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OTHER SERVICES1
 OS1: FMS
 OS2: DSI
 OS3: MSS
 OS4:
 OS5:

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

REMARKS: RUN NUMBER 1
 Hole drilled with APC/XCB coring bit and bottom hole assembly (BHA). 11 7/16" BS
 Lamont Magnetic Susceptibility (MSS) tool run in combination with HRLA/HLDS/HNGS
 4 knuckle joints decouple the eccentered HLDS and HNGS from the centered HRLA and MSS.
 HLDS density data not valid as gamma source was not installed due to the assumed high risk of losing the tools in this hole based on drilling experience expressed by the drilling team.
 Two MCD centralizer tools centralize the MSS and HRLA.
 Large holesize will affect the HRLA response with the shallow arrays (RLA0-RLA5) being affected the most. Actual holesize is not known as the caliper was reading mostly at the maximum reach of the tool.

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

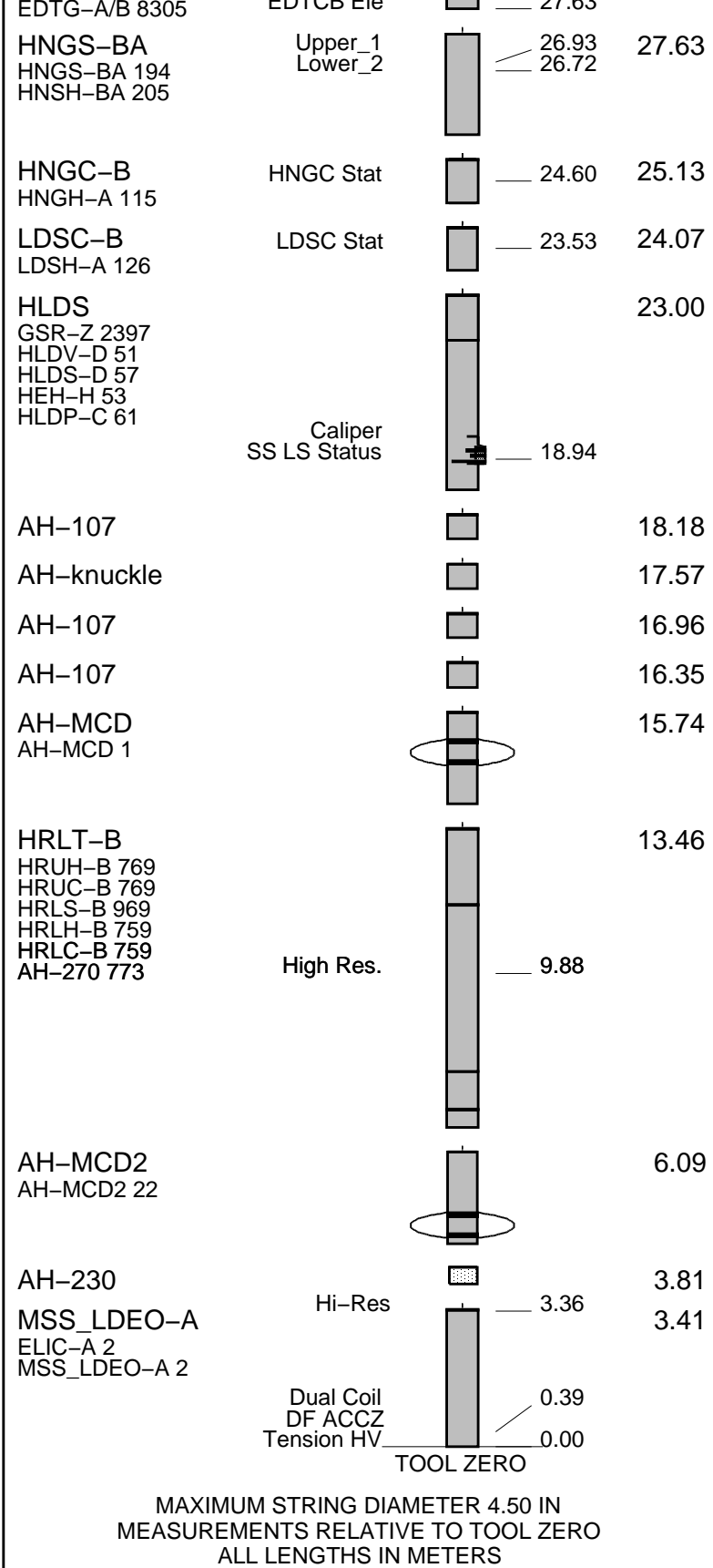
SURFACE EQUIPMENT

GSR-U 616008
 WITM (EDTS)-A 1

DOWNHOLE EQUIPMENT

LEH-QT				30.94
LEH-QT 301	MDSB_EDTC			
AH-369	Mud Tempe		29.61	30.05
	CTEM		28.55	
EDTC-B	Gamma Ray		27.98	29.61
EDTH-B 8303	EFTB DIAG			
EDTC-B 8317	TelStatus			
	EDTCB_Ele		27.62	

RUN 2



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

Kelly Bushing Elevation

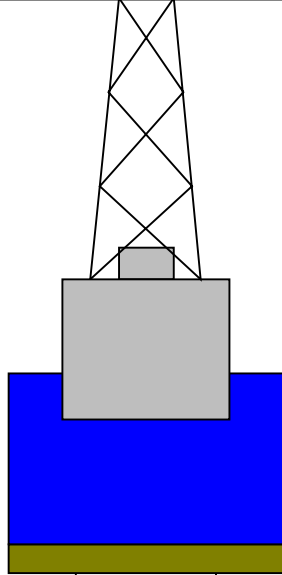
Derrick Floor Elevation

Mean Sea Level

-2492.9

-2492.9

-2481.9



4.1



0

81

253

3.80

11.43

Sea Floor

Open Hole

Total Depth

Input DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_040PUP FN:57 PRODUCER 24-Mar-2012 20:37 2713.5 M 2478.6 M

Output DLIS Files

DEFAULT MSS_LDEO_HRLA_LDL_042PUP FN:59 PRODUCER 24-Mar-2012 20:46 224.0 M -11.4 M

OP System Version: 19C0-187

MSS_LDEO-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		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
GCSE	BS	BS	224.0 20:46:17

PIP SUMMARY

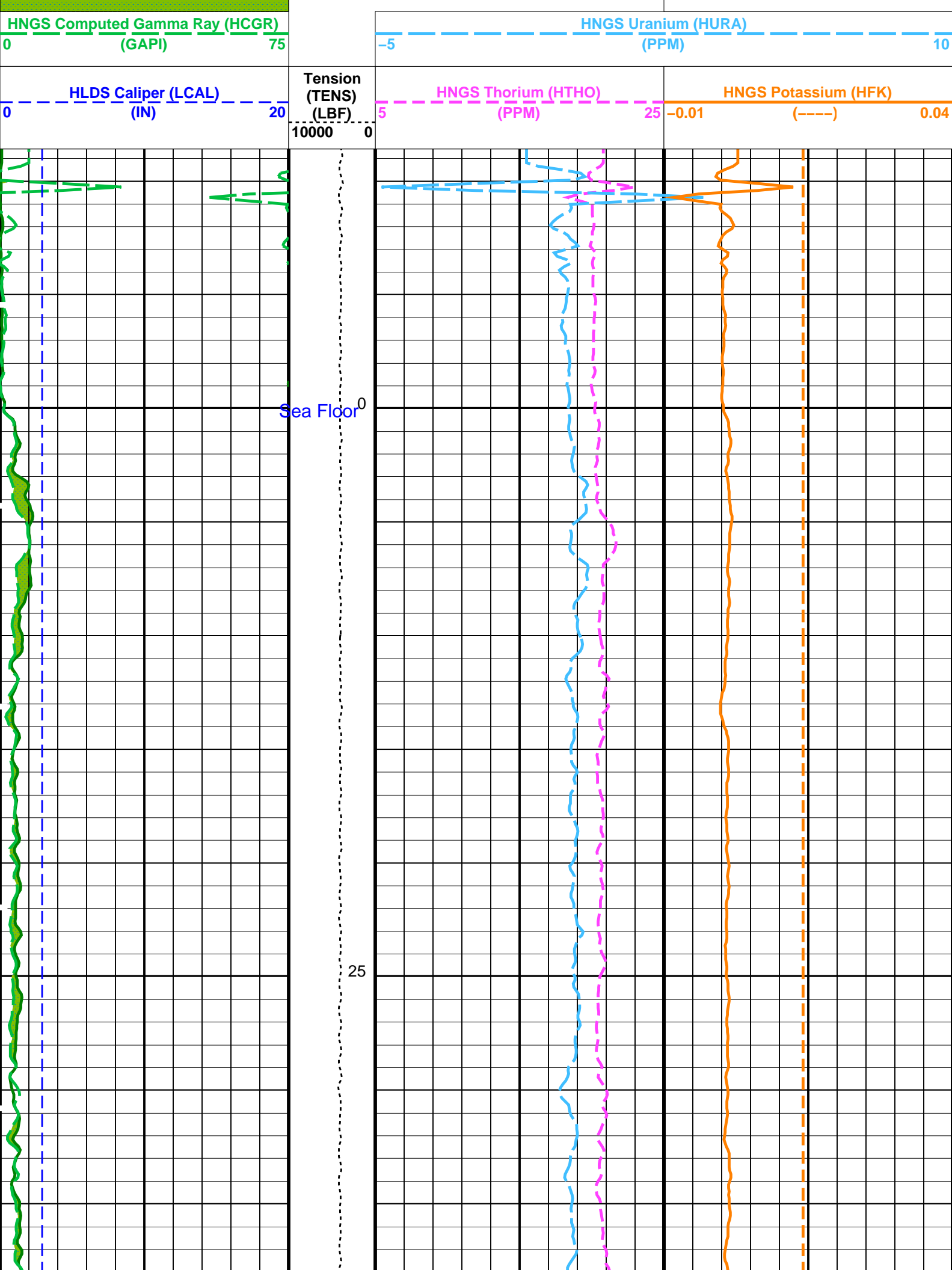
Time Mark Every 60 S

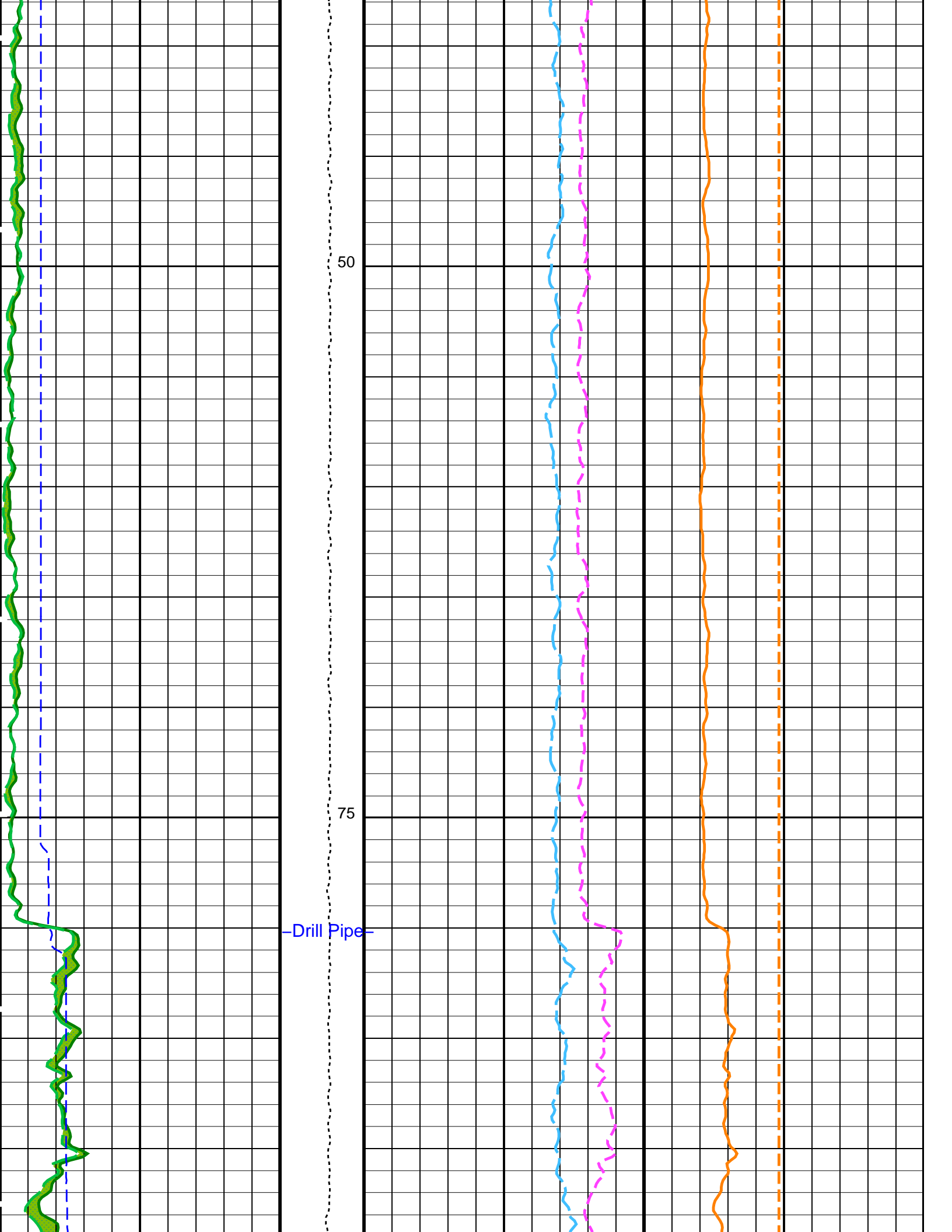
HNGS Spectroscopy Gamma Ray
(HSGR)
0 (GAPI) 75

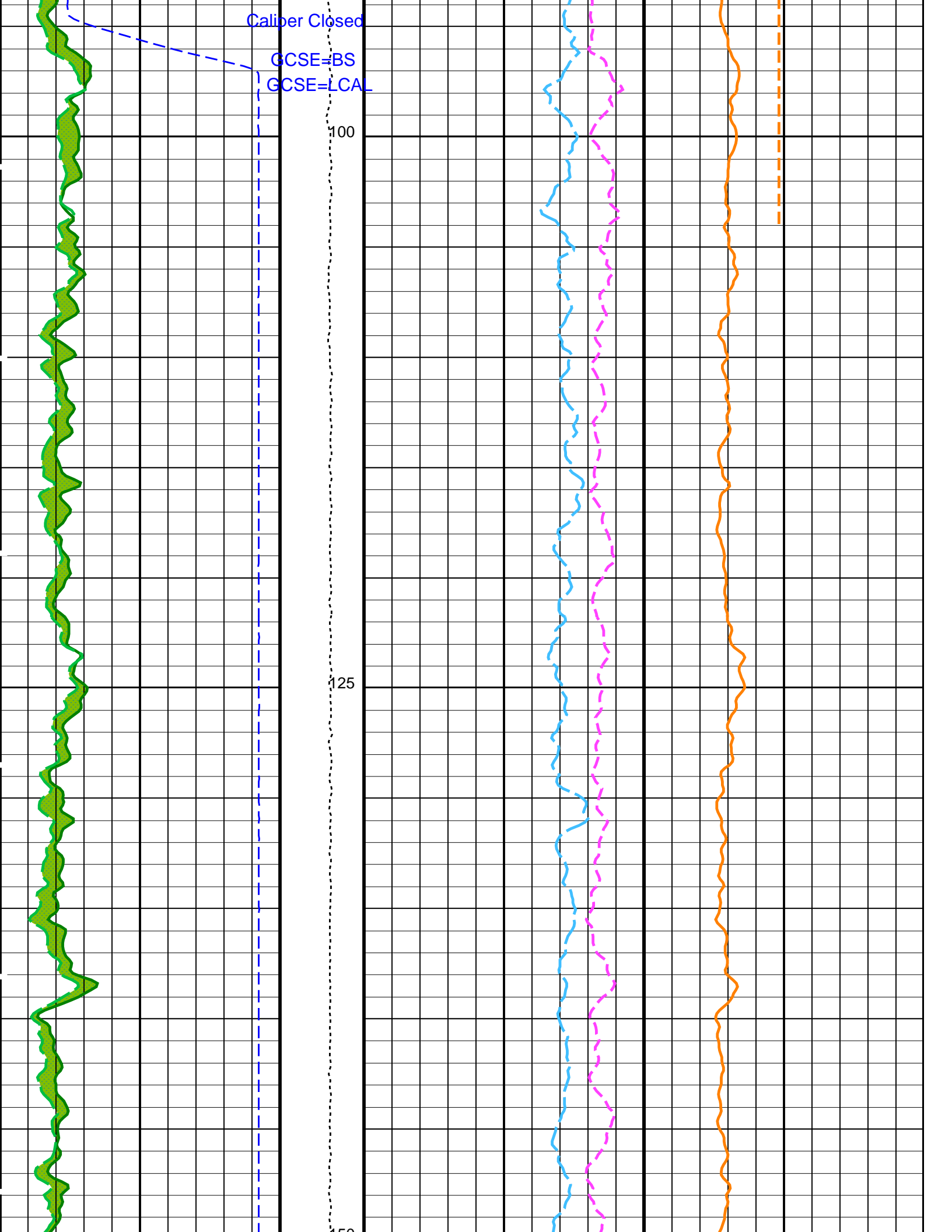
Area1
From HCGR to HSGR

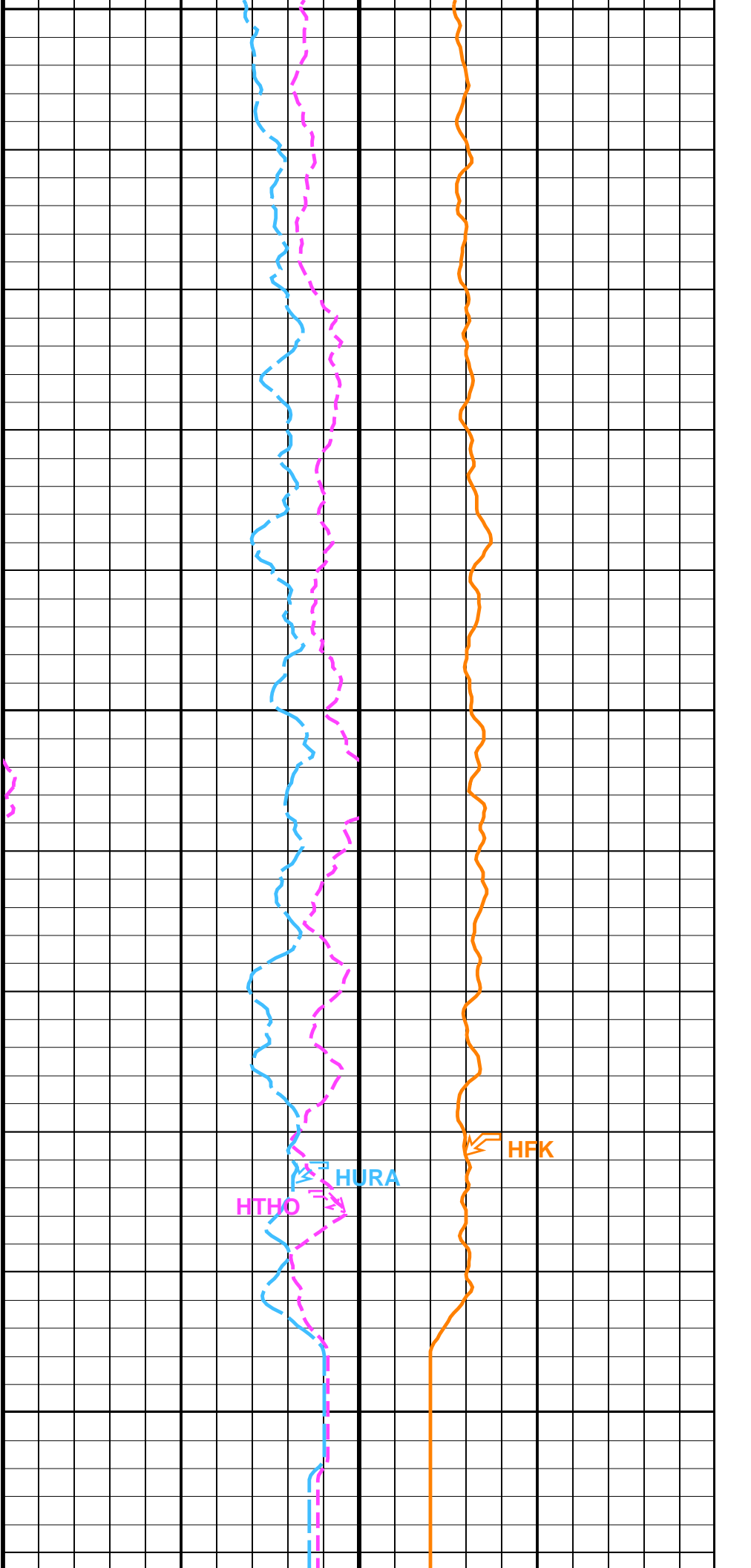
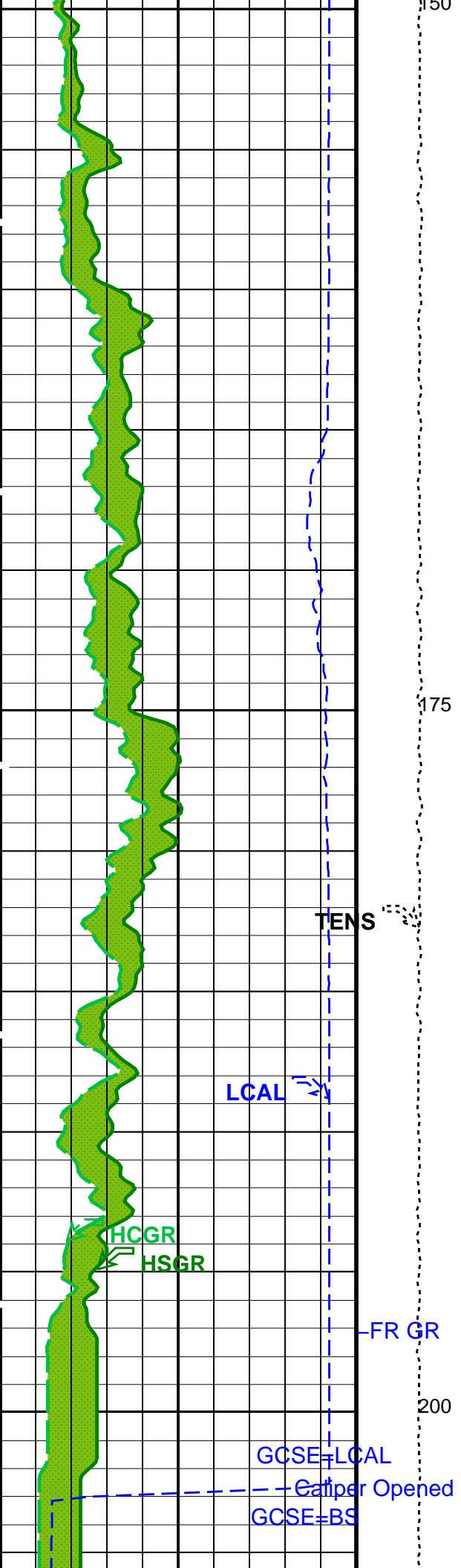
2nd Pass, Sea Floor Depth Reference

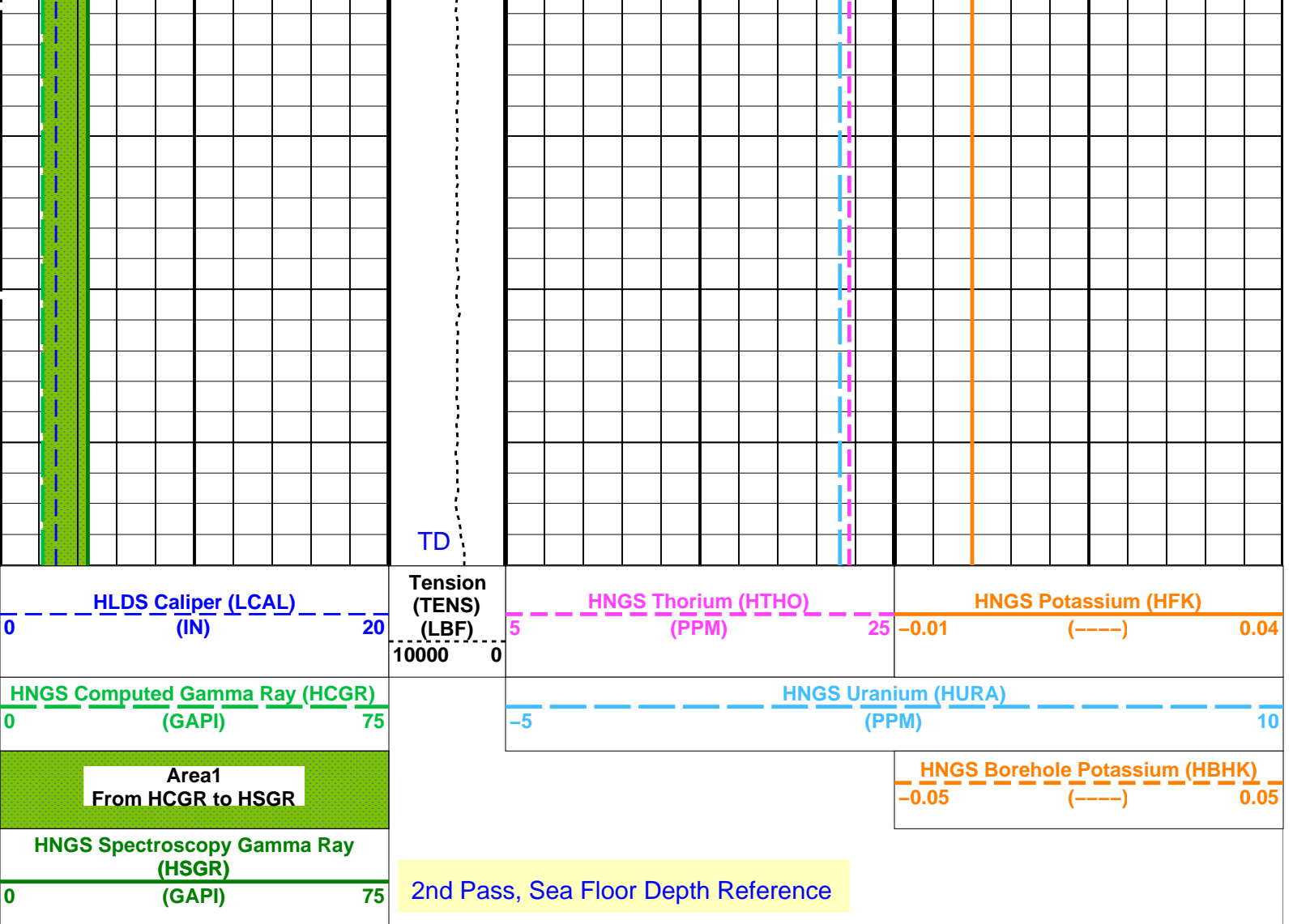
HNGS Borehole Potassium (HBHK)
-0.05 (-----) 0.05











PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	BS
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	-0.00196772
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
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	ECCE
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01997
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01506
EDTC-B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	BS

System and Miscellaneous

BS Bit Size
 DFD Drilling Fluid Density
 DO Depth Offset for Playback
 PP Playback Processing

11.438 IN
 1.08 G/C3
 -2490.0 M
 OFF

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 24-Mar-2012 20:46

OP System Version: 19C0-187

MSS_LDEO-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	MSS_LDEO_HRLA_LDL_040PUP	FN:57	PRODUCER	24-Mar-2012 20:37	2713.5 M	2478.6 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_042PUP	FN:59	PRODUCER	24-Mar-2012 20:46		
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Input DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_039PUP	FN:56	PRODUCER	24-Mar-2012 20:33	2713.5 M	2606.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_041PUP	FN:58	PRODUCER	24-Mar-2012 20:44	224.0 M	116.1 M
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OP System Version: 19C0-187

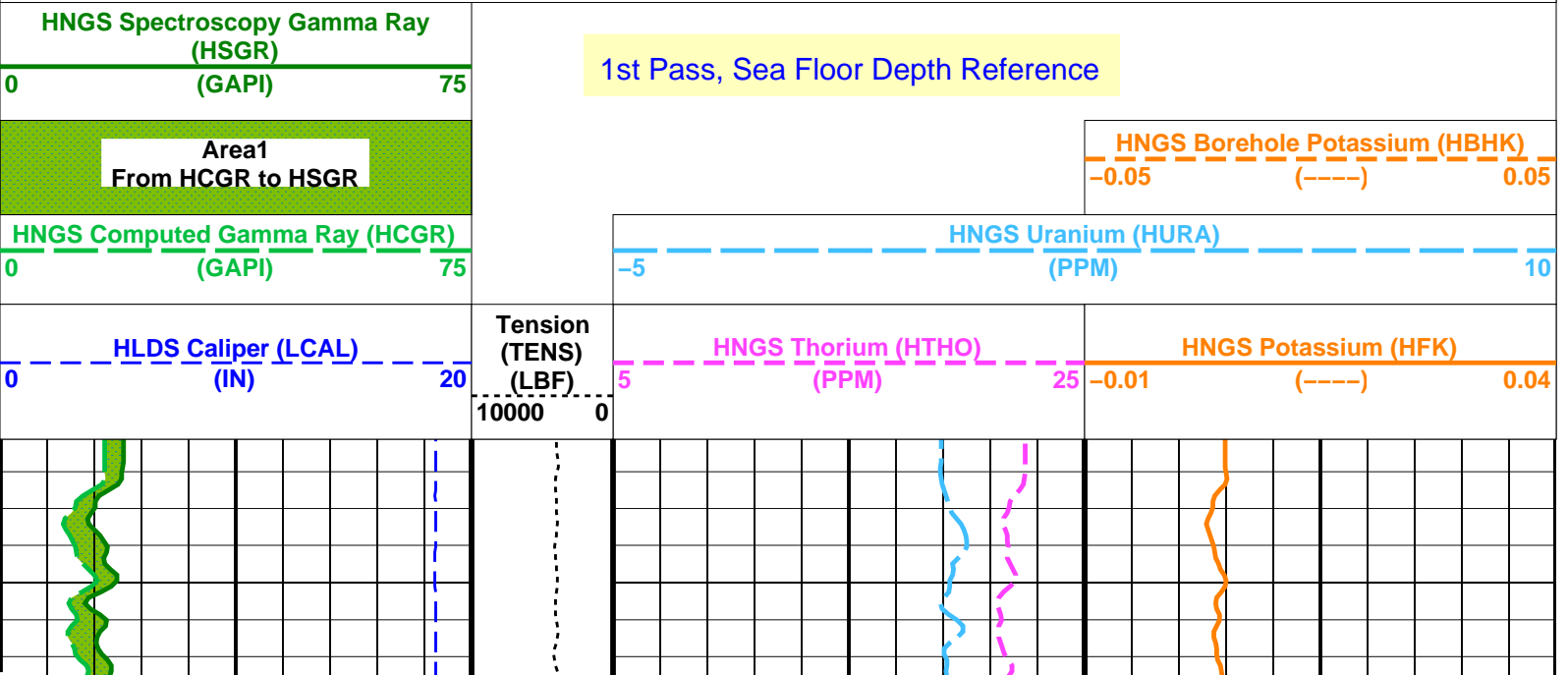
MSS_LDEO-A	19C0-187	HRLT-B	19C0-187
HLDS	19C0-187	LDSC-B	19C0-187
HNGC-B	19C0-187	HNGS-BA	19C0-187
EDTC-B	SKK-5169-EDTCB		

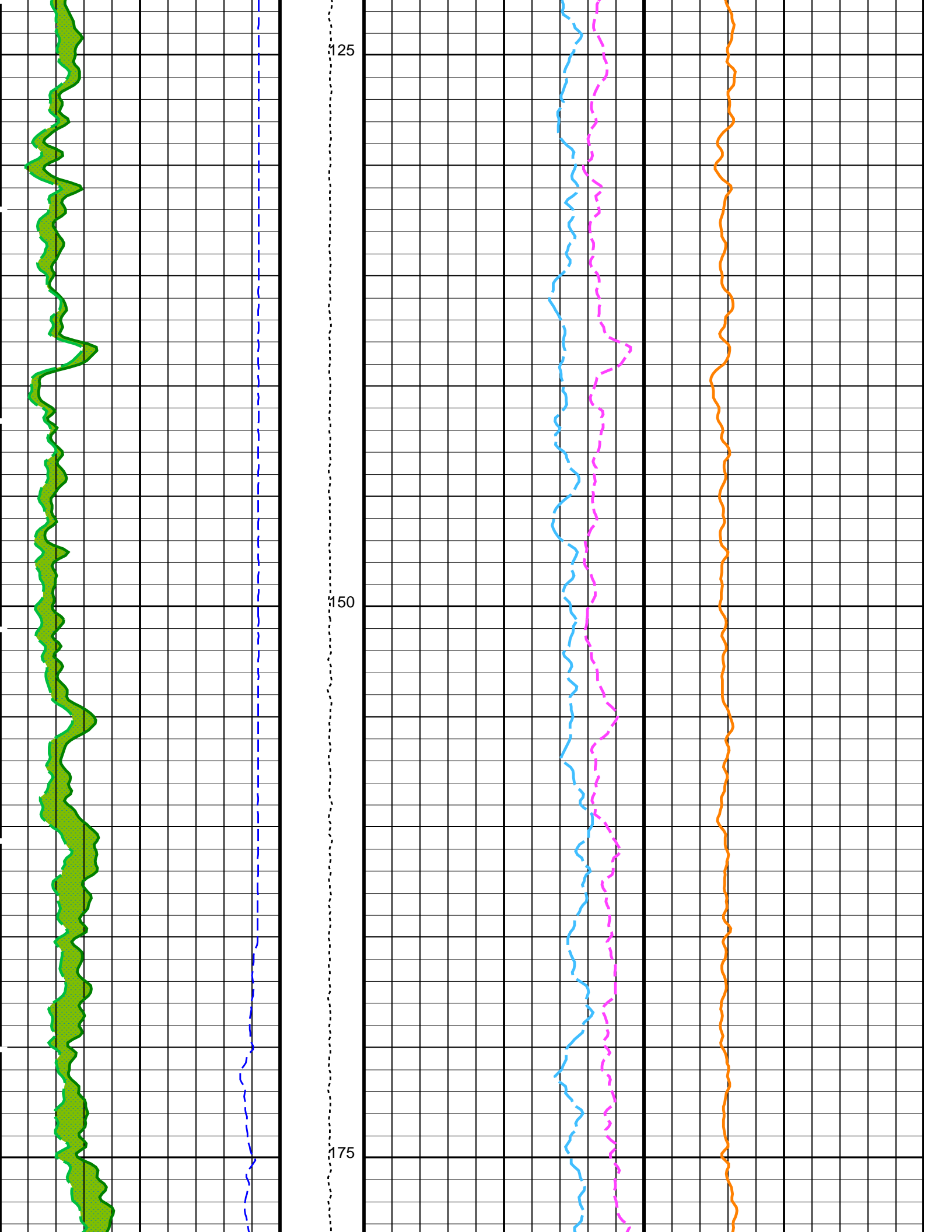
Changed Parameter Summary

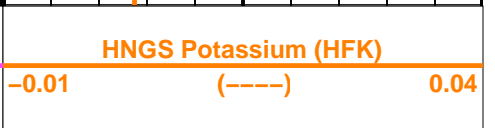
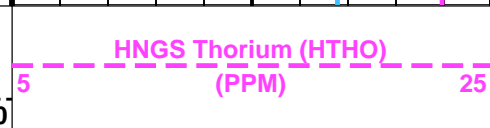
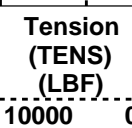
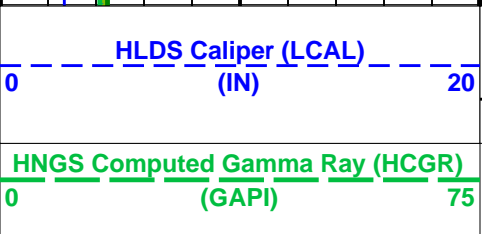
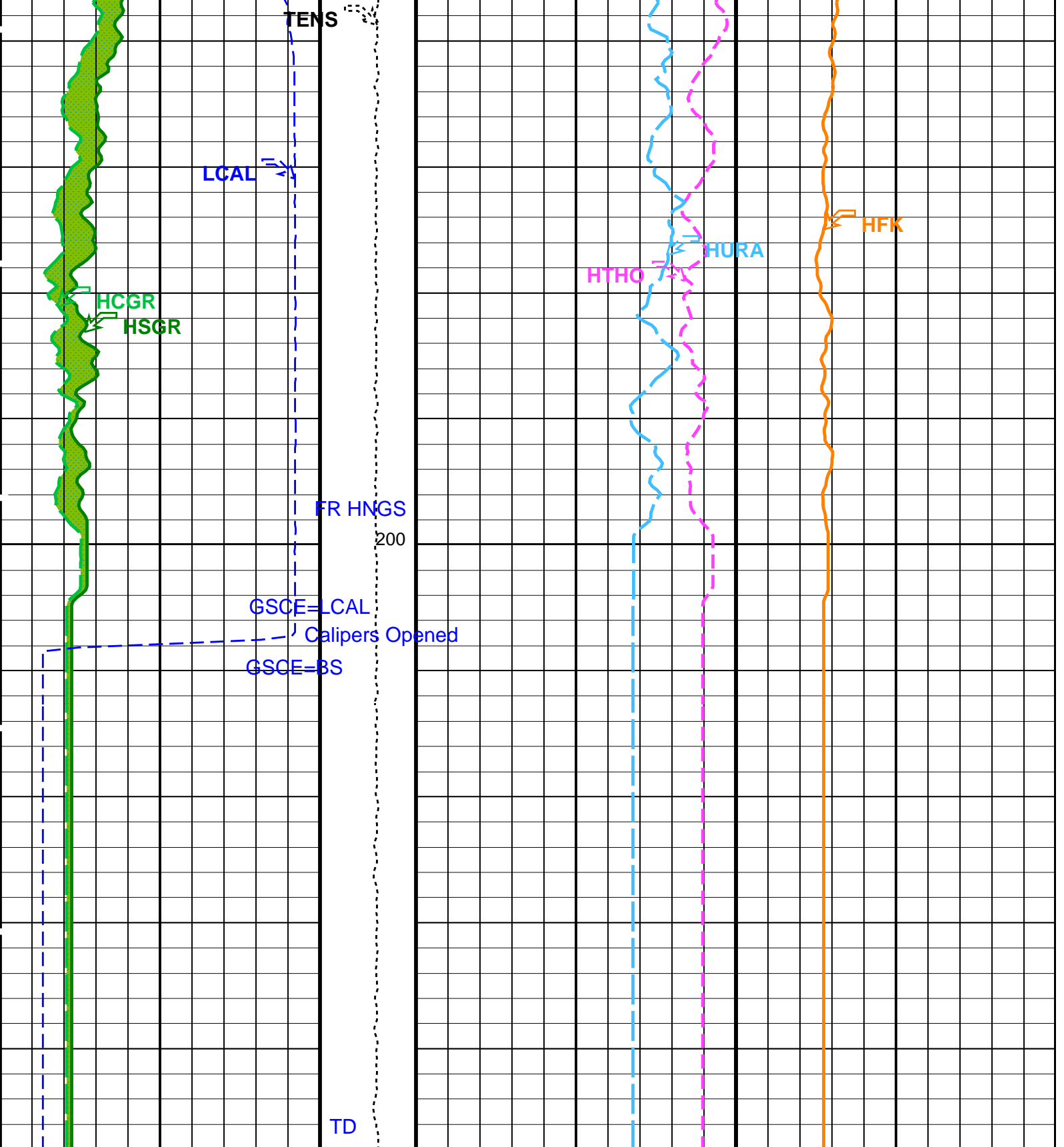
DLIS Name	New Value	Previous Value	Depth & Time
GCSE	BS	BS	224.0 20:44:28

PIP SUMMARY

Time Mark Every 60 S

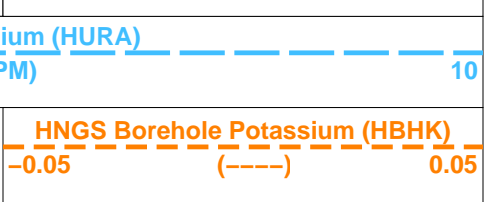






Area1
From HCGR to HSGR

HNGS Spectroscopy Gamma Ray (HSGR)



1st Pass, Sea Floor Depth Reference

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HRLT-B: High Resolution Laterolog Array - B			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
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	-0.00196772	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
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	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.01997	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01506	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
System and Miscellaneous			
BS	Bit Size	11.438	IN
DFD	Drilling Fluid Density	1.08	G/C3
DO	Depth Offset for Playback	-2490.0	M
PP	Playback Processing	OFF	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 24-Mar-2012 20:44

OP System Version: 19C0-187

MSS_LDEO-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	MSS_LDEO_HRLA_LDL_039PUP	FN:56	PRODUCER	24-Mar-2012 20:33	2713.5 M	2606.2 M
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Output DLIS Files

DEFAULT	MSS_LDEO_HRLA_LDL_041PUP	FN:58	PRODUCER	24-Mar-2012 20:44
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Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M01							
Before: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12							
HRLT M0-M1 Voltage Plus - 0	0	N/A	-318.5	-318.7	-0.1793	9.681	UV
HRLT M0-M1 Voltage Plus - 1	0	N/A	-325.9	-328.3	-2.351	9.681	UV
HRLT M0-M1 Voltage Plus - 2	0	N/A	-328.8	-330.6	-1.802	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-334.0	-335.2	-1.195	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-324.3	-324.8	-0.4844	9.681	UV

HRLT M0-M1 Voltage Plus - 5	0	N/A	-320.8	-321.2	-0.3915	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	317.1	320.5	3.338	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT M1-M2 Voltage Plus - 0	0	N/A	1752	1752	0.01233	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1791	1803	12.27	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1802	1811	9.416	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1831	1837	6.161	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1780	1782	1.948	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1762	1764	1.738	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1750	-1768	-17.94	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT M2-M3 Voltage Plus - 0	0	N/A	1738	1737	-1.184	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1790	1800	10.38	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1802	1810	7.970	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1835	1840	5.106	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1777	1777	0.7261	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1759	1760	0.7565	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1739	-1754	-15.87	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT A3-A4 Voltage Plus - 0	0	N/A	68270	68310	40.15	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	70080	70600	523.0	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	70860	71260	396.0	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	72410	72690	279.3	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	70090	70200	111.0	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69420	69530	111.3	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-67110	-67810	-698.6	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT A4-A5 Voltage Plus - 0	0	N/A	68530	68580	53.32	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	70490	70980	491.0	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	71230	71610	383.7	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	72750	73030	280.1	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	70390	70500	114.3	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	69700	69810	103.5	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-67480	-68190	-715.1	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT A5-A6 Voltage Plus - 0	0	N/A	68430	68480	52.69	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	70190	70700	514.8	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	70980	71390	408.3	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	72550	72840	289.2	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	70240	70380	134.4	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69600	69700	104.2	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-67210	-67920	-710.8	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68140	-68160	-23.36	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-70540	-71040	-498.1	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-71290	-71680	-385.6	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-72870	-73120	-252.4	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-70470	-70560	-99.58	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69760	-69850	-87.16	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	67500	68180	676.2	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: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68140	-68150	-10.78	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-70510	-71010	-499.8	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-71270	-71660	-391.8	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-72850	-73110	-258.2	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-70460	-70560	-100.8	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69750	-69840	-87.17	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	67480	68160	675.3	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

High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV

Before: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT Source Current Plus - 0	0	N/A	284.1	284.2	0.1523	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	281.1	0	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	281.1	0	8.520	UA

High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV

Before: 23-Mar-2012 6:19 After: 23-Mar-2012 10:12

HRLT Vertical Voltage PI - 0	0	N/A	-321.0	-320.8	0.2527	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-320.2	-322.3	-2.091	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-322.4	-323.7	-1.374	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-325.9	-326.8	-0.8481	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-313.8	-314.1	-0.2372	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.5	-325.6	-0.1370	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	324.1	327.3	3.177	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: 28-Feb-2012 2:19 Before: 28-Feb-2012 2:36

SS Cs Resolution Bkg	9.000	8.563	8.511	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.637	8.632	N/A	N/A	1.800	%
LSW1 Background	100.0	71.69	71.37	N/A	N/A	0.03000	CPS
LSW2 Background	100.0	65.72	64.67	N/A	N/A	0.03000	CPS
LSW3 Background	200.0	147.7	146.0	N/A	N/A	0.03000	CPS
LSW4 Background	250.0	178.3	178.0	N/A	N/A	0.03000	CPS
LSW5 Background	600.0	402.3	401.7	N/A	N/A	0.03000	CPS
SSW1 Background	100.0	68.69	69.17	N/A	N/A	0.03000	CPS
SSW2 Background	200.0	121.6	122.1	N/A	N/A	0.03000	CPS
SSW3 Background	500.0	321.9	321.7	N/A	N/A	0.03000	CPS
SSW4 Background	270.0	172.2	173.0	N/A	N/A	0.03000	CPS
SSW5 Background	200.0	123.5	123.8	N/A	N/A	0.03000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement

Master: 28-Feb-2012 2:19

LSW1 Aluminum	600.0	521.9	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	758.2	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	921.8	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	463.1	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	428.2	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2229	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6354	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9261	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3871	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	518.3	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement

Master: 28-Feb-2012 2:19

LSW1 Iron	400.0	352.2	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	613.7	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	811.4	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	425.3	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	389.1	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1664	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5327	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8450	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3532	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	458.1	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 28-Feb-2012 2:41

HLDS Caliper Small Ring	12.00	N/A	13.84	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.19	N/A	17.47	N/A	N/A	N/A	IN

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 26-Feb-2012 20:15 Before: 6-Mar-2012 18:49

Na 511 Peak Loc	40.00	39.64	39.54	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.75	15.72	N/A	N/A	2.000	%
High Voltage	1150	1169	1182	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.6	141.5	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.869	8.671	N/A	N/A	2.000	%
Temperature	15.50	26.03	31.35	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	19.34	19.64	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 26-Feb-2012 20:15 Before: 6-Mar-2012 18:49

Na 511 Peak Loc	40.00	39.65	39.61	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.96	15.84	N/A	N/A	2.000	%

High Voltage	1150	1100	1109	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.2	141.4	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	7.801	8.832	N/A	N/A	2.000	%
Temperature	15.50	26.16	31.73	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	19.53	20.28	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2

Master: 26–Feb–2012 20:15 Before: 6–Mar–2012 18:49

Coincidence Count Rate Ratio	1.000	0.9899	0.9701	N/A	N/A	0.05000	
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Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration

Master: 26–Feb–2012 20:03

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	210.0	--	--	--	--	
Th Peak Res	7.000	6.521	--	--	--	--	%
Background Count Rate	142.5	18.97	--	--	--	--	CPS
Gain Ratio	1.000	1.008	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 26–Feb–2012 20:03

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	207.8	--	--	--	--	
Th Peak Res	7.000	6.775	--	--	--	--	%
Background Count Rate	142.5	18.84	--	--	--	--	CPS
Gain Ratio	1.000	0.9969	--	--	--	--	

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 23–Mar–2012 6:19

EDTC Z–Axis Acceleration	9.810	N/A	9.742	N/A	N/A	N/A	M/S2
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Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 4–Mar–2012 17:35

Gamma Ray (Jig – Bkg)	159.9	N/A	159.9	N/A	N/A	14.53	GAPI
Gamma Ray (Calibrated)	164.0	N/A	164.0	N/A	N/A	15.00	GAPI

High Resolution Laterolog Array – B / Equipment Identification

Primary Equipment:

HRLT Sonde	HRLS – B	969
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Auxiliary Equipment:

HRLT lower Housing	HRLH – B	759
HRLT Lower Cartridge	HRLC – B	759
HRLT upper Housing	HRUH – B	769
HRLT Upper Cartridge	HRUC – B	769

Hostile Litho–Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde	HLDS – D	57
Hostile Litho Density High Voltage	HLDV – D	51
Gamma Source Radioactive	GSR – Z	2397

Auxiliary Equipment:

Hostile Litho Density Pad	HLDP – C	61
Hostile Litho Density High Voltage Housi	HEH – H	53

Litho–Density Spectroscopy Cartridge – B / Equipment Identification

Primary Equipment:

LDSC Cartridge	LDSC – B	366
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Auxiliary Equipment:

LDSC Housing	LDSH – A	126
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Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:

HNGC Cartridge	HNGC – B	300
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Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

HNGS - BA 194

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH - BA 205
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		39.64	Master		14.75	Master		1169
Before		39.54	Before		15.72	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		141.6	Master		8.869	Master		26.03
Before		141.5	Before		8.671	Before		31.35
	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		19.34						
Before		19.64						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 26-Feb-2012 20:15			Before: 6-Mar-2012 18:49					

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		39.65	Master		16.96	Master		1100
Before		39.61	Before		15.84	Before		1109
	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		142.2	Master		7.801	Master		26.16
Before		141.4	Before		8.832	Before		31.73
	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		19.53						
Before		20.28						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							
Master: 26-Feb-2012 20:15			Before: 6-Mar-2012 18:49					

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9899
Before		0.9701
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	
Master: 26-Feb-2012 20:15		
Before: 6-Mar-2012 18:49		

Ocean: **Caribbean**

Hostile Natural Gamma Sonde (HNGS)
Spectroscopy
Caliper