



Well: **Expedition 369, Site U1514C**  
Field: **Australia Cretaceous Climate & Tectonics**  
Rig: **JOIDES Resolution** Ocean: **Indian**

Rig:	JOIDES Resolution	Field:	Australia Cretaceous Climate & T	Location:	Latitude: S 33* 7.2443'	Well:	Expedition 369, Site U1514C	Company:	International Ocean Discovery Pr	High Resolution Laterolog Array (HRLA) Natural Gamma Ray, Density (HNGS, HLDS) Dipole Shear Sonic (DSI), MSS							
LOCATION										Latitude: S 33* 7.2443'		Elev.: K.B. 0.00 m					
										Longitude: E 113* 5.4799'		G.L. -3850.00 m					
												D.F. 0.00 m					
										Permanent Datum: Sea Floor		Elev.: -3850.00 m					
										Log Measured From: Rig Floor		3850.00 m above Perm. Datum					
										Drilling Measured From: Rig Floor							
										API Serial No.		Max. Hole Devi. 4 deg		Longitude E 113.09133		Latitude S 33.12073	

Logging Date			9-Nov-2017					
Run Number			1					
Depth Driller			4367 m					
Schlumberger Depth			4364 m					
Bottom Log Interval			4364 m					
Top Log Interval			3846 m					
Casing Driller Size @ Depth			5.500 in @ 3932.2 m			@		
Casing Schlumberger			3928 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		@ 23 degC			@		
	RMF @ Measured Temperature		@			@		
RMC @ Measured Temperature		@			@			
Source RMF	RMC	N/A	N/A					
RM @ MRT	RMF @ MRT	@ 13	@ 13	@	@			
Maximum Recorded Temperatures			13 degC					
Circulation Stopped		Time	9-Nov-2017		20:00			
Logger On Bottom		Time	9-Nov-2017		03:09			
Unit Number	Location	627314	Larose, LA					
Recorded By			K. Swain					
Witnessed By			M. Jones, Z. Mateo					

[illegible]

Run 4

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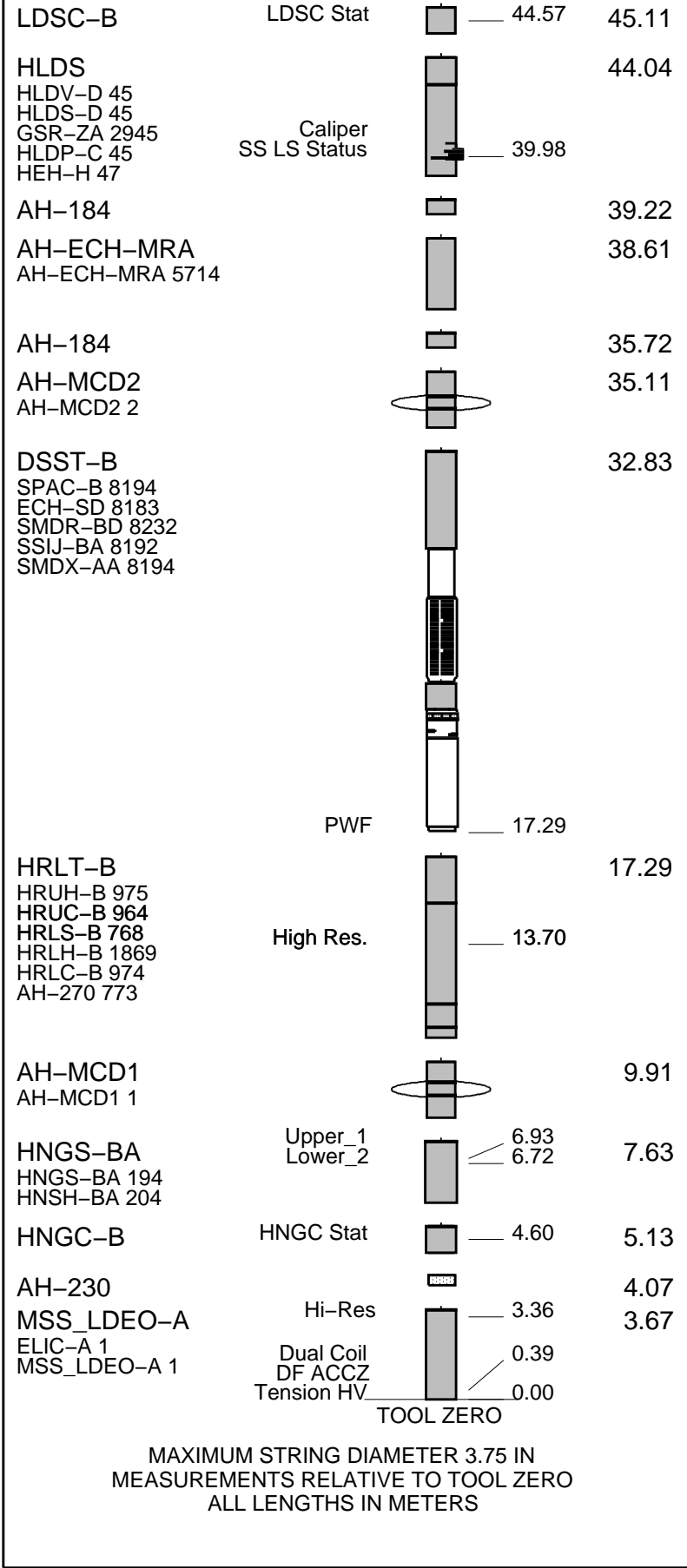
10.5 lb/gal mud pumped in hole prior to logging.

**STOP**

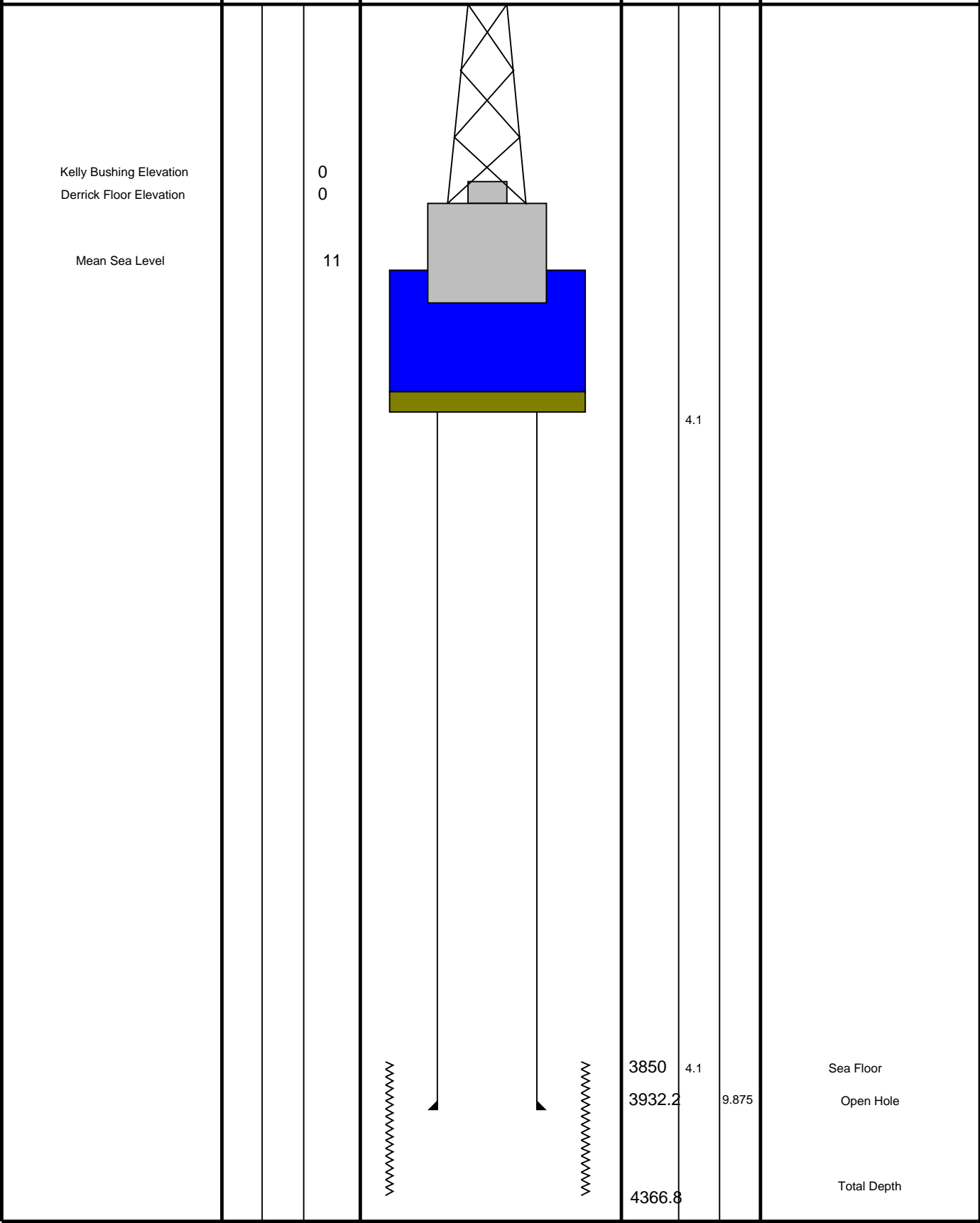
RUN 2

47.09  
46.02  
45.45  
  
45.11

48.41  
47.52  
47.09



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

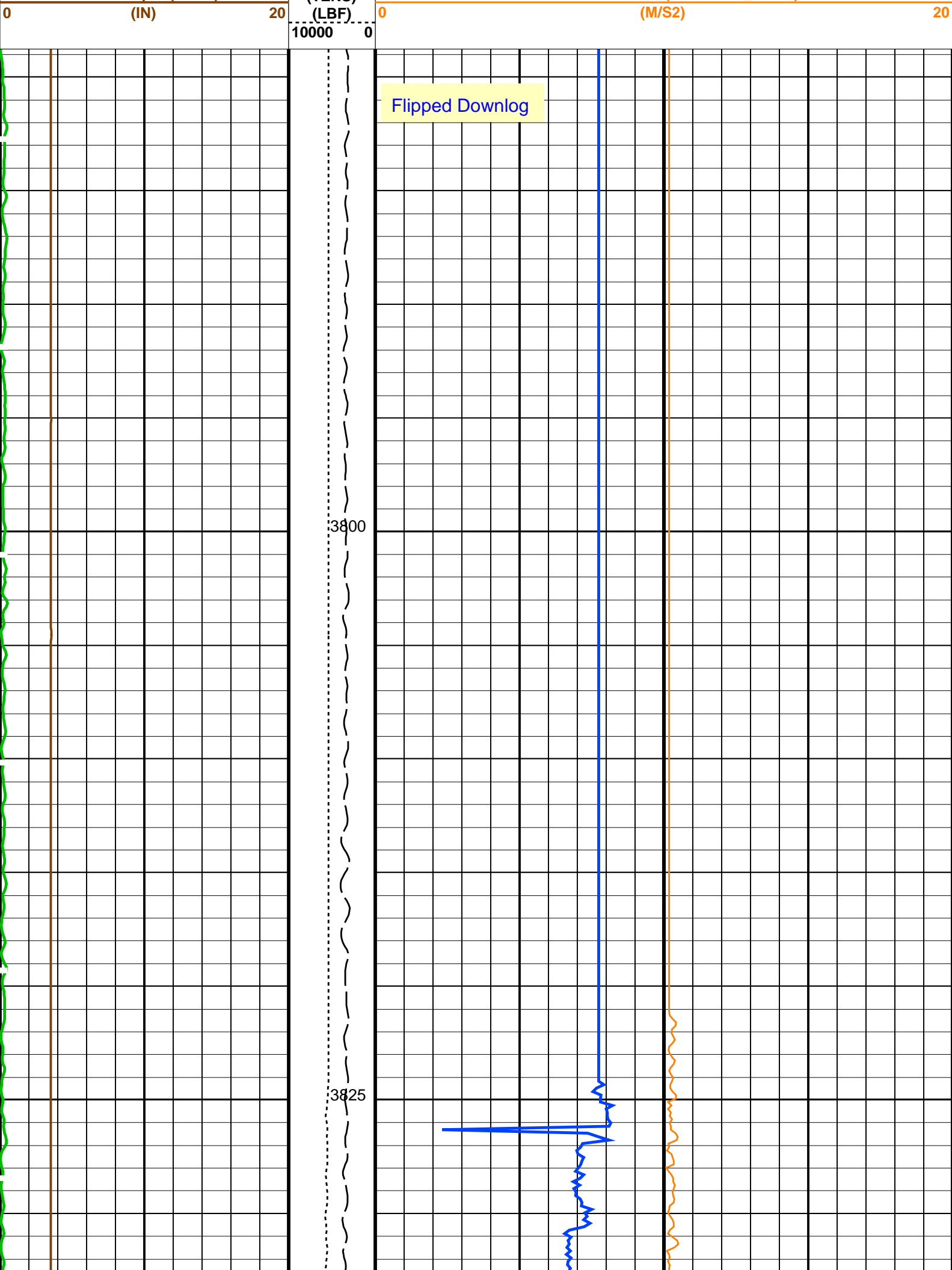


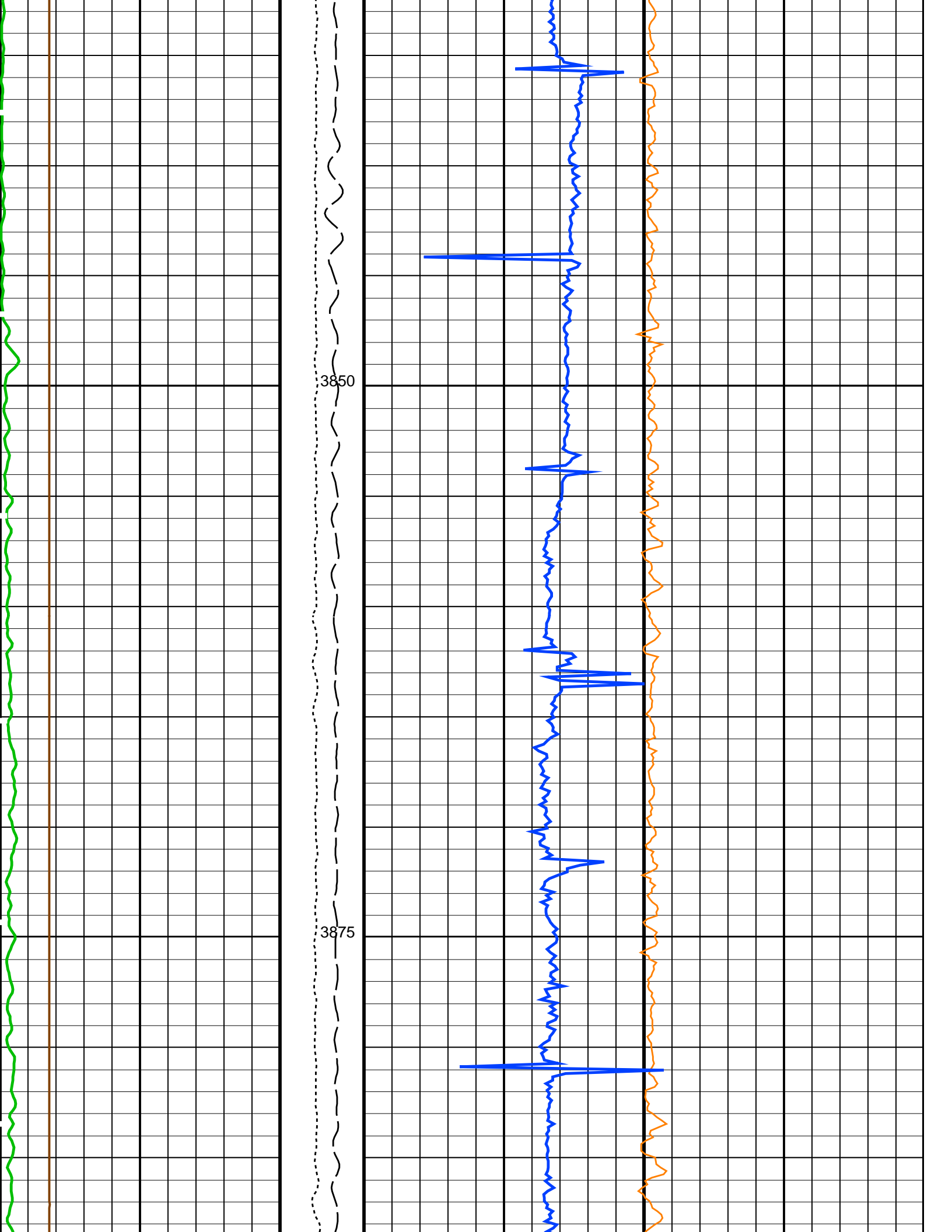


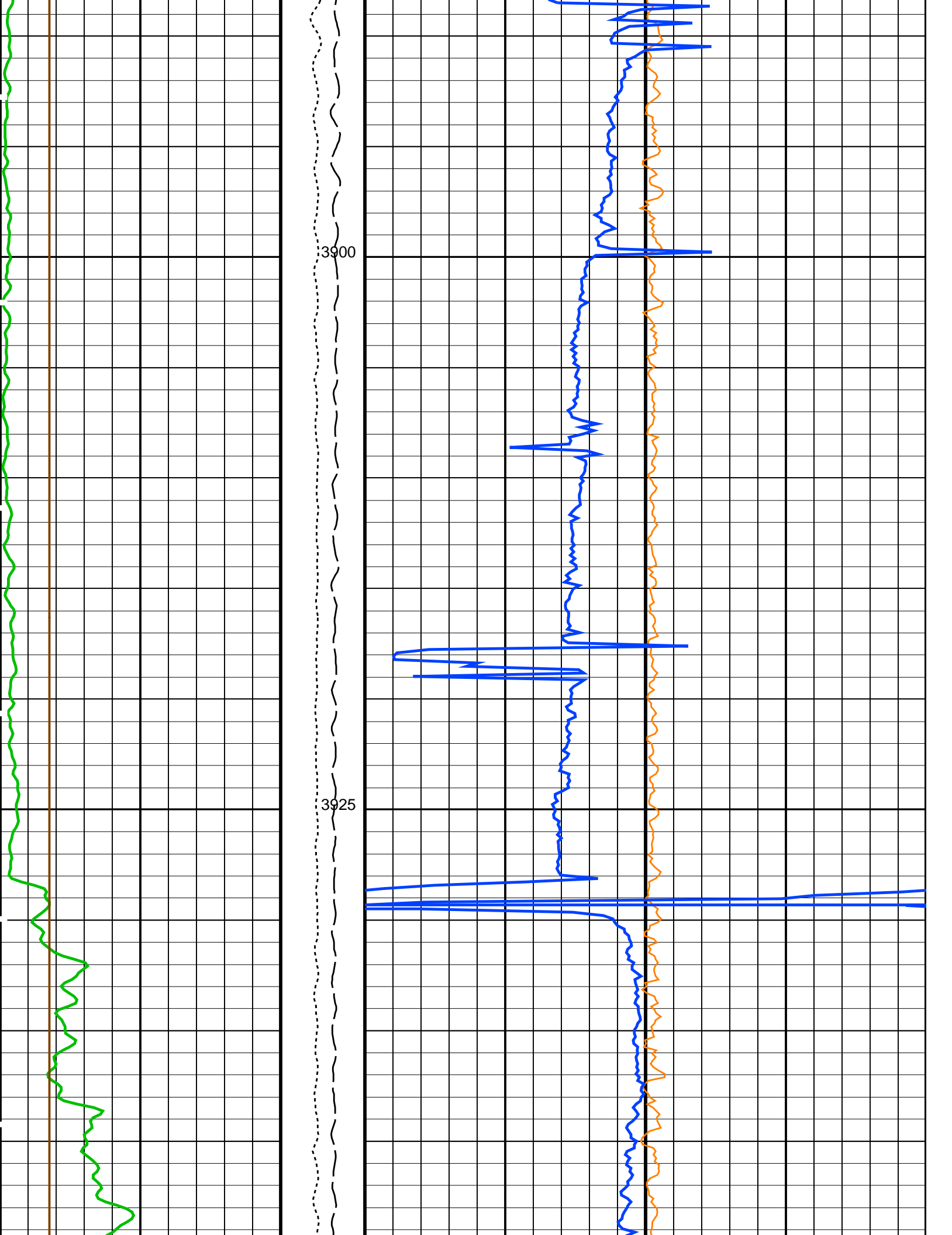
Input DLIS Files						
DEFAULT	Flip_MSS_LDEO_NGS_012LUP	PRODUCER	09-Nov-2017 07:42	4366.6 M	3778.8 M	
Output DLIS Files						
DEFAULT	MSS_LDEO_NGS_HRLA_014PUP	FN:21	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M
BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M

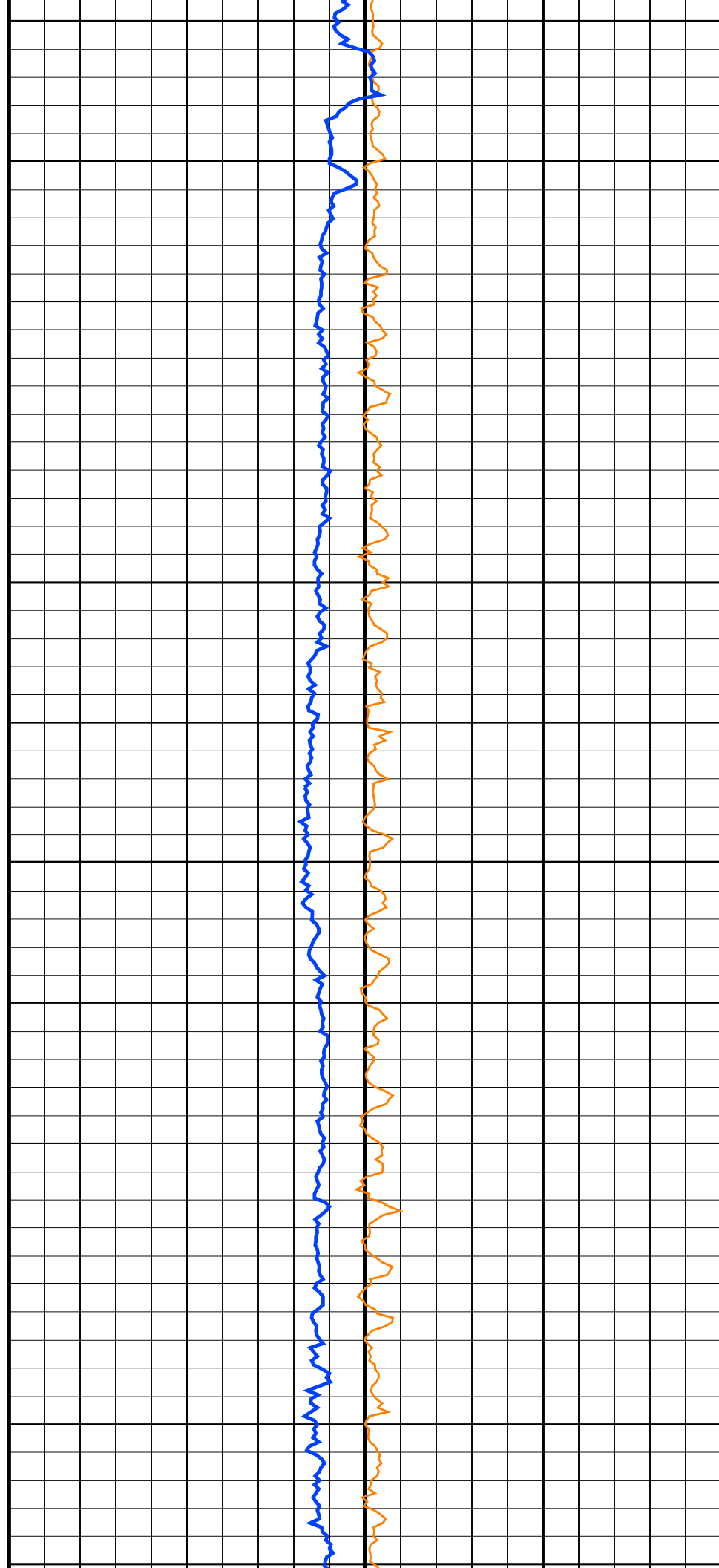
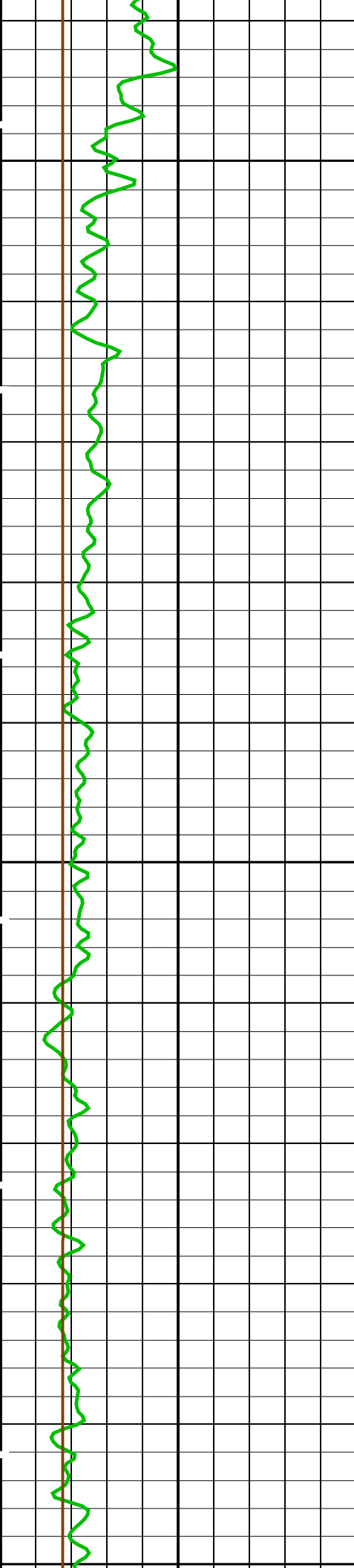
OP System Version: 19C0-187						
MSS_LDEO-A	19C0-187		HNGC-B	19C0-187		
HNGS-BA	19C0-187		HRLT-B	19C0-187		
DSST-B	19C0-187		HLDS	19C0-187		
LDSC-B	19C0-187		EDTC-B	SKK-5169-EDTCB		

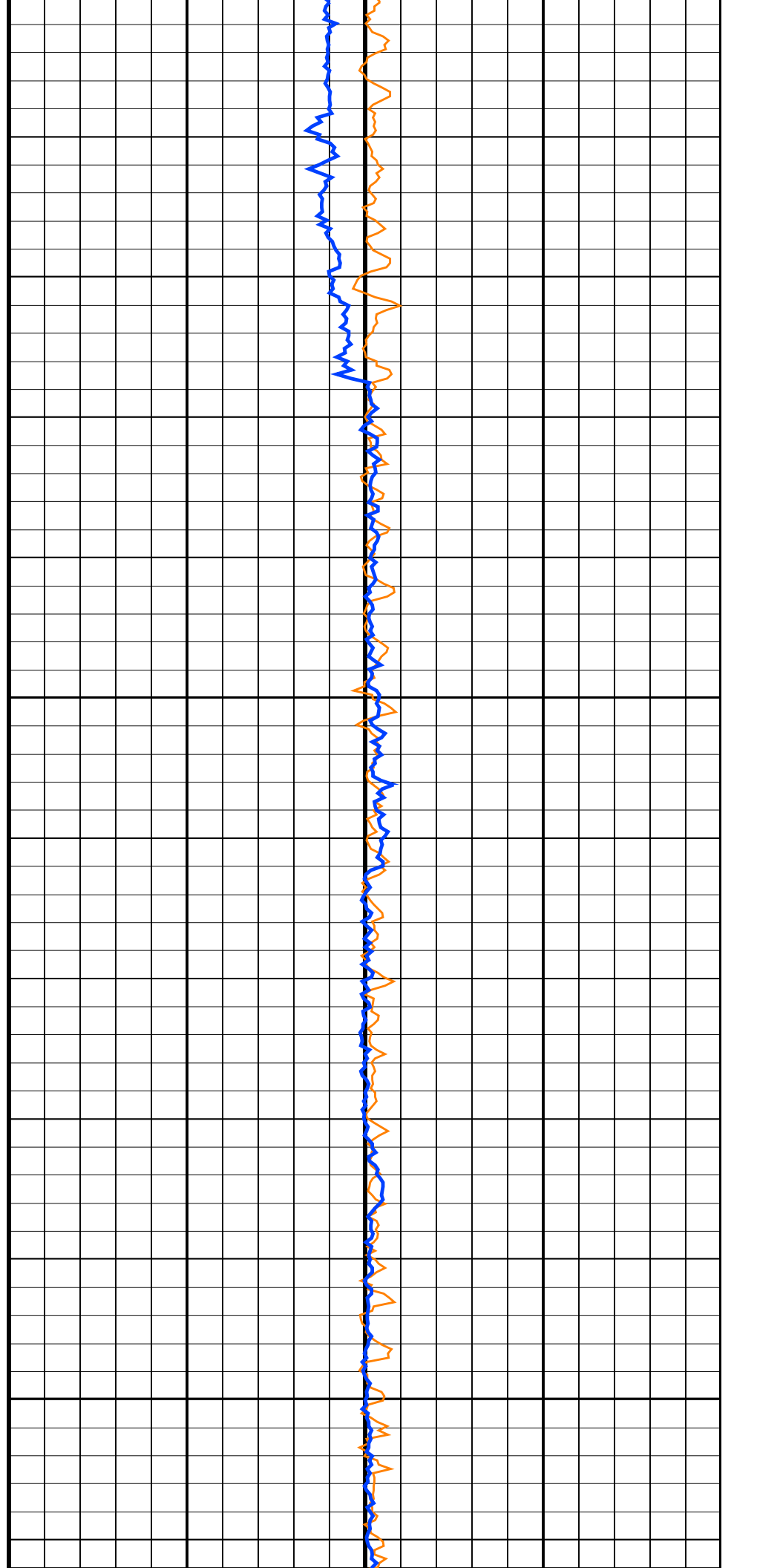
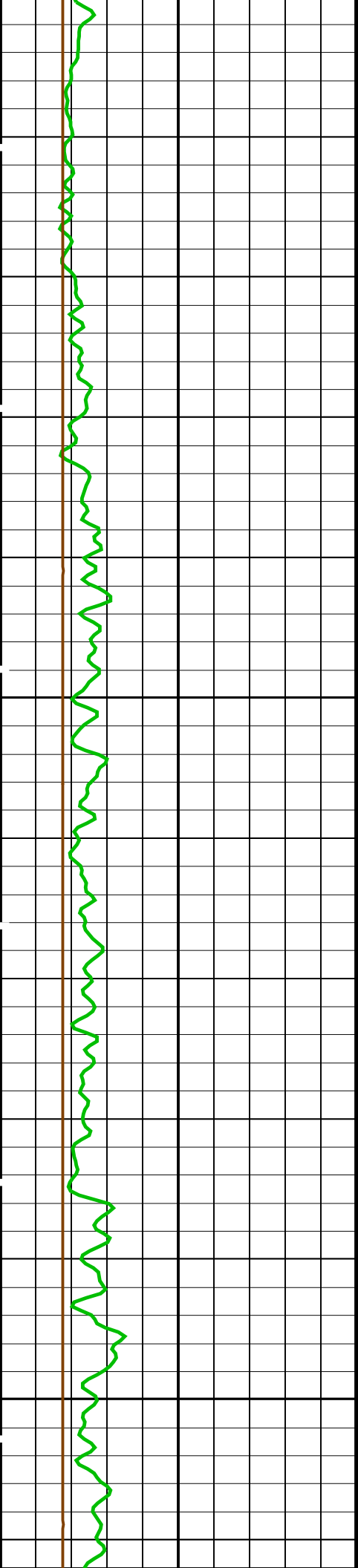
PIP SUMMARY								
Time Mark Every 60 S								
Gamma Ray (GR_EDTC)		Calibrated Downhole Force (CDF) (LBF)	Dual-Coil Susceptibility (MSSL SUS_LDEO)					
0	(GAPI)		100	0	(PPM)			5000
			5000	0				
HLDS Caliper (LCAL)		Tension (TENS)	Axial Acceleration (MSSZACC_LDEO)					

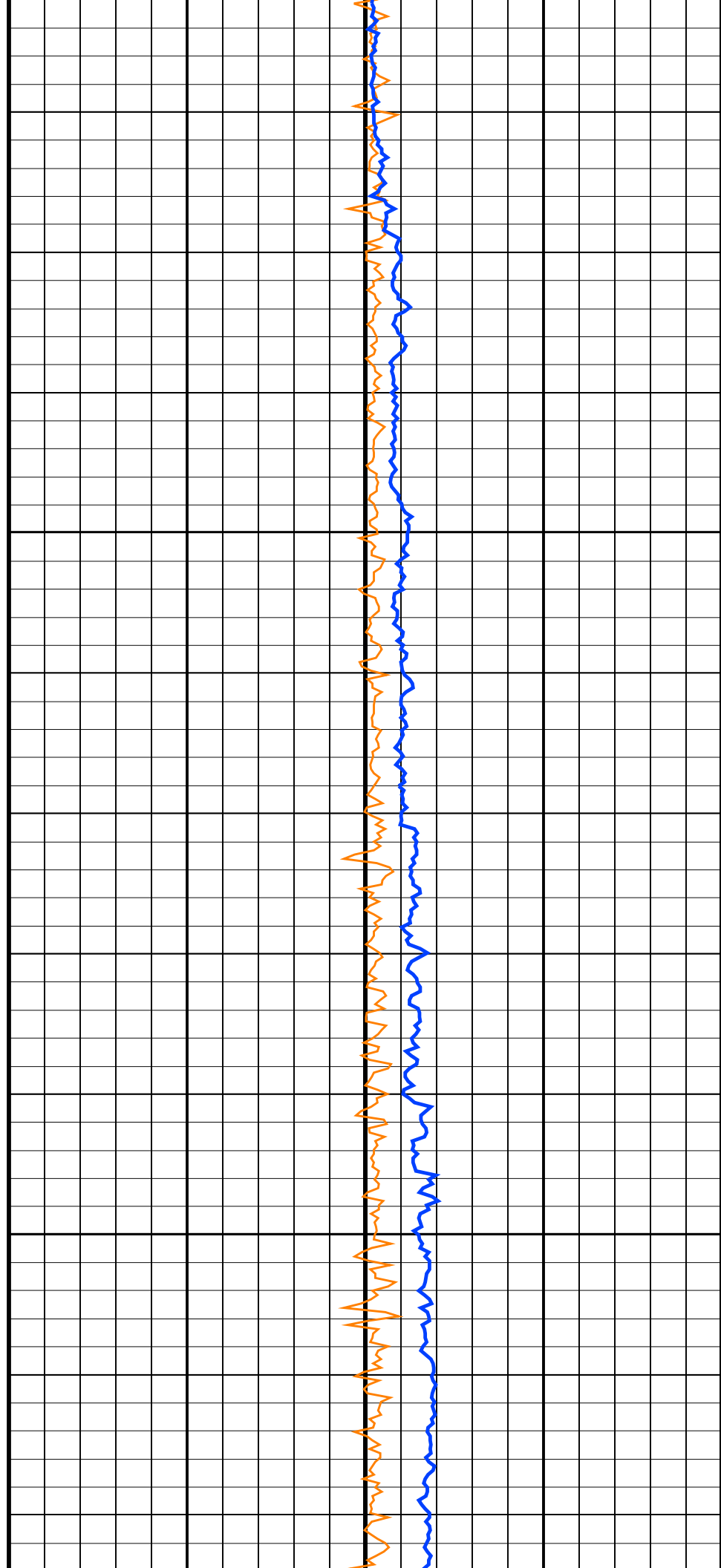
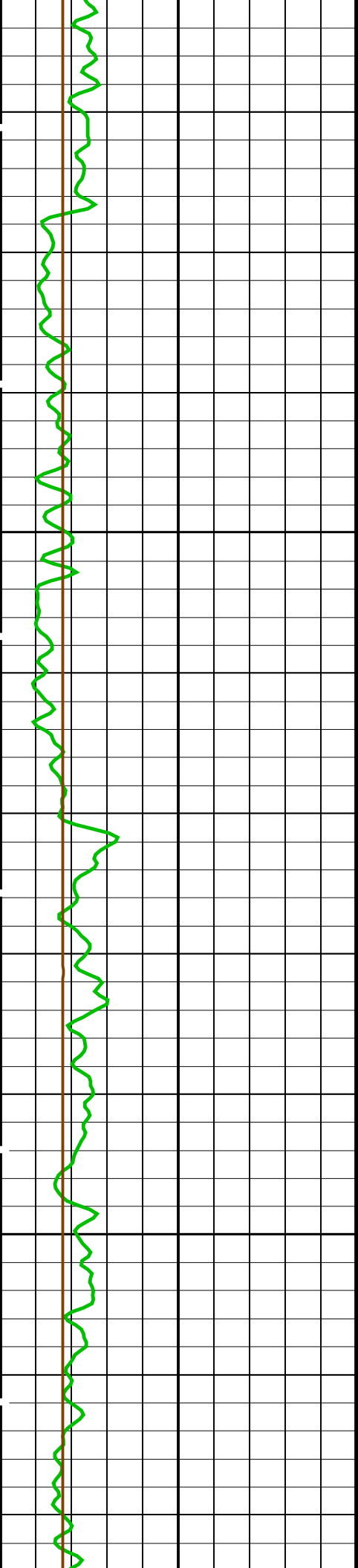


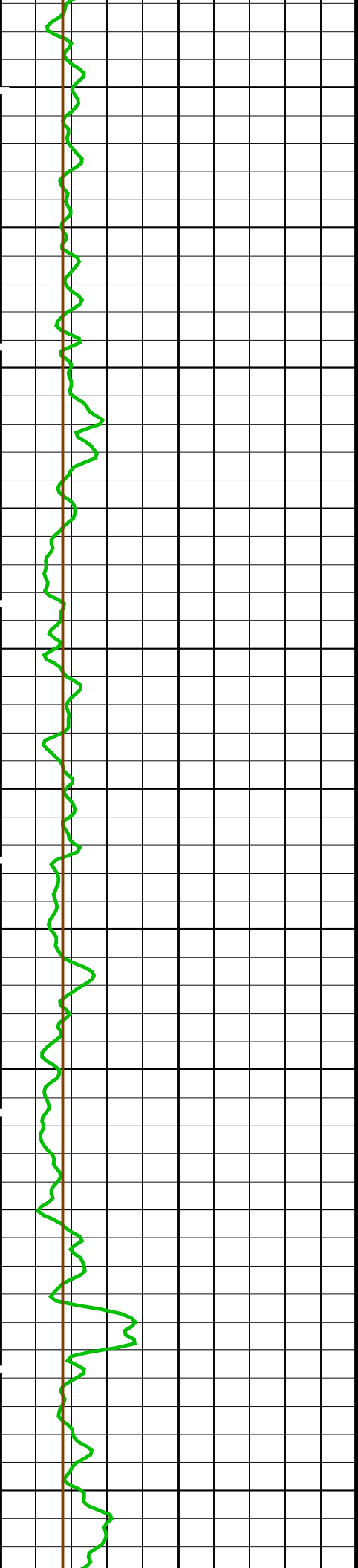






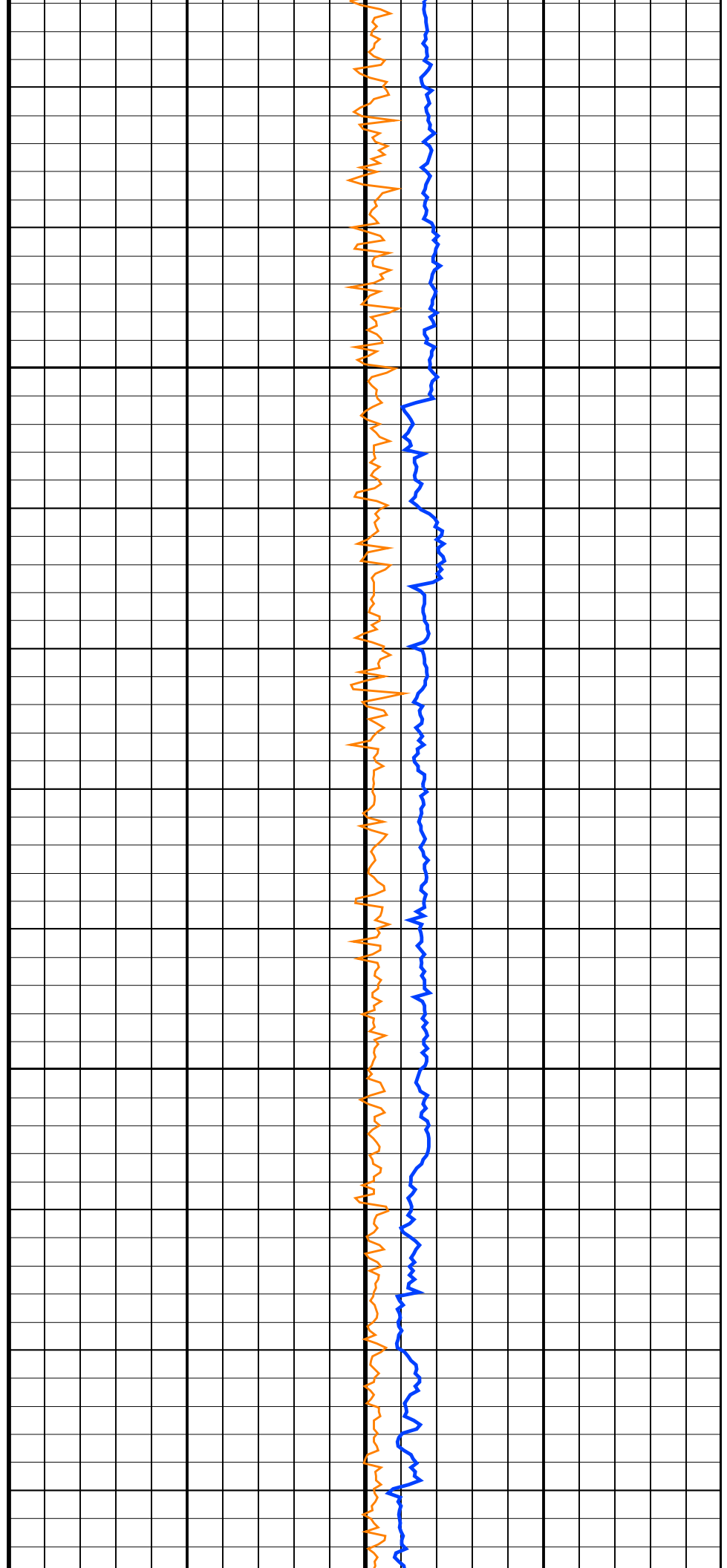




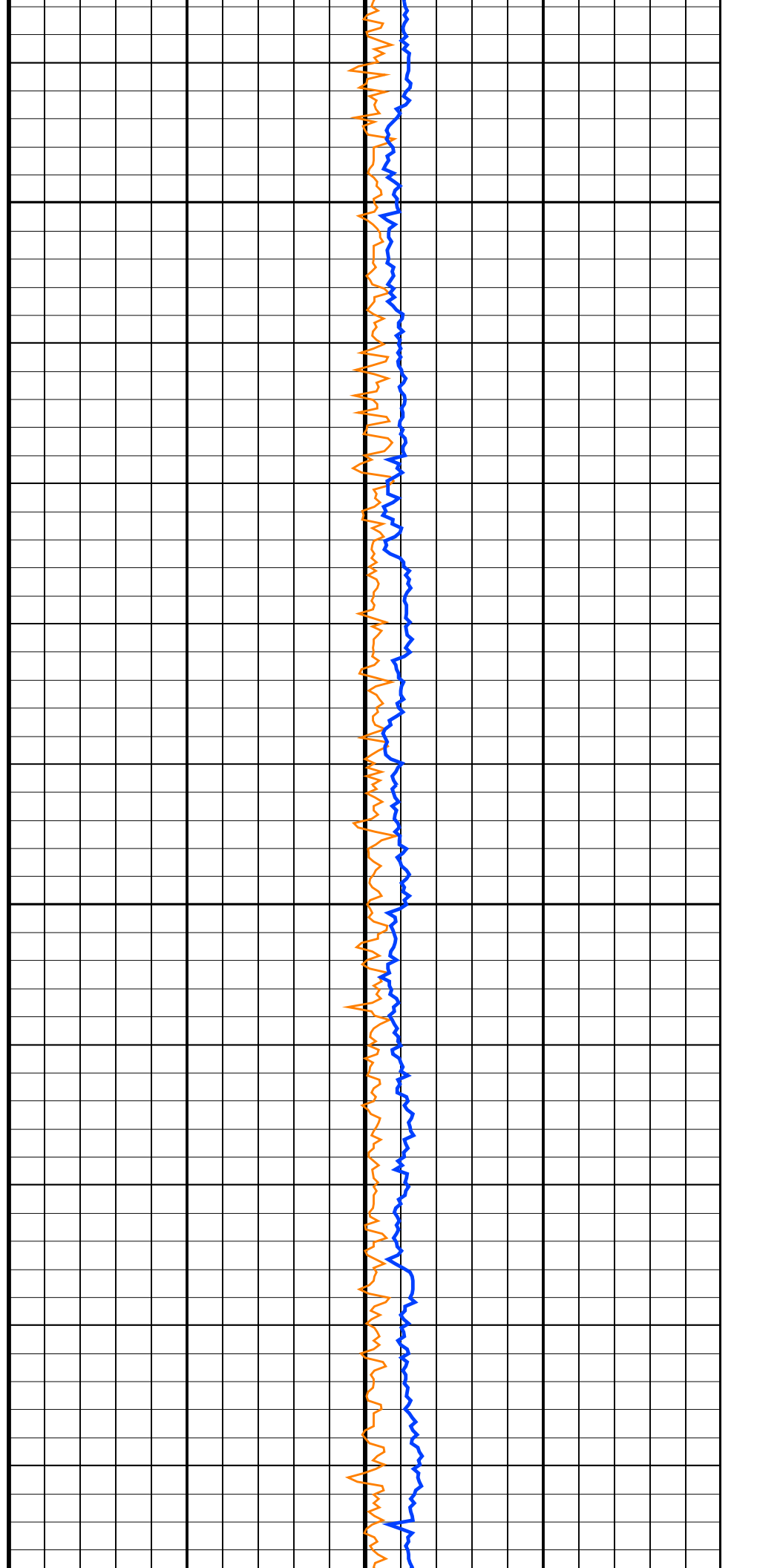
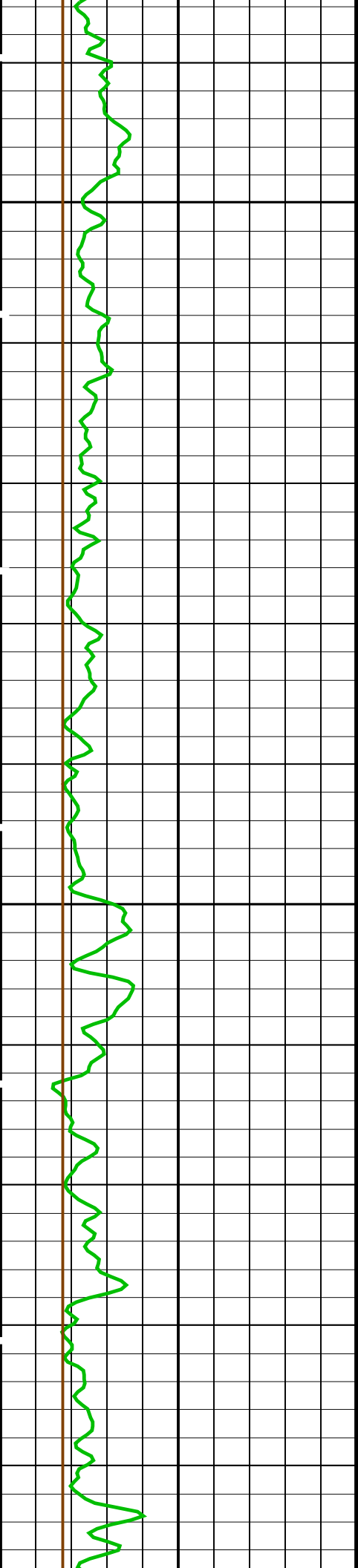


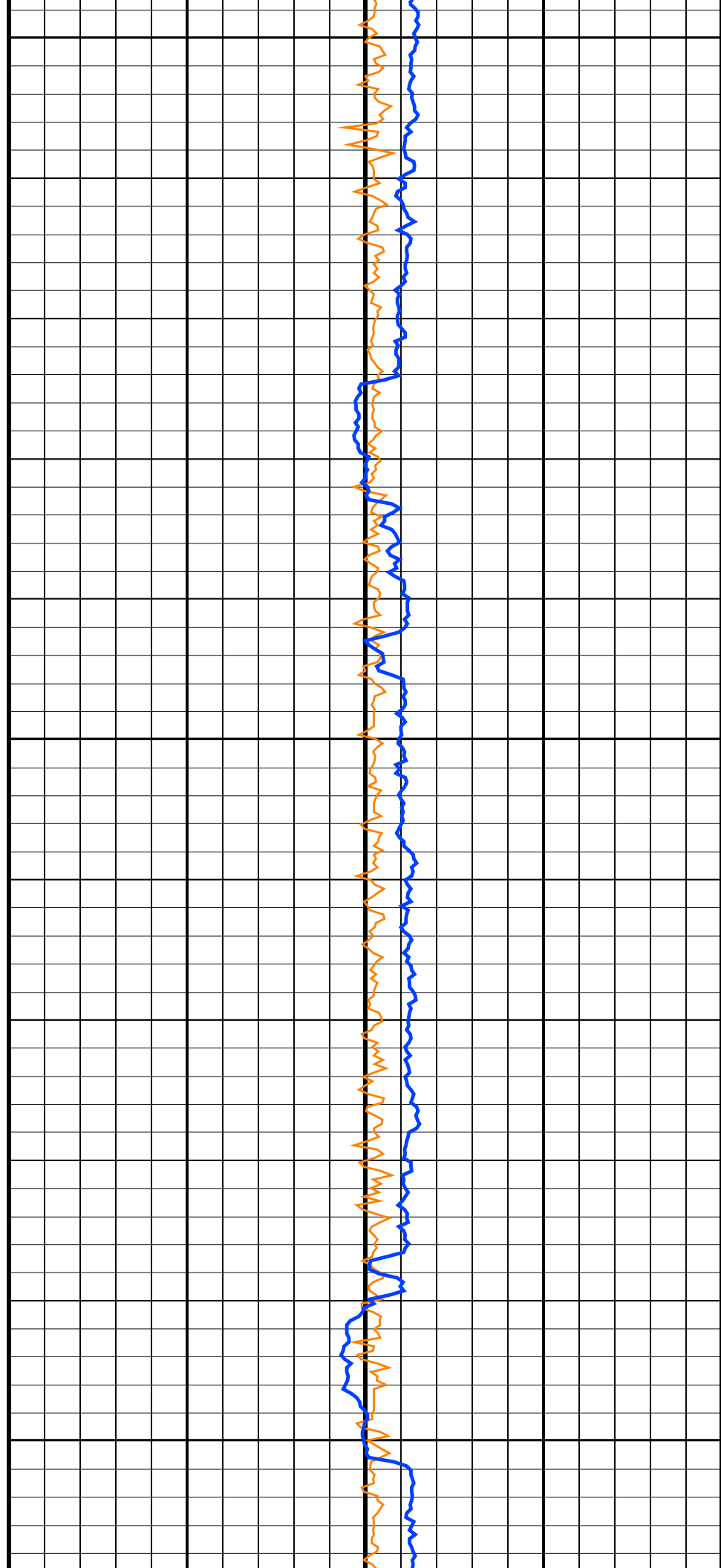
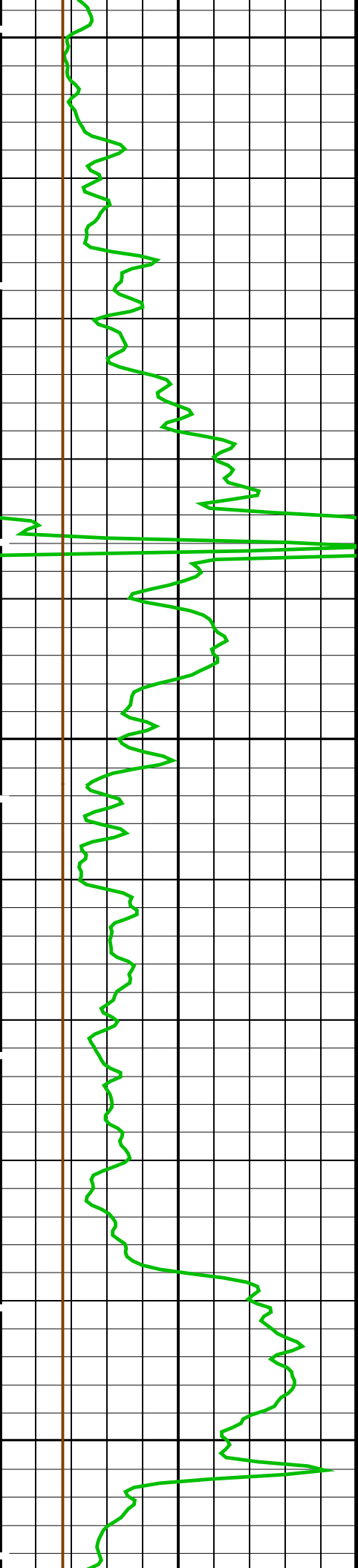
4 25

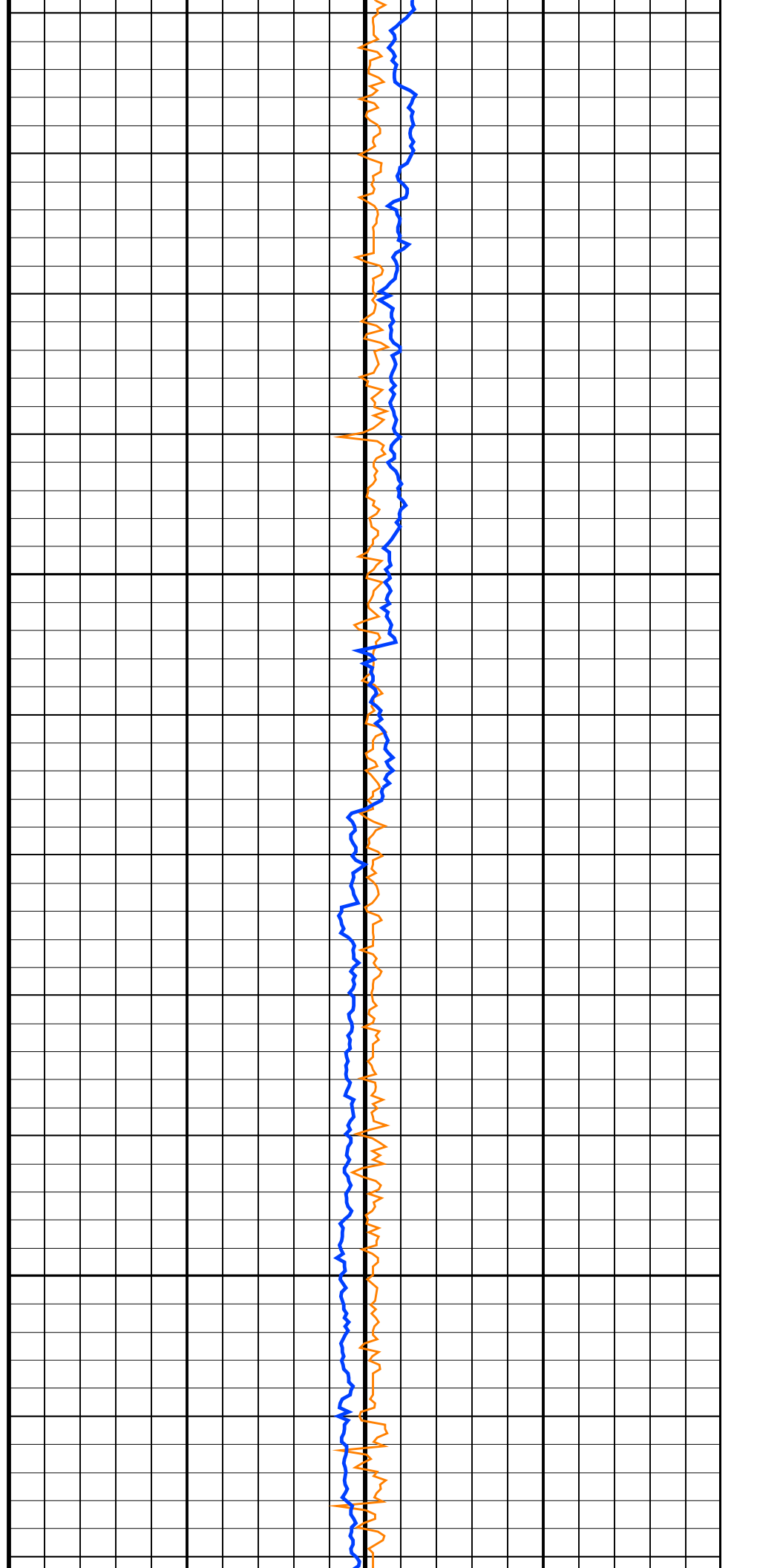
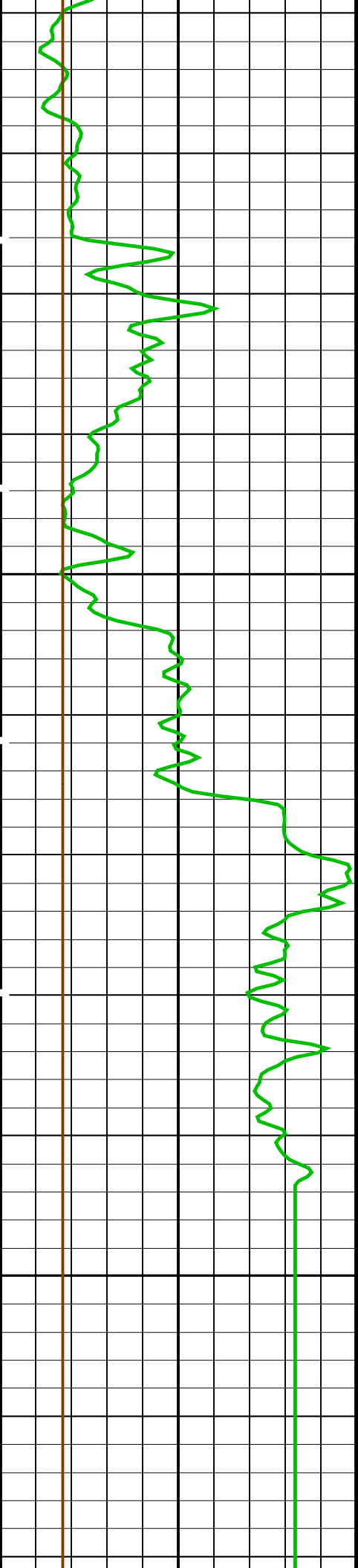
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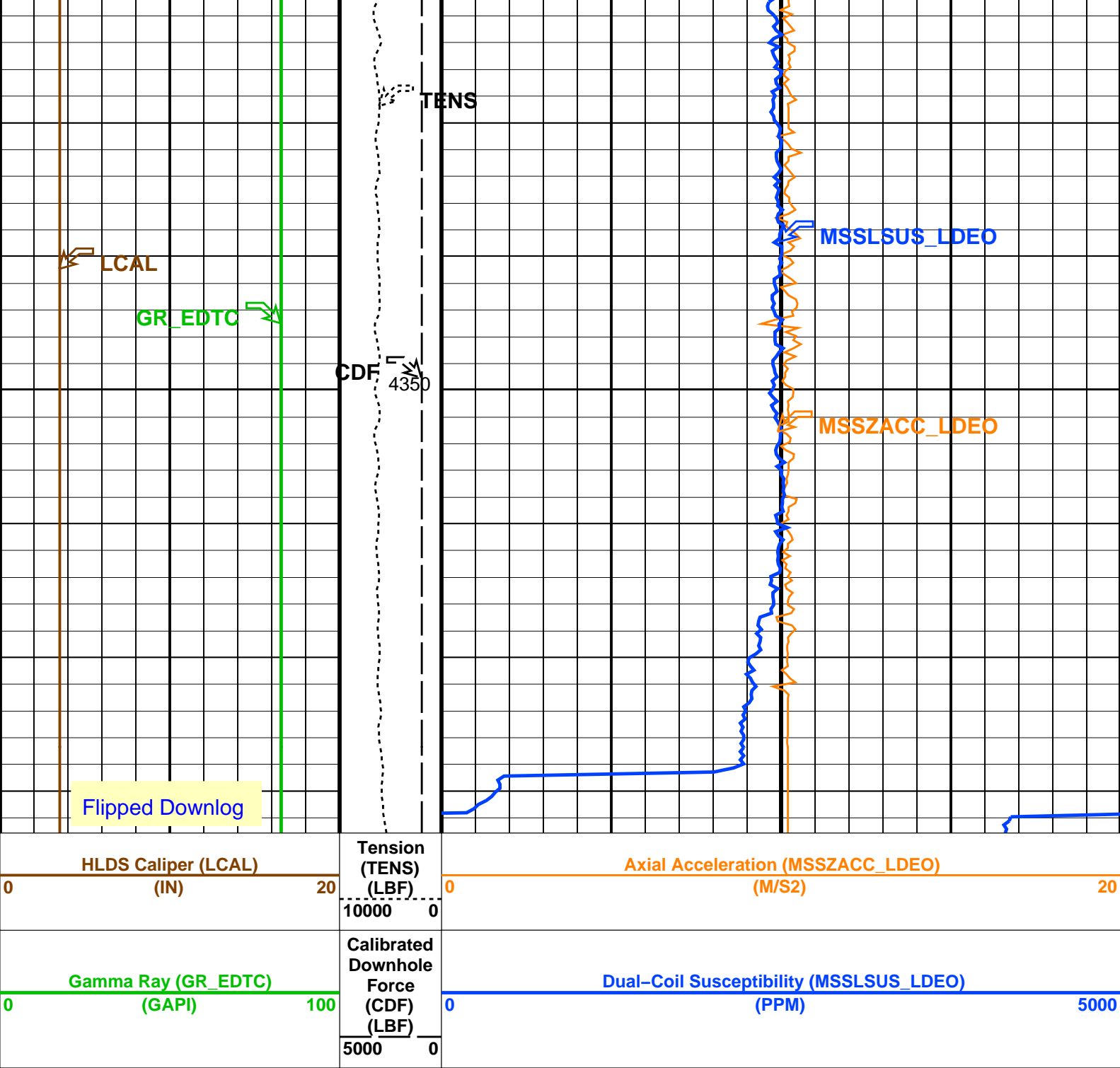












PIP SUMMARY

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	
OTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	

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	-0.00117675	
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	0.987226	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998718	
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	17.0393	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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
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	
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	
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	
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	

NWSX	Number Waveforms Stacked X	1	
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	680.708	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

IST3	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
WFLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLSPX	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	
CCCC	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	12409.8	FT
TDD	Total Depth - Driller	4367.00	M
TDL	Total Depth - Logger	4367.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS\_Loading    Vertical Scale: 1:200    Graphics File Created: 09-Nov-2017 07:50

## OP System Version: 19C0-187

MSS_LDEO-A	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_MSS_LDEO_NGS_012LUP	PRODUCER	09-Nov-2017 07:42	4366.6 M	3778.8 M
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## Output DLIS Files

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BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09-Nov-2017 07:50

Company: International Ocean Discovery Program    Well: Expedition 369, Site U1514C

## Input DLIS Files

DEFAULT	Flip_MSS_LDEO_NGS_012LUP	PRODUCER	09-Nov-2017 07:42	4366.6 M	3778.8 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014PUP	FN:21	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M
BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M

## OP System Version: 19C0-187





MSS_LDEO-A	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

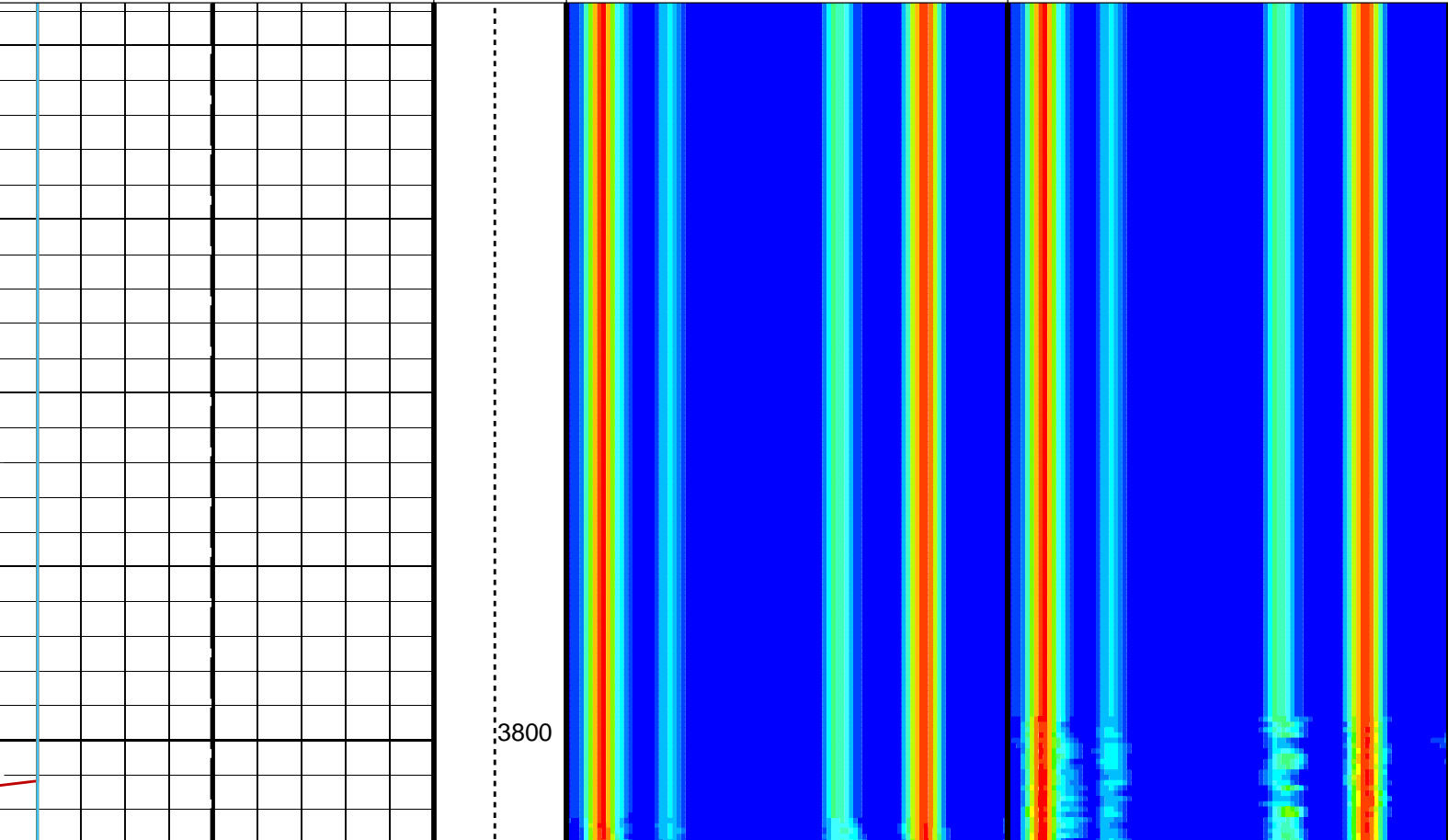
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA - P & S Shear (CHTS)		
-1	(----	9
Peak Coherence / RA - P & S Shear (CHRS)		
-1	(-----)	9
Peak Coherence / TA - P & S Comp (CHTP)		
0	(-----)	10
Peak Coherence / RA - P & S Comp (CHRP)		
0	(-----)	10
Waveform Data Copy Indicator 4 - Monopole P&S (WCI4)		
0	(-----)	10
SAM4 Waveform Gain (WFG4)		
0	(-----)	1000

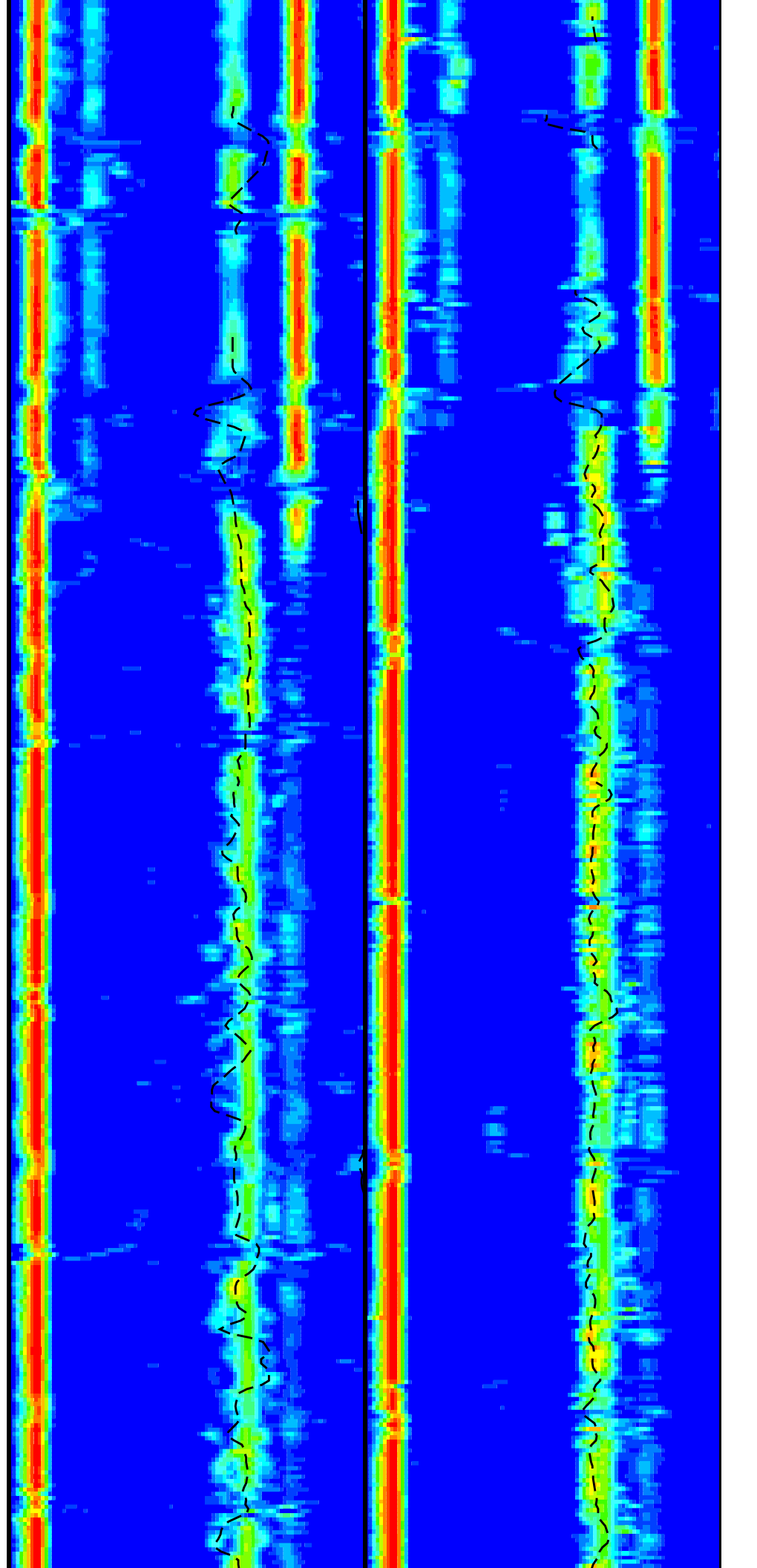
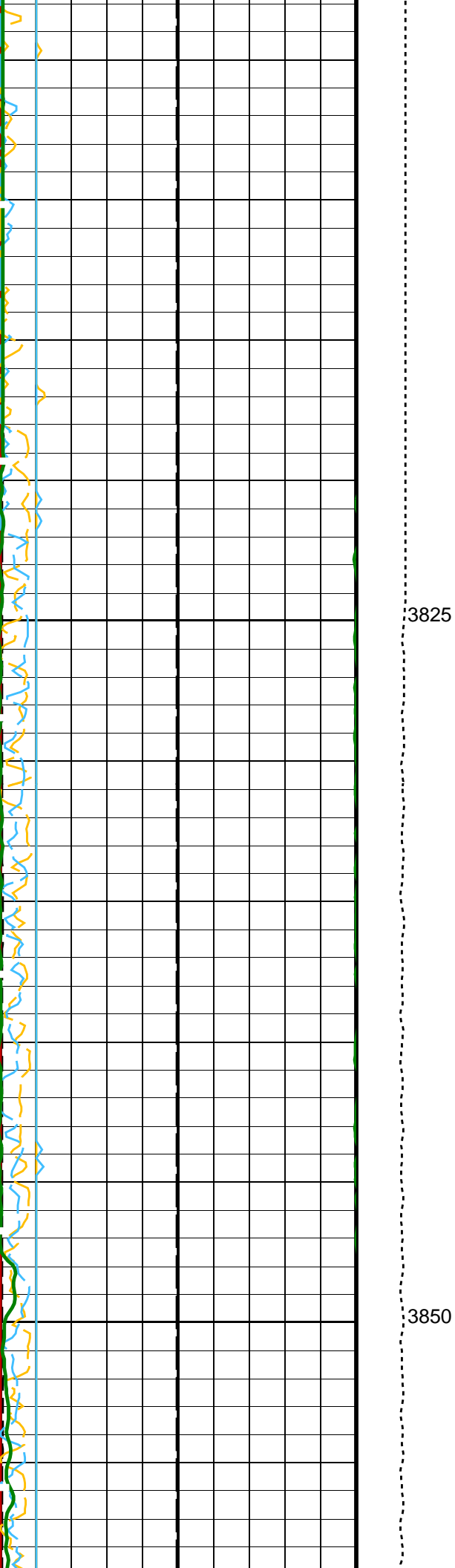
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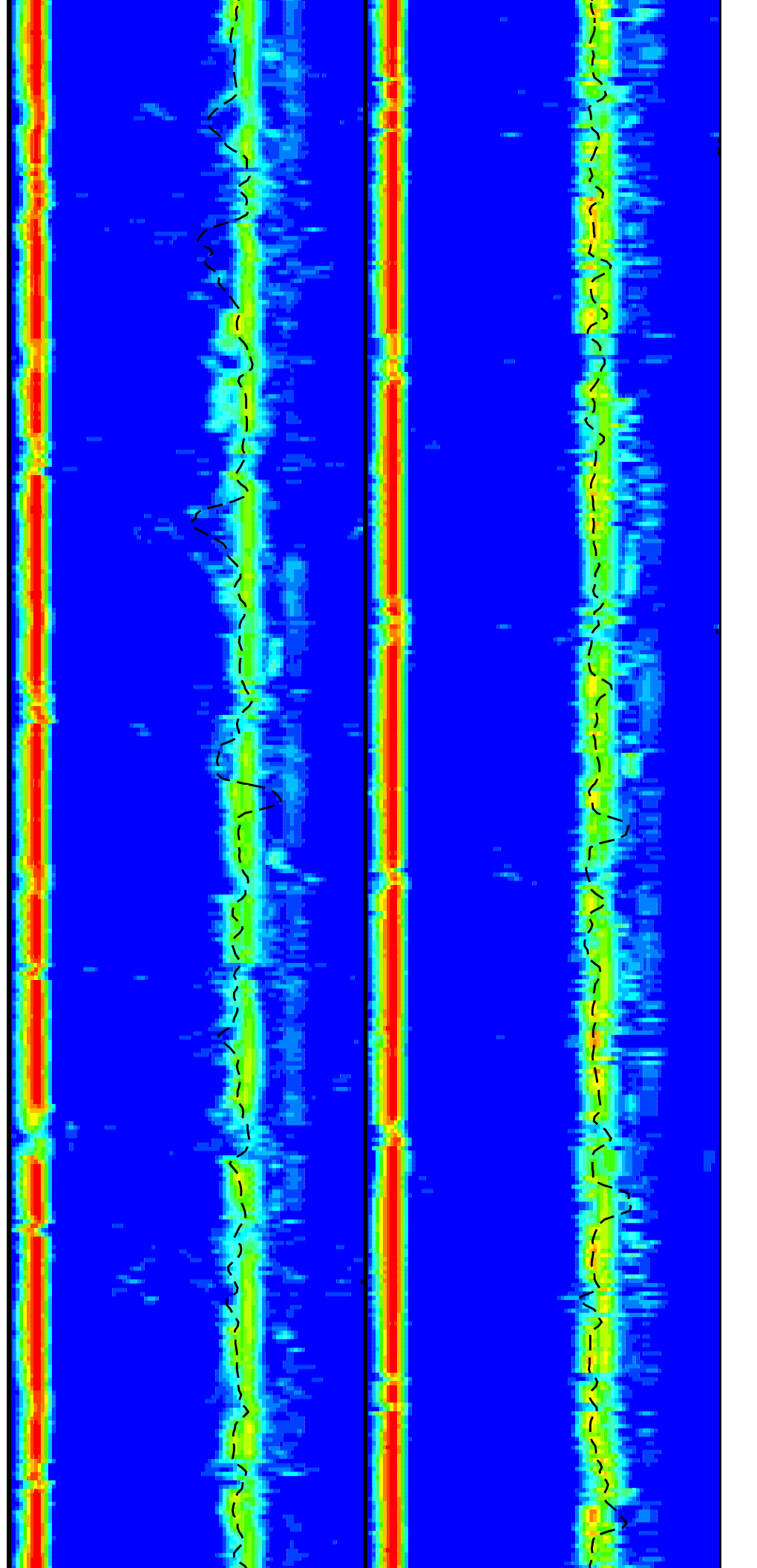
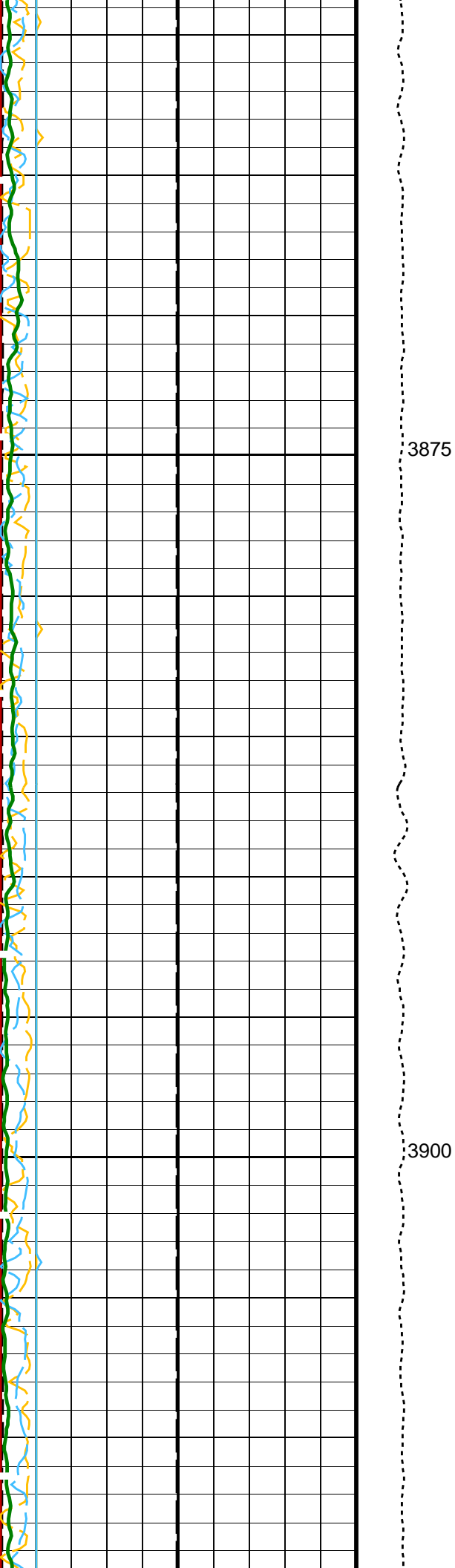
Min	Amplitude	Max	Min	Amplitude	Max
					
Tr.Array P&S Slow Proj. CVDL (SPT4)			Rec.Array P&S Slow Proj. CVDL (SPR4)		
40	(US/F)	240	40	(US/F)	240
Delta-T Shear / TA - P & S (DTTS)			Delta-T Shear / RA - P & S (DTRS)		
40	(US/F)	240	40	(US/F)	240
Delta-T Comp / TA - P & S (DTTP)			Delta-T Comp / RA -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

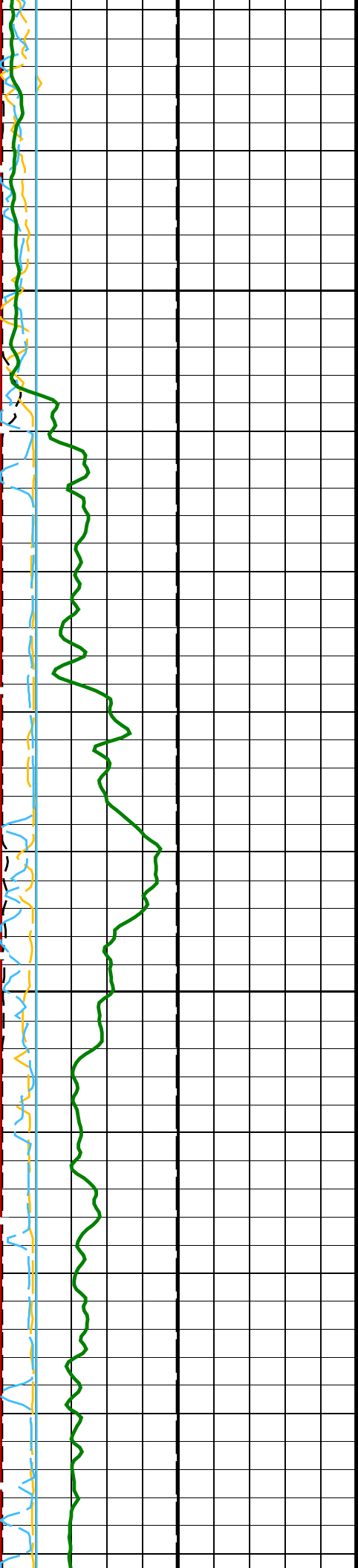
0	Bit Size (BS)	20
	(IN)	

Tension (TENS) (LBF)
10000 0



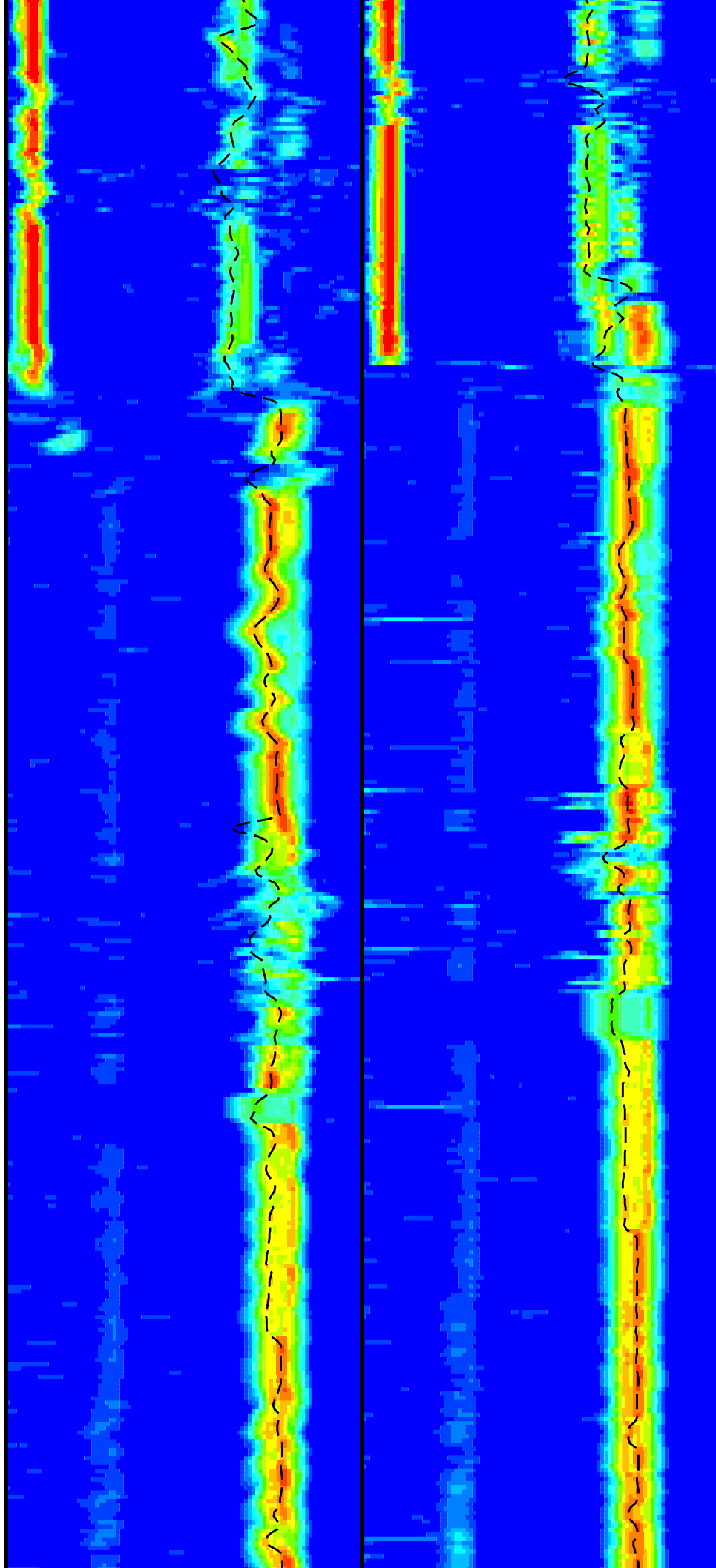


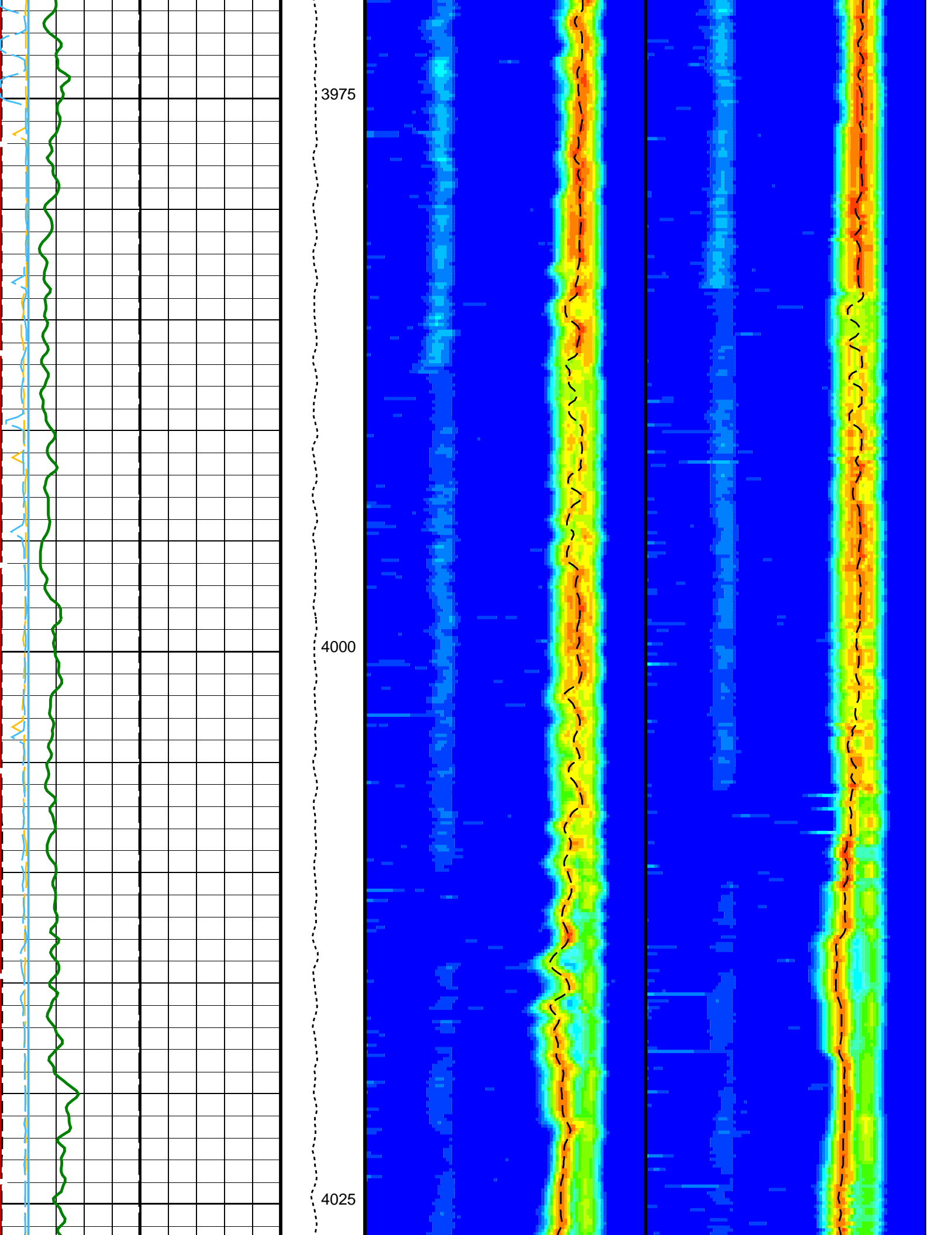


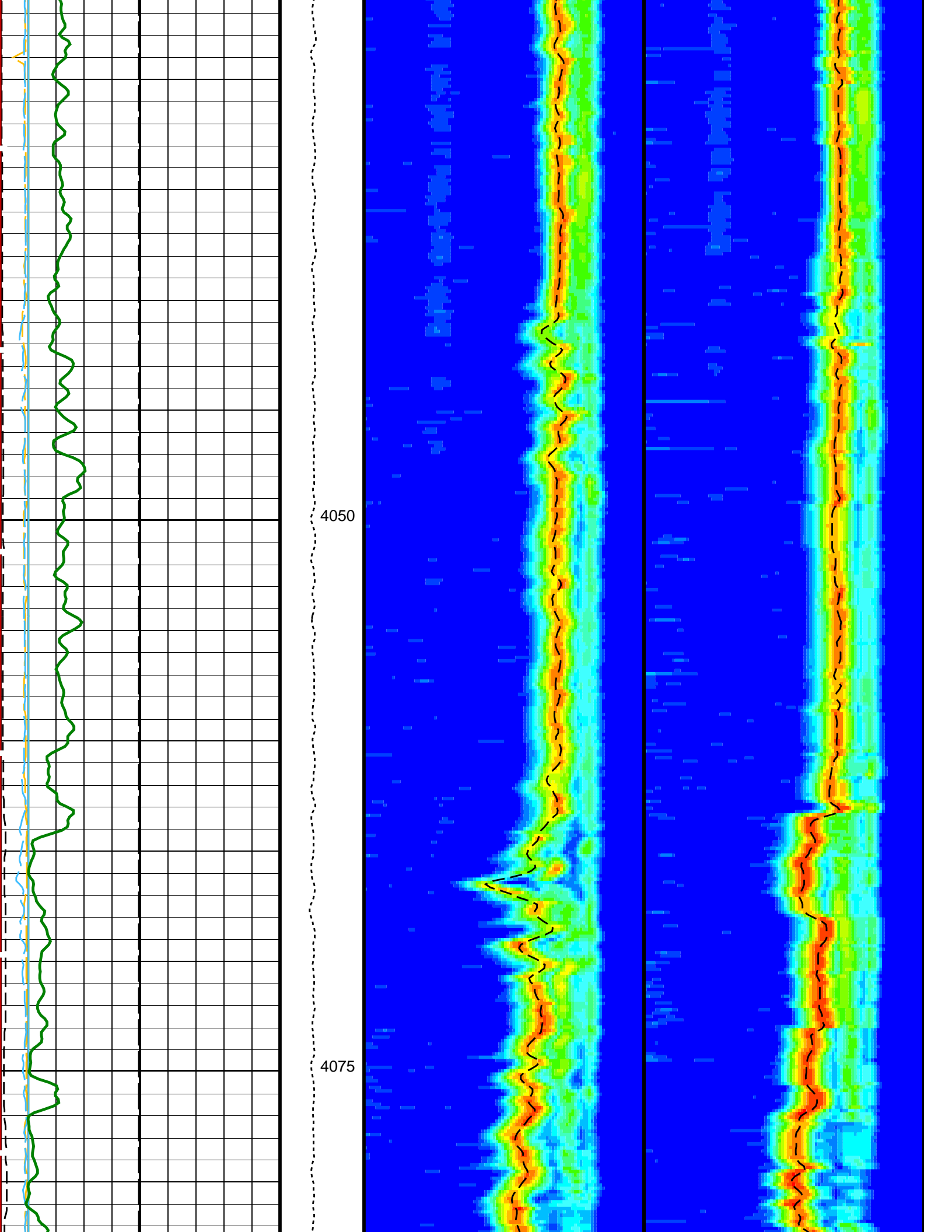


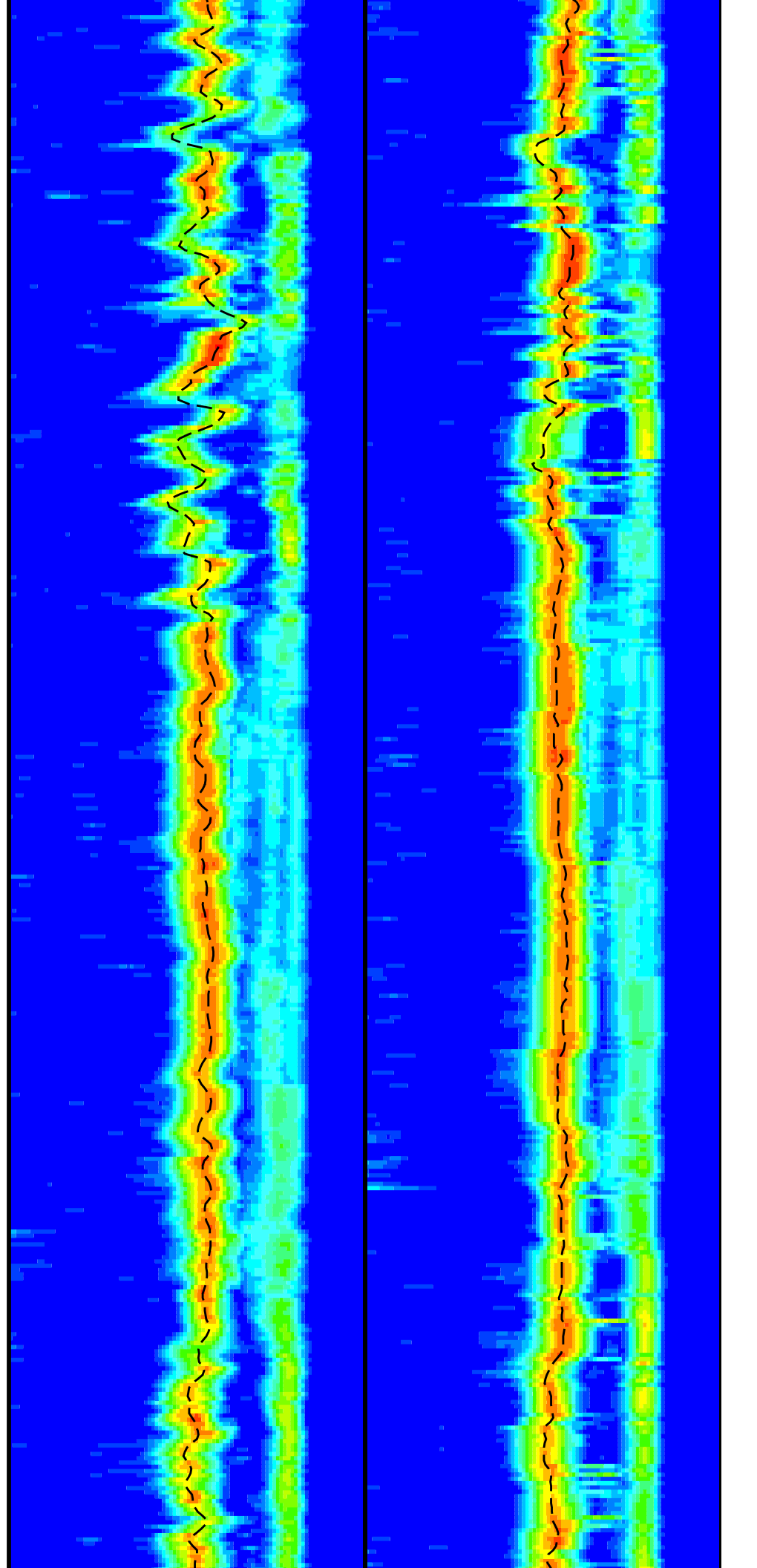
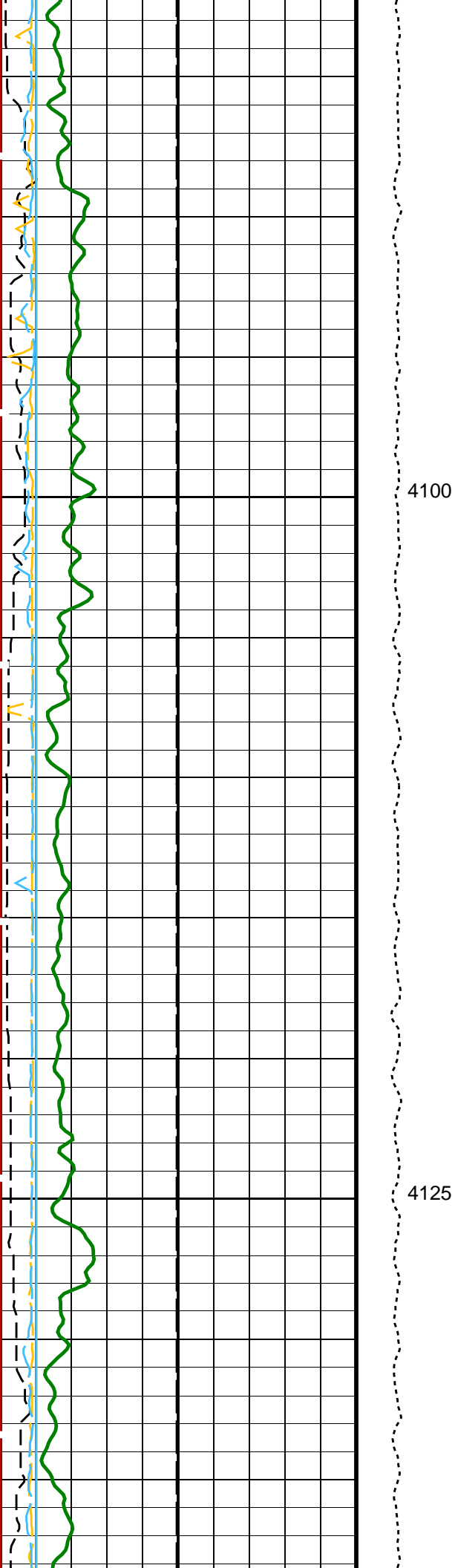
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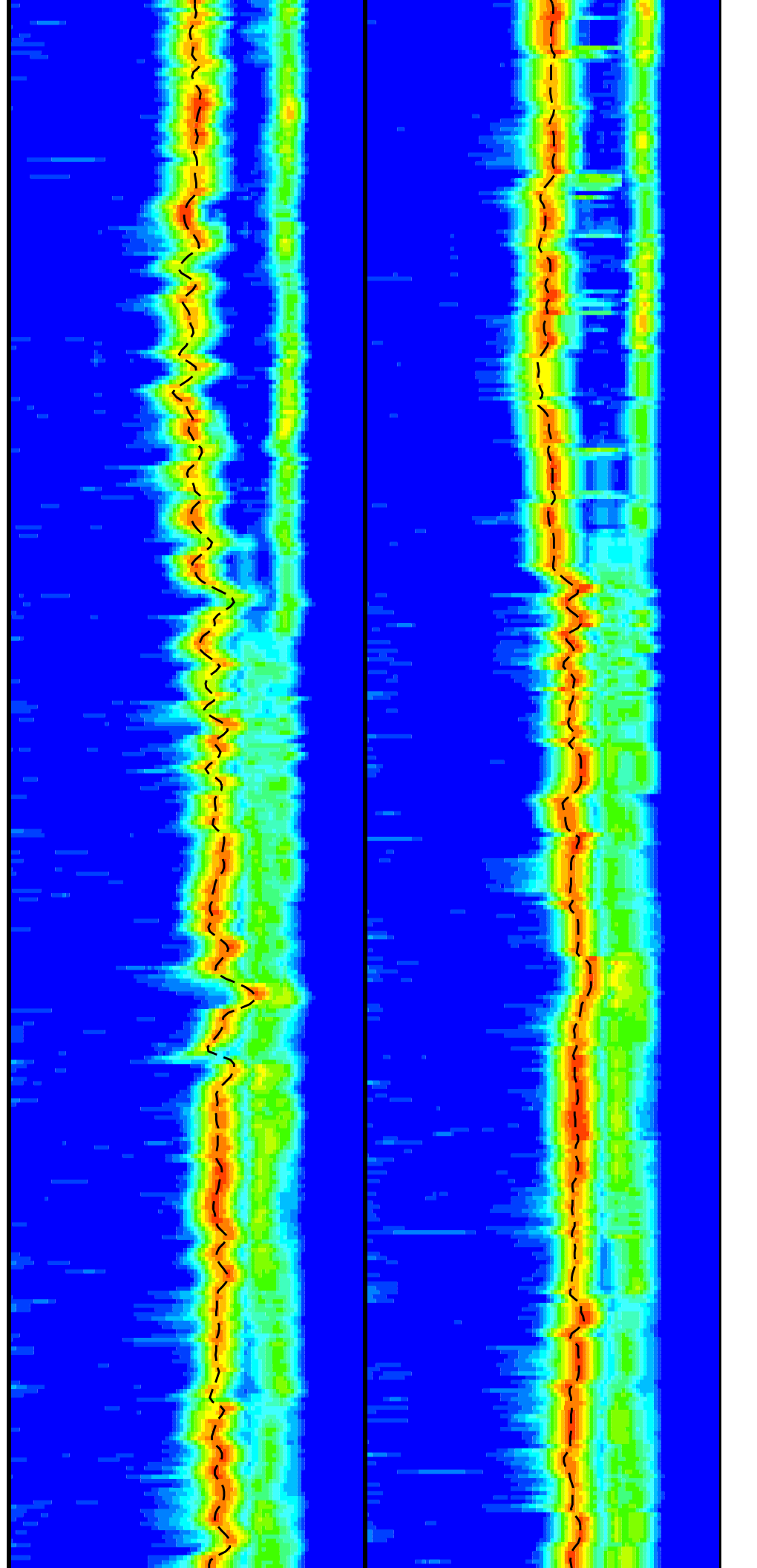
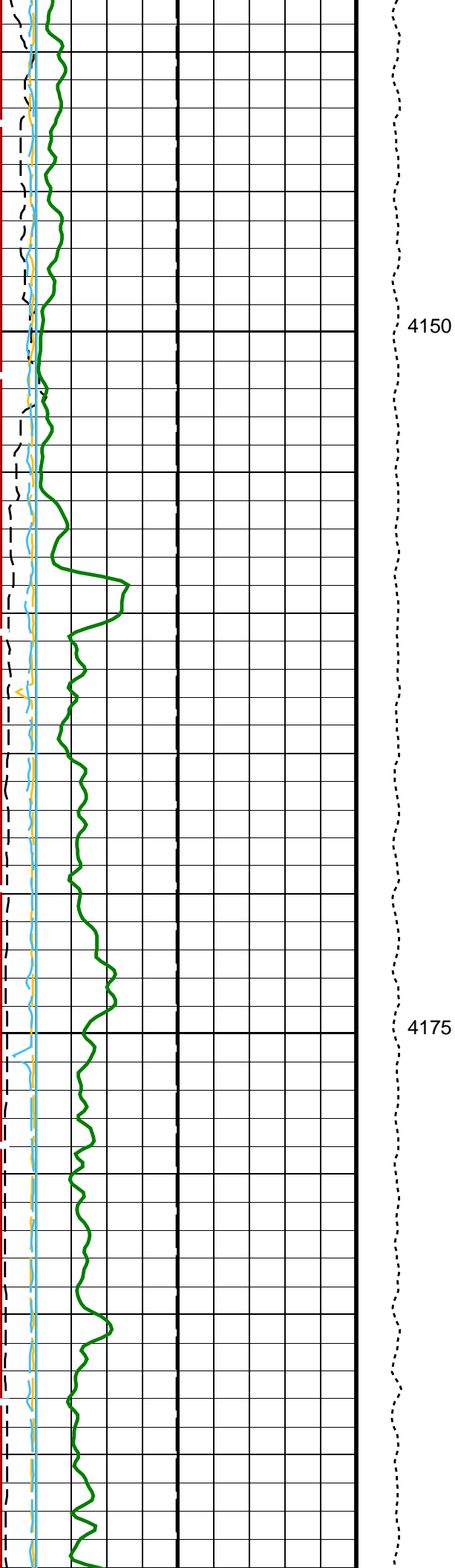


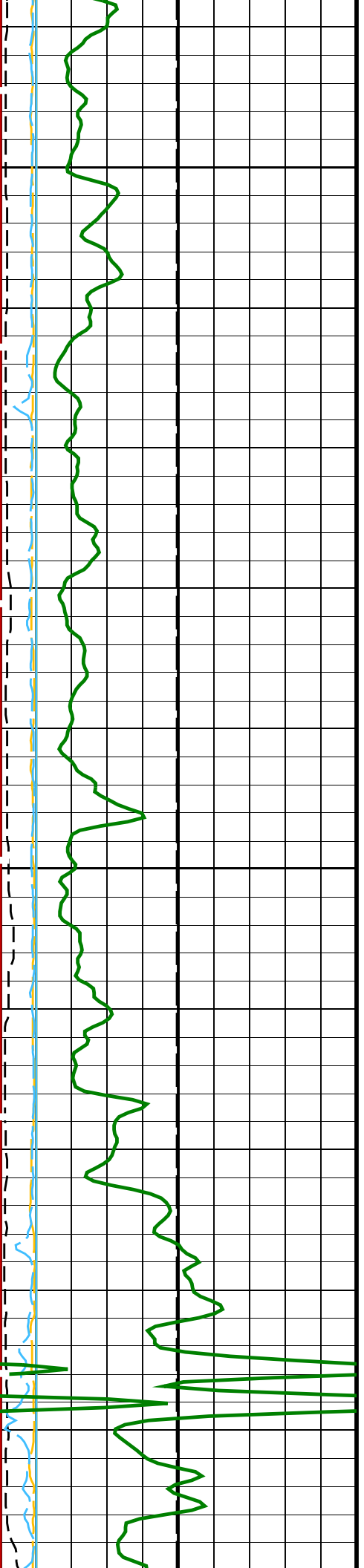








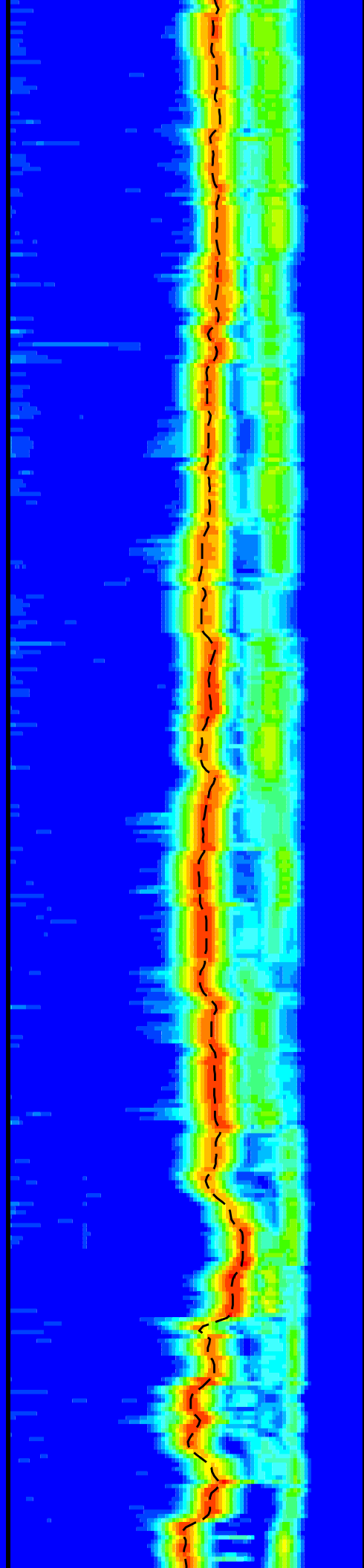
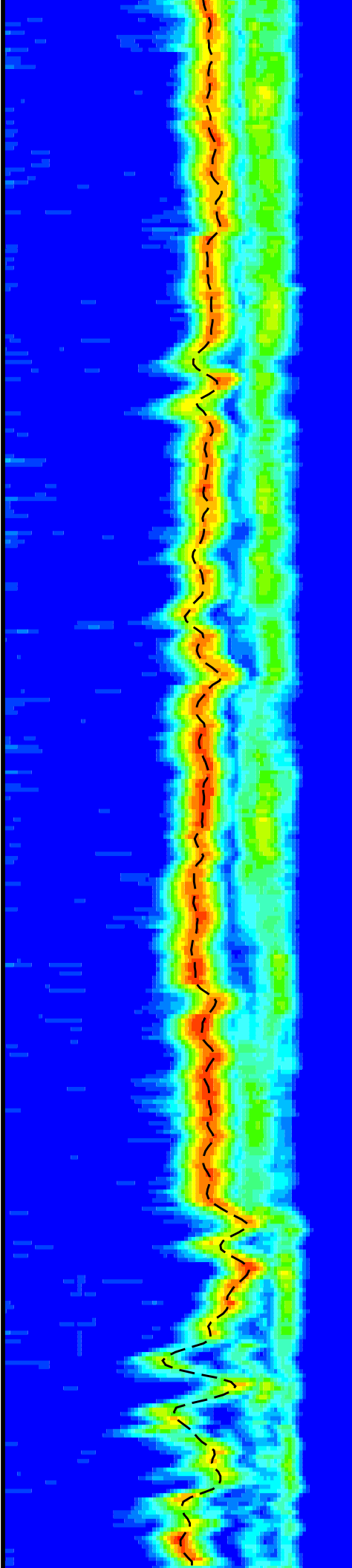


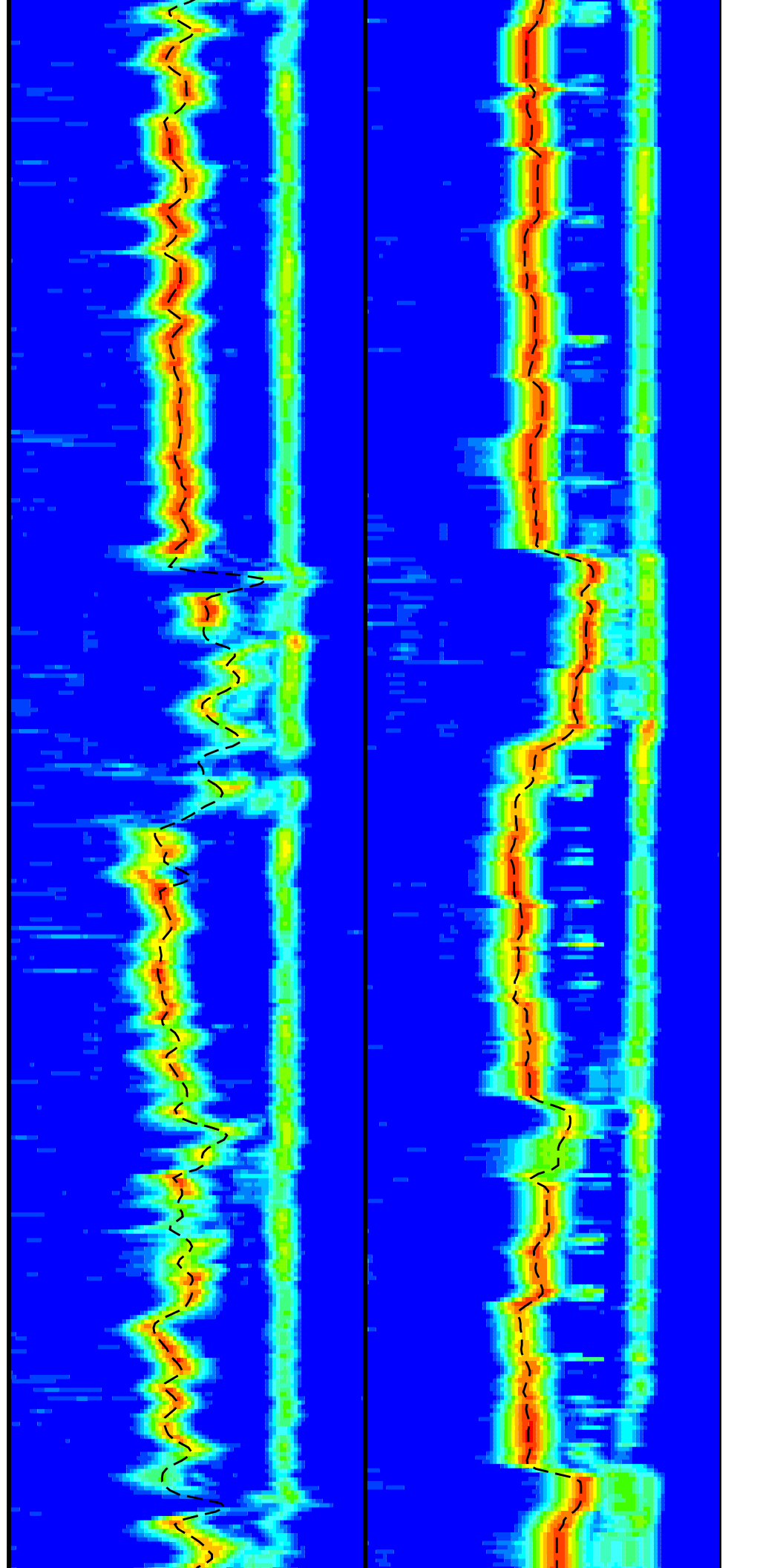
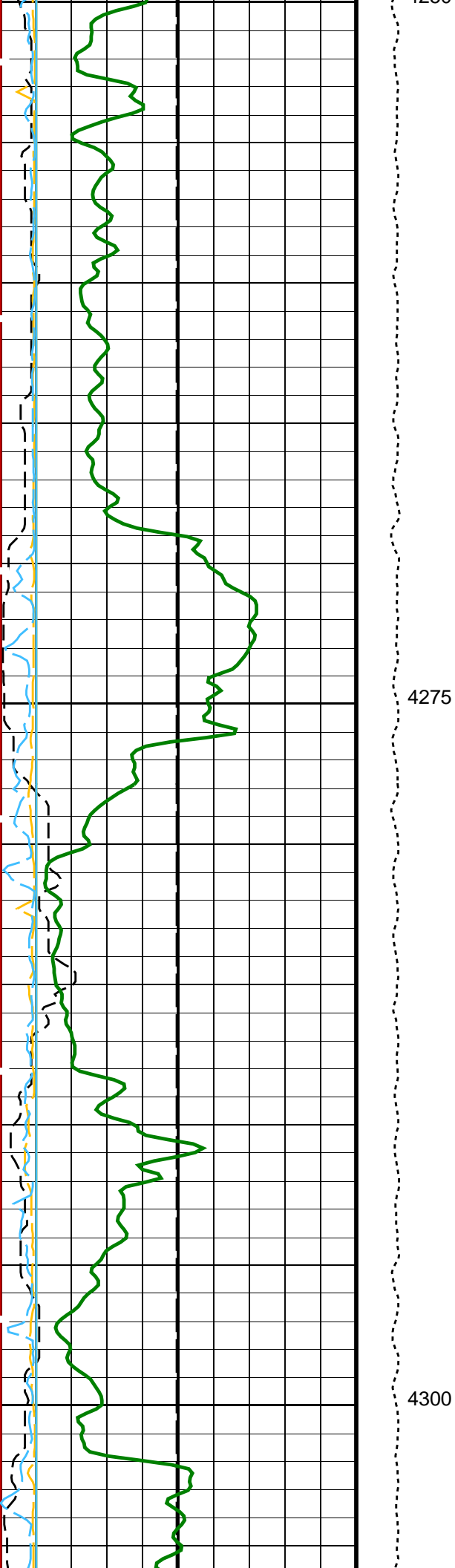


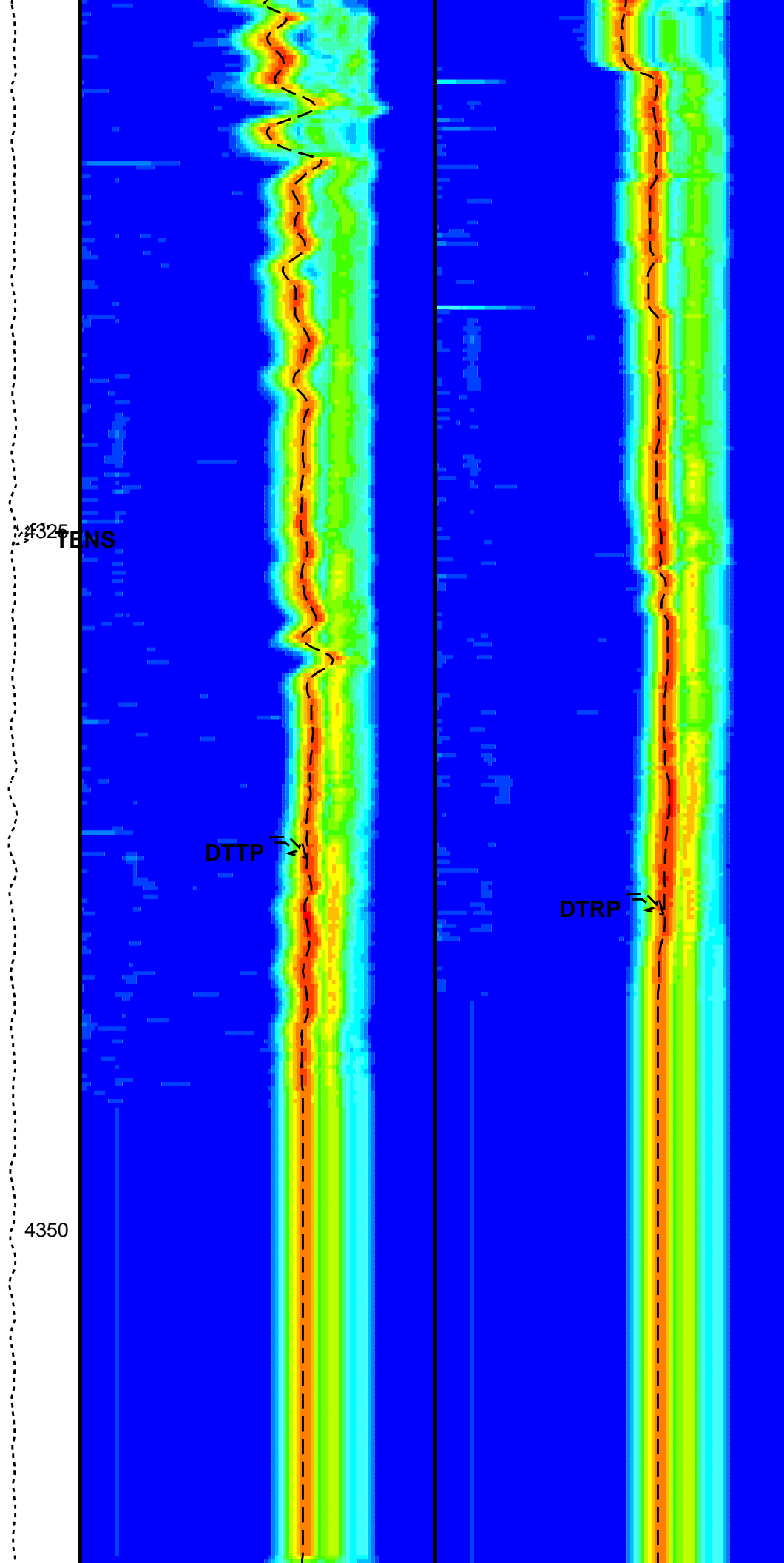
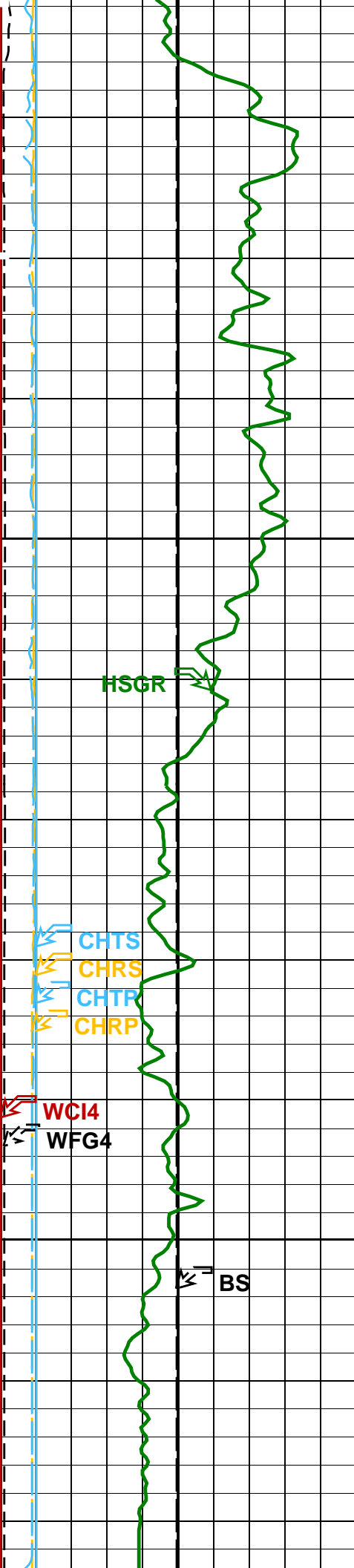
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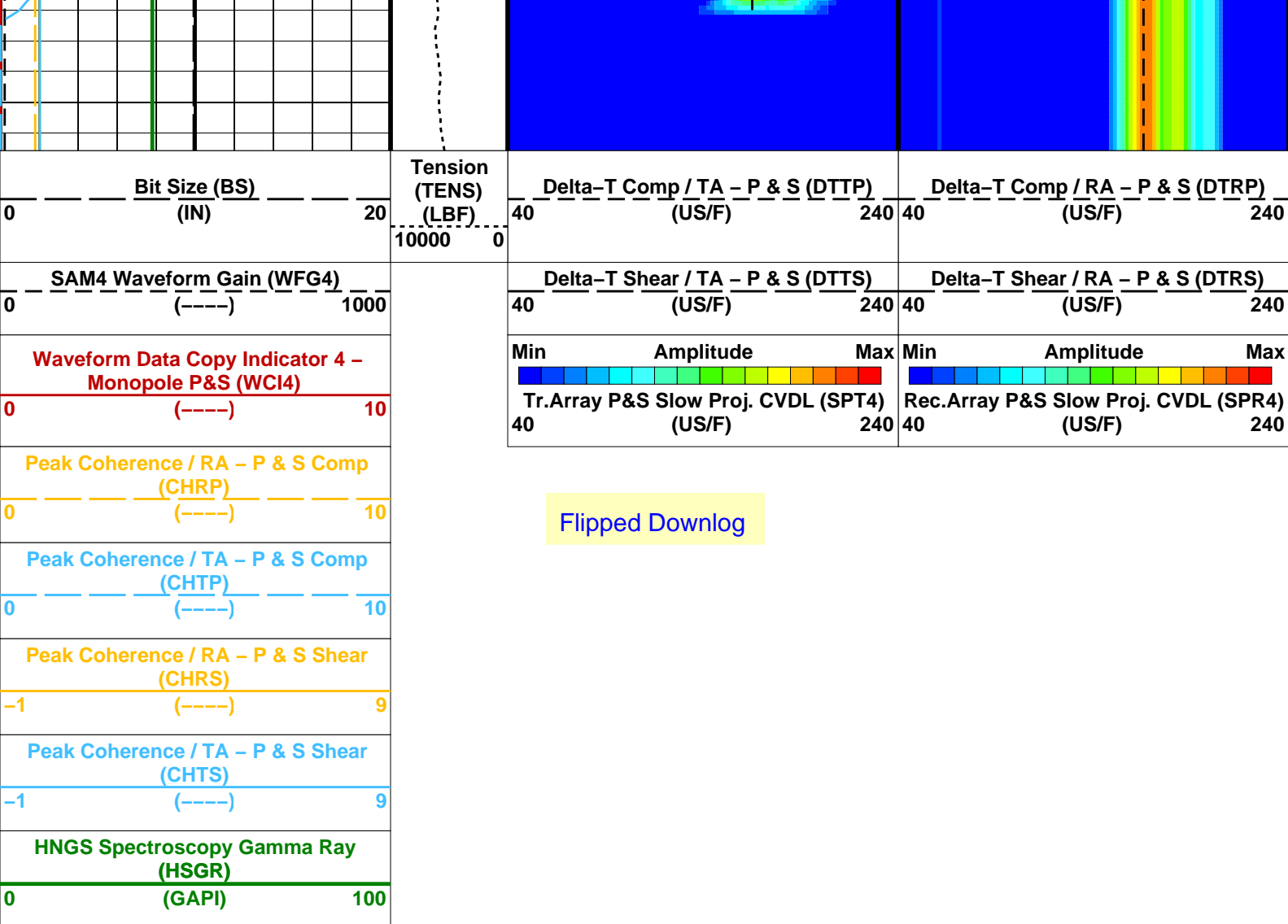
4225

4250









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	-0.00117675	
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	0.987226	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998718	
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	
BHS	EDTC–B: Enhanced DTS Cartridge		
GCSE	Borehole Status	OPEN	
	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: 09–Nov–2017 07:50

## OP System Version: 19C0–187

MSS_LDEO–A	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_MSS_LDEO_NGS_012LUP	PRODUCER	09–Nov–2017 07:42	4366.6 M	3778.8 M
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## Output DLIS Files

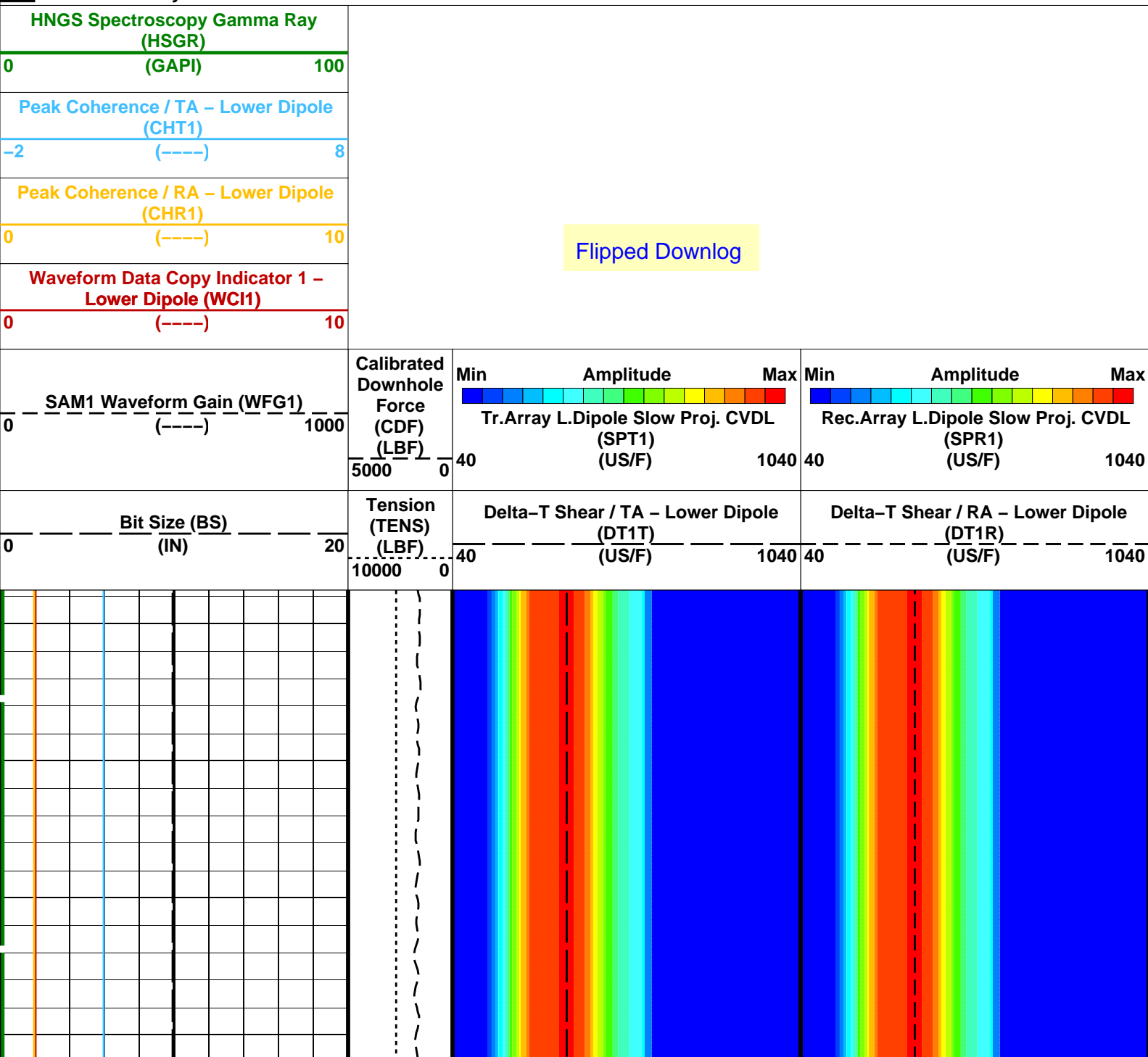
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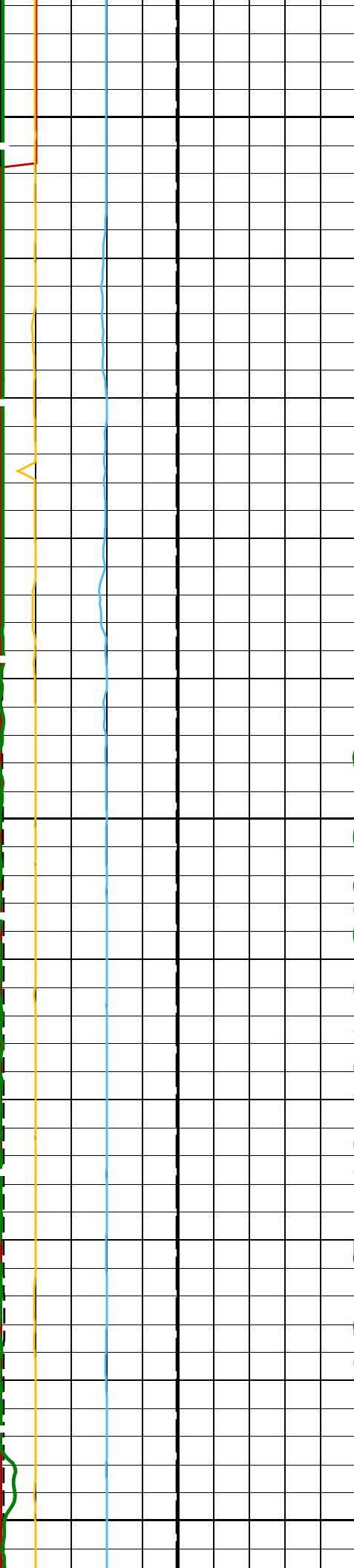
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BACKUP	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M

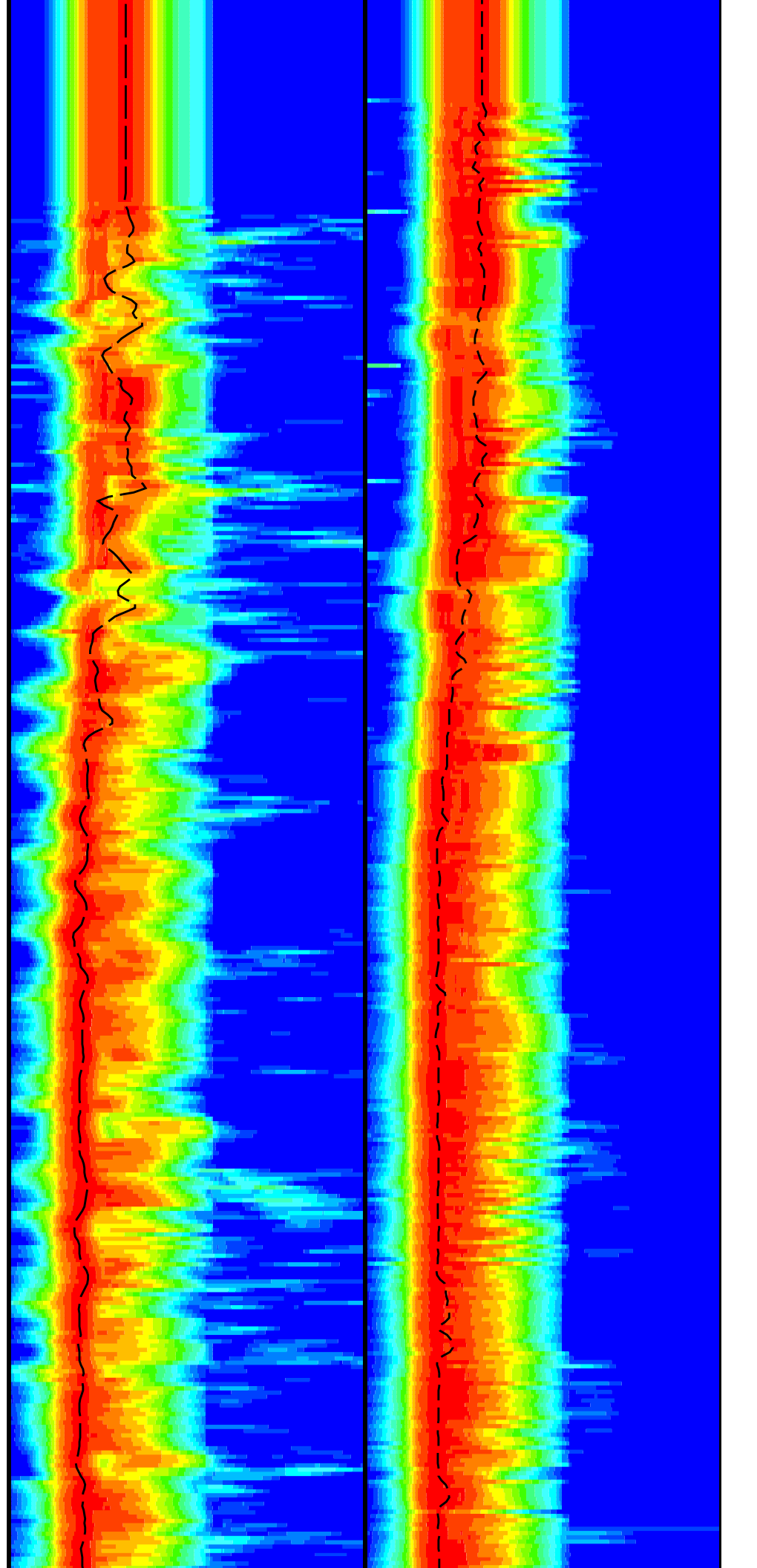
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

**Time Mark Every 60 S**

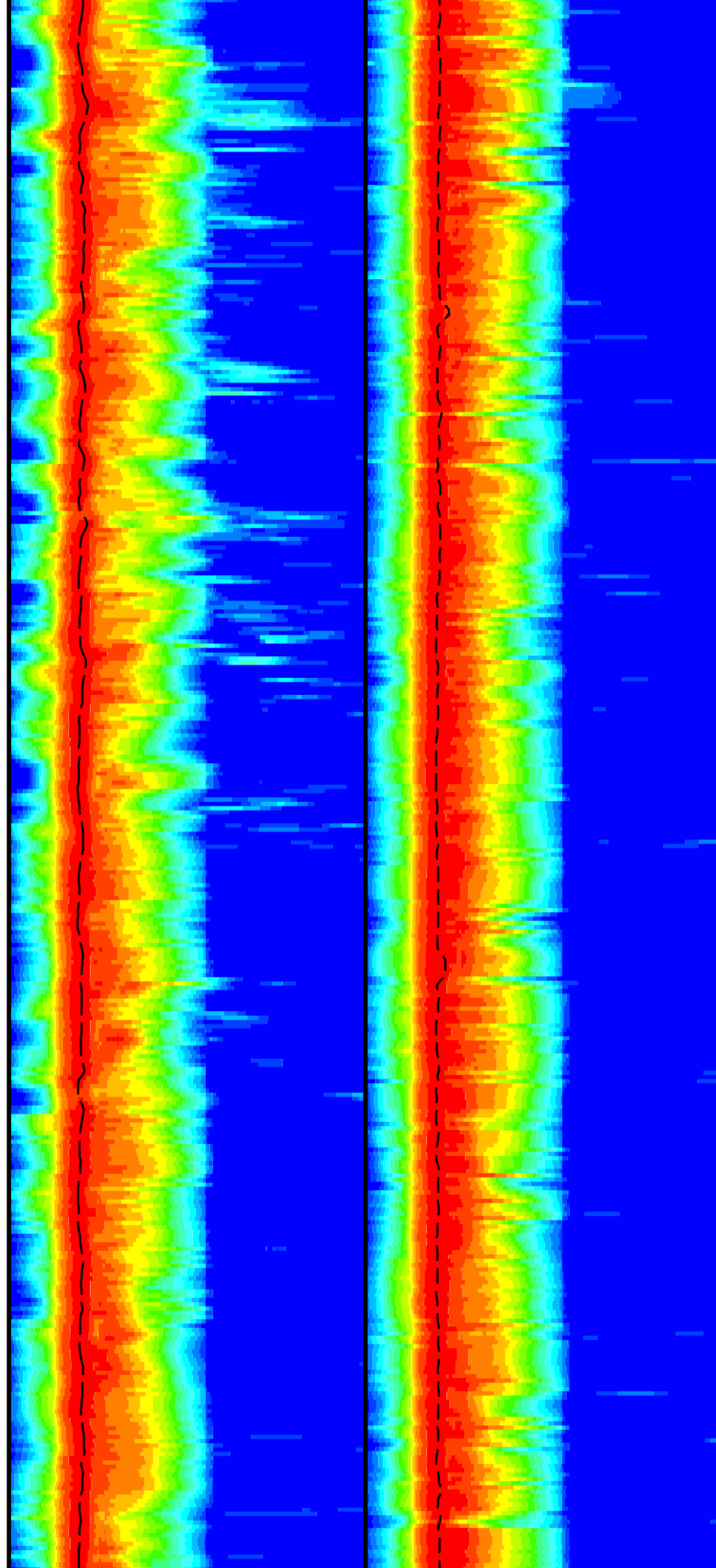
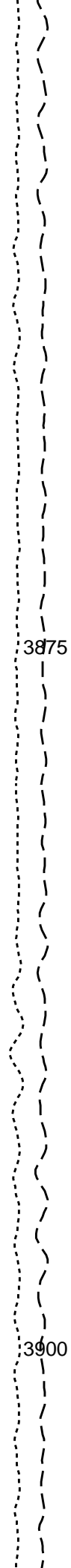
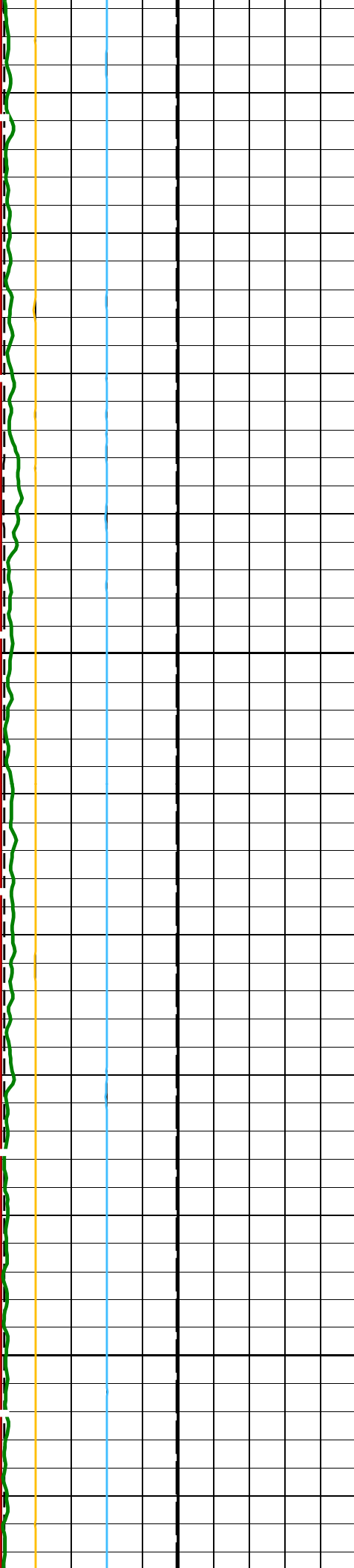


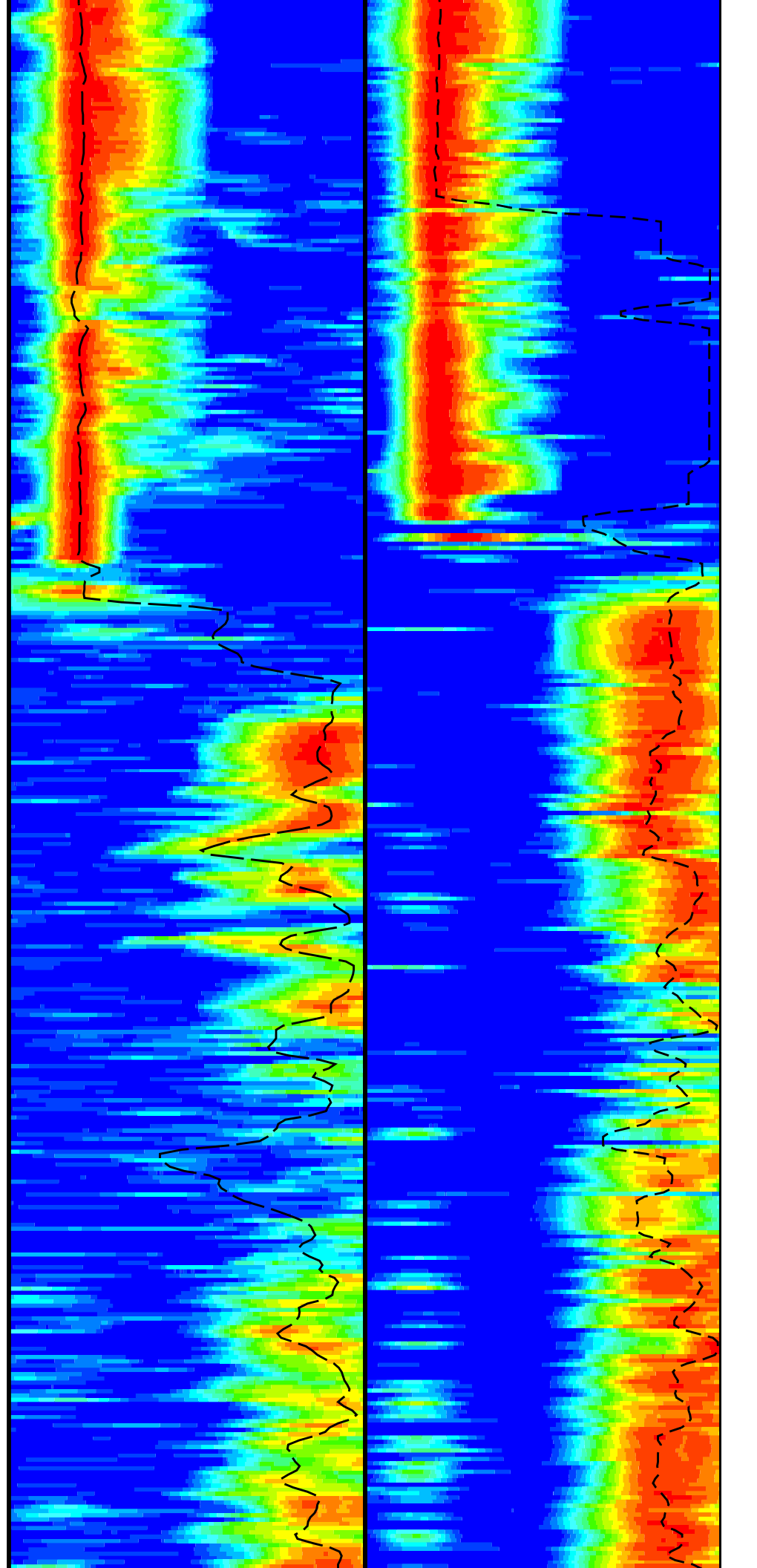
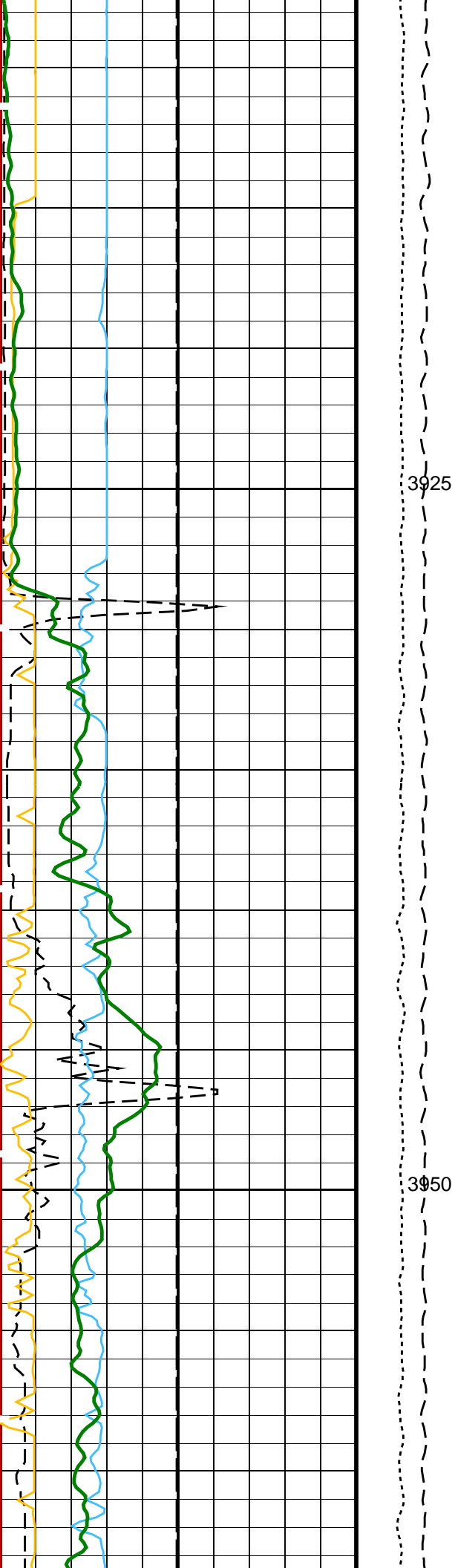


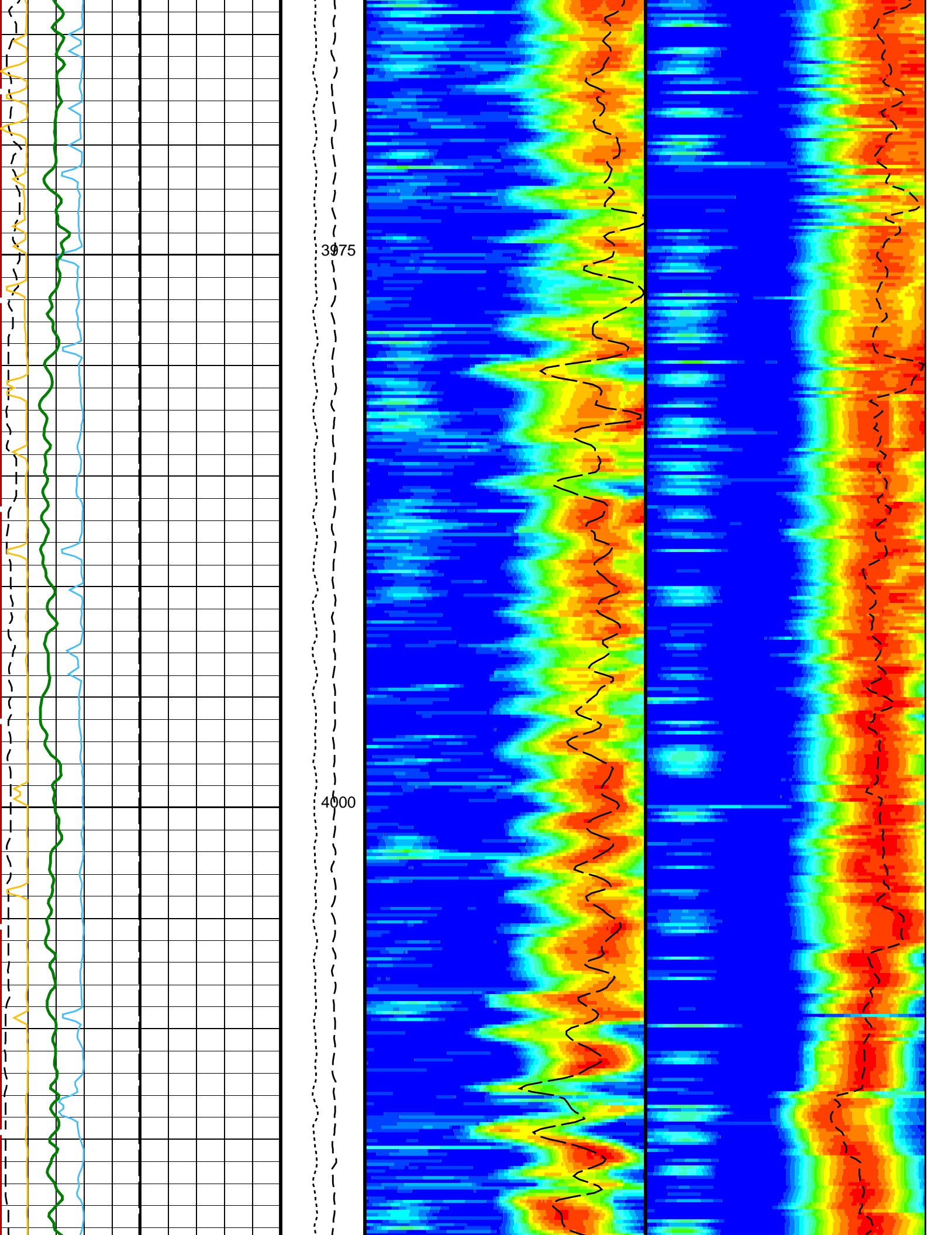
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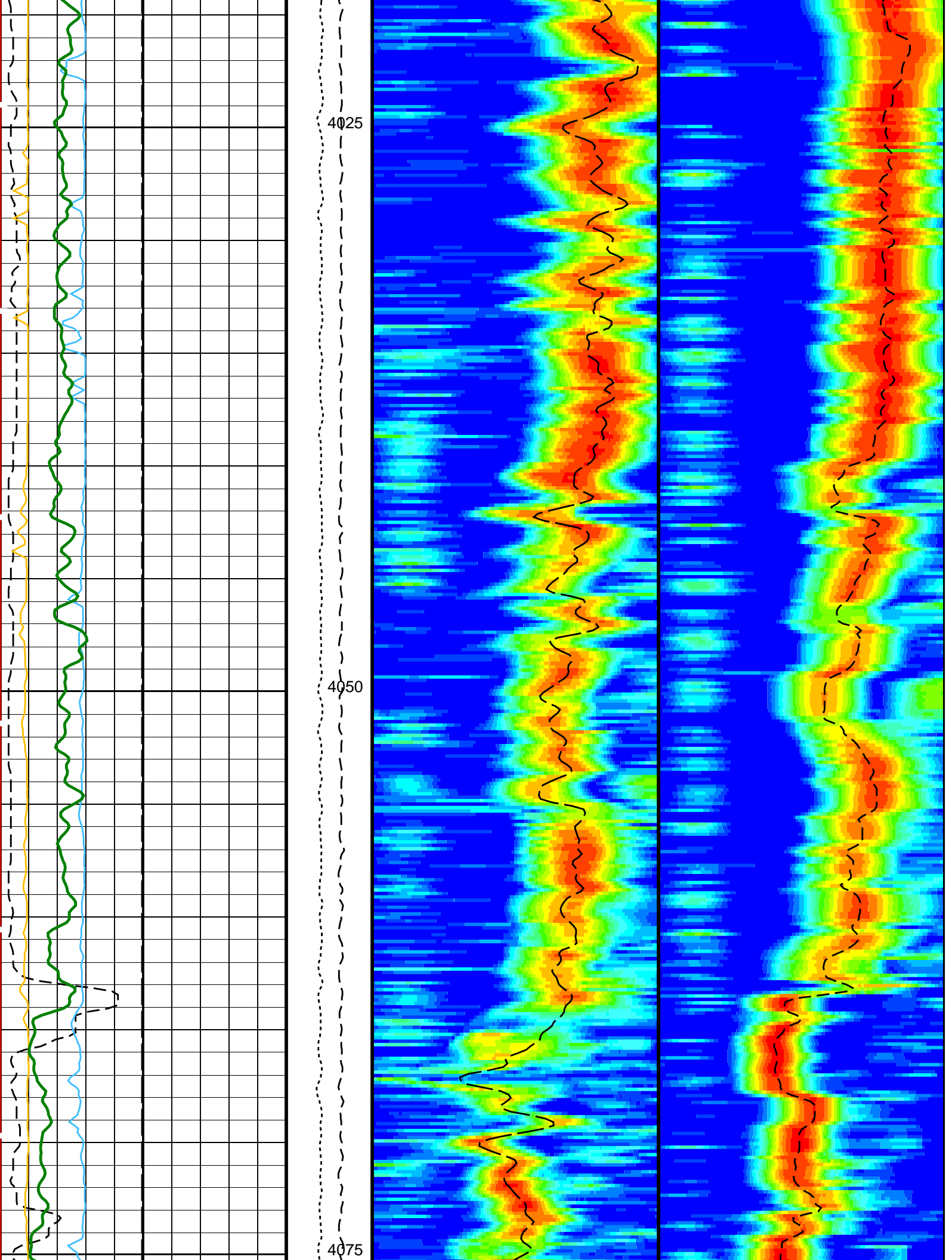


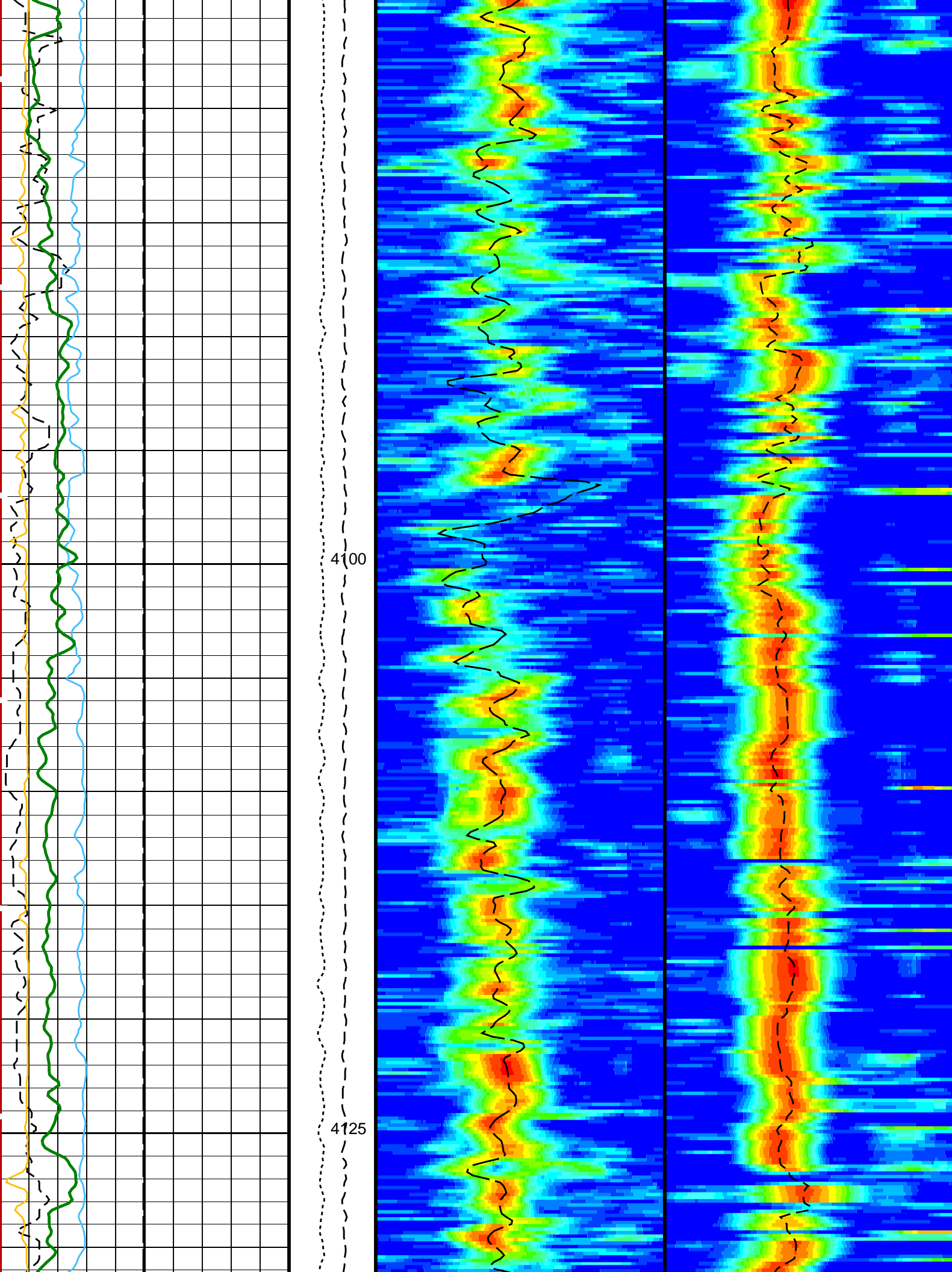


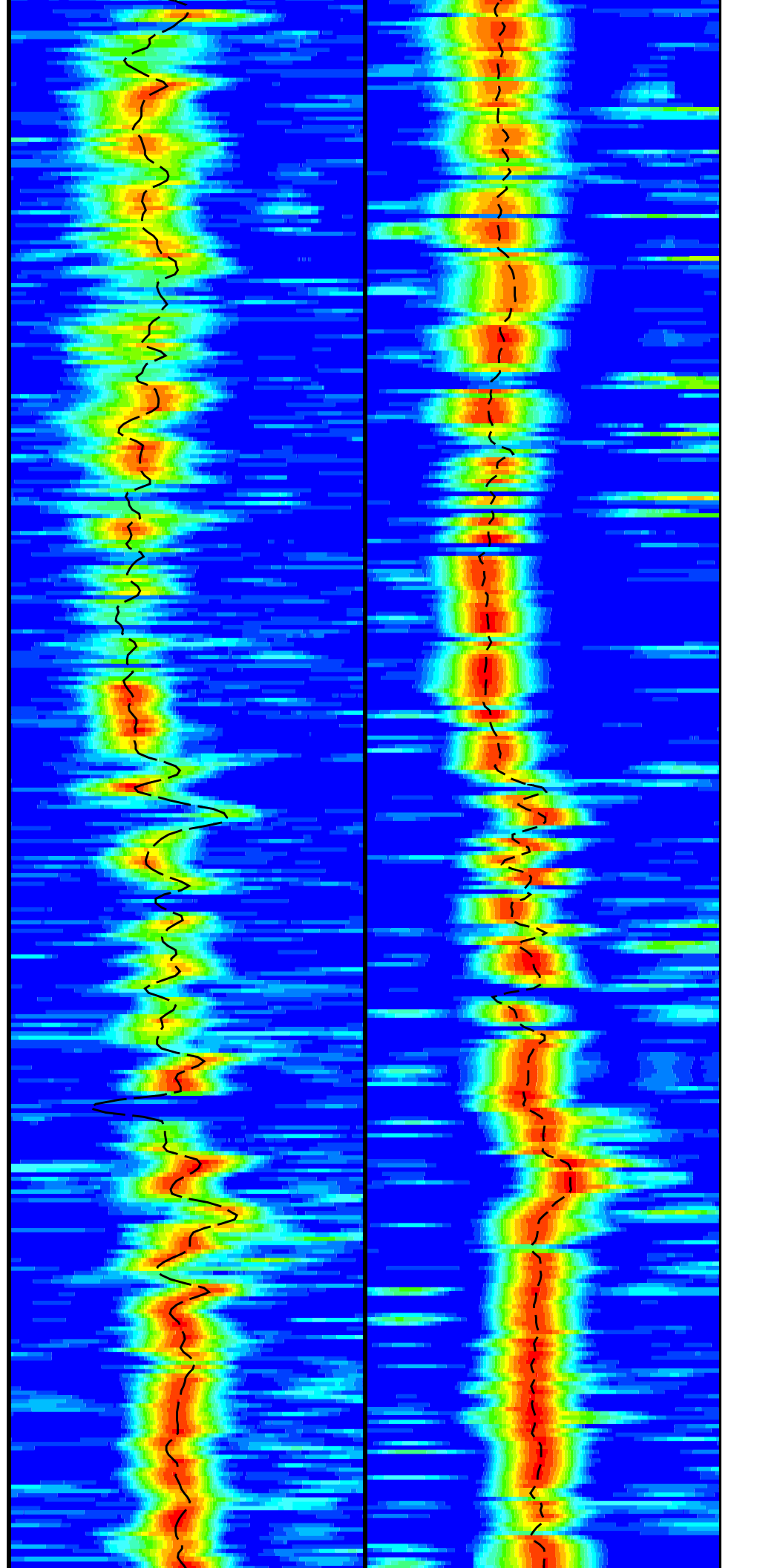
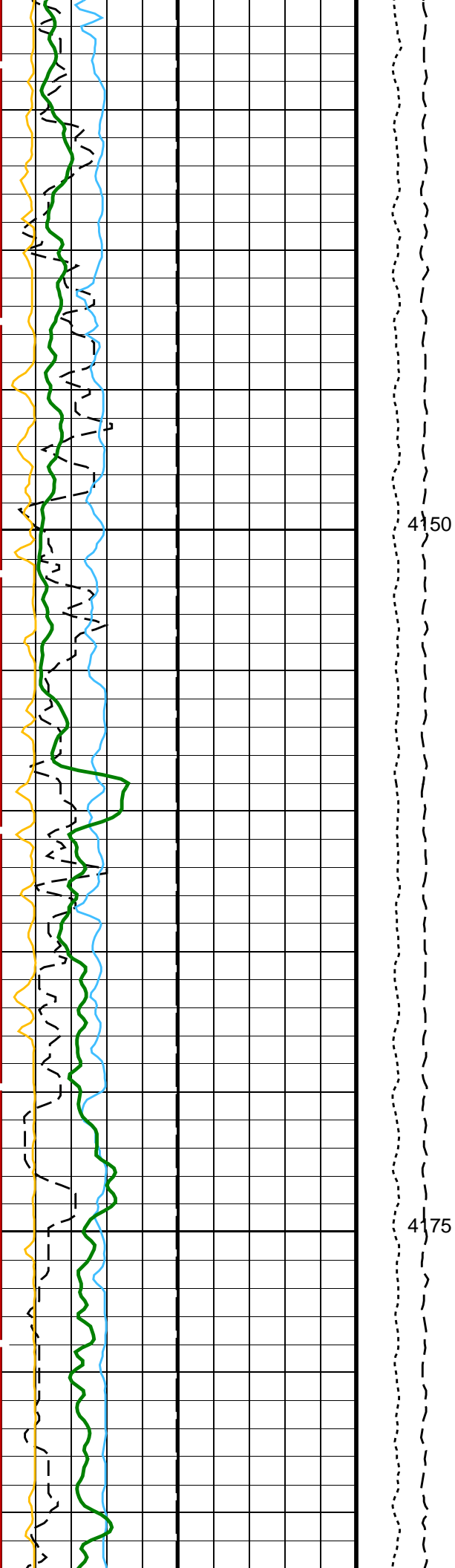


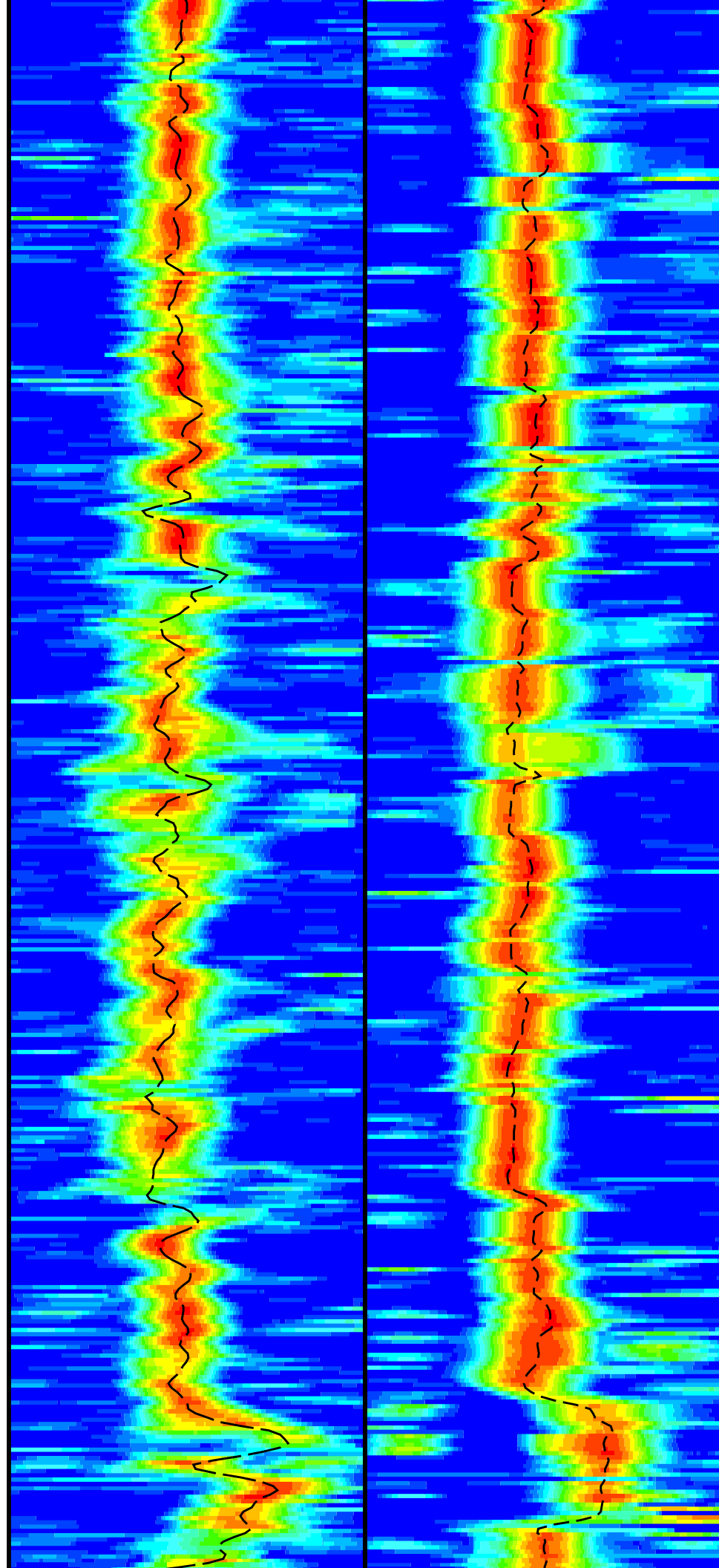
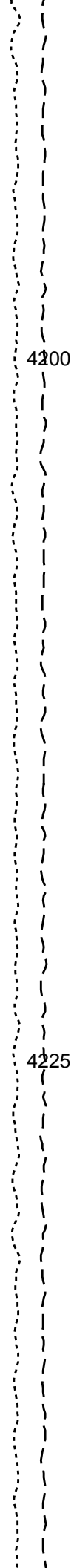
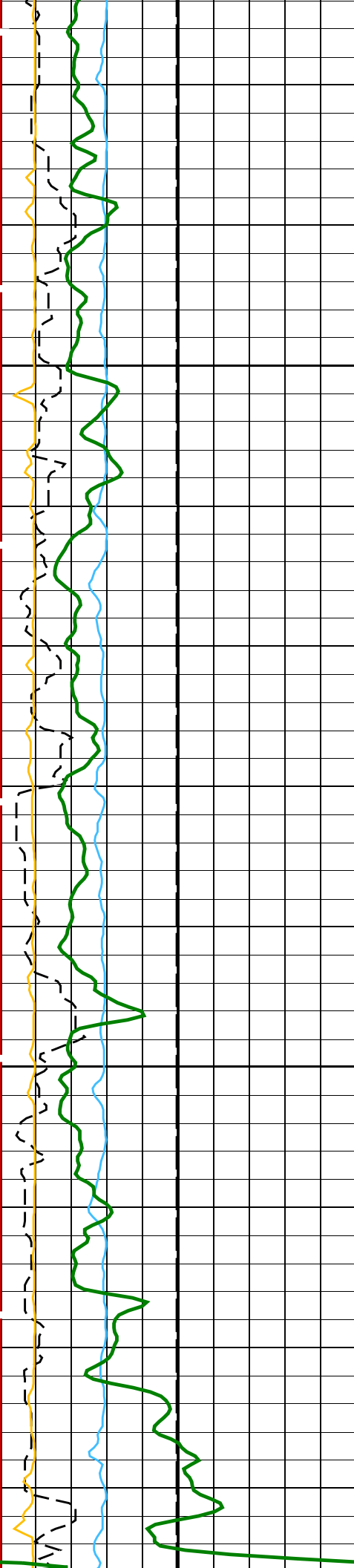




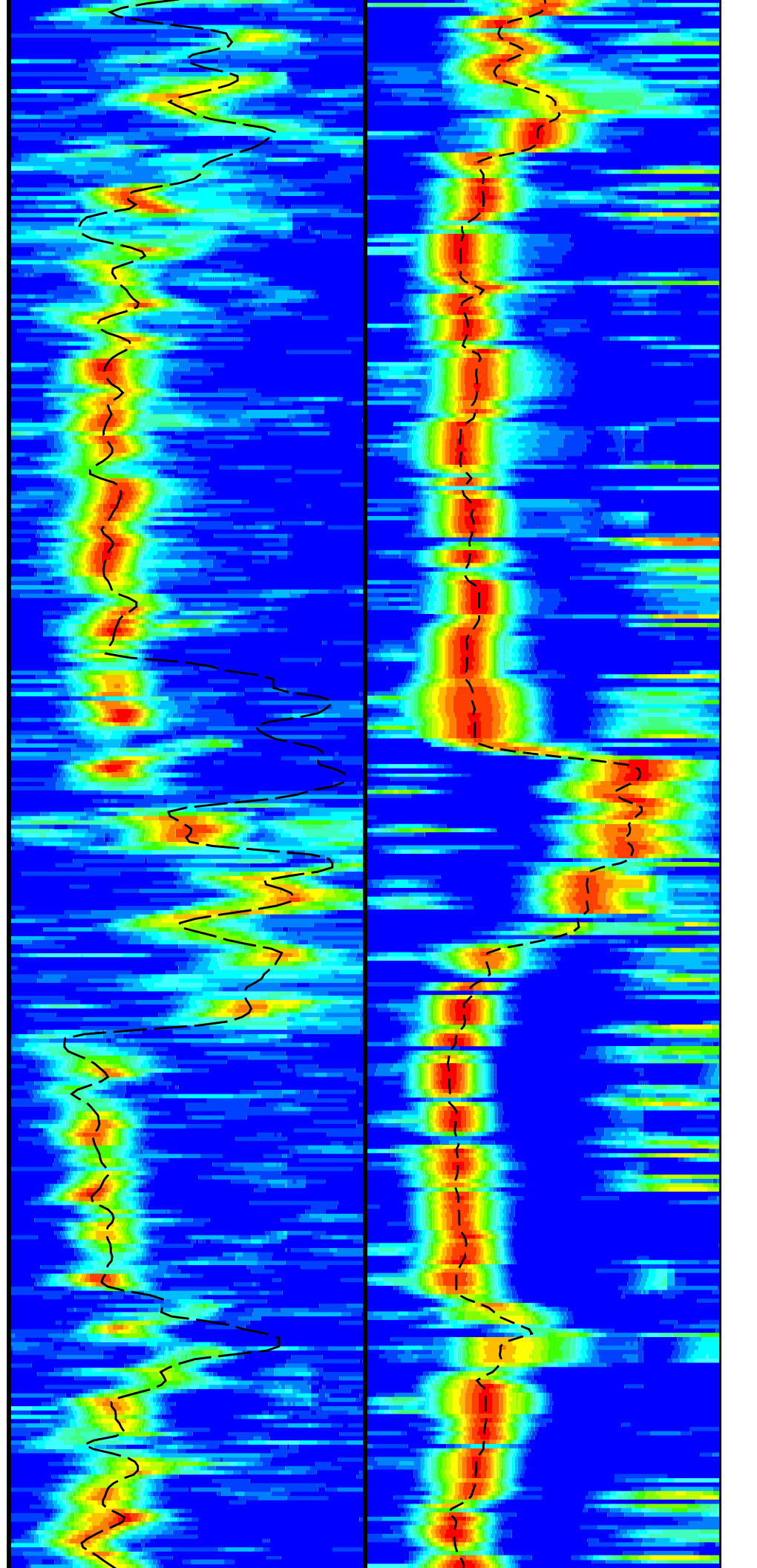
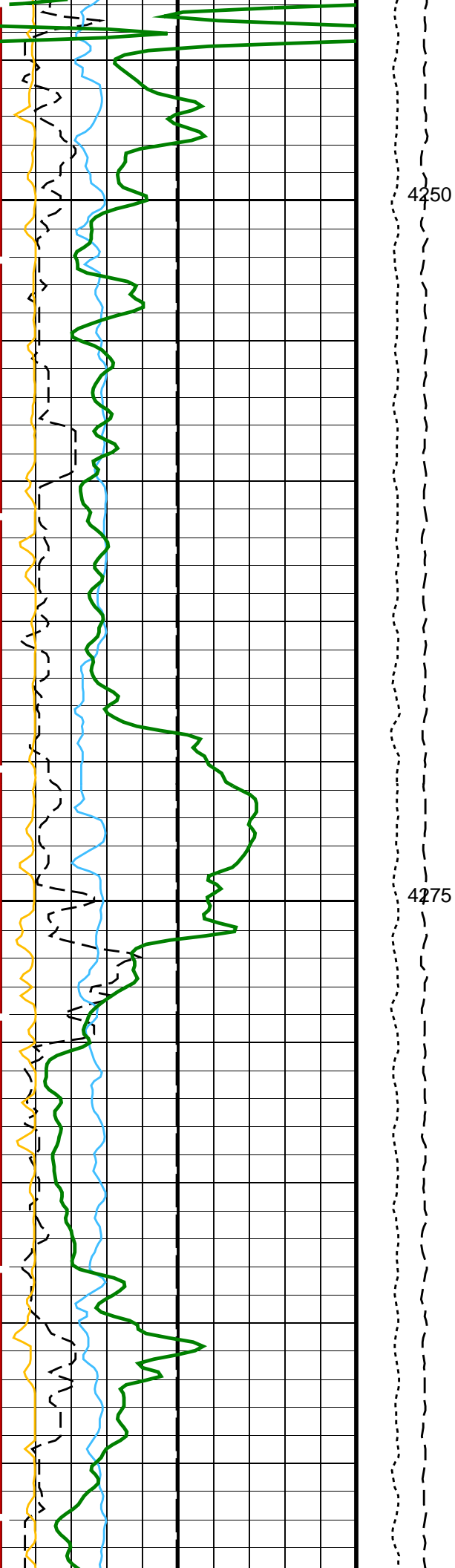




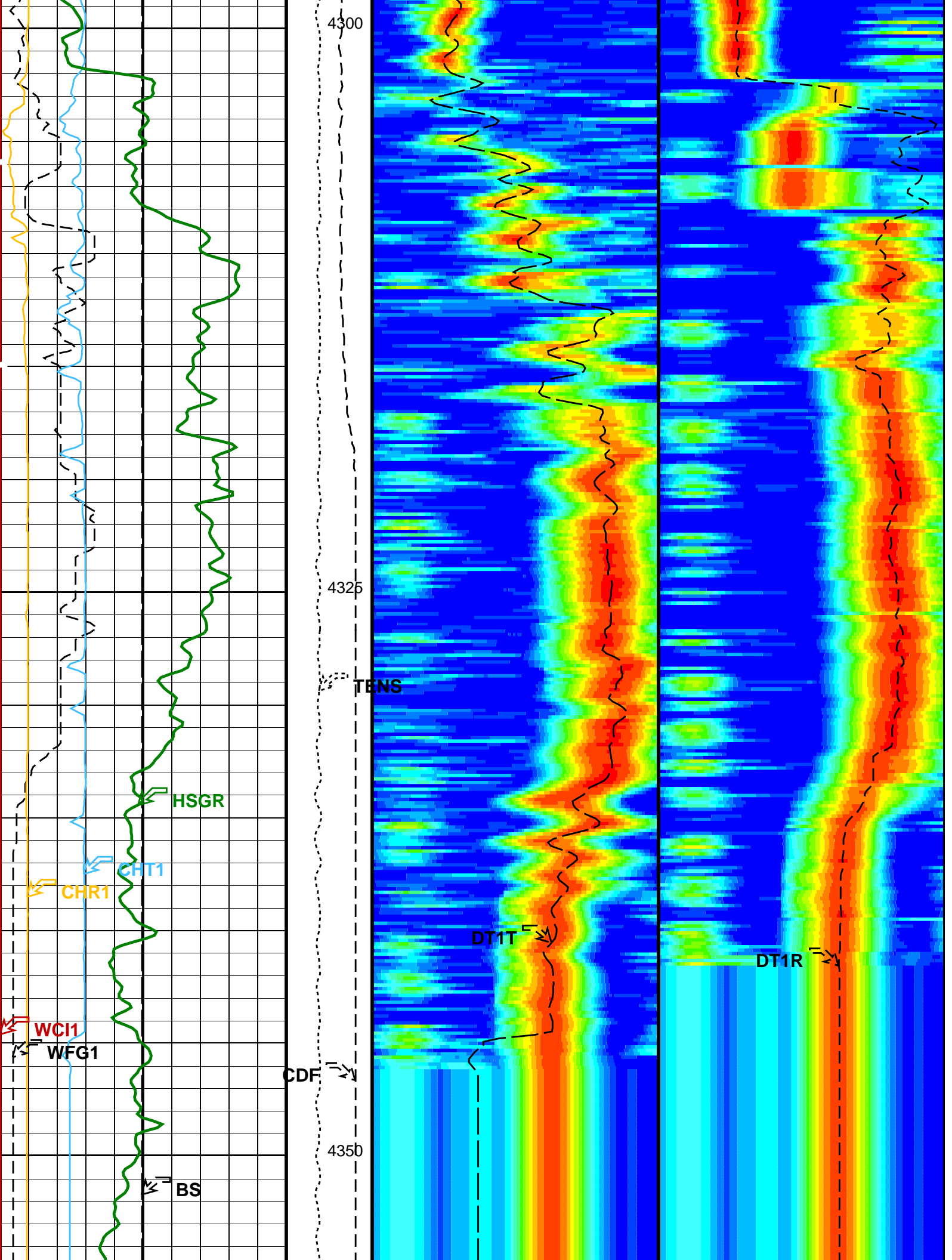


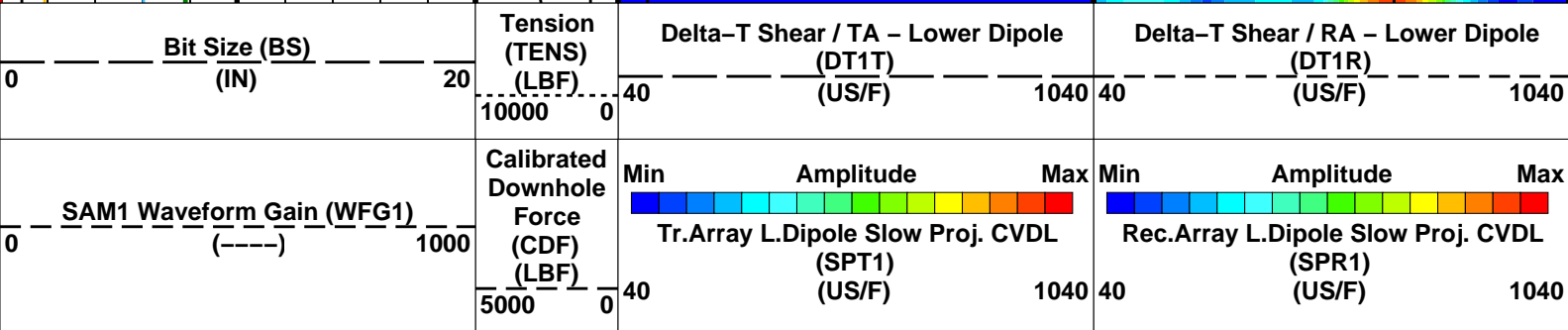
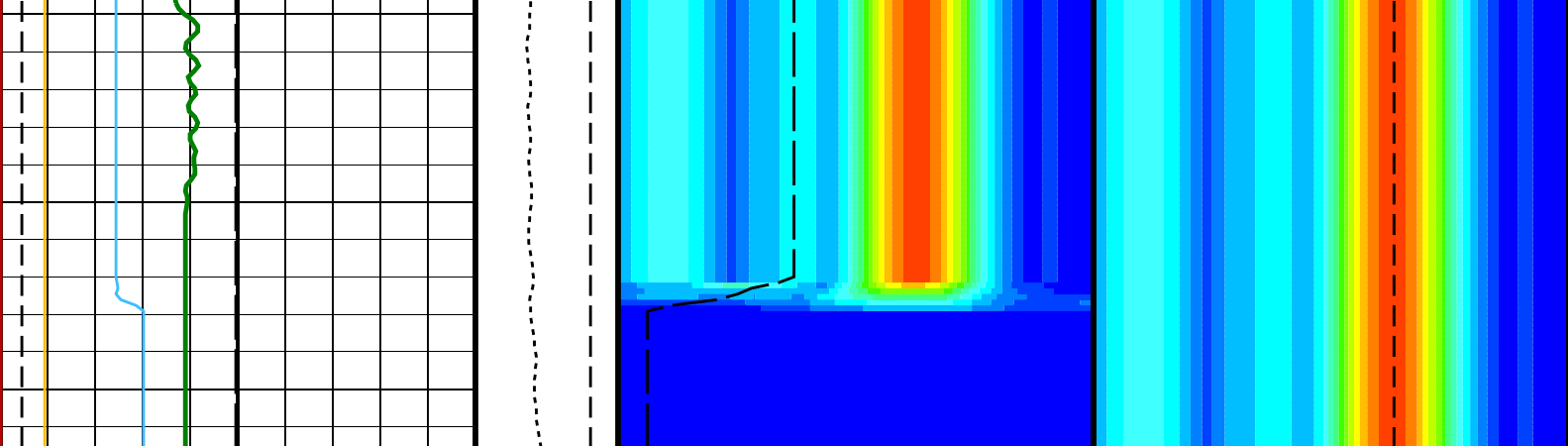












Waveform Data Copy Indicator 1 – Lower Dipole (WC11)	Flipped Downlog
0 (-----) 10	
Peak Coherence / RA – Lower Dipole (CHR1)	
0 (-----) 10	
Peak Coherence / TA – Lower Dipole (CHT1)	
-2 (-----) 8	
HNGS Spectroscopy Gamma Ray (HSGR)	
0 (GAPI) 100	

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	-0.00117675
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	0.987226
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998718
HRLT-B: High Resolution Laterolog Array – B		
BUS	Borehole Status	OPEN

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: 09–Nov–2017 07:50

## OP System Version: 19C0–187

MSS_LDEO–A	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_MSS_LDEO_NGS_012LUP	PRODUCER	09–Nov–2017 07:42	4366.6 M	3778.8 M
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## Output DLIS Files

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BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09–Nov–2017 07:50

Company: International Ocean Discovery Program    Well: Expedition 369, Site U1514C

## Input DLIS Files

## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014PUP	FN:21	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M
BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09-Nov-2017 07:50	4366.6 M	3778.8 M

**OP System Version: 19C0-187**

MSS_LDEO-A	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

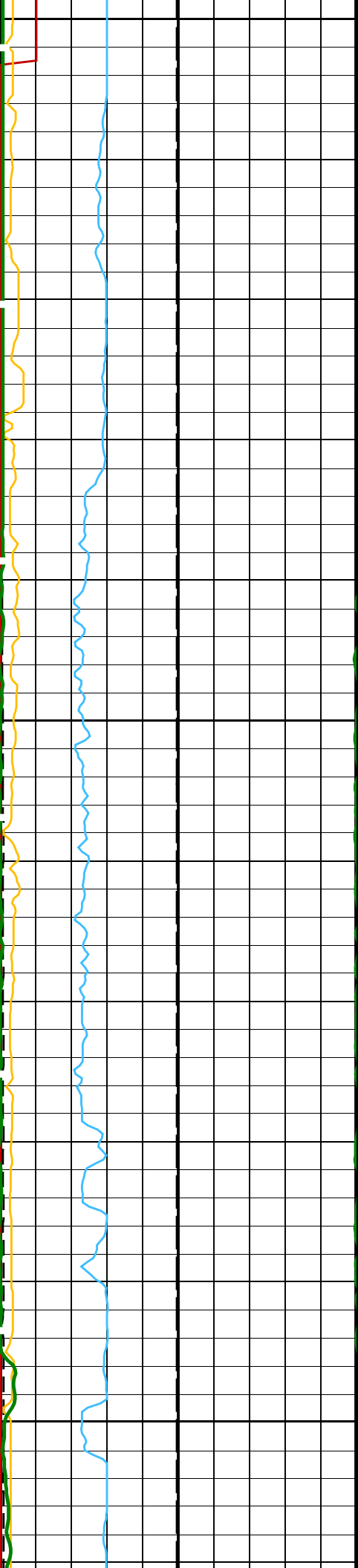
**Time Mark Every 60 S**

<b>HNGS Spectroscopy Gamma Ray (HSGR)</b>		
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<b>Peak Coherence / TA – Upper Dipole (CHT2)</b>		
<b>-2</b>	<b>(----)</b>	<b>8</b>
<b>Peak Coherence / RA – Upper Dipole (CHR2)</b>		
<b>0</b>	<b>(----)</b>	<b>10</b>
<b>Waveform Data Copy Indicator 2 – Upper Dipole (WC12)</b>		
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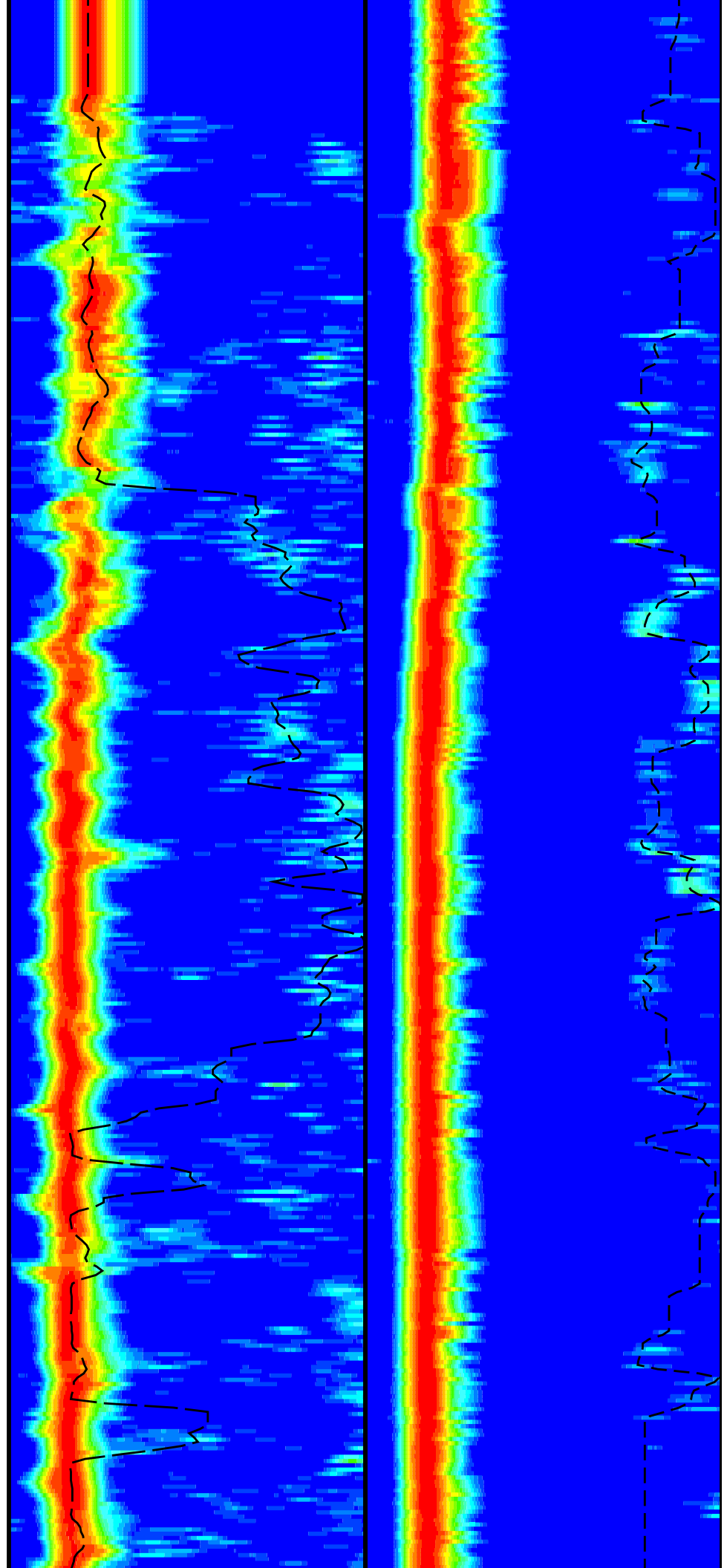
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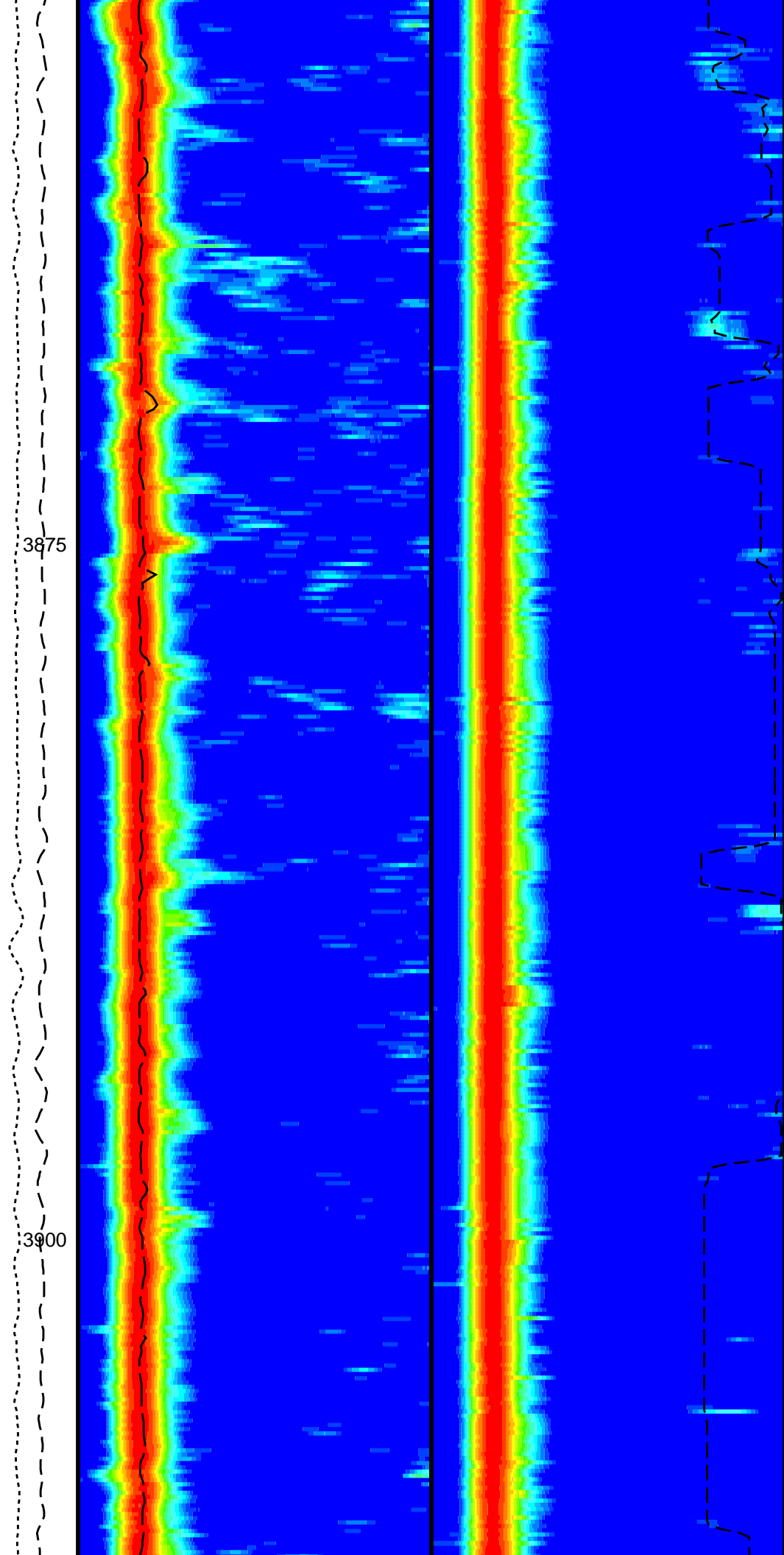
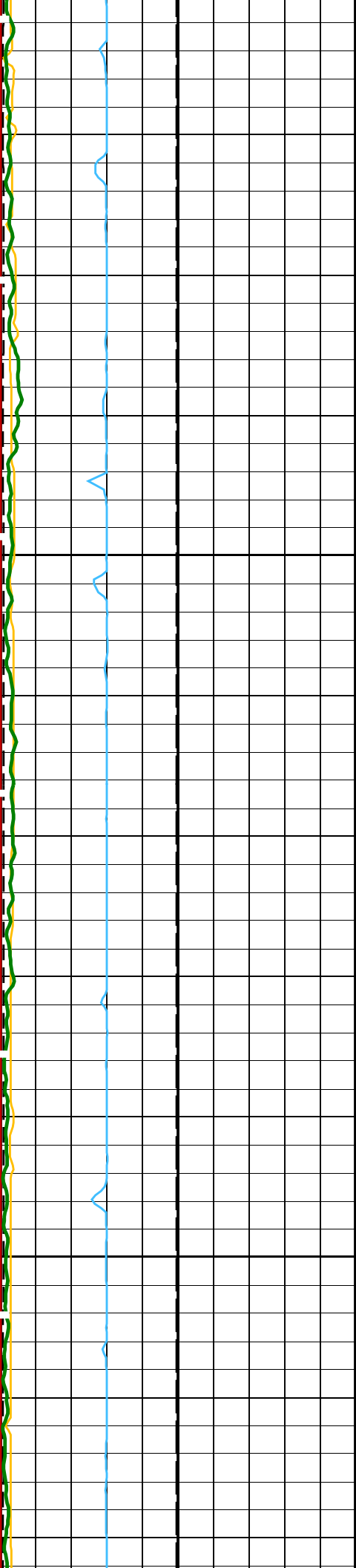
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<div> <div>0</div> <div>Bit Size (BS)</div> <div>20</div> </div> <div>(IN)</div>	<div> <div>10000</div> <div>Tension (TENS) (LBF)</div> <div>0</div> </div>	<div> <div>40</div> <div> <div>Delta-T Shear / TA – Upper Dipole</div> <div>(DT2T)</div> <div>(US/F)</div> </div> <div>1040</div> </div>	<div> <div>40</div> <div> <div>Delta-T Shear / RA – Upper Dipole</div> <div>(DT2R)</div> <div>(US/F)</div> </div> <div>1040</div> </div>

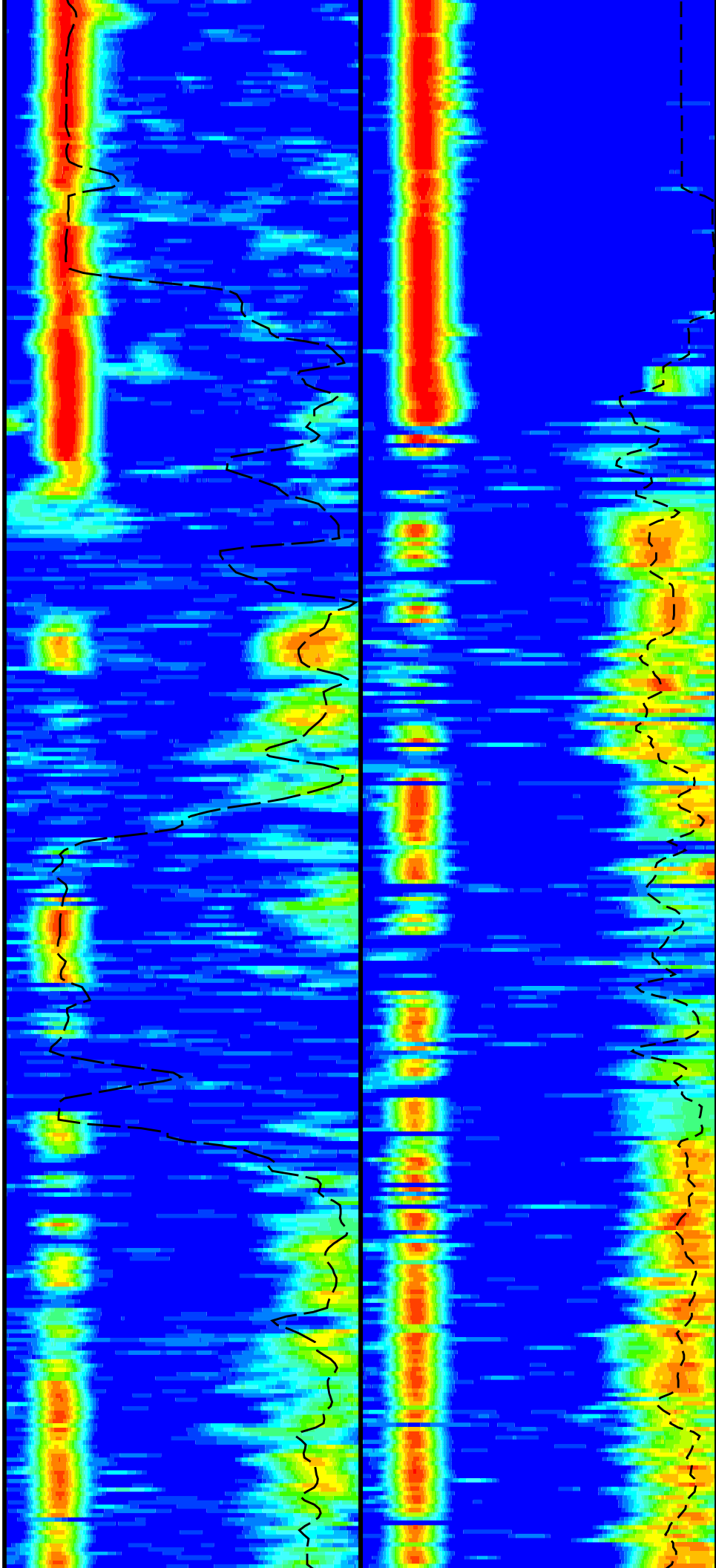
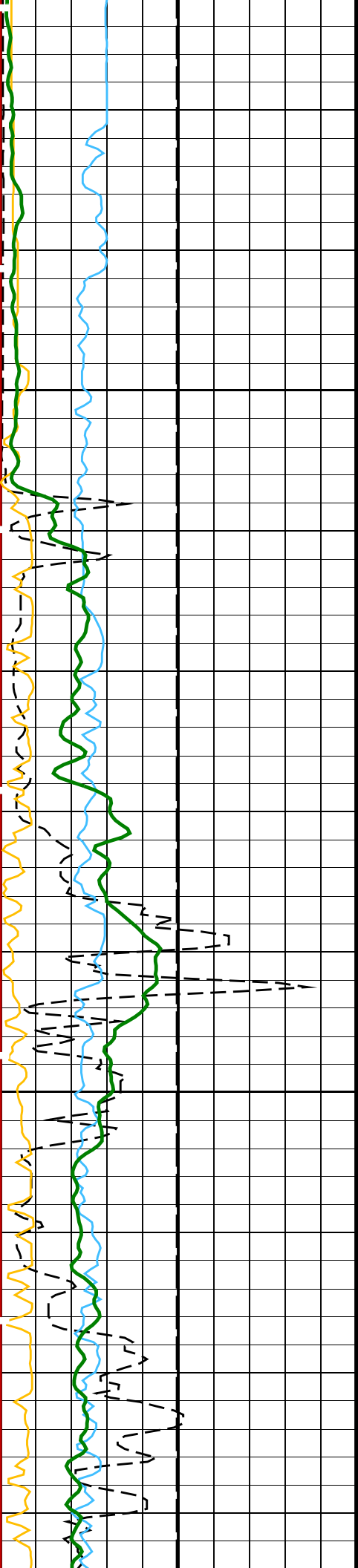




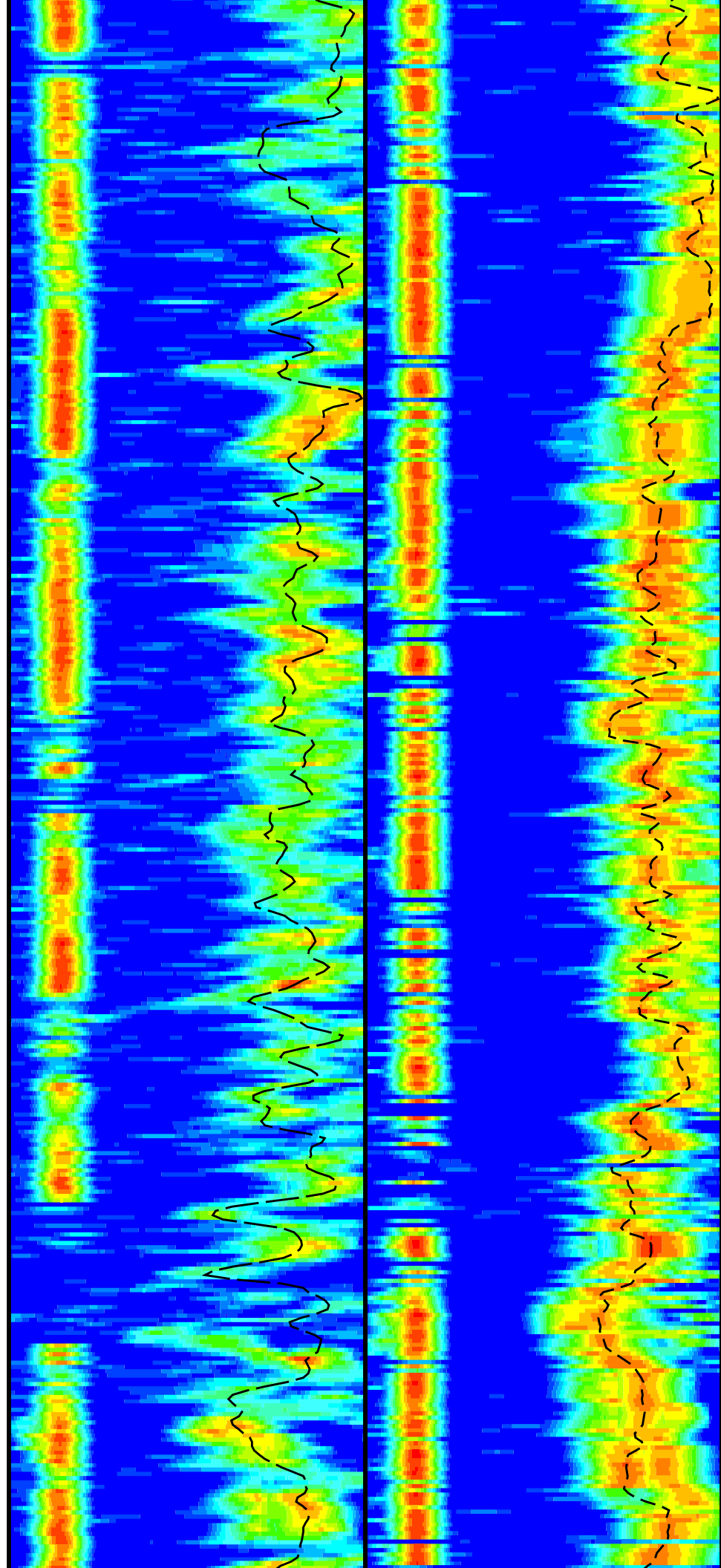
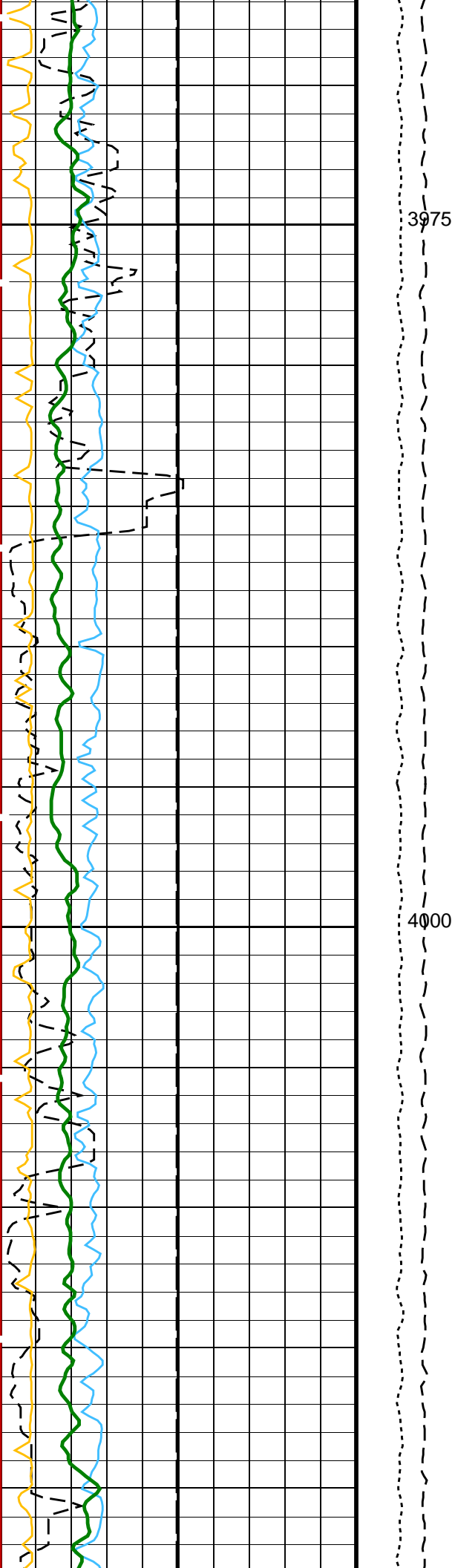
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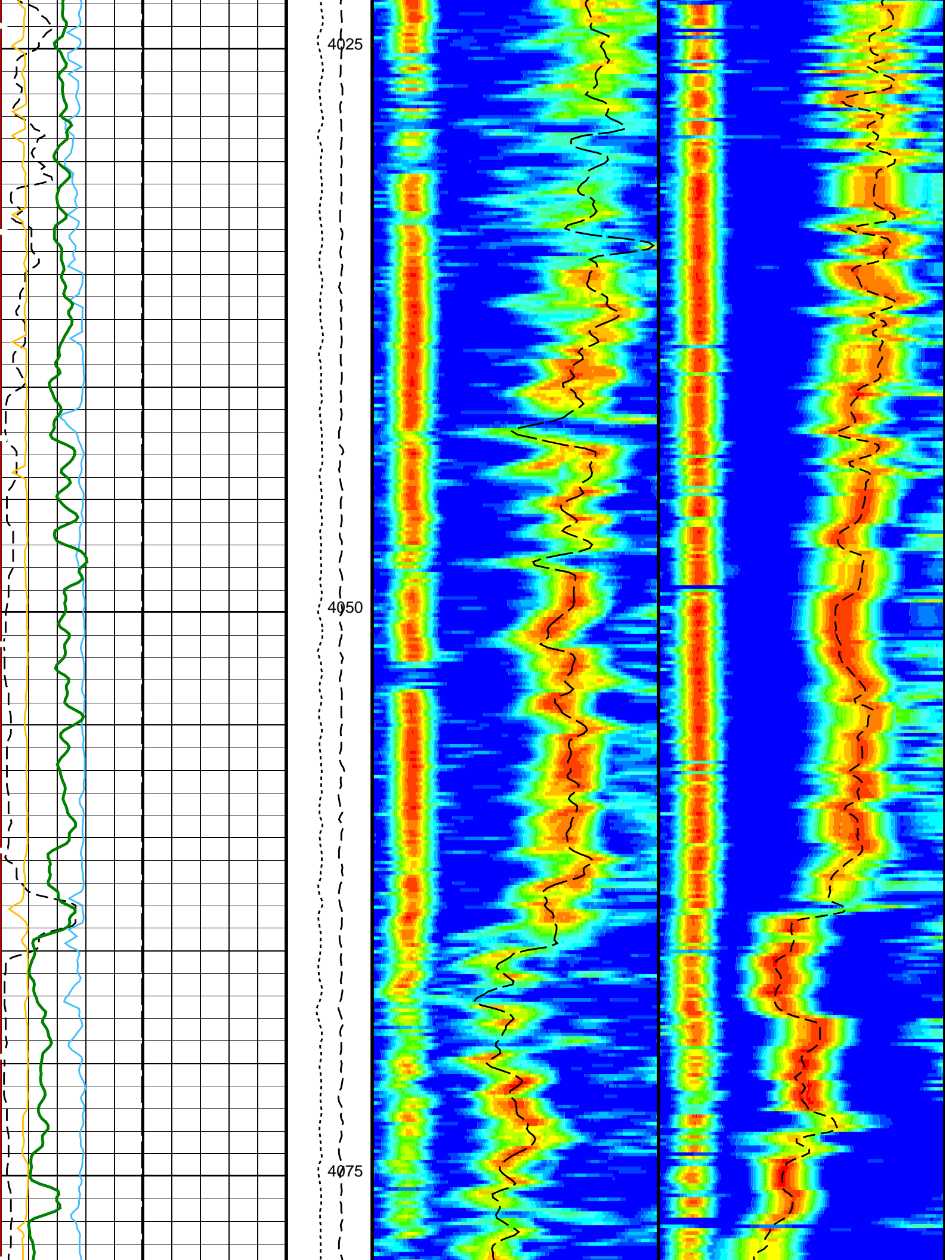


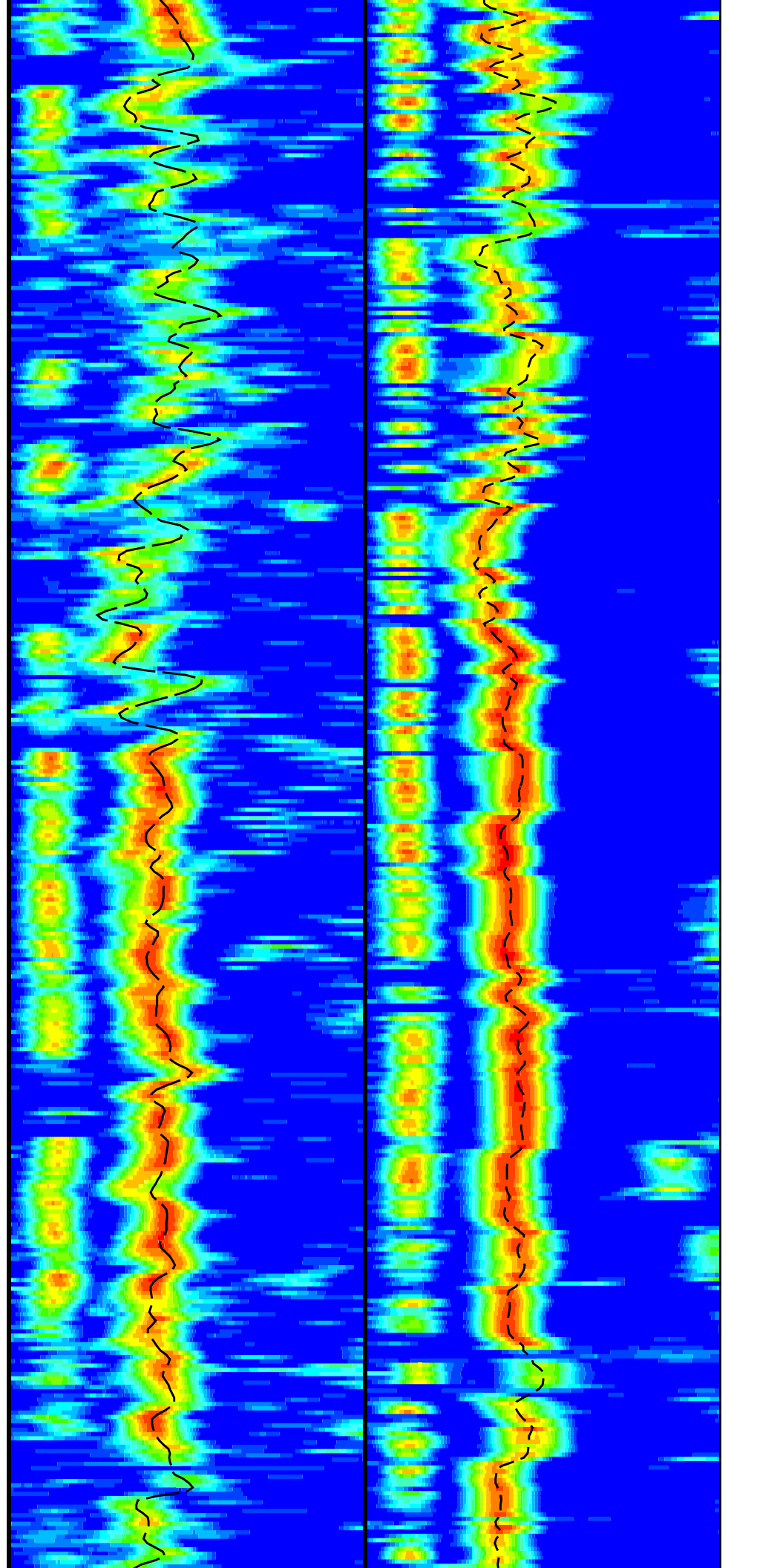
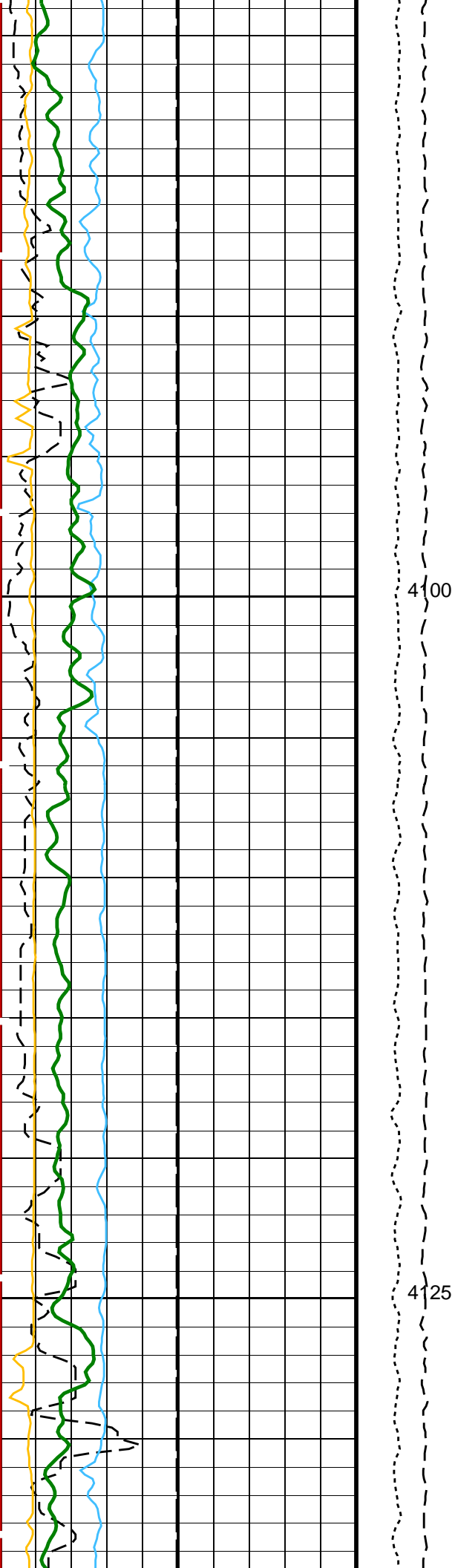


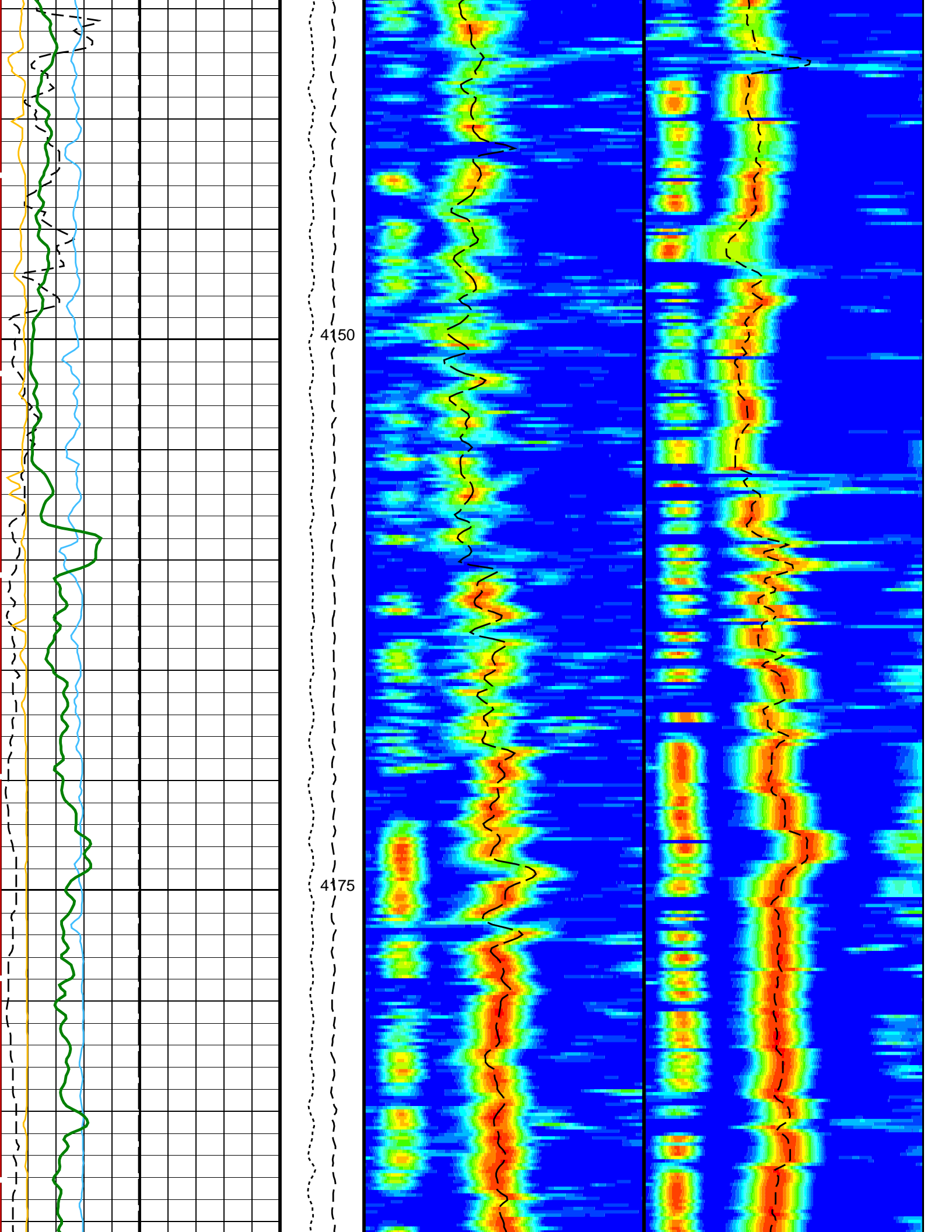


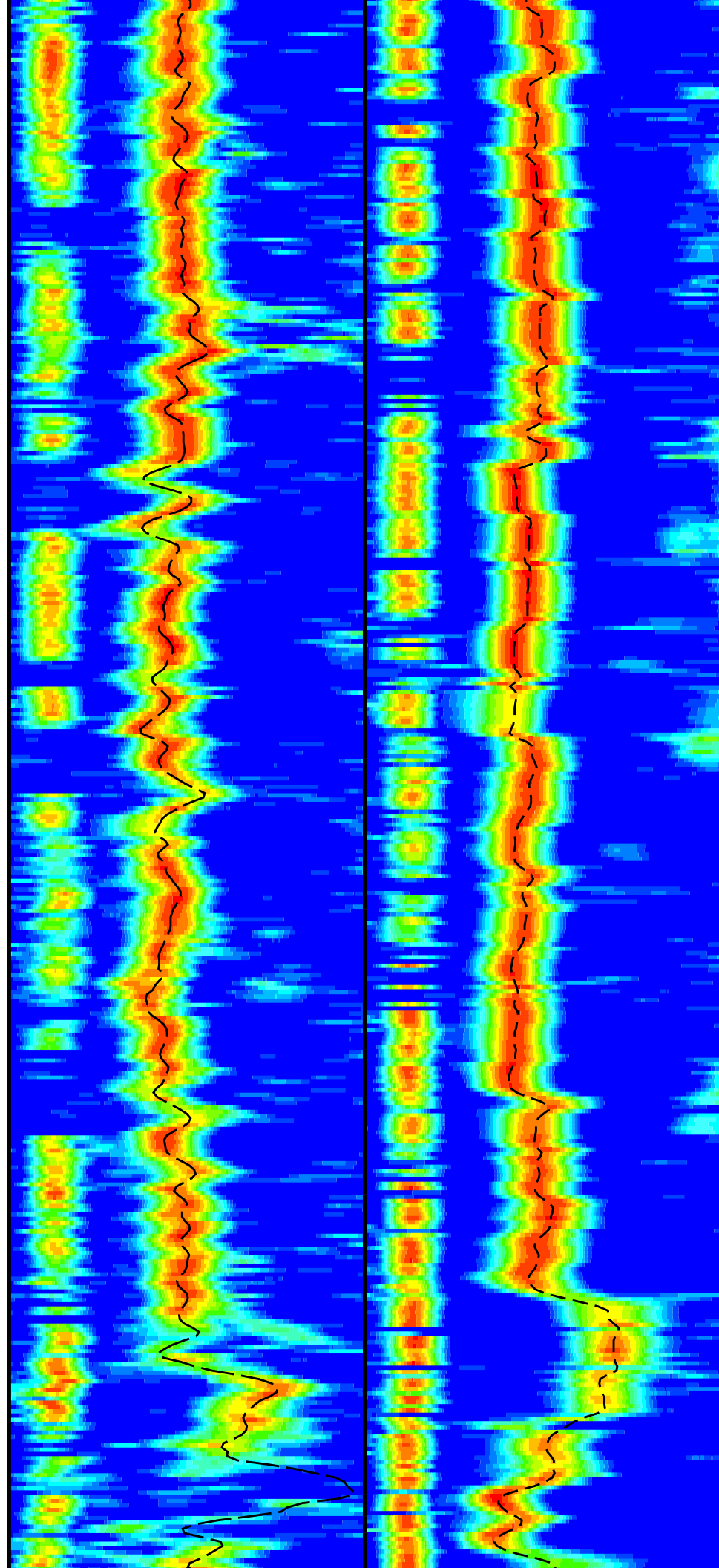
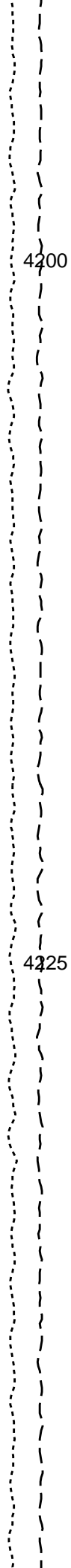
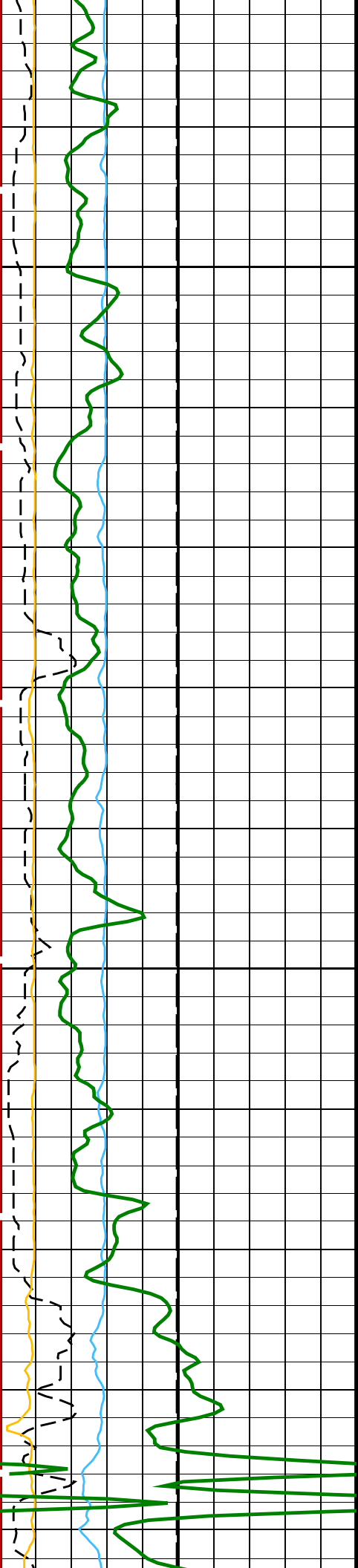


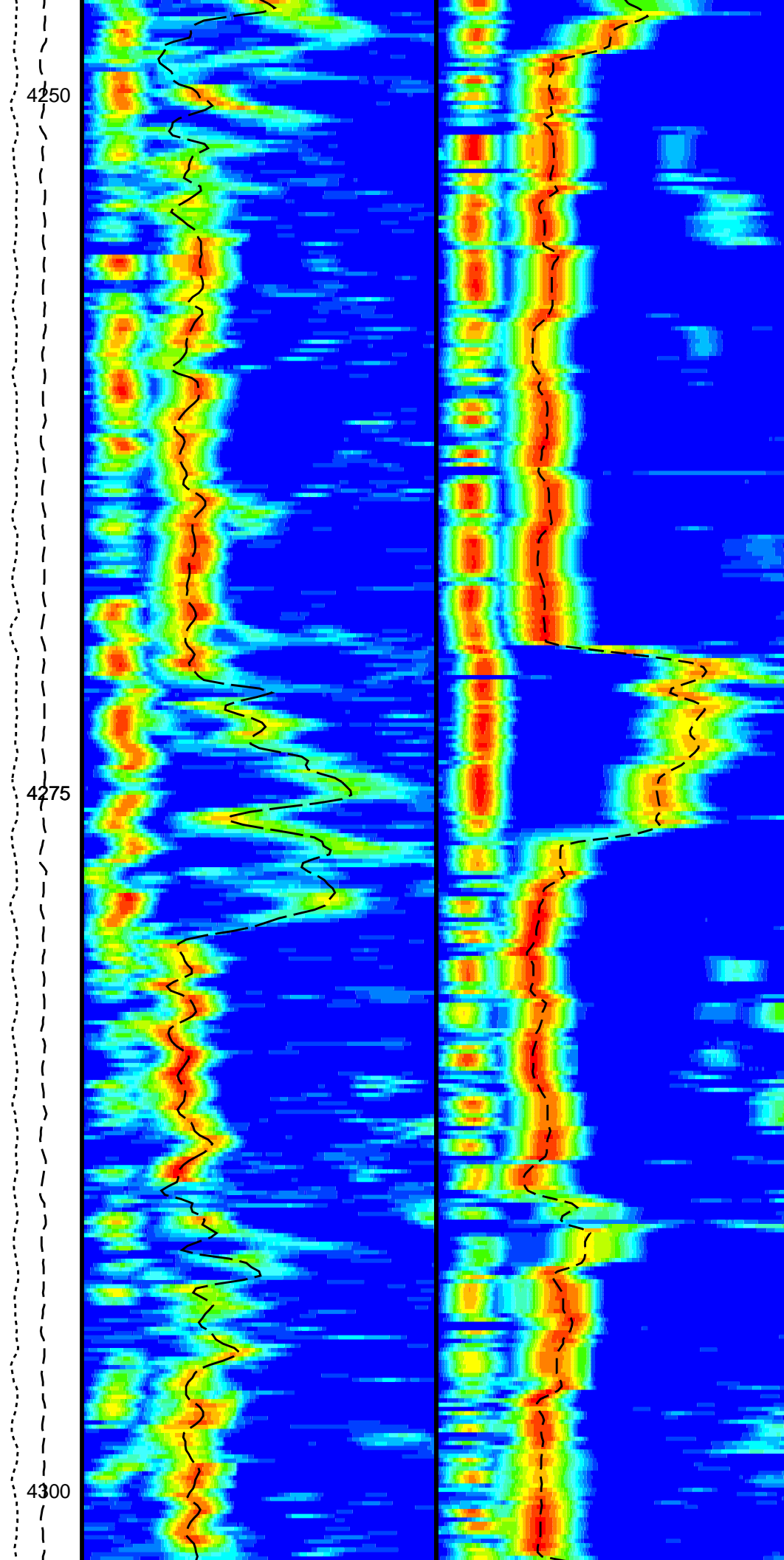
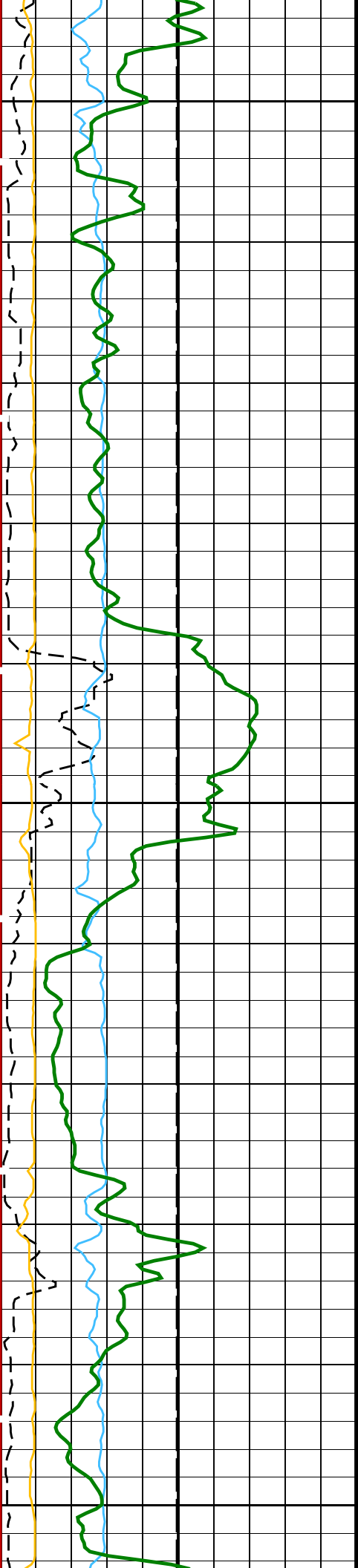




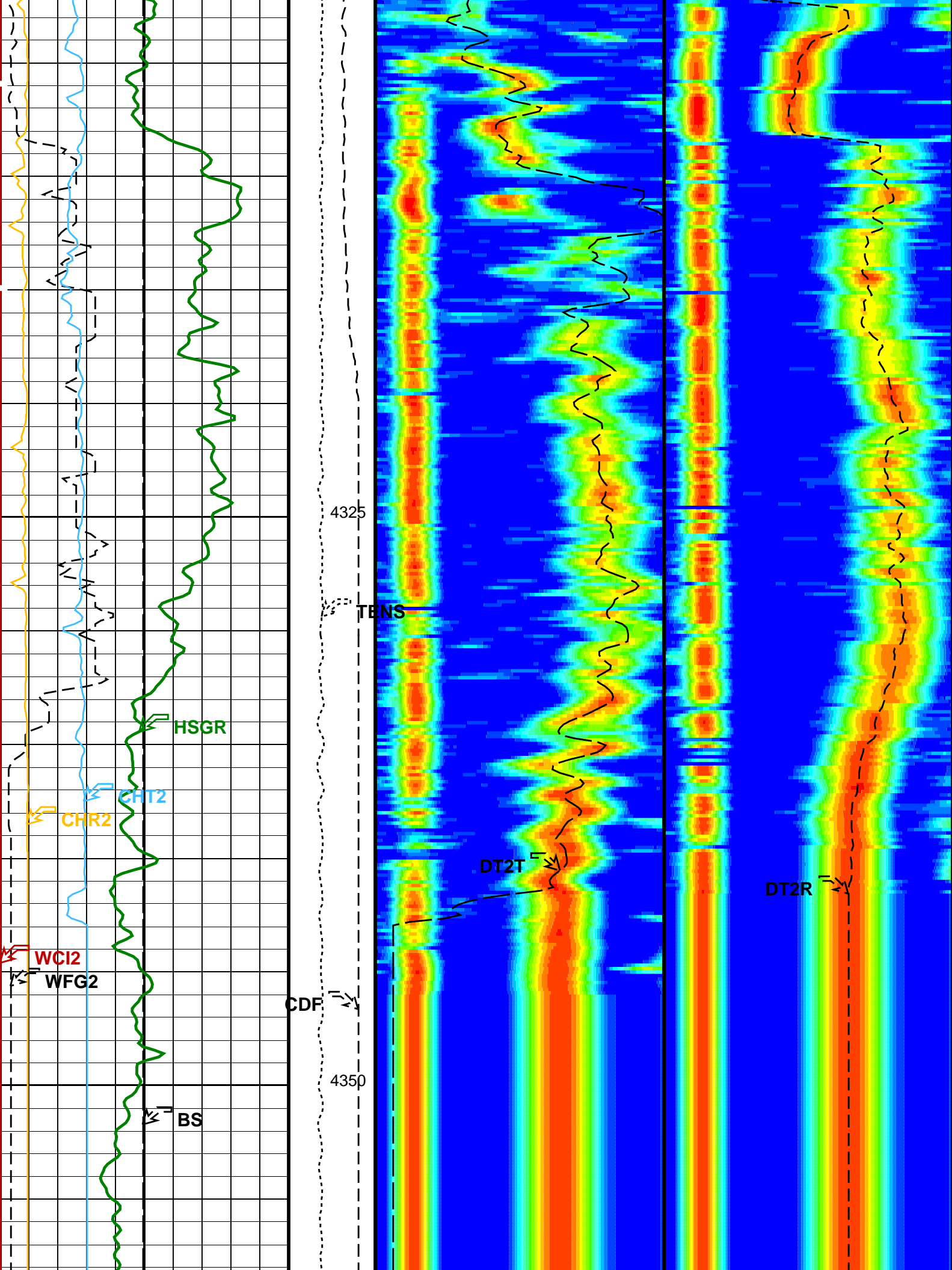


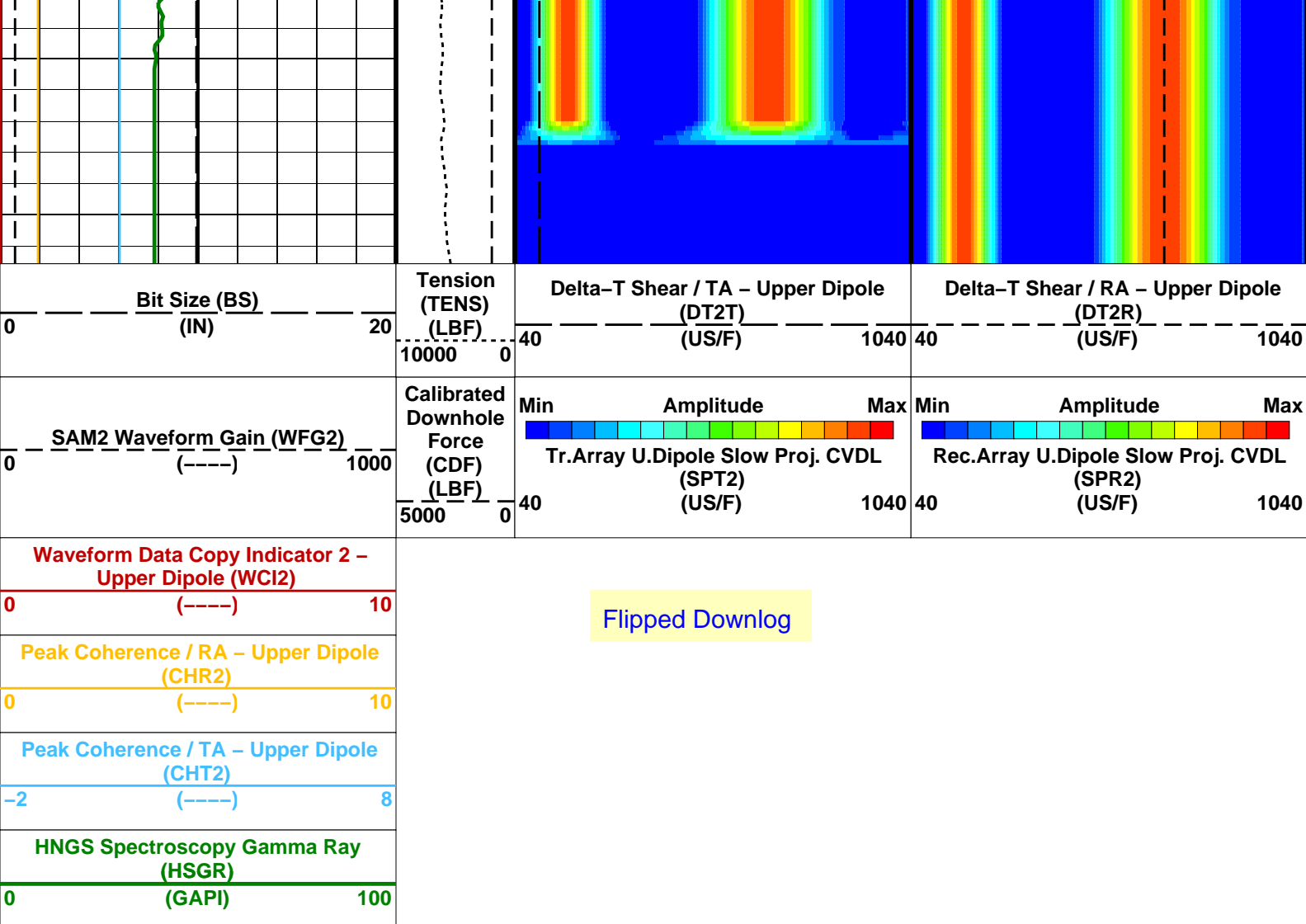












## PIP SUMMARY

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	-0.00117675	
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	0.987226	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998718	
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	Digitizing Delay	USE	US
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: 09–Nov–2017 07:50

## OP System Version: 19C0–187

MSS_LDEO–A	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_MSS_LDEO_NGS_012LUP	PRODUCER	09–Nov–2017 07:42	4366.6 M	3778.8 M
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## Output DLIS Files

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BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09–Nov–2017 07:50

## Input DLIS Files

DEFAULT	Flip_MSS_LDEO_NGS_012LUP	PRODUCER	09–Nov–2017 07:42	4366.6 M	3778.8 M
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## Output DLIS Files

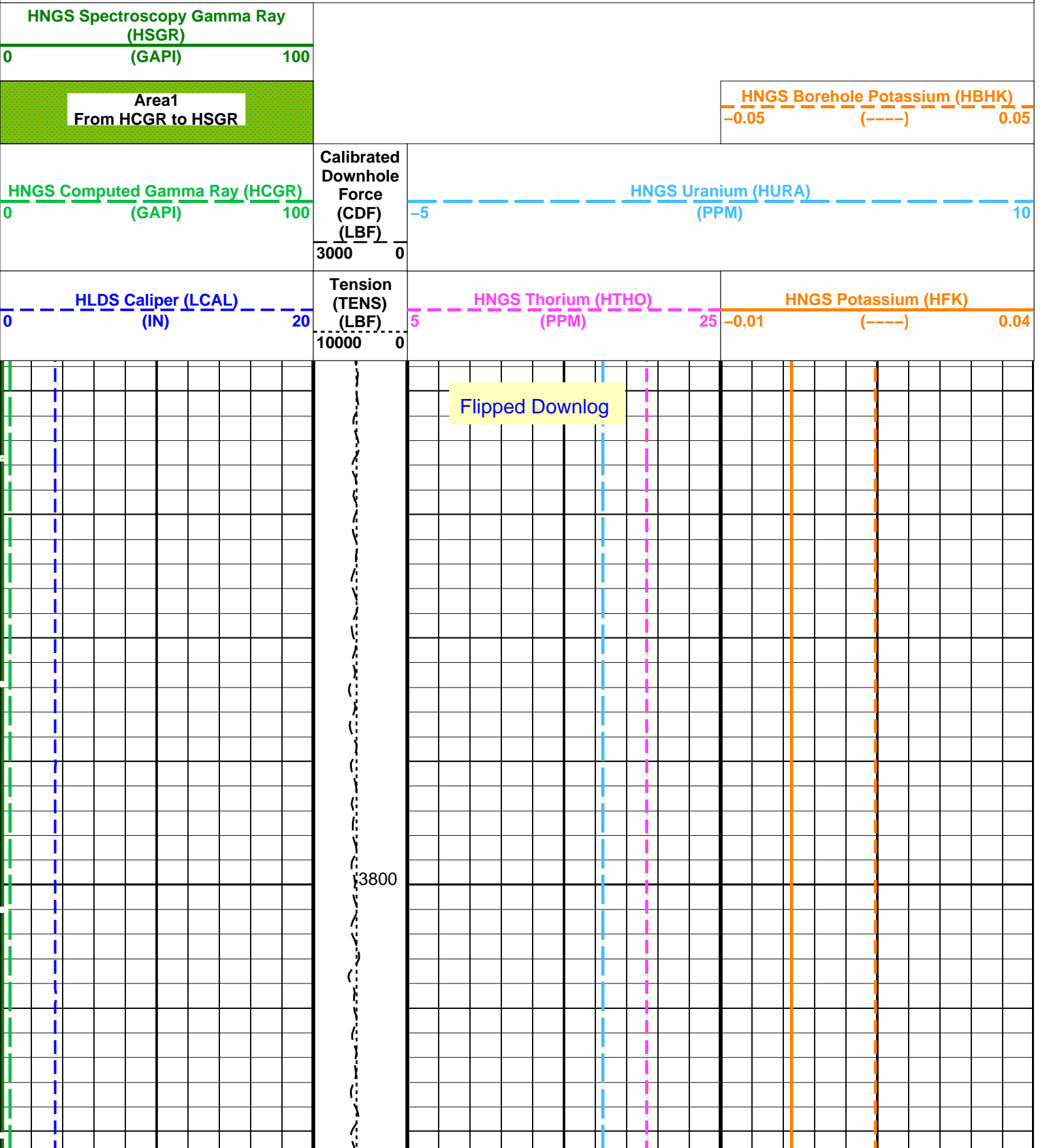
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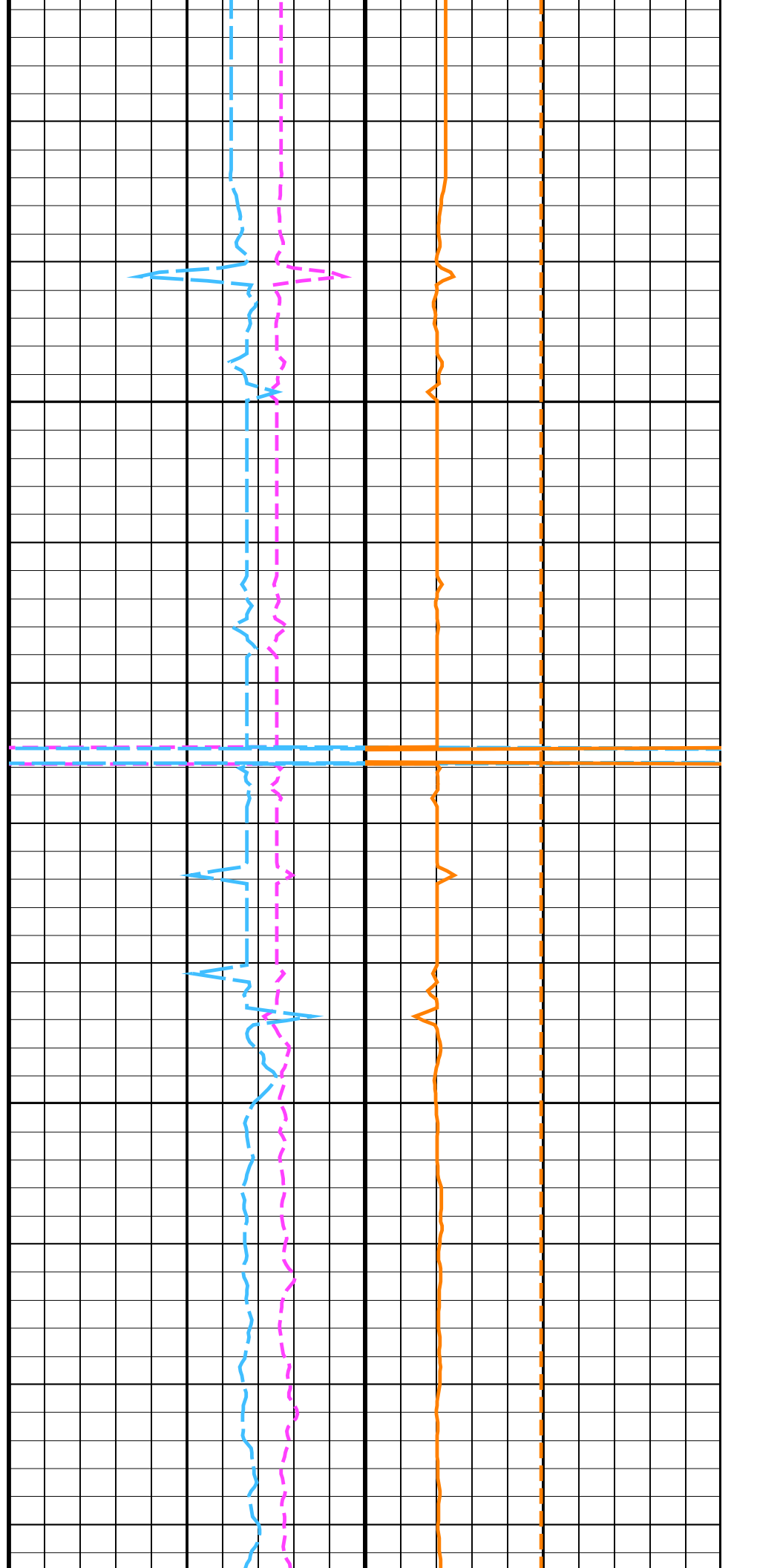
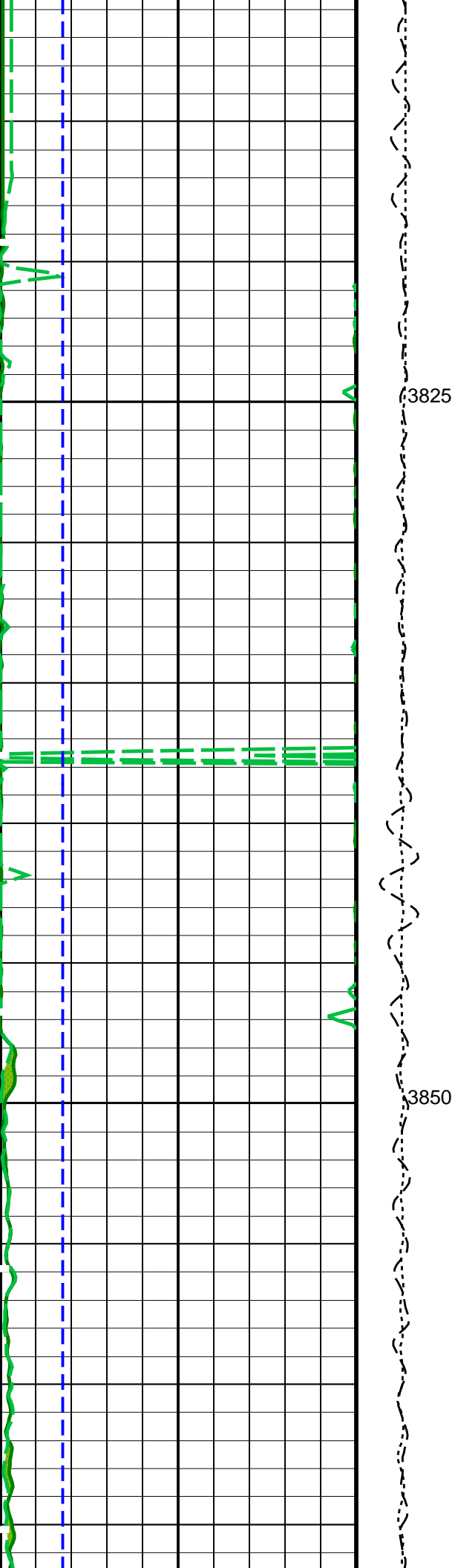


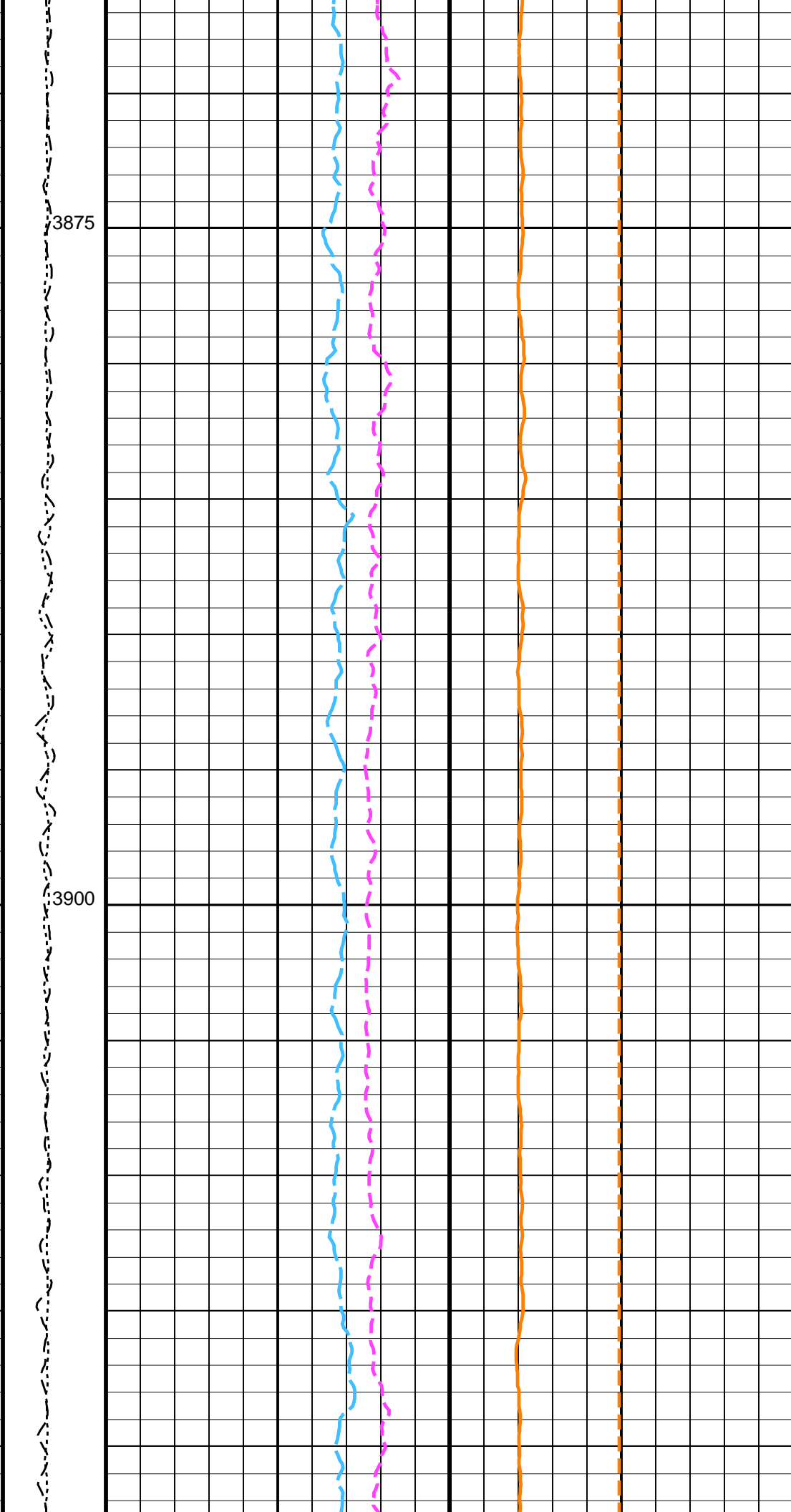
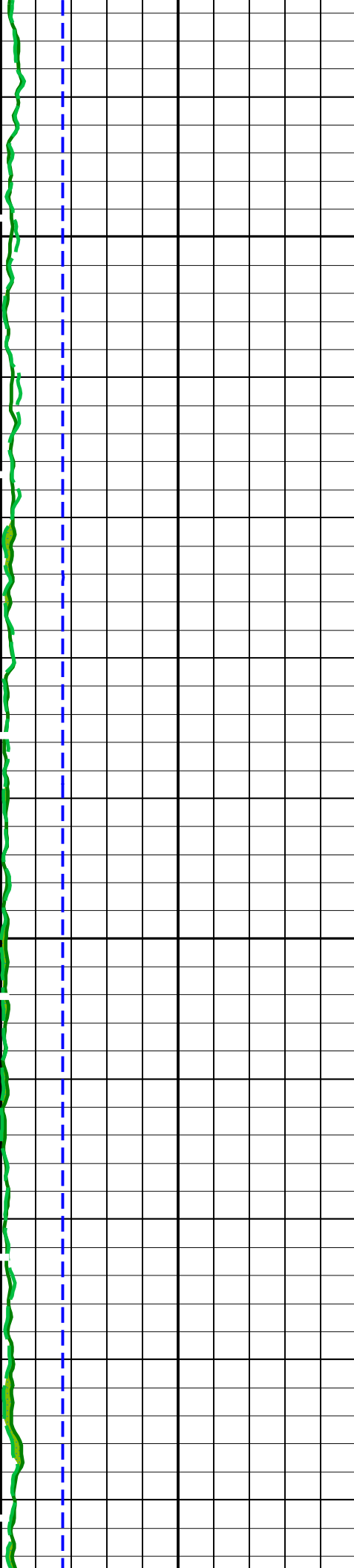
OP System Version: 19C0-187					
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HNGS-BA	19C0-187	HRLT-B	19C0-187		
DSST-B	19C0-187	HLDS	19C0-187		
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB		

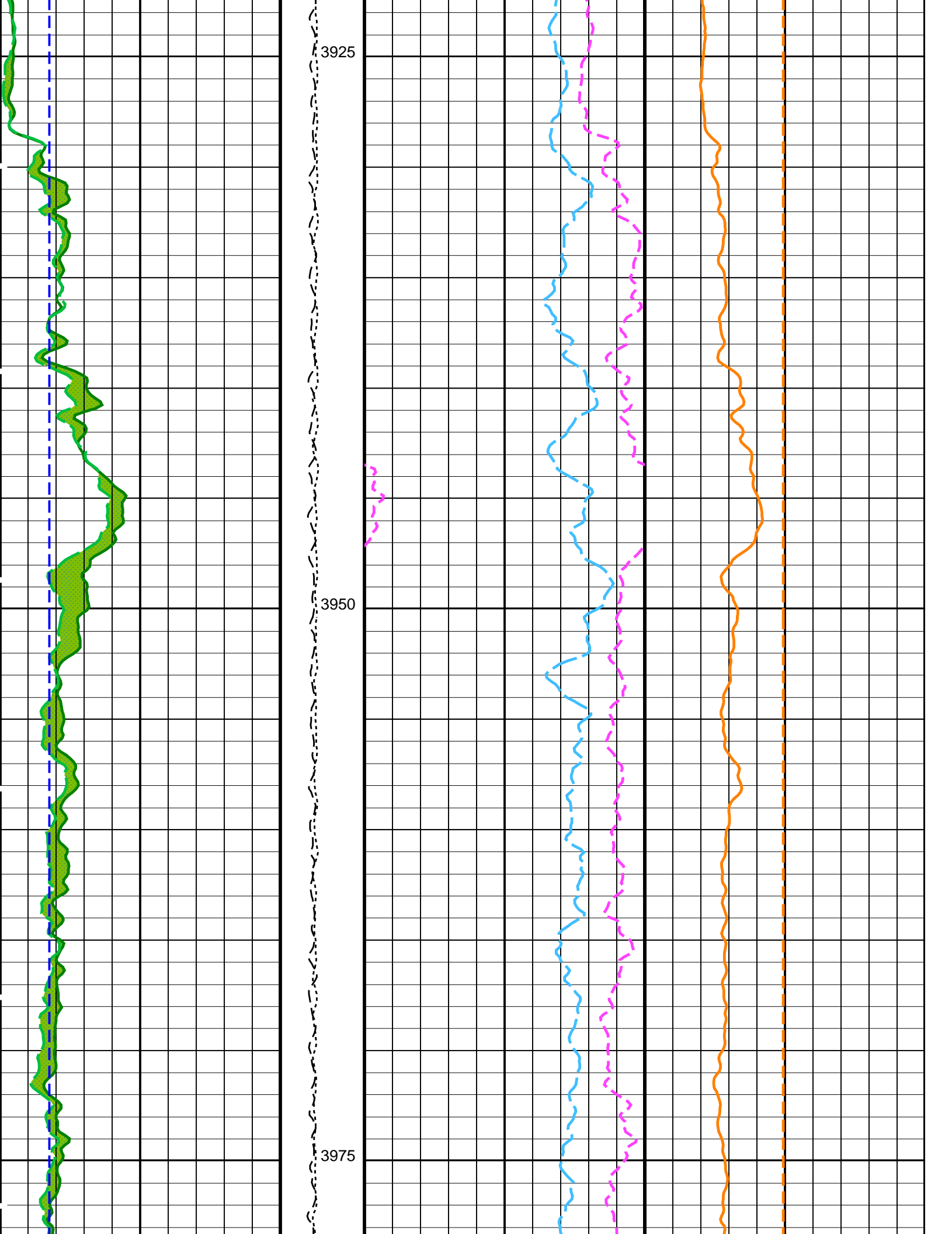
PIP SUMMARY

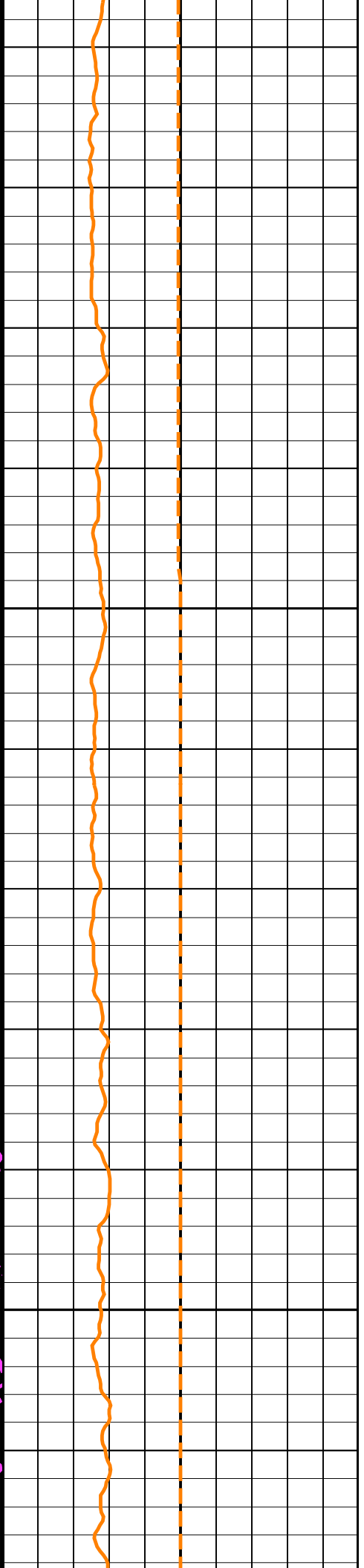
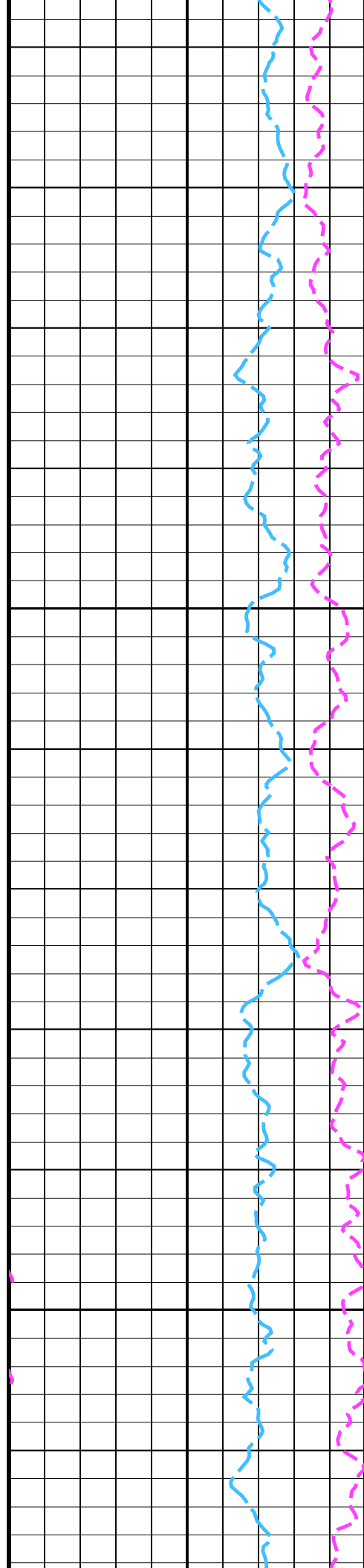
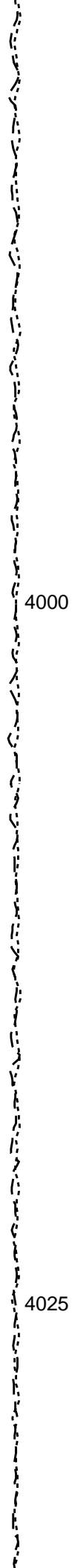
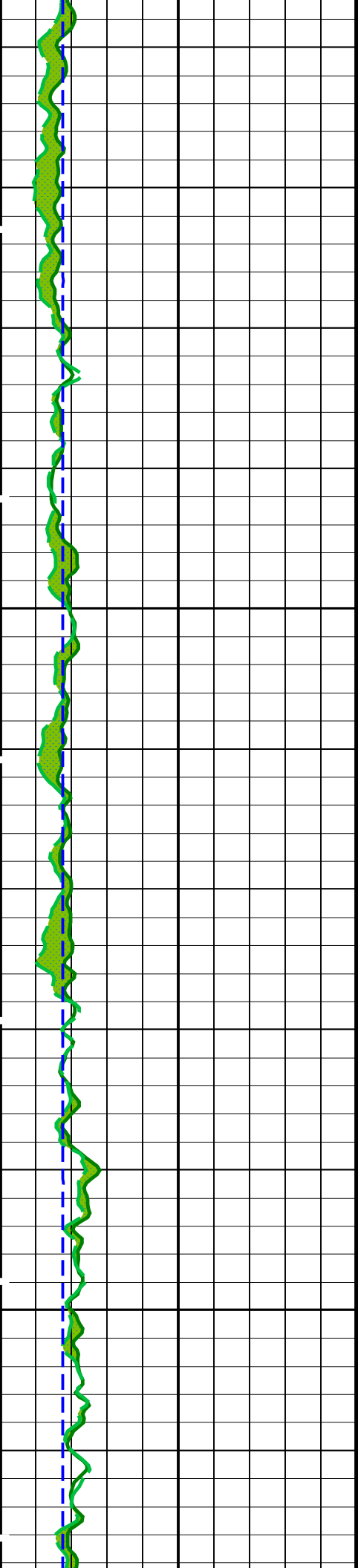
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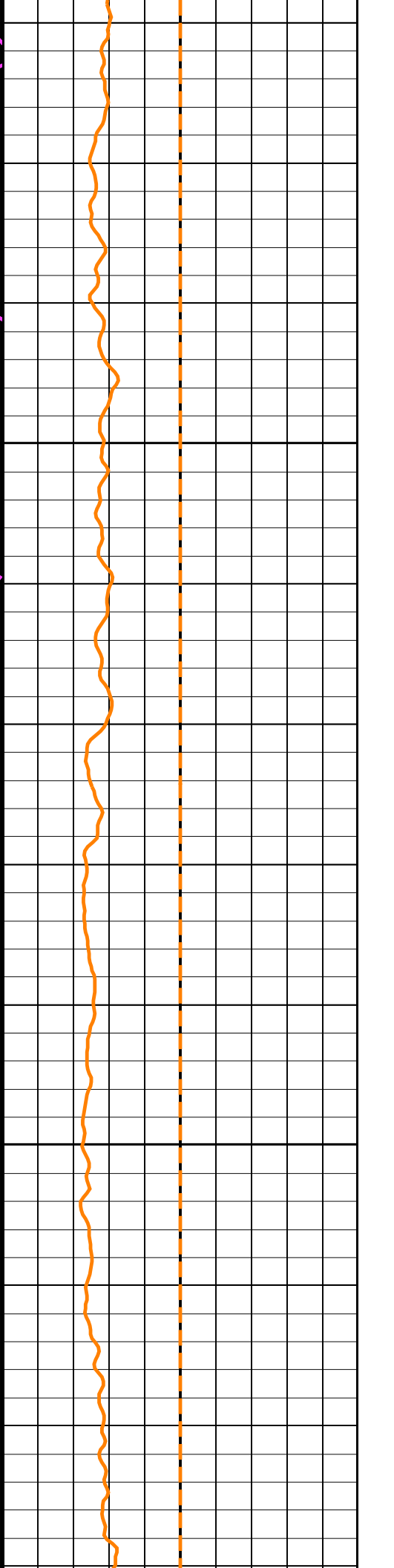
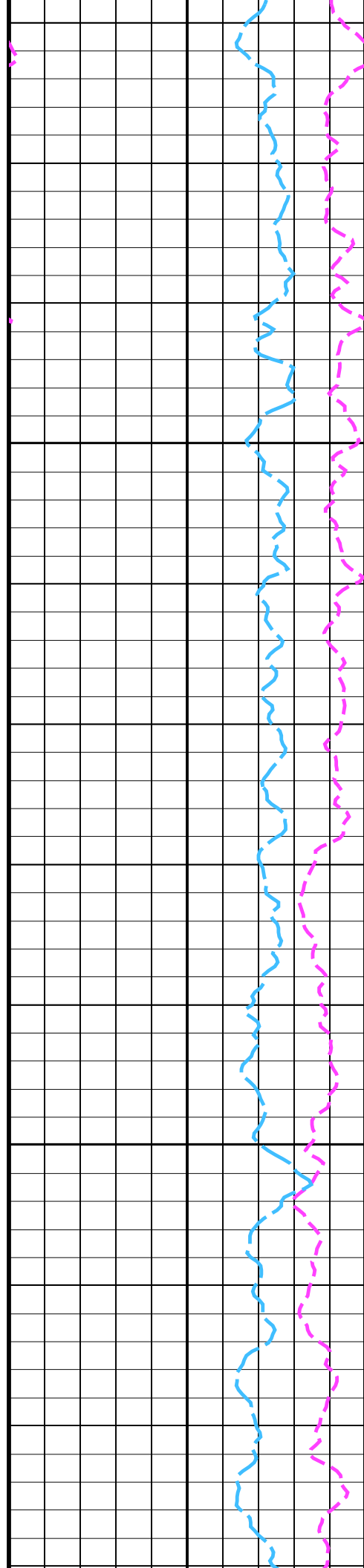
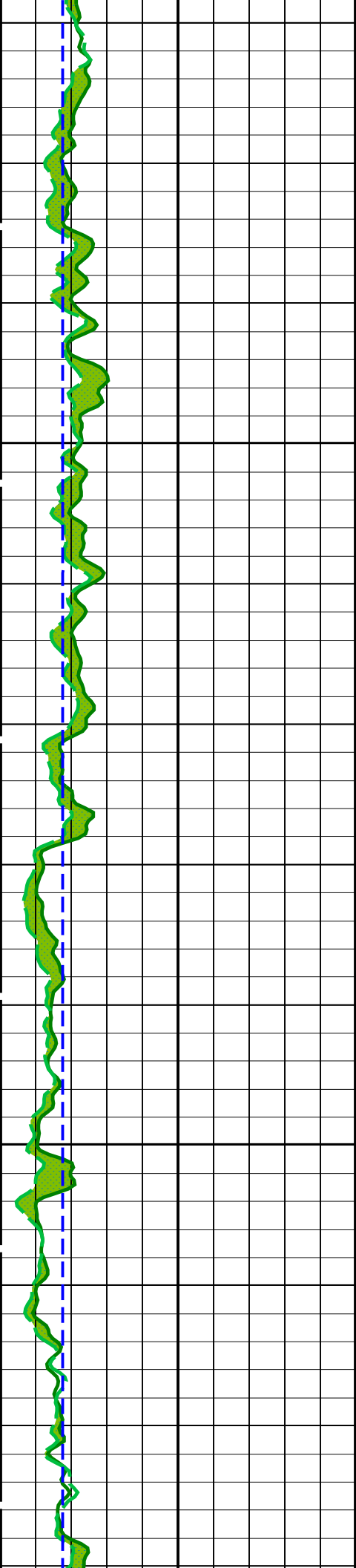


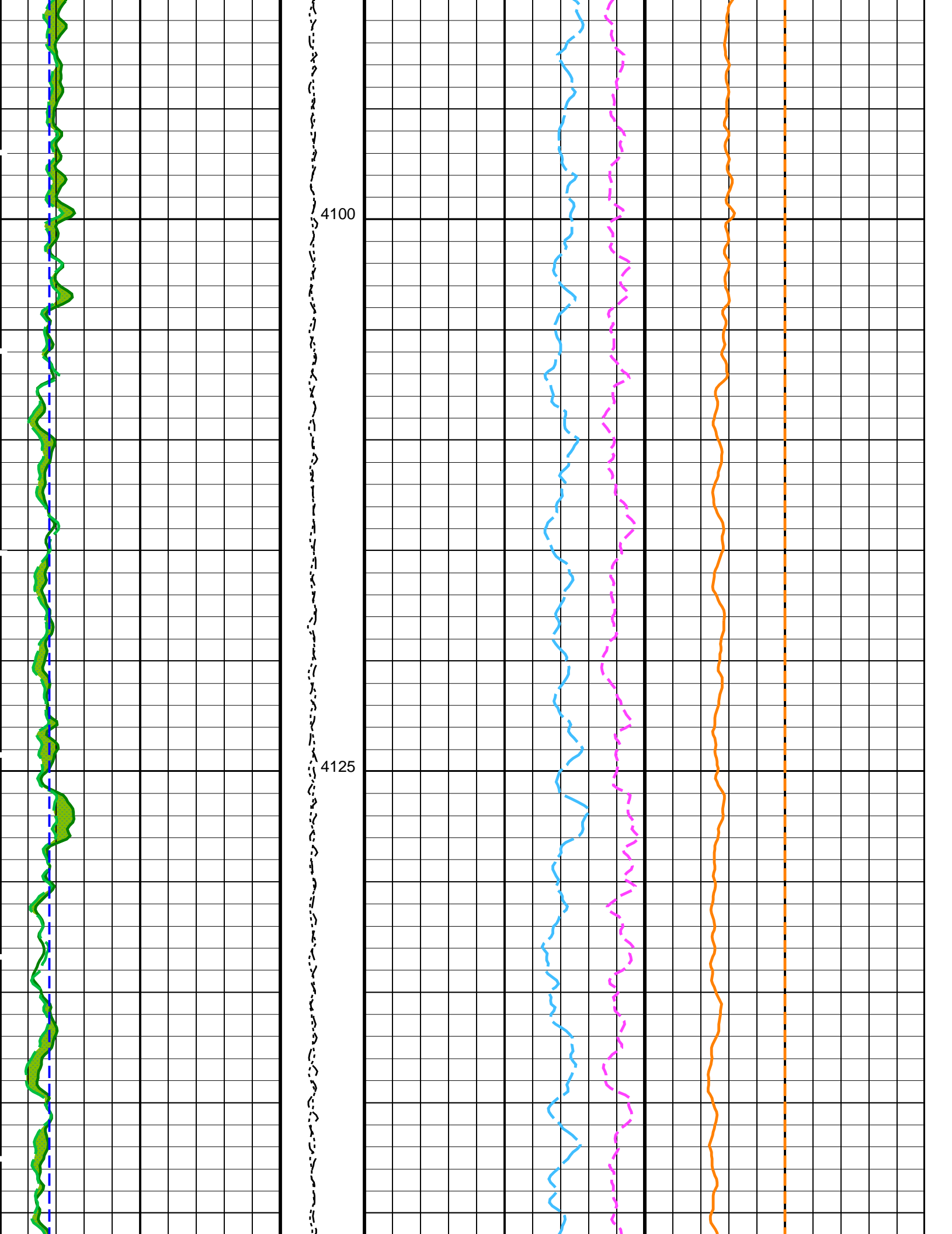


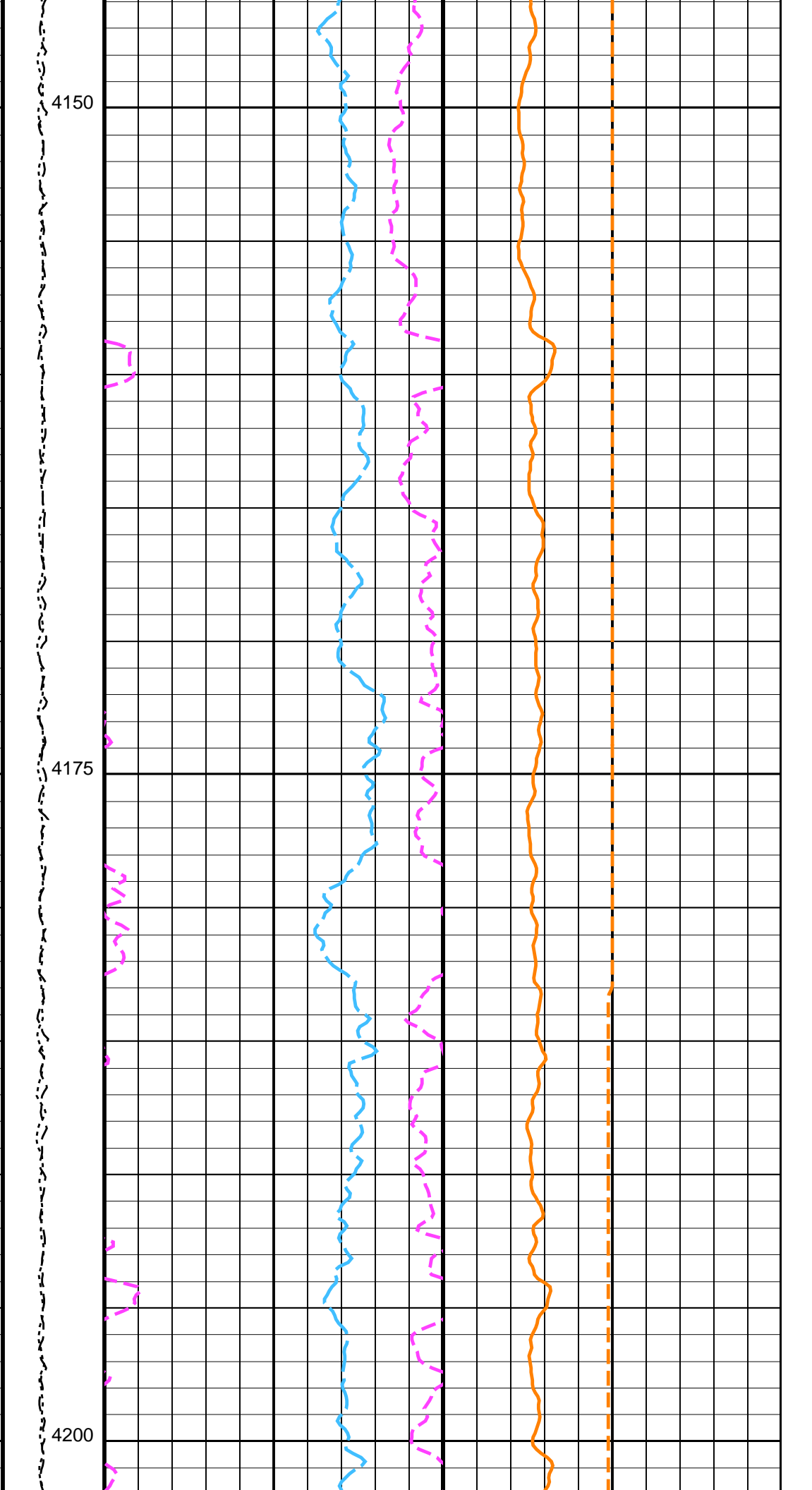
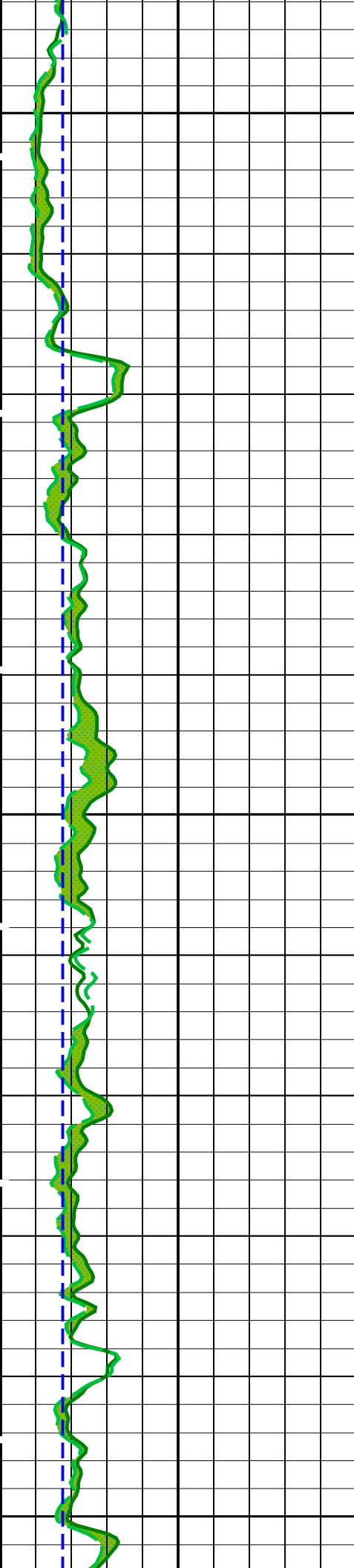




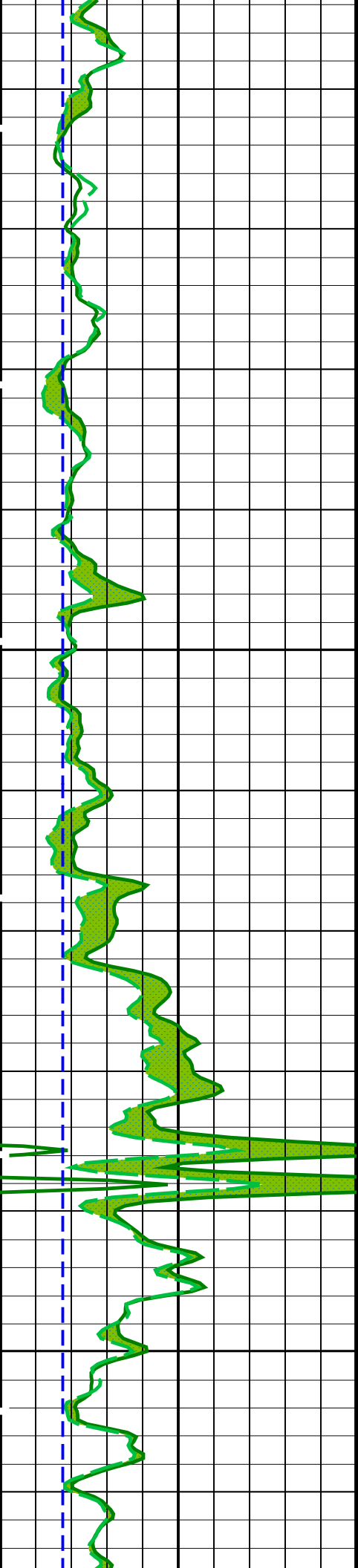






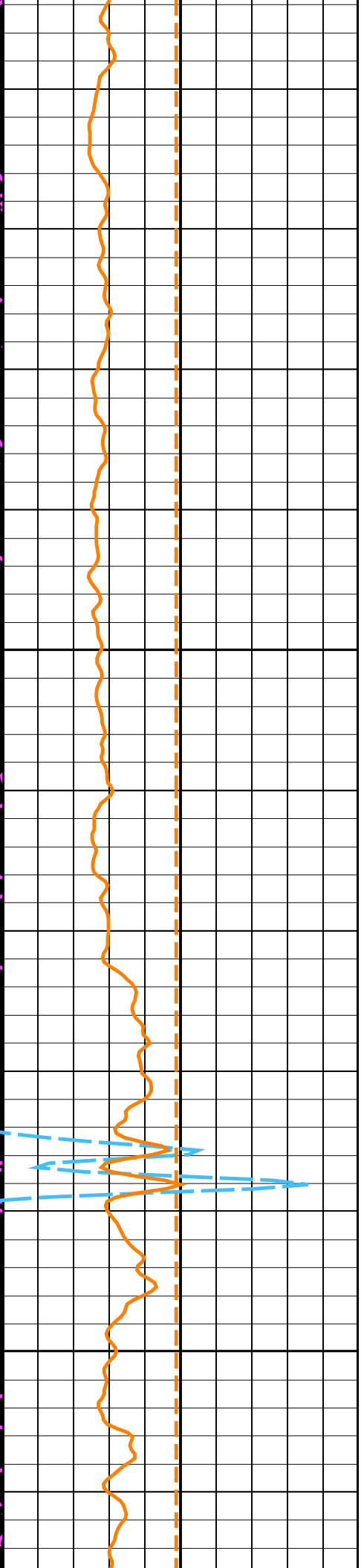
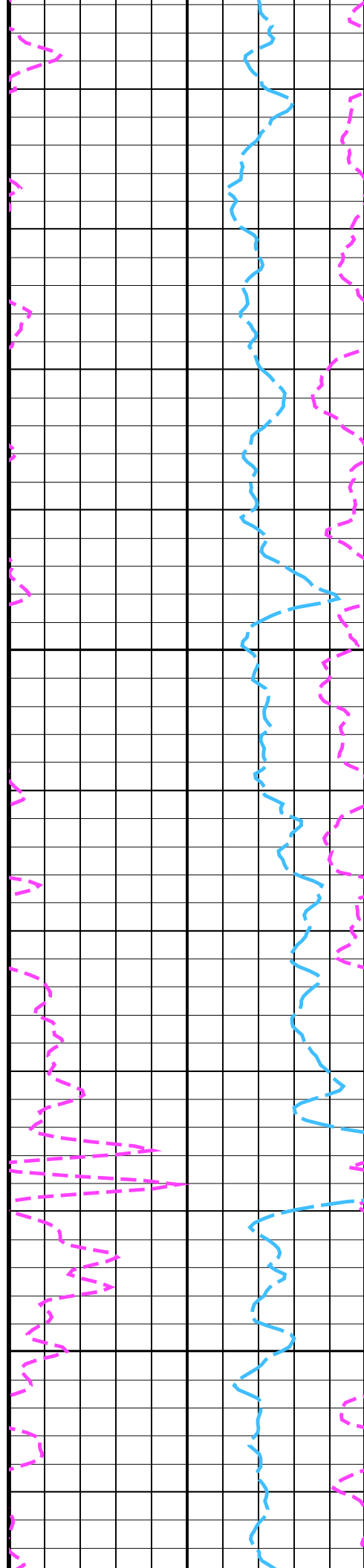


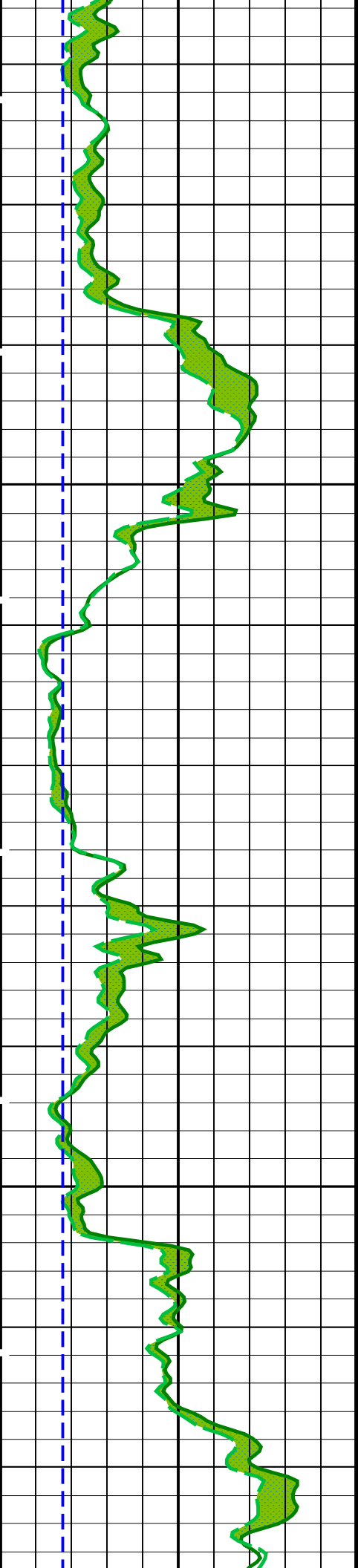




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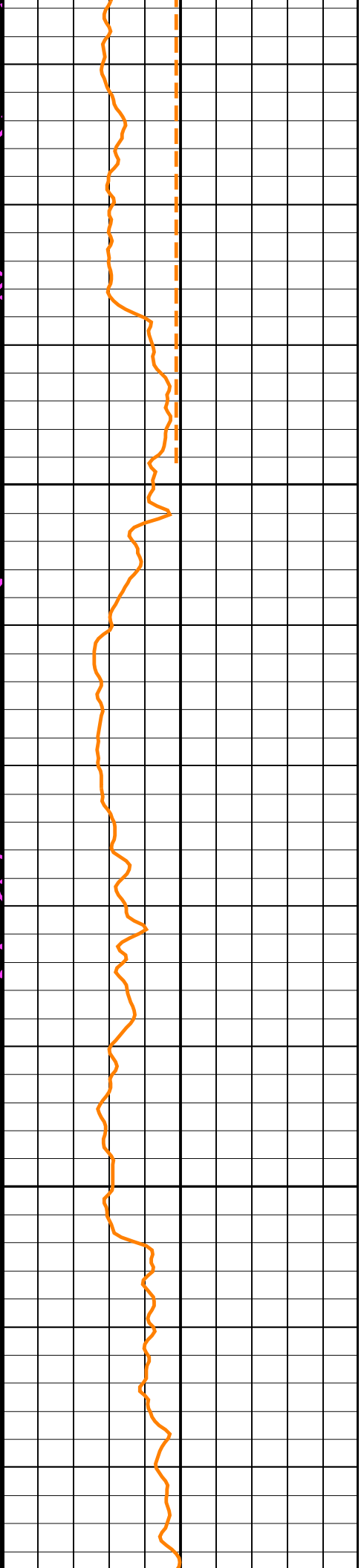
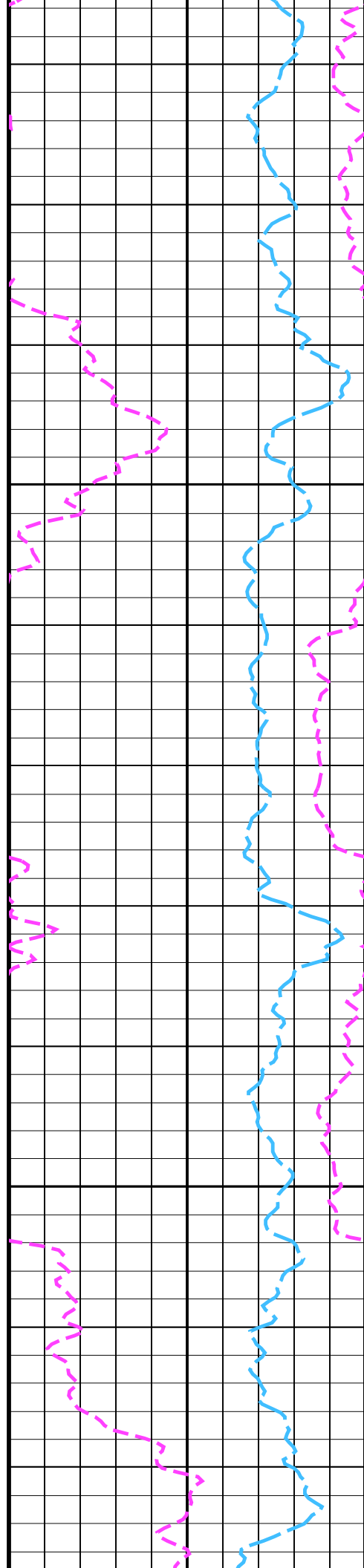
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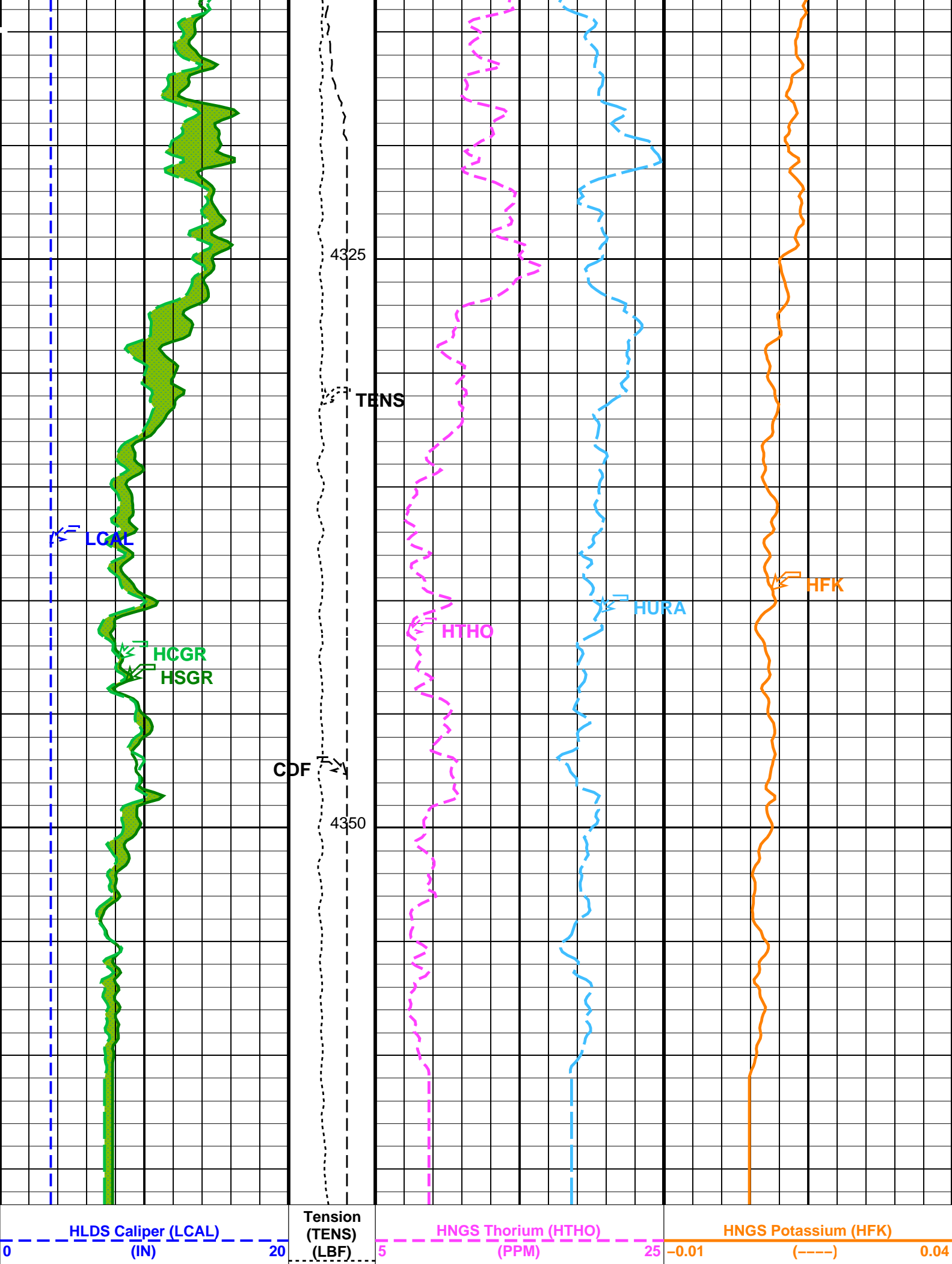


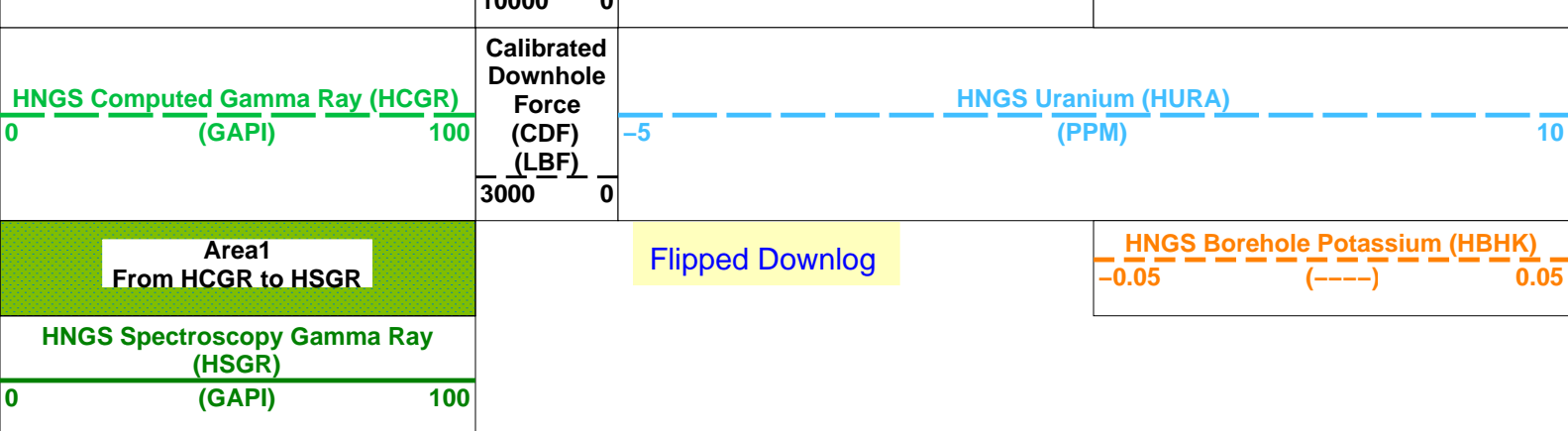


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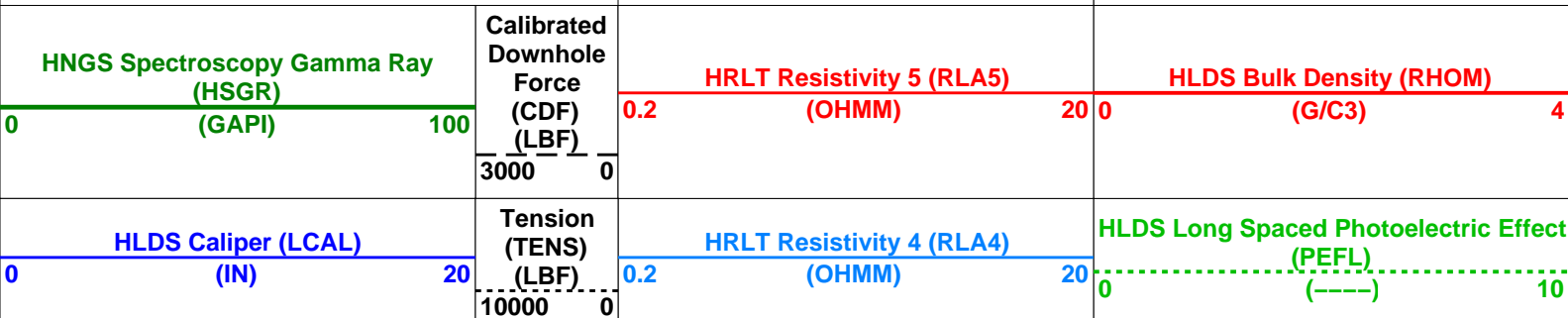
Time Mark Every 60 S

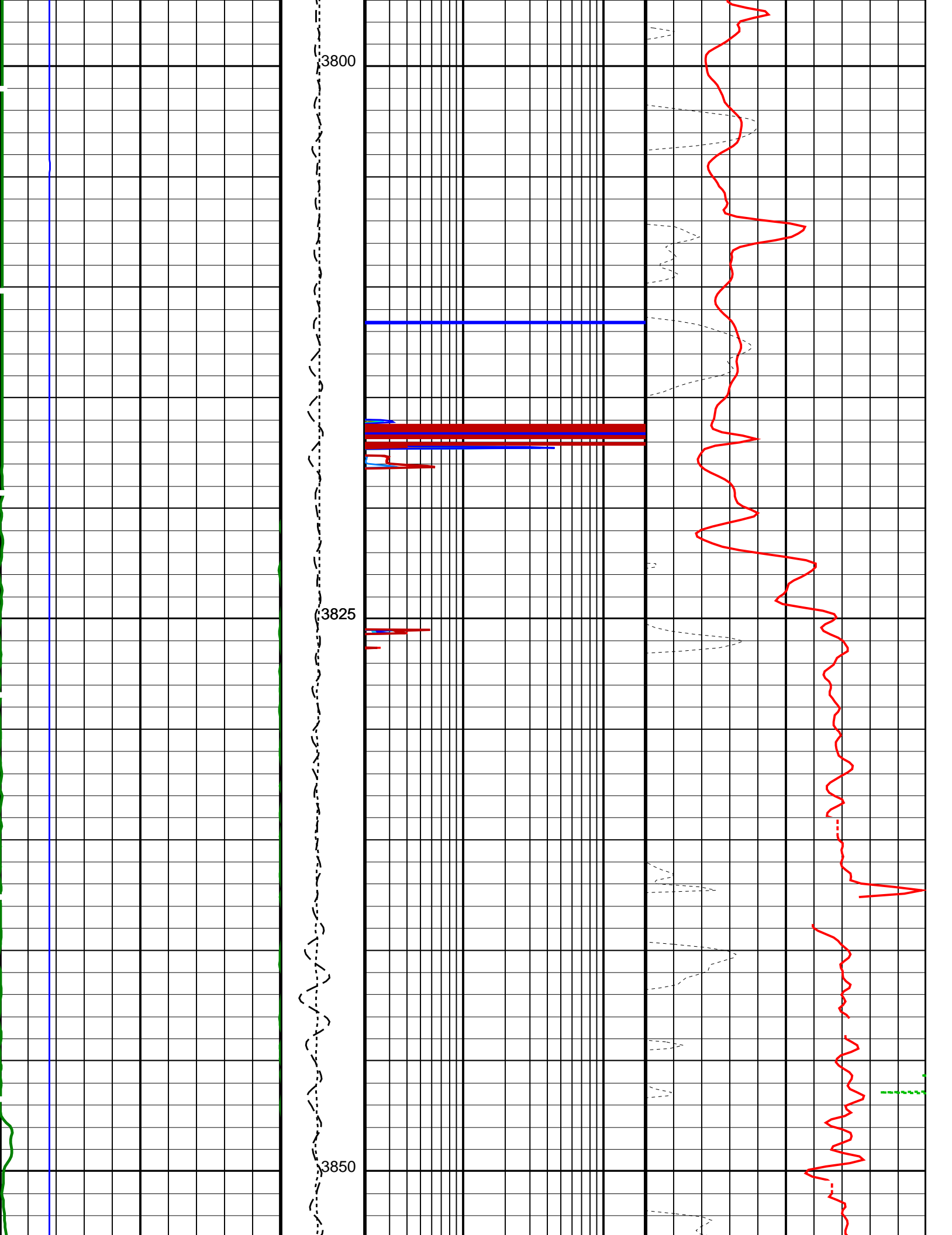
Parameters			
DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing 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	-0.00117675	
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	0.987226	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998718	
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	
GCSE	Generalized Caliper Selection	BS	
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	

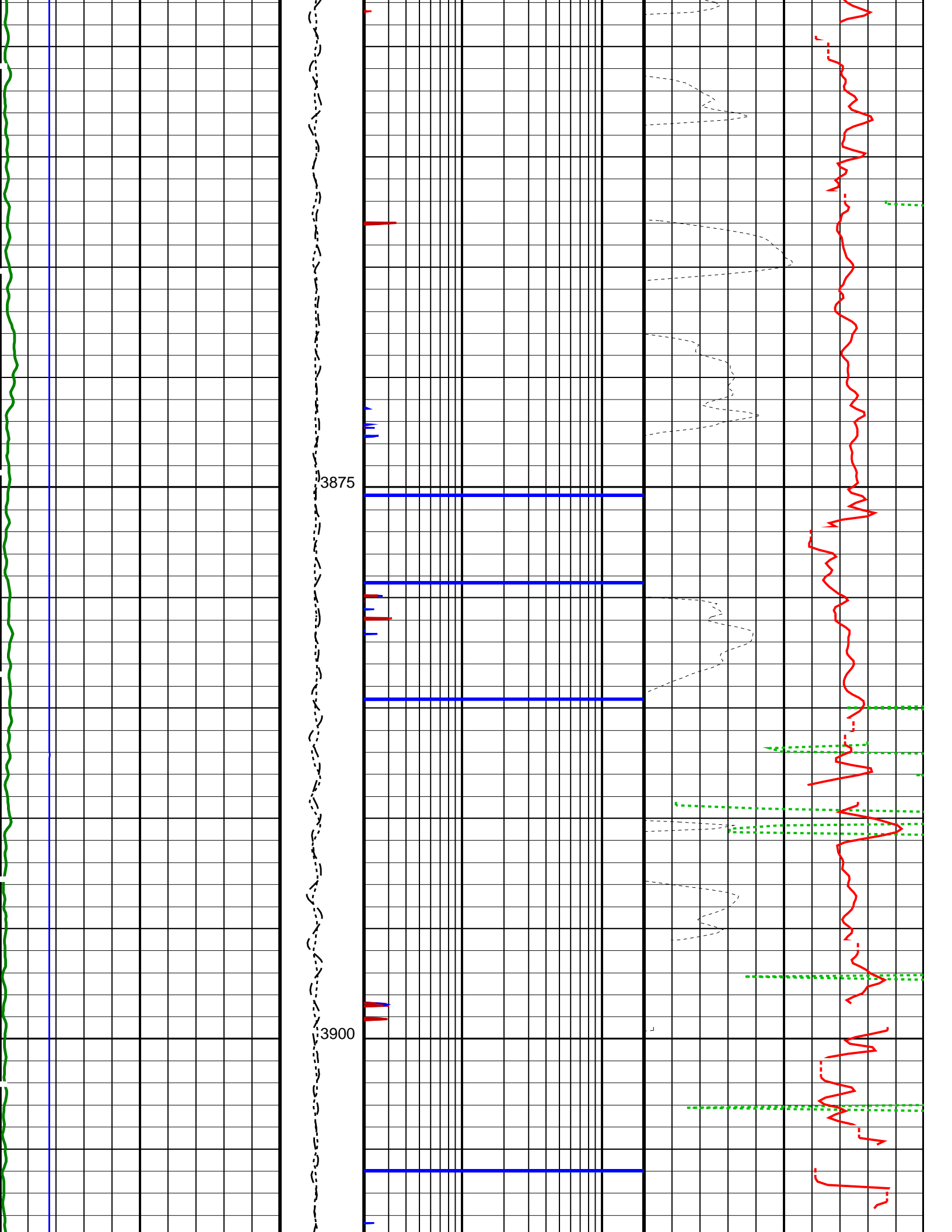
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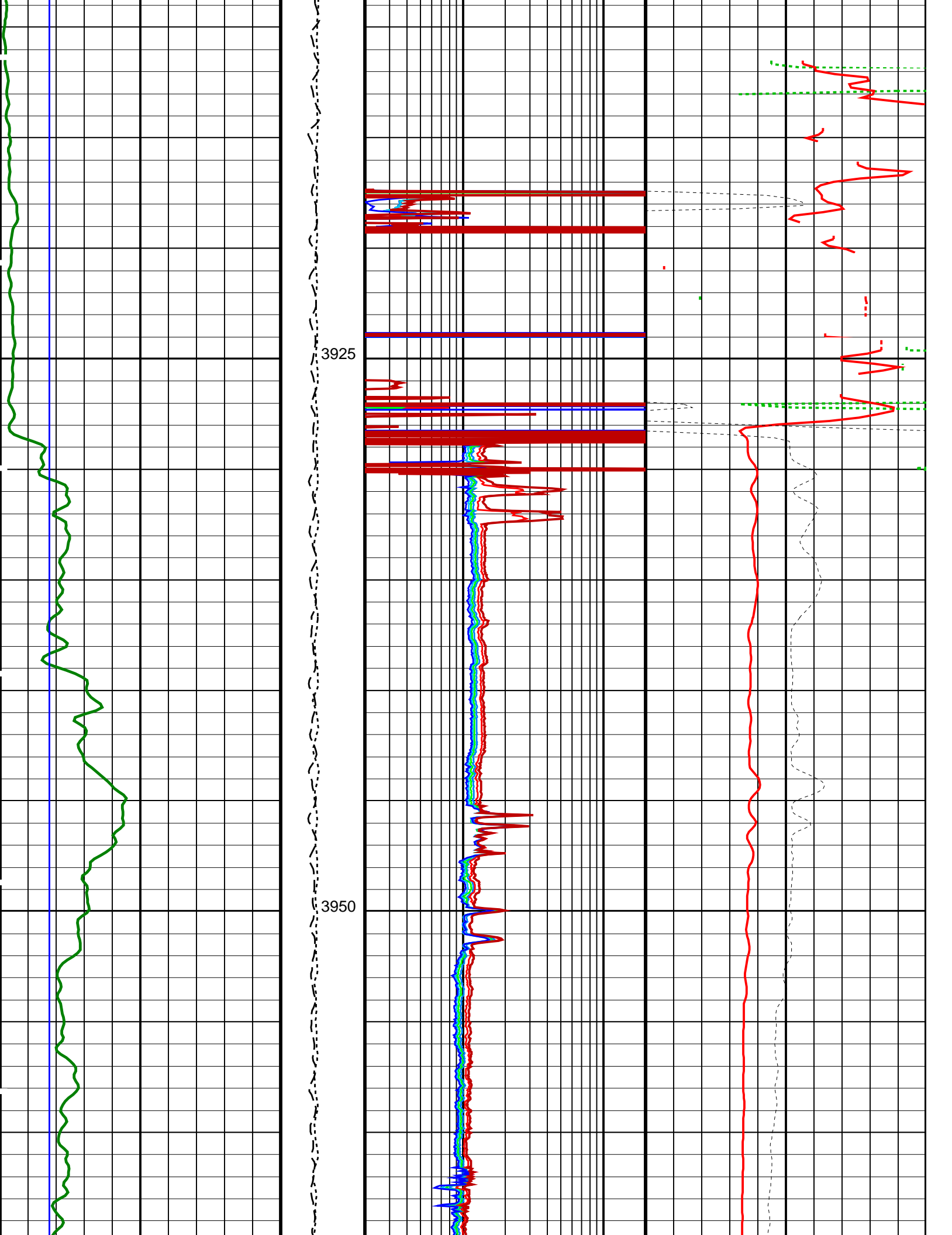
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MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

Input DLIS Files					
DEFAULT	Flip_MSS_LDEO_NGS_012LUP	PRODUCER	09-Nov-2017 07:42	4366.6 M	3778.8 M
Output DLIS Files					
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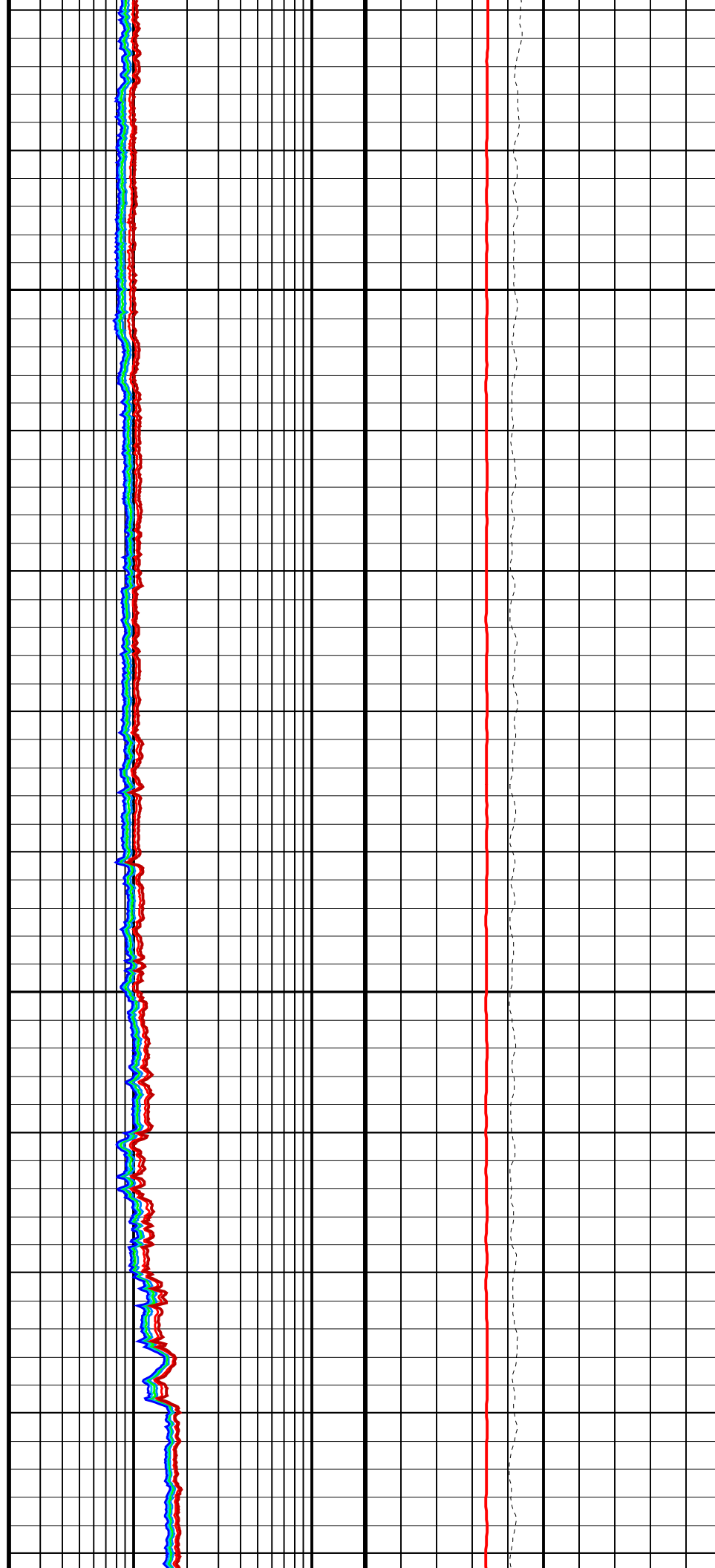
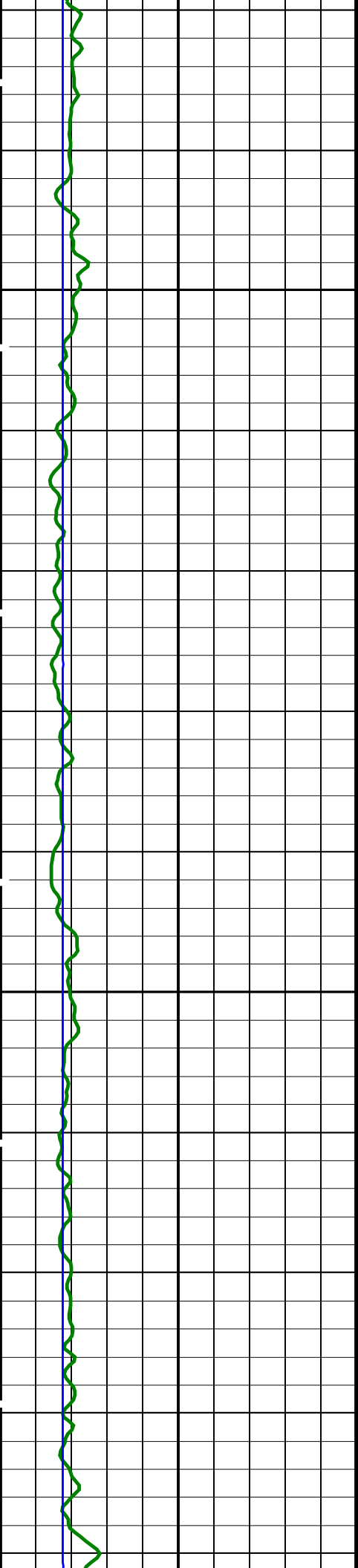


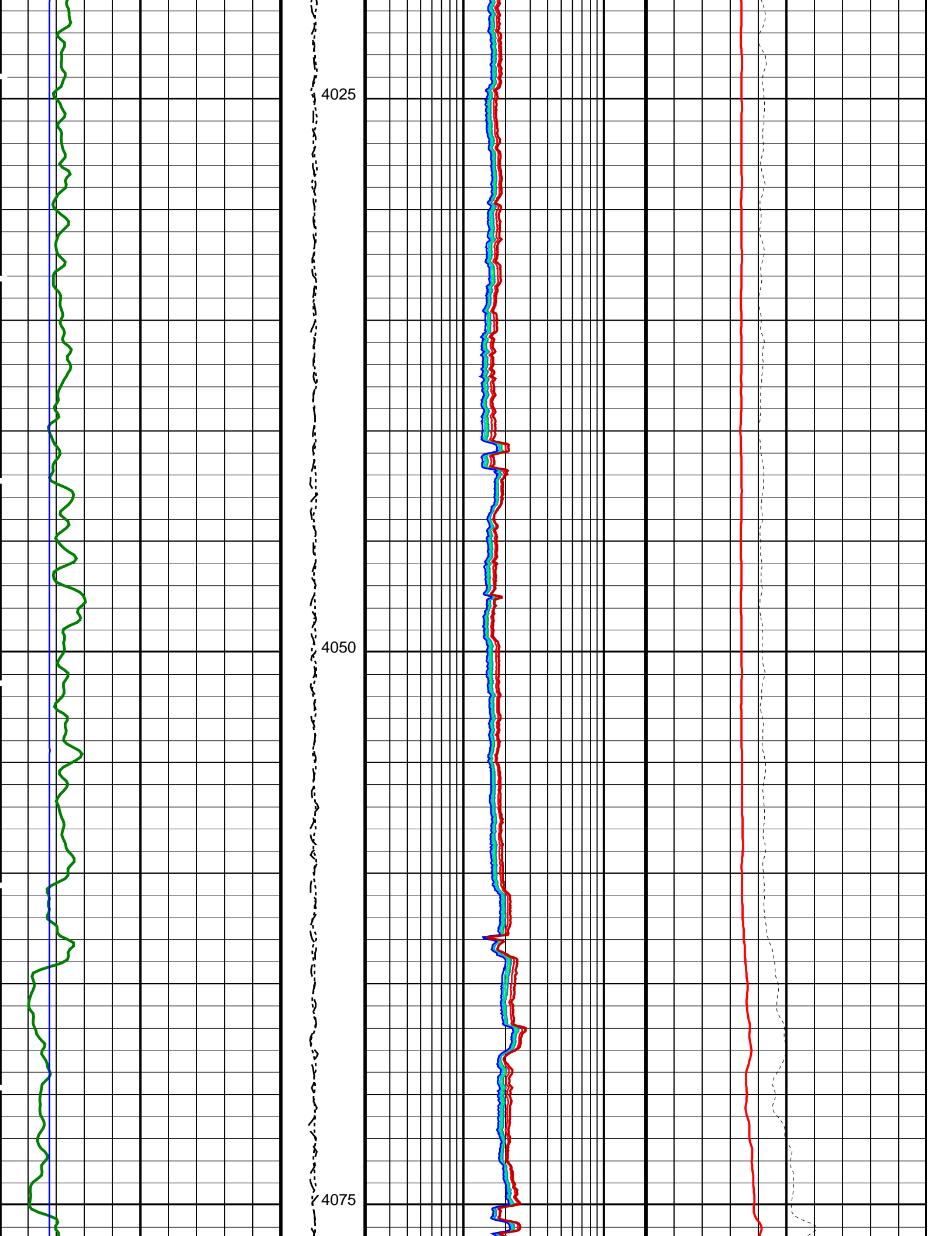


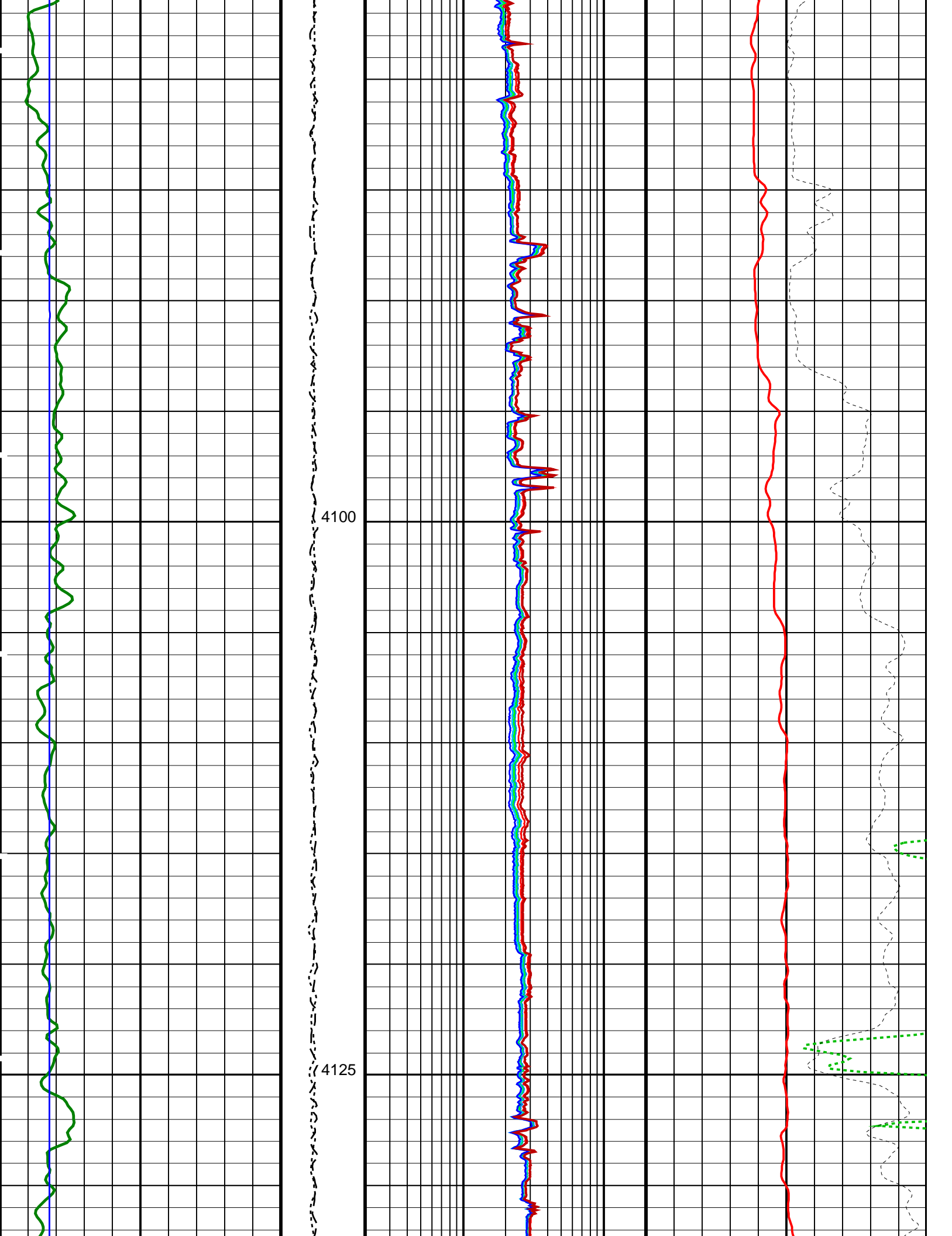


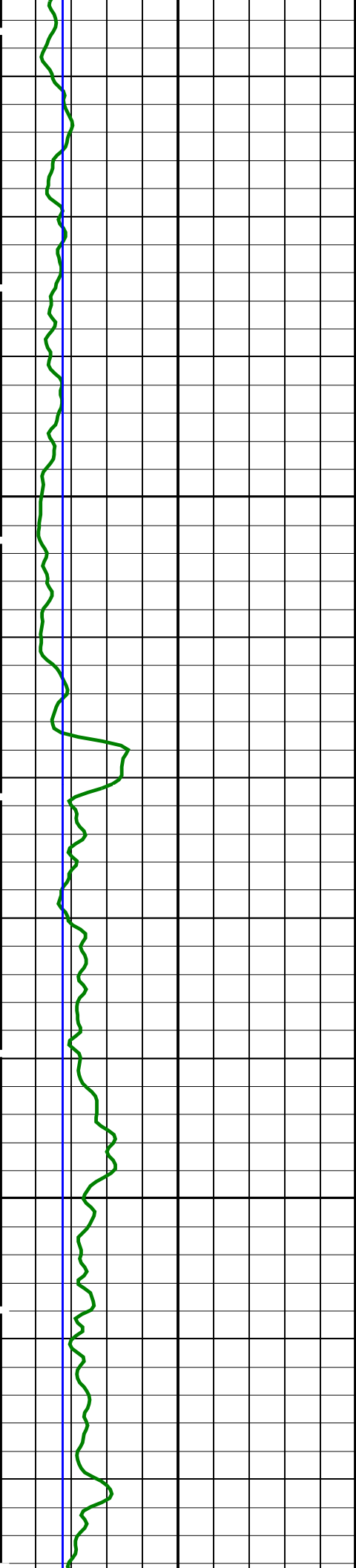






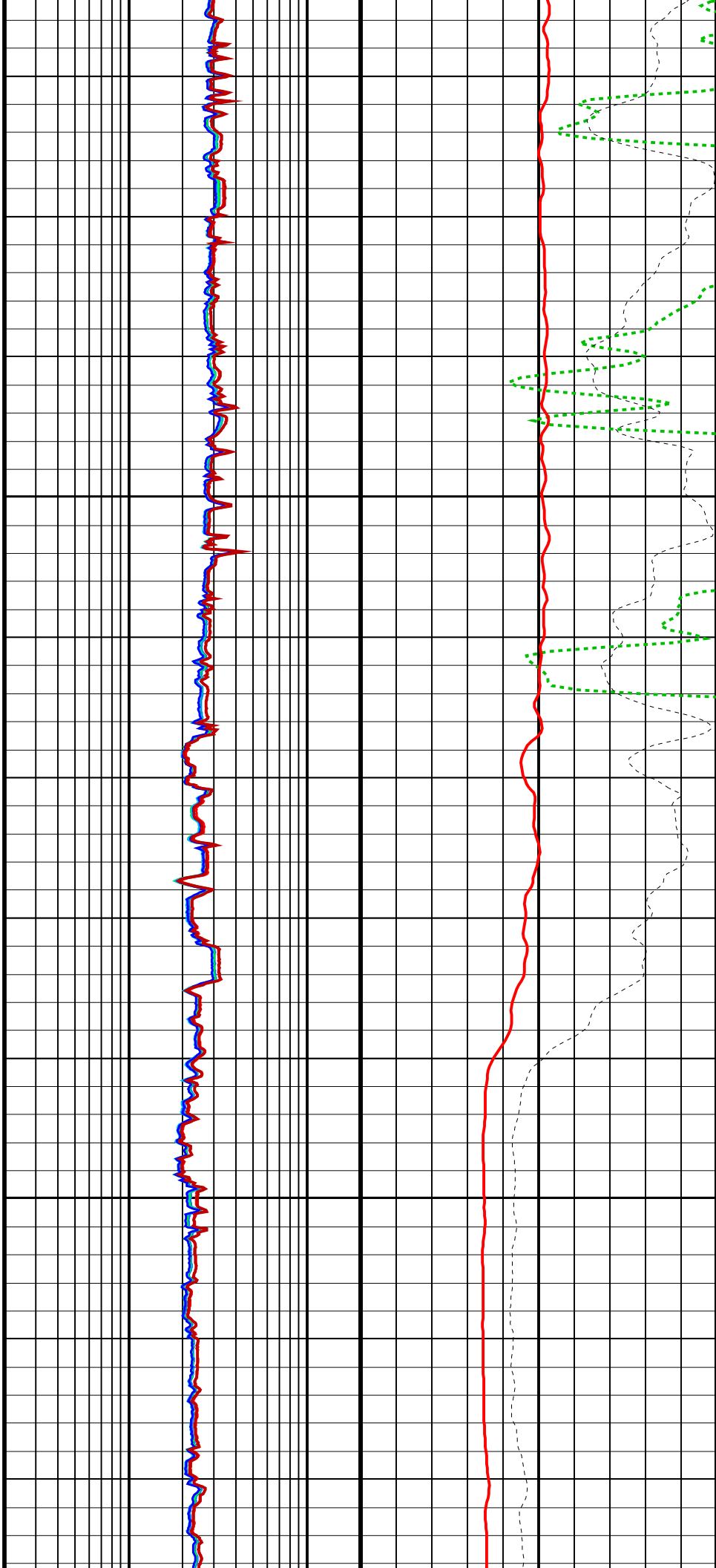


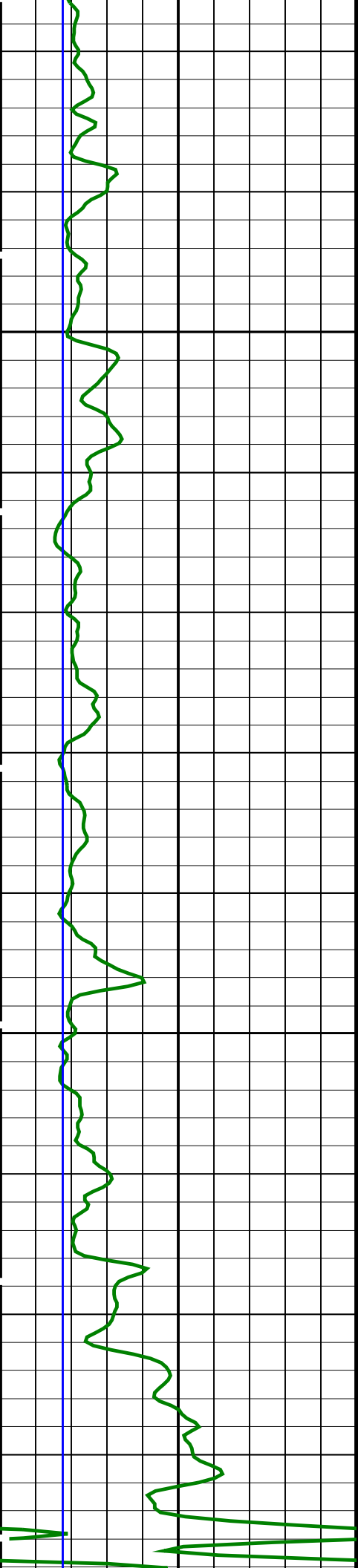




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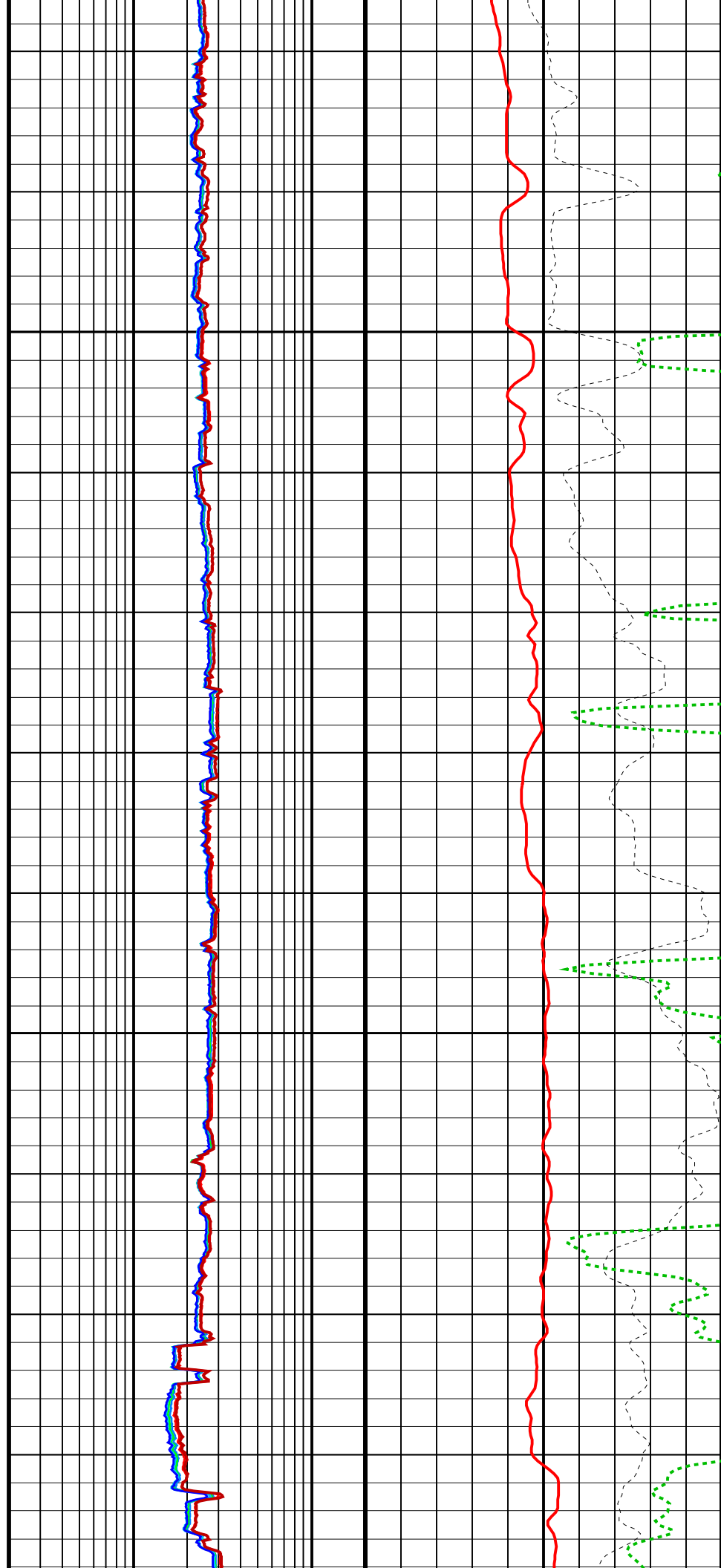
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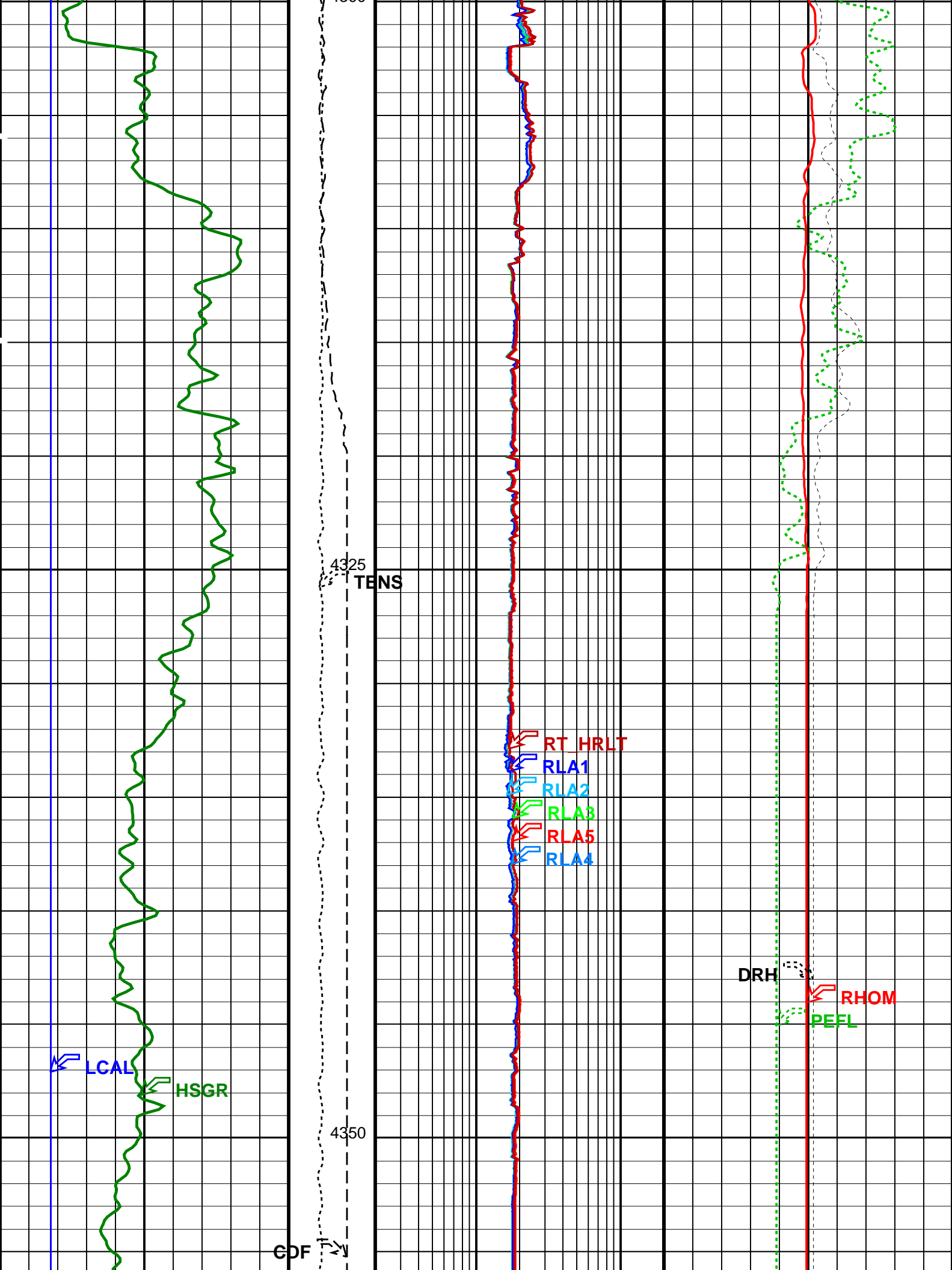


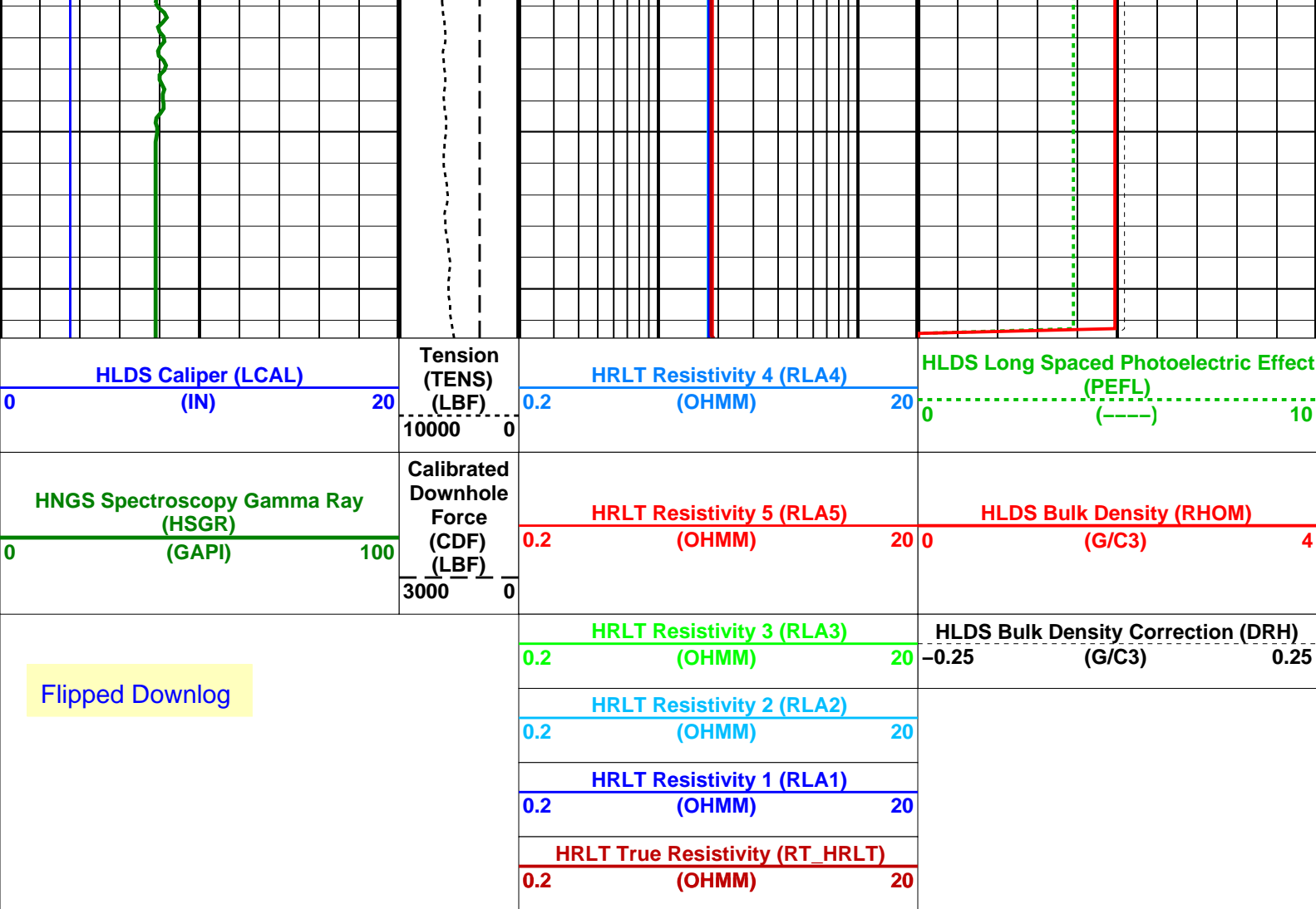
4200

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### 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	-0.00117675
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	0.987226
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.998718



## 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	17.0393	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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
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	
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	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

FMGX	First Motion Minimum Gate X	300	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	
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	680.708	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
WFLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLSPX	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	
MWCC	Mud Weight Correction Option	YES	

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	12409.8	FT
TDD	Total Depth - Driller	4367.00	M
TDL	Total Depth - Logger	4367.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo    Vertical Scale: 1:200    Graphics File Created: 09-Nov-2017 07:50

### OP System Version: 19C0-187

MSS_LDEO-A	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_MSS_LDEO_NGS_012LUP	PRODUCER	09-Nov-2017 07:42	4366.6 M	3778.8 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014PUP	FN:21	PRODUCER	09-Nov-2017 07:50
BACKUP_	MSS_LDEO_NGS_HRLA_014PUP	FN:22	PRODUCER	09-Nov-2017 07:50

Company: International Ocean Discovery Program    Well: Expedition 369, Site U1514C

### Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09-Nov-2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

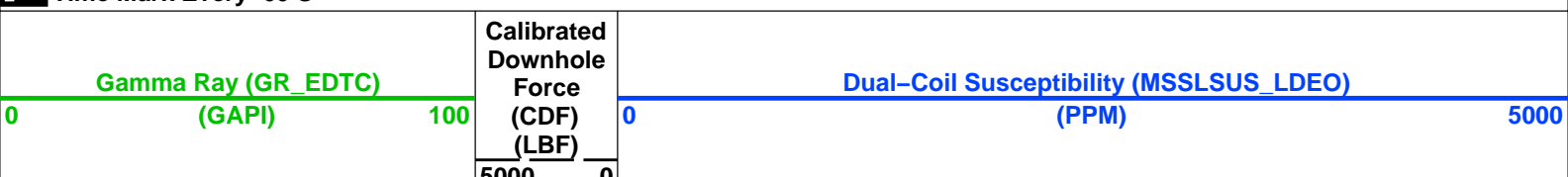
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BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09-Nov-2017 07:57	4366.3 M	3836.7 M

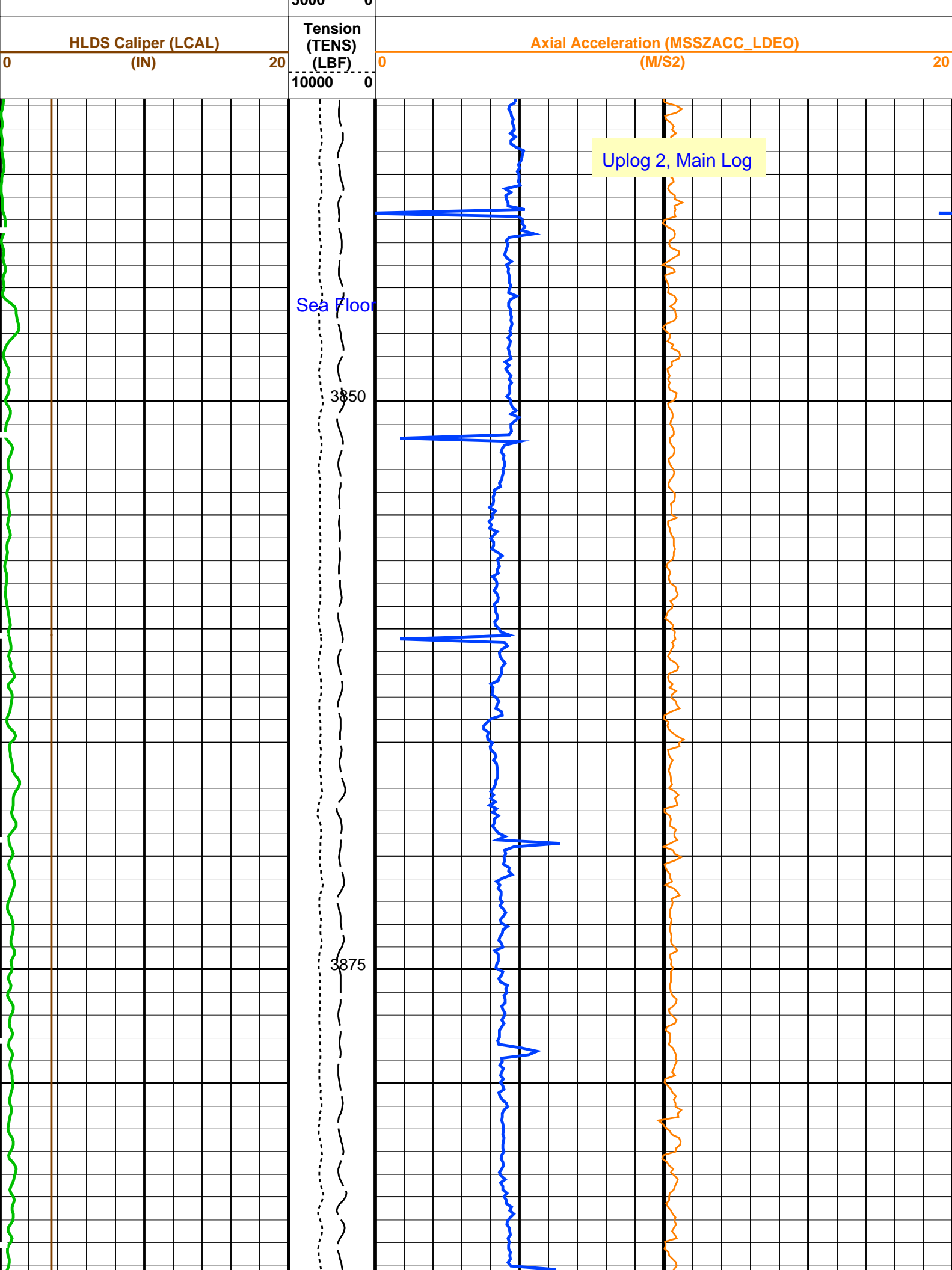
### OP System Version: 19C0-187

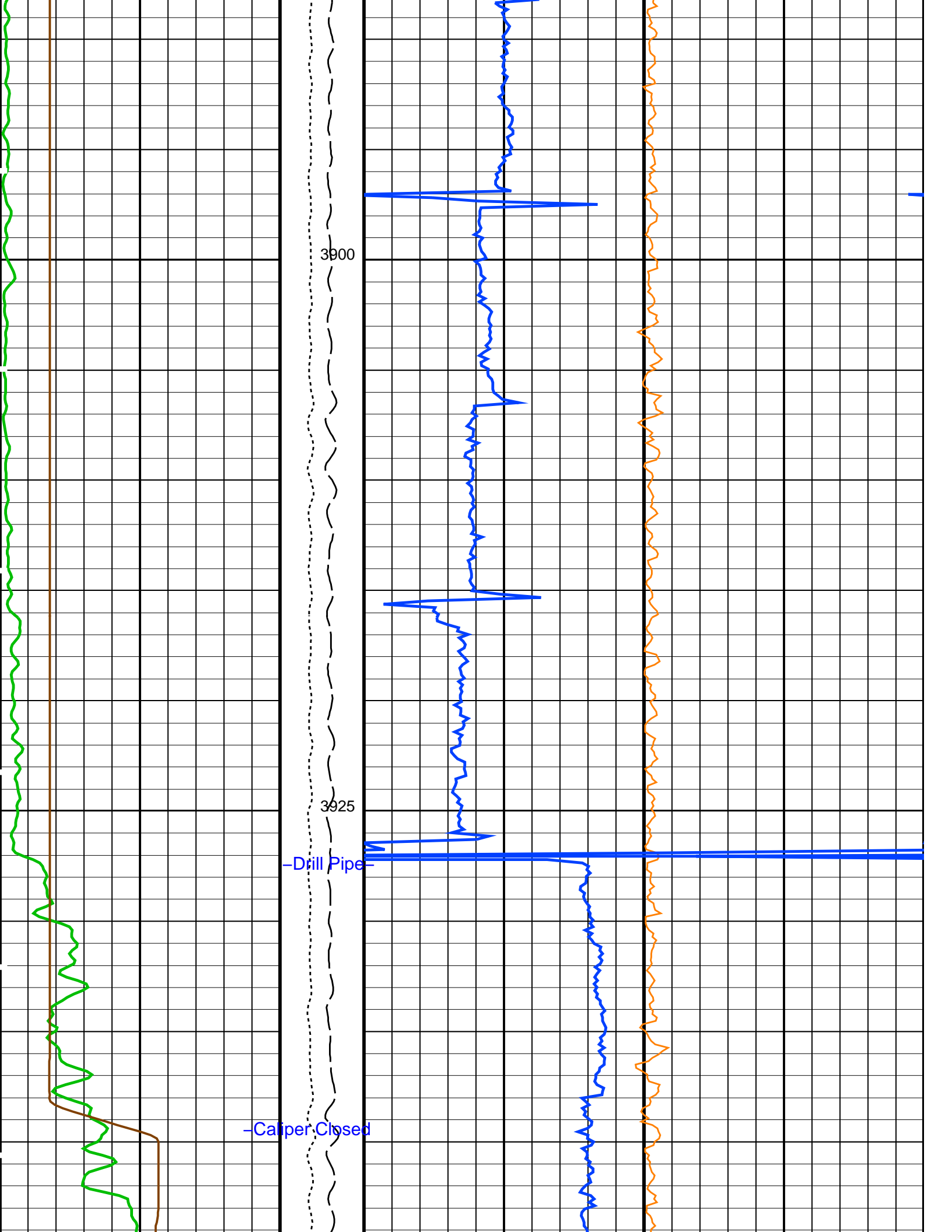
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

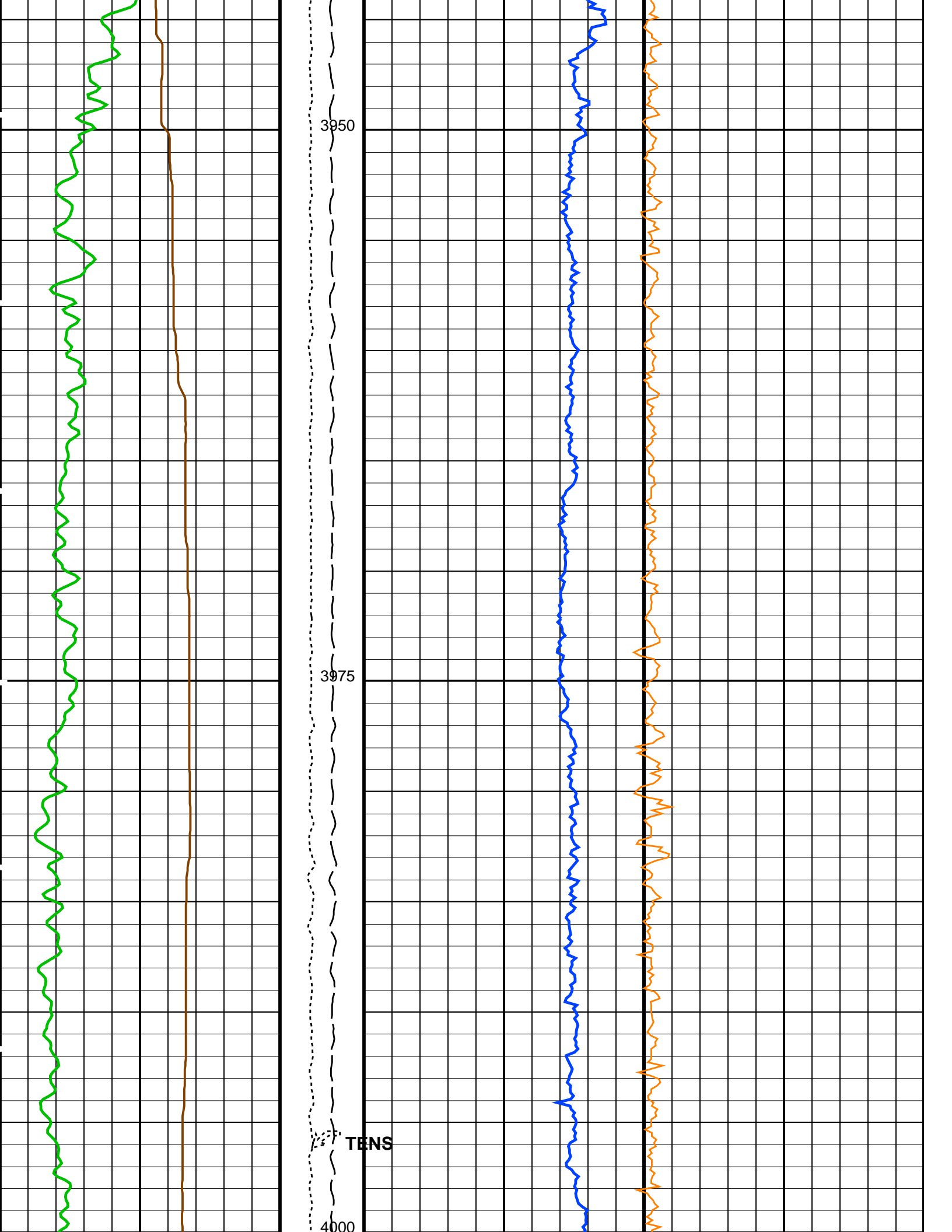
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Time Mark Every 60 S

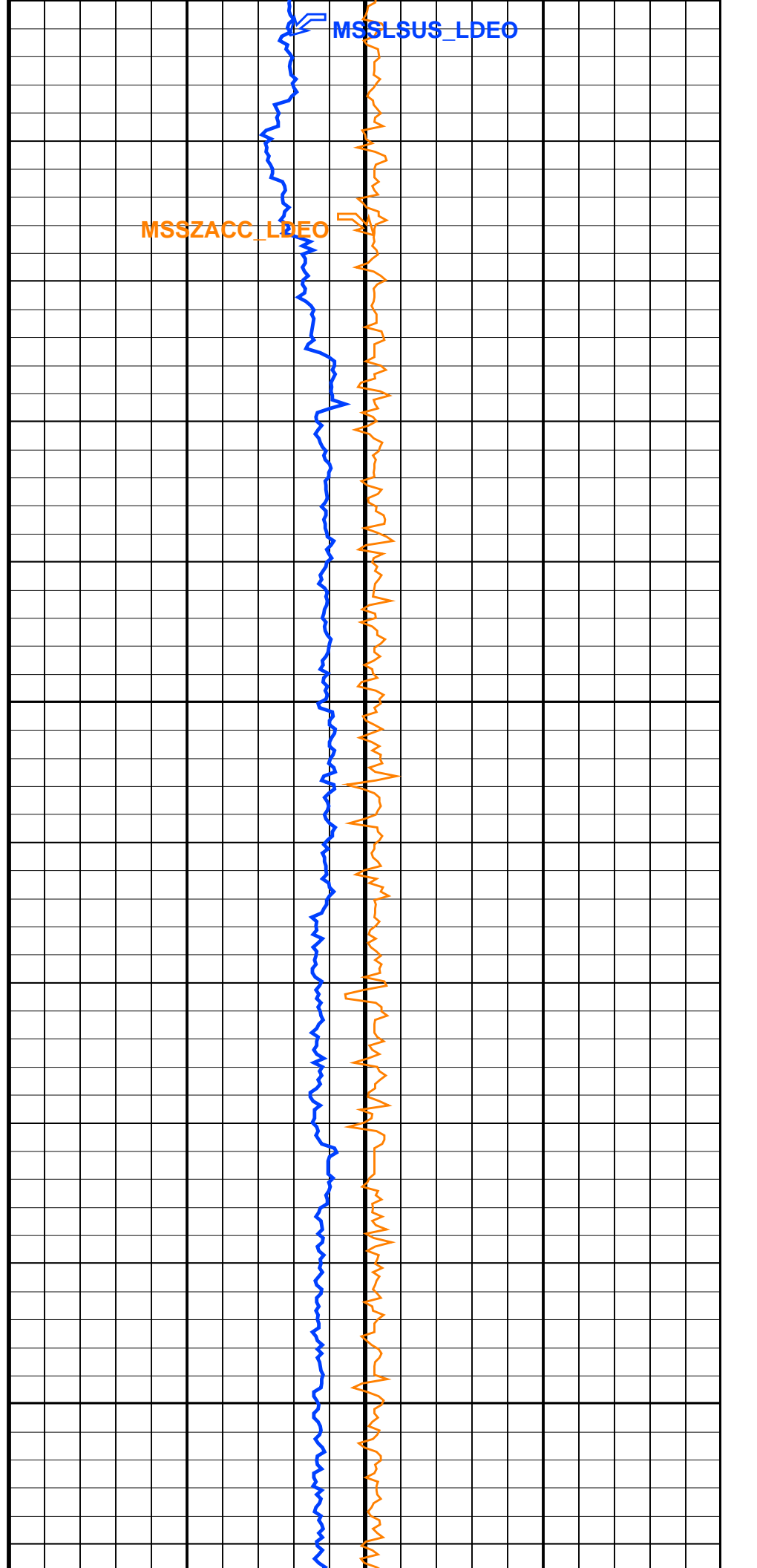
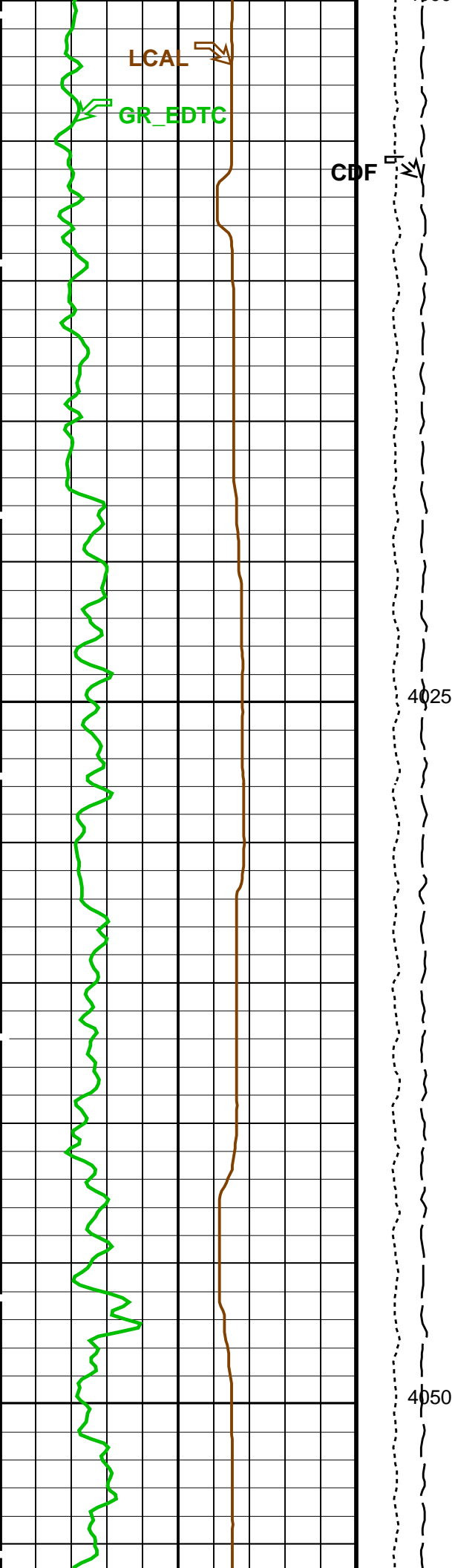


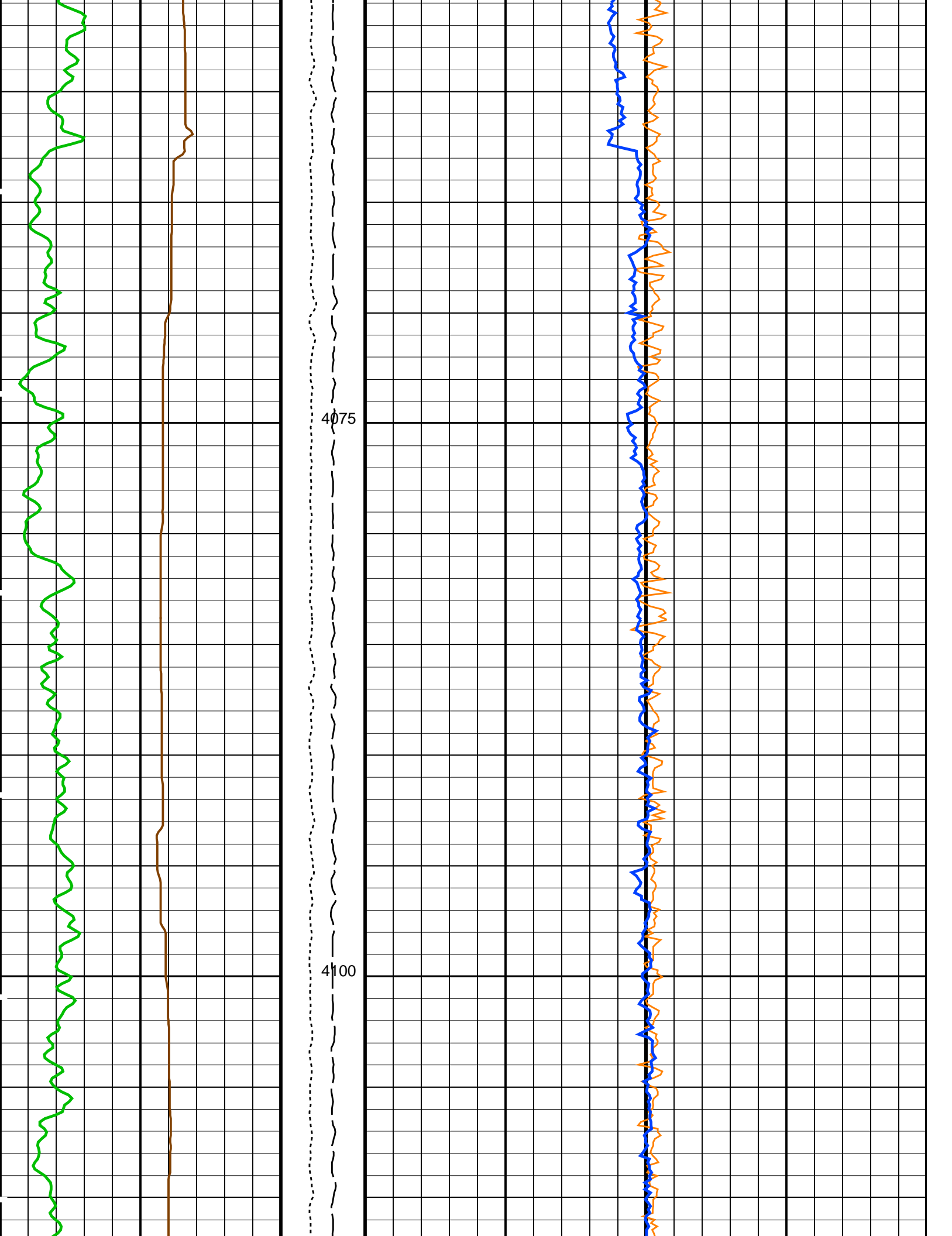


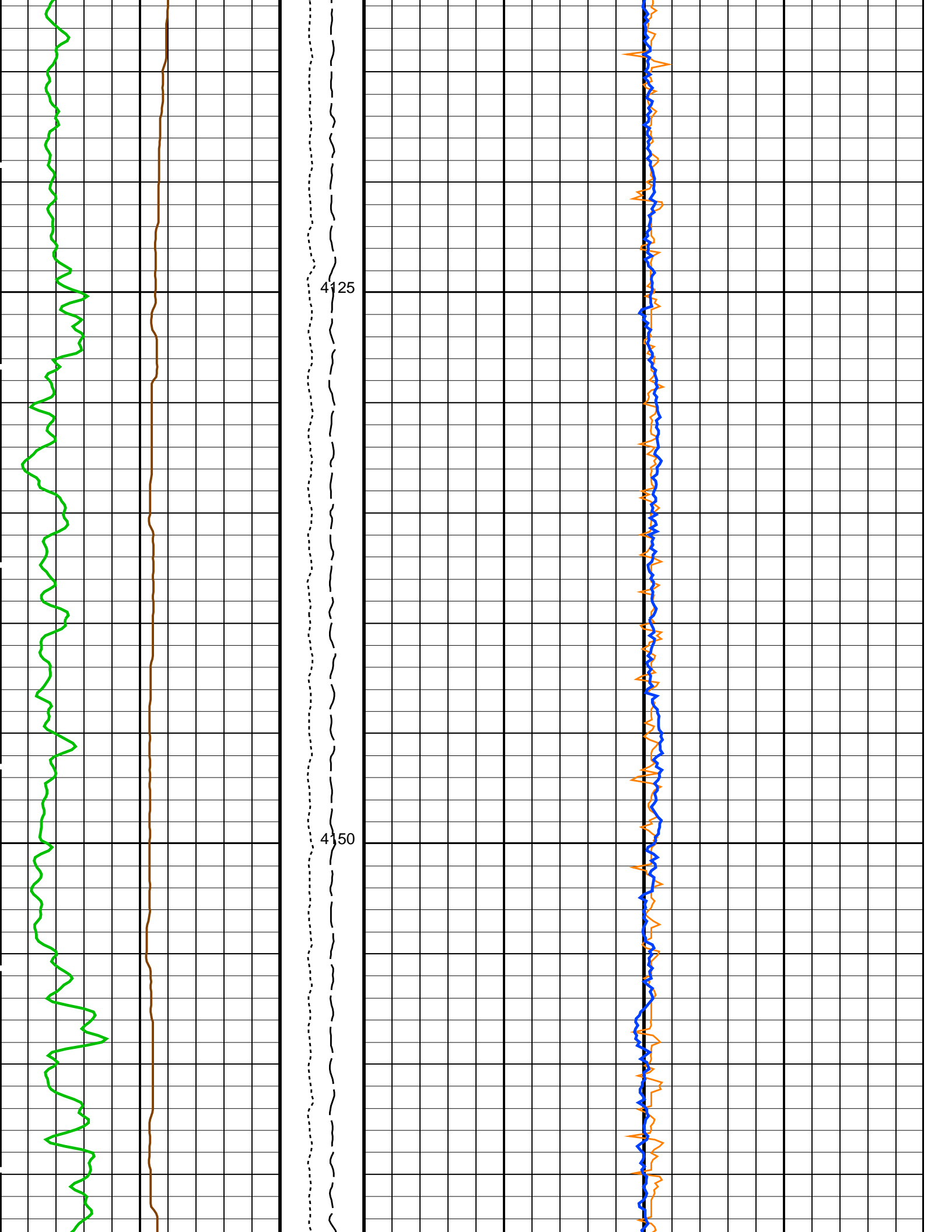


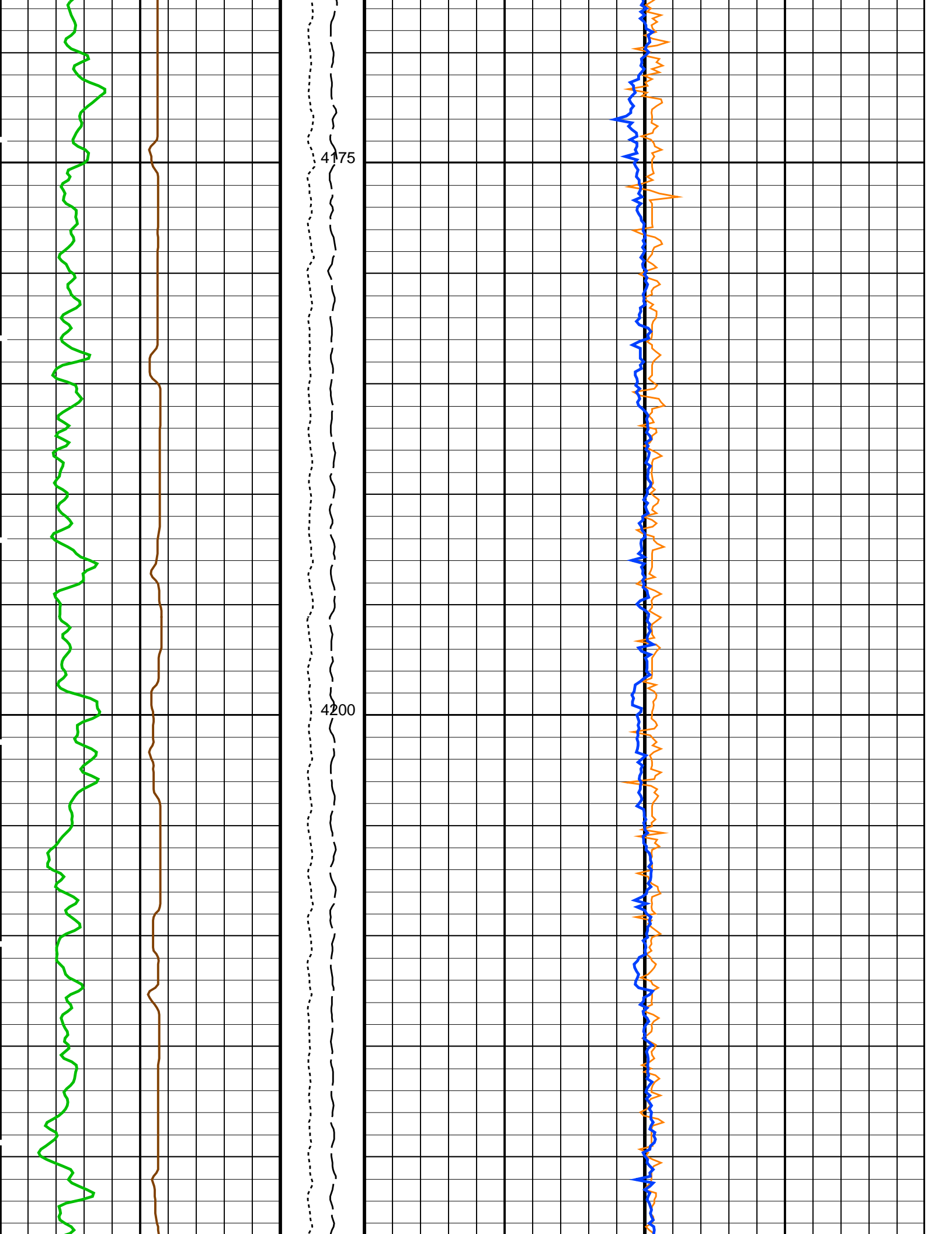


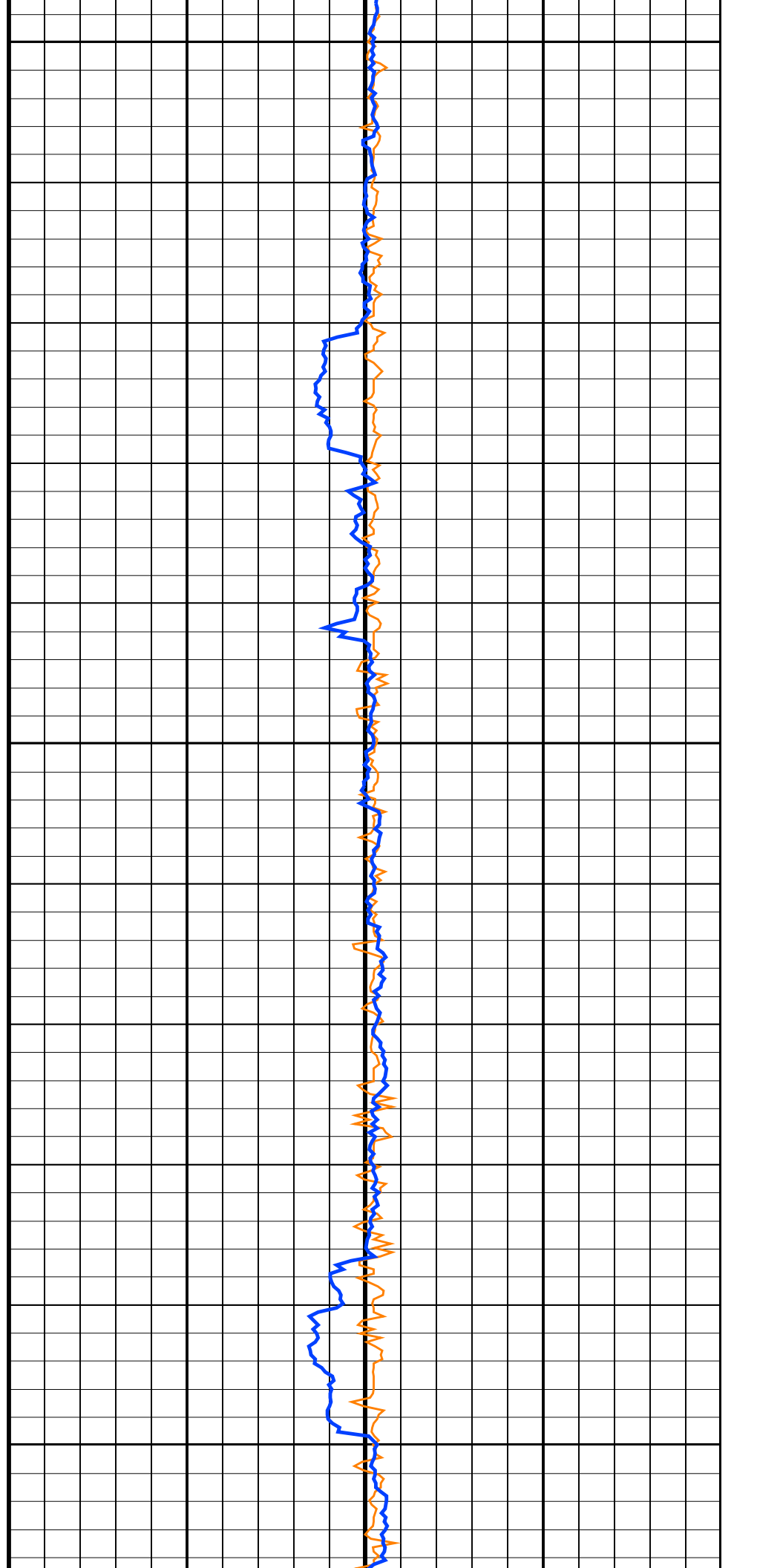
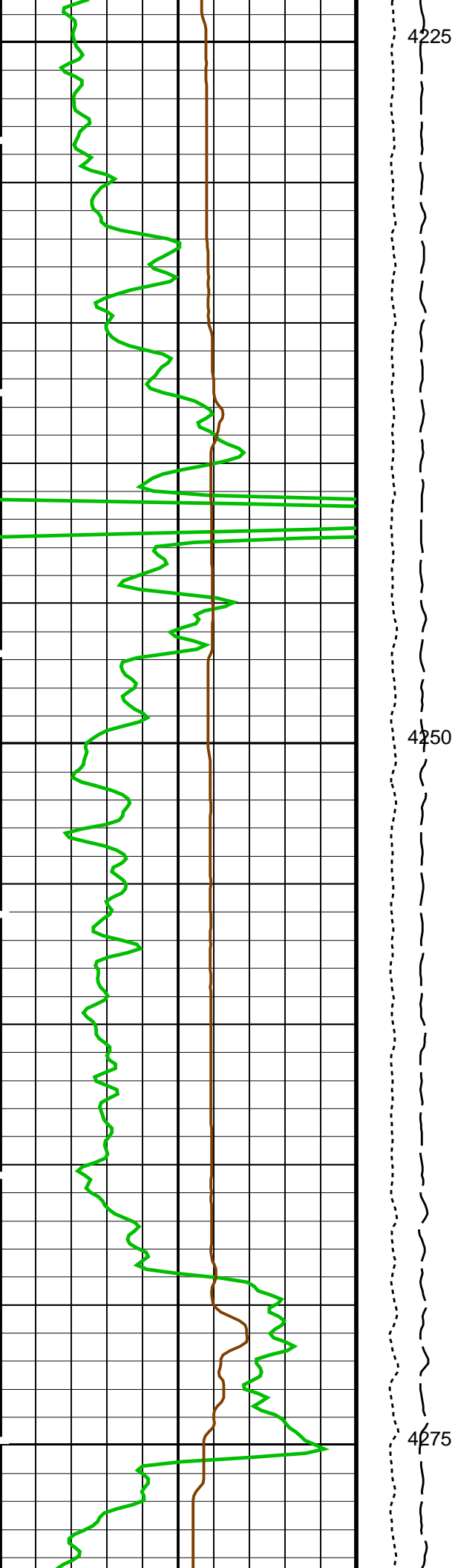


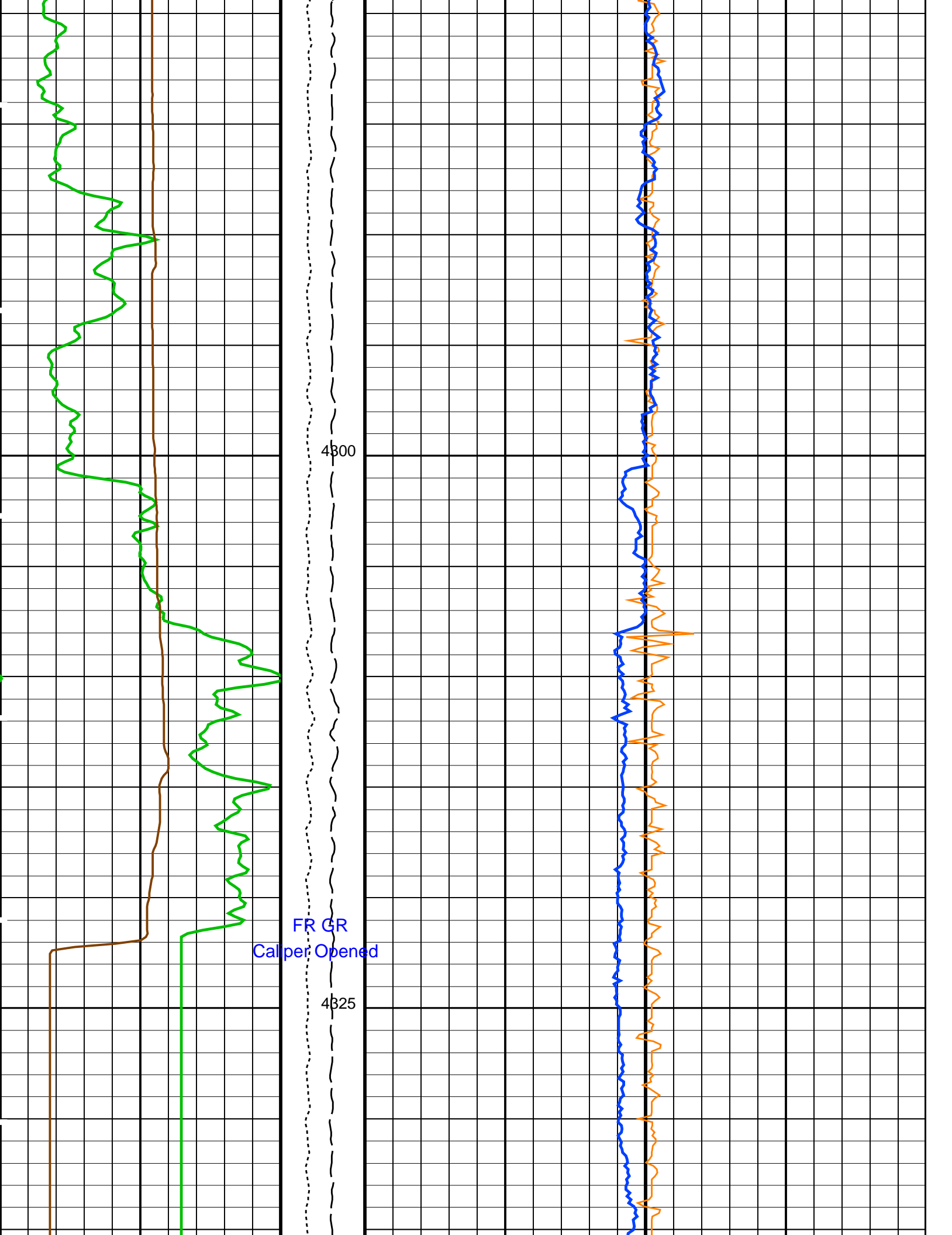


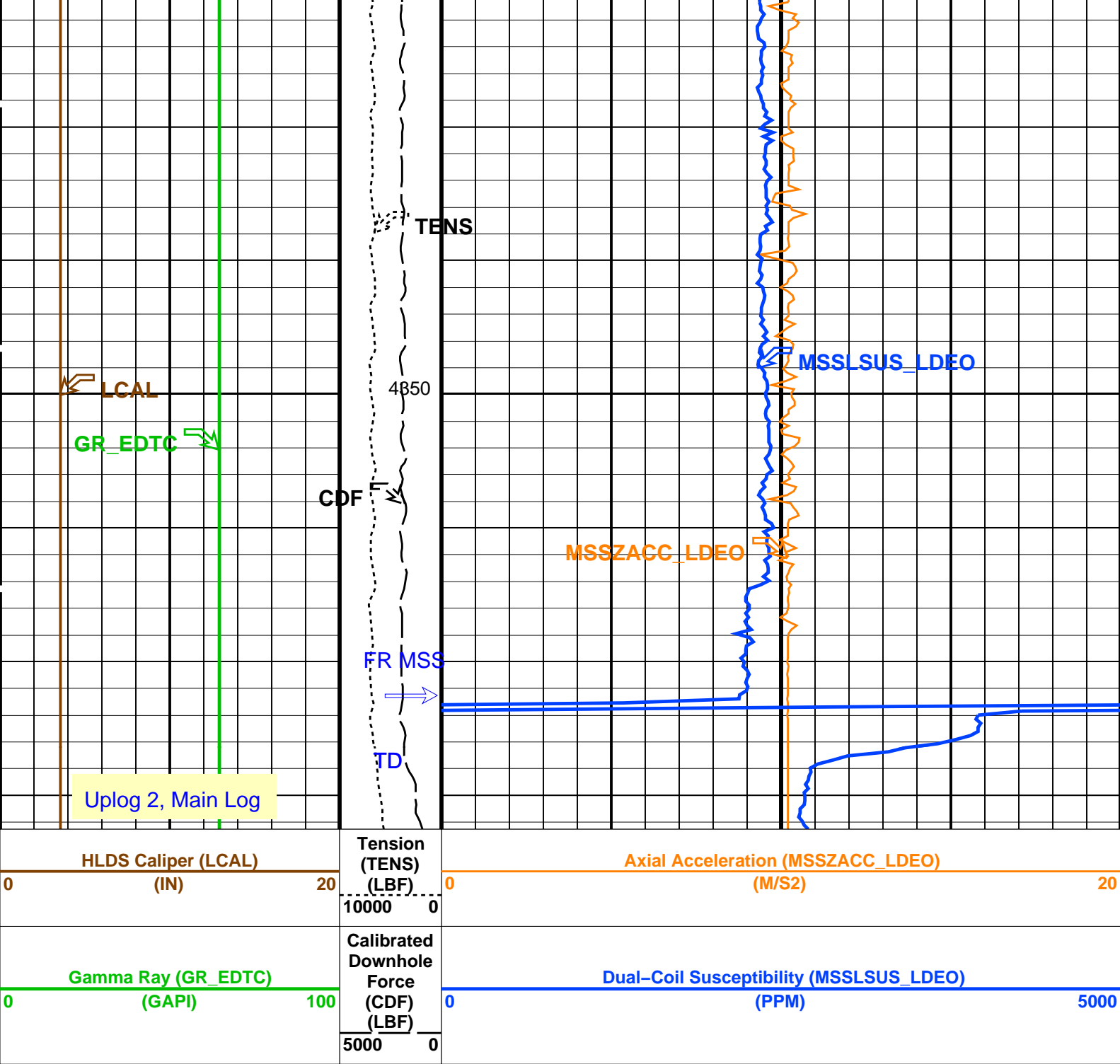












Parameters		
DLIS Name	Description	Value
HNGB-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGB Detector 1 Barite Constant	1
BAR2	HNGB Detector 2 Barite Constant	1
BHK	HNGB Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	212 DEG F
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	HNGB 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

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	-0.00236493	
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	0.972587	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00323	

**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	17.0393	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	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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
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

**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	
GAIX	Manual Gain X	10	
GCSE	Generalized Caliper Selection	LCAL	
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	680.708	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

TST1	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
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLSPX	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	
CCCCO	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			
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	12409.8	FT
TDD	Total Depth - Driller	4367.00	M
TDL	Total Depth - Logger	4367.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS\_Logging      Vertical Scale: 1:200      Graphics File Created: 09-Nov-2017 07:57

### OP System Version: 19C0-187

MSS_LDEO-A	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	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09-Nov-2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09-Nov-2017 07:57		
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09-Nov-2017 07:57		

Company: International Ocean Discovery Program      Well: Expedition 369, Site U1514C

### Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09-Nov-2017 06:35	4366.3 M	3836.6 M
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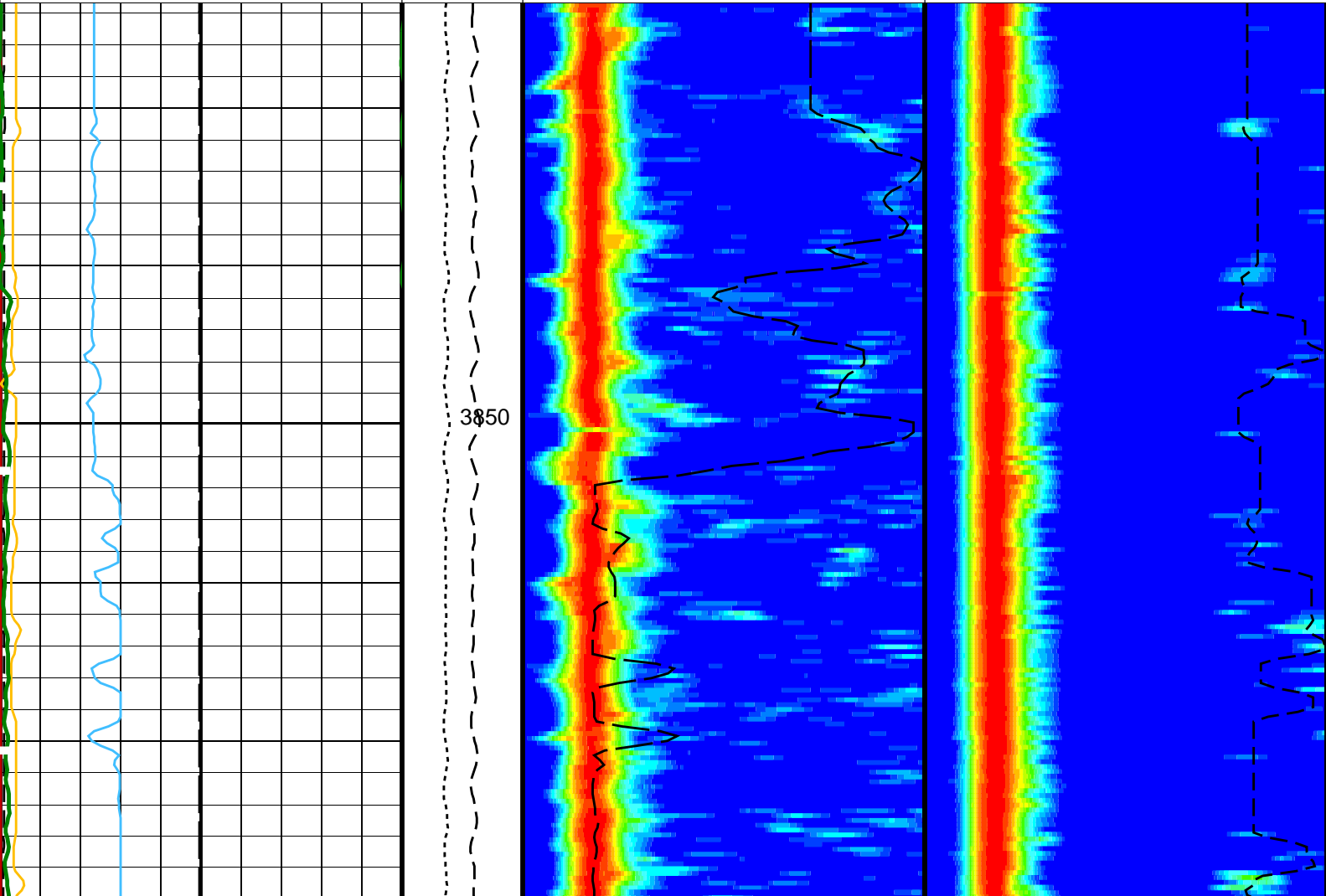
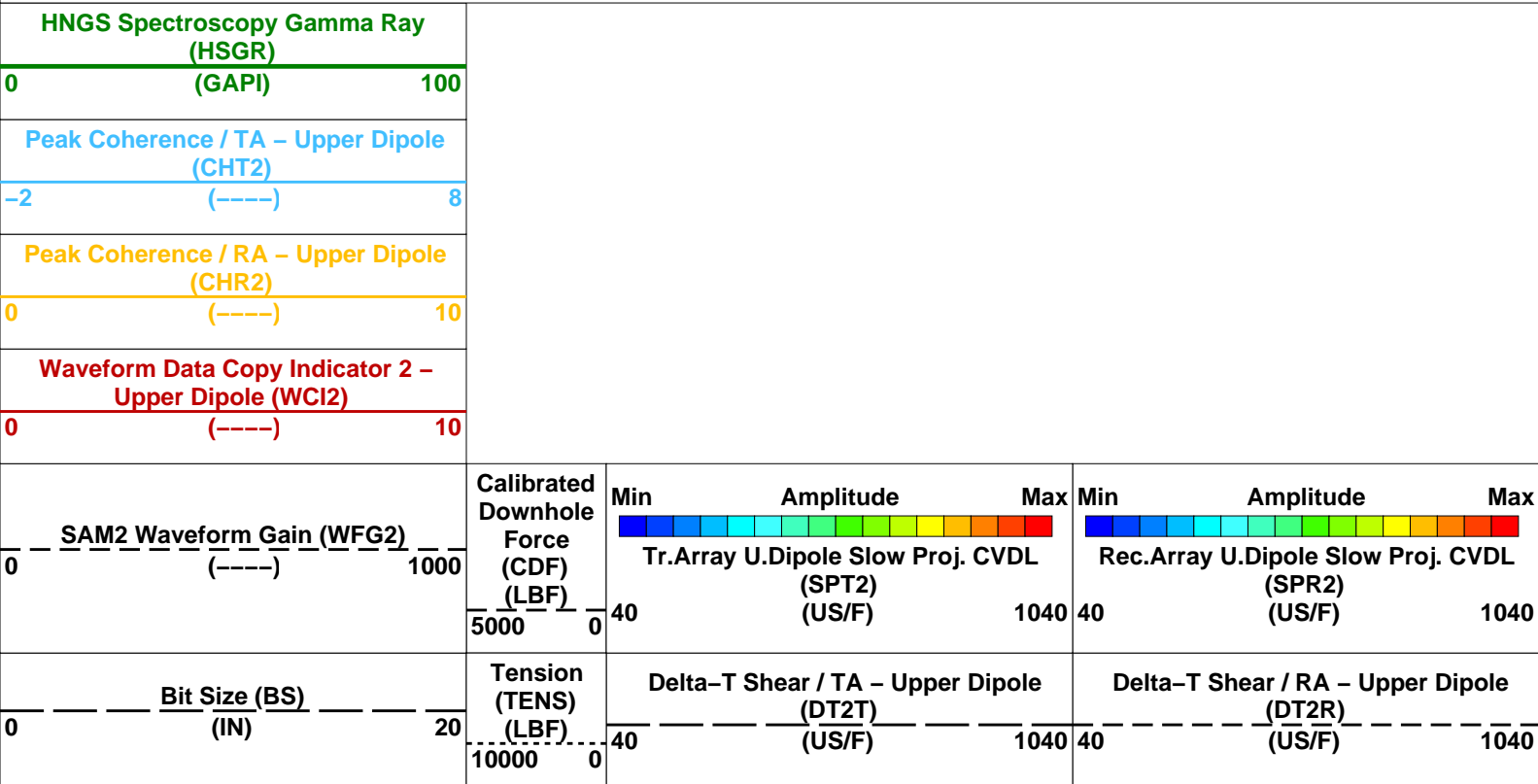
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BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09-Nov-2017 07:57	4366.3 M	3836.7 M

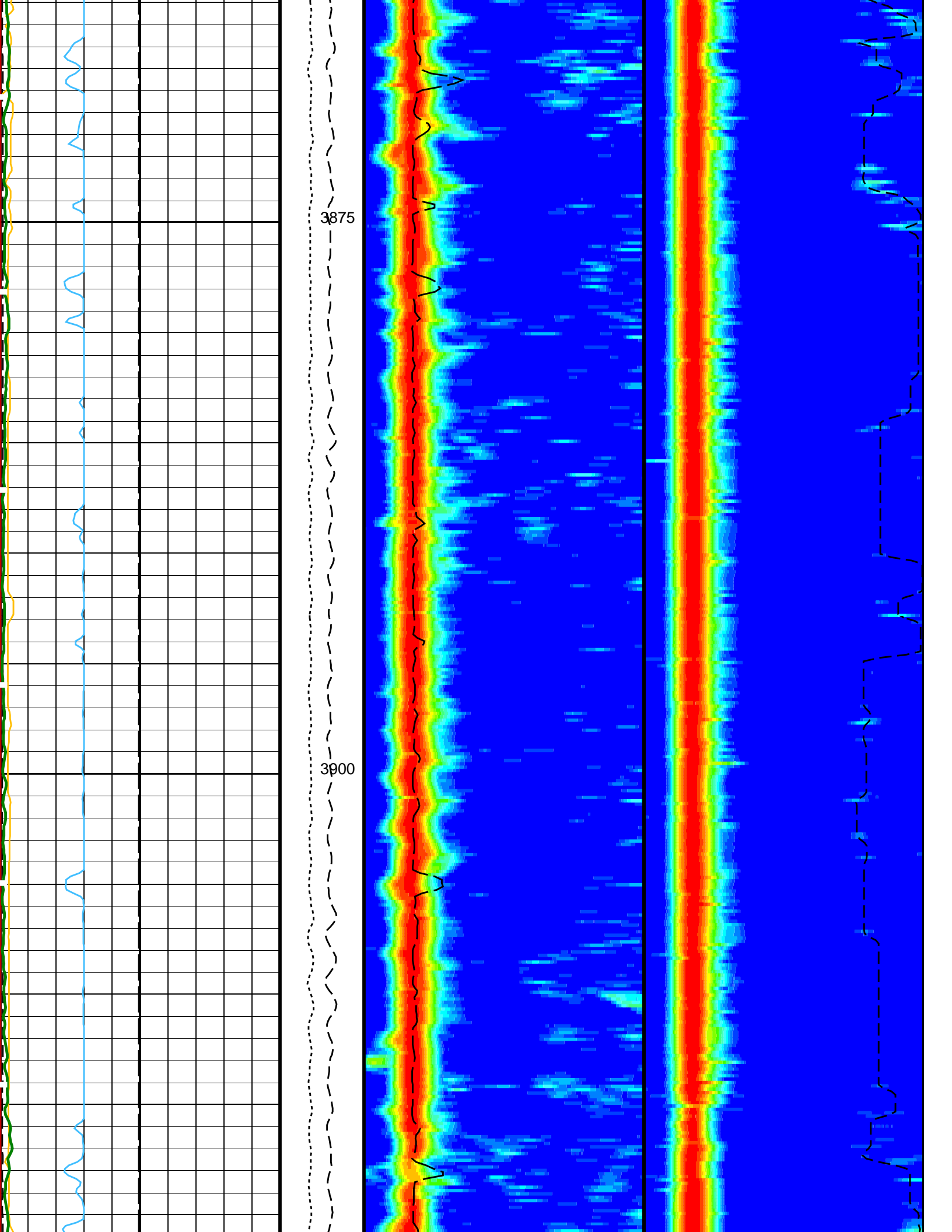
### OP System Version: 19C0-187

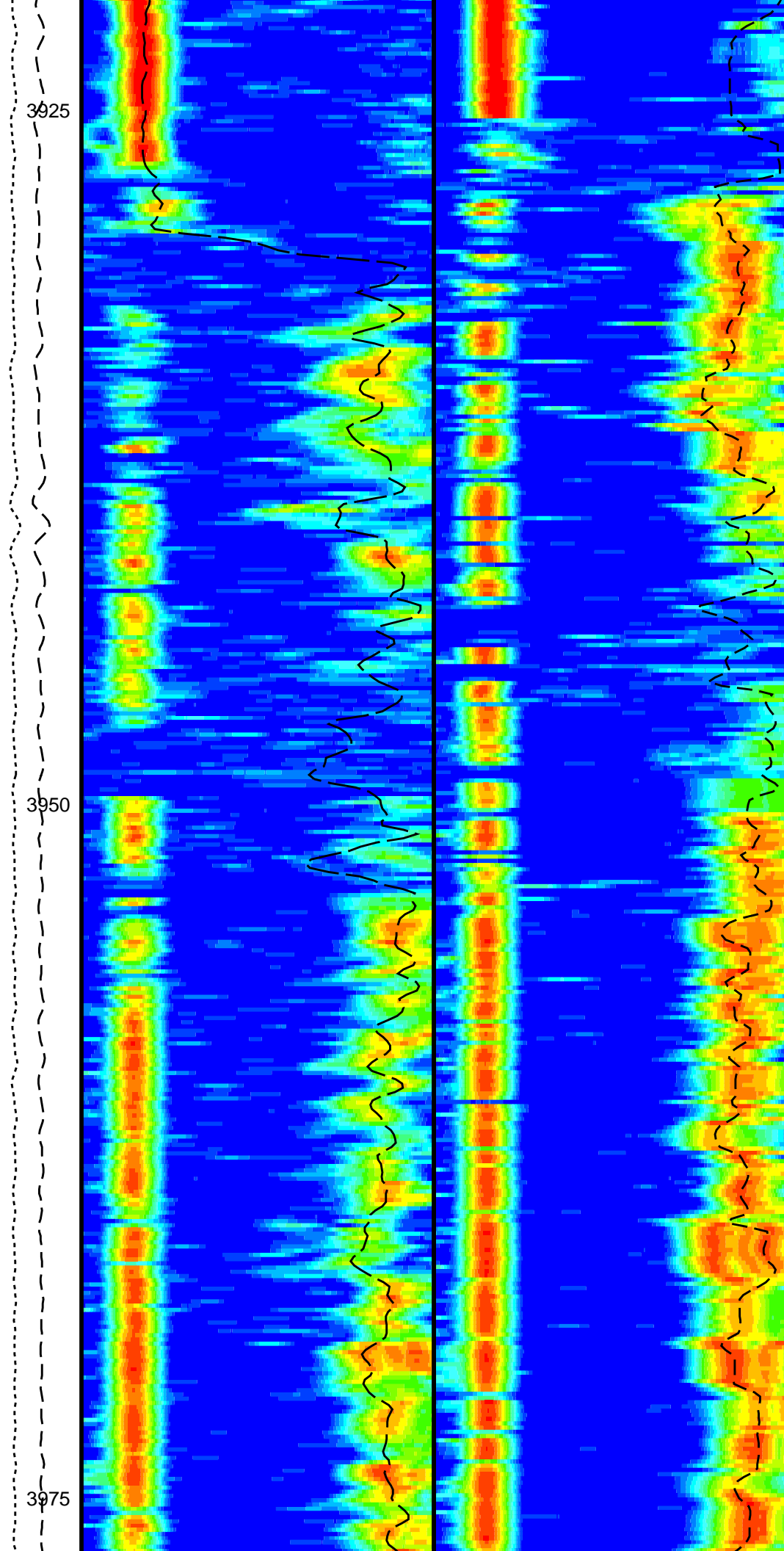
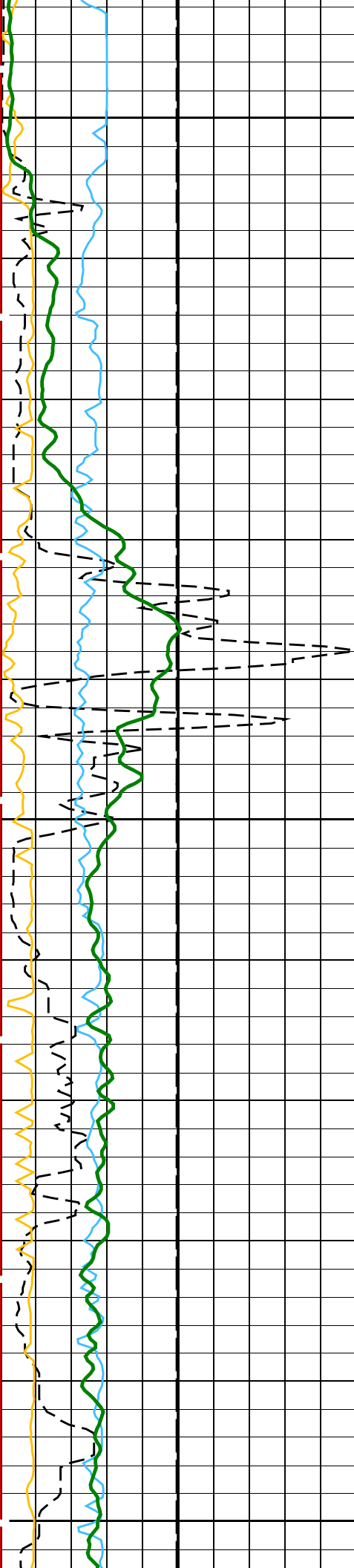
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HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

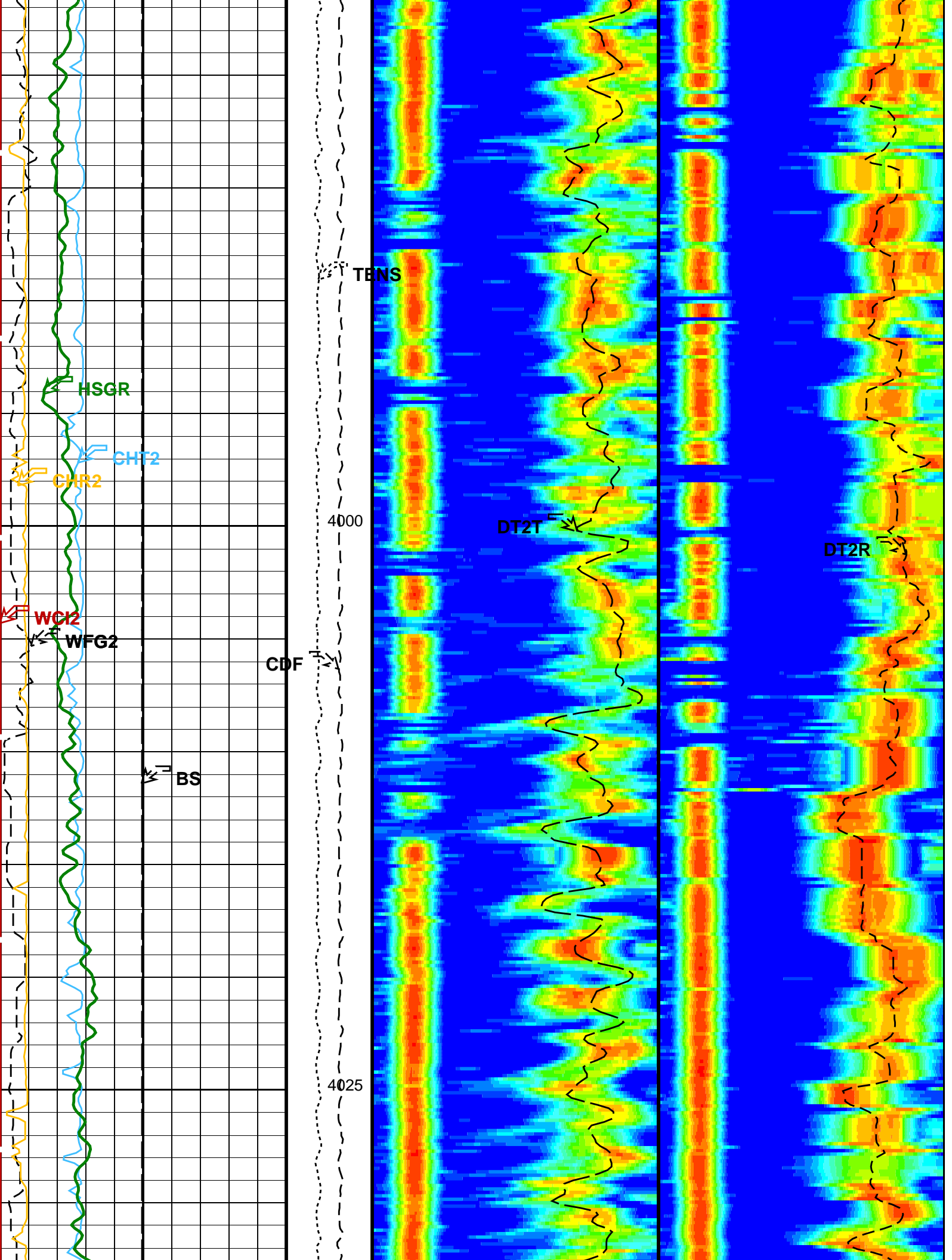
PIP SUMMARY

Time Mark Every 60 S

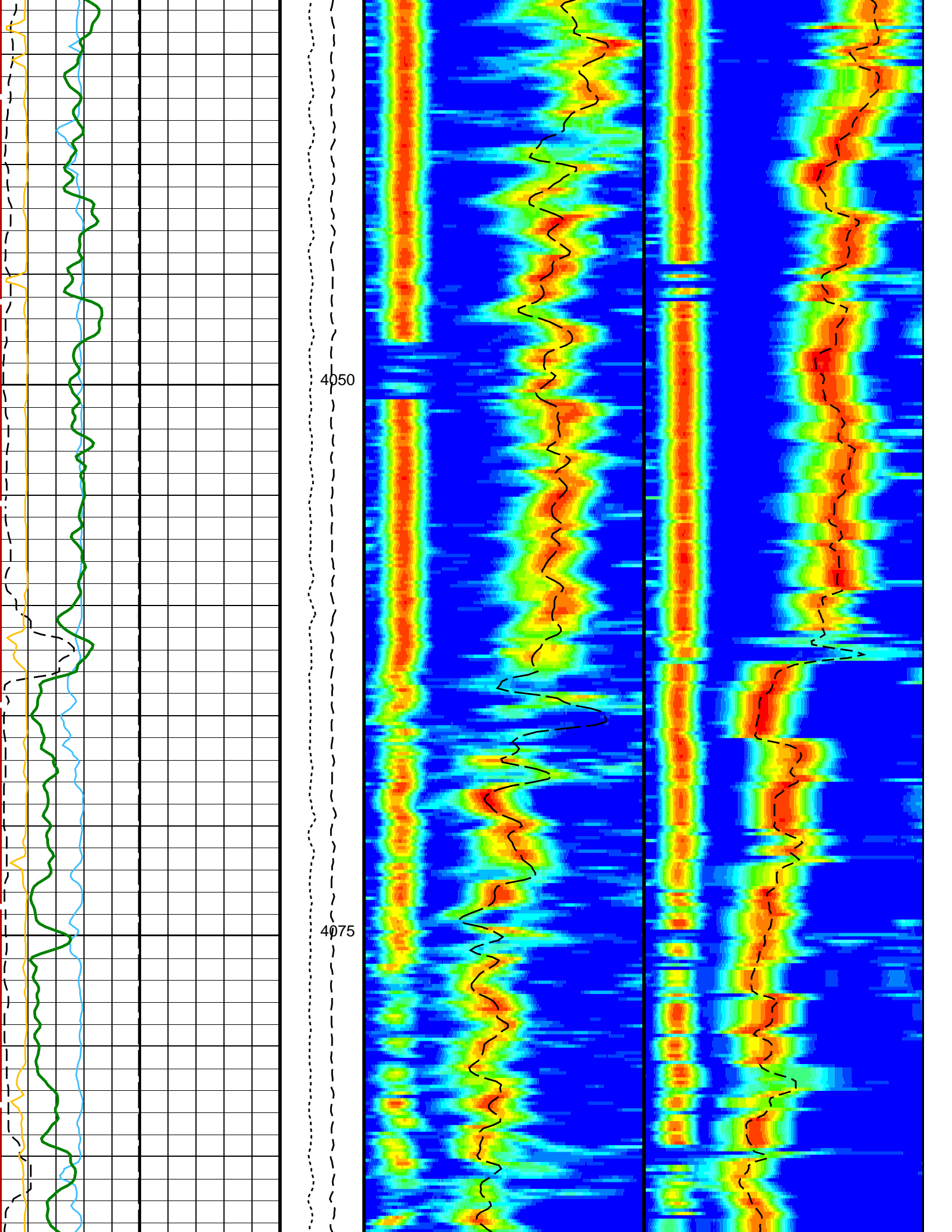


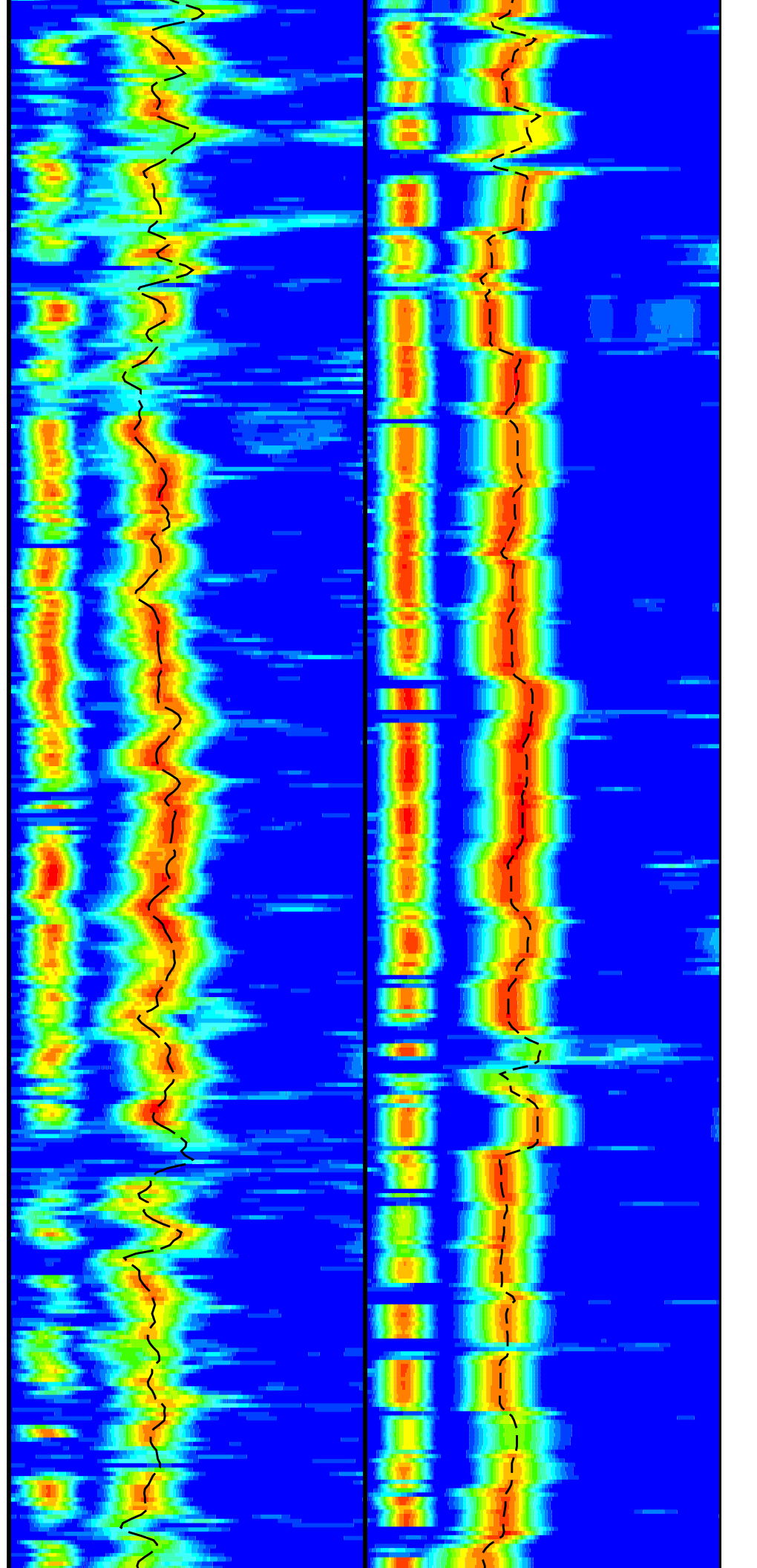
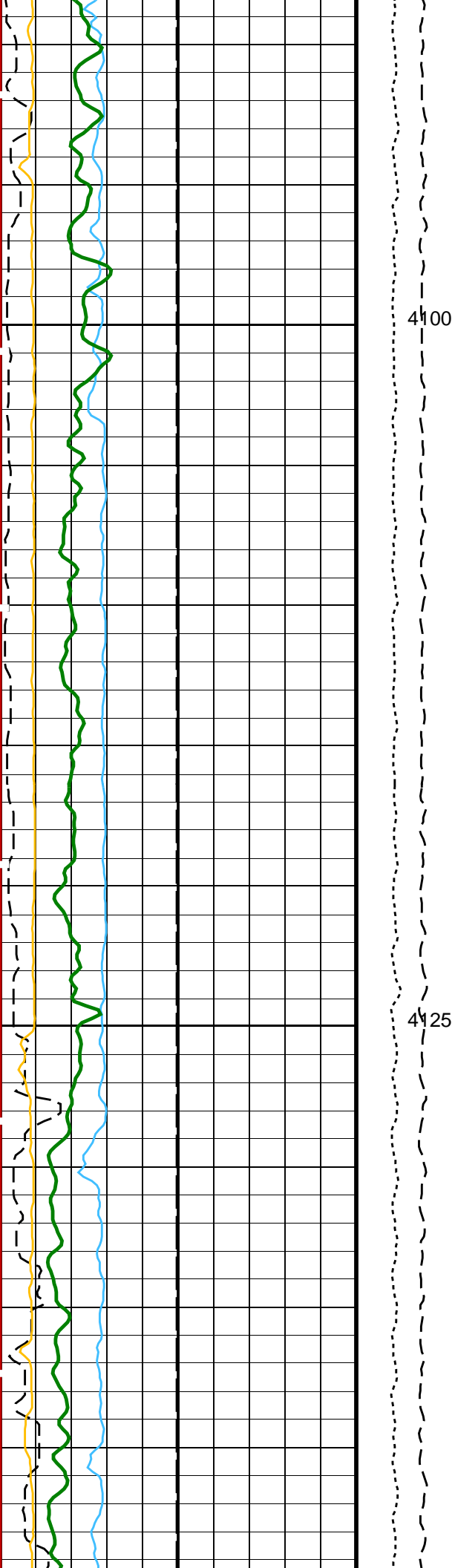


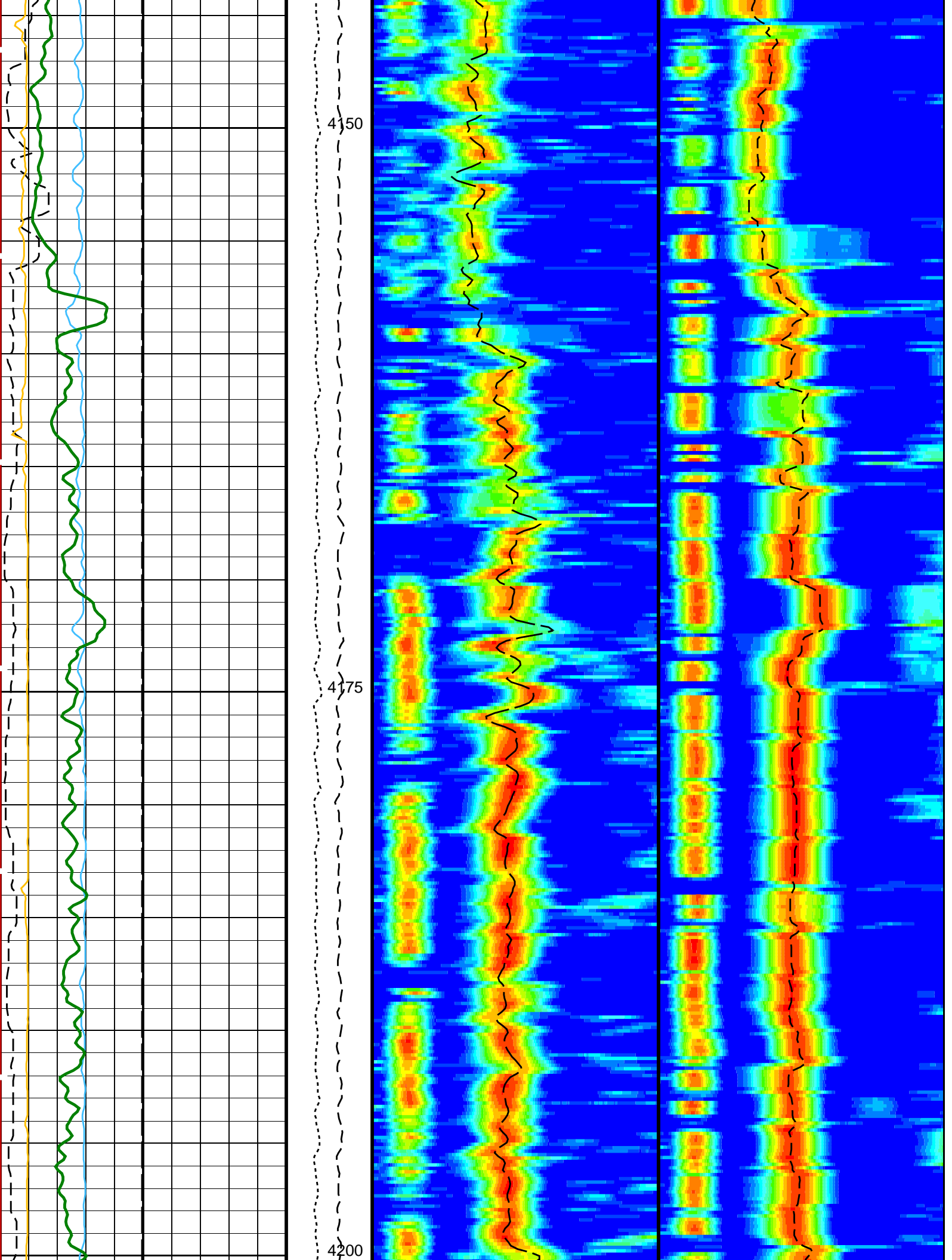


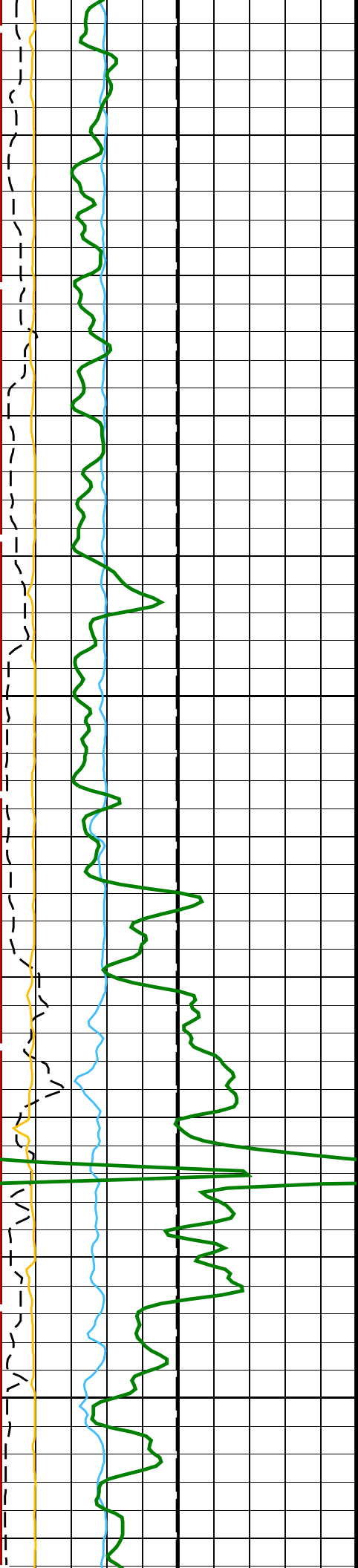




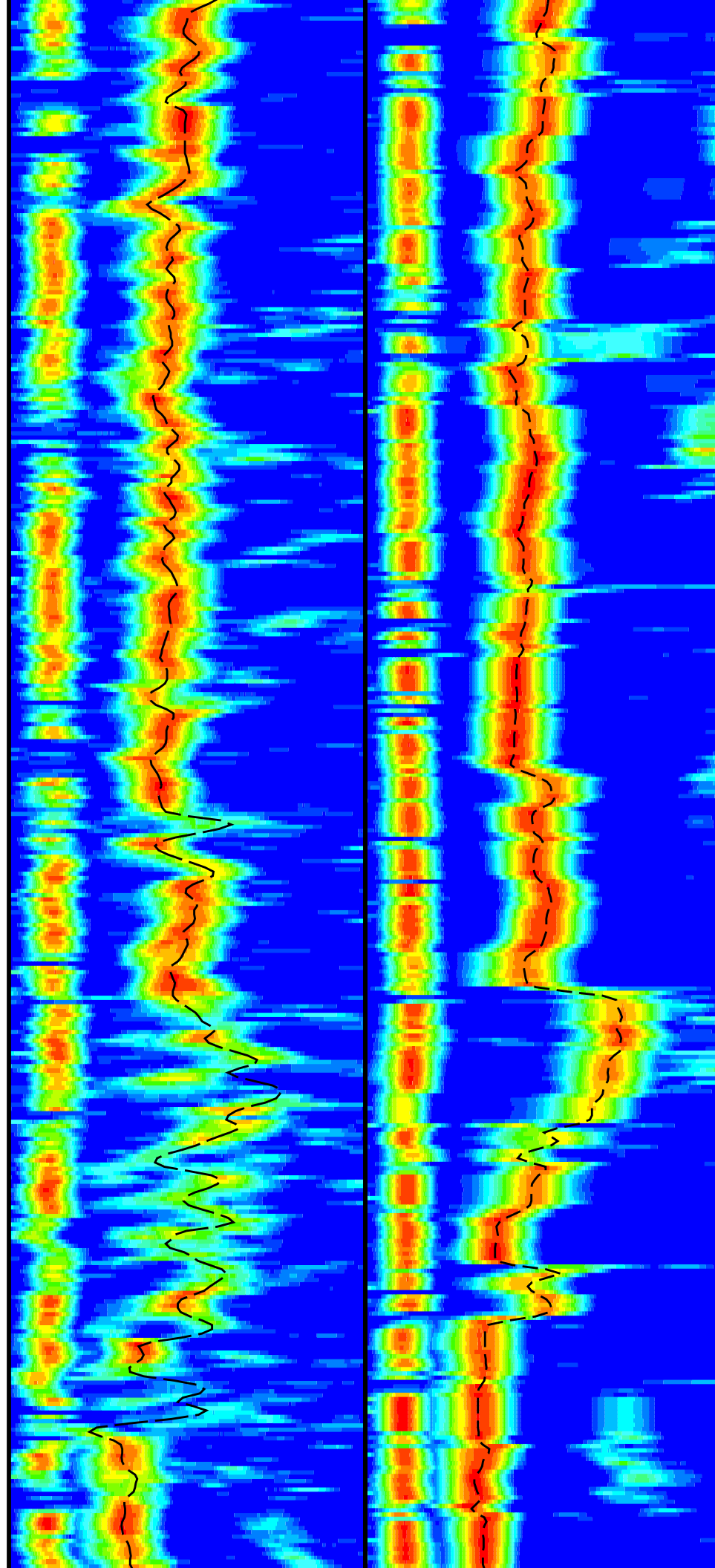


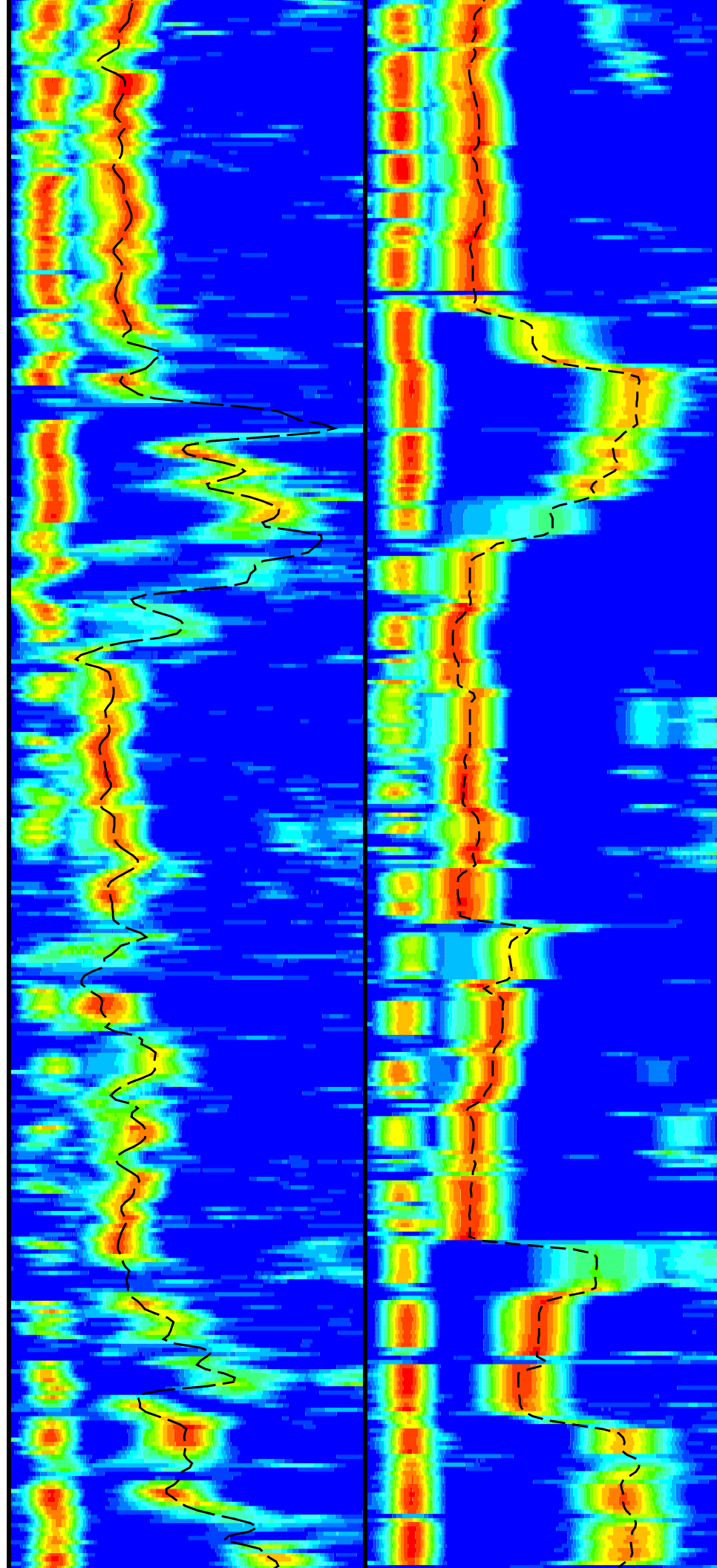
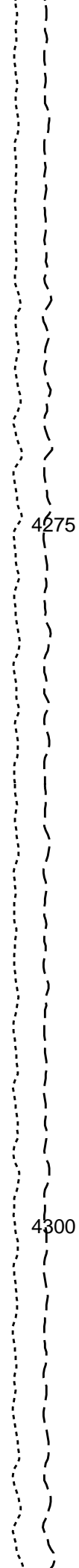
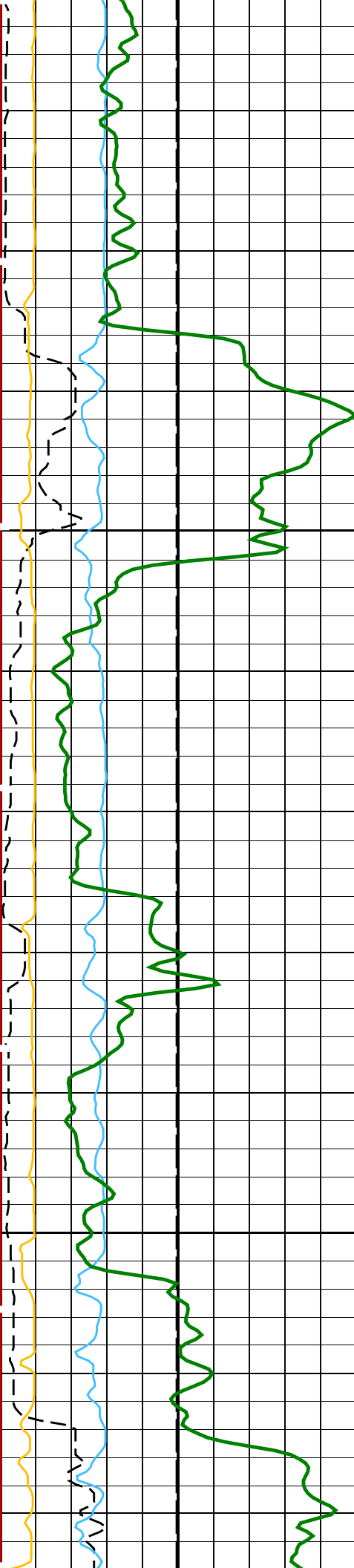




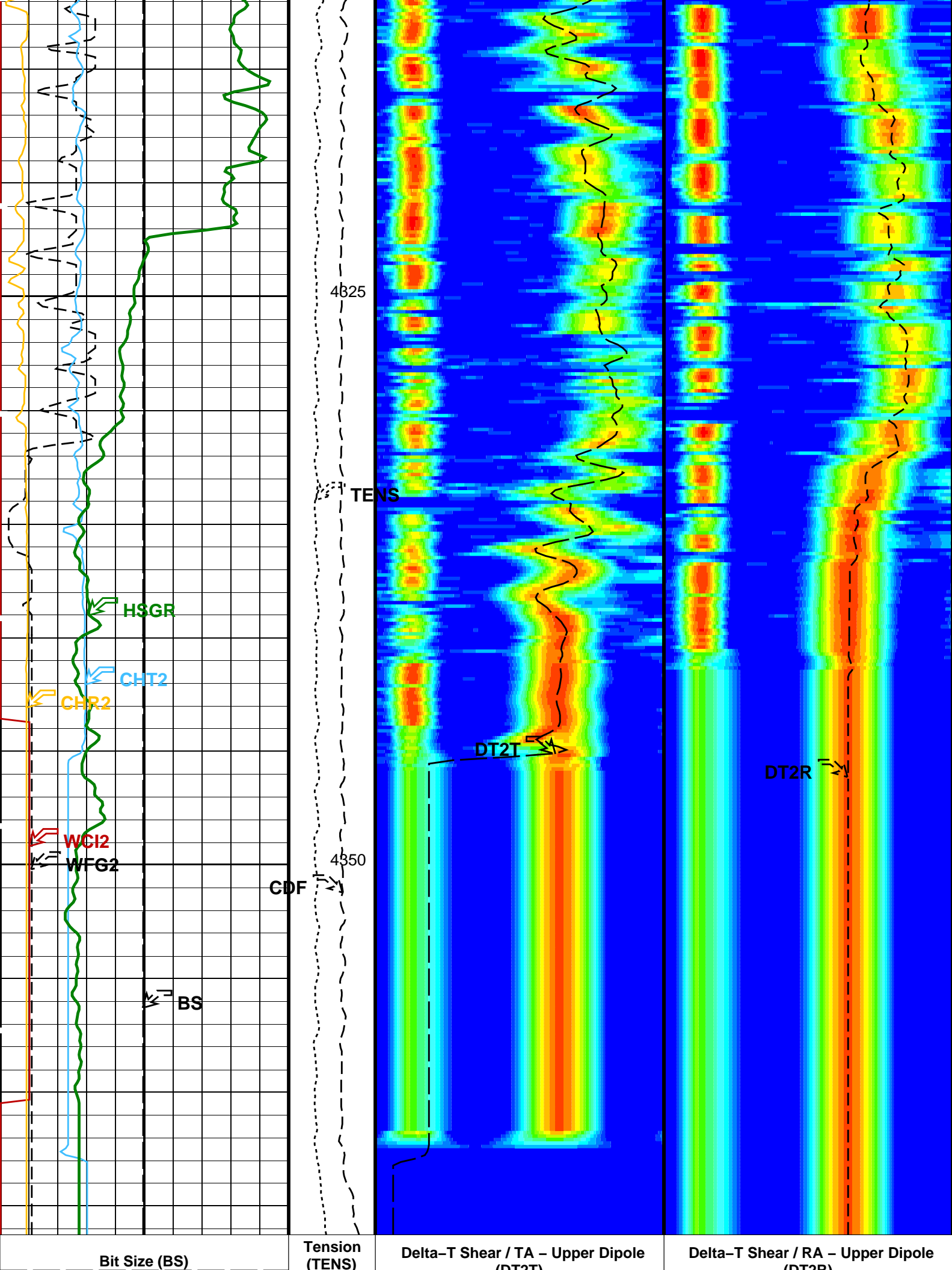


4225  
4250











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	LCAL	
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: 09–Nov–2017 07:57

## OP System Version: 19C0–187

MSS_LDEO–A	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	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09–Nov–2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09–Nov–2017 07:57		
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09–Nov–2017 07:57		

Company: International Ocean Discovery Program      Well: Expedition 369, Site U1514C

### Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09–Nov–2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09–Nov–2017 07:57	4366.3 M	3836.7 M
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09–Nov–2017 07:57	4366.3 M	3836.7 M

## OP System Version: 19C0–187

MSS_LDEO–A	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

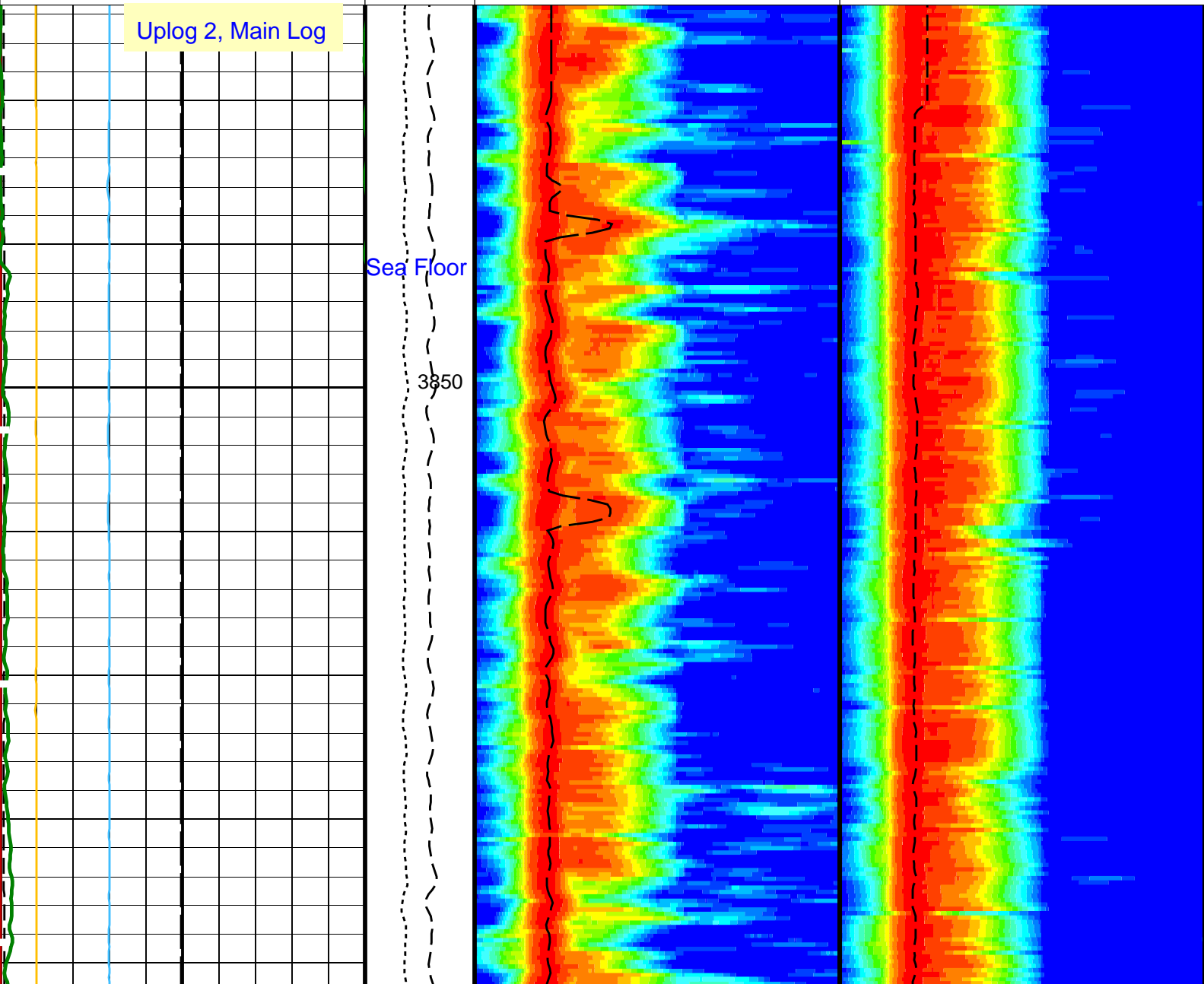
PIP SUMMARY

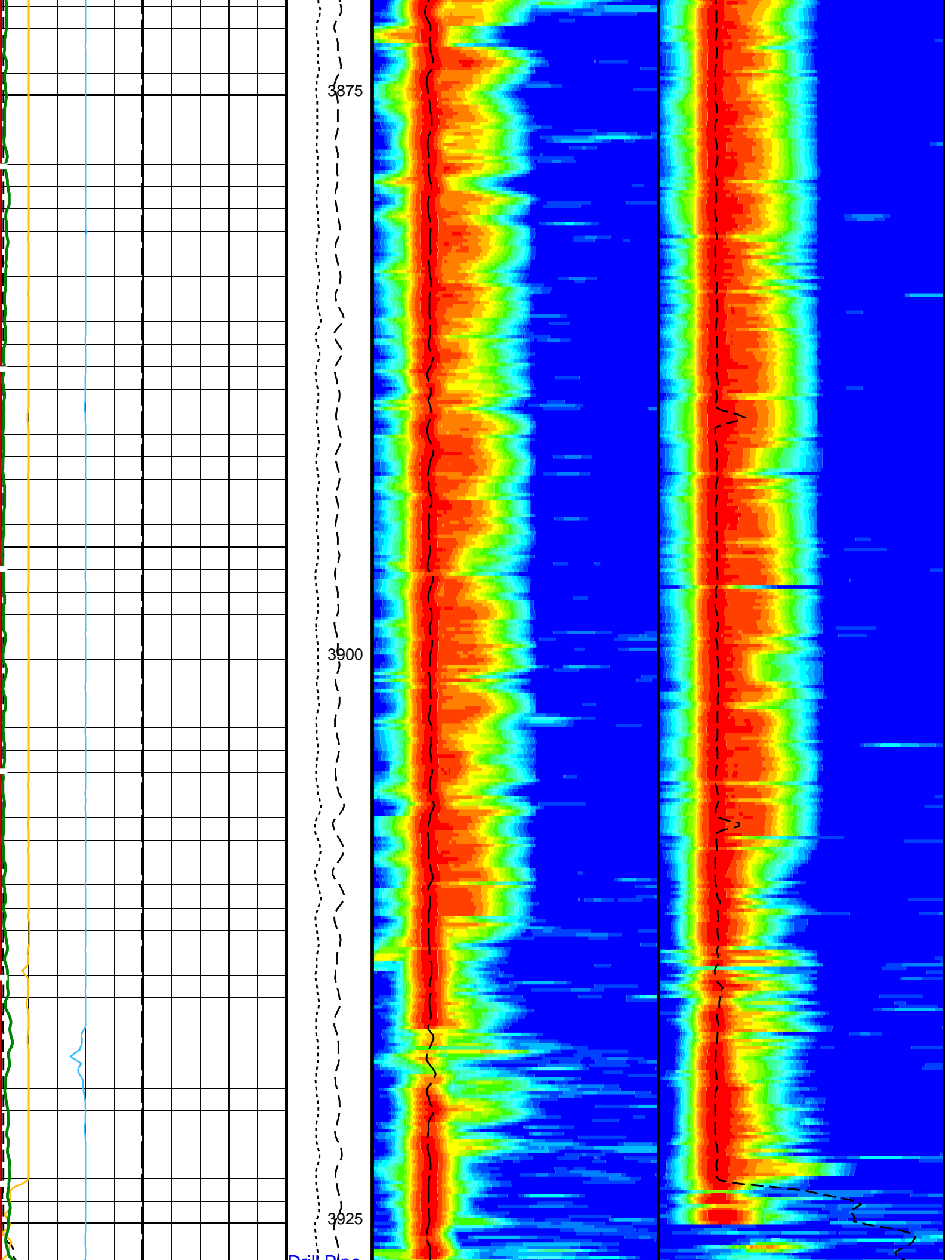


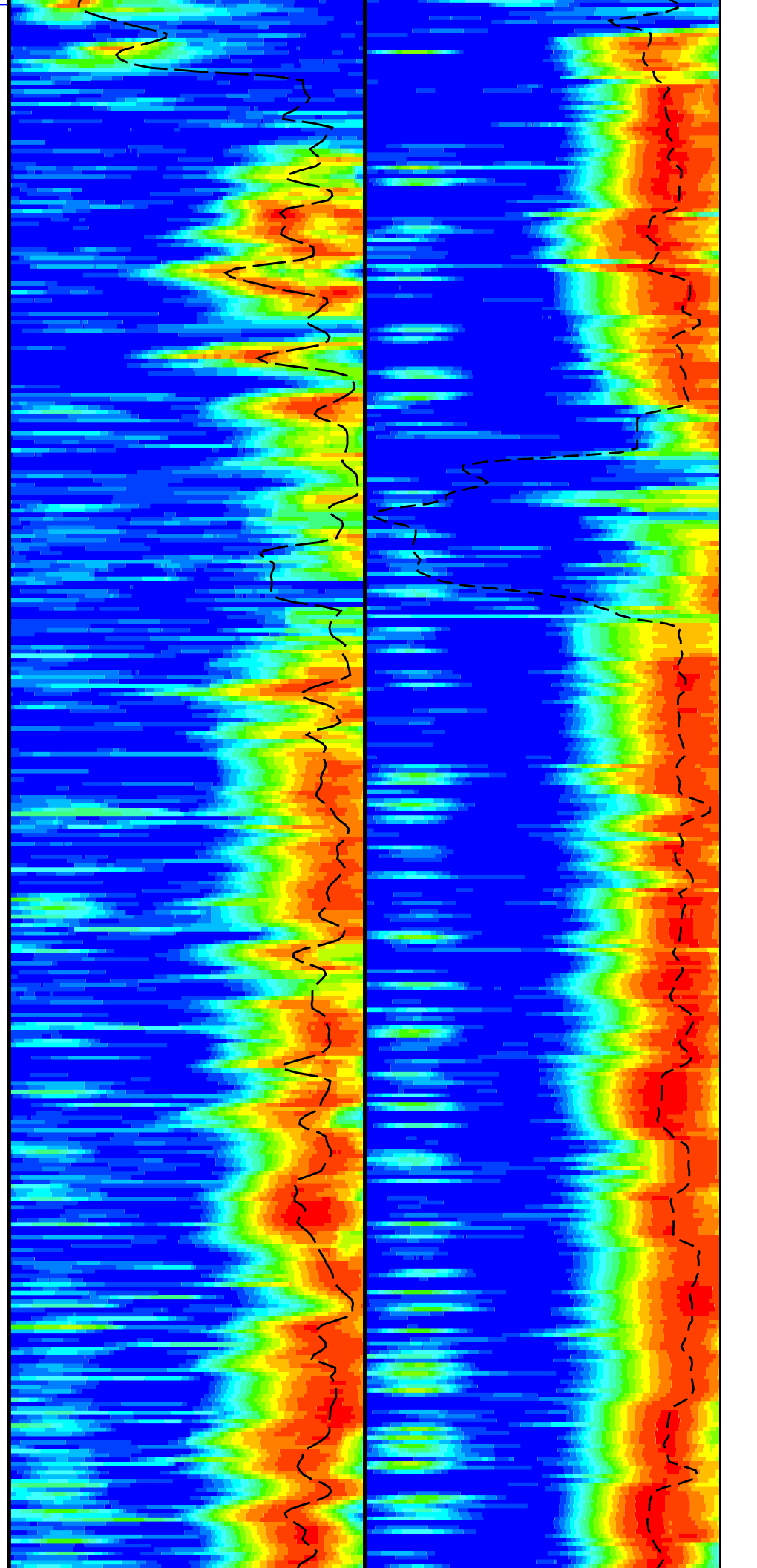
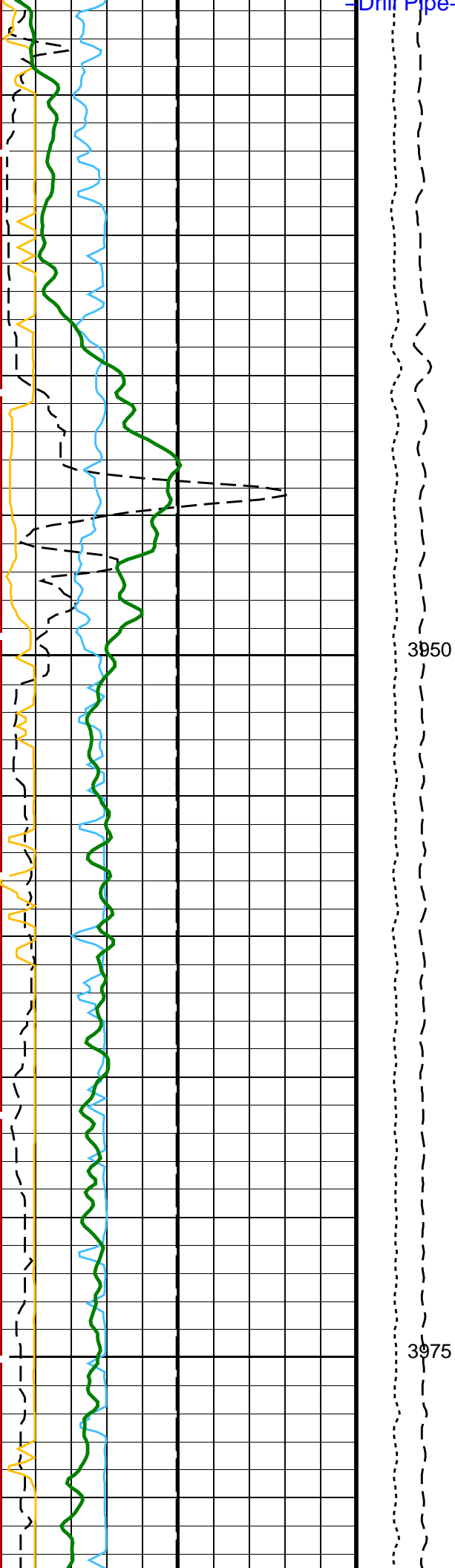
Time Mark Every 60 S

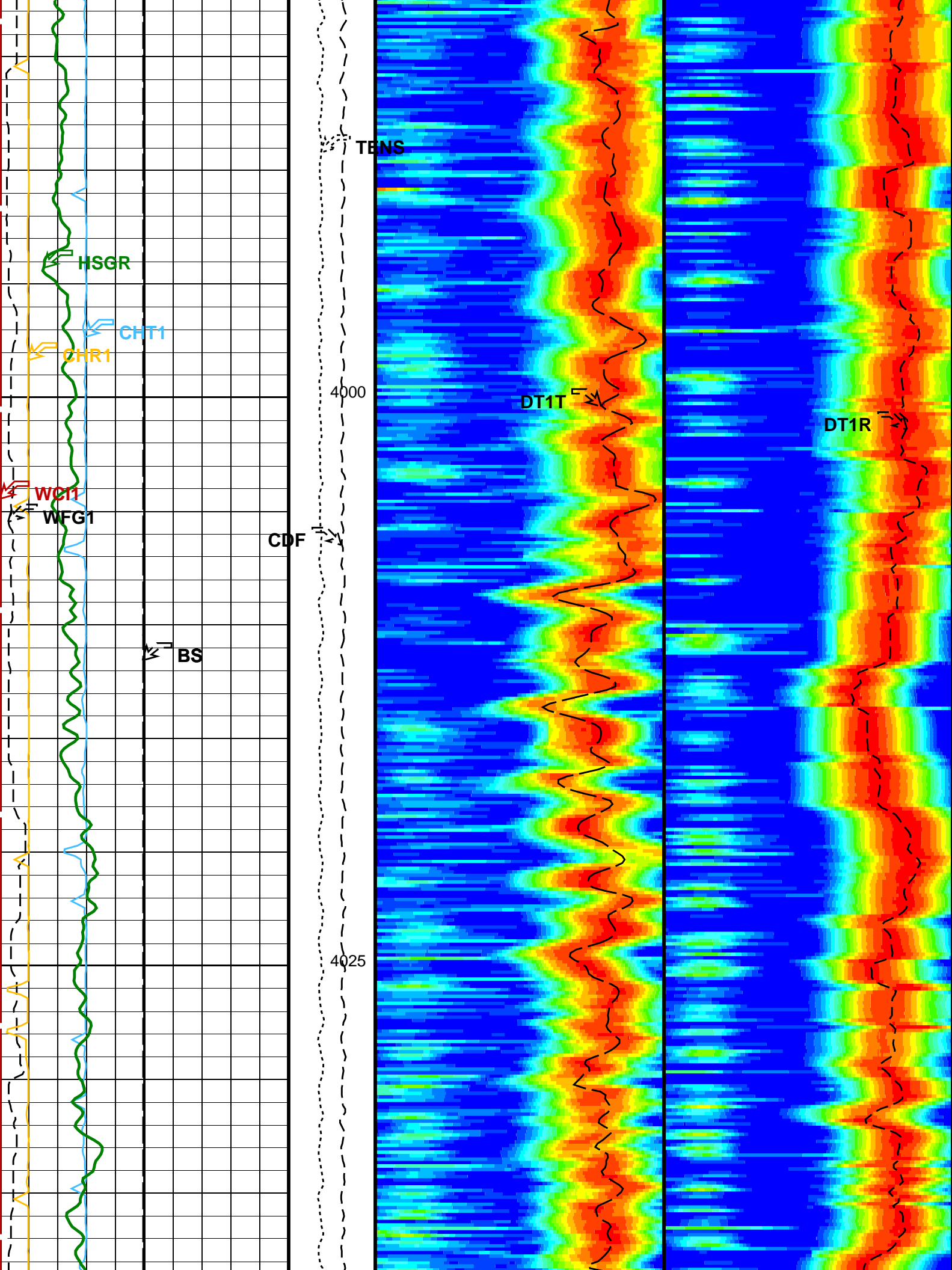
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA – Lower Dipole (CHT1)		
-2	(-----)	8
Peak Coherence / RA – Lower Dipole (CHR1)		
0	(-----)	10
Waveform Data Copy Indicator 1 – Lower Dipole (WC11)		
0	(-----)	10

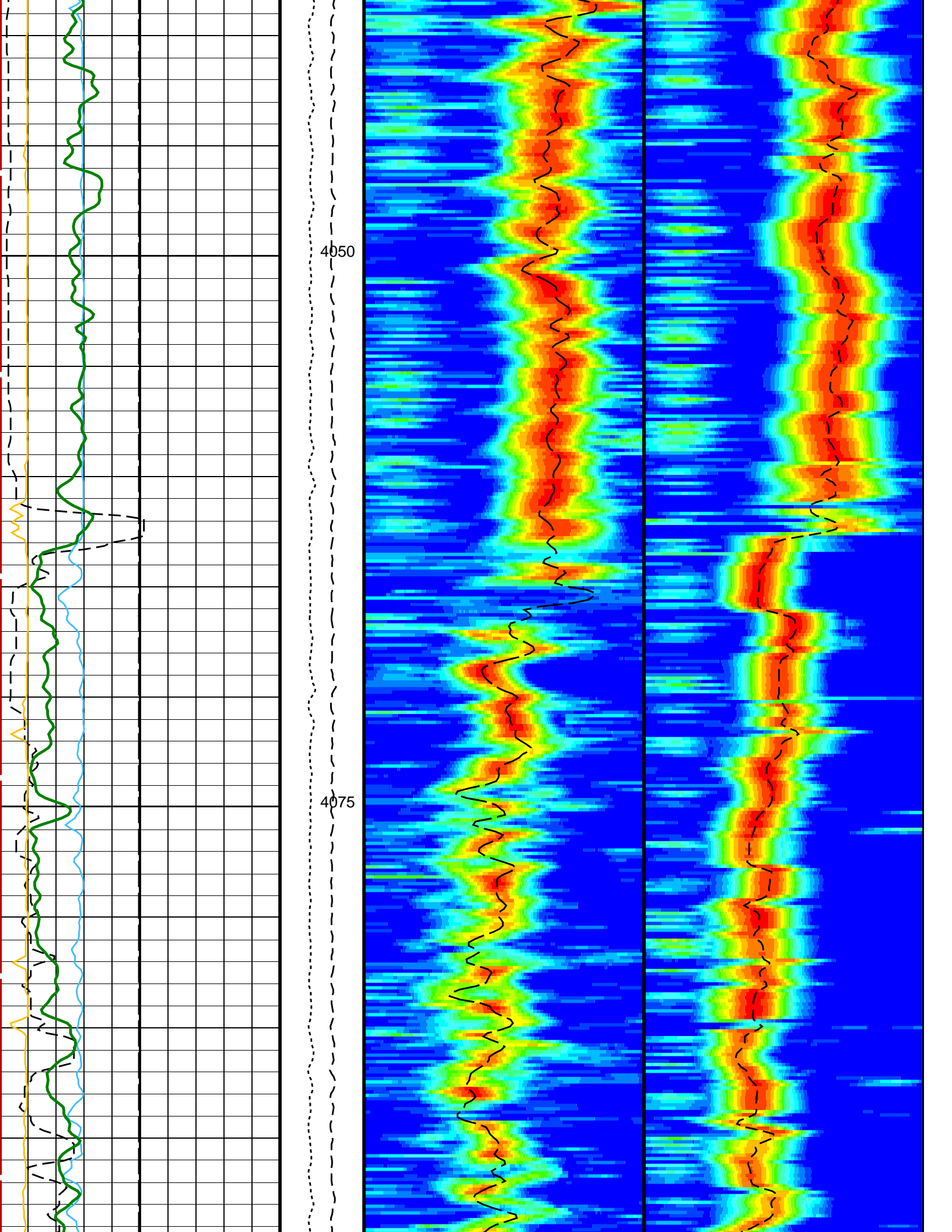
SAM1 Waveform Gain (WFG1) (-----) 1000	Calibrated Downhole Force (CDF) (LBF) 5000 0	Min	Amplitude	Max	Min	Amplitude	Max
		Tr.Array L.Dipole Slow Proj. CVDL (SPT1) (US/F) 40 1040			Rec.Array L.Dipole Slow Proj. CVDL (SPR1) (US/F) 40 1040		
Bit Size (BS) (IN) 20	Tension (TENS) (LBF) 10000 0	Delta-T Shear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

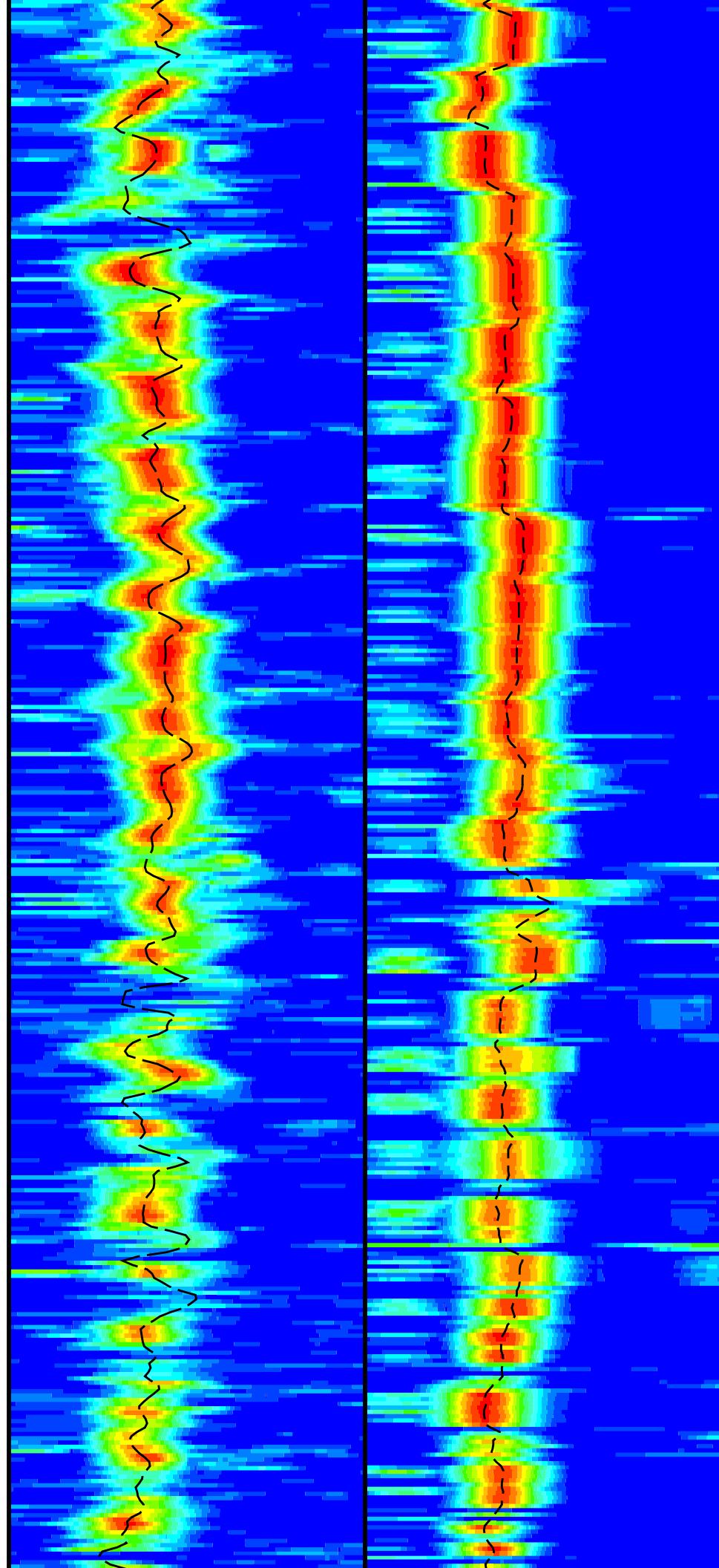
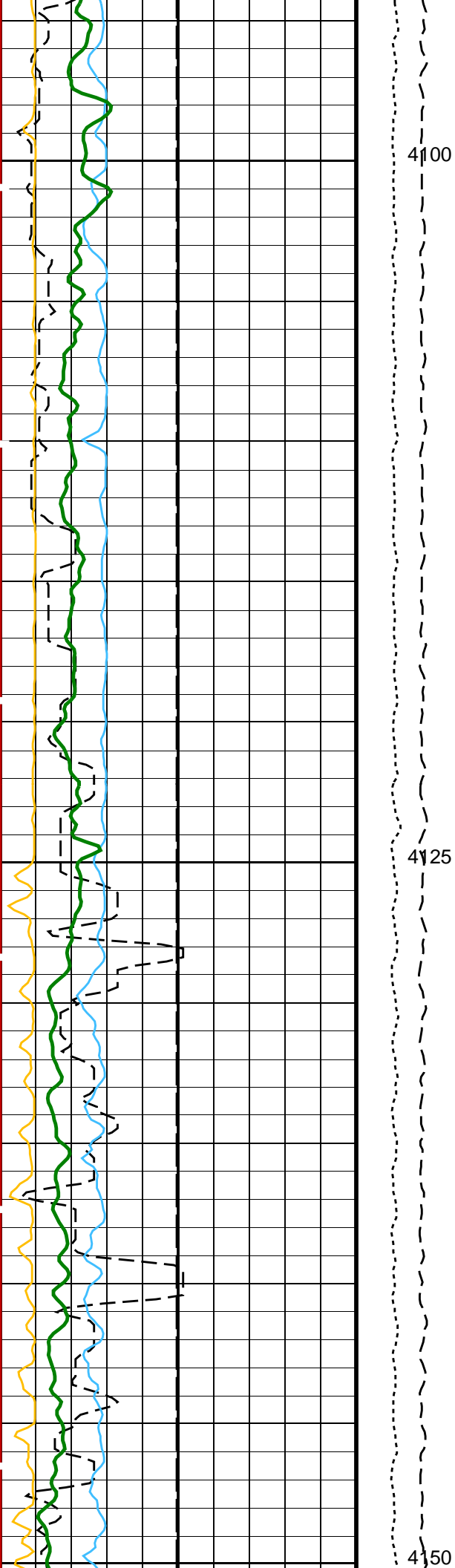


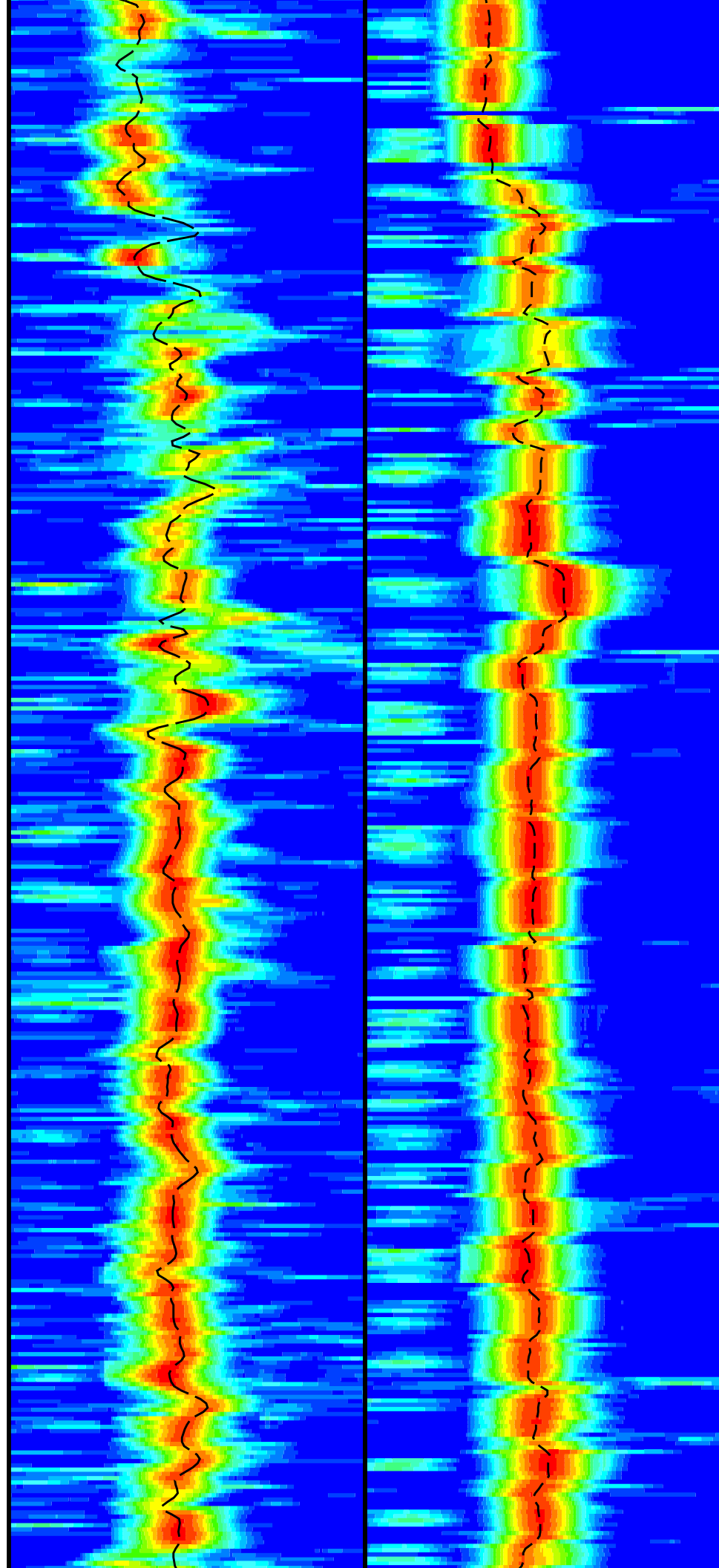
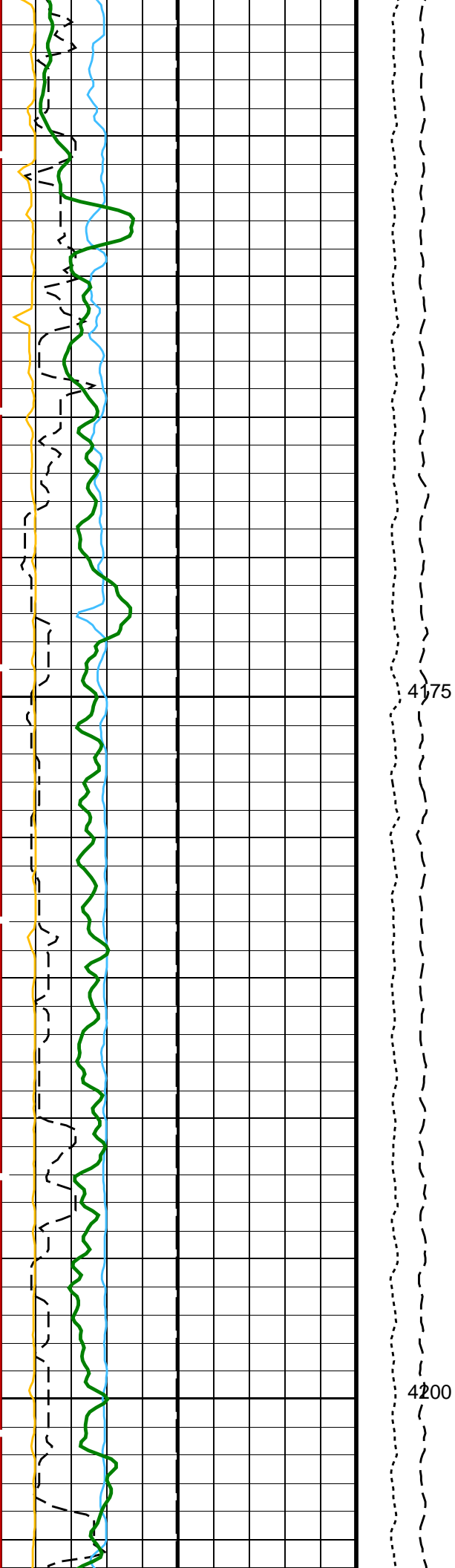




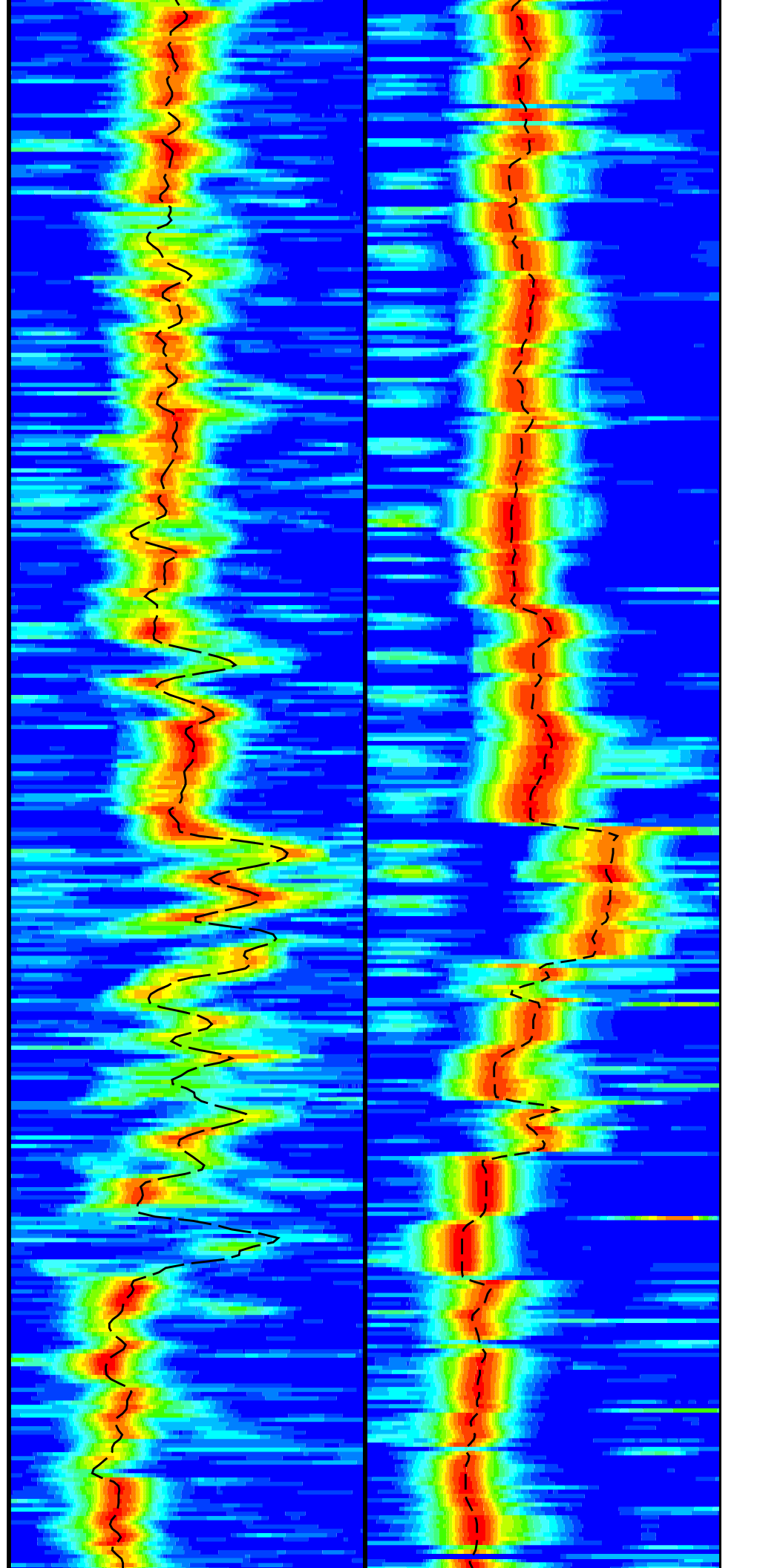
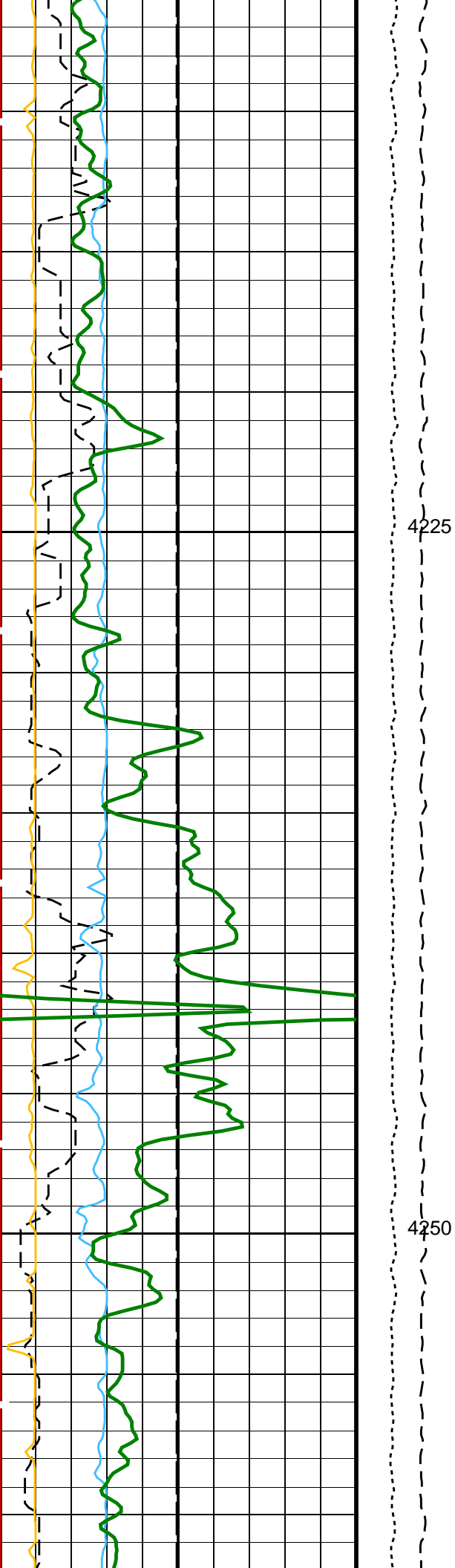




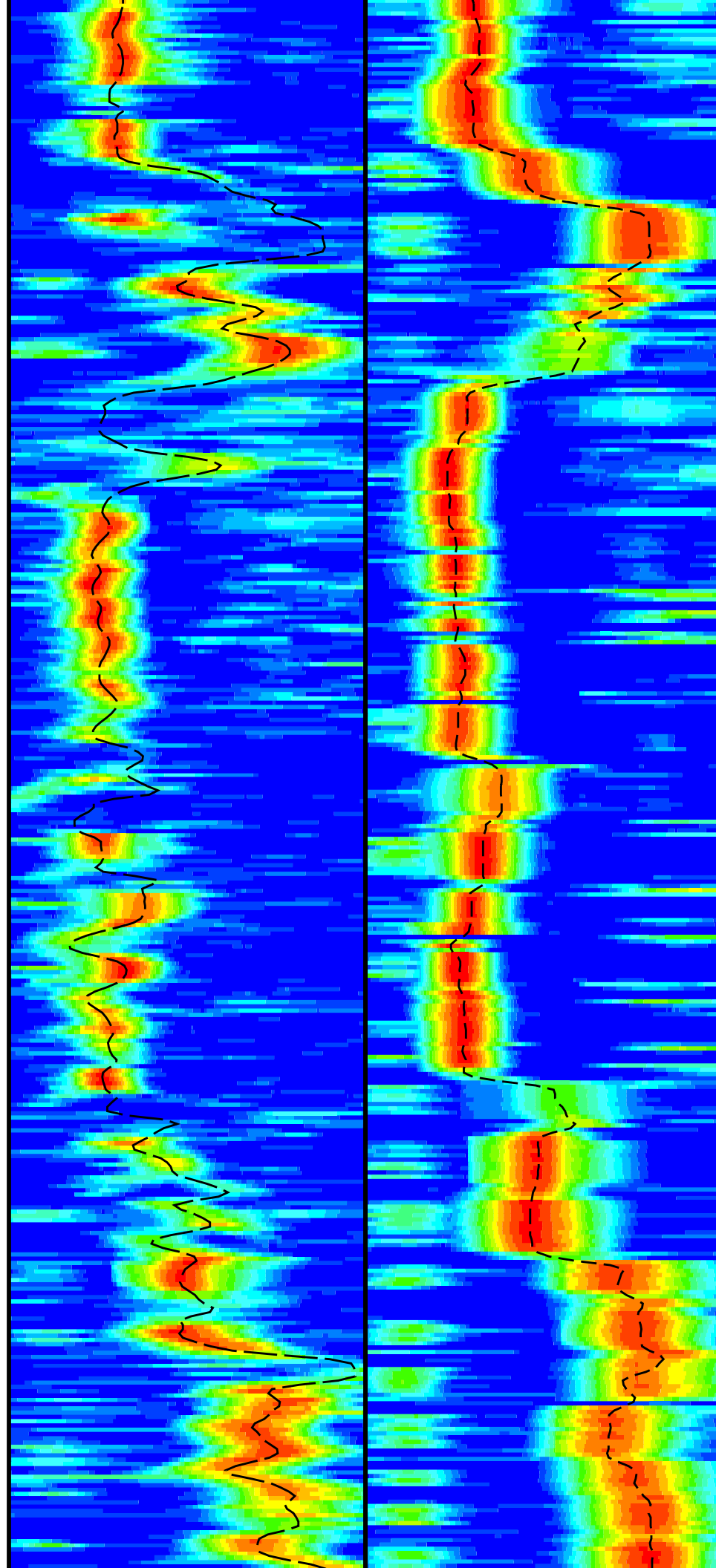
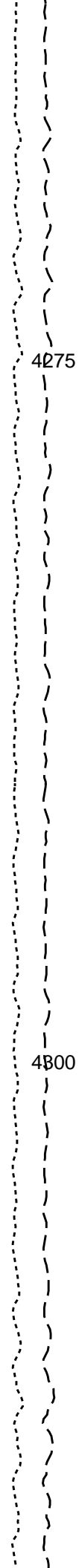
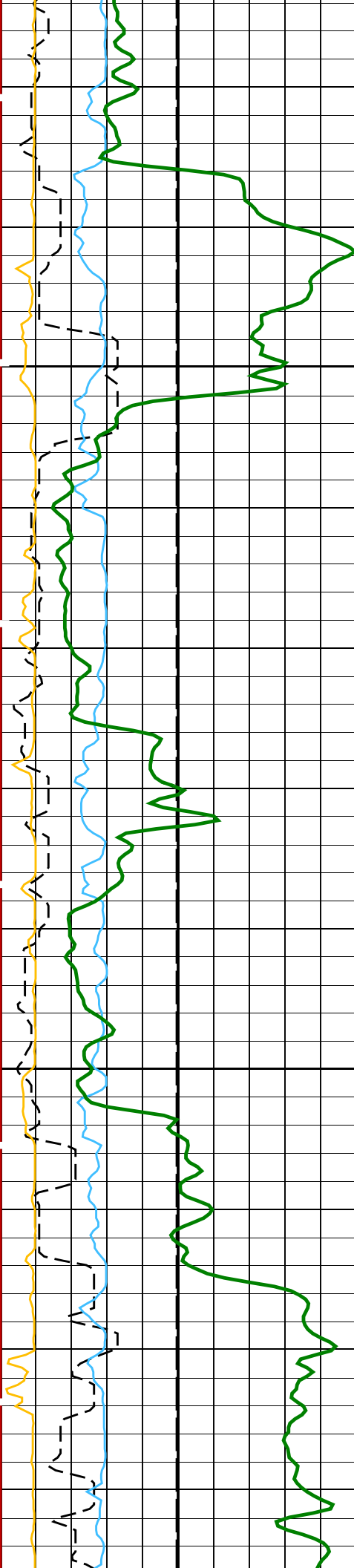


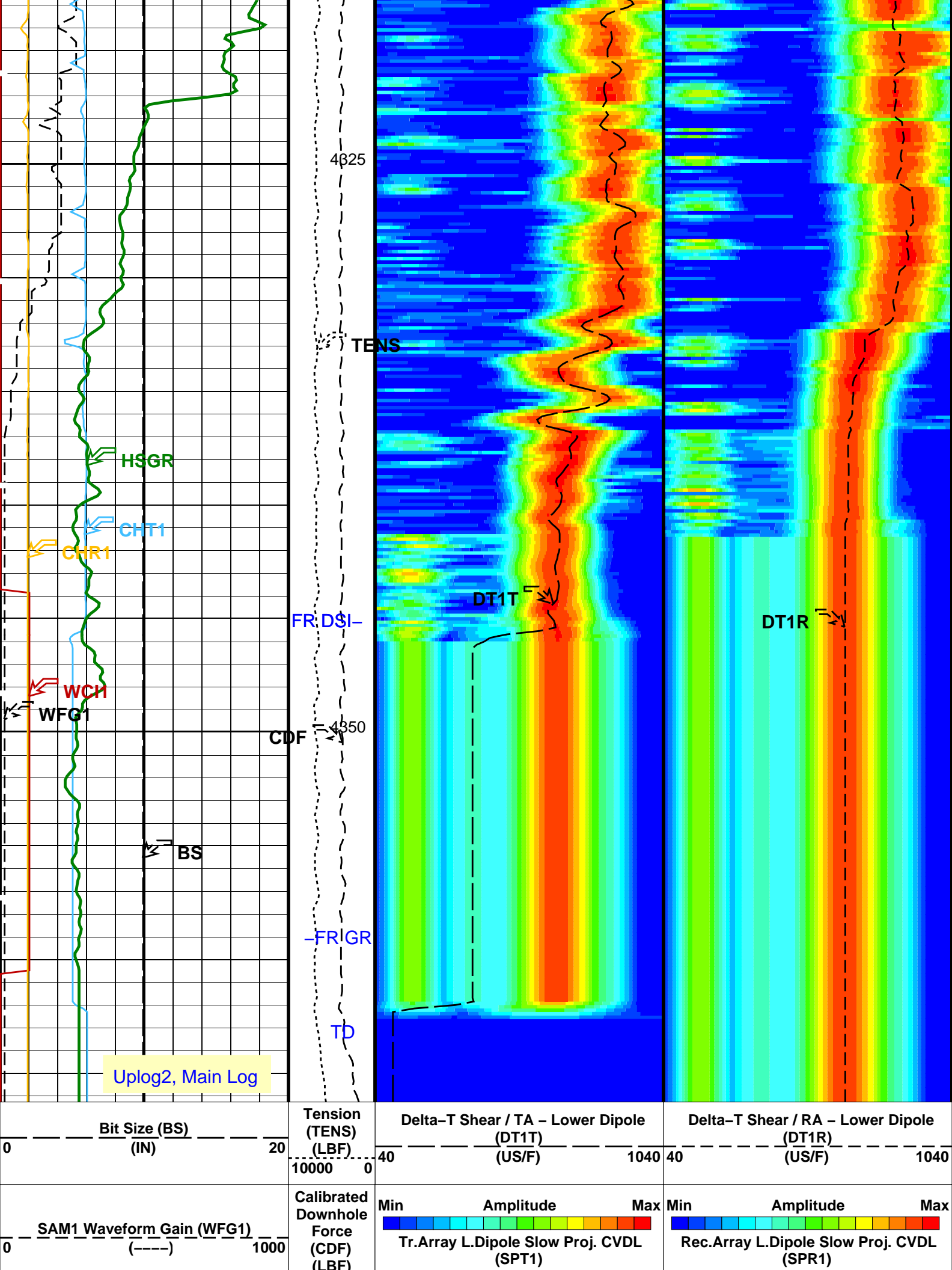












	5000	0	40	(US/F)	1040	40	(US/F)	1040
Waveform Data Copy Indicator 1 – Lower Dipole (WC11)								
0	(-----)	10						
Peak Coherence / RA – Lower Dipole (CHR1)								
0	(-----)	10						
Peak Coherence / TA – Lower Dipole (CHT1)								
-2	(-----)	8						
HNGS Spectroscopy Gamma Ray (HSGR)								
0	(GAPI)	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	LCAL		
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW		
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW		
HABK	HNGS Borehole Potassium Running Average	-0.00236493		
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	0.972587		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00323		
HRLT-B: High Resolution Laterolog Array - B				
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	LCAL		
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	LCAL		
LTXG	Lower Dipole Transmitter Geometry	156	IN	
NW1I	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	LCAL	
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: 09–Nov–2017 07:57

### OP System Version: 19C0–187

MSS_LDEO–A	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	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09–Nov–2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09–Nov–2017 07:57		
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09–Nov–2017 07:57		

Company: International Ocean Discovery Program

Well: Expedition 369, Site U1514C

### Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09–Nov–2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09–Nov–2017 07:57	4366.3 M	3836.7 M
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09–Nov–2017 07:57	4366.3 M	3836.7 M

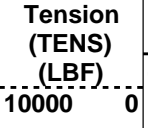
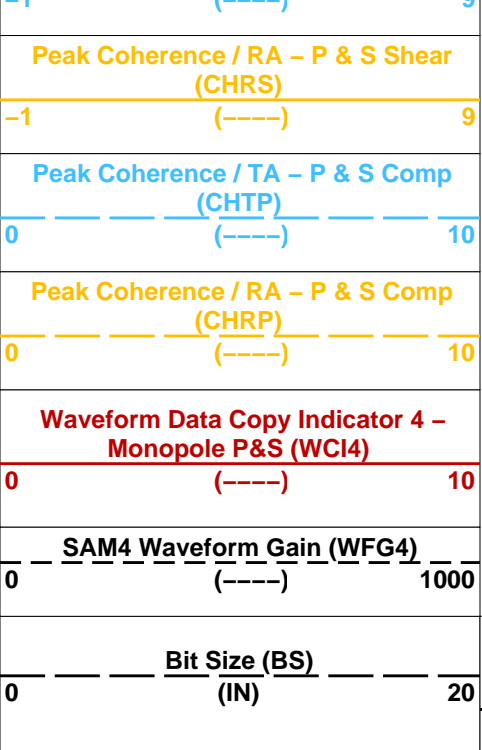
### OP System Version: 19C0–187

MSS_LDEO–A	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

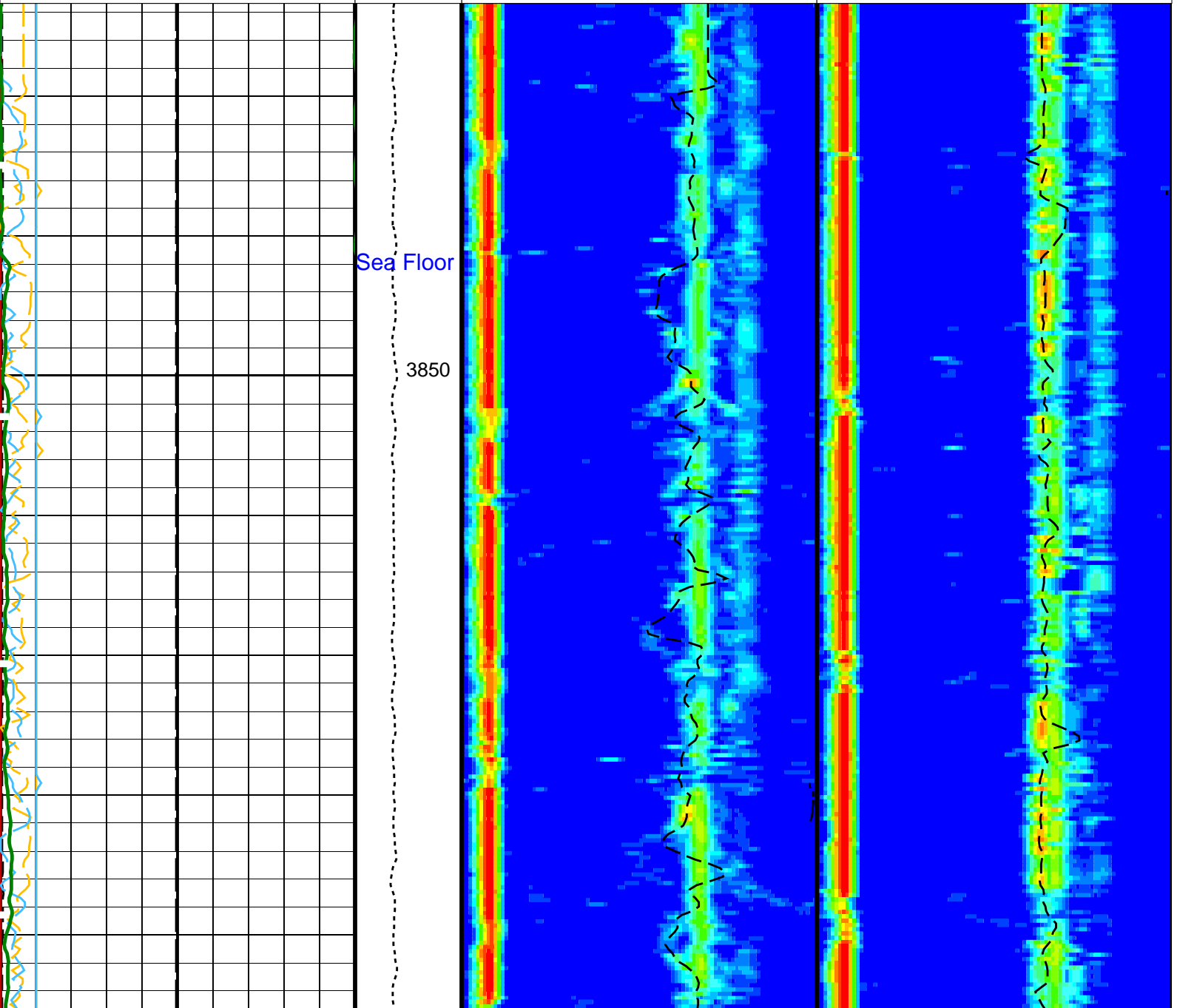
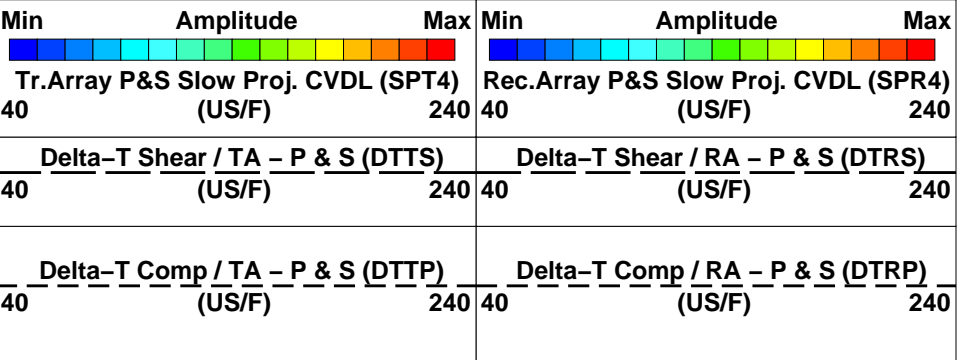
### PIP SUMMARY

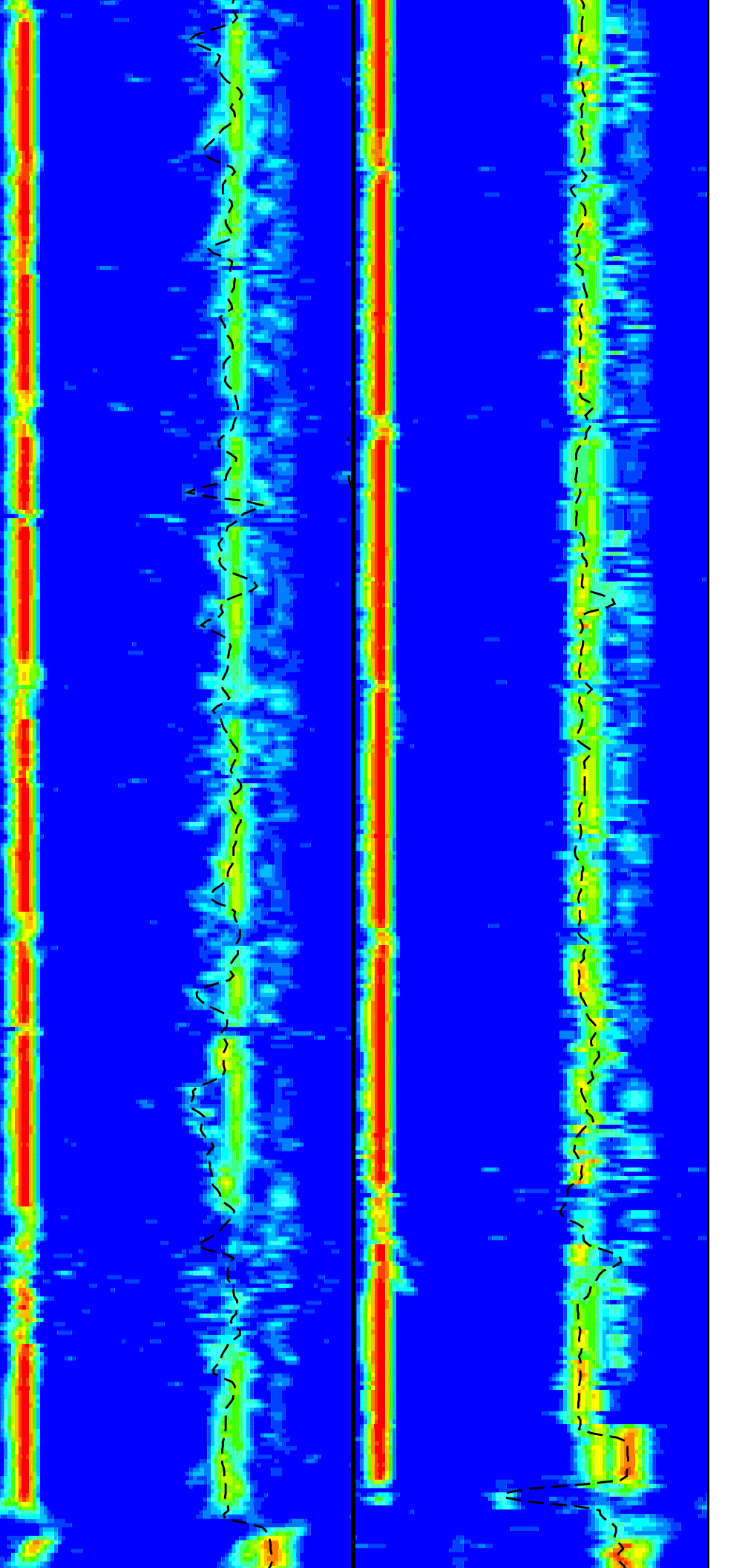
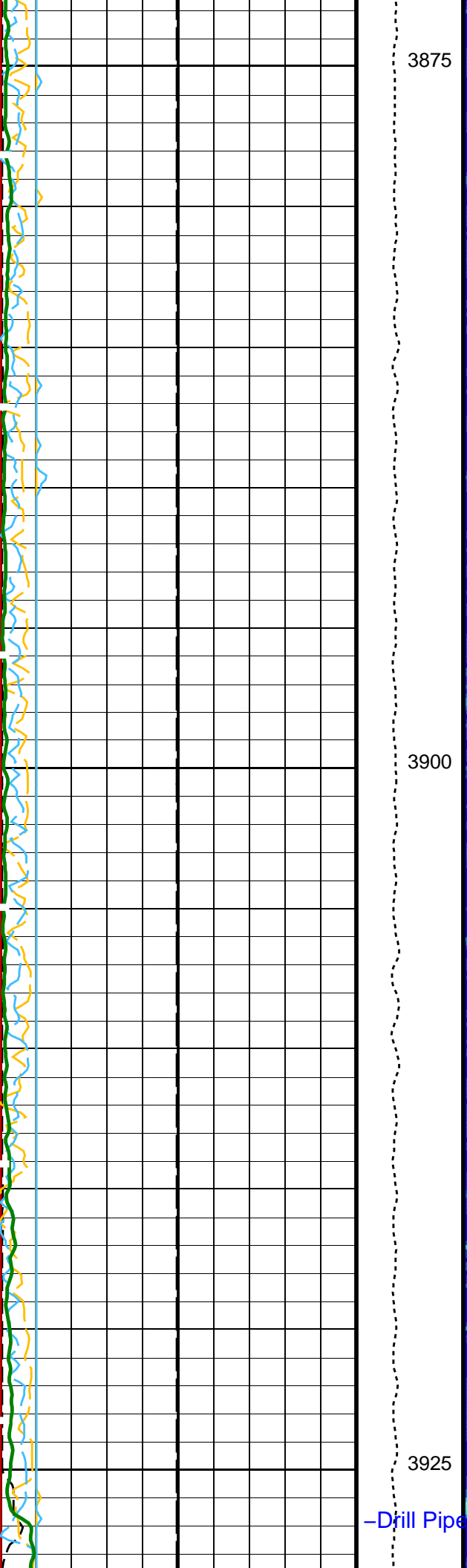
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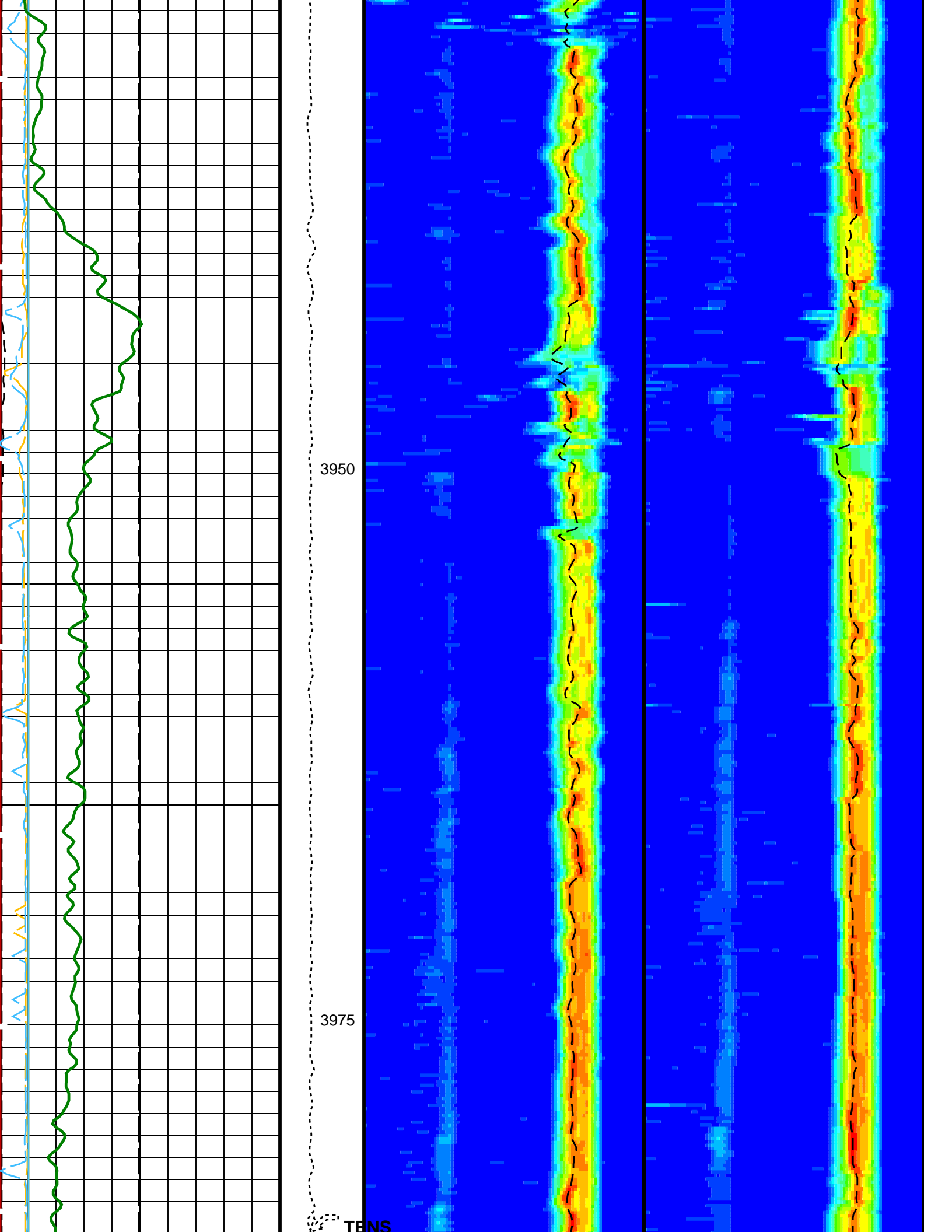
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0	(GAPI)	100
Peak Coherence / TA – P & S Shear (CHTS)		
–1	( )	9

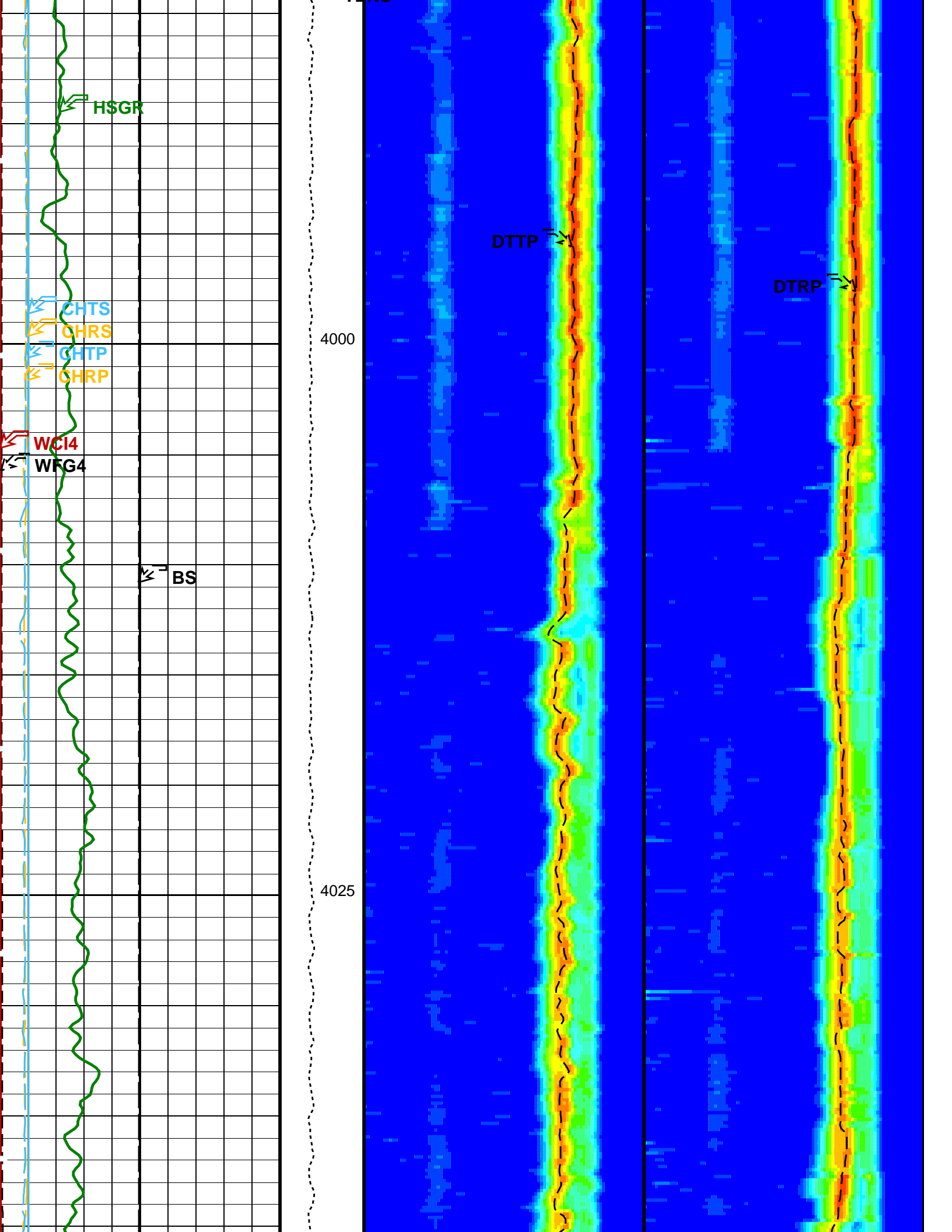


Uplong #2 Main log

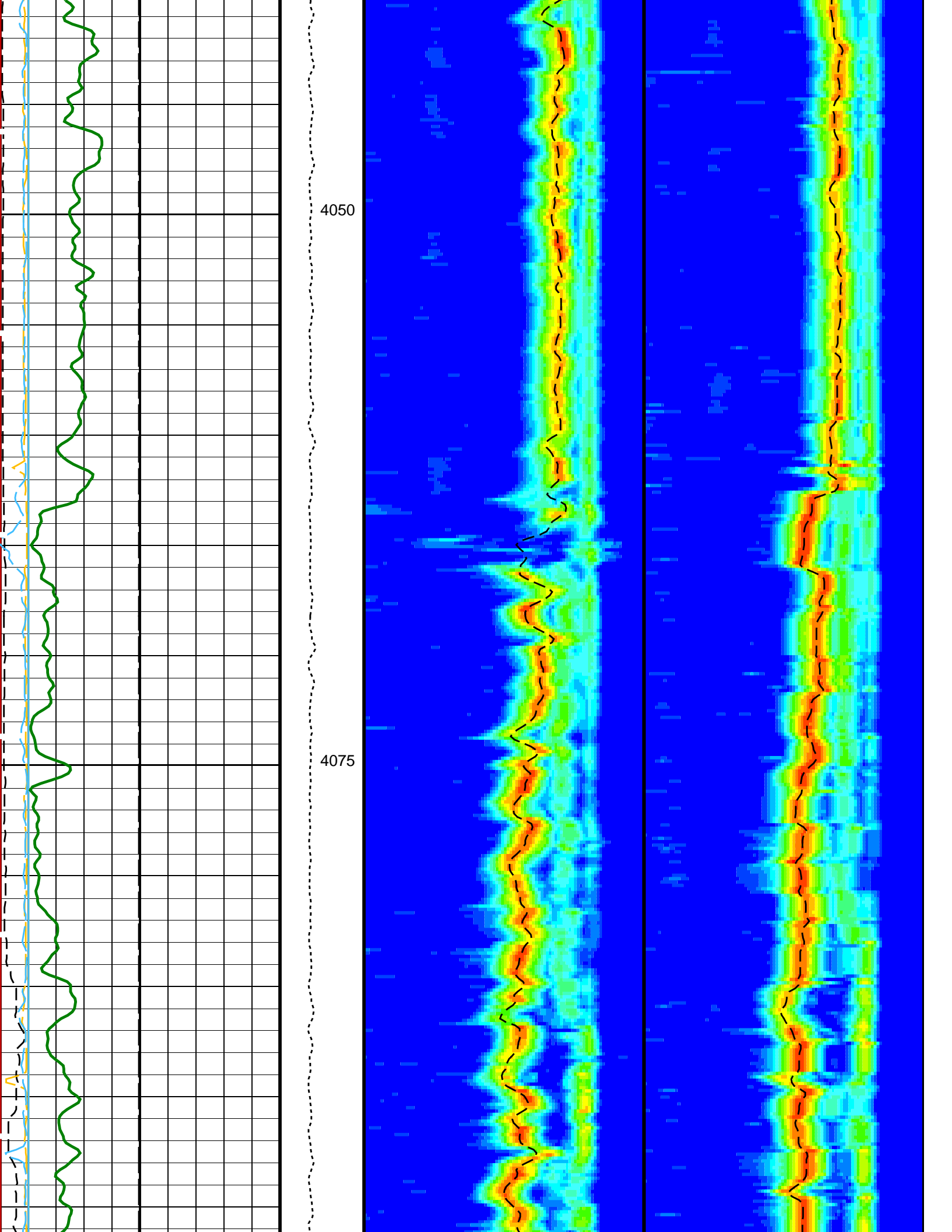


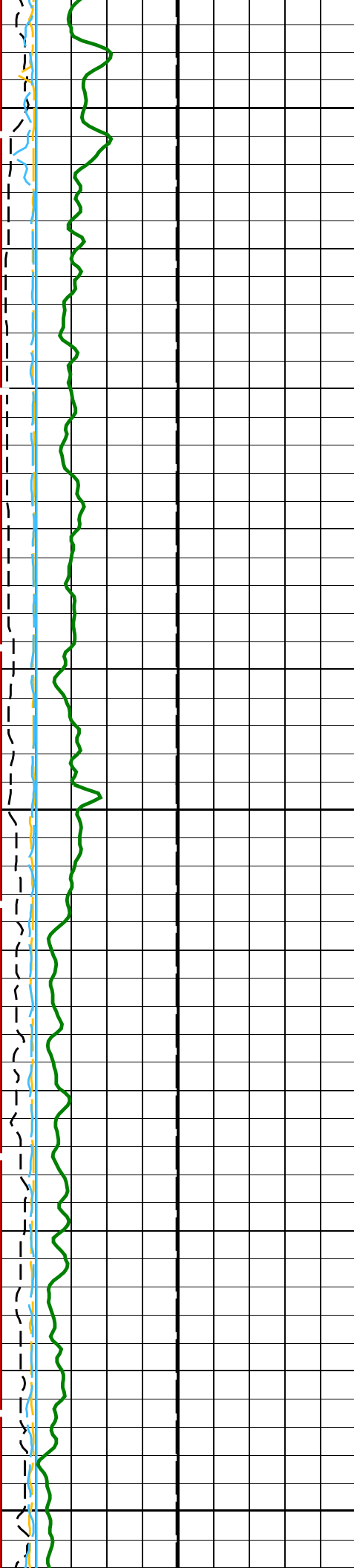








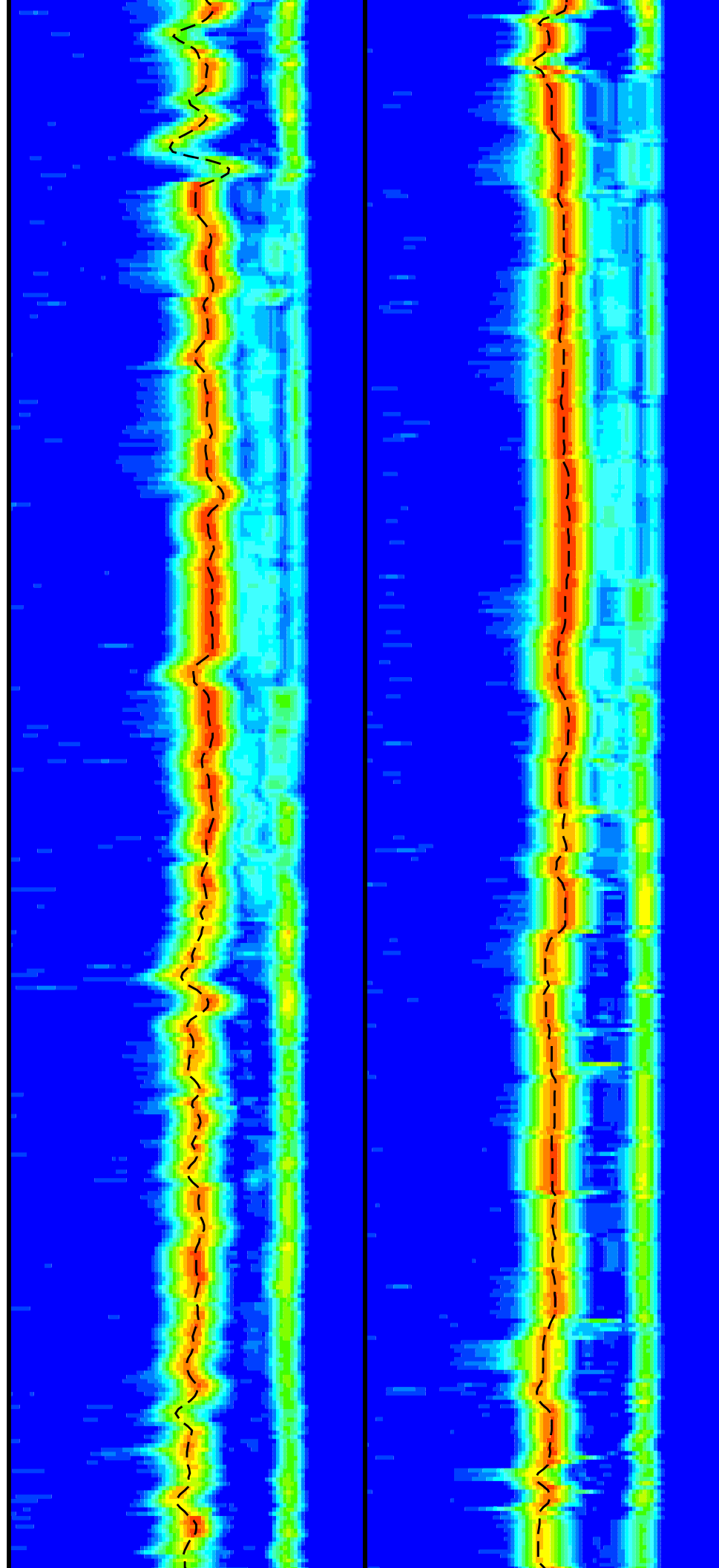


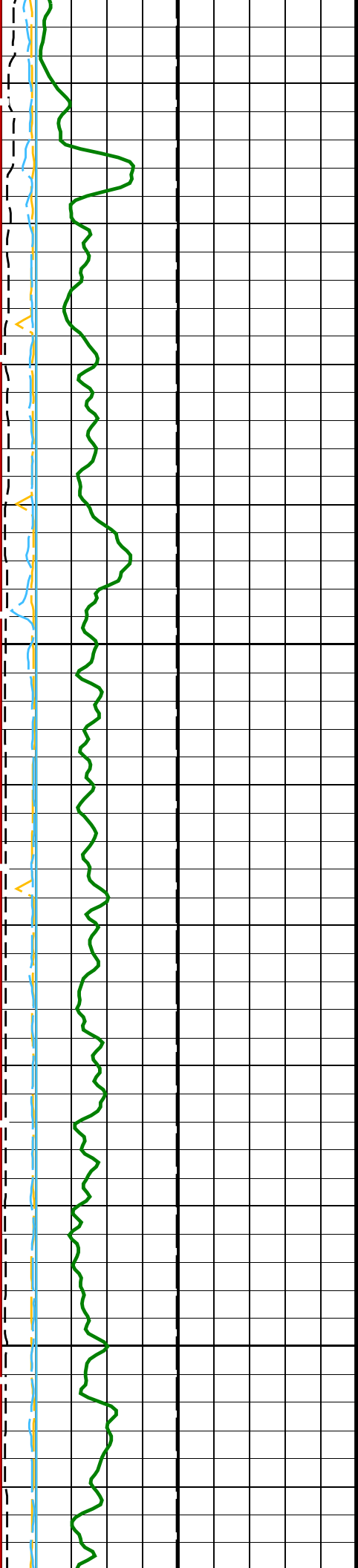


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4125

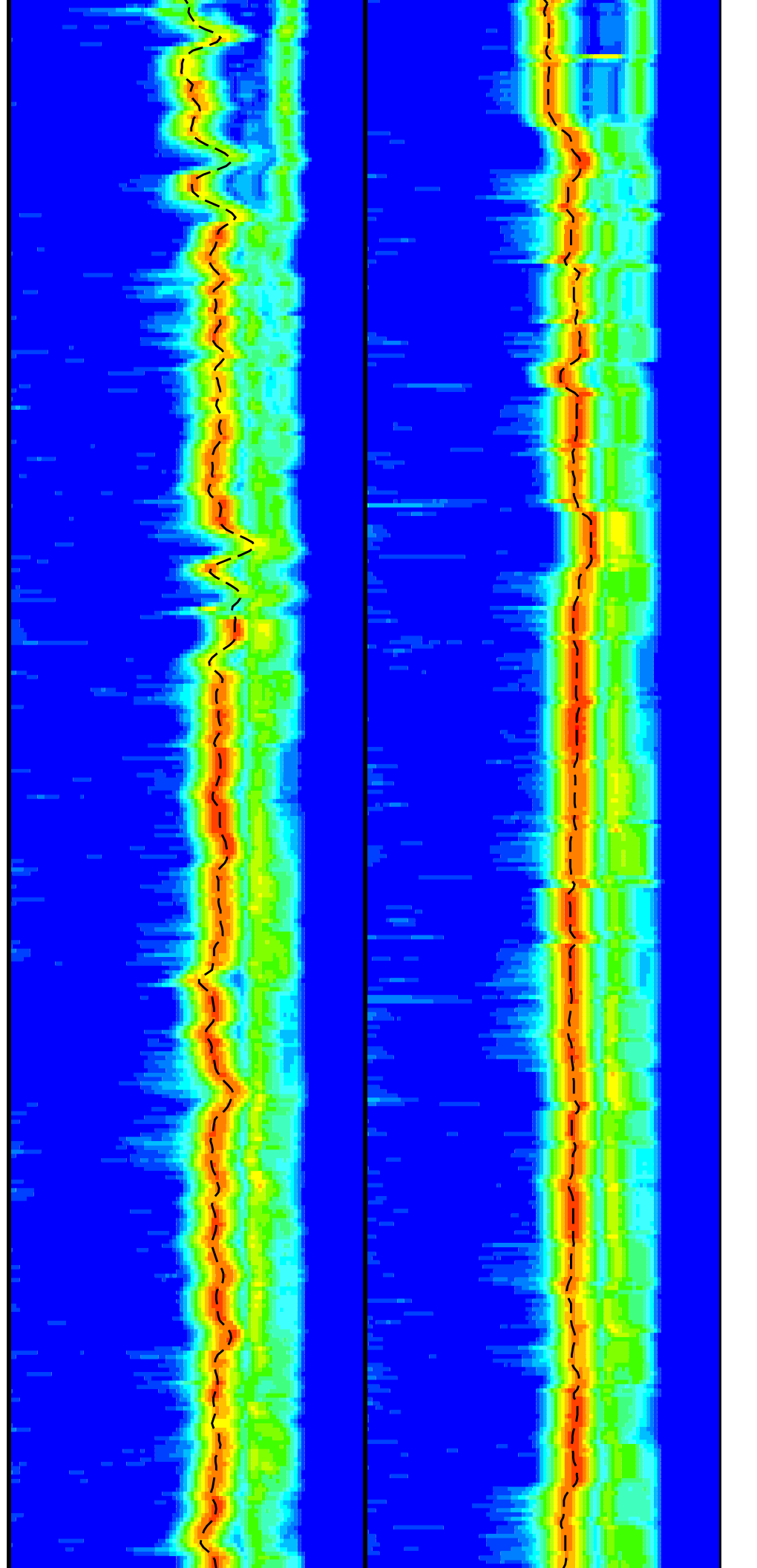
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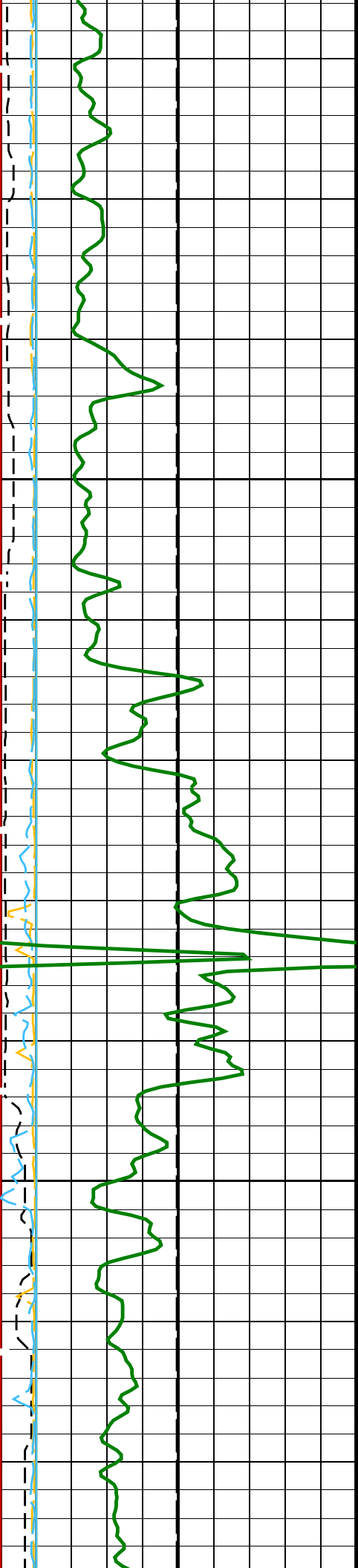




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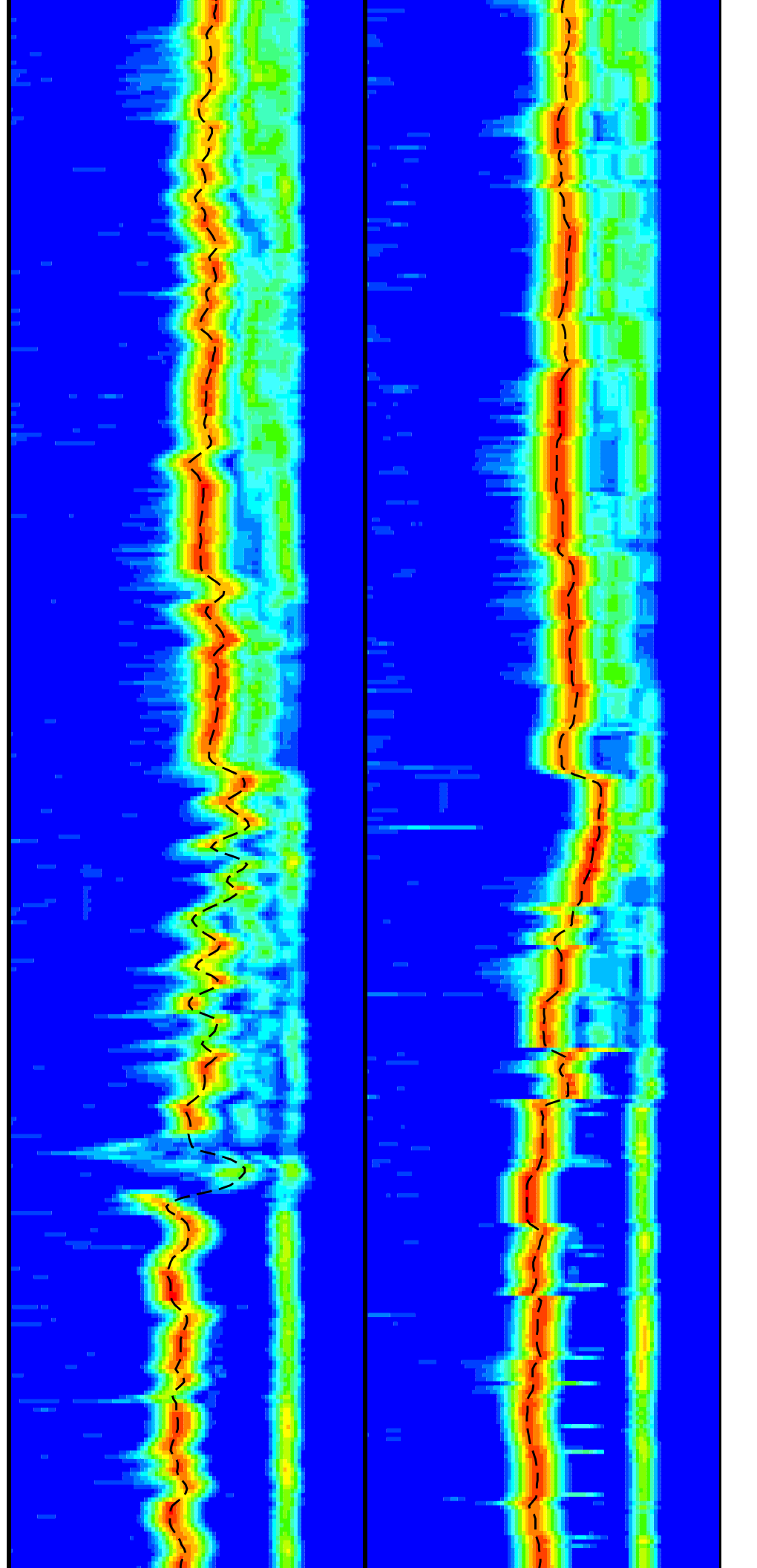
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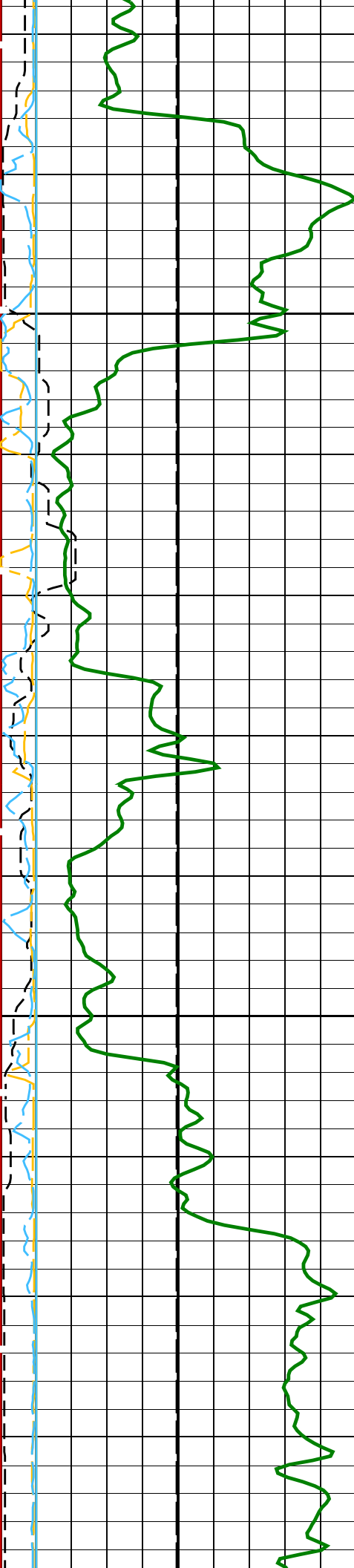




4225

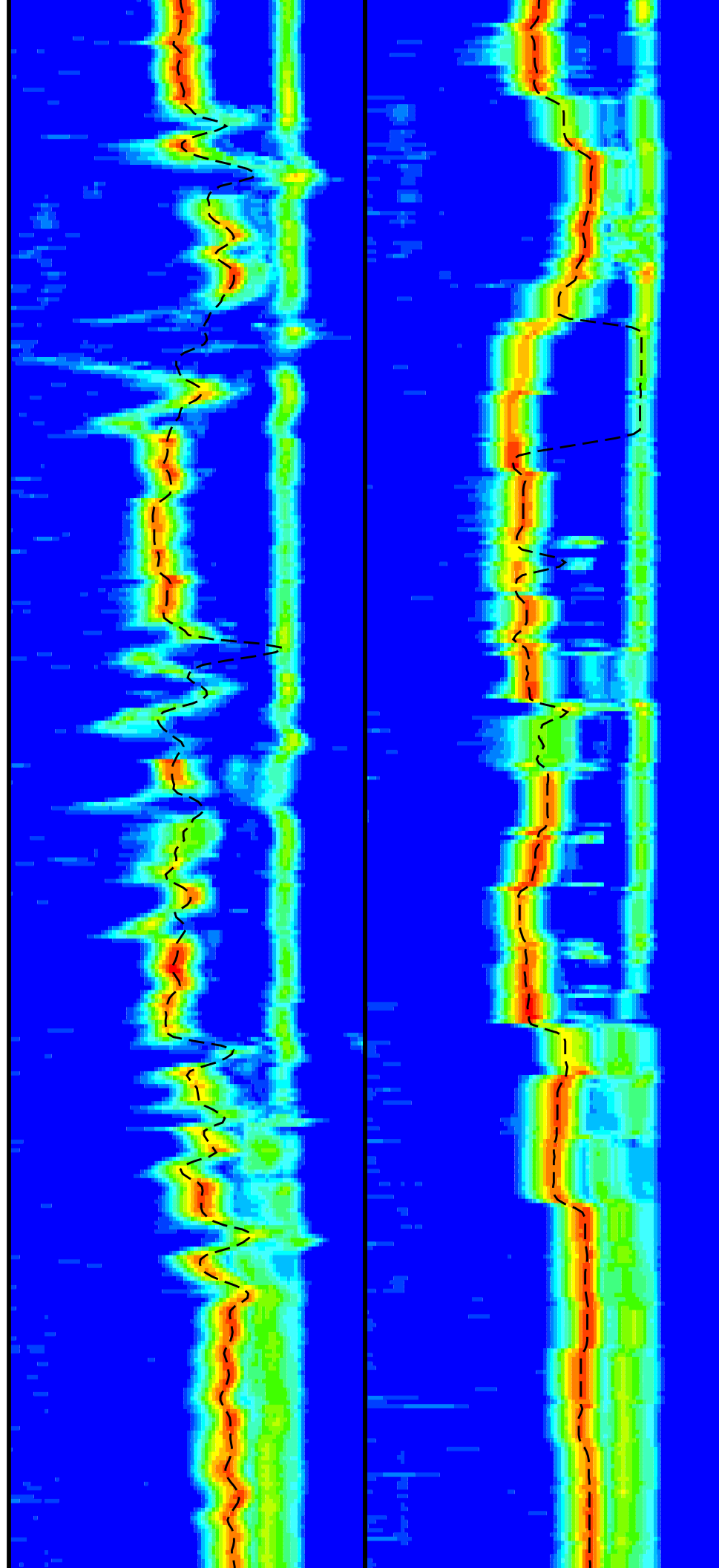
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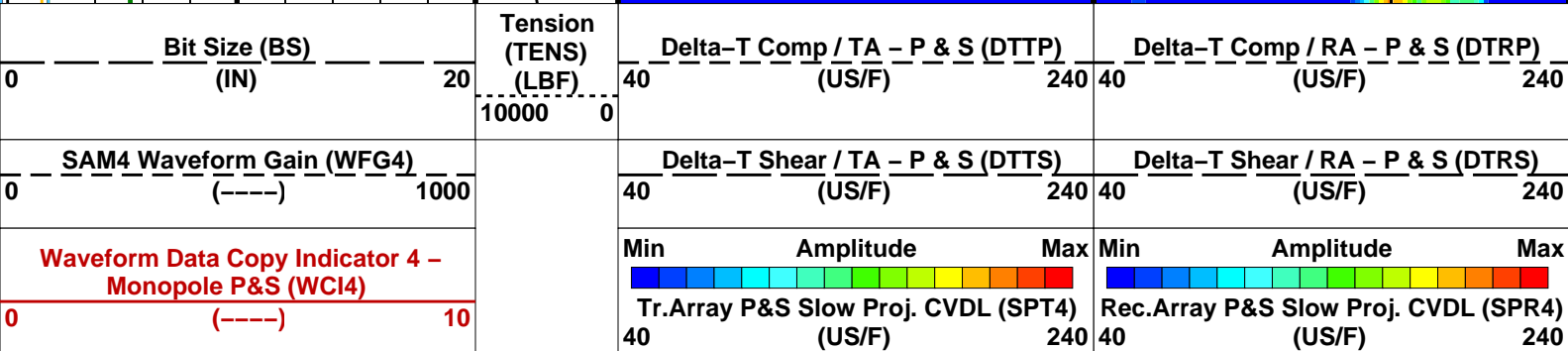
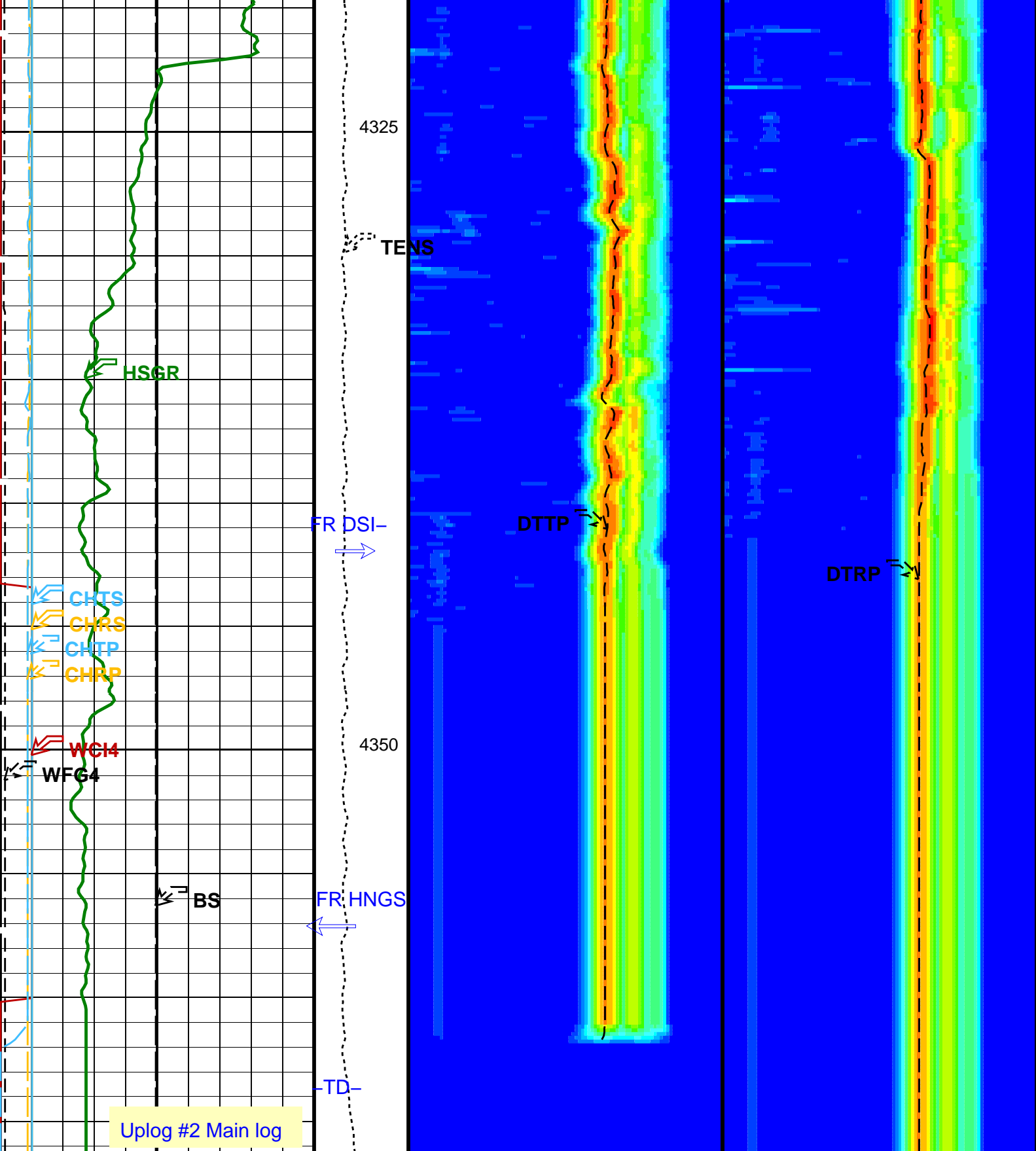




4275

4300





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
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	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00236493	
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	0.972587	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00323	
HRLT-B: High Resolution Laterolog Array – B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
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	LCAL	
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

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	
BHS	EDTC–B: Enhanced DTS Cartridge		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	LCAL	
	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: 09–Nov–2017 07:57

## OP System Version: 19C0–187

MSS_LDEO–A	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	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09–Nov–2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09–Nov–2017 07:57		
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09–Nov–2017 07:57		

### Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09–Nov–2017 06:35	4366.3 M	3836.6 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09–Nov–2017 07:57	4366.3 M	3836.7 M
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09–Nov–2017 07:57	4366.3 M	3836.7 M

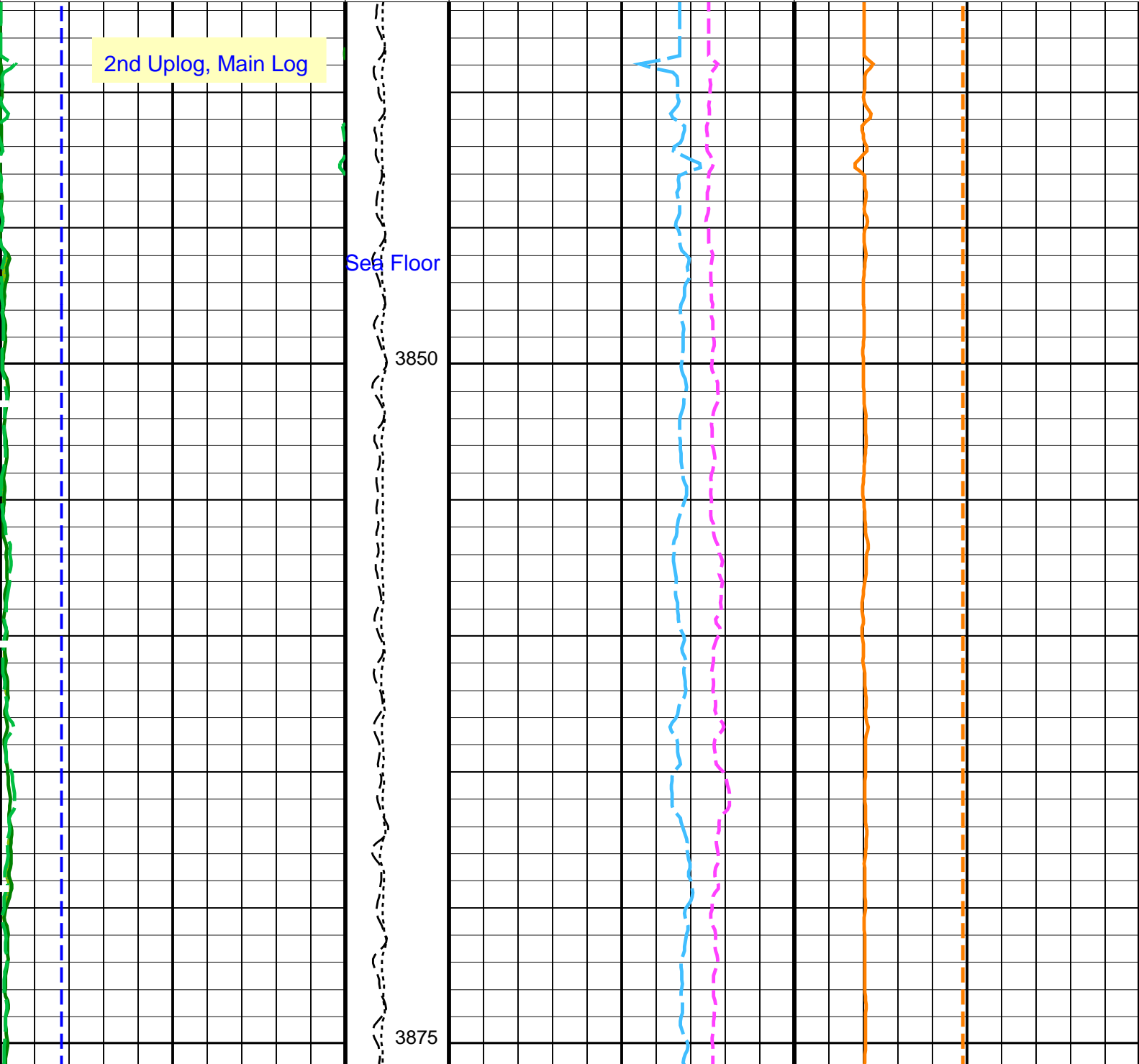
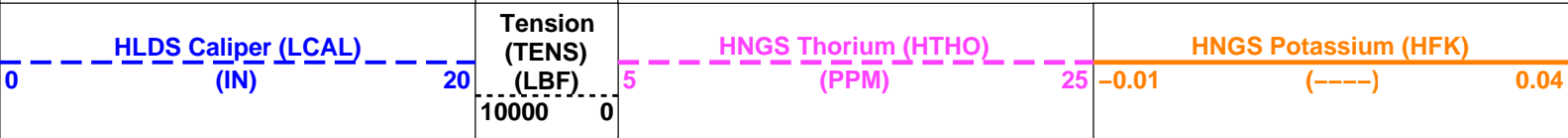
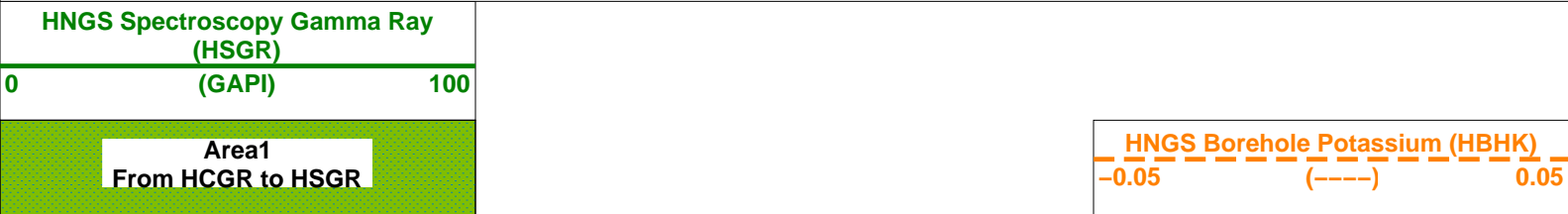
## OP System Version: 19C0–187

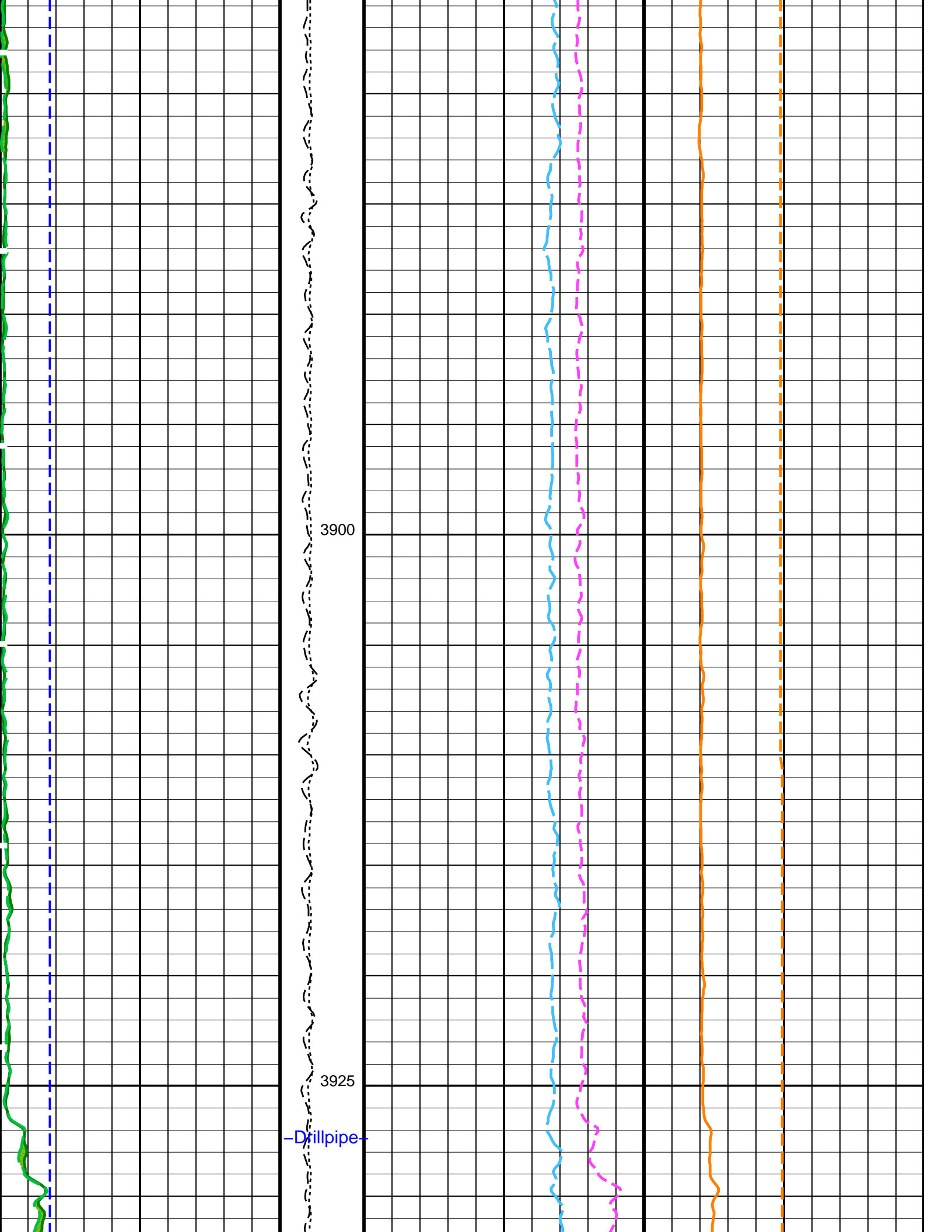
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HNGS–BA	19C0–187	HRLT–B	19C0–187
DSST–B	19C0–187	HLDS	19C0–187
LDSC–B	19C0–187	EDTC–B	SKK–5169–EDTCB

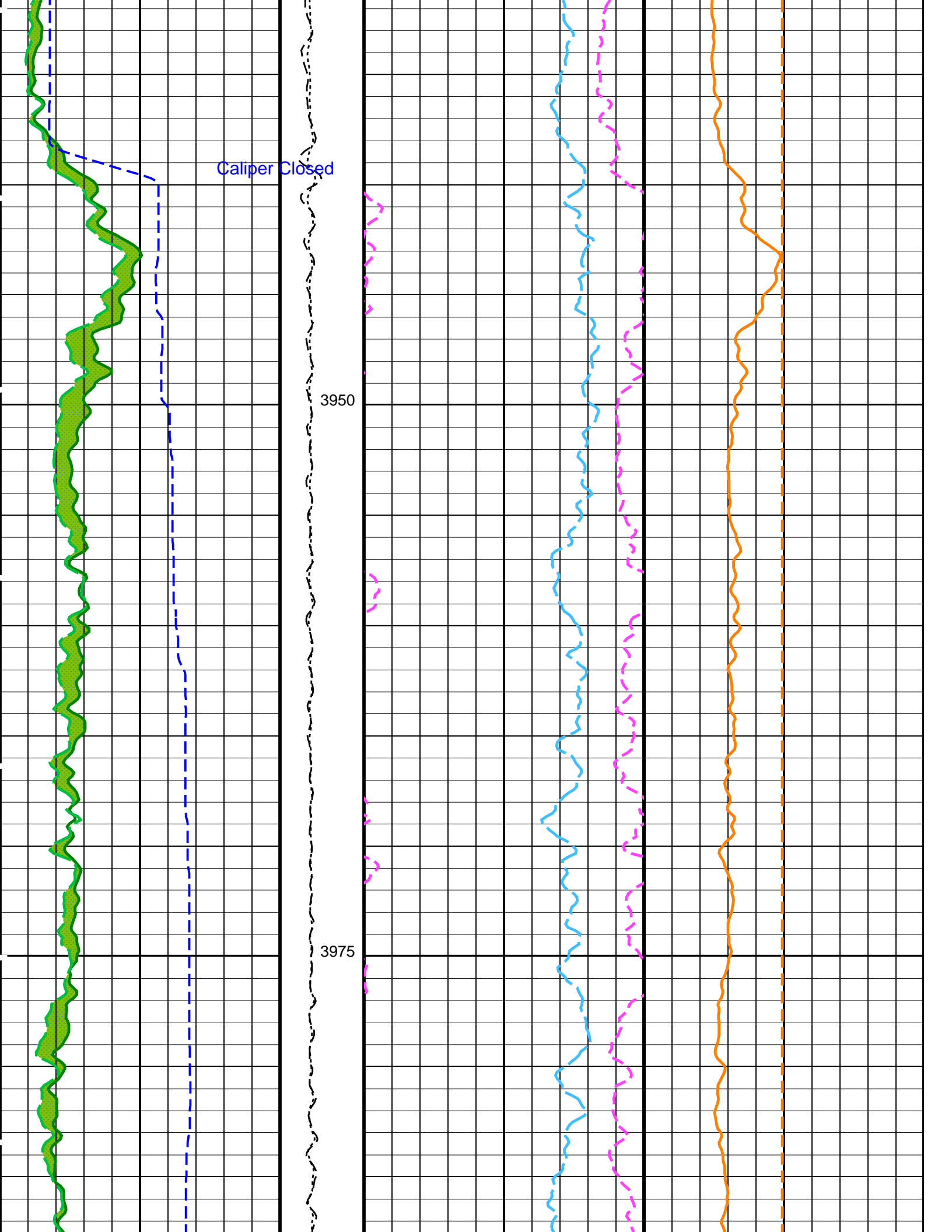


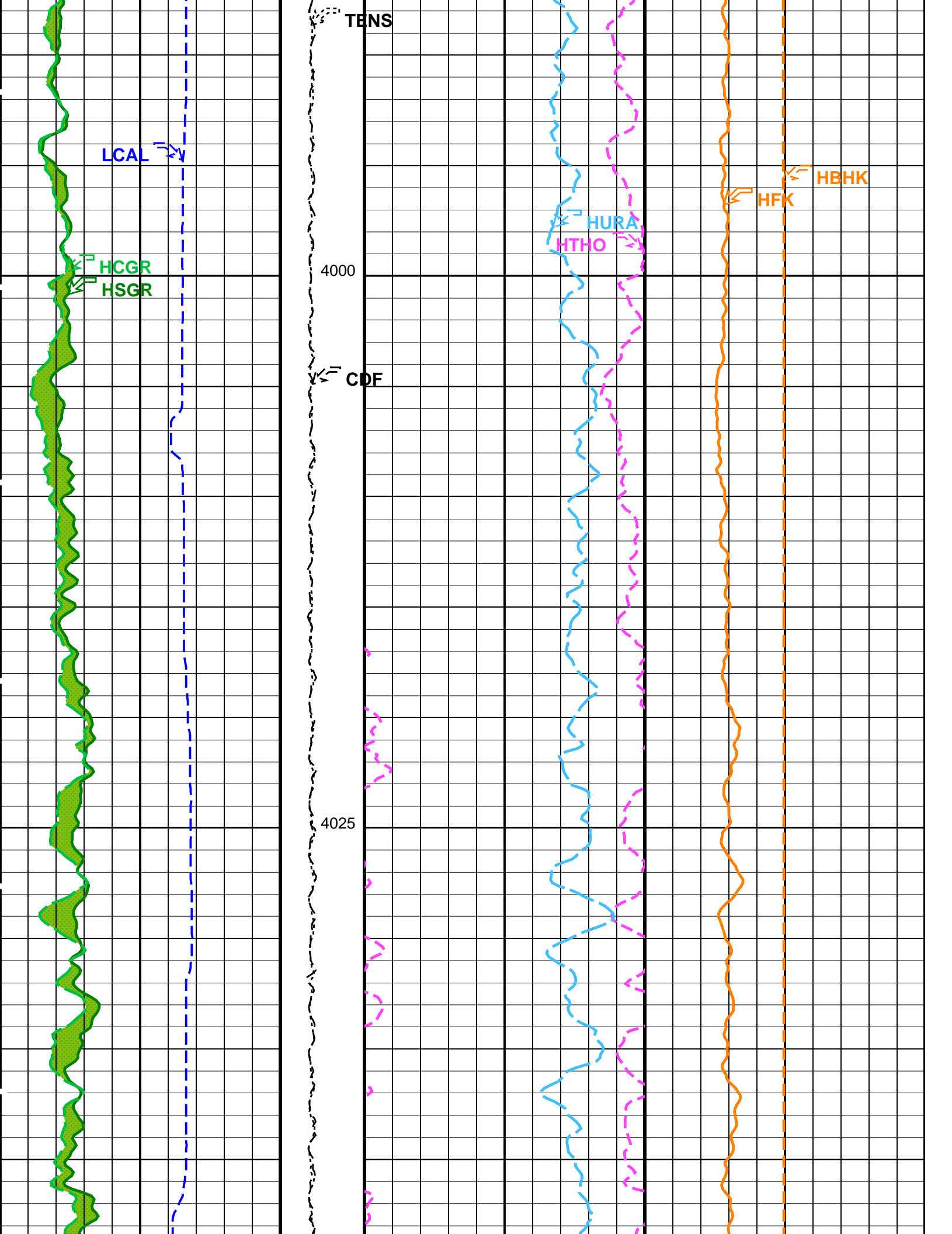
PIP SUMMARY

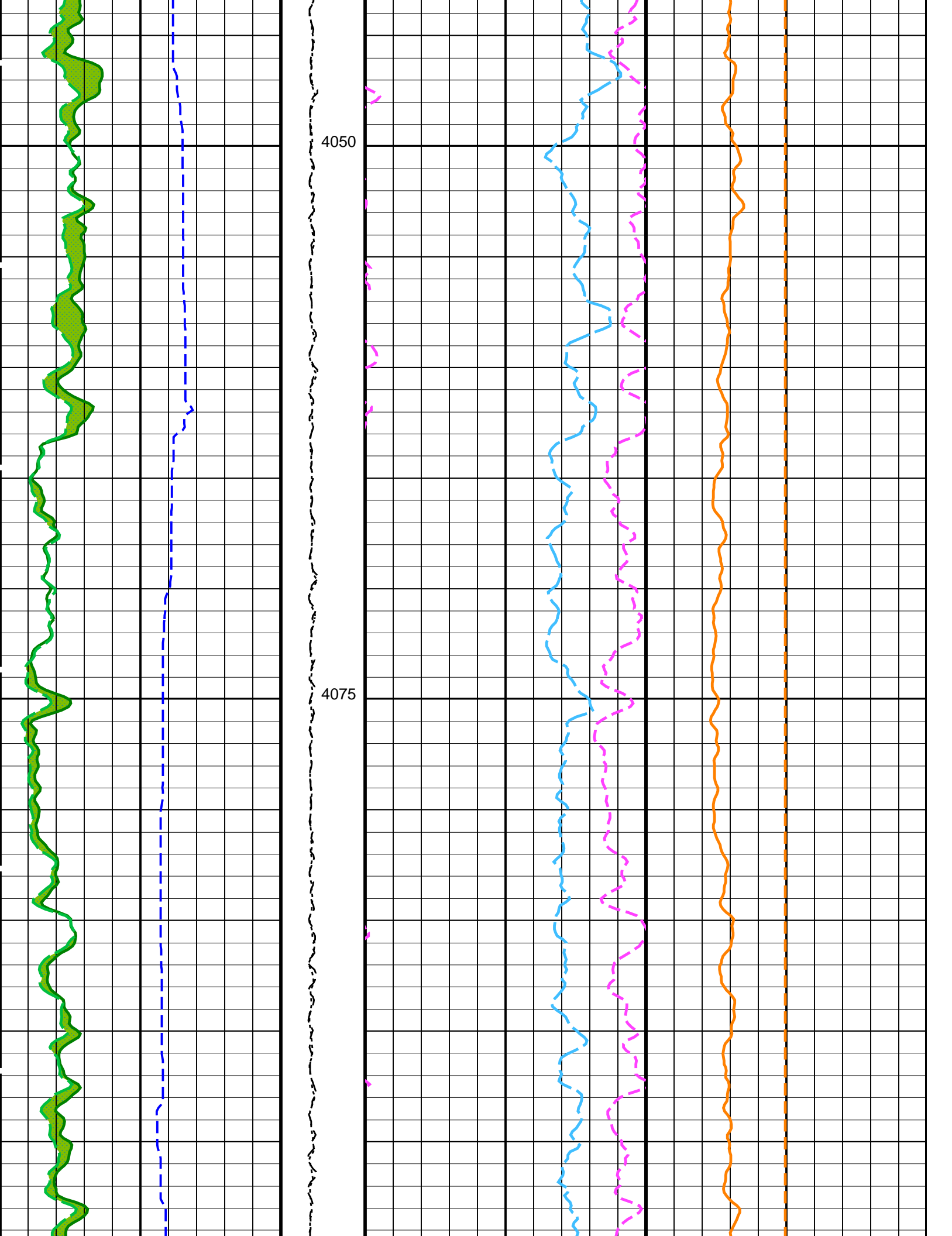
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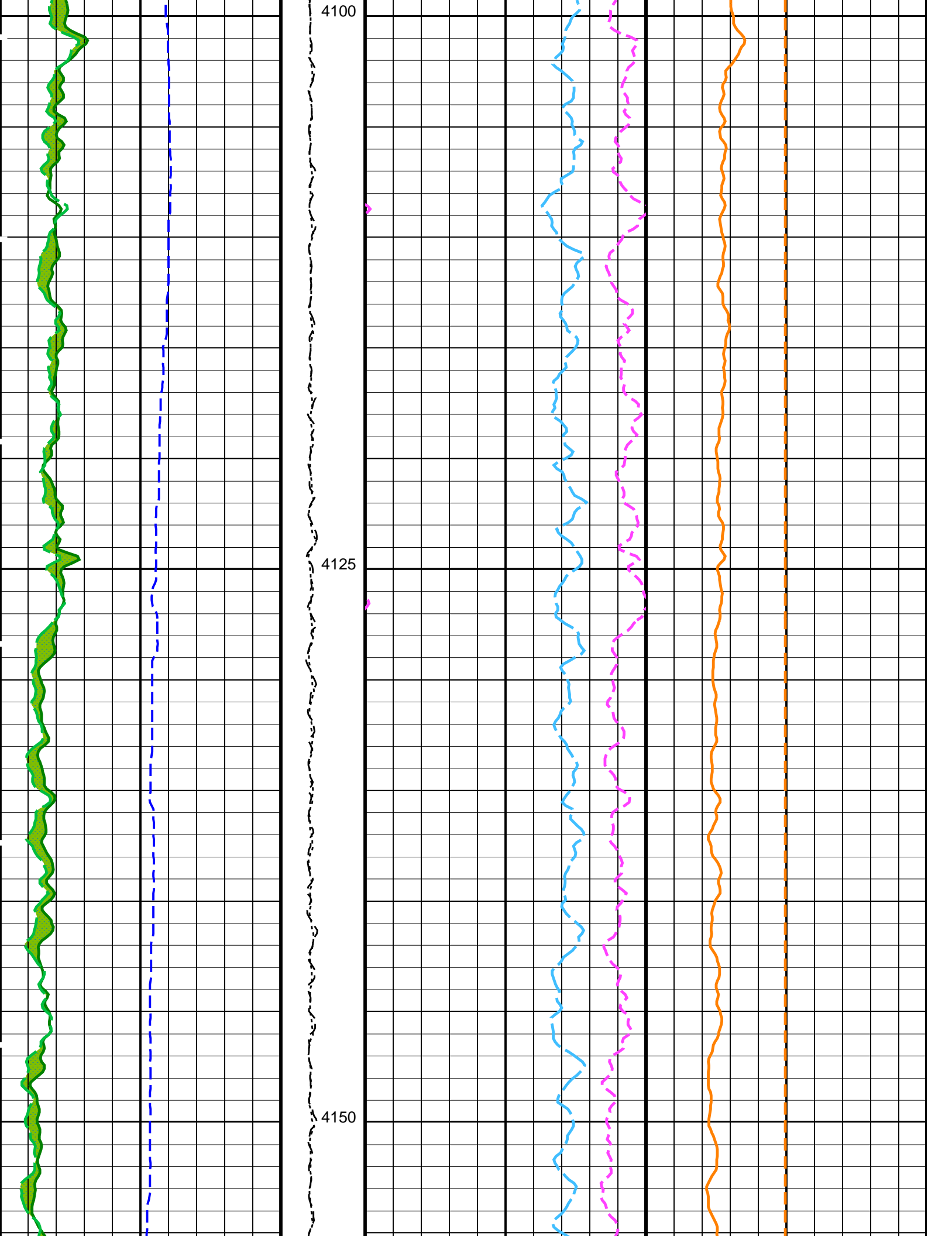


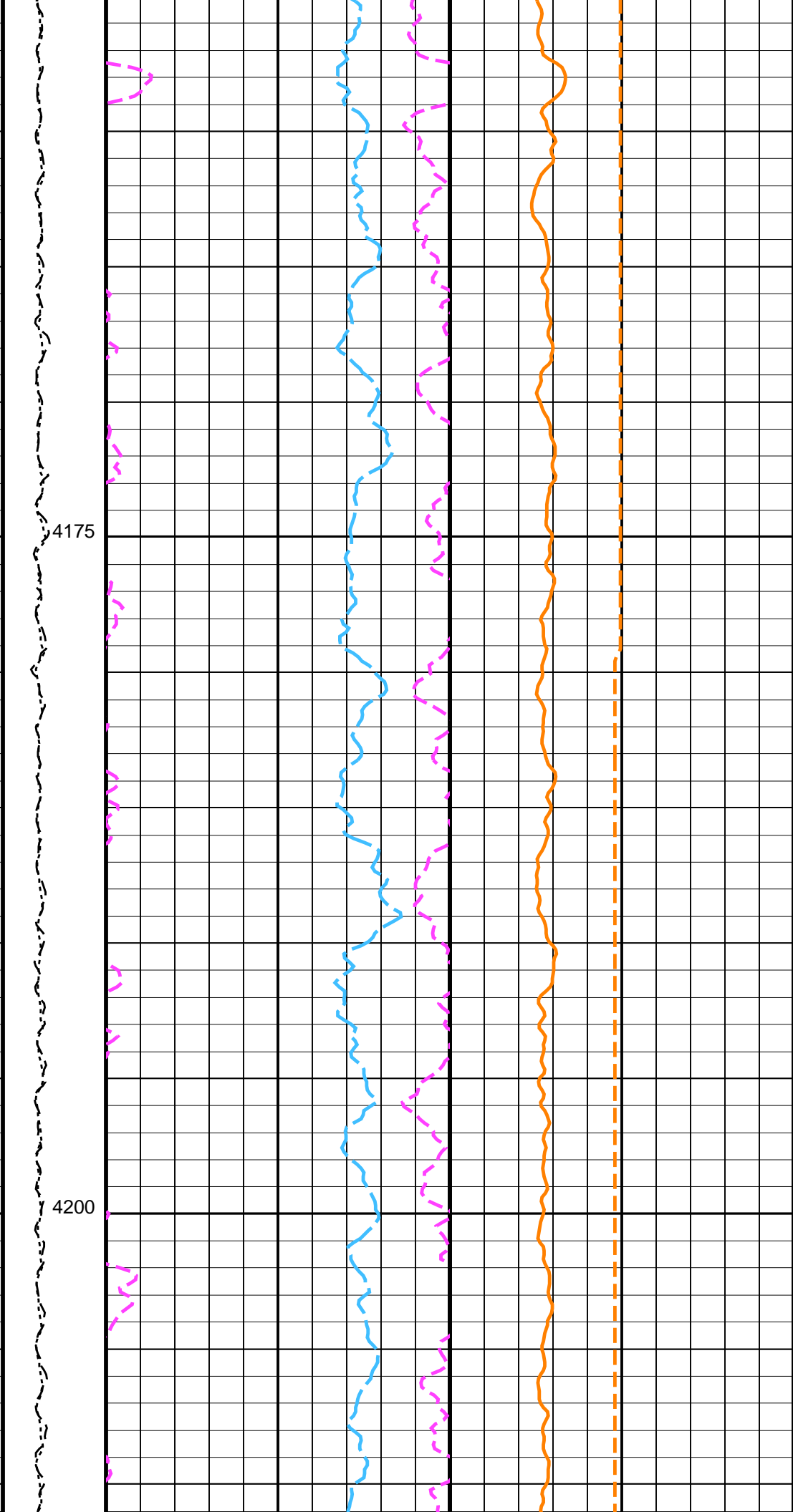
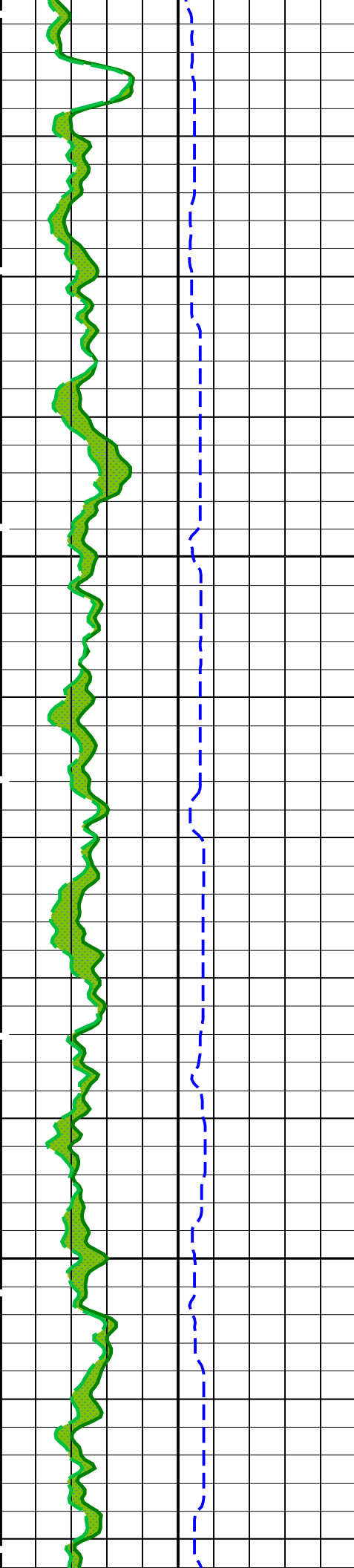


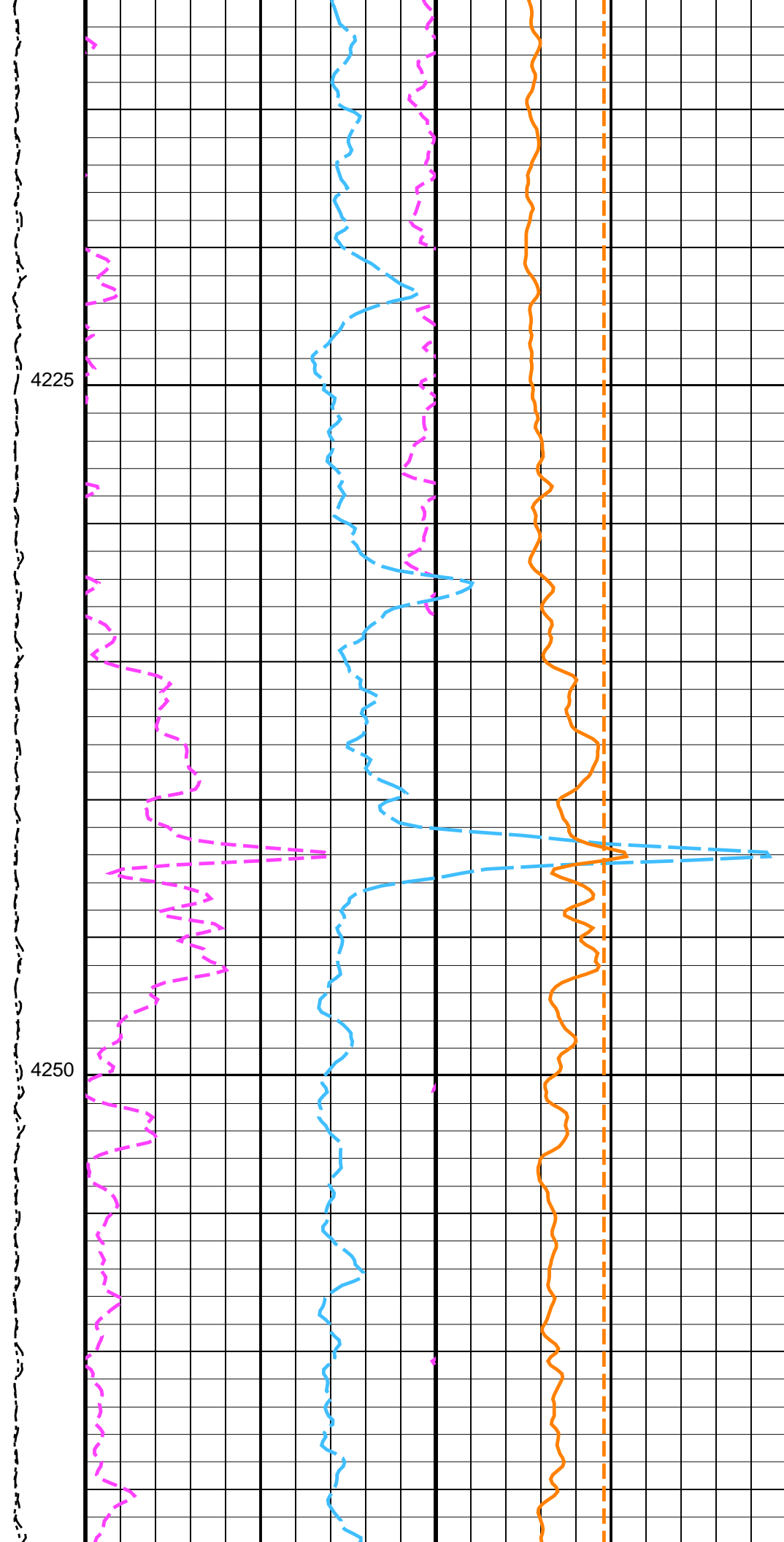
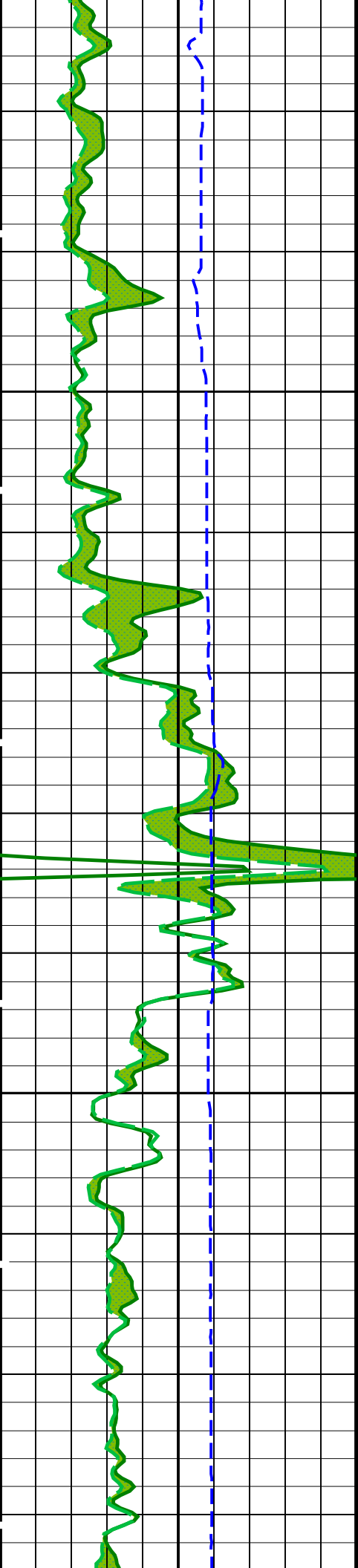




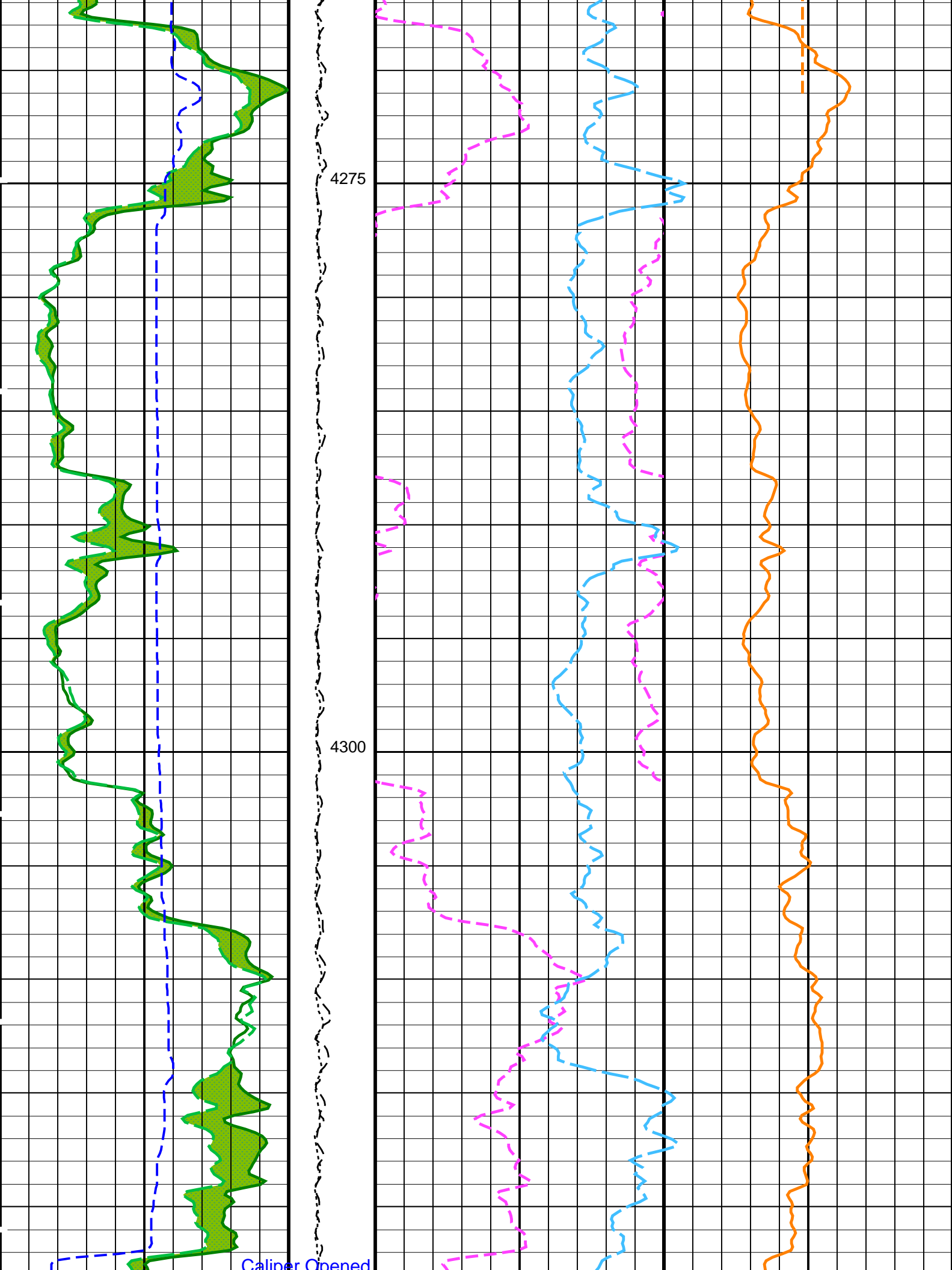


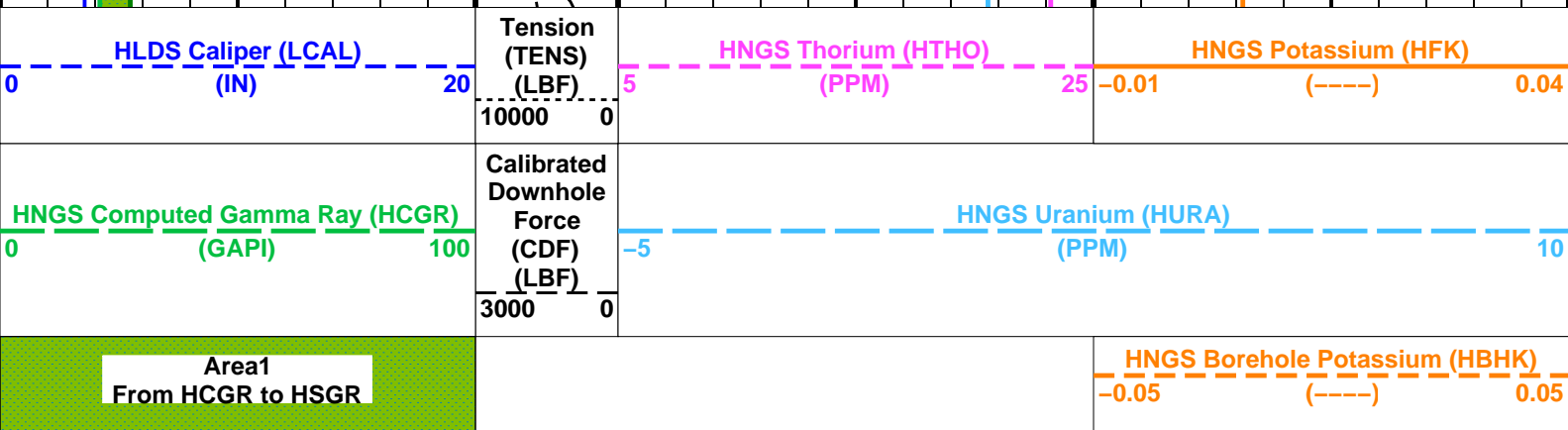
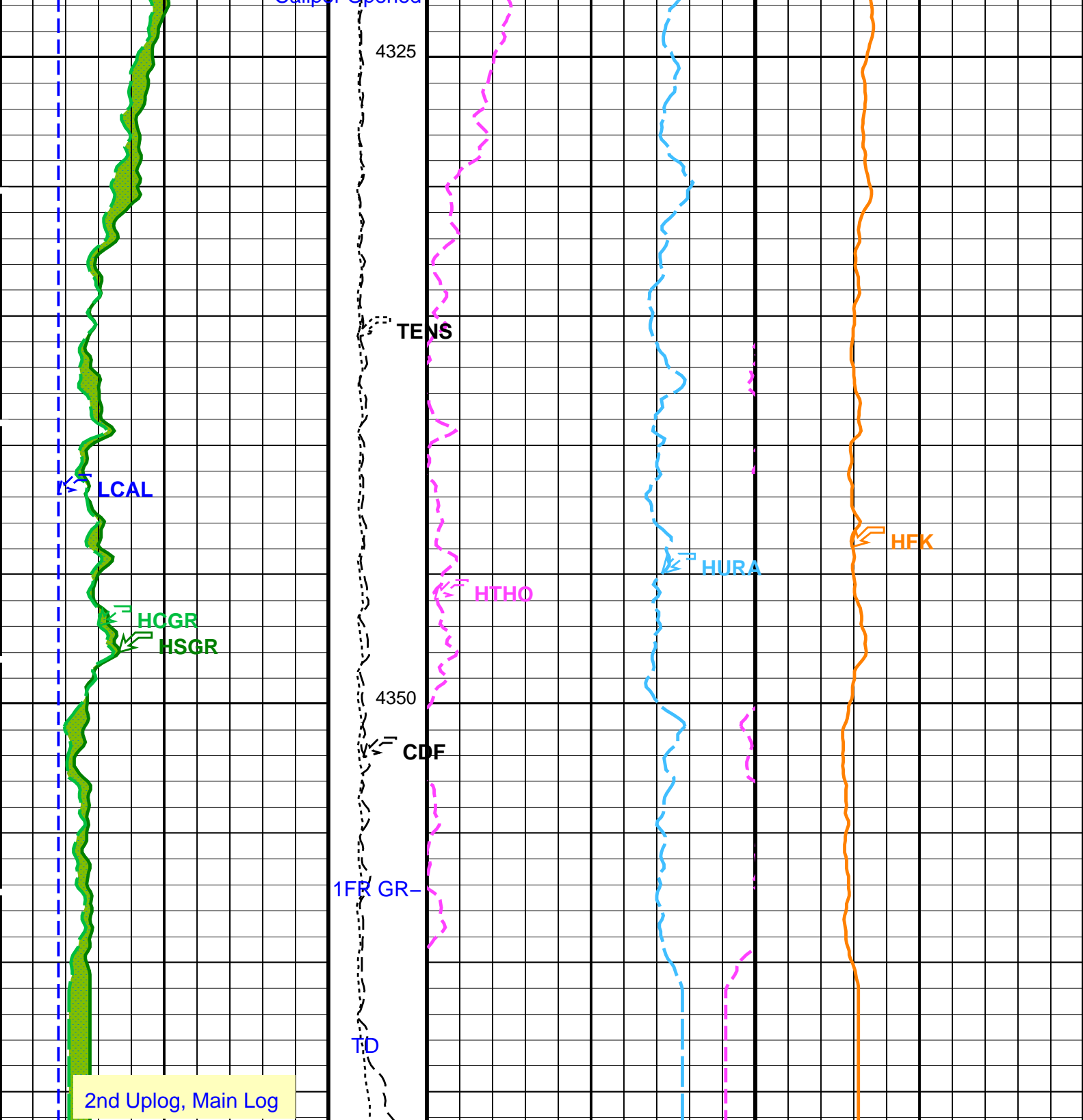












Parameters			
DLIS Name	Description	Value	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing 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	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00236493	
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	0.972587	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00323	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
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: HNGSYields

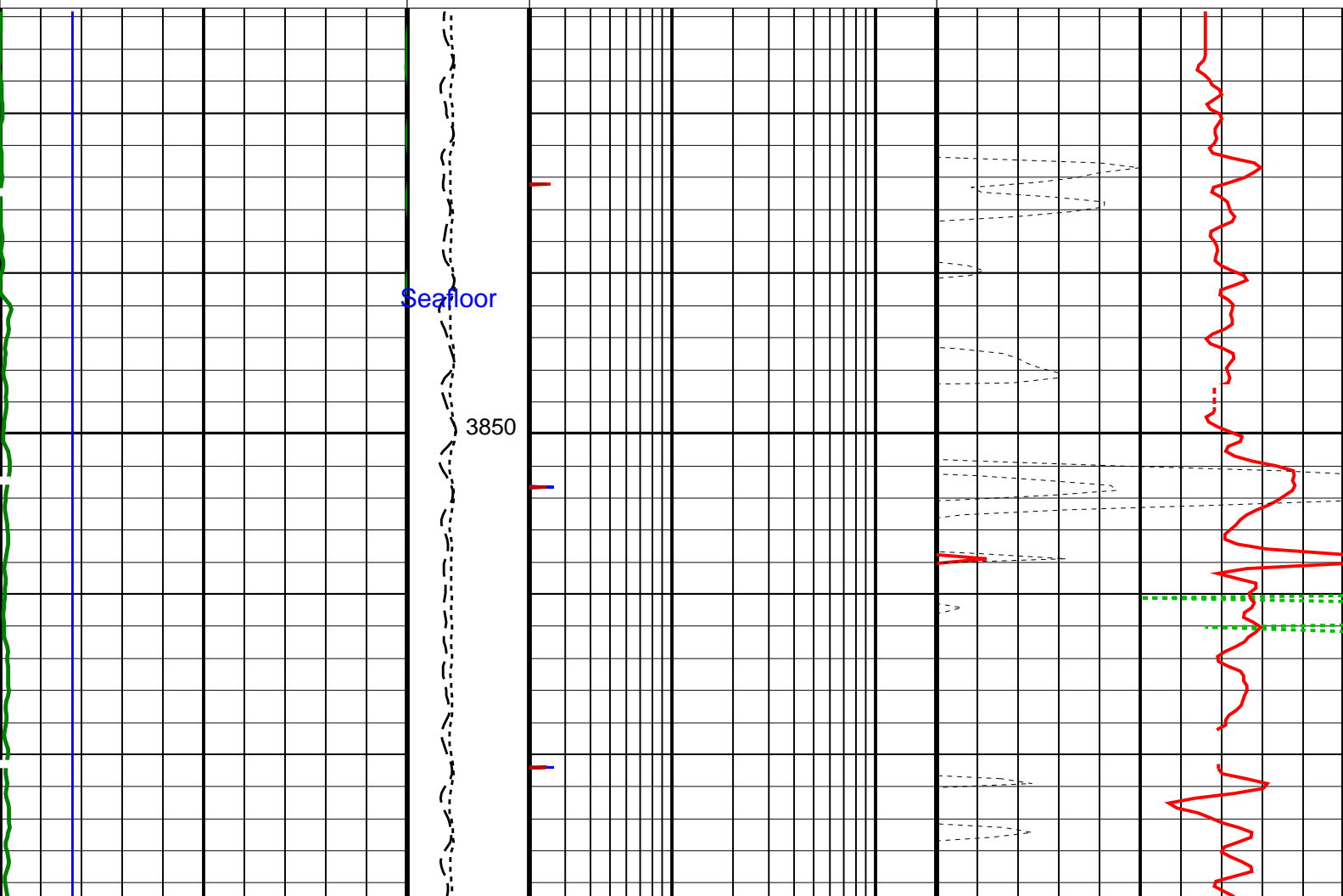
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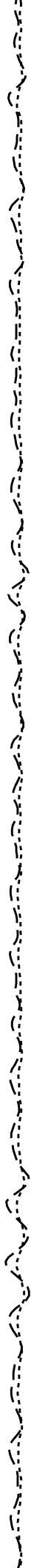
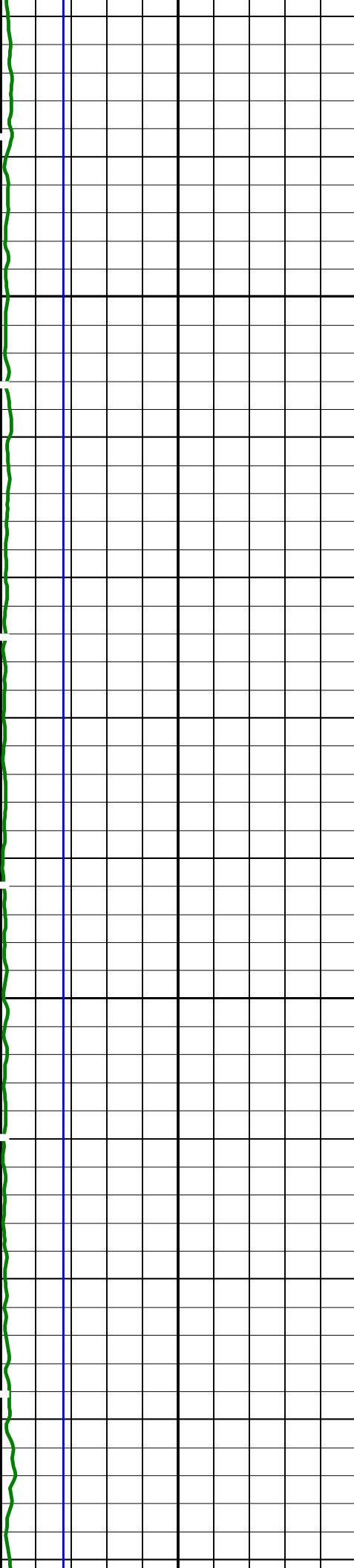
Graphics File Created: 09-Nov-2017 07:57

OP System Version: 19C0-187			
MSS_LDEO-A	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	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09-Nov-2017 06:35	4366.3 M	3836.6 M
Output DLIS Files						
DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09-Nov-2017 07:57		
BACKUP_	MSS_LDEO_NGS_HRLA_016PUP	FN:26	PRODUCER	09-Nov-2017 07:57		

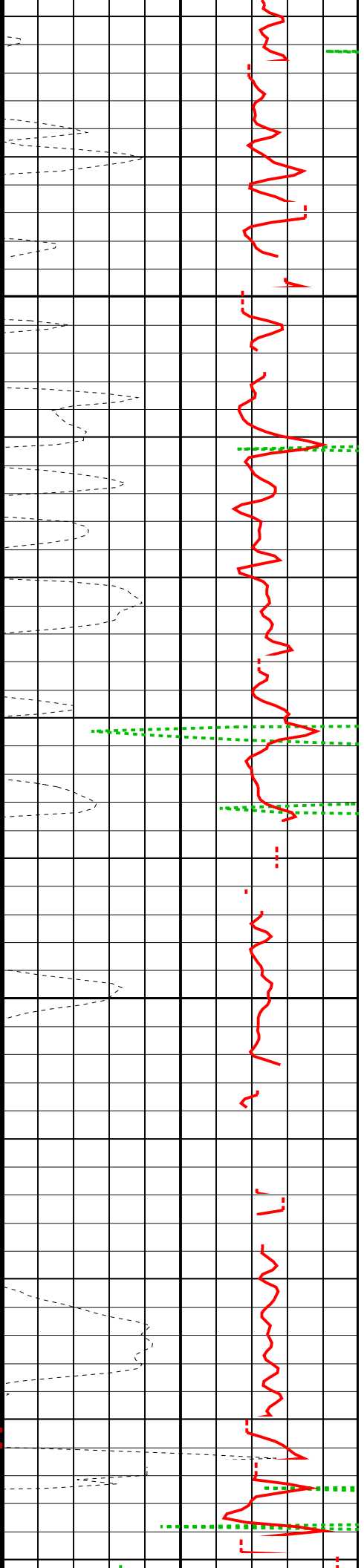
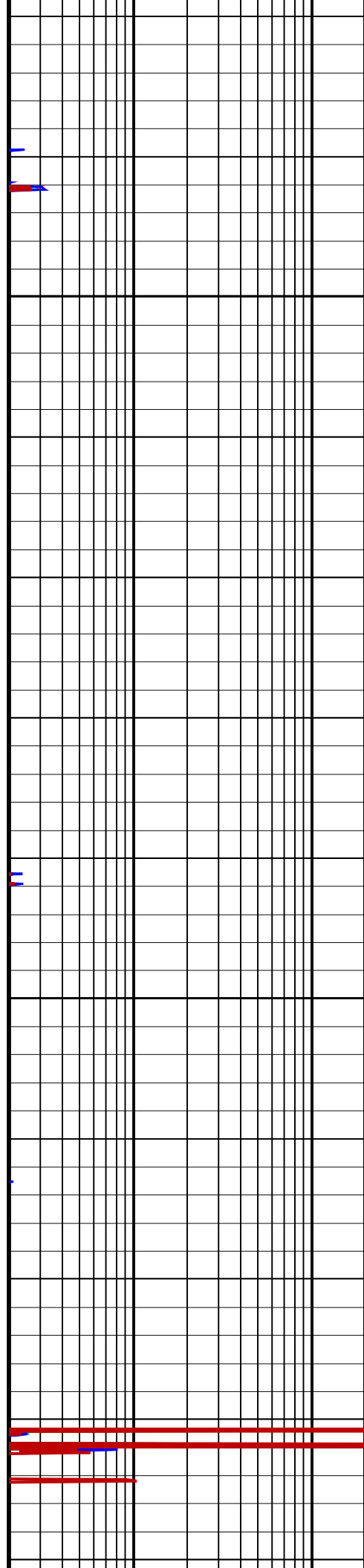
Input DLIS Files						
DEFAULT	MSS_LDEO_NGS_HRLA_010LUP	FN:15	PRODUCER	09-Nov-2017 06:35	4366.3 M	3836.6 M
Output DLIS Files						
DEFAULT	MSS_LDEO_NGS_HRLA_016PUP	FN:25	PRODUCER	09-Nov-2017 07:57	4366.3 M	3836.7 M

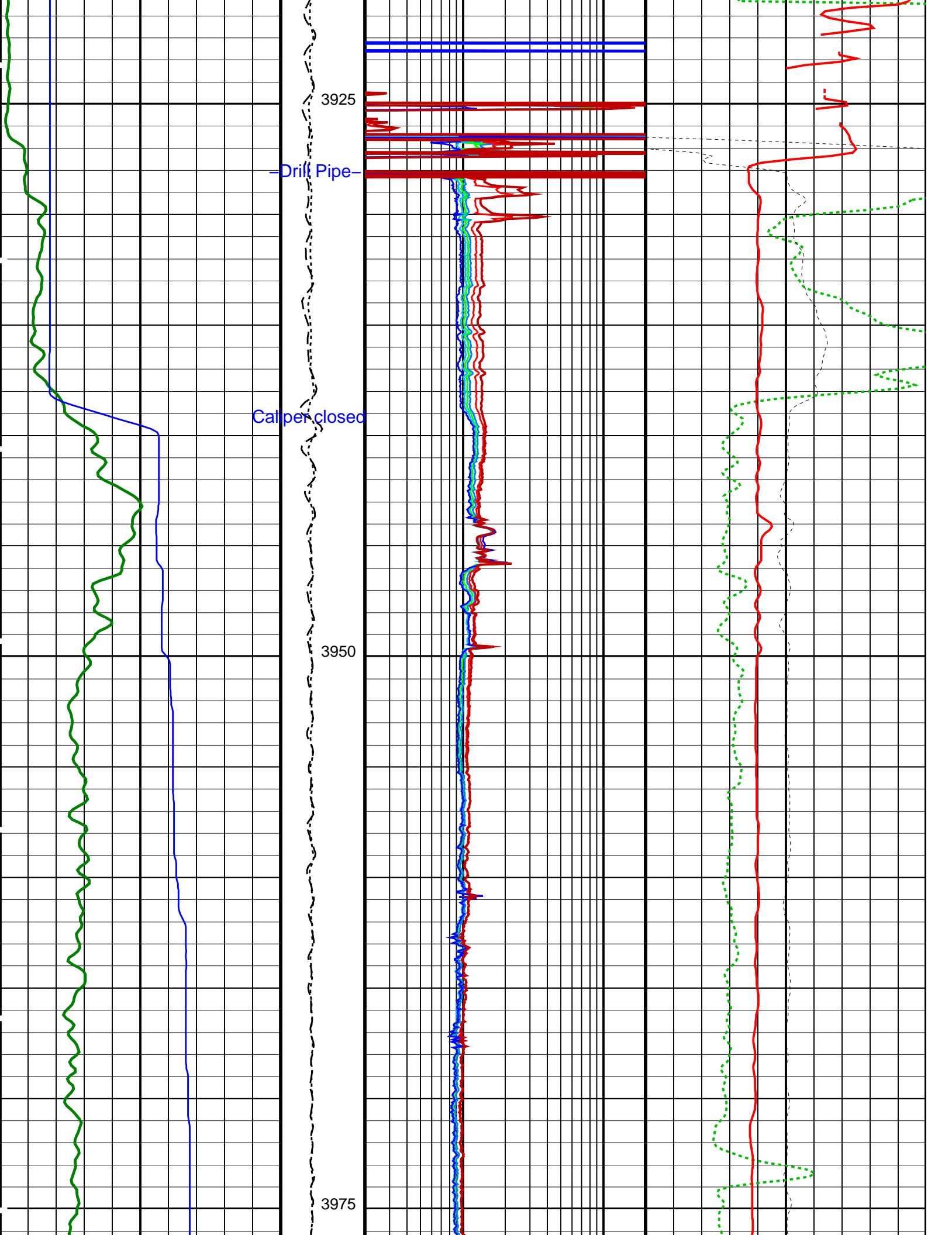


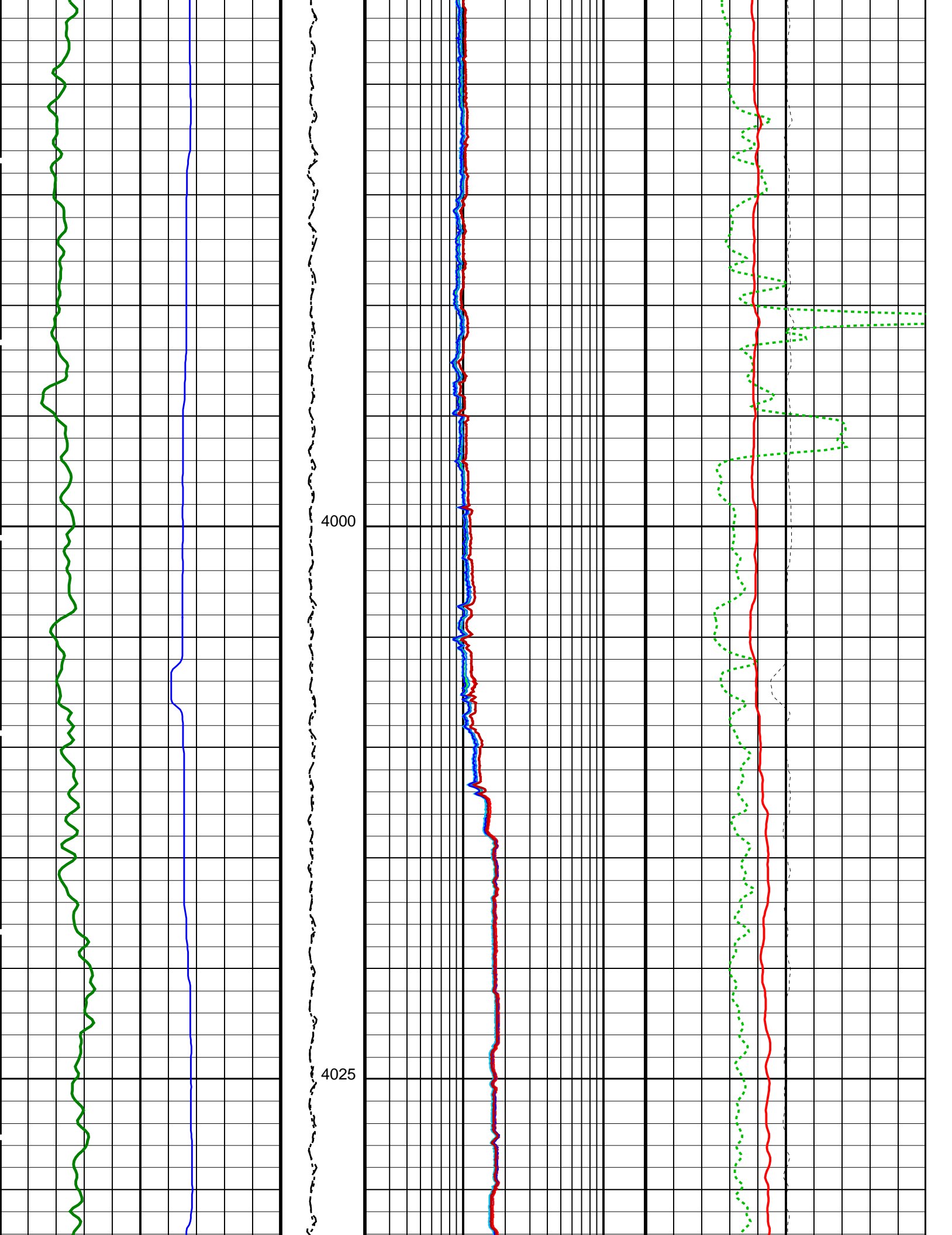


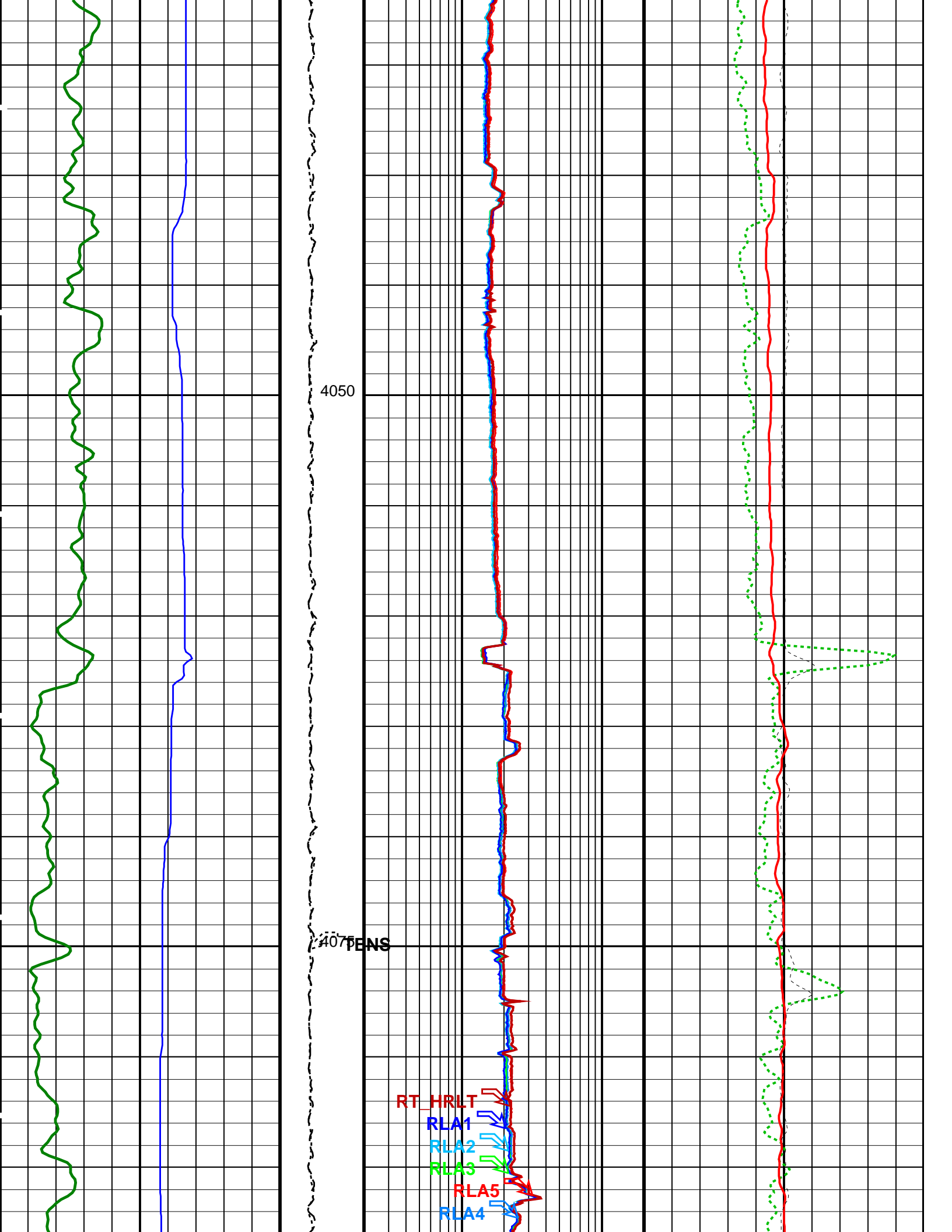
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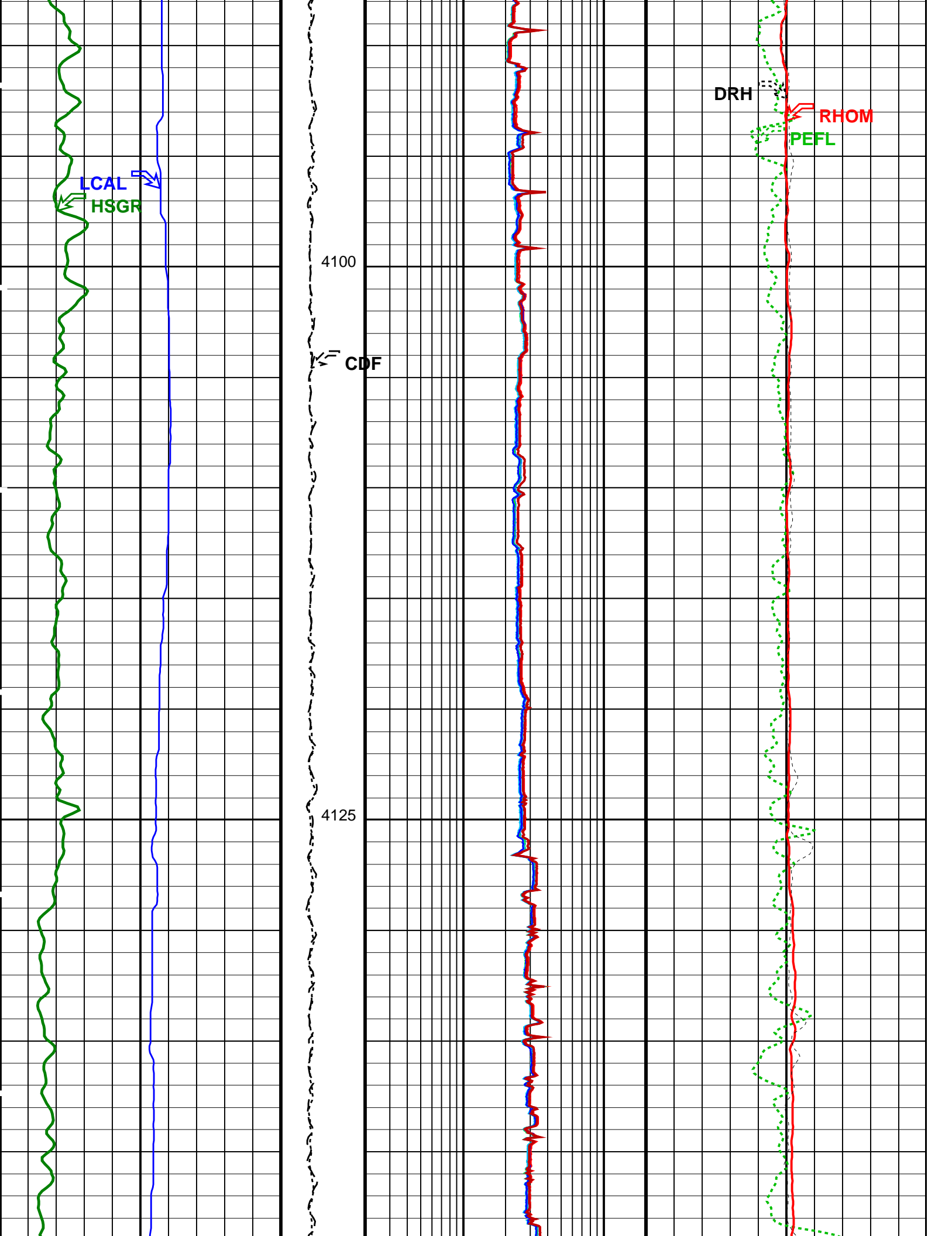


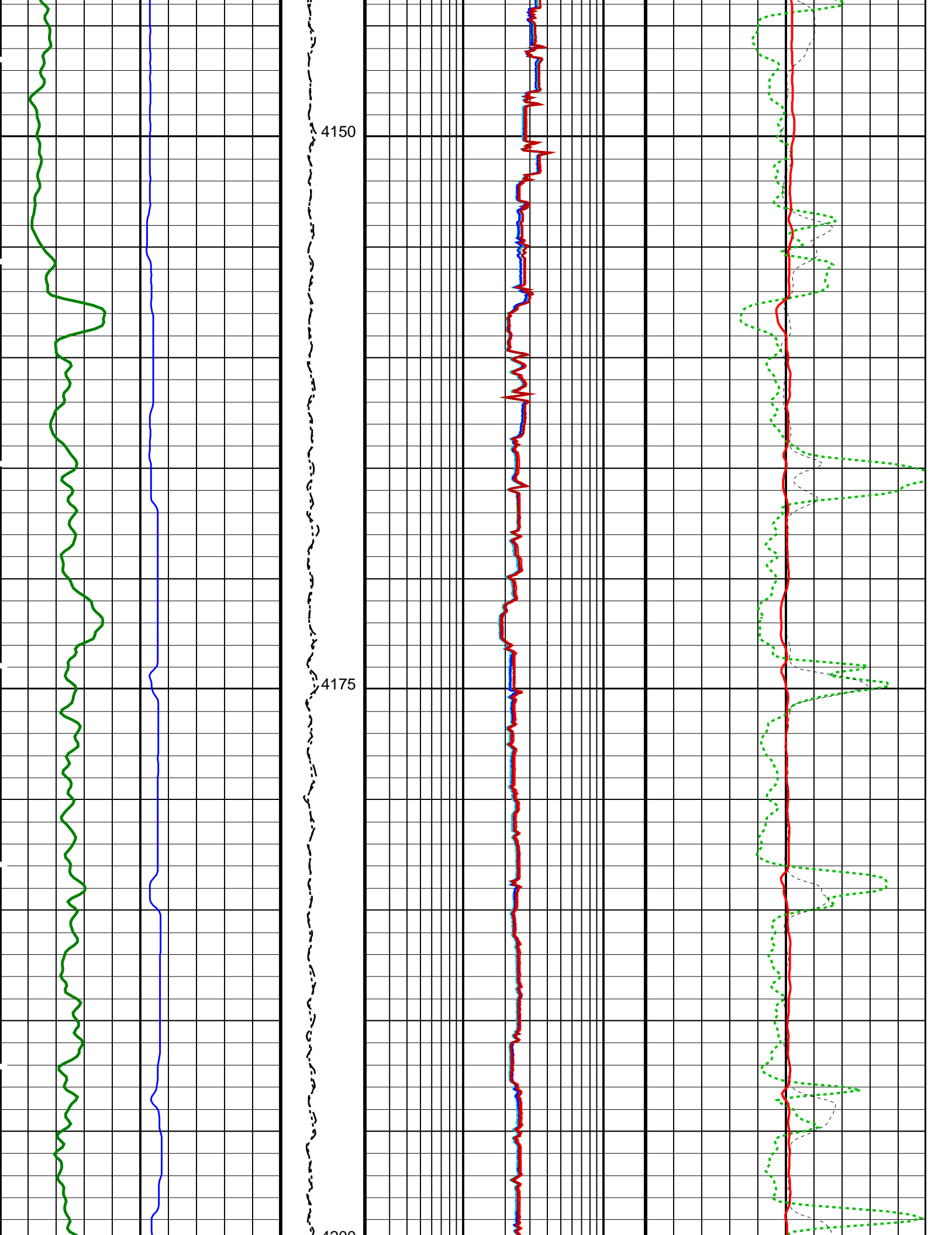


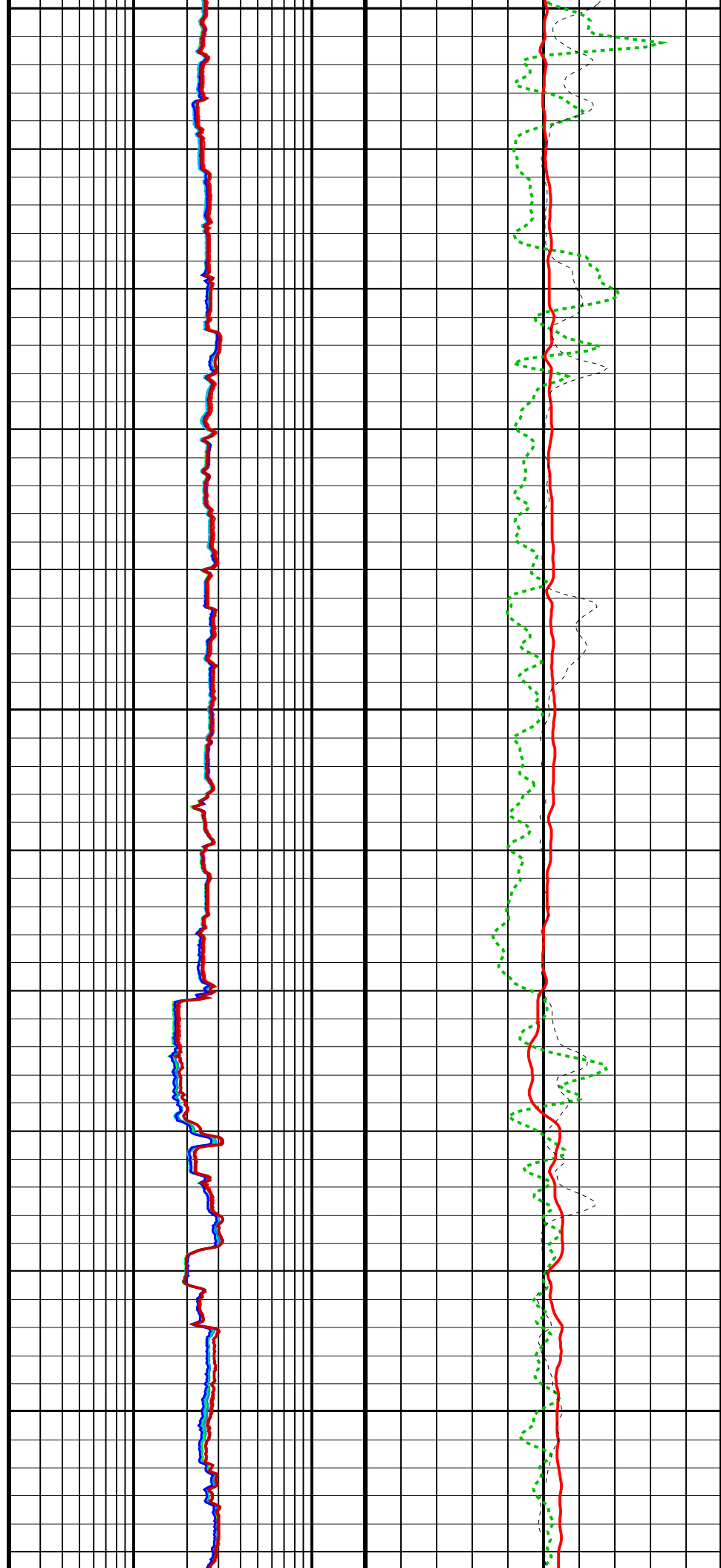
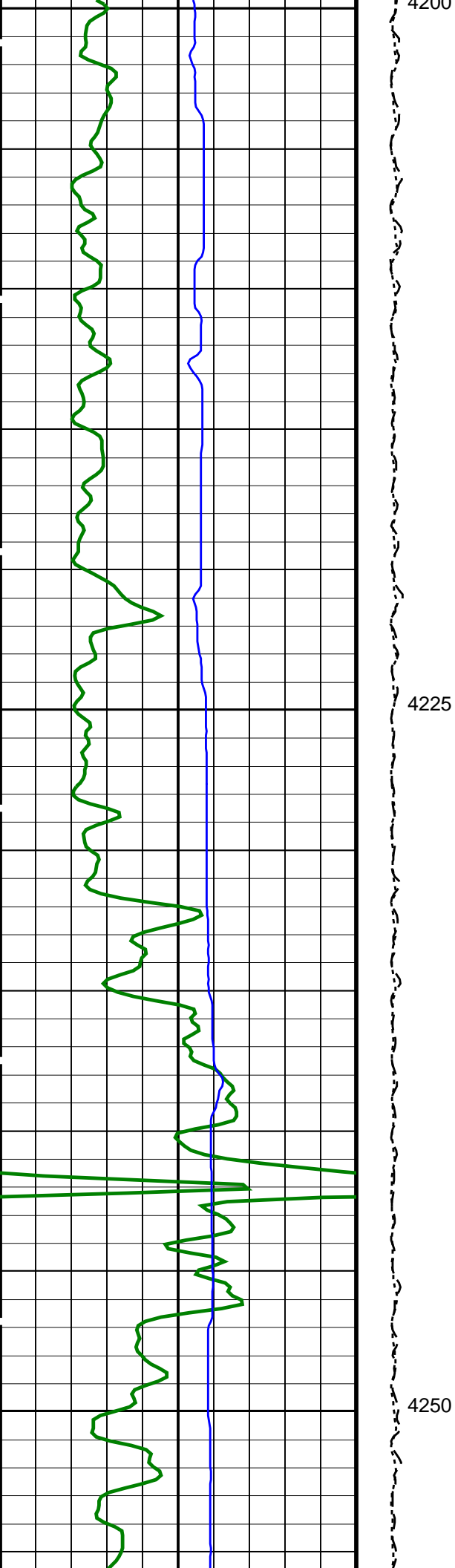


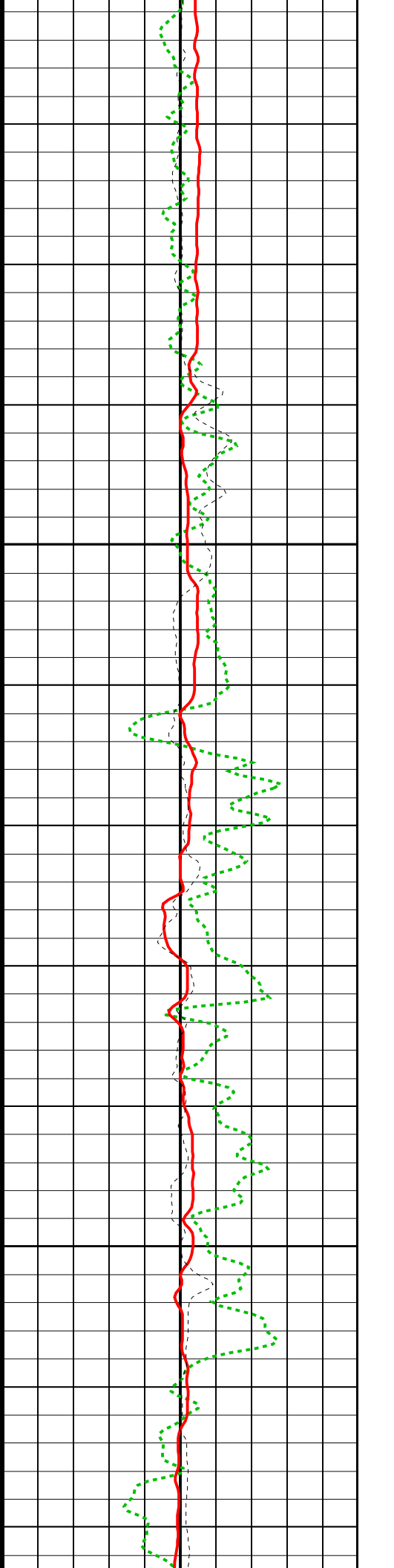
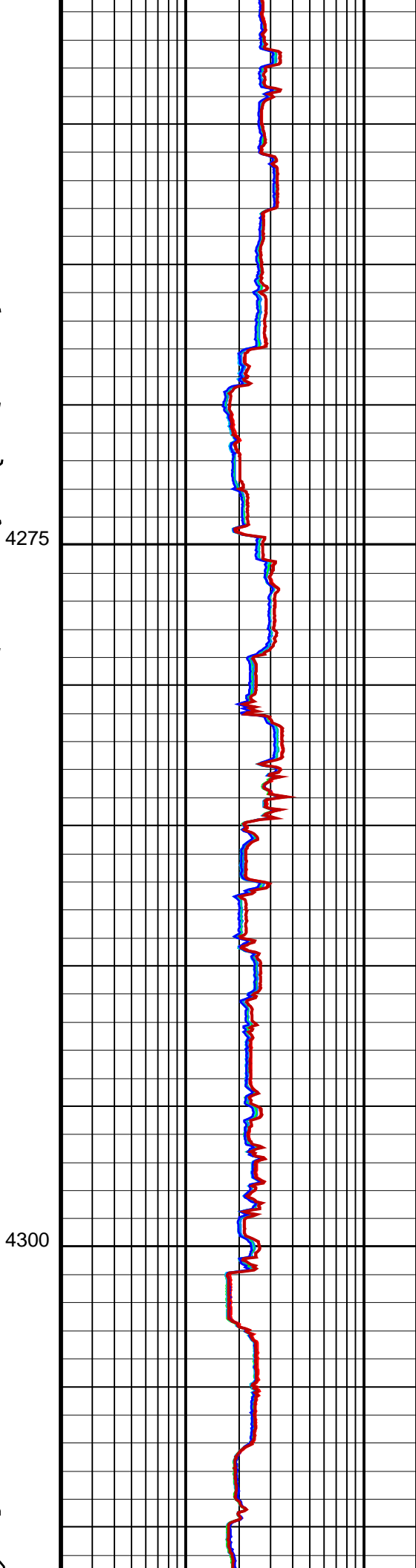
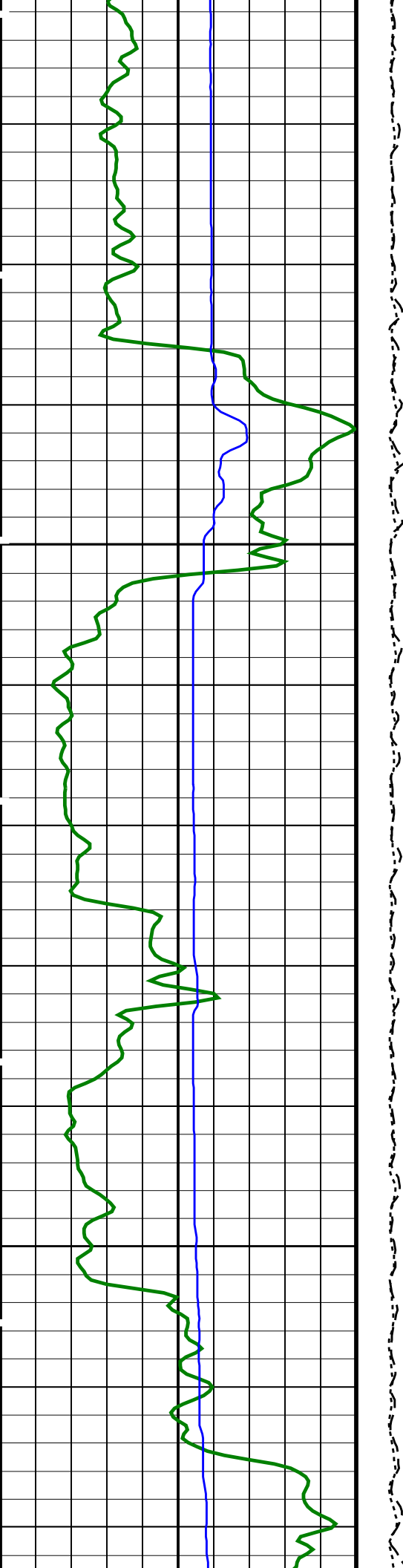


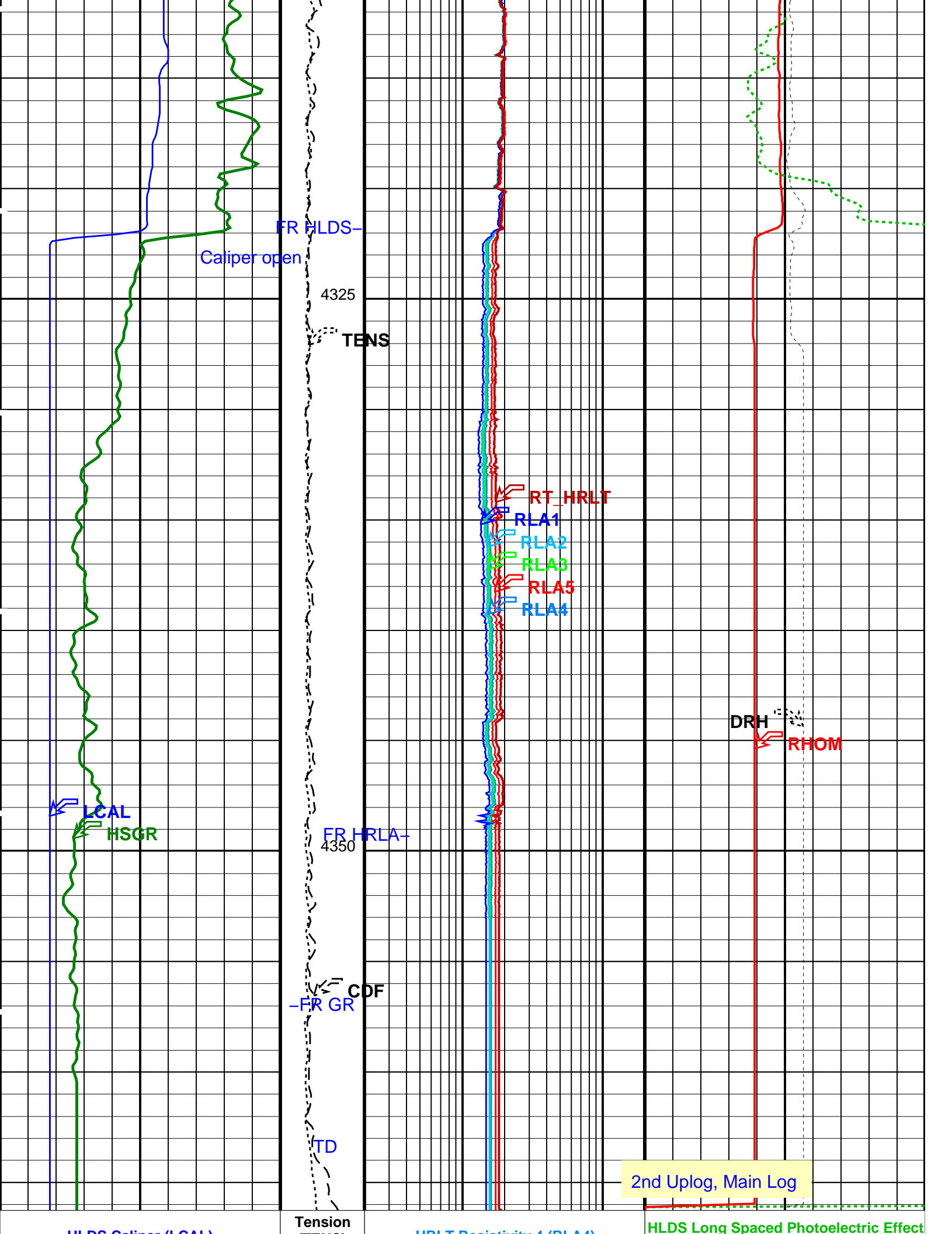












0	HLDS Caliper (LCAL) (IN)	20	(TENS) (LBF)	0.2	HRLT Resistivity 4 (RLA4) (OHMM)	20	0	(PEFL) (----)	10
			10000	0					
	HNGS Spectroscopy Gamma Ray (HSGR)		Calibrated Downhole Force (CDF) (LBF)		HRLT Resistivity 5 (RLA5) (OHMM)	20	0	HLDS Bulk Density (RHOM) (G/C3)	4
0	(GAPI)	100	3000	0					
					HRLT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

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	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	-0.00236493	
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	0.972587	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00323	
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	17.0393	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	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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
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	
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	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	
GAIX	Manual Gain X	10	
GCSE	Generalized Caliper Selection	LCAL	
GCSEV	Average Angular Deviation of Borehole from Normal	0	DEG

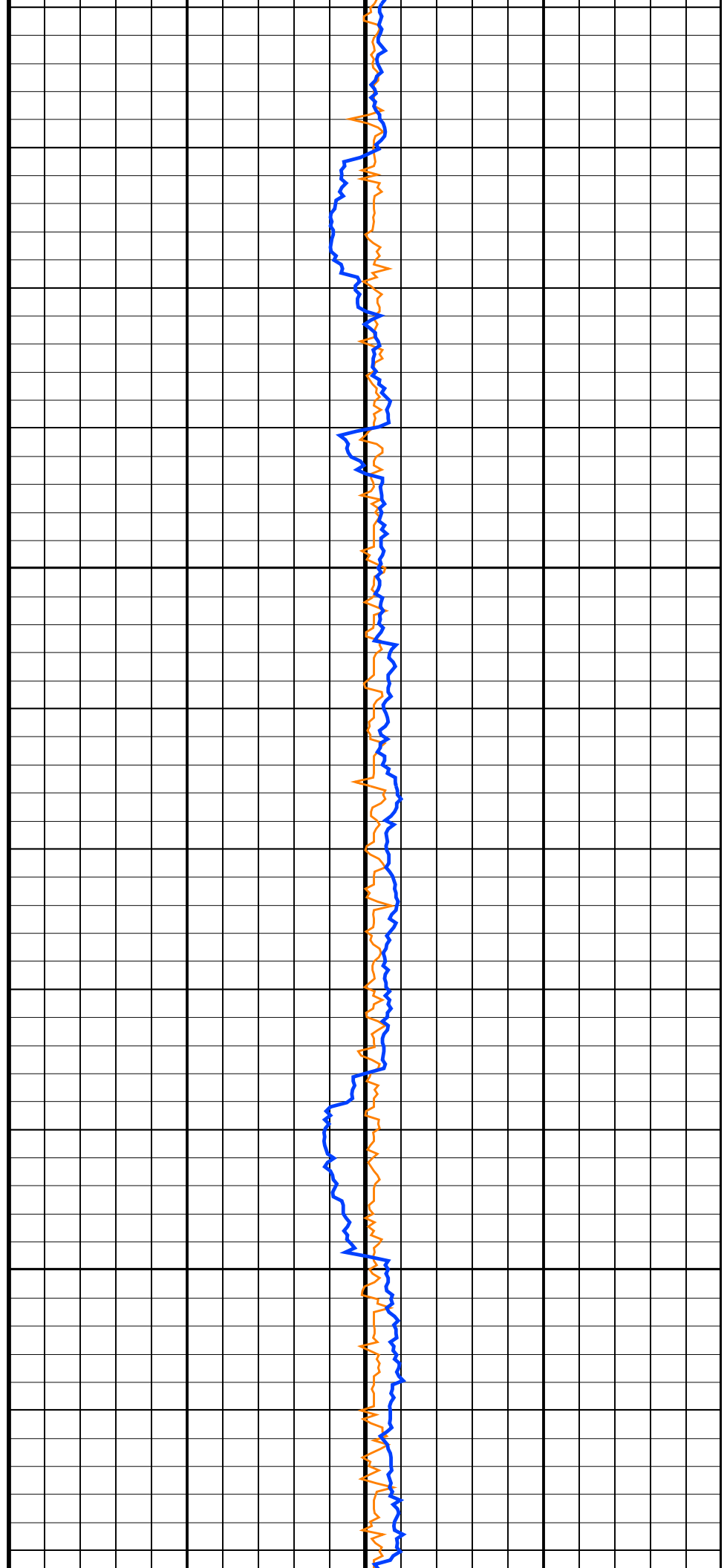
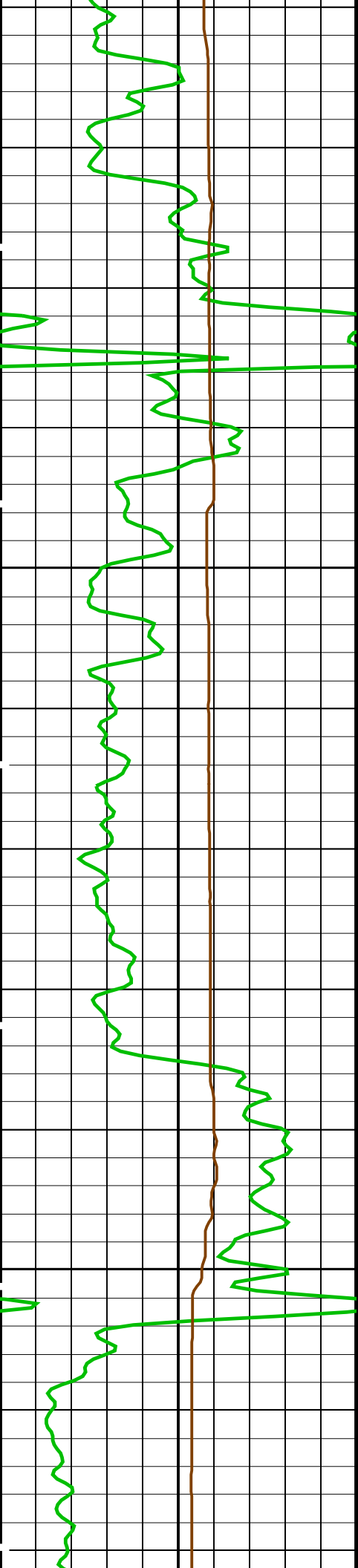
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GDT1	Gain Delta-T 1	800	US/F
GDT2	Gain Delta-T 2	800	US/F
GDT3	Gain Delta-T 3	800	US/F
GDT4	Gain Delta-T 4	160	US/F
GDT5	Gain Delta-T 5	160	US/F
GDTX	Gain Delta-T X	800	US/F
GGRD	Geothermal Gradient	0.01	DF/F
GIN1	Gain Interval 1	15360	US
GIN2	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	

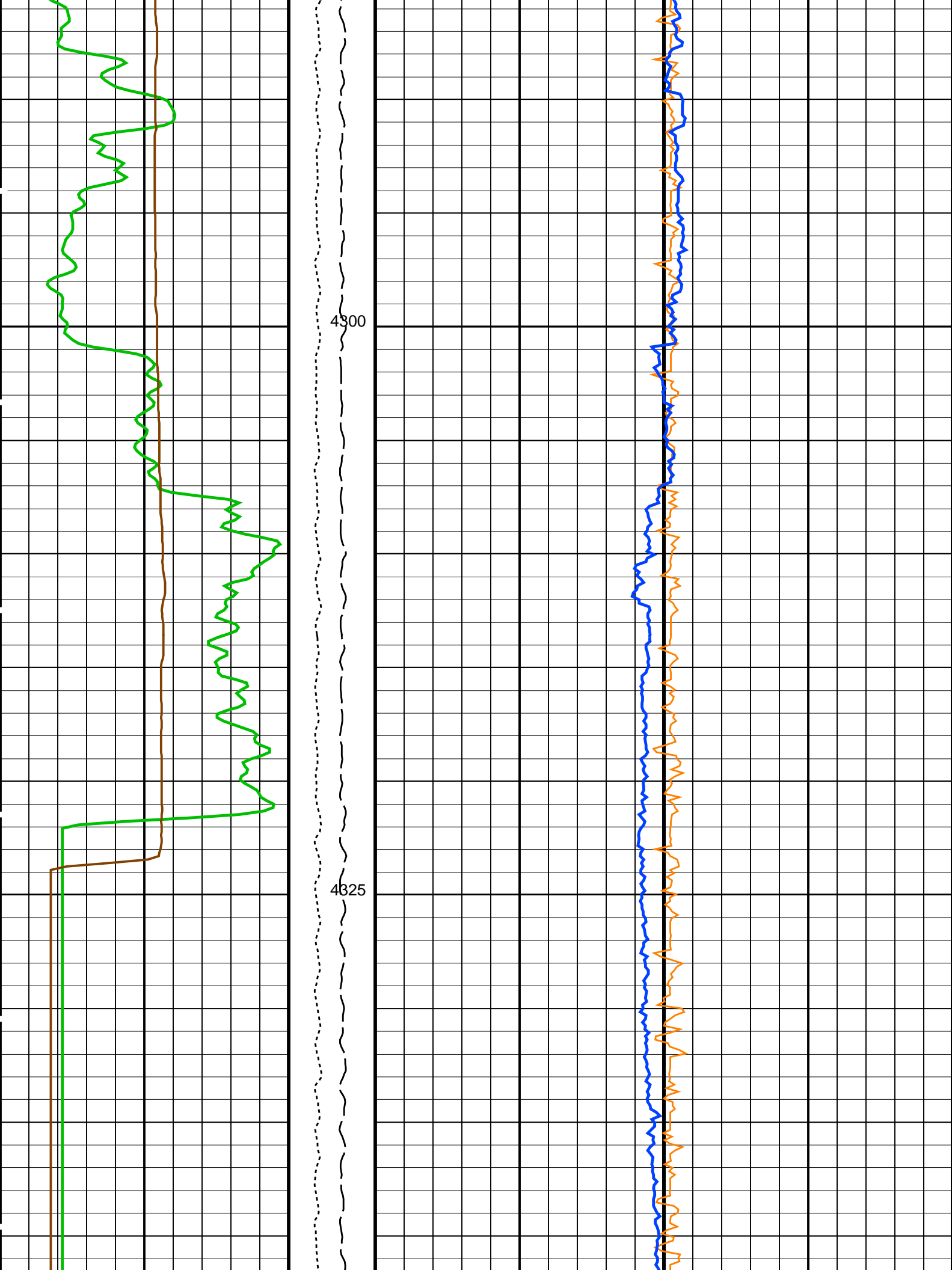


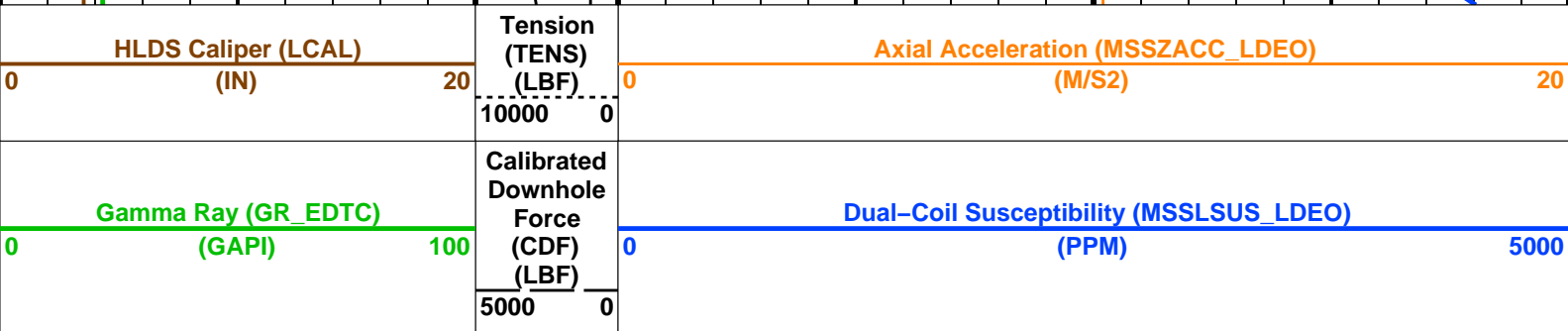
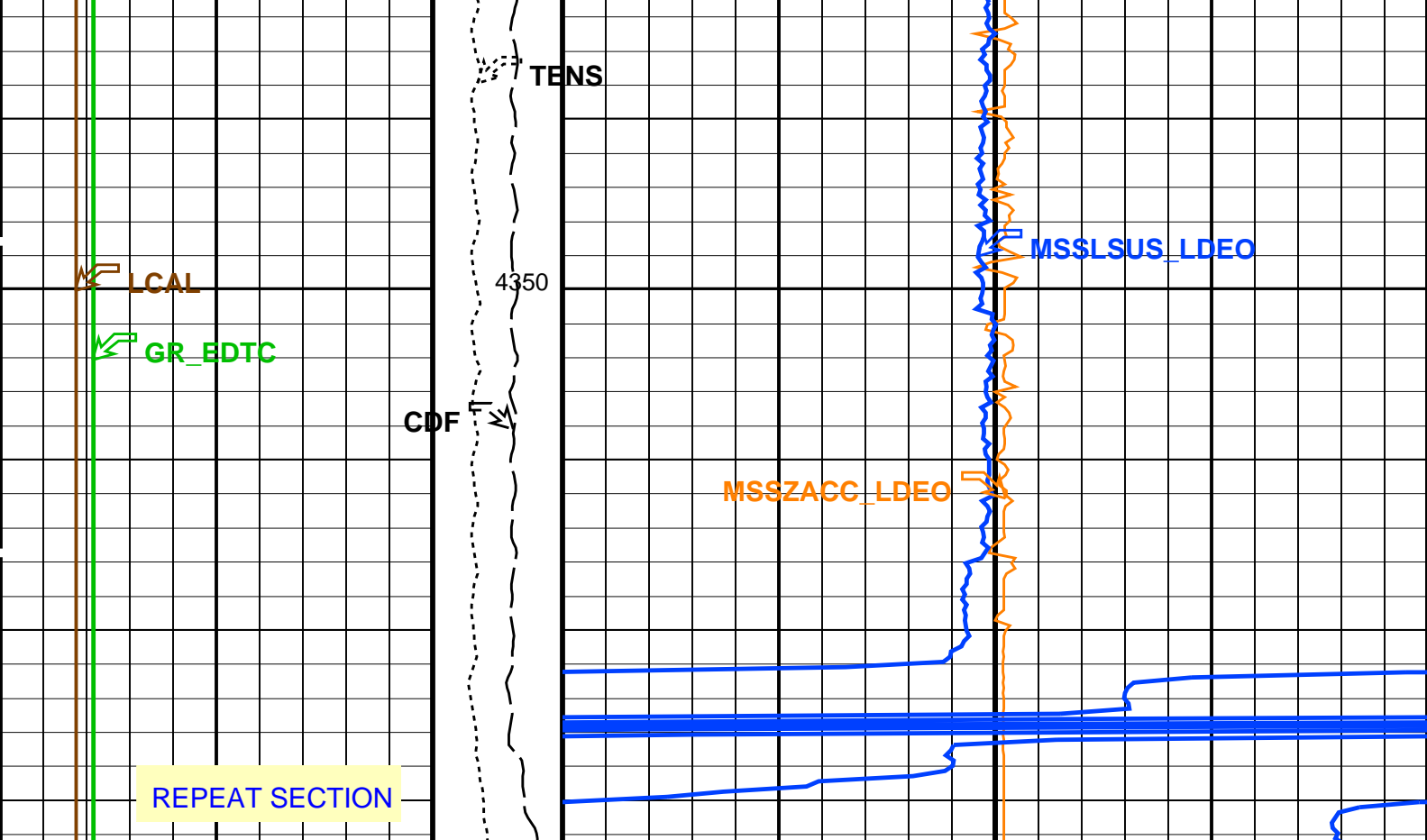
SBW1	STC Search Bandwidth – Lower Dipole	8000	US
SBW2	STC Search Bandwidth – Upper Dipole	8000	US
SBW3	STC Search Bandwidth – Monopole Stoneley	8000	US
SBW4	STC Search Bandwidth – Monopole P&S	2000	US
SFC1	STC Formation Character – Lower Dipole	SELECTABLE	
SFC2	STC Formation Character – Upper Dipole	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	680.708	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
WEDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F

WFDTSF1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTSF2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSF3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSF4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSFX	SAMX Waveform Delta for Spectrum	0	US/F
WFLLSF1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLLSF2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLSF3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLSF4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSFX	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	
WFULSF1	SAM1 Waveform Upper Limit for Spectrum	20000	US
WFULSF2	SAM2 Waveform Upper Limit for Spectrum	20000	US
WFULSF3	SAM3 Waveform Upper Limit for Spectrum	20000	US
WFULSF4	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	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			
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









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 DEG F
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	-0.000709632
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	0.988444	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00177	
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	17.0393	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	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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
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
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	

FDE1	Firing Delay 1	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	LCAL	
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	680.708	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
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLSPX	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	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	

GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	YES	
HSCO	Hole Size Correction Option	BARITE	BARITE	
ISSBAR	Barite Mud Switch	BARITE	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	LIMESTONE	LIMESTONE	
MATR	Rock Matrix for Neutron Porosity Corrections	NO	NO	
MCCO	Mud Cake Correction Option	BARI	BARI	
MCOR	Mud Correction	YES	YES	
MWCO	Mud Weight Correction Option	NO	NO	
PTCO	Pressure/Temperature Correction Option	SOCN	SOCN	
SDAT	Standoff Data Source	55	55	DEGF
SHT	Surface Hole Temperature	0.5	0.5	IN
SOCN	Standoff Distance	NO	NO	
SOCO	Standoff Correction Option	Eccentered	Eccentered	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Standard_EDTS	Standard_EDTS	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE			
System and Miscellaneous				
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth		
BS	Bit Size	9.875	9.875	IN
BSAL	Borehole Salinity	38000.00	38000.00	PPM
CSIZ	Current Casing Size	5.500	5.500	IN
CWEI	Casing Weight	168.00	168.00	LB/F
DFD	Drilling Fluid Density	1.26	1.26	G/C3
DO	Depth Offset for Playback	0.0	0.0	M
FLEV	Fluid Level	-50000.00	-50000.00	M
MST	Mud Sample Temperature	23.00	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	NO	
PP	Playback Processing	RECOMPUTE	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	1.0000	OHMM
TD	Total Depth	12409.8	12409.8	FT
TDD	Total Depth - Driller	4367.00	4367.00	M
TDL	Total Depth - Logger	4367.00	4367.00	M
TWS	Temperature of Connate Water Sample	37.78	37.78	DEGC

Format: MSS\_Logging Vertical Scale: 1:200 Graphics File Created: 09-Nov-2017 07:56

## OP System Version: 19C0-187

MSS_LDEO-A	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	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09-Nov-2017 07:56		
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56		

Company: International Ocean Discovery Program Well: Expedition 369, Site U1514C

## Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

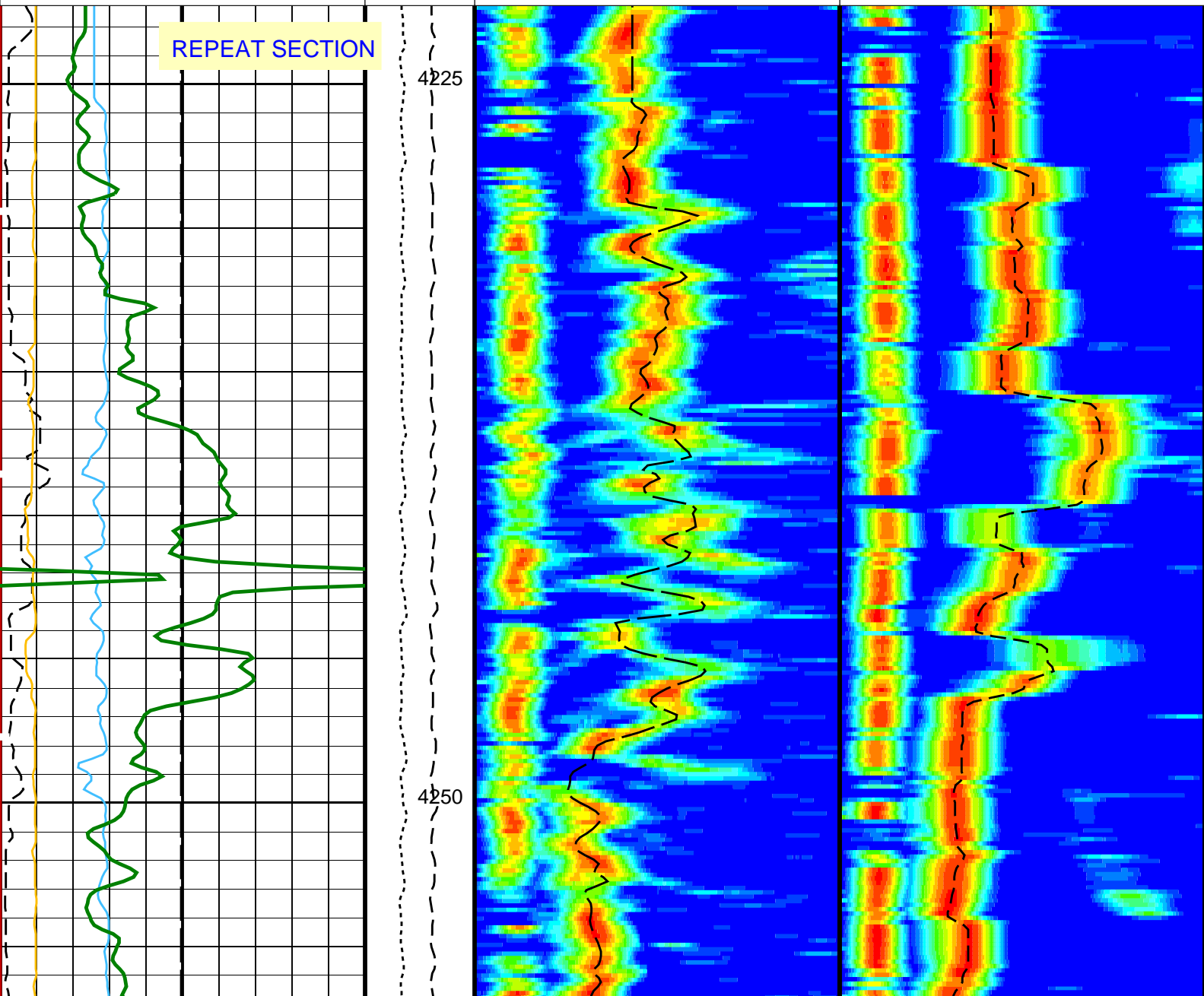
DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09-Nov-2017 07:56	4366.3 M	4222.2 M
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56	4366.3 M	4222.2 M

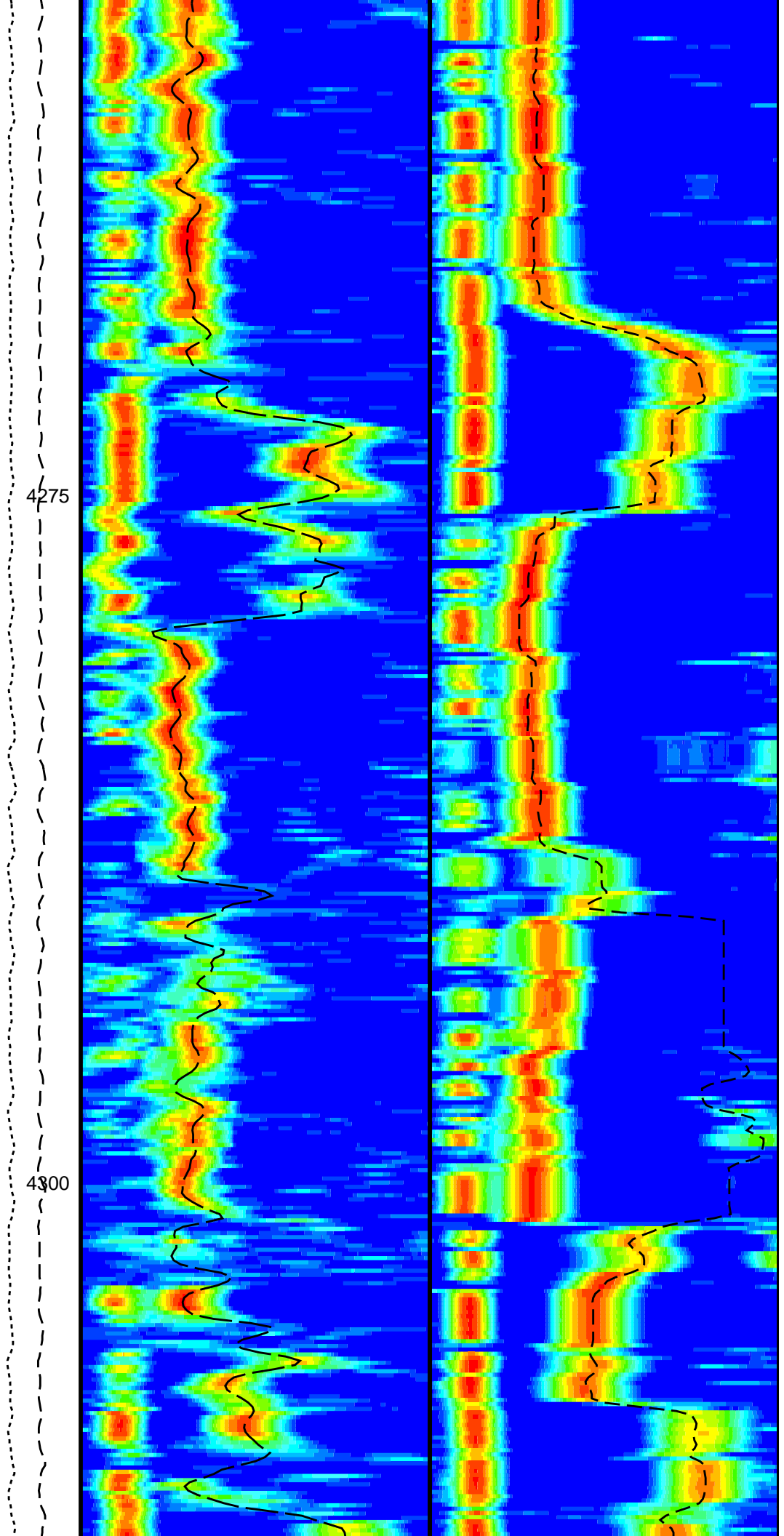
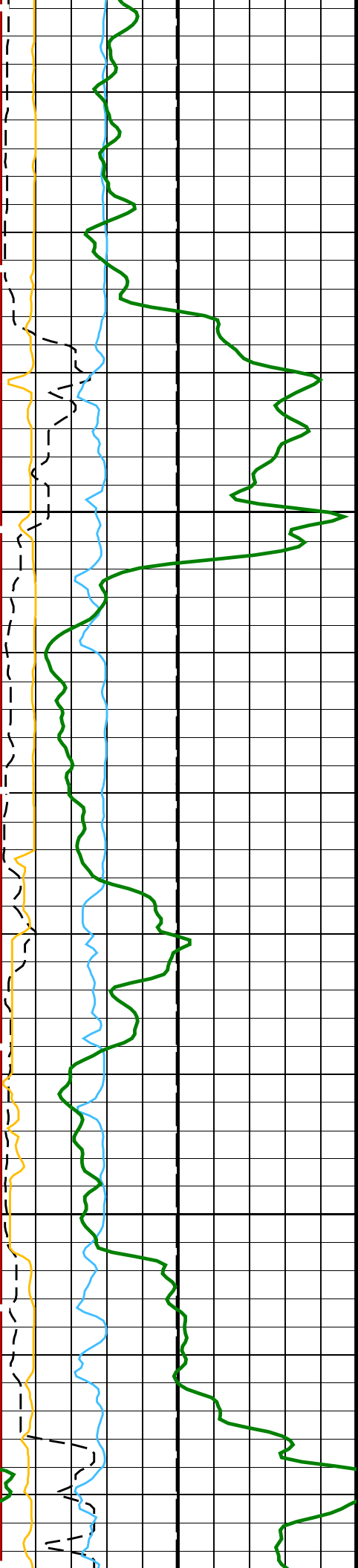
## OP System Version: 19C0-187

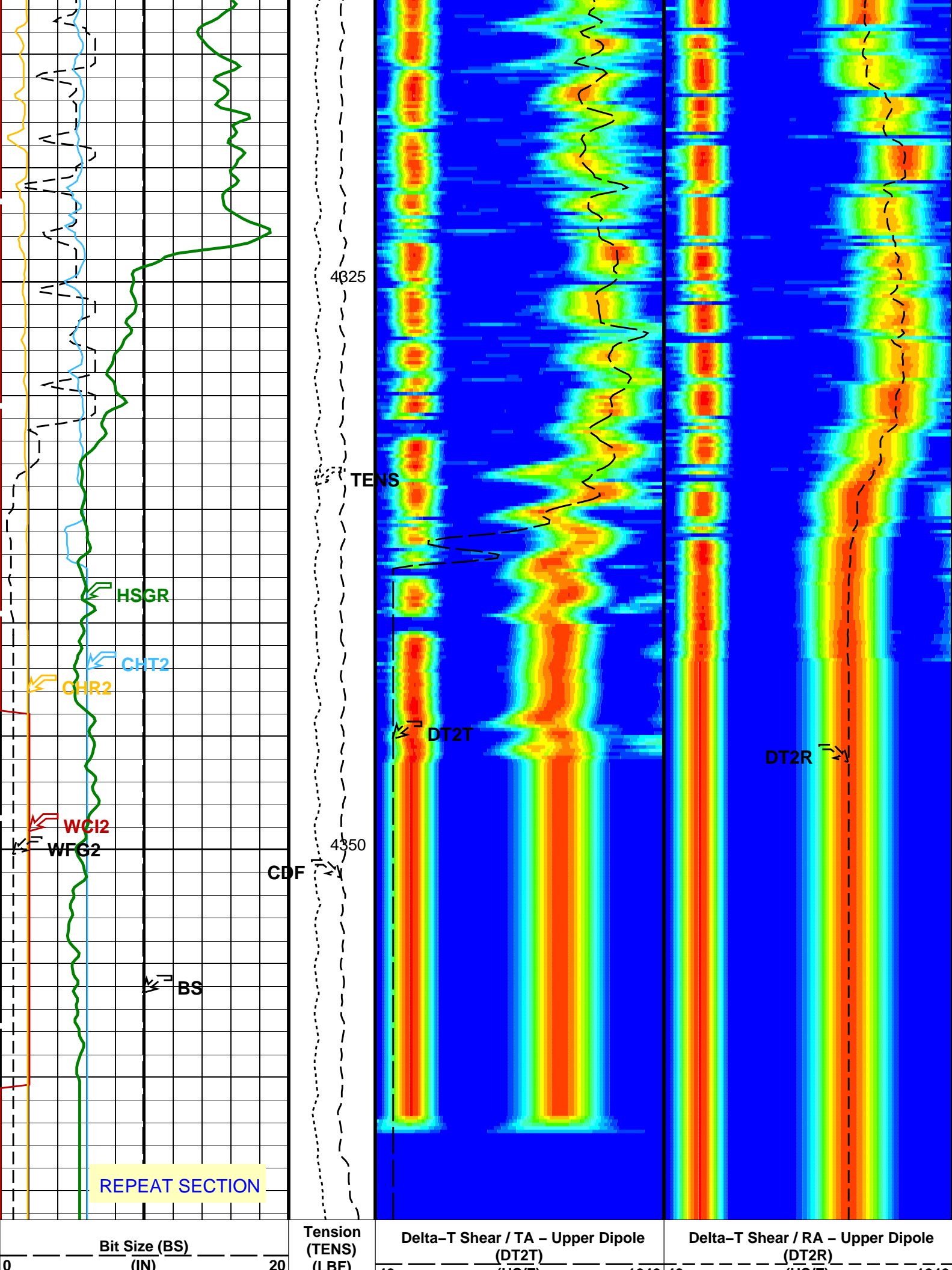
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

## PIP SUMMARY

HNGS Spectroscopy Gamma Ray (HSGR)			
0	(GAPI)	100	
Peak Coherence / TA – Upper Dipole (CHT2)			
-2	(-----)	8	
Peak Coherence / RA – Upper Dipole (CHR2)			
0	(-----)	10	
Waveform Data Copy Indicator 2 – Upper Dipole (WCI2)			
0	(-----)	10	
SAM2 Waveform Gain (WFG2) 0 ----- 1000 (-----)		Calibrated Downhole Force (CDF) (LBF) 5000 0	Min Amplitude Max Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F) 40 1040
Bit Size (BS) 0 ----- 20 (IN)		Tension (TENS) (LBF) 10000 0	Min Amplitude Max Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F) 40 1040
Delta-T Shear / TA – Upper Dipole (DT2T) (US/F) 40 ----- 1040		Delta-T Shear / RA – Upper Dipole (DT2R) (US/F) 40 ----- 1040	









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	
BHS	EDTC-B: Enhanced DTS Cartridge		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	LCAL	
BS	System and Miscellaneous		
DFD	Bit Size	9.875	IN
DO	Drilling Fluid Density	1.26	G/C3
PP	Depth Offset for Playback	0.0	M
	Playback Processing	RECOMPUTE	

Format: DSST\_UPPER\_DIPOLE\_RC\_TR\_VDL\_COLOR      Vertical Scale: 1:200      Graphics File Created: 09-Nov-2017 07:56

### OP System Version: 19C0-187

MSS_LDEO-A	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	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09-Nov-2017 07:56		
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56		

Company: International Ocean Discovery Program      Well: Expedition 369, Site U1514C

### Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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### Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09-Nov-2017 07:56	4366.3 M	4222.2 M
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56	4366.3 M	4222.2 M

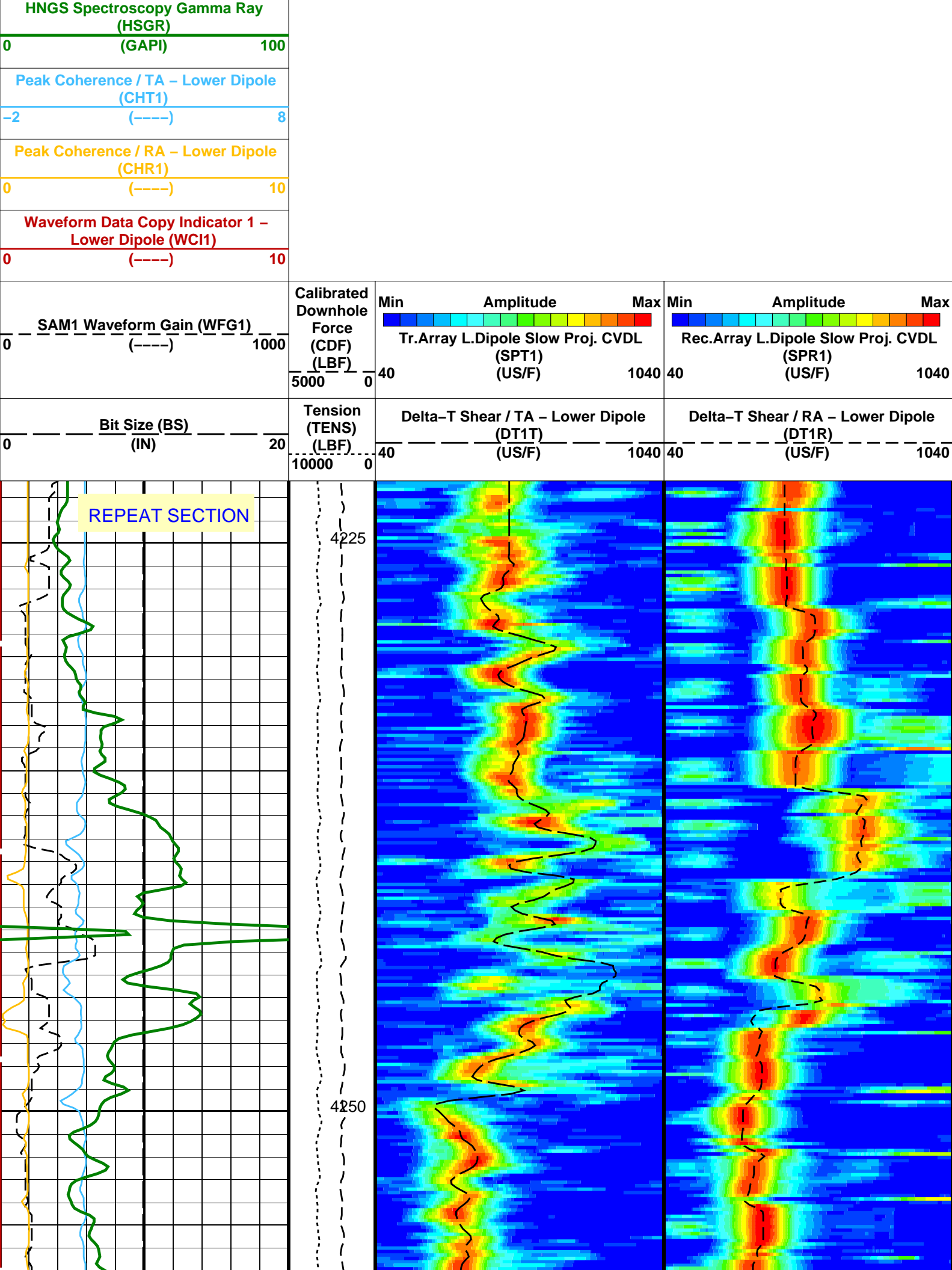
### OP System Version: 19C0-187

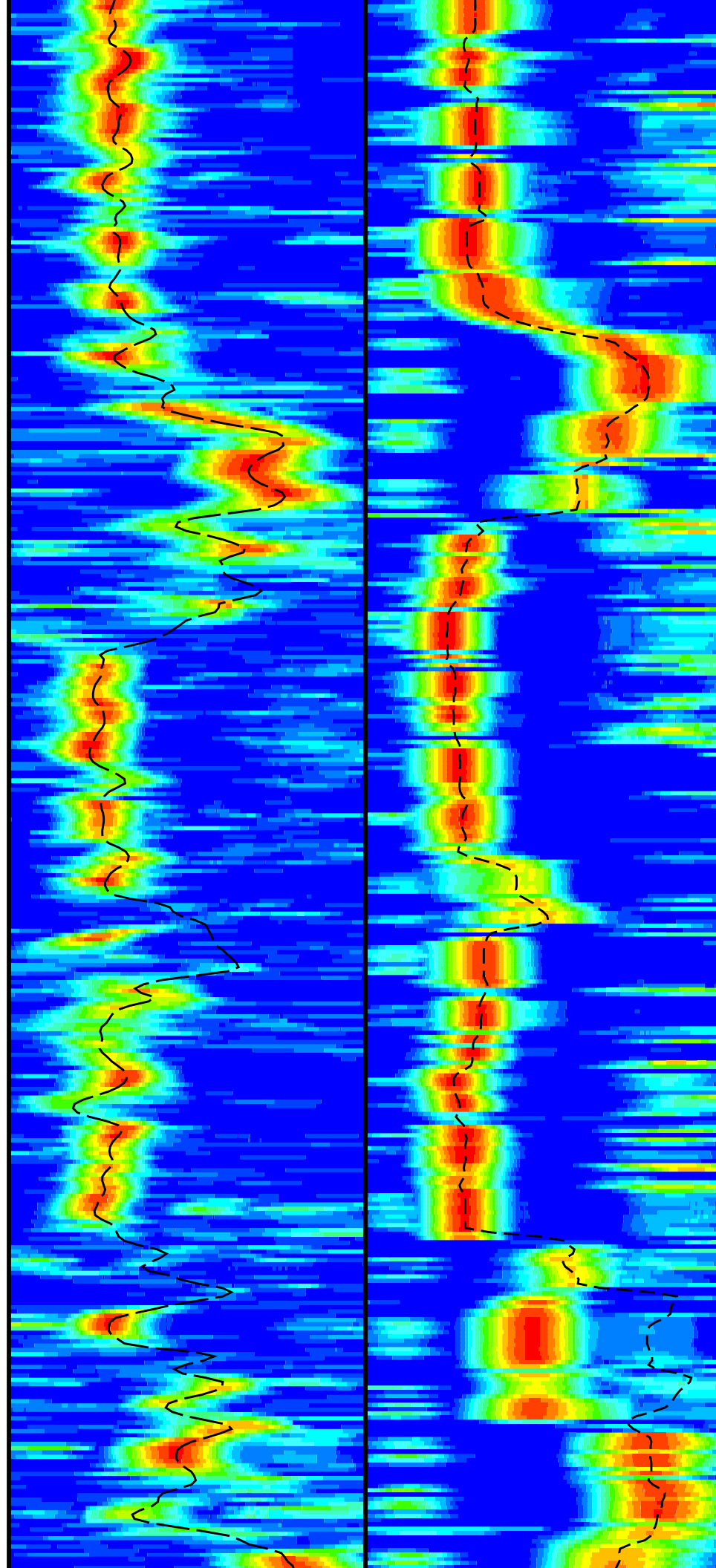
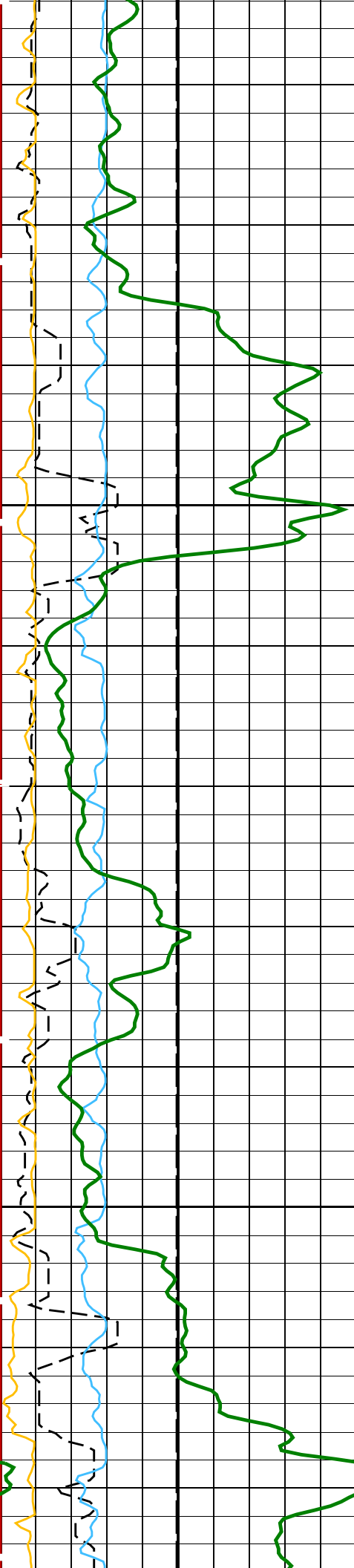
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

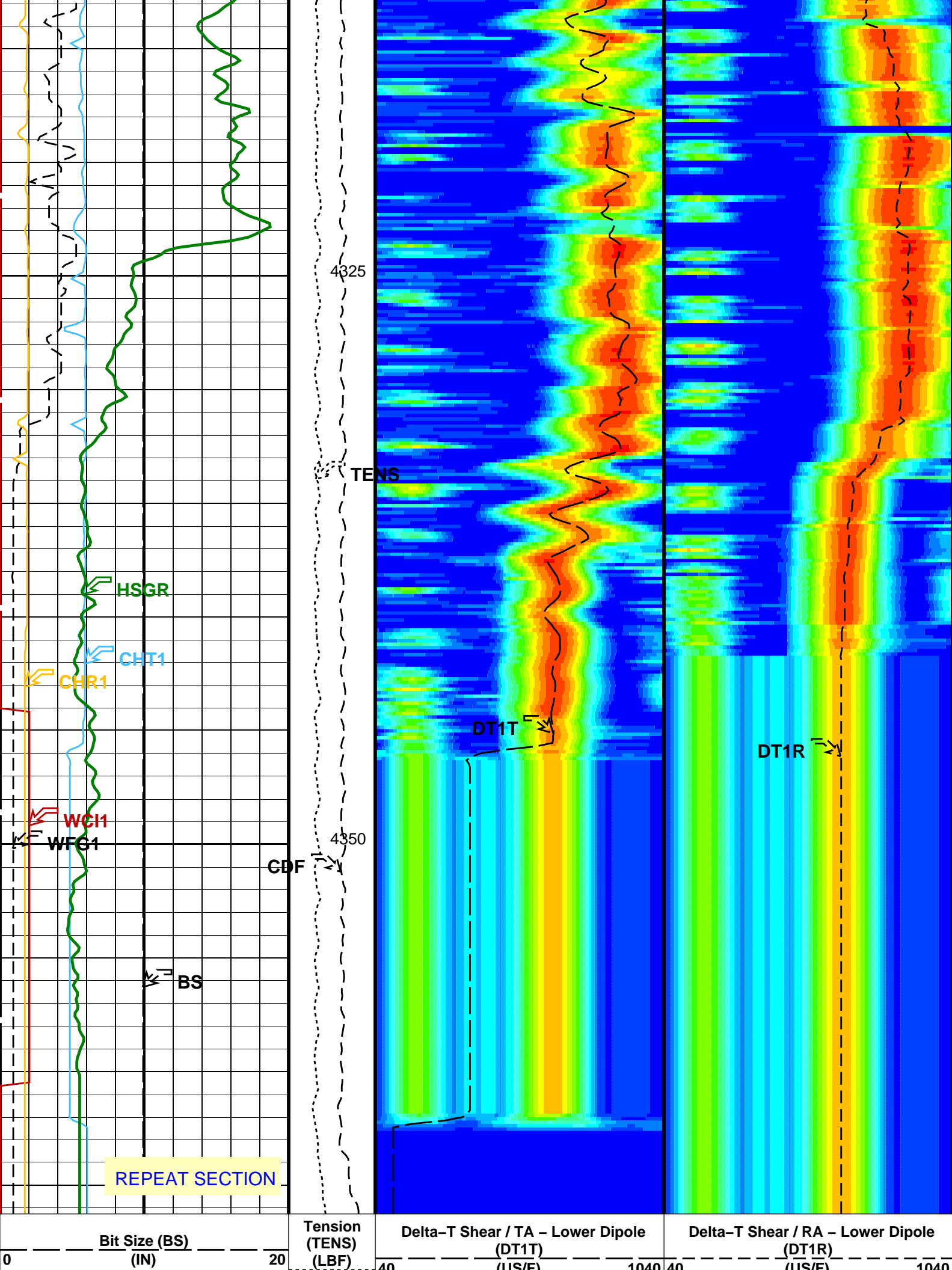
### PIP SUMMARY

Time Mark Every 60 S









	0	10000	Min	Amplitude	Max	Min	Amplitude	Max
SAM1 Waveform Gain (WFG1) (-----)	0	10000	Tr.Array L.Dipole Slow Proj. CVDL (SPT1) (US/F)			Rec.Array L.Dipole Slow Proj. CVDL (SPR1) (US/F)		
	0	10000	40		1040	40		1040
Waveform Data Copy Indicator 1 – Lower Dipole (WC1) (-----)	0	10						
Peak Coherence / RA – Lower Dipole (CHR1) (-----)	0	10						
Peak Coherence / TA – Lower Dipole (CHT1) (-----)	-2	8						
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	0	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	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.000709632	
HALF	HNGS Alpha Filter Length	60	IN
HCRC	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	0.988444	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00177	
	HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
	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	LCAL	
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

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	LCAL	
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: 09–Nov–2017 07:56

## OP System Version: 19C0–187

MSS_LDEO–A	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	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09–Nov–2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09–Nov–2017 07:56		
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09–Nov–2017 07:56		

Company: International Ocean Discovery Program      Well: Expedition 369, Site U1514C

## Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09–Nov–2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09–Nov–2017 07:56	4366.3 M	4222.2 M
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09–Nov–2017 07:56	4366.3 M	4222.2 M

## OP System Version: 19C0–187

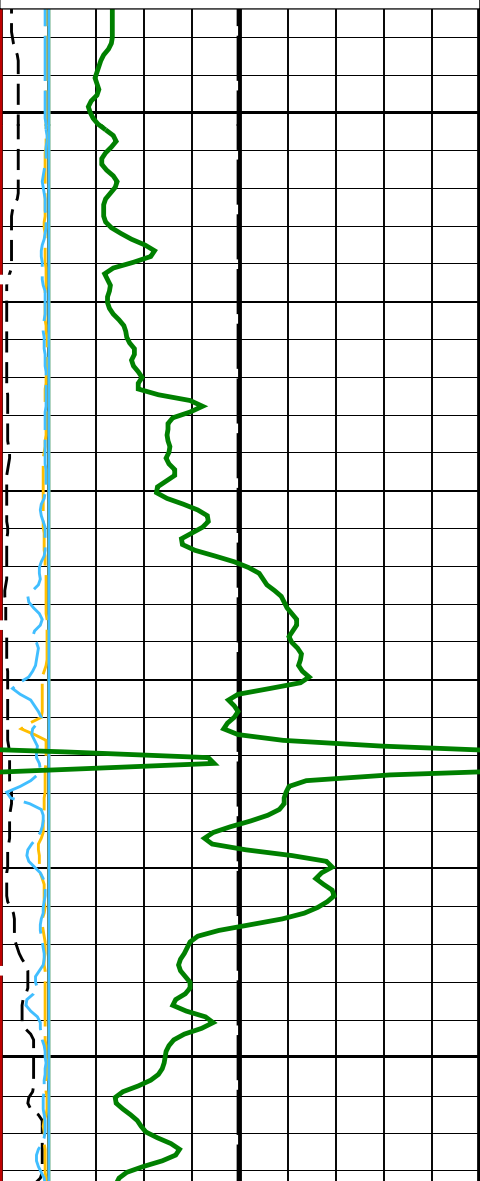
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HNGS–BA	19C0–187	HRLT–B	19C0–187
DSST–B	19C0–187	HLDS	19C0–187
LDSC–B	19C0–187	EDTC–B	SKK–5169–EDTCB

## PIP SUMMARY

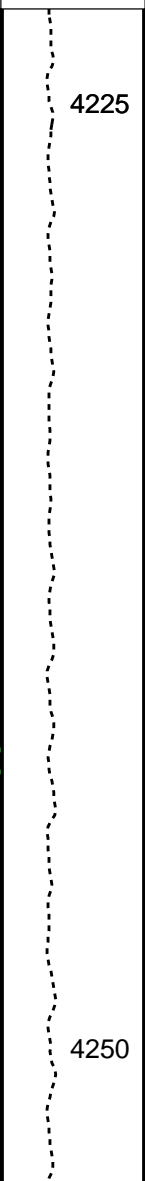
Time Mark Every 60 S

UNGS Spectroscopy Gamma Ray

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)		20

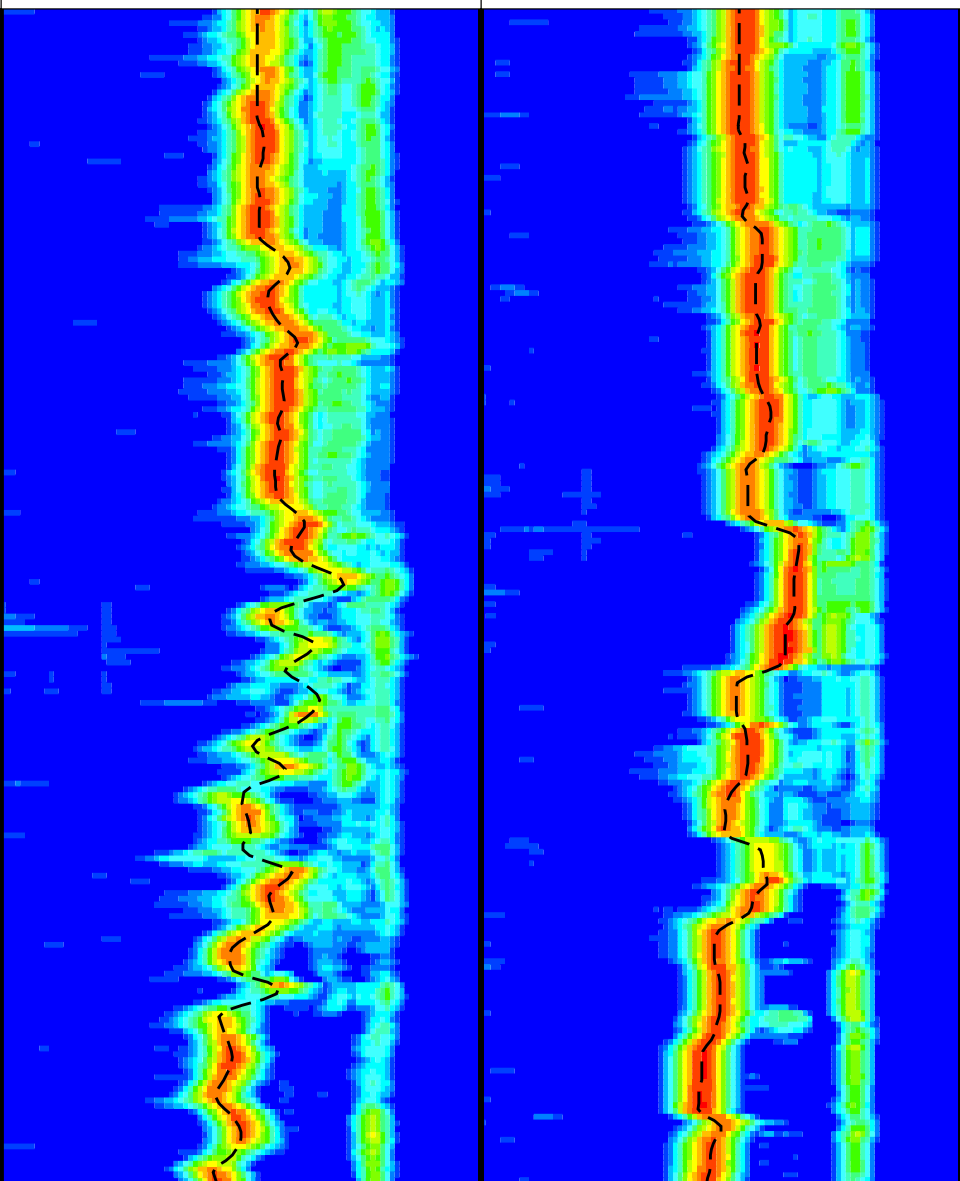


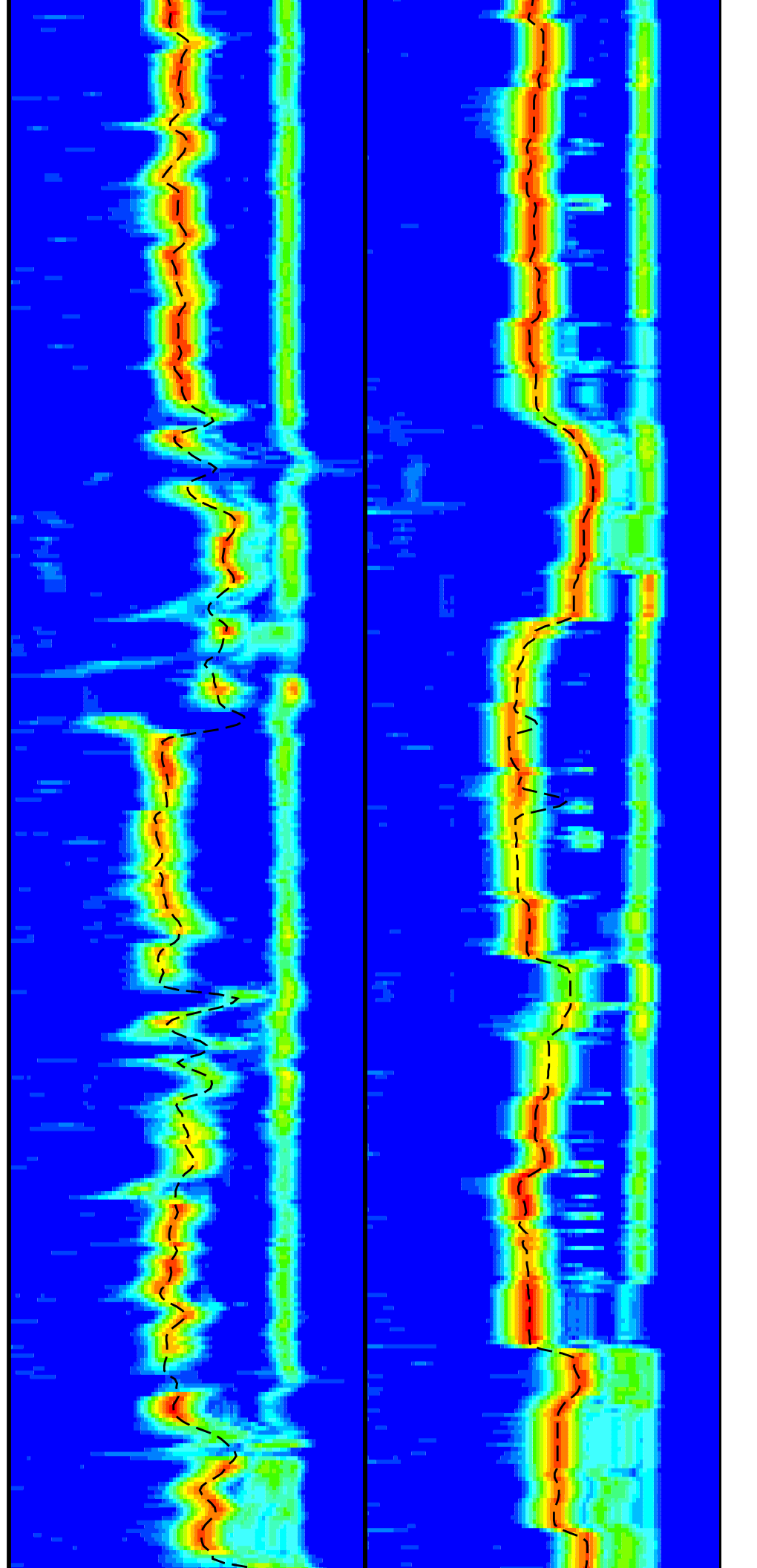
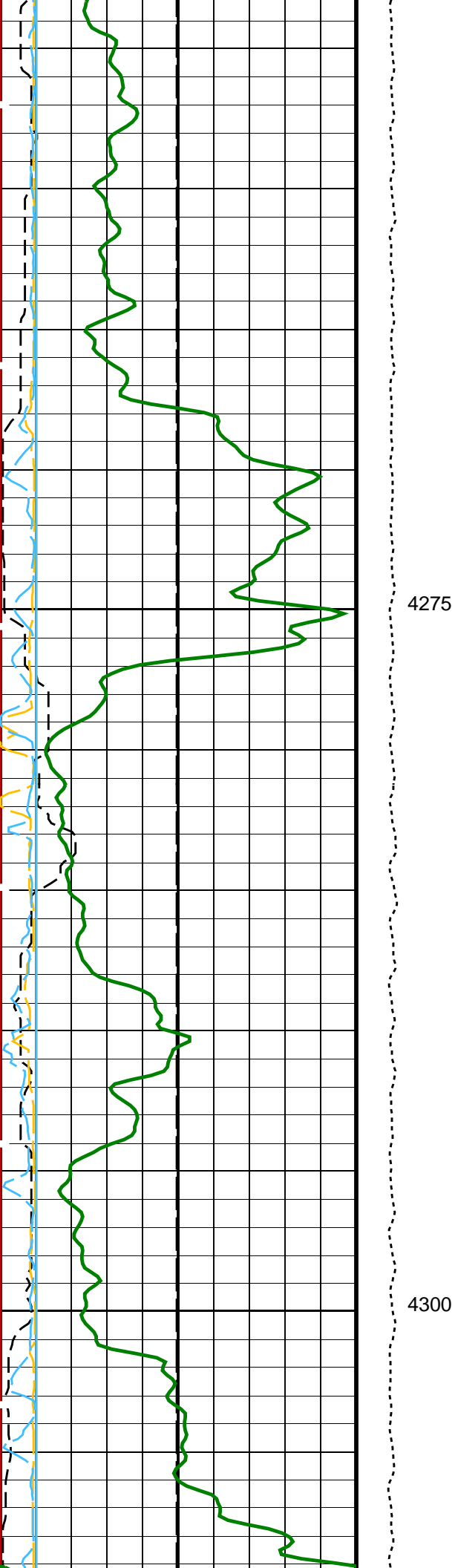
Tension  
(TENS)  
(LBF)

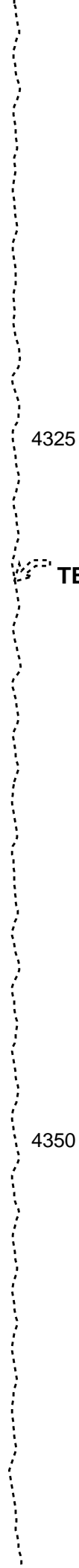
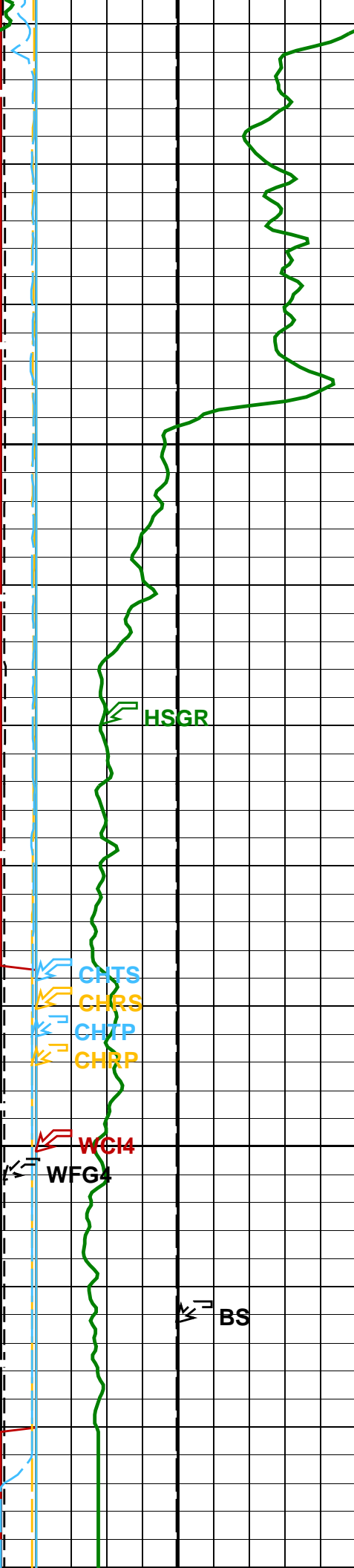


# REPEAT SECTION

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 (DTTP) (US/F)	240	40	Delta-T Comp / RA - P & S (DTRP) (US/F)	240

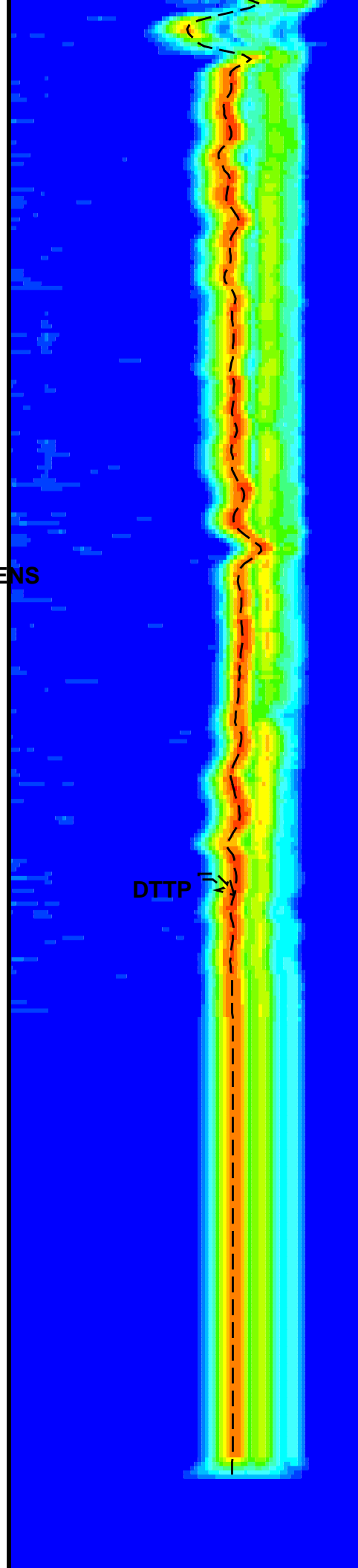




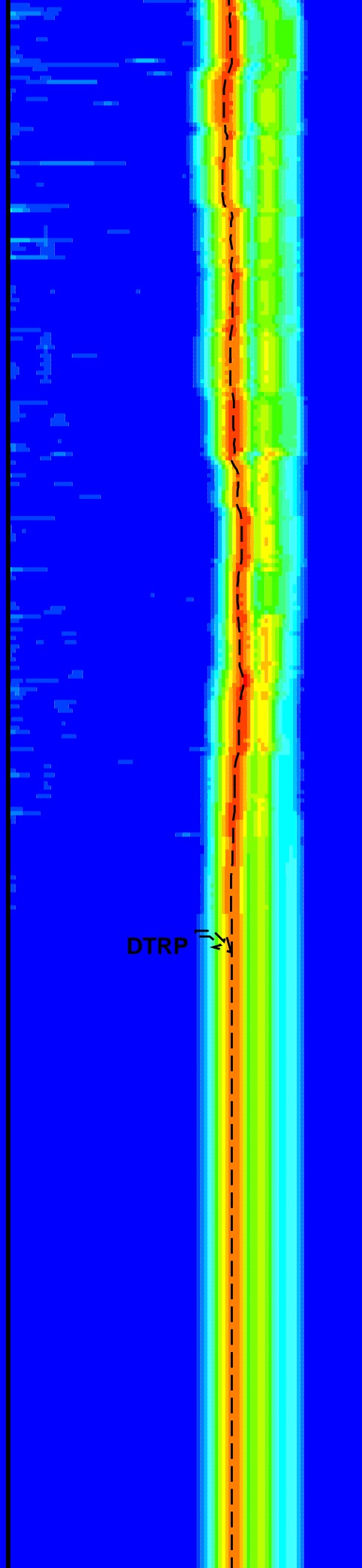


TENS

4350



DTTP



DTRP



<div><div>Bit Size (BS)</div><div>(IN)</div><div>20</div></div>		<div><div>Tension (TENS)</div><div>(LBF)</div><div>10000</div><div>0</div></div>	<div><div>Delta-T Comp / TA – P &amp; S (DTTP)</div><div>(US/F)</div><div>40</div><div>240</div></div>		<div><div>Delta-T Comp / RA – P &amp; S (DTRP)</div><div>(US/F)</div><div>40</div><div>240</div></div>	
<div><div>SAM4 Waveform Gain (WFG4)</div><div>(-----)</div><div>1000</div></div>		<div><div>Delta-T Shear / TA – P &amp; S (DTTS)</div><div>(US/F)</div><div>40</div><div>240</div></div>		<div><div>Delta-T Shear / RA – P &amp; S (DTRS)</div><div>(US/F)</div><div>40</div><div>240</div></div>		
<div><div>Waveform Data Copy Indicator 4 – Monopole P&amp;S (WCI4)</div><div>(-----)</div><div>10</div></div>		<div><div>Min</div><div>Amplitude</div><div>Max</div><div>Tr.Array P&amp;S Slow Proj. CVDL (SPT4)</div><div>(US/F)</div><div>40</div><div>240</div></div>		<div><div>Min</div><div>Amplitude</div><div>Max</div><div>Rec.Array P&amp;S Slow Proj. CVDL (SPR4)</div><div>(US/F)</div><div>40</div><div>240</div></div>		
<div><div>Peak Coherence / RA – P &amp; S Comp (CHRP)</div><div>(-----)</div><div>10</div></div>		<div>REPEAT SECTION</div>				
<div><div>Peak Coherence / TA – P &amp; S Comp (CHTP)</div><div>(-----)</div><div>10</div></div>						
<div><div>Peak Coherence / RA – P &amp; S Shear (CHRS)</div><div>(-----)</div><div>9</div></div>						
<div><div>Peak Coherence / TA – P &amp; S Shear (CHTS)</div><div>(-----)</div><div>9</div></div>						
<div><div>HNGS Spectroscopy Gamma Ray (HSGR)</div><div>(GAPI)</div><div>100</div></div>						

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	LCAL			
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW			
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW			
HABK	HNGS Borehole Potassium Running Average	–0.000709632			
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	0.988444			
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00177			
HRLT–B: High Resolution Laterolog Array – B					
BHS	Borehole Status	OPEN			
GCSE	Generalized Caliper Selection	LCAL			
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		

DOIX	Digitizer Sample Interval X	48	US/F
DTF	Delta-T Fluid	196	
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	LCAL	
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
SLI4	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	LCAL	
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: 09–Nov–2017 07:56

## OP System Version: 19C0–187

MSS_LDEO–A	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	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09–Nov–2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09–Nov–2017 07:56
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09–Nov–2017 07:56

## Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09–Nov–2017 06:09	4366.3 M	4222.1 M
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# Output DLIS Files

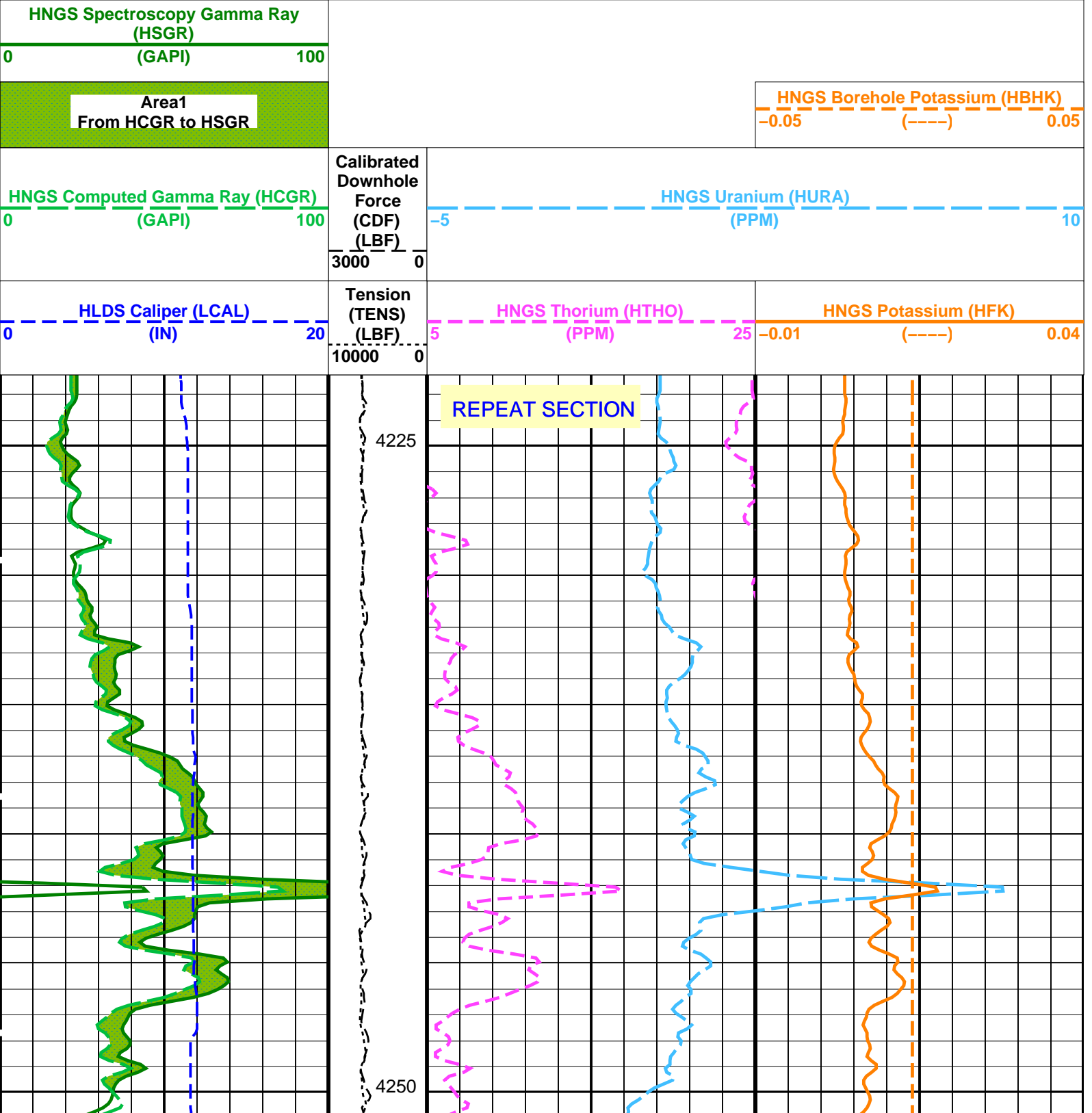
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BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56	4366.3 M	4222.2 M

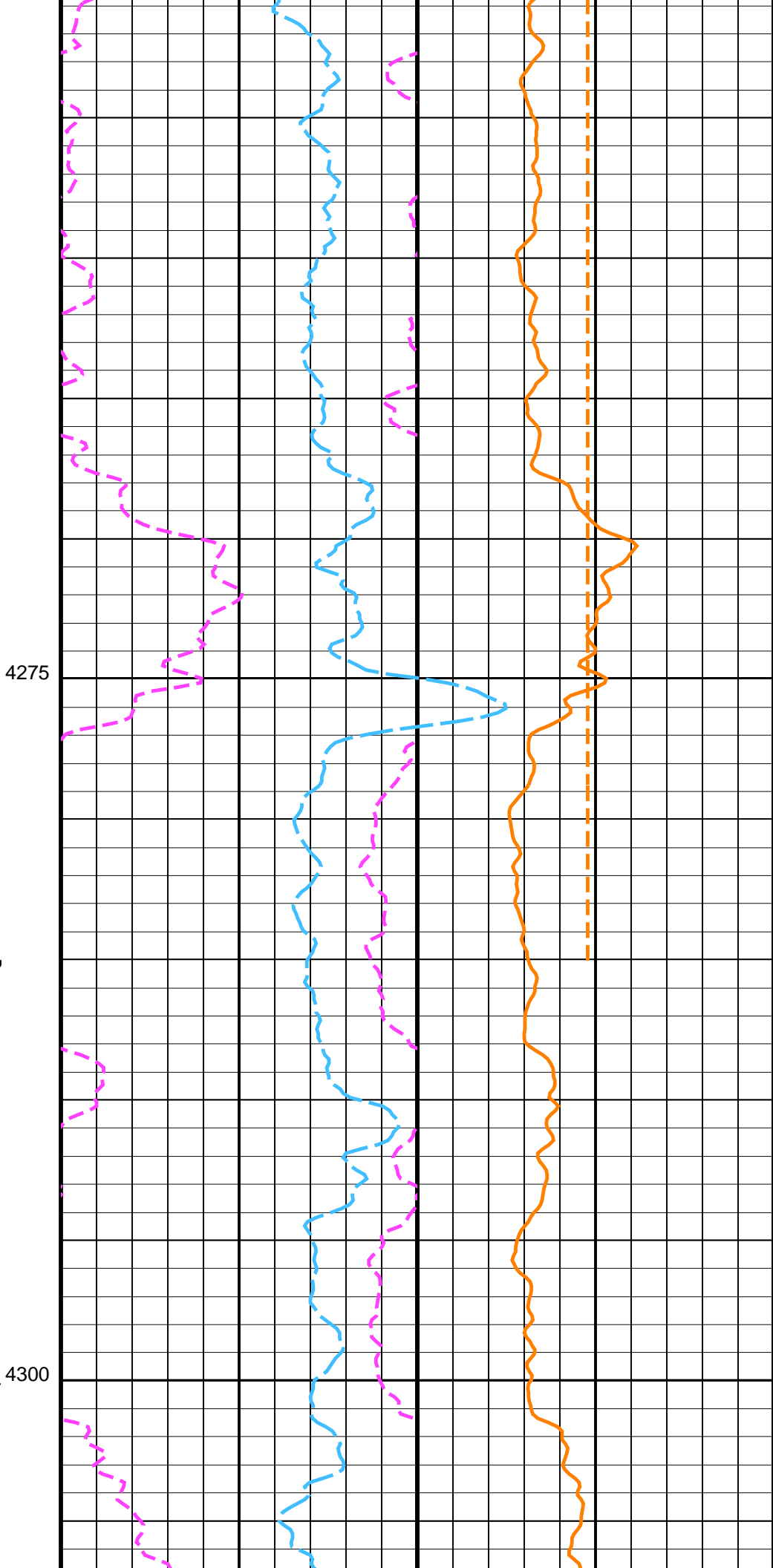
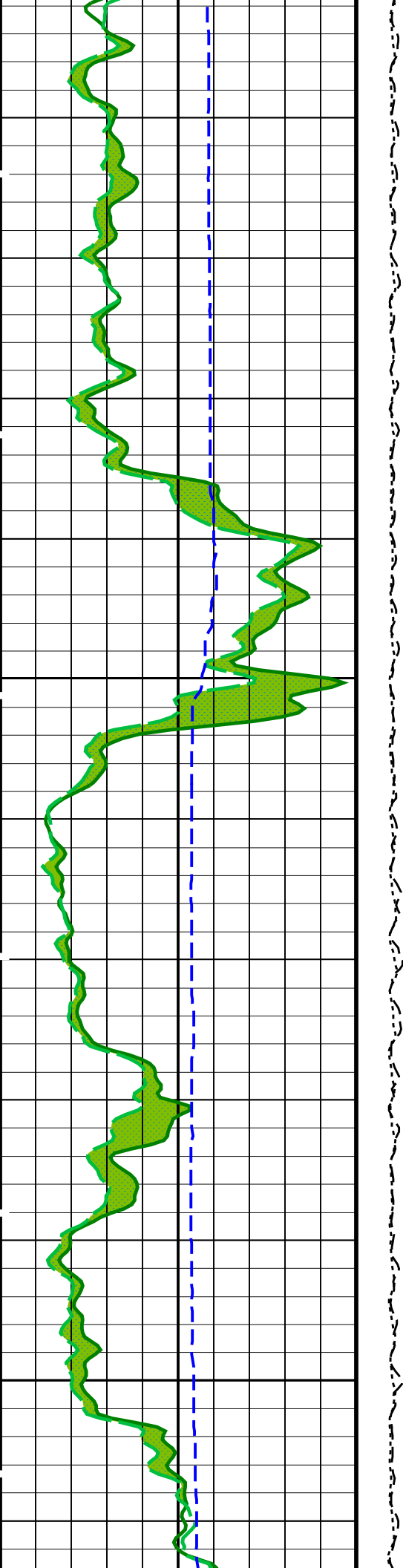
## OP System Version: 19C0-187

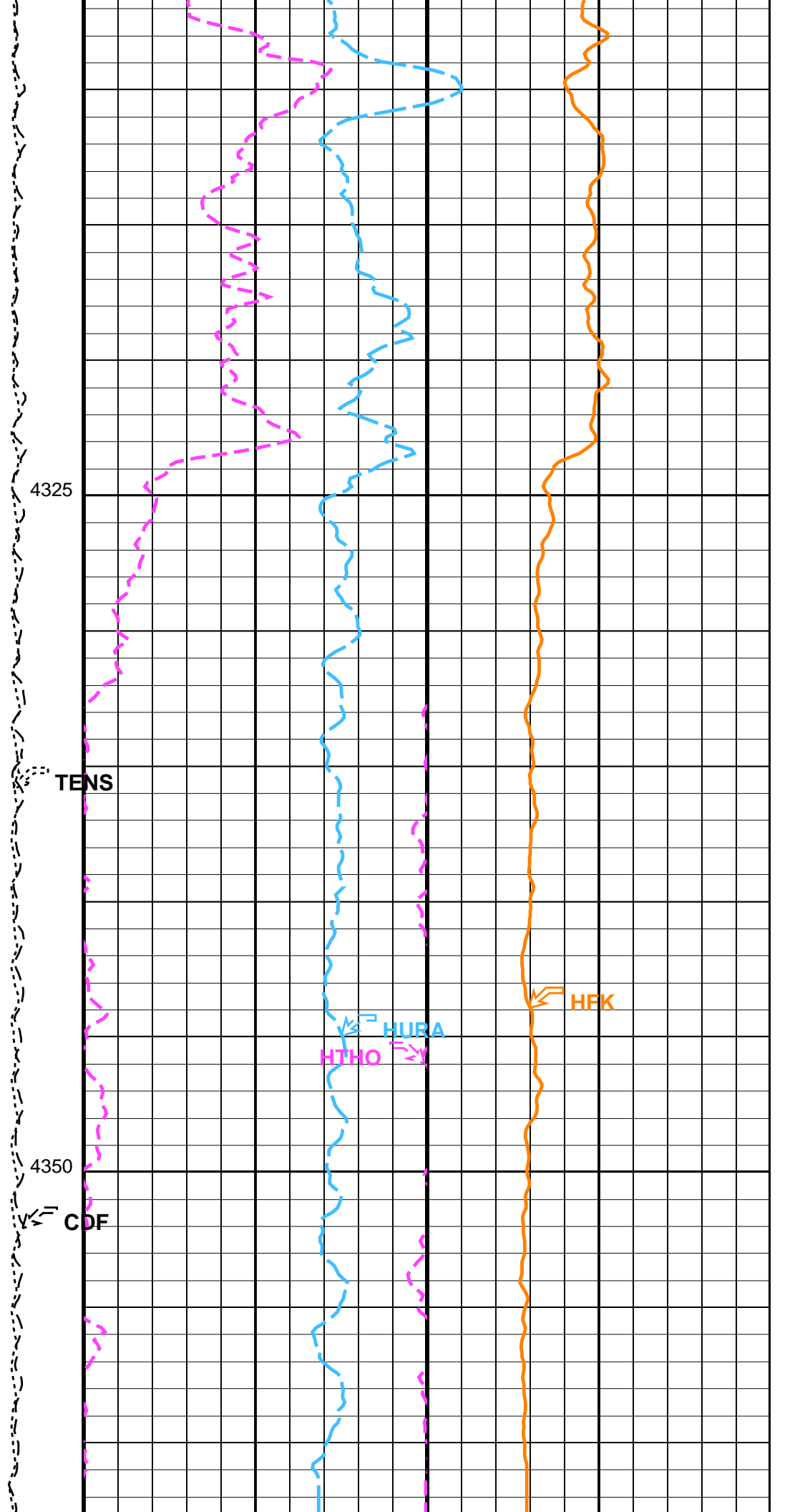
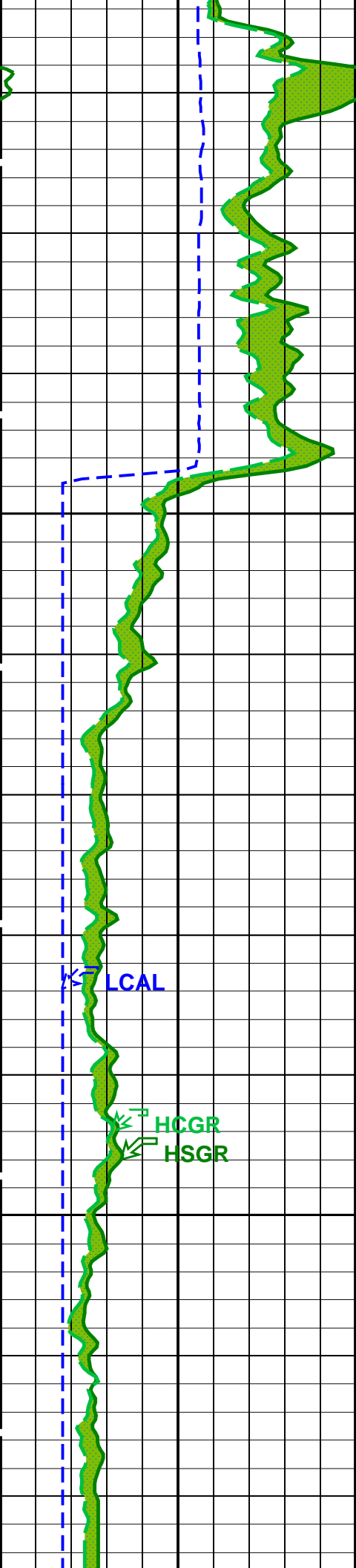
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

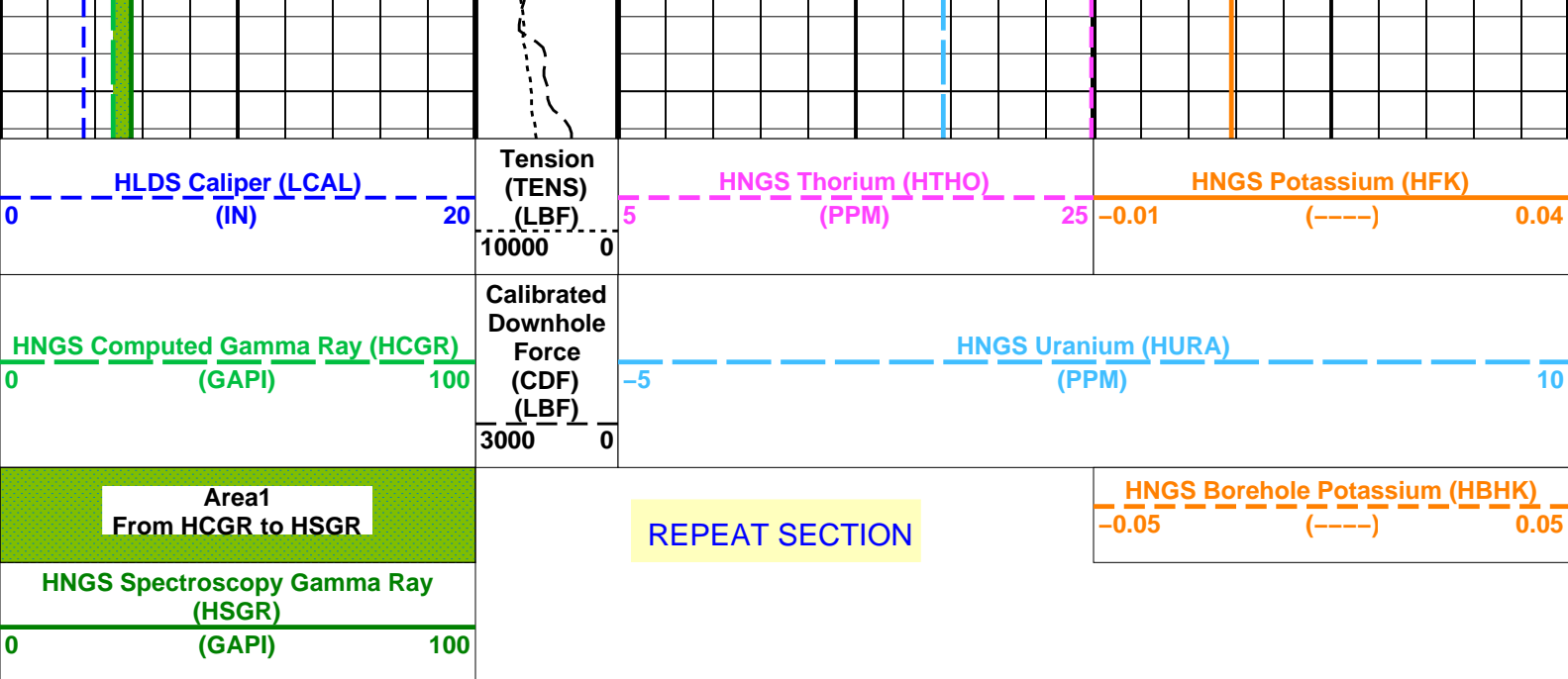
### PIP SUMMARY

Time Mark Every 60 S









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	LCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.000709632	
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	0.988444	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00177	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
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	

OP System Version: 19C0-187

MSS_LDEO-A	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	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09-Nov-2017 07:56
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56

## Input DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

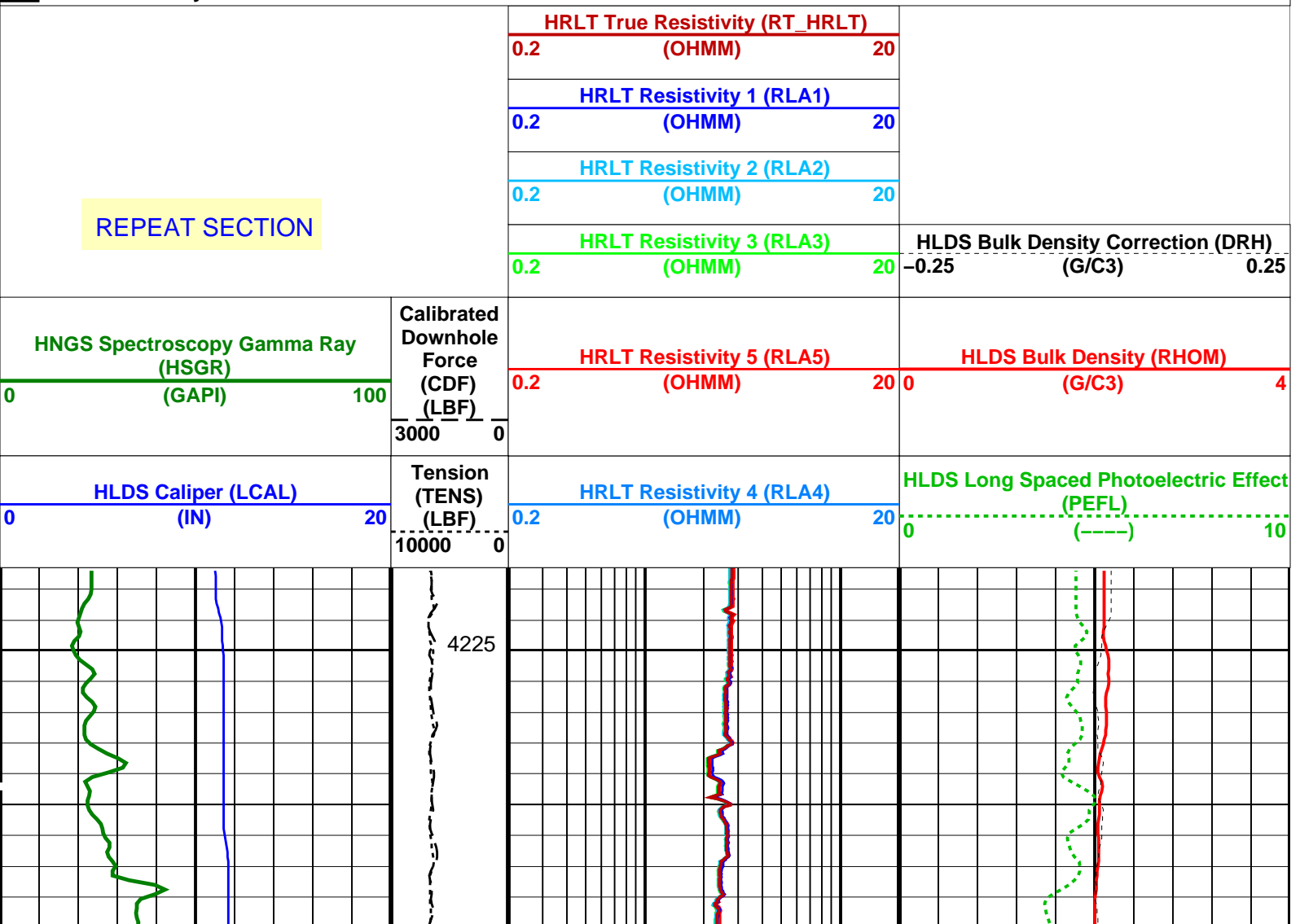
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BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56	4366.3 M	4222.2 M

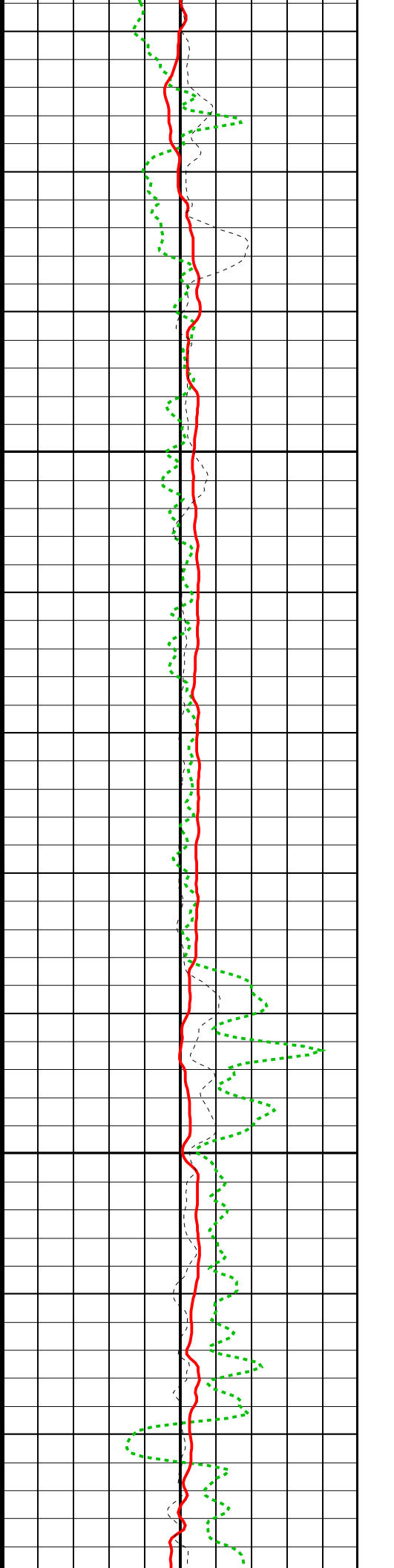
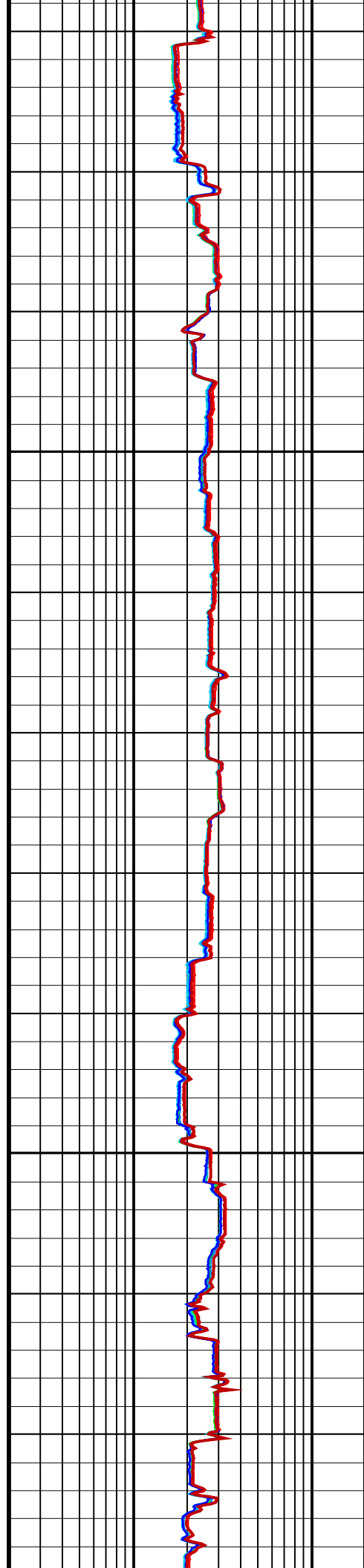
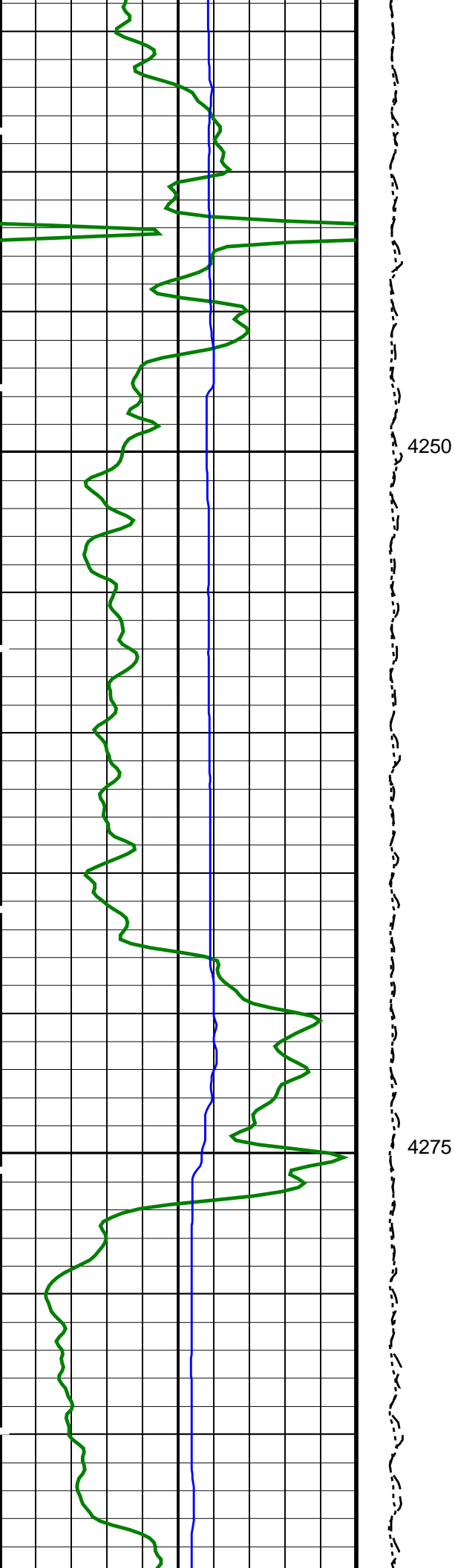
**OP System Version: 19C0-187**

MSS_LDEO-A	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

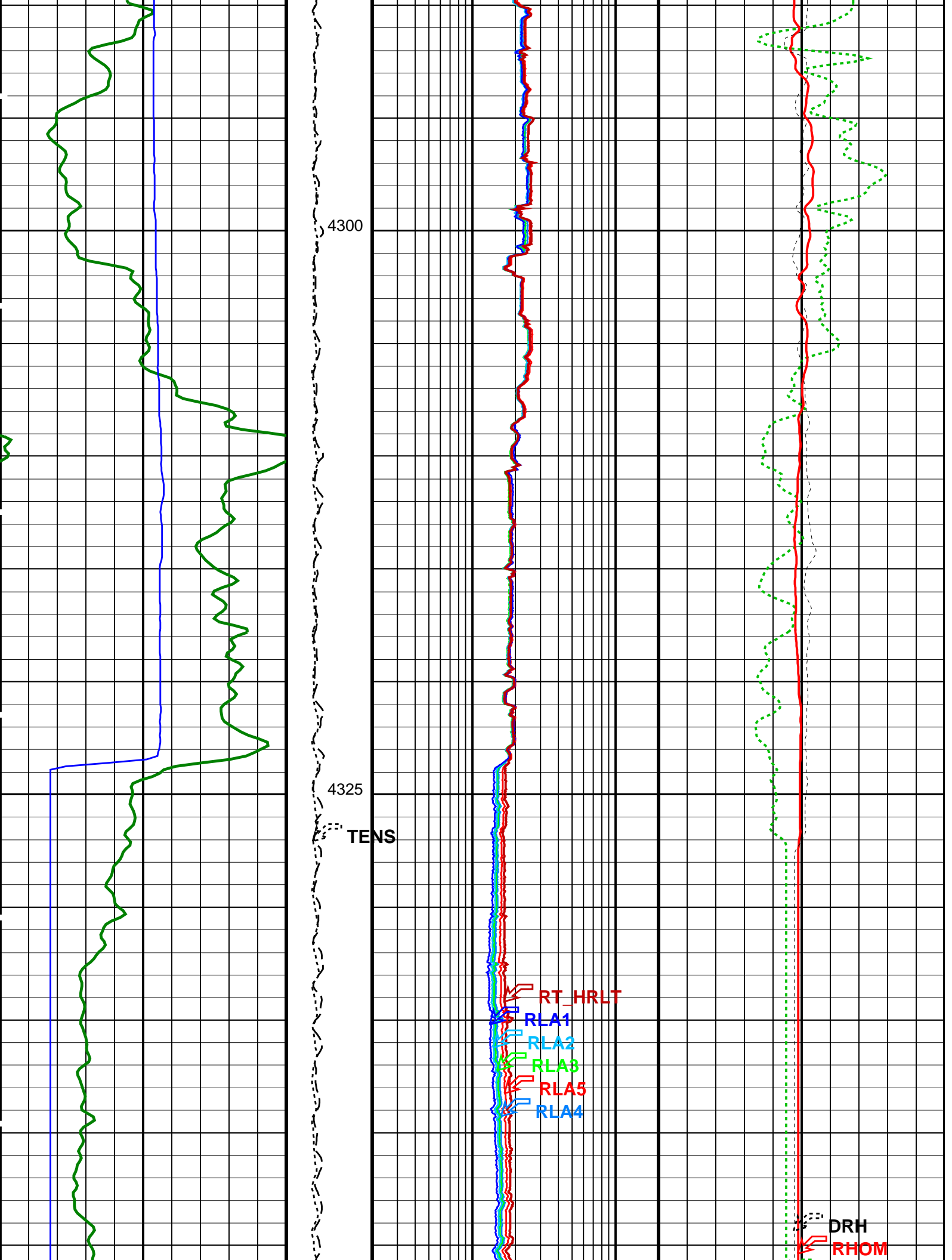
## PIP SUMMARY

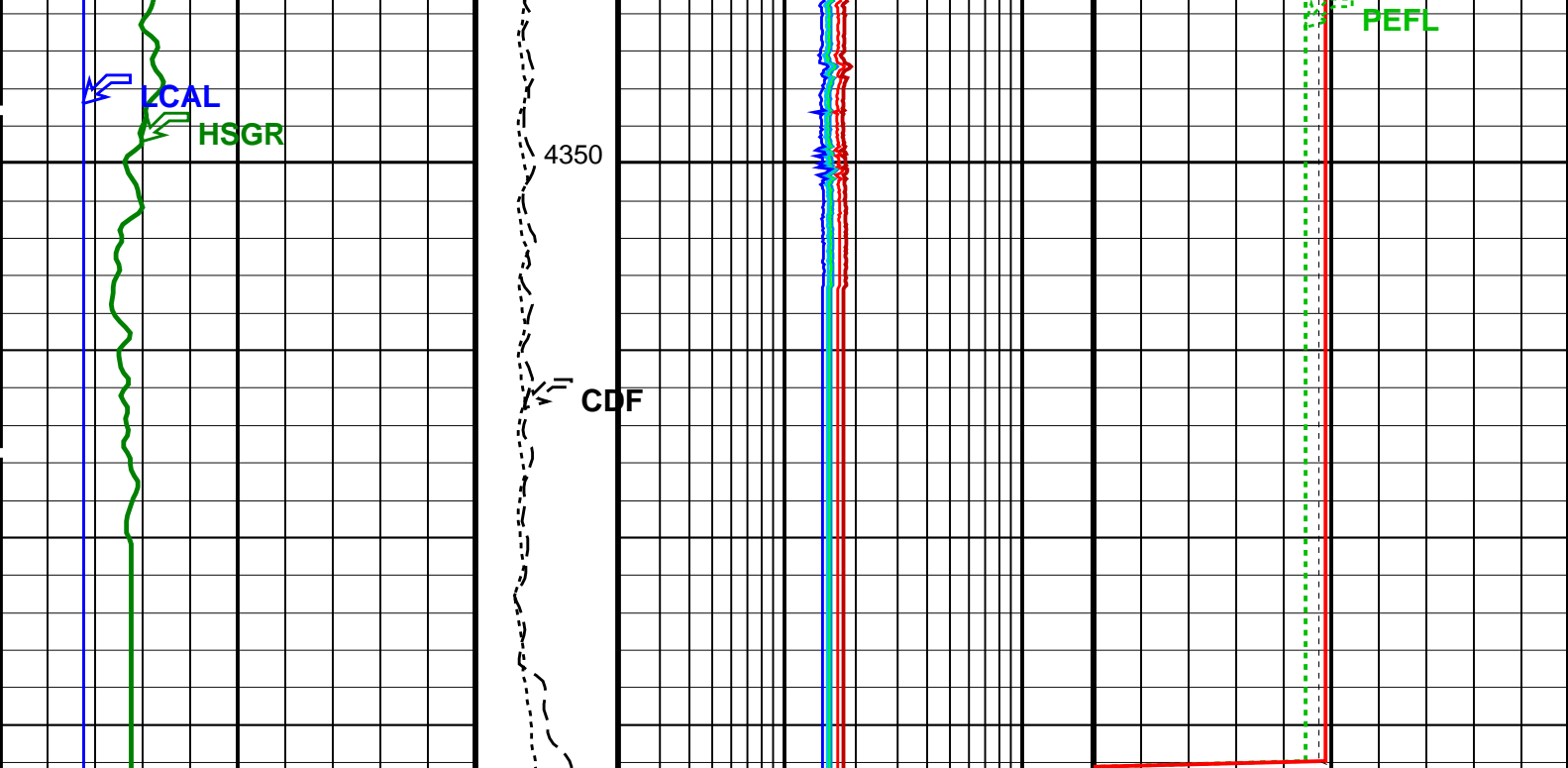
**Time Mark Every 60 S**











<b>HLDS Caliper (LCAL)</b> (IN) 020	<b>Tension (TENS)</b> (LBF) 100000	<b>HRLT Resistivity 4 (RLA4)</b> (OHMM) 0.220	<b>HLDS Long Spaced Photoelectric Effect (PEFL)</b> (-----) 010
<b>HNGS Spectroscopy Gamma Ray (HSGR)</b> (GAPI) 0100	<b>Calibrated Downhole Force (CDF)</b> (LBF) 30000	<b>HRLT Resistivity 5 (RLA5)</b> (OHMM) 0.220	<b>HLDS Bulk Density (RHOM)</b> (G/C3) 04
<b>REPEAT SECTION</b>		<b>HRLT Resistivity 3 (RLA3)</b> (OHMM) 0.220	<b>HLDS Bulk Density Correction (DRH)</b> (G/C3) -0.250.25
		<b>HRLT Resistivity 2 (RLA2)</b> (OHMM) 0.220	
		<b>HRLT Resistivity 1 (RLA1)</b> (OHMM) 0.220	
		<b>HRLT True Resistivity (RT_HRLT)</b> (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	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	-0.000709632	
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	0.988444	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00177	
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	17.0393	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	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GRGD	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	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROGINV	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	
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	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	

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	LCAL	
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	680.708	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
WFDTSP1	SAM1 Waveform Delta for Spectrum	0	US/F
WFDTSP2	SAM2 Waveform Delta for Spectrum	0	US/F
WFDTSP3	SAM3 Waveform Delta for Spectrum	0	US/F
WFDTSP4	SAM4 Waveform Delta for Spectrum	0	US/F
WFDTSPX	SAMX Waveform Delta for Spectrum	0	US/F
WFLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLSPX	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	
CSCC	Casing & Cement Thickness Correction Option	NO	

CCCC	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			
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	12409.8	FT
TDD	Total Depth - Driller	4367.00	M
TDL	Total Depth - Logger	4367.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 09-Nov-2017 07:56

## OP System Version: 19C0-187

MSS_LDEO-A	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	MSS_LDEO_NGS_HRLA_009LUP	FN:13	PRODUCER	09-Nov-2017 06:09	4366.3 M	4222.1 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015PUP	FN:23	PRODUCER	09-Nov-2017 07:56
BACKUP_	MSS_LDEO_NGS_HRLA_015PUP	FN:24	PRODUCER	09-Nov-2017 07:56

## Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check							
Master: 24-Sep-2017 3:26 Before: 9-Oct-2017 23:50 After: 24-Sep-2017 3:36							
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: 24–Sep–2017 3:26			Before: 9–Oct–2017 23:50		After: 24–Sep–2017 3:36			
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: 24–Sep–2017 3:26			Before: 9–Oct–2017 23:50		After: 24–Sep–2017 3:36			
Coincidence Count Rate Ratio	1.000	1.020	1.012	1.014	0.001632	0.05000		
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration								
Master: 24–Sep–2017 3:22								
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: 24–Sep–2017 3:22								
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	--	--	--	--		
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01								
Before: 9–Nov–2017 2:52 After: 9–Nov–2017 9:13								
HRLT M0–M1 Voltage Plus – 0	0	N/A	–318.5	–318.3	0.2565	9.681	UV	
HRLT M0–M1 Voltage Plus – 1	0	N/A	–330.0	–328.9	1.126	9.681	UV	
HRLT M0–M1 Voltage Plus – 2	0	N/A	–337.8	–336.4	1.377	9.681	UV	
HRLT M0–M1 Voltage Plus – 3	0	N/A	–328.4	–327.5	0.9164	9.681	UV	
HRLT M0–M1 Voltage Plus – 4	0	N/A	–319.4	–319.3	0.1038	9.681	UV	
HRLT M0–M1 Voltage Plus – 5	0	N/A	–321.4	–321.2	0.2817	9.681	UV	
HRLT M0–M1 Voltage Plus – 6	0	N/A	319.0	318.3	–0.7544	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: 9–Nov–2017 2:52 After: 9–Nov–2017 9:13								
HRLT M1–M2 Voltage Plus – 0	0	N/A	1740	1736	–3.596	53.42	UV	
HRLT M1–M2 Voltage Plus – 1	0	N/A	1810	1801	–8.223	53.42	UV	
HRLT M1–M2 Voltage Plus – 2	0	N/A	1845	1835	–9.855	53.42	UV	
HRLT M1–M2 Voltage Plus – 3	0	N/A	1792	1785	–7.172	53.42	UV	
HRLT M1–M2 Voltage Plus – 4	0	N/A	1742	1739	–2.786	53.42	UV	
HRLT M1–M2 Voltage Plus – 5	0	N/A	1754	1750	–3.716	53.42	UV	
HRLT M1–M2 Voltage Plus – 6	0	N/A	–1757	–1751	6.340	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: 9–Nov–2017 2:52 After: 9–Nov–2017 9:13								
HRLT M2–M3 Voltage Plus – 0	0	N/A	1732	1729	–3.615	53.42	UV	
HRLT M2–M3 Voltage Plus – 1	0	N/A	1812	1804	–8.630	53.42	UV	
HRLT M2–M3 Voltage Plus – 2	0	N/A	1849	1839	–9.950	53.42	UV	
HRLT M2–M3 Voltage Plus – 3	0	N/A	1800	1792	–7.466	53.42	UV	
HRLT M2–M3 Voltage Plus – 4	0	N/A	1744	1741	–2.521	53.42	UV	
HRLT M2–M3 Voltage Plus – 5	0	N/A	1757	1753	–3.596	53.42	UV	
HRLT M2–M3 Voltage Plus – 6	0	N/A	–1749	–1742	6.527	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: 9–Nov–2017 2:52 After: 9–Nov–2017 9:13								
HRLT A3–A4 Voltage Plus – 0	0	N/A	68620	68530	–89.70	2100	UV	
HRLT A3–A4 Voltage Plus – 1	0	N/A	71620	71320	–298.1	2100	UV	
HRLT A3–A4 Voltage Plus – 2	0	N/A	73390	73020	–363.1	2100	UV	
HRLT A3–A4 Voltage Plus – 3	0	N/A	71680	71440	–233.0	2100	UV	
HRLT A3–A4 Voltage Plus – 4	0	N/A	69420	69350	–62.84	2100	UV	
HRLT A3–A4 Voltage Plus – 5	0	N/A	69940	69830	–113.3	2100	UV	
HRLT A3–A4 Voltage Plus – 6	0	N/A	–68150	–67950	190.7	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: 9–Nov–2017 2:52 After: 9–Nov–2017 9:13								
HRLT A4–A5 Voltage Plus – 0	0	N/A	68710	68620	–92.21	2100	UV	
HRLT A4–A5 Voltage Plus – 1	0	N/A	71820	71540	–282.5	2100	UV	
HRLT A4–A5 Voltage Plus – 2	0	N/A	73570	73200	–366.4	2100	UV	
HRLT A4–A5 Voltage Plus – 3	0	N/A	71830	71600	–232.3	2100	UV	
HRLT A4–A5 Voltage Plus – 4	0	N/A	69530	69450	–73.54	2100	UV	



HRLT A4-A5 Voltage Plus -	5	0	N/A	70040	69930	-109.4	2100	UV
HRLT A4-A5 Voltage Plus -	6	0	N/A	-68350	-68160	194.2	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: 9-Nov-2017 2:52 After: 9-Nov-2017 9:13

HRLT A5-A6 Voltage Plus -	0	0	N/A	68560	68460	-102.3	2100	UV
HRLT A5-A6 Voltage Plus -	1	0	N/A	71660	71380	-281.6	2100	UV
HRLT A5-A6 Voltage Plus -	2	0	N/A	73430	73080	-348.4	2100	UV
HRLT A5-A6 Voltage Plus -	3	0	N/A	71680	71440	-233.0	2100	UV
HRLT A5-A6 Voltage Plus -	4	0	N/A	69390	69330	-54.16	2100	UV
HRLT A5-A6 Voltage Plus -	5	0	N/A	69900	69800	-101.6	2100	UV
HRLT A5-A6 Voltage Plus -	6	0	N/A	-68200	-68000	195.0	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: 9-Nov-2017 2:52 After: 9-Nov-2017 9:13

HRLT Torpedo-M0 Voltage -	0	0	N/A	-68080	-68010	75.48	2100	UV
HRLT Torpedo-M0 Voltage -	1	0	N/A	-71470	-71190	279.0	2100	UV
HRLT Torpedo-M0 Voltage -	2	0	N/A	-73260	-72910	349.6	2100	UV
HRLT Torpedo-M0 Voltage -	3	0	N/A	-71600	-71370	229.3	2100	UV
HRLT Torpedo-M0 Voltage -	4	0	N/A	-69340	-69290	51.07	2100	UV
HRLT Torpedo-M0 Voltage -	5	0	N/A	-69850	-69760	89.64	2100	UV
HRLT Torpedo-M0 Voltage -	6	0	N/A	67960	67770	-183.9	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: 9-Nov-2017 2:52 After: 9-Nov-2017 9:13

HRLT Bridle#9-M0 Voltage -	0	0	N/A	-68120	-68050	69.49	2100	UV
HRLT Bridle#9-M0 Voltage -	1	0	N/A	-71570	-71290	279.9	2100	UV
HRLT Bridle#9-M0 Voltage -	2	0	N/A	-73350	-73010	337.1	2100	UV
HRLT Bridle#9-M0 Voltage -	3	0	N/A	-71670	-71440	222.8	2100	UV
HRLT Bridle#9-M0 Voltage -	4	0	N/A	-69390	-69340	49.15	2100	UV
HRLT Bridle#9-M0 Voltage -	5	0	N/A	-69880	-69800	79.12	2100	UV
HRLT Bridle#9-M0 Voltage -	6	0	N/A	68040	67860	-182.2	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: 9-Nov-2017 2:52 After: 9-Nov-2017 9:13

HRLT Source Current Plus -	0	0	N/A	284.2	283.9	-0.2468	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: 9-Nov-2017 2:52 After: 9-Nov-2017 9:13

HRLT Vertical Voltage PI -	0	0	N/A	-320.5	-319.9	0.5525	9.681	UV
HRLT Vertical Voltage PI -	1	0	N/A	-324.9	-323.6	1.313	9.681	UV
HRLT Vertical Voltage PI -	2	0	N/A	-331.4	-329.8	1.605	9.681	UV
HRLT Vertical Voltage PI -	3	0	N/A	-320.3	-319.2	1.140	9.681	UV
HRLT Vertical Voltage PI -	4	0	N/A	-308.6	-308.3	0.3094	9.681	UV
HRLT Vertical Voltage PI -	5	0	N/A	-325.5	-325.0	0.5831	9.681	UV
HRLT Vertical Voltage PI -	6	0	N/A	326.6	325.6	-1.019	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: 26-Sep-2017 5:25 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: 26-Sep-2017 5:51

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	220.0	220.1	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: 26-Sep-2017 5:46

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

#### Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 9-Nov-2017 2:52

EDTC Z-Axis Acceleration	9.810	N/A	9.709	N/A	N/A	N/A	M/S2
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#### Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: Calibration out of date 9-Oct-2017 23:47 After: Calibration out of date 17-Aug-2017 15:22

Gamma Ray (Jig – Bkg)	140.5	N/A	140.5	142.2	1.670	12.77	GAPI
Gamma Ray (Calibrated)	164.0	N/A	164.0	165.9	1.949	15.00	GAPI

#### 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

HNSH – BA

204





















Gamma Source Radioactive



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
<div>10.00 (Minimum)      45.00 (Nominal)      100.0 (Maximum)</div>		
<div>Master: 24-Sep-2017 3:26      Before: 9-Oct-2017 23:50      After: 24-Sep-2017 3:36</div>		

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	<div><div></div></div>			39.51	Master	<div><div></div></div>			15.77	Master	<div><div></div></div>			1088
Before	<div><div></div></div>			39.64	Before	<div><div></div></div>			15.02	Before	<div><div></div></div>			1096
After	<div><div></div></div>			39.54	After	<div><div></div></div>			16.14	After	<div><div></div></div>			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	<div><div></div></div>			141.7	Master	<div><div></div></div>			8.872	Master	<div><div></div></div>			18.97
Before	<div><div></div></div>			140.7	Before	<div><div></div></div>			9.283	Before	<div><div></div></div>			23.56
After	<div><div></div></div>			141.7	After	<div><div></div></div>			7.911	After	<div><div></div></div>			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	<div><div></div></div>			27.04										
Before	<div><div></div></div>			26.46										
After	<div><div></div></div>			27.03										
10.00 (Minimum)      45.00 (Nominal)      100.0 (Maximum)														
Master: 24-Sep-2017 3:26				Before: 9-Oct-2017 23:50				After: 24-Sep-2017 3:36						

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.020
Before		1.012
After		1.014
<div>0.9500 (Minimum)      1.000 (Nominal)      1.050 (Maximum)</div>		
Master: 24-Sep-2017 3:26		
Before: 9-Oct-2017 23:50		
After: 24-Sep-2017 3:36		

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 1 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master				41.00	Master				210.1	Master				7.030
38.00 (Minimum)      40.00 (Nominal)      43.00 (Maximum)					201.0 (Minimum)      209.6 (Nominal)      218.3 (Maximum)					5.000 (Minimum)      7.000 (Nominal)      9.000 (Maximum)				
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master				20.14	Master				1.005					
10.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)					0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)									
Master: 24-Sep-2017 3:22														

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 2 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master				41.00	Master				208.2	Master				7.022
38.00 (Minimum)      40.00 (Nominal)      43.00 (Maximum)					201.0 (Minimum)      209.6 (Nominal)      218.3 (Maximum)					5.000 (Minimum)      7.000 (Nominal)      9.000 (Maximum)				
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master				17.54	Master				1.003					
10.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)					0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)									

















### High Resolution Laterolog Array – B / Equipment Identification












Primary Equipment:  
HRLT Sonde

HRLS – B 768

Auxiliary Equipment:  
HRLT lower Housing  
HRLT Lower Cartridge  
HRLT upper Housing  
HRLT Upper Cartridge

HRLH – B 1869  
HRLC – B 974  
HRUH – B 975  
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		-318.5	-322.7	-280.7	-379.7
	After		-318.3			
1	Before		-330.0	-322.7	-280.7	-379.7
	After		-328.9			
2	Before		-337.8	-322.7	-280.7	-379.7
	After		-336.4			
3	Before		-328.4	-322.7	-280.7	-379.7
	After		-327.5			
4	Before		-319.4	-322.7	-280.7	-379.7
	After		-319.3			
5	Before		-321.4	-322.7	-280.7	-379.7
	After		-321.2			
6	Before		319.0	322.7	379.7	280.7
	After		318.3			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
(Minimum) (Nominal) (Maximum)						
Before: 9–Nov–2017 2:52						
After: 9–Nov–2017 9:13						

















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		1736			
1	Before		1810	1781	2095	1549
	After		1801			
2	Before		1845	1781	2095	1549
	After		1835			
3	Before		1792	1781	2095	1549
	After		1785			
4	Before		1742	1781	2095	1549
	After		1739			
5	Before		1754	1781	2095	1549
	After		1750			
















6	Before		-1757	-1781	-1549	-2095
	After		-1751			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 9-Nov-2017 2:52						
After: 9-Nov-2017 9:13						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1732	1781	2095	1549
	After		1729			
1	Before		1812	1781	2095	1549
	After		1804			
2	Before		1849	1781	2095	1549
	After		1839			
3	Before		1800	1781	2095	1549
	After		1792			
4	Before		1744	1781	2095	1549
	After		1741			
5	Before		1757	1781	2095	1549
	After		1753			
6	Before		-1749	-1781	-1549	-2095
	After		-1742			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 9-Nov-2017 2:52						
After: 9-Nov-2017 9:13						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68620	70000	82360	60900
	After		68530			
1	Before		71620	70000	82360	60900
	After		71320			
2	Before		73390	70000	82360	60900
	After		73020			
3	Before		71680	70000	82360	60900
	After		71440			
4	Before		69420	70000	82360	60900
	After		69350			
5	Before		69940	70000	82360	60900
	After		69830			
6	Before		-68150	-70000	-60900	-82360
	After		-67950			

7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 9-Nov-2017 2:52						
After: 9-Nov-2017 9:13						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68710	70000	82360	60900
	After		68620			
1	Before		71820	70000	82360	60900
	After		71540			
2	Before		73570	70000	82360	60900
	After		73200			
3	Before		71830	70000	82360	60900
	After		71600			
4	Before		69530	70000	82360	60900
	After		69450			
5	Before		70040	70000	82360	60900
	After		69930			
6	Before		–68350	–70000	–60900	–82360
	After		–68160			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 9-Nov-2017 2:52						
After: 9-Nov-2017 9:13						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68560	70000	82360	60900
	After		68460			
1	Before		71660	70000	82360	60900
	After		71380			
2	Before		73430	70000	82360	60900
	After		73080			
3	Before		71680	70000	82360	60900
	After		71440			
4	Before		69390	70000	82360	60900
	After		69330			
5	Before		69900	70000	82360	60900
	After		69800			
6	Before		–68200	–70000	–60900	–82360
	After		–68000			
7	Before		70000	70000	82360	60900
	After		70000			







# Hostile Litho-Density Sonde / Equipment Identification

## Primary Equipment:

Gamma Source Radioactive  
Hostile Litho Density Sonde  
Hostile Litho Density High Voltage

GSR – ZA 2945  
HLDS – D 45  
HLDV – D 45

## Auxiliary Equipment:

Hostile Litho Density High Voltage Housi  
Hostile Litho Density Pad

HEH – H 47  
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)			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)			110.0 (Minimum) 200.0 (Nominal) 290.0 (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)			55.00 (Minimum) 100.0 (Nominal) 150.0 (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)			150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)	
Master: 26-Sep-2017 5:25			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		64.16	Master		60.11	Master		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		160.5	Master		364.8	Master		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		72.43	Master		129.4	Master		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		180.4	Master		130.3	Master		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: 26-Sep-2017 5:25								

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

Phase	LSW1 Aluminum CPS	Value	Phase	LSW2 Aluminum CPS	Value	Phase	LSW3 Aluminum CPS	Value
Master		510.2	Master		739.5	Master		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		445.5	Master		411.4	Master		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		6444	Master		8933	Master		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		444.5						
	430.0 (Minimum) 660.0 (Nominal) 770.0 (Maximum)							

Master: 26-Sep-2017 5:51

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		389.8						
	420.0 (Minimum) 580.0 (Nominal) 680.0 (Maximum)							

Master: 26-Sep-2017 5:46

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		0.9798			
	0.9900 (Minimum) 0.9940 (Nominal) 1.015 (Maximum)			0.9850 (Minimum) 0.9940 (Nominal) 1.010 (Maximum)				

Master: 26-Sep-2017 5:41

#### Litho-Density Spectroscopy Cartridge – B / Equipment Identification

Primary Equipment:  
LDSC Cartridge

LDSC – B 521

Auxiliary Equipment:  
LDSC Housing

LDSh – A 319

## Primary Equipment:

EDTC Gamma Ray Detector  
Enhanced DTS Cartridge

EDTG – A/B  
EDTC – B

8305  
8317

## Auxiliary Equipment:


EDTC Housing

EDTH – B

8303

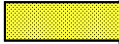





## Enhanced DTS Cartridge Wellsite Calibration

## EDTC Accelerometer Calibration

Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.709
	9.610 (Minimum)      9.810 (Nominal)      10.01 (Maximum)	
Before: 9–Nov–2017 2:52		

## 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		7.866	Before		140.5	Before		164.0
After		7.157	After		142.2	After		165.9
	0 (Minimum)      30.00 (Nominal)      120.0 (Maximum)			127.7 (Minimum)      140.5 (Nominal)      153.3 (Maximum)			149.0 (Minimum)      164.0 (Nominal)      179.0 (Maximum)	
Before: Calibration out of date 9–Oct–2017 23:47			After: Calibration out of date 17–Aug–2017 15:22					

Company: **International Ocean Discovery Program****Schlumberger**Well: **Expedition 369, Site U1514C**Field: **Australia Cretaceous Climate & Tectonics**Rig: **JOIDES Resolution**Ocean: **Indian**

High Resolution Laterolog Array (HRLA)

Natural Gamma Ray, Density (HNGS, HLDS)

Dipole Shear Sonic (DSI), MSS