



Pulsed Neutron
Gamma Ray
Casing Collar Log

Company		TEP Rocky Mountain LLC	
Well		Puckett GM 314-8	
Field		Grand Valley	
County		Garfield	
State		Colorado	
Company		TEP Rocky Mountain LLC	
Well		Puckett GM 314-8	
Field		Grand Valley	
County		Garfield	
State		Colorado	
Location:		API #: 05-045-24093	
SEC 8 TWP 7S RGE 96W		Other Services	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
Elevation		6281'	
K.B. 6305'		D.F. ---	
G.L. 6281'		RBL	
Date		31-OCT-2019	
Run Number		One	
Depth Driller		6860 FT	
Depth Logger		6779 FT	
Bottom Logged Interval		6774 FT	
Top Log Interval		3548 FT	
Open Hole Size		8.750"	
Type Fluid		Water	
Density / Viscosity		8.34 lb/gal	
Max. Recorded Temp.		---	
Estimated Cement Top		---	
Time Well Ready		---	
Time Logger on Bottom		---	
Equipment Number		HD-0331	
Location		Grand Junction, CO	
Recorded By		J. Donnelly	
Witnessed By			
Borehole Record		Tubing Record	
Run Number		Bit	
From		To	
Size		Weight	
From		To	
Casing Record		Size (in)	
Surface Casing		9 5/8	
Intermediate #1		4 1/2	
Intermediate #2		11.6	
Inner		P-110	
Top		Surface	
Bottom		6818 FT	

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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 31-OCT-2019
Log ran from 6774 FT to 3548 FT
Pulsed Neutron Data logged with Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!

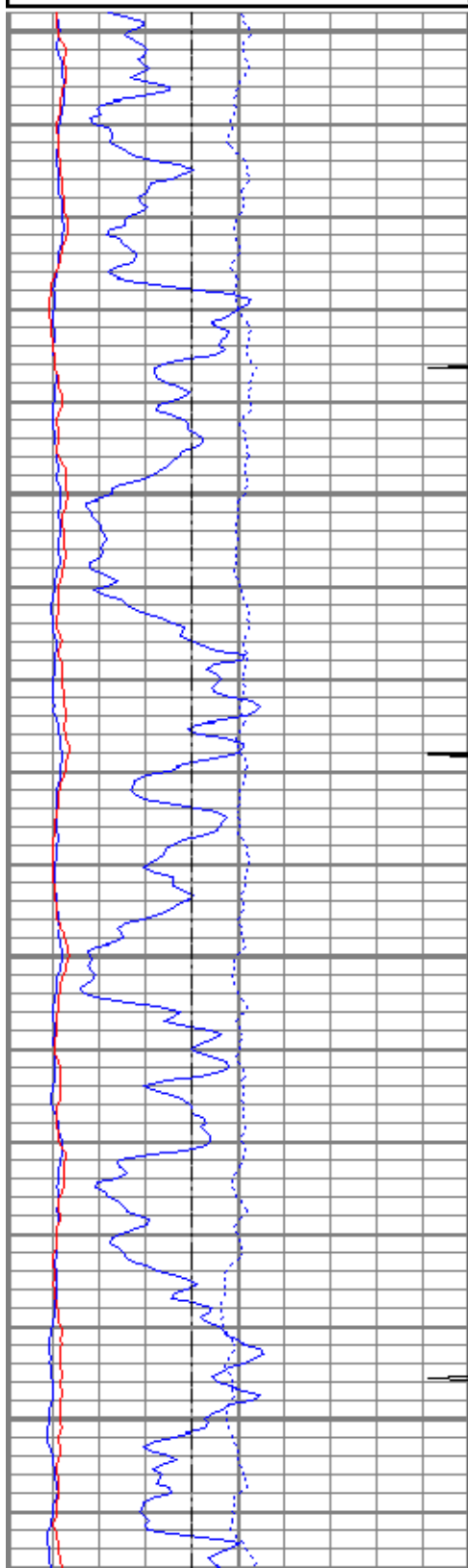


Main Pass

Database File	tep_puckett gm 314-8_rbl_10-31-19\tep_puckett gm 314-8_pn_10-31-19.db
Dataset Pathname	pn/merge1
Presentation Format	ros_pdn_hunter
Dataset Creation	Sat Nov 09 11:43:50 2019
Charted by	Depth in Feet scaled 1:240

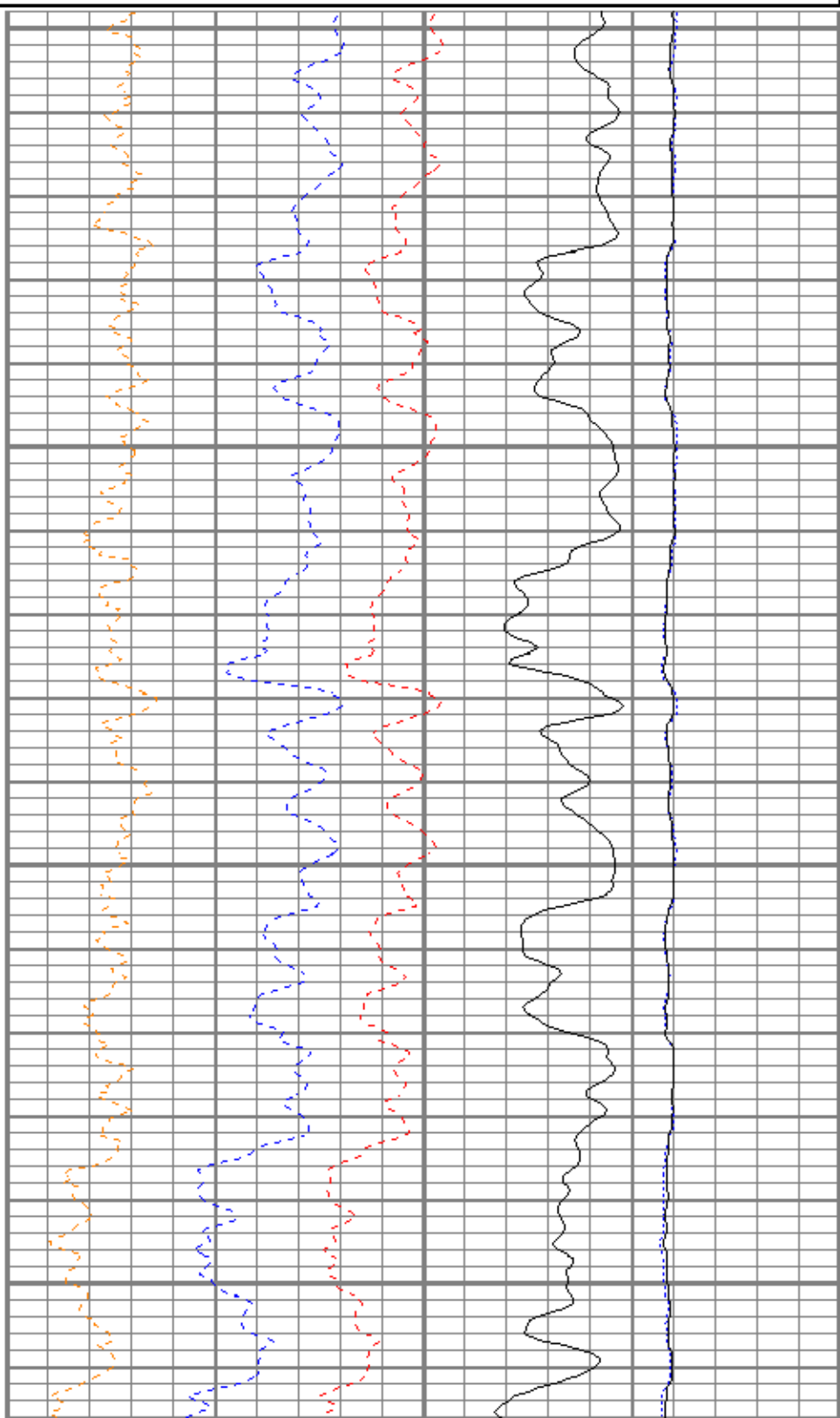
0	GR (GAPI)	150
PN Casing Collar Locator		
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

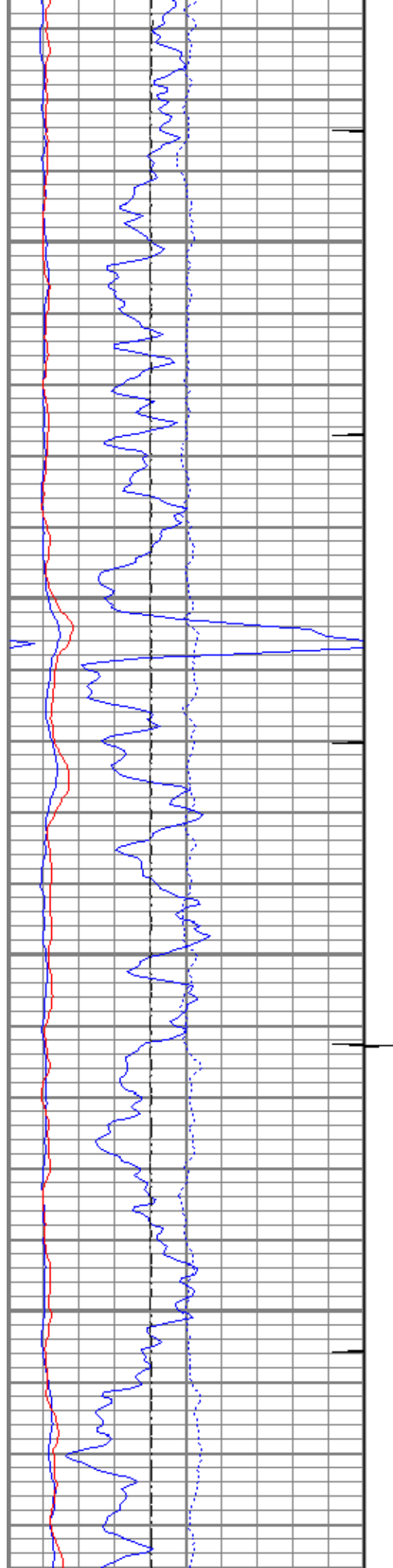
4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	-1
1	PN Porosity (Sandstone)	0
0	FIS2 (cps)	15000
0	NIS2 (cps)	10000



3600

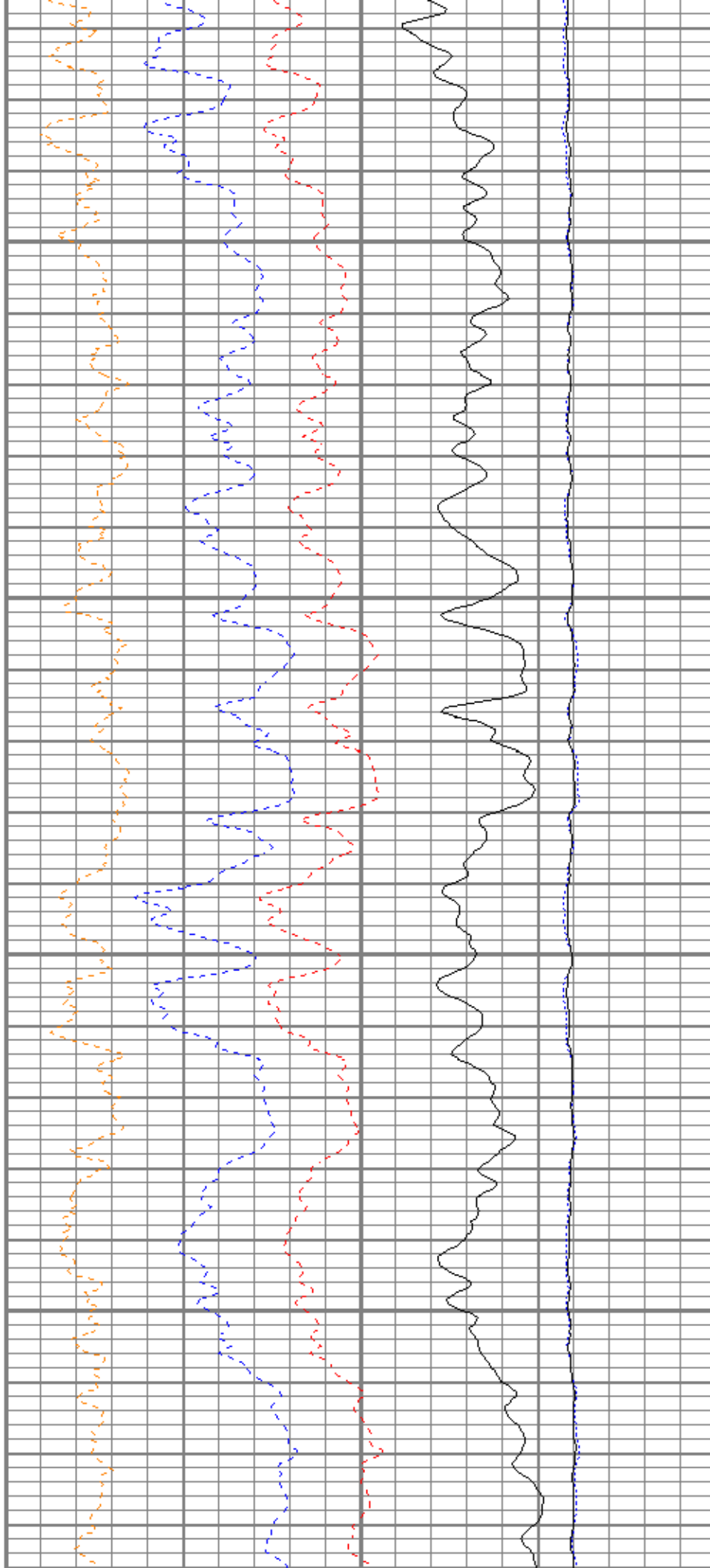
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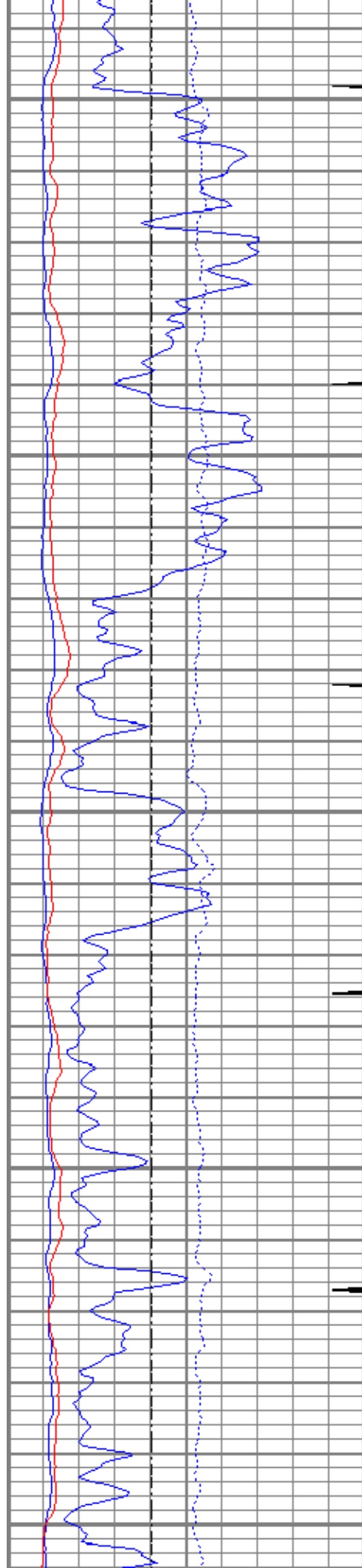




3800

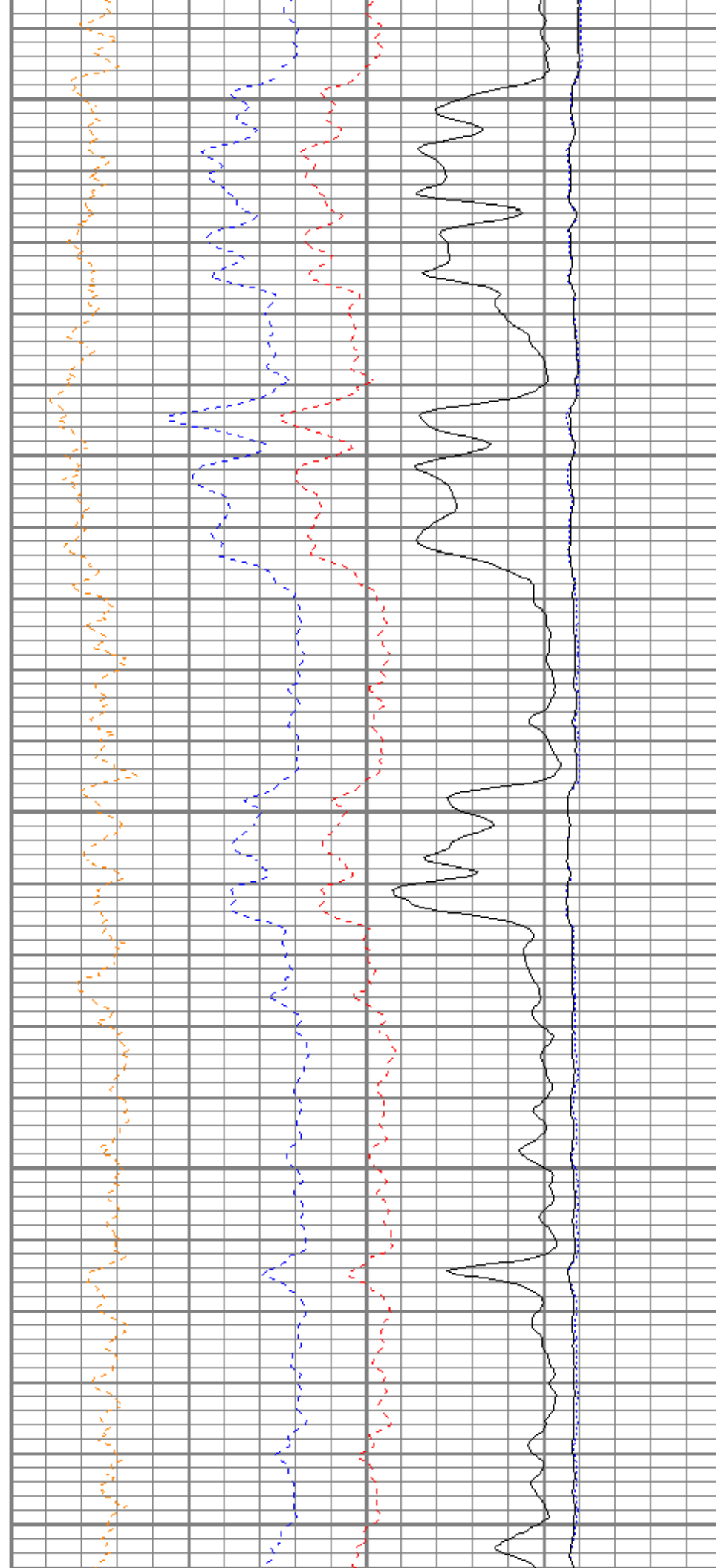
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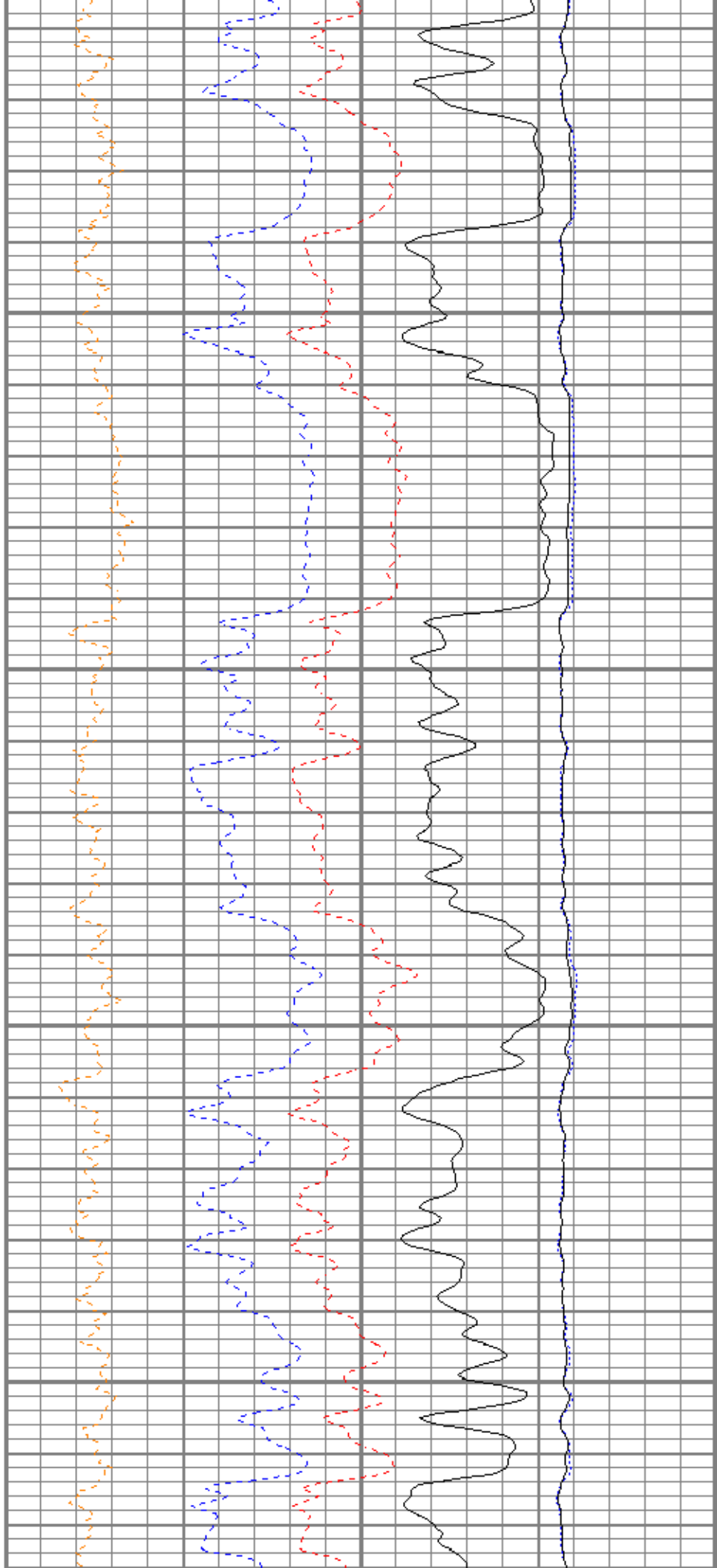
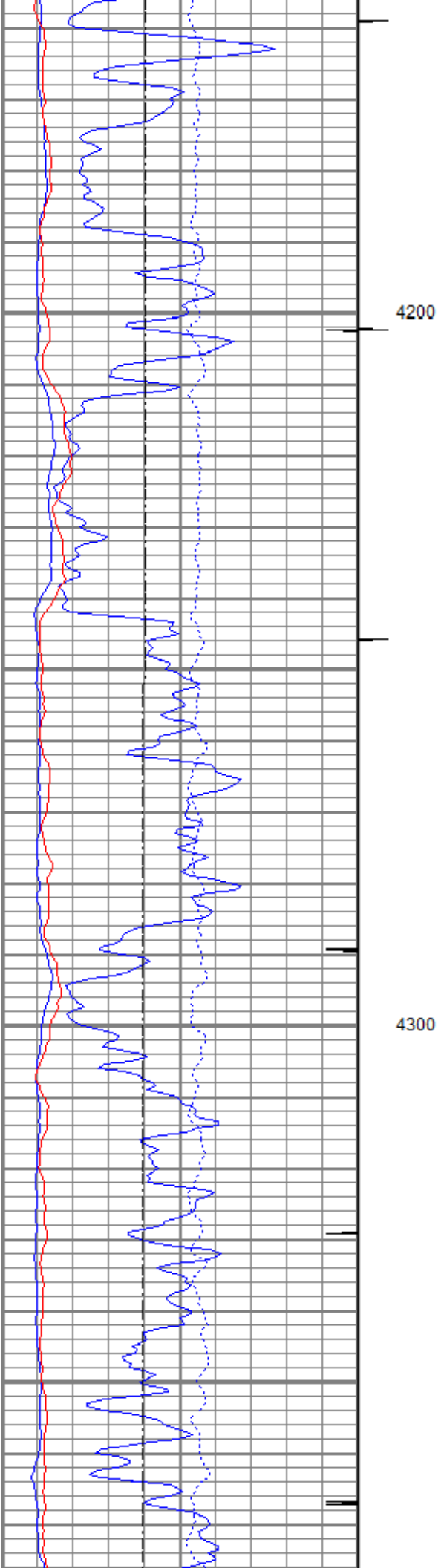


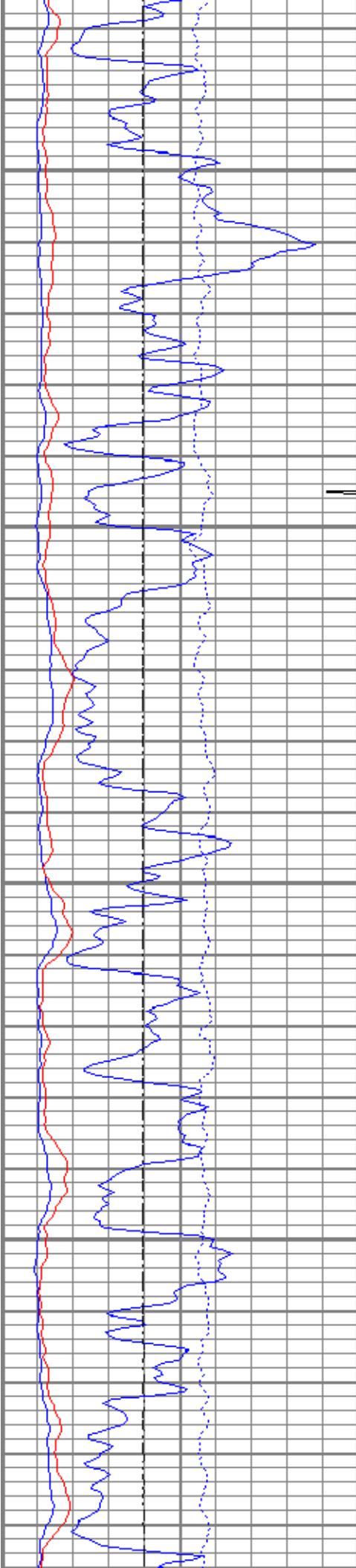


4000

4100

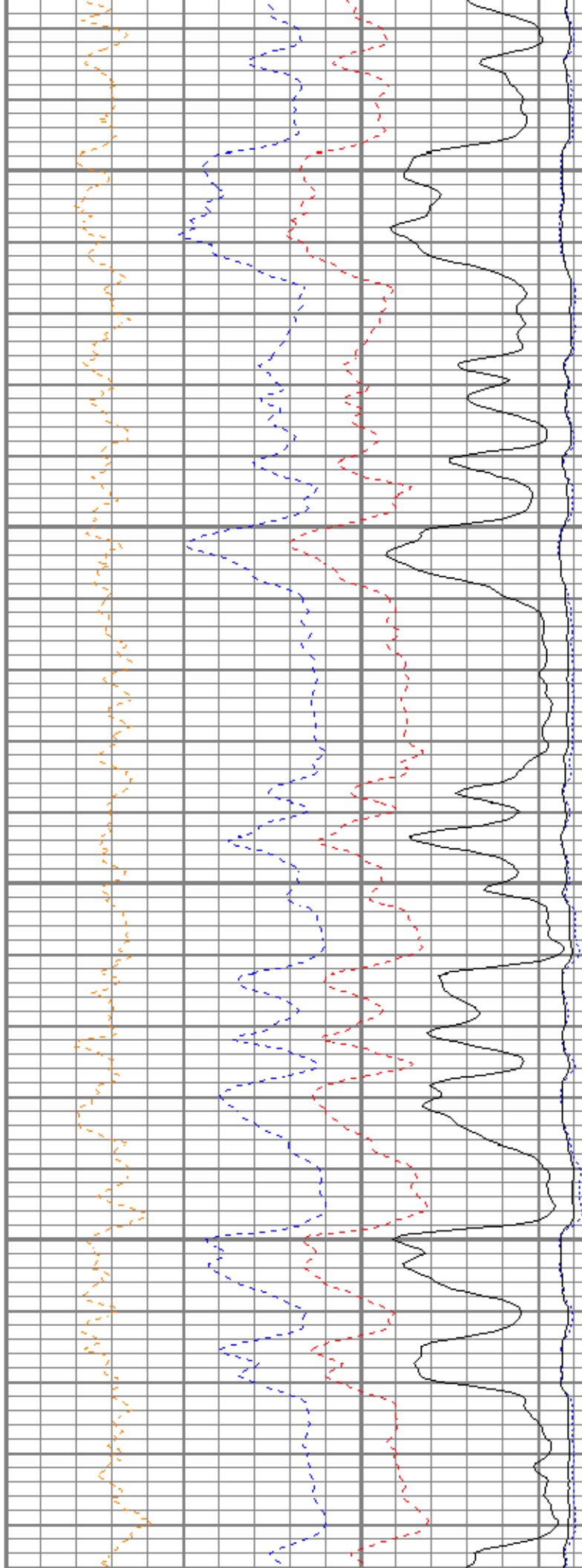


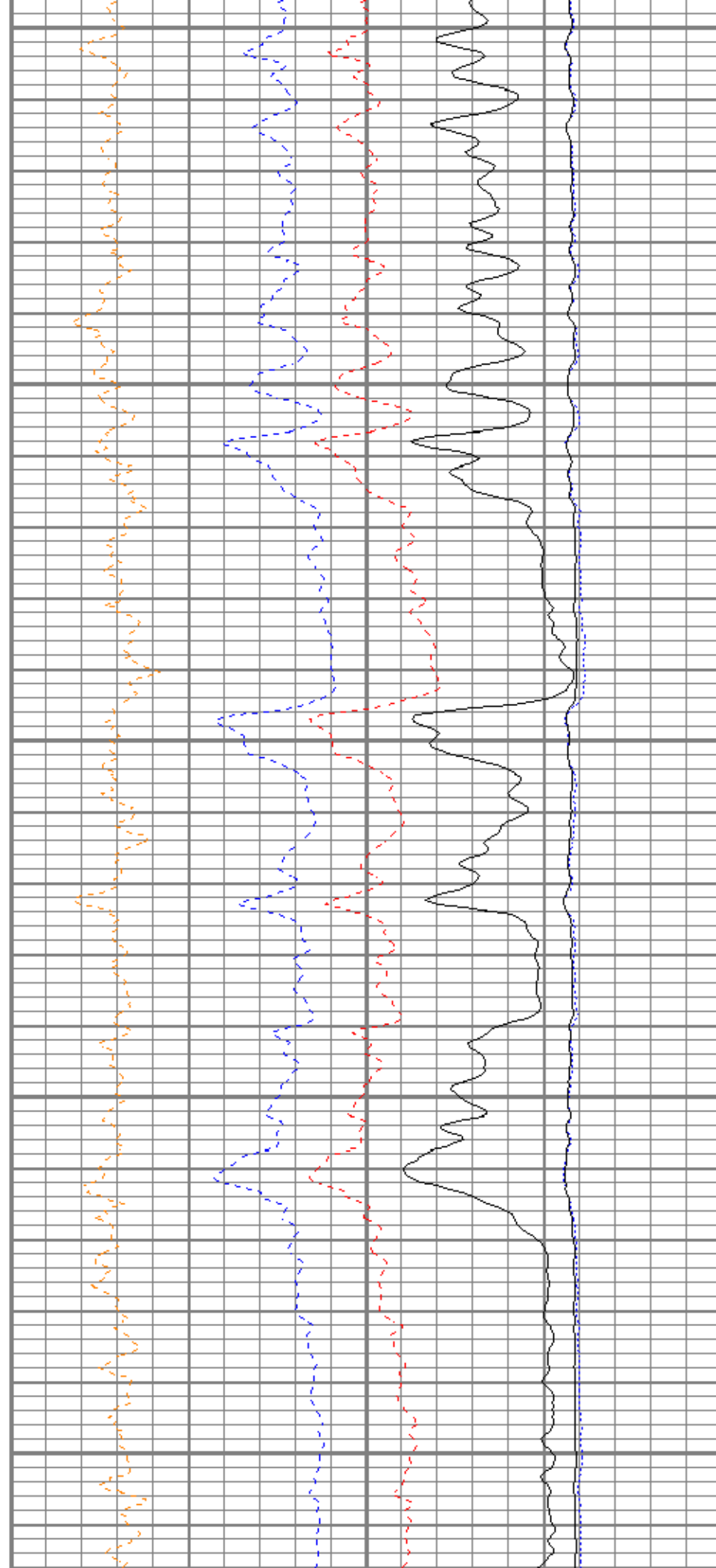
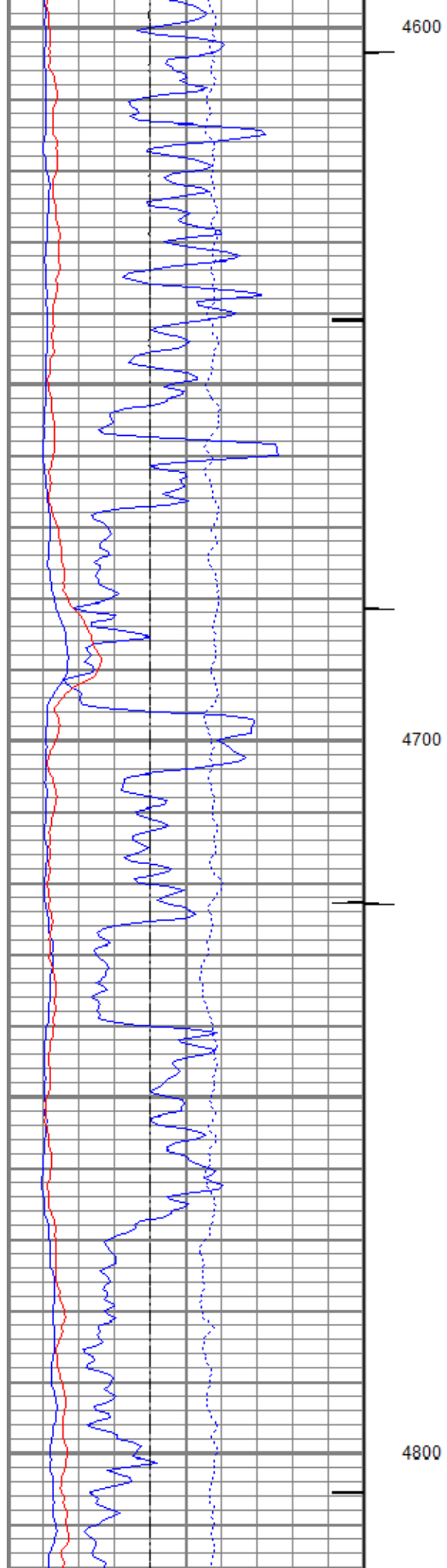


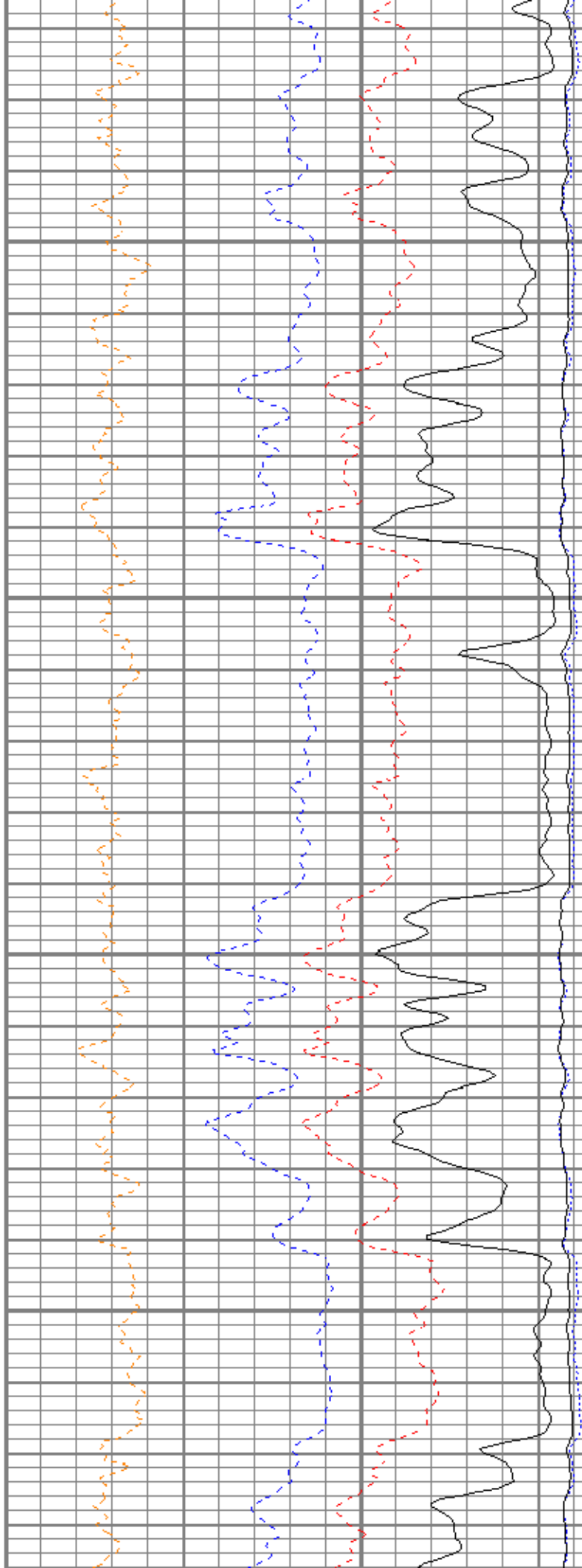
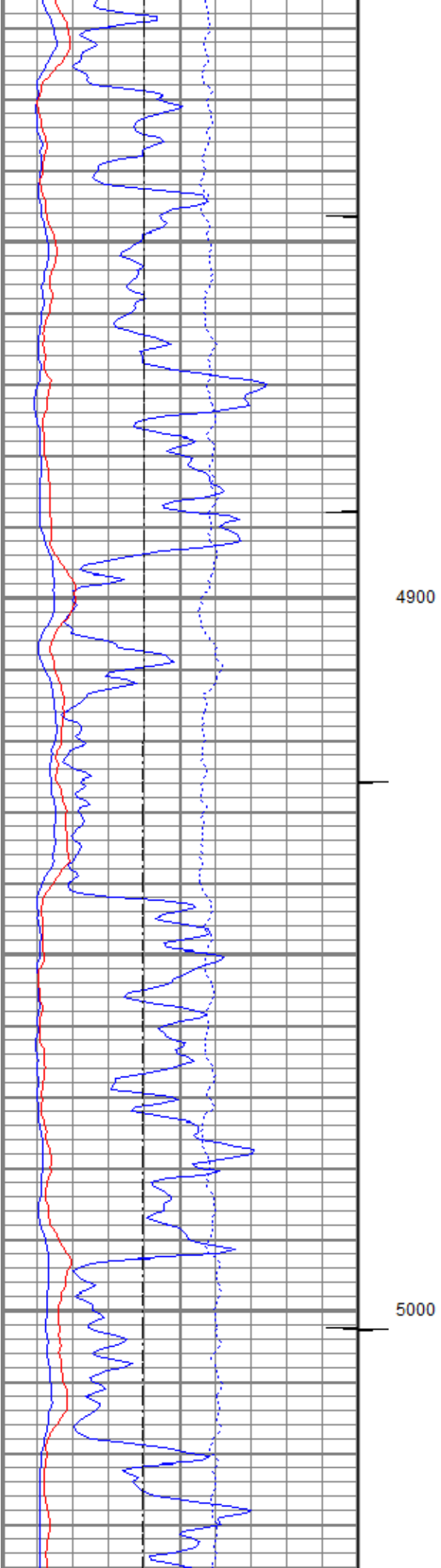


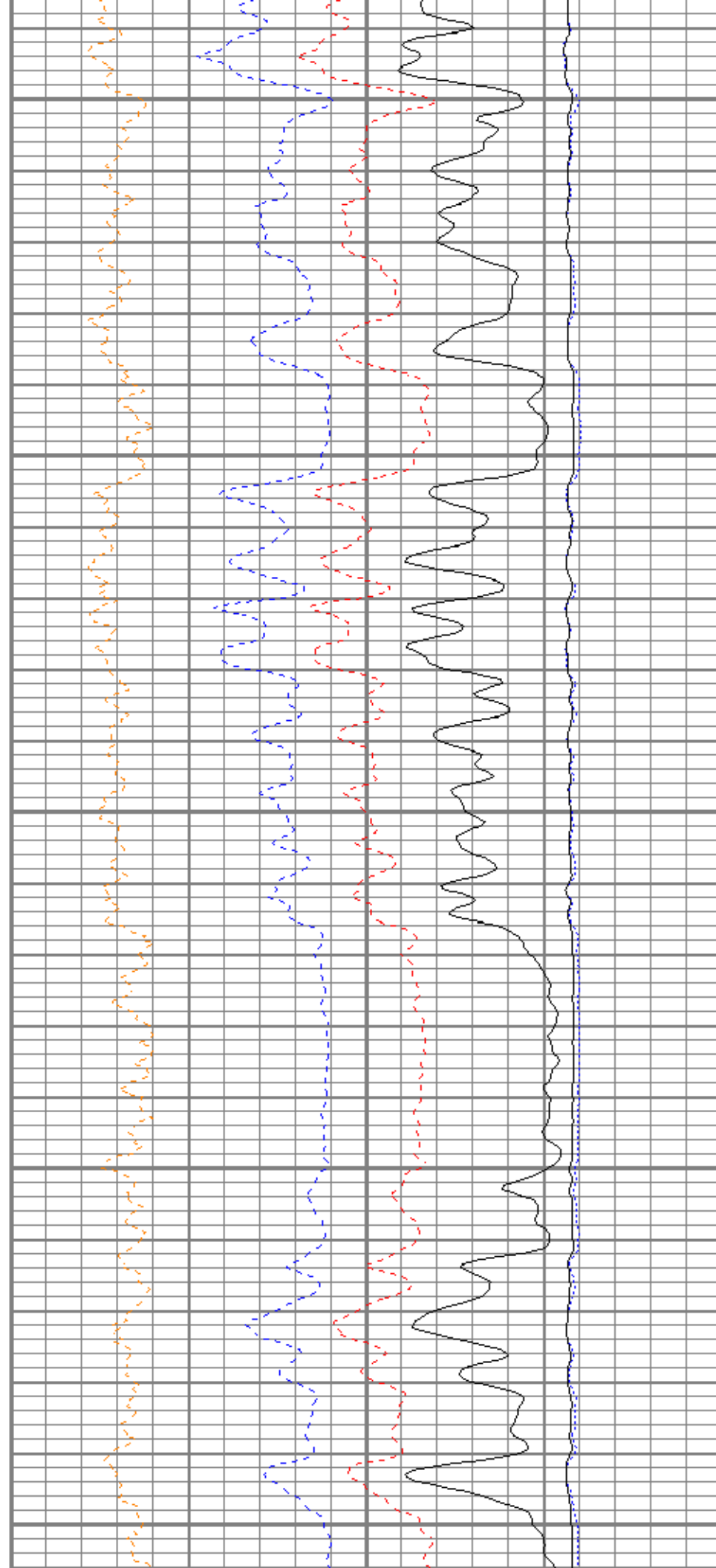
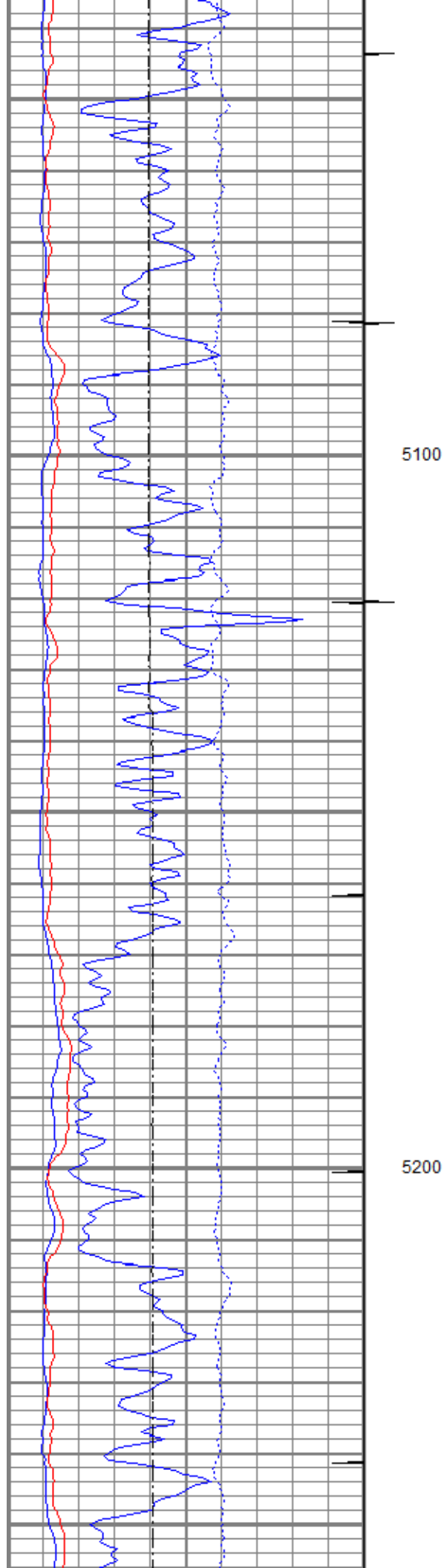
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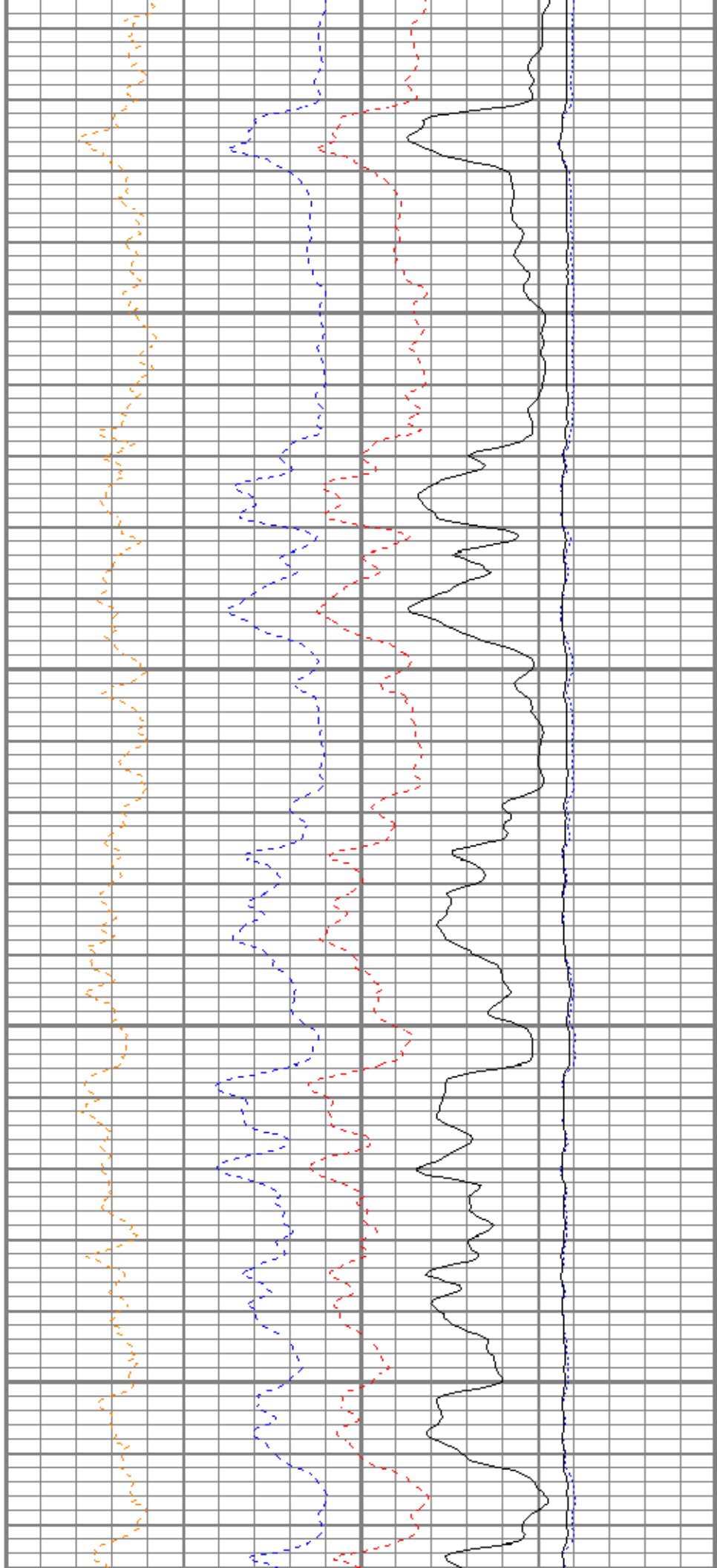
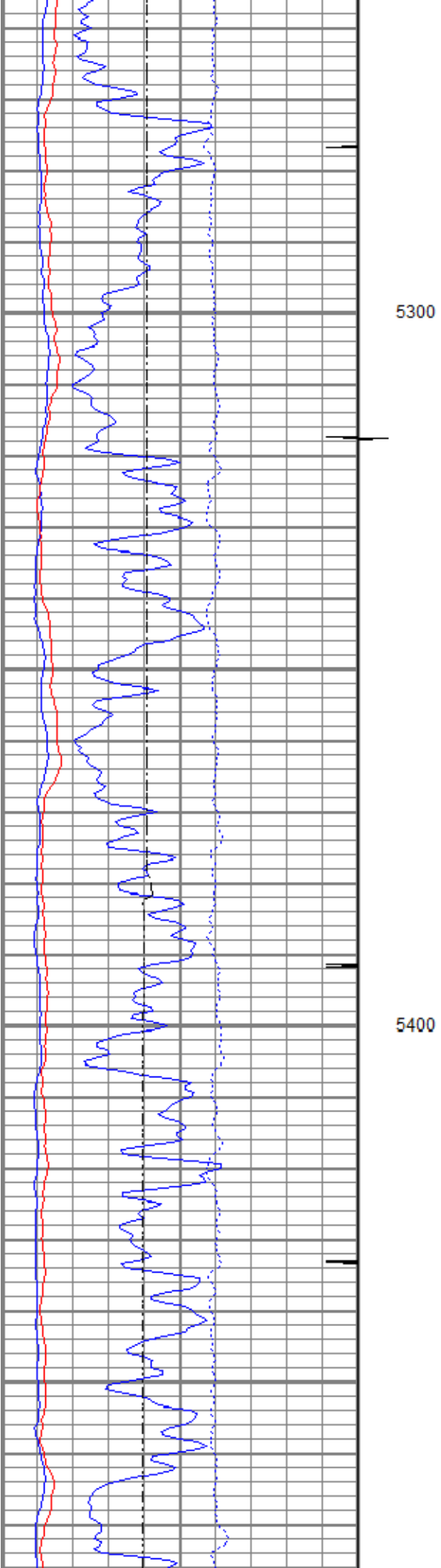
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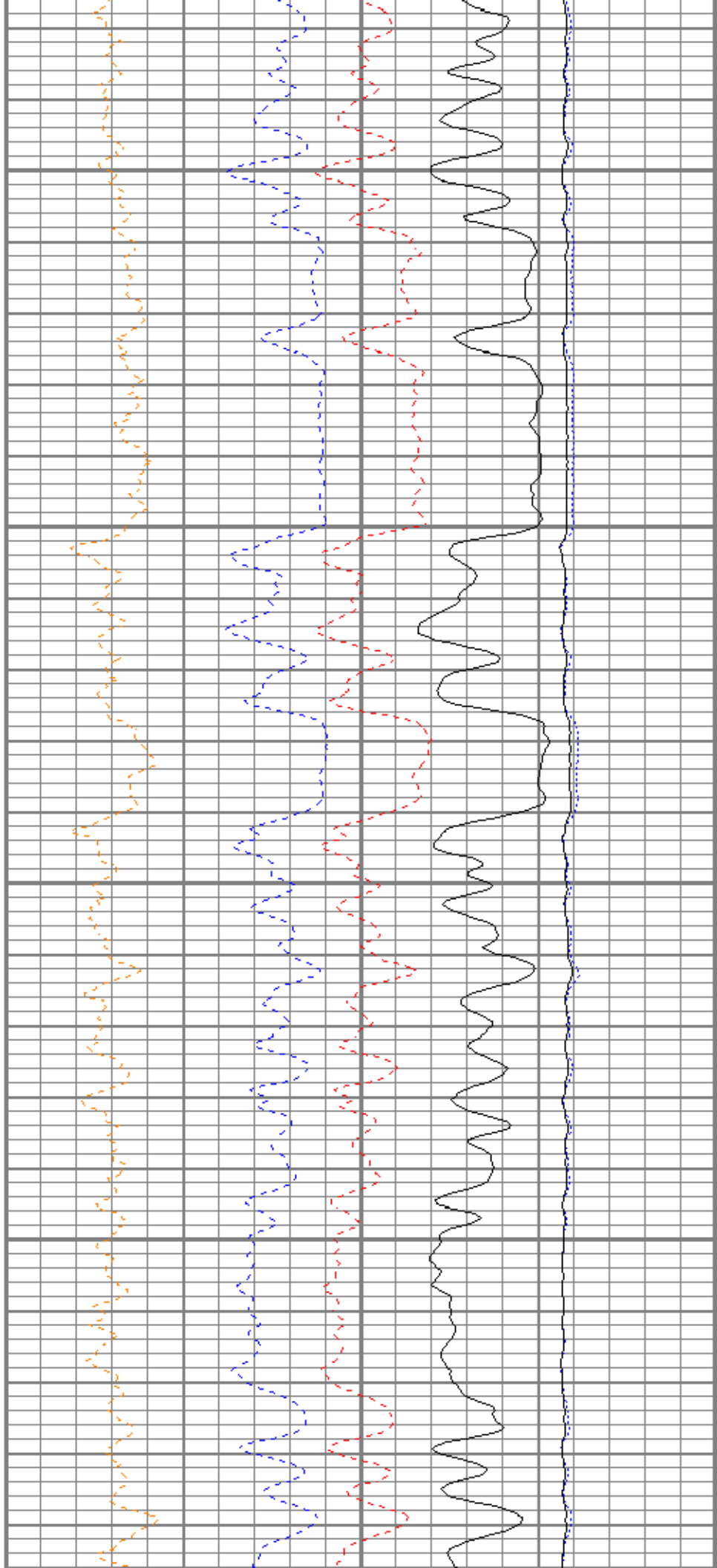
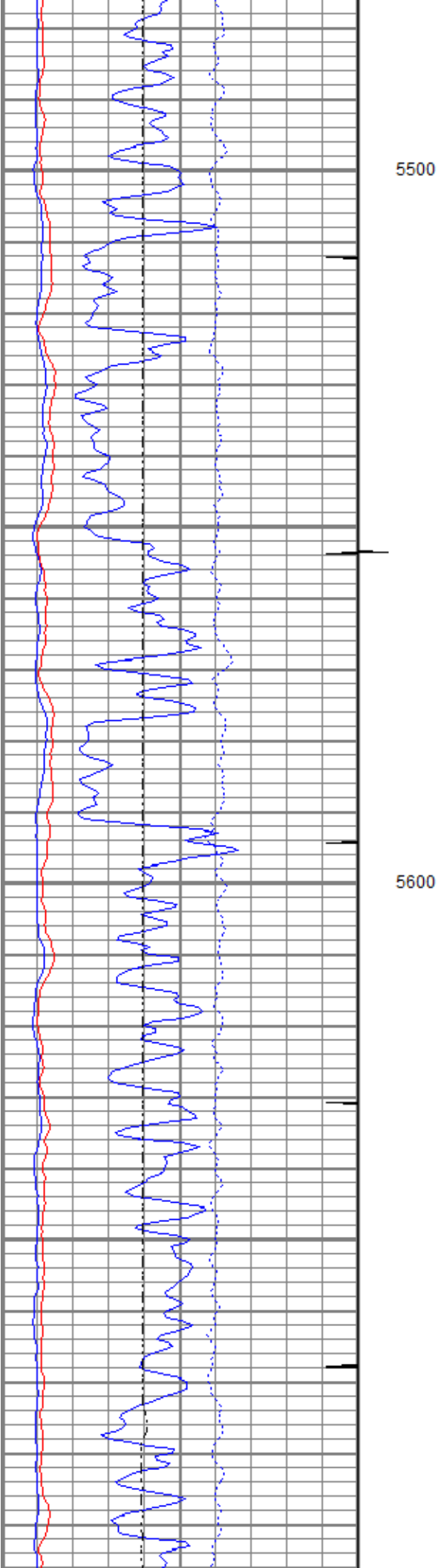


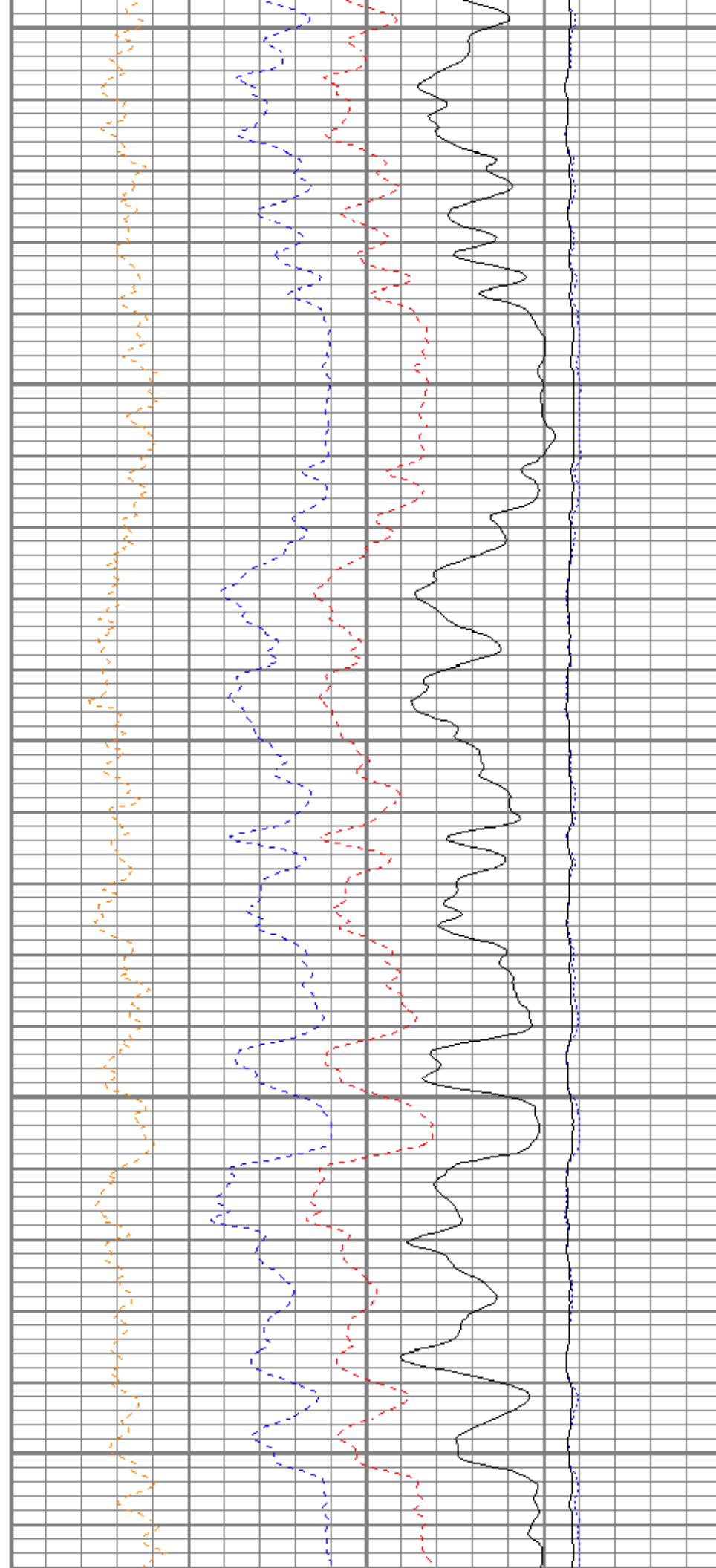
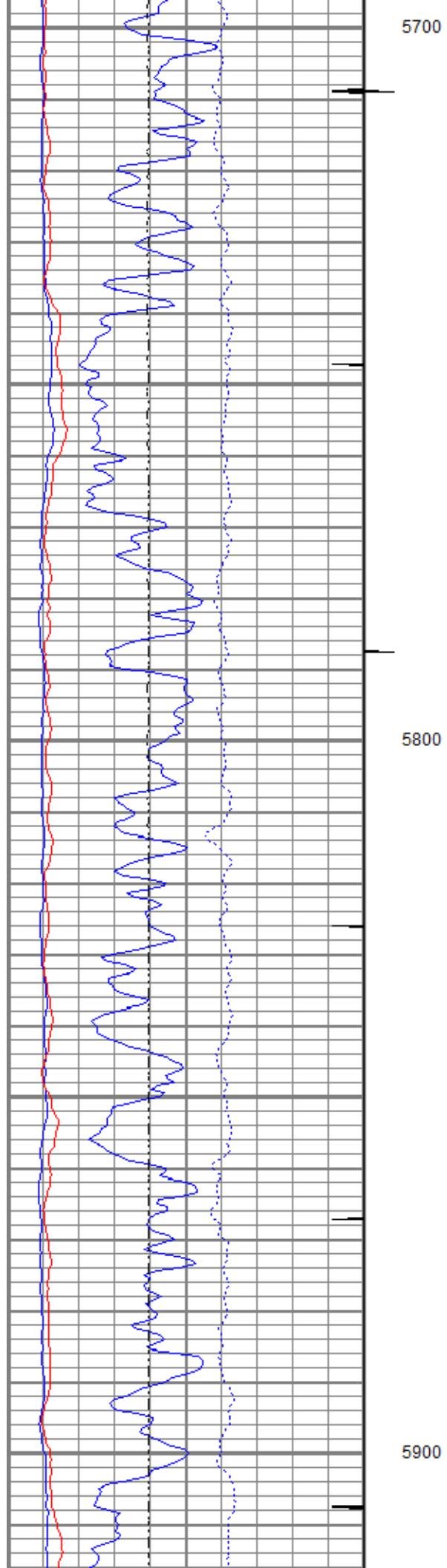


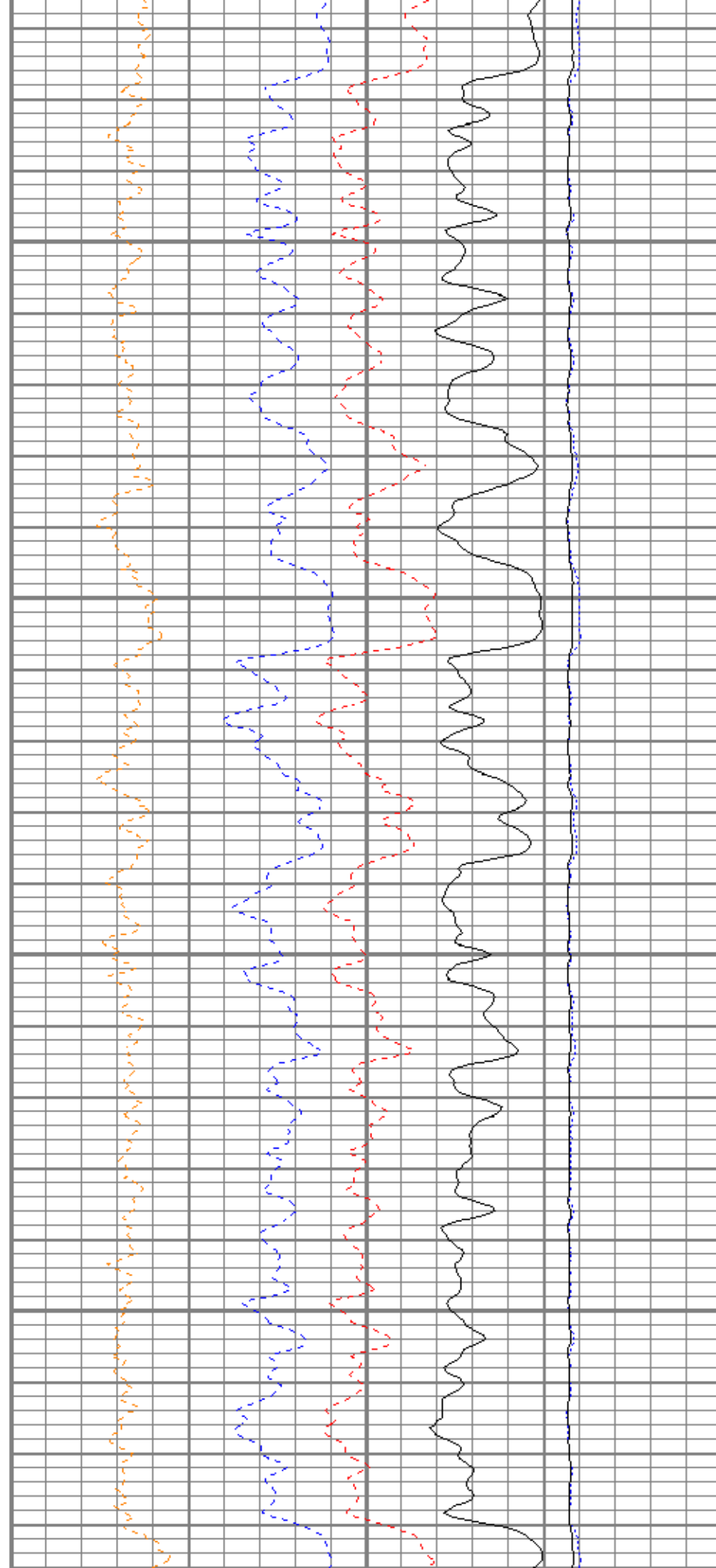
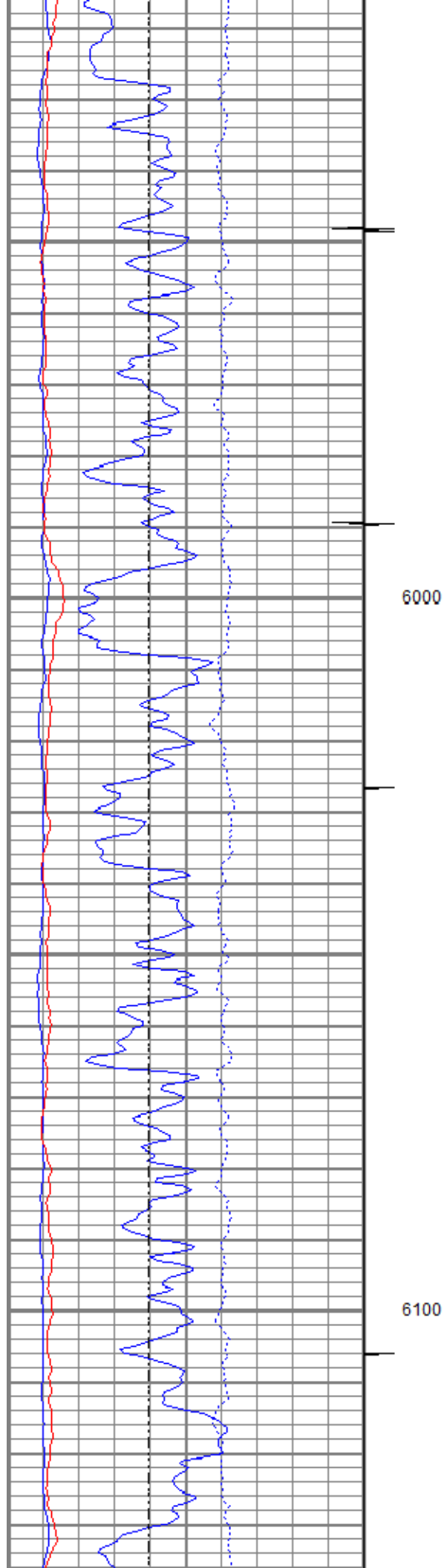


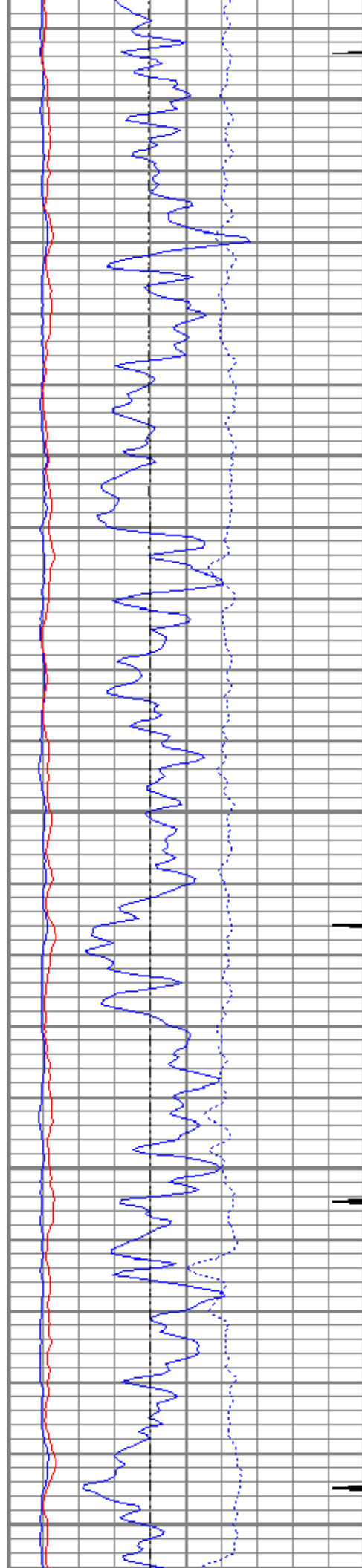






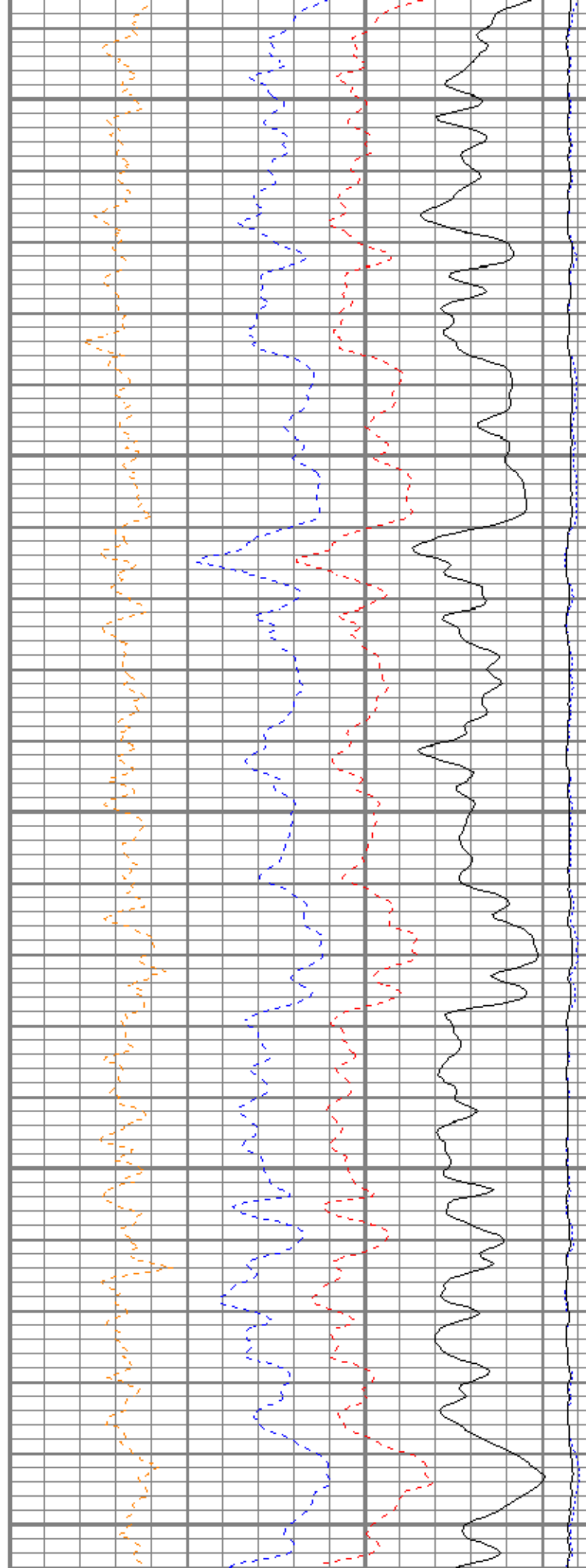


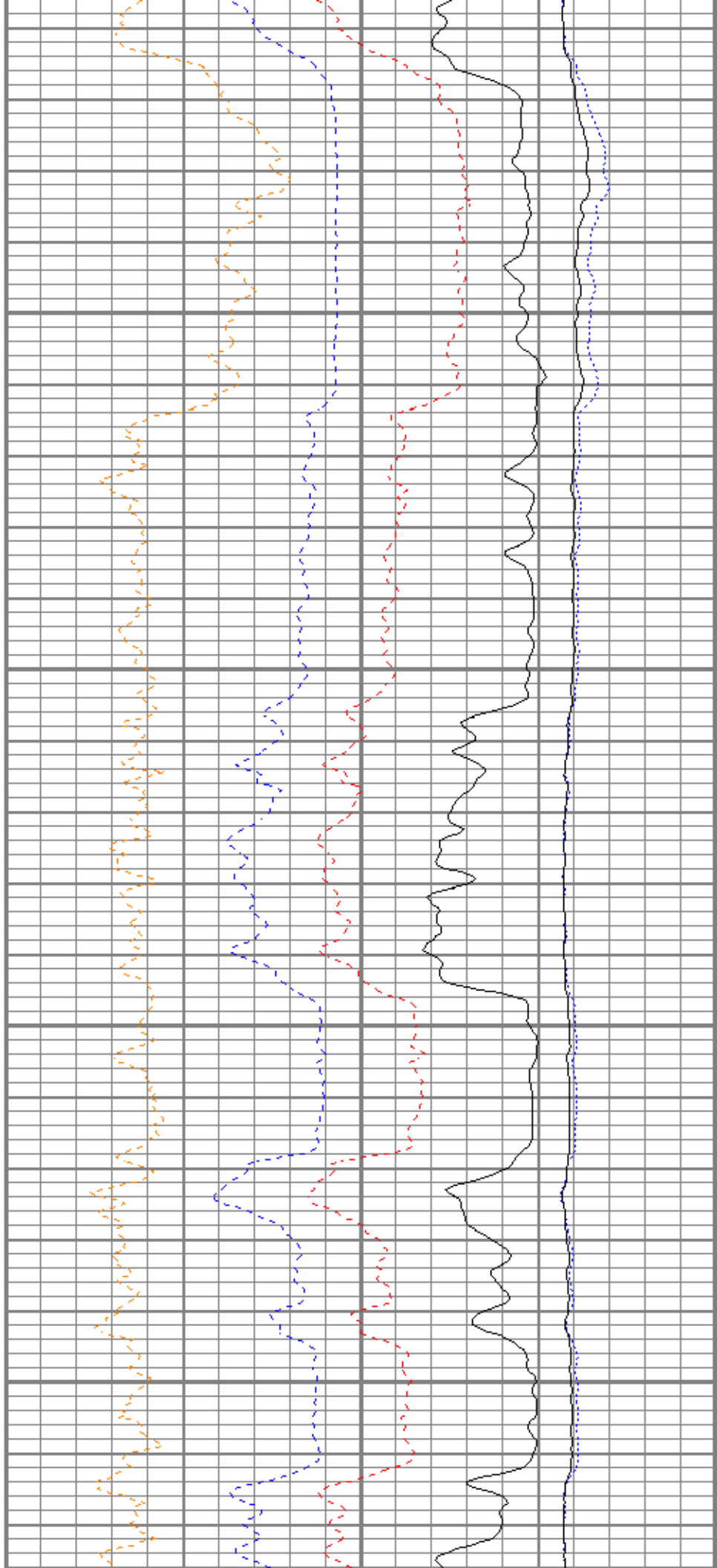
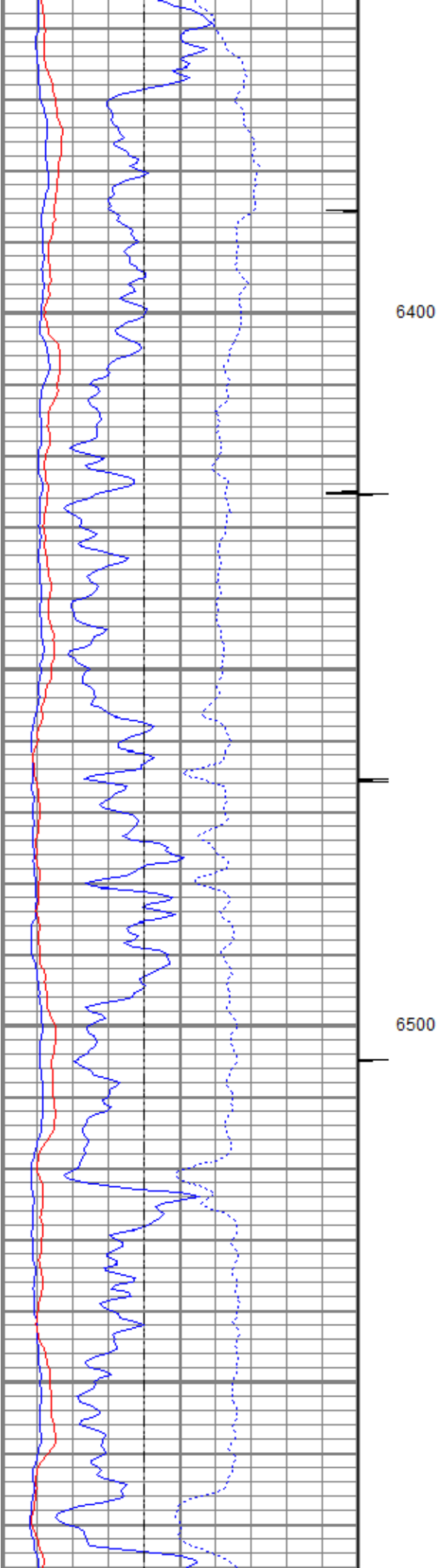


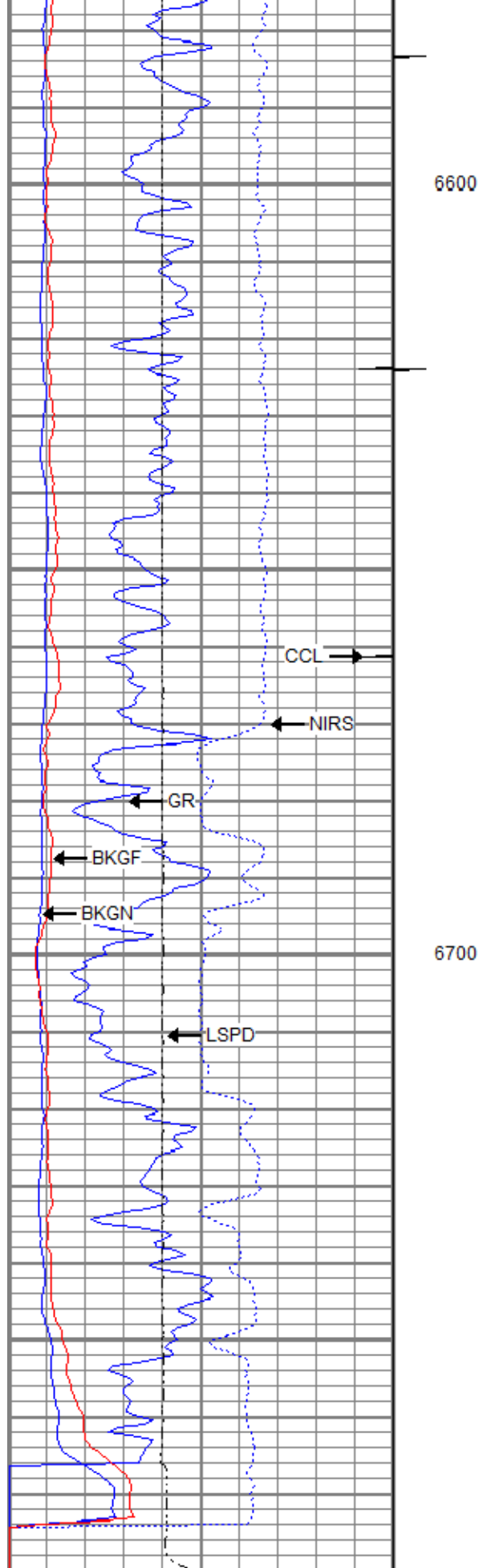


6200

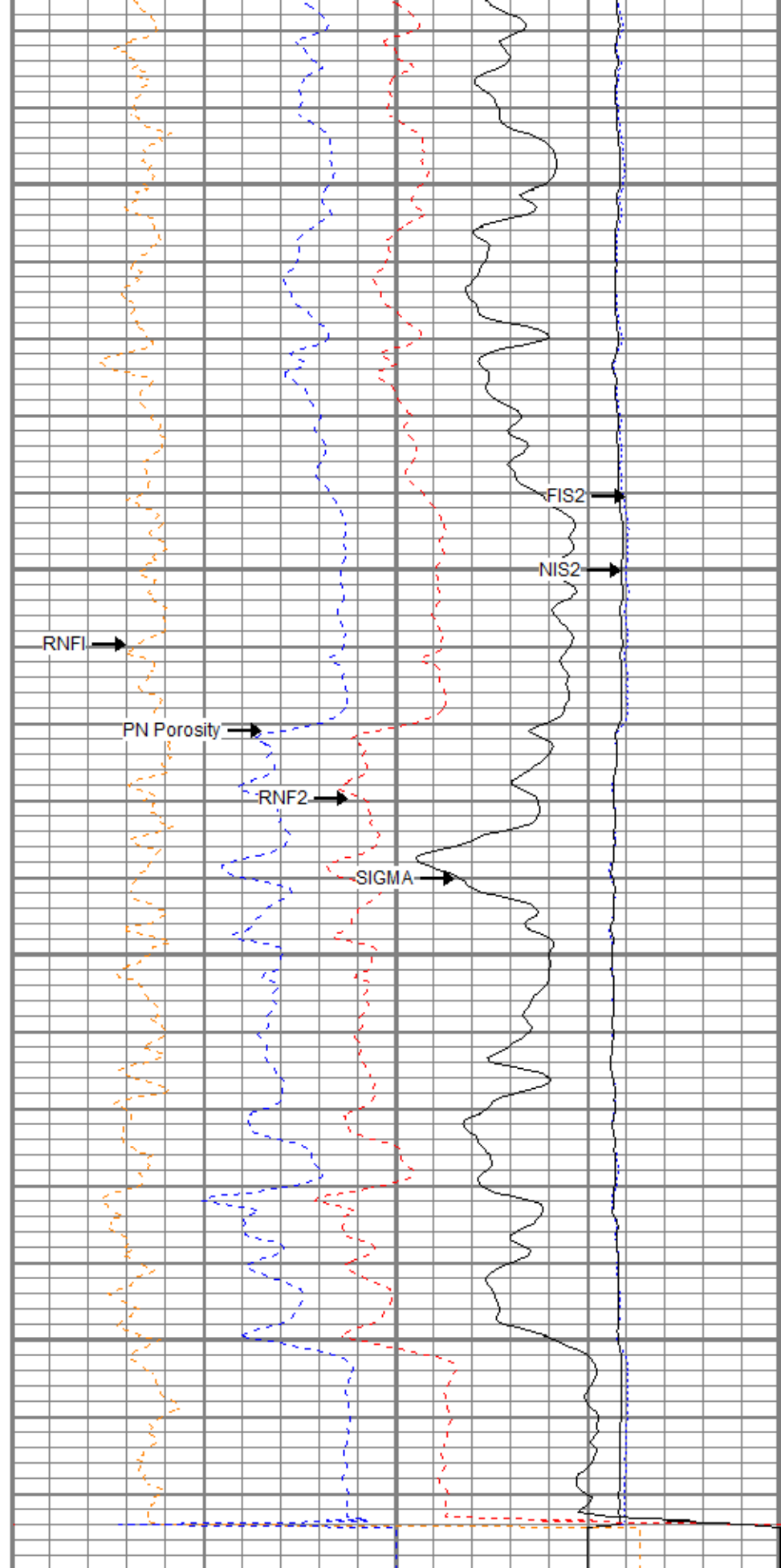
6300







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



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

0	BKGN (cps)	4000
0	BKGF (cps)	2000

0	NIS2 (cps)	0000
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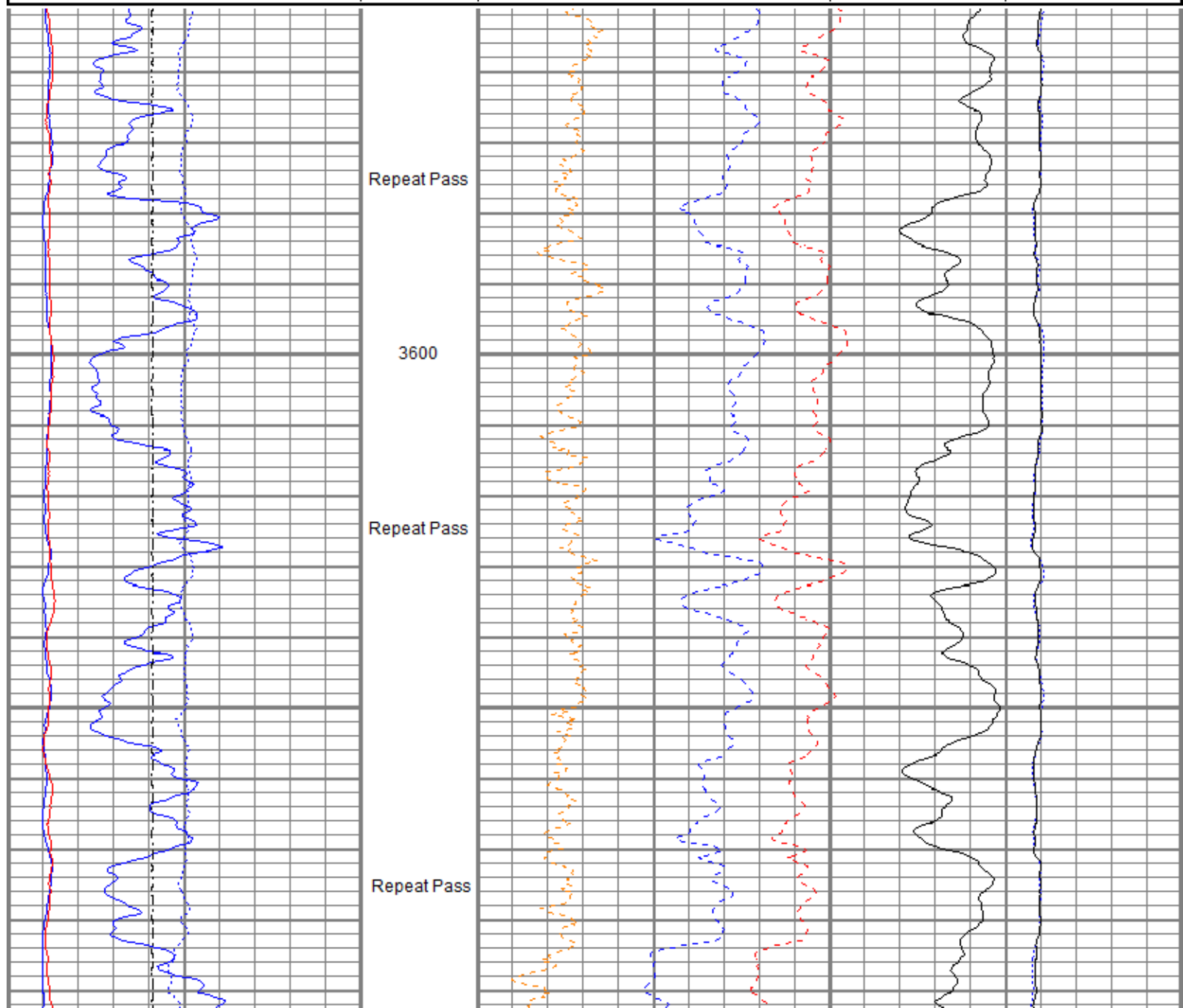


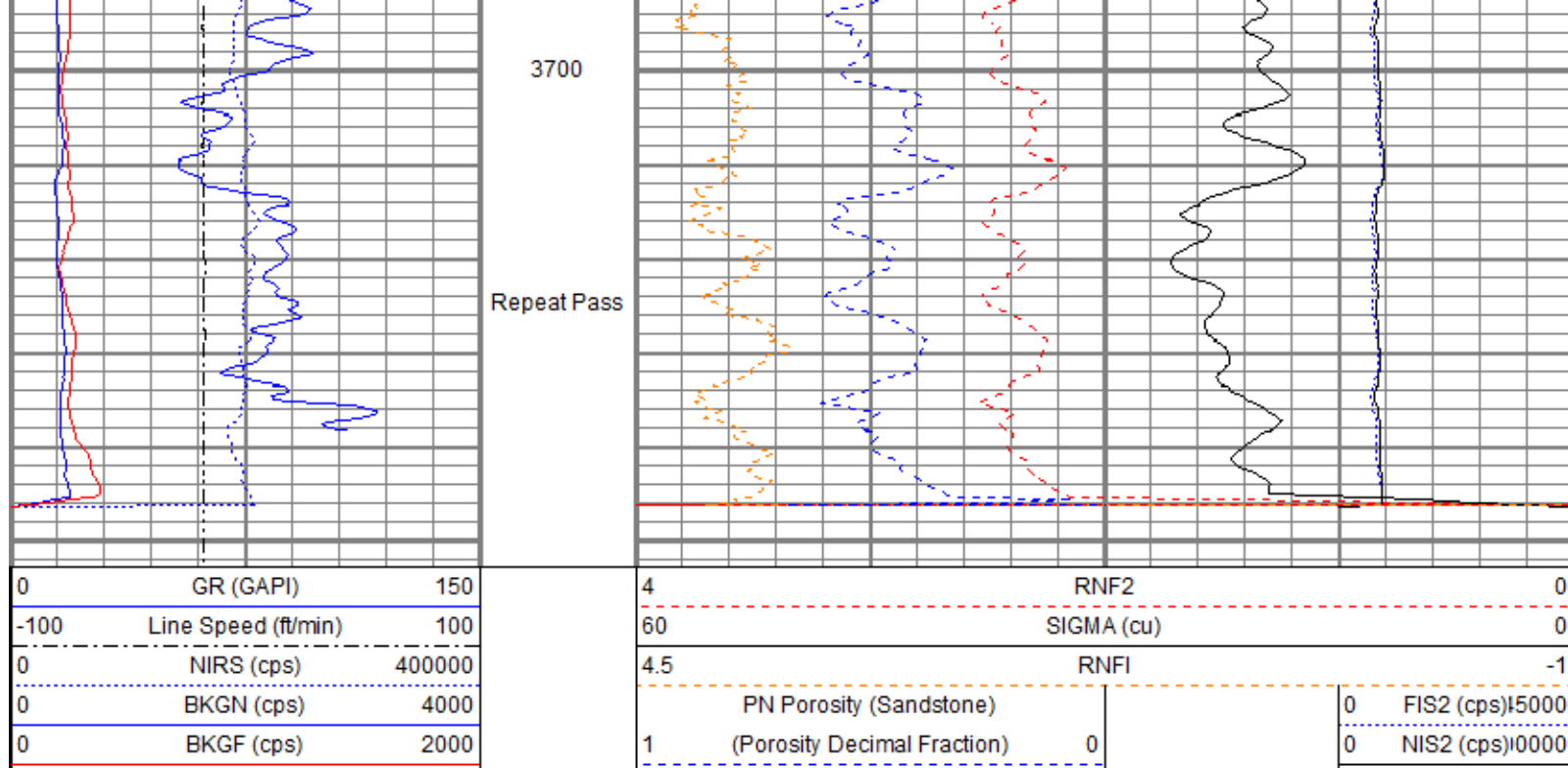
Repeat Pass



Database File tep_puckett gm 314-8_rbl_10-31-19\tep_puckett gm 314-8_pn_10-31-19.db
 Dataset Pathname Repeat.2
 Presentation Format ros_pdn_hunter
 Dataset Creation Fri Nov 01 11:43:56 2019
 Charted by Depth in Feet scaled 1:240



0	GR (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	-1
1	PN Porosity (Sandstone) (Porosity Decimal Fraction)	0
0	FIS2 (cps)	05000
0	NIS2 (cps)	0000





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TCUTEMP TCUVOLT GCL_CCL	14.44		Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.69	5.40
	14.44		HWS_TCU-002 (001704) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
	13.72		HWS_GCL-001 (001681) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
GCL_GR	12.25					

Long	6.00			HWS_RAS-RAS002 (003040) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
Far	6.00						
Near	6.00						
Anci	6.00						
Dataset: tep_puckett gm 314-8_pn_10-31-19.db: field/well/run1/Main.2 Total length: 17.77 ft Total weight: 85.49 lb O.D.: 1.69 in							

Calibration Report	
Database File	c:\programdata\warrior\data\tep_puckett gm 314-8_rbl_10-31-19\tep_puckett gm 314-8_pn_10-31-19.db
Dataset Pathname	Main.2
Dataset Creation	Fri Nov 01 11:48:52 2019

RAS Calibration Report	
Calibration Date:	Fri Nov 01 14:23 2019
Meas #:	003040

Water Tank				
Description	Curve	Standard	Mean	Dev
Sigma Near	SIGN	23.1	24.3	0.31
Sigma Far	SIGF	22.8	23.5	0.38
Ratio Near-Long Capture	RNL2	5.79	6.42	0.07
Ratio Near-Long Burst	RNLB	6.49	6.65	0.04
Ratio Near-Far Capture	RNF2	1.85	1.99	0.02
Ratio Near-Far Burst	RNFB	2.03	2.15	0.01
Spectral Hydrogen Index	HIS2	12.84	12.91	0.19
Carbon-Oxygen Ratio	CORS	1.34	1.36	0.06
Ratio Burst-Capture Near	RNBC	1.46	1.74	0.01
Ratio Burst-Capture Far	RFBC	1.50	1.67	0.02

Hydrocarbon Tank				
Description	Curve	Standard	Mean	Dev
Sigma Near	SIGN	25.7	26.7	0.32
Sigma Far	SIGF	25.1	25.6	0.46
Ratio Near-Long Capture	RNL2	1.78	2.96	0.02
Ratio Near-Long Burst	RNLB	2.57	4.34	0.02
Ratio Near-Far Capture	RNF2	0.98	1.30	0.01
Ratio Near-Far Burst	RNFB	1.30	1.65	0.01
Spectral Hydrogen Index	HIS2	16.68	17.87	0.36
Carbon-Oxygen Ratio	CORS	1.51	1.62	0.06
Ratio Burst-Capture Near	RNBC	2.23	2.44	0.02

Ratio Burst-Capture Far	RFBC	2.09	2.13	0.02
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Gamma Ray Calibration Report			
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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/



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