

Company: Lamont Doherty

Well: Expedition 317 Site U1351B

Field: Canterbury Basin

Rig: JOIDES Resolution Ocean: Pacific

Dipole Shear Sonic (DSI)

Rig: JOIDES Resolution
 Field: Canterbury Basin
 Location: Latitude: S 44° 53.044'
 Well: Expedition 317 Site U1351B
 Company: Lamont Doherty

LOCATION			
Latitude: S 44° 53.044'		Elev.:	K.B. 11.00 m
Longitude: E 171° 50.408'		G.L.	0.00 m
		D.F.	11.00 m
Permanent Datum:	Sea Floor	Elev.:	0.00 m
Log Measured From:	Drill Floor		0.00 m above Perm. Datum
Drilling Measured From:	Drill Floor		
API Serial No.	Max. Hole Devi.	Longitude	Latitude
25-Nov-2009	0 deg	S 44° 43.044'	E 171° 50.408'

Logging Date	25-Nov-2009
Run Number	2
Depth Driller	1030.5 m
Schlumberger Depth	485.5 m
Bottom Log Interval	468.5 m
Top Log Interval	82.5 m
Casing Driller Size @ Depth	4.500 in @ 83.3 m
Casing Schlumberger	82.5 m
Bit Size	11.438 in
Type Fluid In Hole	Seawater Gel
Density	1.258 g/cm3
Fluid Loss	PH
Source Of Sample	N/A
RM @ Measured Temperature	@ @ @
RMF @ Measured Temperature	@ @ @
RMC @ Measured Temperature	@ @ @
Source RMF	RMC
RM @ MRT	RMF @ MRT
Maximum Recorded Temperatures	15 degC @ 15 @ 15
Circulation Stopped	24-Nov-2009 Time 11:00
Logger On Bottom	25-Nov-2009 Time 10:30
Unit Number	625003 Houston
Recorded By	C. Fuman
Witnessed By	A. Slagle, G. Guerin

Logging Date	Run 1	Run 2
Run Number		
Depth Driller		
Schlumberger Depth		
Bottom Log Interval		
Top Log Interval		
Casing Driller Size @ Depth		
Casing Schlumberger		
Bit Size		
Type Fluid In Hole		
Density		
Fluid Loss		
Source Of Sample		
RM @ Measured Temperature	@	@
RMF @ Measured Temperature	@	@
RMC @ Measured Temperature	@	@
Source RMF	RMC	
RM @ MRT	RMF @ MRT	
Maximum Recorded Temperatures	15 degC @ 15 @ 15	
Circulation Stopped	24-Nov-2009 Time 11:00	
Logger On Bottom	25-Nov-2009 Time 10:30	
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DISCLAIMER

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OTHER SERVICES1

- OS1: FMS
- OS2: DIT
- OS3: APS/HLDS
- OS4: HNGS

REMARKS: RUN NUMBER 1


Logs run in second hole ("B" hole) of drilling site U1351 to aid in depth correlation of core data collected in surface labs.
 Average heave during the run was only 0.2m; Active Heave Compensator not used.
 TD was found to be 1163mBRF with the pipe (bit) at 216mBRF. Sea Bed given as 132.7mBRF.
 Hole Size input taken from FMS Caliper Axis 1.
 Tools run slick in order to fit through drill pipe, as is standard practice on this project.
 FMS Caliper closed and EMEX deactivated at 254.9m to facilitate pipe re-entry.
 Logging tools were unable to descend below 619mBRF due to hole collapse.
 Logs recorded from maximum depth reached, 619mBRF, to bit depth.
 FMS EMEX mode was "Automatic"; DSI run with Monopole=MF, LD=LF, UD=Std.
 Depth correlated to Run #1, DIT-APS-HLDS-HNGS recorded on 24 NOV 09 in this hole.

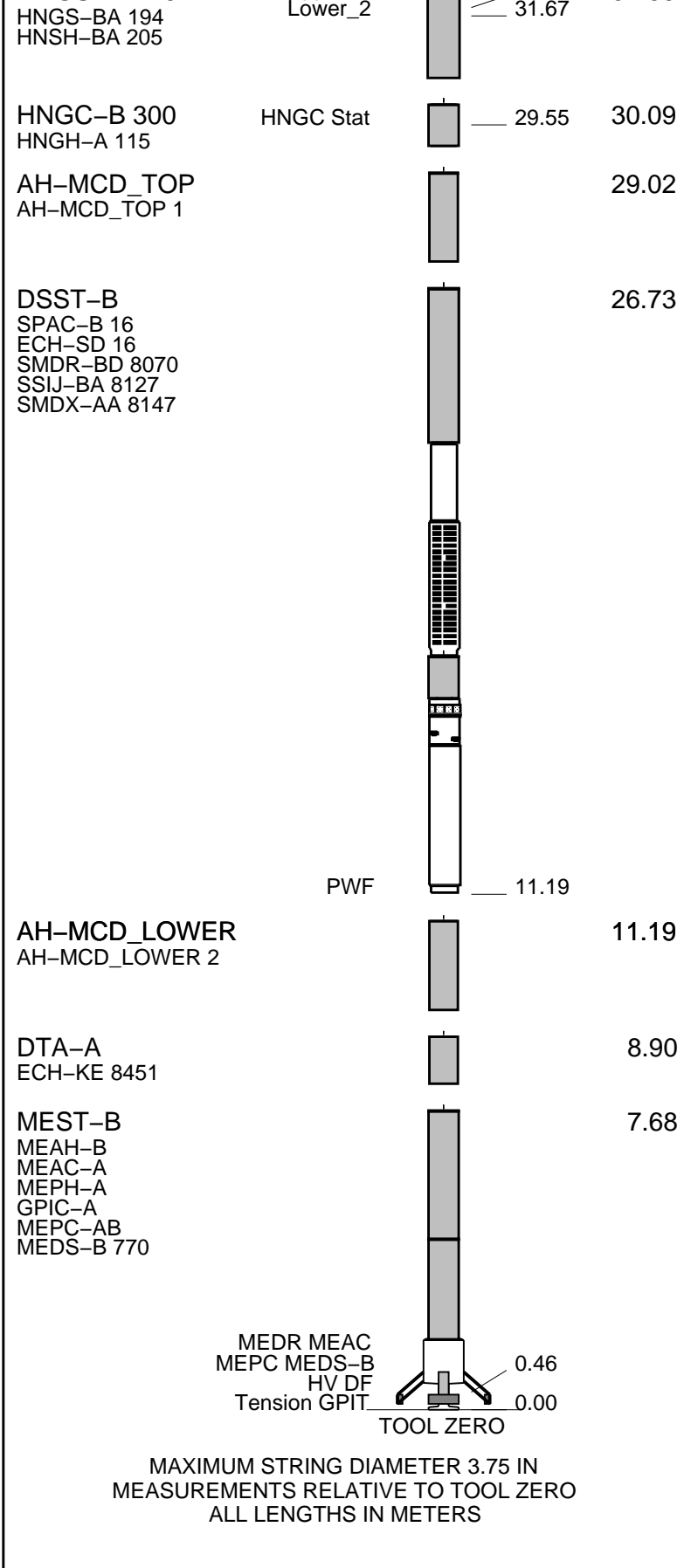
Depth "Zero" reference adjusted to Sea Bed picked by client.
 Depths shown are measured depth below sea floor, as per client request.

RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
17C0-154					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT			
GSR-U 616008 WITM (DTS)-A			

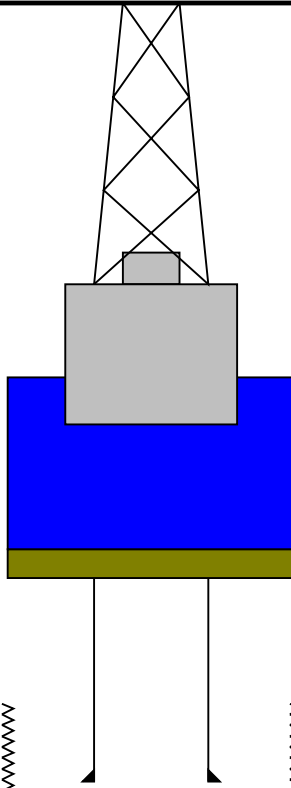
RUN 1		RUN 2	
DOWNHOLE EQUIPMENT			
LEH-QT		34.39	
LEH-QT			
DTC-H	CTEM	33.22	
ECH-KC 2304	TelStatus	33.50	
	ToolStatu	32.59	
HNGS-BA 194	Upper_1	31.89	32.59



Production String	(in)	(m)	Well Schematic	(m)	(in)	Casing String
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Kelly Bushing Elevation
 Derrick Floor Elevation
 Mean Sea Level

0.0
 0.0
 11.0



0.0 4.500
 132.7 11.340
 215.8 4.500

Drill Pipe
 Sea Bed
 Bit Depth for Logging

Driller's Depths

1163.3 11.340

Total Depth

Schlumberger

Main Pass

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 317 Site U1351B

Input DLIS Files

DEFAULT	FMS_DSI_NGS_030PUP	FN:40	PRODUCER	26-Nov-2009 13:40	619.5 M	206.3 M
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Output DLIS Files

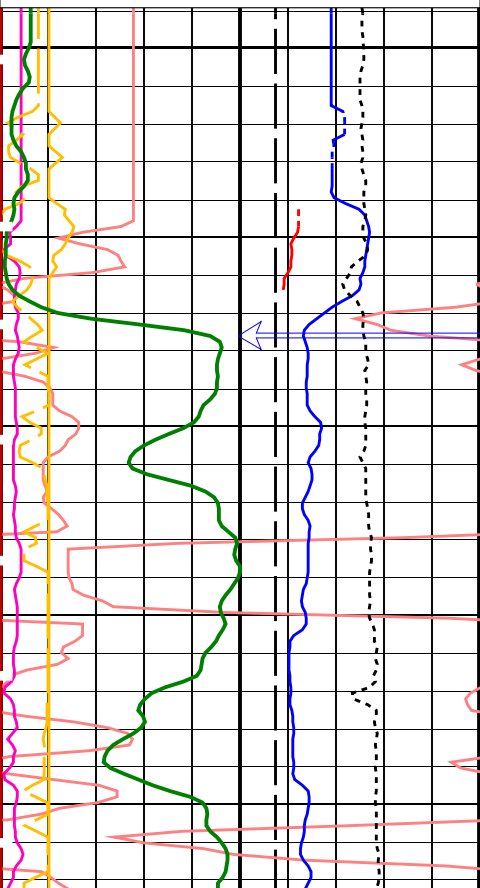
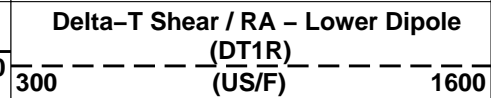
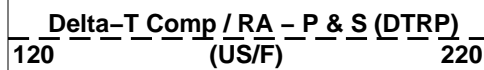
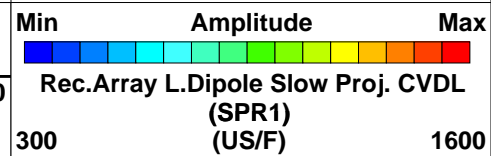
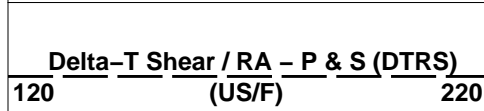
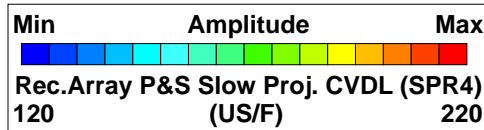
DEFAULT	FMS_DSI_NGS_052PUP	FN:62	PRODUCER	31-Dec-2009 20:54	486.9 M	73.9 M
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OP System Version: 17C0-154

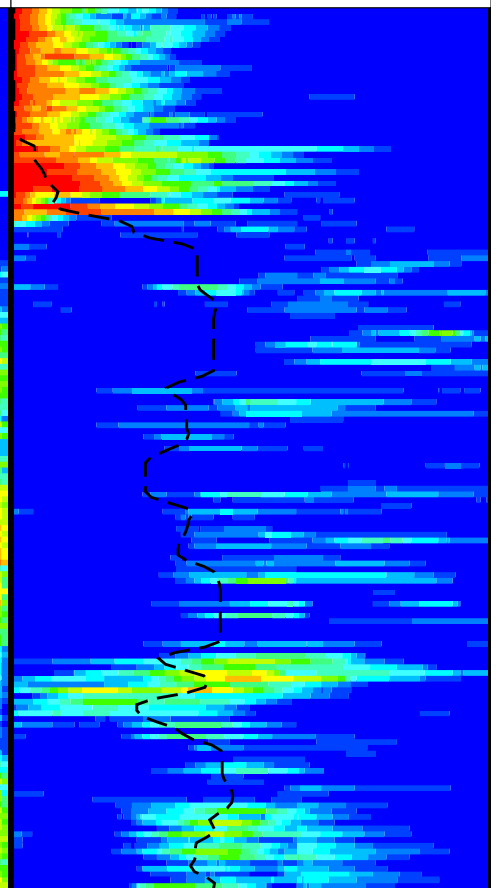
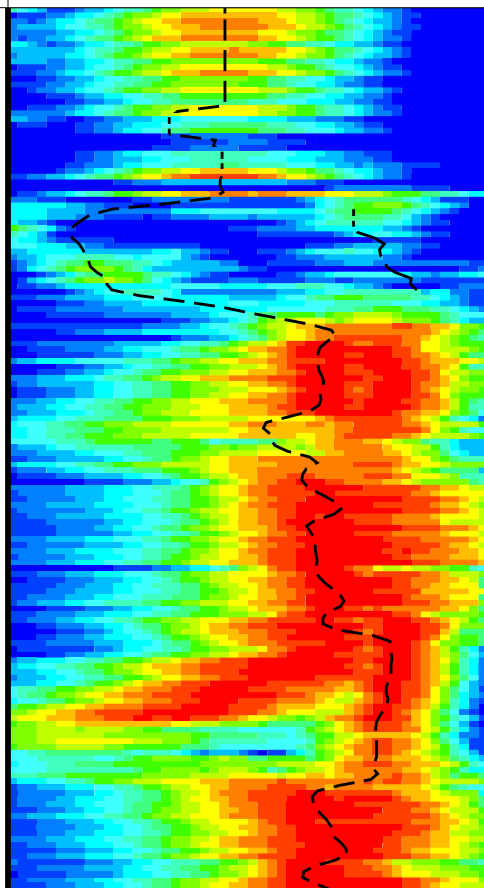
MEST-B	SRPC-3870_Q3_2009_OP17_V3_b	DTA-A	17C0-154
DSST-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

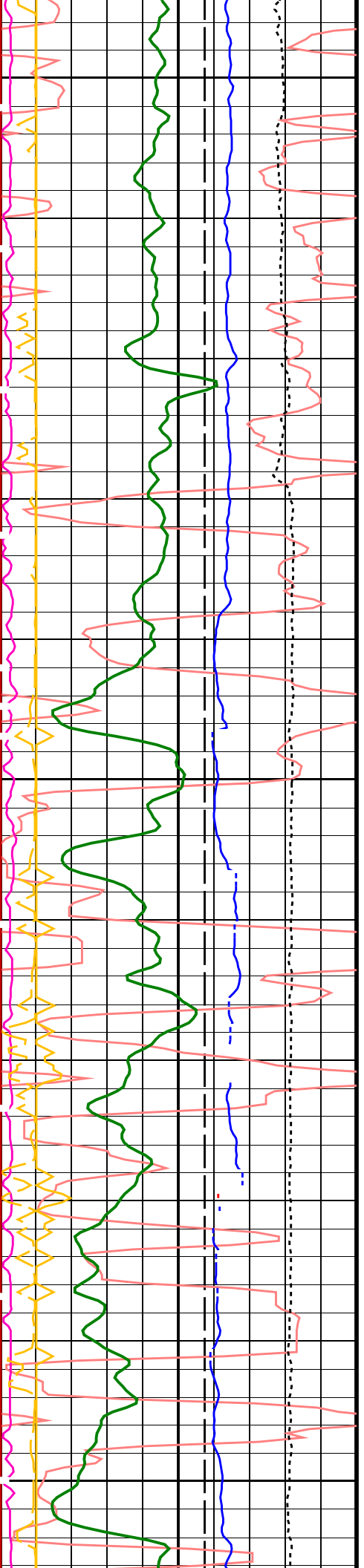
Time Mark Every 60 S

Waveform Data Copy Indicator 4 – Monopole P&S (WCI4)		
0	(-----)	10
Peak Coherence / RA – P & S Shear (CHRS)		
-1	(-----)	9
Peak Coherence / RA – P & S Comp (CHRP)		
0	(-----)	10
Peak Coherence / RA – Upper Dipole (CHR2)		
0	(-----)	10
HNGS Computed Gamma Ray (HCGR)		
0	(GAPI)	100
Tension (TENS)		
10000	(LBF)	0
Delta-T Shear – P & S (DT4S)		
440	(US/F)	40
Delta-T Comp – P & S (DT4P)		
440	(US/F)	40
Delta-T Shear – Upper Dipole (DT2)		
440	(US/F)	40
Bit Size (BS)		
0	(IN)	20



75

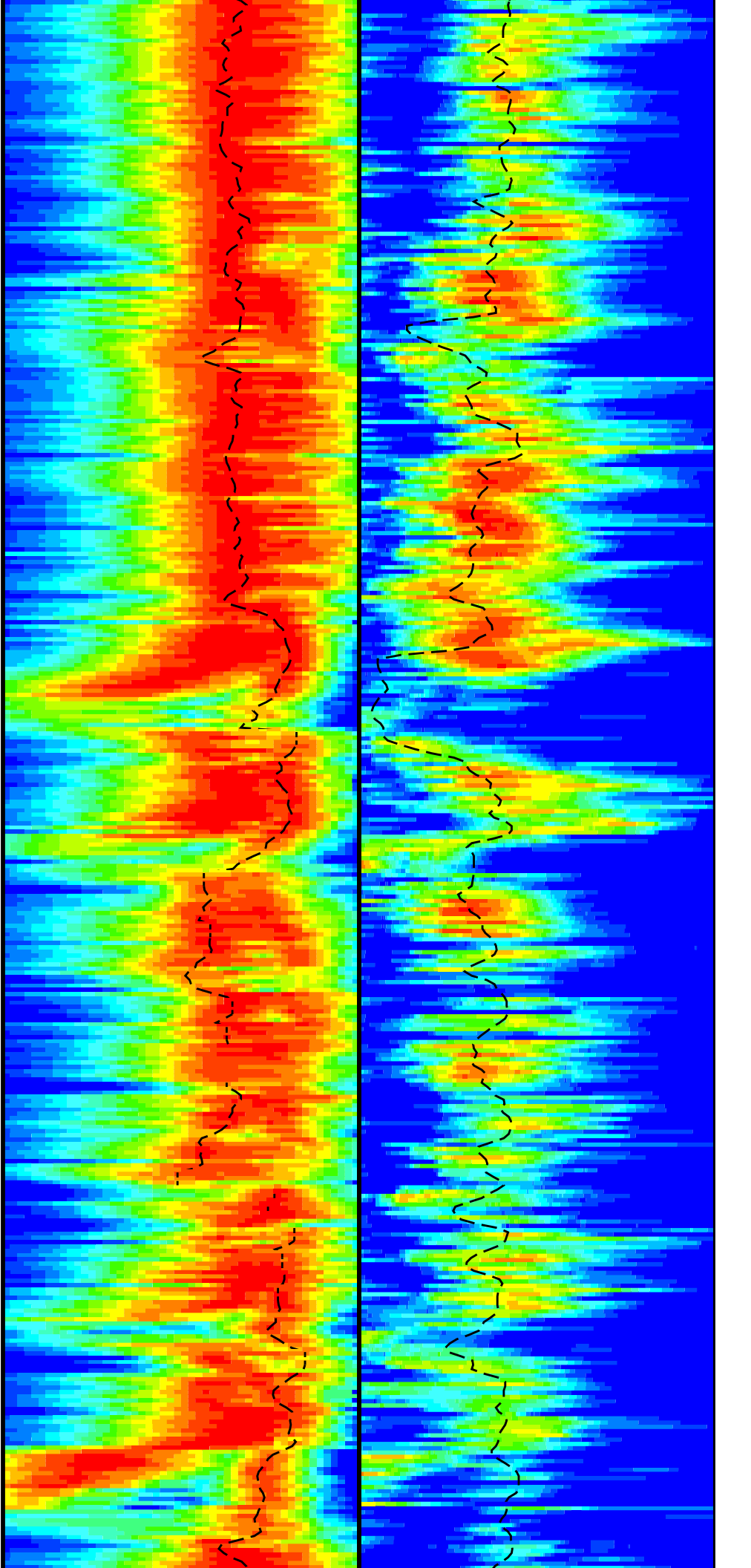


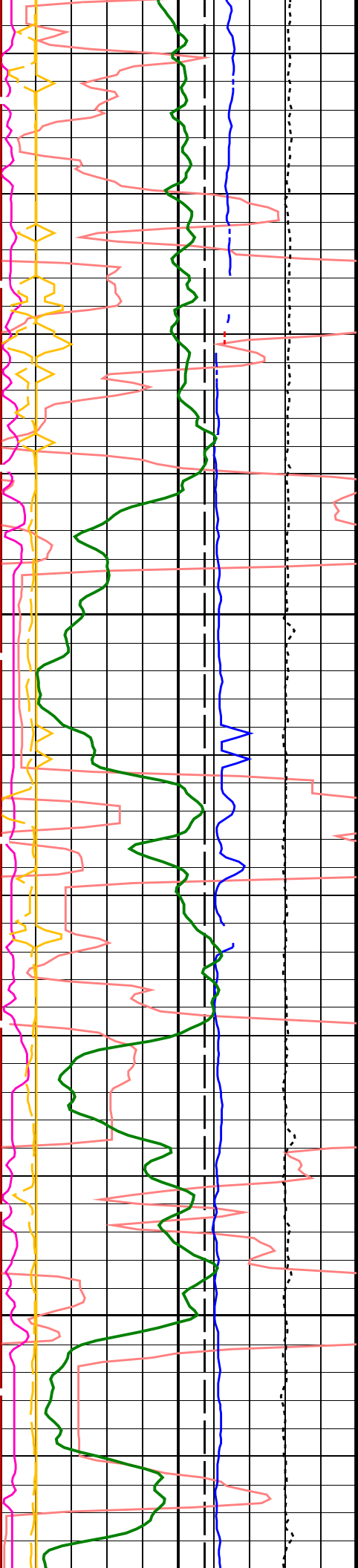


100

125

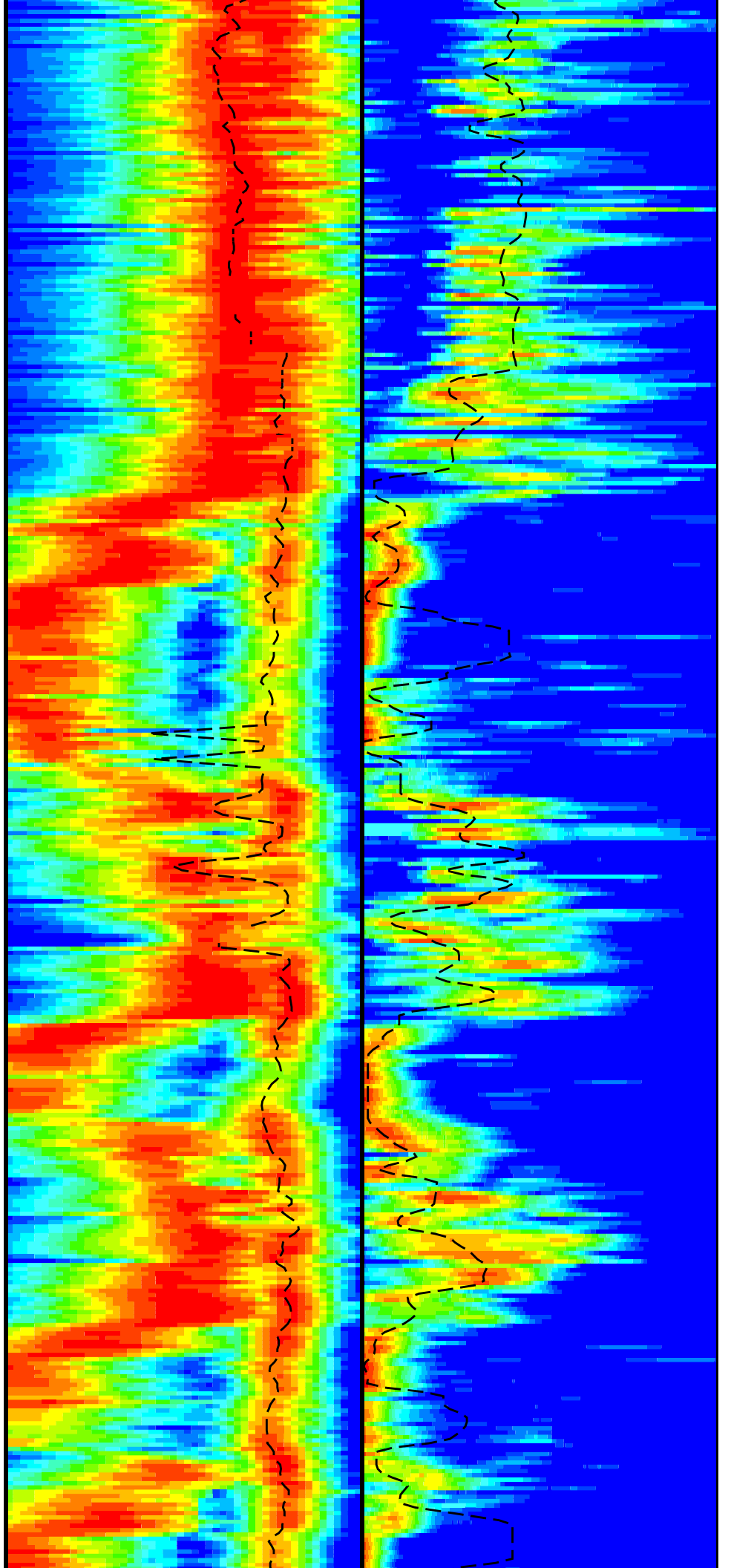
150

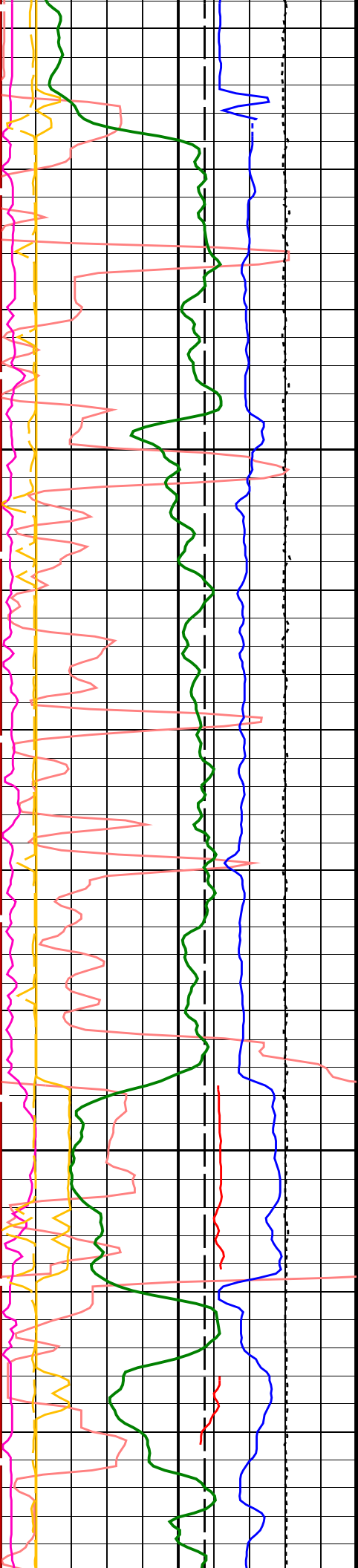




175

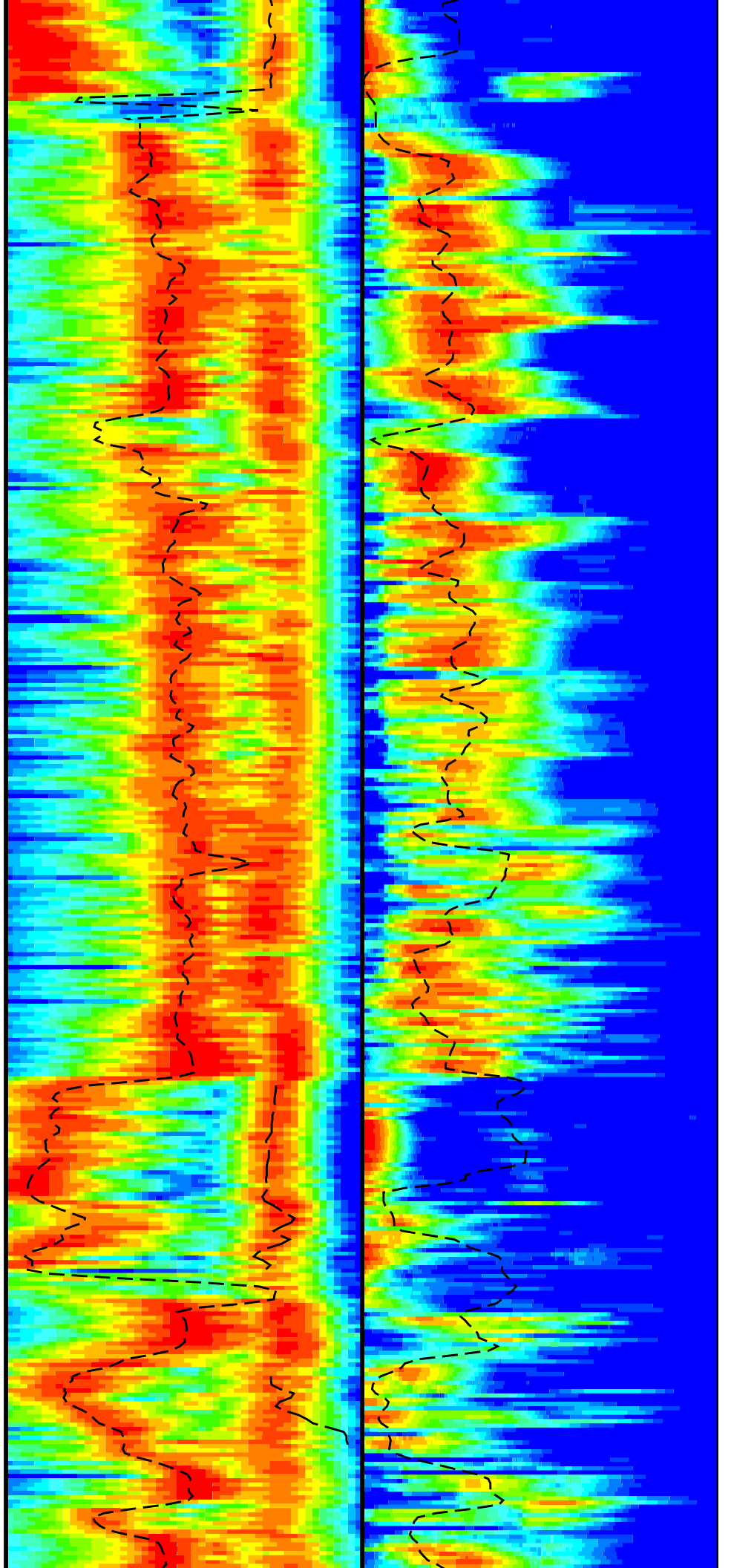
200

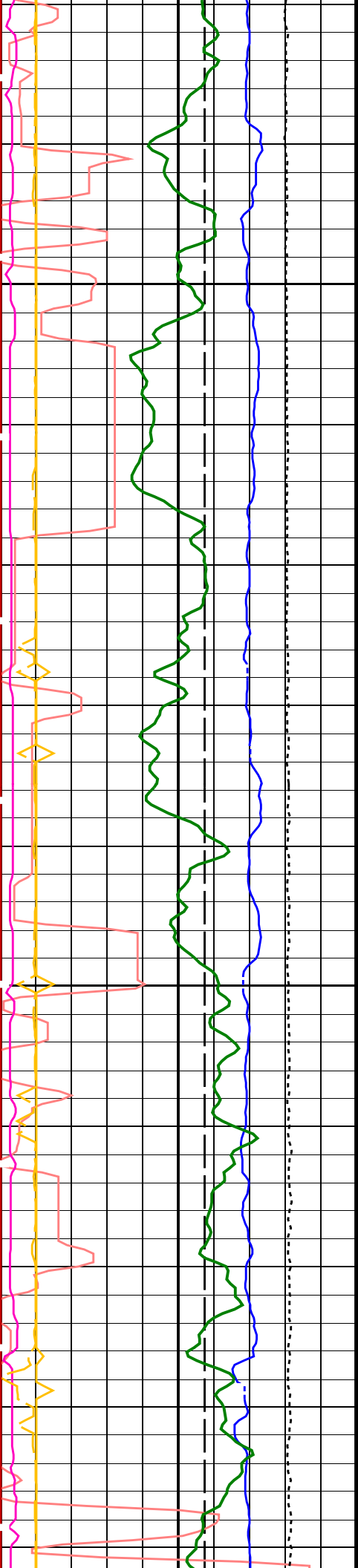




225

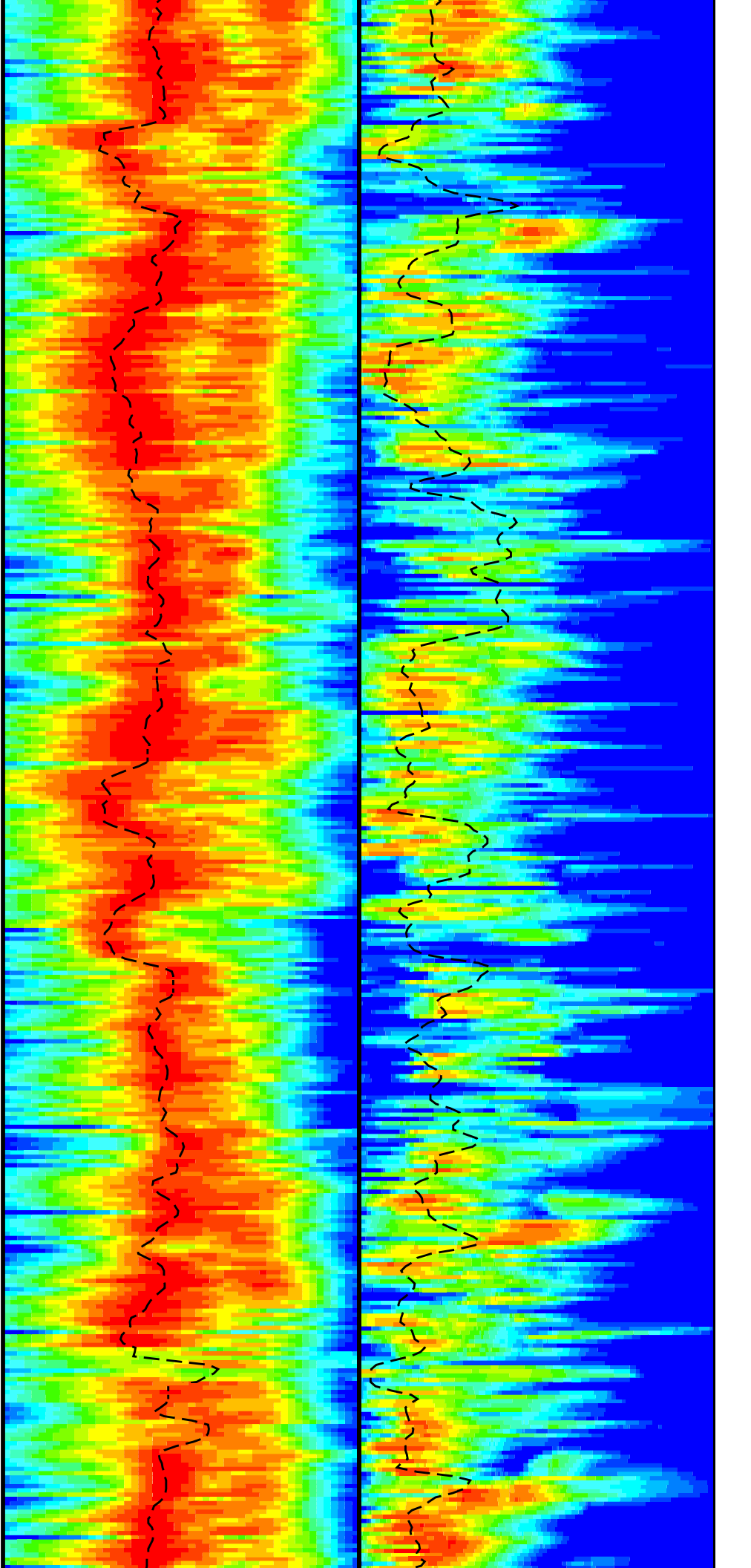
250





275

300

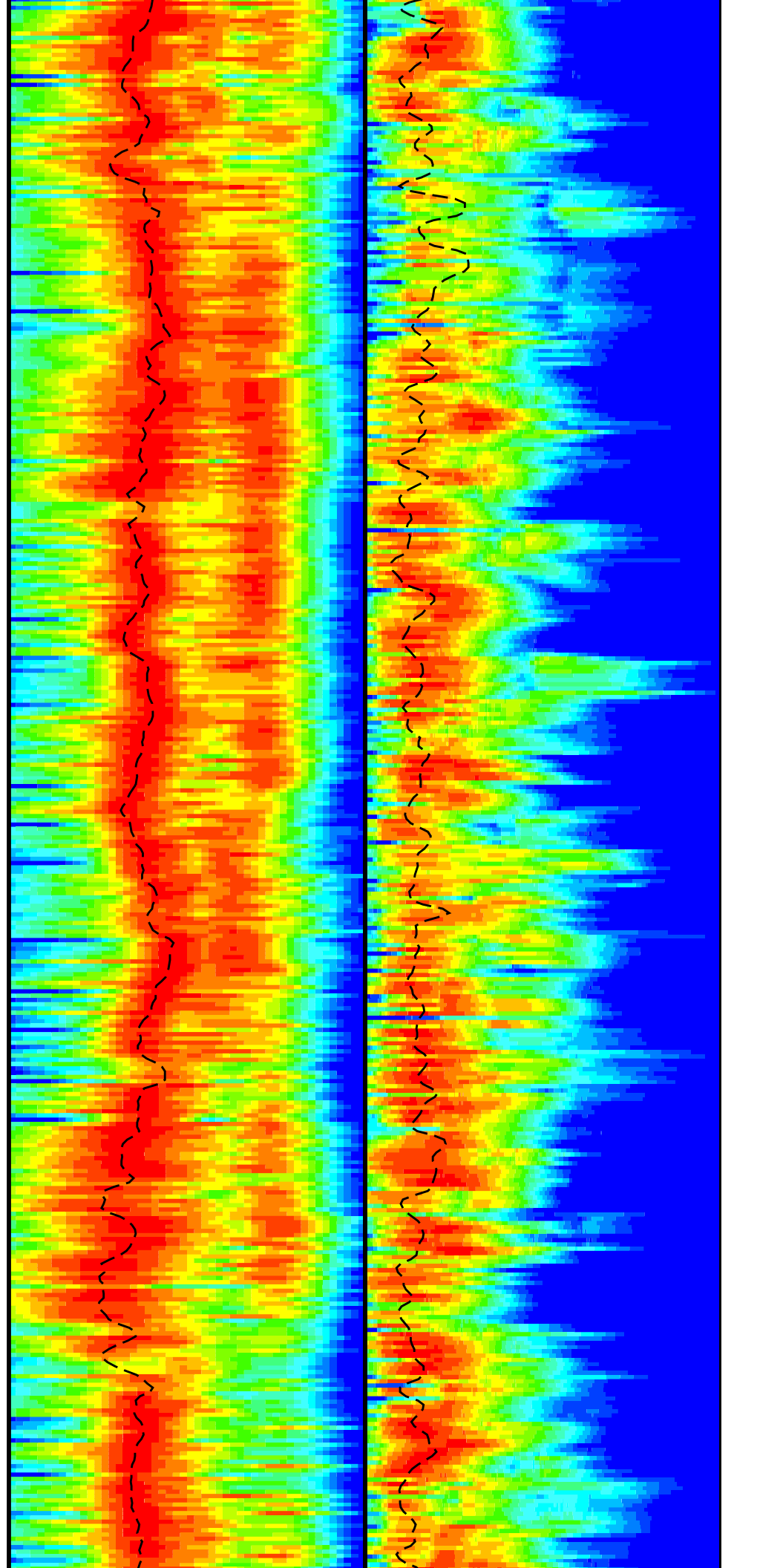


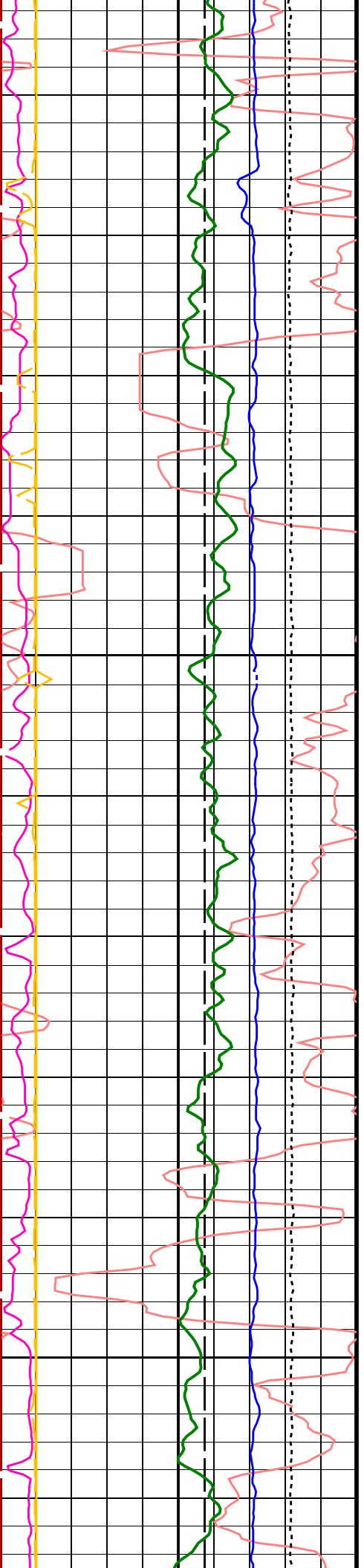


325

350

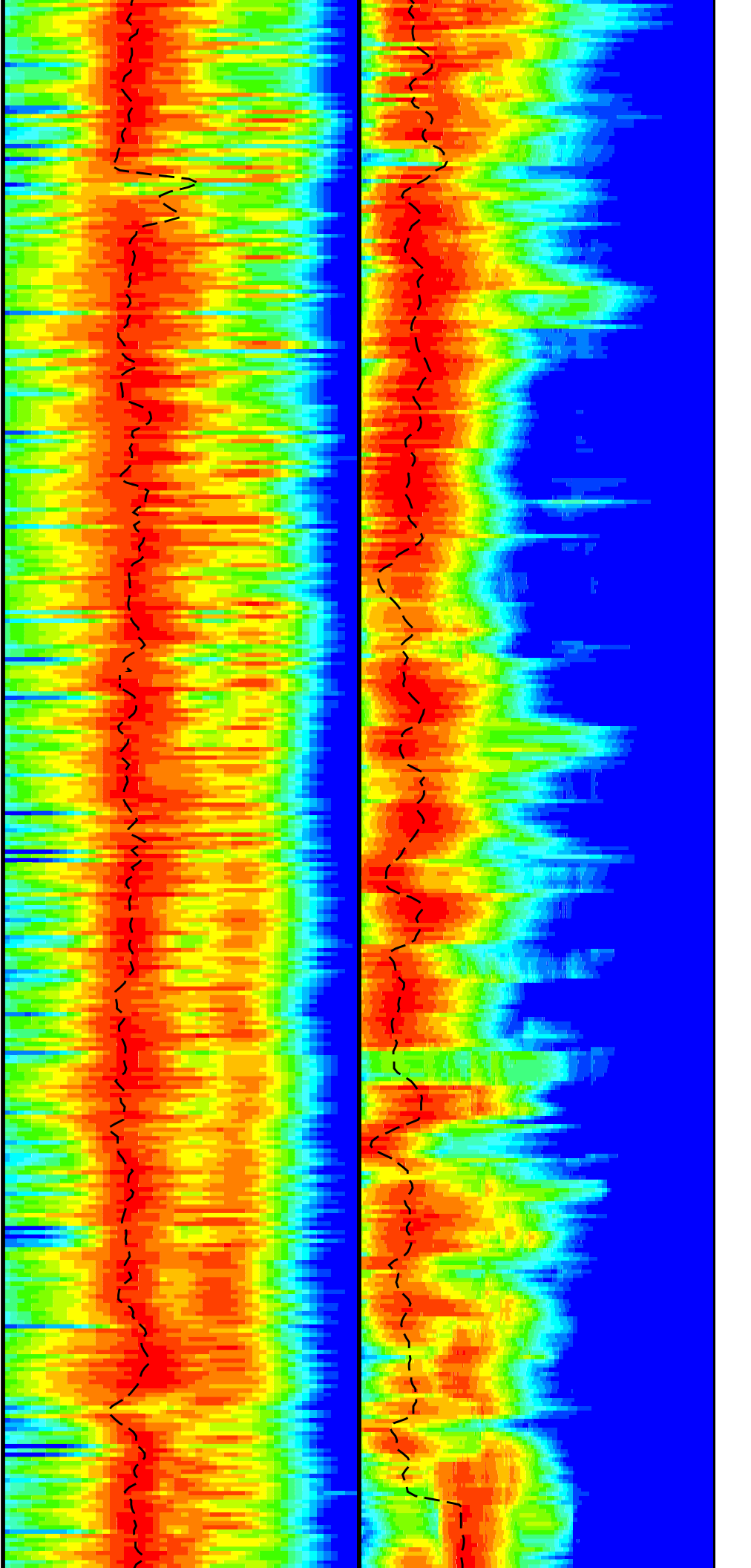
375

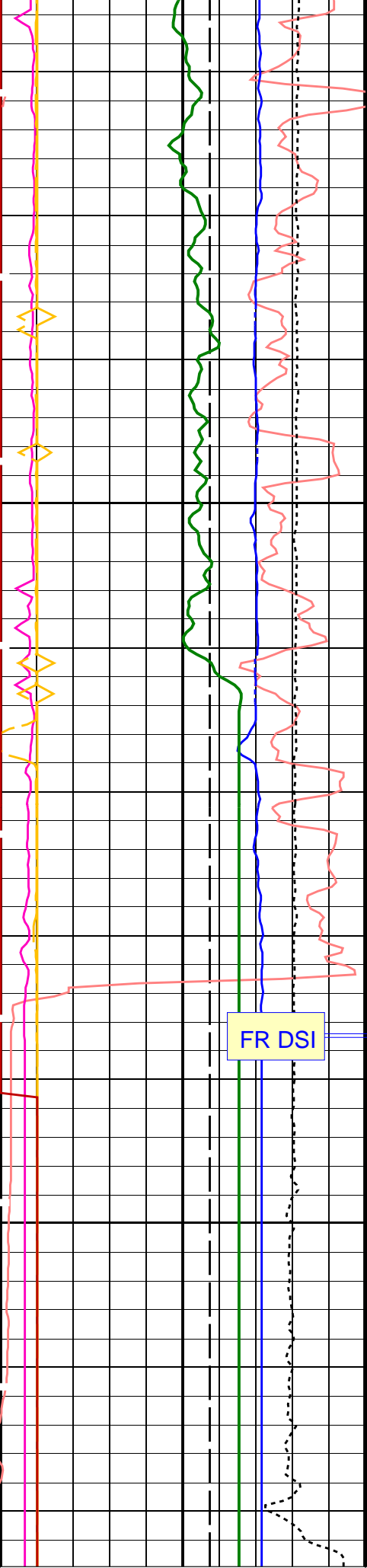




400

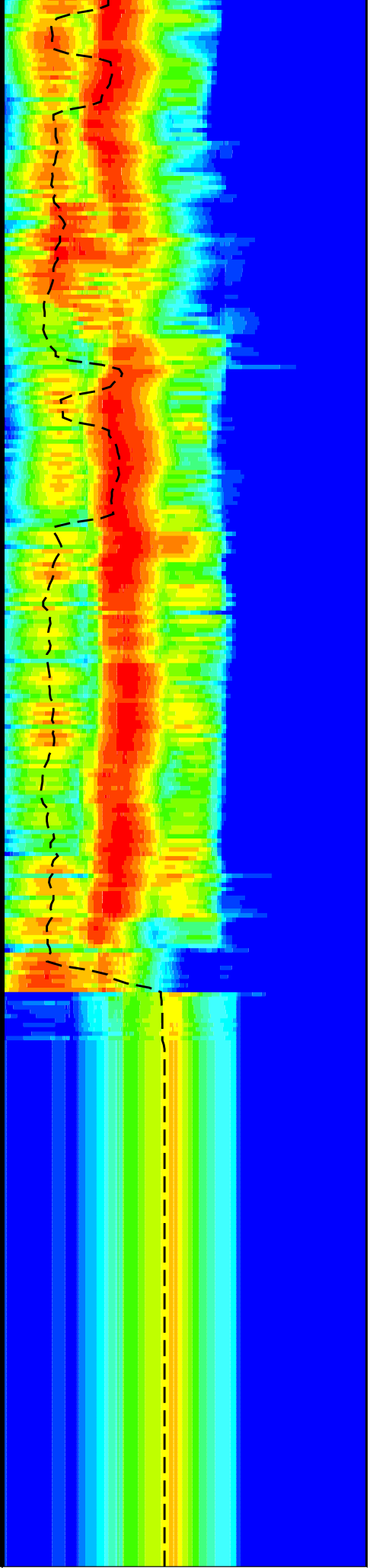
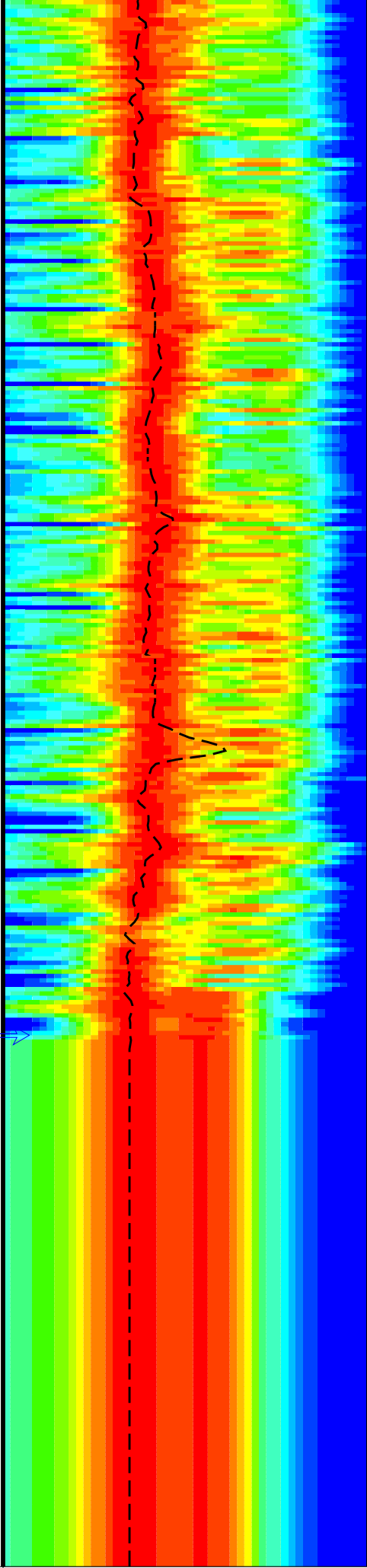
425





450

475



Bit Size (BS)

Delta-T Comp / RA - P & S (DTRP)

Delta-T Shear / RA - Lower Dipole (DT1R)

0	(IN)	20
440	Delta-T Shear – Upper Dipole (DT2) (US/F)	40
440	Delta-T Comp – P & S (DT4P) (US/F)	40
440	Delta-T Shear – P & S (DT4S) (US/F)	40
10000	Tension (TENS) (LBF)	0
0	HNGS Computed Gamma Ray (HCGR) (GAPI)	100
0	Peak Coherence / RA – Upper Dipole (CHR2)	10
0	Peak Coherence / RA – P & S Comp (CHRP)	10
-1	Peak Coherence / RA – P & S Shear (CHRS)	9
0	Waveform Data Copy Indicator 4 – Monopole P&S (WCI4)	10

120	(US/F)	220
120	Delta-T Shear / RA – P & S (DTRS) (US/F)	220
120	(US/F)	220
Min	Amplitude	Max
Rec.Array P&S Slow Proj. CVDL (SPR4)		
120	(US/F)	220

300	(US/F)	1600
Min	Amplitude	Max
Rec.Array L.Dipole Slow Proj. CVDL (SPR1)		
300	(US/F)	1600

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
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	220 US/F
DDE1	Digitizing Delay 1	0 US
DDE4	Digitizing Delay 4	0 US
DDEX	Digitizing Delay X	0 US
DLCS	Label Compressional Source – Dipole Shear	USE
DSHL	Label Slowness Lower Limit – Dipole Shear	300 US/F
DSHU	Label Slowness Upper Limit – Dipole Shear	900 US/F
DSI1	Digitizer Sample Interval 1	40 US
DSI4	Digitizer Sample Interval 4	10 US
DSIX	Digitizer Sample Interval X	40 US
DTCS	Compressional Delta-T Source for DTCS Channel	PS_COMP
DTF	Delta-T Fluid	204.5 US/F
DWC1	Digitizer Word Count 1	512
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
LTXG	Lower Dipole Transmitter Geometry	156 IN
MCS	Mean Casing Slowness	57 US/F
MTXG	Monopole Transmitter Geometry	186 IN
NWI1	Number Waveform Items 1	8
NWI2	Number Waveform Items 2	8
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
RY1C	Receiver 1 Geometry	204 IN

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	
SAM4	DSST Sonic Acquisition Mode 4 – High Frequency Monopole Mode for P&S	MFD_ODD	
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	
SAS4	STC Sonic Array Status – Monopole P&S	255	
SBO1	STC Search Band Offset – Lower Dipole	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
SBW4	STC Search Bandwidth – Monopole P&S	2000	US
SFC1	STC Formation Character – Lower Dipole	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	
SFM4	STC Filter – Monopole P&S	B3–12K	
SHLL	Label Slowness Lower Limit – Monopole P&S Shear	120	US/F
SHUL	Label Slowness Upper Limit – Monopole P&S Shear	220	US/F
SLL1	STC Slowness Lower Limit – Lower Dipole	300	US/F
SLL4	STC Slowness Lower Limit – Monopole P&S	120	US/F
SST1	STC Slowness Step – Lower Dipole	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	
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	1600	US/F
SUL4	STC Slowness Upper Limit – Monopole P&S	220	US/F
SWD1	STC Slowness Width – Lower Dipole	40	US/F
SWD4	STC Slowness Width – Monopole P&S	10	US/F
TBF1	STC Time for Baseline Fill – Lower Dipole	0	US
TBF4	STC Time for Baseline Fill – Monopole P&S	300	US
TLL1	STC Time Lower Limit – Lower Dipole	2450	US
TLL4	STC Time Lower Limit – Monopole P&S	580	US
TST1	STC Time Step – Lower Dipole	200	US
TST4	STC Time Step – Monopole P&S	50	US
TUL1	STC Time Upper Limit – Lower Dipole	20440	US
TUL4	STC Time Upper Limit – Monopole P&S	3480	US
TWD1	STC Time Width – Lower Dipole	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
TWI4	STC Integration Time Window – Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
UTXG	Upper Dipole Transmitter Geometry	162	IN
WFM4	Waveform Mode 4	W1	
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	
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	BS	
H1P	HNGB Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGB Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGB Borehole Potassium Running Average	-0.0016678	
HALF	HNGB Alpha Filter Length	60	IN
HCRB	HNGB Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGB Processing Enable	YES	
S1BI	HNGB Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGB Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGB Standard Gamma–Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGB Detector 1 Variable Barite Factor Running Average	1.00399	
VBA2	HNGB Detector 2 Variable Barite Factor Running Average	1.01062	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	-132.5	M

OP System Version: 17C0-154

MEST-B	SRPC-3870_Q3_2009_OP17_V3_b	DTA-A	17C0-154
DSST-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

Input DLIS Files

DEFAULT	FMS_DSI_NGS_030PUP	FN:40	PRODUCER	26-Nov-2009 13:40	619.5 M	206.3 M
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Output DLIS Files

DEFAULT	FMS_DSI_NGS_052PUP	FN:62	PRODUCER	31-Dec-2009 20:54
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Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 31-Oct-2009 10:09 Before: 24-Nov-2009 10:30 After: 24-Nov-2009 17:47							
Na 511 Peak Loc	40.00	39.48	39.62	39.47	-0.1509	1.000	
Na 511 Peak Res	15.50	16.07	15.05	15.48	0.4290	2.000	%
High Voltage	1150	1200	1157	1165	7.953	N/A	V
Na 1785 Peak Loc	142.6	142.5	142.1	141.9	-0.1621	7.000	
Na 1785 Peak Res	8.500	8.076	7.708	8.978	1.271	2.000	%
Temperature	15.50	36.12	22.82	23.64	0.8194	N/A	DEGC
Na Count Rate	45.00	34.81	33.69	33.43	-0.2596	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 31-Oct-2009 10:09 Before: 24-Nov-2009 10:30 After: 24-Nov-2009 17:47							
Na 511 Peak Loc	40.00	39.63	39.59	39.66	0.07236	1.000	
Na 511 Peak Res	15.50	15.54	16.26	15.22	-1.044	2.000	%
High Voltage	1150	1123	1094	1099	5.689	N/A	V
Na 1785 Peak Loc	142.6	142.2	142.2	142.2	0.02171	7.000	
Na 1785 Peak Res	8.500	8.652	8.393	8.244	-0.1482	2.000	%
Temperature	15.50	36.37	23.56	25.33	1.769	N/A	DEGC
Na Count Rate	45.00	35.36	33.56	33.18	-0.3781	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 31-Oct-2009 10:09 Before: 24-Nov-2009 10:30 After: 24-Nov-2009 17:47							
Coincidence Count Rate Ratio	1.000	0.9839	1.005	1.007	0.001954	0.05000	

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:	HNGC Cartridge	HNGC – B	300
Auxiliary Equipment:	HNGC Housing	HNGH – A	115

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

HNGS – BA 194

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH – BA 205
GSR – U 616008

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		39.48	Master		16.07	Master		1200
Before		39.62	Before		15.05	Before		1157
After		39.47	After		15.48	After		1165
	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		142.5	Master		8.076	Master		36.12
Before		142.1	Before		7.708	Before		22.82
After		141.9	After		8.978	After		23.64
	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		34.81						
Before		33.69						
After		33.43						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 31-Oct-2009 10:09

Before: 24-Nov-2009 10:30

After: 24-Nov-2009 17:47

Hostile Natural Gamma Ray Sonde Wellsite Calibration								
Detector 2 Check								
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.63	Master		15.54	Master		1123
Before		39.59	Before		16.26	Before		1094
After		39.66	After		15.22	After		1099
	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		142.2	Master		8.652	Master		36.37
Before		142.2	Before		8.393	Before		23.56
After		142.2	After		8.244	After		25.33
	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		35.36						
Before		33.56						
After		33.18						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 31-Oct-2009 10:09

Before: 24-Nov-2009 10:30

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Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9839
Before		1.005
After		1.005

Before			1.005
After			1.007
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 31-Oct-2009 10:09			
Before: 24-Nov-2009 10:30			
After: 24-Nov-2009 17:47			

DTS Telemetry Tool / Equipment Identification

Primary Equipment:

DTC-H Auxiliary Cartridge	DTCH - A	
DTC-H Telemetry Cartridge	DTCH - A	8753

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing	ECH - KC	2304
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Company: **Lamont Doherty**

Schlumberger

Well: **Expedition 317 Site U1351B**

Field: **Canterbury Basin**

Rig: **JOIDES Resolution**

Ocean: **Pacific**

Dipole Shear Sonic (DSI)