

Rig: **JOIDES Resolution** Country: **USA**

LOCATION	Latitude: N 75° 42' 21.85"		Elev.:	K.B.	–592.00 m
	Longitude: W 65° 43' 46.32"			G.L.	–603.00 m
				D.F.	–592.00 m
	Permanent Datum:	<u>Mean Sea Level</u>	Elev.:	<u>0.00 m</u>	
	Log Measured From:	<u>Sea Floor</u>	11.00 m	above Perm. Datum	
	Drilling Measured From:	<u>Drill Floor</u>			

Rig:	JOIDES Resolution
Field:	Baffin Bay
Location:	Latitude: N 75° 42' 21.85"
Well:	Expedition 344S, U0070A (USC7)
Company:	Lamont Doherty Earth Observatory

Logging Date			20-Sep-2012					
Run Number			1					
Depth Driller			303.6 m					
Schlumberger Depth			258.3 m					
Bottom Log Interval			236 m					
Top Log Interval			31 m					
Casing Driller Size @ Depth			7.000 in @ 33 m			@		
Casing Schlumberger			31 m					
Bit Size			9.875 in					
Type Fluid In Hole			Seawater					
MUD	Density	Viscosity	1.05 g/cm3					
	Fluid Loss	PH						
	Source Of Sample		N/A					
	RM @ Measured Temperature		@			@		
	RMF @ Measured Temperature		@			@		
RMC @ Measured Temperature		@			@			
Source RMF	RMC	N/A	N/A					
RM @ MRT	RMF @ MRT	@ 9	@ 9	@	@			
Maximum Recorded Temperatures			9 degC					
Circulation Stopped		Time	20-Sep-2012		14:00			
Logger On Bottom		Time	20-Sep-2012		17:20			
Unit Number	Location	625003 Houston						
Recorded By			C. Furman					
Witnessed By			G. Guerin, H. Evans					

[illegible]

Run 4

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OS1:	MSS
OS2:	HRLA
OS3:	HLDS
OS4:	FMS
OS5:	HNGS

Site U0070A, client designation USC 070, was cored for exploration using the RCB system.

\*\*\*This site is subcontracted to Shell from LDEO, not a standard USIO/IODP site!\*\*\*

Tools were not able to reach TD due to hole obstruction; maximum depth was 258.5mbsf.

Centralized tools run using modified MCD chassis as inline centralizer, as per tool sketch.

Eccentered / Centered tools decoupled using knuckle joints with a through-wired spacer.

HLDS Caliper used for applicable hole size corrections on up log; bit sized used for downlog.

Tools conveyed to hole on wireline through drill pipe, as is standard for this riser-less operation.

Logs recorded from Drill Floor, but played back with zero reference at sea bed for compatibility with core data.

Original sea bed, as measured from drill floor, was 603.0m uncorrected measured depth below drill floor.

Heave compensation was not required due to exceptionally calm sea state and favorable weather during logging.

DSI Run with typical modes as follows:

- P&S Monopole in Standard Frequency
- Upper Dipole in Low Frequency
- Lower Dipole in Standard Frequency
- Stoneley in Standard Frequency

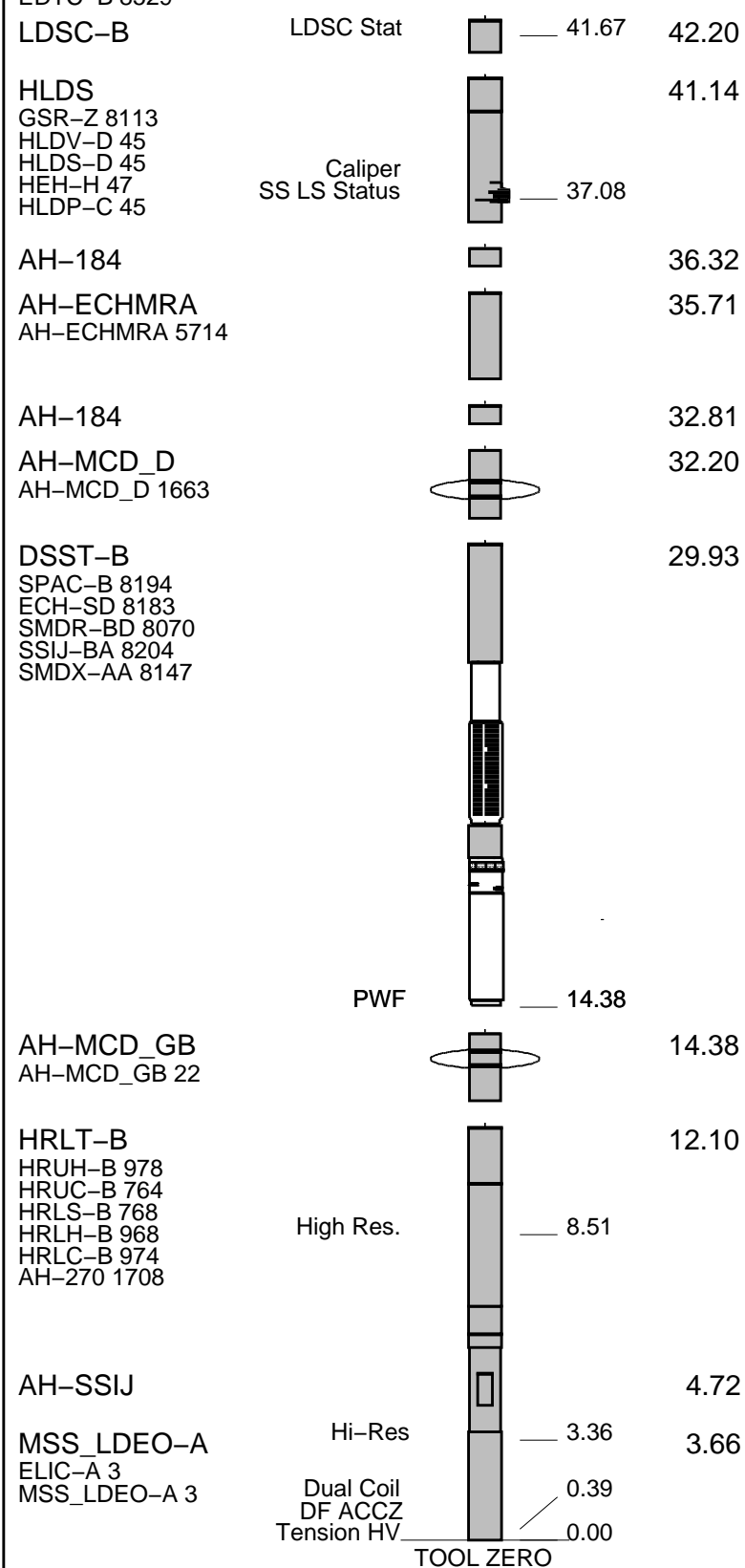
DSI Centralized using two MCD inline centralizers.

STOP

RUN 2

## WITM (EDTS)-A

Sample	Method	Value	Rank
LEH-MT	MDSB_EDTC	45.58	1
AH-369	Mud Tempe	44.19	2
	CTEM	43.12	3
EDTC-B	Gamma Ray	42.55	4
	EFTB DIAG	44.19	5
EDTH-B 8528	TelStatus	42.20	6
EDTC-B 8529	EDTCB Ele		



Client: LDEO / Shell

Well: USC 70

Field: Baffin Bay

State:

Country: Greenland

Rig Name: JOIDES Resolution

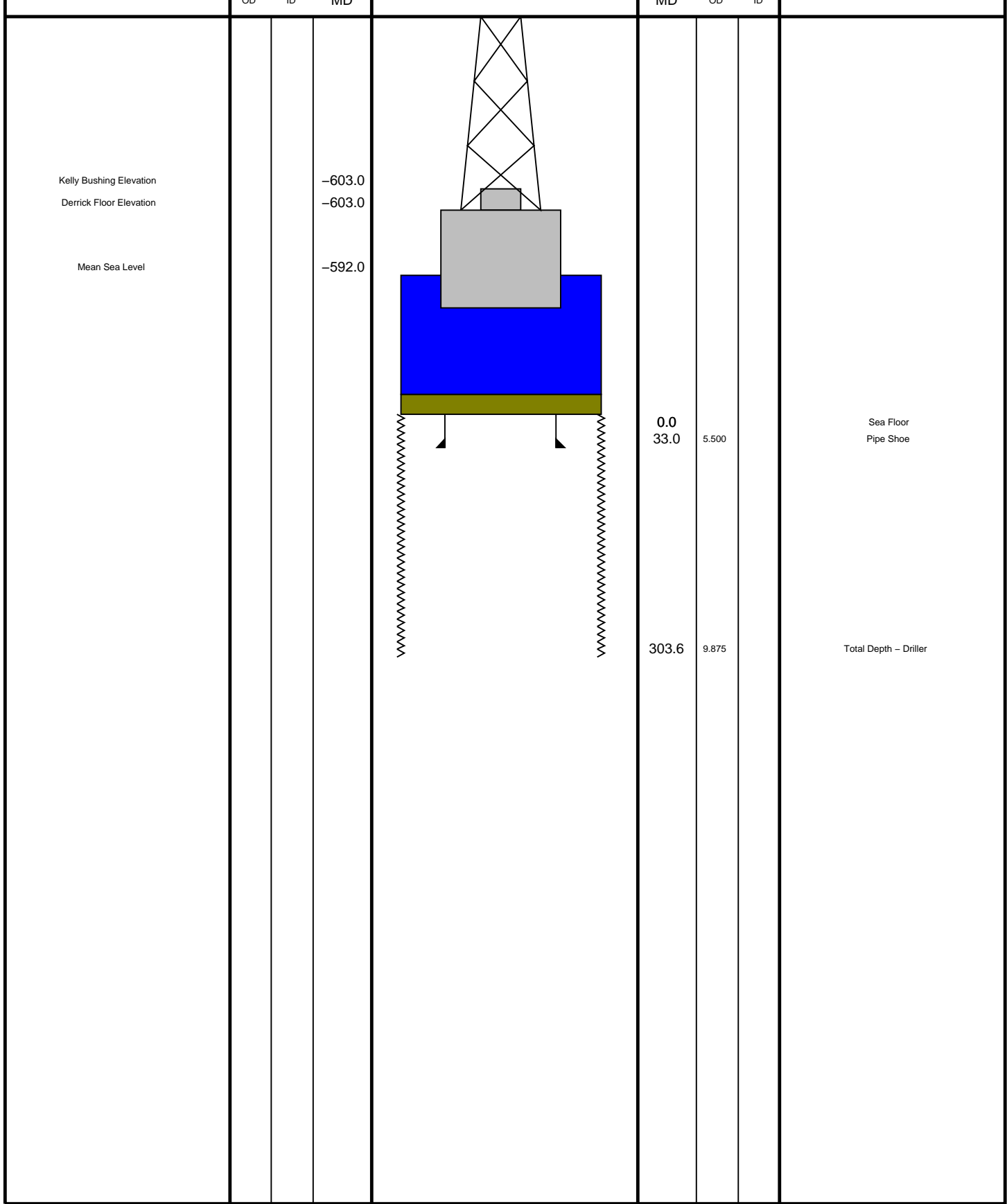
Reference Datum: Sea Floor

Elevation: -603.0 m

Drawing Date: 9/23/2012

API #:

Production String	(in)	(m)	Well Schematic	(m)	(in)	Casing String





Up Log

MAXIS Field Log

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_010LUP	FN:11	PRODUCER	20-Sep-2012 19:23	861.8 M	591.6 M
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Output DLIS Files

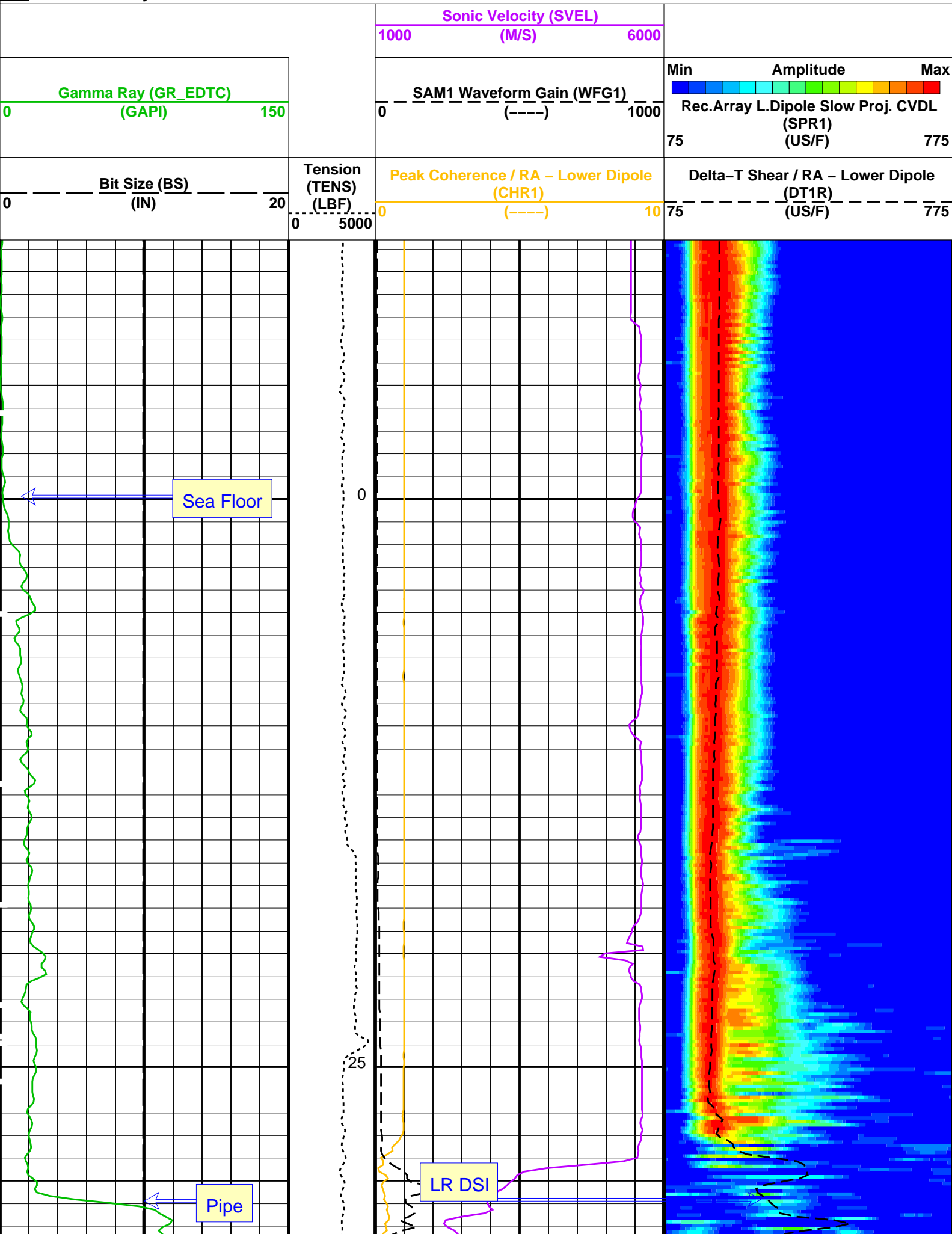
DEFAULT	MSS_LDEO_HRLA_DSI_028PUP	FN:33	PRODUCER	23-Sep-2012 02:33	259.1 M	-11.4 M
CLIENT	MSS_LDEO_HRLA_DSI_028PUC	FN:34	CUSTOMER	23-Sep-2012 02:33	259.1 M	-11.4 M

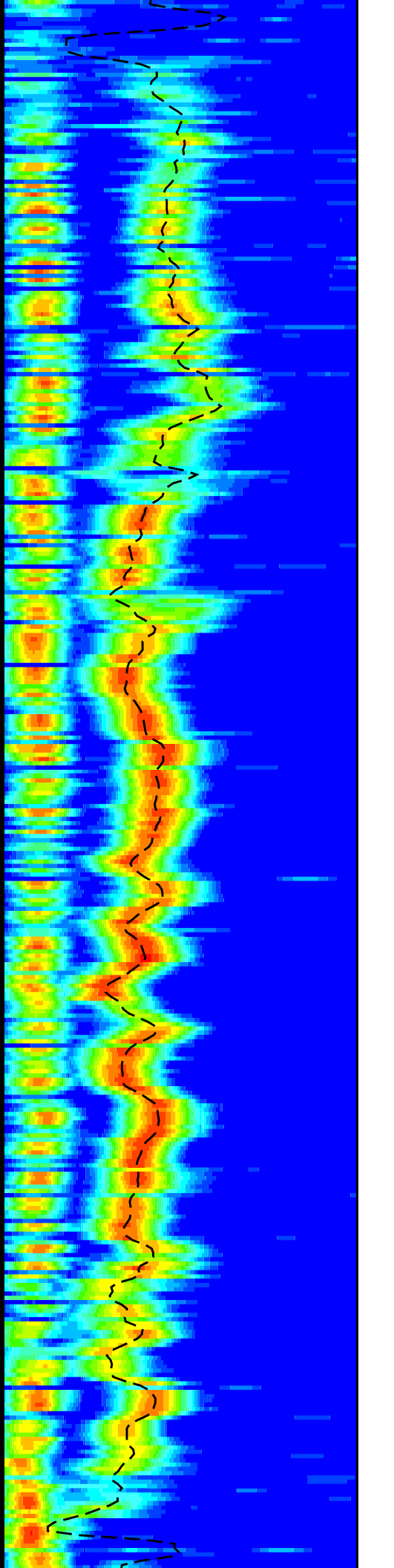
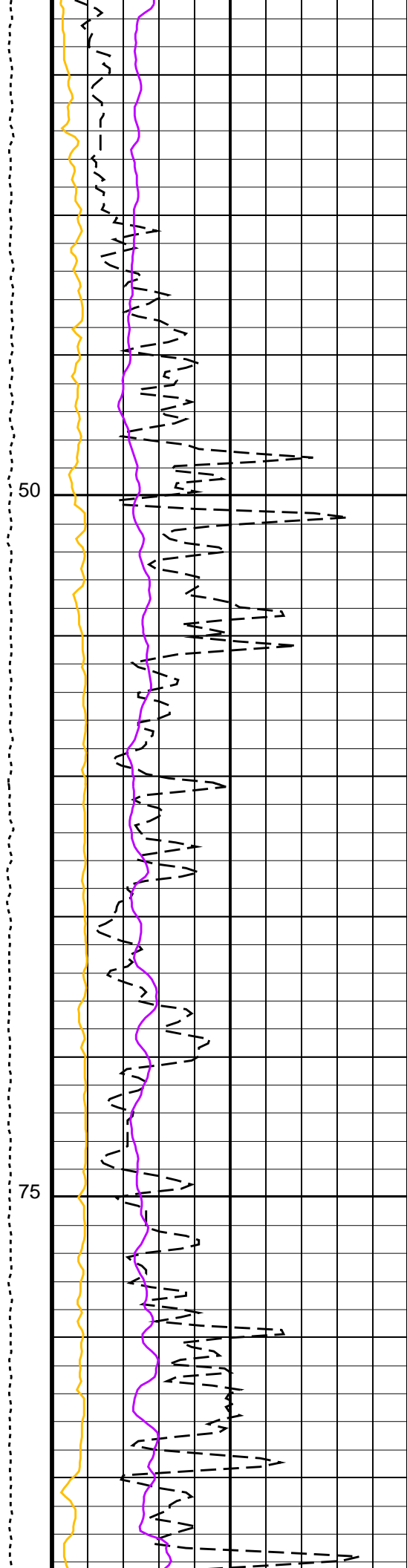
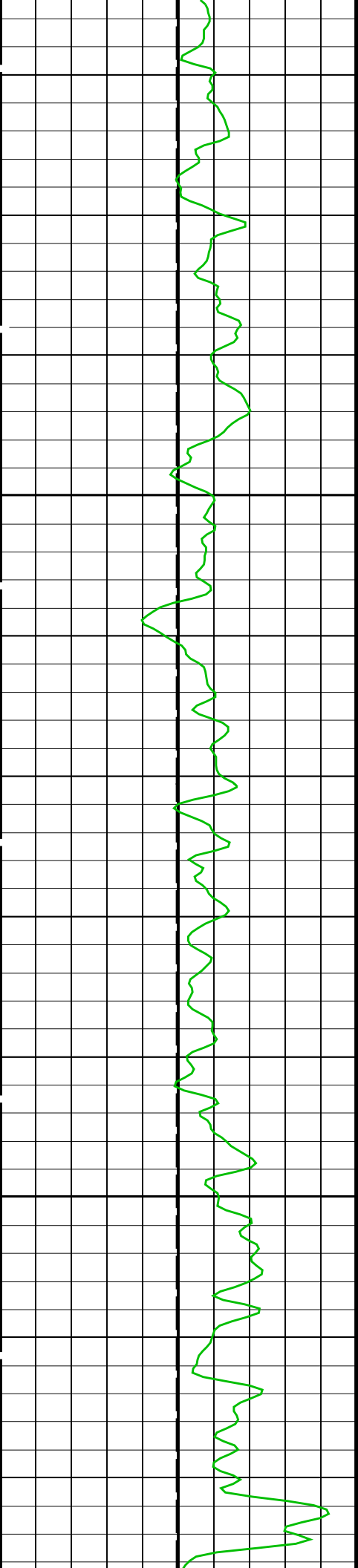
OP System Version: 19C0-187

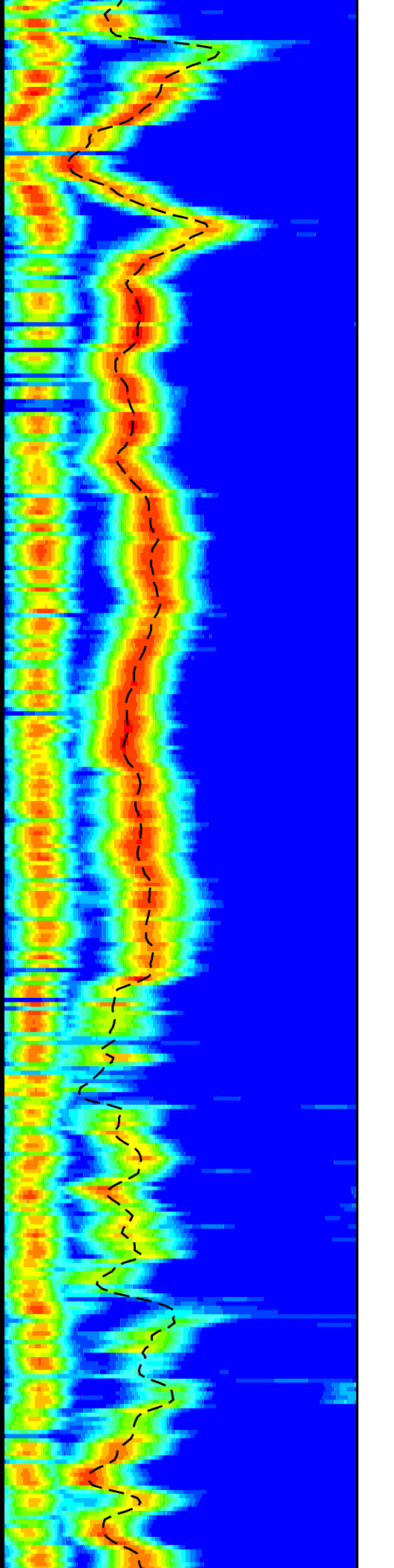
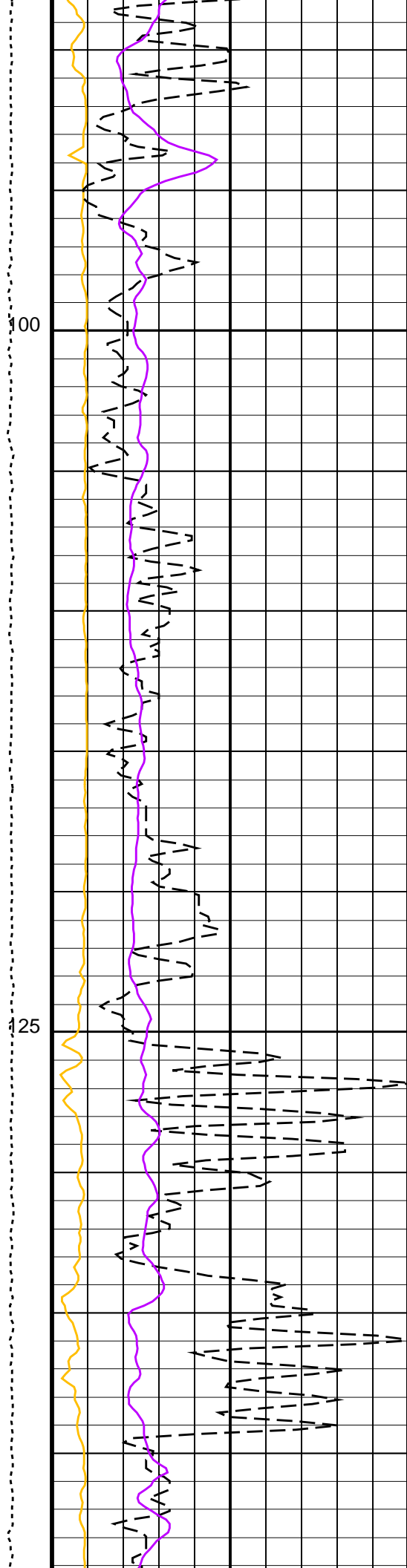
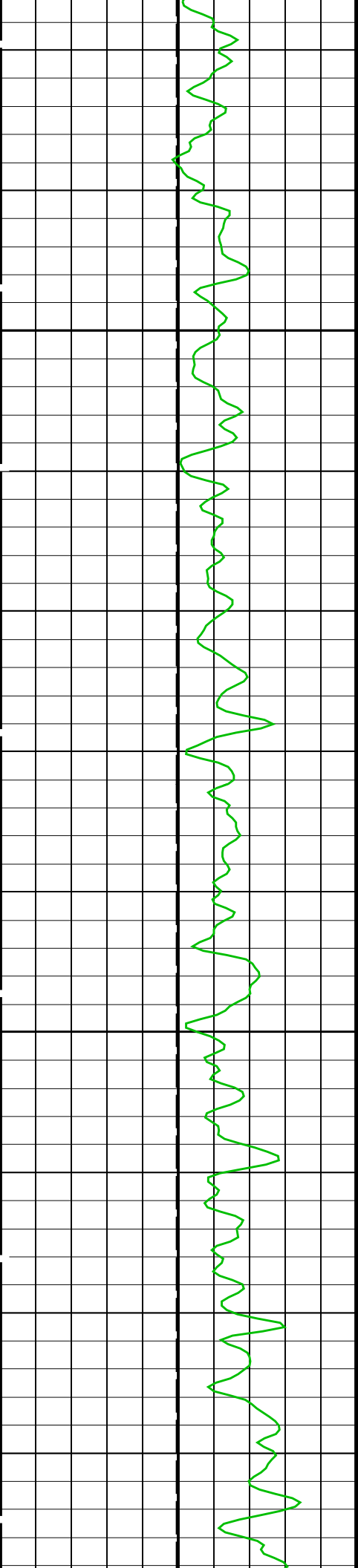
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

PIP SUMMARY

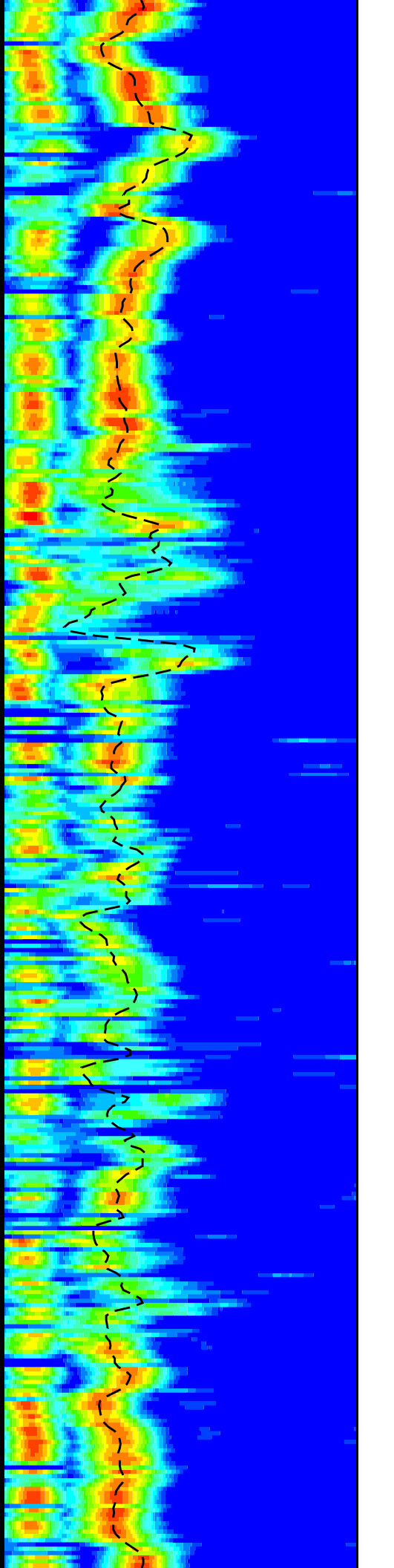
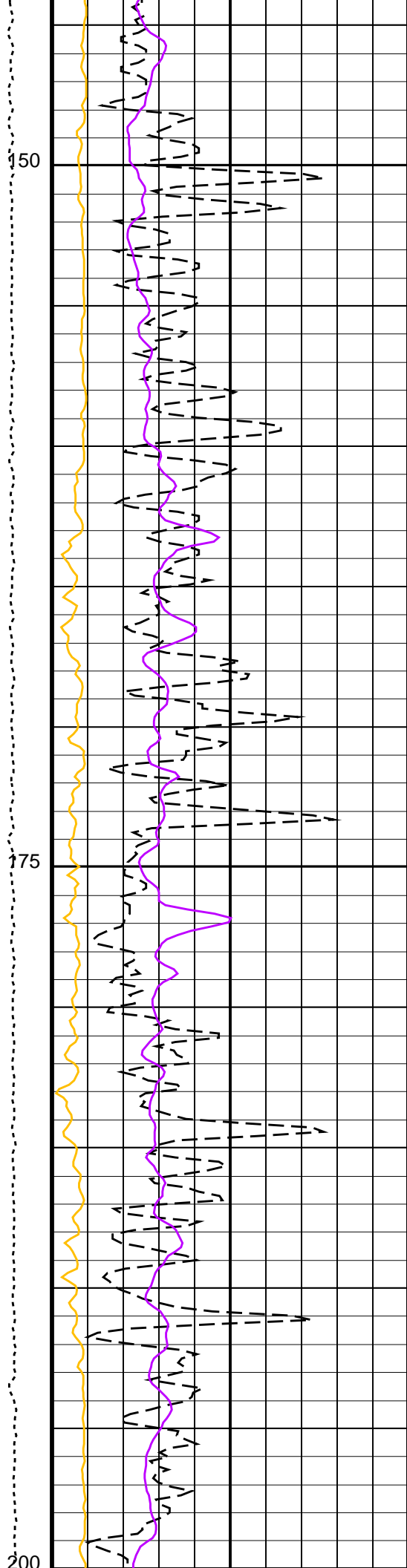
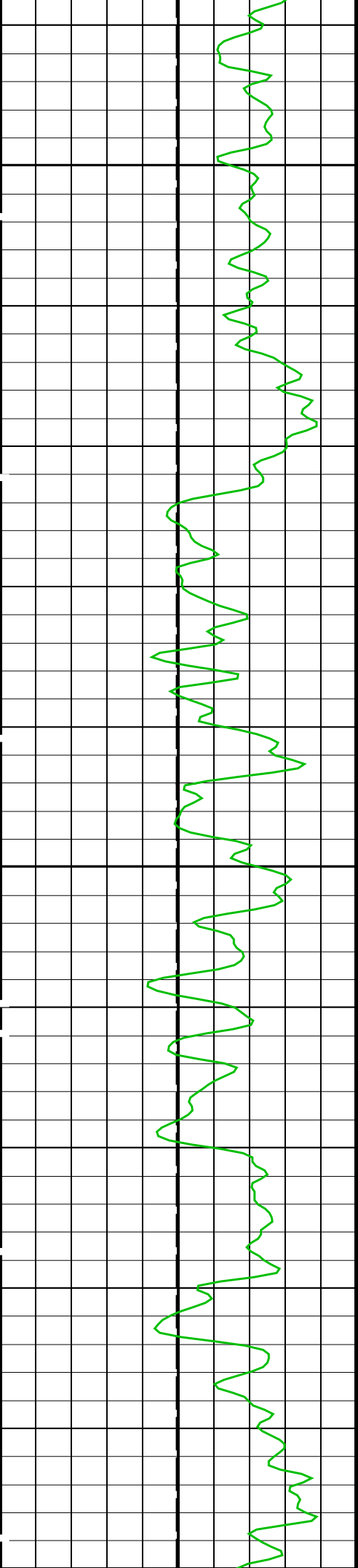
Time Mark Every 60 S

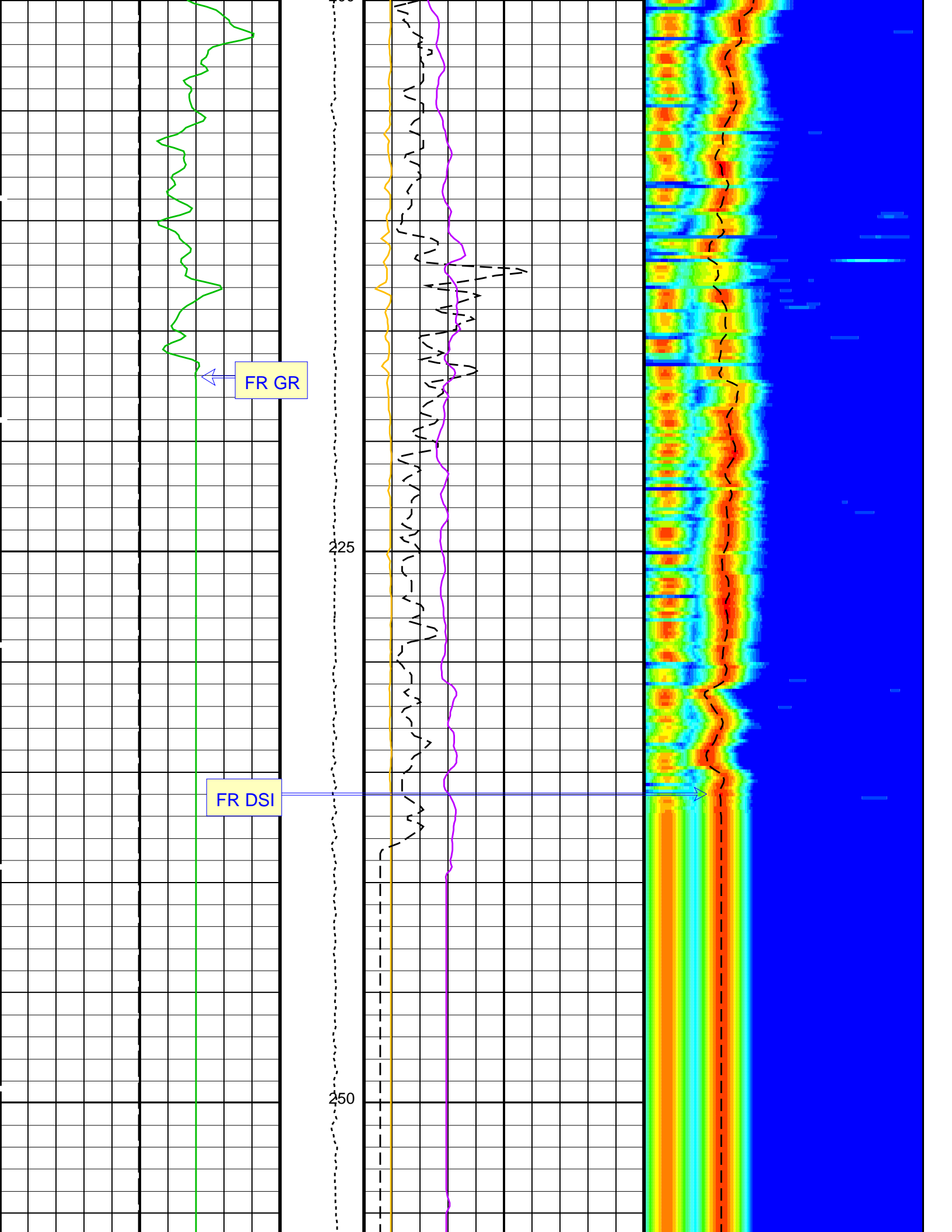


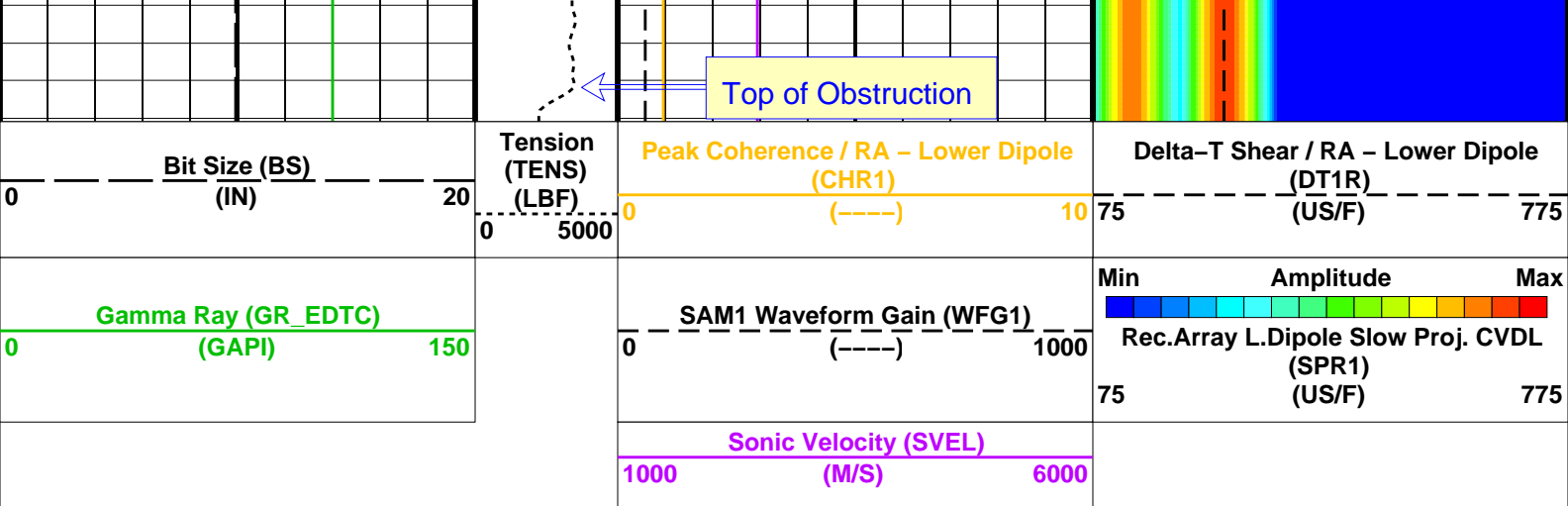












### PIP SUMMARY

Time Mark Every 60 S

### Parameters

DLIS Name	Description	Value
DSST-B: Dipole Shear Imager - B		
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	75 US/F
DSHU	Label Slowness Upper Limit - Dipole Shear	775 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
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	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	B1-3K
SLL1	STC Slowness Lower Limit - Lower Dipole	75 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	775 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	15912.5 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
System and Miscellaneous		
BS	Bit Size	9.875 IN
DO	Depth Offset for Playback	-603.0 M
PP	Playback Processing	RECOMPUTE

Format: DSST\_LOWER\_DIPOLE\_VDL\_COLOR Vertical Scale: 1:200 Graphics File Created: 23-Sep-2012 02:33

### OP System Version: 19C0-187

MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187

DEFAULT	MSS_LDEO_HRLA_DSI_010LUP	FN:11	PRODUCER	20-Sep-2012 19:23	861.8 M	591.6 M
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DEFAULT	MSS_LDEO_HRLA_DSI_028PUP	FN:33	PRODUCER	23-Sep-2012 02:33
CLIENT	MSS_LDEO_HRLA_DSI_028PUC	FN:34	CUSTOMER	23-Sep-2012 02:33

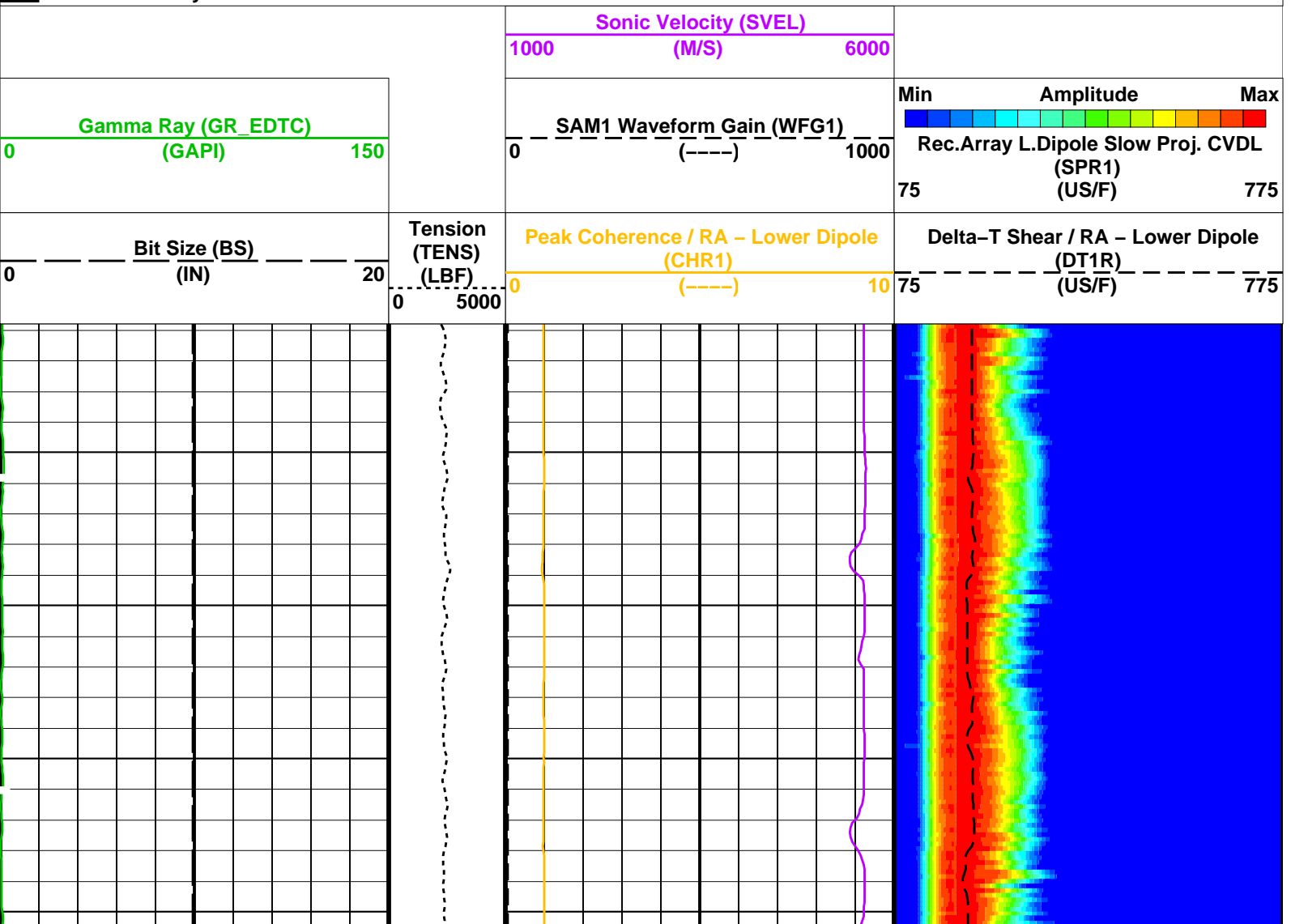
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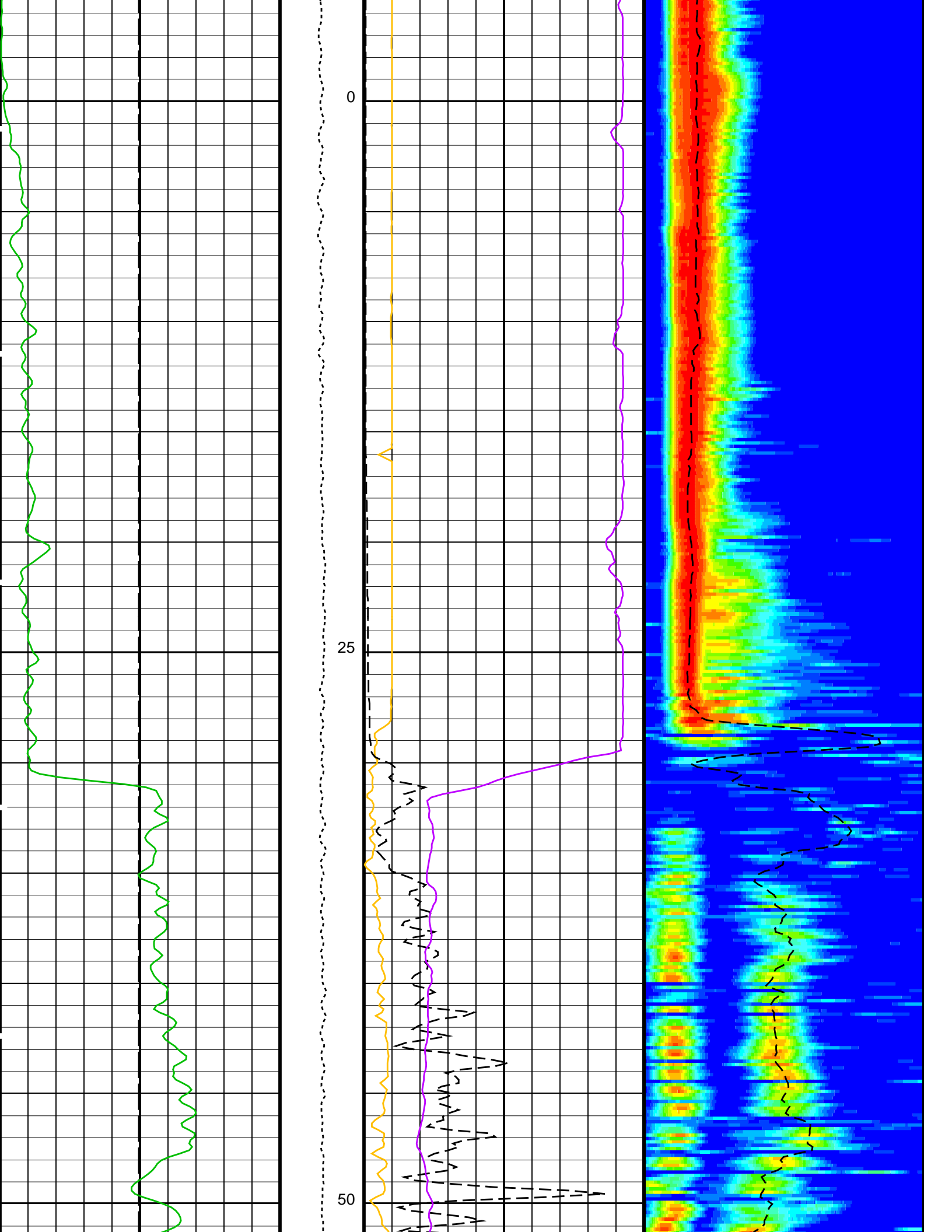
DEFAULT	MSS_LDEO_HRLA_DSI_029PUP	FN:35	PRODUCER	23-Sep-2012 02:41	259.2 M	-24.2 M
CLIENT	MSS_LDEO_HRLA_DSI_029PUC	FN:36	CUSTOMER	23-Sep-2012 02:41	259.2 M	-24.2 M

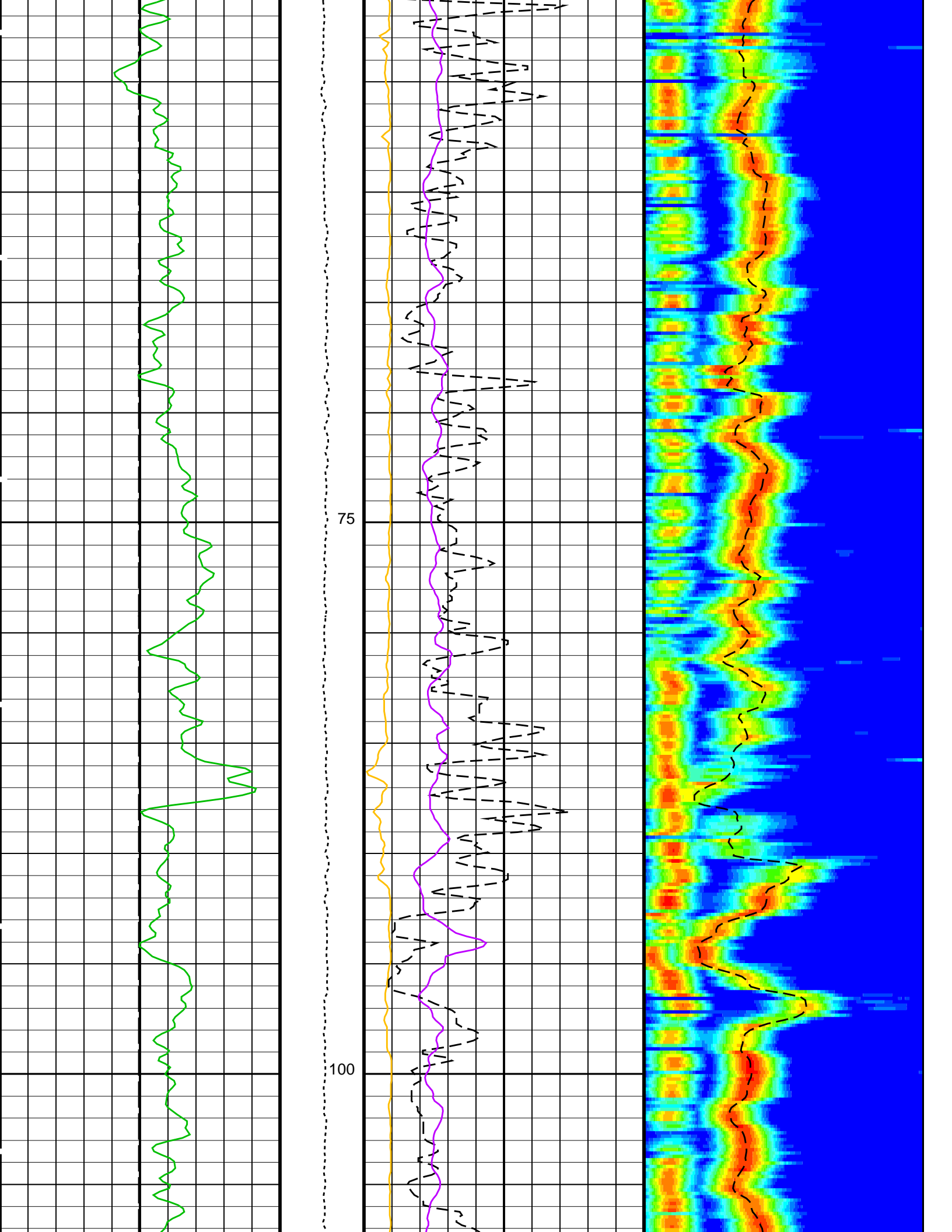
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
DSST-B	19C0-187	HLDS	19C0-187
LDSC-B	19C0-187	EDTC-B	SKK-5169-EDTCB

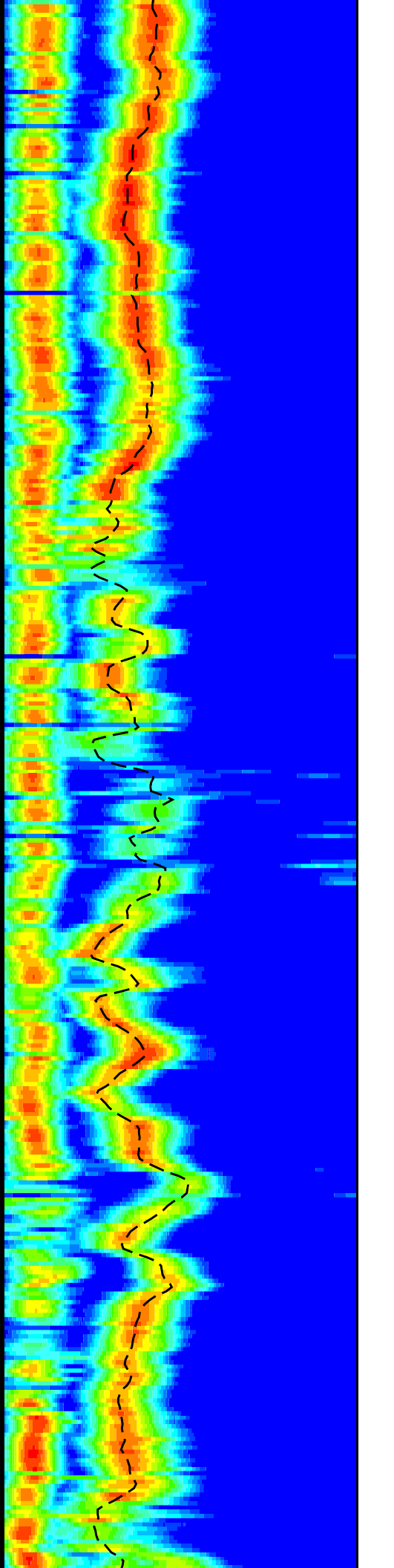
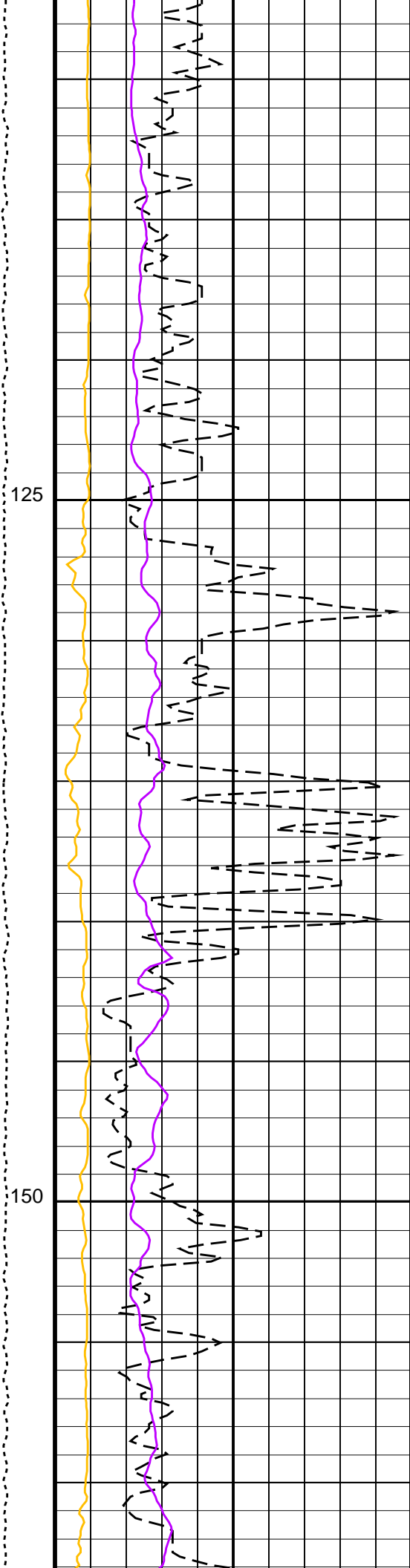
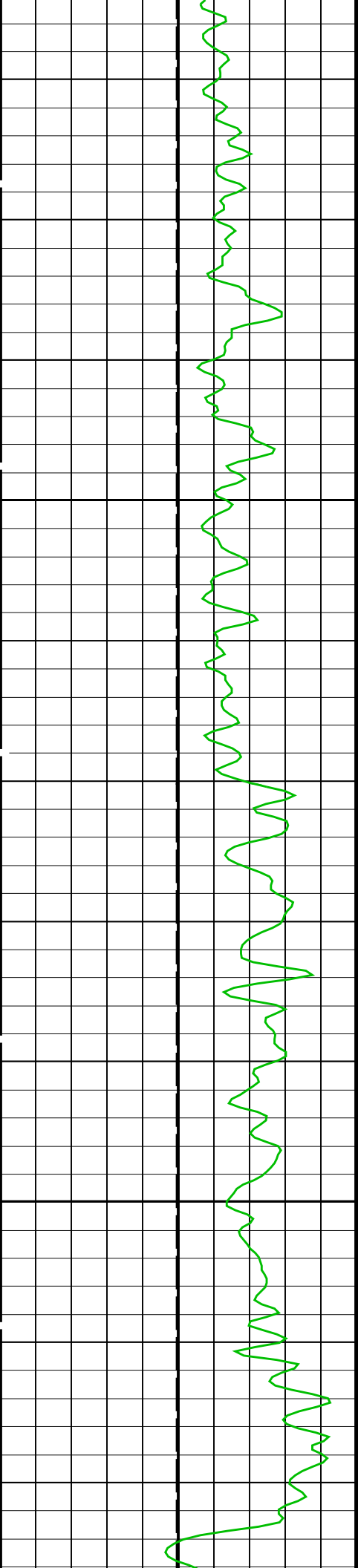
## PIP SUMMARY

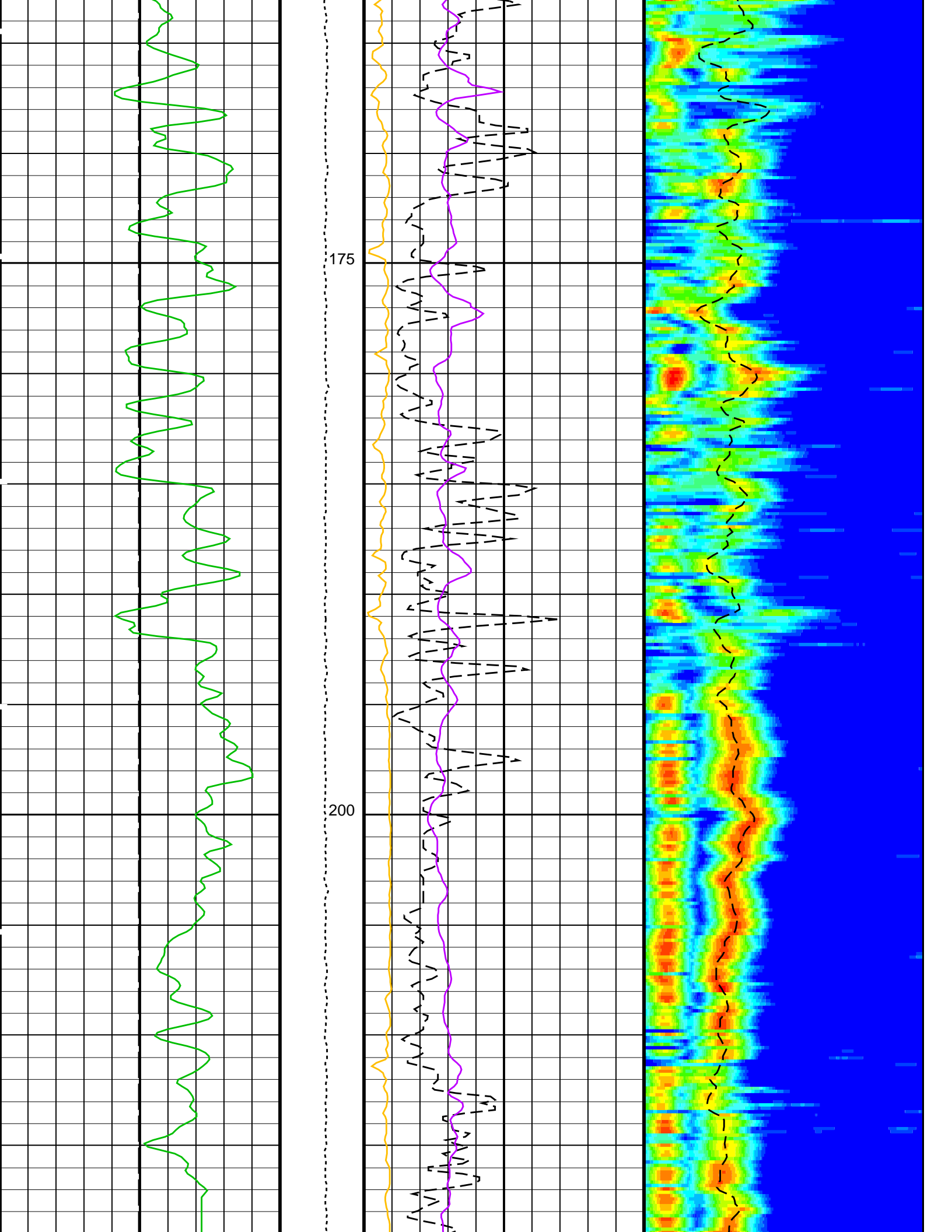
**Time Mark Every 60 S**



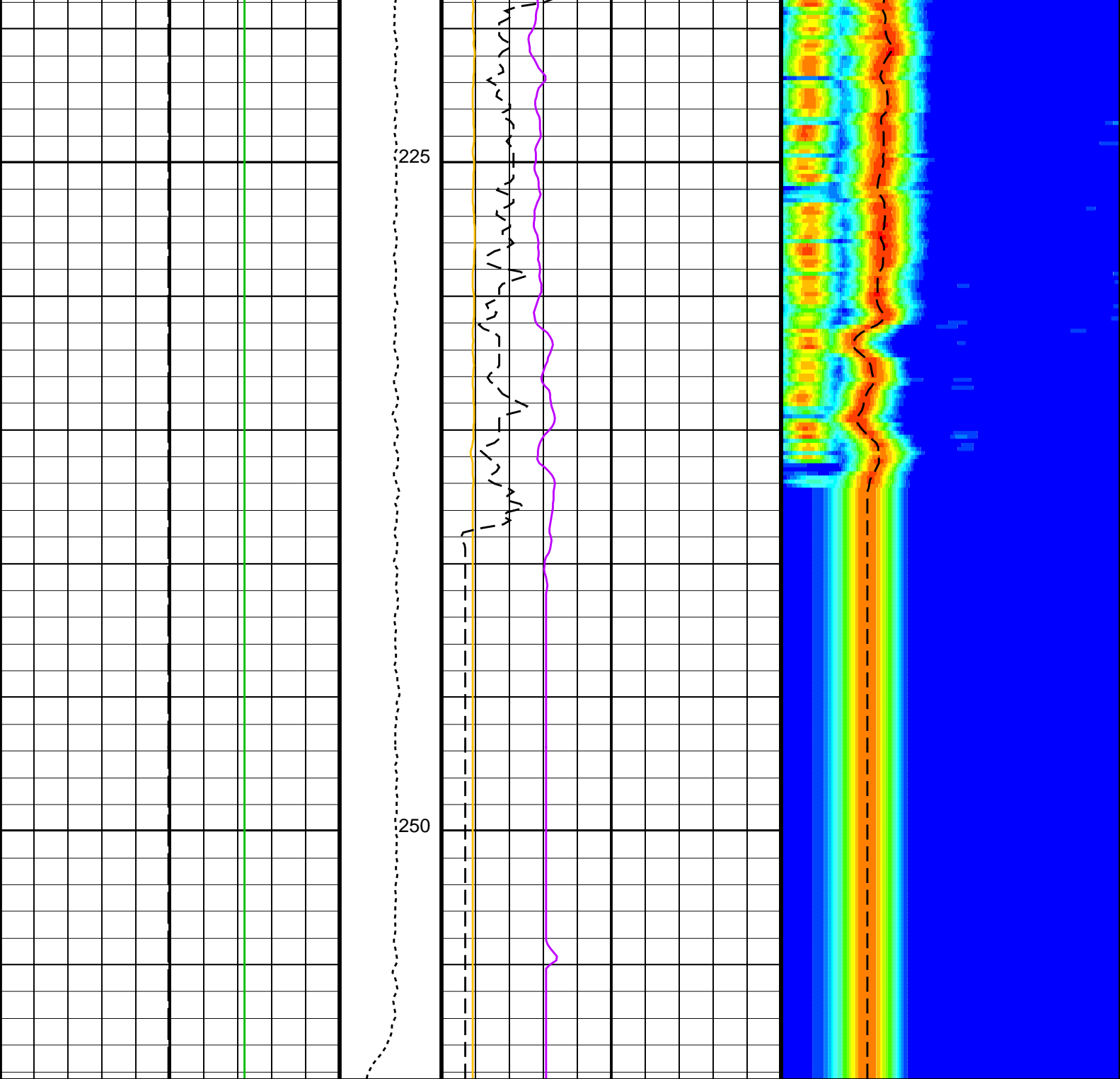












<div> <div>Bit Size (BS)</div> <div>(IN)</div> <div>020</div> </div>	<div> <div>Tension (TENS)</div> <div>(LBF)</div> <div>05000</div> </div>	<div> <div>Peak Coherence / RA - Lower Dipole</div> <div>(CHR1)</div> <div>010</div> </div>	<div> <div>Delta-T Shear / RA - Lower Dipole</div> <div>(DT1R)</div> <div>(US/F)</div> <div>75775</div> </div>
<div> <div>Gamma Ray (GR_EDTC)</div> <div>(GAPI)</div> <div>0150</div> </div>	<div> <div>SAM1 Waveform Gain (WFG1)</div> <div>(----)</div> <div>01000</div> </div>	<div> <div>Sonic Velocity (SVEL)</div> <div>(M/S)</div> <div>10006000</div> </div>	<div> <div>Min</div> <div>Amplitude</div> <div>Max</div> <div>Rec.Array L.Dipole Slow Proj. CVDL</div> <div>(SPR1)</div> <div>(US/F)</div> <div>75775</div> </div>

#### PIP SUMMARY

Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value

**DSST-B: Dipole Shear Imager – B**

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	75	US/F
DSHU	Label Slowness Upper Limit – Dipole Shear	775	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	
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	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	B1–3K	
SLL1	STC Slowness Lower Limit – Lower Dipole	75	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	775	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	15912.5	US
TWD1	STC Time Width – Lower Dipole	2000	US
TW1	STC Integration Time Window – Lower Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
WFM1	Waveform Mode 1	W1	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	–603.4	M
PP	Playback Processing	RECOMPUTE	

Format: DSST\_LOWER\_DIPOLE\_VDL\_COLOR      Vertical Scale: 1:200      Graphics File Created: 23-Sep-2012 02:41

## OP System Version: 19C0–187

MSS_LDEO–A	19C0–187	HRLT–B	19C0–187
DSST–B	19C0–187	HLDS	19C0–187
LDSC–B	19C0–187	EDTC–B	SKK–5169–EDTCB

## Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_026LUP	PRODUCER	23-Sep-2012 02:30	862.6 M	506.7 M
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## Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_029PUP	FN:35	PRODUCER	23-Sep-2012 02:41
CLIENT	MSS_LDEO_HRLA_DSI_029PUC	FN:36	CUSTOMER	23-Sep-2012 02:41

**Schlumberger**

**Calibrations**

# Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
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## High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01

Before: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT M0-M1 Voltage Plus – 0	0	N/A	-320.1	-319.3	0.7999	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-341.6	-338.6	2.980	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-339.5	-337.3	2.248	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-342.4	-340.5	1.922	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-328.1	-327.0	1.090	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-323.6	-322.7	0.8422	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	332.2	329.8	-2.436	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT M1-M2 Voltage Plus – 0	0	N/A	1758	1755	-2.932	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1876	1860	-16.31	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1860	1848	-11.92	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1876	1866	-9.832	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1799	1794	-5.057	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1776	1772	-3.489	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1832	-1820	12.60	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT M2-M3 Voltage Plus – 0	0	N/A	1745	1741	-3.911	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1875	1857	-17.45	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1860	1847	-13.26	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1879	1868	-10.97	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1796	1789	-6.424	53.42	UV
HRLT M2-M3 Voltage Plus – 5	0	N/A	1773	1769	-4.405	53.42	UV
HRLT M2-M3 Voltage Plus – 6	0	N/A	-1819	-1805	13.85	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT A3-A4 Voltage Plus – 0	0	N/A	68580	68470	-107.9	2100	UV
HRLT A3-A4 Voltage Plus – 1	0	N/A	73460	72830	-631.8	2100	UV
HRLT A3-A4 Voltage Plus – 2	0	N/A	73170	72710	-458.4	2100	UV
HRLT A3-A4 Voltage Plus – 3	0	N/A	74220	73830	-386.3	2100	UV
HRLT A3-A4 Voltage Plus – 4	0	N/A	70890	70690	-197.9	2100	UV
HRLT A3-A4 Voltage Plus – 5	0	N/A	70020	69890	-123.6	2100	UV
HRLT A3-A4 Voltage Plus – 6	0	N/A	-70280	-69810	468.9	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT A4-A5 Voltage Plus – 0	0	N/A	68870	68760	-110.4	2100	UV
HRLT A4-A5 Voltage Plus – 1	0	N/A	73860	73240	-616.3	2100	UV
HRLT A4-A5 Voltage Plus – 2	0	N/A	73540	73080	-459.3	2100	UV
HRLT A4-A5 Voltage Plus – 3	0	N/A	74570	74180	-394.7	2100	UV
HRLT A4-A5 Voltage Plus – 4	0	N/A	71190	70990	-199.9	2100	UV
HRLT A4-A5 Voltage Plus – 5	0	N/A	70310	70180	-130.1	2100	UV
HRLT A4-A5 Voltage Plus – 6	0	N/A	-70670	-70200	471.5	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT A5-A6 Voltage Plus – 0	0	N/A	68760	68650	-113.5	2100	UV
HRLT A5-A6 Voltage Plus – 1	0	N/A	73580	72960	-610.8	2100	UV
HRLT A5-A6 Voltage Plus – 2	0	N/A	73290	72840	-458.4	2100	UV
HRLT A5-A6 Voltage Plus – 3	0	N/A	74370	74000	-375.0	2100	UV
HRLT A5-A6 Voltage Plus – 4	0	N/A	71050	70850	-198.5	2100	UV
HRLT A5-A6 Voltage Plus – 5	0	N/A	70190	70050	-145.6	2100	UV
HRLT A5-A6 Voltage Plus – 6	0	N/A	-70390	-69900	494.1	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT Torpedo-M0 Voltage – 0	0	N/A	-68440	-68340	106.0	2100	UV
HRLT Torpedo-M0 Voltage – 1	0	N/A	-73930	-73290	640.7	2100	UV
HRLT Torpedo-M0 Voltage – 2	0	N/A	-73610	-73150	462.2	2100	UV

HRLT Torpedo-M0 Voltage - 3	0	N/A	-74670	-74280	396.4	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-71250	-71050	203.0	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-70360	-70210	147.7	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	70680	70180	-490.6	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68430	-68320	110.2	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-73910	-73280	637.2	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-73590	-73130	456.7	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-74650	-74260	384.8	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-71250	-71040	204.3	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-70340	-70210	134.8	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	70650	70160	-490.6	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT Source Current Plus - 0	0	N/A	285.3	284.9	-0.3990	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: 20-Sep-2012 18:03 After: 20-Sep-2012 20:45

HRLT Vertical Voltage PI - 0	0	N/A	-322.3	-321.4	0.8523	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-335.6	-332.5	3.175	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-332.8	-330.4	2.353	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-333.9	-331.9	2.034	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-317.3	-316.2	1.169	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-328.1	-327.2	0.9027	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	339.4	336.7	-2.633	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: 3-Aug-2012 12:38 Before: 20-Sep-2012 18:06 After: 20-Sep-2012 21:14

SS Cs Resolution Bkg	9.000	7.952	8.050	8.000	-0.05026	1.800	%
LS Cs Resolution Bkg	9.000	8.109	8.189	8.101	-0.08724	1.800	%
LSW1 Background	100.0	71.68	71.68	71.86	0.1790	3.000	CPS
LSW2 Background	100.0	68.54	66.66	66.34	-0.3285	3.000	CPS
LSW3 Background	200.0	146.7	145.5	147.5	1.967	6.000	CPS
LSW4 Background	250.0	177.8	179.7	178.5	-1.147	7.500	CPS
LSW5 Background	600.0	409.7	409.8	411.6	1.815	18.00	CPS
SSW1 Background	100.0	81.22	80.50	80.07	-0.4239	3.000	CPS
SSW2 Background	200.0	145.7	143.5	142.3	-1.204	6.000	CPS
SSW3 Background	500.0	389.5	388.2	387.2	-0.9963	15.00	CPS
SSW4 Background	270.0	200.9	200.6	199.1	-1.489	8.100	CPS
SSW5 Background	200.0	146.3	146.0	145.3	-0.7189	6.000	CPS

#### Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement

Master: 3-Aug-2012 13:08

LSW1 Aluminum	600.0	531.2	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	759.6	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	924.3	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	467.3	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	427.7	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2539	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6810	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9419	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3830	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	469.0	N/A	N/A	N/A	N/A	CPS

#### Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement

Master: 3-Aug-2012 13:03

LSW1 Iron	400.0	367.3	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	618.0	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	815.0	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	424.5	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	392.6	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1845	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5678	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8586	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3500	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	417.1	N/A	N/A	N/A	N/A	CPS

#### Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 3-Aug-2012 13:28

Before: 3-Aug-2012 13:28		12.00	N/A	15.62	N/A	N/A	IN
HLDS Caliper Small Ring							
HLDS Caliper Large Ring		15.19	N/A	19.44	N/A	N/A	IN
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 20-Sep-2012 18:08							
EDTC Z-Axis Acceleration		9.810	N/A	9.852	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 20-Sep-2012 18:08 After: 20-Sep-2012 21:12							
Gamma Ray (Jig – Bkg)		159.7	N/A	159.7	162.2	2.544	GAPI
Gamma Ray (Calibrated)		165.0	N/A	165.0	167.6	2.629	GAPI

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

Primary Equipment:

HRLT Sonde

HRLS – B

768

Auxiliary Equipment:

HRLT lower Housing

HRLH – B

968

HRLT Lower Cartridge

HRLC – B

974

HRLT upper Housing

HRUH – B

978











HRLT Upper Cartridge

















HRUC – B









764









High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M01							
Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-320.1	-322.7	-280.7	-379.7	
	After		-319.3				
1	Before		-341.6	-322.7	-280.7	-379.7	
	After		-338.6				
2	Before		-339.5	-322.7	-280.7	-379.7	
	After		-337.3				
3	Before		-342.4	-322.7	-280.7	-379.7	
	After		-340.5				
4	Before		-328.1	-322.7	-280.7	-379.7	
	After		-327.0				
5	Before		-323.6	-322.7	-280.7	-379.7	
	After		-322.7				
6	Before		332.2	322.7	379.7	280.7	
	After		329.8				
7	Before		-322.7	-322.7	-280.7	-379.7	
	After		-322.7				
(Minimum) (Nominal) (Maximum)							
Before: 20-Sep-2012 18:03							
After: 20-Sep-2012 20:45							

















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HRLT M12							
Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		1758	1781	2095	1549	
	After		1755				
1	Before		1876	1781	2095	1549	
	After		1860				
2	Before		1860	1781	2095	1549	
	After		1848				











3	Before		1876	1781	2095	1549
	After		1866			
4	Before		1799	1781	2095	1549
	After		1794			
5	Before		1776	1781	2095	1549
	After		1772			
6	Before		-1832	-1781	-1549	-2095
	After		-1820			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						







High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1745	1781	2095	1549
	After		1741			
1	Before		1875	1781	2095	1549
	After		1857			
2	Before		1860	1781	2095	1549
	After		1847			
3	Before		1879	1781	2095	1549
	After		1868			
4	Before		1796	1781	2095	1549
	After		1789			
5	Before		1773	1781	2095	1549
	After		1769			
6	Before		-1819	-1781	-1549	-2095
	After		-1805			
7	Before		1781	1781	2095	1549
	After		1781			
(Minimum) (Nominal) (Maximum)						
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68580	70000	82360	60900
	After		68470			
1	Before		73460	70000	82360	60900
	After		72830			
2	Before		73170	70000	82360	60900
	After		72710			
3	Before		74220	70000	82360	60900
	After		73830			

4	Before		70890	70000	82360	60900
	After		70690			
5	Before		70020	70000	82360	60900
	After		69890			
6	Before		-70280	-70000	-60900	-82360
	After		-69810			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						

















High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68870	70000	82360	60900
	After		68760			
1	Before		73860	70000	82360	60900
	After		73240			
2	Before		73540	70000	82360	60900
	After		73080			
3	Before		74570	70000	82360	60900
	After		74180			
4	Before		71190	70000	82360	60900
	After		70990			
5	Before		70310	70000	82360	60900
	After		70180			
6	Before		-70670	-70000	-60900	-82360
	After		-70200			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68760	70000	82360	60900
	After		68650			
1	Before		73580	70000	82360	60900
	After		72960			
2	Before		73290	70000	82360	60900
	After		72840			
3	Before		74370	70000	82360	60900
	After		74000			
4	Before		71050	70000	82360	60900
	After		70850			

5	Before		70190	70000	82360	60900
	After		70050			
6	Before		-70390	-70000	-60900	-82360
	After		-69900			
7	Before		70000	70000	82360	60900
	After		70000			
(Minimum) (Nominal) (Maximum)						





Before: 20-Sep-2012 18:03

After: 20-Sep-2012 20:45






High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68440	-70000	-60900	-82360
	After		-68340			
1	Before		-73930	-70000	-60900	-82360
	After		-73290			
2	Before		-73610	-70000	-60900	-82360
	After		-73150			
3	Before		-74670	-70000	-60900	-82360
	After		-74280			
4	Before		-71250	-70000	-60900	-82360
	After		-71050			
5	Before		-70360	-70000	-60900	-82360
	After		-70210			
6	Before		70680	70000	82360	60900
	After		70180			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
(Minimum) (Nominal) (Maximum)						

















Before: 20-Sep-2012 18:03














After: 20-Sep-2012 20:45

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68430	-70000	-60900	-82360
	After		-68320			
1	Before		-73910	-70000	-60900	-82360
	After		-73280			
2	Before		-73590	-70000	-60900	-82360
	After		-73130			
3	Before		-74650	-70000	-60900	-82360
	After		-74260			
4	Before		-71250	-70000	-60900	-82360
	After		-71040			
5	Before		-70340	-70000	-60900	-82360
	After		-70210			



	After		-70210			
6	Before		70650	70000	82360	60900
	After		70160			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
(Minimum) (Nominal) (Maximum)						
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		285.3	284.0	334.1	247.0
	After		284.9			
1	Before		281.1	281.1	330.7	244.4
	After		281.1			
2	Before		281.1	281.1	330.7	244.4
	After		281.1			
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
(Minimum) (Nominal) (Maximum)						
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-322.3	-322.7	-280.7	-379.7
	After		-321.4			
1	Before		-335.6	-322.7	-280.7	-379.7
	After		-332.5			
2	Before		-332.8	-322.7	-280.7	-379.7
	After		-330.4			
3	Before		-333.9	-322.7	-280.7	-379.7
	After		-331.9			
4	Before		-317.3	-322.7	-280.7	-379.7
	After		-316.2			
5	Before		-328.1	-322.7	-280.7	-379.7
	After		-327.2			
6	Before		339.4	322.7	379.7	280.7
	After		326.7			

Alter			336.7			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
	(Minimum)	(Nominal)	(Maximum)			
Before: 20-Sep-2012 18:03						
After: 20-Sep-2012 20:45						

#### Hostile Litho-Density Sonde / Equipment Identification

##### Primary Equipment:

Hostile Litho Density Sonde	HLDS - D	45
Hostile Litho Density High Voltage	HLDV - D	45
Gamma Source Radioactive	GSR - Z	8113

##### Auxiliary Equipment:

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

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		7.952	Master		8.109	Master		71.68	
Before		8.050	Before		8.189	Before		71.68	
After		8.000	After		8.101	After		71.86	
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)		
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value	
Master		68.54	Master		146.7	Master		177.8	
Before		66.66	Before		145.5	Before		179.7	
After		66.34	After		147.5	After		178.5	
	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		409.7	Master		81.22	Master		145.7	
Before		409.8	Before		80.50	Before		143.5	
After		411.6	After		80.07	After		142.3	
	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		389.5	Master		200.9	Master		146.3	
Before		388.2	Before		200.6	Before		146.0	
After		387.2	After		199.1	After		145.3	
	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: 3-Aug-2012 12:38			Before: 20-Sep-2012 18:06			After: 20-Sep-2012 21:14			

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

##### Primary Equipment:

LDSC Cartridge	LDSC - B	521
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##### Auxiliary Equipment:

LDSC Housing	LDSh - A	319
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#### Enhanced DTS Cartridge / Equipment Identification


##### Primary Equipment:







EDTC Gamma Ray Detector	EDTG - A/B	77693
Enhanced DTS Cartridge	EDTC - B	8588

Auxiliary Equipment:  
EDTC Housing

EDTH - B

8528

Enhanced DTS Cartridge Wellsite Calibration		
EDTC Accelerometer Calibration		
Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.852
	9.610 (Minimum)      9.810 (Nominal)      10.01 (Maximum)	
Before: 20-Sep-2012 18:08		

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				4.007	Before				159.7	Before				165.0			
After				4.426	After				162.2	After				167.6			
0 (Minimum)				30.00 (Nominal)	120.0 (Maximum)	145.2 (Minimum)				159.7 (Nominal)	174.2 (Maximum)	150.0 (Minimum)				165.0 (Nominal)	180.0 (Maximum)
Before: 20–Sep–2012 18:08										After: 20–Sep–2012 21:12							

Company: **Lamont Doherty Earth Observatory**  
**Shell**  
 Well: **Expedition 344S, U0070A (USC70)**  
 Field: **Baffin Bay**  
 Rig: **JOIDES Resolution**  
 Country: **USA**

**Schlumberger**

DSI Sonic Imager  
Lower Dipole