



Company: International Ocean Discovery Program

Well: Expedition 369, Site U1513D
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

Latitude: S 33* 47.6196'
Longitude: E 112* 29.1339'
Elev.: K.B. 0.00 m
G.L. -2800.00 m
D.F. 0.00 m
Permanent Datum: Sea Floor
Log Measured From: Rig Floor
Drilling Measured From: Rig Floor

API Serial No.
Max. Hole Devi. 0 deg
Longitude E 112.48556
Latitude S 33.79347

JOIDES Resolution
Australia Cretaceous Climate & Tectonics
Location: S 33* 47.6196'
Well: Expedition 369, Site U1513D
Company: International Ocean Discovery Program

Table with columns for Logging Date, Run Number, Depth Driller, Schlumberger Depth, Bottom Log Interval, Top Log Interval, Casing Driller Size @ Depth, Casing Schlumberger, Bit Size, Type Fluid In Hole, MUD (Density, Viscosity, Fluid Loss, PH, Source Of Sample), RM @ Measured Temperature, RMF @ Measured Temperature, RMC @ Measured Temperature, Source RMF, RMC, RM @ MRT, RMF @ MRT, Maximum Recorded Temperatures, Circulation Stopped, Logger On Bottom, Unit Number, Location, Recorded By, Witnessed By.

Table with columns for Run 1, Run 2, and Run 3 (partially visible). The table is mostly empty, suggesting it is a log of data runs.

DISCLAIMER





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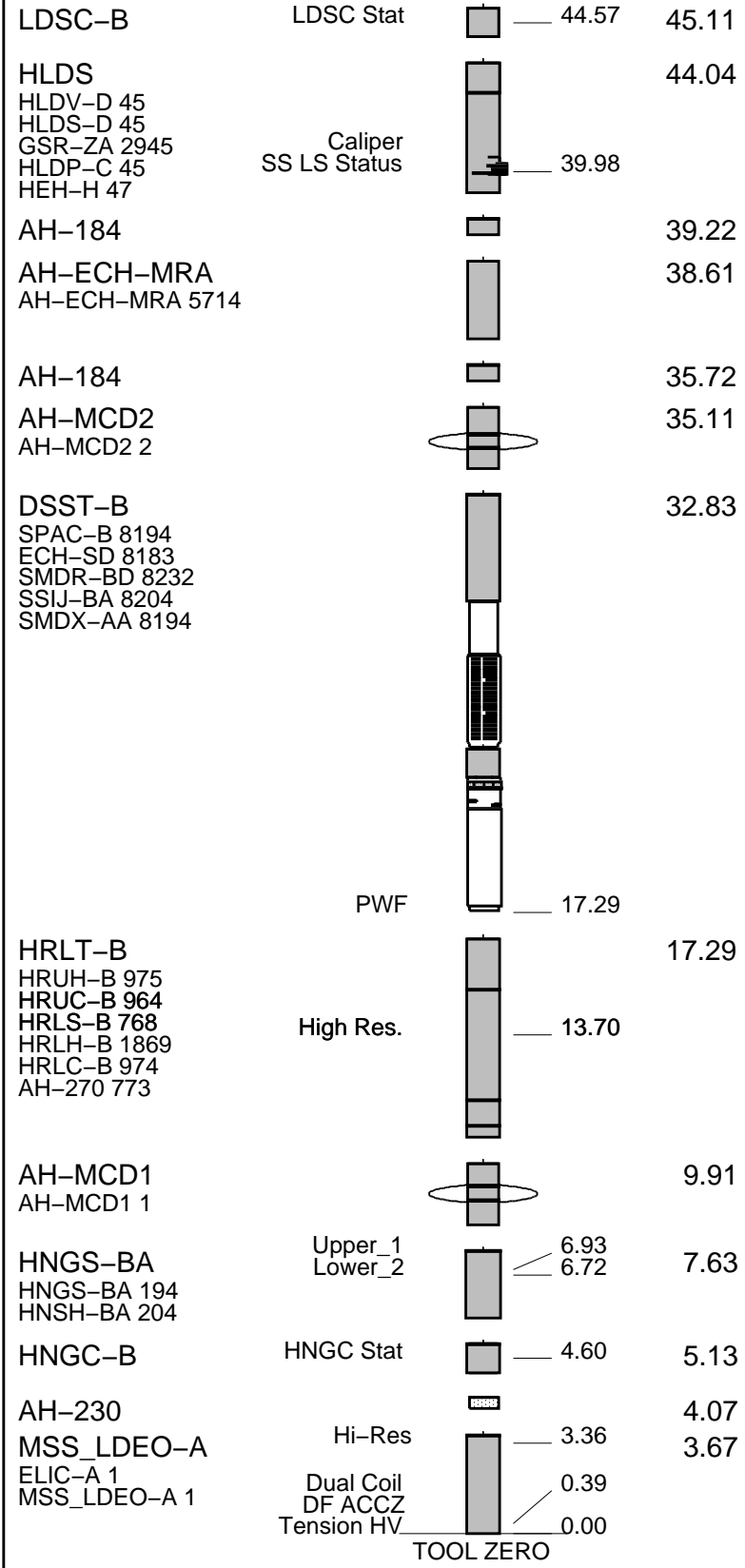
OTHER SERVICES1 OS1: OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
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REMARKS: RUN NUMBER 1 Hole drilled with RCB bottom hole assembly (BHA) at 9-7/8" BS Bit dropped using Mechanical Bit Release (MBR) prior to logging. Drilled TD was 3557.4 mbrf. Drill pipe set at 2957.4 mbrf. Tcombo run with upper part eccentralized, lower centralized with MCD tools. See toolsketch. Fluid type was Sepeolite mud weighted with Barite to a density of ppg (g/cc) Depth recorded from drill floor; logs presented as-logged without depth corrections or shifts, as per client instructions. All logs presented in wireline measured depth below rig floor (MDBRF). Caliper opened during upward passes; closed inside pipe. Hole size corrections made using caliper measurements for upward passes. DSI run with P&S Mode in standard frequency, DDBHC mode; LD run in low-freq, UD run in std. freq. AHC used from TD then switched off to facilitate pipe entry. 10.5 lb/gal mud pumped in hole prior to logging. Bridge at 3149-3137mbrf. Made multiple attempts but no success. 2nd run of tools utilized hole finder on bottom with no success. 2nd run of tools only made downlog and MSS removed from string to avoid damage to MSS housing with holefinder.	REMARKS: RUN NUMBER 2
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RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:	19C0-187		PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT			
GSR-U 6098 WITM (EDTS)-A			
DOWNHOLE EQUIPMENT			
LEH-QT	MDSB_EDTC		47.09 48.41
	Mud Tempe		46.02 47.52
AH-369	CTEM		45.45 47.09
EDTC-B	Gamma Ray		45.11
EDTH-B 8303	EFTB DIAG		
	TelStatus		
	EDTCB Ele		



MAXIMUM STRING DIAMETER 3.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

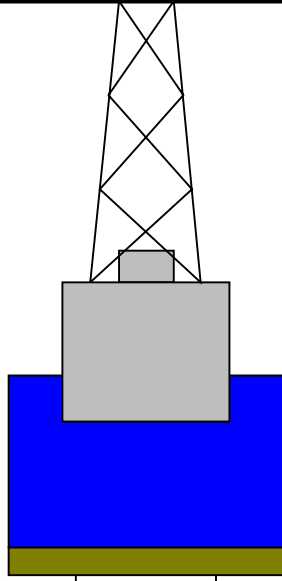
Production String	(in)	(M)	Well Schematic	(M)	(in)	Casing String
	OD	ID		MD	MD	

Kelly Bushing Elevation
Derrick Floor Elevation

0
0

Mean Sea Level

11



4.1



2800

4.1

2957.4

9.875

Sea Floor

Open Hole

3557.4

Total Depth

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 M
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 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		

Waveform Data Copy Indicator - Lower Dipole (WC11)
0 (----) 10

SAM1 Waveform Gain (WFG1)
0 (----) 1000

Bit Size (BS)
(IN) 0 20

Calibrated Downhole Force (CDF) (LBF)
5000 0

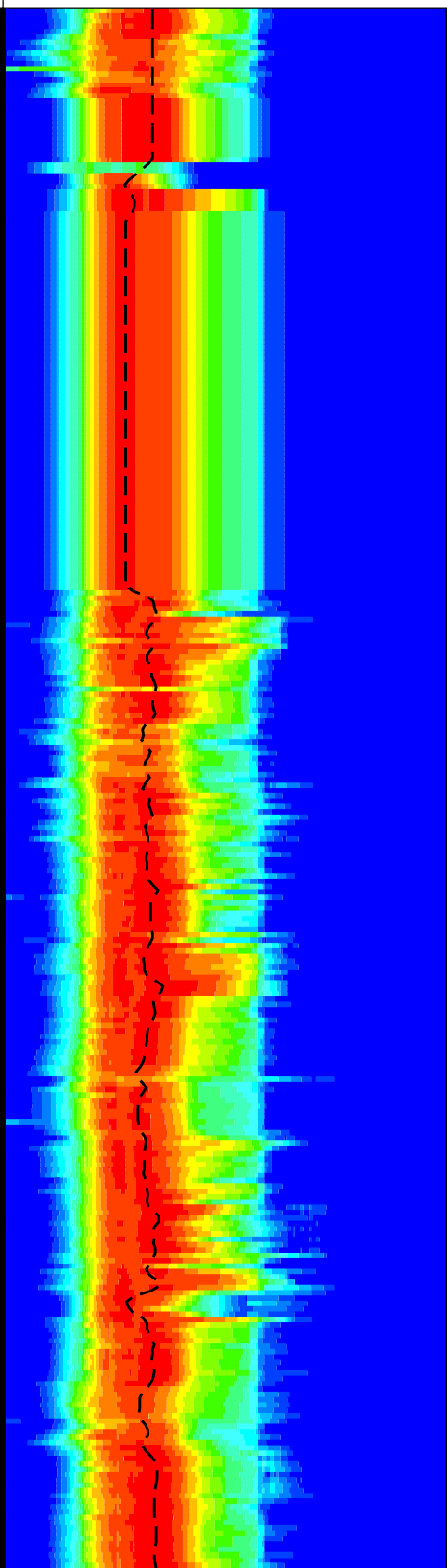
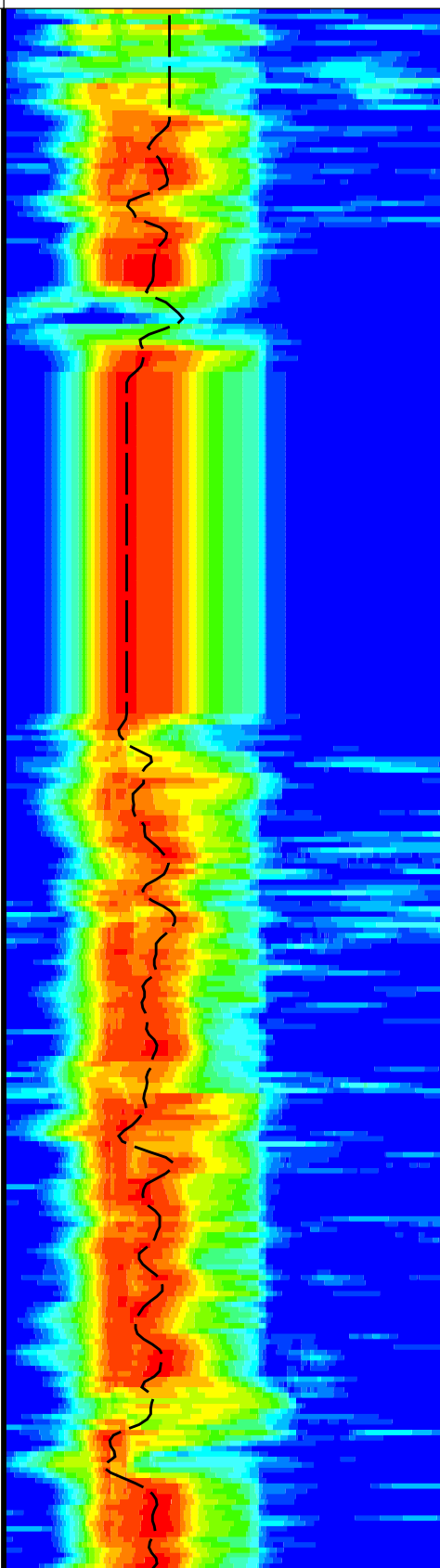
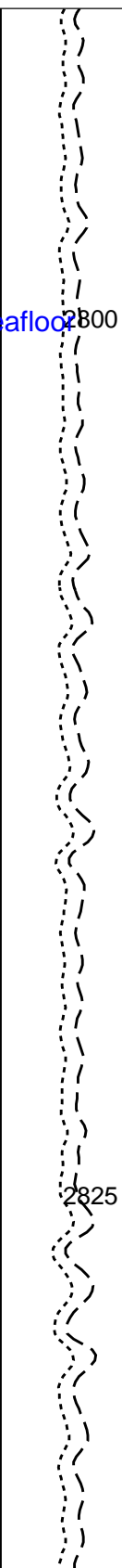
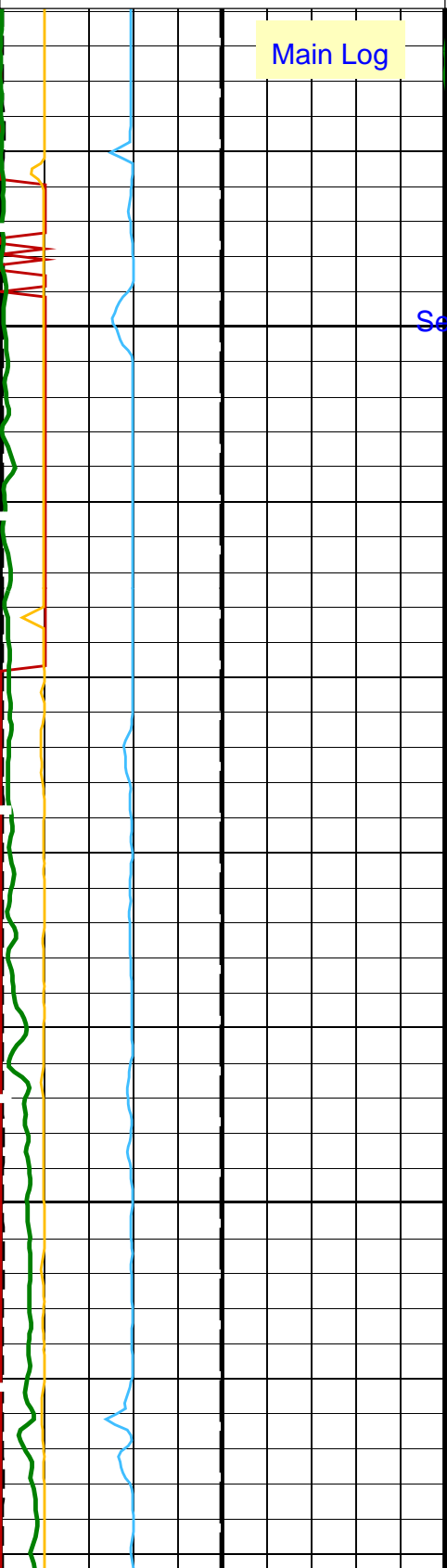
Tension (TENS) (LBF)
10000 0

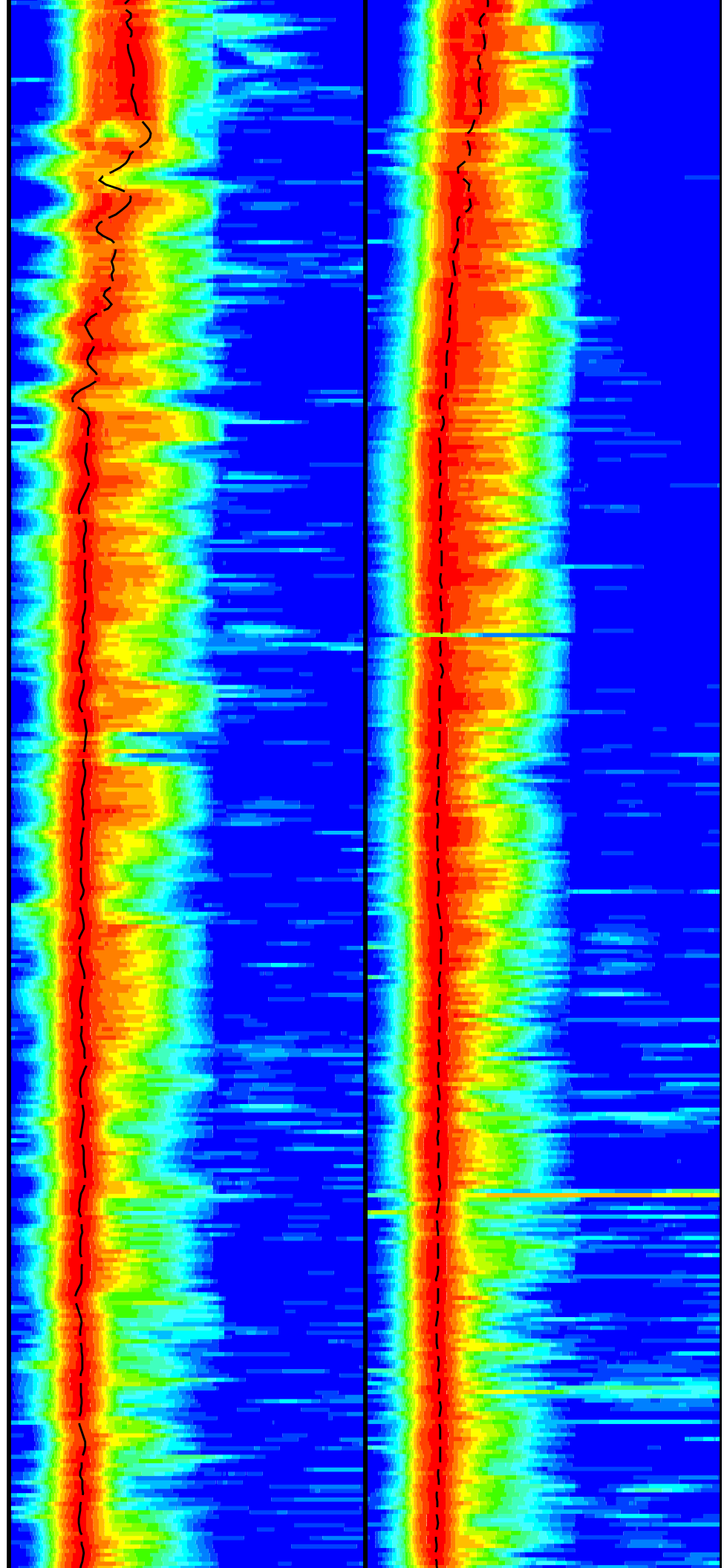
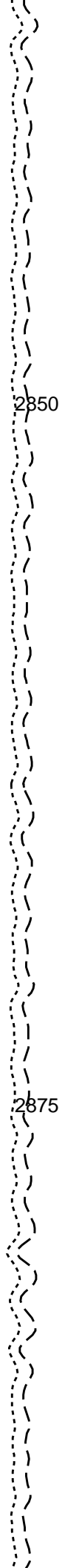
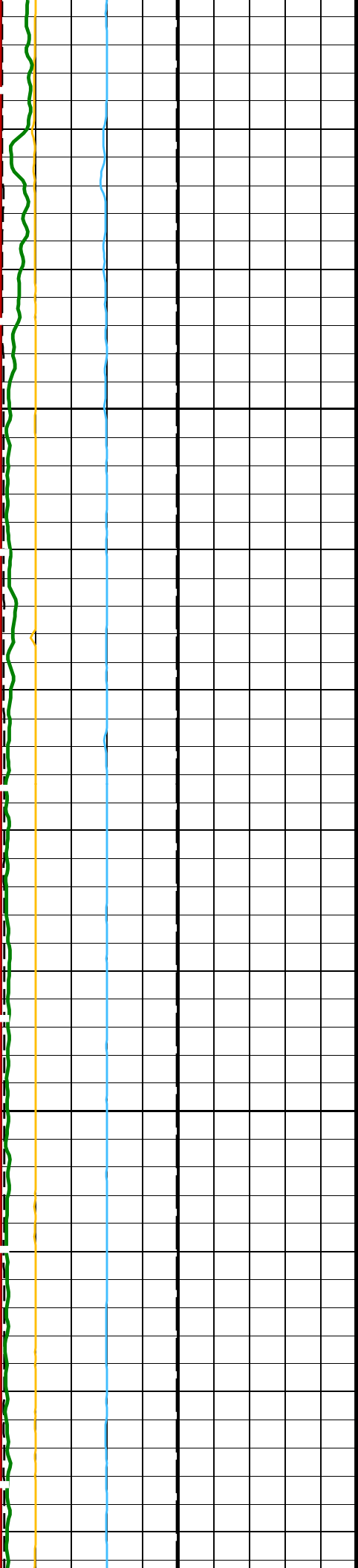
Min Amplitude Max
Tr.Array L.Dipole Slow Proj. CVDL (SPT1) (US/F) 40 1040

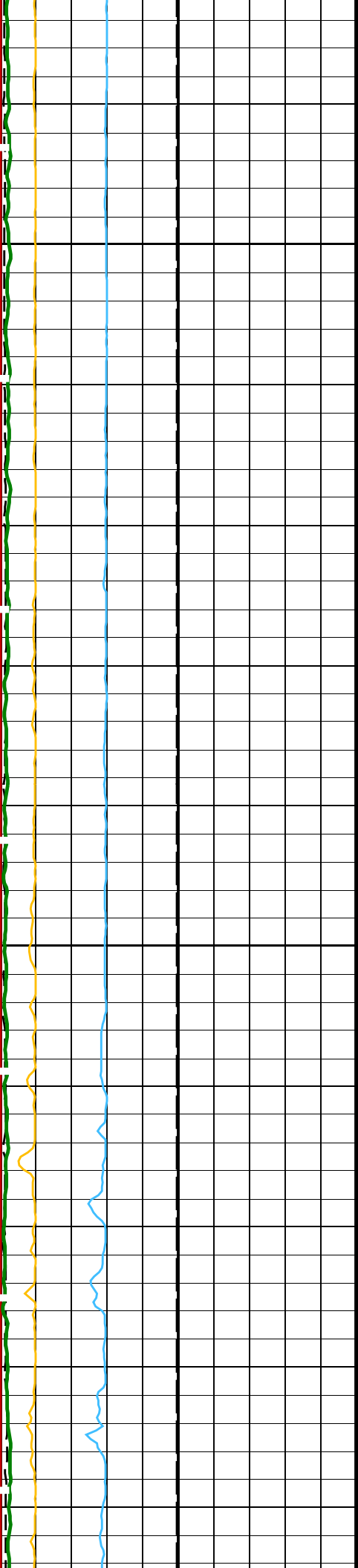
Min Amplitude Max
Rec.Array L.Dipole Slow Proj. CVDL (SPR1) (US/F) 40 1040

Delta-T Shear / TA - Lower Dipole (DT1T) (US/F) 40 1040

Delta-T Shear / RA - Lower Dipole (DT1R) (US/F) 40 1040

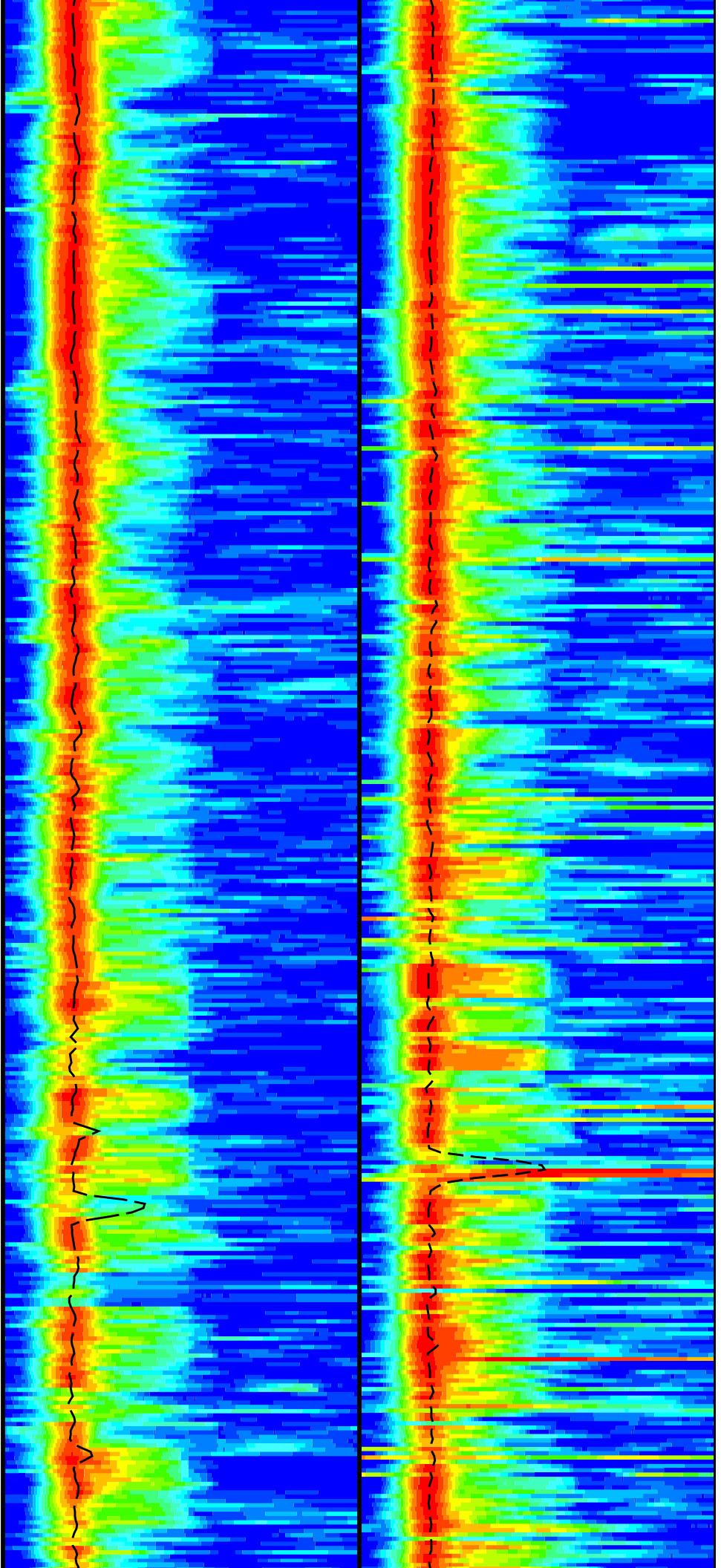
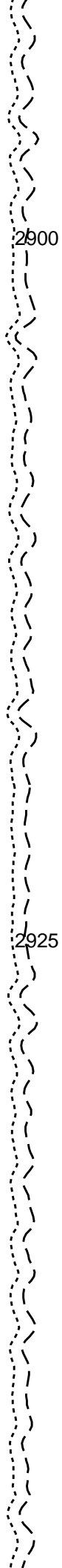


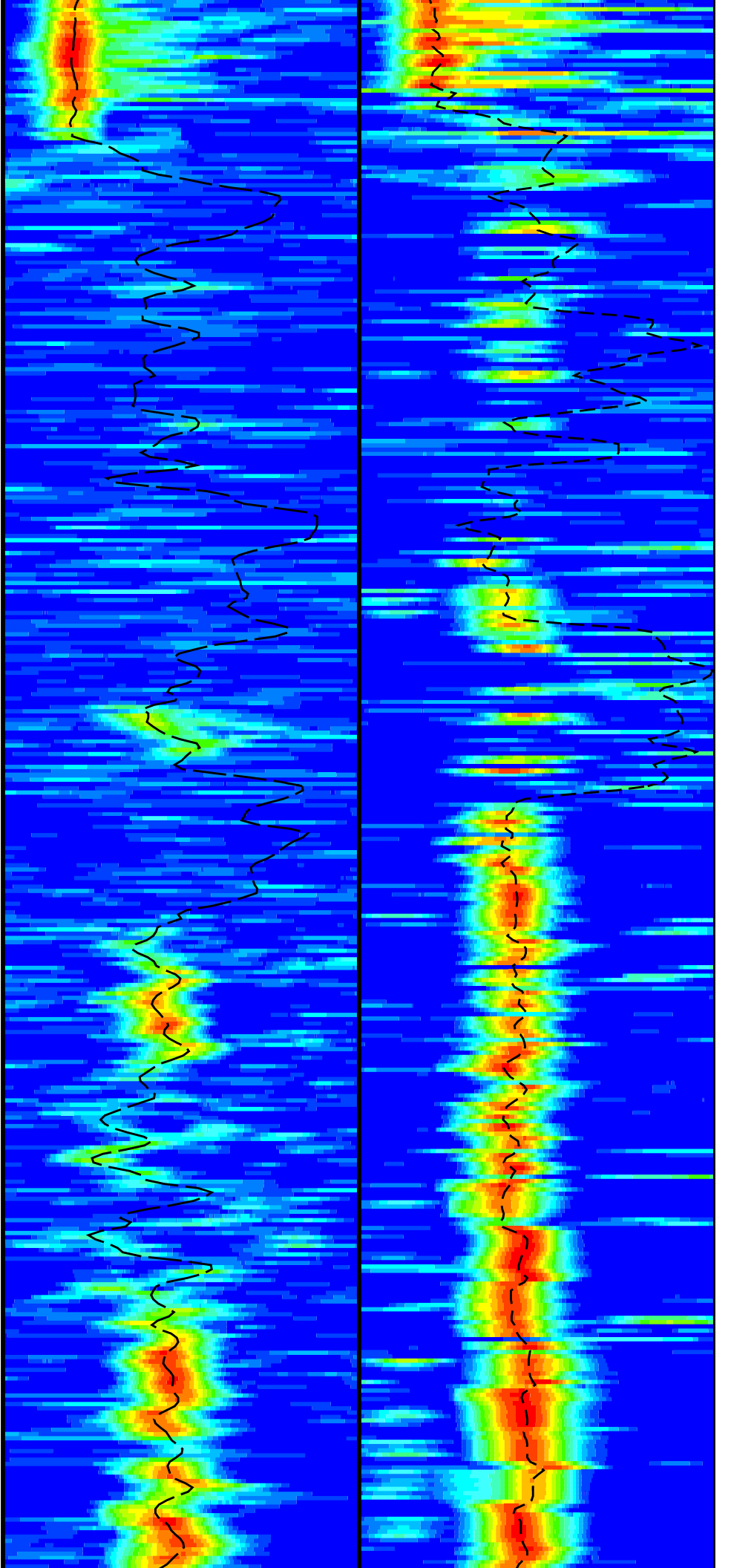
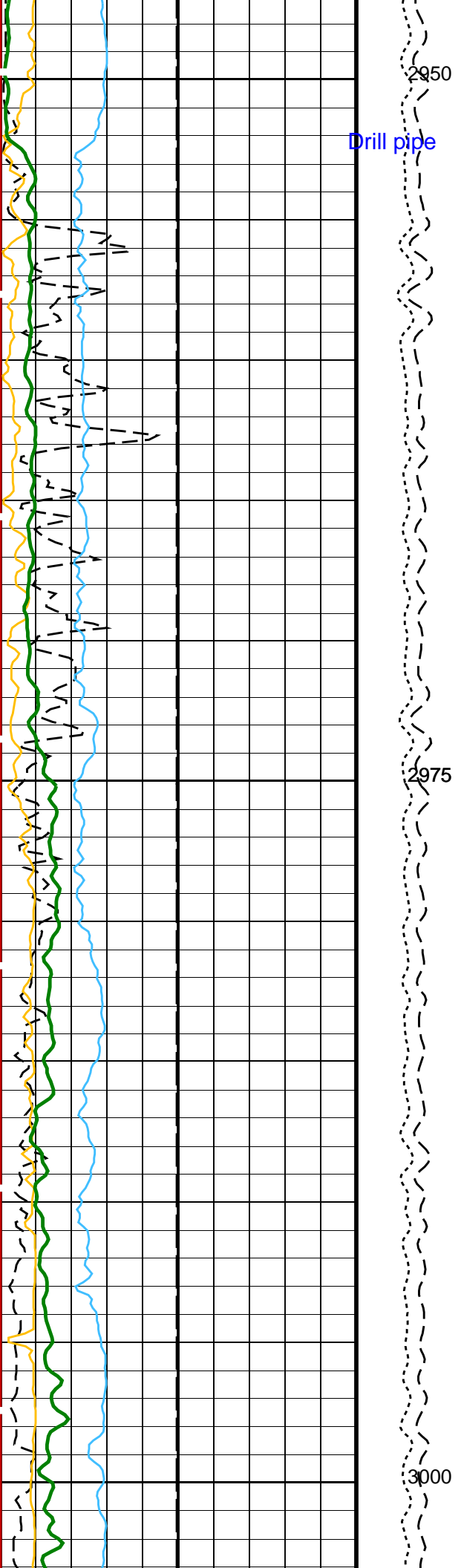


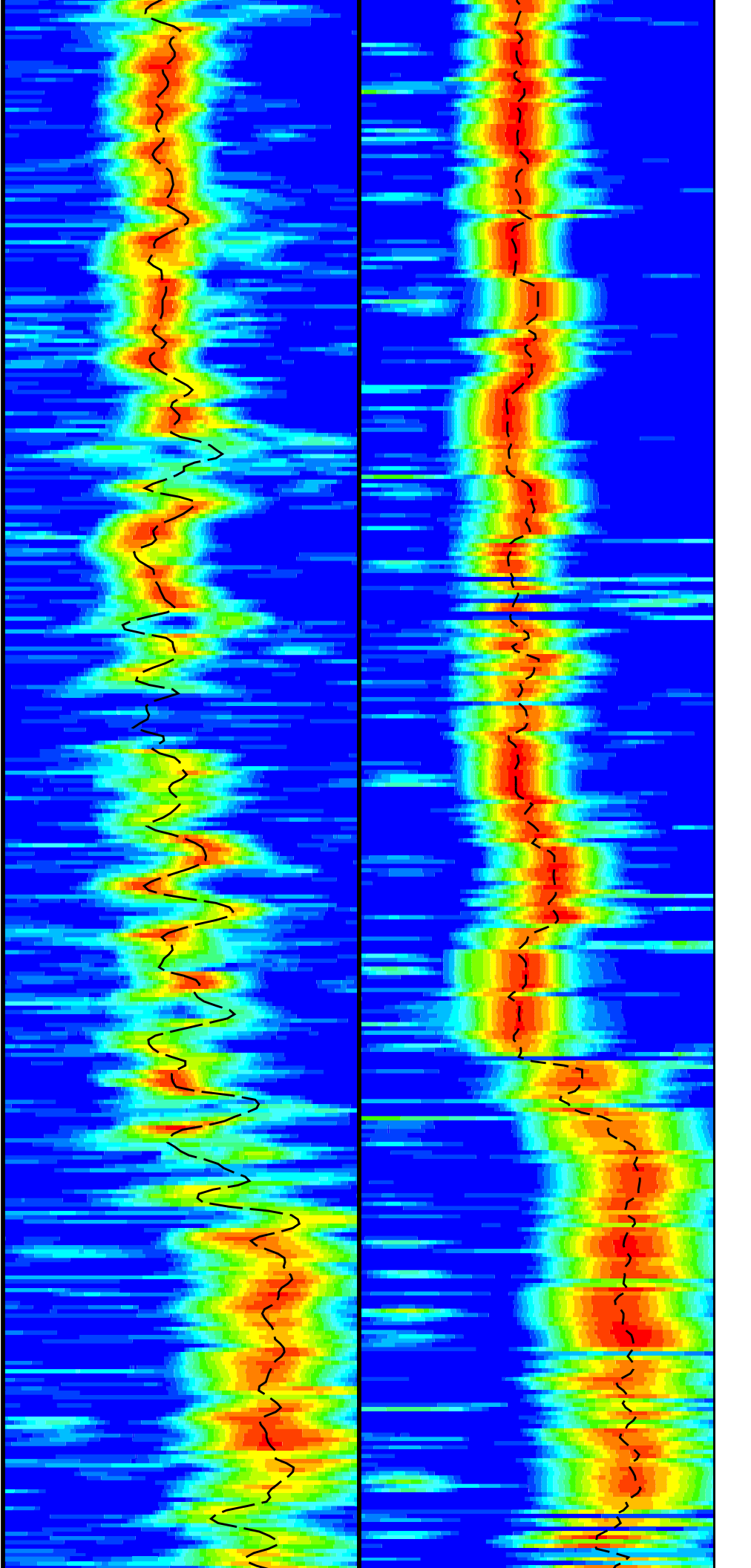
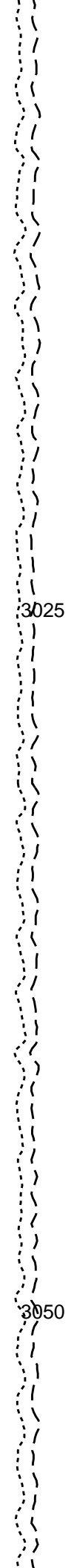
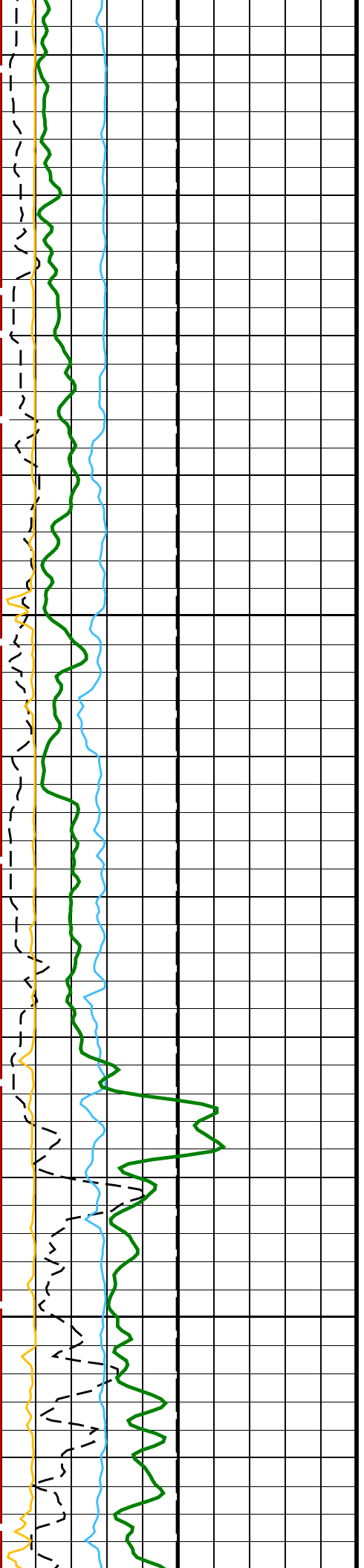


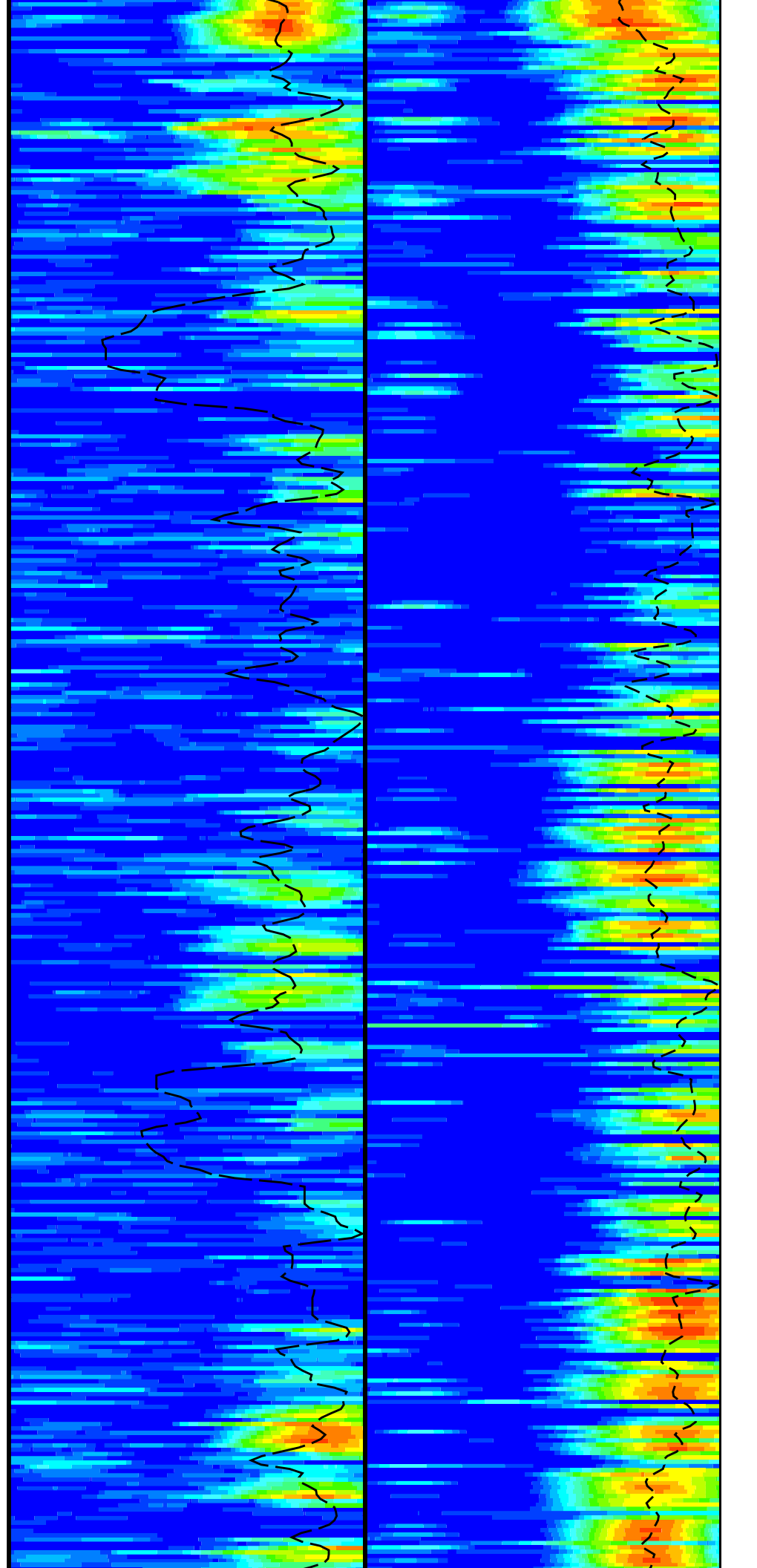
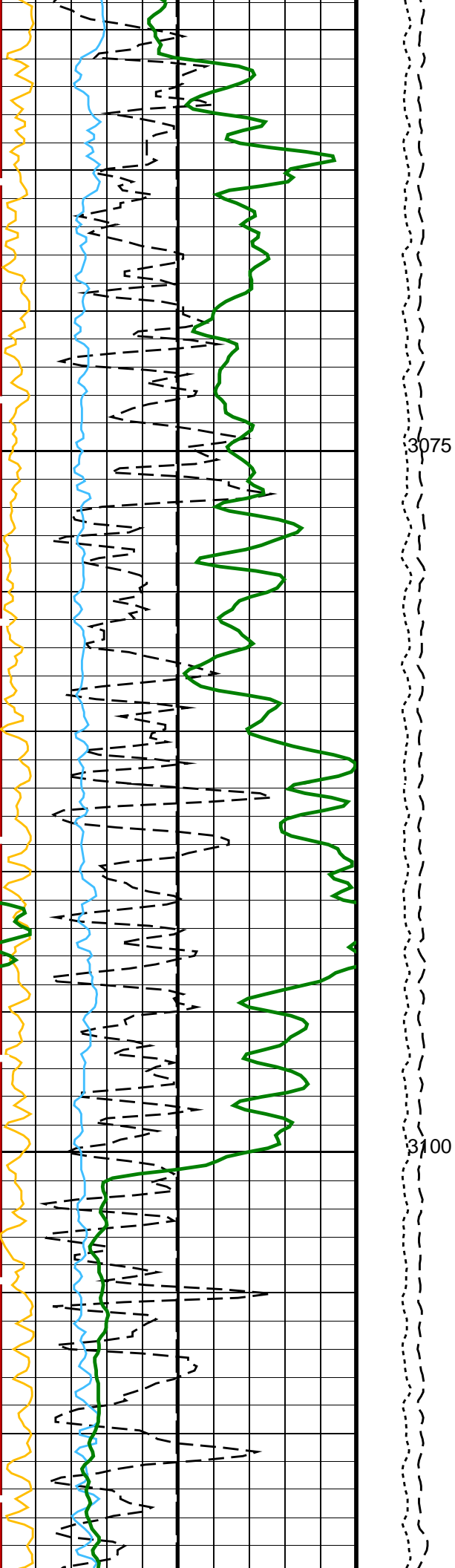
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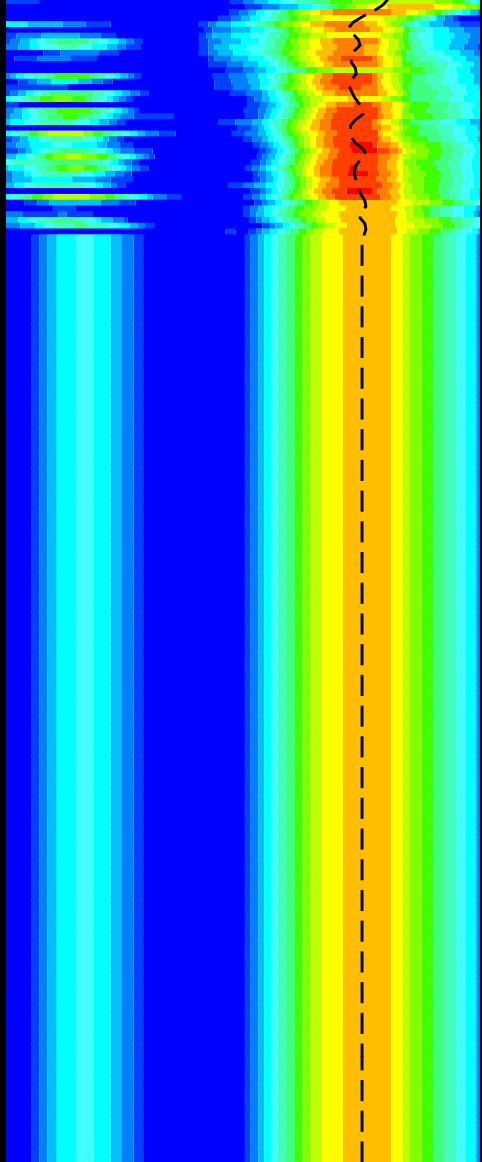
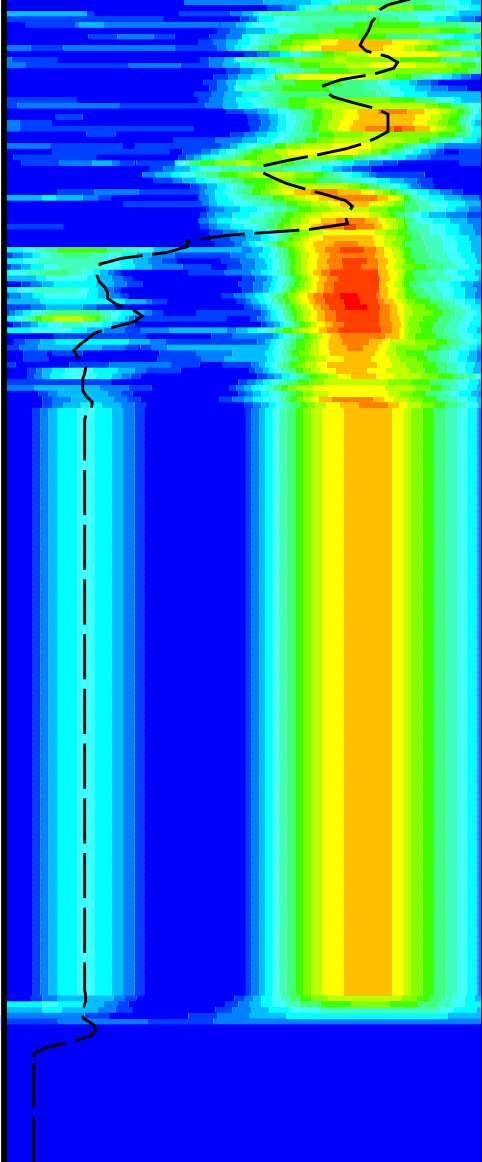
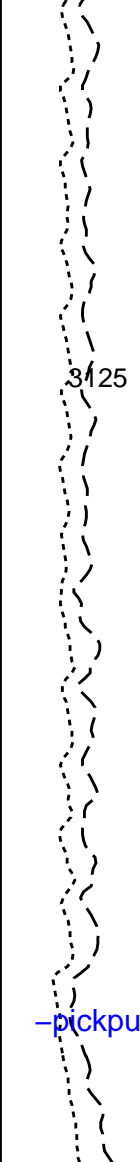
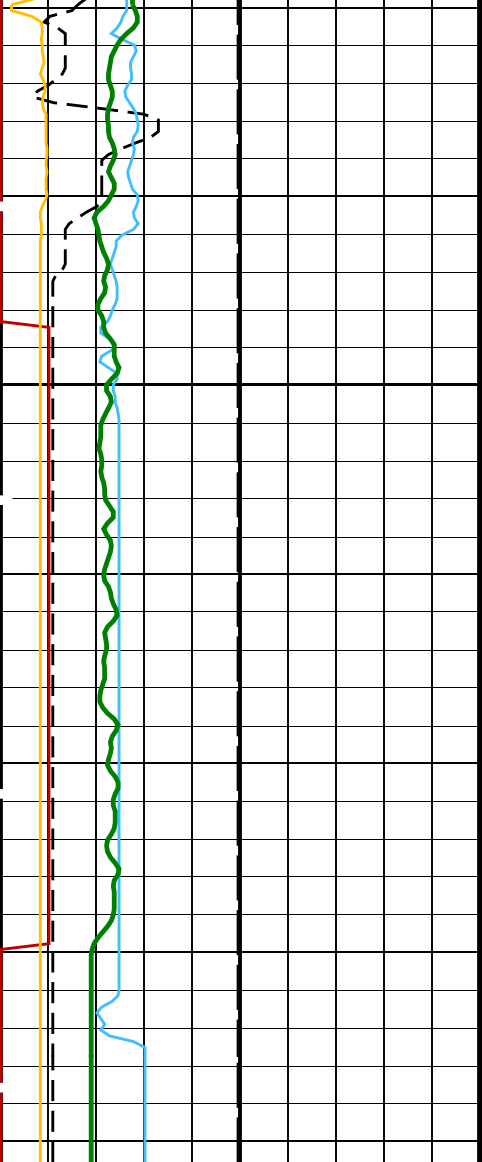
2925











Bit Size (BS)
(IN) 0 20

Tension (TENS)
(LBF) 10000 0

Delta-T Shear / TA - Lower Dipole
(DT1T) 40 1040
(US/F)

Delta-T Shear / RA - Lower Dipole
(DT1R) 40 1040
(US/F)

SAM1 Waveform Gain (WFG1)
(----) 0 1000

Calibrated Downhole Force (CDF) (LBF) 5000 0

Min Amplitude Max
Tr.Array L.Dipole Slow Proj. CVDL (SPT1) (US/F) 40 1040

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

Main Log

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
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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	-0.000627614	
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	1.00201	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02526	

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
DTCX	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
NW11	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
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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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 M
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 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

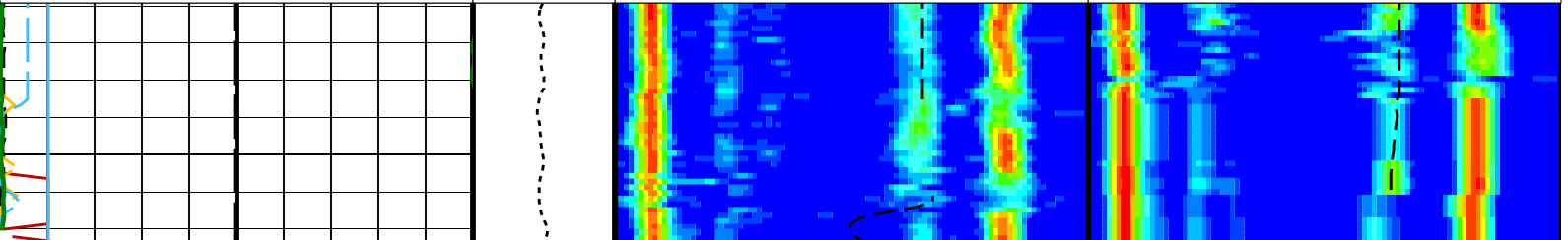
PIP SUMMARY

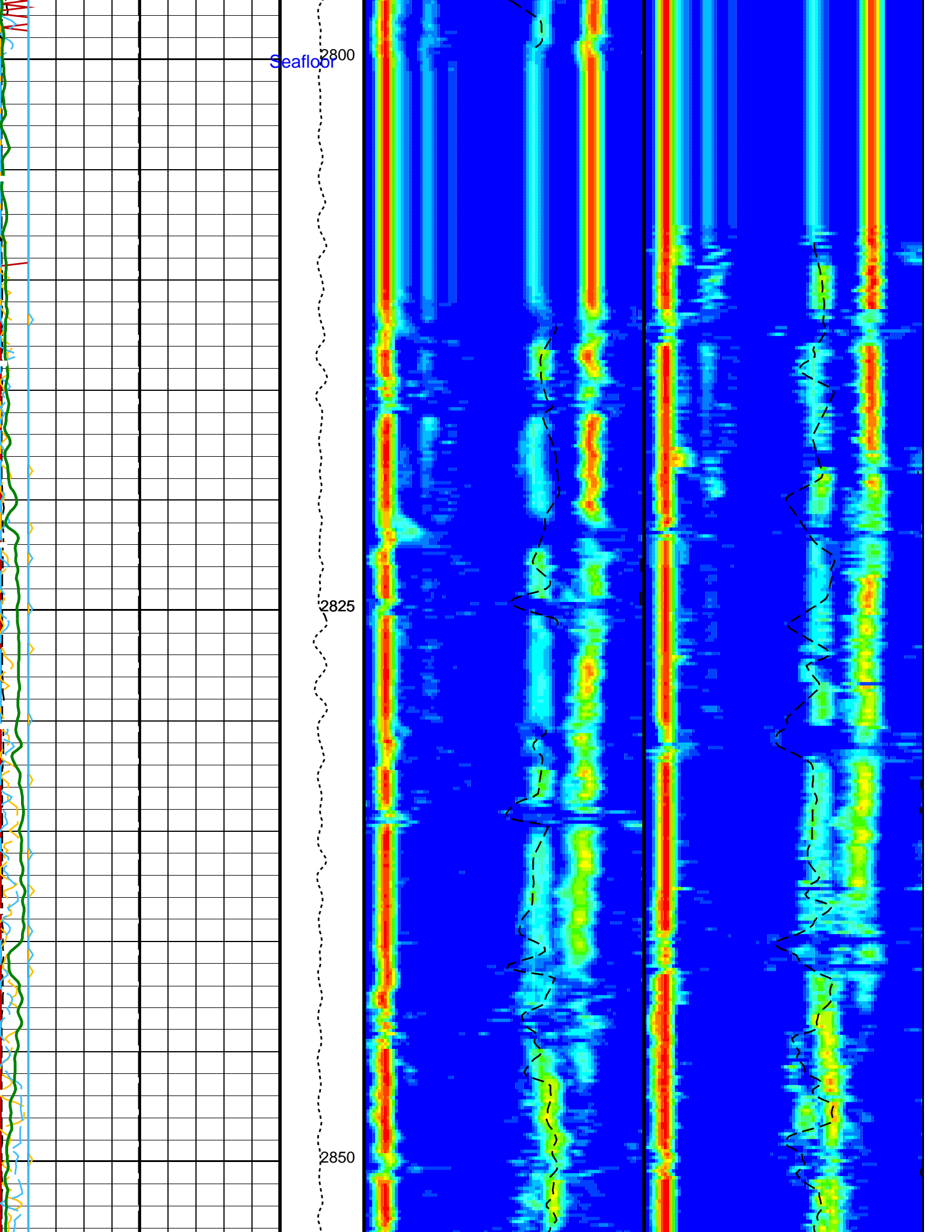
Time Mark Every 60 S

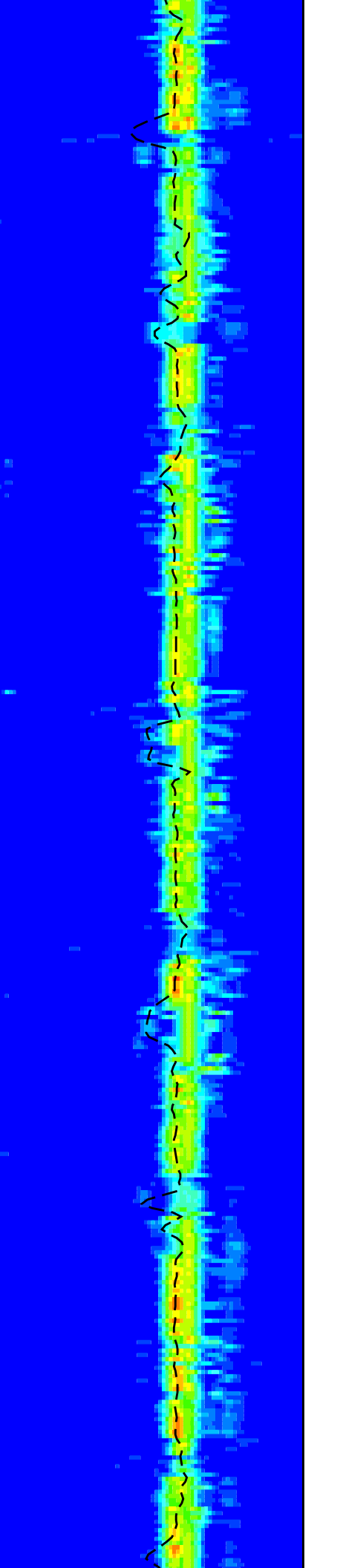
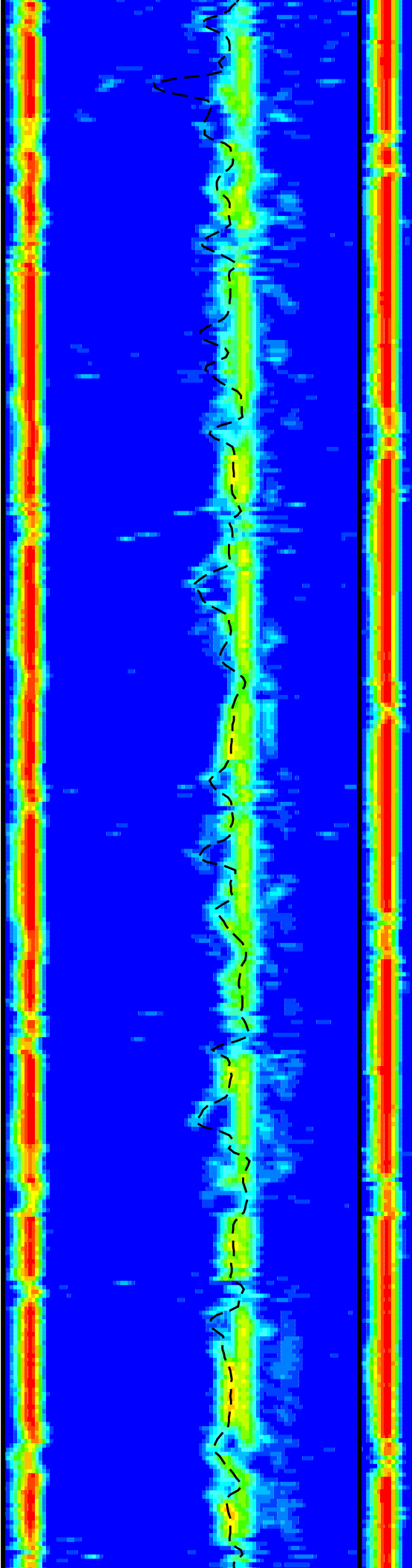
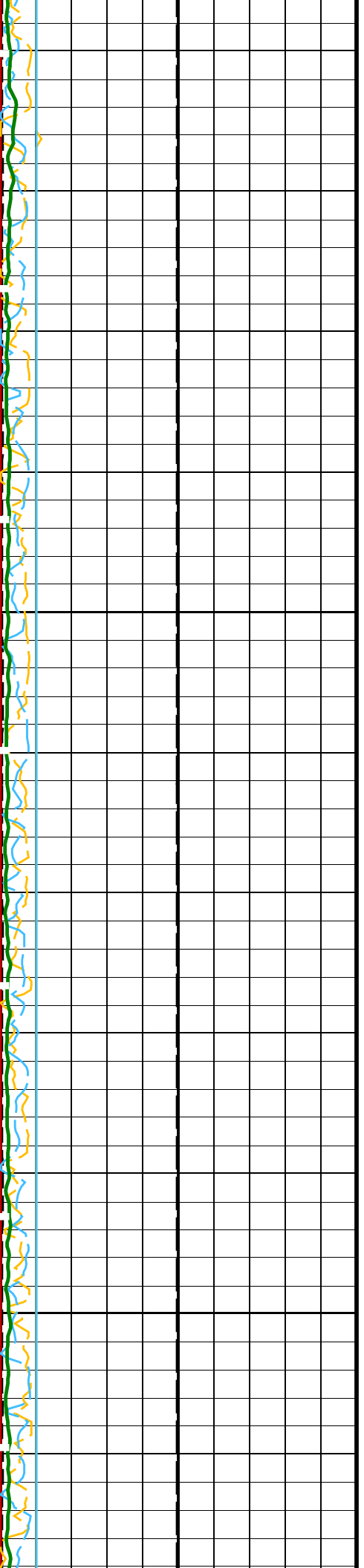
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA - P & S Shear (CHTS)		
-1	(----)	9
Peak Coherence / RA - P & S Shear (CHRS)		
-1	(----)	9
Peak Coherence / TA - P & S Comp (CHTP)		
0	(----)	10
Peak Coherence / RA - P & S Comp (CHRP)		
0	(----)	10
Waveform Data Copy Indicator 4 - Monopole P&S (WCI4)		
0	(----)	10
SAM4 Waveform Gain (WFG4)		
0	(----)	1000
Bit Size (BS)		
0	(IN)	20

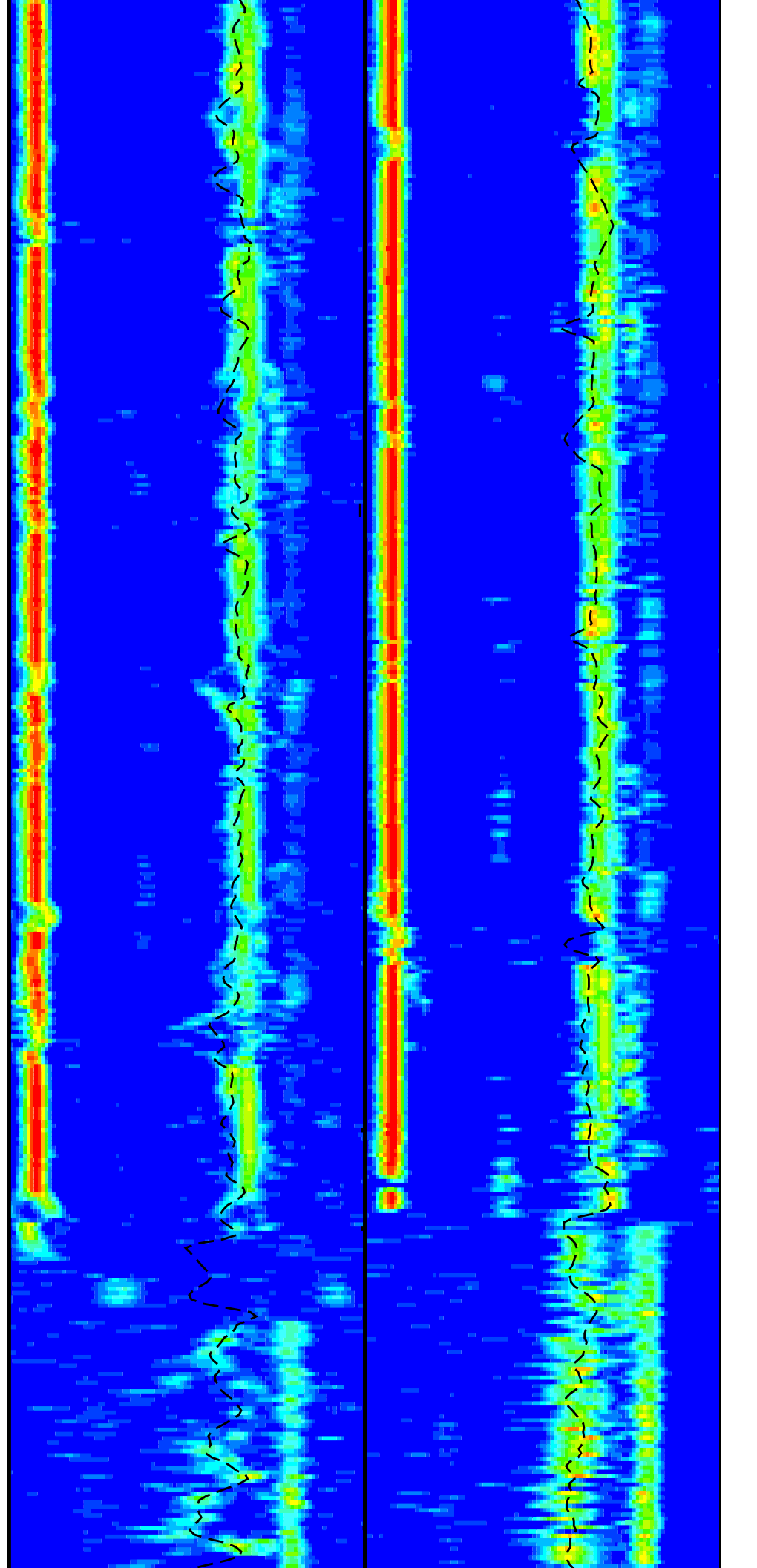
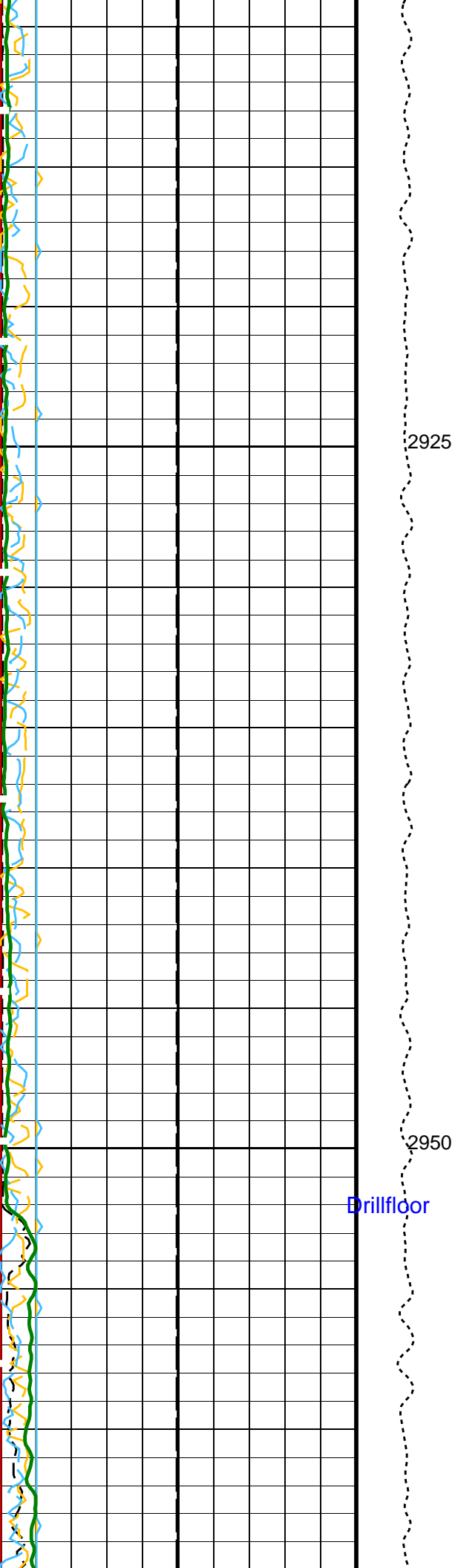
[Main Log](#)

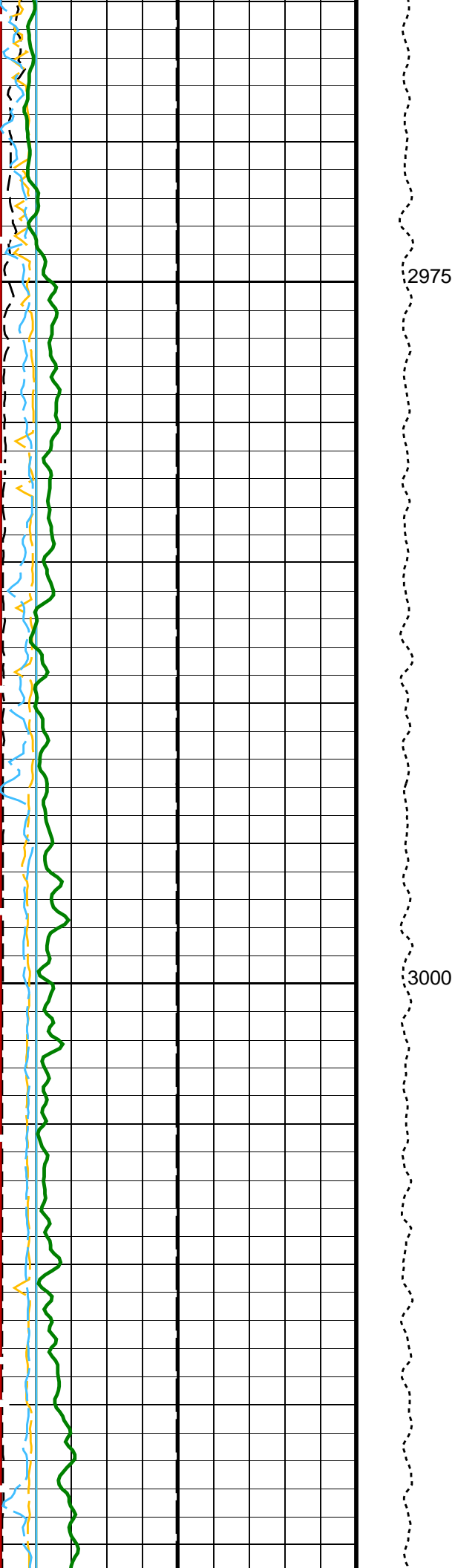
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40	(US/F)	240	40	(US/F)	240
40	Delta-T Shear / TA - P & S (DTTS)	240	40	Delta-T Shear / RA - P & S (DTRS)	240
40	(US/F)	240	40	(US/F)	240
40	Delta-T Comp / TA - P & S (DTTP)	240	40	Delta-T Comp / RA - P & S (DTRP)	240
40	(US/F)	240	40	(US/F)	240





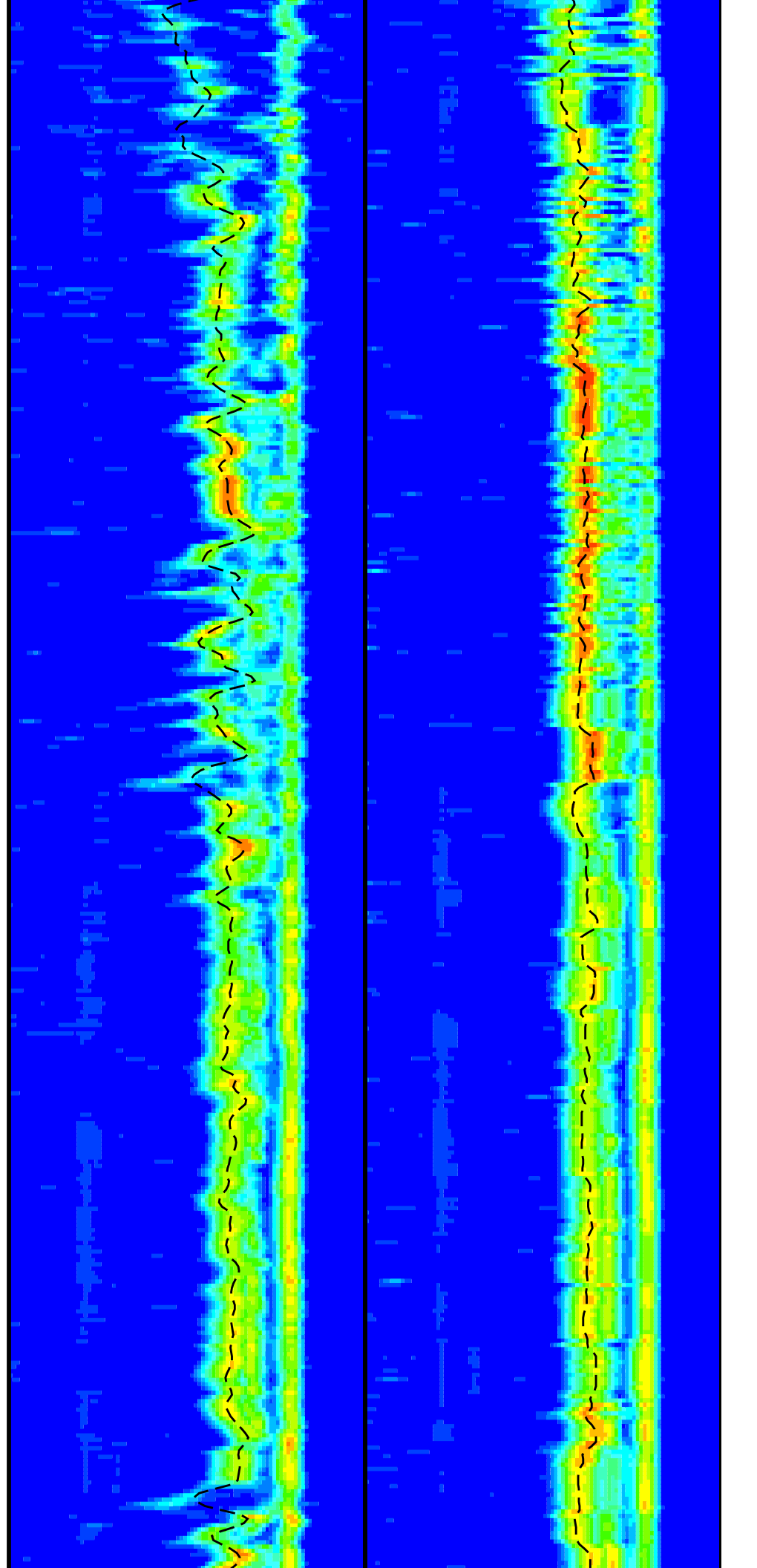


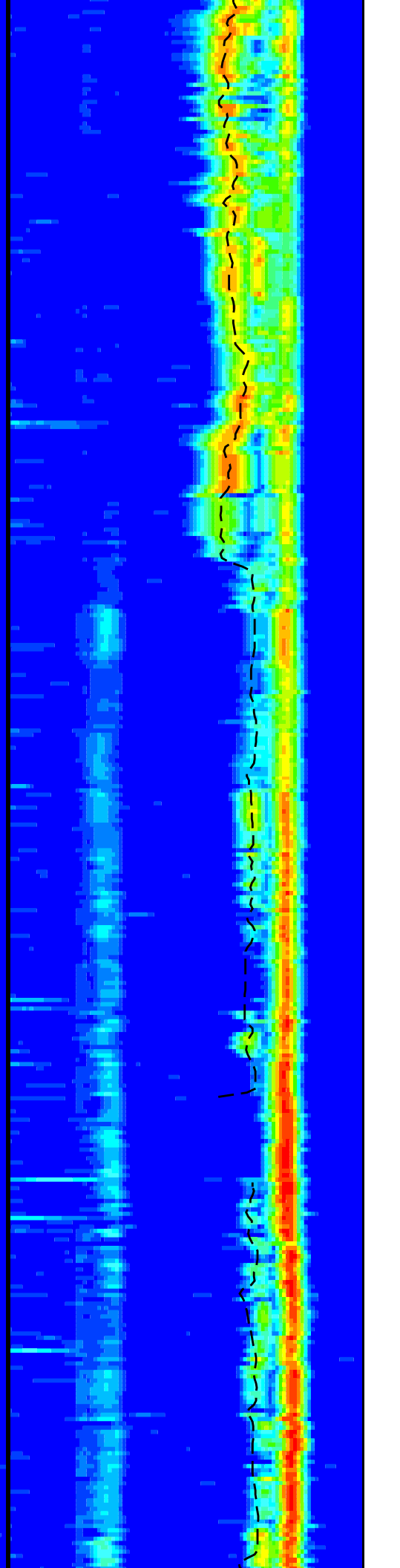
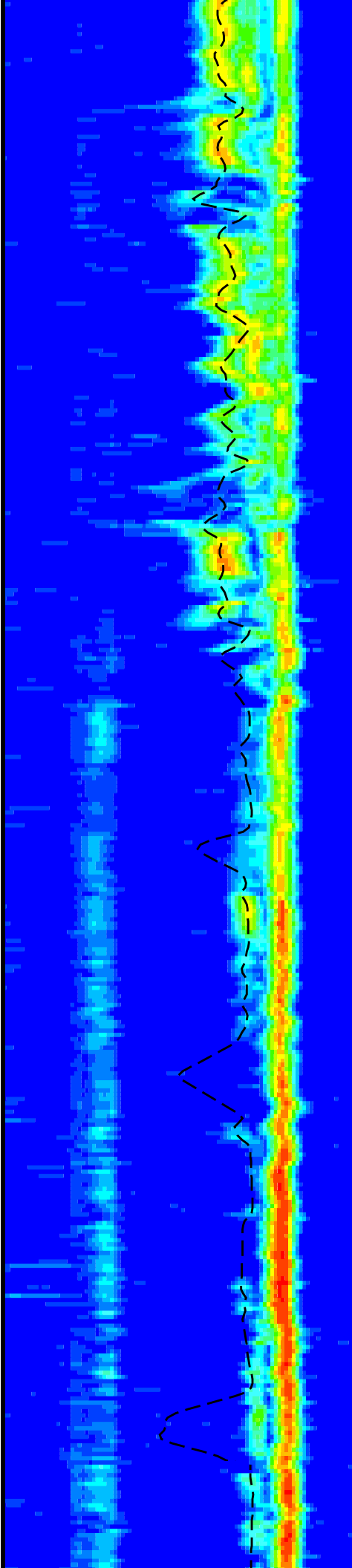
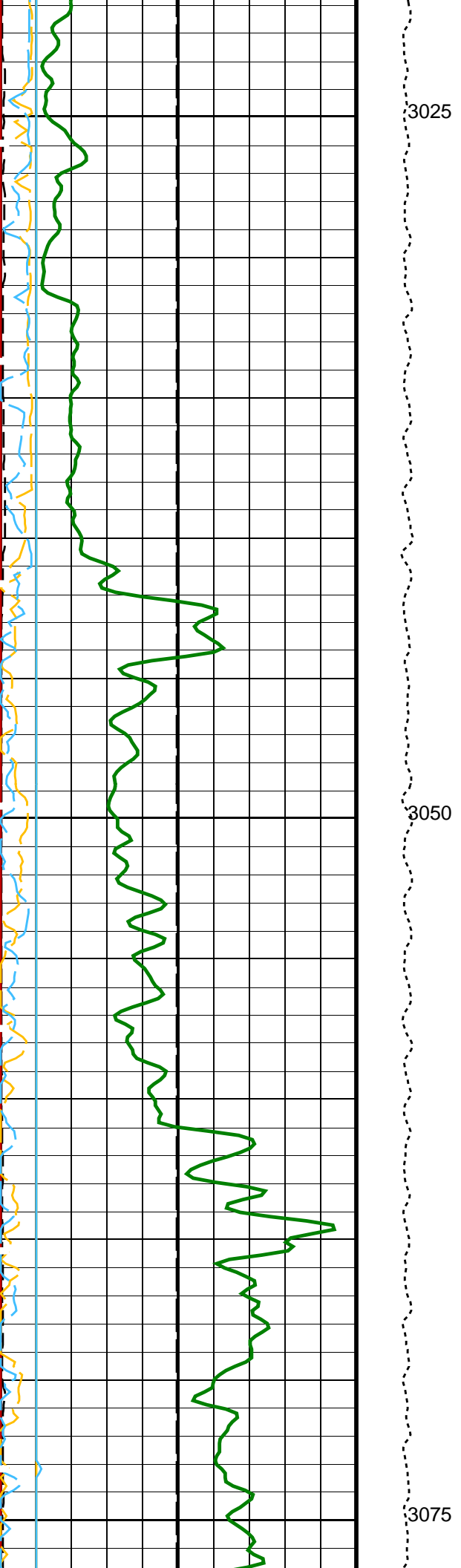


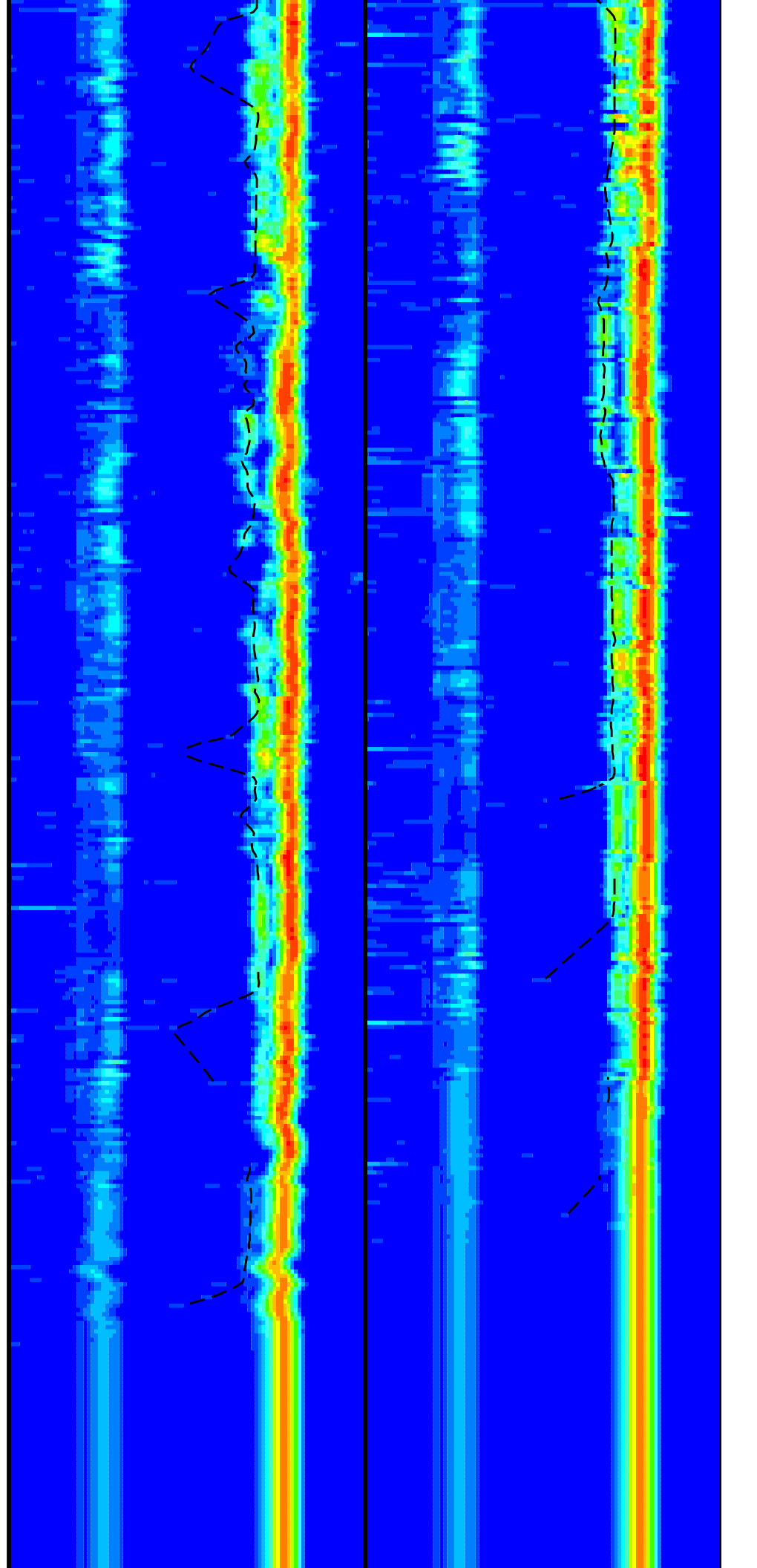
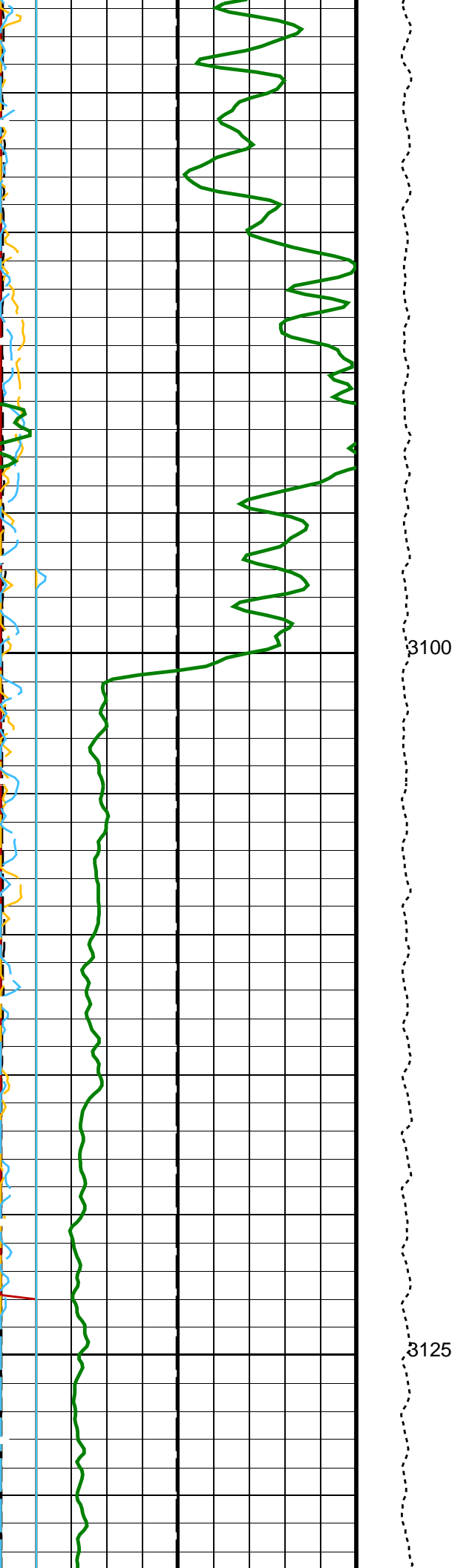


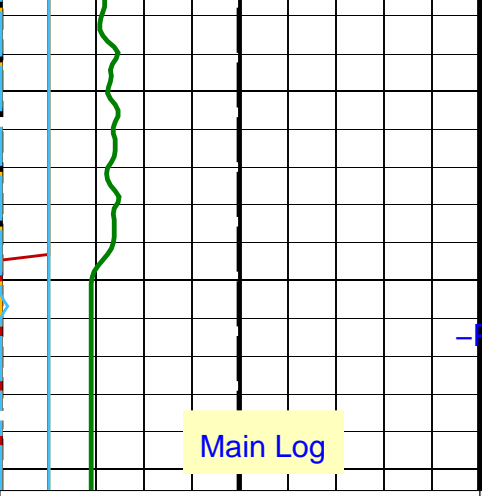
2975

3000

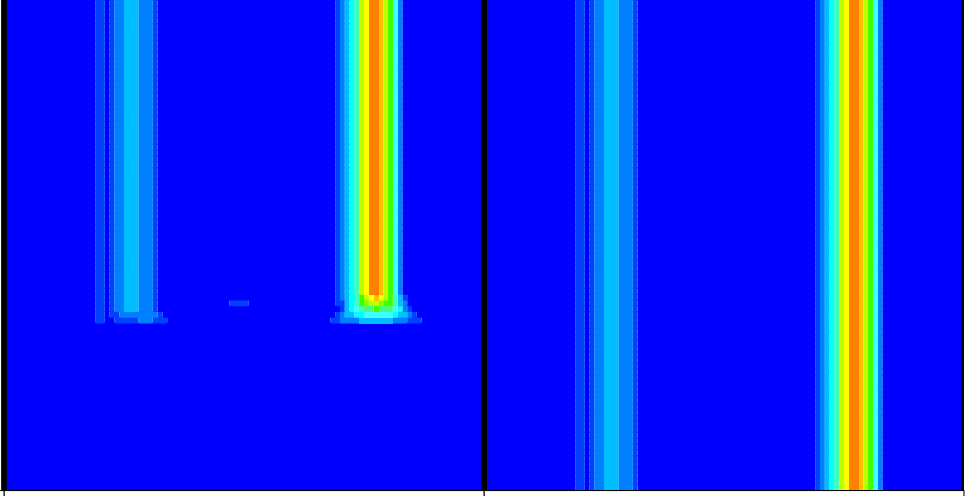








-Pickup



Bit Size (BS) (IN)	0	20
SAM4 Waveform Gain (WFG4) (----)	0	1000
Waveform Data Copy Indicator 4 - Monopole P&S (WCI4)	0	10
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) (GAPI)	0	100

Tension
(TENS)
(LBF)

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

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

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	-0.000627614
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	1.00201	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02526	
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	180	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	193	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
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS4	STC Sonic Array Status - Monopole P&S	255	
SBO4	STC Search Band Offset - Monopole P&S	500	US
SBR4	STC Baseline Removal - Monopole P&S	ON	
SBW4	STC Search Bandwidth - Monopole P&S	2000	US
SFC4	STC Formation Character - Monopole P&S	SELECTABLE	
SFM4	STC Filter - Monopole P&S	B3-20K	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	235	US/F
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	240	US/F
SLL4	STC Slowness Lower Limit - Monopole P&S	40	US/F
SST4	STC Slowness Step - Monopole P&S	2	US/F
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	180	US/F
STUL	Label Slowness Upper Limit - Monopole Stoneley	780	US/F
SUL4	STC Slowness Upper Limit - Monopole P&S	240	US/F
SWD4	STC Slowness Width - Monopole P&S	10	US/F
TBF4	STC Time for Baseline Fill - Monopole P&S	300	US
TLL4	STC Time Lower Limit - Monopole P&S	150	US
TST4	STC Time Step - Monopole P&S	50	US
TUL4	STC Time Upper Limit - Monopole P&S	3660	US
TWD4	STC Time Width - Monopole P&S	1000	US
TWI4	STC Integration Time Window - Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
WFM4	Waveform Mode 4	W1	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	9.875	IN

Format: DSST_P_S_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:39

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

Output DLIS Files

DEFAULT MSS_LDEO_NGS_HRLA_015LUP_EN:21_PRODUCER_01-Nov-2017-08:39

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 M
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 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

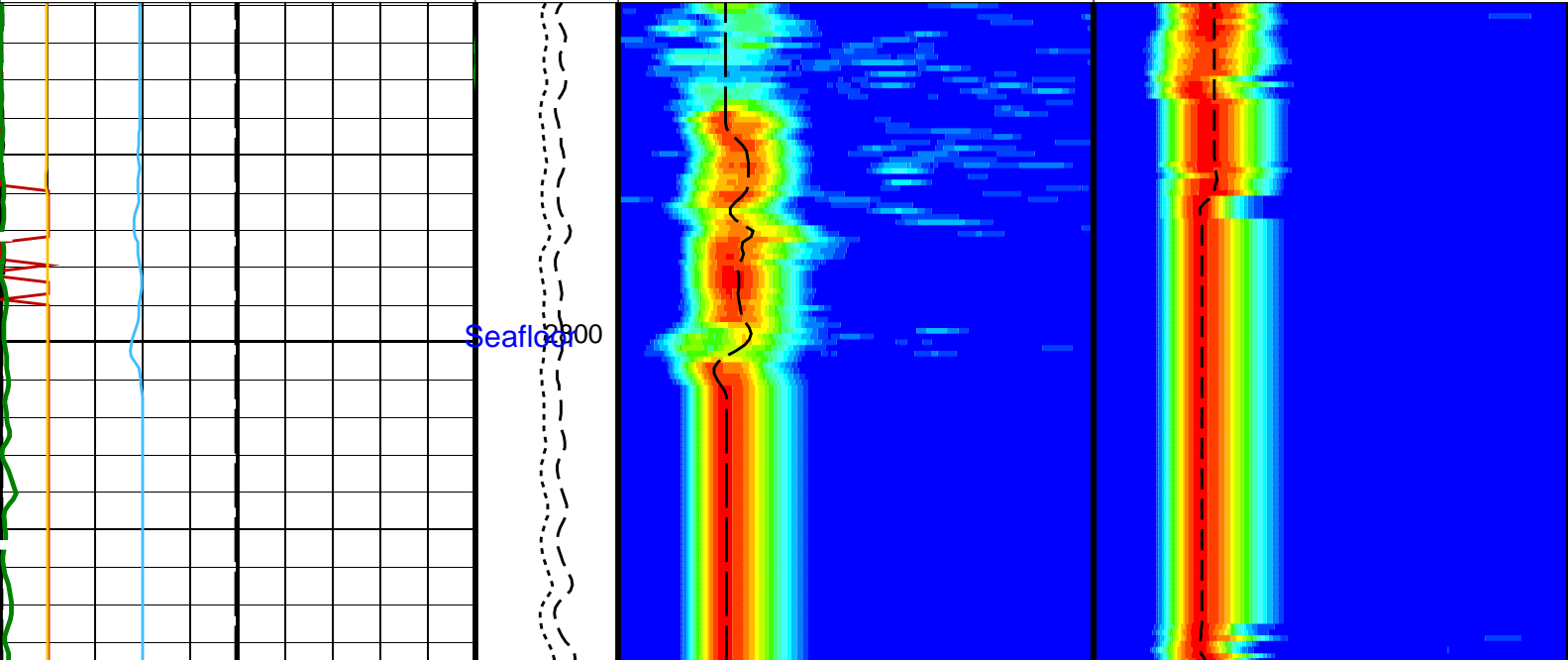
PIP SUMMARY

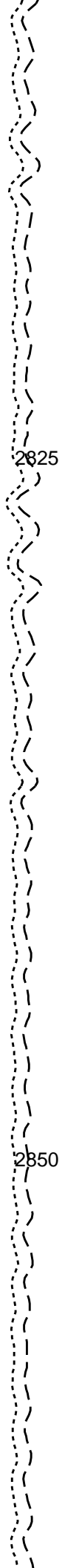
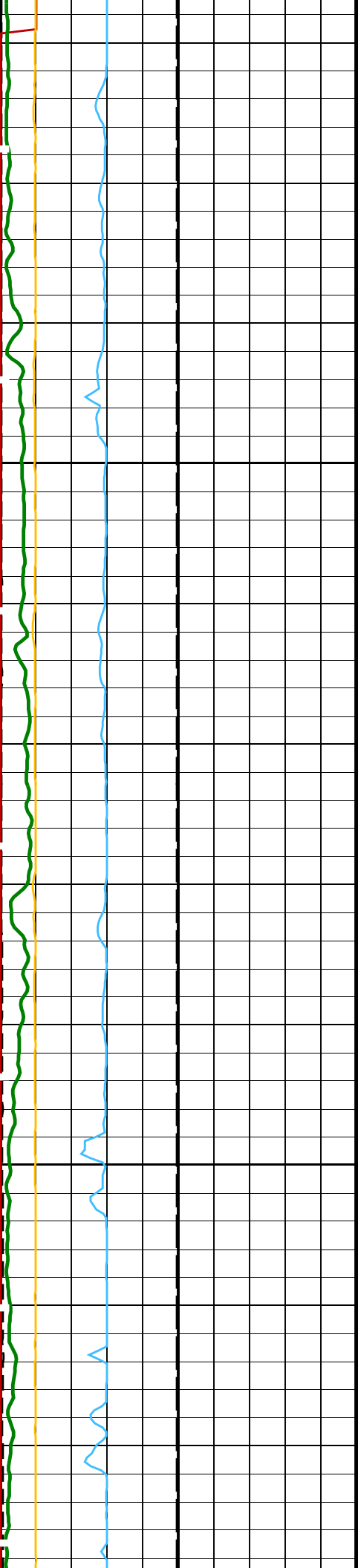
Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)	
0 (GAPI) 100	
Peak Coherence / TA - Upper Dipole (CHT2)	
-2 (----) 8	
Peak Coherence / RA - Upper Dipole (CHR2)	
0 (----) 10	
Waveform Data Copy Indicator 2 - Upper Dipole (WC12)	
0 (----) 10	

Main Log

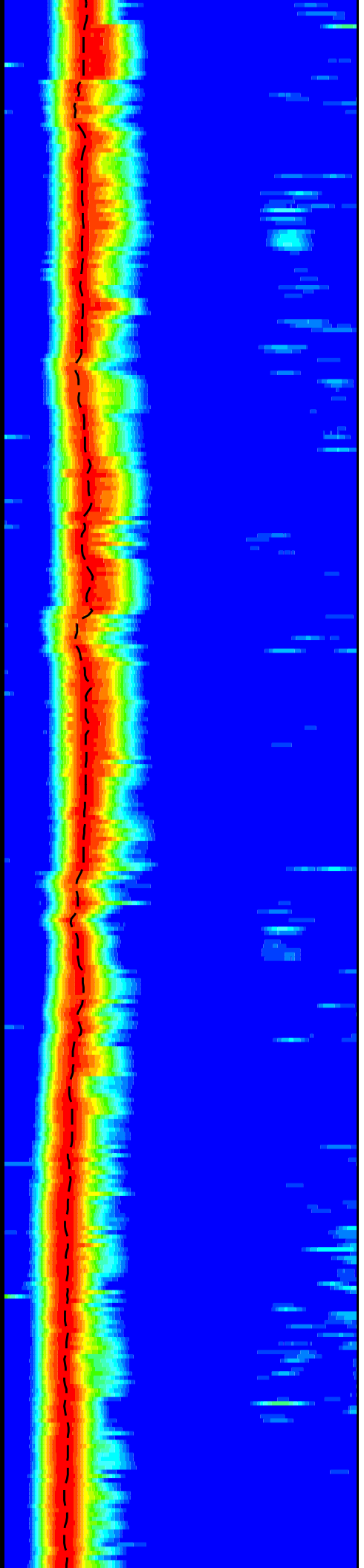
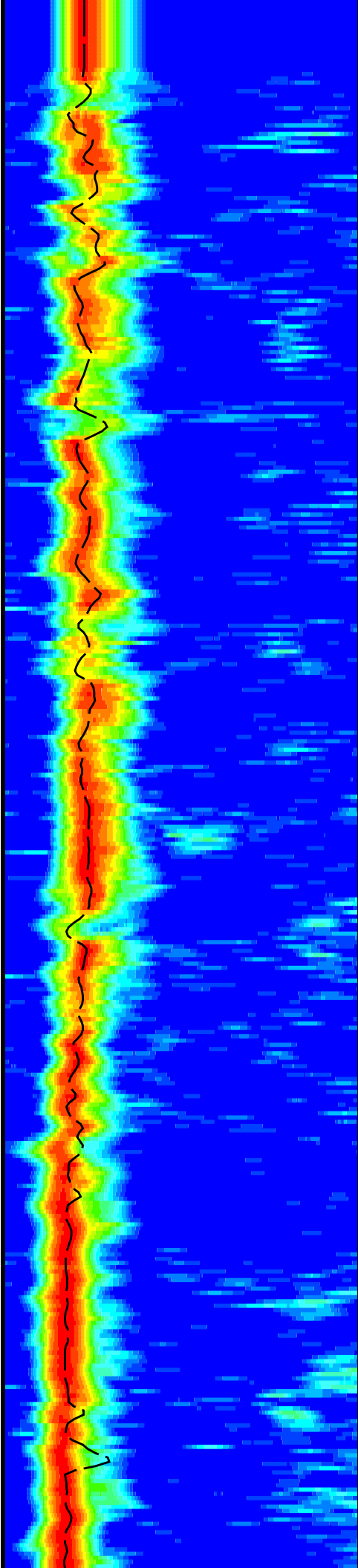
SAM2 Waveform Gain (WFG2)		Calibrated Downhole Force (CDF) (LBF)													
0 (----) 1000		5000 0		40	1040										
				<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Min</td> <td style="text-align: center;">Amplitude</td> <td style="text-align: center;">Max</td> </tr> <tr> <td colspan="3" style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;">Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F)</td> <td></td> <td style="text-align: center;">Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)</td> </tr> </table>	Min	Amplitude	Max				Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F)		Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)		
Min	Amplitude	Max													
Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F)		Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)													
				40	1040										
Bit Size (BS)		Tension (TENS) (LBF)		Delta-T Shear / TA - Upper Dipole (DT2T) (US/F)	Delta-T Shear / RA - Upper Dipole (DT2R) (US/F)										
0 (IN) 20		10000 0		40	1040										

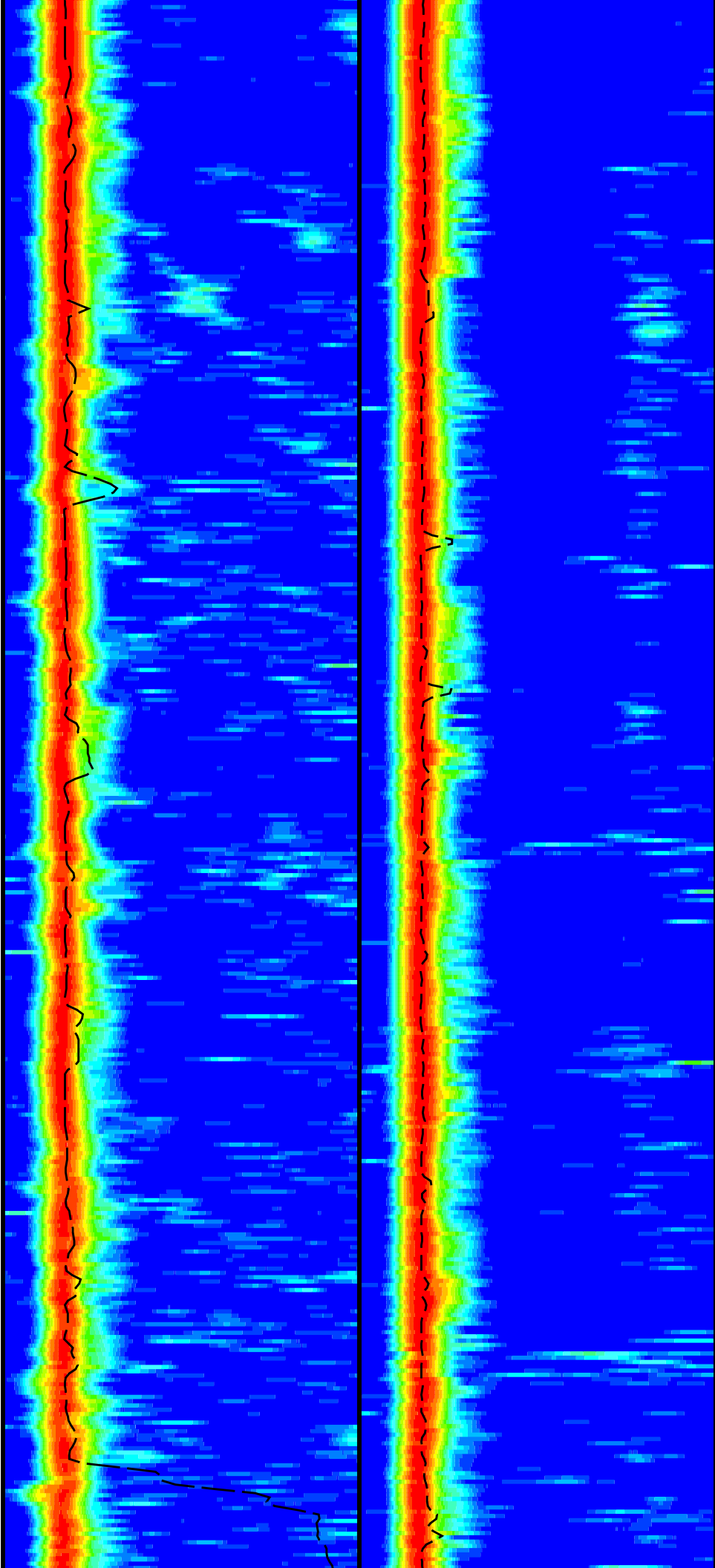
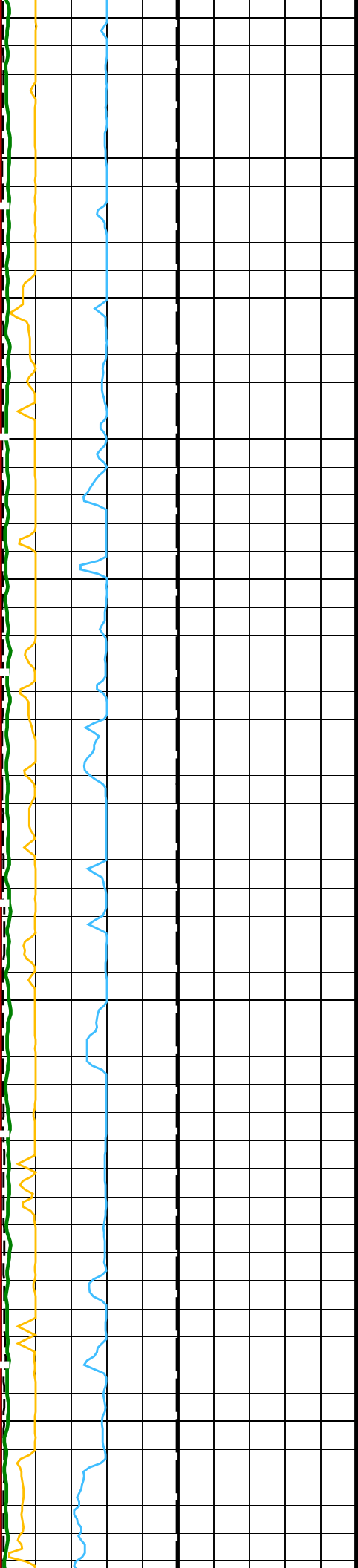


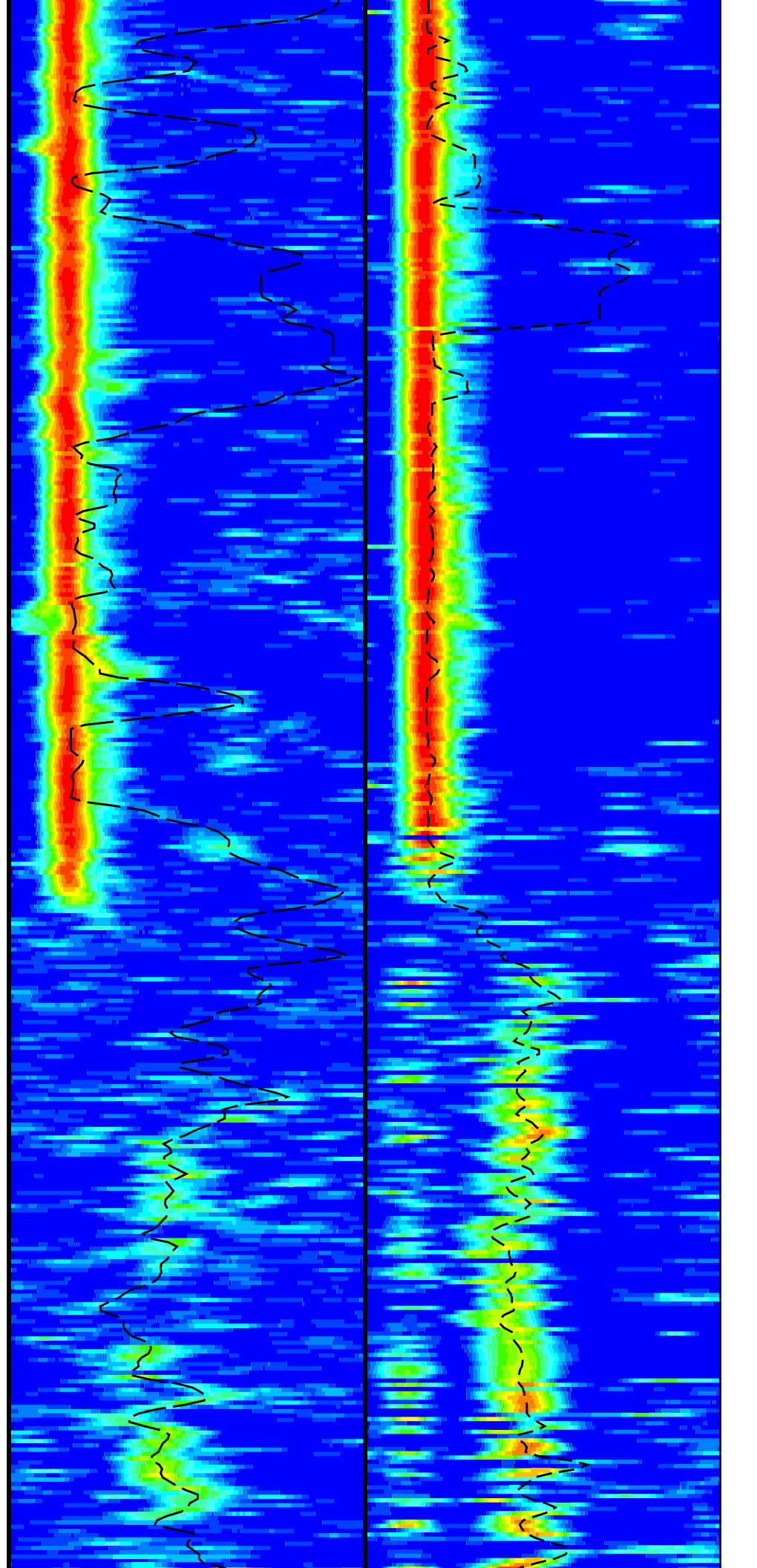
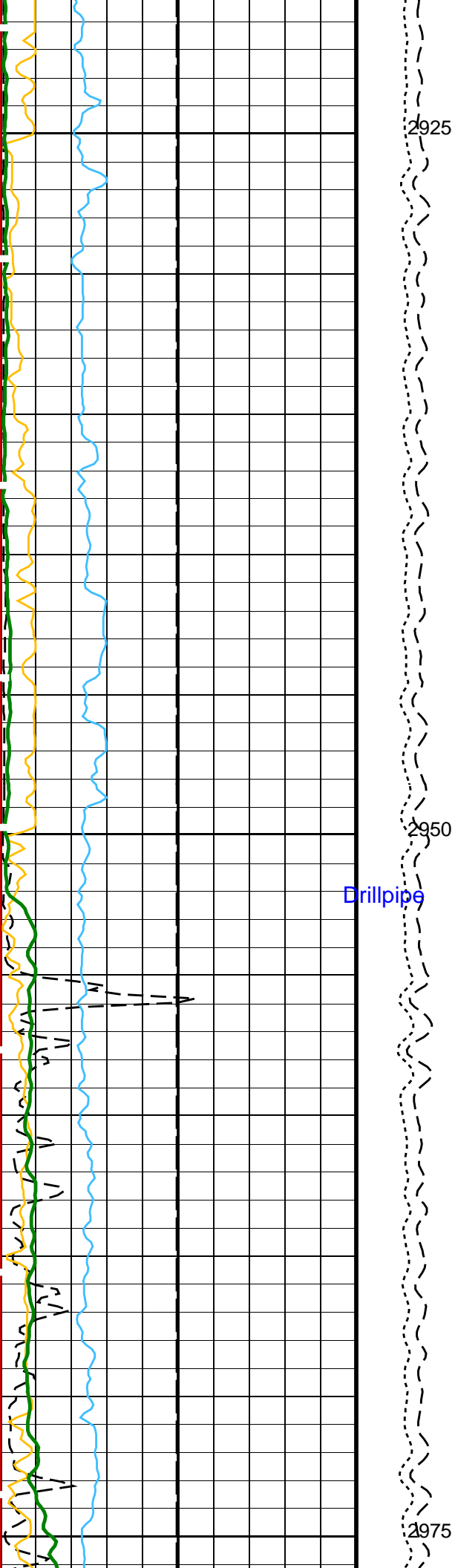


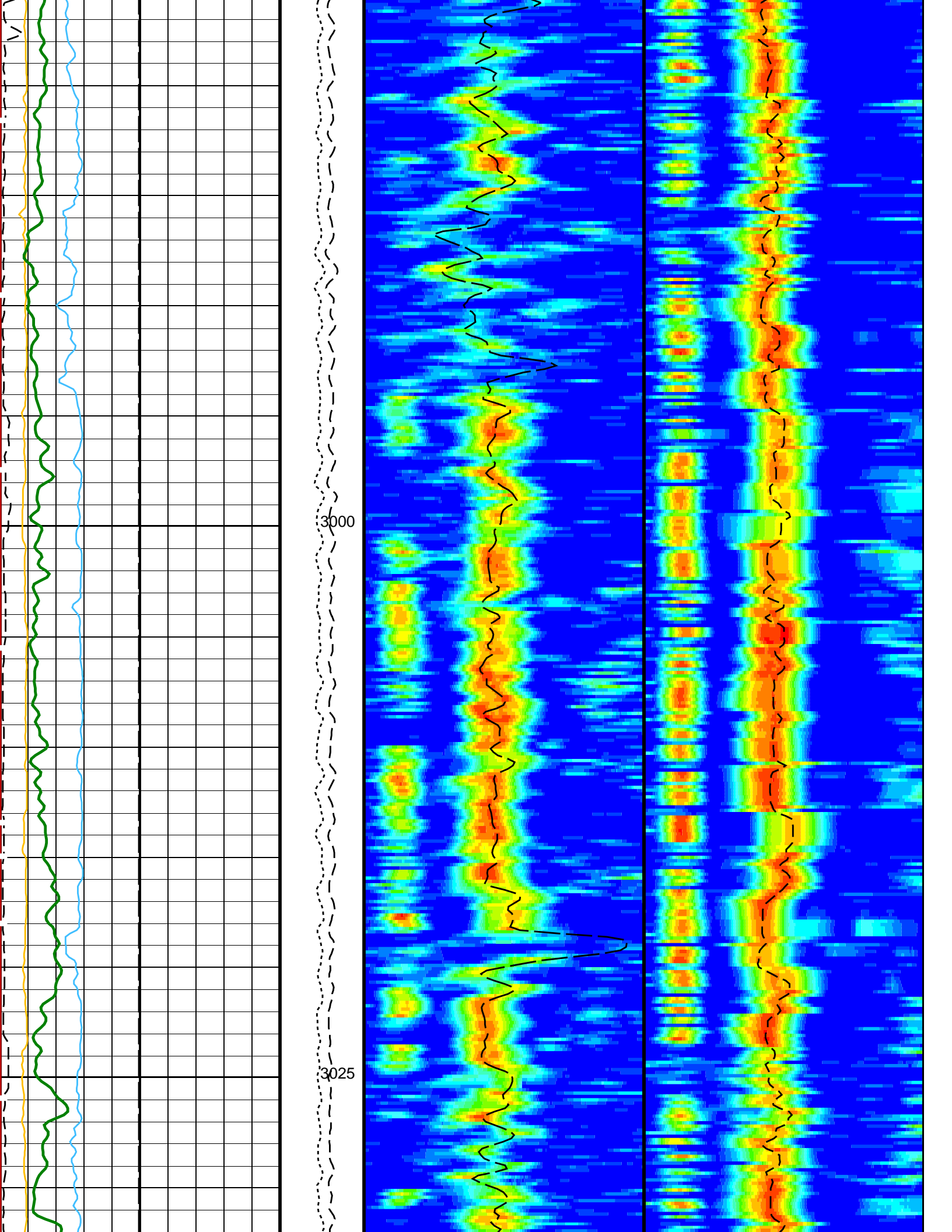
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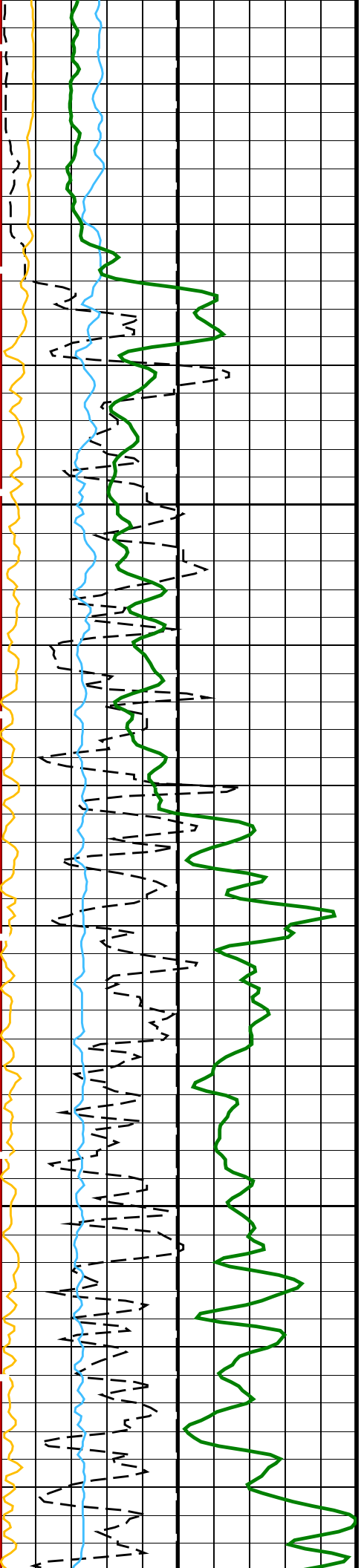
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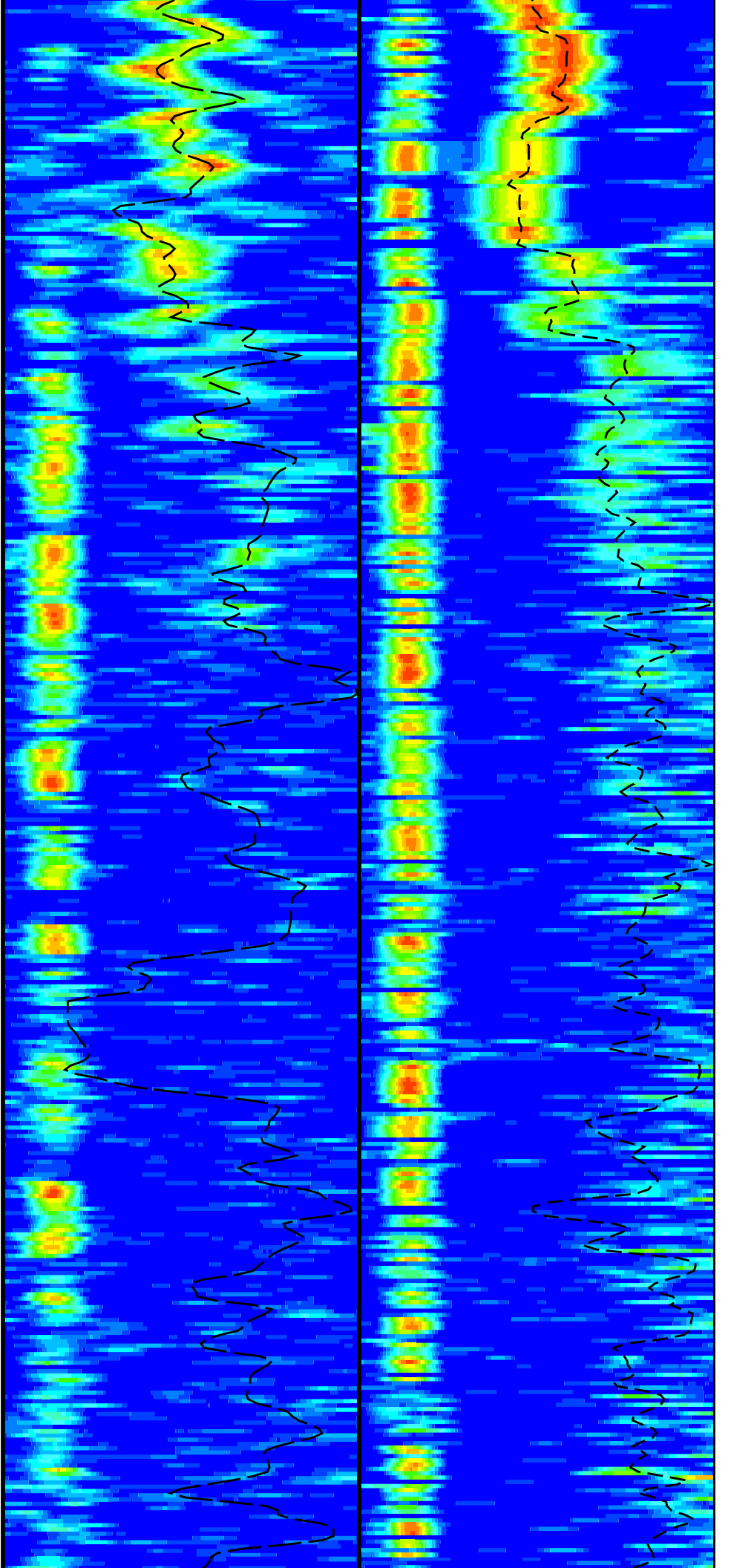


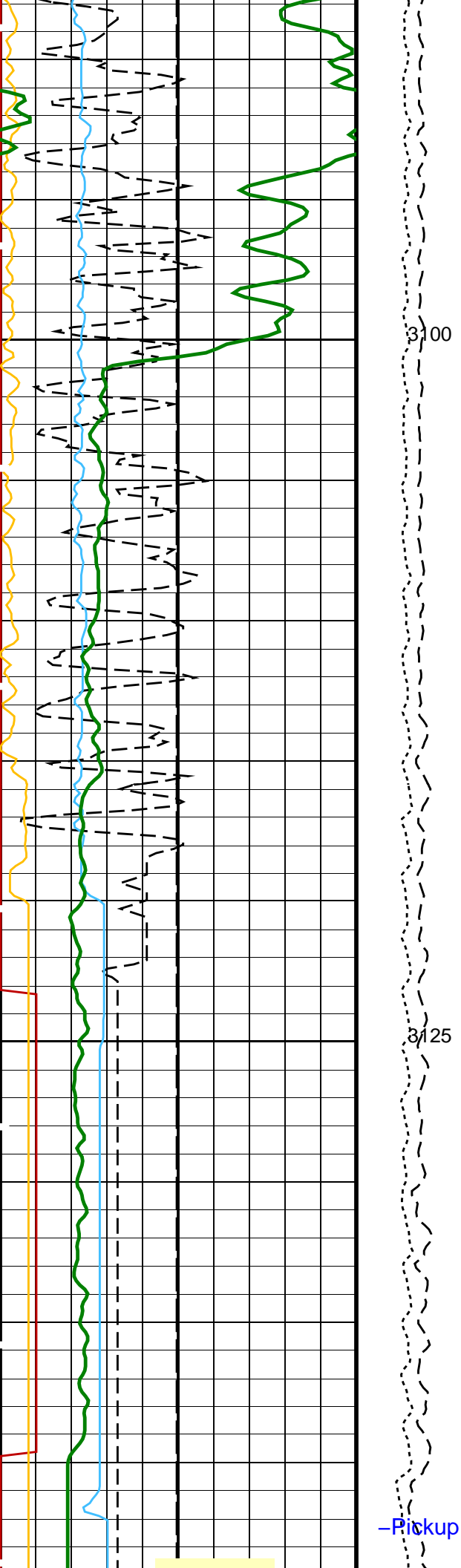




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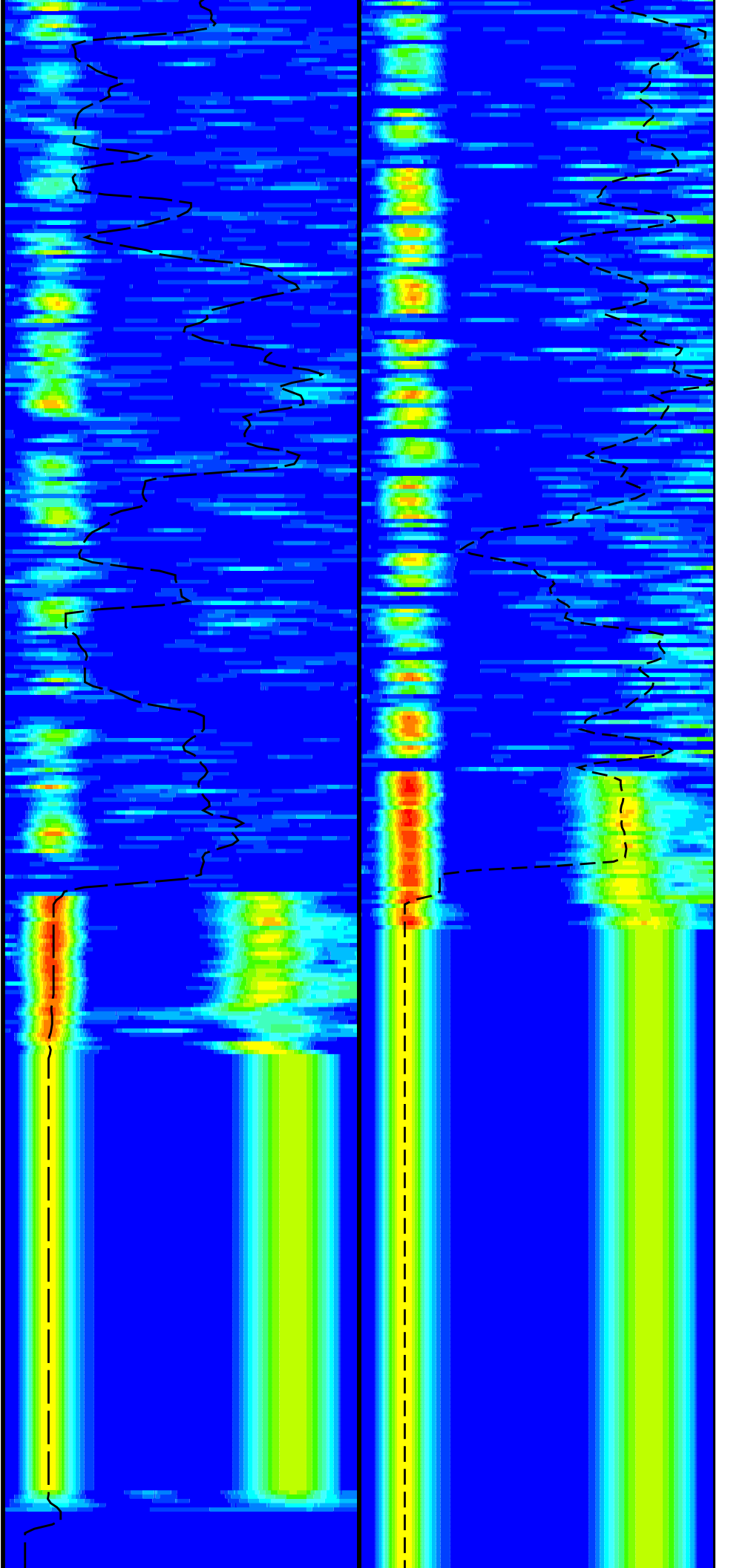
3075





3100

3125



Bit Size (BS) (IN)	Tension (TENS) (LBF)	Delta-T Shear / TA - Upper Dipole (DT2T) (US/F)	Delta-T Shear / RA - Upper Dipole (DT2R) (US/F)
0 --- 20	10000 --- 0	40 --- 1040	40 --- 1040
SAM2 Waveform Gain (WFG2) (----)	Calibrated Downhole Force (CDF) (LBF)	Min Amplitude Max Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F)	Min Amplitude Max Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)
0 --- 1000	5000 --- 0	40 --- 1040	40 --- 1040
Waveform Data Copy Indicator 2 - Upper Dipole (WCI2) (----)			
0 --- 10			
Peak Coherence / RA - Upper Dipole (CHR2) (----)			
0 --- 10			
Peak Coherence / TA - Upper Dipole (CHT2) (----)			
-2 --- 8			
HNGS Spectroscopy Gamma Ray (HSGR) (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	-0.000627614
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	1.00201
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02526
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
DDE2	Digitizing Delay 2	0 US
DDEX	Digitizing Delay X	0 US
DLCS	Label Compressional Source - Dipole Shear	USE
DSHL	Label Slowness Lower Limit - Dipole Shear	40 US/F
DSHU	Label Slowness Upper Limit - Dipole Shear	1040 US/F
DSI2	Digitizer Sample Interval 2	40 US
DSIX	Digitizer Sample Interval X	40 US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP
DWC2	Digitizer Word Count 2	512
DWCX	Digitizer Word Count X	512
GCSE	Generalized Caliper Selection	LCAL
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	LCAL	
	System and Miscellaneous		
BS	Bit Size	9.875	IN

Format: DSST_UPPER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01–Nov–2017 08:39

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01–Nov–2017 08:39
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01–Nov–2017 08:39

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

Output DLIS Files

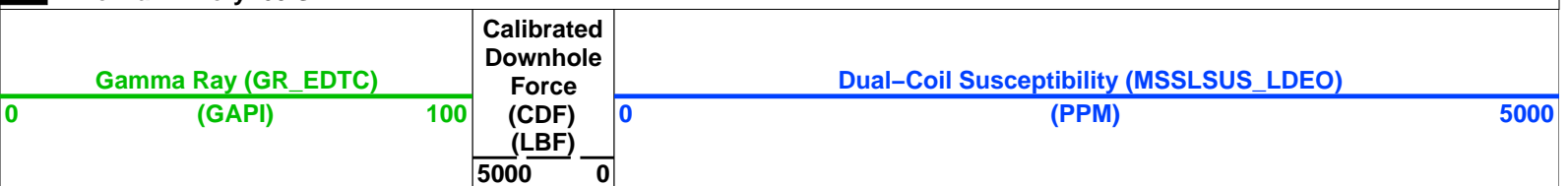
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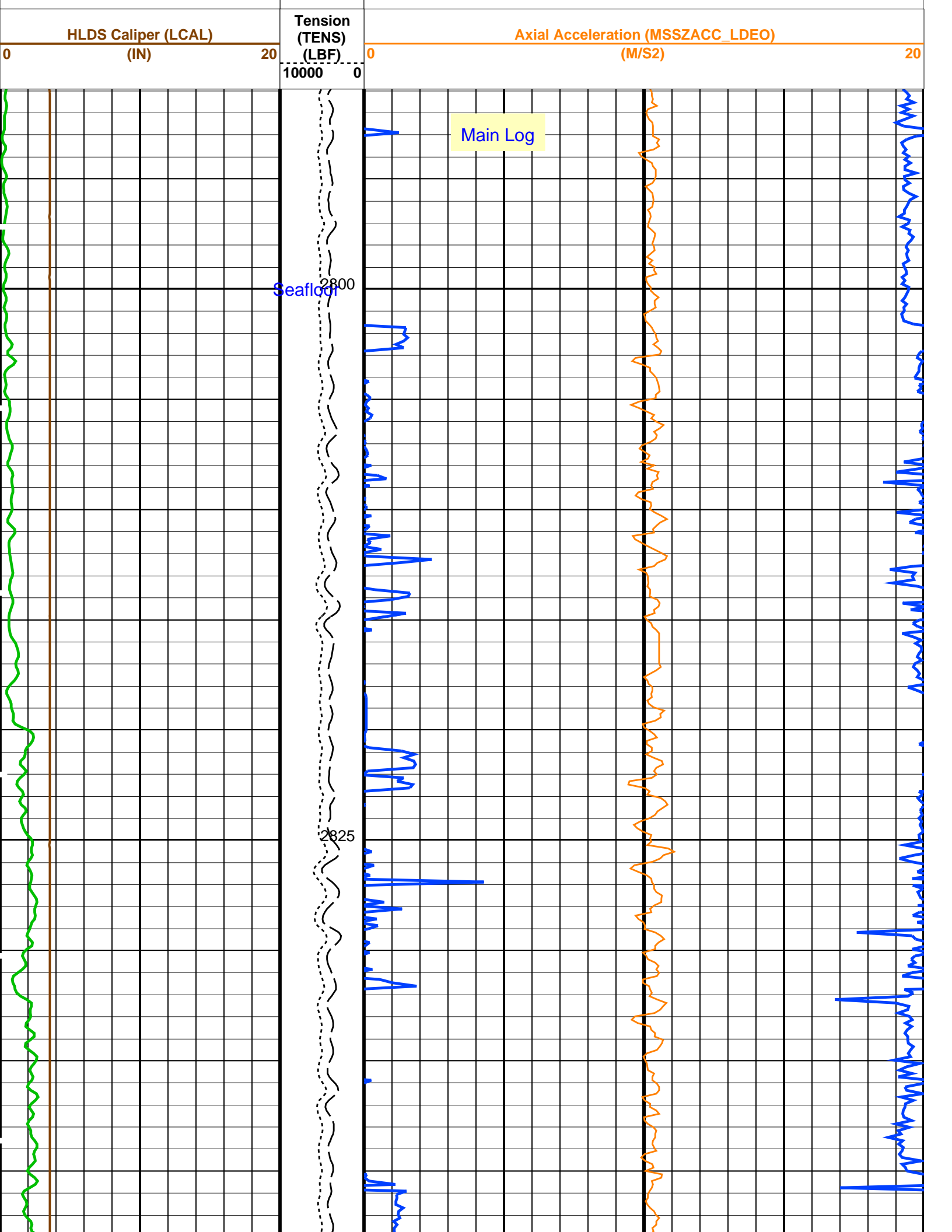
OP System Version: 19C0–187

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





HLDS Caliper (LCAL)
(IN)

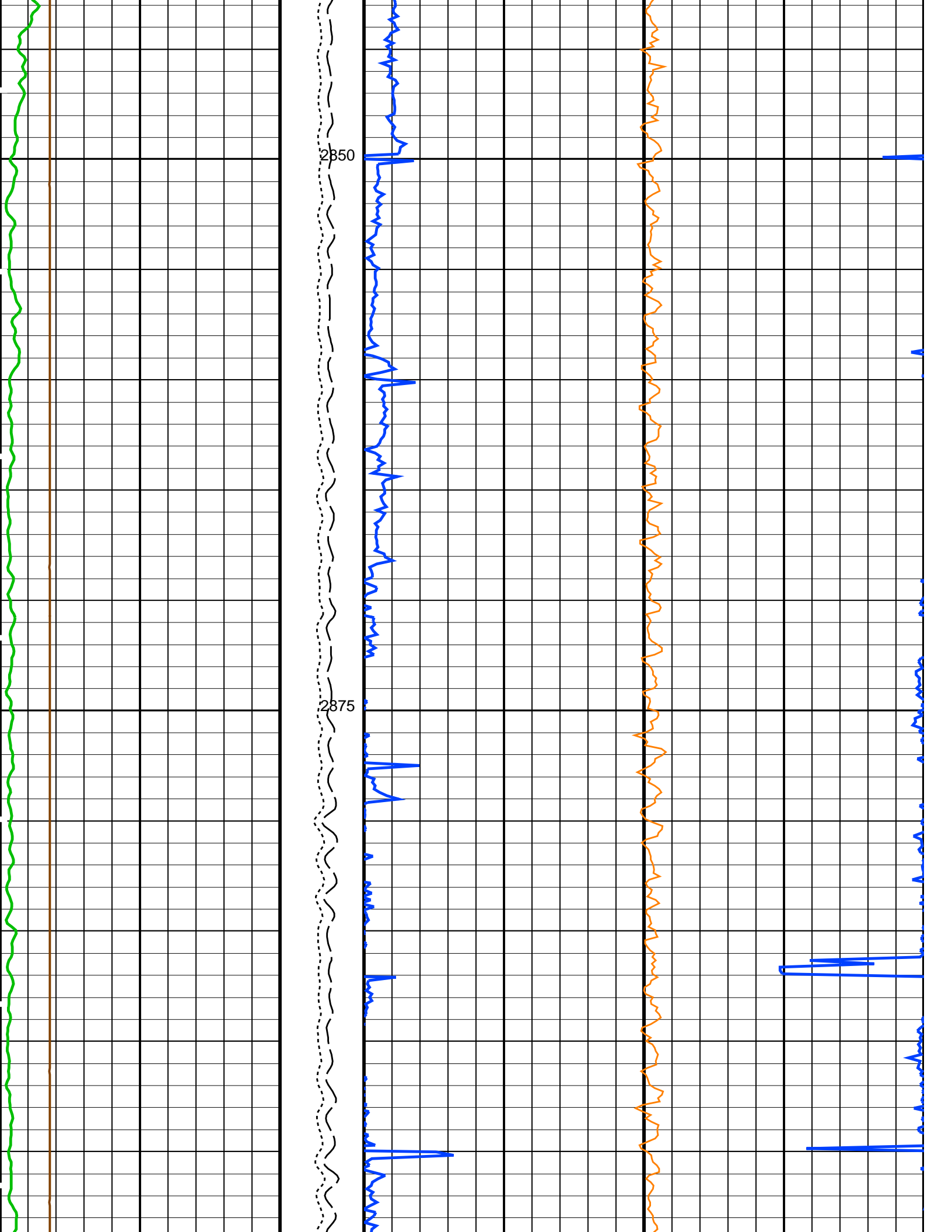
Tension
(TENS)
(LBF)

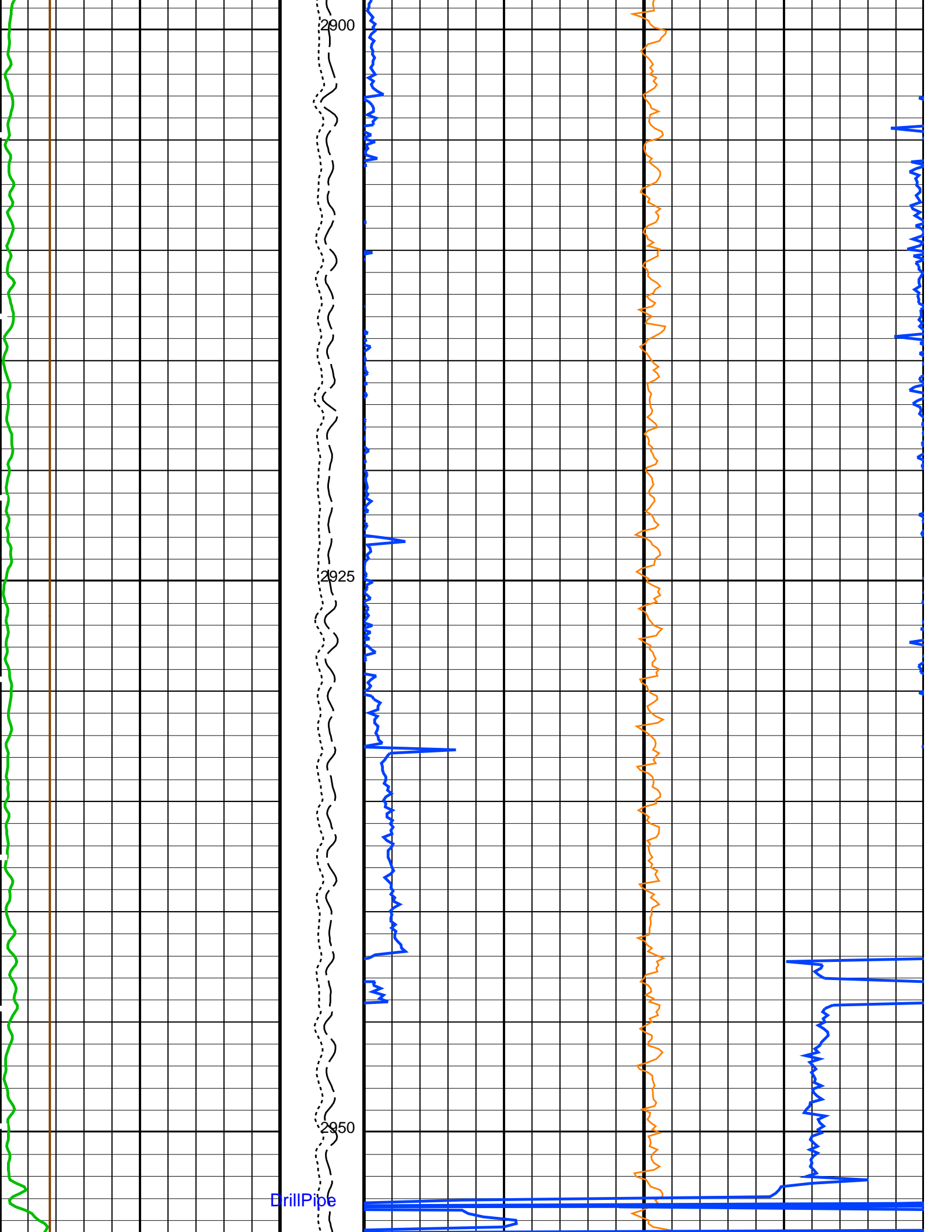
Axial Acceleration (MSSZACC_LDEO)
(M/S2)

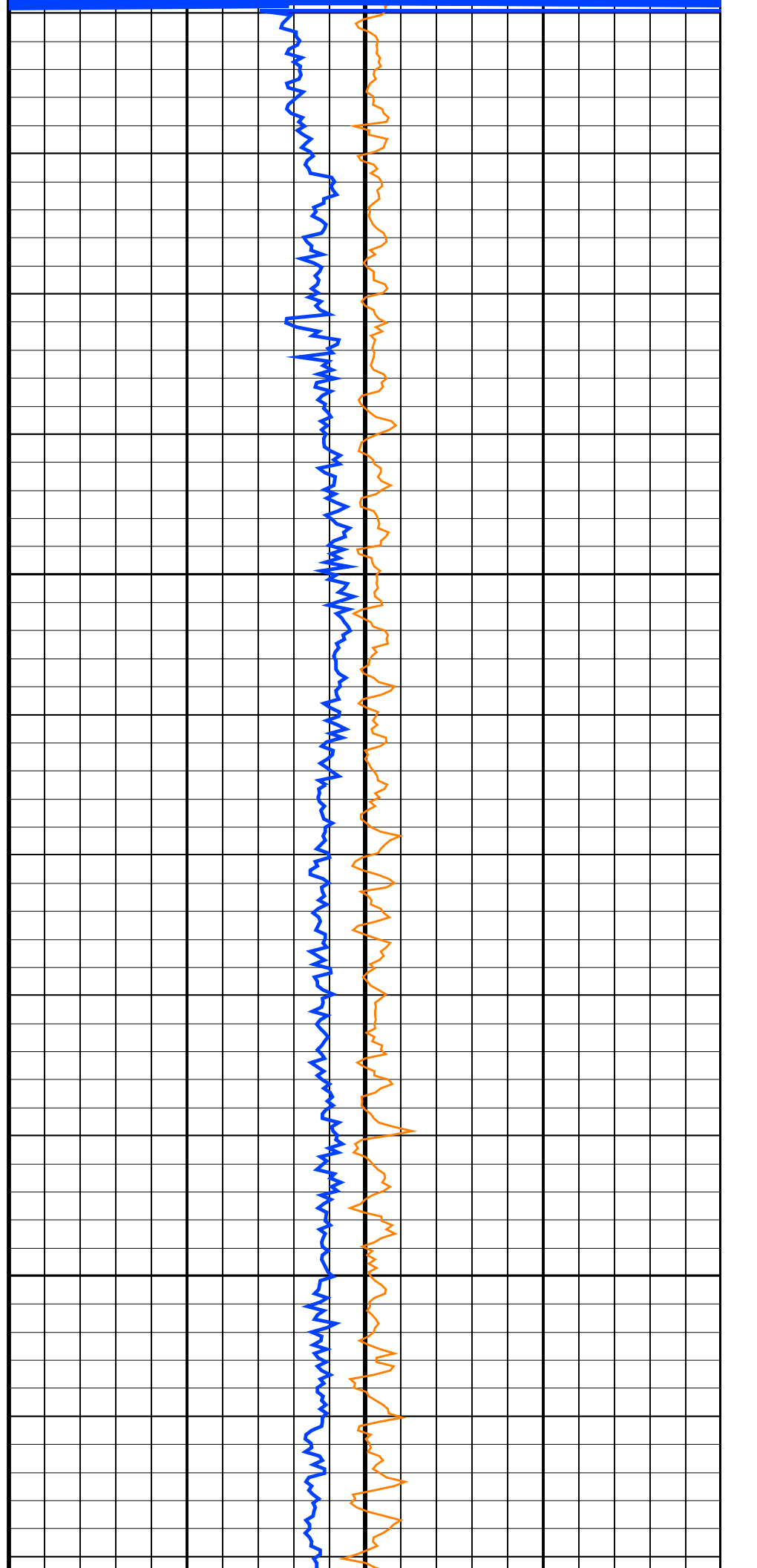
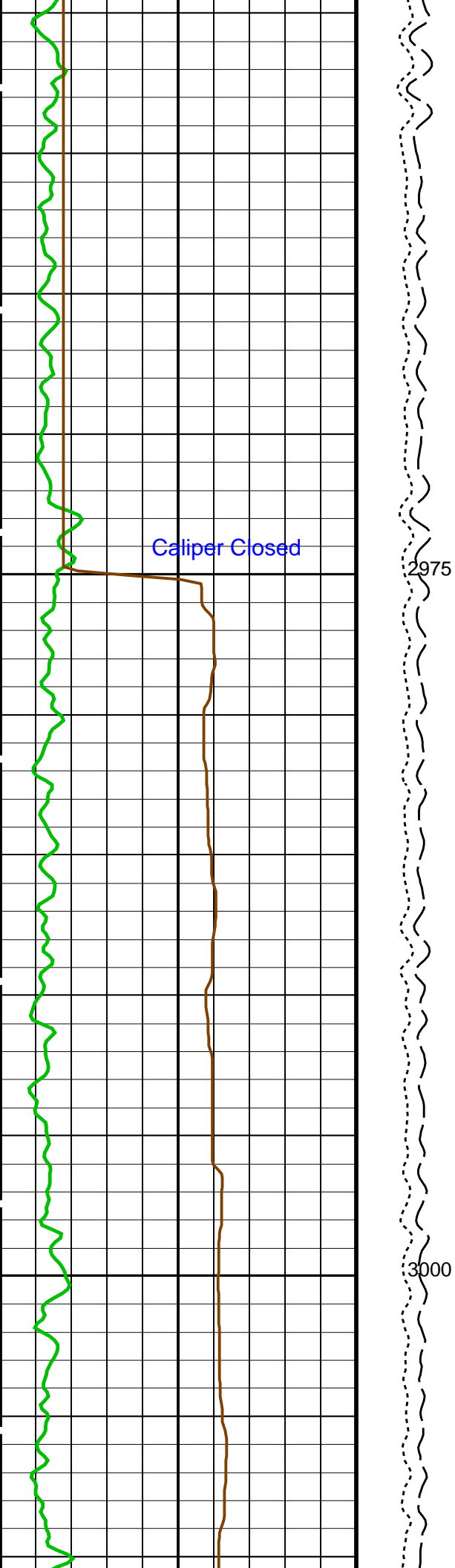
Main Log

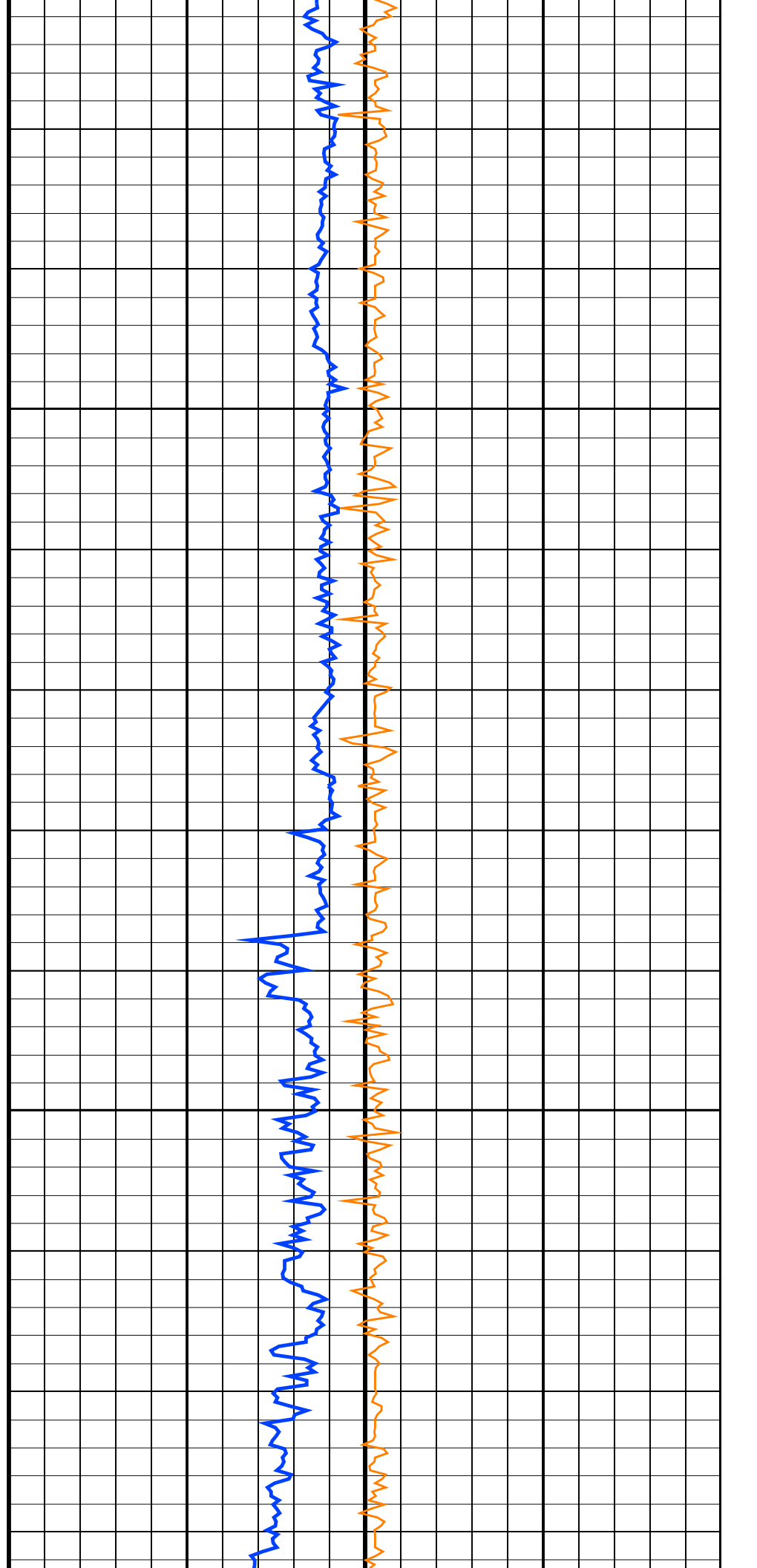
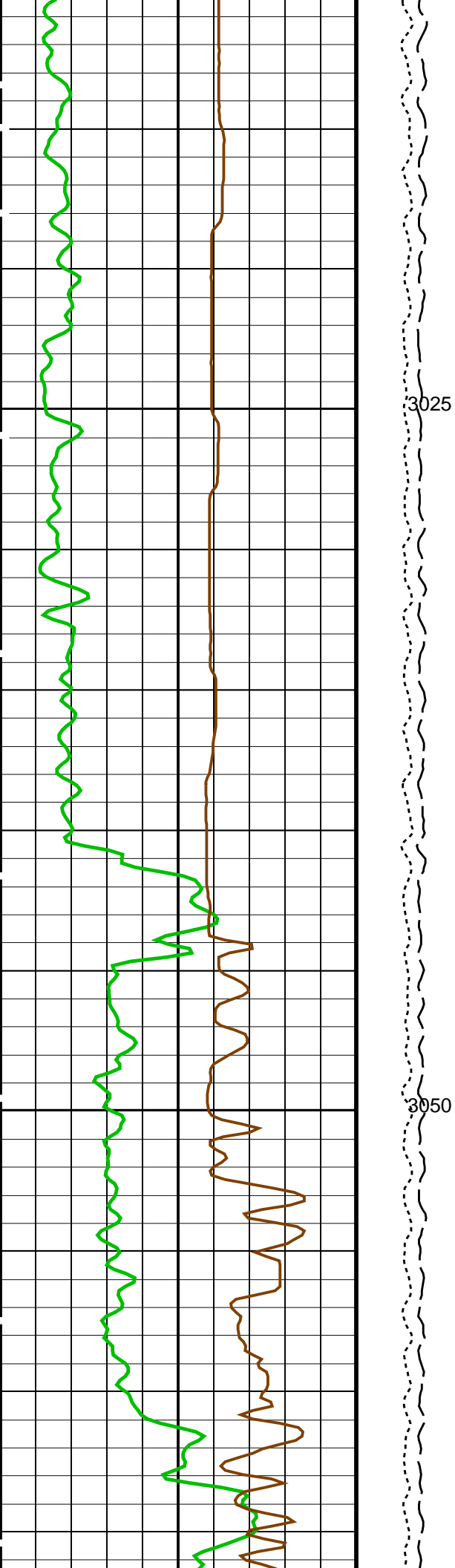
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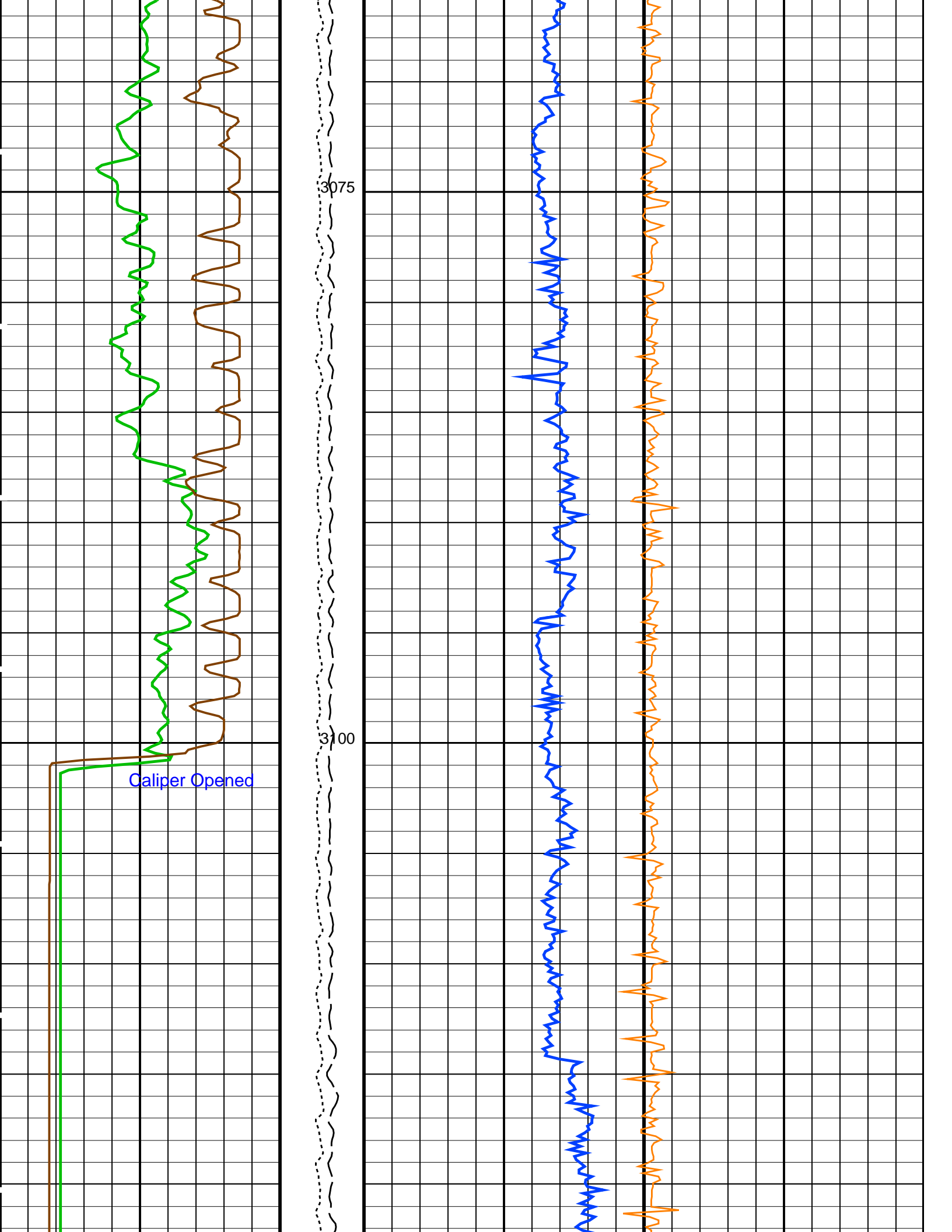
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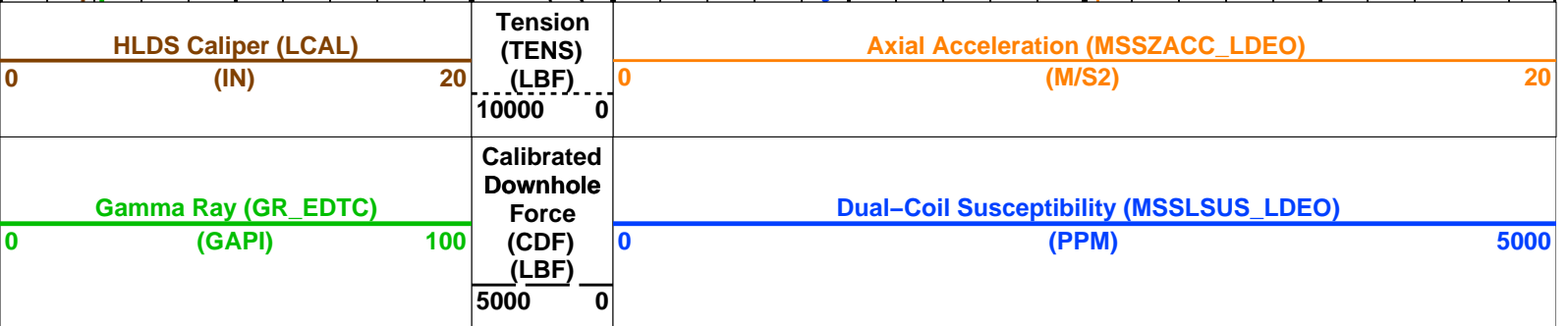
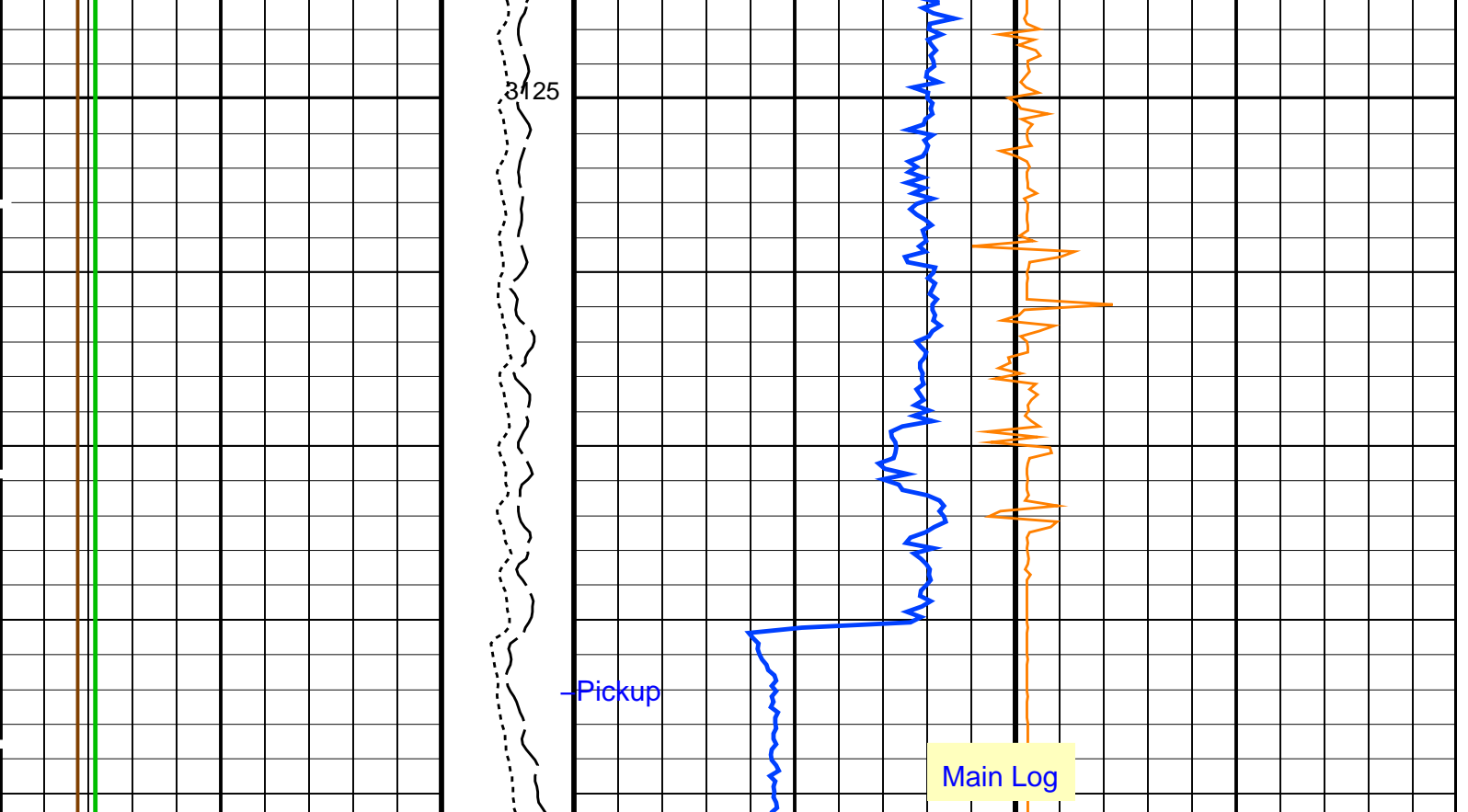












PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HNCS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNCS Detector 1 Barite Constant	1
BAR2	HNCS Detector 2 Barite Constant	1
BHK	HNCS 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	HNCS 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	HNCS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNCS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNCS Borehole Potassium Running Average	-0.000627614
HALF	HNCS Alpha Filter Length	60 IN
HCRB	HNCS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	BARI
HNPE	HNCS Processing Enable	YES
ISSBAR	Barite Mud Switch	BARITE
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
S1BI	HNCS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNCS 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	1.00201	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02526	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
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	180	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	193	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	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 Amplitude X	789	
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
WFLDSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLDSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLDSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLDSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLDSPX	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	
HSCO	Hole Size Correction Option	YES	
ISSBP	Barite Mud Switch	BARITE	

ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	55	DEGF
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	12409.8	FT
TDD	Total Depth - Driller	3092.70	M
TDL	Total Depth - Logger	3560.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:39

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39

Output DLIS Files

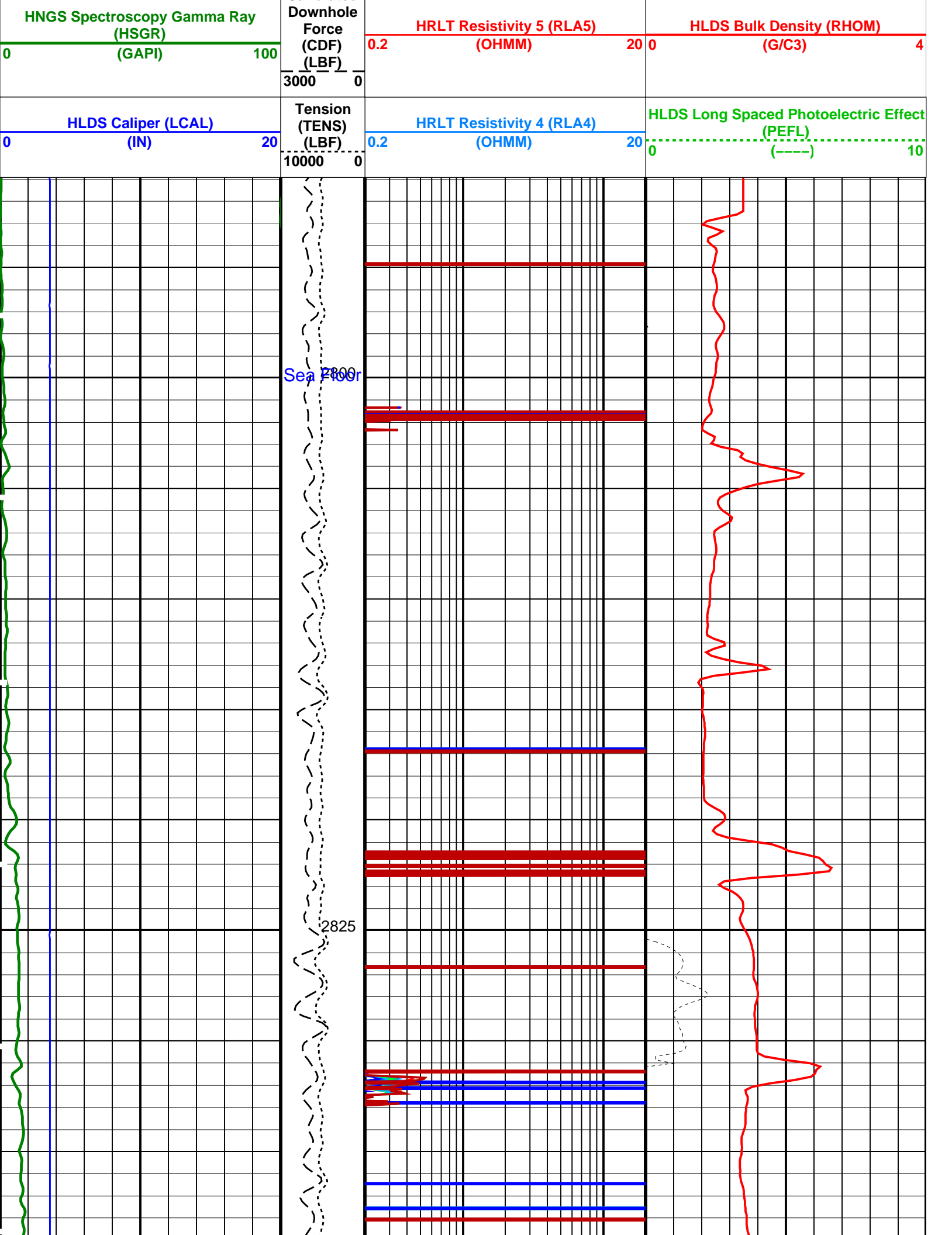
DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 M
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39	3145.5 M	2790.9 M

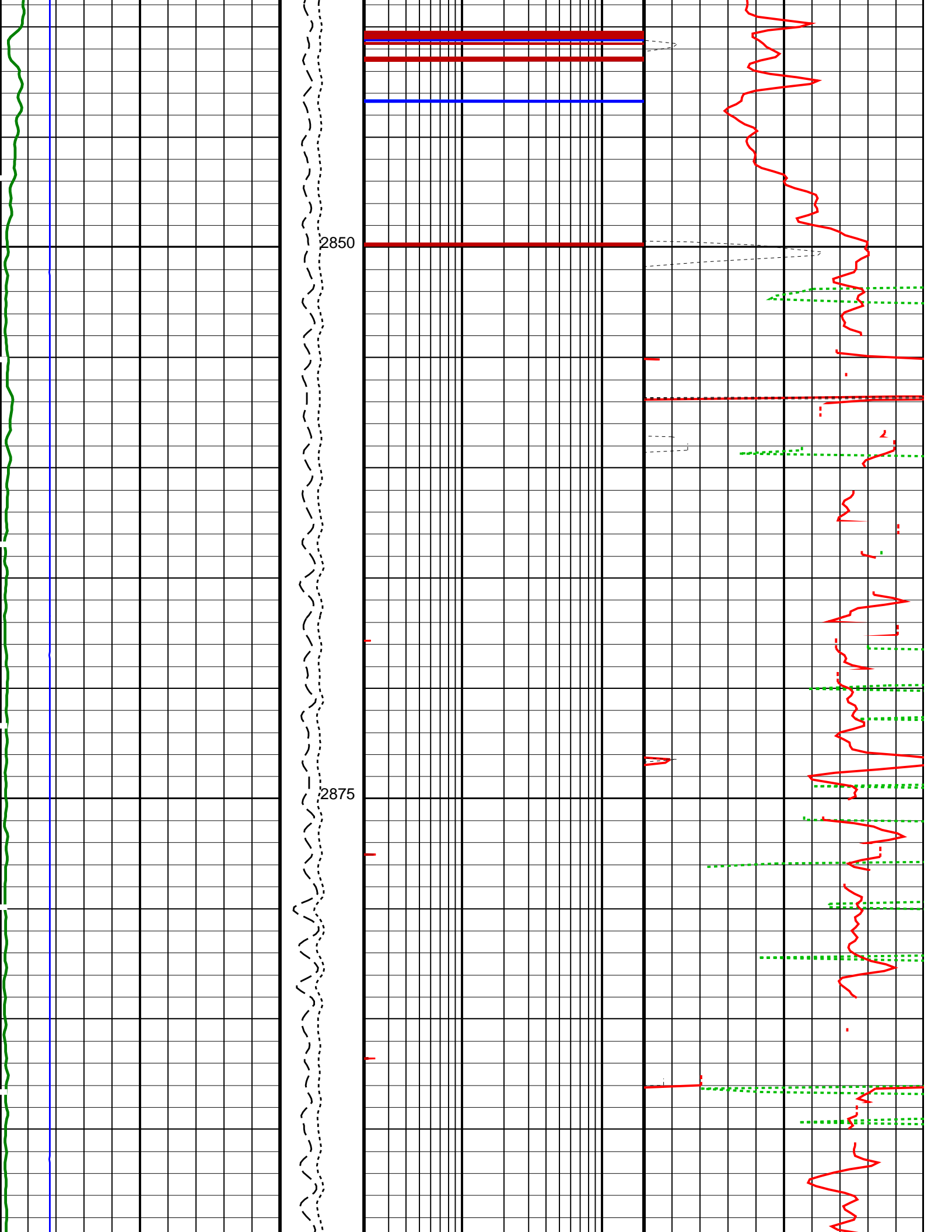
OP System Version: 19C0-187

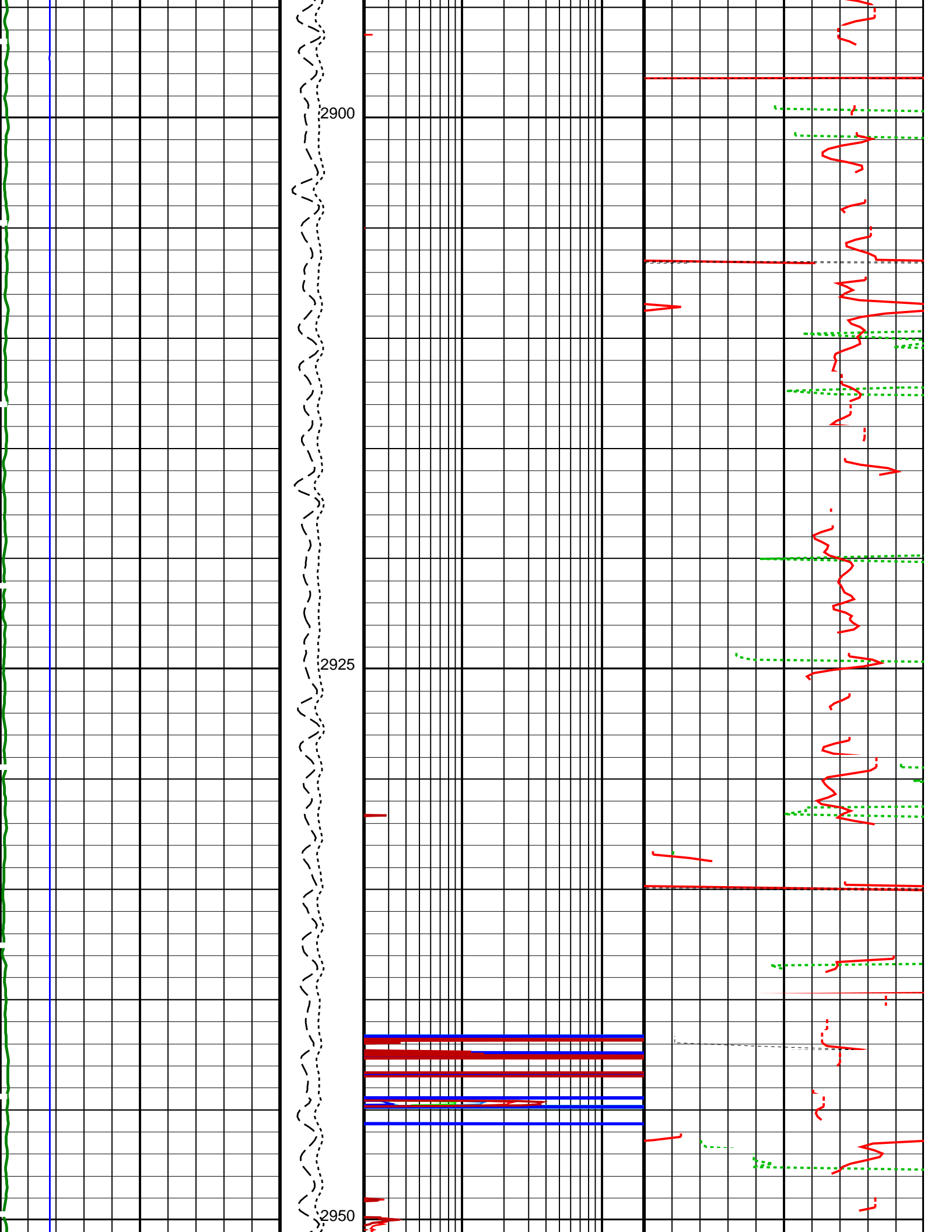
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

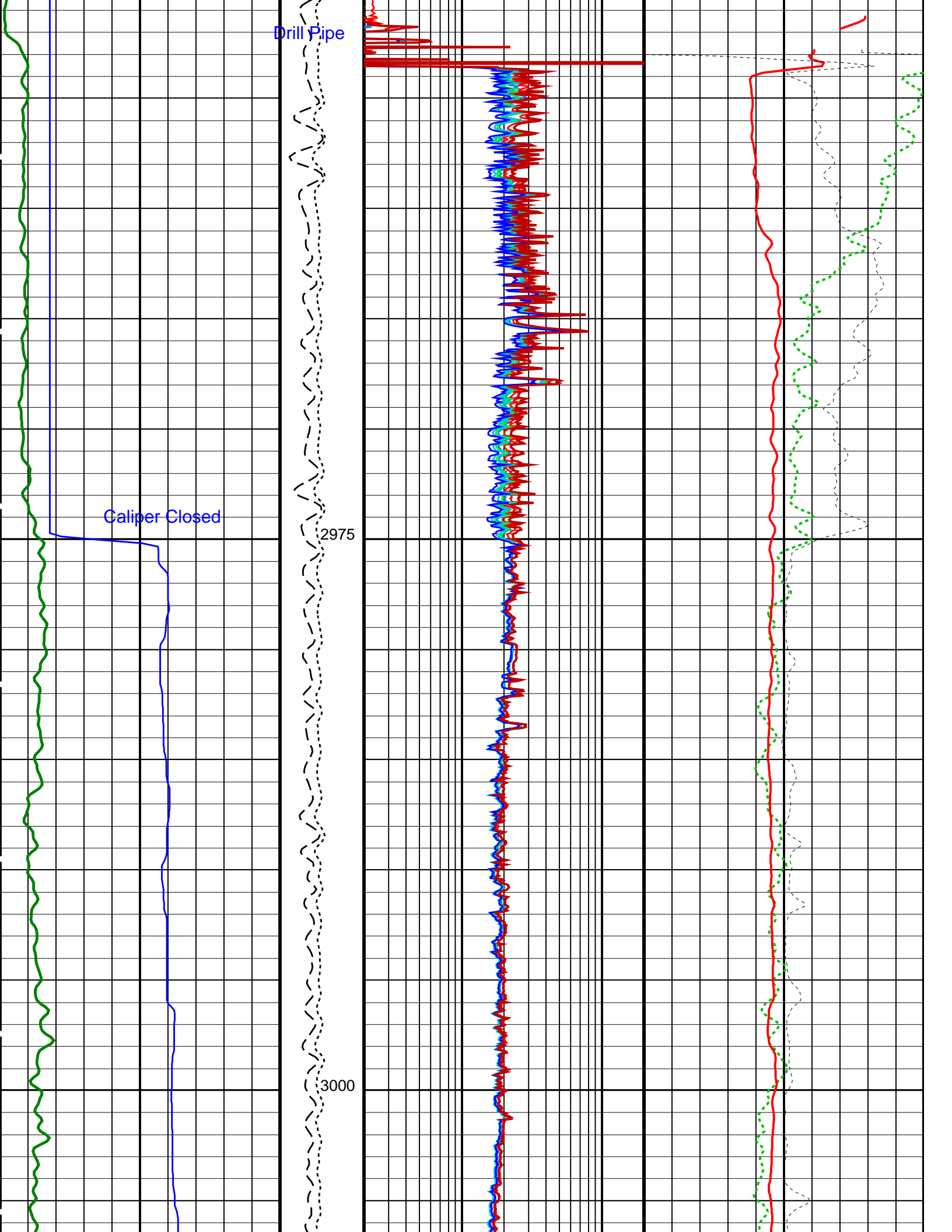
PIP SUMMARY

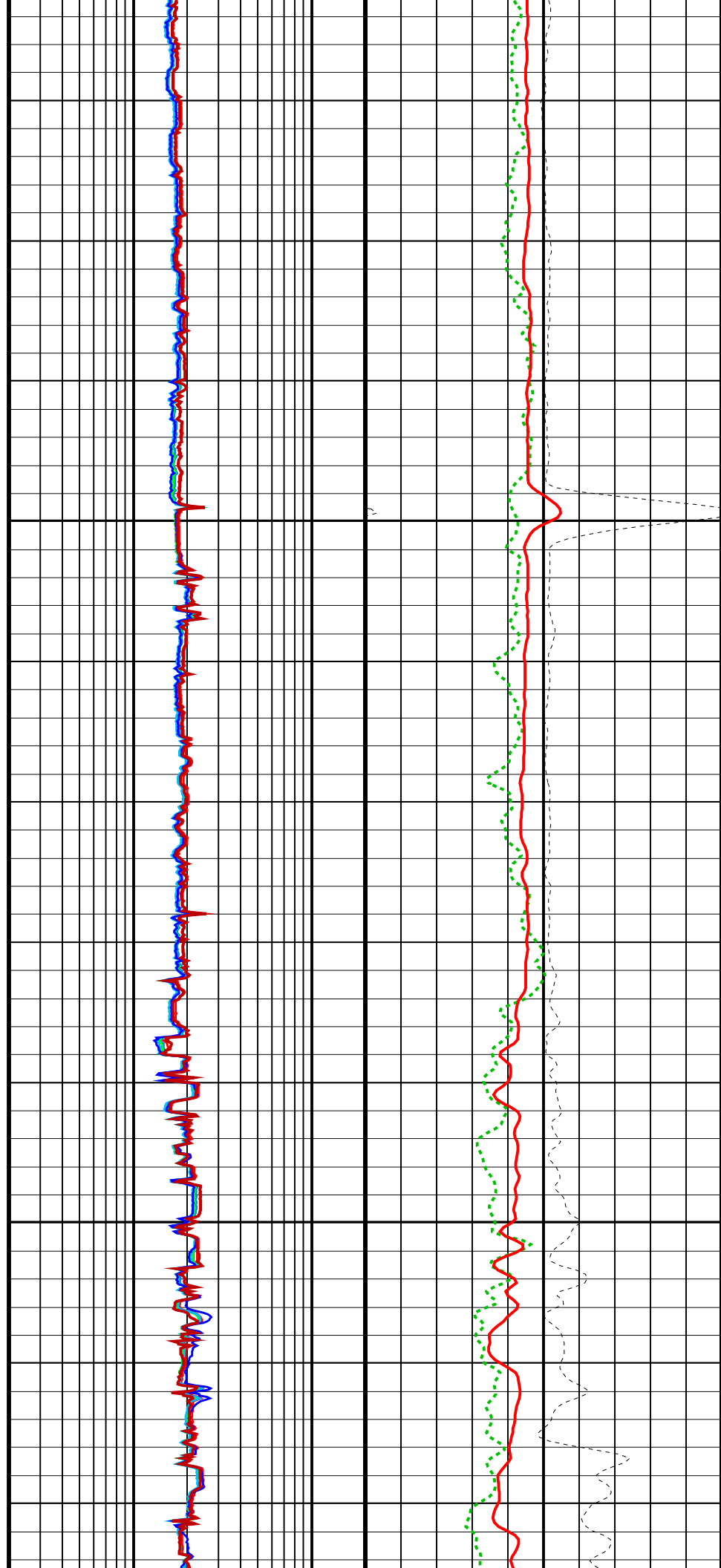
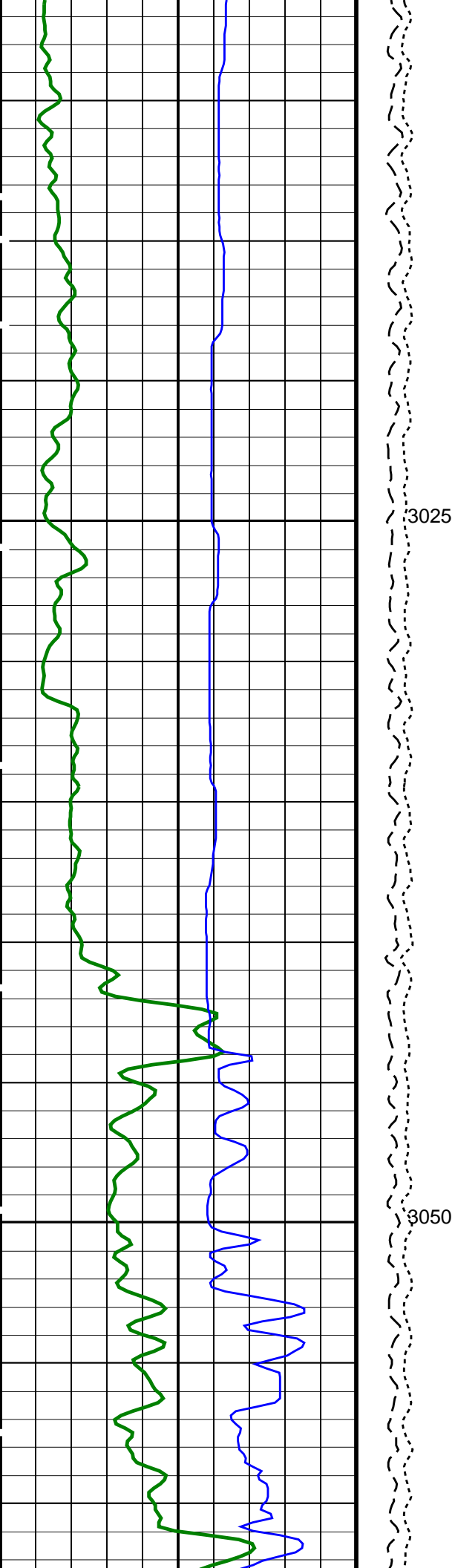
<input type="checkbox"/> Time Mark Every 60 S			
Main Log	HRLT True Resistivity (RT_HRLT)		
	0.2	(OHMM)	20
	HRLT Resistivity 1 (RLA1)		
	0.2	(OHMM)	20
	HRLT Resistivity 2 (RLA2)		
0.2	(OHMM)	20	
HRLT Resistivity 3 (RLA3)			
0.2	(OHMM)	20	HLDS Bulk Density Correction (DRH)
			-0.25 (G/C3) 0.25
	Calibrated		

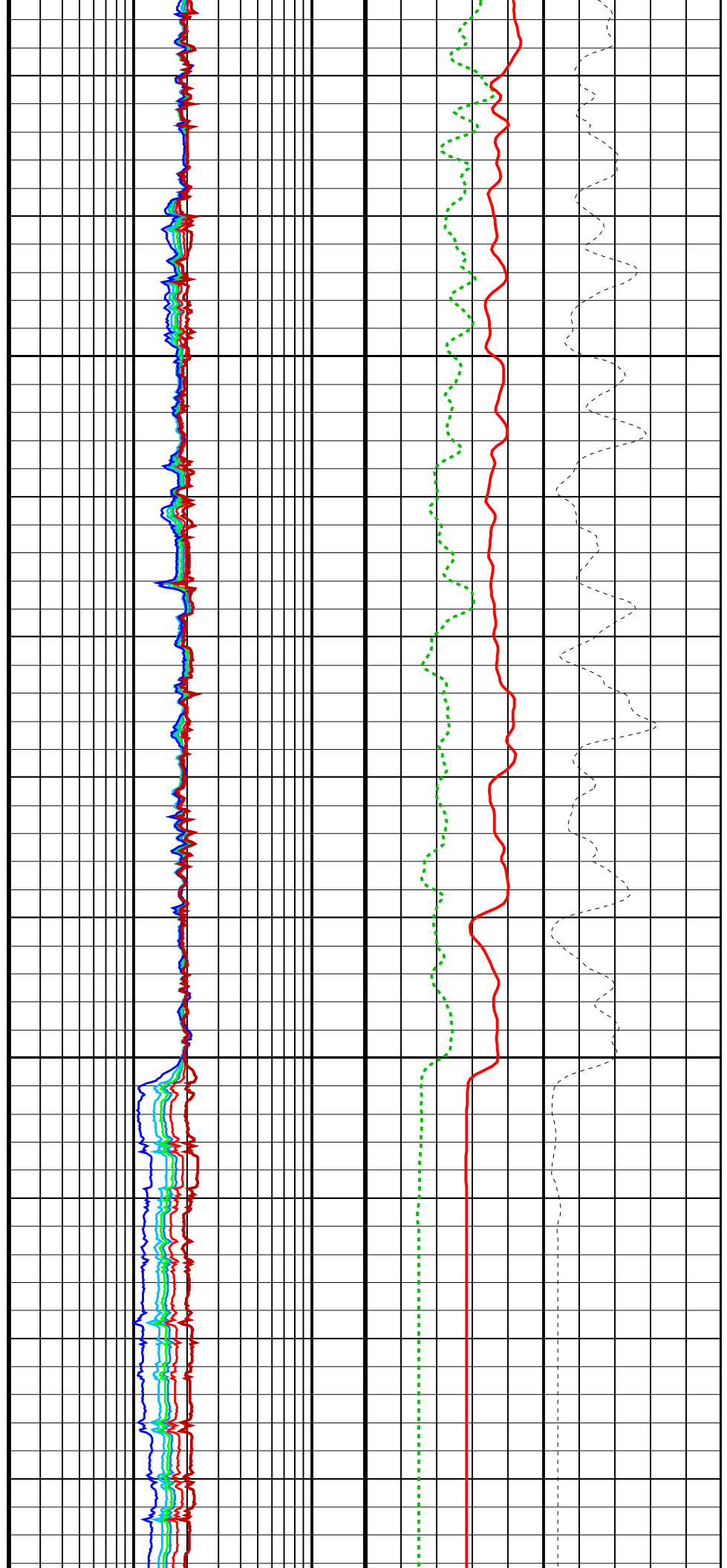
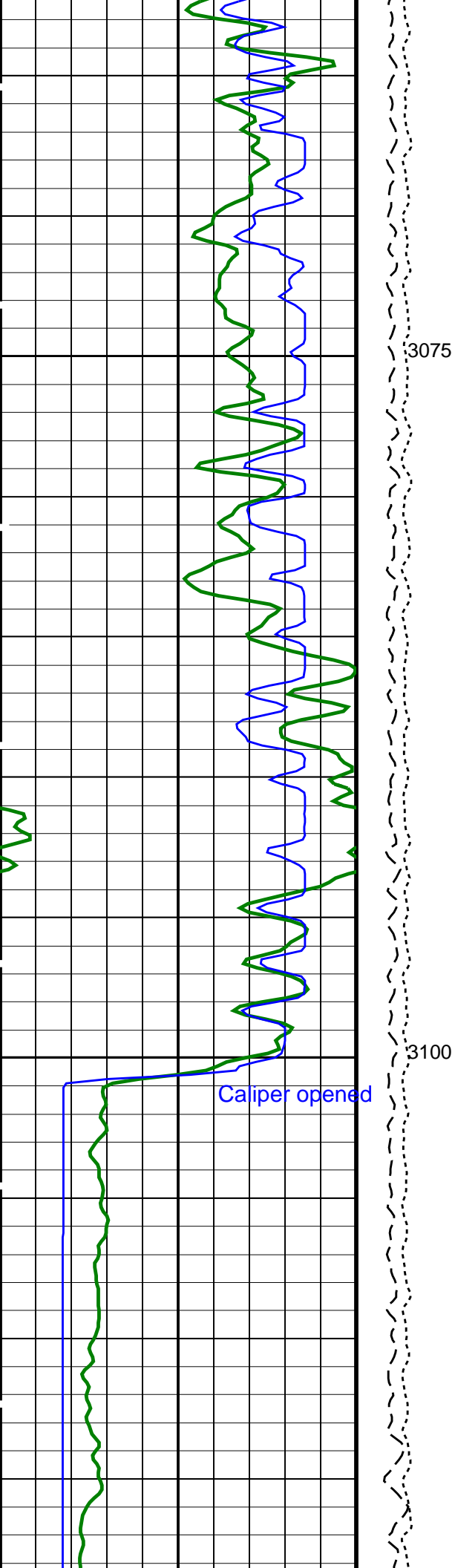


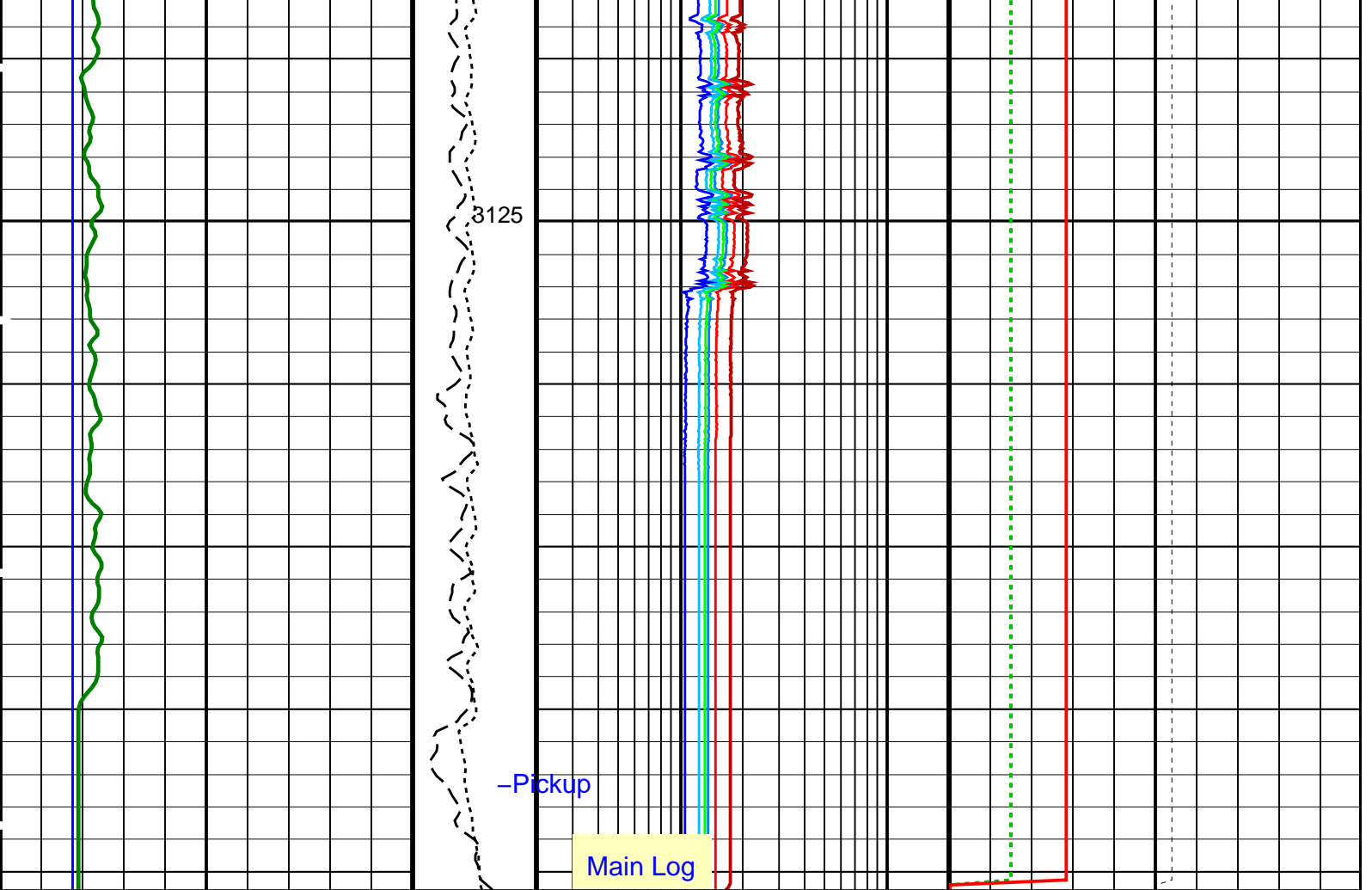












HLDS Caliper (LCAL) (IN)	Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	HLDS Long Spaced Photoelectric Effect (PEFL) (----)
0 20	10000 0	0.2 20	0 10
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5) (OHMM)	HLDS Bulk Density (RHOM) (G/C3)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

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	-0.000627614	
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	1.00201	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.02526	

HRLT-B: High Resolution Laterolog Array - B

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCVN	Inversion Selection	ON	
PROCFL	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	180	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

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	193	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

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
WFLLSP1	SAM1 Waveform Lower Limit for Spectrum	0	US
WFLLSP2	SAM2 Waveform Lower Limit for Spectrum	0	US
WFLLSP3	SAM3 Waveform Lower Limit for Spectrum	0	US
WFLLSP4	SAM4 Waveform Lower Limit for Spectrum	0	US
WFLLSPX	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	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	55	DEGF
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	

System and Miscellaneous

ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	12409.8	FT
TDD	Total Depth - Driller	3092.70	M
TDL	Total Depth - Logger	3560.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:39

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_015LUP	FN:21	PRODUCER	01-Nov-2017 08:39
BACKUP	MSS_LDEO_NGS_HRLA_015LUP	FN:22	PRODUCER	01-Nov-2017 08:39

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M

OP System Version: 19C0-187

MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187

PIP SUMMARY

Time Mark Every 60 S

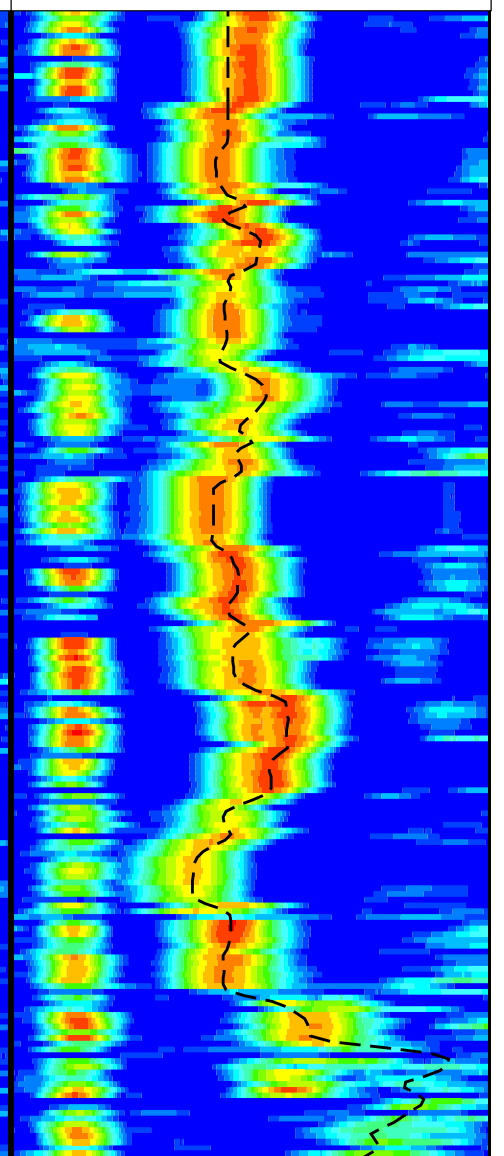
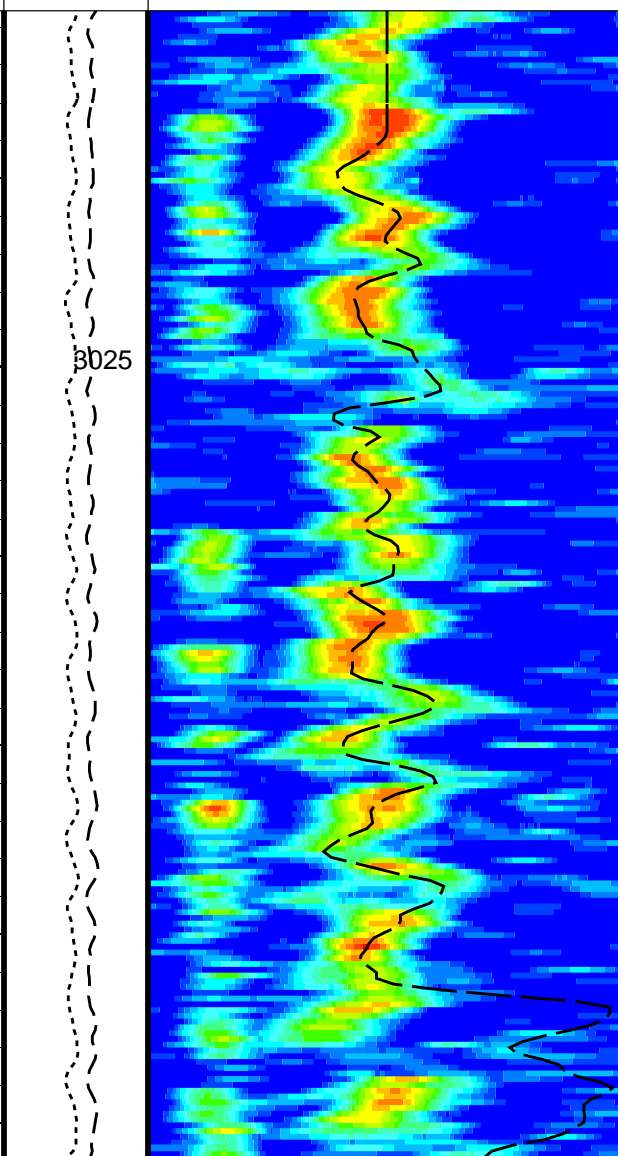
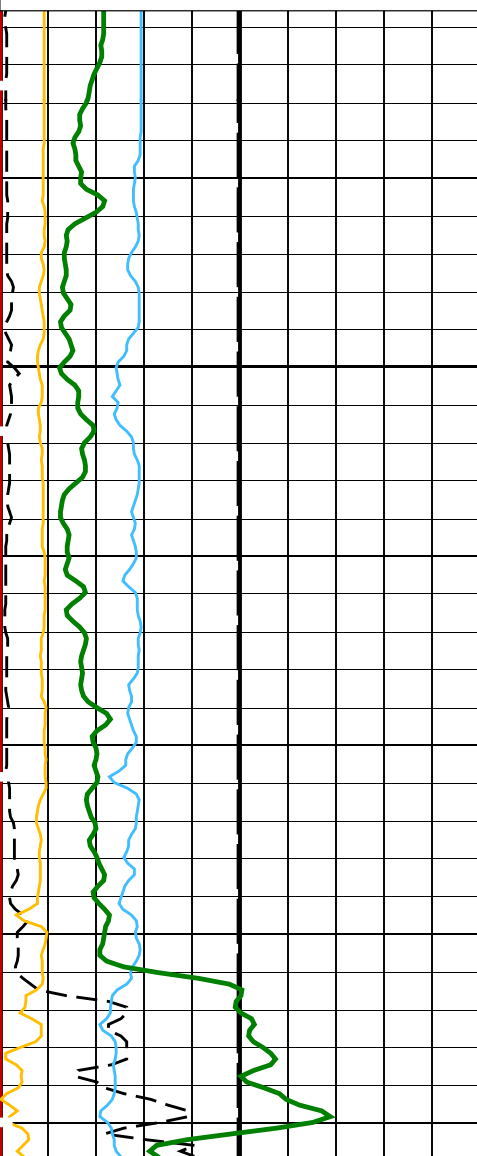
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100
Peak Coherence / TA - Upper Dipole (CHT2)		
-2	(----)	8
Peak Coherence / RA - Upper Dipole (CHR2)		
0	(----)	10
Waveform Data Copy Indicator 2 - Upper Dipole (WC12)		
0	(----)	10

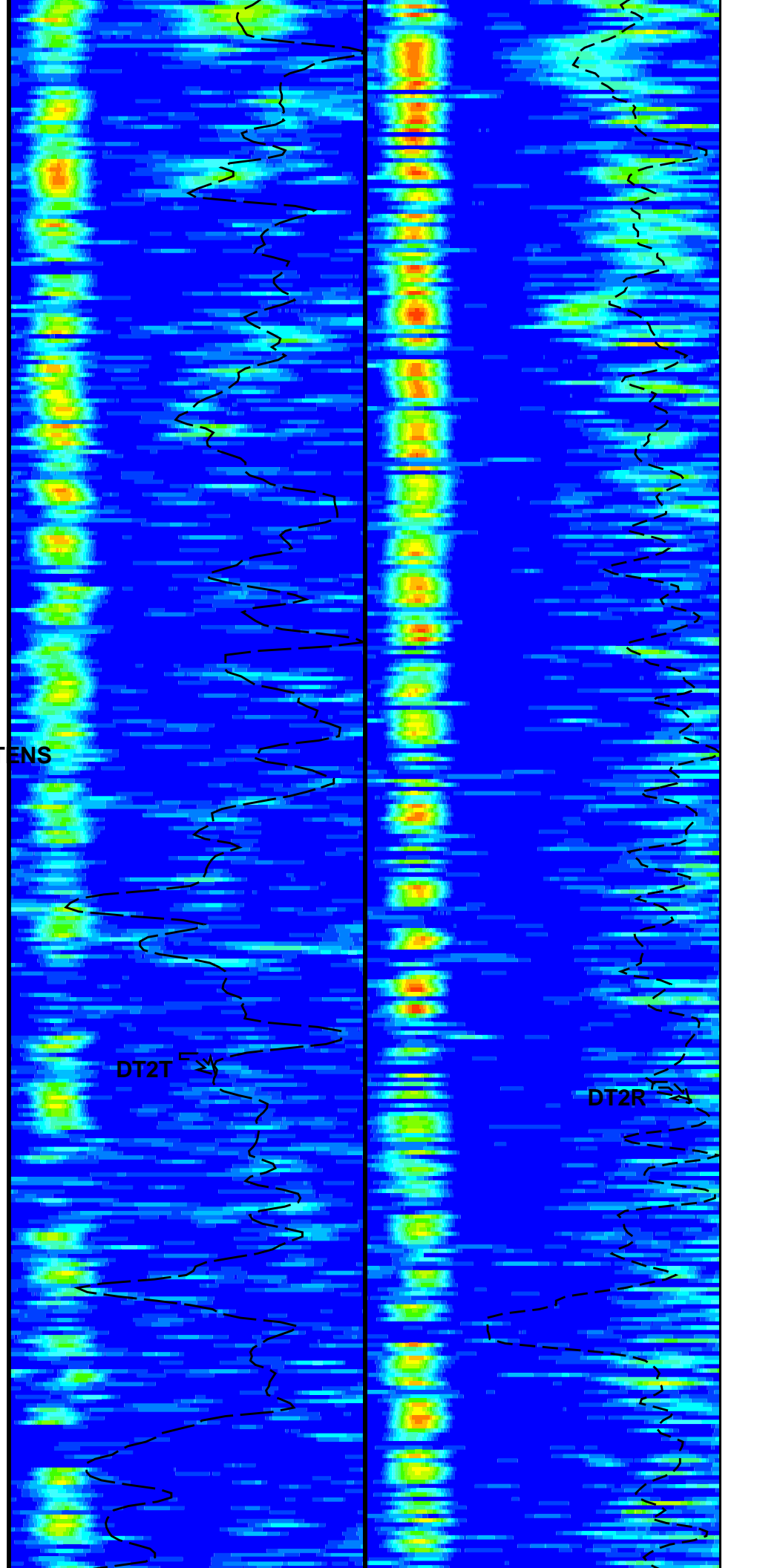
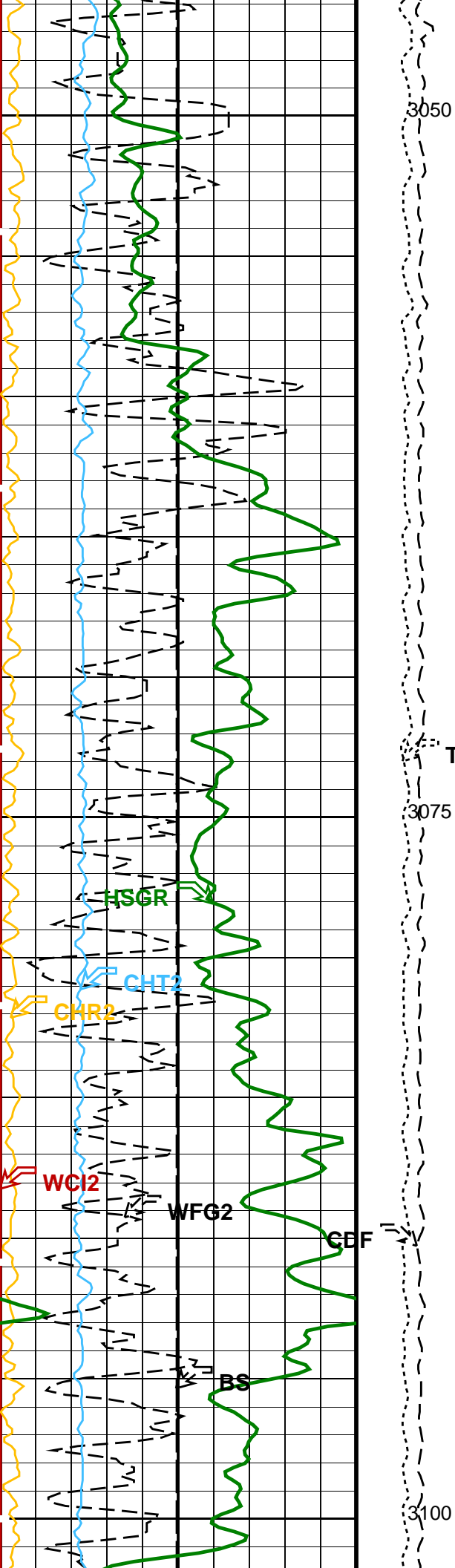
REPEAT SECTION

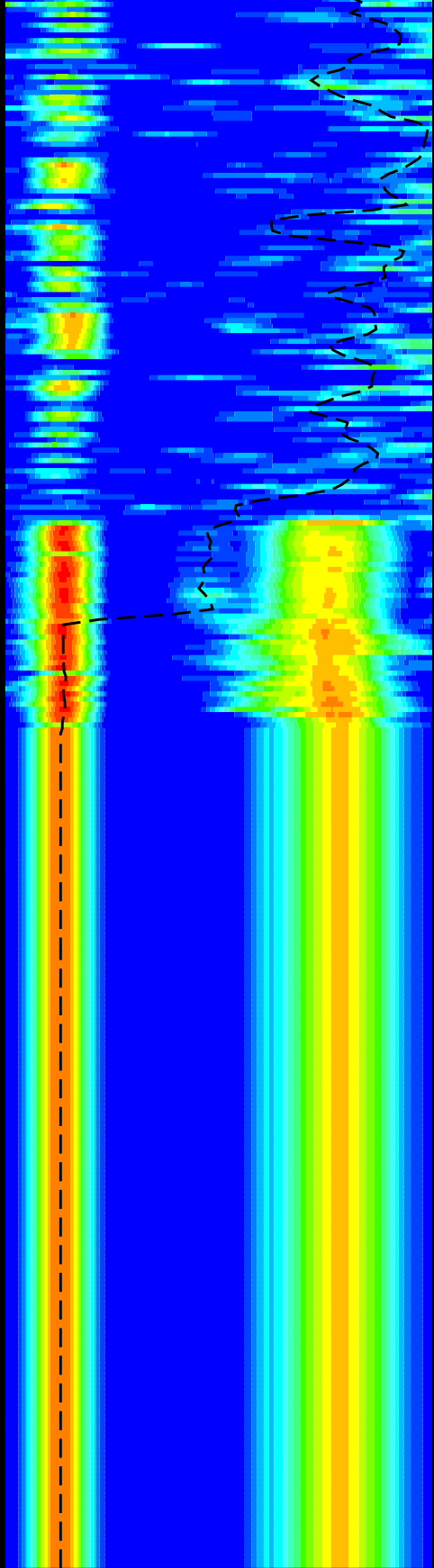
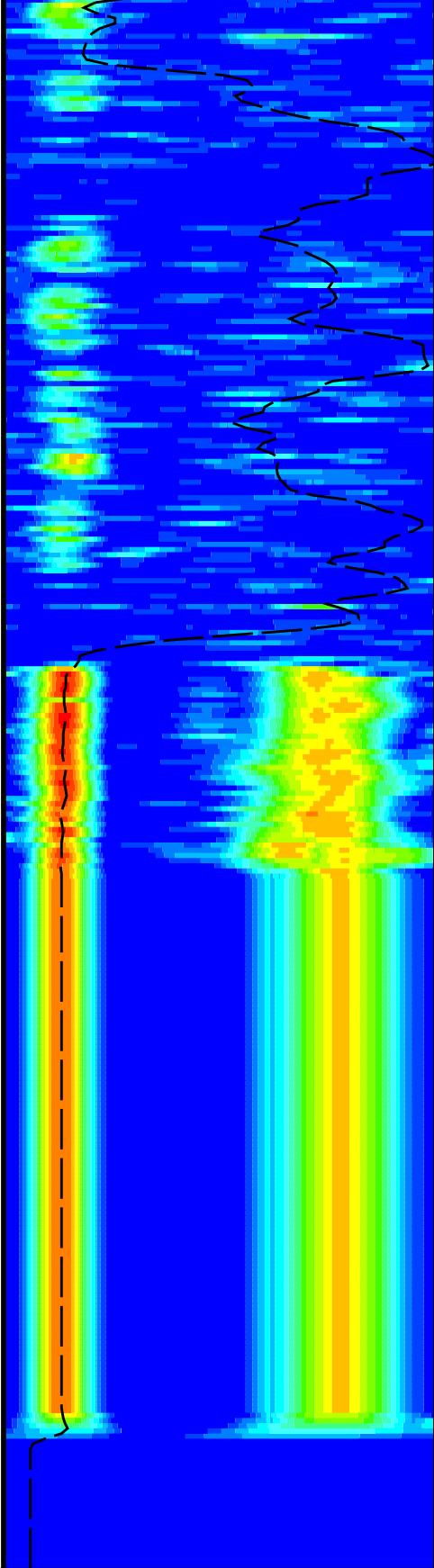
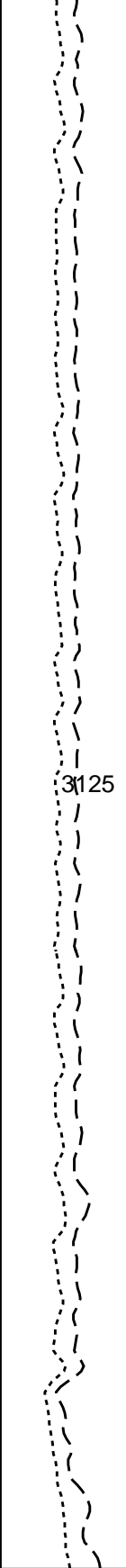
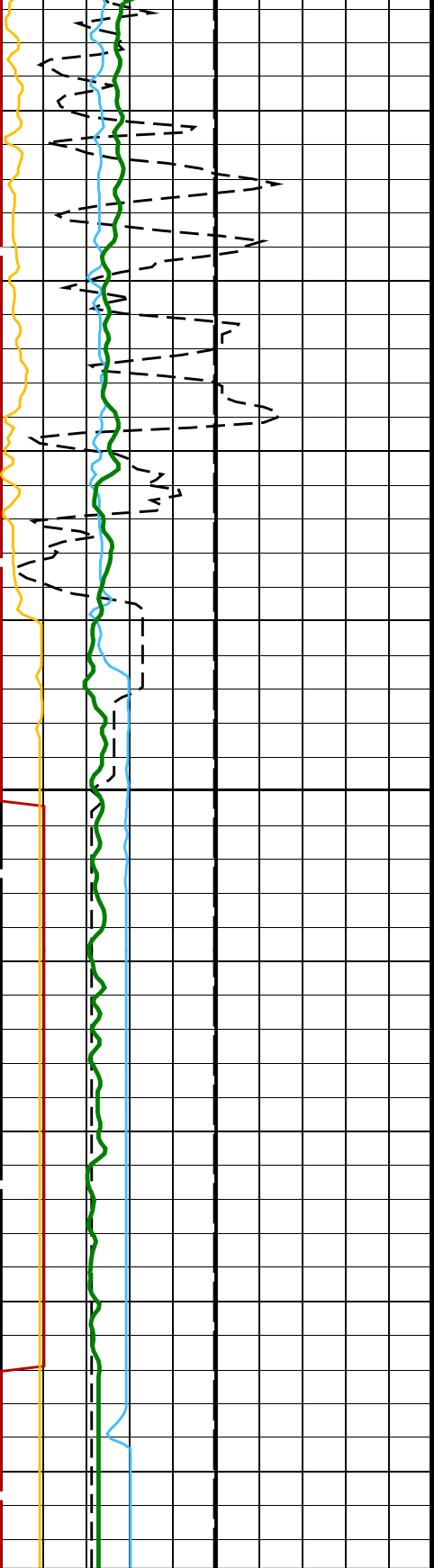
SAM2 Waveform Gain (WFG2)		
0	(----)	1000
Bit Size (BS)		
0	(IN)	20

Calibrated Downhole Force (CDF) (LBF)	Min	Amplitude	Max
	40	Tr.Array U.Dipole Slow Proj. CVDL (SPT2) (US/F)	1040
Tension (TENS) (LBF)	Min	Amplitude	Max
	40	Delta-T Shear / TA - Upper Dipole (DT2T) (US/F)	1040

5000	Min	Amplitude	Max
	40	Rec.Array U.Dipole Slow Proj. CVDL (SPR2) (US/F)	1040
0	Min	Amplitude	Max
	40	Delta-T Shear / RA - Upper Dipole (DT2R) (US/F)	1040







Bit Size (BS)
(IN) 20

Tension
(TENS)
(LBF) 10000 0

Delta-T Shear / TA - Upper Dipole
(DT2T) 40 1040
(US/F)

Delta-T Shear / RA - Upper Dipole
(DT2R) 40 1040
(US/F)

SAM2 Waveform Gain (WFG2)
(----) 1000 0

Calibrated
Downhole
Force
(CDF)
(LBF) 5000 0

Min Amplitude Max
Tr.Array U.Dipole Slow Proj. CVDL
(SPT2) 40 1040
(US/F)

Min Amplitude Max
Rec.Array U.Dipole Slow Proj. CVDL
(SPR2) 40 1040
(US/F)

0	(-----)	10
Peak Coherence / RA – Upper Dipole (CHR2)		
0	(-----)	10
Peak Coherence / TA – Upper Dipole (CHT2)		
-2	(-----)	8
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	100

REPEAT SECTION

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	-0.000959416	
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	1.02228	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.19796	
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	
DDE2	Digitizing Delay 2	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source – Dipole Shear	USE	
DSHL	Label Slowness Lower Limit – Dipole Shear	40	US/F
DSHU	Label Slowness Upper Limit – Dipole Shear	1040	US/F
DSI2	Digitizer Sample Interval 2	40	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DWC2	Digitizer Word Count 2	512	
DWCX	Digitizer Word Count X	512	
GCSE	Generalized Caliper Selection	LCAL	
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	
SLI2	STC Slowness Lower Limit – Upper Dipole	40	US/F

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

Format: DSST_UPPER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:03

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M

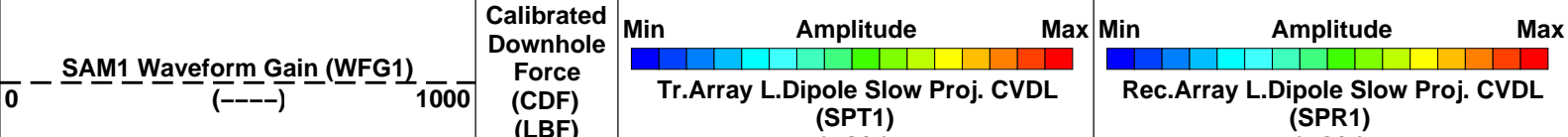
OP System Version: 19C0-187

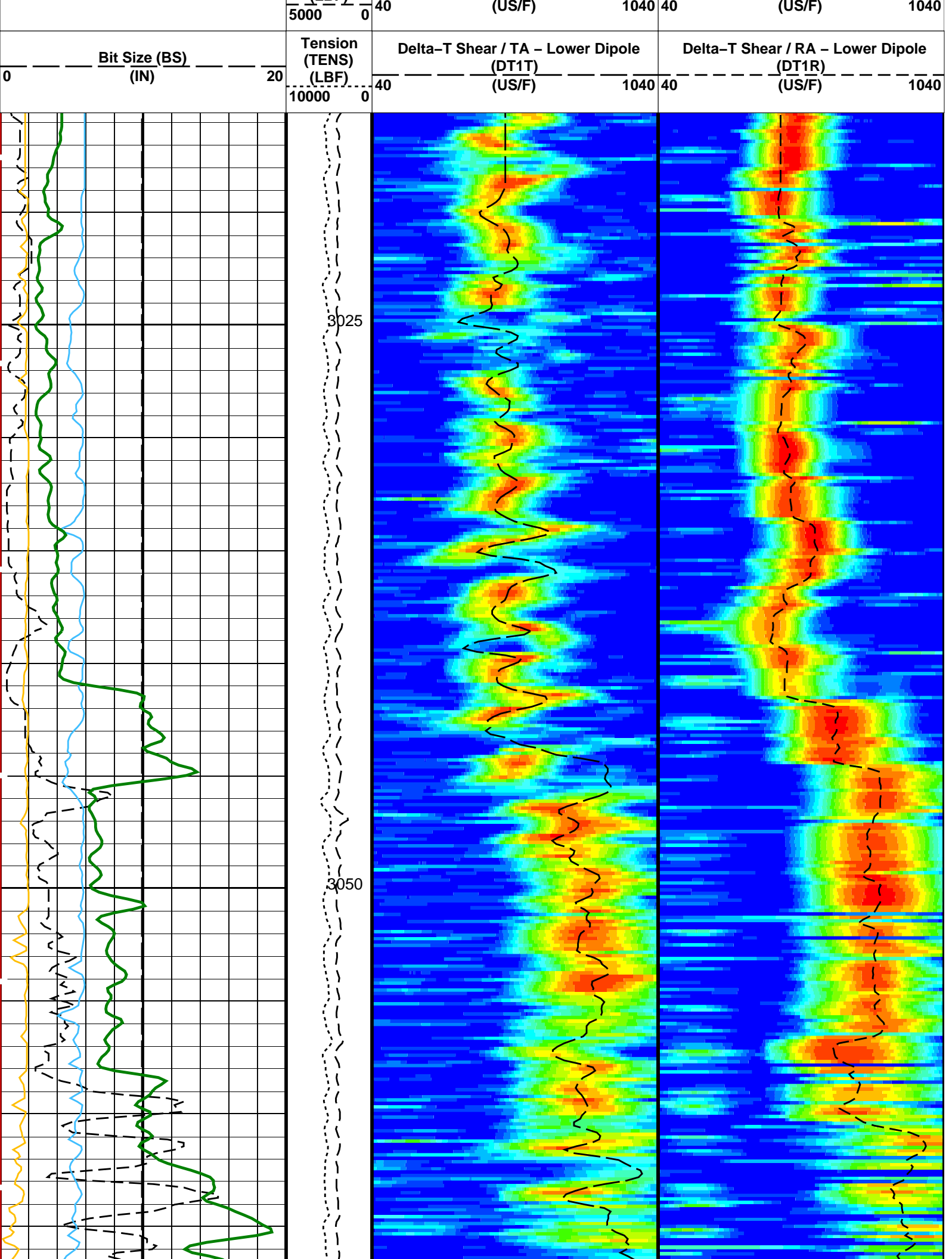
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HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

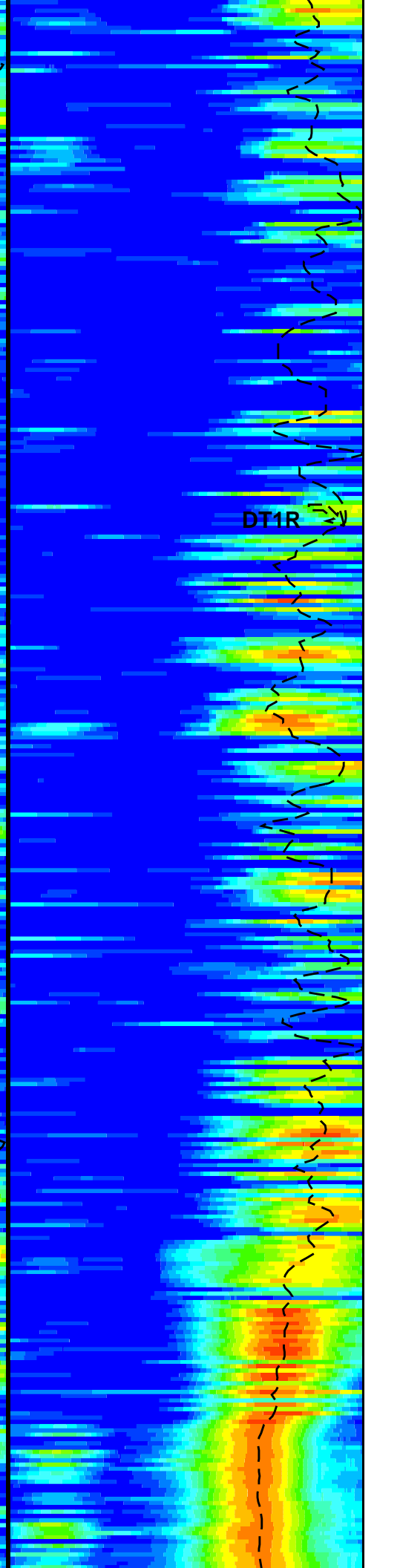
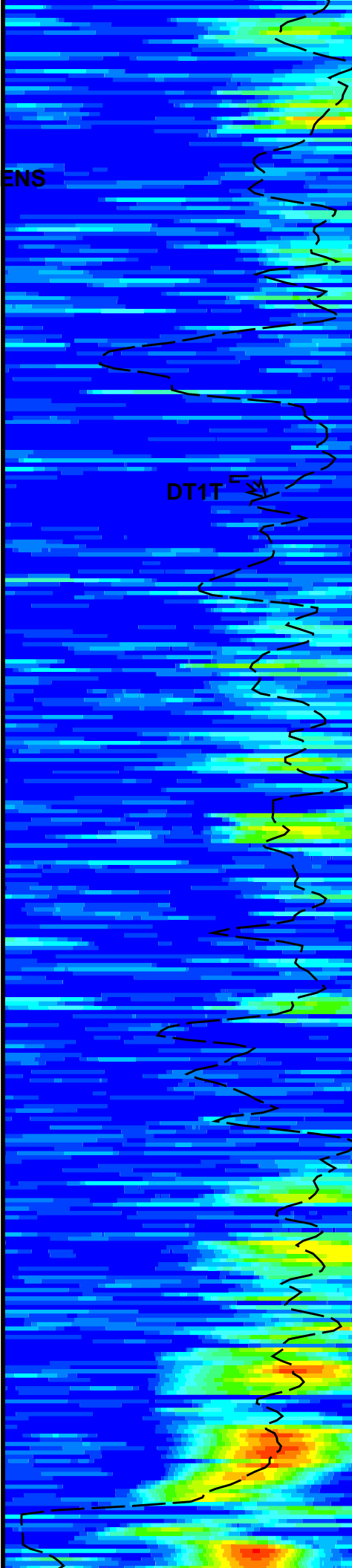
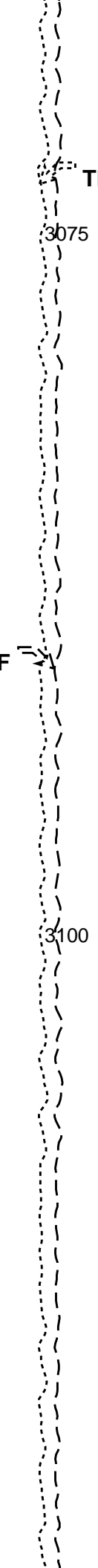
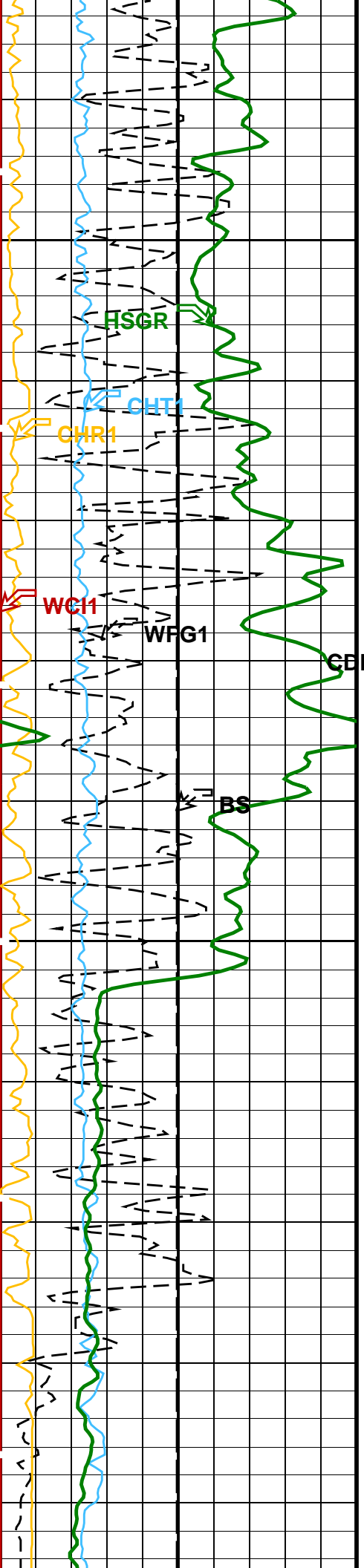
PIP SUMMARY

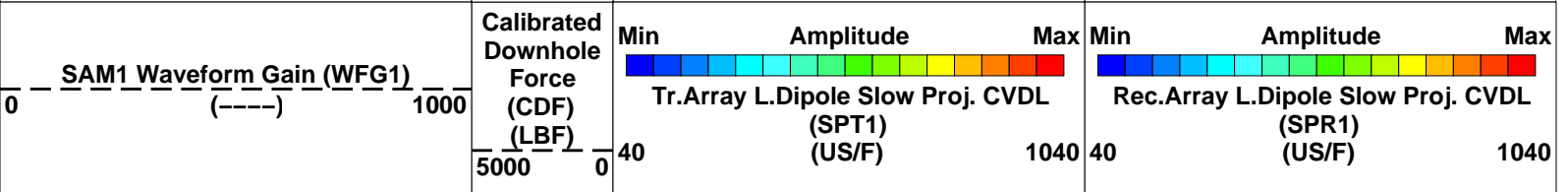
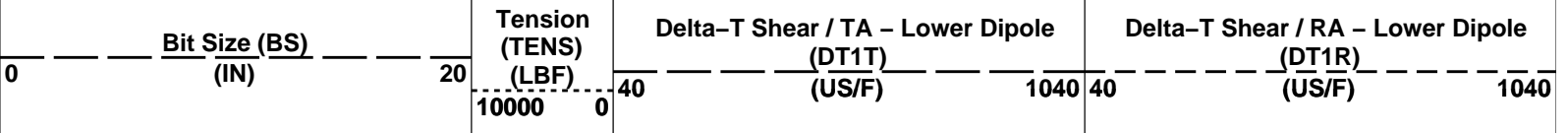
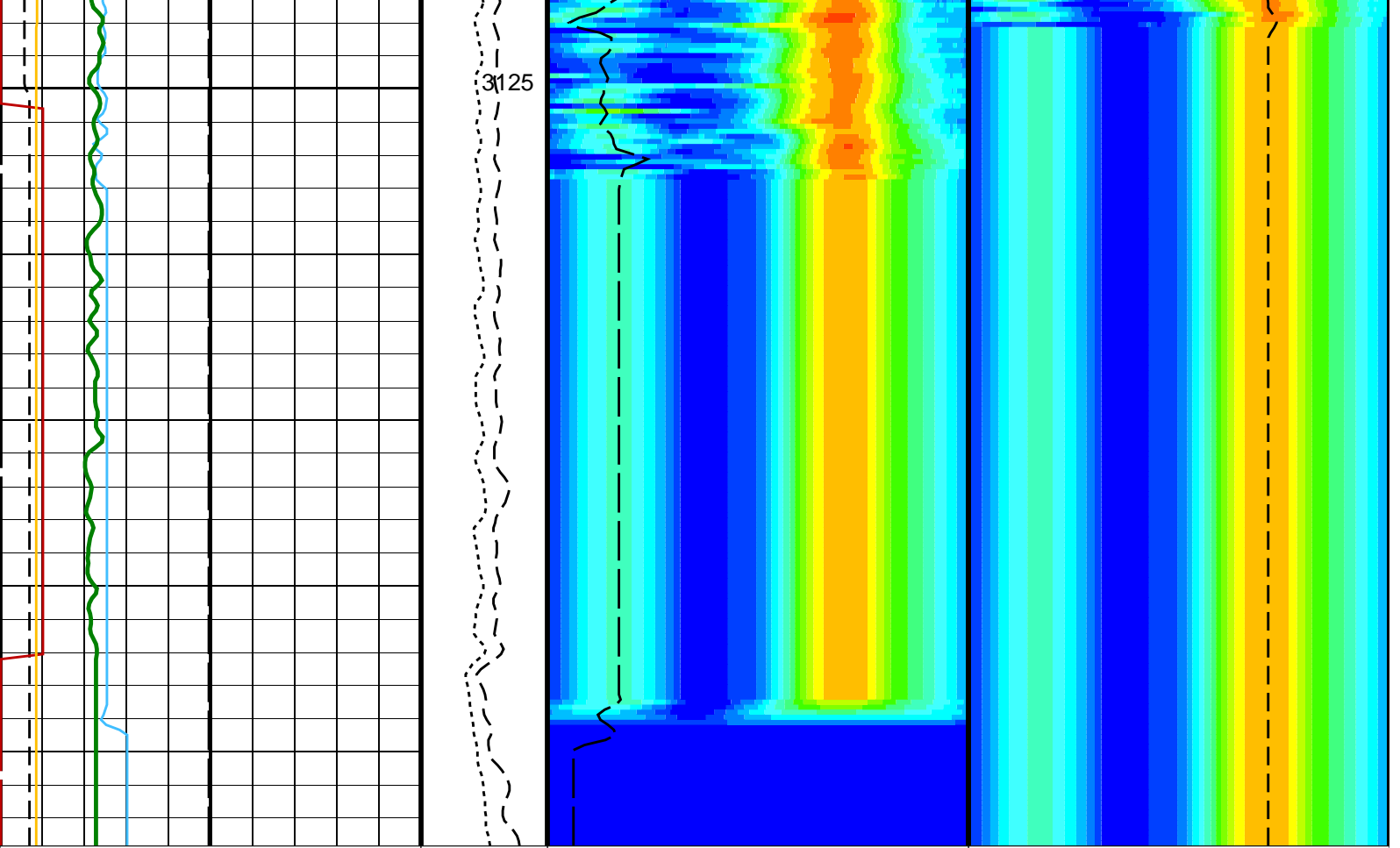
Time Mark Every 60 S

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	REPEAT SECTION









Waveform Data Copy Indicator 1 - Lower Dipole (WC11) (----)	10	REPEAT SECTION
Peak Coherence / RA - Lower Dipole (CHR1) (----)	10	
Peak Coherence / TA - Lower Dipole (CHT1) (----)	8	
HNGS Spectroscopy Gamma Ray (HSGR) (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	-0.000959416	
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	1.02228	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.19796	
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
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

Format: DSST_LOWER_DIPOLE_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:03

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 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

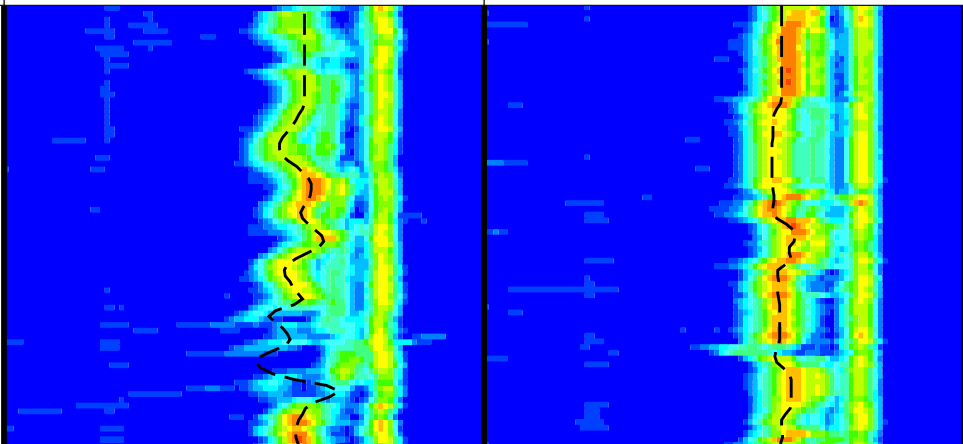
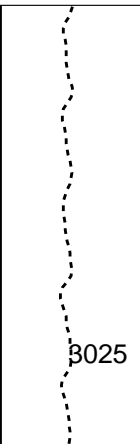
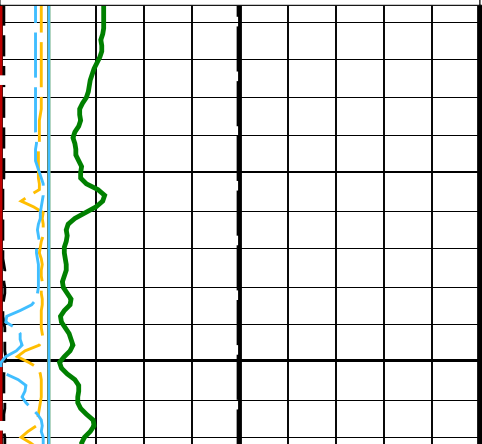
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0 (GAPI)	100	
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-1 (----)	9	
Peak Coherence / RA - P & S Shear (CHRS)		
-1 (----)	9	
Peak Coherence / TA - P & S Comp (CHTP)		
0 (----)	10	
Peak Coherence / RA - P & S Comp (CHRP)		
0 (----)	10	
Waveform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

REPEAT SECTION

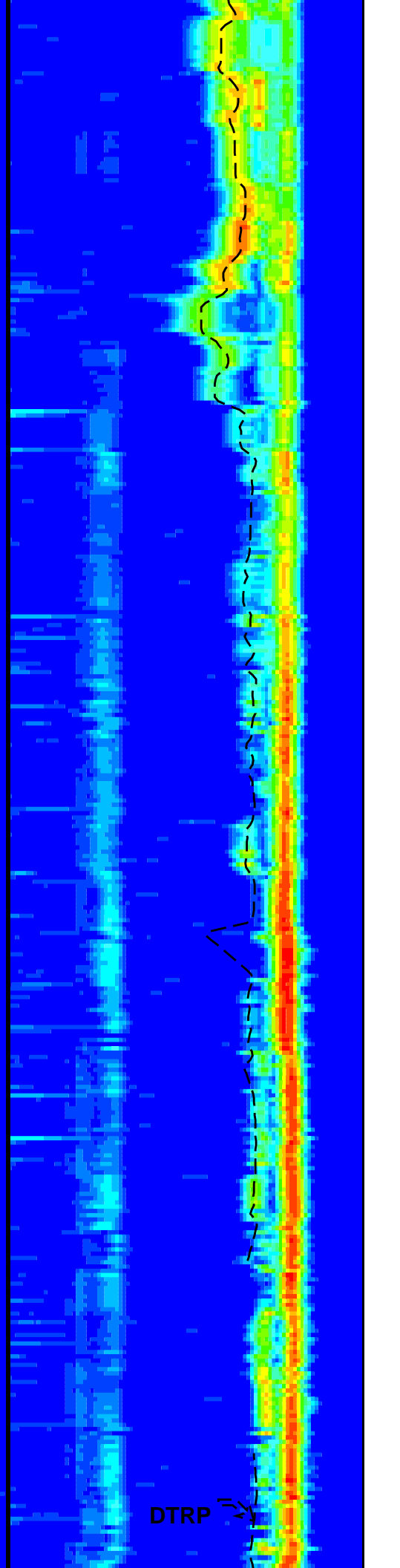
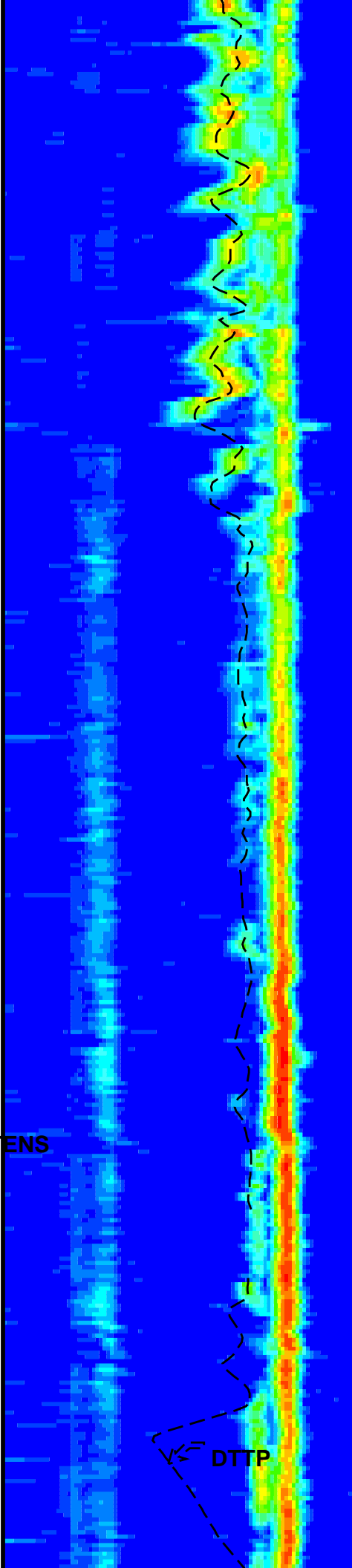
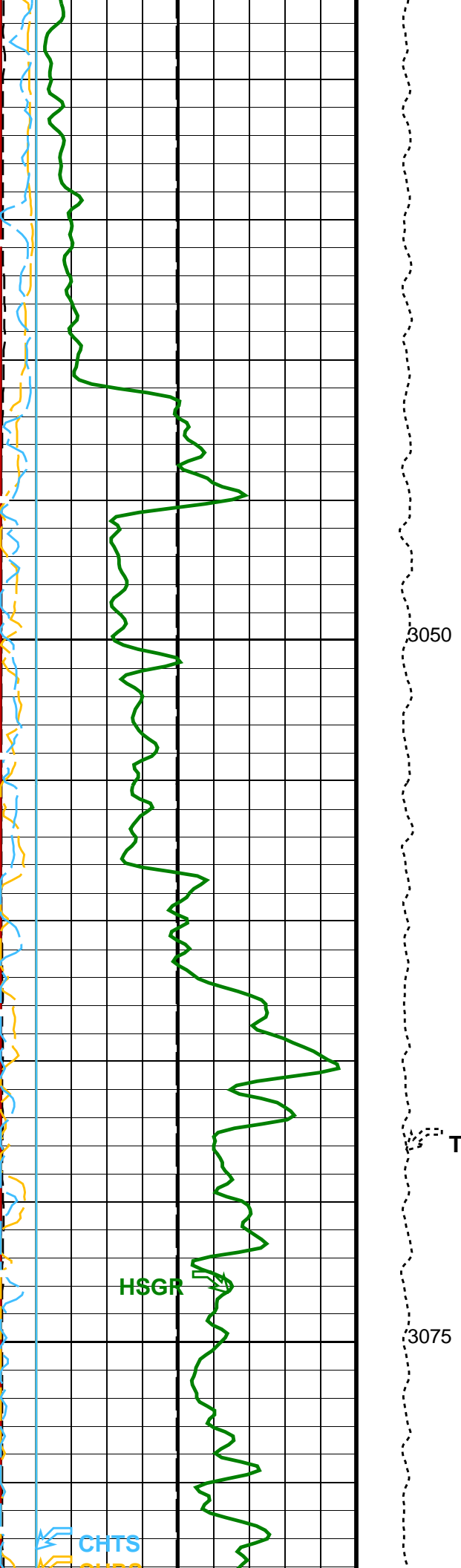
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	(US/F)			(US/F)	
40	Delta-T Shear / TA - P & S (DTTS)	240	40	Delta-T Shear / RA - P & S (DTRS)	240
	(US/F)			(US/F)	
40	Delta-T Comp / TA - P & S (DTTP)	240	40	Delta-T Comp / RA - P & S (DTRP)	240
	(US/F)			(US/F)	

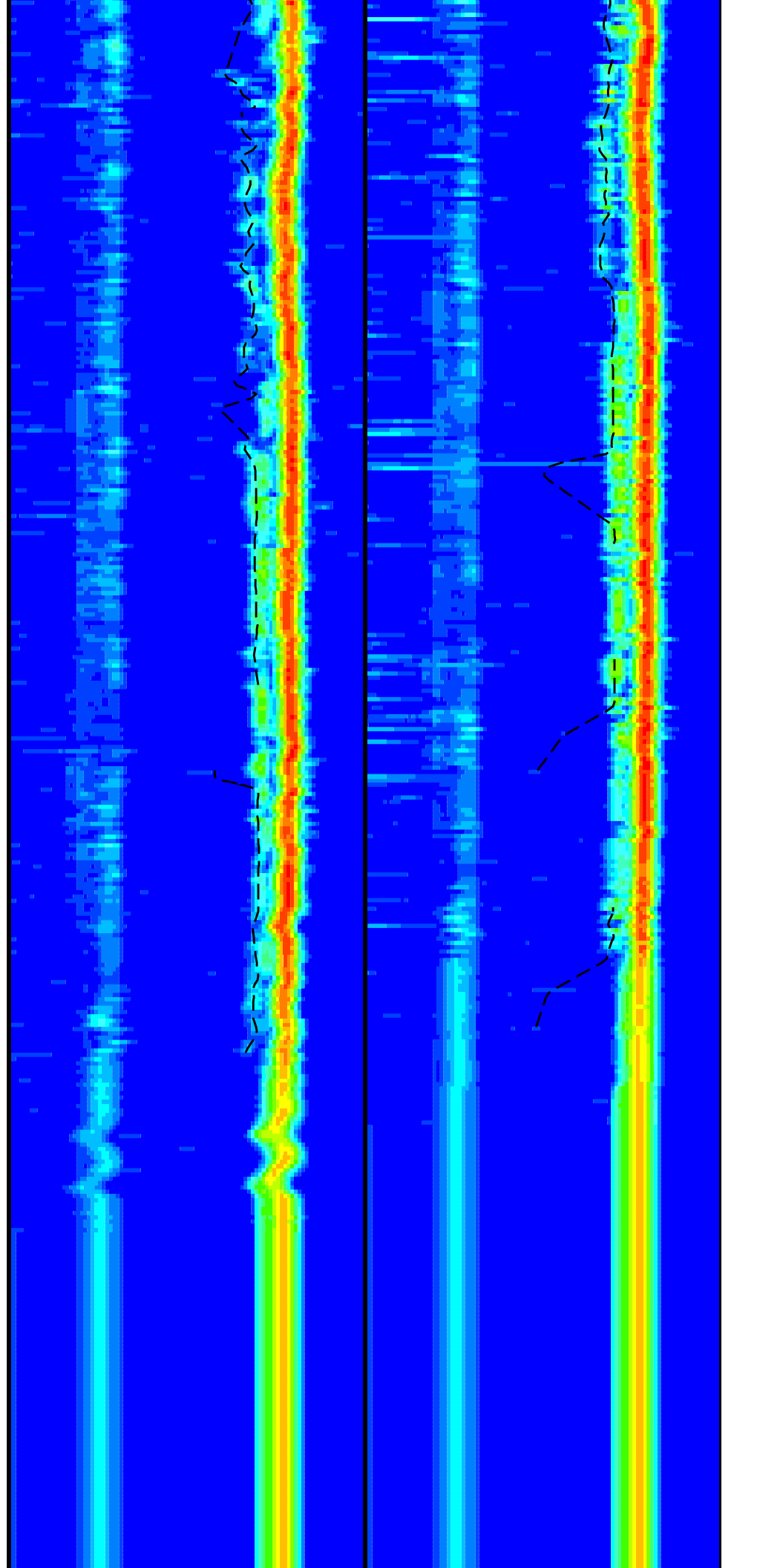
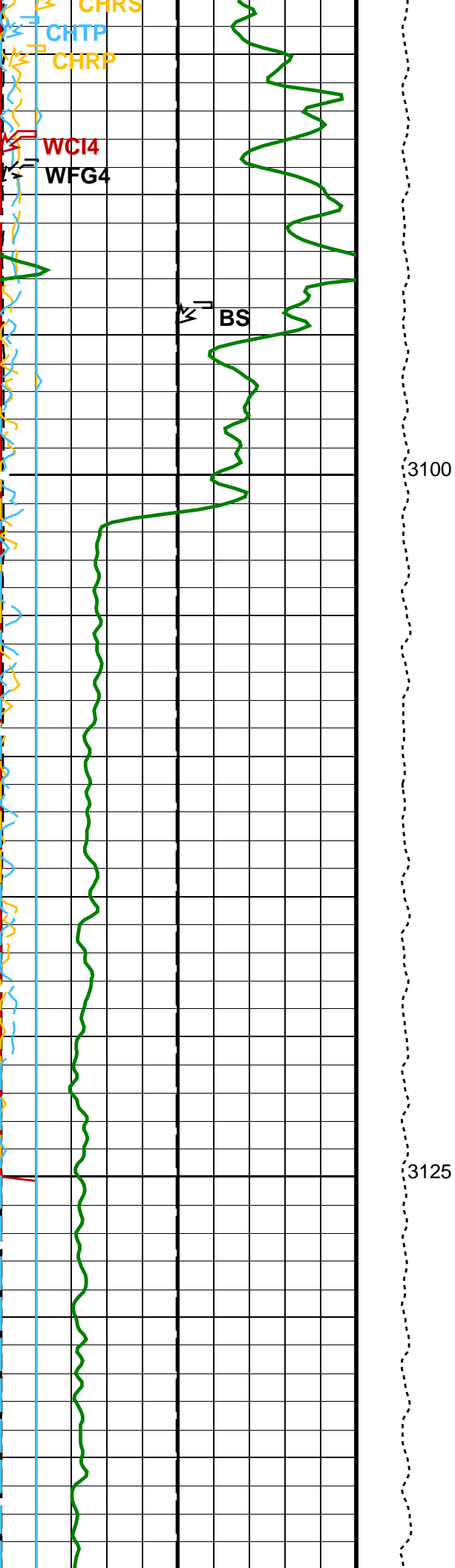
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0 (IN)	20	

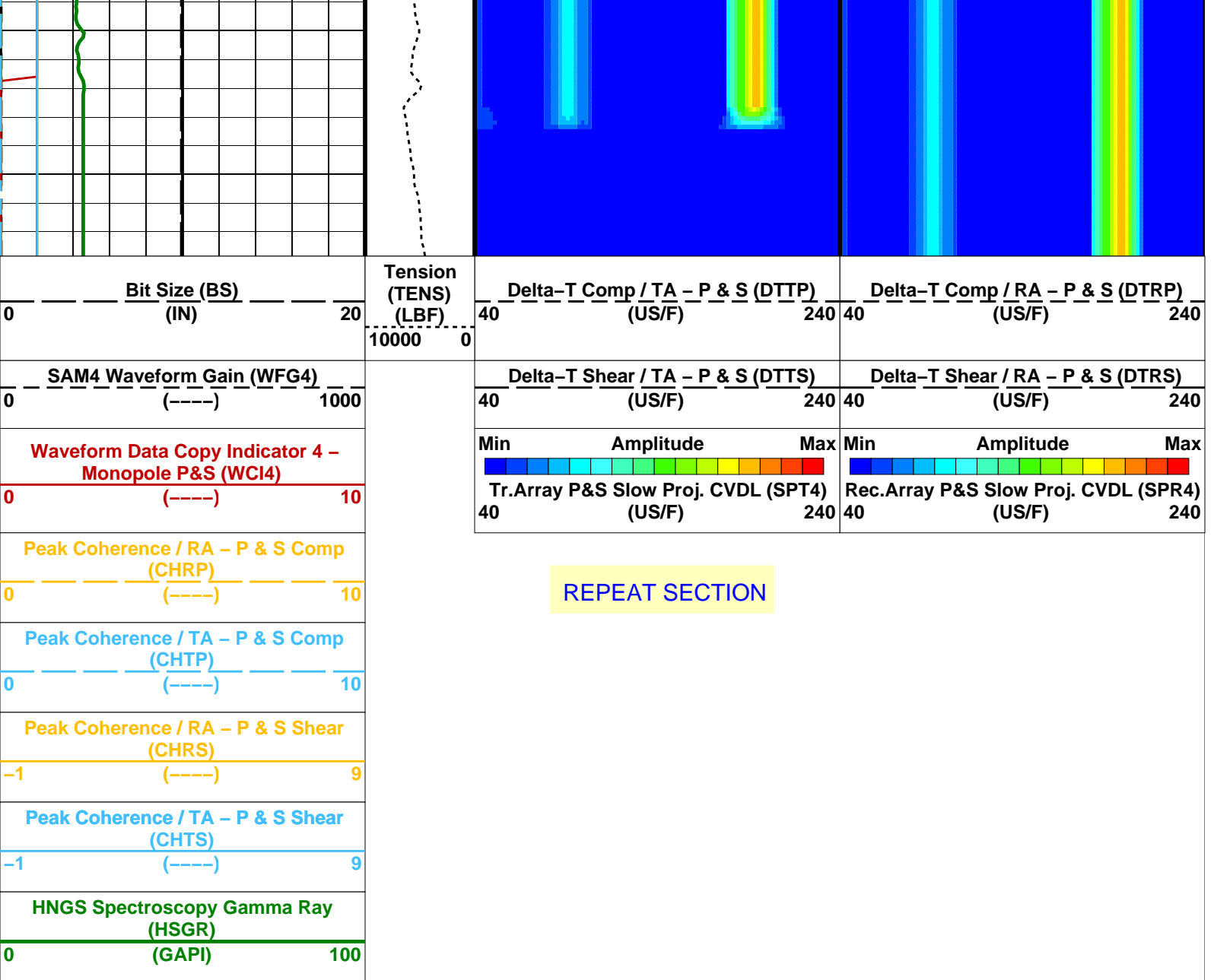
Tension (TENS)	
(LBF)	
10000	0



3025







REPEAT SECTION

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	-0.000959416
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	1.02228
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.19796

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	180	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	193	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
RX5G	Receiver 5 Geometry	318	IN
RX6G	Receiver 6 Geometry	324	IN
RX7G	Receiver 7 Geometry	330	IN
RX8G	Receiver 8 Geometry	336	IN
SAM4	DSST Sonic Acquisition Mode 4 - Monopole Mode for P&S	EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS4	STC Sonic Array Status - Monopole P&S	255	
SBO4	STC Search Band Offset - Monopole P&S	500	US
SBR4	STC Baseline Removal - Monopole P&S	ON	
SBW4	STC Search Bandwidth - Monopole P&S	2000	US
SFC4	STC Formation Character - Monopole P&S	SELECTABLE	
SFM4	STC Filter - Monopole P&S	B3-20K	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	235	US/F
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	240	US/F
SLL4	STC Slowness Lower Limit - Monopole P&S	40	US/F
SST4	STC Slowness Step - Monopole P&S	2	US/F
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	180	US/F
STUL	Label Slowness Upper Limit - Monopole Stoneley	780	US/F
SUL4	STC Slowness Upper Limit - Monopole P&S	240	US/F
SWD4	STC Slowness Width - Monopole P&S	10	US/F
TBF4	STC Time for Baseline Fill - Monopole P&S	300	US
TLL4	STC Time Lower Limit - Monopole P&S	150	US
TST4	STC Time Step - Monopole P&S	50	US
TUL4	STC Time Upper Limit - Monopole P&S	3660	US
TWD4	STC Time Width - Monopole P&S	1000	US
TWI4	STC Integration Time Window - Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
WFM4	Waveform Mode 4	W1	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	LCAL	
System and Miscellaneous			
BS	Bit Size	9.875	IN

Format: DSST_P_S_RC_TR_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:03

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03

Output DLIS Files

Output DLIS Files

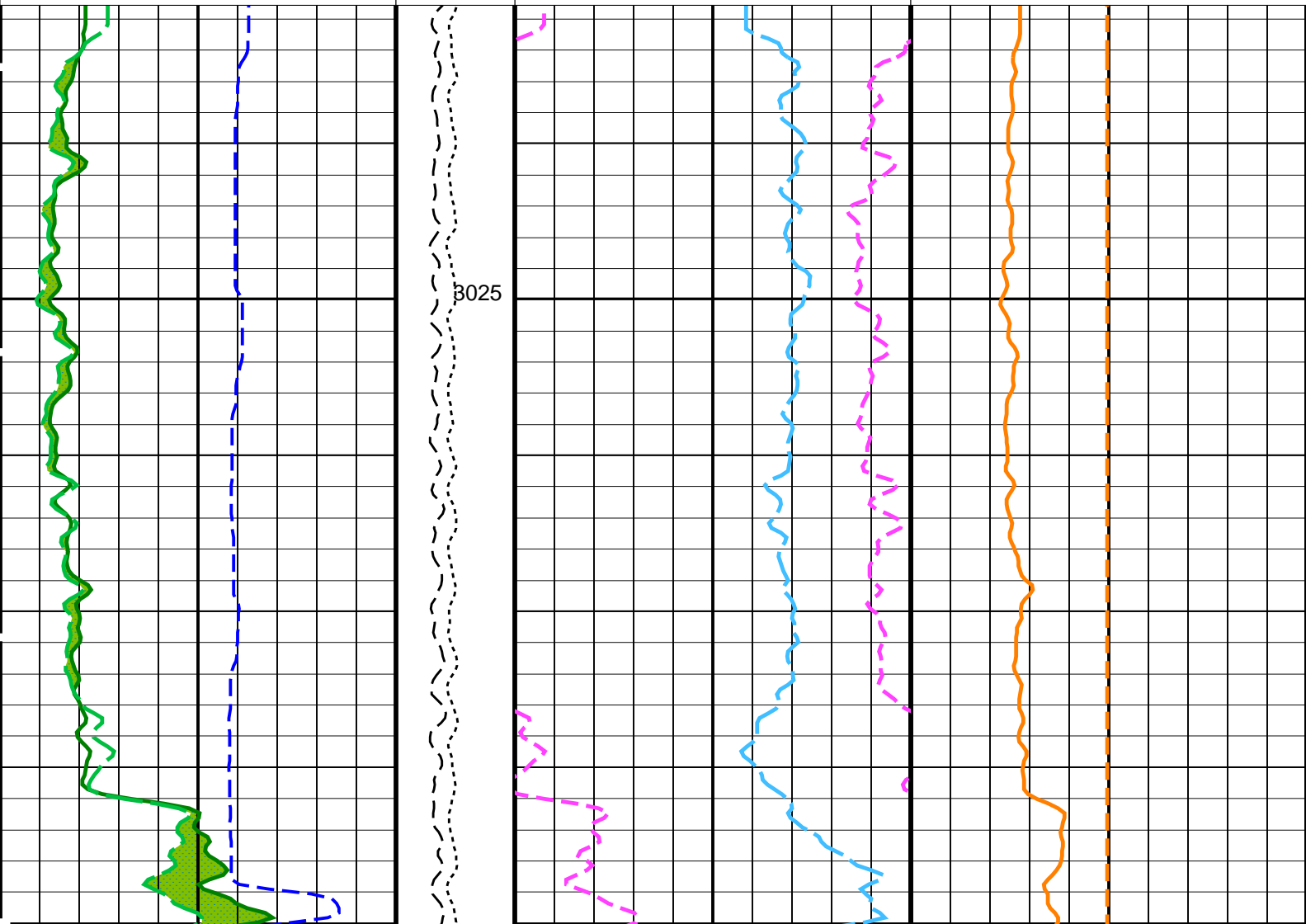
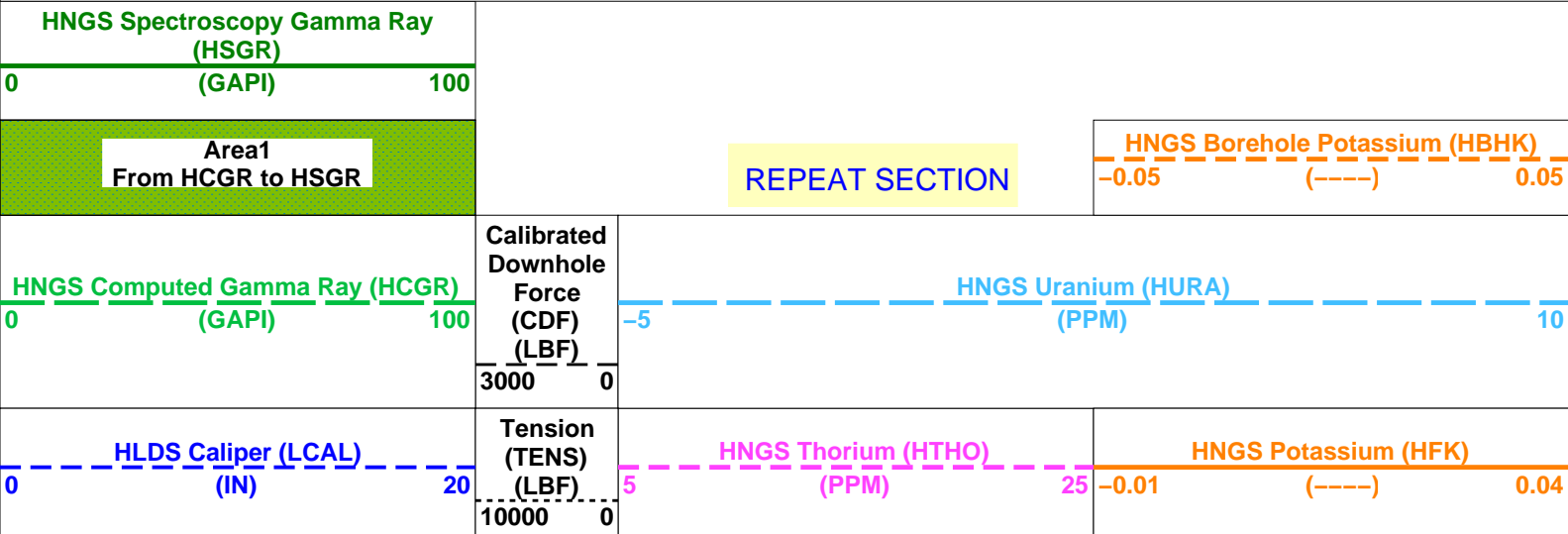
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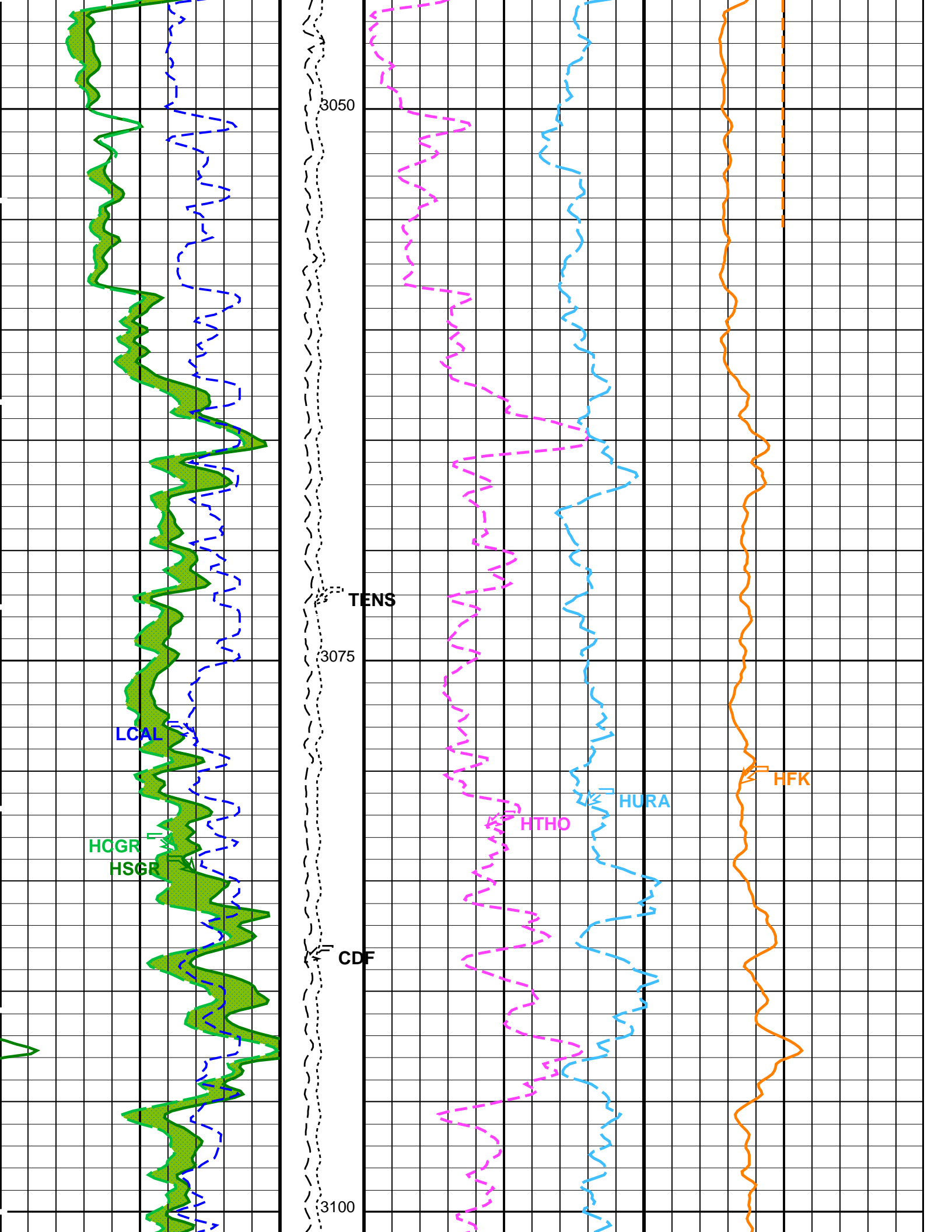
OP System Version: 19C0-187

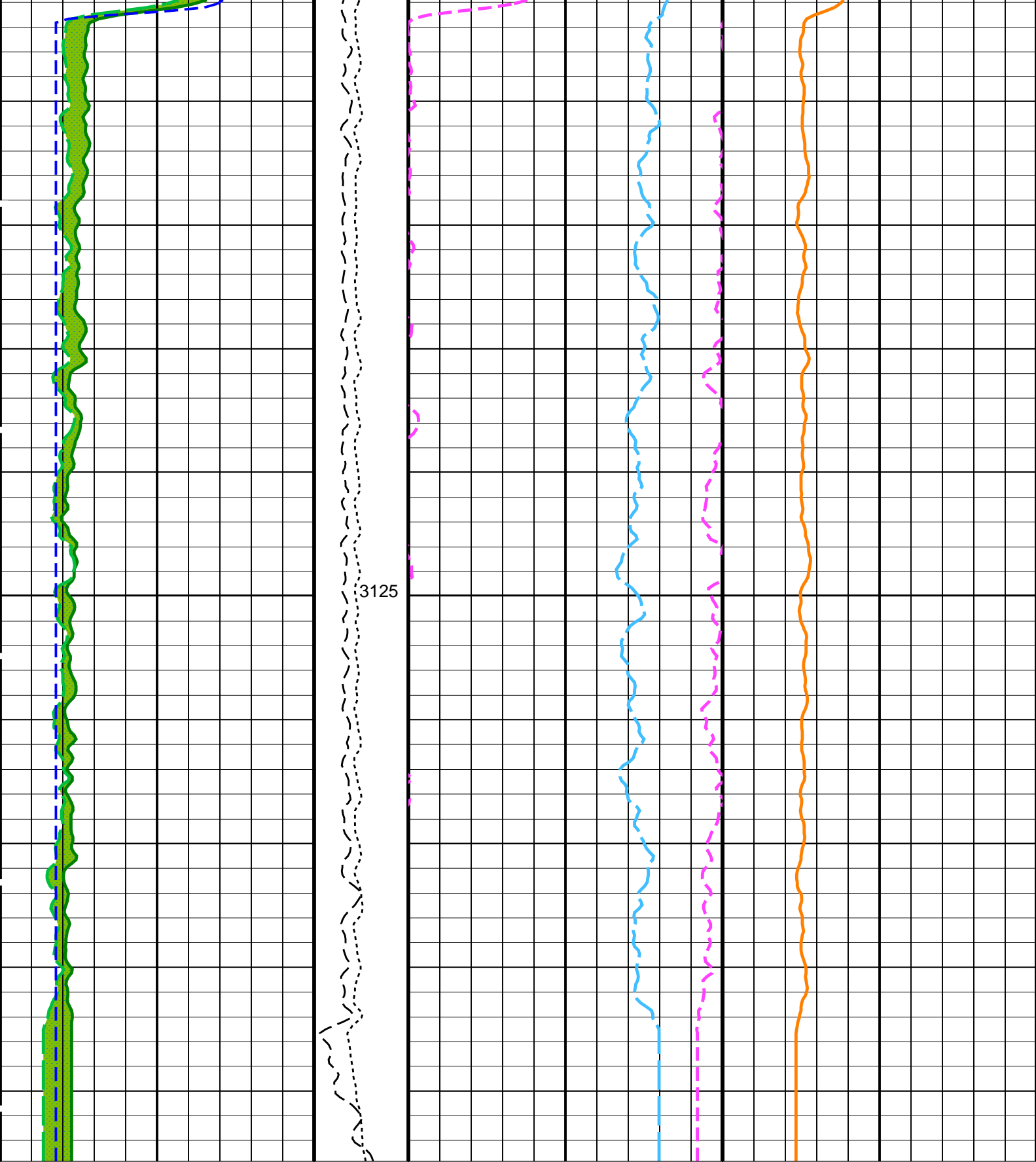
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HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

PIP SUMMARY

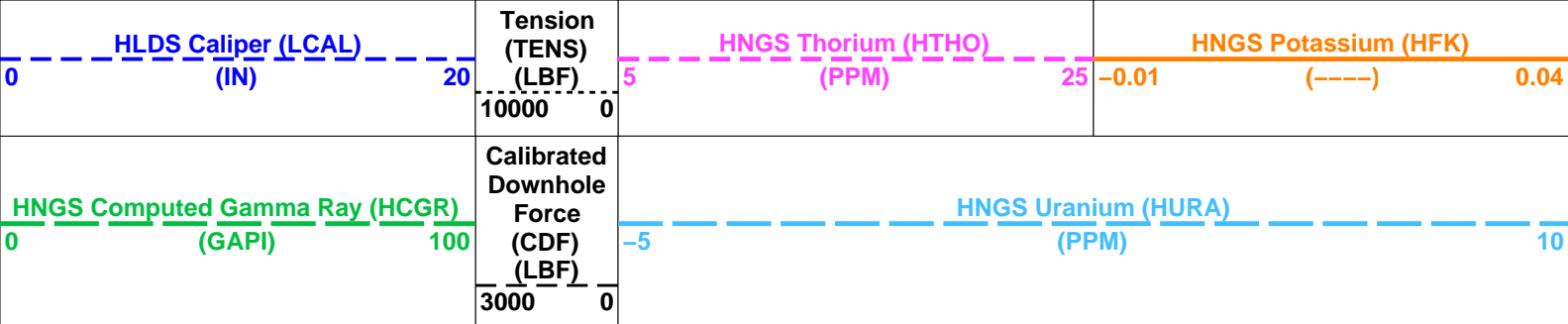
Time Mark Every 60 S







3125



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	-0.000959416
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	1.02228
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.19796
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

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:03

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03

Company: International Ocean Discovery Program Well: Expedition 369, Site U1513D

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M

OP System Version: 19C0-187

MSS_LDEO-A
HNGS-BA
DSST-B
LDSC-B

19C0-187
19C0-187
19C0-187
19C0-187

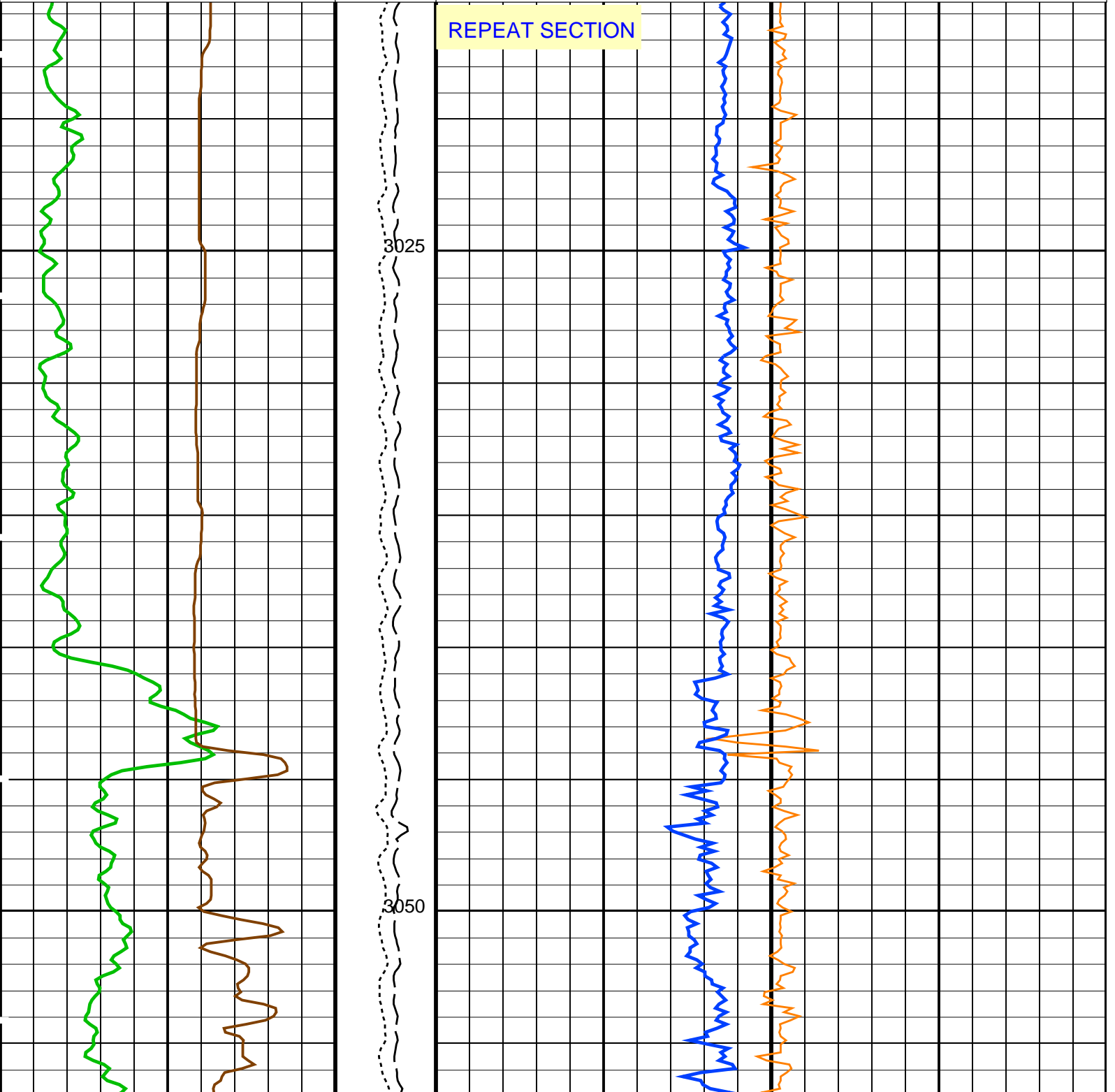
HNGC-B
HRLT-B
HLDS
EDTC-B

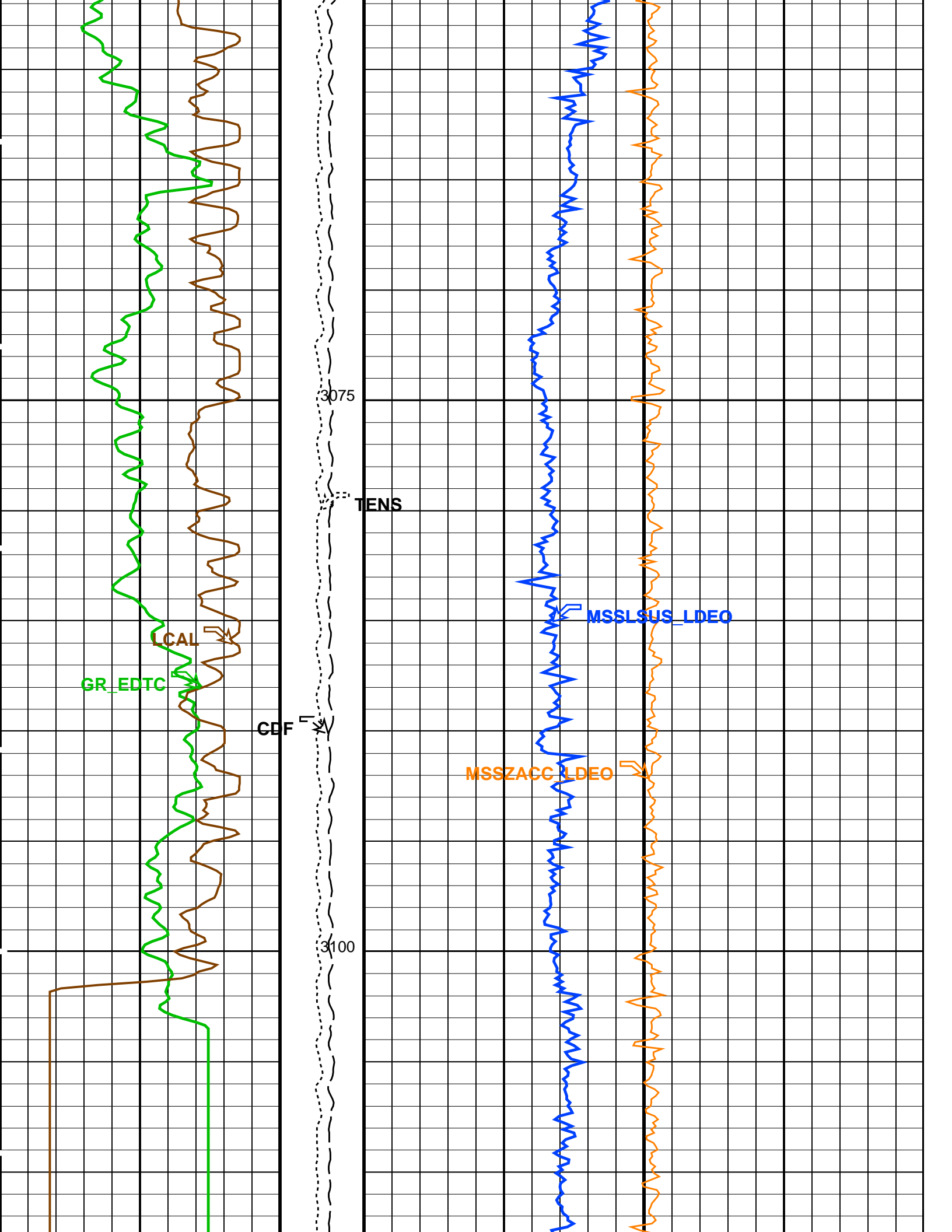
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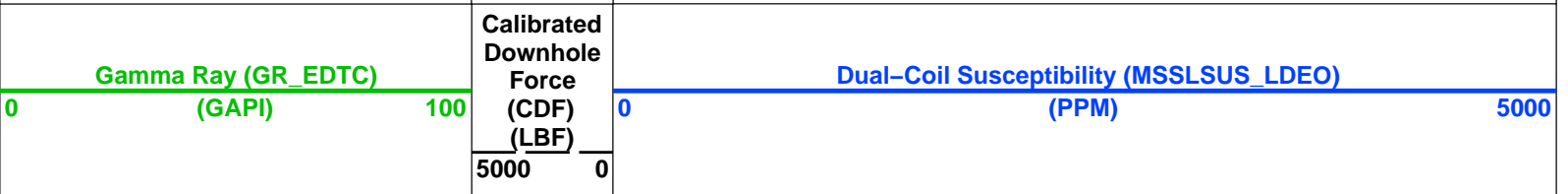
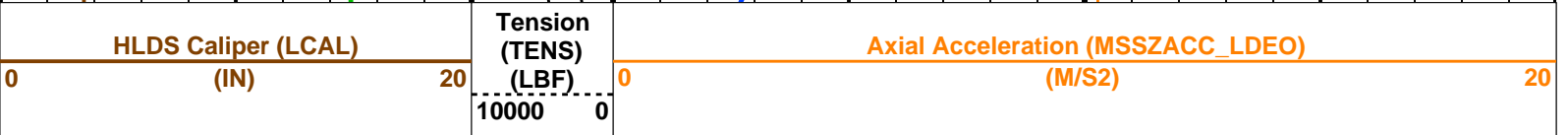
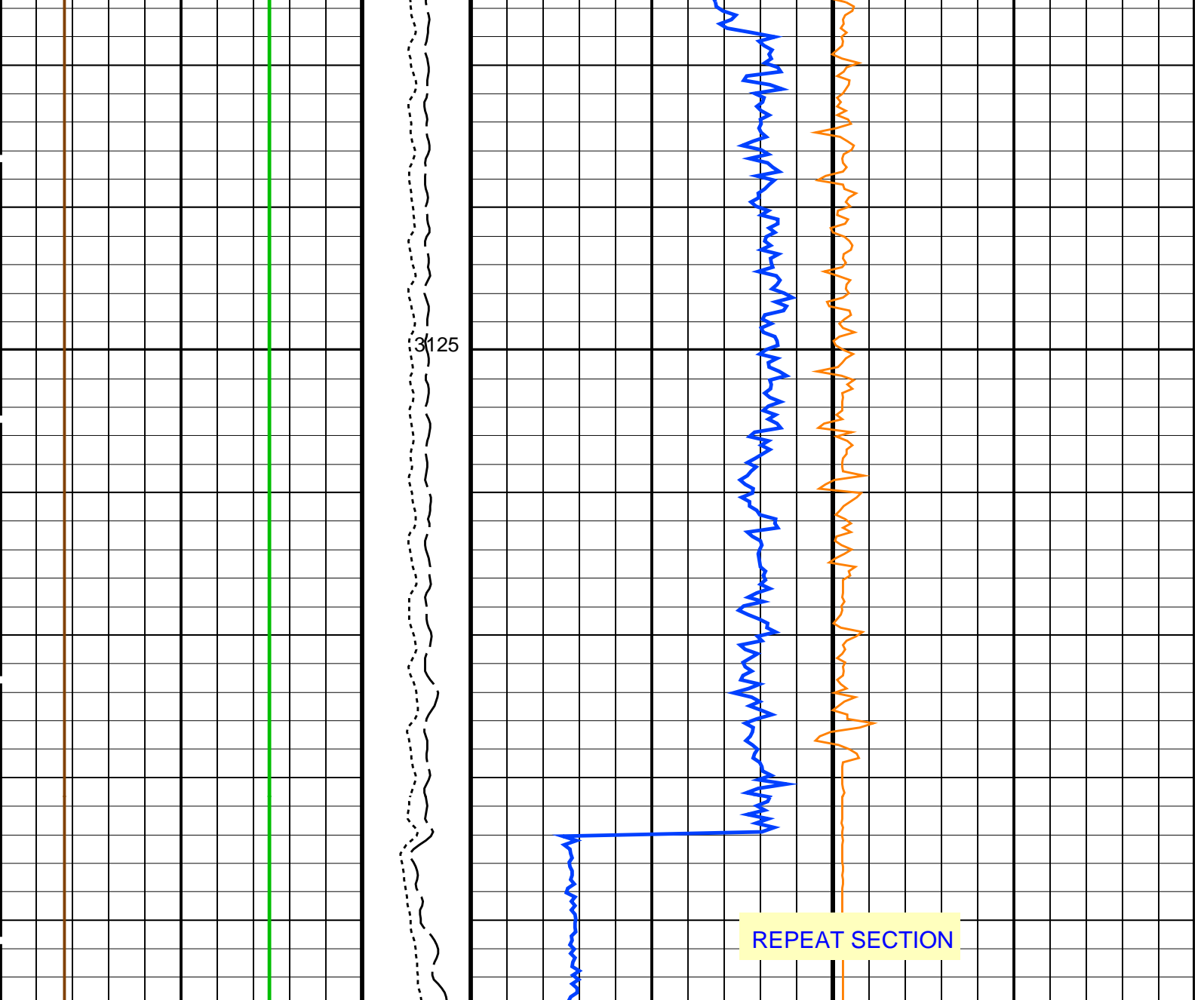
PIP SUMMARY

Time Mark Every 60 S

Gamma Ray (GR_EDTC) (GAPI)	0 100	Calibrated Downhole Force (CDF) (LBF)	5000 0	Dual-Coil Susceptibility (MSSLSUS_LDEO) (PPM)	0 5000
HLDS Caliper (LCAL) (IN)	0 20			Tension (TENS) (LBF)	10000 0







PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HNCS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNCS Detector 1 Barite Constant	1
BAR2	HNCS Detector 2 Barite Constant	1
BHK	HNCS 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

CSWZ	Outer Casing Weight	0	
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	-0.000959416	
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	1.02228	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.19796	

HRLT-B: High Resolution Laterolog Array - B

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
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	
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	180	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	193	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	

NW1X	Number Threshold Items X	0	
NW1	Number Waveform Items 1	8	
NW12	Number Waveform Items 2	8	
NW13	Number Waveform Items 3	0	
NW14	Number Waveform Items 4	8	
NW15	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

LTL1	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	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	55	DEGF
SOCN	Standoff Distance	0.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U-ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U-TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	12409.8	FT
TDD	Total Depth - Driller	3092.70	M
TDL	Total Depth - Logger	3560.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: MSS_Logging Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:03

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

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03

Output DLIS Files

DEFAULT	MSS_LDEO_NGS_HRLA_014LUP	FN:19	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M
BACKUP	MSS_LDEO_NGS_HRLA_014LUP	FN:20	PRODUCER	01-Nov-2017 08:03	3147.8 M	3015.4 M

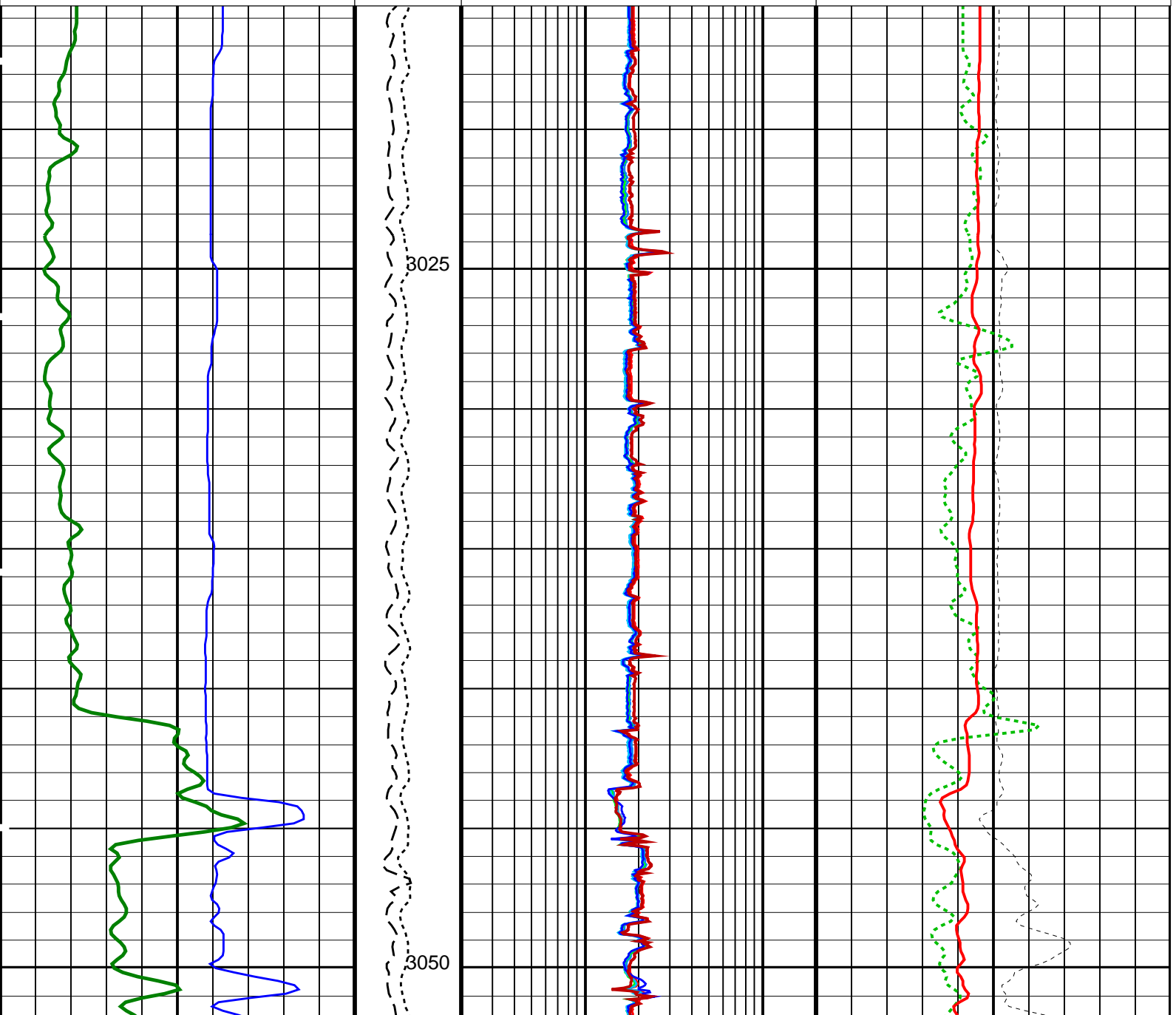
OP System Version: 19C0-187

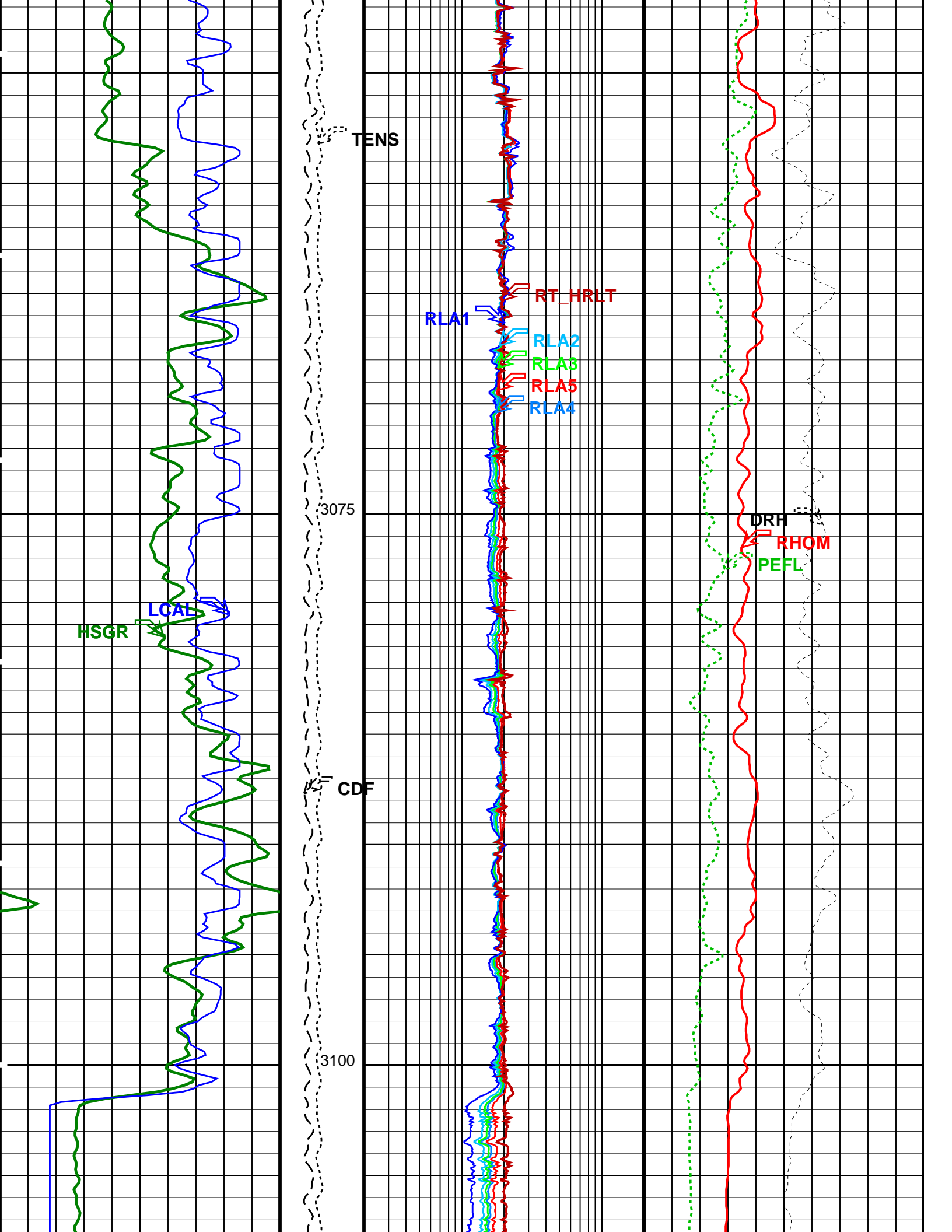
MSS_LDEO-A	19C0-187	HNGC-B	19C0-187
HNGS-BA	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

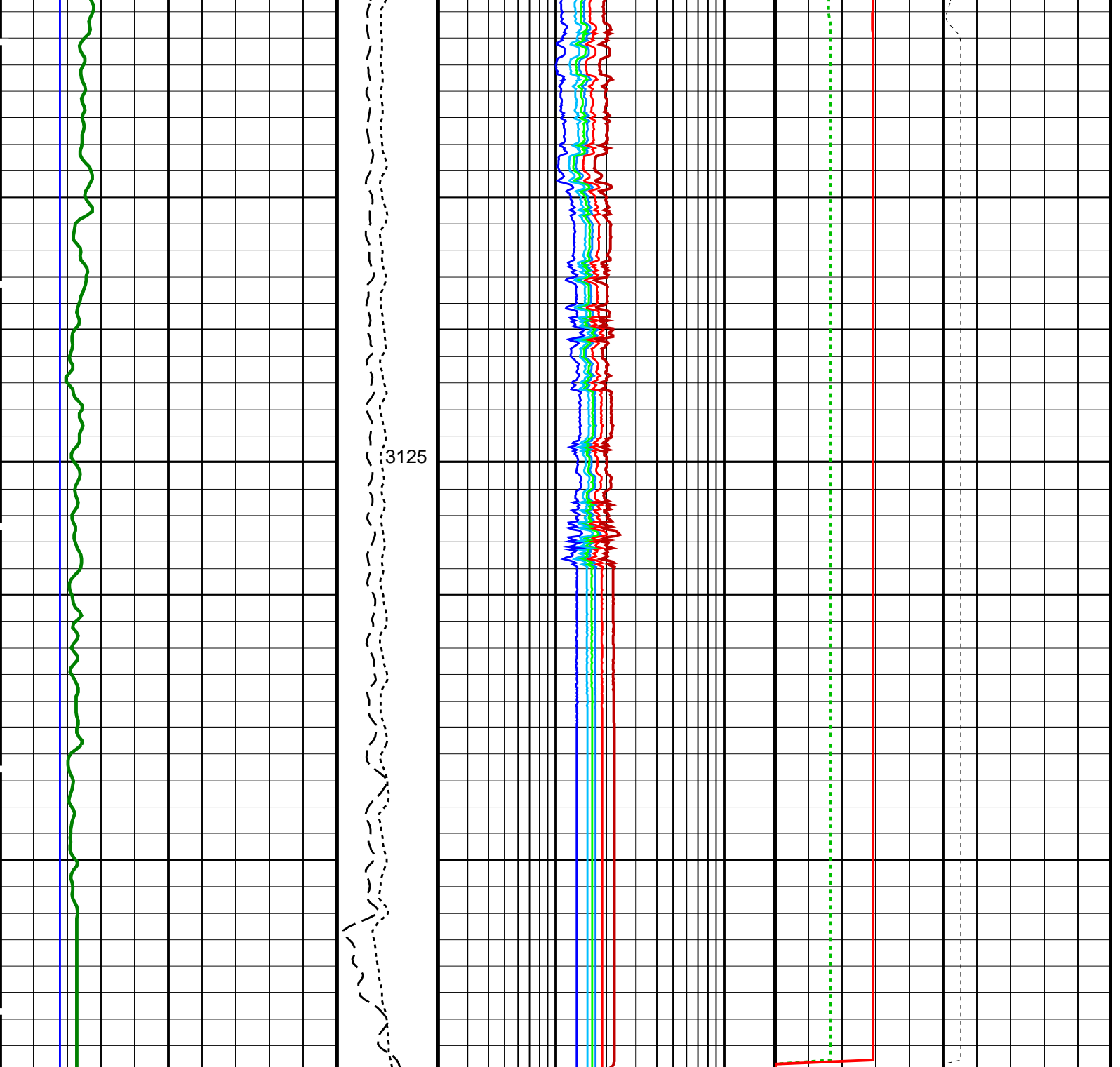
Time Mark Every 60 S

REPEAT SECTION

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







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

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	-0.000959416	
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	1.02228	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.19796	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	14.5979	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	LCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCFL	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	180	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	193	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	
ISSPAB	Isotope Mud Switch	DABITE	

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	DIIP	

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			
ALTDPCAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	38000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	168.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	23.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	12409.8	FT
TDD	Total Depth - Driller	3092.70	M
TDL	Total Depth - Logger	3560.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 01-Nov-2017 08:03

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

Output DLIS Files

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
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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	
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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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT M0-M1 Voltage Plus – 0	0	N/A	-318.6	-318.3	0.2538	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-329.6	-329.4	0.2171	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-337.8	-336.7	1.066	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-328.3	-327.7	0.6151	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-319.6	-319.4	0.2797	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-321.5	-321.3	0.2141	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	319.2	318.4	-0.8530	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT M1-M2 Voltage Plus – 0	0	N/A	1739	1736	-3.190	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1807	1803	-4.460	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1844	1836	-8.612	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1791	1785	-5.934	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1742	1739	-3.625	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1753	1750	-3.149	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1758	-1750	7.941	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT M2-M3 Voltage Plus – 0	0	N/A	1732	1728	-3.230	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1809	1804	-5.182	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1849	1840	-8.725	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1799	1793	-6.069	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1745	1741	-3.986	53.42	UV

HRLT M2-M3 Voltage Plus - 5	0	N/A	1753	1753	-3.185	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1750	-1741	8.402	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT A3-A4 Voltage Plus - 0	0	N/A	68610	68520	-87.82	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	71520	71380	-140.8	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	73370	73080	-286.7	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	71670	71450	-221.6	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	69440	69340	-102.3	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69950	69840	-102.3	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-68190	-67900	289.5	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT A4-A5 Voltage Plus - 0	0	N/A	68690	68610	-77.78	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	71730	71590	-143.6	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	73550	73260	-285.9	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	71810	71610	-198.1	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	69560	69450	-103.6	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	70040	69940	-102.9	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-68400	-68110	287.8	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT A5-A6 Voltage Plus - 0	0	N/A	68540	68450	-91.59	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	71570	71440	-126.2	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	73410	73090	-324.5	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	71670	71460	-206.5	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	69430	69320	-113.0	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69900	69810	-93.20	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68240	-67960	282.6	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP

Before: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68070	-67990	81.47	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-71370	-71250	126.1	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-73240	-72960	275.3	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-71570	-71380	185.2	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-69380	-69280	94.48	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69860	-69780	82.23	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68000	67720	-283.7	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68110	-68030	79.08	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71460	-71340	120.0	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73330	-73030	295.6	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71650	-71450	200.4	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-69430	-69330	91.27	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69900	-69820	82.84	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68090	67810	-275.4	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT Source Current Plus - 0	0	N/A	284.1	283.8	-0.2677	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: 1-Nov-2017 4:42 After: 23-Oct-2017 11:40

HRLT Vertical Voltage PI - 0	0	N/A	-320.5	-319.9	0.5861	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-324.5	-323.8	0.7675	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-331.3	-329.8	1.435	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-320.3	-319.2	1.059	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-308.8	-308.3	0.5809	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.6	-325.0	0.5374	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	326.9	325.6	-1.336	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	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: 1-Nov-2017 4:47								
EDTC Z-Axis Acceleration	9.810	N/A	9.690	N/A	N/A	N/A	M/S2	

Enhanced DTS Cartridge Wellsite Calibration - Detector Calibration

Before: 9-Oct-2017 23:47								
Gamma Ray (Jig - Bkg)	140.5	N/A	140.5	N/A	N/A	12.77	GAPI	
Gamma Ray (Calibrated)	164.0	N/A	164.0	N/A	N/A	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

Na 511 Peak Loc			Na 511 Peak Res %			High Voltage V		
Phase	Value		Phase	Value		Phase	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)	43.50 (Maximum)		12.00 (Minimum)	19.00 (Maximum)		900.0 (Minimum)	1600 (Maximum)

Na 1785 Peak Loc			Na 1785 Peak Res %			Temperature DEGC		
Phase	Value		Phase	Value		Phase	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)	150.3 (Maximum)		7.000 (Minimum)	11.00 (Maximum)		-28.89 (Minimum)	60.00 (Maximum)

Na Count Rate CPS		
Phase	Value	
Master	27.65	
Before	26.76	
After	27.40	
	10.00 (Minimum)	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								
Detector 2 Check								
Na 511 Peak Loc			Na 511 Peak Res %			High Voltage V		
Phase	Value		Phase	Value		Phase	Value	
Master	39.51		Master	15.77		Master	1088	
Before	39.64		Before	15.02		Before	1096	
After	39.54		After	16.14		After	1088	
	37.50 (Minimum)	43.50 (Maximum)		12.00 (Minimum)	19.00 (Maximum)		900.0 (Minimum)	1600 (Maximum)

Na 1785 Peak Loc			Na 1785 Peak Res %			Temperature DEGC		
Phase	Value		Phase	Value		Phase	Value	
Master	141.7		Master	8.872		Master	18.97	
Before	140.7		Before	9.283		Before	23.56	
After	141.7		After	7.911		After	18.96	
	135.0 (Minimum)	150.3 (Maximum)		7.000 (Minimum)	11.00 (Maximum)		-28.89 (Minimum)	60.00 (Maximum)

Na Count Rate CPS		
Phase	Value	
Master	27.04	
Before	26.46	
After	27.03	
	10.00 (Minimum)	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	Value	
Master	1.020	
Before	1.012	
After	1.014	
	0.9500 (Minimum)	1.050 (Maximum)

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							
Na 511 Peak Set Point		Th Peak Loc		Th Peak Res %			
Phase	Value	Phase	Value	Phase	Value	Phase	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)						

Master: 24-Sep-2017 3:22

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		-318.6	-322.7	-280.7	-379.7
	After		-318.3			
1	Before		-329.6	-322.7	-280.7	-379.7
	After		-329.4			
2	Before		-337.8	-322.7	-280.7	-379.7
	After		-336.7			
3	Before		-328.3	-322.7	-280.7	-379.7
	After		-327.7			
4	Before		-319.6	-322.7	-280.7	-379.7
	After		-319.4			
5	Before		-321.5	-322.7	-280.7	-379.7
	After		-321.3			
6	Before		319.2	322.7	379.7	280.7
	After		318.4			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
		(Minimum) (Nominal) (Maximum)				

Before: 1-Nov-2017 4:42

After: 23-Oct-2017 11:40

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum

Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1739	1781	2095	1549
	After		1736			
1	Before		1807	1781	2095	1549
	After		1803			
2	Before		1844	1781	2095	1549
	After		1836			
3	Before		1791	1781	2095	1549
	After		1785			
4	Before		1742	1781	2095	1549
	After		1739			
5	Before		1753	1781	2095	1549
	After		1750			
6	Before		-1758	-1781	-1549	-2095
	After		-1750			
7	Before		1781	1781	2095	1549
	After		1781			
			(Minimum)	(Nominal)	(Maximum)	

Before: 1-Nov-2017 4:42
After: 23-Oct-2017 11:40

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		1728			
1	Before		1809	1781	2095	1549
	After		1804			
2	Before		1849	1781	2095	1549
	After		1840			
3	Before		1799	1781	2095	1549
	After		1793			
4	Before		1745	1781	2095	1549
	After		1741			
5	Before		1757	1781	2095	1549
	After		1753			
6	Before		-1750	-1781	-1549	-2095
	After		-1741			
7	Before		1781	1781	2095	1549
	After		1781			
			(Minimum)	(Nominal)	(Maximum)	

Before: 1-Nov-2017 4:42
After: 23-Oct-2017 11:40

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3-A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68610	70000	82360	60900
	After		68520			

Idx	Phase	HRLT A4-A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
1	Before		71520	70000	82360	60900
	After		71380			
2	Before		73370	70000	82360	60900
	After		73080			
3	Before		71670	70000	82360	60900
	After		71450			
4	Before		69440	70000	82360	60900
	After		69340			
5	Before		69950	70000	82360	60900
	After		69840			
6	Before		-68190	-70000	-60900	-82360
	After		-67900			
7	Before		70000	70000	82360	60900
	After		70000			
			(Minimum)	(Nominal)	(Maximum)	
Before: 1-Nov-2017 4:42						
After: 23-Oct-2017 11:40						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4-A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68690	70000	82360	60900
	After		68610			
1	Before		71730	70000	82360	60900
	After		71590			
2	Before		73550	70000	82360	60900
	After		73260			
3	Before		71810	70000	82360	60900
	After		71610			
4	Before		69560	70000	82360	60900
	After		69450			
5	Before		70040	70000	82360	60900
	After		69940			
6	Before		-68400	-70000	-60900	-82360
	After		-68110			
7	Before		70000	70000	82360	60900
	After		70000			
			(Minimum)	(Nominal)	(Maximum)	
Before: 1-Nov-2017 4:42						
After: 23-Oct-2017 11:40						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5-A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68540	70000	82360	60900
	After		68450			
1	Before		71570	70000	82360	60900
	After		71440			

2	Before		73410	70000	82360	60900
	After		73090			
3	Before		71670	70000	82360	60900
	After		71460			
4	Before		69430	70000	82360	60900
	After		69320			
5	Before		69900	70000	82360	60900
	After		69810			
6	Before		-68240	-70000	-60900	-82360
	After		-67960			
7	Before		70000	70000	82360	60900
	After		70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 1-Nov-2017 4:42

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High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VTP							
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68070	-70000	-60900	-82360	
	After		-67990				
1	Before		-71370	-70000	-60900	-82360	
	After		-71250				
2	Before		-73240	-70000	-60900	-82360	
	After		-72960				
3	Before		-71570	-70000	-60900	-82360	
	After		-71380				
4	Before		-69380	-70000	-60900	-82360	
	After		-69280				
5	Before		-69860	-70000	-60900	-82360	
	After		-69780				
6	Before		68000	70000	82360	60900	
	After		67720				
7	Before		-70000	-70000	-60900	-82360	
	After		-70000				
			(Minimum)	(Nominal)	(Maximum)		

Before: 1-Nov-2017 4:42

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High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68110	-70000	-60900	-82360	
	After		-68030				
1	Before		-71460	-70000	-60900	-82360	
	After		-71340				
2	Before		-73330	-70000	-60900	-82360	
	After		-73030				

3	Before		-71650	-70000	-60900	-82360
	After		-71450			
4	Before		-69430	-70000	-60900	-82360
	After		-69330			
5	Before		-69900	-70000	-60900	-82360
	After		-69820			
6	Before		68090	70000	82360	60900
	After		67810			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
			(Minimum)	(Nominal)	(Maximum)	

Before: 1-Nov-2017 4:42

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		284.1	284.0	334.1	247.0
	After		283.8			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
			(Minimum)	(Nominal)	(Maximum)	

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.5	-322.7	-280.7	-379.7
	After		-319.9			
1	Before		-324.5	-322.7	-280.7	-379.7
	After		-323.8			
2	Before		-331.3	-322.7	-280.7	-379.7
	After		-329.8			
3	Before		-320.3	-322.7	-280.7	-379.7
	After		-319.2			

4	Before		-308.8	-322.7	-280.7	-379.7
	After		-308.3			
5	Before		-325.6	-322.7	-280.7	-379.7
	After		-325.0			
6	Before		326.9	322.7	379.7	280.7
	After		325.6			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
		(Minimum) (Nominal) (Maximum)				
Before: 1-Nov-2017 4:42						
After: 23-Oct-2017 11:40						

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

Gamma Source Radioactive	GSR - ZA	2945
Hostile Litho Density Sonde	HLDS - D	45
Hostile Litho Density High Voltage	HLDV - D	45

Auxiliary Equipment:

Hostile Litho Density High Voltage Housi	HEH - H	47
Hostile Litho Density Pad	HLDP - C	45

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
Master		8.040	Master		8.146	Master		64.16
Before		8.022	Before		8.143	Before		64.43
After		7.896	After		8.163	After		63.76
		7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.000 (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)

(Minimum) (Nominal) (Maximum)			(Minimum) (Nominal) (Maximum)			(Minimum) (Nominal) (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
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)							

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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)							

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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	EXCEEDS LIMIT		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

Enhanced DTS Cartridge / Equipment Identification		
Primary Equipment:		
EDTC Gamma Ray Detector	EDTG - A/B	8305
Enhanced DTS Cartridge	EDTC - B	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		9.690
	9.610 (Minimum)	9.810 (Nominal)
		10.01 (Maximum)

Before: 1-Nov-2017 4:47

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
	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: 9-Oct-2017 23:47

Company: International Ocean Discovery Program

Well: Expedition 369, Site U1513D

Field: Australia Cretaceous Climate & Tectonics

Rig: JOIDES Resolution

Ocean: Indian

Schlumberger

High Resolution Laterolog Array (HRLA)
 Natural Gamma Ray, Density (HNGS, HLDS)
 Dipole Shear Sonic (DSI), MSS