



Compensated Neutron
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.

Well George 25-3HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-46331

Other Services
JB/GR
RBP
RBL

SEC 25 TWP 2N RGE 65W

Elevation

Permanent Datum
Log Measured From
Drilling Measured From

Ground Level
Kelly Bushing
Kelly Bushing

Elevation
17 FT
4900'

K.B. 4917'
D.F. ---
G.L. 4900'

Date	13-AUG-2018
Run Number	One
Depth Driller	18092 FT
Depth Logger	6890 FT
Bottom Logged Interval	6870 FT
Top Log Interval	Surface
Open Hole Size	7.88"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	218°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	8:19
Equipment Number	HD-363
Location	Platteville Co
Recorded By	J. Morrison
Witnessed By	Kyle Carver
Borehole Record	
Run Number	Bit From To
Size (in)	Size Weight From To
Wgt (lbs/ft)	
Grade	
Top	
Bottom	
Surface Casing	9.5/8 36 J-55 Surface 1918 FT
Intermediate #1	5 1/2 17 HCP 110 Surface 18082 FT
Intermediate #2	
Inner	

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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

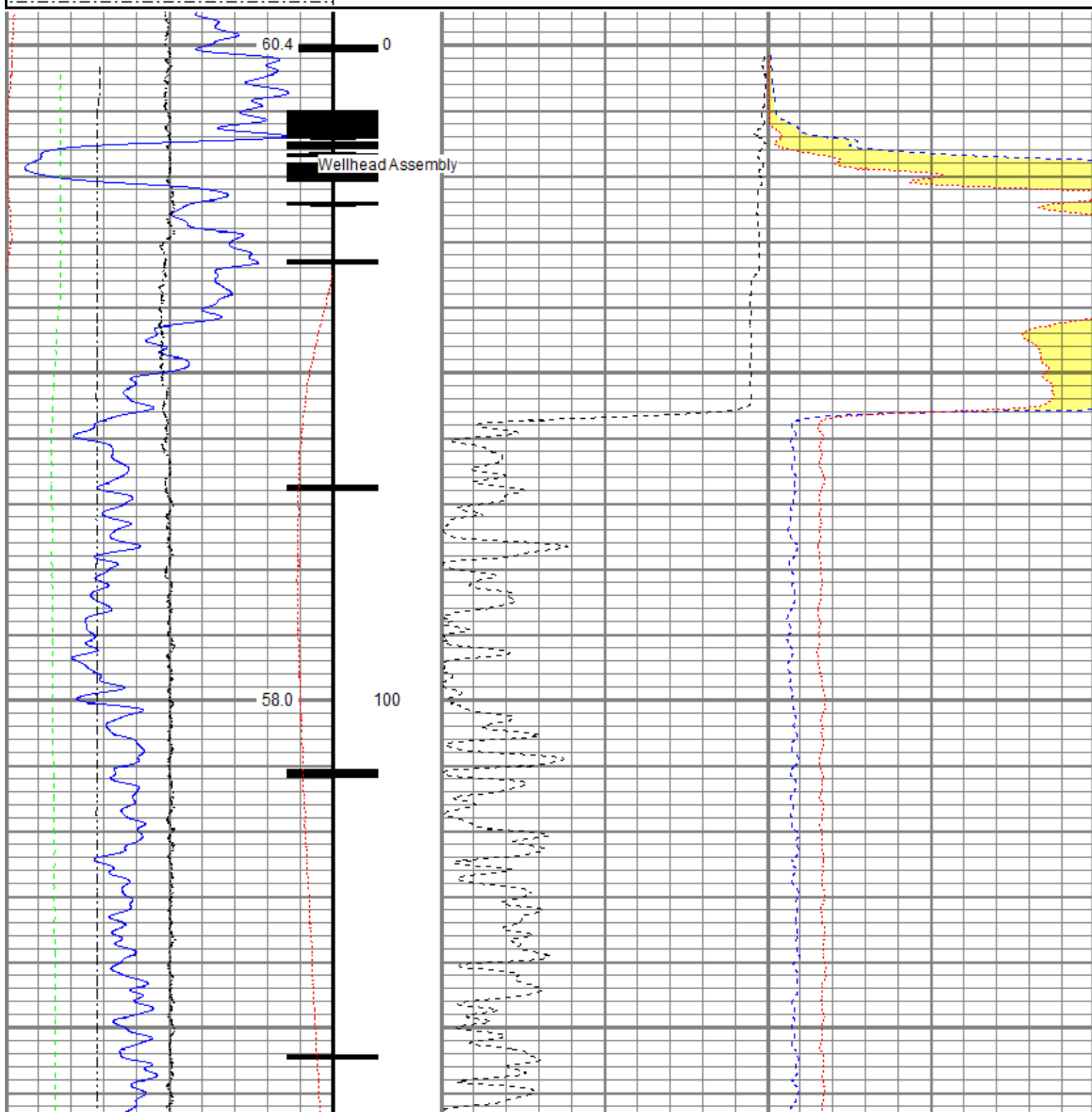
Log ran as per customer request
Log measured from Kelly Bushing at 17 FT
Depth referenced to Casing Tally reported Marker Joint at 6772 FT
Adjusted +2 FT to correlate with Marker Joint
Ran JB/GR down to 7909 FT
Log ran with 0 PSI Surface Induced Pressure
Logging tools were clean and free of any debris upon completion of operations
Thank you for choosing Reliance Oilfield Services, LLC!!

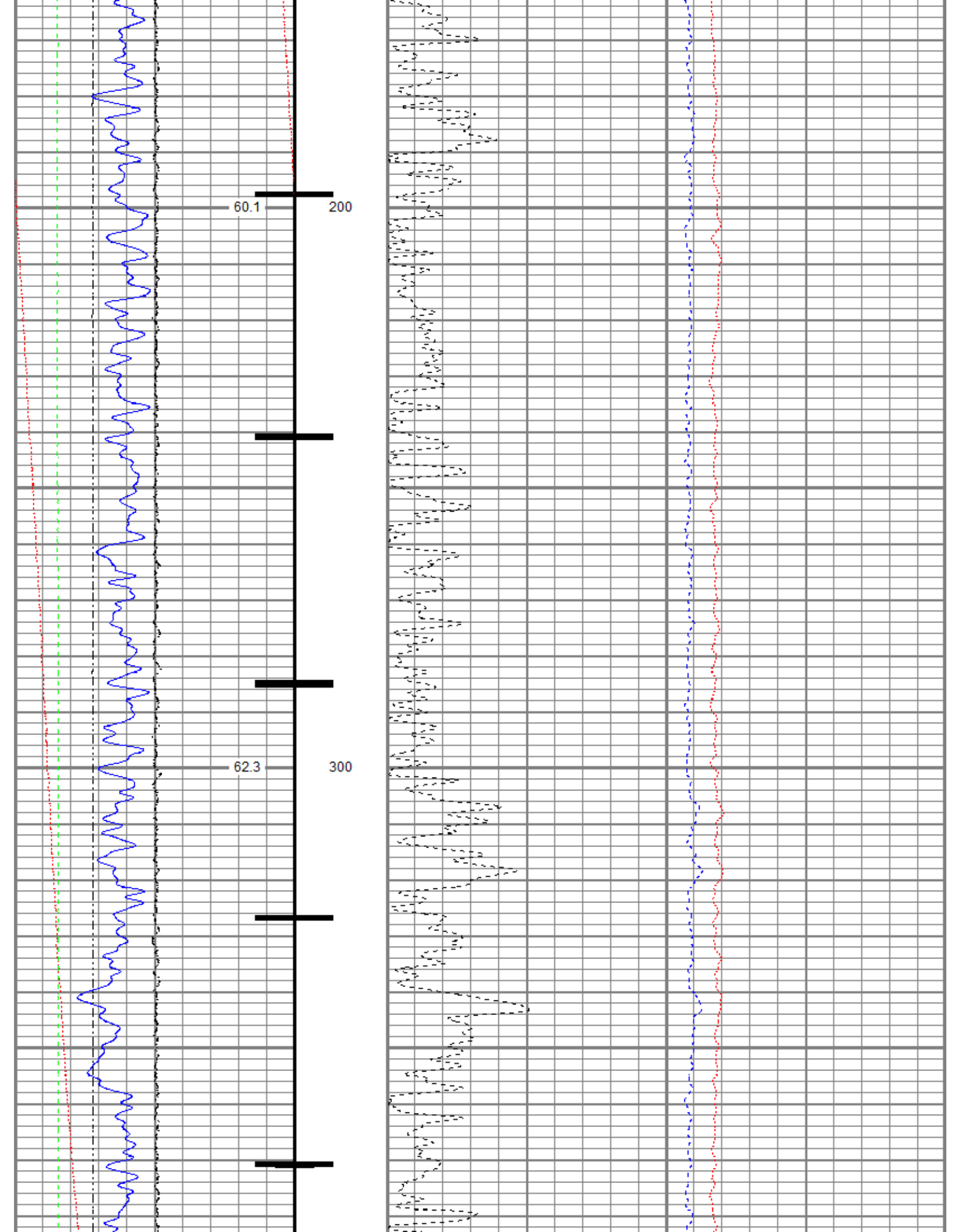
Main Pass

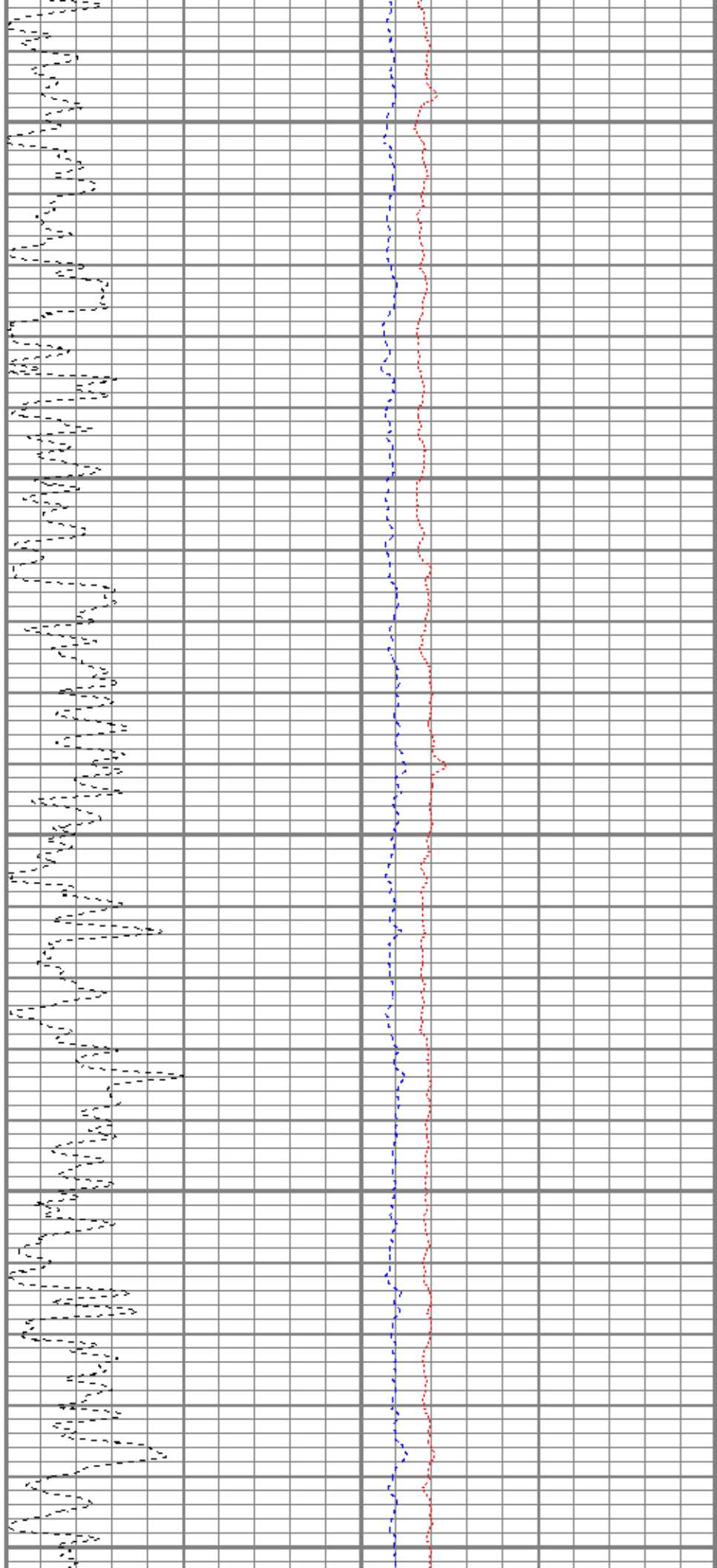
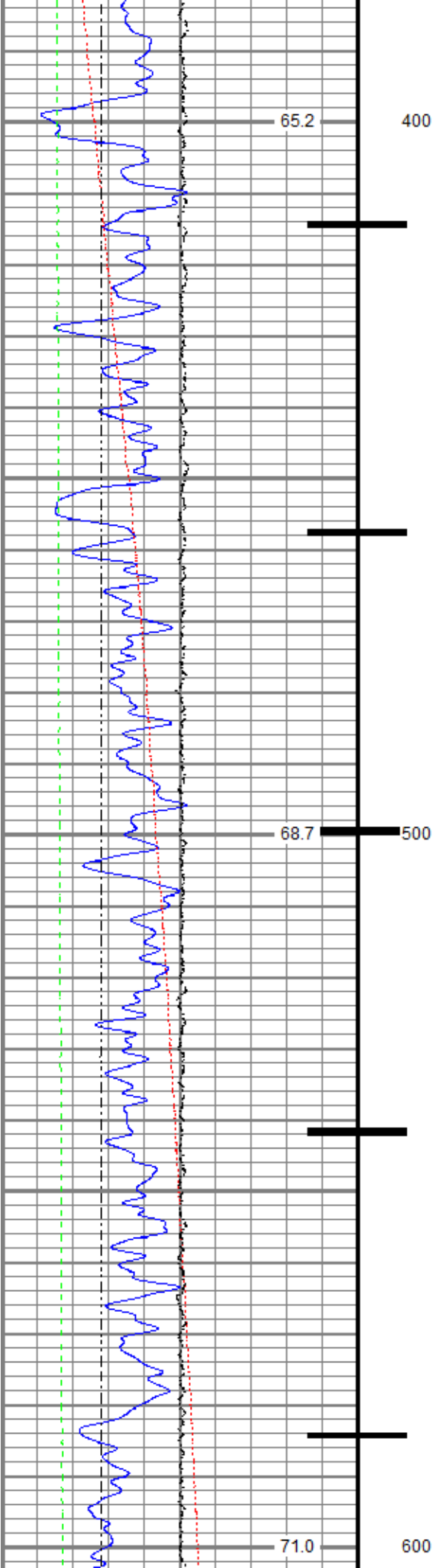


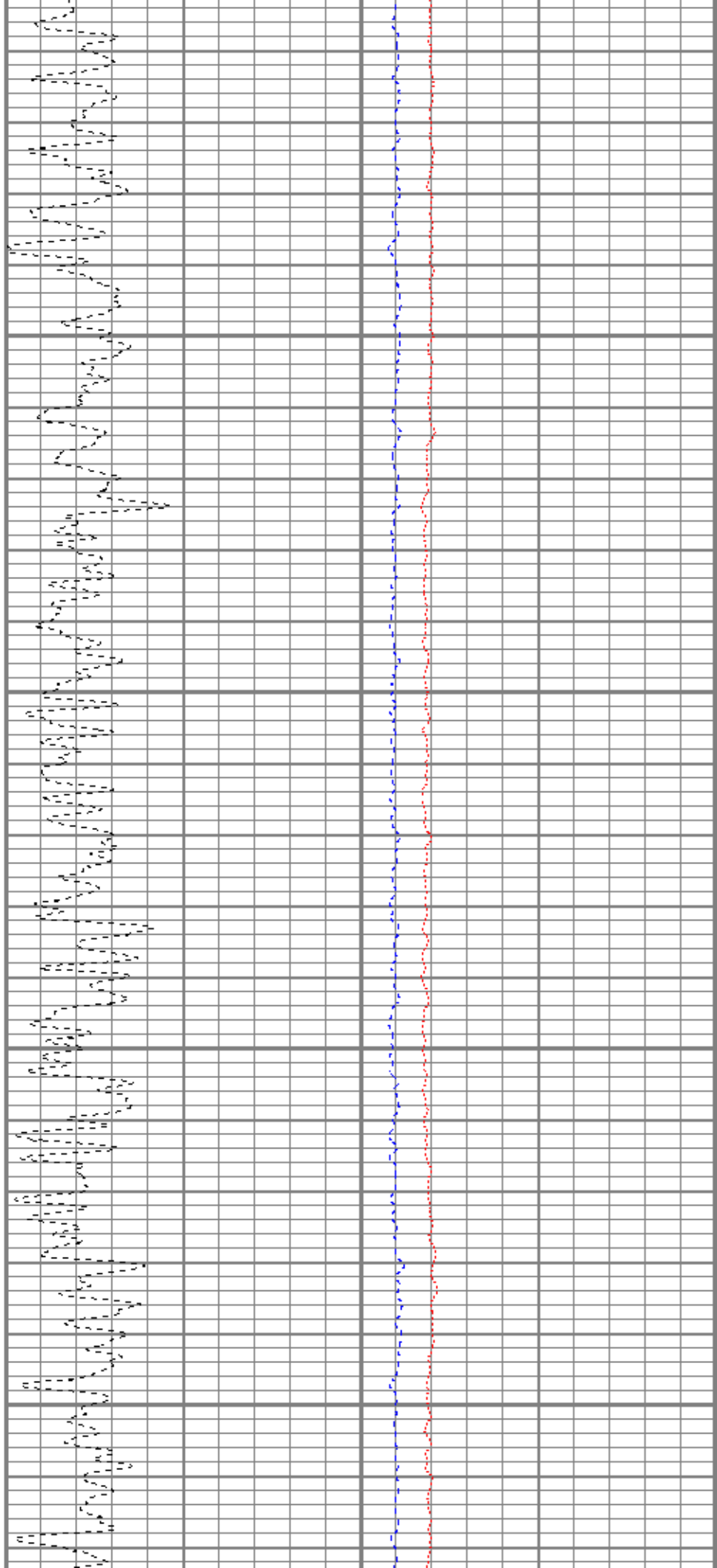
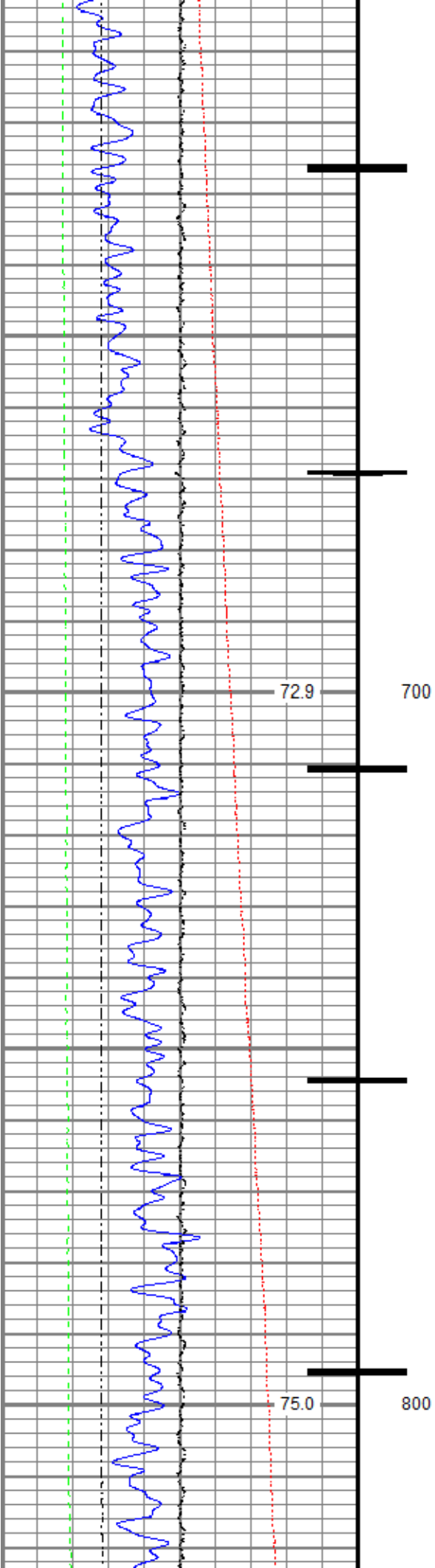
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Dataset Pathname	Main1.1
Presentation Format	ros_cnl_probe
Dataset Creation	Mon Aug 13 11:12:30 2018
Charted by	Depth in Feet scaled 1:240

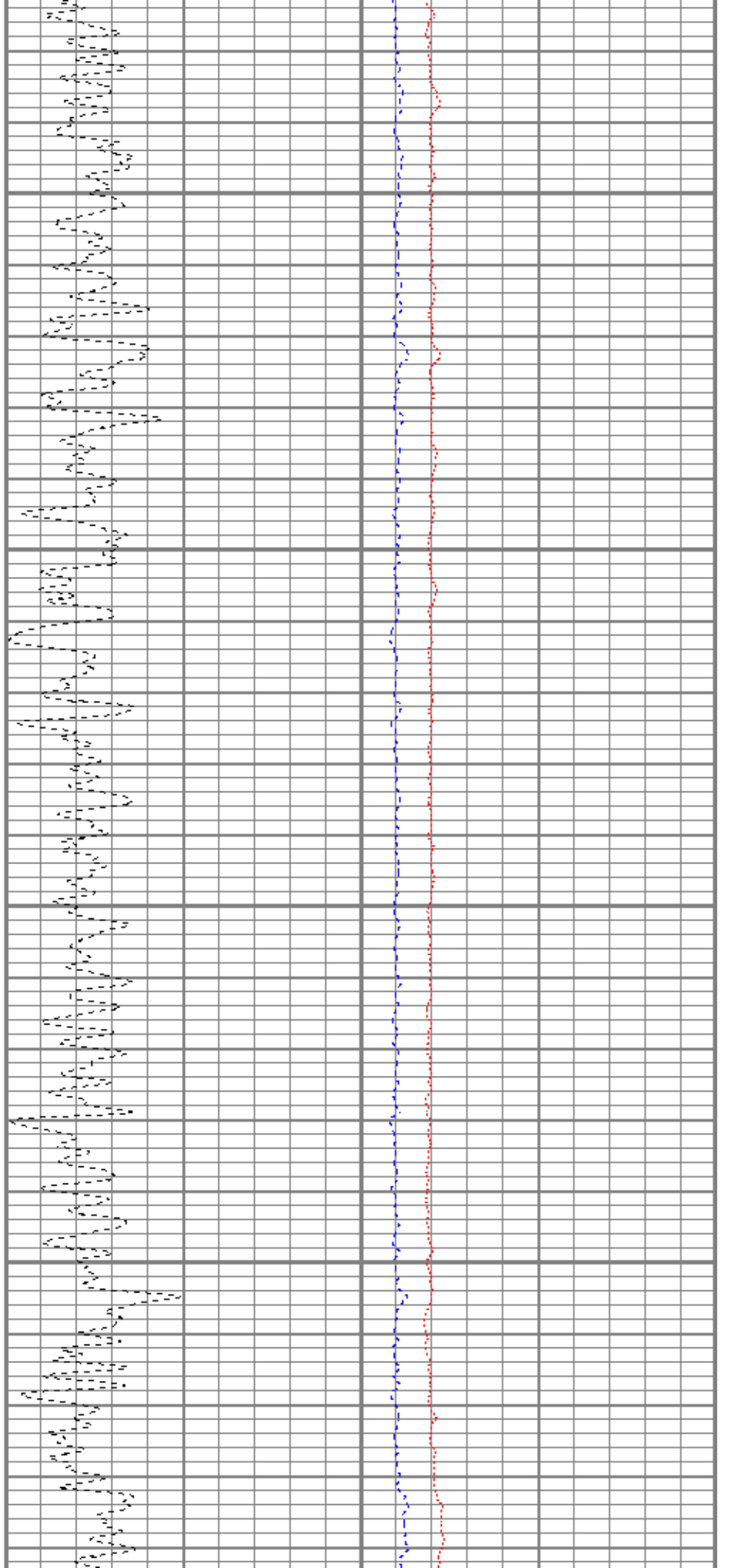
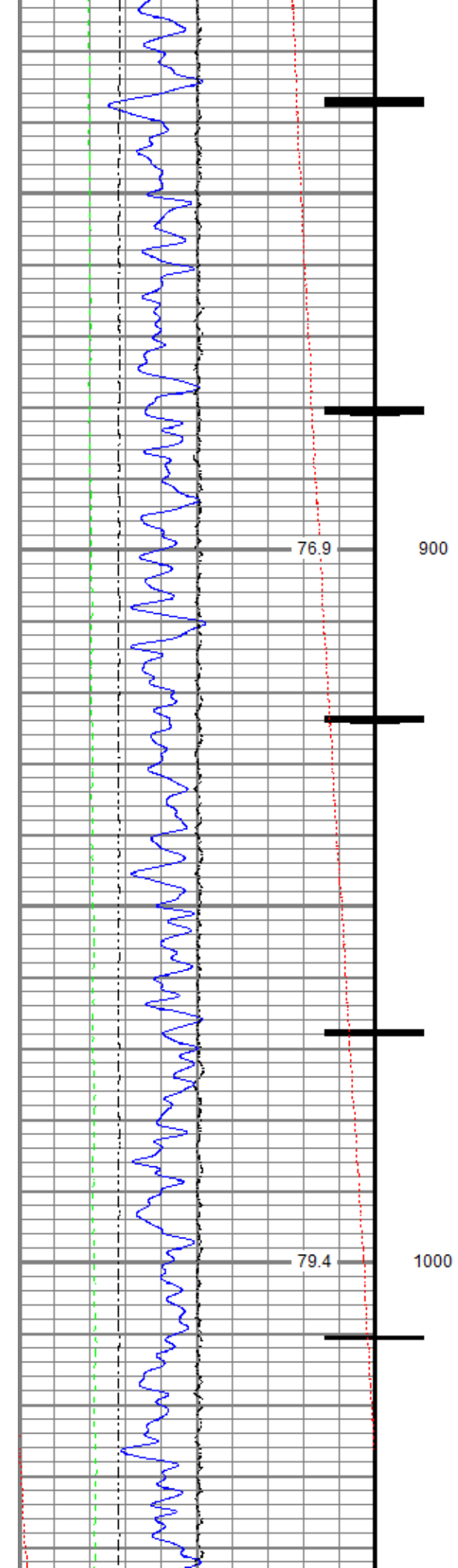
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Casing Collar Locator						0	Near Neutron (cps)	5000
0	Temperature (degF)	20						
-100	Line Speed (ft/min)	100						
0	Line Tension (lb)	2000						
-2	Differential Temperature (degF)	2						

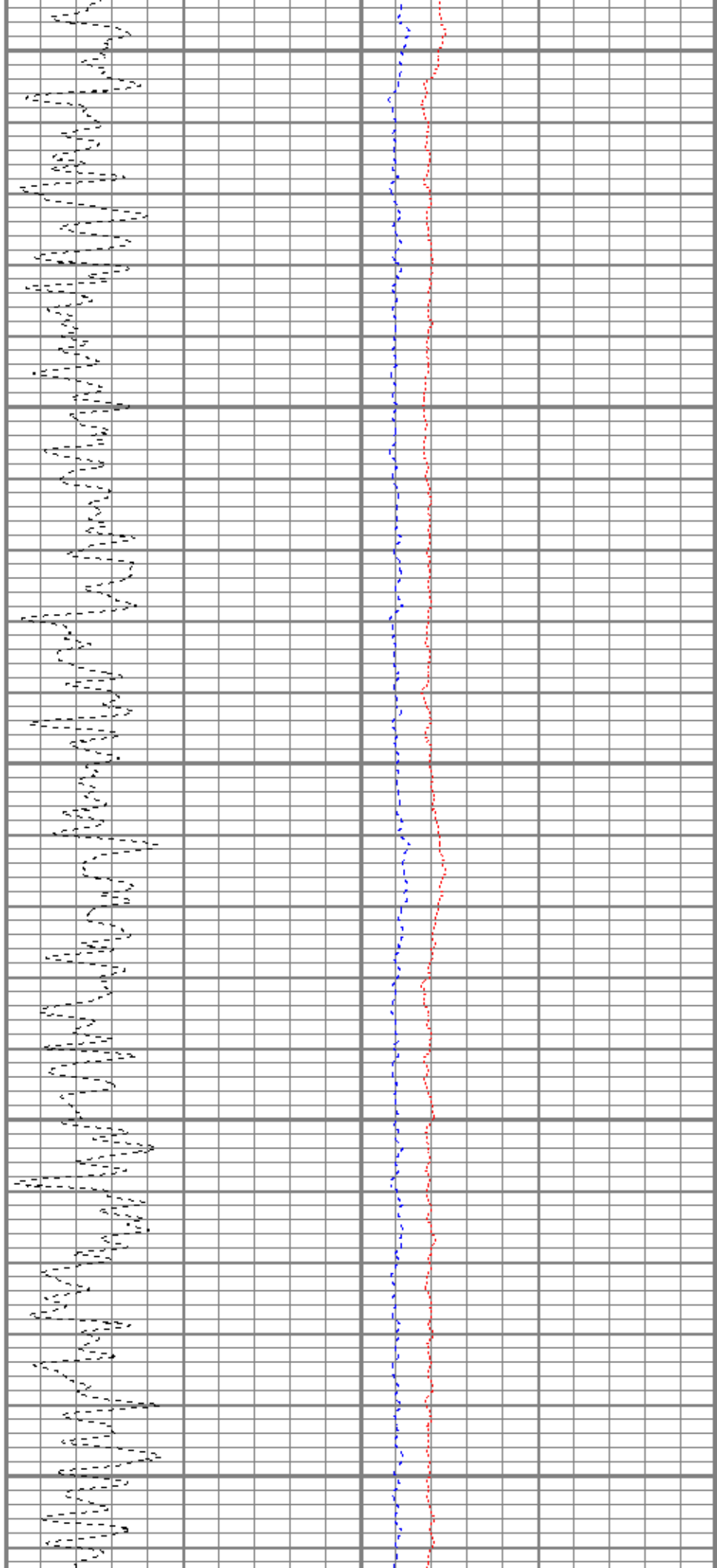
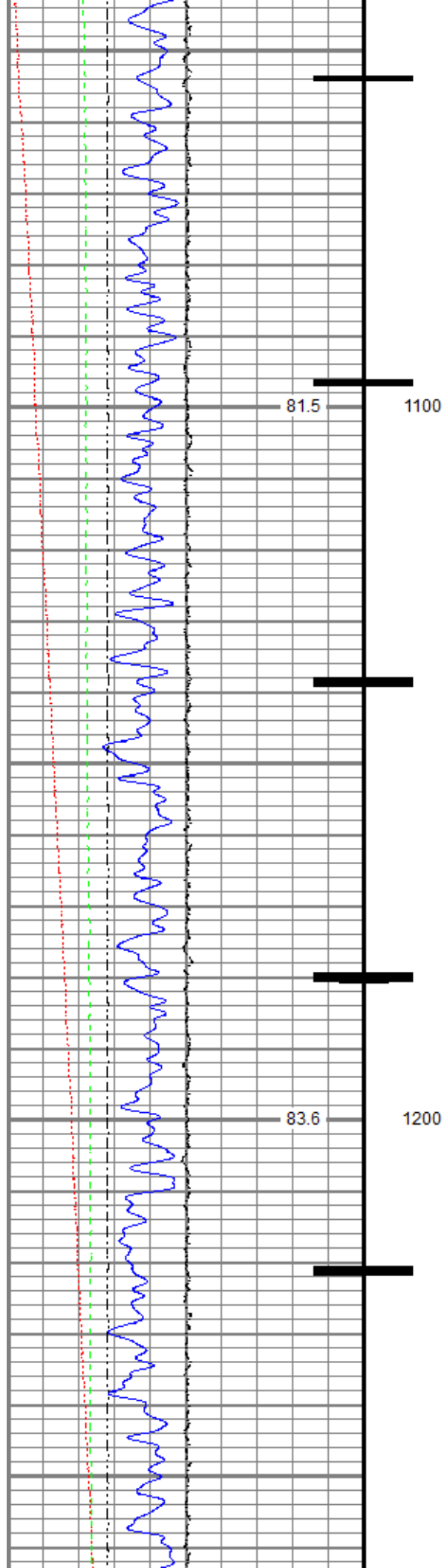


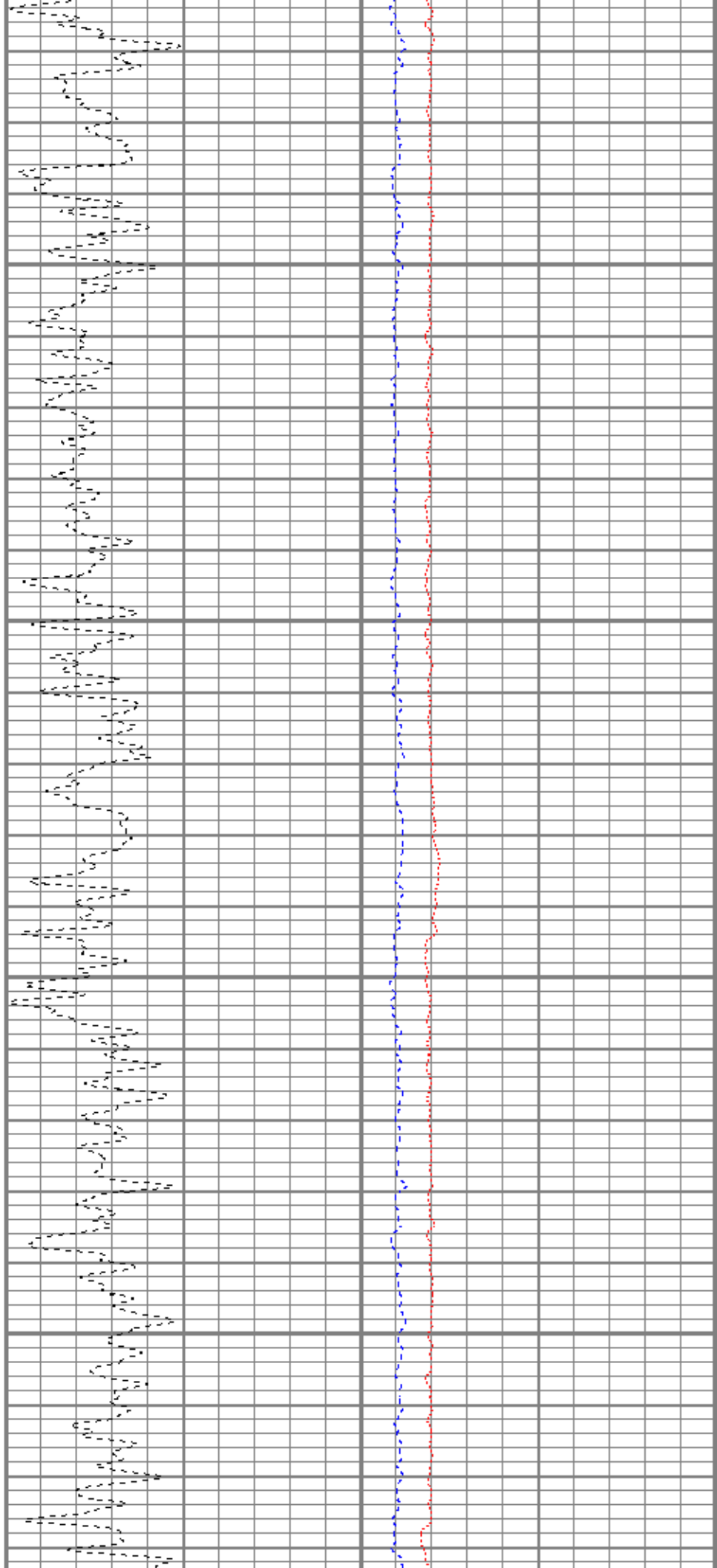
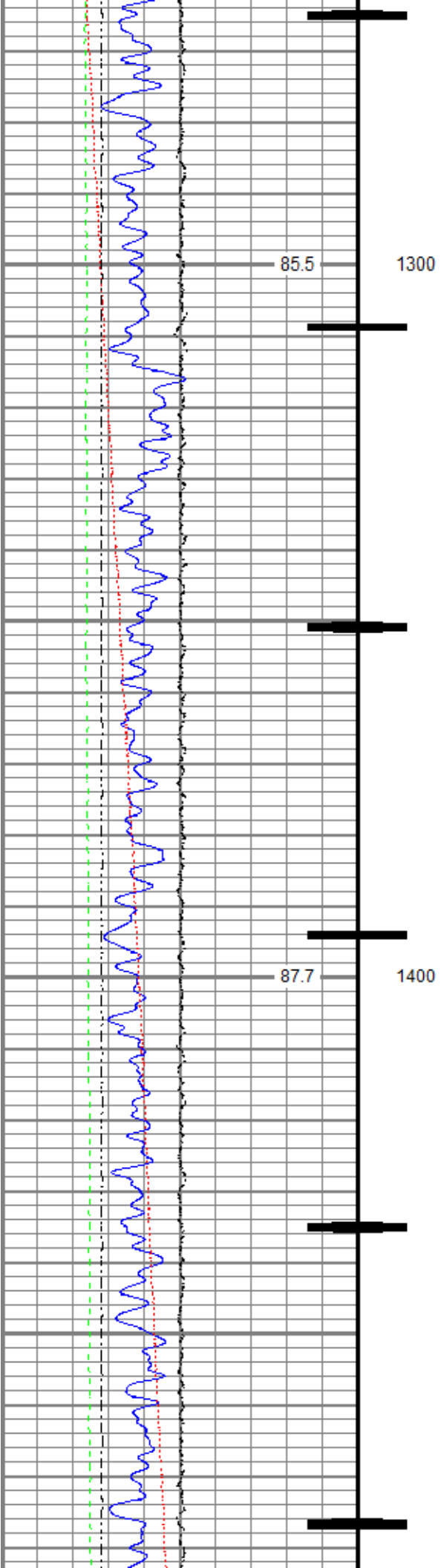


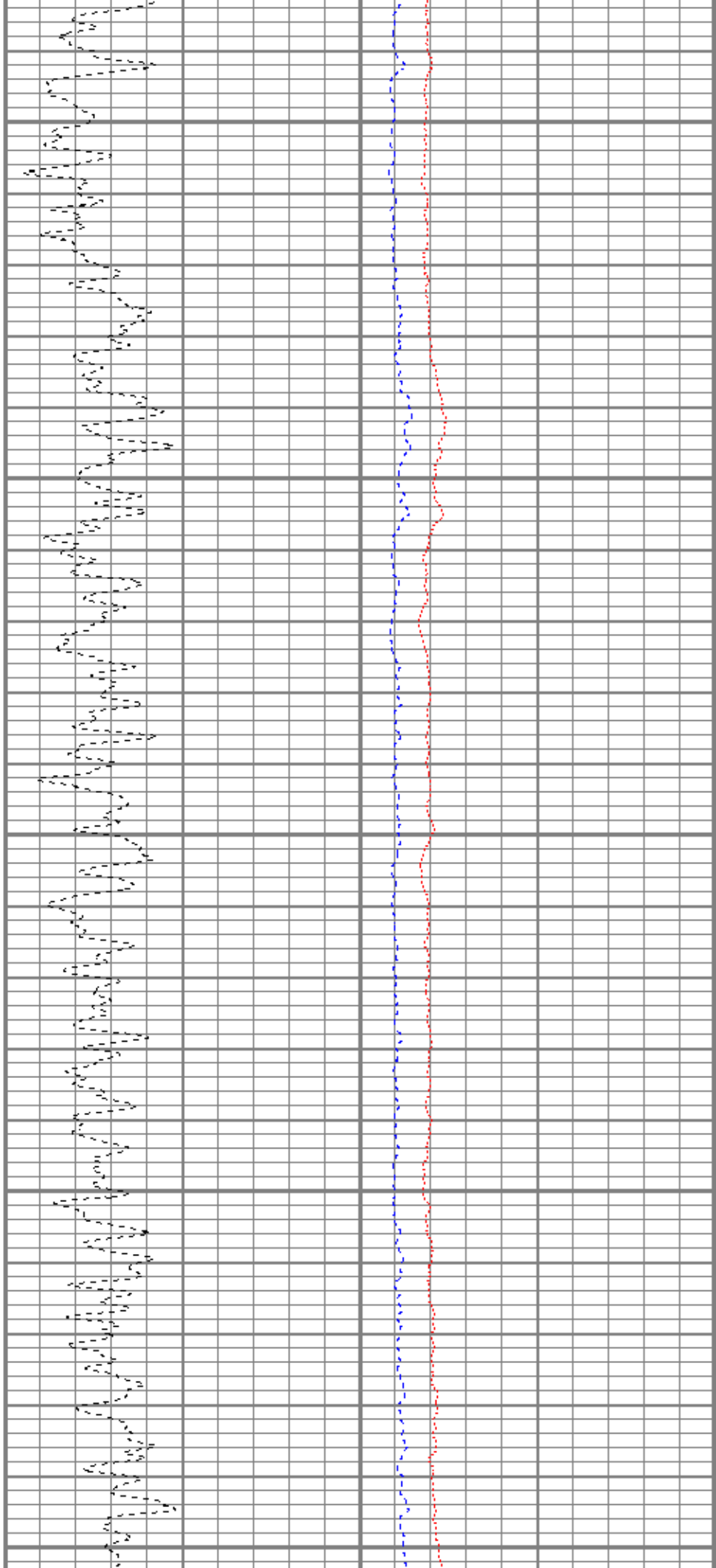
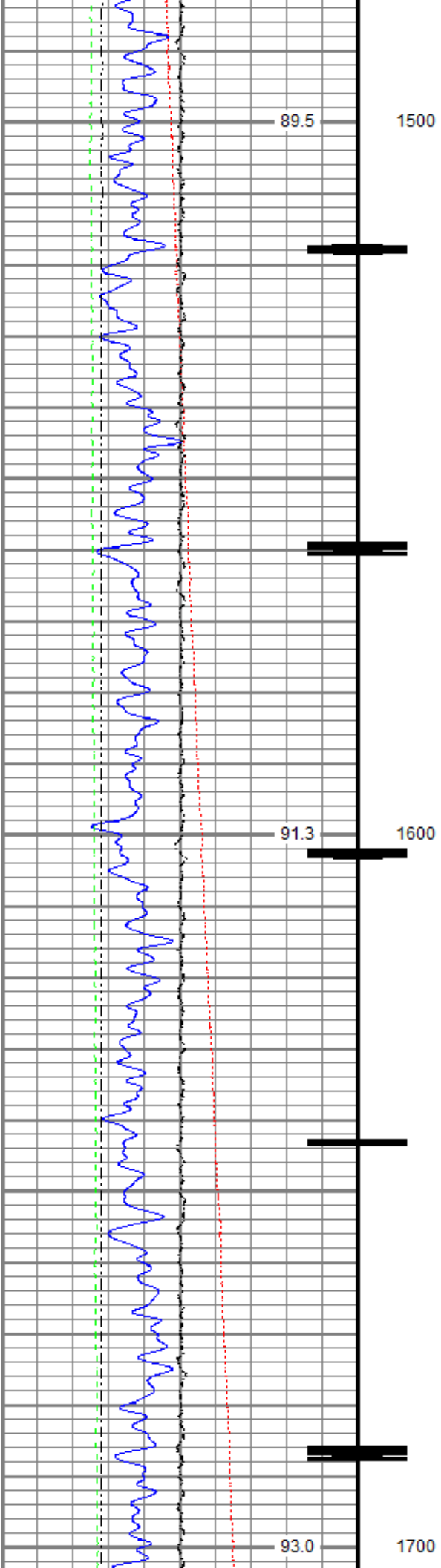


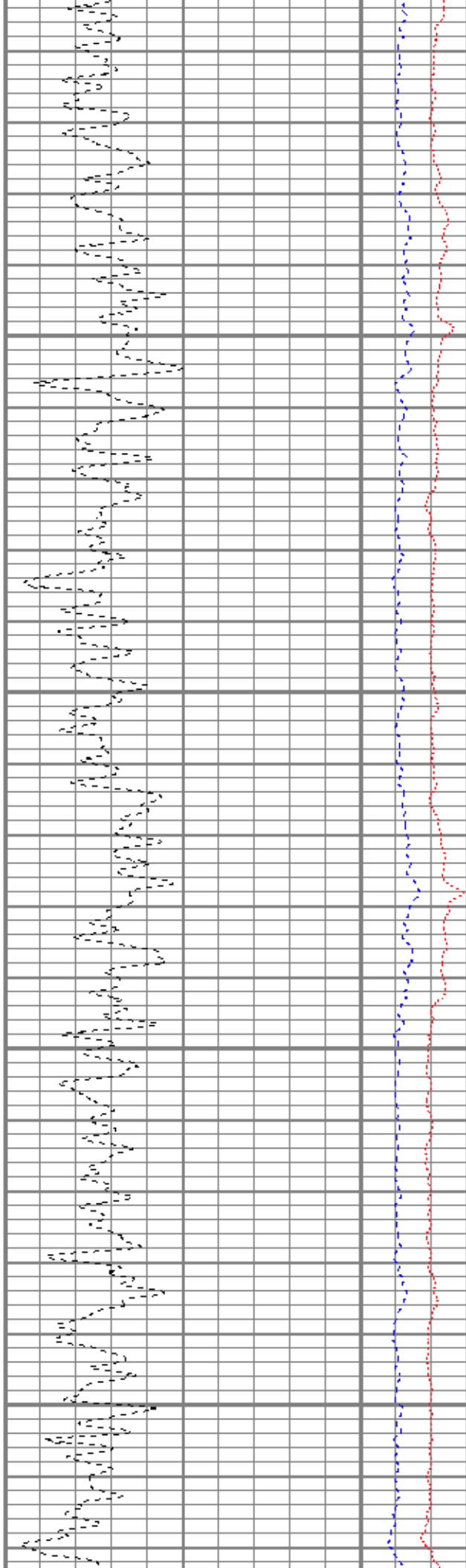
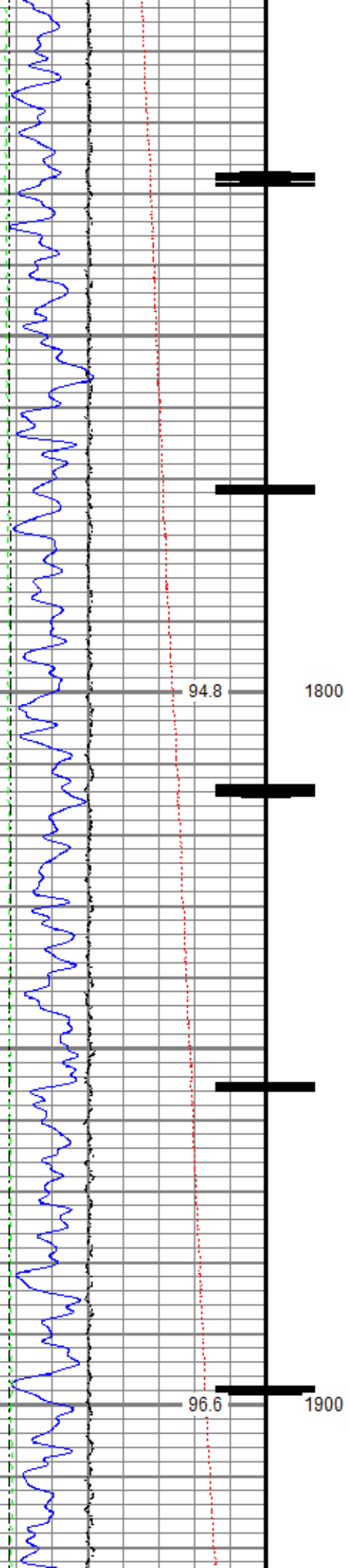


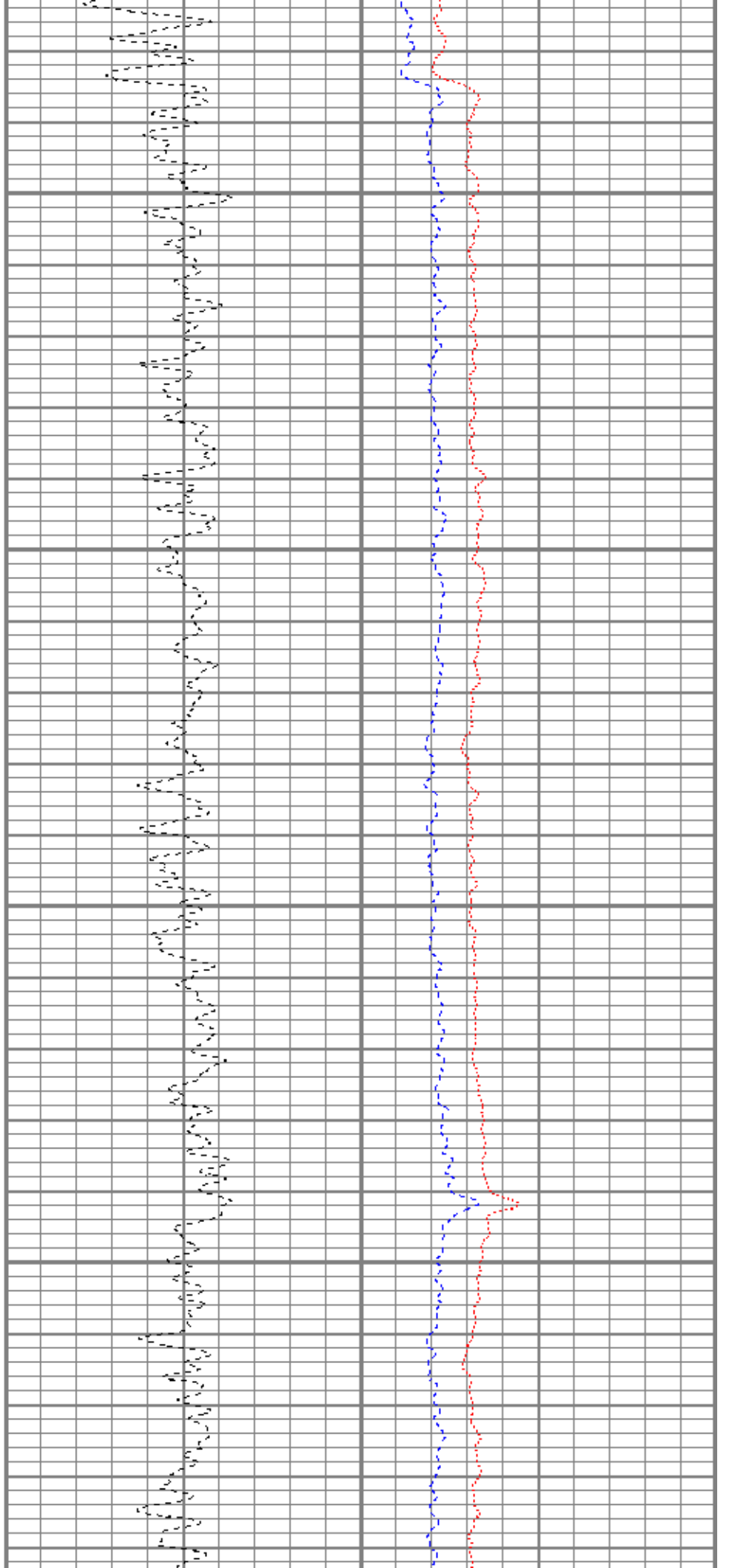
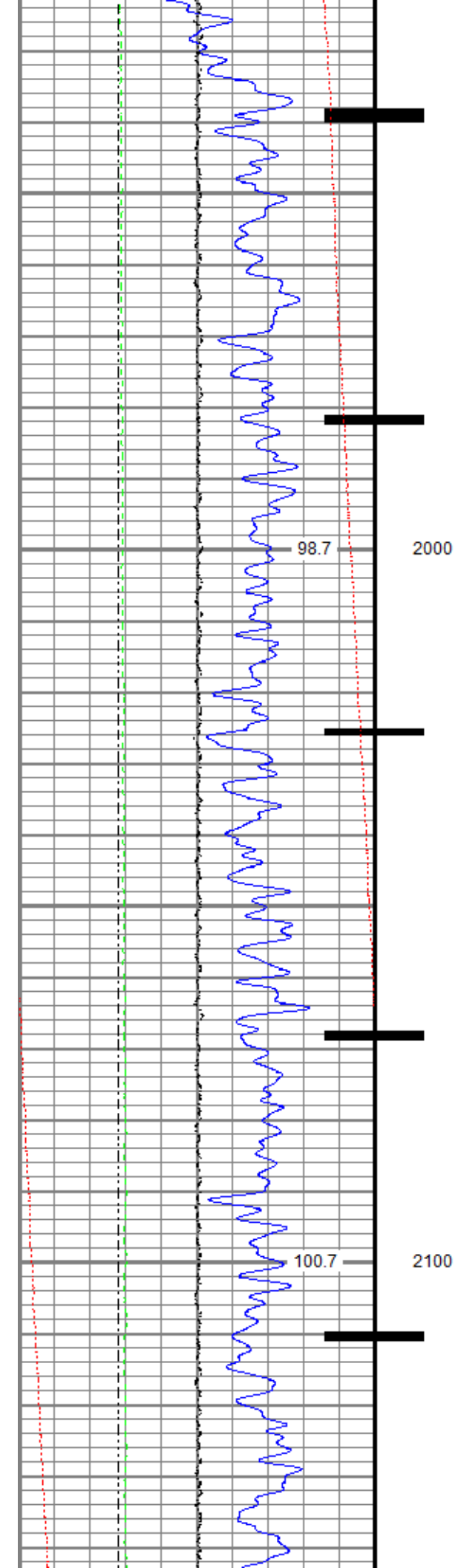


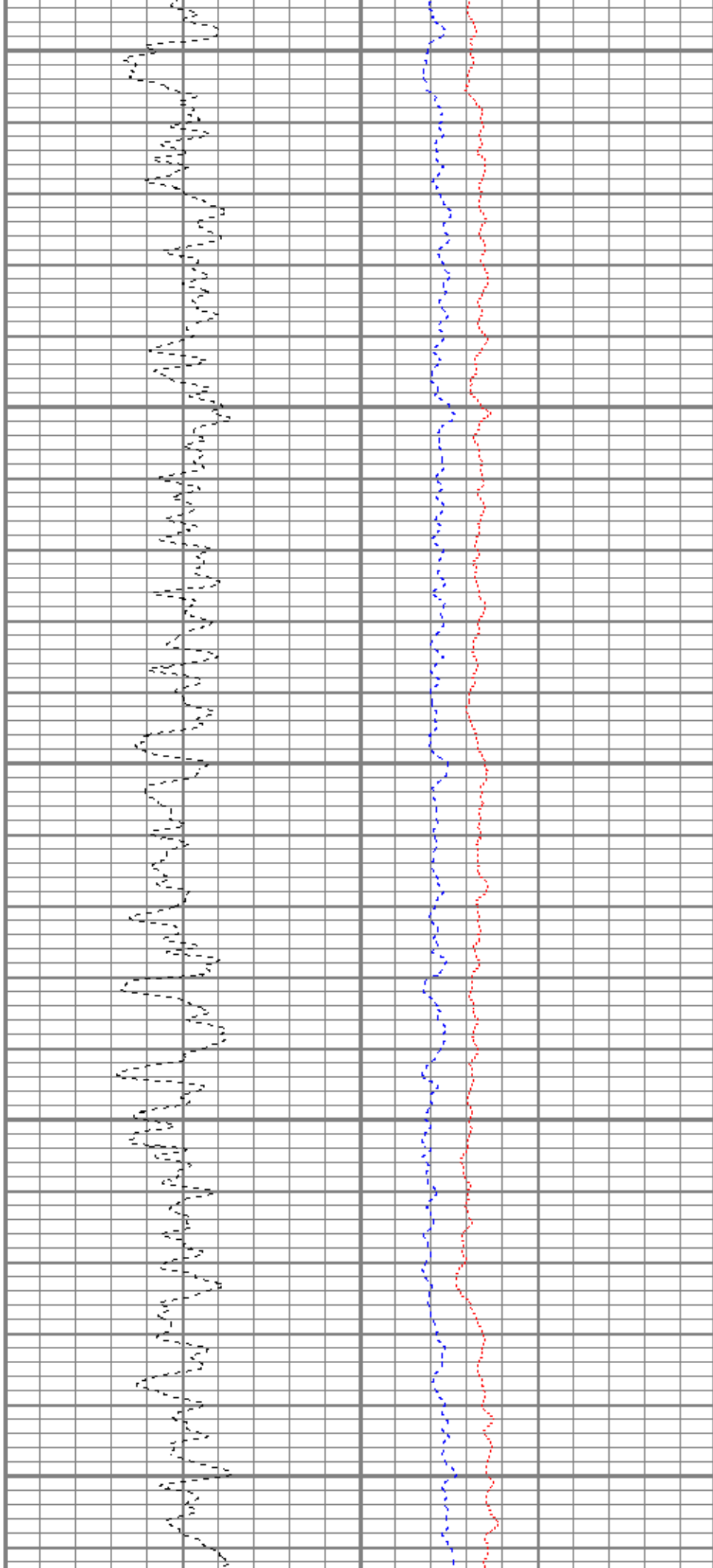
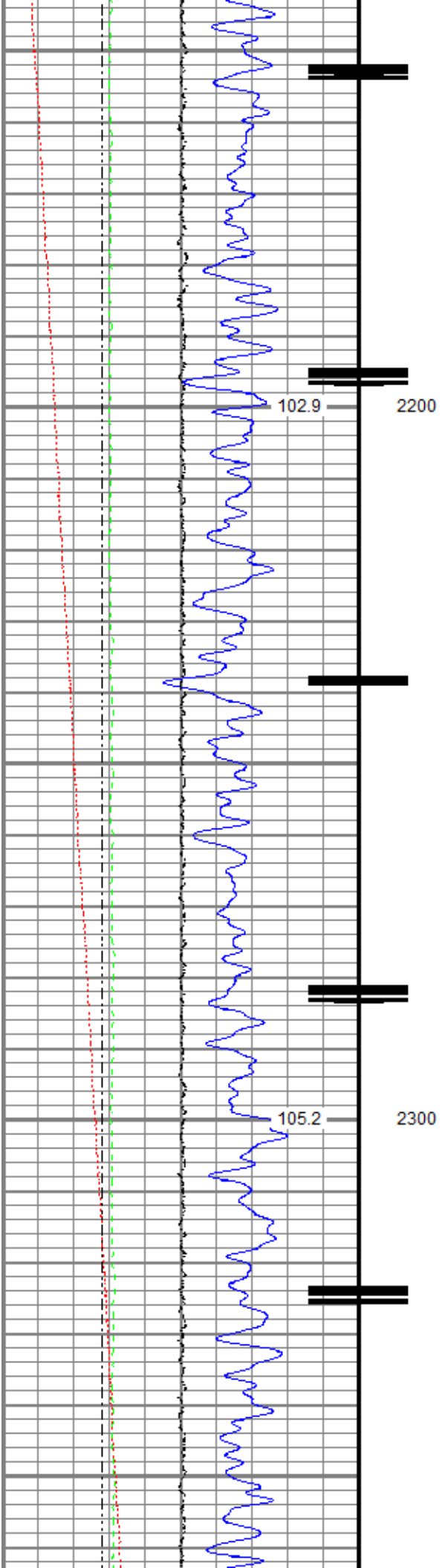


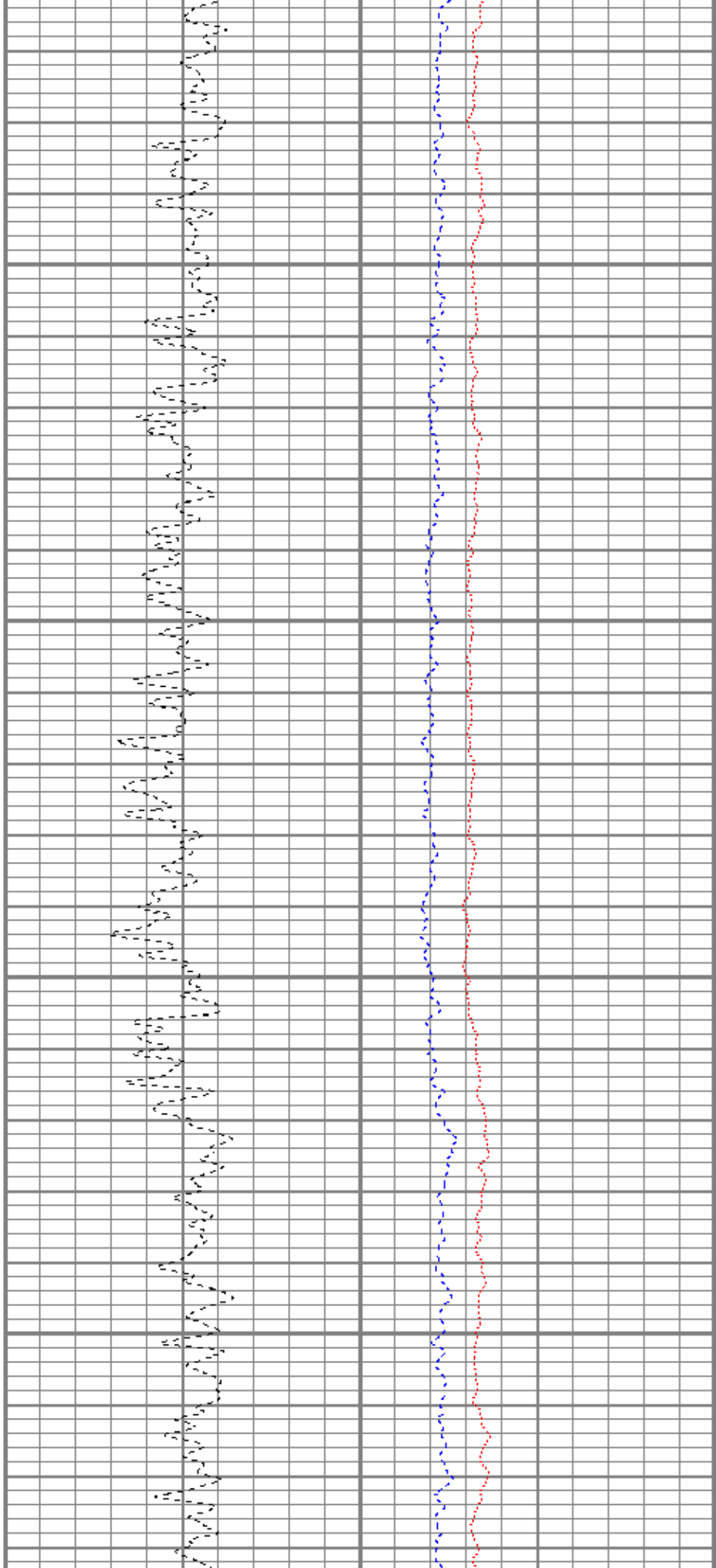
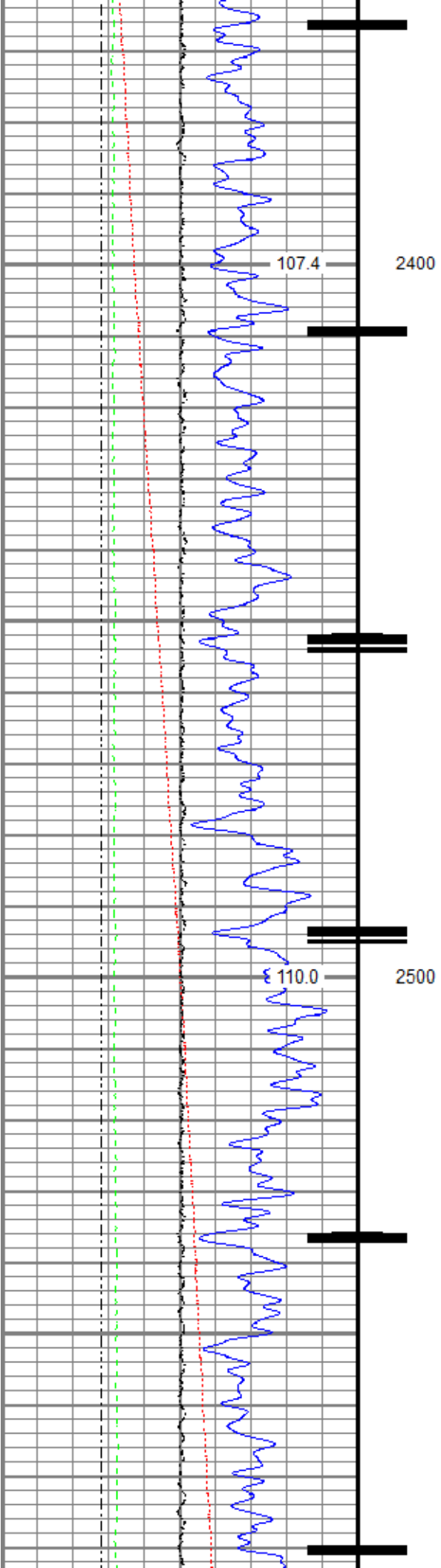


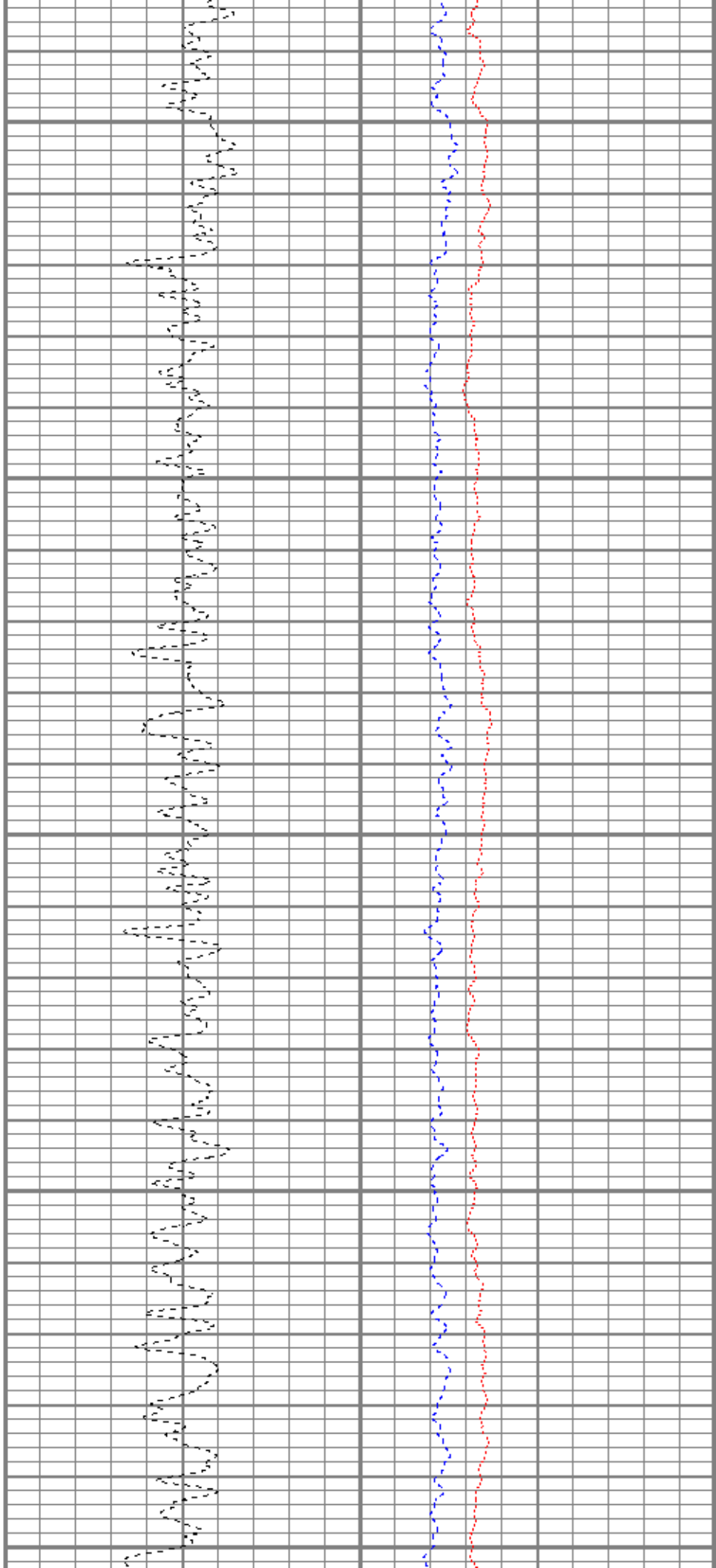
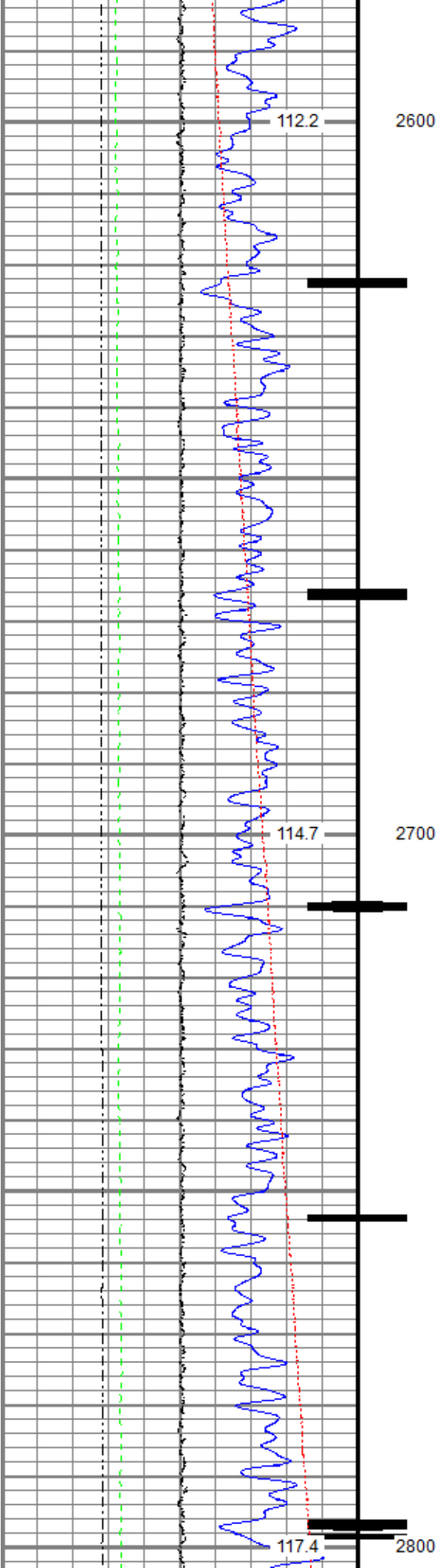


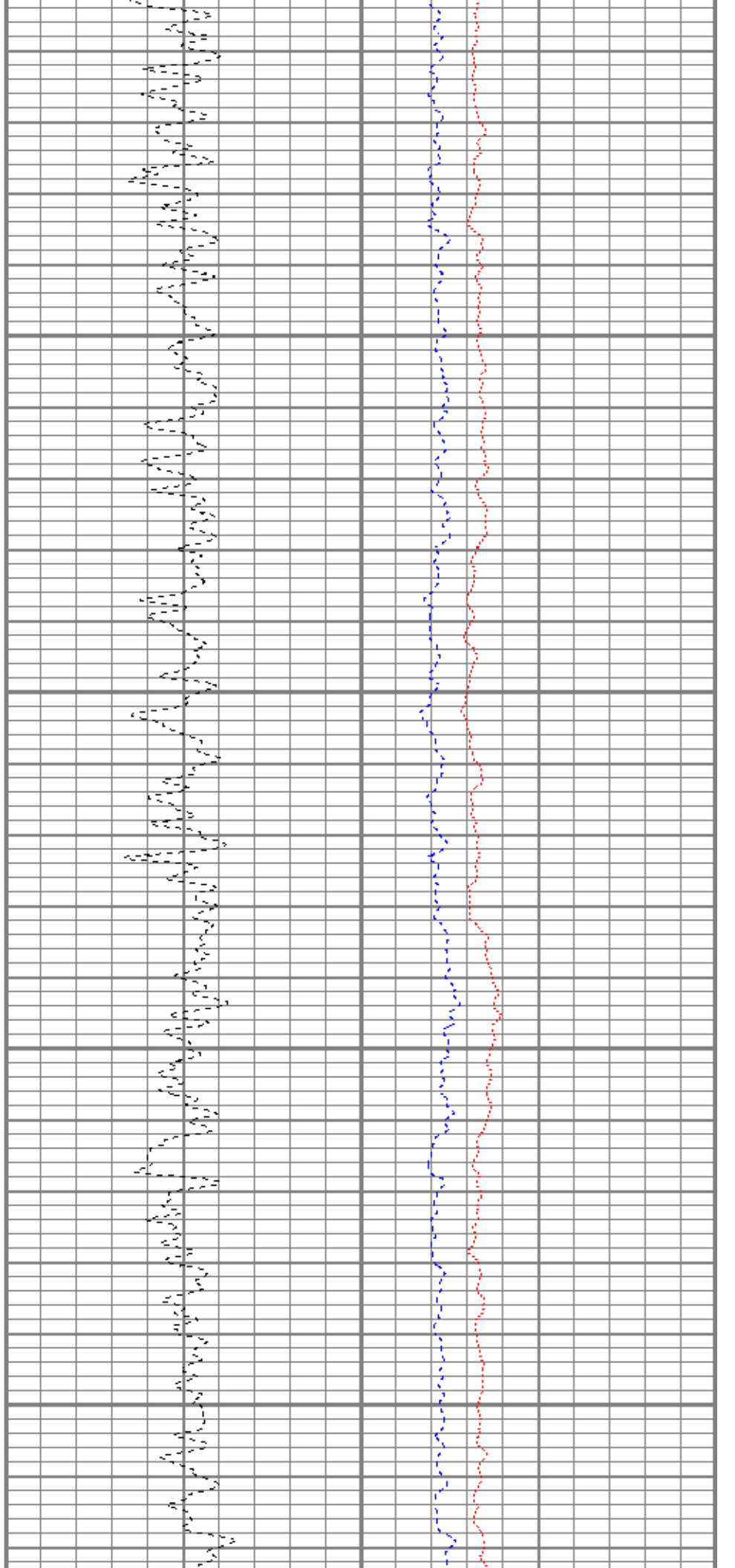
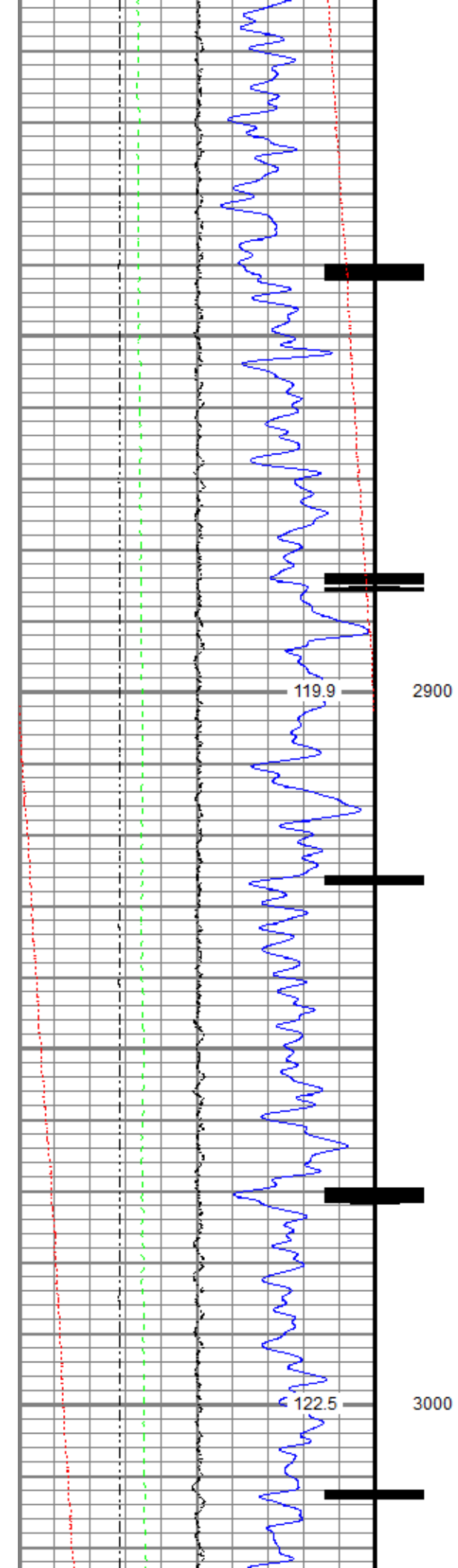


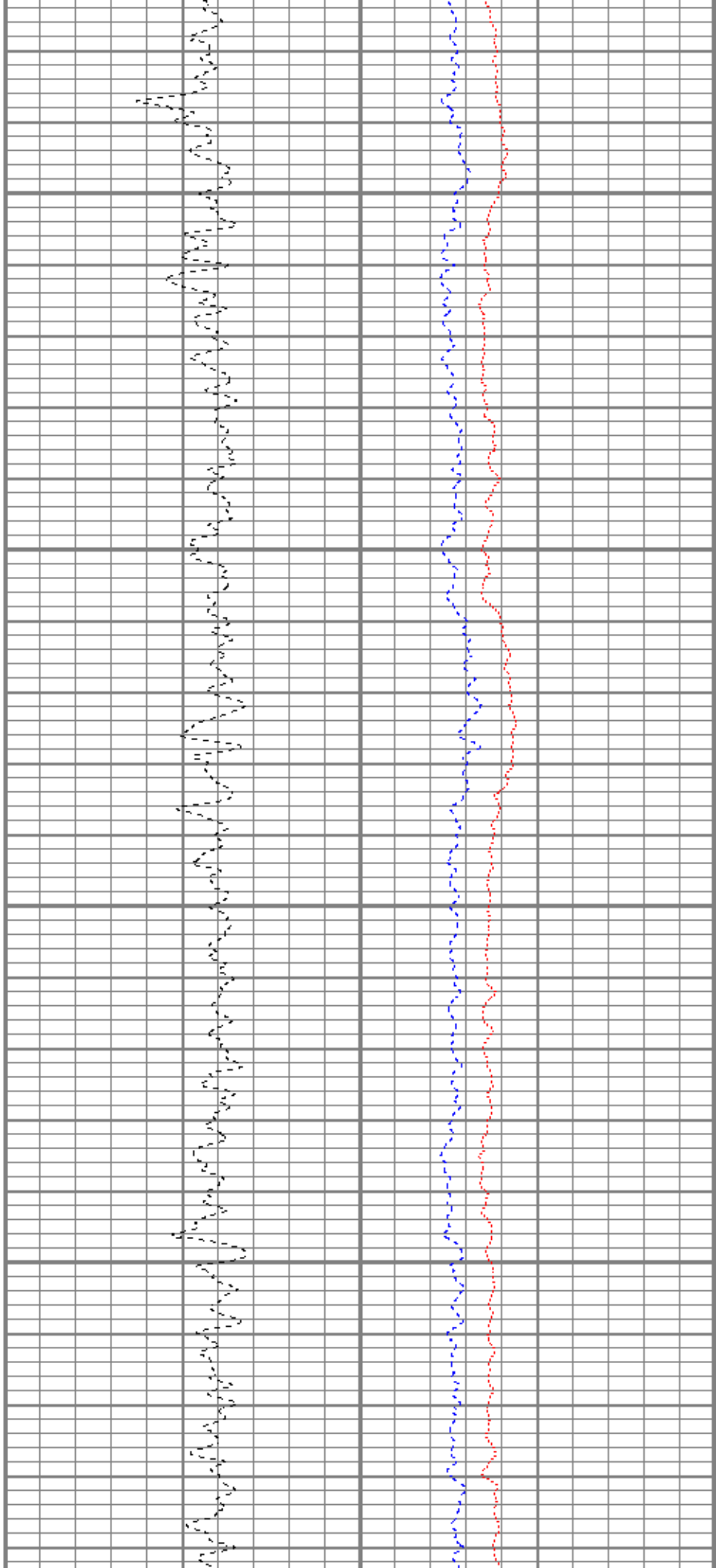
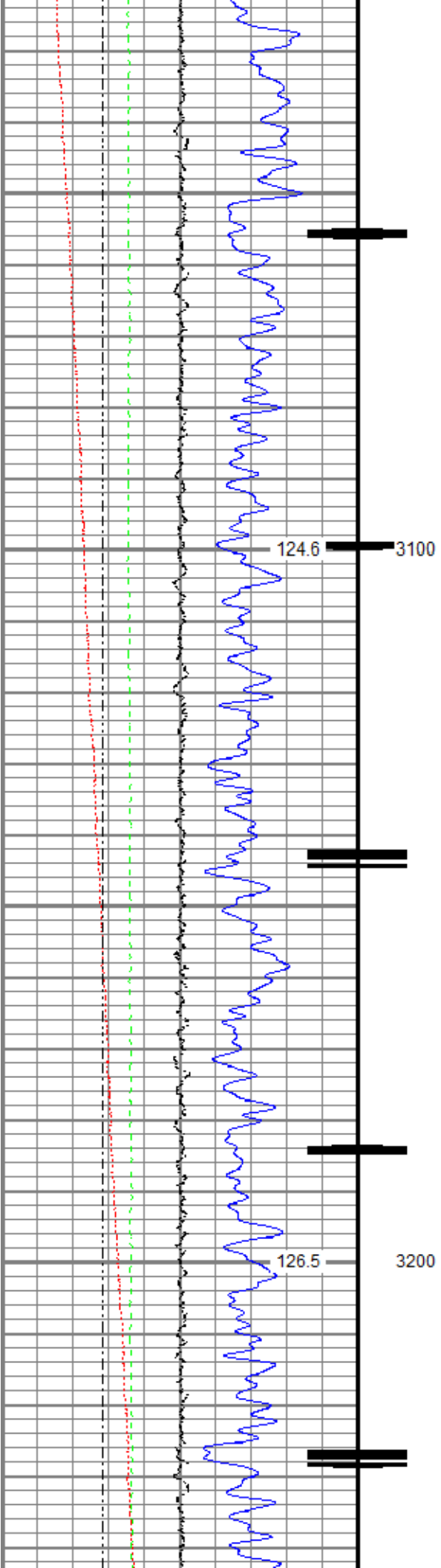


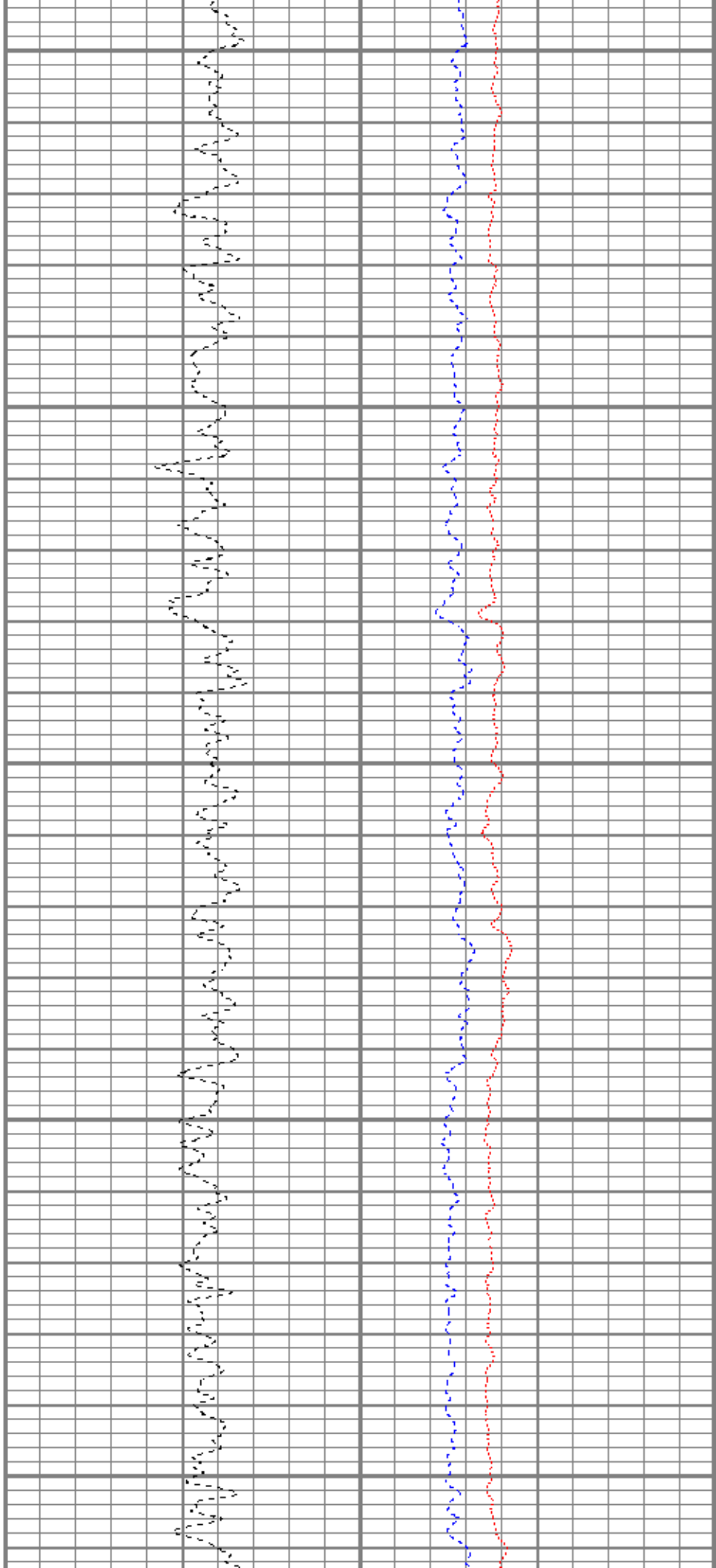
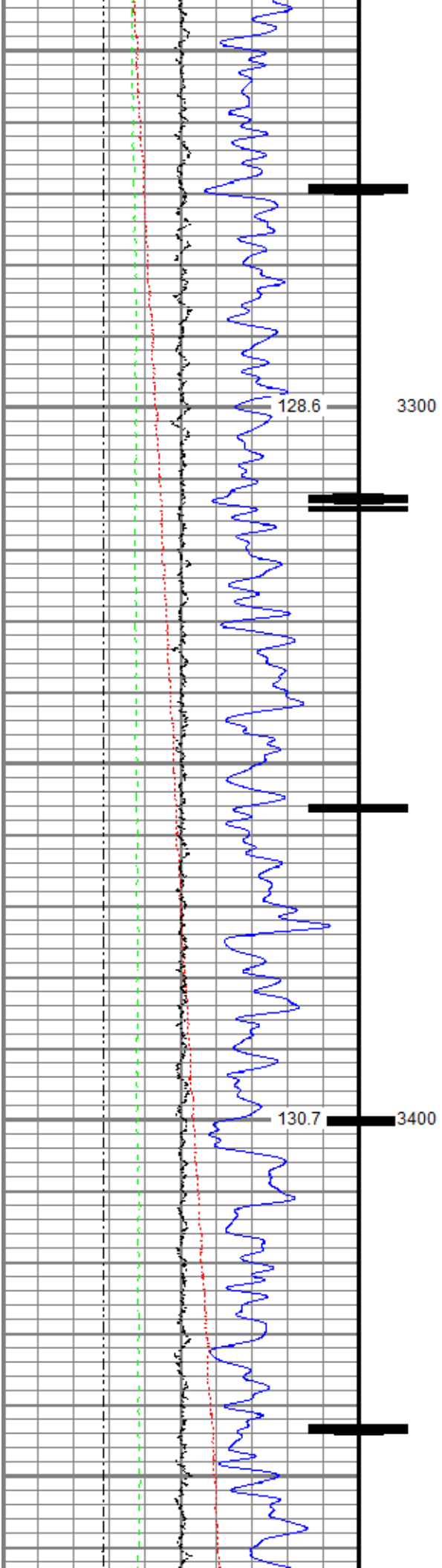


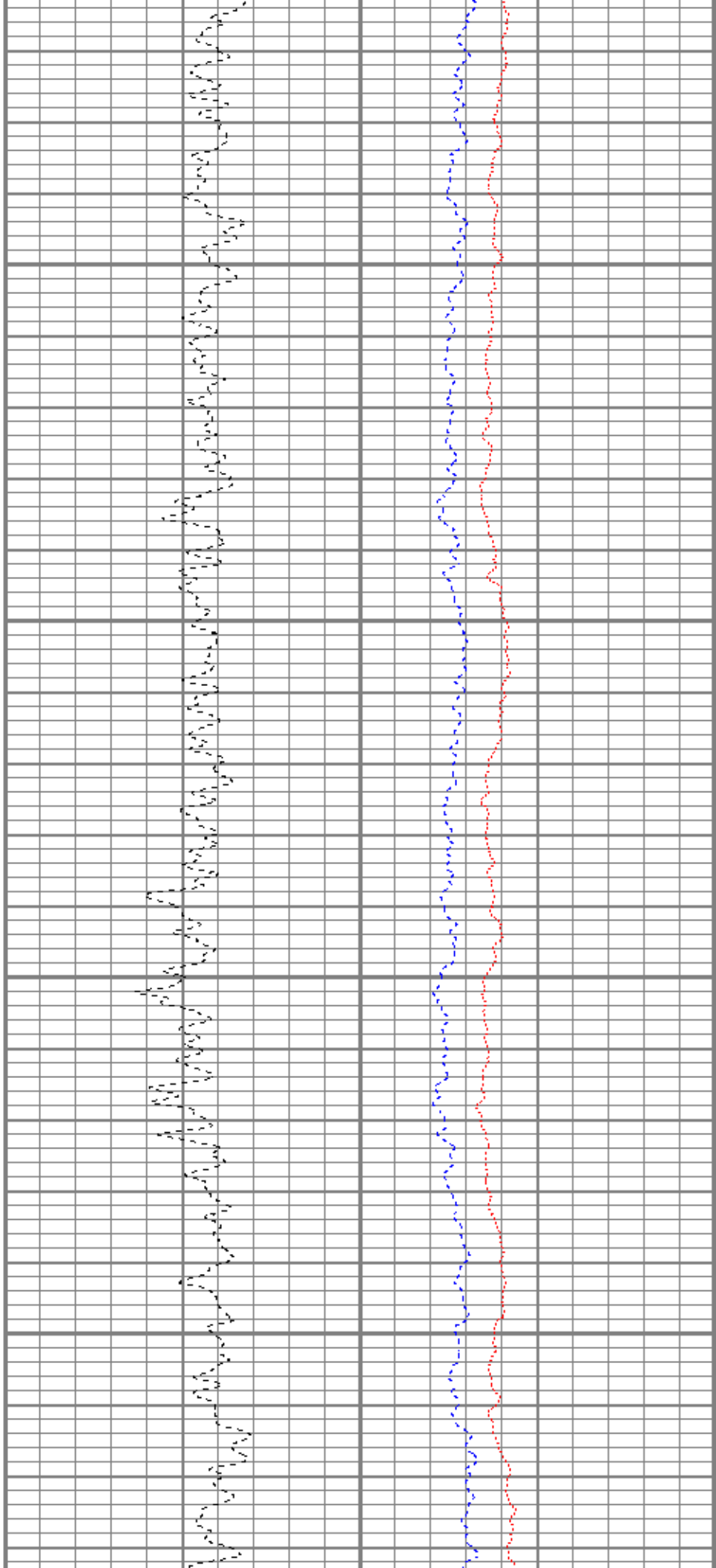
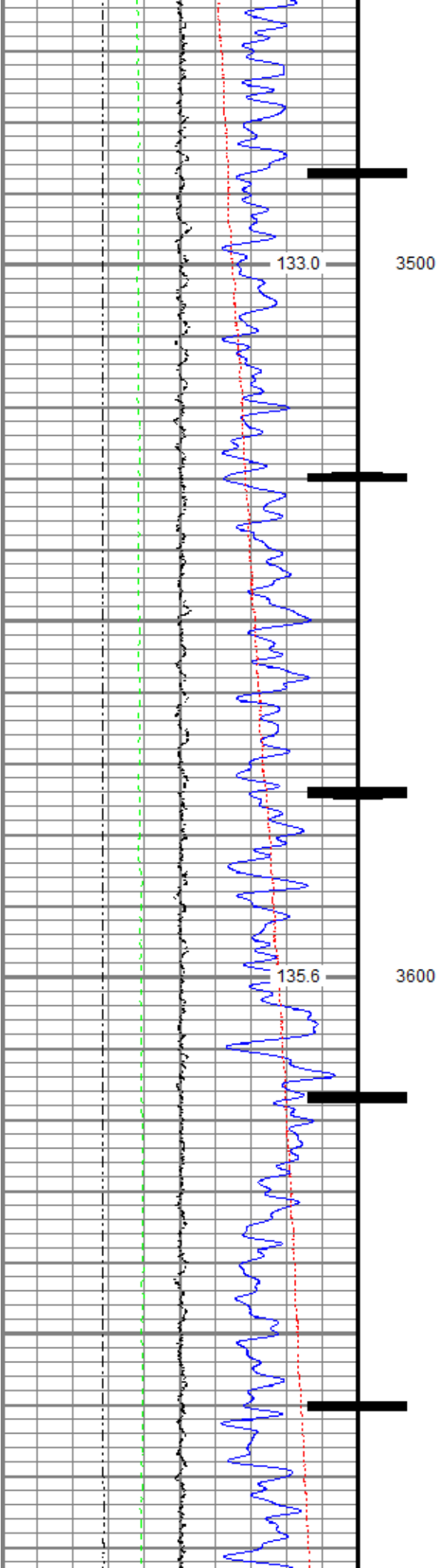


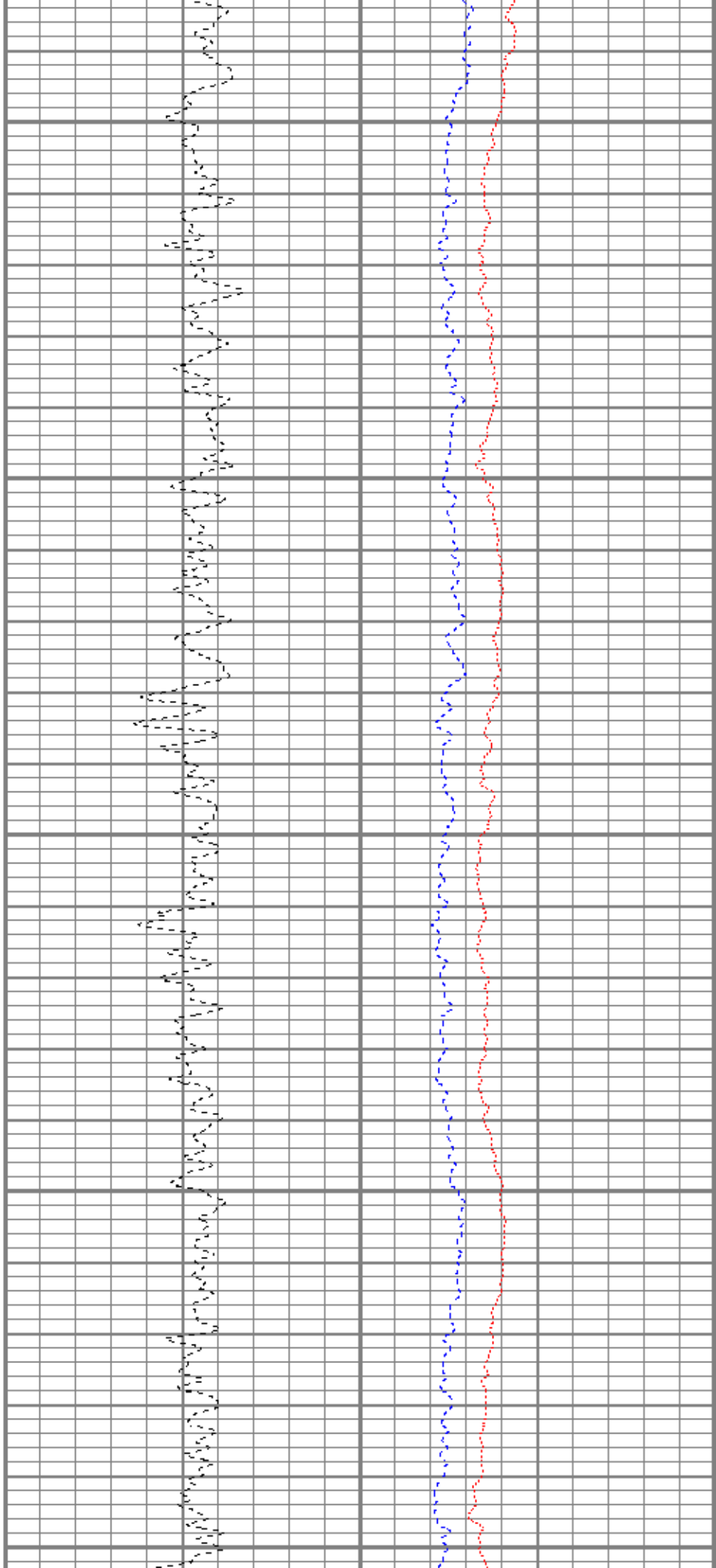
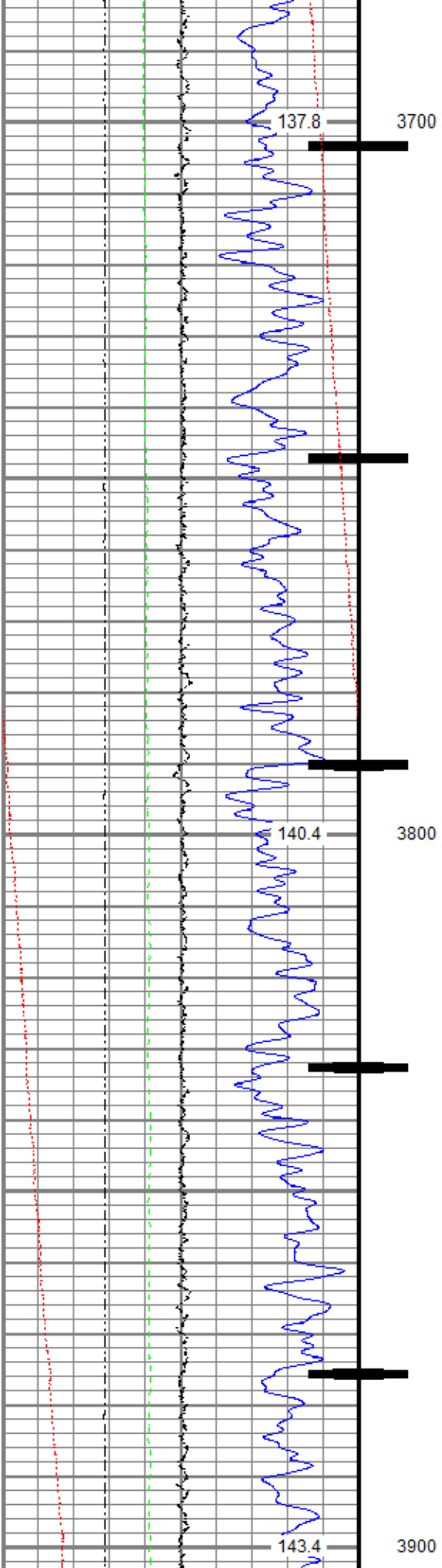


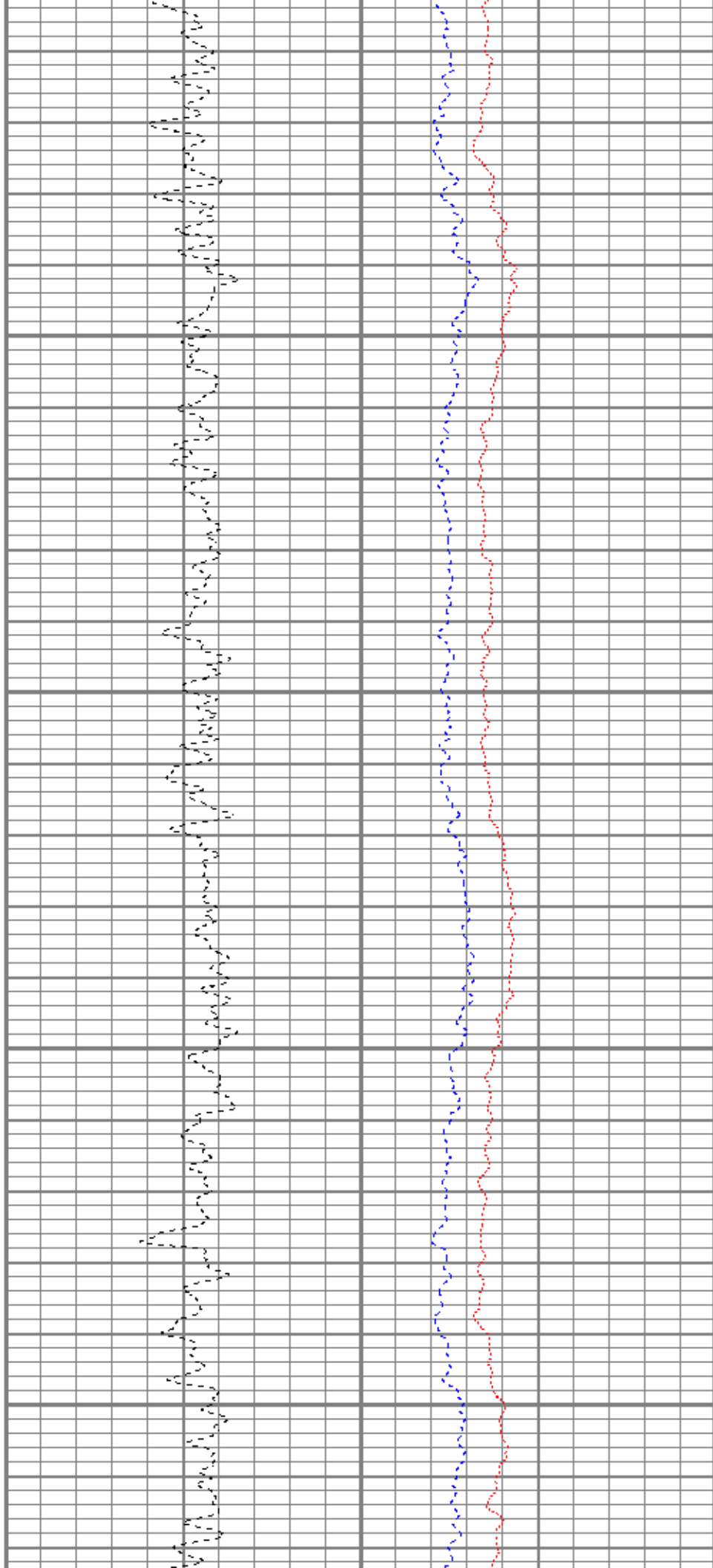
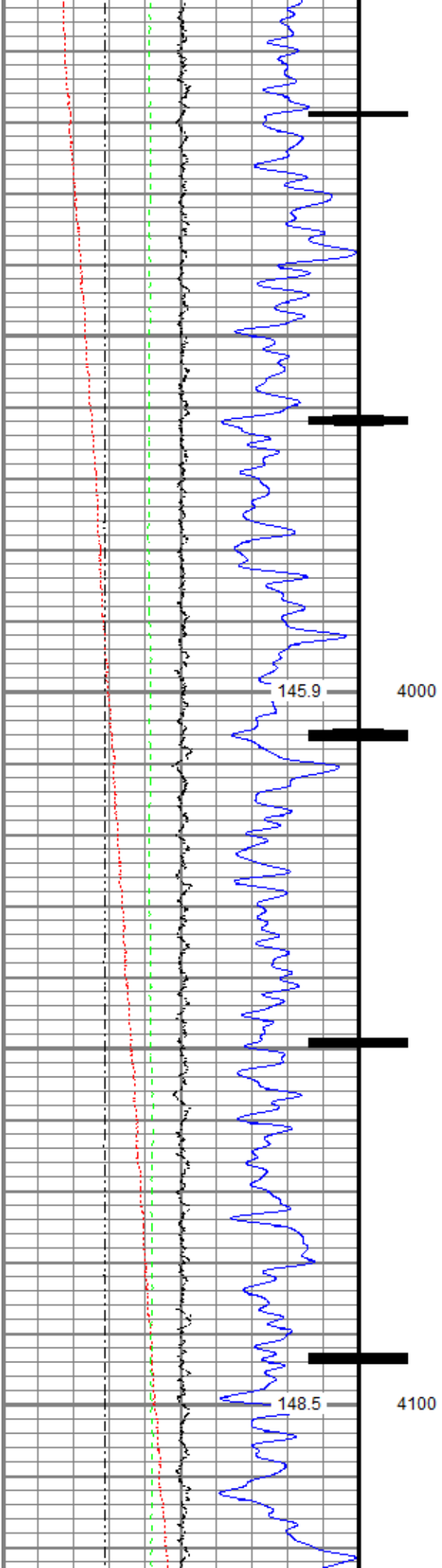


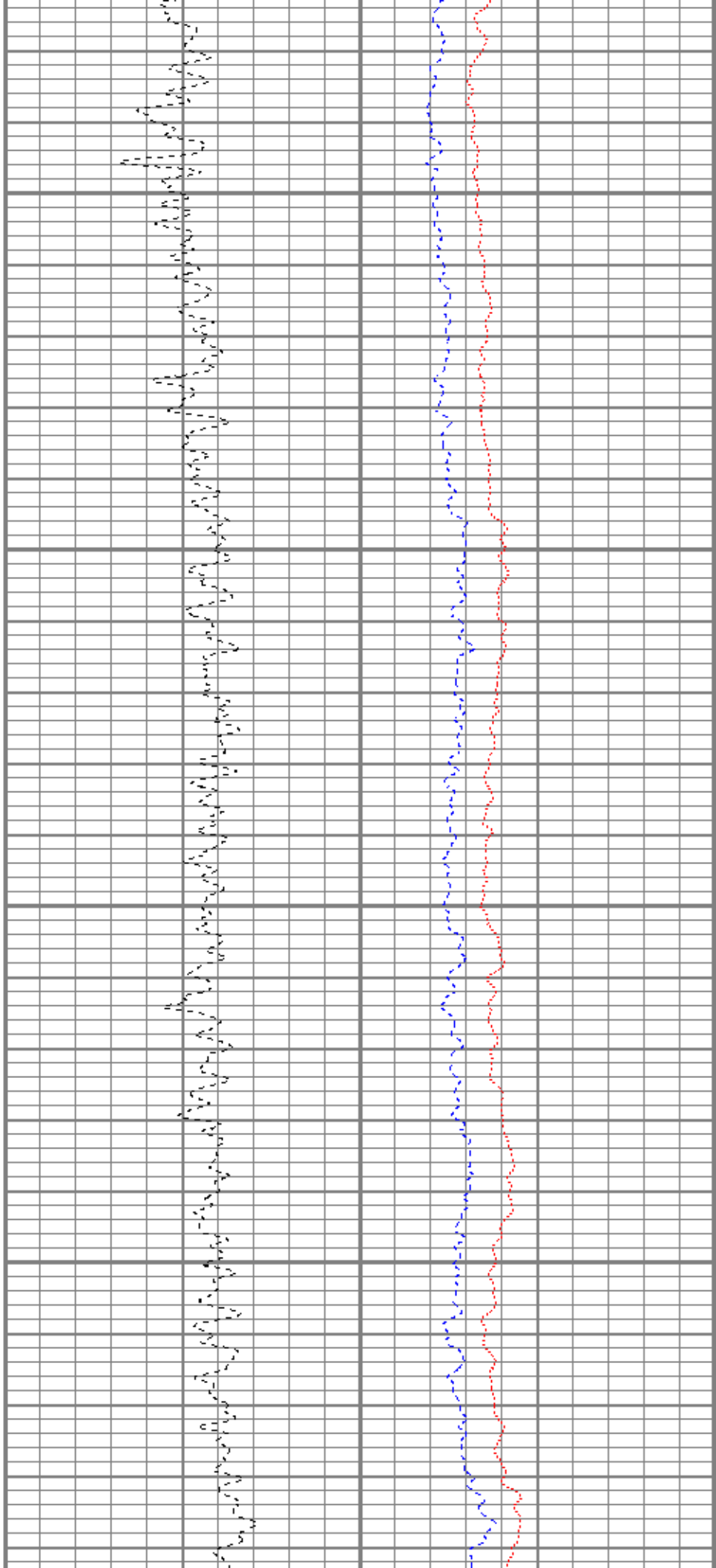
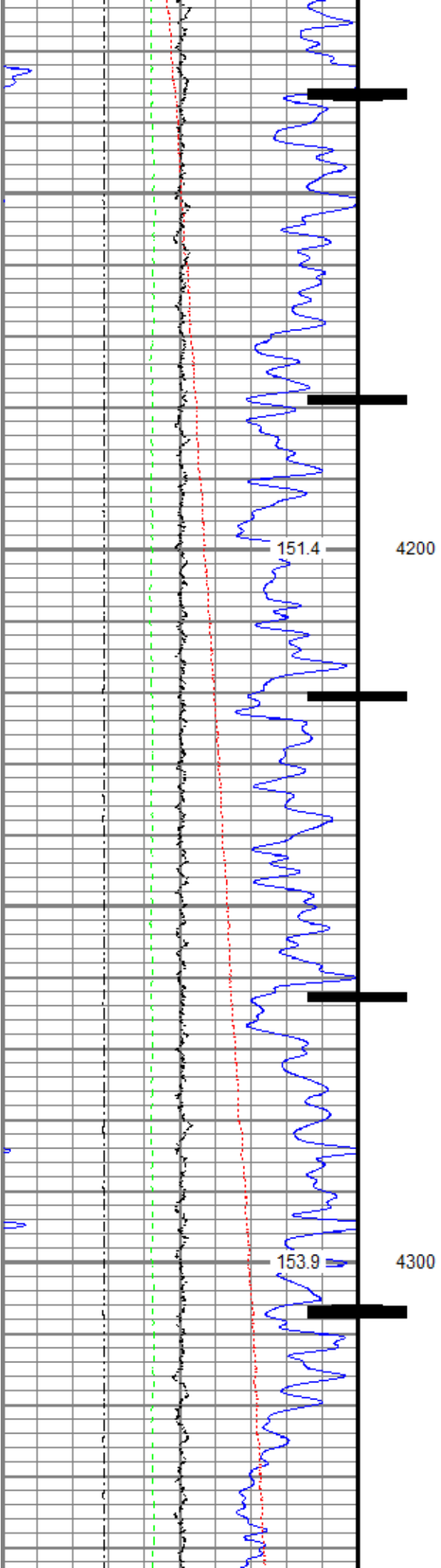


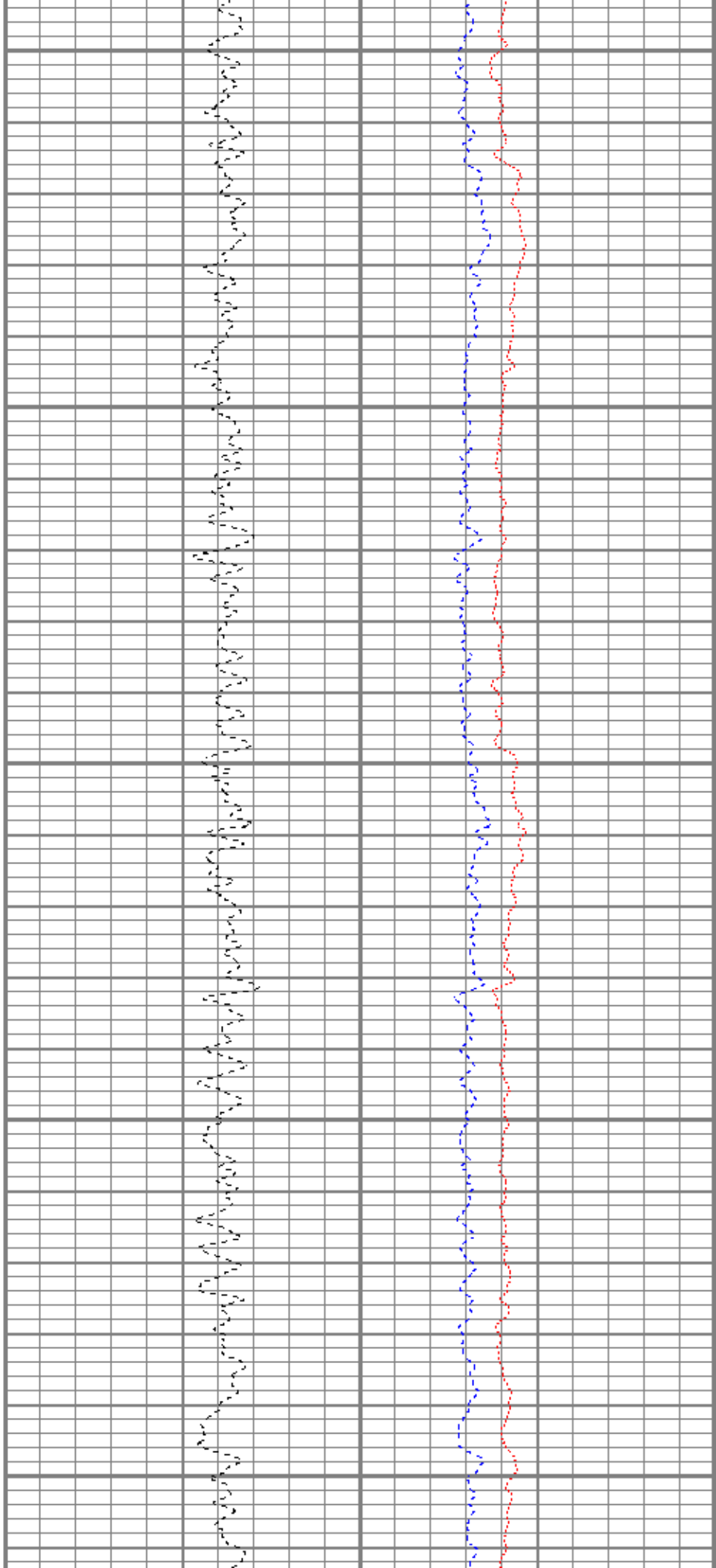
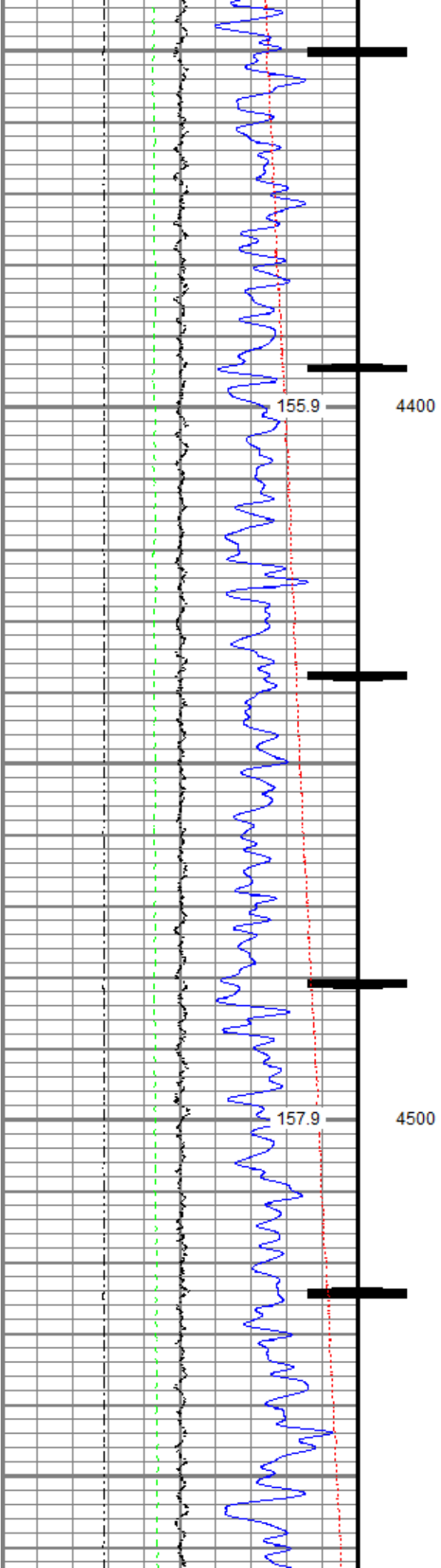


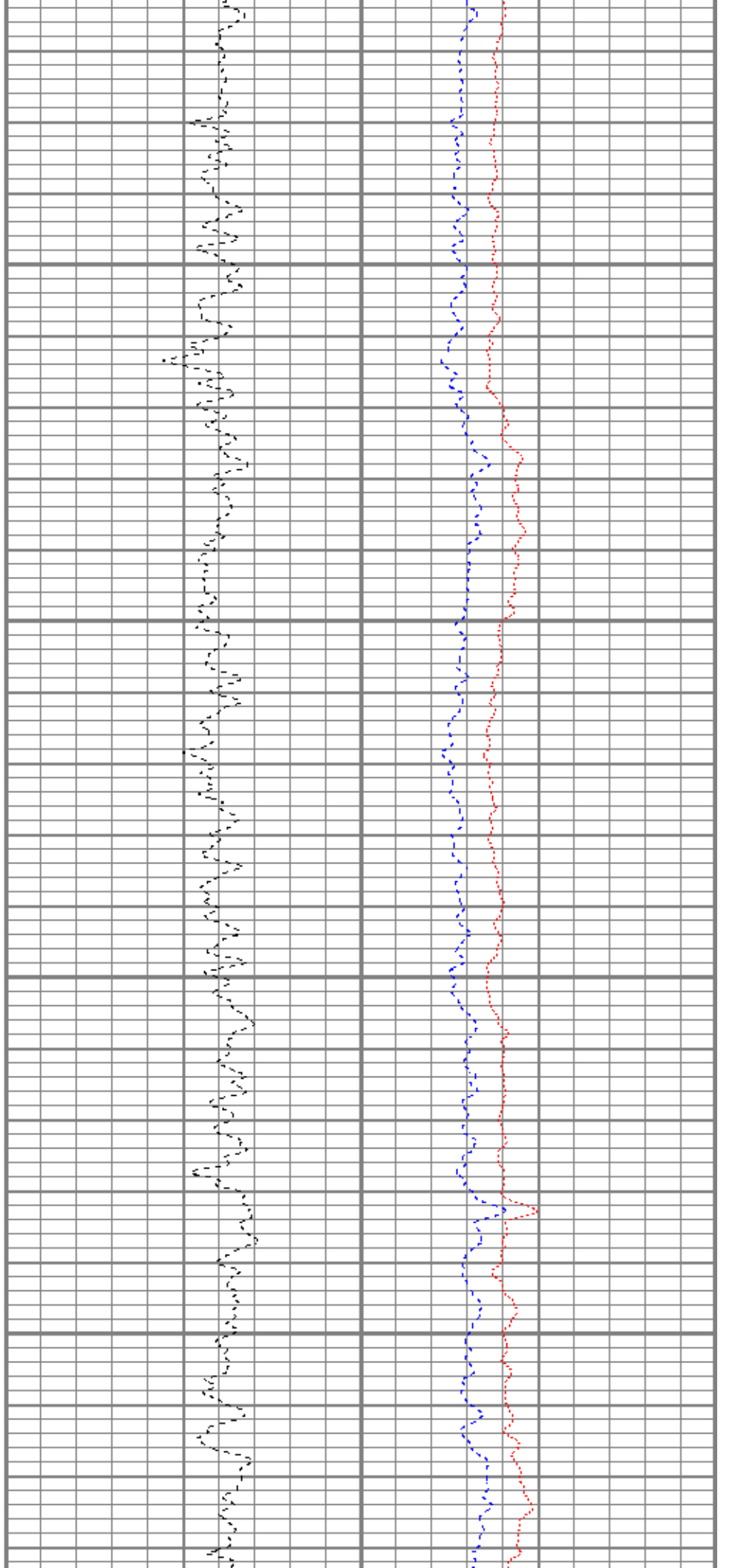
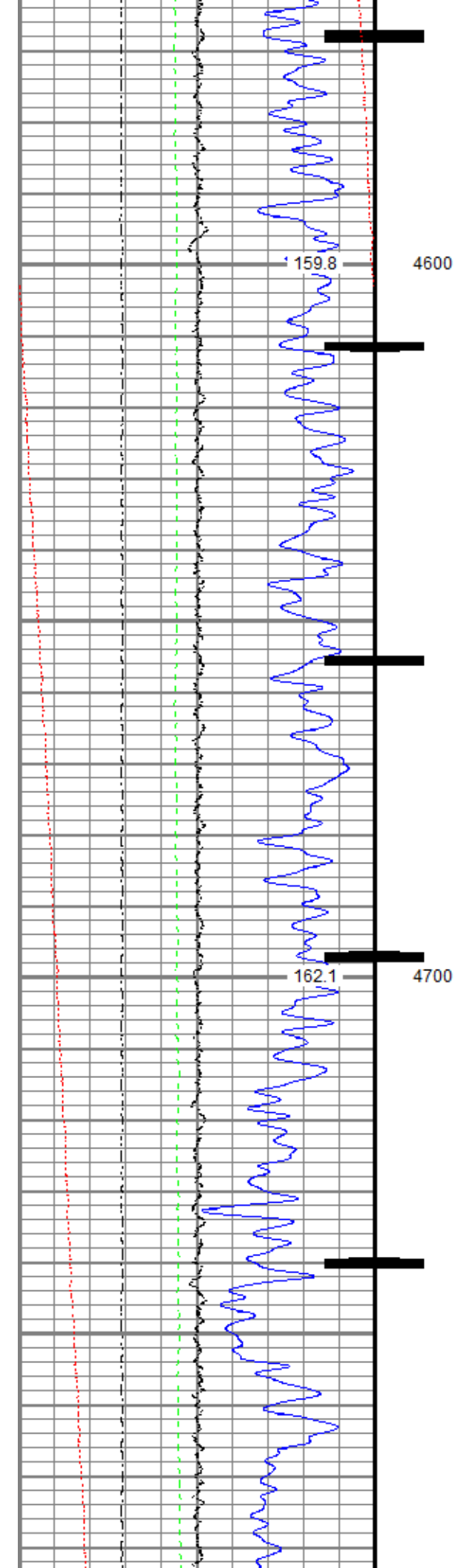


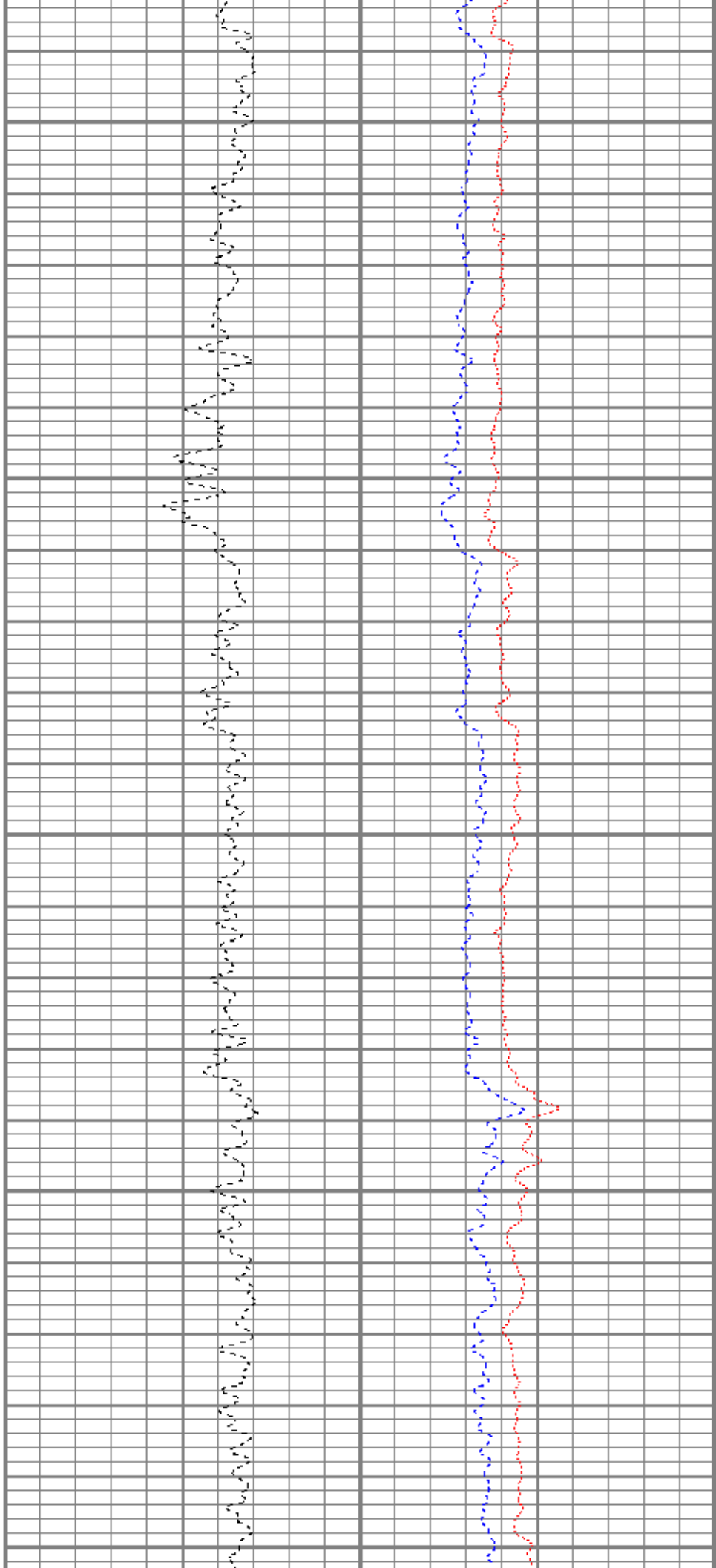
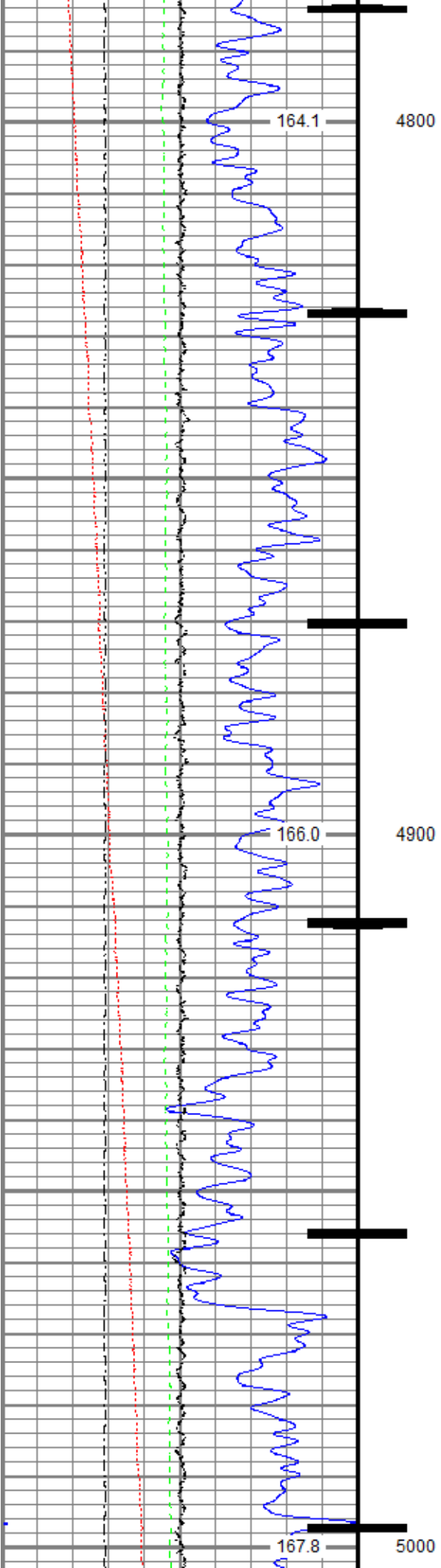


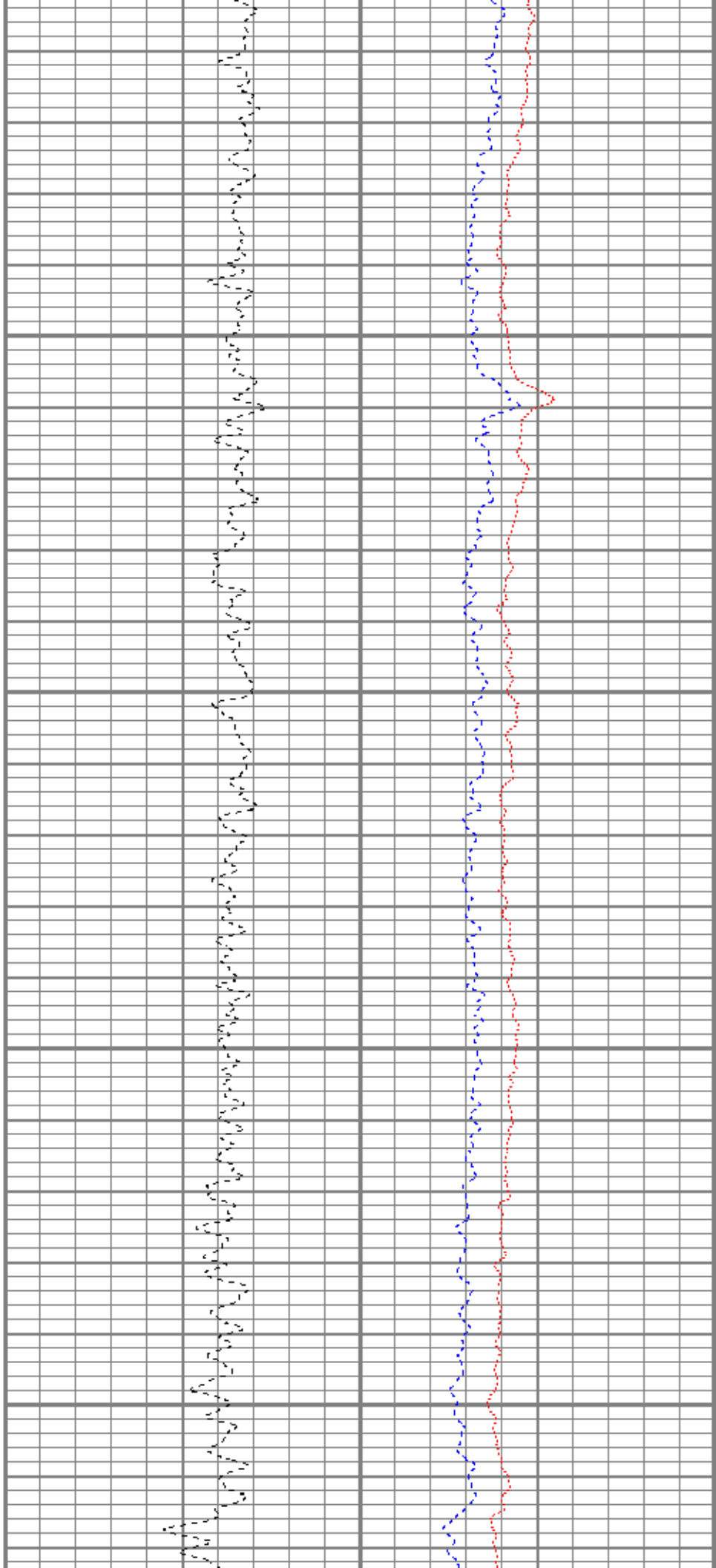
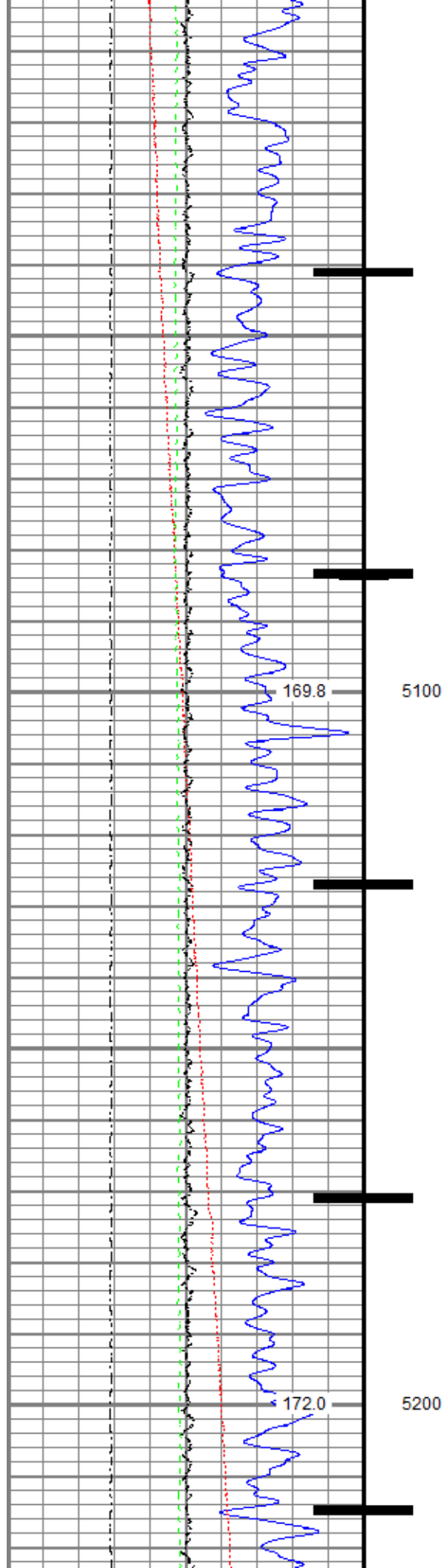


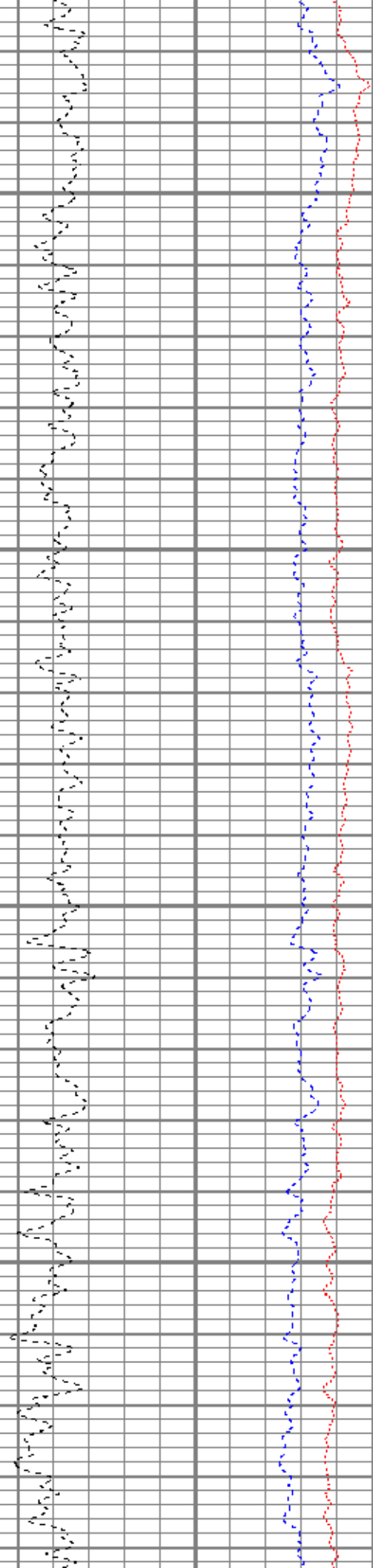
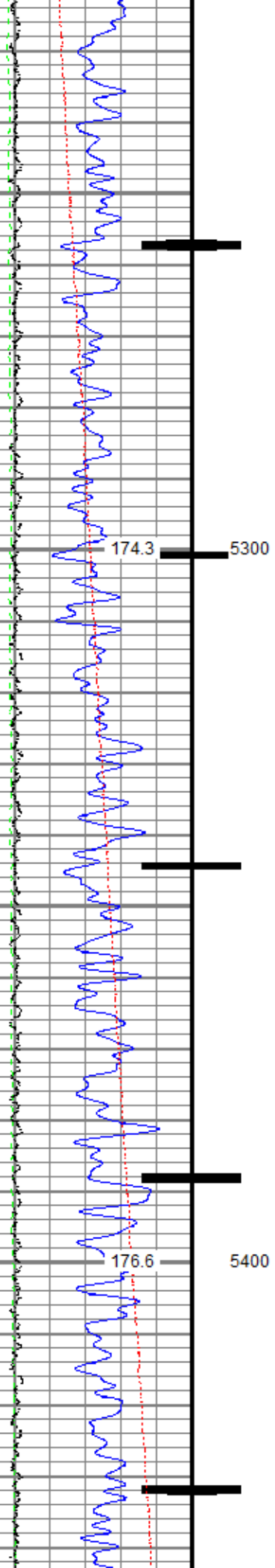


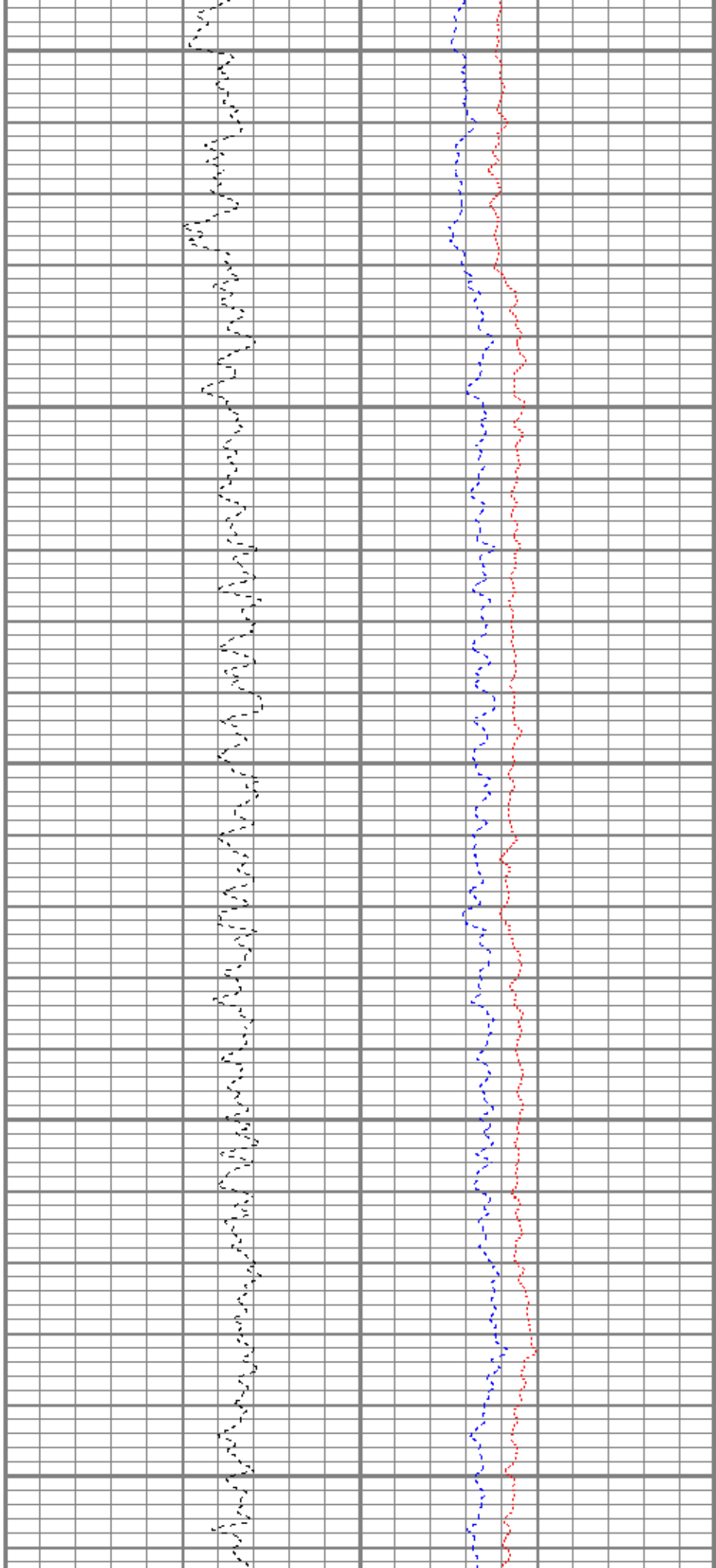
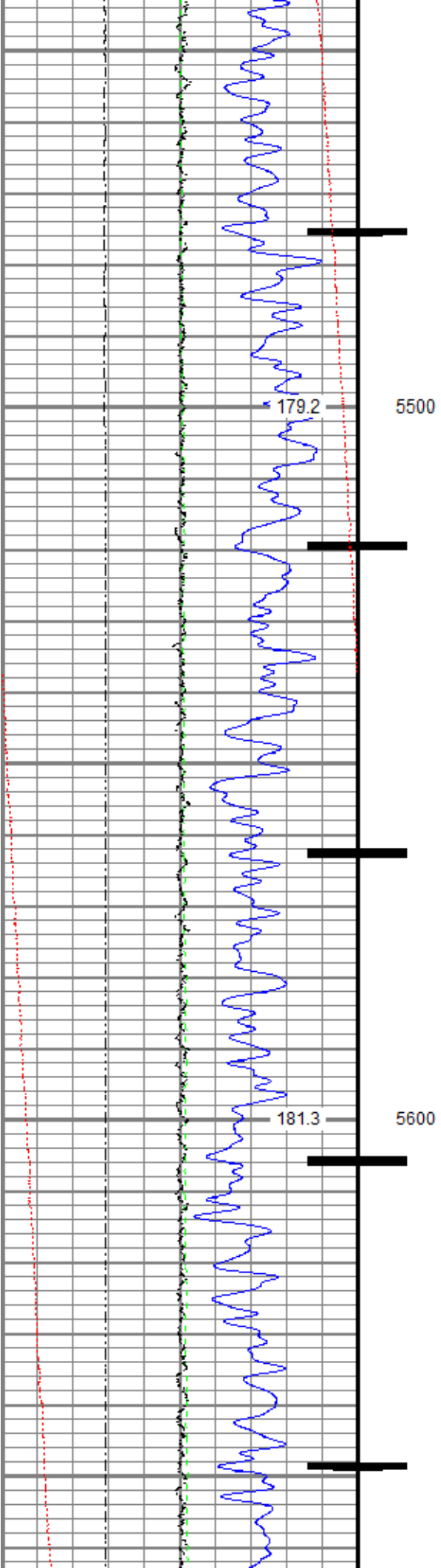


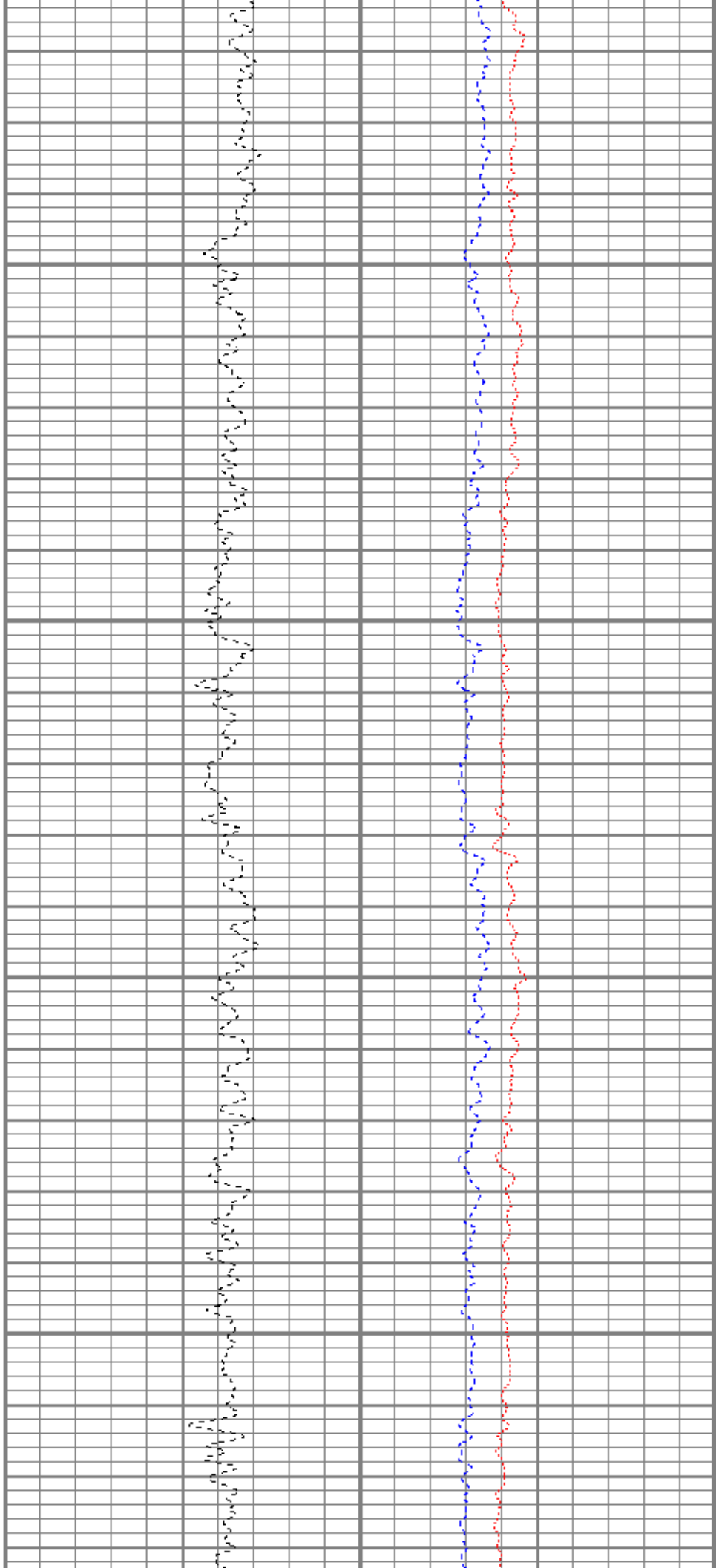
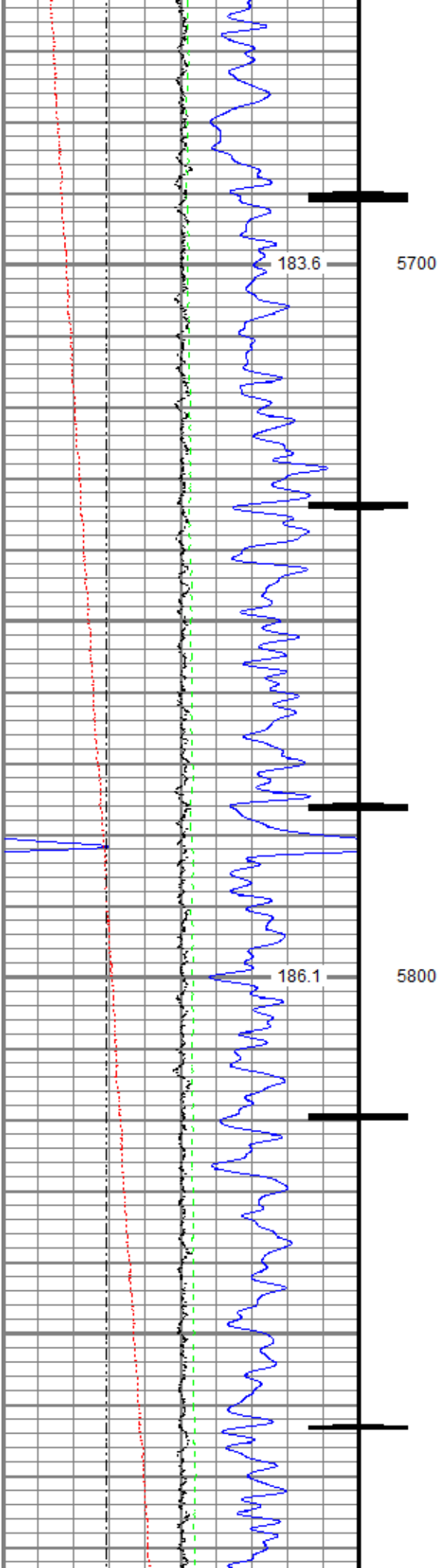


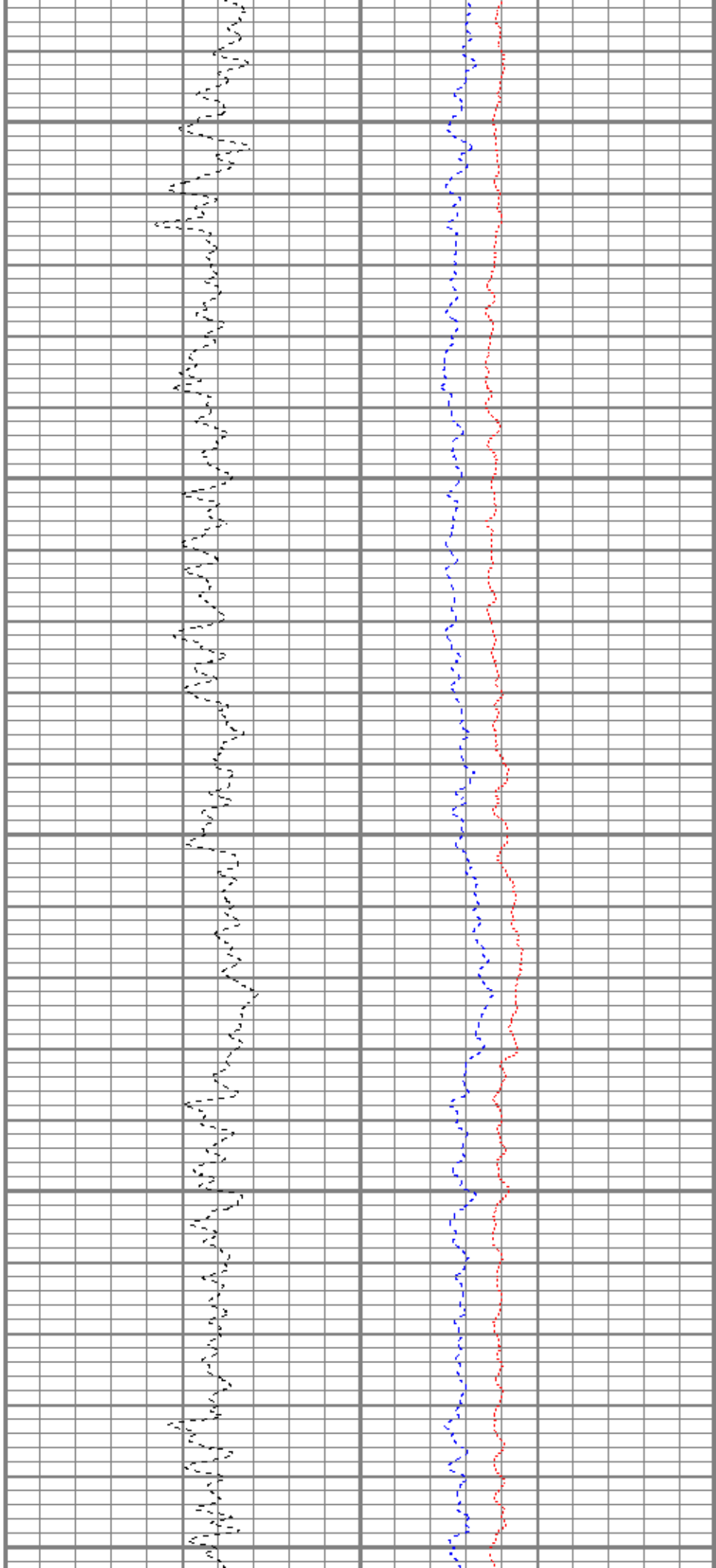
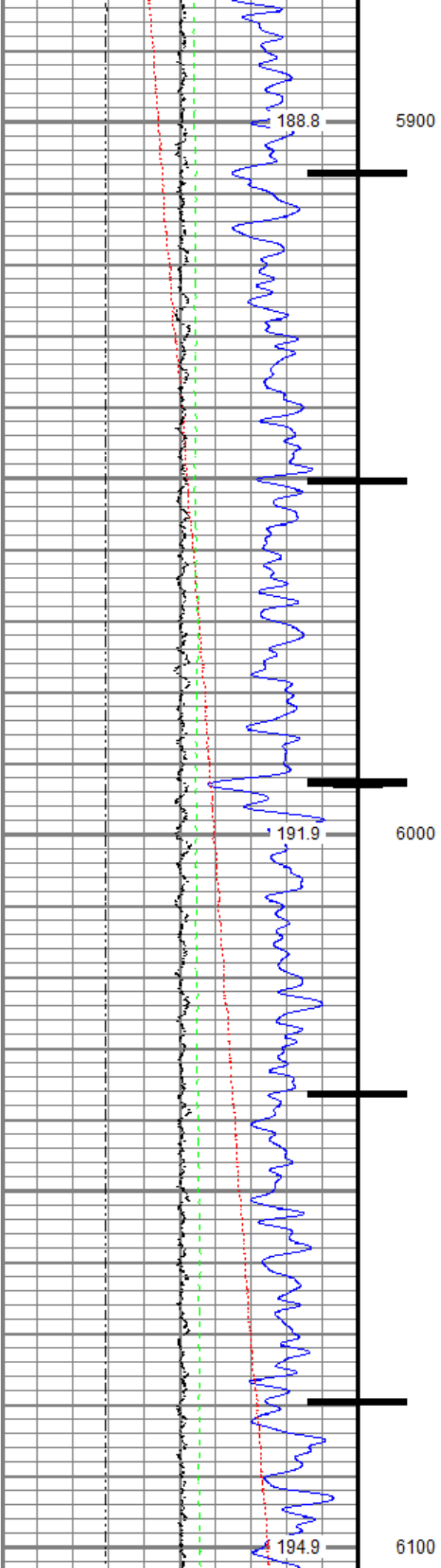


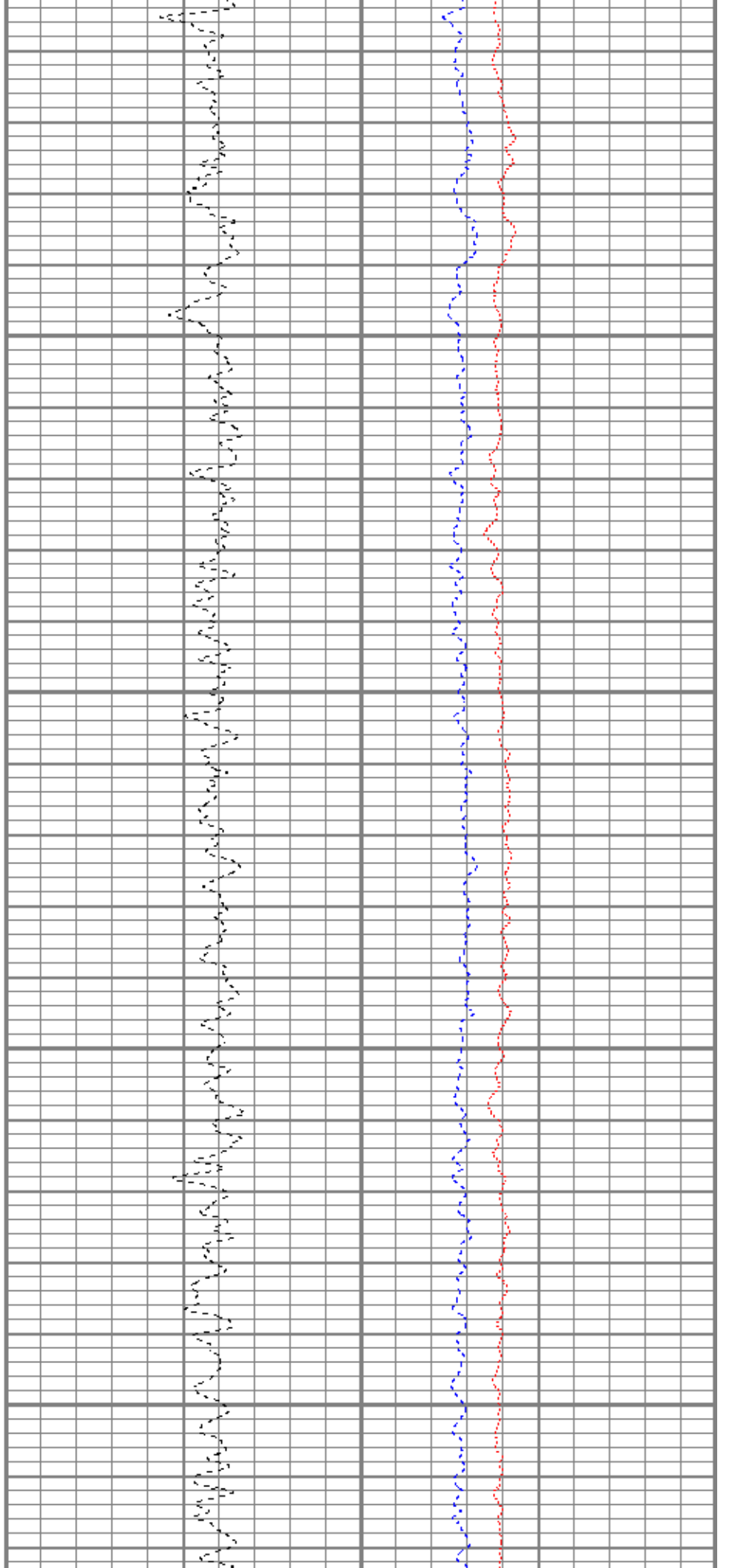
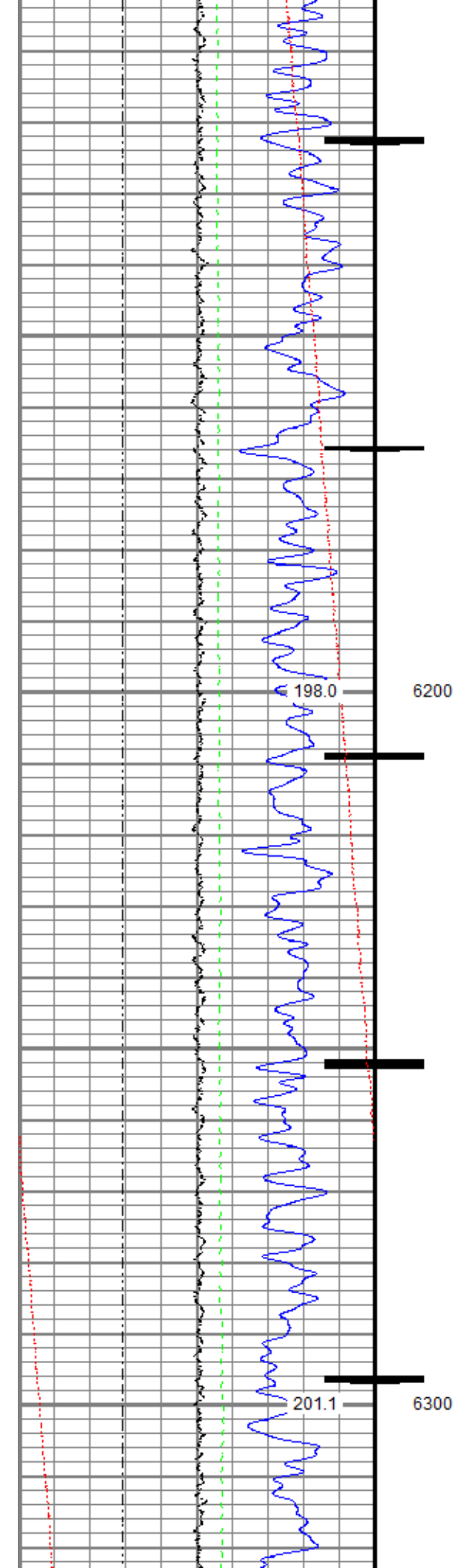


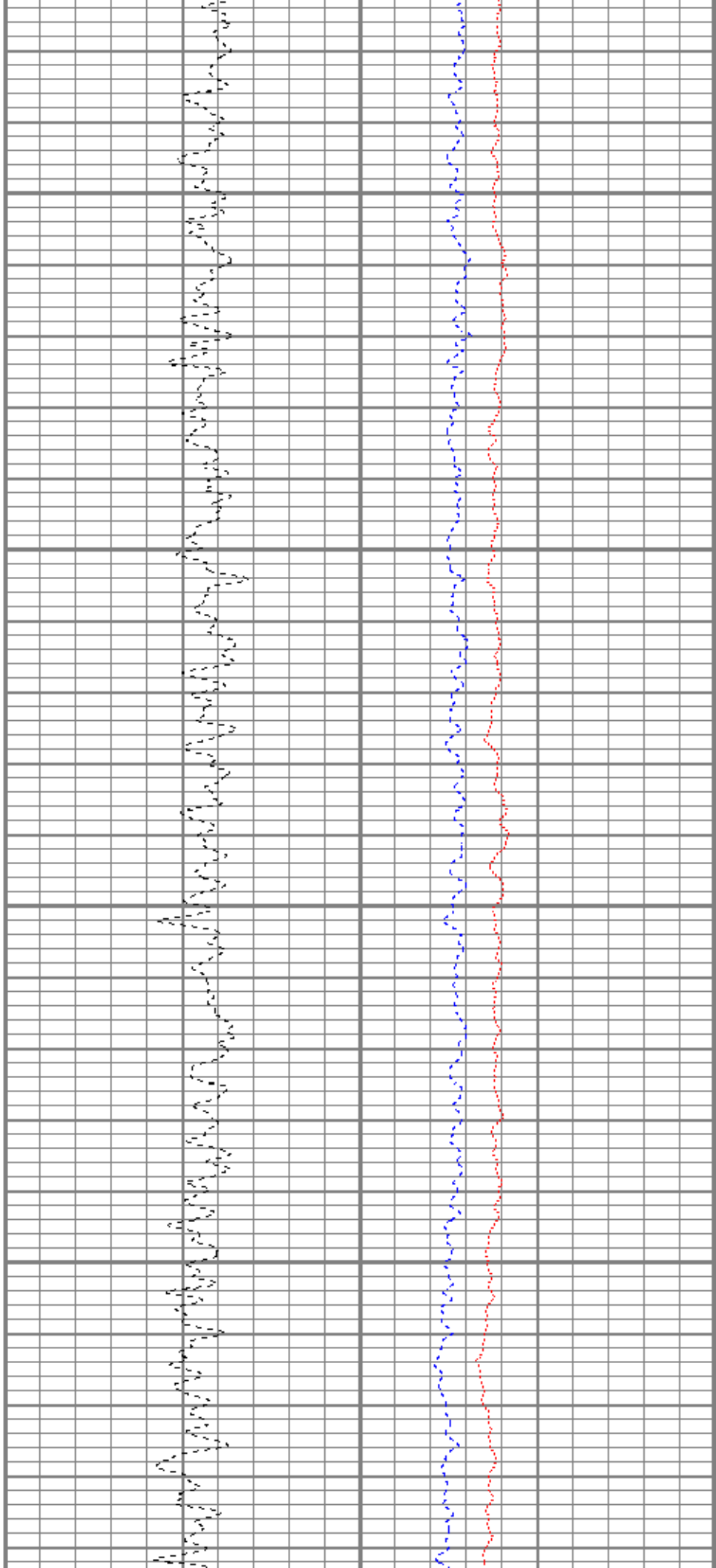
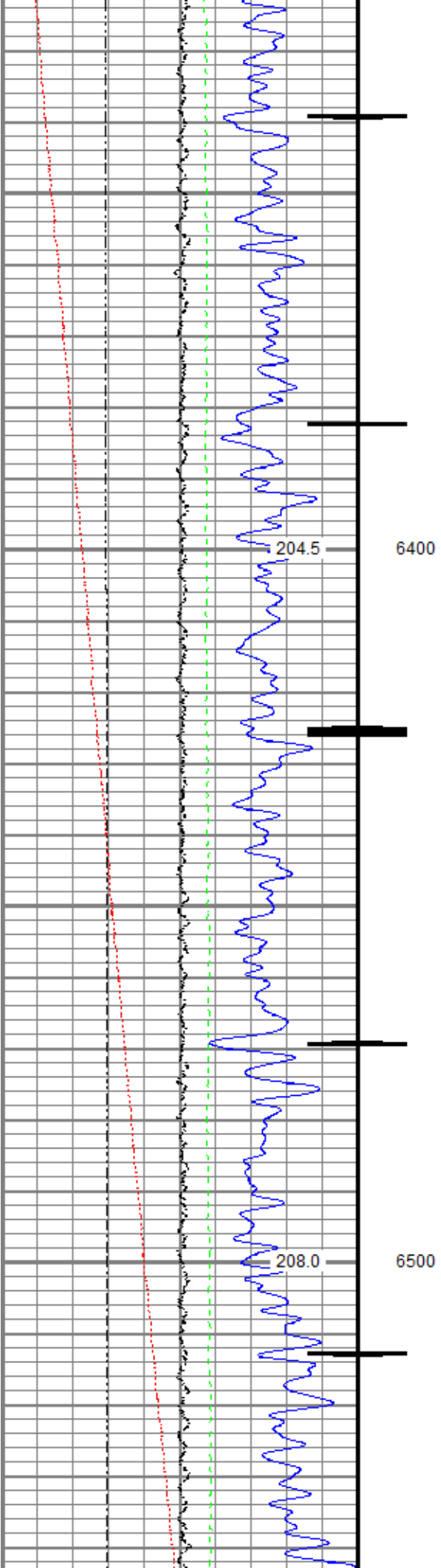


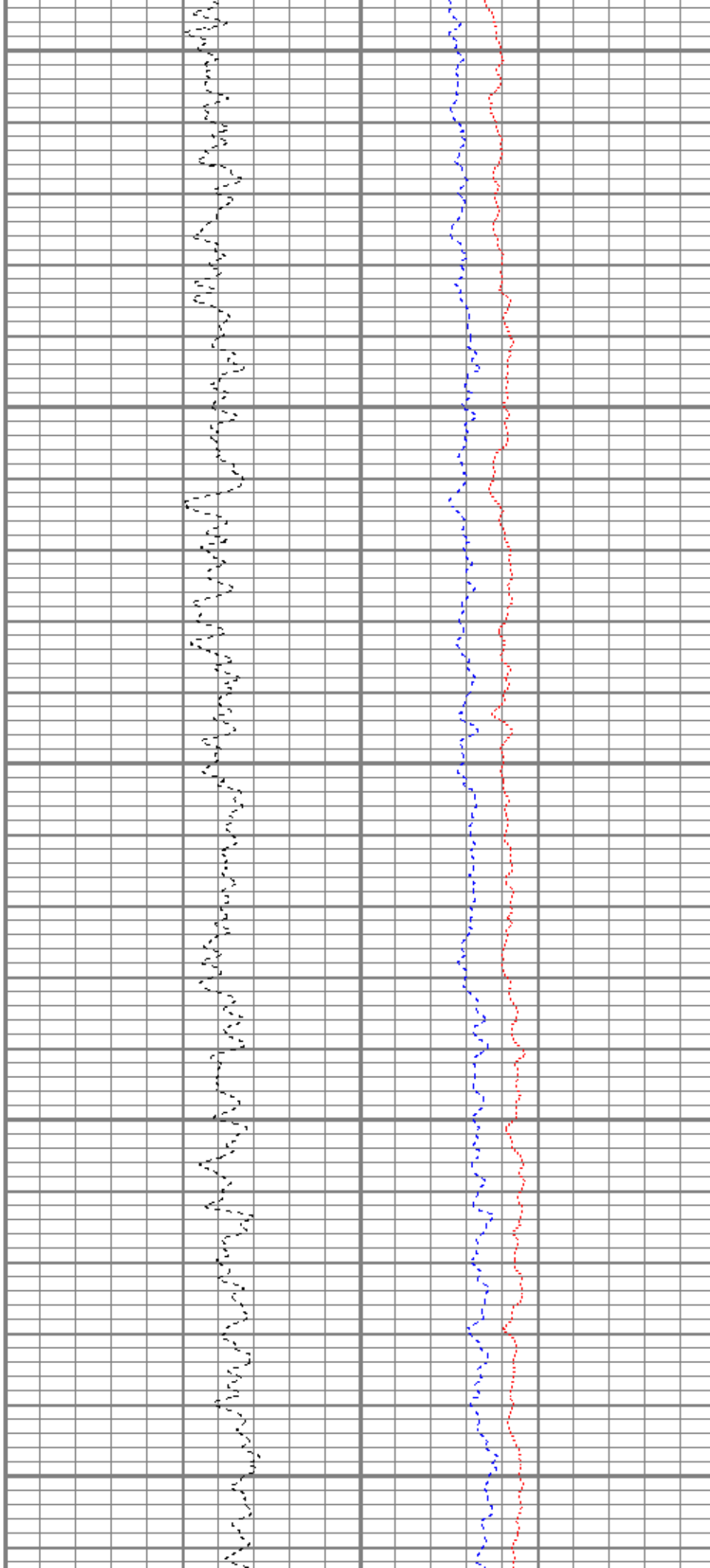
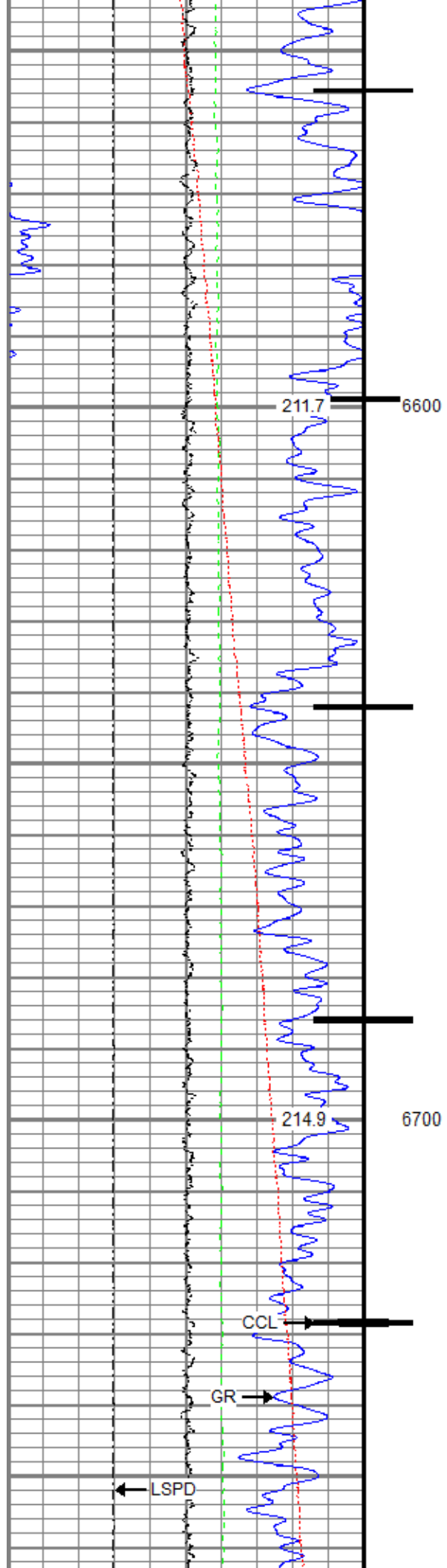


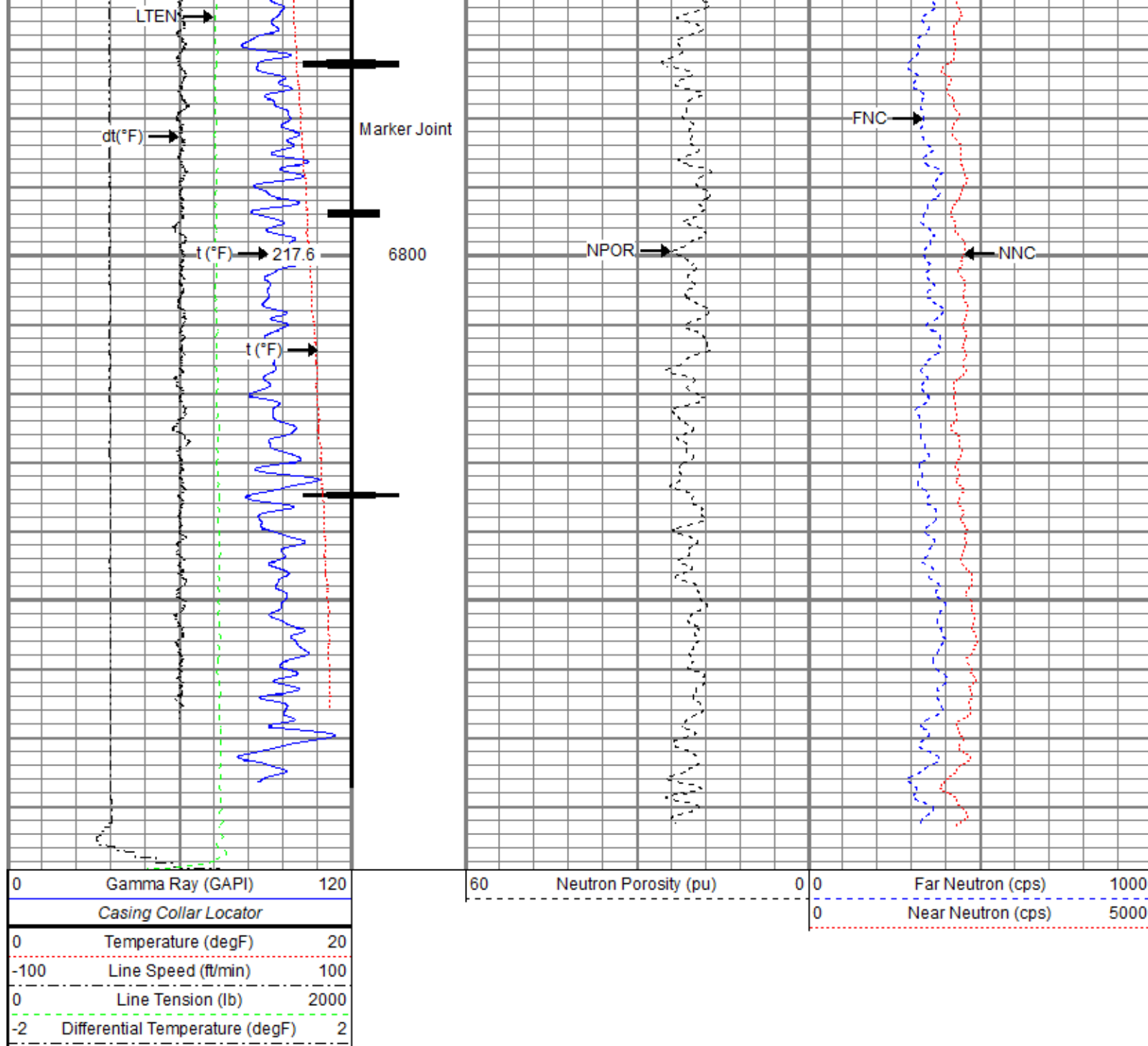








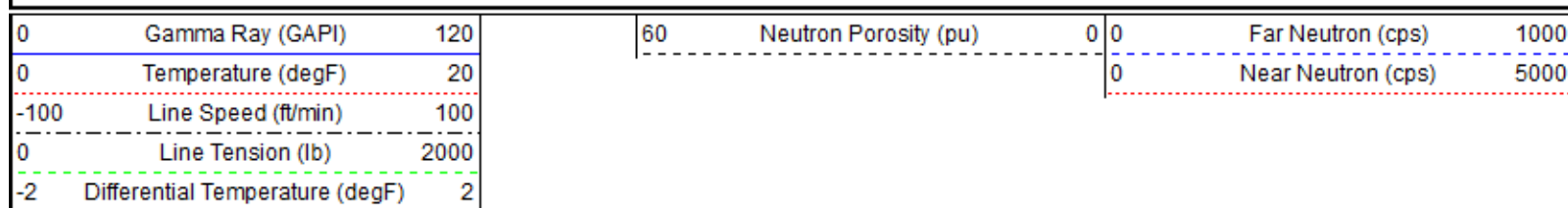


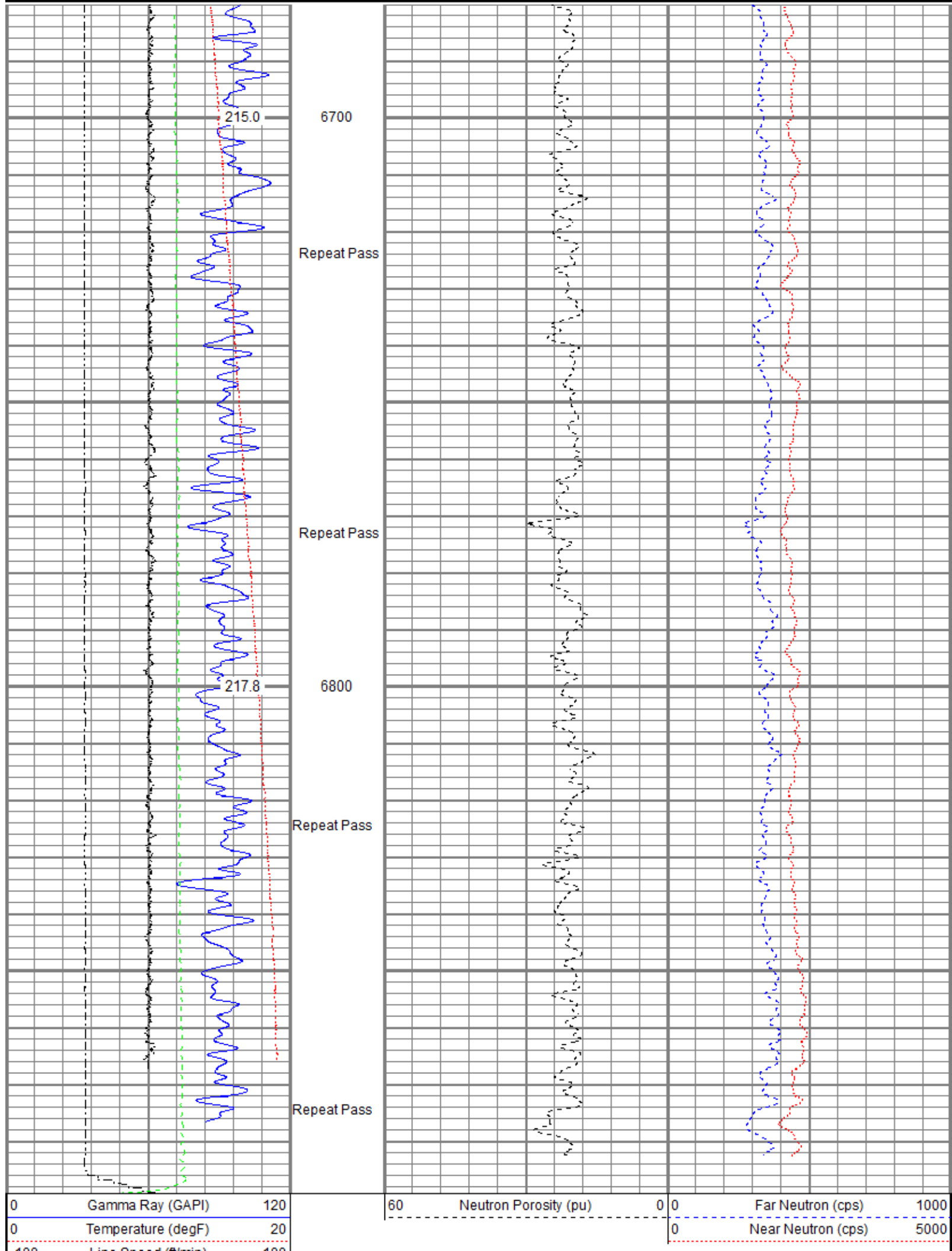


Repeat Pass




Recorded with 0 PSI Surface Induced Pressure

Database File: anadarko\0512346332_anadarko_george 25-3hz_rbl_cnl_08-12-18\0512346331_anadarko_george 25-3hz_rbl_cnl_08-13-18
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 Presentation Format: ros_cnl_probe
 Dataset Creation: Mon Aug 13 08:16:43 2018
 Charted by: Depth in Feet scaled 1:240





100	Line Speed (ft/min)	100
0	Line Tension (lb)	2000
-2	Differential Temperature (degF)	2

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TEMP	22.08		Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
			Probe Radii-2750 RBT (FW1308-089) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS8	19.84					
WVFS7	19.84					
WVFS6	19.84					
WVFS5	19.84					
WVFS4	19.84					
WVFS3	19.84					
WVFS2	19.84					
WVFS1	19.84					
WVFCAL	19.84					
WVF3FT	19.84					
WVF5FT	18.84					
CCL\$2 CCL\$1 GR	11.83		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
	11.83					
	10.50		Probe GR-CCL-2750 6PB (101001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
CNLSC CNSSC	4.53		Probe CN-2750 BL (FW1308-020_A1483) Probe 2-3/4" Compensated Neutron with Bottom Load	5.03	2.75	60.00
	4.12					
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00

Dataset:	0512346331_Anadarko_George 25-3HZ_RBL_CNL_08-13-18_0 PSI.db: field/well/run1/Main1.1
Total length:	28.90 ft
Total weight:	283.60 lb
O.D.:	2.75 in

Calibration Report

Database File	C:\ProgramData\Warrior\Data\Anadarko\0512346332_Anadarko_George 25-3HZ_RBL_CNL_08-12-18\0512346331_Anadarko_
Dataset Pathname	Main1.1
Dataset Creation	Mon Aug 13 11:12:30 2018

Compensated Neutron Calibration Report

Serial Number:	FW1308-020_A1483
Tool Model:	2750 BL

CALIBRATION	Wed Oct 11 09:42:11 2017
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Detector	Readings	Target	Normalization
Short Space	3241.60 cps	0.00 cps	1.0000
Long Space	452.04 cps	0.00 cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	101001
Tool Model:	2750 6PB
Performed:	Sun Nov 12 11:25:32 2017
Calibrator Value:	637.0 GAPI
Background Reading:	100.6 cps
Calibrator Reading:	981.1 cps
Sensitivity:	0.7235 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1308-089
Tool Model:	2750 RBT
Calibration Casing Diameter:	5.500 in
Calibration Depth:	-73.279 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.000	0.643	0.800	71.921	110.554	0.819
CAL	0.720	0.722				
5'	-0.001	0.608	0.800	71.921	116.873	0.864
SUM						
S1	0.003	0.646	0.000	100.000	155.470	-0.465
S2	0.004	0.649	0.000	100.000	155.115	-0.599
S3	-0.007	0.651	0.000	100.000	152.100	1.046
S4	-0.016	0.644	0.000	100.000	151.440	2.482
S5	-0.036	0.651	0.000	100.000	145.522	5.224
S6	-0.013	0.653	0.000	100.000	150.098	1.974
S7	0.003	0.651	0.000	100.000	154.429	-0.519
S8	0.004	0.661	0.000	100.000	152.003	-0.534

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.720	0.722	1.000	0.000

Air Zero Calibration, performed Mon Aug 13 07:04:01 2018:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	
S7	0.000		0.000		0.000	
S8	0.000		0.000		0.000	

Temperature Calibration Report

Serial Number: FW1308-089
Tool Model: 2750 RBT
Performed: Sun Nov 12 13:49:09 2017

	Reference	Reading
Low Reference:	100.00 degF	106.47 degF
High Reference:	350.00 degF	395.10 degF

Gain: 0.87
Offset: 7.78
Delta Spacing: 1



Company: Kerr-McGee Oil & Gas Onshore, L.P.
Well: George 25-3HZ
Field: Wattenberg
County: Weld
State: Colorado

