Schlumberger

Company: **Lamont Doherty Earth Observatory**
Shell
Well: **Expedition 344S, U0060A (USC60)**
Field: **Baffin Bay**
Rig: **JOIDES Resolution** Country: **USA**

Rig: JOIDES Resolution
Field: Baffin Bay
Location: Latitude: N 75* 42' 58.35"
Well: Expedition 344S, U0060A (USC6
Company: Lamont Doherty Earth Observato

DSI Sonic Imager
Lower Dipole

LOCATION

Latitude: N 75* 42' 58.35"
Longitude: W 65* 57' 12.19"

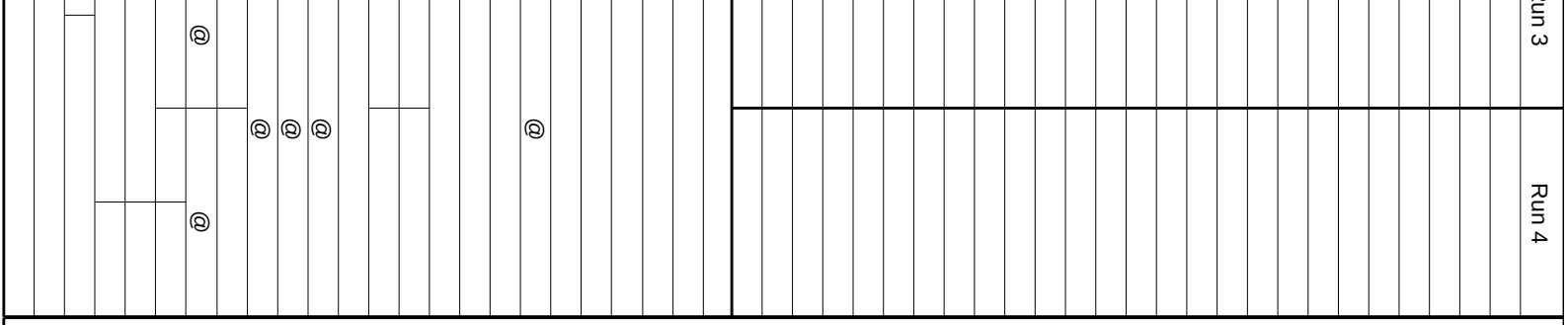
Elev.: K.B. −603.20 m
G.L. −592.20 m
D.F. −603.20 m

Permanent Datum: Mean Sea Level — Elev.: 0.00 m
Log Measured From: Sea Floor — 11.00 m above Perm. Datum
Drilling Measured From: Drill Floor

Ocean:	Max. Well Deviation	Longitude	Latitude
Atlantic	0 deg	N 75* 42' 58.35"	W 65* 57' 12.19"

	Run 1	Run 2	R
Logging Date	27−Sep−2012		
Run Number	1		
Depth Driller	239.1 m		
Schlumberger Depth	195.5 m		
Bottom Log Interval	174 m		
Top Log Interval	43 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		
MUD Fluid Loss / PH			
MUD 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	27−Sep−2012 / 18:00		
Logger On Bottom / Time	27−Sep−2012 / 22:20		
Unit Number / Location	625003 / Houston		
Recorded By	C. Furman		
Witnessed By	G. Guerin, H. Evans		

	Run 1	Run 2	R
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			
MUD Fluid Loss / PH			
MUD Source Of Sample			
RM @ Measured Temperature	@		
RMF @ Measured Temperature	@		
RMC @ Measured Temperature	@		
Source RMF / RMC			
RM @ MRT / RMF @ MRT	@	@	
Maximum Recorded Temperatures			
Circulation Stopped / Time			
Logger On Bottom / Time			
Unit Number / Location			
Recorded By			
Witnessed By			



DISCLAIMER

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.

OTHER SERVICES1

OS1: MSS

OS2: HRLA

OS3: HNGS

REMARKS: RUN NUMBER 1

Site U0060A, client designation USC 060, 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 195.5mbsf.

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

Hole size corrections made using bit size, as no caliper was present in the string.

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 594.0m 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

RUN 1

SERVICE ORDER #:

PROGRAM VERSION: 19C0−187

FLUID LEVEL:

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #:

PROGRAM VERSION:

FLUID LEVEL:

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

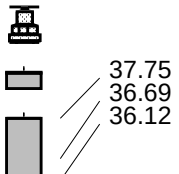
RUN 2

SURFACE EQUIPMENT

GSR−U 616008

WITM (EDTS)−A

DOWNHOLE EQUIPMENT



LEH−MT

LEH−MT 101

AH−369

EDTC−B

EDTH−B 8528

MDSB_EDTC

Mud Tempe

CTEM

Gamma Ray

EFTB DIAG

TelStatus

EDTC−B 8529

HNGS−BA
HNGS−BA 194
HNSH−BA 205

HNGC−B
HNGH−A 115

AH−MCD_D
AH−MCD_D 1663

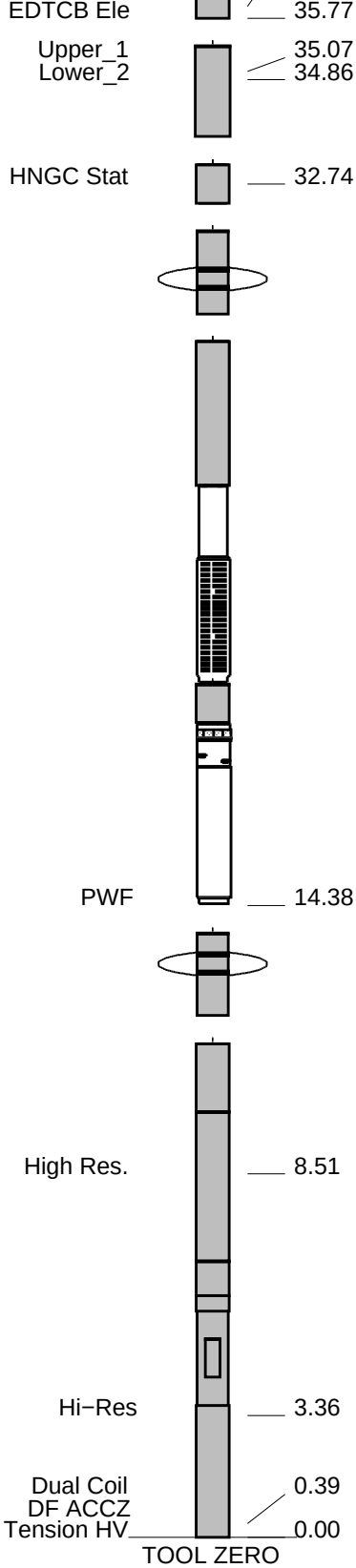
DSST−B
SPAC−B 8194
ECH−SD 8183
SMDR−BD 8070
SSIJ−BA 8204
SMDX−AA 8147

AH−MCD_GB
AH−MCD_GB 22

HRLT−B
HRUH−B 978
HRUC−B 764
HRLS−B 768
HRLH−B 968
HRLC−B 974
AH−270 1708

AH−SSIJ
AH−SSIJ 8192

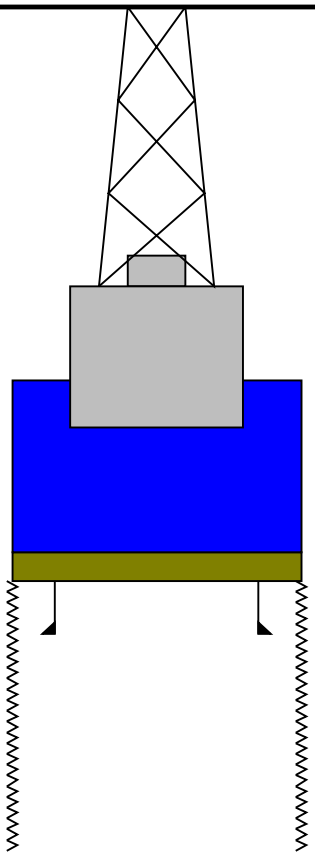
MSS_LDEO−A
ELIC−A 3
MSS_LDEO−A 3



EDTCB Ele	35.77
Upper_1	35.07
Lower_2	34.86
HNGS−BA	35.77
HNGC Stat	32.74
HNGC−B	33.27
AH−MCD_D	32.20
DSST−B	29.93
PWF	14.38
AH−MCD_GB	14.38
HRLT−B	12.10
High Res.	8.51
AH−SSIJ	4.72
Hi−Res	3.36
MSS_LDEO−A	3.66
Dual Coil	0.39
DF ACCZ	
Tension HV	0.00
TOOL ZERO	

MAXIMUM STRING DIAMETER 4.50 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

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

	OD	ID	MD		MD	OD	ID	
Kelly Bushing Elevation			−603.2					
Derrick Floor Elevation			−603.2					
Mean Sea Level			−592.2					
					0.0			Sea Bed
					46.8	7.000		Pipe Shoe
					239.1	9.875		Total Depth − Driller

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Up Log

MAXIS Field Log

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_007LUP	FN:6	PRODUCER	28−Sep−2012 00:21	788.7 M	579.3 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_011PUP	FN:10	PRODUCER	28−Sep−2012 20:08	194.3 M	−14.6 M
CLIENT	MSS_LDEO_HRLA_DSI_011PUC	FN:11	CUSTOMER	28−Sep−2012 20:08	194.3 M	−14.6 M

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
DSST−B	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

PIP SUMMARY

Time Mark Every 60 S

Sonic Velocity (SVEL)
1000 (M/S) 6000

Gamma Ray (GR_EDTC)
0 (GAPI) 150

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

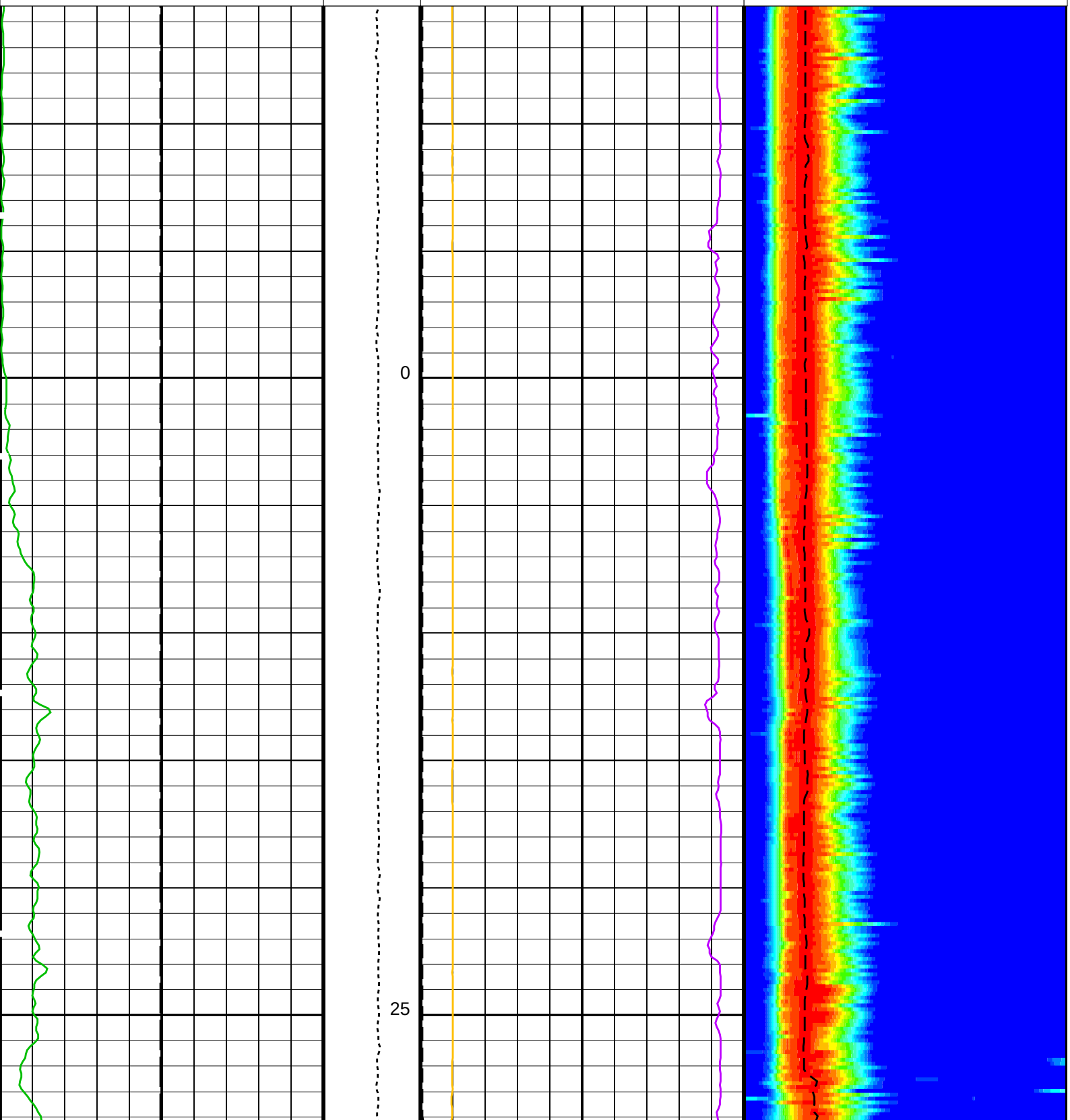
Min Amplitude Max
Rec.Array L.Dipole Slow Proj. CVDL (SPR1)
75 (US/F) 775

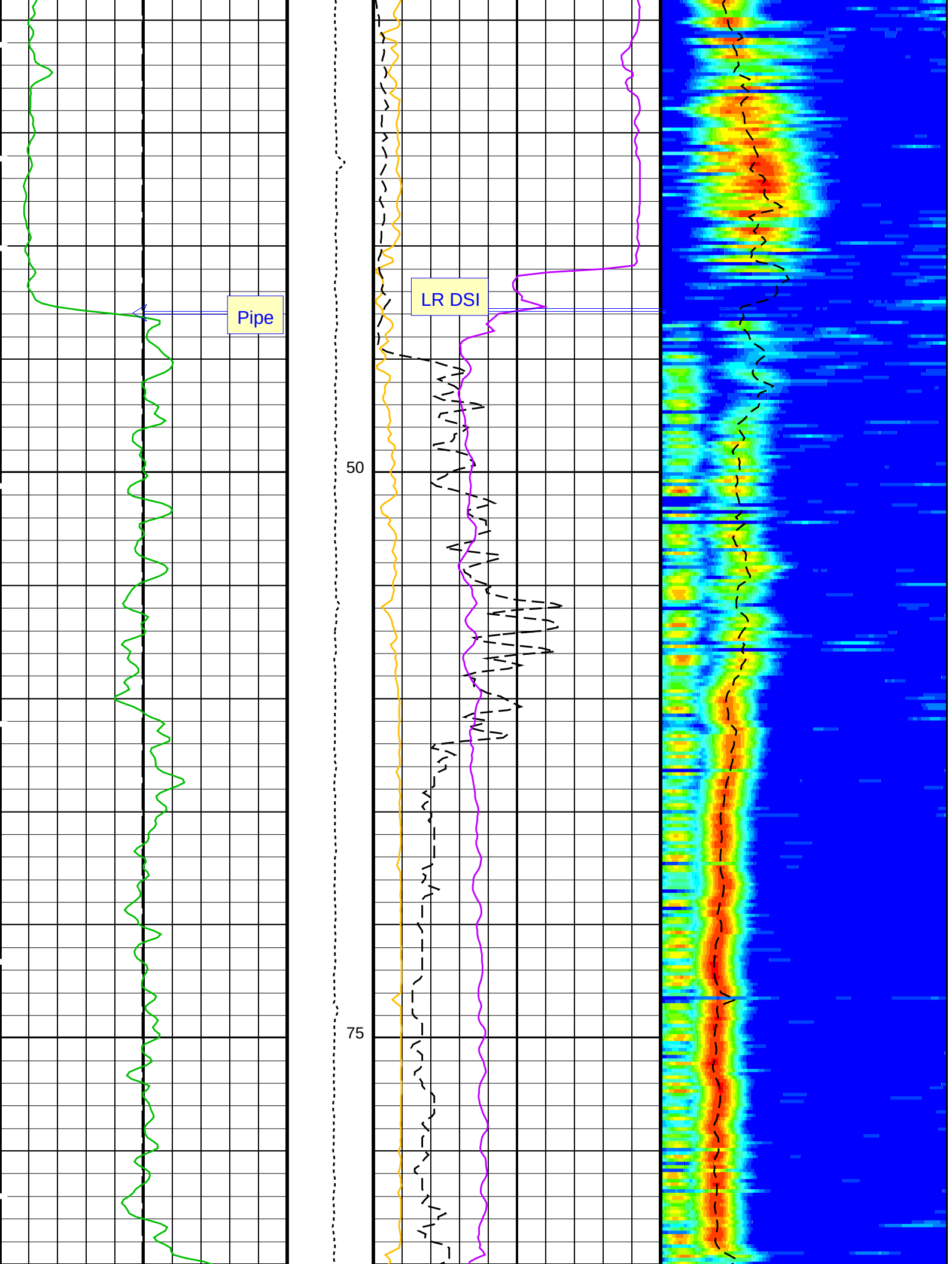
Bit Size (BS)
0 (IN) 20

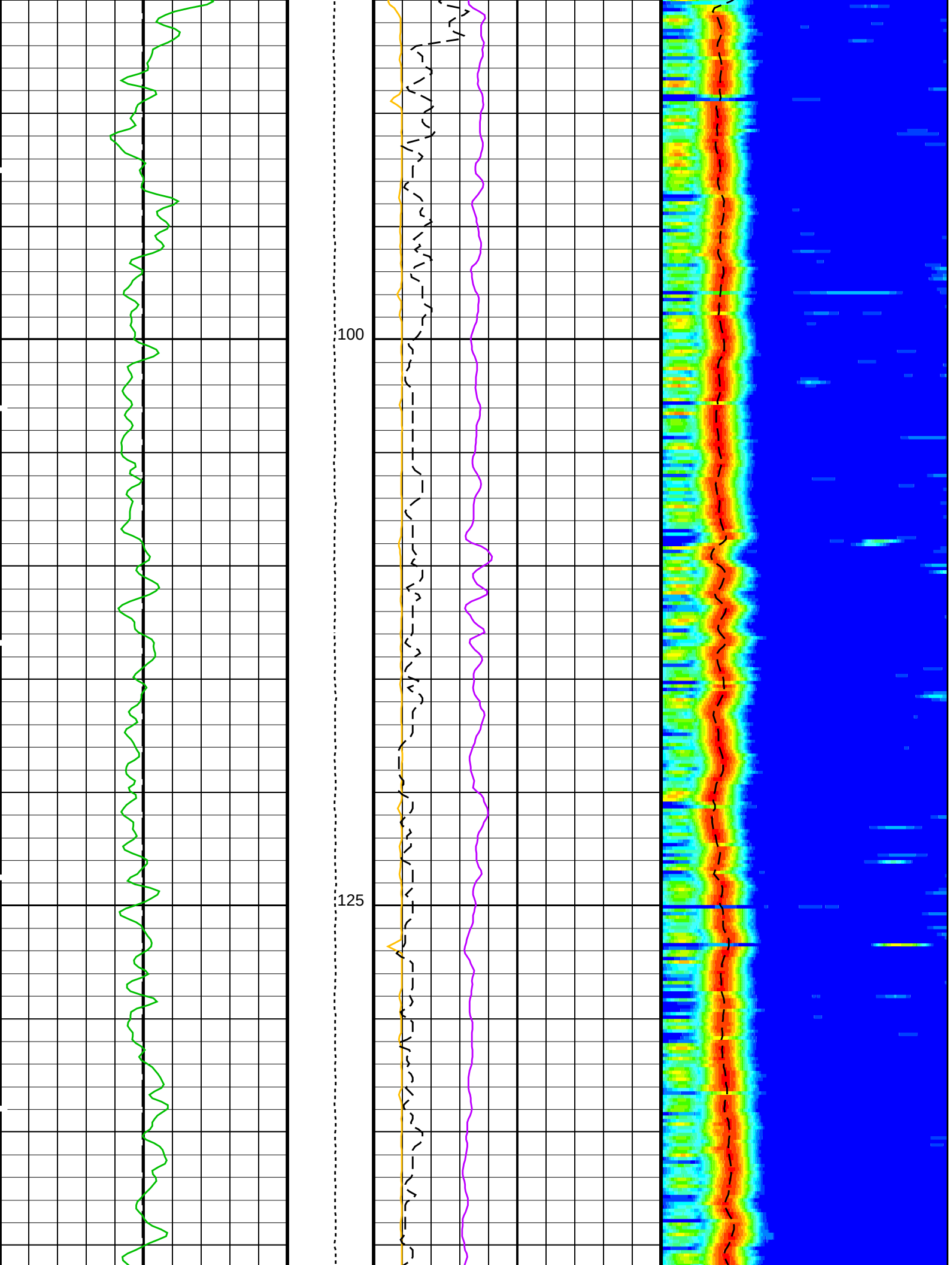
Tension (TENS) (LBF)
0 5000

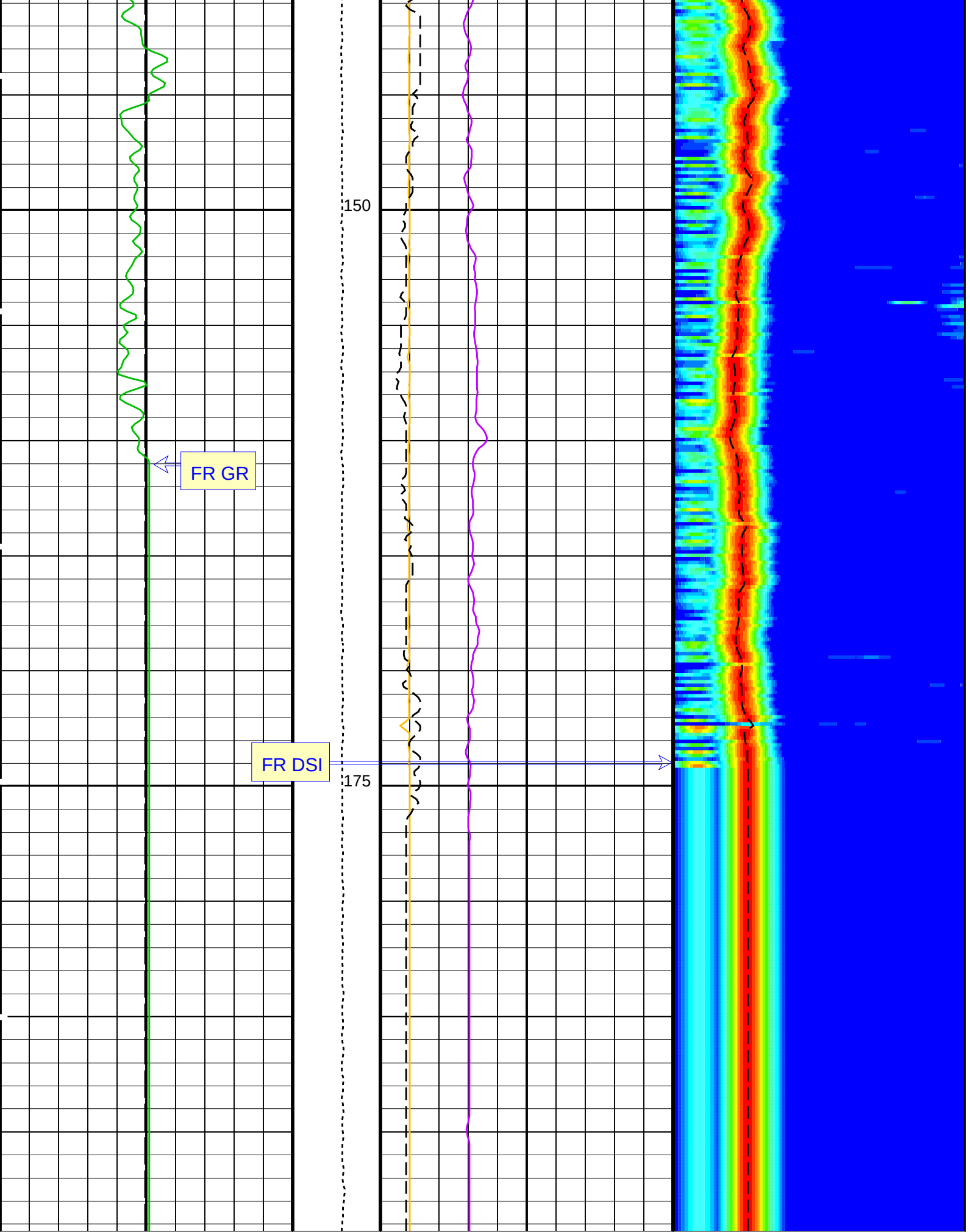
Peak Coherence / RA − Lower Dipole (CHR1)
0 (----) 10

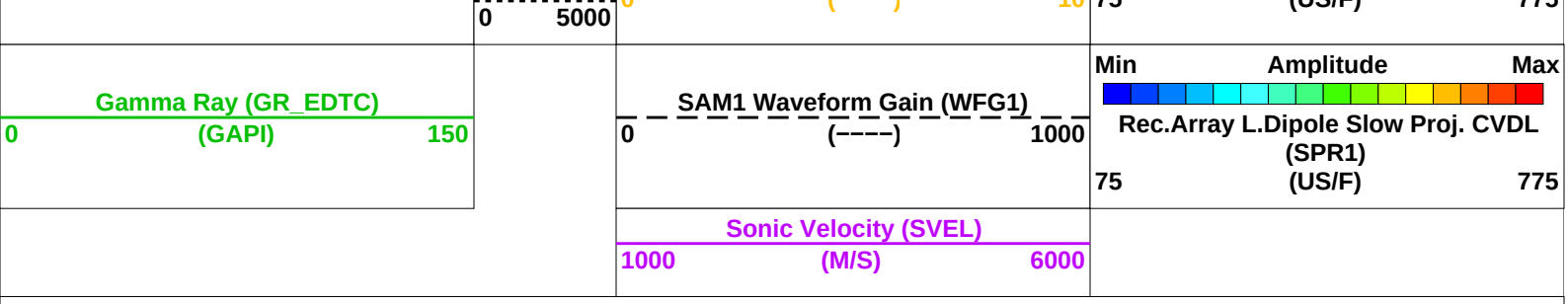
Delta−T Shear / RA − Lower Dipole (DT1R)
75 (US/F) 775




Pipe
LR DSI
50
75


100
125


150
175
FR GR
FR DSI
Bit Size (BS)
(IN)
0
20
Tension
(TENS)
(LBF)
Peak Coherence / RA − Lower Dipole
(CHR1)
0
10
Delta−T Shear / RA − Lower Dipole
(DT1R)
(US/F)
75
775



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	−594.0	M
PP	Playback Processing	NORMAL	

Format: DSST_LOWER_DIPOLE_VDL_COLOR Vertical Scale: 1:200 Graphics File Created: 28−Sep−2012 20:08

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
DSST−B	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_007LUP	FN:6	PRODUCER	28−Sep−2012 00:21	788.7 M	579.3 M

Output DLIS Files

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_011PUP	FN:10	PRODUCER	28−Sep−2012 20:08	
CLIENT	MSS_LDEO_HRLA_DSI_011PUC	FN:11	CUSTOMER	28−Sep−2012 20:08	

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Down Log

MAXIS Field Log

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_020PUP	PRODUCER	28−Sep−2012 20:28	153.0 M	−10.1 M

Output DLIS Files

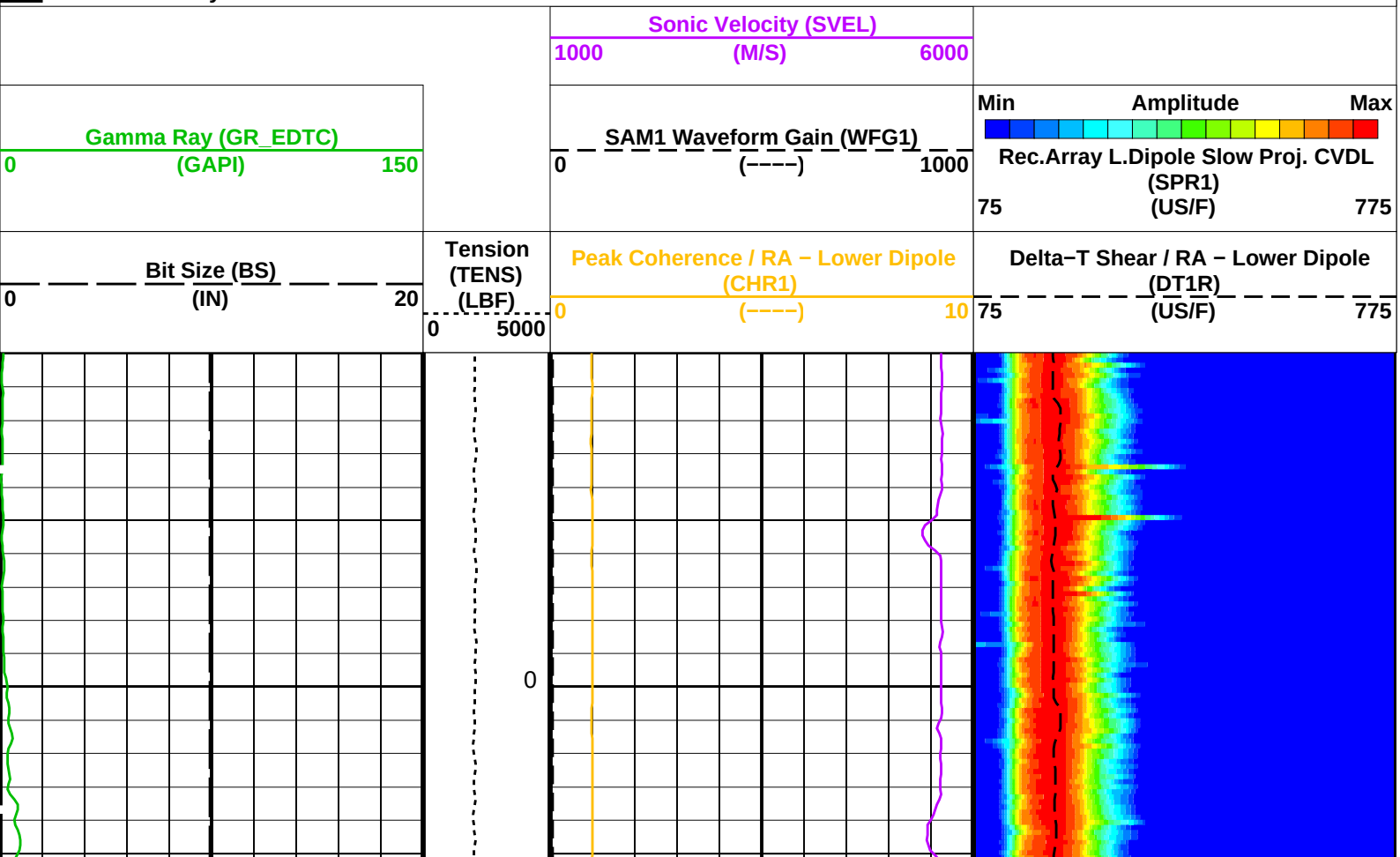
DEFAULT	MSS_LDEO_HRLA_DSI_021PUP	FN:26	PRODUCER	28−Sep−2012 20:29	153.0 M	−10.1 M
CLIENT	MSS_LDEO_HRLA_DSI_021PUC	FN:27	CUSTOMER	28−Sep−2012 20:29	153.0 M	−10.1 M

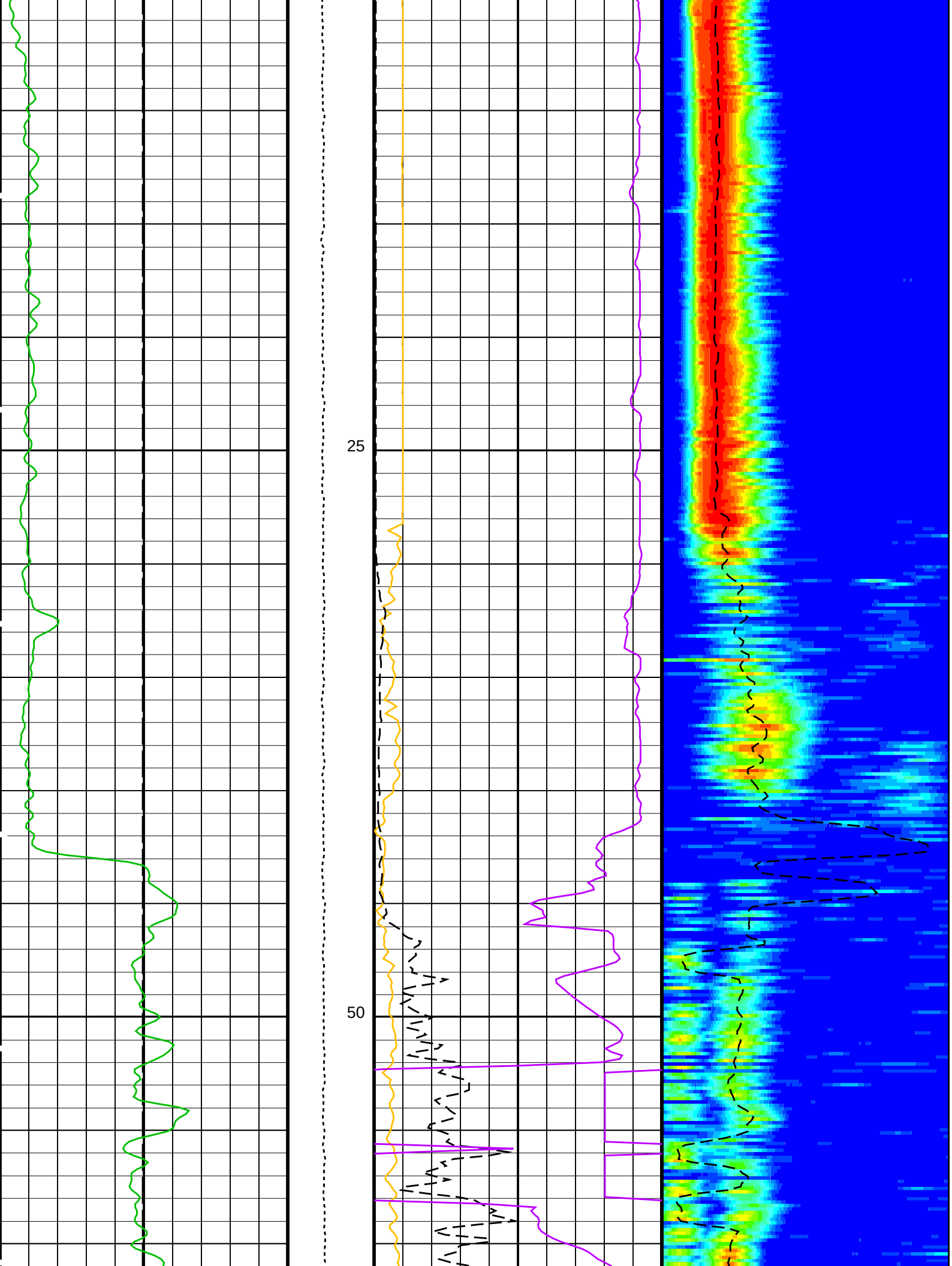
OP System Version: 19C0−187

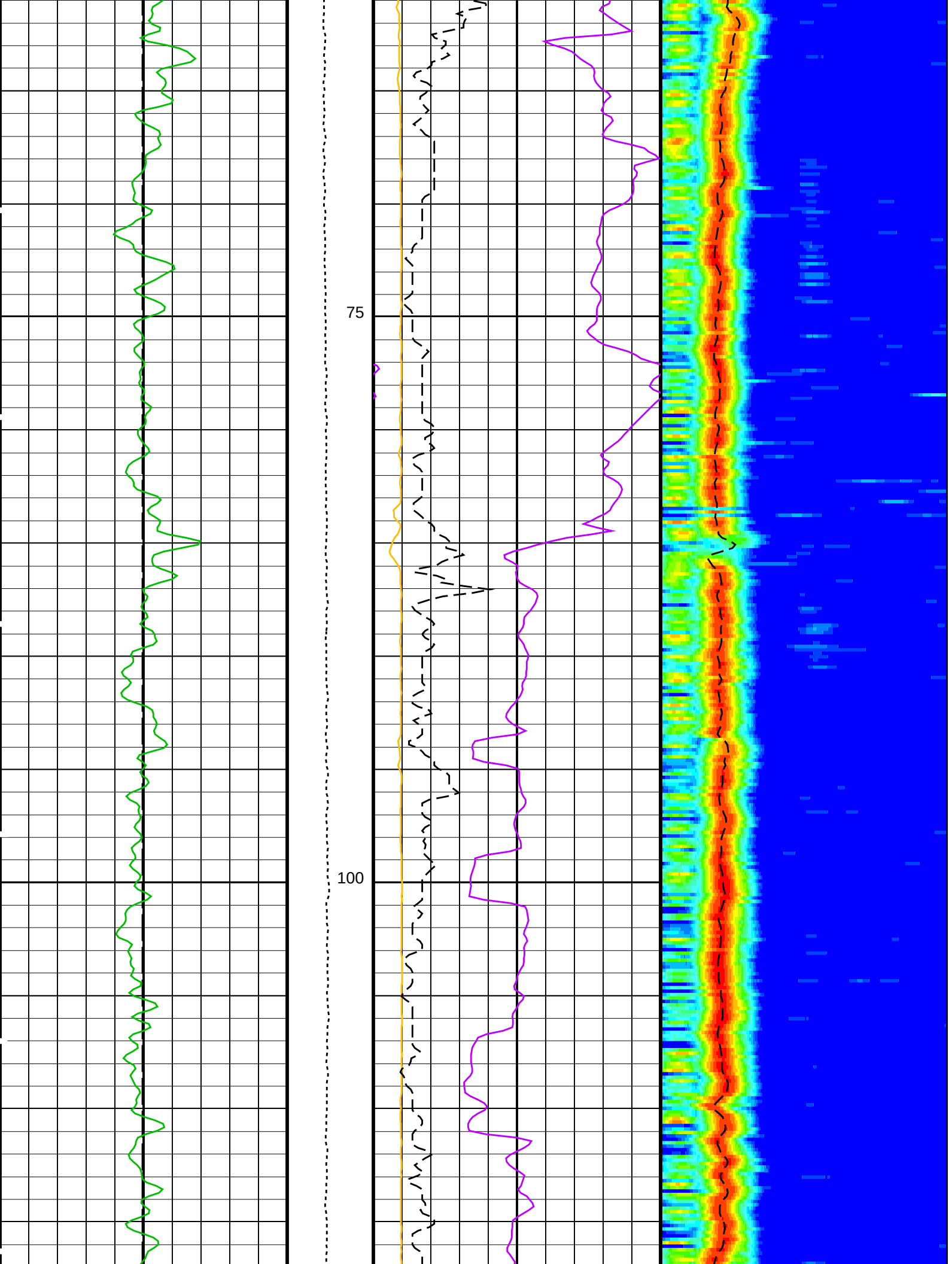
MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
DSST−B	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

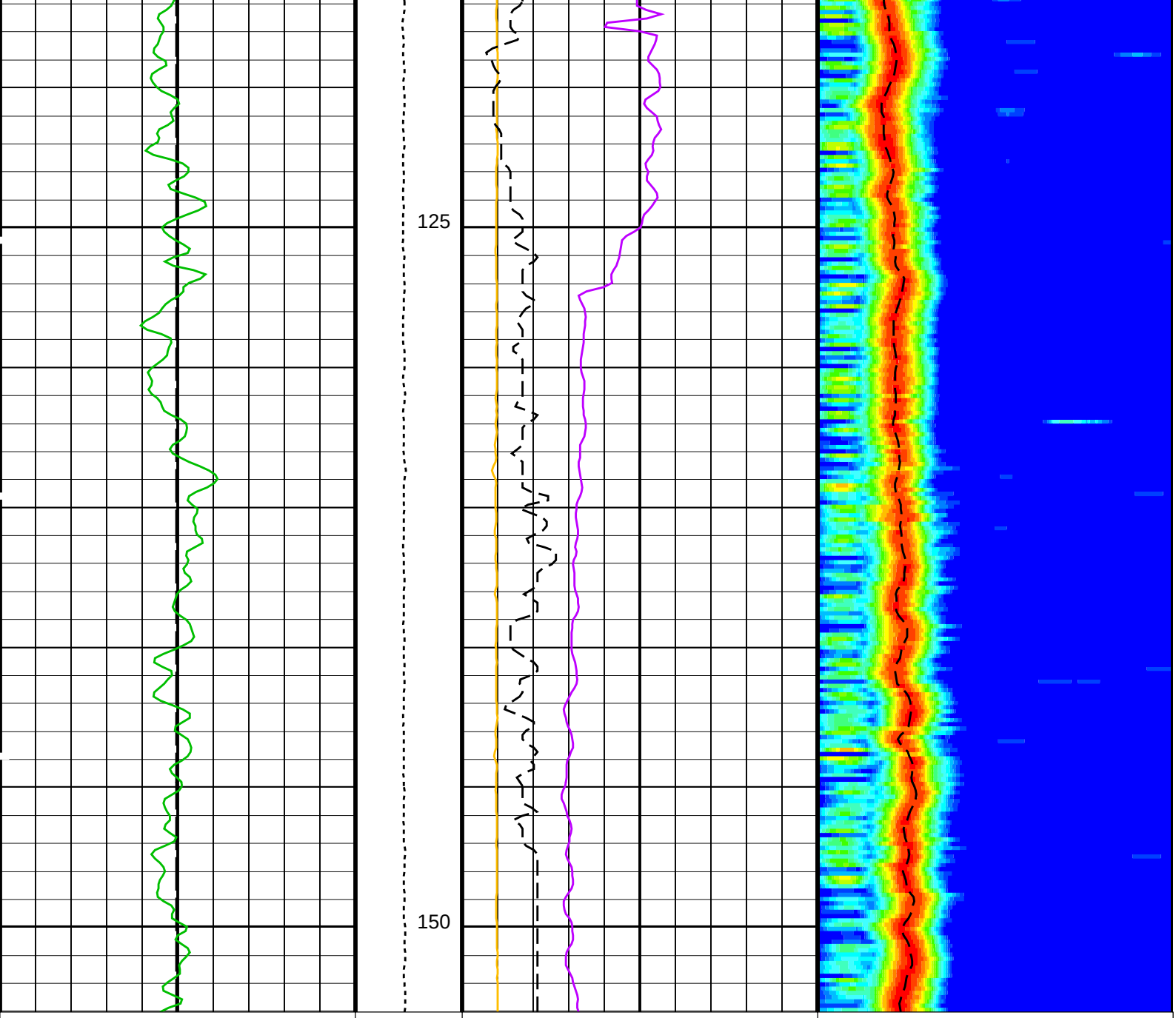
PIP SUMMARY

Time Mark Every 60 S




25
50


75
100



Bit Size (BS)
0 (IN) 20

Tension (TENS) (LBF)
0 5000

Peak Coherence / RA − Lower Dipole (CHR1)
0 (−−−−) 10

Delta−T Shear / RA − Lower Dipole (DT1R)
75 (US/F) 775

Gamma Ray (GR_EDTC)
0 (GAPI) 150

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

Min Amplitude Max

Rec.Array L.Dipole Slow Proj. CVDL (SPR1)
75 (US/F) 775

Sonic Velocity (SVEL)
1000 (M/S) 6000

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

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	0.0	M
PP	Playback Processing	NORMAL	

Format: DSST_LOWER_DIPOLE_VDL_COLOR **Vertical Scale: 1:200** **Graphics File Created: 28−Sep−2012 20:29**

OP System Version: 19C0−187

MSS_LDEO−A	19C0−187	HRLT−B	19C0−187
DSST−B	19C0−187	HNGC−B	19C0−187
HNGS−BA	19C0−187	EDTC−B	SKK−5169−EDTCB

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_020PUP	PRODUCER	28−Sep−2012 20:28	153.0 M	−10.1 M

Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_DSI_021PUP	FN:26	PRODUCER	28−Sep−2012 20:29
CLIENT	MSS_LDEO_HRLA_DSI_021PUC	FN:27	CUSTOMER	28−Sep−2012 20:29

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
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 Pl − 0	0	N/A	−322.3	−321.4	0.8523	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−335.6	−332.5	3.175	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−332.8	−330.4	2.353	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−333.9	−331.9	2.034	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−317.3	−316.2	1.169	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−328.1	−327.2	0.9027	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	339.4	336.7	−2.633	9.681	UV
HRLT Vertical Voltage Pl − 7	0	N/A	−322.7	−322.7	0	9.681	UV

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check
Master: 15−Jul−2012 1:37 Before: 21−Sep−2012 1:23 After: 21−Sep−2012 1:28

Na 511 Peak Loc	40.00	39.55	39.64	39.63	−0.01205	1.000	
Na 511 Peak Res	15.50	15.74	14.62	14.61	−0.01343	2.000	%
High Voltage	1150	1192	1133	1131	−1.140	N/A	V
Na 1785 Peak Loc	142.6	141.9	143.3	142.5	−0.8368	7.000	
Na 1785 Peak Res	8.500	8.399	8.136	7.484	−0.6517	2.000	%
Temperature	15.50	30.02	5.829	5.848	0.01951	N/A	DEGC
Na Count Rate	45.00	18.00	15.48	15.98	0.5035	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check
Master: 15−Jul−2012 1:37 Before: 21−Sep−2012 1:23 After: 21−Sep−2012 1:28

Na 511 Peak Loc	40.00	39.55	39.64	39.78	0.1437	1.000	
Na 511 Peak Res	15.50	16.74	16.05	14.99	−1.060	2.000	%
High Voltage	1150	1112	1067	1067	0.09460	N/A	V
Na 1785 Peak Loc	142.6	142.2	141.8	141.9	0.09863	7.000	
Na 1785 Peak Res	8.500	9.140	8.464	9.198	0.7344	2.000	%
Temperature	15.50	30.92	6.453	6.596	0.1431	N/A	DEGC
Na Count Rate	45.00	18.43	15.49	16.22	0.7288	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2
Master: 15−Jul−2012 1:37 Before: 21−Sep−2012 1:23 After: 21−Sep−2012 1:28

Coincidence Count Rate Ratio	1.000	0.9742	0.9968	0.9870	−0.009778	0.05000	

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	N/A	M/S2

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 20−Sep−2012 18:08 After: 20−Sep−2012 21:12

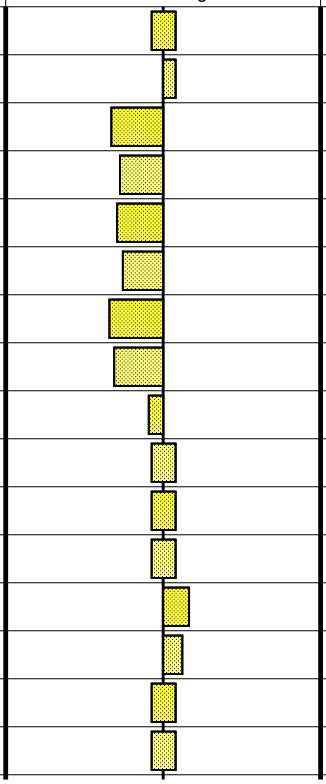
Gamma Ray (Jig − Bkg)	159.7	N/A	159.7	162.2	2.544	14.52	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	167.6	2.629	15.00	GAPI

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

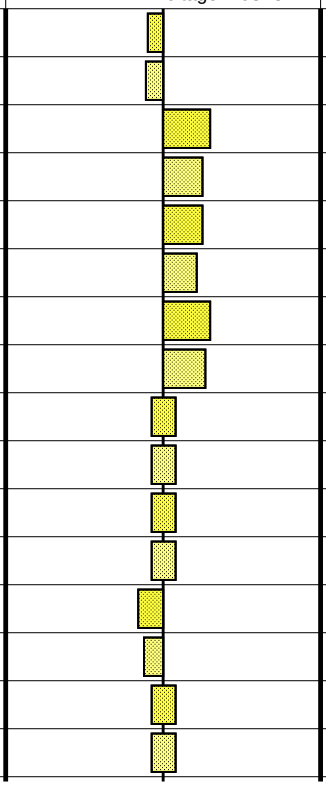
Idx	Phase	HRLT M0−M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.1	−322.7	−280.7	−379.7
	After		−319.3			
1	Before		−341.6	−322.7	−280.7	−379.7
	After		−338.6			
2	Before		−339.5	−322.7	−280.7	−379.7
	After		−337.3			
3	Before		−342.4	−322.7	−280.7	−379.7
	After		−340.5			
4	Before		−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

High Resolution Laterolog Array − B Wellsite Calibration

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

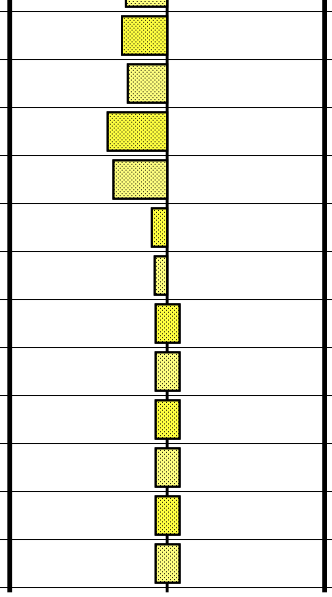
Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68760	70000	82360	60900
	After		68650			
1	Before		73580	70000	82360	60900
	After		72960			
2	Before		73290	70000	82360	60900
	After		72840			
3	Before		74370	70000	82360	60900
	After		74000			
4	Before		71050	70000	82360	60900
	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			

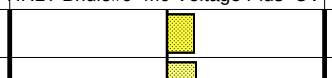
2	Before		−73610	−70000	−60900	−82360
	After		−73150			
3	Before		−74670	−70000	−60900	−82360
	After		−74280			
4	Before		−71250	−70000	−60900	−82360
	After		−71050			
5	Before		−70360	−70000	−60900	−82360
	After		−70210			
6	Before		70680	70000	82360	60900
	After		70180			
7	Before		−70000	−70000	−60900	−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

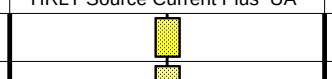
Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68430	−70000	−60900	−82360
	After		−68320			
1	Before		−73910	−70000	−60900	−82360
	After		−73280			
2	Before		−73590	−70000	−60900	−82360
	After		−73130			
3	Before		−74650	−70000	−60900	−82360
	After		−74260			
4	Before		−71250	−70000	−60900	−82360
	After		−71040			
5	Before		−70340	−70000	−60900	−82360
	After		−70210			
6	Before		70650	70000	82360	60900
	After		70160			
7	Before		−70000	−70000	−60900	−82360
	After		−70000			
	(Minimum) (Nominal) (Maximum)					

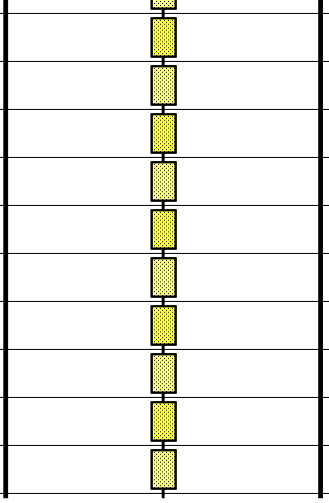
Before: 20−Sep−2012 18:03

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			

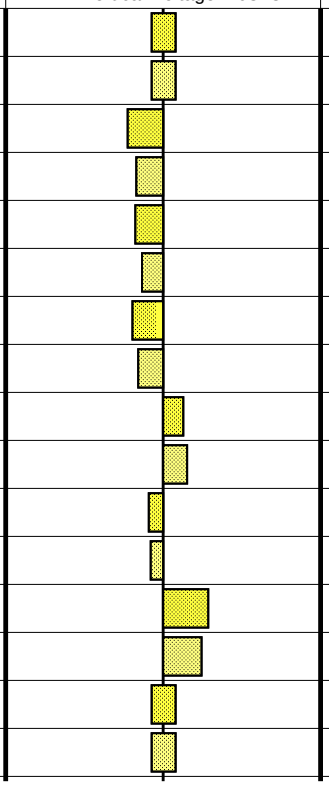
3	Before		281.1	281.1	330.7	244.4
	After		281.1			
4	Before		281.1	281.1	330.7	244.4
	After		281.1			
5	Before		281.1	281.1	330.7	244.4
	After		281.1			
6	Before		281.1	281.1	330.7	244.4
	After		281.1			
7	Before		281.1	281.1	330.7	244.4
	After		281.1			
	(Minimum)	(Nominal)	(Maximum)			

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		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 Natural Gamma Ray Cartridge − B / Equipment Identification

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

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	194
Auxiliary Equipment:		

Auxiliary Equipment:

HNGS Sonde Housing	HNSH − BA	205
Gamma Source Radioactive	GSR − U	616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.55
Before		39.64
After		39.63

37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		15.74
Before		14.62
After		14.61

12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)

Phase	High Voltage V	Value
Master		1192
Before		1133
After		1131

900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		141.9
Before		143.3
After		142.5

135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		8.399
Before		8.136
After		7.484

7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		30.02
Before		5.829
After		5.848

−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		18.00
Before		15.48
After		15.98

10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)

Master: 15−Jul−2012 1:37 Before: 21−Sep−2012 1:23 After: 21−Sep−2012 1:28

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		**39.55**
Before		39.64
After		39.78

37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)

Phase	Na 511 Peak Res %	Value
Master		**16.74**
Before		16.05
After		14.99

12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)

Phase	High Voltage V	Value
Master		**1112**
Before		1067
After		1067

900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)

Phase	Na 1785 Peak Loc	Value
Master		142.2
Before		141.8
After		141.9

135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)

Phase	Na 1785 Peak Res %	Value
Master		9.140
Before		8.464
After		9.198

7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)

Phase	Temperature DEGC	Value
Master		30.92
Before		6.453
After		6.596

−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)

Phase	Na Count Rate CPS	Value
Master		18.43
Before		15.49
After		16.22

10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)

Master: 15−Jul−2012 1:37 Before: 21−Sep−2012 1:23 After: 21−Sep−2012 1:28

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9742
Before		0.9968
After		0.9870

0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)

Master: 15−Jul−2012 1:37
Before: 21−Sep−2012 1:23

After: 21−Sep−2012 1:28

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:		
EDTC Gamma Ray Detector	EDTG − A/B	77693
Enhanced DTS Cartridge	EDTC − B	8529
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, U0060A (USC60)**

Field: **Baffin Bay**

Rig: **JOIDES Resolution**

Country: **USA**

Schlumberger

DSI Sonic Imager
Lower Dipole