Schlumberger

Company: **Lamont Doherty**

Well: **Expedition 336, Site U1382A**
Field: **North Pond**
Rig: **JOIDES Resolution** Country: **USA**

Rig: JOIDES Resolution
Field: North Pond
Location: Latitude: N 22* 45.3531'
Well: Expedition 336, Site U1382A
Company: Lamont Doherty

HNGS
(Hostile Natural Gamma Spectroscopy)

LOCATION

Latitude: N 22* 45.3531'
Longitude: W 46* 4.8911'

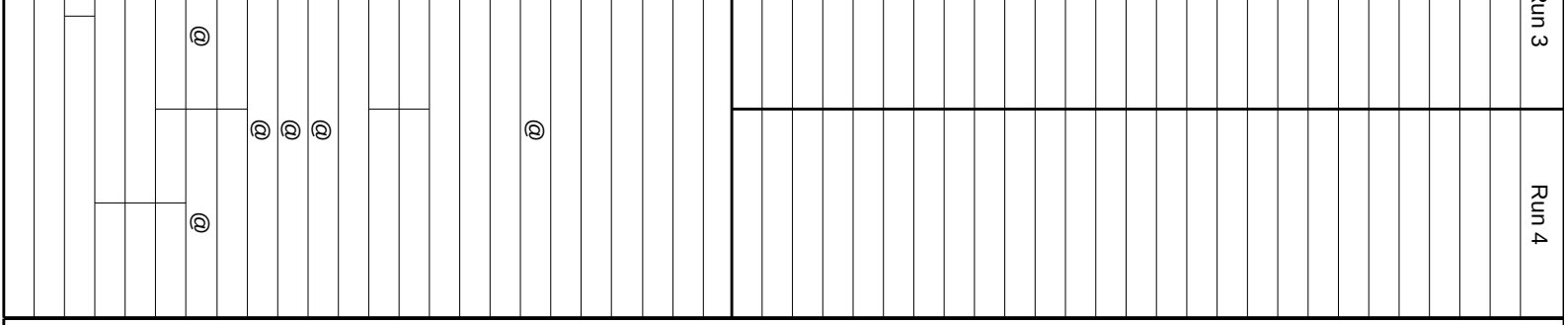
Elev.: K.B. 11.00 m
G.L. −4494.00 m
D.F. 11.00 m

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

Ocean:	Max. Well Deviation	Longitude	Latitude
Atlantic	0 deg	W 46* 4.8911'	N 22* 45.3531'

	Run 1	Run 2	Run 1	Run 2
Logging Date	9−Oct−2011			
Run Number	2			
Depth Driller	204 m			
Schlumberger Depth	204.6 m			
Bottom Log Interval	194.7 m			
Top Log Interval	0 m			
Casing Driller Size @ Depth	10.750 in @ 102 m	@	@	
Casing Schlumberger	98.3 m			
Bit Size	9.875 in			
Type Fluid In Hole	Seawater			
MUD Density / Viscosity	1.05 g/cm3			
MUD Fluid Loss / PH				
MUD Source Of Sample	N/A			
RM @ Measured Temperature	@	@	@	
RMF @ Measured Temperature	@	@	@	
RMC @ Measured Temperature	@	@	@	
Source RMF / RMC	N/A	N/A		
RM @ MRT / RMF @ MRT	@ 15	@ 15	@	@
Maximum Recorded Temperatures	15 degC			
Circulation Stopped / Time	8−Oct−2011	4:00		
Logger On Bottom / Time	17−Nov−2010	17:00		
Unit Number / Location	625003	Houston		
Recorded By	C. Furman			
Witnessed By	L. Anderson			

	Run 1	Run 2	Run 1	Run 2
Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth	@			
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
MUD Density / Viscosity				
MUD Fluid Loss / PH				
MUD Source Of Sample				
RM @ Measured Temperature	@			
RMF @ Measured Temperature	@			
RMC @ Measured Temperature	@			
Source RMF / RMC				
RM @ MRT / RMF @ MRT	@	@		
Maximum Recorded Temperatures				
Circulation Stopped / Time				
Logger On Bottom / Time				
Unit Number / Location				
Recorded By				
Witnessed By				



DISCLAIMER

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OTHER SERVICES1

OS1: FMS
OS2: HRLA
OS3: HLDS
OS4: DEBI−T

REMARKS: RUN NUMBER 1

Hole 1382A was drilled for the purpose of placing a CORK and collecting RCB cores.
10−3/4 in. Casing was placed from sea bed (4494mbrf) to 4596mbrf with open hole down to TB at 4704mbrf.
The second run tool string included only the FMS and the HNGS in order to collect GR data as deep as possible.
A downlog was recorded from above sea bed to TD. TD was tagged at a depth of 204.6mbsf.
The first up pass was conducted with the calipers open and EMEX power applied until a depth of 108mbsf.
EMEX was swtiched off at 108mbsf to prevent tool damage; calipers remained open to identify casing at 98.3mbsf.
The second up pass was conducted in a similar manner with EMEX up to 102.8mbsf.
The calipers were closed after a successful caliper check in casing (C1=9.8in., C2=10in.; CSG ID=9.875in.)
Tool encountered difficulty re−entering drill pipe −− the FMS was not able to pass through the logging bit easily.
After approximately two hours of applying overpull up to 3000 lbs above tool weight, the Pad 1 caliper
arm was eventually damaged and forced closed, allowing the tool to enter pipe and return to surface.
Caliper was found to be reading normally throughout logging, including expanding to fully open in the rathole
and then reading proper casing ID upon entering casing; damage occurred during attempt to pull
through the logging bit during the second upward pass. Depths above the bit during the second up pass
may be affected by cable stretch caused by overpull getting through the bit.

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 RUN 2

SURFACE EQUIPMENT

GSR−U 616008
WITM (EDTS)−A

DOWNHOLE EQUIPMENT

LEH−QT 17.63
LEH−QT

MDSB_EDTC
Mud Tempe

16.74

EDTC−B 16.74
EDTH−B 8528

EDTC−B 8529
EDTG−A/B 77693

CTEM — 15.67
Gamma Ray — 15.10
EFTB DIAG
TelStatus
EDTCB Ele — 14.75

HNGC−B — 14.75
HNGH−A 115
HNGC−B 300

HNGC Stat — 14.22

HNGS−BA — 13.69
HNGS−BA 194
HNSH−BA 205

Upper_1 — 12.99
Lower_2 — 12.78

AH−MCD — 11.19
AH−MCD

DTA−A — 8.90
ECH−KE
DTA−A

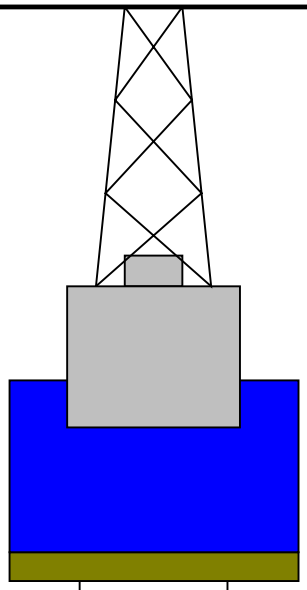
MEST−B — 7.68
MEAH−B
MEAC−A
MEPH−A
GPIC−A
MEPC−AB
MEDS−B

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

MAXIMUM STRING DIAMETER 4.50 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

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

	OD	ID	MD
Kelly Bushing Elevation			0.0
Derrick Floor Elevation			0.0
Mean Sea Level			11.0



MD	OD	ID	
4494.0			Sea Bed
4558.0			Bit Depth
4596.0	10.750		Casing Shoe
4704.0	9.875		Total Depth – Driller

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Down Log

MAXIS Field Log

Company: Lamont Doherty **Well: Expedition 336, Site U1382A**

Input DLIS Files

DEFAULT	Flip_FMS_NGS_050LUP		PRODUCER	13−Oct−2011 12:08	4703.1 M	4476.0 M

Output DLIS Files

DEFAULT	FMS_NGS_052PUP	FN:50	PRODUCER	13−Oct−2011 12:11	205.1 M	−21.9 M

OP System Version: 19C0−187

MEST−B	19C0−187	DTA−A	19C0−187
HNGS−BA	19C0−187	HNGC−B	19C0−187
EDTC−B	19C0−187		

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 25

HNGS Borehole Potassium (HBHK)
−0.05 (V/V) 0.05

Area1
From HCGR to HSGR

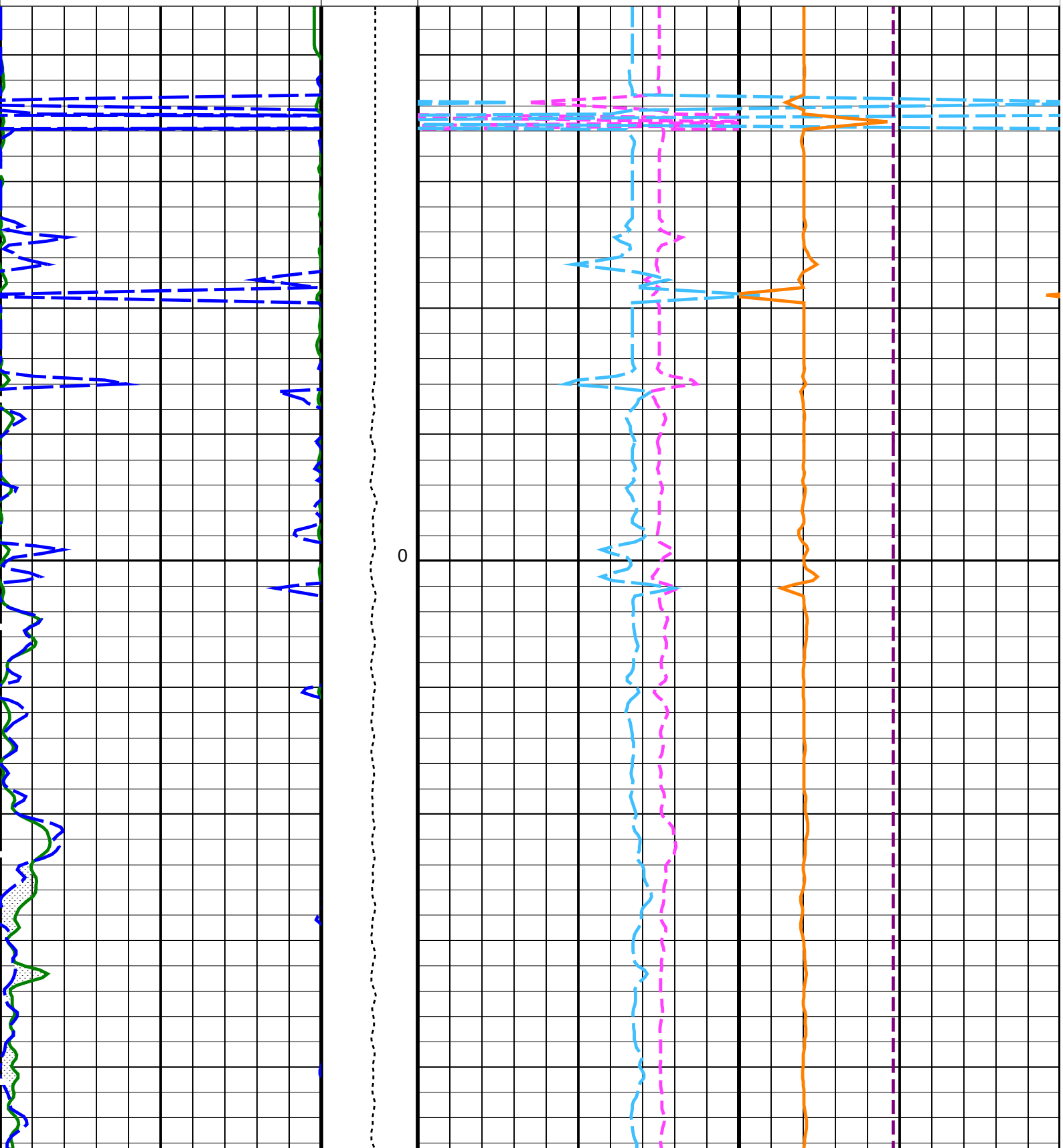
HNGS Uranium (HURA)
−5 (PPM) 10

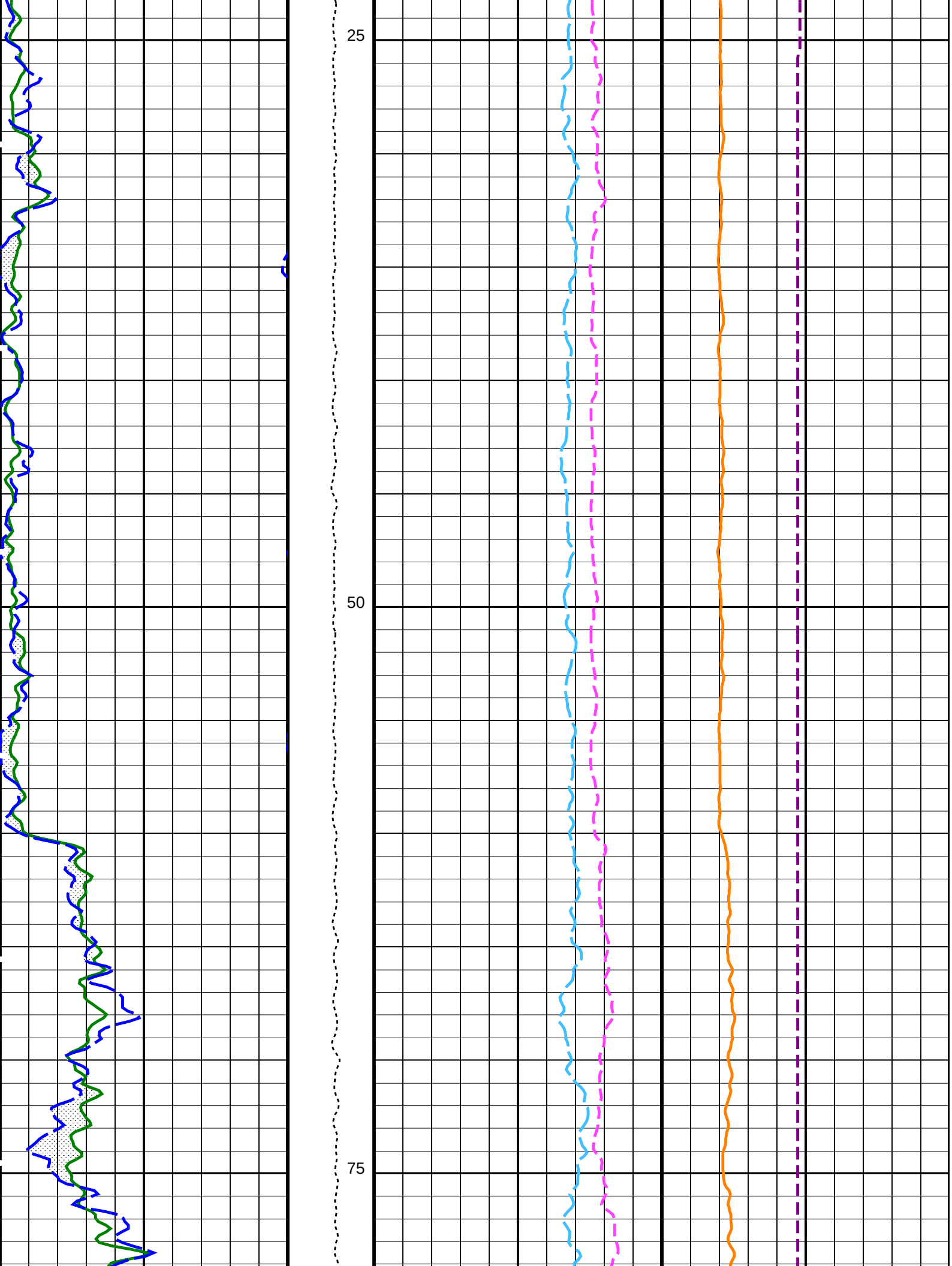
HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 20

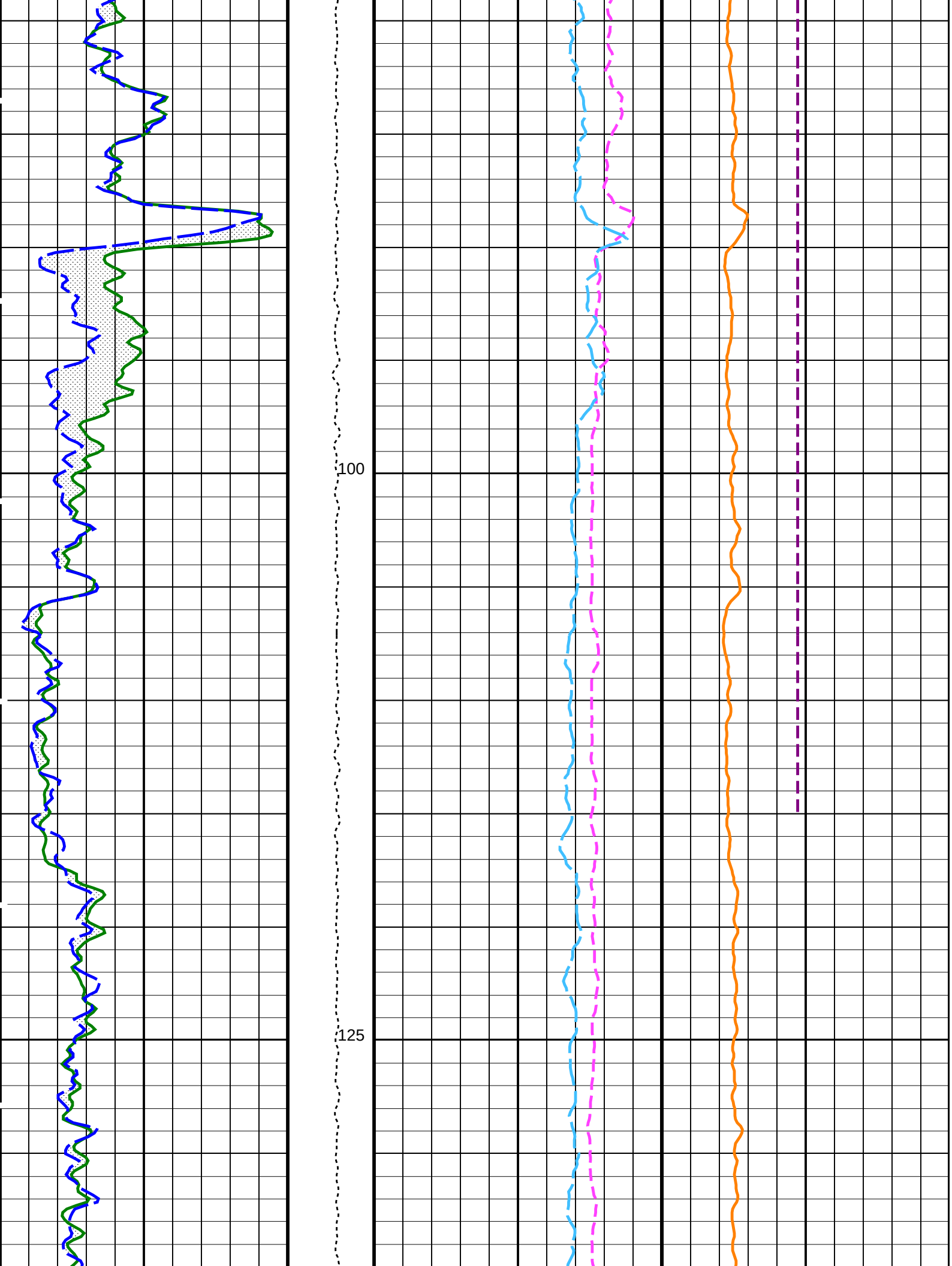
Tension (TENS) (LBF)
0 8000

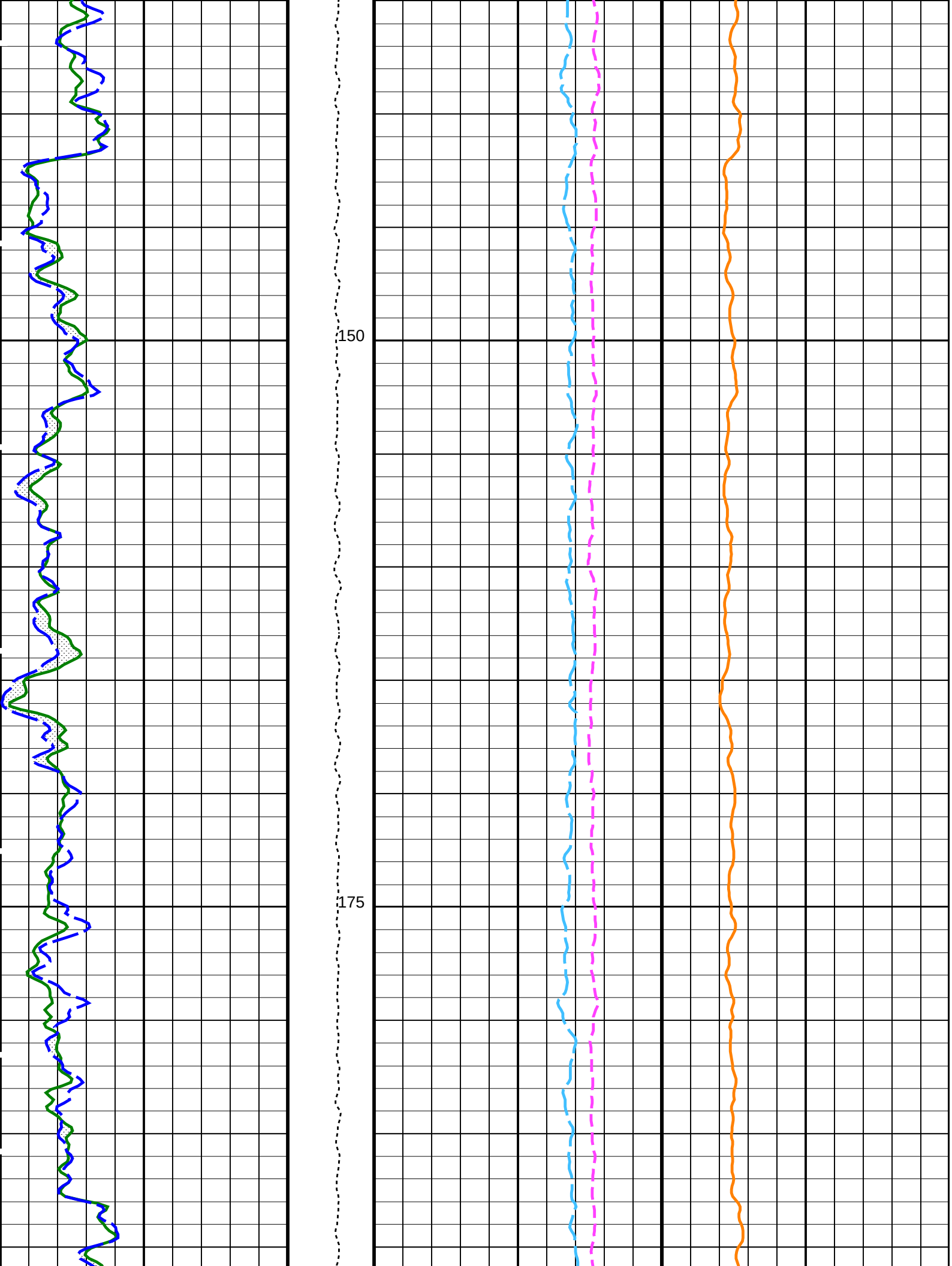
HNGS Thorium (HTHO)
5 (PPM) 25

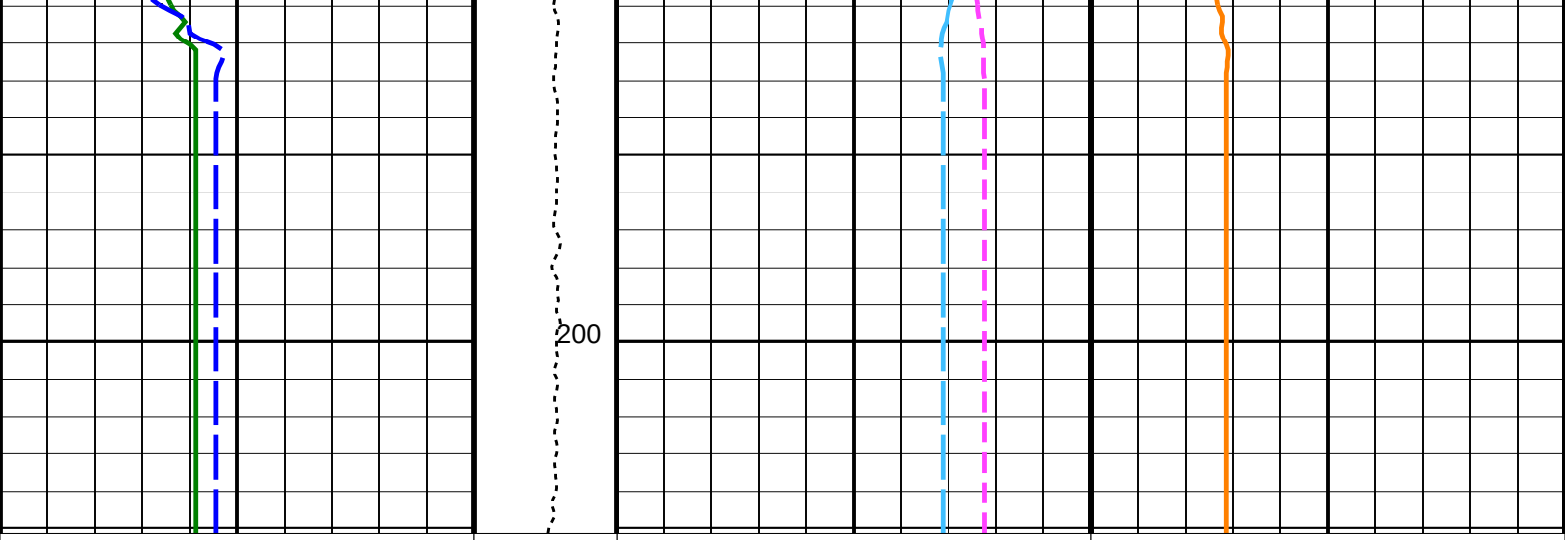
HNGS Potassium (HFK)
−0.01 (V/V) 0.04




25
50
75


100
125


150
175



HNGS Computed Gamma Ray (HCGR)
0 (GAPI) 20

Tension (TENS) (LBF)
0 8000

HNGS Thorium (HTHO)
5 (PPM) 25

HNGS Potassium (HFK)
−0.01 (V/V) 0.04

Area1
From HCGR to HSGR

HNGS Uranium (HURA)
−5 (PPM) 10

HNGS Spectroscopy Gamma Ray (HSGR)
0 (GAPI) 25

HNGS Borehole Potassium (HBHK)
−0.05 (V/V) 0.05

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	9.9	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	43	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	−0.00257376	
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	1.09011	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.06938	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	M
TIMD	Along−hole depth of Tie−in Point	0	M
TIVD	TVD of Tie−in Point	0	M
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.05	G/C3
DO	Depth Offset for Playback	−4497.9	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 13−Oct−2011 12:11

OP System Version: 19C0−187

MEST−B	19C0−187	DTA−A	19C0−187
HNGS−BA	19C0−187	HNGC−B	19C0−187
EDTC−B	19C0−187		

Input DLIS Files

DEFAULT	Flip_FMS_NGS_050LUP		PRODUCER	13−Oct−2011 12:08	4703.1 M	4476.0 M

Output DLIS Files

DEFAULT	FMS_NGS_052PUP	FN:50	PRODUCER	13−Oct−2011 12:11		

Schlumberger

Up Pass #1

MAXIS Field Log

Company: Lamont Doherty | Well: Expedition 336, Site U1382A

Input DLIS Files

DEFAULT	FMS_NGS_039LUP	FN:38	PRODUCER	09−Oct−2011 21:47	4702.3 M	4588.0 M

Output DLIS Files

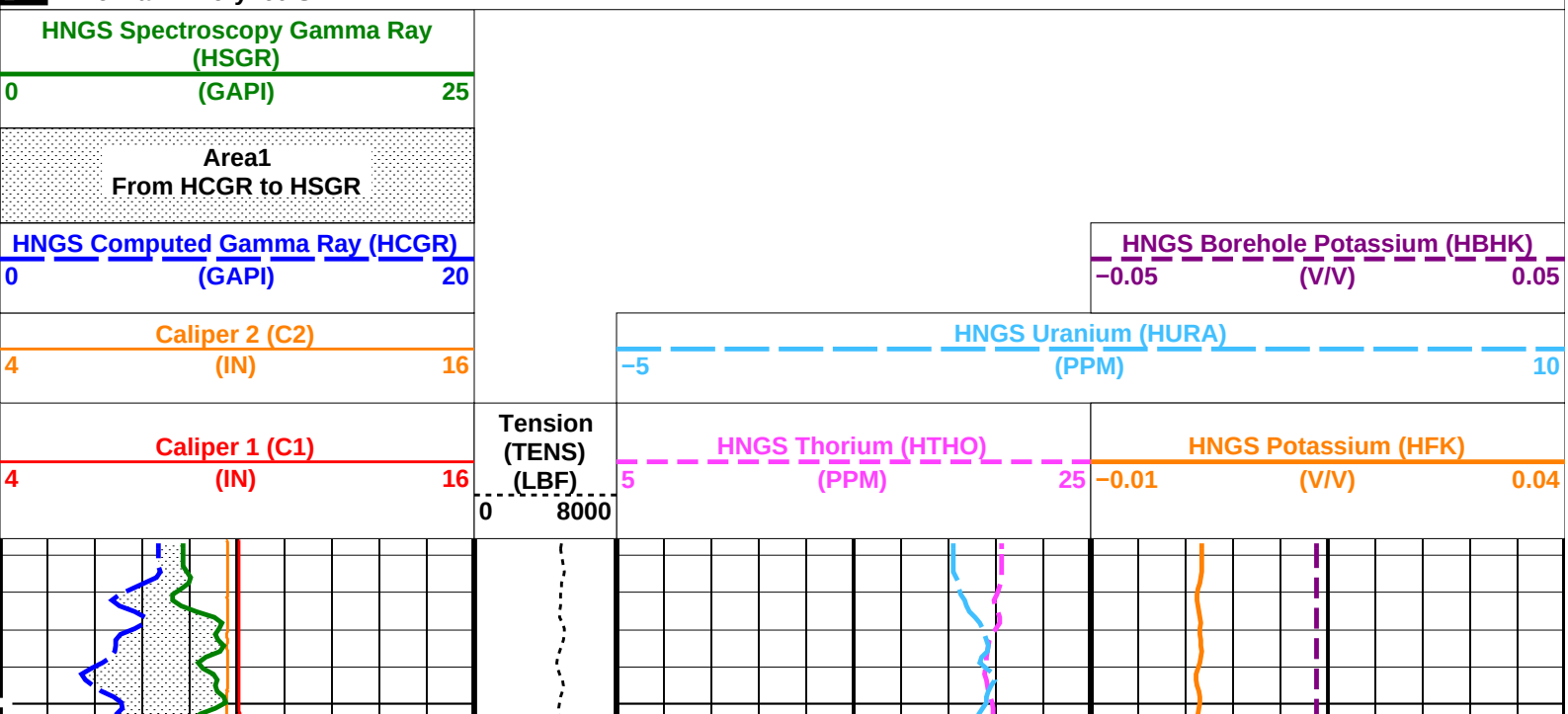
DEFAULT	FMS_NGS_049PUP	FN:48	PRODUCER	13−Oct−2011 12:07	205.7 M	90.5 M

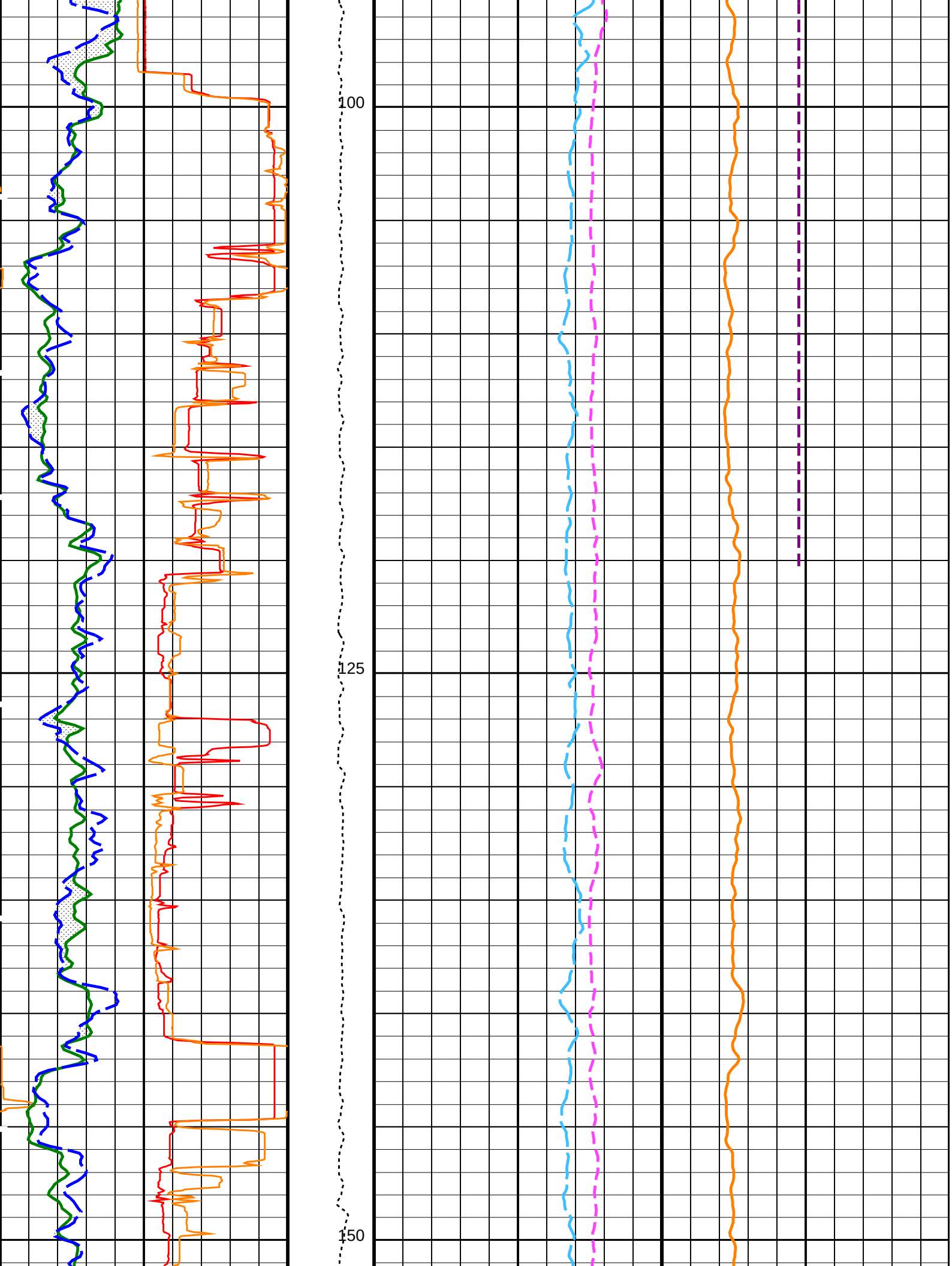
OP System Version: 19C0−187

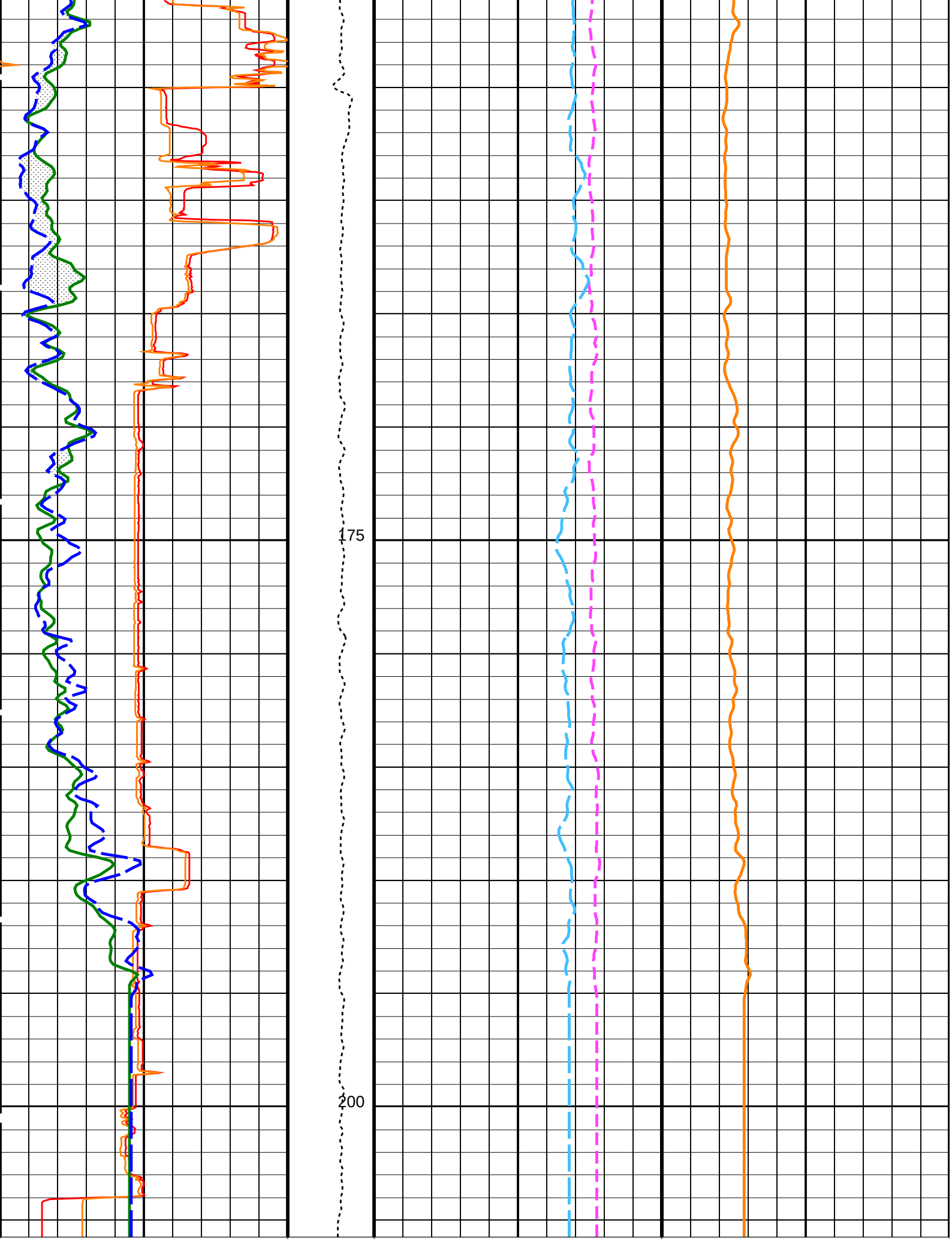
MEST−B	19C0−187	DTA−A	19C0−187
HNGS−BA	19C0−187	HNGC−B	19C0−187
EDTC−B	19C0−187		

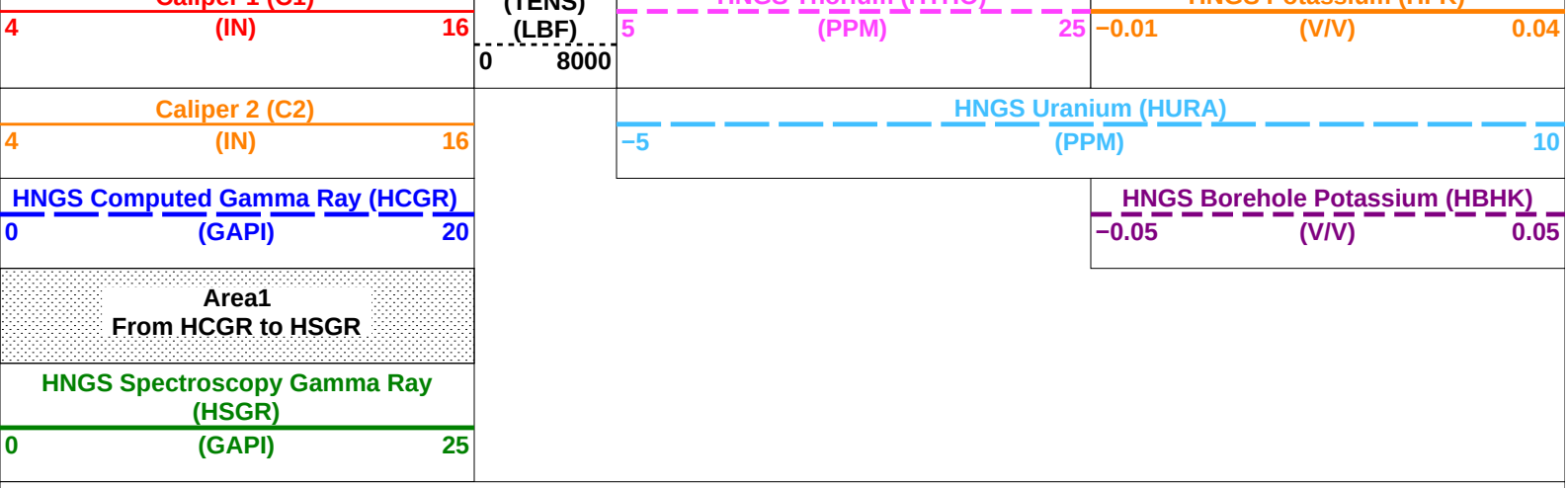
PIP SUMMARY

Time Mark Every 60 S




100
125
150


175
200
Caliper 1 (C1)
Tension (TENS)
HNGS Thorium (HTHO)
HNGS Potassium (HFK)



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	9.9	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	43	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	−0.00253052	
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	1.07291	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.06638	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	M
TIMD	Along−hole depth of Tie−in Point	0	M
TIVD	TVD of Tie−in Point	0	M
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.05	G/C3
DO	Depth Offset for Playback	−4497.2	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields **Vertical Scale: 1:200** **Graphics File Created: 13−Oct−2011 12:07**

OP System Version: 19C0−187

MEST−B	19C0−187	DTA−A	19C0−187
HNGS−BA	19C0−187	HNGC−B	19C0−187
EDTC−B	19C0−187		

Input DLIS Files

DEFAULT	FMS_NGS_039LUP	FN:38	PRODUCER	09−Oct−2011 21:47	4702.3 M	4588.0 M

Output DLIS Files

DEFAULT	FMS_NGS_049PUP	FN:48	PRODUCER	13−Oct−2011 12:07

Schlumberger

Up Pass #2

MAXIS Field Log

Company: Lamont Doherty | **Well: Expedition 336, Site U1382A**

Input DLIS Files

DEFAULT	FMS_NGS_040LUP	FN:39	PRODUCER	09−Oct−2011 21:46	4702.3 M	4458.2 M

Output DLIS Files

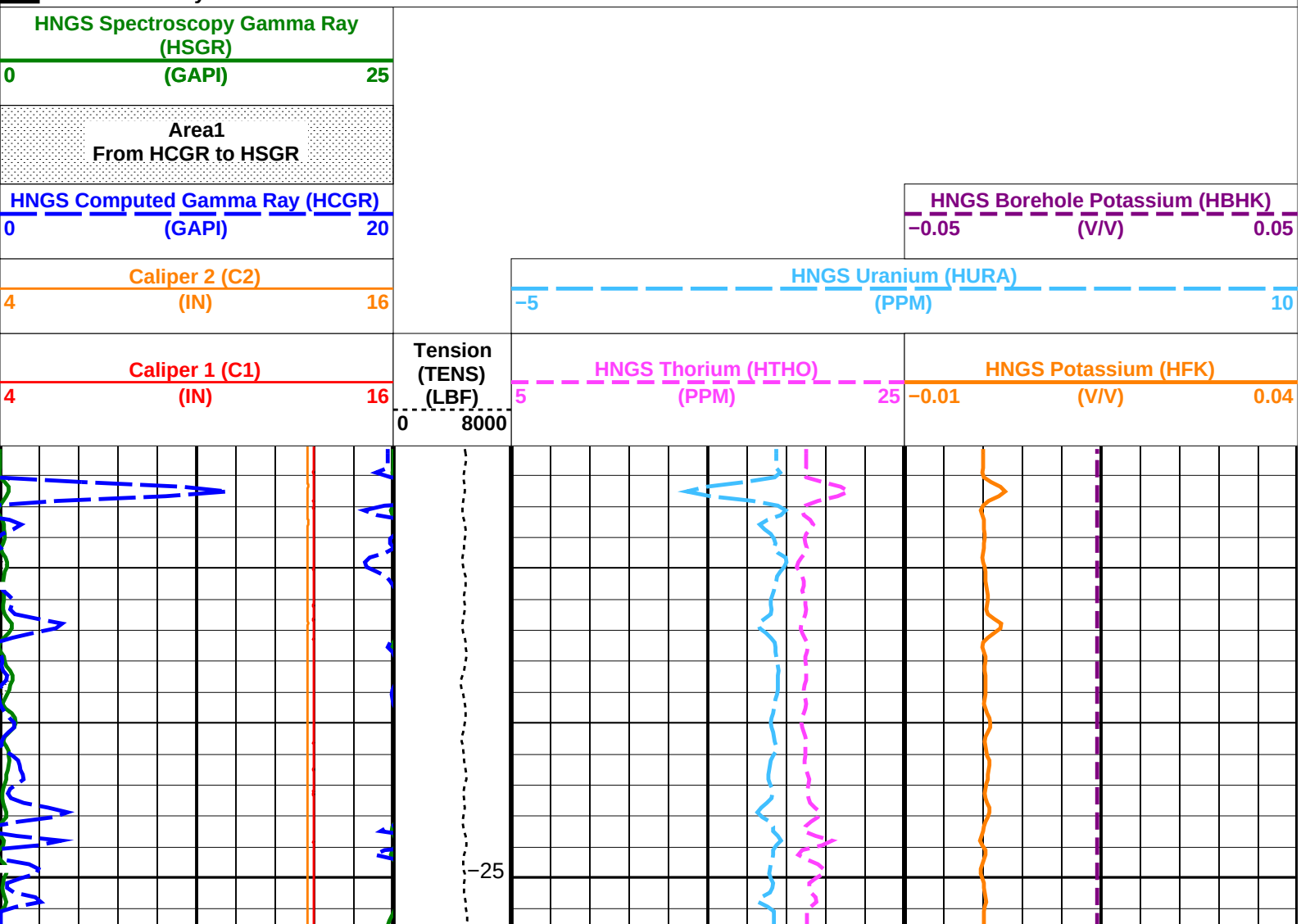
DEFAULT	FMS_NGS_045PUP	FN:44	PRODUCER	13−Oct−2011 11:55	205.7 M	−39.0 M

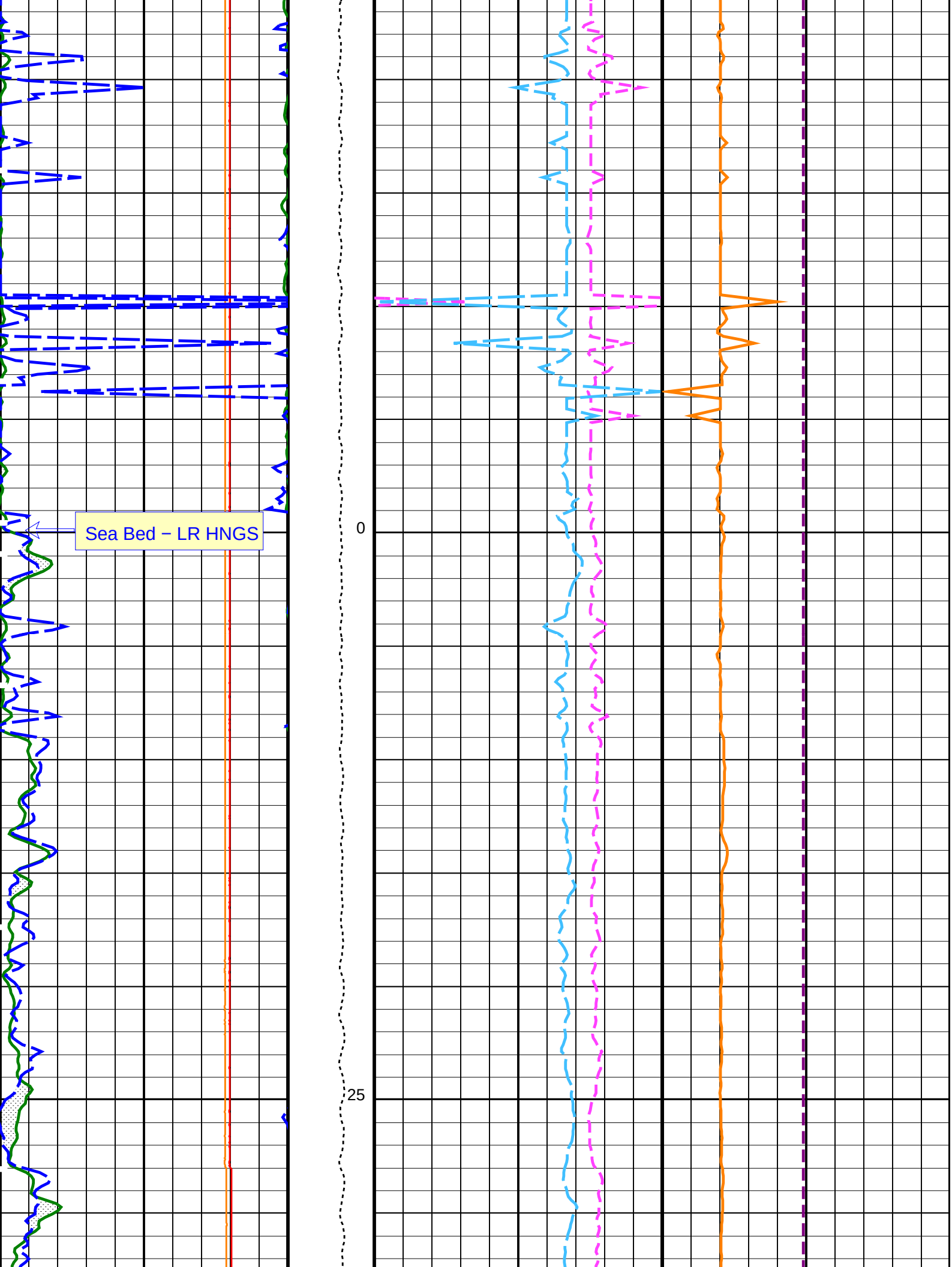
OP System Version: 19C0−187

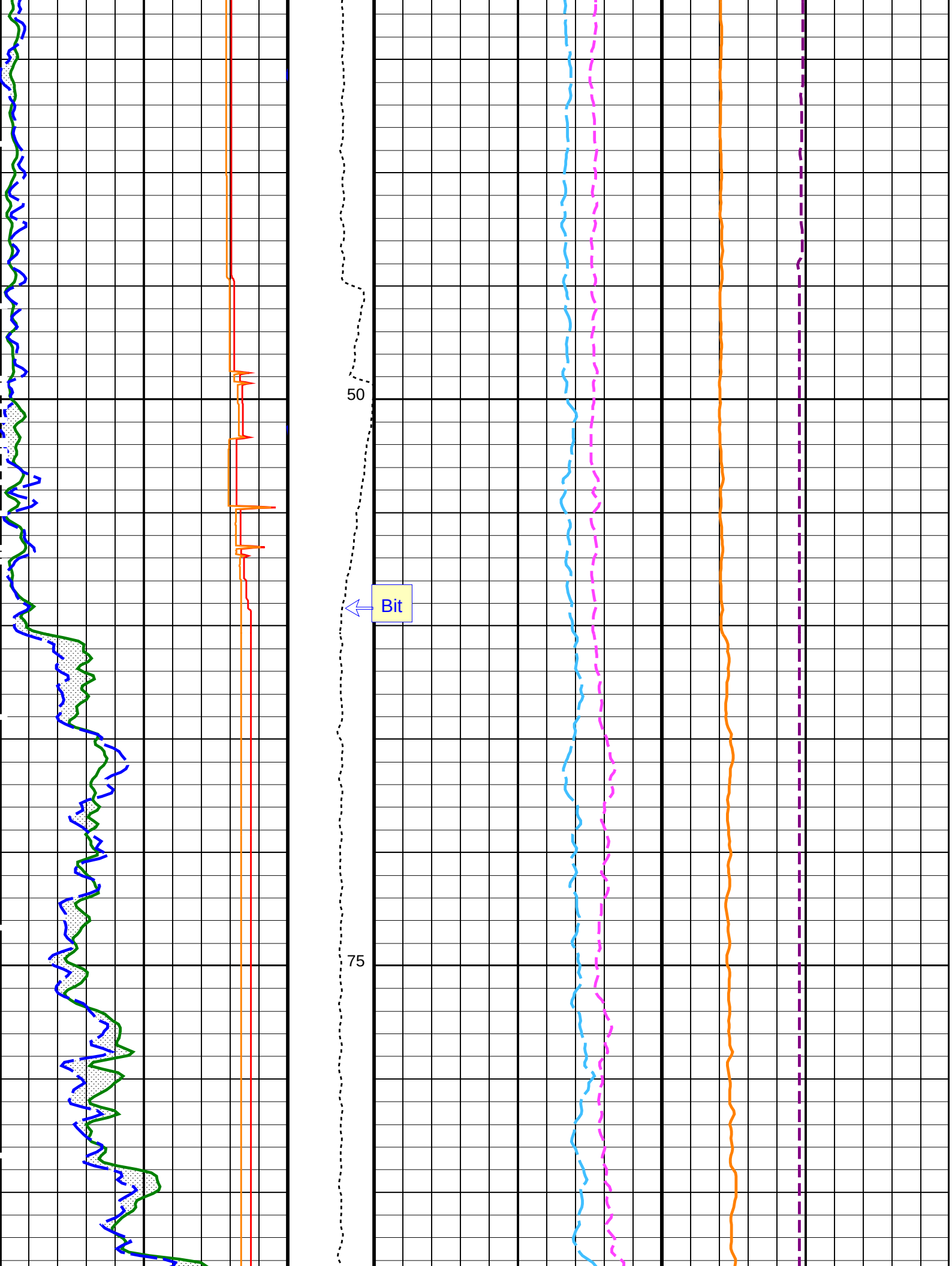
MEST−B	19C0−187	DTA−A	19C0−187
HNGS−BA	19C0−187	HNGC−B	19C0−187
EDTC−B	19C0−187		

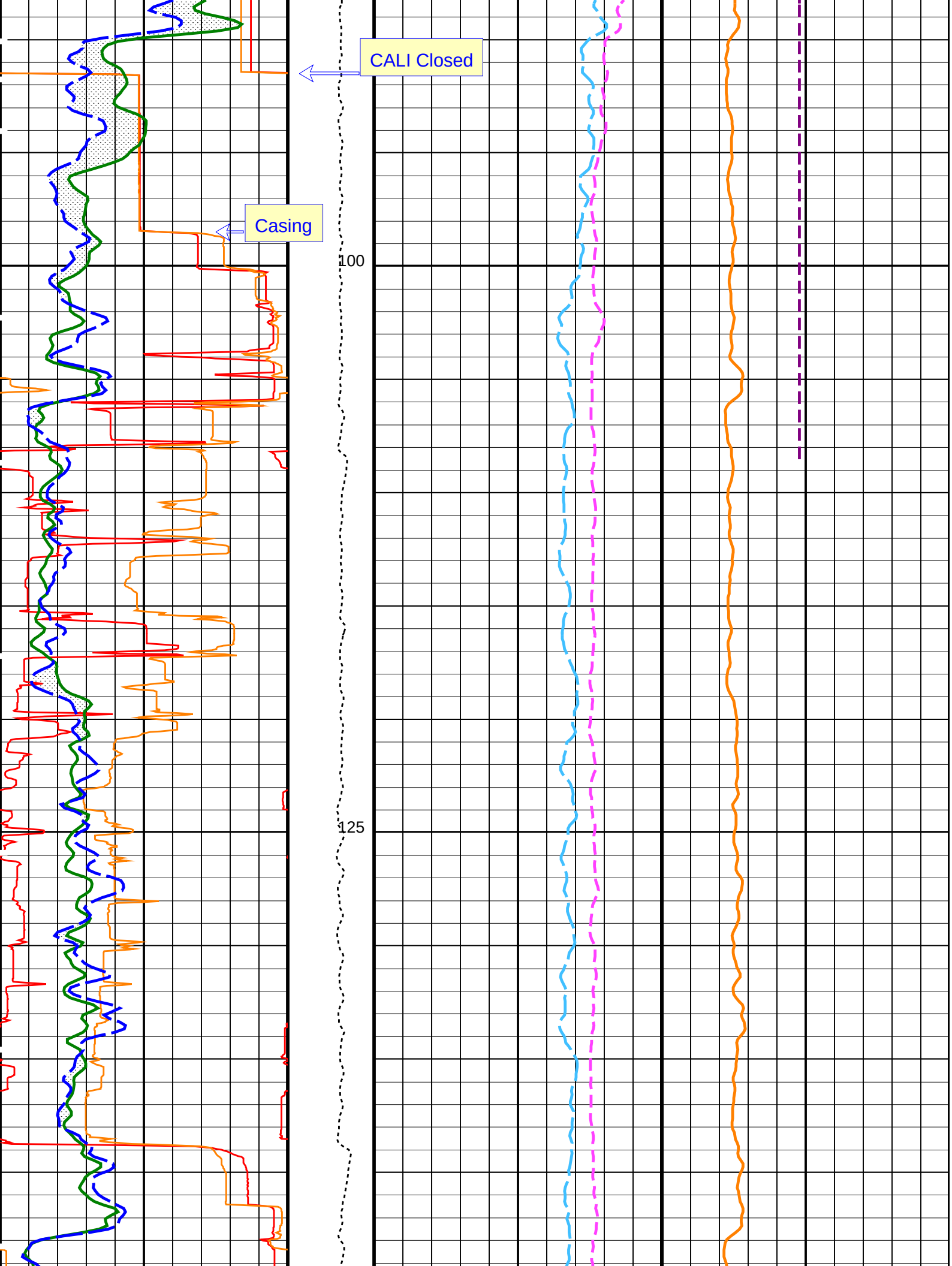
PIP SUMMARY

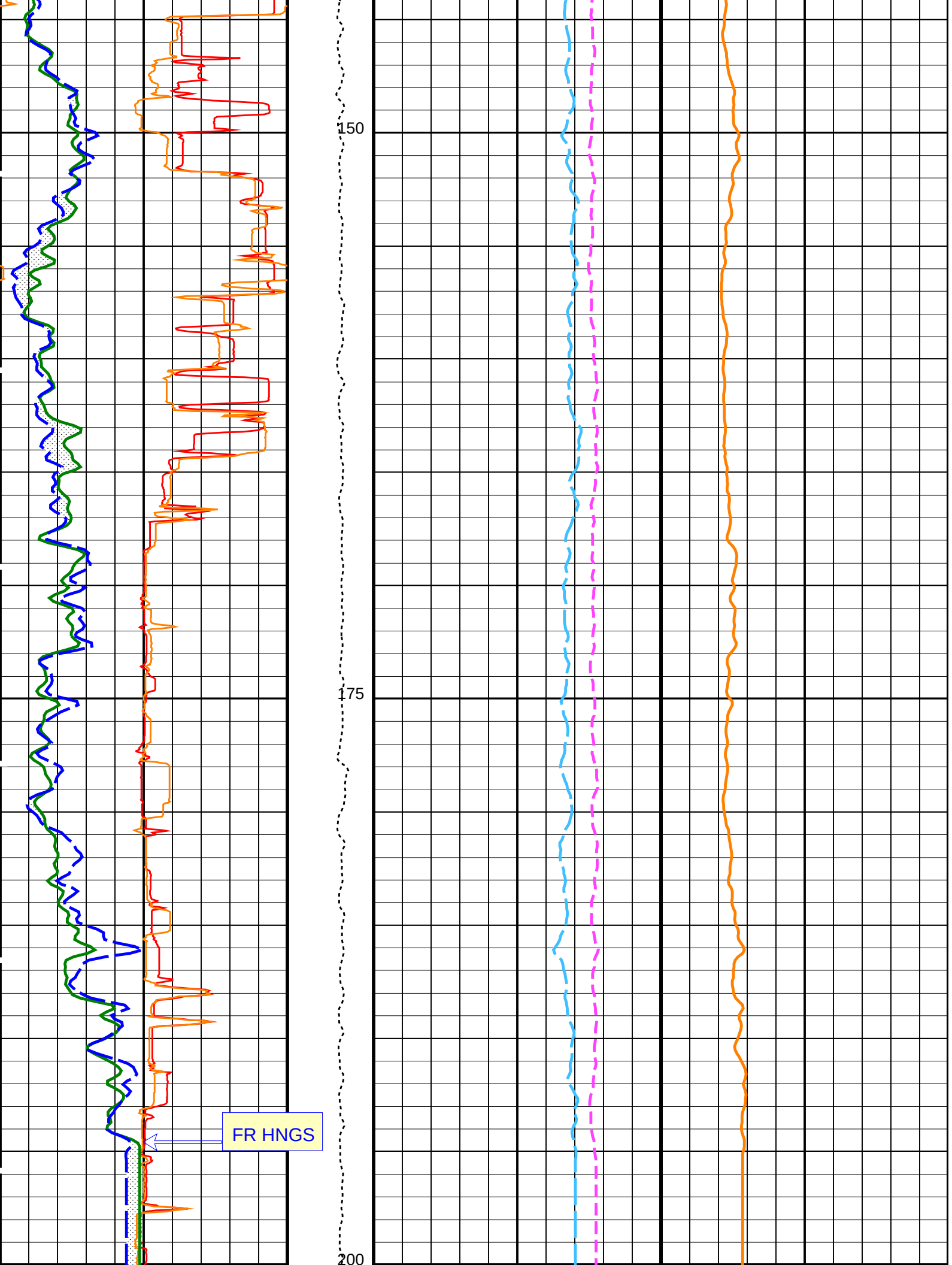
Time Mark Every 60 S

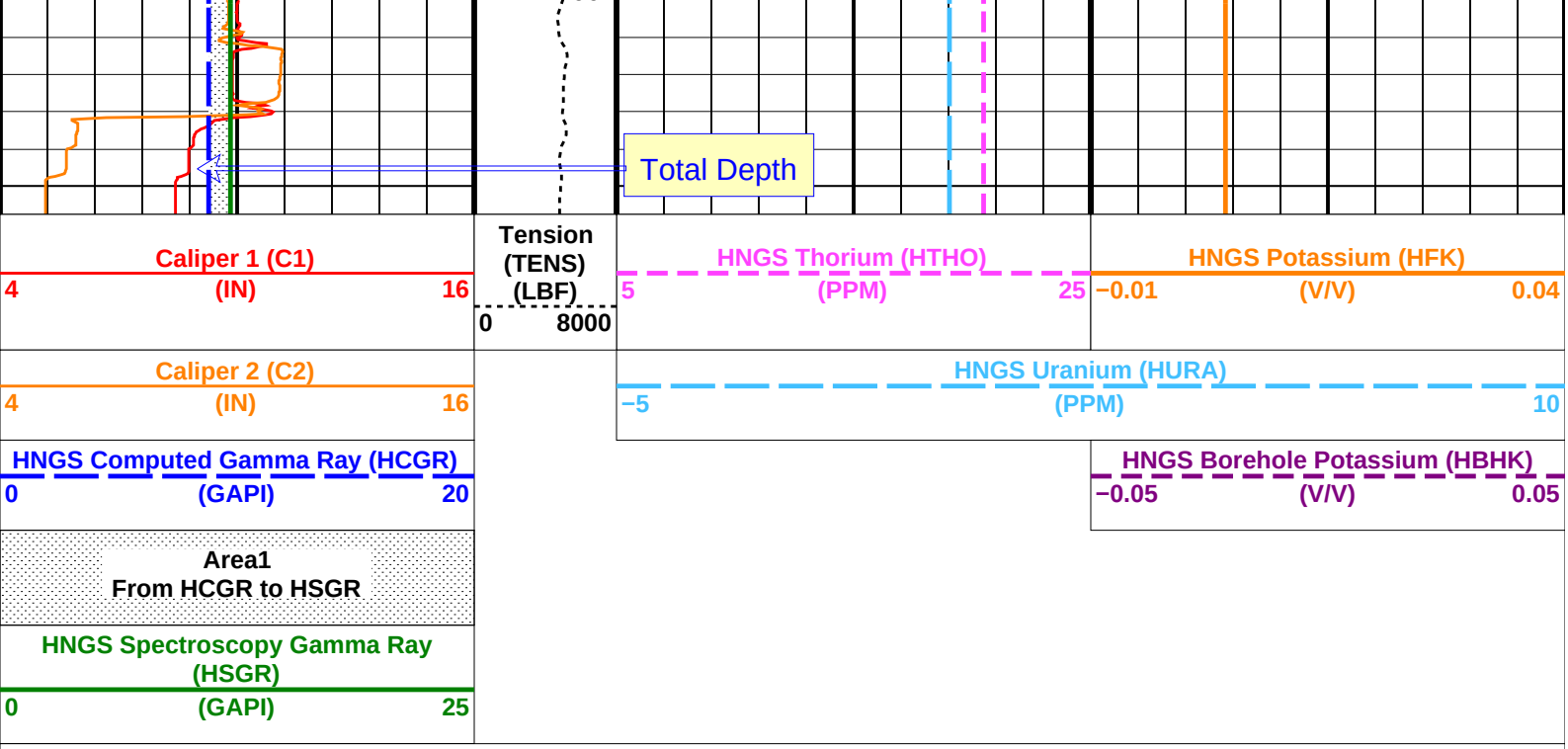



Sea Bed − LR HNGS
0
25


50
Bit
75


CALI Closed
Casing
100
125


150
175
200
FR HNGS



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	9.9	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	43	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	−0.00196634	
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	1.29424	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.959039	
	EDTC−B: Enhanced DTS Cartridge		
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	BS	
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	M
TIMD	Along−hole depth of Tie−in Point	0	M
TIVD	TVD of Tie−in Point	0	M
	System and Miscellaneous		
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.05	G/C3
DO	Depth Offset for Playback	−4497.1	M
PP	Playback Processing	RECOMPUTE	

Format: HNGSYields **Vertical Scale: 1:200** **Graphics File Created: 13−Oct−2011 11:55**

OP System Version: 19C0−187

MEST−B	19C0−187	DTA−A	19C0−187
HNGS−BA	19C0−187	HNGC−B	19C0−187
EDTC−B	19C0−187		

Input DLIS Files

DEFAULT	**FMS_NGS_040LUP**	**FN:39**	**PRODUCER**	**09−Oct−2011 21:46**	**4702.3 M**	**4458.2 M**

Output DLIS Files

DEFAULT	**FMS_NGS_045PUP**	**FN:44**	**PRODUCER**	**13−Oct−2011 11:55**

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Micro Electrical Scanner − B (Slim) Wellsite Calibration − Caliper Calibration							
Before: 2−Oct−2011 14:36							
Caliper 1 Zero Measurement	12.00	N/A	12.84	N/A	N/A	N/A	IN
Caliper 2 Zero Measurement	12.00	N/A	12.62	N/A	N/A	N/A	IN
Caliper 1 Plus Measurement	15.14	N/A	15.86	N/A	N/A	N/A	IN
Caliper 2 Plus Measurement	15.14	N/A	15.60	N/A	N/A	N/A	IN
Micro Electrical Scanner − B (Slim) Wellsite Calibration − CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 9−Oct−2011 15:17							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	99	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	743	N/A	N/A	N/A	
Micro Electrical Scanner − B (Slim) Wellsite Calibration − CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 9−Oct−2011 15:17							
TEMPERATURE REFERENCE :	N/A	N/A	23	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	9	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	507	N/A	N/A	N/A	
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 1 Check							
Master: 15−Sep−2011 14:01 Before: 2−Oct−2011 14:33							
Na 511 Peak Loc	40.00	39.54	39.63	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.51	16.05	N/A	N/A	2.000	%
High Voltage	1150	1190	1196	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	141.9	142.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.871	9.317	N/A	N/A	2.000	%
Temperature	15.50	35.19	34.33	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	22.03	21.35	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Detector 2 Check							
Master: 15−Sep−2011 14:01 Before: 2−Oct−2011 14:33							
Na 511 Peak Loc	40.00	39.52	39.55	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.45	17.55	N/A	N/A	2.000	%
High Voltage	1150	1121	1118	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.5	141.9	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.764	8.990	N/A	N/A	2.000	%
Temperature	15.50	35.72	34.41	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	22.83	22.32	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration − Ratio Of Detector 1 To Detector 2							
Master: 15−Sep−2011 14:01 Before: 2−Oct−2011 14:33							
Coincidence Count Rate Ratio	1.000	0.9670	0.9574	N/A	N/A	0.05000	
Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration							
Before: 9−Oct−2011 15:20							

EDTC Z−Axis Acceleration	9.810	N/A	9.727	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration							
Before: 2−Oct−2011 11:53							
Gamma Ray (Jig − Bkg)	162.1	N/A	162.1	N/A	N/A	14.74	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Micro Electrical Scanner − B (Slim) / Equipment Identification

Primary Equipment:	
MEST Sonde − B	MEDS − B
MEST Preamplifier Cartridge − AB	MEPC − AB
GPIT Cartridge − A	GPIC − A
MEST Acquisition Cartridge − A	MEAC − A
Auxiliary Equipment:	
MEST−B Preamplifier Cartridge Housing	MEPH − A
MEST Acquisition Cartridge Housing (Slim	MEAH − B

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:		
HNGS Sonde	HNGS − BA	194
Auxiliary Equipment:		
HNGS Sonde Housing	HNSH − BA	205
Gamma Source Radioactive	GSR − U	616008

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value
Master		39.54
Before		39.63
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.51
Before		16.05
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

Phase	High Voltage V	Value
Master		1190
Before		1196
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		141.9
Before		142.3
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.871
Before		9.317
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		35.19
Before		34.33
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

Phase	Na Count Rate CPS	Value
Master		22.03
Before		21.35
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 15−Sep−2011 14:01 Before: 2−Oct−2011 14:33

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc	Value
Master		39.52
Before		39.55
	37.50 (Minimum) 40.00 (Nominal) 43.50 (Maximum)	

Phase	Na 511 Peak Res %	Value
Master		16.45
Before		17.55
	12.00 (Minimum) 15.50 (Nominal) 19.00 (Maximum)	

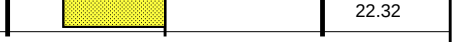
Phase	High Voltage V	Value
Master		1121
Before		1118
	900.0 (Minimum) 1150 (Nominal) 1600 (Maximum)	

Phase	Na 1785 Peak Loc	Value
Master		142.5
Before		141.9
	135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)	

Phase	Na 1785 Peak Res %	Value
Master		8.764
Before		8.990
	7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)	

Phase	Temperature DEGC	Value
Master		35.72
Before		34.41
	−28.89 (Minimum) 15.50 (Nominal) 60.00 (Maximum)	

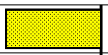
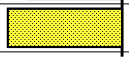
Phase	Na Count Rate CPS	Value
Master		22.83

Before		22.32
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 15−Sep−2011 14:01 Before: 2−Oct−2011 14:33

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Master		0.9670
Before		0.9574
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 15−Sep−2011 14:01

Before: 2−Oct−2011 14:33

Hostile Natural Gamma Ray Cartridge − B / Equipment Identification

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

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:		
EDTC Gamma Ray Detector	EDTG − A/B	77693
Enhanced DTS Cartridge	EDTC − B	8529
Auxiliary Equipment:		
EDTC Housing	EDTH − B	8528

Enhanced DTS Cartridge Wellsite Calibration

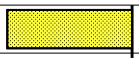
EDTC Accelerometer Calibration

Phase	EDTC Z−Axis Acceleration M/S2	Value
Before		9.727
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	

Before: 9−Oct−2011 15:20

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value
Before		6.159
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)	

Phase	Gamma Ray (Jig − Bkg) GAPI	Value
Before		162.1
	147.4 (Minimum) 162.1 (Nominal) 176.9 (Maximum)	

Phase	Gamma Ray (Calibrated) GAPI	Value
Before		165.0
	150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 2−Oct−2011 11:53

Company: **Lamont Doherty**

Schlumberger

Well: **Expedition 336, Site U1382A**

Field: **North Pond**

Rig: **JOIDES Resolution**

Country:	**USA**
	HNGS (Hostile Natural Gamma Spectroscopy)