

DISCLAIMER

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OTHER SERVICES1

- OS1: HLDS
- OS2: DEBI-T
- OS3: FMS
- OS4: HNGS

REMARKS: RUN NUMBER 1

Hole U1382A was drilled for the purpose of placing a CORK and collecting RCB cores.

10-3/4 in. Casing was placed from sea bed (4494mbrf) to 4596mbrf with open hole down to TD at 4704mbrf.

The tool string used for this run included the experimental "DEBI-T" tool from JPL/USC on the bottom.

DEBI-T was run to obtain a baseline measurement in a freshly drilled hole for comparison with the previous (shut-in) hole.

Gamma Ray was provided by a simple total GR sensor built into the EDTC telemetry cartridge; measurement similar to SGT-N tool.

The HRLA tool was included to record resistivity in lieu of the standard DIT, since DEBI-T is bottom-only.

HRLA was run slick and without knuckles in order to minimize string length for this short open-hole section.

HLDS was allowed to record data during the down pass, but the caliper remained closed.

The main pass was terminated prematurely (roughly 22m below casing shoe) due to a problem with tool power downhole.

Due to the problem, it was not possible to record a repeat section

Logs from this run were tied into the second run, which included a complete GR record from TD to sea bed.

HRLA curves did not show significant processing flags on the down log.

HRLA shallow curves (RLA1 and RLA2) did show some processing flags (questionable data) during the up pass due to tool position.




Sea Bed and Casing Shoe were not clearly identified using GR and/or Caliper due to power problem during the first up pass.

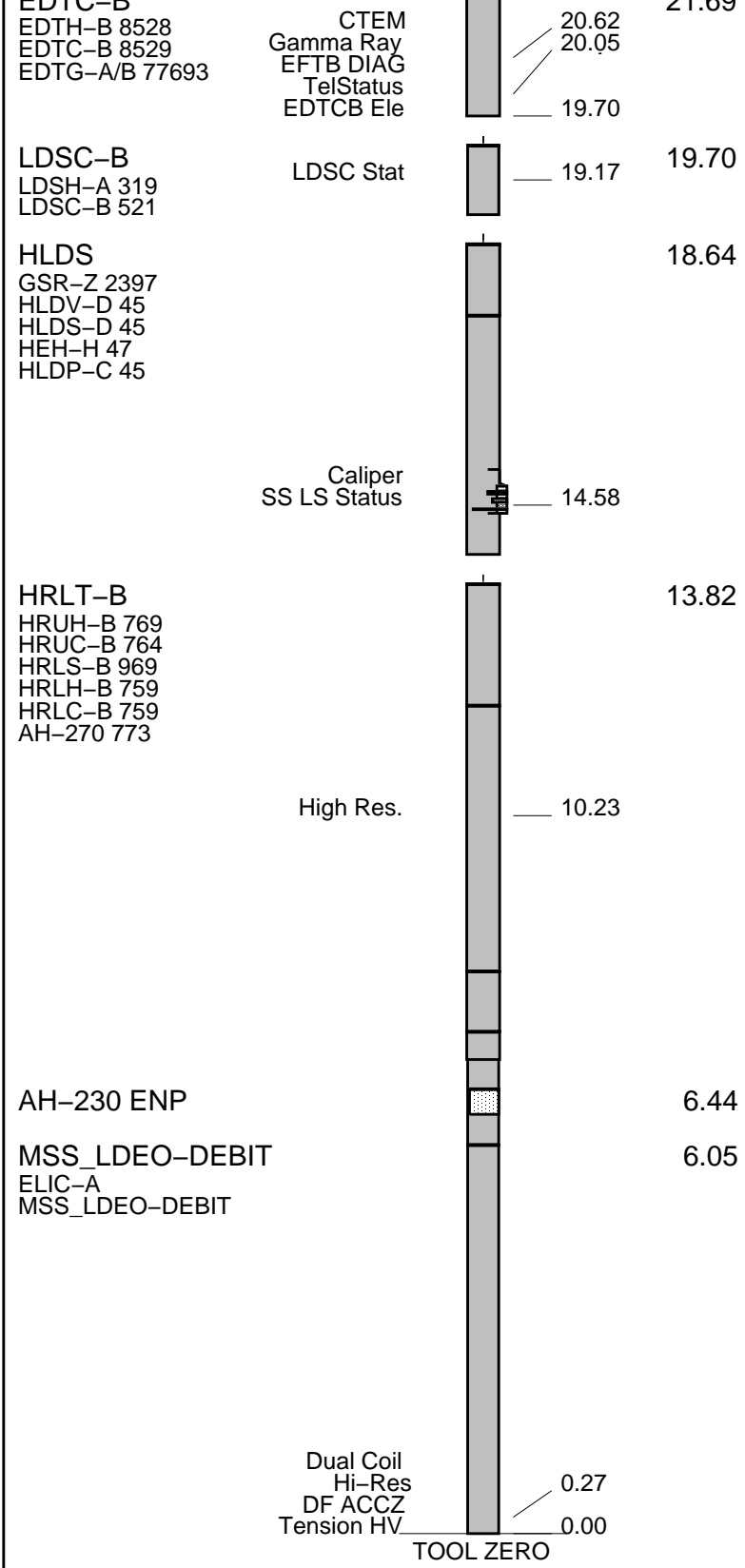
DEBI-T real-time data provides only enough information to determine that the tool is functioning.

Main DEBI-T data is recorded on an internal memory card that is retrieved after the tool is rigged down.

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			
WITM (EDTS)-A			
DOWNHOLE EQUIPMENT			
LEH-MT LEH-MT 101		23.05	
AH-369		22.09	
EDTC B	MDSB_EDTC Mud Tempe	21.69	
		21.60	



MAXIMUM STRING DIAMETER 3.63 IN
 MEASUREMENTS RELATIVE TO TOOL ZERO
 ALL LENGTHS IN METERS

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

Kelly Bushing Elevation

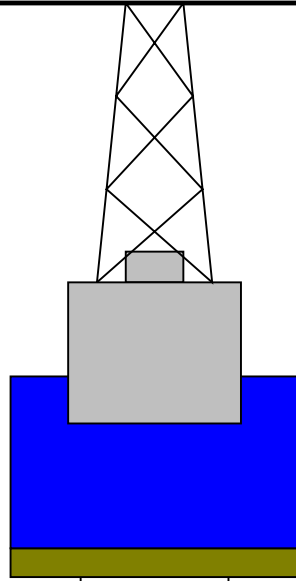
Derrick Floor Elevation

Mean Sea Level

0.0

0.0

11.0



4494.0

Sea Bed

4558.0

Bit Depth

4596.0

10.750

Casing Shoe

4704.0

9.875

Total Depth - Driller



Schlumberger

Down Log

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 336, Site U1382A

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_055LUP	PRODUCER	13-Oct-2011 12:57	4699.7 M	4569.0 M
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Output DLIS Files

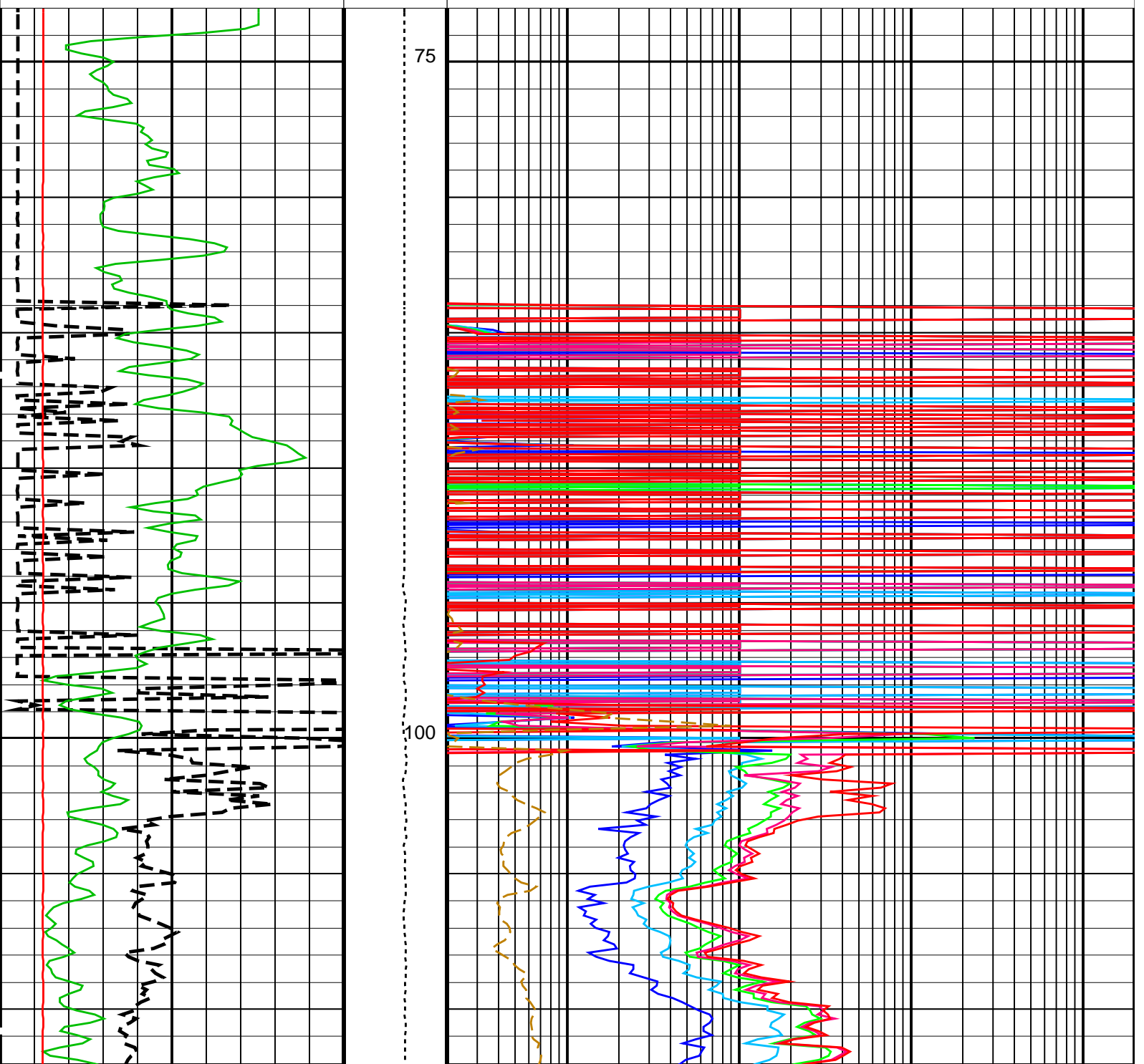
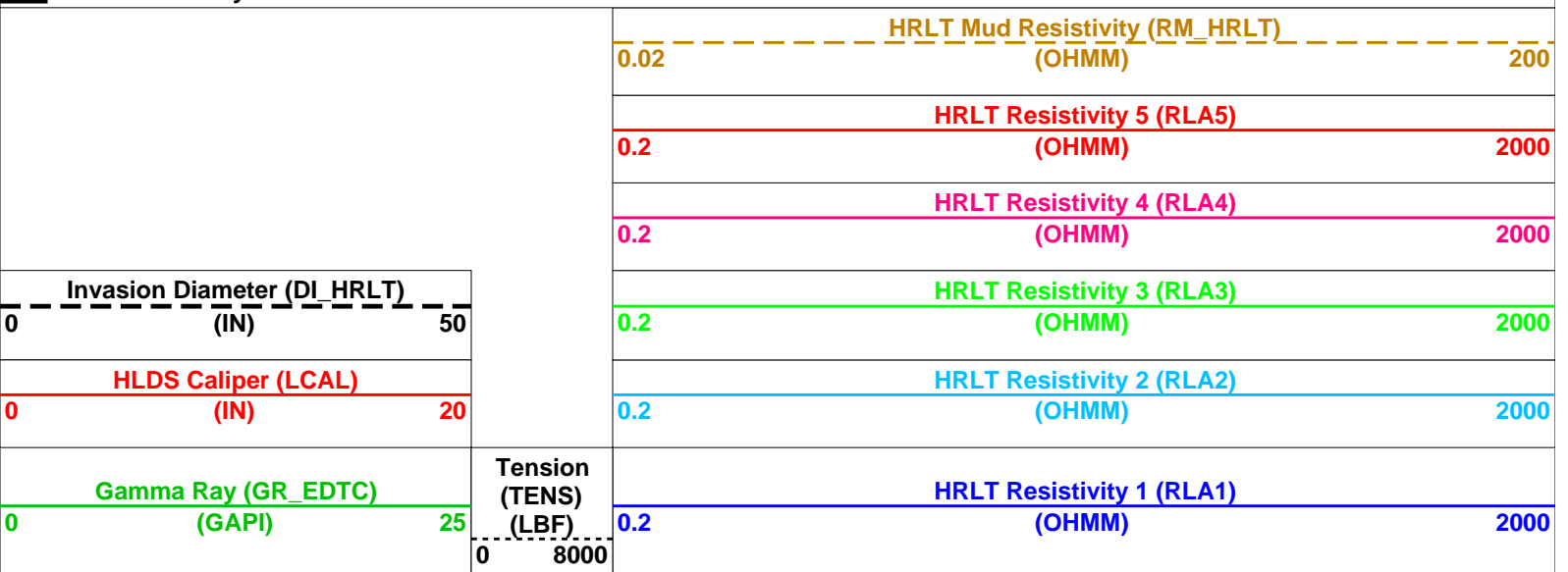
DEFAULT	MSS_LDEO_HRLA_LDL_060PUP	FN:57	PRODUCER	13-Oct-2011 13:11	203.8 M	73.0 M
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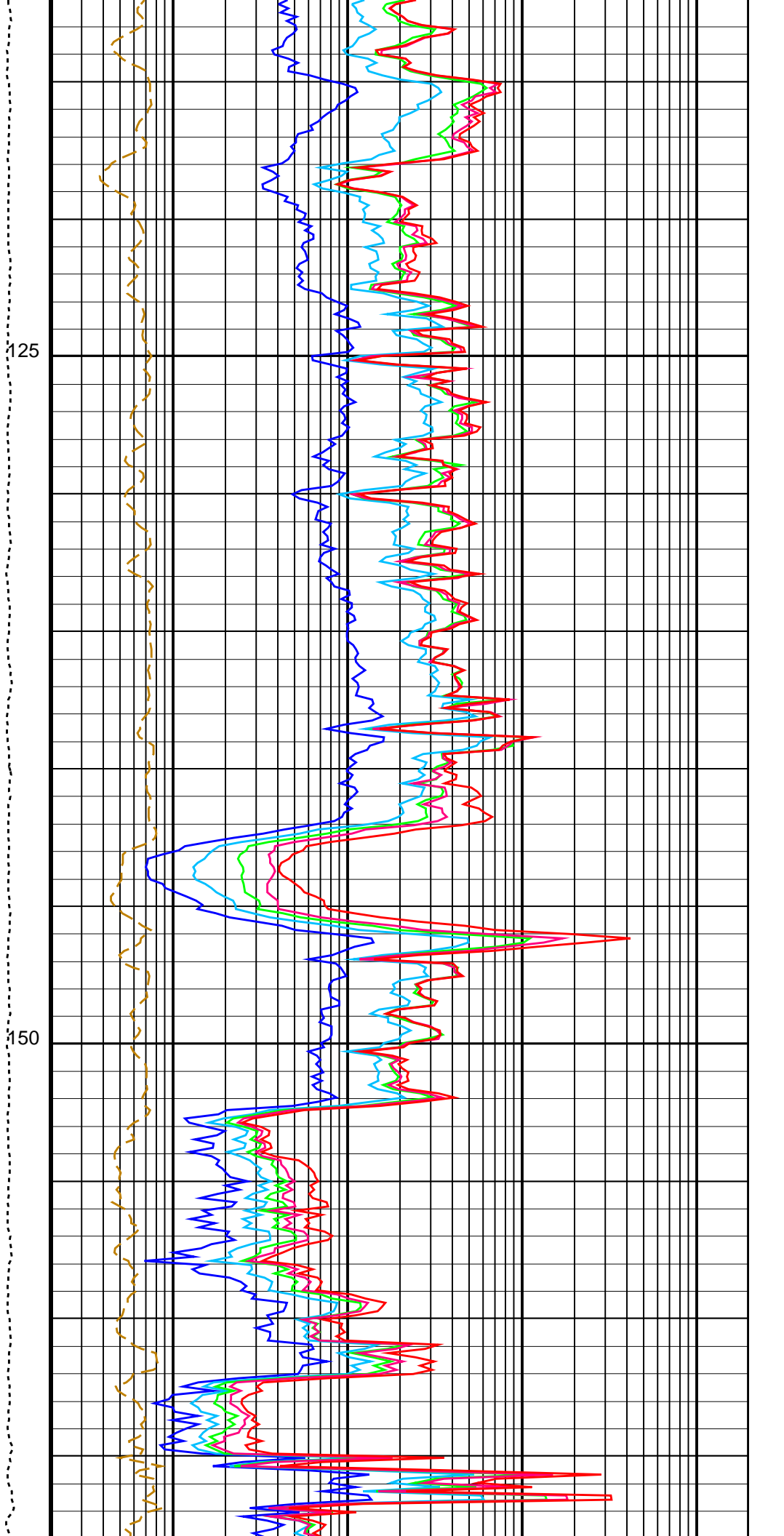
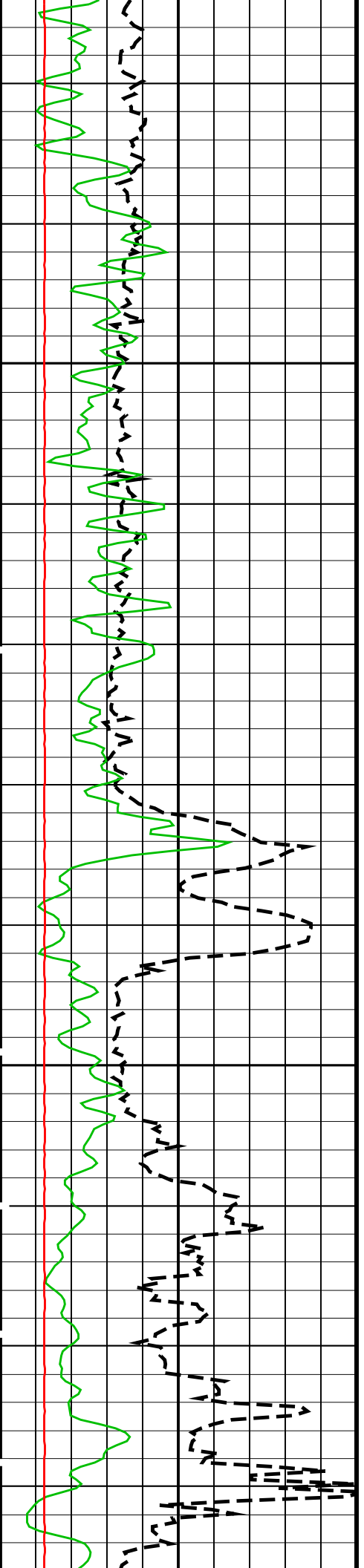
OP System Version: 19C0-187

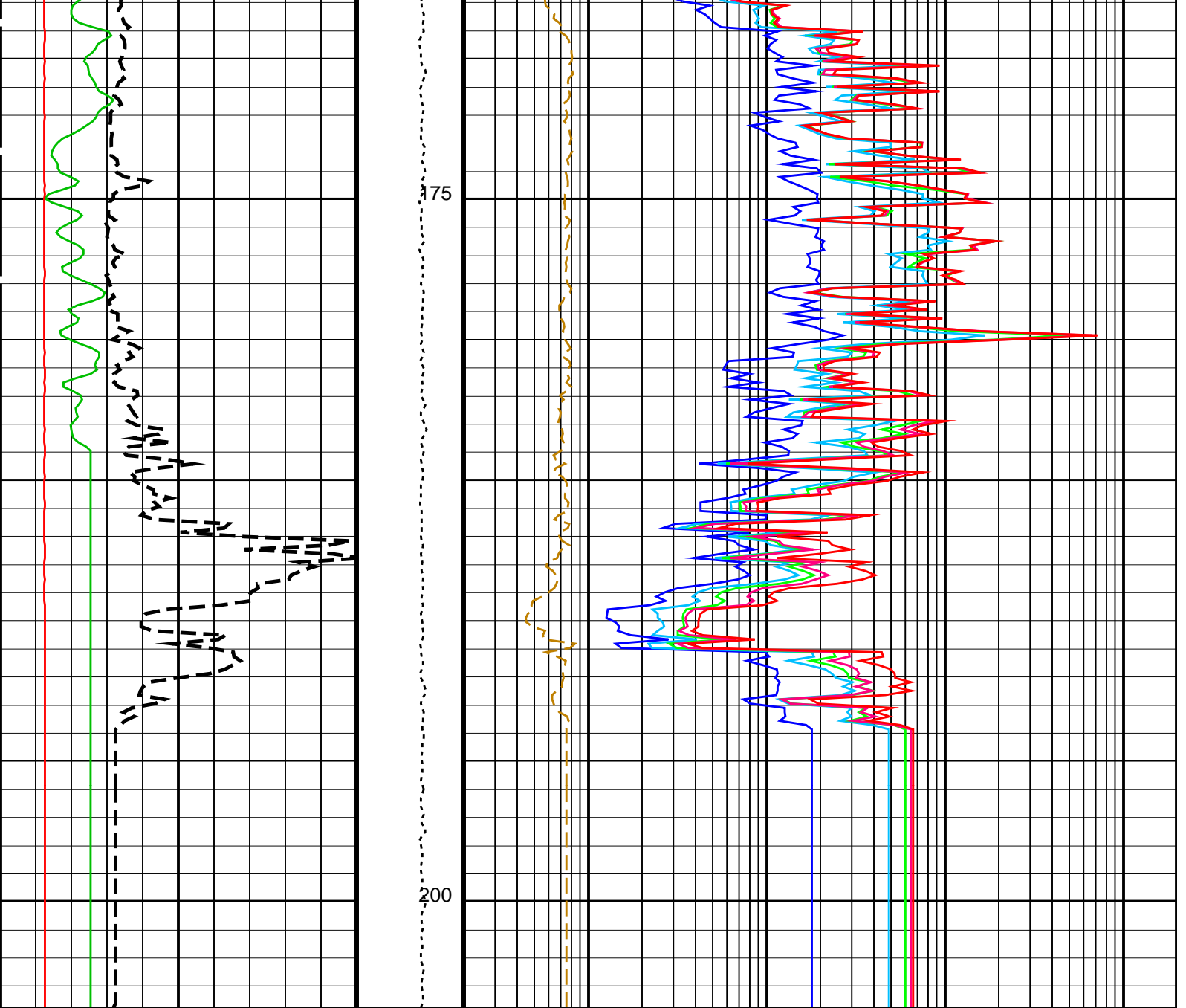
MSS_LDEO-DEBIT	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	19C0-187		

Time Mark Every 60 S

TOP SUMMARY







Gamma Ray (GR_EDTC) (GAPI)	Tension (TENS) (LBF)	HRLT Resistivity 1 (RLA1) (OHMM)
0 25	0 8000	0.2 2000
HLDS Caliper (LCAL) (IN)		HRLT Resistivity 2 (RLA2) (OHMM)
0 20		0.2 2000
Invasion Diameter (DI_HRLT) (IN)		HRLT Resistivity 3 (RLA3) (OHMM)
0 50		0.2 2000
		HRLT Resistivity 4 (RLA4) (OHMM)
		0.2 2000
		HRLT Resistivity 5 (RLA5) (OHMM)
		0.2 2000
		HRLT Mud Resistivity (RM_HRLT) (OHMM)
		0.02 200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0.25	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Eccentered	
SHT	Surface Hole Temperature	20	DEGC
EDTC-B: Enhanced DTS Cartridge			
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
DIR: Directional Survey Computation			
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	0	M
TIVD	TVD of Tie-in Point	0	M
System and Miscellaneous			
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	-4496.0	M
MST	Mud Sample Temperature	-50000.00	DEGC
PP	Playback Processing	NORMAL	
TD	Total Depth	4704	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 13-Oct-2011 13:11

OP System Version: 19C0-187

MSS_LDEO-DEBIT	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	19C0-187		

Input DLIS Files

DEFAULT	Flip_MSS_LDEO_HRLA_055LUP	PRODUCER	13-Oct-2011 12:57	4699.7 M	4569.0 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_060PUP	FN:57	PRODUCER	13-Oct-2011 13:11	
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Up Log

MAXIS Field Log

Company: Lamont Doherty Well: Expedition 336, Site U1382A

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_030LUP	FN:29	PRODUCER	09-Oct-2011 09:52	4700.0 M	4617.6 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_057PUP	FN:54	PRODUCER	13-Oct-2011 13:02	204.2 M	122.2 M
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OP System Version: 19C0-187

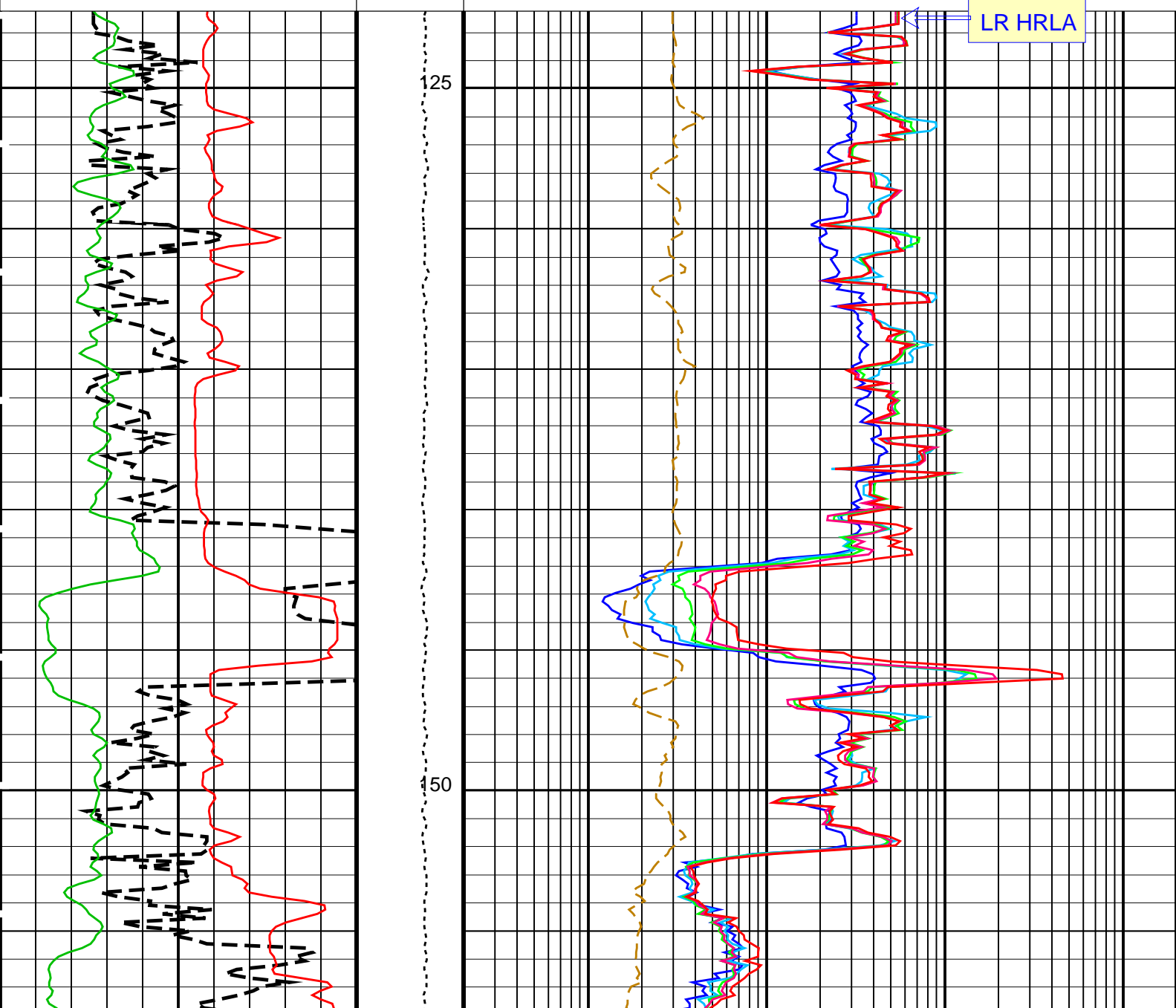
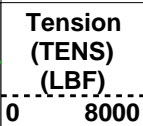
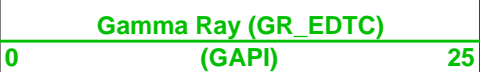
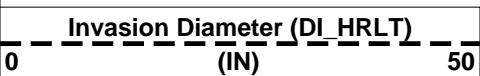
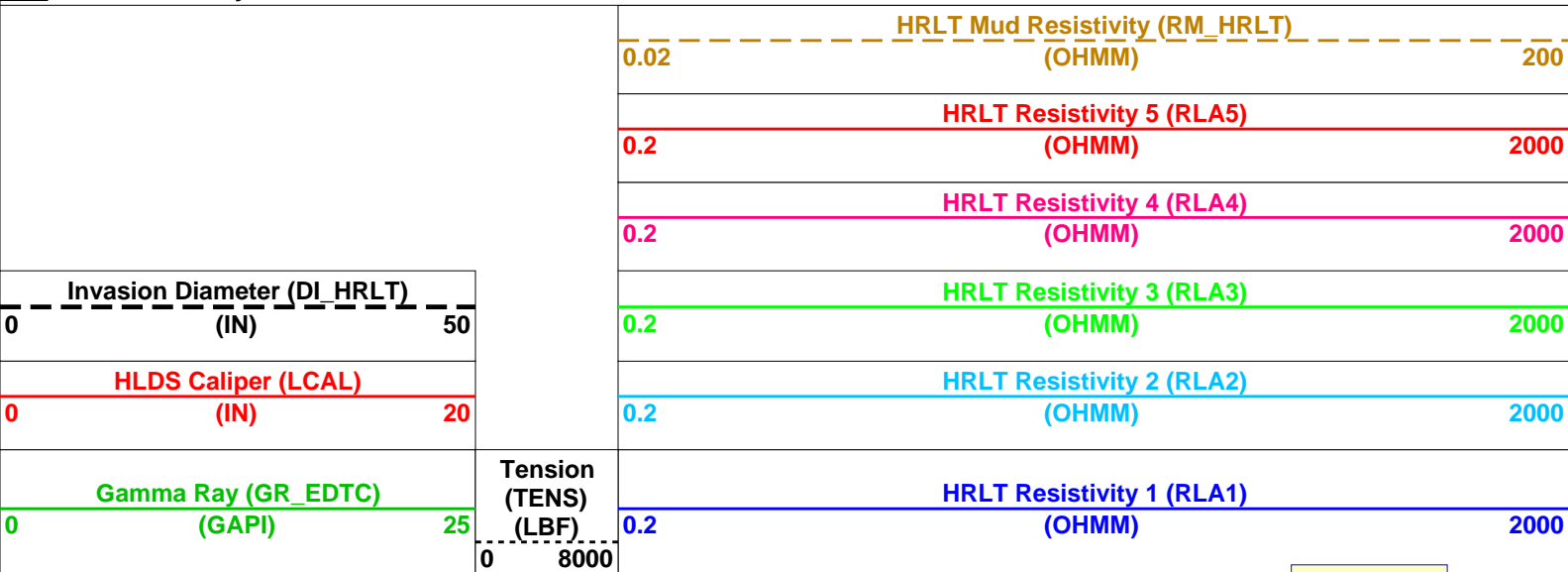
MSS_LDEO-DEBIT 19C0-187
HLDS 19C0-187
EDTC-B 19C0-187

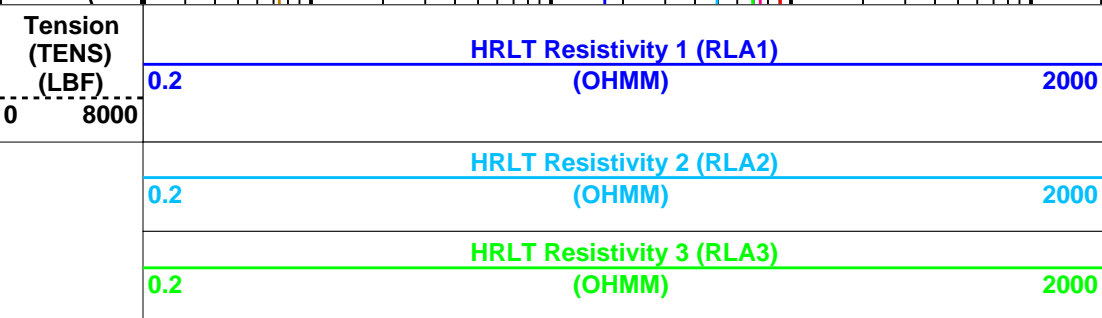
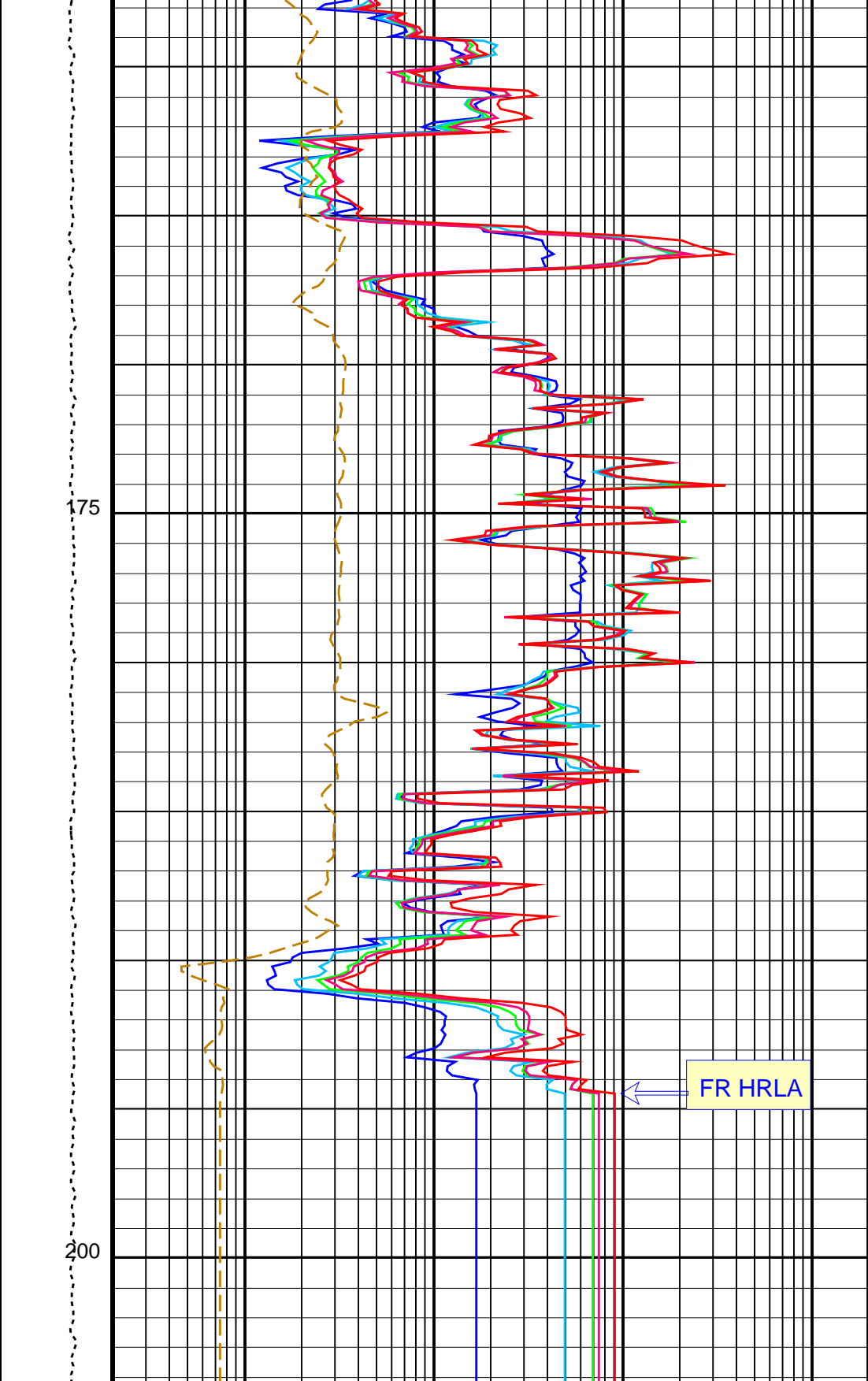
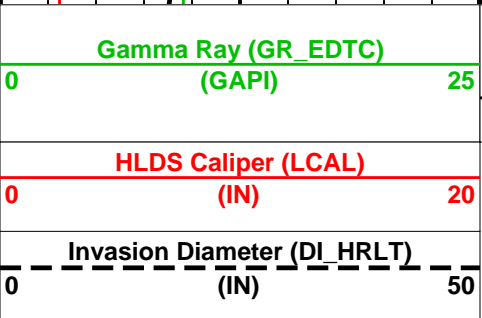
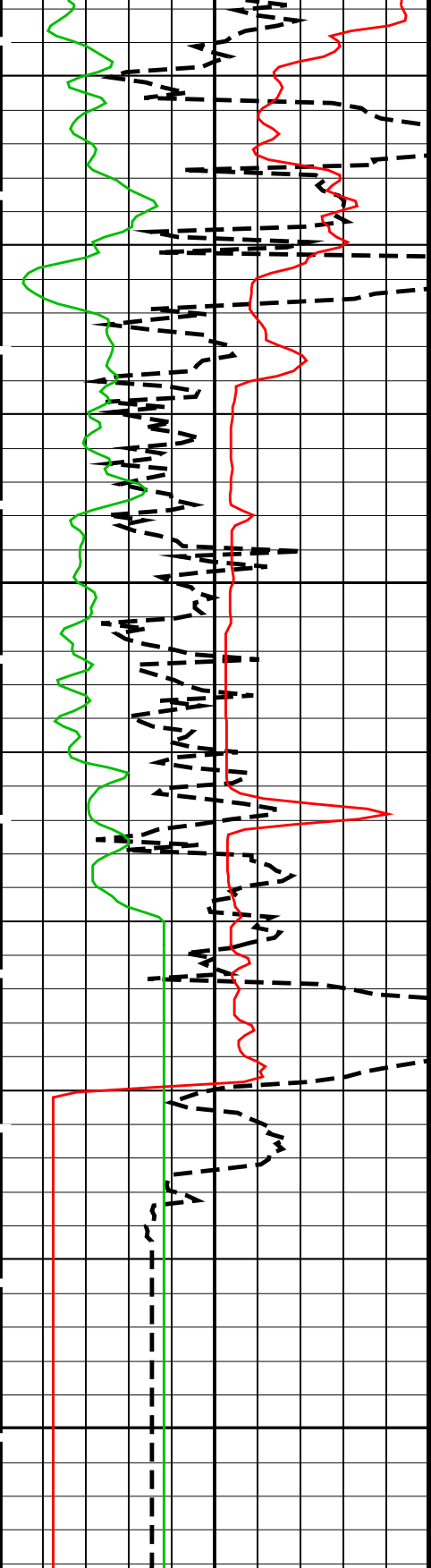
HRLT-B
LDSC-B

19C0-187
19C0-187

PIP SUMMARY

Time Mark Every 60 S





0.2	(OHMM)	2000
HRLT Resistivity 5 (RLA5)		
0.2	(OHMM)	2000
HRLT Mud Resistivity (RM_HRLT)		
0.02	(OHMM)	200

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
PROGINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0.25	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Eccentered	
SHT	Surface Hole Temperature	20	DEGC
EDTC-B: Enhanced DTS Cartridge			
BHT	Bottom Hole Temperature (used in calculations)	100	DEGC
GCSE	Generalized Caliper Selection	LCAL	
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
SHT	Surface Hole Temperature	20	DEGC
DIR: Directional Survey Computation			
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	0	M
TIVD	TVD of Tie-in Point	0	M
System and Miscellaneous			
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	-4495.5	M
MST	Mud Sample Temperature	-50000.00	DEGC
PP	Playback Processing	NORMAL	
TD	Total Depth	4704	M

Format: HRLT Vertical Scale: 1:200 Graphics File Created: 13-Oct-2011 13:02

OP System Version: 19C0-187

MSS_LDEO-DEBIT	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
EDTC-B	19C0-187		

Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_030LUP	FN:29	PRODUCER	09-Oct-2011 09:52	4700.0 M	4617.6 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_057PUP	FN:54	PRODUCER	13-Oct-2011 13:02
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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: 2-Oct-2011 13:21

HRLT M0-M1 Voltage Plus – 0	0	N/A	-318.9	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-328.5	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-331.0	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-335.3	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-325.0	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-321.5	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	320.9	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 7	0	N/A	-322.7	N/A	N/A	9.681	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12

Before: 2-Oct-2011 13:21

HRLT M1-M2 Voltage Plus – 0	0	N/A	1754	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1806	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1815	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1839	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1784	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1767	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1771	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23

Before: 2-Oct-2011 13:21

HRLT M2-M3 Voltage Plus – 0	0	N/A	1741	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1805	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1815	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1843	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1781	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 5	0	N/A	1764	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 6	0	N/A	-1759	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V34

Before: 2-Oct-2011 13:21

HRLT A3-A4 Voltage Plus – 0	0	N/A	68360	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 1	0	N/A	70690	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 2	0	N/A	71350	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 3	0	N/A	72740	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 4	0	N/A	70260	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 5	0	N/A	69620	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 6	0	N/A	-67930	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V45

Before: 2-Oct-2011 13:21

HRLT A4-A5 Voltage Plus – 0	0	N/A	68630	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 1	0	N/A	71050	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 2	0	N/A	71720	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 3	0	N/A	73060	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 4	0	N/A	70540	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 5	0	N/A	69890	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 6	0	N/A	-68290	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus – 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT V56

Before: 2-Oct-2011 13:21

HRLT A5-A6 Voltage Plus – 0	0	N/A	68530	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 1	0	N/A	70780	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 2	0	N/A	71480	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 3	0	N/A	72870	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 4	0	N/A	70400	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 5	0	N/A	69770	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 6	0	N/A	-68010	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus – 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT VTP

Before: 2-Oct-2011 13:21

HRLT Torpedo-M0 Voltage – 0	0	N/A	-68210	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage – 1	0	N/A	-71110	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage – 2	0	N/A	-71760	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage – 3	0	N/A	-73150	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage – 4	0	N/A	-70610	N/A	N/A	2100	UV

HRLT Torpedo-M0 Voltage - 5	0	N/A	-69930	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68280	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD

Before: 2-Oct-2011 13:21

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68210	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71080	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-71750	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-73130	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-70600	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69930	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68270	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 2-Oct-2011 13:21

HRLT Source Current Plus - 0	0	N/A	284.5	N/A	N/A	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	N/A	N/A	8.520	UA

High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV

Before: 2-Oct-2011 13:21

HRLT Vertical Voltage PI - 0	0	N/A	-321.1	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-322.6	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-324.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-327.0	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-314.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-326.0	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	327.7	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	N/A	N/A	9.681	UV

Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement

Master: 16-Sep-2011 9:31 Before: 9-Oct-2011 6:05

SS Cs Resolution Bkg	9.000	7.738	7.751	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.115	8.045	N/A	N/A	1.800	%
LSW1 Background	100.0	90.00	87.67	N/A	N/A	3.000	CPS
LSW2 Background	100.0	79.46	79.42	N/A	N/A	3.000	CPS
LSW3 Background	200.0	182.4	182.0	N/A	N/A	6.000	CPS
LSW4 Background	250.0	223.0	223.6	N/A	N/A	7.500	CPS
LSW5 Background	600.0	526.1	526.6	N/A	N/A	18.00	CPS
SSW1 Background	100.0	84.99	86.00	N/A	N/A	3.000	CPS
SSW2 Background	200.0	147.1	146.8	N/A	N/A	6.000	CPS
SSW3 Background	500.0	413.1	412.6	N/A	N/A	15.00	CPS
SSW4 Background	270.0	220.0	221.5	N/A	N/A	8.100	CPS
SSW5 Background	200.0	157.9	157.2	N/A	N/A	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement

Master: 16-Sep-2011 9:31

LSW1 Aluminum	600.0	554.8	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	809.5	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	975.9	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	495.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	452.5	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2638	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7210	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	10070	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4124	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	502.8	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement

Master: 16-Sep-2011 9:31

LSW1 Iron	400.0	383.3	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	664.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	884.0	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	466.3	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	427.8	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1972	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	6170	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9403	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3878	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	460.6	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 2-Oct-2011 12:06









HLDS Caliper Small Ring	12.00	N/A	13.51	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.14	N/A	16.99	N/A	N/A	N/A	IN

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration								
Before: 9-Oct-2011 6:01								
EDTC Z-Axis Acceleration	9.810	N/A	9.816	N/A	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration								
Before: 2-Oct-2011 11:53								
Gamma Ray (Jig – Bkg)	162.1	N/A	162.1	N/A	N/A	14.74		GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00		GAPI









High Resolution Laterolog Array – B / Equipment Identification

Primary Equipment:
HRLT Sonde HRLS – B




Auxiliary Equipment:
HRLT lower Housing HRLH – B
HRLT Lower Cartridge HRLC – B
HRLT upper Housing HRUH – B
HRLT Upper Cartridge HRUC – B

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M01							
Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-318.9	-322.7	-280.7	-379.7	
1	Before		-328.5	-322.7	-280.7	-379.7	
2	Before		-331.0	-322.7	-280.7	-379.7	
3	Before		-335.3	-322.7	-280.7	-379.7	
4	Before		-325.0	-322.7	-280.7	-379.7	
5	Before		-321.5	-322.7	-280.7	-379.7	
6	Before		320.9	322.7	379.7	280.7	
7	Before		-322.7	-322.7	-280.7	-379.7	
		(Minimum) (Nominal) (Maximum)					

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M12							
Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		1754	1781	2095	1549	
1	Before		1806	1781	2095	1549	
2	Before		1815	1781	2095	1549	
3	Before		1839	1781	2095	1549	
4	Before		1784	1781	2095	1549	
5	Before		1767	1781	2095	1549	
6	Before		-1771	-1781	-1549	-2095	
7	Before		1781	1781	2095	1549	
		(Minimum) (Nominal) (Maximum)					

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT M23							
Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		1741	1781	2095	1549	
1	Before		1805	1781	2095	1549	
2	Before		1815	1781	2095	1549	

3	Before		1843	1781	2095	1549
4	Before		1781	1781	2095	1549
5	Before		1764	1781	2095	1549
6	Before		-1759	-1781	-1549	-2095
7	Before		1781	1781	2095	1549
(Minimum) (Nominal) (Maximum)						

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68360	70000	82360	60900
1	Before		70690	70000	82360	60900
2	Before		71350	70000	82360	60900
3	Before		72740	70000	82360	60900
4	Before		70260	70000	82360	60900
5	Before		69620	70000	82360	60900
6	Before		-67930	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68630	70000	82360	60900
1	Before		71050	70000	82360	60900
2	Before		71720	70000	82360	60900
3	Before		73060	70000	82360	60900
4	Before		70540	70000	82360	60900
5	Before		69890	70000	82360	60900
6	Before		-68290	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68530	70000	82360	60900
1	Before		70780	70000	82360	60900
2	Before		71480	70000	82360	60900
3	Before		72870	70000	82360	60900
4	Before		70400	70000	82360	60900
5	Before		69770	70000	82360	60900
6	Before		-68010	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VTP							
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68210	-70000	-60900	-82360	
1	Before		-71110	-70000	-60900	-82360	
2	Before		-71760	-70000	-60900	-82360	
3	Before		-73150	-70000	-60900	-82360	
4	Before		-70610	-70000	-60900	-82360	
5	Before		-69930	-70000	-60900	-82360	
6	Before		68280	70000	82360	60900	
7	Before		-70000	-70000	-60900	-82360	
		(Minimum) (Nominal) (Maximum)					

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT VBD							
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68210	-70000	-60900	-82360	
1	Before		-71080	-70000	-60900	-82360	
2	Before		-71750	-70000	-60900	-82360	
3	Before		-73130	-70000	-60900	-82360	
4	Before		-70600	-70000	-60900	-82360	
5	Before		-69930	-70000	-60900	-82360	
6	Before		68270	70000	82360	60900	
7	Before		-70000	-70000	-60900	-82360	
		(Minimum) (Nominal) (Maximum)					

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT ISO							
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum	
0	Before		284.5	284.0	334.1	247.0	
1	Before		281.1	281.1	330.7	244.4	
2	Before		281.1	281.1	330.7	244.4	
3	Before		281.1	281.1	330.7	244.4	
4	Before		281.1	281.1	330.7	244.4	
5	Before		281.1	281.1	330.7	244.4	
6	Before		281.1	281.1	330.7	244.4	
7	Before		281.1	281.1	330.7	244.4	
		(Minimum) (Nominal) (Maximum)					

Before: 2-Oct-2011 13:21

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT MV							
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-321.1	-322.7	-280.7	-379.7	
1	Before		-322.6	-322.7	-280.7	-379.7	
2	Before		-324.3	-322.7	-280.7	-379.7	
3	Before		-327.0	-322.7	-280.7	-379.7	

4	Before		-314.3	-322.7	-280.7	-379.7
5	Before		-326.0	-322.7	-280.7	-379.7
6	Before		327.7	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
		(Minimum) (Nominal) (Maximum)				

Before: 2-Oct-2011 13:21

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	2397

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		7.738	Master		8.115	Master		90.00
Before		7.751	Before		8.045	Before		87.67
	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		79.46	Master		182.4	Master		223.0
Before		79.42	Before		182.0	Before		223.6
	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		526.1	Master		84.99	Master		147.1
Before		526.6	Before		86.00	Before		146.8
	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		413.1	Master		220.0	Master		157.9
Before		412.6	Before		221.5	Before		157.2
	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: 16-Sep-2011 9:31

Before: 9-Oct-2011 6:05

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

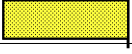


Primary Equipment:

EDTC Gamma Ray Detector	EDTG - A/B	77693
Enhanced DTS Cartridge	EDTC - B	8529

Auxiliary Equipment:

EDTC Housing	EDTH - B	8528
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Enhanced DTS Cartridge Wellsite Calibration		
Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.816
	9.610 (Minimum)	9.810 (Nominal)
		10.01 (Maximum)
Before: 9-Oct-2011 6:01		

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		6.159	Before		162.1	Before		165.0	
	0 (Minimum)	30.00 (Nominal)		147.4 (Minimum)	162.1 (Nominal)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 2-Oct-2011 11:53									

Company: **Lamont Doherty**

Schlumberger

Well: **Expedition 336, Site U1382A**

Field: **North Pond**

Rig: **JOIDES Resolution**

Country: **USA**

HLRA
(High-Resolution Laterolog Array)