

Schlumberger

Company: **SANDIA TECHNOLOGIES, LLC**

Well: **NYSTA TANDEM LOT 1**

Field: **WILDCAT**

County: **ROCKLAND** State: **NEW YORK**

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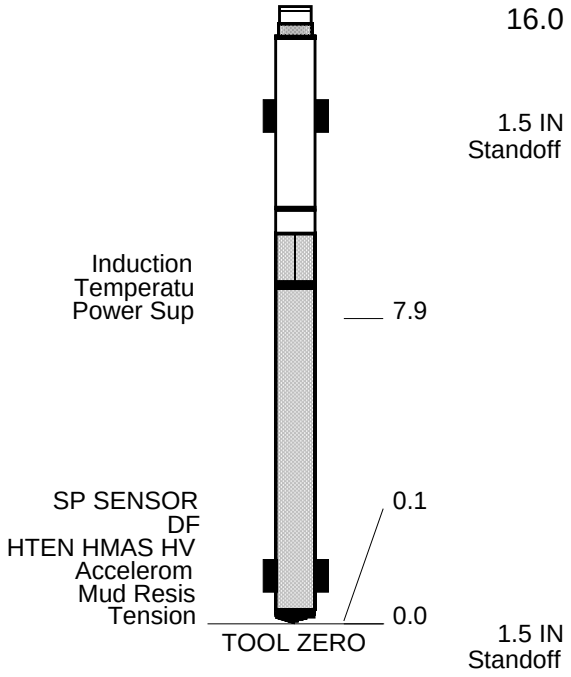
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Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth		@		
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
Density	Viscosity			
Fluid Loss	PH			
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				

OTHER SERVICES1	OTHER SERVICES2
OS1: RUN 2A: PEX-AIT	OS1:
OS2: RUN 2B: FMI-MSIP	OS2:
OS3: RUN 2C: CMR-ECS-HNGS	OS3:
OS4: RUN 2D: USIT-DSLT	OS4:
OS5: RUN 2E: VSP SEISMIC	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
THANK YOU FOR CHOOSING SCHLUMBERGER!!!	
MATRIX: SANDSTONE	
MATRIX DENSITY: 2.65 G/CC	

RIG: UNION RIG 48	
CREW: PAUL REYNOLDS, BRYAN AUSTIN, NAT DORSAY	
RUN 1 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL: BMNA-00055 19C0-187 0 ft	RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:
LOGGED INTERVAL START STOP	LOGGED INTERVAL START STOP
EQUIPMENT DESCRIPTION	
RUN 1	RUN 2
SURFACE EQUIPMENT WITM (DTS)-A GSR-U/Y NCT-B CNB-AB NCS-VB	
DOWNHOLE EQUIPMENT LEH-QT LEH-QT 43.6 DTC-H ECH-KC 10496 DTCH0-A 9406 DTCH1-A CTEM TelStatus ToolStatu HGNS HTEM HMCA HGNS Gamm 39.7 37.6 37.6 36.9 40.6 HILTH-FTB HGNSD-H 4836 HMCA-H HGNH 3947 NLS-KL NSR-F 5142 HACCZ-H 6313 HCNT-H HGR HRCC-H 4819 HRMS-H 4824 HRGD-H 2368 GLS-VJ 5482 MCFL Device-H HILT Nucl. LS-H HILT Nucl. SS-H HILT Nucl. BS-H BOW-SPR NPV-N HGNS Neut HGNS Neut HGNS sens HRCC cart 31.1 30.6 28.2 24.2 MCFL HILT cali HRDD-LS HRDD-SS HRDD-BS 18.8 18.3 17.9	

AIT-M
AMIS-A 190
AMRM-A



MAIN PASS 2"=100'

MAXIS Field Log

Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_007LUP	FN:10	PRODUCER	15-Oct-2011 12:28	6886.5 FT	330.5 FT

Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_012PUP	FN:16	PRODUCER	15-Oct-2011 16:01	6886.5 FT	330.5 FT
BACKUP	AIT_TLD_MCFL_CNL_012PUP	FN:17	PRODUCER	15-Oct-2011 16:04	6886.5 FT	330.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 2816.39 F3
Cement Volume = 2816.39 F3 (assuming 0.00 IN casing O.D.)
Computed from 6870.0 FT to 1492.0 FT using data channel(s) HCAL

OP System Version: 19C0-187

AIT-M	19C0-187	HILTH-FTB	19C0-187
DTC-H	19C0-187		

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

GR > 400
From LHT1 to GR2

GR > 200
From LHT1 to GR1

Tension (TENS)
(LBF)

1000000

Caliper (HCAL)
(IN)

616

HGNS Deviation (GDEV)
(DEG)

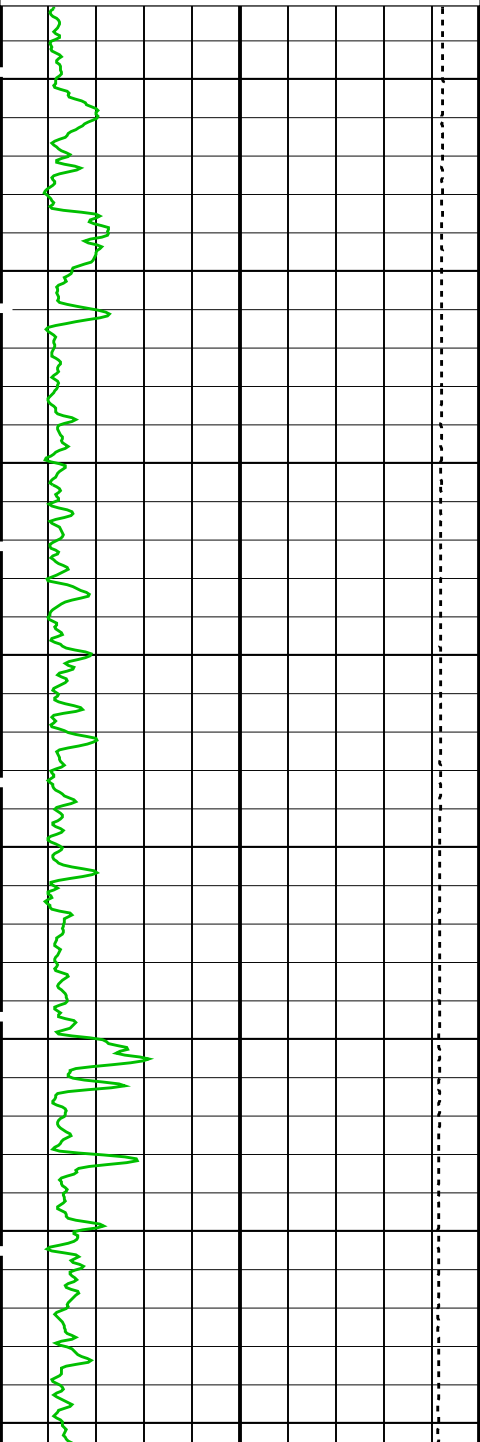
-1090

Gamma Ray (GR)
(GAPI)

0200

SP (SP)
(MV)

-100100



GAS EFFECT
From DPHZ to NPHI

Std. Res. Formation Density (RHOZ)
(G/C3)

23

Std. Res. Formation Pe (PEFZ)
(----

010

Neutron Porosity (NPHI)
(V/V)

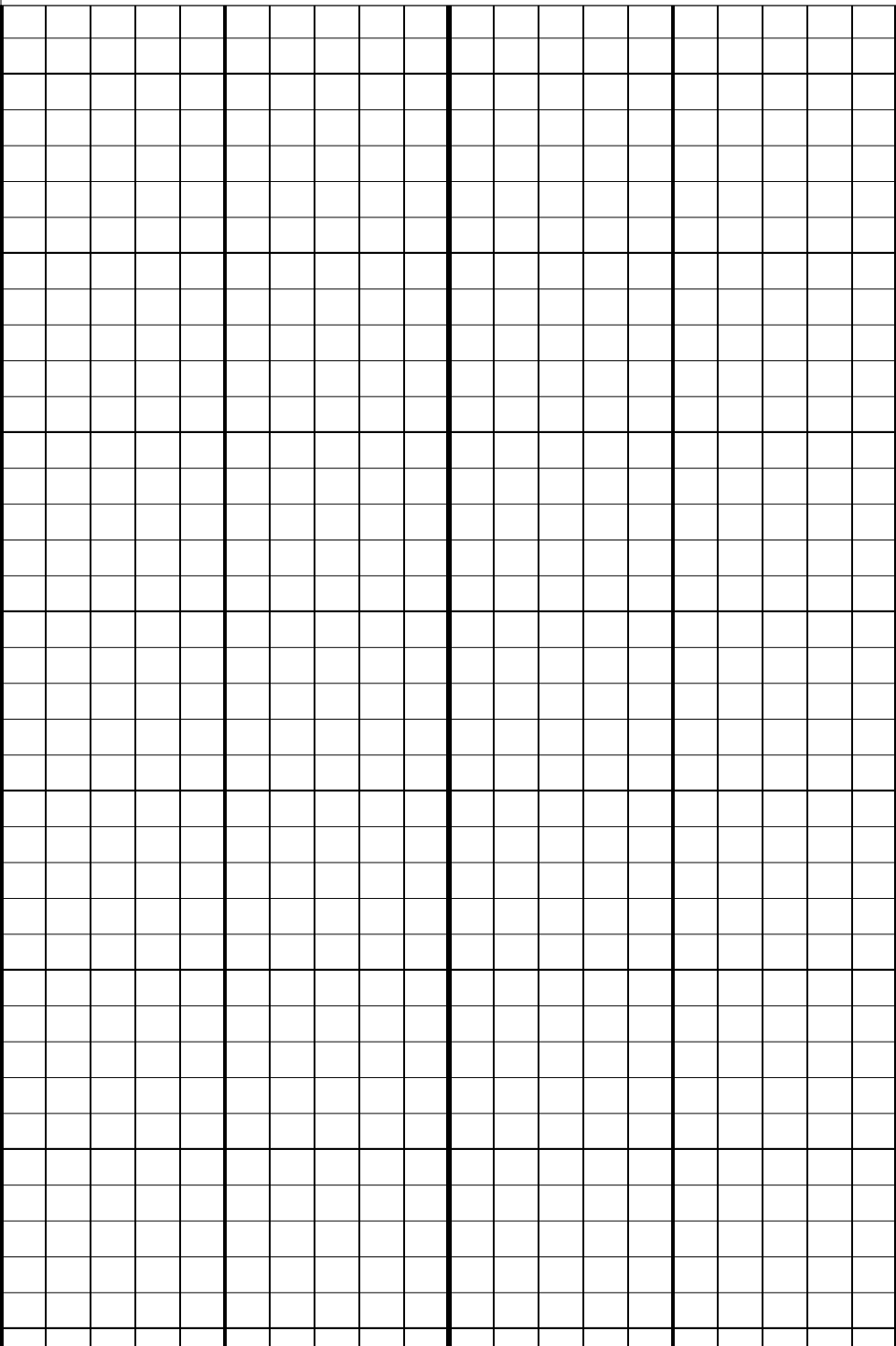
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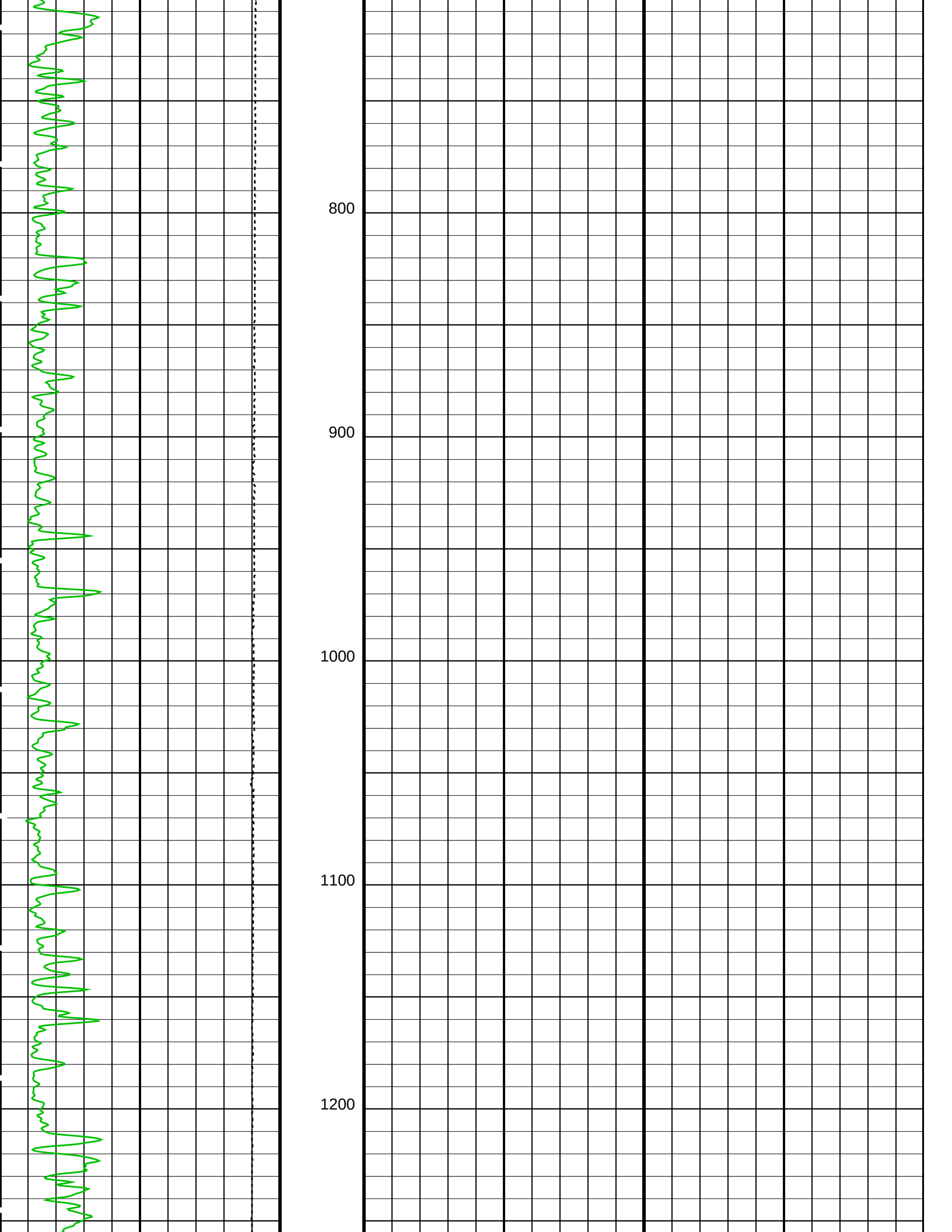
Density Correction (HDRA)
(G/C3)

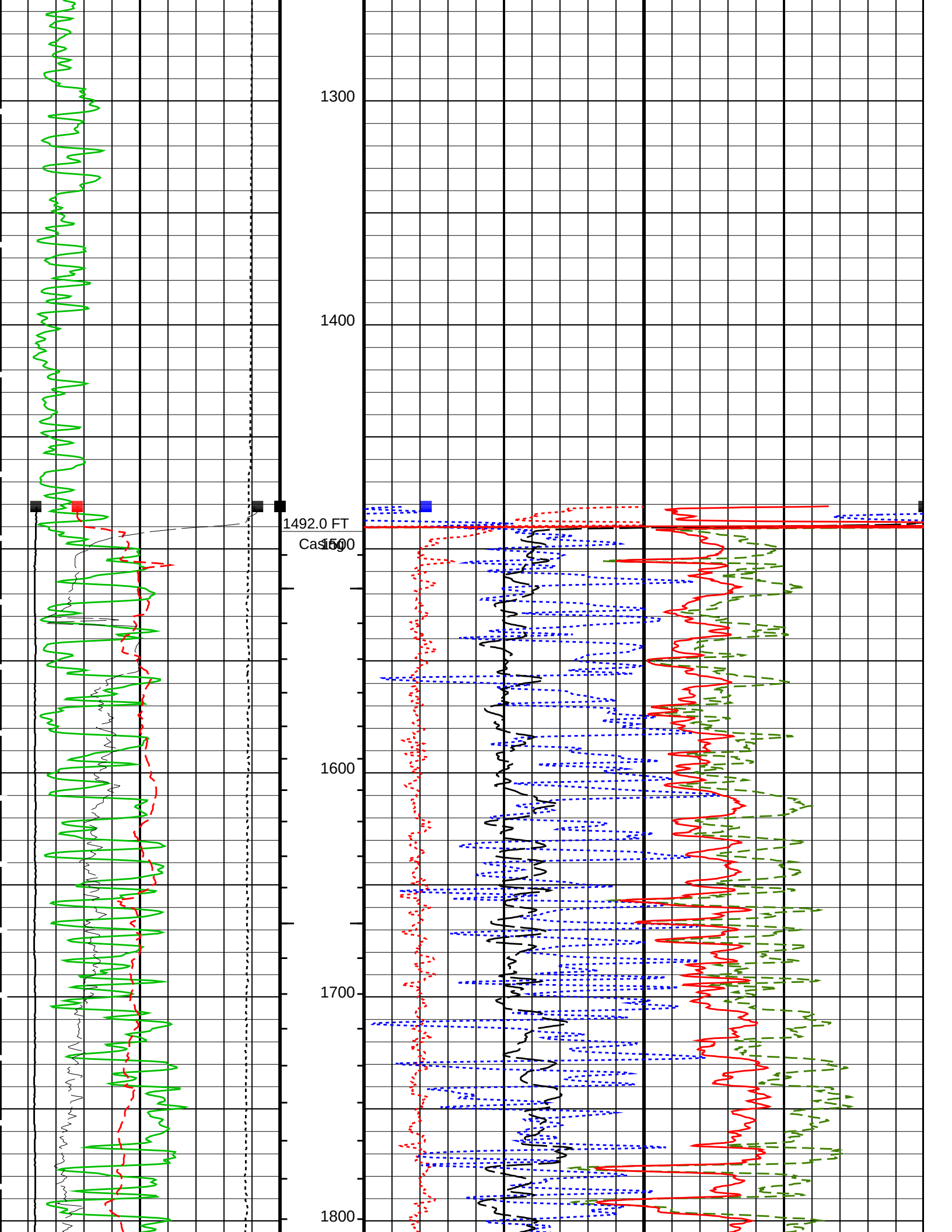
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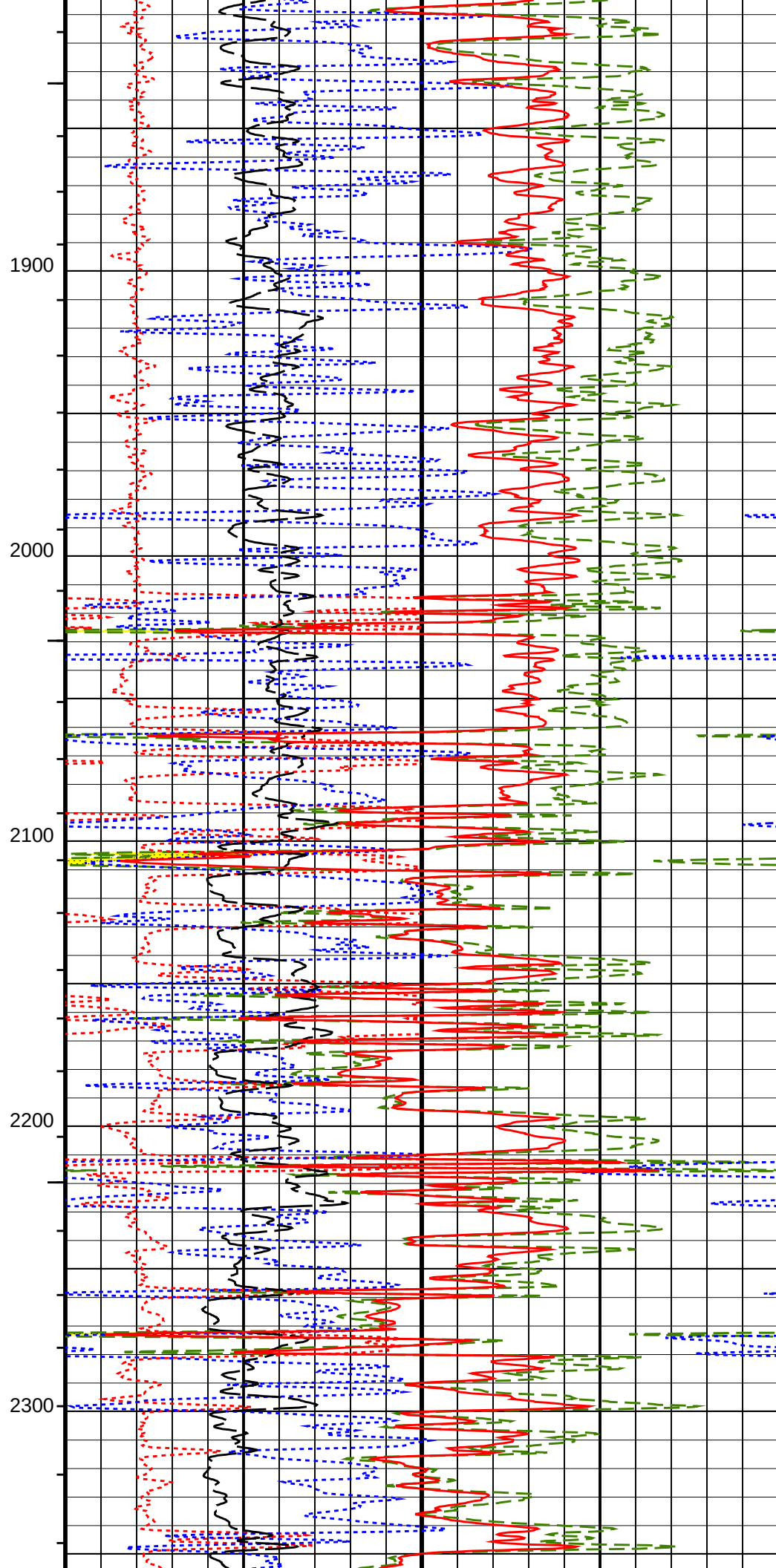
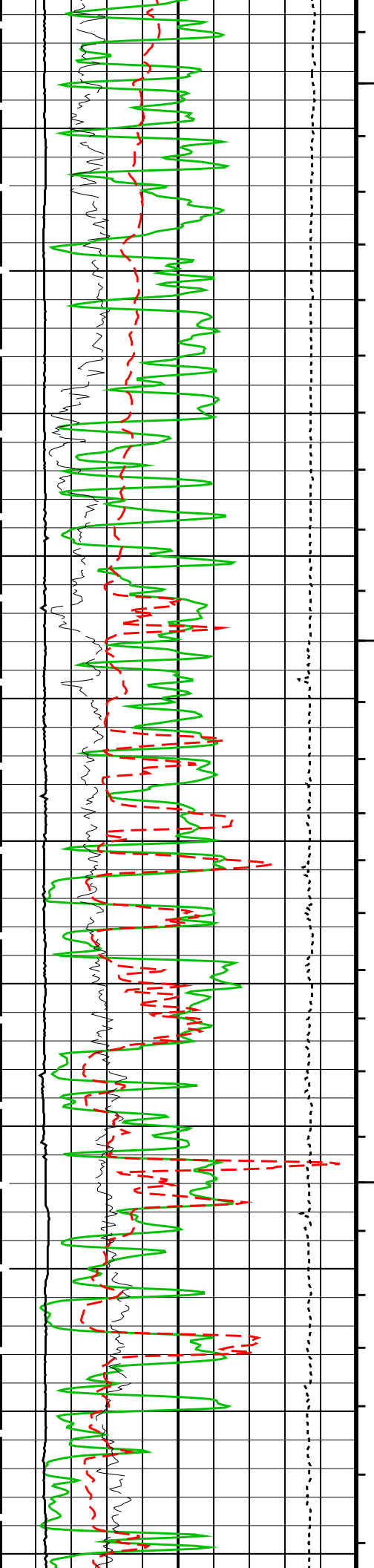
Std. Res. Density Porosity (DPHZ)
(V/V)

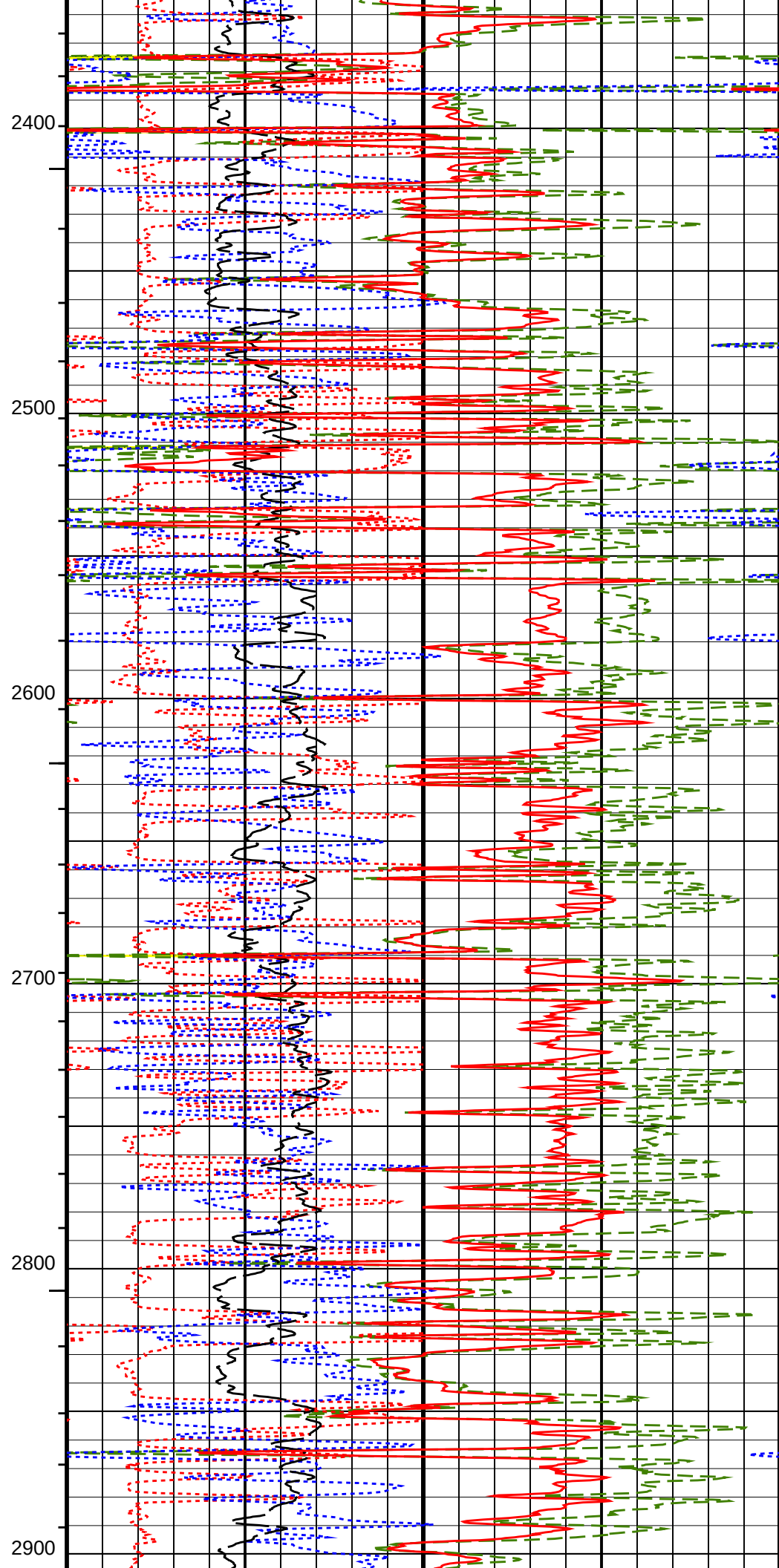
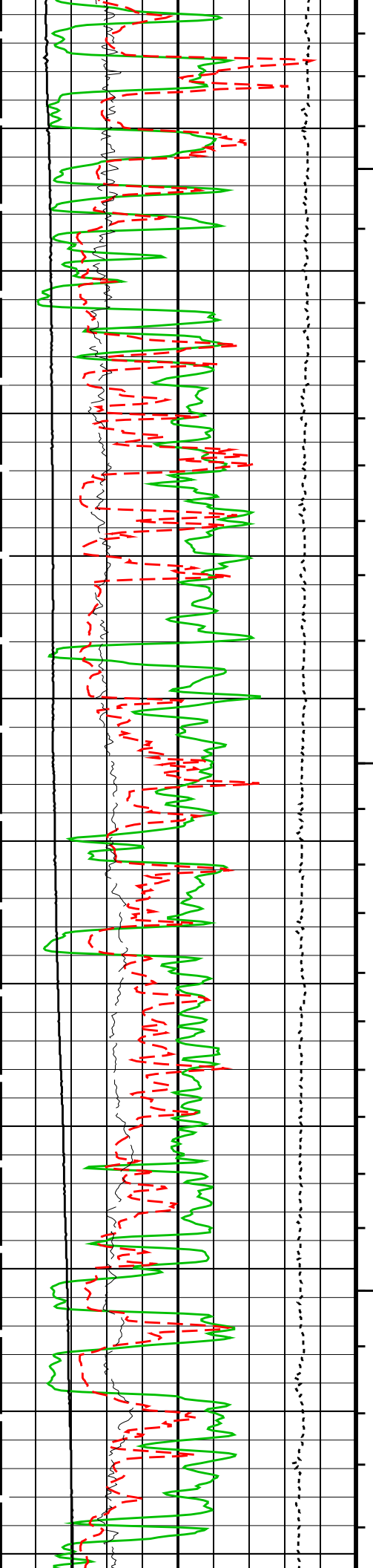
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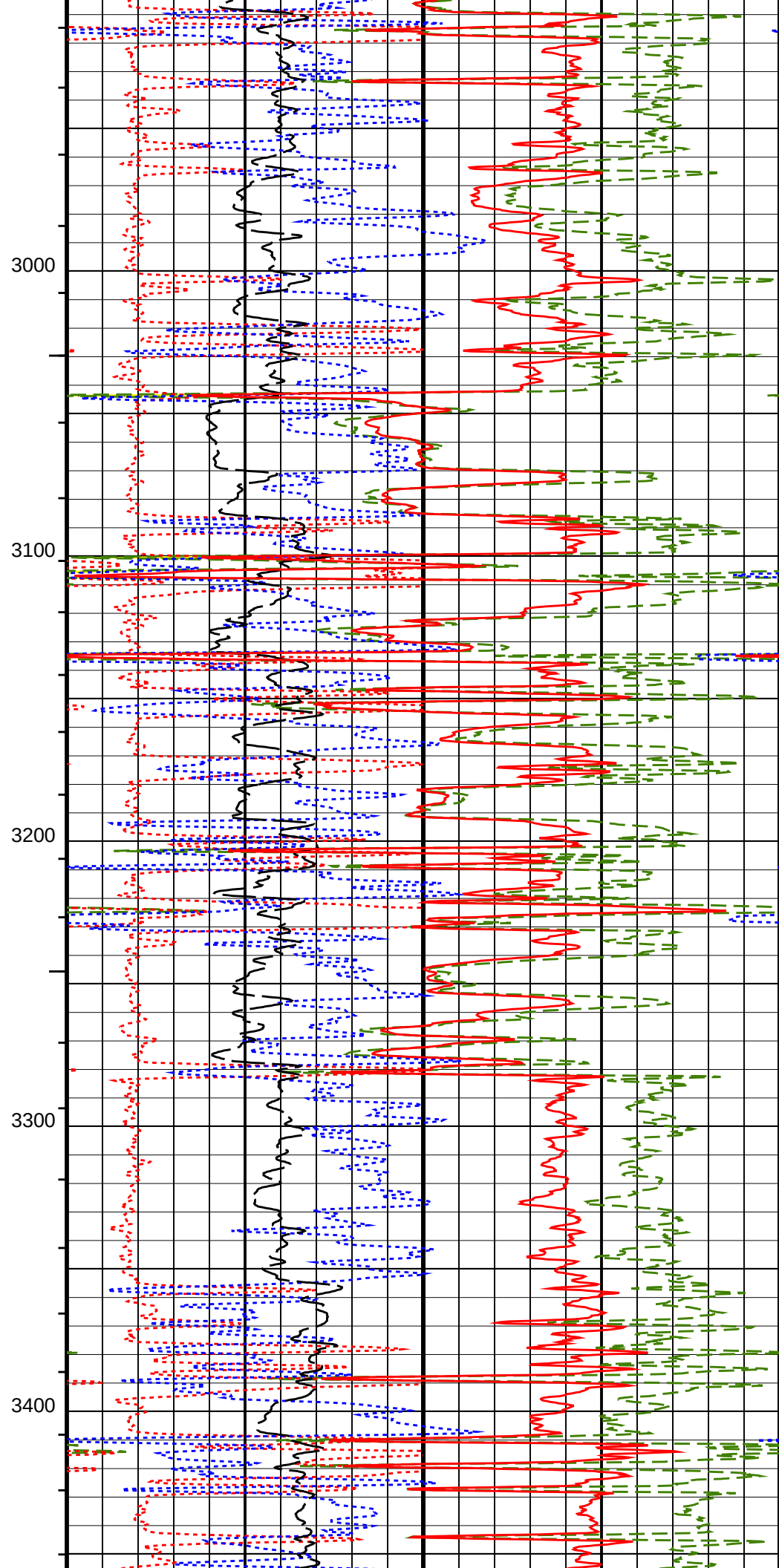
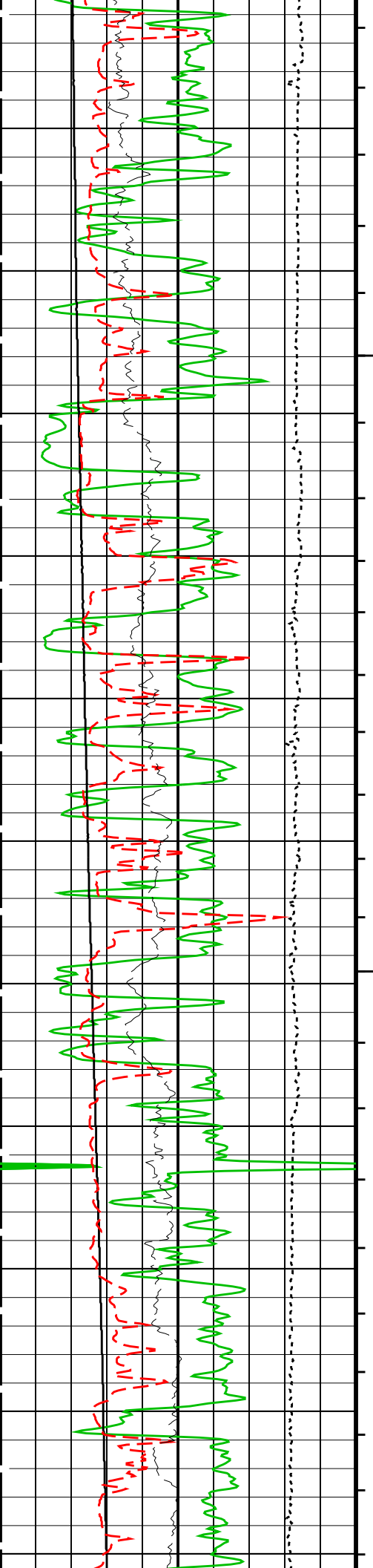


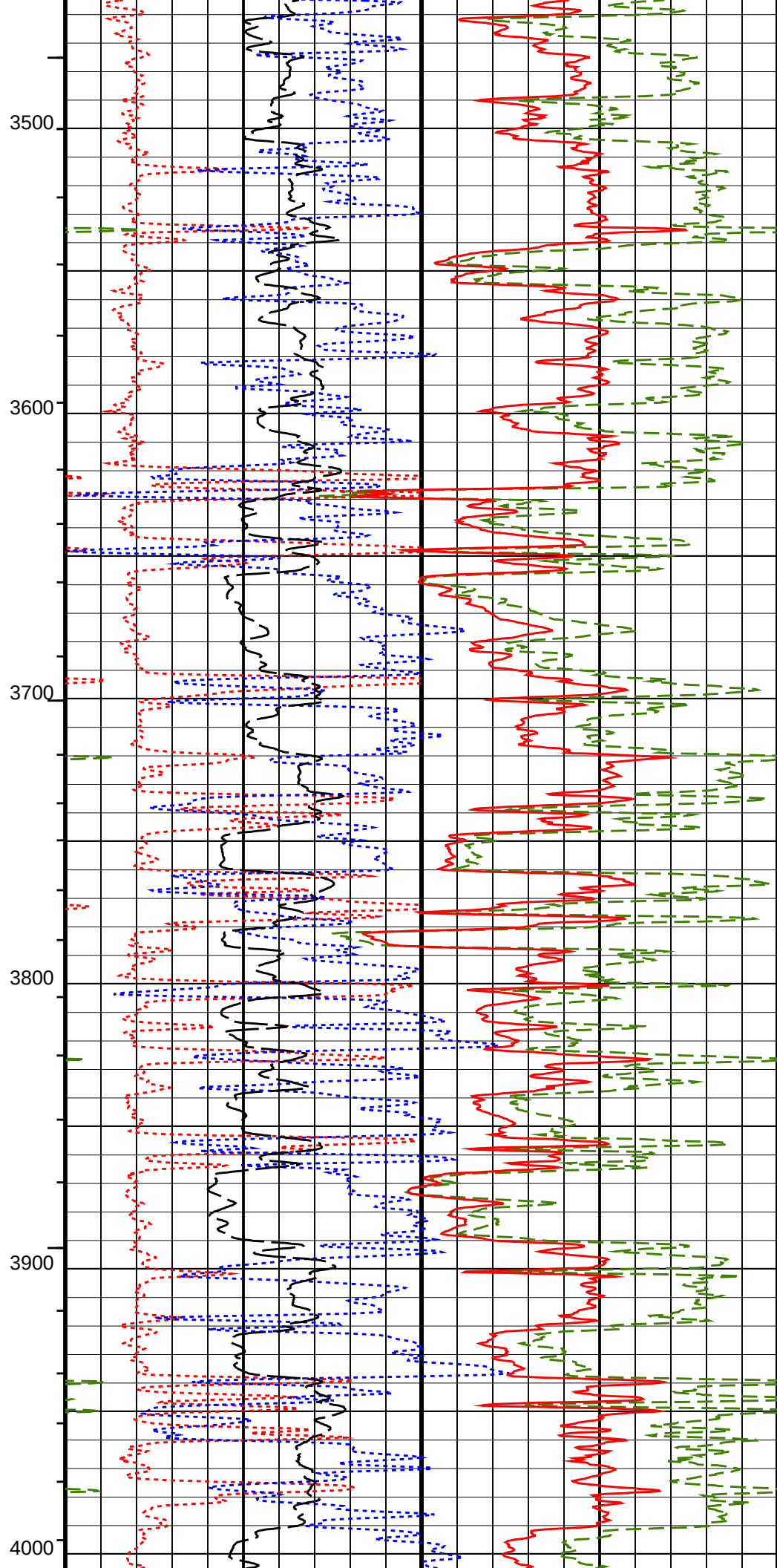
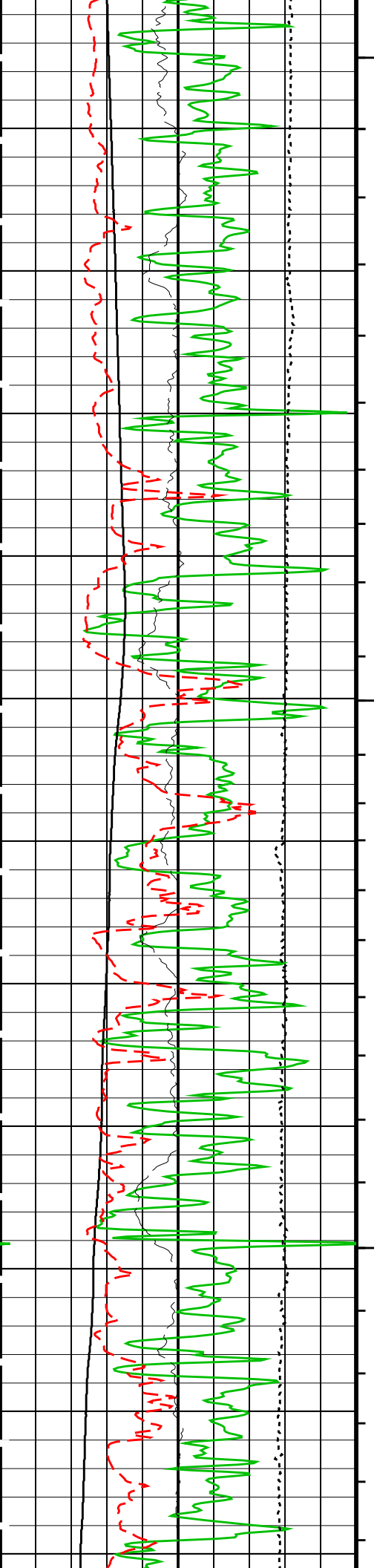


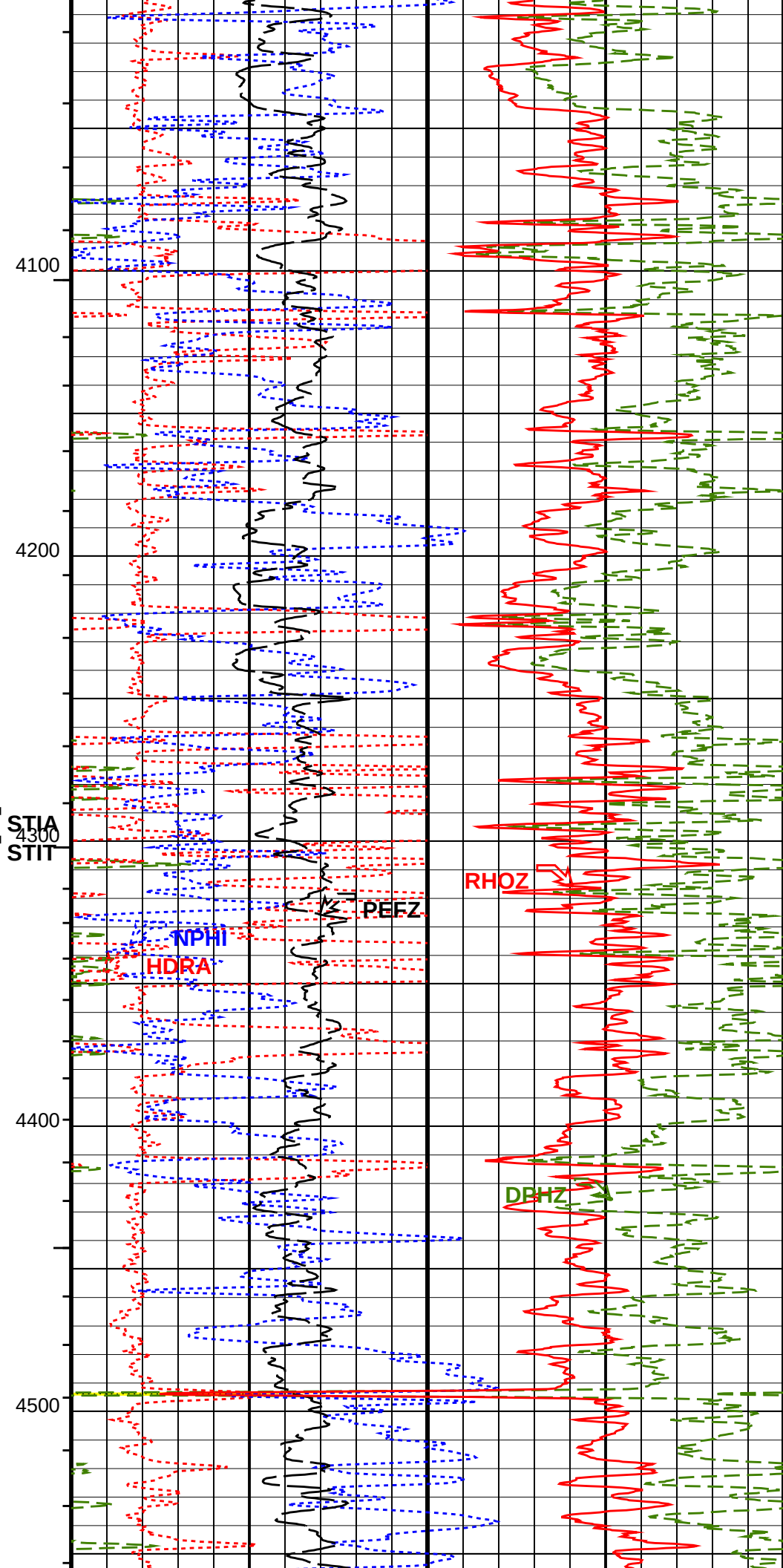
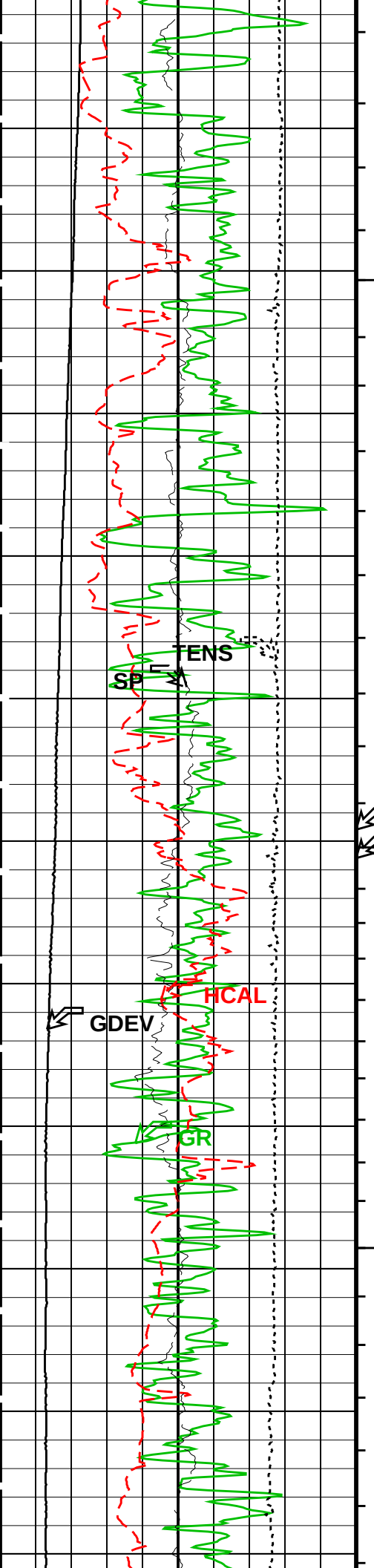


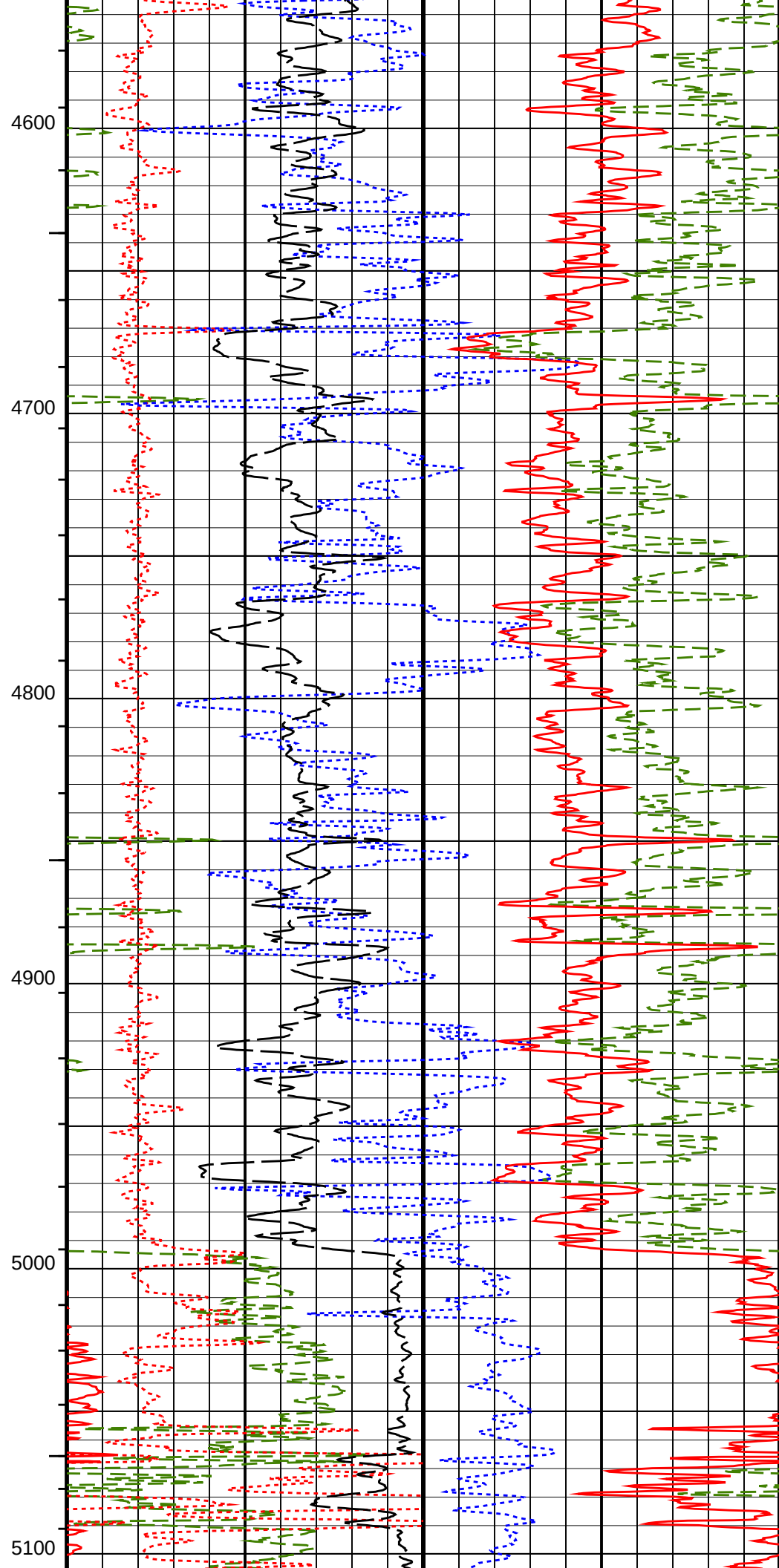
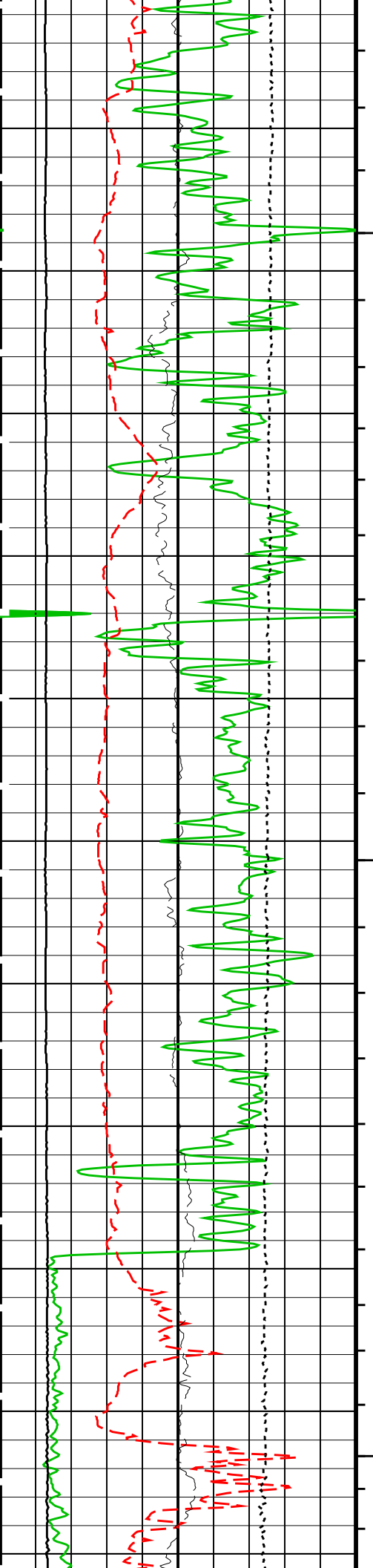


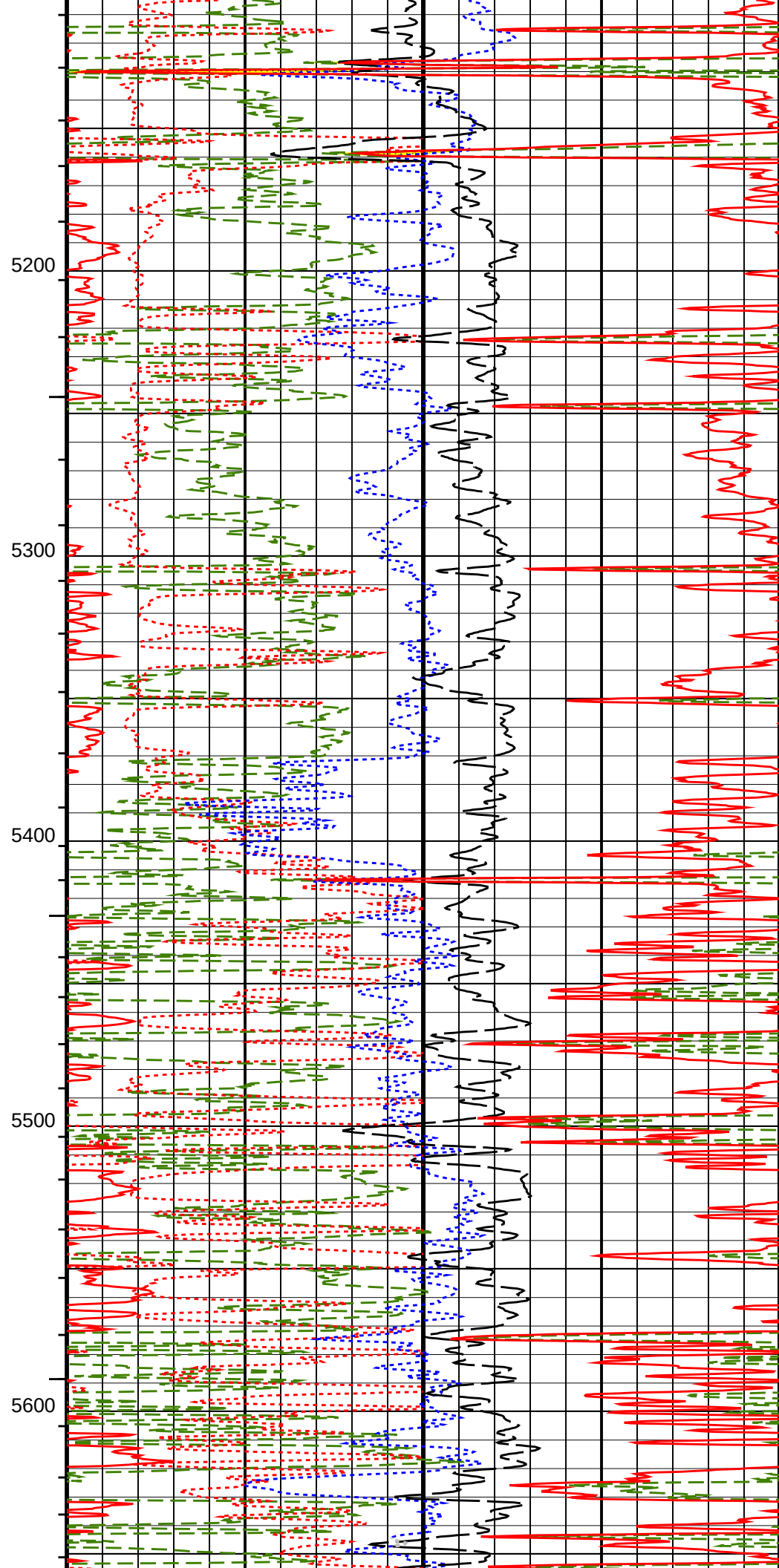
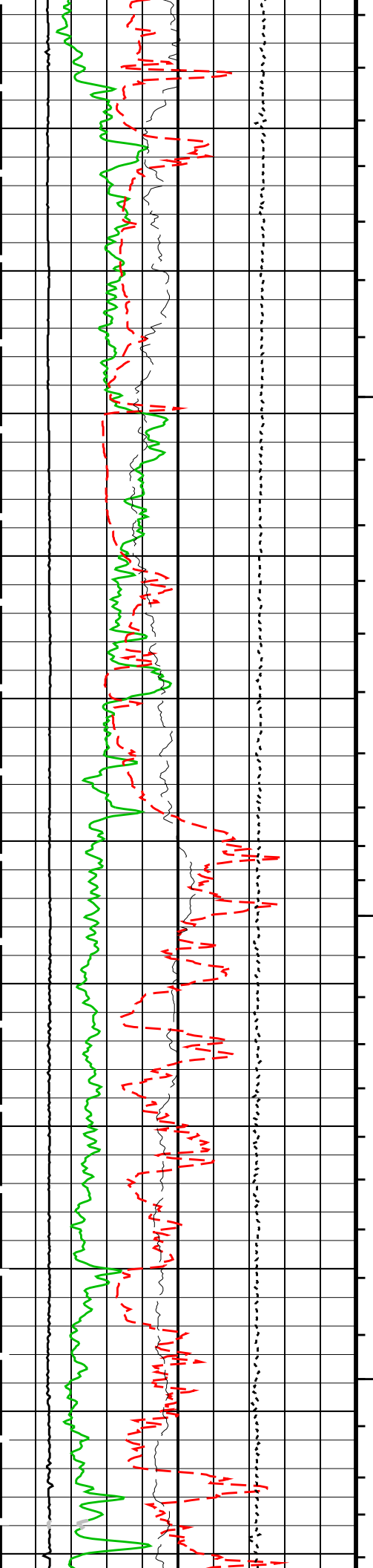


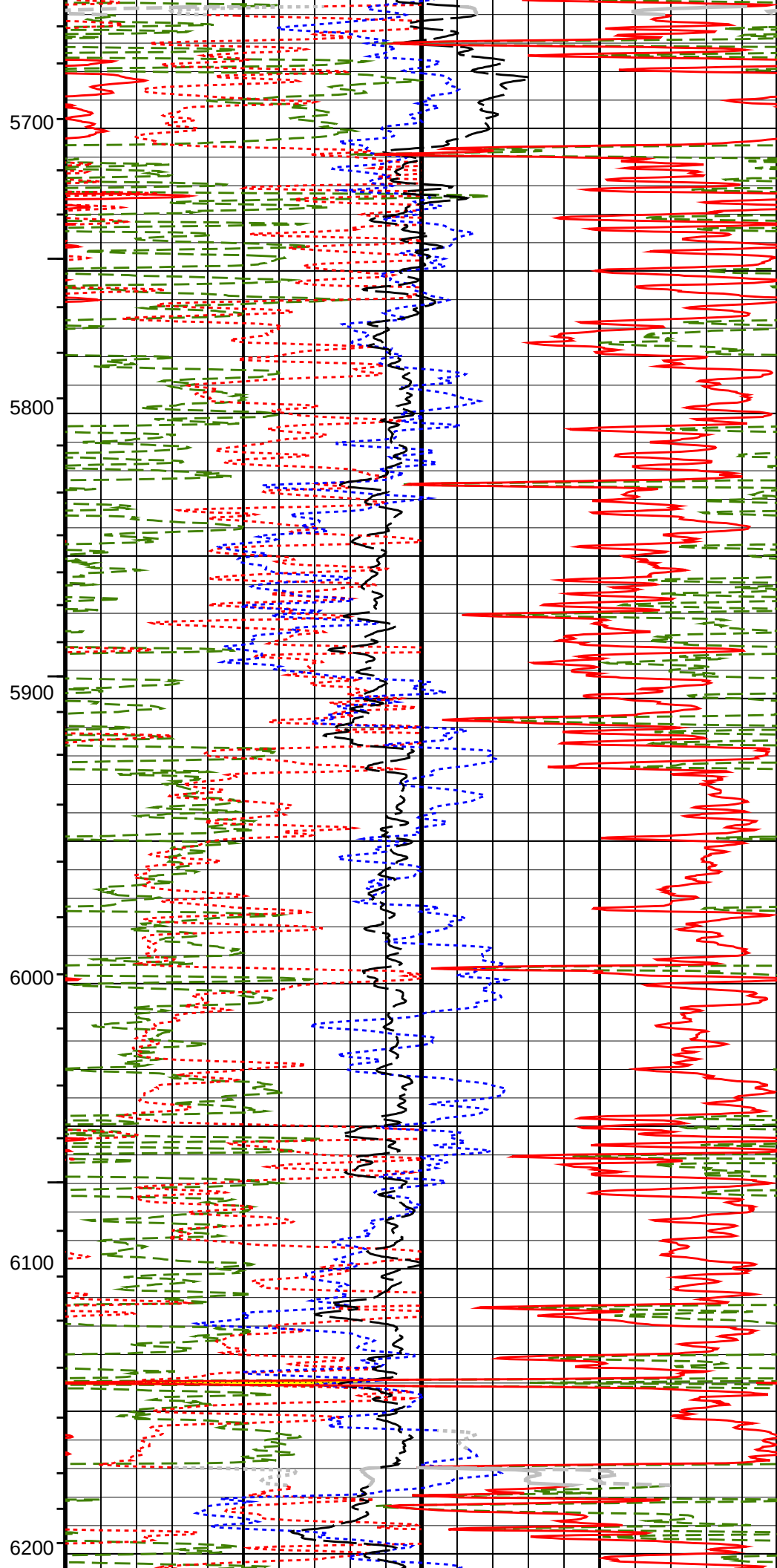
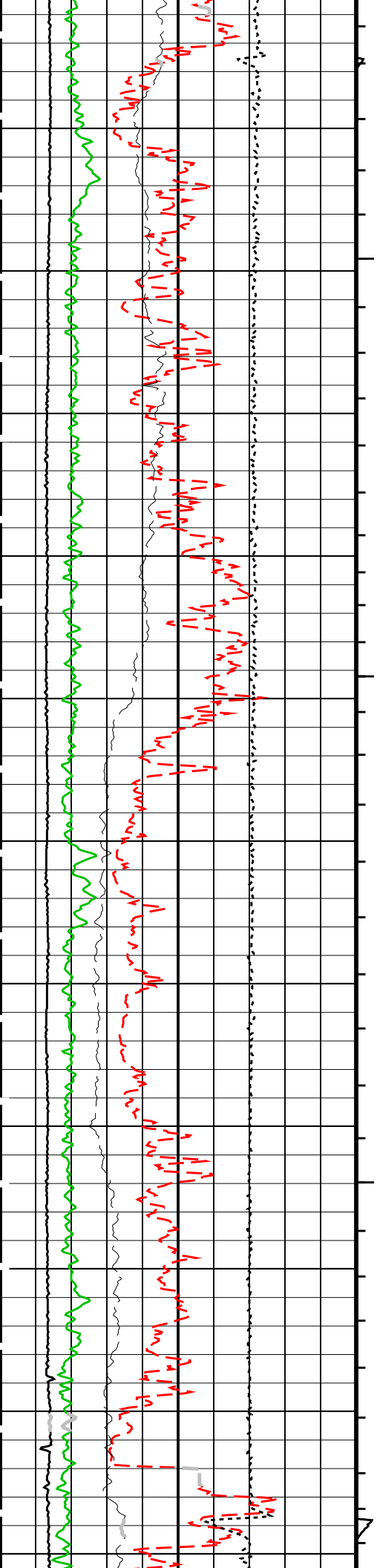


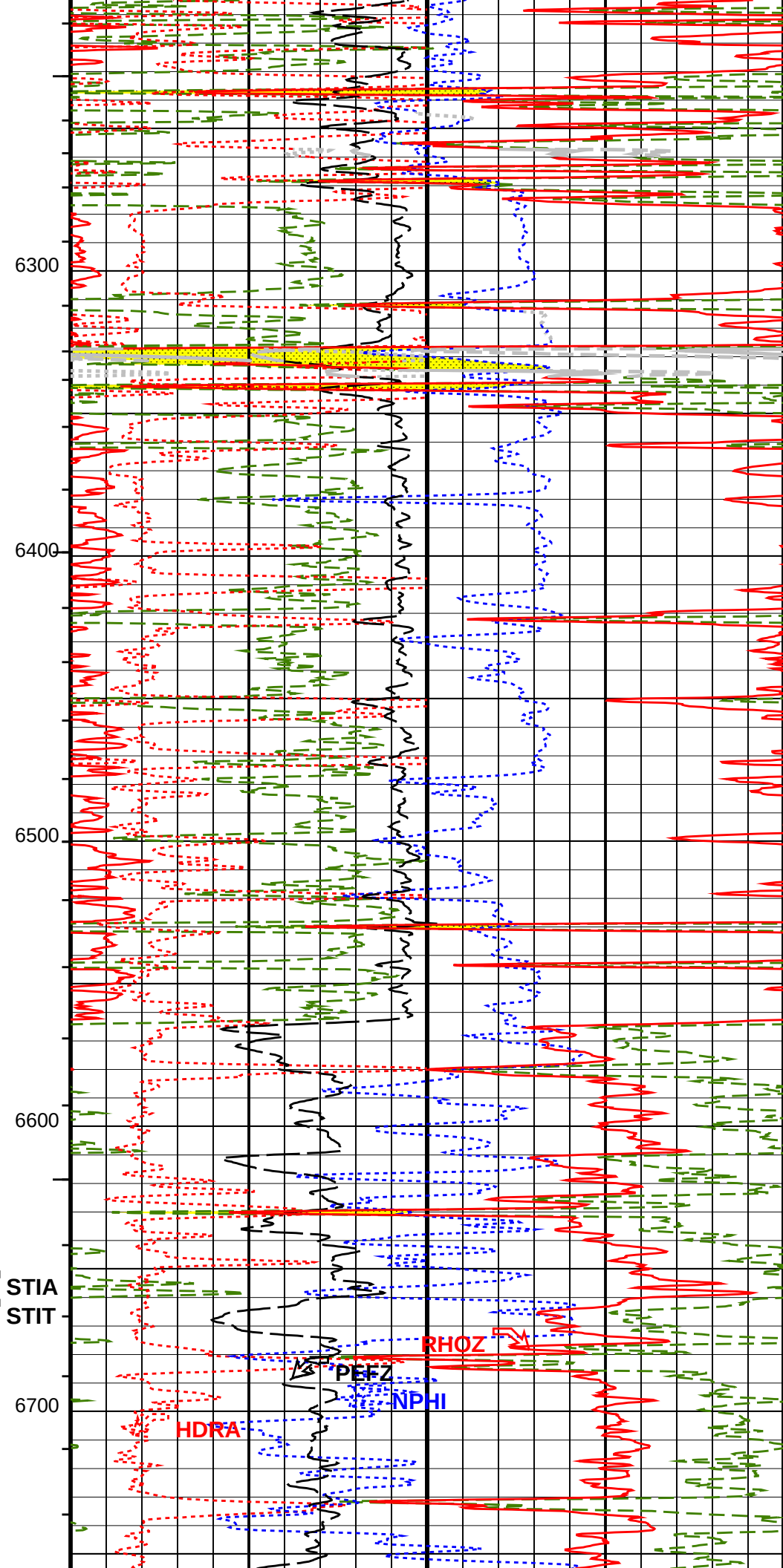
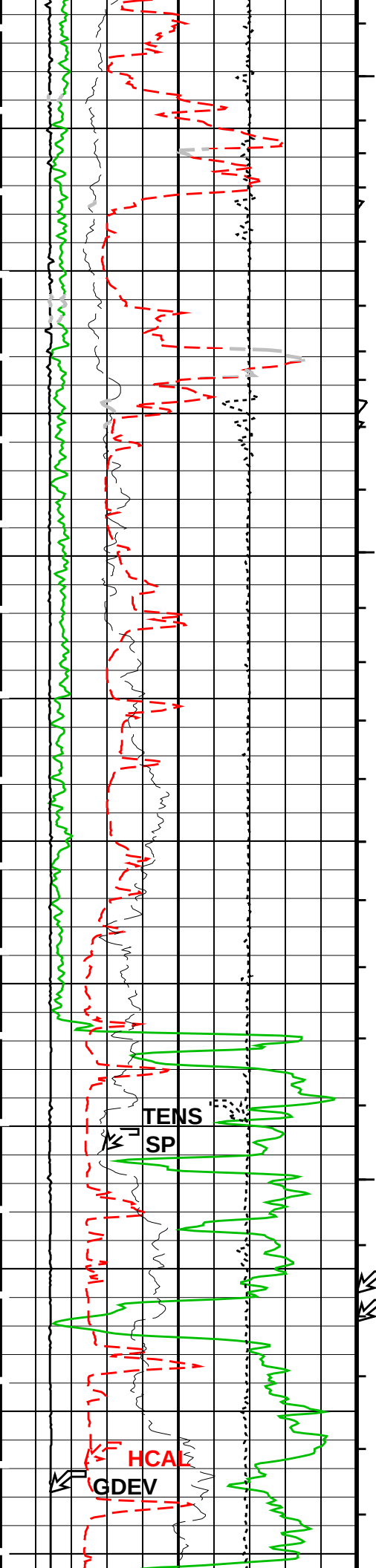


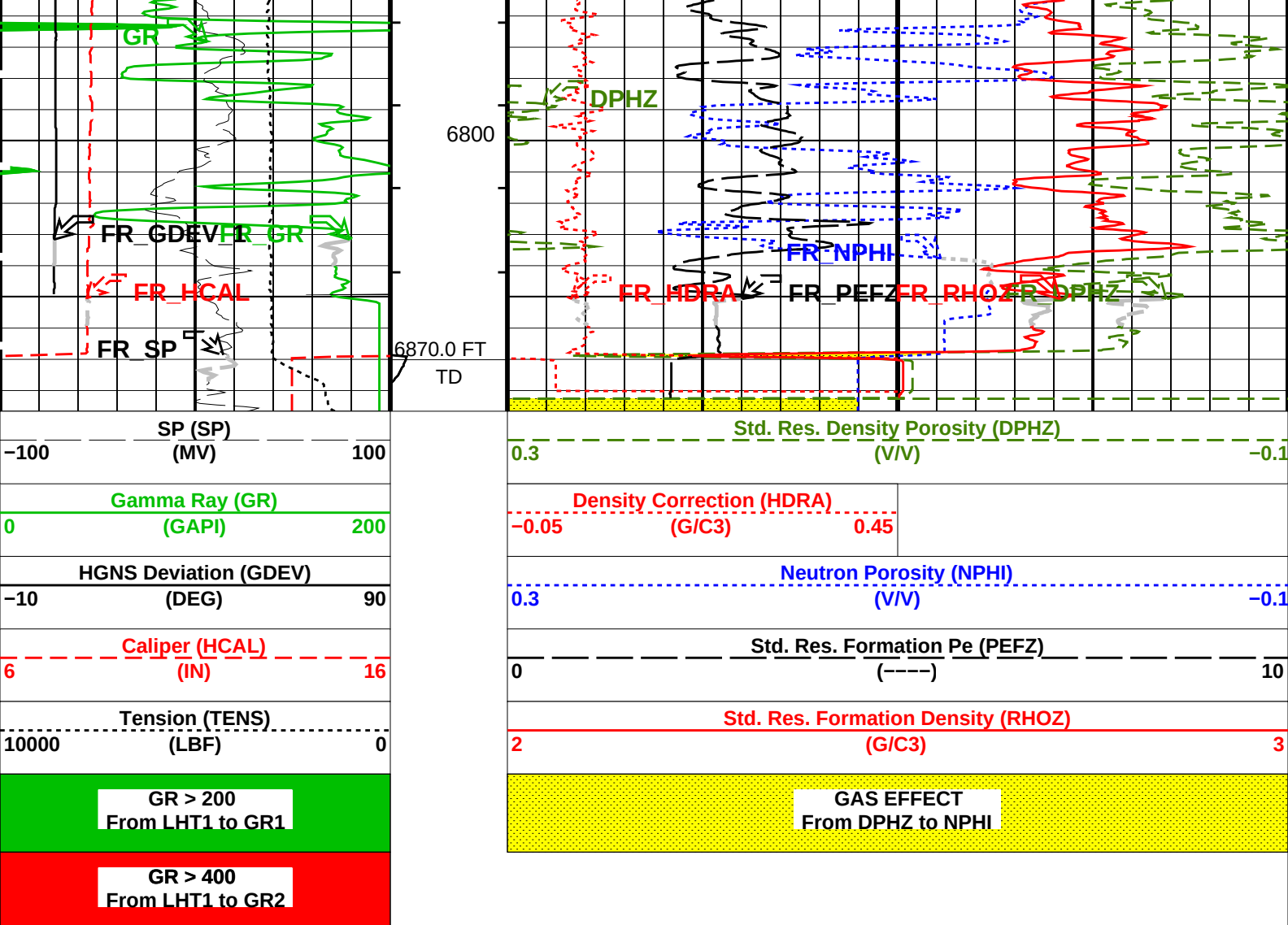












PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
AIT-M: Array Induction Tool - M		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	HCAL
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
SPNV	SP Next Value	0 MV
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL_TLD	HILT Nuclear Mud Base	WATER
BHS	Borehole Status	OPEN
DHC	Density Hole Correction	BS
FD	Fluid Density	1.1 G/C3
GCLF	Germany Coal-like Formation Option	NO
GCSE	Generalized Caliper Selection	HCAL
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MDEN	Matrix Density	2.65 G/C3
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HiRes
NSAR	HRDD Depth Sampling Rate	1 IN
HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN
FCD	Future Casing (Outer) Diameter	0 IN
GCSE	Generalized Caliper Selection	HCAL
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
STI: Stuck Tool Indicator		
LTFR	Trigger for MAXIS First Reading Label	STI

LBFR	Trigger for MAXIS First Reading Label	STI	2.5	FT
STKT	STI Stuck Threshold		6885.00	FT
TDD	Total Depth - Driller		6870.00	FT
TDL	Total Depth - Logger			
System and Miscellaneous				
BS	Bit Size		8.500	IN
DFD	Drilling Fluid Density		9.40	LB/G
DO	Depth Offset for Playback		0.0	FT
PP	Playback Processing	NORMAL		
TD	Total Depth		6870	FT

Format: PEX_NUC2_1 Vertical Scale: 2" per 100' Graphics File Created: 15-Oct-2011 16:01

OP System Version: 19C0-187

AIT-M	19C0-187	HILTH-FTB	19C0-187
DTC-H	19C0-187		

Input DLIS Files

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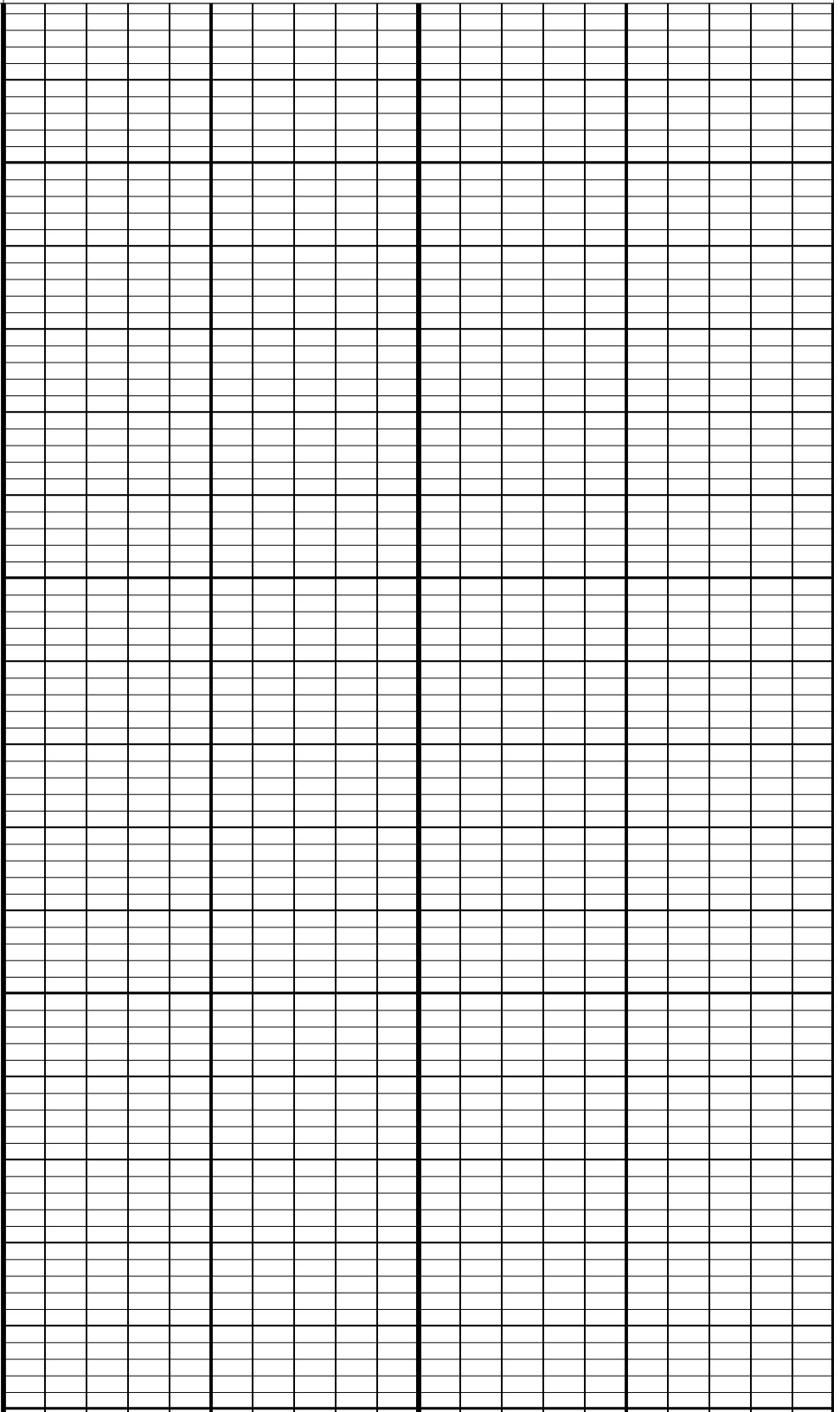
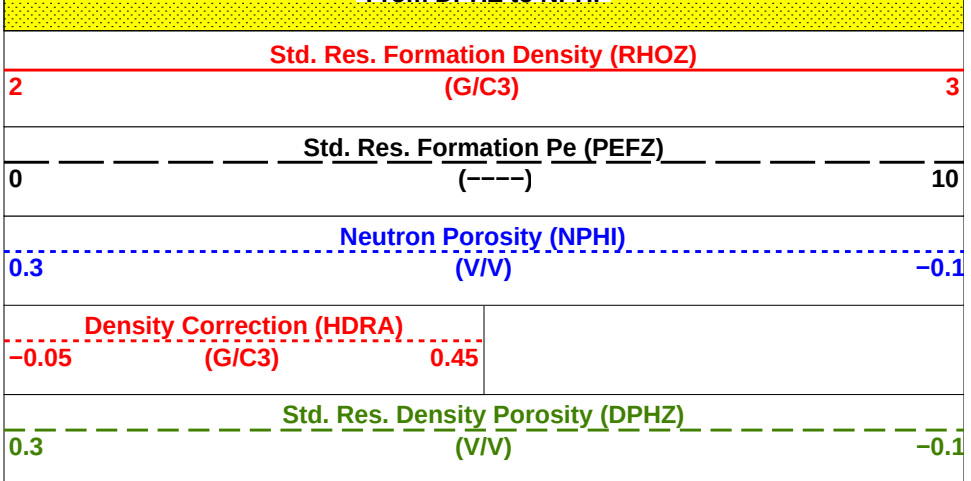
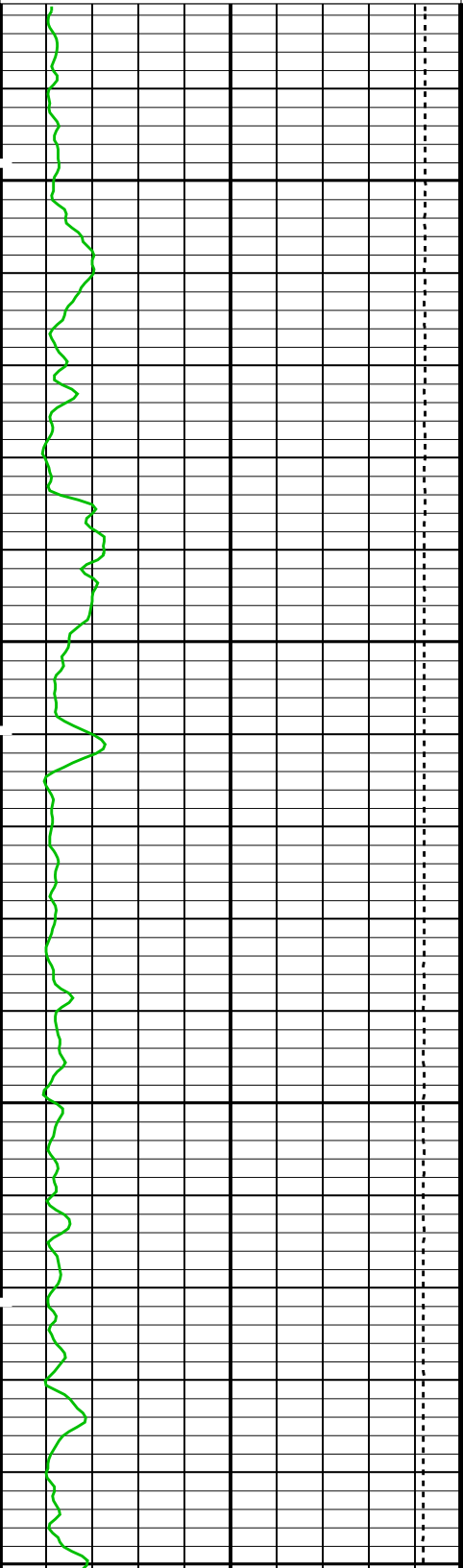
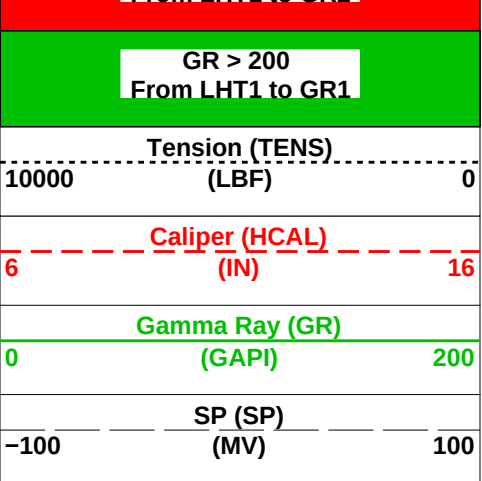
PIP SUMMARY

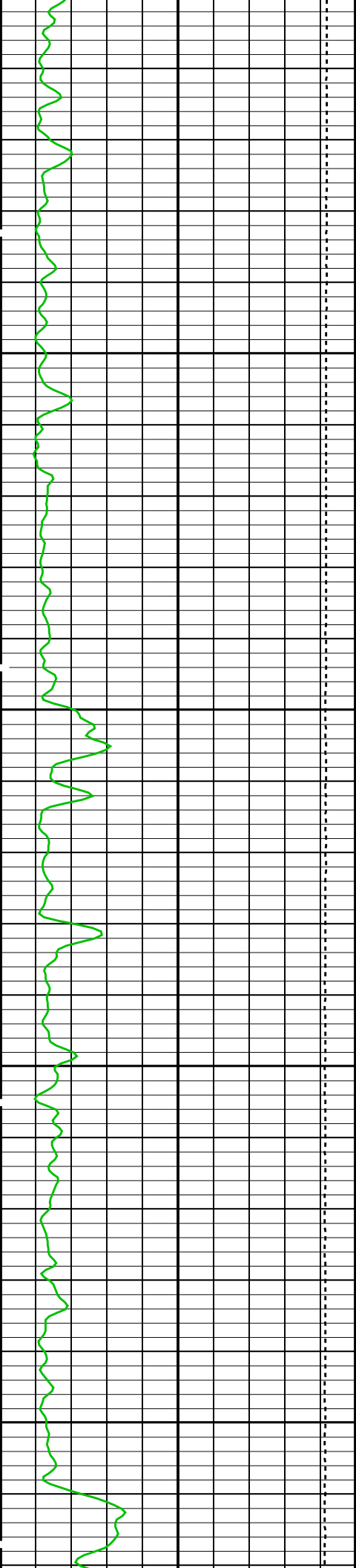
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 - └ Integrated Cement Volume Minor Pip Every 10 F3
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Time Mark Every 60 S

GR > 400
From LHT1 to GR2

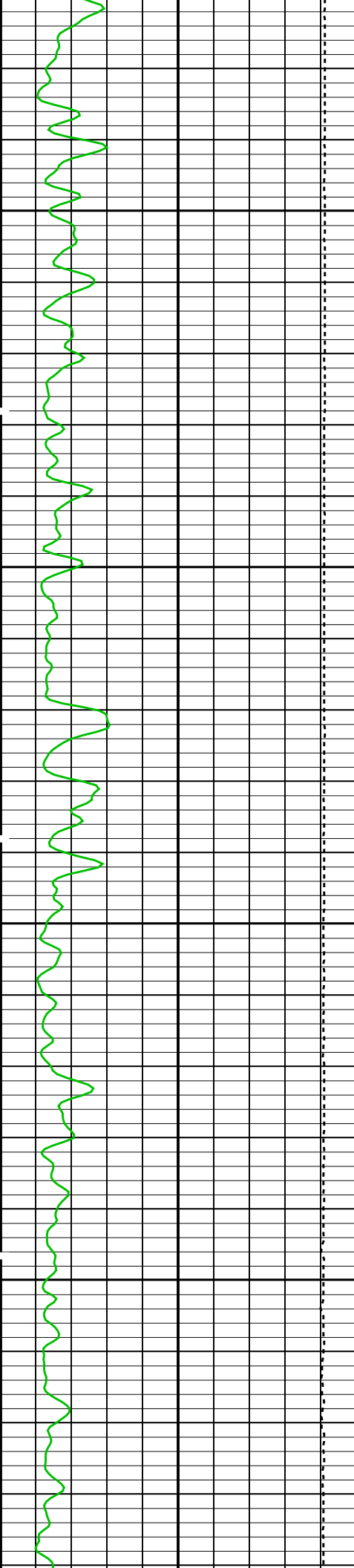
GAS EFFECT
From DPHZ to NPHI





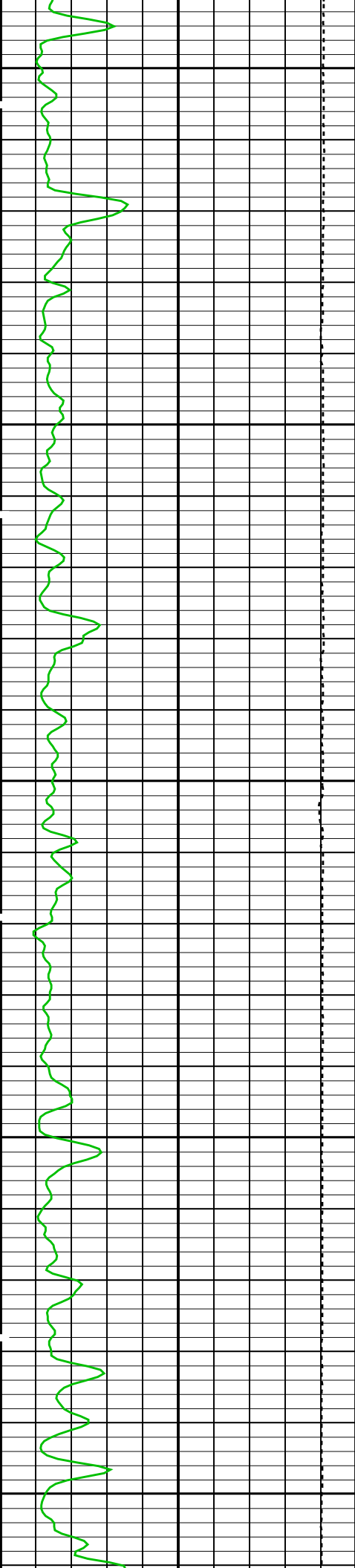
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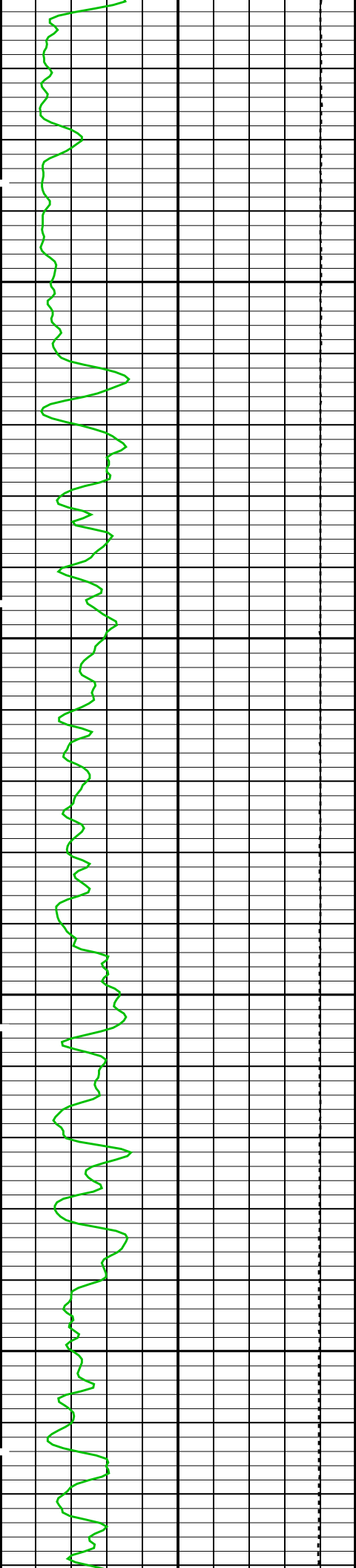
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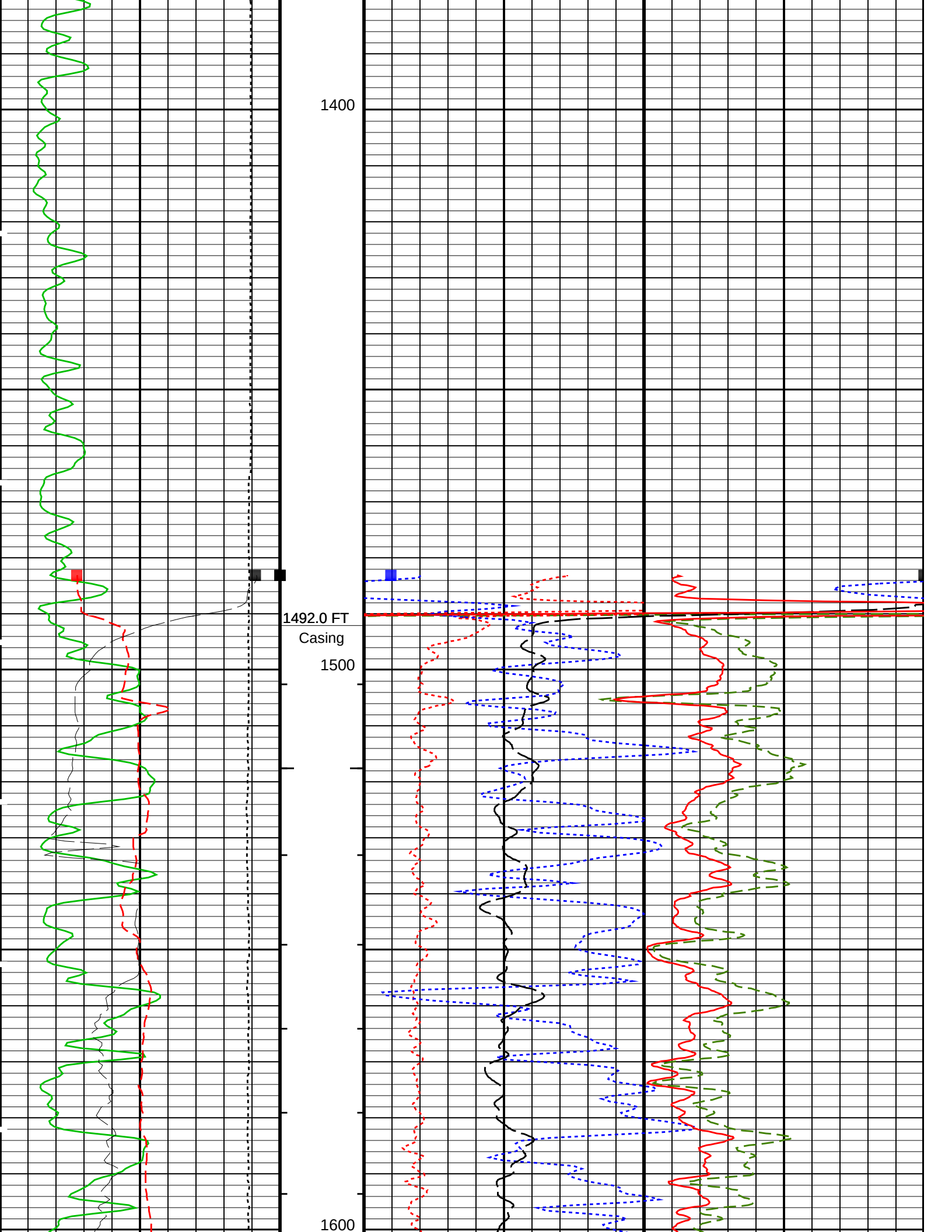
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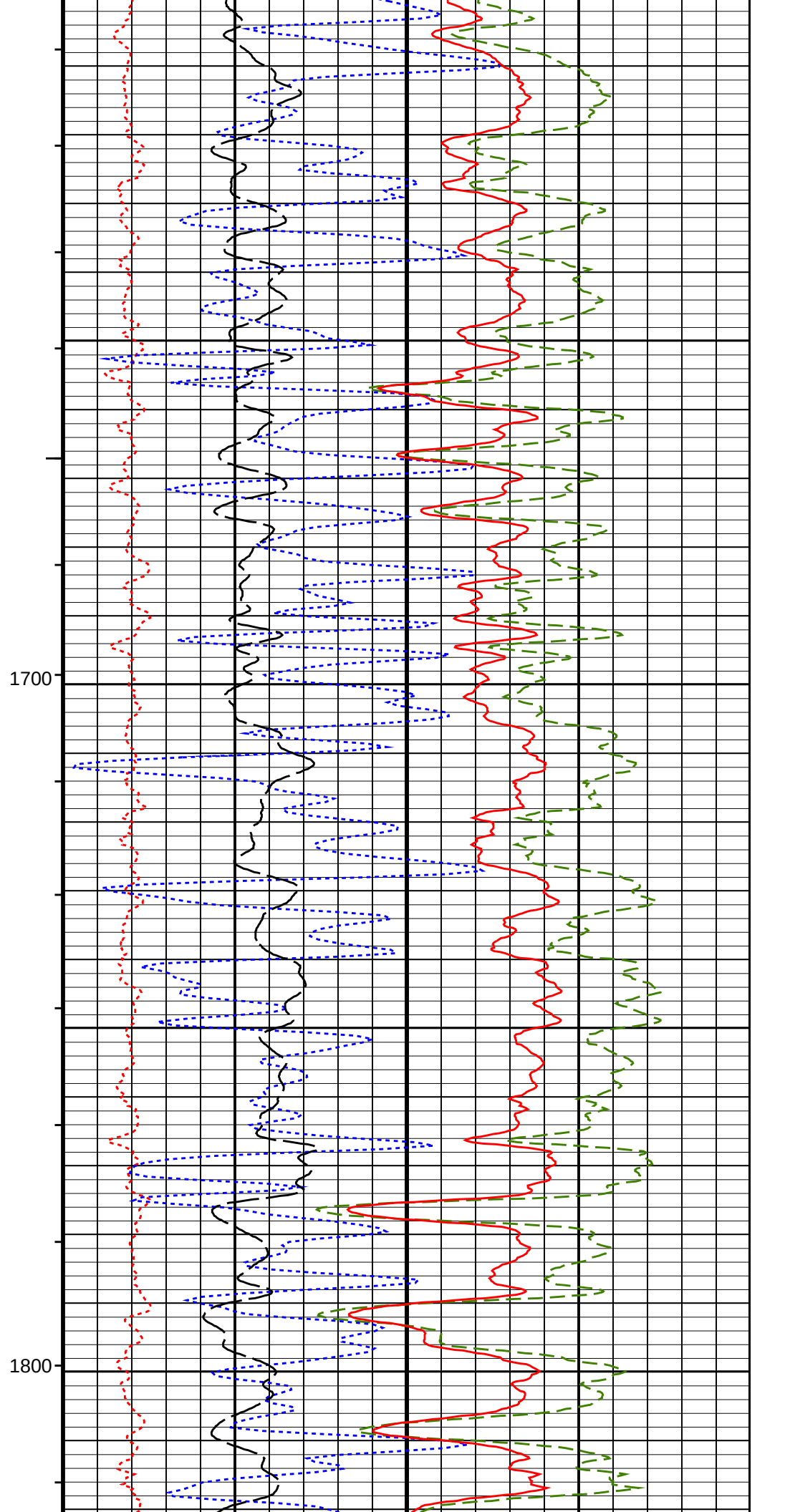
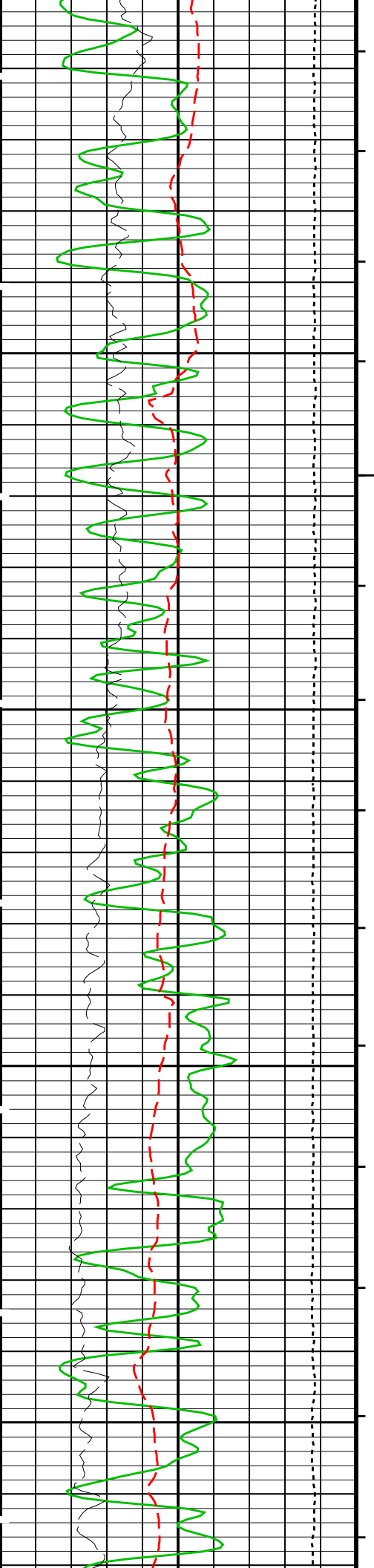
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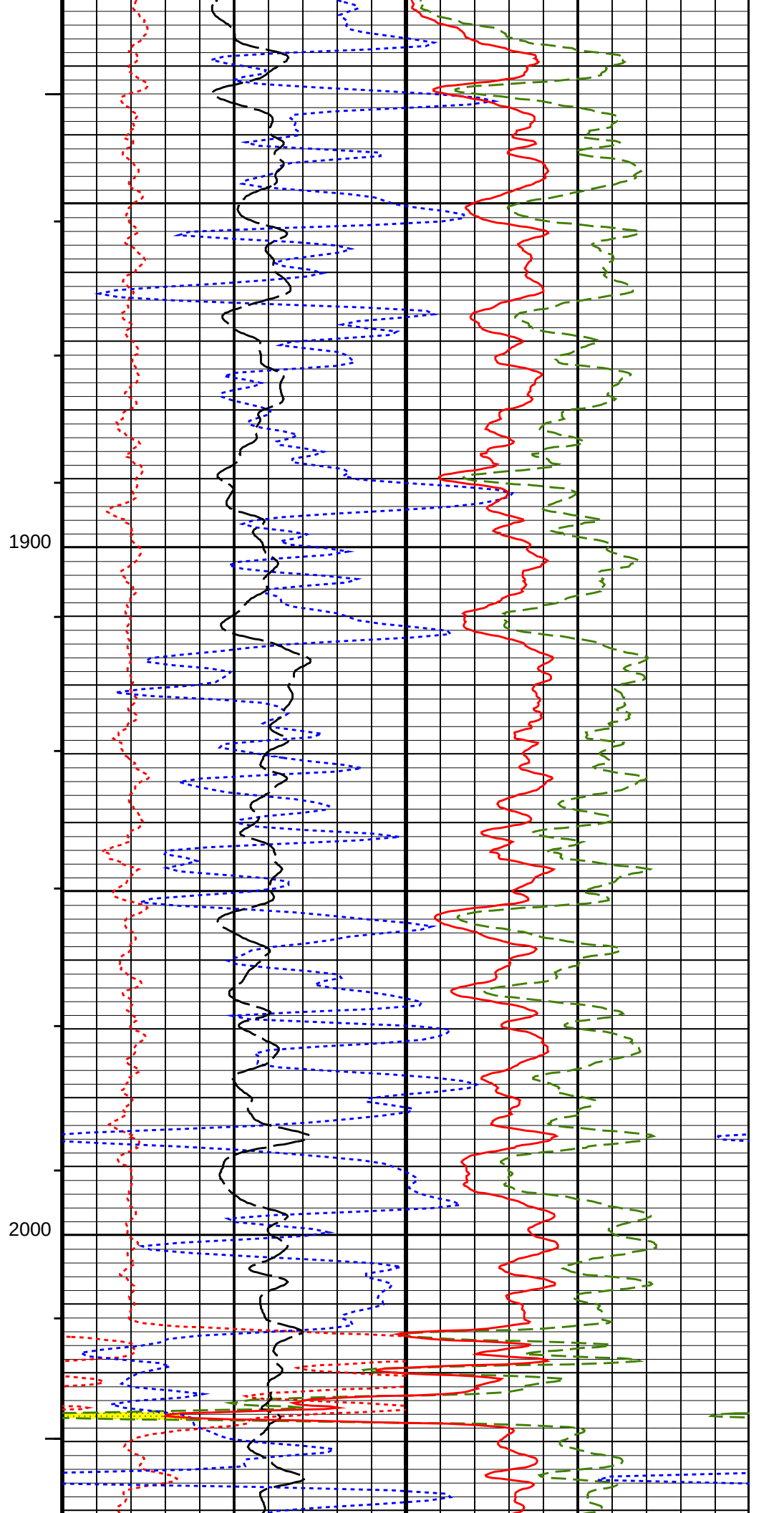
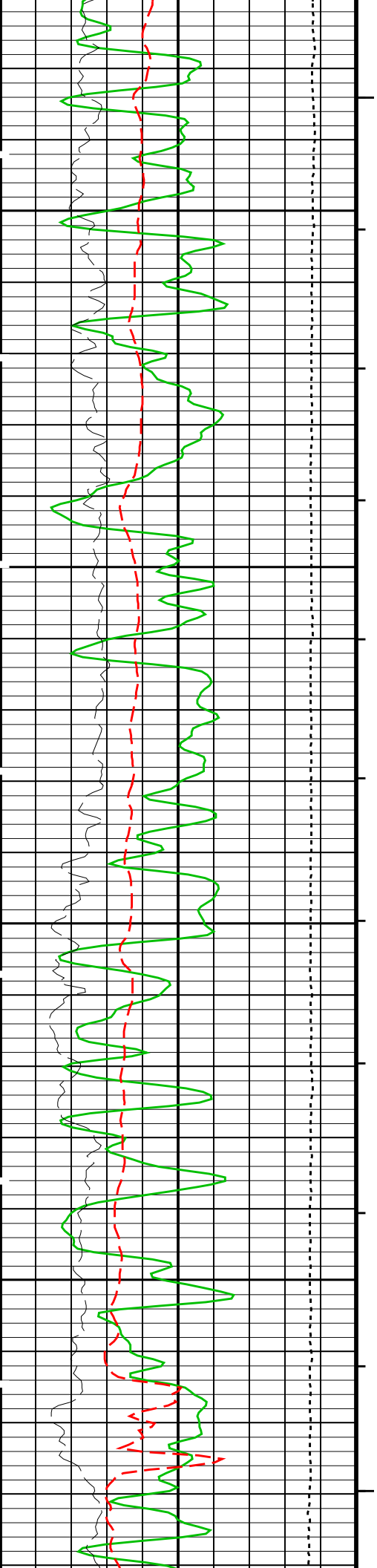


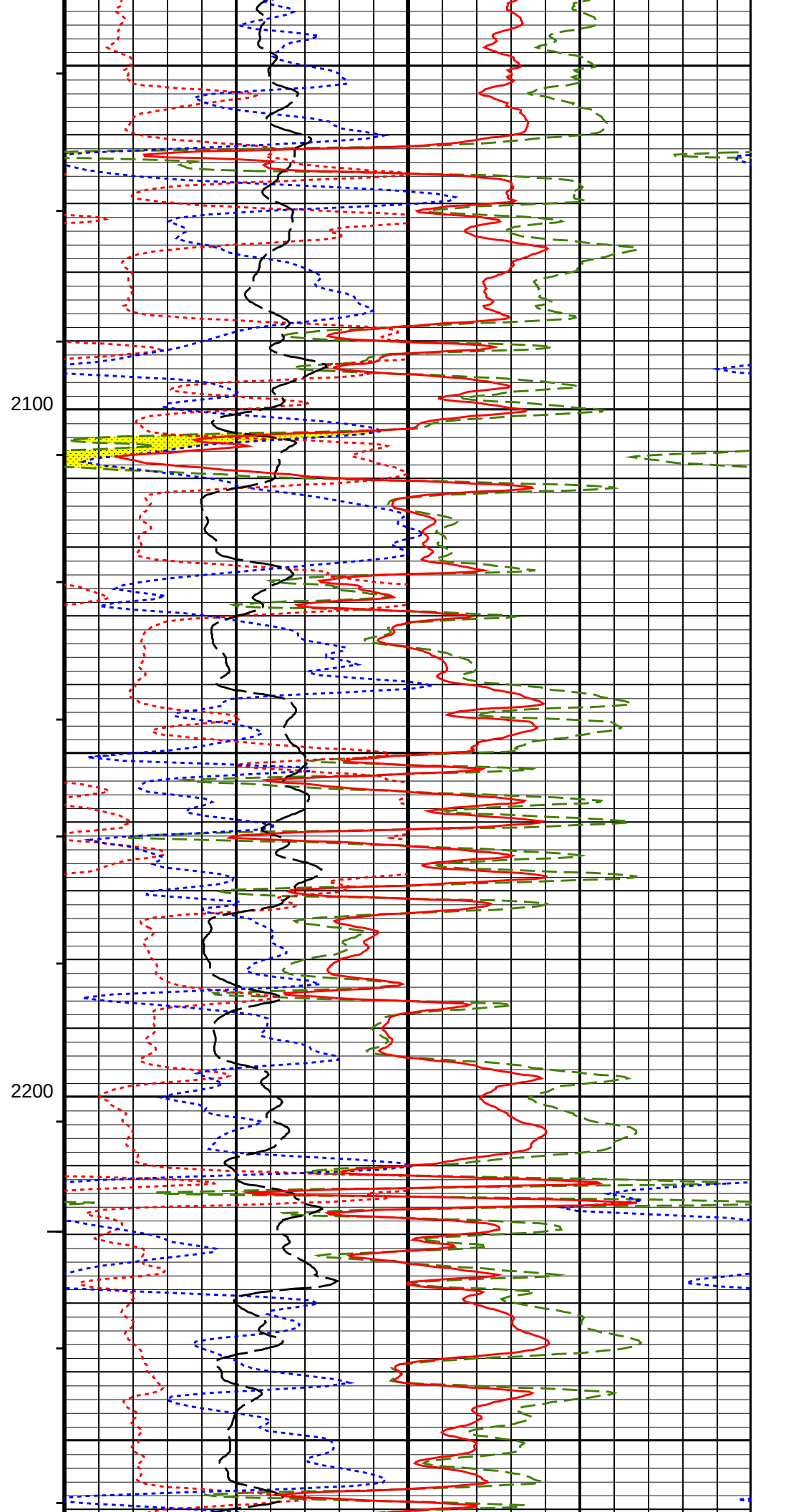
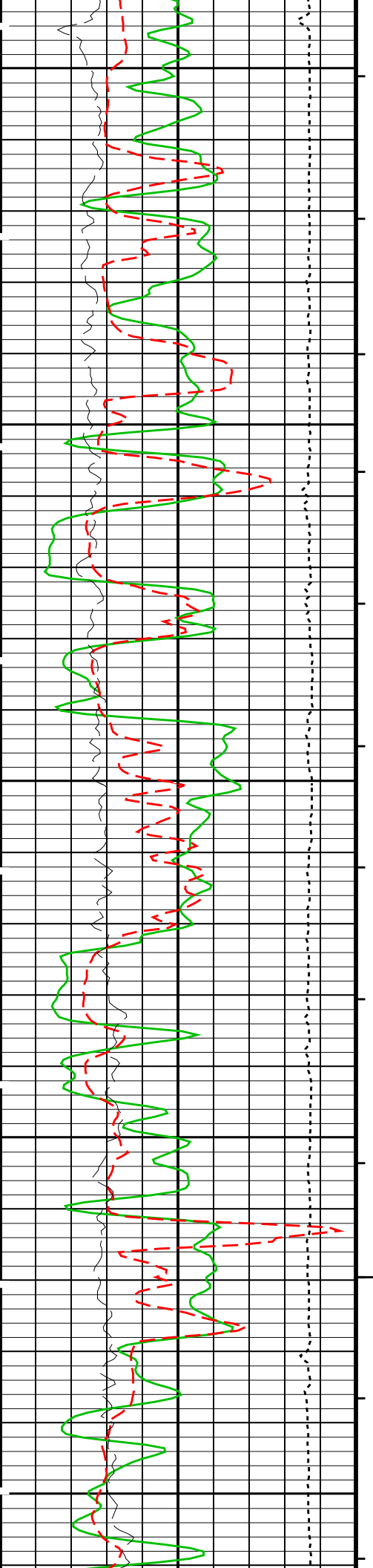
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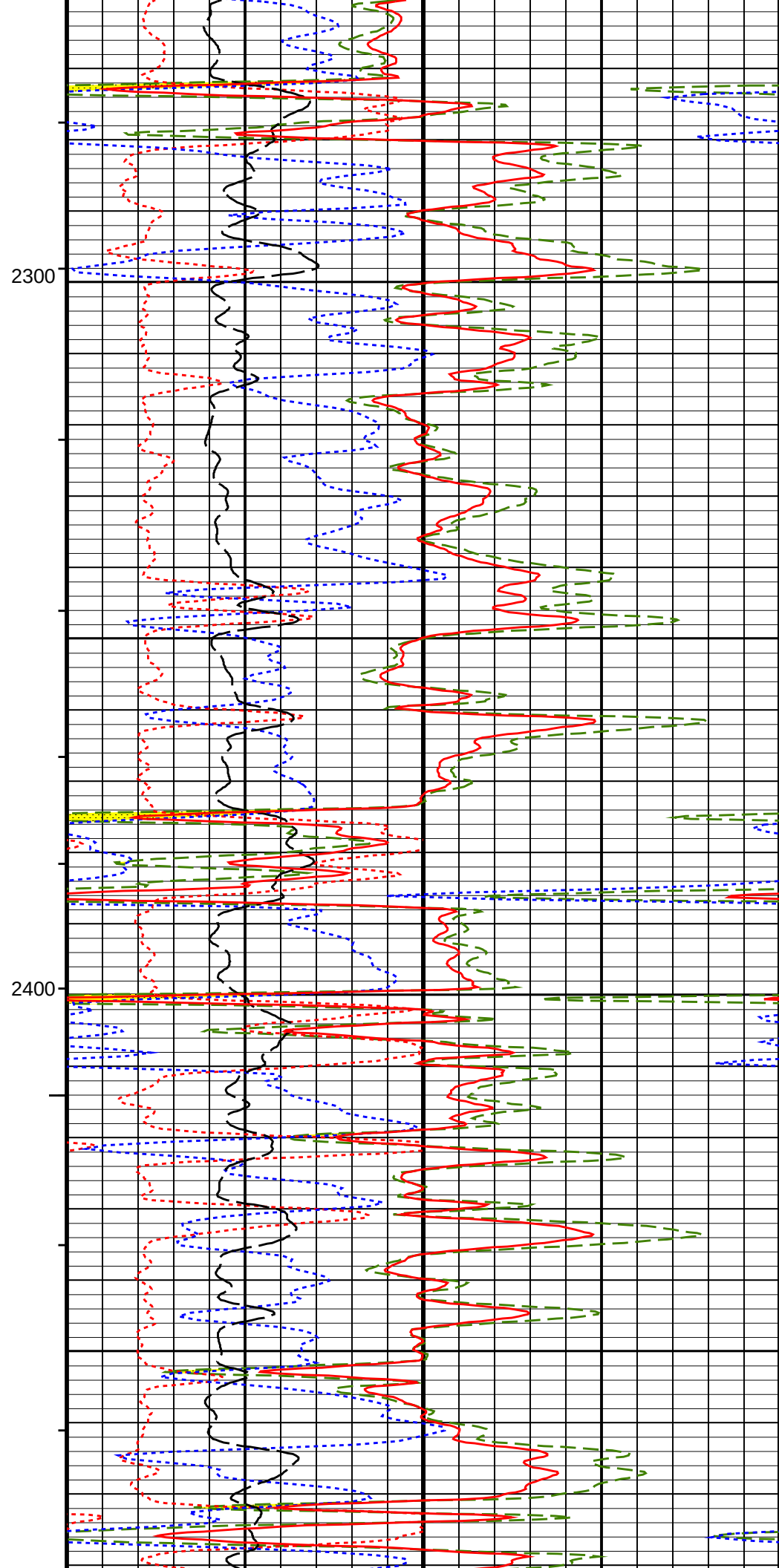
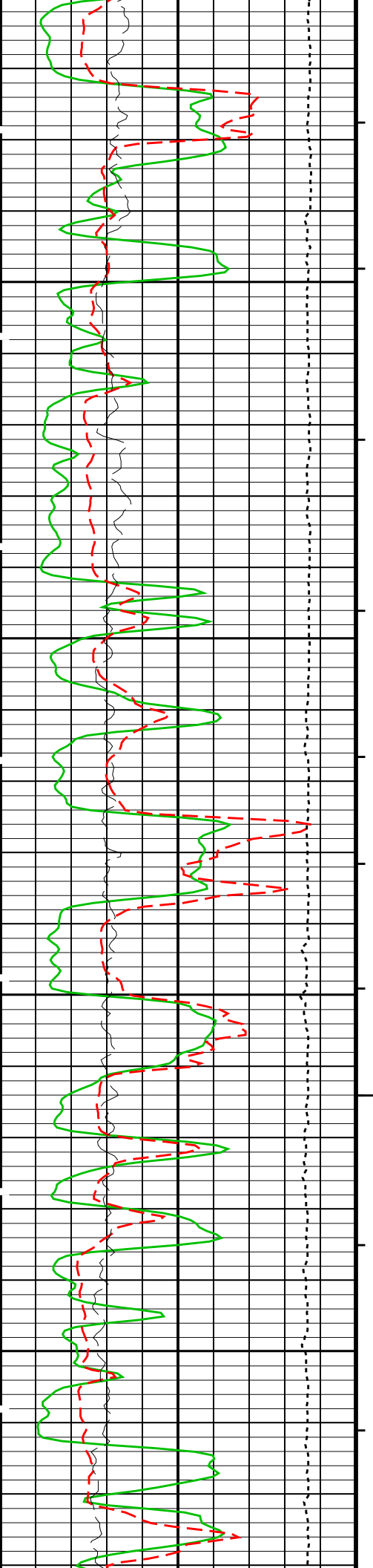
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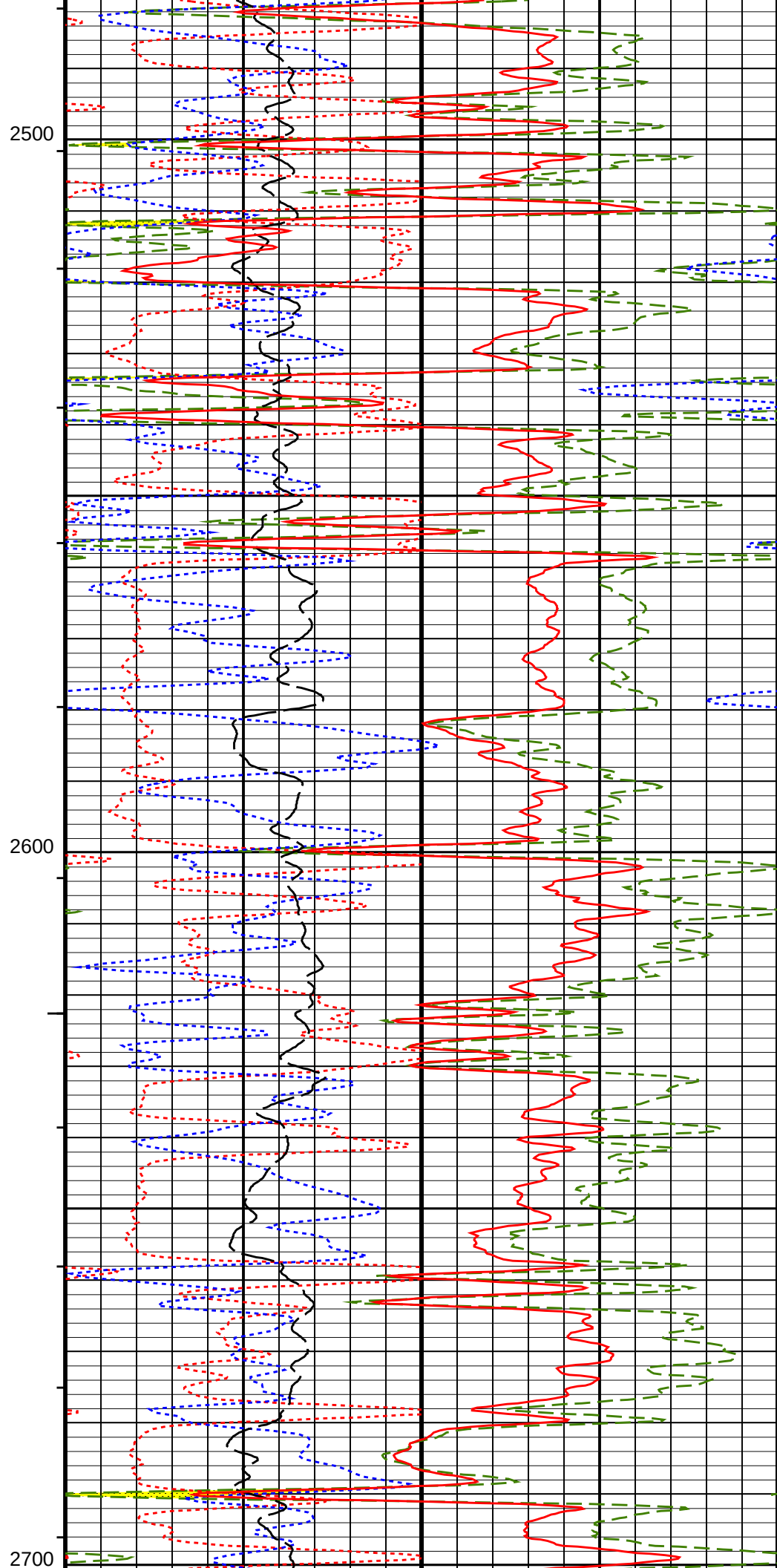
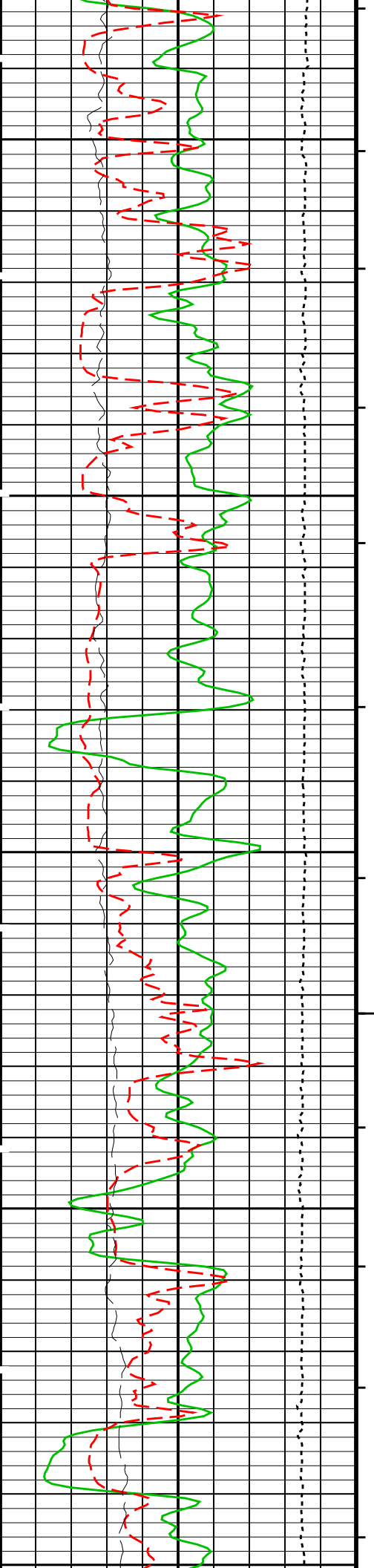


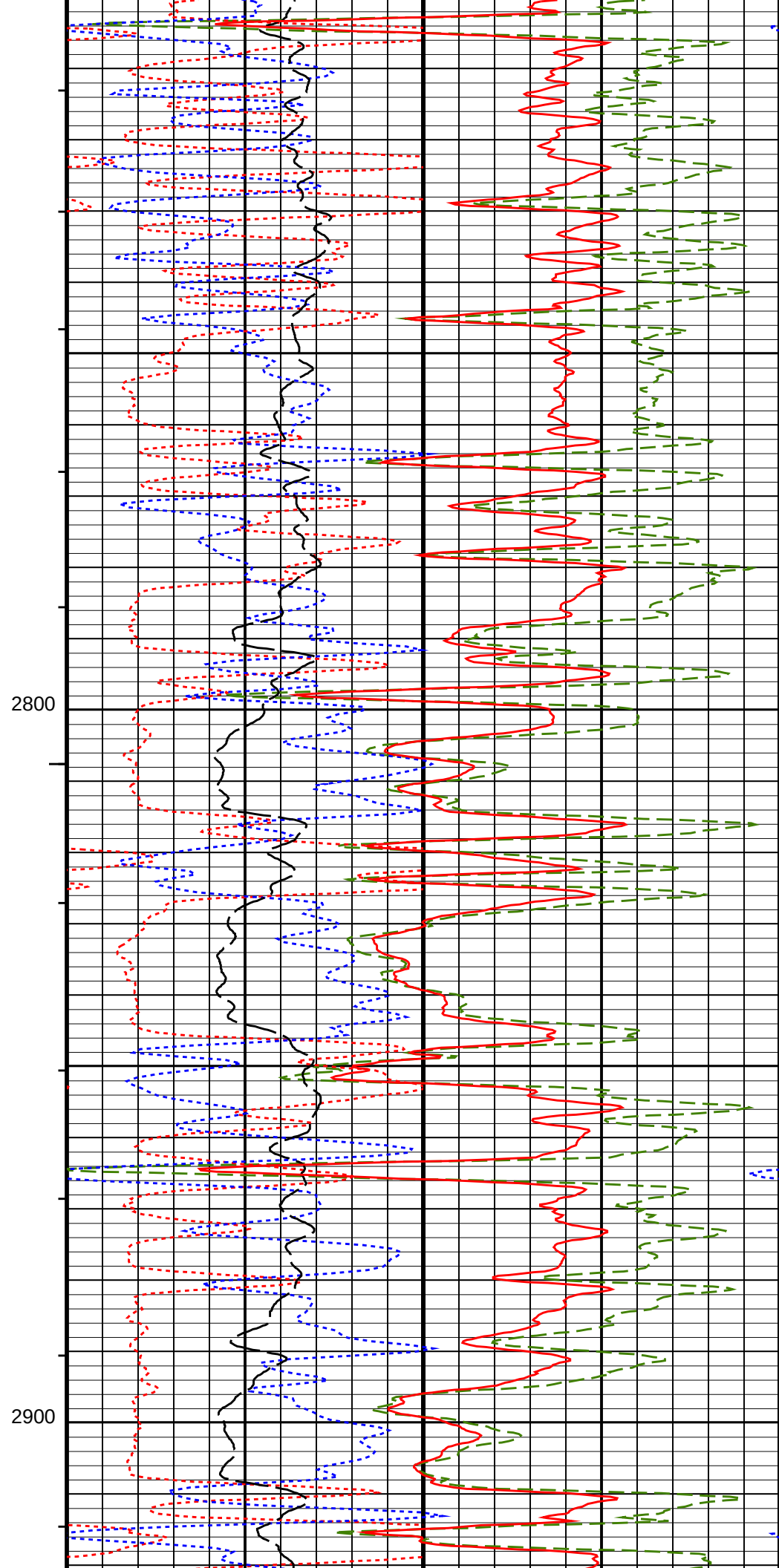
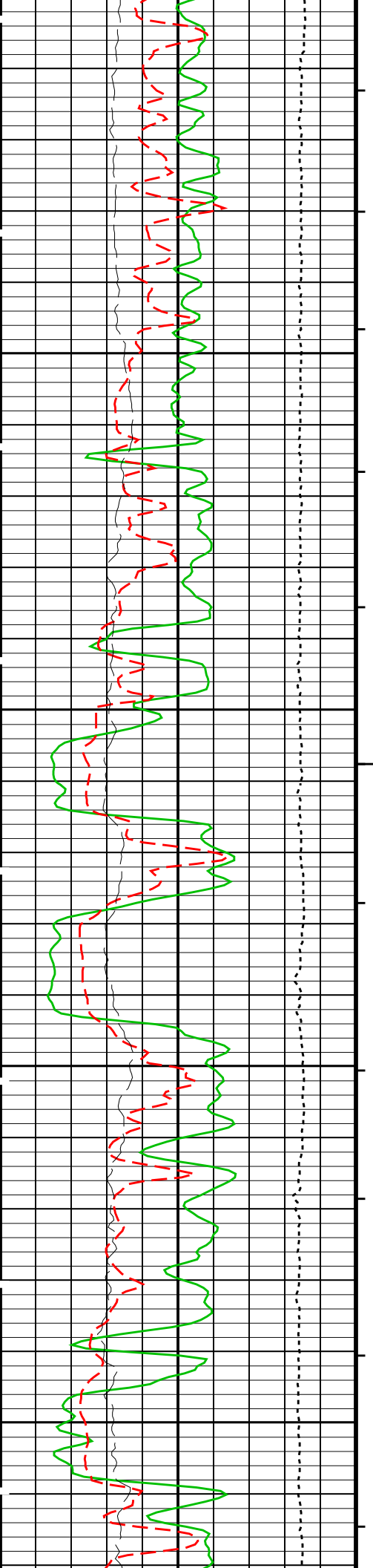


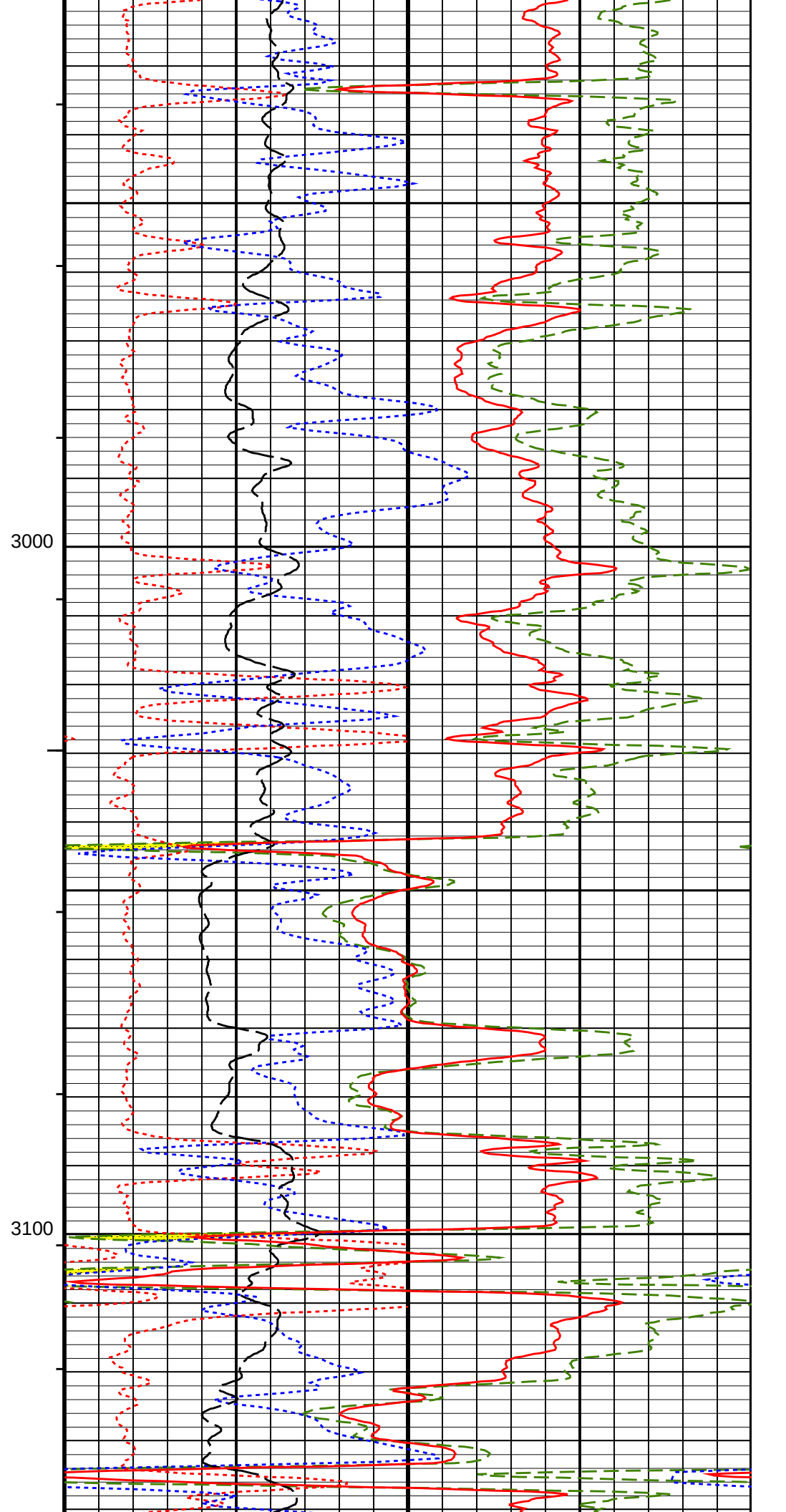
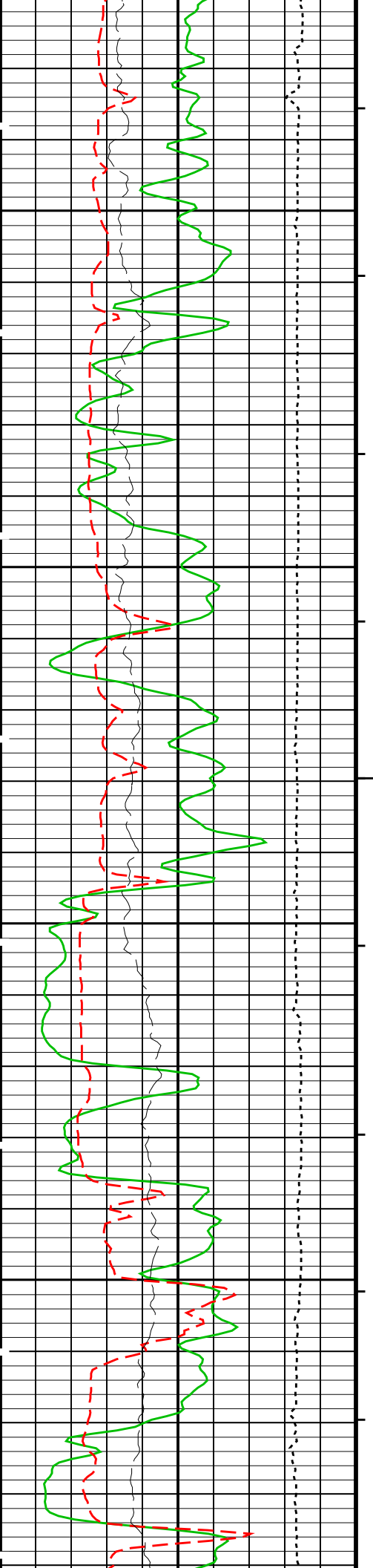


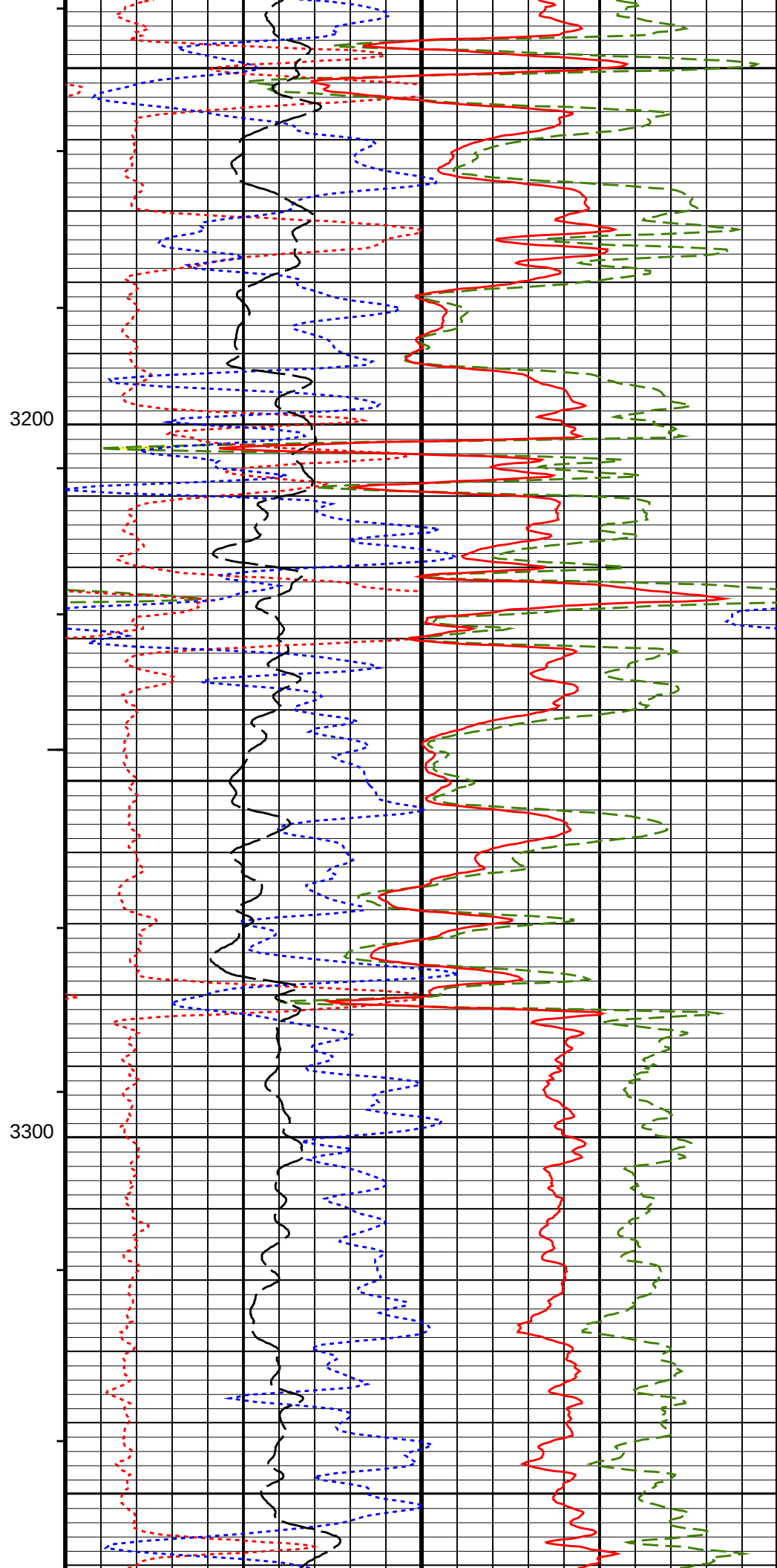
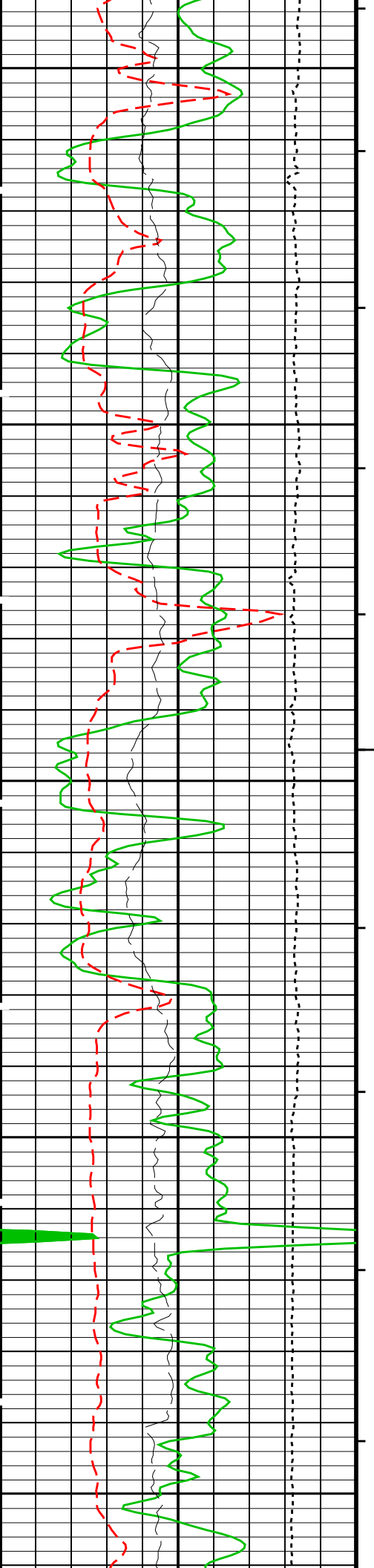


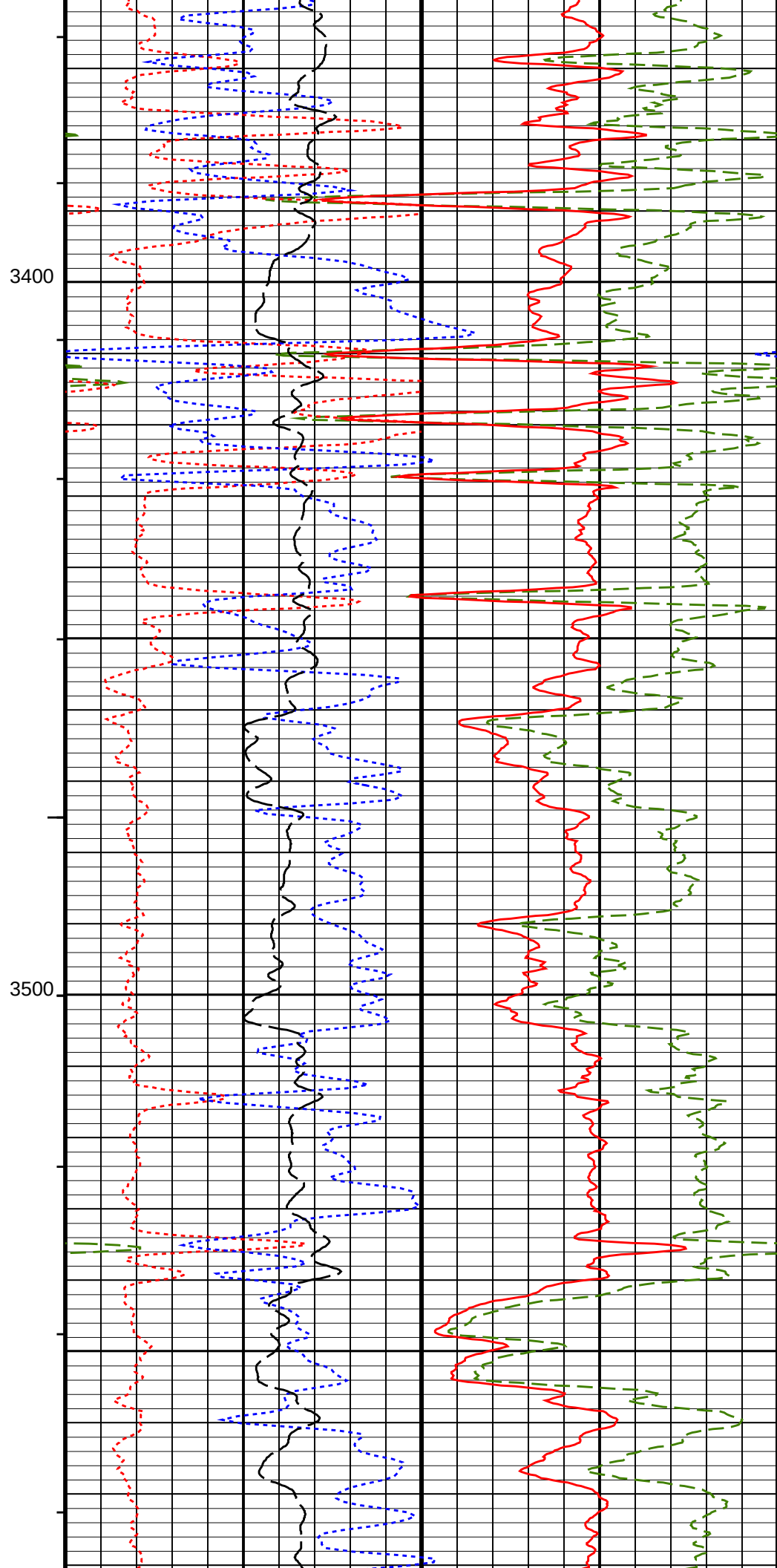
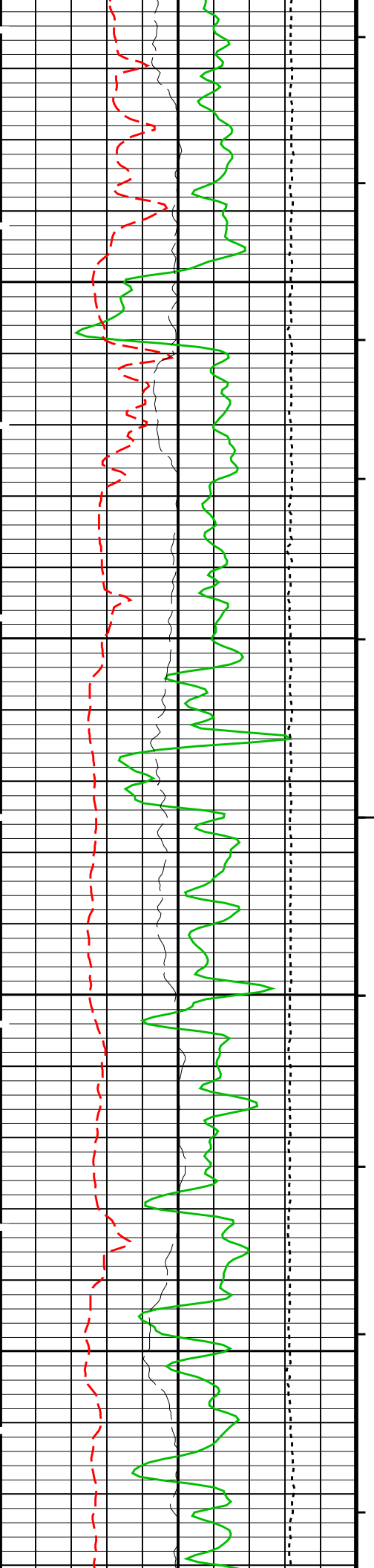


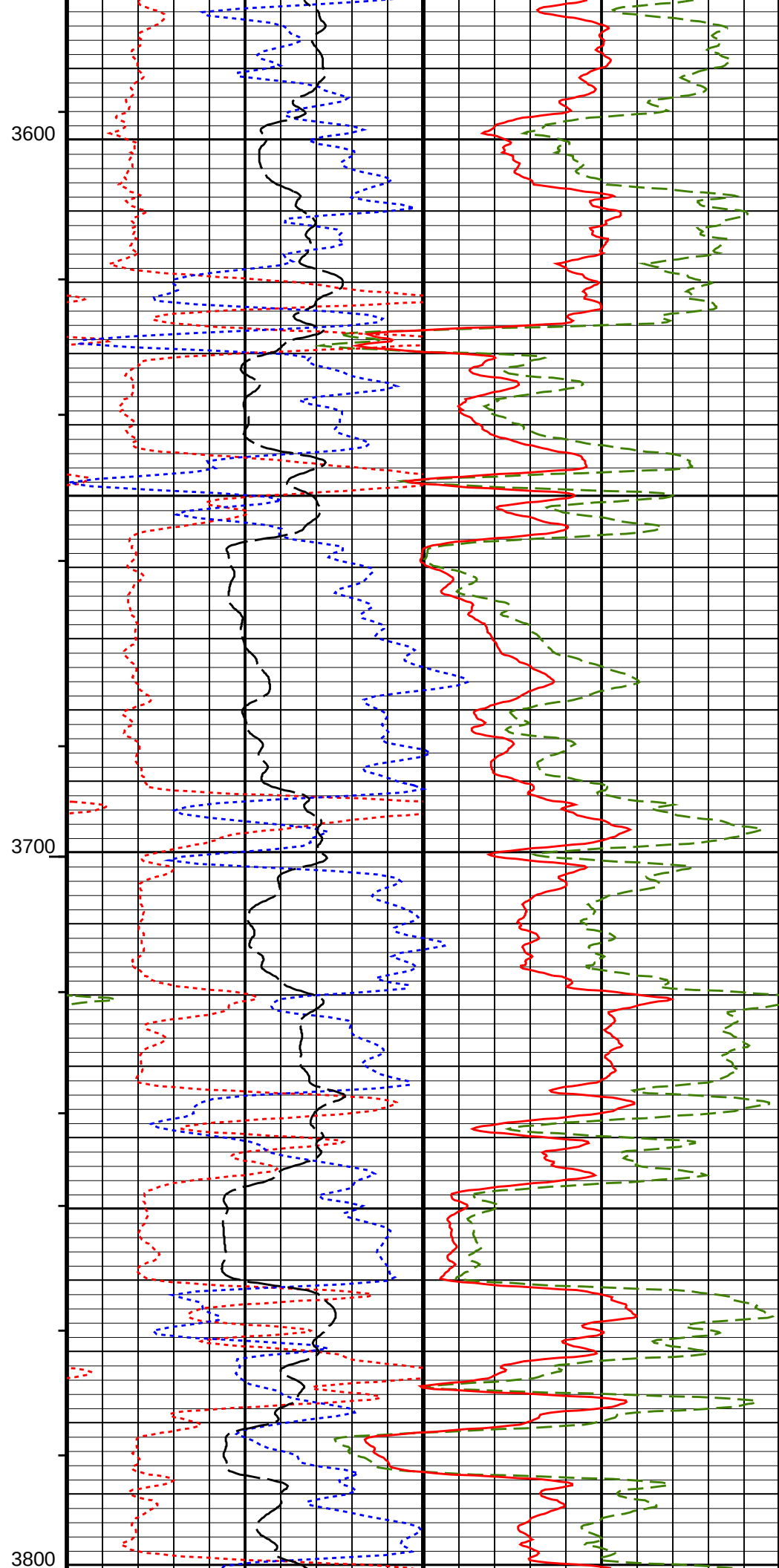
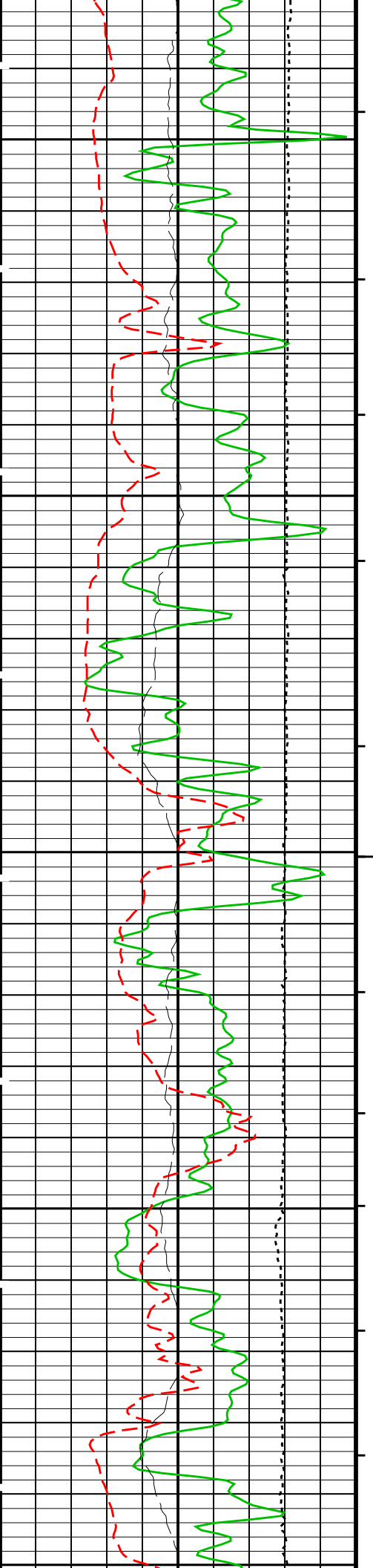


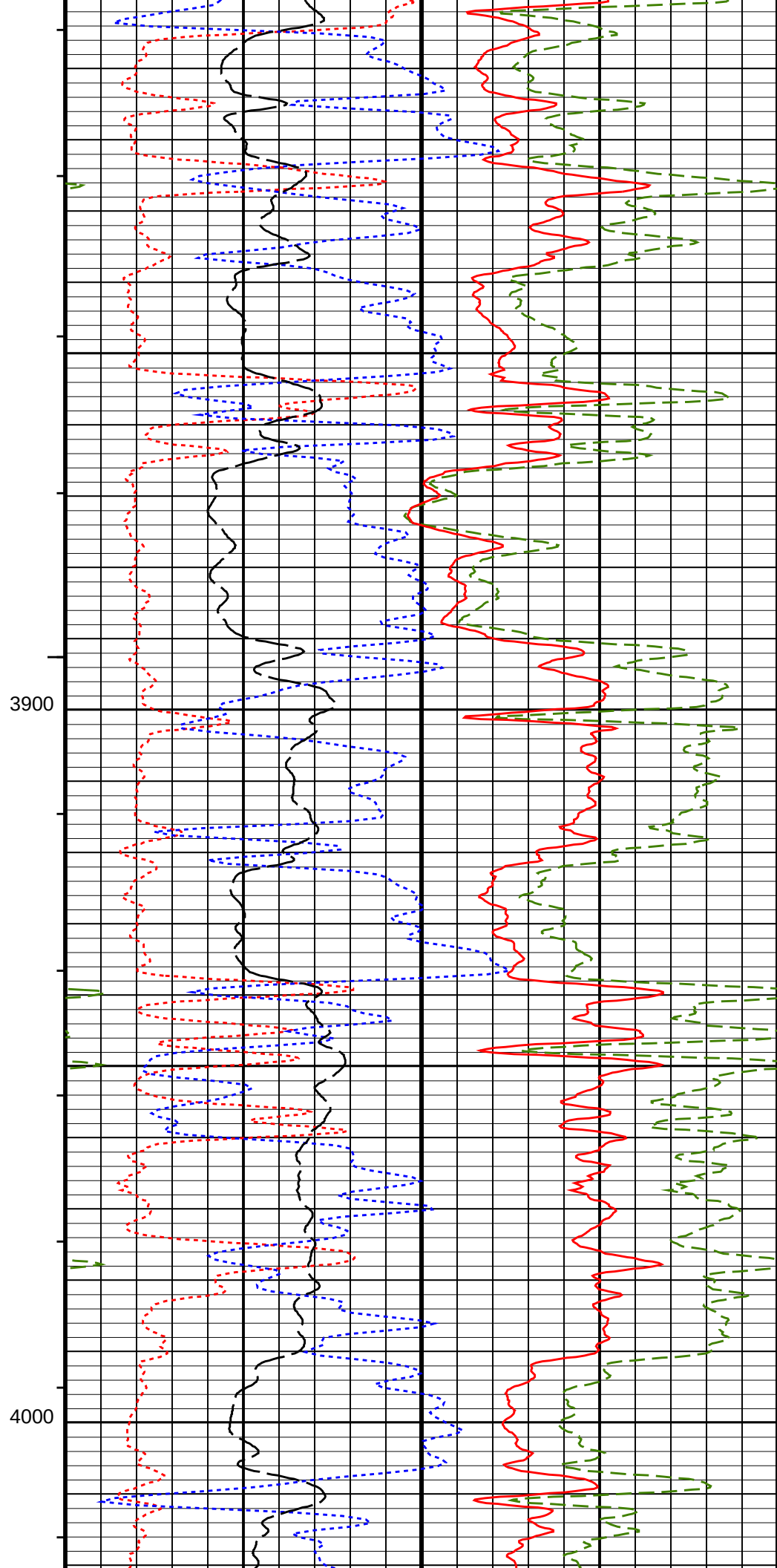
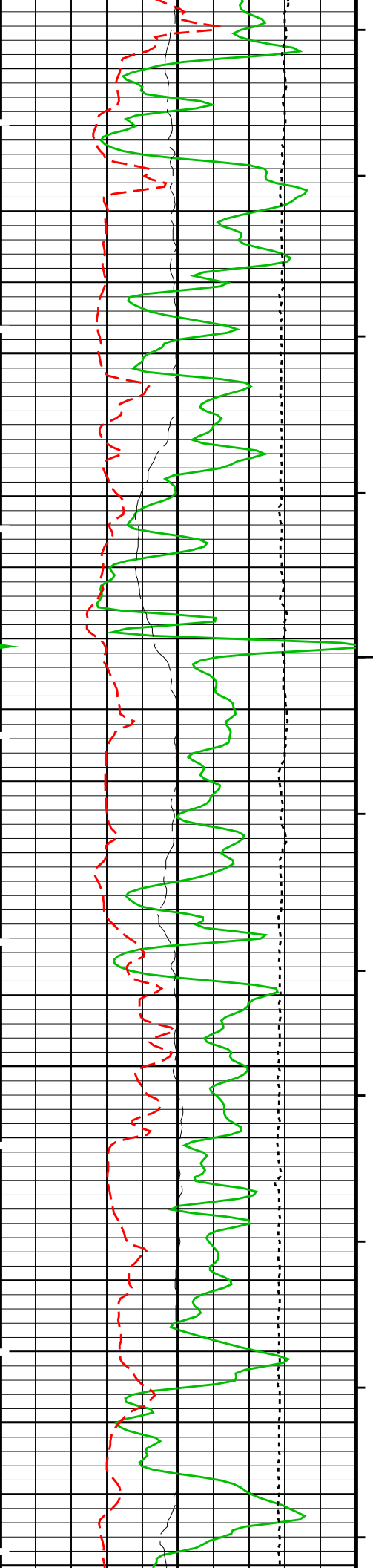


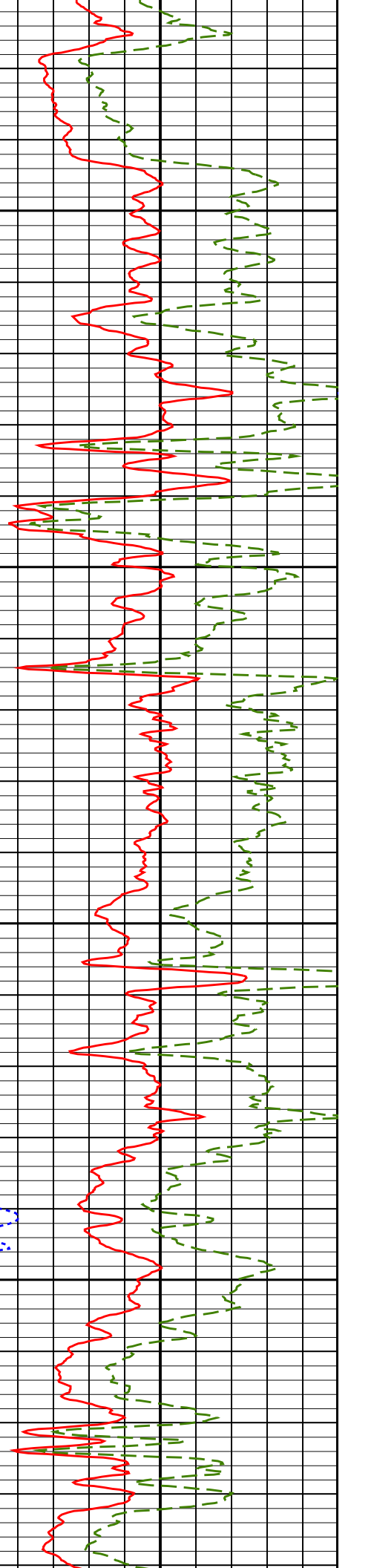
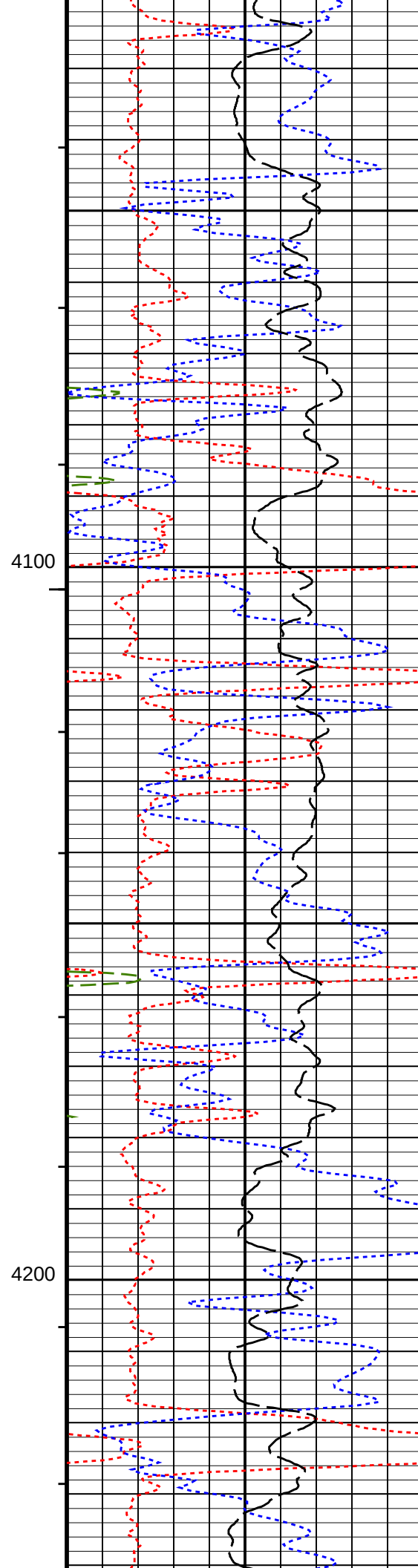
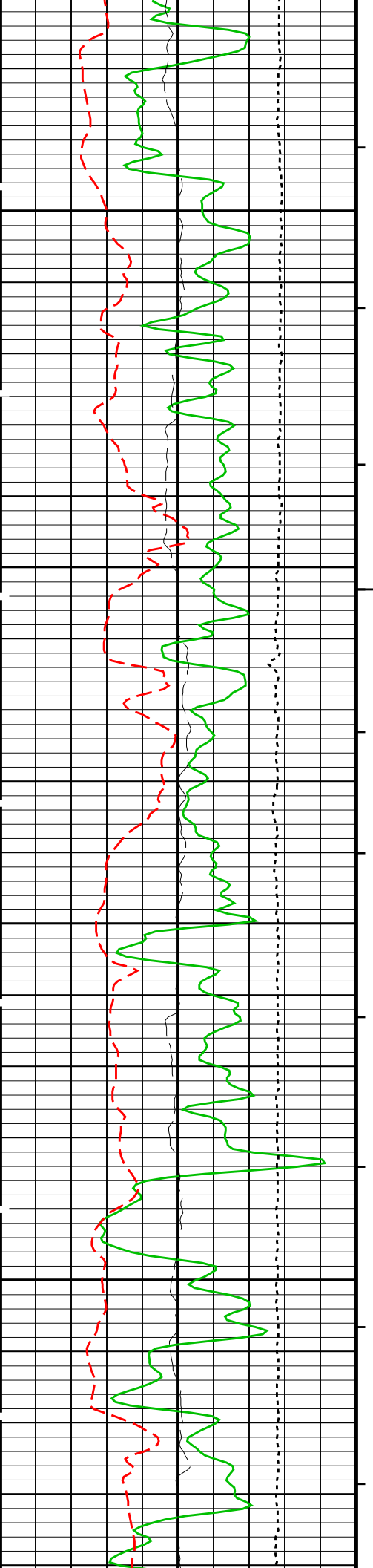


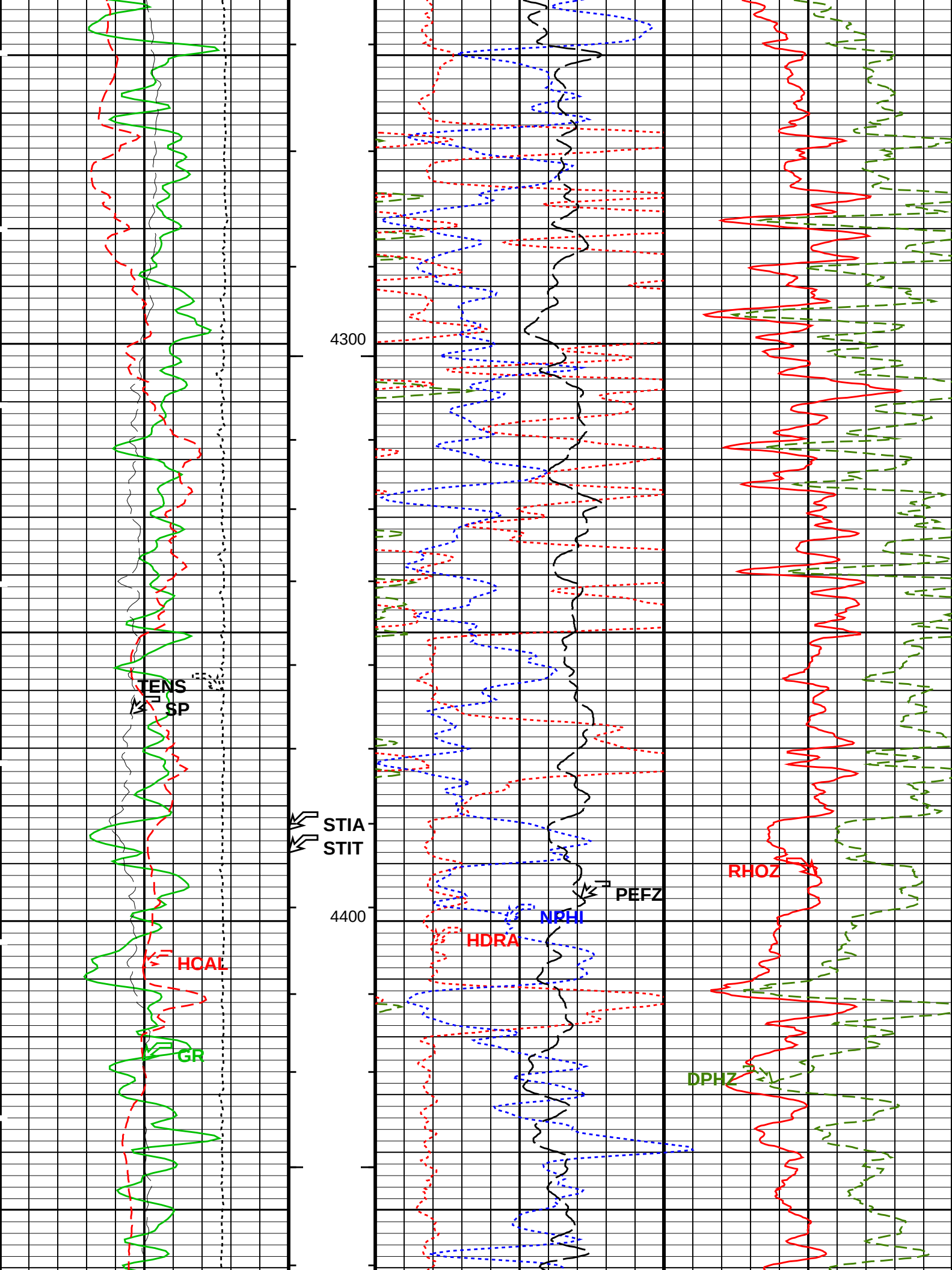


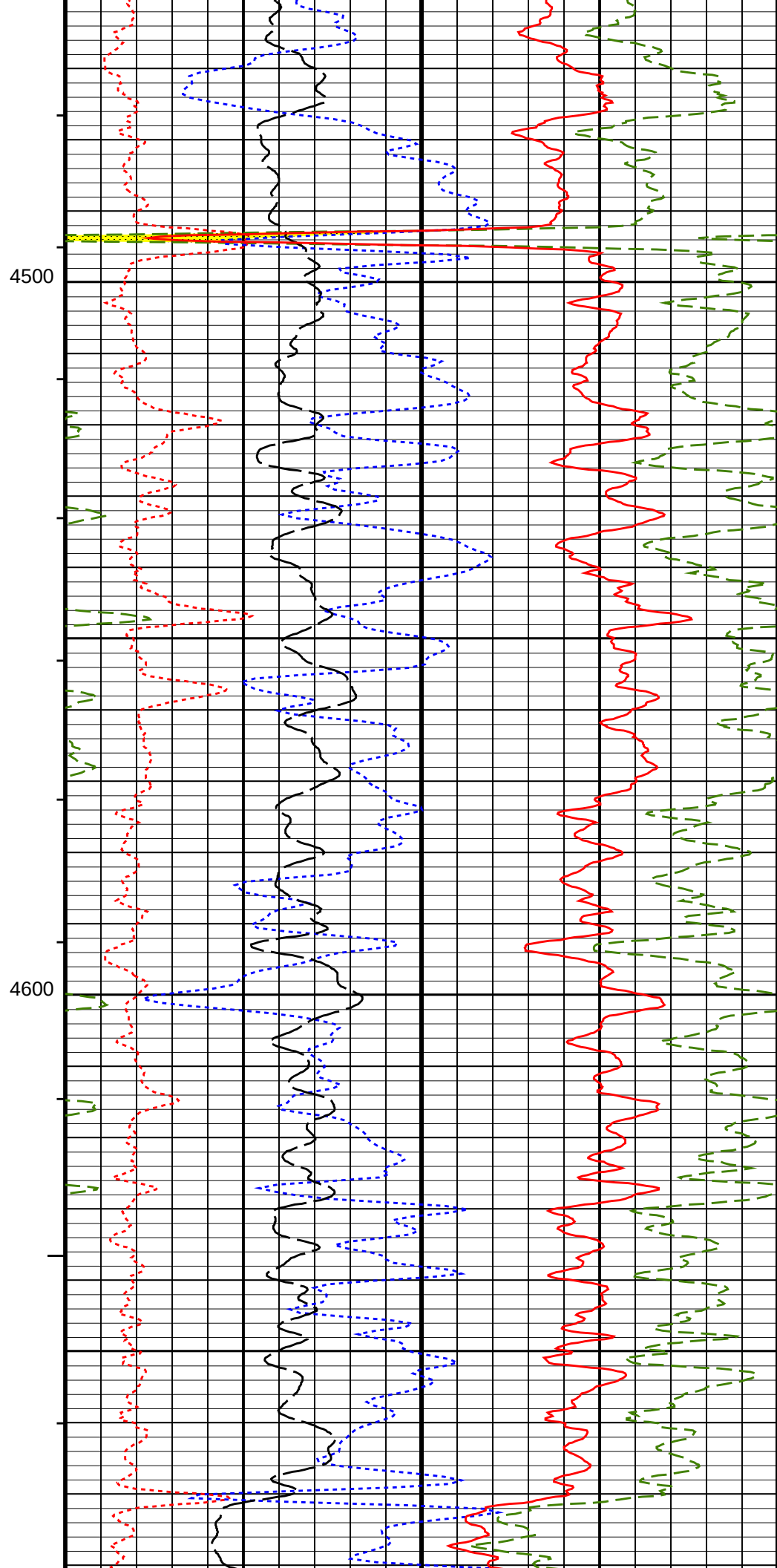
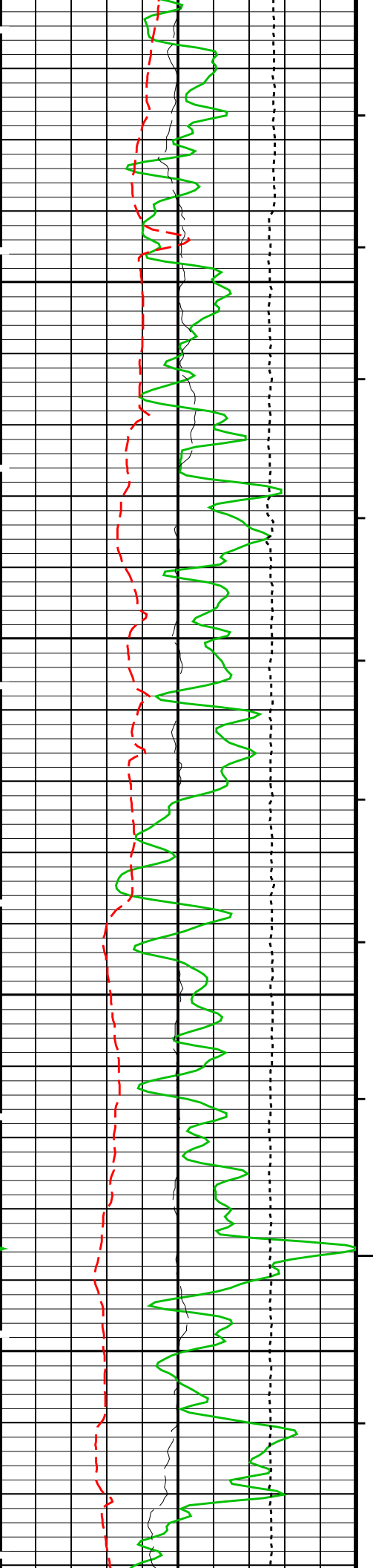


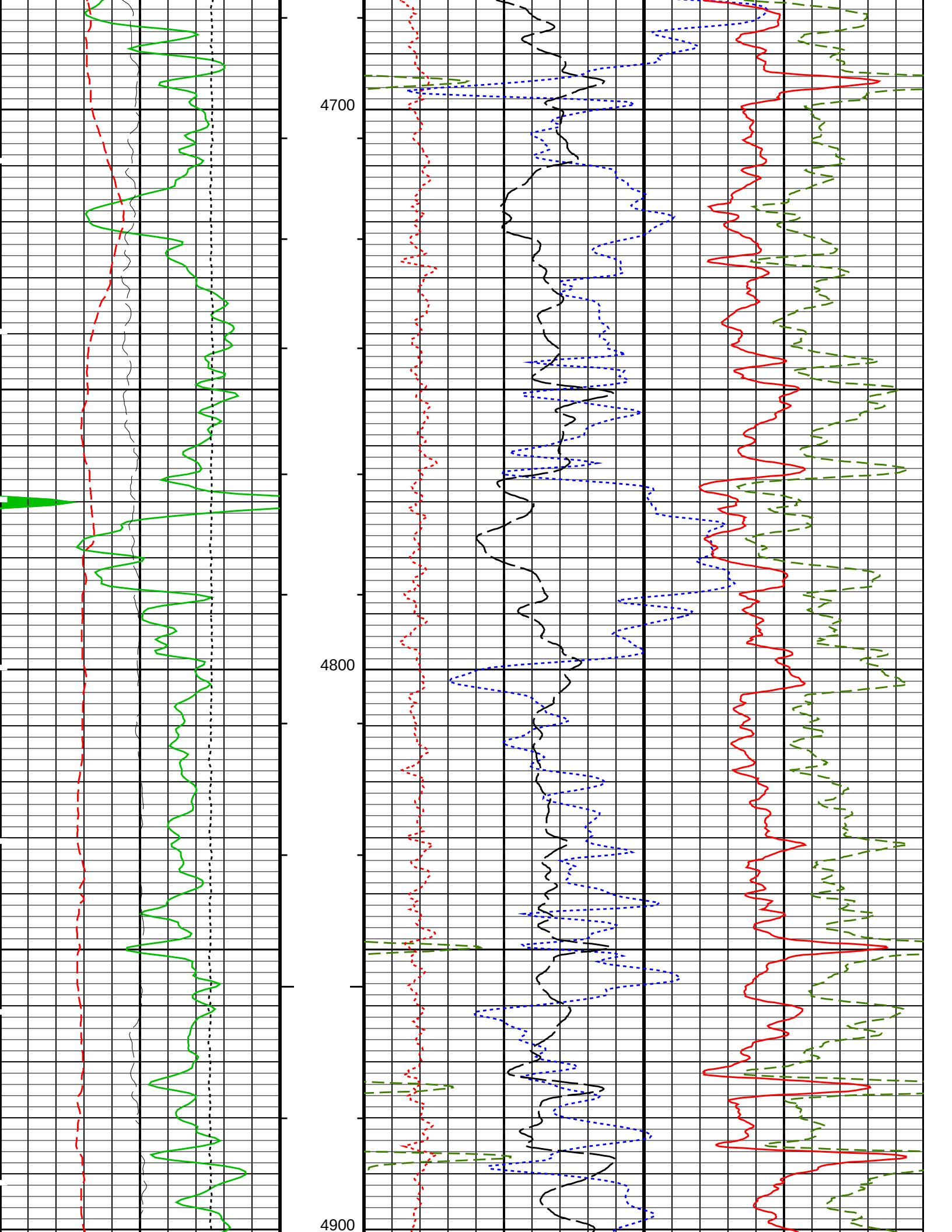


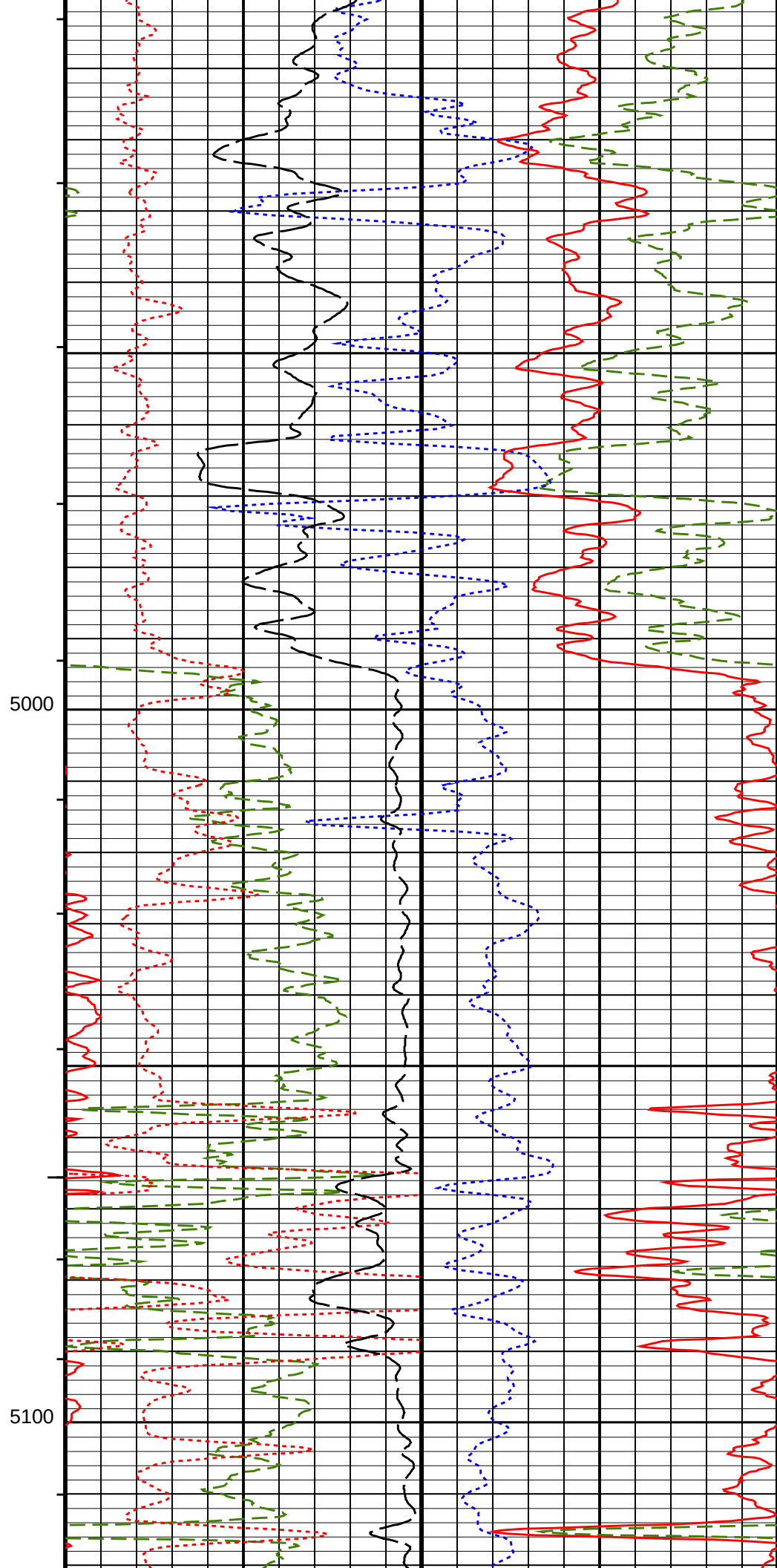
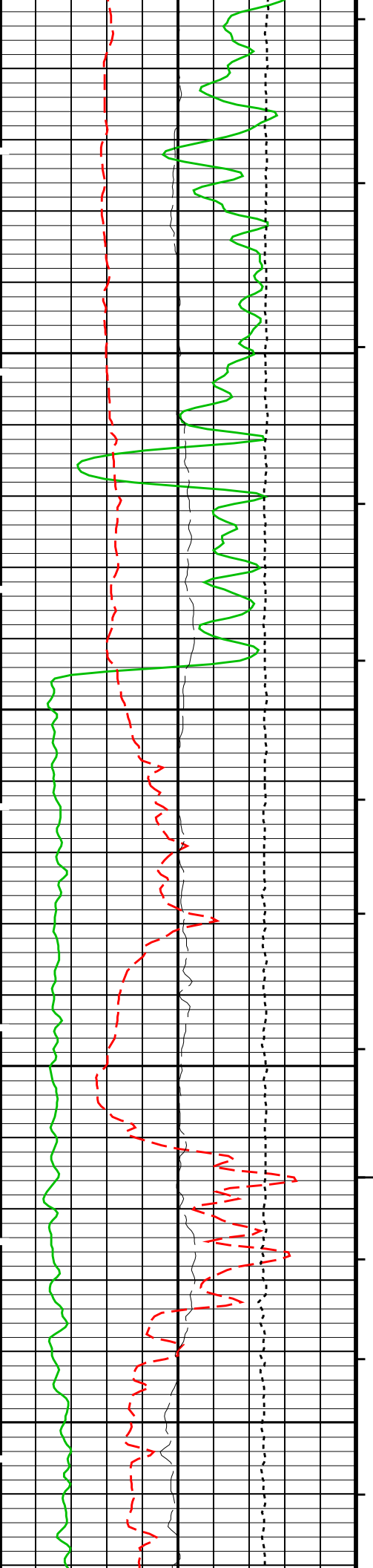


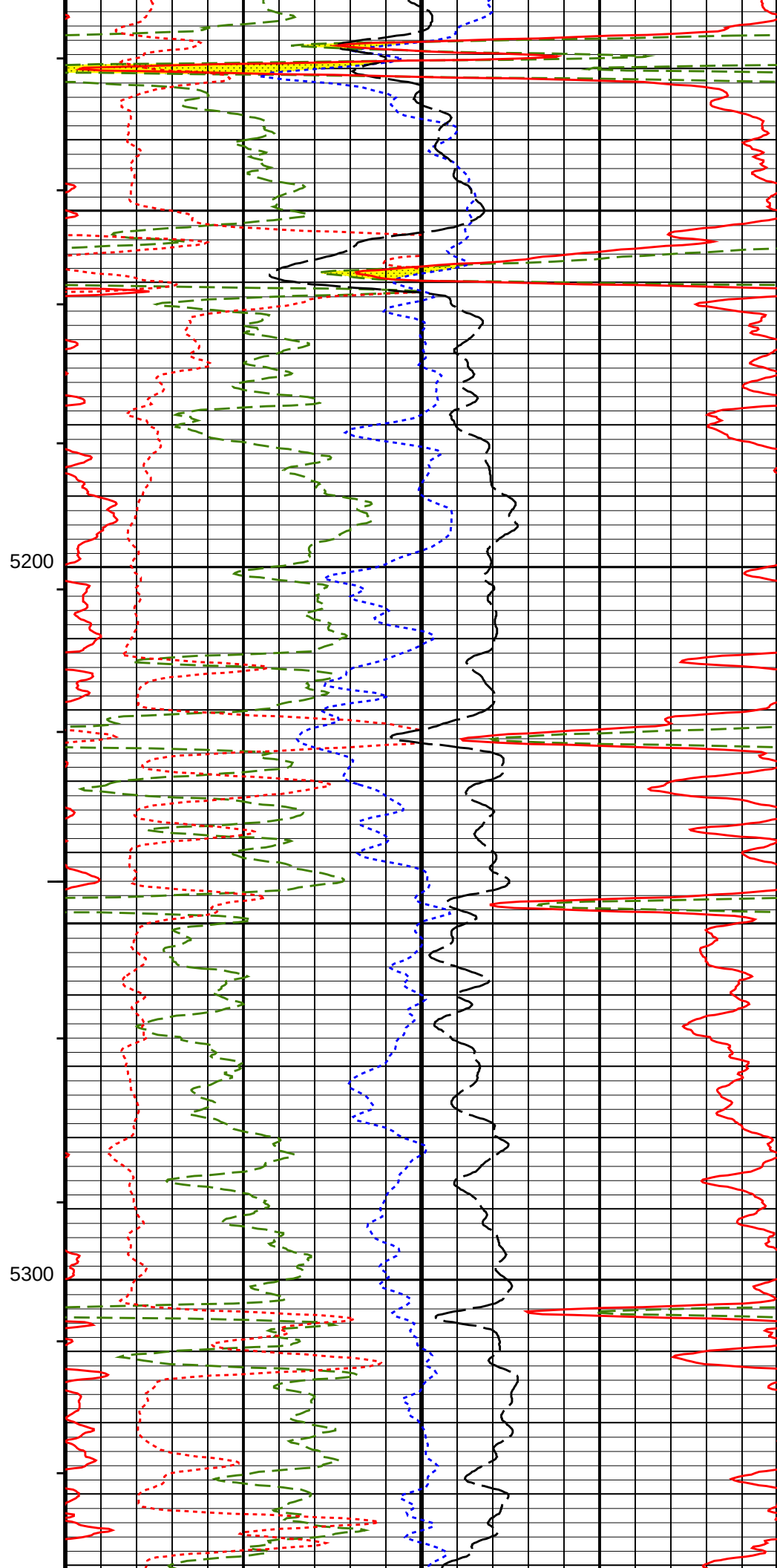
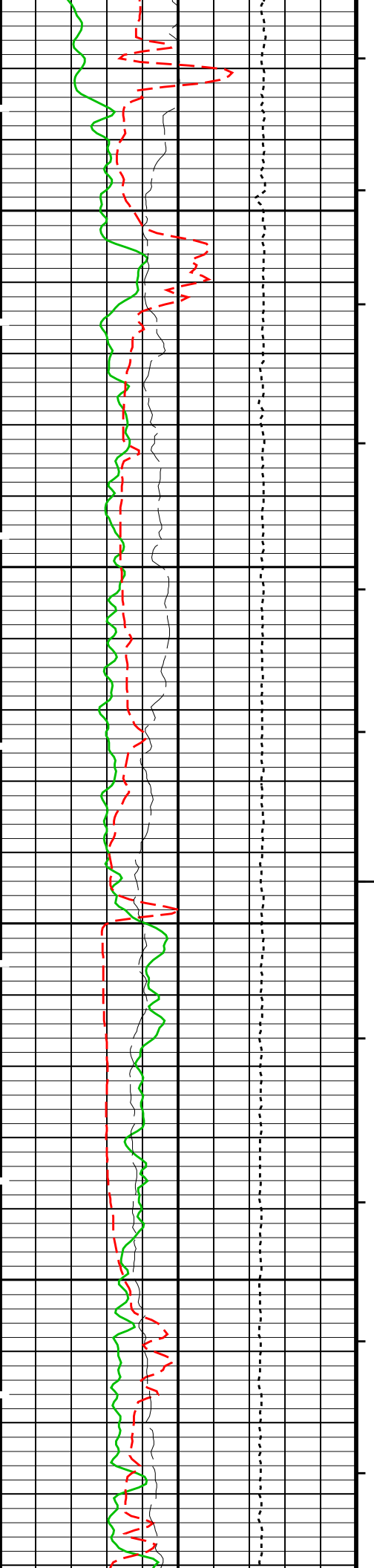


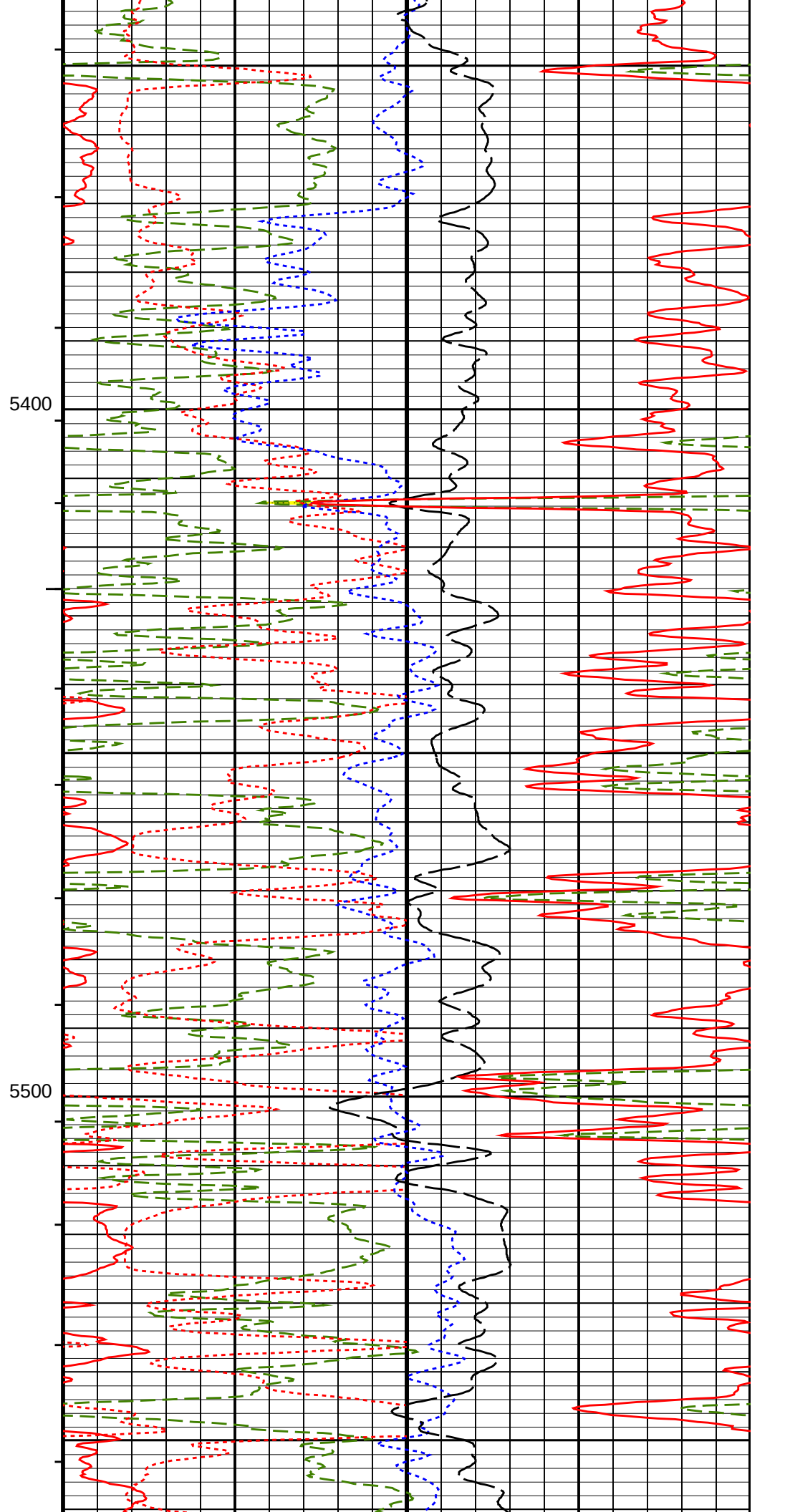
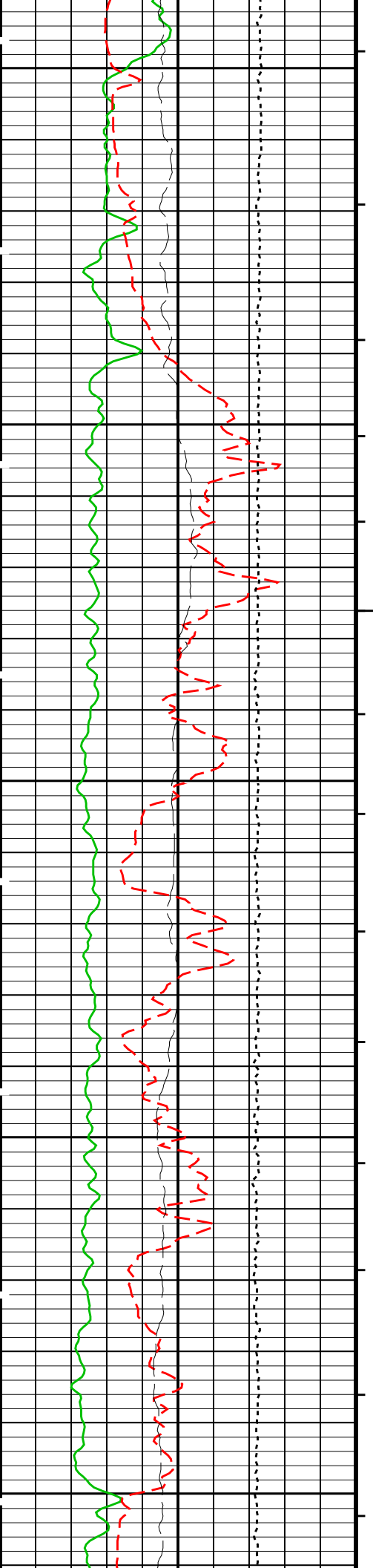


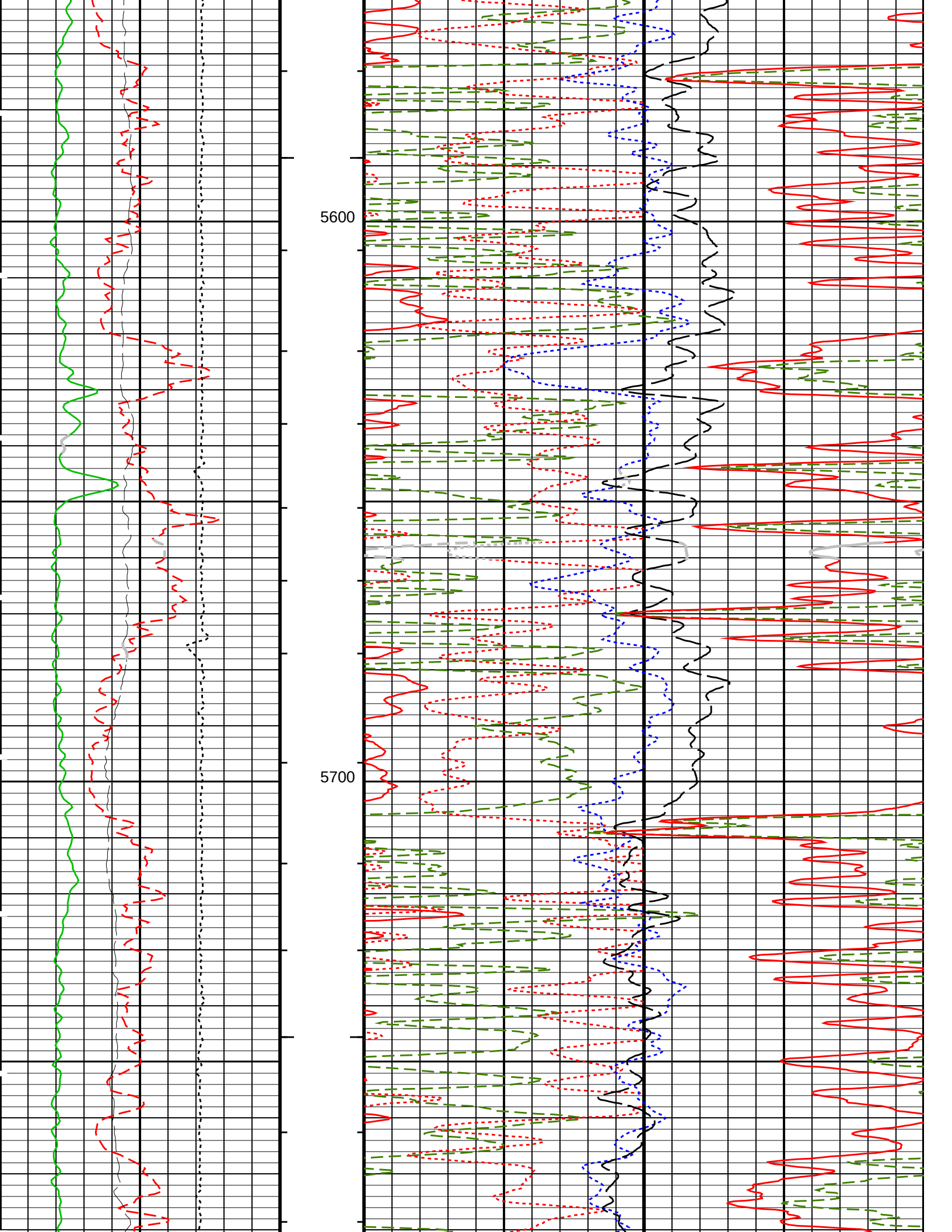


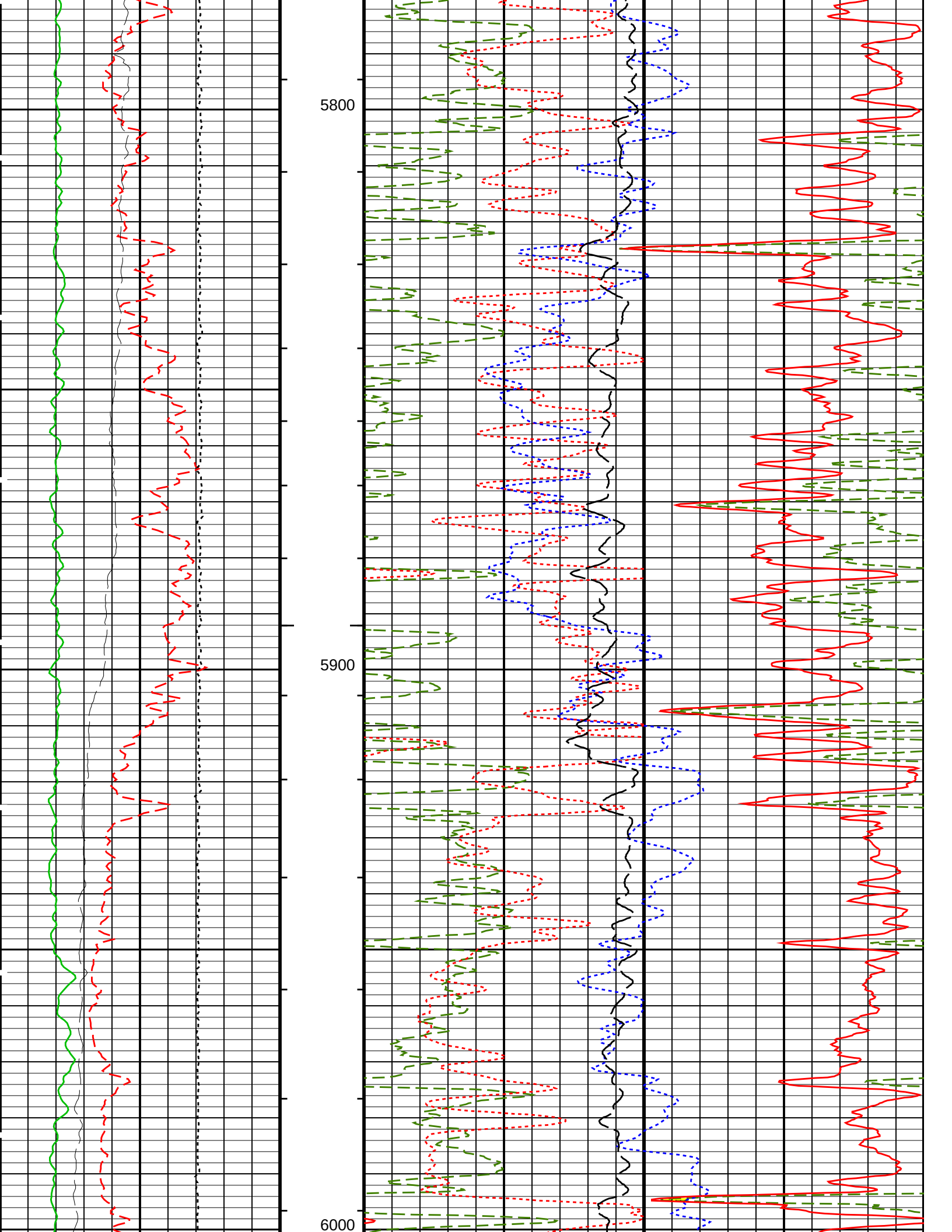


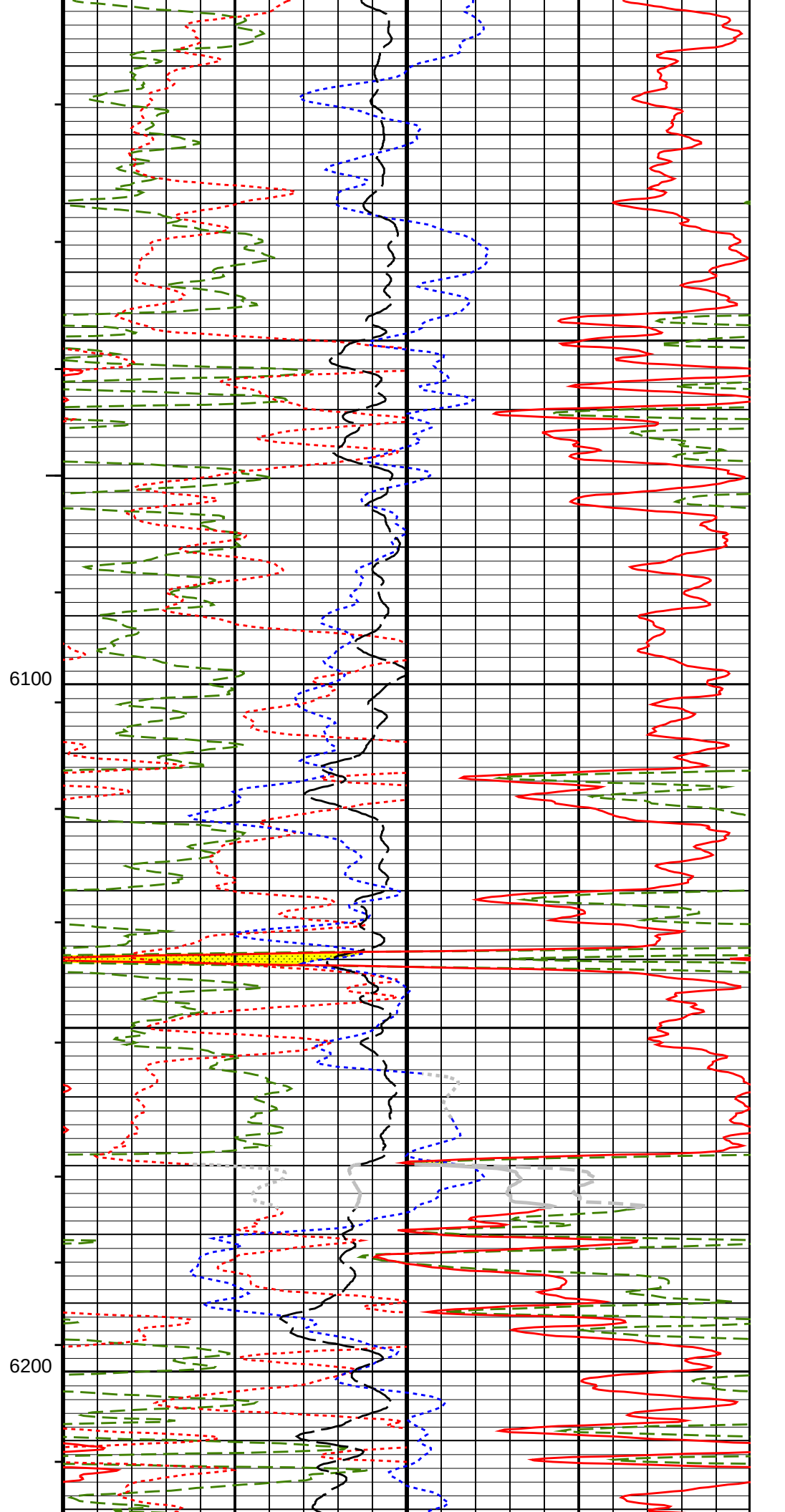
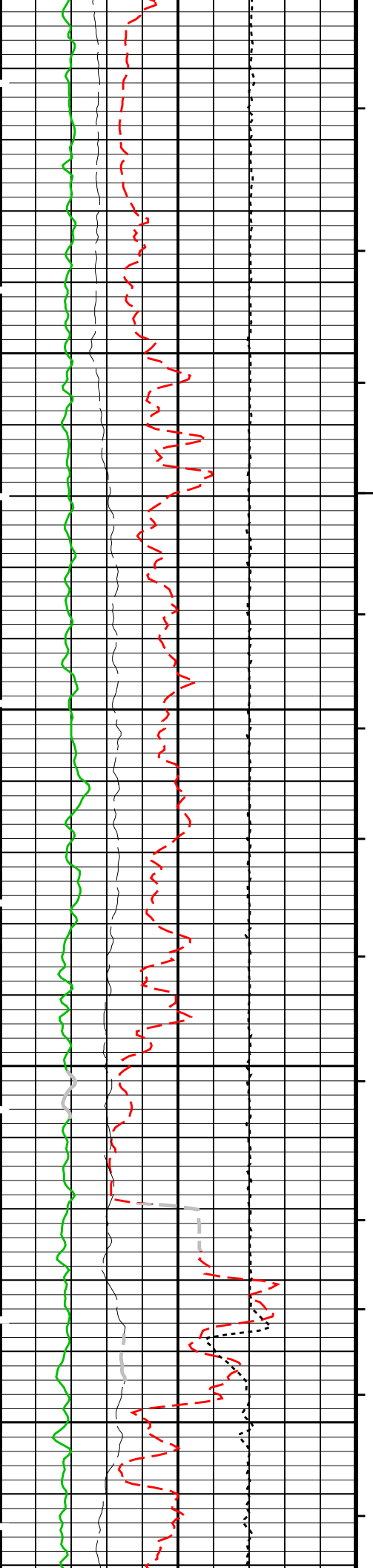


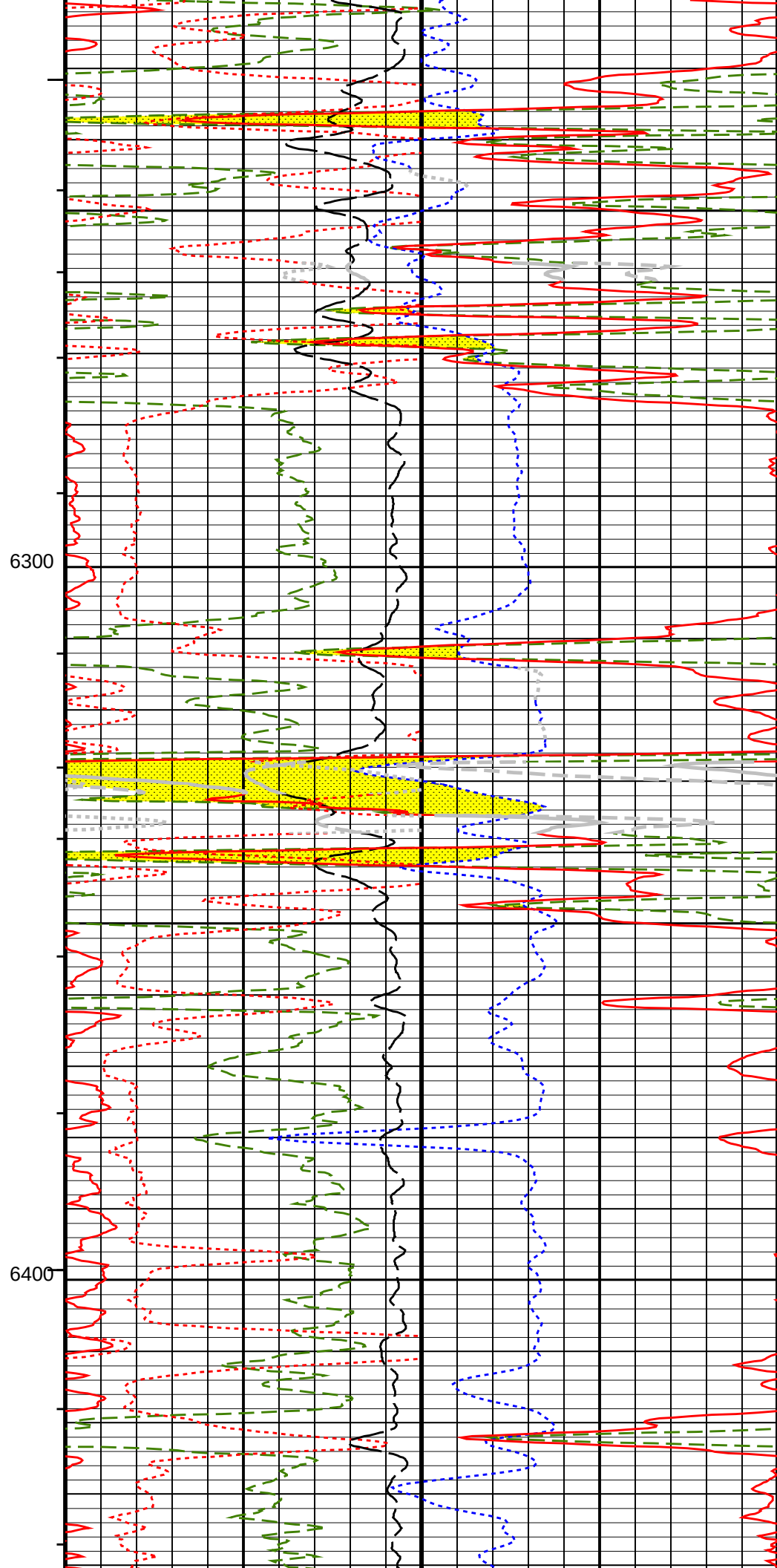
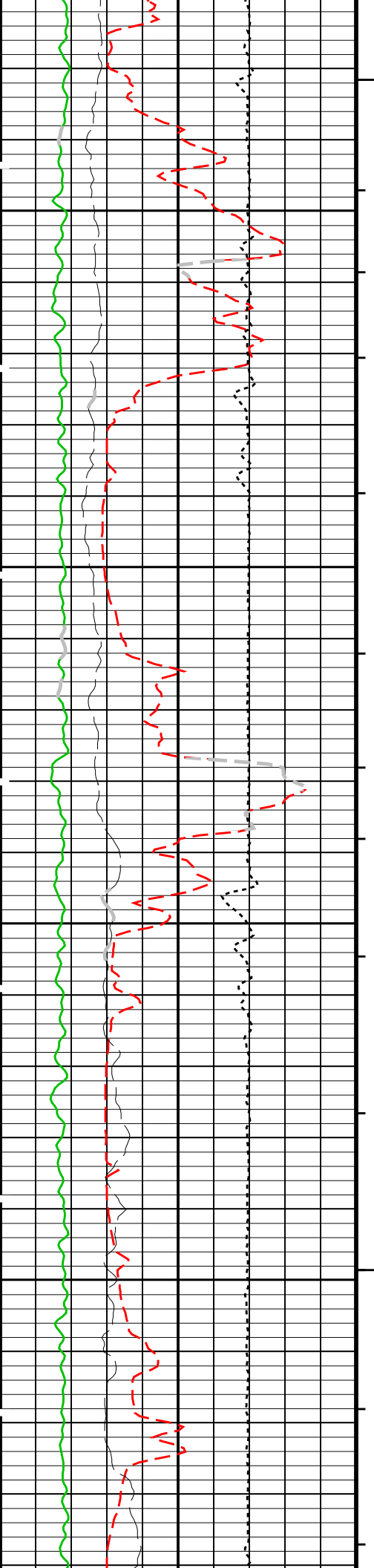


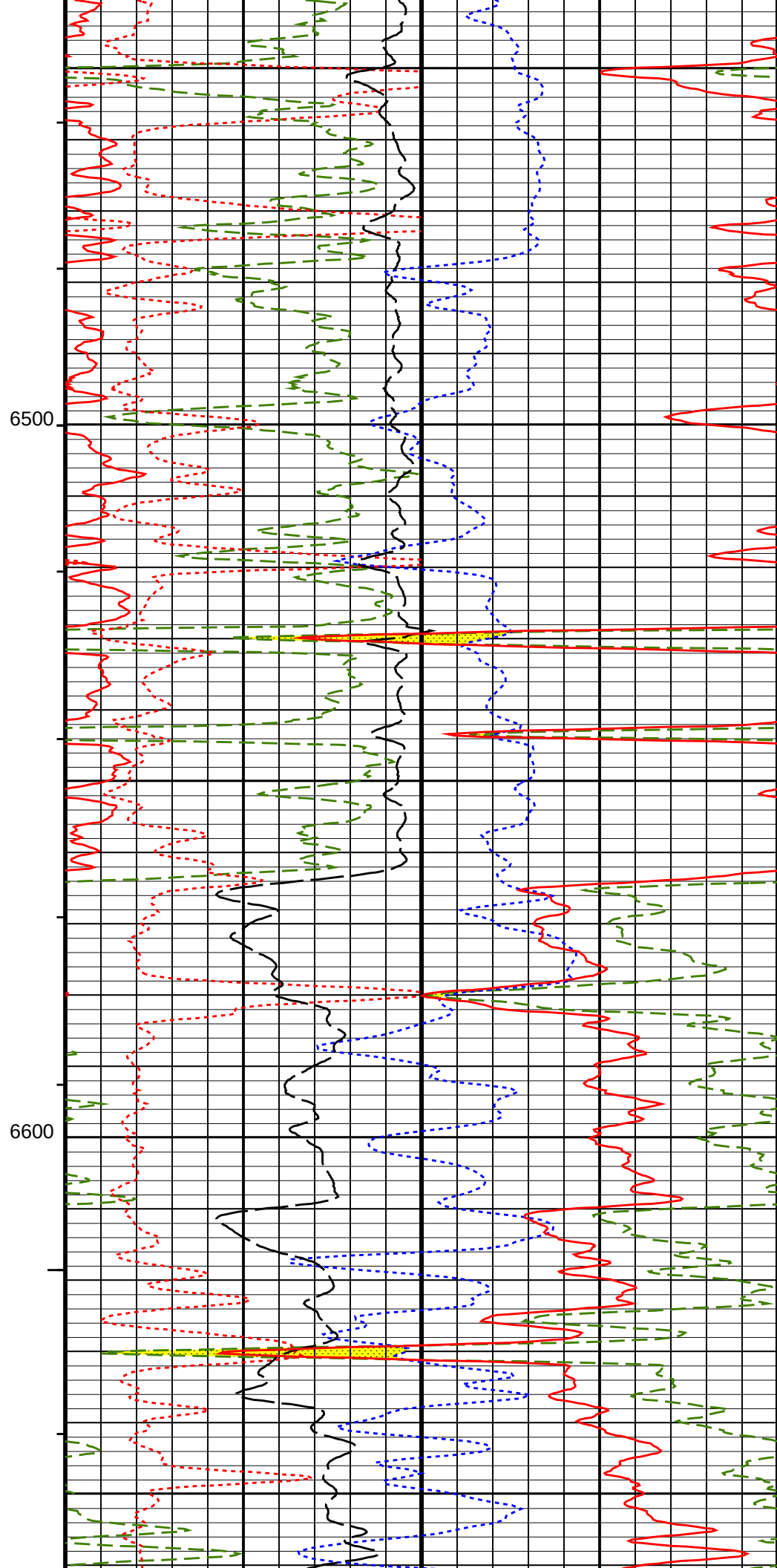
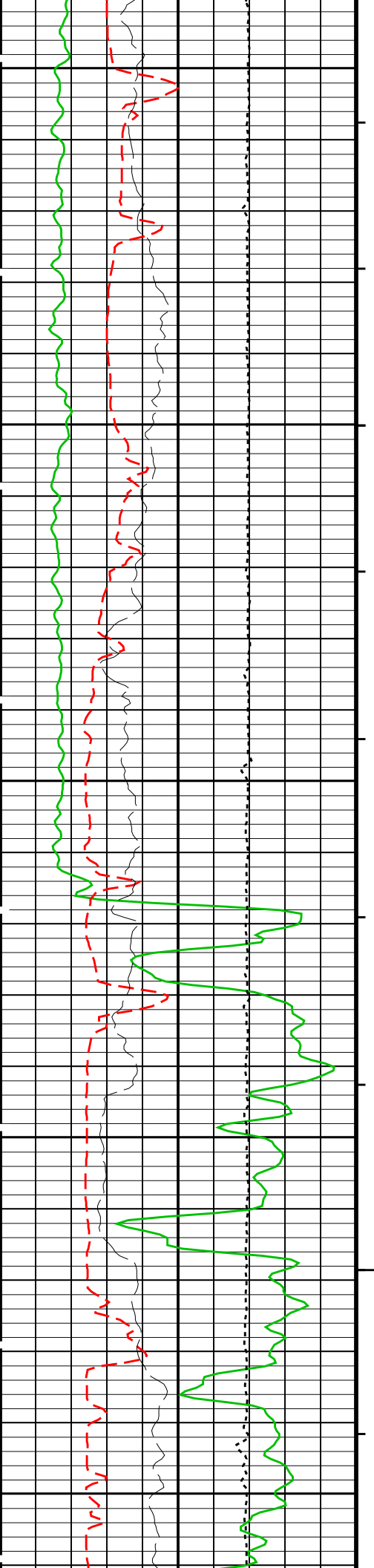


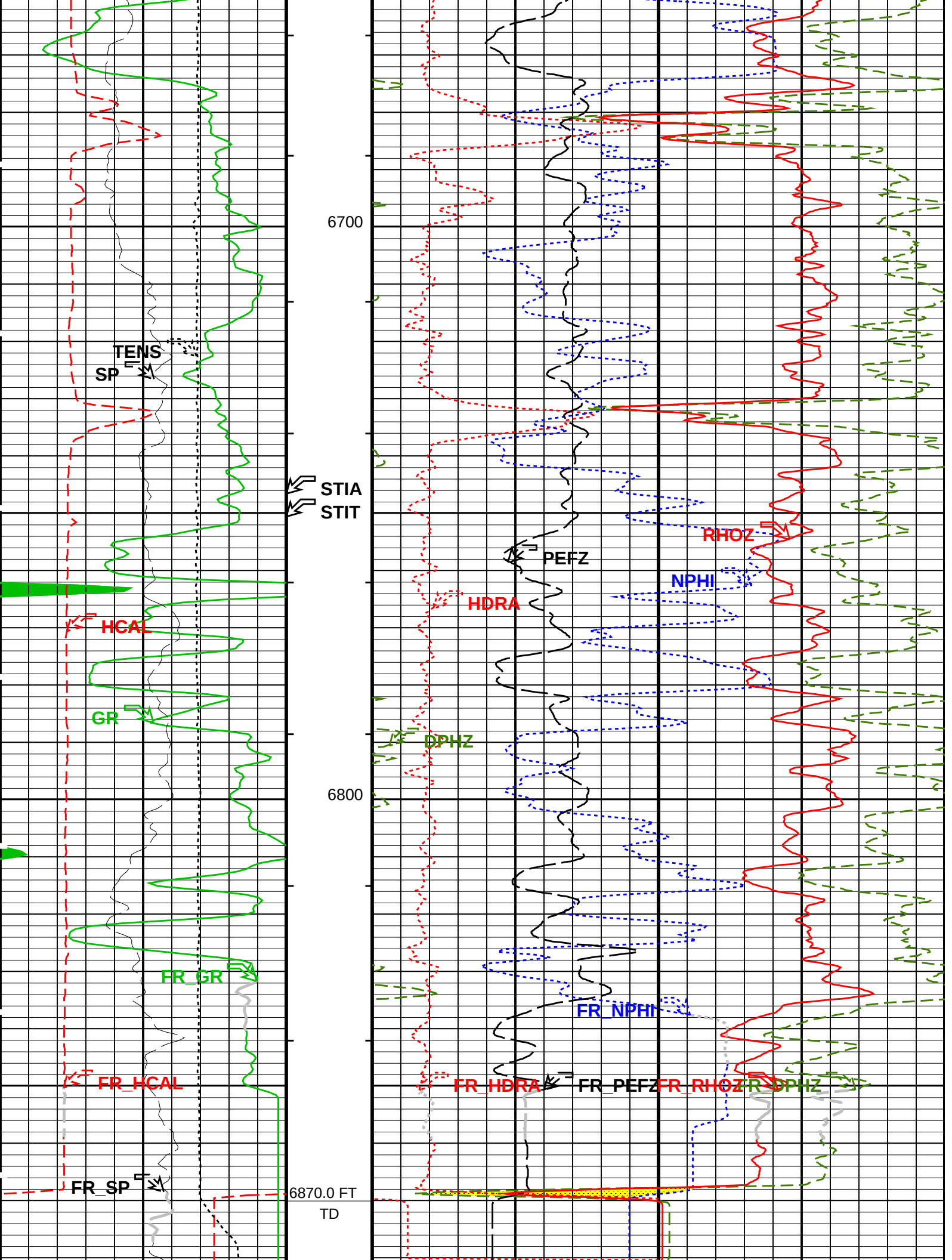


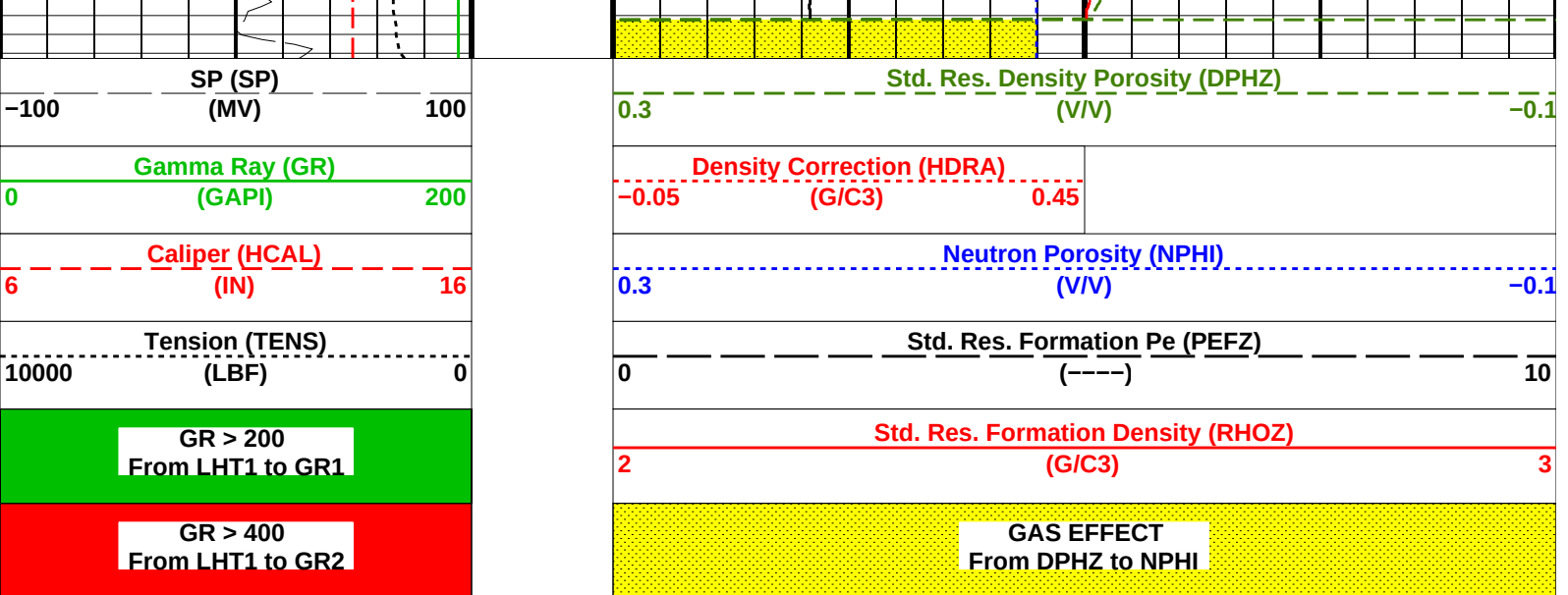












PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
AAPL	Array Induction Answer Product Level(Depth Log/View only)		
	3_BholeCorr_BasicLogs_RadialProcessing		
ABHM	Array Induction Borehole Correction Mode	2_ComputeStandoff	
ABHV	Array Induction Borehole Correction Code Version Number	900	
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	223	
ACDE	Array Induction Casing Detection Enable	Yes	
ACEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ACSED	Array Induction Casing Shoe Estimated Depth	1491	FT
ADITM	Array Induction Desired Tool Mode	0x00_Log_000	
AEBC	Array Induction Enable Borehole Correction	Yes	
AEBL	Array Induction Enable Basic Logs	Yes	
AERP	Array Induction Enable Radial Processing	Yes	
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFRSV	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AFVN	Array Induction Firmware Code Version Number	1	
AIGS	Array Induction Select Akima Interpolation Gating	On	
ALNV	Array Induction Log Not Valid Flag	Log_Valid-No_Default_Parameters	
AMRD	Array Induction Mud Resistivity Calibration Depth	0	FT
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPM	Array Induction Radial Processing Mode	0_One	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ARTS	AIT Rt Selection (for ALLRES computation)	AITM_OneResA60	
ASTA	Array Induction Tool Standoff	1.5	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
ATTY	Array Induction Tool Type (of acquired data)	AITM	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	108	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
RTCO	RTCO - Rt Invasion Correction	YES	
SHT	Surface Hole Temperature	68	DEGF
SPNV	SP Next Value	0	MV

HILTH-FTB: High resolution Integrated Logging Tool-DTS

BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	108	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1.1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	77	DEGF
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.65	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PEA_FILTER	PEA Filter	NO_FILTER	
PEFC_FILTER	PEFC Filter	NO_FILTER	
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	108	DEGF
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	6885.00	FT
TDL	Total Depth - Logger	6870.00	FT
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	1200.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	9.40	LB/G
DO	Depth Offset for Playback	0.0	FT

DO	Depth Onset for Playback	0.0	FT
FLEV	Fluid Level	0.00	FT
MST	Mud Sample Temperature	64.30	DEGF
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	0.8856	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	6870	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: PEX_NUC5_1 Vertical Scale: 5" per 100' Graphics File Created: 15-Oct-2011 16:01

OP System Version: 19C0-187

AIT-M	19C0-187	HILTH-FTB	19C0-187
DTC-H	19C0-187		

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_007LUP	FN:10	PRODUCER	15-Oct-2011 12:28	6886.5 FT	330.5 FT
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Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_012PUP	FN:16	PRODUCER	15-Oct-2011 16:01
BACKUP	AIT_TLD_MCFL_CNL_012PUP	FN:17	PRODUCER	15-Oct-2011 16:04

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REPEAT PASS 5"=100'

MAXIS Field Log

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:8	PRODUCER	15-Oct-2011 12:12	6886.5 FT	6417.5 FT
BACKUP	AIT_TLD_MCFL_CNL_006LUP	FN:9	PRODUCER	15-Oct-2011 12:16	6886.5 FT	6417.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 187.50 F3

Cement Volume = 187.50 F3 (assuming 0.00 IN casing O.D.)

Computed from 6864.0 FT to 6418.0 FT using data channel(s) HCAL

OP System Version: 19C0-187

AIT-M	19C0-187	HILTH-FTB	19C0-187
DTC-H	19C0-187		

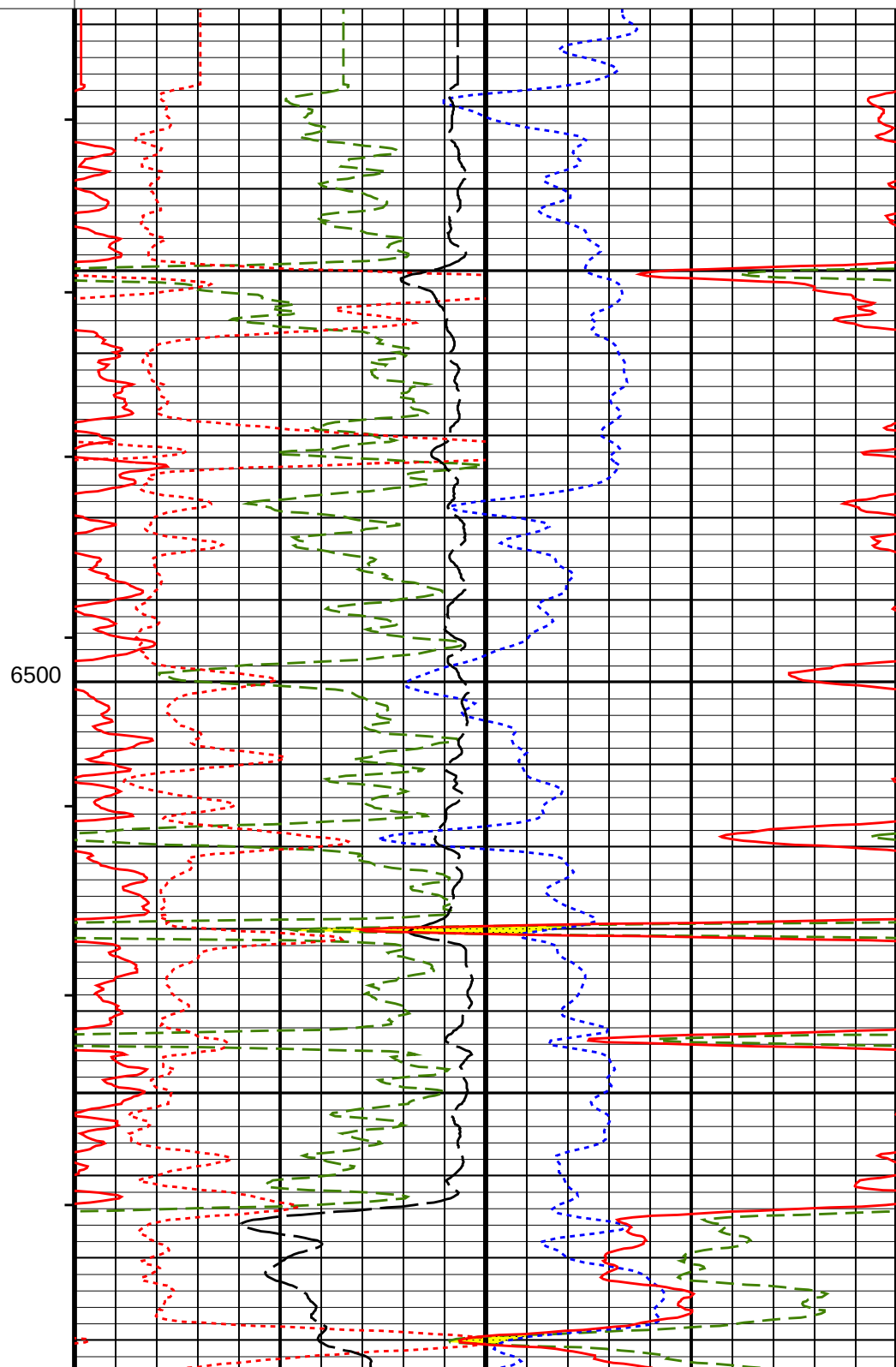
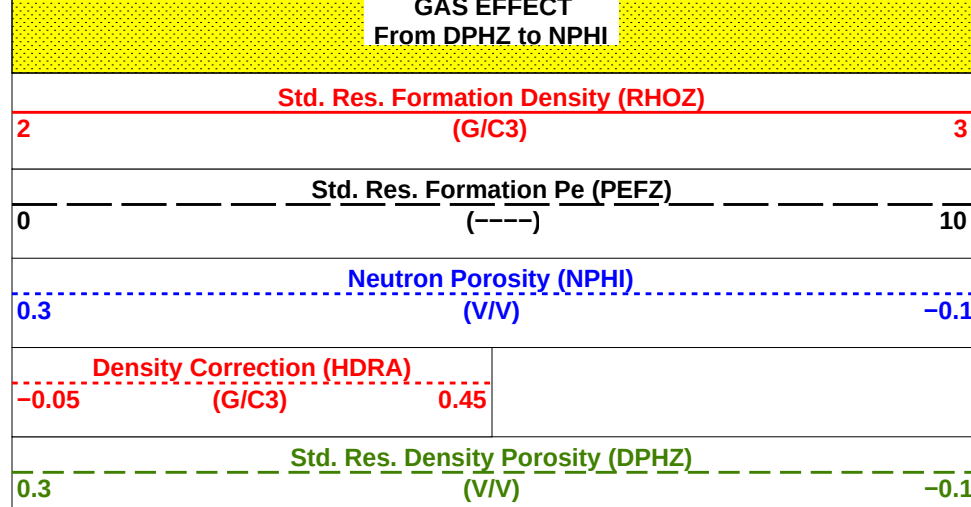
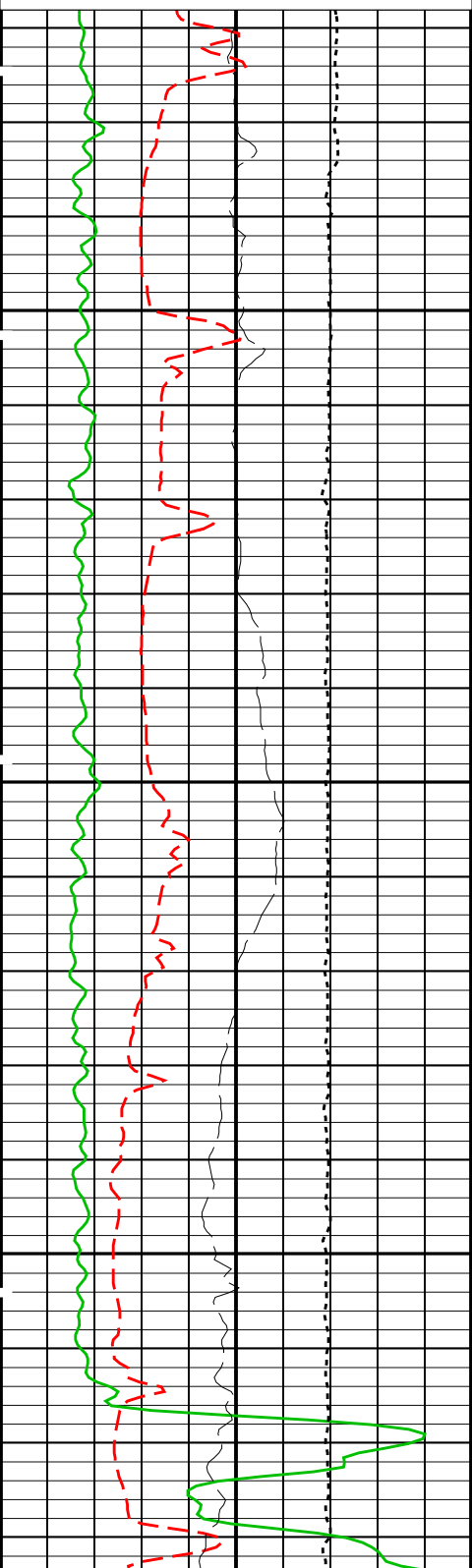
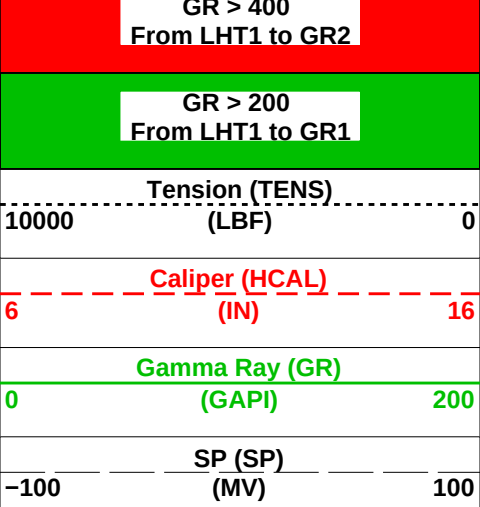
Changed Parameter Summary

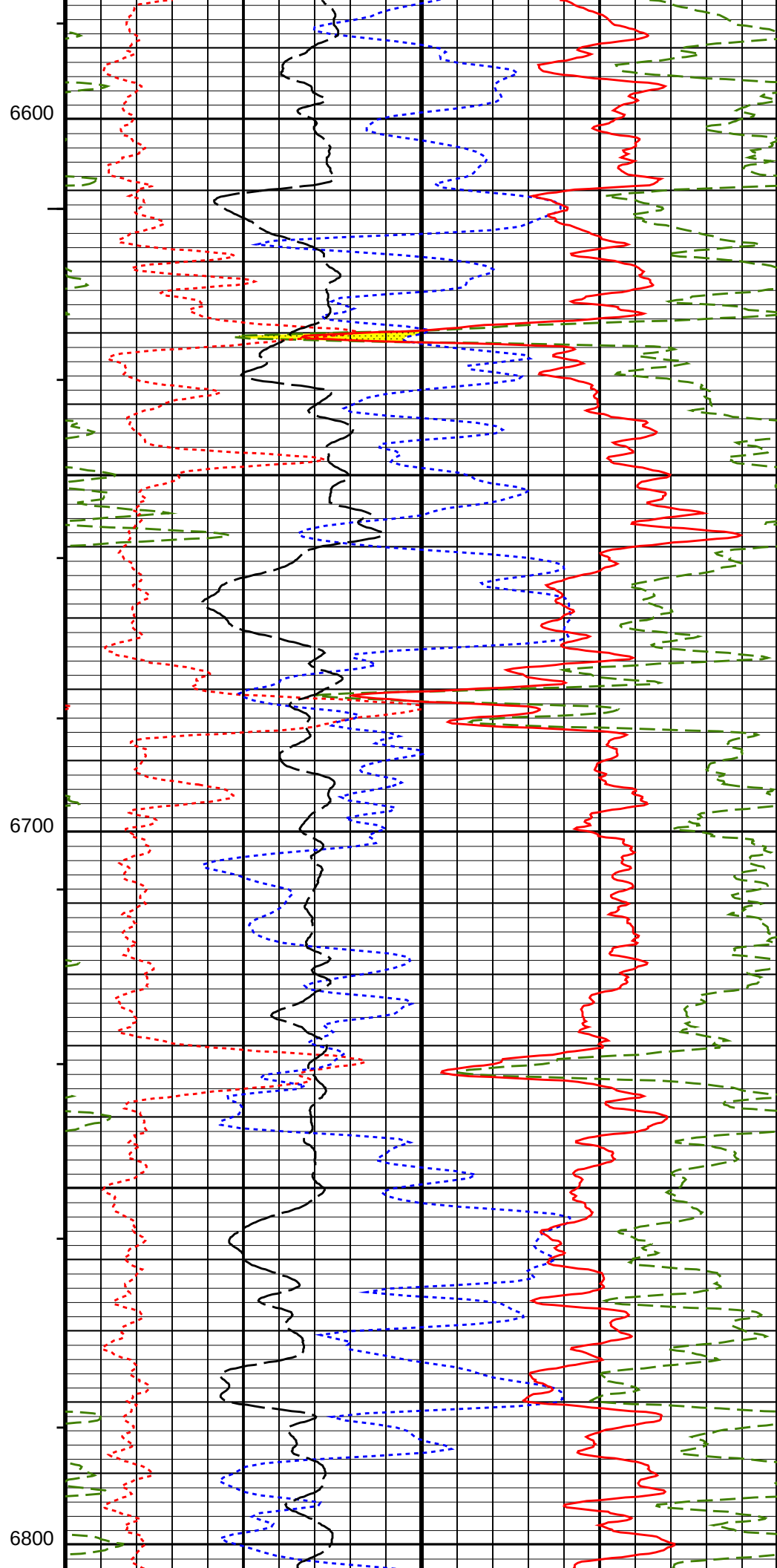
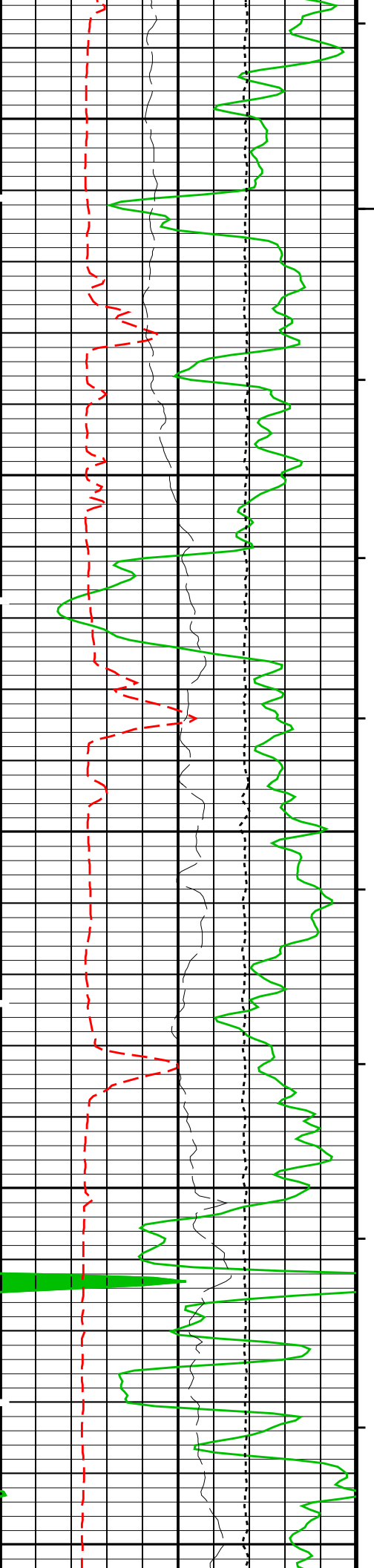
DLIS Name	New Value	Previous Value	Depth & Time
TD	6869 FT	6864 FT	6791.8 12:18:44
TDL	6869.00 FT	6864.00 FT	6791.8 12:18:44

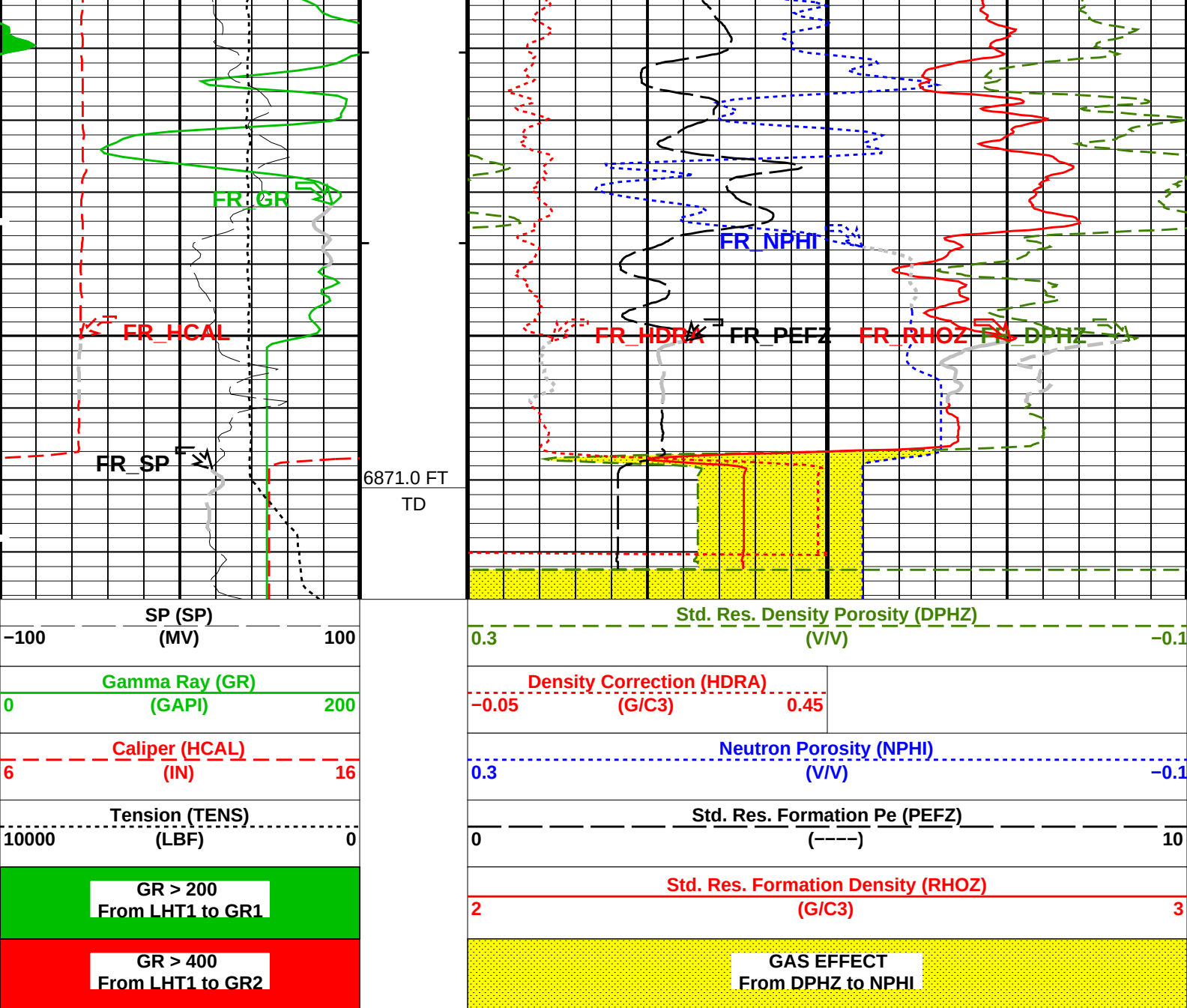
PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S







PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
AIT-M: Array Induction Tool - M		
AAPL	Array Induction Answer Product Level(Depth Log/View only)	
ABHM	Array Induction Borehole Correction Mode	3_BholeCorr_BasicLogs_RadialProcessing
ABHV	Array Induction Borehole Correction Code Version Number	2_ComputeStandoff
ABLM	Array Induction Basic Logs Mode	900
ABLV	Array Induction Basic Logs Code Version Number	6_One_Two_and_Four
ACDE	Array Induction Casing Detection Enable	223
ACEN	Array Induction Tool Centering Flag (in Borehole)	Yes
ACSED	Array Induction Casing Shoe Estimated Depth	Eccentered
ADITM	Array Induction Cased Tool Mode	-50000 FT
AEBC	Array Induction Enable Borehole Correction	0x00_Log_000
AEBL	Array Induction Enable Basic Logs	Yes
AERP	Array Induction Enable Radial Processing	Yes
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes
AFRSV	Array Induction Response Set Version for Four ft Resolution	Yes
AFVN	Array Induction Firmware Code Version Number	41.70.24.20
		1

AGS	Array Induction Select Akima Interpolation Gating	On	
ALNV	Array Induction Log Not Valid Flag	Log_Valid-No_Default_Parameters	
AMRD	Array Induction Mud Resistivity Calibration Depth	0	FT
AMRF	Array Induction Mud Resistivity Factor	1	
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPM	Array Induction Radial Processing Mode	0_One	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ARTS	AIT Rt Selection (for ALLRES computation)	AITM_OneResA60	
ASTA	Array Induction Tool Standoff	1.5	IN
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
ATTY	Array Induction Tool Type (of acquired data)	AITM	
AULV	Array Induction User Level Control	Normal	
AZRSV	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	150	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
RTCO	RTCO - Rt Invasion Correction	YES	
SHT	Surface Hole Temperature	68	DEGF
SPNV	SP Next Value	0	MV
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	150	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1.1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	77	DEGF
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.65	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PEA_FILTER	PEA Filter	NO_FILTER	
PEFC_FILTER	PEFC Filter	NO_FILTER	
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	

SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	150	DEGF
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	6885.00	FT
TDL	Total Depth - Logger	6864.00	FT
System and Miscellaneous			
ALTDPCN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	1200.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	9.40	LB/G
FLEV	Fluid Level	0.00	FT
MST	Mud Sample Temperature	64.30	DEGF
PBVSADP	Use alternate depth channel for playback	NO	
RMFS	Resistivity of Mud Filtrate Sample	0.8856	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	6864	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: PEX_NUC5_1 Vertical Scale: 5" per 100' Graphics File Created: 15-Oct-2011 12:12

OP System Version: 19C0-187

AIT-M	19C0-187	HILTH-FTB	19C0-187
DTC-H	19C0-187		

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:8	PRODUCER	15-Oct-2011 12:12
BACKUP	AIT_TLD_MCFL_CNL_006LUP	FN:9	PRODUCER	15-Oct-2011 12:16

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Repeat Analysis

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_012PUP	FN:16	PRODUCER	15-Oct-2011 16:01	6886.5 FT	330.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:8	PRODUCER	15-Oct-2011 12:12	6886.5 FT	6417.5 FT

Output DLIS Files

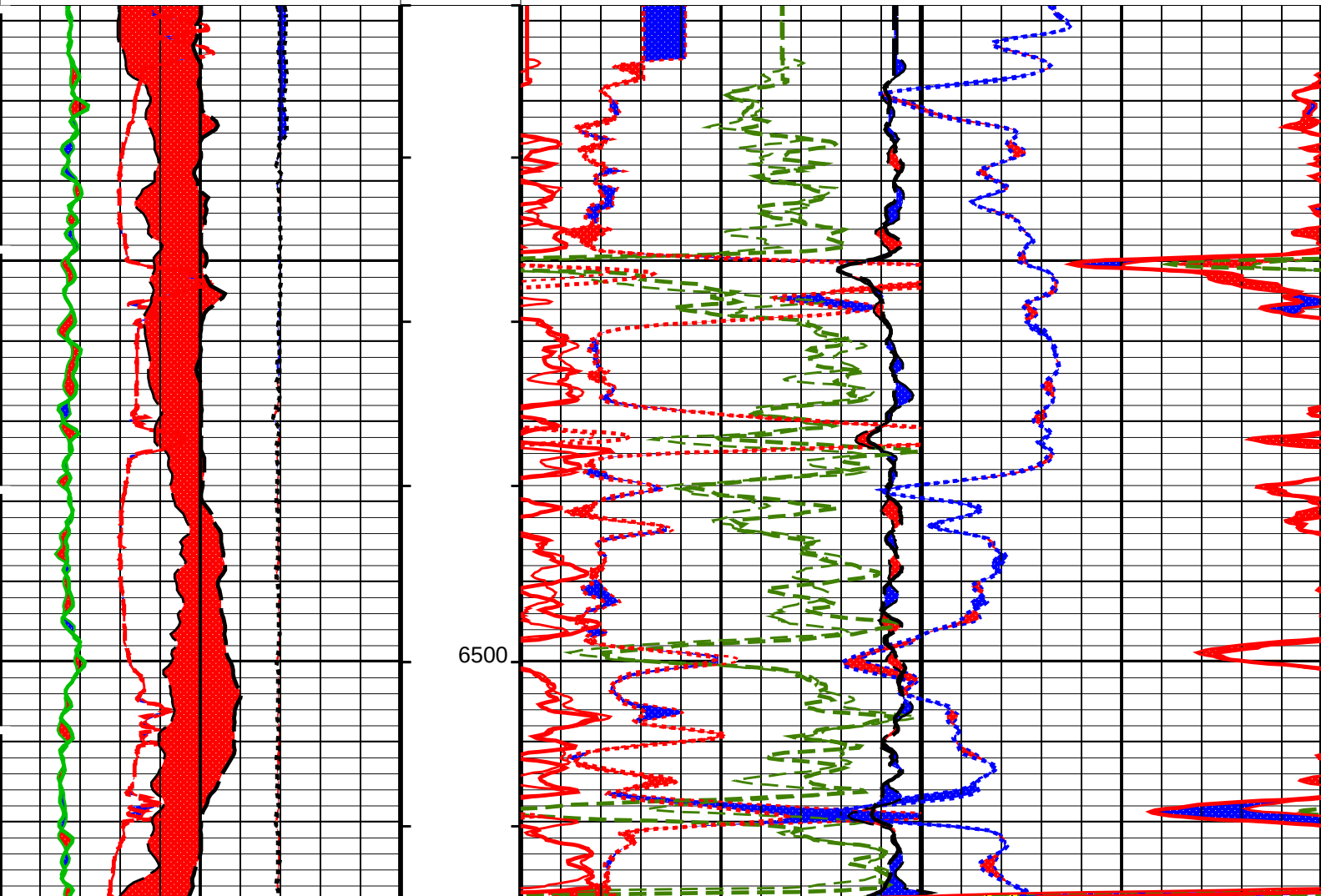
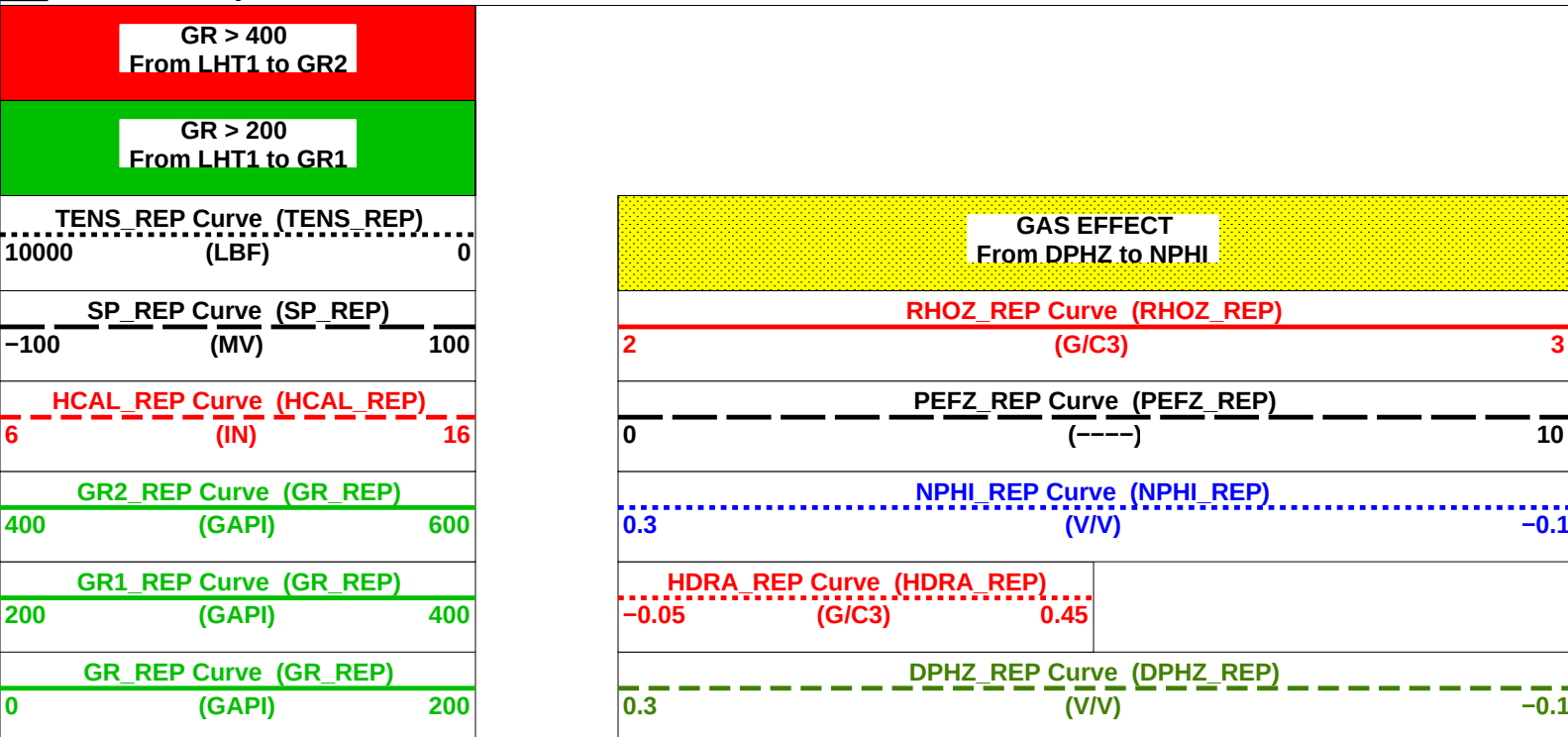
DEFAULT	AIT_TLD_MCFL_CNL_015PUP	FN:22	PRODUCER	15-Oct-2011 16:19
BACKUP	AIT_TLD_MCFL_CNL_015PUP	FN:23	PRODUCER	15-Oct-2011 16:22

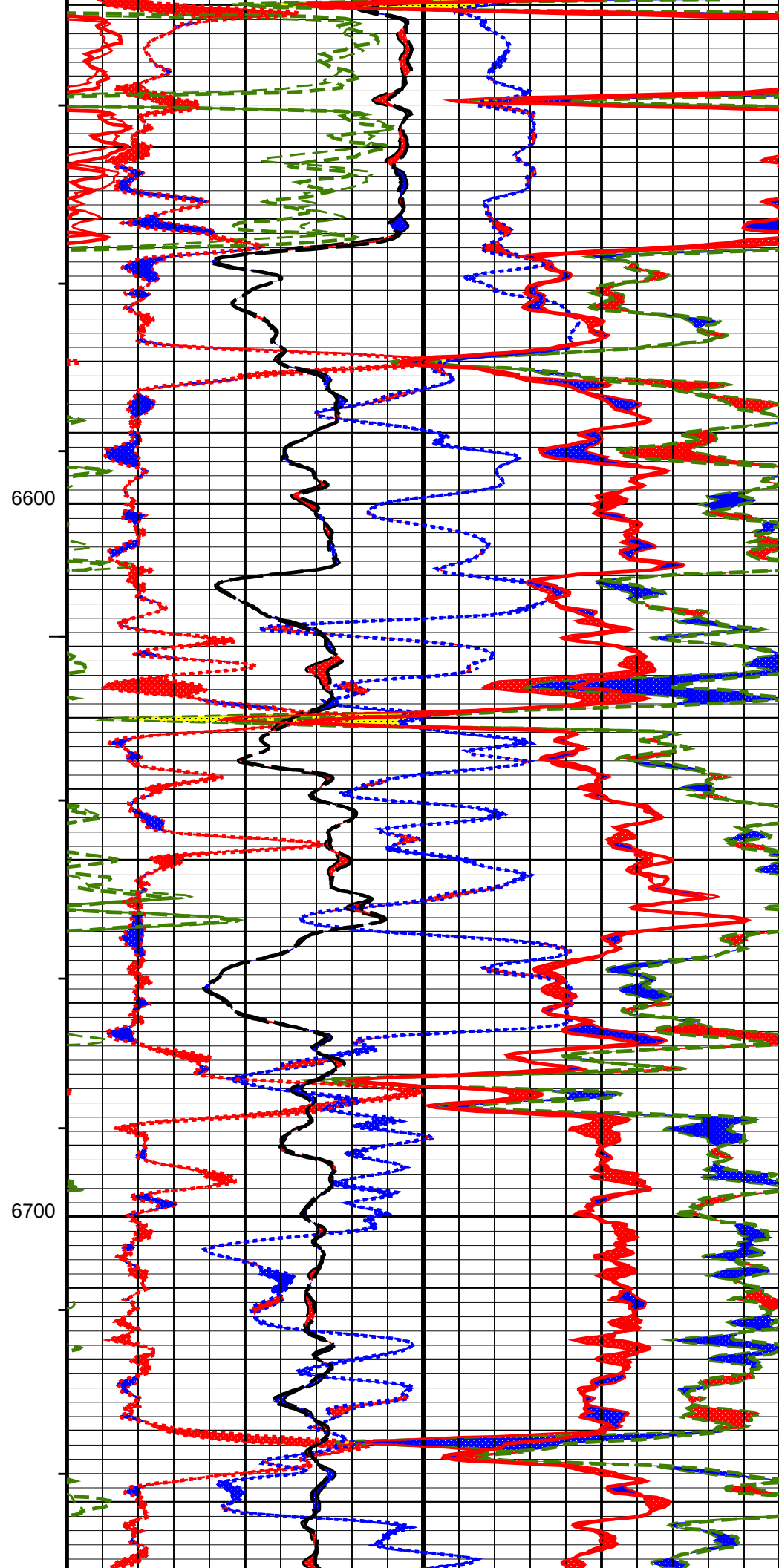
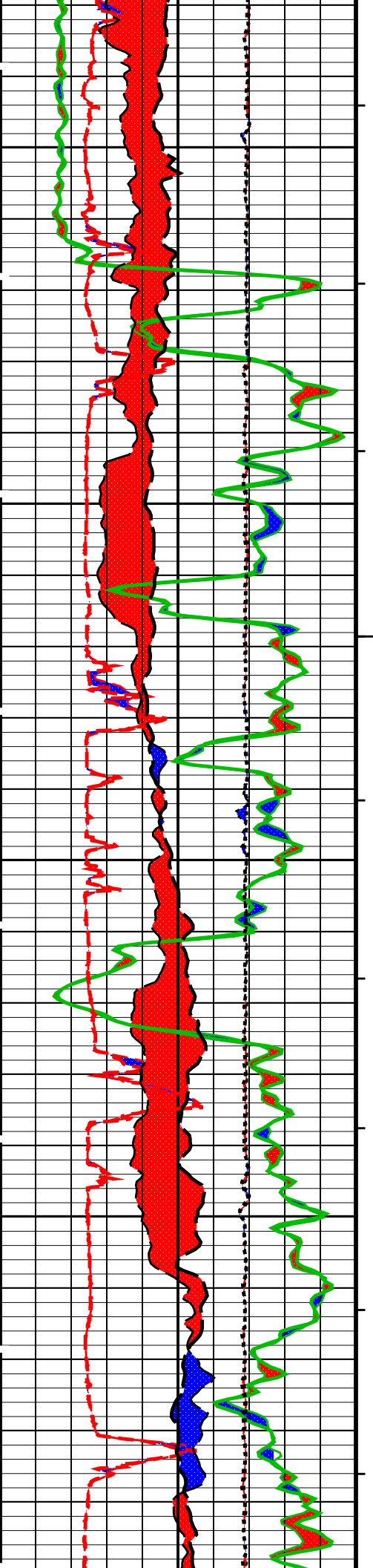
OP System Version: 19C0-187

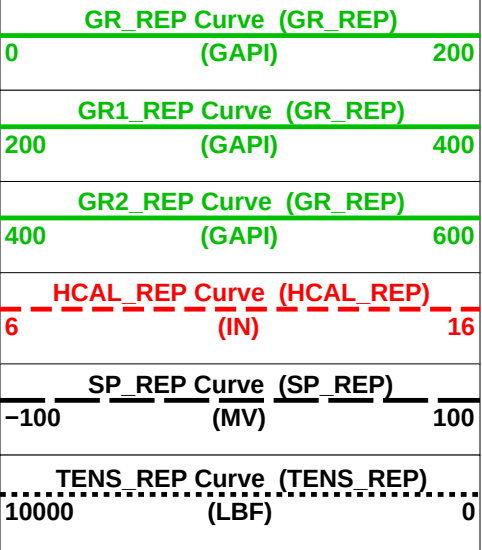
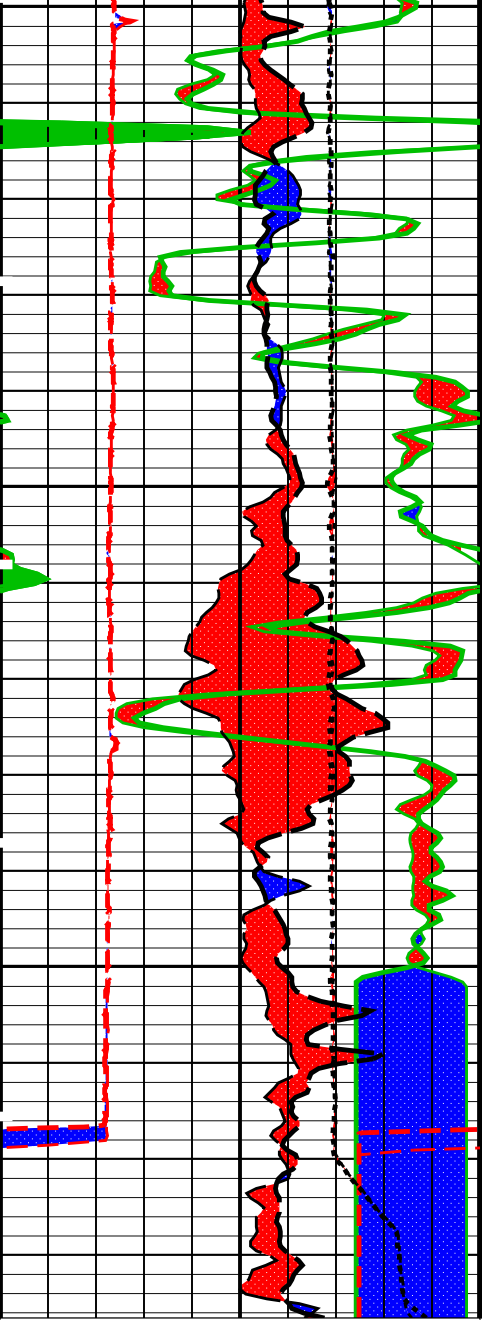
PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

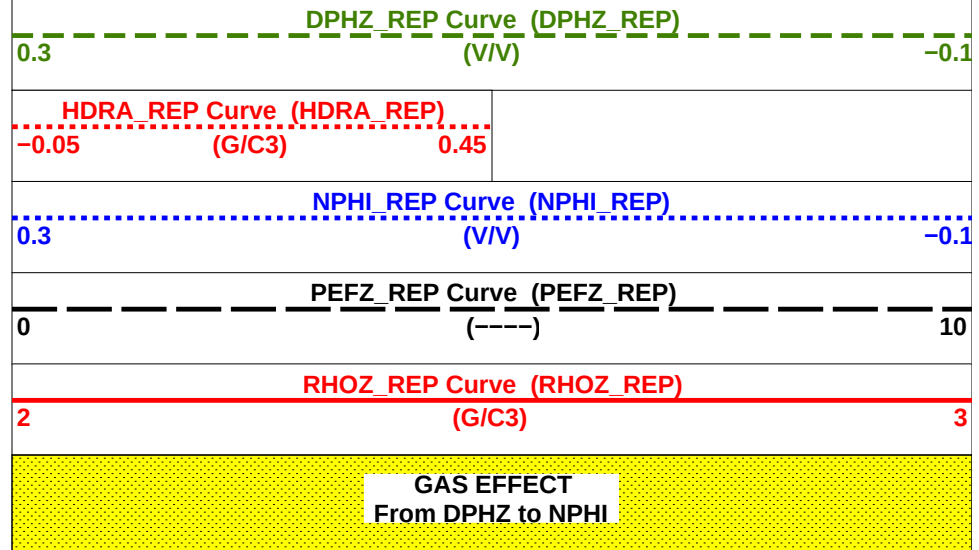
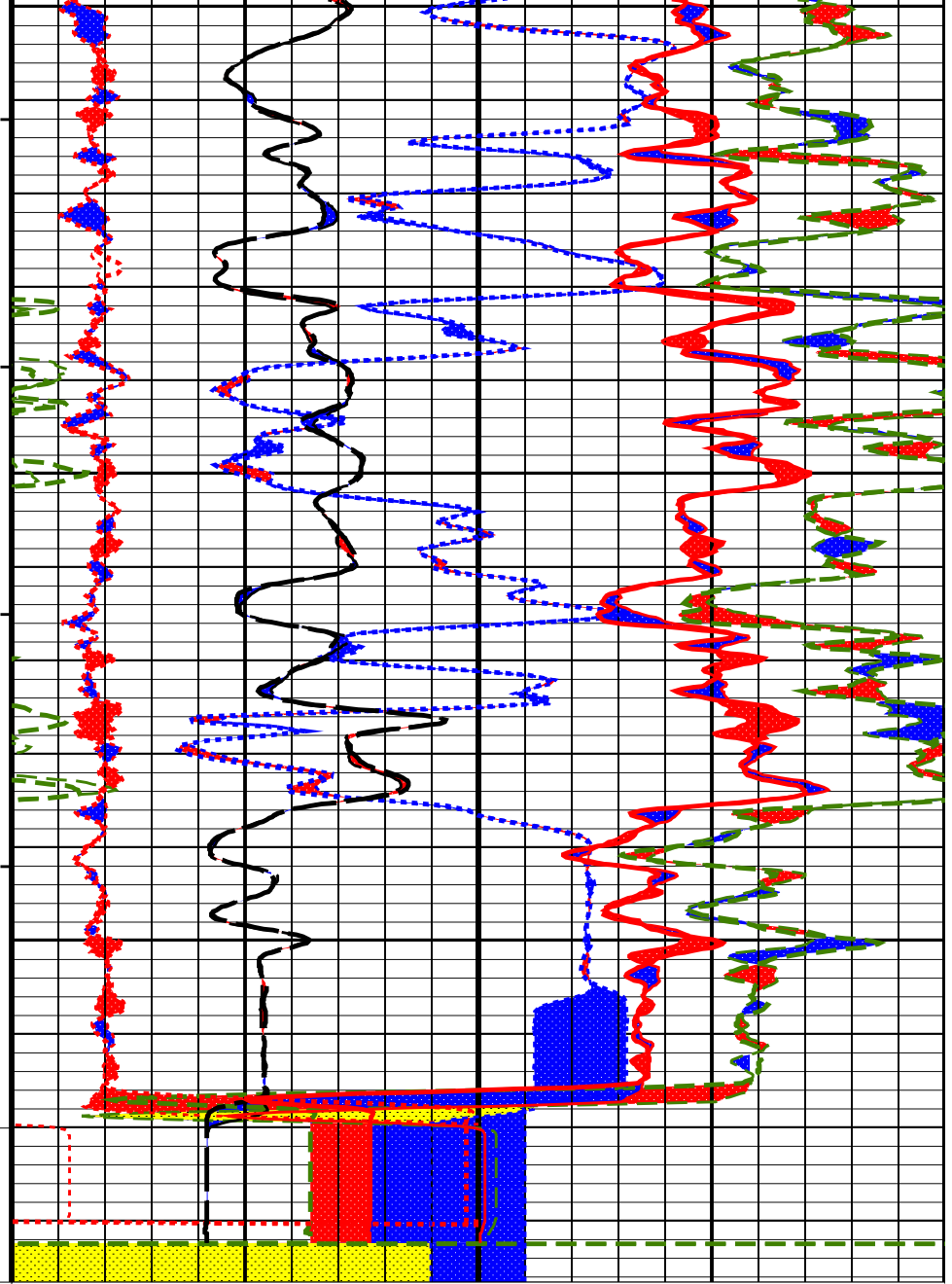






GR > 200
From LHT1 to GR1

GR > 400
From LHT1 to GR2



- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
AAPL	Array Induction Answer Product Level(Depth Log/View only)		
ABHM	3_BholeCorr_BasicLogs_RadialProcessing		
ABHV	2_ComputeStandoff		
ABLM	Array Induction Borehole Correction Code Version Number	900	
ABLV	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ACDE	Array Induction Basic Logs Code Version Number	223	
ACEN	Array Induction Casing Detection Enable	Yes	
ACSED	Array Induction Tool Centering Flag (in Borehole)	Eccentered	
ADITM	Array Induction Casing Shoe Estimated Depth	1491	FT
AEBM	Array Induction Desired Tool Mode	0x00_Log_000	
AEBL	Array Induction Enable Borehole Correction	Yes	
AERP	Array Induction Enable Basic Logs	Yes	
AETP	Array Induction Enable Radial Processing	Yes	
AFRSV	Array Induction Enable Sonde Error Temp&Pres Corr	Yes	
AFVN	Array Induction Response Set Version for Four ft Resolution	41.70.24.20	
AIGS	Array Induction Firmware Code Version Number	1	
ALNV	Array Induction Select Akima Interpolation Gating	On	
AMRD	Array Induction Log Not Valid Flag	Log_Valid-No_Default_Parameters	
AMRF	Array Induction Mud Resistivity Calibration Depth	0	FT
AORSV	Array Induction Mud Resistivity Factor	1	
ARFV	Array Induction Response Set Version for One ft Resolution	41.70.24.20	
ARPM	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Processing Mode	0_One	
ARTS	Array Induction Radial Parametrization Code Version Number	232	
ASTA	AIT Rt Selection (for ALLRES computation)	AITM_OneResA60	IN
ATRSV	Array Induction Tool Standoff	1.5	
ATSE	Array Induction Response Set Version for Two ft Resolution	41.70.24.20	
ATTY	Array Induction Temperature Selection(Sonde Error Correction)	Internal	
AULV	Array Induction Tool Type (of acquired data)	AITM	
AZRSV	Array Induction User Level Control	Normal	
BHS	Array Induction Response Set Version for Z Resolution	00.10.25.00	
BHT	Borehole Status	OPEN	
FEXP	Bottom Hole Temperature (used in calculations)	108	DEGF
FNUM	Form Factor Exponent	2	
FPHI	Form Factor Numerator	1	
GCSE	Form Factor Porosity Source	DPHZ	
GDEV	Generalized Caliper Selection	HCAL	
GGRD	Average Angular Deviation of Borehole from Normal	0	DEG
GRSE	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Mud Resistivity Selection	AITM_RESIST	
ISSBAR	Generalized Temperature Selection	HSTS_HTEM	
MATR	Barite Mud Switch	NOBARITE	
RTCO	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	RTCO - Rt Invasion Correction	YES	
SPNV	Surface Hole Temperature	68	DEGF
	SP Next Value	0	MV
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	108	DEGF
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1.1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	77	DEGF
HDCOD	HILT Density Coal detection	2	G/C3

HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.65	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PEA_FILTER	PEA Filter	NO_FILTER	
PEFC_FILTER	PEFC Filter	NO_FILTER	
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	108	DEGF
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	STI	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth - Driller	6885.00	FT
TDL	Total Depth - Logger	6870.00	FT
System and Miscellaneous			
ALTDCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	1200.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	36.00	LB/F
DFD	Drilling Fluid Density	9.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
FLEV	Fluid Level	0.00	FT
MST	Mud Sample Temperature	64.30	DEGF
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	0.8856	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	6870	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: PEX_NUC5_1_REP Vertical Scale: 5" per 100' Graphics File Created: 15-Oct-2011 16:19

OP System Version: 19C0-187

AIT-M	19C0-187	HILTH-FTB	19C0-187
DTC-H	19C0-187		

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_012PUP	FN:16	PRODUCER	15-Oct-2011 16:01	6886.5 FT	330.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_006LUP	FN:8	PRODUCER	15-Oct-2011 12:12	6886.5 FT	6417.5 FT

Output DLIS Files

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_015PUP	FN:22	PRODUCER	15-Oct-2011 16:19
BACKUP	AIT_TLD_MCFL_CNL_015PUP	FN:23	PRODUCER	15-Oct-2011 16:22



CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Before: 10-Oct-2011 10:07							
Thru Cal Magnitude – 0	0	N/A	0.6138	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	N/A	1.257	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	N/A	0.6224	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	N/A	0.7041	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	N/A	1.319	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	N/A	1.919	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	N/A	1.918	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	N/A	1.377	N/A	N/A	N/A	V
Thru Cal Phase – 0	0	N/A	192.1	N/A	N/A	N/A	DEG
Thru Cal Phase – 1	0	N/A	191.0	N/A	N/A	N/A	DEG
Thru Cal Phase – 2	0	N/A	187.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 3	0	N/A	186.6	N/A	N/A	N/A	DEG
Thru Cal Phase – 4	0	N/A	180.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 5	0	N/A	178.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 6	0	N/A	178.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 7	0	N/A	178.0	N/A	N/A	N/A	DEG
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Auxiliary							
Before: 10-Oct-2011 10:07							
Array Induction SPA Plus	991.0	N/A	989.0	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	N/A	–0.2888	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9170	N/A	0.9161	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	N/A	–0.0002814	N/A	N/A	N/A	V
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary							
Before: 10-Oct-2011 10:12							
BS Window Ratio	0.7352	N/A	0.7386	N/A	N/A	N/A	CPS
BS Window Sum	9410	N/A	9268	N/A	N/A	N/A	
SS Window Ratio	0.4886	N/A	0.4886	N/A	N/A	N/A	CPS
SS Window Sum	9987	N/A	9800	N/A	N/A	N/A	
LS Window Ratio	0.2945	N/A	0.2904	N/A	N/A	N/A	CPS
LS Window Sum	1125	N/A	1109	N/A	N/A	N/A	
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo-multiplier High Voltages Calibrations							
Before: 10-Oct-2011 10:12							
BS PM High Voltage (Command)	1305	N/A	1329	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1452	N/A	1443	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1889	N/A	1887	N/A	N/A	N/A	V
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration							
Before: 10-Oct-2011 10:12							
BS Crystal Resolution	11.16	N/A	11.04	N/A	N/A	N/A	%
SS Crystal Resolution	8.840	N/A	8.762	N/A	N/A	N/A	%
LS Crystal Resolution	9.092	N/A	9.007	N/A	N/A	N/A	%
High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration							
Before: 10-Oct-2011 10:13							
Raw B0 Resistivity	3875	N/A	3861	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3832	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3837	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration							
Before: 10–Oct–2011 10:09							
HILT Caliper Zero Measurement	8.000	N/A	7.797	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.20	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration							
Before: 10–Oct–2011 10:09							
Gamma Ray Background	30.00	N/A	42.81	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkgd)	165.0	N/A	173.7	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement							
Master: 23–Jul–2011 12:09 Before: 10–Oct–2011 10:10							
CNTC Background	27.29	27.29	27.11	N/A	N/A	4.094	CPS
CFTC Background	27.71	27.71	28.87	N/A	N/A	4.156	CPS
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement							
Master: 23–Jul–2011 12:09							
Thermal Near Corr. (Tank)	5800	5360	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2241	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.392	N/A	N/A	N/A	N/A	
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration							
Before: 15–Oct–2011 11:06							
Z–Axis Acceleration	32.19	N/A	32.11	N/A	N/A	N/A	F/S2
High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results							
Master: 20–Sep–2011 14:20							
Rho Aluminum	2.596	2.598	--	--	--	--	G/C3
Rho Magnesium	1.686	1.690	--	--	--	--	G/C3
Pe Aluminum	2.570	2.551	--	--	--	--	
Pe Magnesium	2.650	2.609	--	--	--	--	
High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary							
Master: 20–Sep–2011 14:20							
BS Average Deviation	0	0.3450	--	--	--	--	%
BS Max Deviation	0	1.064	--	--	--	--	%
SS Average Deviation	0	0.2802	--	--	--	--	%
SS Max Deviation	0	1.289	--	--	--	--	%
LS Average Deviation	0	0.5325	--	--	--	--	%
LS Max Deviation	0	1.395	--	--	--	--	%

The GLS–VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT–B Water Temperature 76.0 DEGF.
Thermal Housing Size 3.381 IN.
NSR–F serial number 5142

Array Induction Tool – M / Equipment Identification

Primary Equipment:
Rm/SP Bottom Nose AMRM – A
Array Induction Sonde AMIS – A 190

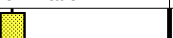
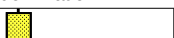
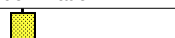
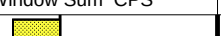
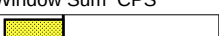
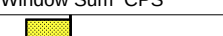
Auxiliary Equipment:

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Before	0.6138		0.6100	192.1		197.0
1	Before	1.257		1.270	191.0		196.0
2	Before	0.6224		0.6200	187.4		192.0
3	Before	0.7041		0.7000	186.6		191.0
4	Before	1.319		1.340	180.4		185.0
5	Before	1.919		1.960	178.8		182.0

6	Before	1.918		1.960	178.8		181.0
7	Before	1.377		1.410	178.0		175.0
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Before: 10-Oct-2011 10:07							

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Auxiliary							
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value
Before			989.0	Before			-0.2888
	941.0 (Minimum)	991.0 (Nominal)	1040 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
Phase	Array Induction Temperature Plus V		Value	Phase	Array Induction Temperature Zero V		Value
Before			0.9161	Before			-0.0002814
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)		-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Before: 10-Oct-2011 10:07							

High resolution Integrated Logging Tool-DTS / Equipment Identification			
Primary Equipment:			
HILT high-Resolution Mechanical Sonde	HRMS – H	4824	
HILT Rxo Gamma-ray Device	HRGD – H	2368	
HILT Micro Cylindrically Focused Log Dev	MCFL – H		
GR Logging Source	GLS – VJ	5482	
HILT High Res. Control Cartridge	HRCC – H	4819	
HILT Gamma-Ray Neutron Sonde-DTS	HGNS – H	4836	
HGNS Gamma-Ray Device	HGR –		
HGNS Neutron Detector with Alpha Source	HCNT – H		
Auxiliary Equipment:			
Neutron Calibration Tank	NCT – B		
Gamma Source Radioactive	GSR – U/Y		
HGNS Housing	HGNH –	3947	

High resolution Integrated Logging Tool-DTS Wellsite Calibration														
Stab Measurement Summary														
Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value	Phase	LS Window Ratio			Value
Before				0.7386	Before				0.4886	Before				0.2904
	0.6984 (Minimum)	0.7352 (Nominal)	0.7719 (Maximum)		0.4642 (Minimum)	0.4886 (Nominal)	0.5130 (Maximum)		0.2798 (Minimum)	0.2945 (Nominal)	0.3092 (Maximum)			
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value	Phase	LS Window Sum CPS			Value
Before				9268	Before				9800	Before				1109
	8940 (Minimum)	9410 (Nominal)	9881 (Maximum)		9488 (Minimum)	9987 (Nominal)	10490 (Maximum)		1068 (Minimum)	1125 (Nominal)	1181 (Maximum)			
Before: 10-Oct-2011 10:12														

High resolution Integrated Logging Tool-DTS Wellsite Calibration														
Photo-multiplier High Voltages Calibrations														
Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1329	Before				1443	Before				1887
	1205 (Minimum)	1305 (Nominal)	1405 (Maximum)		1352 (Minimum)	1452 (Nominal)	1552 (Maximum)			1789 (Minimum)	1889 (Nominal)	1989 (Maximum)		
Before: 10-Oct-2011 10:12														

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			11.04	Before			8.762	Before			9.007
	10.16 (Minimum)	11.16 (Nominal)	12.16 (Maximum)		7.840 (Minimum)	8.840 (Nominal)	9.840 (Maximum)		8.092 (Minimum)	9.092 (Nominal)	10.09 (Maximum)
Before: 10-Oct-2011 10:12											

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
MCFL Calibration									
Phase	Raw R0 Resistivity OHMM	Value	Phase	Raw R1 Resistivity OHMM	Value	Phase	Raw R2 Resistivity OHMM	Value	

Phase	Raw B1 Resistivity Ohm/m	Value	Phase	Raw B1 Resistivity Ohm/m	Value	Phase	Raw B2 Resistivity Ohm/m	Value
Before		3861	Before		3832	Before		3837
3565 (Minimum) 3875 (Nominal) 4185 (Maximum)			3524 (Minimum) 3830 (Nominal) 4136 (Maximum)			3524 (Minimum) 3830 (Nominal) 4136 (Maximum)		
Before: 10-Oct-2011 10:13								

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		Value
Before			7.797	Before			12.20
6.000 (Minimum) 8.000 (Nominal) 10.00 (Maximum)			9.000 (Minimum) 12.00 (Nominal) 15.00 (Maximum)				
Before: 10-Oct-2011 10:09							

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Detector Calibration							
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig - Bkgd) GAPI		Value
Before			42.81	Before			173.7
0 (Minimum)30.00 (Nominal)120.0 (Maximum)				157.1 (Minimum)165.0 (Nominal)206.3 (Maximum)			
Before: 10-Oct-2011 10:09							

High resolution Integrated Logging Tool-DTS Wellsite Calibration					
Zero Measurement					
Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		27.29	Master		27.71
Before		27.11	Before		28.87
5.000 (Minimum) 27.29 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 27.71 (Nominal) 40.00 (Maximum)		
Master: 23-Jul-2011 12:09			Before: 10-Oct-2011 10:10		

High resolution Integrated Logging Tool-DTS Wellsite Calibration																
Ratio Measurement																
Phase	Thermal Near Corr. (Tank) CPS		Value	Phase	Thermal Far Corr. (Tank) CPS		Value	Phase	CNTC/CFTC (Tank)		Value					
Master			5360	Master			2241	Master			2.392					
4700 (Minimum)			5800 (Nominal)	6900 (Maximum)			1900 (Minimum)			2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)			2.159 (Nominal)	2.540 (Maximum)
Master: 23-Jul-2011 12:09																

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration F/S2	Value
Before		32.11
31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)		
Before: 15-Oct-2011 11:06		

High resolution Integrated Logging Tool-DTS Master Calibration							
Inversion results							
Phase	Rho Aluminum G/C3		Value	Phase	Rho Magnesium G/C3		Value
Master			2.598	Master			1.690
2.586 (Minimum)				1.676 (Minimum)			
2.596 (Nominal)				1.686 (Nominal)			
2.606 (Maximum)				1.696 (Maximum)			
Phase	Pe Aluminum		Value	Phase	Pe Magnesium		Value
Master			2.551	Master			2.609
2.470 (Minimum)				2.550 (Minimum)			
2.570 (Nominal)				2.650 (Nominal)			
2.670 (Maximum)				2.750 (Maximum)			
Master: 20-Sep-2011 14:20							

High resolution Integrated Logging Tool-DTS Master Calibration									
Deviation Summary									
Phase	BS Average Deviation %	Value	Phase	SS Average Deviation %	Value	Phase	LS Average Deviation %	Value	
Master		0.3450	Master		0.2802	Master		0.5325	
-0.6000 0 0.6000			-1.000 0 1.000			-1.500 0 1.500			

(Minimum)	(Nominal)	(Maximum)	Phase	BS Max Deviation %	Value	(Minimum)	(Nominal)	(Maximum)	Phase	SS Max Deviation %	Value	(Minimum)	(Nominal)	(Maximum)	Phase	LS Max Deviation %	Value
			Master		1.064				Master		1.289				Master		1.395
-1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)				-2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)				-3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)			

Master: 20-Sep-2011 14:20

High resolution Integrated Logging Tool-DTS Master Calibration								
Zero Measurement								
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value	
Master			27.29	Master			27.71	
	5.000 (Minimum)	27.29 (Nominal)	40.00 (Maximum)		5.000 (Minimum)	27.71 (Nominal)	40.00 (Maximum)	

Master: 23-Jul-2011 12:09

High resolution Integrated Logging Tool-DTS Master Calibration														
Tank Measurement														
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value
Master				5360	Master				2241	Master				2.392
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)			
Master: 23-Jul-2011 12:09														

Master: 23-Jul-2011 12:09

DTS Telemetry Tool / Equipment Identification

Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry Cartridge

DTCH - A
DTCH - A 9406

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH - KC 10496

Company: **SANDIA TECHNOLOGIES, LLC**

Schlumberger

Well: **NYSTA TANDEM LOT 1**

Field: **WILDCAT**

County: **ROCKLAND**

State: **NEW YORK**

Platform Express

Compensated Neutron / Litho-Density

Gamma Ray / Caliper