



Compensated Neutron
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Meguire 28C-16HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Meguire 28C-16HZ	
	Field	Wattenberg	
	County	Weld	
Location:	State	Colorado	
	APL # :	05-123-41970	
	SEC 21	TWP 2N	RGE 65W
	Permanent Datum	Ground Level	Elevation 4888'
Log Measured From	Kelly Bushing 16 FT		
Drilling Measured From	Kelly Bushing		
Other Services			Elevation
Gauge Ring			K.B. 4904'
RBT			D.F. 4903'
			G.L. 4888'

Date	02-DEC-2015
Run Number	Two
Depth Driller	15363 FT
Depth Logger	7533 FT
Bottom Logged Interval	7532 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	246°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	8:45 PM
Equipment Number	HD-0343
Location	Fort Lupton, CO
Recorded By	B. Kalkwarf
Witnessed By	Steve Vigil

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	J-55 BTC	Surface	1844 FT		
Intermediate #1	5 1/2	17	HCP-110 LTC	Surface	15347 FT		
Intermediate #2							
Liner							

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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 Casing Tally Reported Marker Joint Top at 6574 FT
Log Adjusted +10 FT to Correlate to Marker Joint
Gauge Ring ran to 7650 FT
Log ran as deep as possible in heel to Surface
Recorded with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operation
Thank you for choosing FMC Technologies Surface Integrated Services.



Main Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341970_anadarko_meguire 28c-16hz_12-02-15_rbl_cnl\processed_0512341970_

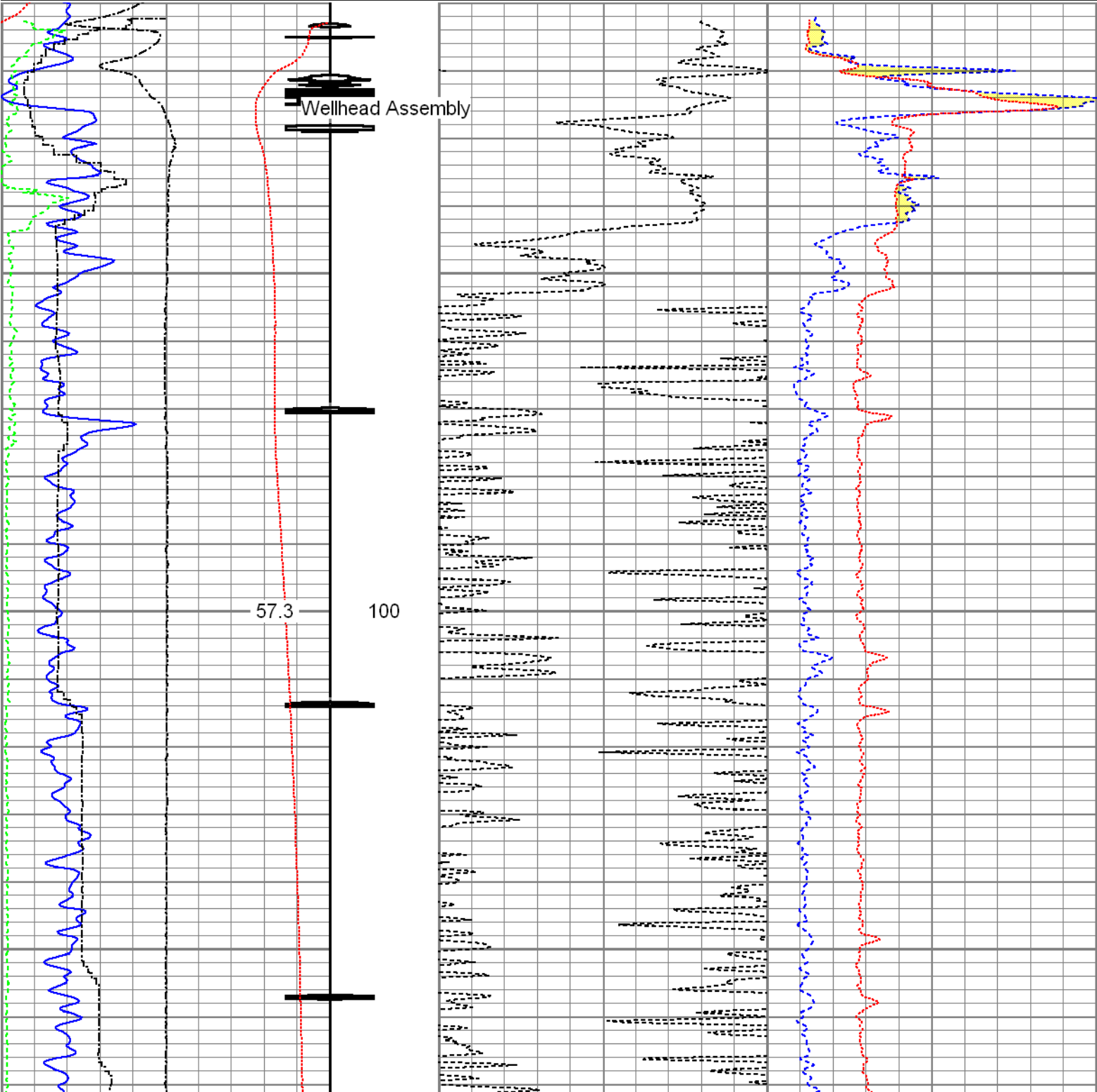
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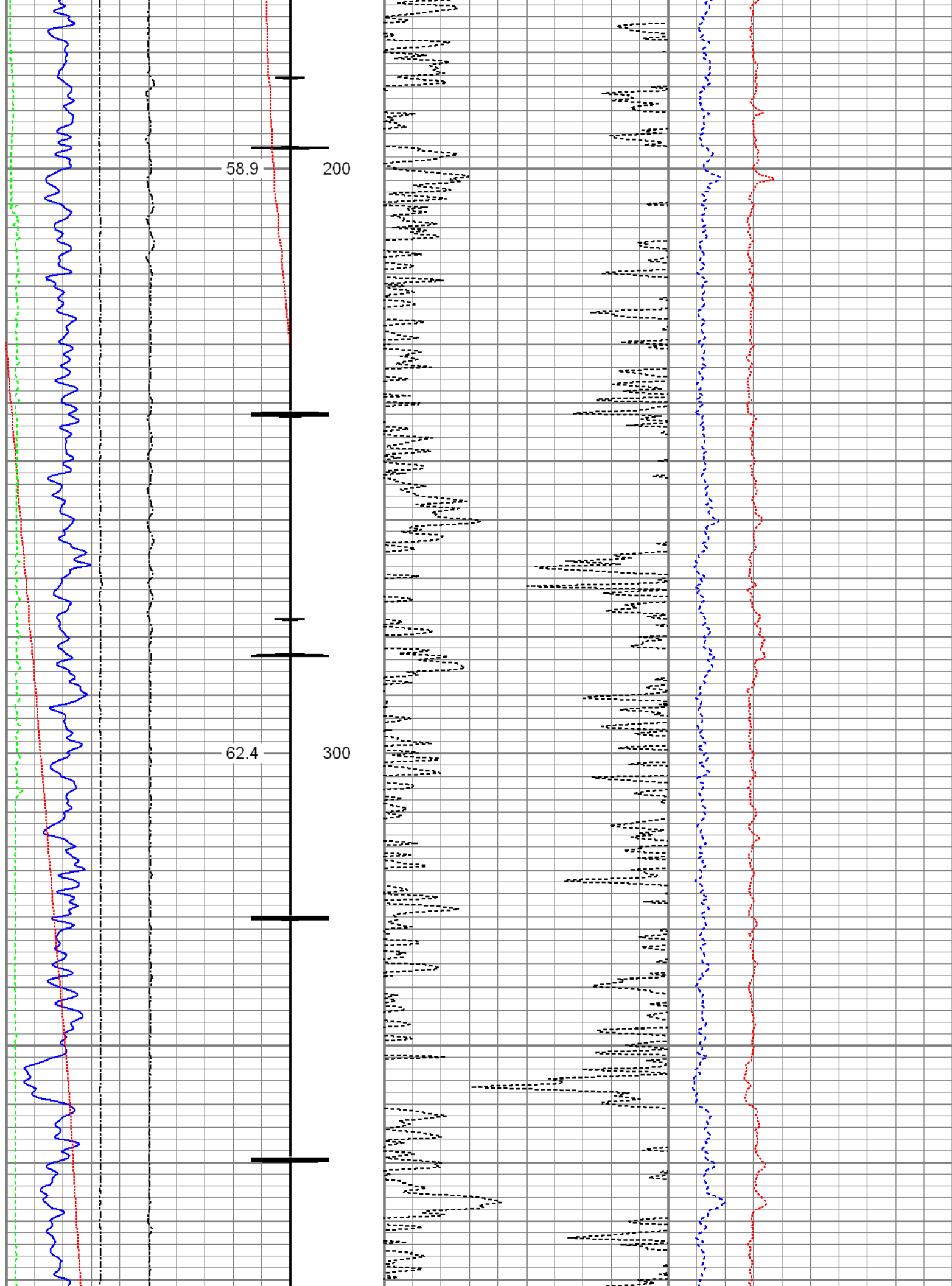
Presentation Format: cnl

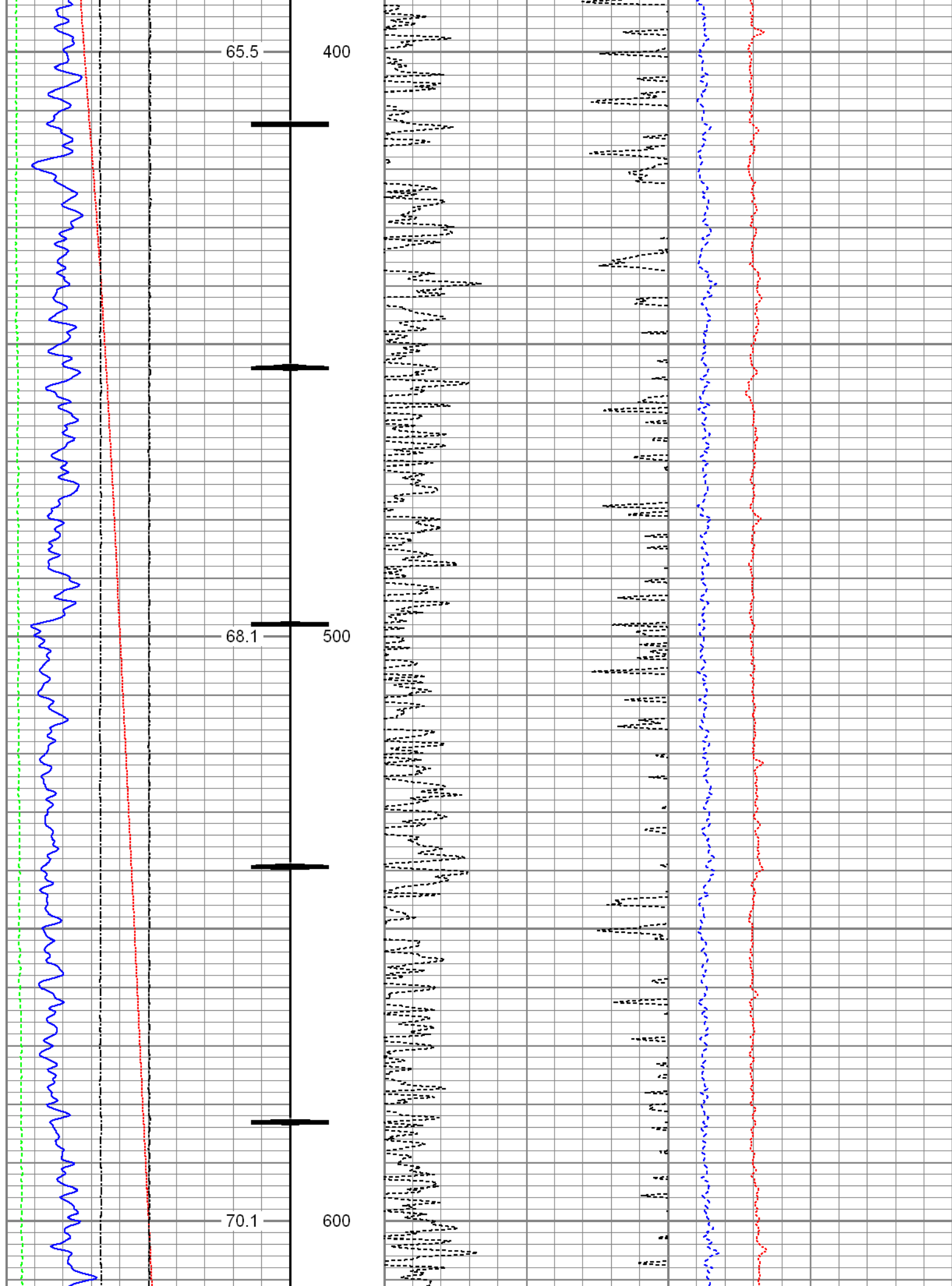
Dataset Creation: Wed Dec 02 09:49:41 2015 by Log 7.0 B1

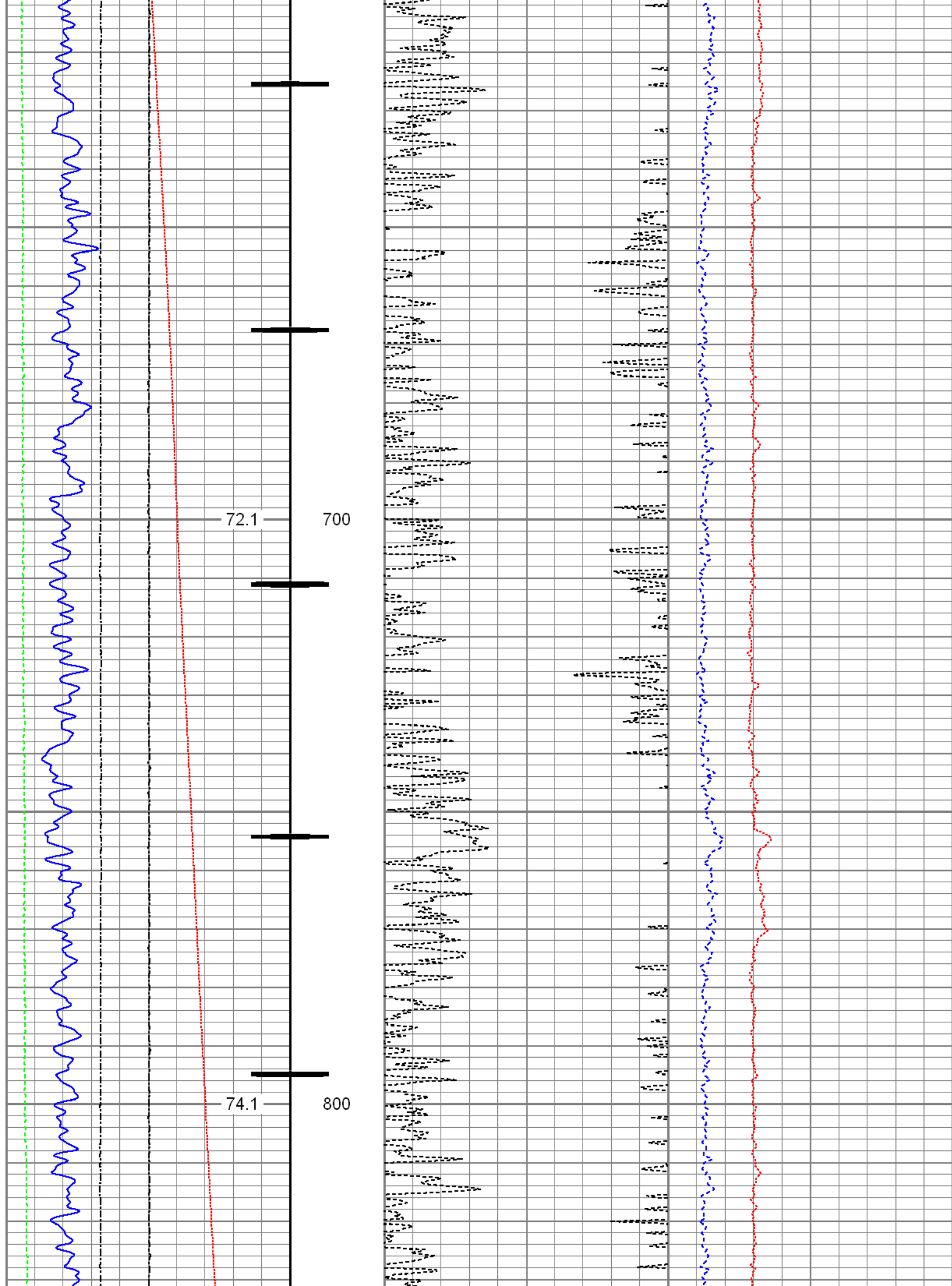
Charted by: Depth in Feet scaled 1:240

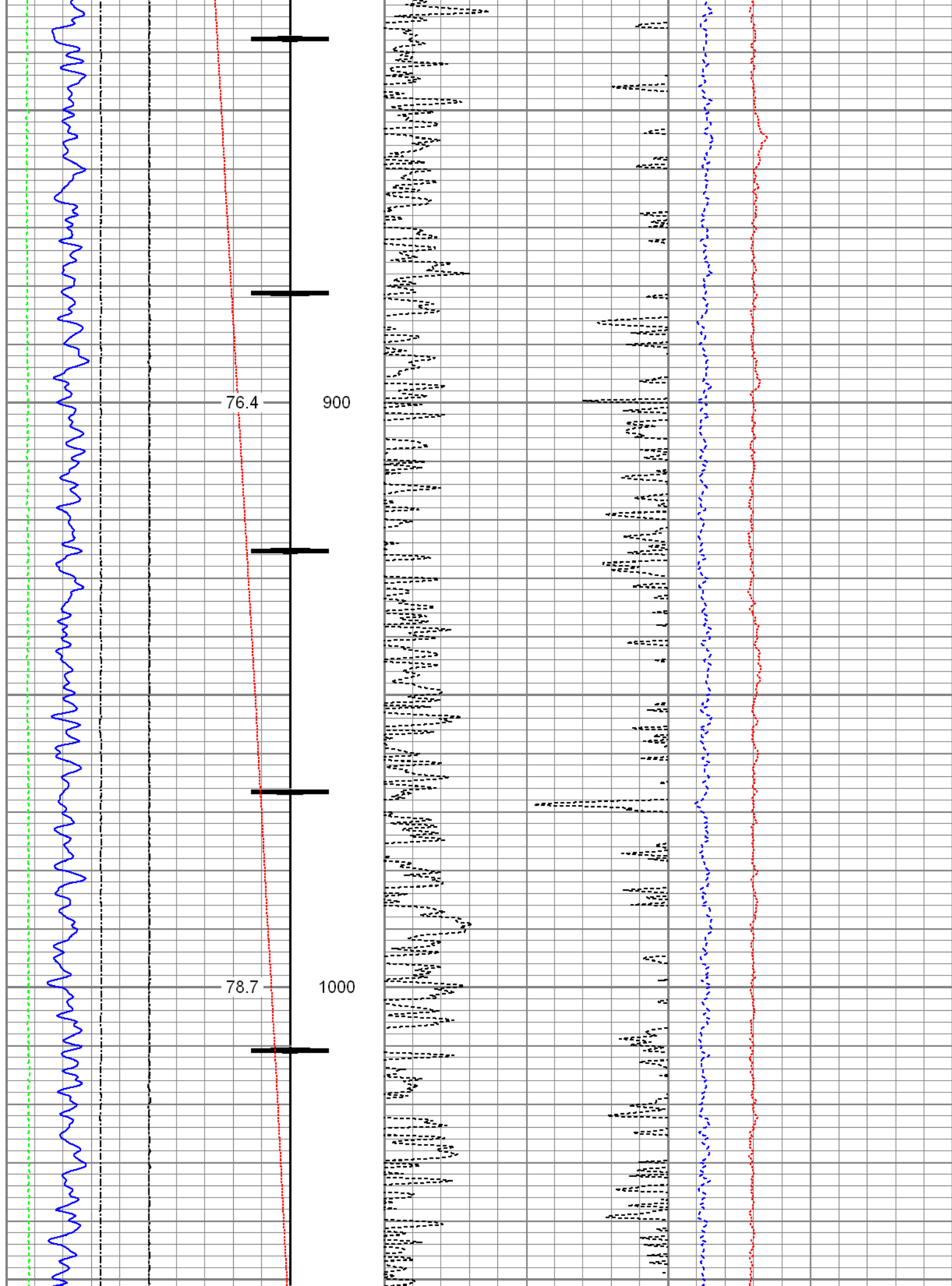
0	Gamma Ray (GAPI)	120	60	Neutron Porosity (pu)	0	0	Far Neutron (cps)	1000
Casing Collar Locator						0	Near Neutron (cps)	10000
0	Temperature (degF)	20						
-100	Line Speed (ft/min)	100						
0	Line Tension (lb)	2000						
-2	Differential Temperature (degF)	2						

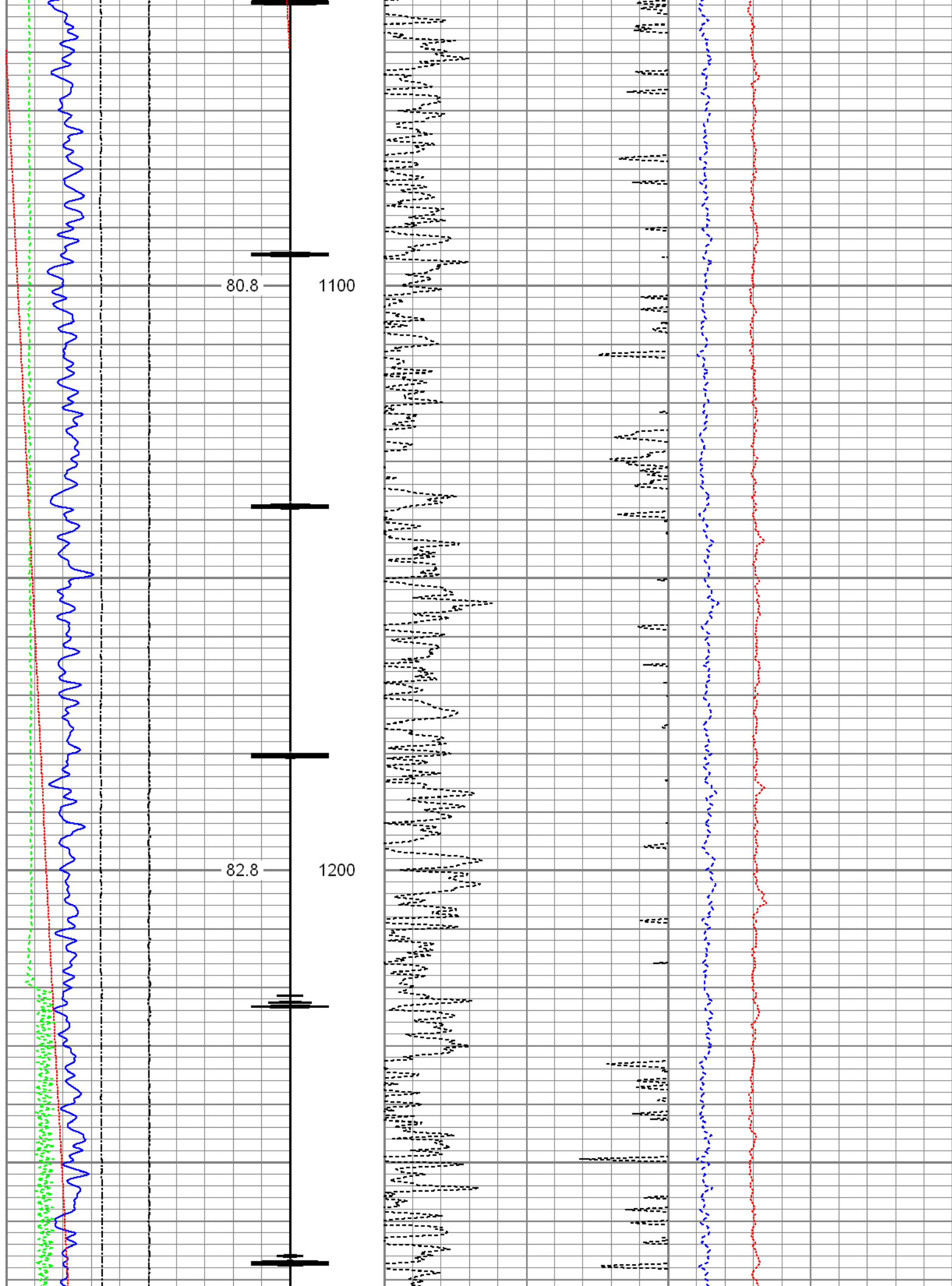


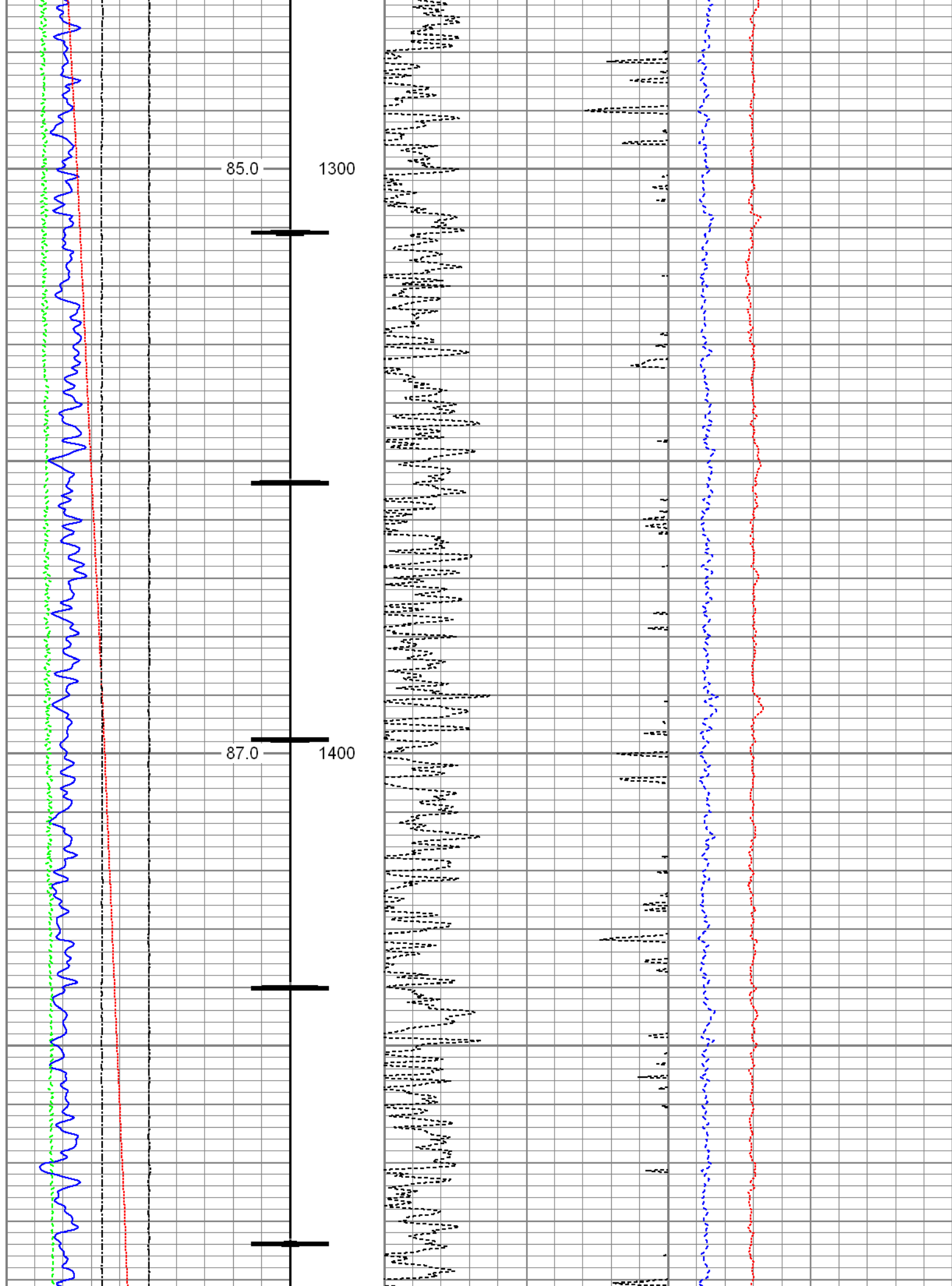


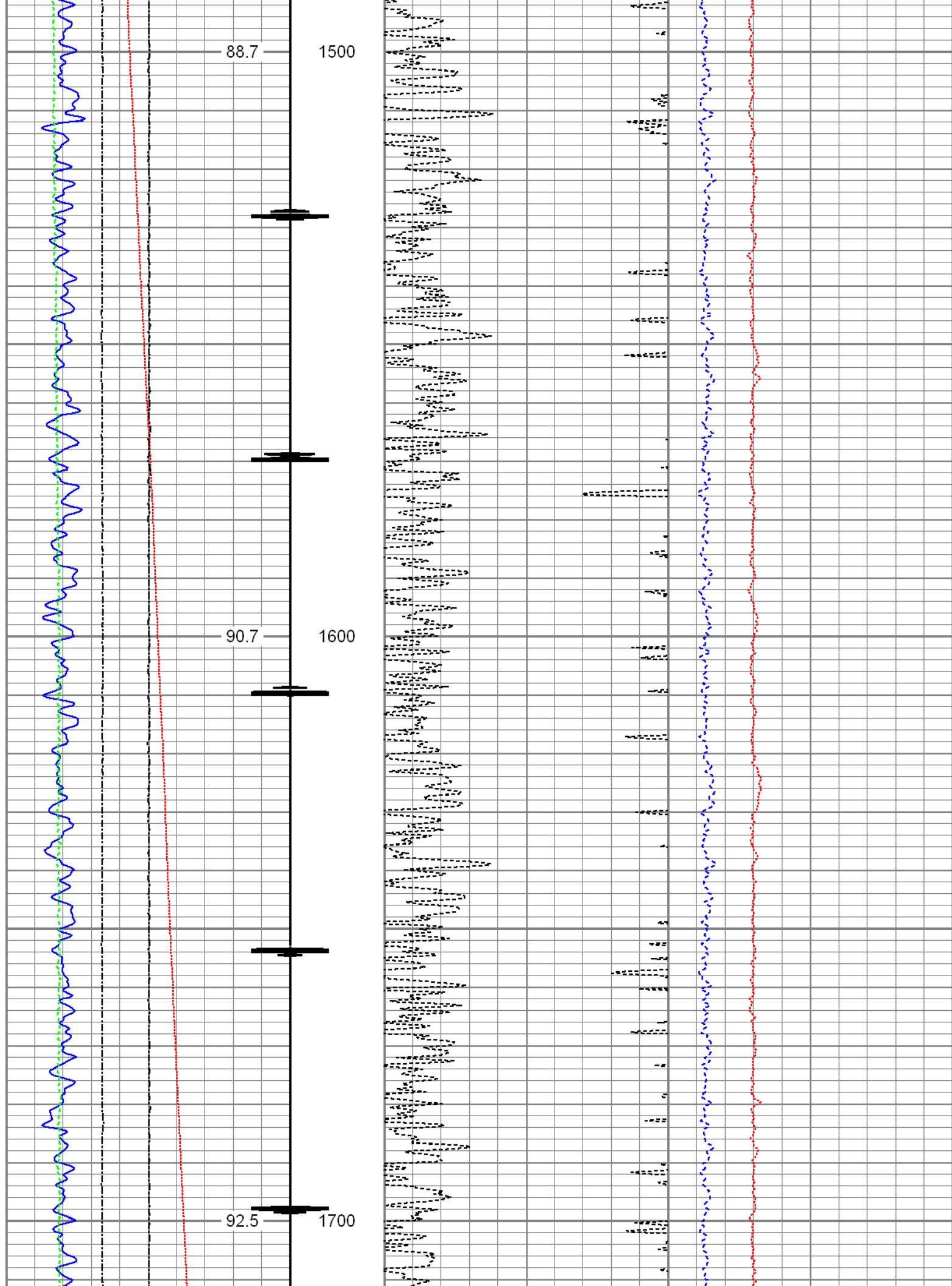


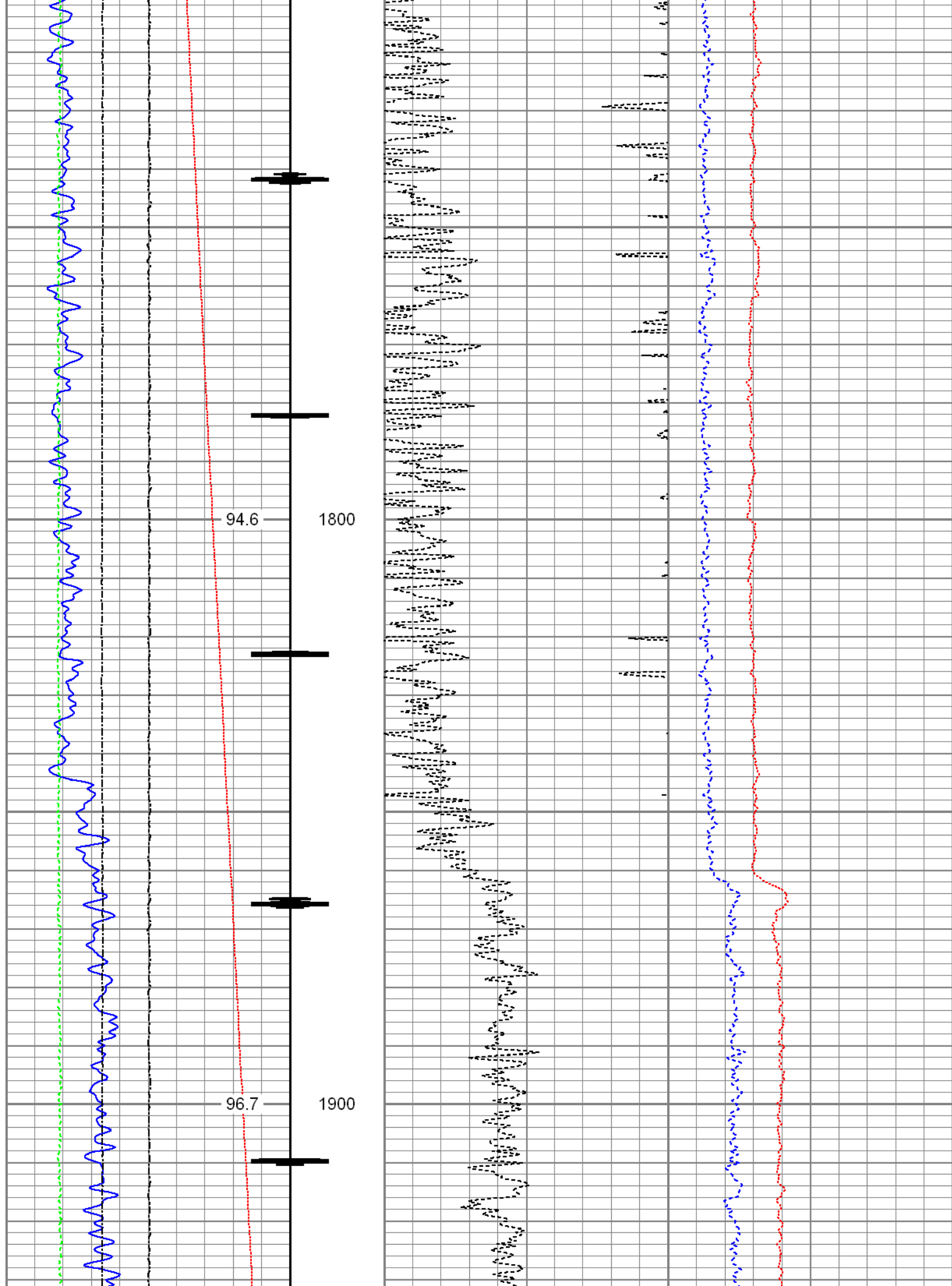


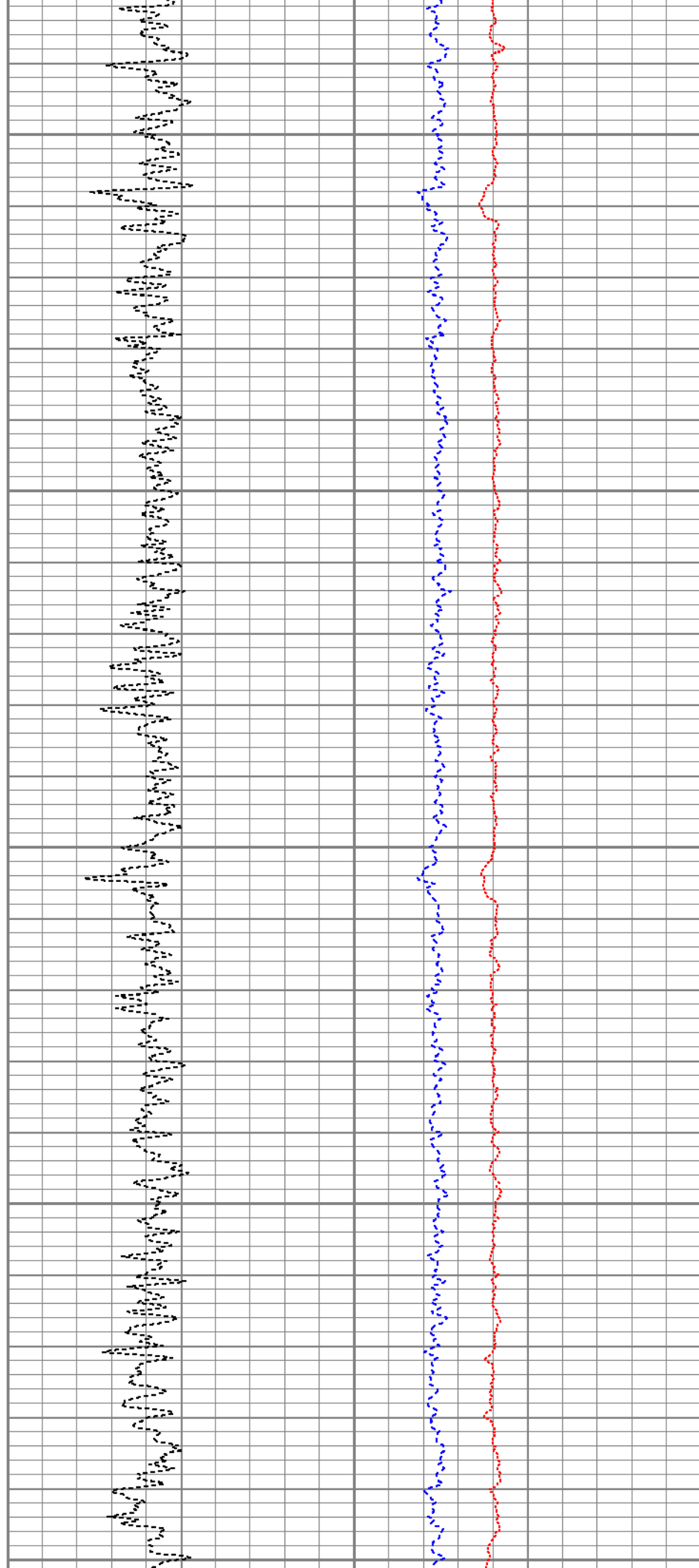
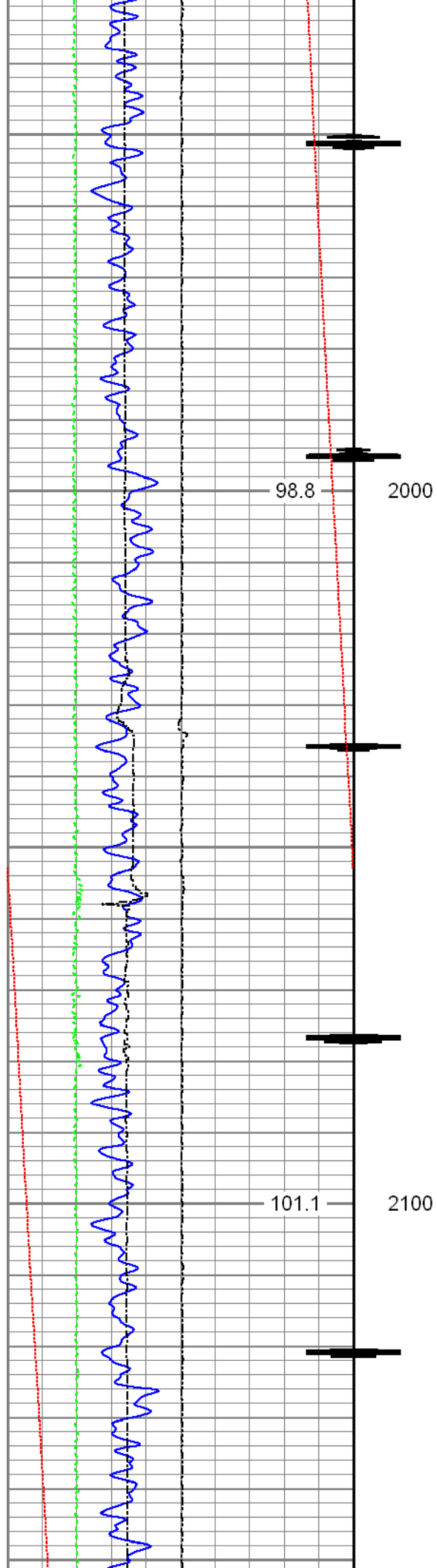


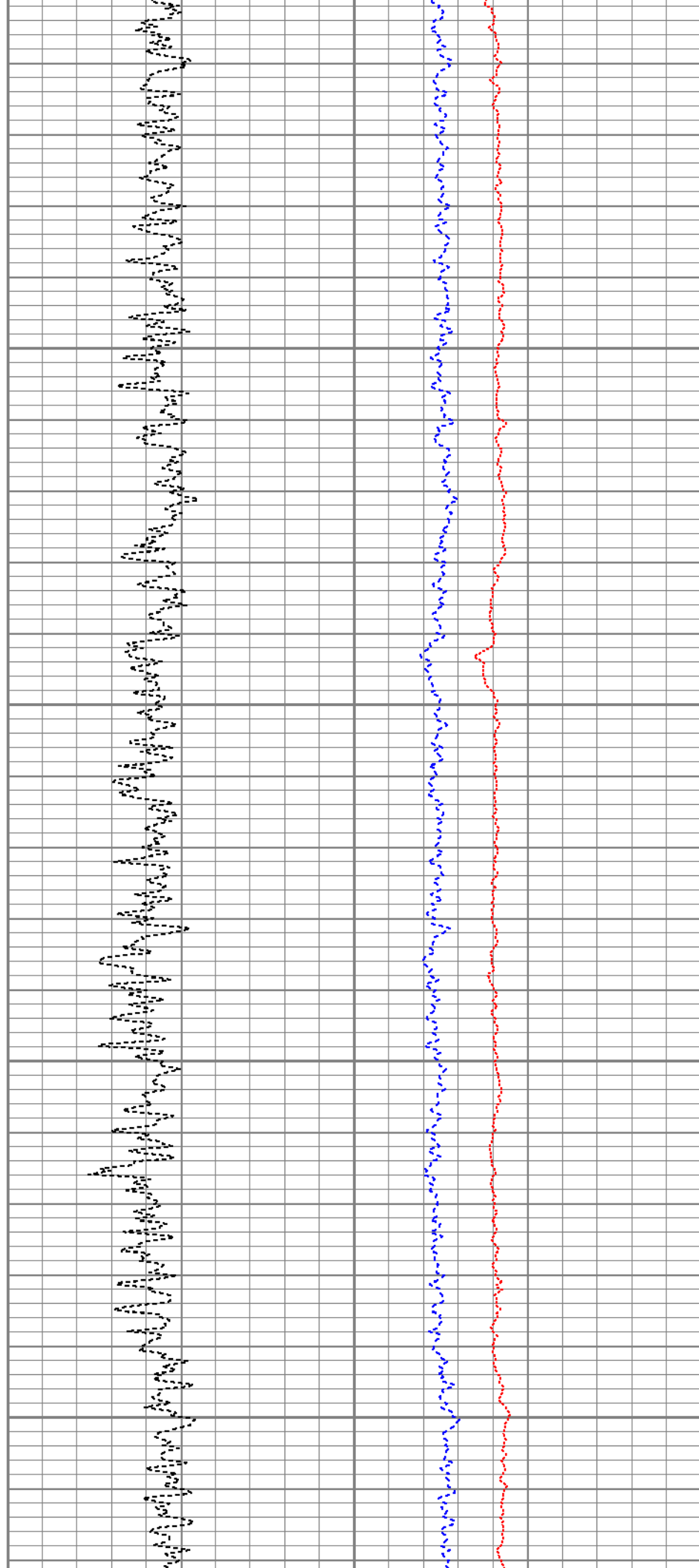
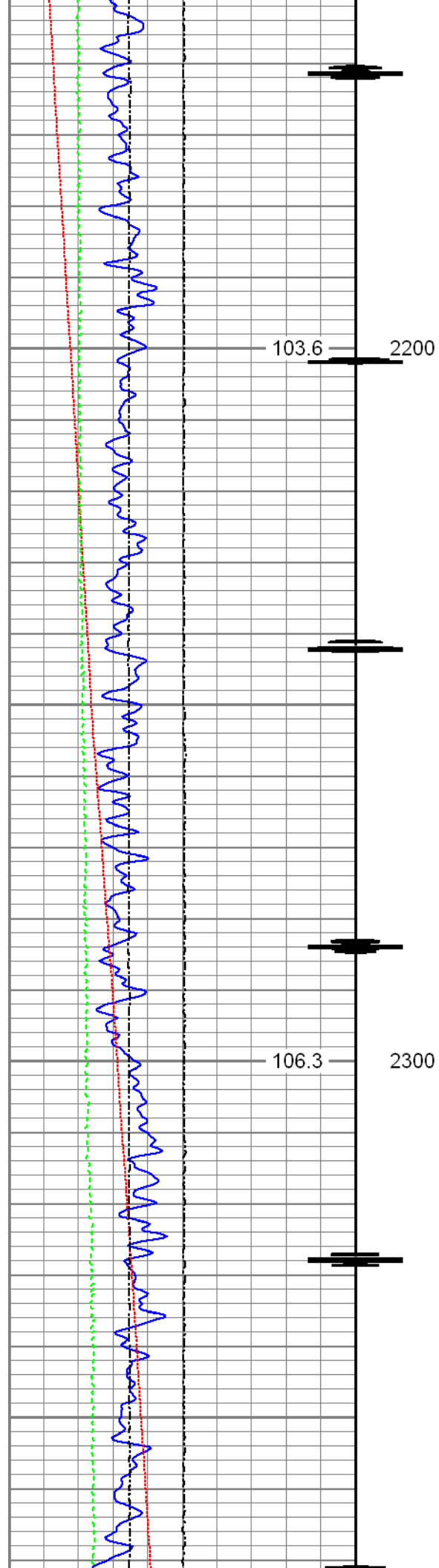


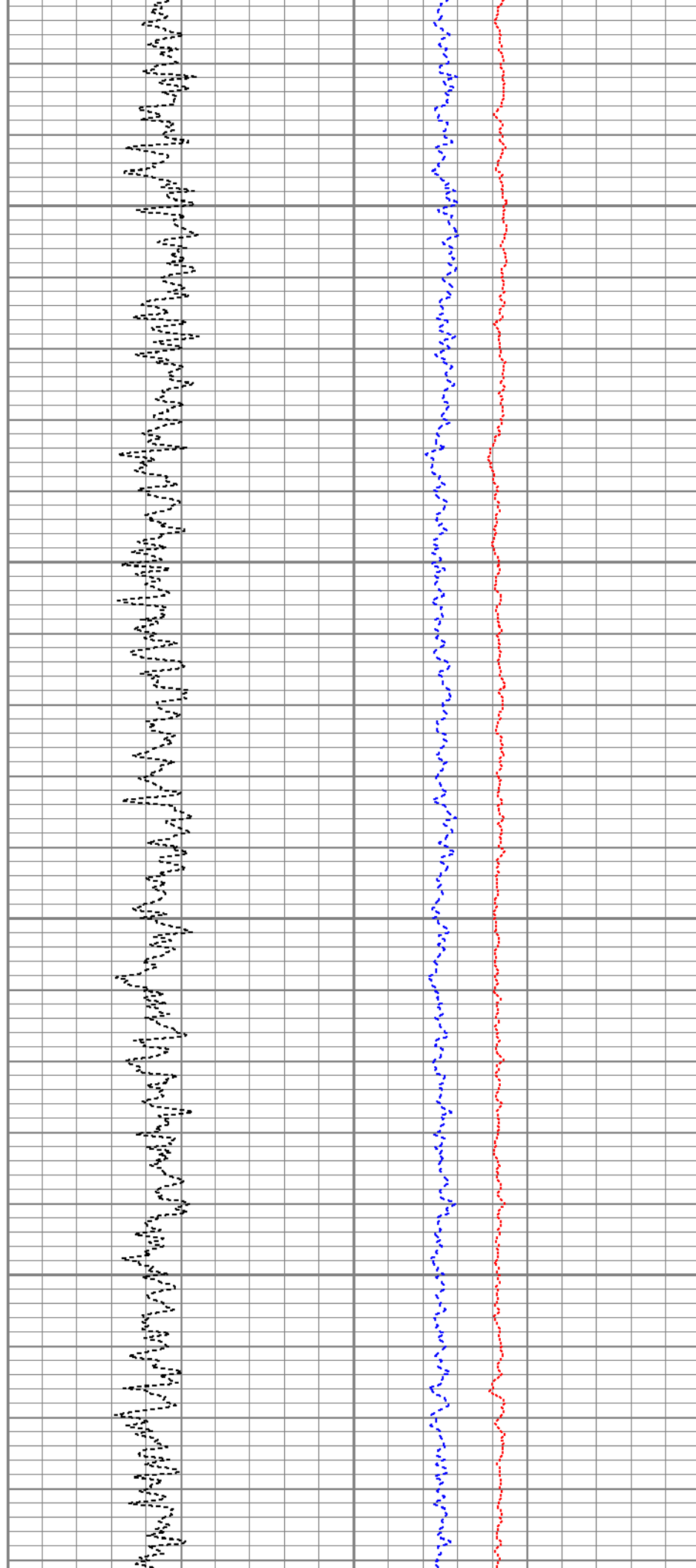
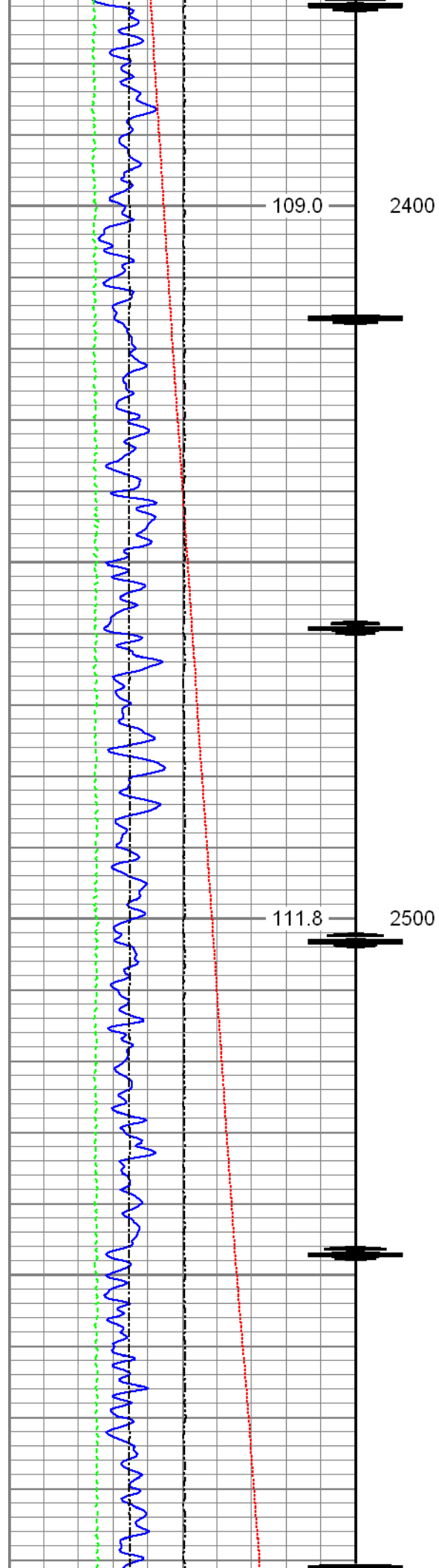


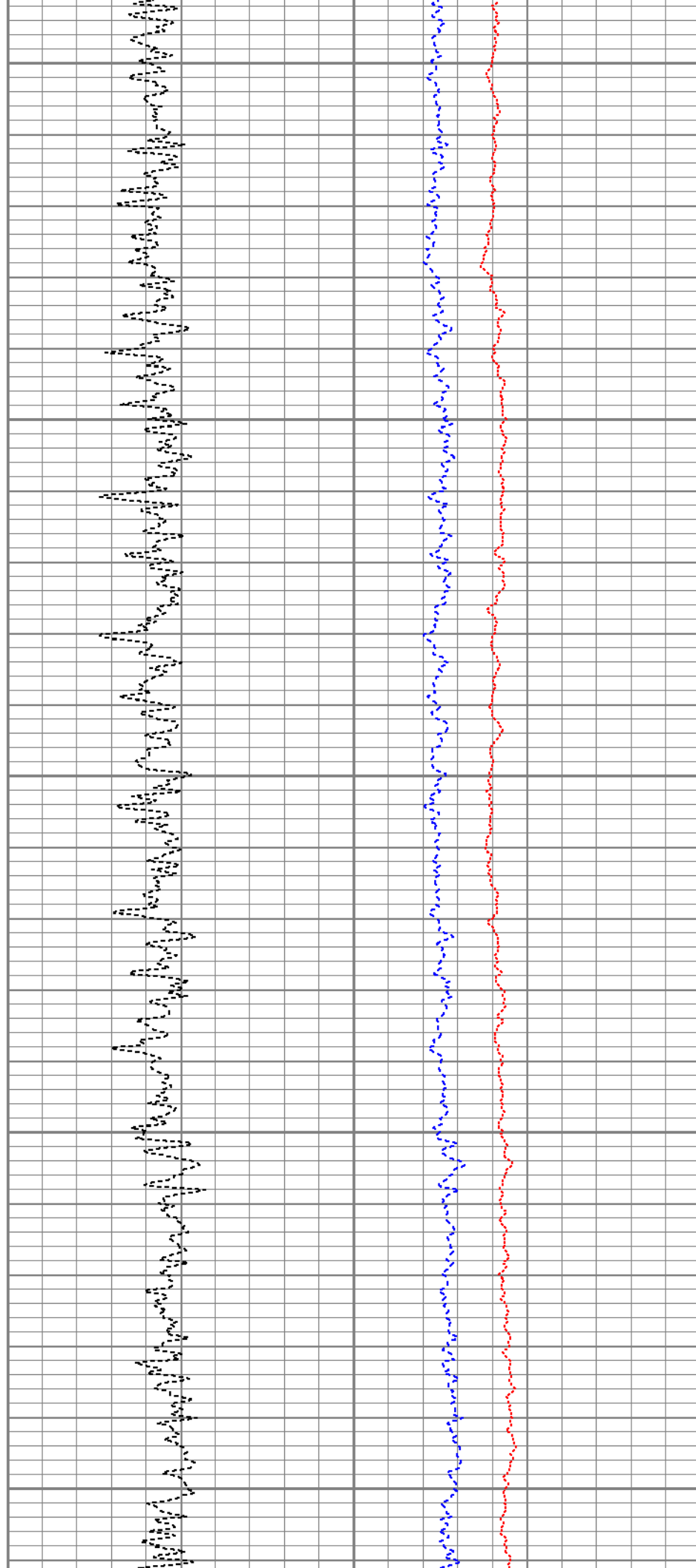
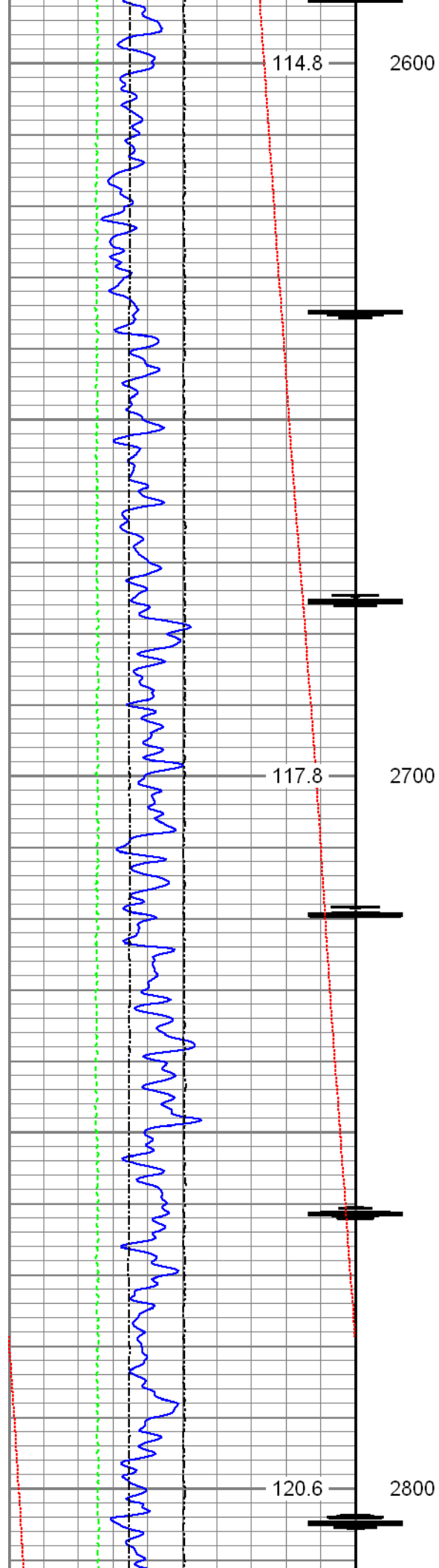


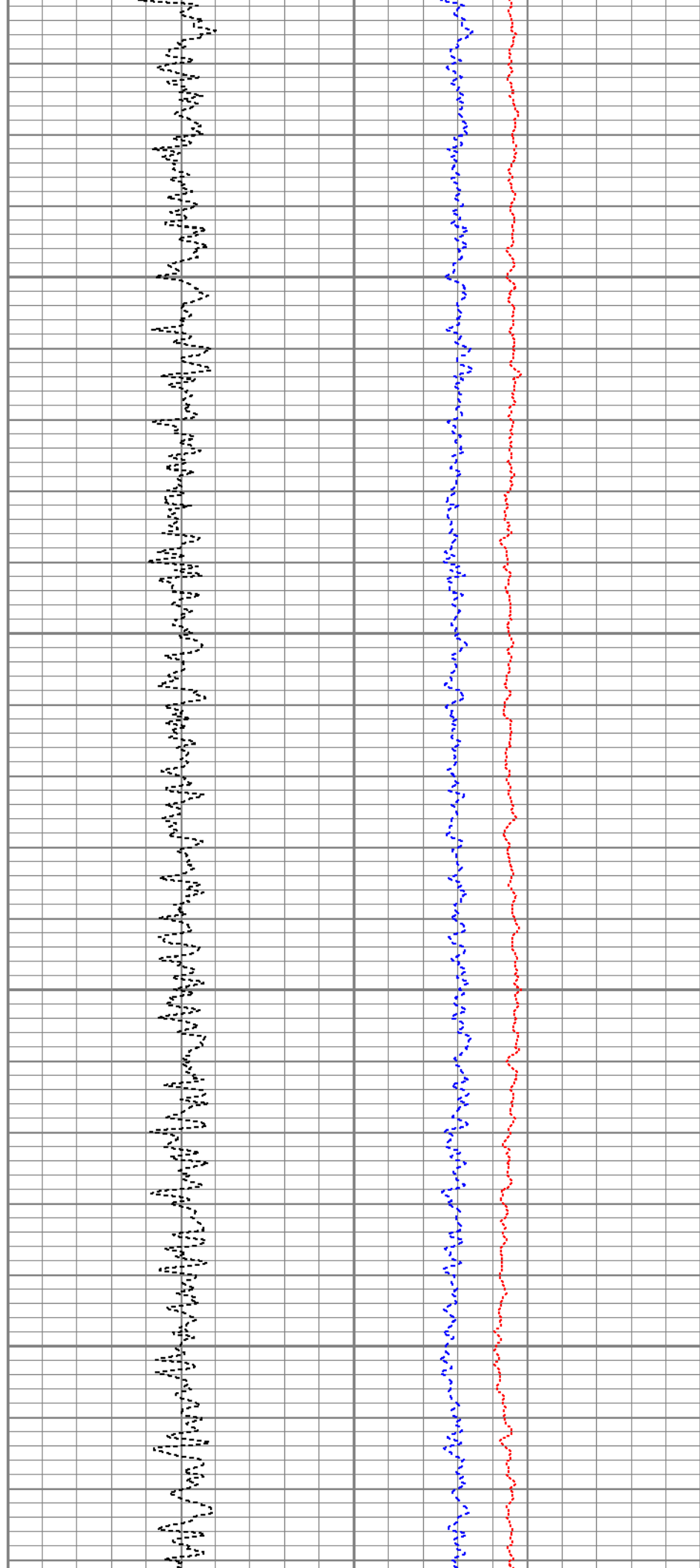
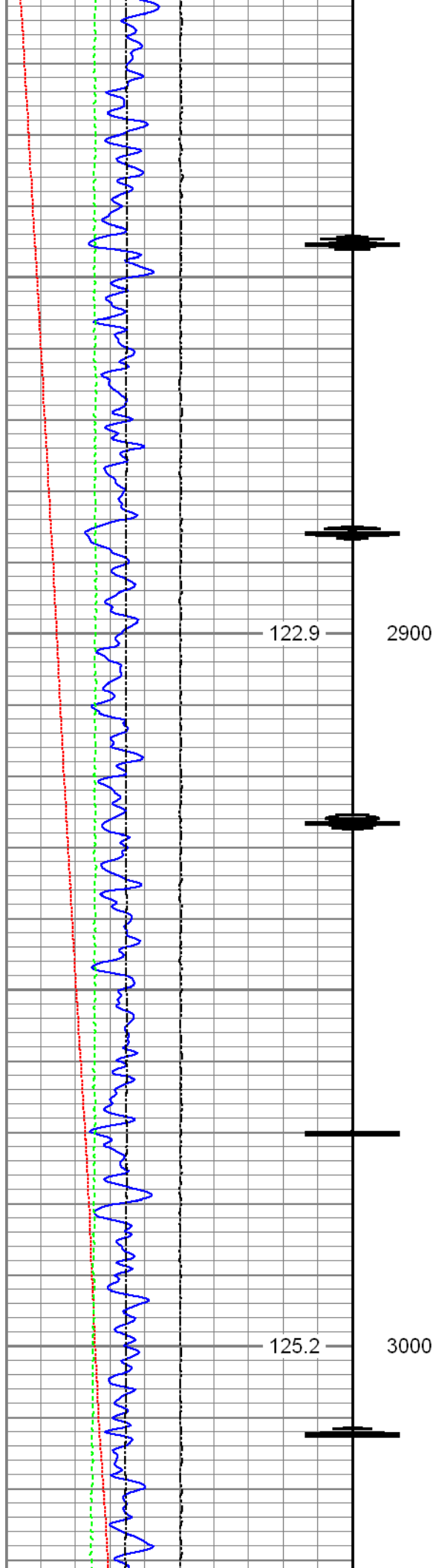


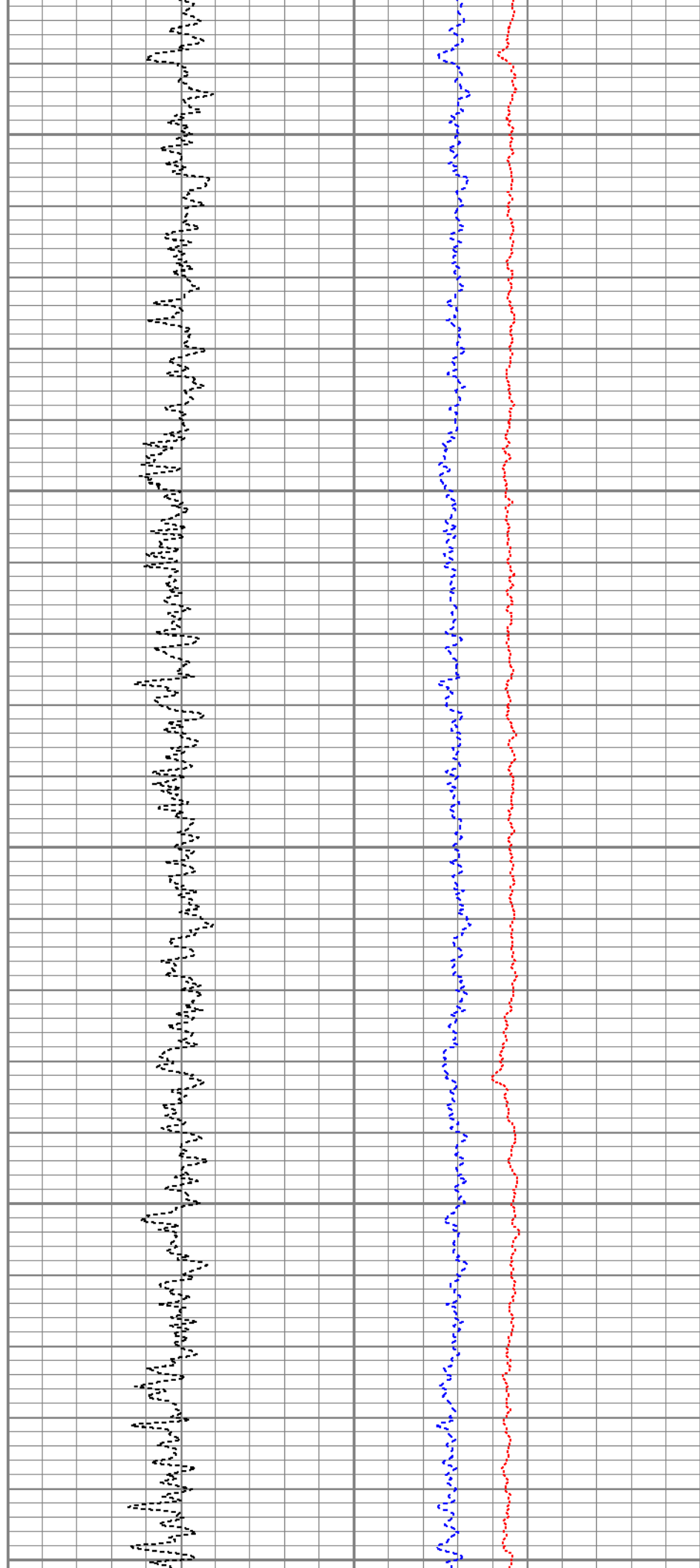
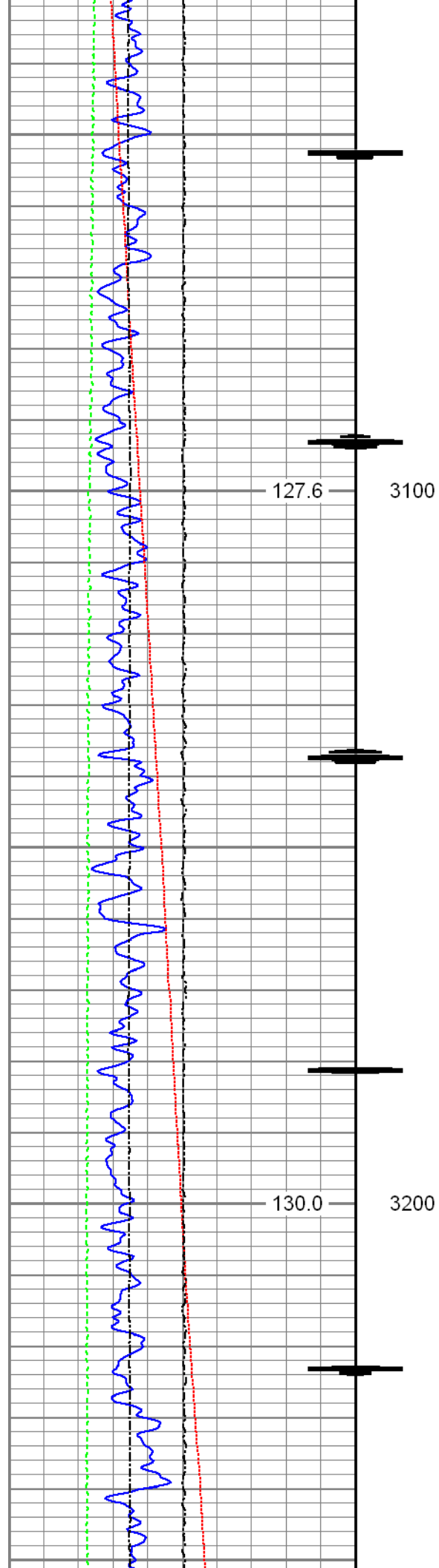


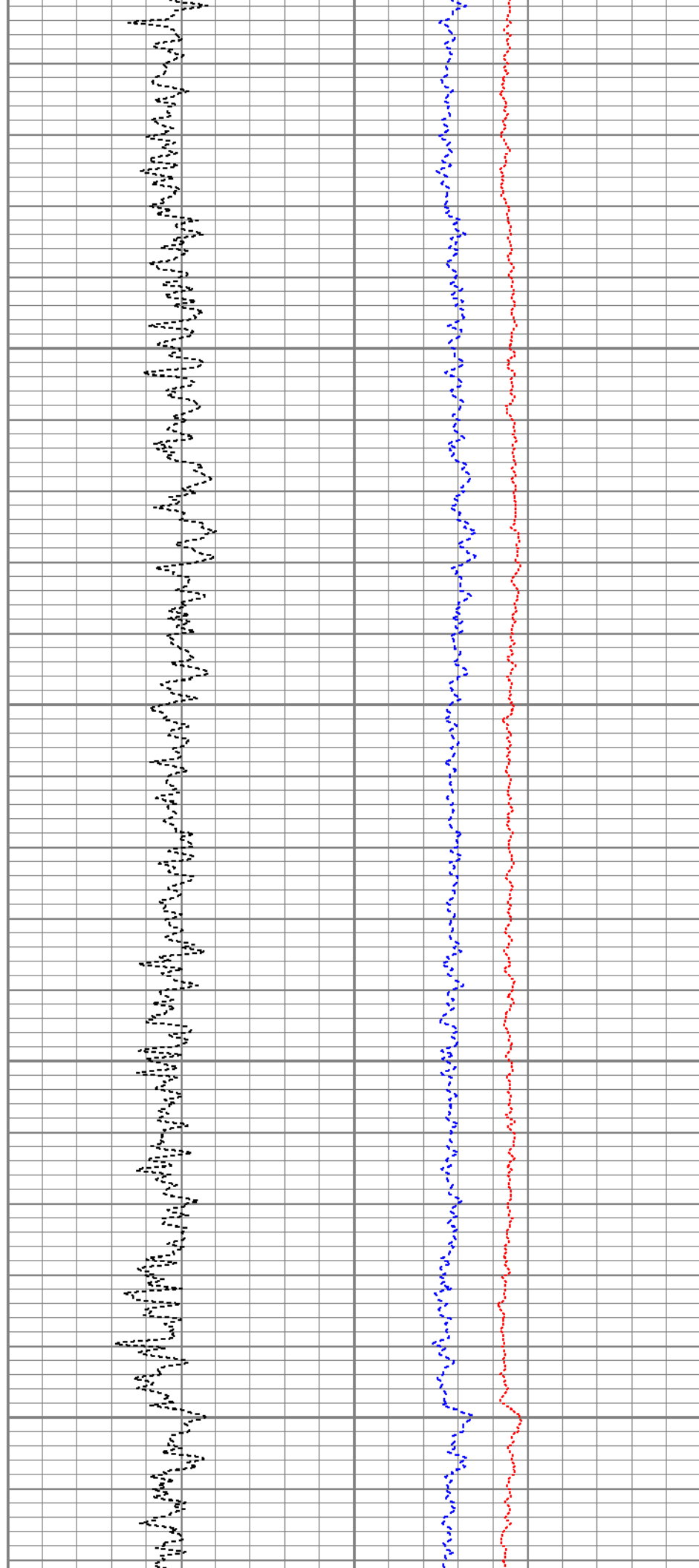
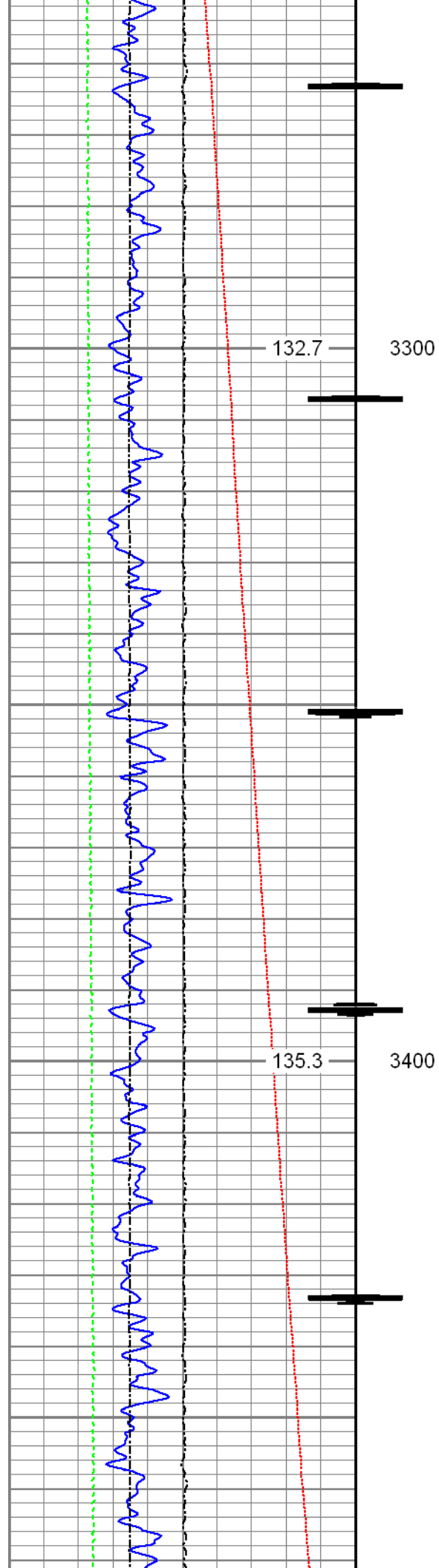


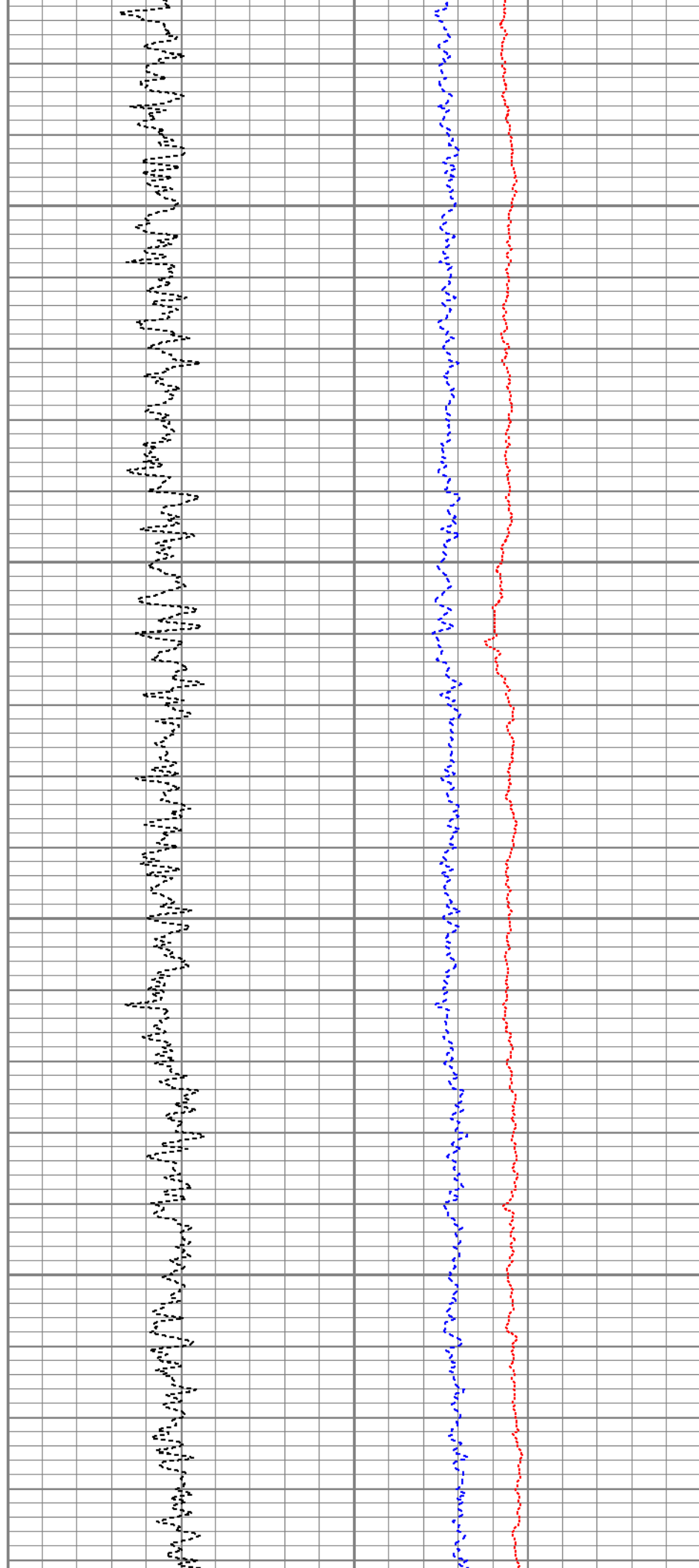
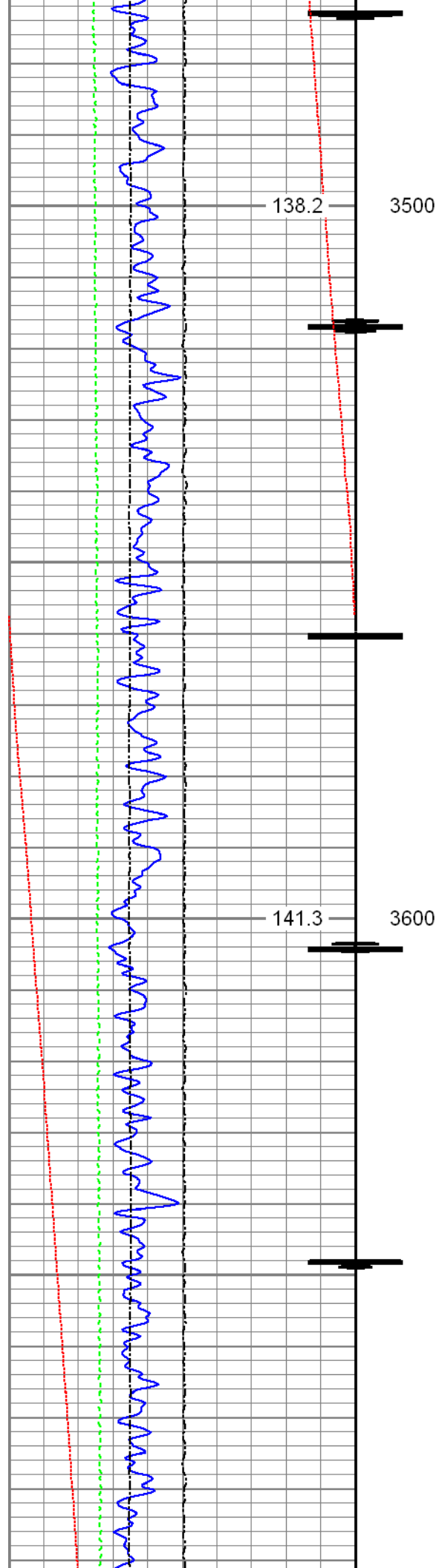


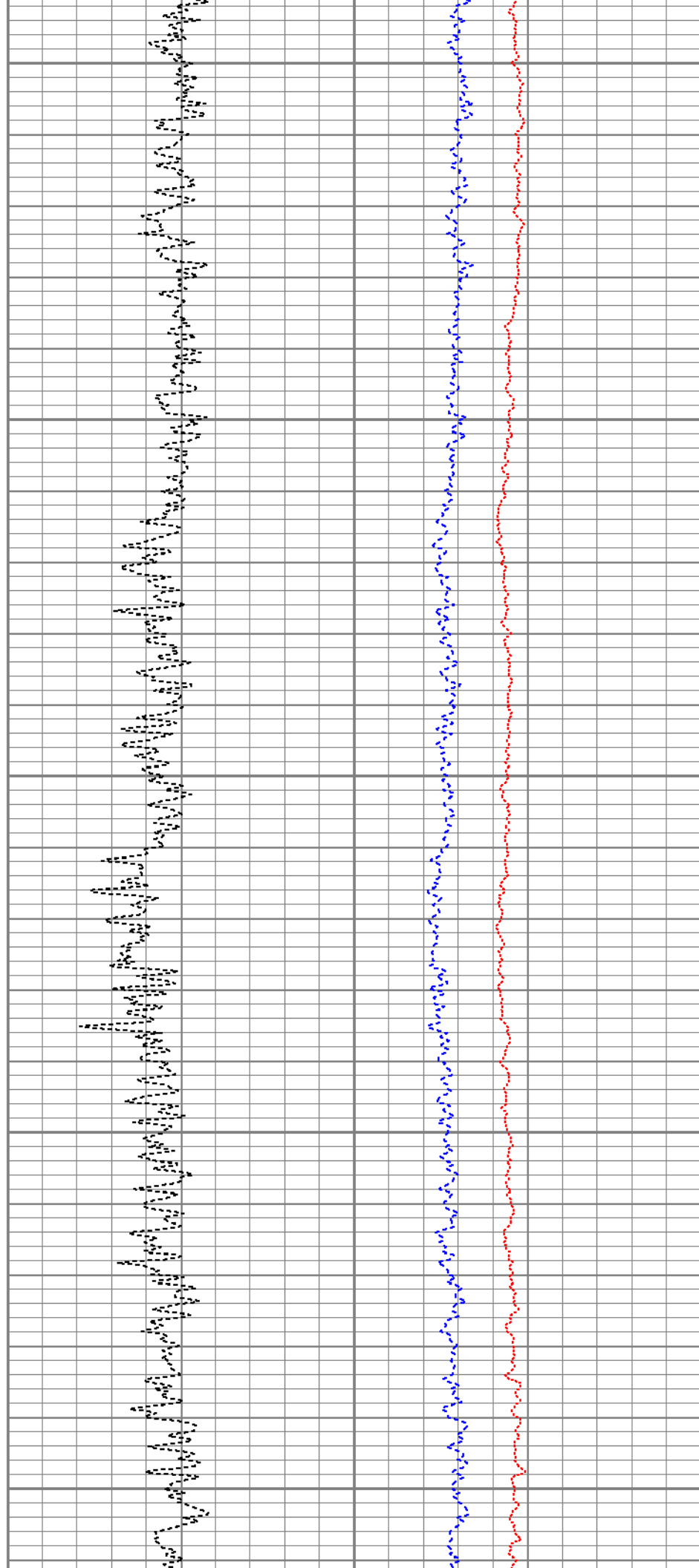
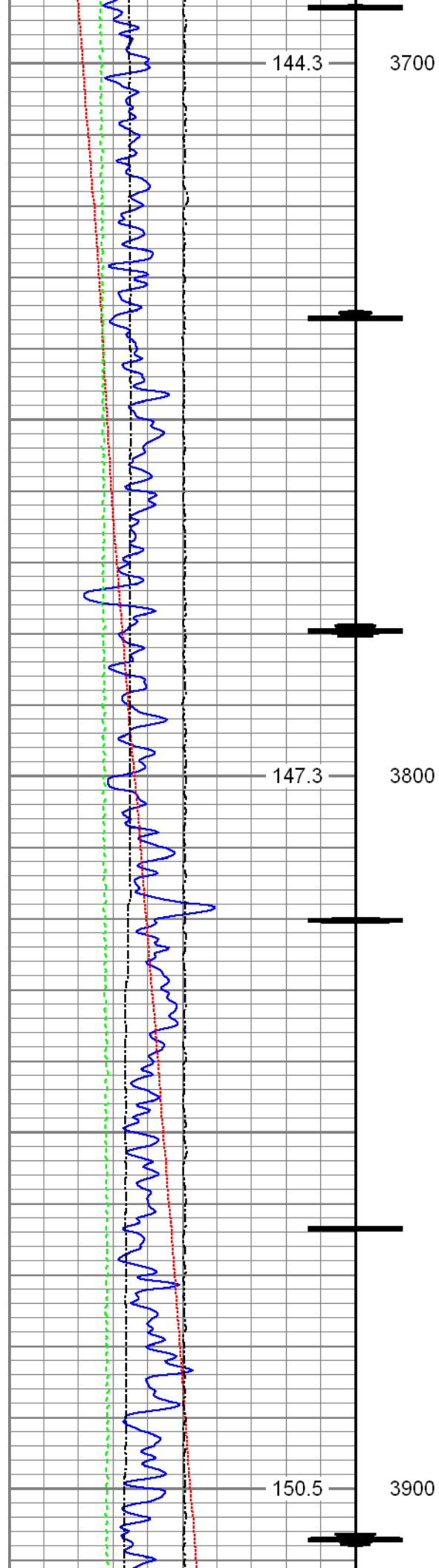


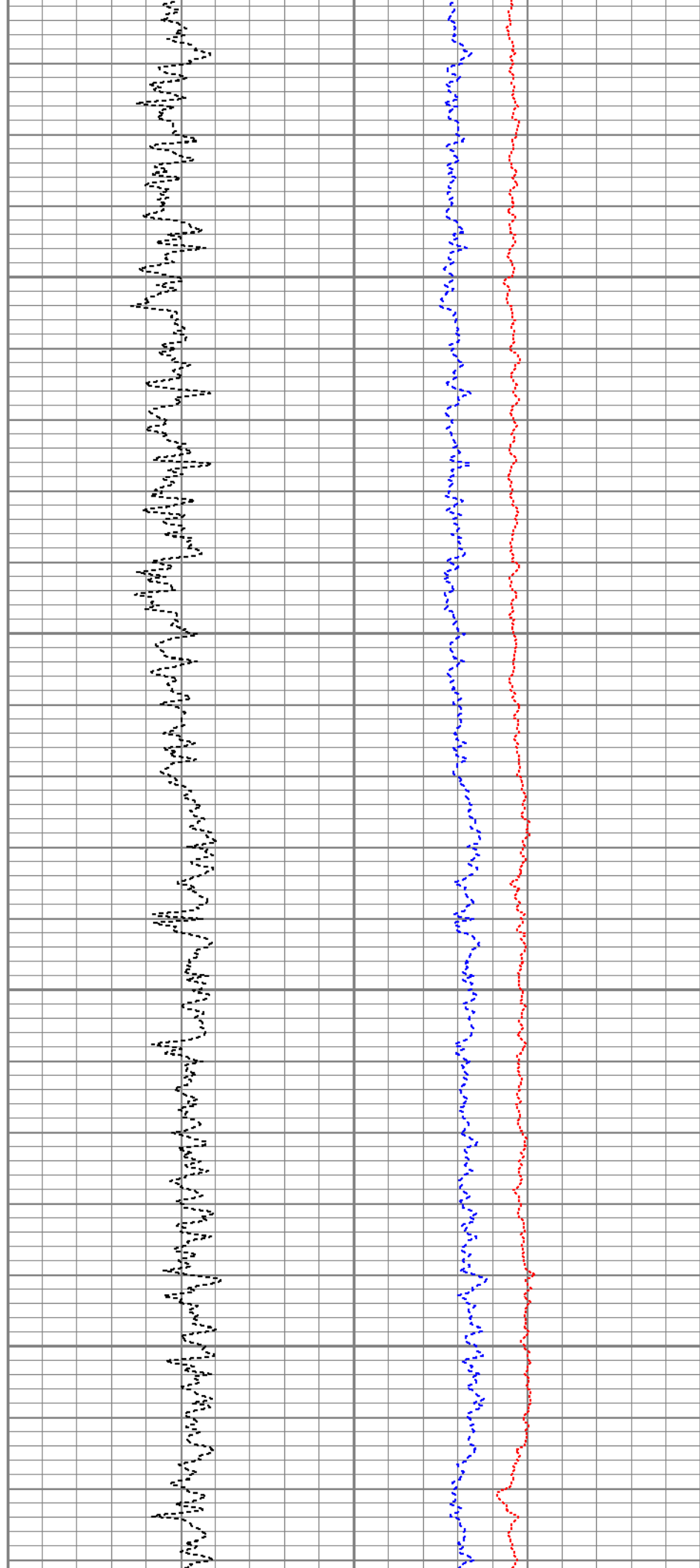
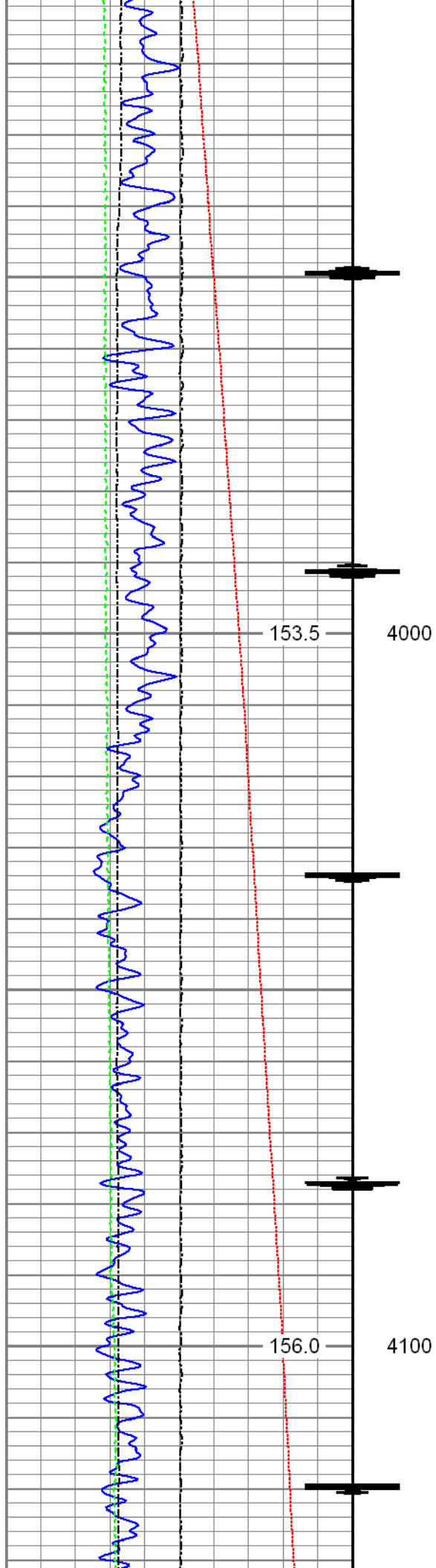


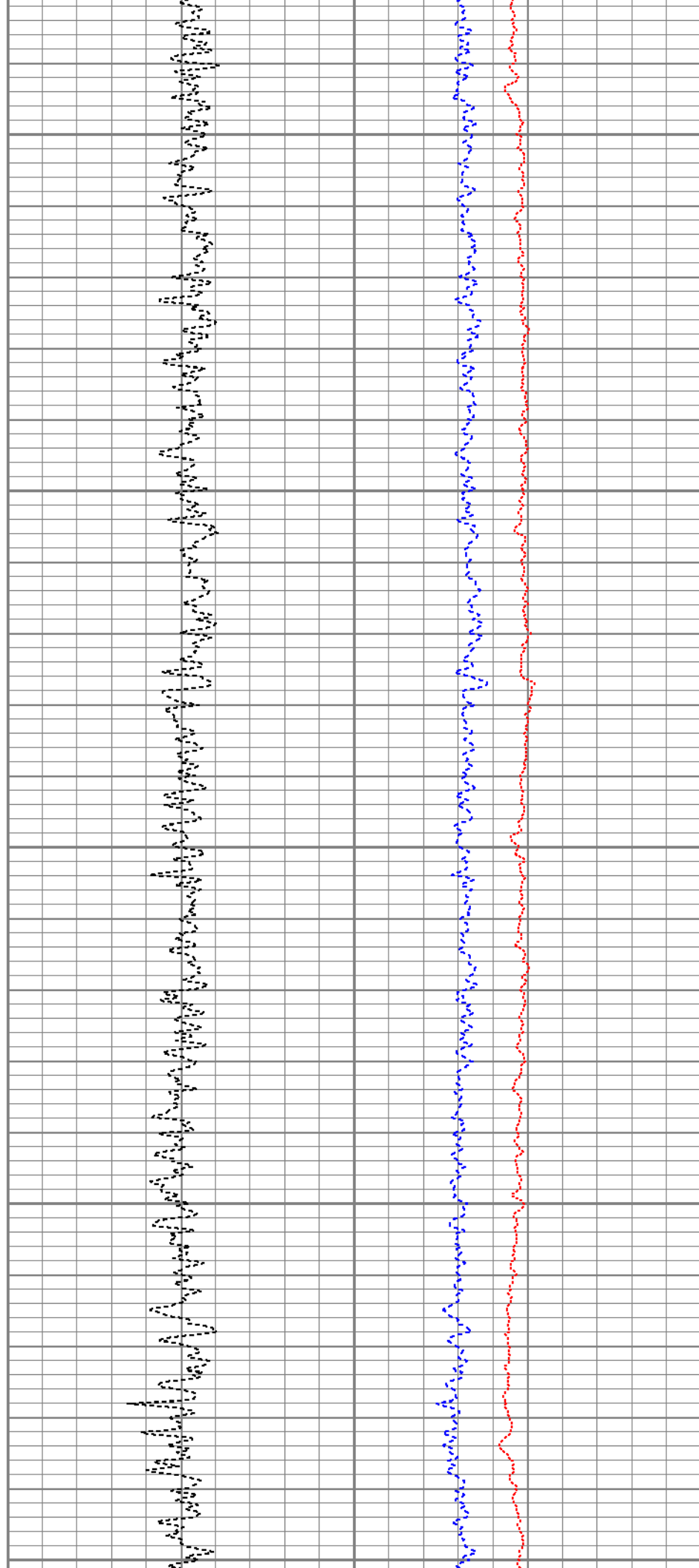
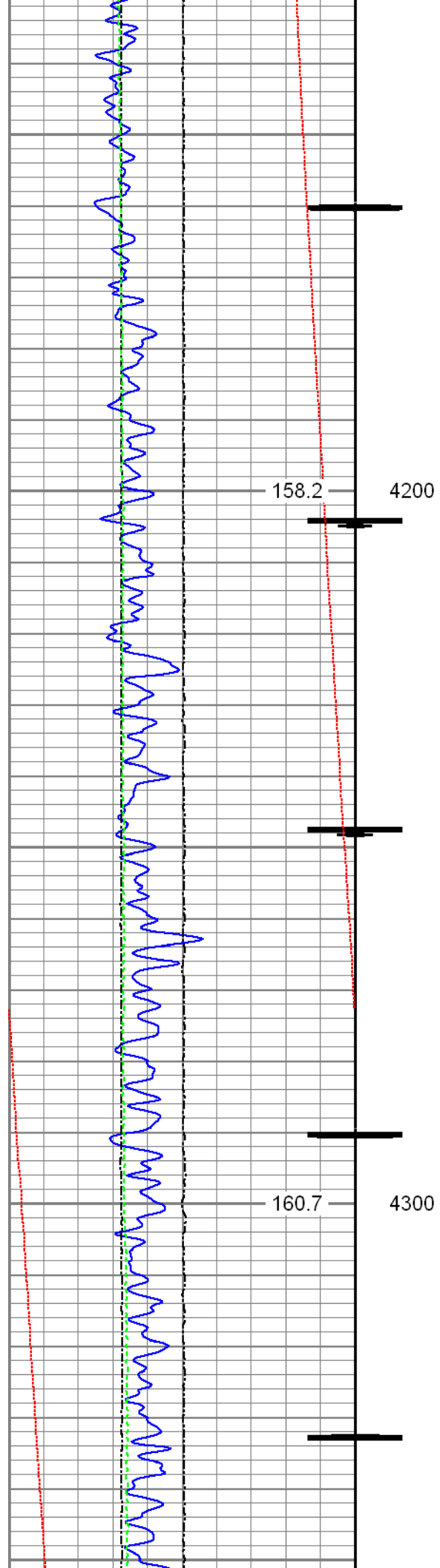


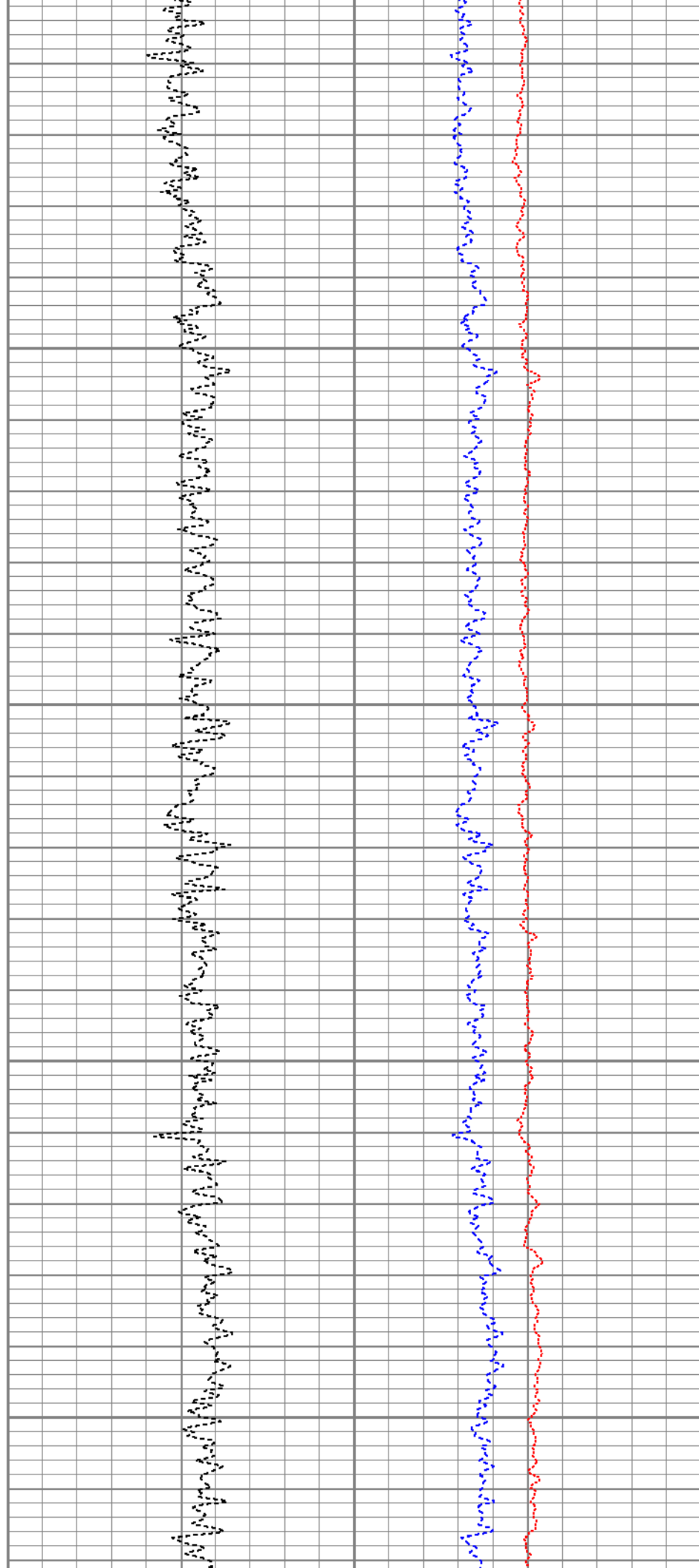
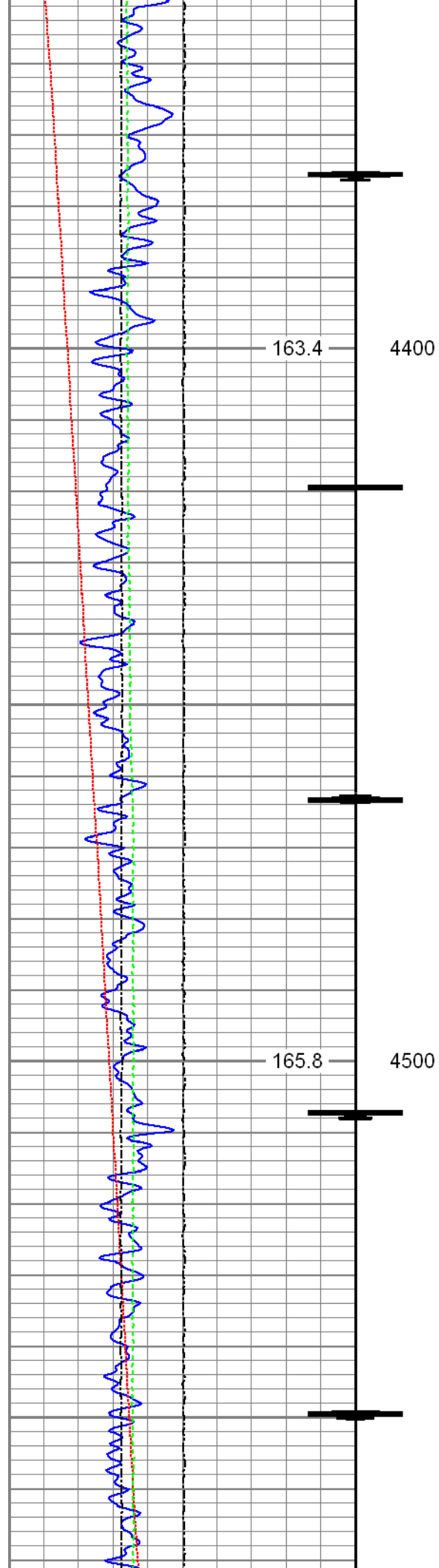


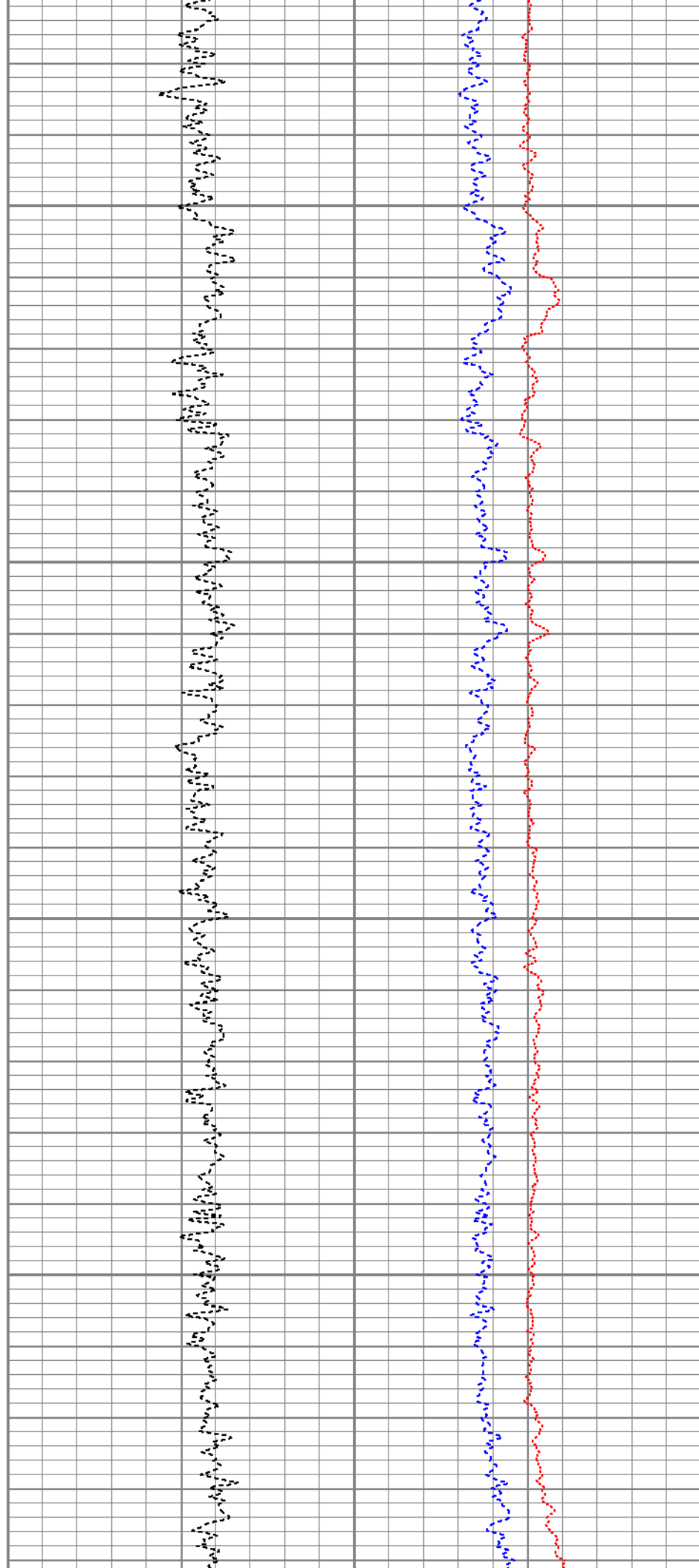
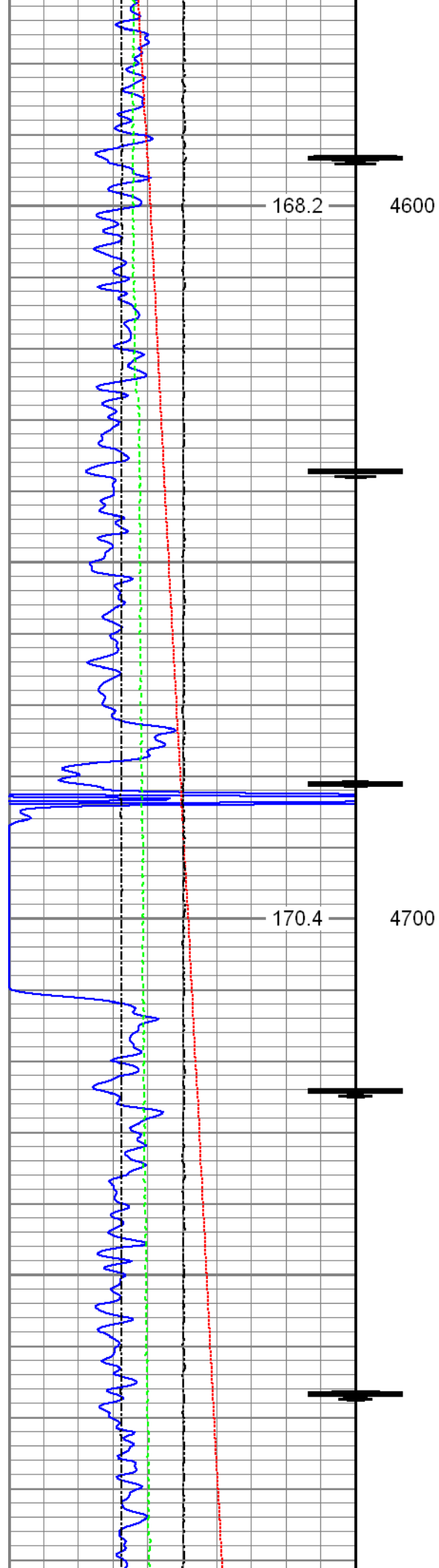


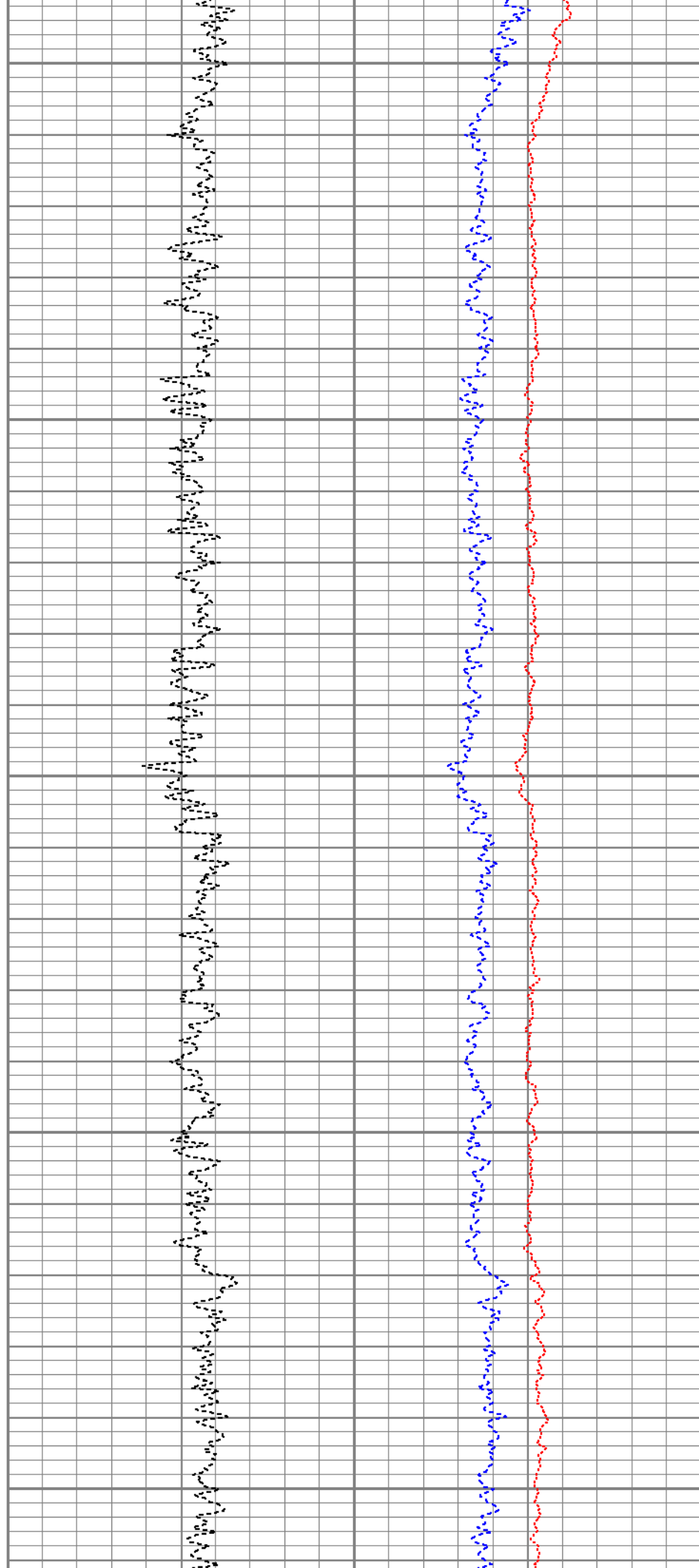
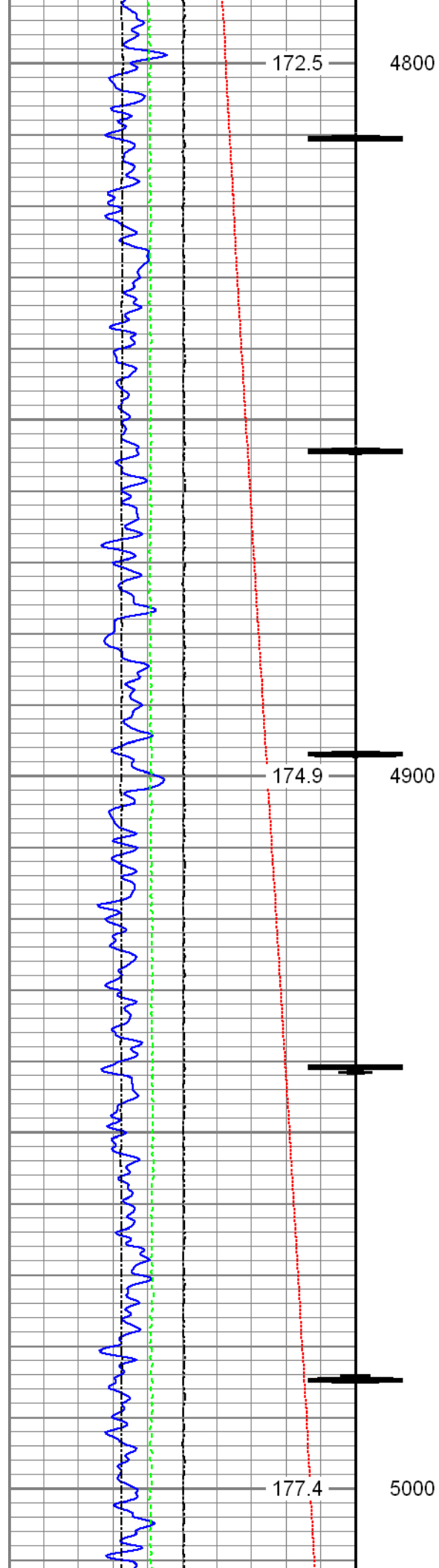


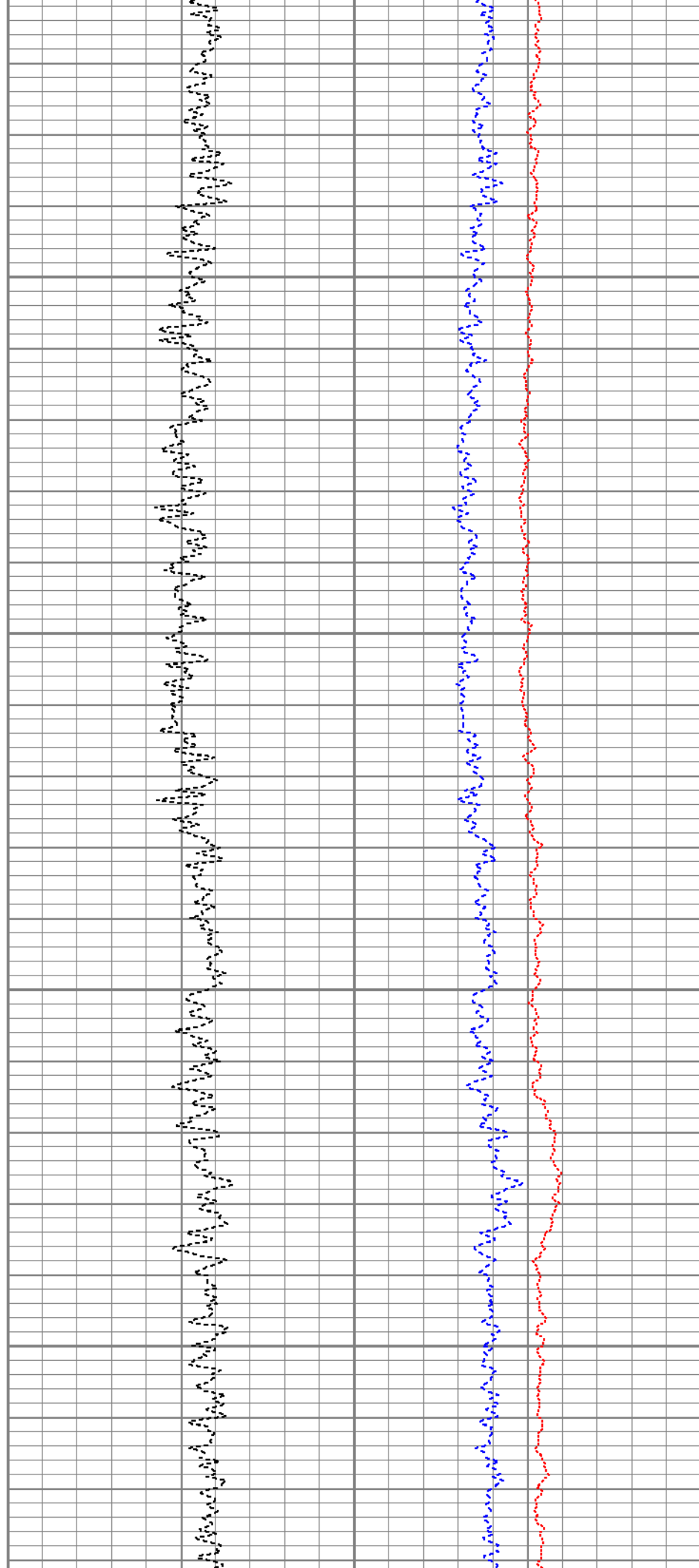
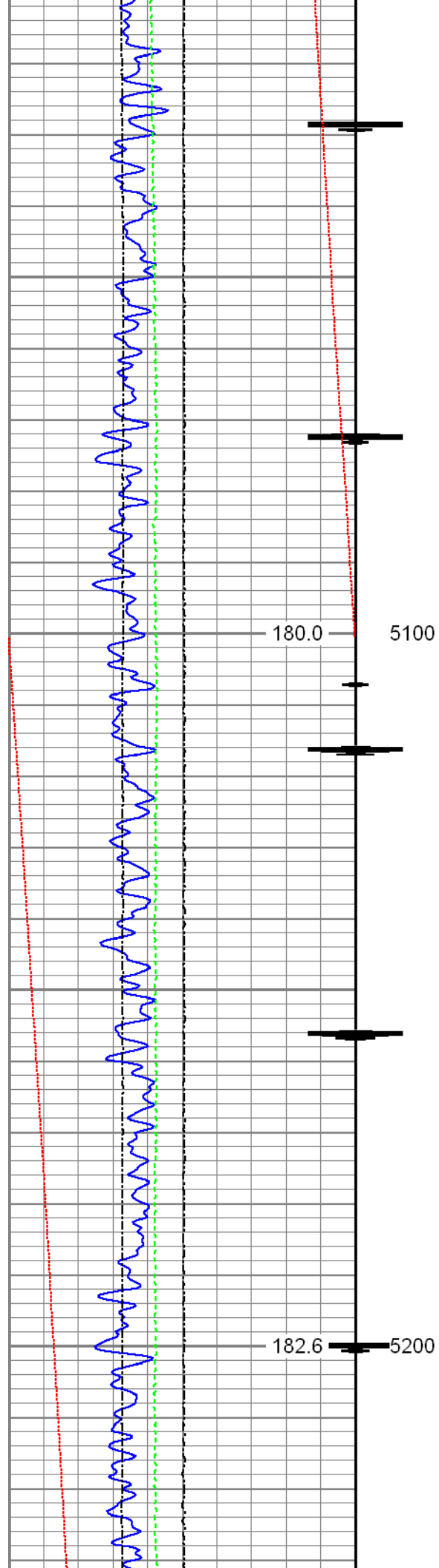


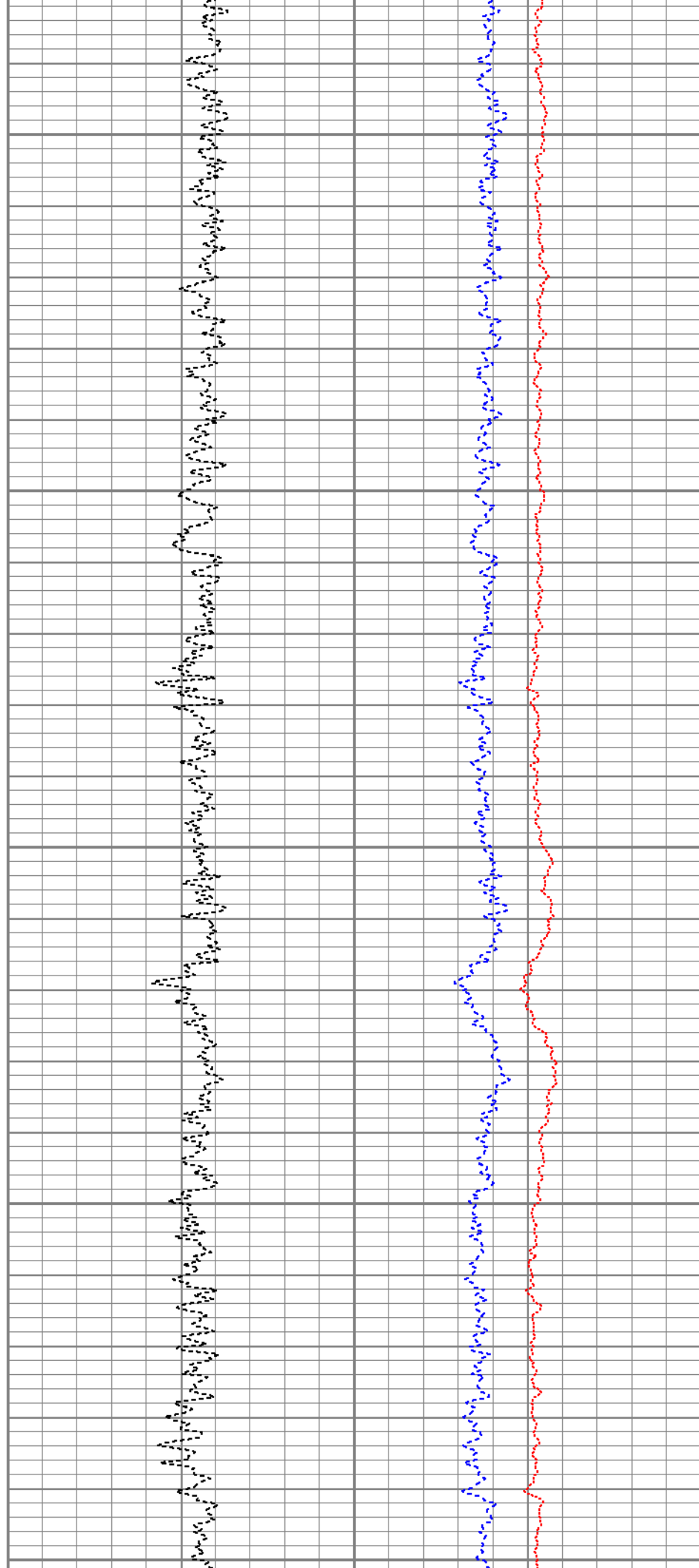
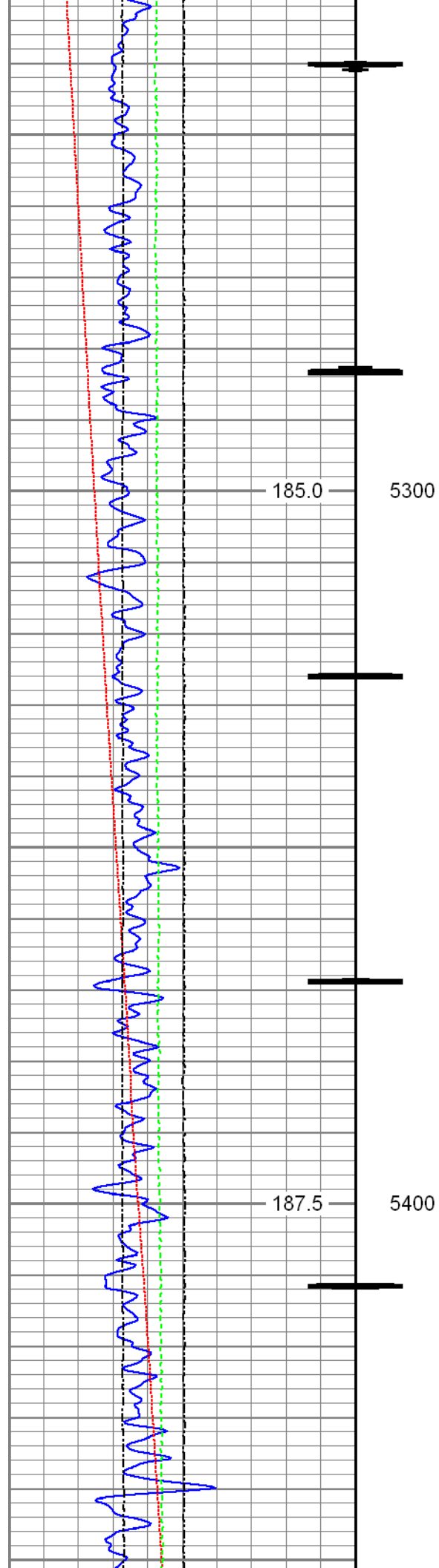


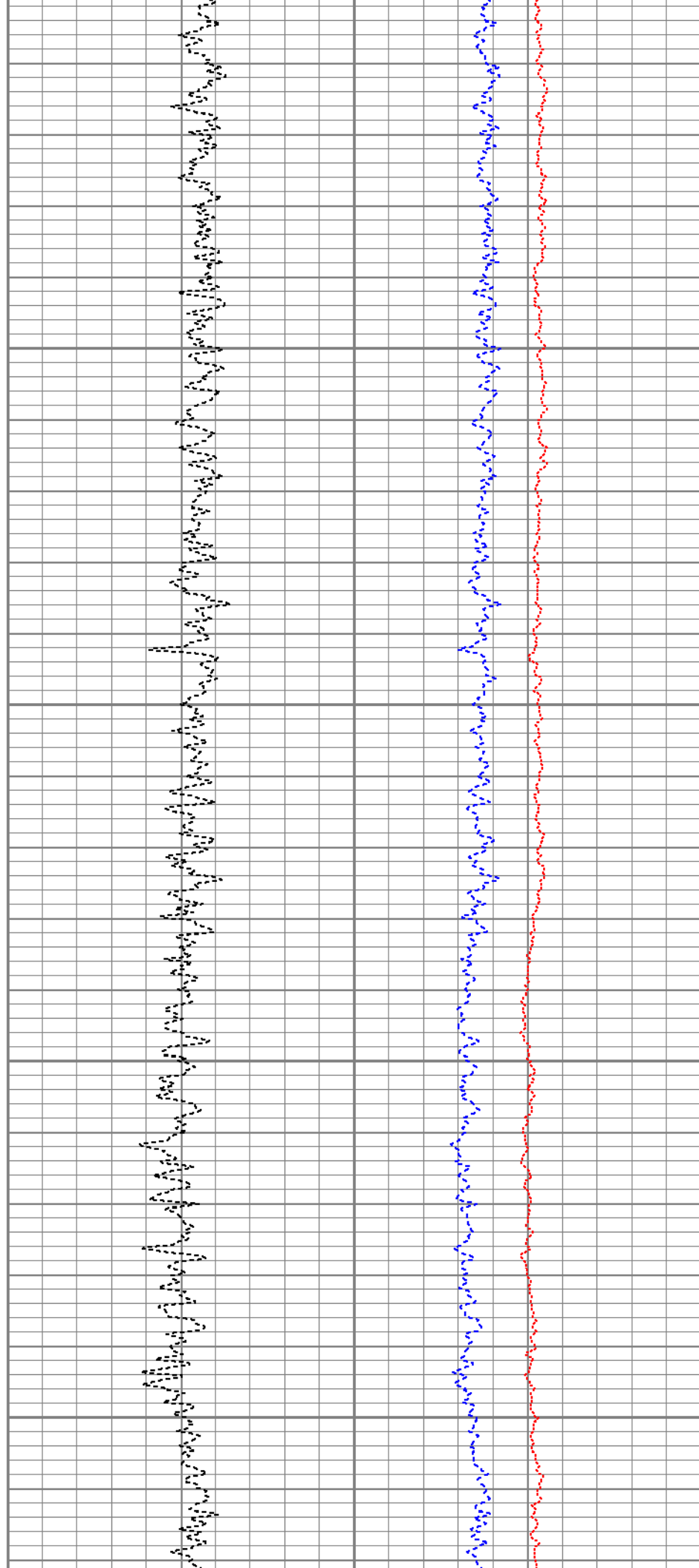
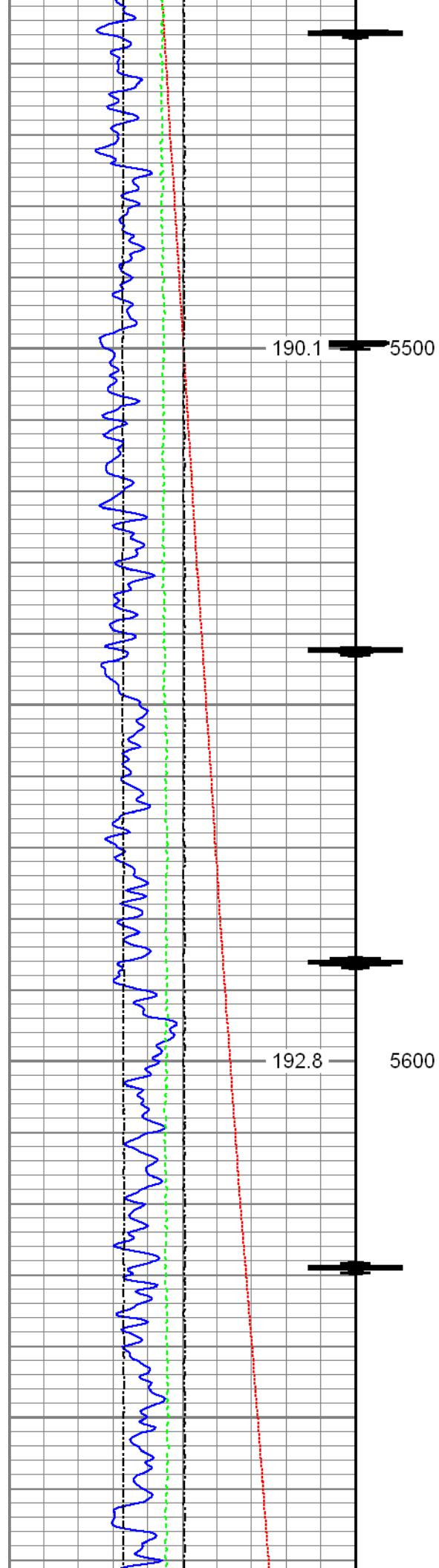


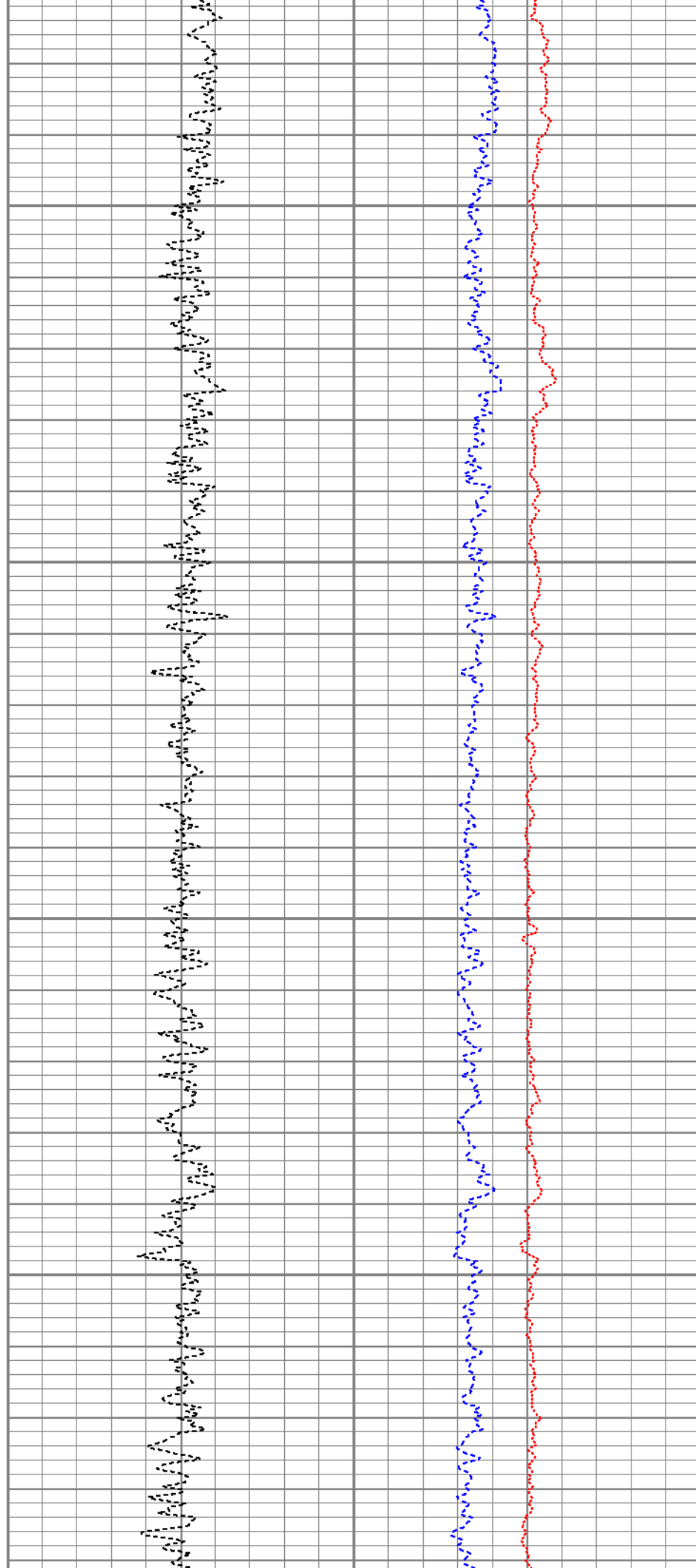
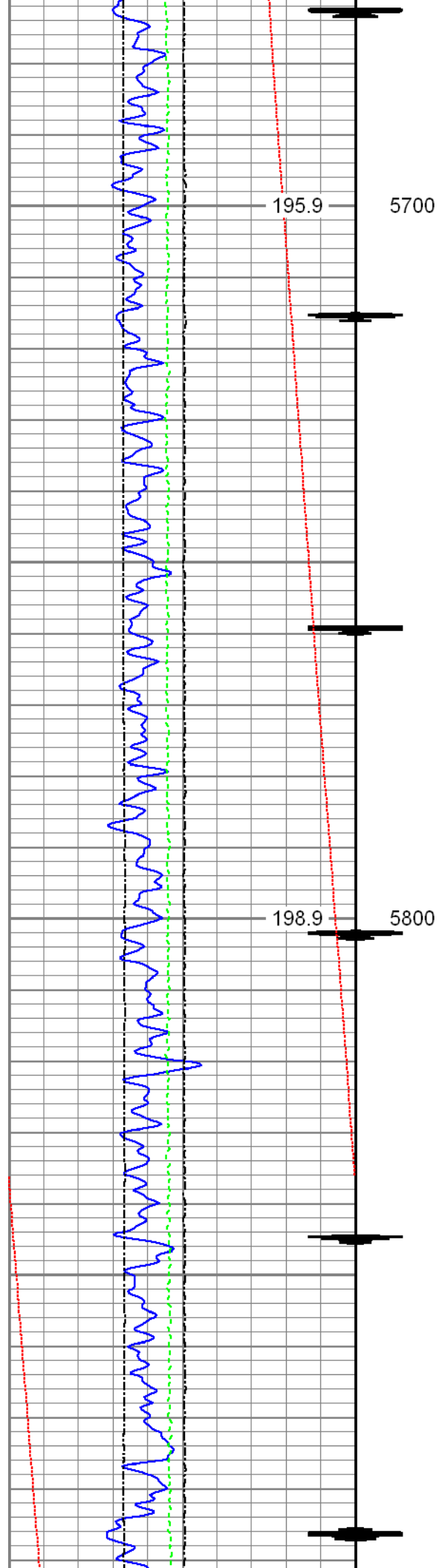


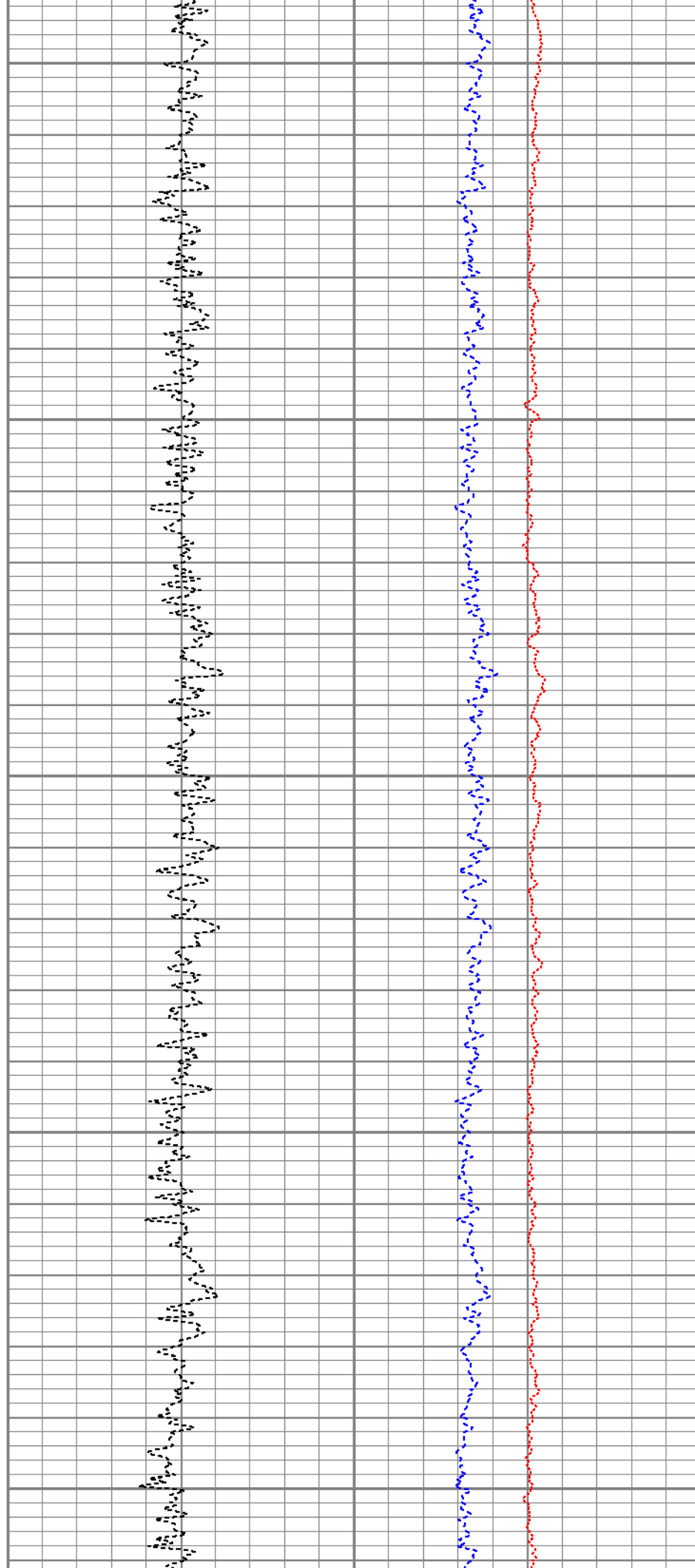
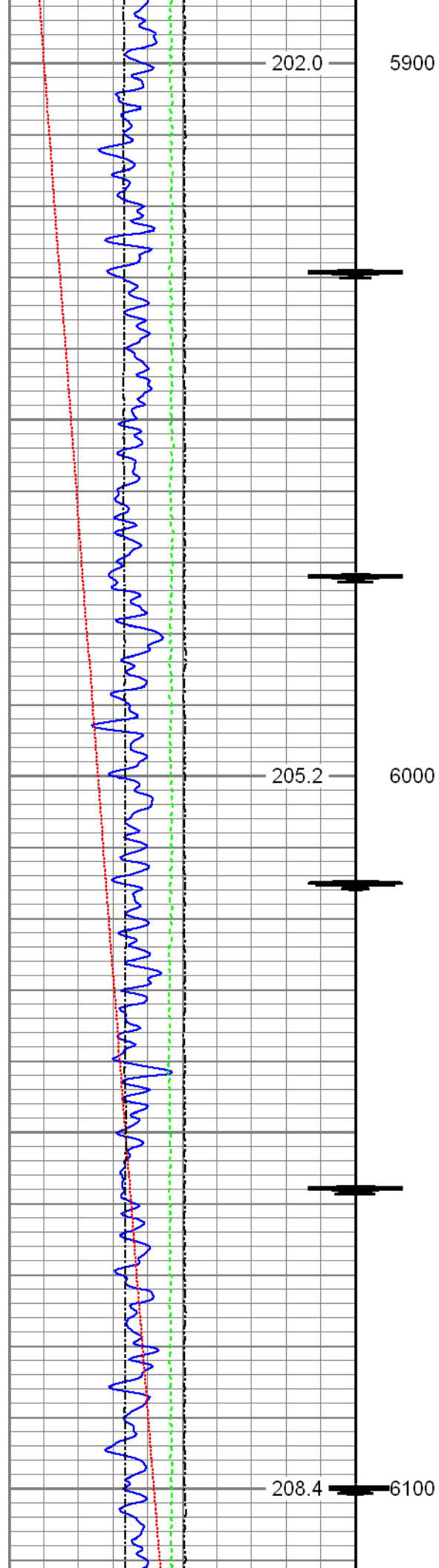


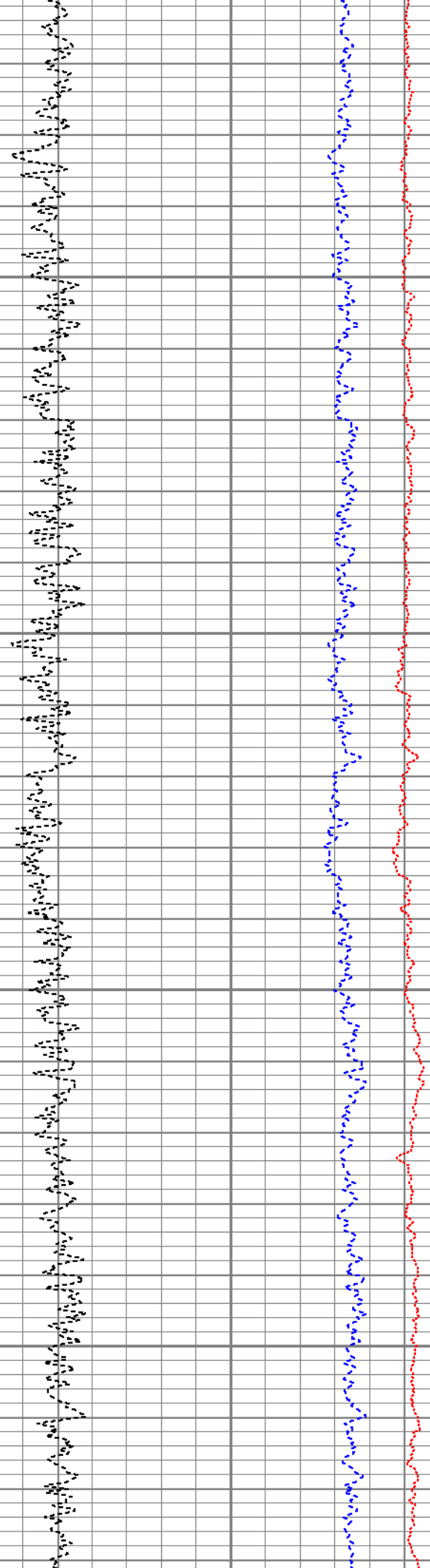
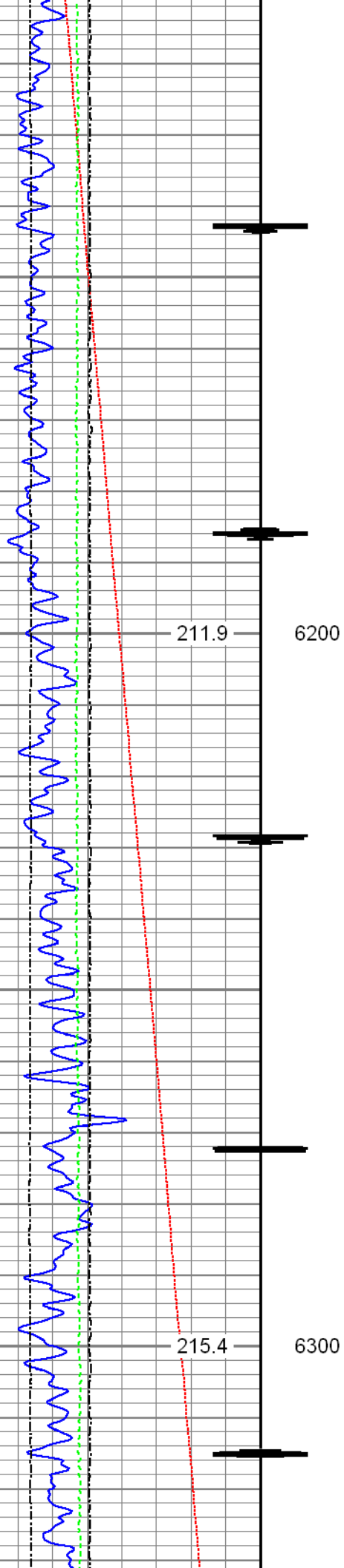


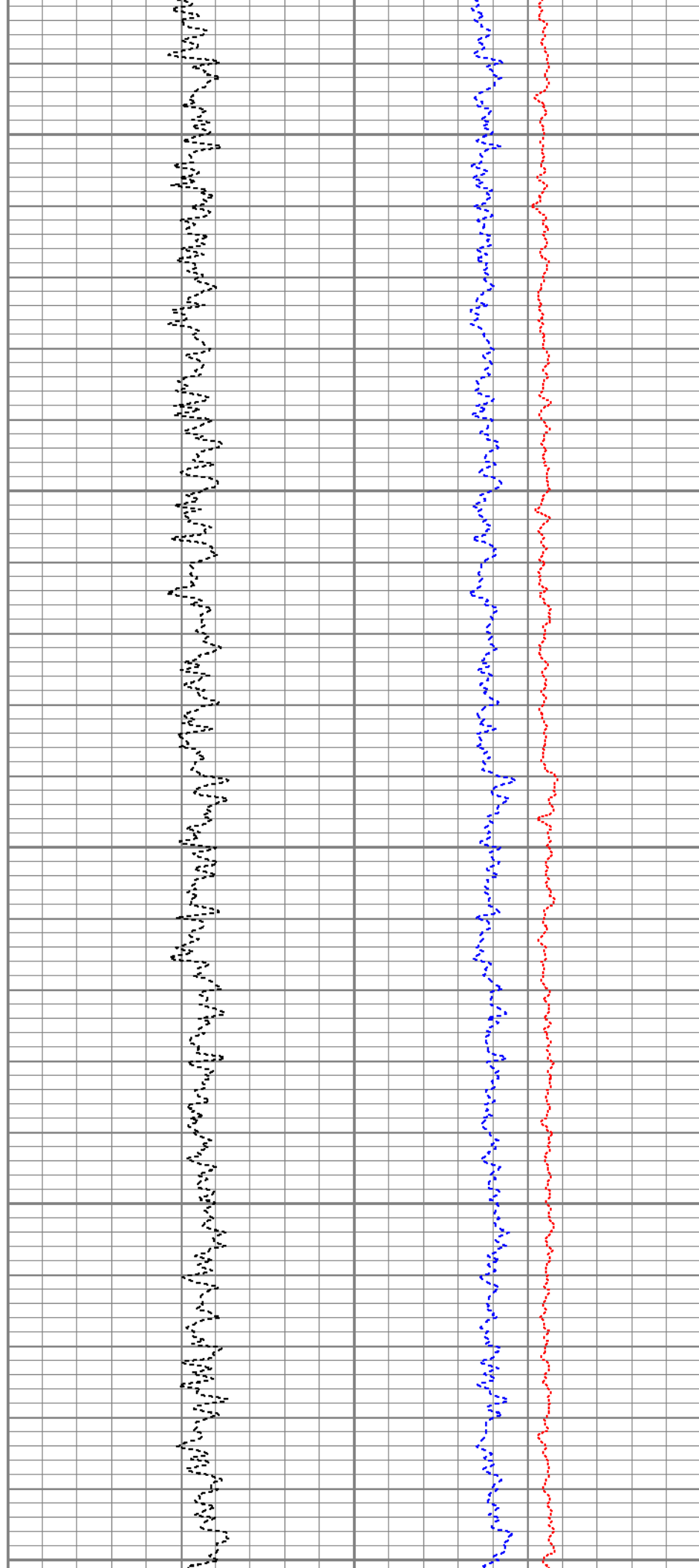
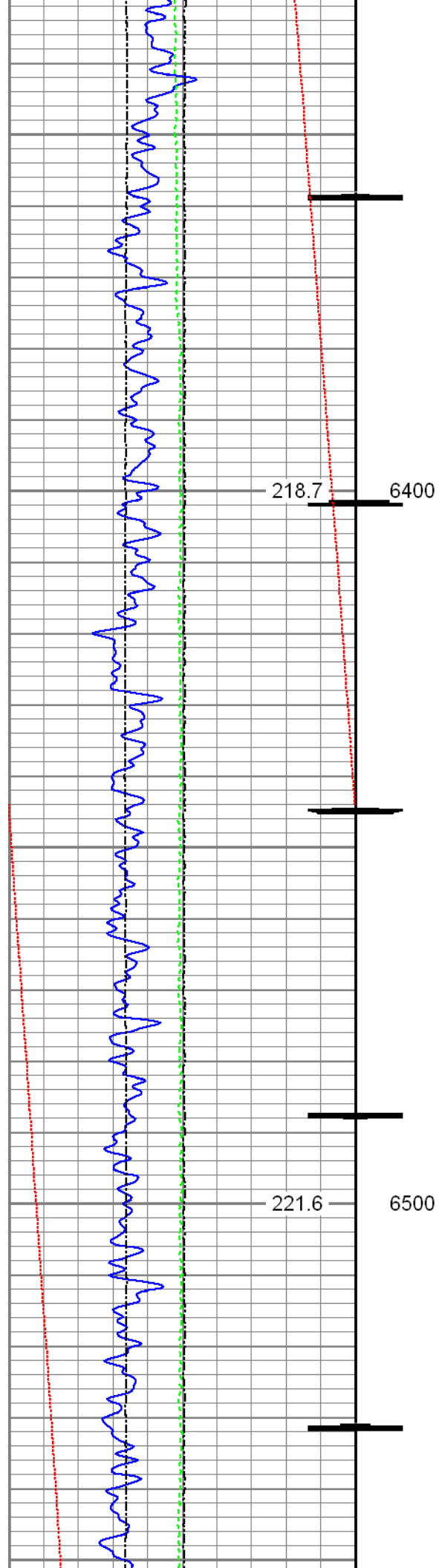


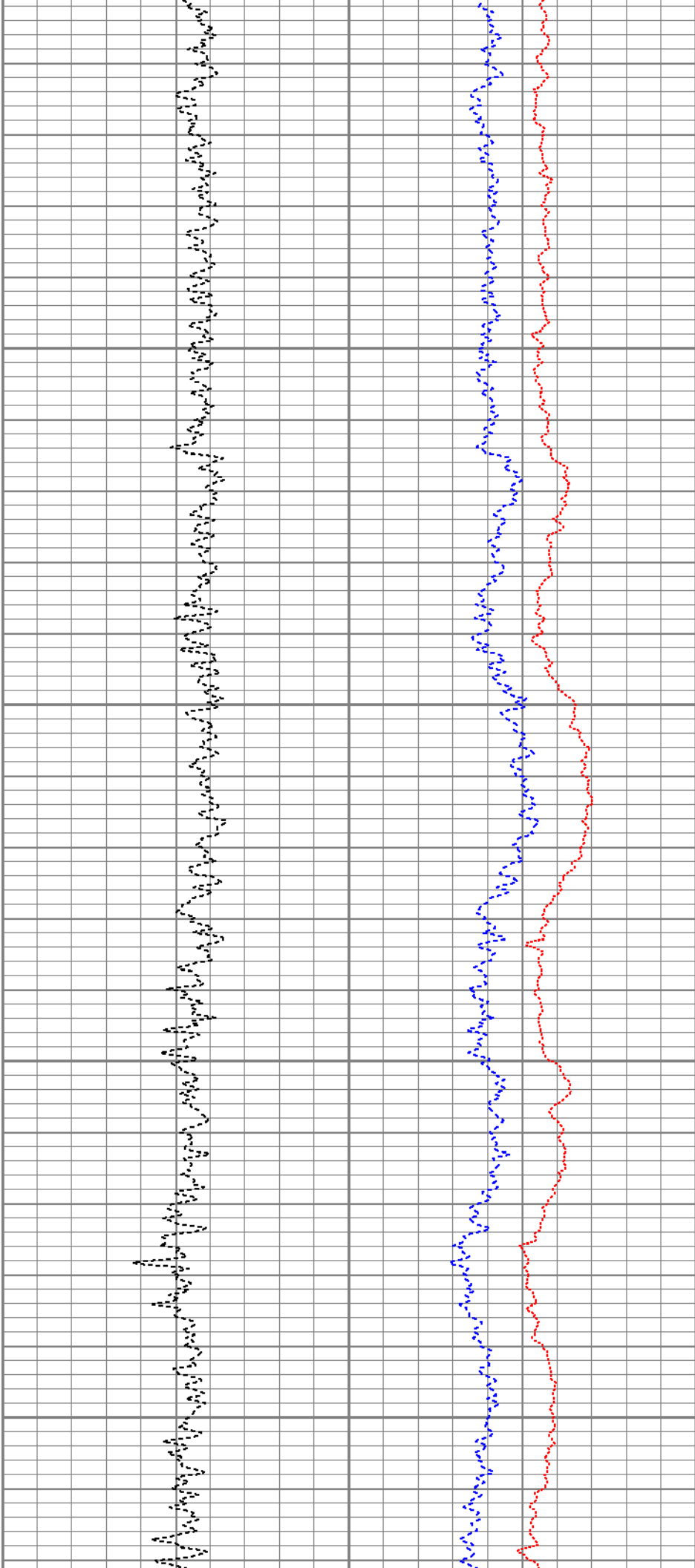
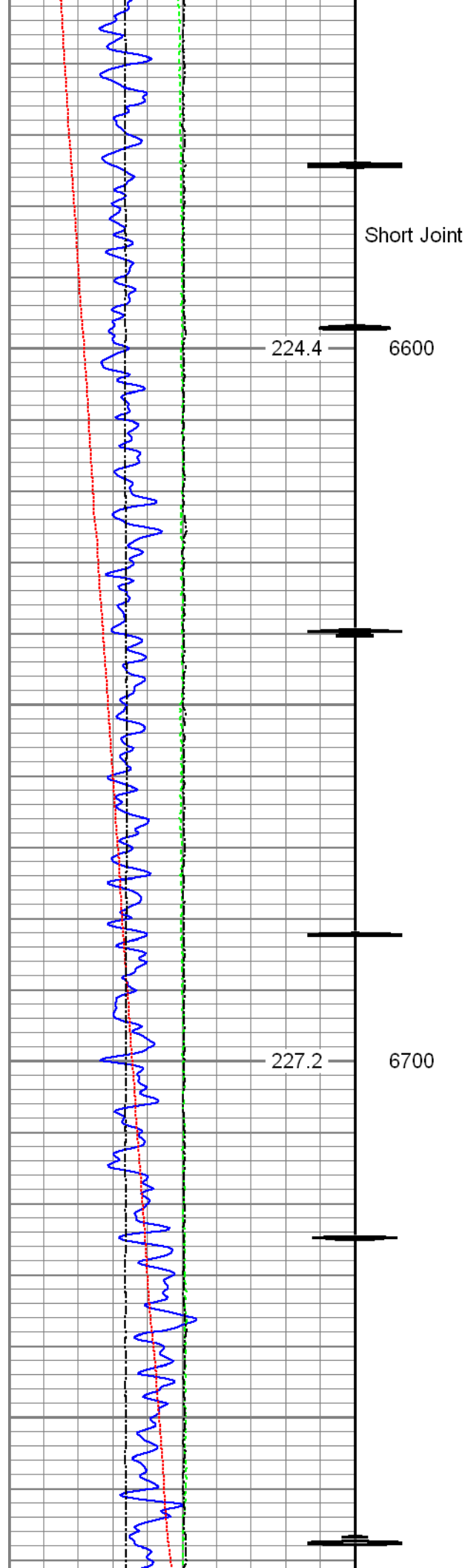


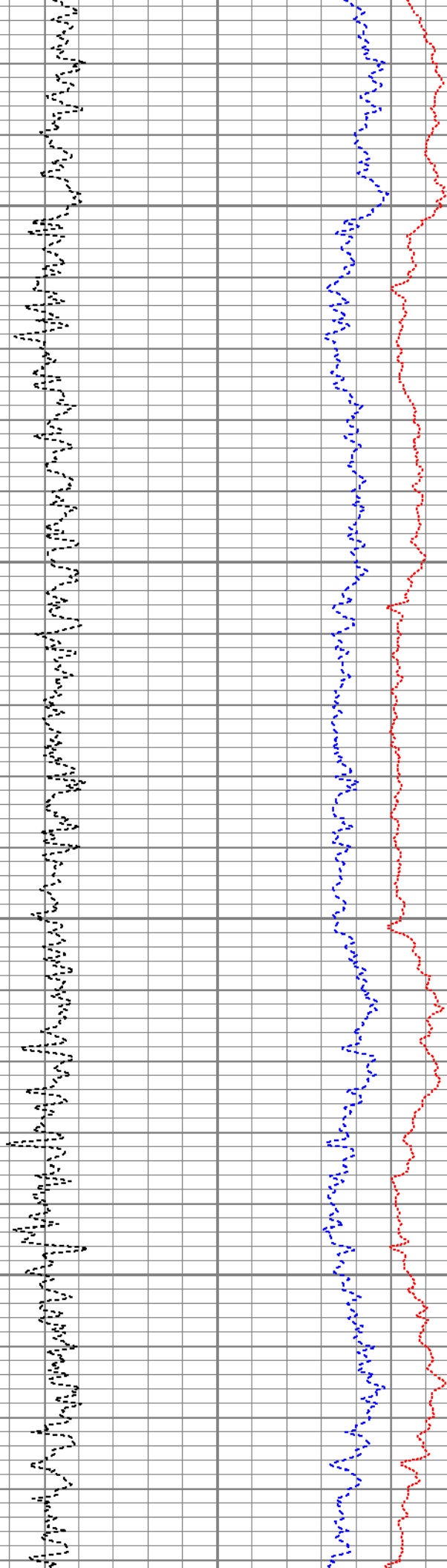
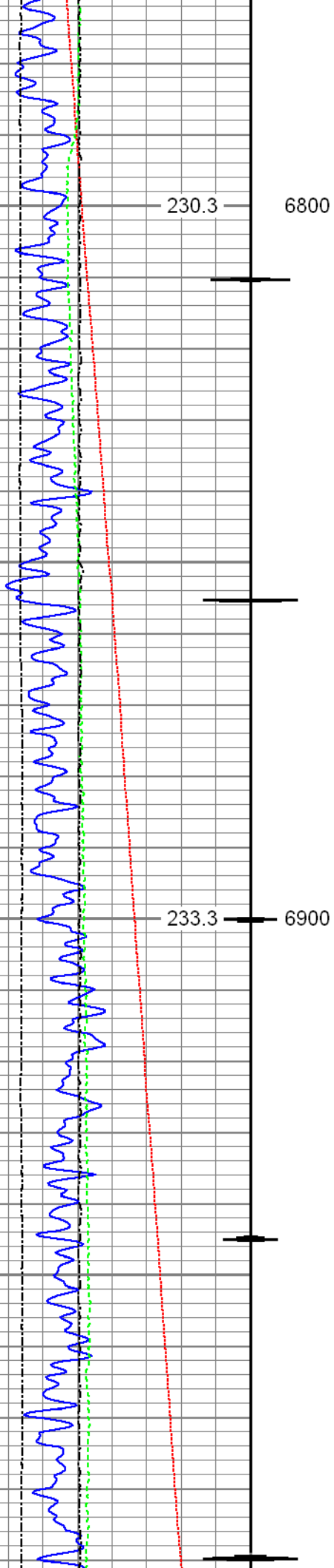


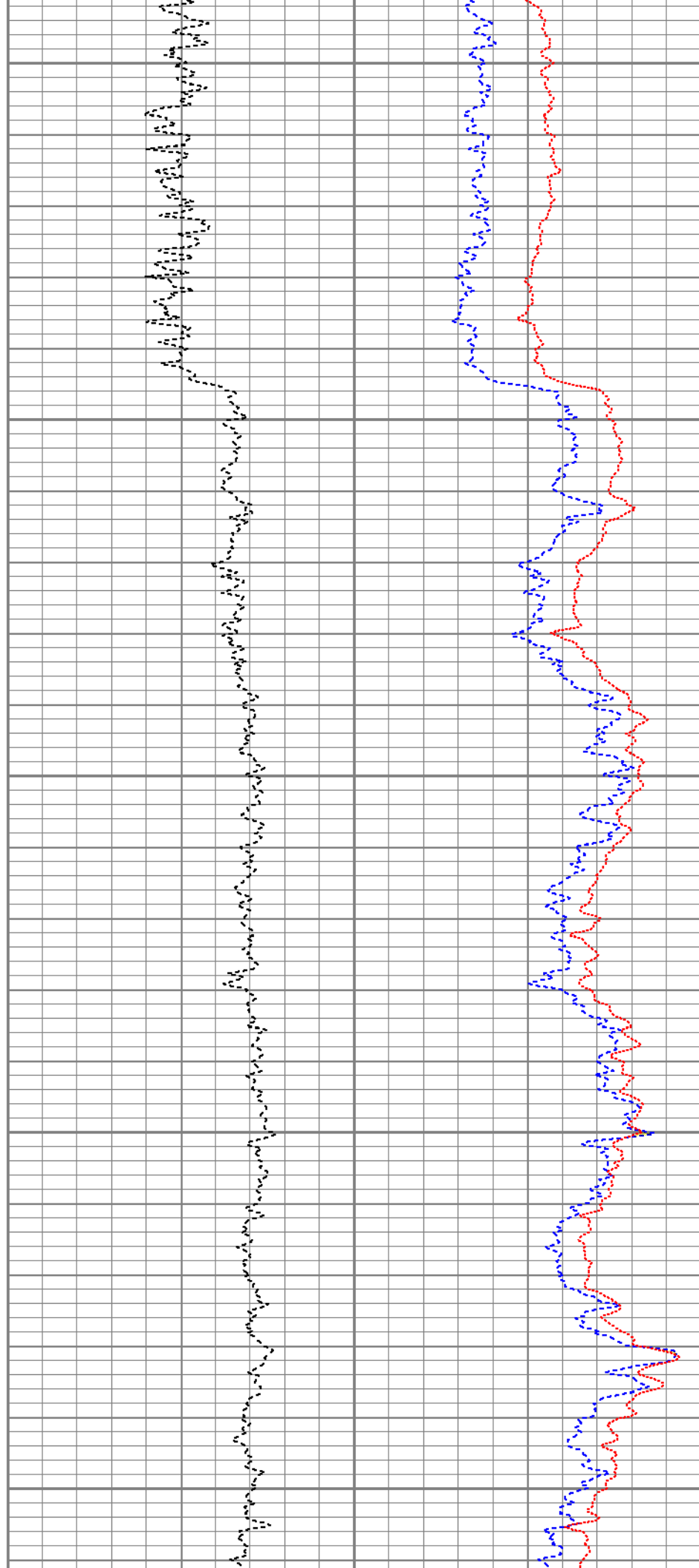
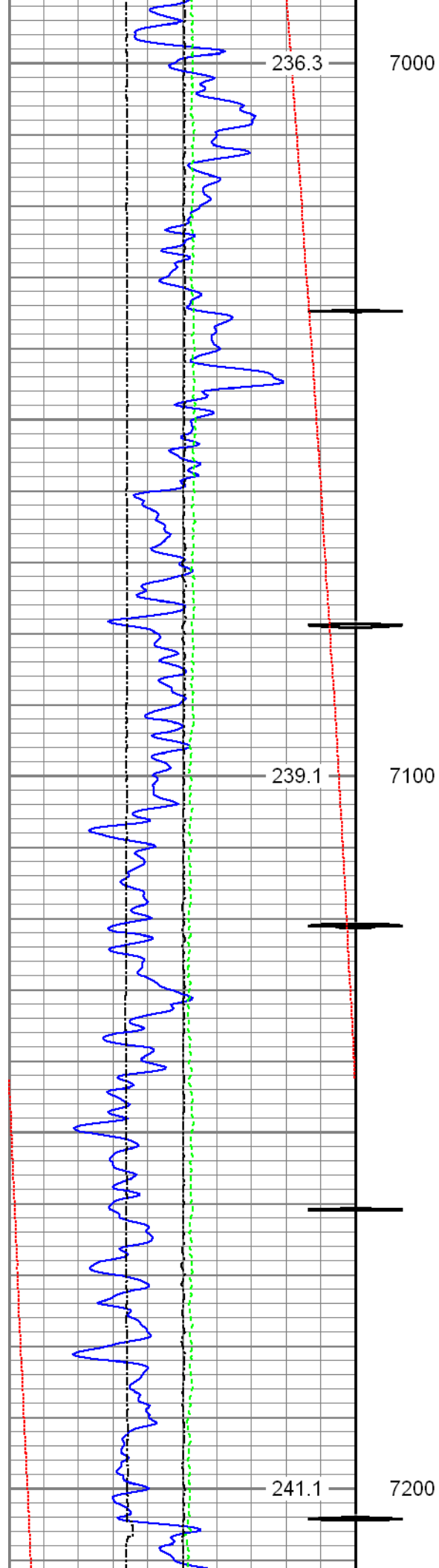


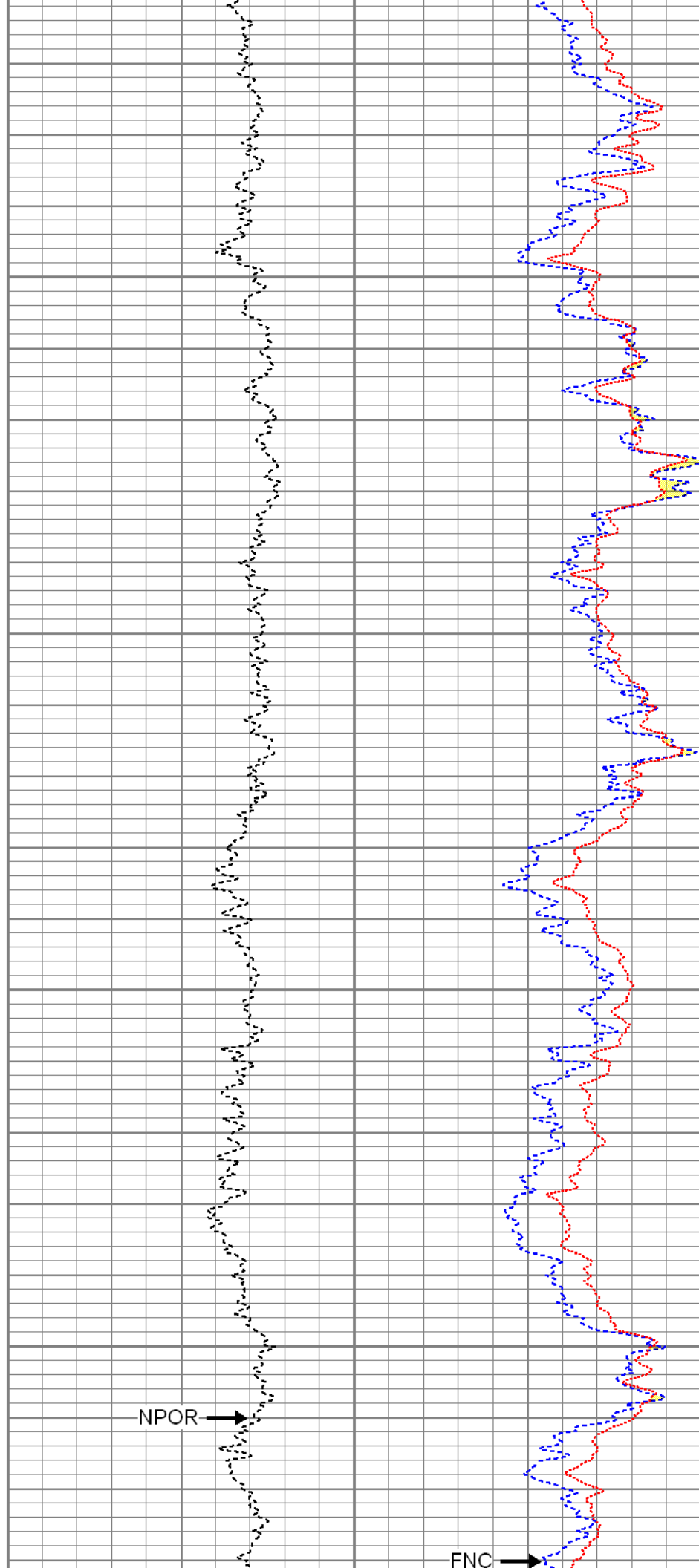
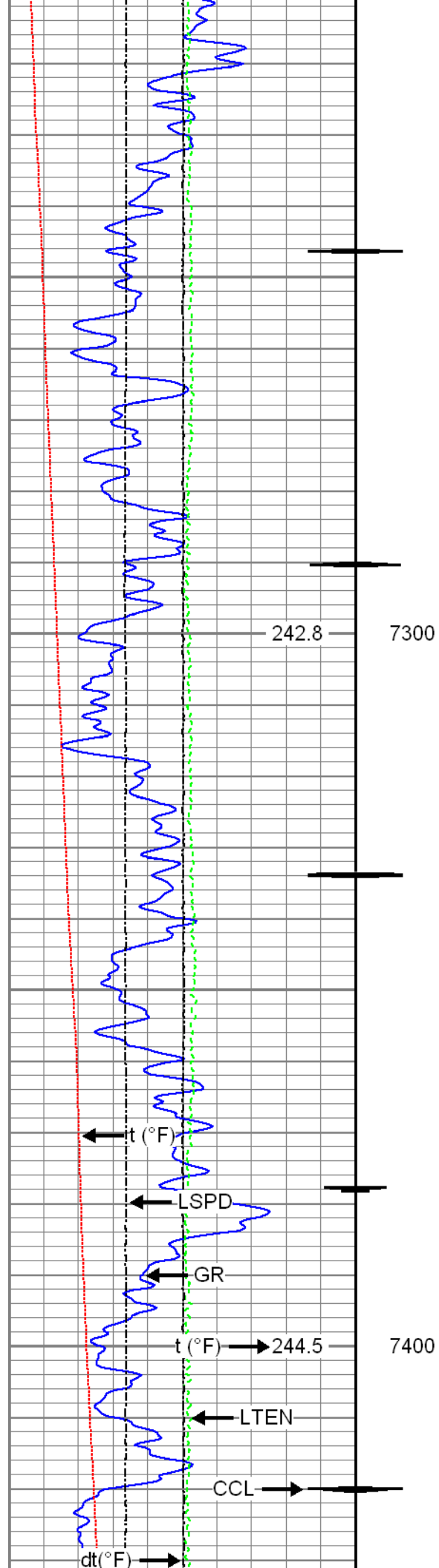


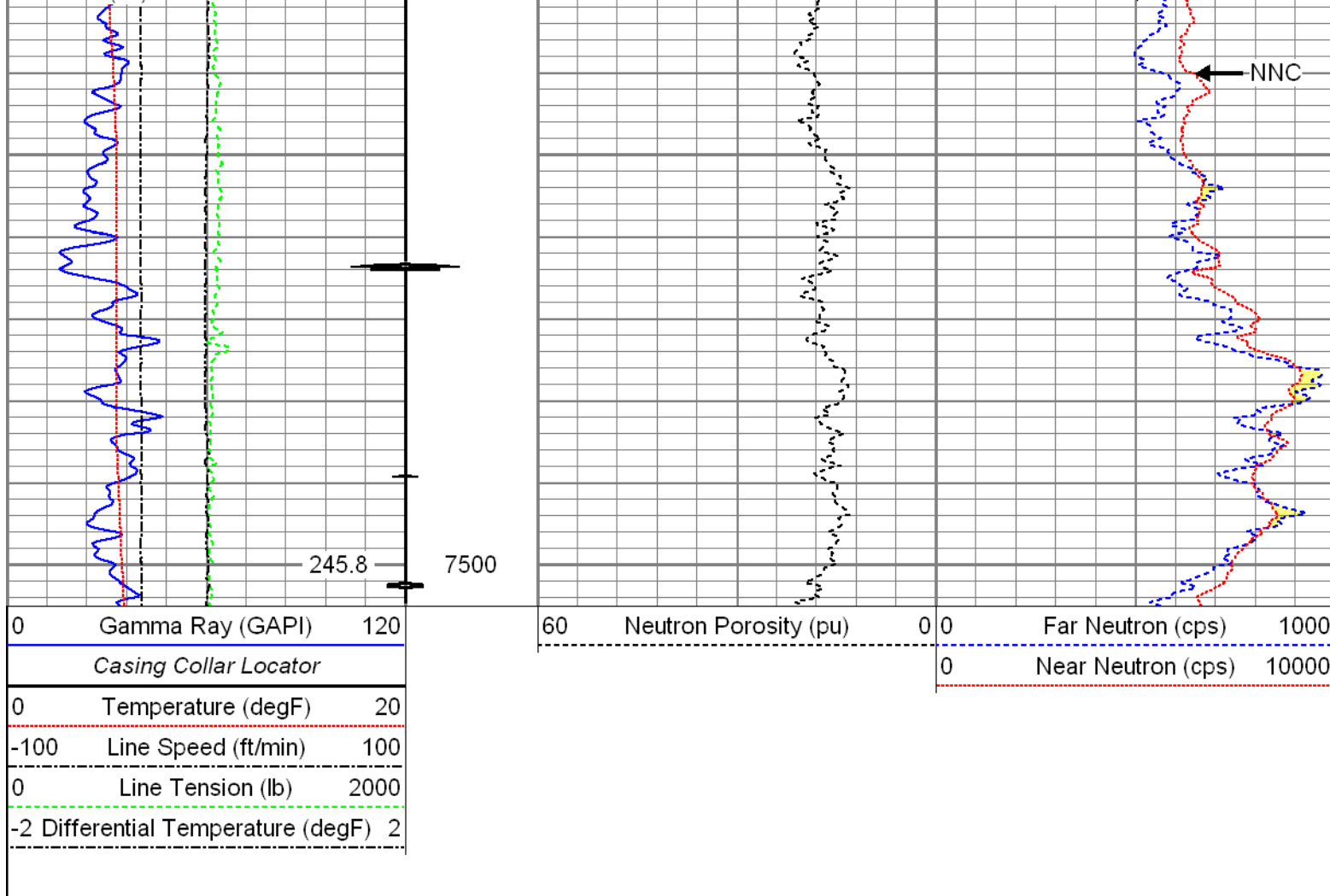












Repeat Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341970_anadarko_meguire 28c-16hz_12-02-15_rbl_cnl\processed_0512341970

Dataset Pathname: pass8

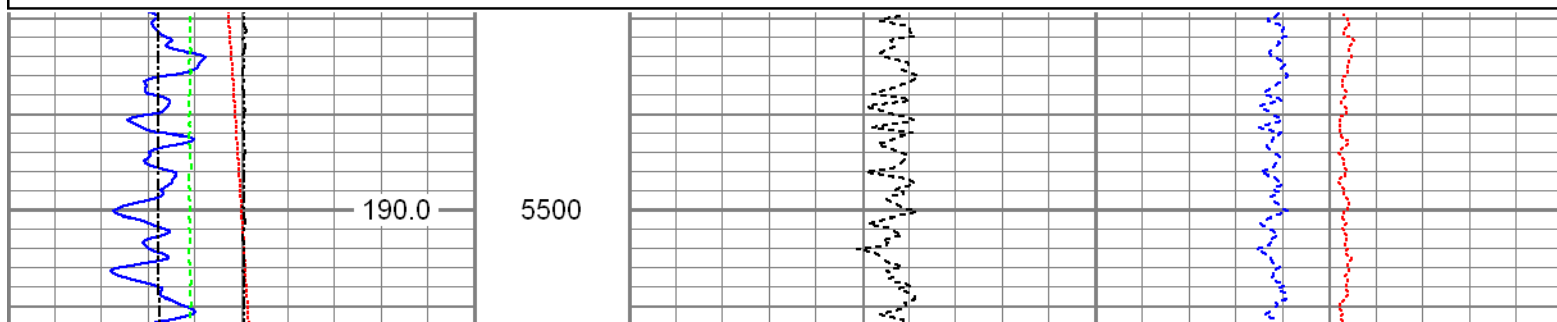
Presentation Format: cnl

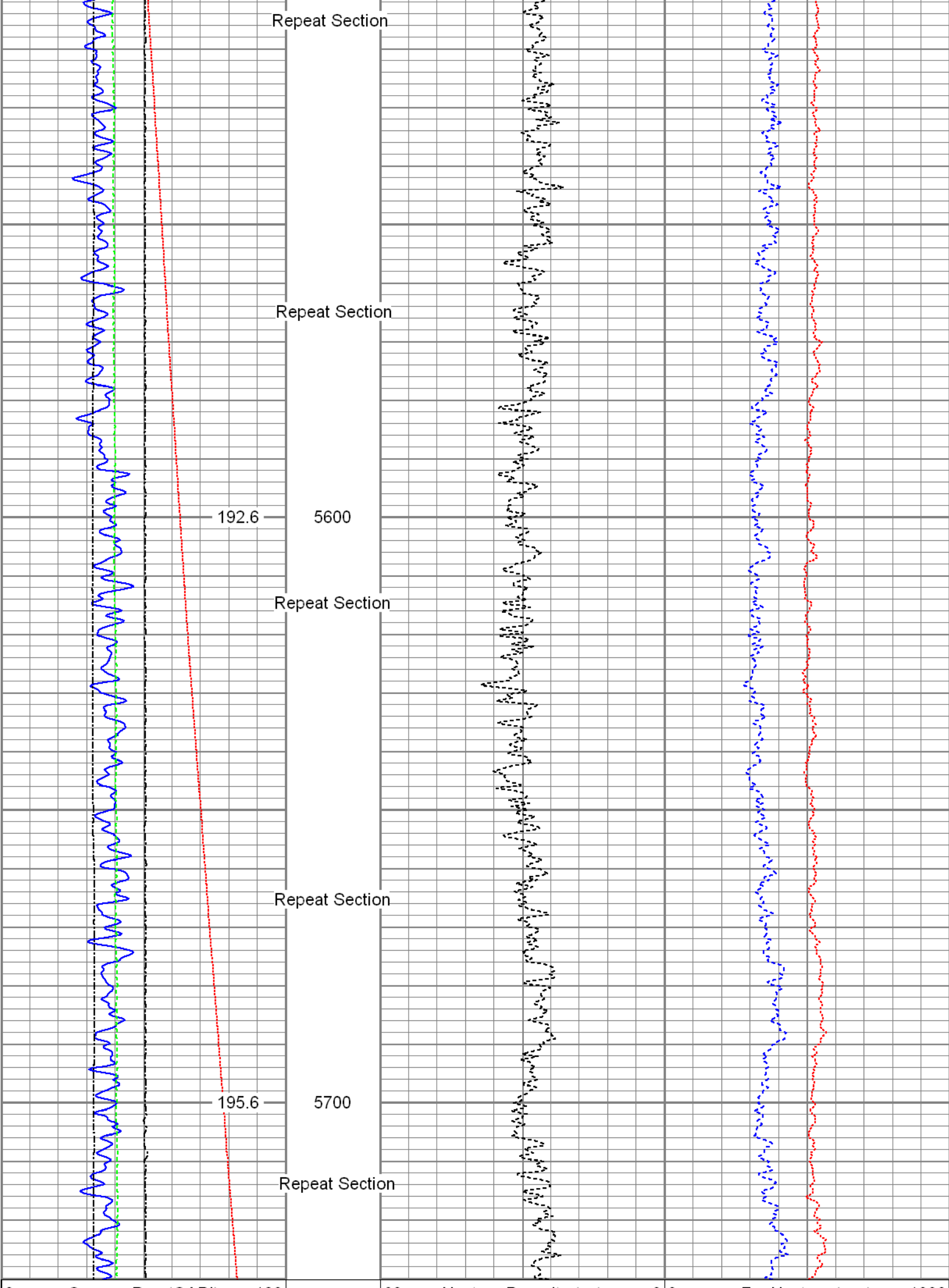
Dataset Creation: Wed Dec 02 09:23:10 2015 by Log 7.0 B1

Charted by: Depth in Feet scaled 1:240

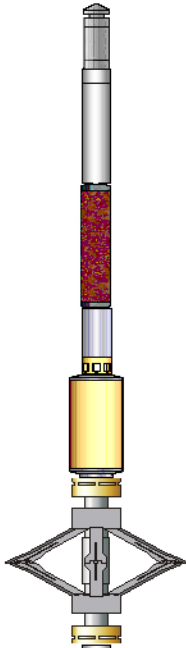
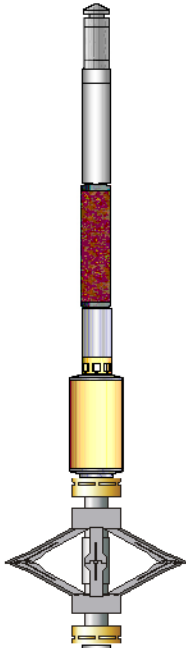
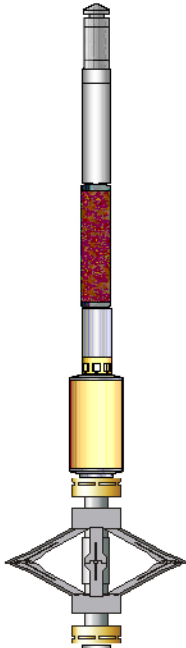
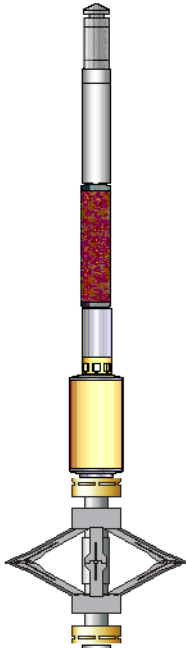
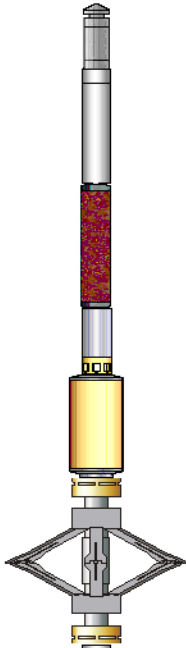
0	Gamma Ray (GAPI)	120
0	Temperature (degF)	20
-100	Line Speed (ft/min)	100
0	Line Tension (lb)	2000
-2	Differential Temperature (degF)	2

60	Neutron Porosity (pu)	0	0	Far Neutron (cps)	1000
Near Neutron (cps) 10000					





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	25.22		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (218874) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10024770) Production Gamma Ray	1.93	1.69	9.50
TEMP	23.82		UW_PRT-UW_PRT_016 (10024052) Platinum Resistance Thermometer	1.04	1.69	5.20
CCL	22.58		UW_CCL-UW_CCL_028 (10009470) Ultrawire 3-1/8" CCL	1.61	3.13	36.00
			UW_PRC #4 -DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVF3FT	14.64		UW_RBT-UW_RBT_003 (1048) Sondex Ultrawire 1-11/16" Radial Bond Tool	9.93	1.69	42.00
WVFS1	14.64					
WVFS2	14.64					
WVFS3	14.64					
WVFS4	14.64					
WVFS5	14.64					
WVFS6	14.64					
CBLTEMP	14.64					
CBLROT	14.64					
WVF5FT	13.64					
			UW_PRC-UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			CNL-007 (1005) Compensated Neutron Logging Tool	6.61	1.69	30.00

CNLSC	1.53					
CNSSC	1.12					
TSTAMP	0.00					
Dataset: PROCESSED_0512341970_Anadarko_Meguire 28C-16HZ_12-02-15_RBL_CNL.db: field/well/run1/pass11 Total Length: 29.47 ft Total Weight: 198.20 lb O.D. 3.13 in						

Calibration Report			
Database File:	C:\Warrior\Data\0512341970_Anadarko_Meguire 28C-16HZ_12-02-15_RBL_CNL\PROCESSED_051		
Dataset Pathname:	pass11		
Dataset Creation:	Wed Dec 02 09:49:41 2015 by Log 7.0 B1		
Compensated Neutron Calibration Report			
Serial Number:	1005		
Tool Model:	007		
Master Calibration	Tue Jun 03 09:29:29 2014		
Detector	Readings		
Short Space	240.87	cps	
Long Space	303.55	cps	
Ratio	Measured	Reference	
CNRAT Gain K	0.8150	Sleeve: 1.0000	
	1.0271		
Before Survey			
Detector	Readings		
Short Space		cps	
Long Space		cps	
	Measured	Reference	
Ratio			
After Survey			
Detector	Readings		
Short Space		cps	
Long Space		cps	
	Measured	Reference	
Ratio			

Segmented Cement Bond Log Calibration Report			
Serial Number:	1048		
Tool Model:	UW_RBT_003		
Calibration Casing Diameter:	5.500	in	
Calibration Depth:	1483.757	ft	

Master Calibration, performed Wed Dec 02 08:58:41 2015:		
Raw (v)	Calibrated (mv)	Results


	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.001	1.917	1.000	71.921	36.989	1.021
5FT	-0.004	2.010	1.000	71.921	35.224	1.125
S1	0.001	2.161	0.000	100.000	46.282	-0.034
S2	0.000	2.161	0.000	100.000	46.281	-0.005
S3	0.007	1.944	0.000	100.000	51.629	-0.350
S4	-0.001	1.979	0.000	100.000	50.501	0.057
S5	-0.000	1.719	0.000	100.000	58.153	0.013
S6	0.013	1.807	0.000	100.000	55.753	-0.719

Temperature Calibration Report

Serial Number:		10024052			
Tool Model:		UW_PRT_016			
Performed:		Wed Feb 11 16:41:28 2015			
Point #	Reading	Reference			
1	12242.00 cps	68.00	degF		
2	18329.00 cps	104.00	degF		
3	29563.00 cps	176.00	degF		
4	41222.00 cps	248.00	degF		
5	52988.00 cps	320.00	degF		
6	58824.00 cps	356.00	degF		
7	cps		degF		
8	cps		degF		
9	cps		degF		
10	cps		degF		

Gamma Ray Calibration Report

Serial Number:		10024770			
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 & Gas Onshore, L.P.
	Well	Meguire 28C-16HZ
	Field	Wattenberg
	County	Weld
	State	Colorado