

**Company:** Lamont Doherty

**Well:** IODP EXP 305 Site U1309D

**Field:** Atlantis Massif

**Rig:** Joides Resolution

**Ocean:** Atlantic Ocean

## Dual-Laterolog Tool Gamma Ray

**Rig:** Joides Resolution  
**Field:** Atlantis Massif  
**Location:** Mid-Atlantic Ridge  
**Well:** IODP EXP 305 Site U1309D  
**Company:** Lamont Doherty

LOCATION	
Mid-Atlantic Ridge	Elev.: K.B. 11.3 m G.L. -1656 m D.F. 11 m
Permanent Datum: _____	Mean Sea Level _____
Log Measured From: _____	Rig Floor _____
Drilling Measured From: _____	Rig Floor _____
API Serial No. _____	Max. Hole Devi. _____
31-Jan-2005	Longitude 42.11865 W
Two	Latitude 30.16847 N
2493.4 m	Elev.: 0 m
2493.4 m	11.3 m above Perm. Datum
2490 m	
1826 m	
0.000 in	@ 1826 m
1826 m	@
9.875 in	
Fresh Water	
1.2 g/cm3	
0 cm3	
0.322 ohm.m	@ 50 degC
@	@
@	@
@	@
RMC	
RMC	
0.322 @ 50	@ @ 50
50 degC	
30-Jan-2005	23:00
31-Jan-2005	8:50
2082	
Javier Espinosa	
Heike Delius, Margarete Linek	

Logging Date	31-Jan-2005
Run Number	Two
Depth Driller	2493.4 m
Schlumberger Depth	2493.4 m
Bottom Log Interval	2490 m
Top Log Interval	1826 m
Casing Driller Size @ Depth	0.000 in @ 1826 m
Casing Schlumberger	1826 m
Bit Size	9.875 in
Type Fluid In Hole	Fresh Water
Density	1.2 g/cm3
Fluid Loss	0 cm3
Source Of Sample	
RM @ Measured Temperature	@
RMF @ Measured Temperature	@
RMC @ Measured Temperature	@
Source RMF	RMC
RM @ MRT	0.322 @ 50
Maximum Recorded Temperatures	50 degC
Circulation Stopped	30-Jan-2005
Logger On Bottom	31-Jan-2005
Unit Number	2082
Recorded By	Javier Espinosa
Witnessed By	Heike Delius, Margarete Linek

Logging Date		Run 1	Run 2	Run
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				
RM @ MRT		@	@	@
Maximum Recorded Temperatures				
Circulation Stopped				
Logger On Bottom				
Unit Number				
Recorded By				
Witnessed By				

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	
RM @ 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: HLDS, APS, HNGS  
 OS2: MEST, DSST  
 OS3: UBI  
 OS4: WST  
 OS5:

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

**REMARKS: RUN NUMBER 1**  
 Hole Cored with RCB  
 All depths in Meters Below Rig Floor (MBRF).  
 Hole flushed with fresh water  
 Tool ran as per tool sketch below

**REMARKS: RUN NUMBER 2**

**RUN 1**  
 SERVICE ORDER #:  
 PROGRAM VERSION: 12C0-301  
 FLUID LEVEL:

**RUN 2**  
 SERVICE ORDER #:  
 PROGRAM VERSION:  
 FLUID LEVEL:

LOGGED INTERVAL	START	STOP

LOGGED INTERVAL	START	STOP

**EQUIPMENT DESCRIPTION**

**RUN 1**  
**SURFACE EQUIPMENT**  
 LCM-AA  
 SFT-281 6250  
 SFT-178 6250  
 GSR-U 135  
 WITM (DTS)-A

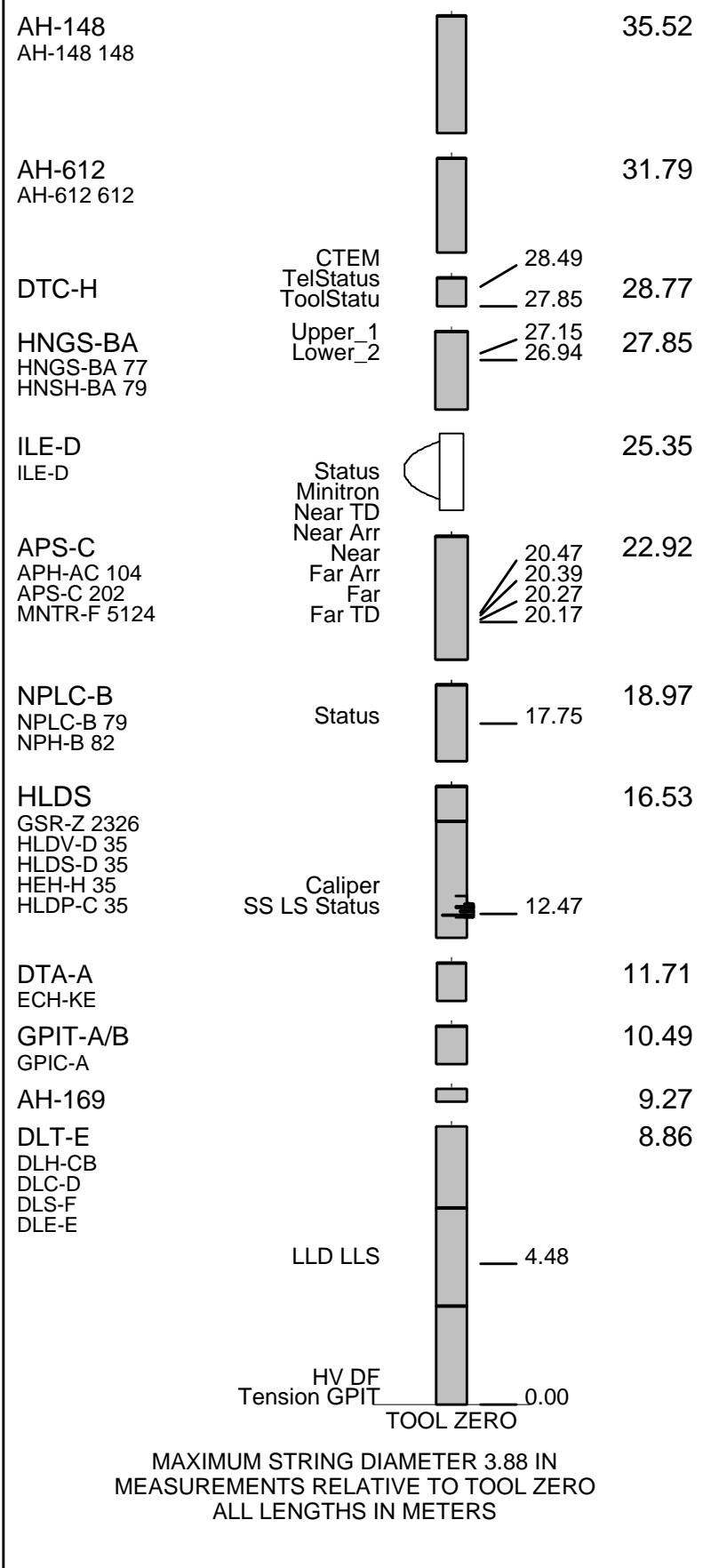
**RUN 2**

**DOWNHOLE EQUIPMENT**

BSP 60.80  
 BRT-S

SP SPARC 39.74

LEH-QT 36.41



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

Kelly Bushing Elevation

11.8

Derrick Floor Elevation

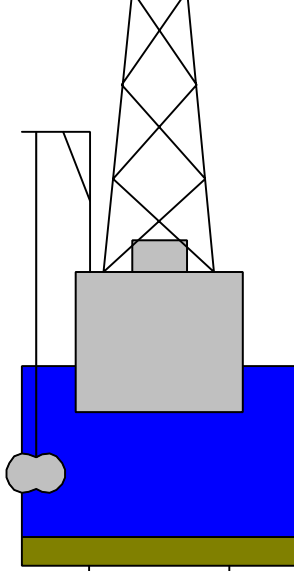
11.8

Mean Sea Level

0.0

Seismic Gun depth below MSL

-304.6



0.0 5.000

Casing String



1656.0 9.875

Borehole Segment

1826.0 5.000

Casing Shoe

**Schlumberger**

MAIN PASS

MAXIS Field Log

Company: Lamont Doherty

Well: IODP EXP 305 Site 1309D

### Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_011LUP	FN:13	PRODUCER	31-Jan-2005 08:52	2489.5 M	1783.1 M
REDUCED	DLL_LDL_APS_NGS_011LUP	FN:14	PRODUCER	31-Jan-2005 08:52	2489.5 M	1784.0 M

### OP System Version: 12C0-301 MCM

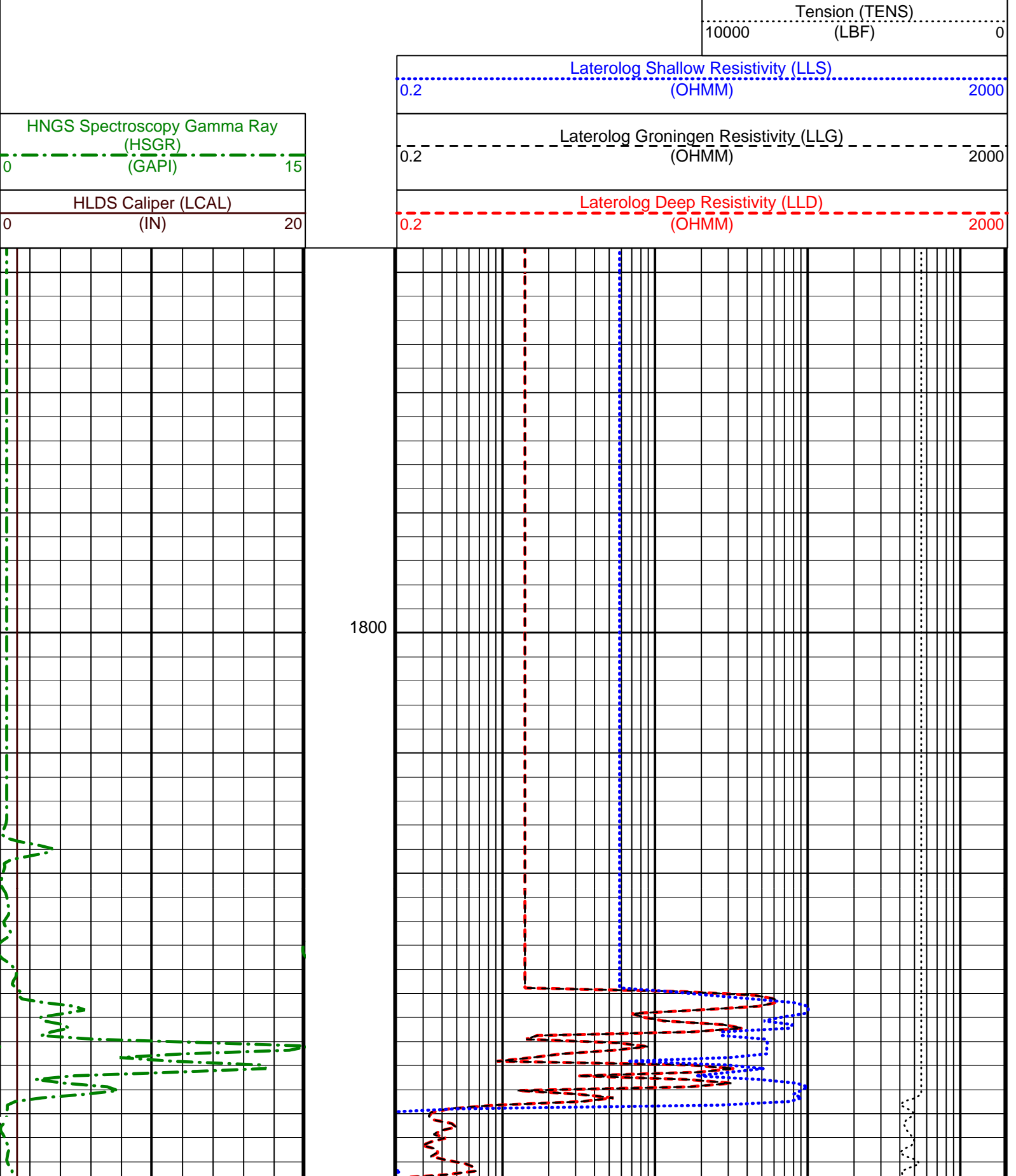
DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

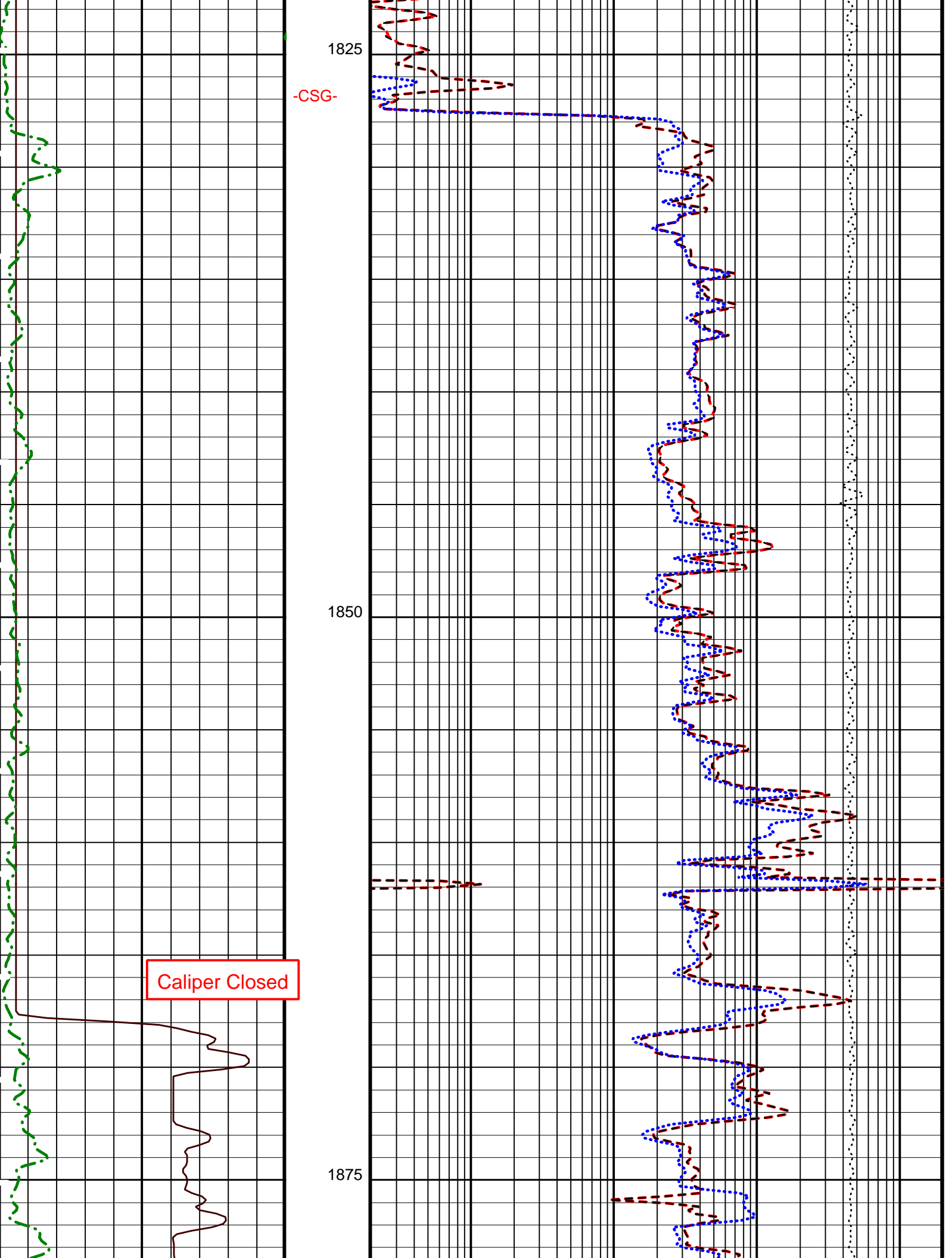
### Changed Parameter Summary

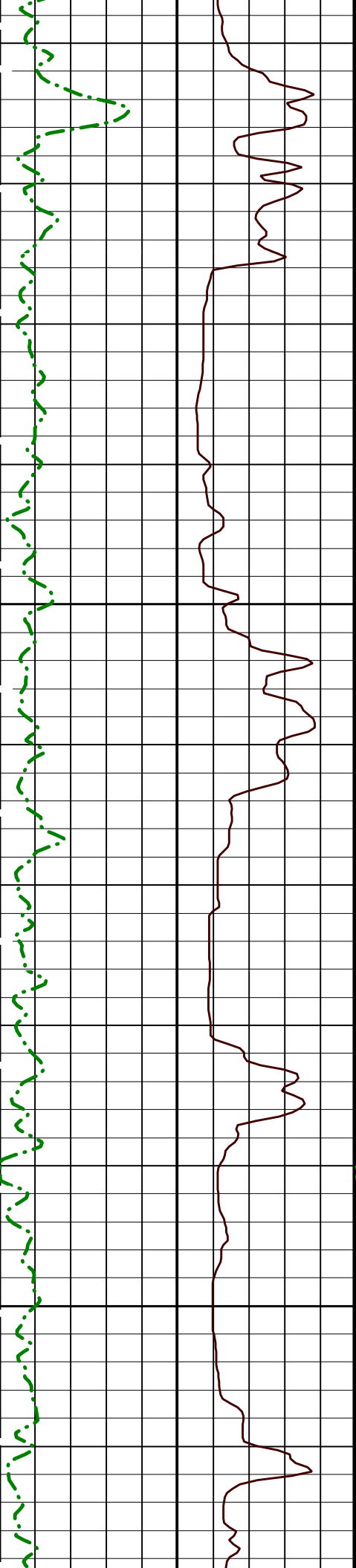
DLIS Name	New Value	Previous Value	Depth & Time
LLOO	OFF	BOTH	2489.9 08:53:36
	BOTH	OFF	2487.7 08:54:06
	OFF	BOTH	1881.4 11:08:07
	BOTH	OFF	1880.0 11:08:53
	OFF	BOTH	1824.2 11:21:25

PIP SUMMARY

Time Mark Every 60 S

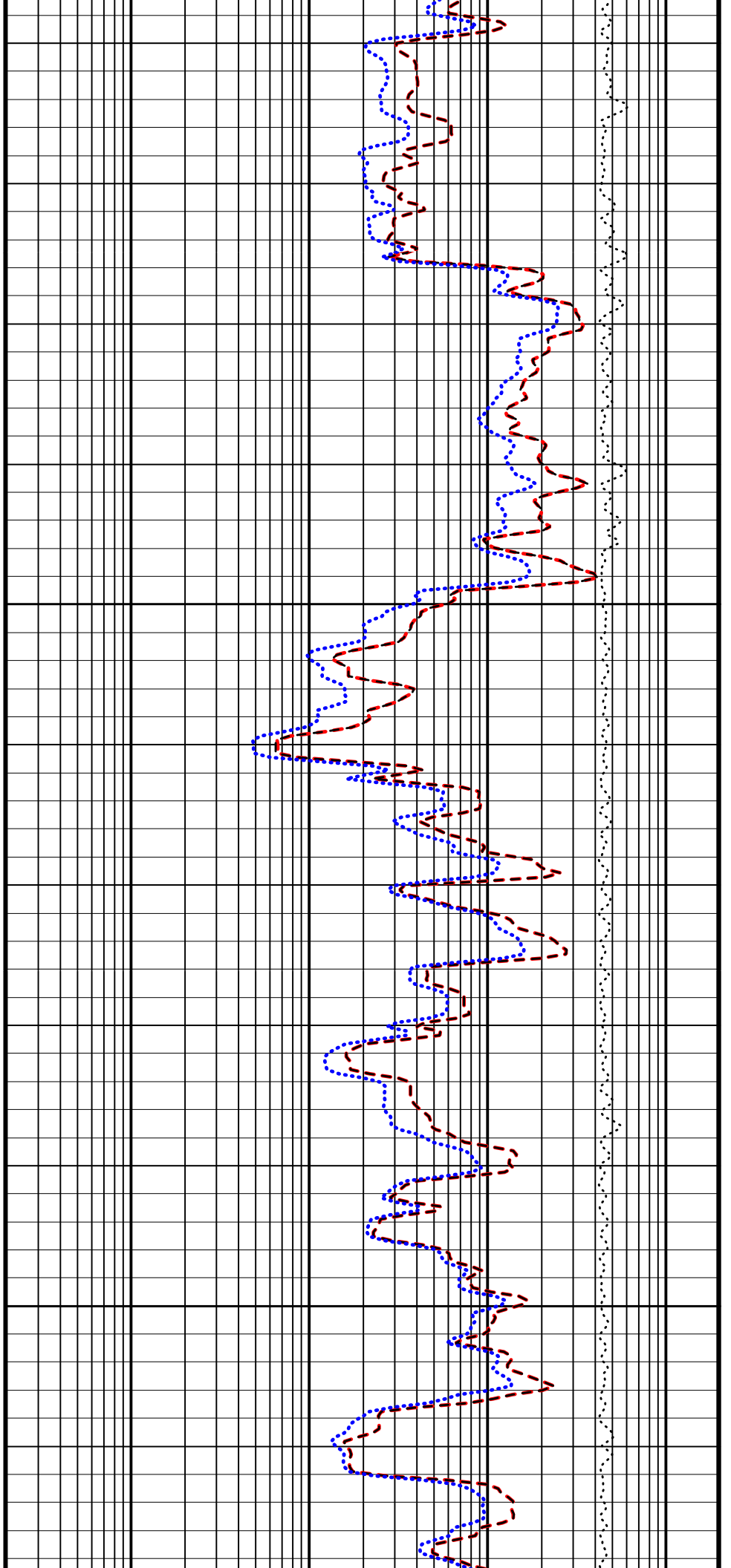




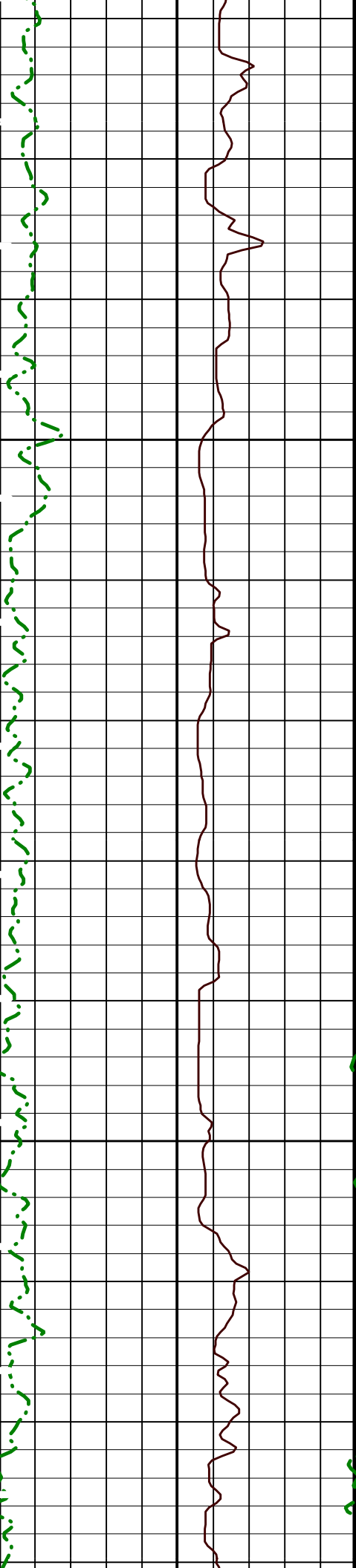


1900

1925

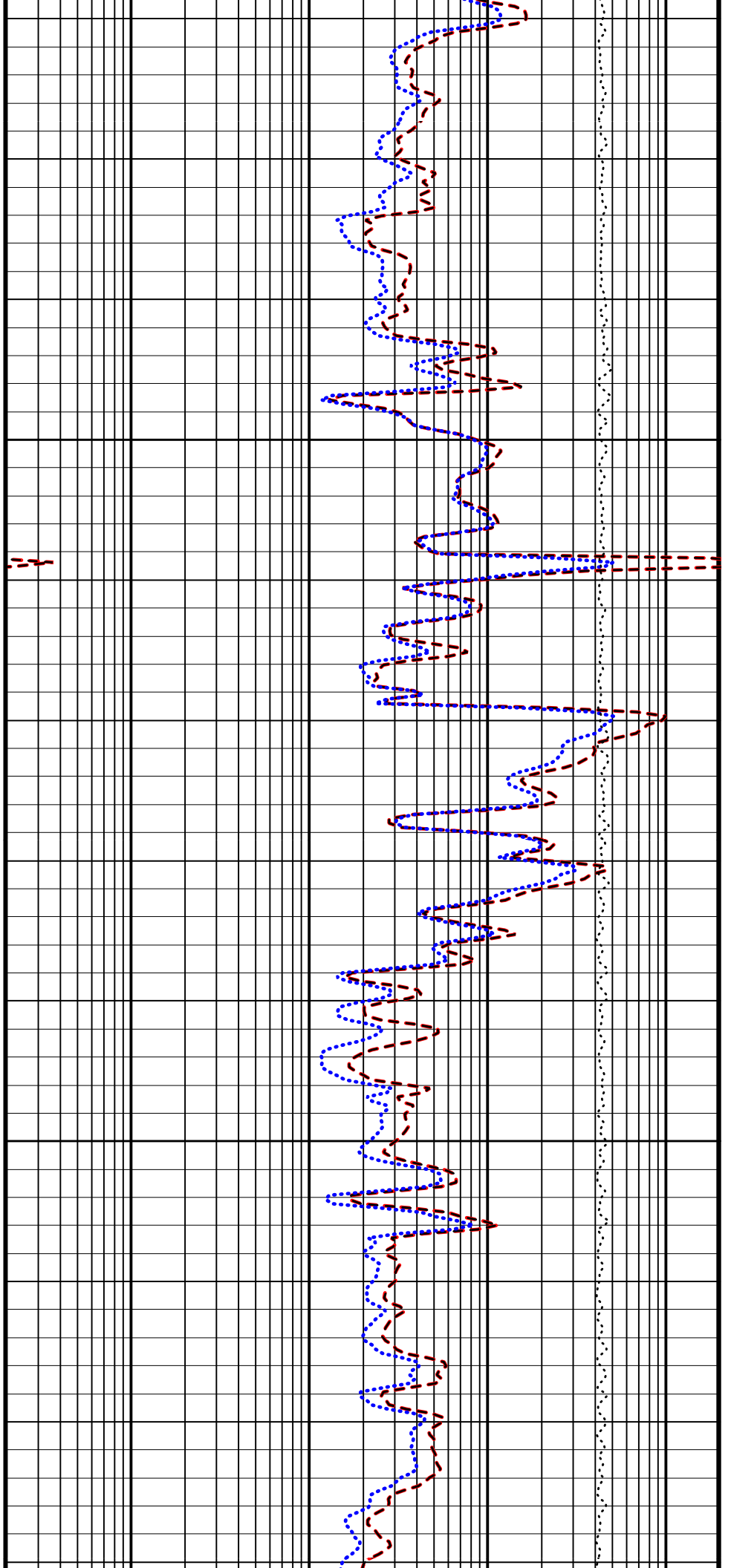


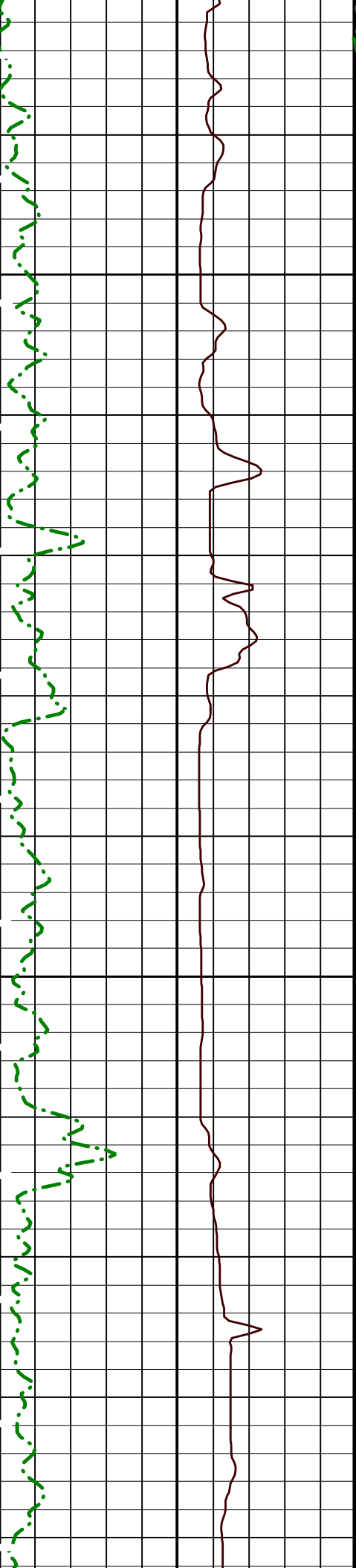




1950

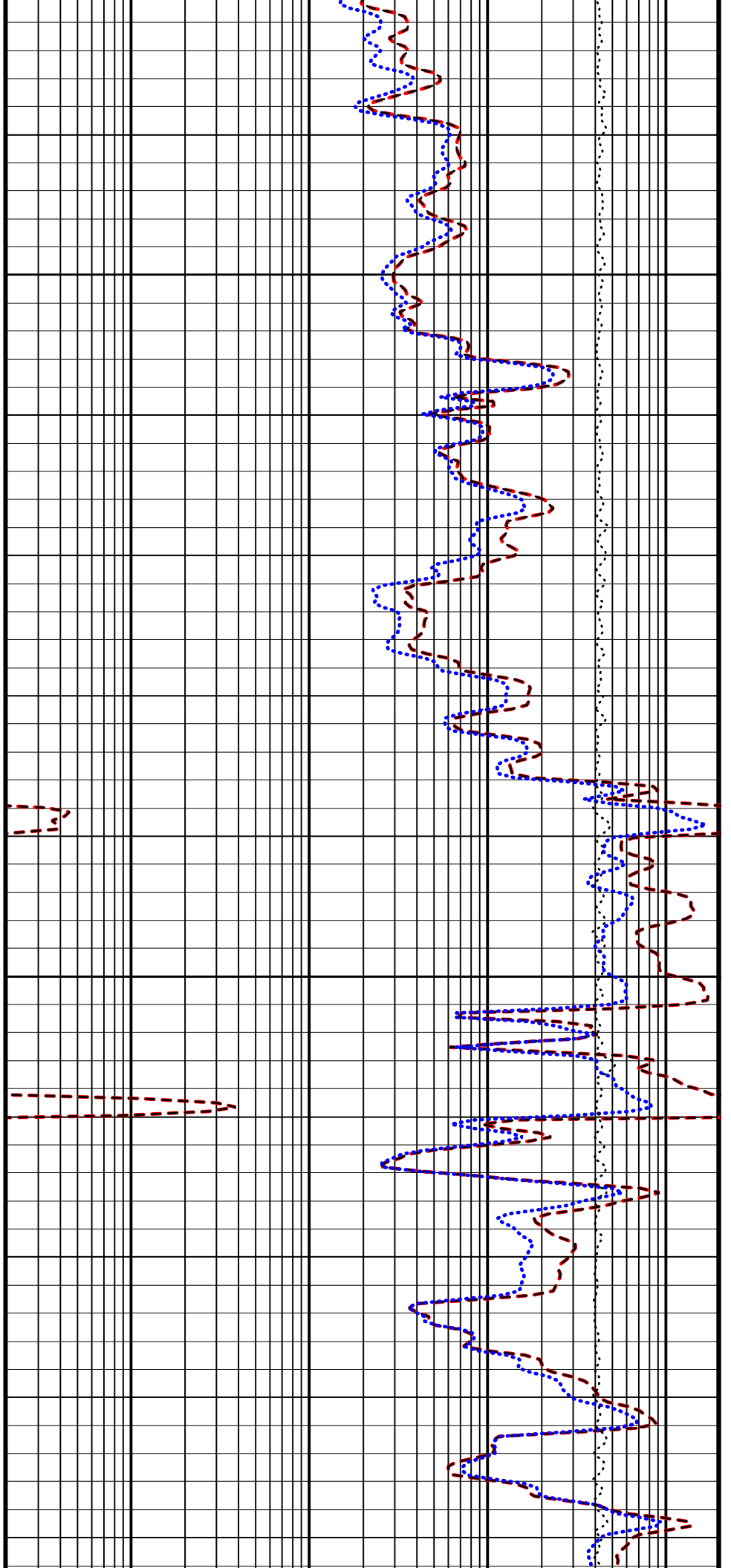
1975

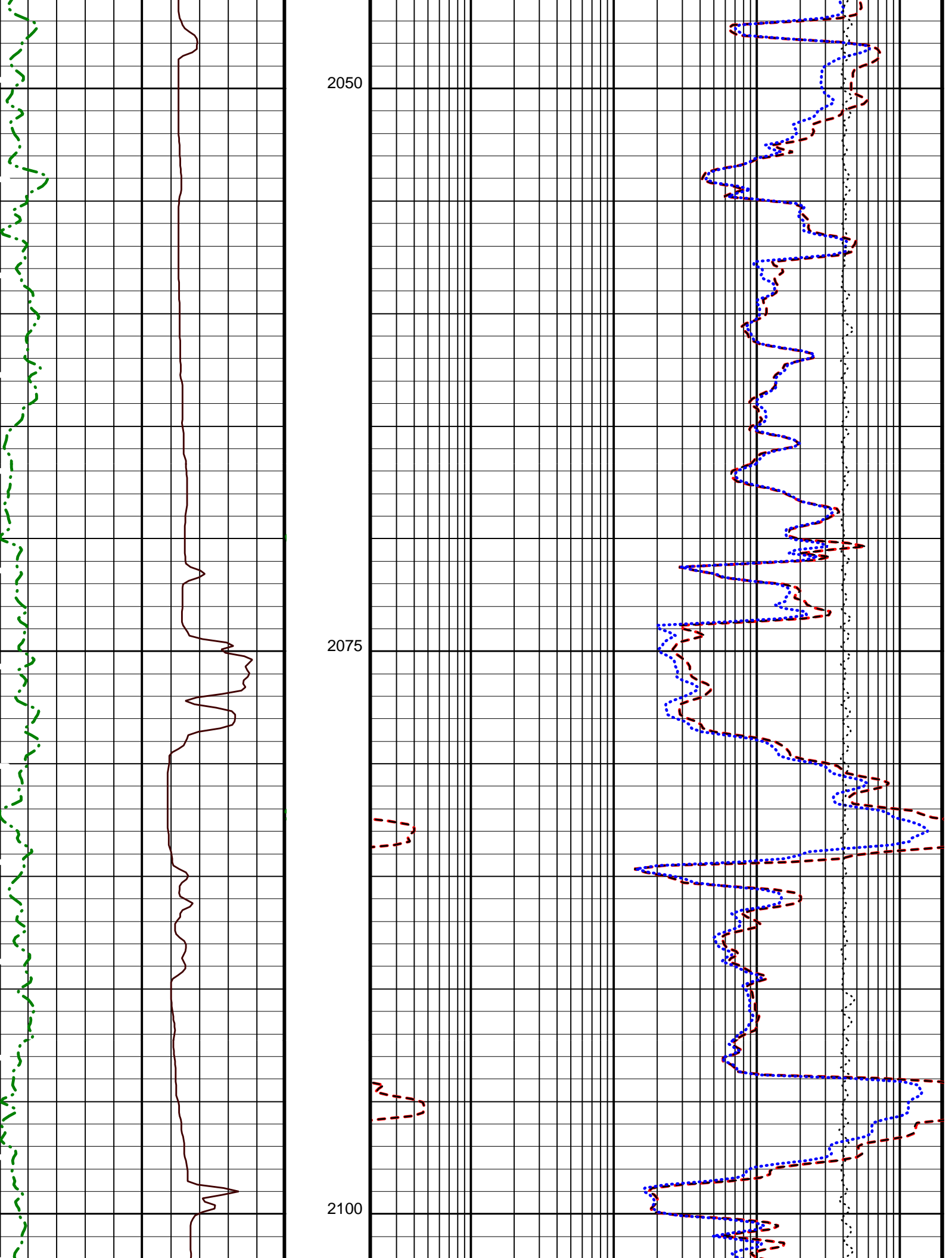


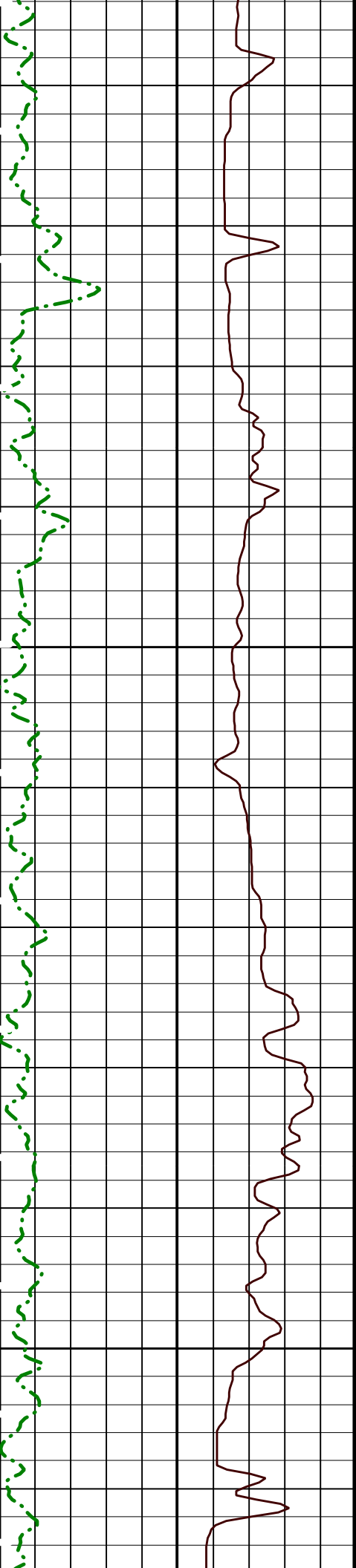


2000

2025

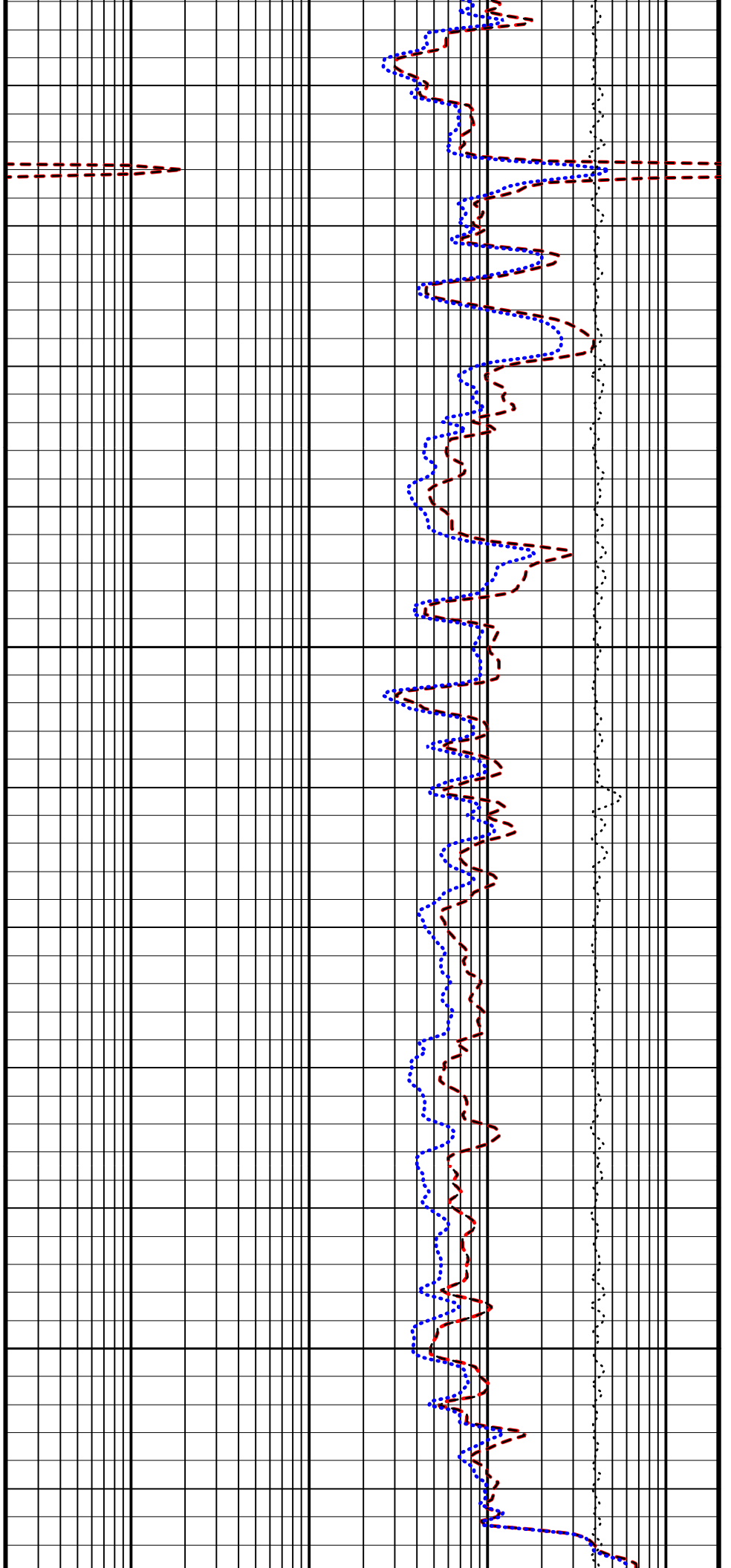


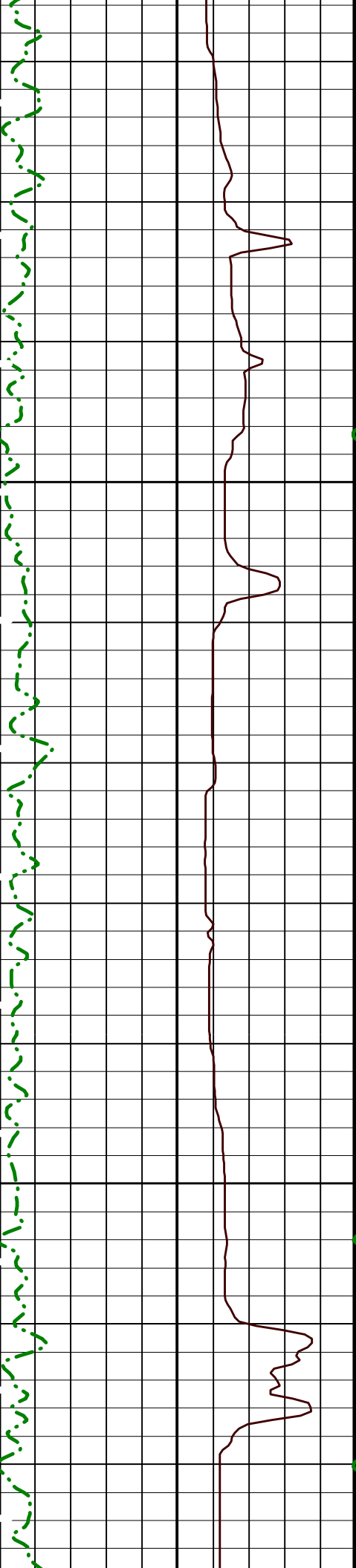




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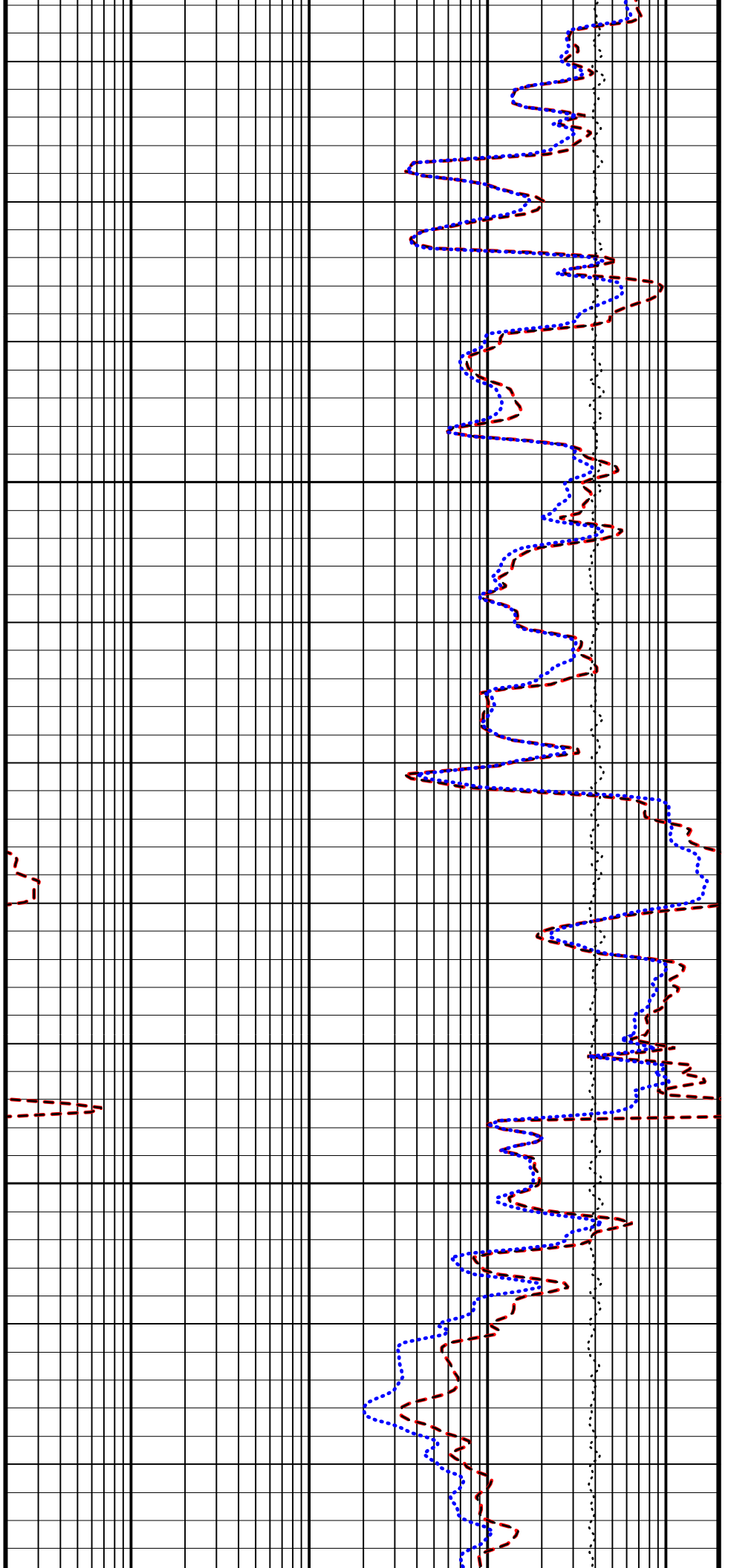
2150

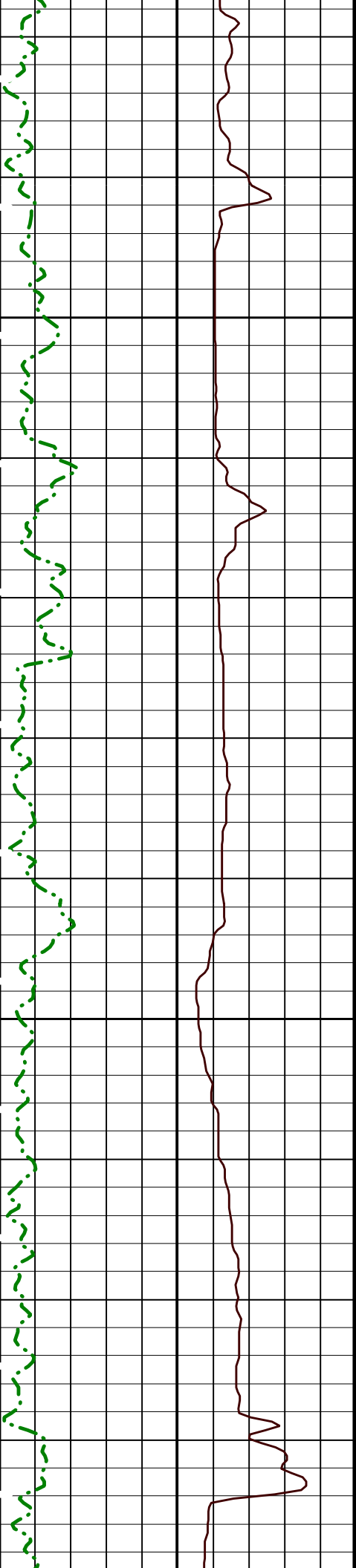




2175

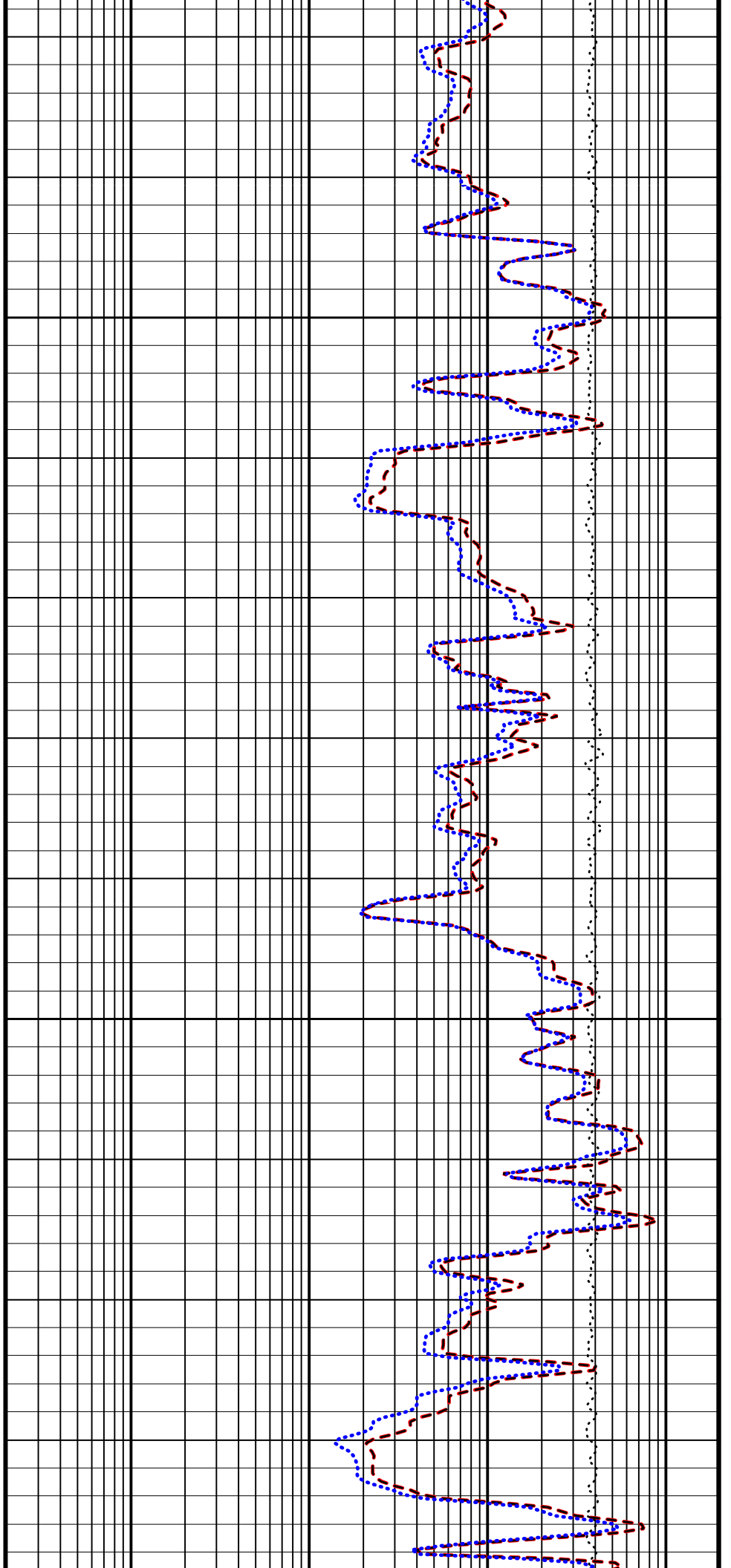
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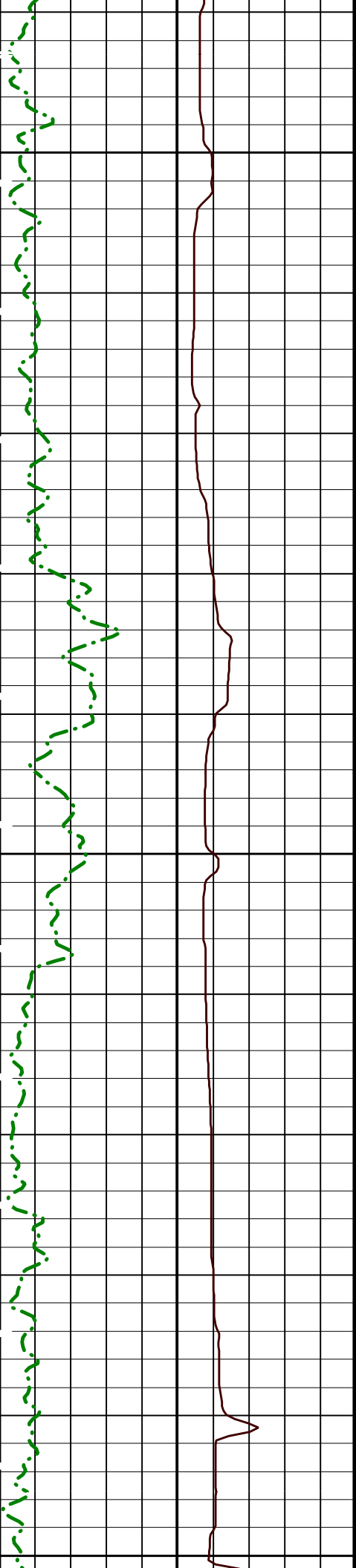




2225

2250

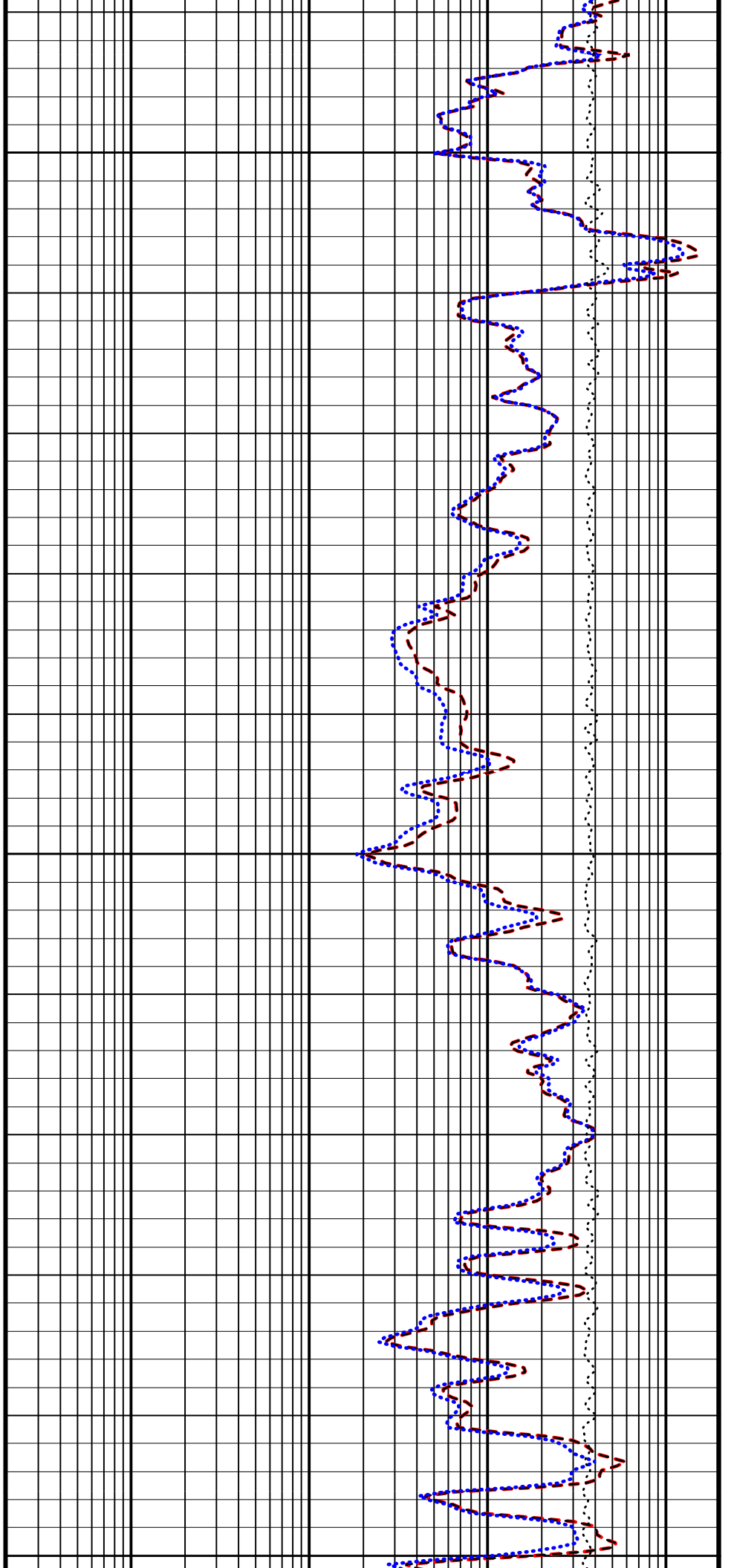


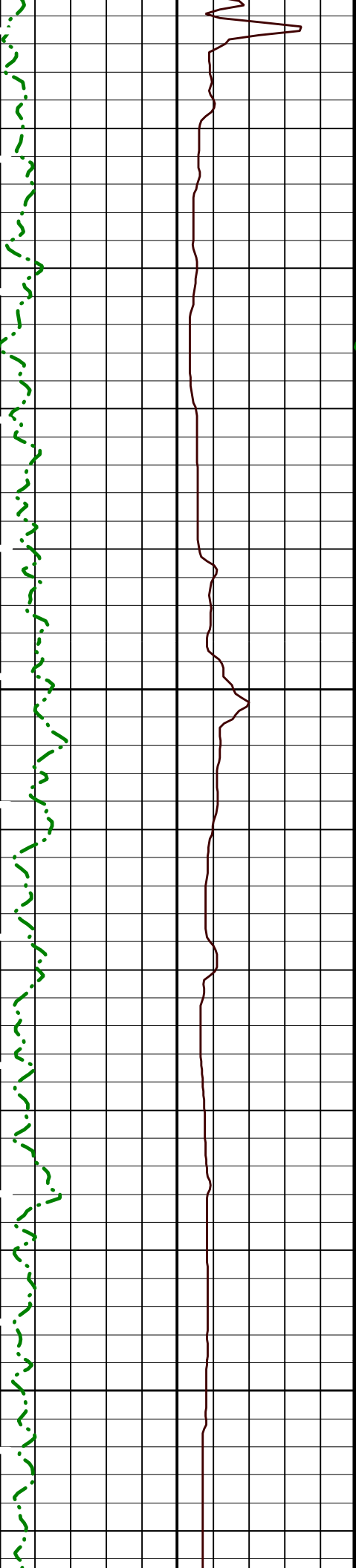


2275

2300

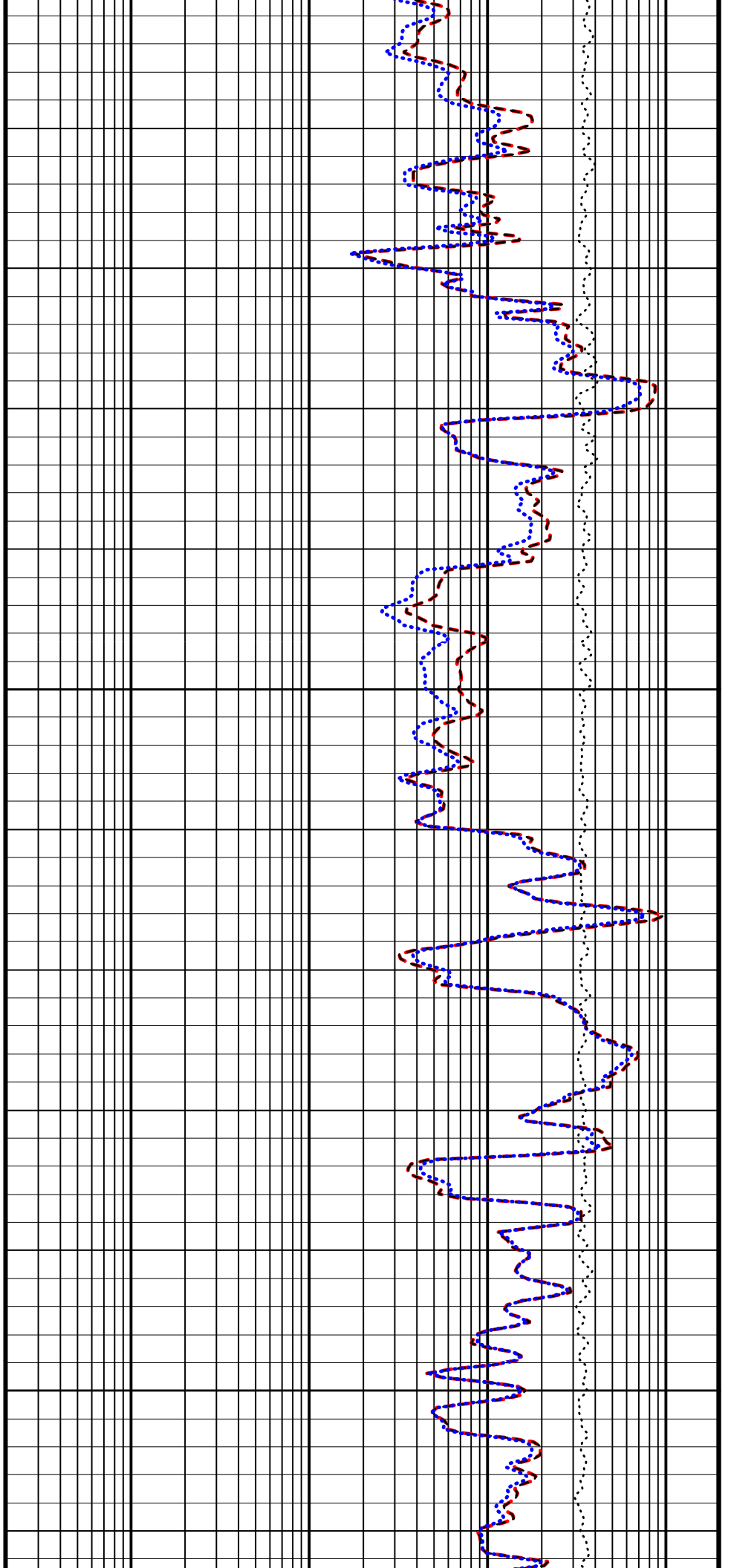
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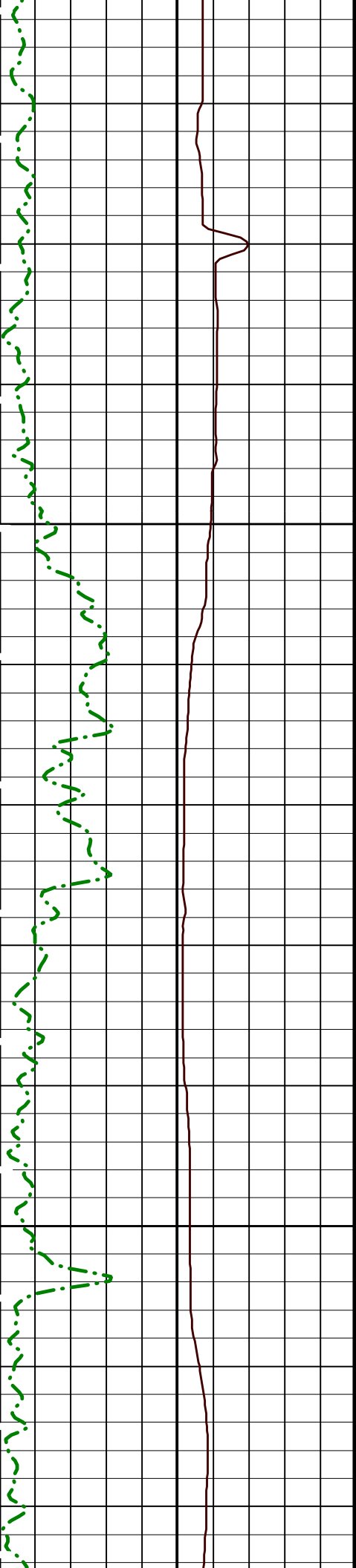


2350

2375

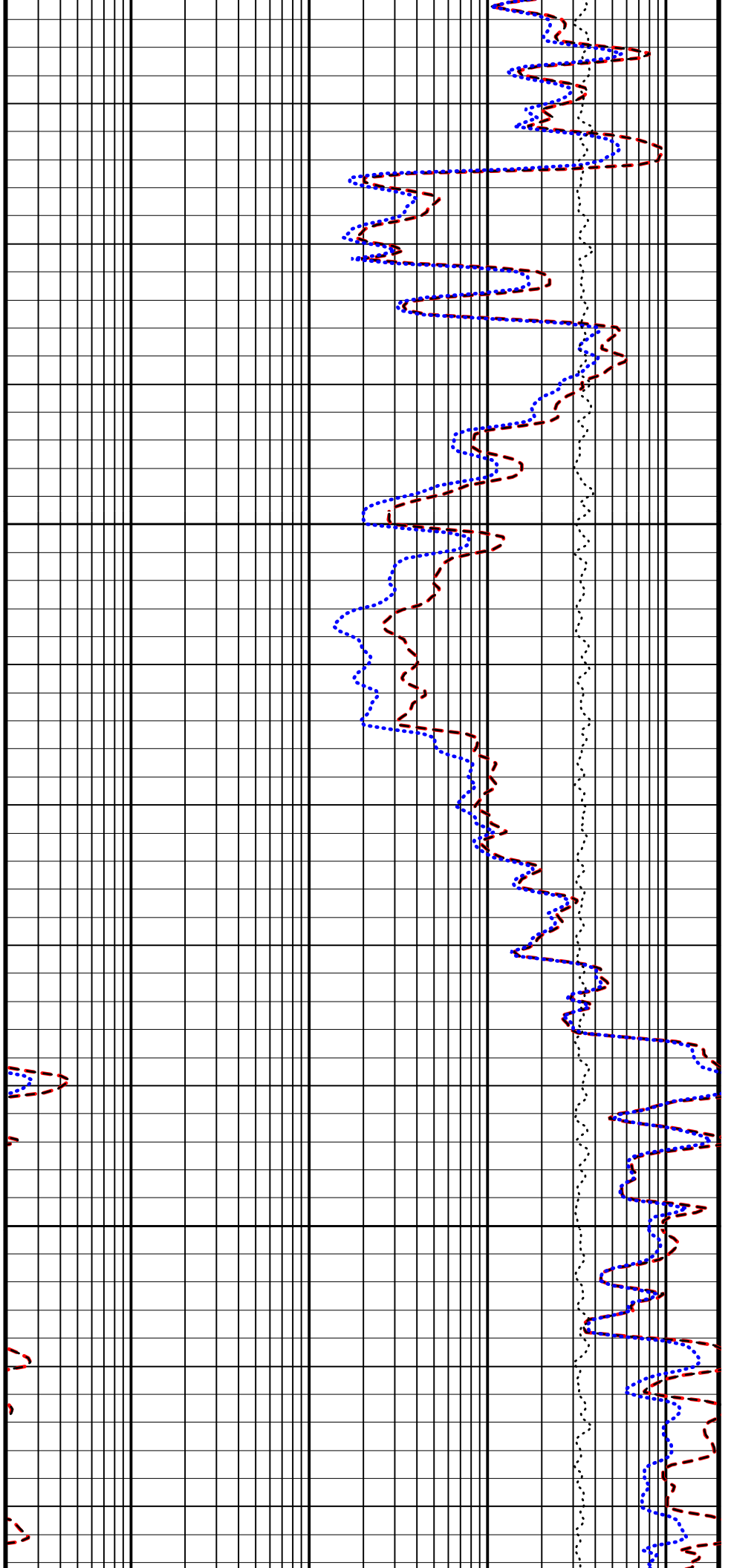


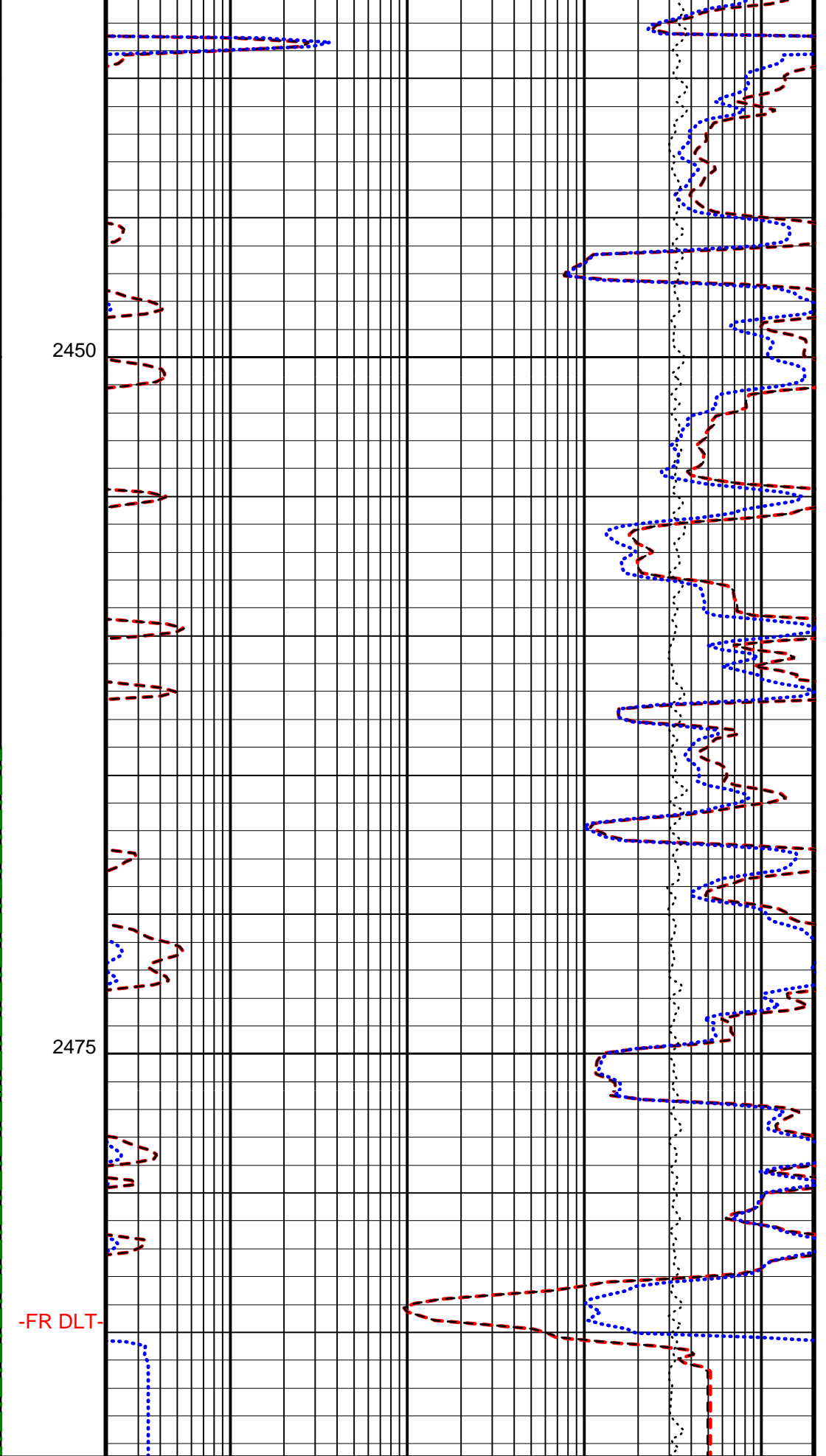
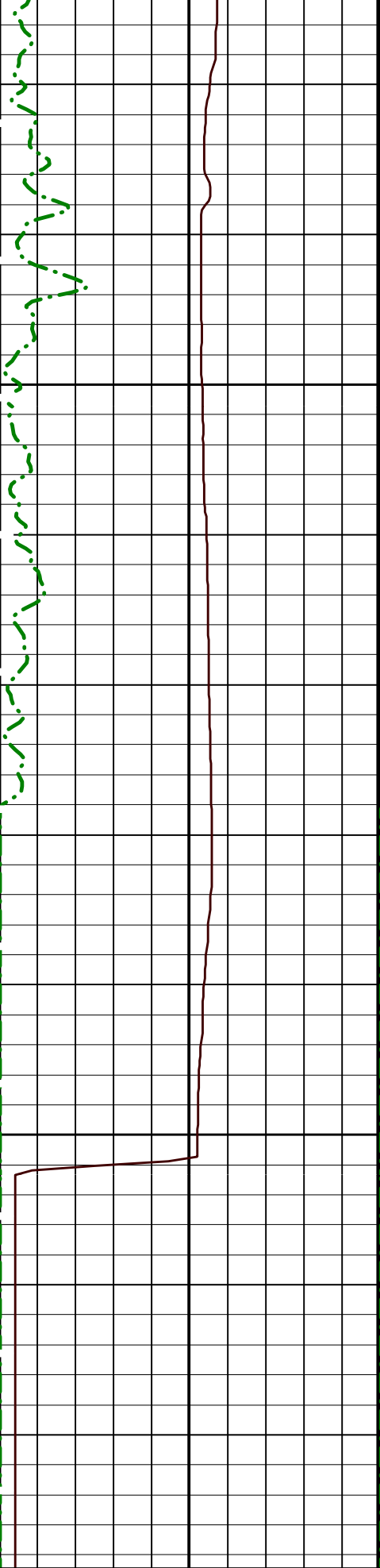




2400

2425





HLDS Caliper (LCAL)  
(IN) 0 20

HNGS Spectroscopy Gamma Ray (USGR)

Laterolog Deep Resistivity (LLD)  
(OHMM) 0.2 2000

Laterolog Groningen Resistivity (LLG)

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DLT-E: DUAL LATEROLOG - E		
DPRF	DEEP REFERENCE POWER	550 NW
KFAC	K FACTOR	SOND
LLOO	LATEROLOG LOOP	BOTH
PLRM	POWER LOOP REFERENCE MODE	DEEP
SPRF	SHALLOW REFERENCE POWER	550 NW
APS-C: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
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	LCAL
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
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	0
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0
System and Miscellaneous		
BS	Bit Size	9.875 IN
DFD	Drilling Fluid Density	1.07 G/C3

Format: DLT\_DST Vertical Scale: 1:200 Graphics File Created: 31-Jan-2005 08:53

OP System Version: 12C0-301  
MCM

DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_011LUP	FN:13	PRODUCER	31-Jan-2005 08:52
REDUCED	DLL_LDL_APS_NGS_011LUP	FN:14	PRODUCER	31-Jan-2005 08:52



REPEAT SECTION

Company: Lamont Doherty

Well: IODP EXP 305 Site 1309D

### Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_012LUP	FN:15	PRODUCER	31-Jan-2005 11:57	2491.7 M	2336.3 M
REDUCED	DLL_LDL_APS_NGS_012LUP	FN:16	PRODUCER	31-Jan-2005 11:57	2491.7 M	2335.9 M

### OP System Version: 12C0-301

MCM

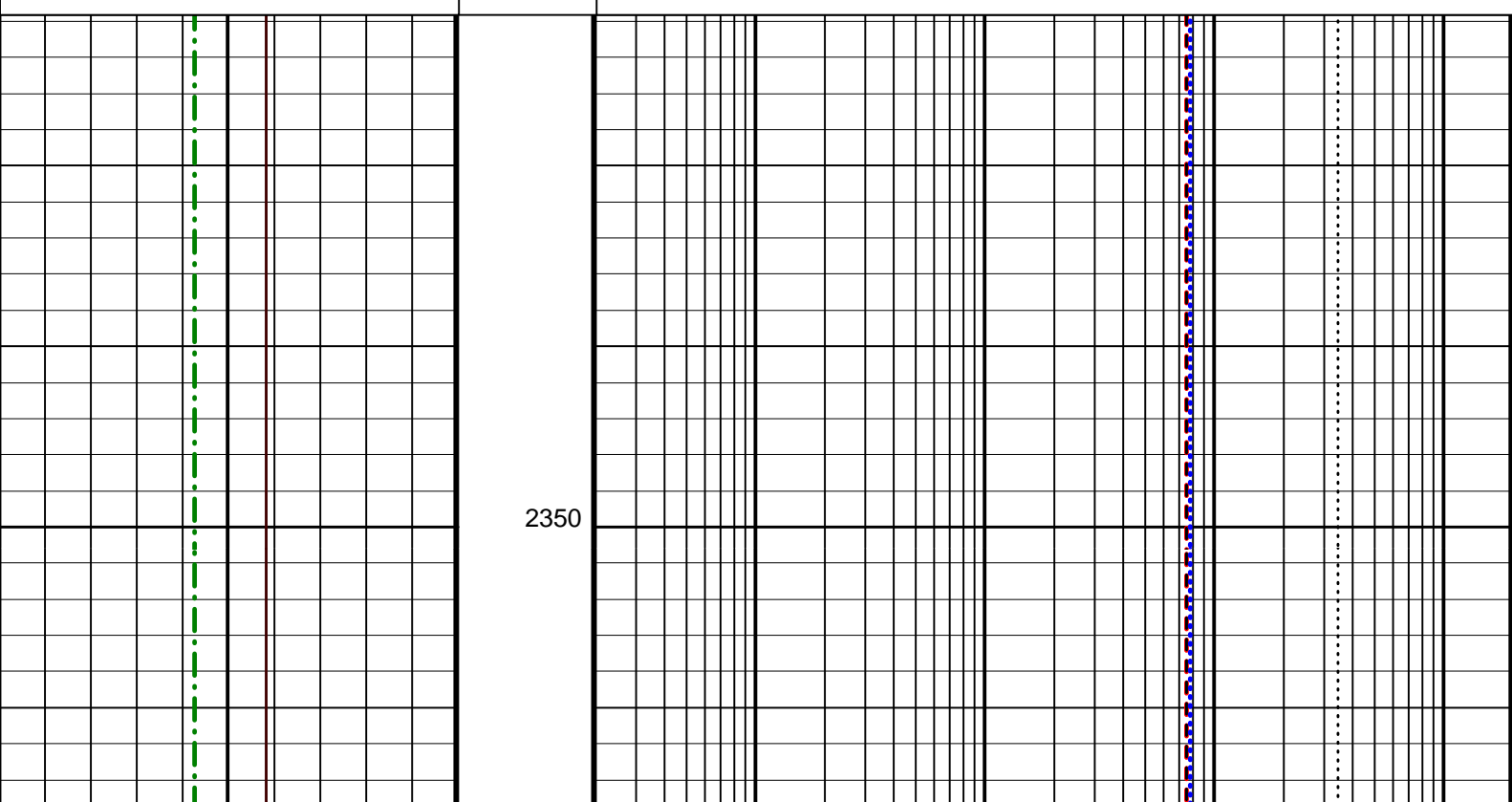
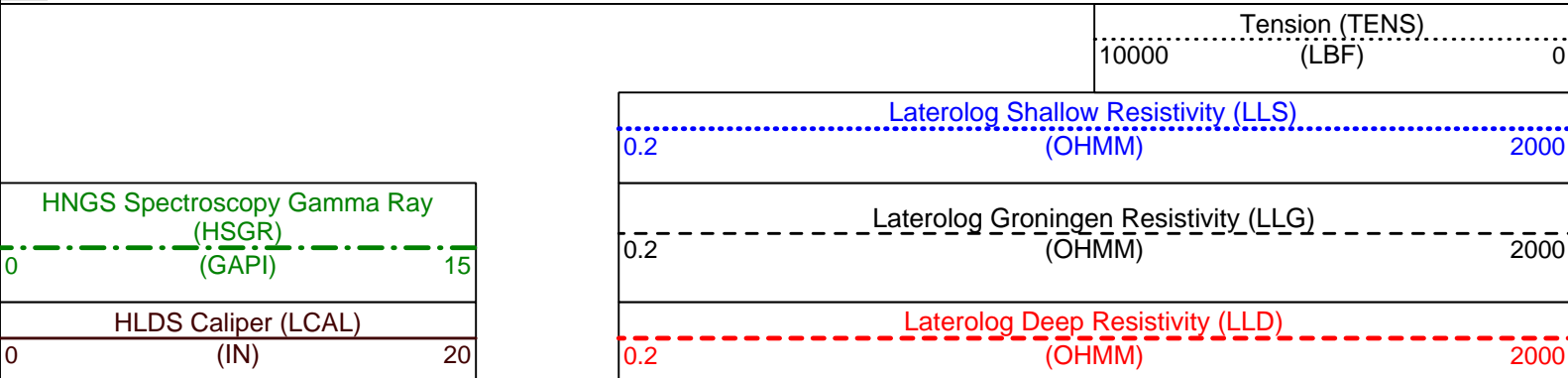
DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

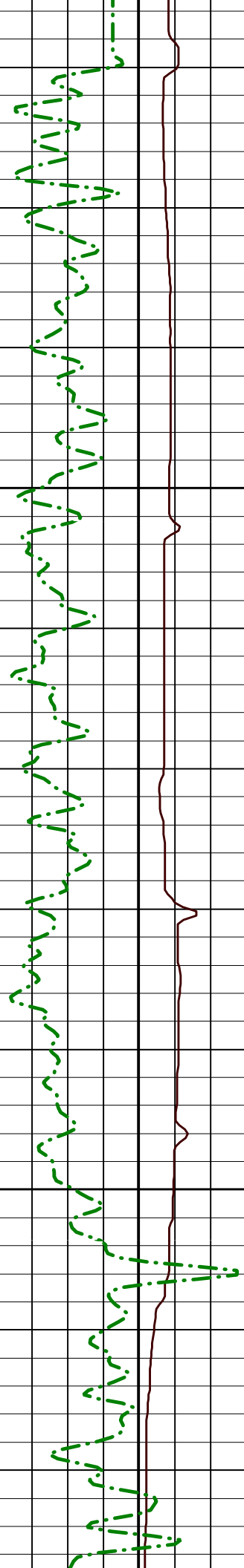
### Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
LLOO	OFF BOTH	BOTH OFF	2491.0 12:00:42 2489.7 12:01:01

#### PIP SUMMARY

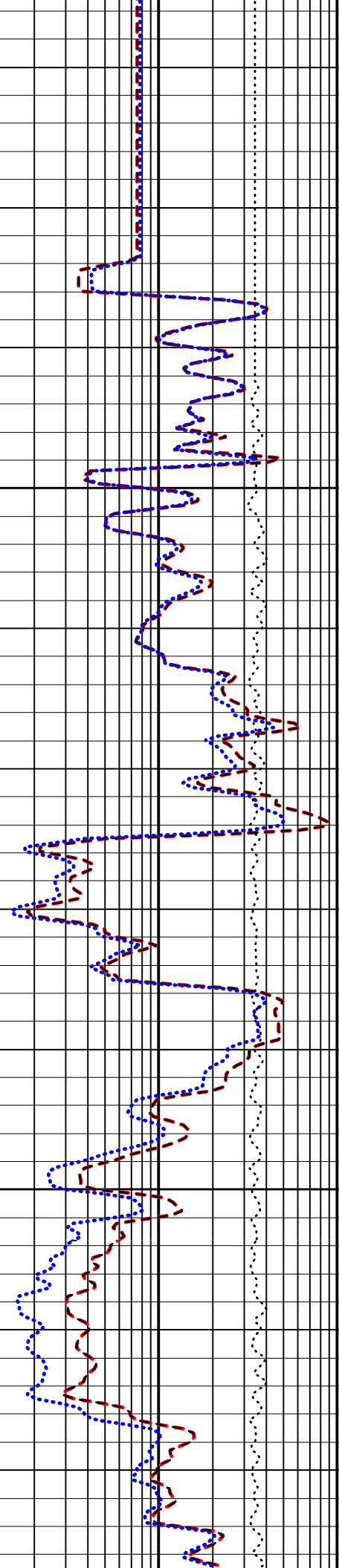
Time Mark Every 60 S

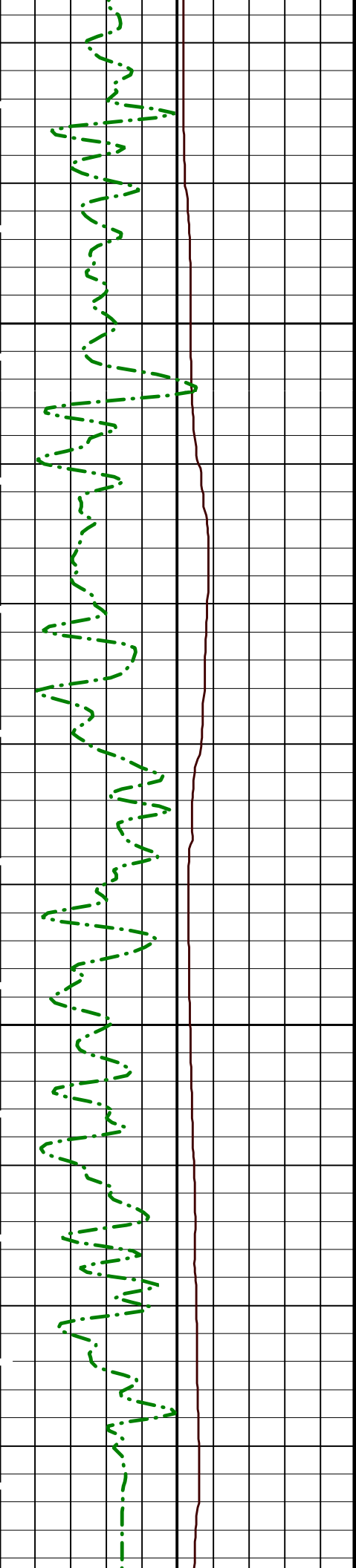




2375

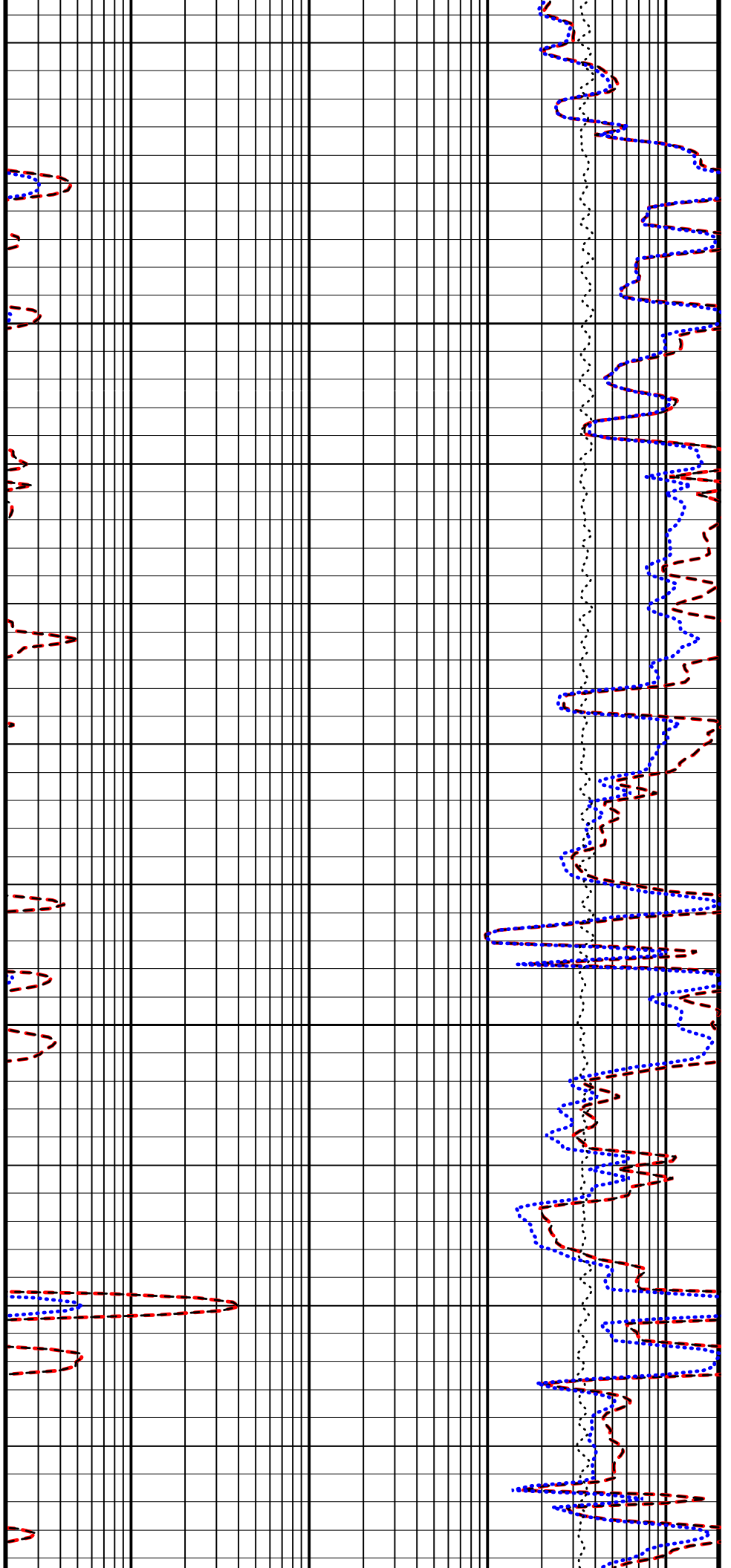
2400

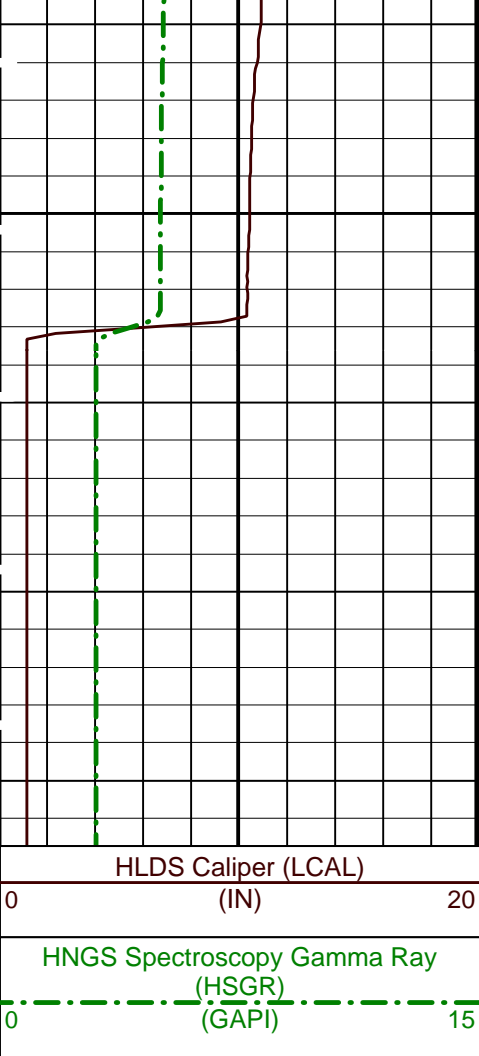




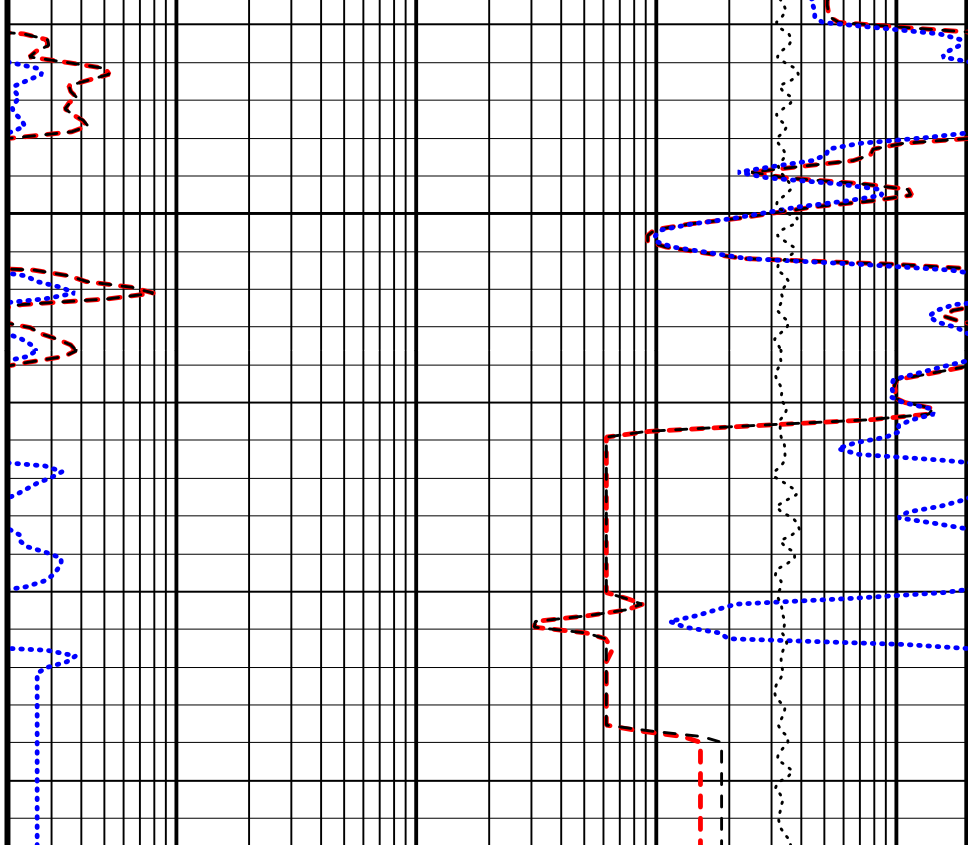
2425

2450





2475



HLDS Caliper (LCAL)  
(IN) 0 20

HNGS Spectroscopy Gamma Ray  
(HSGR)  
(GAPI) 0 15

Laterolog Deep Resistivity (LLD)  
(OHMM) 0.2 2000

Laterolog Groningen Resistivity (LLG)  
(OHMM) 0.2 2000

Laterolog Shallow Resistivity (LLS)  
(OHMM) 0.2 2000

Tension (TENS)  
(LBF) 10000 0

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DLT-E: DUAL LATEROLOG - E		
DPRF	DEEP REFERENCE POWER	550 NW
KFAC	K FACTOR	SOND
LLOO	LATEROLOG LOOP	BOTH
PLRM	POWER LOOP REFERENCE MODE	DEEP
SPRF	SHALLOW REFERENCE POWER	550 NW
APS-C: Accelerator-Porosity Tool		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	LCAL
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	LCAL
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	-0.0036242
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	2.21066	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.10497	
System and Miscellaneous			
BS	Bit Size	9.875	IN
DFD	Drilling Fluid Density	1.07	G/C3

Format: DLT\_DST      Vertical Scale: 1:200      Graphics File Created: 31-Jan-2005 11:57

## OP System Version: 12C0-301

MCM

DLT-E	12C0-301	GPIT-A/B	12C0-301
DTA-A	12C0-301	HLDS	12C0-301
NPLC-B	12C0-301	APS-C	12C0-301
HNGS-BA	12C0-301	DTC-H	12C0-301
BSP	12C0-301		

### Output DLIS Files

DEFAULT	DLL_LDL_APS_NGS_012LUP	FN:15	PRODUCER	31-Jan-2005 11:57
REDUCED	DLL_LDL_APS_NGS_012LUP	FN:16	PRODUCER	31-Jan-2005 11:57



# CALIBRATIONS

## MAXIS Field Log

### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
<b>DUAL LATEROLOG - E Wellsite Calibration - DLT ELECTRONICS CALIBRATION</b> Laterolog Measurement							
Before: 31-Jan-2005 8:20    After: 31-Jan-2005 12:31							
MEASURED LLD	31.62	N/A	31.98	31.92	-0.06243	0.9000	OHMM
MEASURED LLS	31.62	N/A	31.23	31.16	-0.06590	0.9000	OHMM
<b>General Purpose Inclinomometer Wellsite Calibration - CROUZET ACCELEROMETER</b> PROM HAS BEEN READ CORRECTLY							
Before: 31-Jan-2005 5:39							
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	
<b>General Purpose Inclinomometer Wellsite Calibration - CROUZET MAGNETOMETER</b> PROM HAS BEEN READ CORRECTLY							
Before: 31-Jan-2005 5:39							
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	
<b>Hostile Litho-Density Sonde Wellsite Calibration - Background Measurement</b>							
Master: 18-Jan-2005 10:17    Before: 28-Jan-2005 16:13							
SS Cs Resolution Bkg	9.000	8.392	8.384	N/A	N/A	1.800	%
LS Cs Resolution Bkg	9.000	8.031	8.019	N/A	N/A	1.800	%
LSW1 Background	100.0	82.46	81.89	N/A	N/A	3.000	CPS
LSW2 Background	100.0	74.65	74.90	N/A	N/A	3.000	CPS
LSW3 Background	200.0	168.0	166.9	N/A	N/A	6.000	CPS
LSW4 Background	250.0	211.4	207.8	N/A	N/A	7.500	CPS
LSW5 Background	600.0	472.3	473.9	N/A	N/A	18.000	CPS
SSW1 Background	100.0	79.79	79.97	N/A	N/A	3.000	CPS
SSW2 Background	200.0	142.9	140.1	N/A	N/A	6.000	CPS



SSW2 Background	200.0	142.9	140.1	N/A	N/A	6.000	CPS
SSW3 Background	500.0	377.8	376.3	N/A	N/A	15.00	CPS
SSW4 Background	270.0	202.0	201.5	N/A	N/A	8.100	CPS
SSW5 Background	200.0	147.1	146.8	N/A	N/A	6.000	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Aluminum Measurement

Master: 18-Jan-2005 11:11

LSW1 Aluminum	600.0	548.6	N/A	N/A	N/A	N/A	CPS
LSW2 Aluminum	900.0	836.5	N/A	N/A	N/A	N/A	CPS
LSW3 Aluminum	1100	1031	N/A	N/A	N/A	N/A	CPS
LSW4 Aluminum	580.0	521.0	N/A	N/A	N/A	N/A	CPS
LSW5 Aluminum	570.0	484.2	N/A	N/A	N/A	N/A	CPS
SSW1 Aluminum	2800	2443	N/A	N/A	N/A	N/A	CPS
SSW2 Aluminum	8000	7110	N/A	N/A	N/A	N/A	CPS
SSW3 Aluminum	11600	10290	N/A	N/A	N/A	N/A	CPS
SSW4 Aluminum	5000	4376	N/A	N/A	N/A	N/A	CPS
SSW5 Aluminum	660.0	601.1	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Lithology Measurement

Master: 18-Jan-2005 10:52

LSW1 Iron	400.0	384.7	N/A	N/A	N/A	N/A	CPS
LSW2 Iron	730.0	686.2	N/A	N/A	N/A	N/A	CPS
LSW3 Iron	1000	913.5	N/A	N/A	N/A	N/A	CPS
LSW4 Iron	520.0	468.3	N/A	N/A	N/A	N/A	CPS
LSW5 Iron	470.0	445.5	N/A	N/A	N/A	N/A	CPS
SSW1 Iron	2100	1801	N/A	N/A	N/A	N/A	CPS
SSW2 Iron	6800	5868	N/A	N/A	N/A	N/A	CPS
SSW3 Iron	10800	9265	N/A	N/A	N/A	N/A	CPS
SSW4 Iron	4600	3942	N/A	N/A	N/A	N/A	CPS
SSW5 Iron	580.0	520.1	N/A	N/A	N/A	N/A	CPS

Hostile Litho-Density Sonde Wellsite Calibration - Caliper Calibration

Before: 28-Jan-2005 16:17

HLDS Caliper Small Ring	8.000	N/A	10.65	N/A	N/A	N/A	IN
HLDS Caliper Large Ring	12.00	N/A	14.72	N/A	N/A	N/A	IN

Accelerator-Porosity Tool Wellsite Calibration - Detector Background

Master: 19-Dec-2004 17:47 Before: 28-Jan-2005 16:14 After: 31-Jan-2005 13:39

Near Det Bkg Cntrate	30.00	24.76	26.15	24.31	-1.836	N/A	CPS
Far Det Bkg Cntrate	30.00	26.62	25.11	25.91	0.7930	N/A	CPS
Array-1 Det Bkg Cntrate	30.00	26.08	25.48	25.90	0.4258	N/A	CPS
Array-2 Det Bkg Cntrate	30.00	26.48	25.39	28.16	2.768	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	25.45	25.75	26.88	1.127	N/A	CPS

Accelerator-Porosity Tool Wellsite Calibration - Calibration Ratios

Master: 19-Dec-2004 17:47

Near/Far Calibration Ratio	0.9250	0.9566	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	0.9884	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.009	N/A	N/A	N/A	N/A	

Accelerator-Porosity Tool Wellsite Calibration - Tank Check

Master: 19-Dec-2004 17:47

Array-1 Standoff Porosity	11.75	11.79	N/A	N/A	N/A	N/A	PU
Array-2 Standoff Porosity	11.75	11.76	N/A	N/A	N/A	N/A	PU
Average Slowing Down Time	6.000	5.823	N/A	N/A	N/A	N/A	US
Array-1 SDT Ratio Up/Down	1.000	0.9860	N/A	N/A	N/A	N/A	
Array-2 SDT Ratio Up/Down	1.000	0.9960	N/A	N/A	N/A	N/A	
Sigma Formation	27.50	27.47	N/A	N/A	N/A	N/A	CU

Accelerator-Porosity Tool Wellsite Calibration - CCR7 signal boxes

Master: 19-Dec-2004 17:47

Near Detector Plateau Setting	1650	1740	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2078	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1972	N/A	N/A	N/A	N/A	V

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 1 Check

Master: 28-Jan-2005 16:09 Before: 28-Jan-2005 16:15

Na 511 Peak Loc	40.00	40.45	40.48	N/A	N/A	1.000	
Na 511 Peak Res	15.50	18.38	18.14	N/A	N/A	2.000	%
High Voltage	1150	1253	1254	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	144.8	145.1	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	10.31	10.95	N/A	N/A	2.000	%
Temperature	15.50	26.30	26.34	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	46.37	45.19	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration - Detector 2 Check

Master: 28-Jan-2005 16:09 Before: 28-Jan-2005 16:15

Na 511 Peak Loc	40.00	40.54	40.55	N/A	N/A	1.000	
Na 511 Peak Res	15.50	18.78	18.40	N/A	N/A	2.000	%
High Voltage	1150	1274	1274	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.2	145.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	10.55	10.38	N/A	N/A	2.000	%



Before		-0.1174	Before		-0.01155	Before		-0.006245
After		-0.1072	After		-0.01155	After		-0.007697
-1.000 (Minimum)		0 (Nominal)	1.000 (Maximum)		-0.1000 (Minimum)		0 (Nominal)	0.1000 (Maximum)
Phase	Shallow Current Zero UA	Value	Phase	Shallow Voltage Zero MV	Value			
Before		-0.1288	Before		-0.008029			
After		-0.1285	After		-0.007672			
-1.000 (Minimum)		0 (Nominal)	1.000 (Maximum)		-0.1000 (Minimum)		0 (Nominal)	0.1000 (Maximum)
Before: 31-Jan-2005 8:20				After: 31-Jan-2005 12:31				

<b>General Purpose Inclinometer / Equipment Identification</b>	
Primary Equipment: GPIT Cartridge - A	GPIC - A
Auxiliary Equipment: GPIT Housing	GPIH - A

<b>Hostile Litho-Density Sonde / Equipment Identification</b>	
Primary Equipment:	
Hostile Litho Density Sonde	HLDS - D 35
Hostile Litho Density High Voltage	HLDV - D 35
Gamma Source Radioactive	GSR - Z 2326
Auxiliary Equipment:	
Hostile Litho Density Pad	HLDP - C 35
Hostile Litho Density High Voltage Housi	HEH - H 35

<b>Hostile Litho-Density Sonde Wellsite Calibration</b>									
<b>Background Measurement</b>									
Phase	SS Cs Resolution Bkg %	Value	Phase	LS Cs Resolution Bkg %	Value	Phase	LSW1 Background CPS	Value	
Master		8.392	Master		8.031	Master		82.46	
Before		8.384	Before		8.019	Before		81.89	
7.000 (Minimum)		9.000 (Nominal)	7.000 (Minimum)		9.000 (Nominal)	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		74.65	Master		168.0	Master		211.4	
Before		74.90	Before		166.9	Before		207.8	
50.00 (Minimum)		100.0 (Nominal)	110.0 (Minimum)		200.0 (Nominal)	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		472.3	Master		79.79	Master		142.9	
Before		473.9	Before		79.97	Before		140.1	
330.0 (Minimum)		600.0 (Nominal)	55.00 (Minimum)		100.0 (Nominal)	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		377.8	Master		202.0	Master		147.1	
Before		376.3	Before		201.5	Before		146.8	
280.0 (Minimum)		500.0 (Nominal)	150.0 (Minimum)		270.0 (Nominal)	110.0 (Minimum)		200.0 (Nominal)	270.0 (Maximum)
Master: 18-Jan-2005 10:17				Before: 28-Jan-2005 16:13					

<b>Hostile Litho-Density Sonde Master Calibration</b>									
<b>Detector Background Measurement</b>									
Phase	LSW1 Background CPS	Value	Phase	LSW2 Background CPS	Value	Phase	LSW3 Background CPS	Value	
Master		82.46	Master		74.65	Master		168.0	
55.00 (Minimum)		100.0 (Nominal)	50.00 (Minimum)		100.0 (Nominal)	110.0 (Minimum)		200.0 (Nominal)	290.0 (Maximum)
Phase	LSW4 Background CPS	Value	Phase	LSW5 Background CPS	Value	Phase	LS Cs Resolution Bkg %	Value	

Master		211.4	Master		472.3	Master		8.031			
	140.0 (Minimum)	250.0 (Nominal)	360.0 (Maximum)	330.0 (Minimum)	600.0 (Nominal)	830.0 (Maximum)	7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)		
Phase	SSW1 Background CPS		Value	Phase	SSW2 Background CPS		Value	Phase	SSW3 Background CPS		Value
Master			79.79	Master			142.9	Master			377.8
	55.00 (Minimum)	100.0 (Nominal)	150.0 (Maximum)	100.0 (Minimum)	200.0 (Nominal)	260.0 (Maximum)	280.0 (Minimum)	500.0 (Nominal)	700.0 (Maximum)		
Phase	SSW4 Background CPS		Value	Phase	SSW5 Background CPS		Value	Phase	SS Cs Resolution Bkg %		Value
Master			202.0	Master			147.1	Master			8.392
	150.0 (Minimum)	270.0 (Nominal)	380.0 (Maximum)	110.0 (Minimum)	200.0 (Nominal)	270.0 (Maximum)	7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)		
Master: 18-Jan-2005 10:17											

Hostile Litho-Density Sonde Master Calibration											
Detector Aluminum Measurement (bkgd-subtracted)											
Phase	LSW1 Aluminum CPS		Value	Phase	LSW2 Aluminum CPS		Value	Phase	LSW3 Aluminum CPS		Value
Master			548.6	Master			836.5	Master			1031
	420.0 (Minimum)	600.0 (Nominal)	700.0 (Maximum)	650.0 (Minimum)	900.0 (Nominal)	1050 (Maximum)	800.0 (Minimum)	1100 (Nominal)	1300 (Maximum)		
Phase	LSW4 Aluminum CPS		Value	Phase	LSW5 Aluminum CPS		Value	Phase	SSW1 Aluminum CPS		Value
Master			521.0	Master			484.2	Master			2443
	410.0 (Minimum)	580.0 (Nominal)	670.0 (Maximum)	410.0 (Minimum)	570.0 (Nominal)	660.0 (Maximum)	2000 (Minimum)	2800 (Nominal)	3200 (Maximum)		
Phase	SSW2 Aluminum CPS		Value	Phase	SSW3 Aluminum CPS		Value	Phase	SSW4 Aluminum CPS		Value
Master			7110	Master			10290	Master			4376
	5800 (Minimum)	8000 (Nominal)	9300 (Maximum)	8300 (Minimum)	11600 (Nominal)	13500 (Maximum)	3500 (Minimum)	5000 (Nominal)	5800 (Maximum)		
Phase	SSW5 Aluminum CPS		Value								
Master			601.1								
	470.0 (Minimum)	660.0 (Nominal)	770.0 (Maximum)								
Master: 18-Jan-2005 11:11											

Hostile Litho-Density Sonde Master Calibration											
Detector Litholog Measurement (bkgd-subtracted)											
Phase	LSW1 Iron CPS		Value	Phase	LSW2 Iron CPS		Value	Phase	LSW3 Iron CPS		Value
Master			384.7	Master			686.2	Master			913.5
	290.0 (Minimum)	400.0 (Nominal)	470.0 (Maximum)	520.0 (Minimum)	730.0 (Nominal)	850.0 (Maximum)	720.0 (Minimum)	1000 (Nominal)	1160 (Maximum)		
Phase	LSW4 Iron CPS		Value	Phase	LSW5 Iron CPS		Value	Phase	SSW1 Iron CPS		Value
Master			468.3	Master			445.5	Master			1801
	370.0 (Minimum)	520.0 (Nominal)	600.0 (Maximum)	340.0 (Minimum)	470.0 (Nominal)	550.0 (Maximum)	1500 (Minimum)	2100 (Nominal)	2400 (Maximum)		
Phase	SSW2 Iron CPS		Value	Phase	SSW3 Iron CPS		Value	Phase	SSW4 Iron CPS		Value
Master			5868	Master			9265	Master			3942
	4900 (Minimum)	6800 (Nominal)	7900 (Maximum)	7800 (Minimum)	10800 (Nominal)	12600 (Maximum)	3300 (Minimum)	4600 (Nominal)	5400 (Maximum)		
Phase	SSW5 Iron CPS		Value								
Master			520.1								
	420.0 (Minimum)	580.0 (Nominal)	680.0 (Maximum)								
Master: 18-Jan-2005 10:52											

Hostile Litho-Density Sonde Master Calibration											
Quality Ratios											
Phase	AL CALIBRATION RATIO 1		Value	Phase	AL CALIBRATION RATIO 2		Value	Phase	AL CALIBRATION RATIO 3		Value
Master			1.025	Master			2.067	Master			0.5457
	0.9000 (Minimum)	1.000 (Nominal)	1.100 (Maximum)	1.900 (Minimum)	2.100 (Nominal)	2.300 (Maximum)	0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)		
Phase	AL CALIBRATION RATIO 4		Value	Phase	Pad-Wear SS Ratio		Value	Phase	Pad-Wear LS Ratio		Value
Master			0.4909	Master			0.9881	Master			0.9884
	0.4500 (Minimum)	0.5500 (Nominal)	0.6500 (Maximum)	0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)	0.9800 (Minimum)	0.9880 (Nominal)	0.9960 (Maximum)		
Phase	Pad-Position SS Ratio		Value	Phase	Pad-Position LS Ratio		Value				
Master			1.001	Master			1.001				
	0.9900 (Minimum)	1.000 (Nominal)	1.010 (Maximum)	0.9900 (Minimum)	0.9980 (Nominal)	1.000 (Maximum)					

Master	0.9900 (Minimum)	0.9940 (Nominal)	1.001	Master	0.9850 (Minimum)	0.9940 (Nominal)	1.001
Master: 18-Jan-2005 10:43							

**Nuclear Porosity Lithology Cartridge - B / Equipment Identification**

Primary Equipment: NPLC Cartridge	NPLC - B	79
Auxiliary Equipment: NPLC Housing	NPH - B	82

**Accelerator-Porosity Tool / Equipment Identification**

Primary Equipment: Accelerator-Porosity Sonde APS Minitron	APS - C MNTR - F	202 5124
Auxiliary Equipment: Accelerator-Porosity Housing APS Calibration Water Tank APS Aluminum Calibrator Sleeve	APH - AC SFT - 178 SFT - 281	104 6250 6250

**Accelerator-Porosity Tool Wellsite Calibration**

**Detector Background**

Phase	Near Det Bkg Cntrate CPS	Value	Phase	Far Det Bkg Cntrate CPS	Value	Phase	Array-1 Det Bkg Cntrate CPS	Value
Master		24.76	Master		26.62	Master		26.08
Before		26.15	Before		25.11	Before		25.48
After		24.31	After		25.91	After		25.90
	1.000 (Minimum)			1.000 (Minimum)			1.000 (Minimum)	
	30.00 (Nominal)			30.00 (Nominal)			30.00 (Nominal)	
	50.00 (Maximum)			50.00 (Maximum)			50.00 (Maximum)	

Phase	Array-2 Det Bkg Cntrate CPS	Value	Phase	Array Therm Det Bkg Cntrate CPS	Value
Master		26.48	Master		25.45
Before		25.39	Before		25.75
After		28.16	After		26.88
	1.000 (Minimum)			1.000 (Minimum)	
	30.00 (Nominal)			30.00 (Nominal)	
	50.00 (Maximum)			50.00 (Maximum)	

Master: 19-Dec-2004 17:47

Before: 28-Jan-2005 16:14

After: 31-Jan-2005 13:39

**Accelerator-Porosity Tool Wellsite Calibration**

**Calibration Ratios**

Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value	Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.9566	Master		0.9884	Master		1.009
	0.8000 (Minimum)			0.9000 (Minimum)			0.9700 (Minimum)	
	0.9250 (Nominal)			1.030 (Nominal)			1.000 (Nominal)	
	1.050 (Maximum)			1.170 (Maximum)			1.030 (Maximum)	

Master: 19-Dec-2004 17:47

**Accelerator-Porosity Tool Wellsite Calibration**

**Tank Check**

Phase	Array-1 Standoff Porosity PU	Value	Phase	Array-2 Standoff Porosity PU	Value	Phase	Average Slowing Down Time US	Value
Master		11.79	Master		11.76	Master		5.823
	9.900 (Minimum)			9.900 (Minimum)			5.500 (Minimum)	
	11.75 (Nominal)			11.75 (Nominal)			6.000 (Nominal)	
	13.60 (Maximum)			13.60 (Maximum)			6.250 (Maximum)	

Phase	Array-1 SDT Ratio Up/Down	Value	Phase	Array-2 SDT Ratio Up/Down	Value	Phase	Sigma Formation CU	Value
Master		0.9860	Master		0.9960	Master		27.47
	0.9500 (Minimum)			0.9500 (Minimum)			20.00 (Minimum)	
	1.000 (Nominal)			1.000 (Nominal)			27.50 (Nominal)	
	1.050 (Maximum)			1.050 (Maximum)			35.00 (Maximum)	

Master: 19-Dec-2004 17:47

**Accelerator-Porosity Tool Master Calibration**

**Detector Calibration**

Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value	Phase	Near/Array Cal Ratio Up/Down	Value
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Master		0.9566	Master		0.9884	Master		1.009	
	0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)	0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)	0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

Master: 19-Dec-2004 17:47

Accelerator-Porosity Tool Master Calibration											
Tank Check											
Phase	Array-1 Standoff Porosity	PU	Value	Phase	Array-2 Standoff Porosity	PU	Value	Phase	Average Slowing Down Time	US	Value
Master			11.79	Master			11.76	Master			5.823
	9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)		9.900 (Minimum)	11.75 (Nominal)	13.60 (Maximum)		5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)
Phase	Array-1 SDT Ratio Up/Down		Value	Phase	Array-2 SDT Ratio Up/Down		Value	Phase	Sigma Formation	CU	Value
Master			0.9860	Master			0.9960	Master			27.47
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		20.00 (Minimum)	27.50 (Nominal)	35.00 (Maximum)



Master: 19-Dec-2004 17:47



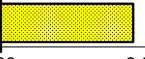
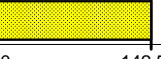

Hostile Natural Gamma Ray Sonde / Equipment Identification			
Primary Equipment:	HNGS Sonde	HNGS - BA	77
Auxiliary Equipment:	HNGS Sonde Housing	HNSH - BA	79
	Gamma Source Radioactive	GSR - U	135



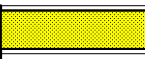
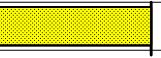

Hostile Natural Gamma Ray Sonde Wellsite Calibration											
Detector 1 Check											
Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V	Value	
Master			40.45	Master			18.38	Master			1253
Before			40.48	Before			18.14	Before			1254
	37.50 (Minimum)	40.00 (Nominal)	42.50 (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			144.8	Master			10.31	Master			26.30
Before			145.1	Before			10.95	Before			26.34
	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			46.37								
Before			45.19								
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)								

Master: 28-Jan-2005 16:09      Before: 28-Jan-2005 16:15

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			40.54	Master			18.78	Master			1274
Before			40.55	Before			18.40	Before			1274
	37.50 (Minimum)	40.00 (Nominal)	42.50 (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			145.2	Master			10.55	Master			25.45
Before			145.3	Before			10.38	Before			25.46
	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			46.31								
Before			45.33								
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)								

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.000
Before		0.9959
	0.9500 (Minimum)      1.000 (Nominal)      1.050 (Maximum)	
Master: 28-Jan-2005 16:09		
Before: 28-Jan-2005 16:15		

Hostile Natural Gamma Ray Sonde Master Calibration								
Detector 1 Calibration								
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		41.00	Master		208.2	Master		8.691
	38.00 (Minimum)      40.00 (Nominal)      42.00 (Maximum)			201.0 (Minimum)      209.6 (Nominal)      218.3 (Maximum)			5.000 (Minimum)      7.000 (Nominal)      9.000 (Maximum)	
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value			
Master		21.41	Master		0.9790			
	20.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)			0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)				
Master: 28-Jan-2005 16:03								

Hostile Natural Gamma Ray Sonde Master Calibration								
Detector 2 Calibration								
Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		41.00	Master		207.6	Master		8.966
	38.00 (Minimum)      40.00 (Nominal)      42.00 (Maximum)			201.0 (Minimum)      209.6 (Nominal)      218.3 (Maximum)			5.000 (Minimum)      7.000 (Nominal)      9.000 (Maximum)	
Phase	Background Count Rate CPS	Value	Phase	Gain Ratio	Value			
Master		22.37	Master		0.9745			
	20.00 (Minimum)      142.5 (Nominal)      265.0 (Maximum)			0.9400 (Minimum)      1.000 (Nominal)      1.060 (Maximum)				
Master: 28-Jan-2005 16:03								

Company: Lamont Doherty	<b>Schlumberger</b>
Well: IODP EXP 305 Site U1309D	
Field: Atlantis Massif	
Rig: Joides Resolution	
Ocean: Atlantic Ocean	
Dual-Laterolog Tool Gamma Ray	