

Pulsed Neutron Gamma Ray Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal RG 443-18-297
Field Sulphur Creek
County Rio Blanco **State** Colorado

Location: API #: 05-103-12461
 SEC 18 TWP 2S RGE 9TW
 Permanent Datum Ground Level Elevation 6621'
 Log Measured From Kelly Bushing 30 FT
 Drilling Measured From Kelly Bushing
 Other Services
 RBL
 Elevation
 K.B. 6651'
 D.F. 6650'
 G.L. 6621'

Uate	08-MAY-2021			
Run Number	Two			
Depth Driller	12297 FT			
Depth Logger	12192 FT			
Bottom Logged Interval	12186 FT			
Top Log Interval	6565 FT			
Open Hole Size	8.750"			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	---			
E estimated Cement Top	---			
Time Well Ready	ROA			
Time Logger on Bottom	12:40			
E equipment Number	HD-0331			
Location	Grand Junction, CO			
Recorded By	Z Fisher			
Witnessed By	---			
Borehole Record				
Run Number	Bit	From	To	Size
				Weight
				From
				To
Tubing Record				
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top
Surface Casing	9 5/8	36	J-55	Surface
Intermediate #1	4 1/2	11.6	P-110	Surface
Intermediate #2				
Liner				

<<< Fold Here >>>

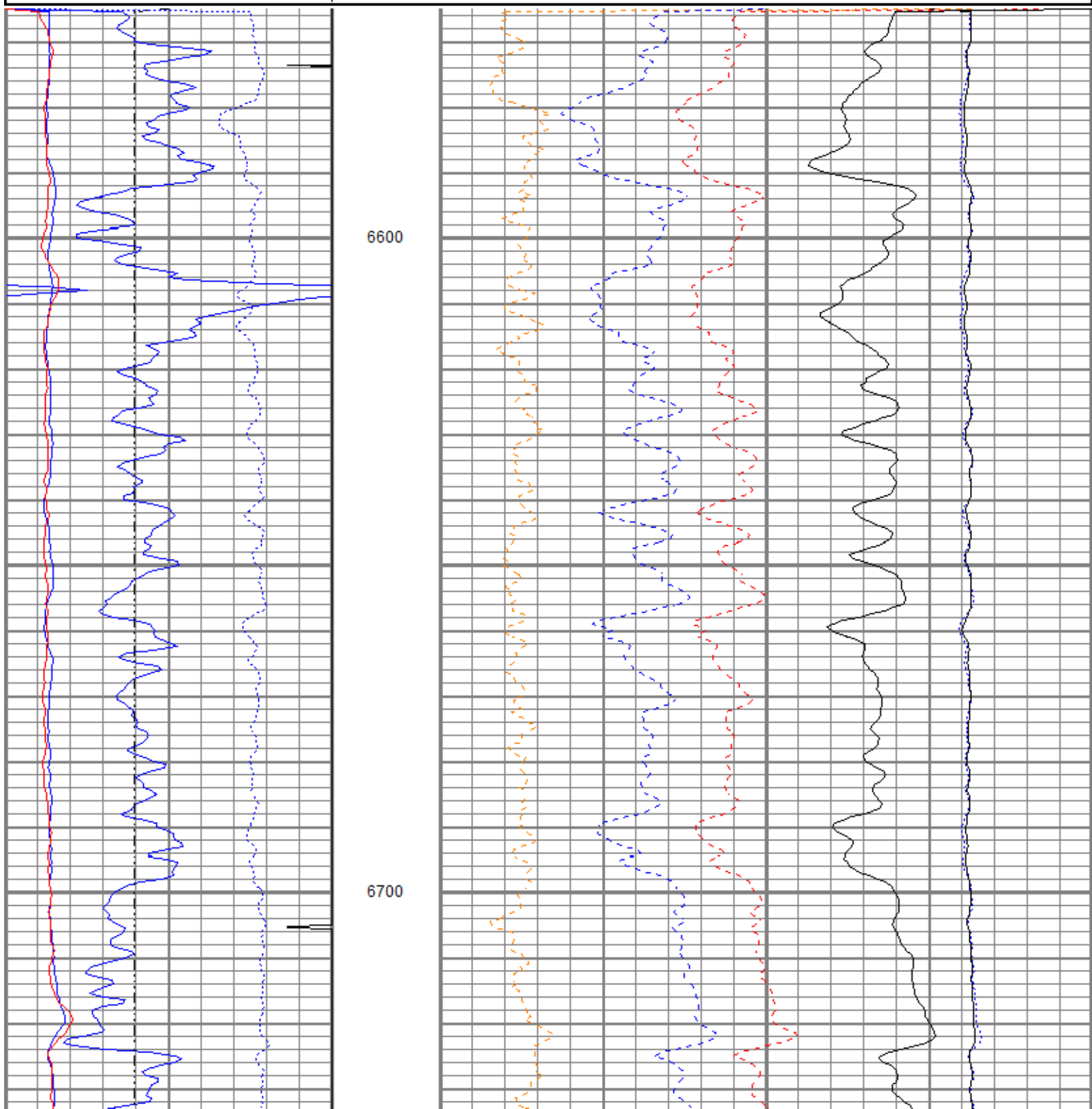
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

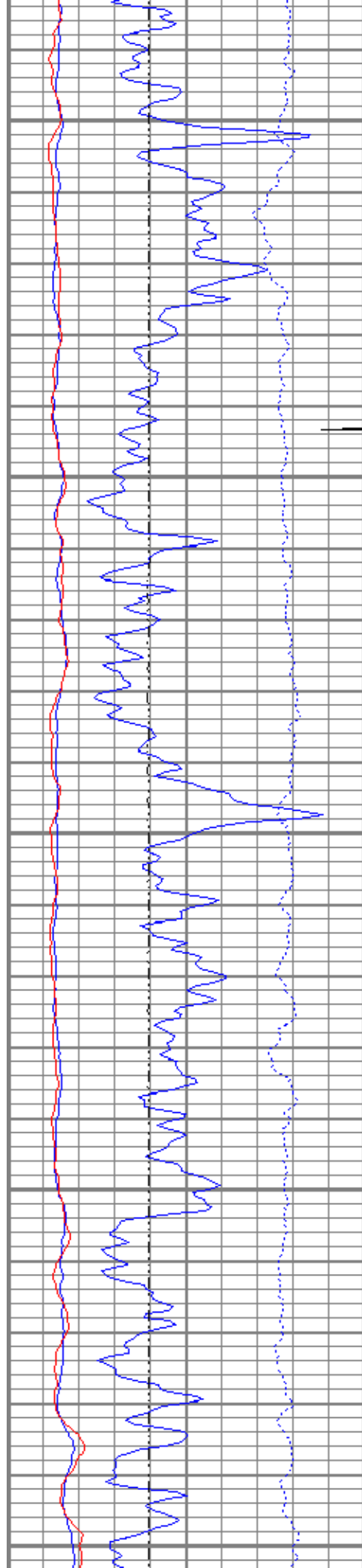
Comments

Log ran as per customer request
 Depth referenced to Reliance Bond Log dated 07-MAY-2021
 Log ran from 12192 FT to 6565 FT
 Pulsed Neutron Data logged with the Hunter RAS Tool
 Thank you for choosing Reliance Oilfield Services, LLC!

Database File	tep/federal rg 443-18-297/processed_tep_federal rg 443-18-297_pn_05-08-21.db
Dataset Pathname	runSHIFTED/merge1
Presentation Format	ros_pdn_hunter
Dataset Creation	Mon May 10 22:25:02 2021
Charted by	Depth in Feet scaled 1:240

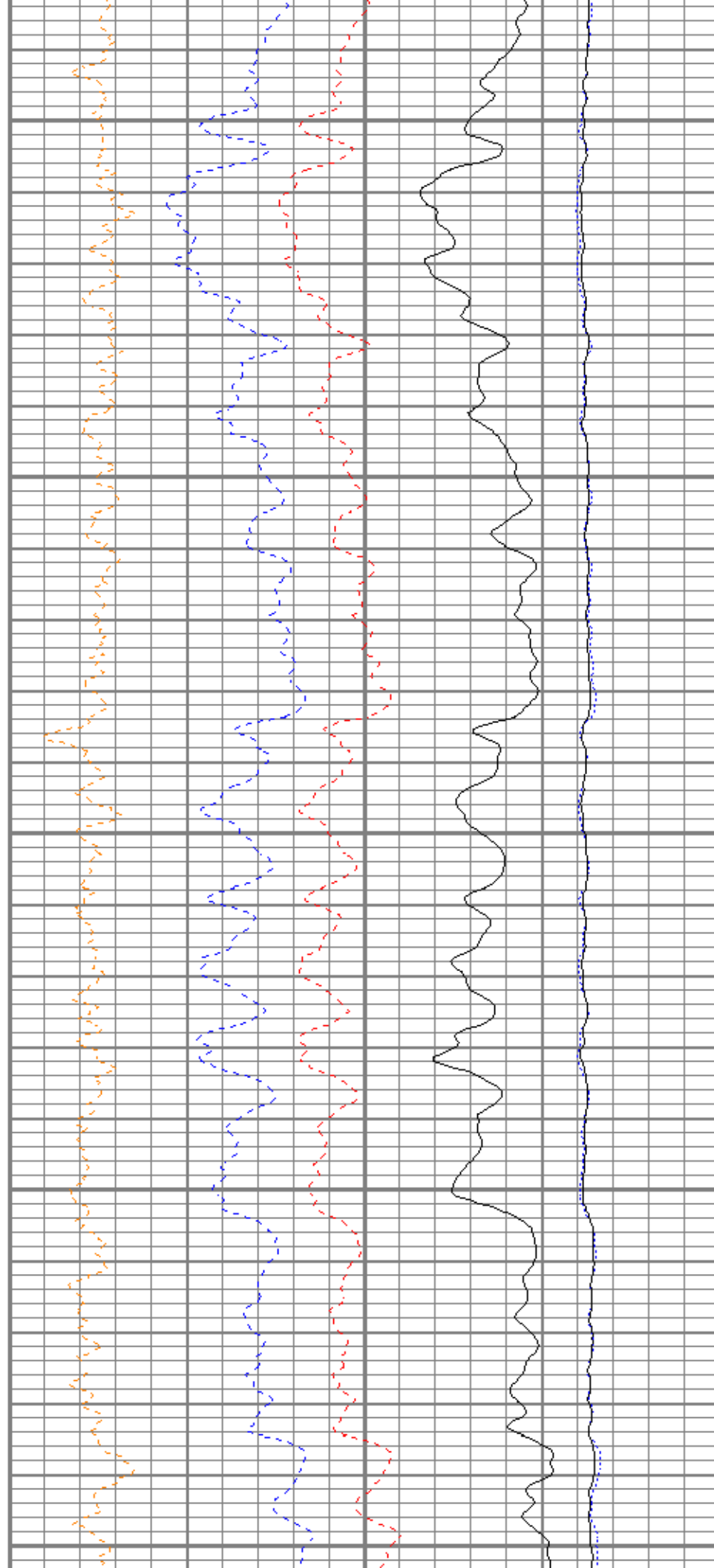
0	GR (GAPI)	150	4	RNF2	0			
	PN Casing Collar Locator		60	SIGMA (cu)	0			
-100	Line Speed (ft/min)	100	4.5	RNFI	-1			
0	NIRS (cps)	400000	1	PN Porosity (Sandstone)	0	0	FIS2 (cps)	5000
0	BKGN (cps)	4000				0	NIS2 (cps)	10000
0	BKGF (cps)	2000						

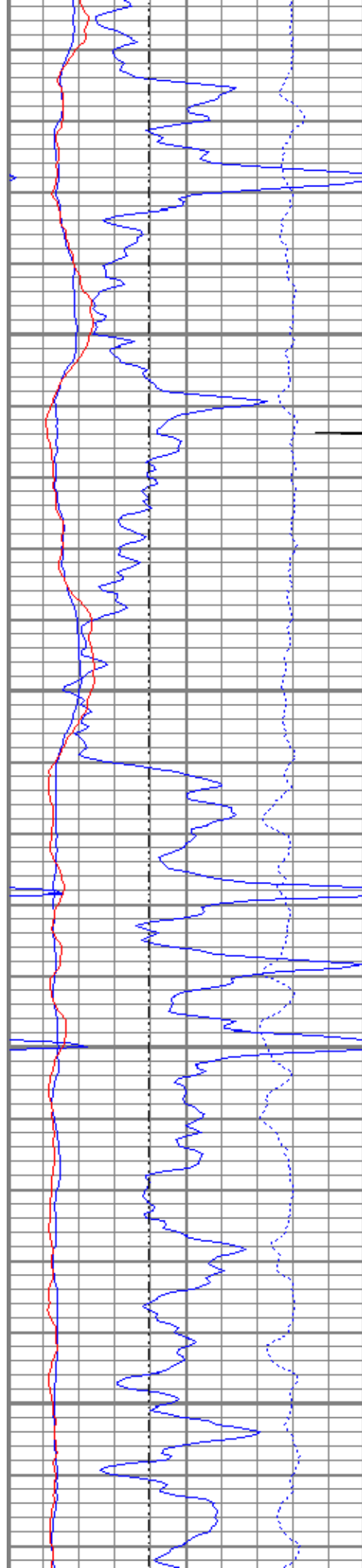




6800

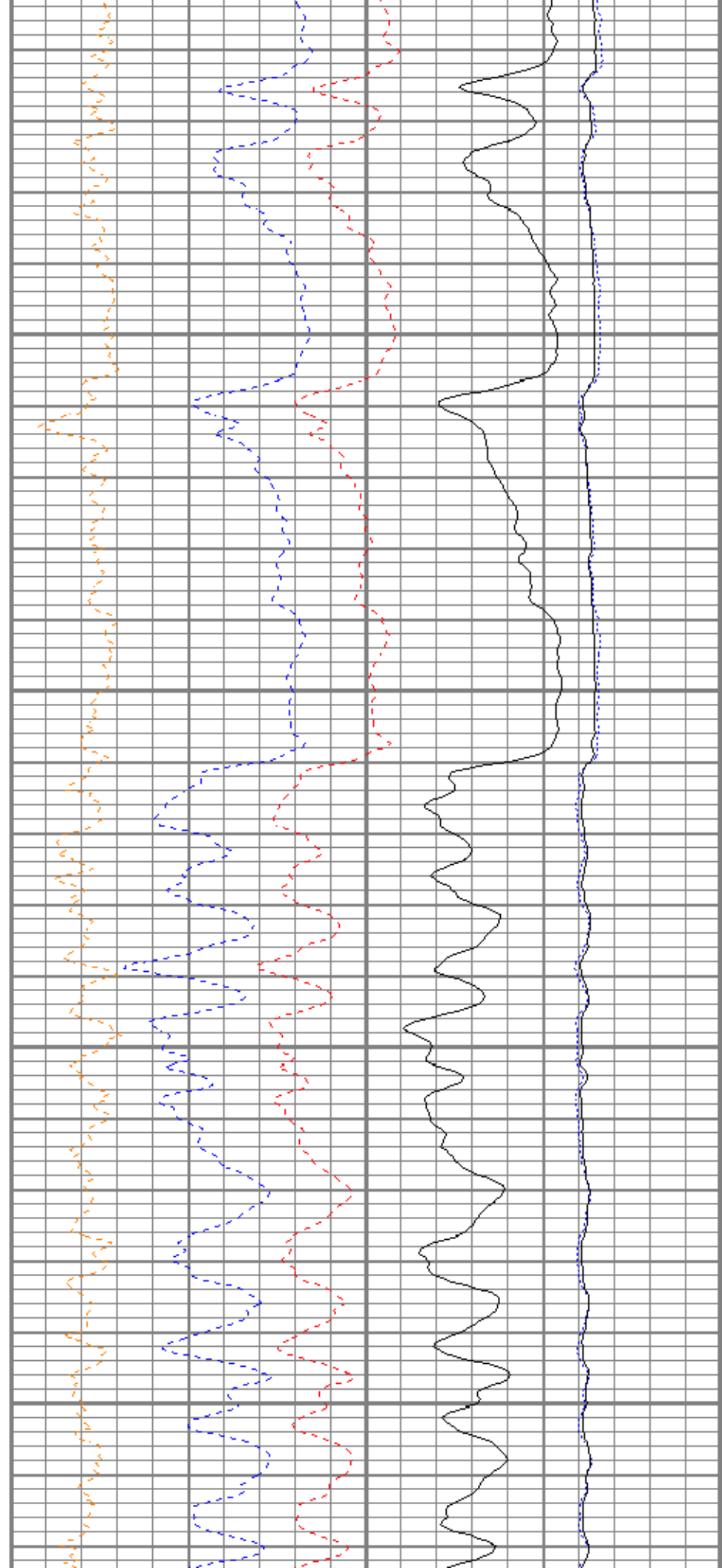
6900

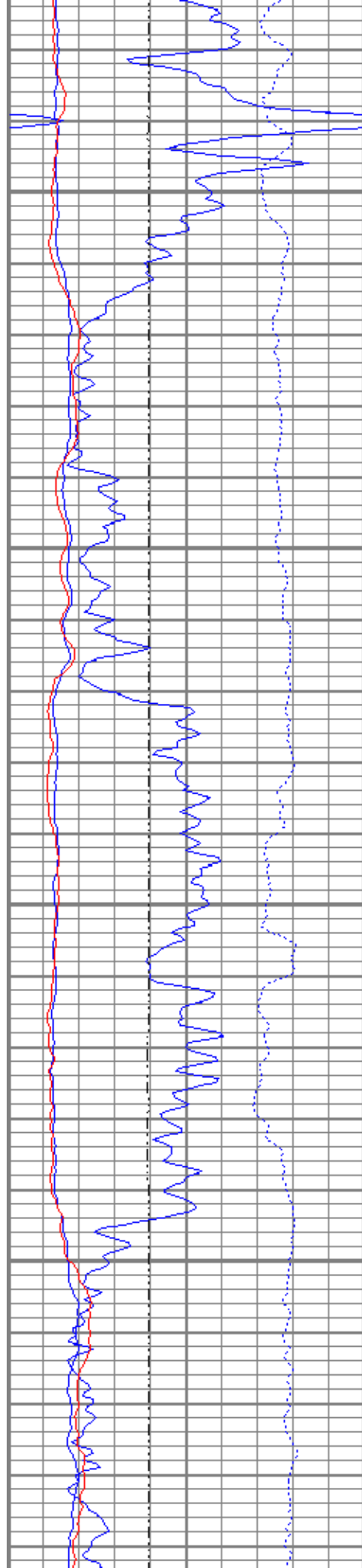




7000

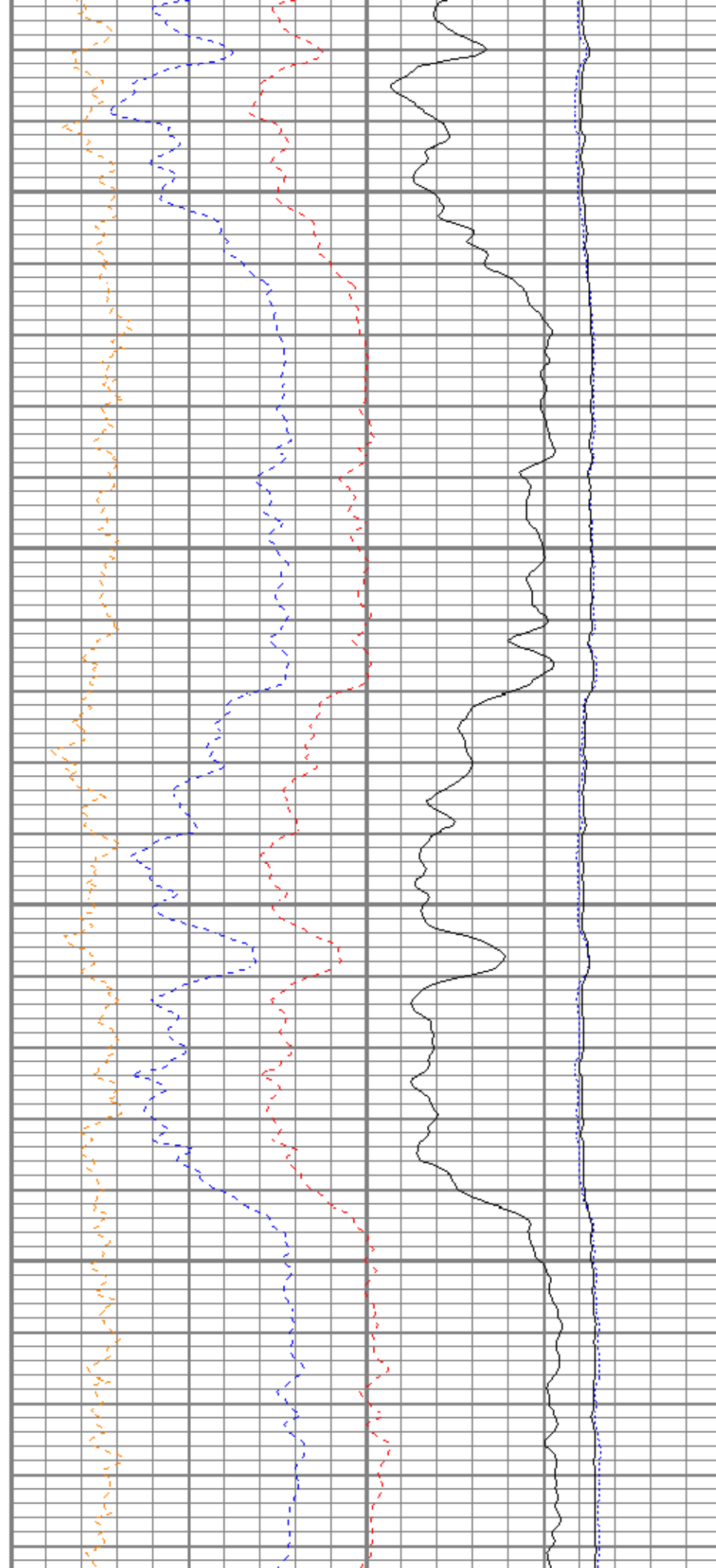
7100

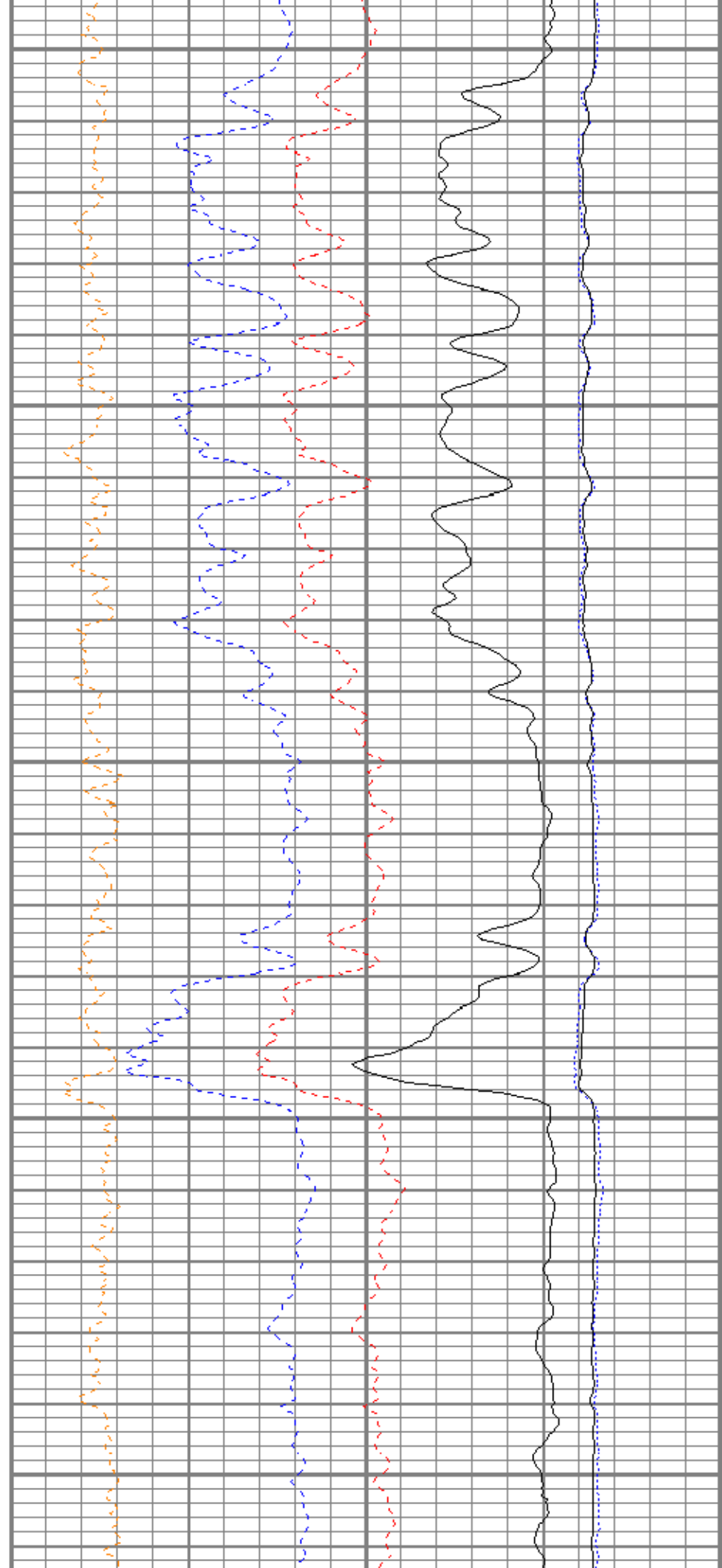
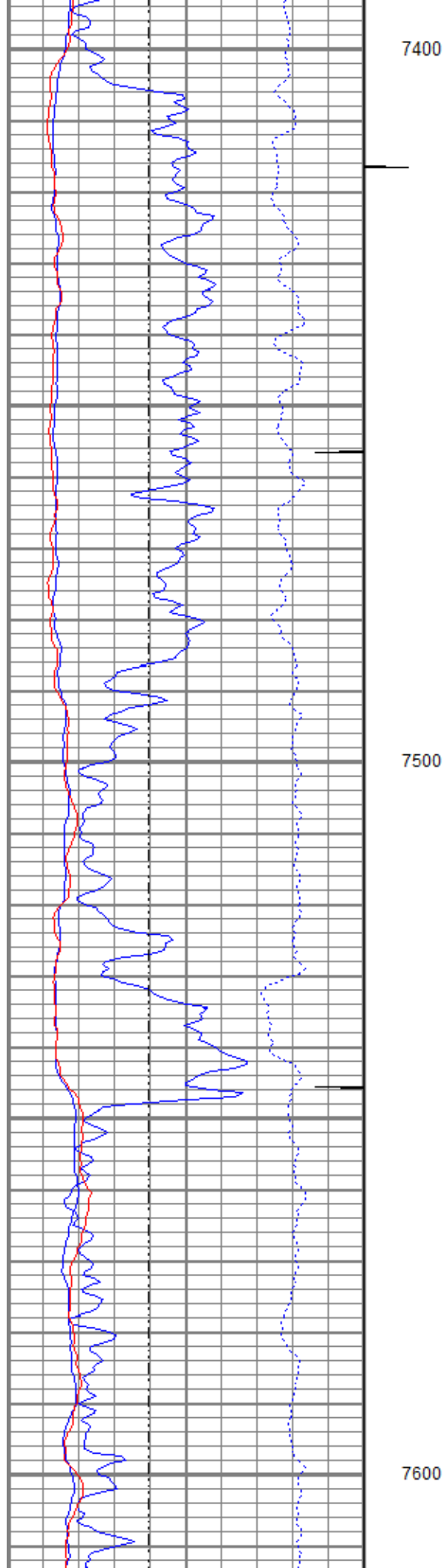


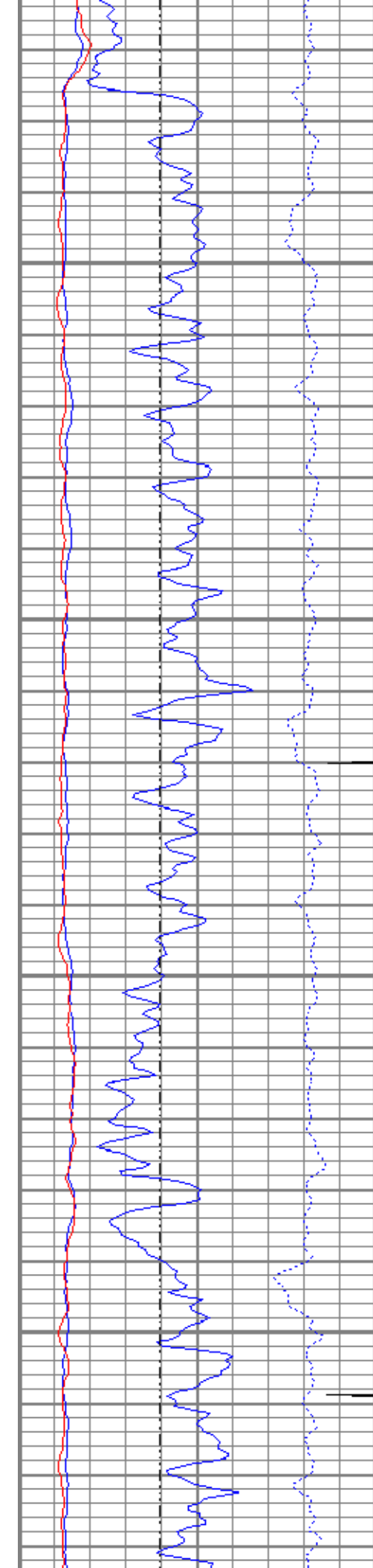


7200

7300

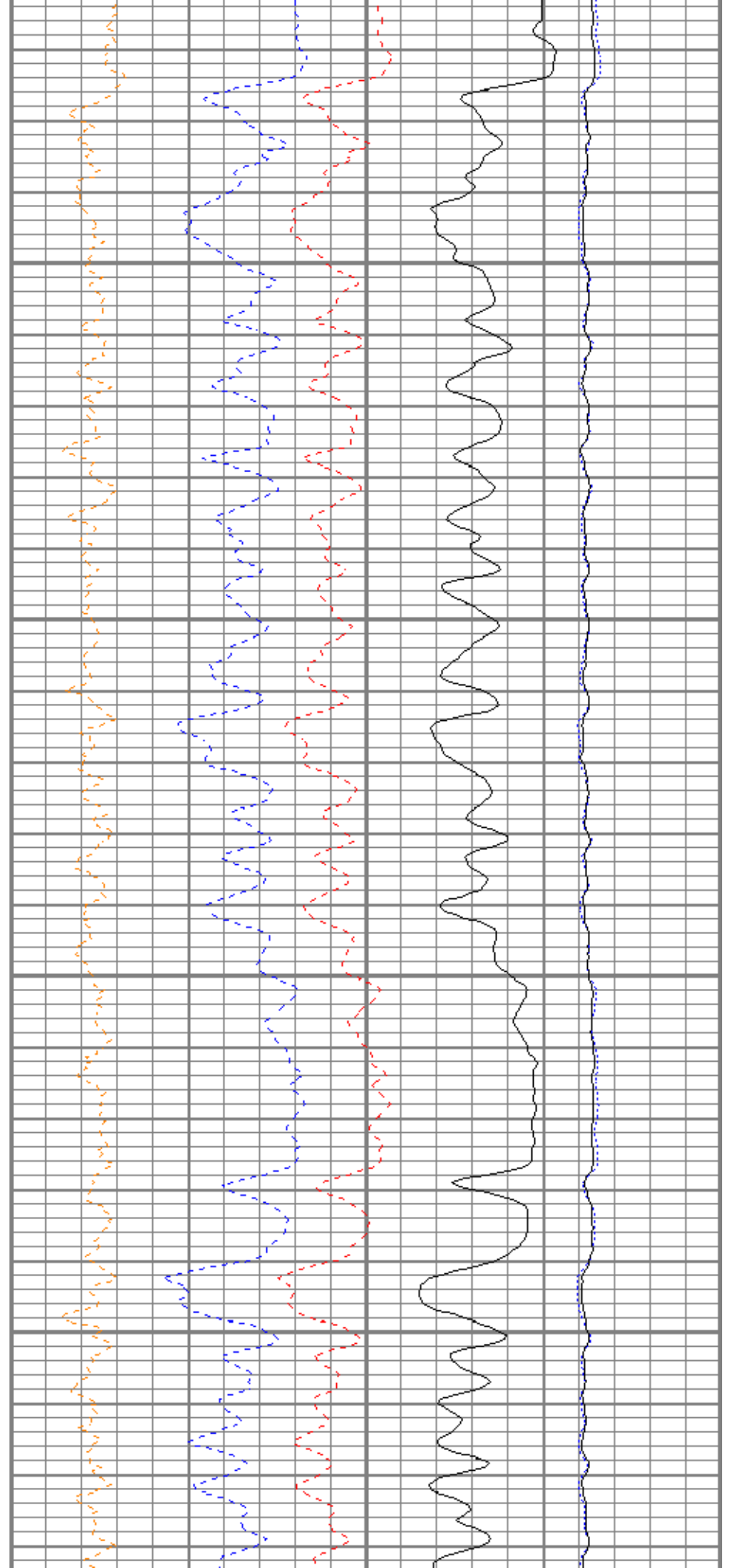


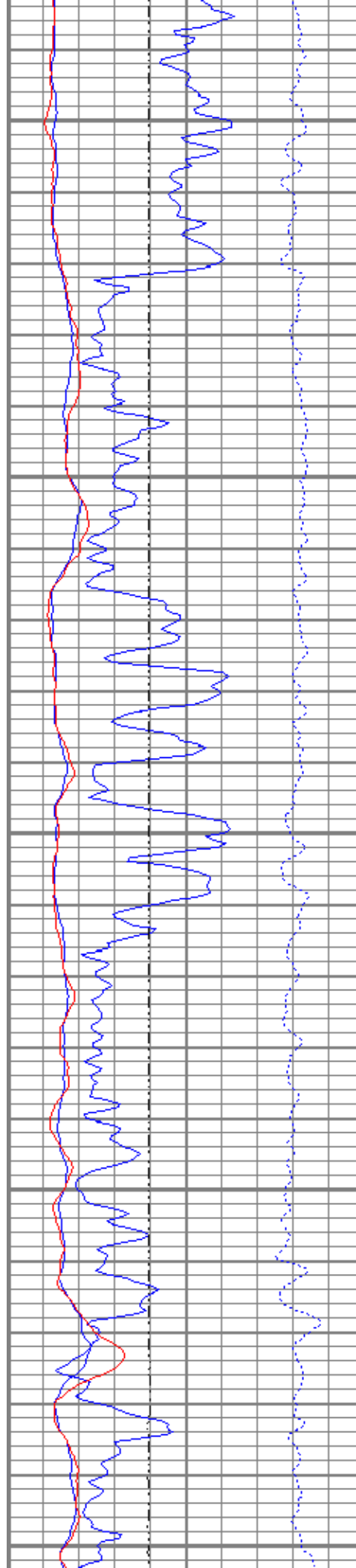




7700

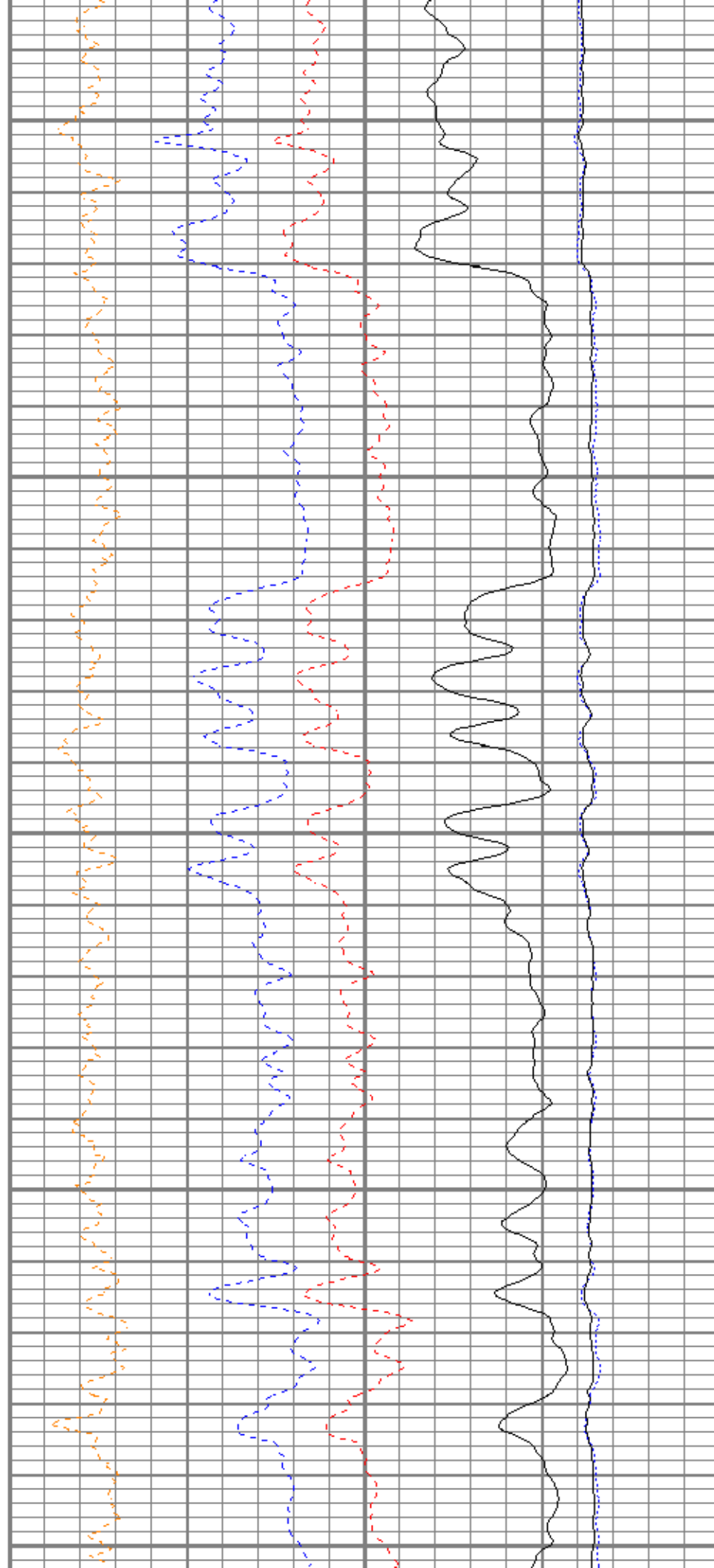
7800

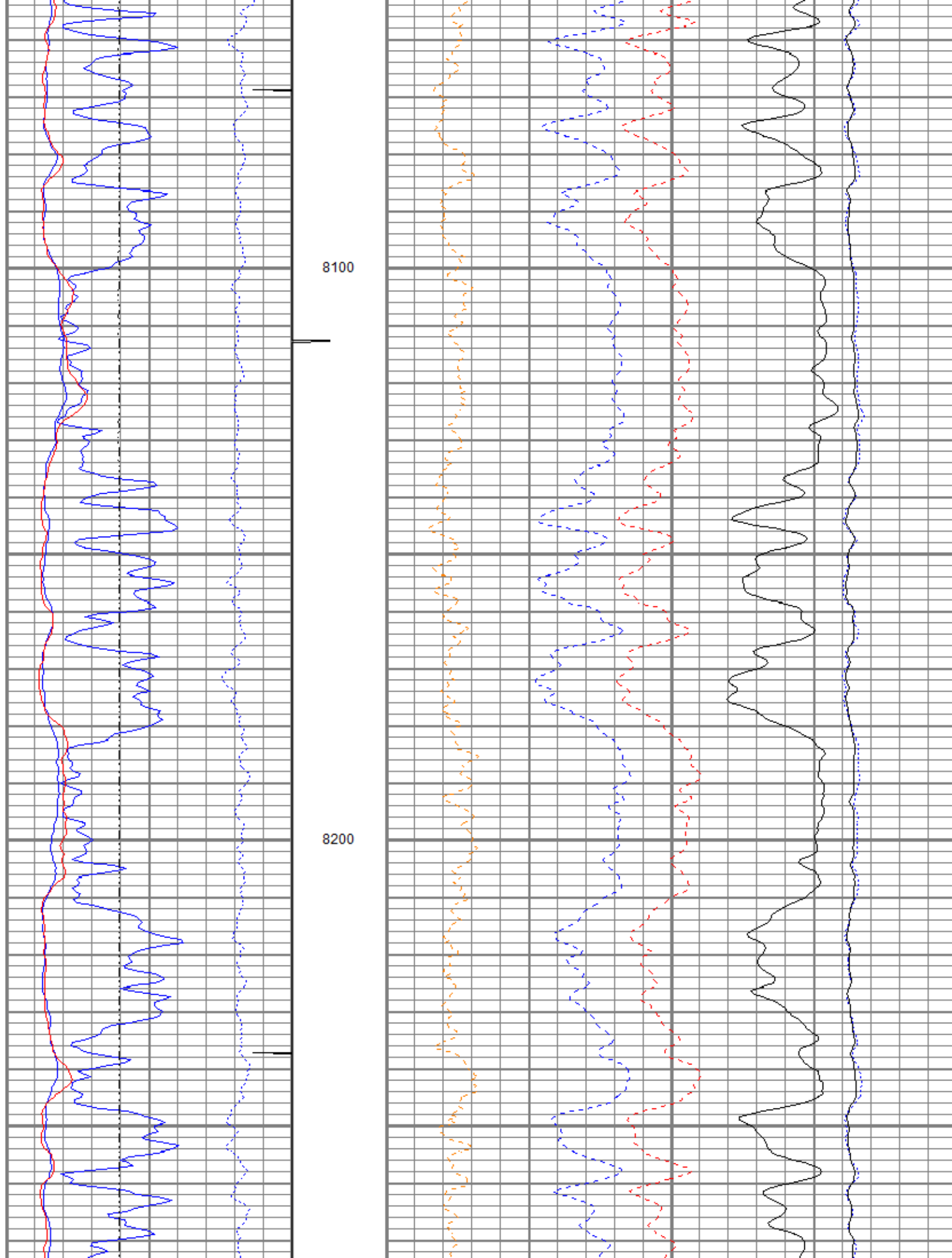


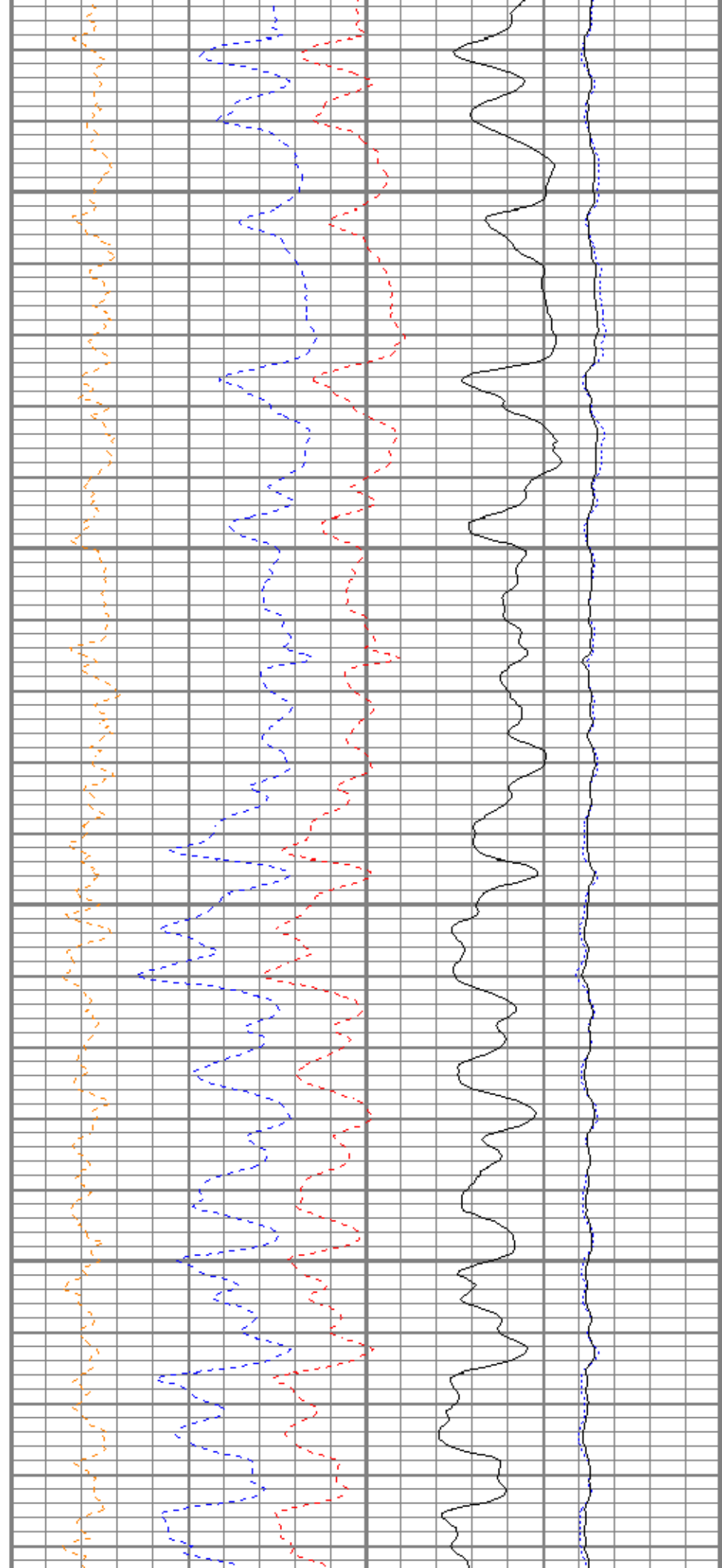
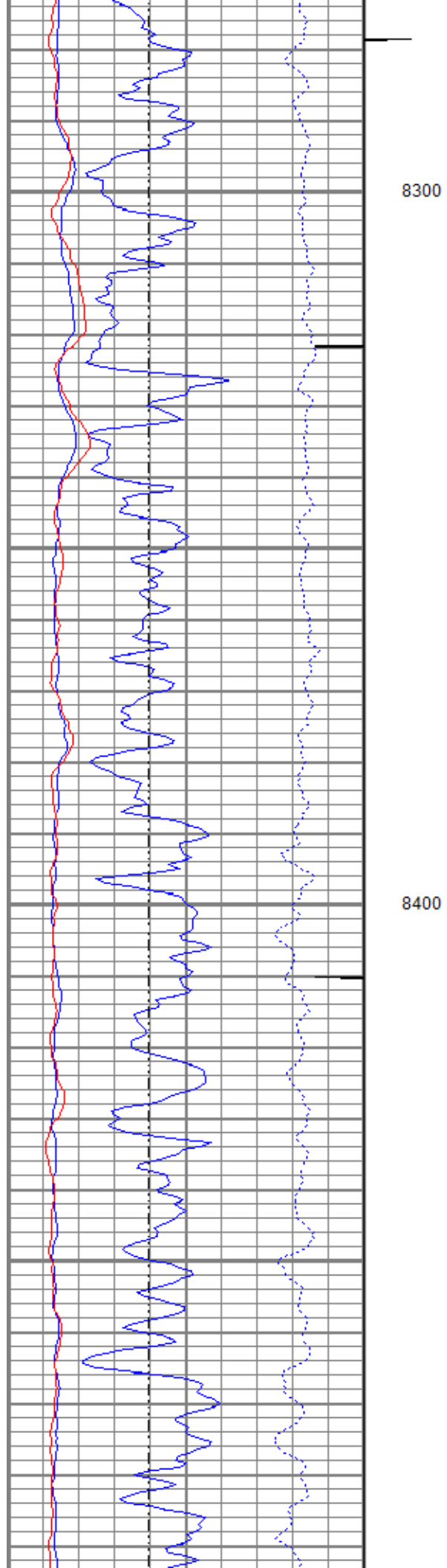


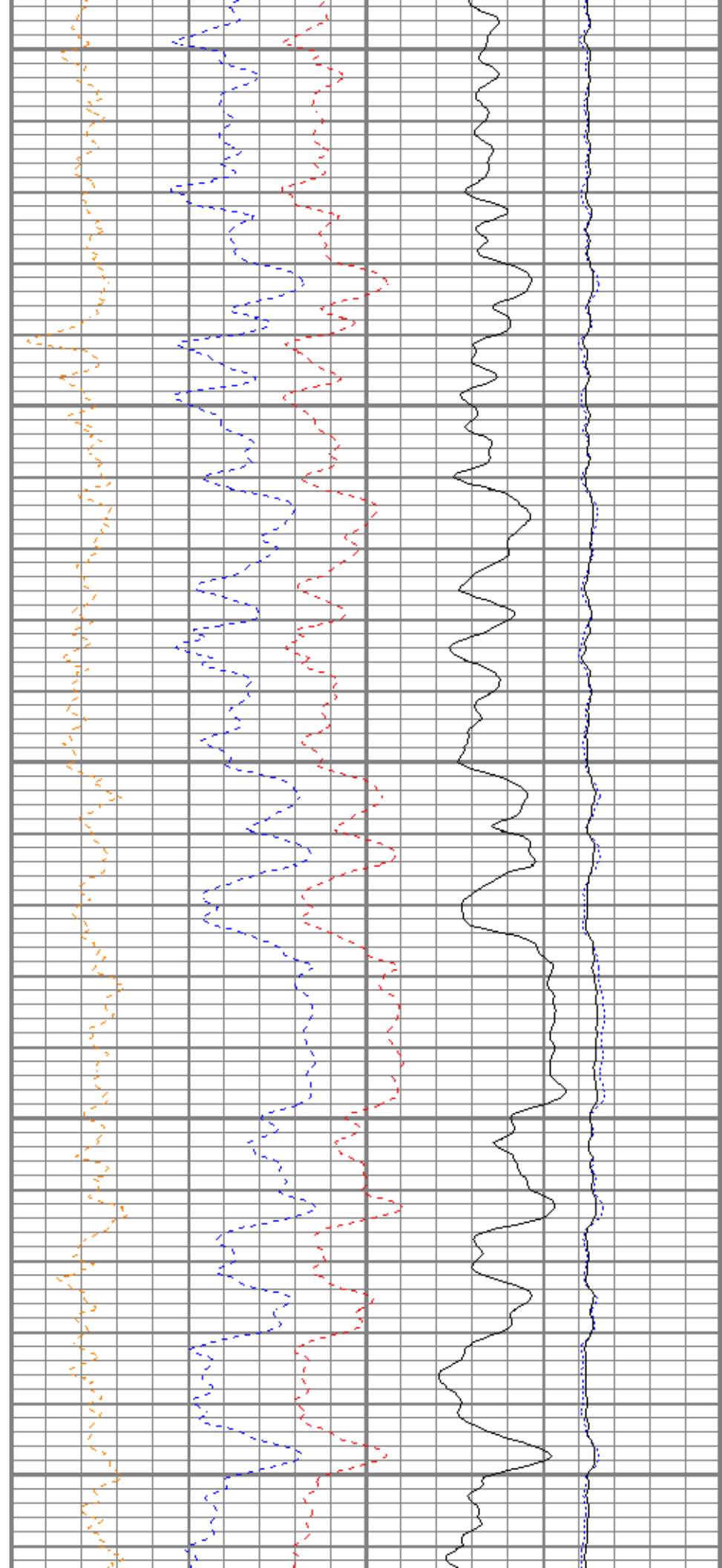
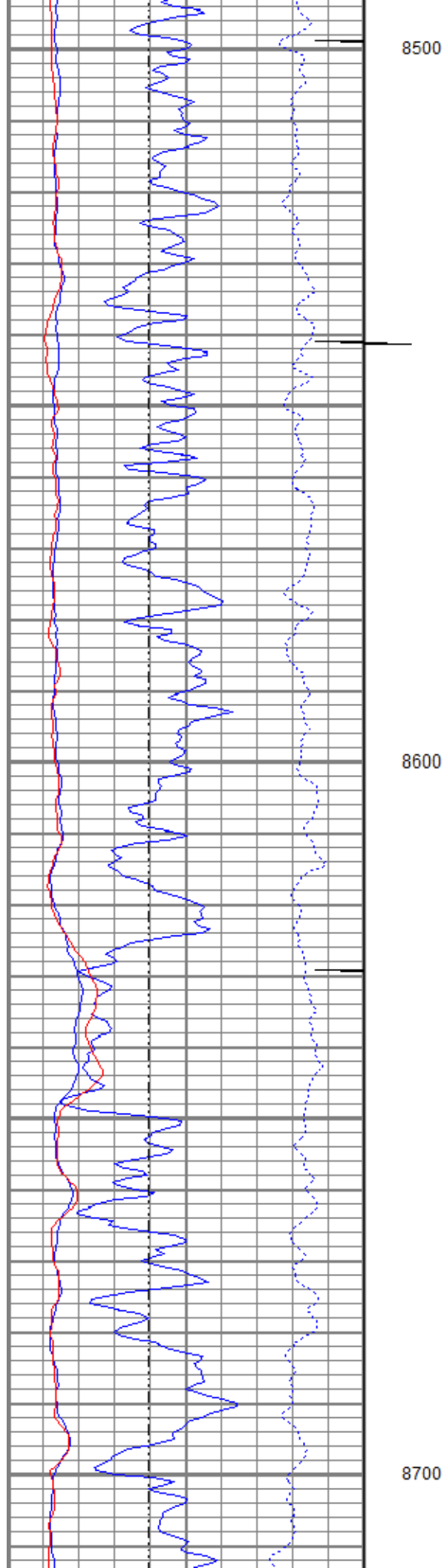
7900

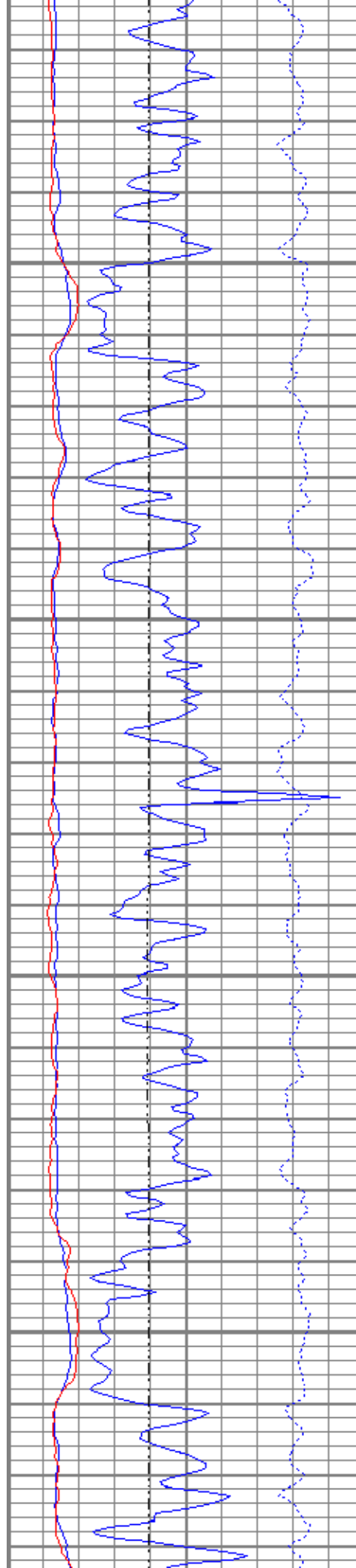
8000





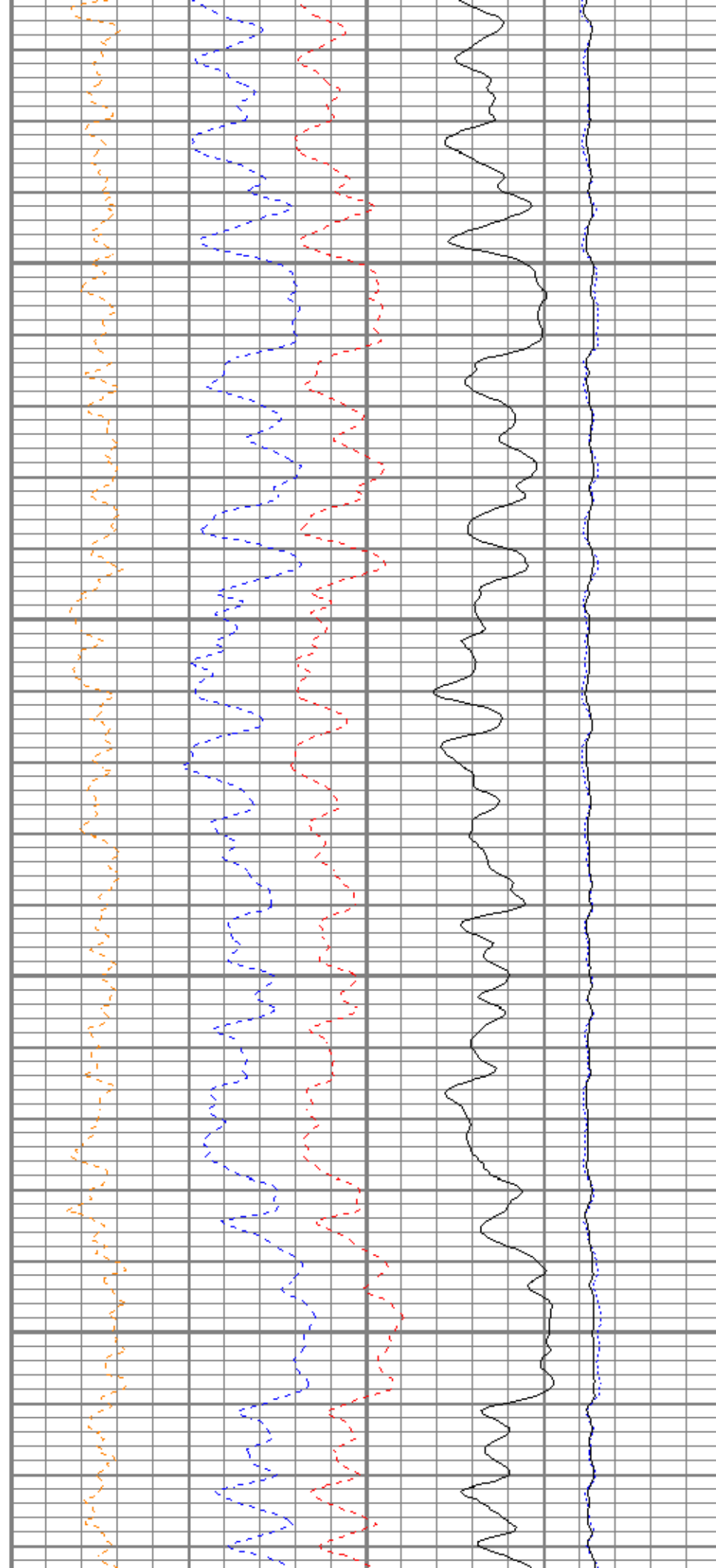


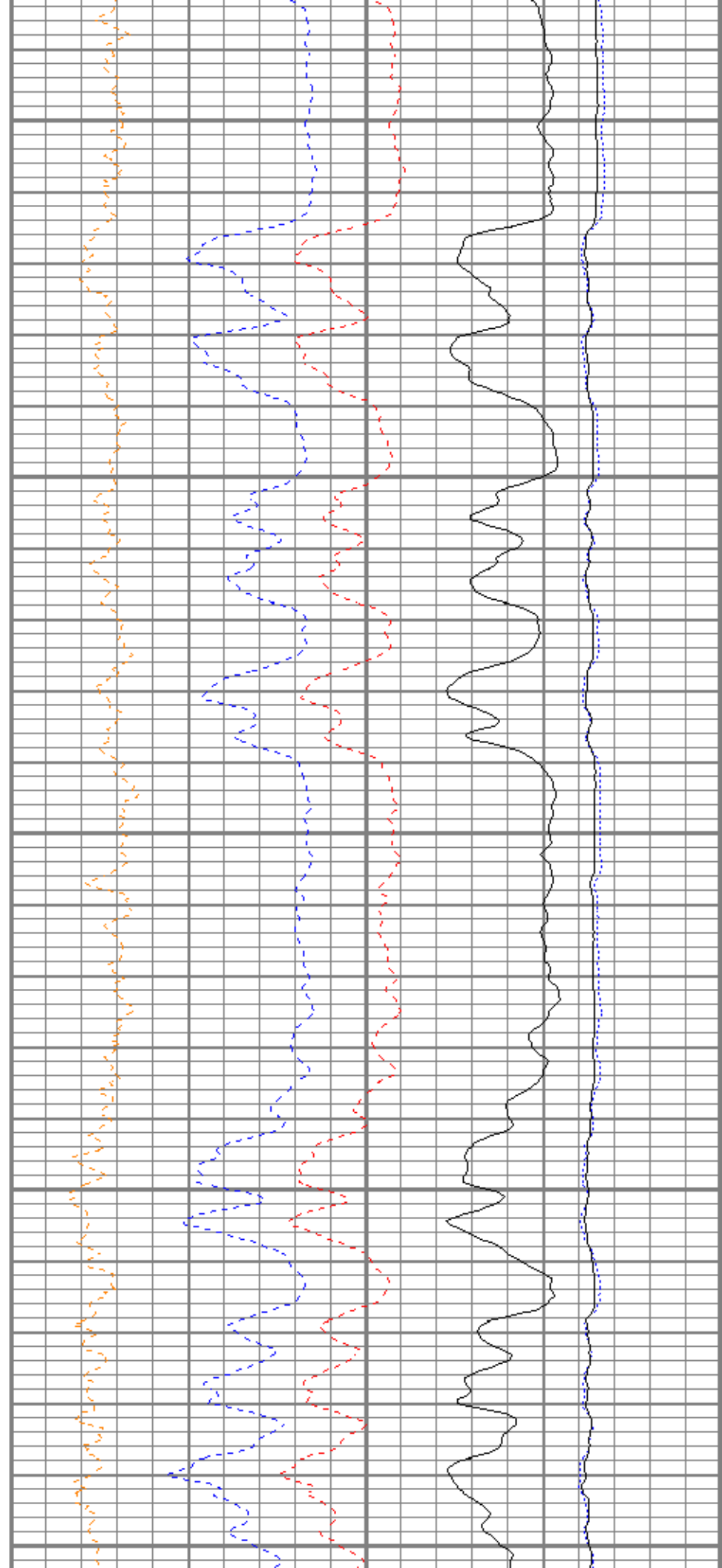
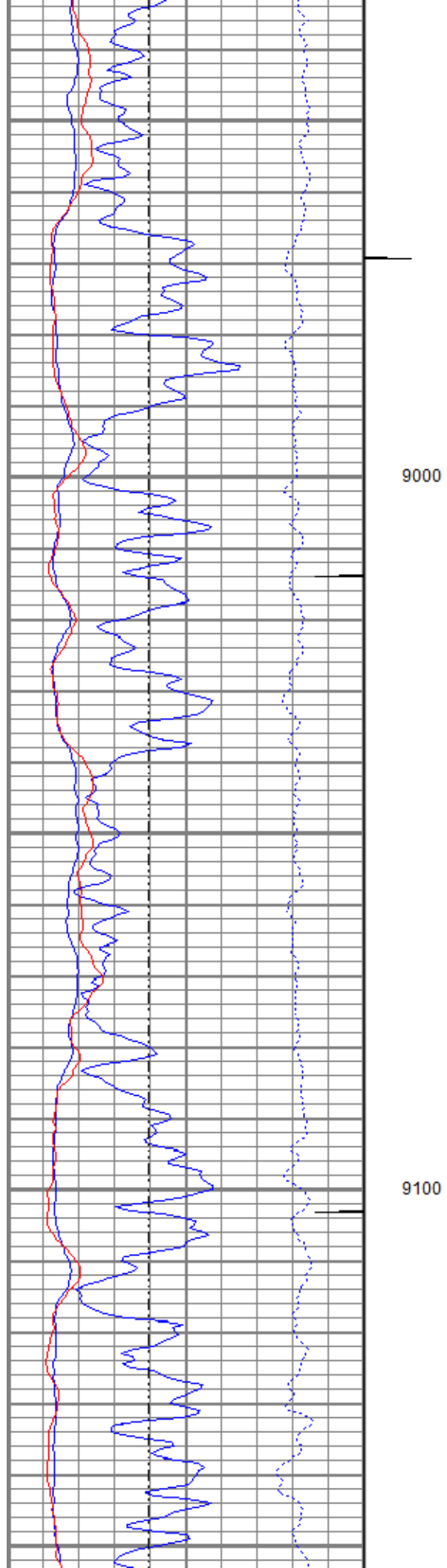


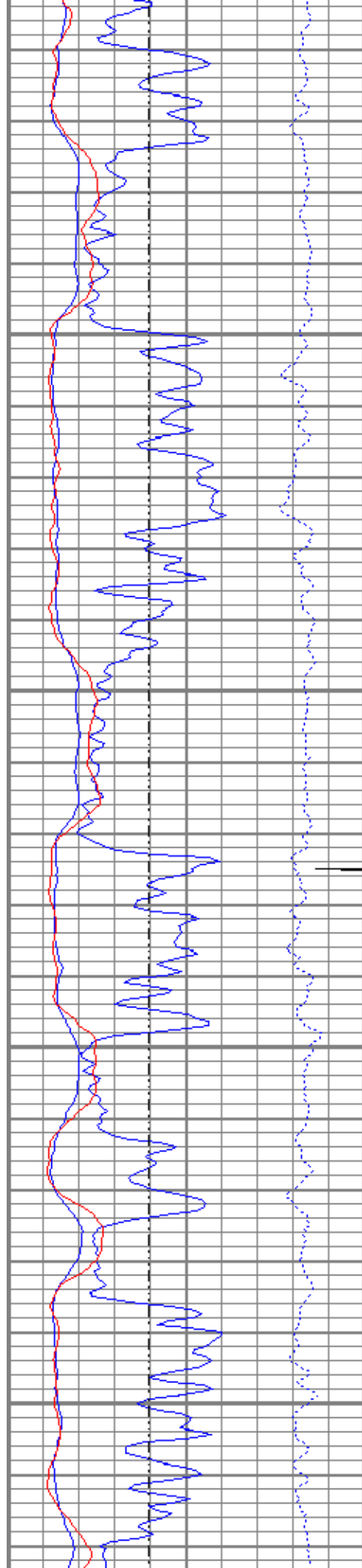


8800

8900

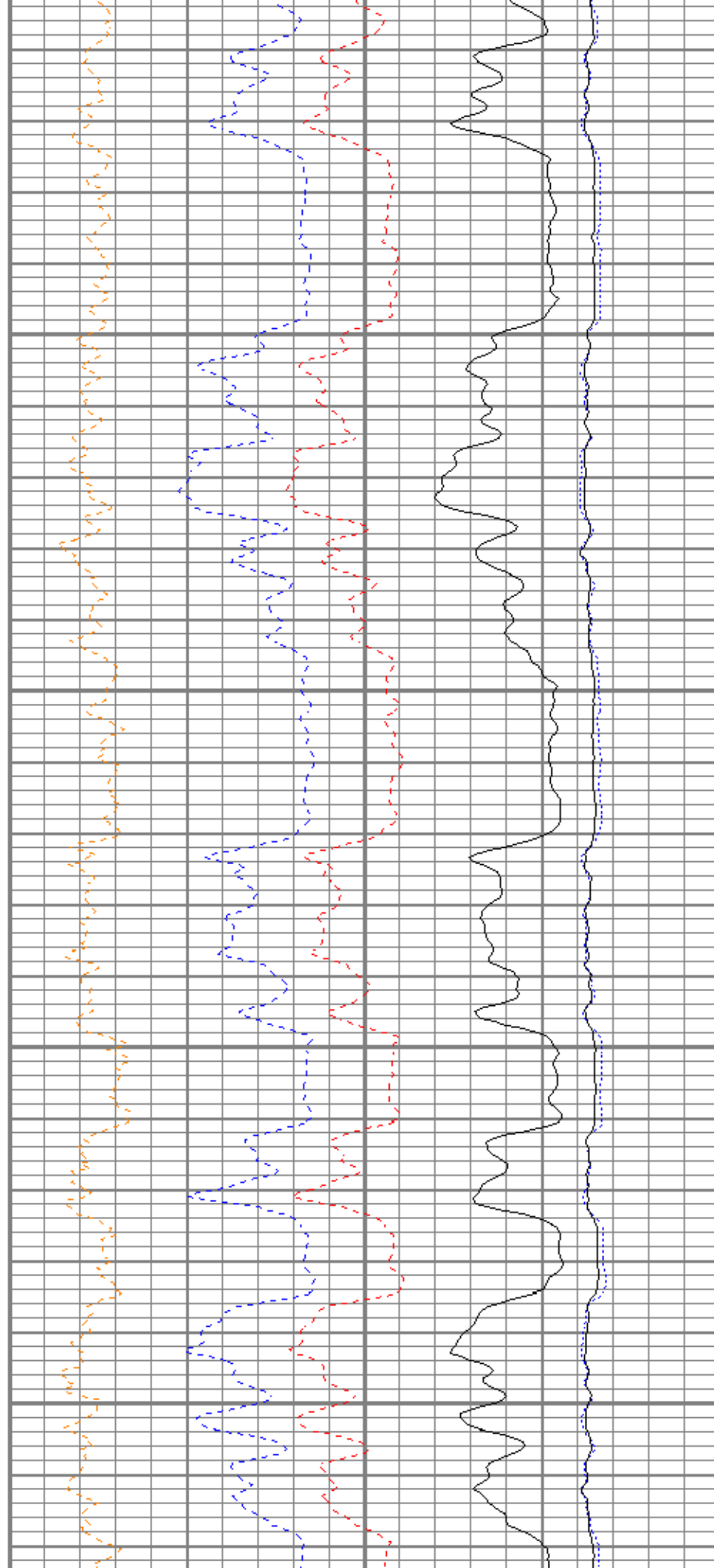


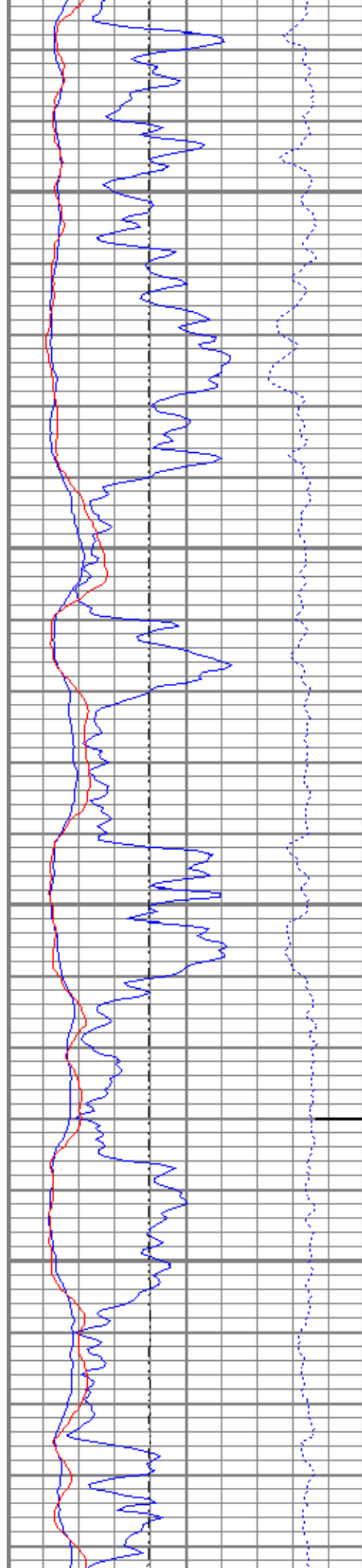




9200

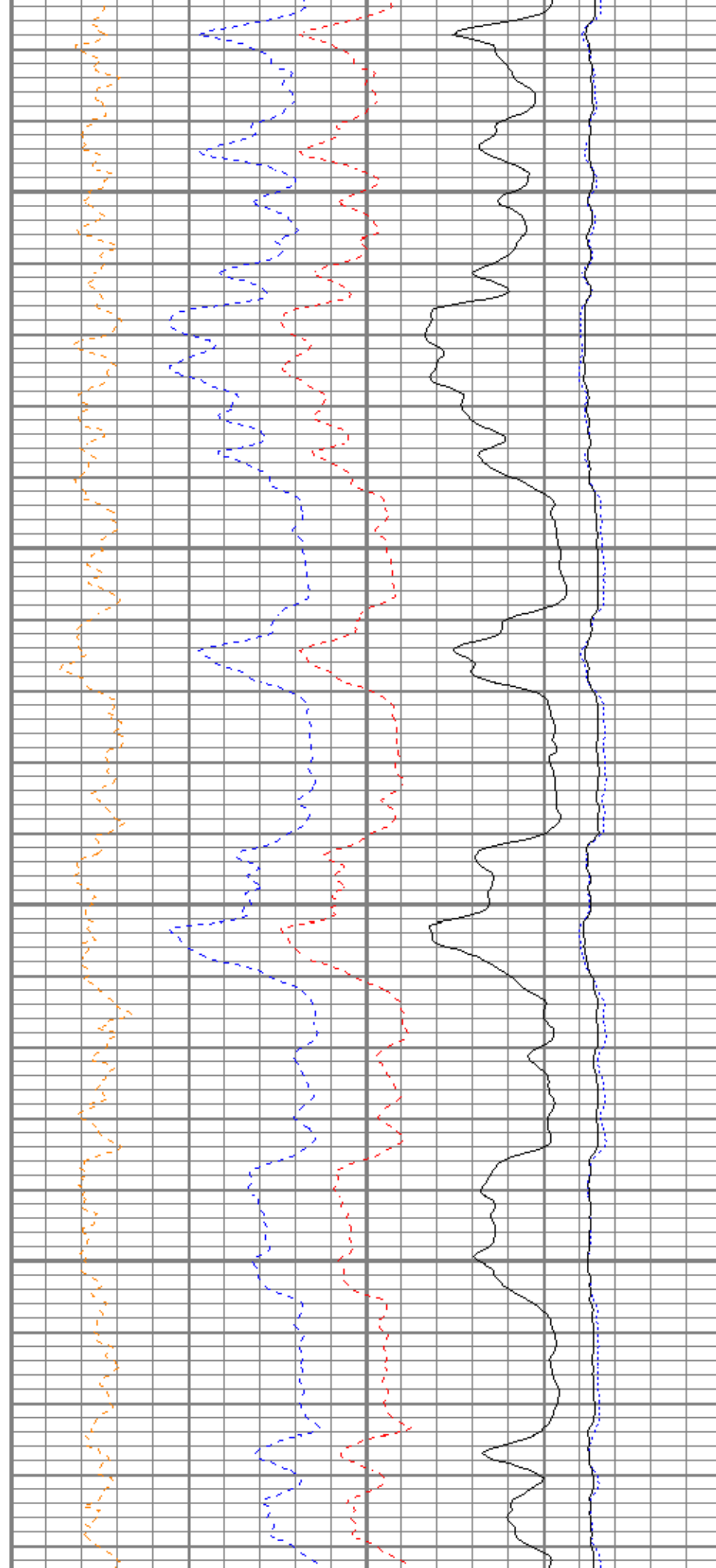
9300

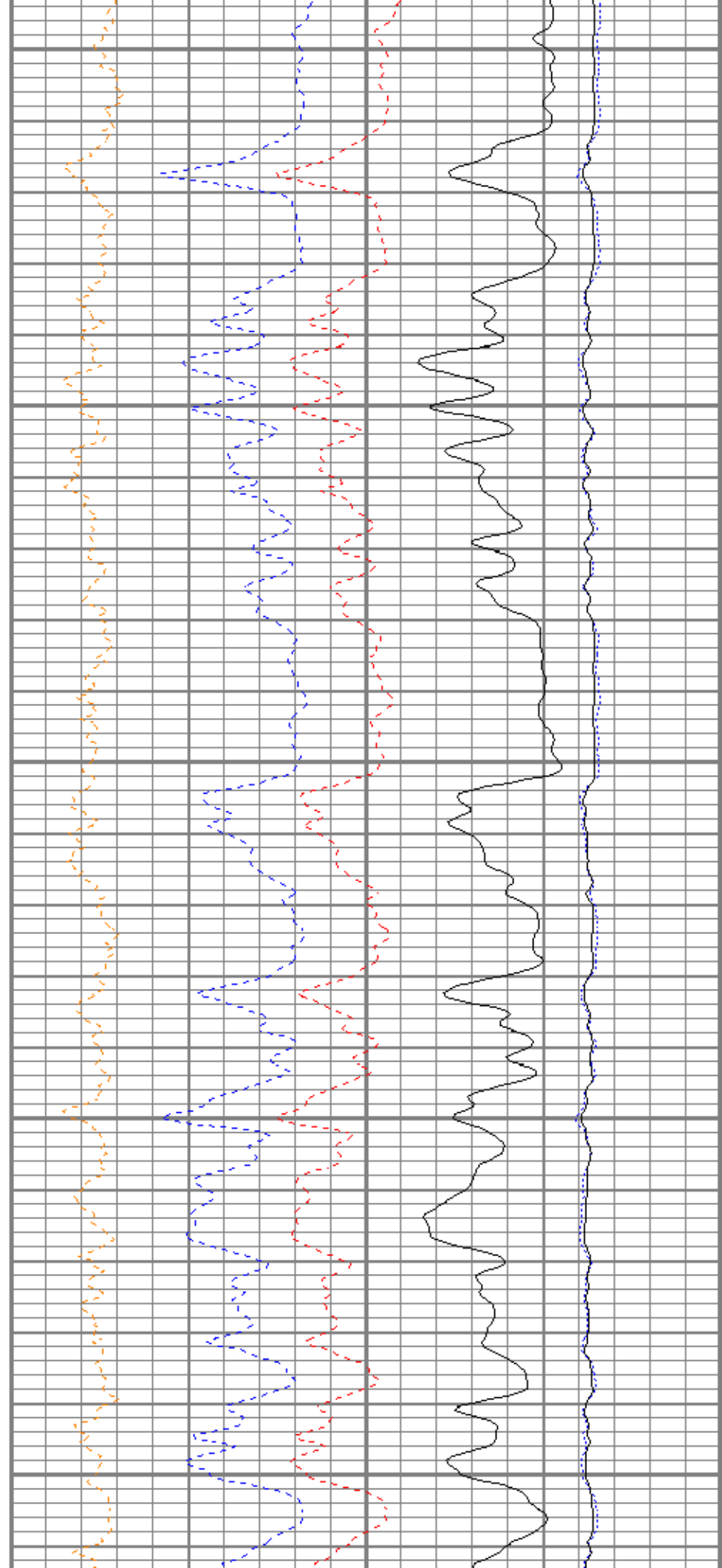
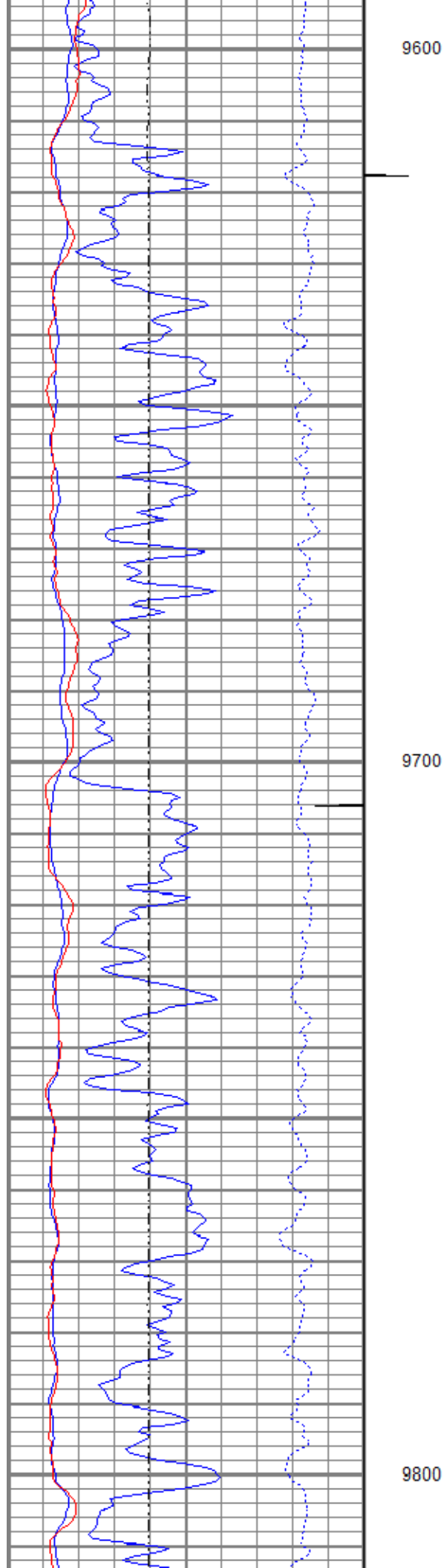


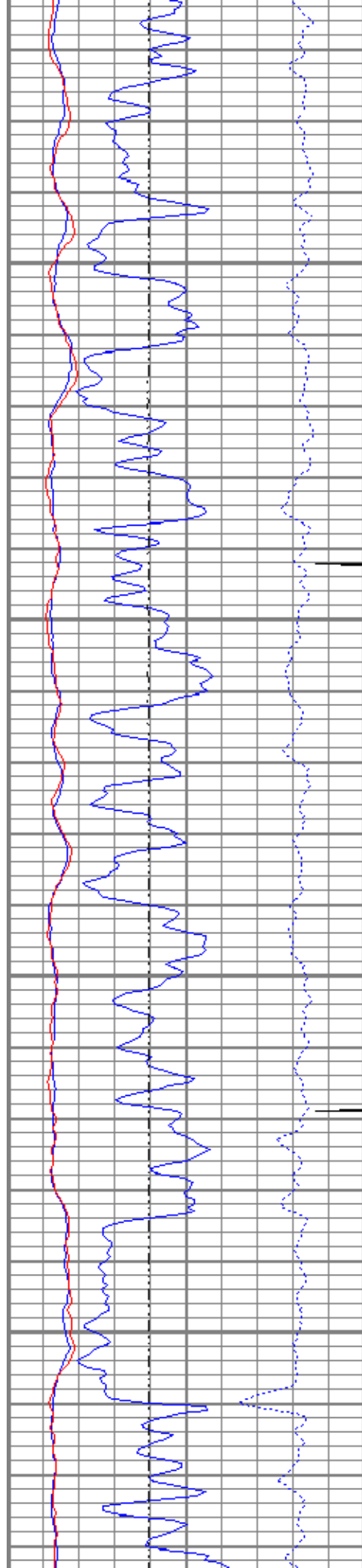


9400

9500

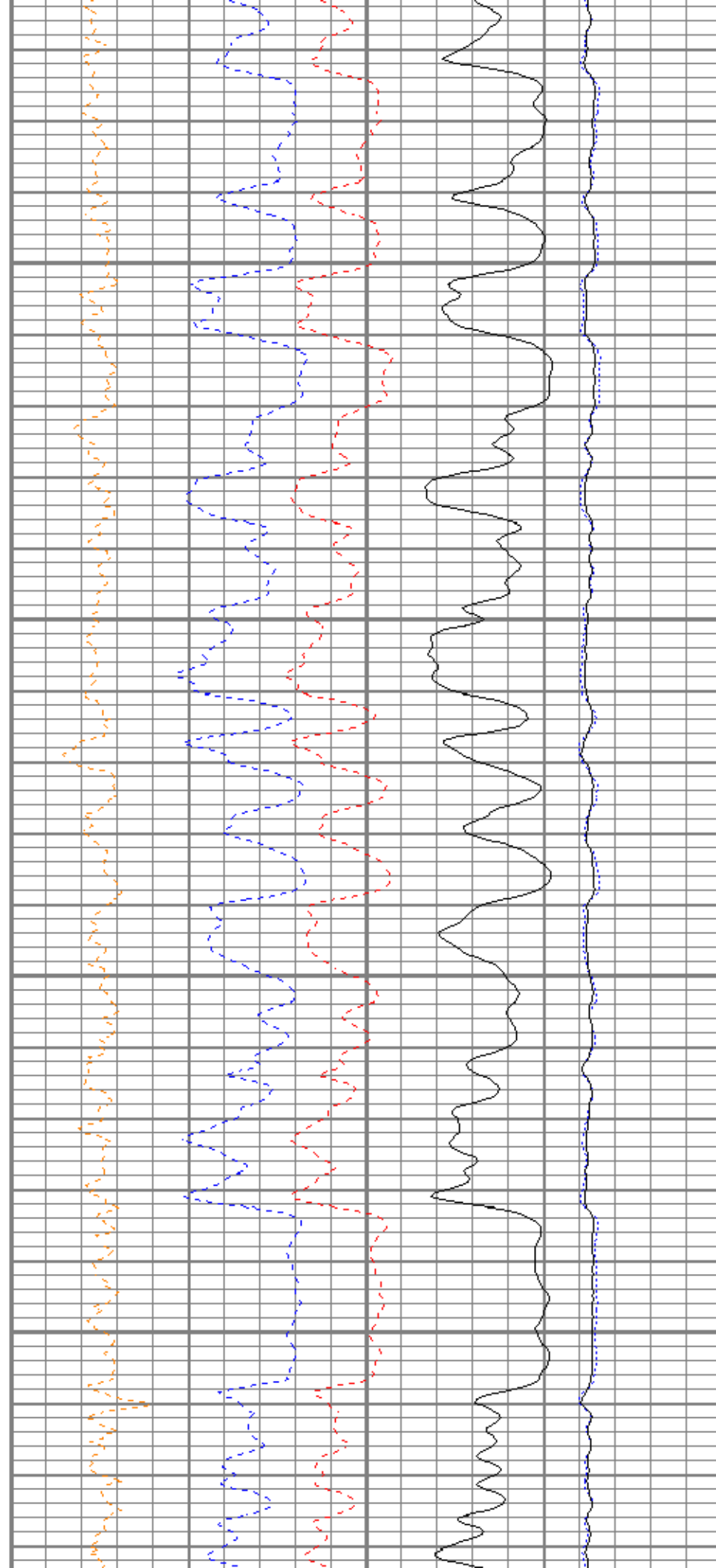


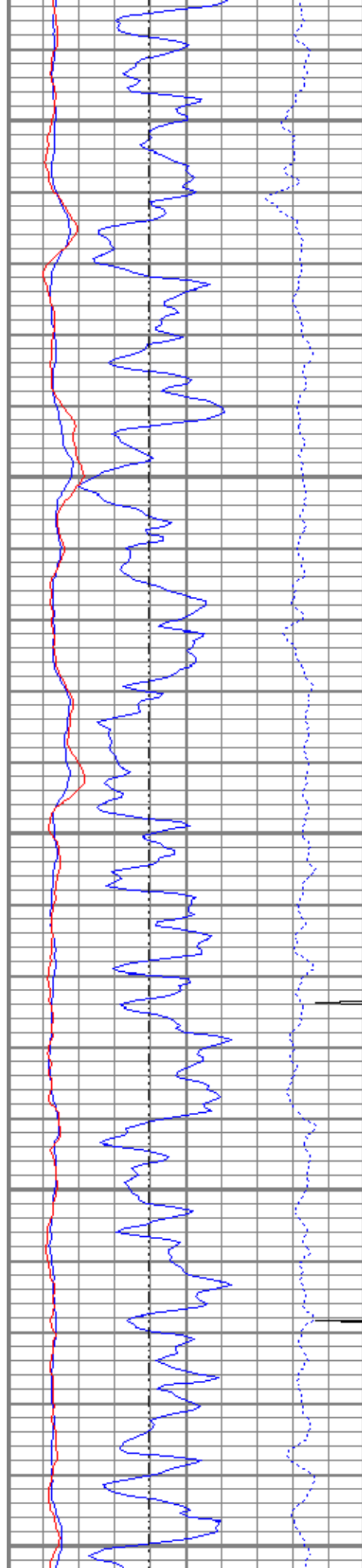




9900

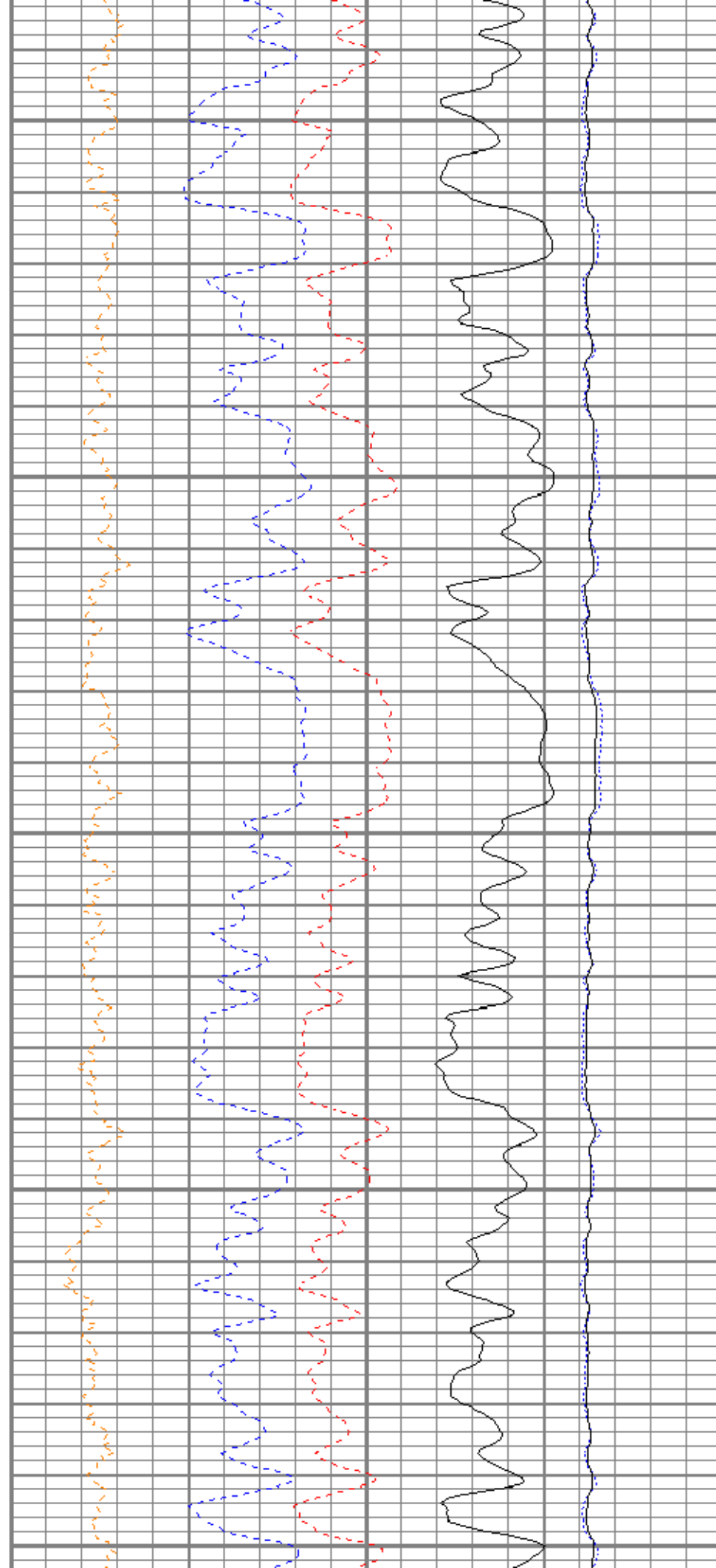
10000

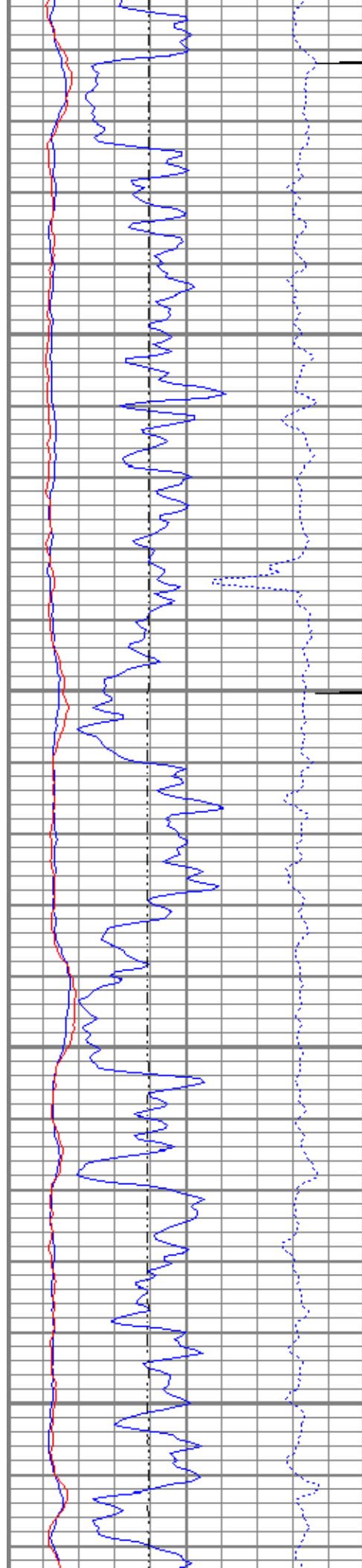




10100

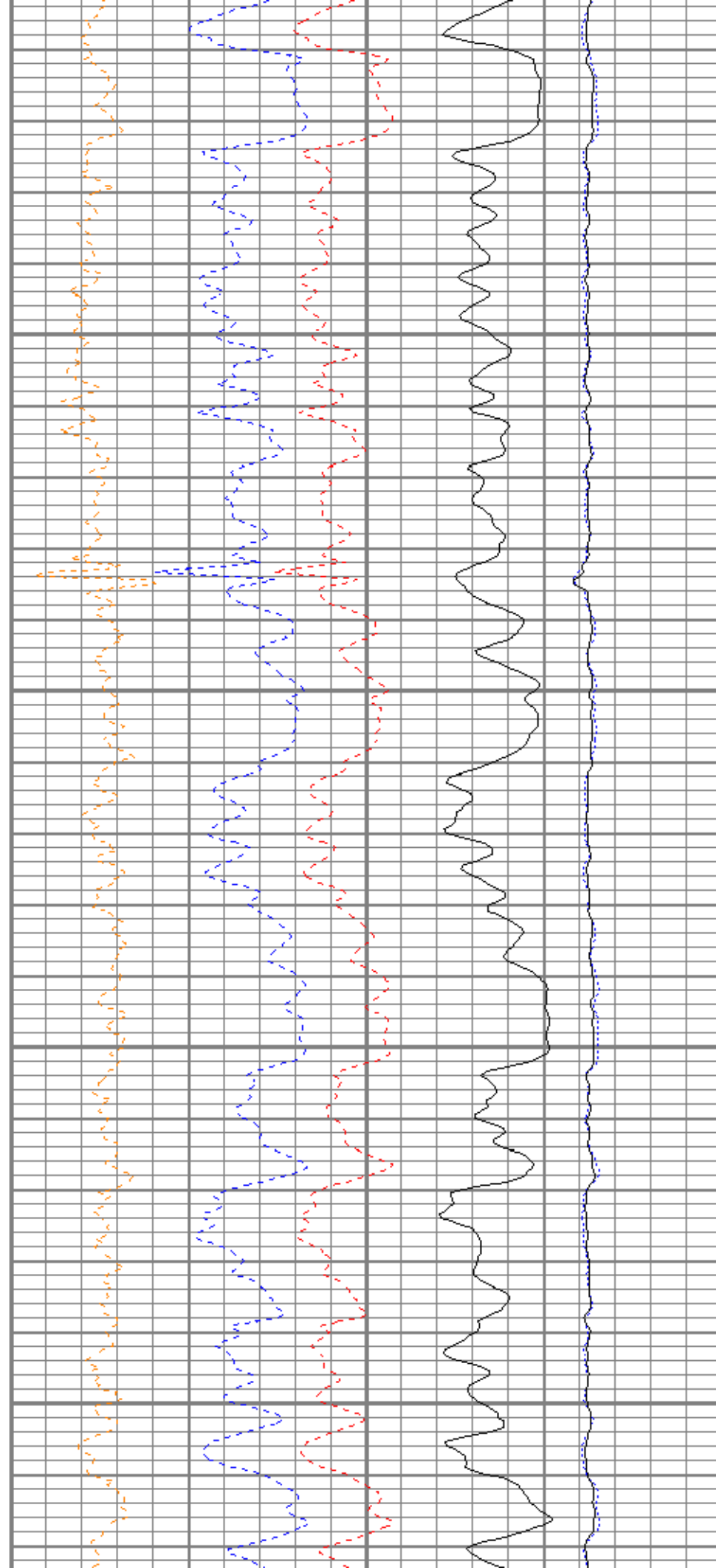
10200

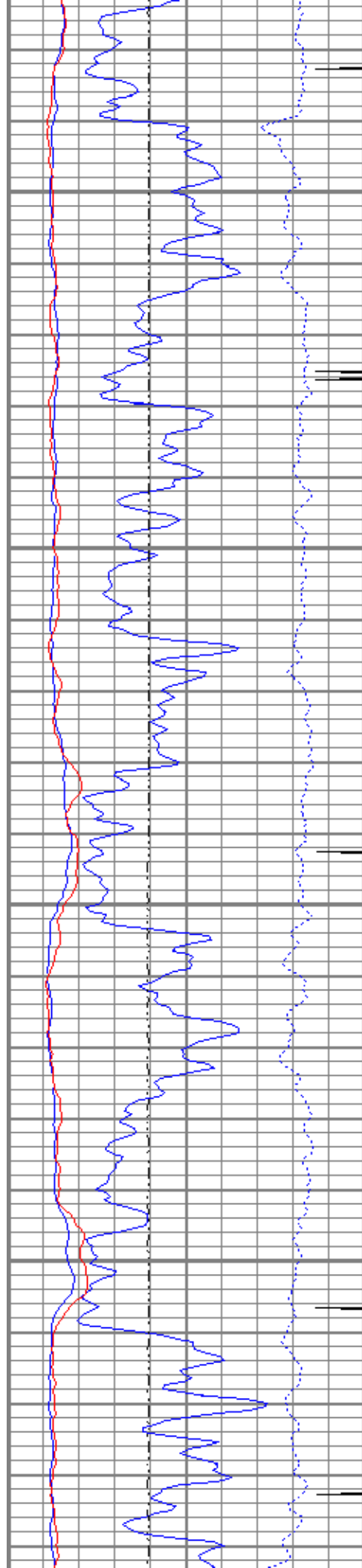




10300

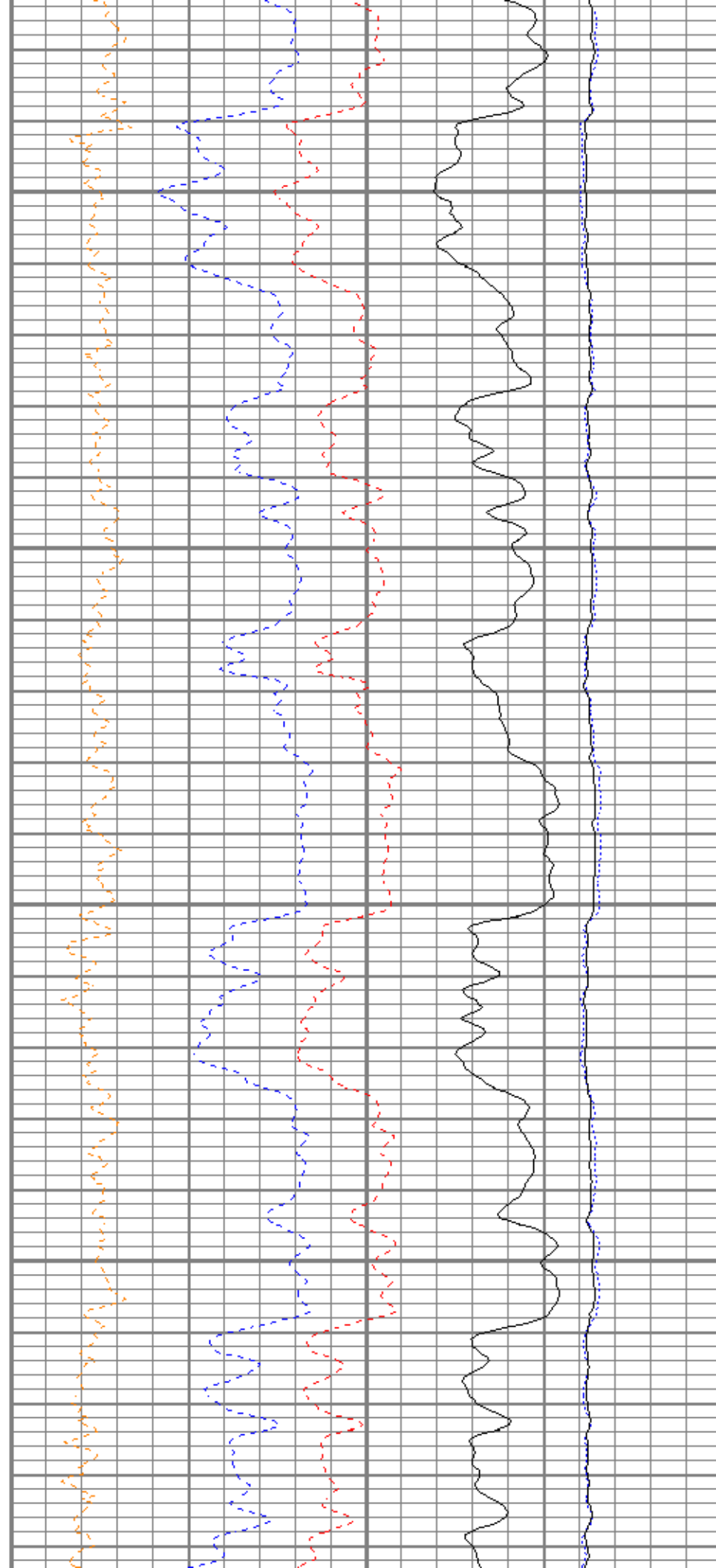
10400

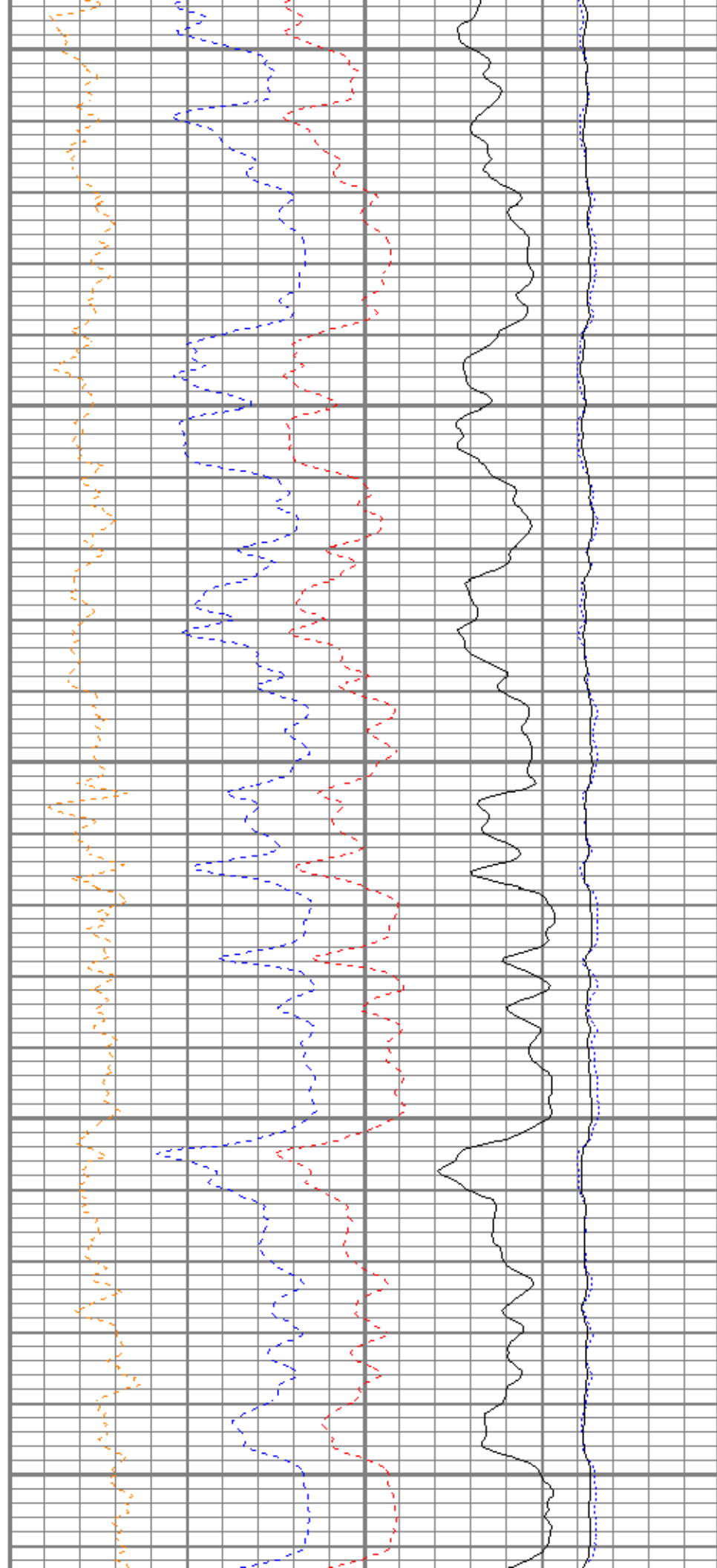
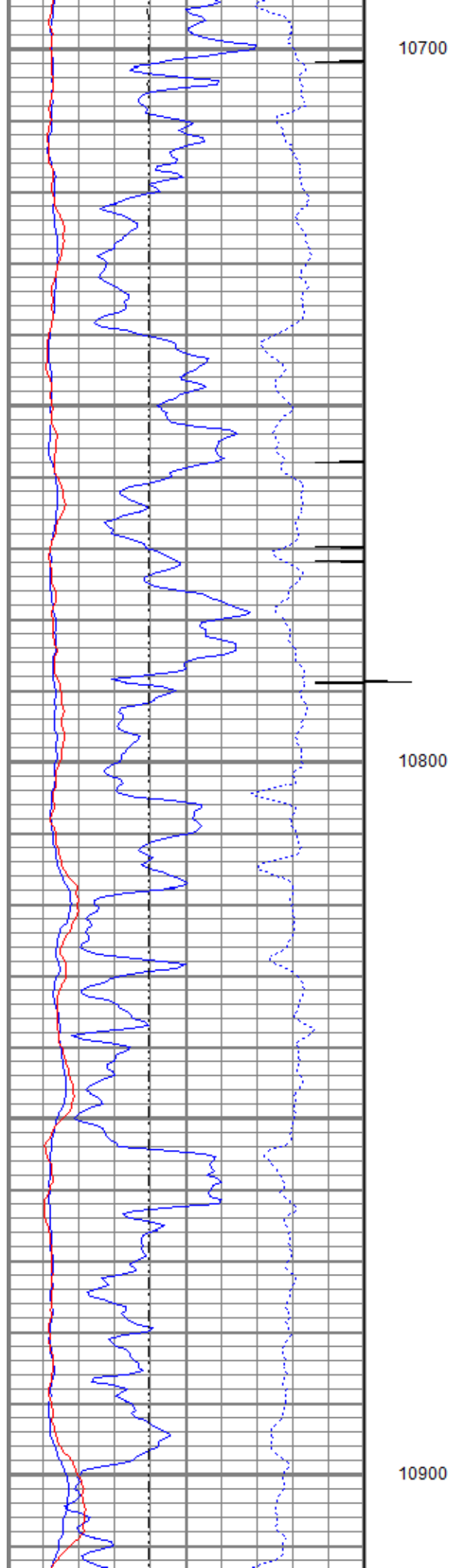


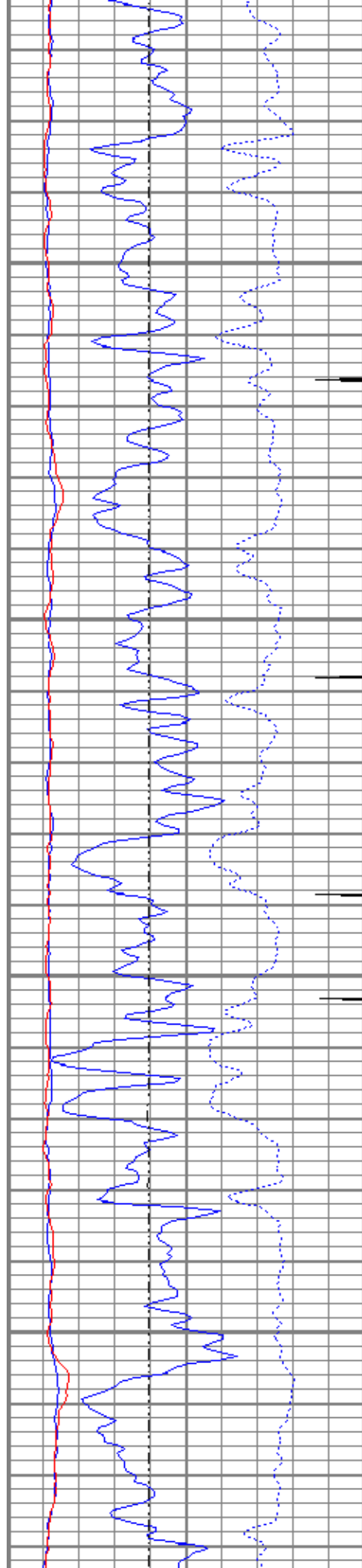


10500

10600

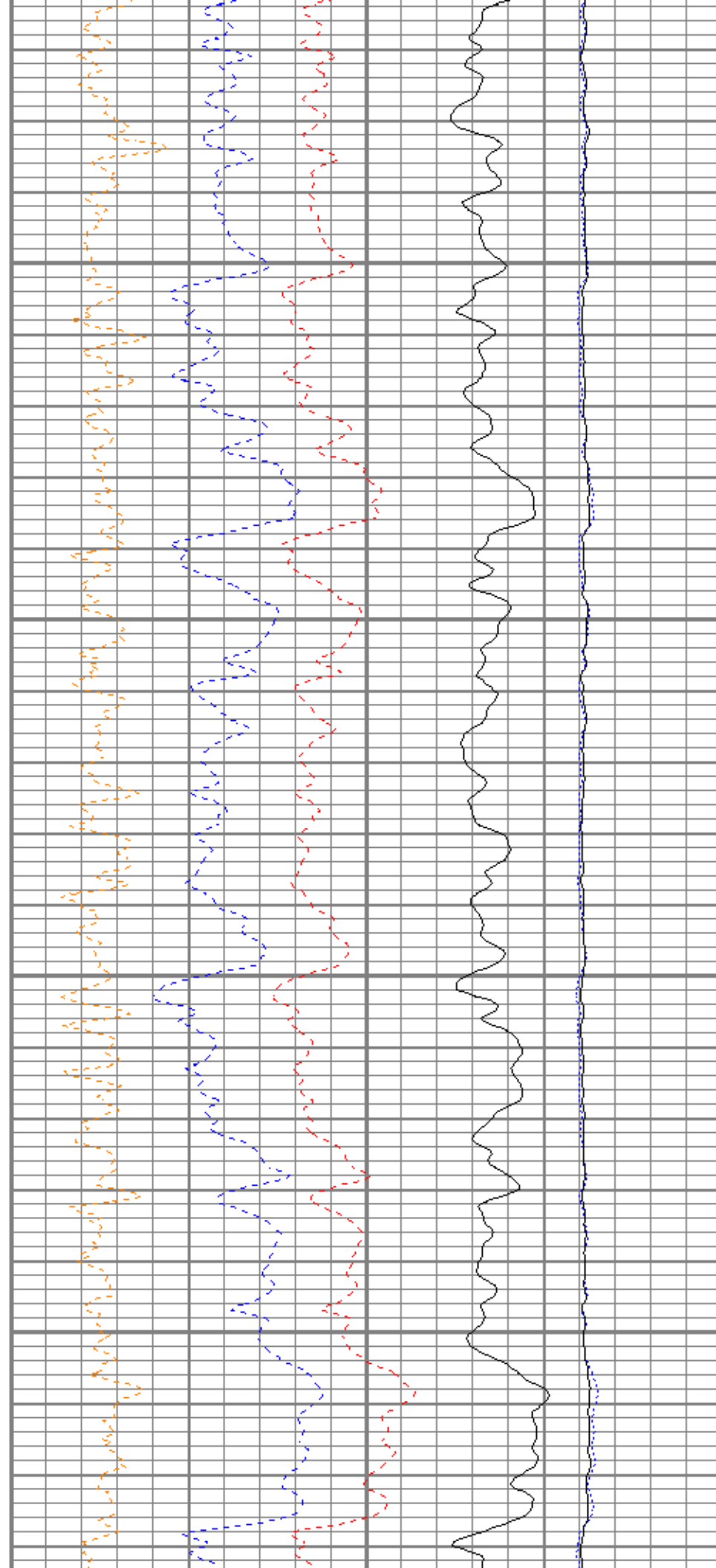


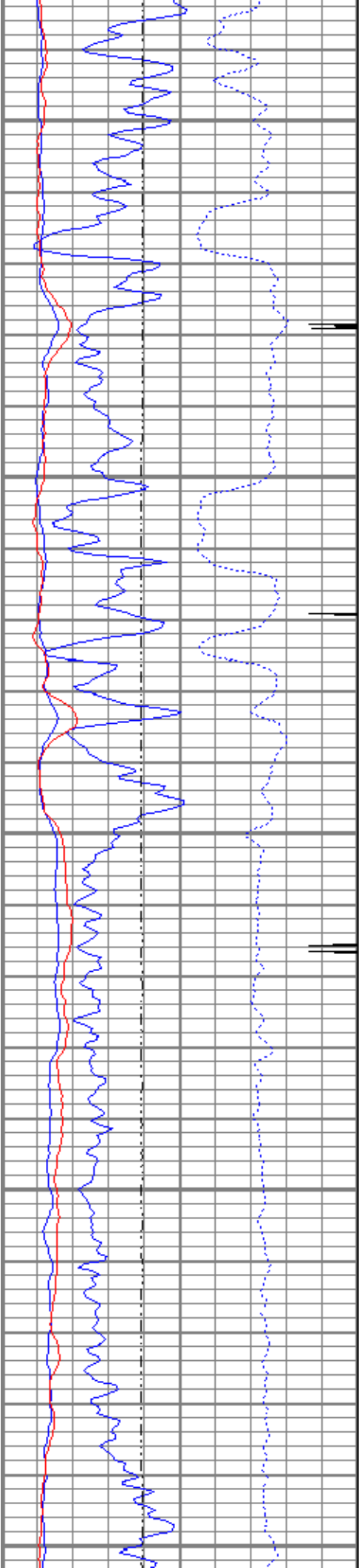




11000

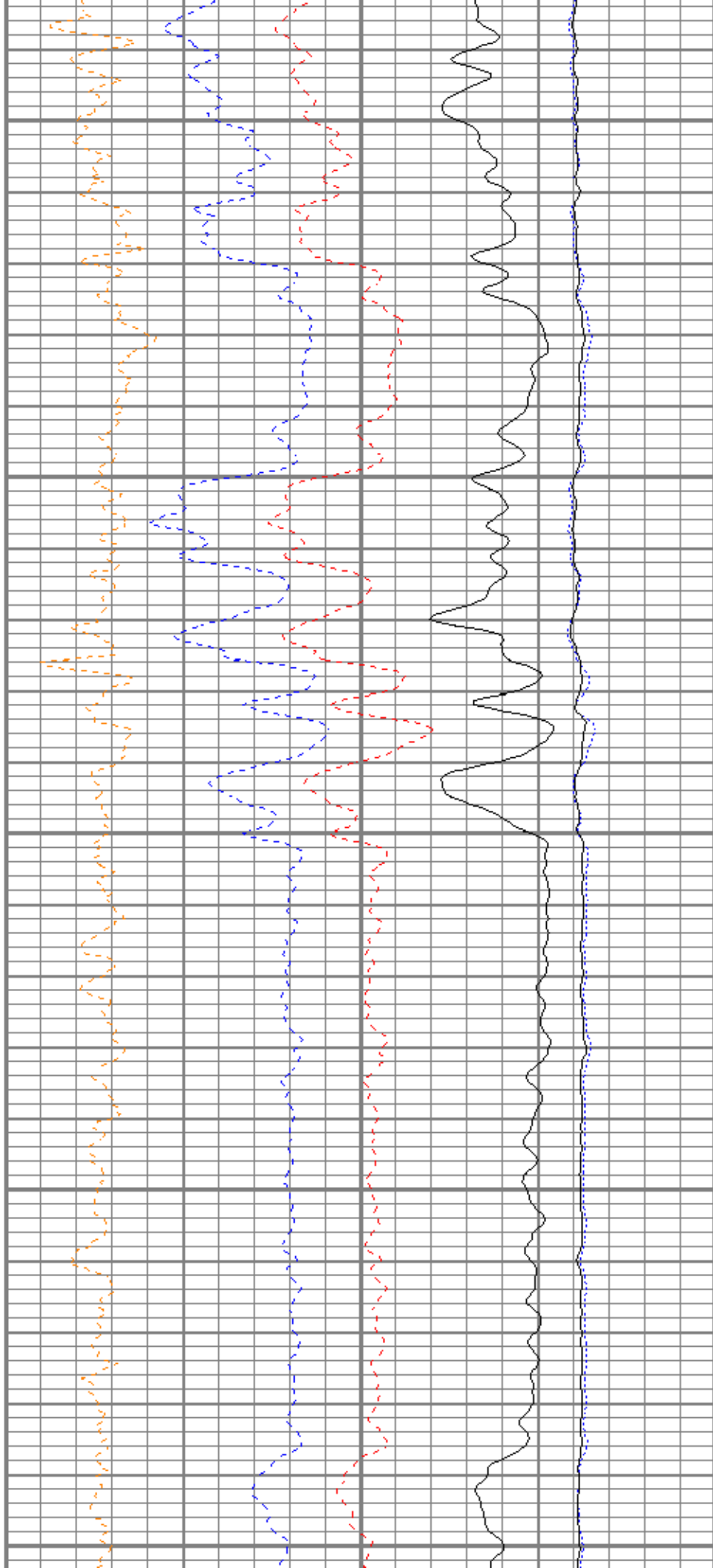
11100

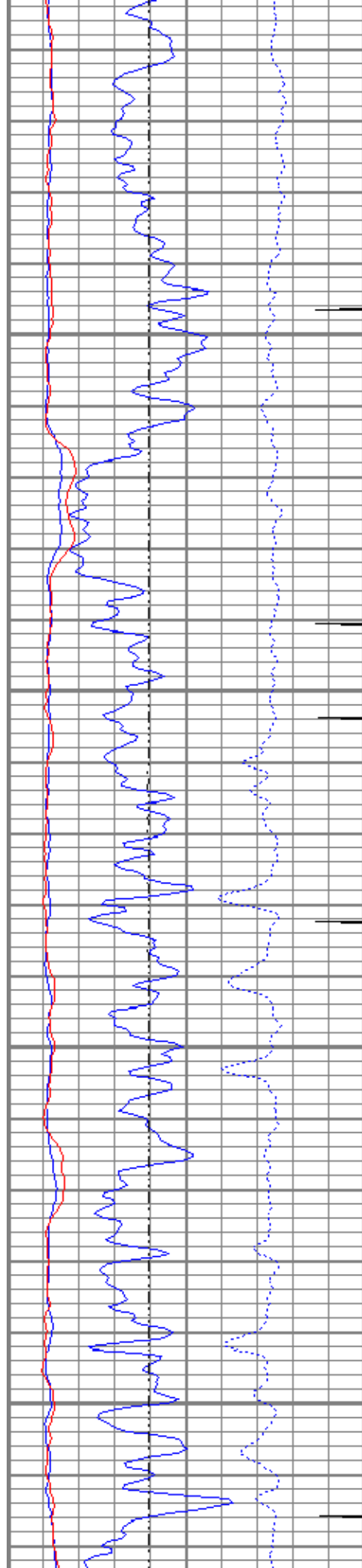




11200

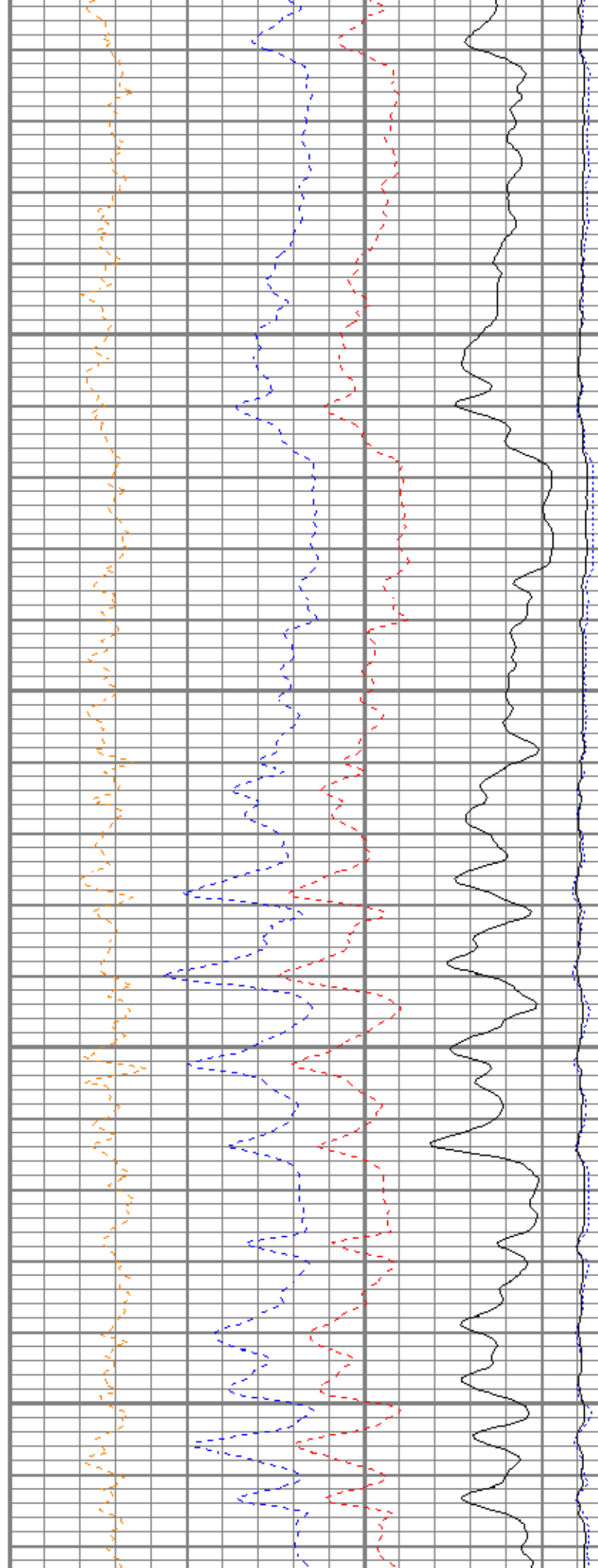
11300

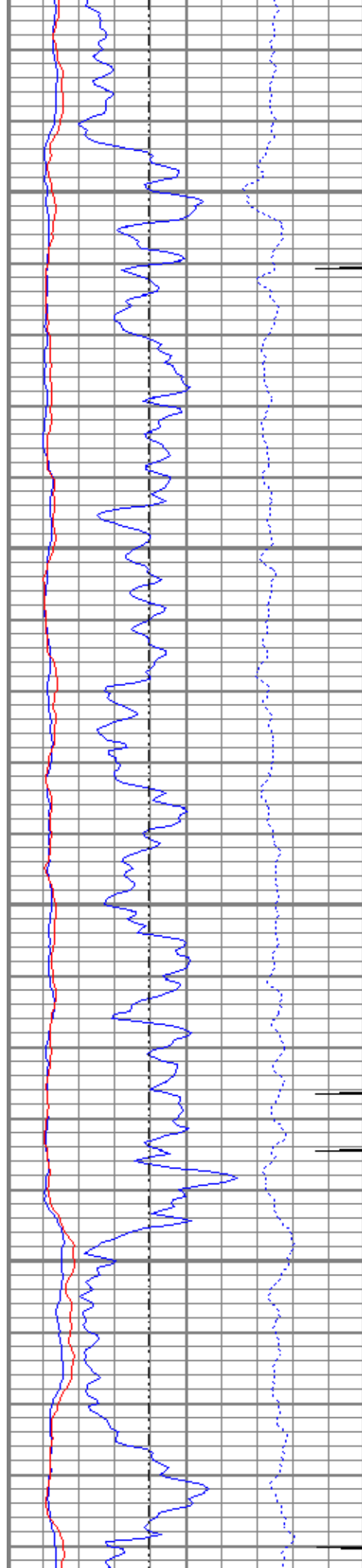




11400

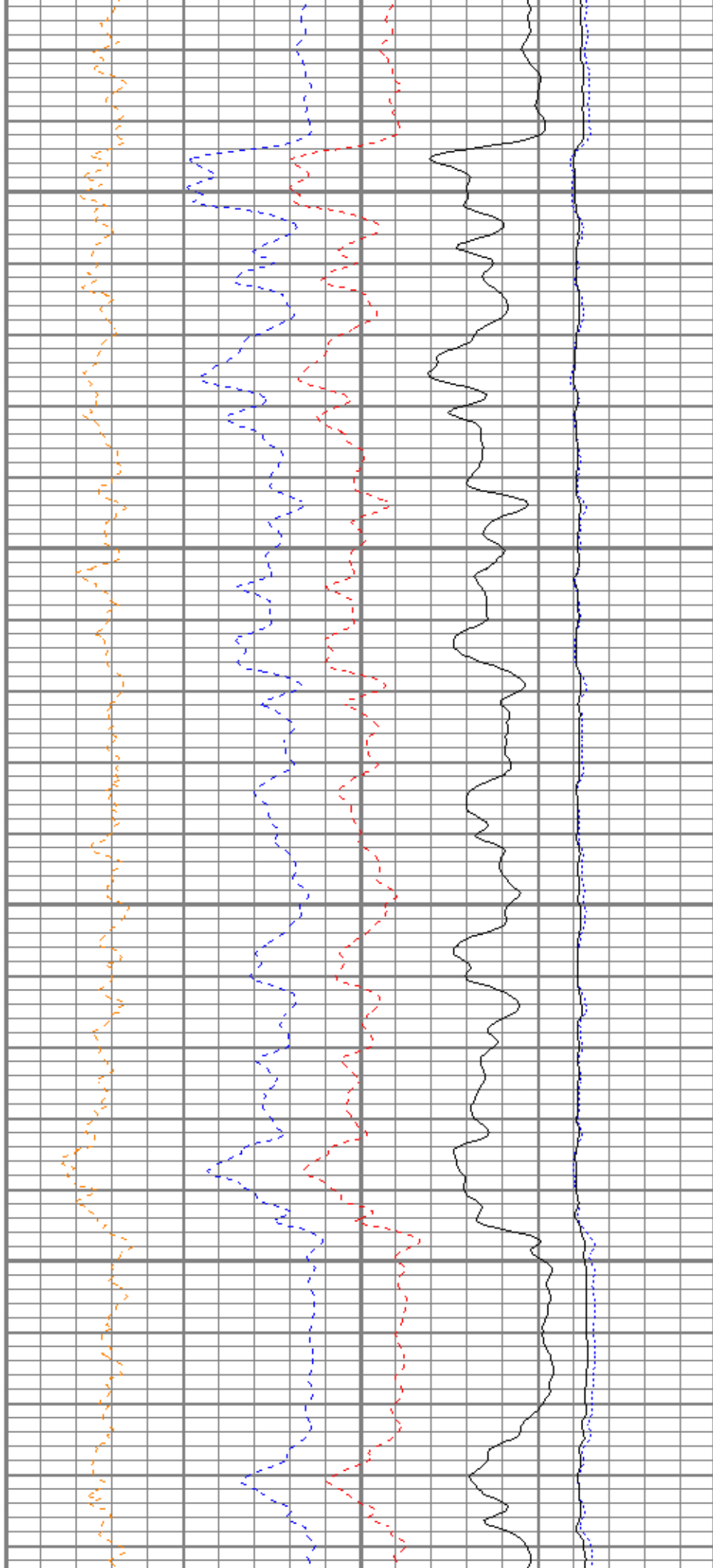
11500

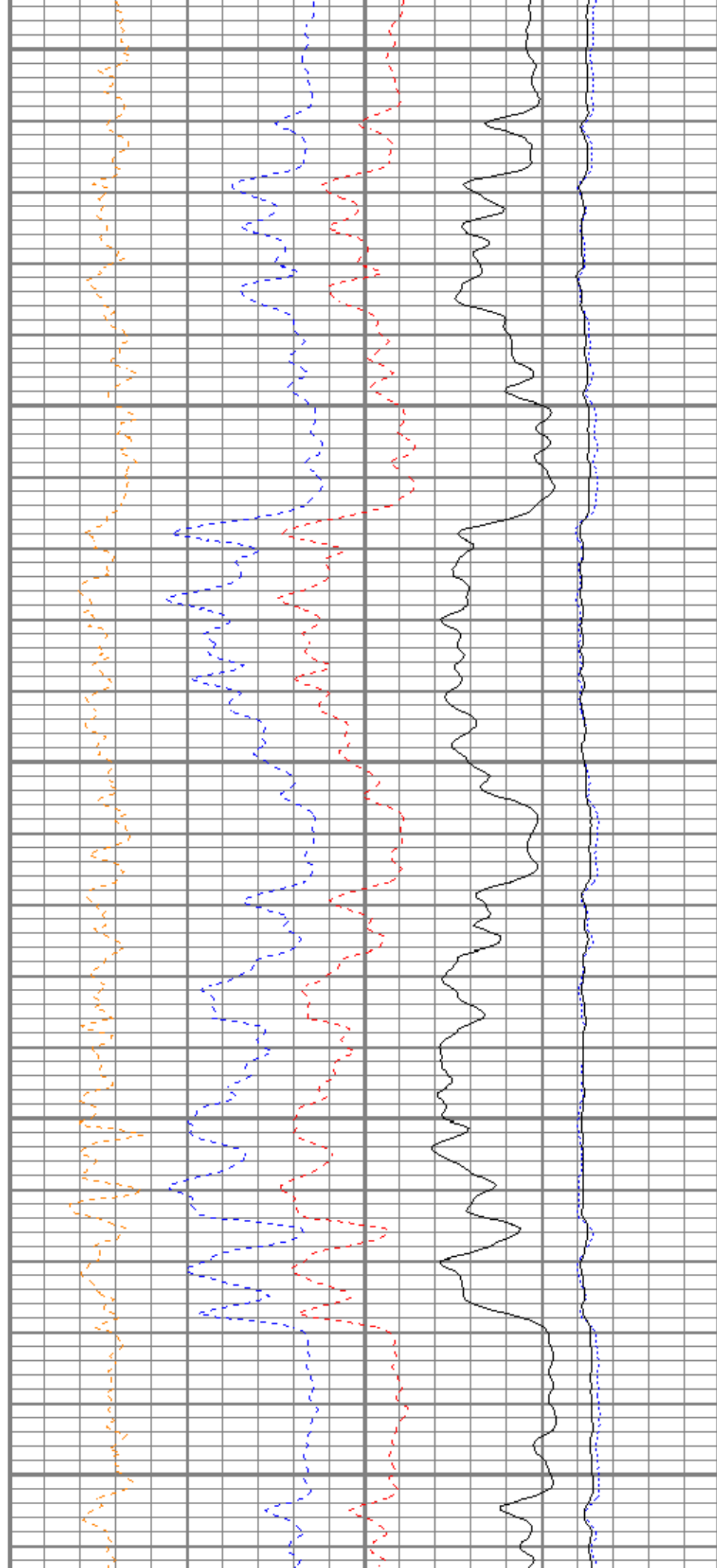
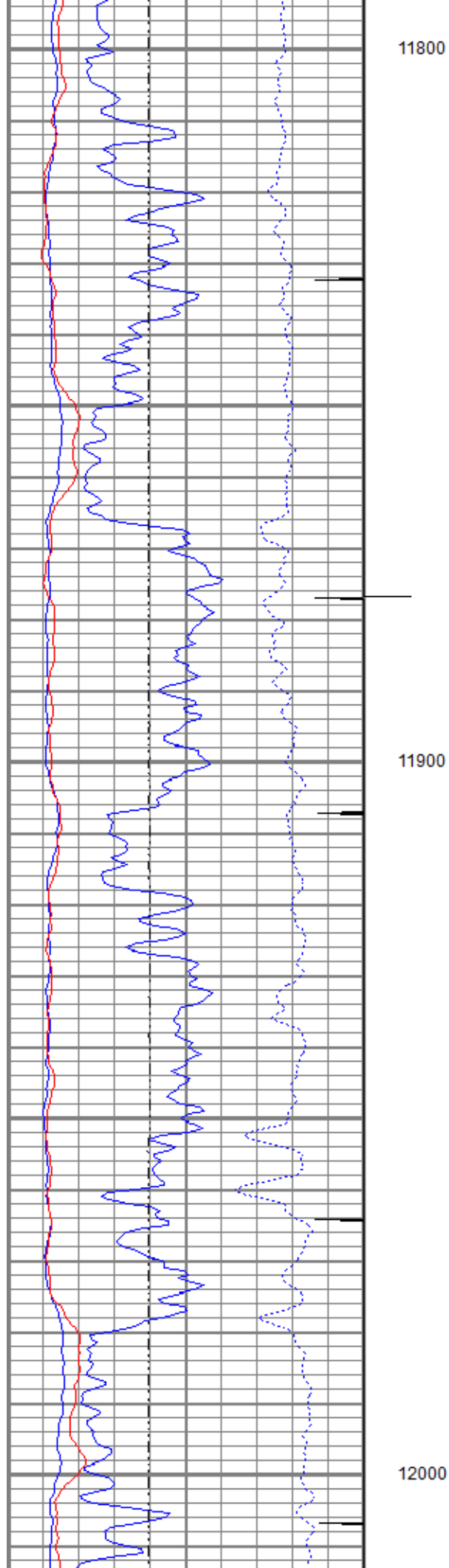


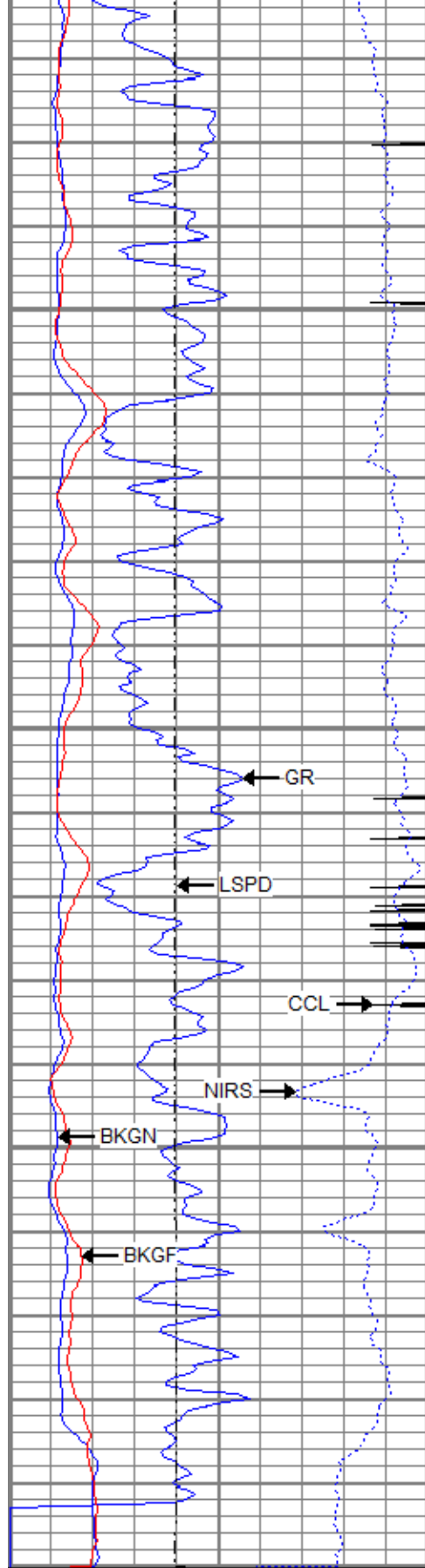


11600

11700



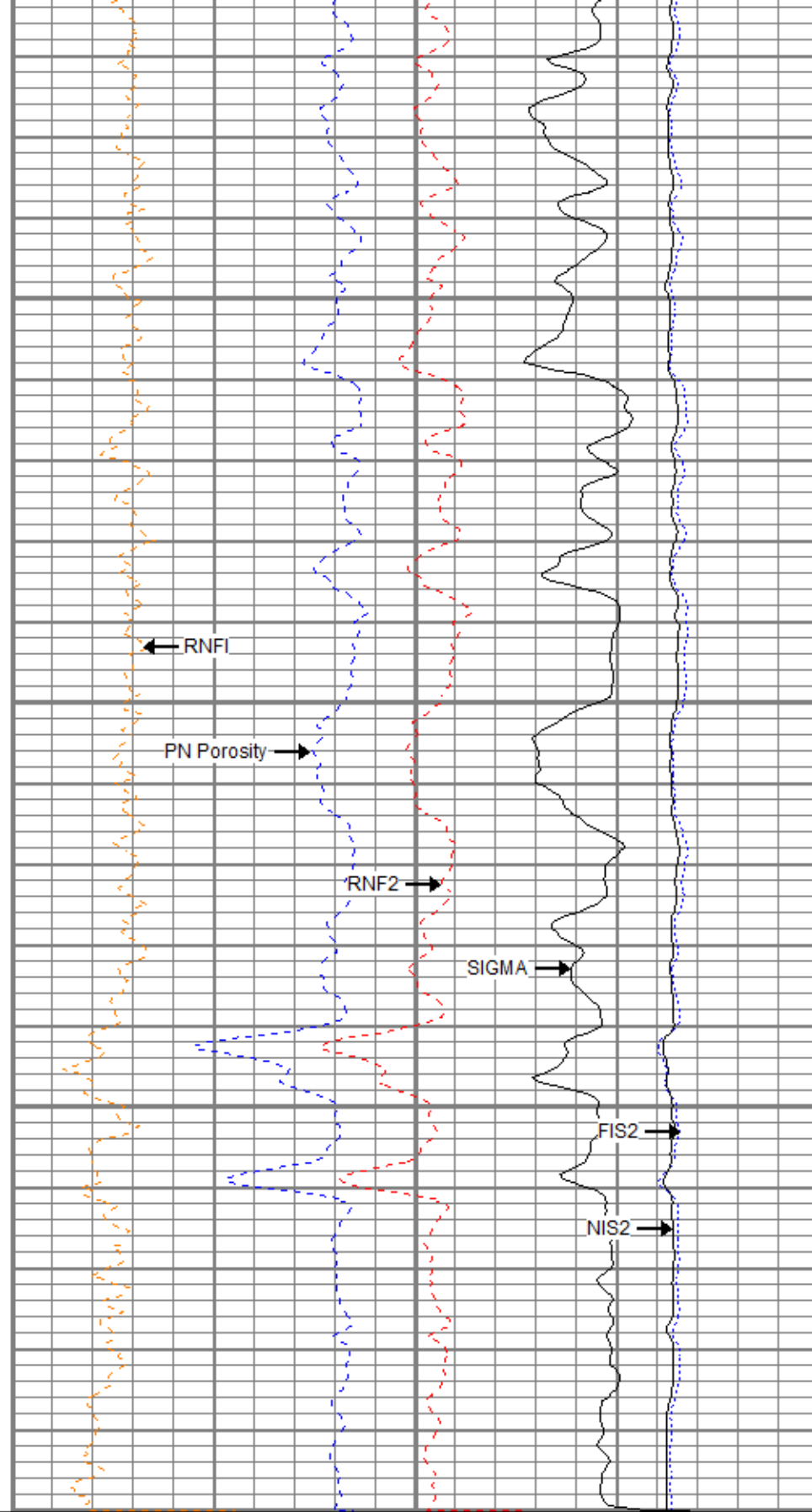




12100

12200

0	GR (GAPI)	150
PN Casing Collar Locator		
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

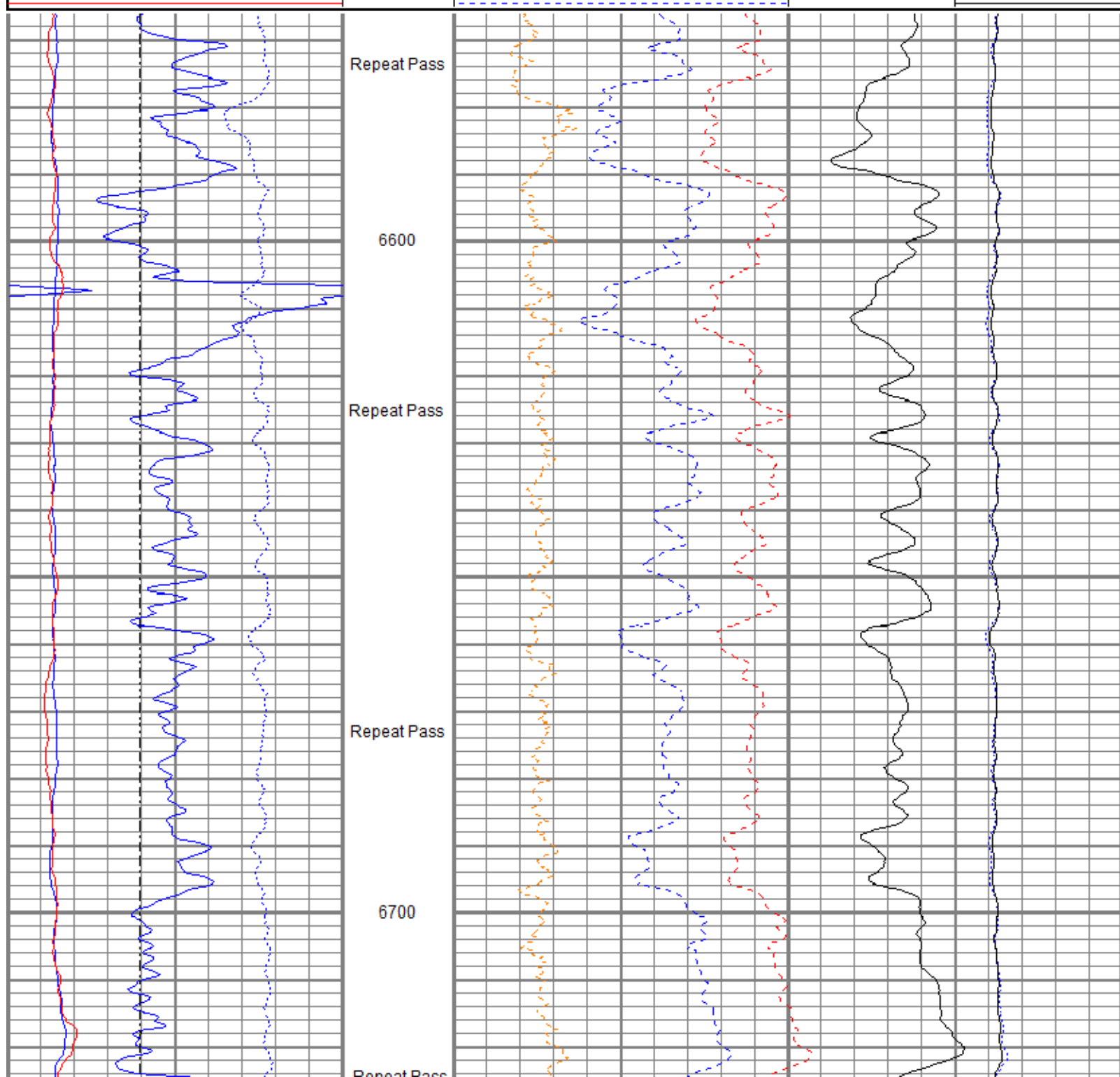


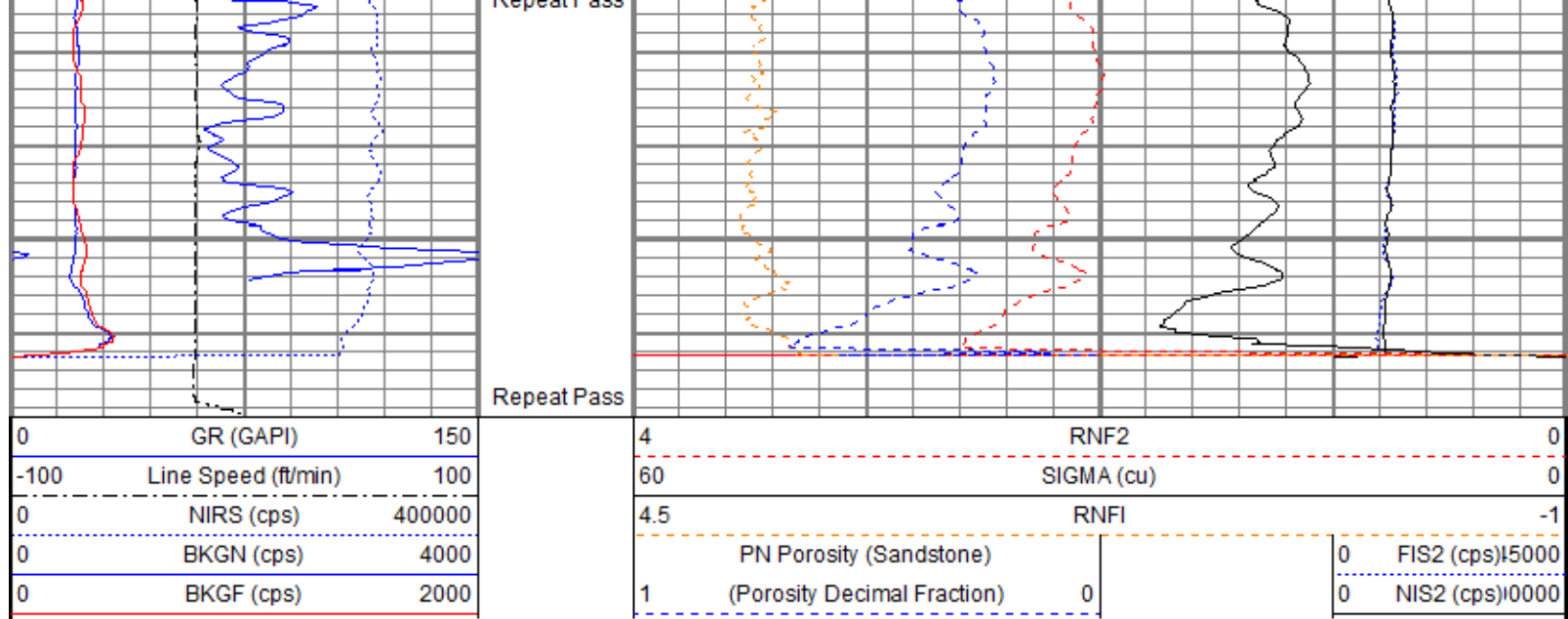
4	RNF2	0
60	SIGMA (cu)	0
4.5	RNF1	-1
1	PN Porosity (Sandstone)	0
0	FIS2 (cps)	5000
0	NIS2 (cps)	0000

Repeat Pass

Database File tep/federal rg 443-18-297/processed_tep_federal rg 443-18-297_pn_05-08-21.db
 Dataset Pathname repeat.2
 Presentation Format ros_pdn_hunter
 Dataset Creation Sat May 08 21:41:54 2021
 Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150	4	RNF2	0
-100	Line Speed (ft/min)	100	60	SIGMA (cu)	0
0	NIRS (cps)	400000	4.5	RNFI	-1
0	BKGN (cps)	4000	PN Porosity (Sandstone)		0 FIS2 (cps) 5000
0	BKGF (cps)	2000	(Porosity Decimal Fraction)		0 NIS2 (cps) 10000





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TCUTEMP TCUVOLT GCL_CCL GCL_GR	14.72 14.72 14.00 12.53		Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.69	5.40
			HWS_TCU-002 (001704) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
			HWS_GCL-001 (001681) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
Long Far Near Anci	6.28 6.28 6.28 6.28		HWS_RAS-RAS002 (003040) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82

	HWS_BN_FLT-001 (000001) Bull Nose FLTE/CFT	0.28	1.69	0.44
--	---	------	------	------

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\TEP\Federal RG 443-18-297\PROCESSED_TEP_Federal RG 443-18-297_PN_05-08-21.db
Dataset Pathname	main.2
Dataset Creation	Sat May 08 21:39:44 2021

RAS Calibration Report

Water Tank

Hydrocarbon Tank

Serial Number:	001681	
Tool Model:	001	
Performed:	(Not Performed)	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	
Calibrator Reading:	1.0	
Sensitivity:	1.0000	GAPI/



Company	TEP Rocky Mountain LLC
Well	Federal RG 443-18-297
Field	Sulphur Creek
County	Rio Blanco
State	Colorado