

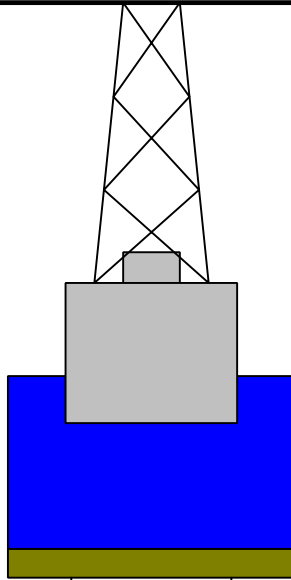
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	OD	ID		MD	MD	

Kelly Bushing Elevation
Derrick Floor Elevation

11.2
11.2

Mean Sea Level

0.0



0.0

5.500

Casing String

All depths are
in meters,
measured
from the drill
floor



4935.1
5012.0
5087.5

9.875
5.500
9.875

Sea Bed
Pipe Bottom
Total Depth

Schlumberger

First Pass

MAXIS Field Log

Company: Lamont Doherty

Well: Expedition 320, Site U1331A

Output DLIS Files

DEFAULT	MSS_LDEO_LDL_NGS_009LUP	FN:8	PRODUCER	24-Mar-2009 23:51	5086.4 M	5010.3 M
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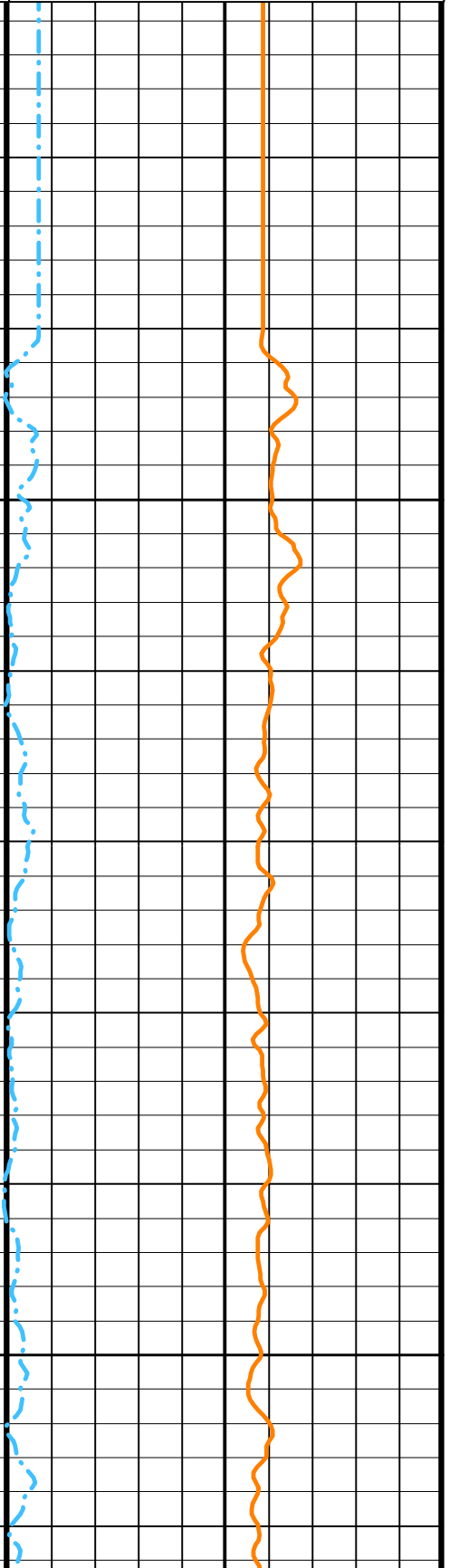
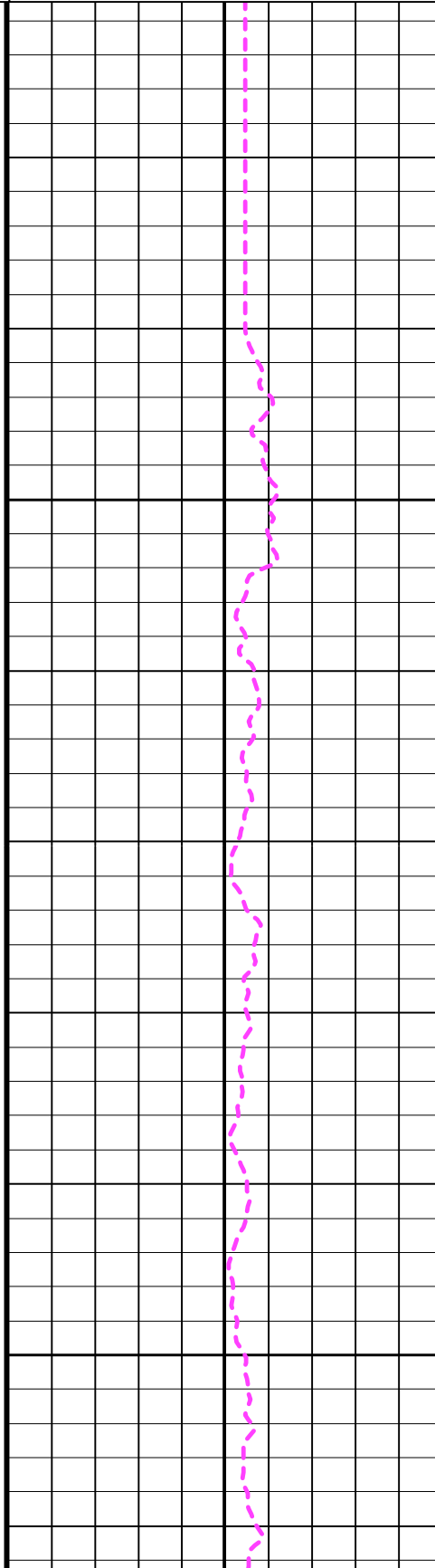
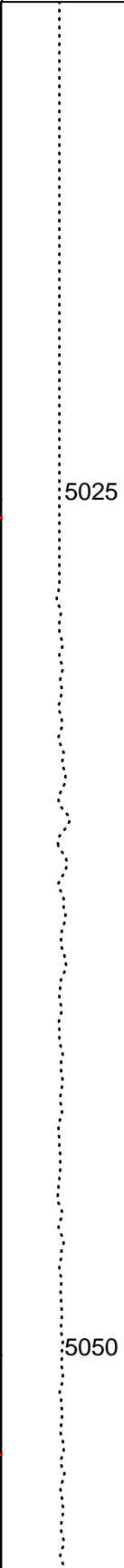
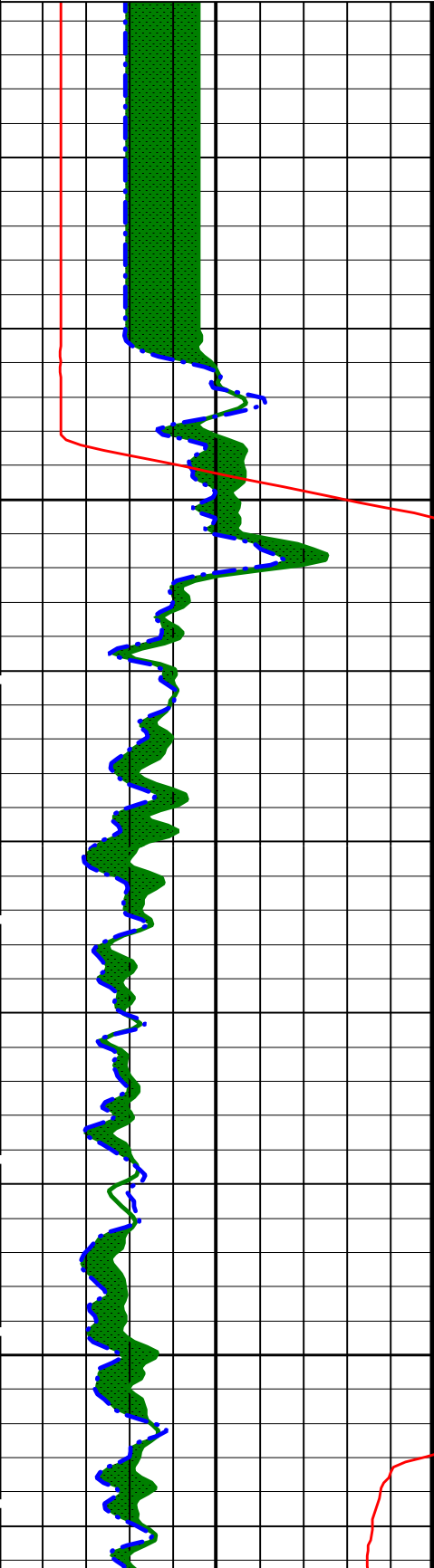
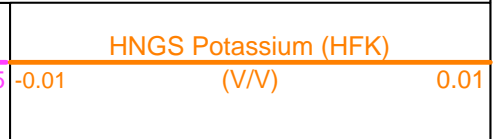
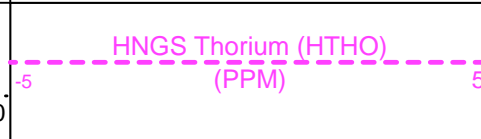
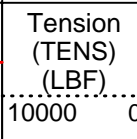
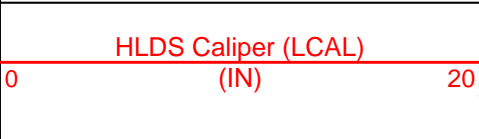
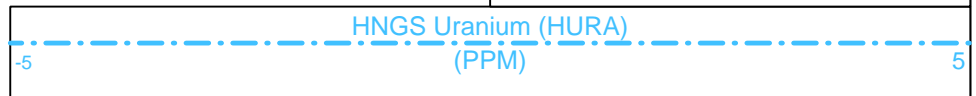
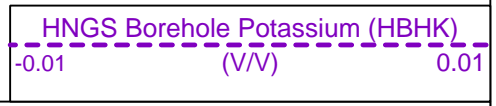
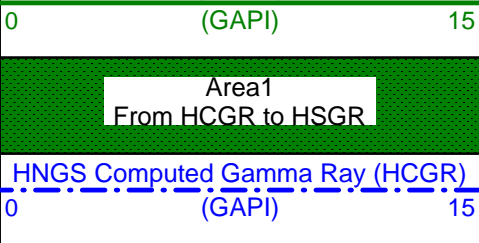
OP System Version: 17C0-154

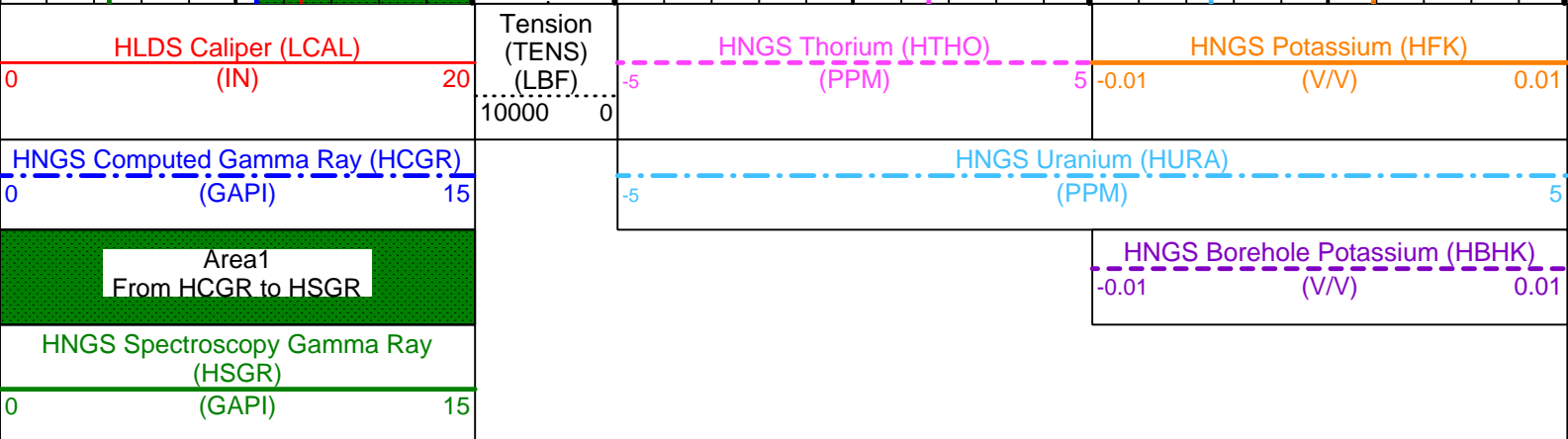
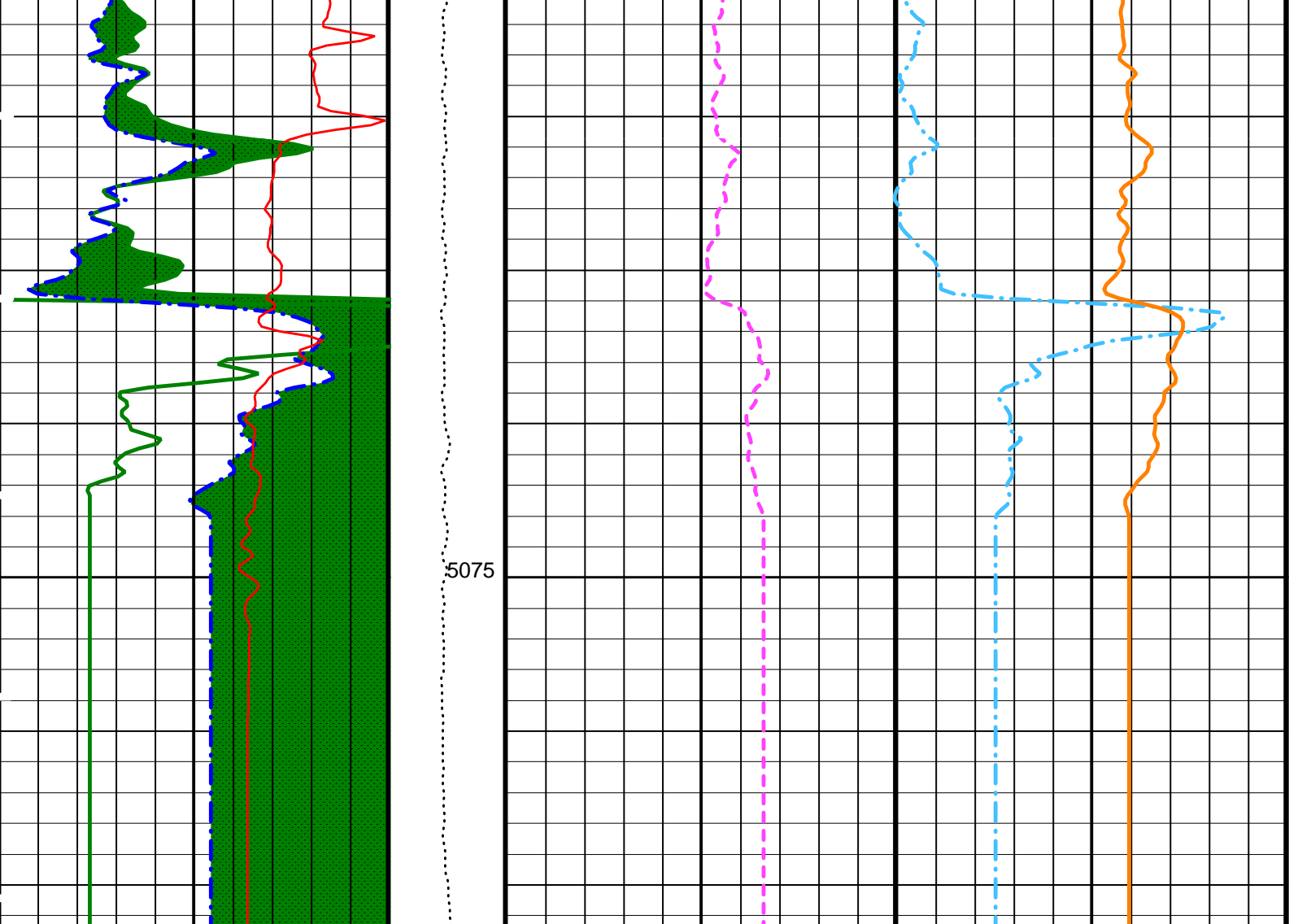
MSS_LDEO-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

PIP SUMMARY

 Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray
(HSGR)





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
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

H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	-0.00157452	
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	1.11953	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.01889	
BS	System and Miscellaneous Bit Size	9.875	IN

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 24-Mar-2009 23:51

OP System Version: 17C0-154

MSS_LDEO-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

Output DLIS Files

DEFAULT MSS_LDEO_LDL_NGS_009LUP FN:8 PRODUCER 24-Mar-2009 23:51



Second Pass

MAXIS Field Log

Company: Lamont Doherty Well: Expedition 320, Site U1331A

Output DLIS Files

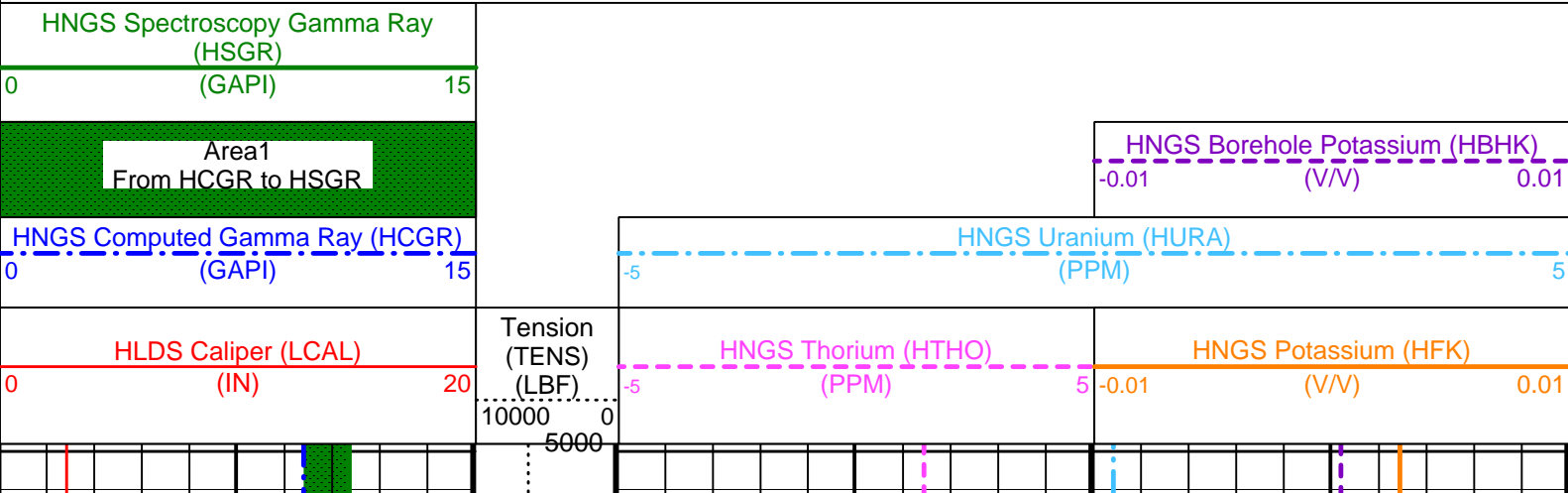
DEFAULT MSS_LDEO_LDL_NGS_010LUP FN:9 PRODUCER 25-Mar-2009 00:11 5086.4 M 4999.8 M

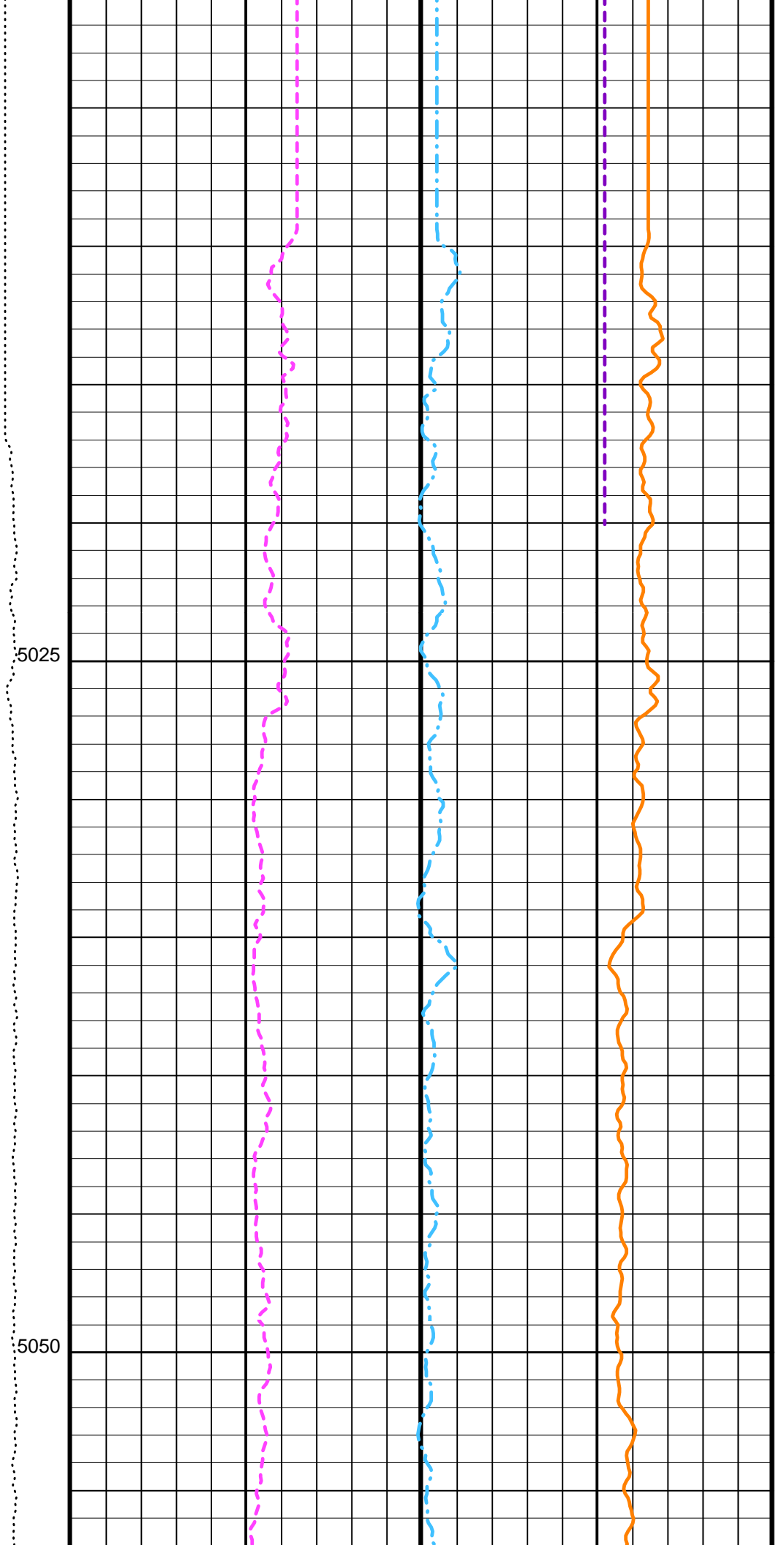
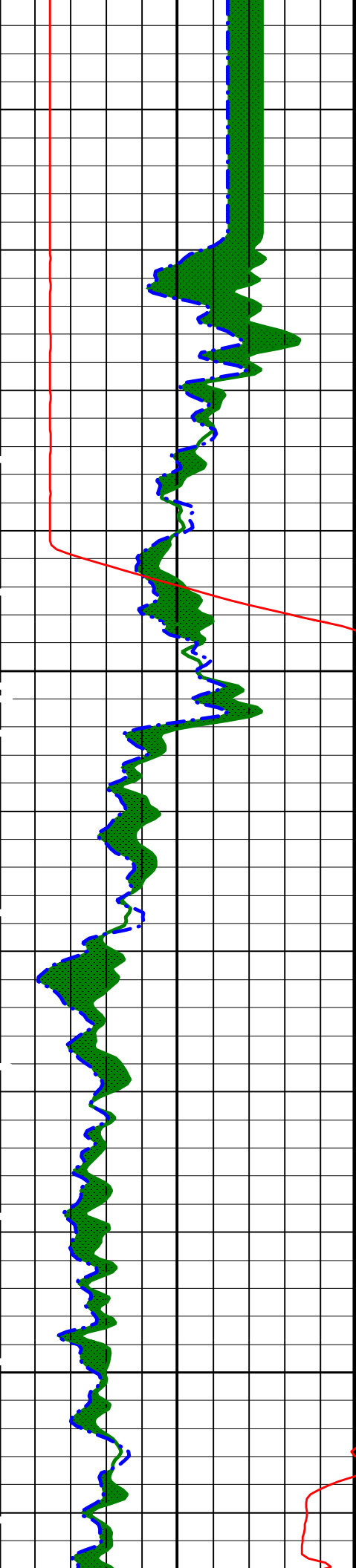
OP System Version: 17C0-154

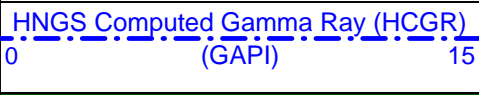
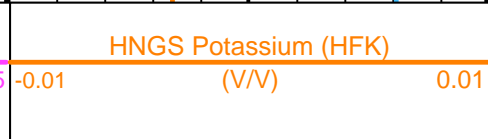
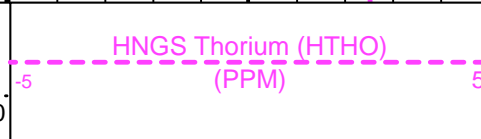
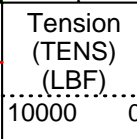
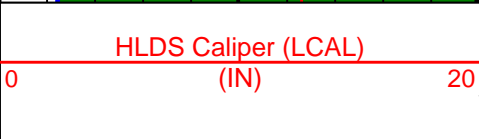
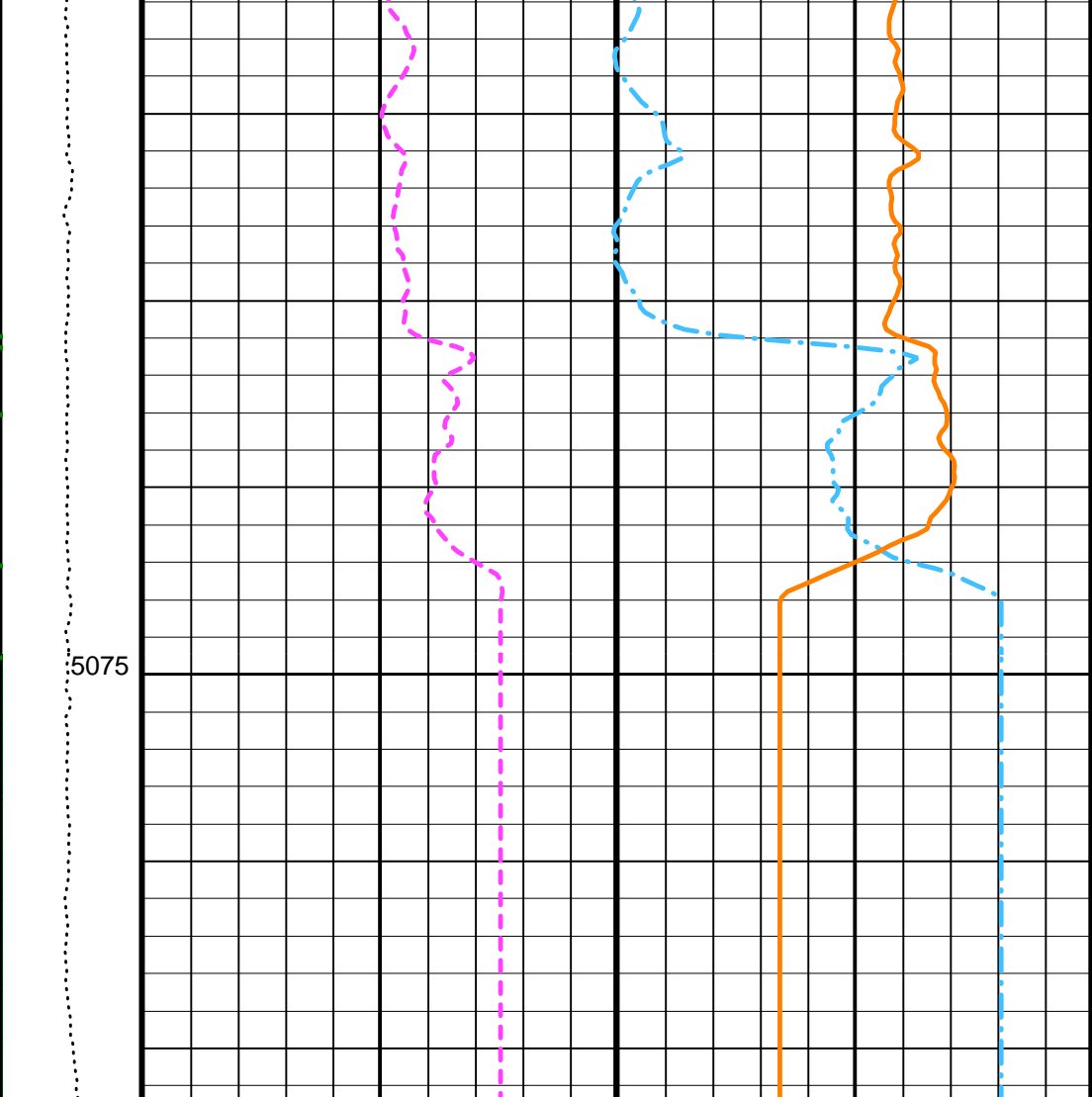
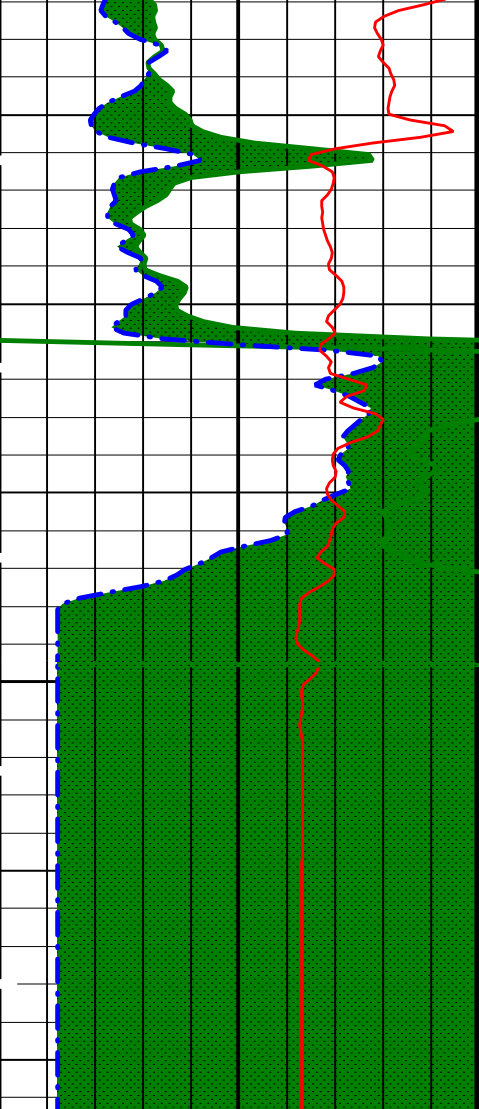
MSS_LDEO-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

PIP SUMMARY

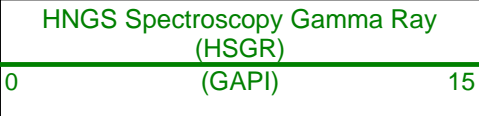
Time Mark Every 60 S







Area1
From HCGR to HSGR



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
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	0.00157452

HADR	HNGS Borehole Potassium Running Average	-0.00157452	60	IN
HALF	HNGS Alpha Filter Length		NONE	
HCRB	HNGS Apply Borehole Potassium Correction		NATU	
HMWM	Mud Weighting Material		YES	
HNPE	HNGS Processing Enable		1.3	CPS
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate		1.3	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate		YES	
SGRC	HNGS Standard Gamma-Ray Correction Flag		ECCE	
TPOS	Tool Position		1.11953	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average		1.01889	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average			
BS	System and Miscellaneous Bit Size		9.875	IN

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 25-Mar-2009 00:11

OP System Version: 17C0-154

MSS_LDEO-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

Output DLIS Files

DEFAULT MSS_LDEO_LDL_NGS_010LUP FN:9 PRODUCER 25-Mar-2009 00:11



Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement							
Master: 15-Mar-2009 16:10							
SS Cs Resolution Bkg	9.000	8.618	N/A	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	9.098	N/A	N/A	N/A	1.800	%
LSW1 Background	100.0	79.21	N/A	N/A	N/A	3.000	CPS
LSW2 Background	100.0	74.14	N/A	N/A	N/A	3.000	CPS
LSW3 Background	200.0	164.6	N/A	N/A	N/A	6.000	CPS
LSW4 Background	250.0	195.8	N/A	N/A	N/A	7.500	CPS
LSW5 Background	600.0	447.4	N/A	N/A	N/A	18.00	CPS
SSW1 Background	100.0	77.96	N/A	N/A	N/A	3.000	CPS
SSW2 Background	200.0	139.8	N/A	N/A	N/A	6.000	CPS
SSW3 Background	500.0	379.0	N/A	N/A	N/A	15.00	CPS
SSW4 Background	270.0	199.4	N/A	N/A	N/A	8.100	CPS
SSW5 Background	200.0	142.5	N/A	N/A	N/A	6.000	CPS
Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement							
Master: 15-Mar-2009 16:10							
LSW1 Aluminum	600.0	586.6	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	803.3	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	953.5	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	475.3	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	431.2	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2521	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6772	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9333	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3817	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	462.9	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement
Master: 15-Mar-2009 16:10

LSW1 Iron	400.0	396.0	N/A	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	647.3	N/A	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	837.7	N/A	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	426.5	N/A	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	391.2	N/A	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1839	N/A	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5630	N/A	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8456	N/A	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3456	N/A	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	406.9	N/A	N/A	N/A	N/A	N/A	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 12-Mar-2009 19:24

Na 511 Peak Loc	40.00	40.60	N/A	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.66	N/A	N/A	N/A	2.000	%
High Voltage	1150	1174	N/A	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.7	N/A	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.231	N/A	N/A	N/A	2.000	%
Temperature	15.50	27.43	N/A	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	37.76	N/A	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 12-Mar-2009 19:24

Na 511 Peak Loc	40.00	40.61	N/A	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.67	N/A	N/A	N/A	2.000	%
High Voltage	1150	1250	N/A	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	143.6	N/A	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.251	N/A	N/A	N/A	2.000	%
Temperature	15.50	26.37	N/A	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	38.49	N/A	N/A	N/A	8.000	CPS

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

Master: 12-Mar-2009 19:24

Coincidence Count Rate Ratio	1.000	0.9811	N/A	N/A	N/A	0.05000	
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Hostile Litho-Density Sonde / Equipment Identification

Primary Equipment:

Hostile Litho Density Sonde	HLDS - D	10
Hostile Litho Density High Voltage	HLDV - D	10
Gamma Source Radioactive	GSR - ZA	2326

Auxiliary Equipment:

Hostile Litho Density Pad	HLDP - C	10
Hostile Litho Density High Voltage Housi	HEH - H	10

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		8.618	Master		9.098	Master		79.21
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value
Master		74.14	Master		164.6	Master		195.8
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		447.4	Master		77.96	Master		139.8
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		379.0	Master		199.4	Master		142.5

Master: 15-Mar-2009 16:10

Litho-Density Spectroscopy Cartridge - B / Equipment Identification

Primary Equipment:

LDS Cartridge	LDS - B	503
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Auxiliary Equipment:
LDSC Housing

LDSH - A

323

Hostile Natural Gamma Ray Cartridge - B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC - B

202

Auxiliary Equipment:
HNGC Housing

HNGH - A

30

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

HNGS - BA

27

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH - BA

27

GSR - U
1154

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		40.60	Master		16.66	Master		1174
	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		145.7	Master		9.231	Master		27.43
	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		37.76						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 12-Mar-2009 19:24

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		40.61	Master		14.67	Master		1250
	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		143.6	Master		8.251	Master		26.37
	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		38.49						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 12-Mar-2009 19:24

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9811
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 12-Mar-2009 19:24

Primary Equipment:

DTC-H Auxiliary Cartridge	DTCH - A	8789
DTC-H Telemetry Cartridge	DTCH - A	8798

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing	ECH - KC	1777
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Company: Lamont Doherty

Schlumberger

Well: Expedition 320, Site U1332A

Field: PEAT

Rig: JOIDES Resolution

Country: USA

Lamont Doherty
Natural Gamma Ray Spectroscopy