Schlumberger

Company: **Lamont Doherty**

Well: **Expedition 344, Site U1413C**
Field: **Costa Rica Seismogenesis (CRISP−A2)**
Rig: **JOIDES Resolution** Ocean: **Pacific**

Rig: JOIDES Resolution
Field: Costa Rica Seismogenesis (CRIS
Location: Latitude: N 8* 44.4482'
Well: Expedition 344, Site U1413C
Company: Lamont Doherty

Phasor Induction
Natural Gamma Ray
HLDS Caliper

LOCATION

Latitude: N 8* 44.4482'
Longitude: W 84* 6.7993'

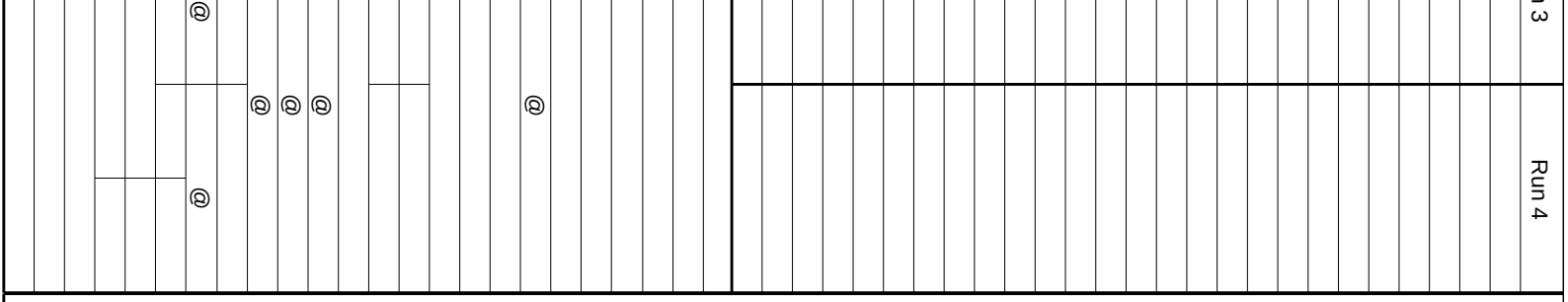
Elev.: K.B. 11.00 m
G.L. −540.00 m
D.F. 11.00 m

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

API Serial No.	Max. Hole Devi. 0 deg	Longitude W 84.1133	Latitude N 8.7408

			Run 1	Run 2	Run
Logging Date		30−Nov−2012			
Run Number		1			
Depth Driller		582 m			
Schlumberger Depth		186 m			
Bottom Log Interval		186 m			
Top Log Interval		0 m			
Casing Driller Size @ Depth		5.500 in @ 103 m	@	@	
Casing Schlumberger		102 m			
Bit Size		9.875 in			
Type Fluid In Hole		Seawater Gel			
MUD Density	Viscosity	1.25818 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	@ 19	@ 19	@	@
Maximum Recorded Temperatures		19 degC			
Circulation Stopped	Time	30−Nov−2012	9:00		
Logger On Bottom	Time	30−Nov−2012	13:21		
Unit Number	Location	625003	Houston		
Recorded By		K. Swain			
Witnessed By		A. Malinverno, S. Saito			

			Run 1	Run 2	Run
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

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OTHER SERVICES1	OTHER SERVICES2
OS1: FMS	OS1:
OS2:	OS2:
OS3: Caliper (HLDS)	OS3:
OS4:	OS4:
OS5: UBI	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Hole was drilled with a 9 7/8" RCB bit to TDD of 1133 mbrf.	
Tools bridged at 737mbrf, and logs obtained from that depth and up to drillpipe	
and seafloor.	
Phasor Induction resistivity not valid inside drill pipe.	
HLDS density not available as density source was not installed per IODP	
request due to poor hole conditions to reduce risk.	
Downlog used for repeat section.	
All logs recorded via wireline thru 5−5.5" drillpipe and RCB coring BHA	
consisting of a bit release sub, Kinley sub, drill collars. The bit was release	
d at TD prior to logging.	

RUN 1		RUN 2	
SERVICE ORDER #:		SERVICE ORDER #:	
PROGRAM VERSION:	19C0−187	PROGRAM VERSION:	
FLUID LEVEL:	0 m	FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−U 616008
WITM (EDTS)−A

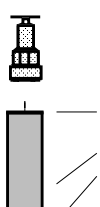
DOWNHOLE EQUIPMENT

LEH−MT
LEH−MT 101

MDSB_EDTC
Mud Tempe

EDTC−B
EDTH−B 8528
EDTC−B 8529
EDTG−A/B 77693

CTEM
Gamma Ray
EFTB DIAG



23.14

22.18

TelStatus
EDTCB Ele 20.20

HNGS−BA 20.20
HNGS−BA 194
HNSH−BA 205
Upper_1 19.49
Lower_2 19.28

HNGC−B 17.70
HNGH−A 115
HNGC−B 300
HNGC Stat 17.16

LDSC−B 16.63
LDSH−A 326
LDSC−B 521
LDSC Stat 16.10

HLDS 15.56
GSR−Z 8113
HLDV−D 45
HLDS−D 45
HEH−H 47
HLDP−C 45
Caliper
SS LS Status 11.51

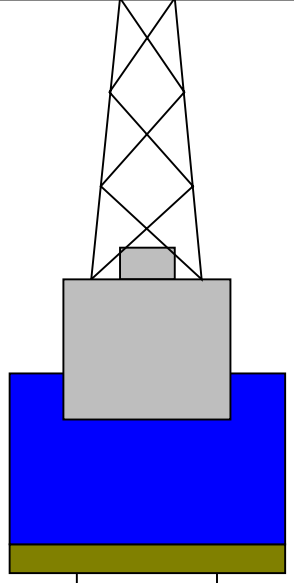
DTA−A 10.74
ECH−KE 8456
DTA−A 8453

DIT−E 9.52
DIC−EB 171
MIH−ZA 342
DIS−HB 129
SP 3.15
Deep Ind 2.90
Aux Meas SFL 1.98
Med Ind 1.83
ACCZ
Status HV DF
Tension 0.00

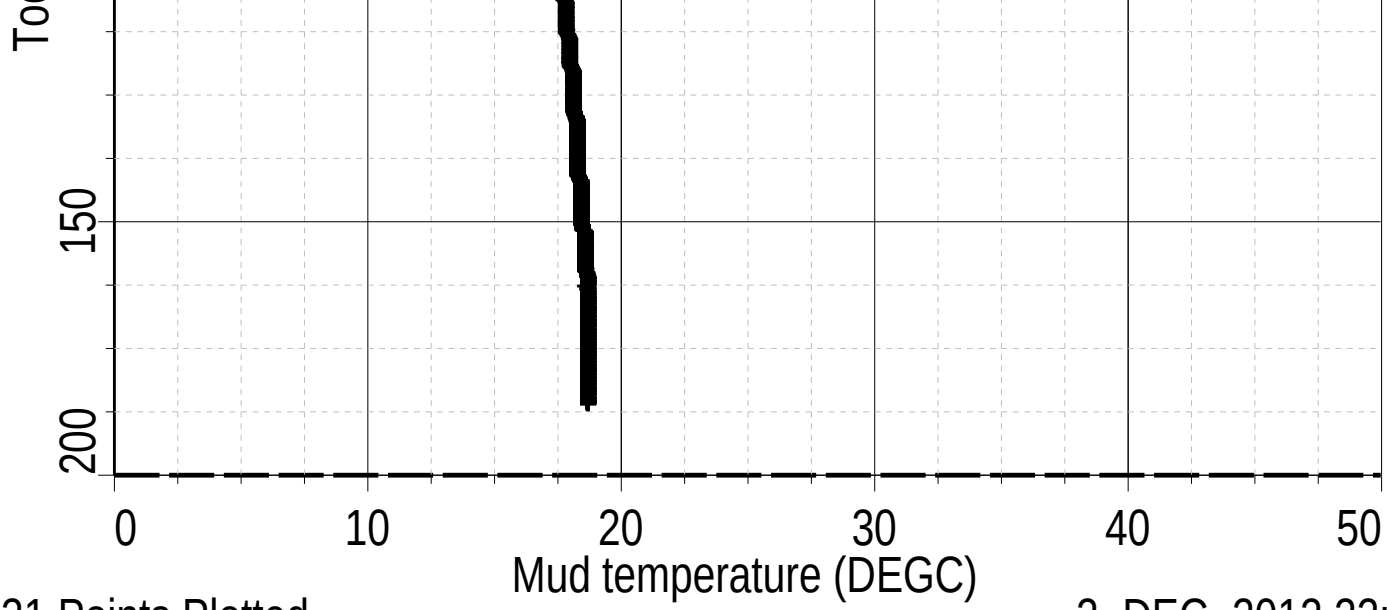
TOOL ZERO

MAXIMUM STRING DIAMETER 3.75 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

Kelly Bushing Elevation		−551					
Derrick Floor Elevation		−551					
Mean Sea Level		−540					
				0	7.75	4.1	Sea Floor
				0	8.25	3.80	Sea Floor
				103	9.875		Open Hole
				582.2			Total Depth

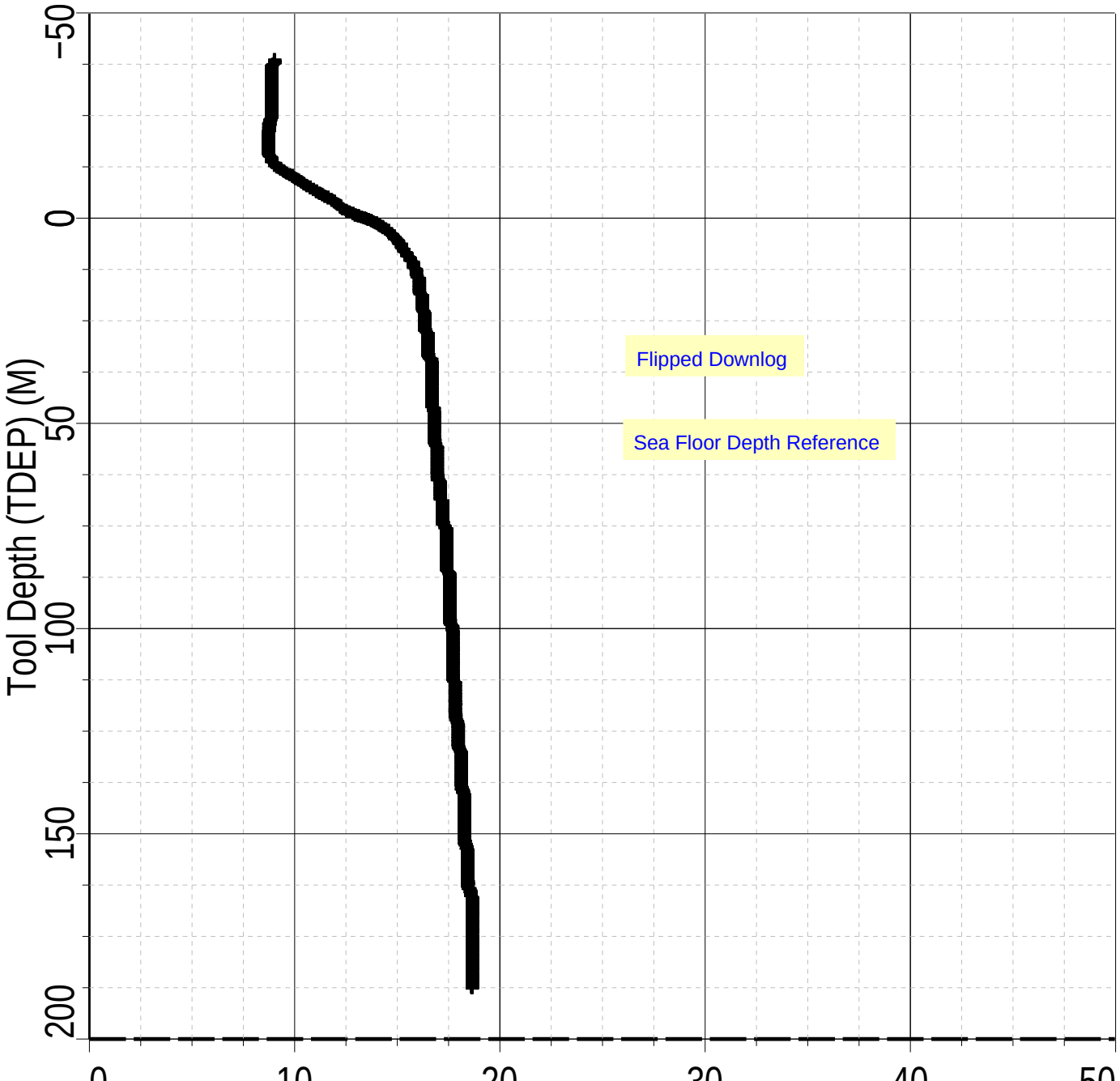
Index: 185.9 – −16.8 M



1331 Points Plotted

2−DEC−2012 22:43

Index: 187.6 − −38.7 M



0 10 20 30 40 50

Mud temperature (DEGC)

1486 Points Plotted 2−DEC−2012 22:20

Input DLIS Files

DEFAULT	PI_LDL_NGS_014LUP	FN:22	PRODUCER	30−Nov−2012 18:21	736.1 M	533.2 M

Output DLIS Files

DEFAULT	PI_LDL_NGS_055PUP	FN:83	PRODUCER	02−Dec−2012 22:42	185.9 M	−16.8 M

OP System Version: 19C0−187

DIT−E	19C0−187	DTA−A	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

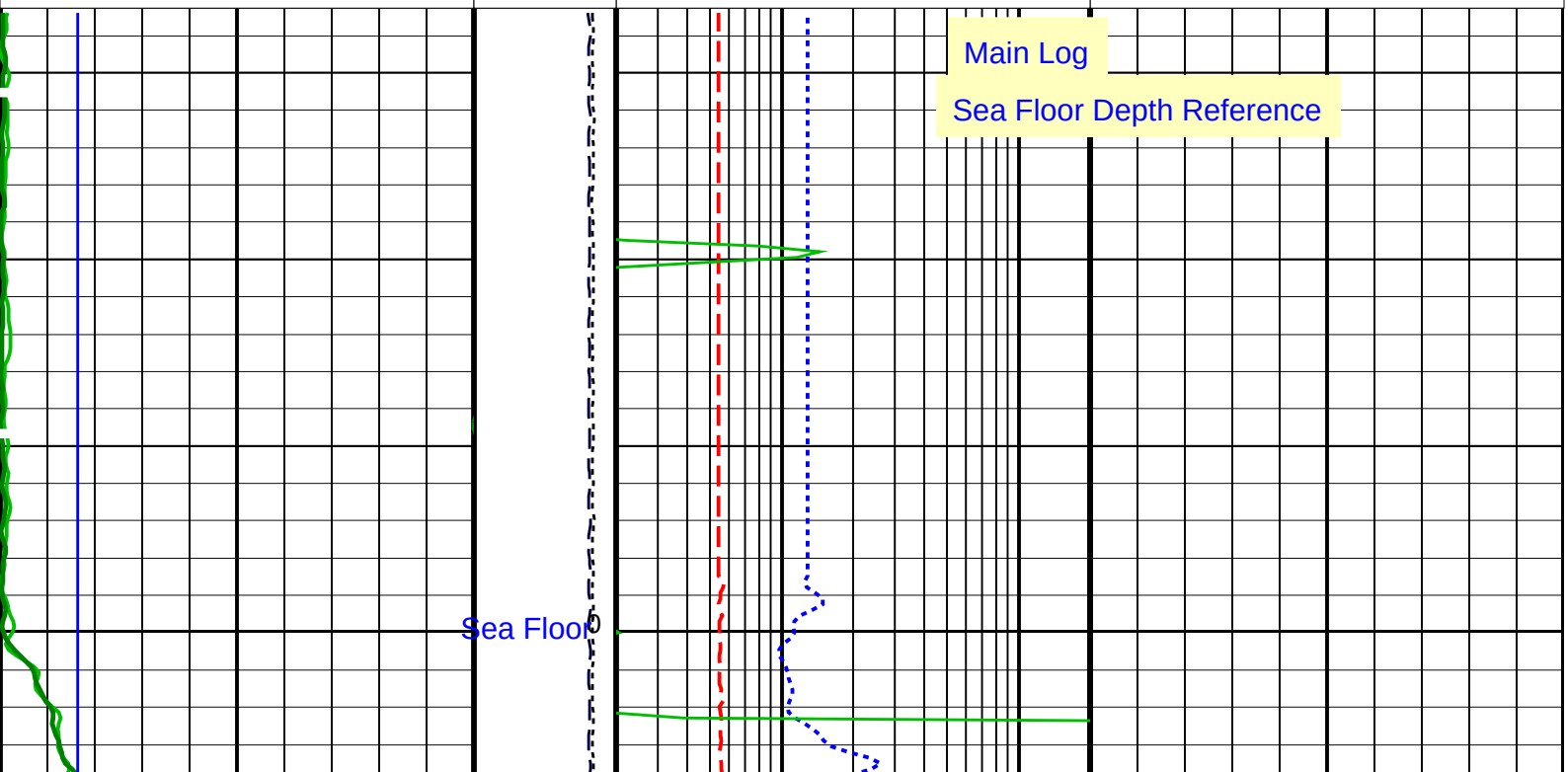
Changed Parameter Summary

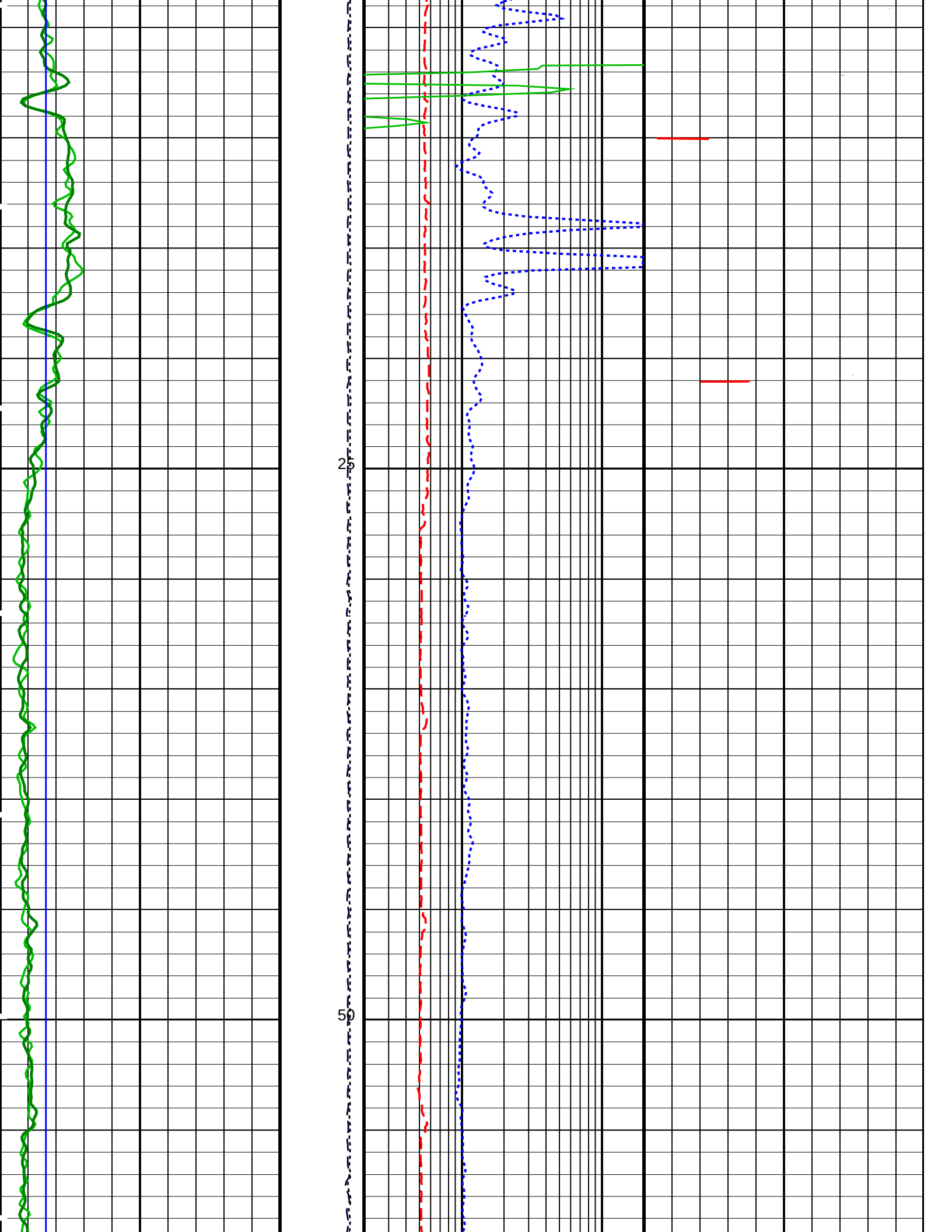
DLIS Name	New Value	Previous Value	Depth & Time
GCSE	LCAL	BS	174.7 22:42:58
	BS	LCAL	114.8 22:43:29

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 75		SFL Unaveraged (SFLU) 0.2 (OHMM) 20	HLDS HR Long Spaced Photoelectric Effect (HLEF) 0 (−−−−) 10
Gamma Ray (GR_EDTC) 0 (GAPI) 75	Calibrated Downhole Force (CDF) (LBF) 5000 0	Medium Induction Phasor−processed Resistivity (IMPH) 0.2 (OHMM) 20	HLDS HR Bulk Density Correction (HBDC) −0.25 (G/C3) 0.25
HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	Deep Induction Phasor−processed Resistivity (IDPH) 0.2 (OHMM) 20	HLDS HR Bulk Density (HROM) 0 (G/C3) 4

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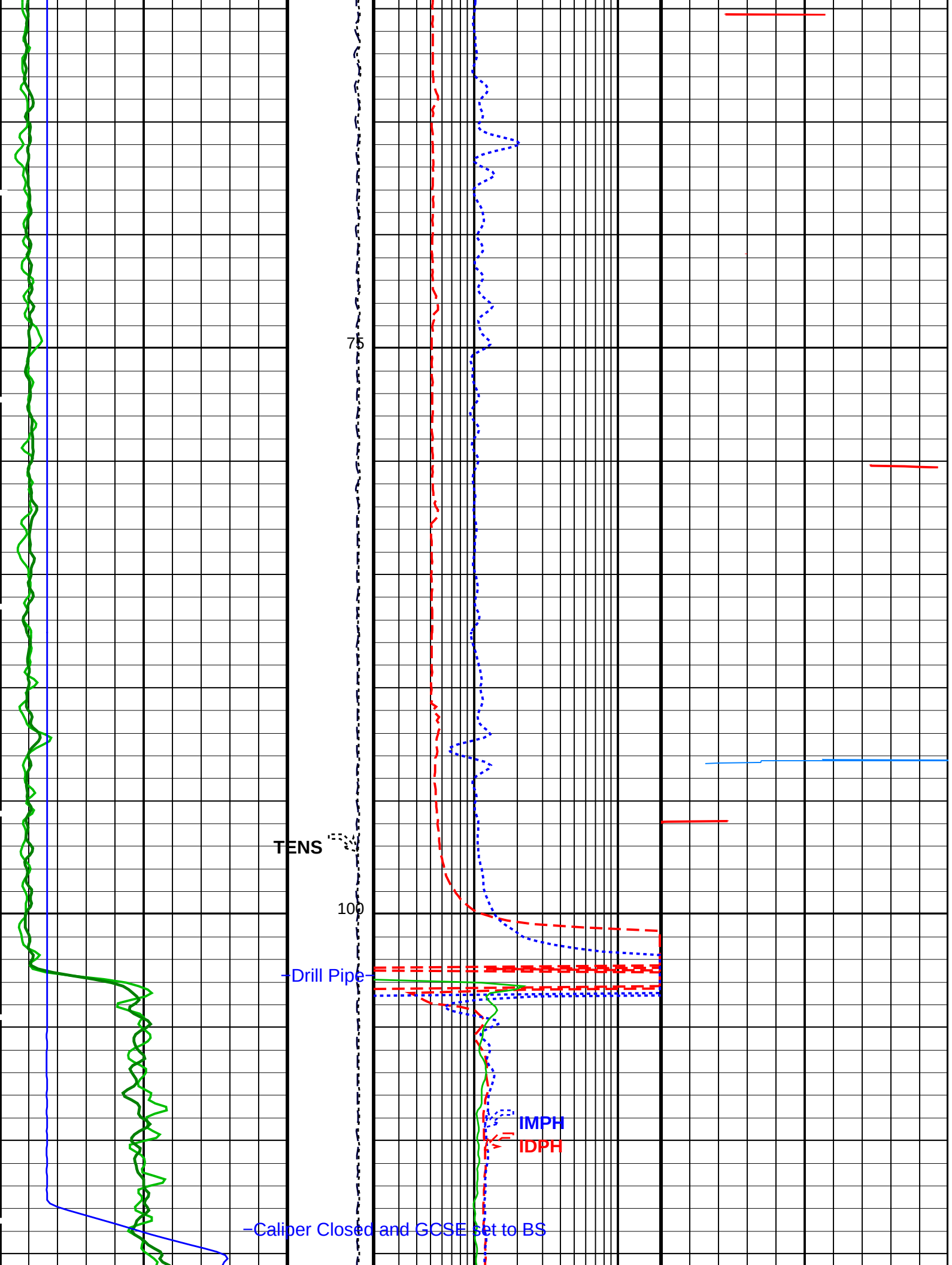
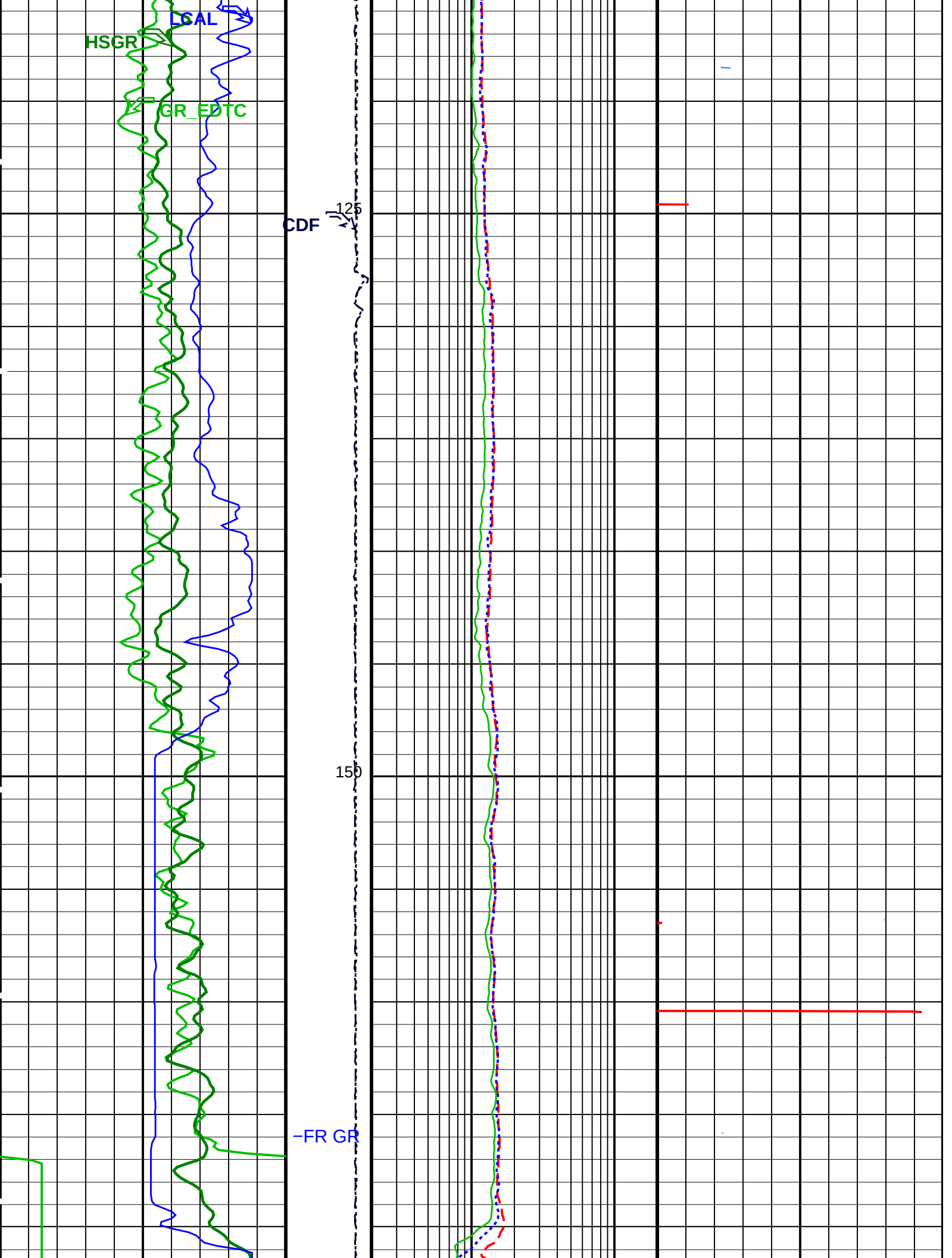
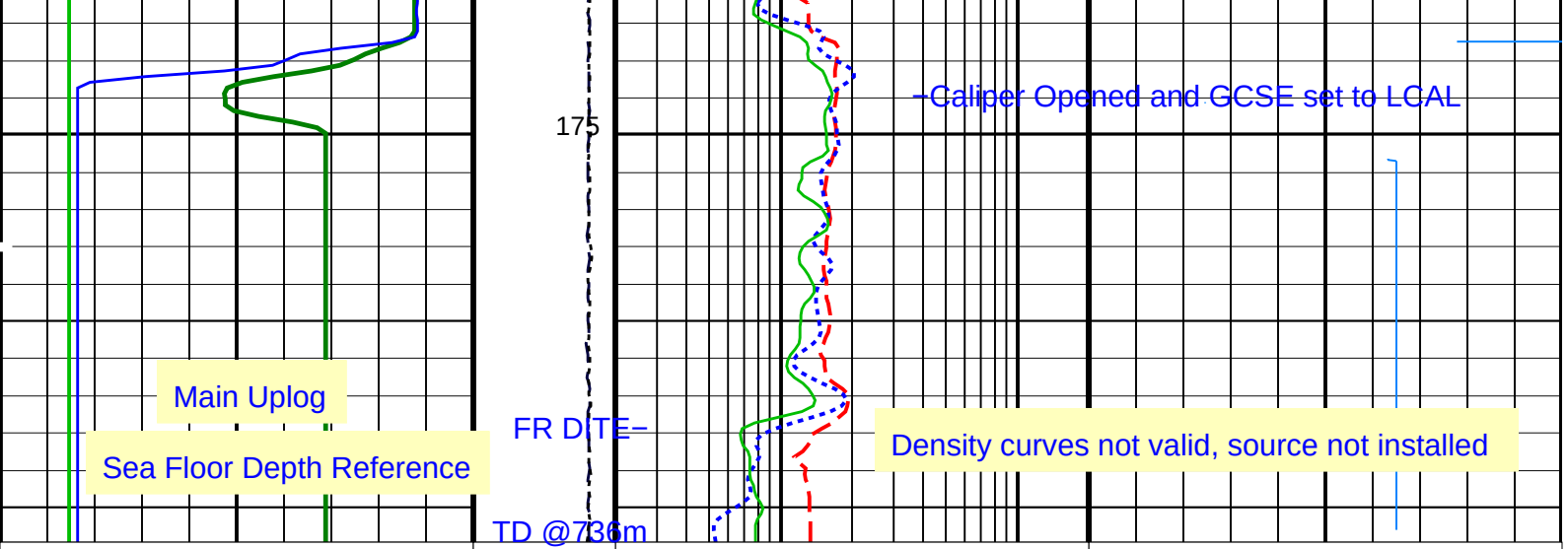
50


75
TENS
100
Drill Pipe
IMPH
IDPH
Caliper Closed and GCSE set to BS


LCAL
HSGR
GR_EDTC
CDF
125
150
FR GR



HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	Deep Induction Phasor−processed Resistivity (IDPH) 0.2 (OHMM) 20	HLDS HR Bulk Density (HROM) 0 (G/C3) 4
Gamma Ray (GR_EDTC) 0 (GAPI) 75	Calibrated Downhole Force (CDF) (LBF) 5000 0	Medium Induction Phasor−processed Resistivity (IMPH) 0.2 (OHMM) 20	HLDS HR Bulk Density Correction (HBDC) −0.25 (G/C3) 0.25
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 75		SFL Unaveraged (SFLU) 0.2 (OHMM) 20	HLDS HR Long Spaced Photoelectric Effect (HLEF) 0 (−−−−) 10

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DIT−E: Dual Induction − E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	22	DEGF
DGF1	Deep 10 kHz Gain Factor	0.983944	
DGF2	Deep 20 kHz Gain Factor	0.994954	
DGF4	Deep 40 kHz Gain Factor	1.00592	
DPH1	Deep 10 kHz Phase Shift	0.168276	DEG
DPH2	Deep 20 kHz Phase Shift	0.0121563	DEG
DPH4	Deep 40 kHz Phase Shift	−1.03419	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	41.5527	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	17.216	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	5.26232	MM/M
DRIM	DIT−E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT−E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	254.472	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	139.586	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	80.4475	MM/M
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT−E Induction Frequency Selector	20	
IPHA	DIT−E Phasor Processing Mode	ALL	
IPRO	DIT−E Induction Processing Selector	PHASOR	
ISSBAR	Barite Mud Switch	BARITE	
ITEN	DIT−E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	0.989571	
MGF2	Medium 20 kHz Gain Factor	0.993379	
MGF4	Medium 40 kHz Gain Factor	1.0135	
MPH1	Medium 10 kHz Phase Shift	−0.203288	DEG
MPH2	Medium 20 kHz Phase Shift	−0.886203	DEG

MPH4	Medium 40 kHz Phase Shift	−2.22812	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	30.326	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	9.52242	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	0.86266	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	345.689	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	182.2	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	117.66	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT−E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
HLDS: Hostile Litho−Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.71	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	22	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.00453673	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.995422	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.00182	
EDTC−B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	22	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	−50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	

ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	10.750	IN
CWEI	Casing Weight	43.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	−550.0	M
FLEV	Fluid Level	0.00	M
MST	Mud Sample Temperature	−50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3740	FT
TDD	Total Depth − Driller	1133.00	M
TDL	Total Depth − Logger	737.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo Vertical Scale: 1:200 Graphics File Created: 02−Dec−2012 22:42

OP System Version: 19C0−187

DIT−E	19C0−187	DTA−A	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	PI_LDL_NGS_014LUP	FN:22	PRODUCER	30−Nov−2012 18:21	736.1 M	533.2 M

Output DLIS Files

DEFAULT	PI_LDL_NGS_055PUP	FN:83	PRODUCER	02−Dec−2012 22:42		

Input DLIS Files

DEFAULT	Flip_PI_LDL_NGS_044LUP		PRODUCER	02−Dec−2012 21:17	737.6 M	0.0 M

Output DLIS Files

DEFAULT	PI_LDL_NGS_050PUP	FN:78	PRODUCER	02−Dec−2012 22:18	187.6 M	−38.7 M

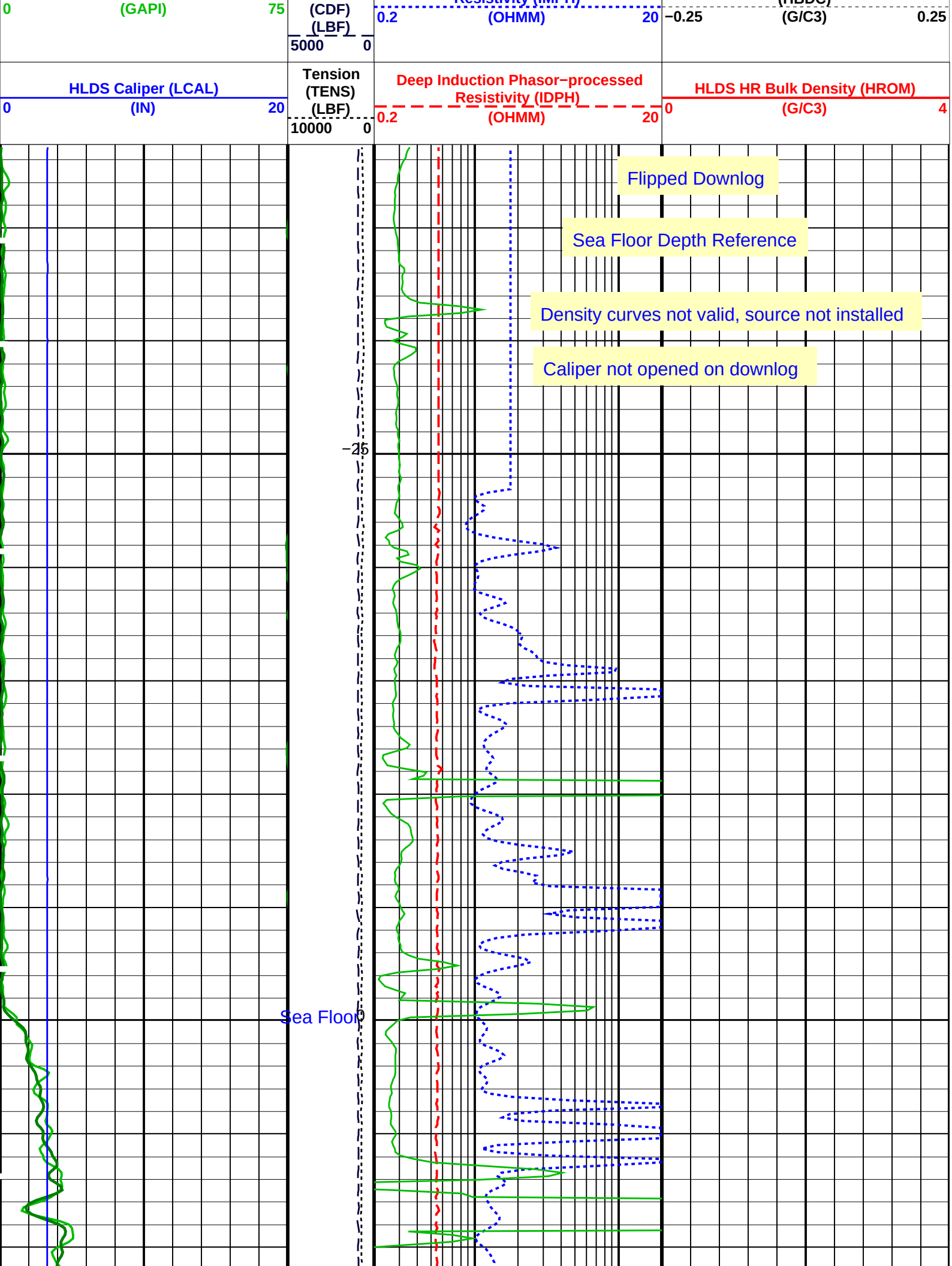
OP System Version: 19C0−187

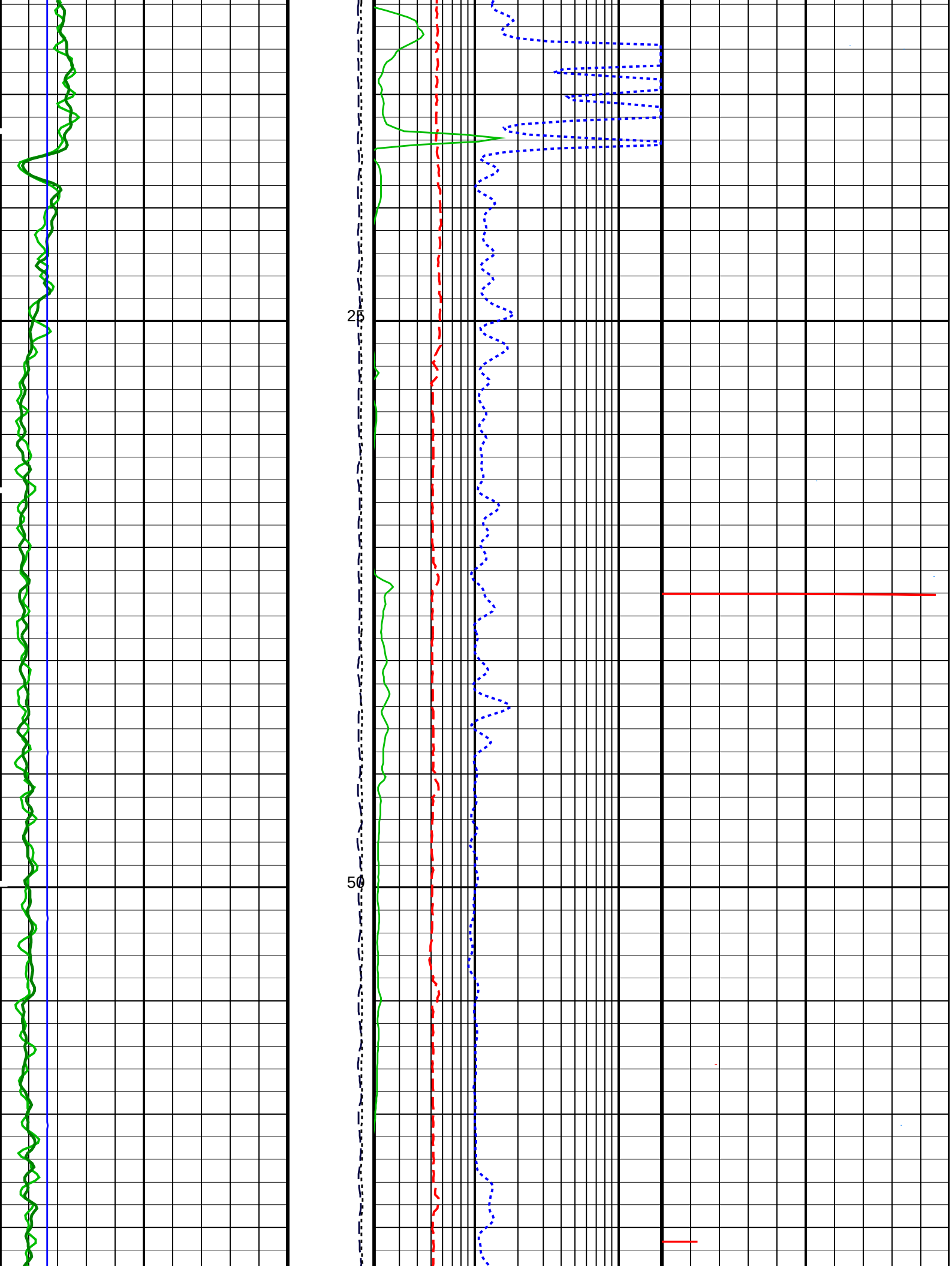
DIT−E	19C0−187	DTA−A	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

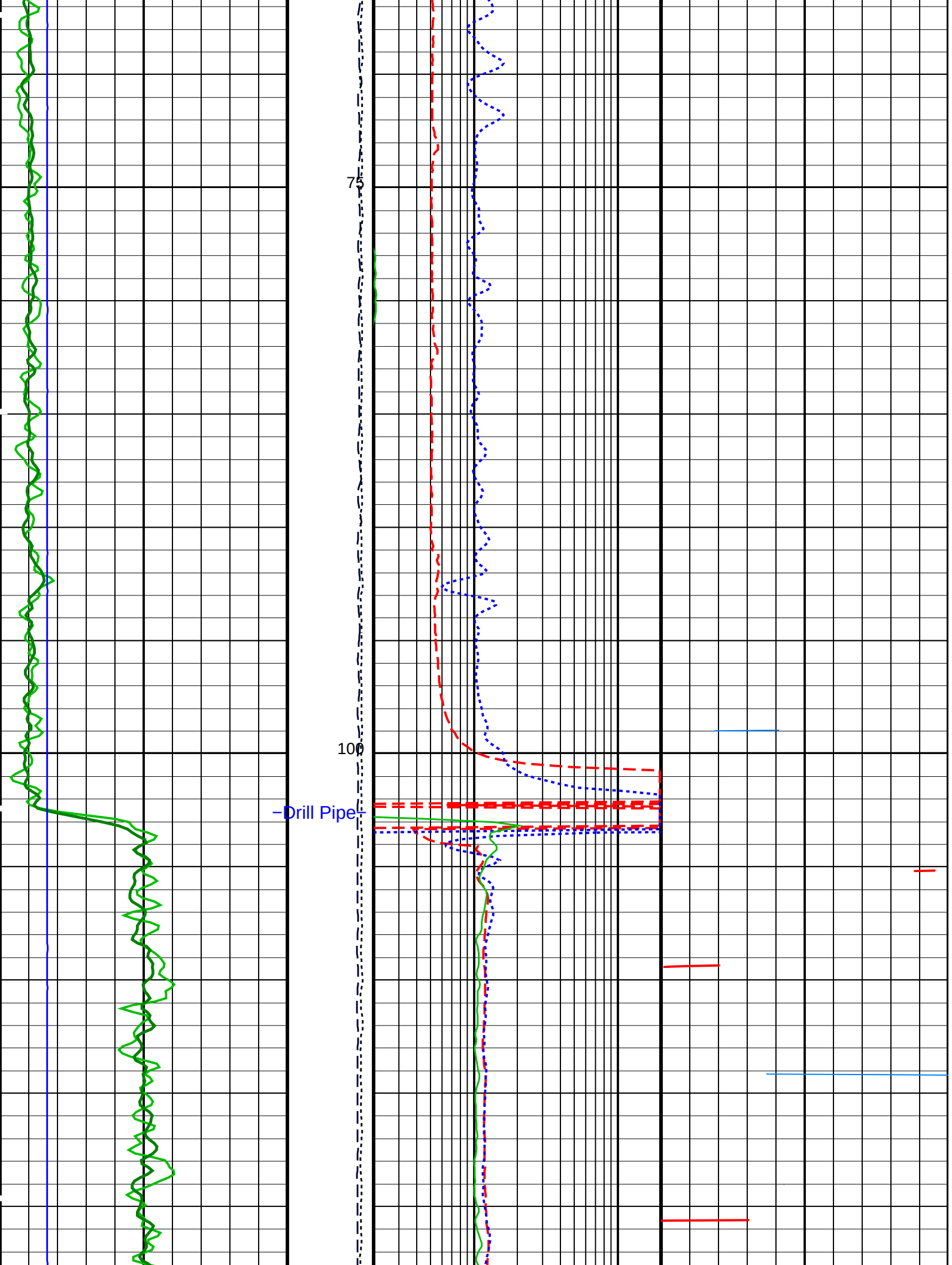
PIP SUMMARY

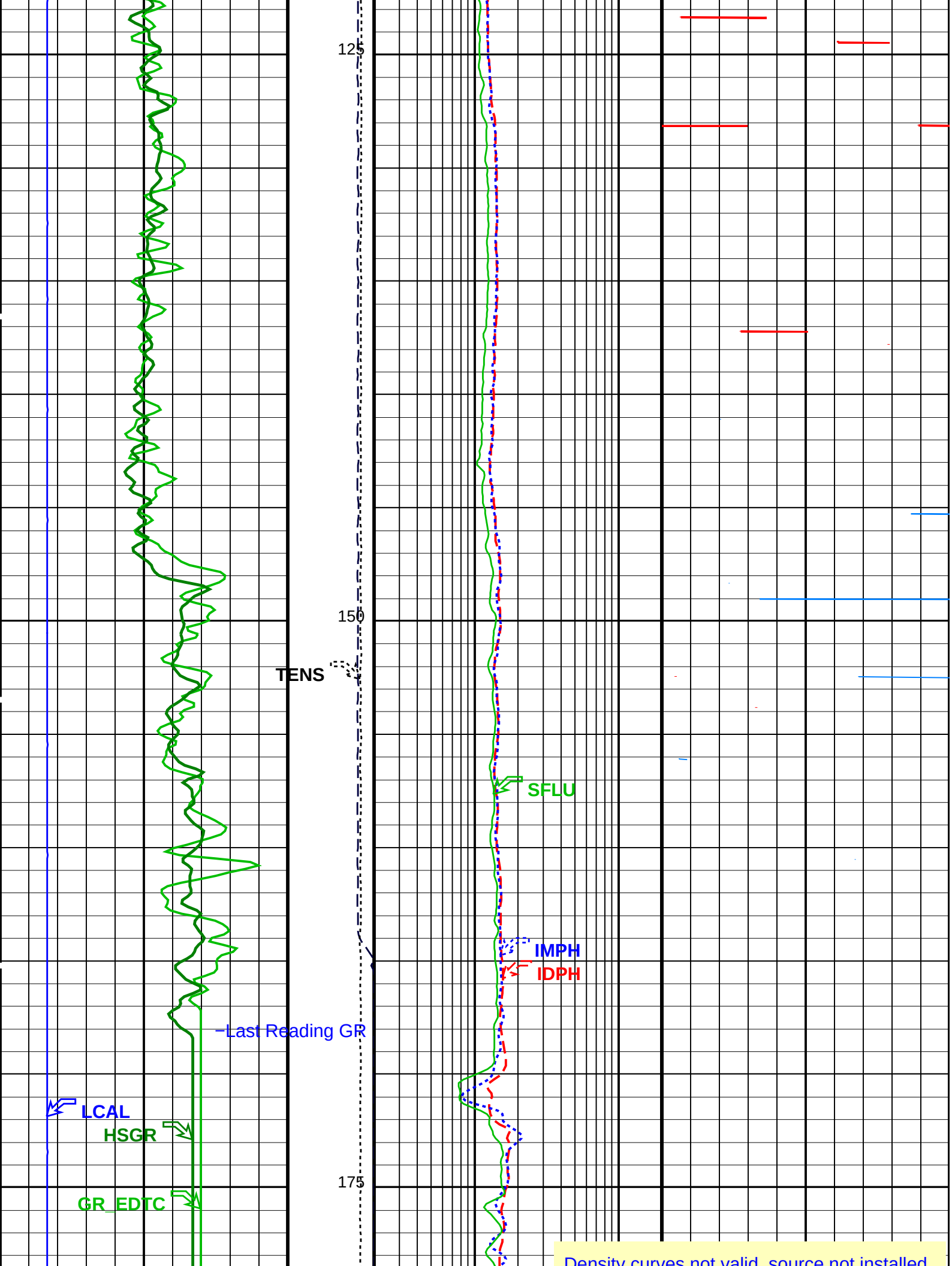
Time Mark Every 60 S

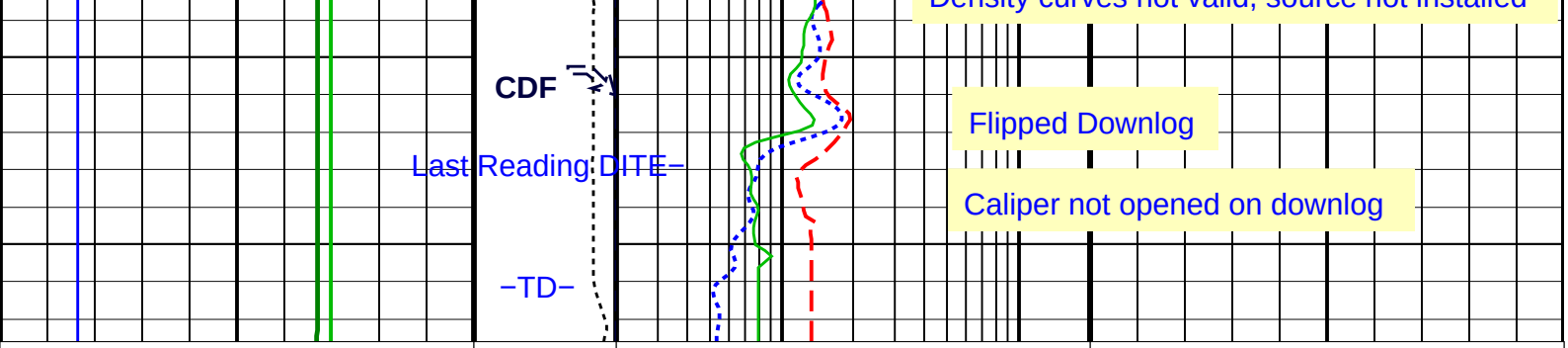
HNGS Spectroscopy Gamma Ray (HSGR)		SFL Unaveraged (SFLU)		HLDS HR Long Spaced Photoelectric Effect (HLEF)
0 (GAPI) 75		0.2 (OHMM) 20		0 (−−−−) 10
Gamma Ray (GR_EDTC)	Calibrated Downhole Force	Medium Induction Phasor−processed Resistivity (IMPH)		HLDS HR Bulk Density Correction (HBDC)


0
(GAPI)
75
(CDF)
(LBF)
5000
0
0.2
(OHMM)
20
−0.25
(G/C3)
0.25
HLDS Caliper (LCAL)
0
(IN)
20
Tension
(TENS)
(LBF)
10000
0
Deep Induction Phasor−processed
Resistivity (IDPH)
0.2
(OHMM)
20
HLDS HR Bulk Density (HROM)
0
(G/C3)
4
Flipped Downlog
Sea Floor Depth Reference
Density curves not valid, source not installed
Caliper not opened on downlog
−25
Sea Floor
0


25
50


75
100
−Drill Pipe−


125
150
175
TENS
SFLU
IMPH
IDPH
Last Reading GR
LCAL
HSGR
GR_EDTC
Density curves not valid, source not installed



HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	Deep Induction Phasor–processed Resistivity (IDPH) 0.2 (OHMM) 20	HLDS HR Bulk Density (HROM) 0 (G/C3) 4
Gamma Ray (GR_EDTC) 0 (GAPI) 75	Calibrated Downhole Force (CDF) (LBF) 5000 0	Medium Induction Phasor–processed Resistivity (IMPH) 0.2 (OHMM) 20	HLDS HR Bulk Density Correction (HBDC) –0.25 (G/C3) 0.25
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 75		SFL Unaveraged (SFLU) 0.2 (OHMM) 20	HLDS HR Long Spaced Photoelectric Effect (HLEF) 0 (––––) 10

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DIT–E: Dual Induction – E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	22	DEGF
DGF1	Deep 10 kHz Gain Factor	0.983944	
DGF2	Deep 20 kHz Gain Factor	0.994954	
DGF4	Deep 40 kHz Gain Factor	1.00592	
DPH1	Deep 10 kHz Phase Shift	0.168276	DEG
DPH2	Deep 20 kHz Phase Shift	0.0121563	DEG
DPH4	Deep 40 kHz Phase Shift	–1.03419	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	41.5527	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	17.216	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	5.26232	MM/M
DRIM	DIT–E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT–E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	254.472	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	139.586	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	80.4475	MM/M
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT–E Induction Frequency Selector	20	
IPHA	DIT–E Phasor Processing Mode	ALL	
IPRO	DIT–E Induction Processing Selector	PHASOR	
ISSBAR	Barite Mud Switch	BARITE	
ITEN	DIT–E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	0.989571	
MGF2	Medium 20 kHz Gain Factor	0.993379	
MGF4	Medium 40 kHz Gain Factor	1.0135	
MPH1	Medium 10 kHz Phase Shift	–0.203288	DEG
MPH2	Medium 20 kHz Phase Shift	–0.886203	DEG
MPH4	Medium 40 kHz Phase Shift	–2.22812	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	30.326	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	9.52242	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	0.86266	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	345.689	MM/M

MXE2	Medium Quad 20 kHz Sonde Error Correction	182.2	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	117.66	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT−E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
HLDS: Hostile Litho−Density Sonde			
CLCL	HLDS LS Control Loop Controller Mode	AUTO_DEFAULT	
CLCS	HLDS SS Control Loop Controller Mode	AUTO_DEFAULT	
CLLS	HLDS Mode Loop Long Spacing	AUTO	
CLSS	HLDS Mode Loop Short Spacing	AUTO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1	G/C3
LATC	HLDS Activation Correction	ON	
LLDL	HLDS LS Low Level Discriminator DAC	14000	
LLDS	HLDS SS Low Level Discriminator DAC	14000	
LLML	HLDS LS Low Level Discriminator Mode	AUTO	
LLMS	HLDS SS Low Level Discriminator Mode	AUTO	
MDEN	Matrix Density	2.71	G/C3
PHVL	HLDS Long Spacing High Voltage Setting	1000	V
PHVS	HLDS Short Spacing High Voltage Setting	1000	V
PSDL	HLDS LS Pulse Shape Compensation DAC	30000	
PSDS	HLDS SS Pulse Shape Compensation DAC	30000	
PSML	HLDS LS Pulse Shape Compensation Mode	AUTO	
PSMS	HLDS SS Pulse Shape Compensation Mode	AUTO	
HNGS−BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1	
BAR2	HNGS Detector 2 Barite Constant	1	
BHK	HNGS Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	22	DEGF
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	−0.0127281	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma−Ray Correction Flag	YES	
SHT	Surface Hole Temperature	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.970015	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.970767	
EDTC−B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	22	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	−50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0	IN

SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
U−ETELM_EDTS	Telemetry Mode for eWAFE	Standard_EDTS	
U−TELM_EDTS	Telemetry Mode for WAFE	Standard_EDTS	
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	9.875	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	10.750	IN
CWEI	Casing Weight	43.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	−550.0	M
FLEV	Fluid Level	0.00	M
MST	Mud Sample Temperature	−50000.00	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3740	FT
TDD	Total Depth − Driller	1133.00	M
TDL	Total Depth − Logger	737.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripleCombo **Vertical Scale: 1:200** **Graphics File Created: 02−Dec−2012 22:18**

OP System Version: 19C0−187

DIT−E	19C0−187	DTA−A	19C0−187
HLDS	19C0−187	LDSC−B	19C0−187
HNGC−B	19C0−187	HNGS−BA	19C0−187
EDTC−B	SKK−5169−EDTCB		

Input DLIS Files

DEFAULT	Flip_PI_LDL_NGS_044LUP	PRODUCER	02−Dec−2012 21:17	737.6 M	0.0 M

Output DLIS Files

DEFAULT	PI_LDL_NGS_050PUP	FN:78	PRODUCER	02−Dec−2012 22:18

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho−Density Sonde Wellsite Calibration − Background Measurement							
Master: 18−Oct−2012 8:47 Before: 27−Oct−2012 15:26							
SS Cs Resolution Bkg	9.000	7.989	7.988	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.149	8.231	N/A	N/A	1.800	%
LSW1 Background	100.0	71.12	70.95	N/A	N/A	0.03000	CPS
LSW2 Background	100.0	67.19	66.52	N/A	N/A	0.03000	CPS
LSW3 Background	200.0	146.1	144.2	N/A	N/A	0.03000	CPS
LSW4 Background	250.0	178.6	176.9	N/A	N/A	0.03000	CPS
LSW5 Background	600.0	409.2	408.6	N/A	N/A	0.03000	CPS
SSW1 Background	100.0	81.40	80.30	N/A	N/A	0.03000	CPS
SSW2 Background	200.0	144.4	145.3	N/A	N/A	0.03000	CPS
SSW3 Background	500.0	388.1	387.8	N/A	N/A	0.03000	CPS
SSW4 Background	270.0	201.3	200.7	N/A	N/A	0.03000	CPS
SSW5 Background	200.0	147.1	146.8	N/A	N/A	0.03000	CPS
Hostile Litho−Density Sonde Wellsite Calibration − Aluminum Measurement							
Master: 18−Oct−2012 8:47							
LSW1 Aluminum	600.0	541.2	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	769.3	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	930.7	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	464.7	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	428.9	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2521	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6786	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9415	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3843	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	470.9	N/A	N/A	N/A	N/A	CPS
Hostile Litho−Density Sonde Wellsite Calibration − Lithology Measurement							
Master: 18−Oct−2012 8:47							

LSW1 Iron	400.0	367.1	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	618.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	821.5	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	426.0	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	392.9	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1839	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5668	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8569	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3498	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	417.3	N/A	N/A	N/A	N/A	CPS
Hostile Litho−Density Sonde Wellsite Calibration − Caliper Calibration							
Before: 18−Oct−2012 9:19							
HLDS Caliper Small Ring	12.00	N/A	15.58	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	19.52	N/A	N/A	N/A	IN
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check							
Master: 15−Oct−2012 3:07 Before: 27−Oct−2012 16:27							
Na 511 Peak Loc	40.00	39.46	39.68	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.52	15.36	N/A	N/A	2.000	%
High Voltage	1150	1159	1180	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.4	142.1	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.629	9.065	N/A	N/A	2.000	%
Temperature	15.50	22.62	32.56	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	17.26	16.53	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check							
Master: 15−Oct−2012 3:07 Before: 27−Oct−2012 16:27							
Na 511 Peak Loc	40.00	39.42	39.73	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.34	15.56	N/A	N/A	2.000	%
High Voltage	1150	1092	1114	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.6	142.6	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.553	8.724	N/A	N/A	2.000	%
Temperature	15.50	22.74	33.00	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	16.99	17.34	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2							
Master: 15−Oct−2012 3:07 Before: 27−Oct−2012 16:27							
Coincidence Count Rate Ratio	1.000	1.017	0.9512	N/A	N/A	0.05000	
Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration							
Before: 30−Nov−2012 16:38							
EDTC Z−Axis Acceleration	9.810	N/A	9.788	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration							
Before: Calibration out of date 15−Oct−2012 2:09							
Gamma Ray (Jig − Bkg)	160.6	N/A	160.6	N/A	N/A	0.09091	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Dual Induction − E / Equipment Identification

Primary Equipment:		
Dual Induction Sonde	DIS − HB	129
Dual Induction Cartridge	DIC − EB	171
Auxiliary Equipment:		
Mass Isolated Housing	MIH − ZA	342

Dual Induction − E Wellsite Calibration

Induction Electronics (10 kHz)

Phase	ID Elect Real Offset 10 kHz MM/M	Value
Before		32.74
	−291.8 (Minimum) 8.229 (Nominal) 308.2 (Maximum)	

Phase	ID Elect Real Gain 10 kHz	Value
Before		0.9347
	0.7982 (Minimum) 0.9482 (Nominal) 1.127 (Maximum)	

Phase	ID Elect Phase 10 kHz DEG	Value
Before		9.493
	−0.7561 (Minimum) 9.244 (Nominal) 19.24 (Maximum)	

Phase	ID Elect Quad Offset 10 kHz MM/M	Value
Before		21.71
	−293.8 (Minimum) 6.211 (Nominal) 306.2 (Maximum)	

Phase	ID Elect Quad Gain 10 kHz	Value
Before		0.9522
	0.8118 (Minimum) 0.9618 (Nominal) 1.146 (Maximum)	

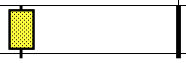
Phase	IM Elect Phase 10 kHz DEG	Value
Before		9.379
	−0.8964 (Minimum) 9.104 (Nominal) 19.10 (Maximum)	

Phase	IM Elect Real Offset 10 kHz MM/M	Value
Before		83.94
	−528.6 (Minimum) 21.37 (Nominal) 571.4 (Maximum)	

Phase	IM Elect Real Gain 10 kHz	Value
Before		0.9443
	0.8071 (Minimum) 0.9571 (Nominal) 1.139 (Maximum)	

Phase	IM Elect Quad Offset 10 kHz MM/M	Value

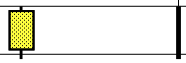
Phase	IM Elect Quad Gain 10 kHz	Value

Phase	IM Elect Quad Offset 10 kHz MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value
Before		43.92	Before		0.9242
−538.8 (Minimum)	11.25 (Nominal)	561.2 (Maximum)	0.7882 (Minimum)	0.9382 (Nominal)	1.113 (Maximum)

Before: 12−Nov−2012 21:06

Dual Induction − E Wellsite Calibration

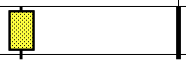
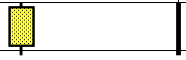
Induction Electronics (20 kHz)

Phase	ID Elect Real Offset 20 kHz MM/M	Value	Phase	ID Elect Real Gain 20 kHz	Value	Phase	ID Elect Phase 20 kHz DEG	Value
Before		13.01	Before		0.9644	Before		5.196
−116.5 (Minimum)	8.470 (Nominal)	133.5 (Maximum)	0.8215 (Minimum)	0.9715 (Nominal)	1.160 (Maximum)	−10.22 (Minimum)	4.784 (Nominal)	19.78 (Maximum)
Phase	ID Elect Quad Offset 20 kHz MM/M	Value	Phase	ID Elect Quad Gain 20 kHz	Value	Phase	IM Elect Phase 20 kHz DEG	Value
Before		8.816	Before		0.9854	Before		5.586
−118.6 (Minimum)	6.413 (Nominal)	131.4 (Maximum)	0.8381 (Minimum)	0.9881 (Nominal)	1.183 (Maximum)	−9.832 (Minimum)	5.168 (Nominal)	20.17 (Maximum)
Phase	IM Elect Real Offset 20 kHz MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value			
Before		34.54	Before		0.9904			
−202.6 (Minimum)	22.36 (Nominal)	247.4 (Maximum)	0.8444 (Minimum)	0.9944 (Nominal)	1.192 (Maximum)			
Phase	IM Elect Quad Offset 20 kHz MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value			
Before		18.19	Before		0.9693			
−213.2 (Minimum)	11.77 (Nominal)	236.8 (Maximum)	0.8249 (Minimum)	0.9749 (Nominal)	1.165 (Maximum)			

Before: 12−Nov−2012 21:07

Dual Induction − E Wellsite Calibration

Induction Electronics (40 kHz)

Phase	ID Elect Real Offset 40 kHz MM/M	Value	Phase	ID Elect Real Gain 40 kHz	Value	Phase	ID Elect Phase 40 kHz DEG	Value
Before		8.616	Before		0.9604	Before		17.69
−76.64 (Minimum)	8.360 (Nominal)	93.36 (Maximum)	0.8109 (Minimum)	0.9609 (Nominal)	1.145 (Maximum)	−3.278 (Minimum)	16.72 (Nominal)	36.72 (Maximum)
Phase	ID Elect Quad Offset 40 kHz MM/M	Value	Phase	ID Elect Quad Gain 40 kHz	Value	Phase	IM Elect Phase 40 kHz DEG	Value
Before		5.956	Before		0.9908	Before		17.45
−78.61 (Minimum)	6.394 (Nominal)	91.39 (Maximum)	0.8356 (Minimum)	0.9856 (Nominal)	1.180 (Maximum)	−3.506 (Minimum)	16.49 (Nominal)	36.49 (Maximum)
Phase	IM Elect Real Offset 40 kHz MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value			
Before		22.54	Before		1.004			
−107.6 (Minimum)	22.42 (Nominal)	152.4 (Maximum)	0.8466 (Minimum)	0.9966 (Nominal)	1.195 (Maximum)			
Phase	IM Elect Quad Offset 40 kHz MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value			
Before		11.95	Before		0.9823			
−118.2 (Minimum)	11.82 (Nominal)	141.8 (Maximum)	0.8282 (Minimum)	0.9782 (Nominal)	1.169 (Maximum)			

Before: 12−Nov−2012 21:08

Dual Induction − E Wellsite Calibration

SFL Electronics

Phase	SFL Voltage Offset MV	Value	Phase	SFL Voltage Gain	Value
Before		−0.3164	Before		0.9880
−15.00 (Minimum)	0 (Nominal)	15.00 (Maximum)	0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
Phase	SFL Current Offset MA	Value	Phase	SFL Current Gain	Value
Before		−0.01625	Before		0.9891
−0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)	0.8500 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Before: 12−Nov−2012 21:09

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

Litho−Density Spectroscopy Cartridge − B / Equipment Identification

Primary Equipment:		
LDSC Cartridge	LDSC − B	521
Auxiliary Equipment:		
LDSC Housing	LDSH − A	326

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

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

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	194
Auxiliary Equipment:		
HNGS Sonde Housing	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		39.46
Before		39.68
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		15.52
Before		15.36
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1159
Before		1180
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		141.4
Before		142.1
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.629
Before		9.065
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		22.62
Before		32.56
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		17.26
Before		16.53
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 15−Oct−2012 3:07 Before: 27−Oct−2012 16:27

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.42
Before		39.73
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		15.34
Before		15.56
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1092
Before		1114
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		141.6
Before		142.6
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.553
Before		8.724
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		22.74
Before		33.00
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		16.99
Before		17.34
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 15−Oct−2012 3:07 Before: 27−Oct−2012 16:27

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		1.017
Before	MASTER−BEFORE LIMIT	0.9512
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 15−Oct−2012 3:07

Before: 27−Oct−2012 16:27

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

Company: **Lamont Doherty**

Schlumberger

Well: **Expedition 344, Site U1413C**

Field: **Costa Rica Seismogenesis (CRISP−A2)**

Rig: **JOIDES Resolution**

Ocean: **Pacific**

Phasor Induction
Natural Gamma Ray
HLDS Caliper