



Pulsed Neutron
Gamma Ray
Casing Collar Log

Company		Ursa Operating Company LLC			
Well		Boies Ranch C-240 FED 21B-25-2-98			
Field		Sulphur Creek			
County		Rio Blanco			
State		Colorado			
Location:		API # : 05-103-12336			
SEC 24 TWP 2S RGE 98W		Other Services			
Permanent Datum		Ground Level		Elevation	
Log Measured From		Kelly Bushing		21 FT	
Drilling Measured From		Kelly Bushing		K.B. 6325.5' D.F. 6324.5' G.L. 6304.5'	
Date		14-FEB-2019			
Run Number		One			
Depth Driller		---			
Depth Logger		10892 FT			
Bottom Logged Interval		10886 FT			
Top Log Interval		5500 FT			
Open Hole Size		8.750"			
Type Fluid		Water			
Density / Viscosity		8.34 lb/gal			
Max. Recorded Temp.		---			
Estimated Cement Top		---			
Time Well Ready		ROA			
Time Logger on Bottom		17:30			
Equipment Number		HD-0359			
Location		Grand Junction, CO			
Recorded By		A. Ellsworth			
Witnessed By		Oscar Molinar			
Borehole Record		Tubing Record			
Run Number		Bit		From	
		To		Size	
				Weight	
				From	
				To	
Casing Record		Size (in)		Wgt (lbs/ft)	
Surface Casing		9 5/8		36	
Intermediate #1		4 1/2		11.6	
Intermediate #2				P-110	
Inner				Surface	
				Top	
				Bottom	

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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 Reliance Bond Log dated 14-FEB-2019
Log ran from 10886 FT to 5500 FT
Pulsed Neutron Data logged with the Hunter RAS Tool
Thank you for choosing Reliance Oilfield Services, LLC!

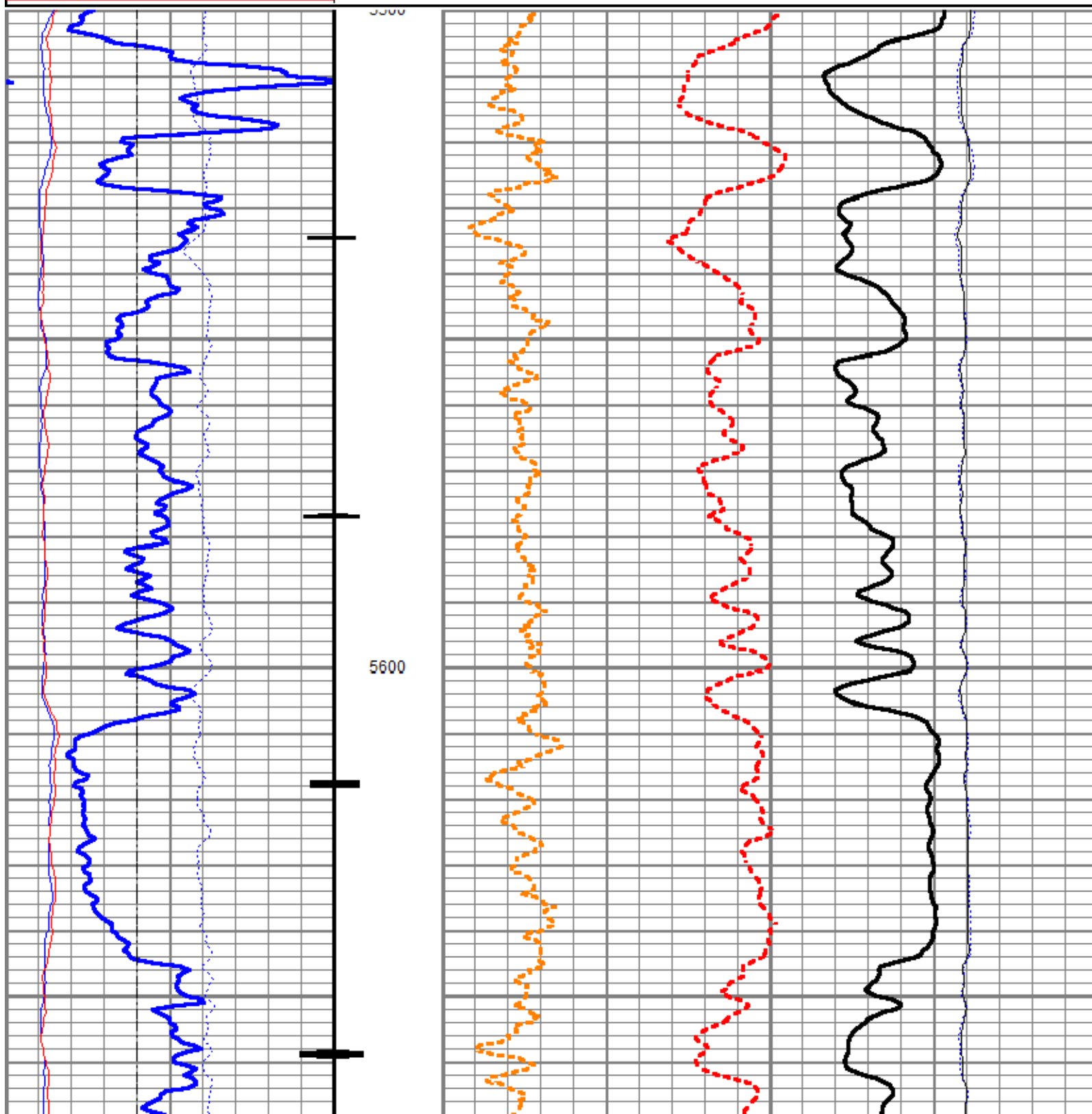


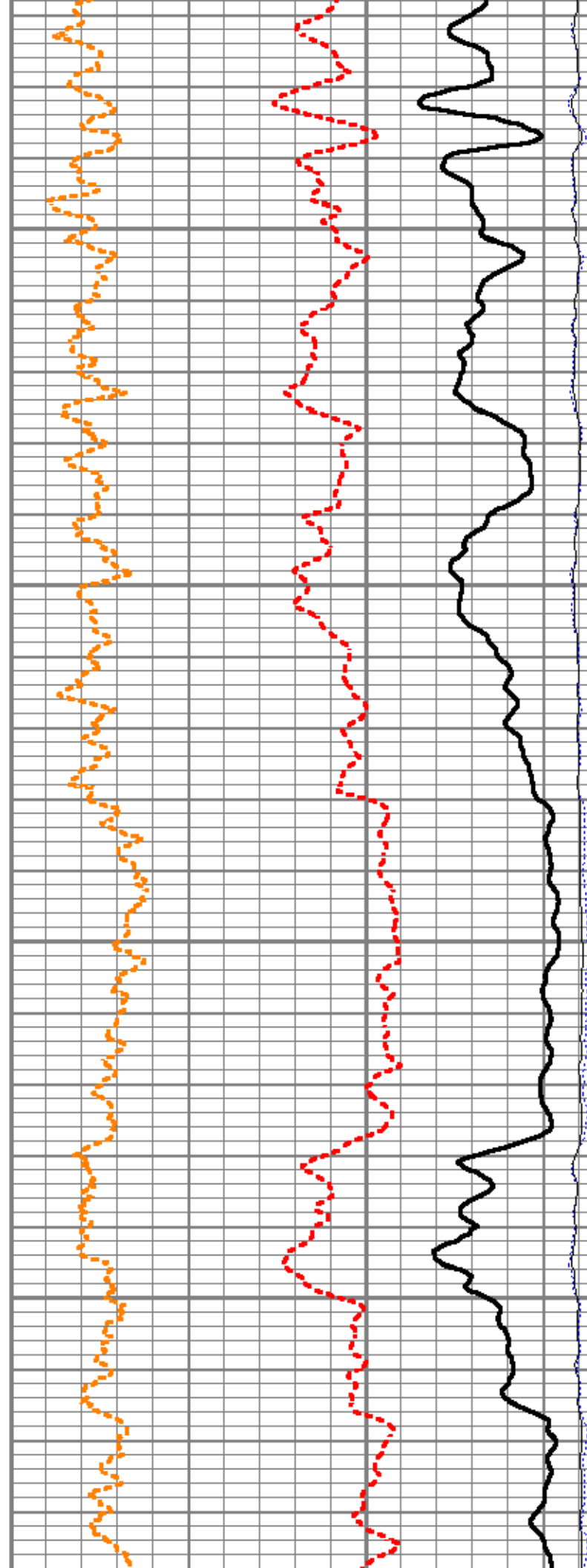
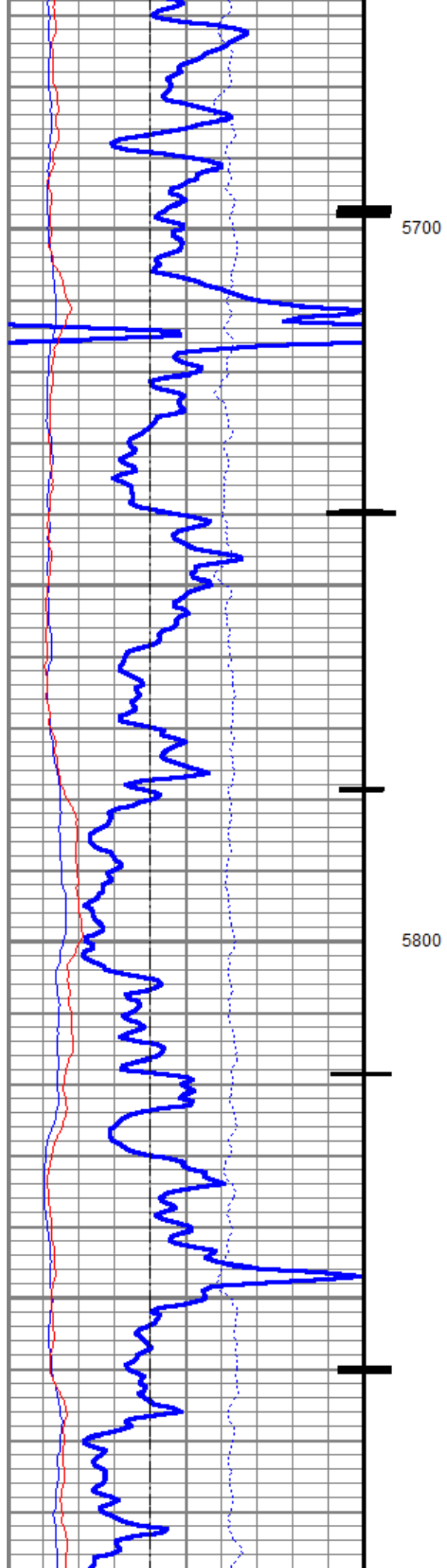
Main Pass

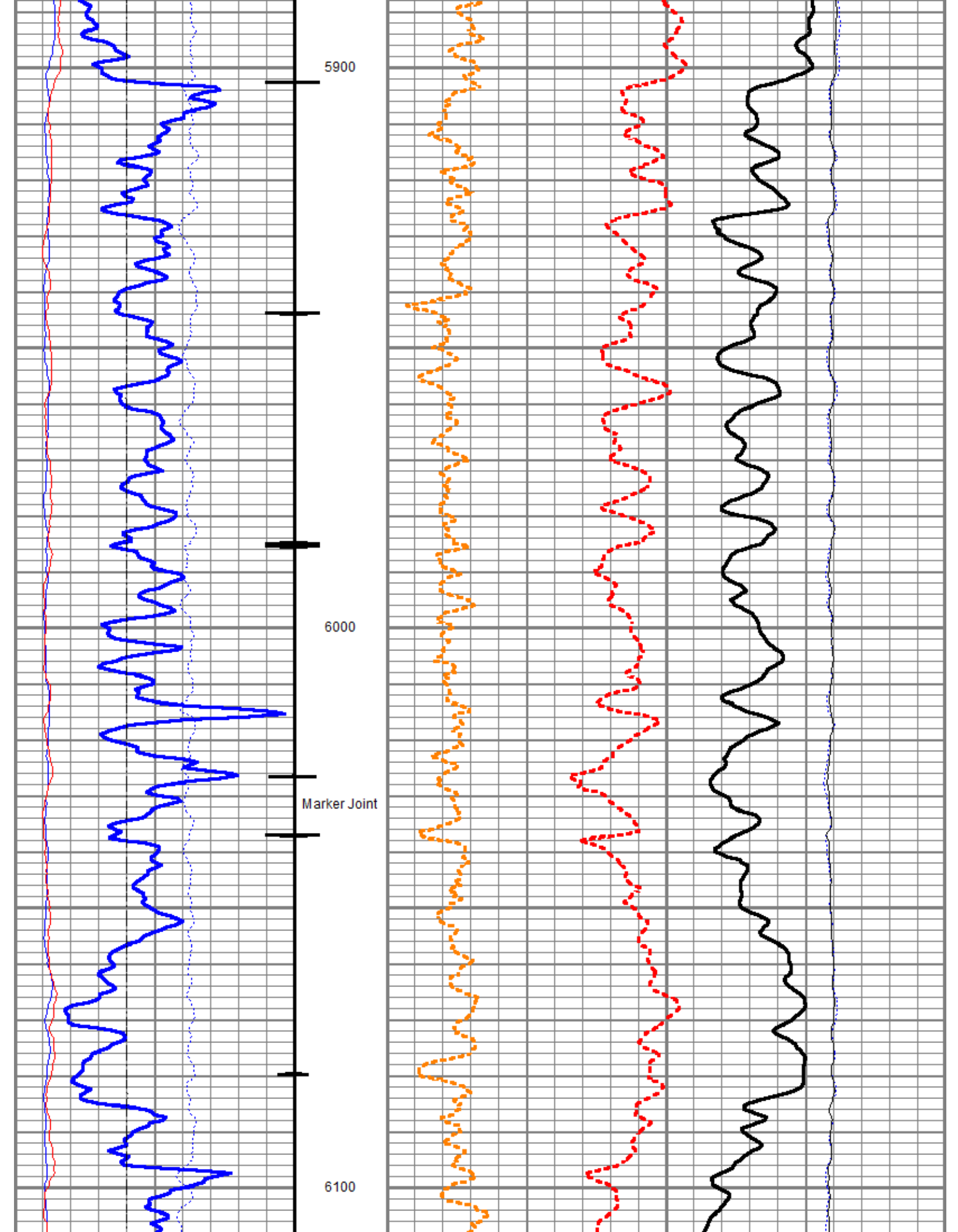
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Presentation Format	ros_pdn_hunter
Dataset Creation	Fri Feb 15 13:53:39 2019
Charted by	Depth in Feet scaled 1:240

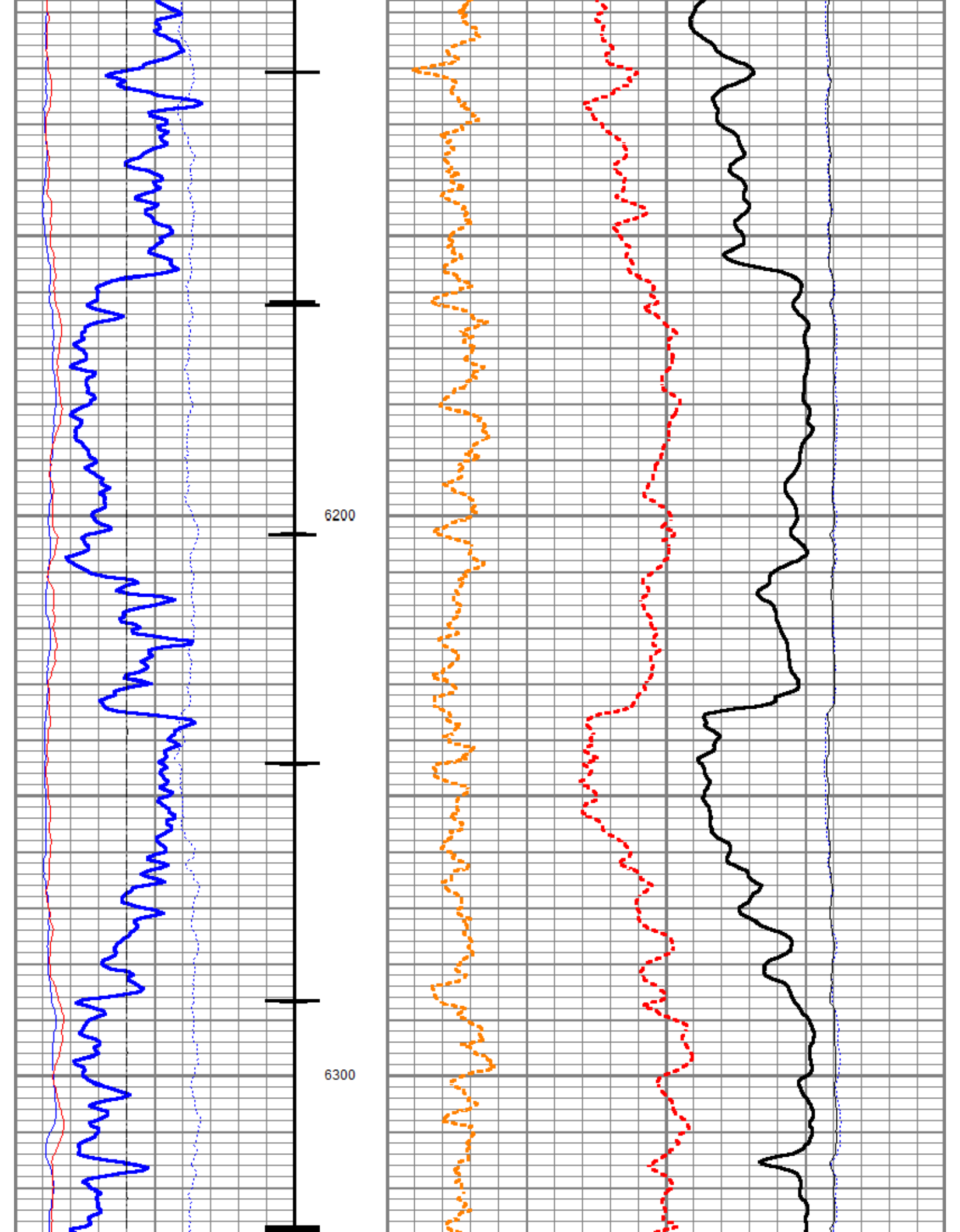
0	Gamma Ray (GAPI)	150
<i>Casing Collar Locator</i>		
-100	Line Speed (ft/min)	100
0	NIRS	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

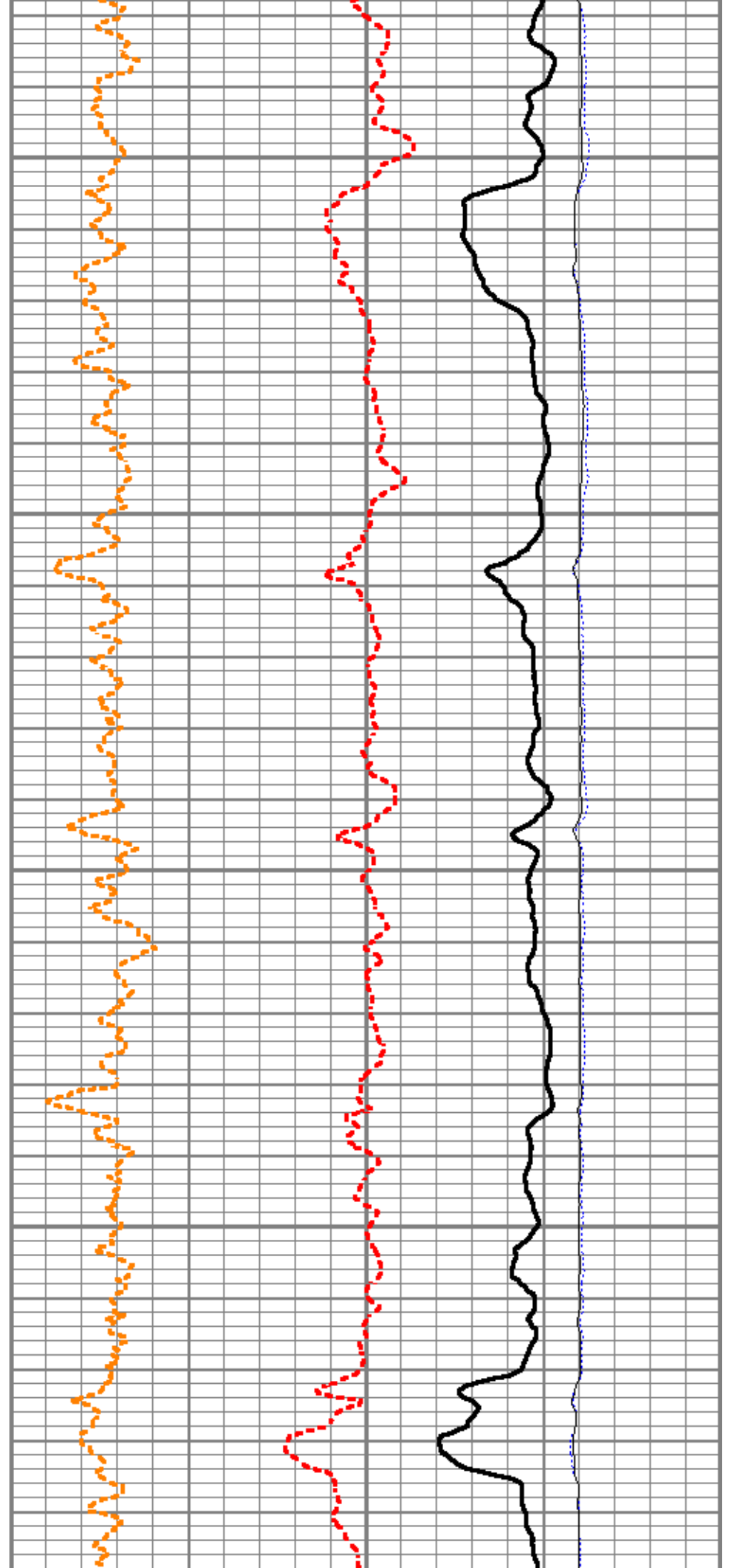
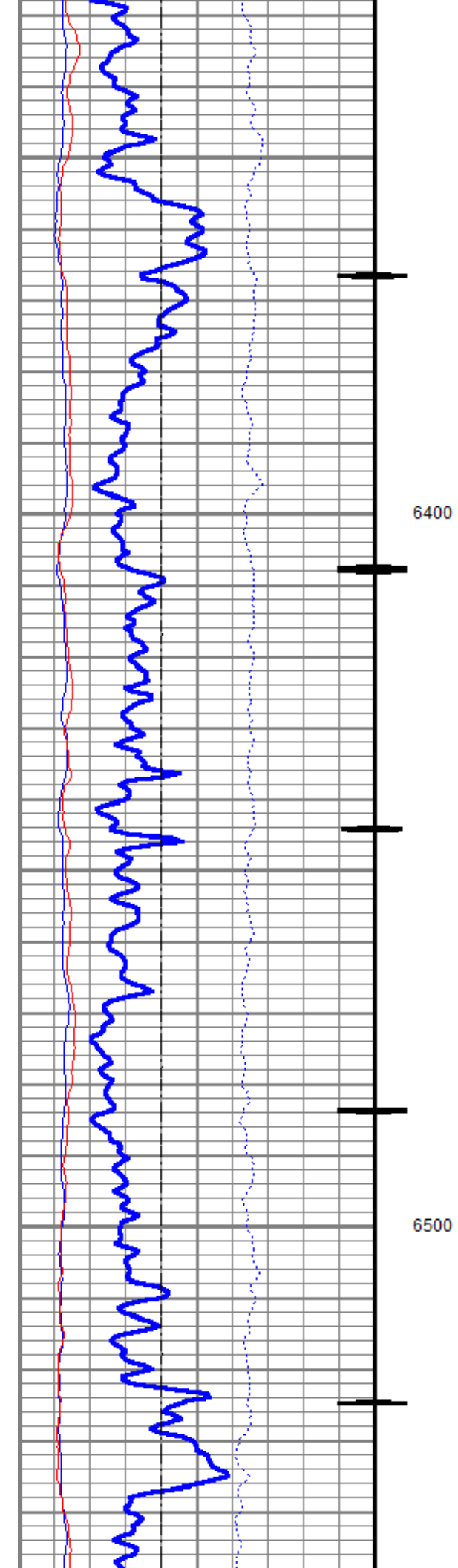
4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	0
		0 FIS2 45000
		0 NIS2 100000

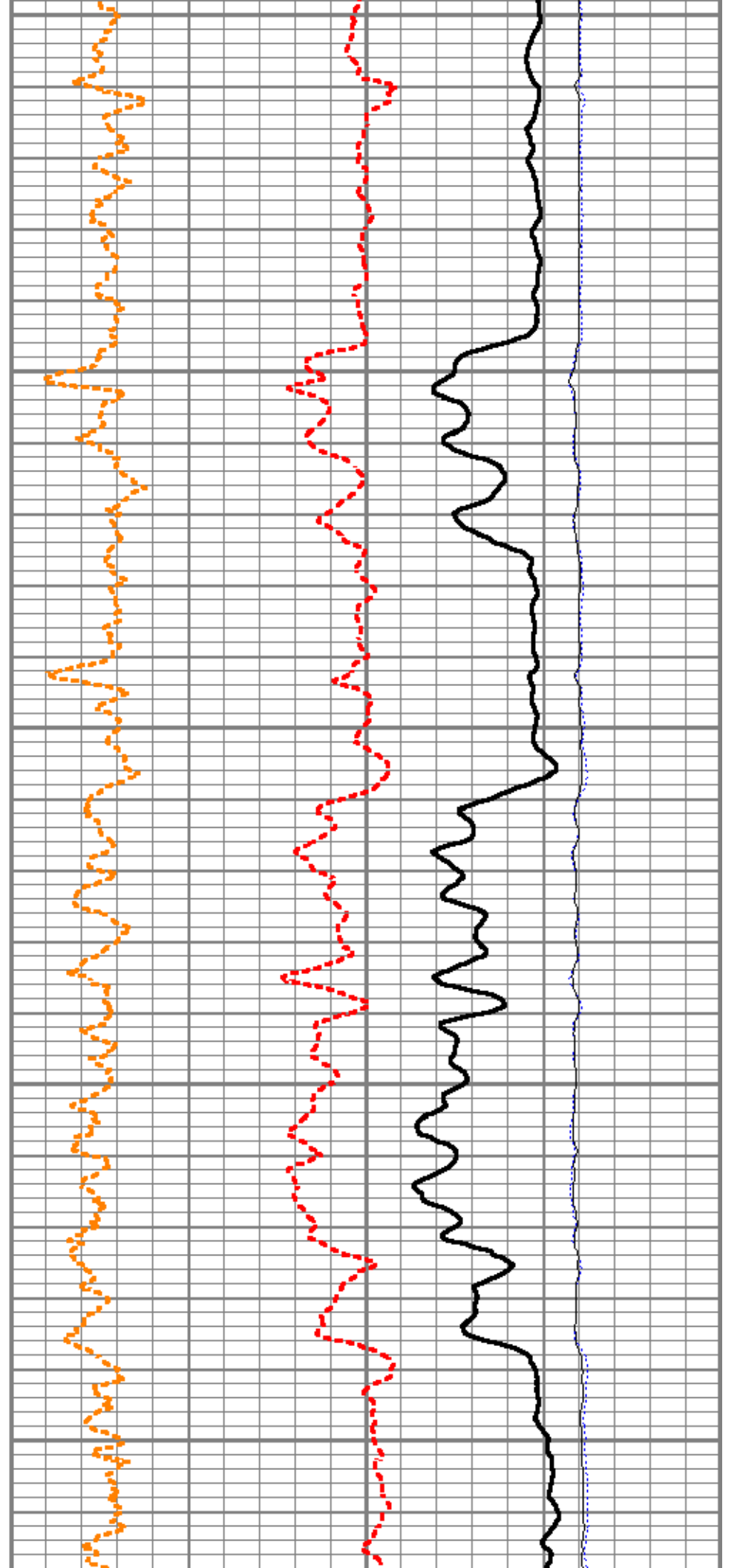
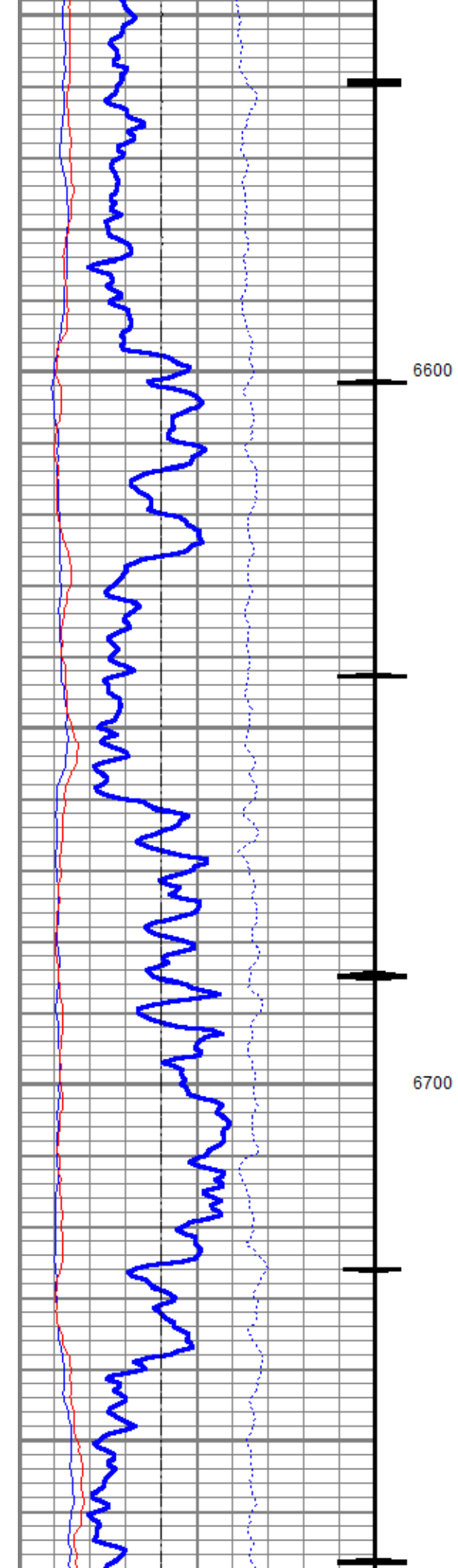


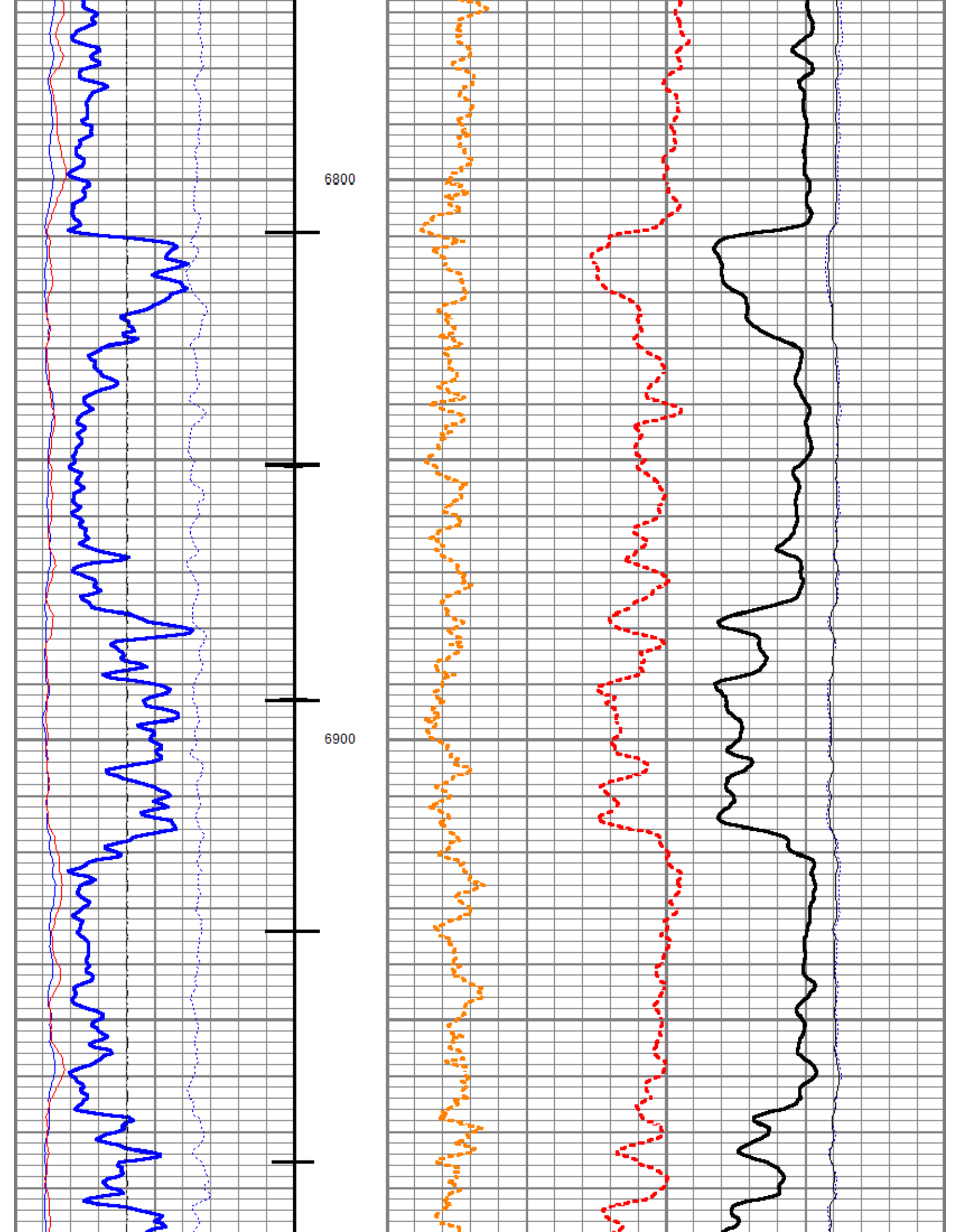


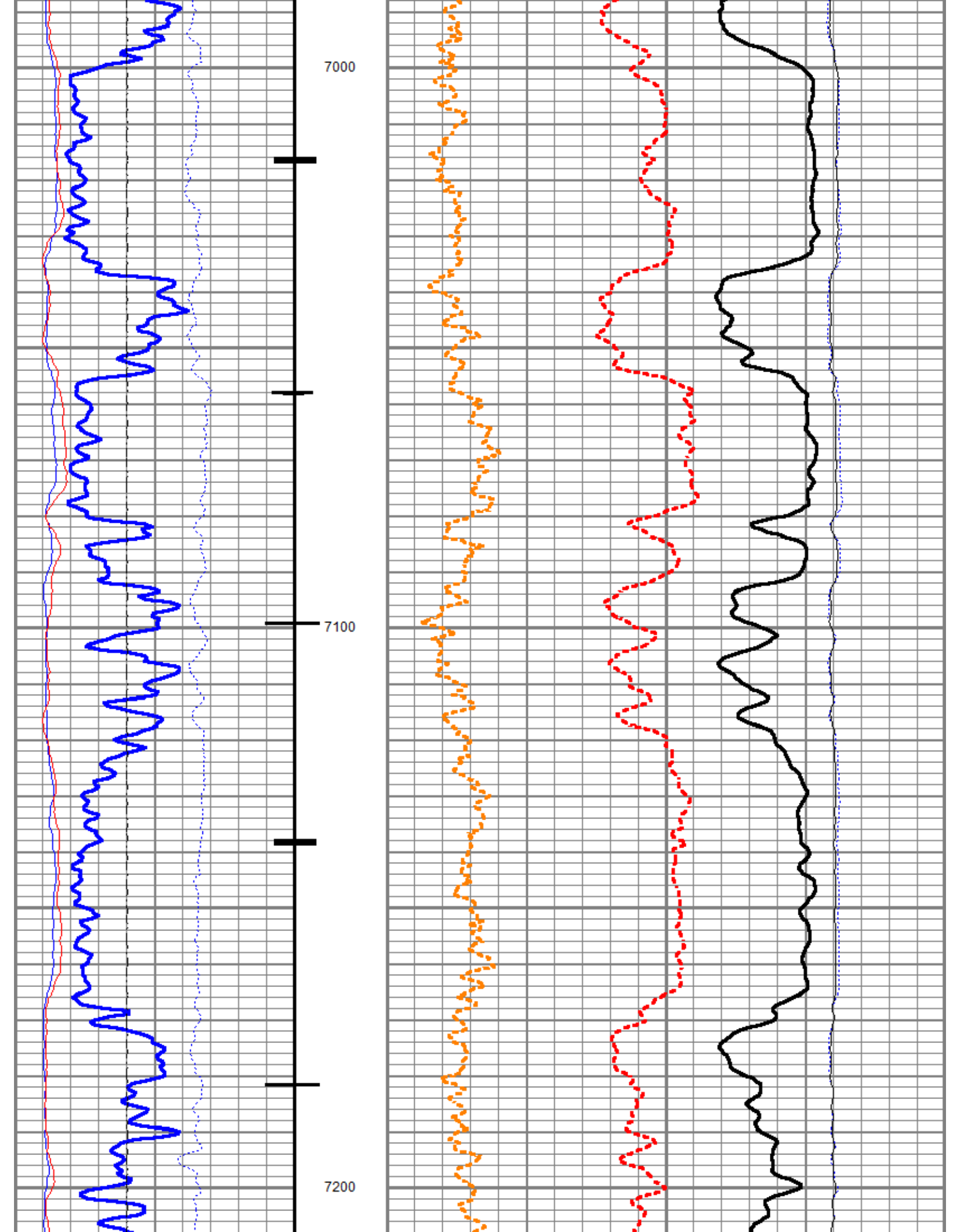


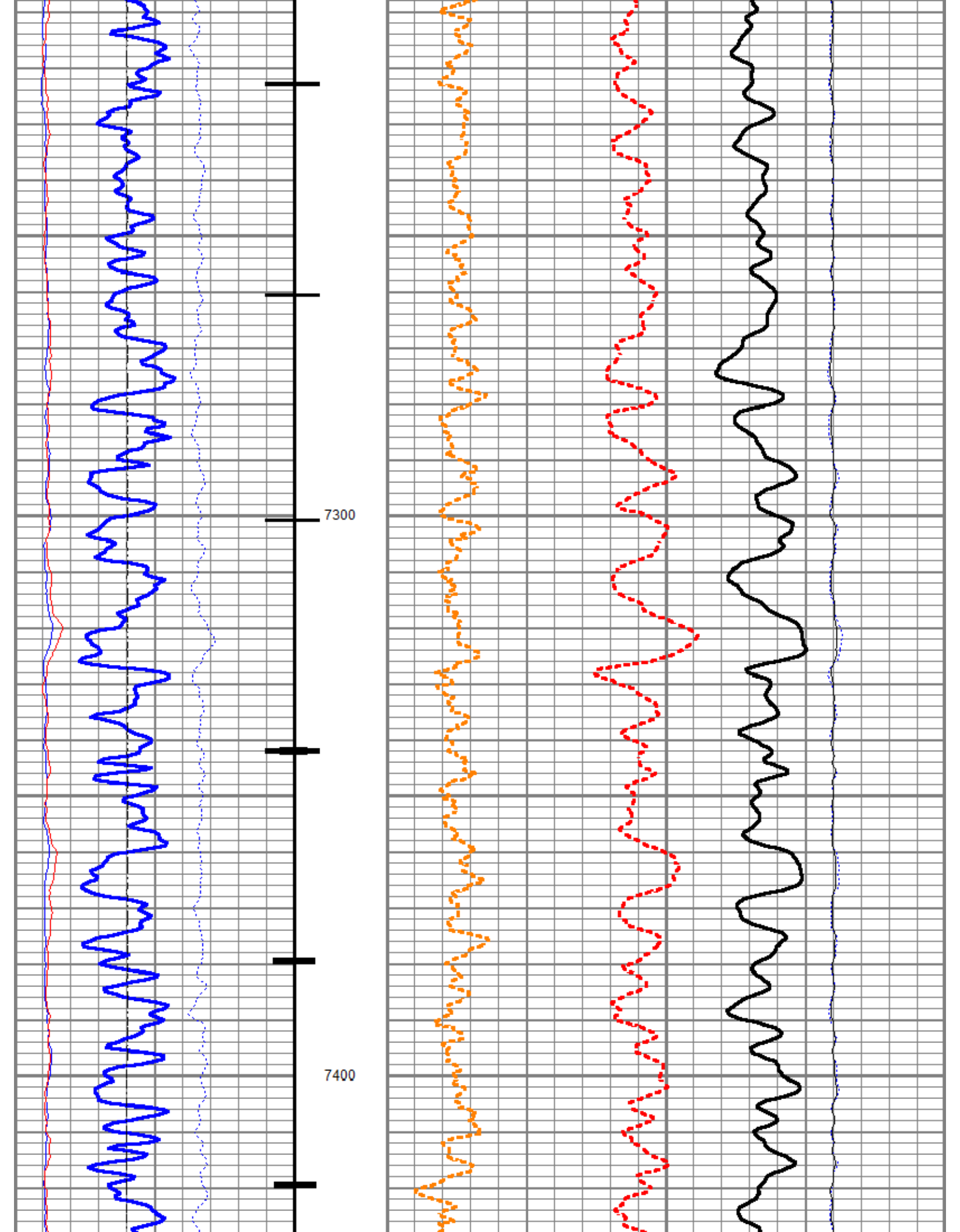


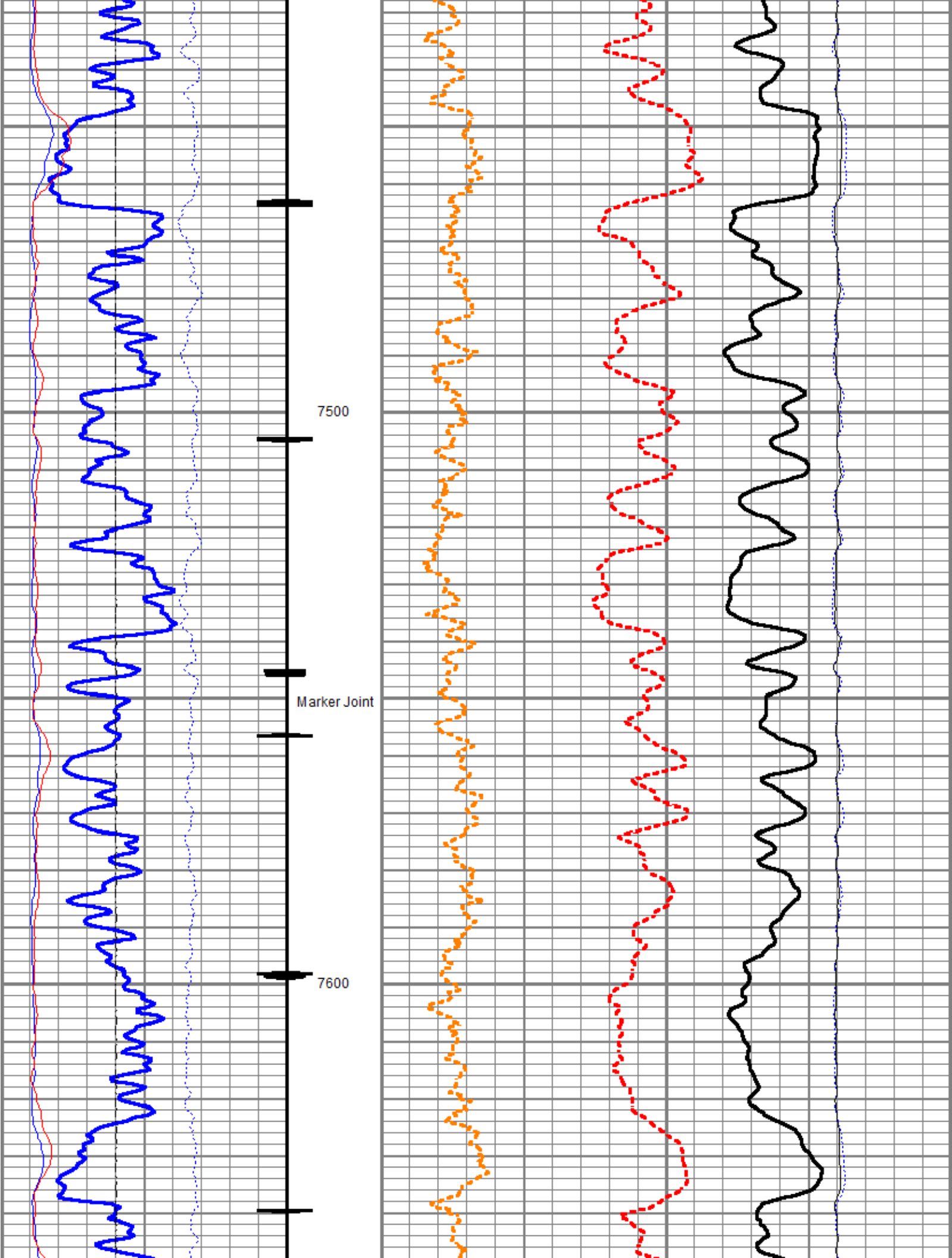


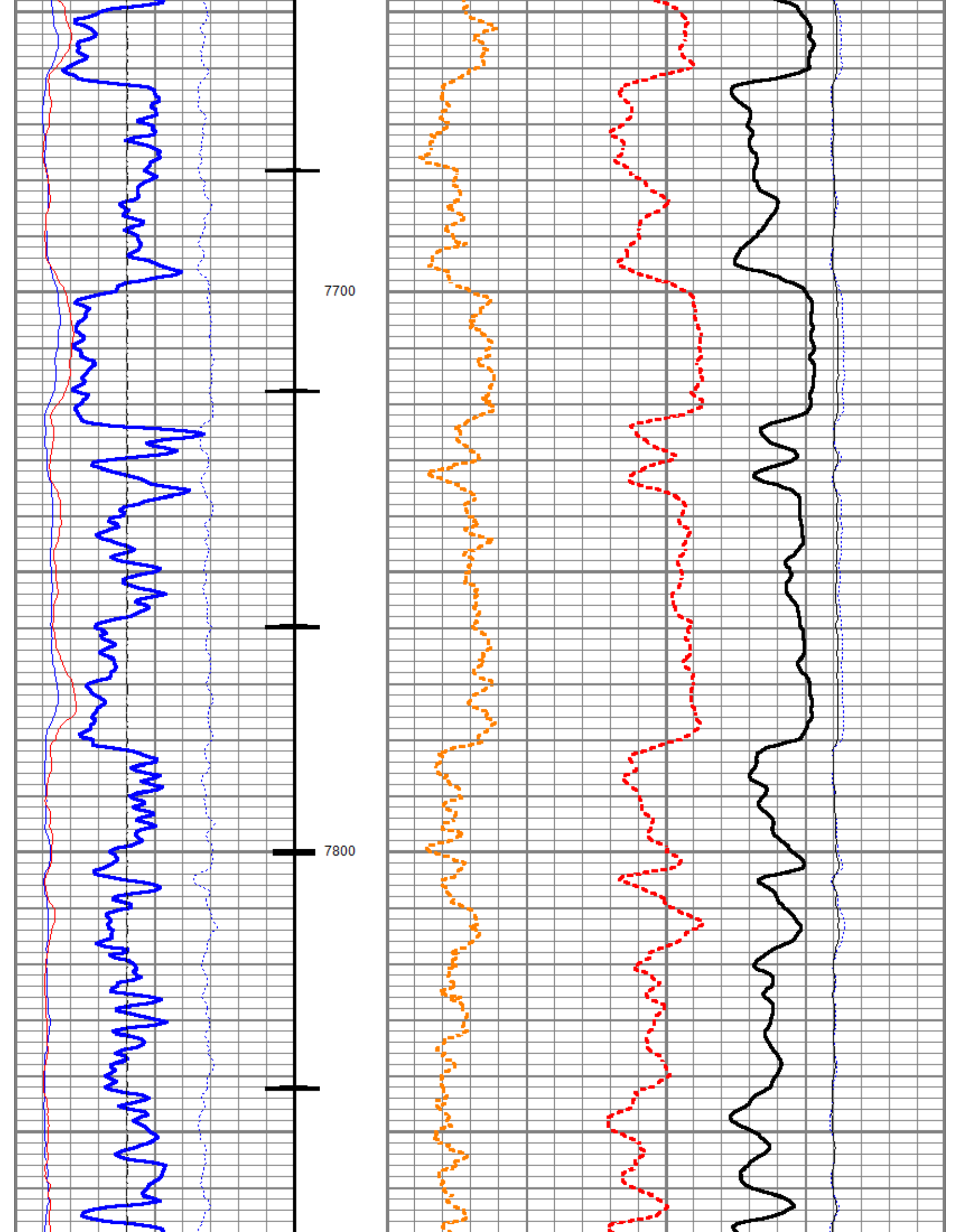


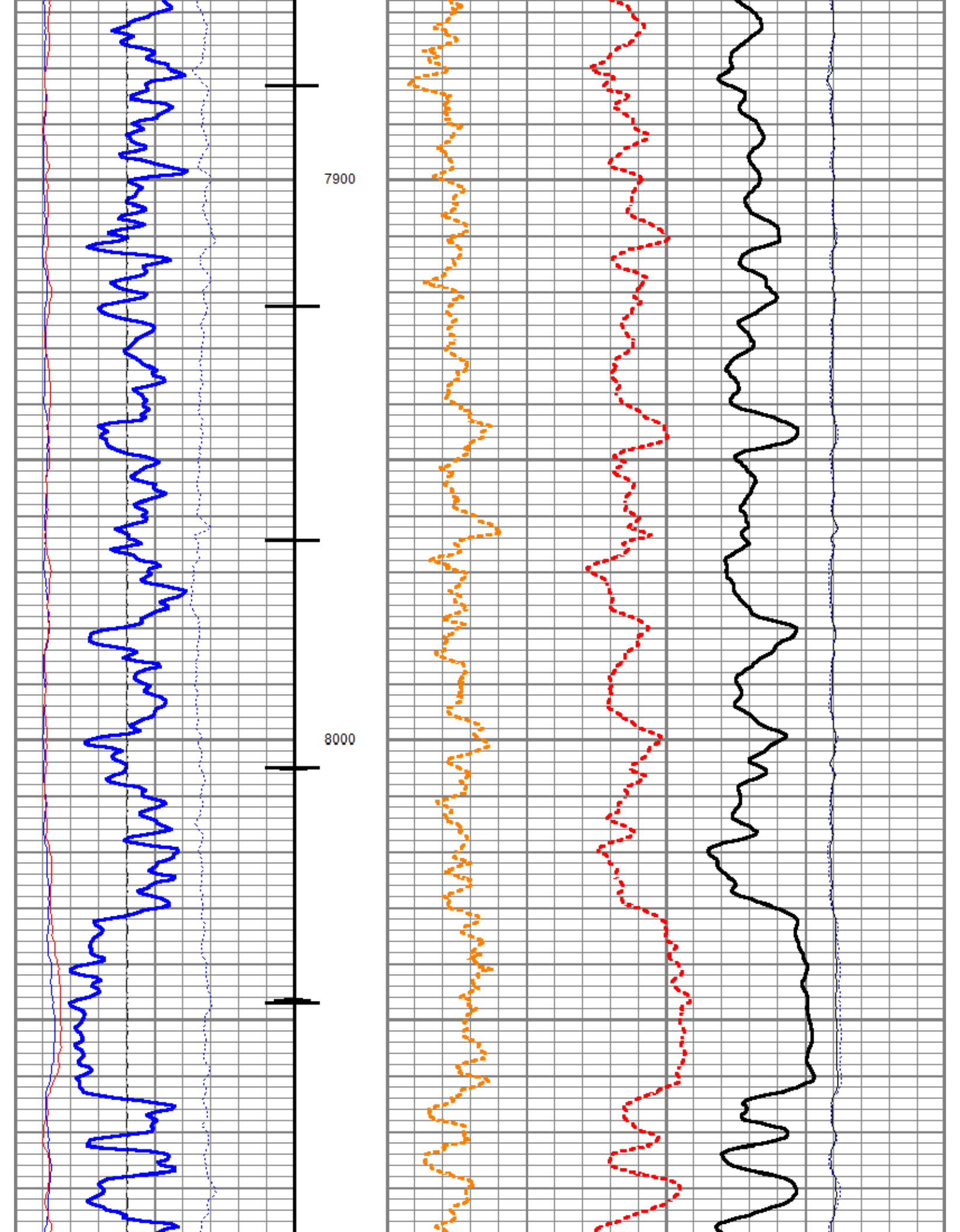


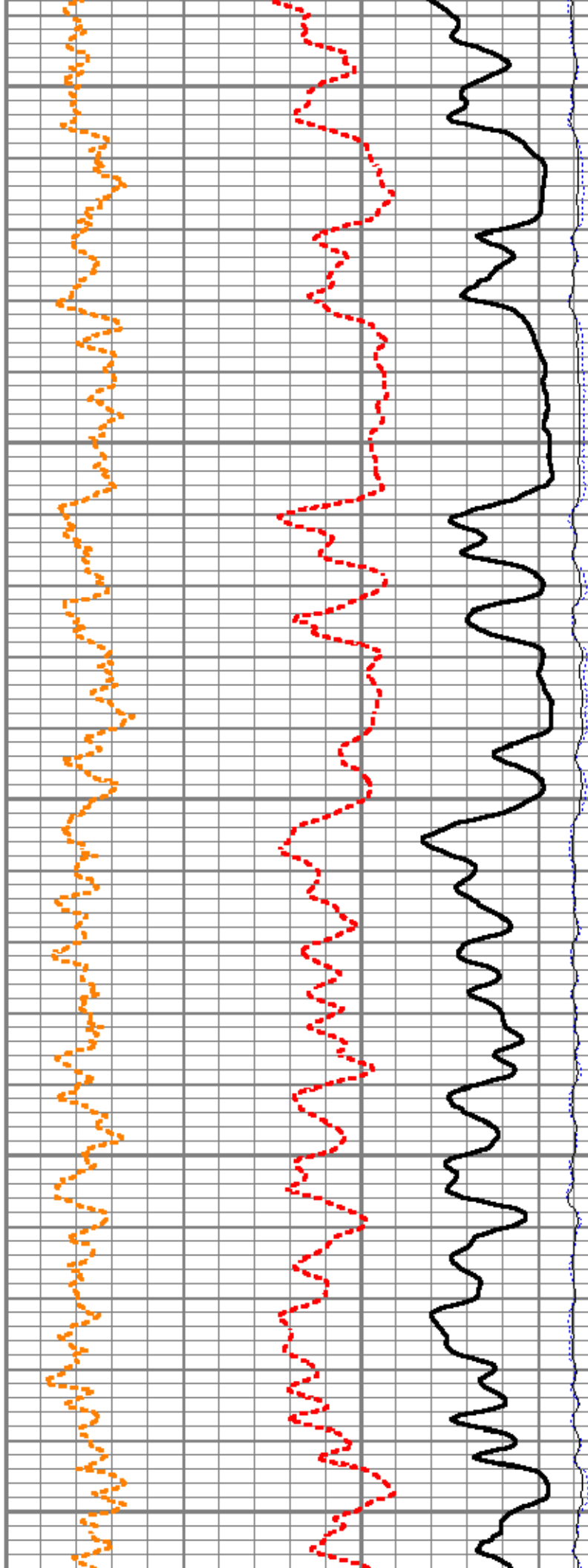
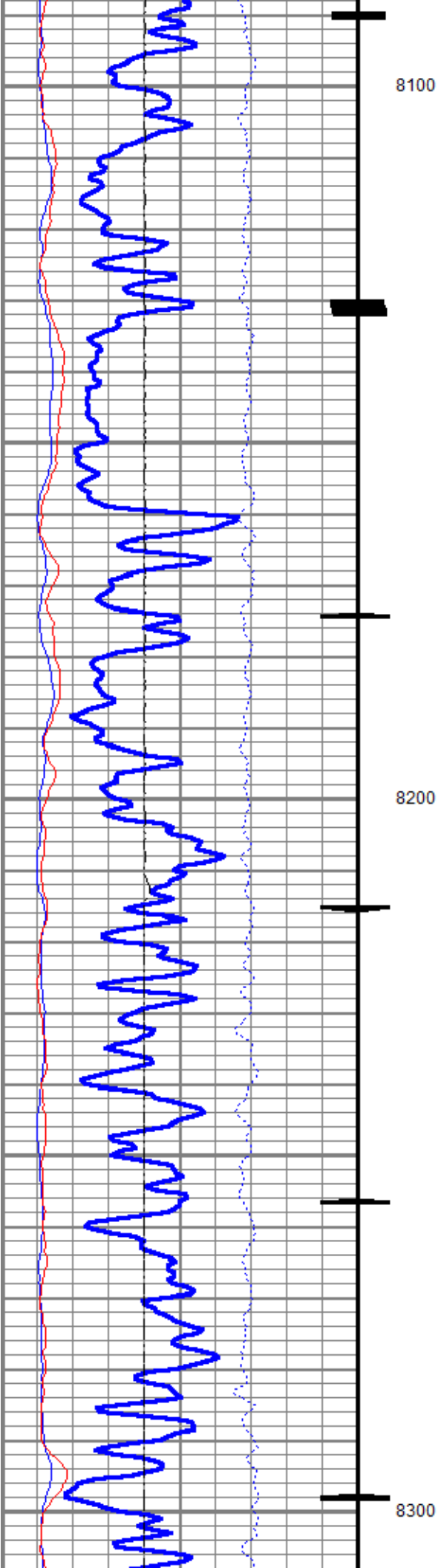


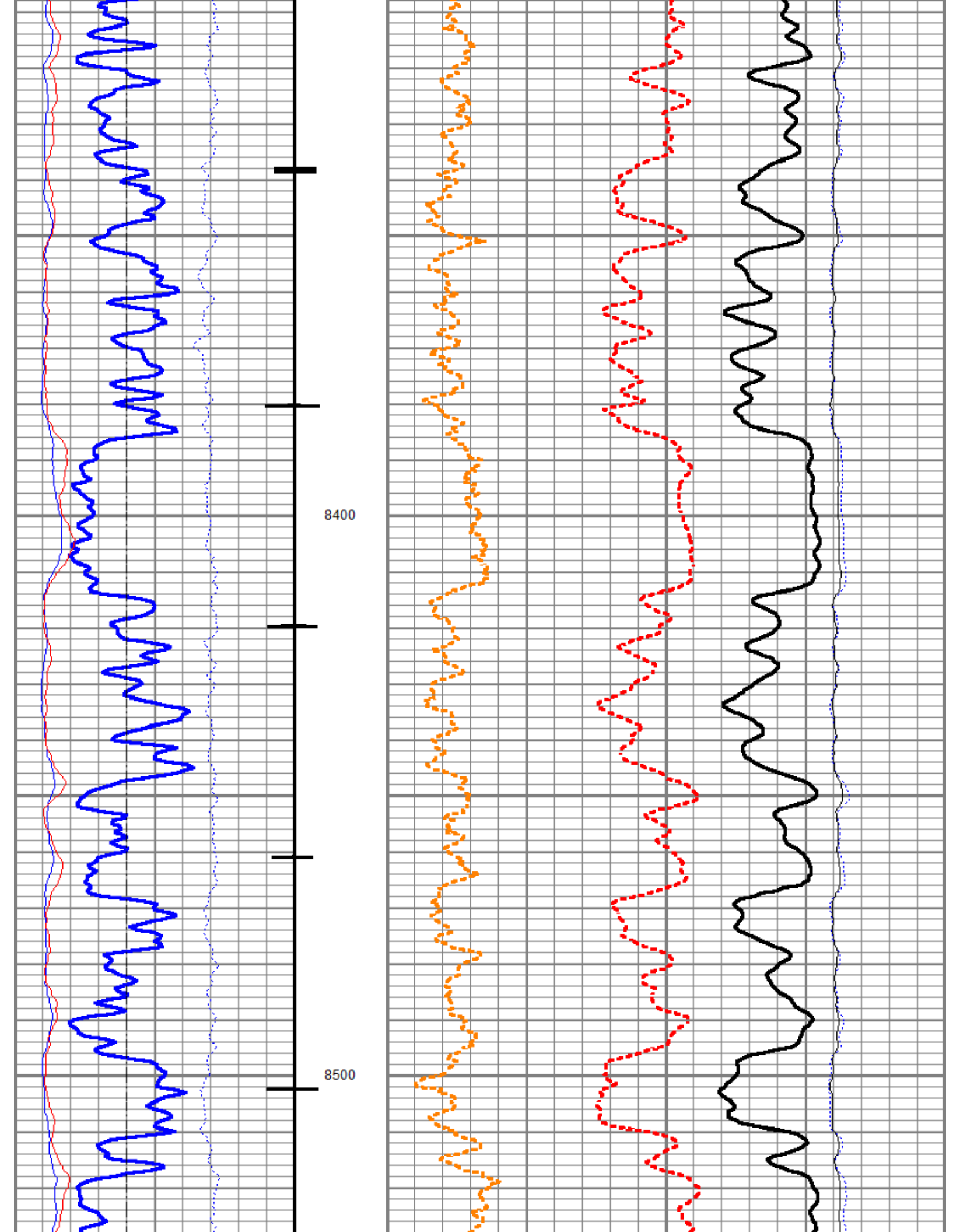


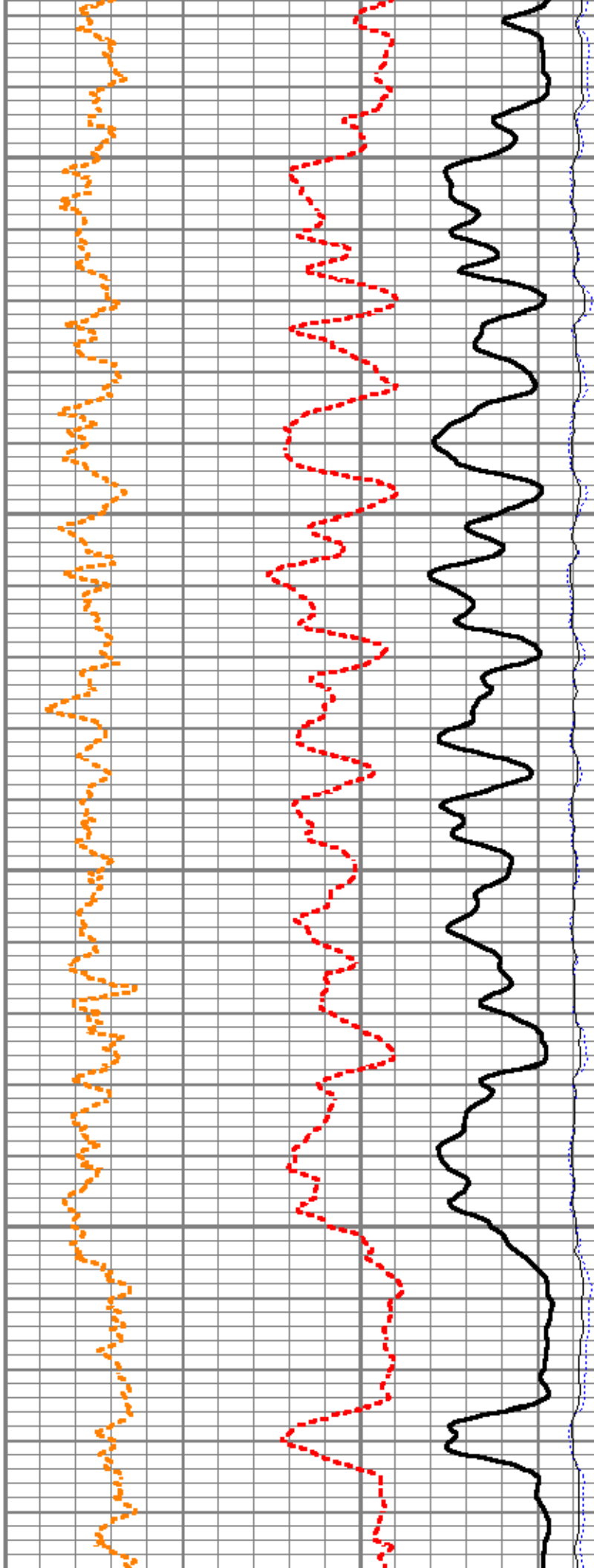
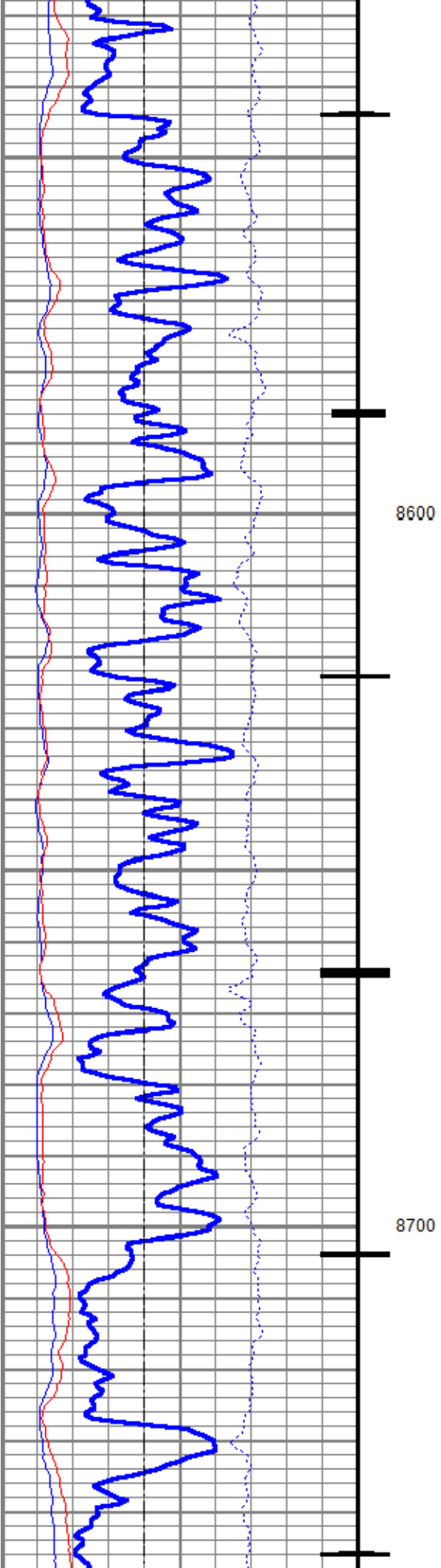


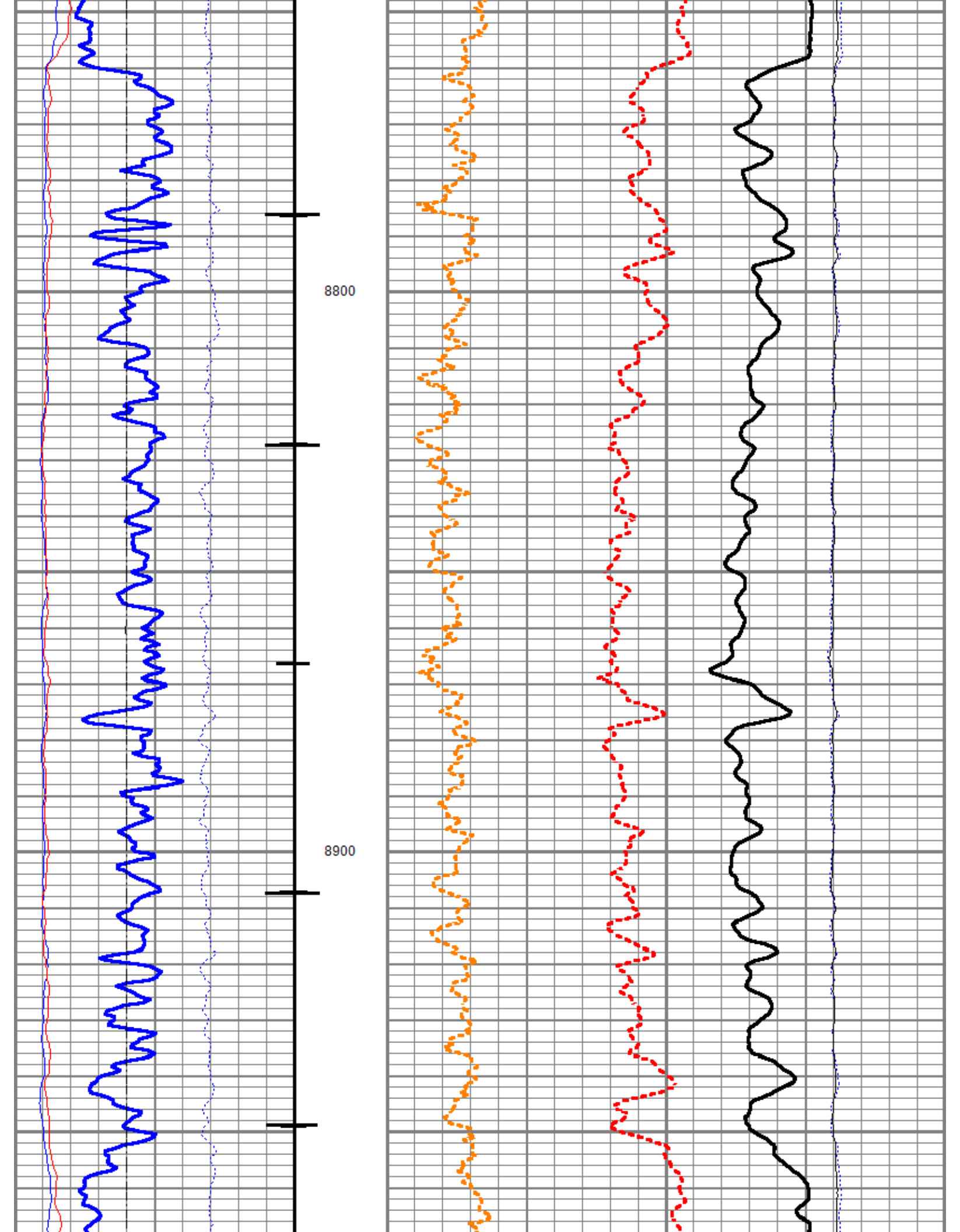


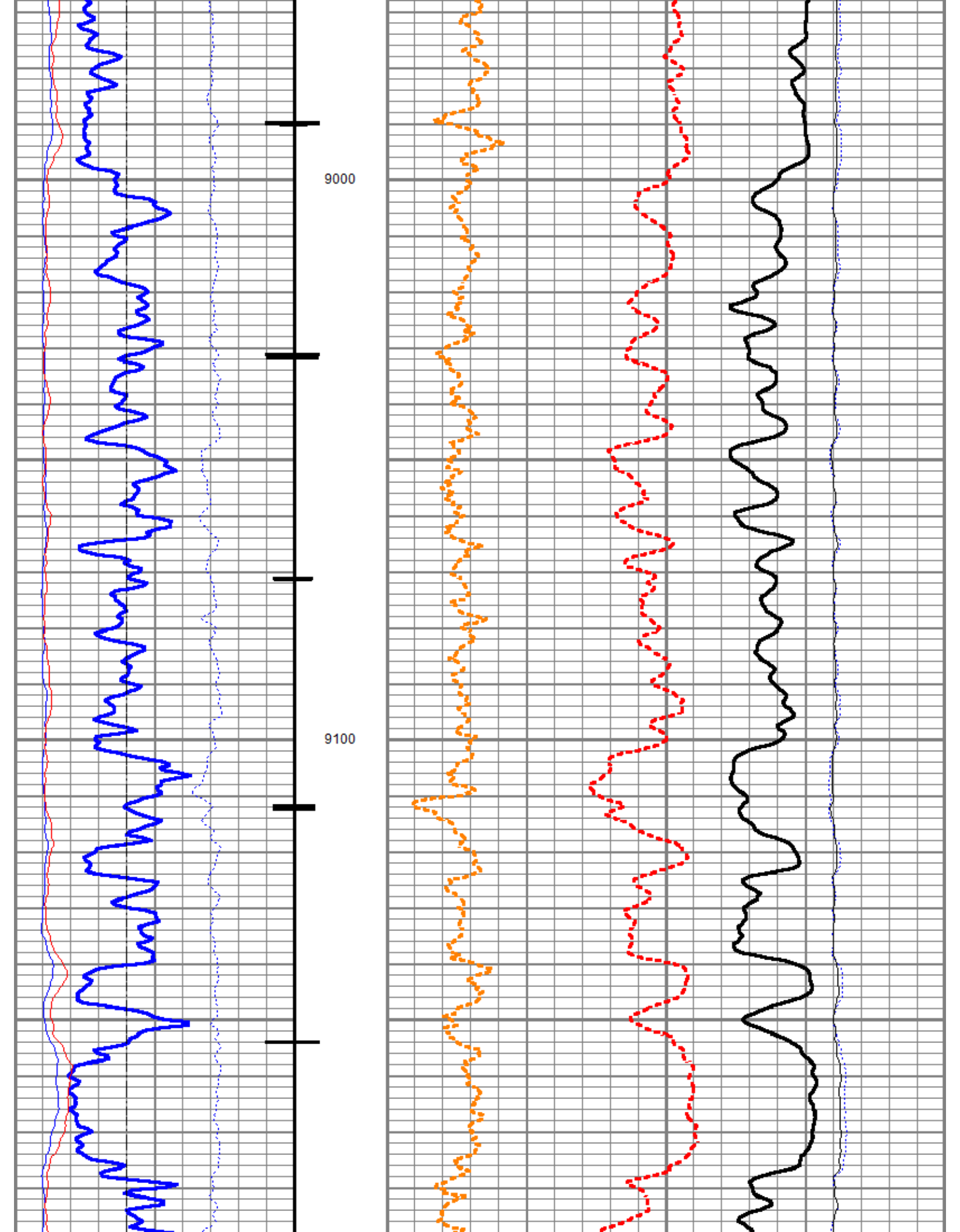


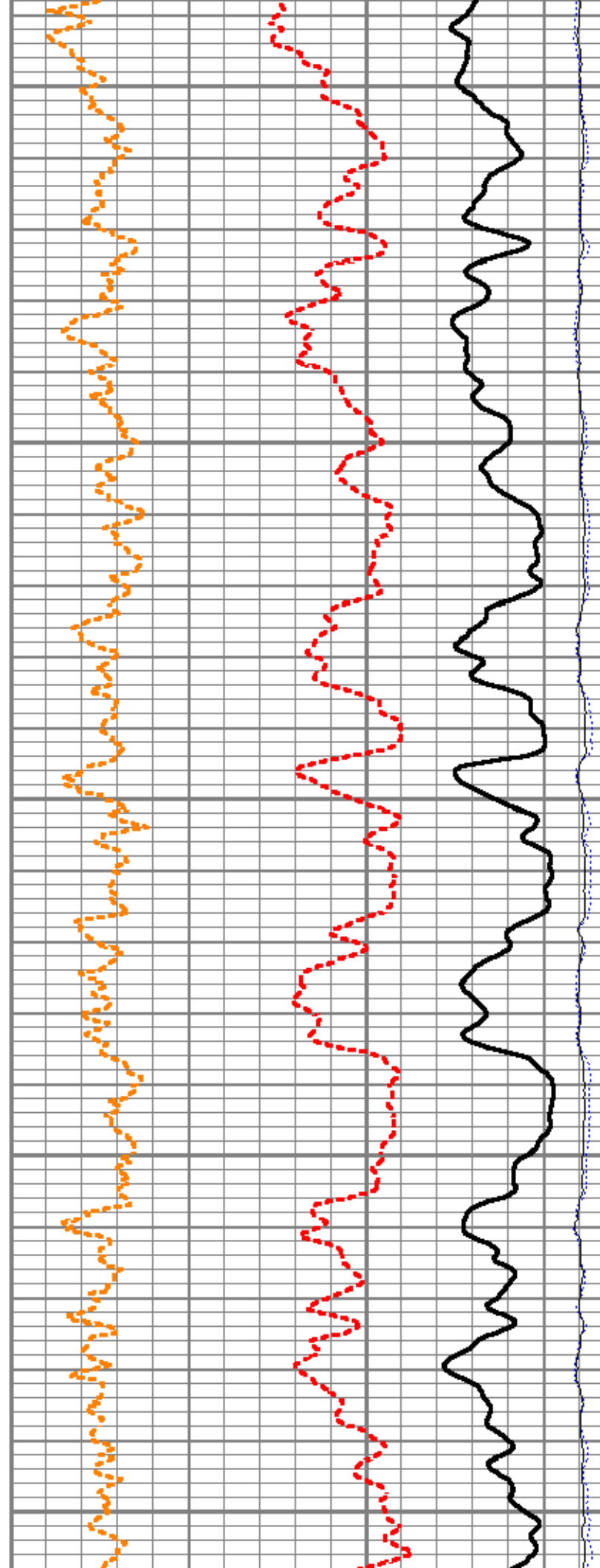
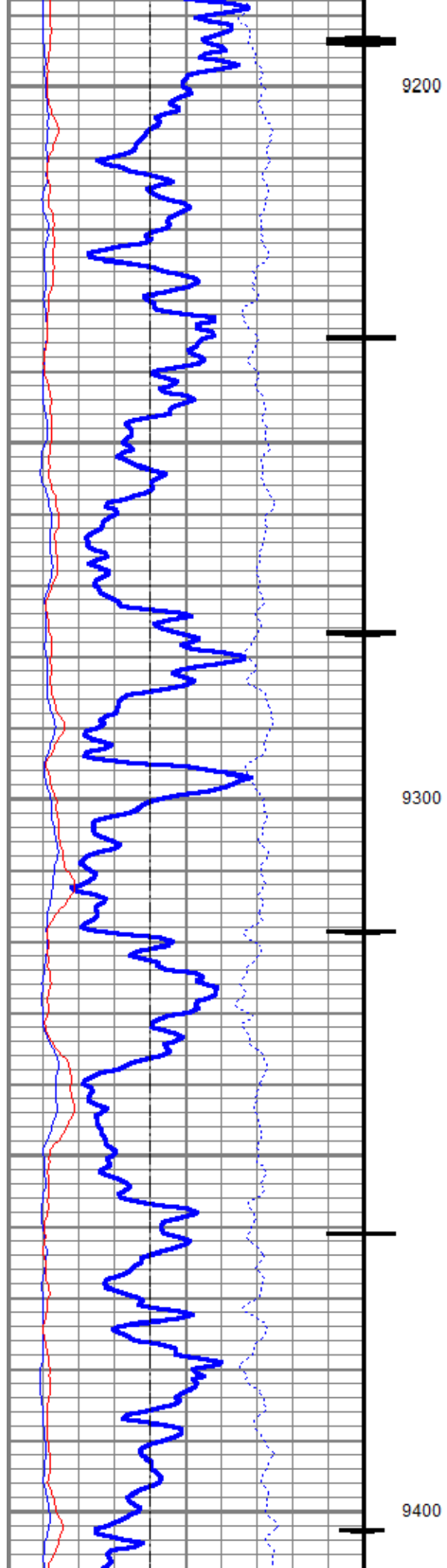


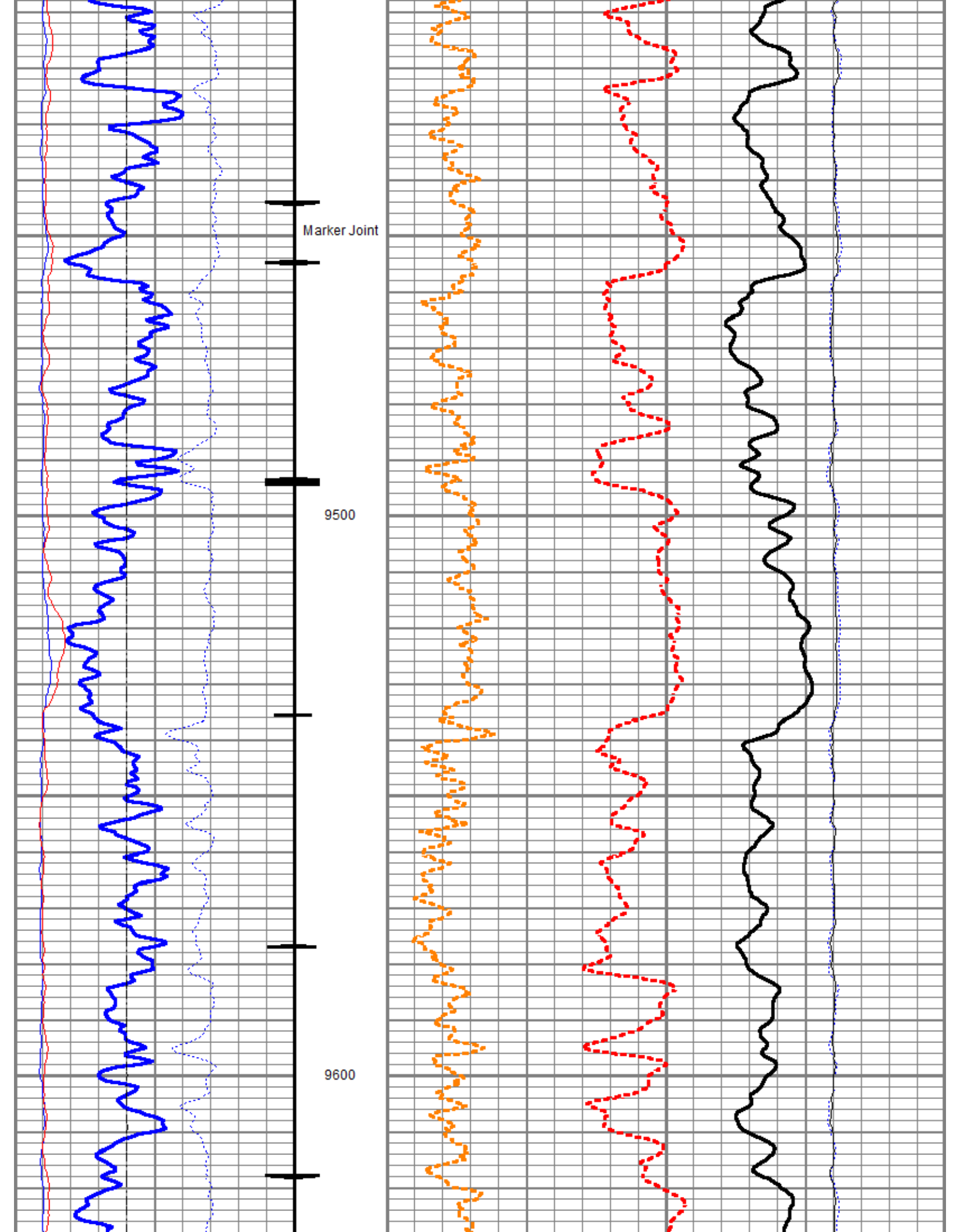


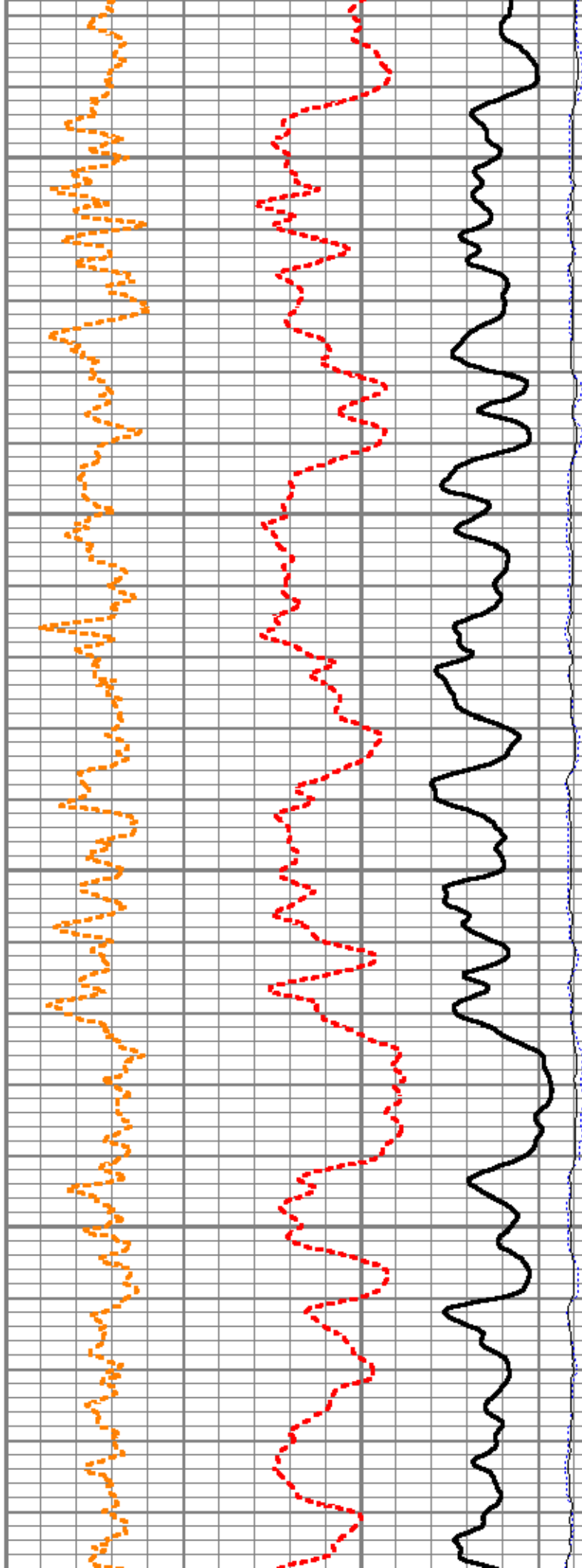
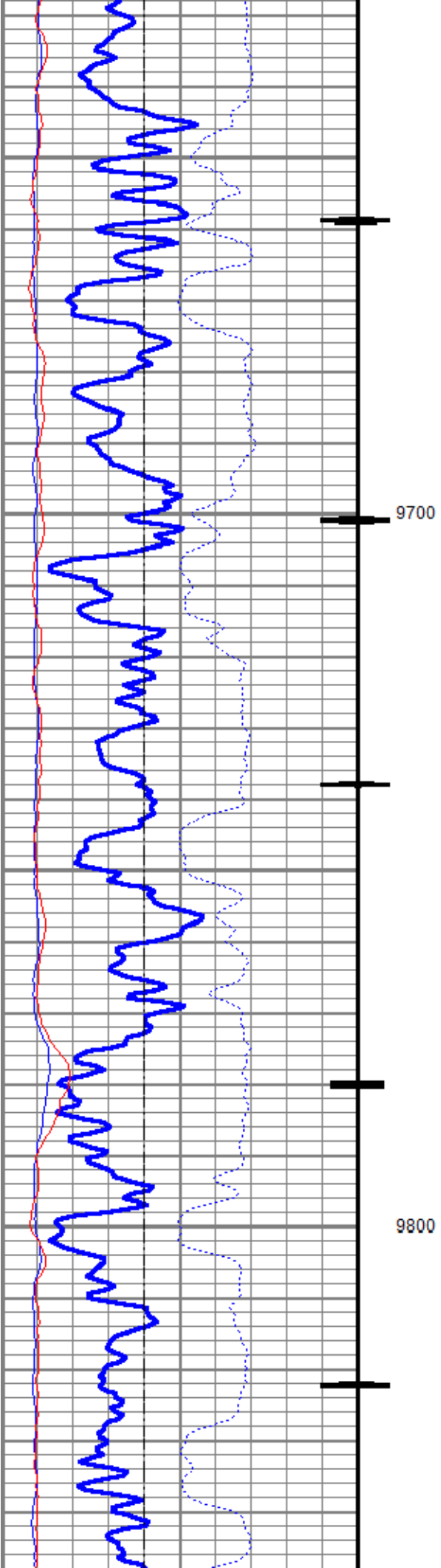


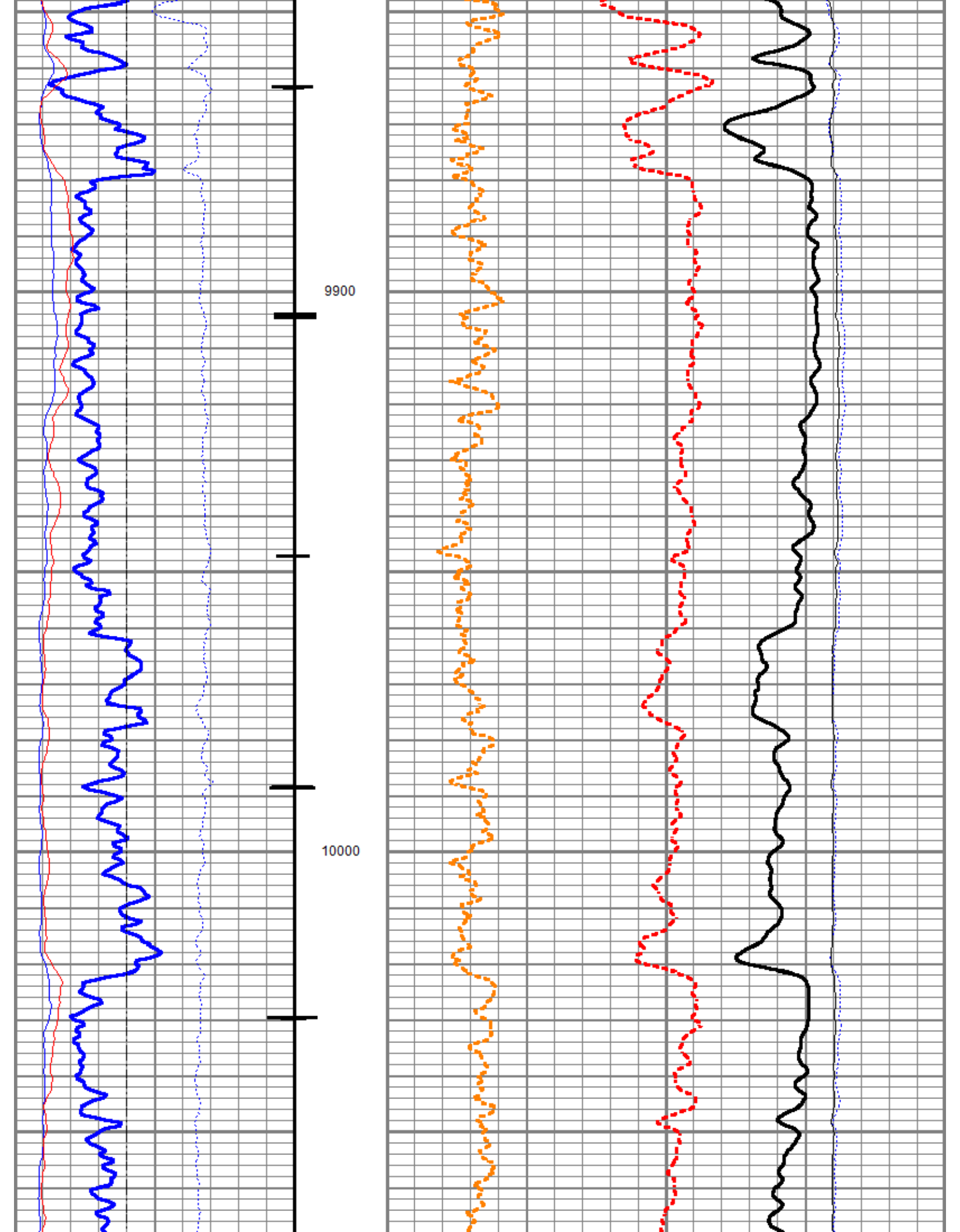


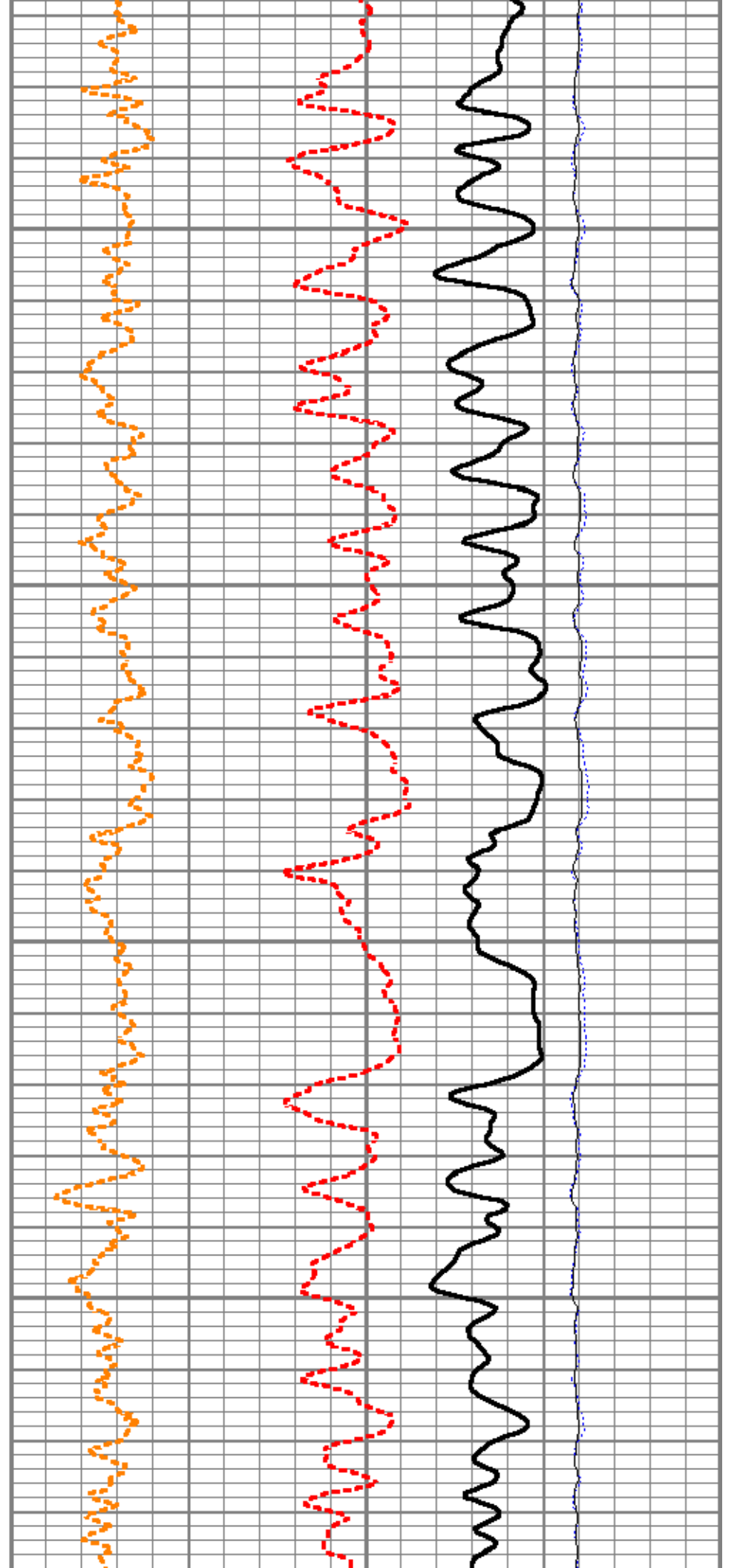
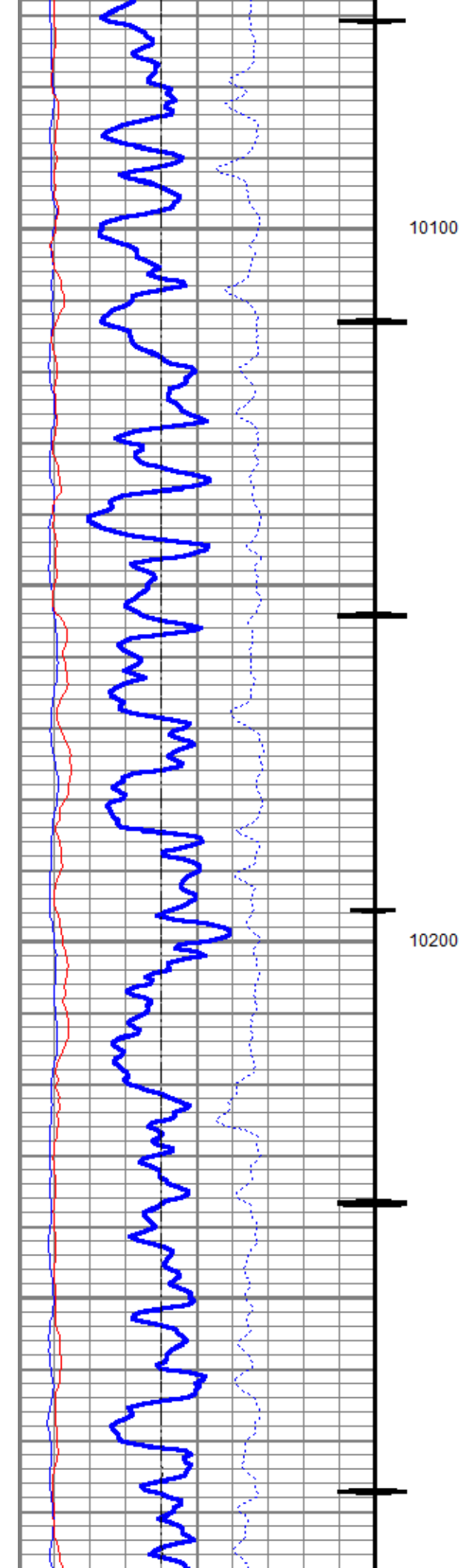


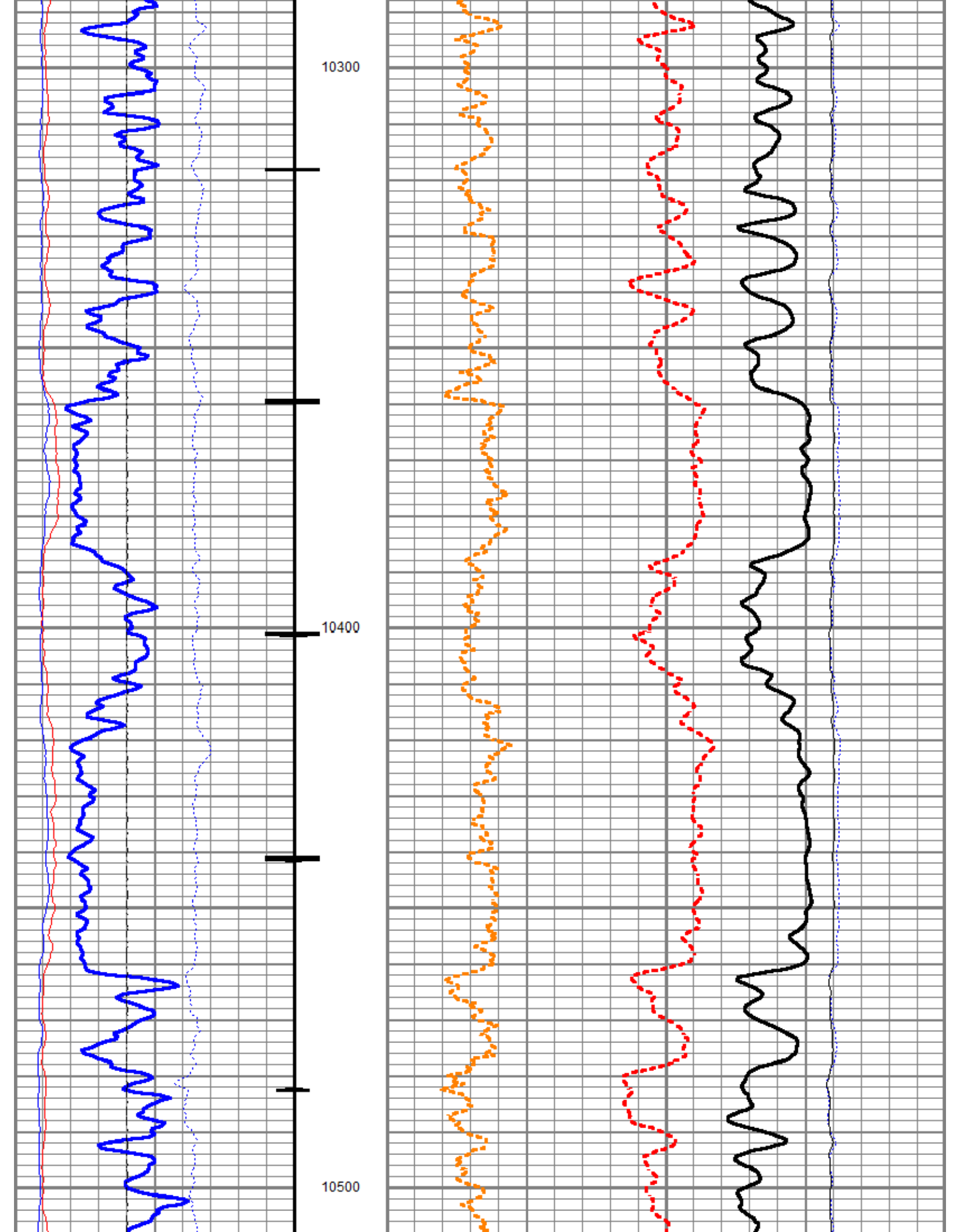


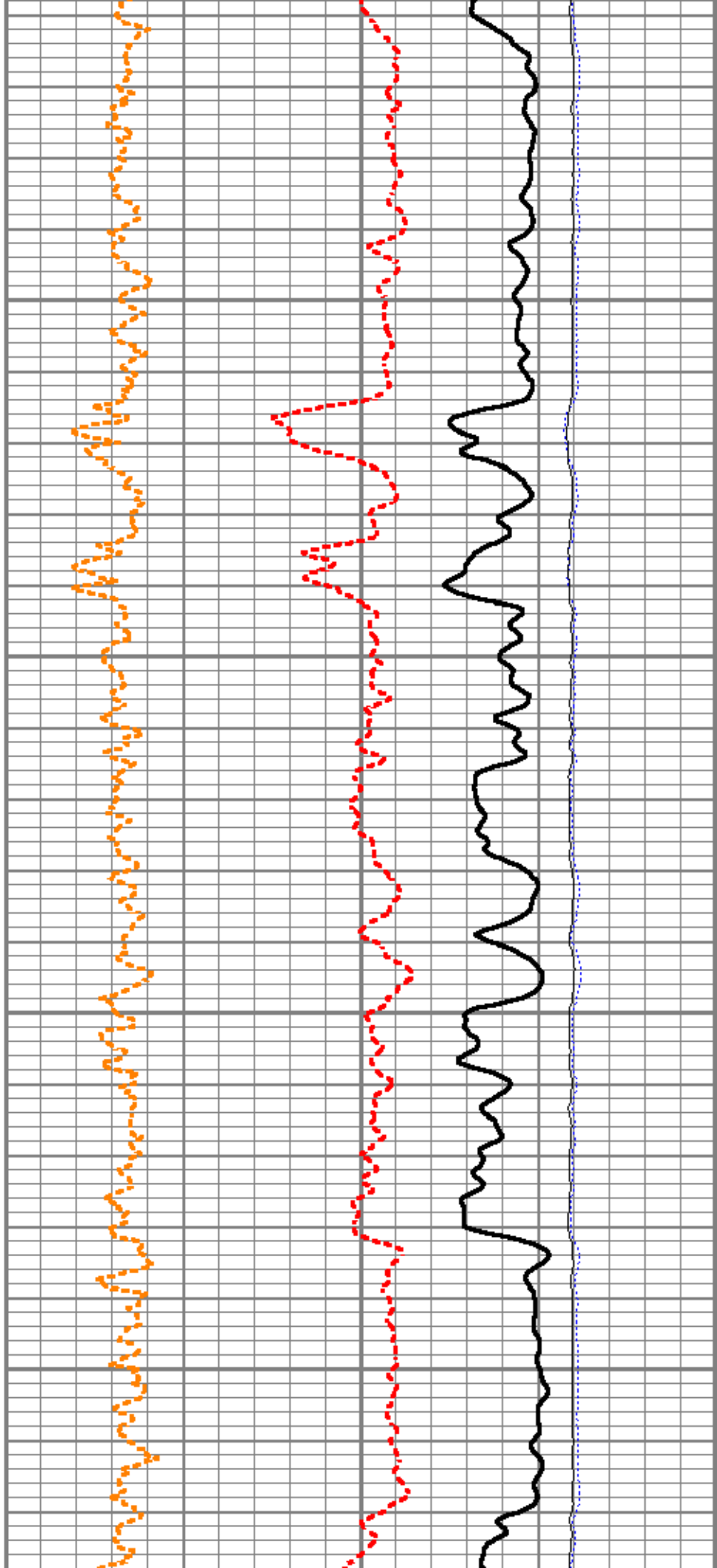
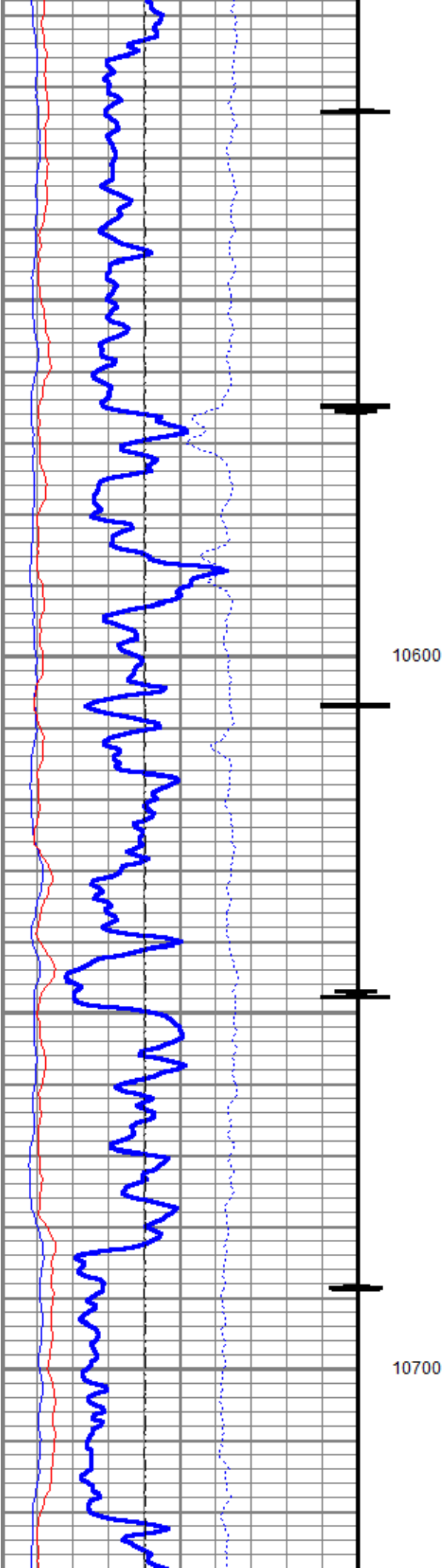


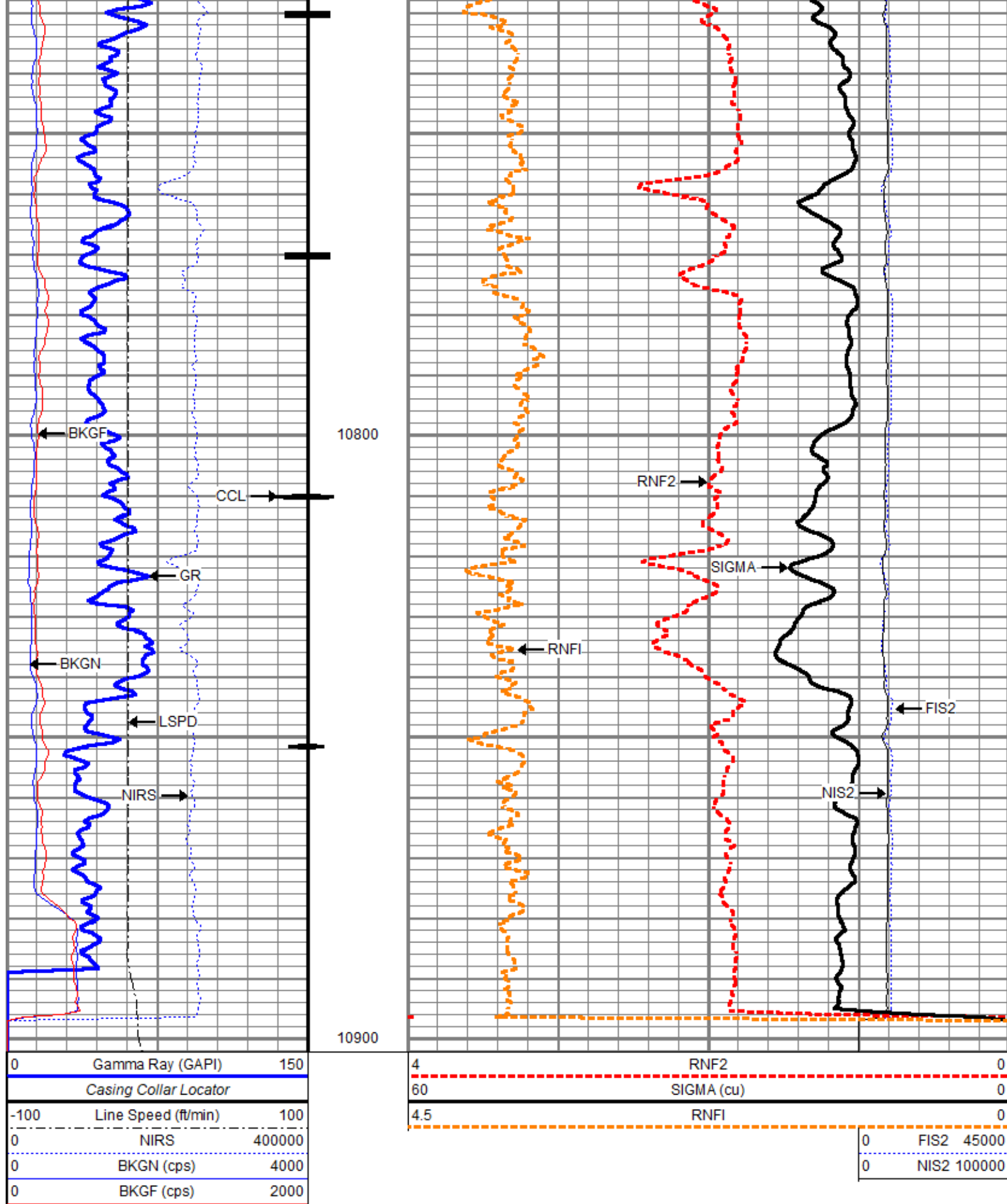








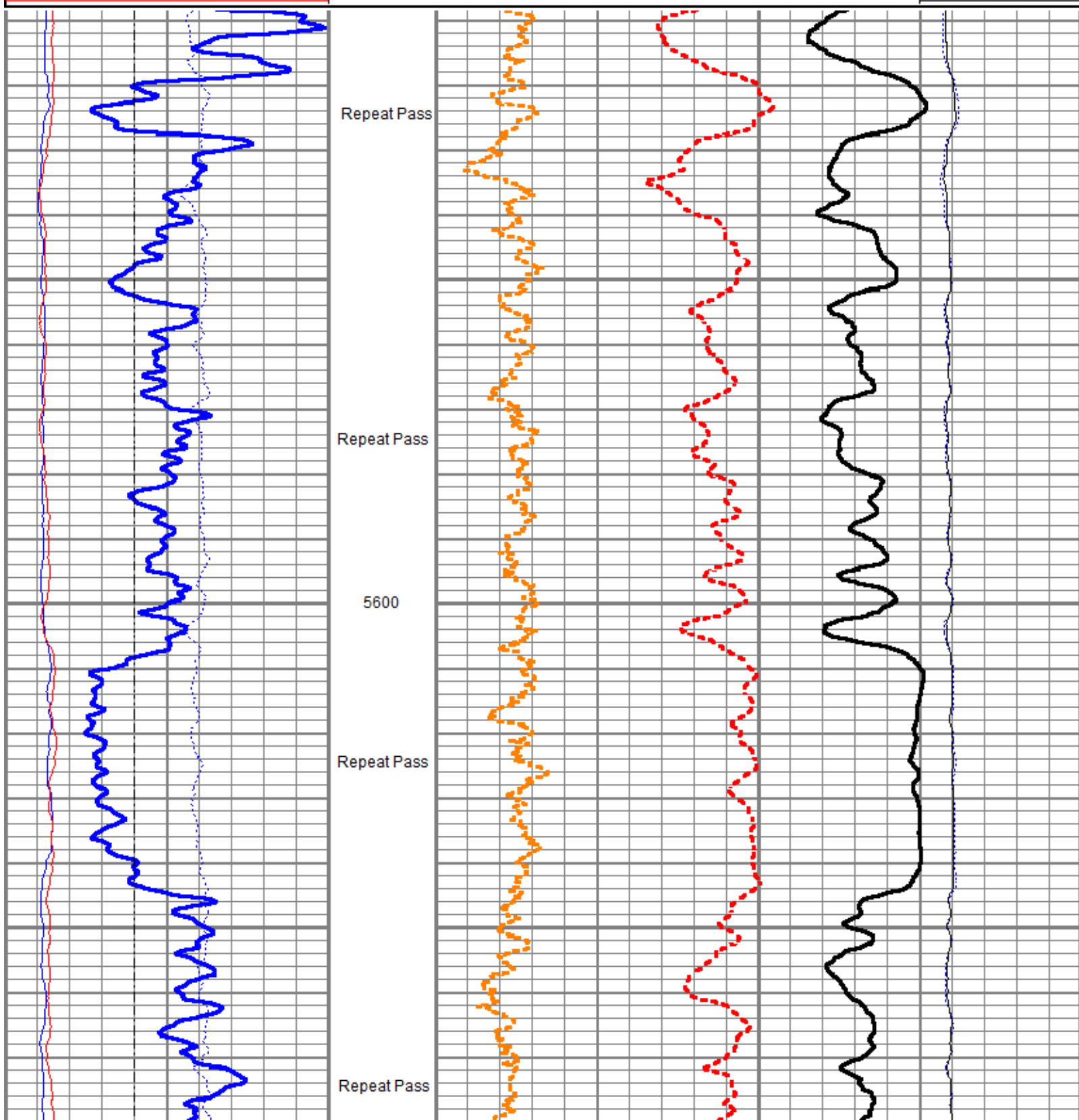


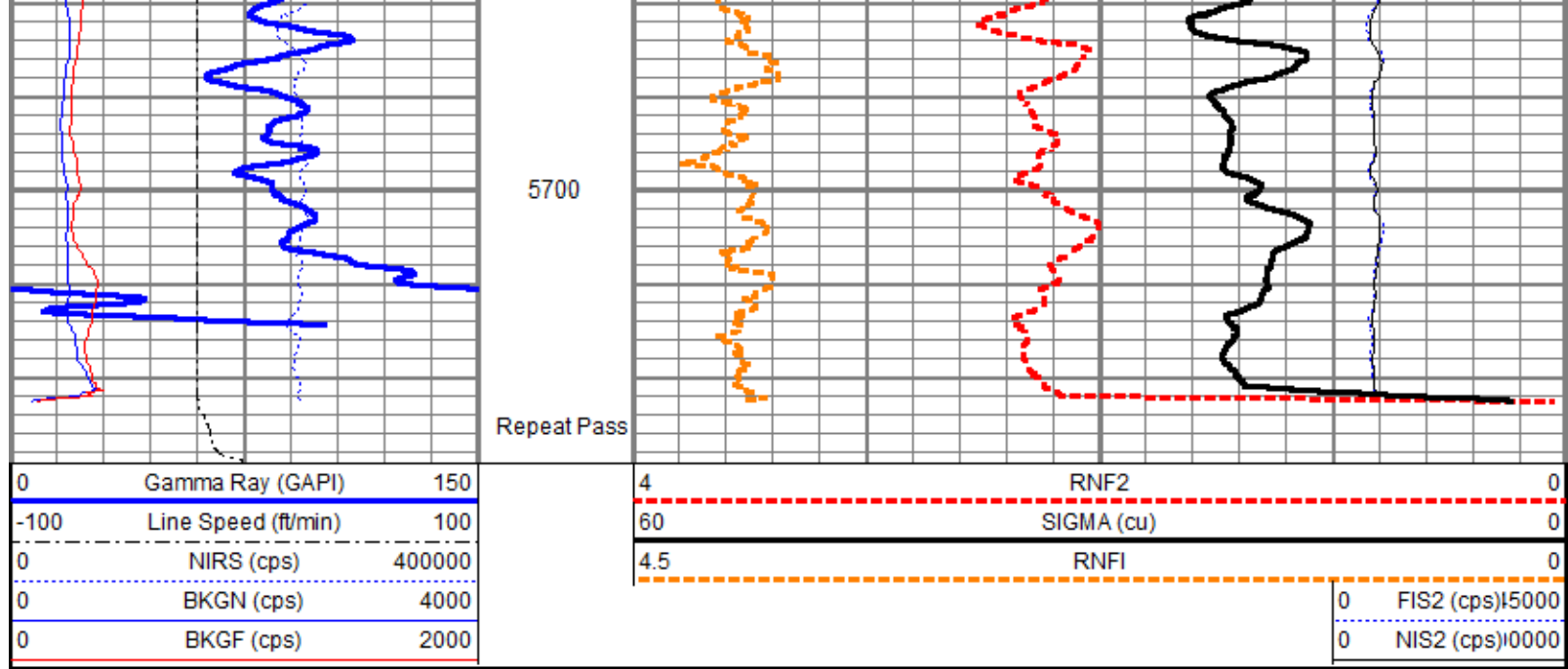


Database File	ursalursa_boies ranch c-240 fed 21b-25-2-98_pn_02-14-19\ursa_boies ranch c-240 fed 21b-25-2-98_pn_02-14-2019.db
Dataset Pathname	repeat.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Thu Feb 14 22:57:16 2019
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	0
0	FIS2 (cps)	15000
0	NIS2 (cps)	10000





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TCUTEMP TCUVOLT GCL_CCL	14.69		Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.69	5.40
	14.69		HWS_TCU-002 (001705) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
	13.97		HWS_GCL-001 (001475) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
	12.50					
GCL_GR	12.50					
GCL_GR	12.50					
Long	6.25		HWS_RAS-RAS002 (003040) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
Far	6.25					
Near	6.25					

Anc	6.25							
				HWS_TBN-001 (001725) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99	
		Dataset: ursa_boies ranch c-240 fed 21b-25-2-98_pn_02-14-2019.db: field/well/run1/repeat.2 Total length: 18.02 ft Total weight: 86.48 lb O.D.: 1.69 in						

Serial Number:	001475	
Tool Model:	001	
Performed:	Fri Oct 19 14:55:00 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	
Calibrator Reading:	1.0	
Sensitivity:	1.0000	GAPI/



Company	Ursa Operating Company LLC
Well	Boies Ranch C-240 FED 21B-25-2-98
Field	Sulphur Creek
County	Rio Blanco
State	Colorado