



Compensated Neutron  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil and Gas Onshore LP	Company	Kerr-McGee Oil and Gas Onshore LP
Well	Tedford 3C-28HZ	Well	Tedford 3C-28HZ
Field	Wattenberg	Field	Wattenberg
County	Weld	County	Weld
State	Colorado	State	Colorado
Location:		API # : 05-123-41795	Other Services
Permanent Datum		SEC 28 TWP 2N RGE 66W	JB/GR RBT
Log Measured From		Ground Level	Elevation 4965'
Drilling Measured From		Kelly Bushing	25 FT
		Kelly Bushing	Elevation
			K.B. 4990'
			D.F. 4989'
			G.L. 4965'

Date	21-OCT-2015
Run Number	Two
Depth Driller	13,297 FT
Depth Logger	7739 FT
Bottom Logged Interval	7737 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	229°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	1:45 PM
Equipment Number	HD-0255
Location	Ft. Lupton, CO
Recorded By	B. Kalkwarf
Witnessed By	Levi McArthur

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom		
Surface Casing	9 5/8	36	J55 LT&C	Surface	1871 FT		
Intermediate #1	5 1/2	17	HCP-110 LT&C	Surface	13264 FT		
Intermediate #2							
Liner							

<<<< Fold Here >>>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log ran as per customer request  
Depth referenced to Kelly Bushing at 25 FT  
Adjusted log 9 FT to correlate with Marker Joint at 7035 FT  
Gauge Ring/Junk Basket ran to 7822 FT with no debris found  
Log ran from 7739 FT to surface  
Log ran with 2800 PSI surface induced pressure  
Logging tools were clean and free of any debris upon completion of operations  
  
Thank you for choosing FMC Technologies Completion Services, Inc.!!



Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341795\_anadarko\_tedford 3c-28hz\_10-21-15\_rbl\_cnl\0512341795\_anadarko\_tec

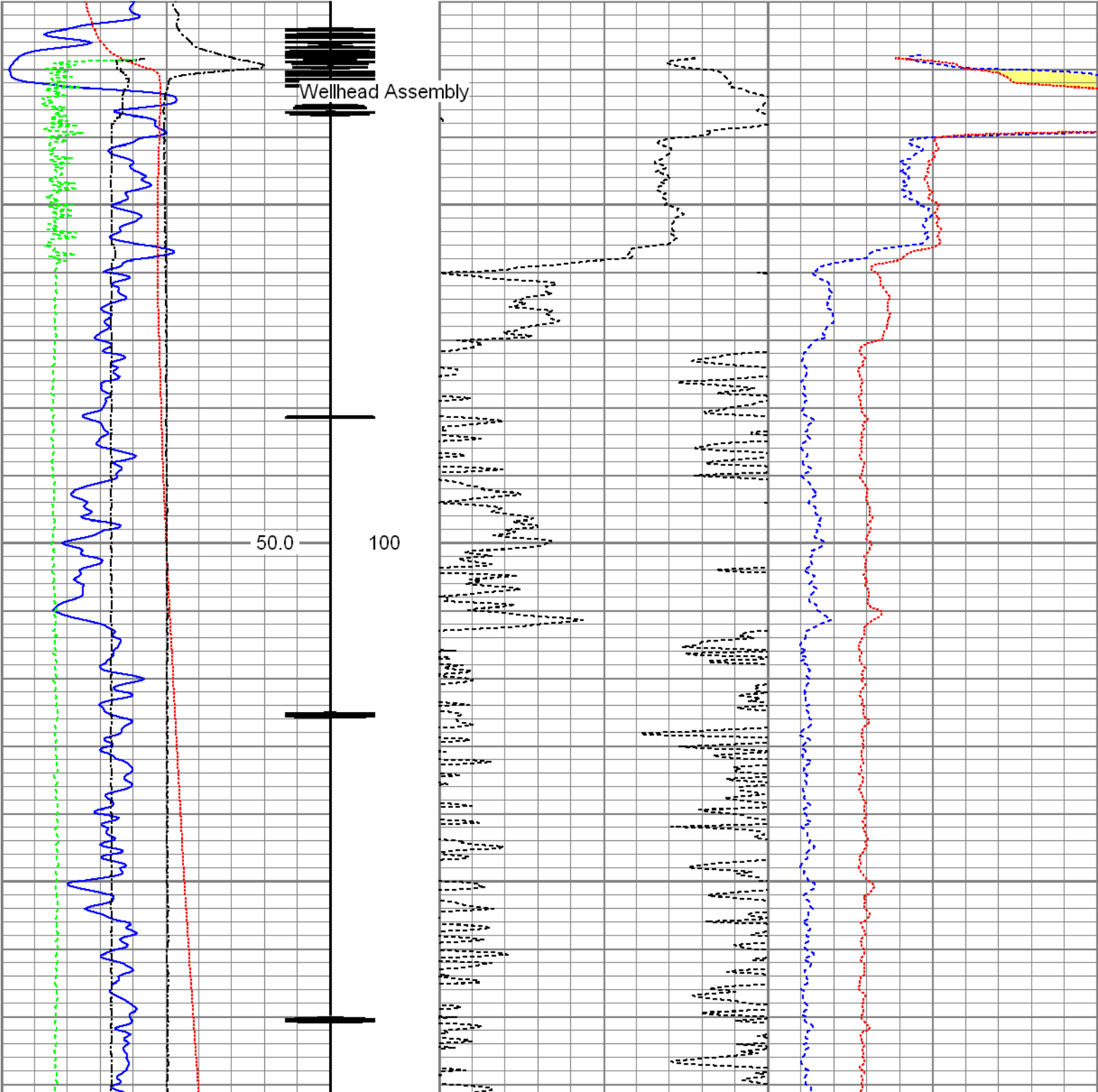
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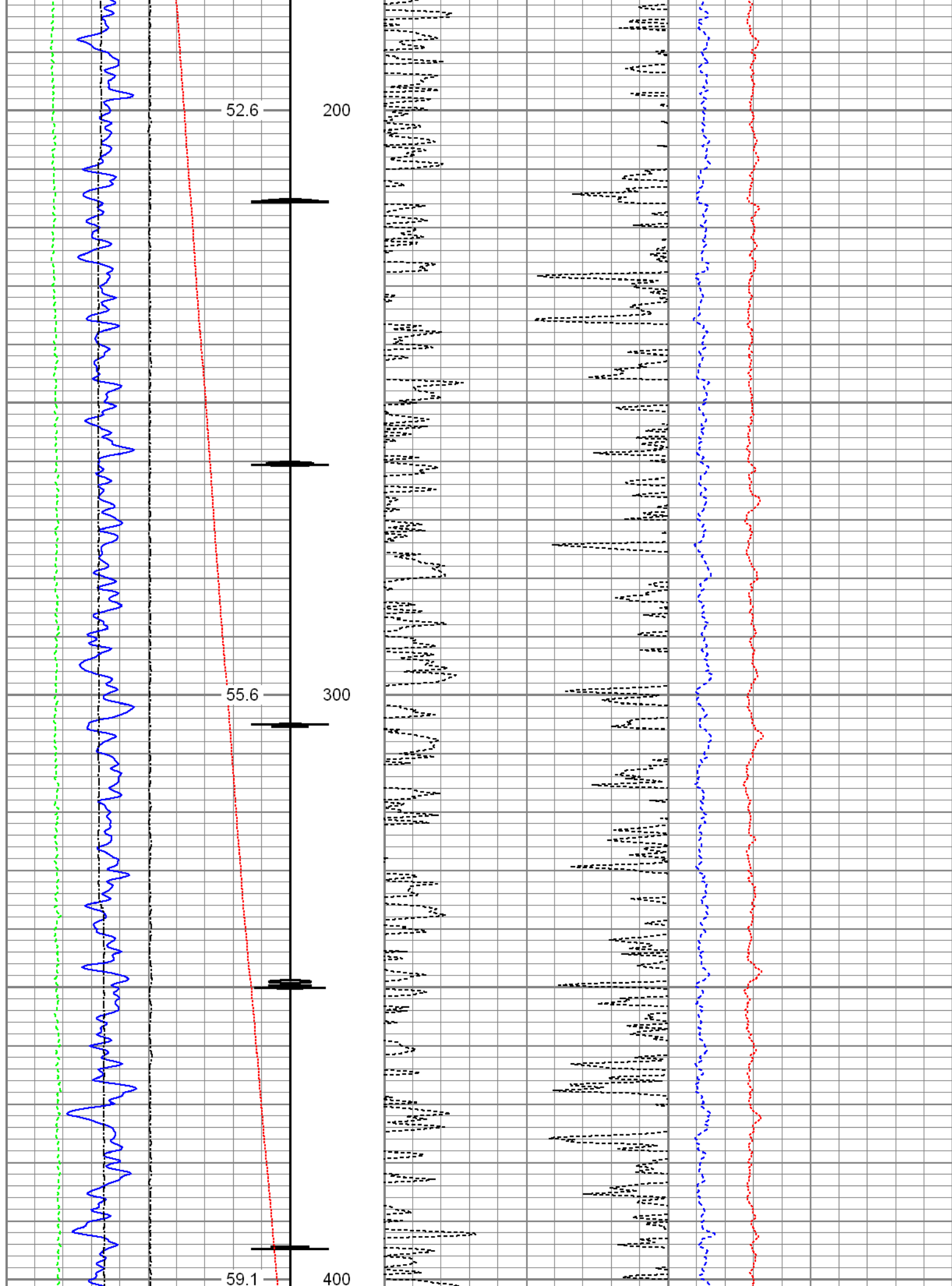
Presentation Format: cnl

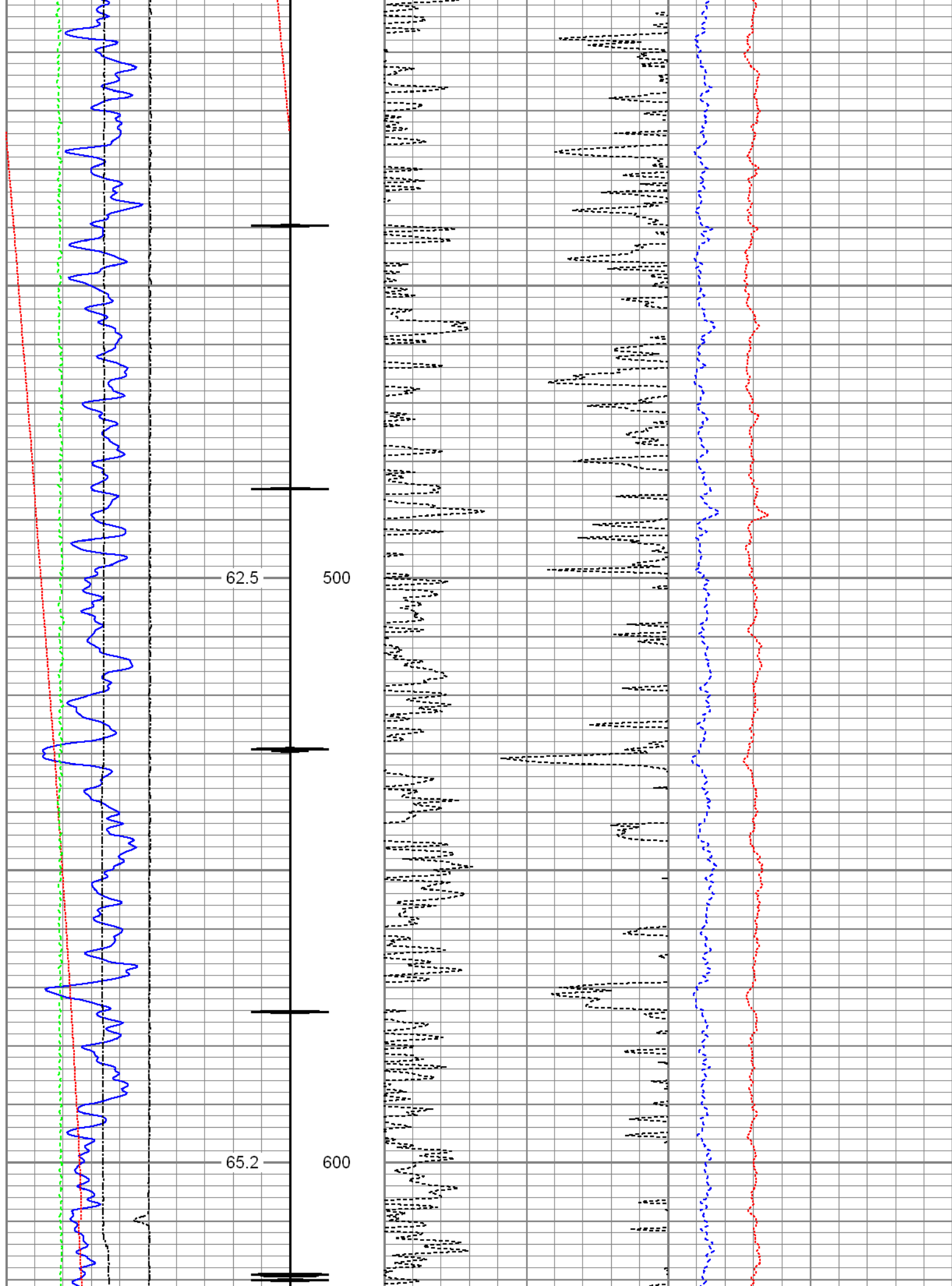
Dataset Creation: Wed Oct 21 13:45:12 2015 by Log 7.0 B1

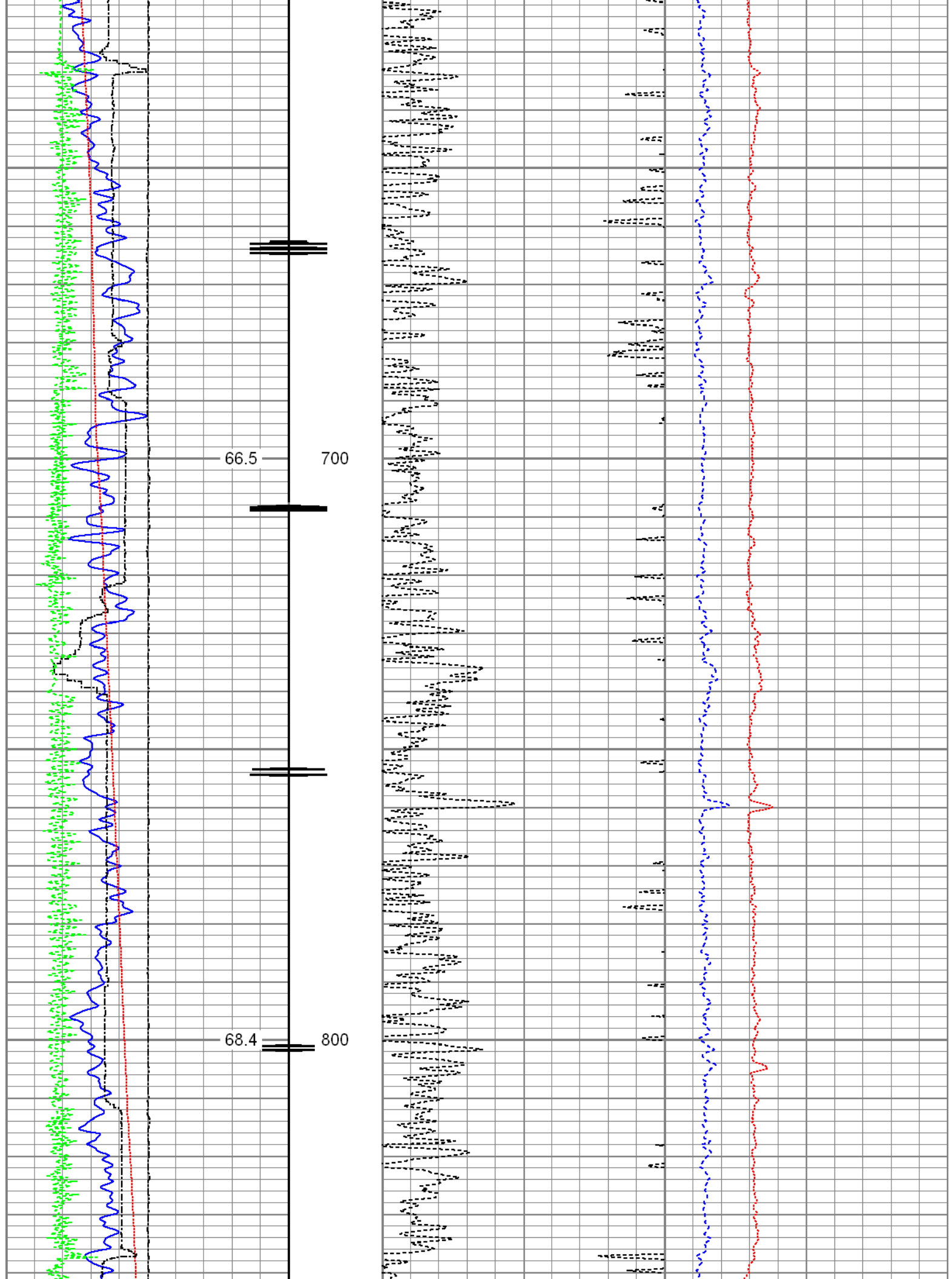
Charted by: Depth in Feet scaled 1:240

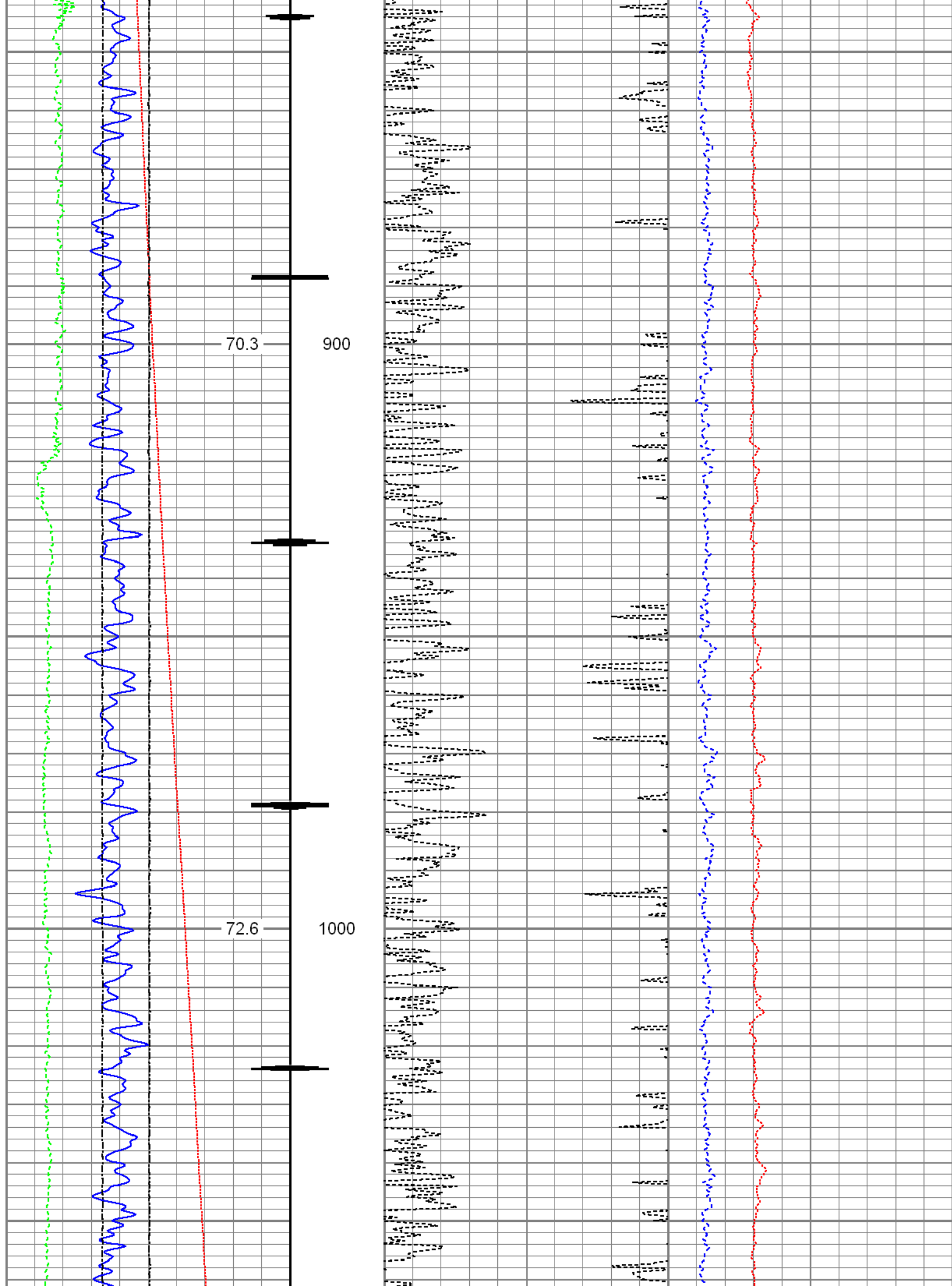
0	Gamma Ray (GAPI)	120	60	Neutron Porosity (pu)	0	0	Far Neutron (cps)	1000
Casing Collar Locator						0	Near Neutron (cps)	10000
0	Temperature (degF)	20						
-100	Line Speed (ft/min)	100						
0	Line Tension (lb)	2000						
-2	Differential Temperature (degF)	2						

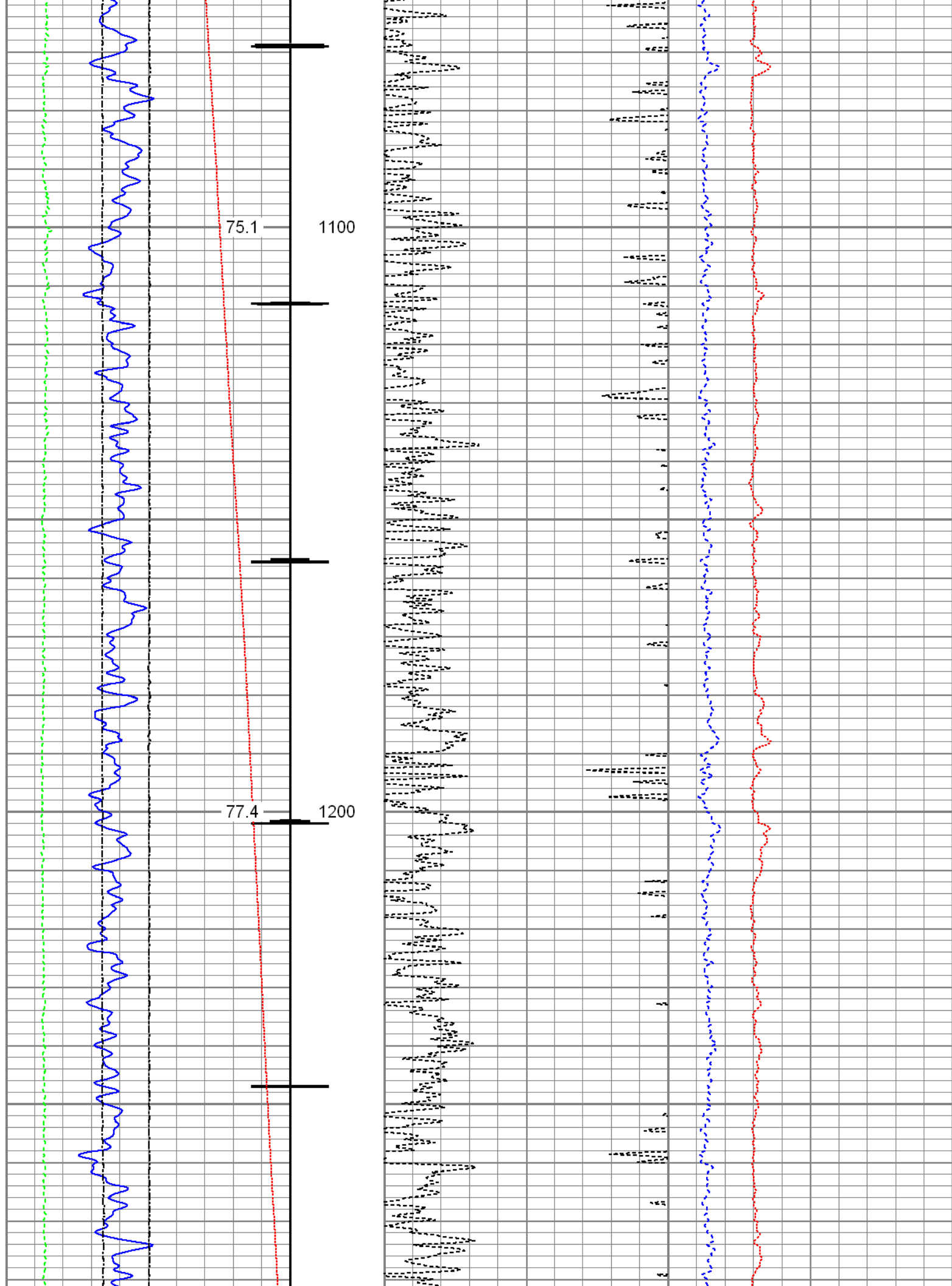




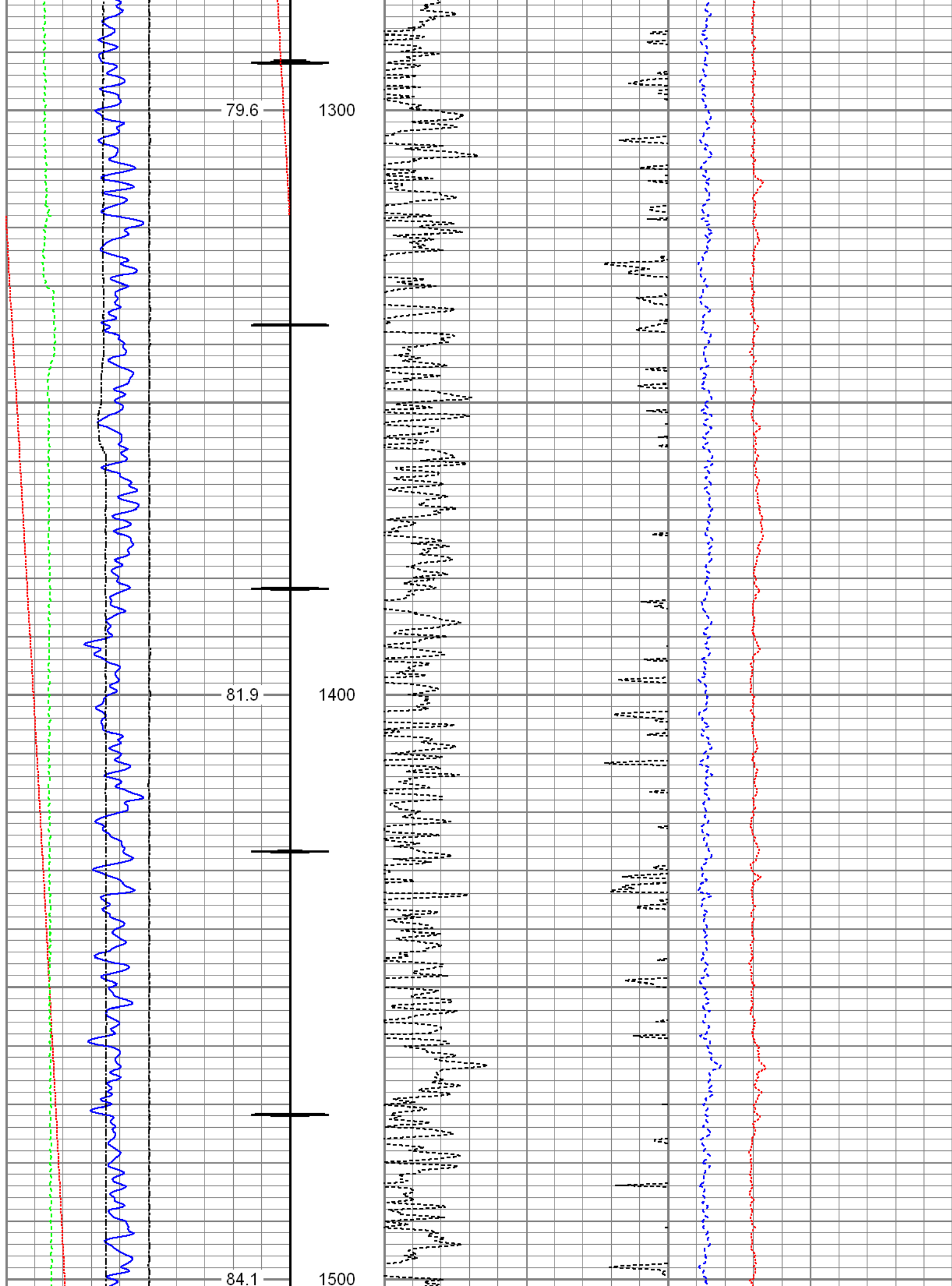




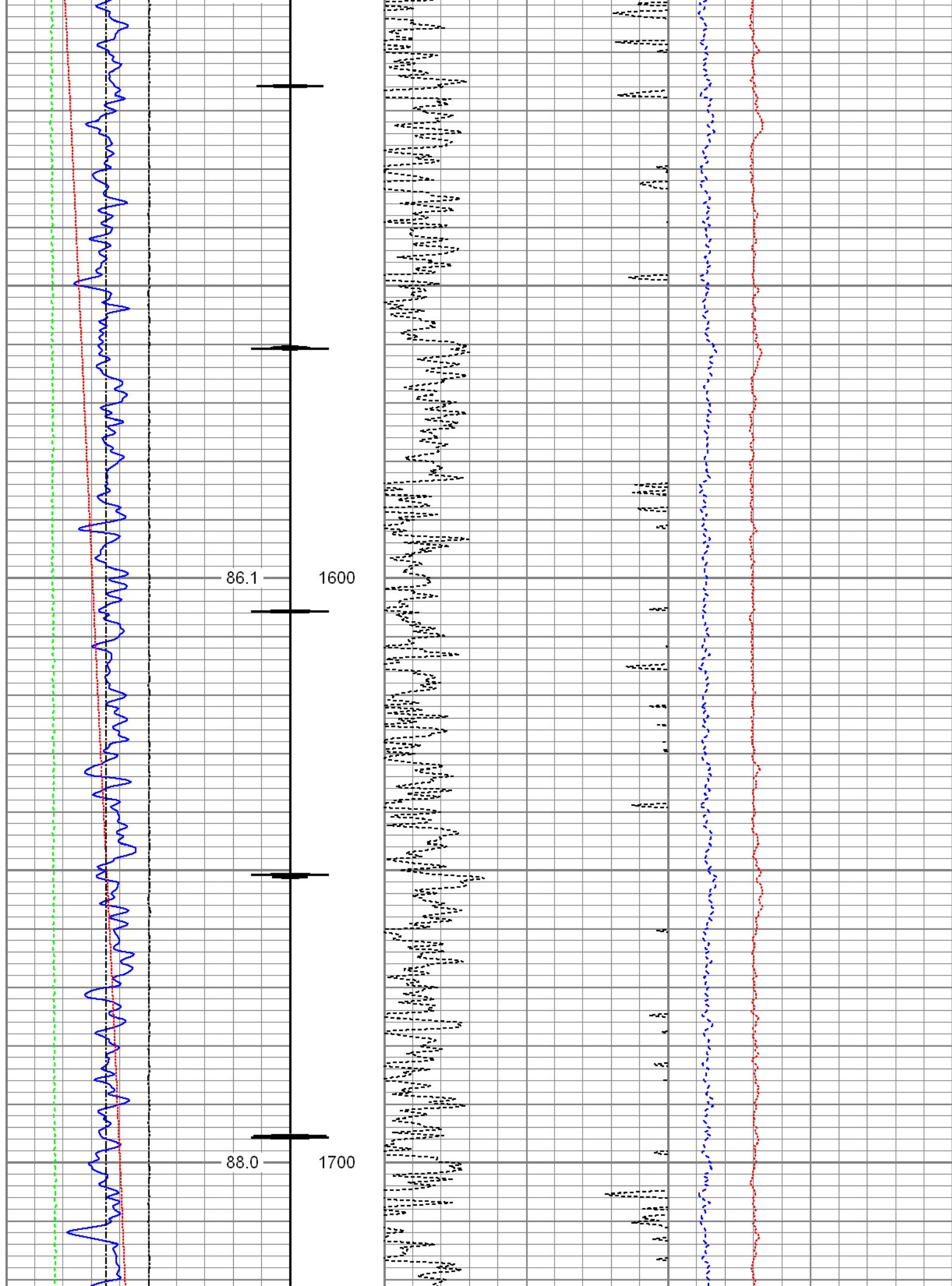


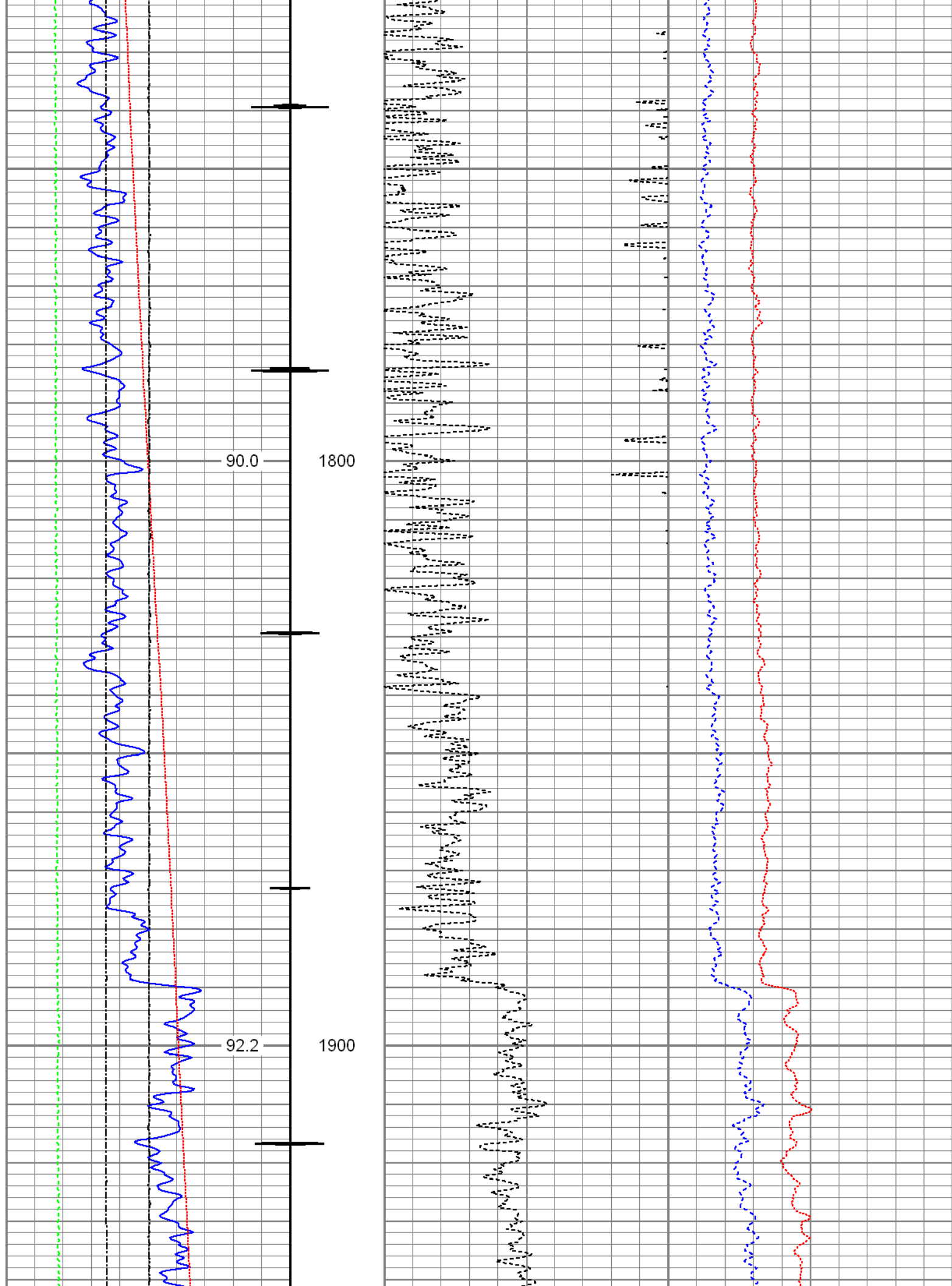


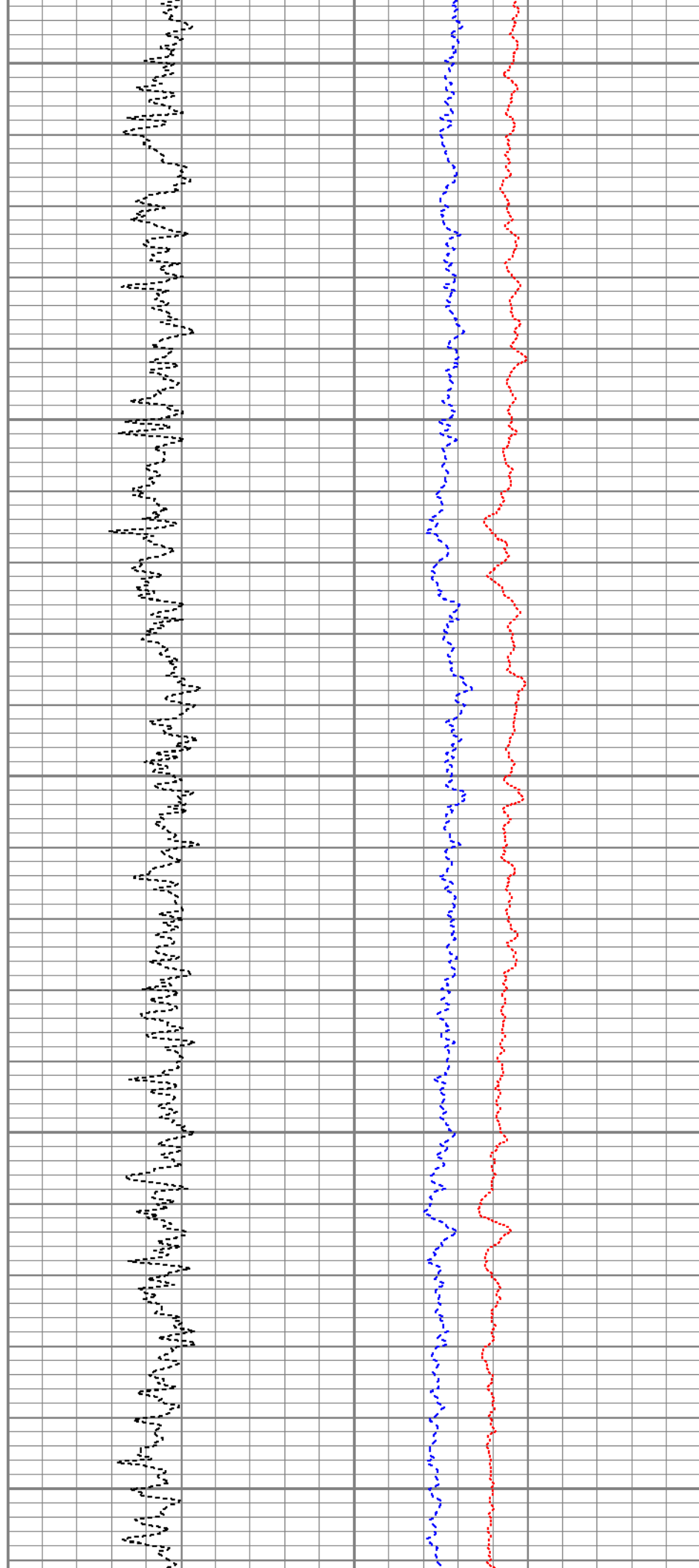
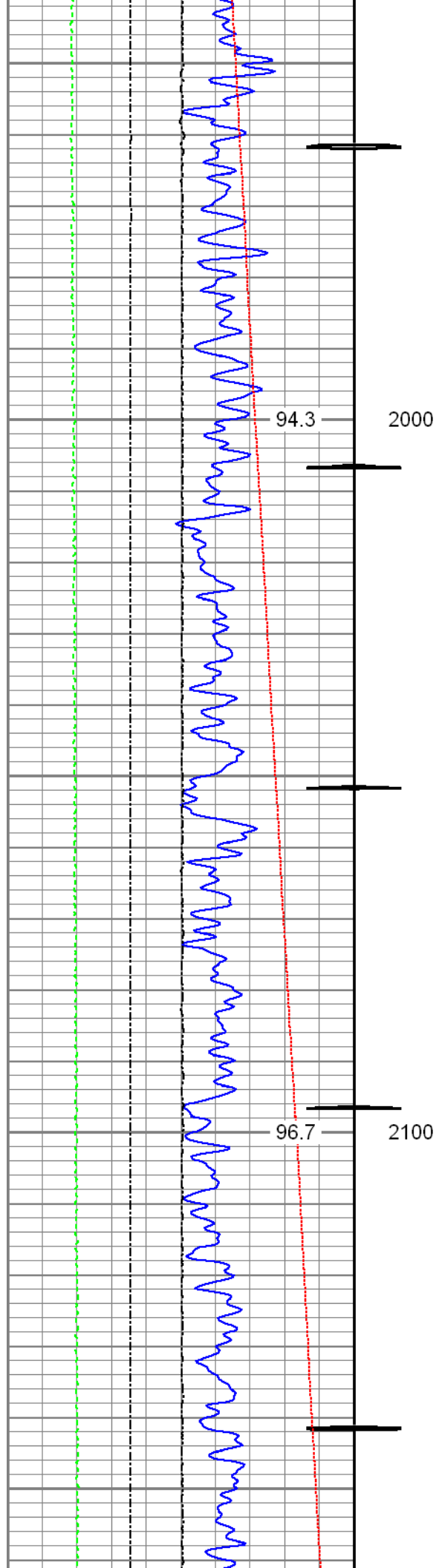


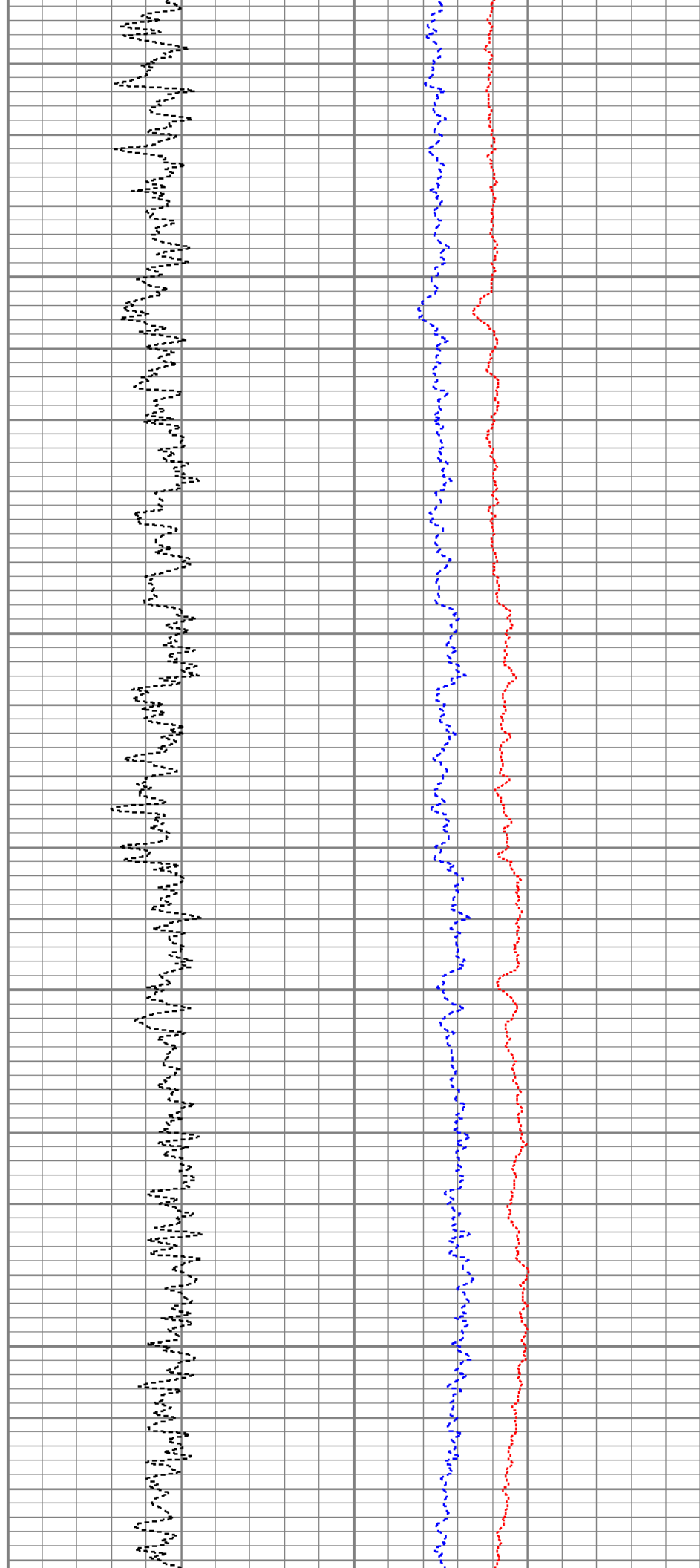
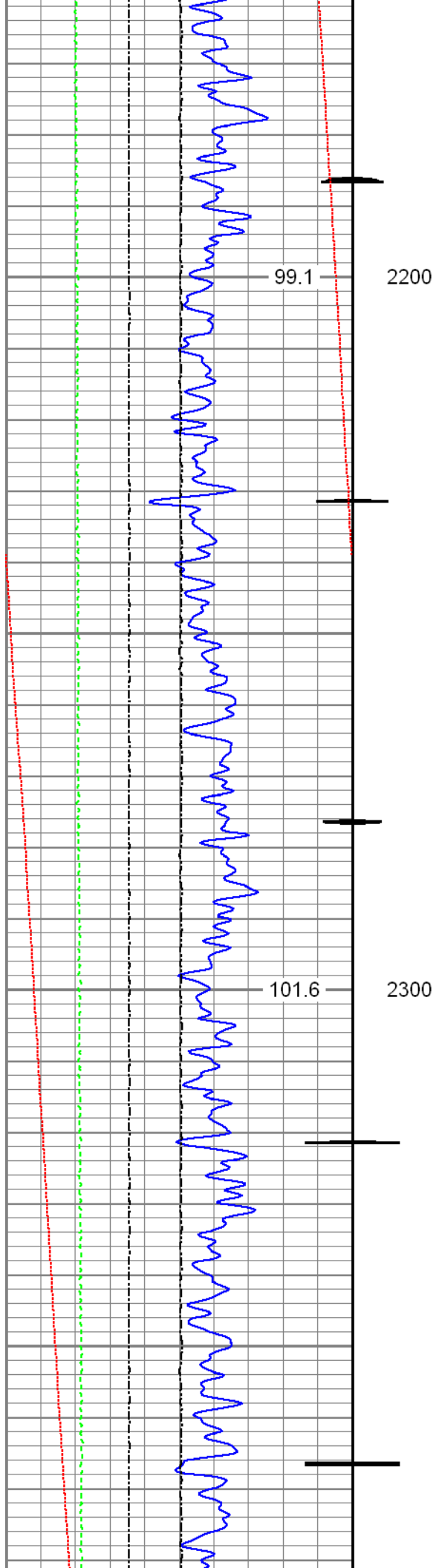


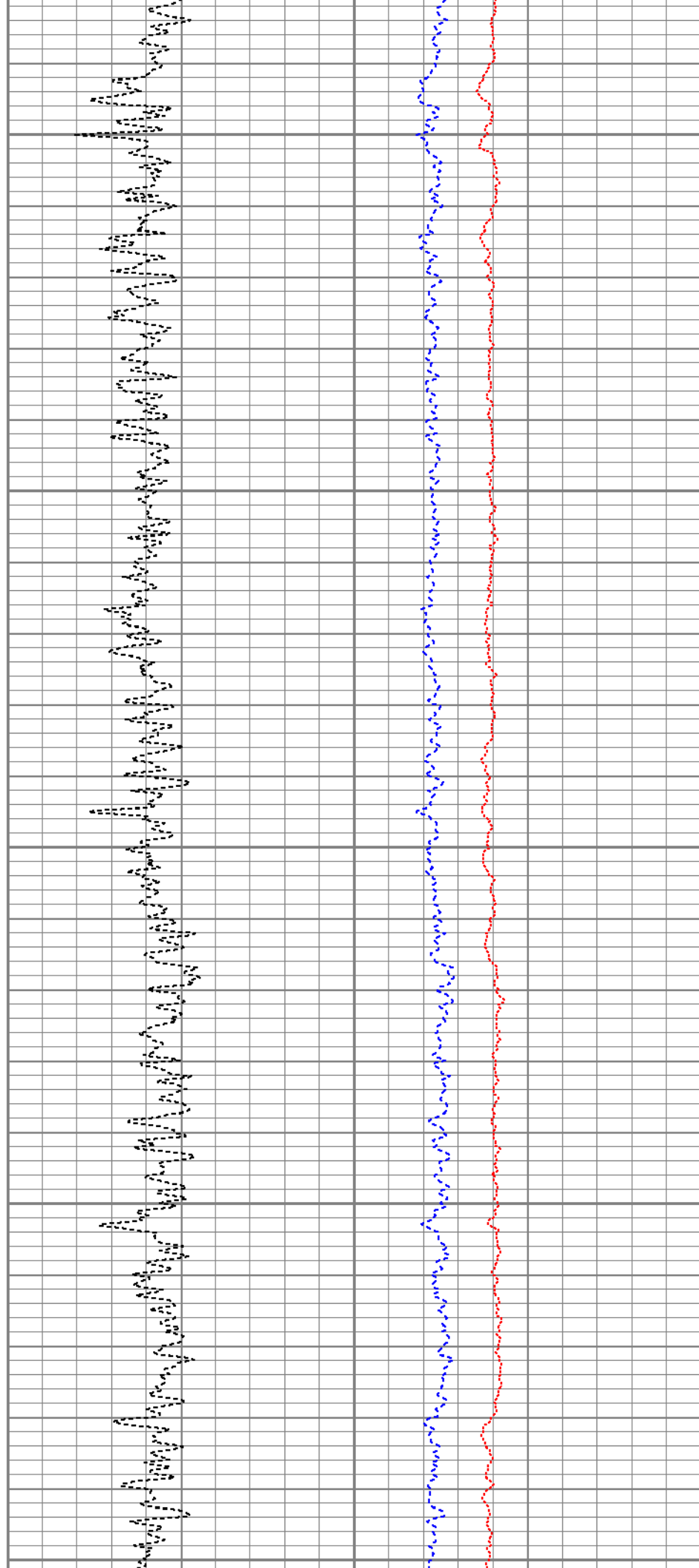
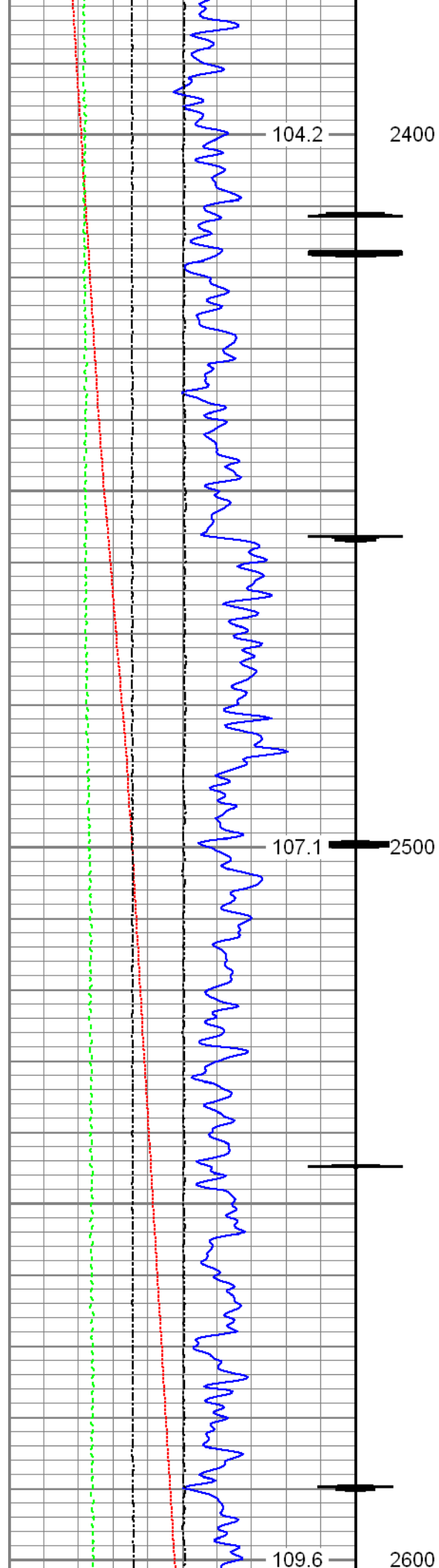


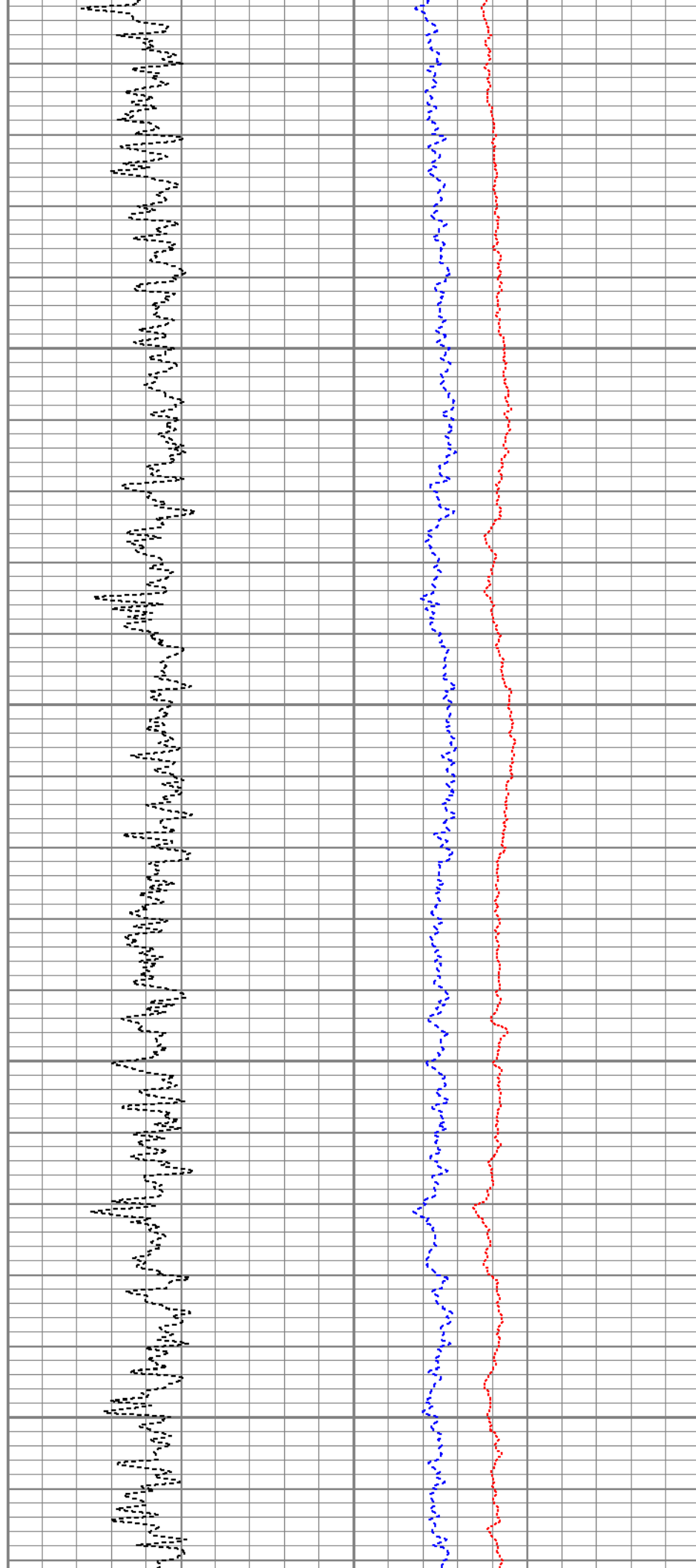
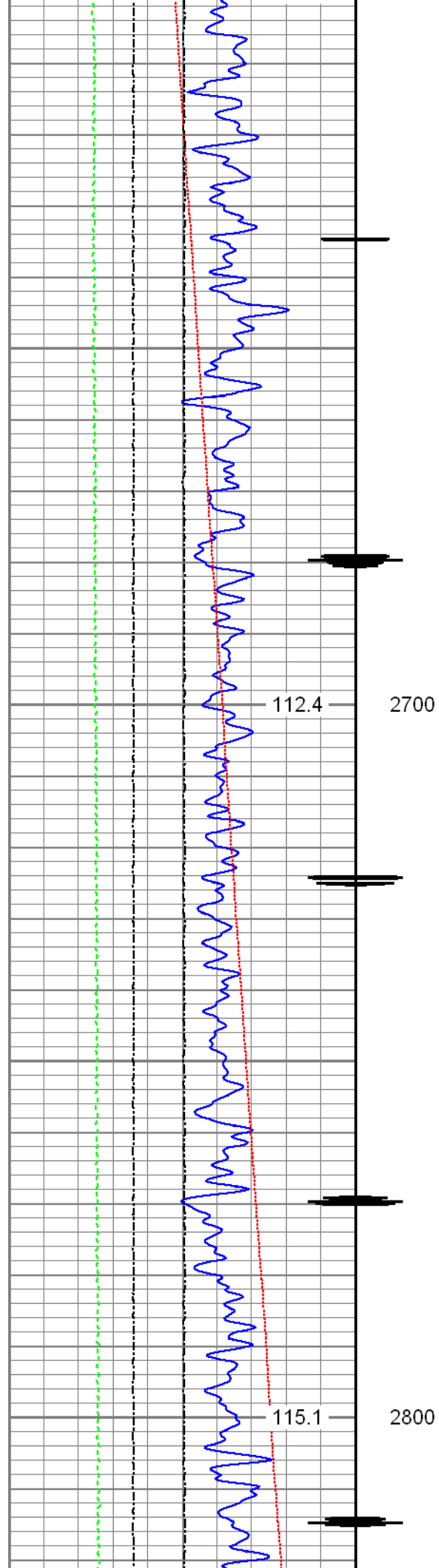


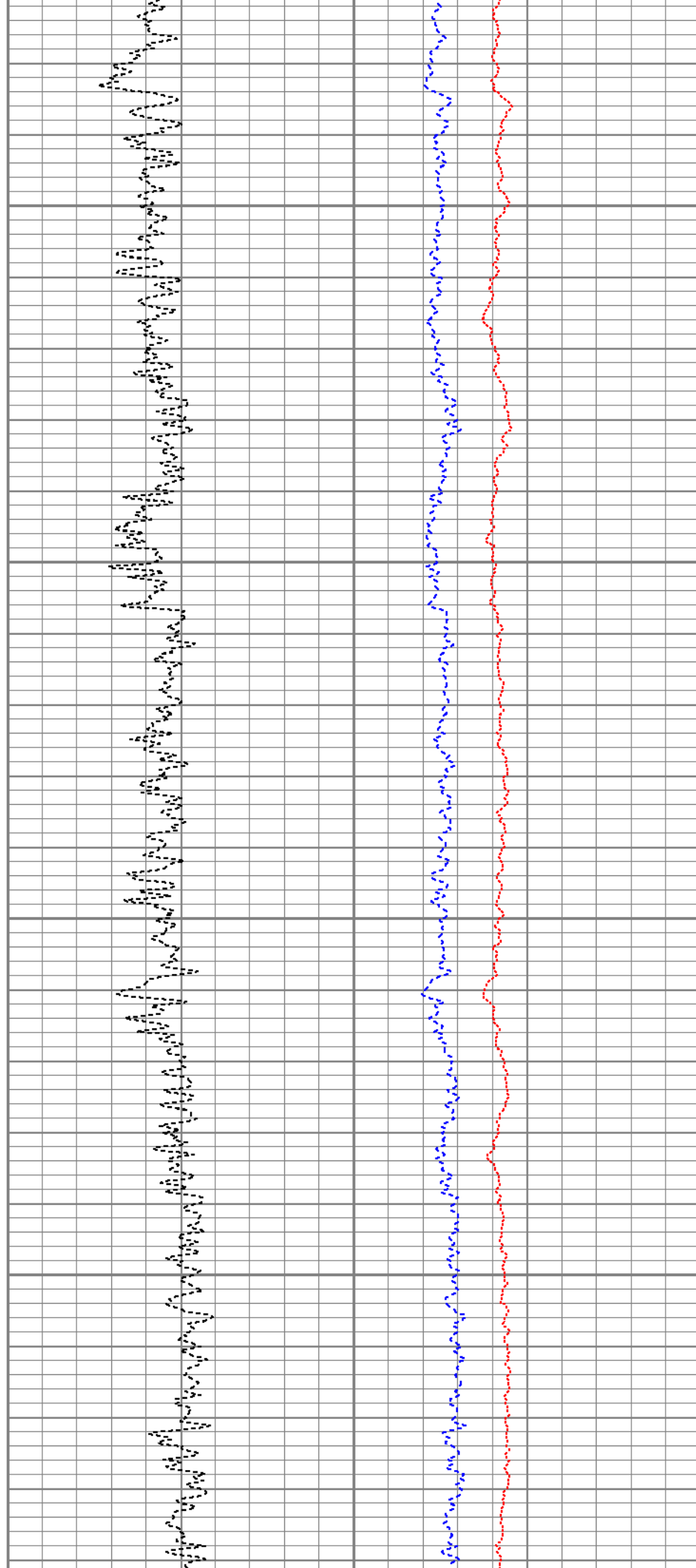
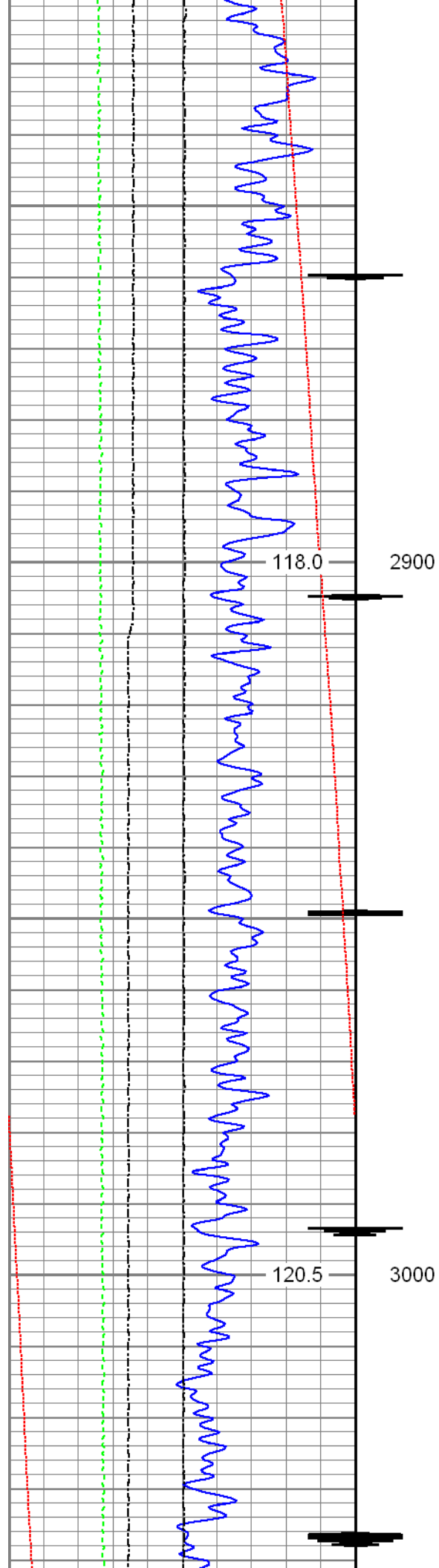




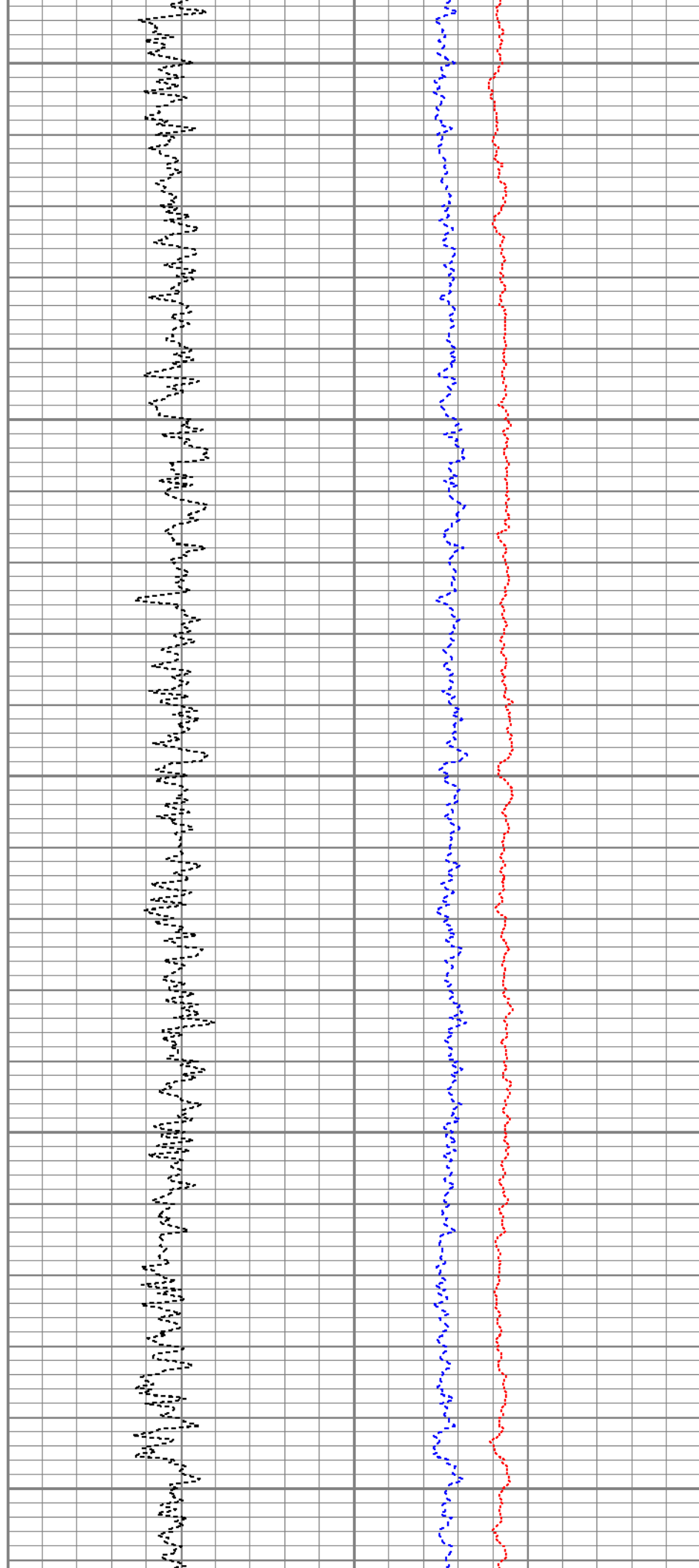
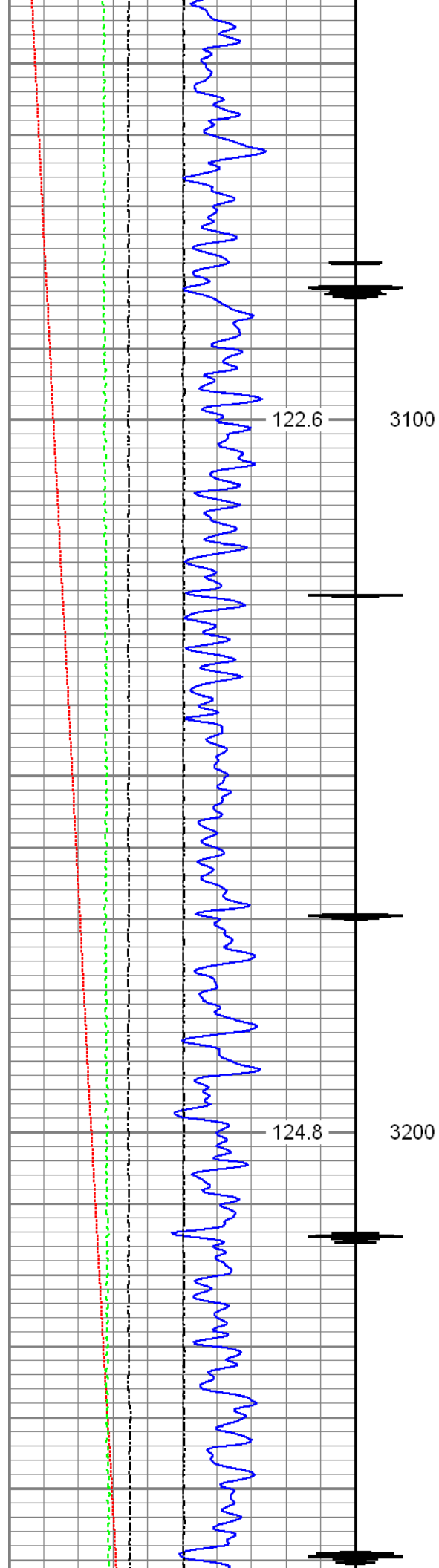


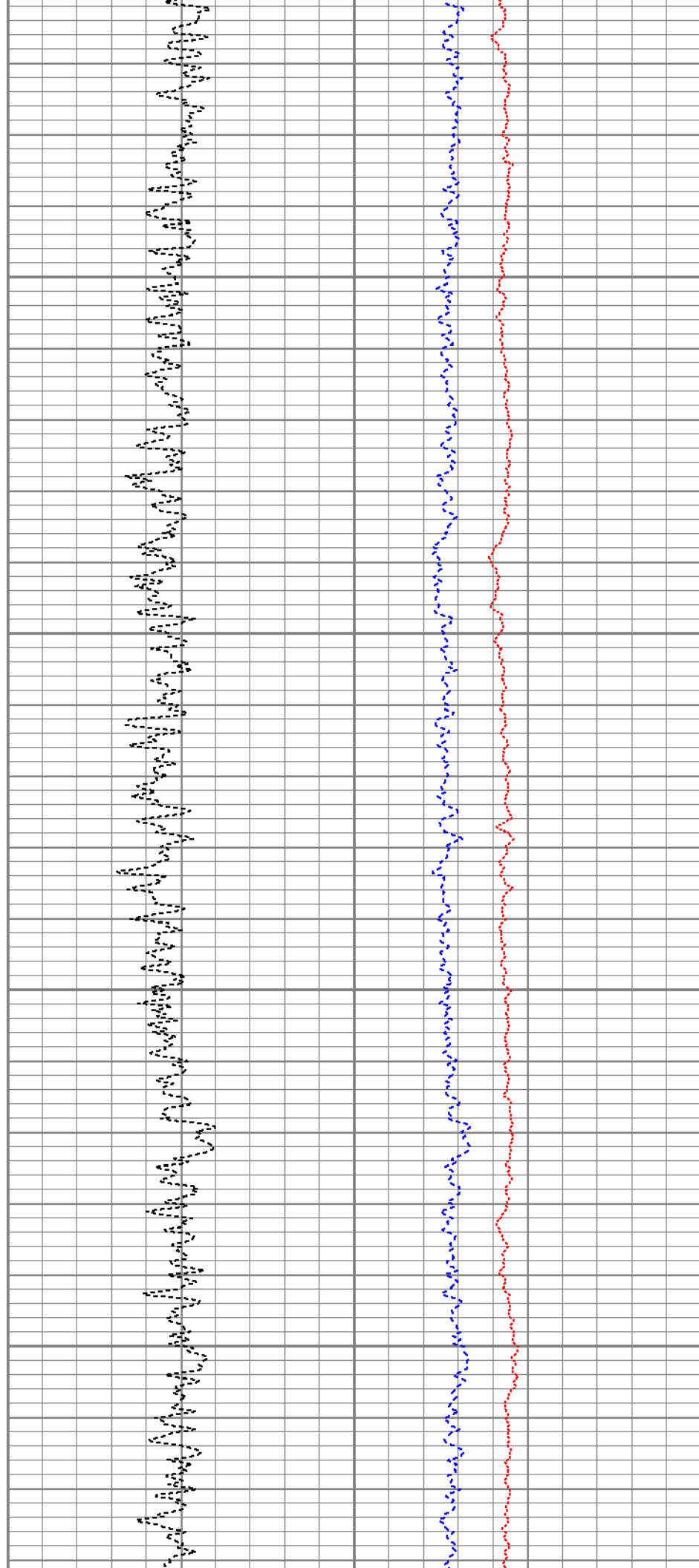
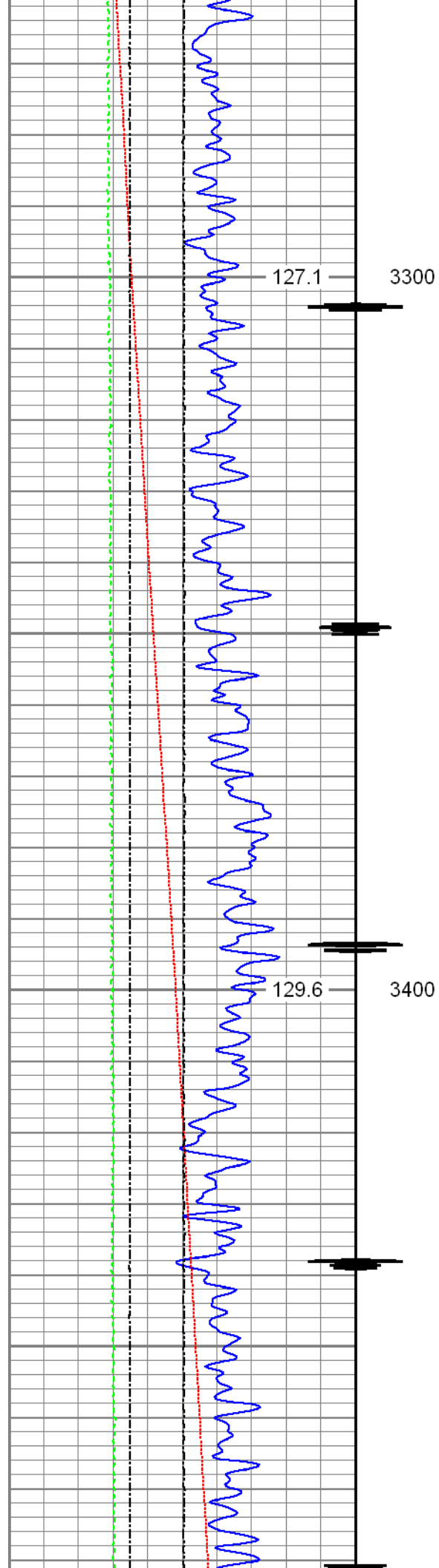


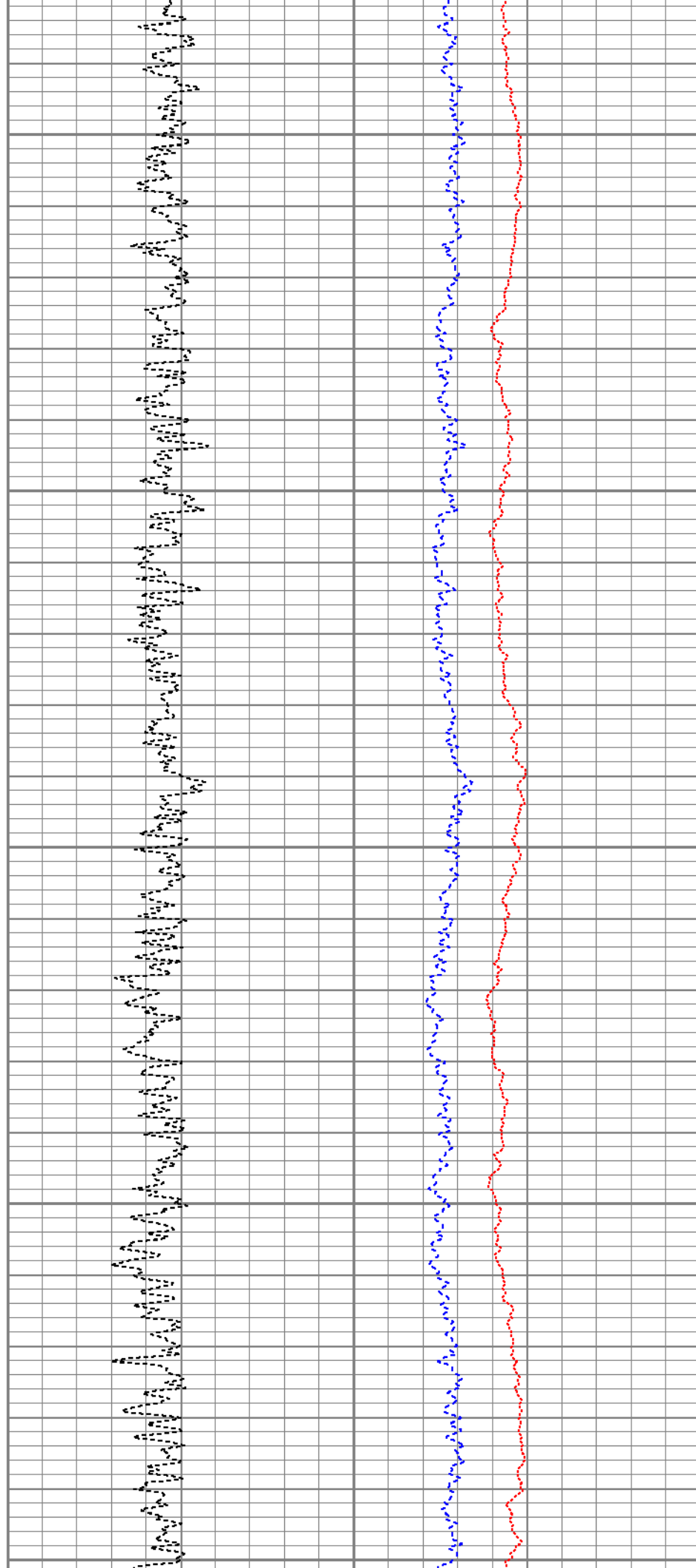
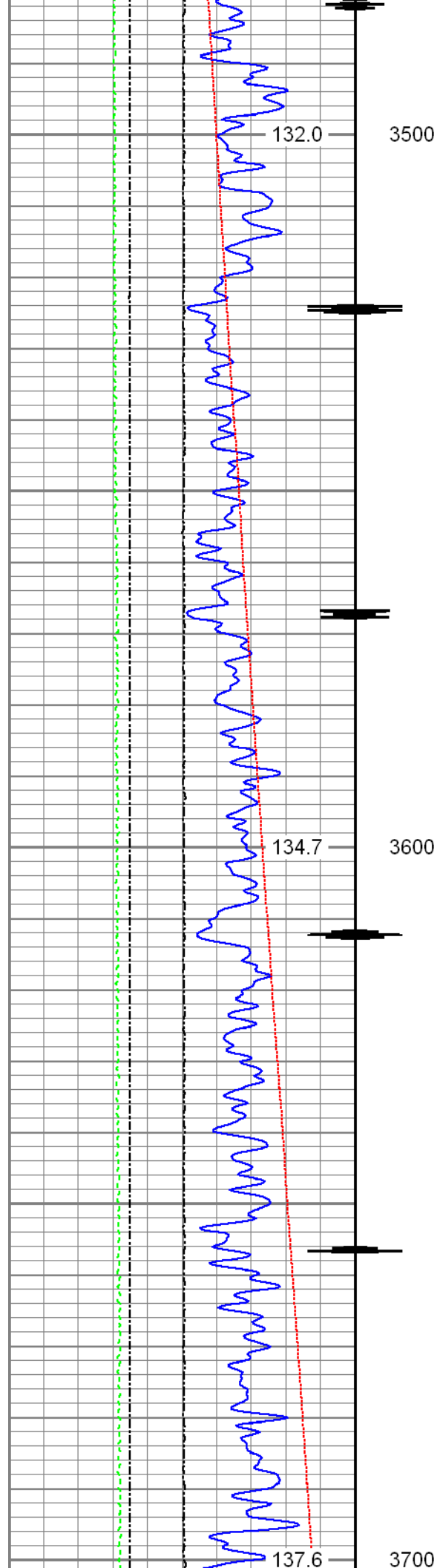


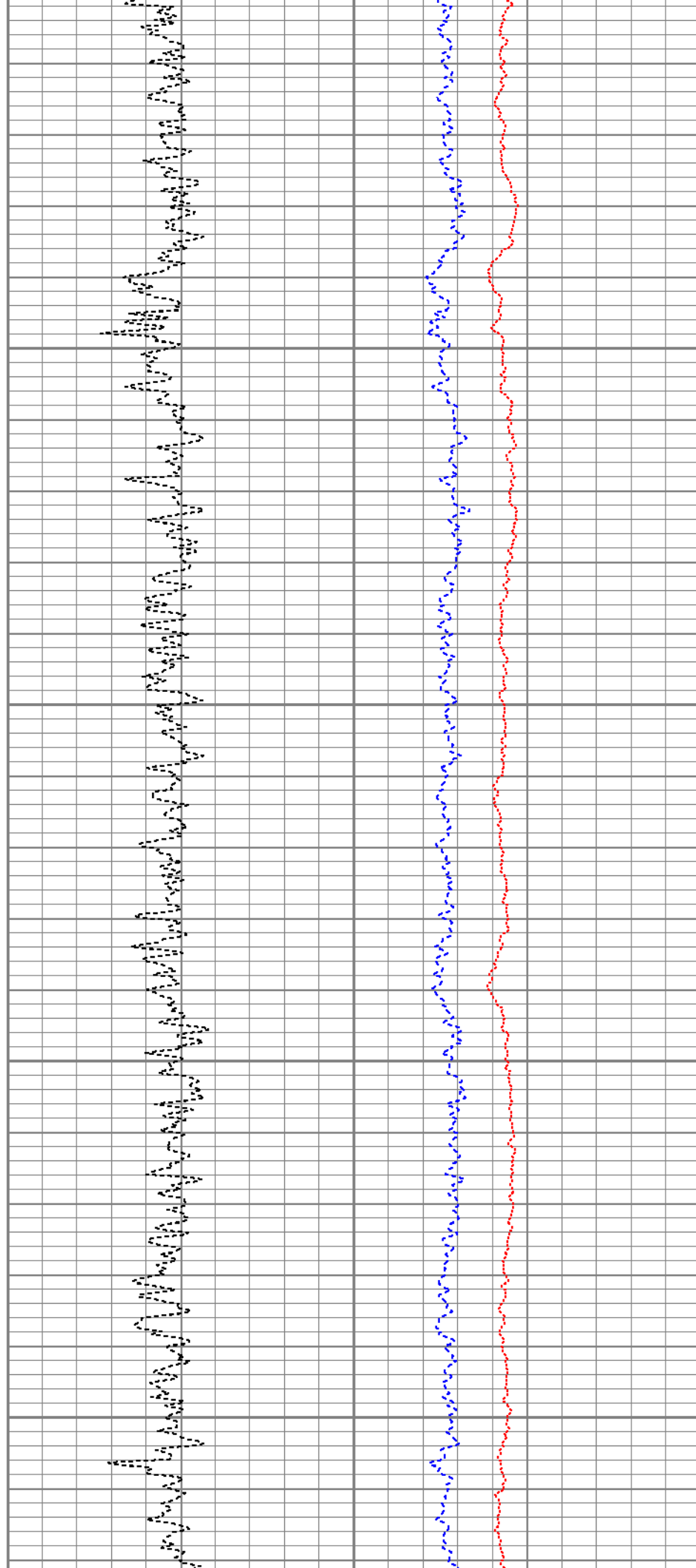
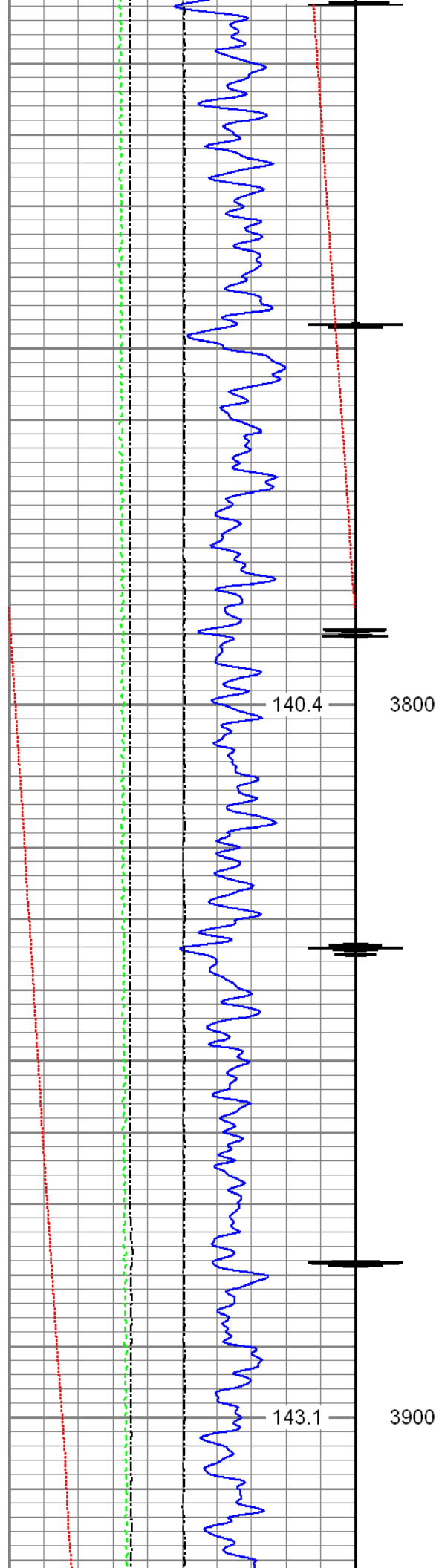


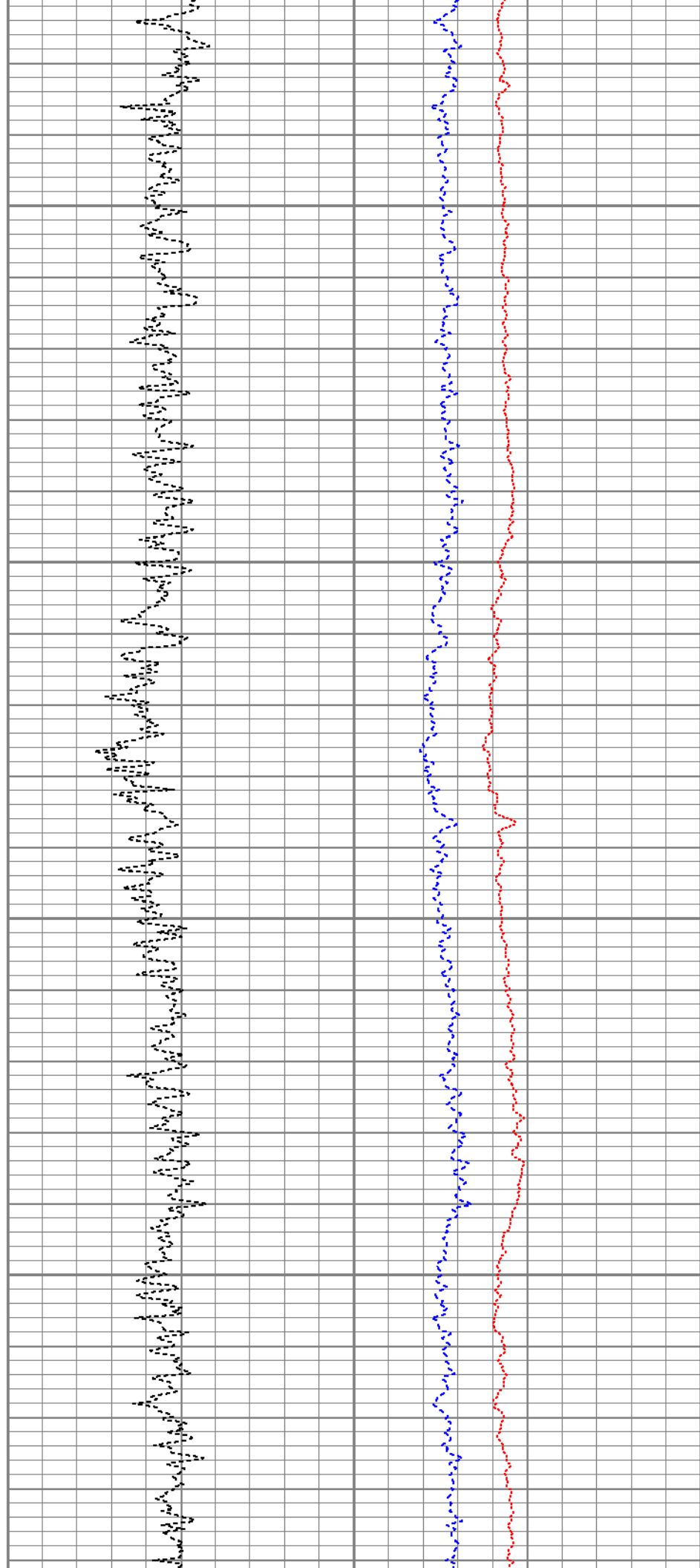
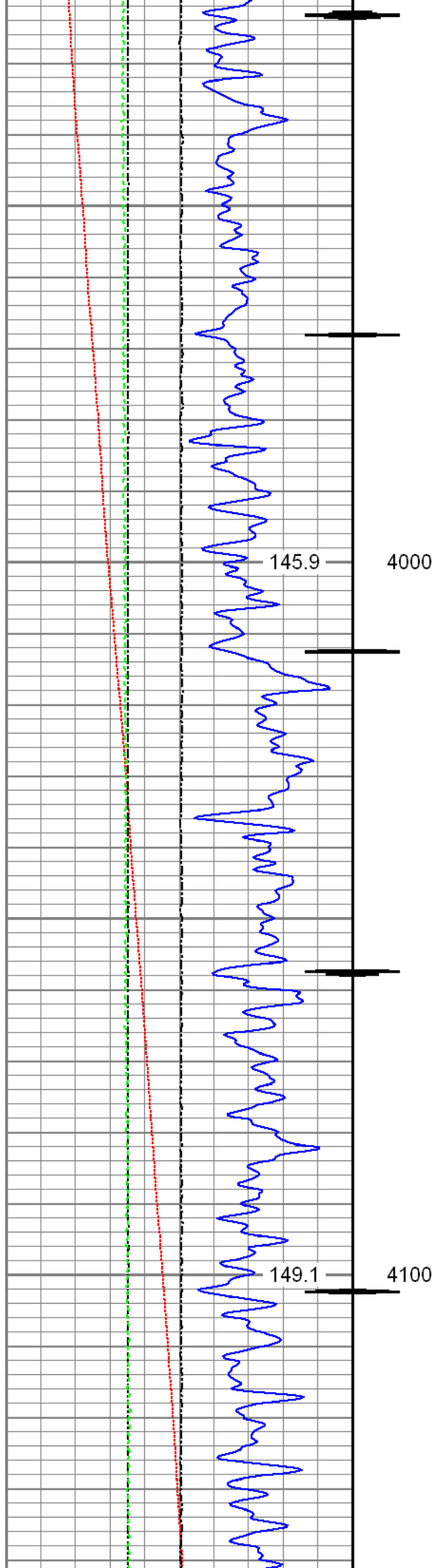


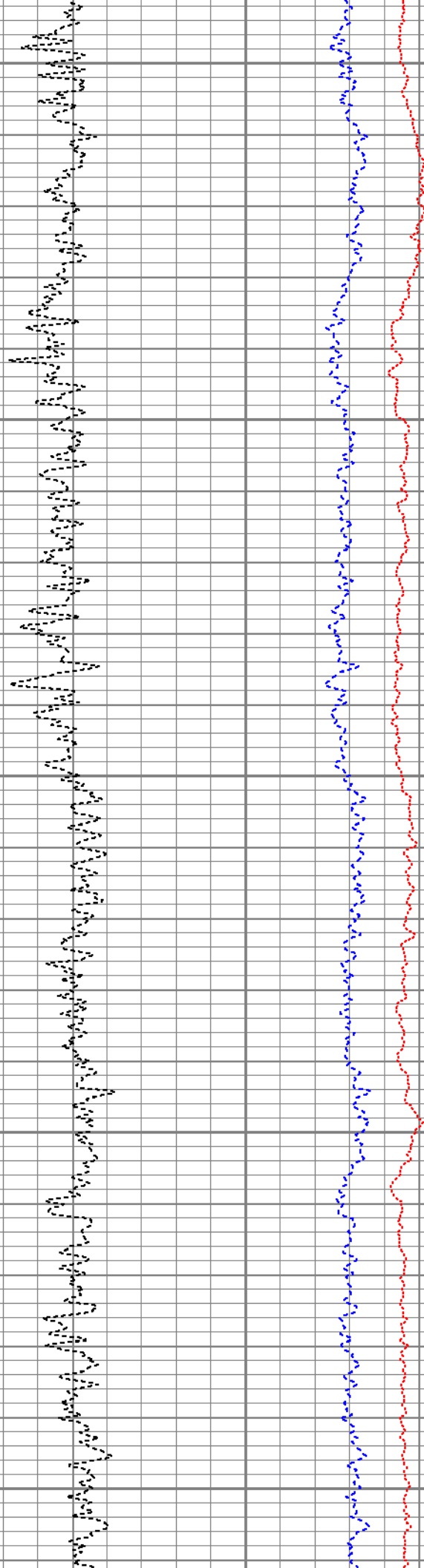
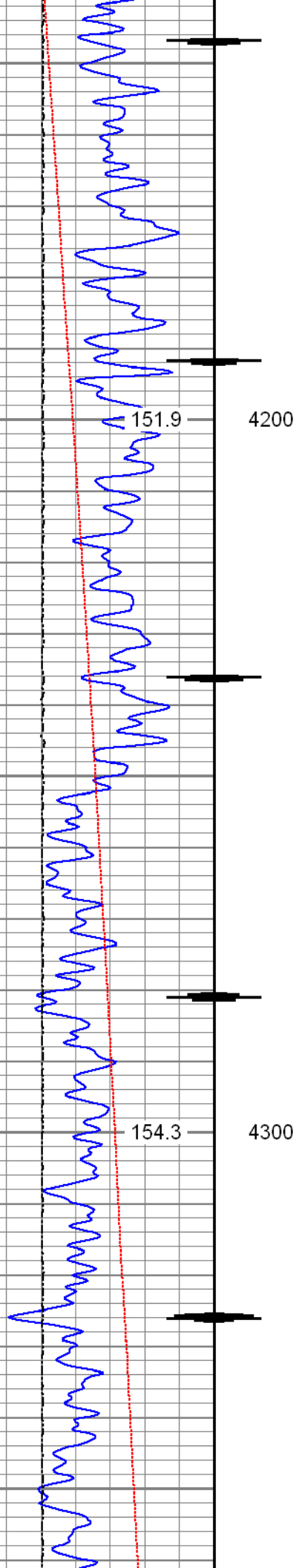


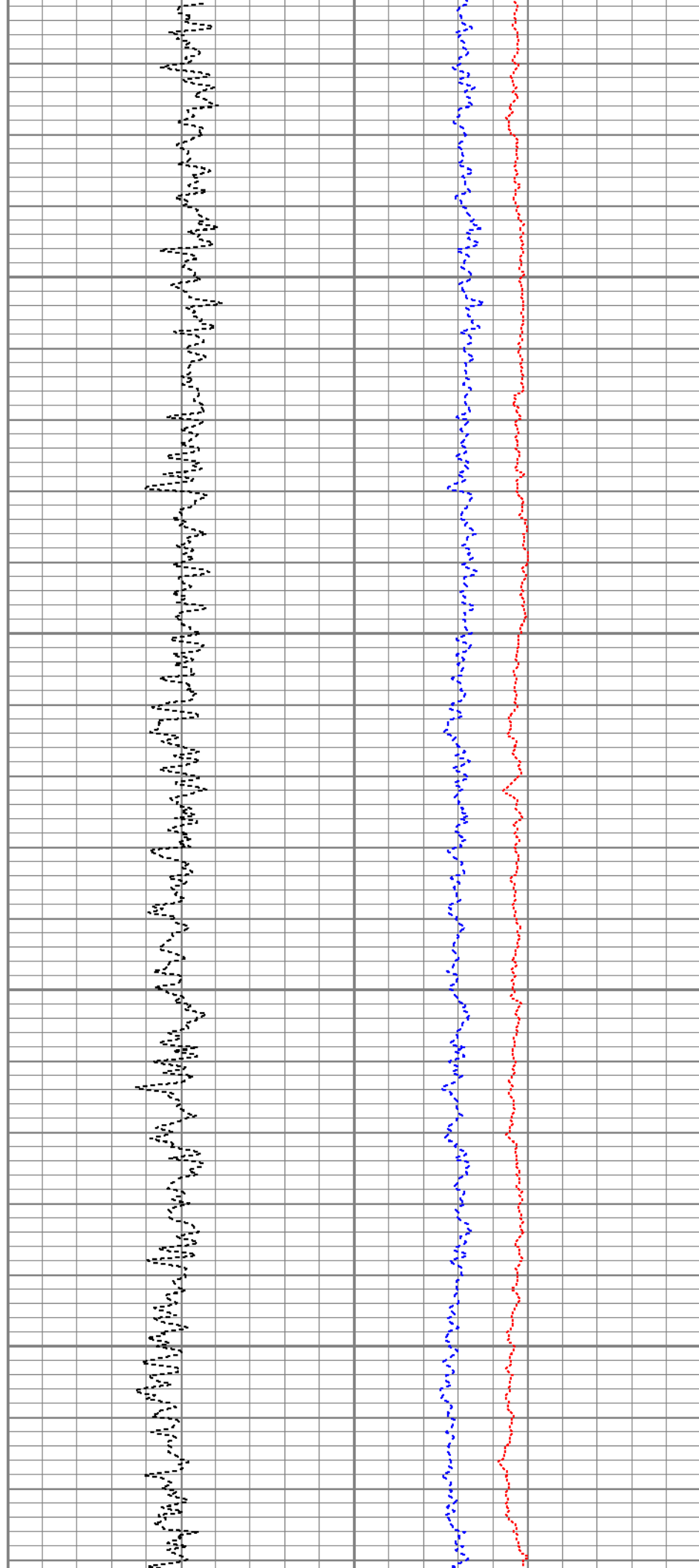
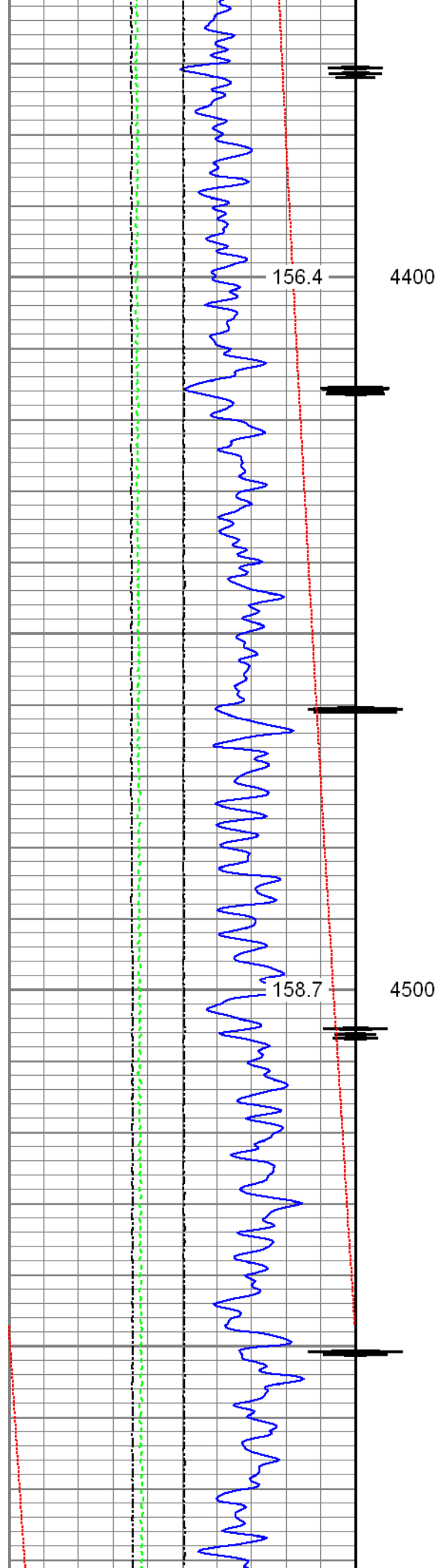




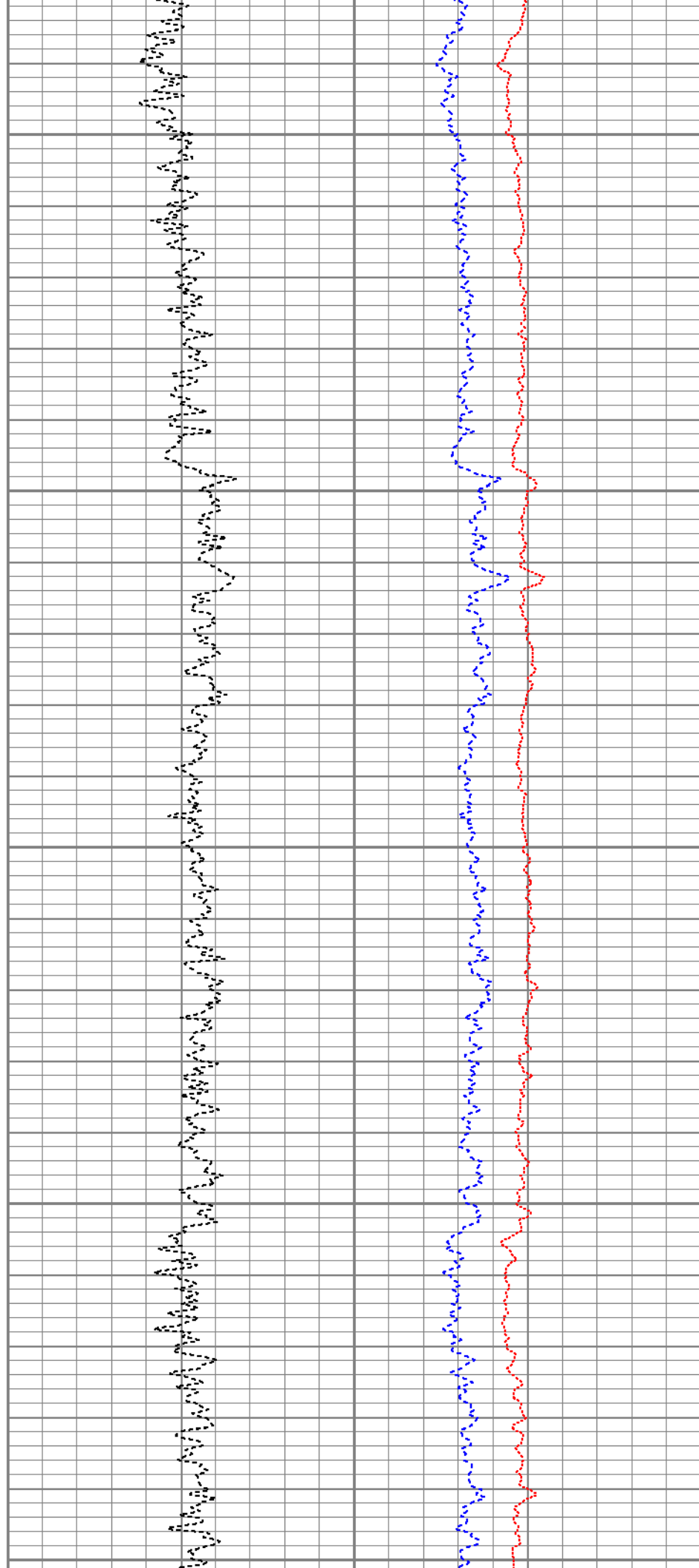
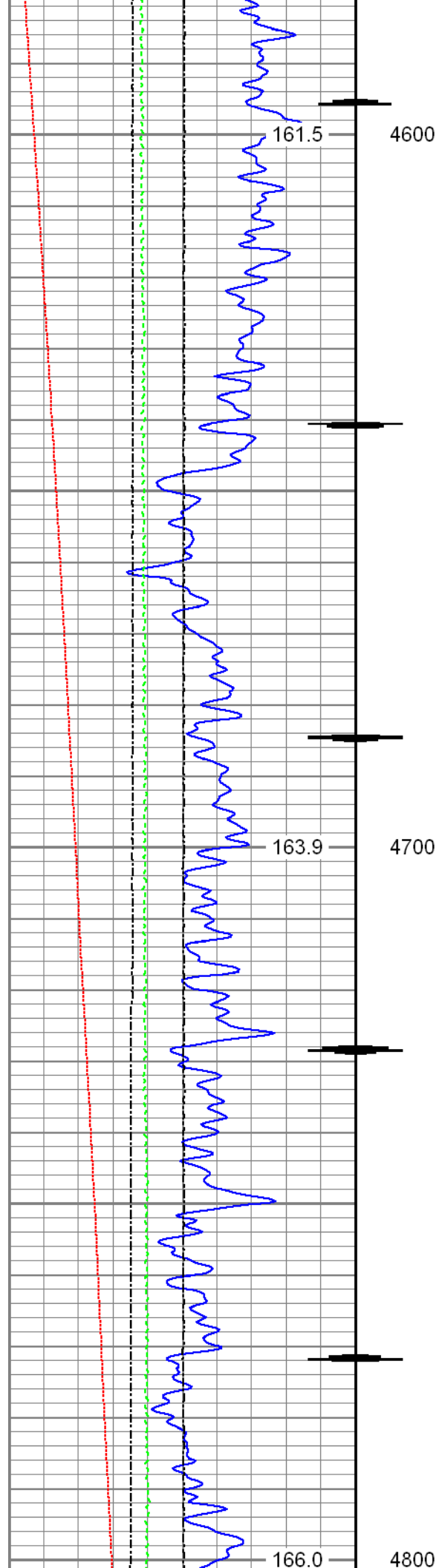


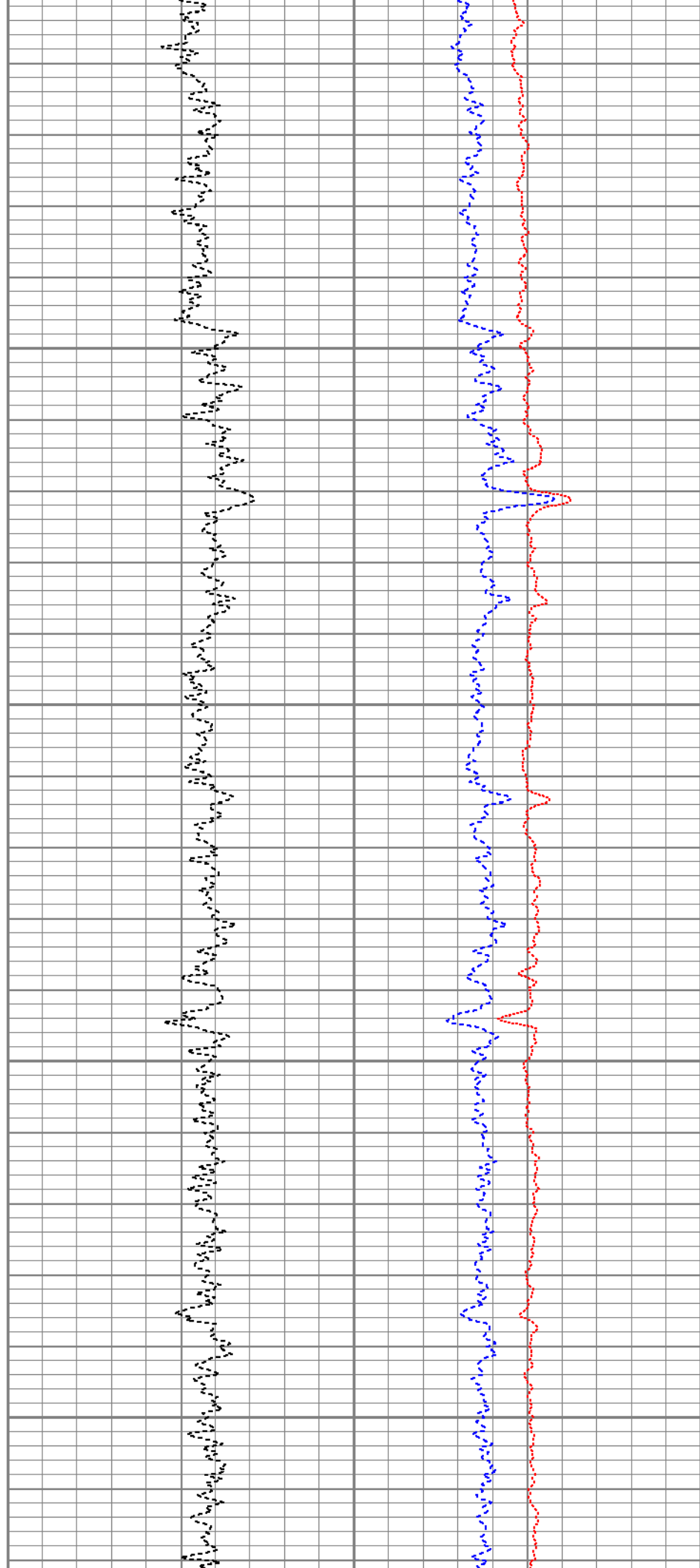
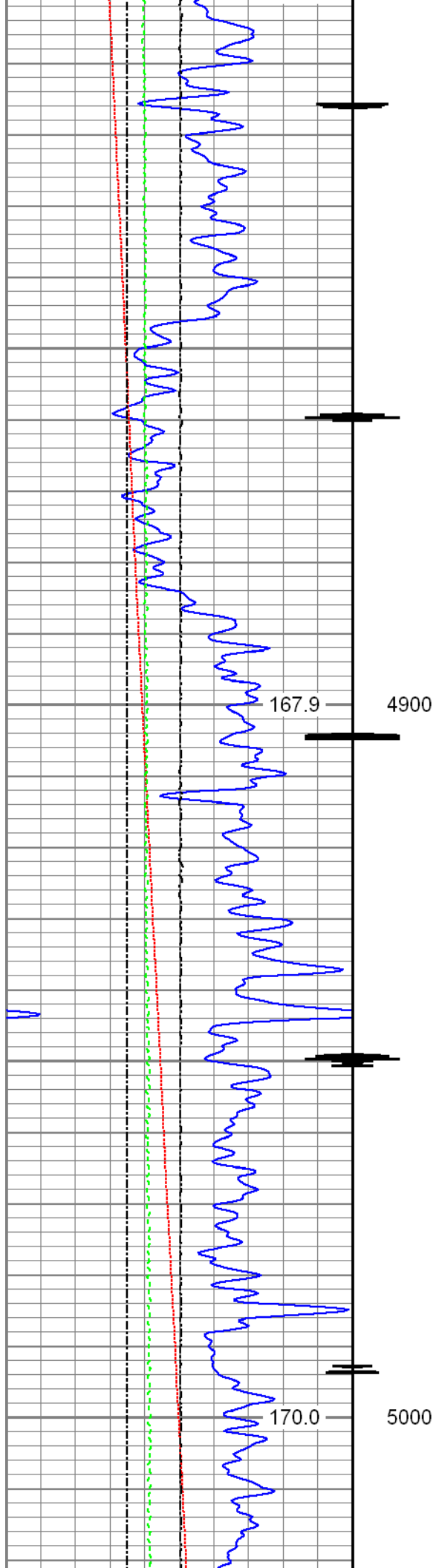


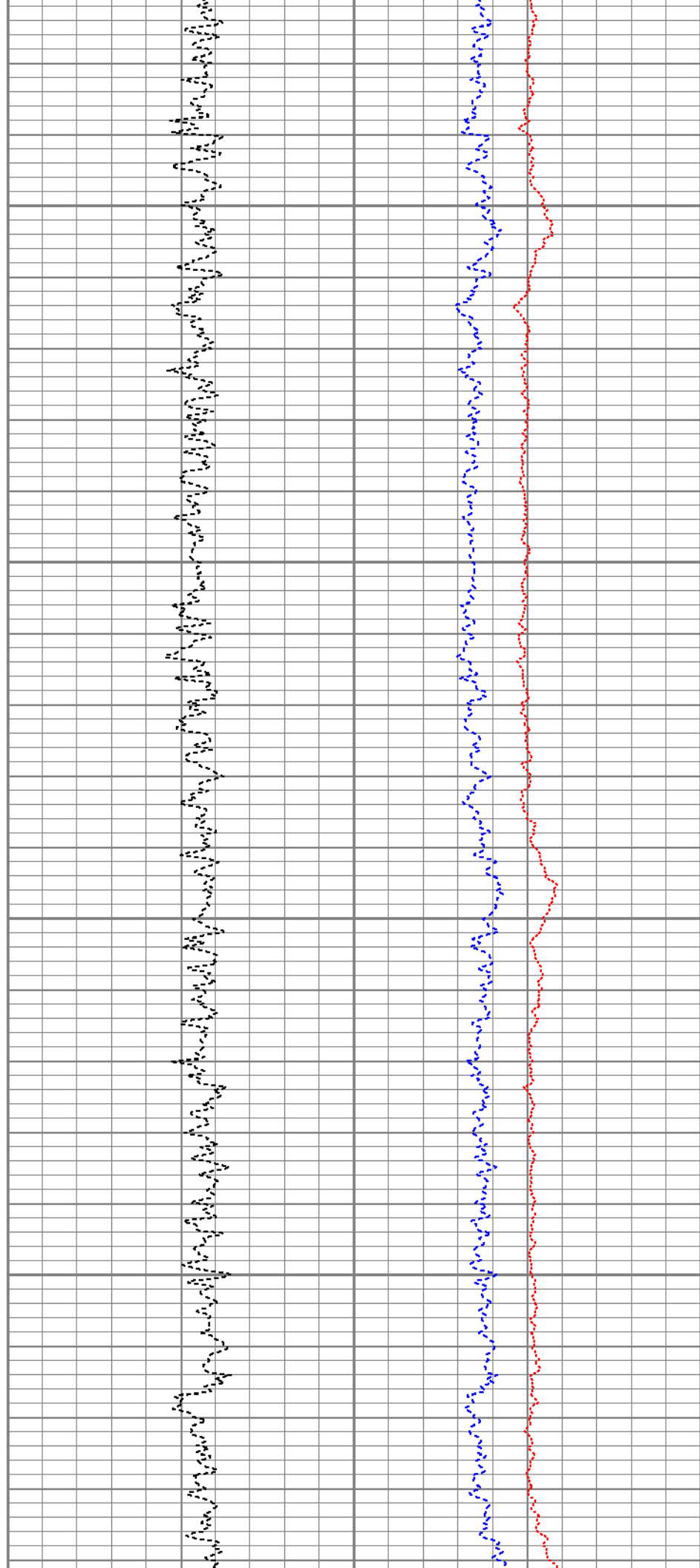
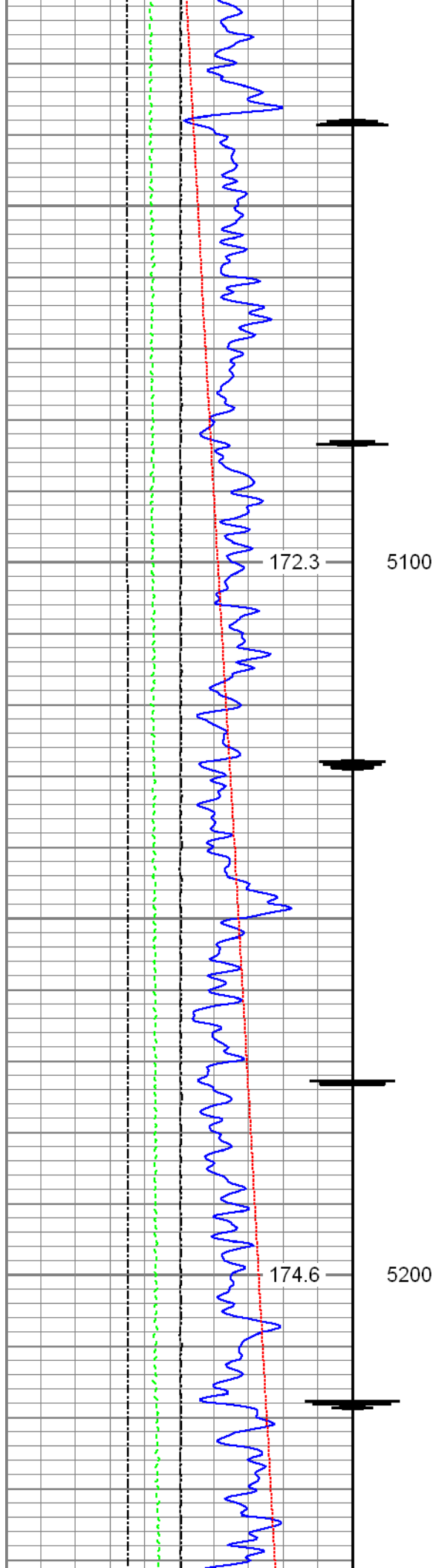


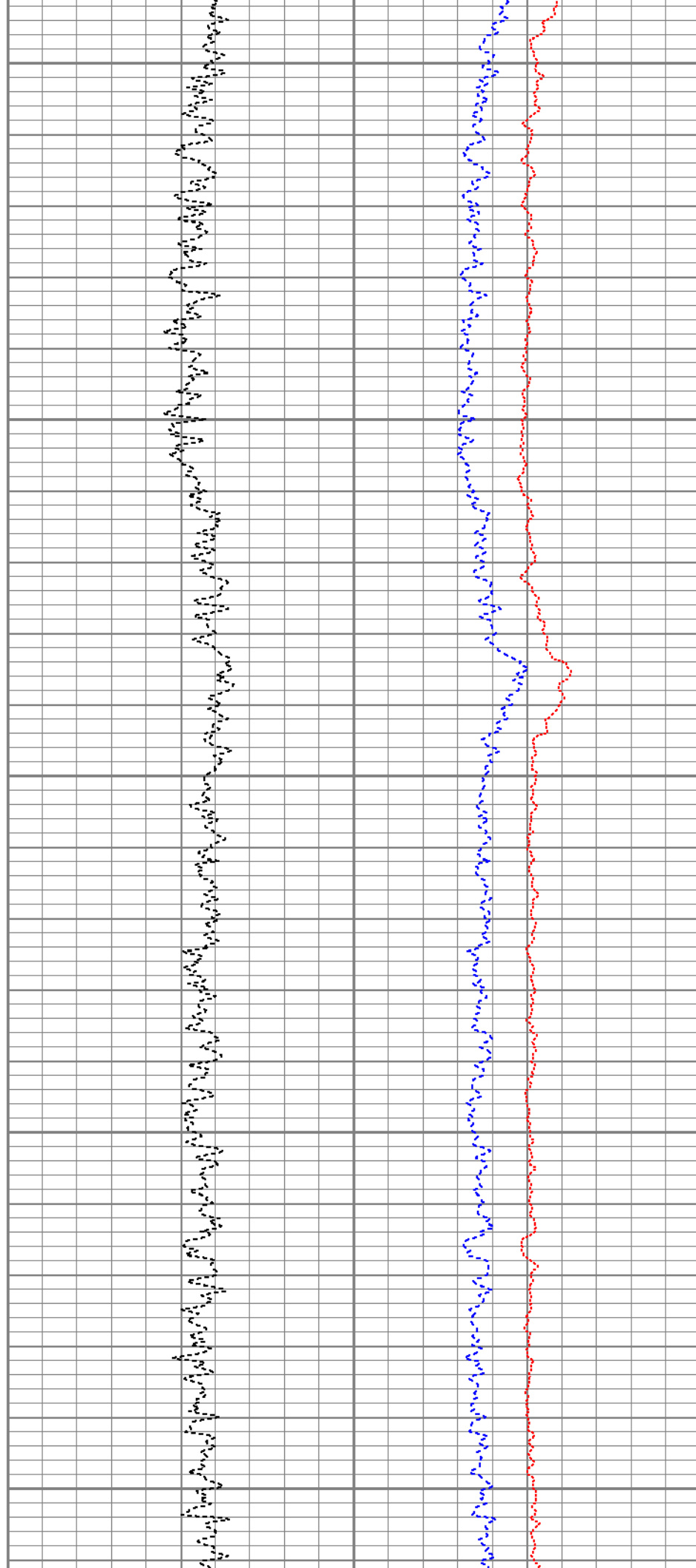
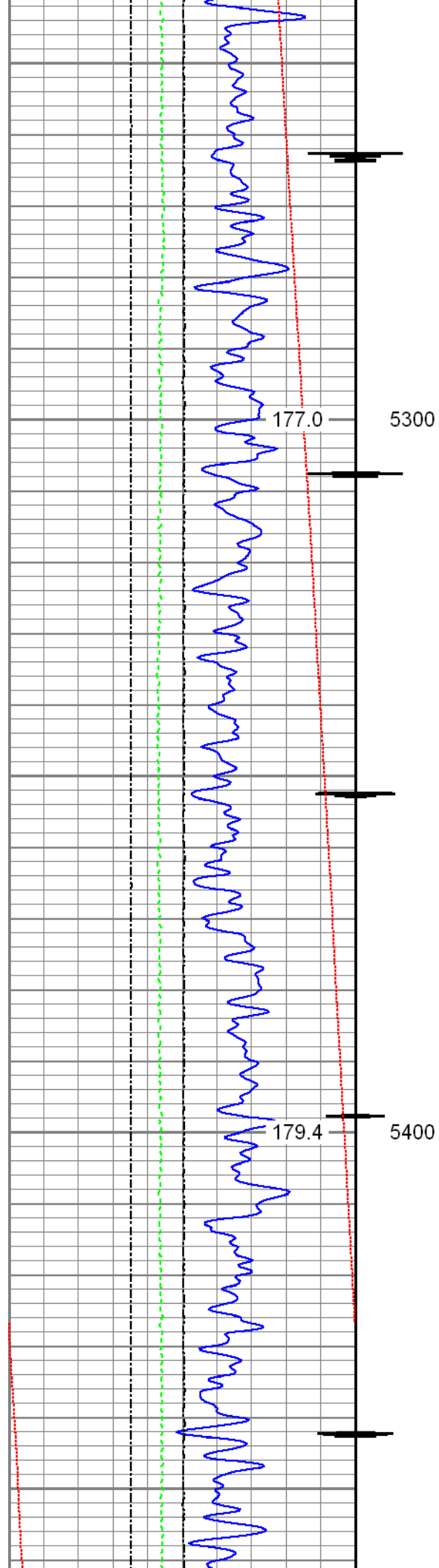


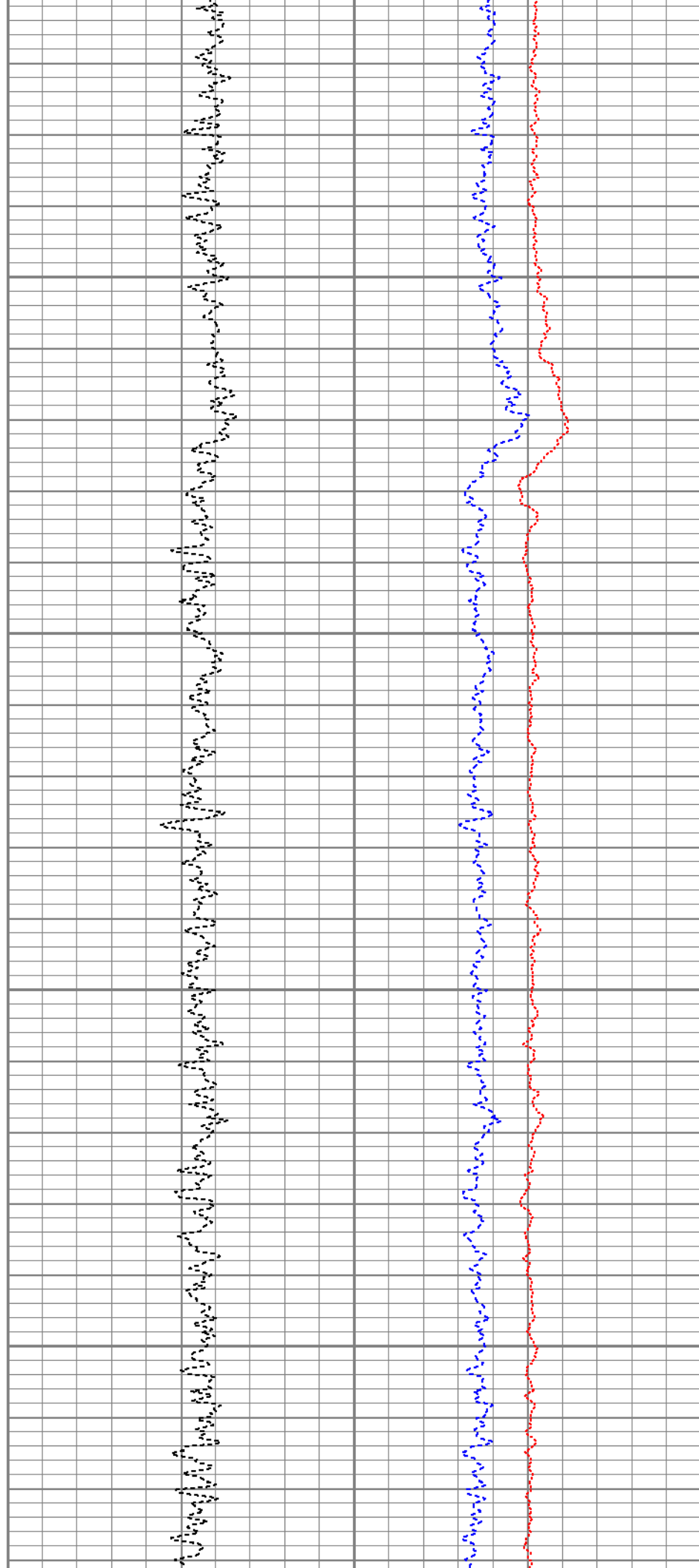
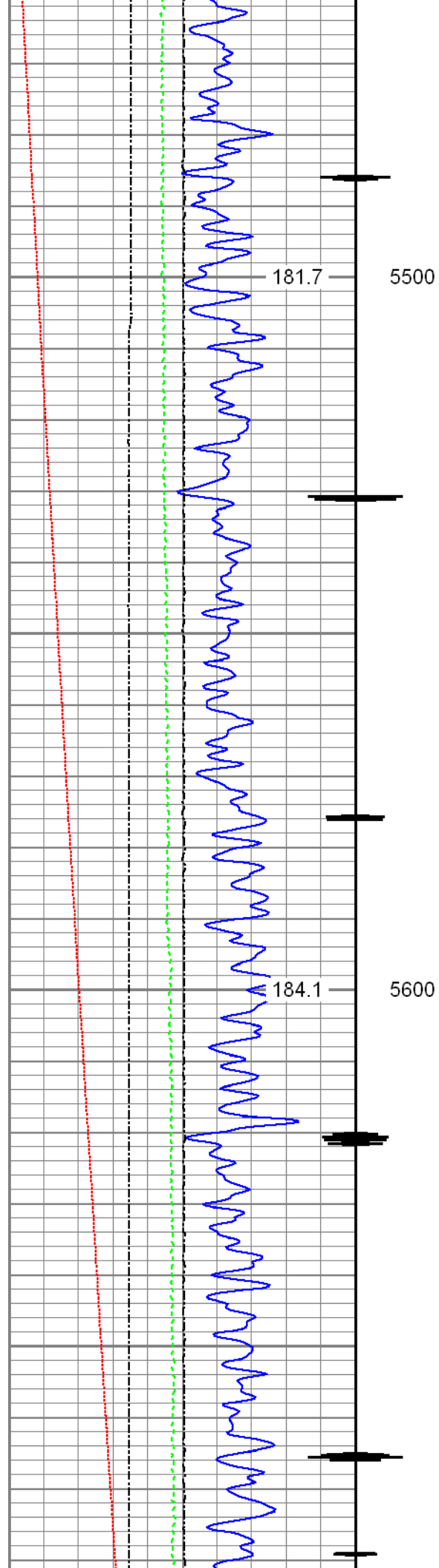


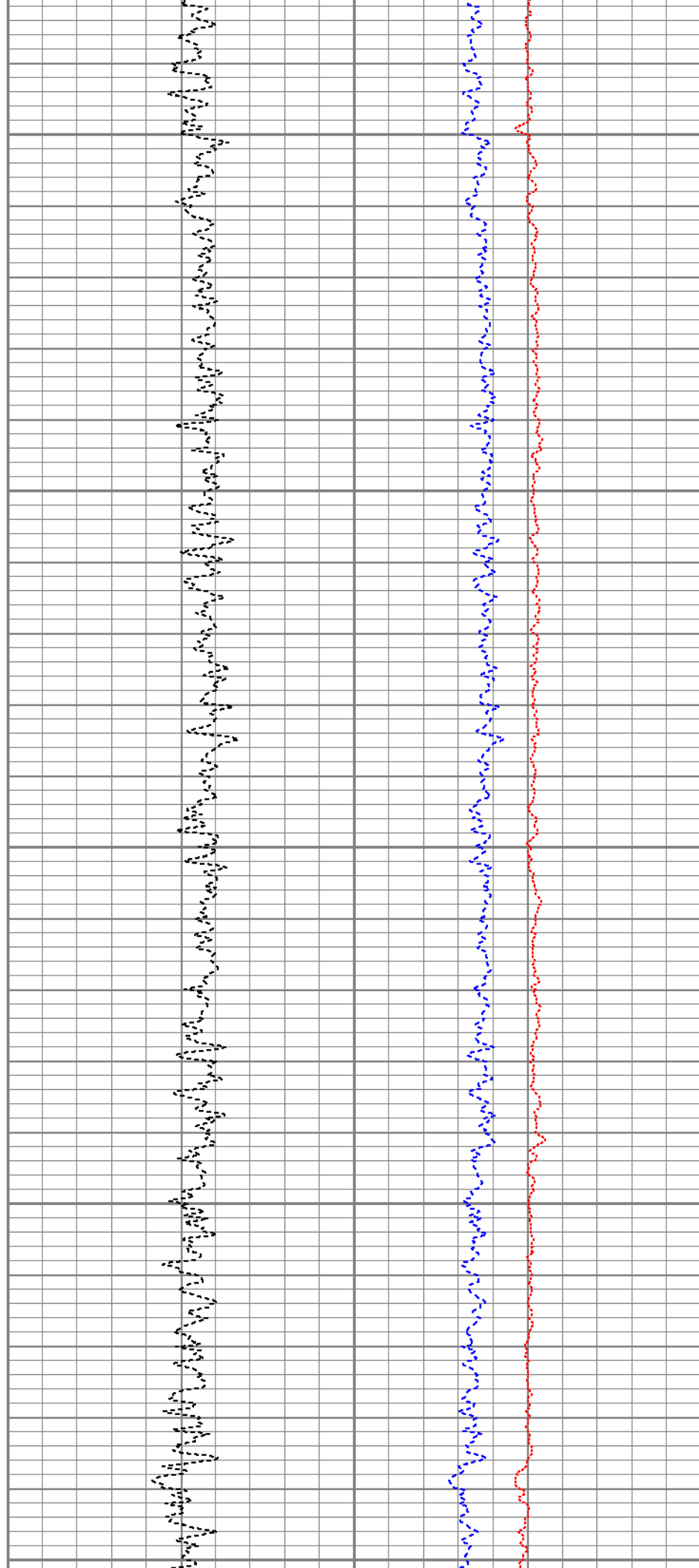
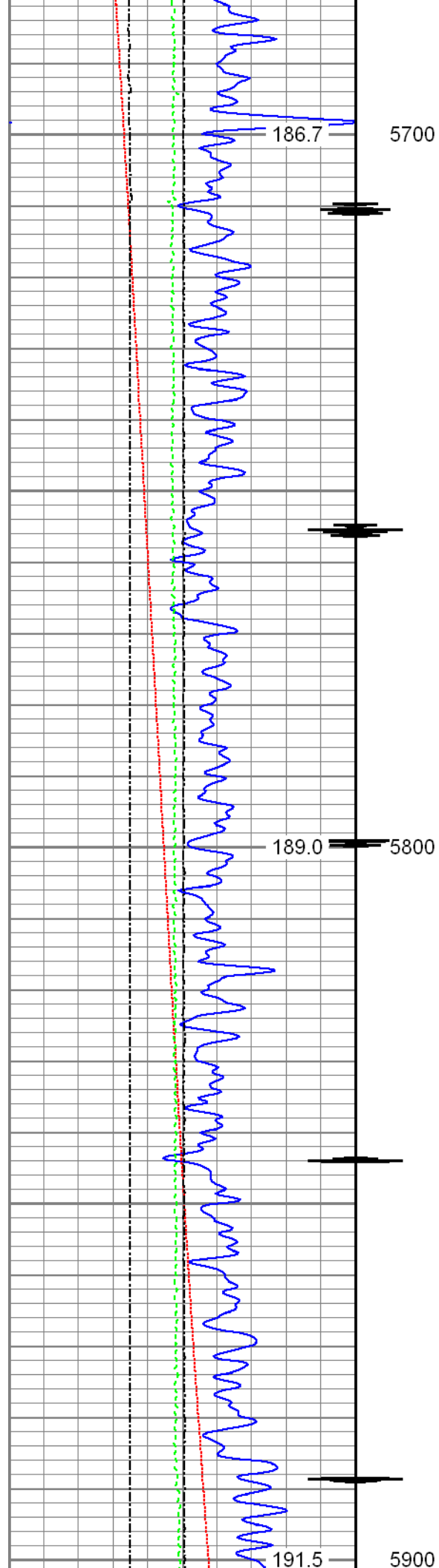


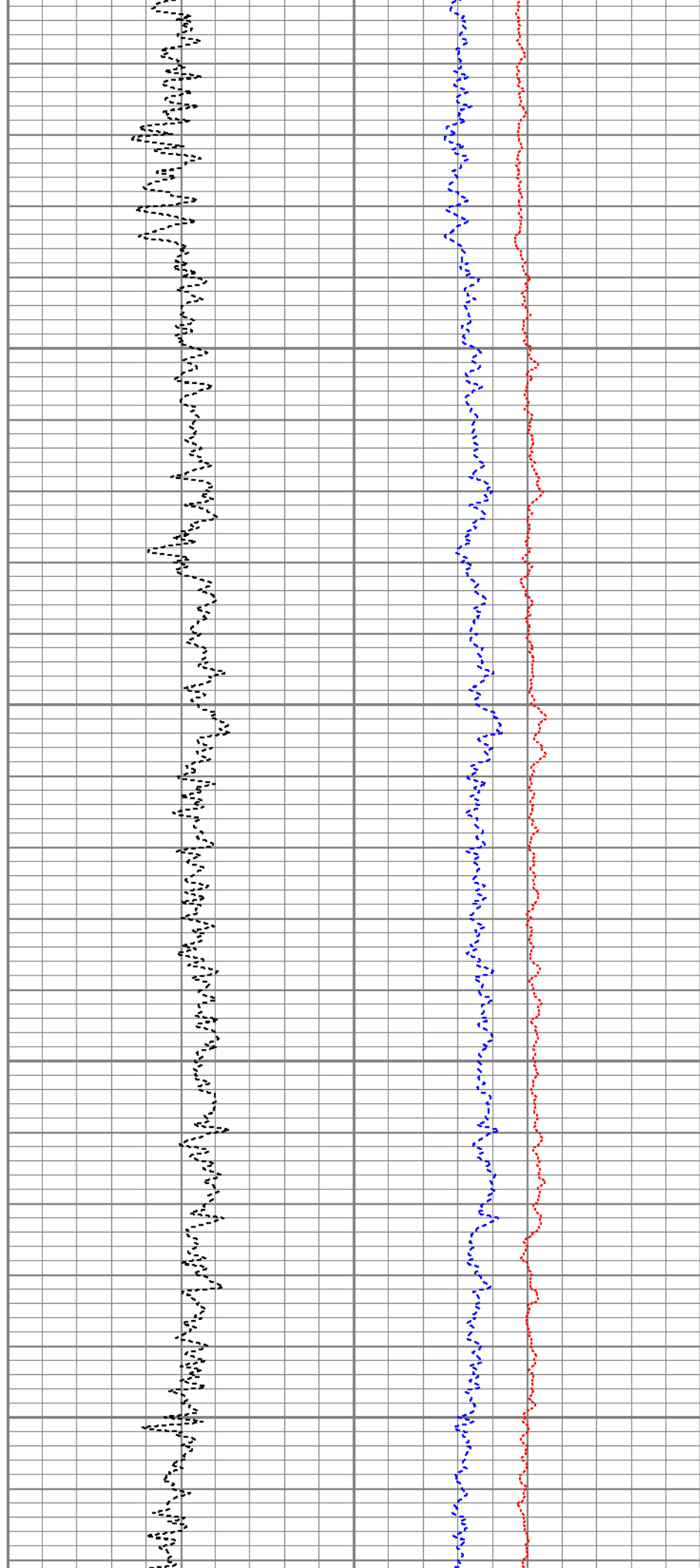
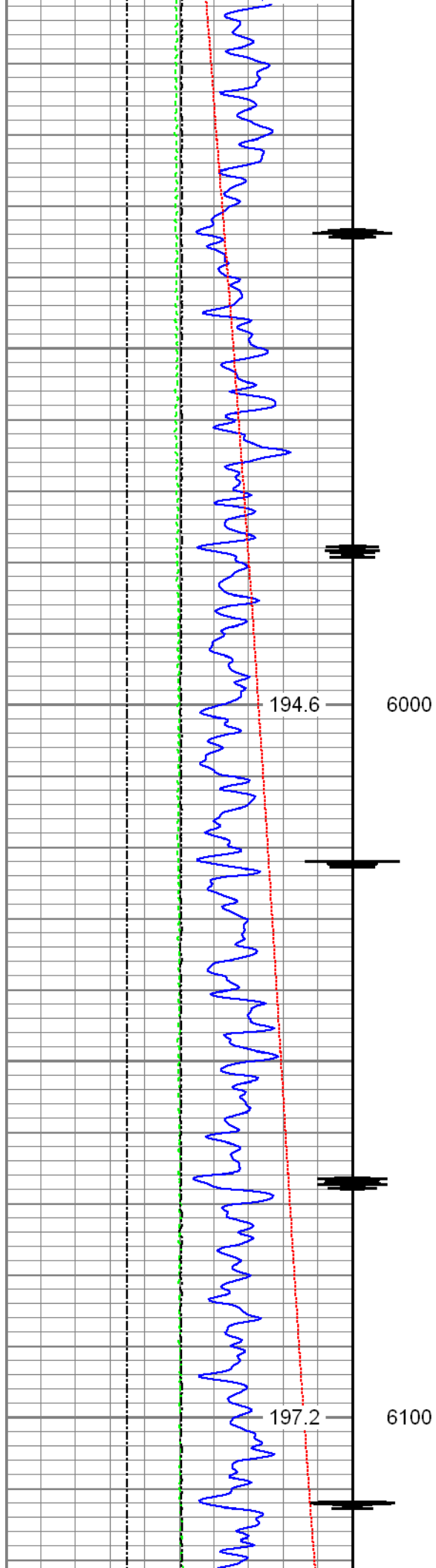




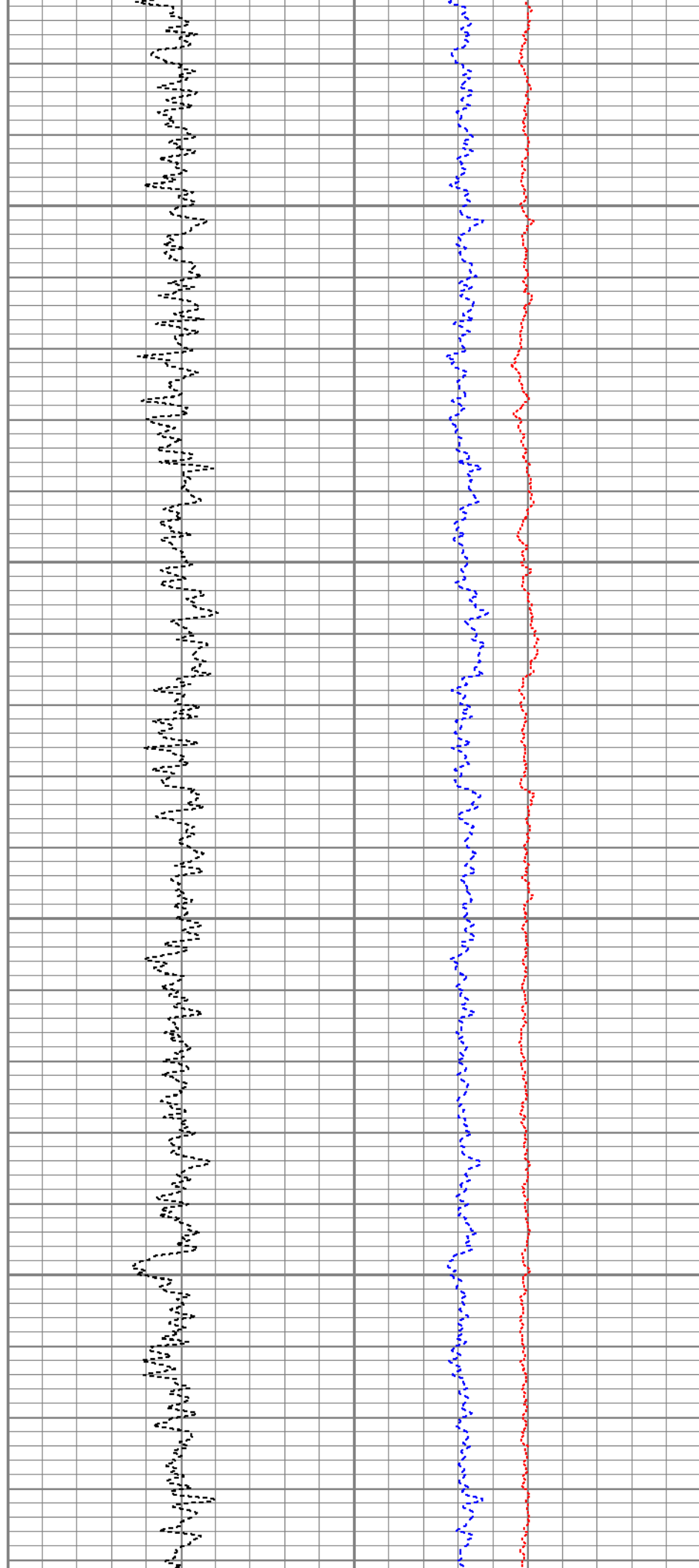
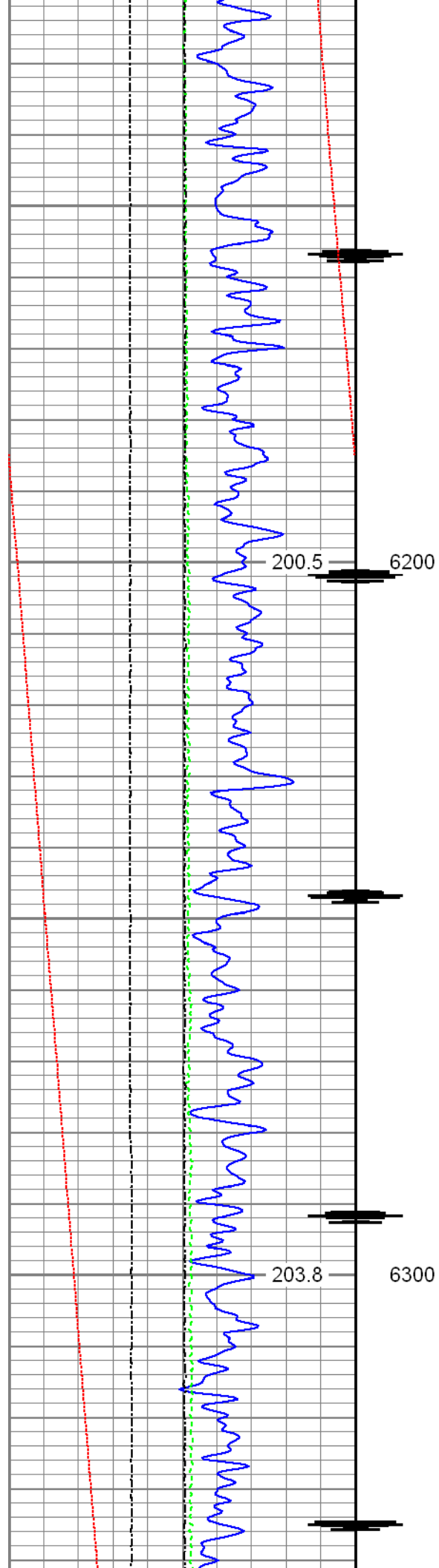


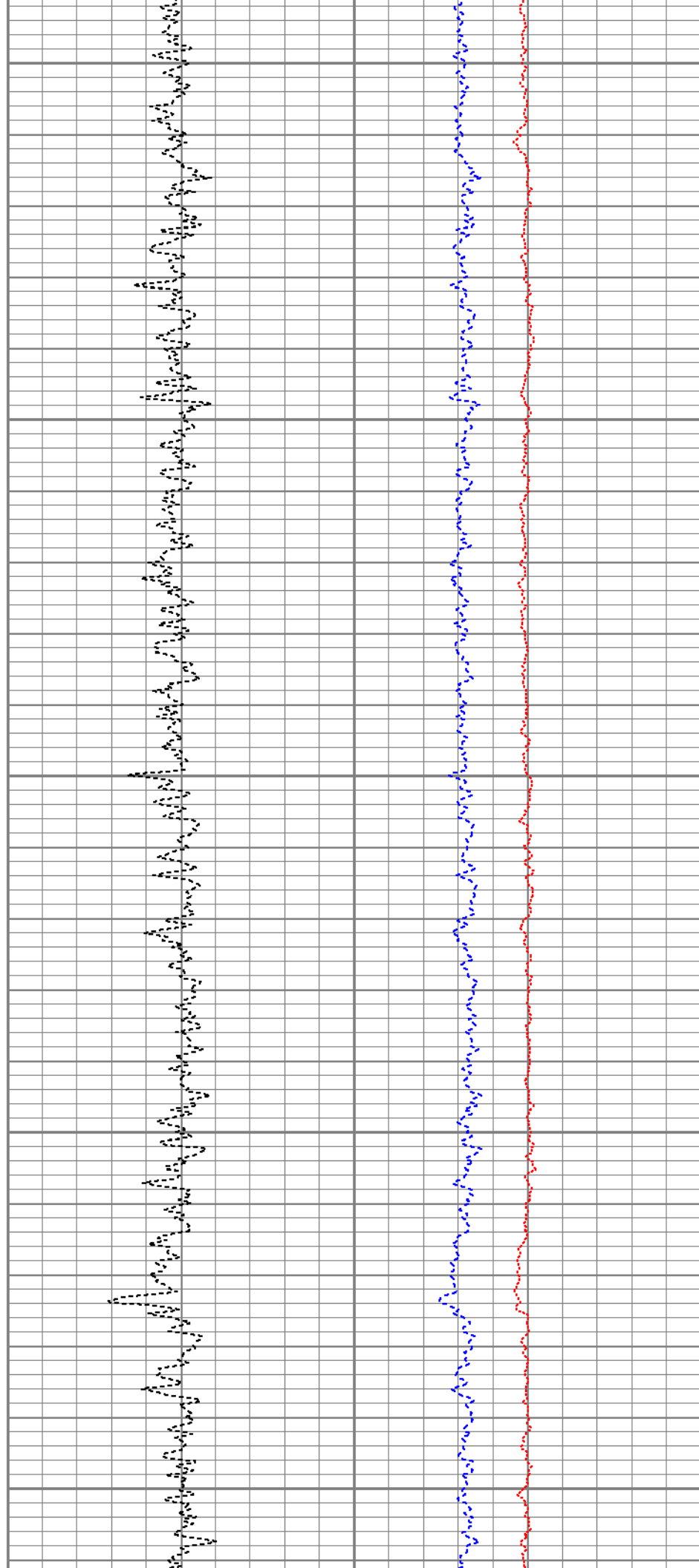
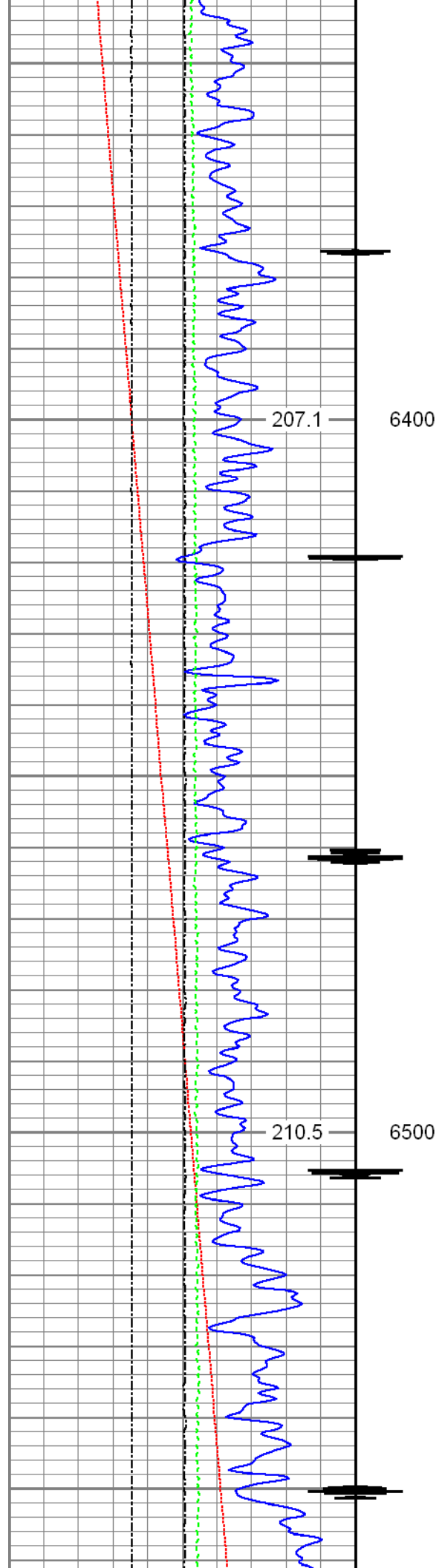


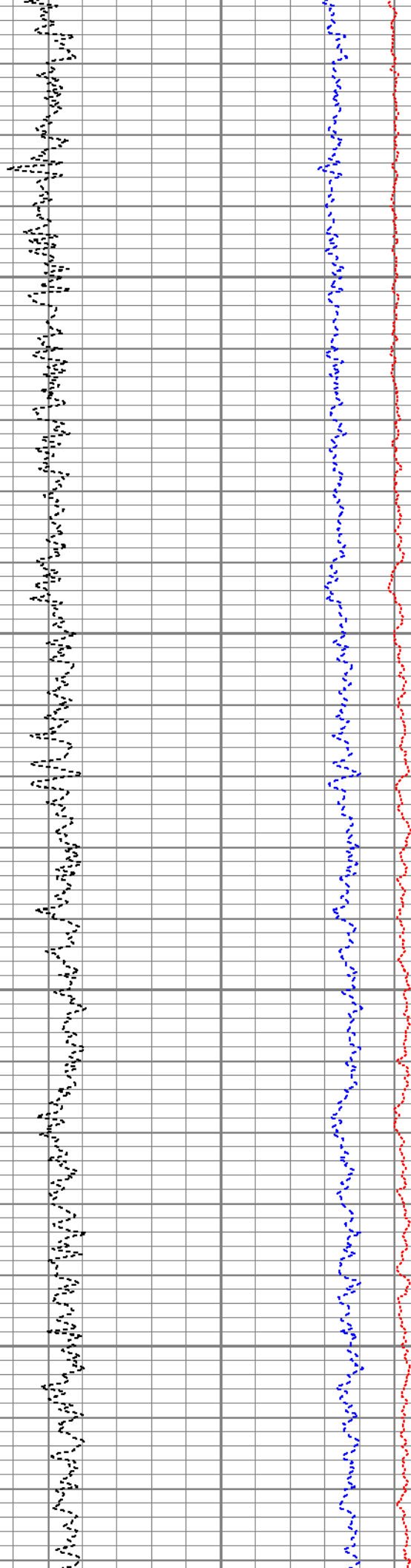
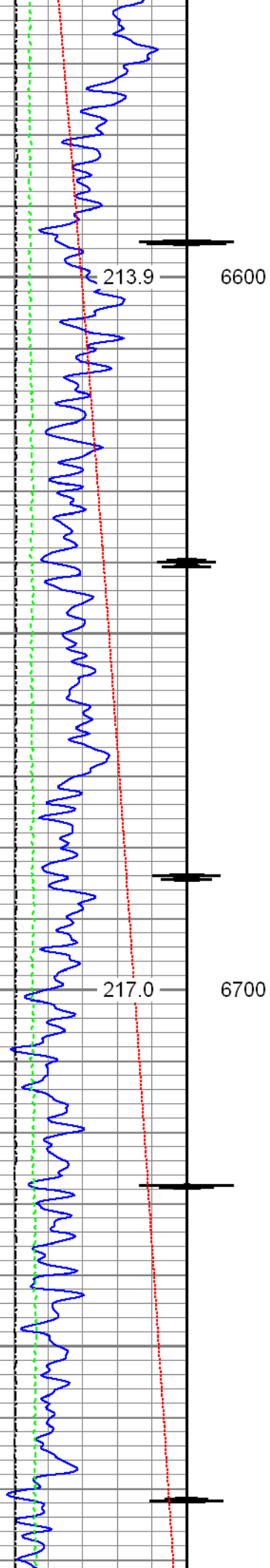


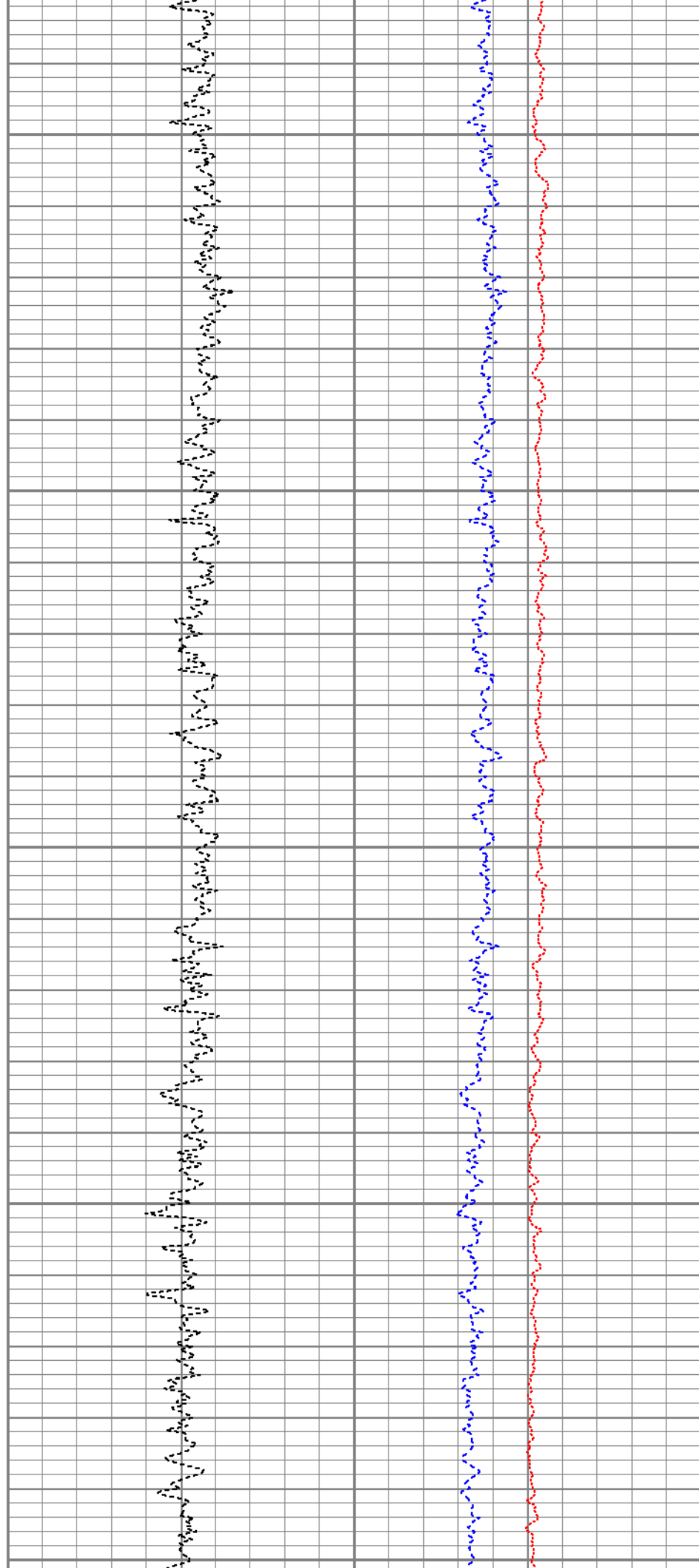
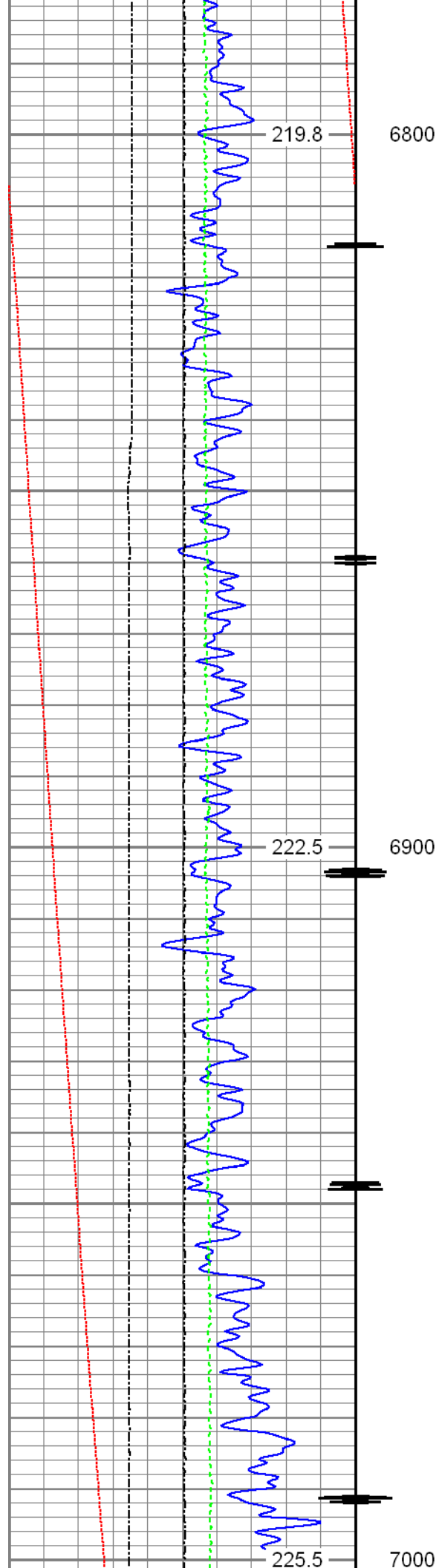


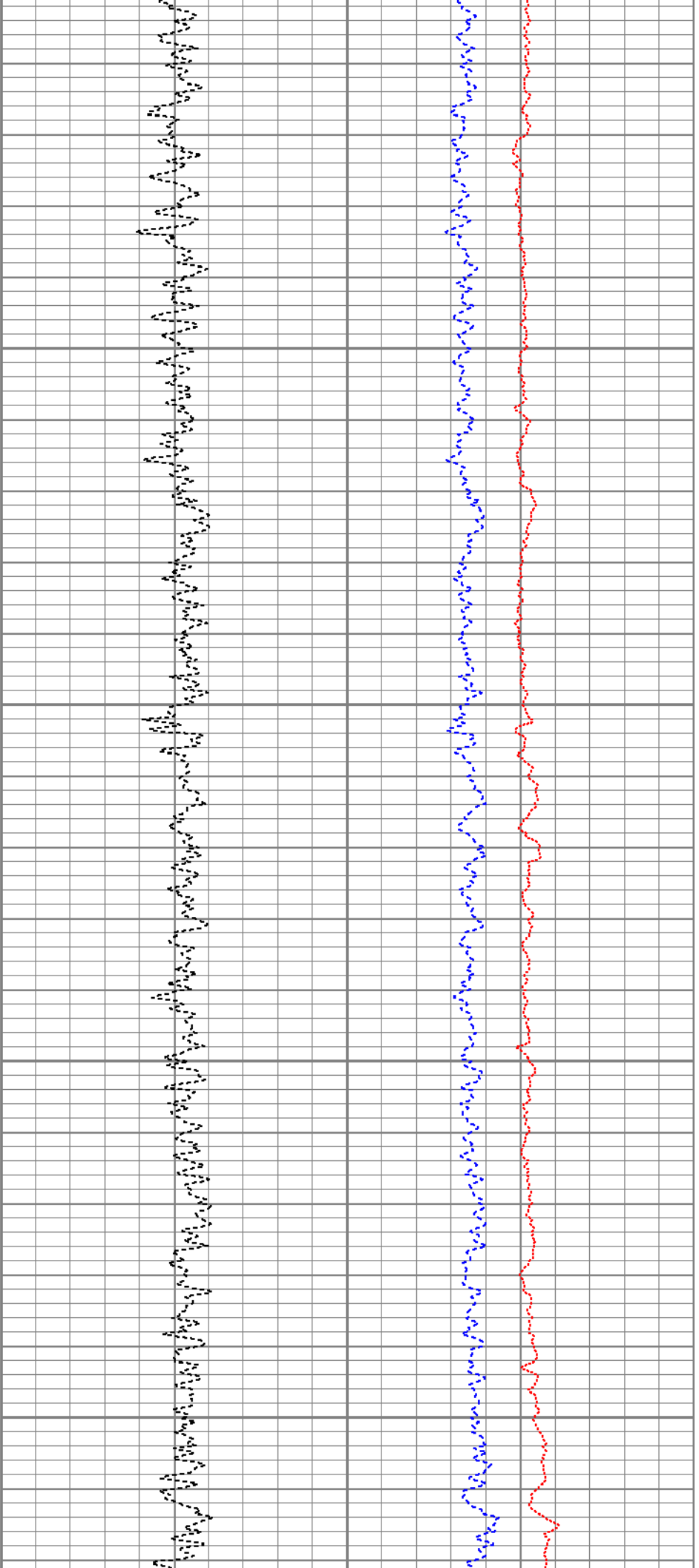
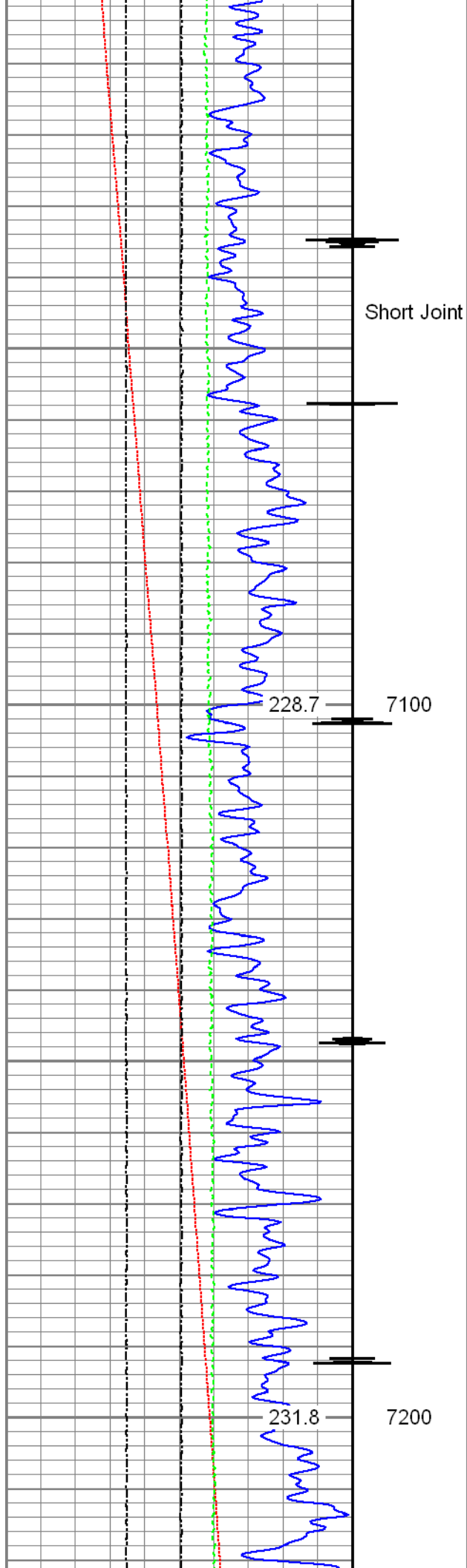


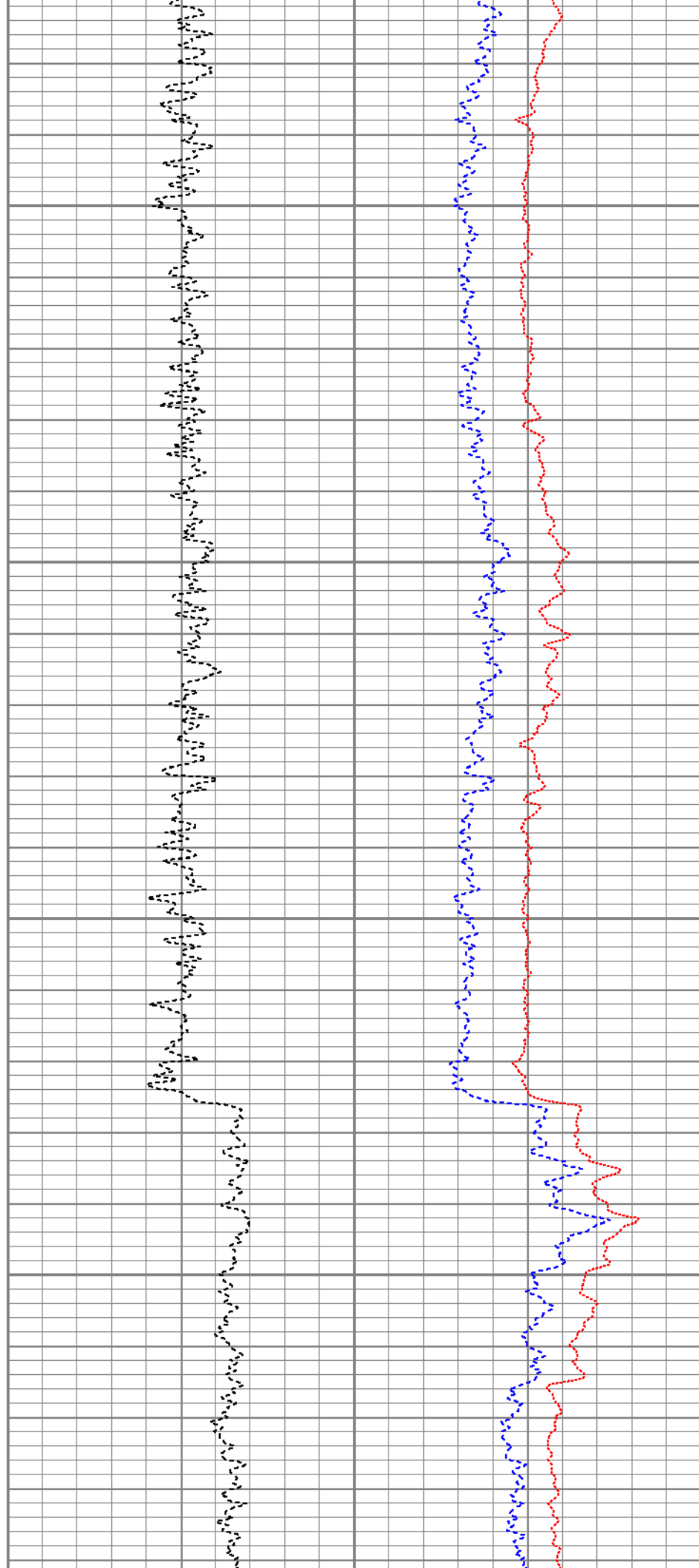
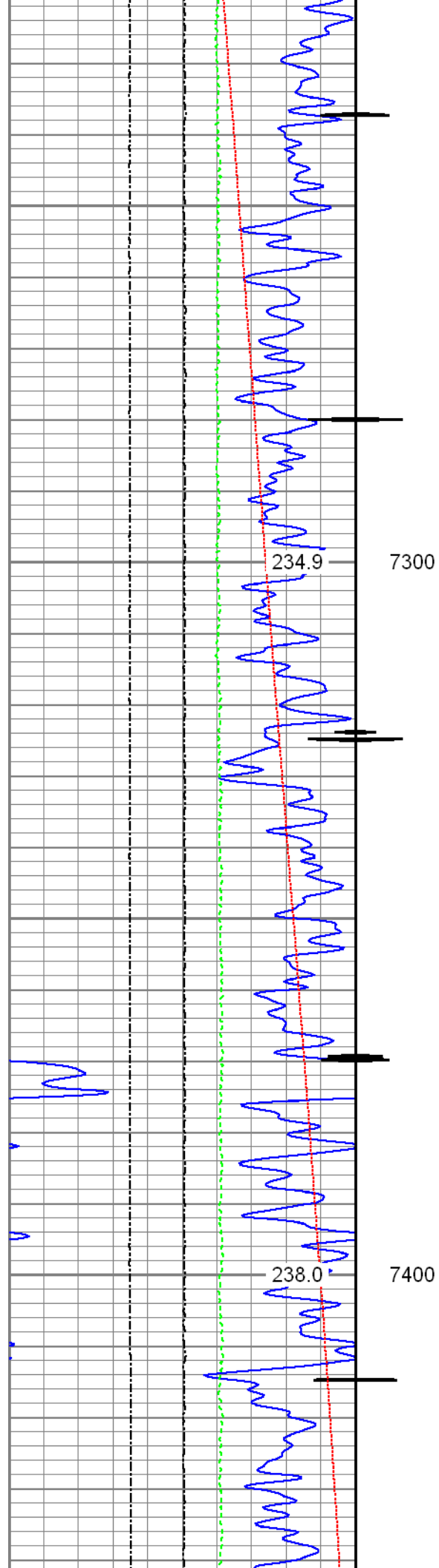


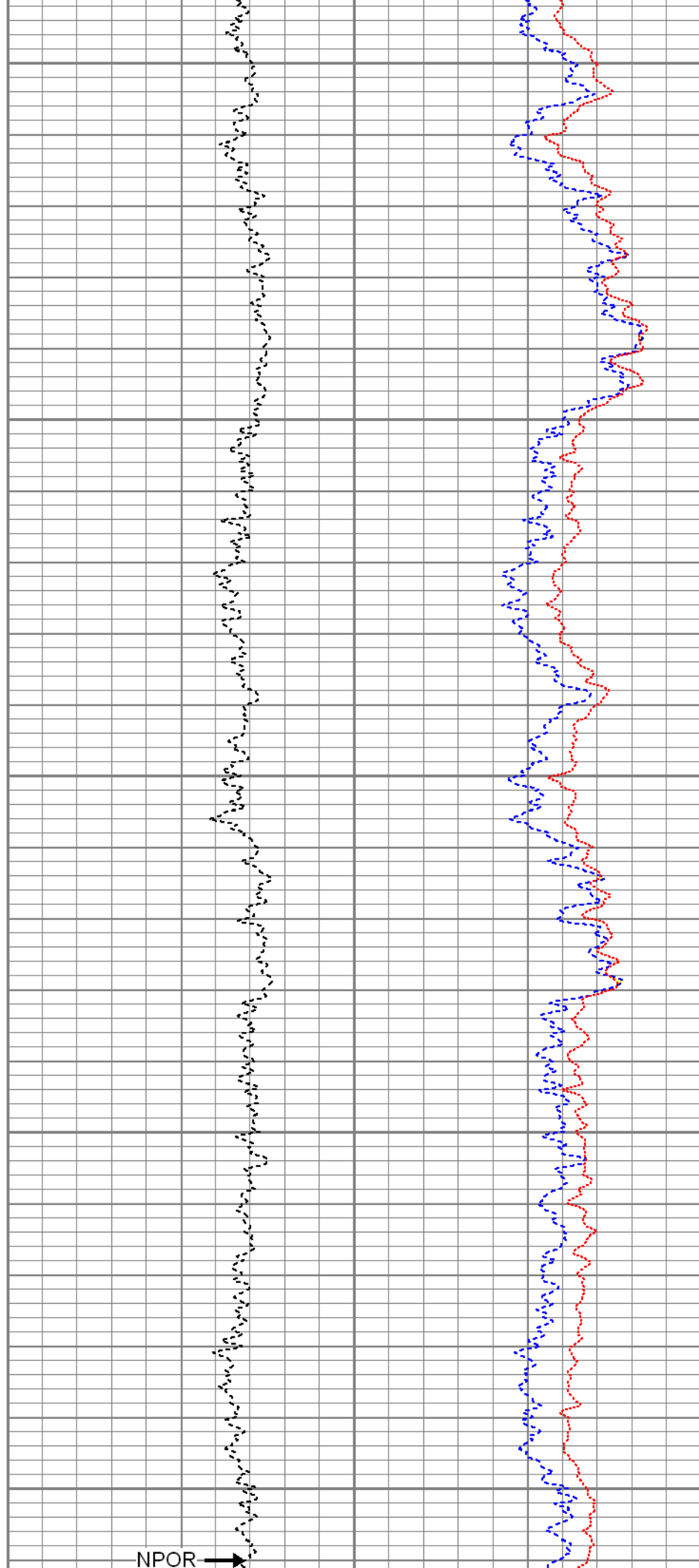
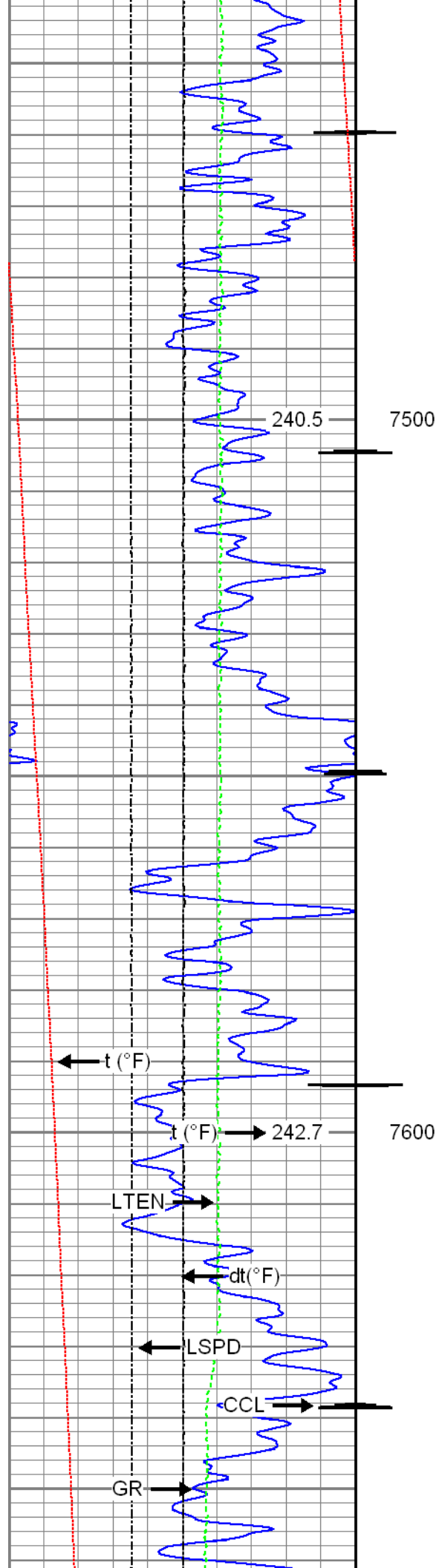




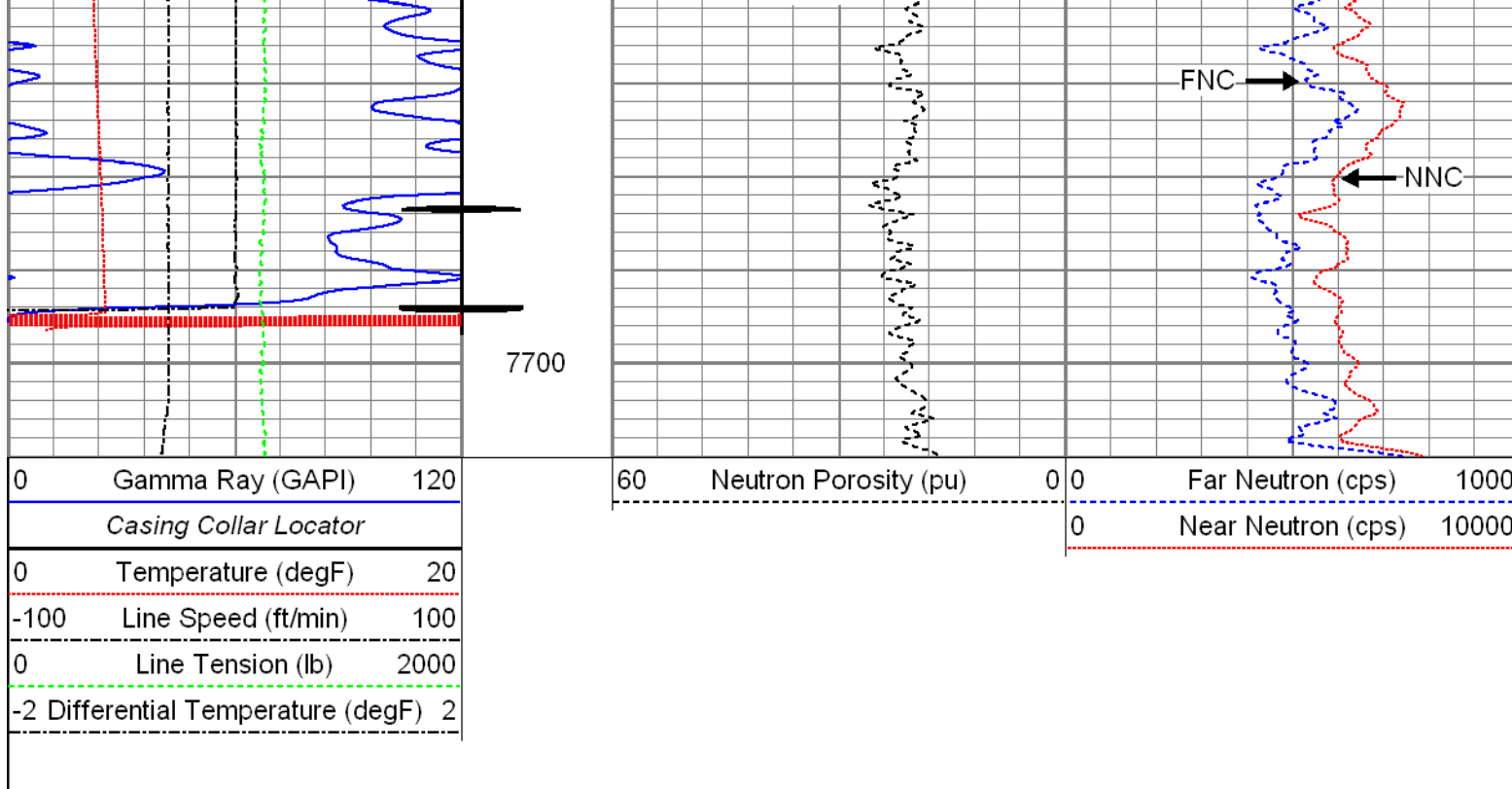















## Repeat Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341795\_anadarko\_tedford 3c-28hz\_10-21-15\_rbl\_cnl\0512341795\_anadarko\_tec

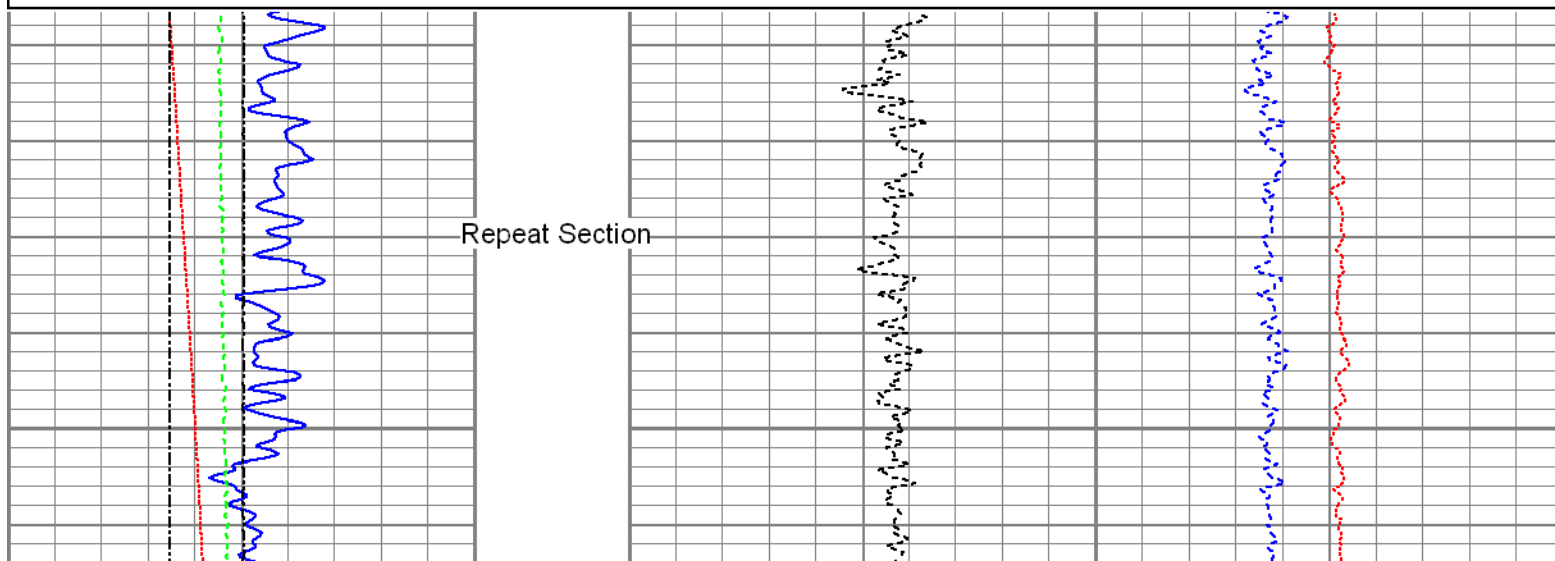
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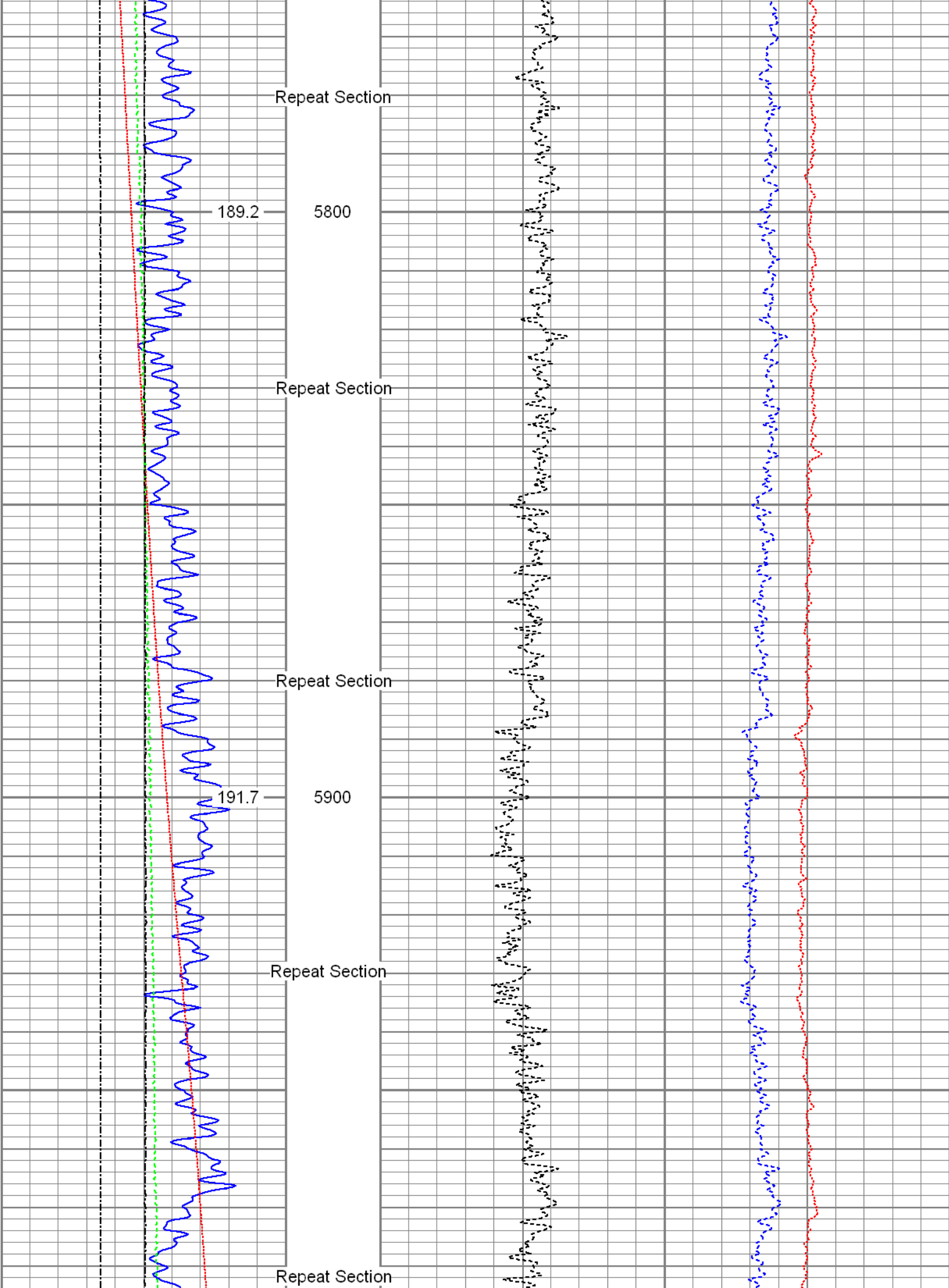
Presentation Format: cnl

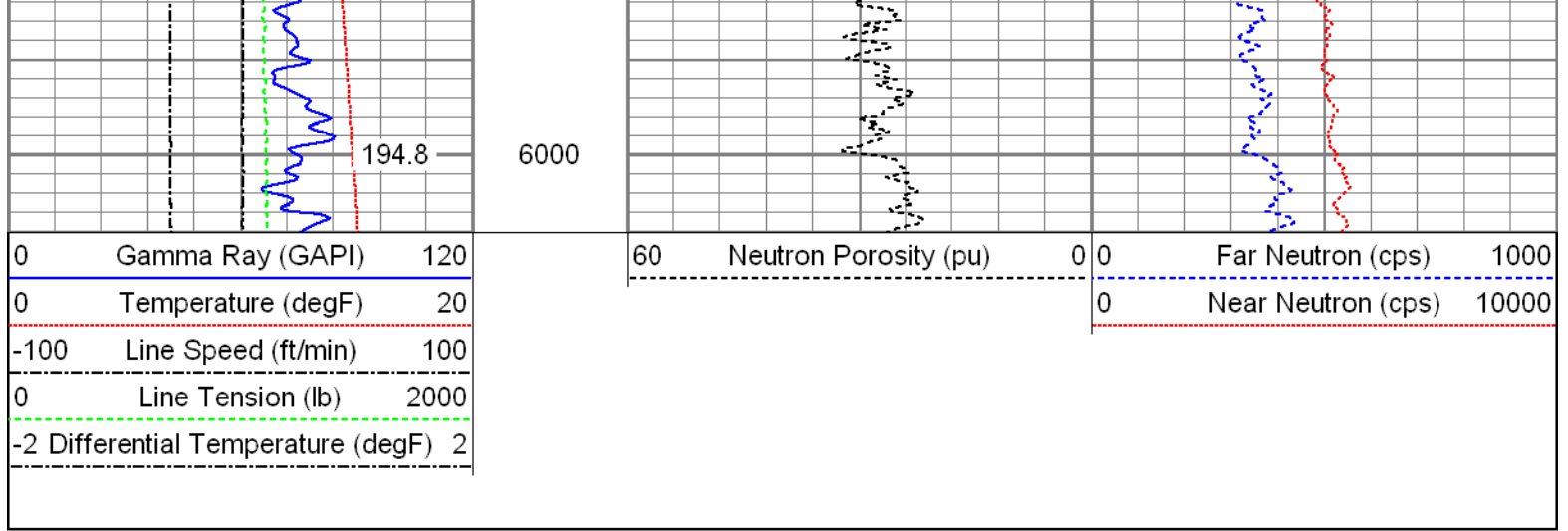
Dataset Creation: Wed Oct 21 13:23:27 2015 by Log 7.0 B1

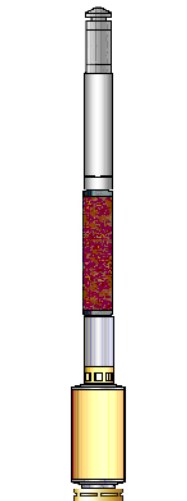
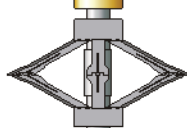
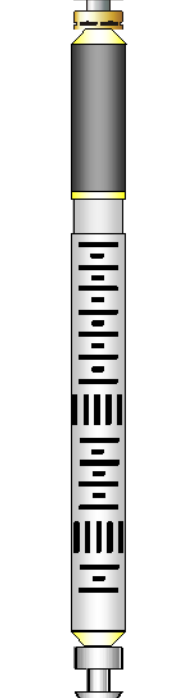
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	120	60	Neutron Porosity (pu)	0	0	Far Neutron (cps)	1000	
0	Temperature (degF)	20					0	Near Neutron (cps)	10000
-100	Line Speed (ft/min)	100							
0	Line Tension (lb)	2000							
-2	Differential Temperature (degF)	2							







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)				
GR	24.77		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00				
			UW_XTU-UW_XTU_002 (219135) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50				
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00				
			UW_PGR-UW_PGR_020 (10013902) Production Gamma Ray	1.93	1.69	9.50				
TEMP	23.37		UW_PRT-UW_PRT_016 (10025095) Platinum Resistance Thermometer	1.04	1.69	5.20				
CCL	22.12		UW_CCL-UW_CCL_028 (10009470) Ultrawire 3-1/8" CCL	1.61	3.13	36.00				
WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8	14.72			UW_PRC #3 -DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00			
				UW_RBT-UW_RBT_004 (10013454) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00			
						UW_PRC-UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00	
							CBLTEMP CBLROT WVFS5FT	14.72	14.72	13.72

CNLSC	1.53		6.61	1.69	30.00
CNSSC	1.12				
TSTAMP	0.00				

Dataset: 0512341795\_Anadarko\_Tedford 3C-28HZ\_10-21-15\_RBL\_CNL.db: field/well/run1/pass7  
Total Length: 29.01 ft  
Total Weight: 296.20 lb  
O.D. 3.13 in

Calibration Casing Diameter: 5.500 in  
Calibration Depth: 30.836 ft

Master Calibration, performed Wed Oct 21 12:46:32 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.004	1.002	1.000	71.921	71.027	0.742
5FT	-0.002	0.990	1.000	71.921	71.465	1.174
S1	0.002	1.002	0.000	100.000	100.054	-0.244
S2	0.001	1.002	0.000	100.000	99.905	-0.122
S3	0.001	1.007	0.000	100.000	99.454	-0.121
S4	0.001	1.007	0.000	100.000	99.412	-0.121
S5	0.001	1.009	0.000	100.000	99.201	-0.140
S6	0.001	1.009	0.000	100.000	99.202	-0.121
S7	0.001	0.998	0.000	100.000	100.349	-0.129
S8	0.002	1.000	0.000	100.000	100.191	-0.166

#### Temperature Calibration Report

Serial Number: 10025095  
Tool Model: UW\_PRT\_016  
Performed: Wed Feb 11 13:43:20 2015

Point #	Reading	Reference
1	12798.00 cps	68.00 degF
2	18136.00 cps	104.00 degF
3	29513.00 cps	176.00 degF
4	40905.00 cps	248.00 degF
5	52487.00 cps	320.00 degF
6	58362.00 cps	356.00 degF
7	cps	degF
8	cps	degF
9	cps	degF
10	cps	degF

#### Gamma Ray Calibration Report

Serial Number: 10013902  
Tool Model: UW\_PGR\_020  
Performed: Sun Jun 13 13:33:21 1993

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps



Company Kerr-McGee Oil and Gas Onshore LP  
Well Tedford 3C-28HZ  
Field Wattenberg  
County Weld  
State Colorado