

## Schlumberger

Company: **TEP ROCKY MOUNTAIN LLC**

Well: TR 423-23-597

## Field: Trail Ridge

County: **Garfield**

# State: Colorado

# Triple Combo

County: Garfield  
Field: Trail Ridge  
Location: SWNE Sec. 23 T5S R97W  
Well: TR 423-23-597  
Company: TEP ROCKY MOUNTAIN LLC

LOCATION			
SWNE Sec. 23 T5S R97W	Elev.:	K.B.	8569.20 ft
SHL: 2552 FNL 1455 FEL		G.L.	8545.20 ft
Latitude: 39.59938 Longitude: -108.241462		D.F.	8569.20 ft
Permanent Datum:	Ground Level	Elev.:	8545.20 ft
Log Measured From:	Kelly Bushing	24.00 ft	above Perm. Datum
Drilling Measured From:	Kelly Bushing		
API Serial No. 05-045-23462	Section 23	Township 5S	Range 97W

[illegible]

Logging Date	8-Aug-2017				
Run Number	1				
Depth Driller	10380 ft				
Schlumberger Depth	10320 ft				
Bottom Log Interval	10320 ft				
Top Log Interval	2878 ft				
Casing Driller Size @ Depth	9.625 in @ 2978 ft			@	
Casing Schlumberger	2980 ft				
Bit Size	8.750 in				
Type Fluid In Hole	WBM				
Density	Viscosity	8.9 lbm/gal		125 s	
Fluid Loss	PH	10 cm3		7.8	
Source Of Sample	Sample				
RM @ Measured Temperature	1.579 ohm.m			@ 75 degF	@
RMF @ Measured Temperature	1.184 ohm.m			@ 75 degF	@
RMC @ Measured Temperature	2.368 ohm.m			@ 75 degF	@
Source RMF	RMC	Calculated	Calculated		
RM @ MRT	RMF @ MRT	0.678 @ 184	0.508 @ 184	@	@
Maximum Recorded Temperatures	184 degF				
Circulation Stopped	Time	08-Aug-2017		7:30	
Logger On Bottom	Time	08-Aug-2017		10:00	
Unit Number	Location	9115 Fort Morgan			
Recorded By	Stephen Tang				
Witnessed By	Matt Hutson				

	Logging Date				
	Run Number				
	Depth Driller				
	Schlumberger Depth				
	Bottom Log Interval				
	Top Log Interval				
	Casing Driller Size @ Depth	@			
	Casing Schlumberger				
	Bit Size				
	Type Fluid In Hole				
	Density	Viscosity			
MUD	Fluid Loss	PH			
	Source Of Sample				
	RM @ Measured Temperature	@			
	RMF @ Measured Temperature	@			
	RMC @ Measured Temperature	@			
	Source RMF	RMC			
	RM @ MRT	RMF @ MRT	@	@	
	Maximum Recorded Temperatures				
	Circulation Stopped	Time			
	Logger On Bottom	Time			
	Unit Number	Location			
	Recorded By				
	Witnessed By				

## DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1

OS1:

OS2:

OS3:

OS4:

OS5:

OTHER SERVICES2

OS1:

OS2:

OS3:

OS4:

OS5:

REMARKS: RUN NUMBER 1

Toolstring ran as per toolsketch.

Log depth recorded as driller depth.

Logs processed from memory data.

First log in well.

REMARKS: RUN NUMBER 2

RUN 1

SERVICE ORDER #:  
PROGRAM VERSION:  
FLUID LEVEL:

DW01-00002  
19C2-270

LOGGED INTERVAL

START

**STOP**

RUN 2

SERVICE ORDER #:  
PROGRAM VERSION:  
FLUID LEVEL:

LOGGED INTERVAL

START

**STOP**

EQUIPMENT DESCRIPTION

RUN 1

RUN 2

## SURFACE EQUIPMENT

## WITM (ThruBit)

## DOWNHOLE EQUIPMENT

TBT-A  
CCL  
BDOT-B  
THOT  
T10\_1  
SAH-TB  
TBAT1  
TBAT2

CCL

70.6

71.3

Hang-Off

64.2

WCIB  
TMG-A  
TILE-A  
TBN-A  
NNLS-EWA  
TBD-A  
GGLS-FZ  
KAH-TB\_2  
TCME-A  
TBI-A

Gamma-Ray — 44.7

Status — 39.4

Neutron N  
Neutron F — 32.6

Density L — 21.6  
Caliper — 21.5  
Density S — 21.2

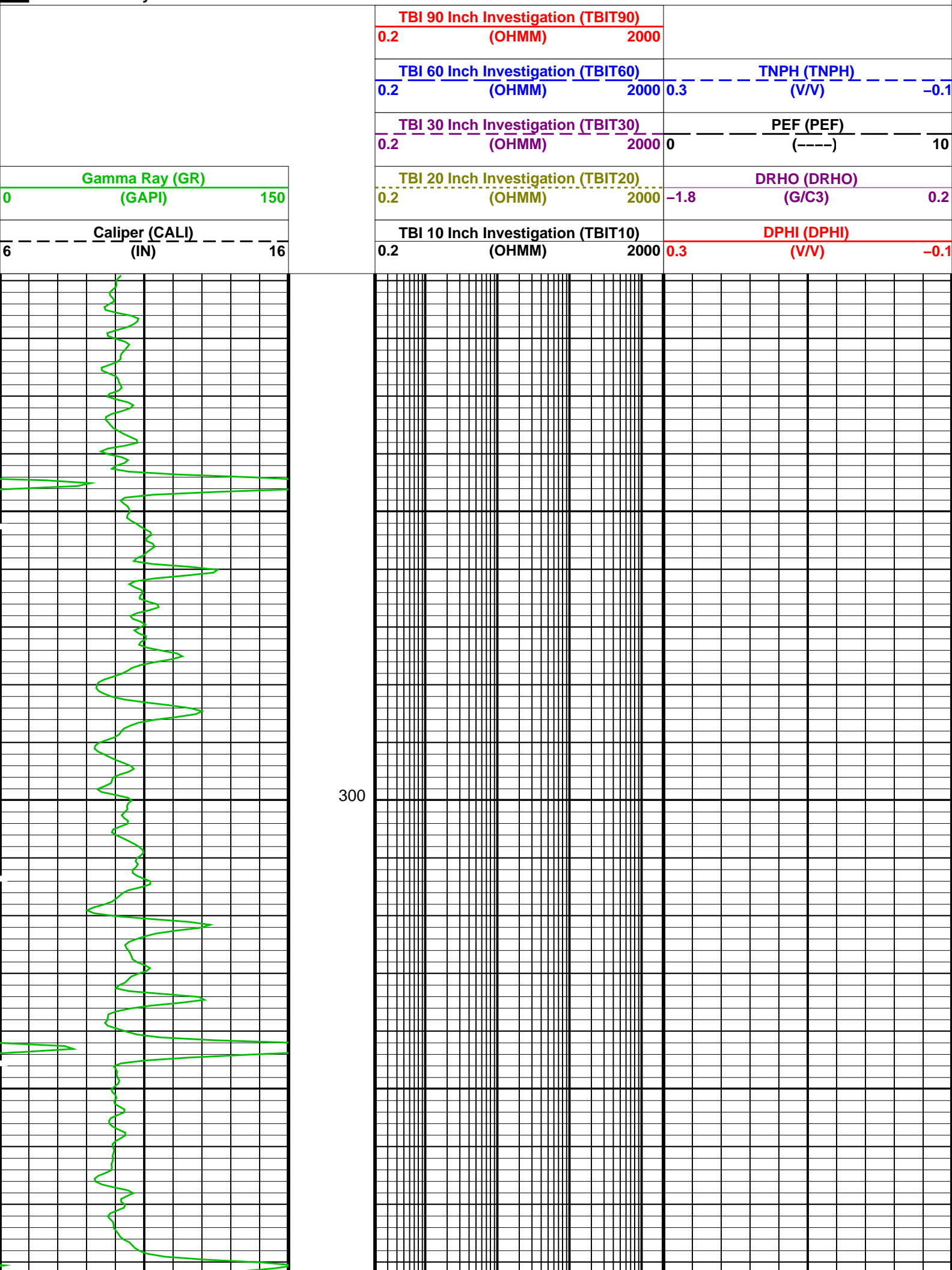
Array 5  
Array 4  
Array 3  
Array 2  
Array 1  
Status — 9.3

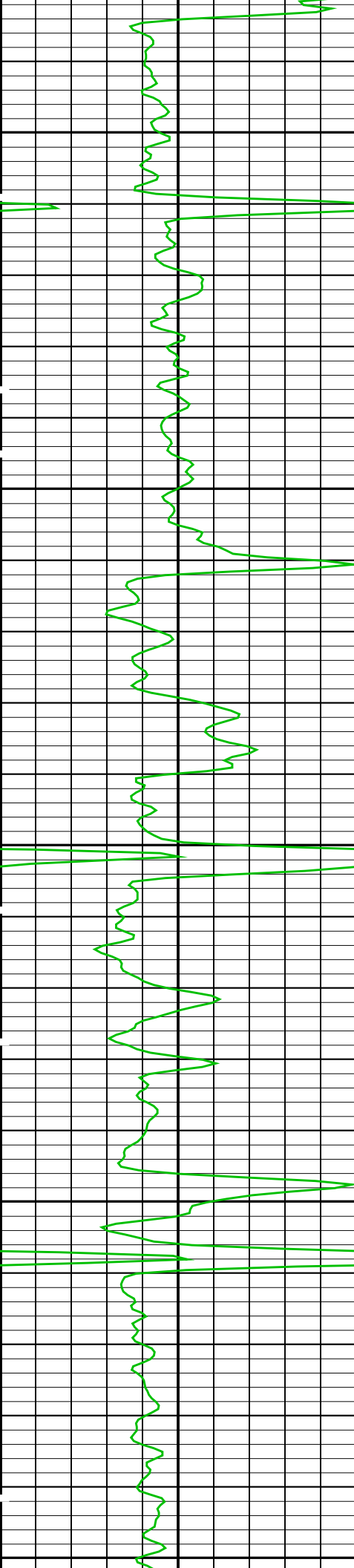
TB Status  
Tension — 0.0

TOOL ZERO

MAXIMUM STRING DIAMETER 2.13 IN  
MEASUREMENTS RELATIVE TO TOOL ZERO  
ALL LENGTHS IN FEET





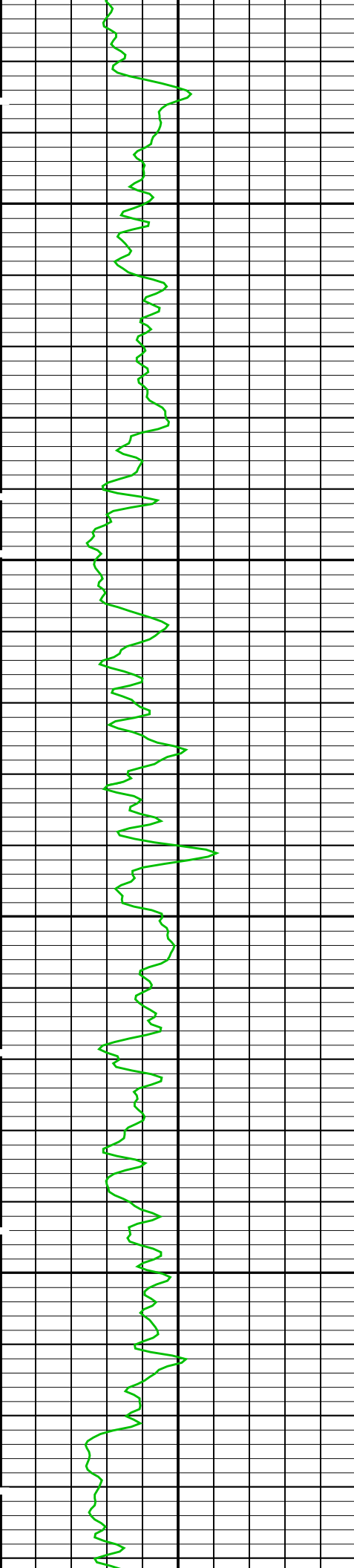


400

500

600

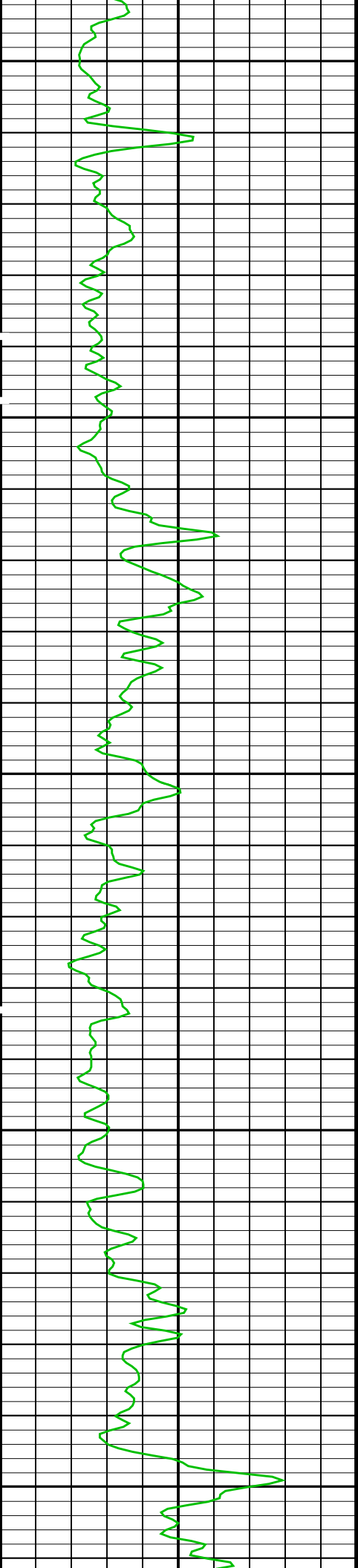




900

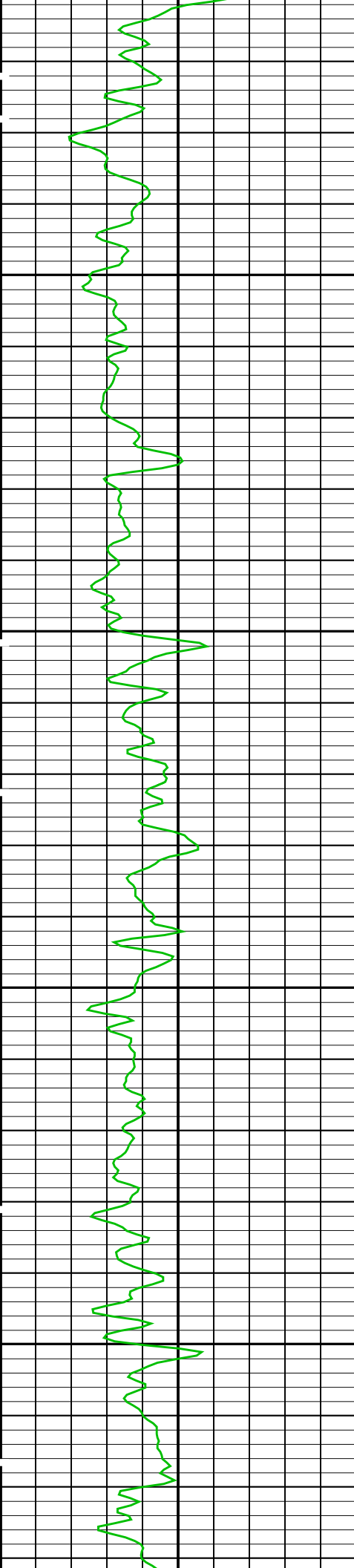
1000





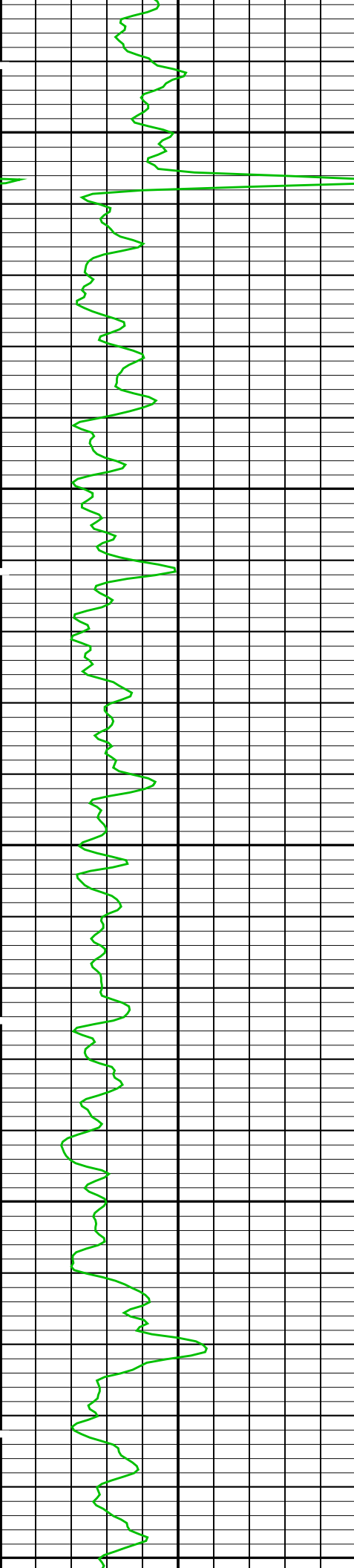
1100

1200



1300

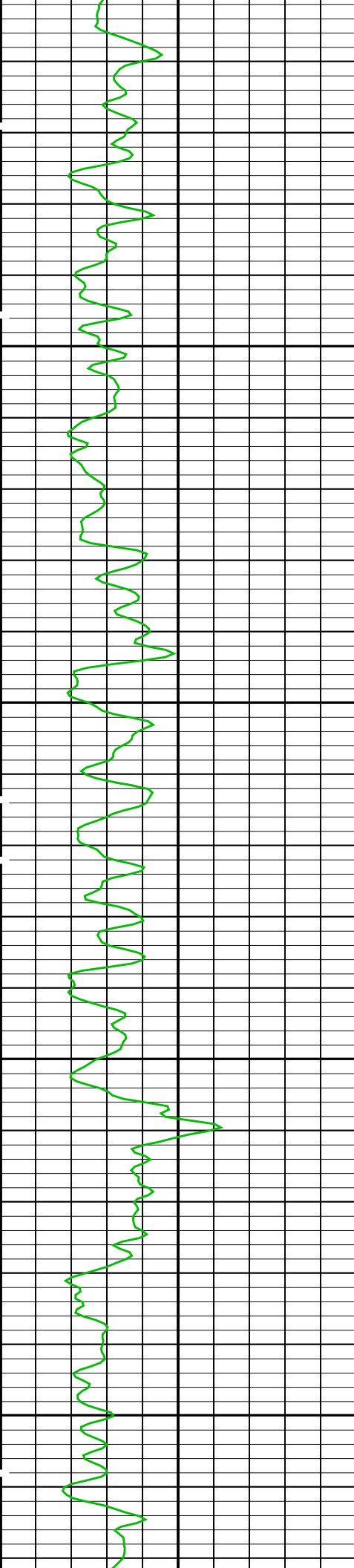
1400



1500

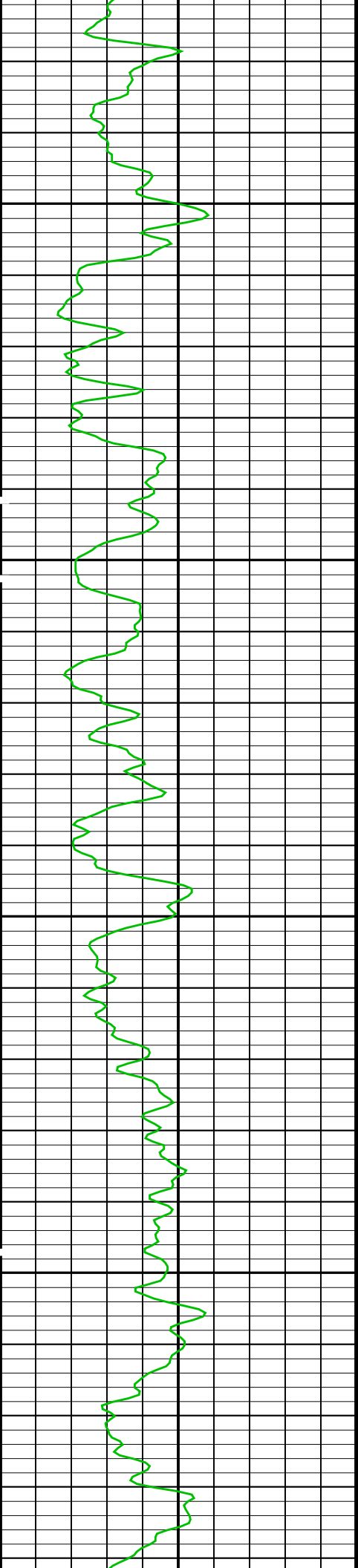
1600

1700



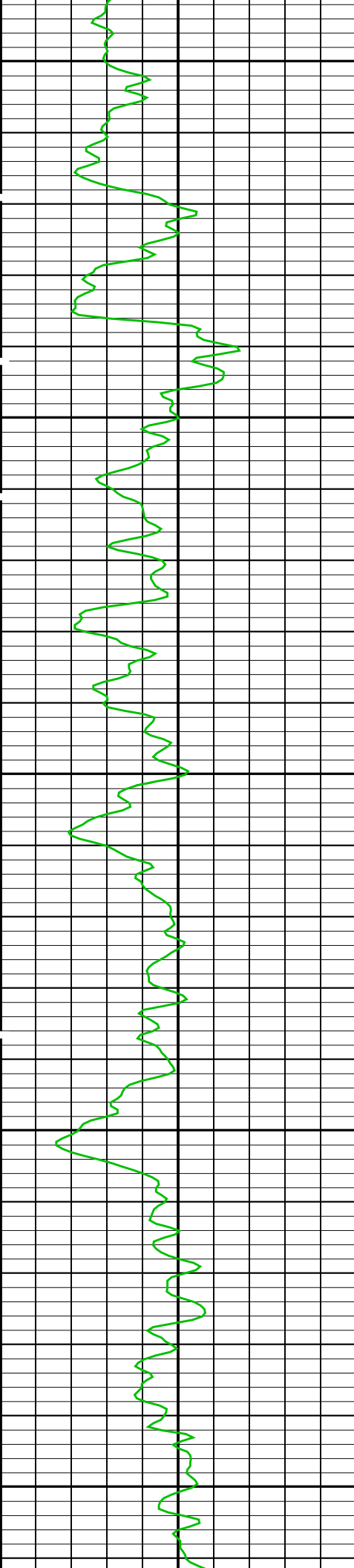
1800

1900



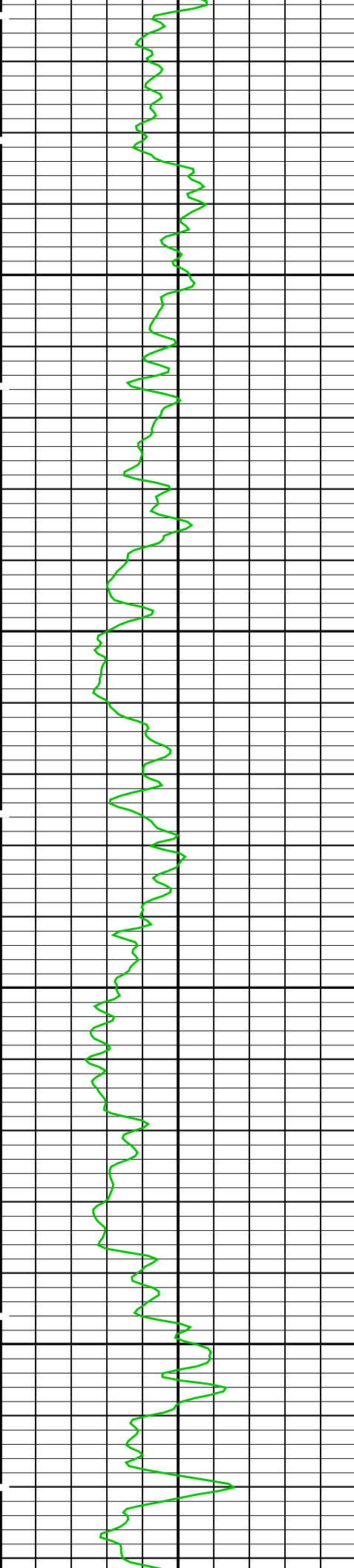
2000

2100



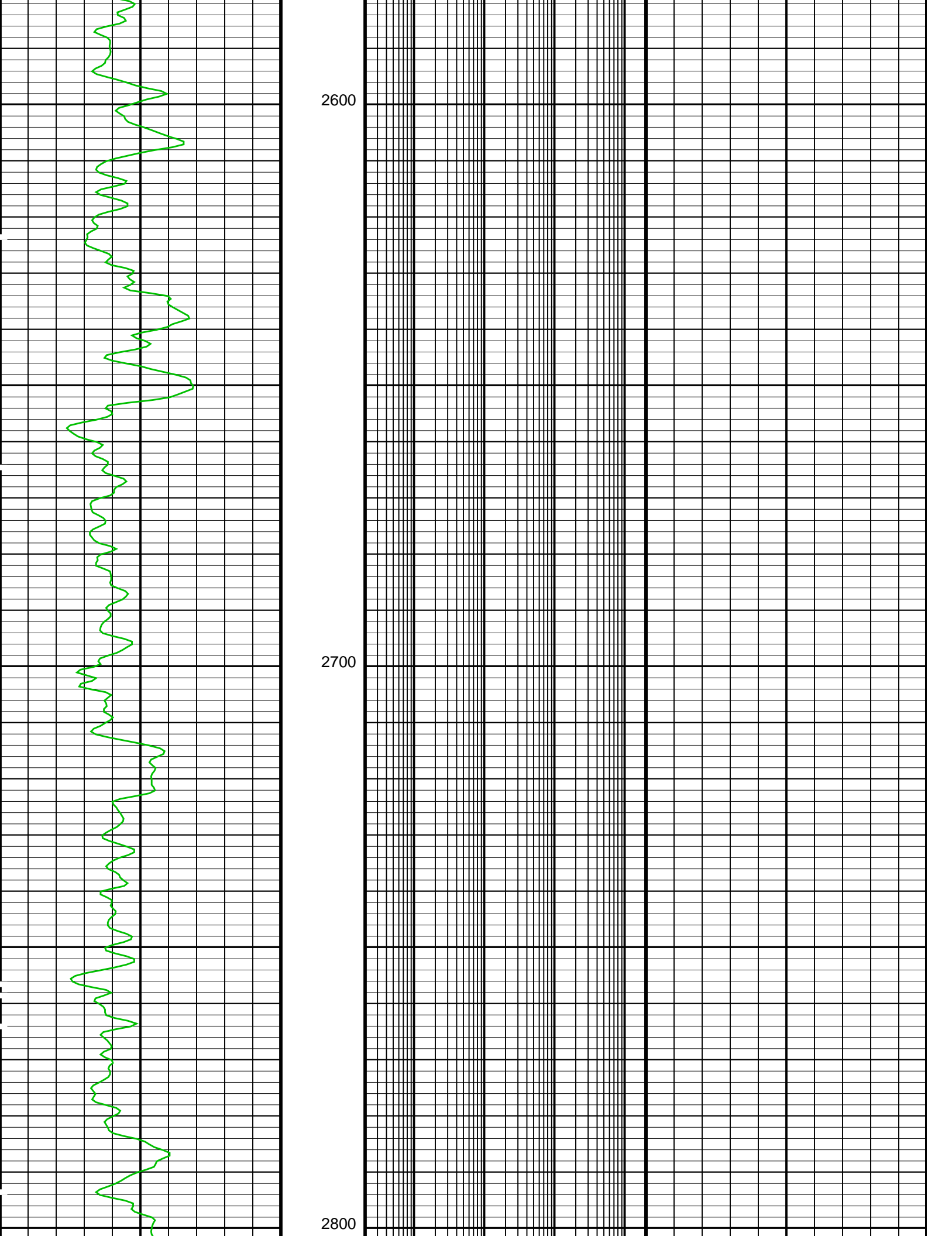
2200

2300

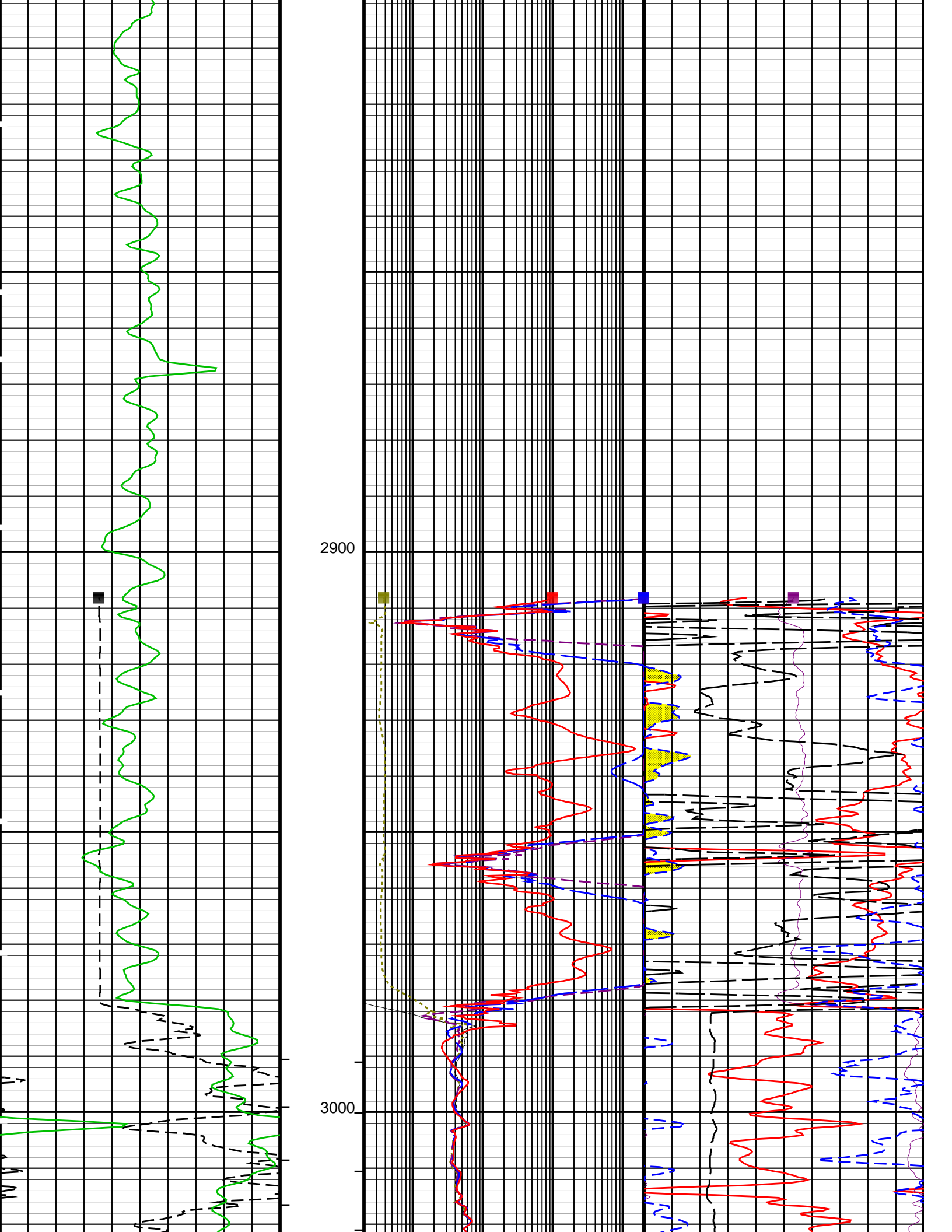


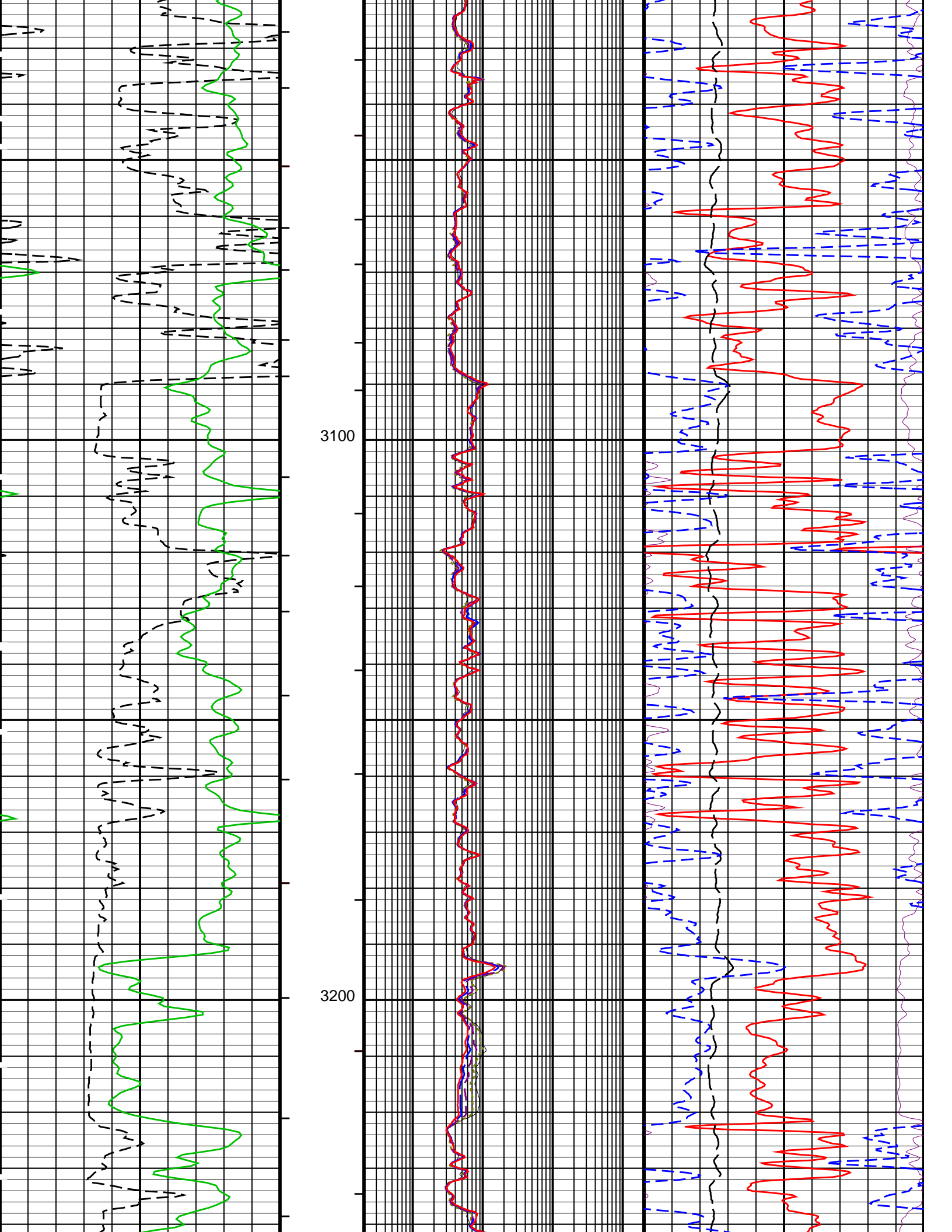
2400

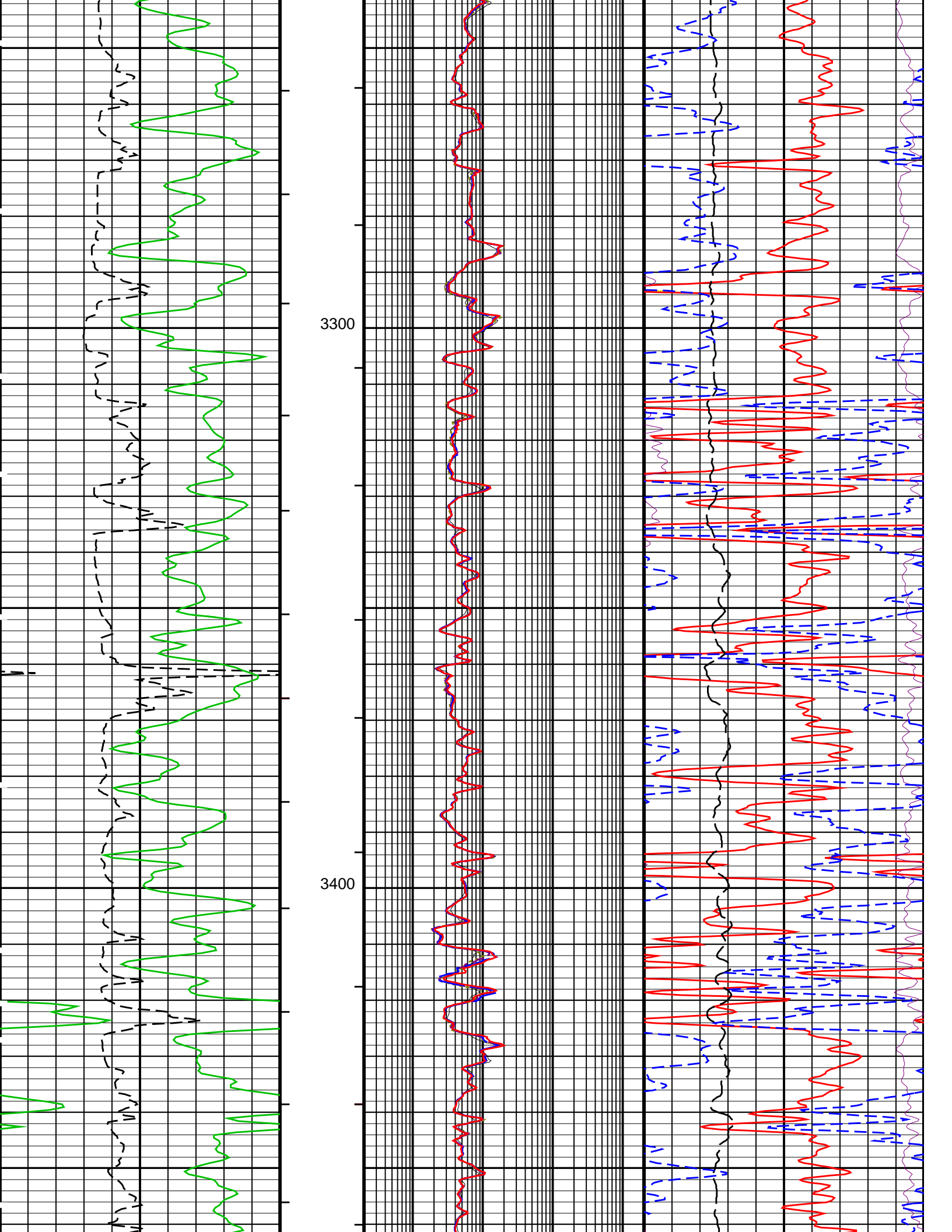
2500

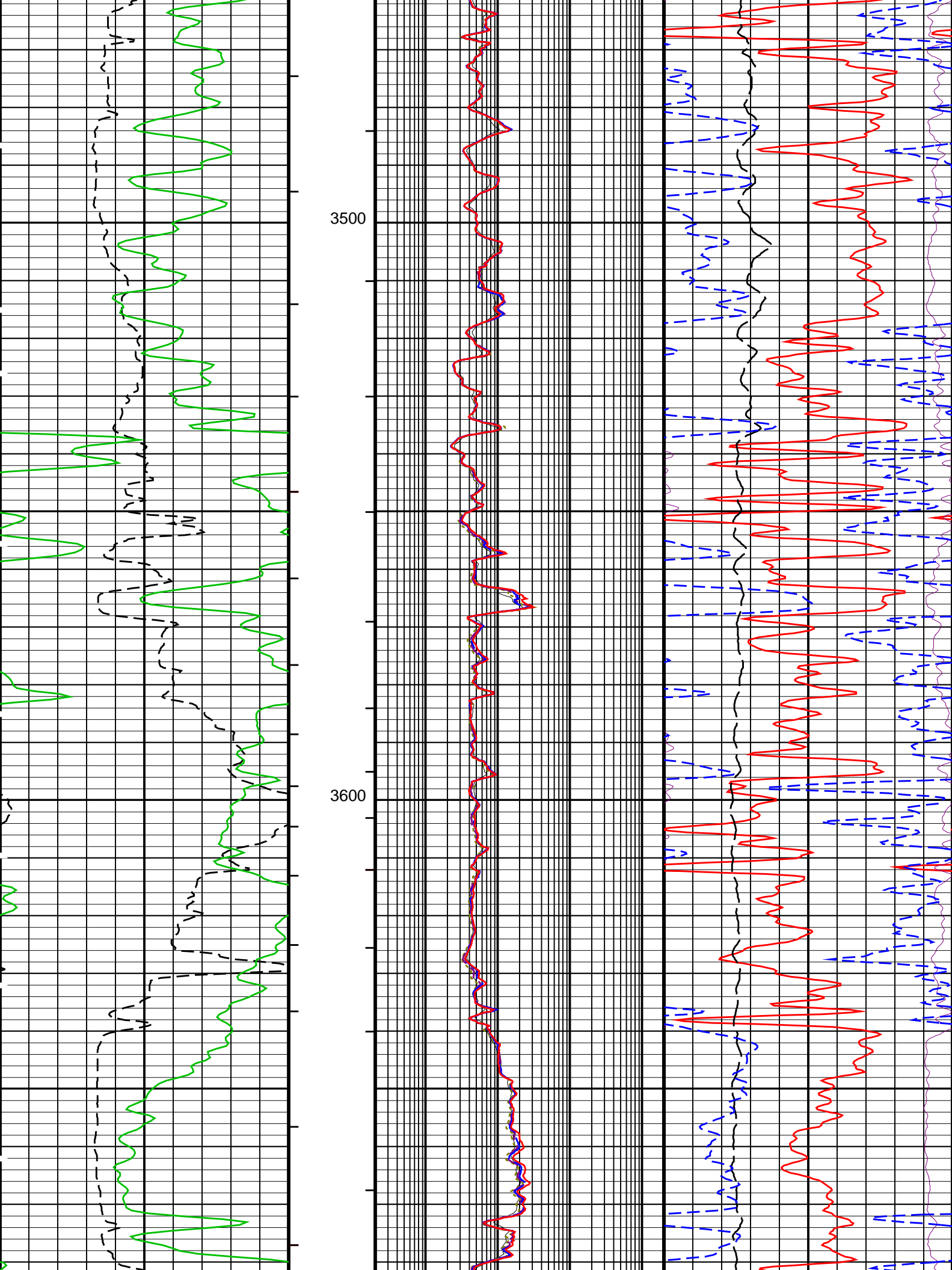


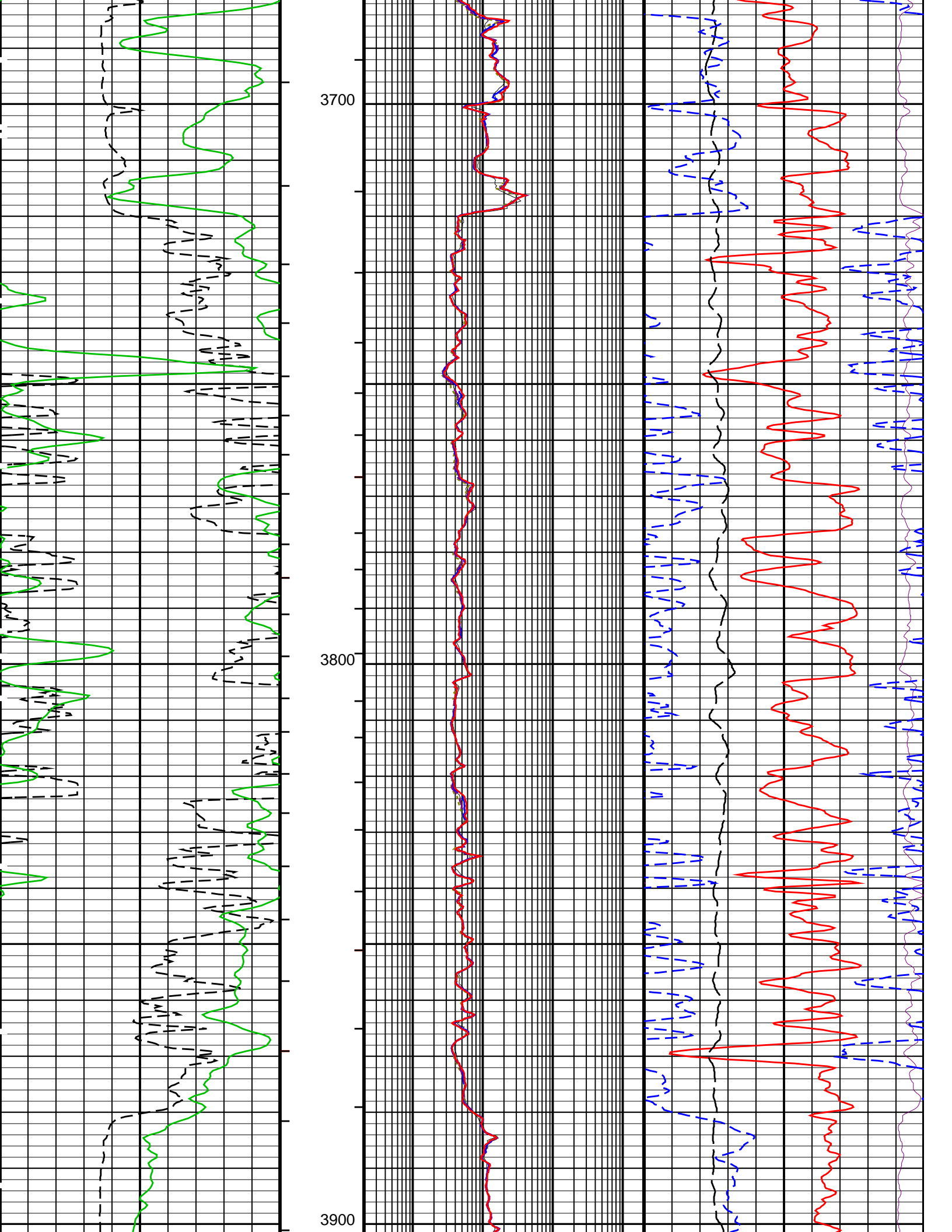


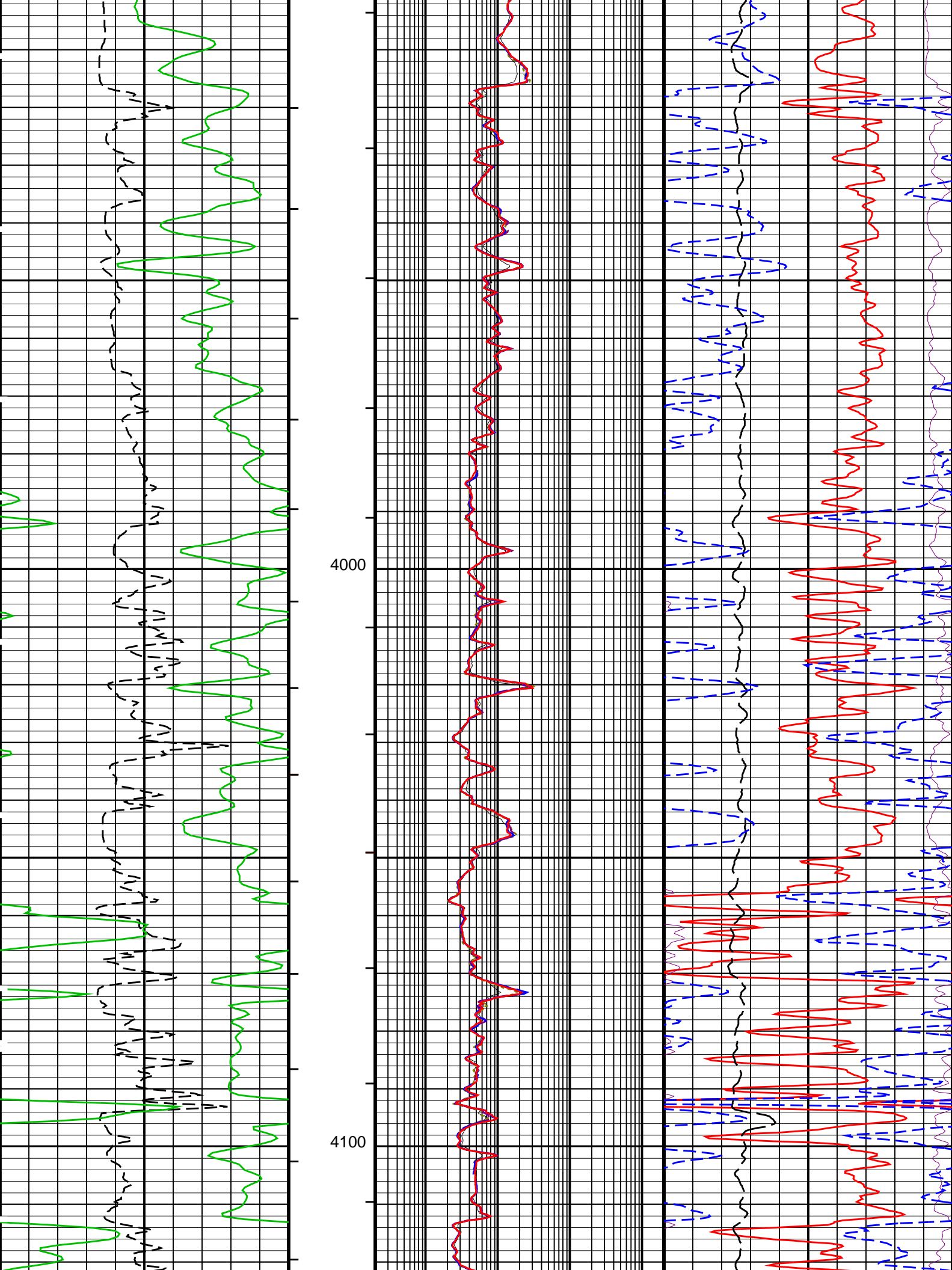


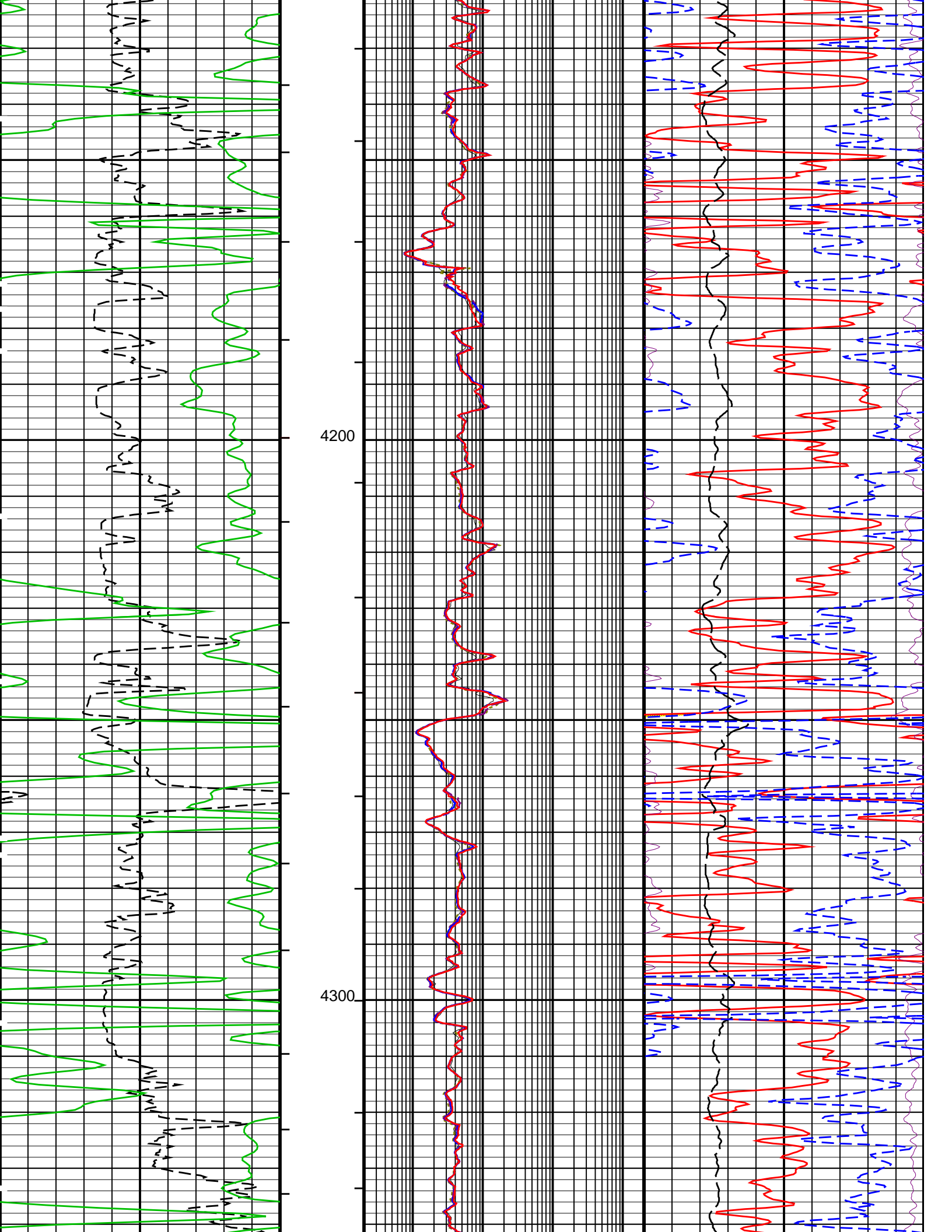


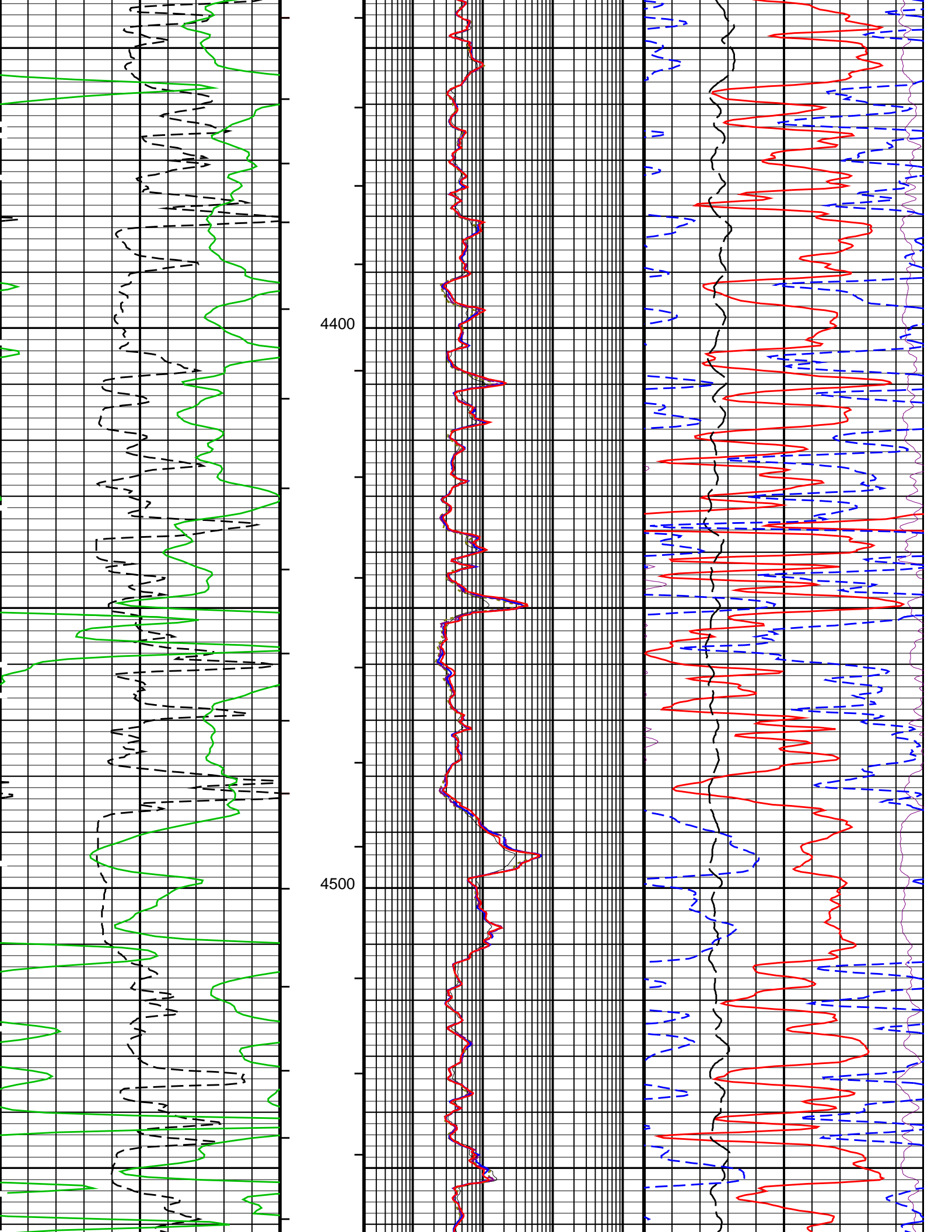




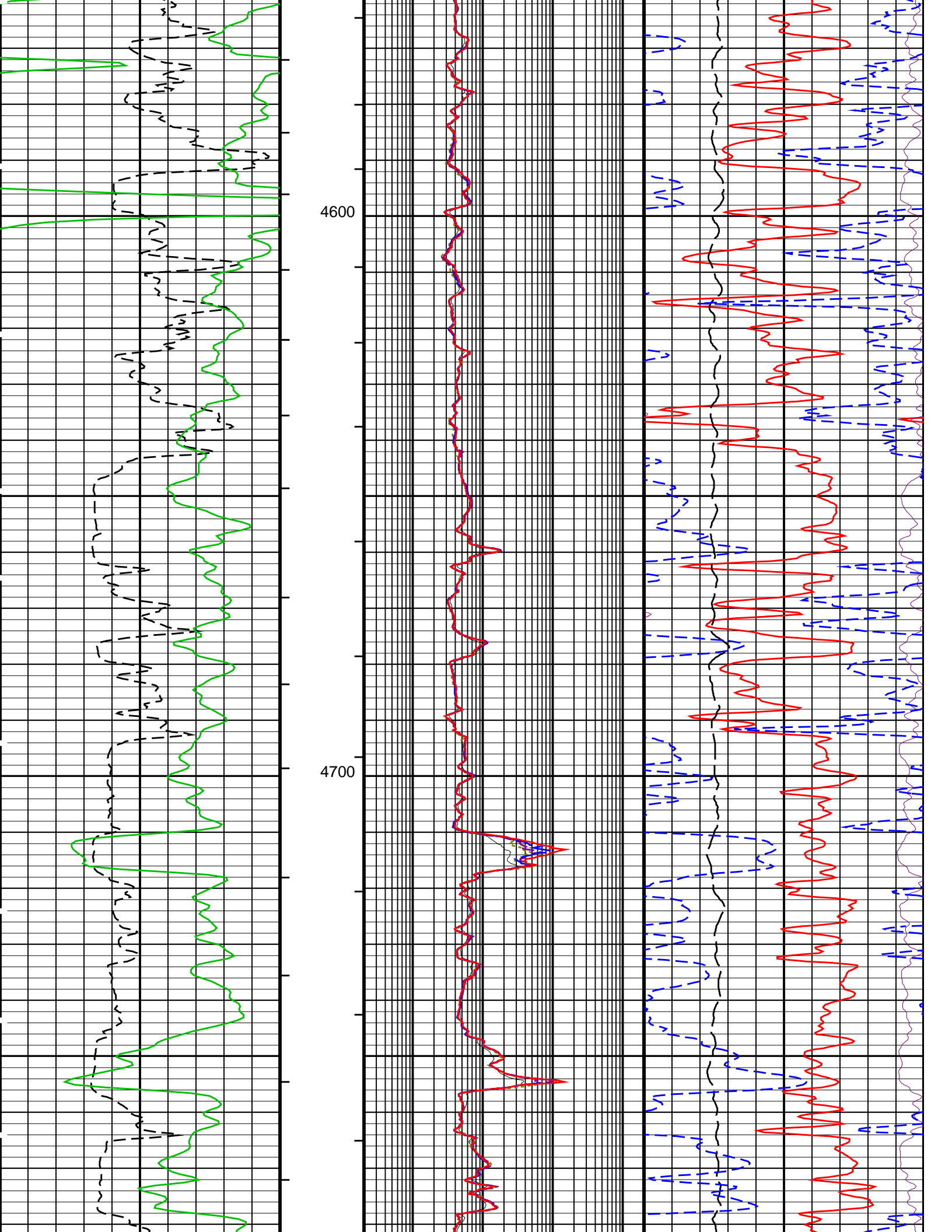


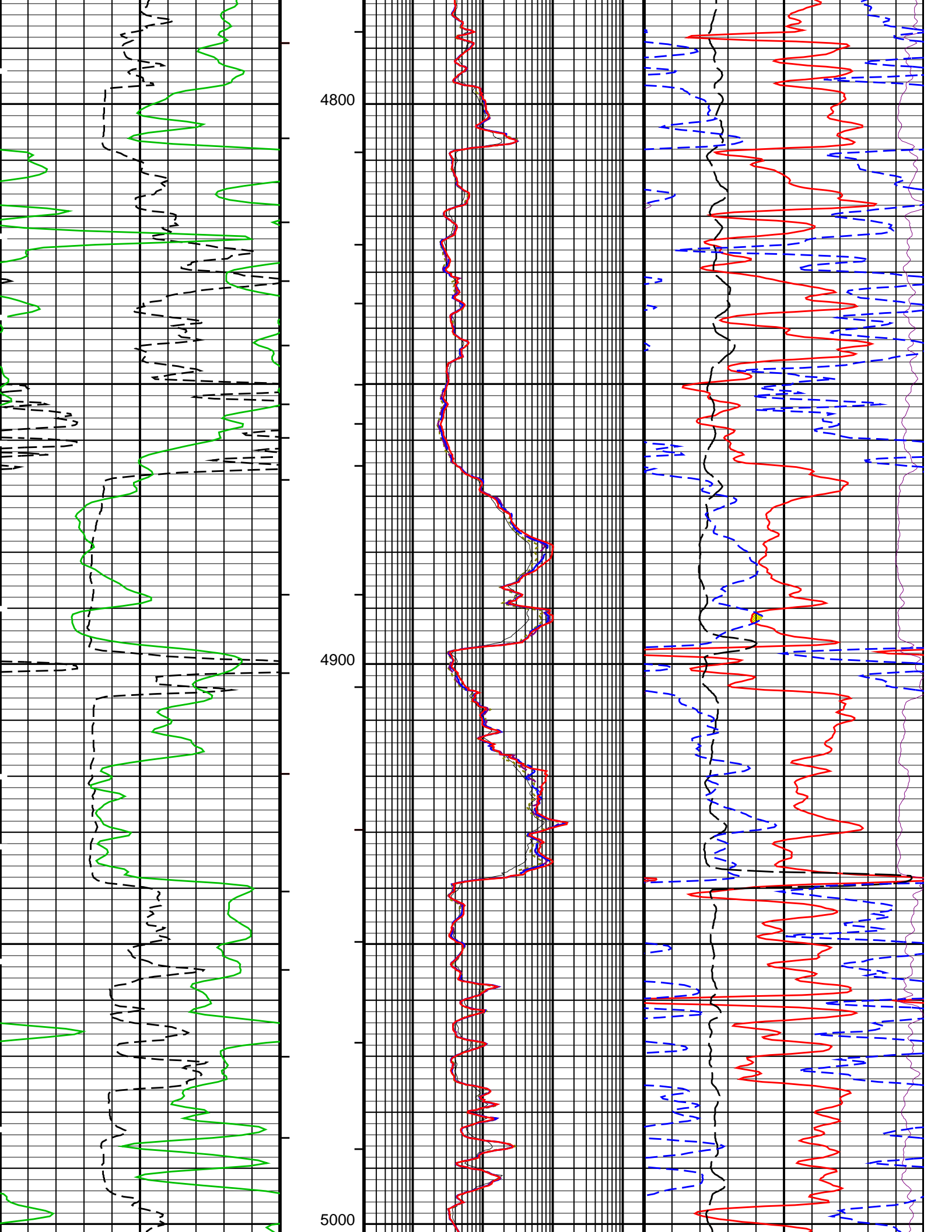


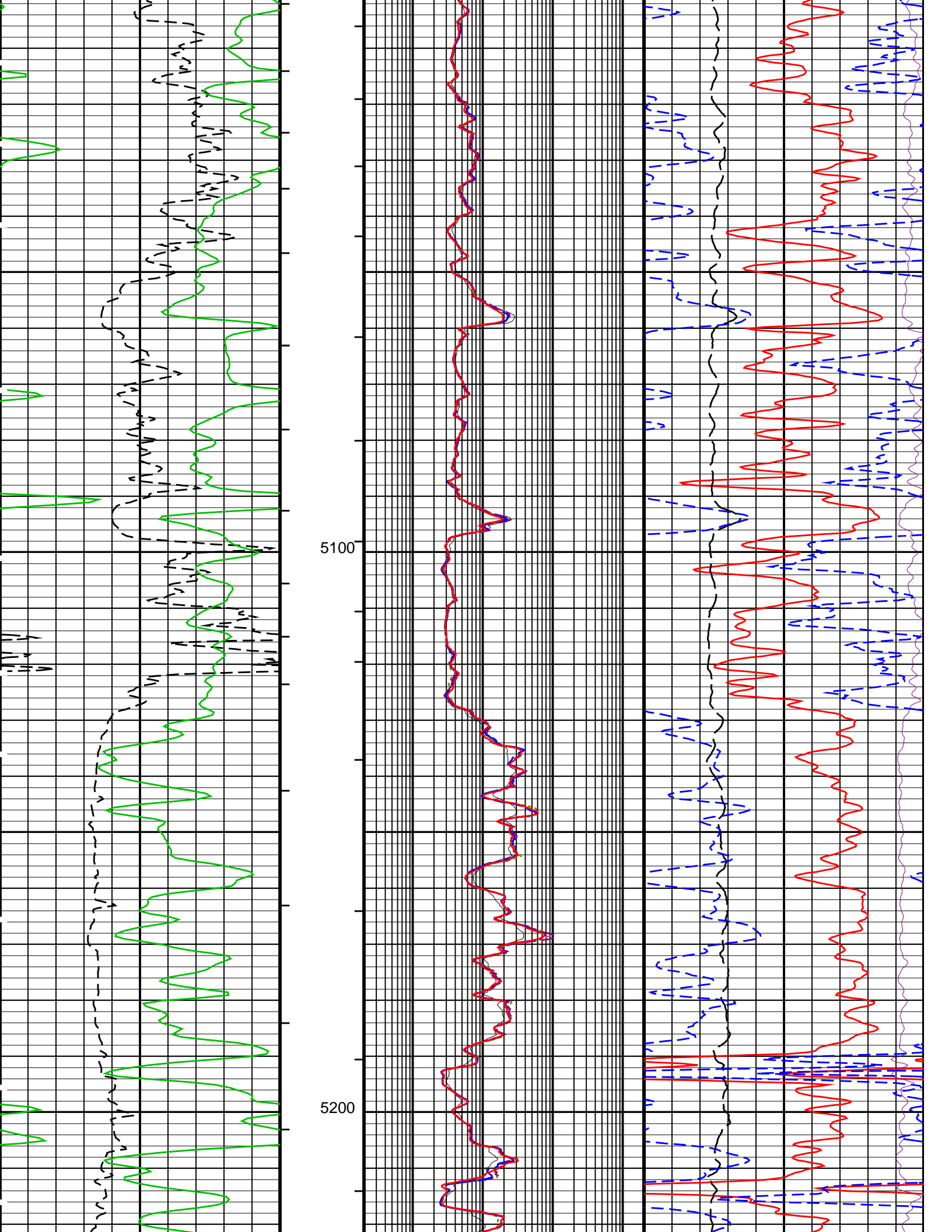


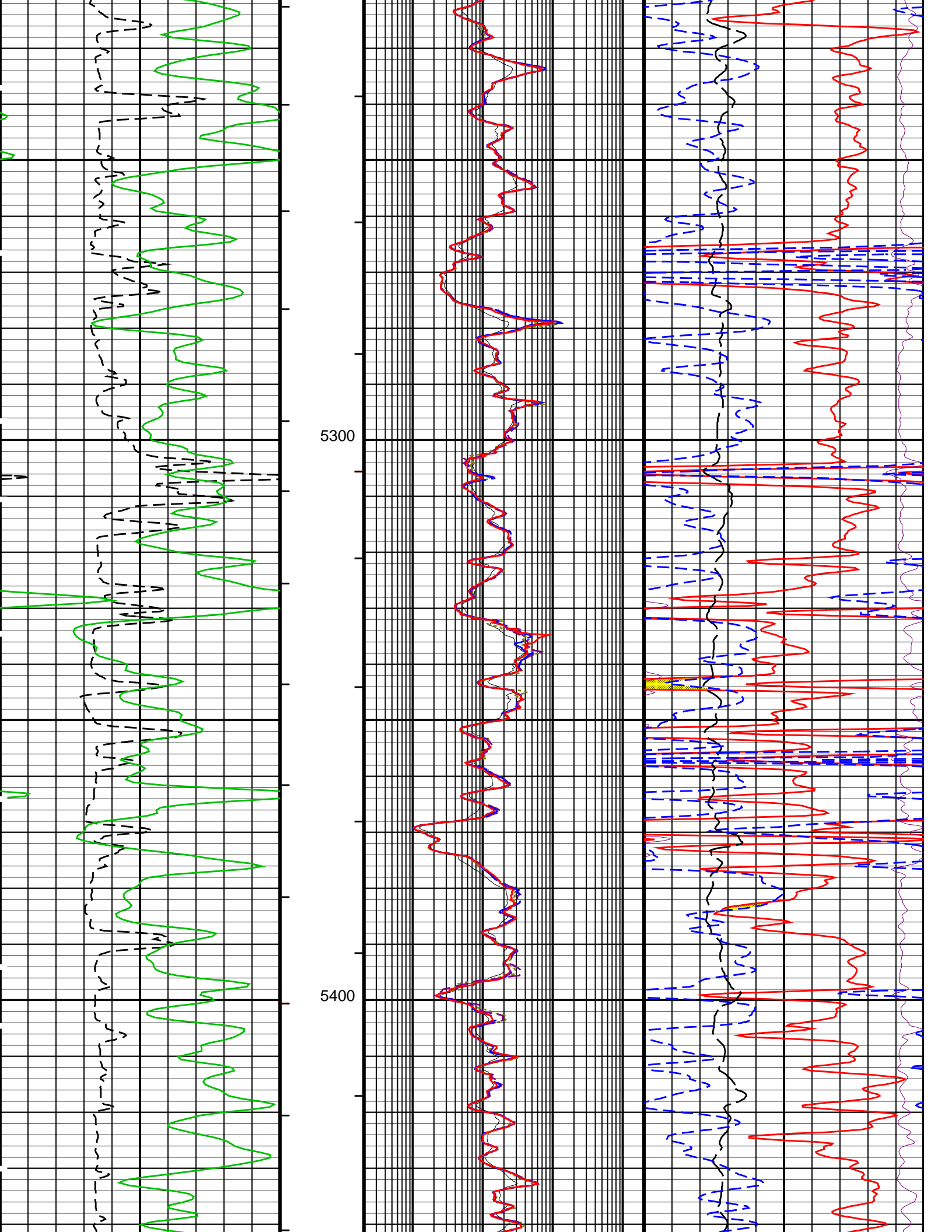


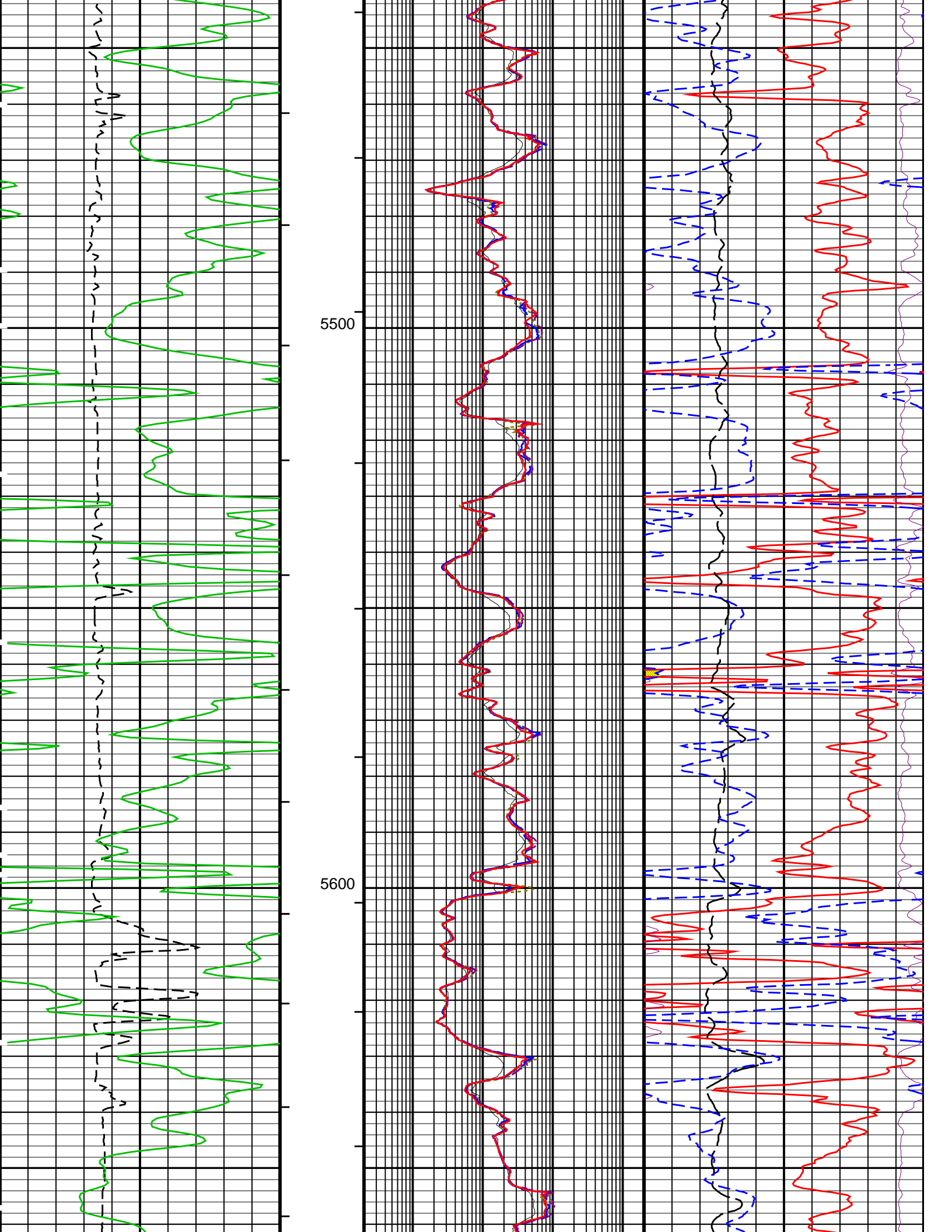


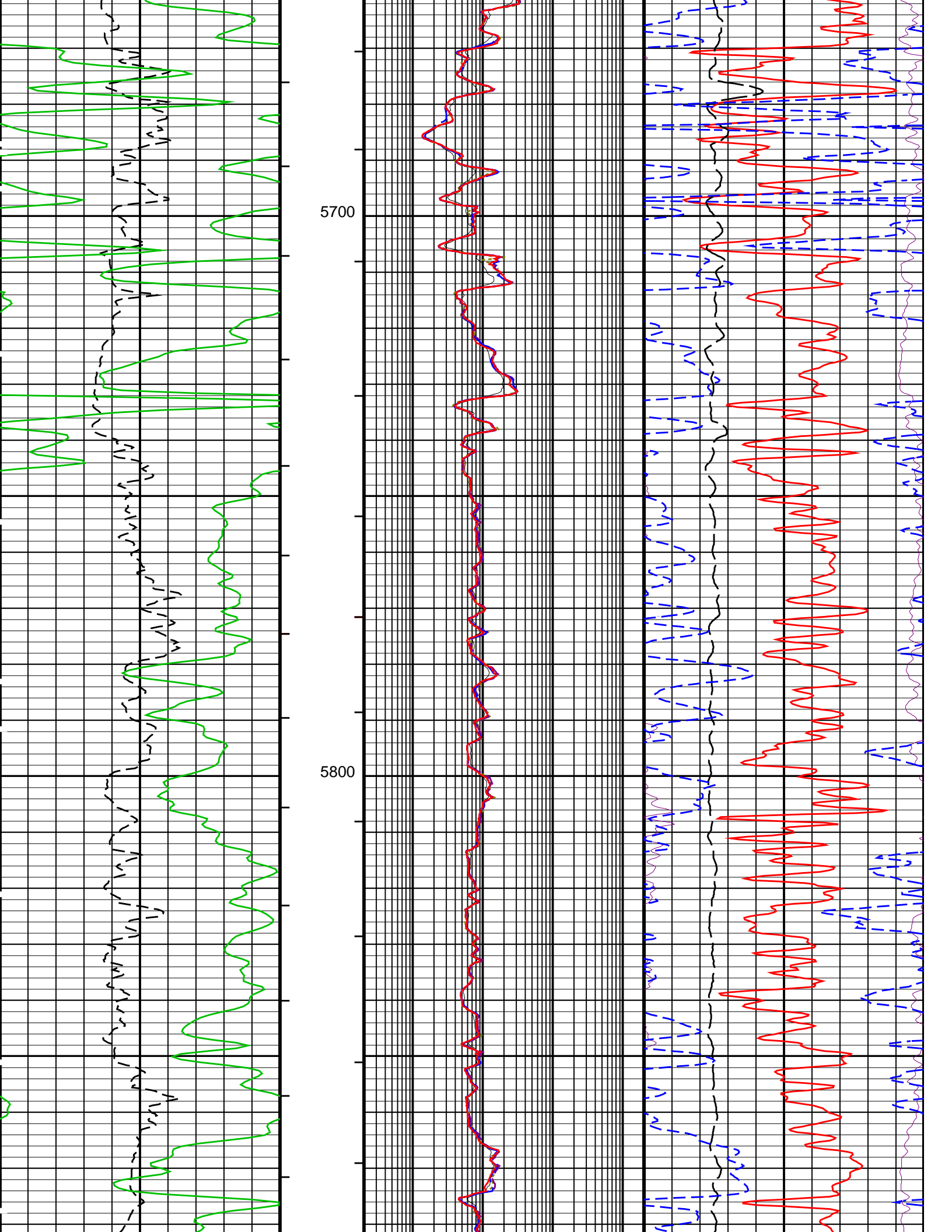


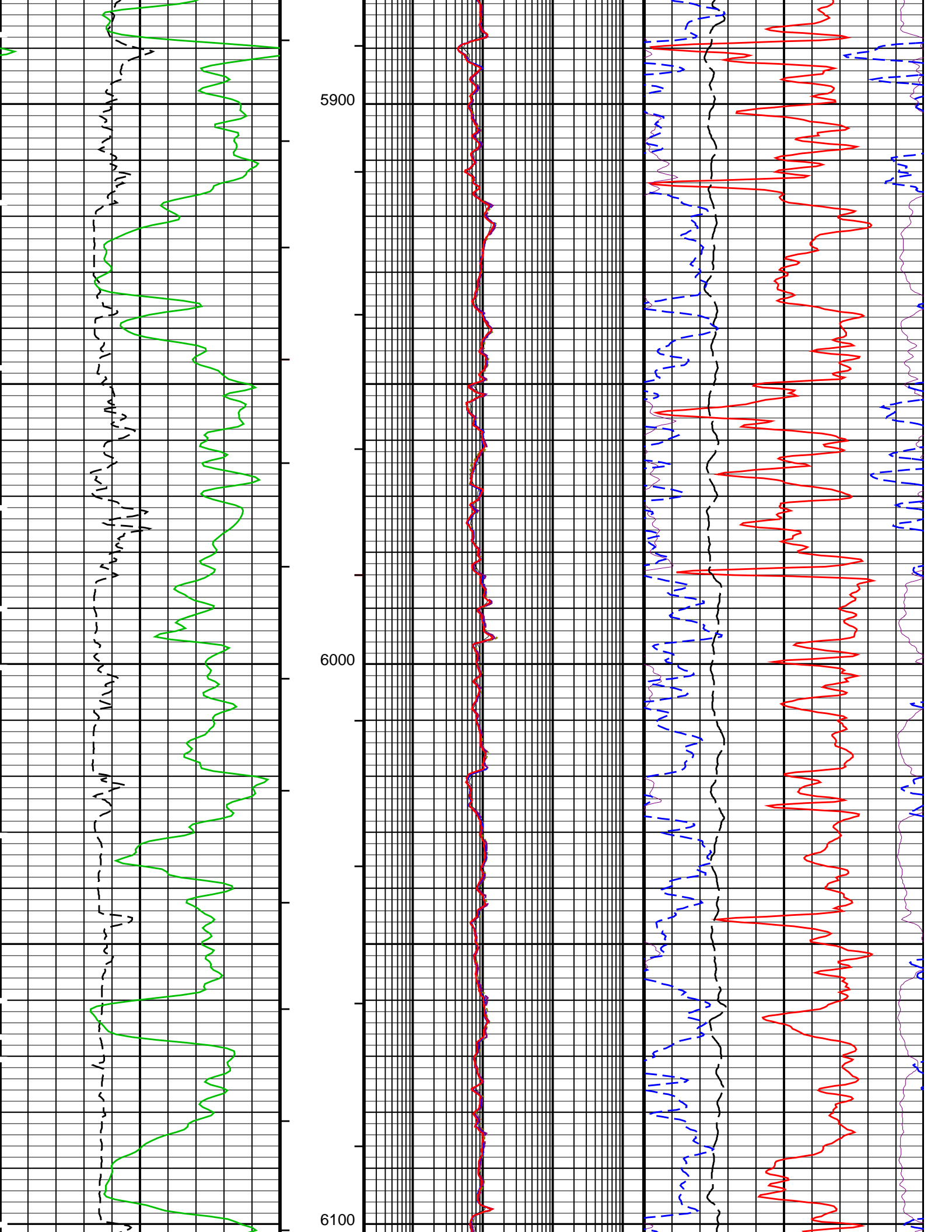


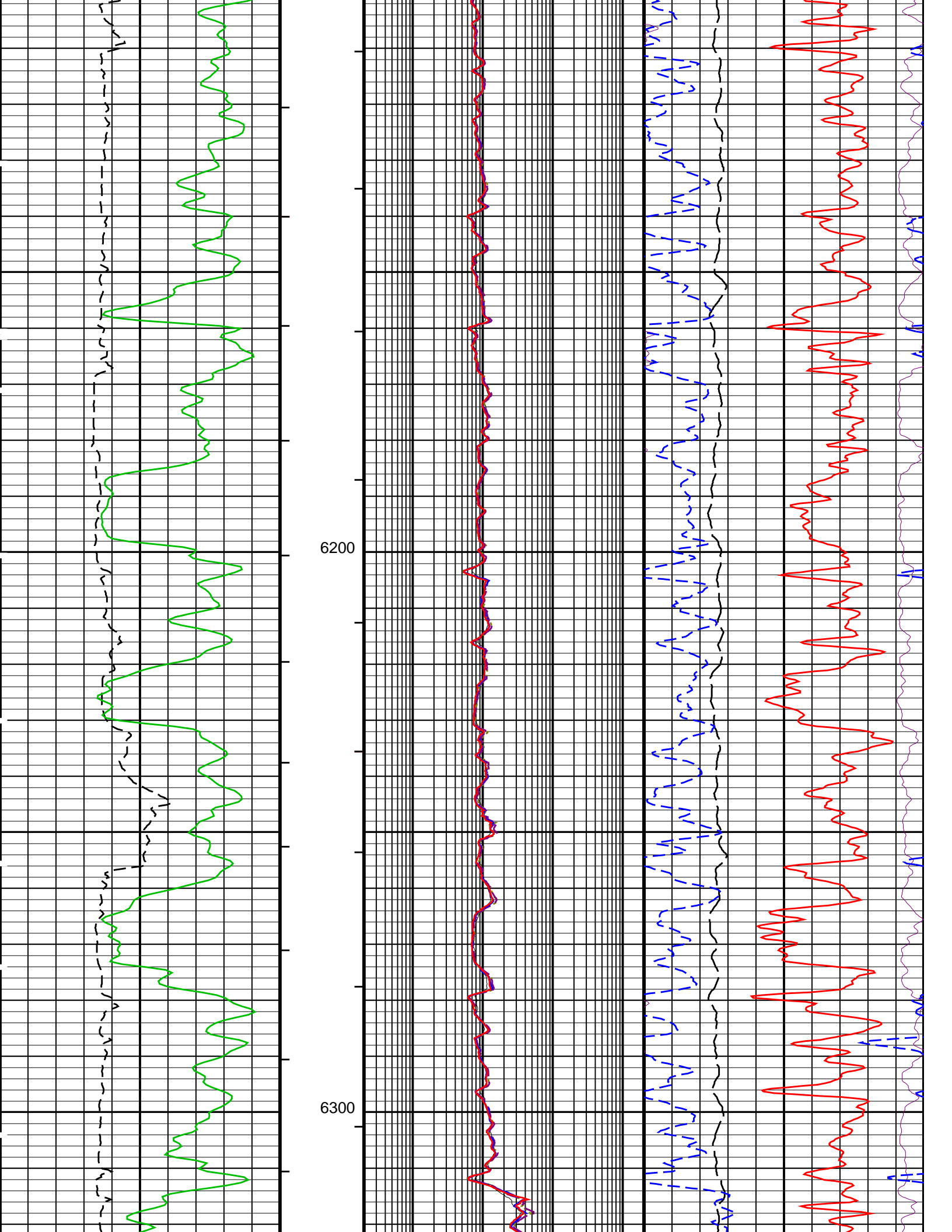




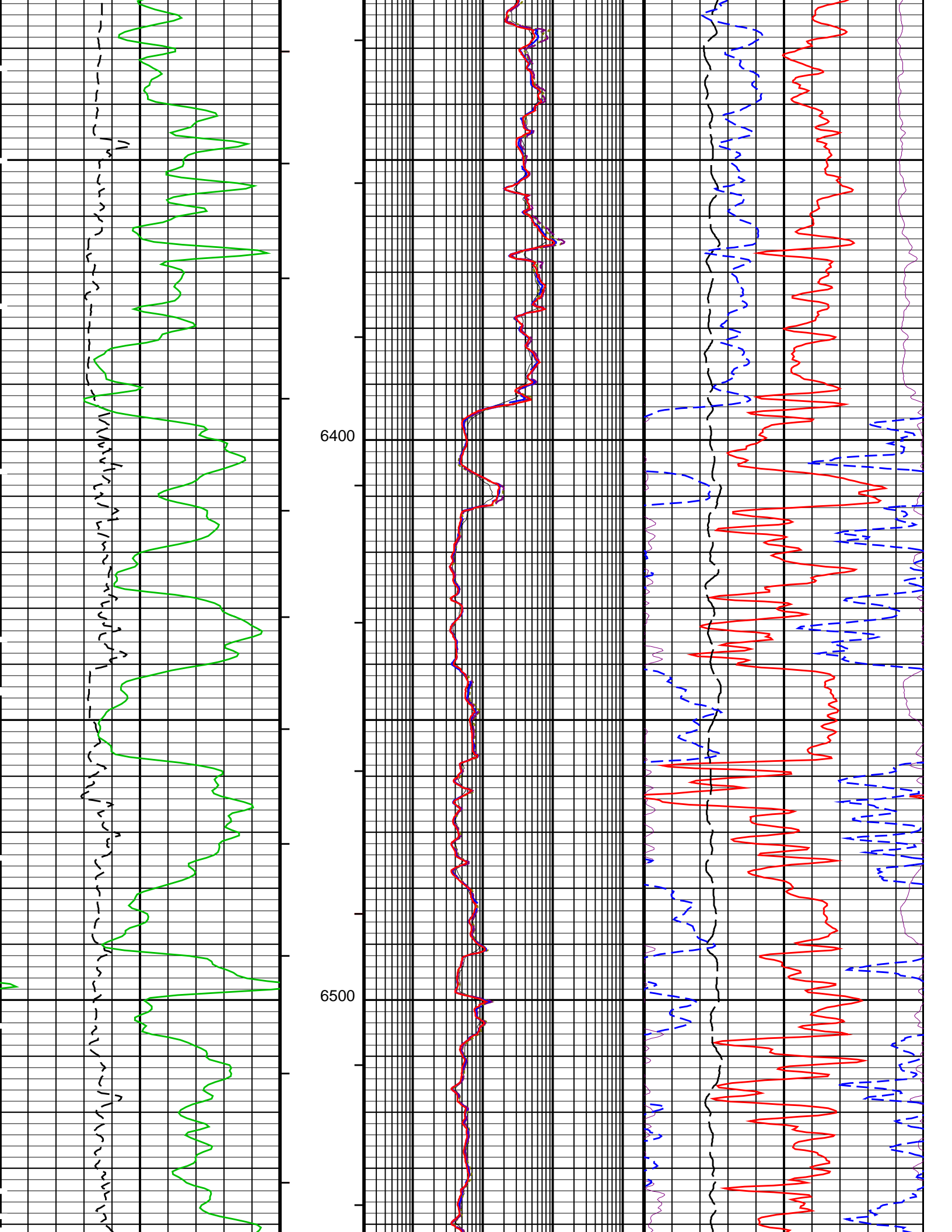


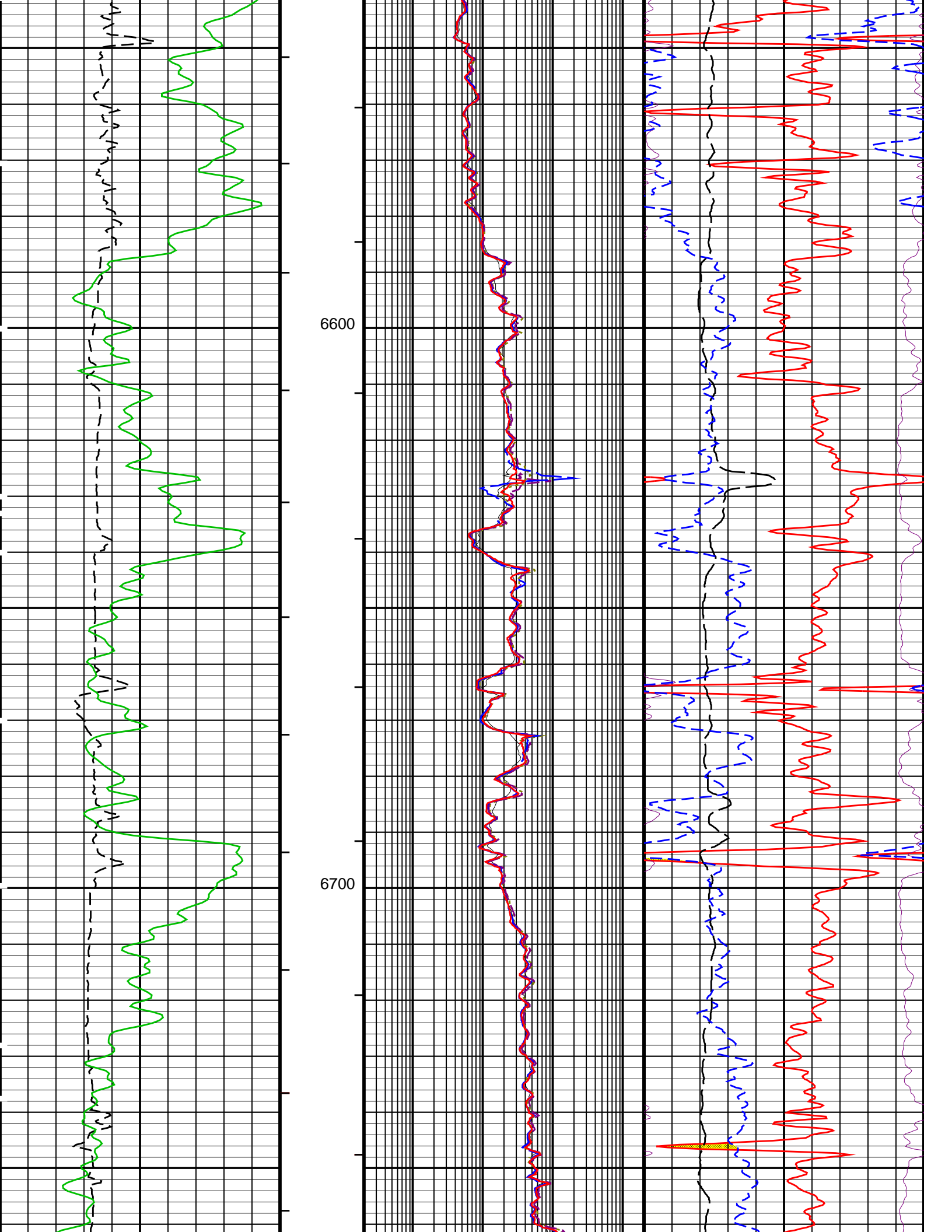


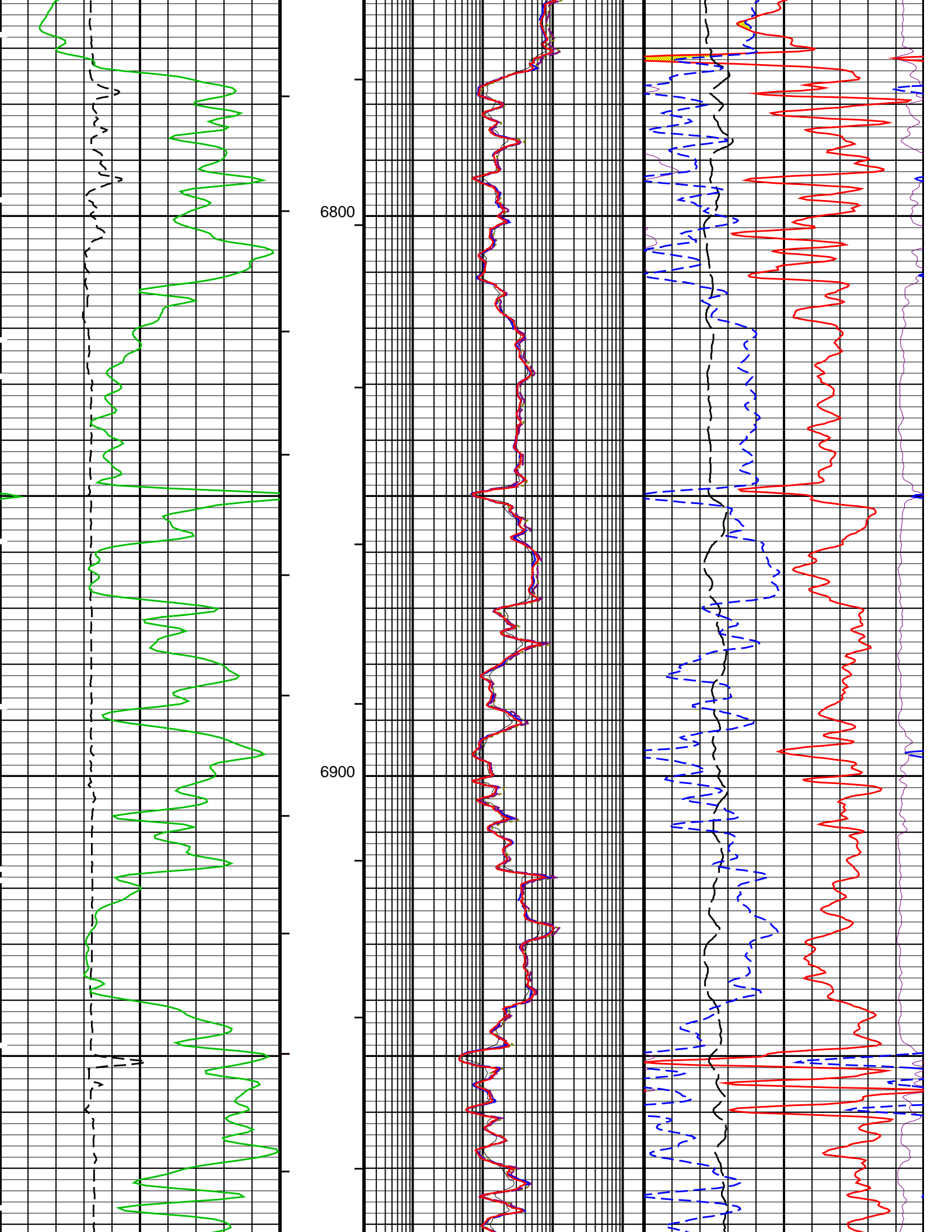


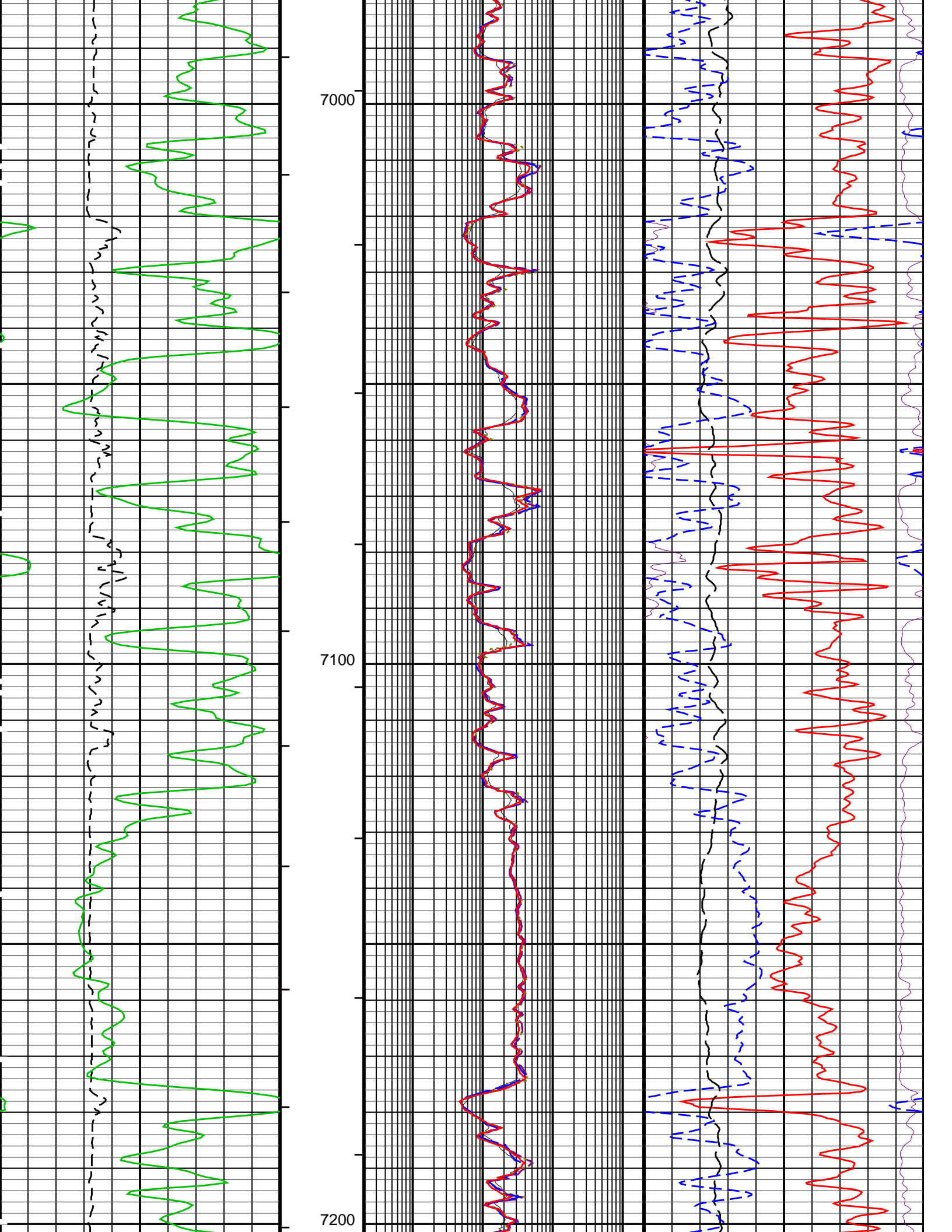


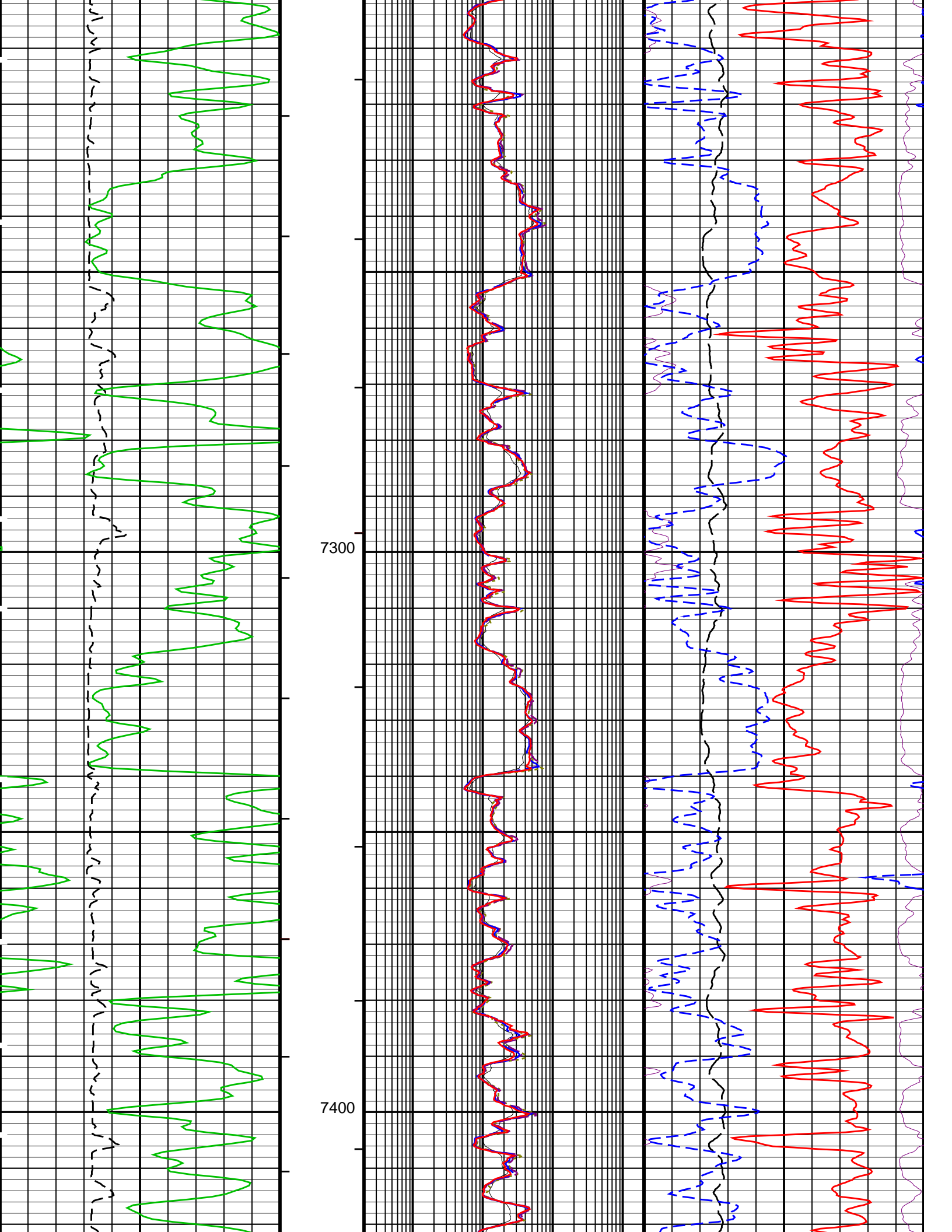


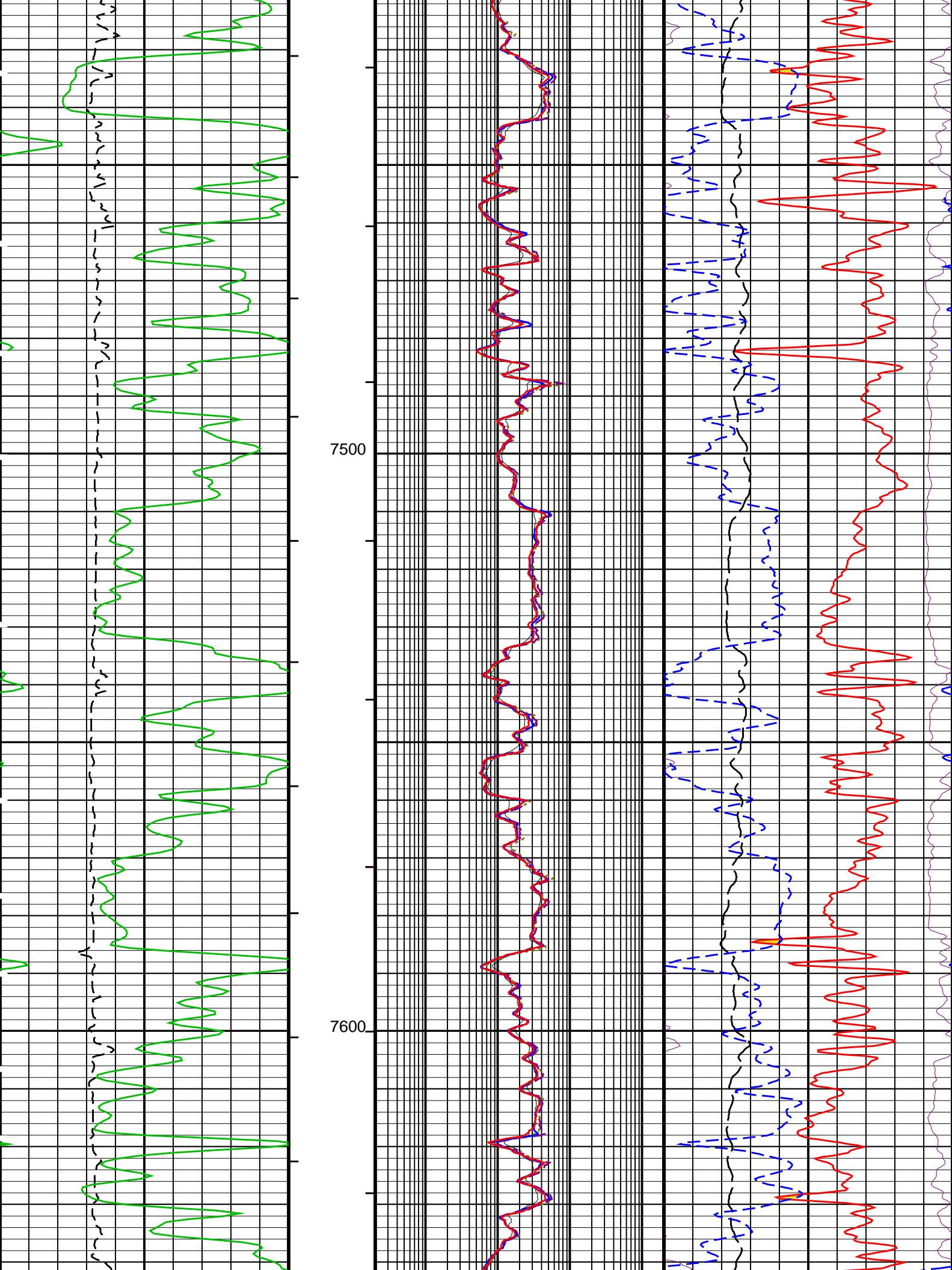


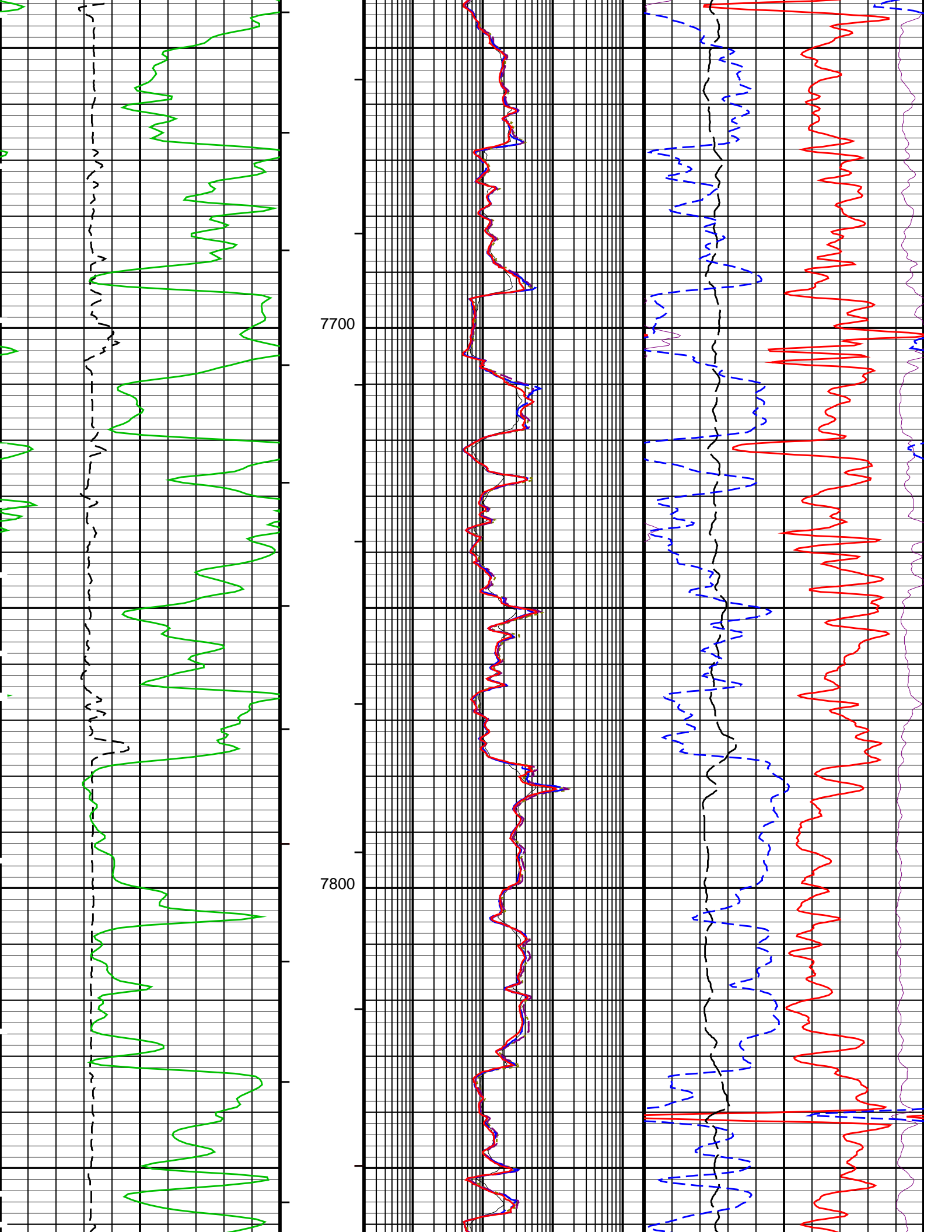


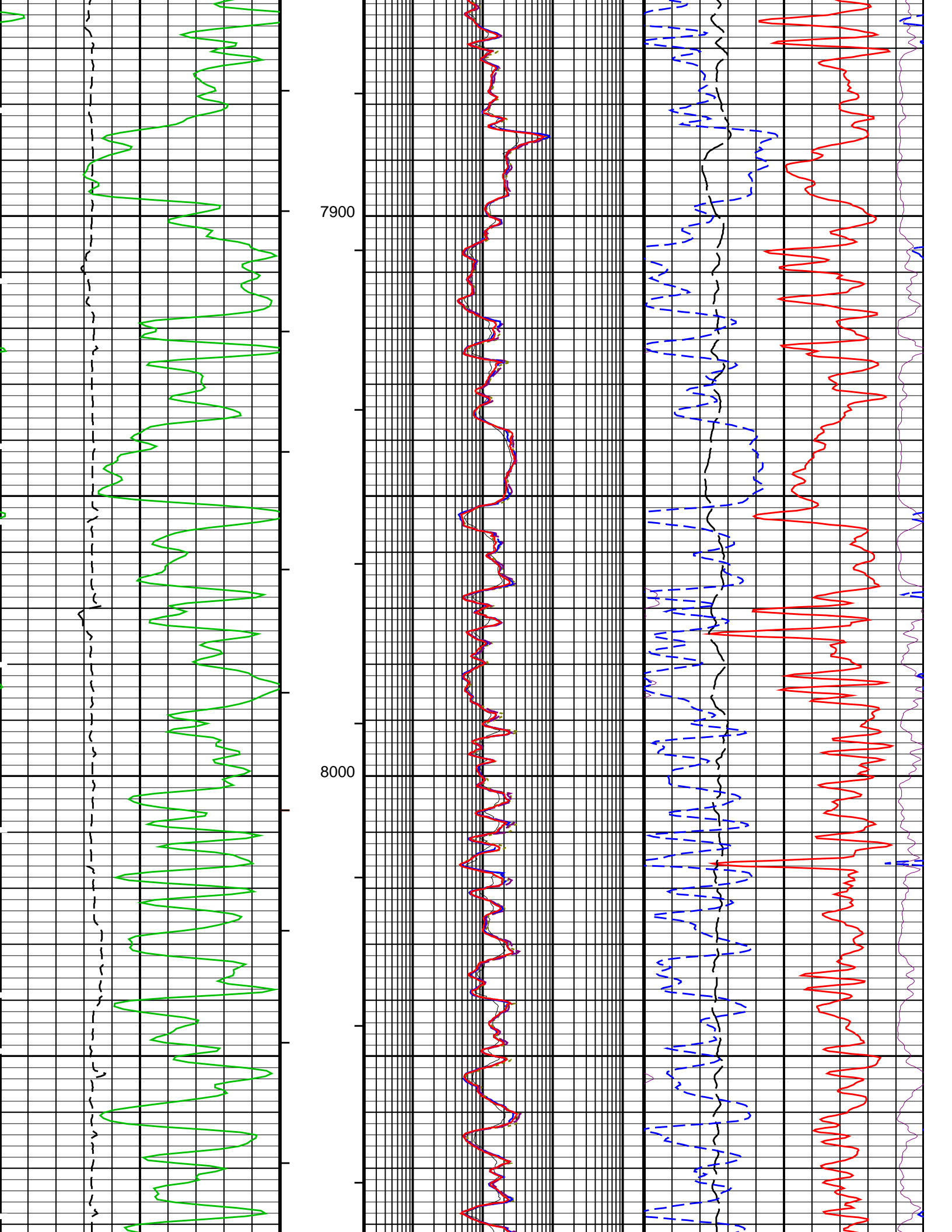




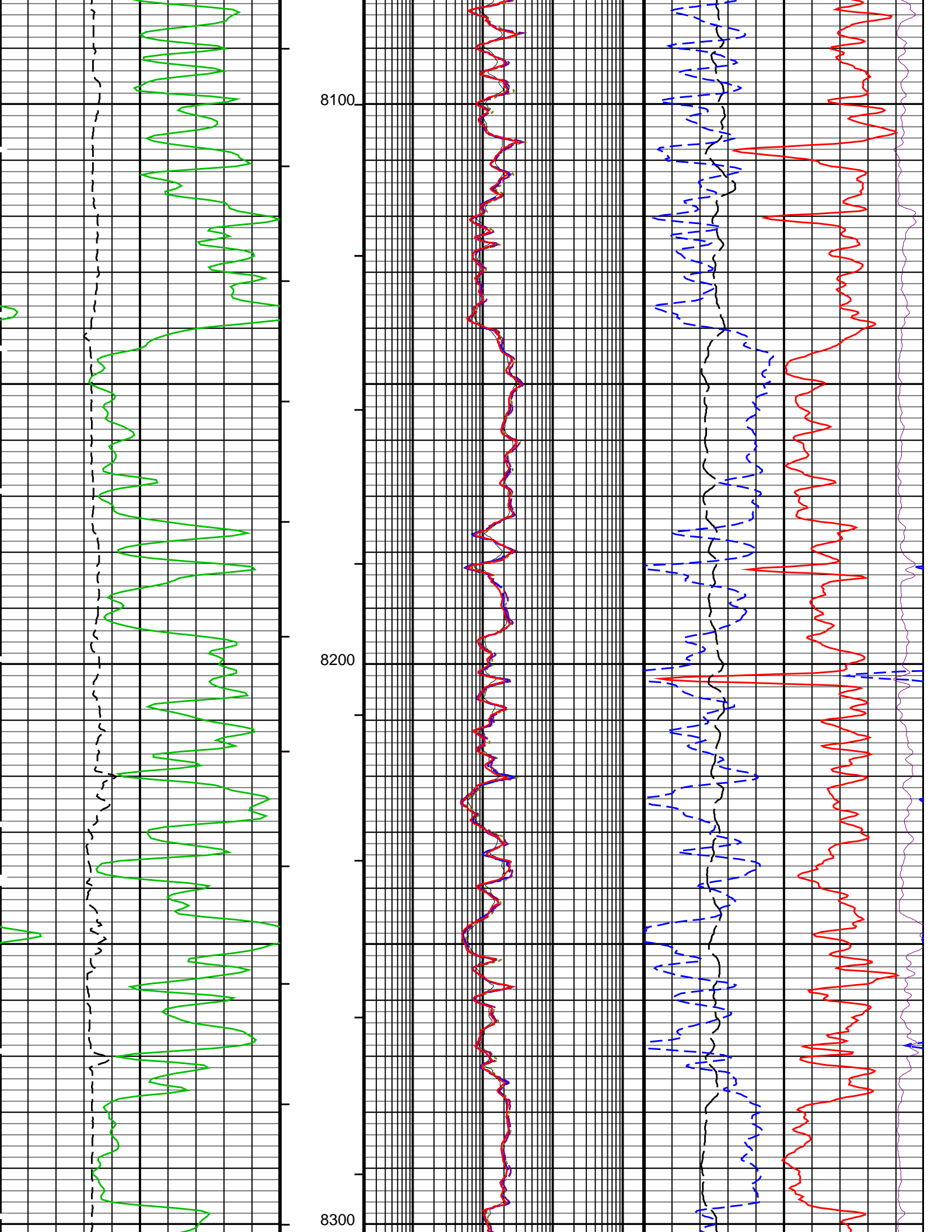


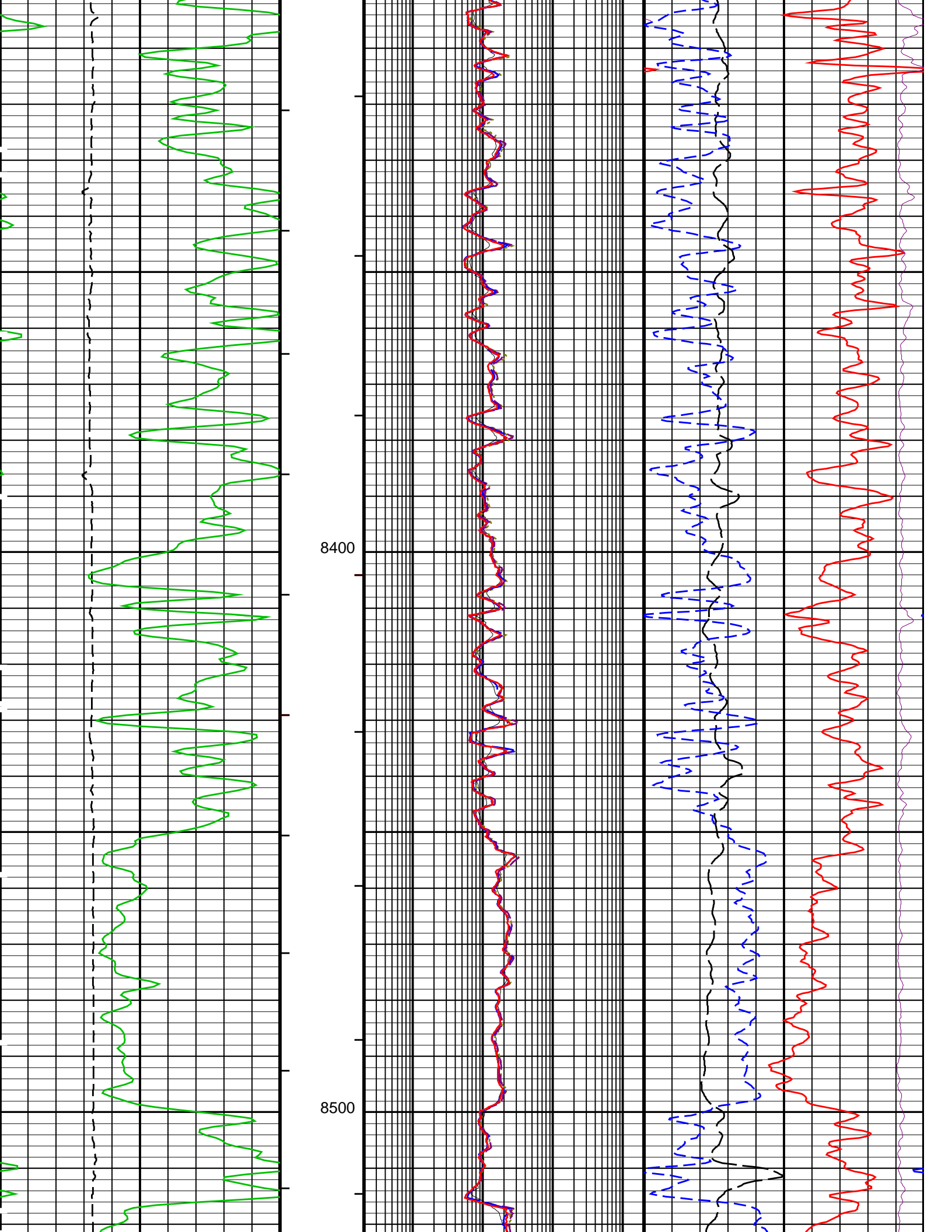


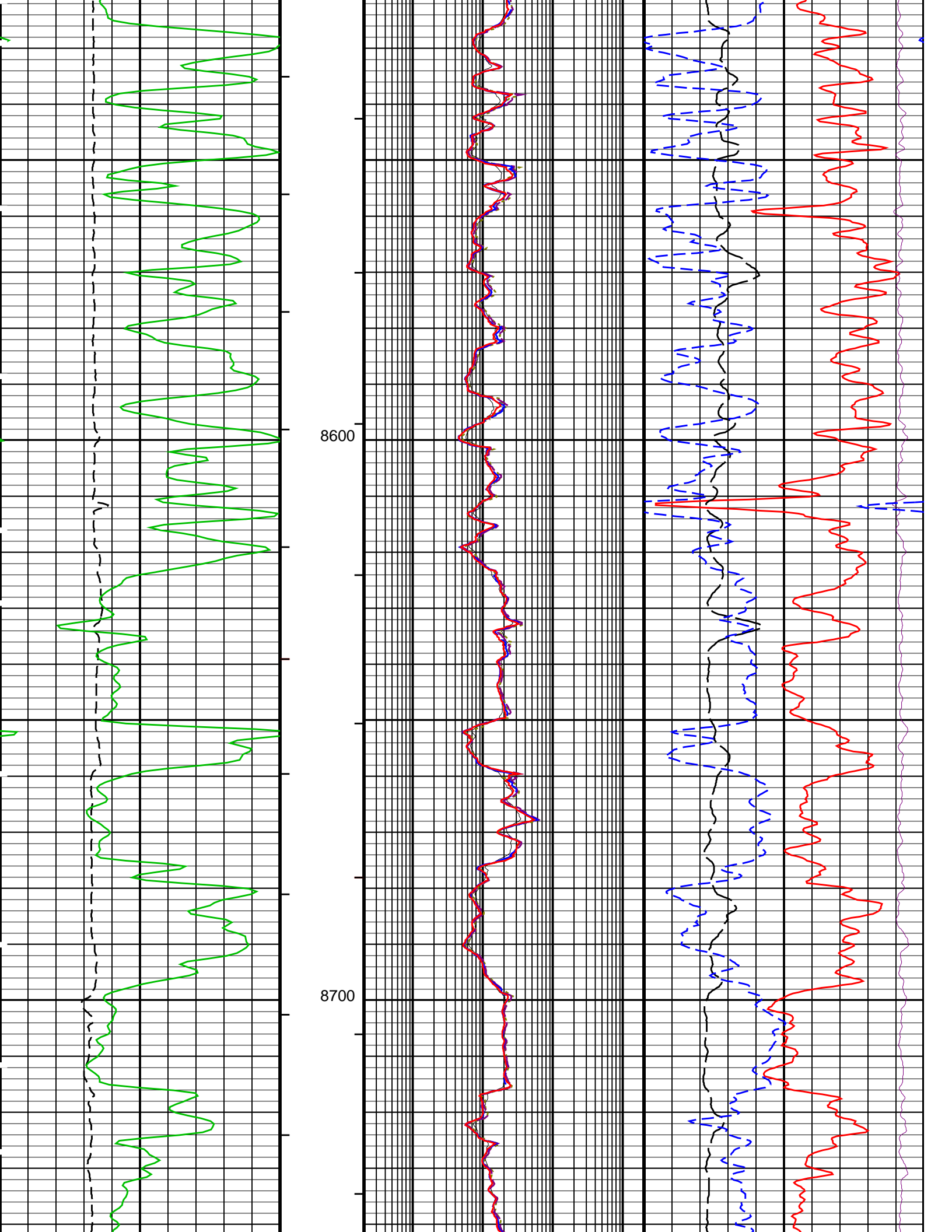


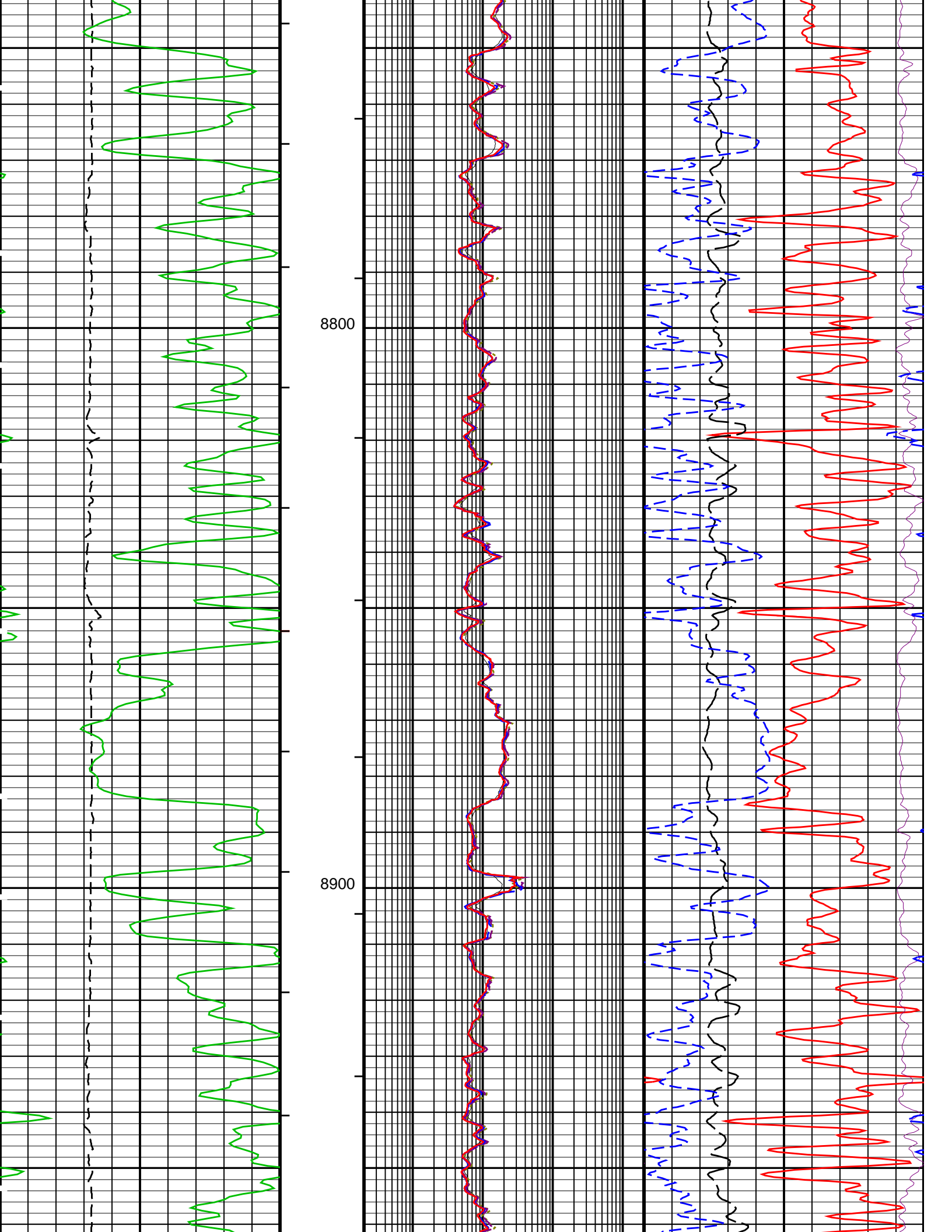


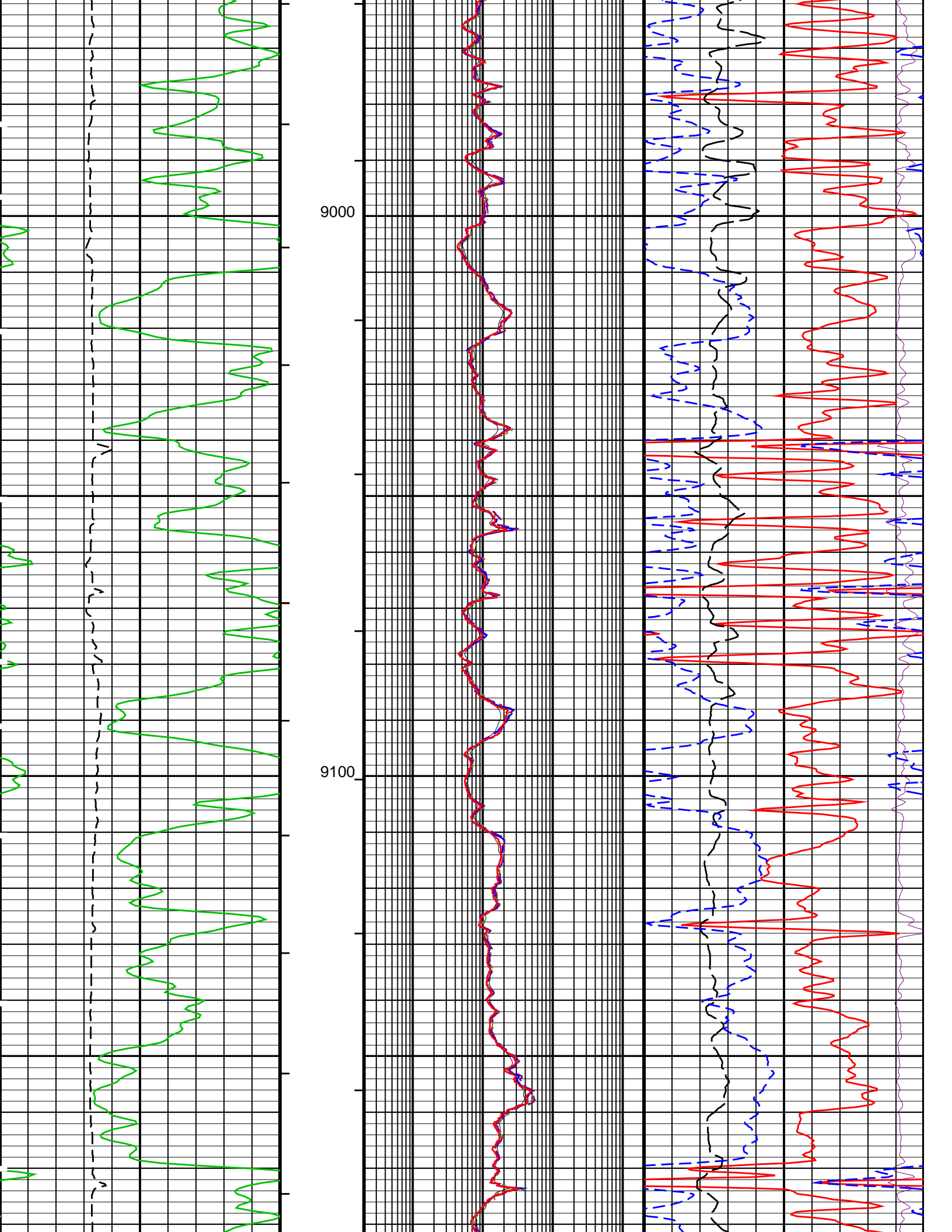


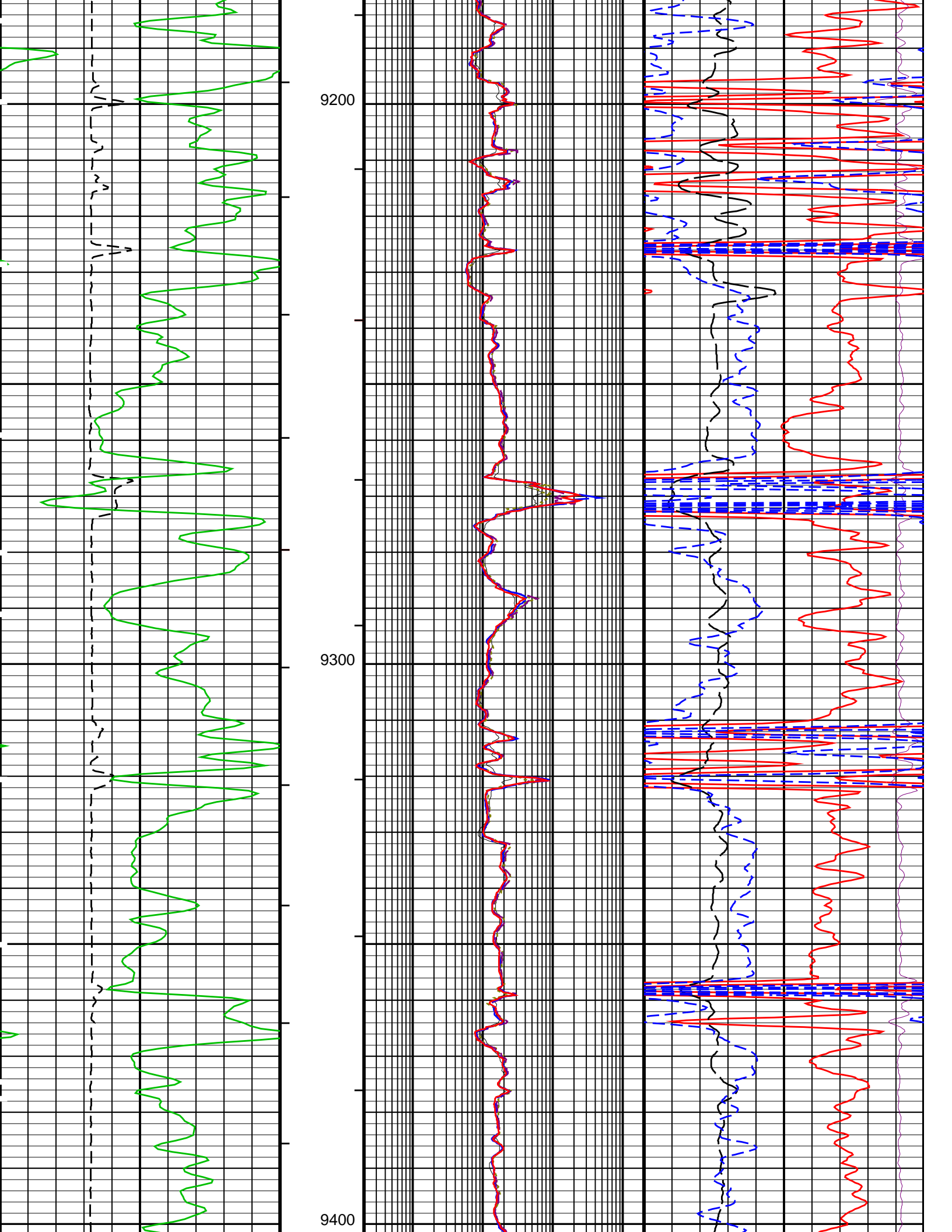


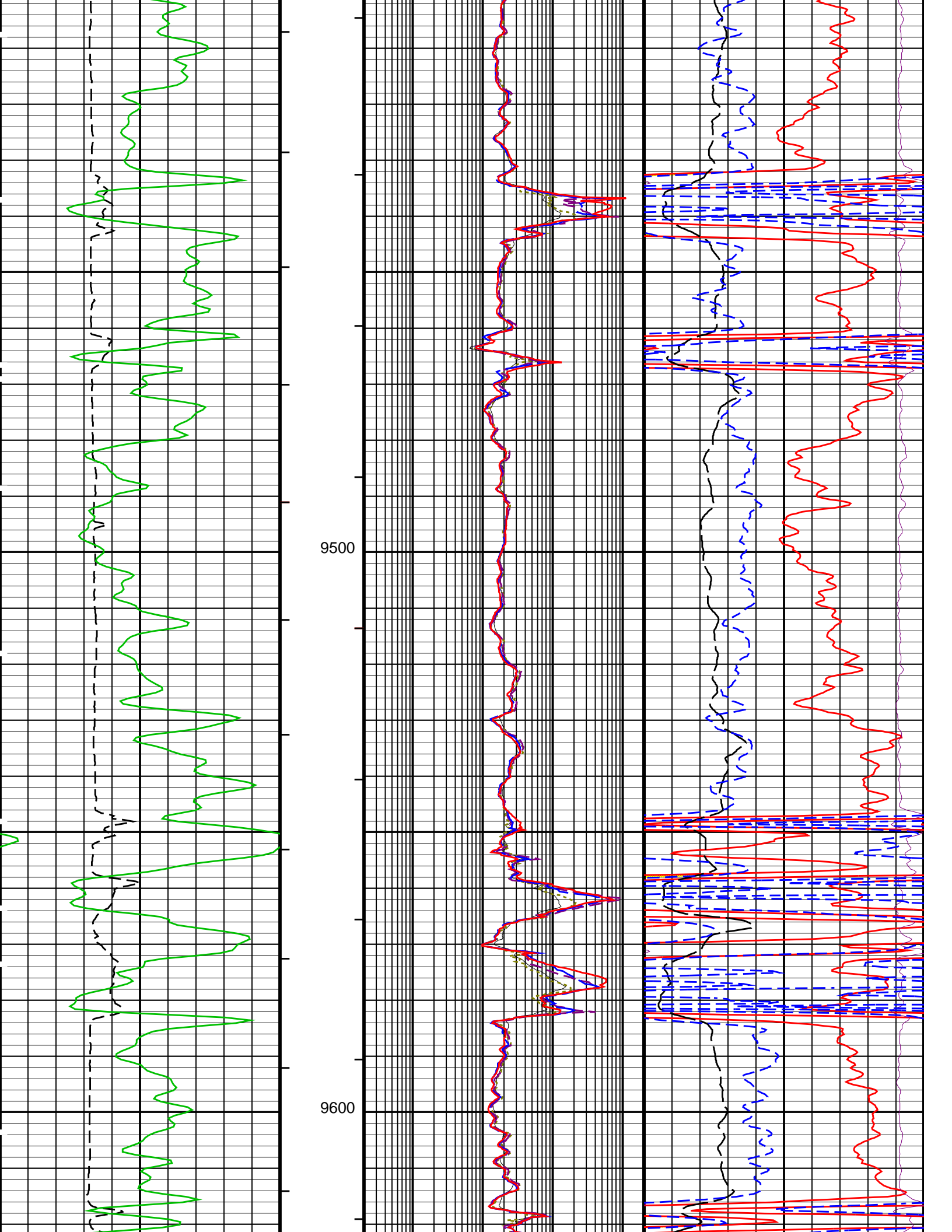


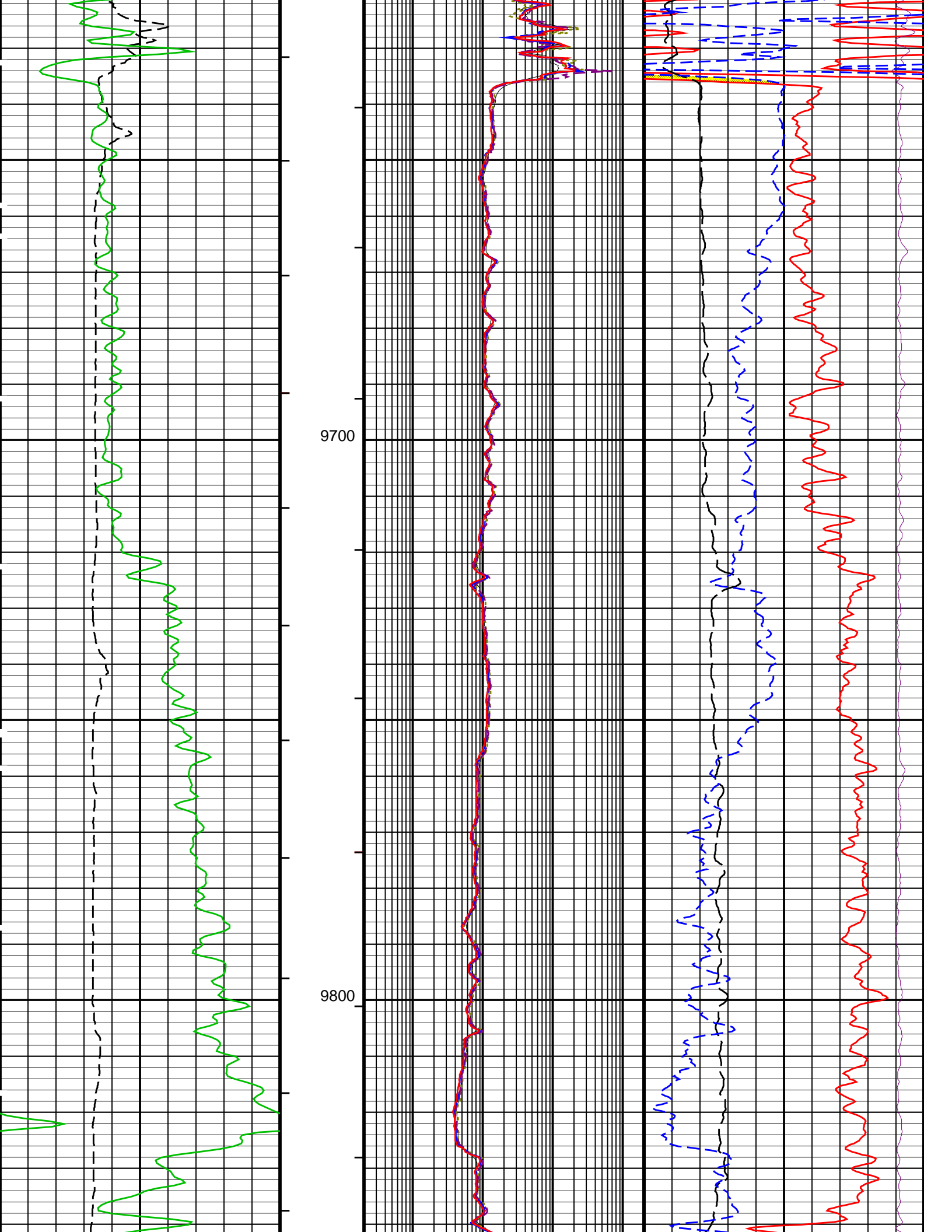




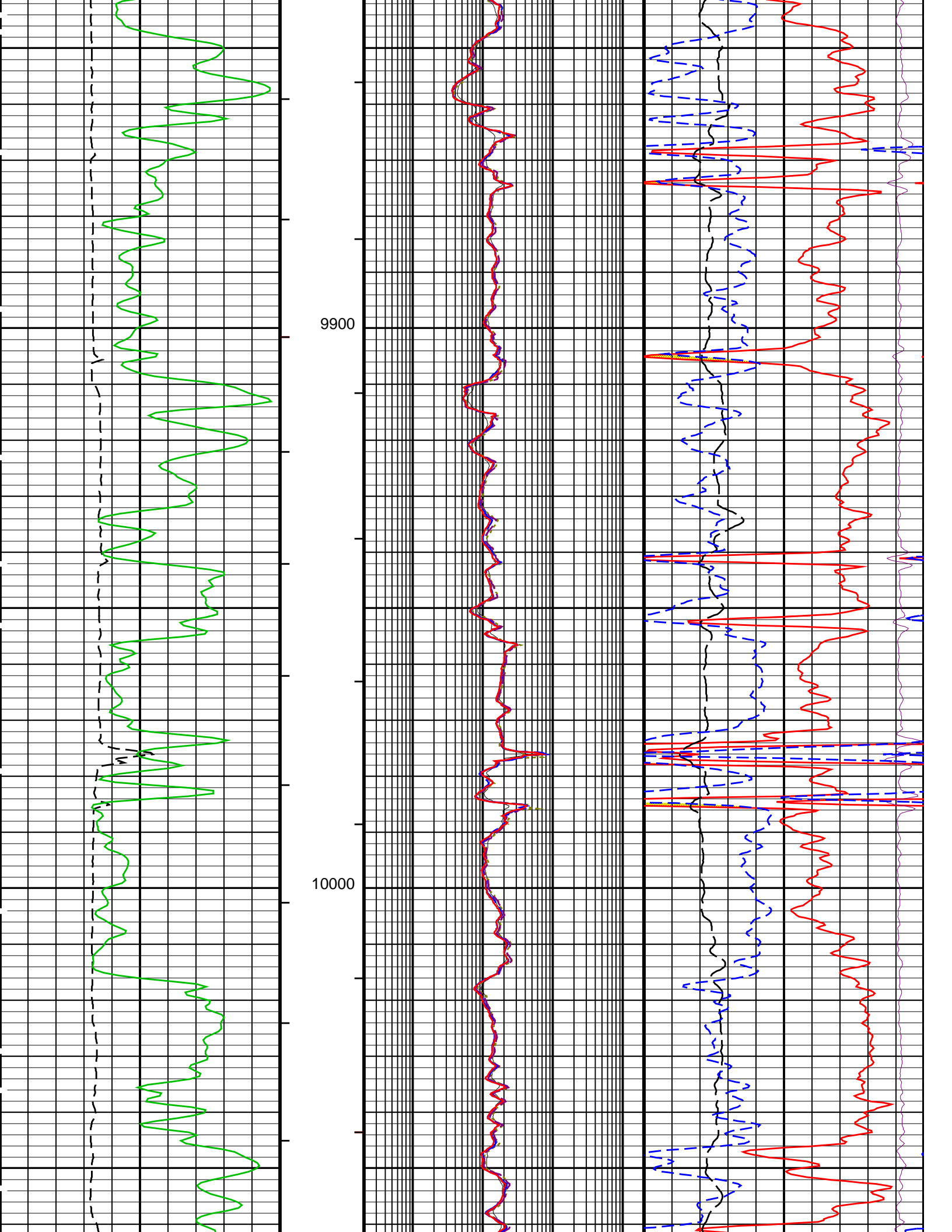


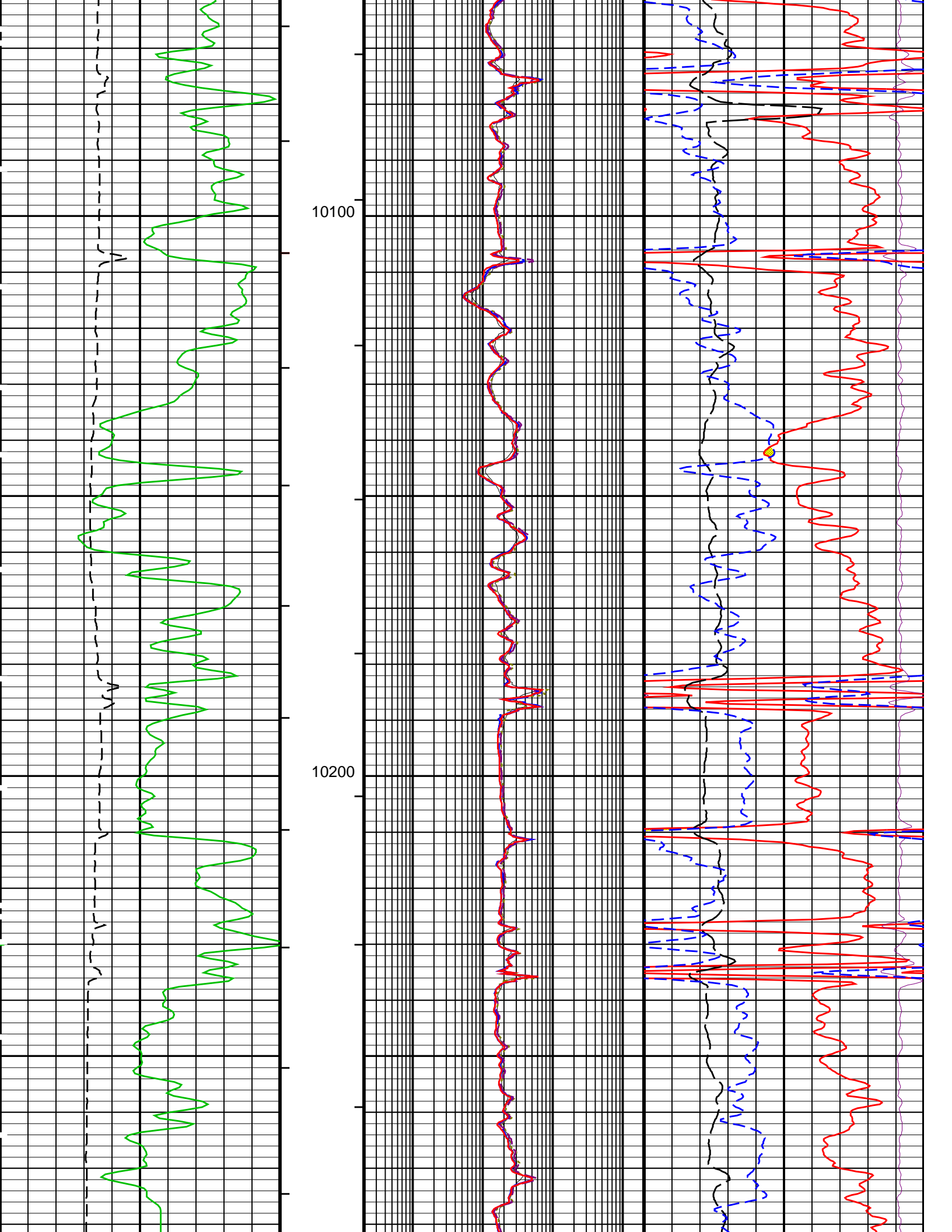


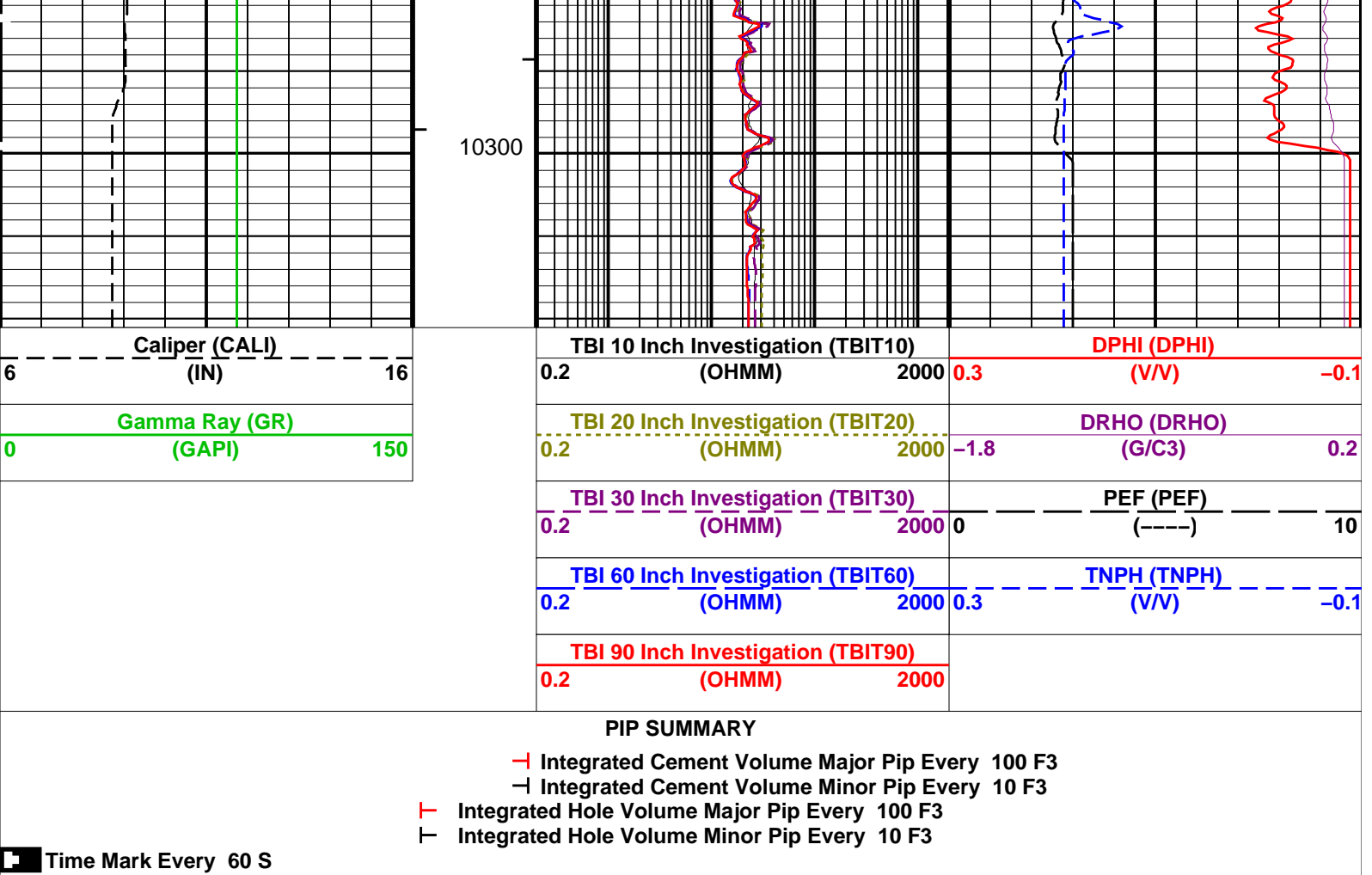












## Parameters

DLIS Name	Description	Value	
TBT-A: ThruBit String			
BHS	Description of this pass		
BSCO	Borehole Status	OPEN	
CSAL	Borehole Salinity Correction Enabled? (for TBN)	No	
CSID	Cement Salinity	0	PPM
DHC	Casing Size I.D.	8.921	IN
FD	Density Hole Correction	CALIPER	
FSAL	Fluid Density	1	G/C3
FSCO	Formation Salinity	0	PPM
MATR	Formation Salinity Correction Enabled? (for TBN)	No	
MDEN	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MT	Matrix Density	2.65	G/C3
MWCO	Mud Type (for TBN and TBI correction)	WBM	
SOCO	Mud Weight Correction Enabled? (for TBN)	No	
SOFF	Stand-Off Correction Enabled? (for TBN)	No	
TBD_CAL_BLOCK	TBN Standoff	0	IN
TBD_SPIKE_REJECT	TBD Calibration Block Type	Schlumberger	
TBD_SPIKE_THRESHOLD	TBD Spike Detection Option	Correct	
TBI_ALGO	TBD Attenuation Change Threshold for Spike Detection	5	%
TBI_BHC_MODE	TBI Algorithm Selection	AIT	
TBI_BHC_OP	Borehole Correction Mode (for TBI)	Solve_For_Standoff	
TBI_CALTYP	Borehole Correction Option (for TBI)	Caliper	
TBI_REPL_ARRAY_DEST	TBI Mastercal Type	Schlumberger	
TBI_REPL_ARRAY_SOURCE	TBI: Replace This Array	None	
TBI_RMUD_SRC	TBI: With This Array	None	
TBI_TC_OP	RMUD Source for Borehole Correction (for TBI)	Data_Channel_RMUD	
TBN_ALGO	Induction Temperature Correction Option	Lower	
TBN_BHC_OP	Porosity Algorithm	Schmid_McKeon	
TBN_CAL_TANK	Borehole Correction Option (for TBN)	Caliper	
TBN_FILTER	TBN Calibration Tank Type	Schlumberger	
TBN PRES_OP	Filter Length	3_point	
TBN_TEMP_OP	Pressure Correction Enabled? (for TBN)	No	
TBN_WPRE	Temperature Correction Enabled? (for TBN)	No	
WMUD	Well Pressure (for TBN)	0	PSIG
	Mud Weight	8.9	LB/G
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	4.5	IN

HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BSAL	Borehole Salinity	1300.00	PPM
CSIZ	Current Casing Size	9.625	IN
DO	Depth Offset for Playback	0.0	FT
MST	Mud Sample Temperature	75.00	DEGF
PP	Playback Processing	NORMAL	
RMB	Resistivity of Mud – BHT	0.6781	OHMM
RMS	Resistivity of Mud Sample	1.5790	OHMM
TD	Total Depth	-50000	FT

Format: TB\_TCOM    Vertical Scale: 5" per 100'    Graphics File Created: 10-Aug-2017 19:16

## OP System Version: 19C2-270

TBT-A      SRPC-5318-ThruBit-SP3.4

### Input DLIS Files

DEFAULT	ThruBit_032PUP	FN:29	PRODUCER	10-Aug-2017 18:54	10320.9 FT	208.4 FT
---------	----------------	-------	----------	-------------------	------------	----------

### Output DLIS Files

DEFAULT	ThruBit_037PUP	FN:34	PRODUCER	10-Aug-2017 19:16
---------	----------------	-------	----------	-------------------



## Calibrations

MAXIS Field Log

### Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
ThruBit String Master Calibration – TBI Master Calibration Sonde Errors							
Master: 6-Aug-2017 6:32							
Freq 2, A1, R	-249.000	-261.957	--	--	--	--	
Freq 2, A1, X	150.000	-106.848	--	--	--	--	
Freq 2, A2, R	-98.0000	-93.6111	--	--	--	--	
Freq 2, A2, X	160.000	-35.0640	--	--	--	--	
Freq 2, A3, R	-23.0000	-20.7227	--	--	--	--	
Freq 2, A3, X	-20.0000	-107.169	--	--	--	--	
Freq 2, A4, R	-19.0000	-24.0828	--	--	--	--	
Freq 2, A4, X	100.000	27.1658	--	--	--	--	
Freq 2, A5, R	-20.0000	-23.1459	--	--	--	--	
Freq 2, A5, X	-25.0000	-37.2762	--	--	--	--	
ThruBit String Master Calibration – TBI Master Calibration COMPLEX GAINS							
Master: 6-Aug-2017 6:32							
Freq 2, R – 0	1.000	1.020	--	--	--	--	
Freq 2, R – 1	1.000	1.013	--	--	--	--	
Freq 2, R – 2	1.000	1.018	--	--	--	--	
Freq 2, R – 3	1.000	1.019	--	--	--	--	
Freq 2, R – 4	1.000	1.027	--	--	--	--	
Freq 2, X – 0	0	-0.01232	--	--	--	--	
Freq 2, X – 1	0	0.004093	--	--	--	--	
Freq 2, X – 2	0	0.01392	--	--	--	--	
Freq 2, X – 3	0	-0.01898	--	--	--	--	
Freq 2, X – 4	0	0.01821	--	--	--	--	
ThruBit String Master Calibration – TBD Caliper Master Calibration							
Master: 1-Aug-2017 8:00							
Caliper 12in Ring	1949.8	1863.1	--	--	--	--	IN
Caliper 9in Ring	2006.7	2020.2	--	--	--	--	IN

Caliper 9in Ring	2096.7	2020.2	--	--	--	--	IN
Caliper 6in Ring	2285.7	2186.9	--	--	--	--	

ThruBit String Master Calibration – TBD Density Master Calibration

Master: 1–Aug–2017 8:00

Aluminium Density	2.607	2.607	--	--	--	--	G/C3
Magnesium Density	1.752	1.752	--	--	--	--	G/C3
LS1 Background	143.00	127.58	--	--	--	--	CPS
SS1 Background	143.00	122.40	--	--	--	--	CPS
LS4 Background	30.00	25.84	--	--	--	--	CPS
SS1 Aluminium	7900.00	6750.93	--	--	--	--	CPS
LS1 Aluminium	1220.0	1030.3	--	--	--	--	CPS
SS1 Magnesium	13160.0	10858.5	--	--	--	--	CPS
LS4 Aluminium	830.00	734.61	--	--	--	--	CPS
SS Slope	1.645	1.751	--	--	--	--	
LS1 Block + Sleeve	50000	4390.7	--	--	--	--	CPS
LS Slope	0.4150	0.4254	--	--	--	--	
LS4 Block + Sleeve	50000	1769.0	--	--	--	--	CPS
Pef K Factor	4.840	12.15	--	--	--	--	
LS1 Magnesium	8260.00	6763.30	--	--	--	--	CPS
Pef B Factor	-0.5550	-0.3357	--	--	--	--	

ThruBit String Master Calibration – TBD Density Master Calibration. Ti Window, Schlumberger blocks

Master: 1–Aug–2017 8:00

SS1 Background	143.00	122.40	--	--	--	--	CPS
SS2 Background	38.0000	32.6493	--	--	--	--	CPS
SS3 Background	23.0000	19.4811	--	--	--	--	CPS
SS4 Background	31.0000	27.3468	--	--	--	--	CPS
LS1 Background	143.00	127.58	--	--	--	--	CPS
LS2 Background	37.0000	33.5492	--	--	--	--	CPS
LS3 Background	22.0000	19.8136	--	--	--	--	CPS
LS4 Background	30.00	25.84	--	--	--	--	CPS
SS1 Aluminium	7900.00	6750.93	--	--	--	--	CPS
SS2 Aluminium	4050.00	3324.92	--	--	--	--	CPS
SS3 Aluminium	3420.00	2764.07	--	--	--	--	CPS
SS4 Aluminium	3360.0000	2736.5369	--	--	--	--	CPS
LS1 Aluminium	1220.0	1030.3	--	--	--	--	CPS
LS2 Aluminium	1140.00	986.502	--	--	--	--	CPS
LS3 Aluminium	1080.00	950.658	--	--	--	--	CPS
LS4 Aluminium	830.00	734.61	--	--	--	--	CPS
Magnesium RHOSS	1.6700	1.6885	--	--	--	--	
Magnesium RHOLS	1.6880	1.6946	--	--	--	--	
Magnesium RHOB	1.7040	1.6998	--	--	--	--	
Magnesium PEF	2.5210	2.5128	--	--	--	--	
Magnesium + Sleeve RHOSS	2.1520	2.1680	--	--	--	--	
Magnesium + Sleeve RHOLS	1.8550	1.8580	--	--	--	--	
Magnesium + Sleeve RHOB	1.6060	1.5943	--	--	--	--	
Magnesium + Sleeve PEF	6.8000	7.4593	--	--	--	--	

ThruBit String Master Calibration – Thermal Neutron Master Calibration

Master: 13–Jul–2017 15:19

TNF, Background	1.0	0.16	--	--	--	--	CPS
TNN, Background	1.0	0	--	--	--	--	CPS
TNF, Tank	27990	10720	--	--	--	--	CPS
TNN, Tank	69600	30980	--	--	--	--	CPS
TNF, Tank + Al Sleeve	1750.0	627.32	--	--	--	--	CPS
TNN, Tank + Al Sleeve	18350.0	7102.70	--	--	--	--	CPS
Tank + Al Sleeve Ratio	11.128	11.322	--	--	--	--	
Tank + Al Sleeve Porosity	15.19	15.19	--	--	--	--	PU
Tank, Ratio	2.6300	2.8891	--	--	--	--	
Tank, Temperature	70.0	92.0	--	--	--	--	DEGF

ThruBit String Master Calibration – TMG Accelerometer Calibration

Master: 1–Aug–2017 8:40

Minimum Ax, m/s2	-9.810	-9.807	--	--	--	--	
Maximum Ax, m/s2	9.810	10.20	--	--	--	--	
Minimum Ay, m/s2	-9.810	-10.00	--	--	--	--	
Maximum Ay, m/s2	9.810	9.905	--	--	--	--	
Minimum Az, m/s2	0	0.05274	--	--	--	--	
Maximum Az, m/s2	9.810	10.12	--	--	--	--	
RB Offset, degrees	0	-15.95	--	--	--	--	

ThruBit String Master Calibration – TMG Gamma-Ray Calibration







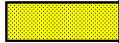



Master: 1–Aug–2017 15:35









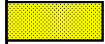

GR Background	30.00	68.22	--	--	--	--	GAPI
GR Jig–Background	160.0	159.4	--	--	--	--	GAPI




Primary Equipment:  
 Induction Resistivity  
 Density  
 Gamma-Ray Logging Source  
 Thermal Neutron  
 Neutron Logging Source  
 Telemetry Memory GR  
 Telemetry  
 Battery 2





TBI – A  
 TBD – A  
 GGSL – FZ  
 TBN – A  
 NNLS – EWA  
 TMG – A  
 WCIB –  
 TBAT –












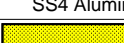








Auxiliary Equipment:

ThruBit String Master Calibration					
TBI Master Calibration Sonde Errors					
Freq 2, A1, R	Value	Nominal	Freq 2, A1, X	Value	Nominal
	-261.957	-249.000		-106.848	150.000
-336.000 (Minimum)	-186.000 (Maximum)		-375.000 (Minimum)	675.000 (Maximum)	
(Nominal)			(Nominal)		
Freq 2, A2, R	Value	Nominal	Freq 2, A2, X	Value	Nominal
	-93.6111	-98.0000		-35.0640	160.000
-138.000 (Minimum)	-76.0000 (Maximum)		-100.000 (Minimum)	425.000 (Maximum)	
(Nominal)			(Nominal)		
Freq 2, A3, R	Value	Nominal	Freq 2, A3, X	Value	Nominal
	-20.7227	-23.0000		-107.169	-20.0000
-31.0000 (Minimum)	-13.0000 (Maximum)		-325.000 (Minimum)	250.000 (Maximum)	
(Nominal)			(Nominal)		
Freq 2, A4, R	Value	Nominal	Freq 2, A4, X	Value	Nominal
	-24.0828	-19.0000		27.1658	100.000
-28.0000 (Minimum)	-7.00000 (Maximum)		-75.0000 (Minimum)	275.000 (Maximum)	
(Nominal)			(Nominal)		
Freq 2, A5, R	Value	Nominal	Freq 2, A5, X	Value	Nominal
	-23.1459	-20.0000		-37.2762	-25.0000
-27.0000 (Minimum)	-10.0000 (Maximum)		-125.000 (Minimum)	100.000 (Maximum)	
(Nominal)			(Nominal)		
Master: 6-Aug-2017 6:32					

ThruBit String Master Calibration					
TBI Master Calibration COMPLEX GAINS					
Freq 2, R	Value	Nominal	Freq 2, X	Value	Nominal
	1.020	1.000		-0.01232	0
	1.013	1.000		0.004093	0
	1.018	1.000		0.01392	0
	1.019	1.000		-0.01898	0
	1.027	1.000		0.01821	0
0.9500 (Minimum)	1.050 (Maximum)		-0.05000 (Minimum)	0.05000 (Maximum)	
(Nominal)			(Nominal)		
Master: 6-Aug-2017 6:32					








ThruBit String Master Calibration								
TBD Caliper Master Calibration								
Caliper 12in Ring IN	Value	Nominal	Caliper 9in Ring IN	Value	Nominal	Caliper 6in Ring IN	Value	Nominal
	1863.1	1949.8		2020.2	2096.7		2186.9	2285.7
1799.8 (Minimum)	2099.8 (Maximum)		1946.7 (Minimum)	2246.7 (Maximum)		2135.7 (Minimum)	2435.7 (Maximum)	
(Nominal)			(Nominal)			(Nominal)		
Master: 1-Aug-2017 8:00								



ThruBit String Master Calibration					
TBD Density Master Calibration. Ti Window, Schlumberger blocks					
LS1 Background CPS	Value	Nominal	SS1 Background CPS	Value	Nominal
	127.58	143.00		122.40	143.00
100.00 (Minimum)	186.00 (Maximum)		100.00 (Minimum)	186.00 (Maximum)	
(Nominal)			(Nominal)		
LS2 Background CPS	Value	Nominal	SS2 Background CPS	Value	Nominal
	33.5492	37.0000		32.6493	38.0000

26.0000 (Minimum)	(Nominal)	48.0000 (Maximum)		27.0000 (Minimum)	(Nominal)	50.0000 (Maximum)	
LS3 Background CPS		Value	Nominal	SS3 Background CPS		Value	Nominal
		19.8136	22.0000			19.4811	23.0000
15.0000 (Minimum)	(Nominal)	29.0000 (Maximum)		16.0000 (Minimum)	(Nominal)	30.0000 (Maximum)	
LS4 Background CPS		Value	Nominal	SS4 Background CPS		Value	Nominal
		25.84	30.00			27.3468	31.0000
20.00 (Minimum)	(Nominal)	40.00 (Maximum)		22.0000 (Minimum)	(Nominal)	40.0000 (Maximum)	
LS1 Aluminium CPS		Value	Nominal	SS1 Aluminium CPS		Value	Nominal
		1030.3	1220.0			6750.93	7900.00
850.00 (Minimum)	(Nominal)	1590.0 (Maximum)		5530.00 (Minimum)	(Nominal)	10270.0 (Maximum)	
LS2 Aluminium CPS		Value	Nominal	SS2 Aluminium CPS		Value	Nominal
		986.502	1140.00			3324.92	4050.00
800.000 (Minimum)	(Nominal)	1480.00 (Maximum)		2840.00 (Minimum)	(Nominal)	5270.00 (Maximum)	
LS3 Aluminium CPS		Value	Nominal	SS3 Aluminium CPS		Value	Nominal
		950.658	1080.00			2764.07	3420.00
760.000 (Minimum)	(Nominal)	1400.00 (Maximum)		2400.00 (Minimum)	(Nominal)	4450.00 (Maximum)	
LS4 Aluminium CPS		Value	Nominal	SS4 Aluminium CPS		Value	Nominal
		734.61	830.00			2736.5369	3360.0000
580.00 (Minimum)	(Nominal)	1080.0 (Maximum)		2350.0000 (Minimum)	(Nominal)	3700.0000 (Maximum)	
Magnesium RHOLS		Value	Nominal	Magnesium RHOSS		Value	Nominal
		1.6946	1.6880			1.6885	1.6700
1.6630 (Minimum)	(Nominal)	1.7130 (Maximum)		1.6350 (Minimum)	(Nominal)	1.7050 (Maximum)	
Magnesium PEF		Value	Nominal	Magnesium RHOB		Value	Nominal
		2.5128	2.5210			1.6998	1.7040
2.3700 (Minimum)	(Nominal)	2.6700 (Maximum)		1.6870 (Minimum)	(Nominal)	1.7210 (Maximum)	
Magnesium + Sleeve RHOLS		Value	Nominal	Magnesium + Sleeve RHOSS		Value	Nominal
		1.8580	1.8550			2.1680	2.1520
1.7950 (Minimum)	(Nominal)	1.9150 (Maximum)		2.0920 (Minimum)	(Nominal)	2.2120 (Maximum)	
Magnesium + Sleeve PEF		Value	Nominal	Magnesium + Sleeve RHOB		Value	Nominal
		7.4593	6.8000			1.5943	1.6060
5.1000 (Minimum)	(Nominal)	8.5000 (Maximum)		1.5780 (Minimum)	(Nominal)	1.6340 (Maximum)	
Master: 1-Aug-2017 8:00							

ThruBit String Master Calibration							
Thermal Neutron Master Calibration							
TNF, Background CPS		Value	Nominal	TNN, Background CPS		Value	Nominal
<div><div></div></div>		0.16	1.0	<div><div></div></div>		0	1.0
0 (Minimum)		(Nominal)		2.0 (Maximum)			
TNF, Tank CPS		Value	Nominal	TNN, Tank CPS		Value	Nominal
<div><div></div></div>		10720	27990	<div><div></div></div>		30980	69600
9330 (Minimum)		(Nominal)		56000 (Maximum)			
23200 (Minimum)		(Nominal)		139200 (Maximum)			
TNF, Tank + Al Sleeve CPS		Value	Nominal	TNN, Tank + Al Sleeve CPS		Value	Nominal
<div><div></div></div>		627.32	1750.0	<div><div></div></div>		7102.70	18350.0
580.00 (Minimum)		(Nominal)		3500.0 (Maximum)			
6100.00 (Minimum)		(Nominal)		36700.0 (Maximum)			
Tank + Al Sleeve Ratio		Value	Nominal	Tank + Al Sleeve Porosity PU		Value	Nominal
<div><div></div></div>		11.322	11.128	<div><div></div></div>		15.19	15.19
10.528 (Minimum)		(Nominal)		11.728 (Maximum)			
14.69 (Minimum)		(Nominal)		15.69 (Maximum)			
Tank, Ratio		Value	Nominal	Tank, Temperature DEGF		Value	Nominal
<div><div></div></div>		2.8891	2.6300	<div><div></div></div>		92.0	70.0

2.0300 (Minimum)	(Nominal)	3.2300 (Maximum)		20.0 (Minimum)	(Nominal)	120 (Maximum)	
Master: 13-Jul-2017 15:19							

ThruBit String Master Calibration							
TMG Accelerometer Calibration							
Minimum Ax, m/s2		Value	Nominal	Maximum Ax, m/s2		Value	Nominal
		-9.807	-9.810			10.20	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
Minimum Ay, m/s2		Value	Nominal	Maximum Ay, m/s2		Value	Nominal
		-10.00	-9.810			9.905	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
Minimum Az, m/s2		Value	Nominal	Maximum Az, m/s2		Value	Nominal
		0.05274	0			10.12	9.810
-1.000 (Minimum)	(Nominal)	1.000 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
RB Offset, degrees		Value	Nominal				
		-15.95	0				
-360.0 (Minimum)	(Nominal)	360.0 (Maximum)					
Master: 1-Aug-2017 8:40							

ThruBit String Master Calibration						
TMG Gamma-Ray Calibration						
GR Background GAPI	Value	Nominal	GR Jig-Background GAPI	Value	Nominal	
	68.22	30.00		159.4	160.0	
0 (Minimum)	(Nominal)	120.0 (Maximum)	128.0 (Minimum)	(Nominal)	192.0 (Maximum)	
Master: 1-Aug-2017 15:35						

Company: **TEP ROCKY MOUNTAIN LLC**

**Schlumberger**

Well: **TR 423-23-597**

Field: **Trail Ridge**

County: **Garfield**

State: **Colorado**

Triple Combo