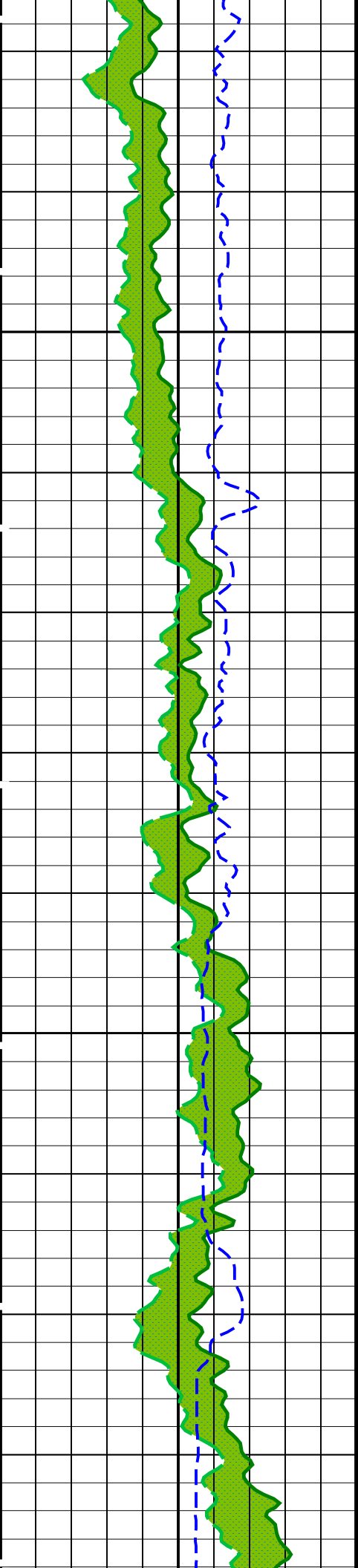




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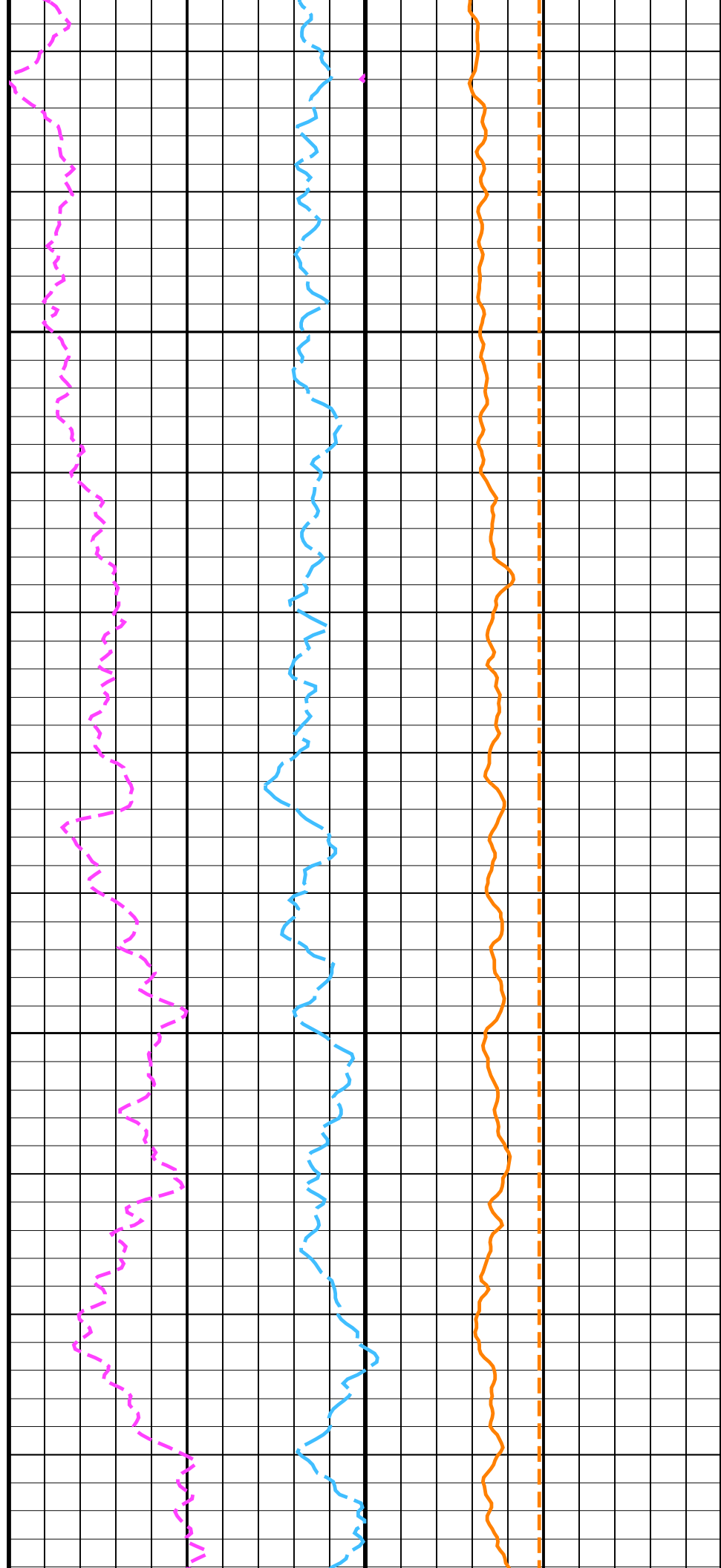
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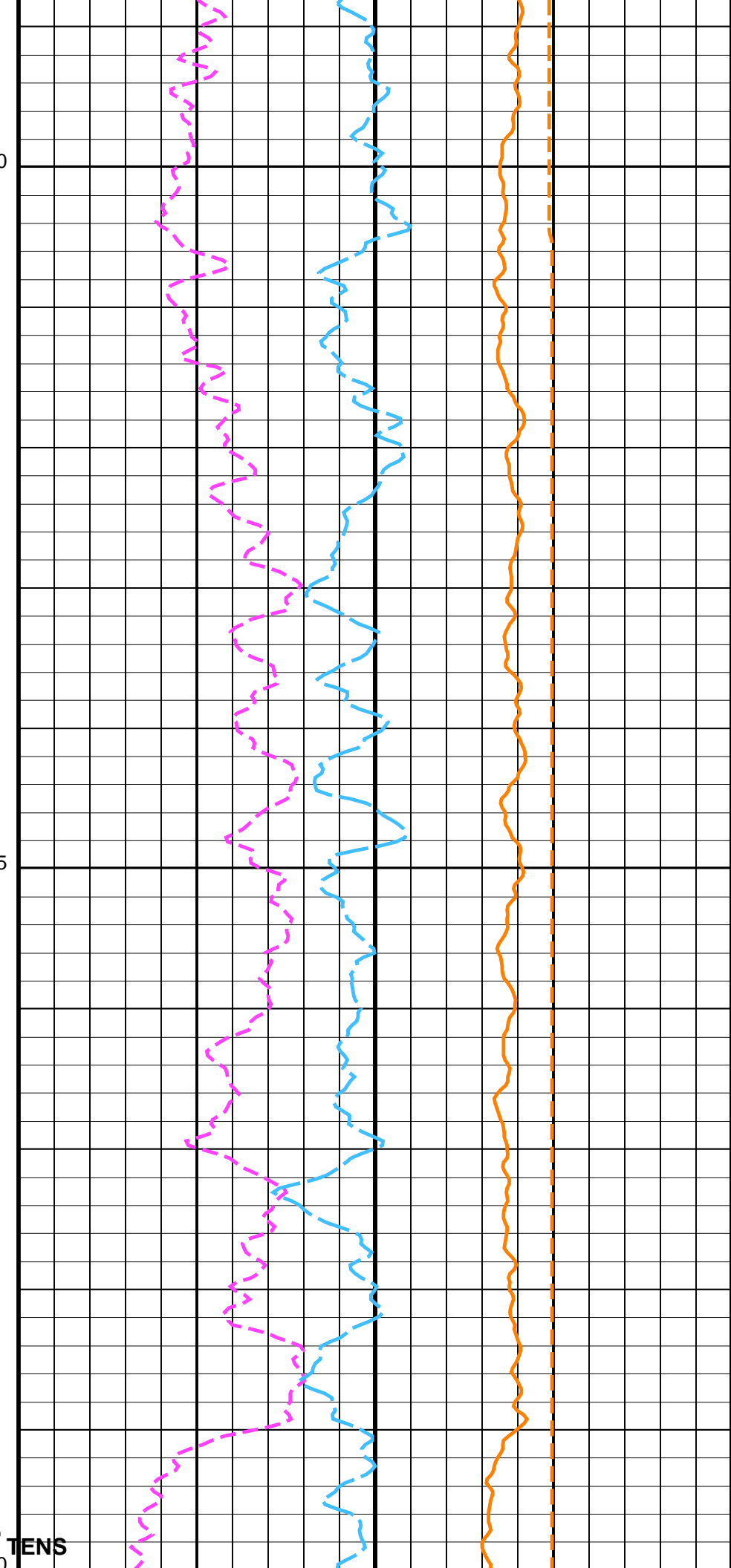
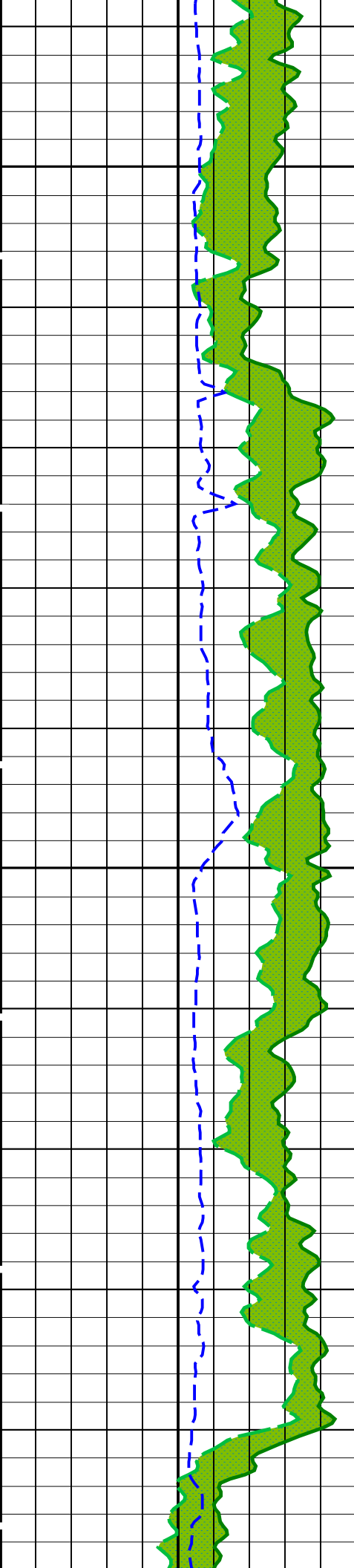


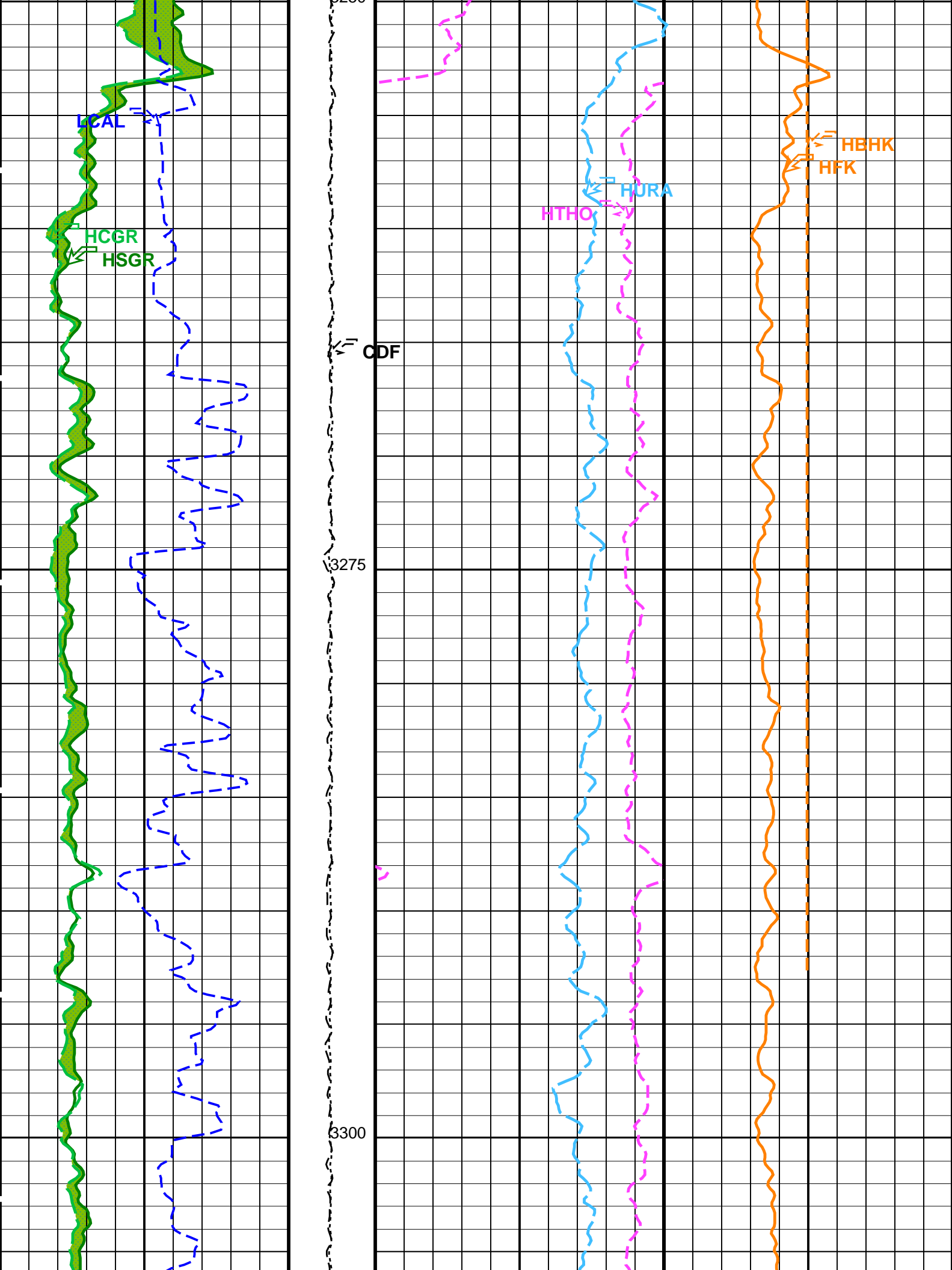


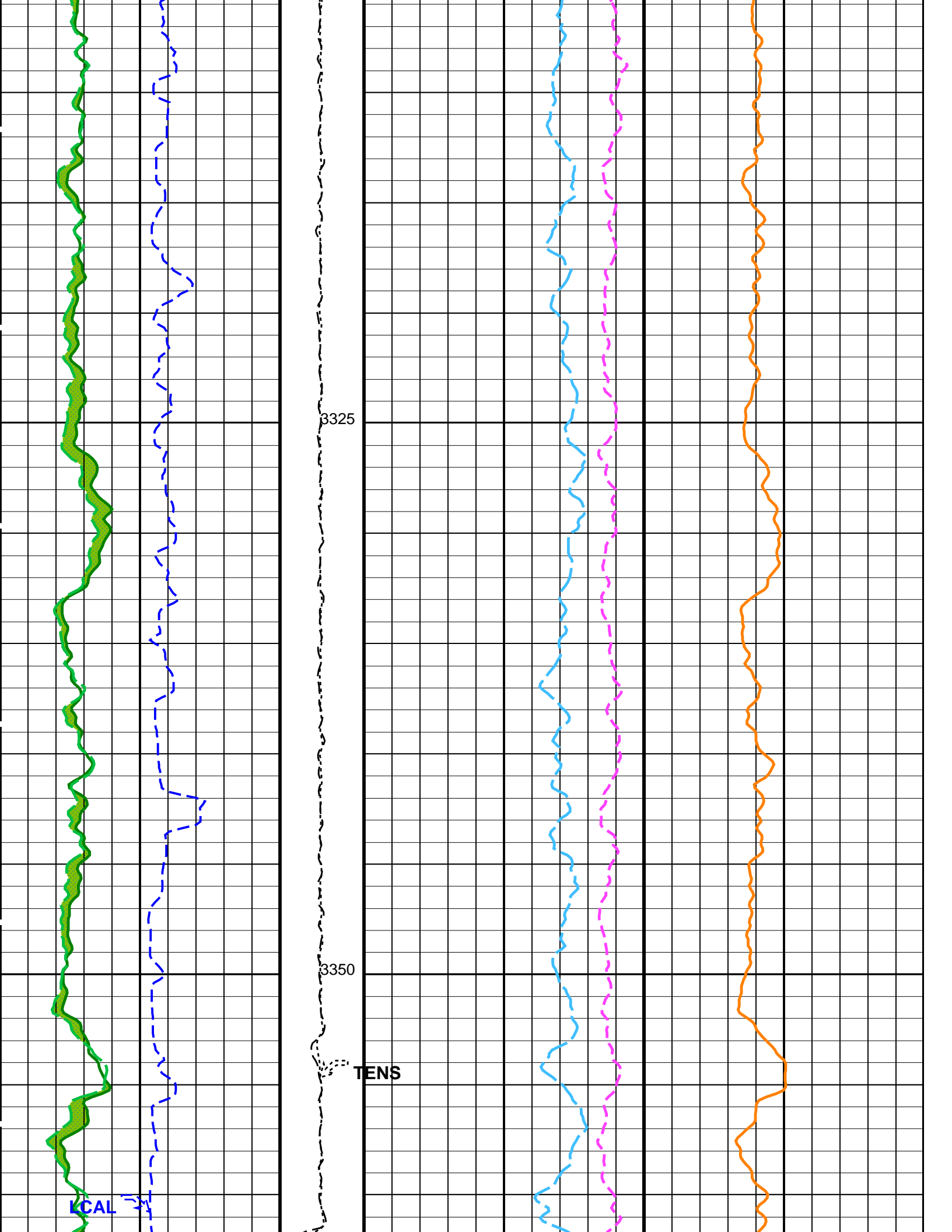
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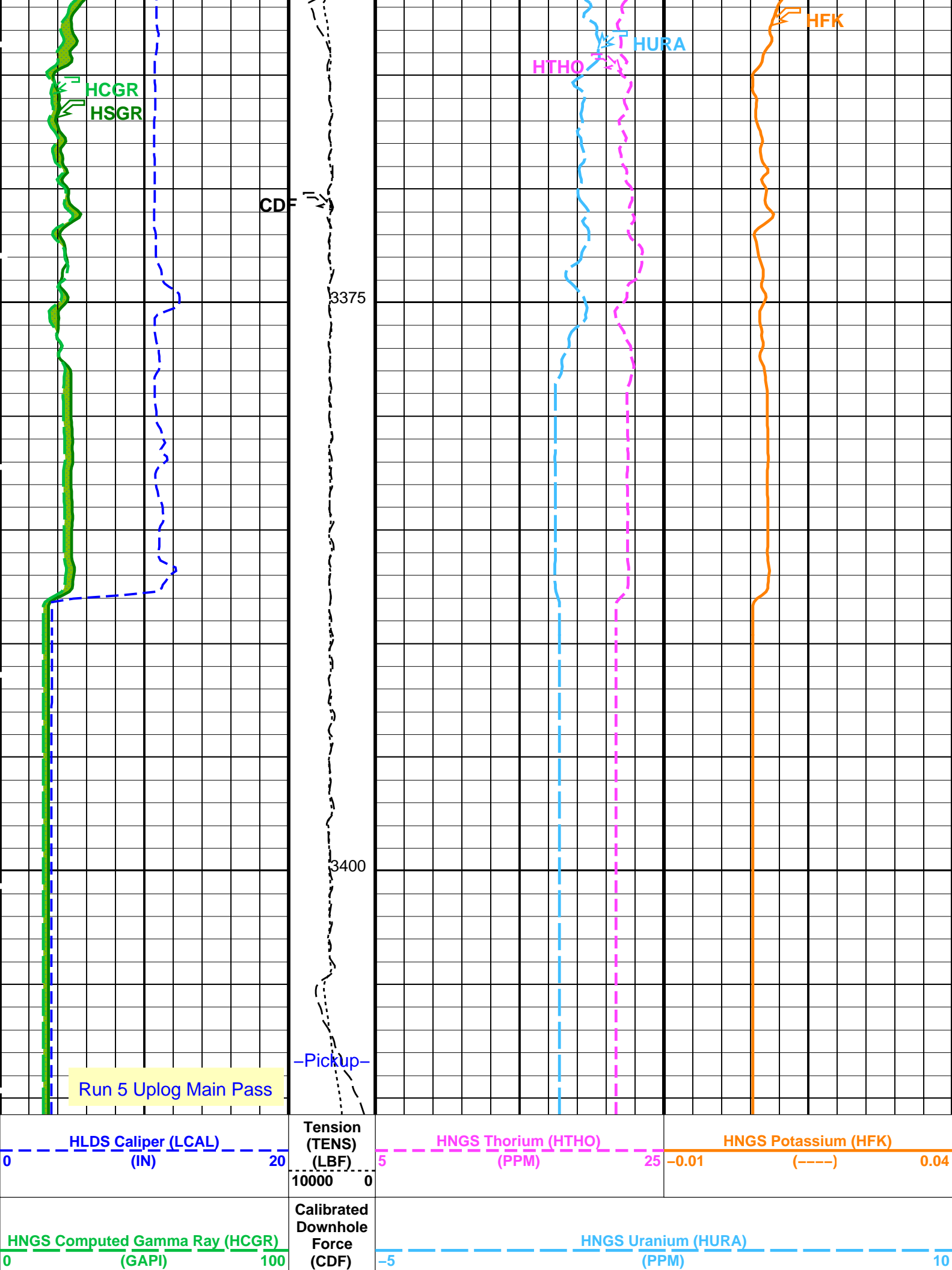
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High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT M0–M1 Voltage Plus – 0	0	N/A	–318.4	–318.4	0.09933	9.681	UV
HRLT M0–M1 Voltage Plus – 1	0	N/A	–330.8	–329.3	1.516	9.681	UV
HRLT M0–M1 Voltage Plus – 2	0	N/A	–338.7	–336.7	2.042	9.681	UV
HRLT M0–M1 Voltage Plus – 3	0	N/A	–329.2	–327.7	1.509	9.681	UV
HRLT M0–M1 Voltage Plus – 4	0	N/A	–320.0	–319.5	0.5161	9.681	UV
HRLT M0–M1 Voltage Plus – 5	0	N/A	–321.8	–321.3	0.4704	9.681	UV
HRLT M0–M1 Voltage Plus – 6	0	N/A	321.5	318.6	–2.845	9.681	UV
HRLT M0–M1 Voltage Plus – 7	0	N/A	–322.7	–322.7	0	9.681	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT M1–M2 Voltage Plus – 0	0	N/A	1740	1737	–2.993	53.42	UV
HRLT M1–M2 Voltage Plus – 1	0	N/A	1815	1804	–10.96	53.42	UV
HRLT M1–M2 Voltage Plus – 2	0	N/A	1850	1837	–13.45	53.42	UV
HRLT M1–M2 Voltage Plus – 3	0	N/A	1797	1786	–11.03	53.42	UV
HRLT M1–M2 Voltage Plus – 4	0	N/A	1745	1740	–5.134	53.42	UV
HRLT M1–M2 Voltage Plus – 5	0	N/A	1756	1751	–5.190	53.42	UV
HRLT M1–M2 Voltage Plus – 6	0	N/A	–1771	–1753	17.83	53.42	UV
HRLT M1–M2 Voltage Plus – 7	0	N/A	1781	1781	0	53.42	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT M2–M3 Voltage Plus – 0	0	N/A	1731	1729	–2.432	53.42	UV
HRLT M2–M3 Voltage Plus – 1	0	N/A	1817	1805	–11.58	53.42	UV
HRLT M2–M3 Voltage Plus – 2	0	N/A	1854	1841	–13.66	53.42	UV
HRLT M2–M3 Voltage Plus – 3	0	N/A	1805	1794	–10.55	53.42	UV
HRLT M2–M3 Voltage Plus – 4	0	N/A	1747	1742	–4.904	53.42	UV
HRLT M2–M3 Voltage Plus – 5	0	N/A	1759	1754	–4.763	53.42	UV
HRLT M2–M3 Voltage Plus – 6	0	N/A	–1762	–1744	18.25	53.42	UV
HRLT M2–M3 Voltage Plus – 7	0	N/A	1781	1781	0	53.42	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V34
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT A3–A4 Voltage Plus – 0	0	N/A	68600	68540	–58.96	2100	UV
HRLT A3–A4 Voltage Plus – 1	0	N/A	71800	71430	–376.7	2100	UV
HRLT A3–A4 Voltage Plus – 2	0	N/A	73570	73100	–471.6	2100	UV
HRLT A3–A4 Voltage Plus – 3	0	N/A	71840	71500	–343.8	2100	UV
HRLT A3–A4 Voltage Plus – 4	0	N/A	69520	69380	–131.7	2100	UV
HRLT A3–A4 Voltage Plus – 5	0	N/A	70010	69860	–150.8	2100	UV
HRLT A3–A4 Voltage Plus – 6	0	N/A	–68660	–68020	637.1	2100	UV
HRLT A3–A4 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V45
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT A4–A5 Voltage Plus – 0	0	N/A	68670	68630	–46.42	2100	UV
HRLT A4–A5 Voltage Plus – 1	0	N/A	72010	71650	–364.8	2100	UV
HRLT A4–A5 Voltage Plus – 2	0	N/A	73760	73290	–464.2	2100	UV
HRLT A4–A5 Voltage Plus – 3	0	N/A	72010	71650	–361.3	2100	UV
HRLT A4–A5 Voltage Plus – 4	0	N/A	69640	69490	–147.7	2100	UV
HRLT A4–A5 Voltage Plus – 5	0	N/A	70110	69960	–152.7	2100	UV
HRLT A4–A5 Voltage Plus – 6	0	N/A	–68870	–68230	636.2	2100	UV
HRLT A4–A5 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V56
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT A5–A6 Voltage Plus – 0	0	N/A	68520	68490	–37.63	2100	UV
HRLT A5–A6 Voltage Plus – 1	0	N/A	71860	71470	–387.7	2100	UV
HRLT A5–A6 Voltage Plus – 2	0	N/A	73590	73140	–448.6	2100	UV
HRLT A5–A6 Voltage Plus – 3	0	N/A	71850	71500	–349.1	2100	UV
HRLT A5–A6 Voltage Plus – 4	0	N/A	69500	69350	–147.7	2100	UV
HRLT A5–A6 Voltage Plus – 5	0	N/A	69980	69850	–135.9	2100	UV
HRLT A5–A6 Voltage Plus – 6	0	N/A	–68700	–68070	633.6	2100	UV
HRLT A5–A6 Voltage Plus – 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT VTP
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT Torpedo–M0 Voltage – 0	0	N/A	–68050	–68010	34.14	2100	UV
HRLT Torpedo–M0 Voltage – 1	0	N/A	–71660	–71280	372.9	2100	UV
HRLT Torpedo–M0 Voltage – 2	0	N/A	–73440	–72980	458.3	2100	UV
HRLT Torpedo–M0 Voltage – 3	0	N/A	–71770	–71420	358.0	2100	UV
HRLT Torpedo–M0 Voltage – 4	0	N/A	–69450	–69320	132.1	2100	UV
HRLT Torpedo–M0 Voltage – 5	0	N/A	–69930	–69800	128.6	2100	UV
HRLT Torpedo–M0 Voltage – 6	0	N/A	68460	67840	–625.0	2100	UV
HRLT Torpedo–M0 Voltage – 7	0	N/A	–70000	–70000	0	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT VBD
Before: 24–Nov–2017 17:04 After: 24–Nov–2017 22:15

HRLT Bridle#9–M0 Voltage – 0	0	N/A	–68090	–68060	24.56	2100	UV
HRLT Bridle#9–M0 Voltage – 1	0	N/A	–71740	–71380	359.0	2100	UV
HRLT Bridle#9–M0 Voltage – 2	0	N/A	–73520	–73080	440.3	2100	UV

HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71840	-71500	336.3	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69500	-69380	120.0	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69960	-69840	124.9	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68550	67930	-628.3	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	-70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 24-Nov-2017 17:04 After: 24-Nov-2017 22:15

HRLT Source Current Plus - 0	0	N/A	284.0	284.0	0.005219	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	281.1	0	8.520	UA

High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV

Before: 24-Nov-2017 17:04 After: 24-Nov-2017 22:15

HRLT Vertical Voltage PI - 0	0	N/A	-320.3	-320.1	0.2358	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-325.7	-323.9	1.788	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-332.2	-329.9	2.341	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-321.1	-319.4	1.673	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-309.1	-308.4	0.7391	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.9	-325.1	0.7798	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	329.0	326.0	-3.027	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	-322.7	0	9.681	UV

Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement

Master: 25-Sep-2017 23:25 Before: 1-Nov-2017 4:53 After: 23-Oct-2017 13:14

SS Cs Resolution Bkg	9.000	8.040	8.022	7.896	-0.1260	1.800	%
LS Cs Resolution Bkg	9.000	8.146	8.143	8.163	0.01940	1.800	%
LSW1 Background	100.0	64.16	64.43	63.76	-0.6701	3.000	CPS
LSW2 Background	100.0	60.11	59.84	58.59	-1.242	3.000	CPS
LSW3 Background	200.0	130.3	131.6	129.4	-2.199	6.000	CPS
LSW4 Background	250.0	160.5	159.5	157.8	-1.642	7.500	CPS
LSW5 Background	600.0	364.8	365.3	365.4	0.1281	18.00	CPS
SSW1 Background	100.0	72.43	72.59	71.58	-1.013	3.000	CPS
SSW2 Background	200.0	129.4	129.0	129.2	0.1391	6.000	CPS
SSW3 Background	500.0	348.7	347.2	346.4	-0.7346	15.00	CPS
SSW4 Background	270.0	180.4	178.9	179.9	1.037	8.100	CPS
SSW5 Background	200.0	130.3	130.1	131.1	1.002	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement

Master: 25-Sep-2017 23:51

LSW1 Aluminum	600.0	510.2	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	739.5	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	888.4	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	445.5	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	411.4	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2381	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6444	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	8933	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3653	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	444.5	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement

Master: 25-Sep-2017 23:46

LSW1 Iron	400.0	346.9	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	593.4	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	777.9	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	401.6	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	376.3	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1735	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5380	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8127	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3318	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	389.8	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 10-Oct-2017 0:01

HLDS Caliper Small Ring	12.00	N/A	15.97	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	20.08	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 25-Sep-2017 23:19 Before: 24-Nov-2017 17:08 After: 24-Nov-2017 22:31

Near Det Bkg Cntrate	30.00	30.87	32.04	32.54	0.5006	N/A	CPS
Far Det Bkg Cntrate	30.00	33.60	34.66	32.99	-1.669	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	28.13	29.38	29.31	-0.06673	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	29.86	28.73	29.01	0.2836	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	32.97	33.10	31.99	-1.111	N/A	CPS

Accelerator–Porosity Tool Wellsite Calibration – Calibration Ratios

Master: 25-Sep-2017 23:19

Near/Far Calibration Ratio	0.9250	0.8966	N/A	N/A	N/A	N/A
Near/Array Calibration Ratio	1.030	1.071	N/A	N/A	N/A	N/A
Near/Array Cal Ratio Up/Down	1.000	1.019	N/A	N/A	N/A	N/A

Accelerator-Porosity Tool Wellsite Calibration – Tank Check

Master: 25-Sep-2017 23:19

Array-1 Standoff Porosity	11.75	10.24	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	10.08	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	6.107	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9723	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9674	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	33.90	N/A	N/A	N/A	N/A	CU

Accelerator-Porosity Tool Wellsite Calibration – CCR7 signal boxes

Master: 25-Sep-2017 22:41

Near Detector Plateau Setting	1650	1738	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2080	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1963	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check

Master: 23-Sep-2017 21:26 Before: 9-Oct-2017 23:50 After: 23-Sep-2017 21:36

Na 511 Peak Loc	40.00	39.76	39.63	39.68	0.05351	1.000	
Na 511 Peak Res	15.50	14.97	14.78	15.12	0.3384	2.000	%
High Voltage	1150	1156	1164	1155	-9.536	N/A	V
Na 1785 Peak Loc	142.6	142.6	142.4	141.8	-0.5373	7.000	
Na 1785 Peak Res	8.500	9.098	8.297	8.997	0.7002	2.000	%
Temperature	15.50	18.30	22.61	18.27	-4.336	N/A	DEGC
Na Count Rate	45.00	27.65	26.76	27.40	0.6426	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check

Master: 23-Sep-2017 21:26 Before: 9-Oct-2017 23:50 After: 23-Sep-2017 21:36

Na 511 Peak Loc	40.00	39.51	39.64	39.54	-0.1000	1.000	
Na 511 Peak Res	15.50	15.77	15.02	16.14	1.121	2.000	%
High Voltage	1150	1088	1096	1088	-7.456	N/A	V
Na 1785 Peak Loc	142.6	141.7	140.7	141.7	1.005	7.000	
Na 1785 Peak Res	8.500	8.872	9.283	7.911	-1.371	2.000	%
Temperature	15.50	18.97	23.56	18.96	-4.591	N/A	DEGC
Na Count Rate	45.00	27.04	26.46	27.03	0.5627	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2

Master: 23-Sep-2017 21:26 Before: 9-Oct-2017 23:50 After: 23-Sep-2017 21:36

Coincidence Count Rate Ratio	1.000	1.020	1.012	1.014	0.001632	0.05000
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Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration

Master: 23-Sep-2017 21:22

Na 511 Peak Set Point	40.00	41.00	---	---	---	---	
Th Peak Loc	209.6	210.1	---	---	---	---	
Th Peak Res	7.000	7.030	---	---	---	---	%
Background Count Rate	142.5	20.14	---	---	---	---	CPS
Gain Ratio	1.000	1.005	---	---	---	---	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 23-Sep-2017 21:22

Na 511 Peak Set Point	40.00	41.00	---	---	---	---	
Th Peak Loc	209.6	208.2	---	---	---	---	
Th Peak Res	7.000	7.022	---	---	---	---	%
Background Count Rate	142.5	17.54	---	---	---	---	CPS
Gain Ratio	1.000	1.003	---	---	---	---	

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 24-Nov-2017 17:06

EDTC Z-Axis Acceleration	9.810	N/A	9.763	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 20-Nov-2017 8:33 After: 20-Nov-2017 8:42

Gamma Ray (Jig – Bkg)	140.5	N/A	140.5	141.6	1.125	12.77	GAPI
Gamma Ray (Calibrated)	164.0	N/A	164.0	165.3	1.313	15.00	GAPI

Accelerator-Porosity Tool – Detector Plateau Settings :

Near Detector Plateau Setting	1738 V
Far Detector Plateau Setting	2080 V
Array Detector Plateau Setting	1963 V

High Resolution Laterolog Array – B / Equipment Identification

Primary Equipment:

HRLT Sonde

HRLS – B

768

Auxiliary Equipment:

HRLT lower Housing

HRLH – B

1869

HRLT Lower Cartridge

HRLC – B

974

HRLT upper Housing

















HRUH – B














975



HRLT Upper Cartridge

















HRUC – B

















964

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M01							
Idx	Phase	HRLT M0–M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-318.4	-322.7	-280.7	-379.7	
	After		-318.4				
1	Before		-330.8	-322.7	-280.7	-379.7	
	After		-329.3				
2	Before		-338.7	-322.7	-280.7	-379.7	
	After		-336.7				
3	Before		-329.2	-322.7	-280.7	-379.7	
	After		-327.7				
4	Before		-320.0	-322.7	-280.7	-379.7	
	After		-319.5				
5	Before		-321.8	-322.7	-280.7	-379.7	
	After		-321.3				
6	Before		321.5	322.7	379.7	280.7	
	After		318.6				
7	Before		-322.7	-322.7	-280.7	-379.7	
	After		-322.7				
		(Minimum) (Nominal) (Maximum)					
Before: 24–Nov–2017 17:04							
After: 24–Nov–2017 22:15							

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M12							
Idx	Phase	HRLT M1–M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		1740	1781	2095	1549	
	After		1737				
1	Before		1815	1781	2095	1549	
	After		1804				
2	Before		1850	1781	2095	1549	
	After		1837				
3	Before		1797	1781	2095	1549	
	After		1786				
4	Before		1745	1781	2095	1549	
	After		1740				
5	Before		1756	1781	2095	1549	
	After		1751				
6	Before		-1771	-1781	-1549	-2095	
	After		-1753				

















7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 24–Nov–2017 17:04						
After: 24–Nov–2017 22:15						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1731	1781	2095	1549
	After		1729			
1	Before		1817	1781	2095	1549
	After		1805			
2	Before		1854	1781	2095	1549
	After		1841			
3	Before		1805	1781	2095	1549
	After		1794			
4	Before		1747	1781	2095	1549
	After		1742			
5	Before		1759	1781	2095	1549
	After		1754			
6	Before		–1762	–1781	–1549	–2095
	After		–1744			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 24–Nov–2017 17:04						
After: 24–Nov–2017 22:15						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68600	70000	82360	60900
	After		68540			
1	Before		71800	70000	82360	60900
	After		71430			
2	Before		73570	70000	82360	60900
	After		73100			
3	Before		71840	70000	82360	60900
	After		71500			
4	Before		69520	70000	82360	60900
	After		69380			
5	Before		70010	70000	82360	60900
	After		69860			
6	Before		–68660	–70000	–60900	–82360
	After		–68020			
7	Before		70000	70000	82360	60900
	After		70000			

















Before: 24-Nov-2017 17:04
After: 24-Nov-2017 22:15

Before: 24-Nov-2017 17:04

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VTP							
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68050	-70000	-60900	-82360	
	After		-68010				
1	Before		-71660	-70000	-60900	-82360	
	After		-71280				
2	Before		-73440	-70000	-60900	-82360	
	After		-72980				
3	Before		-71770	-70000	-60900	-82360	
	After		-71420				
4	Before		-69450	-70000	-60900	-82360	
	After		-69320				
5	Before		-69930	-70000	-60900	-82360	
	After		-69800				
6	Before		68460	70000	82360	60900	
	After		67840				
7	Before		-70000	-70000	-60900	-82360	
	After		-70000				
(Minimum) (Nominal) (Maximum)							
Before: 24-Nov-2017 17:04							
After: 24-Nov-2017 22:15							

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68090	-70000	-60900	-82360	
	After		-68060				
1	Before		-71740	-70000	-60900	-82360	
	After		-71380				
2	Before		-73520	-70000	-60900	-82360	
	After		-73080				
3	Before		-71840	-70000	-60900	-82360	
	After		-71500				
4	Before		-69500	-70000	-60900	-82360	
	After		-69380				
5	Before		-69960	-70000	-60900	-82360	
	After		-69840				
6	Before		68550	70000	82360	60900	
	After		67930				
7	Before		-70000	-70000	-60900	-82360	
	After		-70000				
(Minimum) (Nominal) (Maximum)							
Before: 24-Nov-2017 17:04							
After: 24-Nov-2017 22:15							

HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.0	284.0	334.1	247.0
	After		284.0			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
(Minimum) (Nominal) (Maximum)						
Before: 24–Nov–2017 17:04						
After: 24–Nov–2017 22:15						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.3	-322.7	-280.7	-379.7
	After		-320.1			
1	Before		-325.7	-322.7	-280.7	-379.7
	After		-323.9			
2	Before		-332.2	-322.7	-280.7	-379.7
	After		-329.9			
3	Before		-321.1	-322.7	-280.7	-379.7
	After		-319.4			
4	Before		-309.1	-322.7	-280.7	-379.7
	After		-308.4			
5	Before		-325.9	-322.7	-280.7	-379.7
	After		-325.1			
6	Before		329.0	322.7	379.7	280.7
	After		326.0			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
(Minimum) (Nominal) (Maximum)						
Before: 24–Nov–2017 17:04						
After: 24–Nov–2017 22:15						

Hostile Litho–Density Sonde / Equipment Identification

Primary Equipment:
Gamma Source Radioactive

GSP 7A

2015




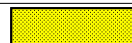
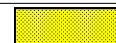




Gamma Source Radioactive	GSR – ZA	2945
Hostile Litho Density Sonde	HLDS – D	45
Hostile Litho Density High Voltage	HLDV – D	45
Auxiliary Equipment:		
Hostile Litho Density High Voltage Housi	HEH – H	47
Hostile Litho Density Pad	HLDP – C	45









Hostile Litho–Density Sonde Wellsite Calibration									
Background Measurement									
Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value	
Master		8.040	Master		8.146	Master		64.16	
Before		8.022	Before		8.143	Before		64.43	
After		7.896	After		8.163	After		63.76	
7.000 (Minimum)		9.000 (Nominal)	11.00 (Maximum)			55.00 (Minimum)		100.0 (Nominal)	150.0 (Maximum)
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value	
Master		60.11	Master		130.3	Master		160.5	
Before		59.84	Before		131.6	Before		159.5	
After		58.59	After		129.4	After		157.8	
50.00 (Minimum)		100.0 (Nominal)	140.0 (Maximum)			140.0 (Minimum)		250.0 (Nominal)	360.0 (Maximum)
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value	
Master		364.8	Master		72.43	Master		129.4	
Before		365.3	Before		72.59	Before		129.0	
After		365.4	After		71.58	After		129.2	
330.0 (Minimum)		600.0 (Nominal)	830.0 (Maximum)			100.0 (Minimum)		200.0 (Nominal)	260.0 (Maximum)
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value	
Master		348.7	Master		180.4	Master		130.3	
Before		347.2	Before		178.9	Before		130.1	
After		346.4	After		179.9	After		131.1	
280.0 (Minimum)		500.0 (Nominal)	700.0 (Maximum)			110.0 (Minimum)		200.0 (Nominal)	270.0 (Maximum)
Master: 25–Sep–2017 23:25			Before: 1–Nov–2017 4:53			After: 23–Oct–2017 13:14			

Hostile Litho–Density Sonde Master Calibration											
Detector Background Measurement											
Phase	LSW1 Background CPS		Value	Phase	LSW2 Background CPS		Value	Phase	LSW3 Background CPS		Value
Master	<div><div></div></div>		64.16	Master	<div><div></div></div>		60.11	Master	<div><div></div></div>		130.3
55.00 (Minimum)100.0 (Nominal)150.0 (Maximum)				50.00 (Minimum)100.0 (Nominal)140.0 (Maximum)				110.0 (Minimum)200.0 (Nominal)290.0 (Maximum)			
Phase	LSW4 Background CPS		Value	Phase	LSW5 Background CPS		Value	Phase	LS Cs Resolution Bkg %		Value
Master	<div><div></div></div>		160.5	Master	<div><div></div></div>		364.8	Master	<div><div></div></div>		8.146
140.0 (Minimum)250.0 (Nominal)360.0 (Maximum)				330.0 (Minimum)600.0 (Nominal)830.0 (Maximum)				7.000 (Minimum)9.000 (Nominal)11.00 (Maximum)			
Phase	SSW1 Background CPS		Value	Phase	SSW2 Background CPS		Value	Phase	SSW3 Background CPS		Value
Master	<div><div></div></div>		72.43	Master	<div><div></div></div>		129.4	Master	<div><div></div></div>		348.7
55.00 (Minimum)100.0 (Nominal)150.0 (Maximum)				100.0 (Minimum)200.0 (Nominal)260.0 (Maximum)				280.0 (Minimum)500.0 (Nominal)700.0 (Maximum)			
Phase	SSW4 Background CPS		Value	Phase	SSW5 Background CPS		Value	Phase	SS Cs Resolution Bkg %		Value
Master	<div><div></div></div>		180.4	Master	<div><div></div></div>		130.3	Master	<div><div></div></div>		8.040
150.0 (Minimum)270.0 (Nominal)380.0 (Maximum)				110.0 (Minimum)200.0 (Nominal)270.0 (Maximum)				7.000 (Minimum)9.000 (Nominal)11.00 (Maximum)			
Master: 25–Sep–2017 23:25											

Hostile Litho–Density Sonde Master Calibration												
Detector Aluminum Measurement (bkgd–subtracted)												
Phase	LSW1 Aluminum CPS		Value	Phase	LSW2 Aluminum CPS		Value	Phase	LSW3 Aluminum CPS		Value	
Master	<div><div></div></div>		510.2	Master	<div><div></div></div>		739.5	Master	<div><div></div></div>		888.4	
420.0 (Minimum)			600.0 (Nominal)	770.0 (Maximum)								
650.0 (Minimum)			900.0 (Nominal)	1150 (Maximum)			800.0 (Minimum)				1100 (Nominal)	1450 (Maximum)

Phase	LSW4 Aluminum CPS	Value	Phase	LSW5 Aluminum CPS	Value	Phase	SSW1 Aluminum CPS	Value
Master	<div><div></div></div>	445.5	Master	<div><div></div></div>	411.4	Master	<div><div></div></div>	2381
410.0 (Minimum) 580.0 (Nominal) 740.0 (Maximum)			410.0 (Minimum) 570.0 (Nominal) 740.0 (Maximum)			2000 (Minimum) 2800 (Nominal) 3200 (Maximum)		
Phase	SSW2 Aluminum CPS	Value	Phase	SSW3 Aluminum CPS	Value	Phase	SSW4 Aluminum CPS	Value
Master	<div><div></div></div>	6444	Master	<div><div></div></div>	8933	Master	<div><div></div></div>	3653
5800 (Minimum) 8000 (Nominal) 9300 (Maximum)			8300 (Minimum) 11600 (Nominal) 13500 (Maximum)			3500 (Minimum) 5000 (Nominal) 5800 (Maximum)		
Phase	SSW5 Aluminum CPS	Value						
Master	<div><div></div></div>	444.5						
430.0 (Minimum) 660.0 (Nominal) 770.0 (Maximum)								
Master: 25-Sep-2017 23:51								




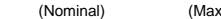
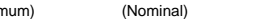
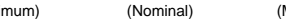
Hostile Litho-Density Sonde Master Calibration											
Detector Litholog Measurement (bkgd-subtracted)											
Phase	LSW1 Iron CPS		Value	Phase	LSW2 Iron CPS		Value	Phase	LSW3 Iron CPS		Value
Master			346.9	Master			593.4	Master			777.9
290.0 (Minimum) 400.0 (Nominal) 560.0 (Maximum)				520.0 (Minimum) 730.0 (Nominal) 950.0 (Maximum)				720.0 (Minimum) 1000 (Nominal) 1350 (Maximum)			
Phase	LSW4 Iron CPS		Value	Phase	LSW5 Iron CPS		Value	Phase	SSW1 Iron CPS		Value
Master			401.6	Master			376.3	Master			1735
370.0 (Minimum) 520.0 (Nominal) 700.0 (Maximum)				340.0 (Minimum) 470.0 (Nominal) 750.0 (Maximum)				1500 (Minimum) 2100 (Nominal) 2400 (Maximum)			
Phase	SSW2 Iron CPS		Value	Phase	SSW3 Iron CPS		Value	Phase	SSW4 Iron CPS		Value
Master			5380	Master			8127	Master			3318
4900 (Minimum) 6800 (Nominal) 7900 (Maximum)				7800 (Minimum) 10800 (Nominal) 12600 (Maximum)				3300 (Minimum) 4600 (Nominal) 5400 (Maximum)			
Phase	SSW5 Iron CPS		Value								
Master	<div>EXCEEDS LIMIT</div>		389.8								
420.0 (Minimum) 580.0 (Nominal) 680.0 (Maximum)											
Master: 25-Sep-2017 23:46											

Hostile Litho—Density Sonde Master Calibration											
Quality Ratios											
Phase	AL CALIBRATION RATIO 1		Value	Phase	AL CALIBRATION RATIO 2		Value	Phase	AL CALIBRATION RATIO 3		Value
Master			1.037	Master			2.180	Master			0.5955
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)		1.900 (Minimum)	2.100 (Nominal)	2.300 (Maximum)		0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)
Phase	AL CALIBRATION RATIO 4		Value	Phase	Pad—Wear SS Ratio		Value	Phase	Pad—Wear LS Ratio		Value
Master			0.5810	Master			0.9903	Master			0.9809
	0.4000 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)		0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)		0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)
Phase	Pad—Position SS Ratio		Value	Phase	Pad—Position LS Ratio		Value				
Master			1.002	Master	<div>EXCEEDS LIMIT</div> 		0.9798				
	0.9900 (Minimum)	0.9940 (Nominal)	1.015 (Maximum)		0.9850 (Minimum)	0.9940 (Nominal)	1.010 (Maximum)				
Master: 25-Sep-2017 23:41											

Litho-Density Spectroscopy Cartridge – B / Equipment Identification		
Primary Equipment: LDSC Cartridge	LDSC – B	521
Auxiliary Equipment: LDSC Housing	LDSh – A	319

Accelerator-Porosity Tool / Equipment Identification		
Primary Equipment: Accelerator-Porosity Sonde APS Minitron	APS – C MNTR – F	22 7341

APH – AC	22
SFT – 178	1
SFT – 281	1

Accelerator-Porosity Tool Master Calibration											
Tank Check											
Phase	Array-1 Standoff Porosity PU		Value	Phase	Array-2 Standoff Porosity PU		Value	Phase	Average Slowing Down Time US		Value
Master			10.24	Master			10.08	Master			6.107
9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)				9.900 (Minimum) 11.75 (Nominal) 13.60 (Maximum)				5.500 (Minimum) 6.000 (Nominal) 6.250 (Maximum)			
Phase	Array-1 SDT Ratio Up/Down		Value	Phase	Array-2 SDT Ratio Up/Down		Value	Phase	Sigma Formation CU		Value
Master			0.9723	Master			0.9674	Master			33.90
0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)				0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)				20.00 (Minimum) 27.50 (Nominal) 35.00 (Maximum)			

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – B 304

Auxiliary Equipment:
HNGC Housing

HNGH – A 3

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde






















HNGS – BA 194

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH – BA 204
GSR – U 6098






















Hostile Natural Gamma Ray Sonde Wellsite Calibration







Detector 1 Check

Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value			
Master			39.76	Master			14.97	Master			1156			
Before			39.63	Before			14.78	Before			1164			
After			39.68	After			15.12	After			1155			
37.50 (Minimum)			40.00 (Nominal)	43.50 (Maximum)			12.00 (Minimum)	15.50 (Nominal)	19.00 (Maximum)			900.0 (Minimum)	1150 (Nominal)	1600 (Maximum)
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value			
Master			142.6	Master			9.098	Master			18.30			
Before			142.4	Before			8.297	Before			22.61			
After			141.8	After			8.997	After			18.27			
135.0 (Minimum)			142.6 (Nominal)	150.3 (Maximum)			7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)			-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)
Phase	Na Count Rate CPS		Value											
Master			27.65											
Before			26.76											
After			27.40											
10.00 (Minimum)			45.00 (Nominal)									100.0 (Maximum)		
Master: 23-Sep-2017 21:26				Before: 9-Oct-2017 23:50				After: 23-Sep-2017 21:36						

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value
Master			39.51	Master			15.77	Master			1088
Before			39.64	Before			15.02	Before			1096
After			39.54	After			16.14	After			1088
37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)				12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)				900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)			
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value
Master			141.7	Master			8.872	Master			18.97
Before			140.7	Before			9.283	Before			23.56
After			141.7	After			7.911	After			18.96
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)				7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)				-28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)			
Phase	Na Count Rate CPS		Value								
Master			27.04								
Before			26.46								
After			27.03								
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)											
Master: 23-Sep-2017 21:26			Before: 9-Oct-2017 23:50				After: 23-Sep-2017 21:36				

Enhanced DTS Cartridge Wellsite Calibration																	
Detector Calibration																	
Phase	Gamma Ray Background		GAPI	Value	Phase	Gamma Ray (Jig – Bkg)		GAPI	Value	Phase	Gamma Ray (Calibrated)		GAPI	Value			
Before				7.572	Before				140.5	Before				164.0			
After				7.441	After				141.6	After				165.3			
0 (Minimum)				30.00 (Nominal)	120.0 (Maximum)	127.7 (Minimum)				140.5 (Nominal)	153.2 (Maximum)	149.0 (Minimum)				164.0 (Nominal)	179.0 (Maximum)
Before: 20–Nov–2017 8:33					After: 20–Nov–2017 8:42												

Company: International Ocean Discovery Program

Schlumberger

Well: Expedition 369, Site U1513E

Field: Australia Cretaceous Climate & Tectonics

Rig: JOIDES Resolution

Ocean: Indian

High Resolution Laterolog Array (HRLA)

Natural Gamma Ray, Density (HNGS, HLDS)

Accelerator Porosity Sonde (APS)