

Schlumberger

Company: Lamont Doherty

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

Run 1

Run 2

Run 3

Rig: JOIDES Resolution	Field: Costa Rica Seismogenesis (CRISP-A2)	Location: Latitude: N 8° 44.4482'	Well: Expedition 344, Site U1413C	Company: Lamont Doherty	Formation Micro Scanner (FMS)			
					Gamma Ray			
					Dual Axis Caliper			
					Latitude: N 8° 44.4482'		Elev.: K.B. 11.00 m	
Longitude: W 84° 6.7993'		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				

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
	Fluid Loss	PH	
	Source Of Sample	N/A	
RM @ Measured Temperature		@	@
RMF @ Measured Temperature		@	@
RMC @ Measured Temperature		@	@
Source RMF	RMC	N/A	N/A
RM @ MRT	RMF @ MRT	@ 19	@ 19
Maximum Recorded Temperatures	19 degC		
Circulation Stopped	Time	30-Nov-2012	9:00
Logger On Bottom	Time	30-Nov-2012	17:00
Unit Number	Location	625003	Houston
Recorded By	K. Swain		
Witnessed By	A. Malinverno, S. Saito		

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

DISCLAIMER
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OTHER SERVICES1
 OS1: UBI
 OS2: DITE
 OS3: Caliper (HLDS)
 OS4:
 OS5: HNGS

OTHER SERVICES2
 OS1:
 OS2:
 OS3:
 OS4:
 OS5:

REMARKS: RUN NUMBER 1
 Hole was drilled with a 9 7/8" RCB bit to TDD of 1133 mbrf.
 Tools bridged at 187msf, and logs obtained from that depth and up to drill pipe 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 released at TD prior to logging.
 Logs referenced to Sea Floor for depth.

REMARKS: RUN NUMBER 2

RUN 1		
SERVICE ORDER #:		
PROGRAM VERSION:	19C0-187	
FLUID LEVEL:	0 m	
LOGGED INTERVAL	START	STOP

RUN 2		
SERVICE ORDER #:		
PROGRAM VERSION:		
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

GSR-U 616008
 WITM (EDTS)-A 1

RUN 2

DOWNHOLE EQUIPMENT

LEH-MT
 LEH-MT 101 15.41

MDSB_EDTC
 Mud Tempe 14.45

EDTC-B
 EDTH-B 8528 14.45



DTIC-B 8529
EDTG-A/B 77693

CTEM 13.38
Gamma Ray 12.81
EFTB DIAG
TelStatus
EDTCB Ele 12.47

HNGS-BA 12.47
HNGS-BA 194
HNSH-BA 205
Upper_1 11.77
Lower_2 11.56

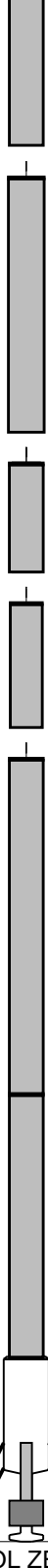
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HNGH-A 115
HNGC-B 300
HNGC Stat 9.44

DTA-A 8.90
ECH-KE 8456
DTA-A 8453

MEST-B 7.68
MEAH-B 769
MEAC-A 875
MEPH-A 702
GPIC-AC 719
MEPC-AB 807
MEDS-B 724

MEDR MEAC
MEPC MEDS-B 0.46
HV DF ACCZ
Tension GPIT 0.00
TOOL ZERO

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

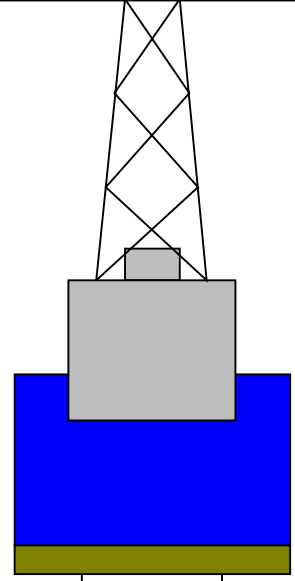


Production String	(in)	(M)	Well Schematic	(M)	(in)	Casing String
	OD	ID		MD	MD	

Kelly Bushing Elevation
Derrick Floor Elevation

Mean Sea Level

-551
-551
-540



0 7.75 4.1

Sea Floor



0 8.25 3.80
103 9.875
582.2

Sea Floor

Open Hole

Total Depth

Input DLIS Files

DEFAULT FMS_NGS_036LUP FN:63 PRODUCER 01-Dec-2012 02:35 733.8 M 543.0 M

Output DLIS Files

DEFAULT FMS_NGS_084PUP FN:111 PRODUCER 09-Dec-2012 05:15 182.9 M -6.9 M

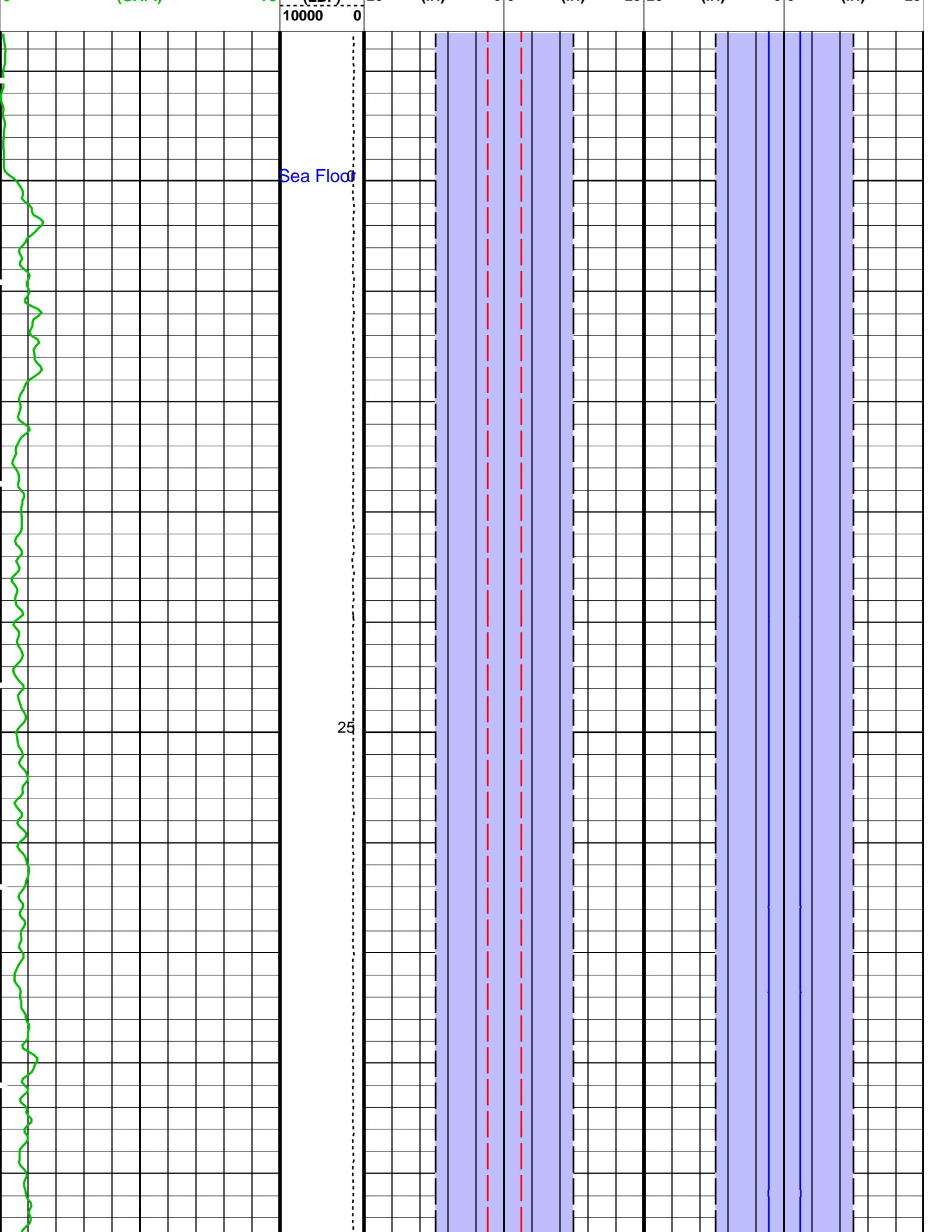
OP System Version: 19C0-187

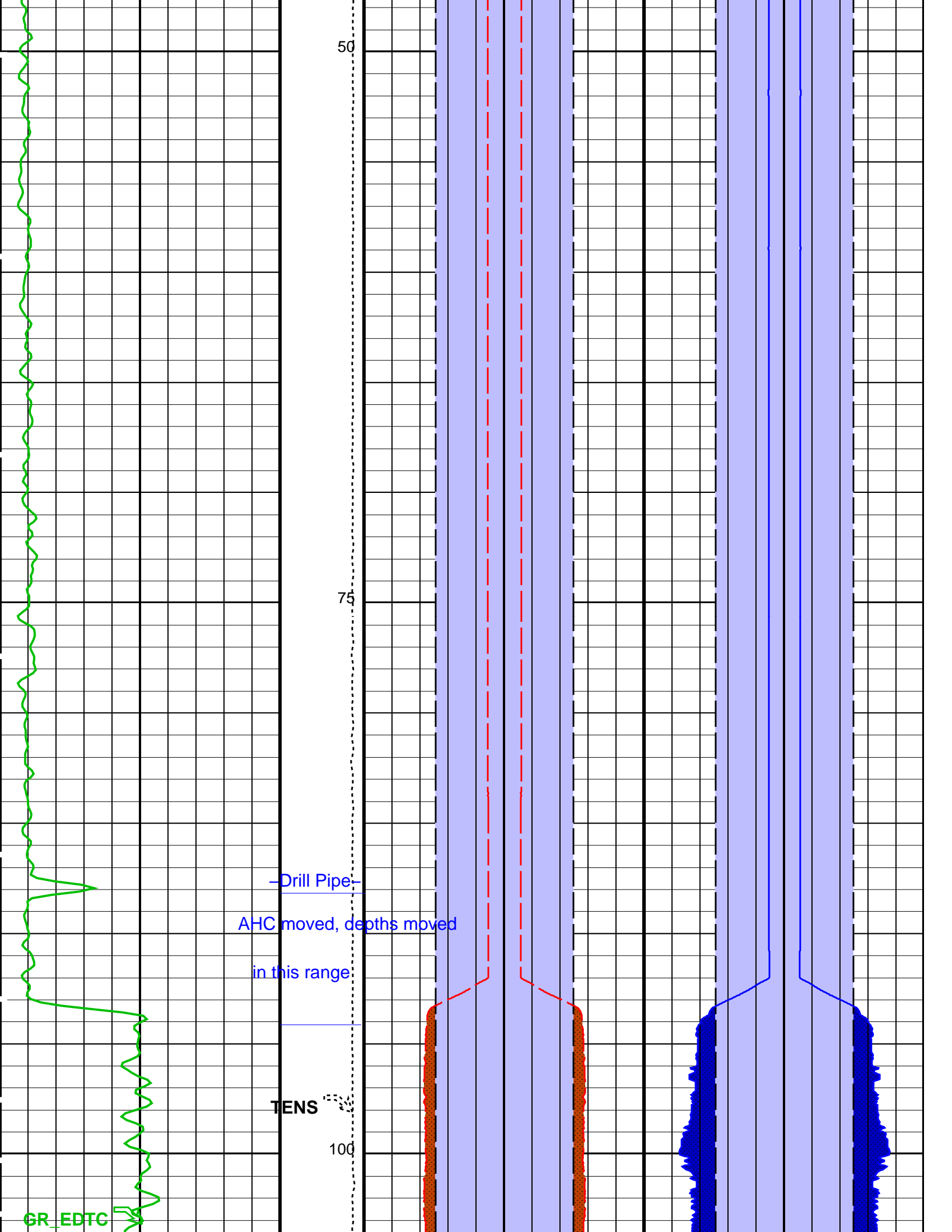
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 HNGC-B 19C0-187 HNGS-BA 19C0-187
 EDTC-B SKK-5169-EDTCB

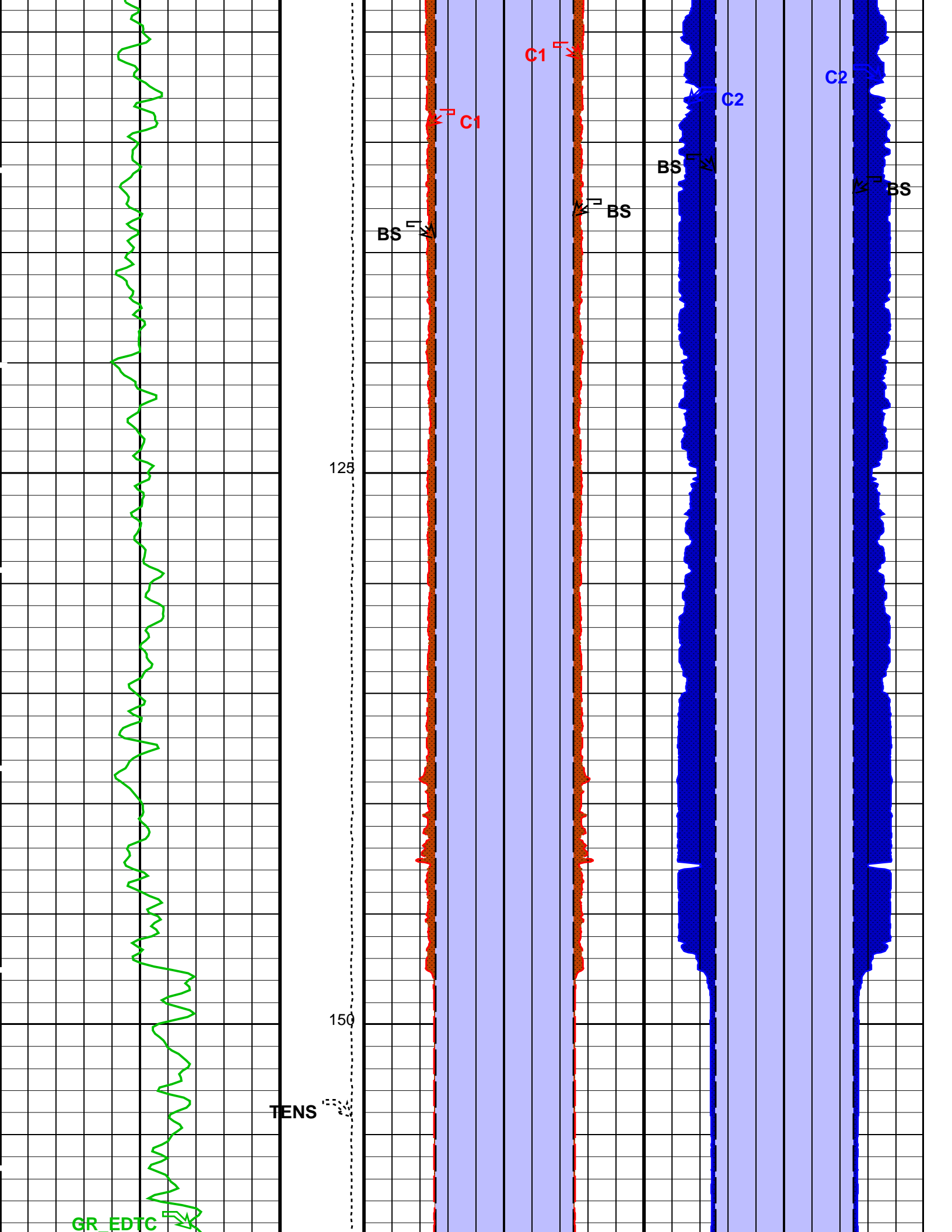
PIP SUMMARY

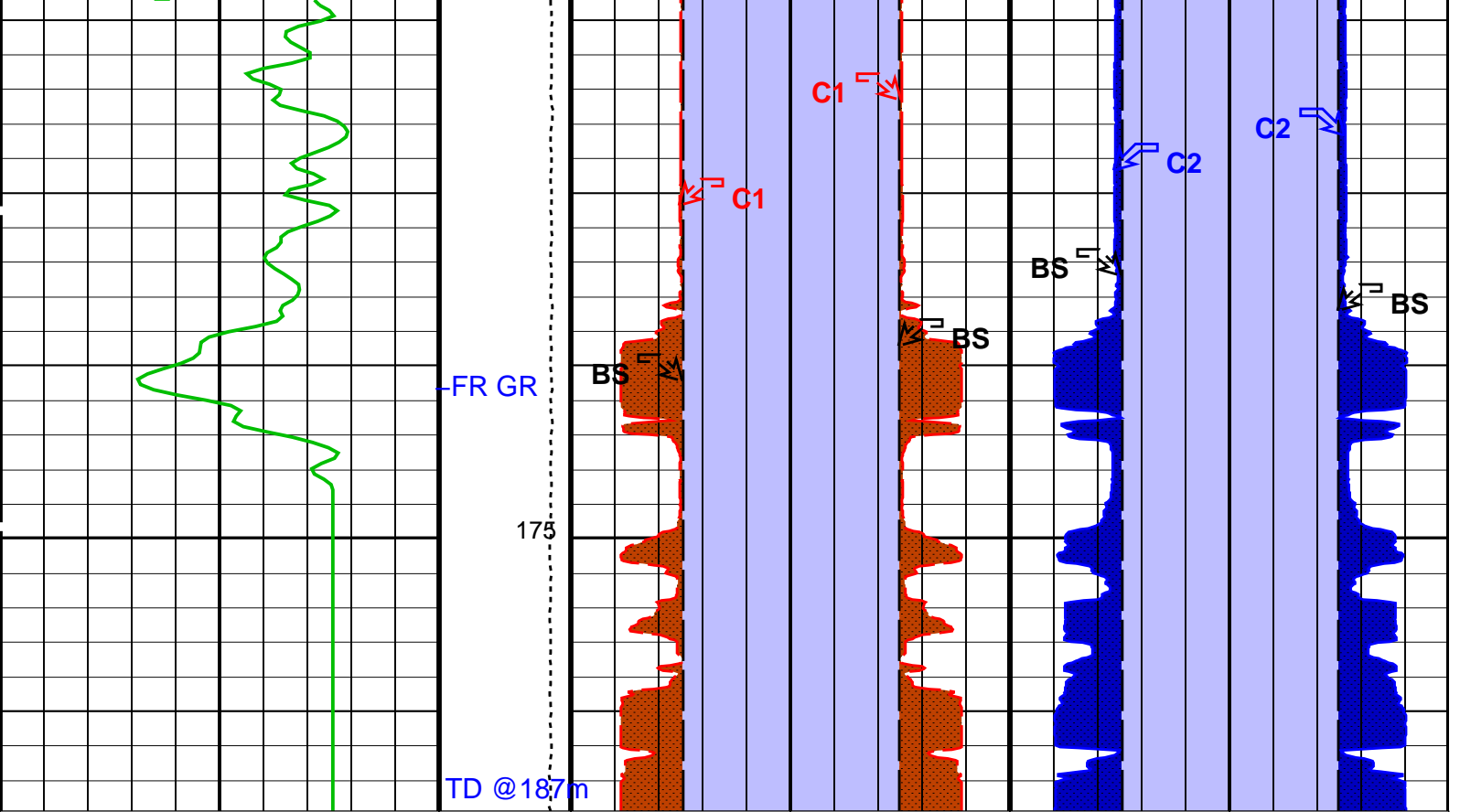
Time Mark Every 60 S

2nd Pass, Sea Floor Depth Reference	Area From BS to BS_1		Area From BS_3 to BS_2			
	Area From C1 to BS	Area From BS_1 to C1_1	Area From C2 to BS_3		Area From BS_2 to C2_1	
	Caliper 1 (C1)	Caliper 1 (C1)	Caliper 2 (C2)		Caliper 2 (C2)	
	20 (IN)	0 0 (IN)	20 (IN)	0 0 (IN)	20 (IN)	20 (IN)
Gamma Ray (GR_EDTC)	Tension (TENS) (LBF)	Bit Size (BS)	Bit Size (BS)	Bit Size (BS)	Bit Size (BS)	Bit Size (BS)
0 (GAPI) 75		20 (IN)	0 0 (IN)	20 (IN)	0 0 (IN)	20 (IN)









Gamma Ray (GR_EDTC) (GAPI)	Tension (TENS) (LBF)	Bit Size (BS) (IN)	Bit Size (BS) (IN)	Bit Size (BS) (IN)	Bit Size (BS) (IN)
0 75	10000 0	20 0 20	0 0 20	20 0 20	0 0 20
2nd Pass, Sea Floor Depth Reference		Caliper 1 (C1) (IN)	Caliper 1 (C1) (IN)	Caliper 2 (C2) (IN)	Caliper 2 (C2) (IN)
		20 0 20	0 0 20	20 0 20	0 0 20
		Area From C1 to BS	Area From BS_1 to C1_1	Area From C2 to BS_3	Area From BS_2 to C2_1
		Area From BS to BS_1		Area From BS_3 to BS_2	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
System and Miscellaneous		
BS	Bit Size	9.875 IN
DO	Depth Offset for Playback	-550.0 M
PP	Playback Processing	NORMAL

Format: BHP Vertical Scale: 1:200 Graphics File Created: 09-Dec-2012 05:15

OP System Version: 19C0-187

MEST-B	19C0-187	DTA-A	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

Input DLIS Files

DEFAULT	FMS_NGS_036LUP	FN:63	PRODUCER	01-Dec-2012 02:35	733.8 M	543.0 M
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Output DLIS Files

Input DLIS Files

DEFAULT FMS_NGS_032LUP FN:56 PRODUCER 01-Dec-2012 02:00 733.8 M 647.4 M

Output DLIS Files

DEFAULT FMS_NGS_082PUP FN:109 PRODUCER 09-Dec-2012 05:12 182.9 M 97.5 M

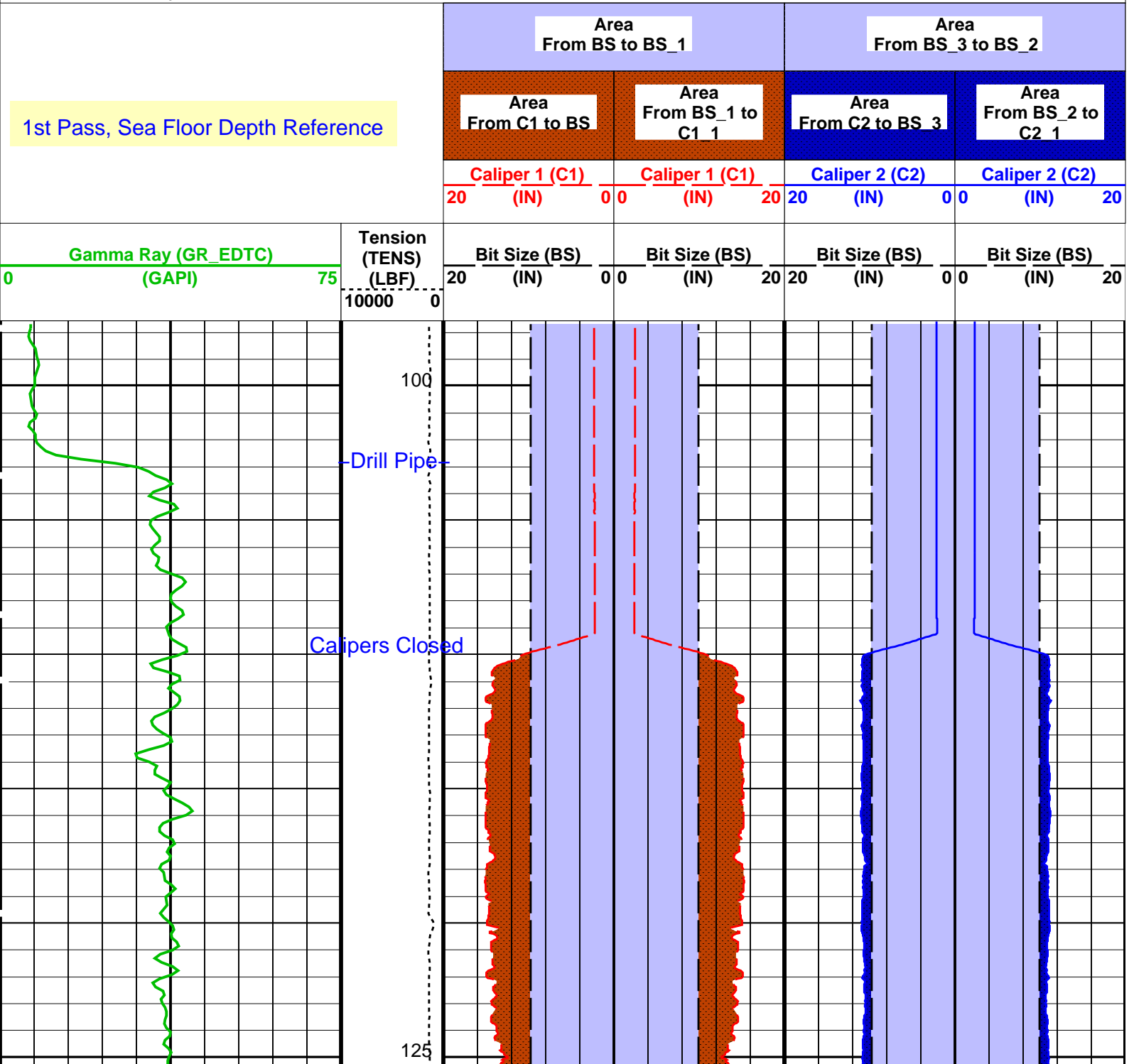
OP System Version: 19C0-187

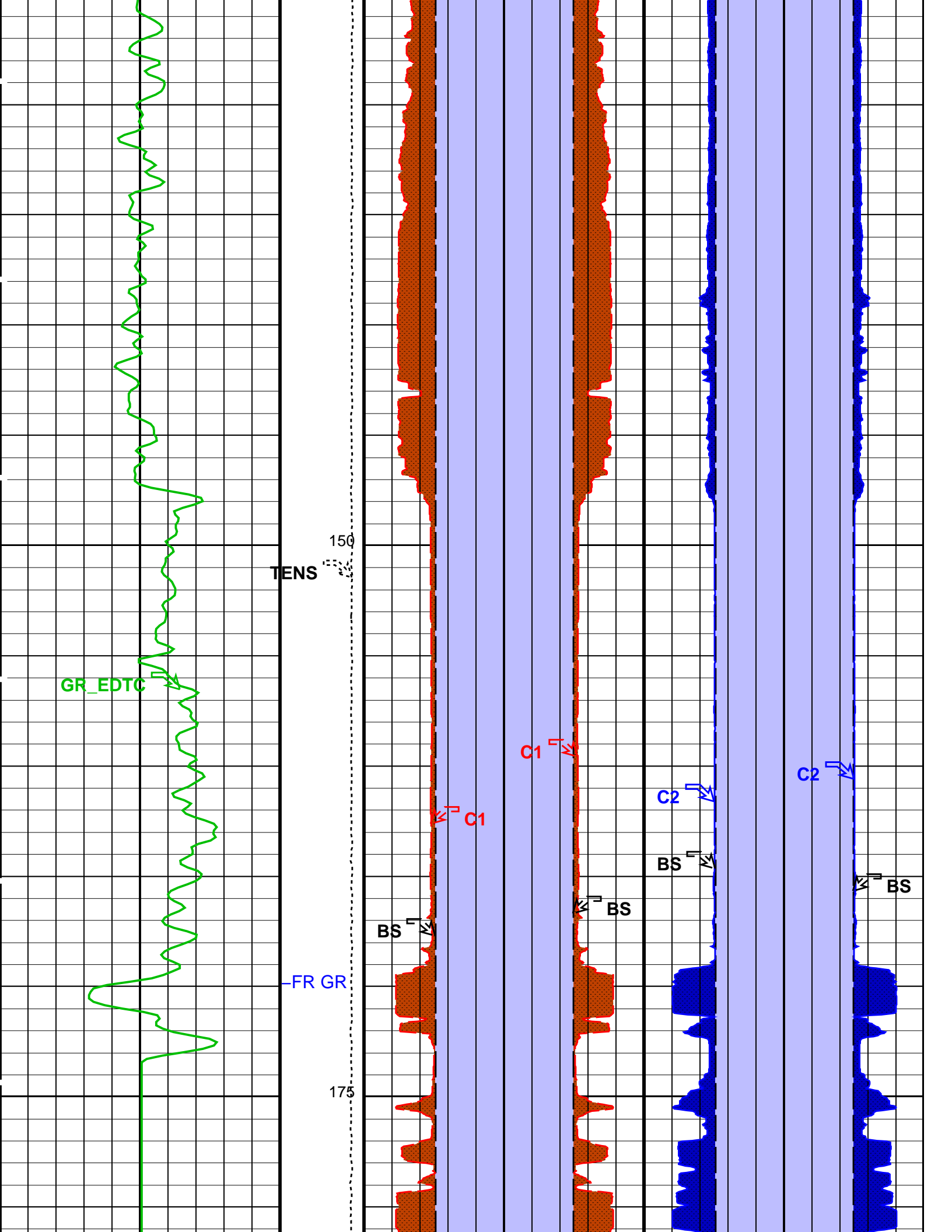
MEST-B 19C0-187 DTA-A 19C0-187
 HNGC-B 19C0-187 HNGS-BA 19C0-187
 EDTC-B SKK-5169-EDTCB

PIP SUMMARY

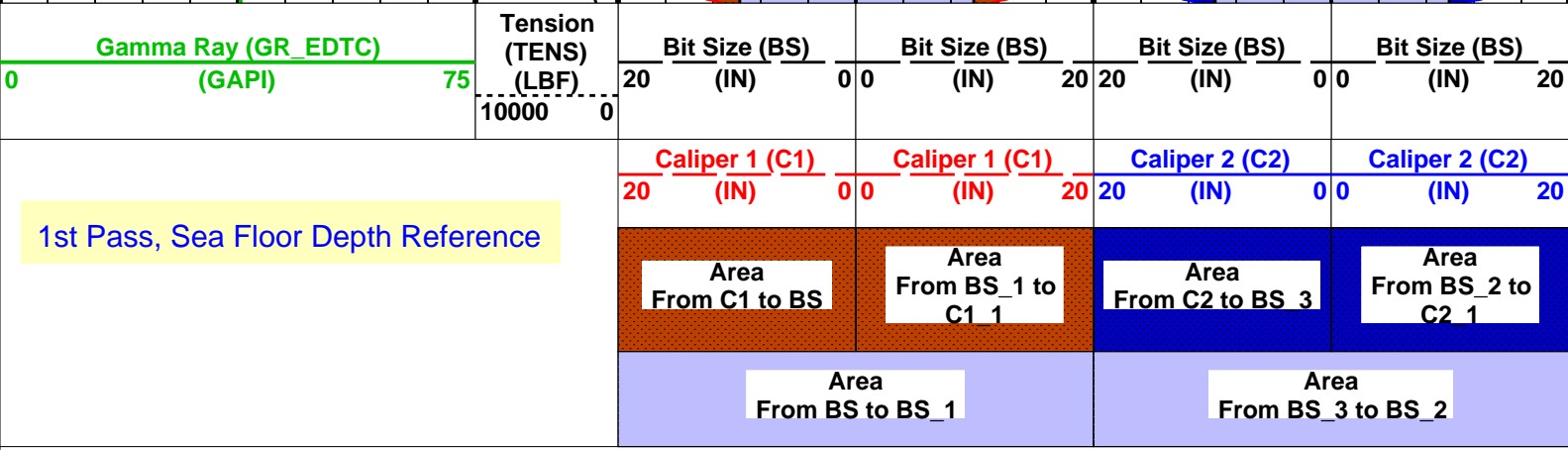
Time Mark Every 60 S

1st Pass, Sea Floor Depth Reference





TD @ 187m



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
BS	System and Miscellaneous Bit Size	9.875 IN
DO	Depth Offset for Playback	-550.0 M
PP	Playback Processing	NORMAL

Format: BHP

Vertical Scale: 1:200

Graphics File Created: 09-Dec-2012 05:12

OP System Version: 19C0-187

MEST-B	19C0-187	DTA-A	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

Input DLIS Files

DEFAULT	FMS_NGS_032LUP	FN:56	PRODUCER	01-Dec-2012 02:00	733.8 M	647.4 M
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Output DLIS Files

DEFAULT	FMS_NGS_082PUP	FN:109	PRODUCER	09-Dec-2012 05:12		
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Company: Lamont Doherty

Well: Expedition 344, Site U1413C

Input DLIS Files

DEFAULT	FMS_NGS_036LUP	FN:63	PRODUCER	01-Dec-2012 02:35	733.8 M	543.0 M
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Output DLIS Files

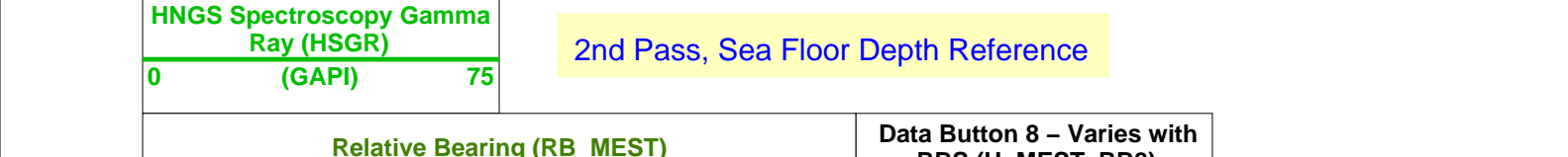
DEFAULT	FMS_NGS_084PUP	FN:111	PRODUCER	09-Dec-2012 05:15	182.9 M	-6.9 M
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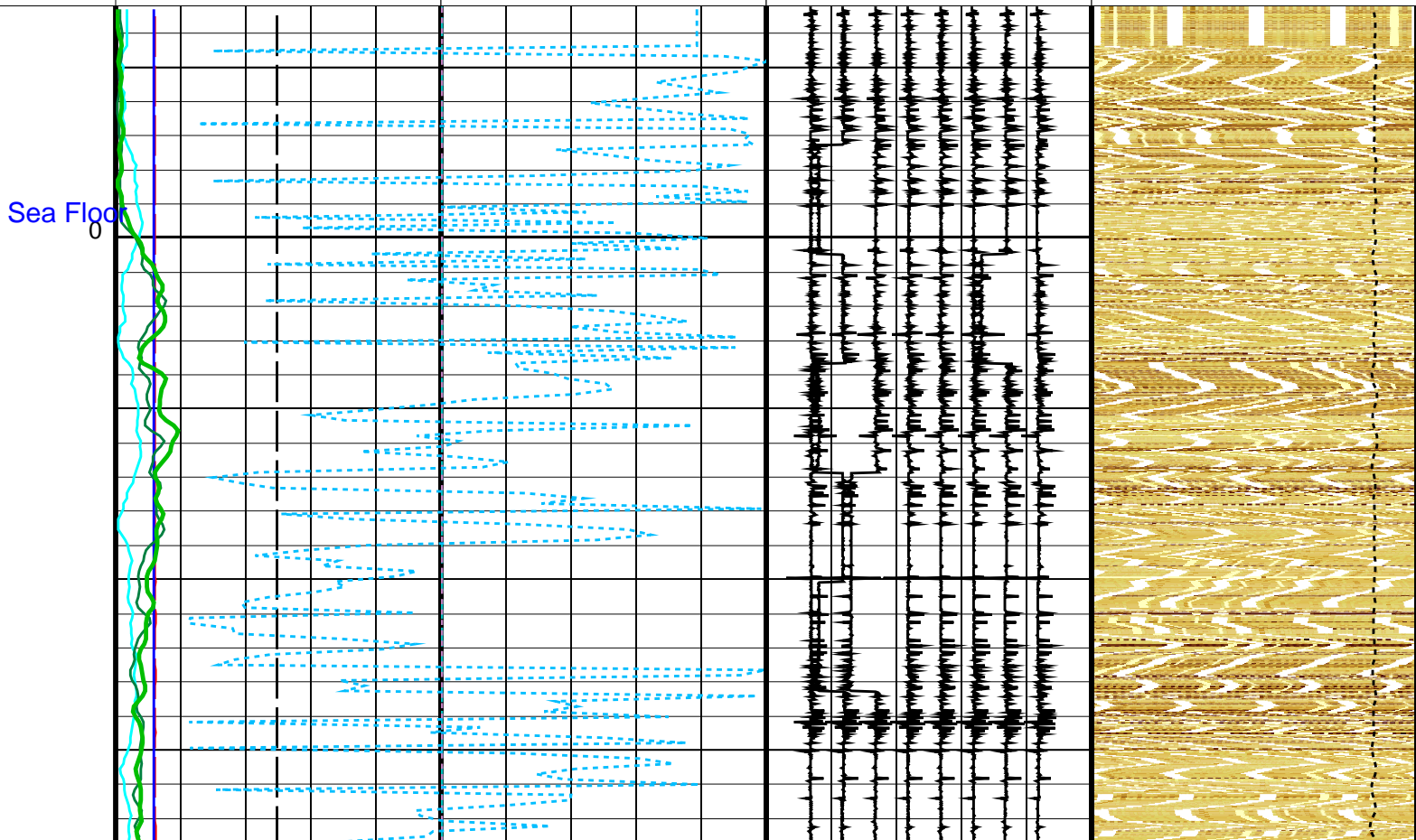
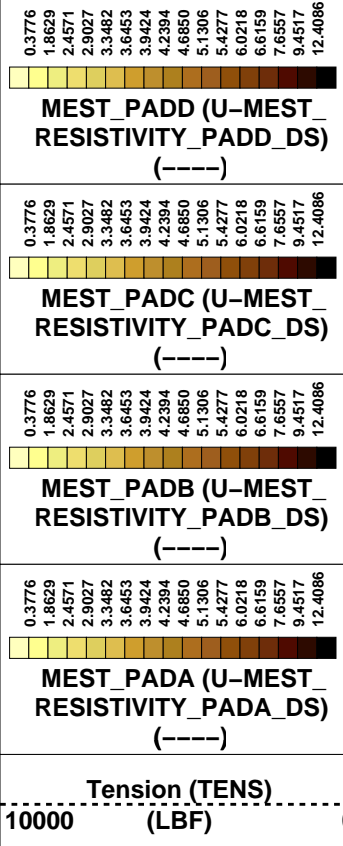
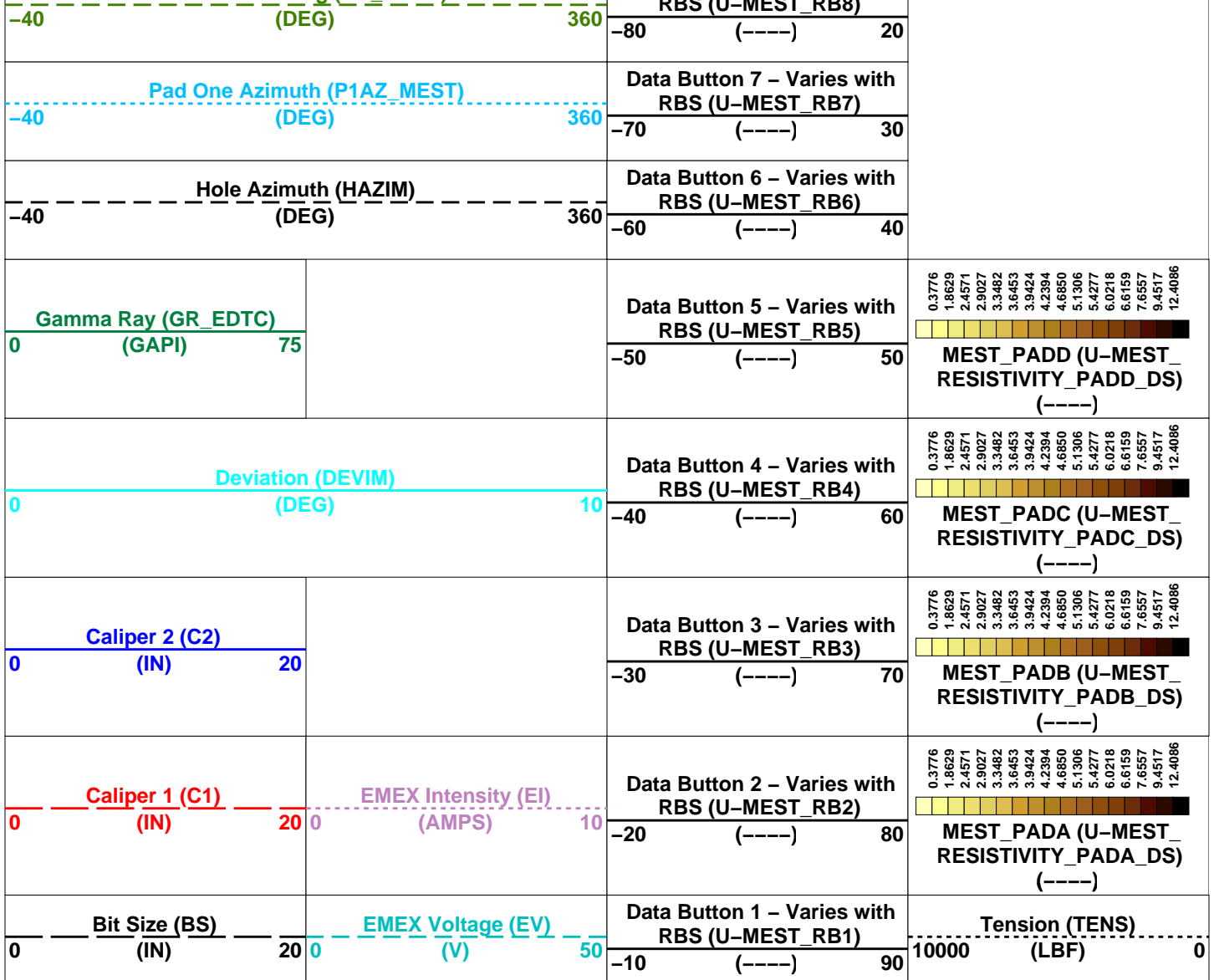
OP System Version: 19C0-187

MEST-B	19C0-187	DTA-A	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

PIP SUMMARY

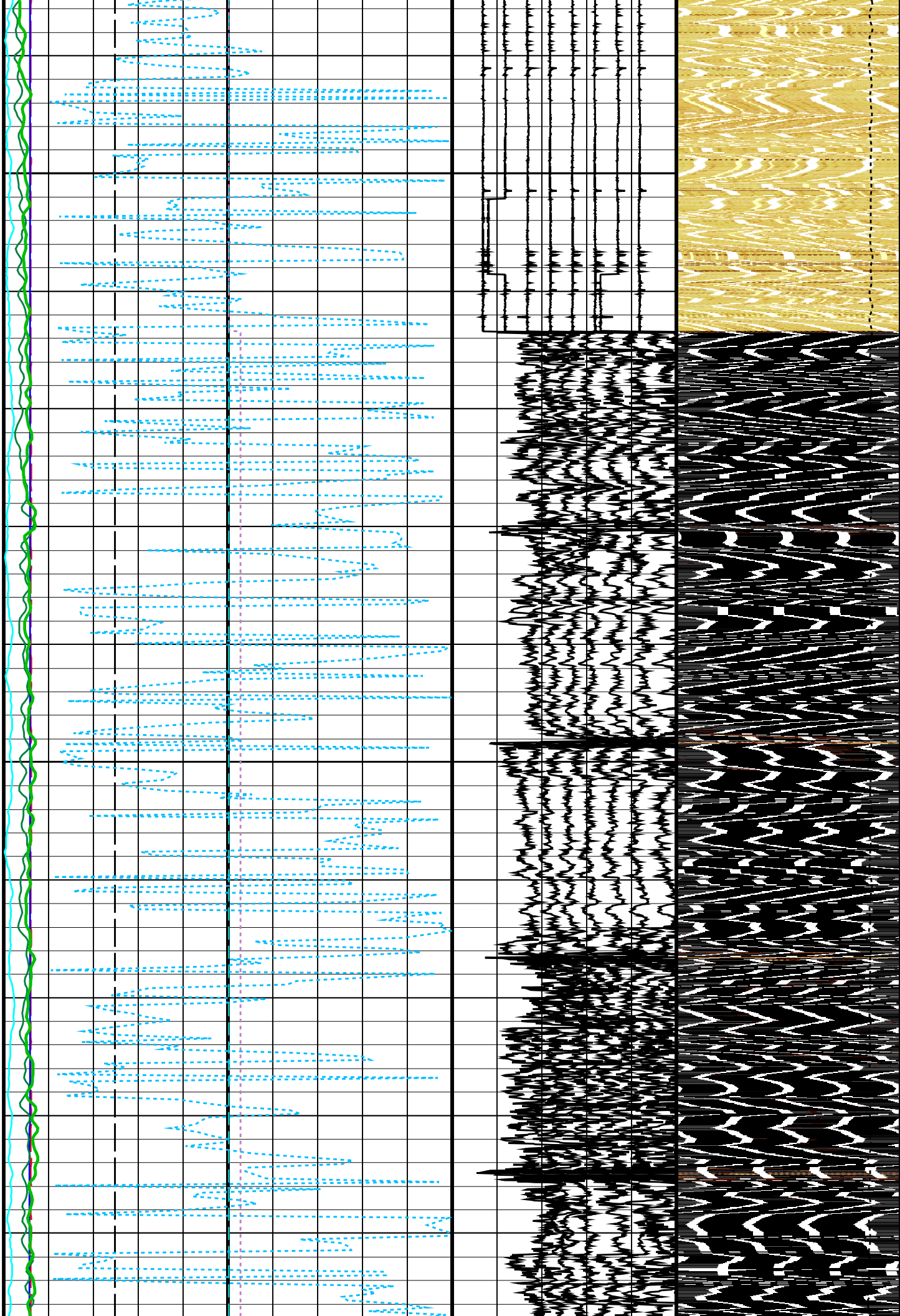
Time Mark Every 60 S

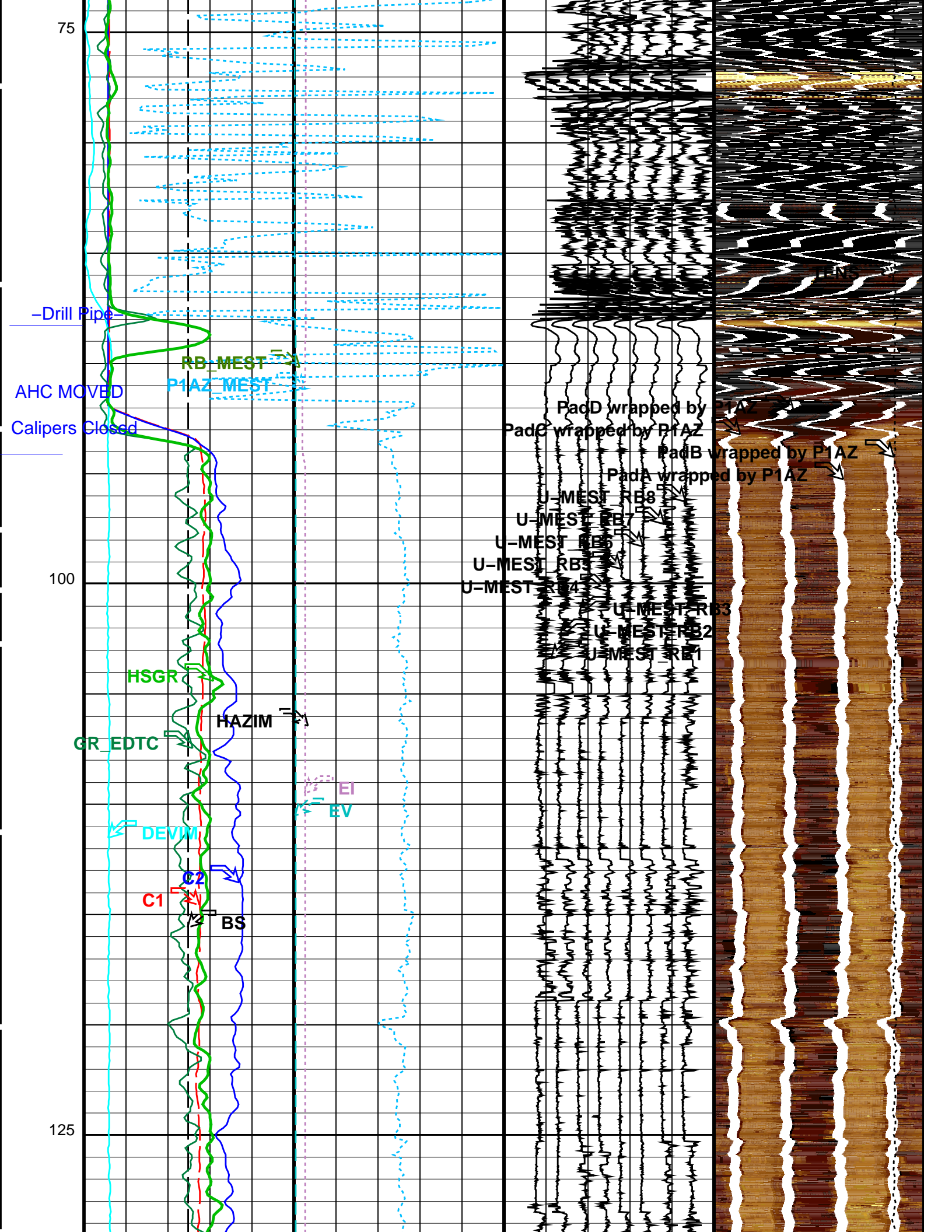


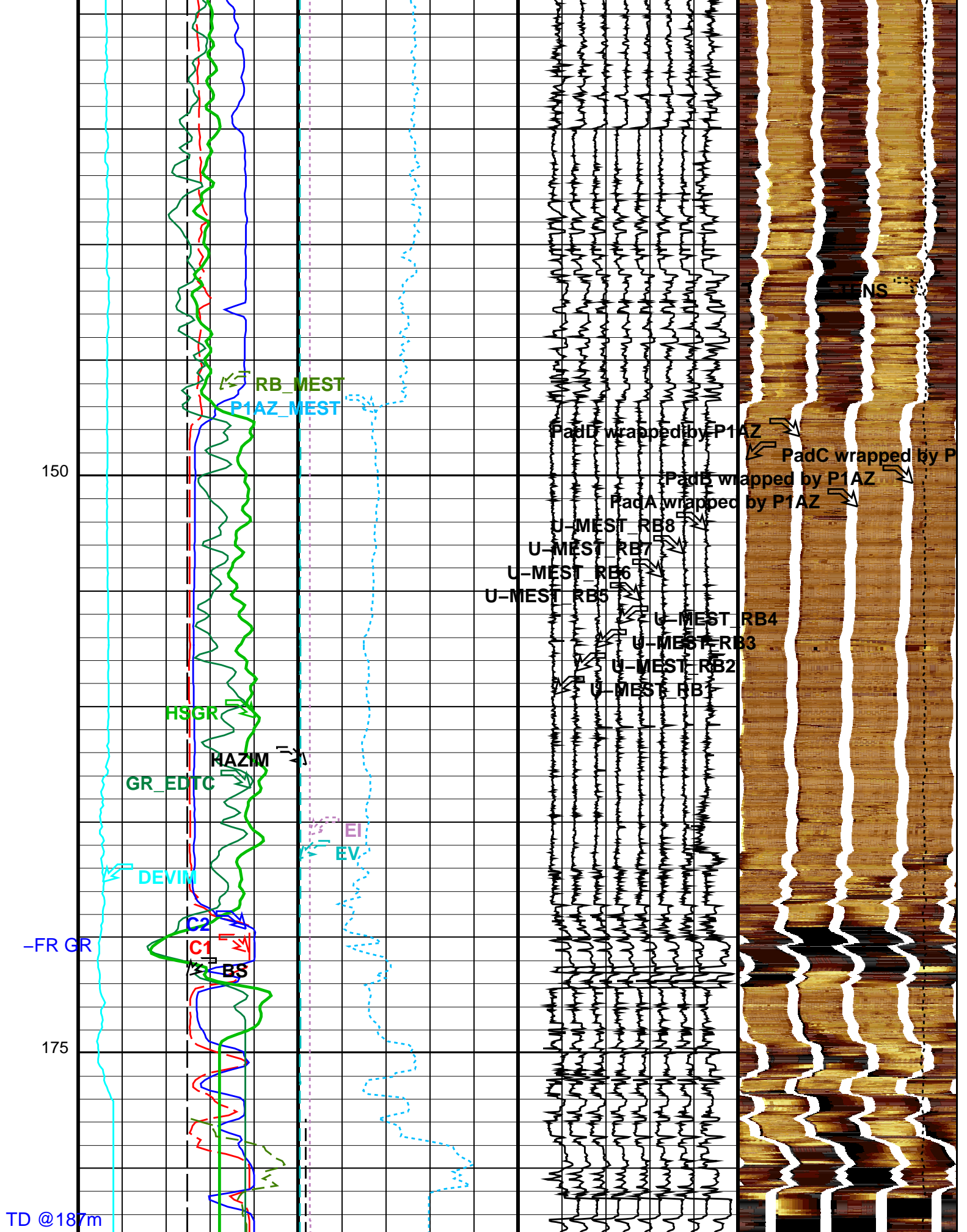


25

50







TD @ 187m

Bit Size (BS)
(IN)

EMEX Voltage (EV)
(V)

Data Button 1 - Varies with
RBS (U-MEST_RB1)

Tension (TENS)
(LBF)

0

20

0

50

-10

90

10000

0





0

150

-FR GR

175

TENS

<p style="text-align: center;">Caliper 1 (C1) (IN)</p> <p style="text-align: center;">0 ————— 20</p>	<p style="text-align: center;">EMEX Intensity (EI) (AMPS)</p> <p style="text-align: center;">0 ————— 10</p>	<p style="text-align: center;">Data Button 2 – Varies with RBS (U-MEST_RB2)</p> <p style="text-align: center;">-20 (----) 80</p>	<p>0.3776 1.8629 2.4571 2.9027 3.3482 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6557 9.4517 12.4086</p>  <p style="text-align: center;">MEST_PADA (U-MEST_RESISTIVITY_PADA_DS) (----)</p>
<p style="text-align: center;">Caliper 2 (C2) (IN)</p> <p style="text-align: center;">0 ————— 20</p>		<p style="text-align: center;">Data Button 3 – Varies with RBS (U-MEST_RB3)</p> <p style="text-align: center;">-30 (----) 70</p>	<p>0.3776 1.8629 2.4571 2.9027 3.3482 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6557 9.4517 12.4086</p>  <p style="text-align: center;">MEST_PADB (U-MEST_RESISTIVITY_PADB_DS) (----)</p>
	<p style="text-align: center;">Deviation (DEVIM) (DEG)</p> <p style="text-align: center;">0 ————— 10</p>	<p style="text-align: center;">Data Button 4 – Varies with RBS (U-MEST_RB4)</p> <p style="text-align: center;">-40 (----) 60</p>	<p>0.3776 1.8629 2.4571 2.9027 3.3482 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6557 9.4517 12.4086</p>  <p style="text-align: center;">MEST_PADC (U-MEST_RESISTIVITY_PADC_DS) (----)</p>
<p style="text-align: center;">Gamma Ray (GR_EDTC) (GAPI)</p> <p style="text-align: center;">0 ————— 75</p>		<p style="text-align: center;">Data Button 5 – Varies with RBS (U-MEST_RB5)</p> <p style="text-align: center;">-50 (----) 50</p>	<p>0.3776 1.8629 2.4571 2.9027 3.3482 3.6453 3.9424 4.2394 4.6850 5.1306 5.4277 6.0218 6.6159 7.6557 9.4517 12.4086</p>  <p style="text-align: center;">MEST_PADD (U-MEST_RESISTIVITY_PADD_DS) (----)</p>
<p style="text-align: center;">Hole Azimuth (HAZIM) (DEG)</p> <p style="text-align: center;">-40 ————— 360</p>		<p style="text-align: center;">Data Button 6 – Varies with RBS (U-MEST_RB6)</p> <p style="text-align: center;">-60 (----) 40</p>	
<p style="text-align: center;">Pad One Azimuth (P1AZ_MEST) (DEG)</p> <p style="text-align: center;">-40 ————— 360</p>		<p style="text-align: center;">Data Button 7 – Varies with RBS (U-MEST_RB7)</p> <p style="text-align: center;">-70 (----) 30</p>	
<p style="text-align: center;">Relative Bearing (RB_MEST) (DEG)</p> <p style="text-align: center;">-40 ————— 360</p>		<p style="text-align: center;">Data Button 8 – Varies with RBS (U-MEST_RB8)</p> <p style="text-align: center;">-80 (----) 20</p>	
<p style="text-align: center;">HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)</p> <p style="text-align: center;">0 ————— 75</p>	<p style="color: blue; font-weight: bold;">2nd Pass, Sea Floor Depth Reference</p>		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
MEST-B: Micro Electrical Scanner – B (Slim)		
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION
MDEC	Magnetic Field Declination	-0.895454 DEG
MLM	MEST Logging Mode	SCAN1800
RBS	Resistivity Button Selection	AUTO
XGAI	Gain	GAIN_2
XOFF	Offset	OFFSET_0
HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	BS
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	-0.00144005
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	BARI

HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	2.86228	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.85288	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DO	Depth Offset for Playback	-550.0	M
PP	Playback Processing	NORMAL	

Format: MEST_C_WRAP_BY_P1AZ Vertical Scale: 1:200 Graphics File Created: 09-Dec-2012 05:15

OP System Version: 19C0-187

MEST-B	19C0-187	DTA-A	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

Input DLIS Files

DEFAULT	FMS_NGS_036LUP	FN:63	PRODUCER	01-Dec-2012 02:35	733.8 M	543.0 M
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Output DLIS Files

DEFAULT	FMS_NGS_084PUP	FN:111	PRODUCER	09-Dec-2012 05:15		
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Company: Lamont Doherty Well: Expedition 344, Site U1413C

Input DLIS Files

DEFAULT	FMS_NGS_032LUP	FN:56	PRODUCER	01-Dec-2012 02:00	733.8 M	647.4 M
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Output DLIS Files

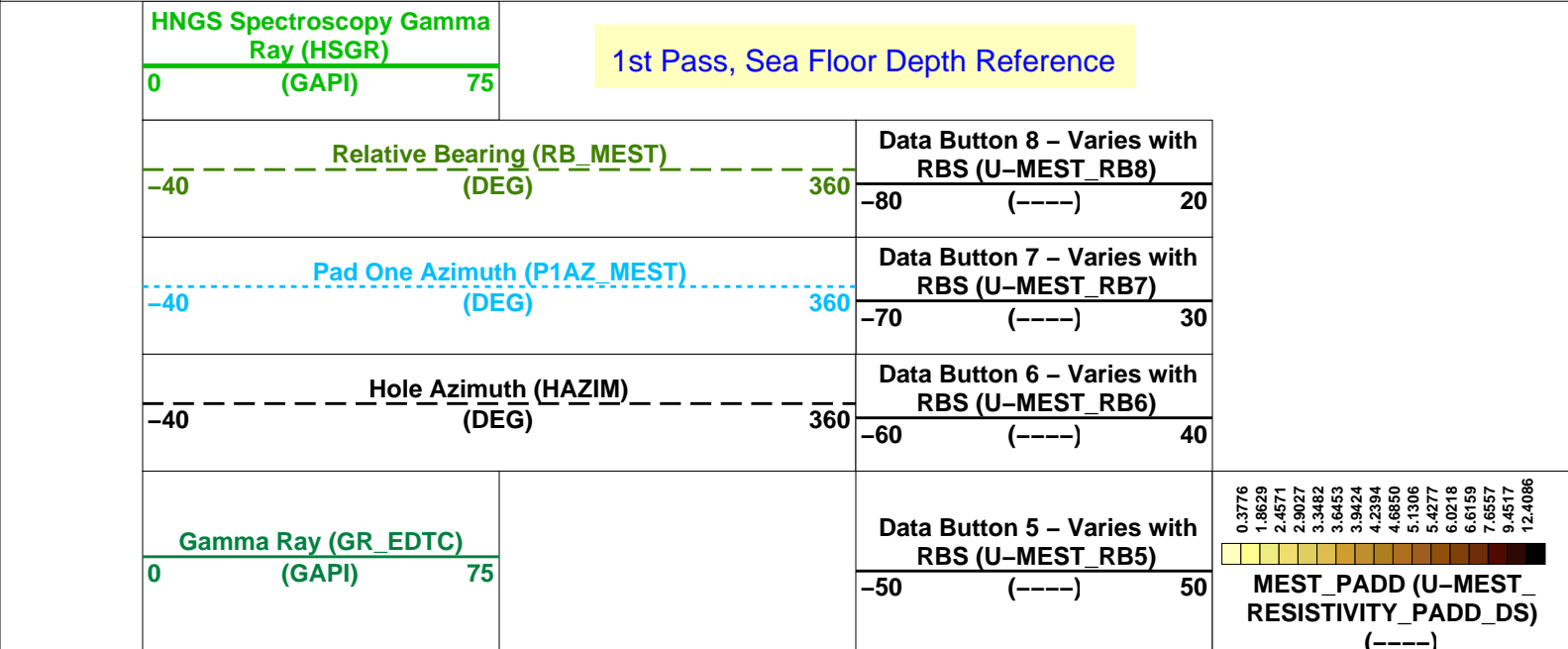
DEFAULT	FMS_NGS_082PUP	FN:109	PRODUCER	09-Dec-2012 05:12	182.9 M	97.5 M
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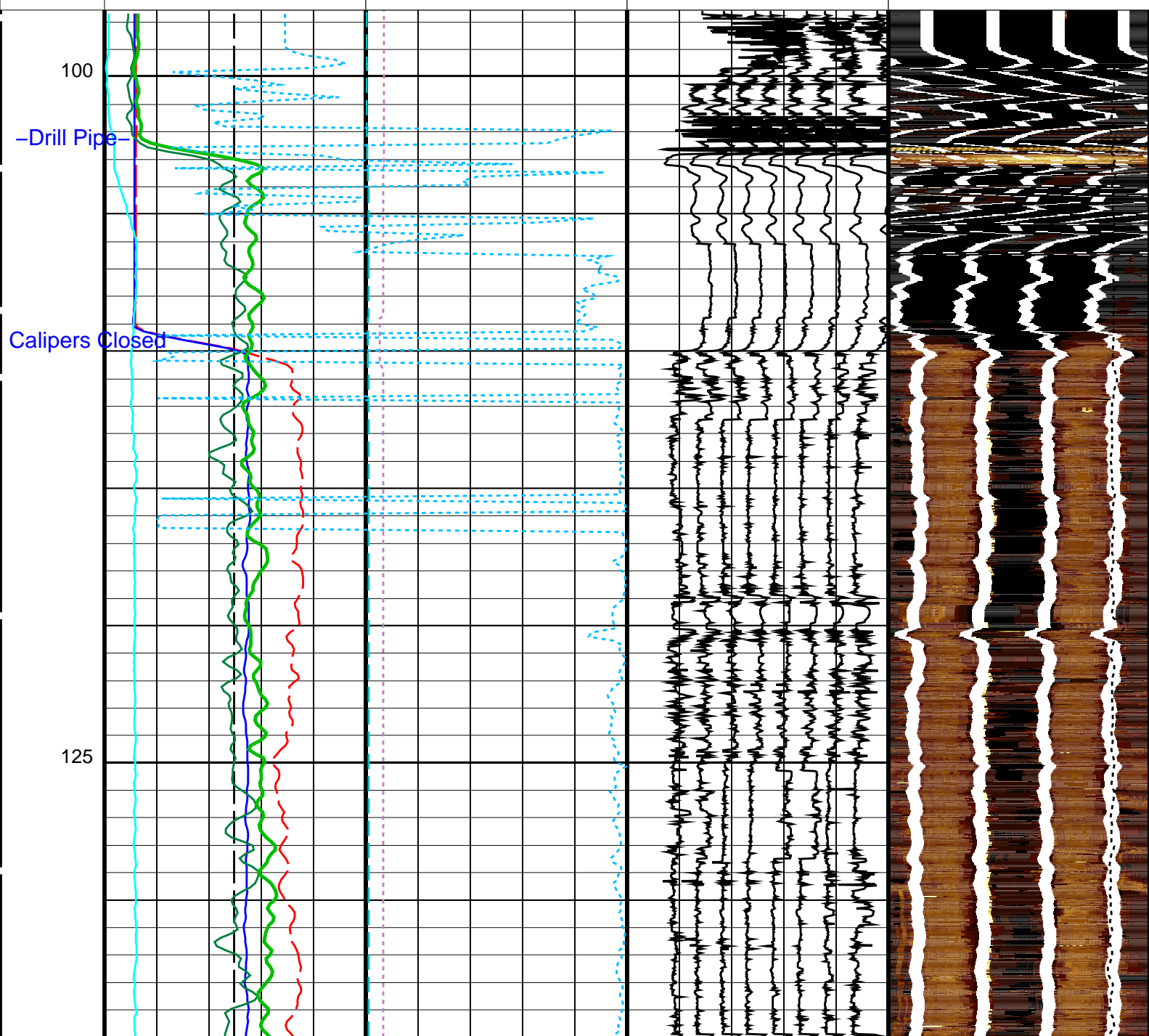
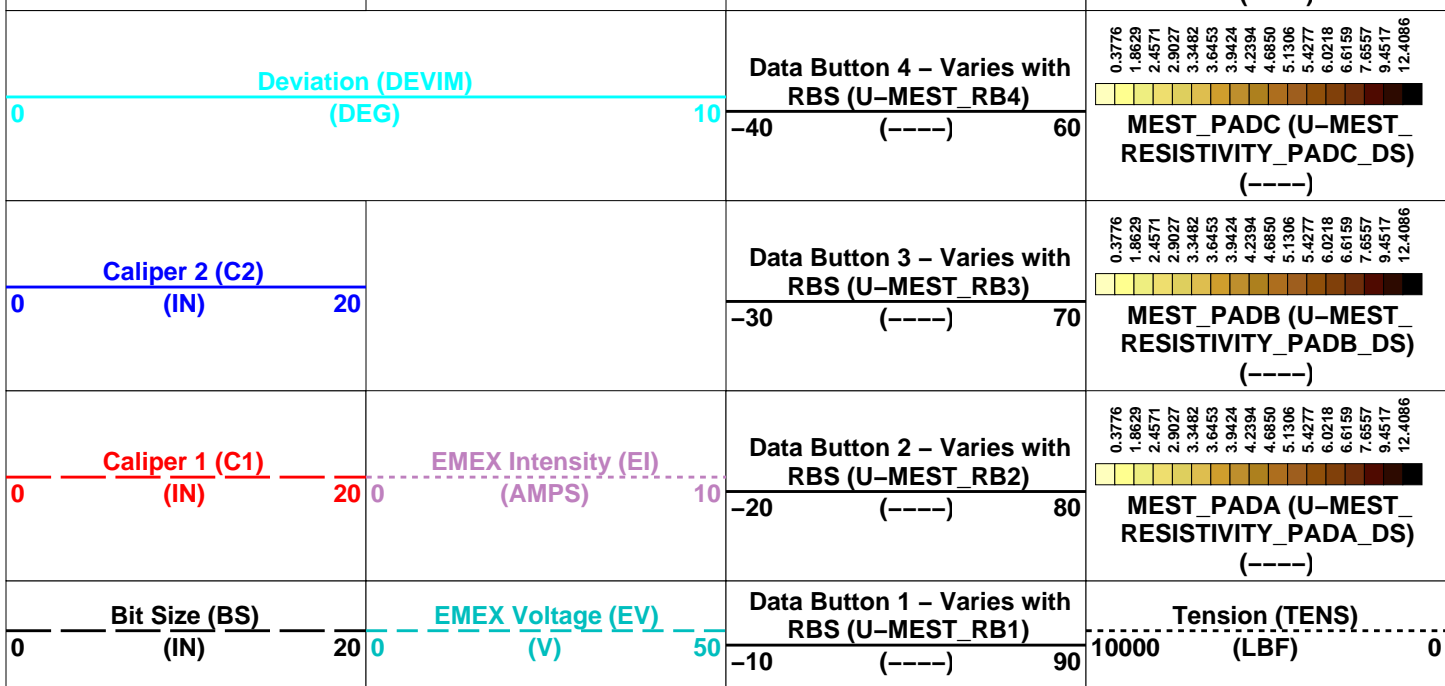
OP System Version: 19C0-187

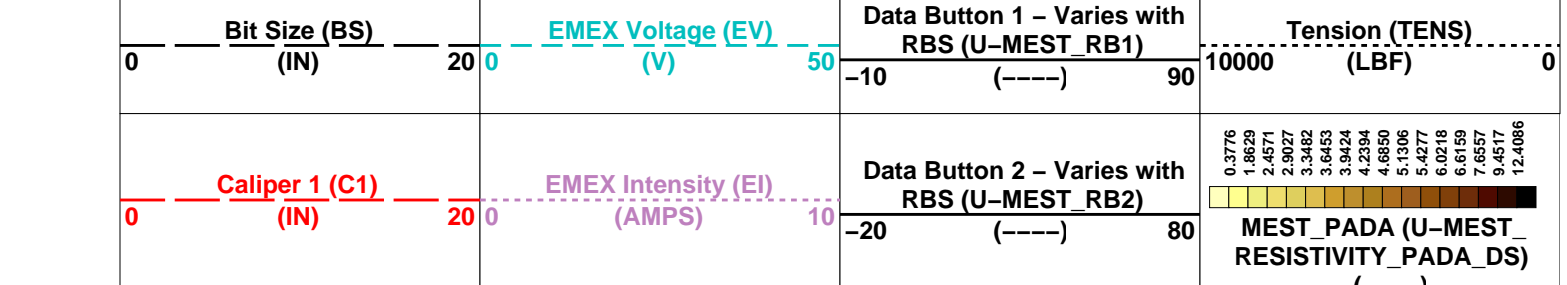
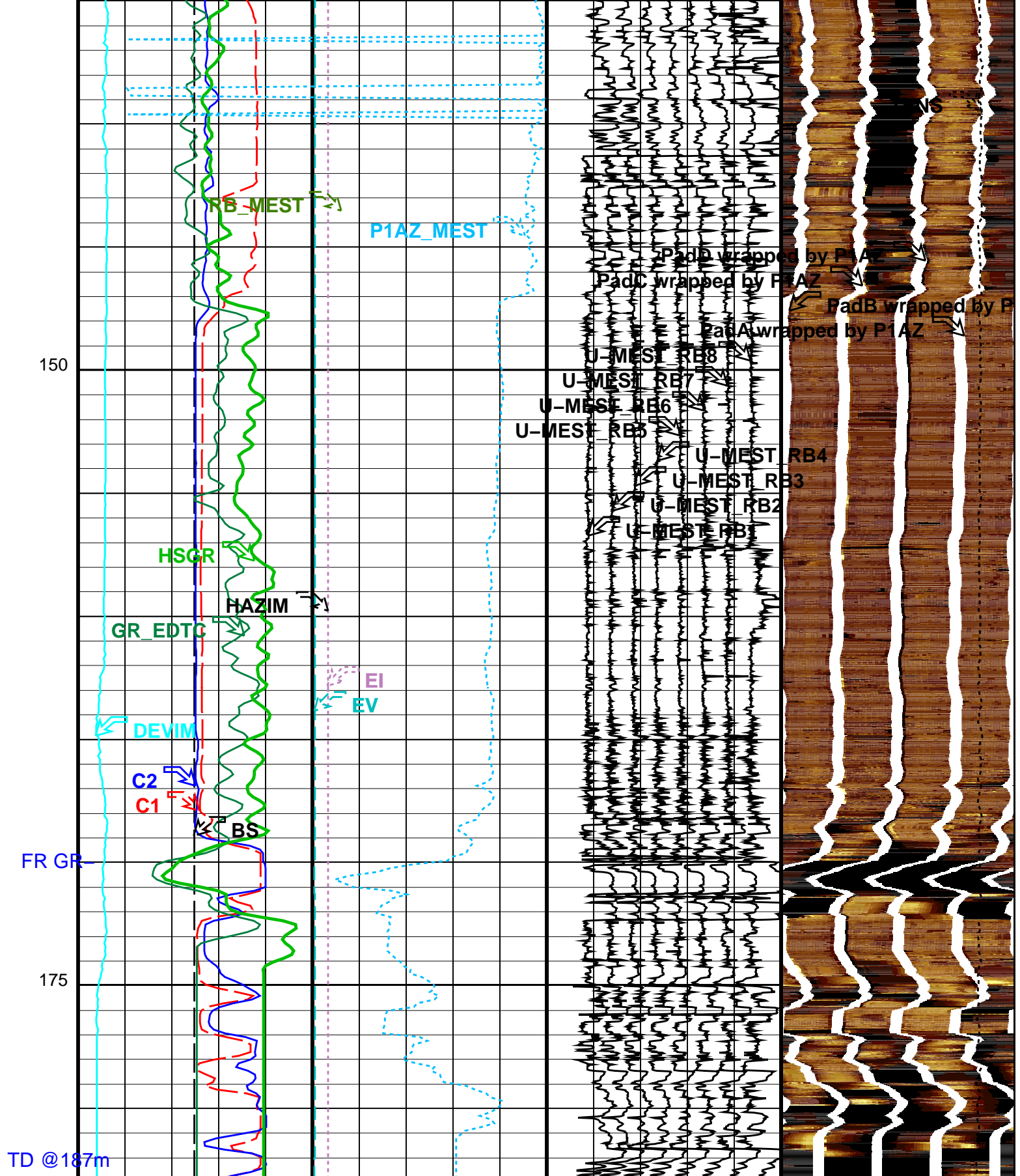
MEST-B	19C0-187	DTA-A	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		




PIP SUMMARY

Time Mark Every 60 S







<p>Caliper 2 (C2)</p> <p>0 (IN) 20</p>	<p>Data Button 3 – Varies with RBS (U-MEST_RB3)</p> <p>-30 (----) 70</p>	 <p>MEST_PADB (U-MEST_RESISTIVITY_PADB_DS)</p> <p>(----)</p>
<p>Deviation (DEVIM)</p> <p>0 (DEG) 10</p>	<p>Data Button 4 – Varies with RBS (U-MEST_RB4)</p> <p>-40 (----) 60</p>	 <p>MEST_PADC (U-MEST_RESISTIVITY_PADC_DS)</p> <p>(----)</p>
<p>Gamma Ray (GR_EDTC)</p> <p>0 (GAPI) 75</p>	<p>Data Button 5 – Varies with RBS (U-MEST_RB5)</p> <p>-50 (----) 50</p>	 <p>MEST_PADD (U-MEST_RESISTIVITY_PADD_DS)</p> <p>(----)</p>
<p>Hole Azimuth (HAZIM)</p> <p>-40 (DEG) 360</p>	<p>Data Button 6 – Varies with RBS (U-MEST_RB6)</p> <p>-60 (----) 40</p>	
<p>Pad One Azimuth (P1AZ_MEST)</p> <p>-40 (DEG) 360</p>	<p>Data Button 7 – Varies with RBS (U-MEST_RB7)</p> <p>-70 (----) 30</p>	
<p>Relative Bearing (RB_MEST)</p> <p>-40 (DEG) 360</p>	<p>Data Button 8 – Varies with RBS (U-MEST_RB8)</p> <p>-80 (----) 20</p>	
<p>HNGS Spectroscopy Gamma Ray (HSGR)</p> <p>0 (GAPI) 75</p>	<p>1st Pass, Sea Floor Depth Reference</p>	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
MEST-B: Micro Electrical Scanner – B (Slim)		
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION
MDEC	Magnetic Field Declination	-0.895454 DEG
MLM	MEST Logging Mode	SCAN1800
RBS	Resistivity Button Selection	AUTO
XGAI	Gain	GAIN_2
XOFF	Offset	OFFSET_0
HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	BS
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	-0.00144005
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	BARI
HNPE	HNGS Processing Enable	YES
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3 CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES
TPOS	Tool Position	CENT
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	2.86228
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.85288
EDTC-B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN

GCSE	System and Miscellaneous	Generalized Caliper Selection	BS
BS	Bit Size		9.875 IN
DO	Depth Offset for Playback		-550.0 M
PP	Playback Processing		NORMAL

Format: MEST_C_WRAP_BY_P1AZ Vertical Scale: 1:200 Graphics File Created: 09-Dec-2012 05:12

OP System Version: 19C0-187

MEST-B	19C0-187	DTA-A	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

Input DLIS Files

DEFAULT	FMS_NGS_032LUP	FN:56	PRODUCER	01-Dec-2012 02:00	733.8 M	647.4 M
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Output DLIS Files

DEFAULT	FMS_NGS_082PUP	FN:109	PRODUCER	09-Dec-2012 05:12
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Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Micro Electrical Scanner – B (Slim) Wellsite Calibration – Caliper Calibration							
Before: Calibration out of date 15-Oct-2012 21:47							
Caliper 1 Zero Measurement	12.00	N/A	12.64	N/A	N/A	N/A	IN
Caliper 2 Zero Measurement	12.00	N/A	12.47	N/A	N/A	N/A	IN
Caliper 1 Plus Measurement	15.19	N/A	15.87	N/A	N/A	N/A	IN
Caliper 2 Plus Measurement	15.19	N/A	15.68	N/A	N/A	N/A	IN
Micro Electrical Scanner – B (Slim) Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 1-Dec-2012 1:01							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	99	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	743	N/A	N/A	N/A	
Micro Electrical Scanner – B (Slim) Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 1-Dec-2012 1:01							
TEMPERATURE REFERENCE :	N/A	N/A	23	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	9	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	507	N/A	N/A	N/A	
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 15-Oct-2012 4:07 Before: 27-Oct-2012 17:27							
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 4:07 Before: 27-Oct-2012 17:27							
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 4:07 Before: 27-Oct-2012 17:27							
Coincidence Count Rate Ratio	1.000	1.017	0.9512	N/A	N/A	0.05000	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration							
Master: 15-Oct-2012 4:07							
Na 511 Peak Set Point	40.00	41.00					

Na 511 Peak Set Point	40.00	41.00	---	---	---	---	---
Th Peak Loc	209.6	210.7	---	---	---	---	%
Th Peak Res	7.000	6.661	---	---	---	---	CPS
Background Count Rate	142.5	21.23	---	---	---	---	
Gain Ratio	1.000	1.016	---	---	---	---	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 15-Oct-2012 4:07

Na 511 Peak Set Point	40.00	41.00	---	---	---	---	---
Th Peak Loc	209.6	207.9	---	---	---	---	%
Th Peak Res	7.000	6.668	---	---	---	---	CPS
Background Count Rate	142.5	21.12	---	---	---	---	
Gain Ratio	1.000	1.003	---	---	---	---	

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
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: Calibration out of date 15-Oct-2012 3:09

Gamma Ray (Jig – Bkg)	160.6	N/A	160.6	N/A	N/A	14.60	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Micro Electrical Scanner – B (Slim) / Equipment Identification

Primary Equipment:

MEST Sonde – B	MEDS – B	724
MEST Preamplifier Cartridge – AB	MEPC – AB	807
GPIT Cartridge – AC	GPIC – AC	719
MEST Acquisition Cartridge – A	MEAC – A	875

Auxiliary Equipment:

MEST-B Preamplifier Cartridge Housing	MEPH – A	702
MEST Acquisition Cartridge Housing (Slim)	MEAH – B	769

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:

HNGC Cartridge	HNGC – B	300
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Auxiliary Equipment:

HNGC Housing	HNGH – A	115
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Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

HNGS Sonde	HNGS – BA	194
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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	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.46	Master		15.52	Master		1159
Before		39.68	Before		15.36	Before		1180
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value
Master		141.4	Master		8.629	Master		22.62
Before		142.1	Before		9.065	Before		32.56
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-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 4:07 Before: 27-Oct-2012 17:27

Hostile Natural Gamma Ray Sonde Wellsite Calibration									
Detector 2 Check									
Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value	
Master		39.42	Master		15.34	Master		1092	
Before		39.73	Before		15.56	Before		1114	
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)			12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)			900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)		
Phase	Na 1785 Peak Loc	Value	Phase	Na 1785 Peak Res %	Value	Phase	Temperature DEGC	Value	
Master		141.6	Master		8.553	Master		22.74	
Before		142.6	Before		8.724	Before		33.00	
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-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 4:07 Before: 27-Oct-2012 17:27

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.017
Before		0.9512
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 15-Oct-2012 4:07

Before: 27-Oct-2012 17:27

Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 1 Calibration									
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value	
Master		41.00	Master		210.7	Master		6.661	
	38.00 (Minimum) 40.00 (Nominal) 43.00 (Maximum)			201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)			5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)		
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value				
Master		21.23	Master		1.016				
	10.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)					

Master: 15-Oct-2012 4:07

Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 2 Calibration									
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value	
Master		41.00	Master		207.9	Master		6.668	
	38.00 (Minimum) 40.00 (Nominal) 43.00 (Maximum)			201.0 (Minimum) 209.6 (Nominal) 218.3 (Maximum)			5.000 (Minimum) 7.000 (Nominal) 9.000 (Maximum)		
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value				
Master		21.12	Master		1.003				
	10.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)					

Master: 15-Oct-2012 4:07

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:
EDTC Gamma Ray Detector

EDTG - A/B

77693

Enhanced DTS Cartridge

EDTC - B

8529

Auxiliary Equipment:

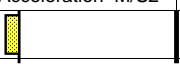
EDTC Housing

EDTH - B

8528

Enhanced DTS Cartridge Wellsite Calibration

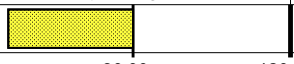
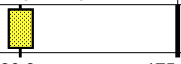

EDTC Accelerometer Calibration

Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.788
	9.610 (Minimum)	9.810 (Nominal)
		10.01 (Maximum)

Before: 30-Nov-2012 16:38

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		6.096	Before		160.6	Before		165.0
	0 (Minimum)			146.0 (Minimum)			150.0 (Minimum)	
	30.00 (Nominal)			160.6 (Nominal)			165.0 (Nominal)	
	120.0 (Maximum)			175.2 (Maximum)			180.0 (Maximum)	

Before: Calibration out of date 15-Oct-2012 3:09

Company: **Lamont Doherty****Schlumberger**Well: **Expedition 344, Site U1413C**Field: **Costa Rica Seismogenesis (CRISP-A2)**Rig: **JOIDES Resolution**Ocean: **Pacific**

Formation Micro Scanner (FMS)

Gamma Ray

Dual Axis Caliper