

Company: **JOGMEC**
Well: **AURORA/JOGMEC/NRCAN MALLIK 2L-38**
Field: **MALLIK**
Province: **NWT**

[illegible]

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				

[illegible]

DEPTH SUMMARY LISTING

Date Created: 7-MAR-2007 11:57:50

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-JA	Type:	CMTD-B/A	Type:	7-46P-XS
Serial Number:	6423	Serial Number:	2565	Serial Number:	0
Calibration Date:	09-JAN-2007	Calibration Date:	06-FEB-2007	Length:	6399.89 M
Calibrator Serial Number:	4	Calibrator Serial Number:	2565	Conveyance Method:	Wireline
Calibration Cable Type:	7-46P-XS	Calibration Gain:	0.84	Rig Type:	LAND
Wheel Correction 1:	-6	Calibration Offset:	-14.00		
Wheel Correction 2:	-7				

Depth Control Parameters

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	PLATFORM EXPRESS: COMPENSATED NEUTRON-LITHO DENSITY LOG
Reference Log Run Number:	ONE
Reference Log Date:	03-MAR-2007
Subsequent Trip Down Log Correction:	1.37 M

Depth Control Remarks

- 1.
2. NO SPEED CORRECTION APPLIED AT WELLSITE
- 3.
- 4.
- 5.
- 6.

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	OTHER SERVICES2
OS1: 1.ZAIT-HRLT-EMS-GPI	OS1:
OS2: 3.FMI-MSIP-EMS	OS2:
OS3: 4.MRSCANNER	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
APS HAS LARGE HOLE KIT INSTALLED	
TLD HAS LARGE HOLE CALIPER INSTALLED	
HGNS HAS LARGE HOLE KIT INSTALLED	
PPC1 AND PPC2 USED FOR ECCENTRALIZATION AND LARGE HOLE KIT INSTALLED ON BOTH	
BS=9.875" FROM TD-1296M	
BS=14.25" FROM 1296-SC	

SLB ONLY LOGGED DOWN TO 1296M

BOTTOM ADAPATERS USED AS HOLE FINDER

RIG: AKITA 62

CREW: JAMES MACDONALD / MARK KIMBALL / MIKE KLOC

RUN 1 SERVICE ORDER #: 11709034 PROGRAM VERSION: 14C0-302 FLUID LEVEL:			RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

RUN 1

RUN 2

SURFACE EQUIPMENT

SFT-281 12673
SFT-178 53
GSR-U/Y 6710
NCT-B

CNB-AB
NCS-VB
GSR-U 610
WITM (EDTS)-A

DOWNHOLE EQUIPMENT

LEH-QT		35.64
--------	---	-------

EDTC-B 8265	Mud Temp	CTEM	34.75
EDTH-B 8253	Gamma Ray <td></td> <td>33.68</td>		33.68
EDTC-B	EDTCB Ele		33.11
			32.77

AH-184		32.77
--------	---	-------

AH-224		32.16
--------	---	-------

AH-224		31.55
--------	---	-------

AH-184		30.94
--------	---	-------

PPC1-B 8148 Calipers 29.98 30.33

PPC1-B		<div></div>
PPC1-C	PPC1-Contr	98.35

PPC_CAL_40EXT	PPC_Caltr		28.35
	Header 1		27.35

HNGS-BA 163 Upper_1 27.65
Lower_2 27.43 28.35

HNGS-BA 163	2019-11-11	2019-11-11
HNSH-BA 25	2019-11-11	2019-11-11

FINSH-BA 25

HNGC-B 405 HNGC Stat  25.31 25.85

FINCO 2-100		10.00
-------------	--	-------

ECC-B ECC Statu — 24.25 24.78

Downloaded from <http://ajphaphysiol.org/> on September 11, 2012


ECS-A 20 Detector — 23.32 23.71

ECS-A 20
NSR-F 2671

NR-1 2071				
2000 2014	Calipers		21 34	21 34

PPC2-B 8149 Calipers 21.54 21.69

PPC2-B					
PPC CAL 40EXT	PPC_Cartr		___	19.70	

CMPT 8  10 70

CMRT-B		19.70
CMBC-BA 202		

CMRS-BA 182	CMR-B Raw		
	CMR-B Sep		15.54

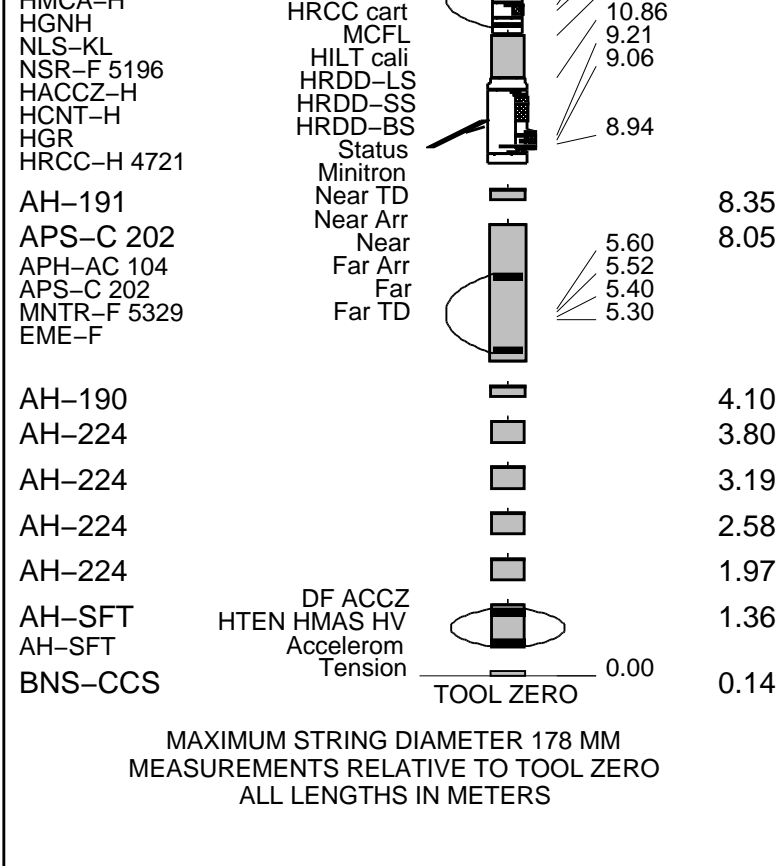
CMR-B Sell		15.34
CMR-B Dia		14.95

HGNS HTEM
HMGA

HMCA		14.95
Gamma-Ray		14.72

HILTH-FTB	Neutron F	12.95	14.95
	Neutron N	12.30	

HGNSD-H 4730	Neutron N		12.79
HGNS sens			12.08



Schlumberger

MAIN PASS: LITHOLOGY DENSITY

MAXIS Field Log

Input DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_128LUP	FN:145	PRODUCER	07-Mar-2007 09:56	1293.9 M	621.0 M
---------	-------------------------	--------	----------	-------------------	----------	---------

Output DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_155PUP	FN:171	PRODUCER	07-Mar-2007 14:06	1295.2 M	628.8 M
CUST	APS_TLD_MCFL_CNL_155PUP	FN:172	PRODUCER	07-Mar-2007 14:06	1295.2 M	628.8 M

OP System Version: 14C0-302

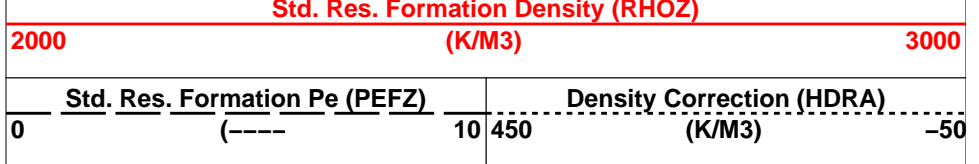
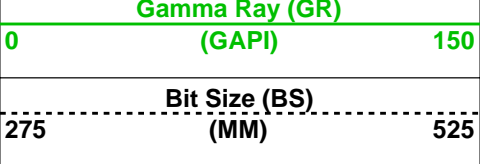
MCM

APS-C	14C0-302	HILTH-FTB	14C0-302
CMRT-B	14C0-302	PPC2-B	SKK-3060-PPCB
ECS-A	14C0-302	ECC-B	14C0-302
HNGC-B	14C0-302	HNGS-BA	14C0-302
PPC1-B	SKK-3060-PPCB	EDTC-B	SKK-3066-EDTCB

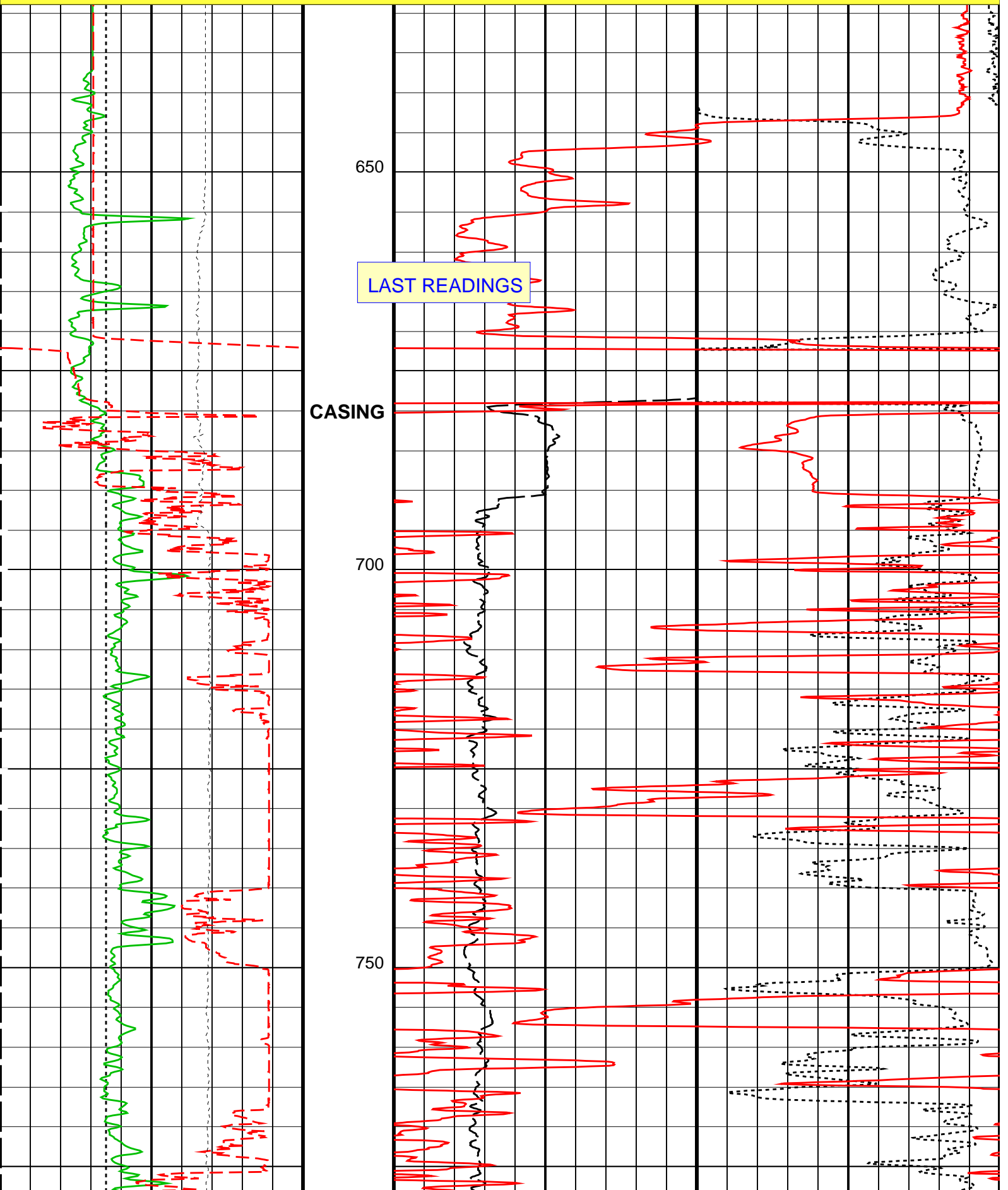
PIP SUMMARY

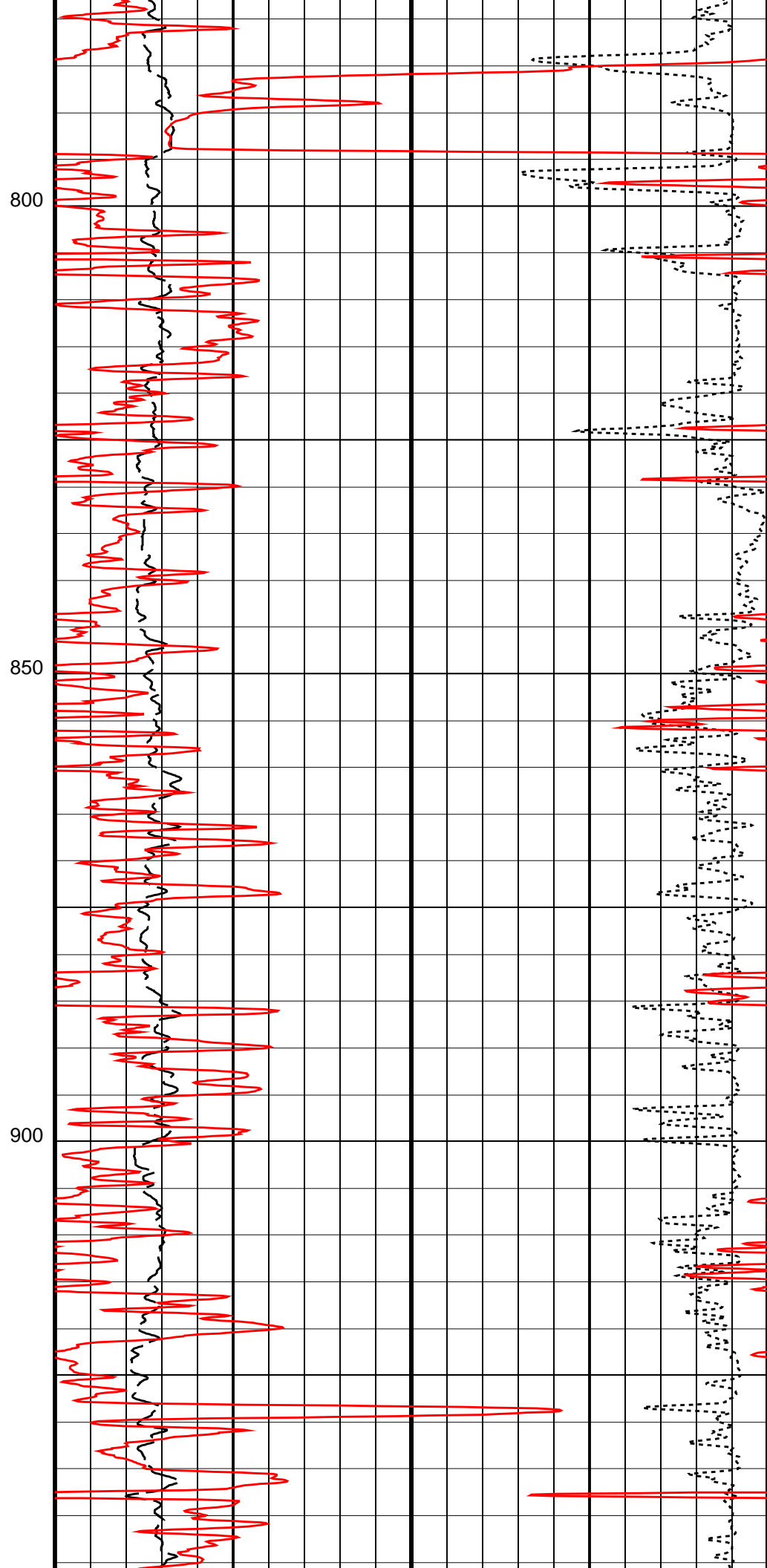
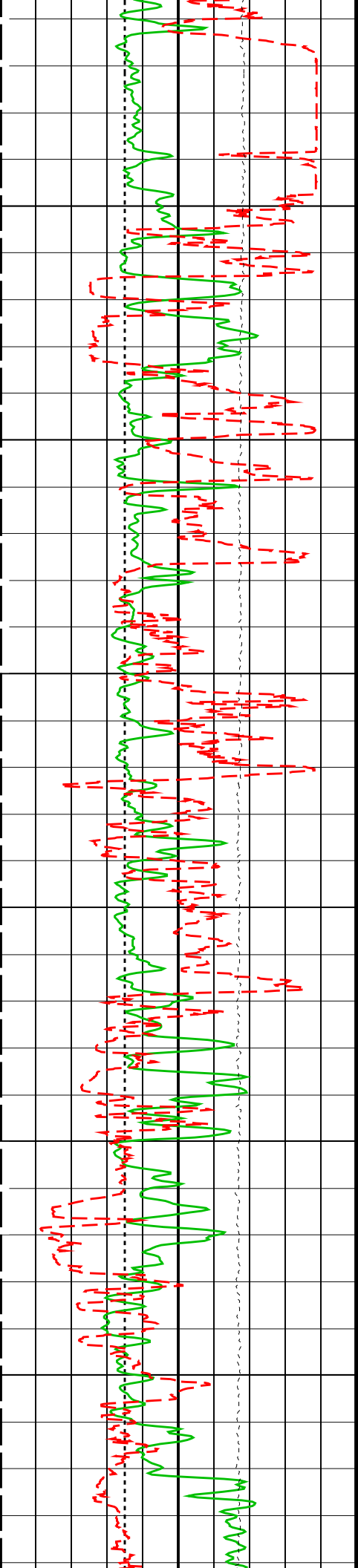
Time Mark Every 60 S

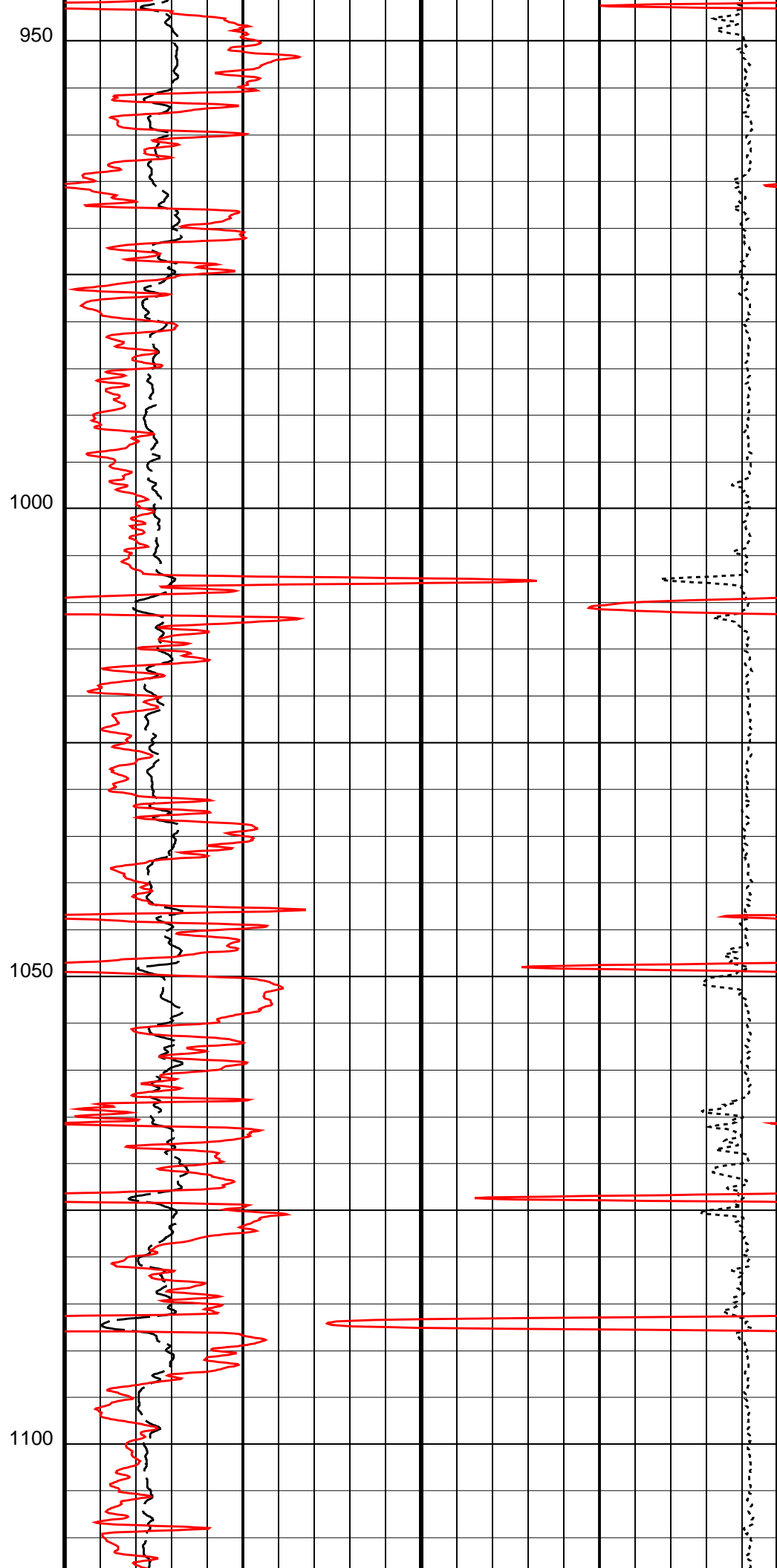
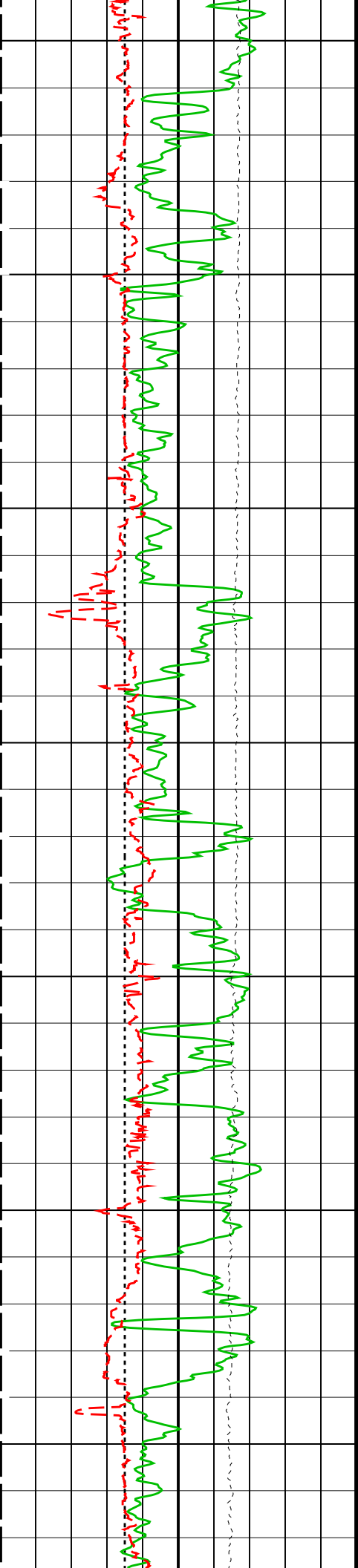
Tension (TENS)	
25000 (N)	0
Caliper (HCAL)	
275 (MM)	525

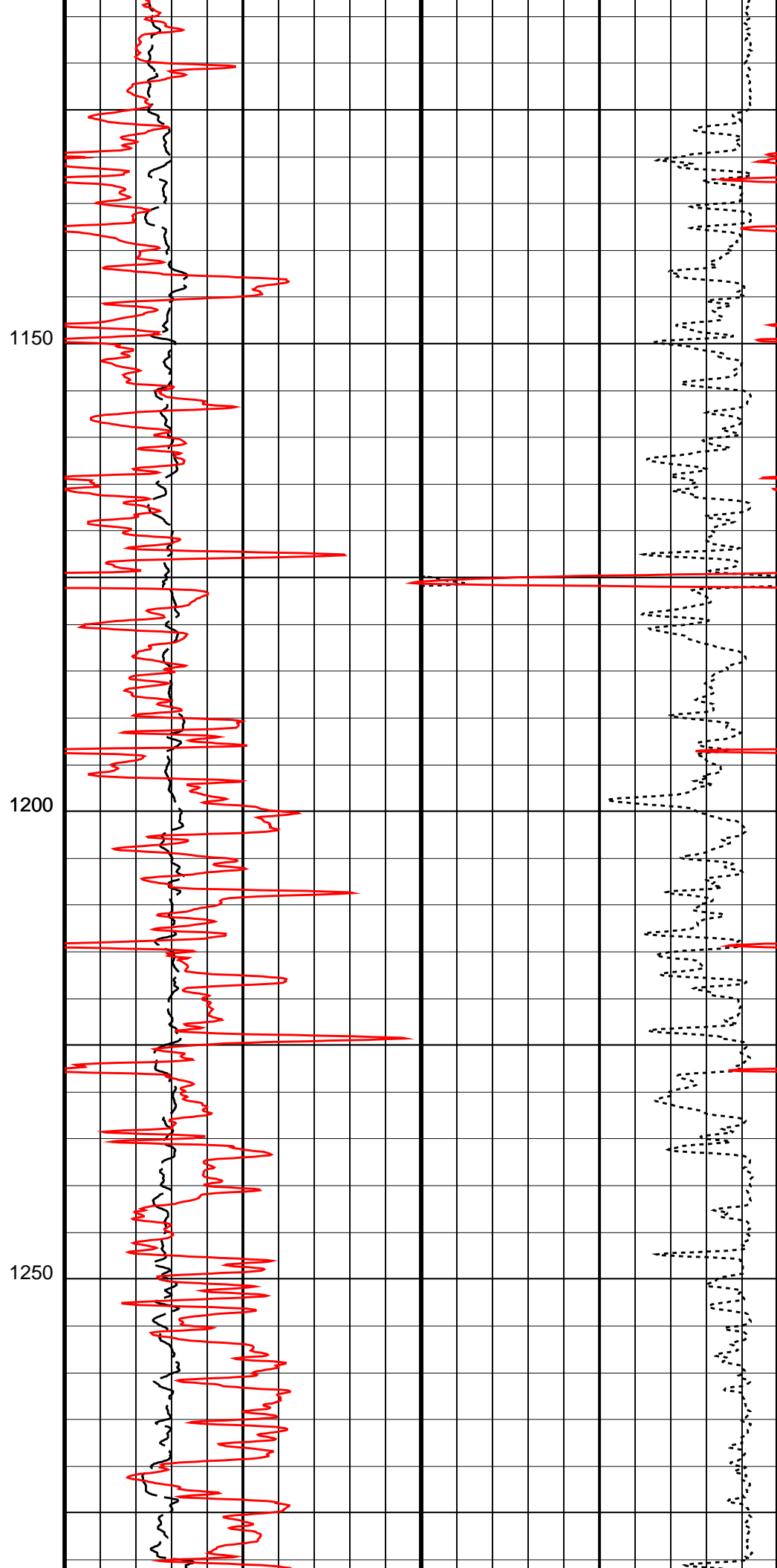
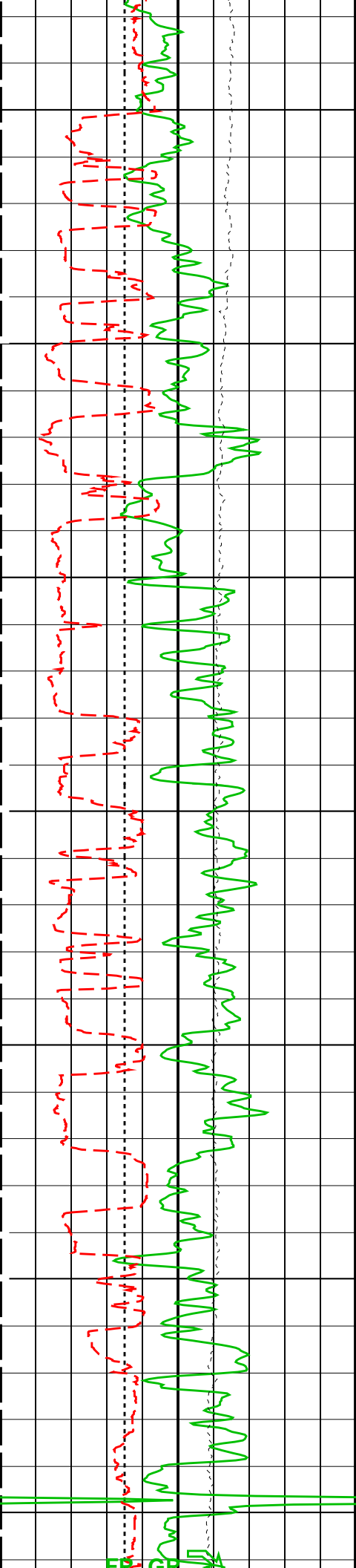


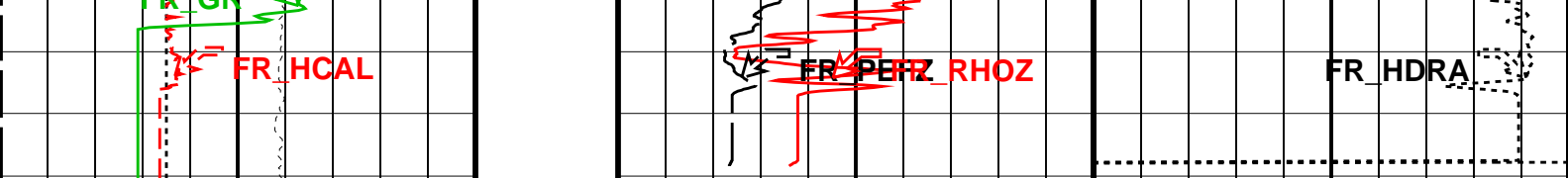
MAIN PASS: *** DENSITY – SANDSTONE 2650 KG/M3***











MAIN PASS: *** DENSITY – SANDSTONE 2650 KG/M3***

Bit Size (BS)		
275	(MM)	525
Gamma Ray (GR)		
0	(GAPI)	150
Caliper (HCAL)		
275	(MM)	525
Tension (TENS)		
25000	(N)	0

Std. Res. Formation Pe (PEFZ)		Density Correction (HDRA)	
0	(----	10	450
		(K/M3)	
		-50	
Std. Res. Formation Density (RHOZ)			
2000		(K/M3)	
		3000	

PIP SUMMARY
Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL_TLD	HILT Nuclear Mud Base	WATER
DHC	Density Hole Correction	BS
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	VeryHiRes
NSAR	HRDD Depth Sampling Rate	12.7 MM
STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL
STKT	STI Stuck Threshold	1.524 M
TDD	Total Depth – Driller	1310.00 M
TDL	Total Depth – Logger	1296.00 M
System and Miscellaneous		
BS	Bit Size	361.950 MM
DO	Depth Offset for Playback	1.4 M
DORL	Depth Offset for Repeat Analysis	0.0 M
PP	Playback Processing	RECOMPUTE

Format: DENS Vertical Scale: 1:600 Graphics File Created: 07-Mar-2007 14:06

OP System Version: 14C0-302			
MCM			
APS-C	14C0-302	HILTH-FTB	14C0-302
CMRT-B	14C0-302	PPC2-B	SKK-3060-PPCB
ECS-A	14C0-302	ECC-B	14C0-302
HNGC-B	14C0-302	HNGS-BA	14C0-302
PPC1-B	SKK-3060-PPCB	EDTC-B	SKK-3066-EDTCB

Input DLIS Files						
DEFAULT	APS_TLD_MCFL_CNL_128LUP	FN:145	PRODUCER	07-Mar-2007 09:56	1293.9 M	621.0 M
Output DLIS Files						
DEFAULT	APS_TLD_MCFL_CNL_155PUP	FN:171	PRODUCER	07-Mar-2007 14:06		
CUST	APS_TLD_MCFL_CNL_155PUP	FN:172	PRODUCER	07-Mar-2007 14:06		

Input DLIS Files

DEFAULT APS_TLD_MCFL_CNL_128LUP FN:145 PRODUCER 07-Mar-2007 09:56 1293.9 M 621.0 M

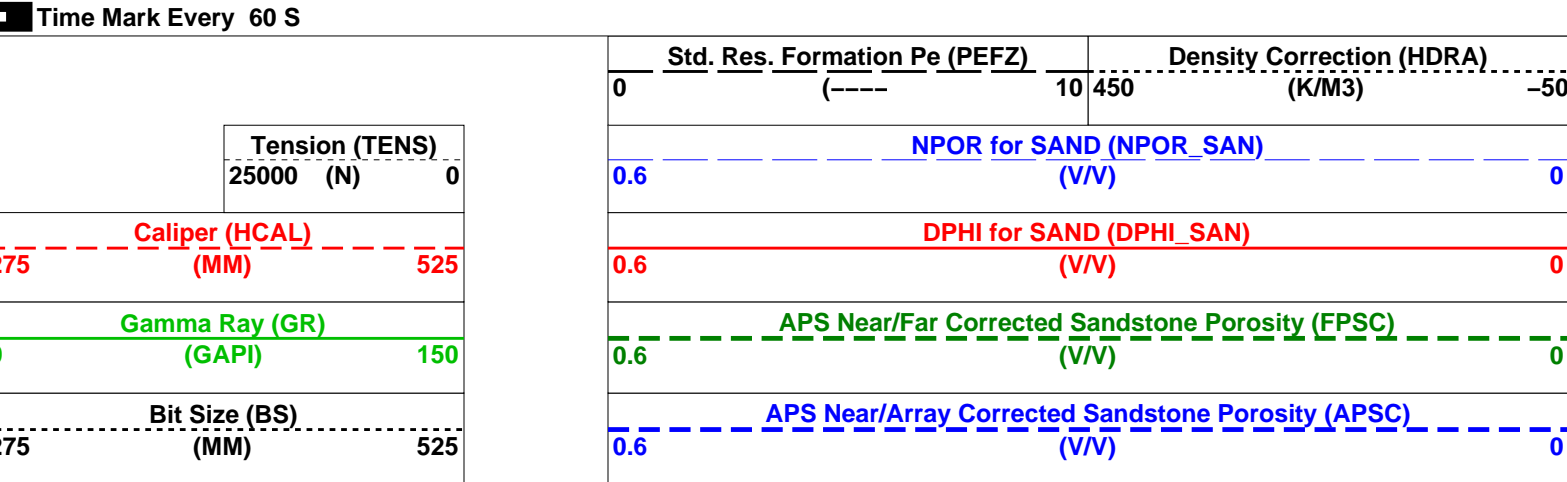
Output DLIS Files

DEFAULT APS_TLD_MCFL_CNL_155PUP FN:171 PRODUCER 07-Mar-2007 14:06 1295.2 M 628.8 M
CUST APS_TLD_MCFL_CNL_155PUP FN:172 PRODUCER 07-Mar-2007 14:06 1295.2 M 628.8 M

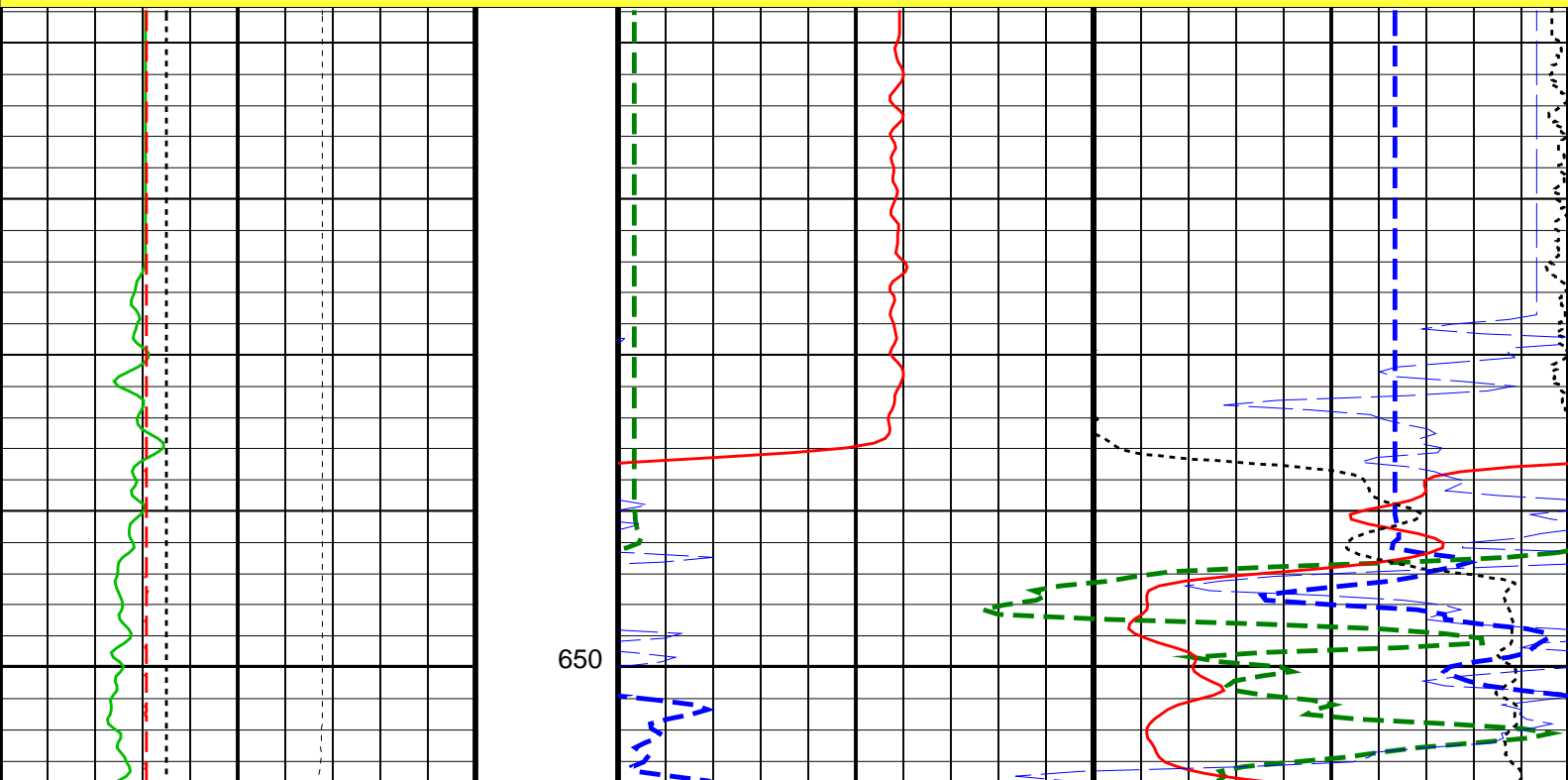
OP System Version: 14C0-302
MCM

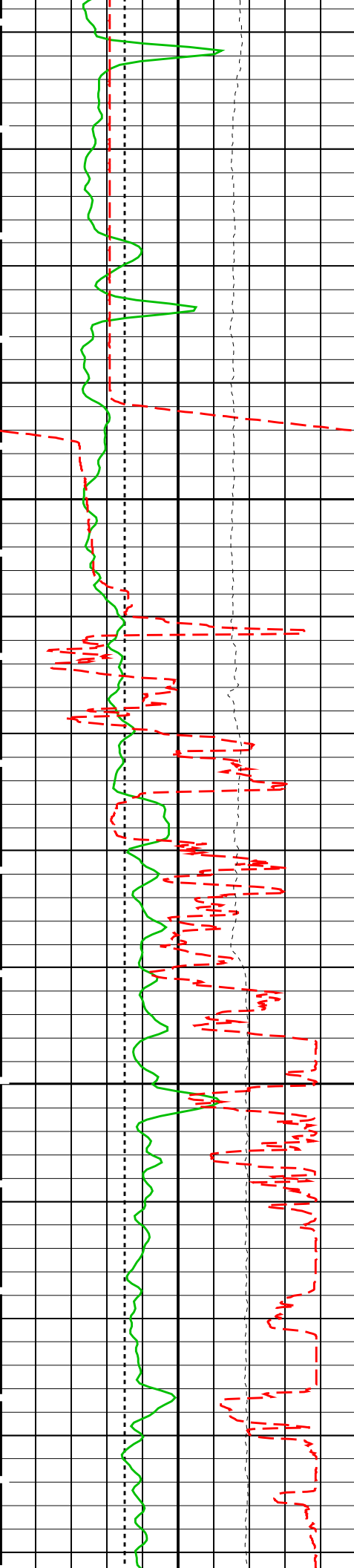
APS-C	14C0-302	HILTH-FTB	14C0-302
CMRT-B	14C0-302	PPC2-B	SKK-3060-PPCB
ECS-A	14C0-302	ECC-B	14C0-302
HNGC-B	14C0-302	HNGS-BA	14C0-302
PPC1-B	SKK-3060-PPCB	EDTC-B	SKK-3066-EDTCB

PIP SUMMARY



MAIN PASS: ***PEX DENSITY POROSITY - SANDSTONE 2650 KG/M3 ***

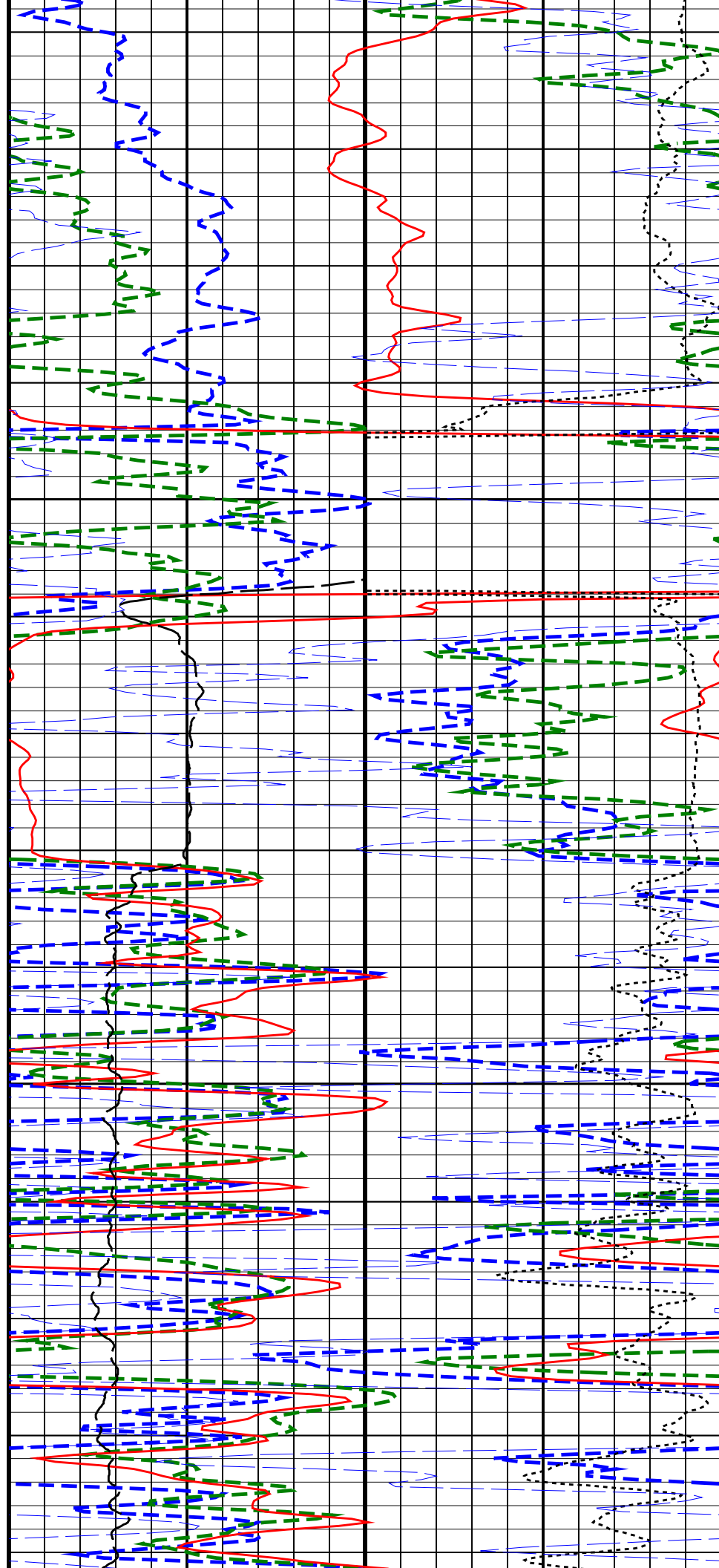




CASING

675

700

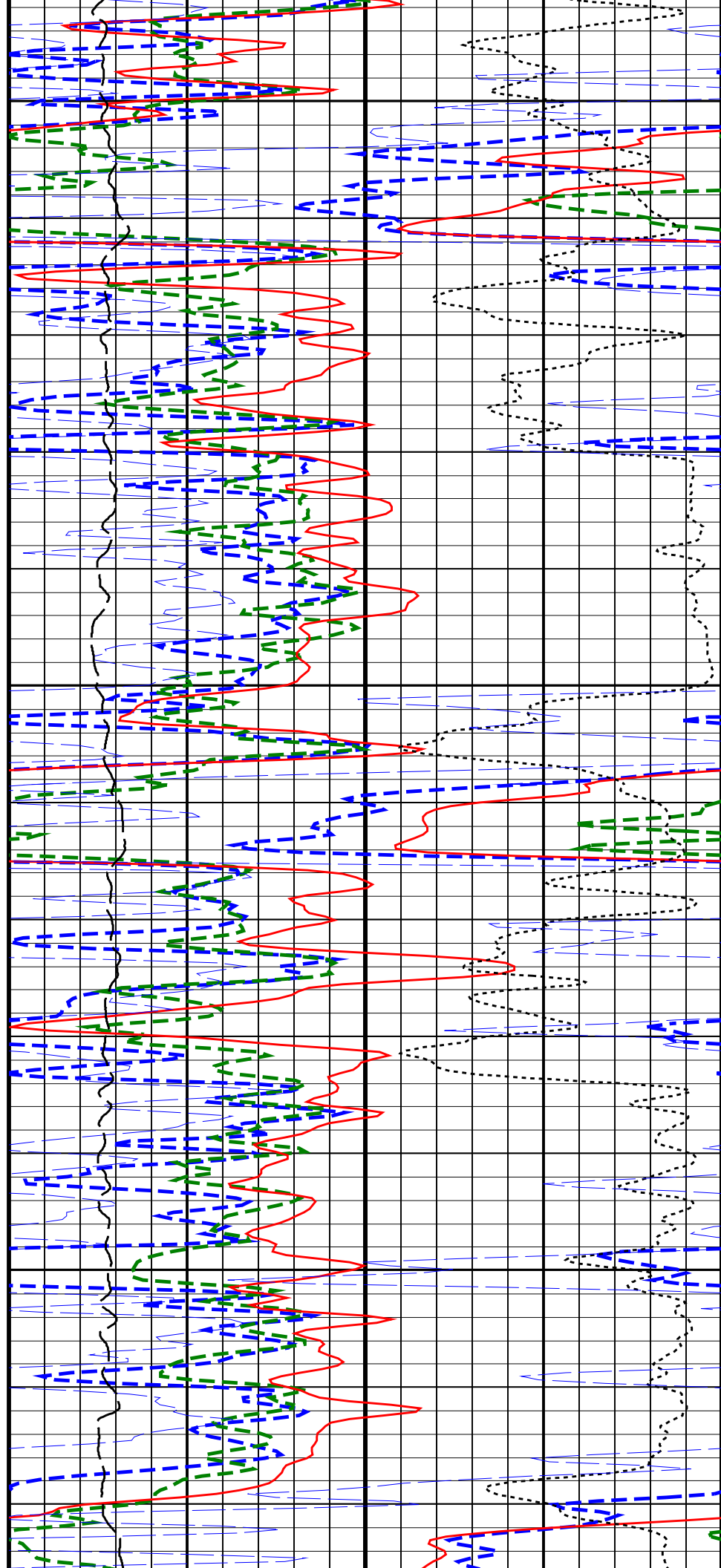


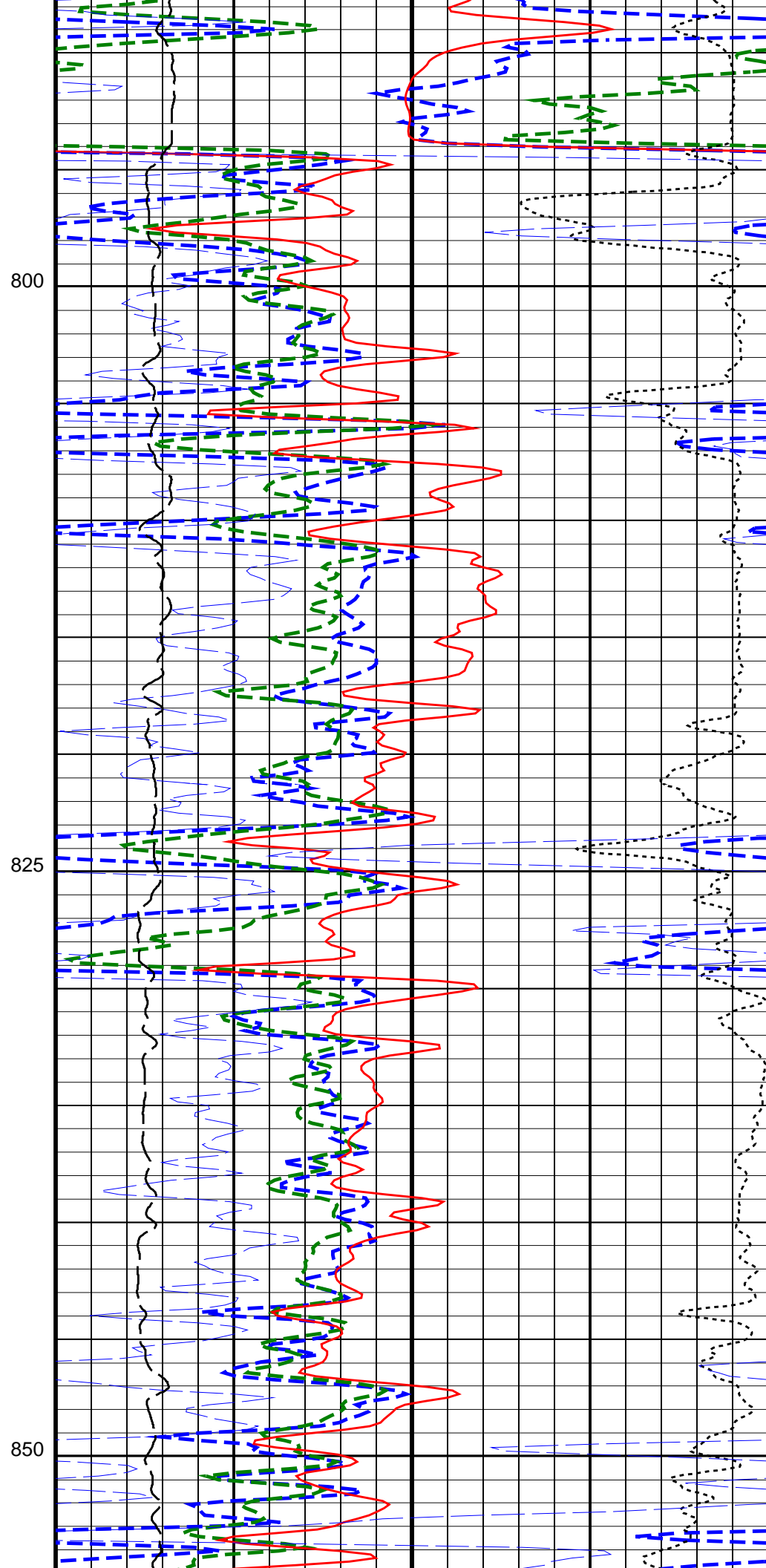
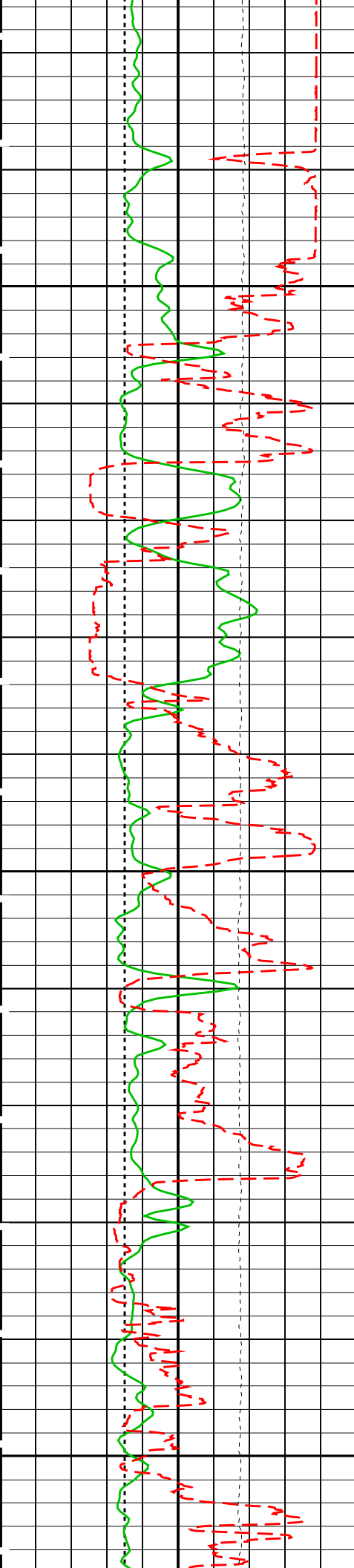


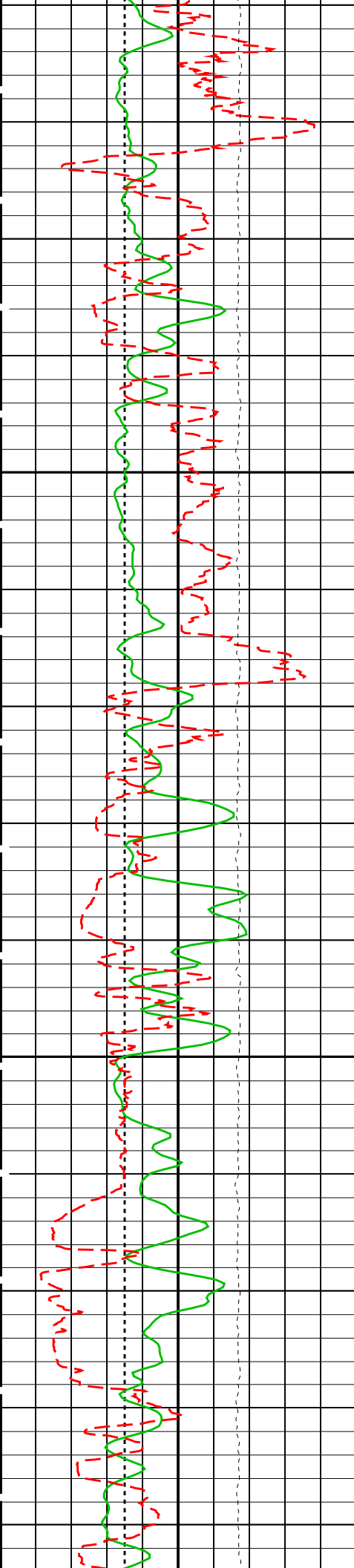
725

750

775

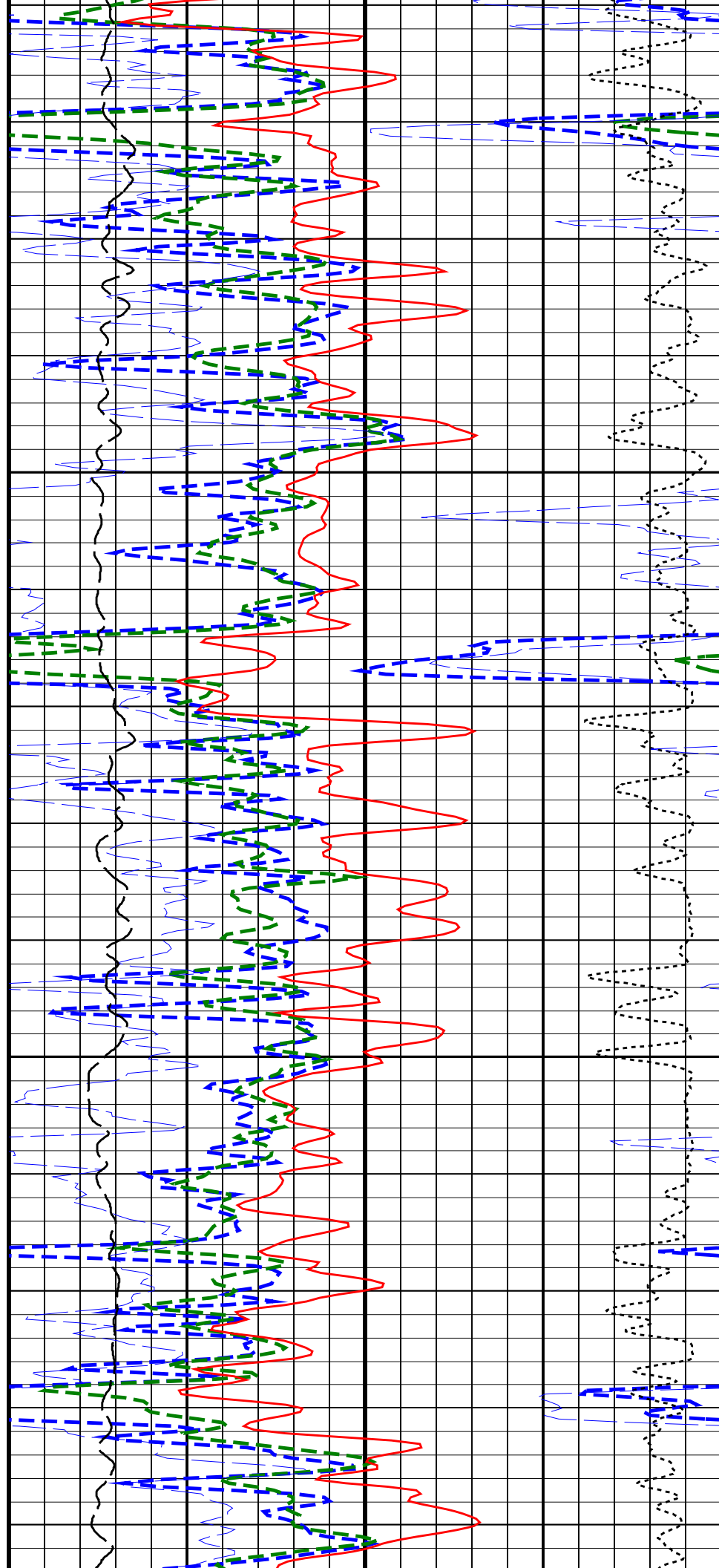


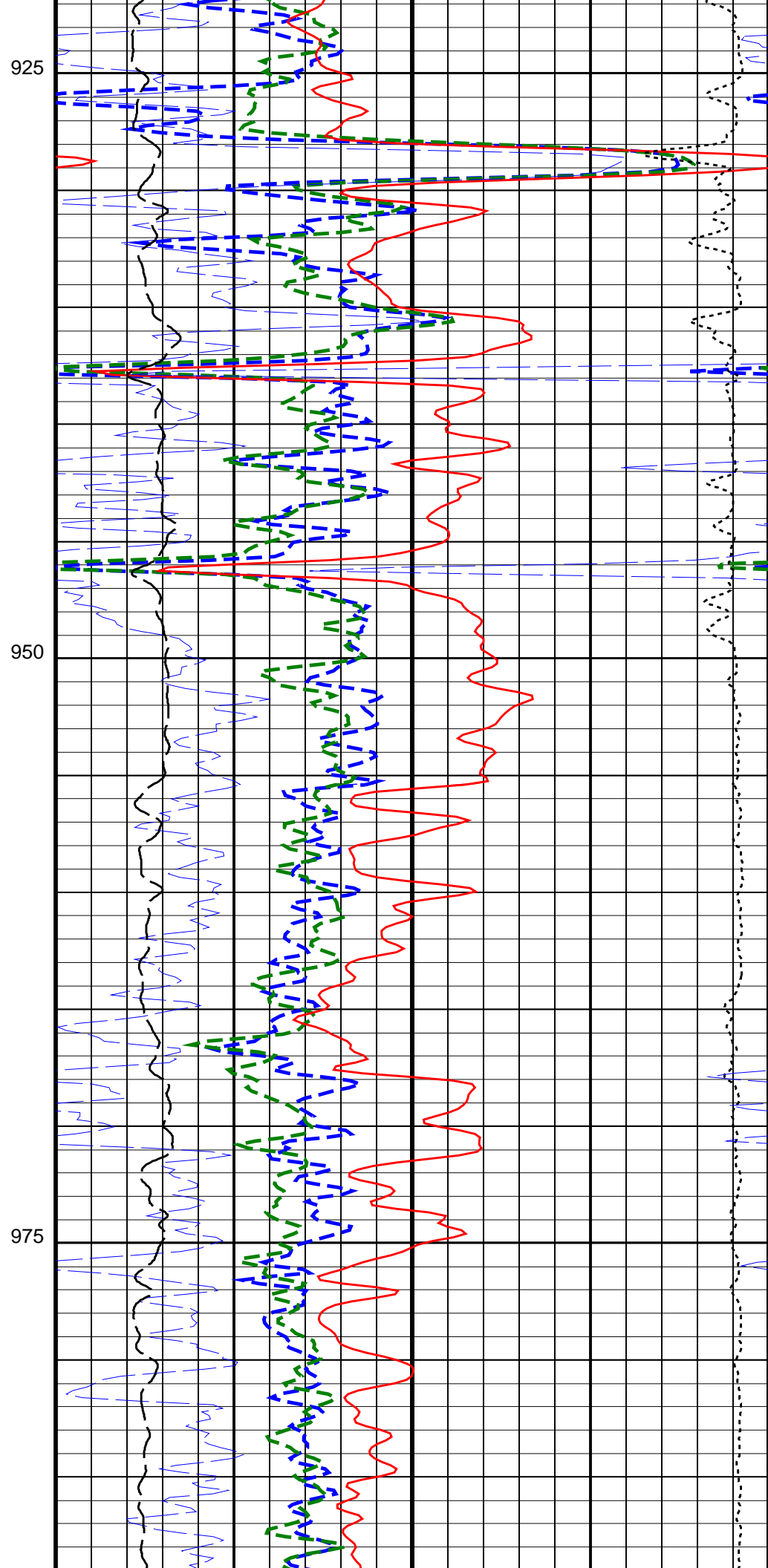
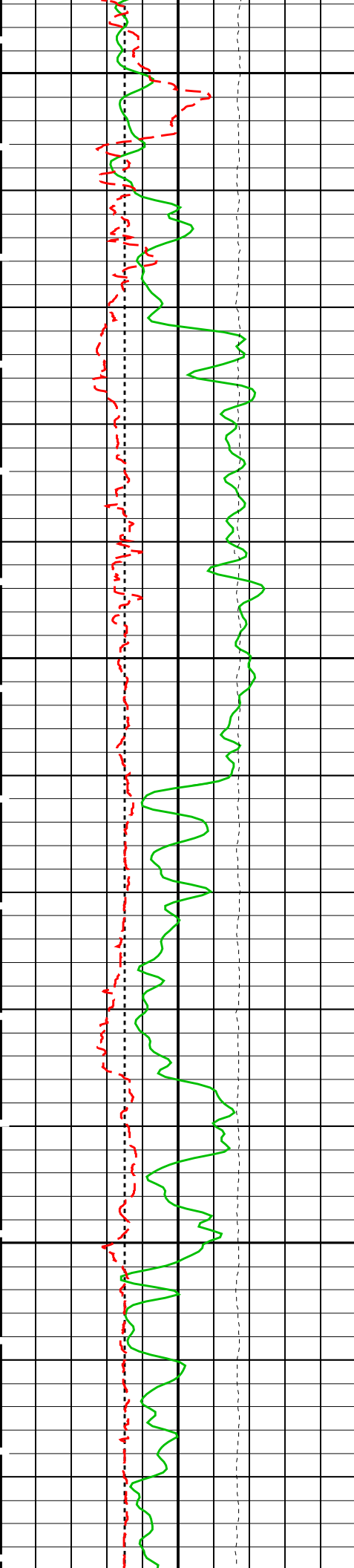


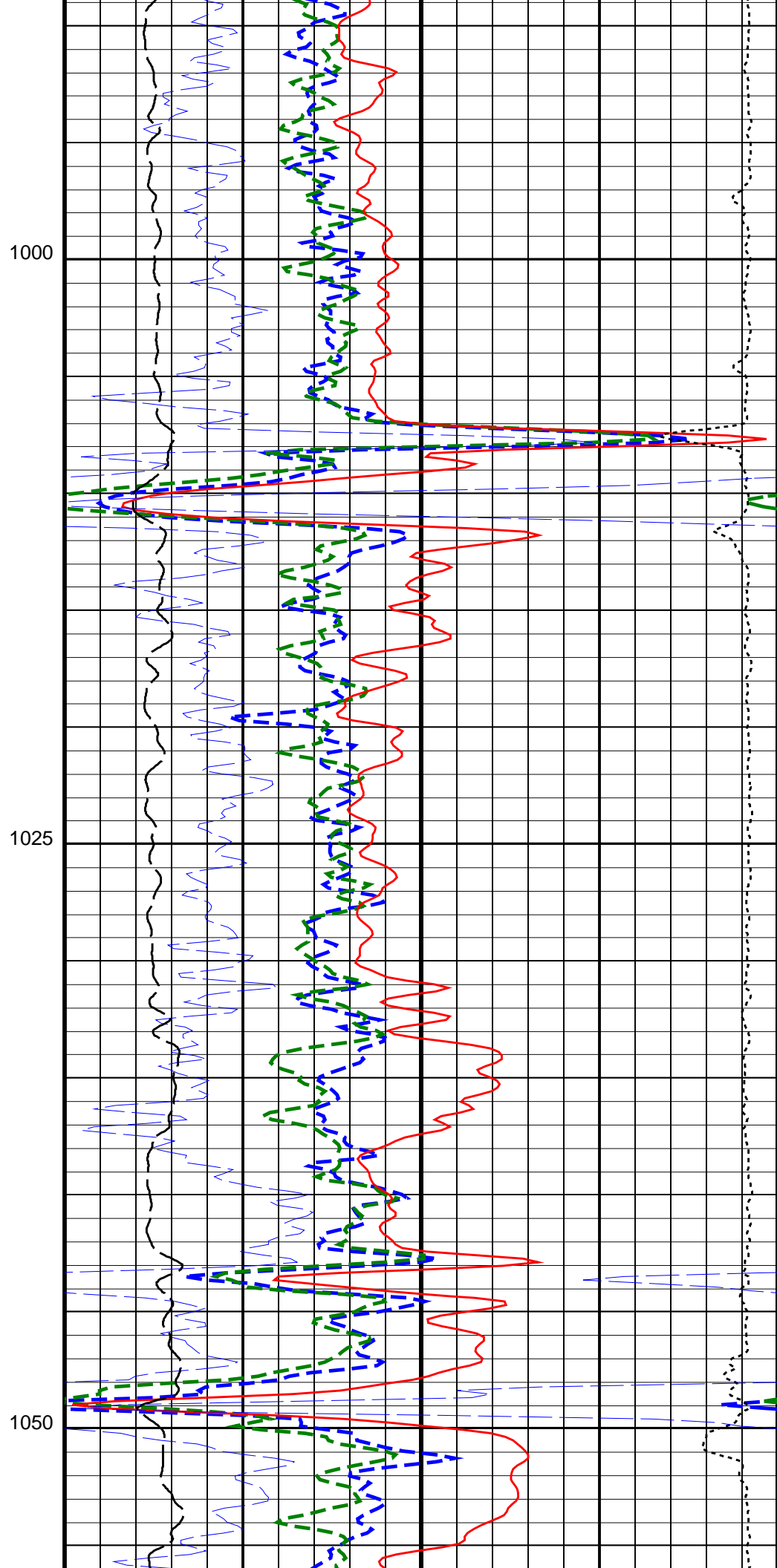
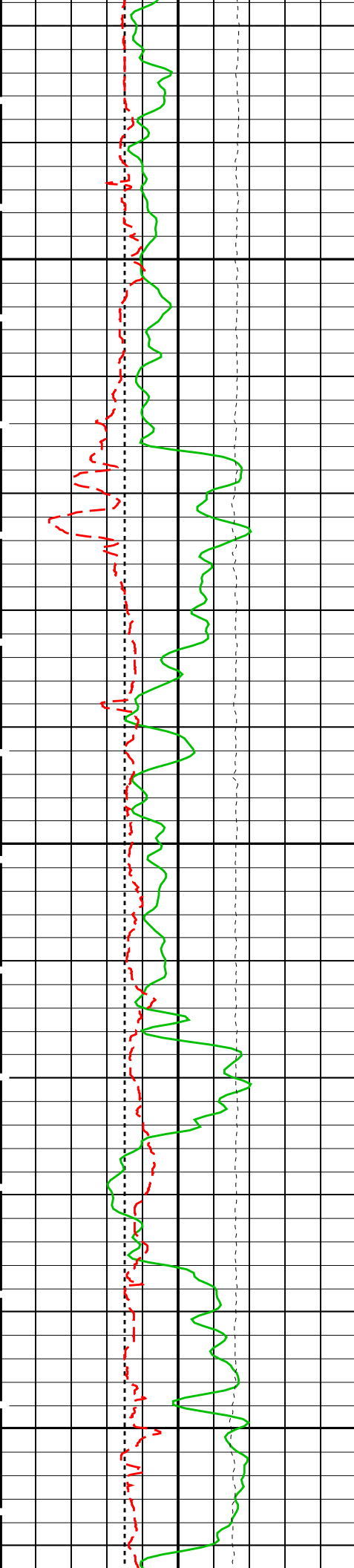


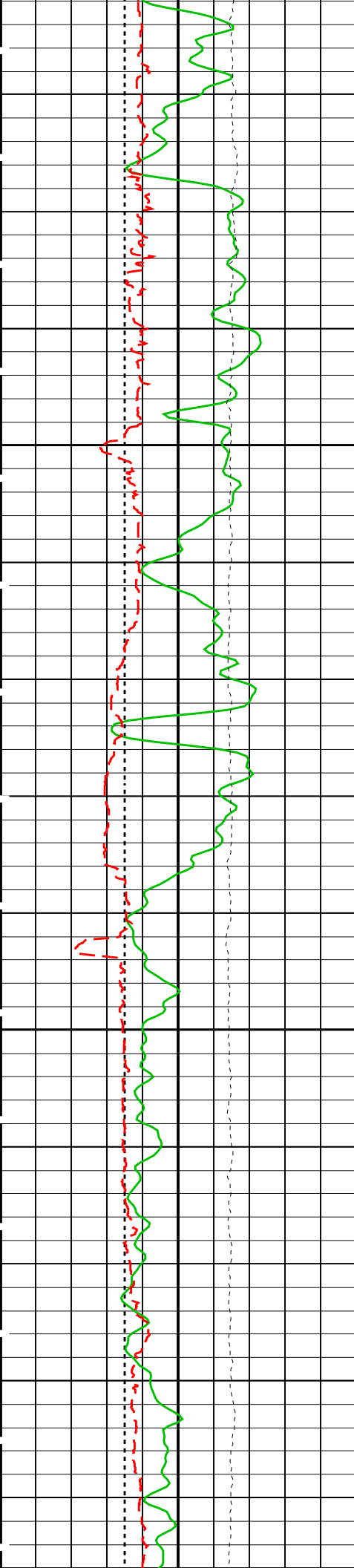
875

900



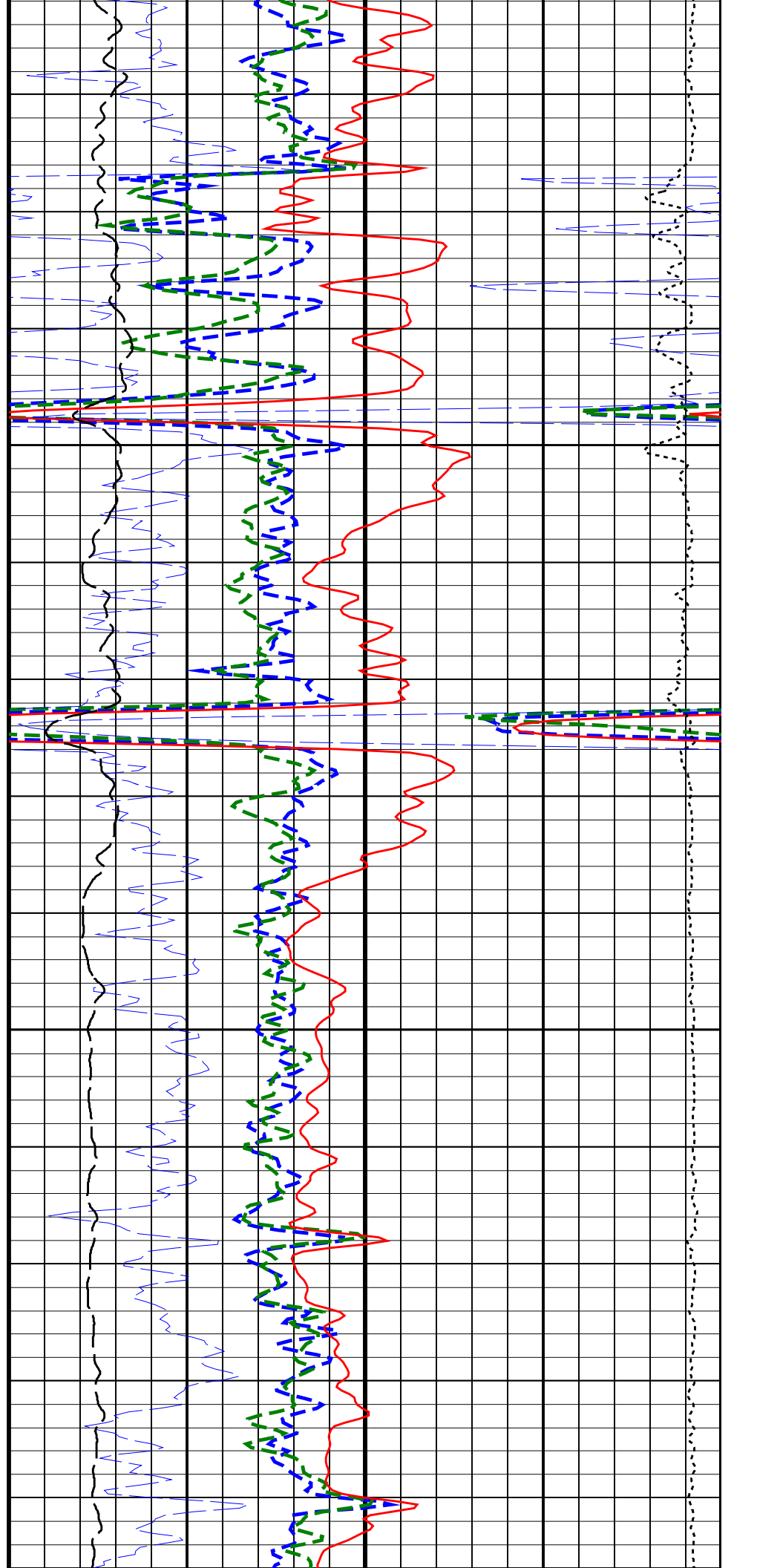


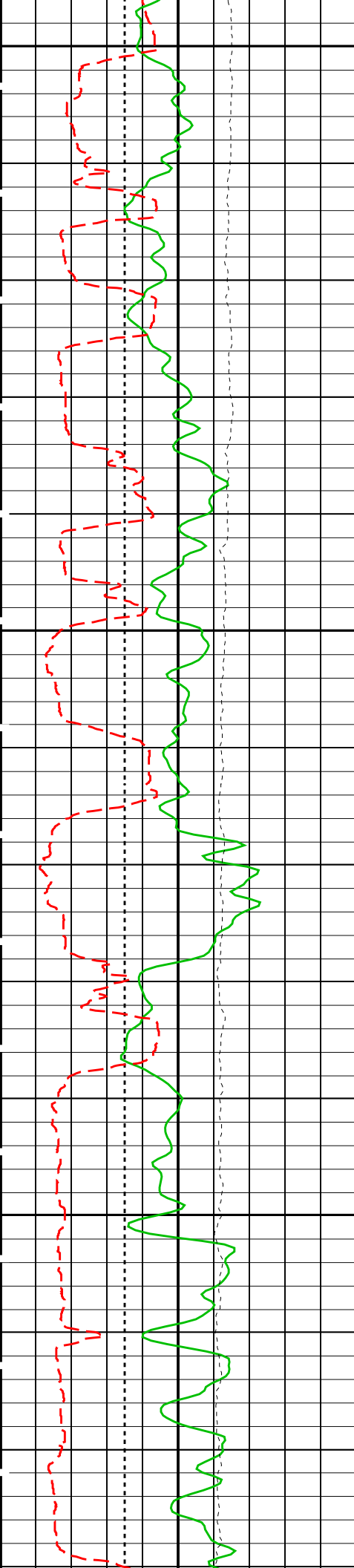




1075

1100

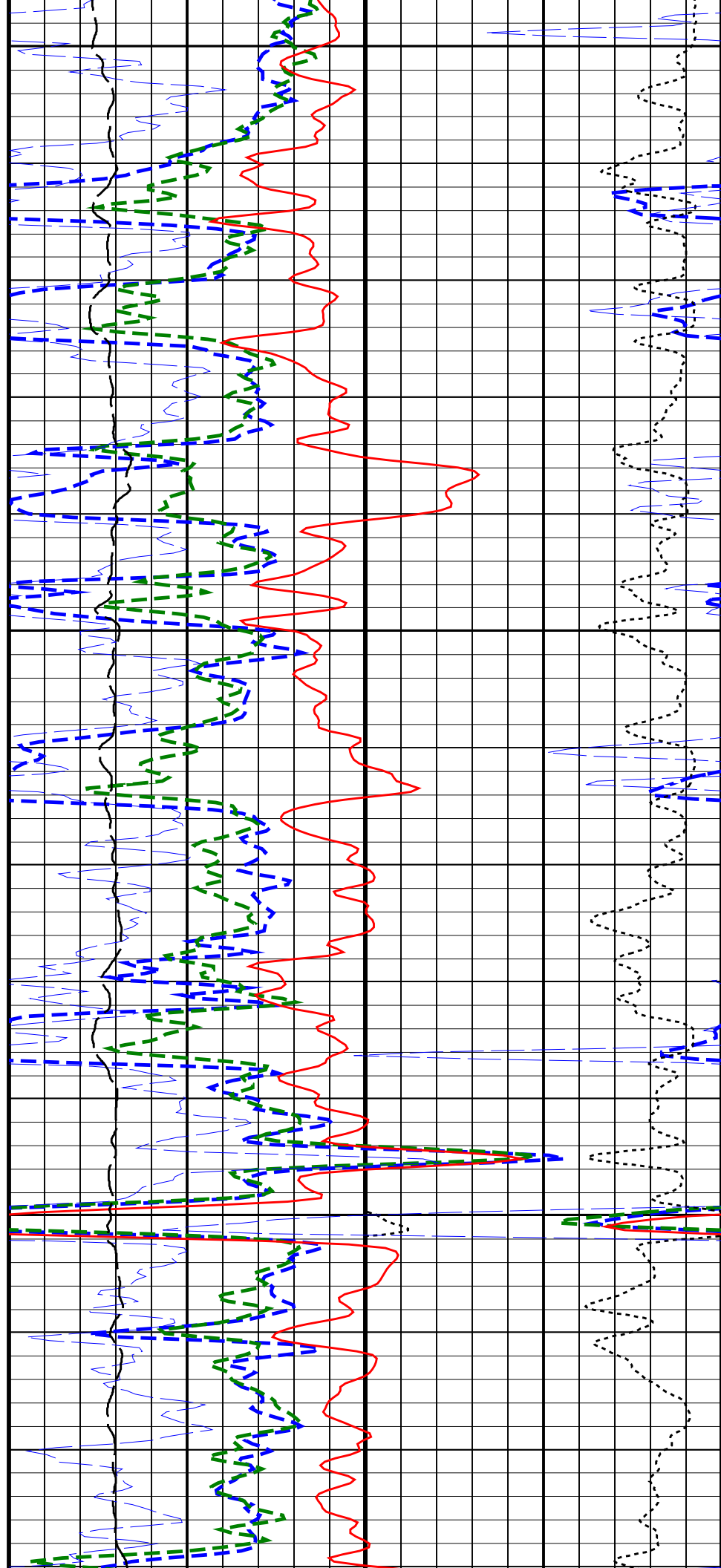


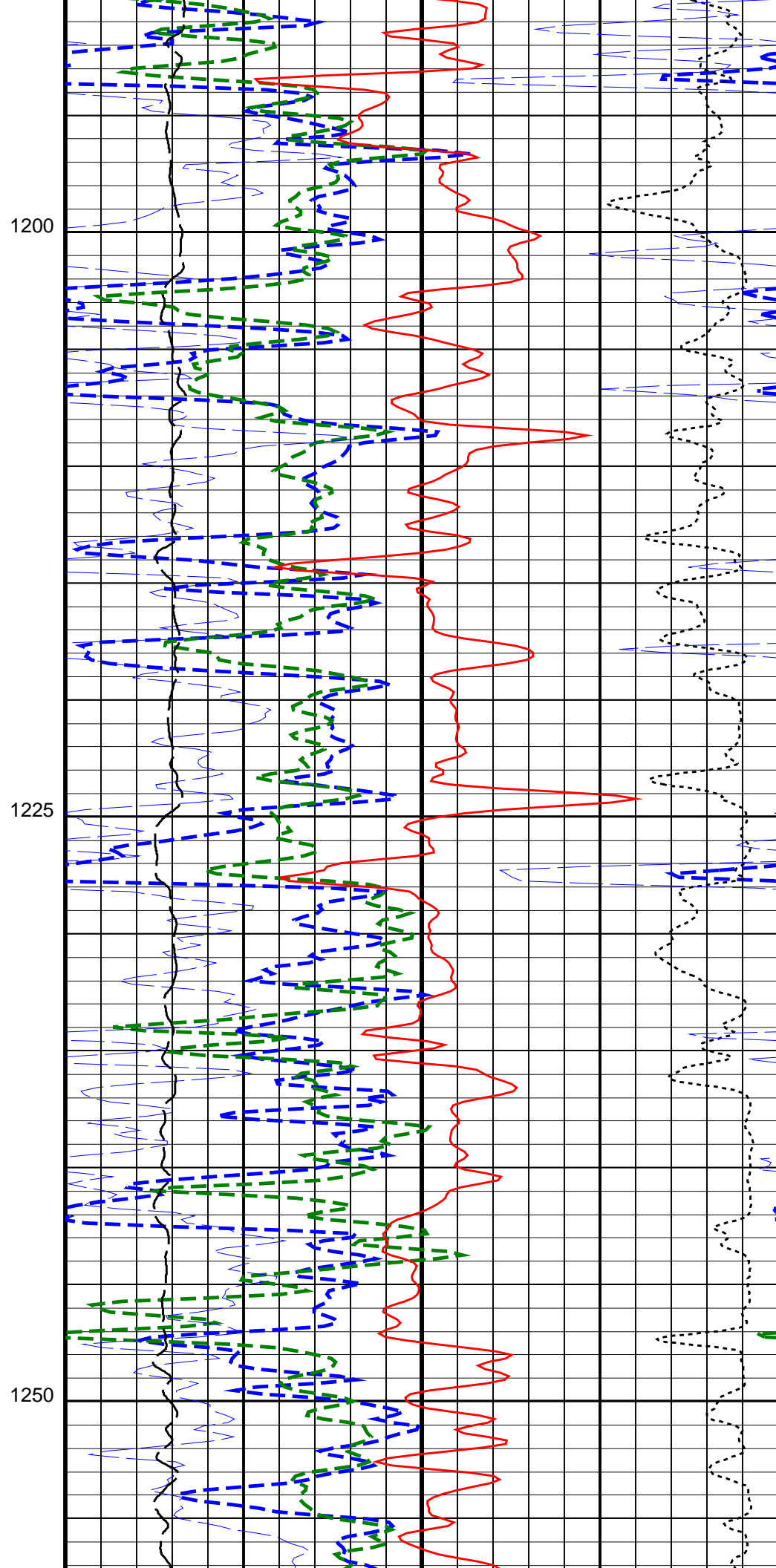
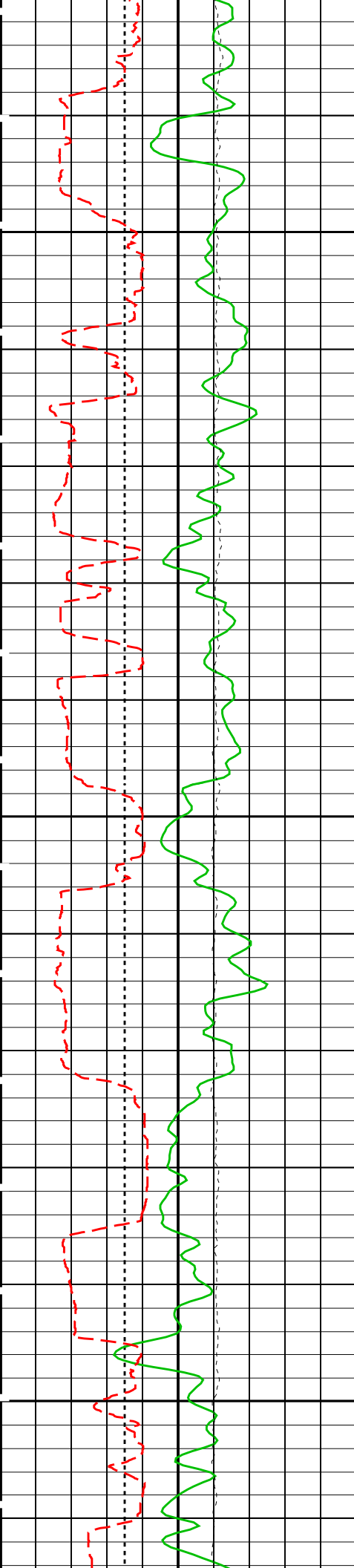


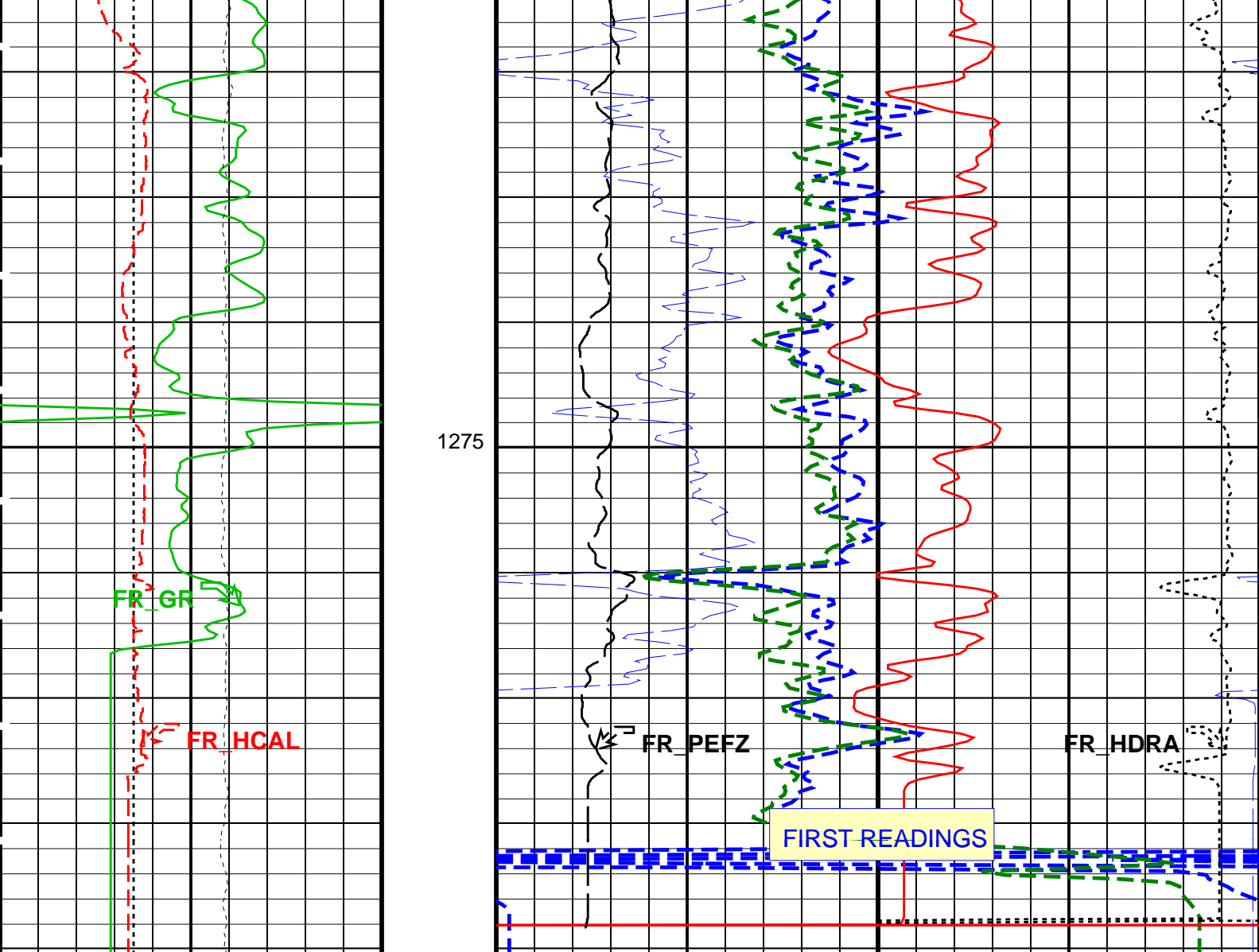
1125

1150

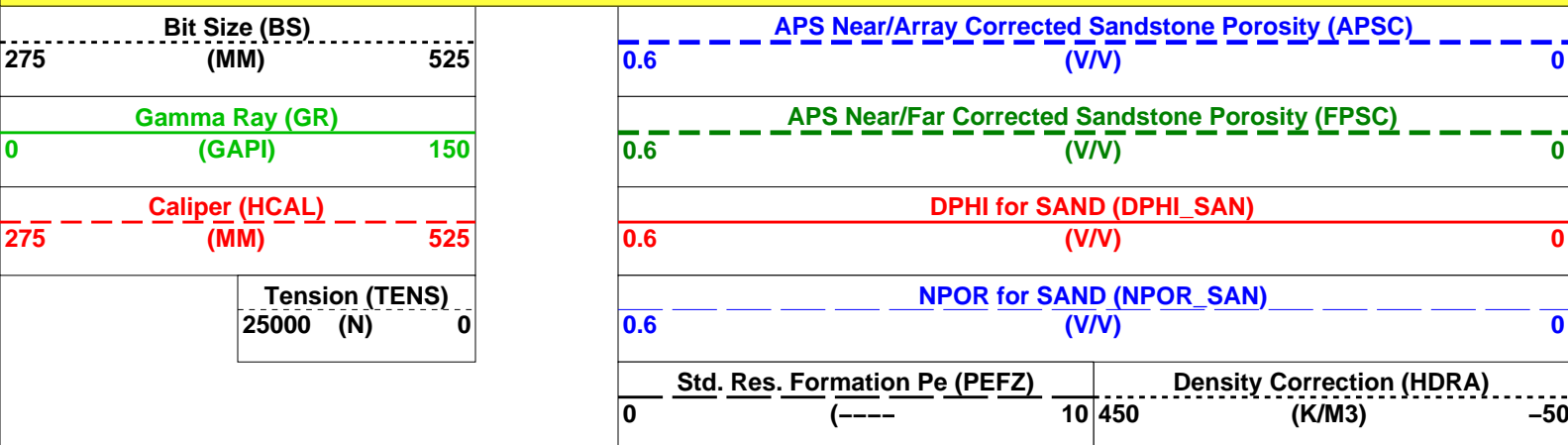
1175







MAIN PASS: ***PEX DENSITY POROSITY – SANDSTONE 2650 KG/M3 ***



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
-----------	-------------	-------

APS-C: Accelerator-Porosity Tool

AASD	APS Software Version	5
ADSO	APS Thermal and Array Detectors High Voltage Setting	1971.66 V
AFSD	APS Array Detectors Data Source Switch	Both
AHCS	APS Far Detector High Voltage Setting	2079.18 V
AHSS	APS Holesize Correction Source	BS
	APS Holesize Correction Switch	ON

AMTY	APS Environmental Corrections Mud Type	WaterBaseBarite	
ANSO	APS Near Detector High Voltage Setting	1742.72	V
ASOS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
NARC	APS Near/Array Calibration Ratio	0.985333	
NFRC	APS Near/Far Calibration Ratio	0.951646	
SHT	Surface Hole Temperature	1	DEGC
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)	9	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1000	K/M3
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	VeryHiRes	
NSAR	HRDD Depth Sampling Rate	12.7	MM
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	1	DEGC
SOCN	Standoff Distance	3.175	MM
SOCO	Standoff Correction Option	YES	
CMRT-B: Combinable Magnetic Resonance Tool - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	1	DEGC
PPC2-B: Powered Positioning Deveice/Caliper 2			
	PPC2 Caliper Type	CAL_40EXT	
ECS-A: Elemental Capture Spectroscopy Tool			
	ECS Marquardt Spectrum	** V **	
HNCS-BA: Hostile Natural Gamma Ray Sonde			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	1	DEGC
PPC1-B: Powered Positioning Deveice/Caliper 1			
	PPC1 Caliper Type	CAL_40EXT	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	1	DEGC

SOCN	Surface Hole Temperature	3.175	MM
SOCO	Standoff Distance	YES	
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	1.524	M
TDD	Total Depth – Driller	1310.00	M
TDL	Total Depth – Logger	1296.00	M
	System and Miscellaneous		
BS	Bit Size	361.950	MM
BSAL	Borehole Salinity	-50000.00	PPM
DO	Depth Offset for Playback	1.4	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	4298	FT

Format: PORO-SAND45-CAN Vertical Scale: 1:240 Graphics File Created: 07-Mar-2007 14:07

OP System Version: 14C0-302

MCM

APS-C	14C0-302	HILTH-FTB	14C0-302
CMRT-B	14C0-302	PPC2-B	SKK-3060-PPCB
ECS-A	14C0-302	ECC-B	14C0-302
HNGC-B	14C0-302	HNGS-BA	14C0-302
PPC1-B	SKK-3060-PPCB	EDTC-B	SKK-3066-EDTCB

Input DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_128LUP	FN:145	PRODUCER	07-Mar-2007 09:56	1293.9 M	621.0 M
---------	-------------------------	--------	----------	-------------------	----------	---------

Output DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_155PUP	FN:171	PRODUCER	07-Mar-2007 14:06
CUST	APS_TLD_MCFL_CNL_155PUP	FN:172	PRODUCER	07-Mar-2007 14:06

Schlumberger

**HIRES: NUCLEAR POROSITY
SANDSTONE 2650 KG/M3**

MAXIS Field Log

Input DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_128LUP	FN:145	PRODUCER	07-Mar-2007 09:56	1293.9 M	621.0 M
---------	-------------------------	--------	----------	-------------------	----------	---------

Output DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_153PUP	FN:169	PRODUCER	07-Mar-2007 13:52	1295.2 M	628.8 M
---------	-------------------------	--------	----------	-------------------	----------	---------

OP System Version: 15C0-309

MCM

APS-C	15C0-309	HILTH-FTB	15C0-309
CMRT-B	15C0-309	PPC2-B	15C0-309
ECS-A	15C0-309	ECC-B	15C0-309
HNGC-B	15C0-309	HNGS-BA	15C0-309
PPC1-B	15C0-309	EDTC-B	15C0-309

PIP SUMMARY

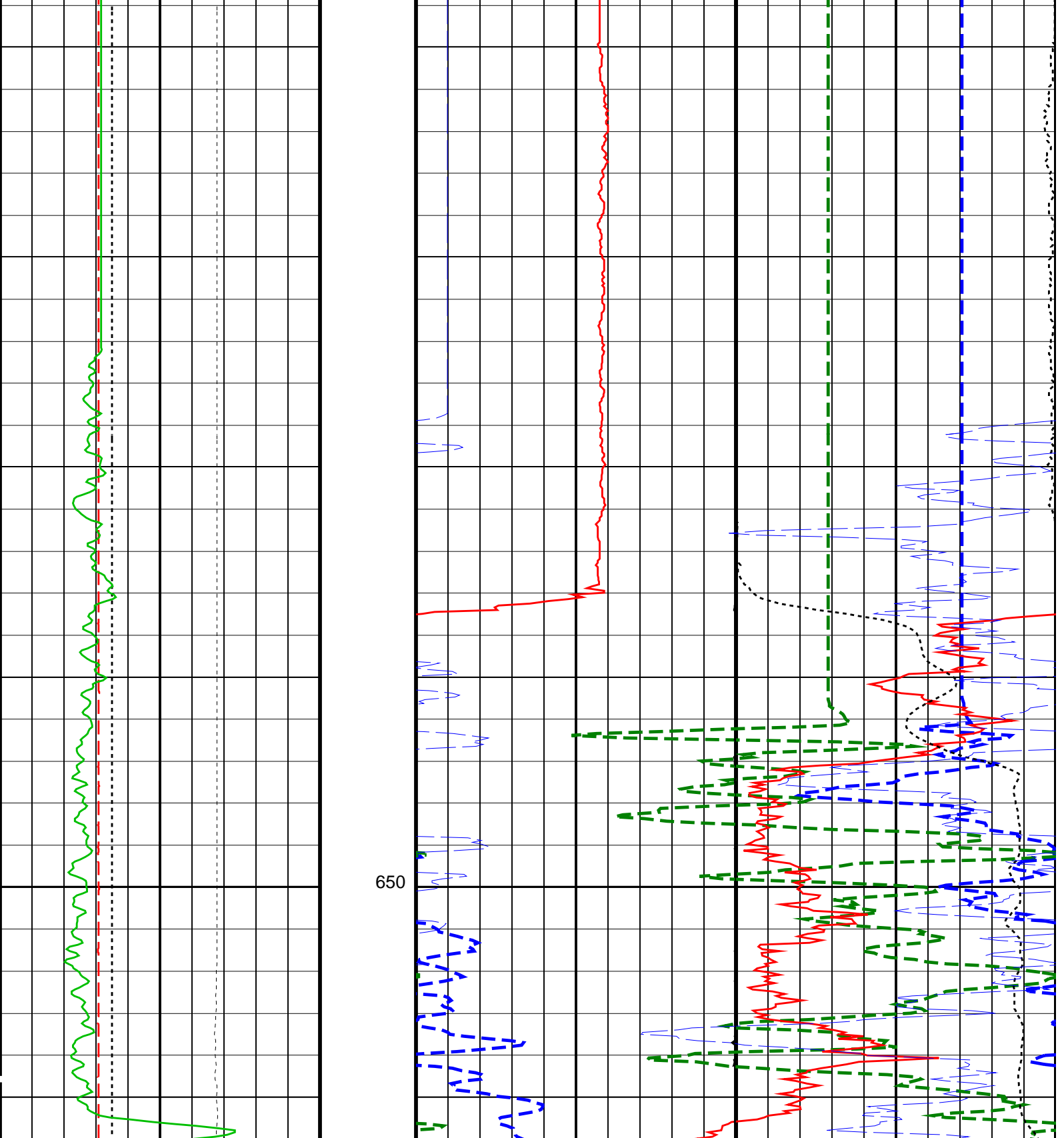
☒ Time Mark Every 60 S

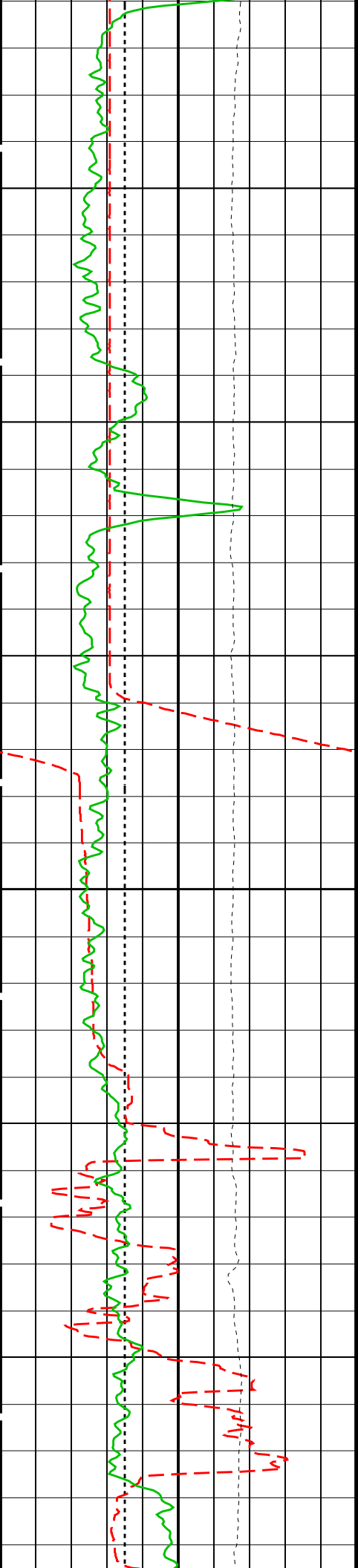
H. Res. Formation Pe (PEF8)		Density Correction (HDRA)	
0	(----	10	450
Tension (TENS)		HNPO for SAND (HNPO SAN)	
		(K/M3)	
		-50	

Version (VENS)		25000 (N)	0
Gamma Ray (HGR)			
(GAPI)		0	150
Caliper (HCAL)			
(MM)		275	525
Bit Size (BS)			
(MM)		275	525

V.HiRes. Density Porosity (DPH2)		0.6	0
(V/V)			
APS HR Near/Far Corrected Sandstone Porosity (HFSC)		0.6	0
(V/V)			
APS HR Near/Array Corrected Sandstone Porosity (HASC)		0.6	0
(V/V)			

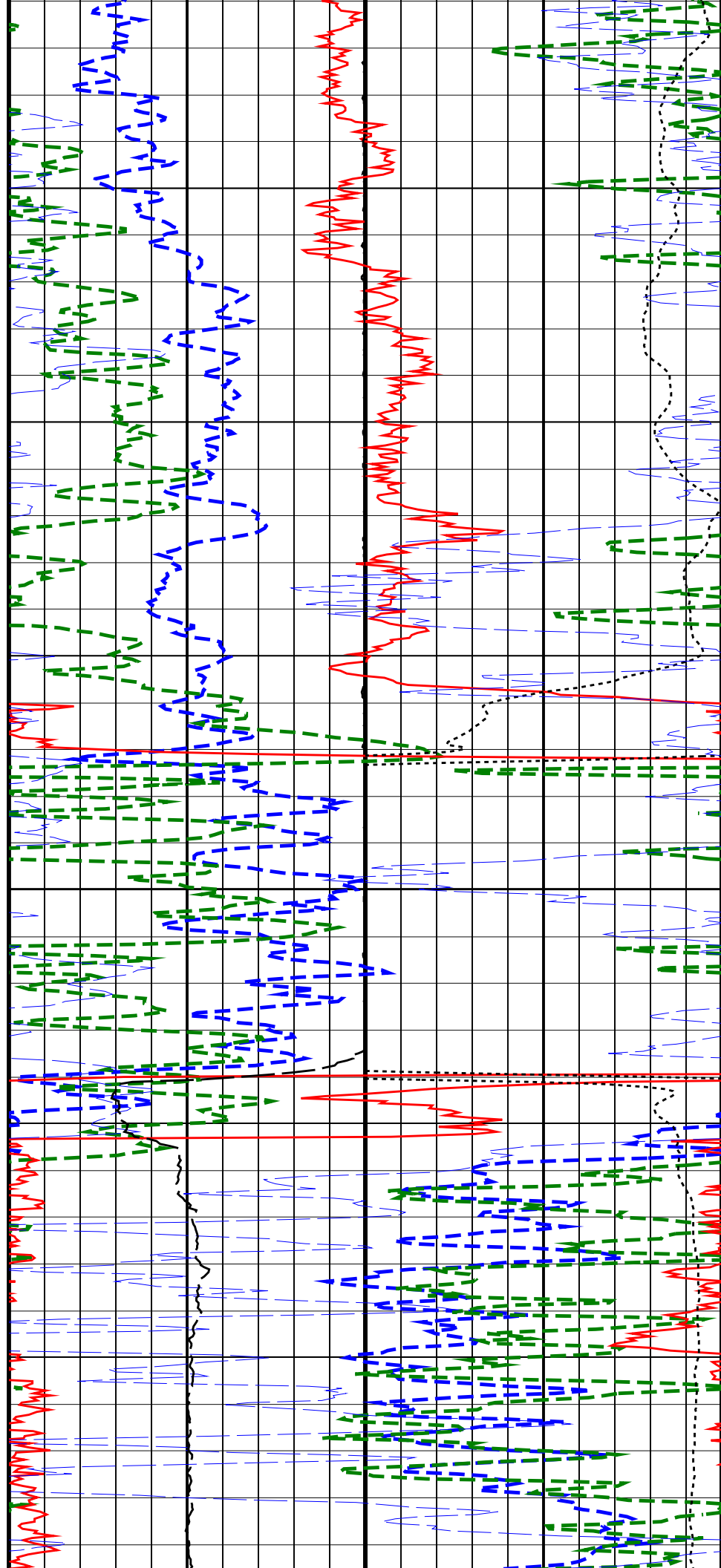
HIRES PASS: *** PEX – DENSITY POROSITY – SANDSTONE 2650 KG/M3 ***

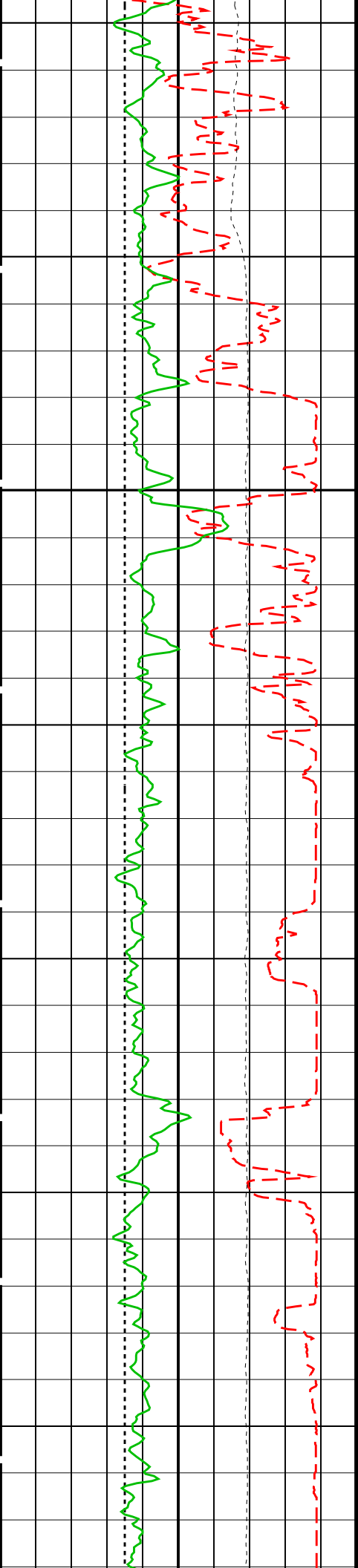




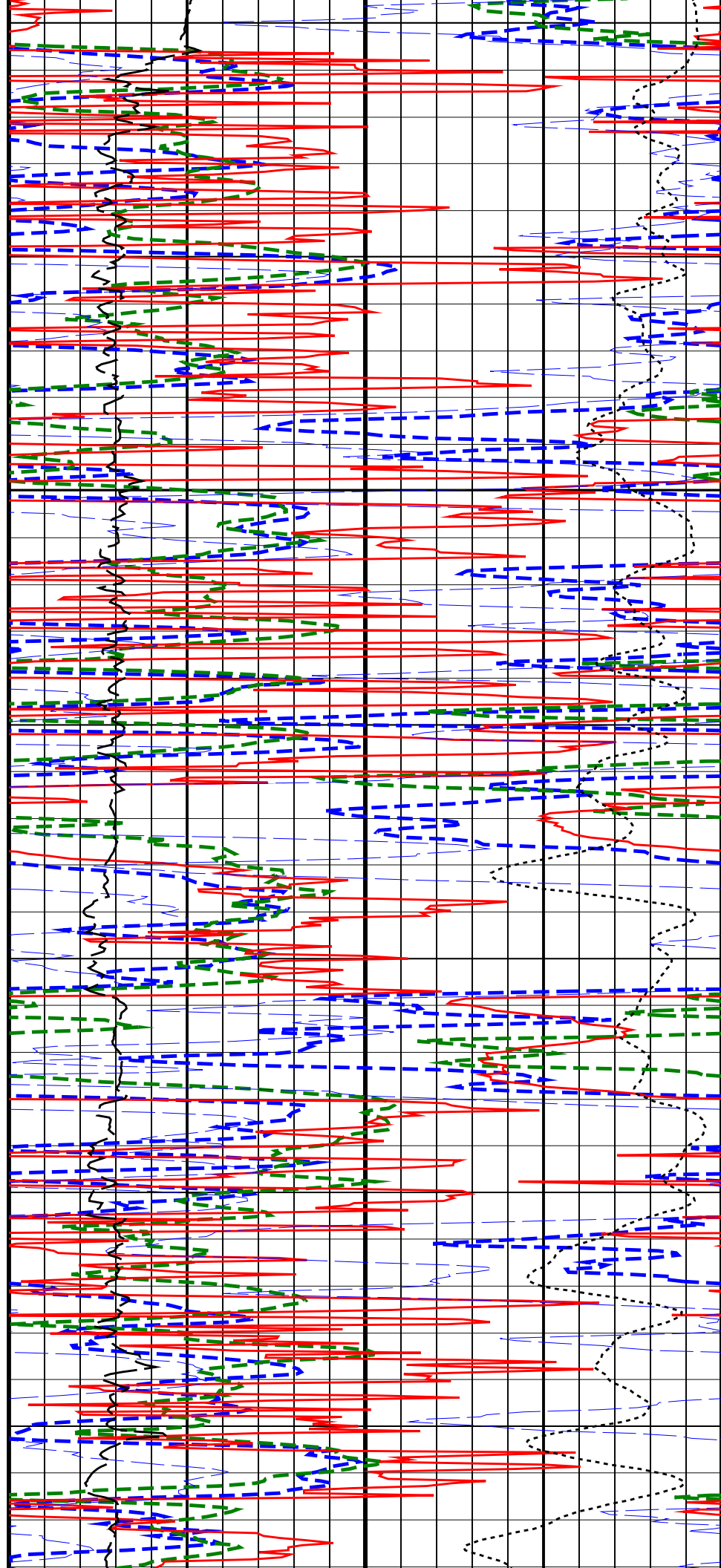
675

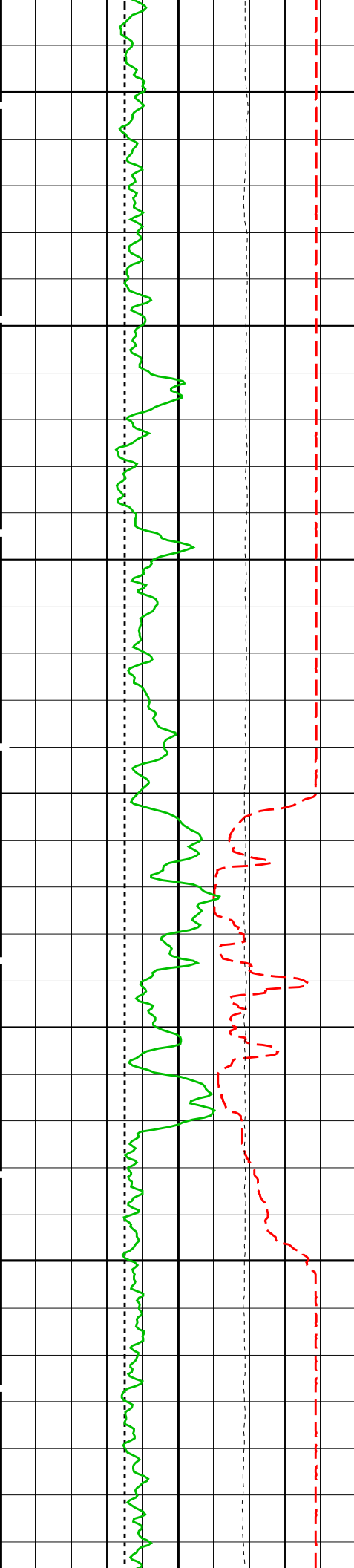
CASING





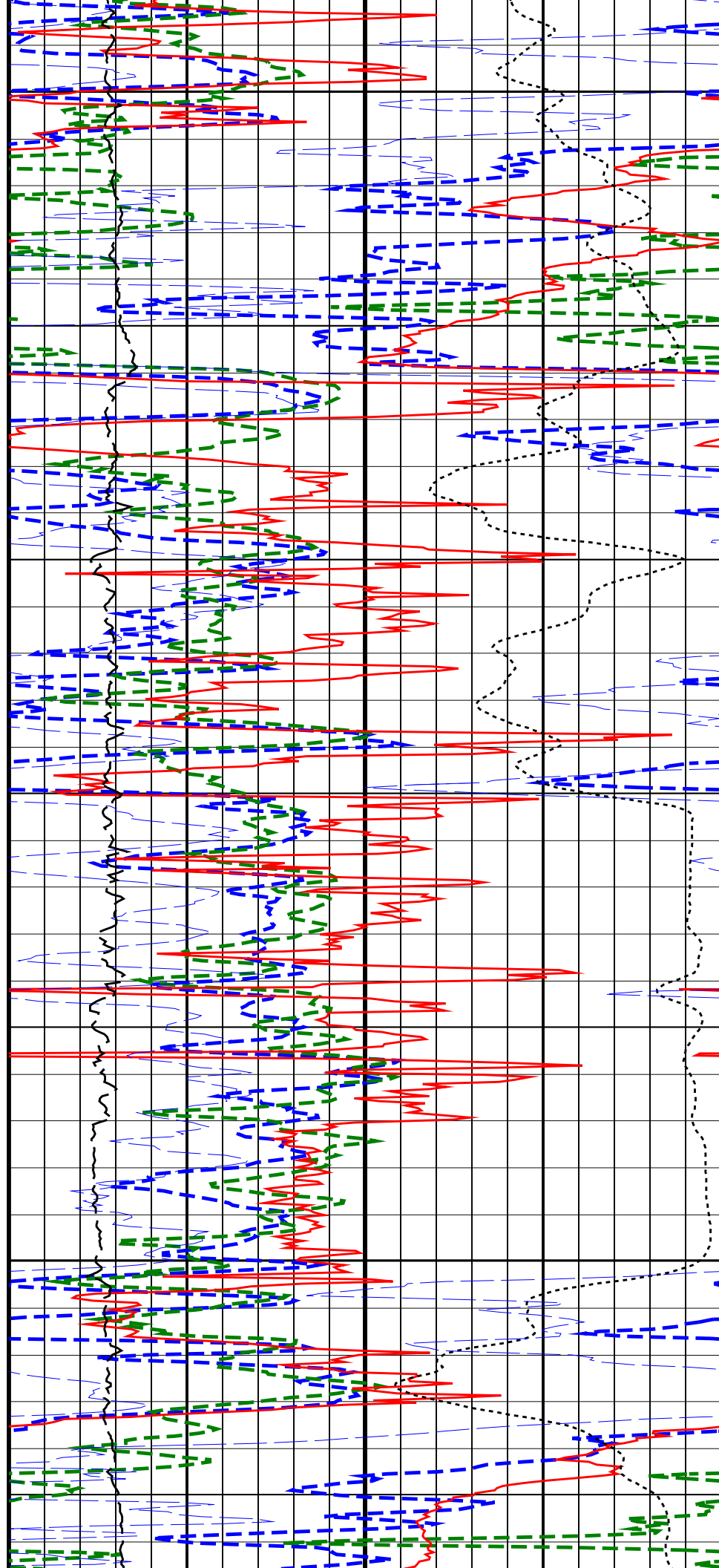
700

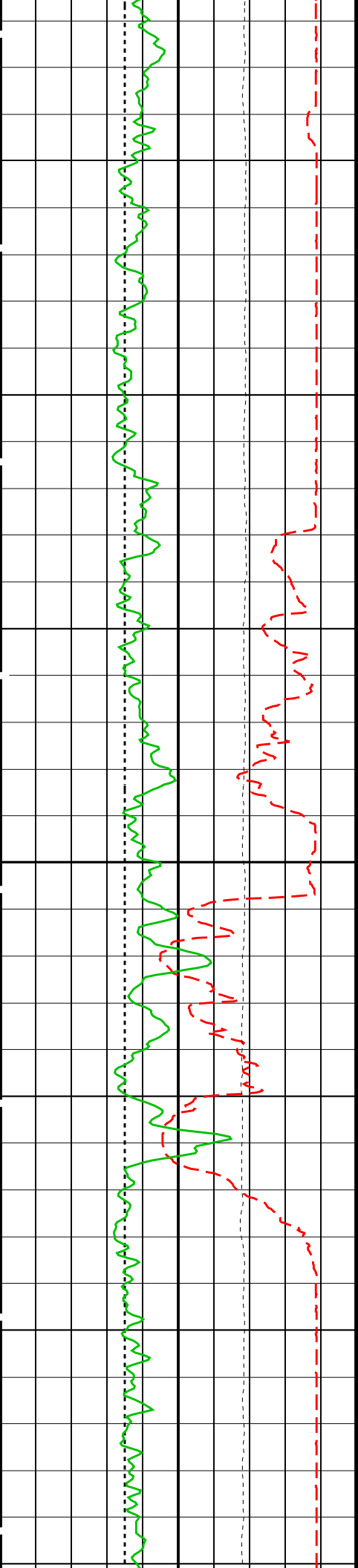




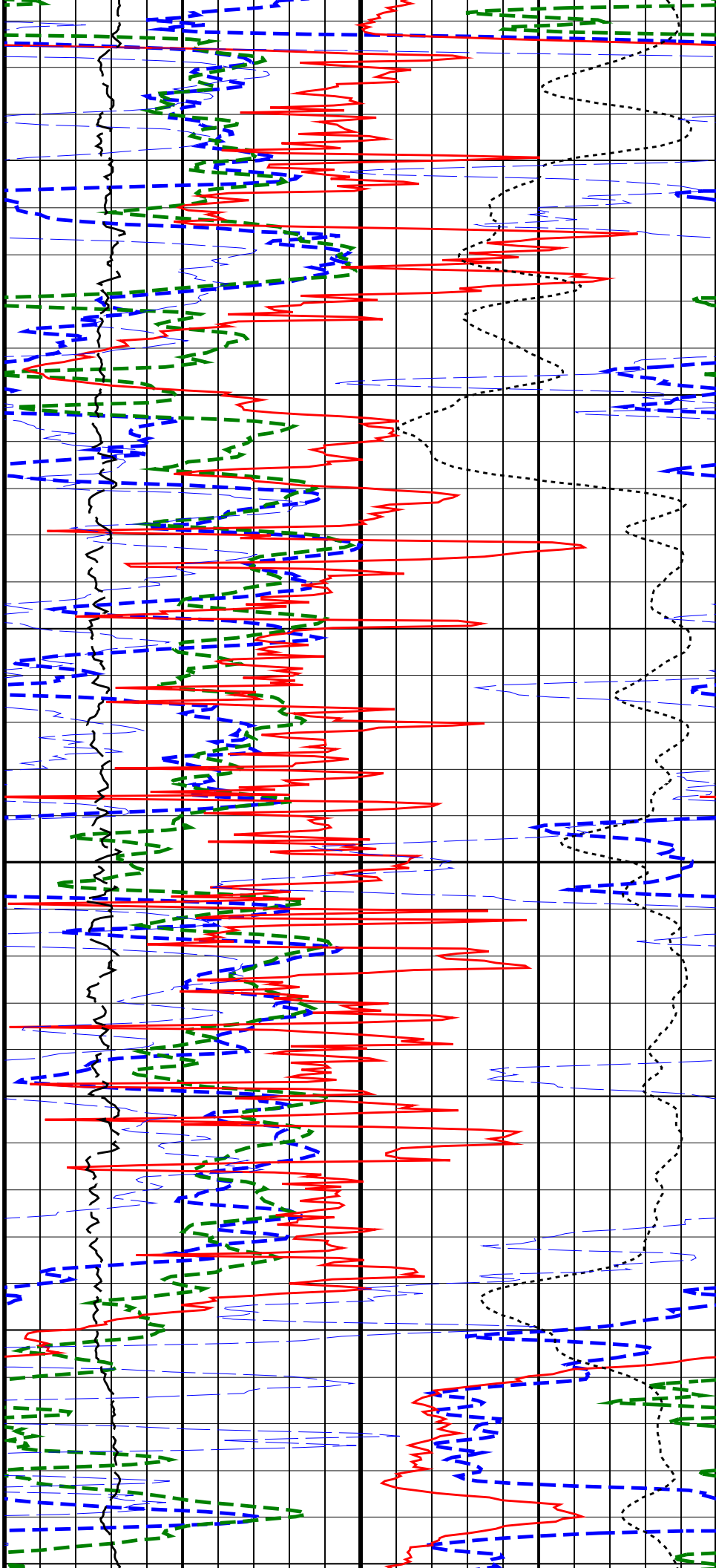
725

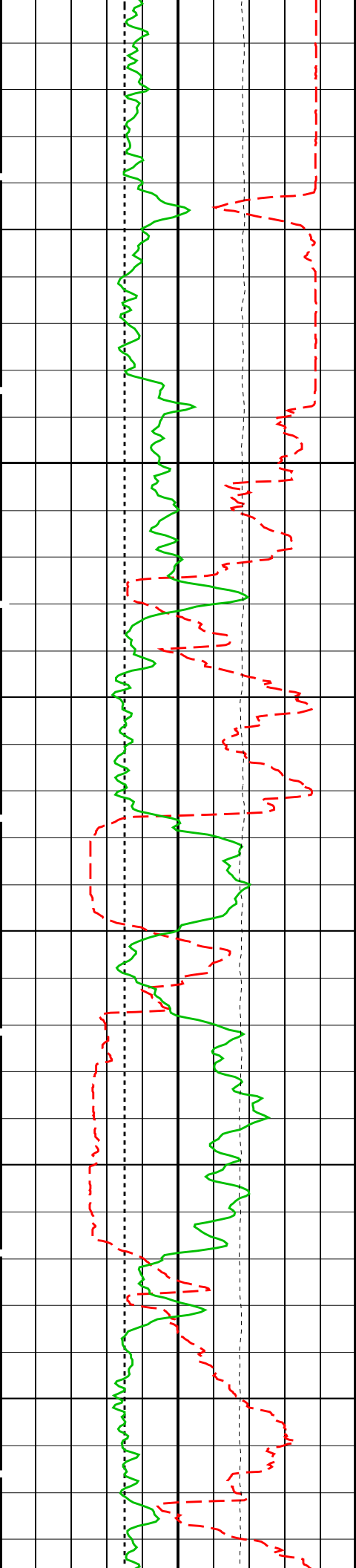
750



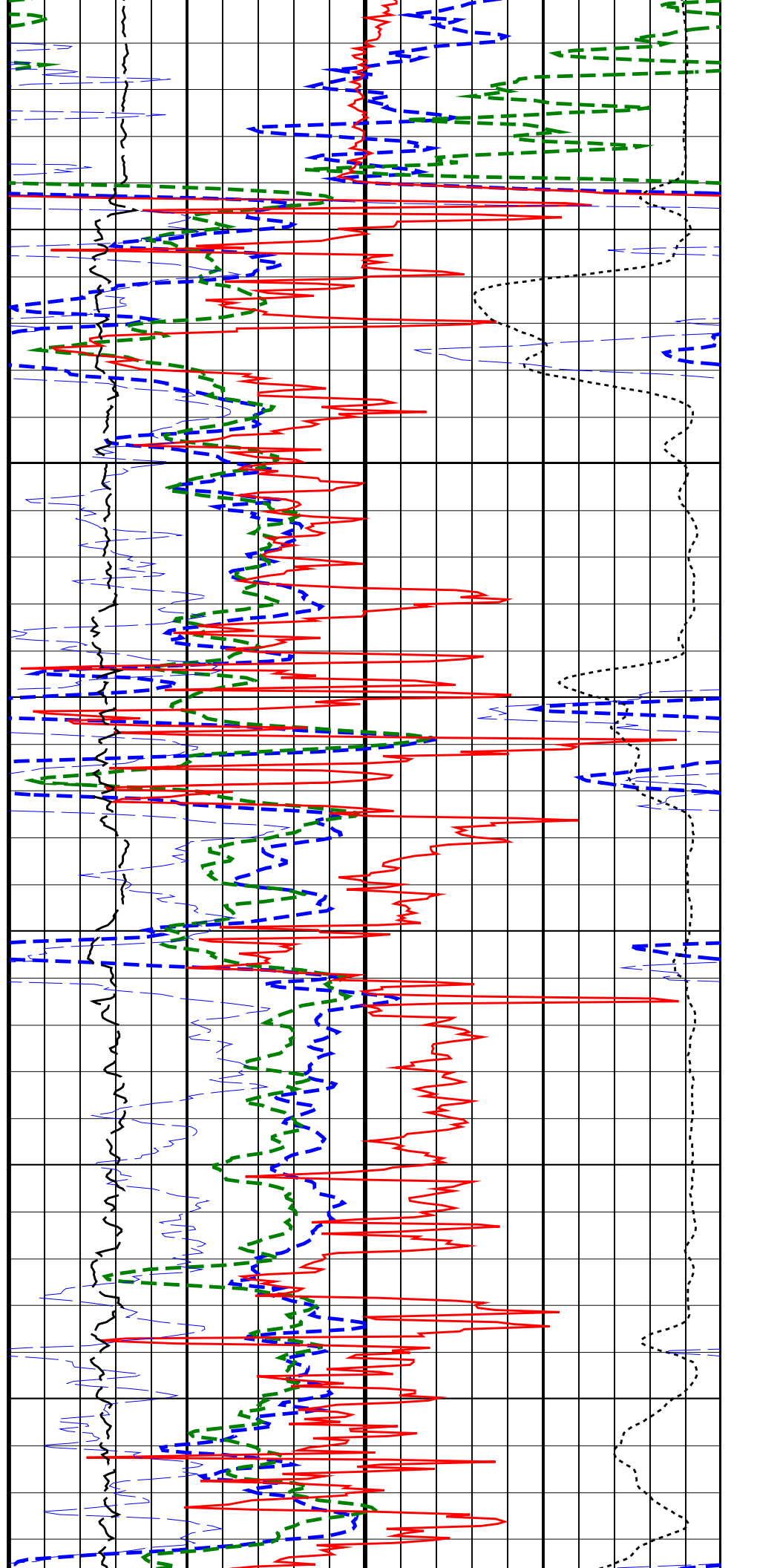


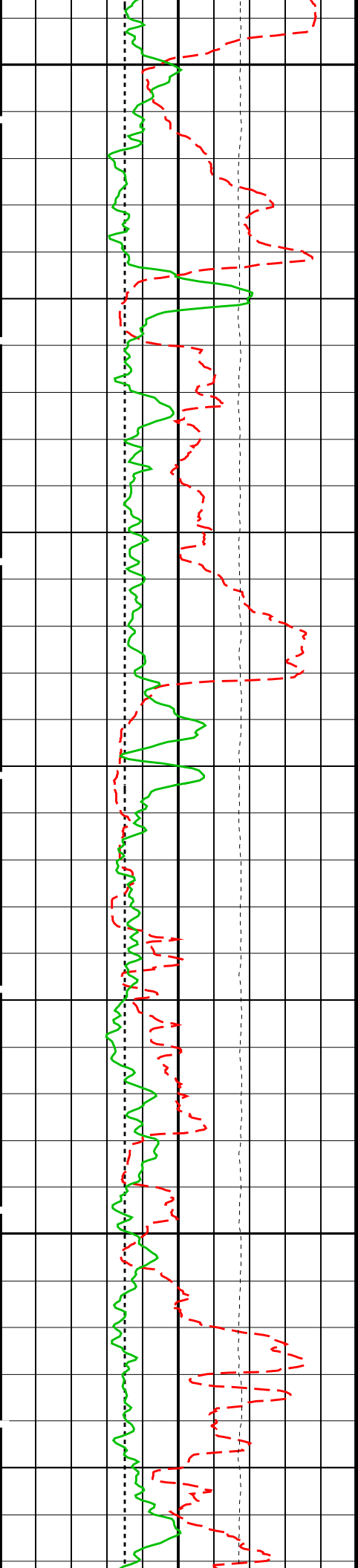
775





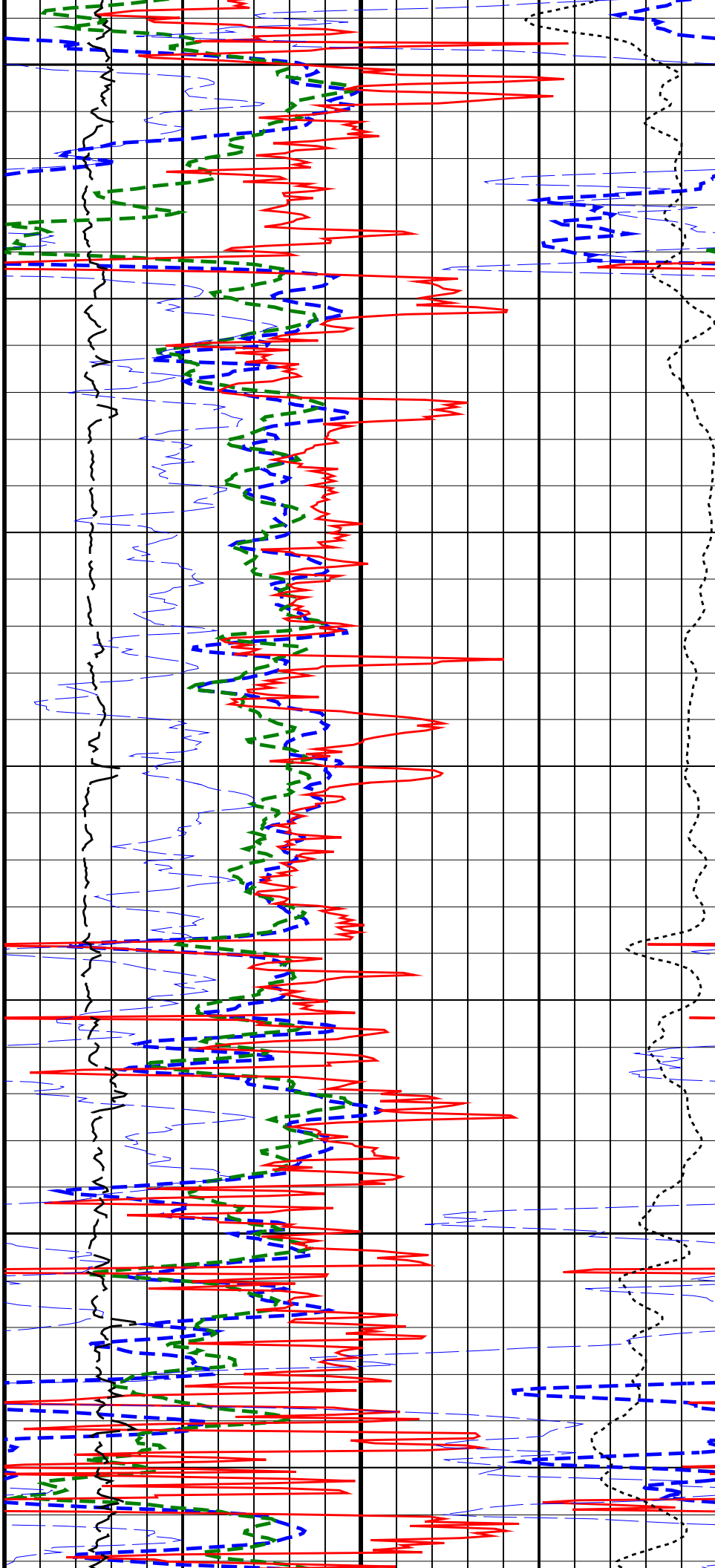
800

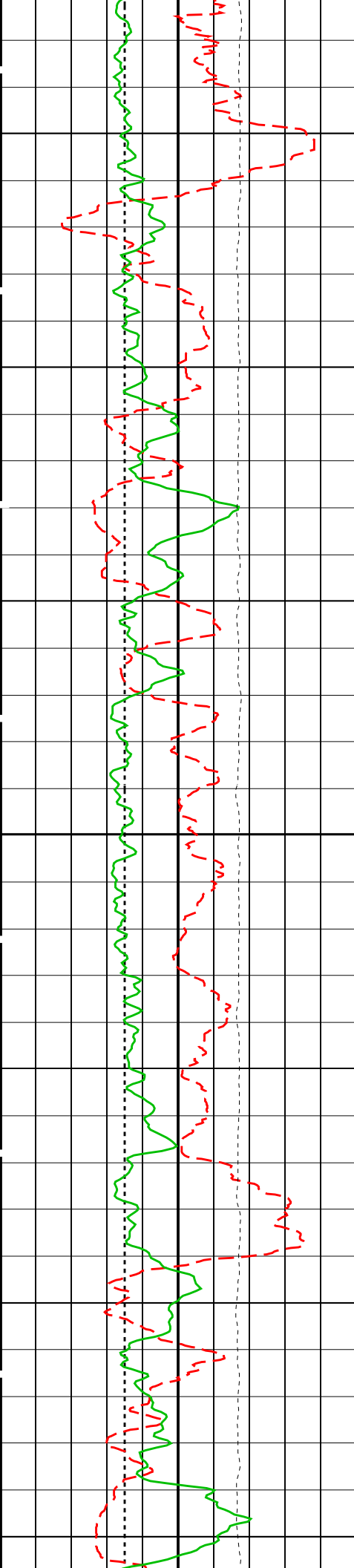




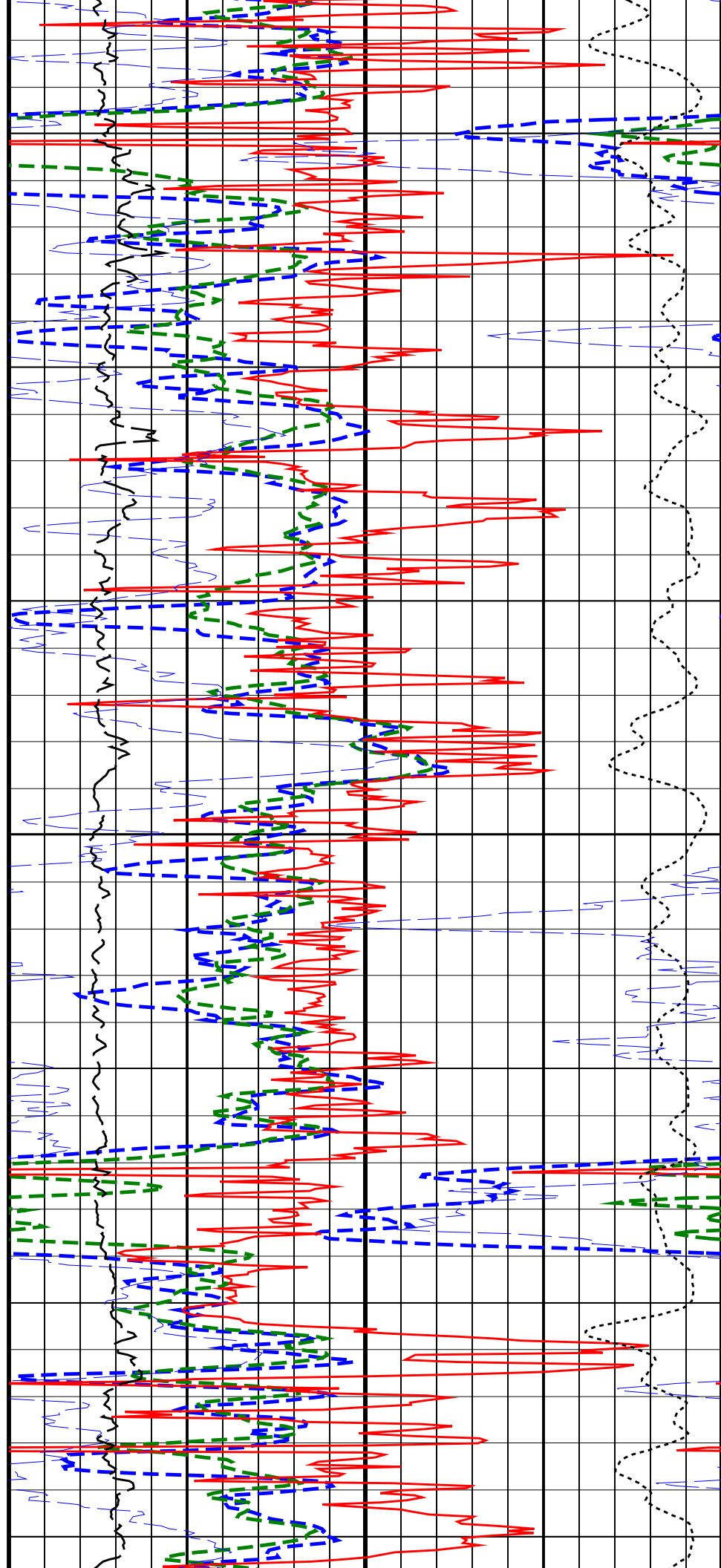
825

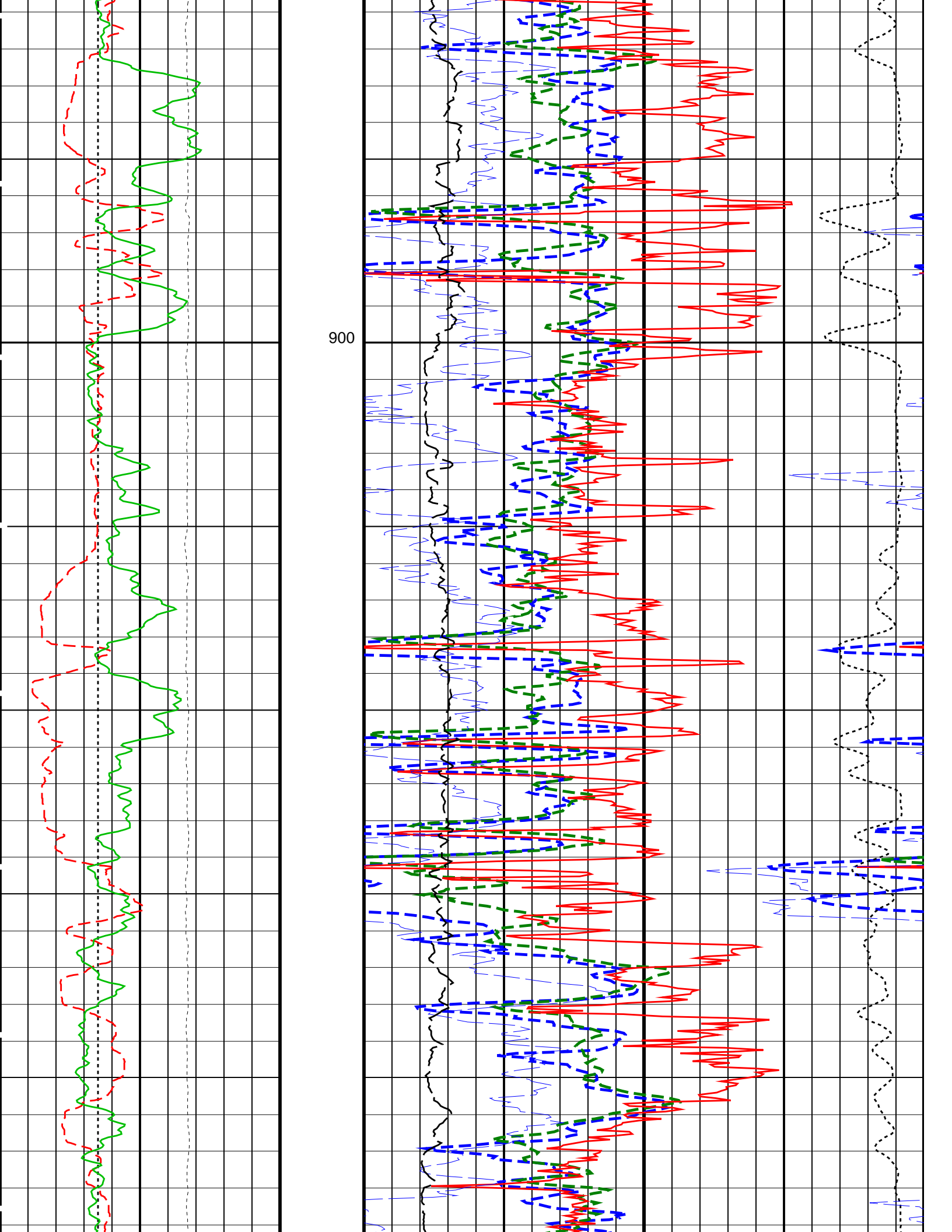
850

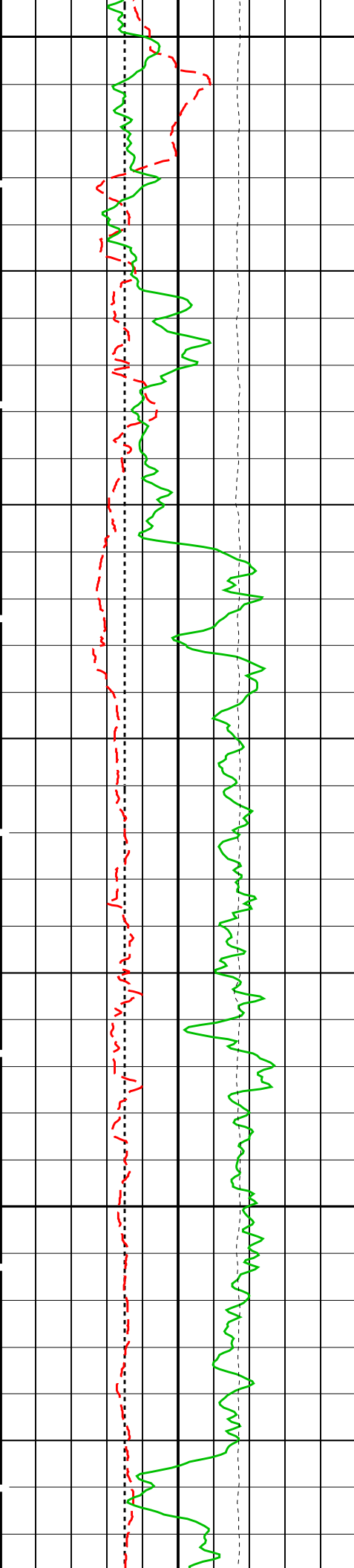




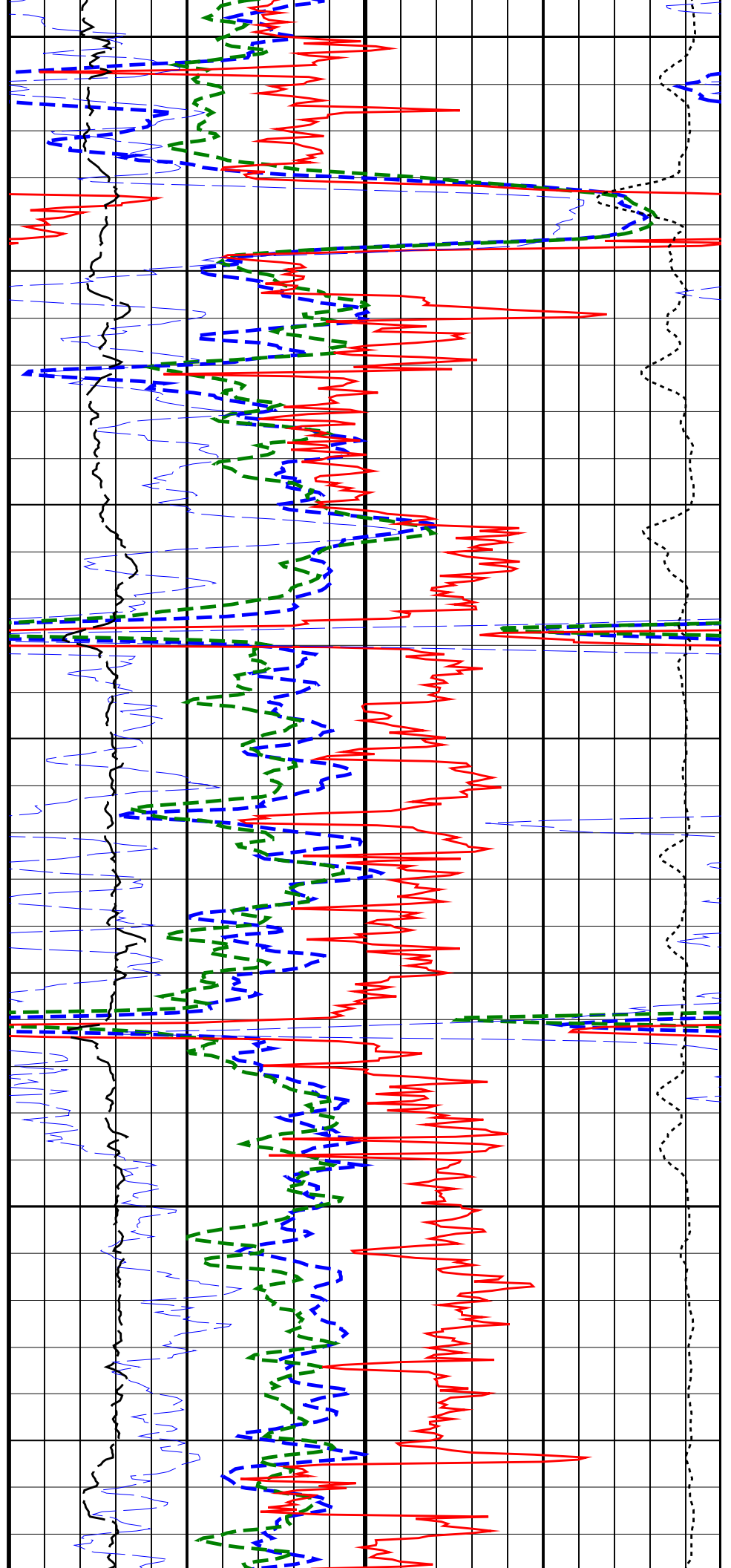
875



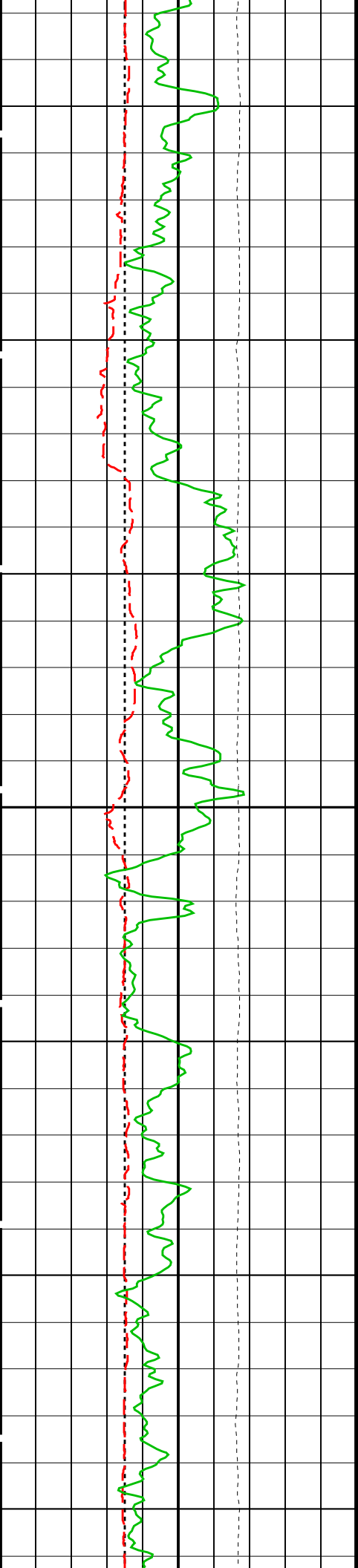




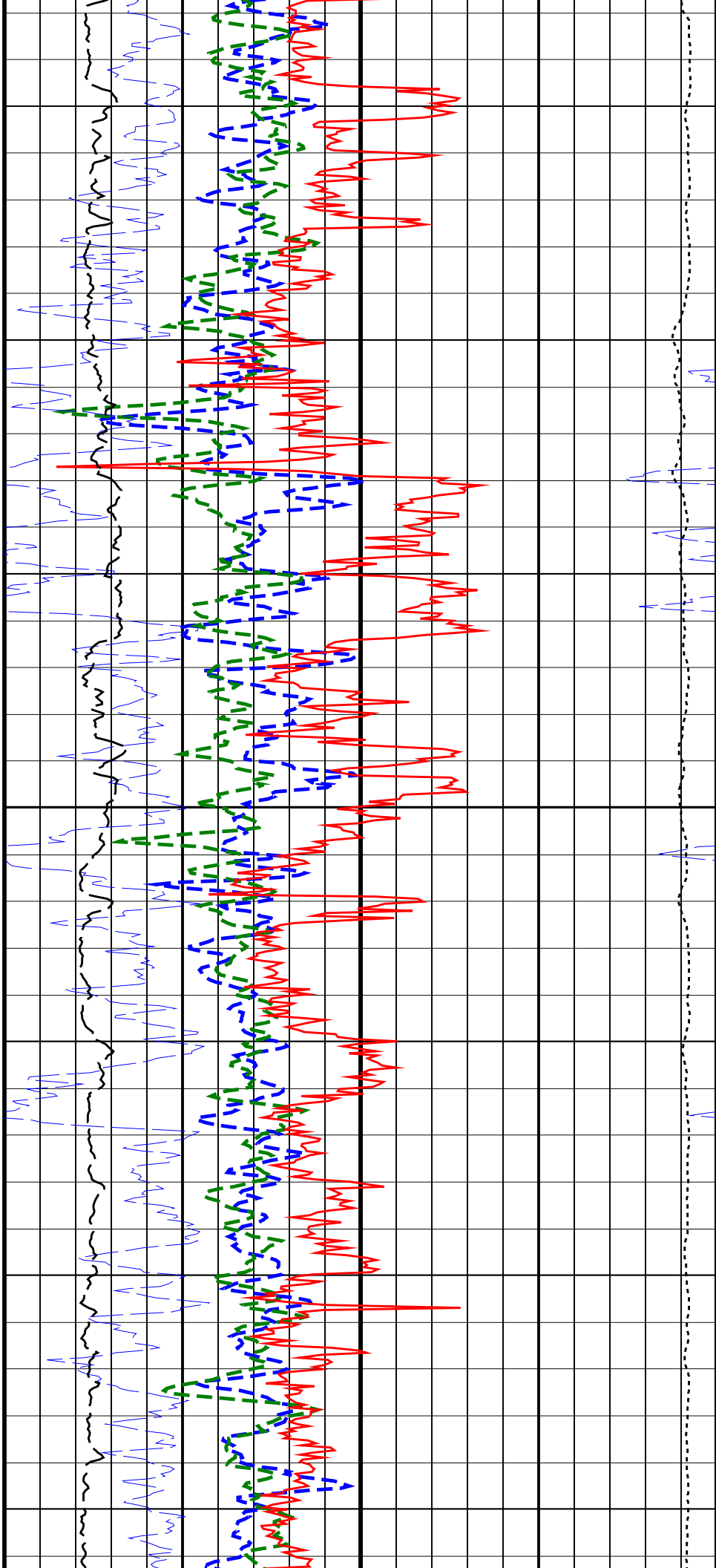
925

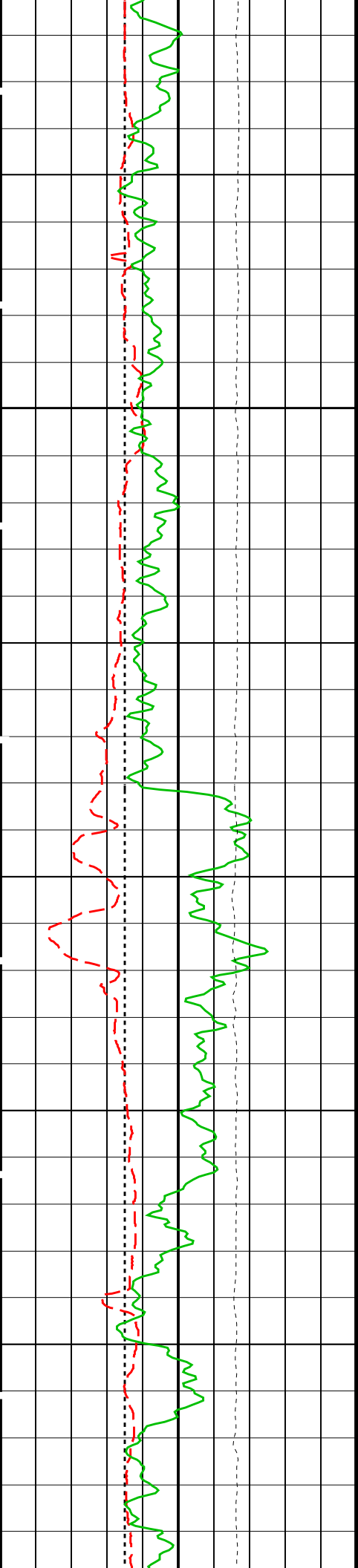


950

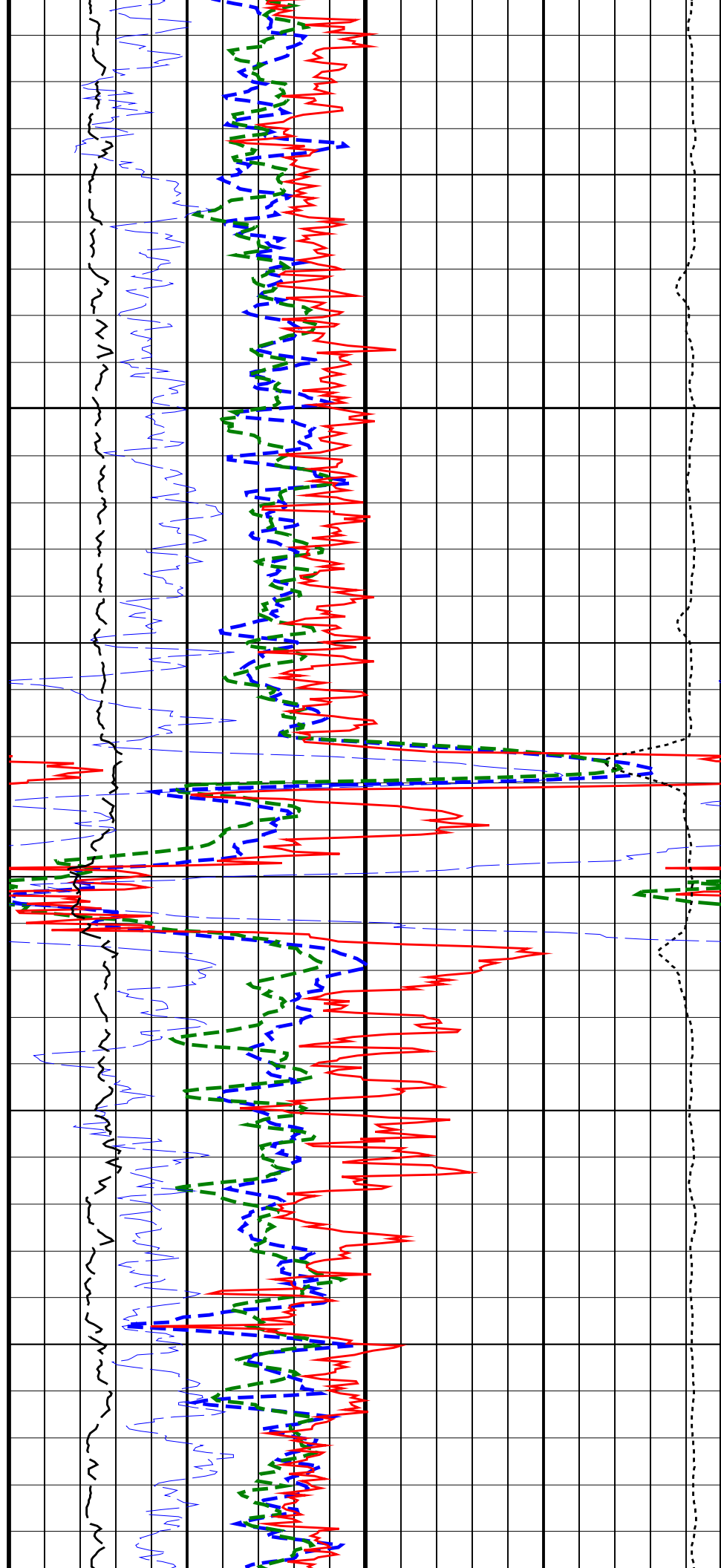


975

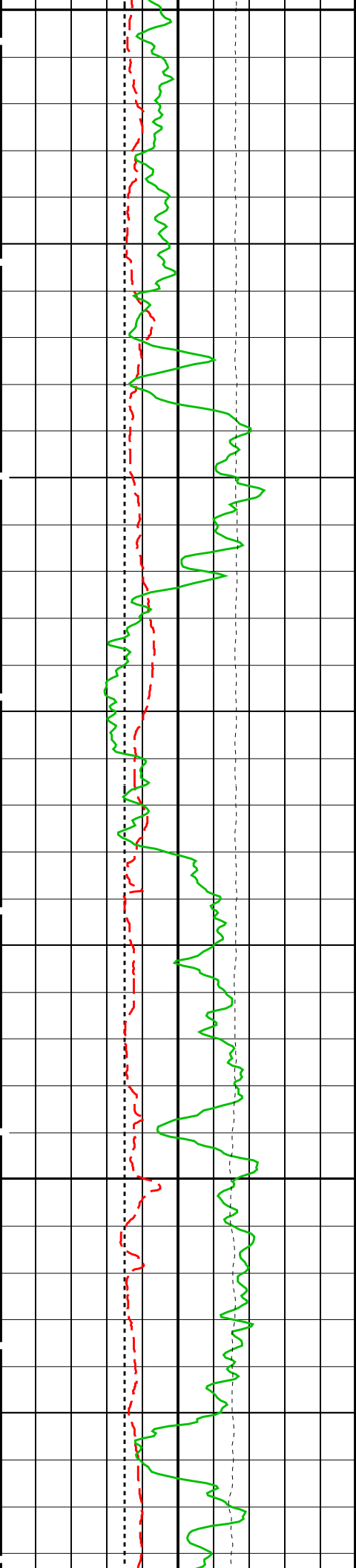




1000

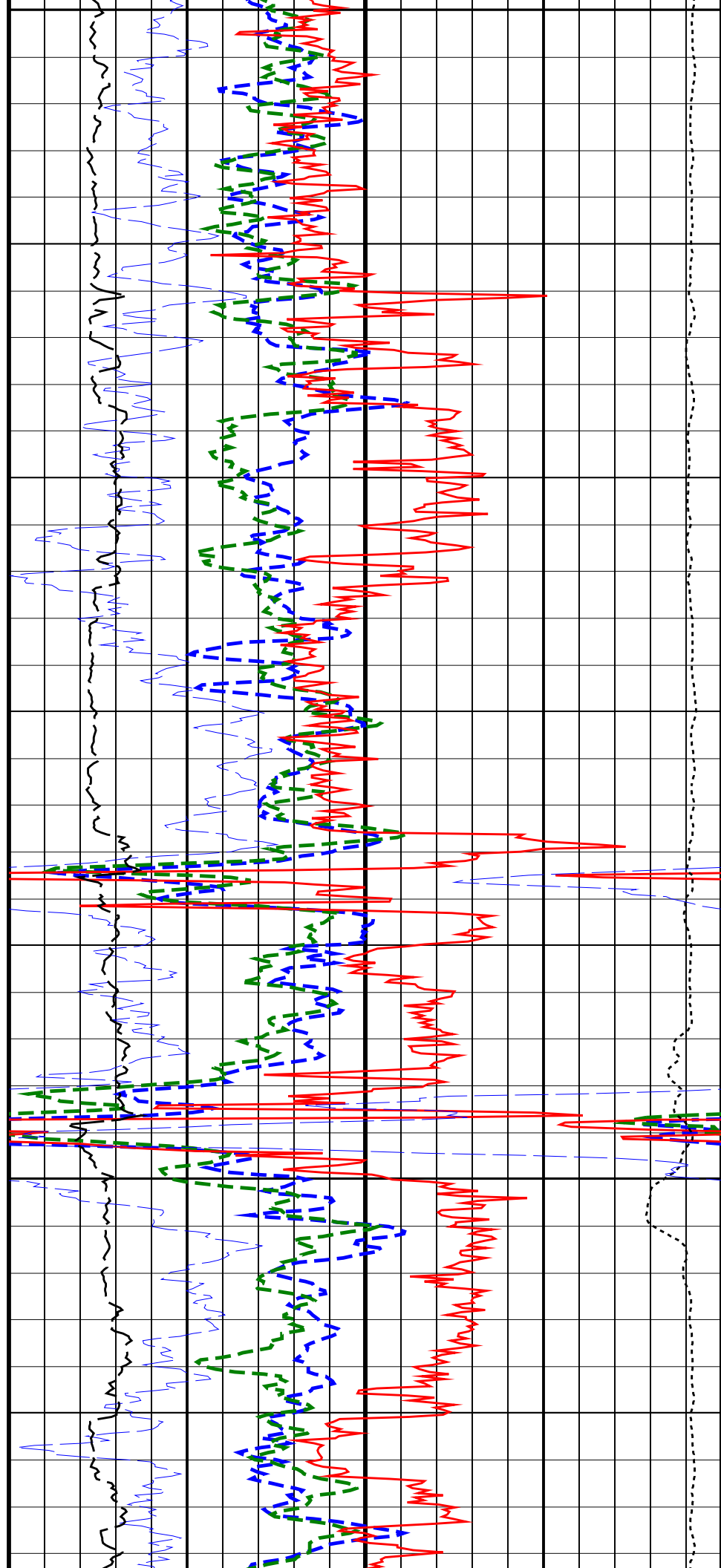


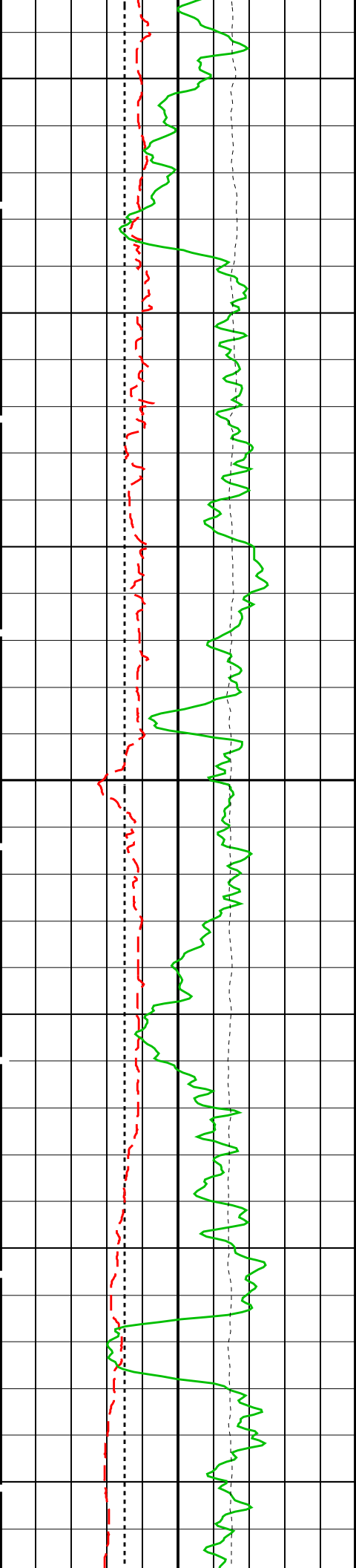
1005



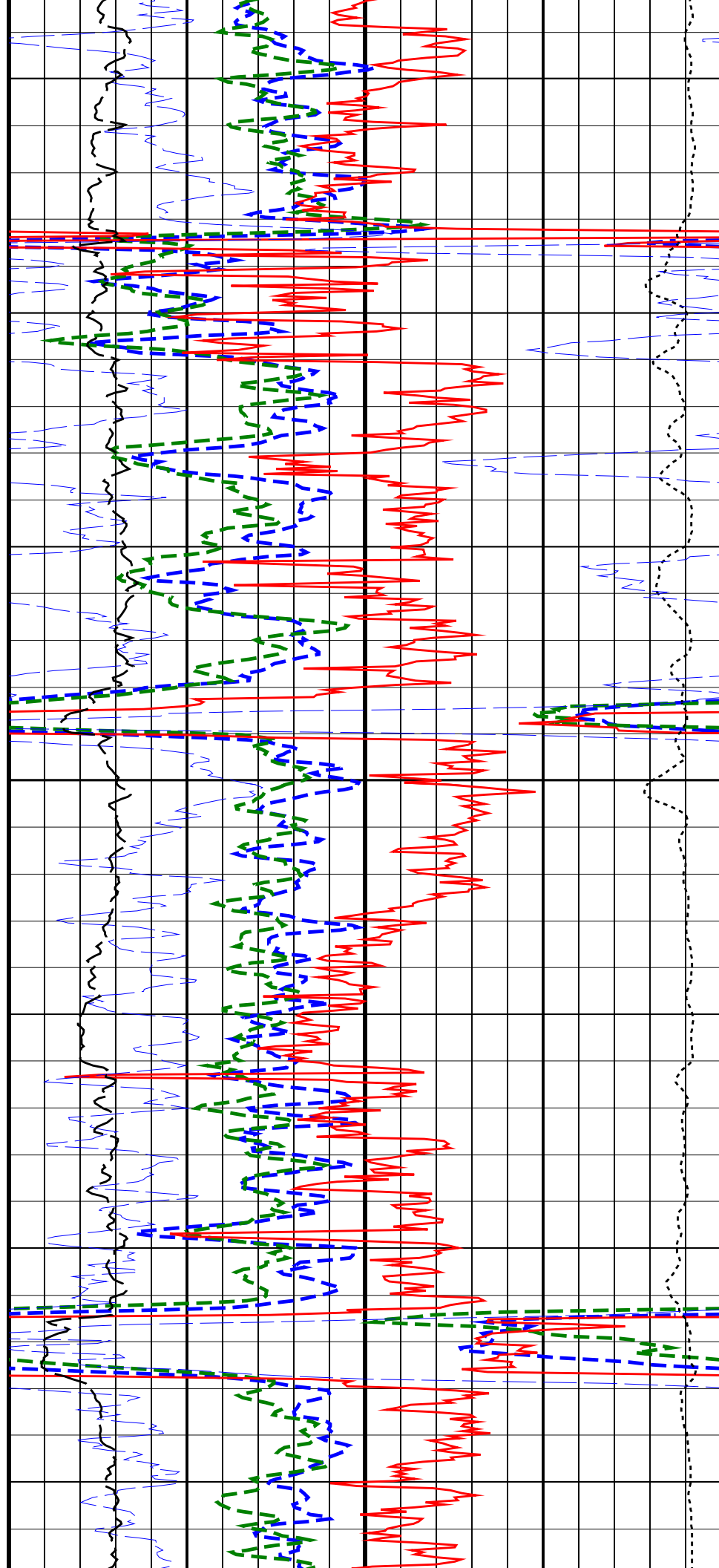
1025

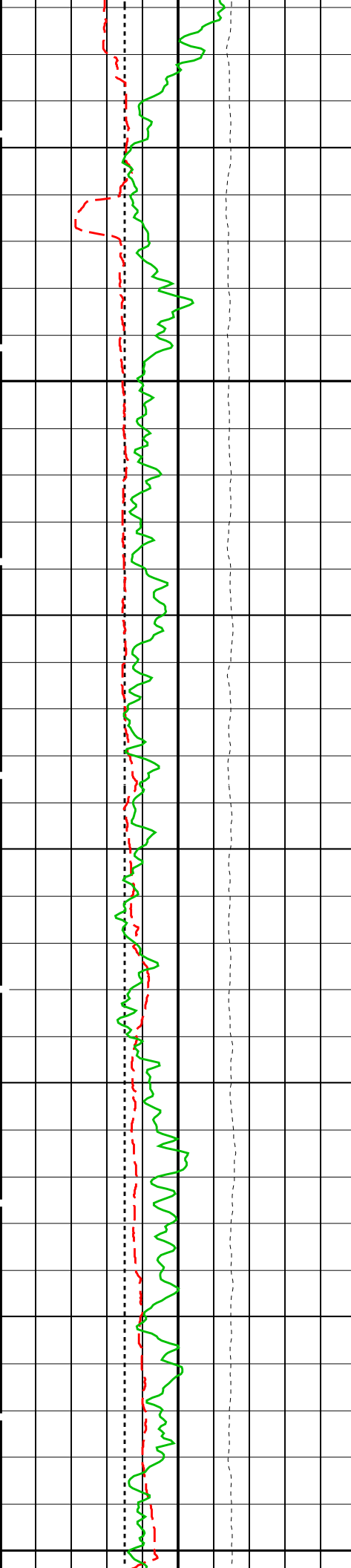
1050





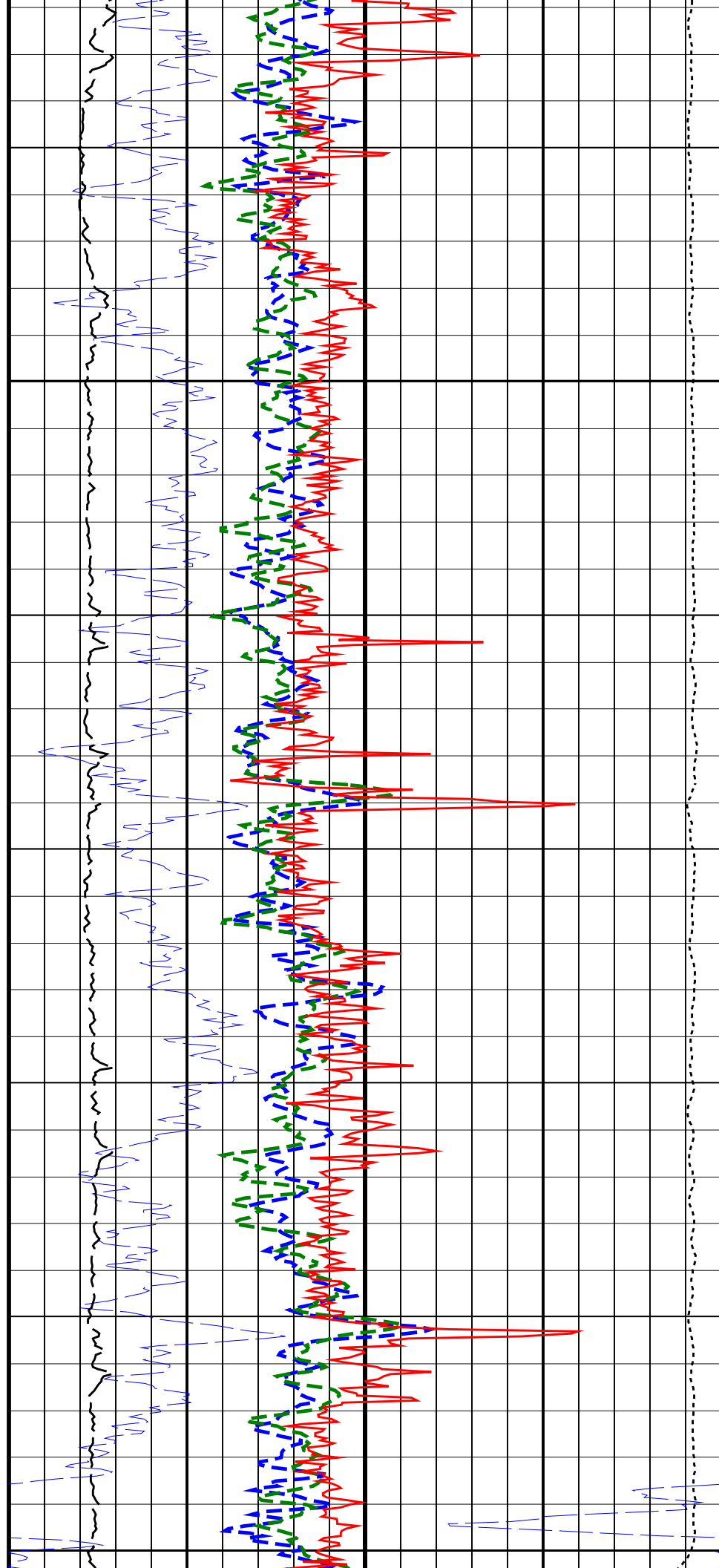
1075

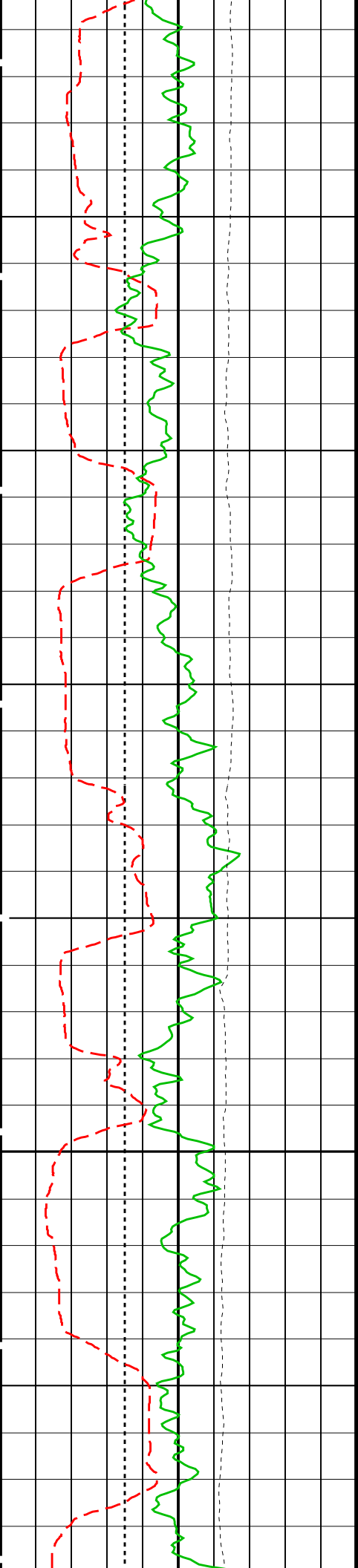




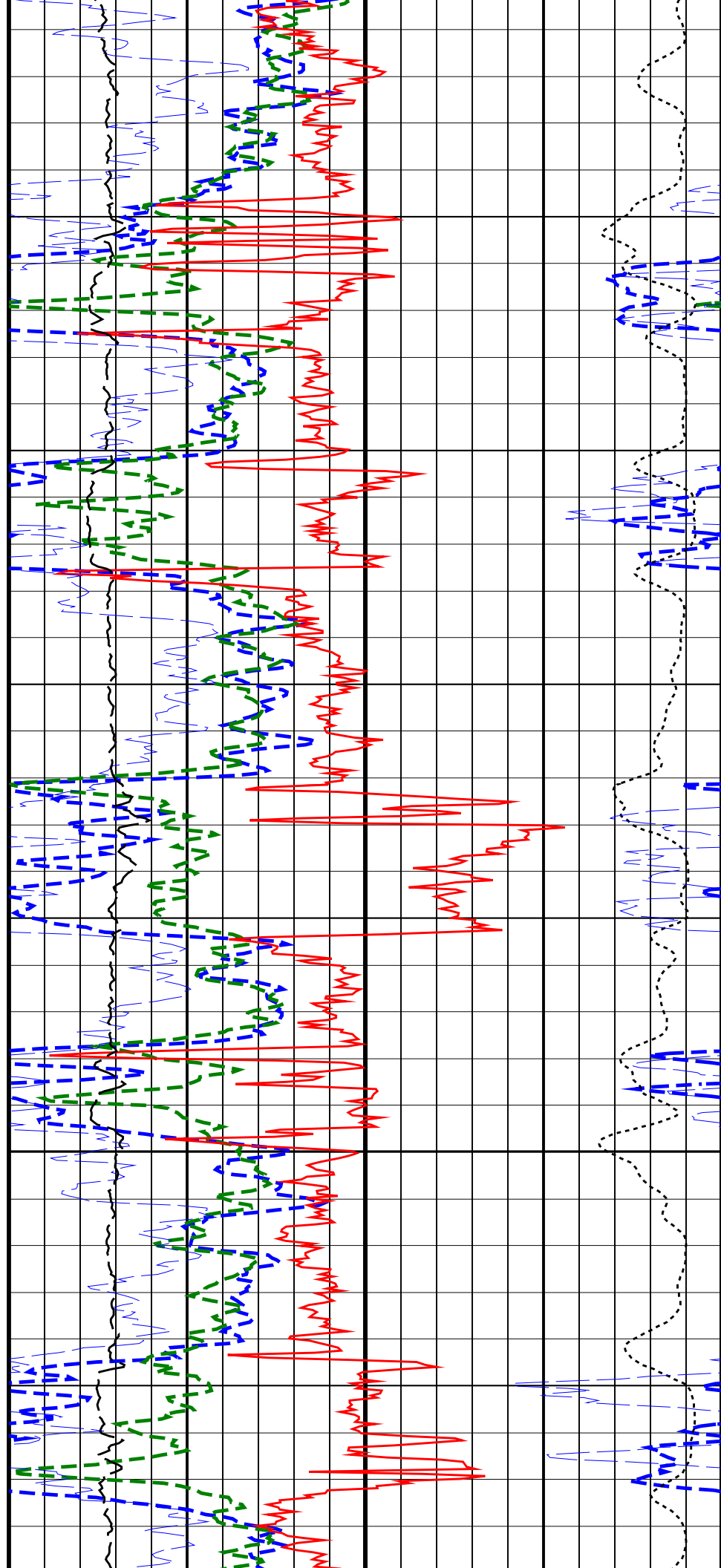
1100

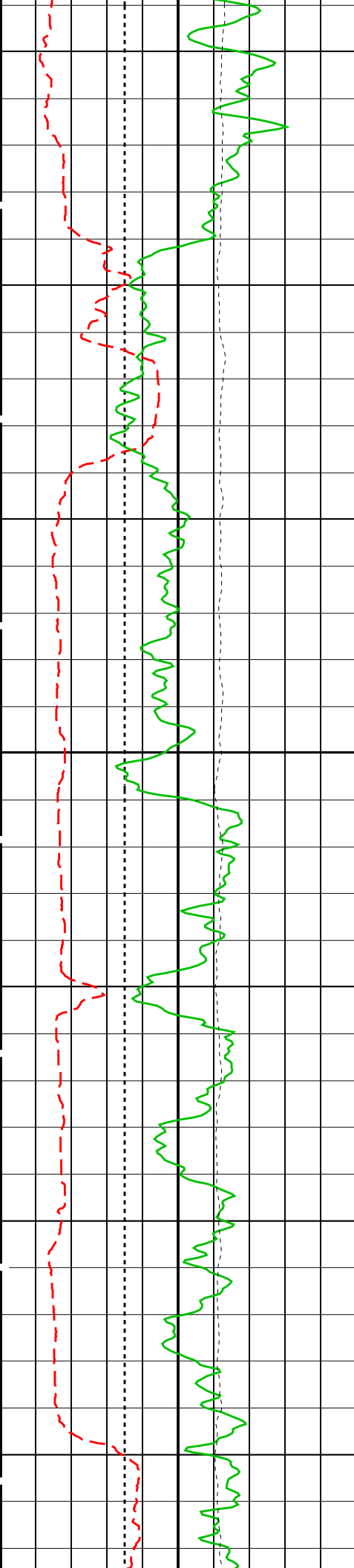
1125



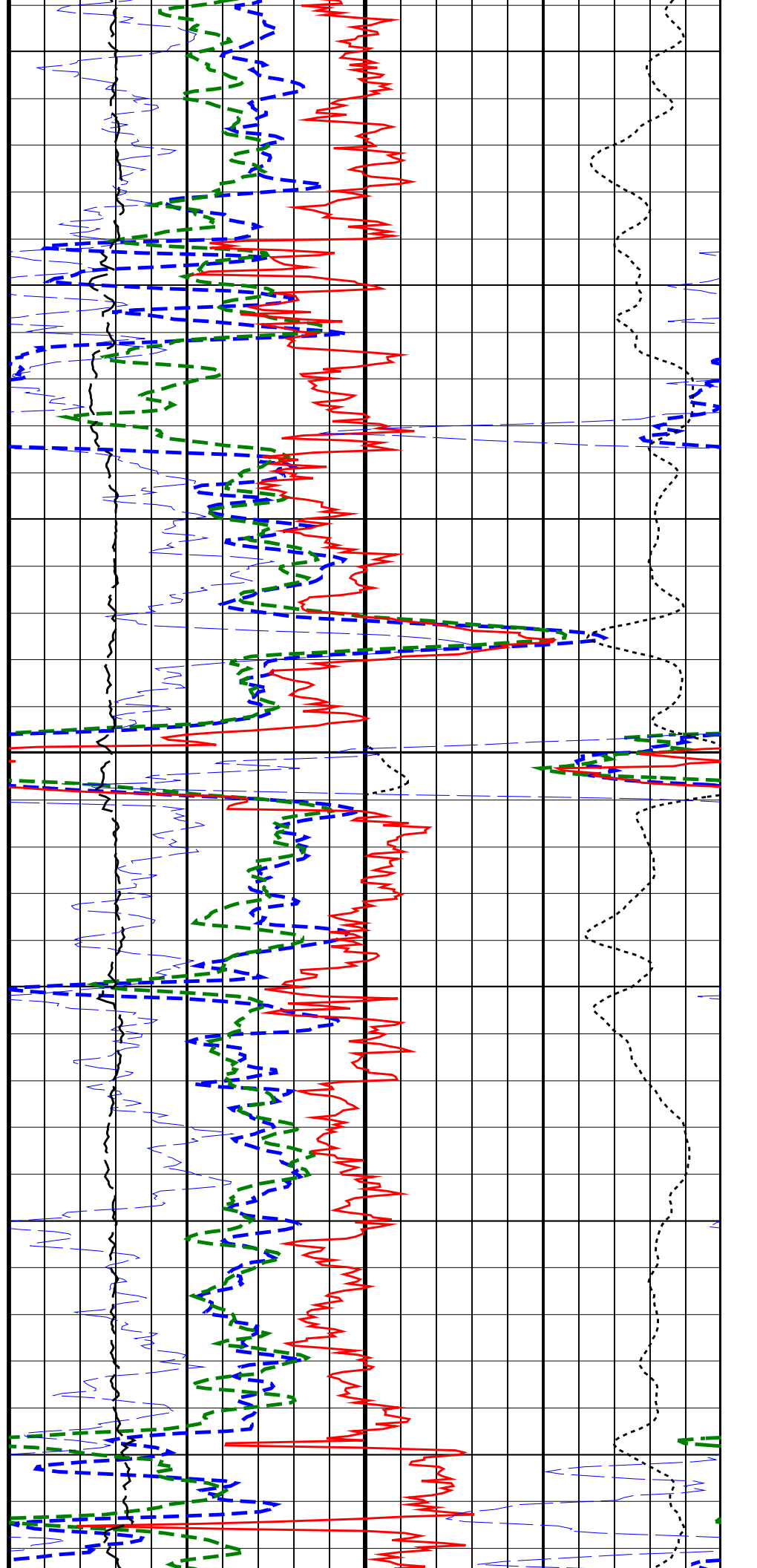


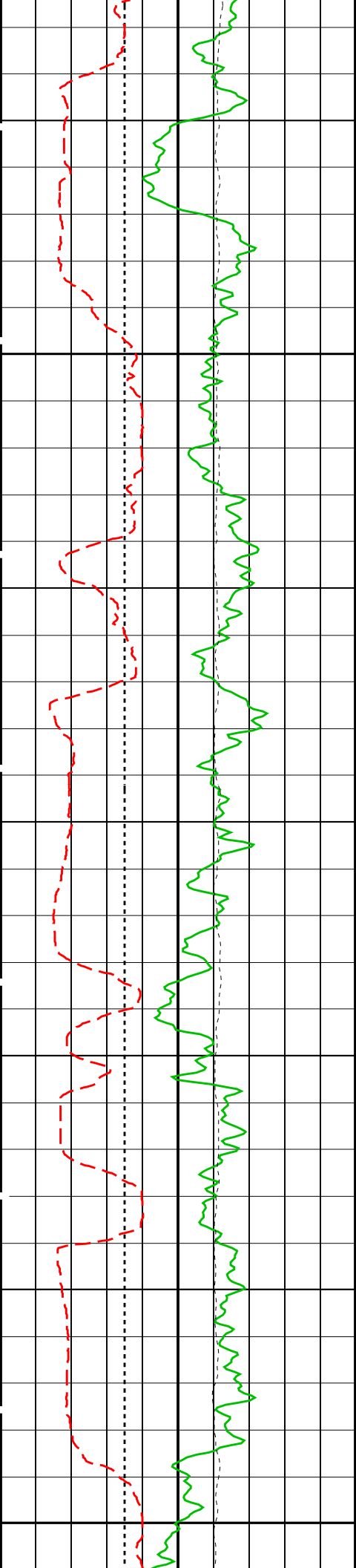
1150





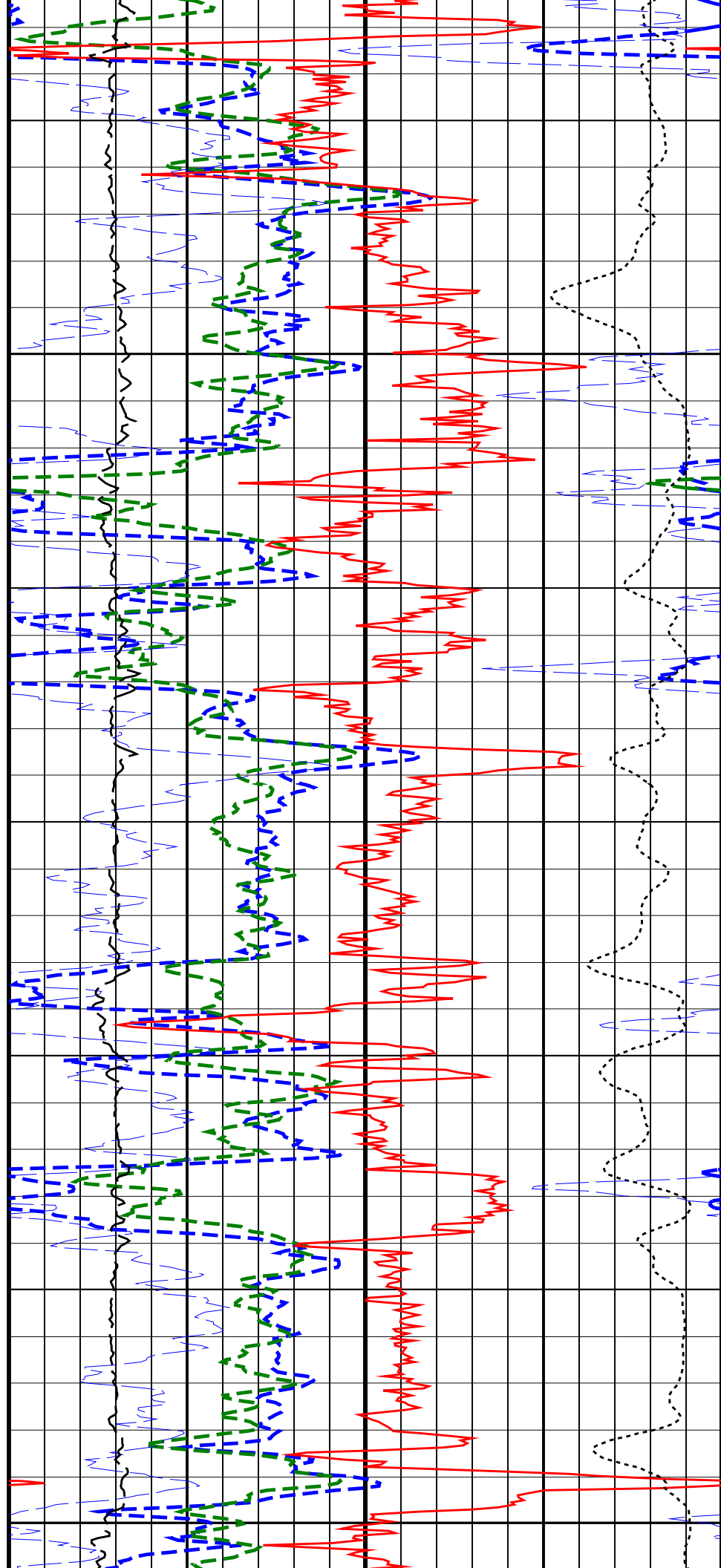
1175

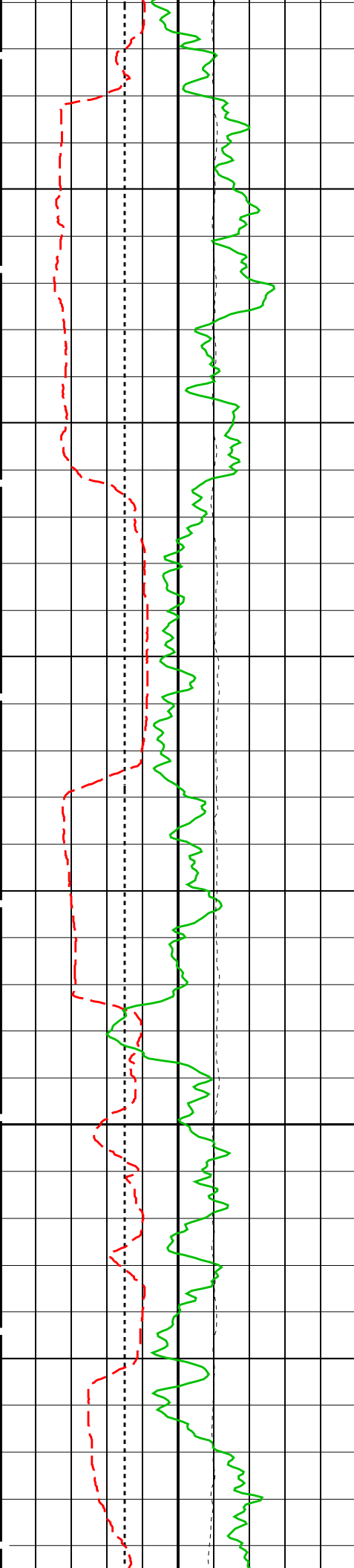




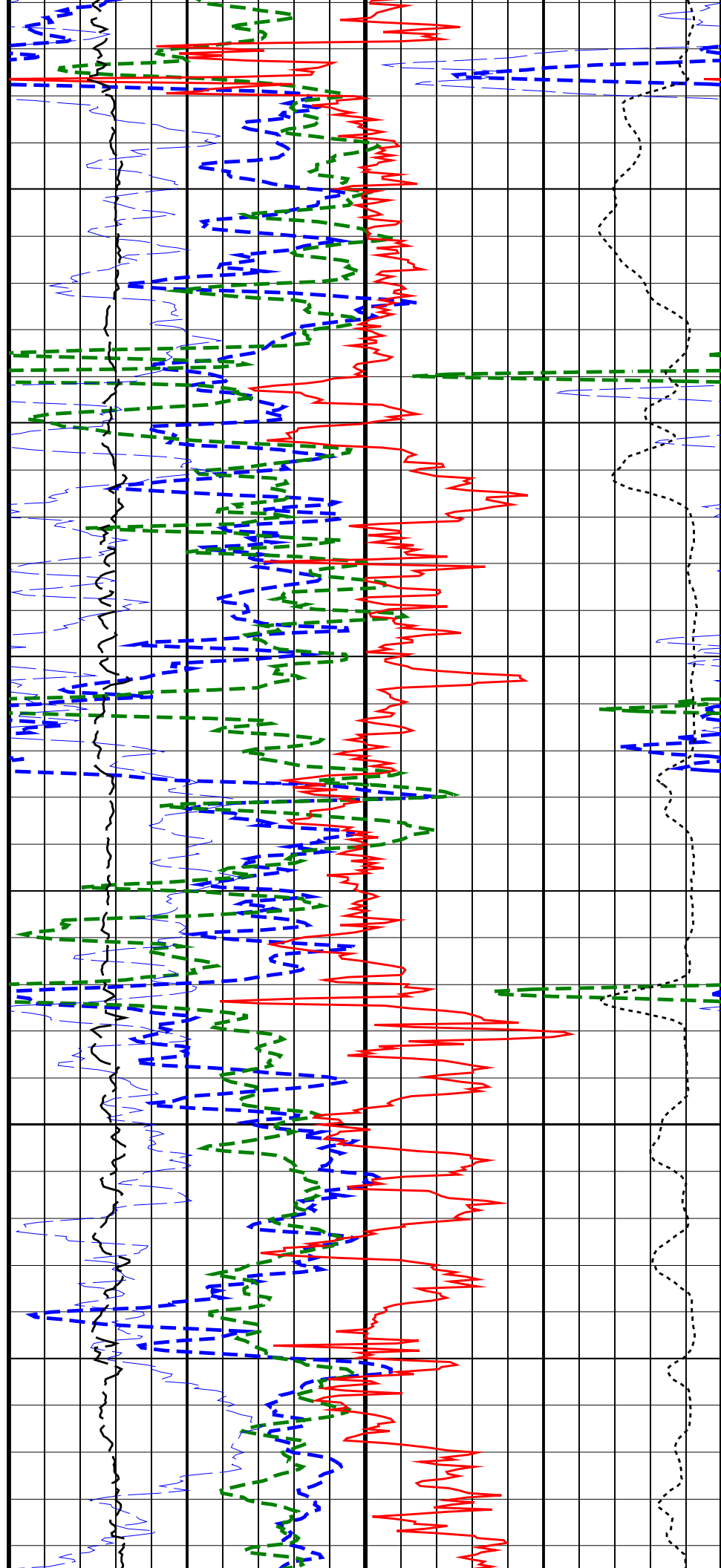
1200

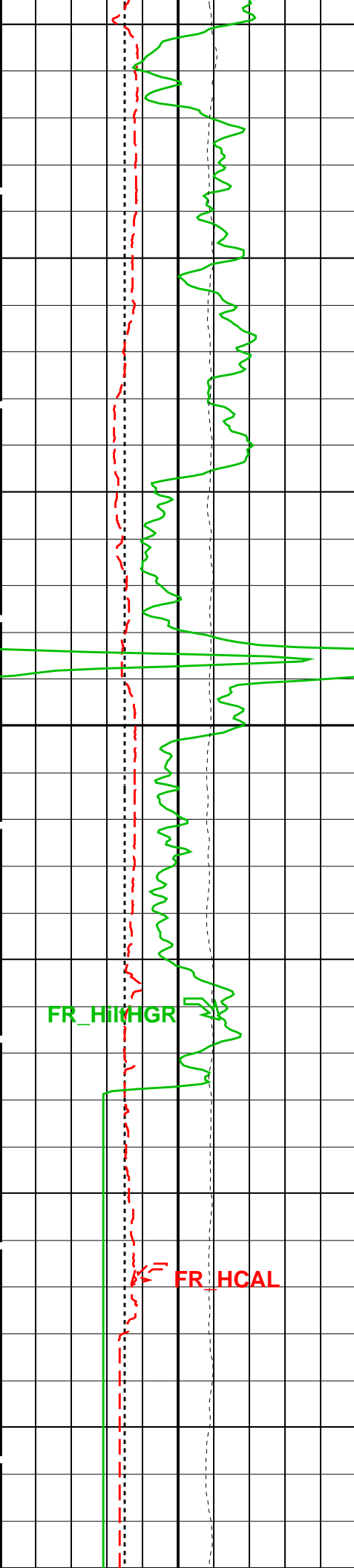
1225



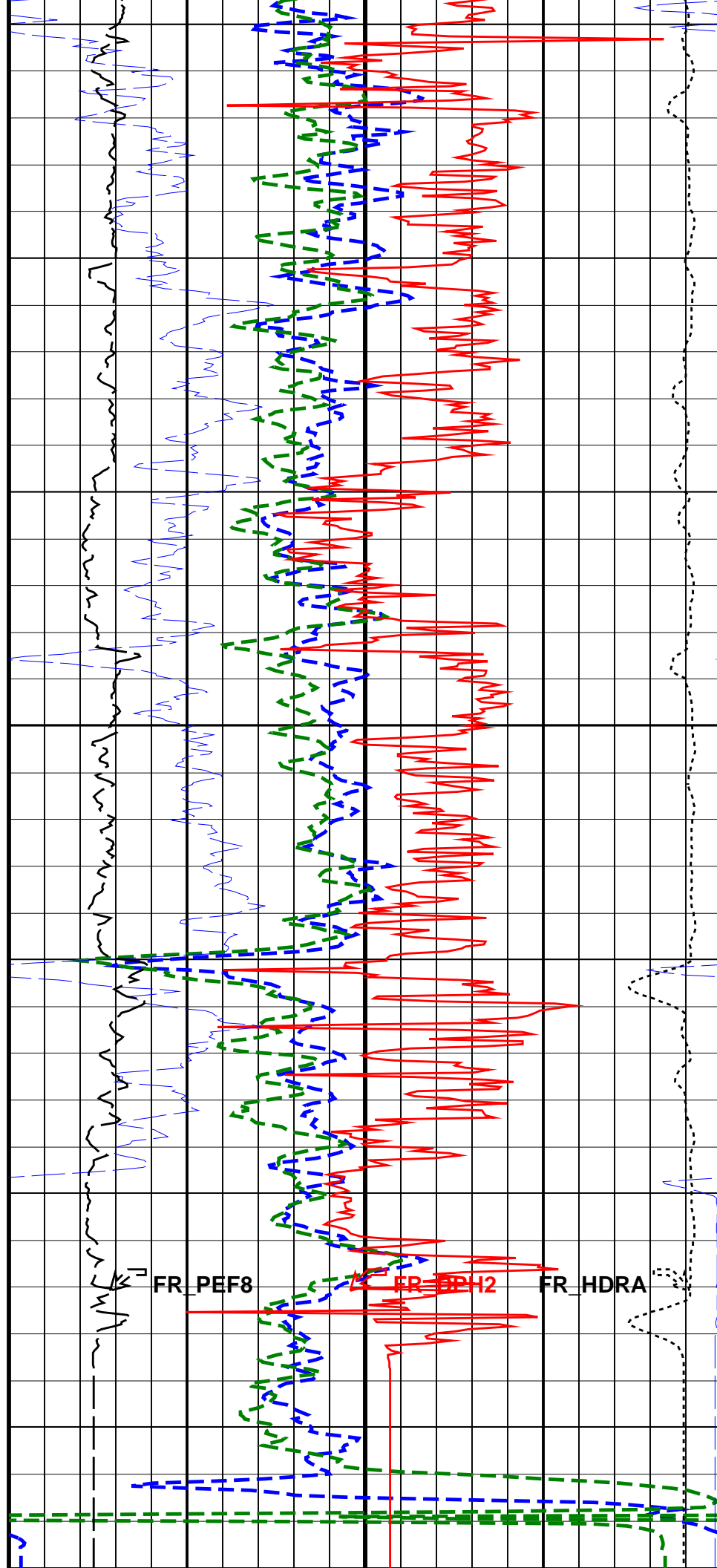


1250





1275



SDAT	Standoff Data Source	SOCN	1	DEGC
SHT	Surface Hole Temperature			
SOCN	Standoff Distance		3.175	MM
SOCO	Standoff Correction Option		YES	
CMRT-B: Combinable Magnetic Resonance Tool - B				
BHS	Borehole Status		OPEN	
BHT	Bottom Hole Temperature (used in calculations)		14	DEGC
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		1	DEGC
PPC2-B: Powered Positioning Deveice/Caliper 2				
	PPC2 Caliper Type		CAL_40EXT	
ECS-A: Elemental Capture Spectroscopy Tool				
	ECS Marquardt Spectrum		** V **	
HNGS-BA: Hostile Natural Gamma Ray Sonde				
BHS	Borehole Status		OPEN	
BHT	Bottom Hole Temperature (used in calculations)		14	DEGC
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM		
SHT	Surface Hole Temperature		1	DEGC
PPC1-B: Powered Positioning Deveice/Caliper 1				
	PPC1 Caliper Type		CAL_40EXT	
EDTC-B: Enhanced DTS Cartridge				
BHFL	Borehole Fluid Type		WATER	
BHS	Borehole Status		OPEN	
BHT	Bottom Hole Temperature (used in calculations)		14	DEGC
BSCO	Borehole Salinity Correction Option		NO	
CCCO	Casing & Cement Thickness Correction Option		NO	
DPPM	Density Porosity Processing Mode		HIRS	
FSCO	Formation Salinity Correction Option		NO	
GCSE	Generalized Caliper Selection		HCAL	
GDEV	Average Angular Deviation of Borehole from Normal		0	DEG
GGRD	Geothermal Gradient		0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM		
HSCO	Hole Size Correction Option		YES	
MCCO	Mud Cake Correction Option		NO	
MCOR	Mud Correction		NATU	
MWCO	Mud Weight Correction Option		NO	
PTCO	Pressure/Temperature Correction Option		NO	
SDAT	Standoff Data Source		SOCN	
SHT	Surface Hole Temperature		1	DEGC
SOCN	Standoff Distance		3.175	MM
SOCO	Standoff Correction Option		YES	
STI: Stuck Tool Indicator				
LBFR	Trigger for MAXIS First Reading Label		TDL	
STKT	STI Stuck Threshold		1.524	M
TDD	Total Depth - Driller		1310.00	M
TDL	Total Depth - Logger		1296.00	M
System and Miscellaneous				
BS	Bit Size		361.950	MM
BSAL	Borehole Salinity		-50000.00	PPM
CSIZ	Current Casing Size		339.725	MM
CWEI	Casing Weight		81.11	KG/M
DFD	Drilling Fluid Density		1115.00	K/M3
DO	Depth Offset for Playback		1.4	M
MST	Mud Sample Temperature		19.70	DEGC
PP	Playback Processing		RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample		0.1200	OHMM
TD	Total Depth		4298	FT

Format: HIRS-SAND45-CAN Vertical Scale: 1:120 Graphics File Created: 07-Mar-2007 13:52

OP System Version: 15C0-309

MCM

APS-C	15C0-309	HILTH-FTB	15C0-309
CMRT-B	15C0-309	PPC2-B	15C0-309
ECS-A	15C0-309	ECC-B	15C0-309
HNGC-B	15C0-309	HNGS-BA	15C0-309
PPC1-B	15C0-309	EDTC-B	15C0-309

Input DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_128LUP	FN:145	PRODUCER	07-Mar-2007 09:56	1293.9 M	621.0 M
---------	-------------------------	--------	----------	-------------------	----------	---------

Output DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_153PUP	FN:169	PRODUCER	07-Mar-2007 13:52
---------	-------------------------	--------	----------	-------------------

REPEAT ANALYSIS: NUCLEAR
POROSITY SANDSTONE 2650KG/M3

MAXIS Field Log

Input DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_128LUP	FN:145	PRODUCER	07-Mar-2007 09:56	1293.9 M	621.0 M
DEFAULT	APS_TLD_MCFL_CNL_154PUP	FN:170	PRODUCER	07-Mar-2007 13:59	1172.7 M	784.3 M

Output DLIS Files

DEFAULT	APS_TLD_MCFL_CNL_155PUP	FN:171	PRODUCER	07-Mar-2007 14:06
CUST	APS_TLD_MCFL_CNL_155PUP	FN:172	PRODUCER	07-Mar-2007 14:06

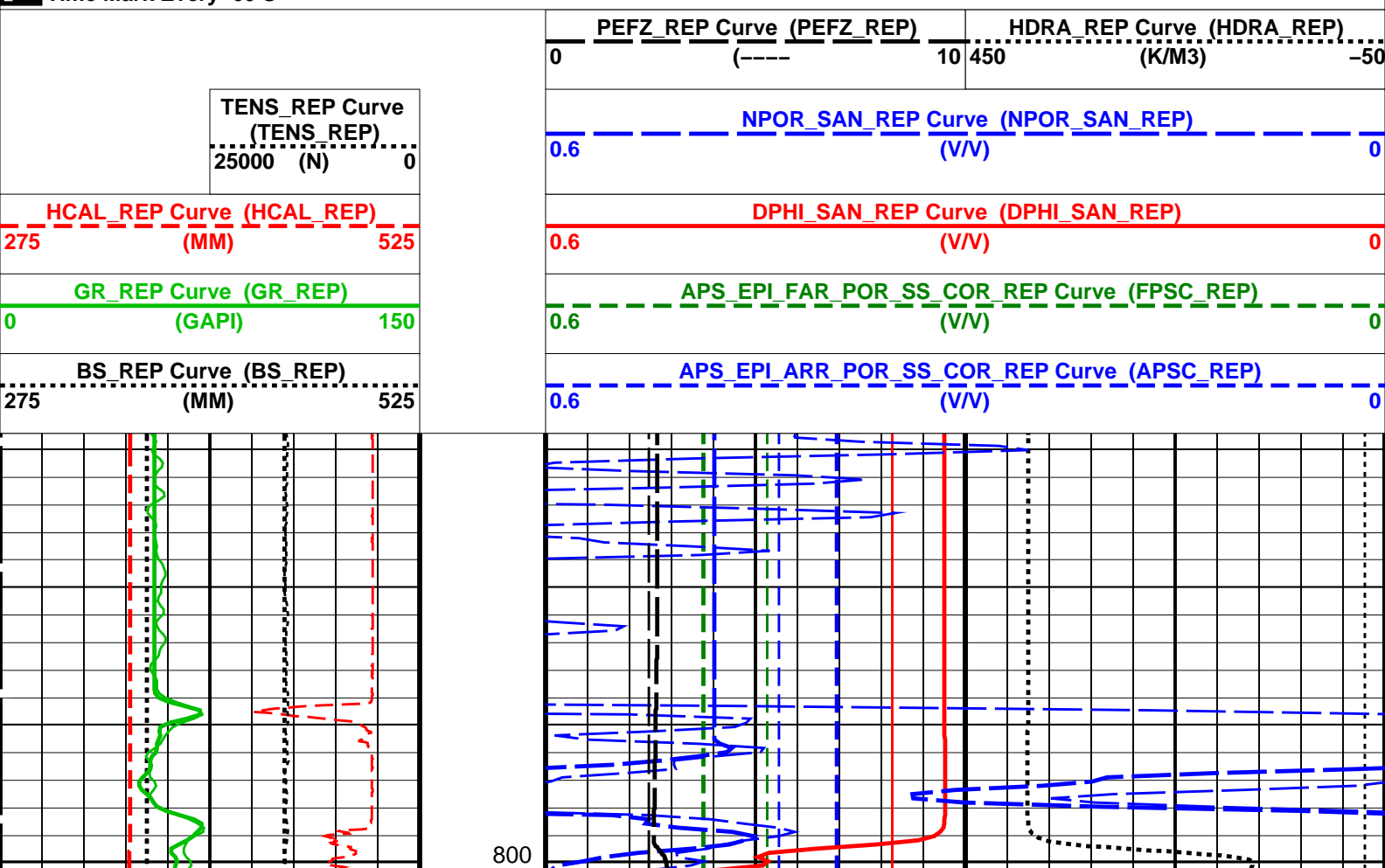
OP System Version: 14C0-302

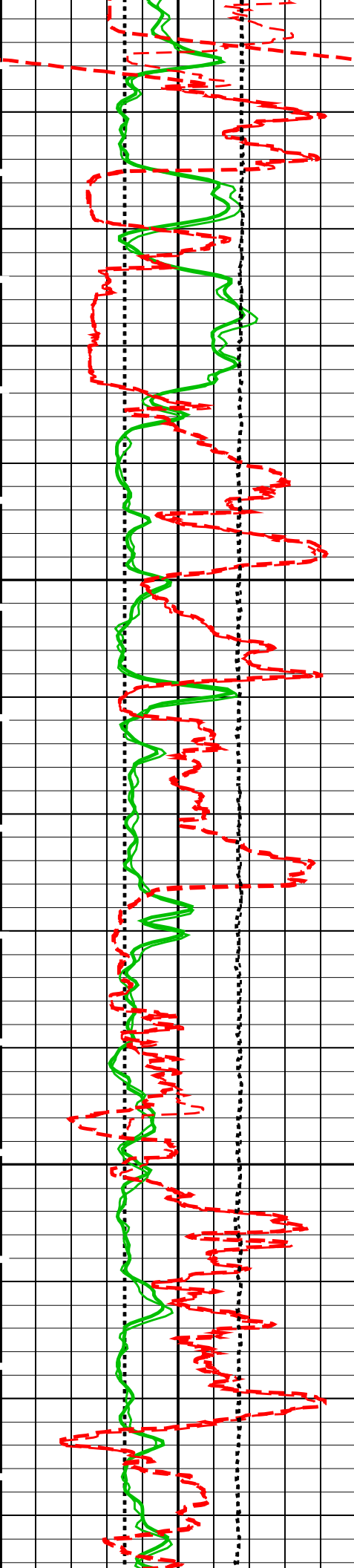
MCM

APS-C	14C0-302	HILTH-FTB	14C0-302
CMRT-B	14C0-302	PPC2-B	SKK-3060-PPCB
ECS-A	14C0-302	ECC-B	14C0-302
HNGC-B	14C0-302	HNGS-BA	14C0-302
PPC1-B	SKK-3060-PPCB	EDTC-B	SKK-3066-EDTCB

PIP SUMMARY

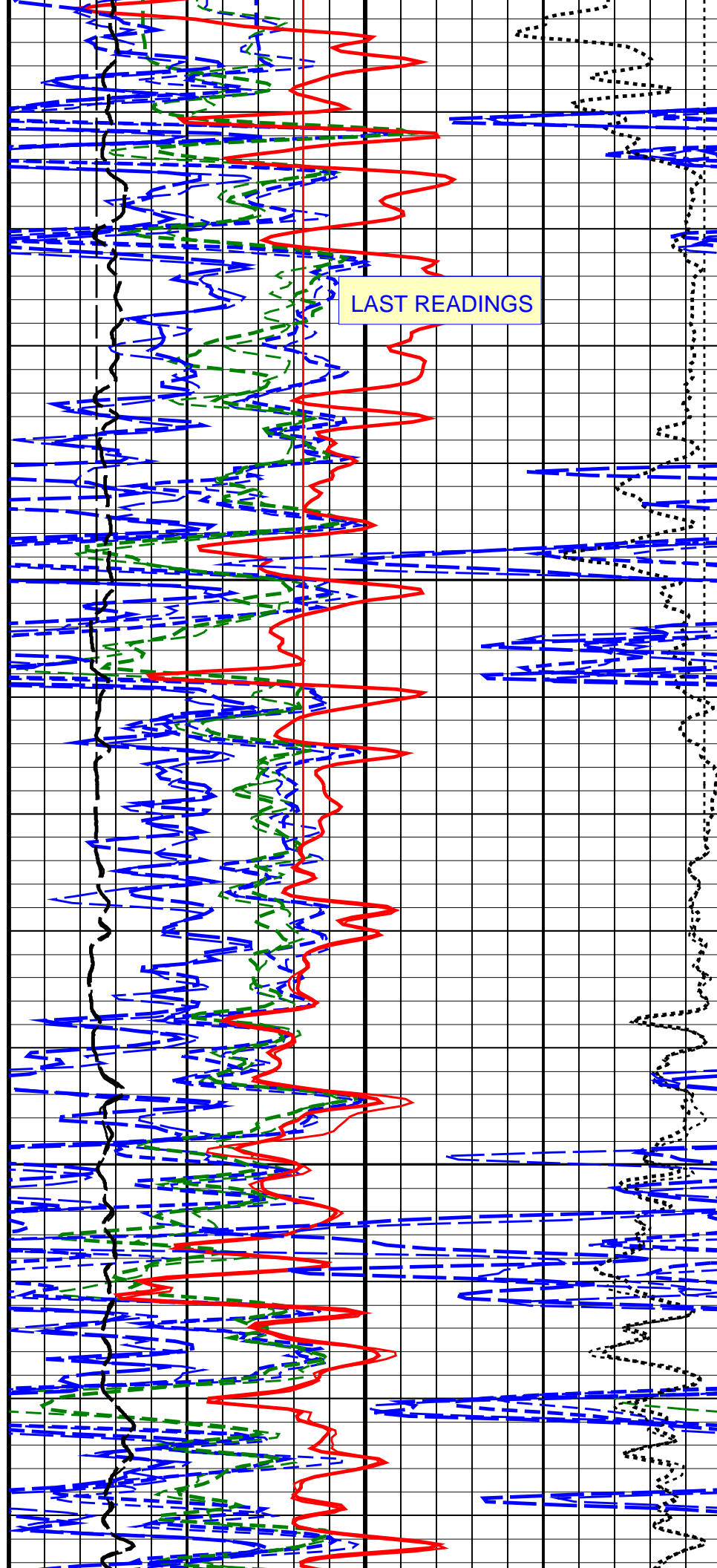
Time Mark Every 60 S

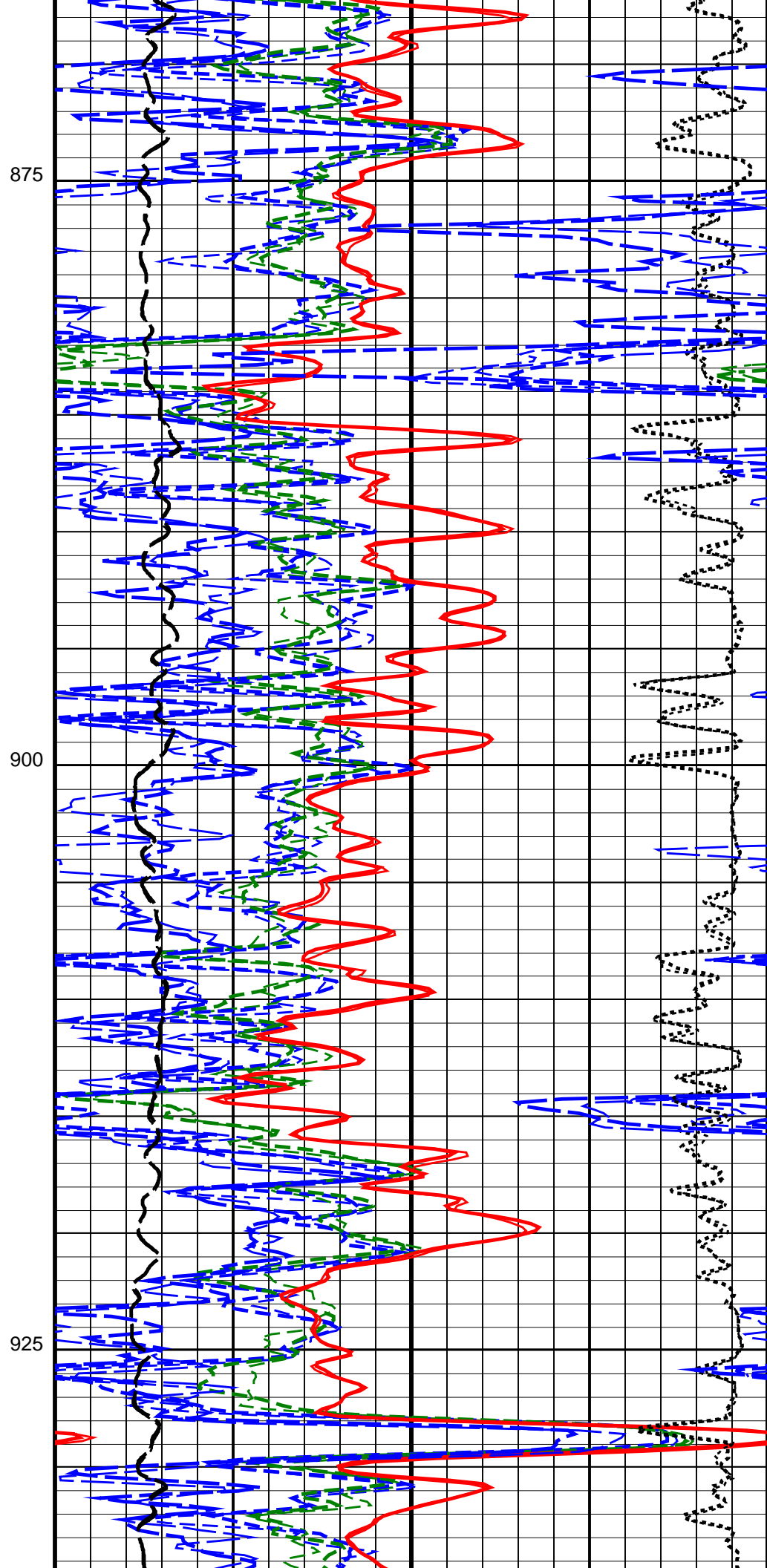
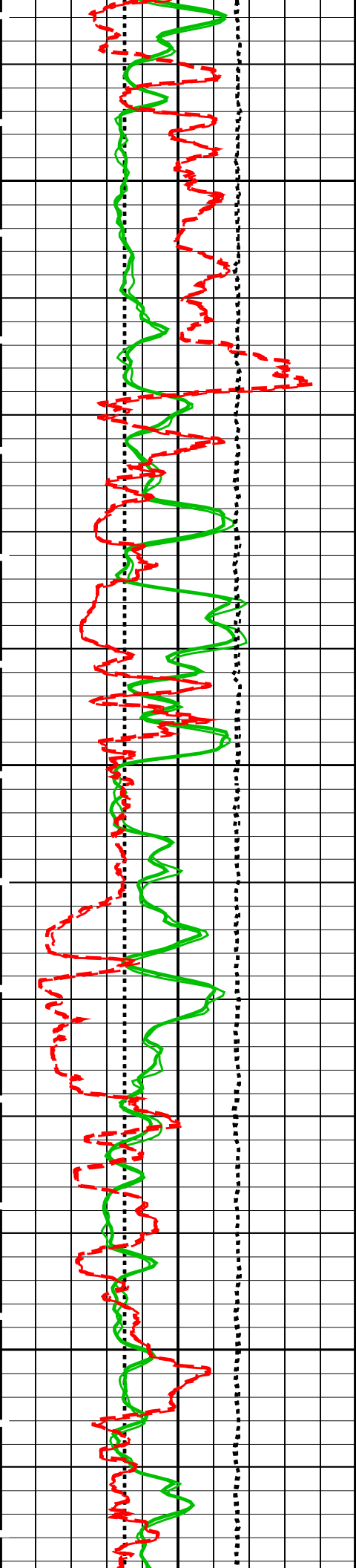


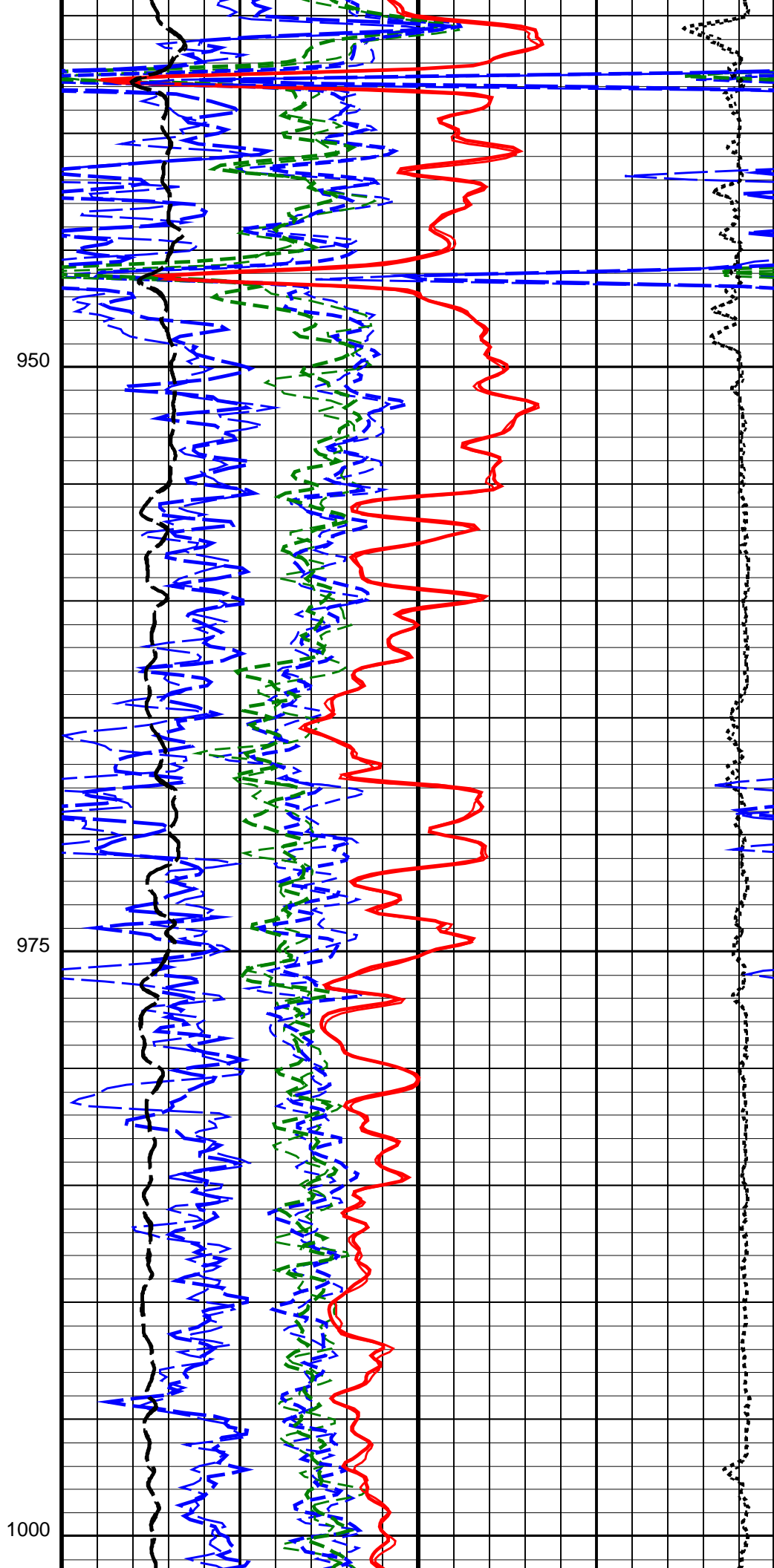
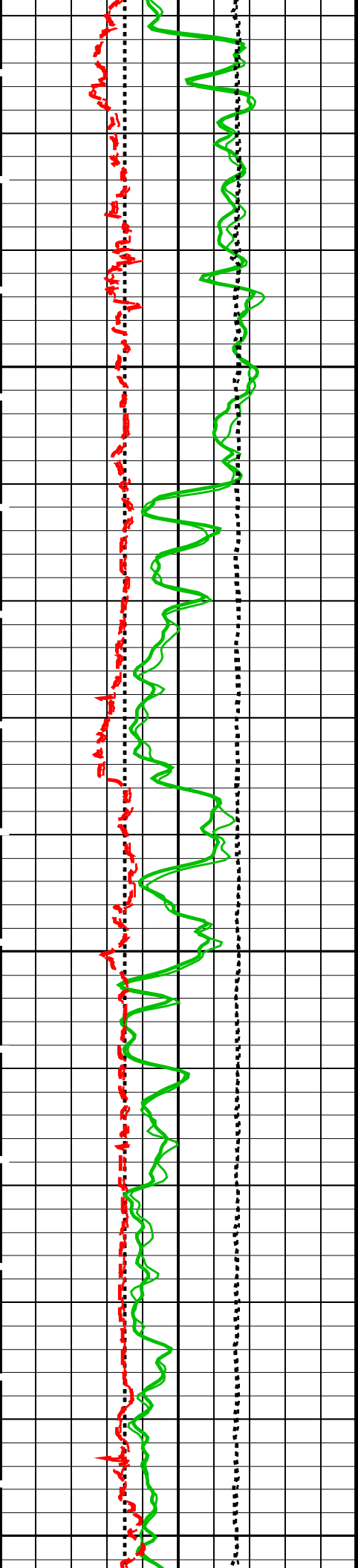


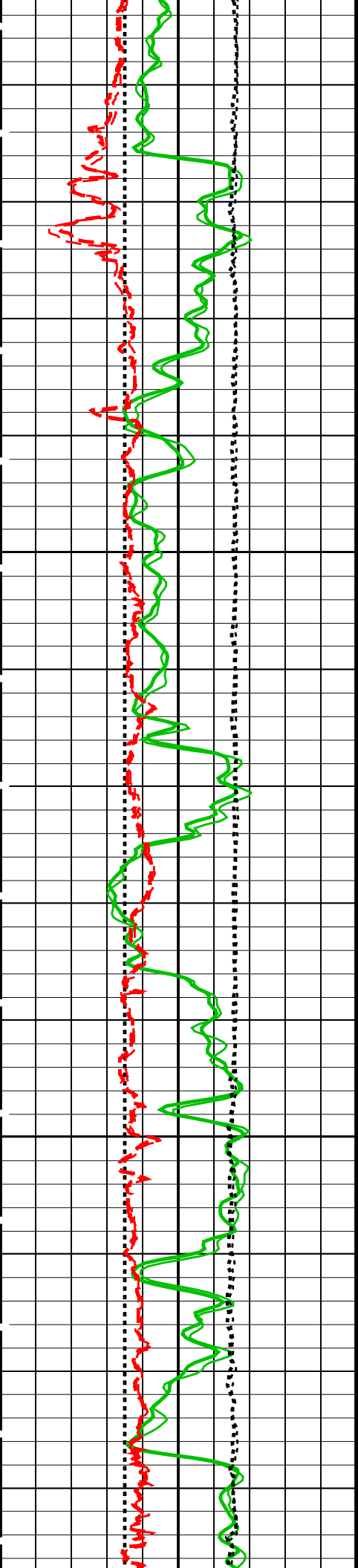
825

850



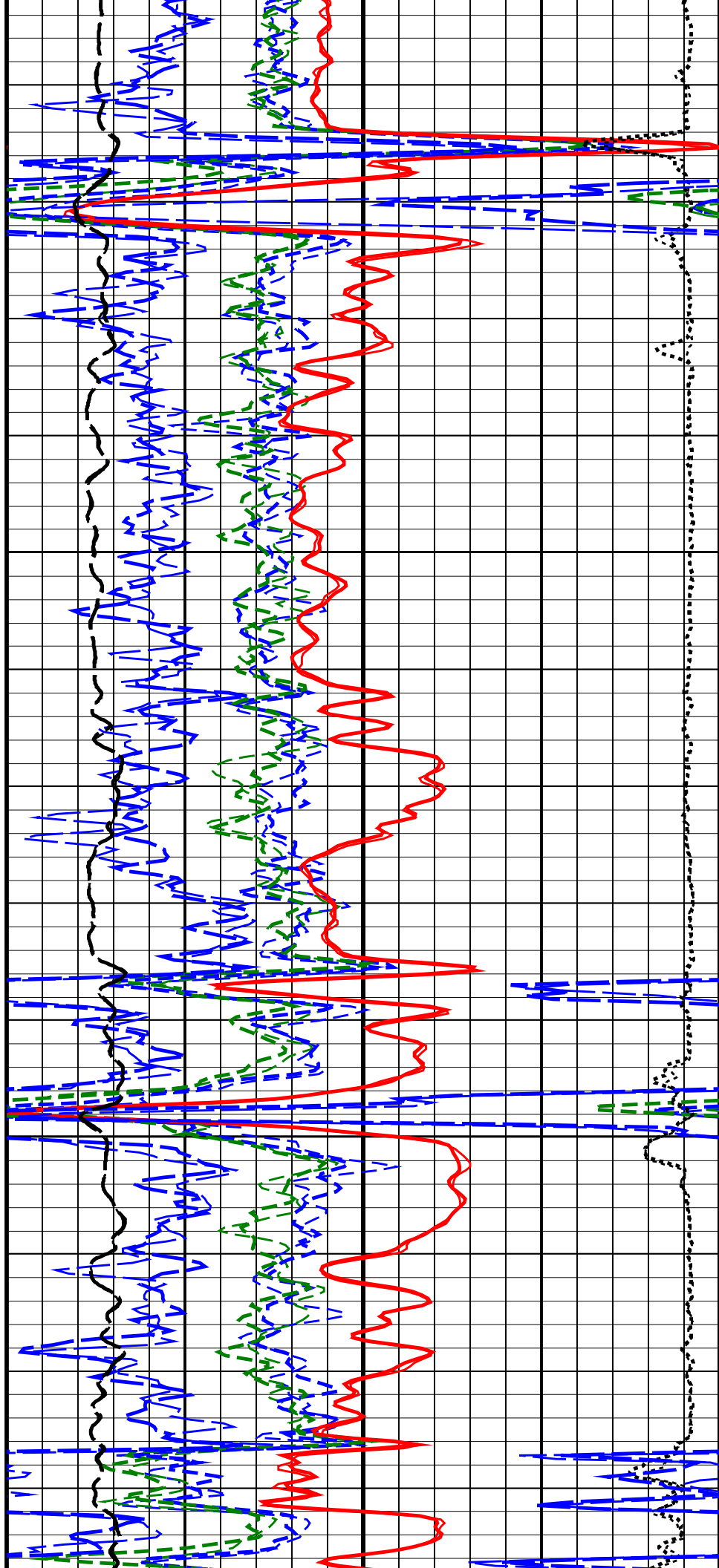


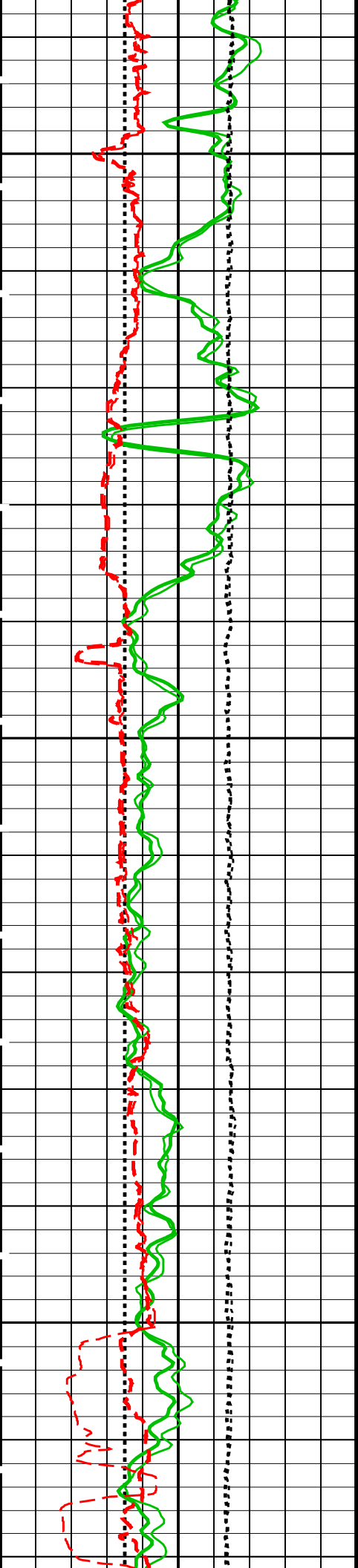




1025

1050

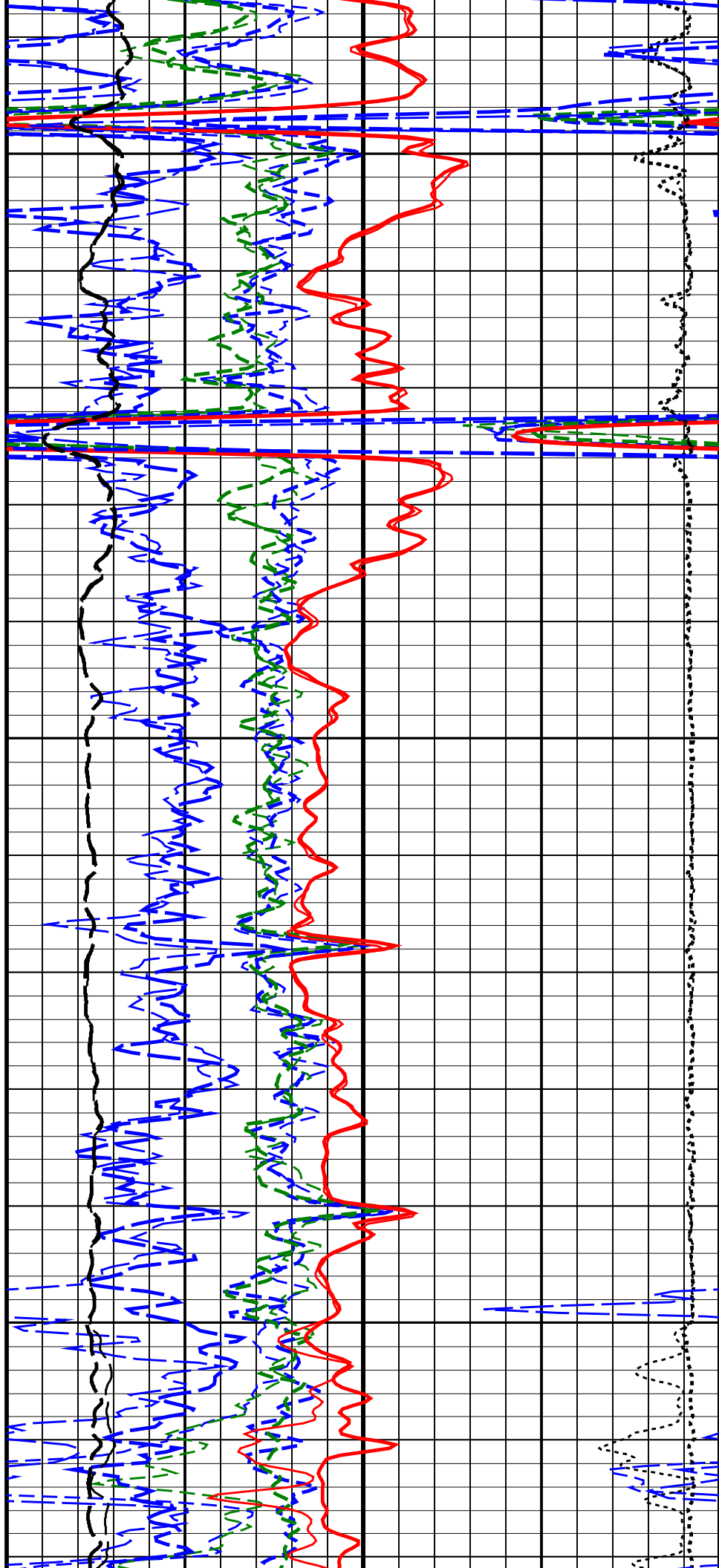


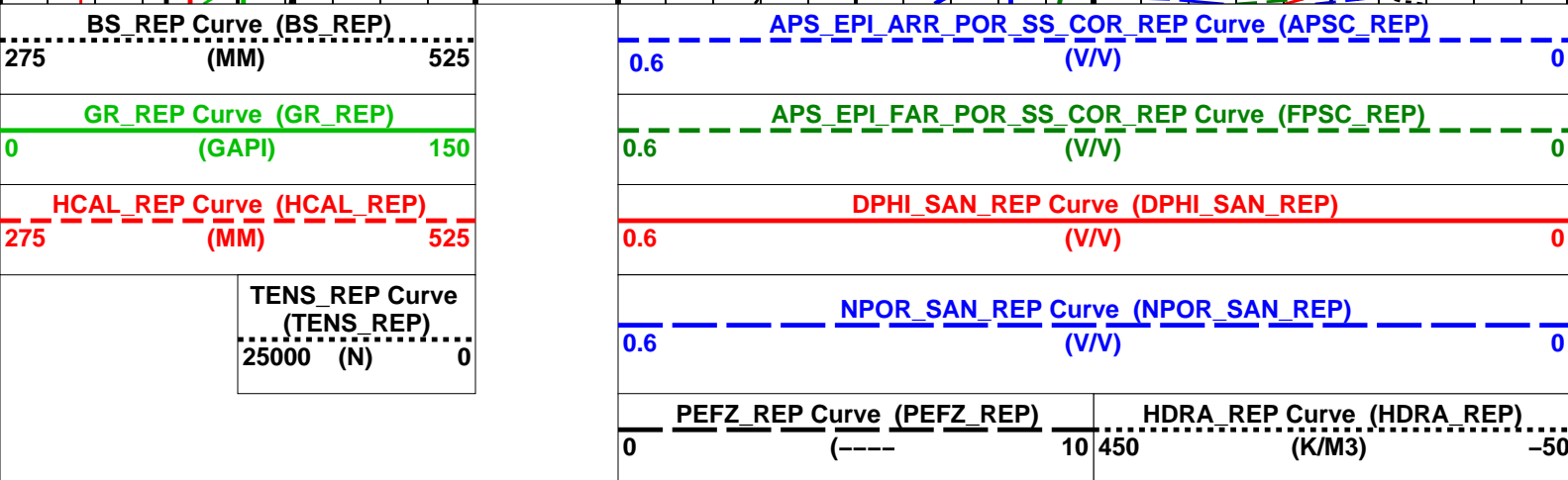
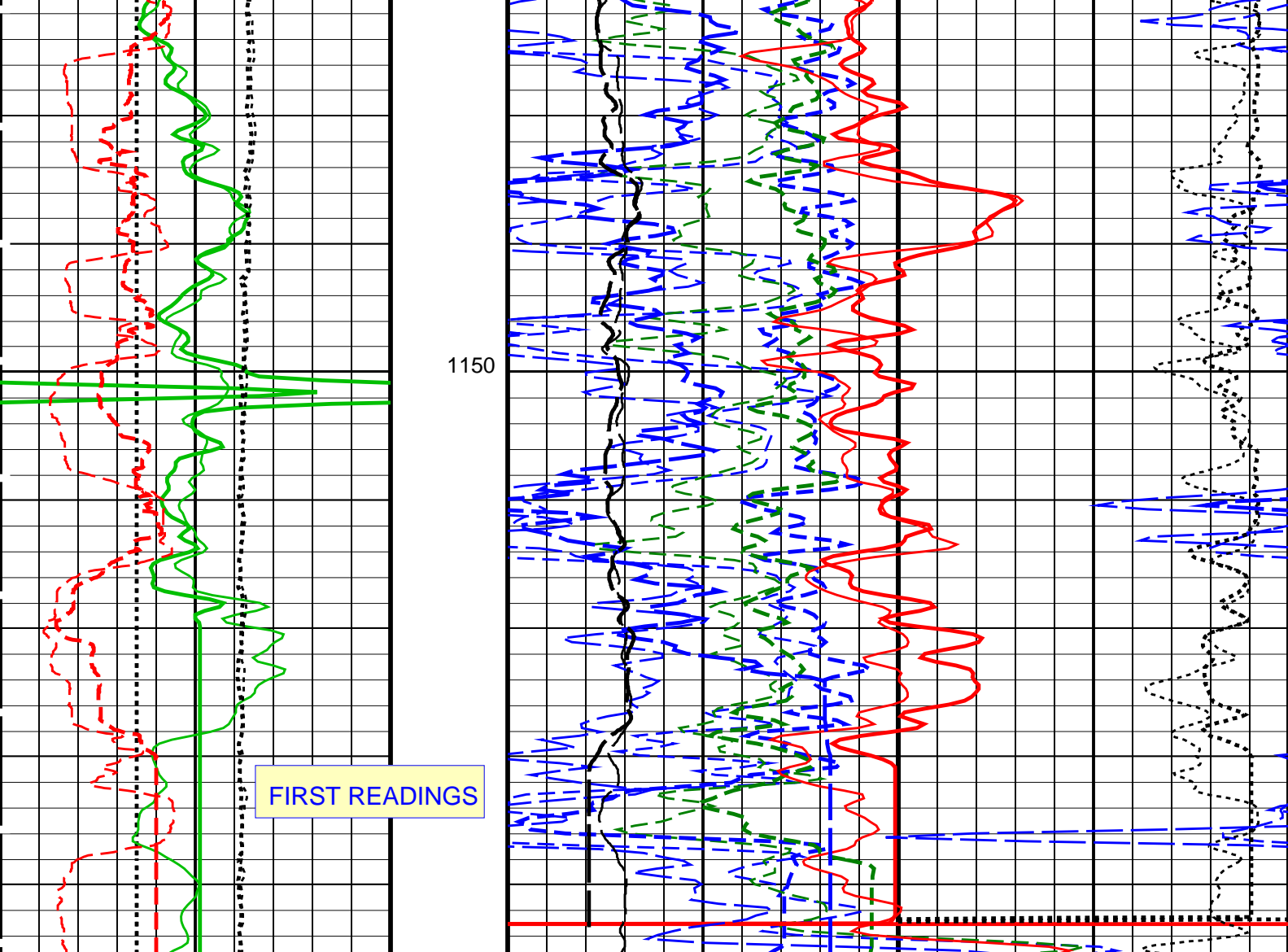


1075

1100

1125





Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
APS-C: Accelerator-Porosity Tool		
AASD	APS Software Version	5
ADSO	APS Thermal and Array Detectors High Voltage Setting	1971.66 V
AFSD	APS Array Detectors Data Source Switch	Both
AHCS	APS Far Detector High Voltage Setting	2079.18 V
AHSS	APS Holesize Correction Source	BS
AMTY	APS Holesize Correction Switch	ON
ANSD	APS Environmental Corrections Mud Type	WaterBaseBarite
ASOS	APS Near Detector High Voltage Setting	1742.72 V
ASOS	APS Standoff Correction Switch	ON

ASUS	APS Standoff Correction Switch	ON	
ATSS	APS Temperature-Pressure-Salinity Correction Switch	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
DPPM	Density Porosity Processing Mode	HIRS	
FSAL	Formation Salinity	-50000	PPM
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
NARC	APS Near/Array Calibration Ratio	0.985333	
NFRC	APS Near/Far Calibration Ratio	0.951646	
SHT	Surface Hole Temperature	1	DEGC
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)	9	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
FD	Fluid Density	1000	K/M3
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	VeryHiRes	
NSAR	HRDD Depth Sampling Rate	12.7	MM
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	1	DEGC
SOCN	Standoff Distance	3.175	MM
SOCO	Standoff Correction Option	YES	
CMRT-B: Combinable Magnetic Resonance Tool - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	1	DEGC
PPC2-B: Powered Positioning Deveice/Caliper 2			
	PPC2 Caliper Type	CAL_40EXT	
ECS-A: Elemental Capture Spectroscopy Tool			
	ECS Marquardt Spectrum	** V **	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	1	DEGC
PPC1-B: Powered Positioning Deveice/Caliper 1			
	PPC1 Caliper Type	CAL_40EXT	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	9	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	1	DEGC
SOCN	Standoff Distance	3.175	MM
SOCO	Standoff Correction Option	YES	

Accelerator-Porosity Tool Wellsite Calibration – CCR7 signal boxes

Master: 12-Jan-2007 20:56

Near Detector Plateau Setting	1650	1743	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2079	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1972	N/A	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 2-Mar-2007 21:28

BS Window Ratio	0.7427	N/A	0.7435	N/A	N/A	N/A	
BS Window Sum	29280	N/A	29240	N/A	N/A	N/A	CPS
SS Window Ratio	0.4849	N/A	0.4833	N/A	N/A	N/A	
SS Window Sum	13080	N/A	13060	N/A	N/A	N/A	CPS
LS Window Ratio	0.3035	N/A	0.2974	N/A	N/A	N/A	
LS Window Sum	1545	N/A	1536	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo-multiplier High Voltages Calibrations

Before: 2-Mar-2007 21:28

BS PM High Voltage (Command)	1376	N/A	1352	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1421	N/A	1410	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1301	N/A	1310	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 2-Mar-2007 21:28

BS Crystal Resolution	10.78	N/A	10.84	N/A	N/A	N/A	%
SS Crystal Resolution	8.916	N/A	8.780	N/A	N/A	N/A	%
LS Crystal Resolution	8.952	N/A	9.048	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 2-Mar-2007 21:29

Raw B0 Resistivity	3875	N/A	3870	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3819	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3828	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 2-Mar-2007 21:51

HILT Caliper Zero Measurement	254.0	N/A	199.8	N/A	N/A	N/A	MM
HILT Caliper Plus Measurement	508.0	N/A	382.4	N/A	N/A	N/A	MM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 2-Mar-2007 21:25

Gamma Ray Background	30.00	N/A	23.72	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	185.1	N/A	185.1	N/A	N/A	16.83	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 10-Jan-2007 15:23 Before: 2-Mar-2007 21:23

CNTC Background	26.53	26.53	26.48	N/A	N/A	3.980	CPS
CFTC Background	29.66	29.66	29.06	N/A	N/A	4.449	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 10-Jan-2007 15:23

Thermal Near Corr. (Tank)	6031	6292	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2793	2647	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.377	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration

Before: 3-Mar-2007 6:35

Z-Axis Acceleration	9.810	N/A	9.812	N/A	N/A	N/A	M/S2
---------------------	-------	-----	-------	-----	-----	-----	------

High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results

Master: 14-Feb-2007 15:55

Rho Aluminum	2596	2599	--	--	--	--	K/M3
Rho Magnesium	1686	1686	--	--	--	--	K/M3
Pe Aluminum	2.570	2.556	--	--	--	--	
Pe Magnesium	2.650	2.631	--	--	--	--	

High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary

Master: 14-Feb-2007 15:55

BS Average Deviation	0	0.2316	--	--	--	--	%
BS Max Deviation	0	0.7406	--	--	--	--	%
SS Average Deviation	0	0.2254	--	--	--	--	%
SS Max Deviation	0	1.106	--	--	--	--	%
LS Average Deviation	0	0.6026	--	--	--	--	%
LS Max Deviation	0	1.170	--	--	--	--	%

Combinable Magnetic Resonance Tool – B Master Calibration – Date of Master Calibration: 14-Feb-2007

Master: 7-Mar-2007 4:45

Tool Temperature MCAL	27.00	25.19	--	--	--	--	DEGC
LOOP Measurement MCAL	2300	1870	--	--	--	--	
Hall Probe B0 MCAL	52.00	52.68	--	--	--	--	MTES
Cal. Fixture Amplitude MCAL	37.50	28.32	--	--	--	--	%

Powered Positioning Deveice/Caliper 2 Wellsite Calibration – PPC2 Caliper Calibration							
Before: 5–Mar–2007 19:34							
PPC2 Radius 1 Raw Small Radius	88.90	N/A	139.6	N/A	N/A	12.70	MM
PPC2 Radius 1 Raw Large Radius	203.2	N/A	245.1	N/A	N/A	12.70	MM
PPC2 Radius 2 Raw Small Radius	88.90	N/A	59.05	N/A	N/A	12.70	MM
PPC2 Radius 2 Raw Large Radius	203.2	N/A	169.2	N/A	N/A	12.70	MM
PPC2 Radius 3 Raw Small Radius	88.90	N/A	135.0	N/A	N/A	12.70	MM
PPC2 Radius 3 Raw Large Radius	203.2	N/A	242.2	N/A	N/A	12.70	MM
PPC2 Radius 4 Raw Small Radius	88.90	N/A	75.27	N/A	N/A	12.70	MM
PPC2 Radius 4 Raw Large Radius	203.2	N/A	186.6	N/A	N/A	12.70	MM

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check
Master: 9–Jan–2007 19:28 Before: 5–Mar–2007 16:58

Na 511 Peak Loc	40.00	39.72	39.61	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.36	15.93	N/A	N/A	2.000	%
High Voltage	1150	1250	1238	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	143.5	143.5	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	7.630	8.646	N/A	N/A	2.000	%
Temperature	15.50	19.48	13.14	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	46.07	43.11	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check
Master: 9–Jan–2007 19:28 Before: 5–Mar–2007 16:58

Na 511 Peak Loc	40.00	39.67	39.53	N/A	N/A	1.000	
Na 511 Peak Res	15.50	15.21	15.54	N/A	N/A	2.000	%
High Voltage	1150	1270	1257	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.2	142.7	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.889	8.350	N/A	N/A	2.000	%
Temperature	15.50	18.64	12.45	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	46.16	43.06	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2
Master: 9–Jan–2007 19:28 Before: 5–Mar–2007 16:58

Coincidence Count Rate Ratio	1.000	0.9985	1.002	N/A	N/A	0.05000	
------------------------------	-------	--------	-------	-----	-----	---------	--

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration
Master: 9–Jan–2007 19:28

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	211.5	--	--	--	--	
Th Peak Res	7.000	6.885	--	--	--	--	%
Background Count Rate	142.5	97.39	--	--	--	--	CPS
Gain Ratio	1.000	1.013	--	--	--	--	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration
Master: 9–Jan–2007 19:28

Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	211.7	--	--	--	--	
Th Peak Res	7.000	6.455	--	--	--	--	%
Background Count Rate	142.5	99.08	--	--	--	--	CPS
Gain Ratio	1.000	1.015	--	--	--	--	

Powered Positioning Deveice/Caliper 1 Wellsite Calibration – PPC1 Caliper Calibration
Before: 6–Mar–2007 4:43

PPC1 Radius 1 Raw Small Radius	88.90	N/A	137.5	N/A	N/A	12.70	MM
PPC1 Radius 1 Raw Large Radius	203.2	N/A	244.4	N/A	N/A	12.70	MM
PPC1 Radius 2 Raw Small Radius	88.90	N/A	55.65	N/A	N/A	12.70	MM
PPC1 Radius 2 Raw Large Radius	203.2	N/A	168.8	N/A	N/A	12.70	MM
PPC1 Radius 3 Raw Small Radius	88.90	N/A	136.3	N/A	N/A	12.70	MM
PPC1 Radius 3 Raw Large Radius	203.2	N/A	244.0	N/A	N/A	12.70	MM
PPC1 Radius 4 Raw Small Radius	88.90	N/A	63.71	N/A	N/A	12.70	MM
PPC1 Radius 4 Raw Large Radius	203.2	N/A	178.0	N/A	N/A	12.70	MM

Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration
Before: 6–Mar–2007 10:05

Gamma Ray (Jig – Bkg)	159.1	N/A	159.1	N/A	N/A	14.47	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration
Before: 6–Mar–2007 9:11

EDTC Z–Axis Acceleration	9.810	N/A	9.805	N/A	N/A	N/A	M/S2
--------------------------	-------	-----	-------	-----	-----	-----	------

Accelerator–Porosity Tool – Detector Plateau Settings :

Near Detector Plateau Setting	1743 V
Far Detector Plateau Setting	2079 V
Array Detector Plateau Setting	1972 V

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

NCT-B Water Temperature 18.0 DEGC.
Thermal Housing Size 85.725 MM.
NSR-F serial number 5196

Accelerator-Porosity Tool / Equipment Identification

Primary Equipment:			
Accelerator-Porosity Sonde	APS – C	202	202
APS Minitron	MNTR – F	5329	5890
Auxiliary Equipment:			
Accelerator-Porosity Housing	APH – AC	104	104
APS Calibration Water Tank	SFT – 178	53	53
APS Aluminum Calibrator Sleeve	SFT – 281	12673	12673

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				25.72	Master				26.28	Master				26.42
Before				25.63	Before				26.00	Before				26.99
1.000 30.00 50.00 (Minimum) (Nominal) (Maximum)					1.000 30.00 50.00 (Minimum) (Nominal) (Maximum)					1.000 30.00 50.00 (Minimum) (Nominal) (Maximum)				
Phase	Array-2 Det Bkg Cntrate CPS			Value	Phase	Array Therm Det Bkg Cntrate CPS			Value					
Master				27.96	Master				24.23					
Before				27.50	Before				25.50					
1.000 30.00 50.00 (Minimum) (Nominal) (Maximum)					1.000 30.00 50.00 (Minimum) (Nominal) (Maximum)									

Master: 12-Jan-2007 20:56

Before: 6-Mar-2007 16:13

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				0.9516	Master				0.9853	Master				1.016
0.8000			0.9250	1.050	0.9000			1.030	1.170	0.9700			1.000	1.030
(Minimum)			(Nominal)	(Maximum)	(Minimum)			(Nominal)	(Maximum)	(Minimum)			(Nominal)	(Maximum)

Master: 12-Jan-2007 20:56

Accelerator-Porosity Tool Wellsite Calibration

Tank Check

Phase	Array-1 Standoff Porosity V/V			Value	Phase	Array-2 Standoff Porosity V/V			Value	Phase	Average Slowing Down Time US			Value
Master				0.1131	Master				0.1119	Master				5.884
0.09900 (Minimum) 0.1175 (Nominal) 0.1360 (Maximum)					0.09900 (Minimum) 0.1175 (Nominal) 0.1360 (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 M-1			Value
Master				0.9832	Master				0.9667	Master				2.710
0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)					0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)					2.000 (Minimum) 2.750 (Nominal) 3.500 (Maximum)				

Master: 12-Jan-2007 20:56

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
Master				0.9516	Master				0.9853	Master				1.016
0.8000 0.9250 1.050					0.9000 1.030 1.170					0.9700 1.000 1.030				
(Minimum) (Nominal) (Maximum)					(Minimum) (Nominal) (Maximum)					(Minimum) (Nominal) (Maximum)				

Master: 12-Jan-2007 20:56

Accelerator-Porosity Tool Master Calibration

Tank Check

Phase	Array-1 Standoff Porosity V/V		Value	Phase	Array-2 Standoff Porosity V/V		Value	Phase	Average Slowing Down Time US		Value

Master		0.1131	Master		0.1119	Master		5.884									
0.09900 (Minimum)		0.1175 (Nominal)	0.1360 (Maximum)		0.09900 (Minimum)		0.1175 (Nominal)		0.1360 (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 M-1		Value				
Master			0.9832		Master			0.9667		Master			2.710				
0.9500 (Minimum)		1.000 (Nominal)		1.050 (Maximum)		0.9500 (Minimum)		1.000 (Nominal)		1.050 (Maximum)		2.000 (Minimum)		2.750 (Nominal)		3.500 (Maximum)	
Master: 12-Jan-2007 20:56																	

High resolution Integrated Logging Tool-DTS / Equipment Identification

Primary Equipment:







HILT high-Resolution Mechanical Sonde	HRMS - H	4707
HILT Rxo Gamma-ray Device	HRGD - H	4761
HILT Micro Cylindrically Focused Log Dev	MCFL - H	
GR Logging Source	GLS - VJ	1904
HILT High Res. Control Cartridge	HRCC - H	4721
HILT Gamma-Ray Neutron Sonde-DTS	HGNS - H	4730
HILT Gamma-Ray Device	HGR -	
HILT Neutron Detector with Alpha Source	HCNT - H	

Auxiliary Equipment:

Neutron Calibration Tank	NCT - B	
Gamma Source Radioactive	GSR - U/Y	6710

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			0.7435	Before			0.4833	Before			0.2974
	0.7056 (Minimum)	0.7427 (Nominal)	0.7799 (Maximum)		0.4606 (Minimum)	0.4849 (Nominal)	0.5091 (Maximum)		0.2883 (Minimum)	0.3035 (Nominal)	0.3186 (Maximum)
Phase	BS Window Sum CPS		Value	Phase	SS Window Sum CPS		Value	Phase	LS Window Sum CPS		Value
Before			29240	Before			13060	Before			1536
	27820 (Minimum)	29280 (Nominal)	30740 (Maximum)		12430 (Minimum)	13080 (Nominal)	13740 (Maximum)		1468 (Minimum)	1545 (Nominal)	1622 (Maximum)

Before: 2-Mar-2007 21:28

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			1352	Before			1410	Before			1310
	1276 (Minimum)	1376 (Nominal)	1476 (Maximum)		1321 (Minimum)	1421 (Nominal)	1521 (Maximum)		1201 (Minimum)	1301 (Nominal)	1401 (Maximum)

Before: 2-Mar-2007 21:28

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			10.84	Before			8.780	Before			9.048
	9.775 (Minimum)	10.78 (Nominal)	11.78 (Maximum)		7.916 (Minimum)	8.916 (Nominal)	9.916 (Maximum)		7.952 (Minimum)	8.952 (Nominal)	9.952 (Maximum)

Before: 2-Mar-2007 21:28

High resolution Integrated Logging Tool-DTS Wellsite Calibration



MCFL Calibration

Phase	Raw B0 Resistivity OHMM		Value	Phase	Raw B1 Resistivity OHMM		Value	Phase	Raw B2 Resistivity OHMM		Value
Before			3870	Before			3819	Before			3828
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)




Before: 2-Mar-2007 21:29





High resolution Integrated Logging Tool-DTS Wellsite Calibration




HILT Caliper Calibration


Phase	HILT Caliper Zero Measurement MM		Value	Phase	HILT Caliper Plus Measurement MM		Value
Before			199.8	Before			382.4
	190.5 (Minimum)	254.0 (Nominal)	317.5 (Maximum)		381.0 (Minimum)	508.0 (Nominal)	635.0 (Maximum)





(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 2-Mar-2007 21:51					

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig - Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			23.72	Before			185.1	Before			165.0
	0	30.00	120.0		168.3	185.1	201.9		150.0	165.0	180.0
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
Before: 2-Mar-2007 21:25											



High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			26.53	Master			29.66
Before			26.48	Before			29.06
5.00026.5340.00				5.00029.6640.00			
(Minimum)(Nominal)(Maximum)				(Minimum)(Nominal)(Maximum)			
Master: 10-Jan-2007 15:23				Before: 2-Mar-2007 21:23			

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				6292	Master				2647	Master				2.377
	5000	6031	7200		2075	2793	3125			2.120	2.159	2.540		
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		
Master: 10-Jan-2007 15:23														

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.812
	9.610 (Minimum)	9.810 (Nominal)
		10.01 (Maximum)
Before: 3-Mar-2007 6:35		

High resolution Integrated Logging Tool-DTS Master Calibration							
Inversion results							
Phase	Rho Aluminum K/M3		Value	Phase	Rho Magnesium K/M3		Value
Master			2599	Master			1686
	2586 (Minimum)	2596 (Nominal)	2606 (Maximum)		1676 (Minimum)	1686 (Nominal)	1696 (Maximum)
Phase	Pe Aluminum		Value	Phase	Pe Magnesium		Value
Master			2.556	Master			2.631
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)		2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 14-Feb-2007 15:55							

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	<div><div></div></div>			0.2316	Master	<div><div></div></div>			0.2254	Master	<div><div></div></div>			0.6026
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)		-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)			-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)		
Phase	BS Max Deviation %			Value	Phase	SS Max Deviation %			Value	Phase	LS Max Deviation %			Value
Master	<div><div></div></div>			0.7406	Master	<div><div></div></div>			1.106	Master	<div><div></div></div>			1.170
	-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: 14-Feb-2007 15:55														

High resolution Integrated Logging Tool-DTS Master Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			26.53	Master			29.66

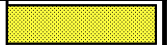







Master		26.53 (Nominal)	40.00 (Maximum)	Master		29.66 (Nominal)	40.00 (Maximum)
Master: 10-Jan-2007 15:23							

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				6292	Master				2647	Master				2.377
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)		2075 (Minimum)	2793 (Nominal)	3125 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)		
Master: 10–Jan–2007 15:23														

Combinable Magnetic Resonance Tool – B / Equipment Identification		
Primary Equipment:		
CMR-B Sonde	CMRS – BA	182
CMR Cartridge	CMRC – BA	202
Auxiliary Equipment:		

Combinable Magnetic Resonance Tool – B Master Calibration														
Date of Master Calibration: 14–Feb–2007														
Phase	Tool Temperature MCAL DEGC			Value	Phase	LOOP Measurement MCAL			Value	Phase	Hall Probe B0 MCAL MTES			Value
Master	<div><div></div></div>			25.19	Master	<div><div></div></div>			1870	Master	<div><div></div></div>			52.68
	10.00 (Minimum)	27.00 (Nominal)	44.00 (Maximum)		1500 (Minimum)	2300 (Nominal)	2900 (Maximum)			50.00 (Minimum)	52.00 (Nominal)	55.00 (Maximum)		
Phase	Cal. Fixture Amplitude MCAL %			Value										
Master	<div><div></div></div>			28.32										
	25.00 (Minimum)	37.50 (Nominal)	50.00 (Maximum)											
Master: 7–Mar–2007 4:45														

Powered Positioning Device/Caliper 2 / Equipment Identification		
Primary Equipment:		
PPC Powered Positioning Device/Caliper	PPC2 – B	
PPC2 Caliper 40 Extension	PPC_ –	
Auxiliary Equipment:		

Powered Positioning Device/Caliper 2 Wellsite Calibration									
PPC2 Caliper Calibration									
Phase	PC2 Radius 1 Raw Small Radius MM			Value	Phase	PC2 Radius 1 Raw Large Radius MM			Value
Before				139.6	Before				245.1
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)			154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)	
Phase	PC2 Radius 2 Raw Small Radius MM			Value	Phase	PC2 Radius 2 Raw Large Radius MM			Value
Before				59.05	Before				169.2
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)			154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)	
Phase	PC2 Radius 3 Raw Small Radius MM			Value	Phase	PC2 Radius 3 Raw Large Radius MM			Value
Before				135.0	Before				242.2
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)			154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)	
Phase	PC2 Radius 4 Raw Small Radius MM			Value	Phase	PC2 Radius 4 Raw Large Radius MM			Value
Before				75.27	Before				186.6
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)			154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)	
Before: 5-Mar-2007 19:34									

Elemental Capture Spectroscopy Tool / Equipment Identification		

Primary Equipment:
ECS Sonde
ECS Detector Package
ECS AmBe Source

ECS – A 20 20
ECSD – A 20 20
NSR – F 2671 2671

Auxiliary Equipment:
ECS Sonde Housing

ECSH – A 20 20

Elemental Capture Spectroscopy Tool Wellsite Calibration

ECS Calibration Check

Phase	Detector Resolution(20 Degc) %	Value	Phase	Spectral Shift Factor	Value
Master		13.34	Master		0.8834
	11.20 (Minimum) 13.00 (Nominal) 14.00 (Maximum)			-1.000 (Minimum) 1.000 (Nominal) 2.000 (Maximum)	
Master: Calibration out of date 11-Jan-2007 13:41					

Elemental Capture Spectroscopy Tool Master Calibration

NO SUB TITLE1

Phase	Detector Resolution(20 Degc) %	Value	Phase	Spectral Shift Factor	Value
Master		13.34	Master		0.8834
	11.20 (Minimum) 13.00 (Nominal) 14.00 (Maximum)			-1.000 (Minimum) 1.000 (Nominal) 2.000 (Maximum)	
Master: Calibration out of date 11-Jan-2007 13:41					

Elemental Capture Cartridge – B / Equipment Identification

Primary Equipment:
ECC Cartridge

ECC – B

Auxiliary Equipment:
ECC Housing

ECH – A

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – B 405 405

Auxiliary Equipment:
HNGC Housing

HNGH – A 346 346

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

HNGS – BA 163 163

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH – BA 25 25
GSR – U 610 610









Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc	Value	Phase	Na 511 Peak Res %	Value	Phase	High Voltage V	Value
Master		39.72	Master		15.36	Master		1250
Before		39.61	Before		15.93	Before		1238
	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		143.5	Master		7.630	Master		19.48
Before		143.5	Before		8.646	Before		13.14
	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						

Hostile Natural Gamma Ray Sonde Wellsite Calibration											
Detector 2 Check											
Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value
Master			39.67	Master			15.21	Master			1270
Before			39.53	Before			15.54	Before			1257
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			142.2	Master			8.889	Master			18.64
Before			142.7	Before			8.350	Before			12.45
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			46.16								
Before			43.06								
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)											
Master: 9-Jan-2007 19:28				Before: 5-Mar-2007 16:58							

Auxiliary Equipment:

Powered Positioning Device/Caliper 1 Wellsite Calibration							
PPC1 Caliper Calibration							
Phase	PC1 Radius 1 Raw Small Radius	MM	Value	Phase	PC1 Radius 1 Raw Large Radius	MM	Value
Before			137.5	Before			244.4
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)		154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PC1 Radius 2 Raw Small Radius	MM	Value	Phase	PC1 Radius 2 Raw Large Radius	MM	Value
Before			55.65	Before			168.8
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)		154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PC1 Radius 3 Raw Small Radius	MM	Value	Phase	PC1 Radius 3 Raw Large Radius	MM	Value
Before			136.3	Before			244.0
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)		154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PC1 Radius 4 Raw Small Radius	MM	Value	Phase	PC1 Radius 4 Raw Large Radius	MM	Value
Before			63.71	Before			178.0
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)		154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Before: 6-Mar-2007 4:43							

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

Enhanced DTS Cartridge

EDTC - B




Auxiliary Equipment:


EDTC Housing

EDTH - B

8253

8253

Enhanced DTS Cartridge Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig – Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			5.155	Before			159.1	Before			165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		144.7 (Minimum)	159.1 (Nominal)	173.6 (Maximum)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 6-Mar-2007 10:05											

Enhanced DTS Cartridge Wellsite Calibration			
EDTC Accelerometer Calibration			
Phase	EDTC Z-Axis Acceleration M/S2	Value	
Before		9.805	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 6-Mar-2007 9:11			

Company: **JOGMEC**
Schlumberger

Well: **AURORA/JOGMEC/NRCAN MALLIK 2L-38**

Field: **MALLIK**

Province: **NWT**

PEX: LITHO DENSITY – COMPENSATED NEUTRON
–ACCELERATED POROSITY SONDE