

Schlumberger

Company: **Lamont Doherty**

Well: **Expedition 344, Site U1414A**

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

Rig: **JOIDES Resolution Ocean: Pacific**

Rig: JOIDES Resolution Field: Costa Rica Seismogenesis (CRISP-A2) Location: Latitude: N 8° 30.2304' Well: Expedition 344, Site U1414A Company: Lamont Doherty	High Resolution Laterolog Array (HRLA) Hostile LithoDensity Sonde (HLDS) Gamma Ray			
	Latitude: N 8° 30.2304' Longitude: W 84° 13.5298'		Elev.: K.B. 11.00 m G.L. -2458.00 m D.F. 11.00 m	
	Permanent Datum: <u>Mean Sea Level</u> Log Measured From: <u>Drill Floor</u> Drilling Measured From: <u>Drill Floor</u>		Elev.: <u>0.00 m</u> 11.00 m above Perm. Datum	
	API Serial No.	Max. Hole Devi. 0 deg	Longitude W 84.22549	Latitude N 8.50384

Logging Date	9-Dec-2012		
Run Number	1		
Depth Driller	471.6 m		
Schlumberger Depth	416 m		
Bottom Log Interval	416 m		
Top Log Interval	0 m		
Casing Driller Size @ Depth	10.750 in @	96 m	@
Casing Schlumberger	94 m		
Bit Size	9.875 in		
Type Fluid In Hole	Seawater Gel		
MUD	Density	Viscosity	1.025 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	@ 27	@ 27
Maximum Recorded Temperatures	27 degC		
Circulation Stopped	Time	9-Dec-2012	15:00
Logger On Bottom	Time	9-Dec-2012	21:00
Unit Number	Location	625003	Houston
Recorded By	K. Swain		
Witnessed By	A. Malinverno, S. Saito		

	Run 1	Run 2	Run 3
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			
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			

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OTHER SERVICES1
 OS1: FMS/DSI
 OS2: HNGS
 OS3: HLDS
 OS4: HRLA
 OS5: UBI

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

REMARKS: RUN NUMBER 1
 Hole was drilled with a 9 7/8" RCB bit to TDD of mbsf.
 10 bbls of 10.5lb/gal heavy weight mud pumped at TD prior to bit release.
 HLDS density calibration shows low count rates for windows 4 and 5.
 This is due to a weaker than nominal gamma ray source but does not change the calibrated accuracy of the density measurement.
 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.

REMARKS: RUN NUMBER 2

RUN 1

SERVICE ORDER #: _____
 PROGRAM VERSION: 19C0-187
 FLUID LEVEL: _____

LOGGED INTERVAL	START	STOP

RUN 2

SERVICE ORDER #: _____
 PROGRAM VERSION: _____
 FLUID LEVEL: _____

LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION




RUN 1

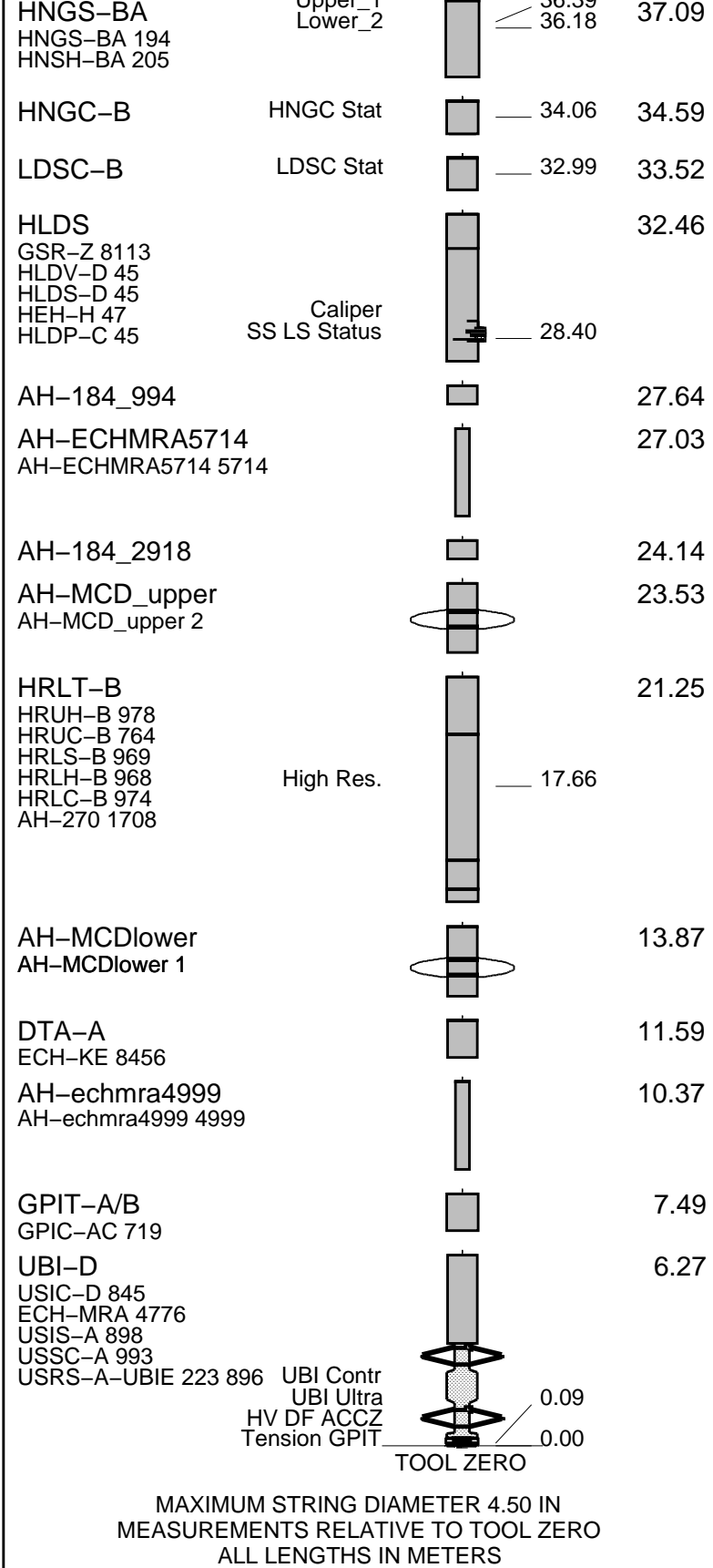
SURFACE EQUIPMENT

GSR-U 616008
 WITM (EDTS)-A 1

RUN 2

DOWNHOLE EQUIPMENT

LEH-MT	MDSB_EDTC		40.46
	Mud Tempe		39.07
AH-369	CTEM		39.50
	Gamma Ray		37.43
EDTC-B	EFTB DIAG		39.07
EDTH-B 8528	TelStatus		
EDTC-B 8529	EDTCB Ele		37.09
	Upper 1		36.39



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

Kelly Bushing Elevation

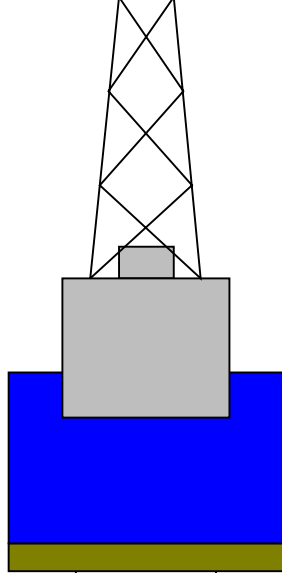
Derrick Floor Elevation

Mean Sea Level

-2469

-2469

-2458



0

7.75

4.1

Sea Floor



0

8.25

3.80

Sea Floor

95.8

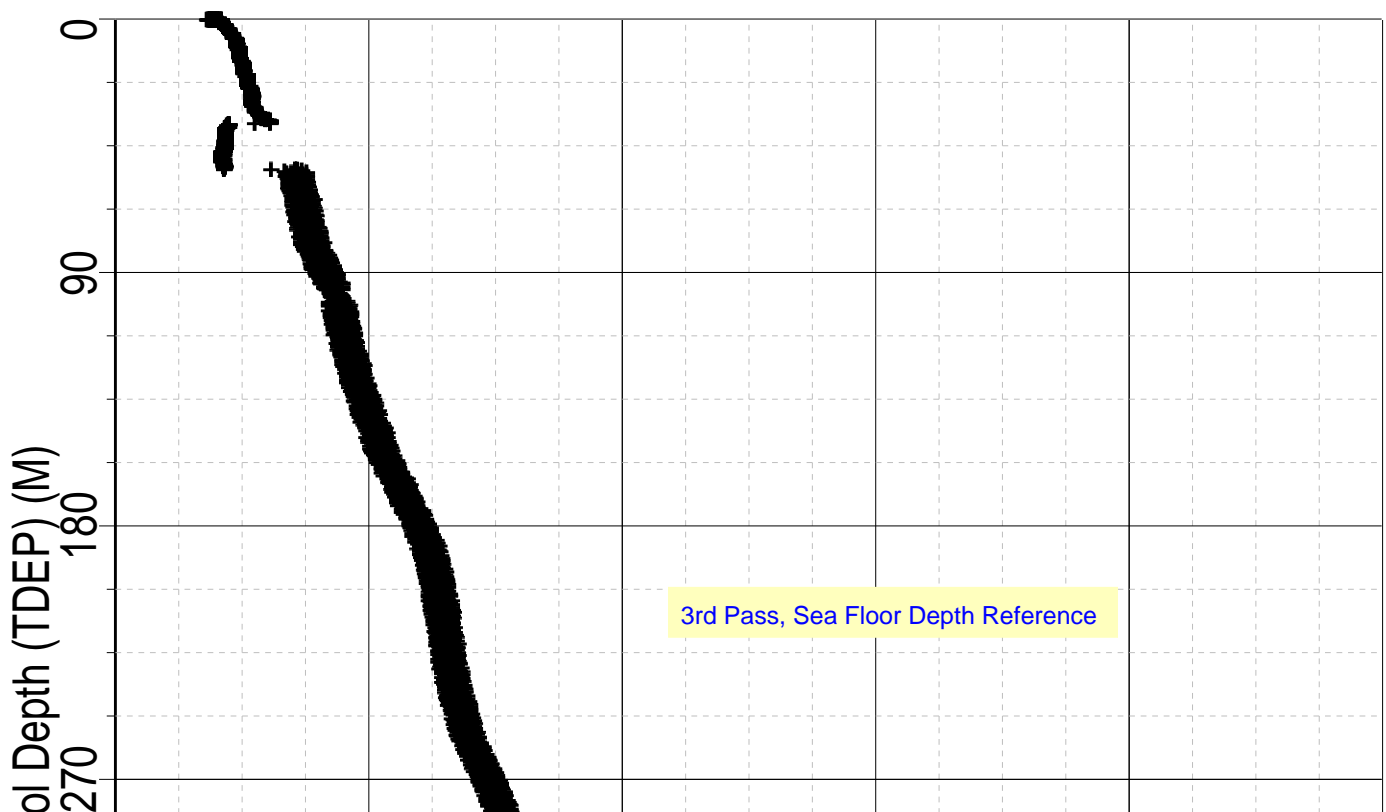
9.875

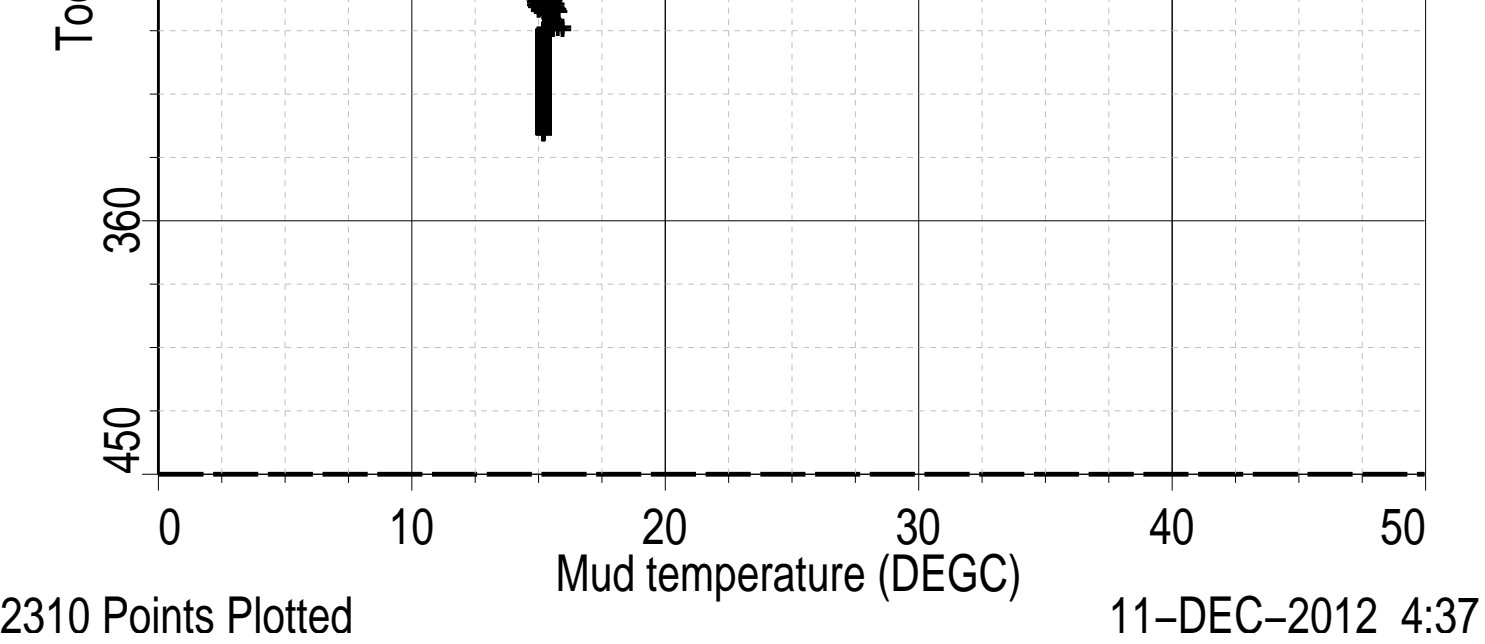
Open Hole

471.6

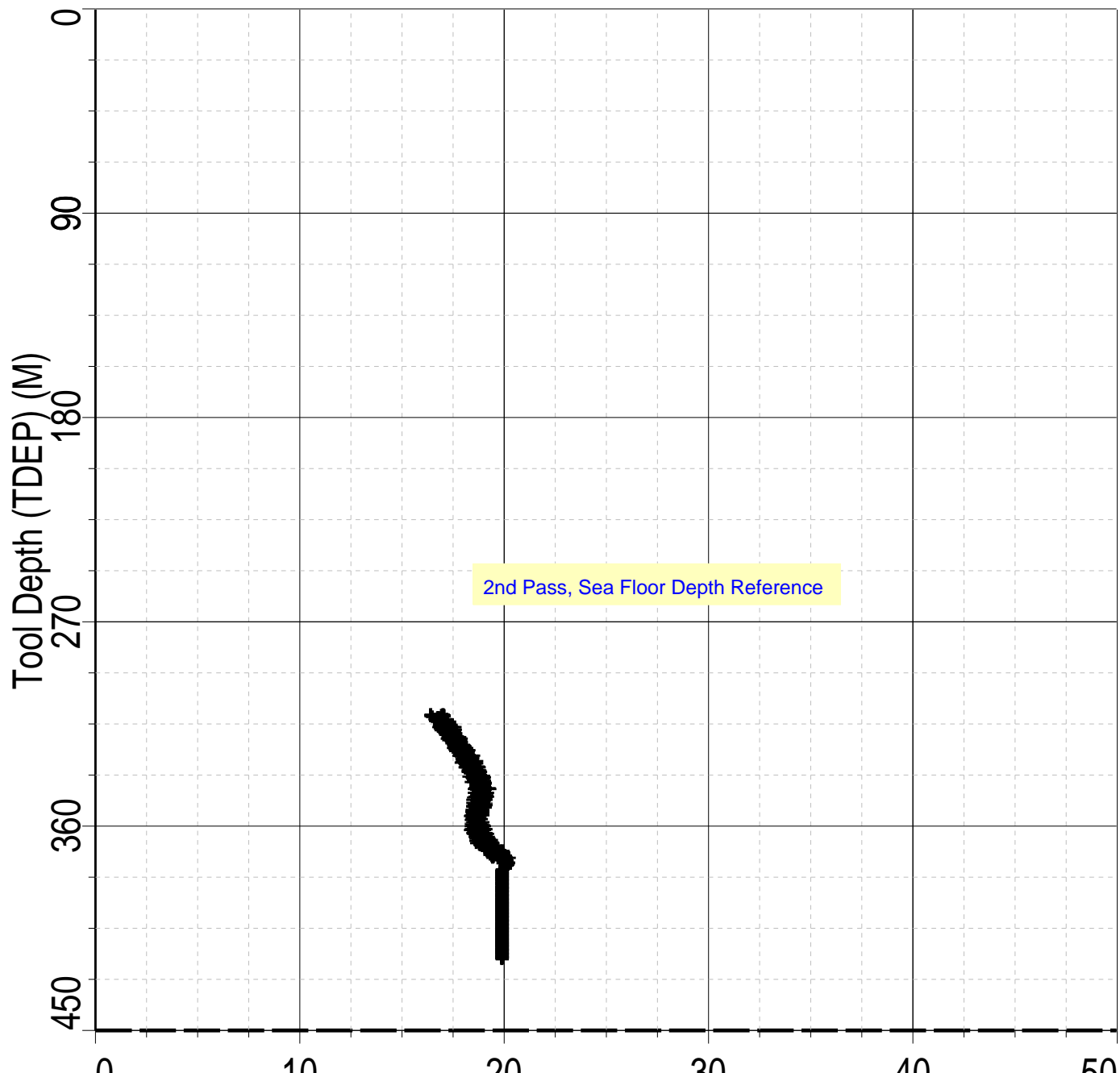
Total Depth

Index: 329.2 – -22.7 M

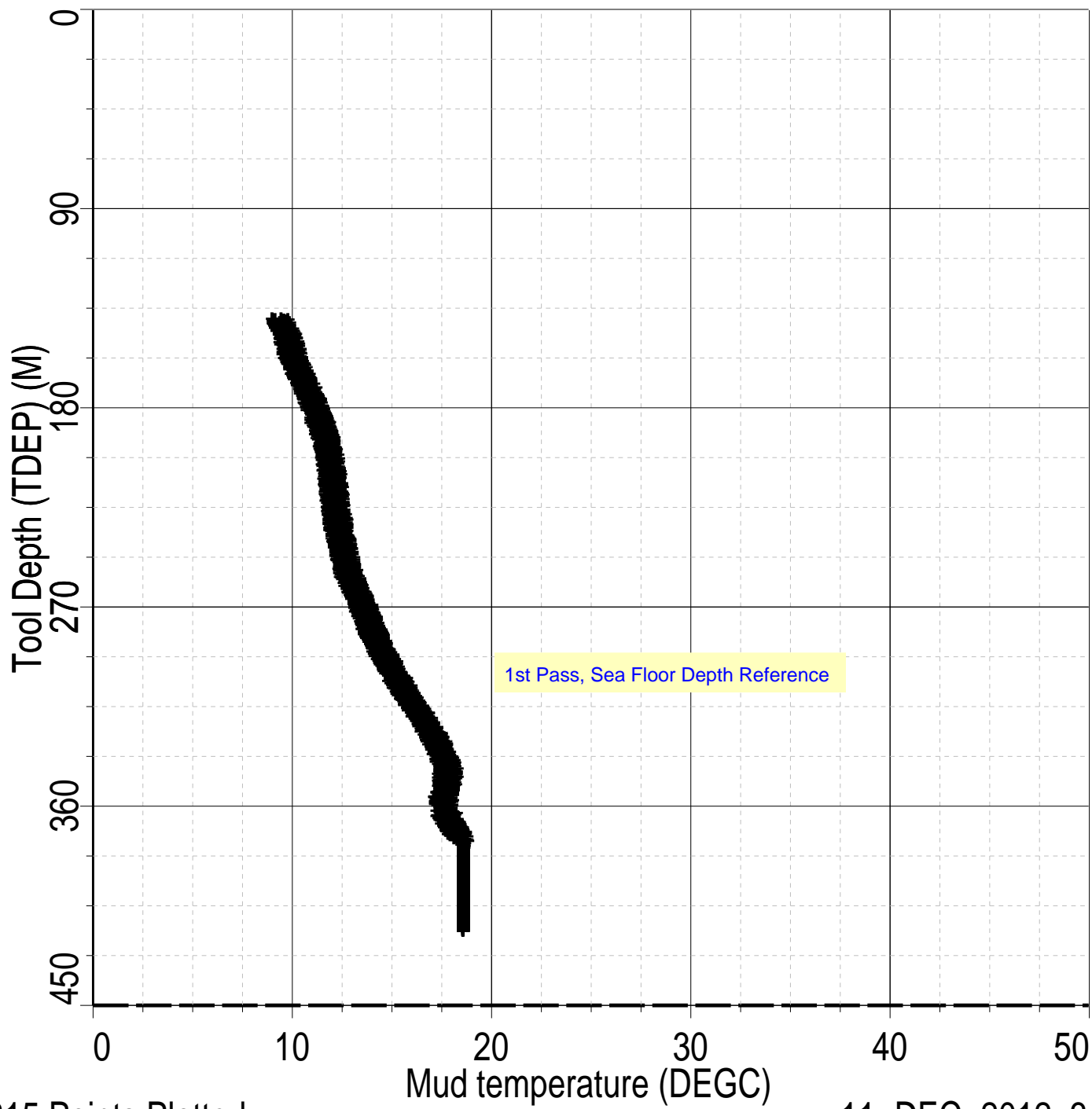




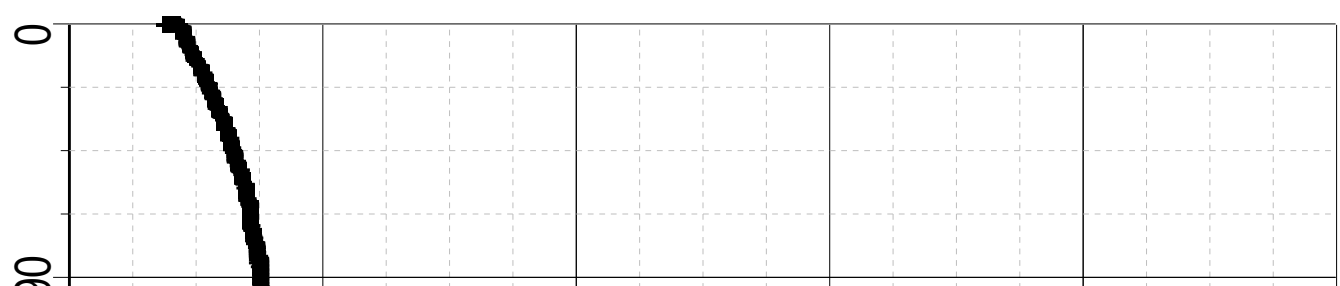
Index: 418.3 – 310.6 M

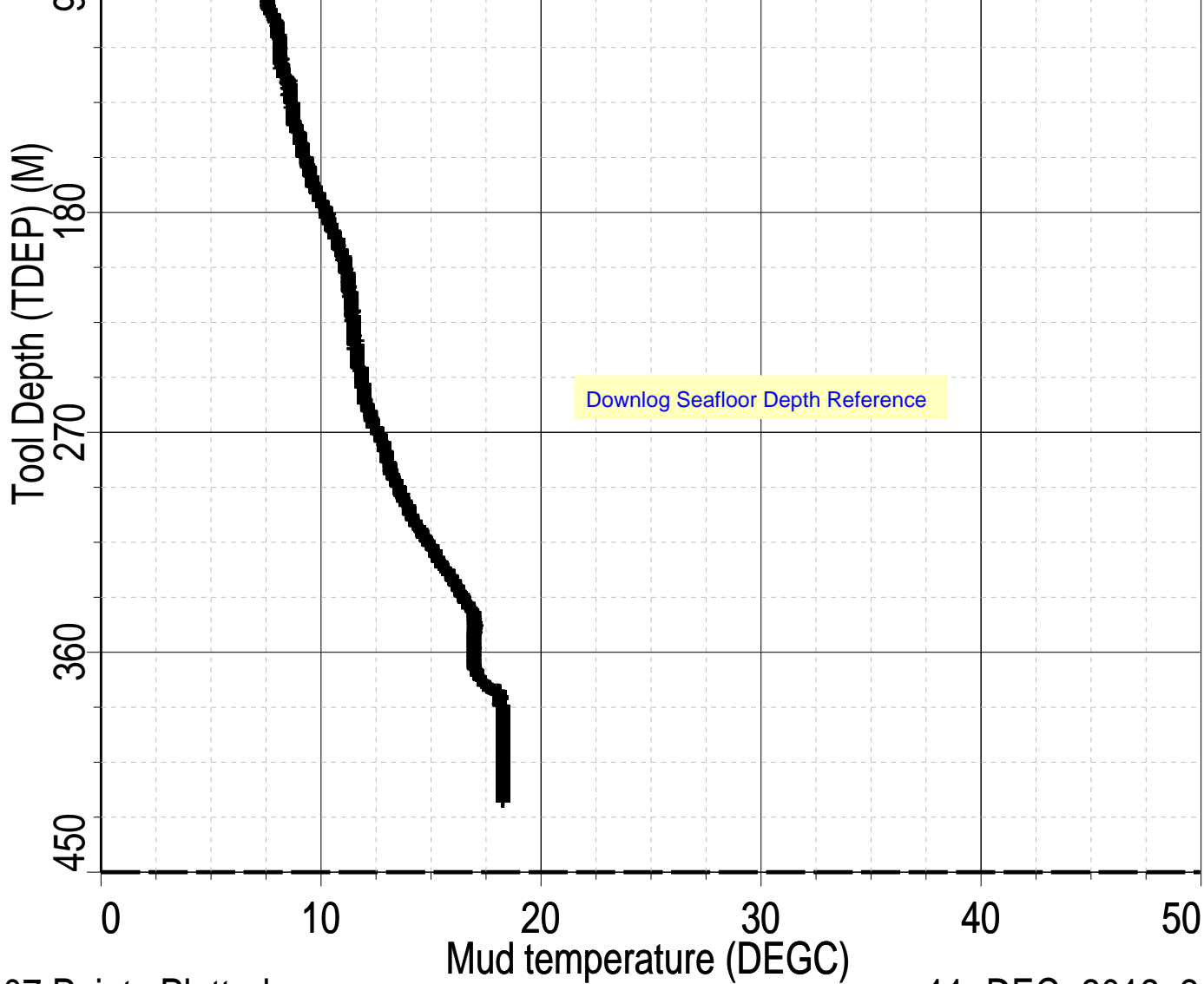


Index: 416.1 – 139.6 M



Index: 420.9 – -52.4 M





3107 Points Plotted

11-DEC-2012 2:59

Input DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_027LUP	FN:34	PRODUCER	10-Dec-2012 06:35	2798.1 M	2446.3 M
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Output DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_062PUP	FN:81	PRODUCER	11-Dec-2012 04:36	329.2 M	-22.7 M
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OP System Version: 19C0-187

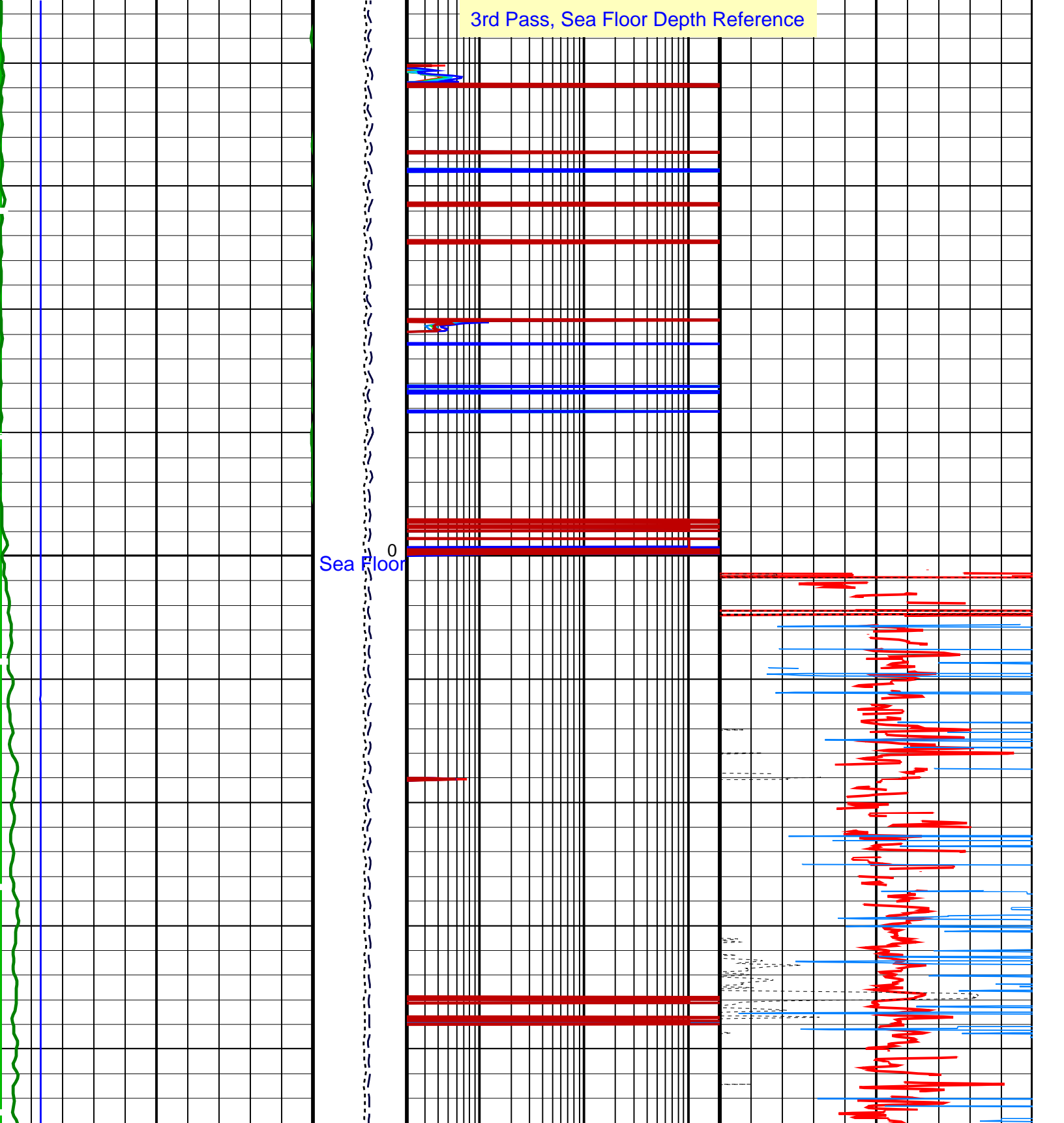
UBI-D	SRPC-5095-H2-2011-OP19	GPIT-A/B	19C0-187
DTA-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

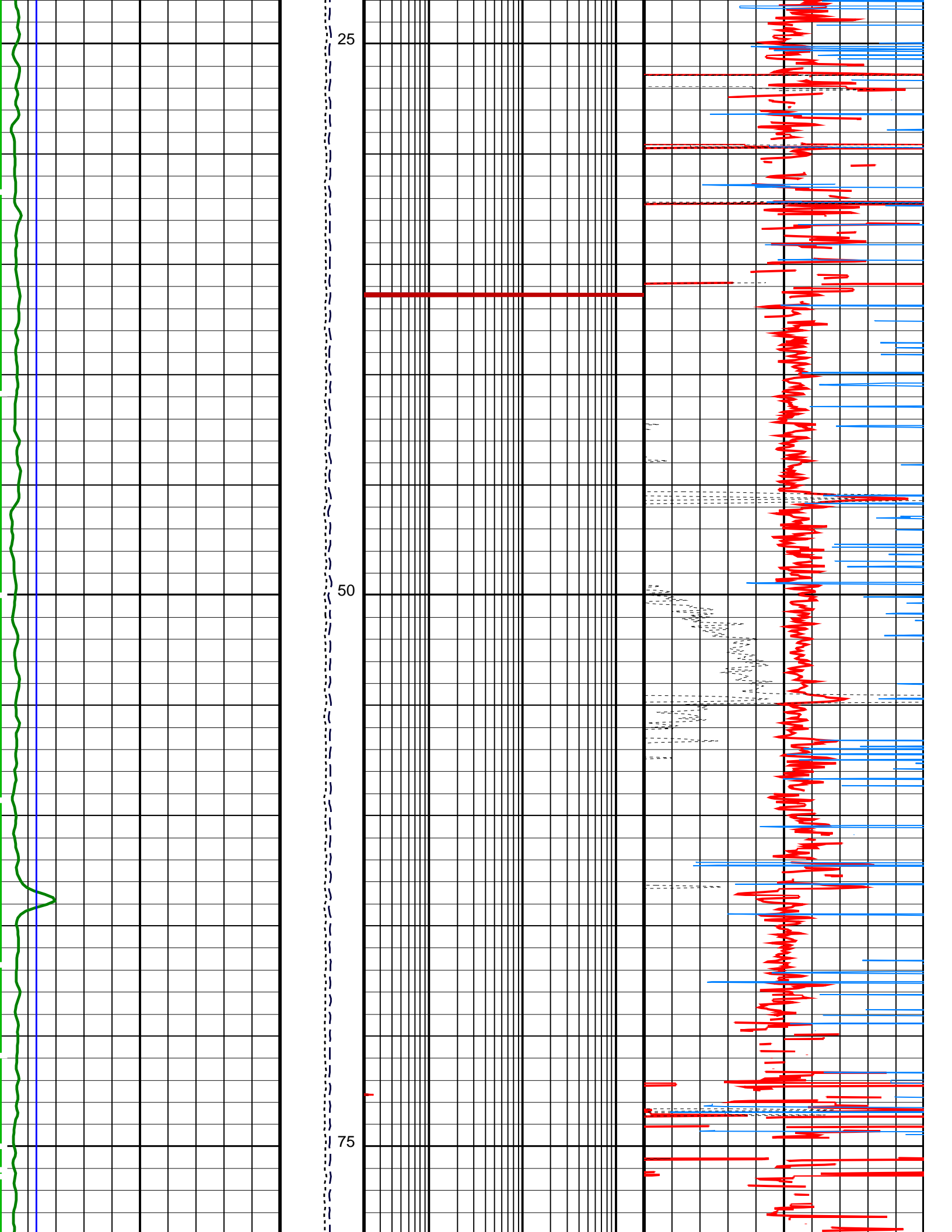
PIP SUMMARY

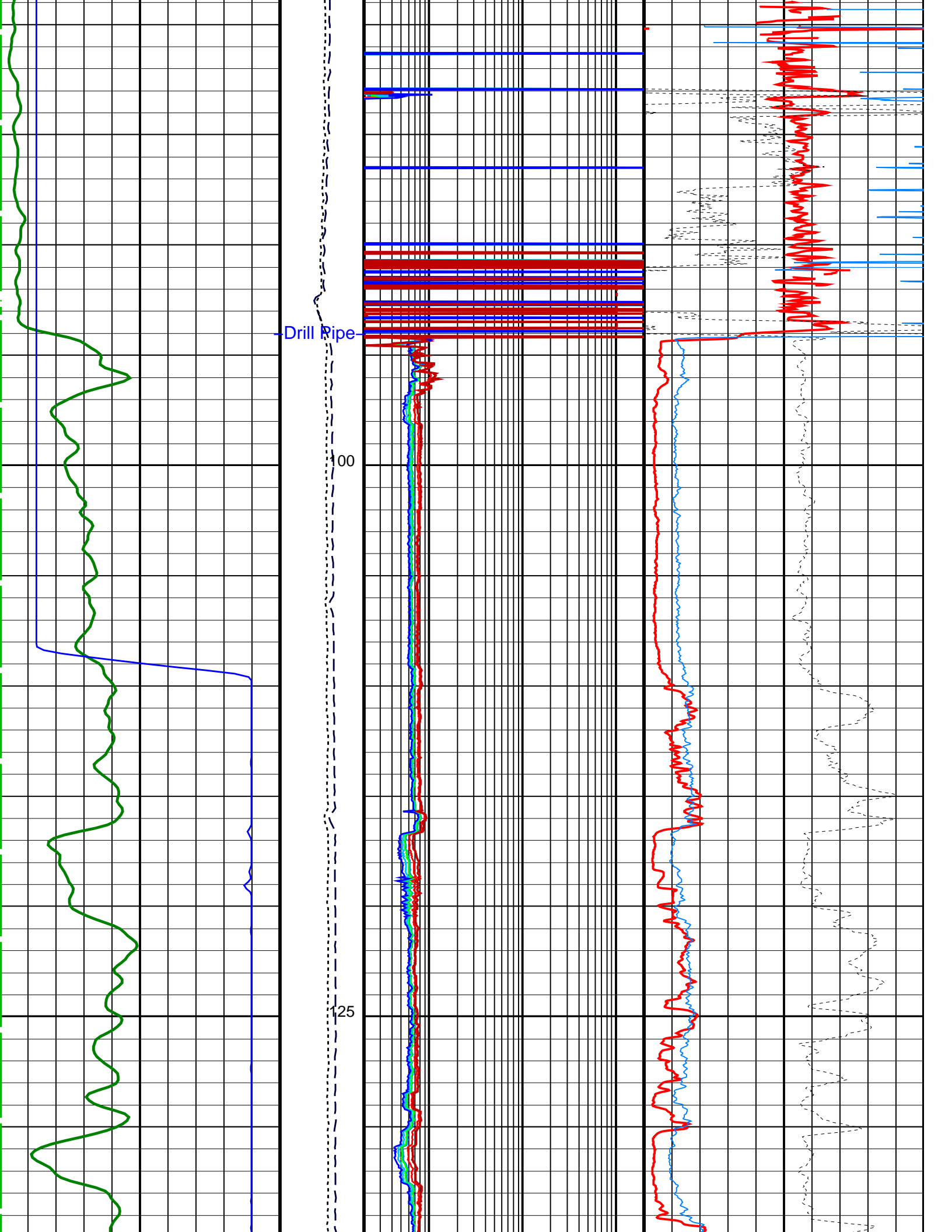
Time Mark Every 60 S

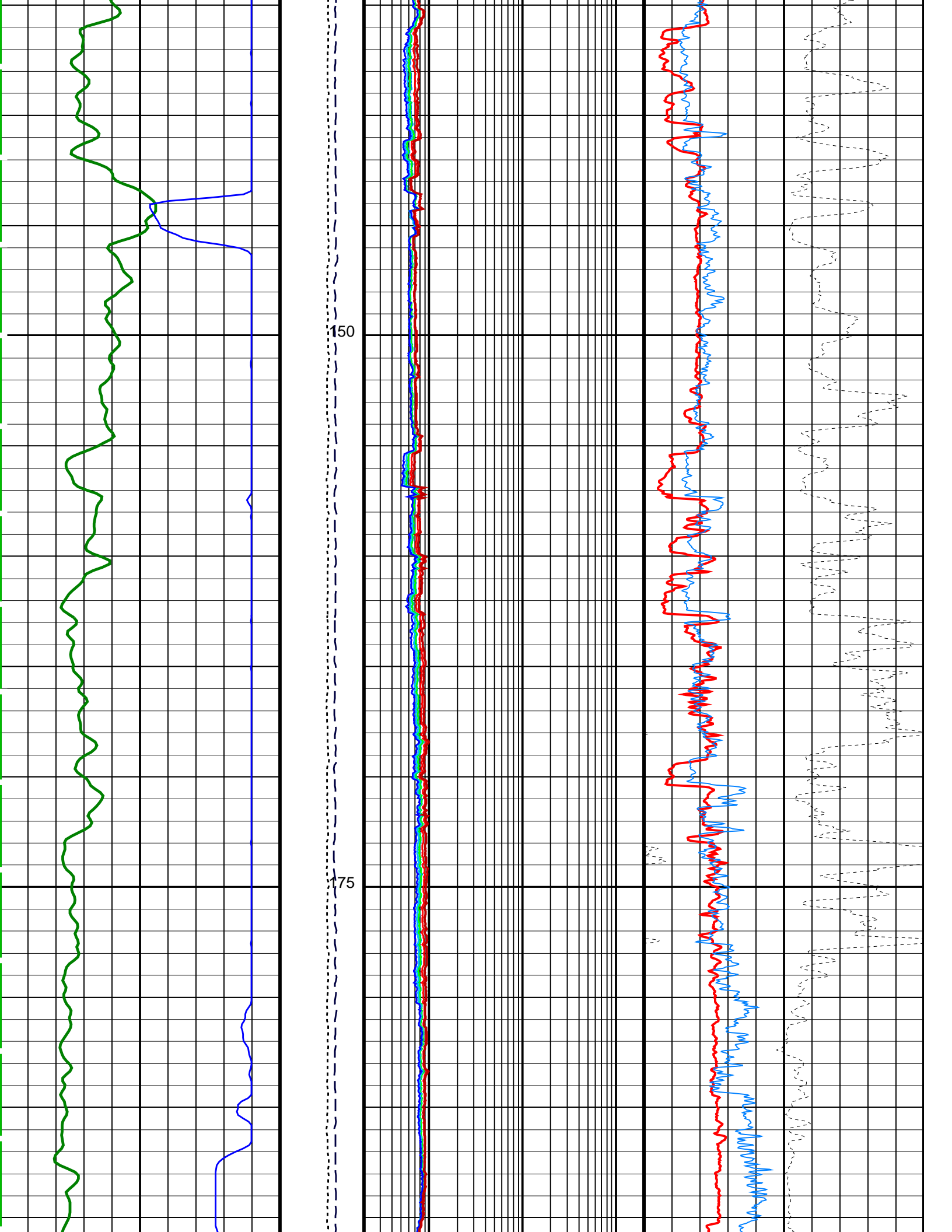
	HRLT True Resistivity (RT_HRLT)	
	0.2 (OHMM)	200
	HRLT Resistivity 1 (RLA1)	
	0.2 (OHMM)	200
	HRLT Resistivity 2 (RLA2)	
	0.2 (OHMM)	200
HNGS Spectroscopy Gamma Ray (HSGR)	HRLT Resistivity 3 (RLA3)	HLDS HR Long Spaced Photoelectric Effect (HLEF)
	0.2 (OHMM)	200

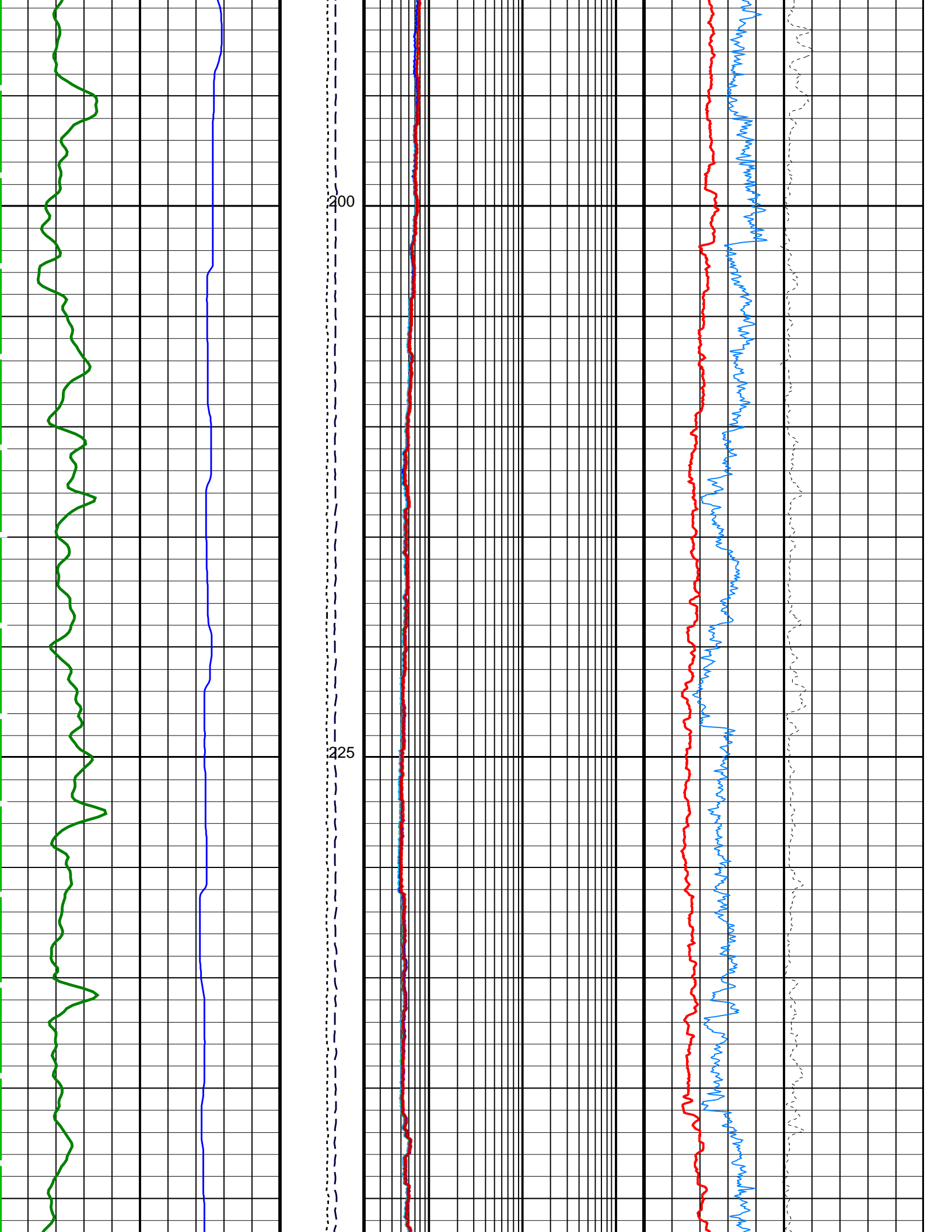
0	(GAPI)	75	0.2	(OHMM)	200	0	(---	10
Gamma Ray (GR_EDTC) (GAPI)			HRLT Resistivity 5 (RLA5) (OHMM)			HLDS HR Bulk Density Correction (HBDC) (G/C3)		
0		75	0.2		200	-0.25		0.25
Calibrated Downhole Force (CDF) (LBF)			HRLT Resistivity 4 (RLA4) (OHMM)			HLDS HR Bulk Density (HROM) (G/C3)		
5000		0	0.2		200	1		4
Tension (TENS) (LBF)			HLDS Caliper (LCAL) (IN)					
10000		0	0		20			

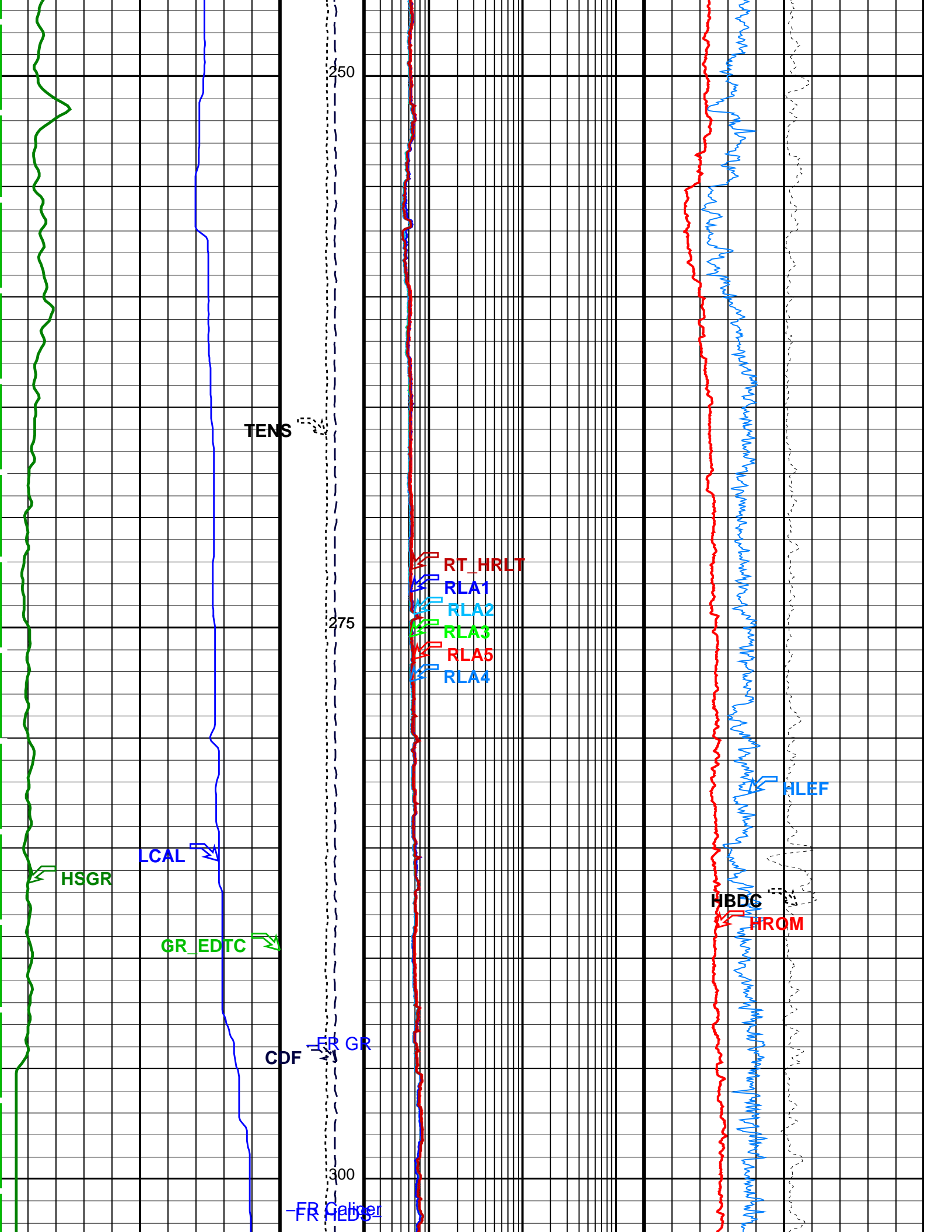


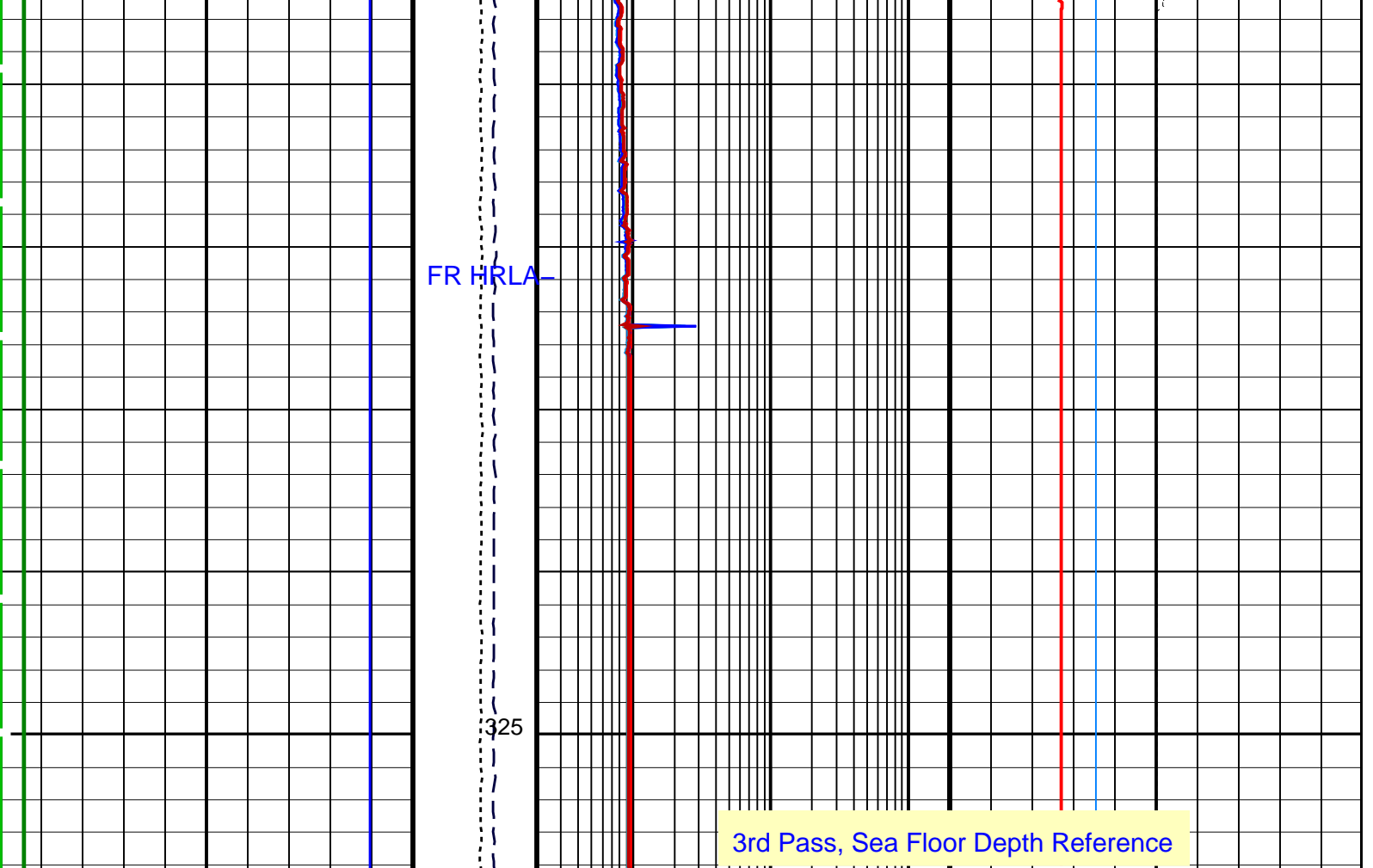












HLDS Caliper (LCAL) 0 (IN) 20	Tension (TENS) (LBF) 10000 0	HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 200	HLDS HR Bulk Density (HROM) 1 (G/C3) 4
Gamma Ray (GR_EDTC) 0 (GAPI) 75	Calibrated Downhole Force (CDF) (LBF) 5000 0	HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 200	HLDS HR Bulk Density Correction (HBDC) (G/C3) -0.25 0.25
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 75		HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 200	HLDS HR Long Spaced Photoelectric Effect (HLEF) (----) 0 10
		HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 200	
		HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 200	
		HRLT True Resistivity (RT_HRLT) 0.2 (OHMM) 200	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
UBI-D: Ultrasonic Borehole Imager - D	Vertical Resolution	IN: 0.4
	Default Fluid Velocity	206 US/F
	UBI Tool Working Mode for FPM	UBI3_SW250_180_1
	UBI Tool Working Mode for Measurement	UBI3_SW250_180_1
AAMN	Automatic Amplitude Minimum Scale	2 DB
ACMN	Minimum Gain of Controller	1200

AGMN	Maximum Gain of Cartridge	-12DB	
AGMX	Amplitude - max color scale minimum	48DB	
AMCM	Amplitude - max color scale maximum	-6	DB
AMCX	Angular Offset	0.2	DB
ANGO	Automatic Transit Time Minimum Scale	-17	DEG
ATMN	Amplitude Color Scale Minimum	2	US
AWMN	Amplitude Color Scale Maximum	20	DB
AWMX	Corrected Amplitude Color Scale Minimum	55	DB
CACN	Corrected Amplitude Color Scale Maximum	0	DB
CACX	Corrected Radii Color Scale Minimum	50	DB
CRCN	Corrected Radii Color Scale Maximum	3	IN
CRCX	Casing Inner Diameter	4.5	IN
CSID	Window Decrement Down	0	IN
DCMN	Window Decrement Up	0.8	
DCMX	Default Fluid Velocity	0.6	
DFVL	Radial Plot Depth Increment	193	US/F
DISI	Radial Plot Display Requested	120	
DISR	Diameter of Tool	0	
DOT	Eccentering Correction Level	1.85	IN
ECRL	EMEX Voltage	FIRST	
EMXV	Eccentering Rejection	50	V
ERDB	FVEL Depth Offset	12	DB
FDOS	FVEL Measurement Offset	0	M
FMOS	Fluid Velocity Filter	0	US/F
FVLM	Gain Correction	MEAN	
GCSW	FVEL Filter Size	ON	
HFLT	Internal Corrosion Color Scale Minimum	10	
ICMN	Internal Corrosion Color Scale Maximum	-0.15	IN
ICMX	Image Rotation	0.15	IN
IMAR	FIFO Inhibition Time	OFF	
INHT	Minimum Limit Control	Inh_29us	
LIM1	Maximum Limit Control	AUTO	
LIM2	Metal Loss Color Scale Minimum	MANUAL	
MLCN	Metal Loss Color Scale Maximum	-0.15	IN
MLCX	Color Correction Depth Level	0.15	IN
NBCD	Eccentering Correction Depth Level	80	
NBLD	Noise Correction Depth Interval	1	
NCDI	Processing Noise Correction	30	
PNSW	Reference Calibrator Standoff	ON	
RCSO	60 Hz Correction	0.795	IN
RJ60	Radii Color Scale Minimum	ON	
RRCN	Radii Color Scale Maximum	3	IN
RRCX	UBI Sub type	4.5	IN
SUBT	Sliding Window Minimum	Sub_5_inch_S	
SWLV	Sliding Window Maximum	Inh_18us	
SWMX	UBI USAC Allow Task after Power Up	Inh_167us	
UBI_USAC_TASK_ALLOW	UBI USAC Task Timeout (in seconds) FOR TEST REPORT	YES	
UBI_USAC_TASK_TIMEOUT	UBI Flagging of Lost Echoes	600	
UFON	UBI/UCI GPIT Offset	OFF	
UGOS	Modulation Frequency	3.63	IN
UMFR	Emission Pattern	500000	HZ
UPAT	Sampling Frequency	Pattern_250K	
USFR	Ultrasonic Time Offset	1e+006	HZ
USTO	UBI Sub Identifier	-3	US
USUB	Current Working Mode	Sub_5_inch	
UWKM	acq VERTICAL Resolution	UBI9_SW250_140_RAW	
VERR	Vertical Sampling	IN: 0.4	
WFVS	Window Beginning Time	0.4	IN
WINB	Window end time	18.5	US
WINE	GPIT-A/B: General Purpose Inclinometer	36	US
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	-0.785248	DEG
MRTE	Magneto Reference Temperature	19	DEGC
TEMS	GPIT Temperature Sensor Used	BOTH	
U-GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC-3098-FEB_2006_C) ?	NO	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	30.2229	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	

GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	30	DEGC
	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)	21	DEGC
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	0.018227	DC/M
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	-0.00235707	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
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	30	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.05984	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03642	
	EDTC-B: Enhanced DTS Cartridge		
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
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	0.018227	DC/M

GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	30	DEGC
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	
UHSV: UBI Hole Shape Analysis			
	Vertical Resolution	IN: 0.4	
	Default Fluid Velocity	206	US/F
	UBI Tool Working Mode for FPM	UBI3_SW250_180_1	
	UBI Tool Working Mode for Measurement	UBI3_SW250_180_1	
	Automatic Amplitude Minimum Scale	2	DB
	Minimum Gain of Cartridge	-12DB	
	Maximum Gain of Cartridge	48DB	
	Amplitude - max color scale minimum	-6	DB
	Amplitude - max color scale maximum	0.2	DB
	Angular Offset	-17	DEG
	Automatic Transit Time Minimum Scale	2	US
	Amplitude Color Scale Minimum	20	DB
	Amplitude Color Scale Maximum	55	DB
	Corrected Amplitude Color Scale Minimum	0	DB
	Corrected Amplitude Color Scale Maximum	50	DB
	Corrected Radii Color Scale Minimum	3	IN
	Corrected Radii Color Scale Maximum	4.5	IN
	Casing Inner Diameter	0	IN
	Window Decrement Down	0.8	
	Window Decrement Up	0.6	
	Default Fluid Velocity	193	US/F
	Radial Plot Depth Increment	120	
	Radial Plot Display Requested	0	
	Diameter of Tool	1.85	IN
	Eccentering Correction Level	FIRST	
	EMEX Voltage	50	V
	Eccentering Rejection	12	DB
	FVEL Depth Offset	0	M
	FVEL Measurement Offset	0	US/F
	Fluid Velocity Filter	MEAN	
	Gain Correction	ON	
	FVEL Filter Size	10	
	Internal Corrosion Color Scale Minimum	-0.15	IN
	Internal Corrosion Color Scale Maximum	0.15	IN
	Image Rotation	OFF	
	FIFO Inhibition Time	Inh_29us	
	Minimum Limit Control	AUTO	
	Maximum Limit Control	MANUAL	
	Metal Loss Color Scale Minimum	-0.15	IN
	Metal Loss Color Scale Maximum	0.15	IN
	Color Correction Depth Level	80	
	Eccentering Correction Depth Level	1	
	Noise Correction Depth Interval	30	
	Processing Noise Correction	ON	
	Reference Calibrator Standoff	0.795	IN
	60 Hz Correction	ON	
	Radii Color Scale Minimum	3	IN
	Radii Color Scale Maximum	4.5	IN
	UBI Sub type	Sub_5_inch_S	
	Sliding Window Minimum	Inh_18us	
	Sliding Window Maximum	Inh_167us	
	UBI Flagging of Lost Echoes	OFF	
	UBI/UCI GPIT Offset	3.63	IN
	Modulation Frequency	500000	HZ
	Emission Pattern	Pattern_250K	
	Sampling Frequency	1e+006	HZ
	Ultrasonic Time Offset	-3	US
	UBI Sub Identifier	Sub_5_inch	
	Current Working Mode	UBI9_SW250_140_RAW	
	acq VERTICAL Resolution	IN: 0.4	
	Vertical Sampling	0.4	IN
	Window Beginning Time	18.5	US
	Window end time	36	US
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.500	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	1.02	G/C3
DO	Depth Offset for Playback	-2469.0	M
FLEV	Fluid Level	-50000.00	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	2970	M
TDD	Total Depth - Driller	2941.00	M
TDL	Total Depth - Logger	2945.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripCombo_2kohm Vertical Scale: 1:200 Graphics File Created: 11-Dec-2012 04:36

OP System Version: 19C0-187

UBI-D	SRPC-5095-H2-2011-OP19	GPIT-A/B	19C0-187
DTA-A	19C0-187	HRLT-B	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	UBI_HRLA_LDL_NGS_027LUP	FN:34	PRODUCER	10-Dec-2012 06:35	2798.1 M	2446.3 M
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Output DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_062PUP	FN:81	PRODUCER	11-Dec-2012 04:36		
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Input DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_025LUP	FN:30	PRODUCER	10-Dec-2012 05:11	2887.2 M	2779.5 M
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Output DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_060PUP	FN:79	PRODUCER	11-Dec-2012 04:13	418.3 M	310.6 M
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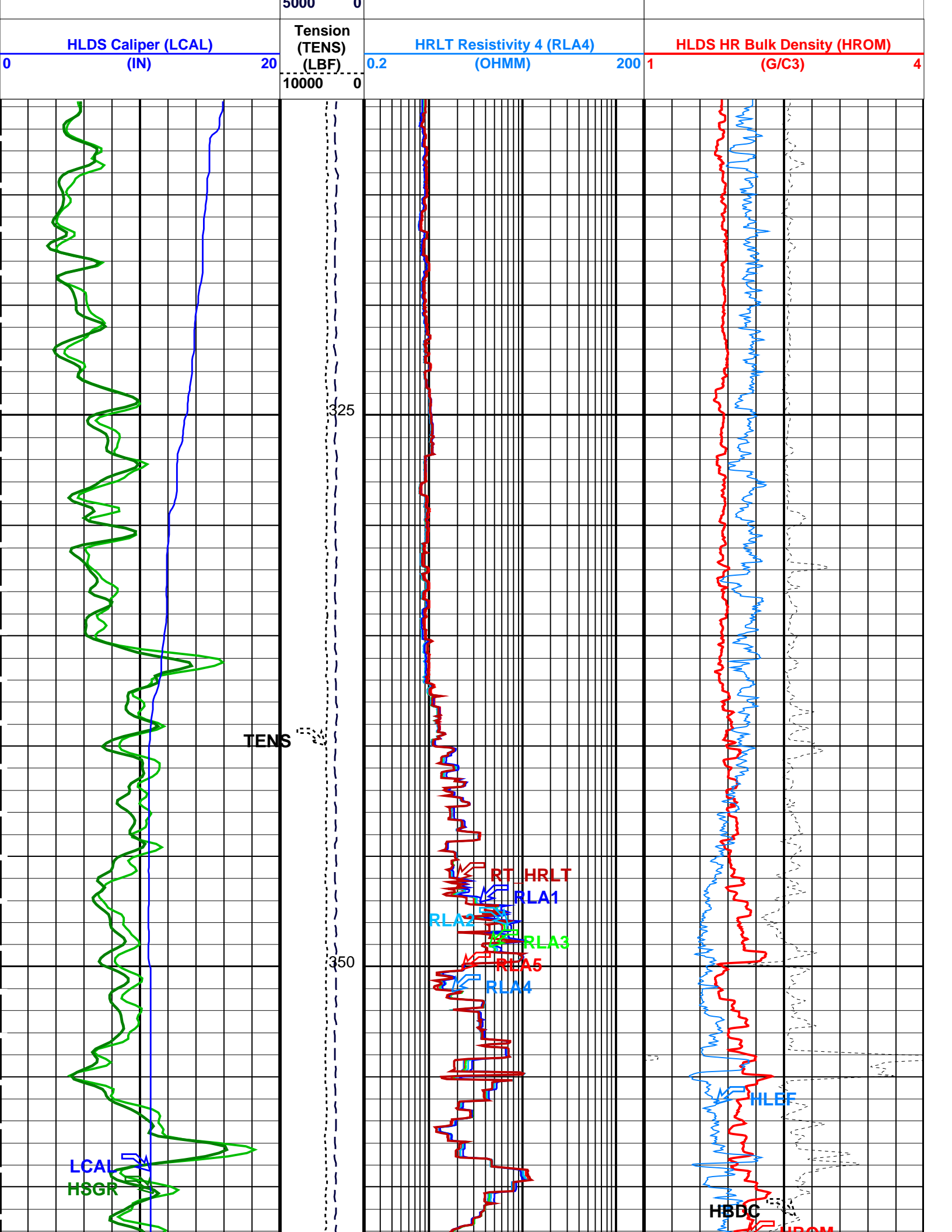
OP System Version: 19C0-187

UBI-D	SRPC-5095-H2-2011-OP19	GPIT-A/B	19C0-187
DTA-A	19C0-187	HRLT-B	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

		HRLT True Resistivity (RT_HRLT)			
		0.2	(OHMM)	200	
		HRLT Resistivity 1 (RLA1)			
		0.2	(OHMM)	200	
2nd Pass, Sea Floor Depth Reference		HRLT Resistivity 2 (RLA2)			
		0.2	(OHMM)	200	
HNGS Spectroscopy Gamma Ray (HSGR)		HRLT Resistivity 3 (RLA3)		HLDS HR Long Spaced Photoelectric Effect (HLEF)	
0	(GAPI) 75	0.2	(OHMM)	200	0 (----) 10
Gamma Ray (GR_EDTC)		HRLT Resistivity 5 (RLA5)		HLDS HR Bulk Density Correction (HBDC)	
0	(GAPI) 75	0.2	(OHMM)	200	-0.25 (G/C3) 0.25



GR_EDTC

CDF

375

-FR GR

-FR Galiper

FR HLDS

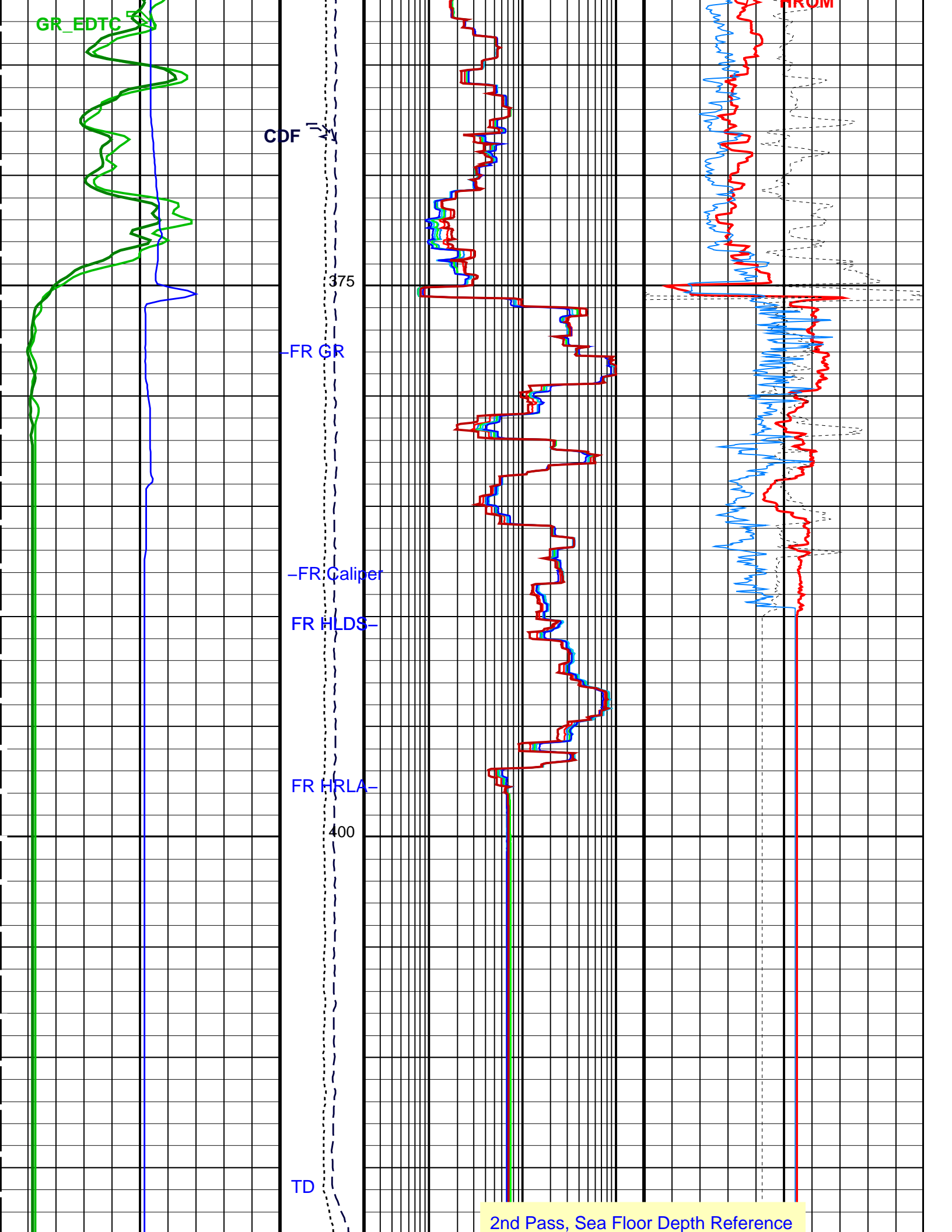
FR HRLA

400

TD

FROM

2nd Pass, Sea Floor Depth Reference



HLDS Caliper (LCAL) (IN)	20	Tension (TENS) (LBF)	10000	0	HRLT Resistivity 4 (RLA4) (OHMM)	0.2	200	1	HLDS HR Bulk Density (HROM) (G/C3)	4
Gamma Ray (GR_EDTC) (GAPI)	75	Calibrated Downhole Force (CDF) (LBF)	5000	0	HRLT Resistivity 5 (RLA5) (OHMM)	0.2	200		HLDS HR Bulk Density Correction (HBDC) (G/C3)	0.25
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)	75				HRLT Resistivity 3 (RLA3) (OHMM)	0.2	200	0	HLDS HR Long Spaced Photoelectric Effect (HLEF) (----)	10
					HRLT Resistivity 2 (RLA2) (OHMM)	0.2	200			
					HRLT Resistivity 1 (RLA1) (OHMM)	0.2	200			
					HRLT True Resistivity (RT_HRLT) (OHMM)	0.2	200			

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
UBI-D: Ultrasonic Borehole Imager - D	Vertical Resolution	IN: 0.4
	Default Fluid Velocity	206 US/F
	UBI Tool Working Mode for FPM	UBI3_SW250_180_1
	UBI Tool Working Mode for Measurement	UBI3_SW250_180_1
AAMN	Automatic Amplitude Minimum Scale	2 DB
AGMN	Minimum Gain of Cartridge	-12DB
AGMX	Maximum Gain of Cartridge	48DB
AMCM	Amplitude - max color scale minimum	-6 DB
AMCX	Amplitude - max color scale maximum	0.2 DB
ANGO	Angular Offset	-17 DEG
ATMN	Automatic Transit Time Minimum Scale	2 US
AWMN	Amplitude Color Scale Minimum	20 DB
AWMX	Amplitude Color Scale Maximum	55 DB
CACN	Corrected Amplitude Color Scale Minimum	0 DB
CACX	Corrected Amplitude Color Scale Maximum	50 DB
CRCN	Corrected Radii Color Scale Minimum	3 IN
CRCX	Corrected Radii Color Scale Maximum	4.5 IN
CSID	Casing Inner Diameter	0 IN
DCMN	Window Decrement Down	0.8
DCMX	Window Decrement Up	0.6
DFVL	Default Fluid Velocity	193 US/F
DISI	Radial Plot Depth Increment	120
DISR	Radial Plot Display Requested	0
DOT	Diameter of Tool	1.85 IN
ECRL	Eccentering Correction Level	FIRST
EMXV	EMEX Voltage	50 V
ERDB	Eccentering Rejection	12 DB
FDOS	FVEL Depth Offset	0 M
FMOS	FVEL Measurement Offset	0 US/F
FVLM	Fluid Velocity Filter	MEAN
GCSW	Gain Correction	ON
HFLT	FVEL Filter Size	10
ICMN	Internal Corrosion Color Scale Minimum	-0.15 IN
ICMX	Internal Corrosion Color Scale Maximum	0.15 IN
IMAR	Image Rotation	OFF
INHT	FIFO Inhibition Time	Inh_29us
LIM1	Minimum Limit Control	AUTO
LIM2	Maximum Limit Control	MANUAL
MLCN	Metal Loss Color Scale Minimum	-0.15 IN
MLCX	Metal Loss Color Scale Maximum	0.15 IN
NBCD	Color Correction Depth Level	80
NBLD	Eccentering Correction Depth Level	1
NCDI	Noise Correction Depth Interval	30
PNSW	Processing Noise Correction	ON
RCSO	Reference Calibrator Standoff	0.795 IN

RJ60	60 HZ Correction		
RRCN	Radii Color Scale Minimum	3	IN
RRCX	Radii Color Scale Maximum	4.5	IN
SUBT	UBI Sub type	Sub_5_inch_S	
SWLV	Sliding Window Minimum	Inh_18us	
SWMX	Sliding Window Maximum	Inh_167us	
UBI_USAC_TASK_ALLOW	UBI USAC Allow Task after Power Up	YES	
UBI_USAC_TASK_TIMEOUT	UBI USAC Task Timeout (in seconds) FOR TEST REPORT	600	
UFON	UBI Flagging of Lost Echoes	OFF	
UGOS	UBI/UCI GPIT Offset	3.63	IN
UMFR	Modulation Frequency	500000	HZ
UPAT	Emission Pattern	Pattern_250K	
USFR	Sampling Frequency	1e+006	HZ
USTO	Ultrasonic Time Offset	-3	US
USUB	UBI Sub Identifier	Sub_5_inch	
UWKM	Current Working Mode	UBI3_SW250_180_1	
VERR	acq VERTical Resolution	IN: 0.2	
WFVS	Vertical Sampling	0.2	IN
WINB	Window Beginning Time	18.5	US
WINE	Window end time	36	US
GPIT-A/B: General Purpose Inclinator			
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	-0.785248	DEG
MRTE	Magneto Reference Temperature	19	DEGC
TEMS	GPIT Temperature Sensor Used	BOTH	
U-GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC-3098-FEB_2006_C) ?	NO	

HRLT-B: High Resolution Laterolog Array - B

BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	30.2229	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROGINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSP0	Sonde Position	Centered	
SHT	Surface Hole Temperature	30	DEGC

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)	21	DEGC
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	0.018227	DC/M
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	-0.00235707	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
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	30	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.05984	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03642	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
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	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	30	DEGC
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	
UHSV: UBI Hole Shape Analysis			
	Vertical Resolution	IN: 0.4	
	Default Fluid Velocity	206	US/F
	UBI Tool Working Mode for FPM	UBI3_SW250_180_1	
	UBI Tool Working Mode for Measurement	UBI3_SW250_180_1	
AAMN	Automatic Amplitude Minimum Scale	2	DB
AGMN	Minimum Gain of Cartridge	-12DB	
AGMX	Maximum Gain of Cartridge	48DB	
AMCM	Amplitude - max color scale minimum	-6	DB
AMCX	Amplitude - max color scale maximum	0.2	DB
ANGO	Angular Offset	-17	DEG
ATMN	Automatic Transit Time Minimum Scale	2	US
AWMN	Amplitude Color Scale Minimum	20	DB
AWMX	Amplitude Color Scale Maximum	55	DB
CACN	Corrected Amplitude Color Scale Minimum	0	DB
CACX	Corrected Amplitude Color Scale Maximum	50	DB
CRCN	Corrected Radii Color Scale Minimum	3	IN
CRCX	Corrected Radii Color Scale Maximum	4.5	IN
CSID	Casing Inner Diameter	0	IN
DCMN	Window Decrement Down	0.8	
DCMX	Window Decrement Up	0.6	
DFVL	Default Fluid Velocity	193	US/F
DISI	Radial Plot Depth Increment	120	

DISR	Radial Plot Depth Increment	120	
DISR	Radial Plot Display Requested	0	
DOT	Diameter of Tool	1.85	IN
ECRL	Eccentering Correction Level	FIRST	
EMXV	EMEX Voltage	50	V
ERDB	Eccentering Rejection	12	DB
FDOS	FVEL Depth Offset	0	M
FMOS	FVEL Measurement Offset	0	US/F
FVLM	Fluid Velocity Filter	MEAN	
GCSW	Gain Correction	ON	
HFLT	FVEL Filter Size	10	
ICMN	Internal Corrosion Color Scale Minimum	-0.15	IN
ICMX	Internal Corrosion Color Scale Maximum	0.15	IN
IMAR	Image Rotation	OFF	
INHT	FIFO Inhibition Time	Inh_29us	
LIM1	Minimum Limit Control	AUTO	
LIM2	Maximum Limit Control	MANUAL	
MLCN	Metal Loss Color Scale Minimum	-0.15	IN
MLCX	Metal Loss Color Scale Maximum	0.15	IN
NBCD	Color Correction Depth Level	80	
NBLD	Eccentering Correction Depth Level	1	
NCDI	Noise Correction Depth Interval	30	
PNSW	Processing Noise Correction	ON	
RCSO	Reference Calibrator Standoff	0.795	IN
RJ60	60 Hz Correction	ON	
RRCN	Radii Color Scale Minimum	3	IN
RRCX	Radii Color Scale Maximum	4.5	IN
SUBT	UBI Sub type	Sub_5_inch_S	
SWLV	Sliding Window Minimum	Inh_18us	
SWMX	Sliding Window Maximum	Inh_167us	
UFON	UBI Flagging of Lost Echoes	OFF	
UGOS	UBI/UCI GPIT Offset	3.63	IN
UMFR	Modulation Frequency	500000	HZ
UPAT	Emission Pattern	Pattern_250K	
USFR	Sampling Frequency	1e+006	HZ
USTO	Ultrasonic Time Offset	-3	US
USUB	UBI Sub Identifier	Sub_5_inch	
UWKM	Current Working Mode	UBI3_SW250_180_1	
VERR	acq VERTical Resolution	IN: 0.2	
WFVS	Vertical Sampling	0.2	IN
WINB	Window Beginning Time	18.5	US
WINE	Window end time	36	US

System and Miscellaneous

ALTDPCCHAN	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	1.02	G/C3
DO	Depth Offset for Playback	-2469.0	M
FLEV	Fluid Level	-50000.00	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	2970	M
TDD	Total Depth - Driller	2941.00	M
TDL	Total Depth - Logger	2945.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripCombo_2kohm Vertical Scale: 1:200 Graphics File Created: 11-Dec-2012 04:13

OP System Version: 19C0-187

UBI-D	SRPC-5095-H2-2011-OP19	GPIT-A/B	19C0-187
DTA-A	19C0-187	HRLT-B	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	UBI_HRLA_LDL_NGS_025LUP	FN:30	PRODUCER	10-Dec-2012 05:11	2887.2 M	2779.5 M
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Output DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_060PUP	FN:79	PRODUCER	11-Dec-2012 04:13		
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Input DLIS Files

DEFAULT UBI_HRLA_LDL_NGS_024LUP FN:28 PRODUCER 10-Dec-2012 03:45 2884.9 M 2608.6 M

Output DLIS Files

DEFAULT UBI_HRLA_LDL_NGS_059PUP FN:78 PRODUCER 11-Dec-2012 03:23 416.1 M 139.6 M

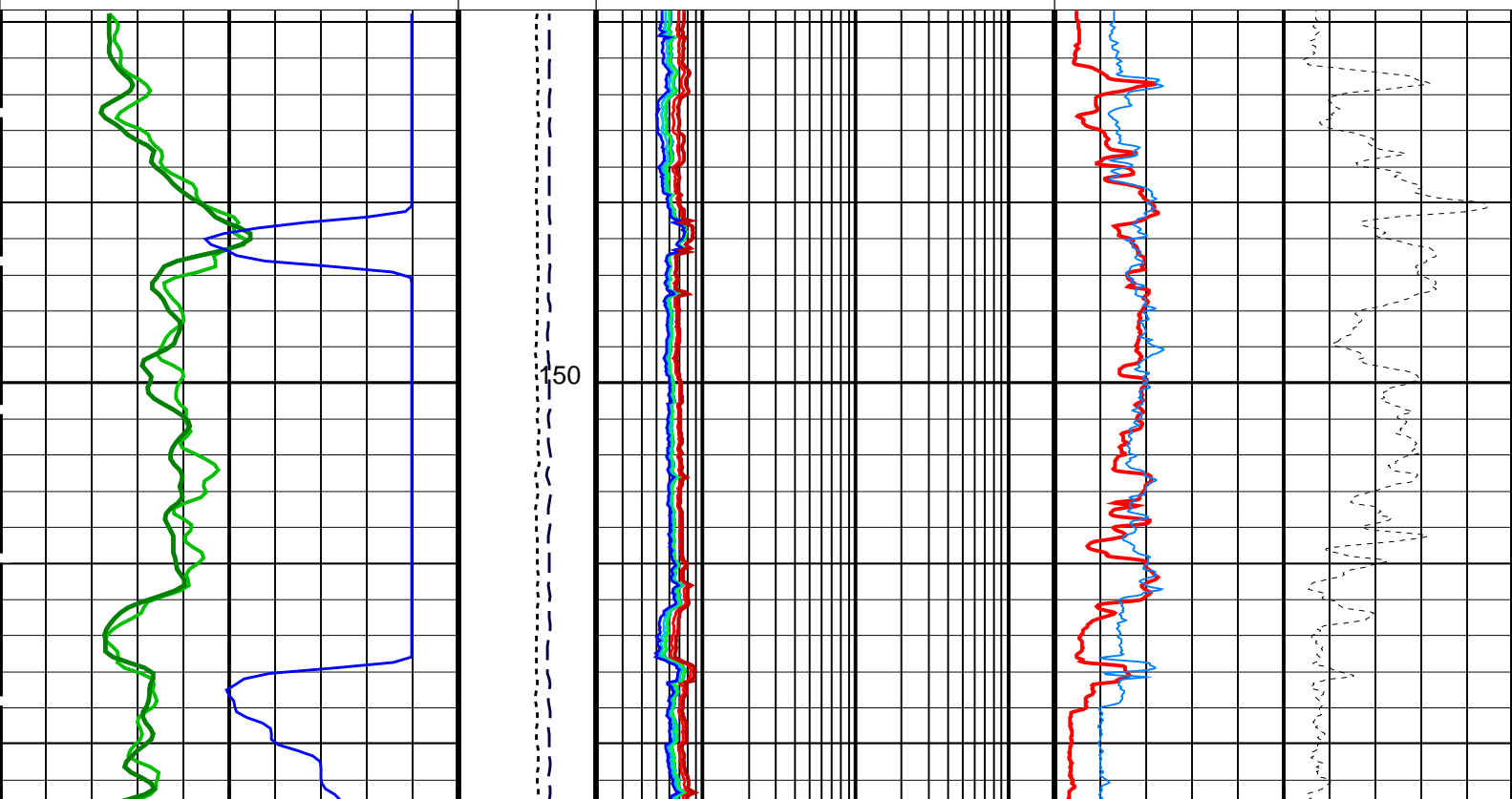
OP System Version: 19C0-187

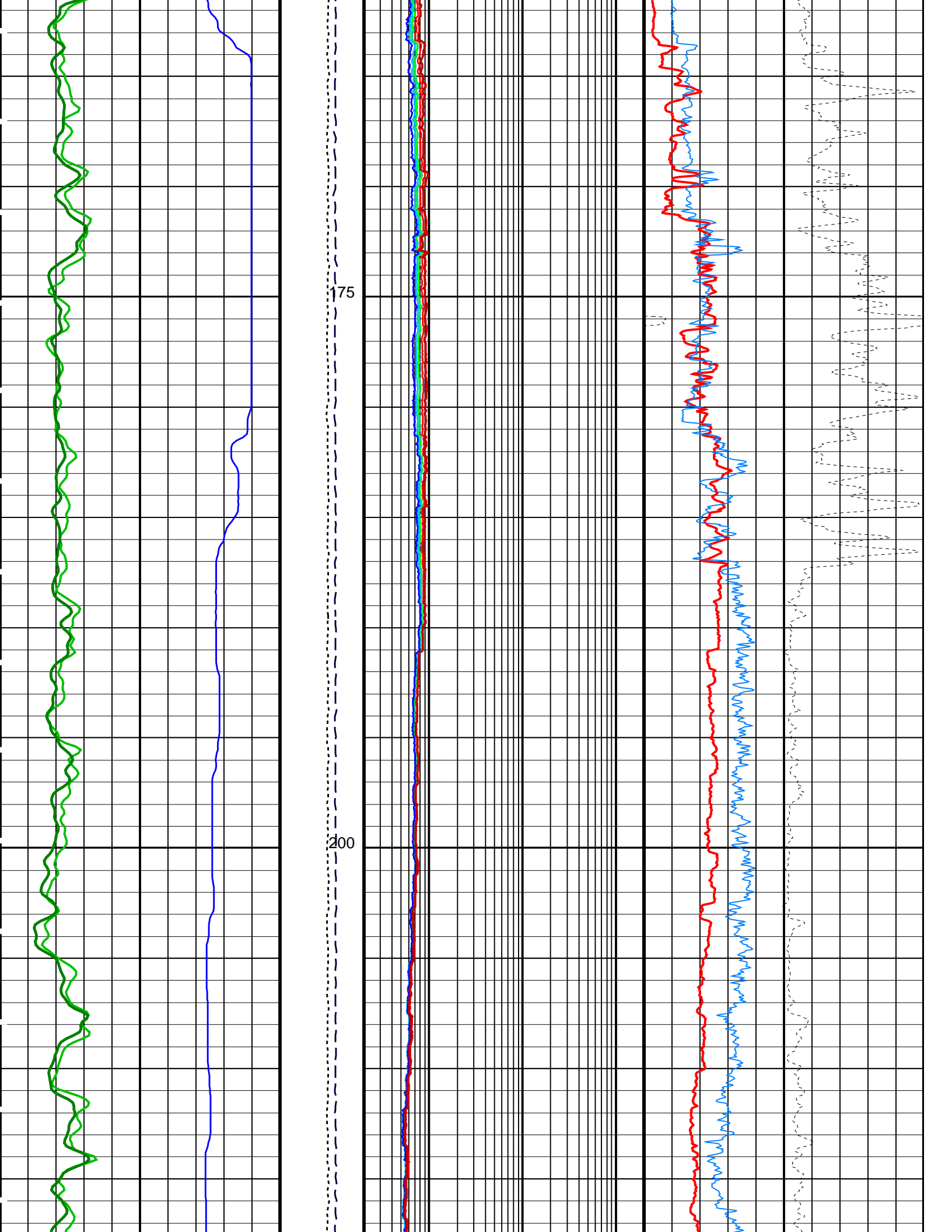
UBI-D	SRPC-5095-H2-2011-OP19	GPIT-A/B	19C0-187
DTA-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

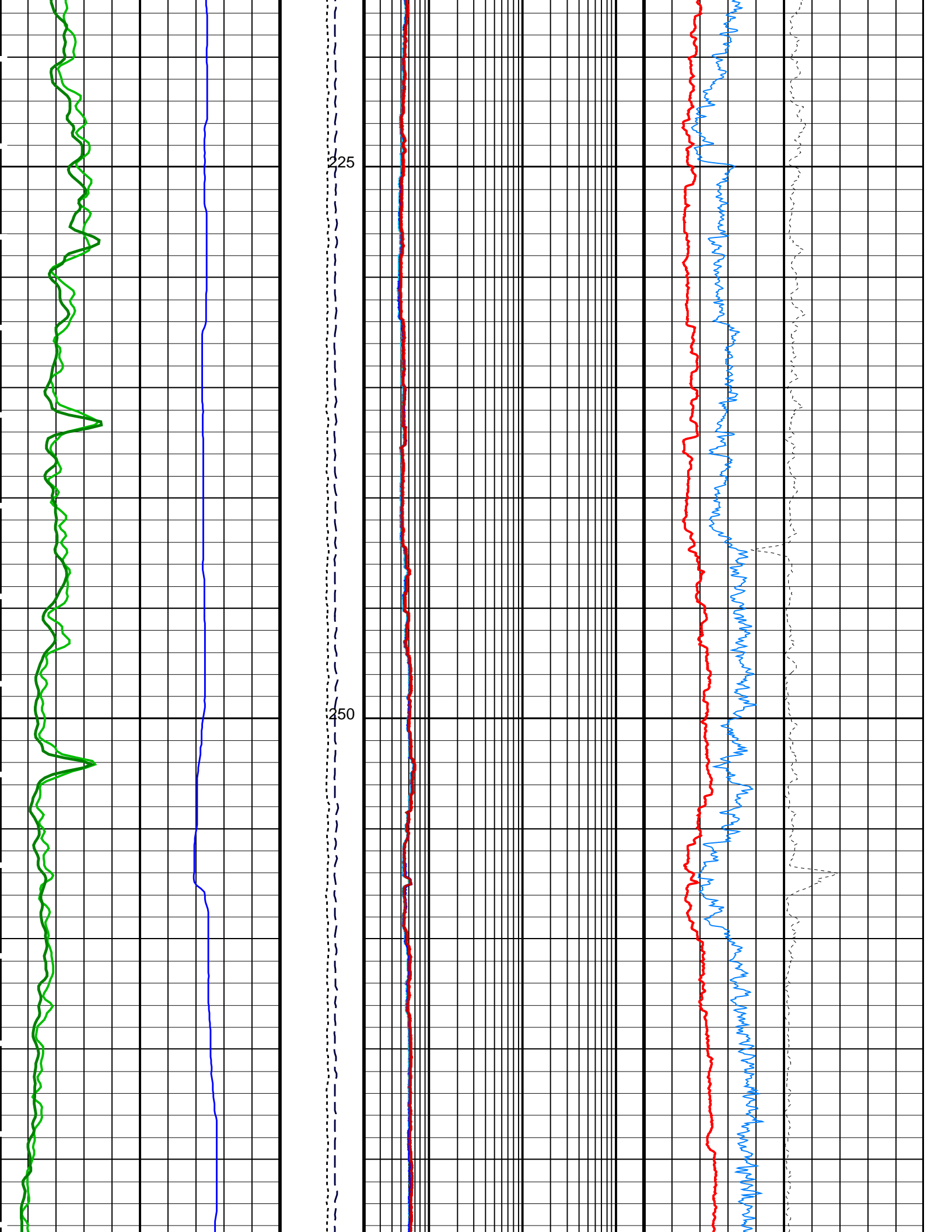
PIP SUMMARY

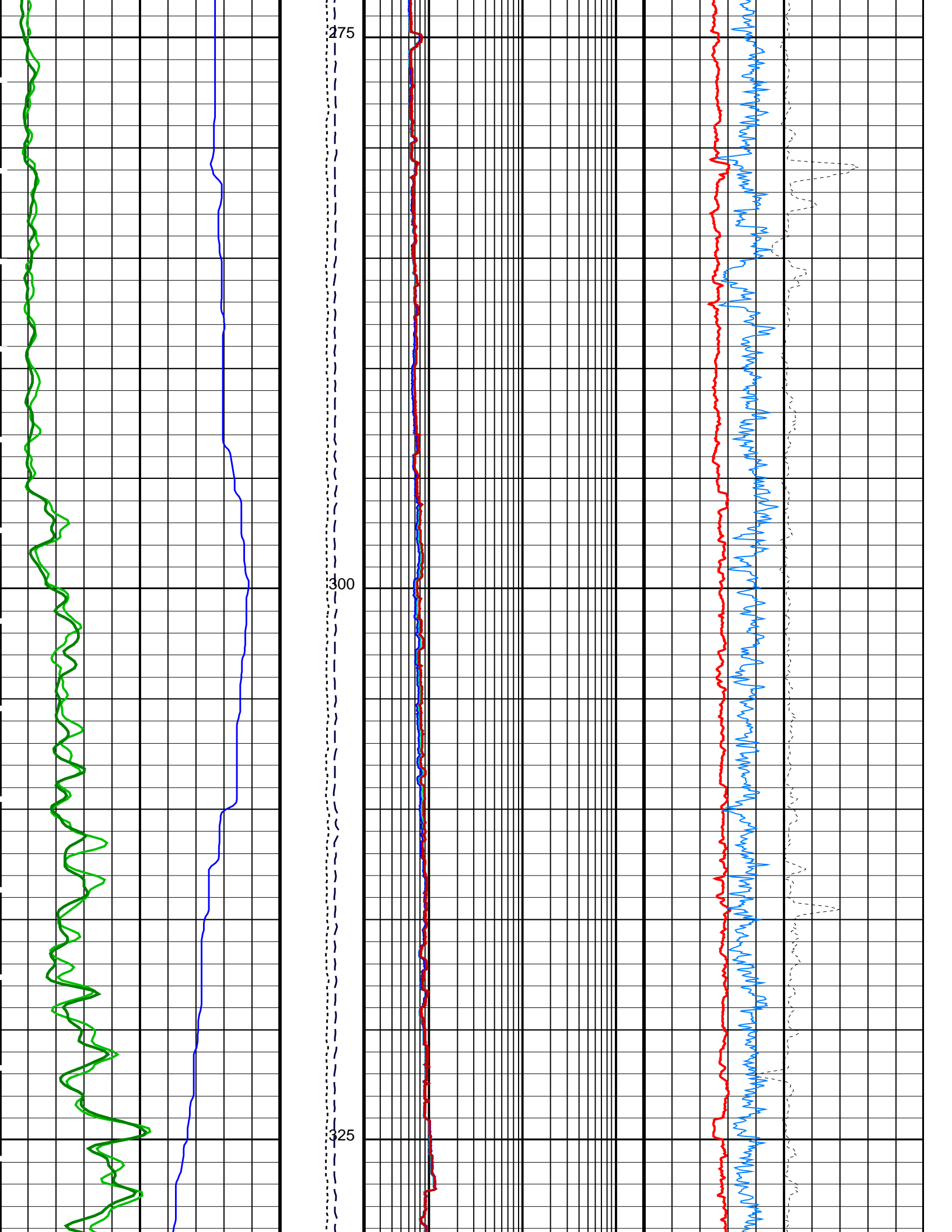
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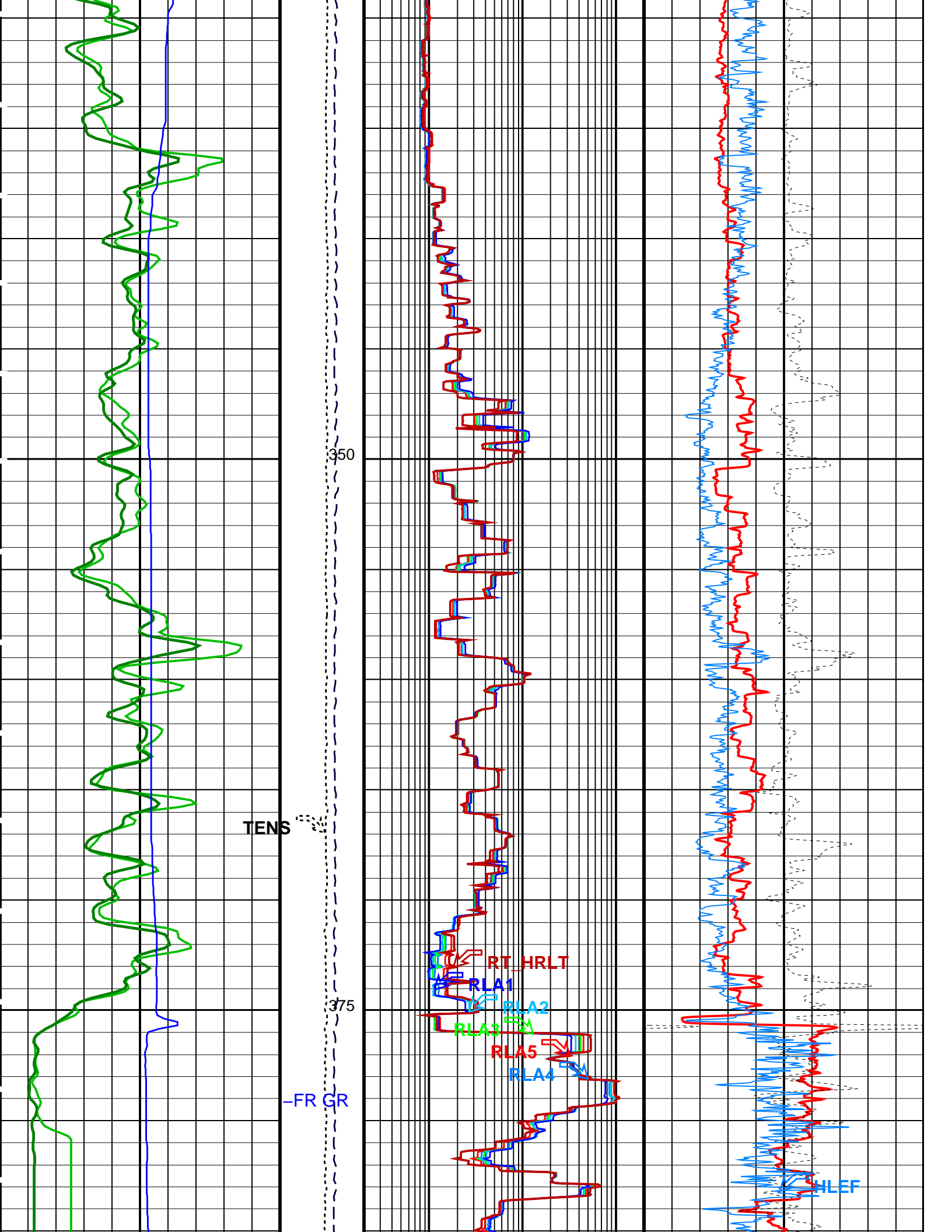
1st Pass, Sea Floor Depth Reference		
HNGS Spectroscopy Gamma Ray (HSGR) 0 (GAPI) 75	Calibrated Downhole Force (CDF) (LBF) 5000 0	HRLT True Resistivity (RT_HRLT) 0.2 (OHMM) 200
Gamma Ray (GR_EDTC) 0 (GAPI) 75	Tension (TENS) (LBF) 10000 0	HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 200
HLDS Caliper (LCAL) 0 (IN) 20		HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 200
		HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 200
		HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 200
		HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 200
		HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 200
		HLDS HR Long Spaced Photoelectric Effect (HLEF) 0 (----) 10
		HLDS HR Bulk Density Correction (HBDC) -0.25 (G/C3) 0.25
		HLDS HR Bulk Density (HROM) 1 (G/C3) 4

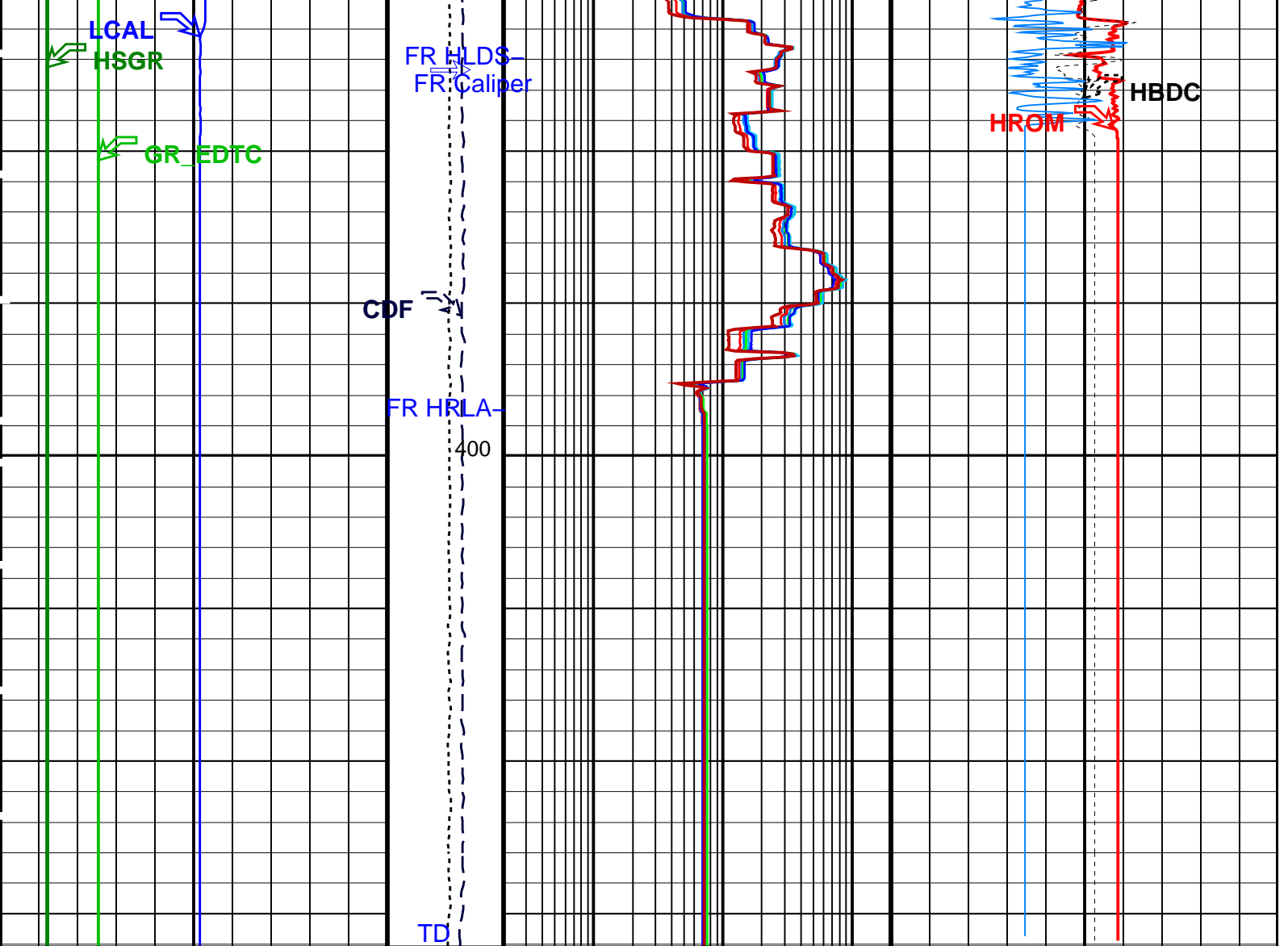












HLDS Caliper (LCAL) (IN)	Tension (TENS) (LBF)	HRLT Resistivity 4 (RLA4) (OHMM)	HLDS HR Bulk Density (HROM) (G/C3)
0 20	10000 0	0.2 200	1 4
Gamma Ray (GR_EDTC) (GAPI)	Calibrated Downhole Force (CDF) (LBF)	HRLT Resistivity 5 (RLA5) (OHMM)	HLDS HR Bulk Density Correction (HBDC) (G/C3)
0 75	5000 0	0.2 200	-0.25 0.25
HNGS Spectroscopy Gamma Ray (HSGR) (GAPI)		HRLT Resistivity 3 (RLA3) (OHMM)	HLDS HR Long Spaced Photoelectric Effect (HLEF) (----)
0 75		0.2 200	0 10
1st Pass, Sea Floor Depth Reference		HRLT Resistivity 2 (RLA2) (OHMM)	
		0.2 200	
		HRLT Resistivity 1 (RLA1) (OHMM)	
		0.2 200	
		HRLT True Resistivity (RT_HRLT) (OHMM)	
		0.2 200	

PIP SUMMARY

Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value

UBI-D: Ultrasonic Borehole Imager - D

	Vertical Resolution	IN: 0.4	
	Default Fluid Velocity	206	US/F
	UBI Tool Working Mode for FPM	UBI3_SW250_180_1	
	UBI Tool Working Mode for Measurement	UBI3_SW250_180_1	
AAMN	Automatic Amplitude Minimum Scale	2	DB
AGMN	Minimum Gain of Cartridge	-12DB	
AGMX	Maximum Gain of Cartridge	48DB	
AMCM	Amplitude - max color scale minimum	-6	DB
AMCX	Amplitude - max color scale maximum	0.2	DB
ANGO	Angular Offset	-17	DEG
ATMN	Automatic Transit Time Minimum Scale	2	US
AWMN	Amplitude Color Scale Minimum	20	DB
AWMX	Amplitude Color Scale Maximum	55	DB
CACN	Corrected Amplitude Color Scale Minimum	0	DB
CACX	Corrected Amplitude Color Scale Maximum	50	DB
CRCN	Corrected Radii Color Scale Minimum	3	IN
CRCX	Corrected Radii Color Scale Maximum	4.5	IN
CSID	Casing Inner Diameter	0	IN
DCMN	Window Decrement Down	0.8	
DCMX	Window Decrement Up	0.6	
DFVL	Default Fluid Velocity	193	US/F
DISI	Radial Plot Depth Increment	120	
DISR	Radial Plot Display Requested	0	
DOT	Diameter of Tool	1.85	IN
ECRL	Eccentering Correction Level	FIRST	
EMXV	EMEX Voltage	30	V
ERDB	Eccentering Rejection	12	DB
FDOS	FVEL Depth Offset	0	M
FMOS	FVEL Measurement Offset	0	US/F
FVLM	Fluid Velocity Filter	MEAN	
GCSW	Gain Correction	ON	
HFLT	FVEL Filter Size	10	
ICMN	Internal Corrosion Color Scale Minimum	-0.15	IN
ICMX	Internal Corrosion Color Scale Maximum	0.15	IN
IMAR	Image Rotation	OFF	
INHT	FIFO Inhibition Time	Inh_29us	
LIM1	Minimum Limit Control	AUTO	
LIM2	Maximum Limit Control	MANUAL	
MLCN	Metal Loss Color Scale Minimum	-0.15	IN
MLCX	Metal Loss Color Scale Maximum	0.15	IN
NBCD	Color Correction Depth Level	80	
NBLD	Eccentering Correction Depth Level	1	
NCDI	Noise Correction Depth Interval	30	
PNSW	Processing Noise Correction	ON	
RCSO	Reference Calibrator Standoff	0.795	IN
RJ60	60 Hz Correction	ON	
RRCN	Radii Color Scale Minimum	3	IN
RRCX	Radii Color Scale Maximum	4.5	IN
SUBT	UBI Sub type	Sub_5_inch_S	
SWLV	Sliding Window Minimum	Inh_18us	
SWMX	Sliding Window Maximum	Inh_167us	
UBI_USAC_TASK_ALLOW	UBI USAC Allow Task after Power Up	YES	
UBI_USAC_TASK_TIMEOUT	UBI USAC Task Timeout (in seconds) FOR TEST REPORT	600	
UFON	UBI Flagging of Lost Echoes	OFF	
UGOS	UBI/UCI GPIT Offset	3.63	IN
UMFR	Modulation Frequency	500000	HZ
UPAT	Emission Pattern	Pattern_250K	
USFR	Sampling Frequency	1e+006	HZ
USTO	Ultrasonic Time Offset	-3	US
USUB	UBI Sub Identifier	Sub_5_inch	
UWKM	Current Working Mode	UBI3_SW250_180_1	
VERR	acq VERTical Resolution	IN: 0.4	
WFVS	Vertical Sampling	0.4	IN
WINB	Window Beginning Time	18.5	US
WINE	Window end time	36	US
GPIT-A/B: General Purpose Inclinometer			
ACPP	Accelerometer PROM Presence	PRESENT	
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE	
ART	Accelerometer Reference Temperature	20	DEGC
GLM	GPIT Logging Mode	DIPM	
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION	
MAPP	Magnetometer PROM Presence	PRESENT	
MDEC	Magnetic Field Declination	-0.785248	DEG
MRTE	Magneto Reference Temperature	19	DEGC
TEMS	GPIT Temperature Sensor Used	BOTH	
U-GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC-3098-FEB_2006_C) ?	NO	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	
CALTEMP	HRLTB Calibration Temperature	30.2229	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	

FREQ1	HRLT Frequency Index for Mode 1	120	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	0	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Centered	
SHT	Surface Hole Temperature	30	DEGC
	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)	21	DEGC
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	0.018227	DC/M
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	-0.00235707	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
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	30	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.05984	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03642	
	EDTC-B: Enhanced DTS Cartridge		
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	21	DEGC
BSCO	Borehole Salinity Correction Option	NO	

CCCO	Casing & Cement Thickness Correction Option		
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	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	30	DEGC
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	
UHSV: UBI Hole Shape Analysis			
	Vertical Resolution	IN: 0.4	
	Default Fluid Velocity	206	US/F
	UBI Tool Working Mode for FPM	UBI3_SW250_180_1	
	UBI Tool Working Mode for Measurement	UBI3_SW250_180_1	
AAMN	Automatic Amplitude Minimum Scale	2	DB
AGMN	Minimum Gain of Cartridge	-12DB	
AGMX	Maximum Gain of Cartridge	48DB	
AMCM	Amplitude - max color scale minimum	-6	DB
AMCX	Amplitude - max color scale maximum	0.2	DB
ANGO	Angular Offset	-17	DEG
ATMN	Automatic Transit Time Minimum Scale	2	US
AWMN	Amplitude Color Scale Minimum	20	DB
AWMX	Amplitude Color Scale Maximum	55	DB
CACN	Corrected Amplitude Color Scale Minimum	0	DB
CACX	Corrected Amplitude Color Scale Maximum	50	DB
CRCN	Corrected Radii Color Scale Minimum	3	IN
CRCX	Corrected Radii Color Scale Maximum	4.5	IN
CSID	Casing Inner Diameter	0	IN
DCMN	Window Decrement Down	0.8	
DCMX	Window Decrement Up	0.6	
DFVL	Default Fluid Velocity	193	US/F
DISI	Radial Plot Depth Increment	120	
DISR	Radial Plot Display Requested	0	
DOT	Diameter of Tool	1.85	IN
ECRL	Eccentering Correction Level	FIRST	
EMXV	EMEX Voltage	30	V
ERDB	Eccentering Rejection	12	DB
FDOS	FVEL Depth Offset	0	M
FMOS	FVEL Measurement Offset	0	US/F
FVLM	Fluid Velocity Filter	MEAN	
GCSW	Gain Correction	ON	
HFLT	FVEL Filter Size	10	
ICMN	Internal Corrosion Color Scale Minimum	-0.15	IN
ICMX	Internal Corrosion Color Scale Maximum	0.15	IN
IMAR	Image Rotation	OFF	
INHT	FIFO Inhibition Time	Inh_29us	
LIM1	Minimum Limit Control	AUTO	
LIM2	Maximum Limit Control	MANUAL	
MLCN	Metal Loss Color Scale Minimum	-0.15	IN
MLCX	Metal Loss Color Scale Maximum	0.15	IN
NBCD	Color Correction Depth Level	80	
NBLD	Eccentering Correction Depth Level	1	
NCDI	Noise Correction Depth Interval	30	
PNSW	Processing Noise Correction	ON	
RCSO	Reference Calibrator Standoff	0.795	IN
RJ60	60 Hz Correction	ON	
RRCN	Radii Color Scale Minimum	3	IN
RRCX	Radii Color Scale Maximum	4.5	IN
SUBT	UBI Sub type	Sub_5_inch_S	
SWLV	Sliding Window Minimum	Inh_18us	
SWMX	Sliding Window Maximum	Inh_167us	
UFON	UBI Flagging of Lost Echoes	OFF	
UGOS	UBI/UCI GPIT Offset	3.63	IN
UMFR	Modulation Frequency	500000	HZ
UPAT	Emission Pattern	Pattern_250K	
USFR	Sampling Frequency	1e+006	HZ
USTO	Ultrasonic Time Offset	-3	US
USUB	UBI Sub Identifier	Sub_5_inch	
UWKM	Current Working Mode	UBI3_SW250_180_1	
VERR	acq VERTICAL Resolution	IN: 0.4	

WFVS	Vertical Sampling	0.4	IN
WINB	Window Beginning Time	18.5	US
WINE	Window end time	36	US
System and Miscellaneous			
ALTDPCCHAN	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	1.02	G/C3
DO	Depth Offset for Playback	-2469.0	M
FLEV	Fluid Level	-50000.00	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	425	M
TDD	Total Depth - Driller	2941.00	M
TDL	Total Depth - Logger	2945.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: TripCombo_2kohm Vertical Scale: 1:200 Graphics File Created: 11-Dec-2012 03:23

OP System Version: 19C0-187

UBI-D	SRPC-5095-H2-2011-OP19	GPIT-A/B	19C0-187
DTA-A	19C0-187	HRLT-B	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	UBI_HRLA_LDL_NGS_024LUP	FN:28	PRODUCER	10-Dec-2012 03:45	2884.9 M	2608.6 M
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Output DLIS Files

DEFAULT	UBI_HRLA_LDL_NGS_059PUP	FN:78	PRODUCER	11-Dec-2012 03:23
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Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
General Purpose Inclinerometer Wellsite Calibration - CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 10-Dec-2012 6:33							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	92	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	10	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	448	N/A	N/A	N/A	
General Purpose Inclinerometer Wellsite Calibration - CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 10-Dec-2012 6:33							
TEMPERATURE REFERENCE :	N/A	N/A	19	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	12	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	428	N/A	N/A	N/A	
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M01							
Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00							
HRLT M0-M1 Voltage Plus - 0	0	N/A	-318.8	-318.1	0.7007	9.681	UV
HRLT M0-M1 Voltage Plus - 1	0	N/A	-328.0	-333.9	-5.887	9.681	UV
HRLT M0-M1 Voltage Plus - 2	0	N/A	-331.3	-334.3	-2.997	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-335.1	-337.6	-2.565	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-324.9	-325.2	-0.3402	9.681	UV
HRLT M0-M1 Voltage Plus - 5	0	N/A	-321.3	-321.0	0.2733	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	320.3	325.4	5.115	9.681	UV
HRLT M0-M1 Voltage Plus - 7	0	N/A	-322.7	-322.7	0	9.681	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M12							
Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00							
HRLT M1-M2 Voltage Plus - 0	0	N/A	1754	1753	-0.4556	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1803	1835	32.51	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1817	1834	17.71	53.42	UV

HRLT M1-M2 Voltage Plus - 3	0	N/A	1838	1854	16.45	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1783	1788	4.915	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1765	1768	2.204	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1768	-1796	-27.96	53.42	UV
HRLT M1-M2 Voltage Plus - 7	0	N/A	1781	1781	0	53.42	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT M23

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT M2-M3 Voltage Plus - 0	0	N/A	1739	1740	1.094	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1801	1834	33.01	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1815	1834	18.69	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1840	1858	17.91	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1779	1785	6.740	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1762	1765	3.689	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1755	-1784	-28.48	53.42	UV
HRLT M2-M3 Voltage Plus - 7	0	N/A	1781	1781	0	53.42	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V34

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT A3-A4 Voltage Plus - 0	0	N/A	68340	68390	47.67	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	70570	71870	1302	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	71420	72170	755.0	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	72680	73370	686.2	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	70230	70480	248.0	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69570	69710	132.0	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-67830	-68910	-1084	2100	UV
HRLT A3-A4 Voltage Plus - 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V45

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT A4-A5 Voltage Plus - 0	0	N/A	68610	68680	62.10	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	70960	72250	1295	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	71780	72540	756.7	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	73000	73710	708.9	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	70510	70780	268.1	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	69850	70000	150.1	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-68170	-69300	-1125	2100	UV
HRLT A4-A5 Voltage Plus - 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT A5-A6 Voltage Plus - 0	0	N/A	68500	68560	57.71	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	70690	71980	1289	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	71540	72300	761.6	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	72810	73500	692.2	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	70380	70650	268.1	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69730	69890	157.9	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-67910	-69030	-1116	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68190	-68240	-43.73	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-71000	-72320	-1327	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-71840	-72600	-764.1	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-73090	-73800	-708.1	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-70580	-70850	-267.4	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69890	-70040	-155.8	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68170	69290	1119	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	-70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68190	-68230	-41.34	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-70980	-72300	-1322	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-71820	-72580	-764.1	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-73070	-73780	-709.6	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-70570	-70830	-257.9	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69890	-70030	-142.8	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68150	69270	1114	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	-70000	0	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00

HRLT Source Current Plus - 0	0	N/A	284.4	284.5	0.1102	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	281.1	0	8.520	UA

HRLT Source Current Plus - 7	281.1	N/A	281.1	0	8.320	0A	
High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV							
Before: 10-Dec-2012 0:38 After: 10-Dec-2012 9:00							
HRLT Vertical Voltage PI - 0	0	N/A	-321.0	-321.3	-0.3133	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-322.1	-328.4	-6.243	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-324.7	-328.2	-3.451	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-326.7	-330.0	-3.316	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-314.2	-315.5	-1.299	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.8	-326.7	-0.8817	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	327.1	332.8	5.664	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	-322.7	0	9.681	UV

Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 7-Dec-2012 11:55 Before: 7-Dec-2012 12:33 After: 7-Dec-2012 12:37							
SS Cs Resolution Bkg	9.000	7.949	7.955	7.918	-0.03735	1.800	%
LS Cs Resolution Bkg	9.000	8.113	8.160	8.074	-0.08591	1.800	%
LSW1 Background	100.0	72.58	72.10	72.08	-0.01728	3.000	CPS
LSW2 Background	100.0	67.65	66.06	66.93	0.8700	3.000	CPS
LSW3 Background	200.0	147.1	146.7	146.3	-0.4534	6.000	CPS
LSW4 Background	250.0	177.6	177.7	178.6	0.9613	7.500	CPS
LSW5 Background	600.0	407.1	409.7	410.2	0.5285	18.00	CPS
SSW1 Background	100.0	80.02	81.32	81.41	0.08895	3.000	CPS
SSW2 Background	200.0	142.3	142.8	143.7	0.9025	6.000	CPS
SSW3 Background	500.0	388.2	386.7	388.3	1.607	15.00	CPS
SSW4 Background	270.0	202.4	201.9	202.0	0.1545	8.100	CPS
SSW5 Background	200.0	144.6	145.9	145.0	-0.9107	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: 7-Dec-2012 12:21							
LSW1 Aluminum	600.0	507.4	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	724.7	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	879.9	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	444.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	403.6	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2408	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6511	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9016	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3596	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	428.8	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement							
Master: 7-Dec-2012 12:16							
LSW1 Iron	400.0	347.4	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	585.7	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	778.9	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	401.8	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	371.0	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1752	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5436	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8225	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3288	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	377.3	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration							
Before: 6-Dec-2012 8:57							
HLDS Caliper Small Ring	12.00	N/A	15.67	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	19.35	N/A	N/A	N/A	IN

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check							
Master: 9-Dec-2012 2:05 Before: 9-Dec-2012 2:13							
Na 511 Peak Loc	40.00	39.52	39.56	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.12	15.91	N/A	N/A	2.000	%
High Voltage	1150	1182	1182	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.4	141.8	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.181	9.123	N/A	N/A	2.000	%
Temperature	15.50	31.95	31.97	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	16.45	16.74	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check							
Master: 9-Dec-2012 2:05 Before: 9-Dec-2012 2:13							
Na 511 Peak Loc	40.00	39.48	39.56	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.87	16.16	N/A	N/A	2.000	%
High Voltage	1150	1114	1115	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.4	141.9	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.230	9.385	N/A	N/A	2.000	%
Temperature	15.50	32.68	32.75	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	16.90	17.23	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Ratio Of Detector 1 To Detector 2							
Master: 9-Dec-2012 2:05 Before: 9-Dec-2012 2:13							
Coincidence Count Rate Ratio	1.000	0.9742	0.9644	N/A	N/A	0.05000	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration

Master: 9-Dec-2012 1:59

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	210.5	--	--	--	--	
Th Peak Res	7.000	7.000	--	--	--	--	%
Background Count Rate	142.5	17.93	--	--	--	--	CPS
Gain Ratio	1.000	1.013	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 9-Dec-2012 1:59

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	209.2	--	--	--	--	
Th Peak Res	7.000	7.038	--	--	--	--	%
Background Count Rate	142.5	18.43	--	--	--	--	CPS
Gain Ratio	1.000	1.008	--	--	--	--	

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 10-Dec-2012 0:38

EDTC Z-Axis Acceleration	9.810	N/A	9.816	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 9-Dec-2012 2:15

Gamma Ray (Jig – Bkg)	162.4	N/A	162.4	N/A	N/A	14.77	GAPI
Gamma Ray (Calibrated)	164.0	N/A	164.0	N/A	N/A	15.00	GAPI

General Purpose Inclinomometer / Equipment Identification














Primary Equipment:			
GPIT Cartridge – AC	GPIC – AC	719	
Auxiliary Equipment:			
GPIT Housing	GPIH – A	2864	

High Resolution Laterolog Array – B / Equipment Identification

Primary Equipment:			
HRLT Sonde	HRLS – B	969	
Auxiliary Equipment:			
HRLT lower Housing	HRLH – B	968	
HRLT Lower Cartridge	HRLC – B	974	
HRLT upper Housing	HRUH – B	978	
HRLT Upper Cartridge	HRUC – B	764	

High Resolution Laterolog Array – B Wellsite Calibration

HRLT M01

Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-318.8	-322.7	-280.7	-379.7
	After		-318.1			
1	Before		-328.0	-322.7	-280.7	-379.7
	After		-333.9			
2	Before		-331.3	-322.7	-280.7	-379.7
	After		-334.3			
3	Before		-335.1	-322.7	-280.7	-379.7
	After		-337.6			
4	Before		-324.9	-322.7	-280.7	-379.7
	After		-325.2			
5	Before		-321.3	-322.7	-280.7	-379.7
	After		-321.0			
6	Before		320.3	322.7	379.7	280.7
	After		320.3			

	After		325.4			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
			(Minimum)	(Nominal)	(Maximum)	
Before: 10-Dec-2012 0:38						
After: 10-Dec-2012 9:00						

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
	After		1753			
1	Before		1803	1781	2095	1549
	After		1835			
2	Before		1817	1781	2095	1549
	After		1834			
3	Before		1838	1781	2095	1549
	After		1854			
4	Before		1783	1781	2095	1549
	After		1788			
5	Before		1765	1781	2095	1549
	After		1768			
6	Before		-1768	-1781	-1549	-2095
	After		-1796			
7	Before		1781	1781	2095	1549
	After		1781			
			(Minimum)	(Nominal)	(Maximum)	
Before: 10-Dec-2012 0:38						
After: 10-Dec-2012 9:00						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1739	1781	2095	1549
	After		1740			
1	Before		1801	1781	2095	1549
	After		1834			
2	Before		1815	1781	2095	1549
	After		1834			
3	Before		1840	1781	2095	1549
	After		1858			
4	Before		1779	1781	2095	1549
	After		1785			
5	Before		1762	1781	2095	1549
	After		1765			
6	Before		-1755	-1781	-1549	-2095
	After		-1784			
7	Before		1781	1781	2095	1549
	After		1781			

After	1781			
(Minimum)	(Nominal)	(Maximum)		
Before: 10-Dec-2012 0:38				
After: 10-Dec-2012 9:00				

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68340	70000	82360	60900
	After		68390			
1	Before		70570	70000	82360	60900
	After		71870			
2	Before		71420	70000	82360	60900
	After		72170			
3	Before		72680	70000	82360	60900
	After		73370			
4	Before		70230	70000	82360	60900
	After		70480			
5	Before		69570	70000	82360	60900
	After		69710			
6	Before		-67830	-70000	-60900	-82360
	After		-68910			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				
Before: 10-Dec-2012 0:38						
After: 10-Dec-2012 9:00						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68610	70000	82360	60900
	After		68680			
1	Before		70960	70000	82360	60900
	After		72250			
2	Before		71780	70000	82360	60900
	After		72540			
3	Before		73000	70000	82360	60900
	After		73710			
4	Before		70510	70000	82360	60900
	After		70780			
5	Before		69850	70000	82360	60900
	After		70000			
6	Before		-68170	-70000	-60900	-82360
	After		-69300			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				
Before: 10-Dec-2012 0:38						
After: 10-Dec-2012 9:00						

Before: 10-Dec-2012 0:38

After: 10-Dec-2012 9:00

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68500	70000	82360	60900
	After		68560			
1	Before		70690	70000	82360	60900
	After		71980			
2	Before		71540	70000	82360	60900
	After		72300			
3	Before		72810	70000	82360	60900
	After		73500			
4	Before		70380	70000	82360	60900
	After		70650			
5	Before		69730	70000	82360	60900
	After		69890			
6	Before		-67910	-70000	-60900	-82360
	After		-69030			
7	Before		70000	70000	82360	60900
	After		70000			
		(Minimum) (Nominal) (Maximum)				

Before: 10-Dec-2012 0:38

After: 10-Dec-2012 9:00

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68190	-70000	-60900	-82360
	After		-68240			
1	Before		-71000	-70000	-60900	-82360
	After		-72320			
2	Before		-71840	-70000	-60900	-82360
	After		-72600			
3	Before		-73090	-70000	-60900	-82360
	After		-73800			
4	Before		-70580	-70000	-60900	-82360
	After		-70850			
5	Before		-69890	-70000	-60900	-82360
	After		-70040			
6	Before		68170	70000	82360	60900
	After		69290			
7	Before		-70000	-70000	-60900	-82360
	After		-70000			
		(Minimum) (Nominal) (Maximum)				

Before: 10-Dec-2012 0:38

After: 10-Dec-2012 9:00

High Resolution Laterolog Array – B Wellsite Calibration

HRLT VBD							
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum	
0	Before		-68190	-70000	-60900	-82360	
	After		-68230				
1	Before		-70980	-70000	-60900	-82360	
	After		-72300				
2	Before		-71820	-70000	-60900	-82360	
	After		-72580				
3	Before		-73070	-70000	-60900	-82360	
	After		-73780				
4	Before		-70570	-70000	-60900	-82360	
	After		-70830				
5	Before		-69890	-70000	-60900	-82360	
	After		-70030				
6	Before		68150	70000	82360	60900	
	After		69270				
7	Before		-70000	-70000	-60900	-82360	
	After		-70000				
		(Minimum) (Nominal) (Maximum)					

Before: 10-Dec-2012 0:38
 After: 10-Dec-2012 9:00

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT ISO							
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum	
0	Before		284.4	284.0	334.1	247.0	
	After		284.5				
1	Before		281.1	281.1	330.7	244.4	
	After		281.1				
2	Before		281.1	281.1	330.7	244.4	
	After		281.1				
3	Before		281.1	281.1	330.7	244.4	
	After		281.1				
4	Before		281.1	281.1	330.7	244.4	
	After		281.1				
5	Before		281.1	281.1	330.7	244.4	
	After		281.1				
6	Before		281.1	281.1	330.7	244.4	
	After		281.1				
7	Before		281.1	281.1	330.7	244.4	
	After		281.1				
		(Minimum) (Nominal) (Maximum)					

Before: 10-Dec-2012 0:38
 After: 10-Dec-2012 9:00

High Resolution Laterolog Array – B Wellsite Calibration							
HRLT MV							
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum	

0	Before		-321.0	-322.7	-280.7	-379.7
	After		-321.3			
1	Before		-322.1	-322.7	-280.7	-379.7
	After		-328.4			
2	Before		-324.7	-322.7	-280.7	-379.7
	After		-328.2			
3	Before		-326.7	-322.7	-280.7	-379.7
	After		-330.0			
4	Before		-314.2	-322.7	-280.7	-379.7
	After		-315.5			
5	Before		-325.8	-322.7	-280.7	-379.7
	After		-326.7			
6	Before		327.1	322.7	379.7	280.7
	After		332.8			
7	Before		-322.7	-322.7	-280.7	-379.7
	After		-322.7			
			(Minimum)	(Nominal)	(Maximum)	
Before: 10-Dec-2012 0:38						
After: 10-Dec-2012 9:00						

Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

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

Auxiliary Equipment:

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

Hostile Litho-Density Sonde Wellsite Calibration

Background Measurement

Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value
Master		7.949	Master		8.113	Master		72.58
Before		7.955	Before		8.160	Before		72.10
After		7.918	After		8.074	After		72.08
		7.000 (Minimum)			7.000 (Minimum)			55.00 (Minimum)
		9.000 (Nominal)			9.000 (Nominal)			100.0 (Nominal)
		11.00 (Maximum)			11.00 (Maximum)			150.0 (Maximum)
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value
Master		67.65	Master		147.1	Master		177.6
Before		66.06	Before		146.7	Before		177.7
After		66.93	After		146.3	After		178.6
		50.00 (Minimum)			110.0 (Minimum)			140.0 (Minimum)
		100.0 (Nominal)			200.0 (Nominal)			250.0 (Nominal)
		140.0 (Maximum)			290.0 (Maximum)			360.0 (Maximum)
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		407.1	Master		80.02	Master		142.3
Before		409.7	Before		81.32	Before		142.8
After		410.2	After		81.41	After		143.7
		330.0 (Minimum)			55.00 (Minimum)			100.0 (Minimum)
		600.0 (Nominal)			100.0 (Nominal)			200.0 (Nominal)
		830.0 (Maximum)			150.0 (Maximum)			260.0 (Maximum)
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		388.2	Master		202.4	Master		144.6
Before		388.5	Before		202.5	Before		144.7
After		388.8	After		202.6	After		144.8

Before		386.7	Before		201.9	Before		145.9
After		388.3	After		202.0	After		145.0
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: 7-Dec-2012 11:55 Before: 7-Dec-2012 12:33 After: 7-Dec-2012 12:37

Hostile Litho-Density Sonde Master Calibration											
Detector Background Measurement											
Phase	LSW1 Background CPS		Value	Phase	LSW2 Background CPS		Value	Phase	LSW3 Background CPS		Value
Master			72.58	Master			67.65	Master			147.1
55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)				50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)				110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			
Phase	LSW4 Background CPS		Value	Phase	LSW5 Background CPS		Value	Phase	LS Cs Resolution Bkg %		Value
Master			177.6	Master			407.1	Master			8.113
140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)				330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)				7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			
Phase	SSW1 Background CPS		Value	Phase	SSW2 Background CPS		Value	Phase	SSW3 Background CPS		Value
Master			80.02	Master			142.3	Master			388.2
55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)				100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)				280.0 (Minimum) 500.0 (Nominal) 700.0 (Maximum)			
Phase	SSW4 Background CPS		Value	Phase	SSW5 Background CPS		Value	Phase	SS Cs Resolution Bkg %		Value
Master			202.4	Master			144.6	Master			7.949
150.0 (Minimum) 270.0 (Nominal) 380.0 (Maximum)				110.0 (Minimum) 200.0 (Nominal) 270.0 (Maximum)				7.000 (Minimum) 9.000 (Nominal) 11.000 (Maximum)			

Master: 7-Dec-2012 11:55

Hostile Litho-Density Sonde Master Calibration											
Detector Aluminum Measurement (bkgd-subtracted)											
Phase	LSW1 Aluminum CPS		Value	Phase	LSW2 Aluminum CPS		Value	Phase	LSW3 Aluminum CPS		Value
Master			507.4	Master			724.7	Master			879.9
420.0 (Minimum) 600.0 (Nominal) 770.0 (Maximum)				650.0 (Minimum) 900.0 (Nominal) 1150 (Maximum)				800.0 (Minimum) 1100 (Nominal) 1450 (Maximum)			
Phase	LSW4 Aluminum CPS		Value	Phase	LSW5 Aluminum CPS		Value	Phase	SSW1 Aluminum CPS		Value
Master			444.9	Master	EXCEEDS LIMIT		403.6	Master			2408
410.0 (Minimum) 580.0 (Nominal) 740.0 (Maximum)				410.0 (Minimum) 570.0 (Nominal) 740.0 (Maximum)				2000 (Minimum) 2800 (Nominal) 3200 (Maximum)			
Phase	SSW2 Aluminum CPS		Value	Phase	SSW3 Aluminum CPS		Value	Phase	SSW4 Aluminum CPS		Value
Master			6511	Master			9016	Master			3596
5800 (Minimum) 8000 (Nominal) 9300 (Maximum)				8300 (Minimum) 11600 (Nominal) 13500 (Maximum)				3500 (Minimum) 5000 (Nominal) 5800 (Maximum)			
Phase	SSW5 Aluminum CPS		Value								
Master	EXCEEDS LIMIT		428.8								
430.0 (Minimum) 660.0 (Nominal) 770.0 (Maximum)											

Master: 7-Dec-2012 12:21

Hostile Litho-Density Sonde Master Calibration											
Detector Litholog Measurement (bkgd-subtracted)											
Phase	LSW1 Iron CPS		Value	Phase	LSW2 Iron CPS		Value	Phase	LSW3 Iron CPS		Value
Master			347.4	Master			585.7	Master			778.9
290.0 (Minimum) 400.0 (Nominal) 560.0 (Maximum)				520.0 (Minimum) 730.0 (Nominal) 950.0 (Maximum)				720.0 (Minimum) 1000 (Nominal) 1350 (Maximum)			
Phase	LSW4 Iron CPS		Value	Phase	LSW5 Iron CPS		Value	Phase	SSW1 Iron CPS		Value
Master			401.8	Master			371.0	Master			1752
370.0 (Minimum) 520.0 (Nominal) 700.0 (Maximum)				340.0 (Minimum) 470.0 (Nominal) 750.0 (Maximum)				1500 (Minimum) 2100 (Nominal) 2400 (Maximum)			
Phase	SSW2 Iron CPS		Value	Phase	SSW3 Iron CPS		Value	Phase	SSW4 Iron CPS		Value
Master			5436	Master			8225	Master	EXCEEDS LIMIT		3288
4900 (Minimum) 6800 (Nominal) 7900 (Maximum)				7800 (Minimum) 10800 (Nominal) 12600 (Maximum)				3300 (Minimum) 4600 (Nominal) 5400 (Maximum)			
Phase	SSW5 Iron CPS		Value								
Master	EXCEEDS LIMIT		377.3								
420.0 (Minimum) 580.0 (Nominal) 680.0 (Maximum)											

Master: 7-Dec-2012 12:16

Hostile Litho-Density Sonde Master Calibration

Quality Ratios

Phase	AL CALIBRATION RATIO 1	Value	Phase	AL CALIBRATION RATIO 2	Value	Phase	AL CALIBRATION RATIO 3	Value
Master		1.037	Master		2.240	Master		0.5979
	0.9000 (Minimum) 1.000 (Nominal) 1.100 (Maximum)			1.900 (Minimum) 2.100 (Nominal) 2.300 (Maximum)			0.4500 (Minimum) 0.5500 (Nominal) 0.6500 (Maximum)	
Phase	AL CALIBRATION RATIO 4	Value	Phase	Pad-Wear SS Ratio	Value	Phase	Pad-Wear LS Ratio	Value
Master		0.5984	Master		0.9922	Master		0.9863
	0.4000 (Minimum) 0.5500 (Nominal) 0.6500 (Maximum)			0.9800 (Minimum) 0.9880 (Nominal) 0.9960 (Maximum)			0.9800 (Minimum) 0.9880 (Nominal) 0.9960 (Maximum)	
Phase	Pad-Position SS Ratio	Value	Phase	Pad-Position LS Ratio	Value			
Master		1.002	Master		0.9862			
	0.9900 (Minimum) 0.9940 (Nominal) 1.015 (Maximum)			0.9850 (Minimum) 0.9940 (Nominal) 1.010 (Maximum)				

Master: 7-Dec-2012 12:10

Litho-Density Spectroscopy Cartridge - B / Equipment Identification

Primary Equipment: LDSC Cartridge	LDSC - B	521
Auxiliary Equipment: LDSC Housing	LDSH - A	319

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 Gamma Source Radioactive	HNSH - BA GSR - U	205 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		39.52	Master		16.12	Master		1182
Before		39.56	Before		15.91	Before		1182
	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		142.4	Master		9.181	Master		31.95
Before		141.8	Before		9.123	Before		31.97
	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		16.45						
Before		16.74						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 9-Dec-2012 2:05

Before: 9-Dec-2012 2:13

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		39.48	Master		15.87	Master		1114	
Before		39.56	Before		16.16	Before		1115	
	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		142.4	Master		9.230	Master		32.68	
Before		141.9	Before		9.385	Before		32.75	
	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		16.90							
Before		17.23							
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						
Master: 9-Dec-2012 2:05			Before: 9-Dec-2012 2:13						


Hostile Natural Gamma Ray Sonde Wellsite Calibration			
Ratio Of Detector 1 To Detector 2			
Phase	Coincidence Count Rate Ratio	Value	
Master		0.9742	
Before		0.9644	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 9-Dec-2012 2:05			
Before: 9-Dec-2012 2:13			

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		210.5	Master		7.000	
	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		17.93	Master		1.013				
	10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)			
Master: 9-Dec-2012 1:59									

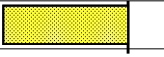


Hostile Natural Gamma Ray Sonde Master Calibration									
Detector 2 Calibration									
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value	
Master		41.00	Master		209.2	Master		7.038	
	38.00 (Minimum)	40.00 (Nominal)	43.00 (Maximum)	201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)	5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value				
Master		18.43	Master		1.008				
	10.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)	0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)			
Master: 9-Dec-2012 1:59									

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/S ²		Value
Before			9.816
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)

Before: 10-Dec-2012 0:38

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			6.074	Before			162.4	Before			164.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		147.7 (Minimum)	162.4 (Nominal)	177.2 (Maximum)		149.0 (Minimum)	164.0 (Nominal)	179.0 (Maximum)

Before: 9-Dec-2012 2:15

Company: **Lamont Doherty**

Schlumberger

Well: **Expedition 344, Site U1414A**

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

Rig: **JOIDES Resolution**

Ocean: **Pacific**

High Resolution Laterolog Array (HRLA)

Hostile LithoDensity Sonde (HLDS)

Gamma Ray