

Company: Lamont Doherty

Well: Expedition 317 Site U1353C

Field: Canterbury Basin

Rig: JOIDES Resolution Ocean: Pacific

Natural Gamma Spectroscopy

Rig: JOIDES Resolution
 Field: Canterbury Basin
 Location: Latitude: S 44° 46.120'
 Well: Expedition 317 Site U1353C
 Company: Lamont Doherty

LOCATION			
Latitude: S 44° 46.120'	Elev.: K.B. 94.50 m		
Longitude: E 171° 40.444'	G.L. 0.00 m		
Permanent Datum: _____	Sea Bed _____	Elev.: 0.00 m	
Log Measured From: _____	Drill Floor _____	0.00 m	above Perm. Datum
Drilling Measured From: _____	Drill Floor _____		
API Serial No. _____	Max. Hole Devi. 0 deg	Longitude S 44° 46.120'	Latitude E 171° 40.444'

Logging Date	28-Dec-2009	
Run Number	1	
Depth Driller	531.6 m	
Schlumberger Depth	527.6 m	
Bottom Log Interval	507.6 m	
Top Log Interval	0 m	
Casing Driller Size @ Depth	4.500 in @	107.6 m @
Casing Schlumberger	107.1 m	
Bit Size	11.438 in	
Type Fluid In Hole	Seawater Gel	
Density	1.26 g/cm3	
Fluid Loss	PH	
Source Of Sample	N/A	
RM @ Measured Temperature	@	
RMF @ Measured Temperature	@	
RMC @ Measured Temperature	@	
Source RMF	RMC	
RM @ MRT	RMF @ MRT	
Maximum Recorded Temperatures	15 degC @ 15	@ 15
Circulation Stopped	28-Dec-2009	1:00
Logger On Bottom	28-Dec-2009	4:00
Unit Number	625003	Houston
Recorded By	C. Furman	
Witnessed By	A. Slagle, G. Guerin	

	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		
Density		
Fluid Loss		
Source Of Sample		
RM @ Measured Temperature		@
RMF @ Measured Temperature		@
RMC @ Measured Temperature		@
Source RMF	RMC	
RM @ MRT	RMF @ MRT	@
Maximum Recorded Temperatures		@
Circulation Stopped		
Logger On Bottom		
Unit Number		
Recorded By		
Witnessed By		

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1
OS1: DIT

REMARKS: RUN NUMBER 1



Logs run in third hole ("C" hole) of drilling site U1353 to aid in depth correlation of core data collected in surface labs.
Average heave during the run was 0.3m; Active Heave Compensator used below 235mbrf.
TD was found to be 622mBRF – with the pipe (bit) at 201mBRF. Sea Bed given as 96mBRF.
Hole Size input taken from HLDS Caliper.
Tools run slick in order to fit through drill pipe, as is standard practice on this project.
HLDS Caliper closed at approximately 233m to facilitate entry into pipe.
Nuclear sources not run due to known risk of hole collapse.
HLDS run for caliper data only.

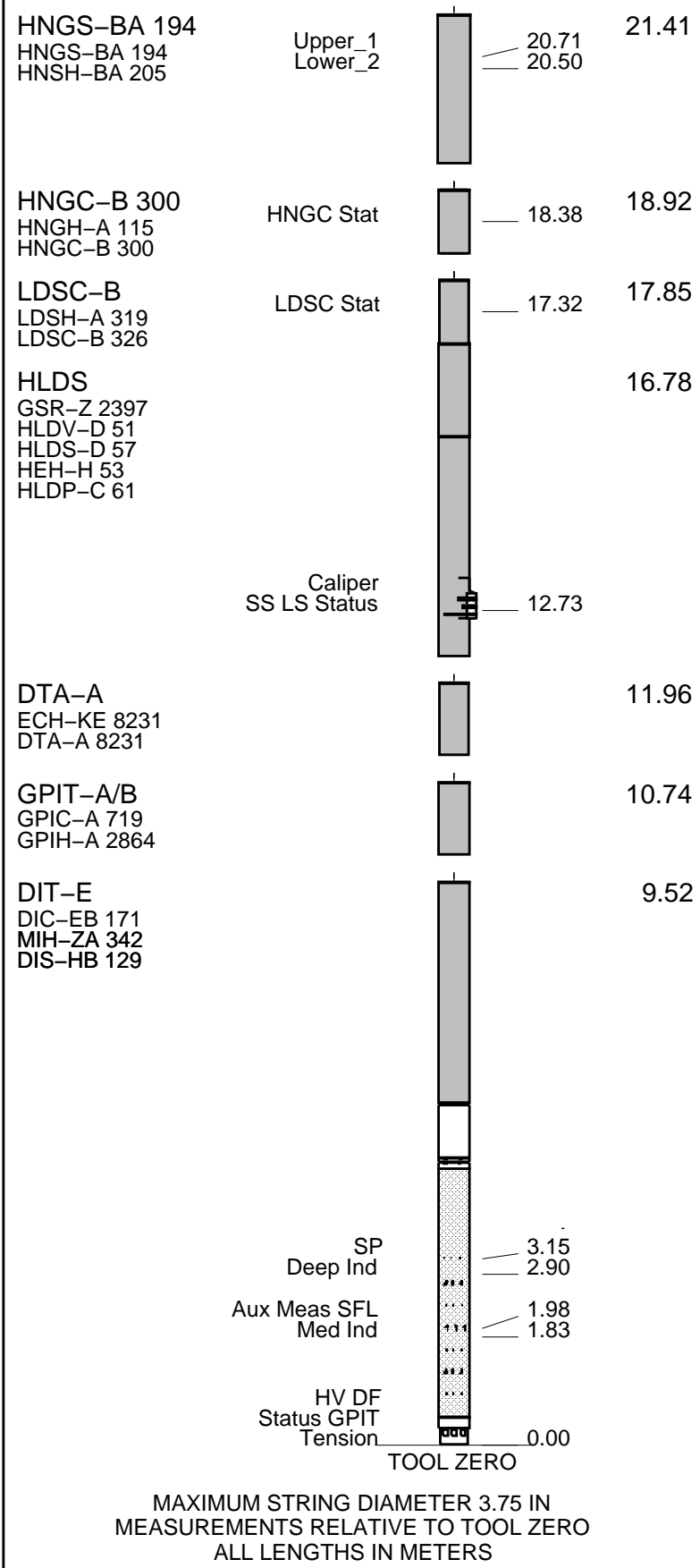
Depth "Zero" reference adjusted to Sea Bed picked by client.
Depths shown are measured depth below sea floor, as per client request.

RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
17C0-154					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1	RUN 2
SURFACE EQUIPMENT	
GSR-U 616008 WITM (DTS)-A	

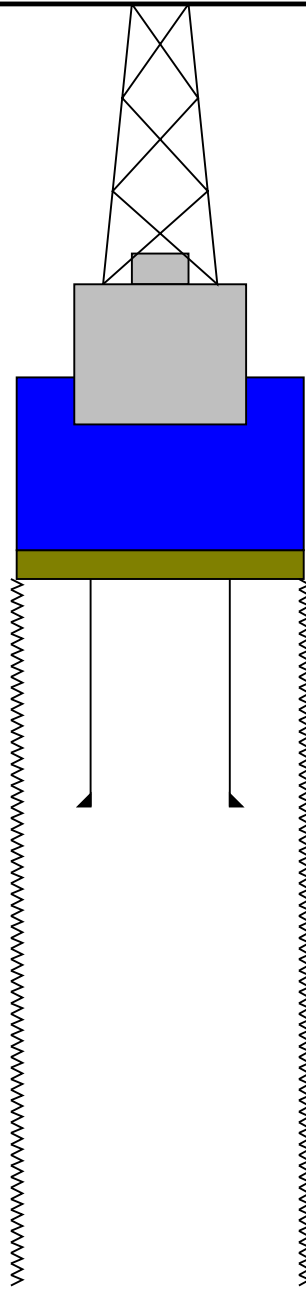
DOWNHOLE EQUIPMENT	
LEH-QT LEH-QT 1750	 23.22
DTC-H ECH-KC 2304 DTCH0-A 8798	CTEM TelStatu ToolStatu  22.05 22.33 _____ 21.41



Production String	(in) (m)	Well Schematic	(m) (in)	Casing String
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Kelly Bushing Elevation
Derrick Floor Elevation
Mean Sea Level

-11.0
-11.0
0.0



96.0

Sea Bed

201.0

5.500

Bit Depth

625.0

11.340

Total Depth - Driller

Schlumberger

Main Pass

MAXIS Field Log

Input DLIS Files

DEFAULT	PI_LDL_NGS_015LUP	FN:14	PRODUCER	28-Dec-2009 05:27	621.8 M	62.5 M
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Output DLIS Files

DEFAULT	PI_LDL_NGS_031PUP	FN:30	PRODUCER	01-Jan-2010 00:37	527.3 M	-32.0 M
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OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3870_Q3_2009_OP17_V3_b
DTA-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray (HSGR)
(GAPI) 0 100

Area1
From HCGR to HSGR

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

HNGS Computed Gamma Ray (HCGR)
(GAPI) 0 100

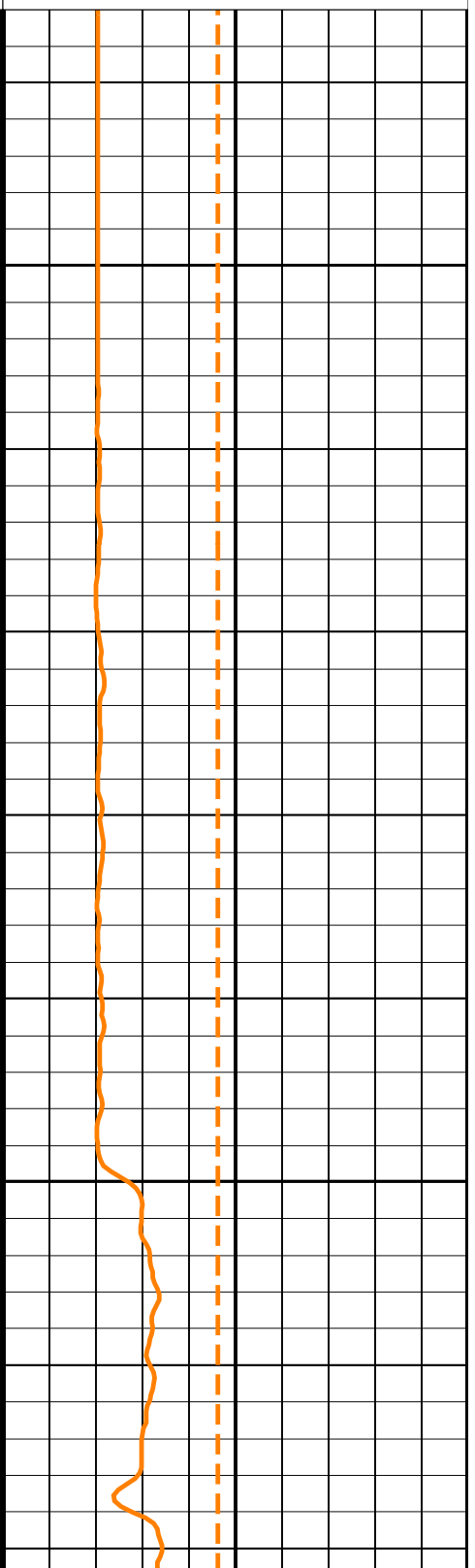
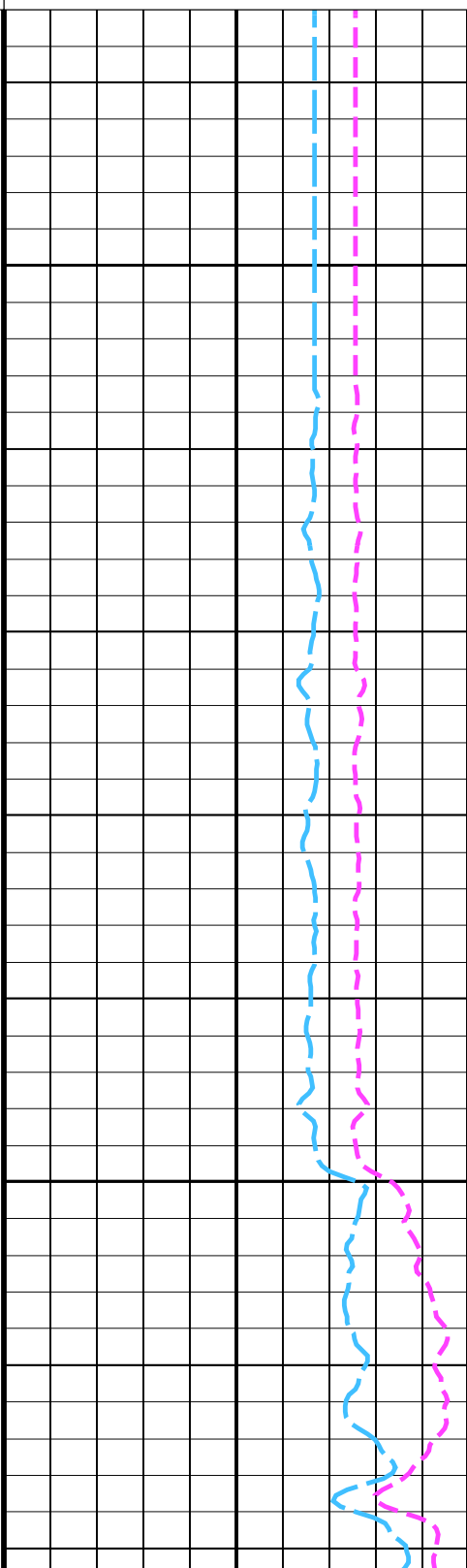
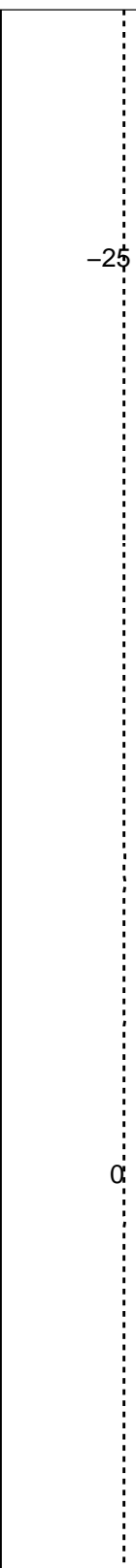
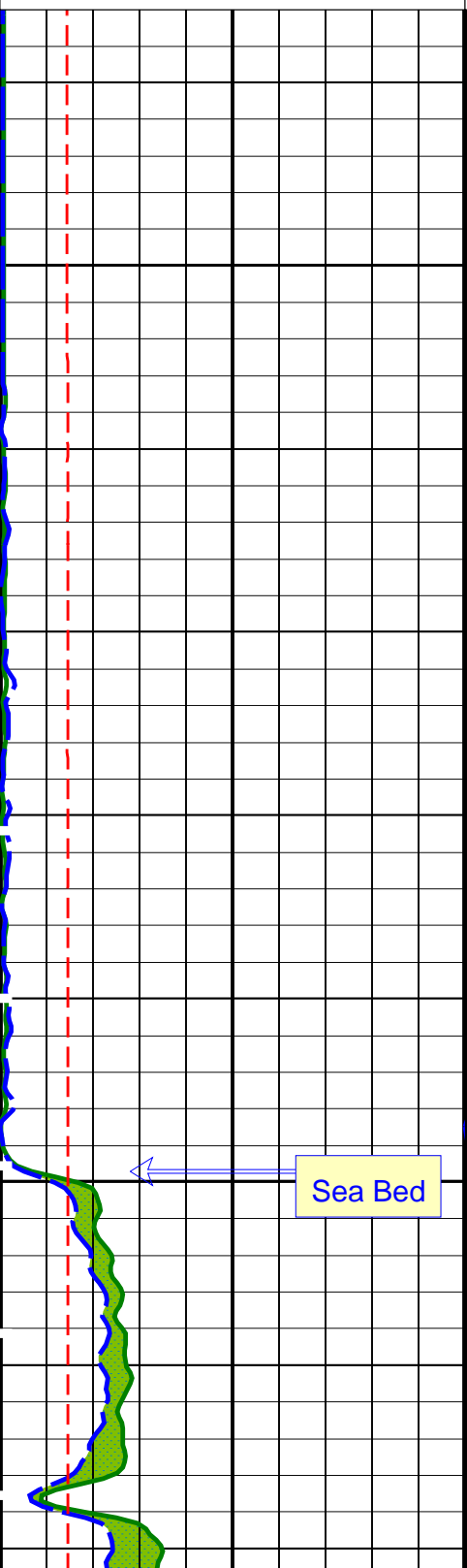
HNGS Uranium (HURA)
(PPM) -5 10

HLDS Caliper (LCAL)
(IN) 0 20

Tension (TENS)
(LBF) 10000 0

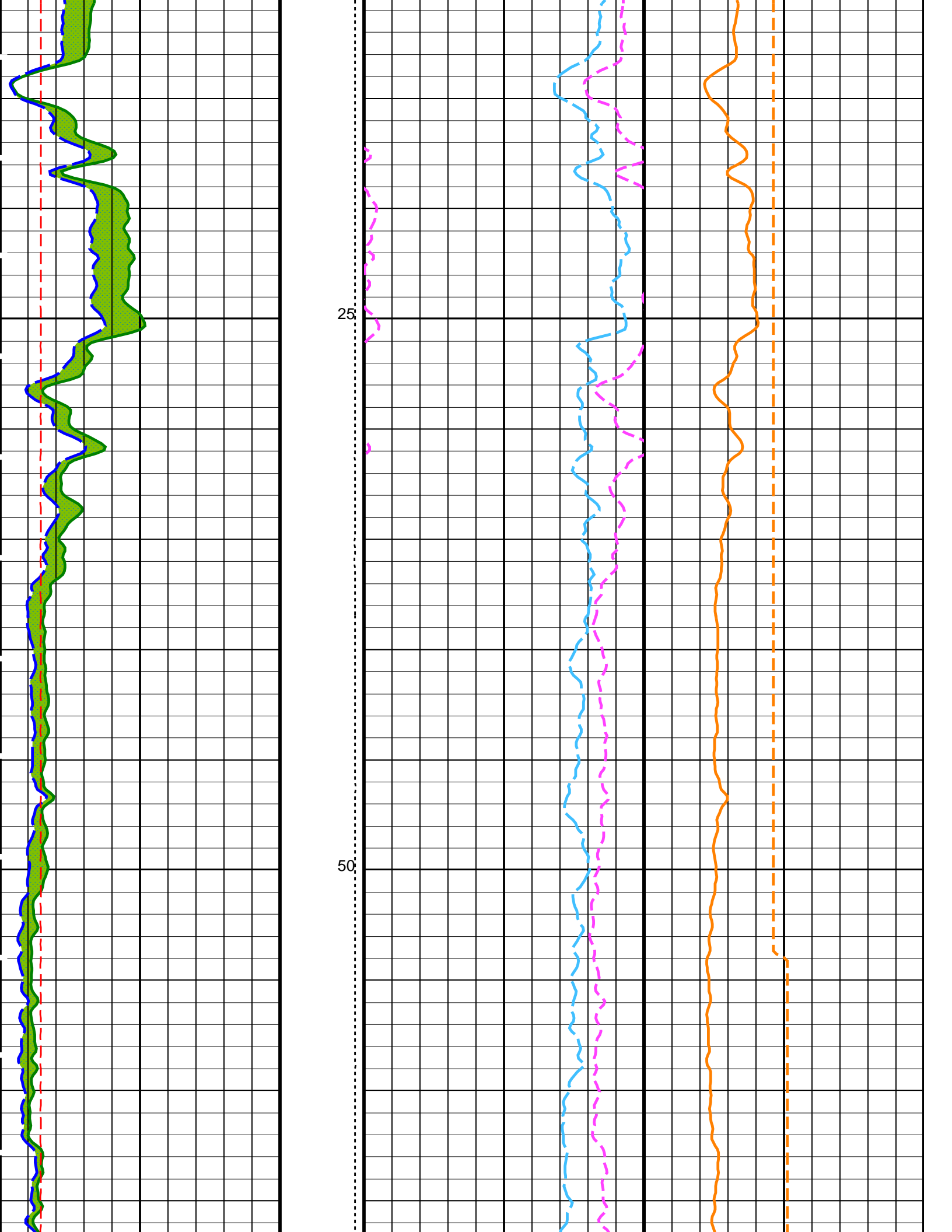
HNGS Thorium (HTHO)
(PPM) 5 25

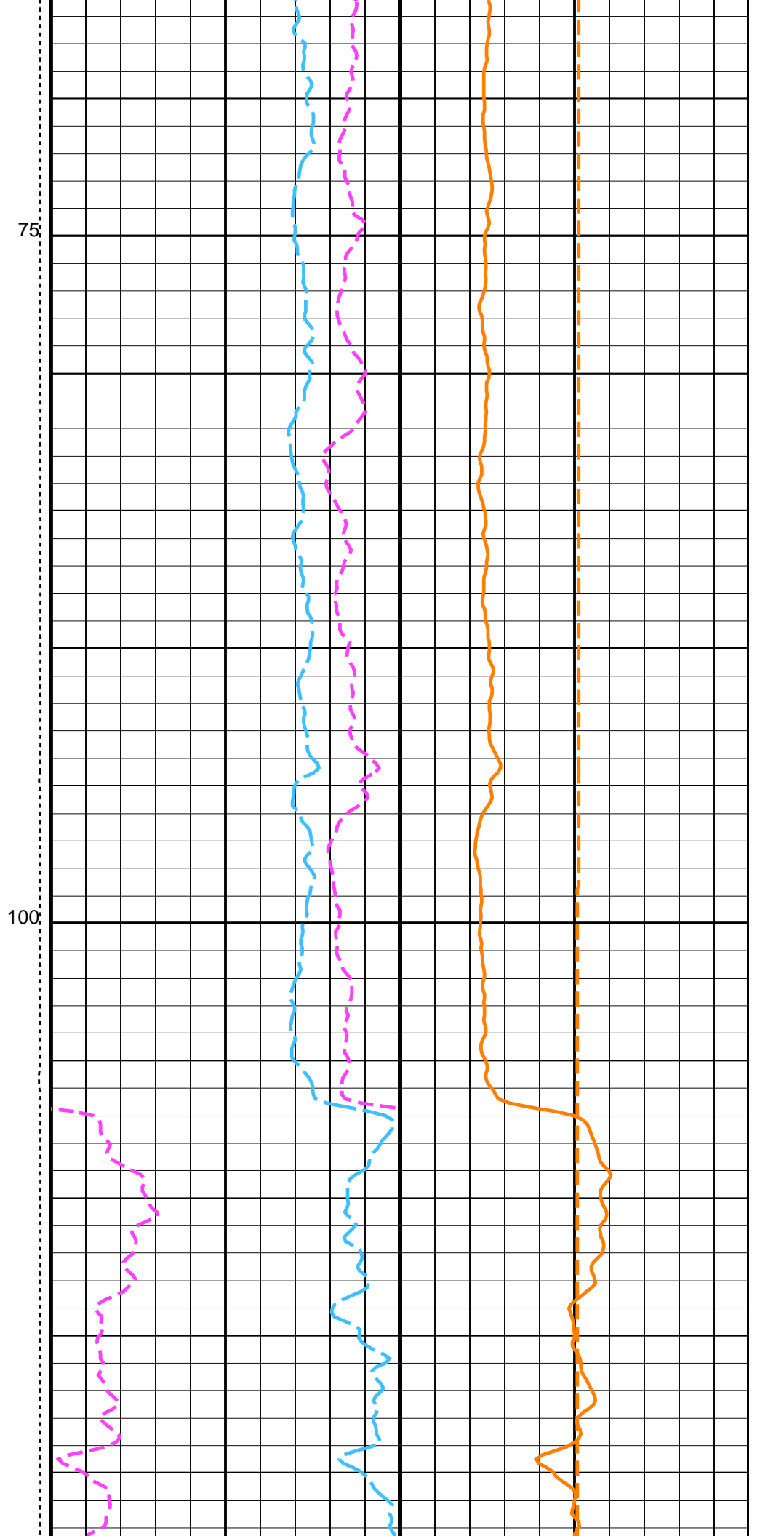
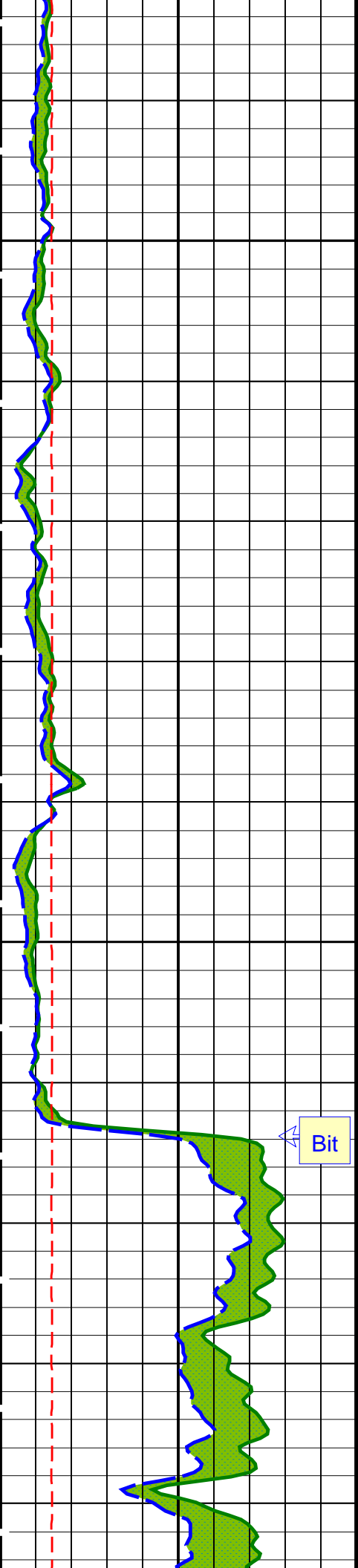
HNGS Potassium (HFK)
-0.01 (----) 0.04

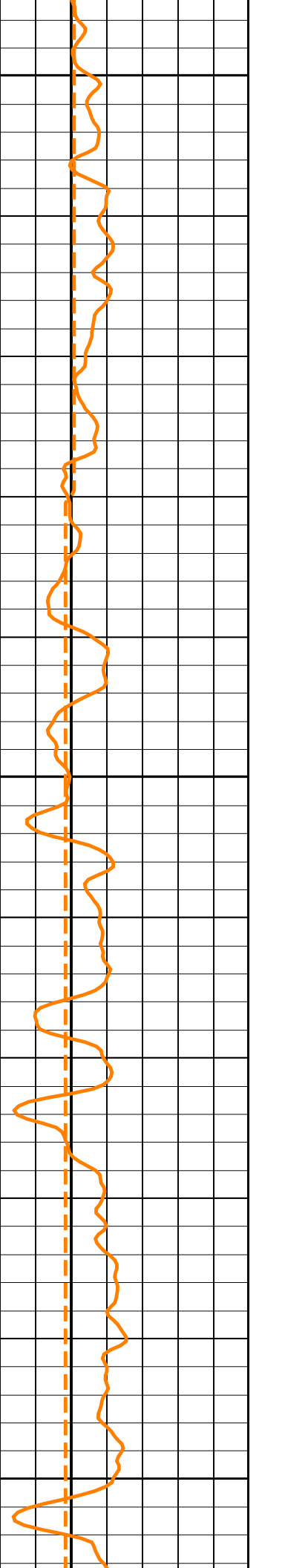
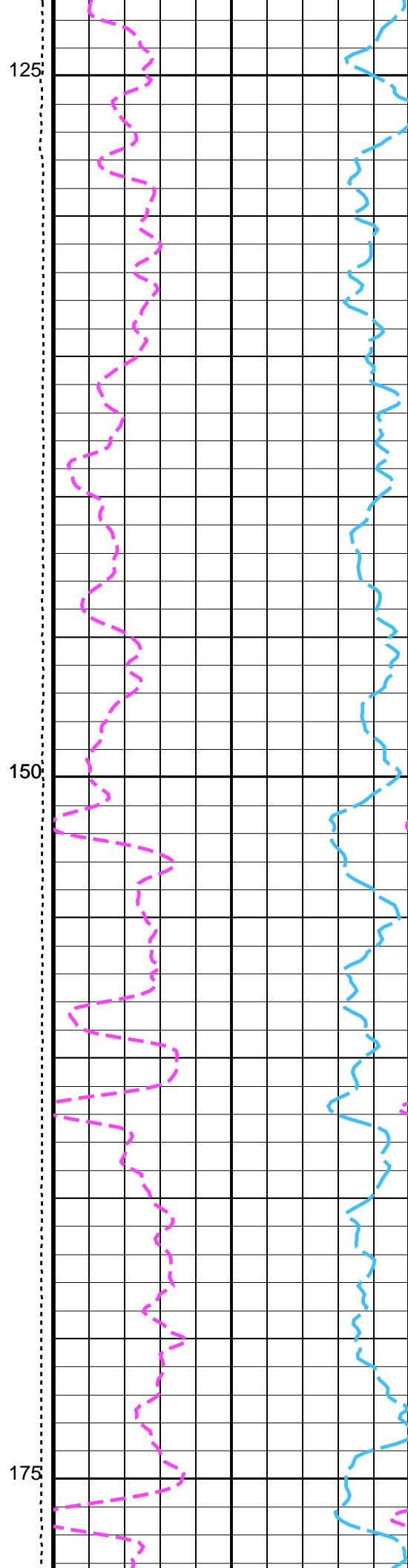
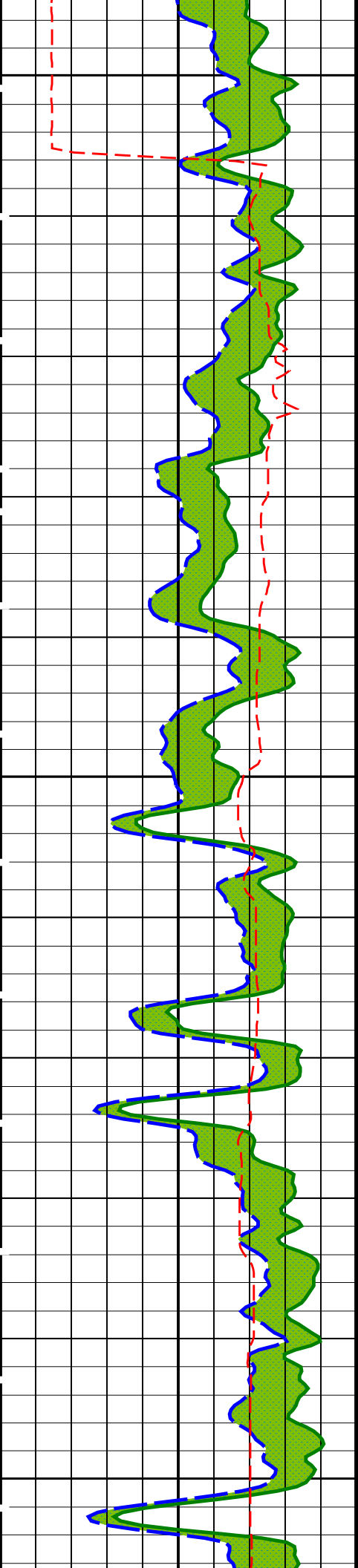


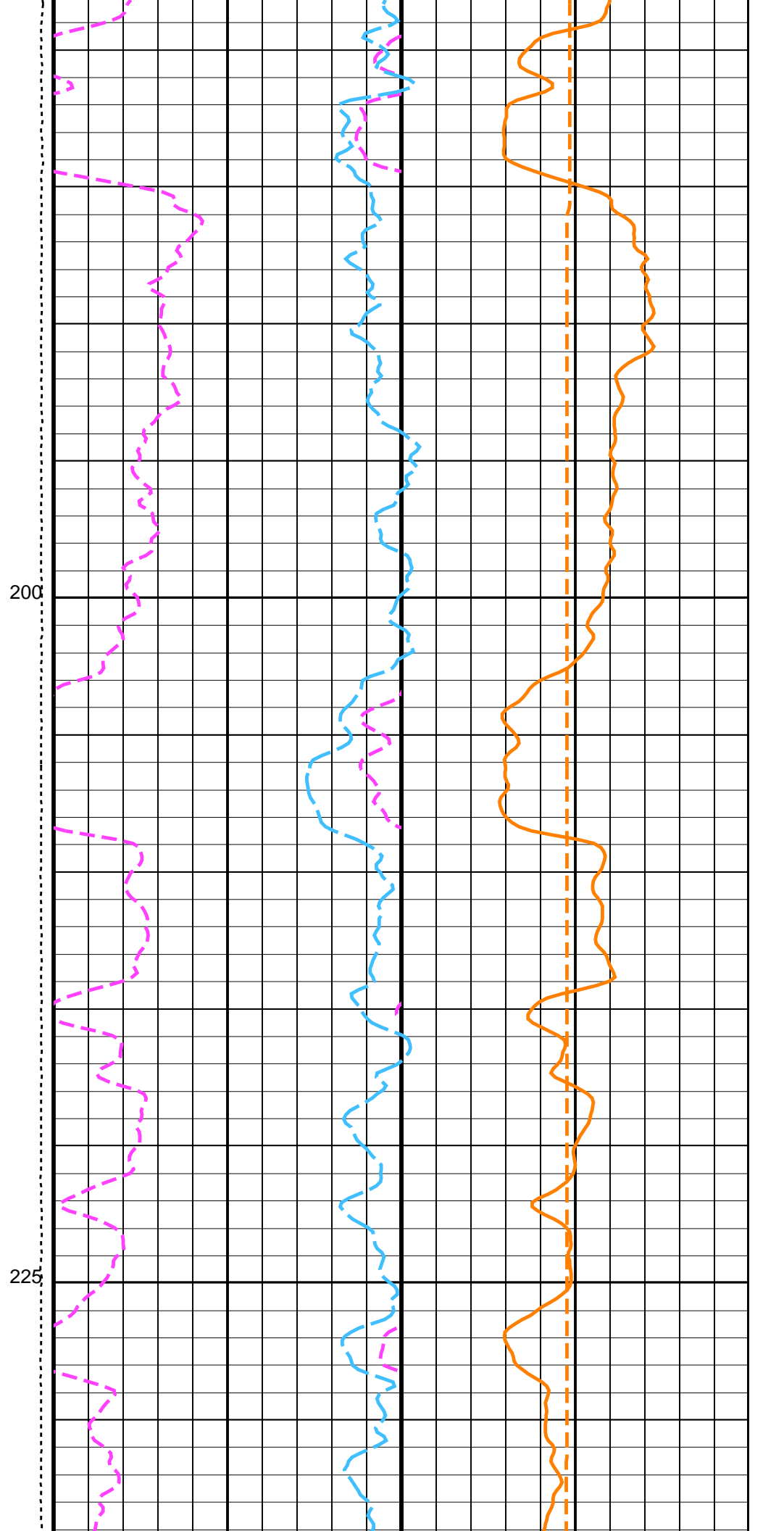
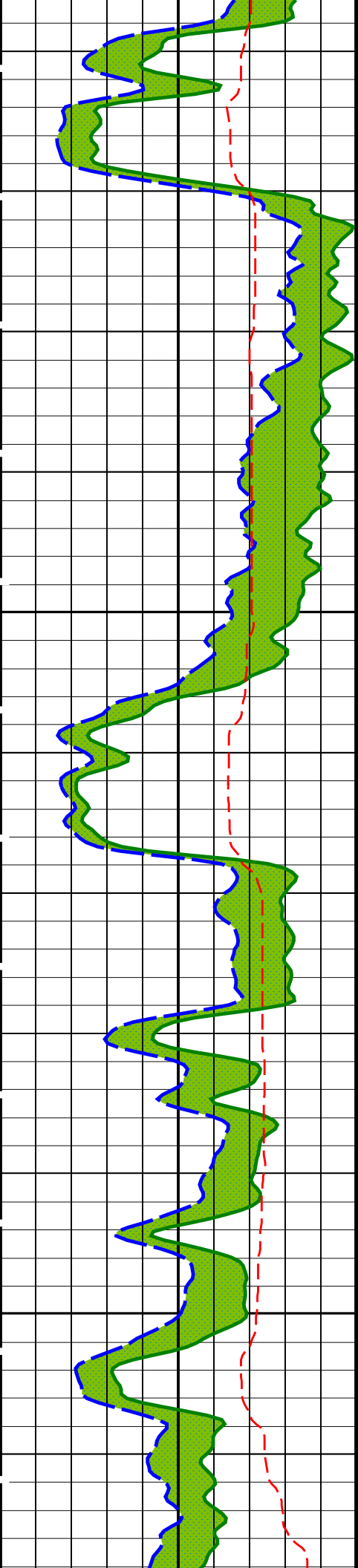
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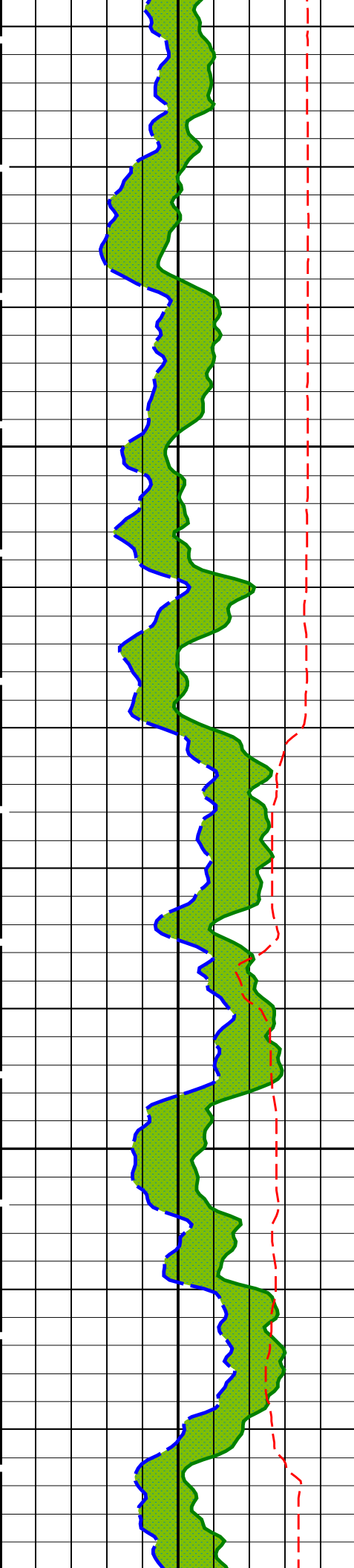
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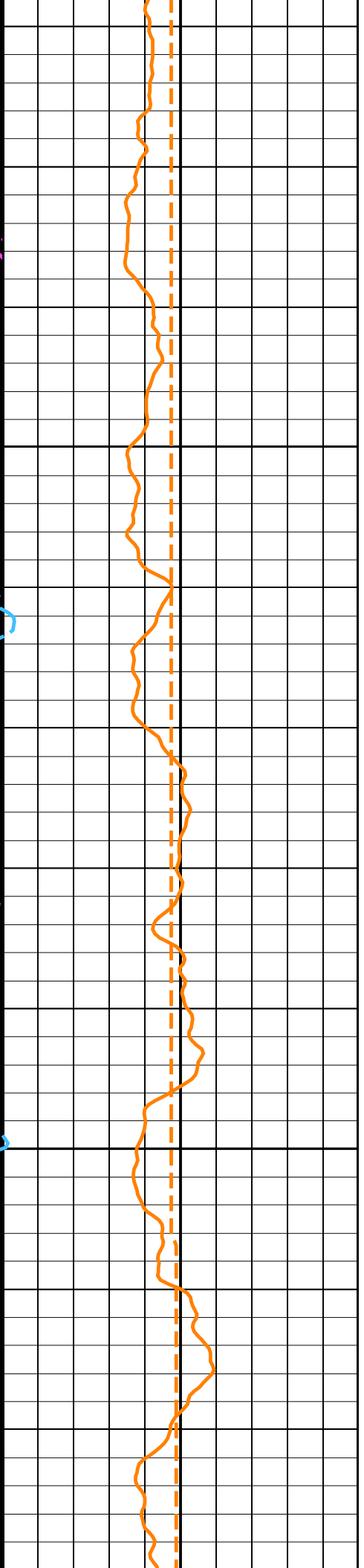
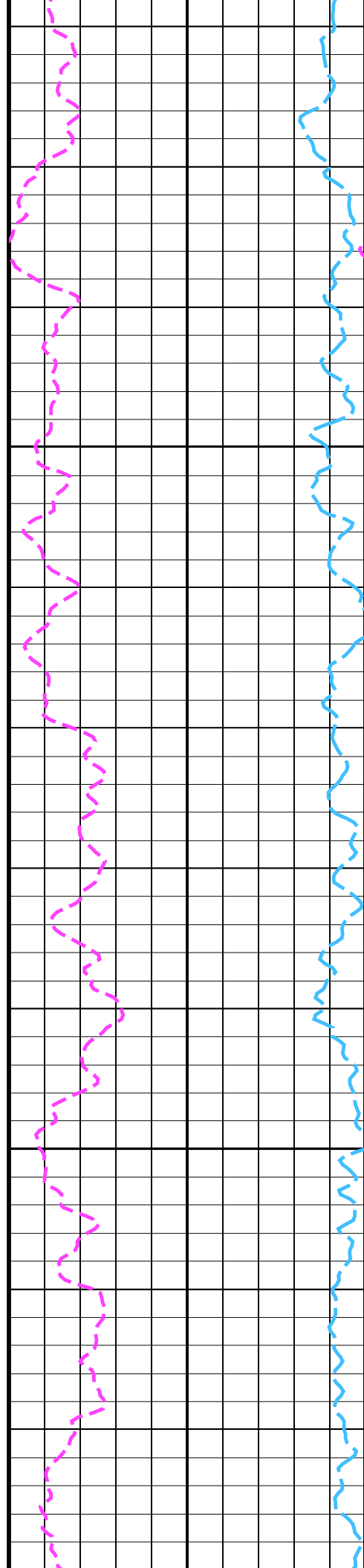


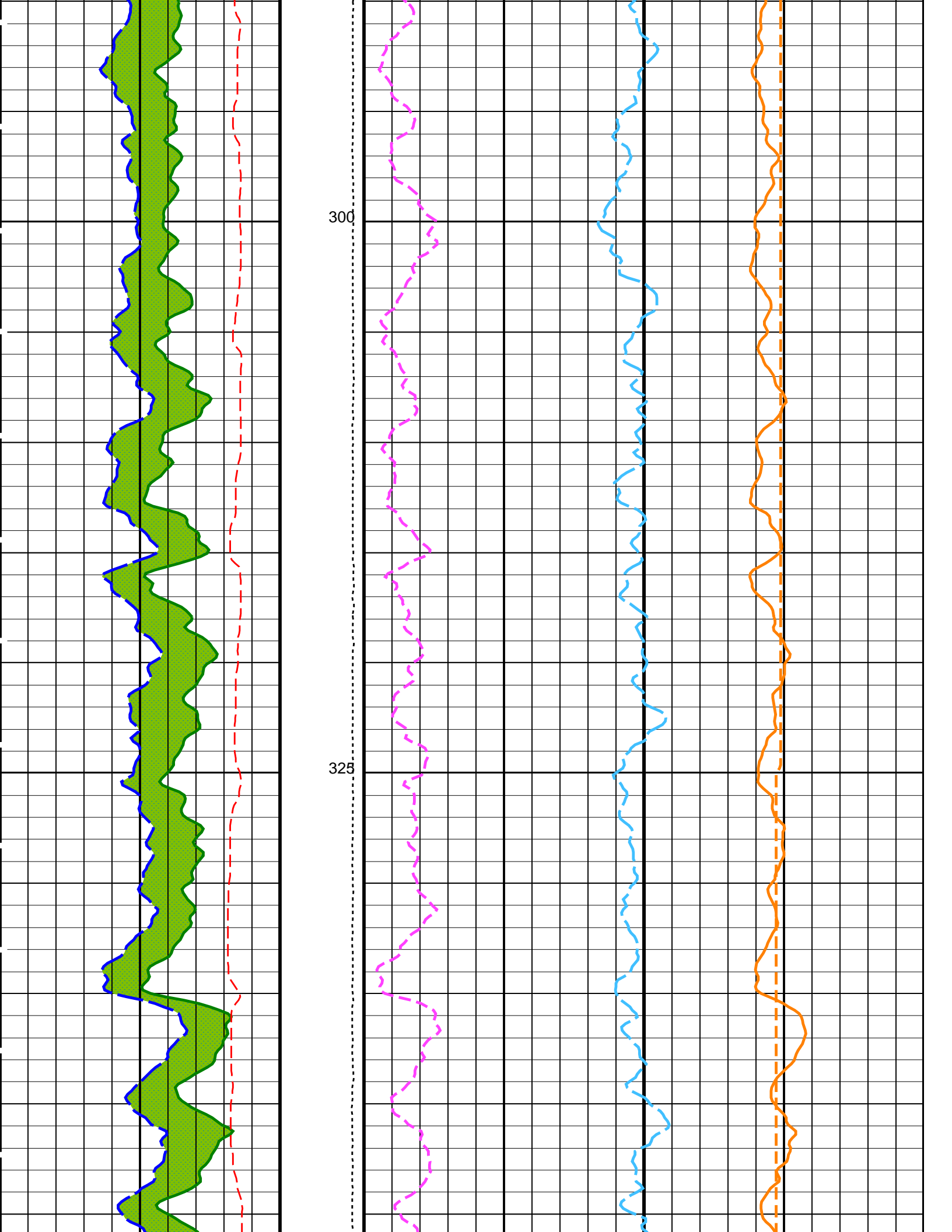


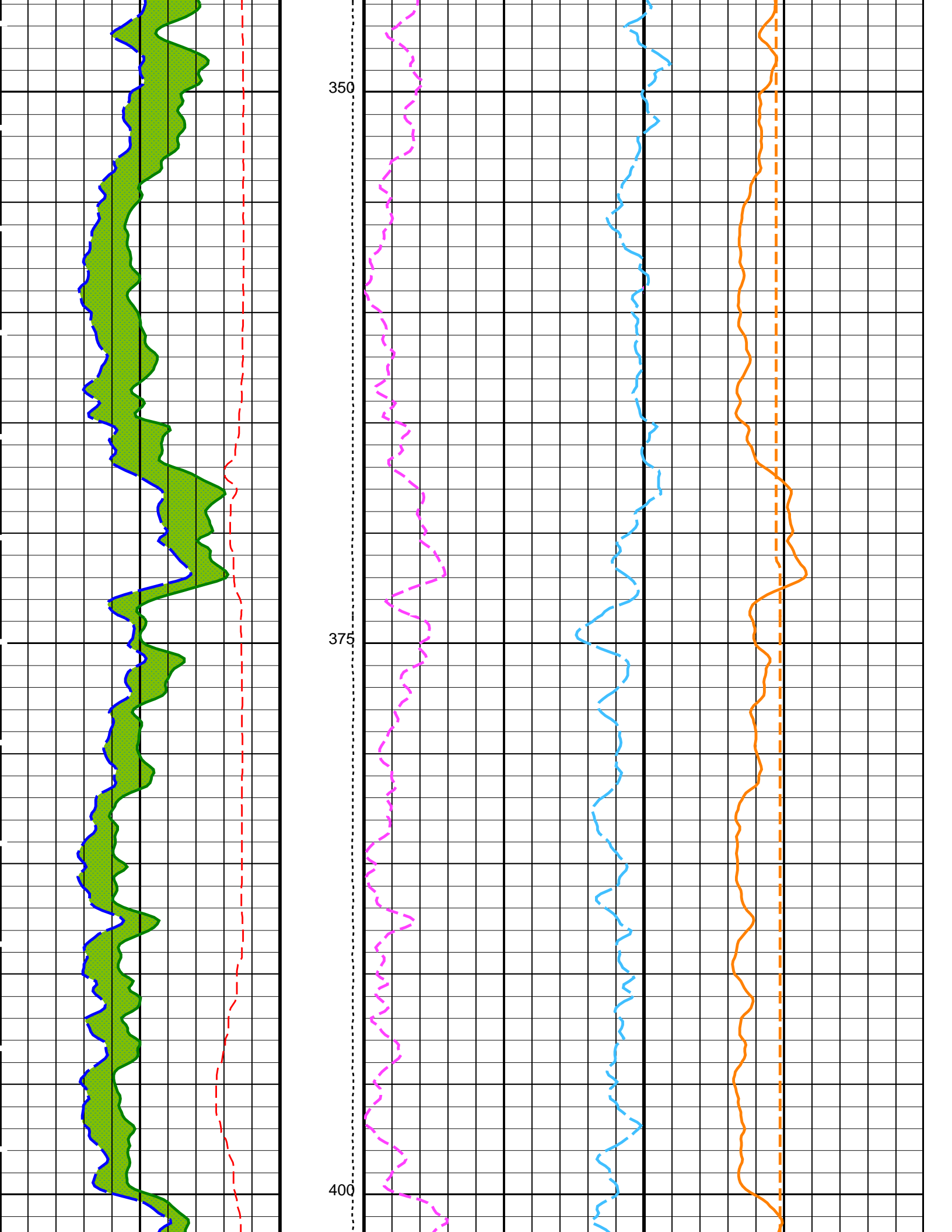


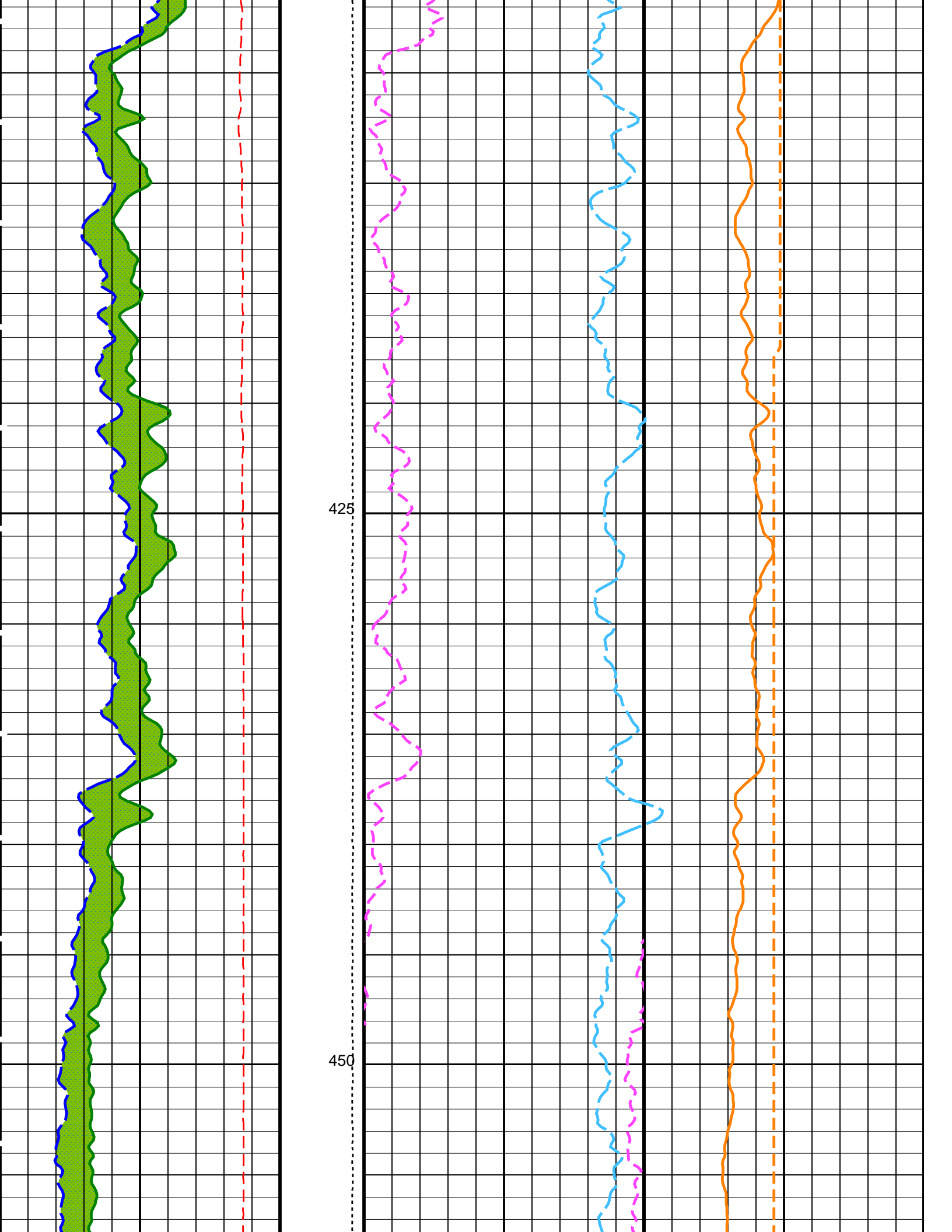
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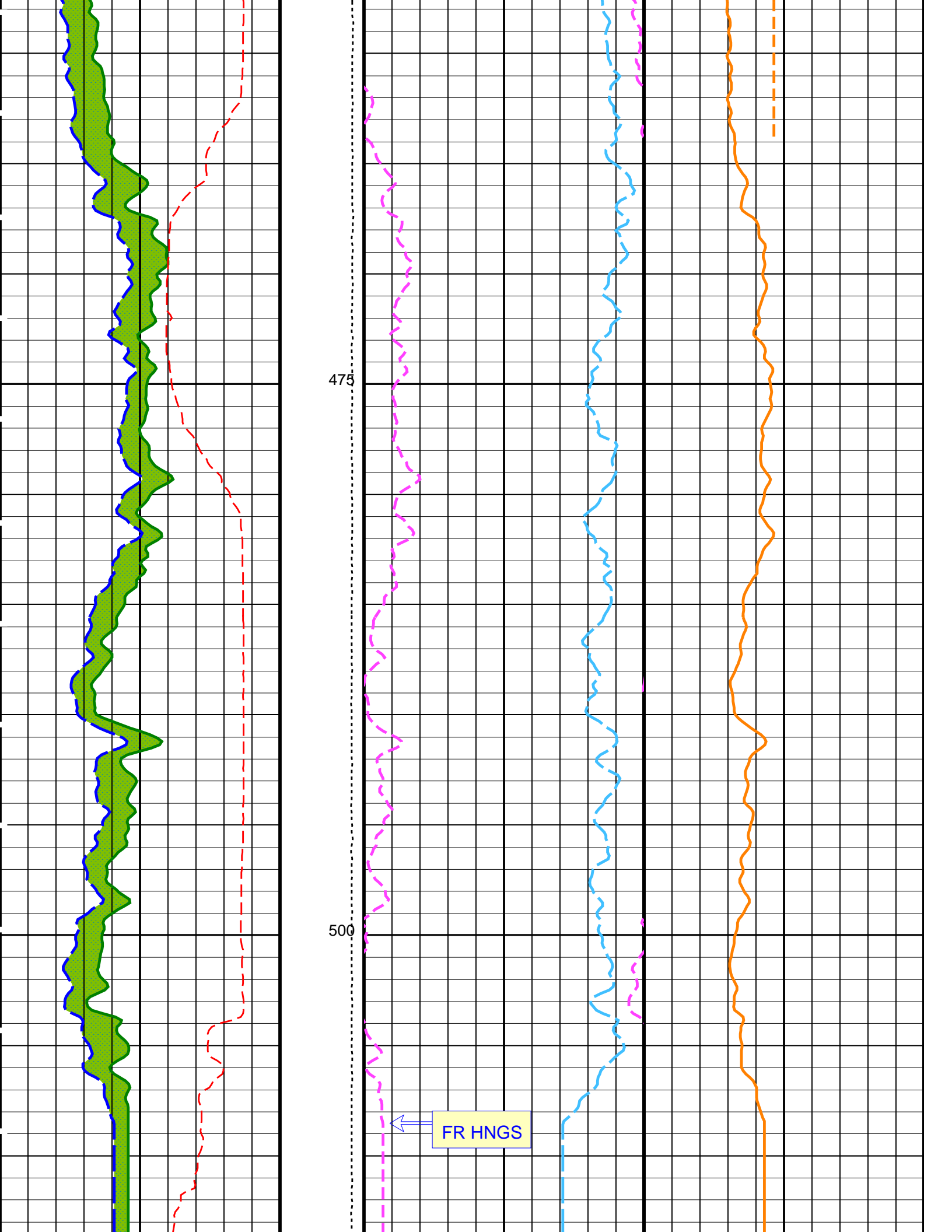
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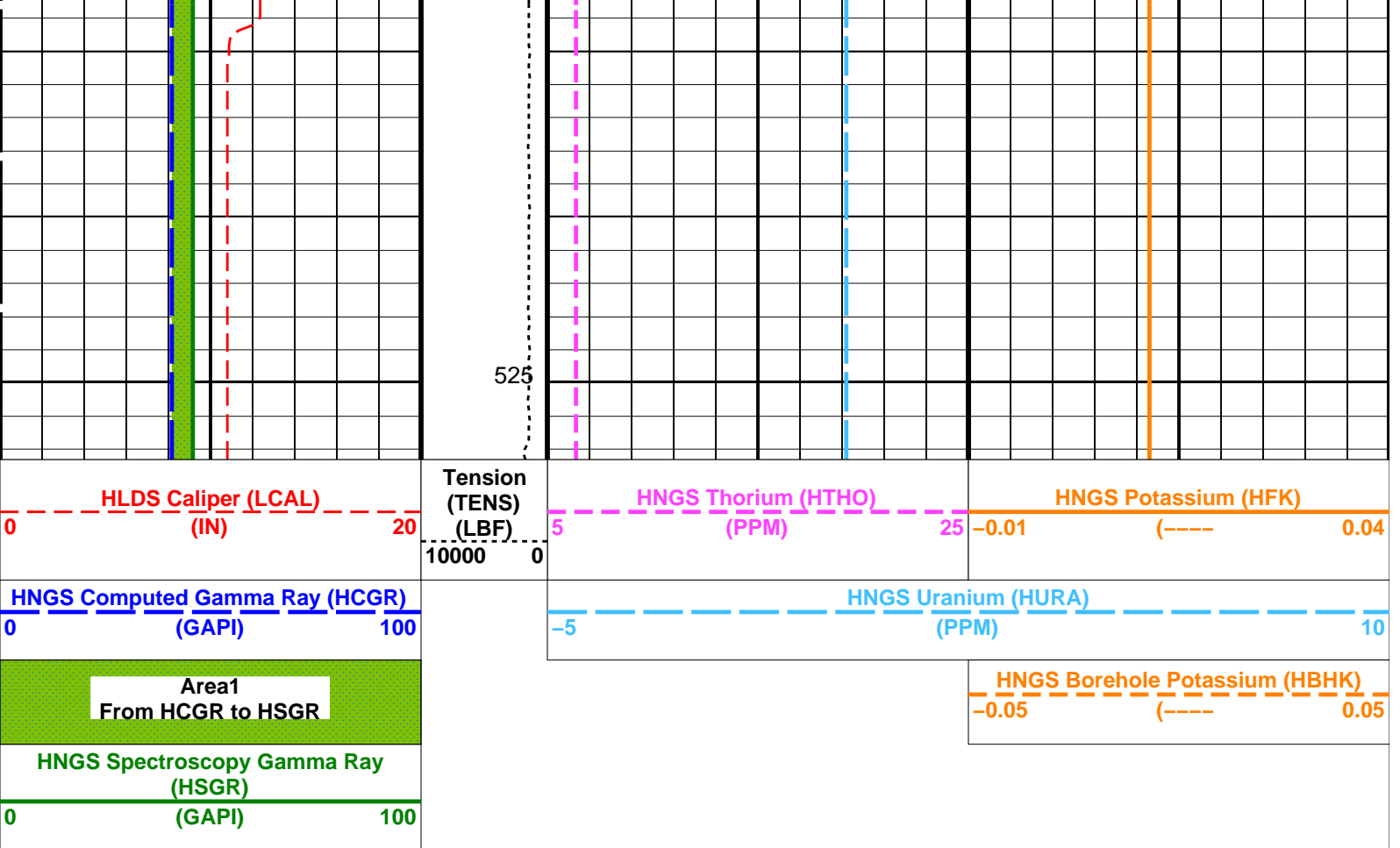












PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DIT-E: Dual Induction - E		
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	60 DEG F
DGF1	Deep 10 kHz Gain Factor	0.968645
DGF2	Deep 20 kHz Gain Factor	0.979119
DGF4	Deep 40 kHz Gain Factor	0.990252
DPH1	Deep 10 kHz Phase Shift	0.26358 DEG
DPH2	Deep 20 kHz Phase Shift	0.0159963 DEG
DPH4	Deep 40 kHz Phase Shift	-1.11256 DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	39.5751 MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	17.0457 MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	5.15121 MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt
DSR1	Deep Sigma Reference (10 kHz)	7637 MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843 MM/M
DSR4	Deep Sigma Reference (40 kHz)	405 MM/M
DSTA	DIT-E Transversal Standoff	0 IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	245.841 MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	136.154 MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	78.4516 MM/M
GCSE	Generalized Caliper Selection	BS
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
IFRS	DIT-E Induction Frequency Selector	20
IPHA	DIT-E Phasor Processing Mode	ALL
IPRO	DIT-E Induction Processing Selector	PHASOR
ISSBAR	Barite Mud Switch	NOBARITE
ITEN	DIT-E Temperature Enable	ENABLE
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
MGF1	Medium 10 kHz Gain Factor	0.969585
MGF2	Medium 20 kHz Gain Factor	0.974788
MGF4	Medium 40 kHz Gain Factor	0.999842
MPH1	Medium 10 kHz Phase Shift	0.0787021 DEG
MPH2	Medium 20 kHz Phase Shift	-0.199528 DEG
MPH4	Medium 40 kHz Phase Shift	-0.885081 DEG

MRE1	Medium Real 10 kHz Sonde Error Correction	31.1041	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	11.3259	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	3.5782	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	328.09	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	172.606	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	112.808	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV

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	23.7509	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	

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	OFF	
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)	60	DEGF
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	0.01	DF/F
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	-0.00213411	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
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	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.964502	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.961509	

System and Miscellaneous

ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	0.00	LB/F

DFD	Casing Weight	0.89	ED1
DO	Drilling Fluid Density	1.26	G/C3
FLEV	Depth Offset for Playback	-94.5	M
MST	Fluid Level	-50000.00	M
PBVSADP	Mud Sample Temperature	-50000.00	DEGC
PP	Use alternate depth channel for playback	NO	
RMFS	Playback Processing	NORMAL	
RW	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
TD	Resistivity of Connate Water	1.0000	OHMM
TDD	Total Depth	2750.9	M
TDL	Total Depth - Driller	531.60	M
TWS	Total Depth - Logger	527.60	M
	Temperature of Connate Water Sample	37.78	DEGC

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 01-Jan-2010 00:37

OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3870_Q3_2009_OP17_V3_b
DTA-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

Input DLIS Files

DEFAULT	PI_LDL_NGS_015LUP	FN:14	PRODUCER	28-Dec-2009 05:27	621.8 M	62.5 M
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Output DLIS Files

DEFAULT	PI_LDL_NGS_031PUP	FN:30	PRODUCER	01-Jan-2010 00:37		
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Repeat Pass

MAXIS Field Log

Input DLIS Files

DEFAULT	PI_LDL_NGS_014LUP	FN:13	PRODUCER	28-Dec-2009 05:00	621.8 M	528.1 M
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Output DLIS Files

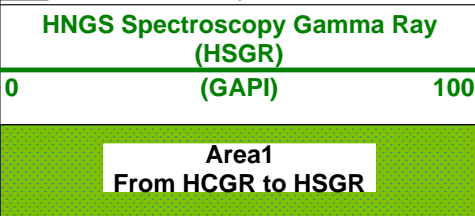
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OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3870_Q3_2009_OP17_V3_b
DTA-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 Computed Gamma Ray (HCGR)

HNGS Uranium (HURA)

(GAPI)

100

-5

(PPM)

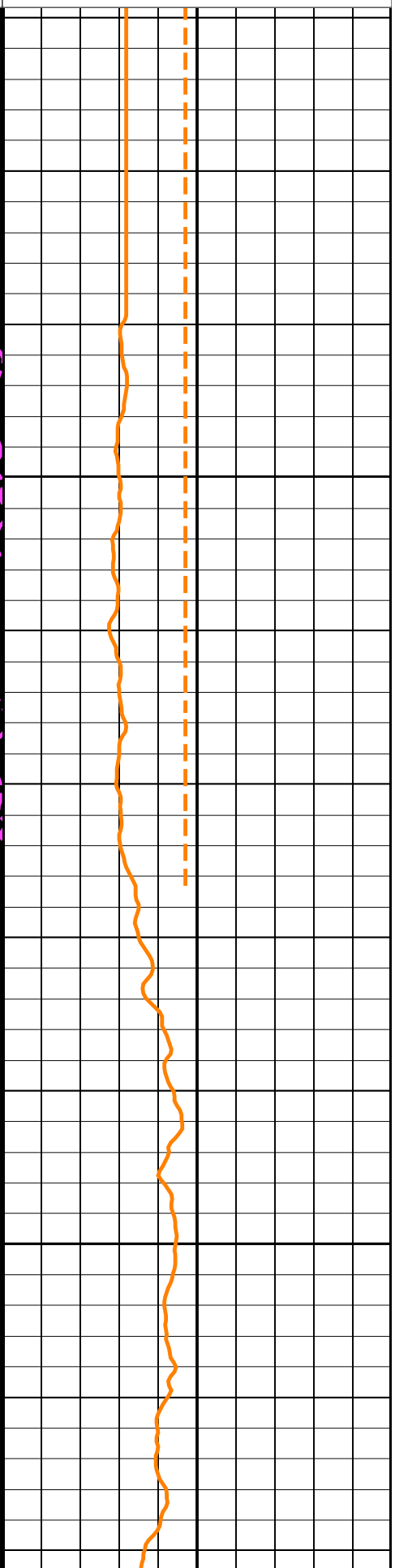
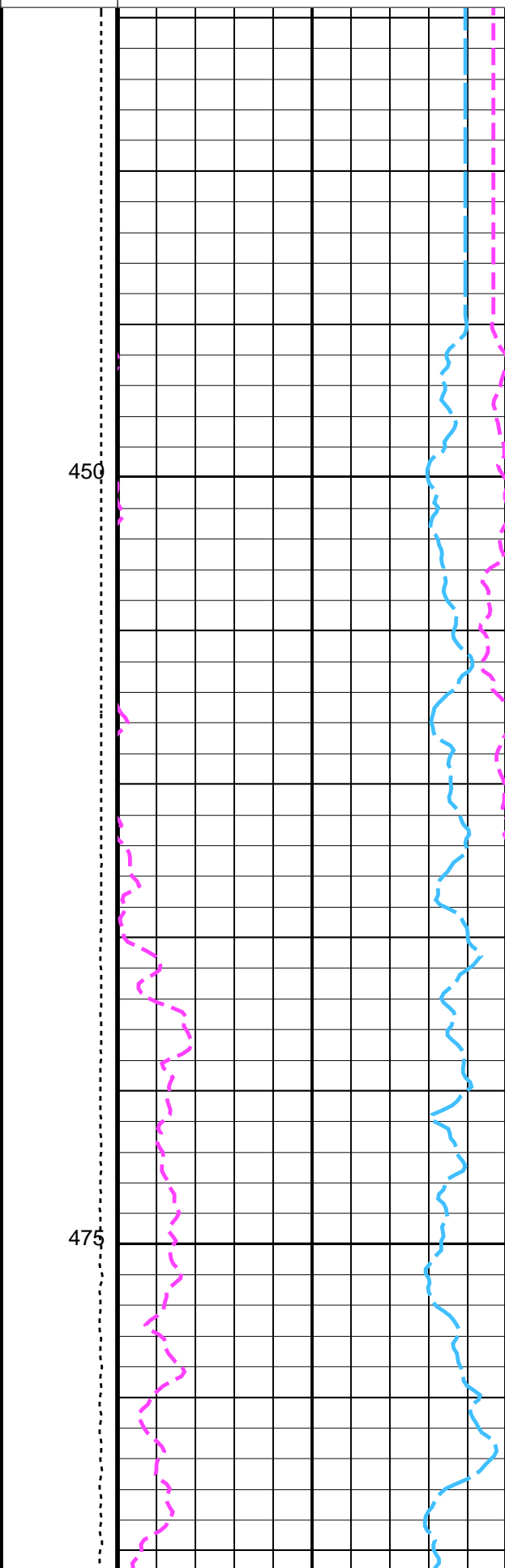
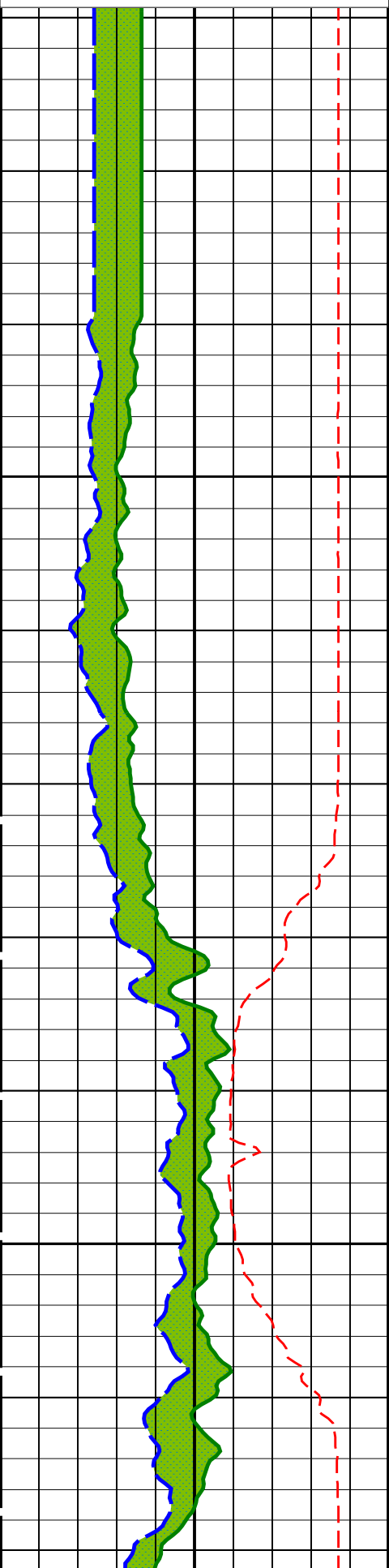
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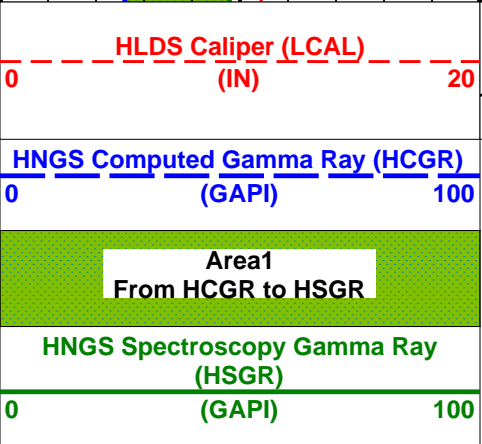
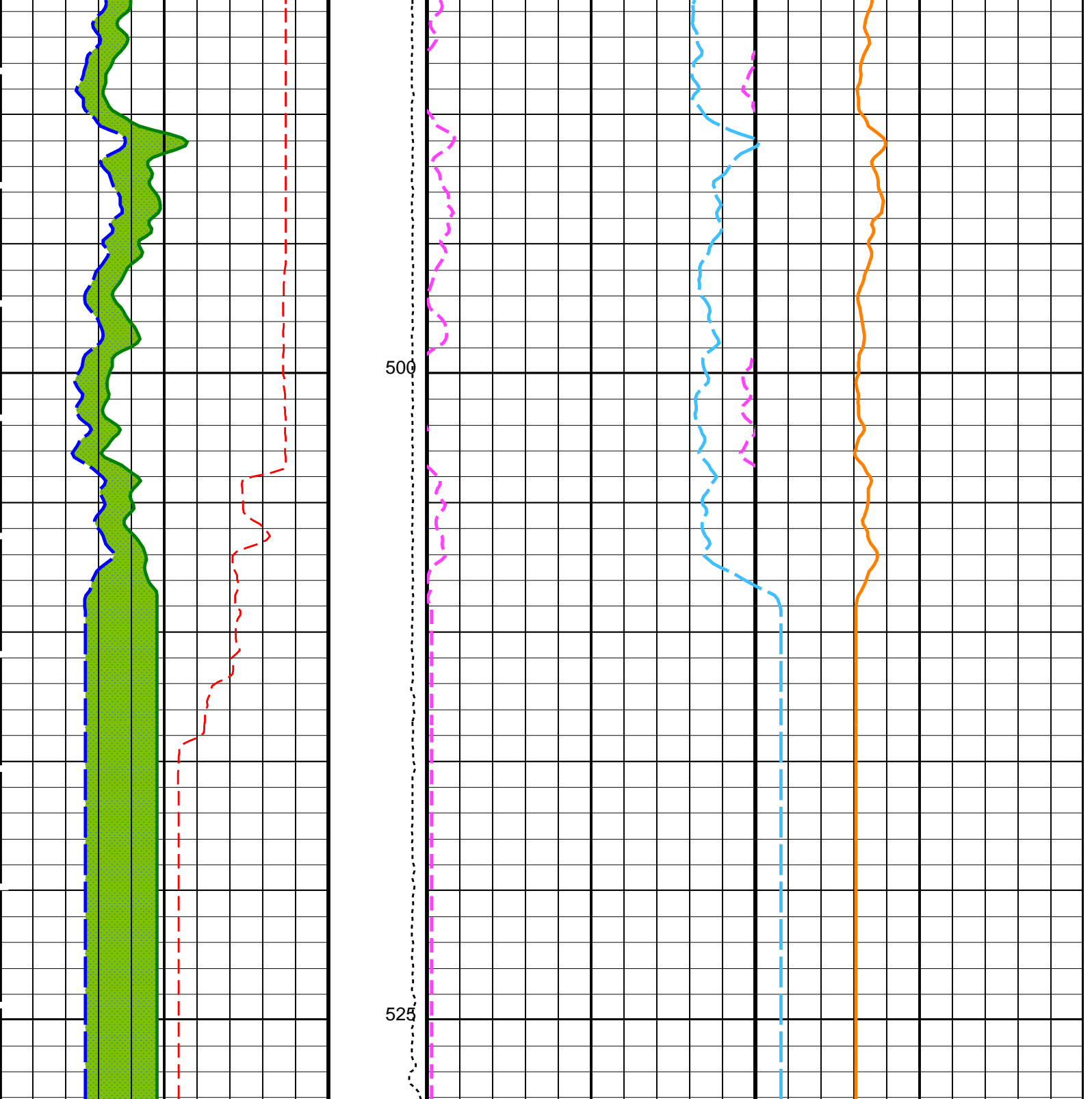
HLDS Caliper (LCAL)
(IN) 0 20

Tension
(TENS)
(LBF) 10000 0

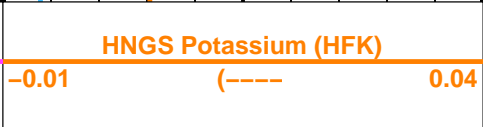
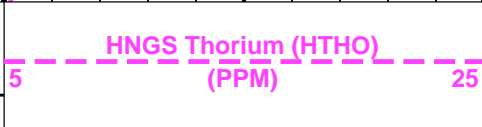
HNGS Thorium (HTHO)
(PPM) 5 25

HNGS Potassium (HFK)
(PPM) -0.01 0.04





Tension
(TENS)
(LBF)



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
DIT-E: Dual Induction - E			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	60	DEGF
DGF1	Deep 10 kHz Gain Factor	0.968645	
DGF2	Deep 20 kHz Gain Factor	0.979119	
DGF4	Deep 40 kHz Gain Factor	0.990252	
DPH1	Deep 10 kHz Phase Shift	0.26358	DEG
DPH2	Deep 20 kHz Phase Shift	0.0159963	DEG
DPH4	Deep 40 kHz Phase Shift	-1.11256	DEG
DRE1	Deep Real 10 kHz Sonde Error Correction	39.5751	MM/M
DRE2	Deep Real 20 kHz Sonde Error Correction	17.0457	MM/M
DRE4	Deep Real 40 kHz Sonde Error Correction	5.15121	MM/M
DRIM	DIT-E Radial Invasion Mode	Rxo>Rt	
DSR1	Deep Sigma Reference (10 kHz)	7637	MM/M
DSR2	Deep Sigma Reference (20 kHz)	1843	MM/M
DSR4	Deep Sigma Reference (40 kHz)	405	MM/M
DSTA	DIT-E Transversal Standoff	0	IN
DXE1	Deep Quad 10 kHz Sonde Error Correction	245.841	MM/M
DXE2	Deep Quad 20 kHz Sonde Error Correction	136.154	MM/M
DXE4	Deep Quad 40 kHz Sonde Error Correction	78.4516	MM/M
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN 9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IFRS	DIT-E Induction Frequency Selector	20	
IPHA	DIT-E Phasor Processing Mode	ALL	
IPRO	DIT-E Induction Processing Selector	PHASOR	
ISSBAR	Barite Mud Switch	NOBARITE	
ITEN	DIT-E Temperature Enable	ENABLE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MGF1	Medium 10 kHz Gain Factor	0.969585	
MGF2	Medium 20 kHz Gain Factor	0.974788	
MGF4	Medium 40 kHz Gain Factor	0.999842	
MPH1	Medium 10 kHz Phase Shift	0.0787021	DEG
MPH2	Medium 20 kHz Phase Shift	-0.199528	DEG
MPH4	Medium 40 kHz Phase Shift	-0.885081	DEG
MRE1	Medium Real 10 kHz Sonde Error Correction	31.1041	MM/M
MRE2	Medium Real 20 kHz Sonde Error Correction	11.3259	MM/M
MRE4	Medium Real 40 kHz Sonde Error Correction	3.5782	MM/M
MSR1	Medium Sigma Reference (10 kHz)	13520	MM/M
MSR2	Medium Sigma Reference (20 kHz)	3250	MM/M
MSR4	Medium Sigma Reference (40 kHz)	685	MM/M
MXE1	Medium Quad 10 kHz Sonde Error Correction	328.09	MM/M
MXE2	Medium Quad 20 kHz Sonde Error Correction	172.606	MM/M
MXE4	Medium Quad 40 kHz Sonde Error Correction	112.808	MM/M
SBR	Shoulder Bed Resistivity Factor	1	OHMM
SFCR	SFL Channel Ratio	1000	
SFLE	SFL Enable	ENABLE	
SHT	Surface Hole Temperature	68	DEGF
SPAE	DIT-E SPARC Processing Enable	ENABLE	
SPNV	SP Next Value	0	MV
GPIT-A/B: General Purpose Inclinerometer			
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	23.7509	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	
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	OFF	
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)	60	DEGF
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	0.01	DF/F
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	-0.00213411	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	BARI	
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	68	DEGF
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.964502	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.961509	
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	11.438	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	1.26	G/C3
DO	Depth Offset for Playback	-93.4	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	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2750.9	M
TDD	Total Depth - Driller	531.60	M
TDL	Total Depth - Logger	527.60	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: HNGSYields Vertical Scale: 1:200 Graphics File Created: 01-Jan-2010 00:51

OP System Version: 17C0-154

DIT-E	17C0-154	GPIT-A/B	SRPC-3870_Q3_2009_OP17_V3_b
DTA-A	17C0-154	HLDS	17C0-154
LDSC-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	17C0-154	DTC-H	17C0-154

Input DLIS Files

DEFAULT	PI_LDL_NGS_014LUP	FN:13	PRODUCER	28-Dec-2009 05:00	621.8 M	528.1 M
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Output DLIS Files

DEFAULT	PI_LDL_NGS_035PUP	FN:34	PRODUCER	01-Jan-2010 00:51		
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MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
General Purpose Inclinometer Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 28-Dec-2009 4:07							
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 Inclinometer Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 28-Dec-2009 4:07							
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	

Hostile Litho-Density Sonde Wellsite Calibration – Background Measurement							
Master: 4-Nov-2009 17:36 Before: 28-Dec-2009 4:11 After: 28-Dec-2009 7:37							
SS Cs Resolution Bkg	9.000	7.756	7.797	7.693	-0.1042	1.800	%
LS Cs Resolution Bkg	9.000	8.165	7.995	8.073	0.07756	1.800	%
LSW1 Background	100.0	92.48	91.62	91.18	-0.4409	3.000	CPS
LSW2 Background	100.0	84.63	81.68	82.87	1.192	3.000	CPS
LSW3 Background	200.0	191.1	189.3	189.2	-0.09708	6.000	CPS
LSW4 Background	250.0	233.7	232.1	232.6	0.5735	7.500	CPS
LSW5 Background	600.0	544.1	545.1	541.6	-3.475	18.00	CPS
SSW1 Background	100.0	90.17	88.03	87.96	-0.07603	3.000	CPS
SSW2 Background	200.0	152.5	154.4	152.2	-2.253	6.000	CPS
SSW3 Background	500.0	429.0	427.6	427.4	-0.1805	15.00	CPS
SSW4 Background	270.0	231.1	229.6	229.9	0.2809	8.100	CPS
SSW5 Background	200.0	164.3	164.2	163.6	-0.5588	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Aluminum Measurement							
Master: 4-Nov-2009 17:36							
LSW1 Aluminum	600.0	567.1	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	807.6	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	967.1	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	490.9	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	441.4	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2502	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	6869	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	9623	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	3958	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	476.5	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Lithology Measurement							
Master: 4-Nov-2009 17:36							
LSW1 Iron	400.0	388.6	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	657.3	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	863.8	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	446.9	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	407.2	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1834	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5739	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	8813	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3631	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	422.9	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration – Caliper Calibration							
Before: 30-Nov-2009 21:30							
HLDS Caliper Small Ring	12.00	N/A	14.52	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	15.14	N/A	18.13	N/A	N/A	N/A	IN

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 31-Oct-2009 23:09 Before: 28-Dec-2009 4:11 After: 28-Dec-2009 7:38							
Na 511 Peak Loc	40.00	39.48	39.59	39.55	-0.04624	1.000	
Na 511 Peak Res	15.50	16.07	15.80	16.27	0.4730	2.000	%

High Voltage	1150	1200	1148	1154	6.806	N/A	V
Na 1785 Peak Loc	142.6	142.5	141.9	142.4	0.5308	7.000	
Na 1785 Peak Res	8.500	8.076	8.599	8.210	-0.3885	2.000	%
Temperature	15.50	36.12	17.66	18.15	0.4877	N/A	DEGC
Na Count Rate	45.00	34.81	32.88	32.02	-0.8579	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check

Master: 31-Oct-2009 23:09 Before: 28-Dec-2009 4:11 After: 28-Dec-2009 7:38

Na 511 Peak Loc	40.00	39.63	39.75	39.51	-0.2377	1.000	
Na 511 Peak Res	15.50	15.54	15.13	15.64	0.5087	2.000	%
High Voltage	1150	1123	1085	1088	2.323	N/A	V
Na 1785 Peak Loc	142.6	142.2	142.5	141.7	-0.7426	7.000	
Na 1785 Peak Res	8.500	8.652	8.401	8.510	0.1095	2.000	%
Temperature	15.50	36.37	18.26	19.13	0.8649	N/A	DEGC
Na Count Rate	45.00	35.36	32.82	32.28	-0.5447	8.000	CPS

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

Master: 31-Oct-2009 23:09 Before: 28-Dec-2009 4:11 After: 28-Dec-2009 7:38

Coincidence Count Rate Ratio	1.000	0.9839	1.001	0.9911	-0.009866	0.05000	
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Dual Induction – E / Equipment Identification

Primary Equipment:

Dual Induction Sonde	DIS – HB	129
Dual Induction Cartridge	DIC – EB	171

Auxiliary Equipment:

Mass Isolated Housing	MIH – ZA	342
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Dual Induction – E Wellsite Calibration

Induction Electronics (10 kHz)

Phase	ID Elect Real Offset 10 kHz MM/M	Value	Phase	ID Elect Real Gain 10 kHz	Value	Phase	ID Elect Phase 10 kHz DEG	Value
Before		30.64	Before		0.9384	Before		9.017
	-300.0 (Minimum) 0 (Nominal) 300.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-10.00 (Minimum) 0 (Nominal) 10.00 (Maximum)	
Phase	ID Elect Quad Offset 10 kHz MM/M	Value	Phase	ID Elect Quad Gain 10 kHz	Value	Phase	IM Elect Phase 10 kHz DEG	Value
Before		24.53	Before		0.9541	Before		8.849
	-300.0 (Minimum) 0 (Nominal) 300.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-10.00 (Minimum) 0 (Nominal) 10.00 (Maximum)	
Phase	IM Elect Real Offset 10 kHz MM/M	Value	Phase	IM Elect Real Gain 10 kHz	Value			
Before		83.41	Before		0.9471			
	-550.0 (Minimum) 0 (Nominal) 550.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				
Phase	IM Elect Quad Offset 10 kHz MM/M	Value	Phase	IM Elect Quad Gain 10 kHz	Value			
Before		43.77	Before		0.9277			
	-550.0 (Minimum) 0 (Nominal) 550.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				

Before: 28-Dec-2009 4:57

Dual Induction – E Wellsite Calibration

Induction Electronics (20 kHz)

Phase	ID Elect Real Offset 20 kHz MM/M	Value	Phase	ID Elect Real Gain 20 kHz	Value	Phase	ID Elect Phase 20 kHz DEG	Value
Before		12.13	Before		0.9661	Before		4.262
	-125.0 (Minimum) 0 (Nominal) 125.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)	
Phase	ID Elect Quad Offset 20 kHz MM/M	Value	Phase	ID Elect Quad Gain 20 kHz	Value	Phase	IM Elect Phase 20 kHz DEG	Value
Before		9.912	Before		0.9850	Before		4.658
	-125.0 (Minimum) 0 (Nominal) 125.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)	
Phase	IM Elect Real Offset 20 kHz MM/M	Value	Phase	IM Elect Real Gain 20 kHz	Value			
Before		34.27	Before		0.9912			
	-225.0 (Minimum) 0 (Nominal) 225.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				
Phase	IM Elect Quad Offset 20 kHz MM/M	Value	Phase	IM Elect Quad Gain 20 kHz	Value			
Before		18.11	Before		0.9708			
	-225.0 (Minimum) 0 (Nominal) 225.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				

Dual Induction – E Wellsite Calibration								
Induction Electronics (40 kHz)								
Phase	ID Elect Real Offset 40 kHz MM/M	Value	Phase	ID Elect Real Gain 40 kHz	Value	Phase	ID Elect Phase 40 kHz DEG	Value
Before		7.911	Before		0.9490	Before		15.22
	-85.00 (Minimum) 0 (Nominal) 85.00 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-20.00 (Minimum) 0 (Nominal) 20.00 (Maximum)	
Phase	ID Elect Quad Offset 40 kHz MM/M	Value	Phase	ID Elect Quad Gain 40 kHz	Value	Phase	IM Elect Phase 40 kHz DEG	Value
Before		6.602	Before		0.9767	Before		15.02
	-85.00 (Minimum) 0 (Nominal) 85.00 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)			-20.00 (Minimum) 0 (Nominal) 20.00 (Maximum)	
Phase	IM Elect Real Offset 40 kHz MM/M	Value	Phase	IM Elect Real Gain 40 kHz	Value			
Before		22.04	Before		0.9910			
	-130.0 (Minimum) 0 (Nominal) 130.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				
Phase	IM Elect Quad Offset 40 kHz MM/M	Value	Phase	IM Elect Quad Gain 40 kHz	Value			
Before		11.74	Before		0.9702			
	-130.0 (Minimum) 0 (Nominal) 130.0 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)				

Dual Induction – E Wellsite Calibration					
SFL Electronics					
Phase	SFL Voltage Offset MV	Value	Phase	SFL Voltage Gain	Value
Before		0.1534	Before		0.9973
	-15.00 (Minimum) 0 (Nominal) 15.00 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)	
Phase	SFL Current Offset MA	Value	Phase	SFL Current Gain	Value
Before		0.03543	Before		1.009
	-0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)			0.8500 (Minimum) 1.000 (Nominal) 1.200 (Maximum)	

General Purpose Inclinometer / Equipment Identification		
Primary Equipment:		
GPIT Cartridge – A	GPIC – A	719
Auxiliary Equipment:		
GPIT Housing	GPIH – A	2864

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

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		7.756	Master		8.165	Master		92.48
Before		7.797	Before		7.995	Before		91.62
After		7.693	After		8.073	After		91.18
	7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			7.000 (Minimum) 9.000 (Nominal) 11.00 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)	
Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	Phase	LSW4 Background CPS	Value

Master		84.63	Master		191.1	Master		233.7
Before		81.68	Before		189.3	Before		232.1
After		82.87	After		189.2	After		232.6
50.00 (Minimum) 100.0 (Nominal) 140.0 (Maximum)			110.0 (Minimum) 200.0 (Nominal) 290.0 (Maximum)			140.0 (Minimum) 250.0 (Nominal) 360.0 (Maximum)		
Phase	LSW5 Background CPS	Value	Phase	SSW1 Background CPS	Value	Phase	SSW2 Background CPS	Value
Master		544.1	Master		90.17	Master		152.5
Before		545.1	Before		88.03	Before		154.4
After		541.6	After		87.96	After		152.2
330.0 (Minimum) 600.0 (Nominal) 830.0 (Maximum)			55.00 (Minimum) 100.0 (Nominal) 150.0 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 260.0 (Maximum)		
Phase	SSW3 Background CPS	Value	Phase	SSW4 Background CPS	Value	Phase	SSW5 Background CPS	Value
Master		429.0	Master		231.1	Master		164.3
Before		427.6	Before		229.6	Before		164.2
After		427.4	After		229.9	After		163.6
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: 4–Nov–2009 17:36			Before: 28–Dec–2009 4:11			After: 28–Dec–2009 7:37		

Litho–Density Spectroscopy Cartridge – B / Equipment Identification

Primary Equipment: LDSC Cartridge	LDSC – B	326
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		39.48	Master		16.07	Master		1200
Before		39.59	Before		15.80	Before		1148
After		39.55	After		16.27	After		1154
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		142.5	Master		8.076	Master		36.12
Before		141.9	Before		8.599	Before		17.66
After		142.4	After		8.210	After		18.15
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	Phase	Na Count Rate CPS	Value	Phase	Na Count Rate CPS	Value

Phase	Na Count Rate CPS	Value
Master		34.81
Before		32.88
After		32.02
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)	

Master: 31-Oct-2009 23:09 Before: 28-Dec-2009 4:11 After: 28-Dec-2009 7:38

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		39.63	Master		15.54	Master		1123
Before		39.75	Before		15.13	Before		1085
After		39.51	After		15.64	After		1088
	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		8.652	Master		36.37
Before		142.5	Before		8.401	Before		18.26
After		141.7	After		8.510	After		19.13
	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		35.36						
Before		32.82						
After		32.28						
	10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)							

Master: 31-Oct-2009 23:09 Before: 28-Dec-2009 4:11 After: 28-Dec-2009 7:38

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9839
Before		1.001
After		0.9911
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Master: 31-Oct-2009 23:09
Before: 28-Dec-2009 4:11
After: 28-Dec-2009 7:38

DTS Telemetry Tool / Equipment Identification		
Primary Equipment:		
DTC-H Auxiliary Cartridge	DTCH - A	
DTC-H Telemetry Cartridge	DTCH - A	8798
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH - KC	2304

Well: **Expedition 317 Site U1353C**
Field: **Canterbury Basin**
Rig: **JOIDES Resolution**
Ocean: **Pacific**

Natural Gamma Spectroscopy