

Company: ENCANA OIL & GAS (USA) INC

Well: ROSE 22-1C (K22W)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

TEMPERATURE LOG
TEMP-CCL

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 2319 FSL & 2226 FWL

Well: ROSE 22-1C (K22W)

Company: ENCANA OIL & GAS (USA) INC

LOCATION			
SHL: 2319 FSL & 2226 FWL BHL: 1165 FNL & 657 FEL	Elev.: K.B. 6972.00 ft G.L. 6950.00 ft D.F. 6971.00 ft		
Permanent Datum: _____	GROUND LEVEL _____ Elev.: 6950.00 ft _____		
Log Measured From: _____	KELLY BUSHING _____ 22.00 ft above Perm. Datum		
Drilling Measured From: _____	KELLY BUSHING _____		
API Serial No. 05-045-22118-0000	Section 22	Township 7S	Range 93W

Logging Date	16-Dec-2013		
Run Number	1		
Depth Driller	9668 ft		
Schlumberger Depth	9602 ft		
Bottom Log Interval	9601 ft		
Top Log Interval	22 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	22 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	22 ft		
To	9668 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade			
From	22 ft		
To	9648 ft		
Maximum Recorded Temperatures	207 degF		
Logger On Bottom	16-Dec-2013	21:45	
Unit Number	391	GRAND JUNCTION	
Recorded By	STEPHEN KRAMER		
Witnessed By	MIKE OLSEN		

	Run 1	Run 2	Run 3
PVT DATA			
Oil Density			
Water Salinity			
Gas Gravity			
Bo			
Bw			
1/Bg			
Bubble Point Pressure			
Bubble Point Temperature			
Solution GOR			
Maximum Deviation			
CEMENTING DATA			
Primary/Squeeze	Primary		
Casing String No			
Lead Cement Type			
Volume			
Density			
Water Loss			
Additives			
Tail Cement Type			
Volume			
Density			
Water Loss			
Additives			
Expected Cement Top			
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Fluid Type			
Salinity			
Density			
Fluid Level			
BIT/CASING/TUBING STRING			
Bit Size			
From			
To			
Casing/Tubing Size			
Weight			
Grade			
From			
To			
Maximum Recorded Temperatures			
Logger On Bottom			
Unit Number			
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 14-AUG-2013 11:54:57

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-JB	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	6349	Serial Number:	3421	Serial Number:	112136
Calibration Date:	7-31-2013	Calibration Date:	14-AUG-2013	Length:	19000 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878	Conveyance Method:	Wireline
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10	Rig Type:	LAND
Wheel Correction 1:	-5	Calibration RMS:	3		
Wheel Correction 2:	-4	Calibration Peak Error:	8		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	0.00 FT
Rig Up Length At Bottom:	0.00 FT
Rig Up Length Correction:	0.00 FT
Stretch Correction:	
Tool Zero Check At Surface:	

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES USED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SPWT DRUM COUNTER USED AS SECONDARY DEPTH REFERENCE
- 4.
- 5.
- 6.

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: NONE OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
TOOL RAN AS PER TOOL SKETCH	
ENTER: 21:00	
TIME ON BOTTOM: 21:45	
EXIT: 23:00	
MAXIMUM RECORDED TEMPERATURE: 207 DEGF	

MAXIMUM RECORDED PRESSURE: 3846 PSI	
CREW: KIRSTIE BUNTING, STEPHEN KRAMER, WALEED AZIZ, KELLY JOHNS	
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY	

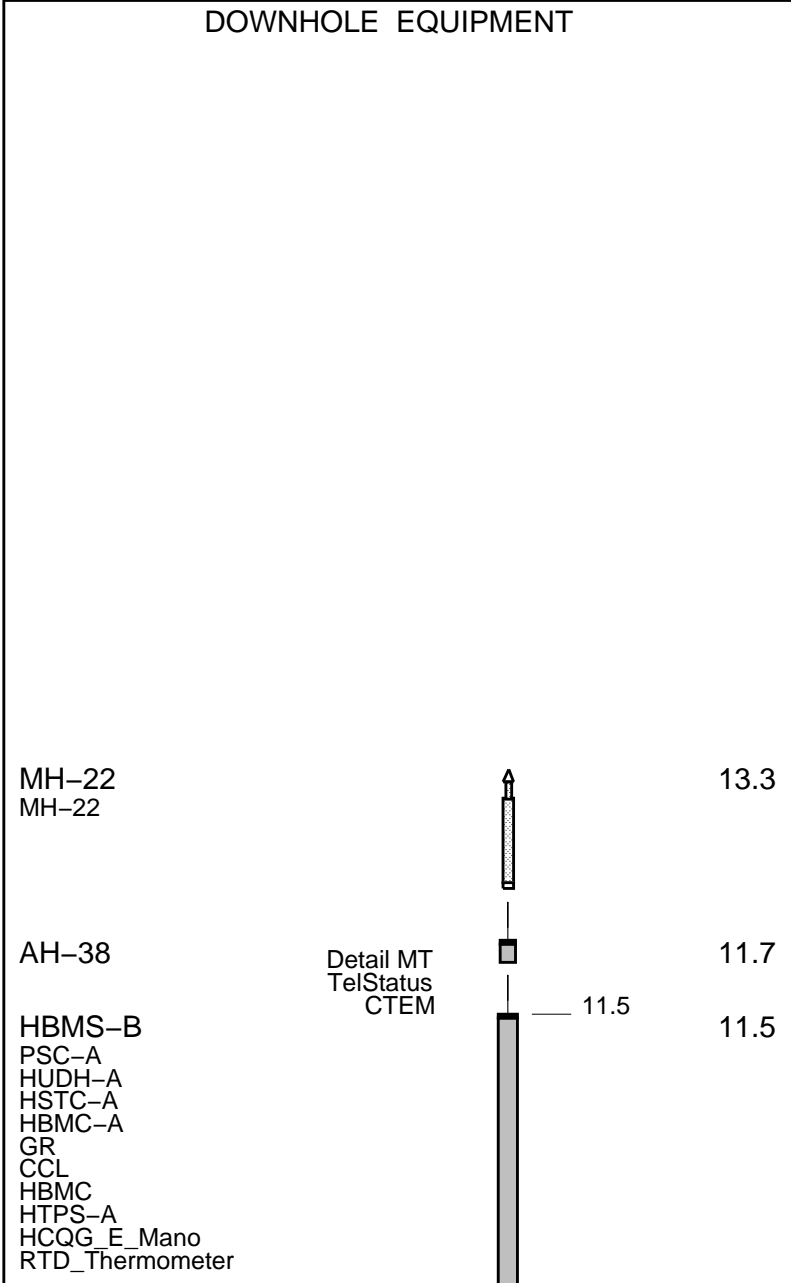
RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

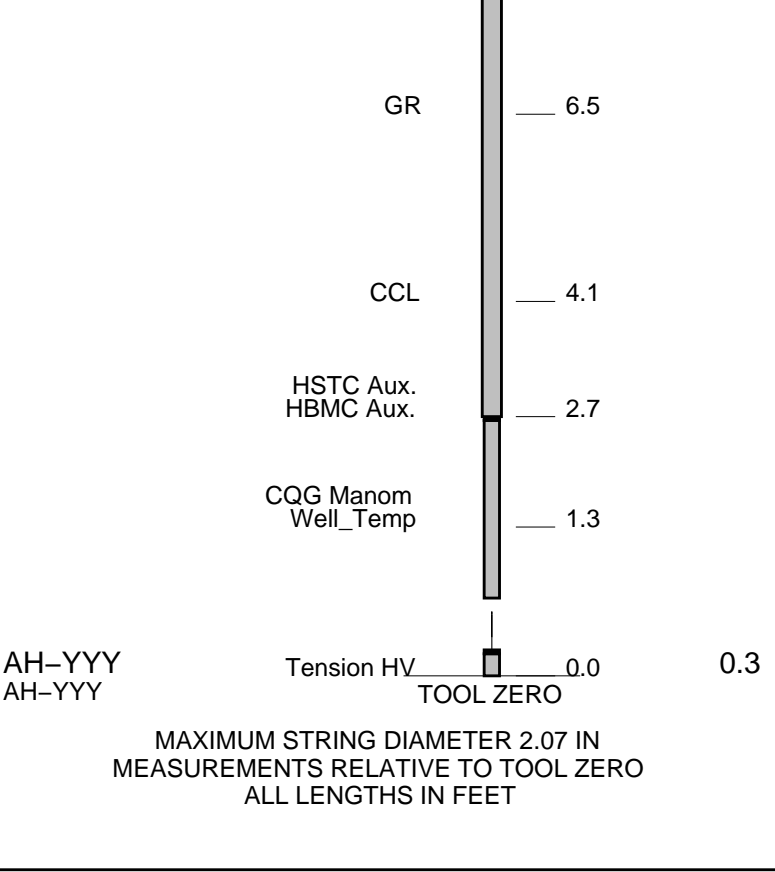
EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT

WITM-A

PSC_16MHZ

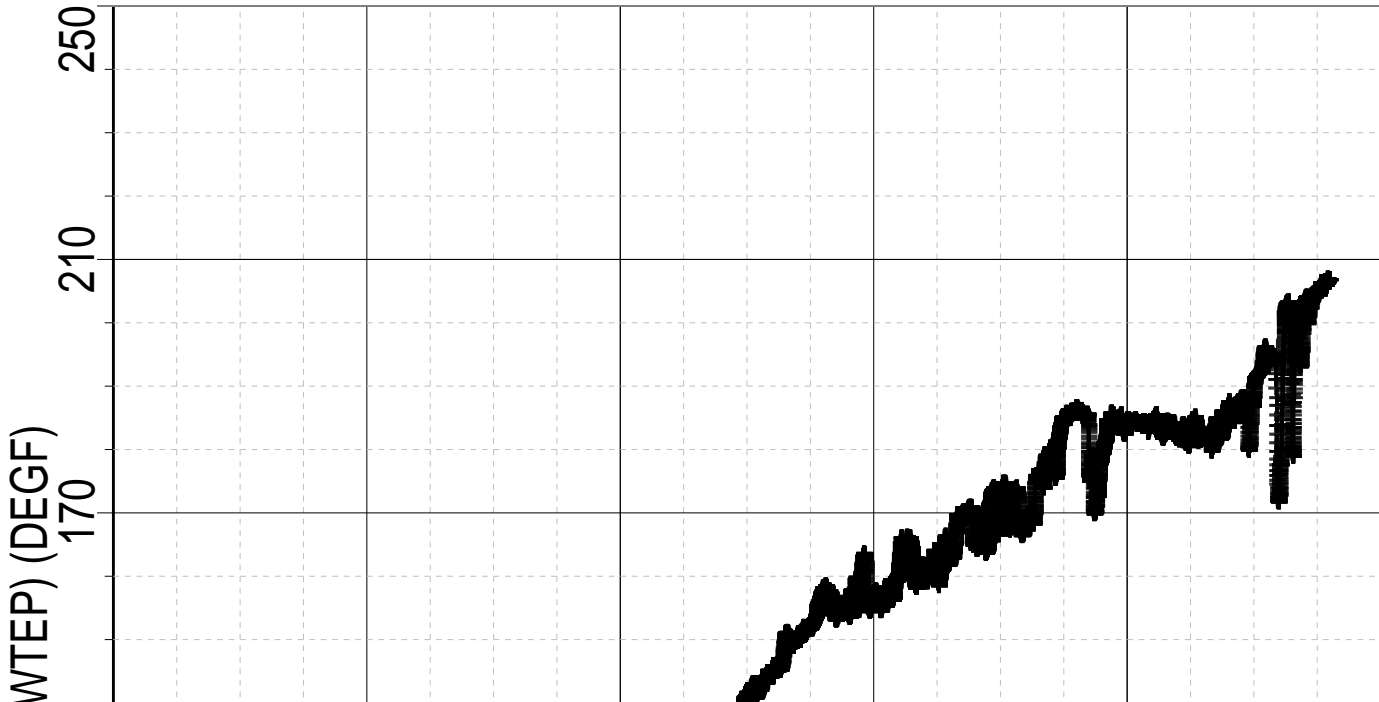


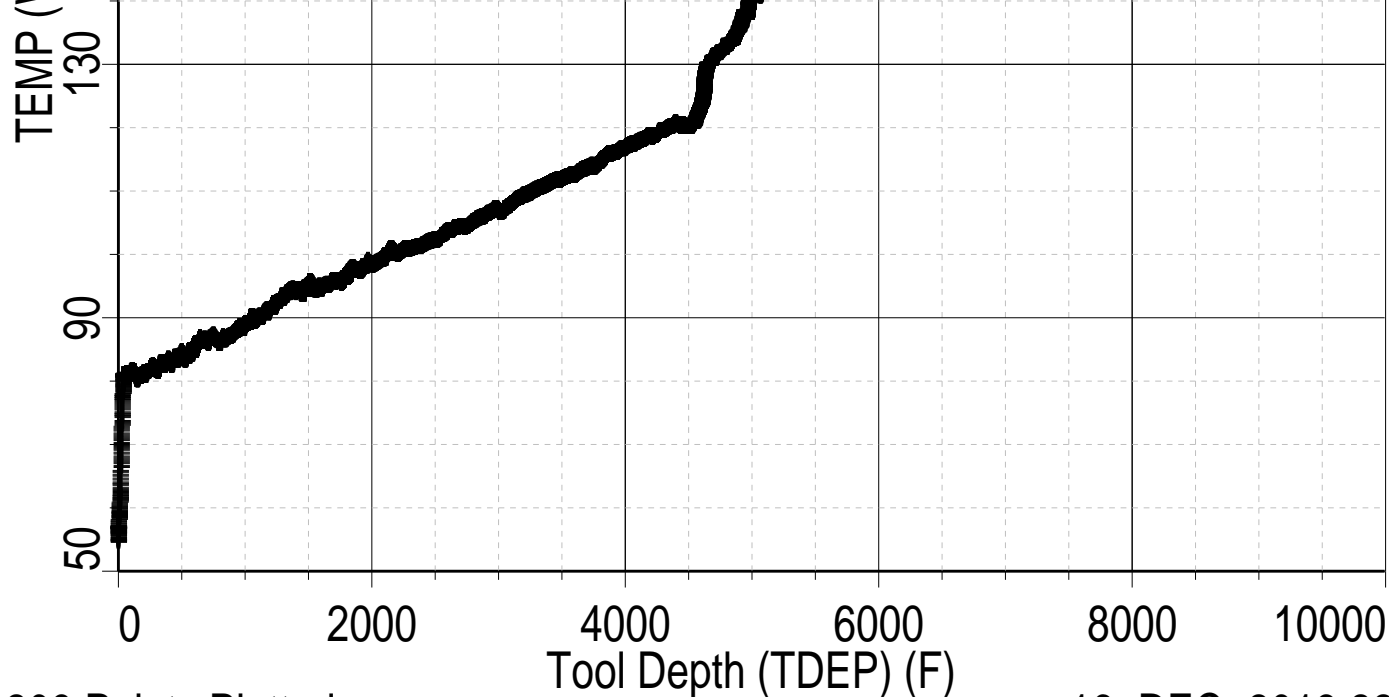


TEMPERATURE PLOT

MAXIS Field Log

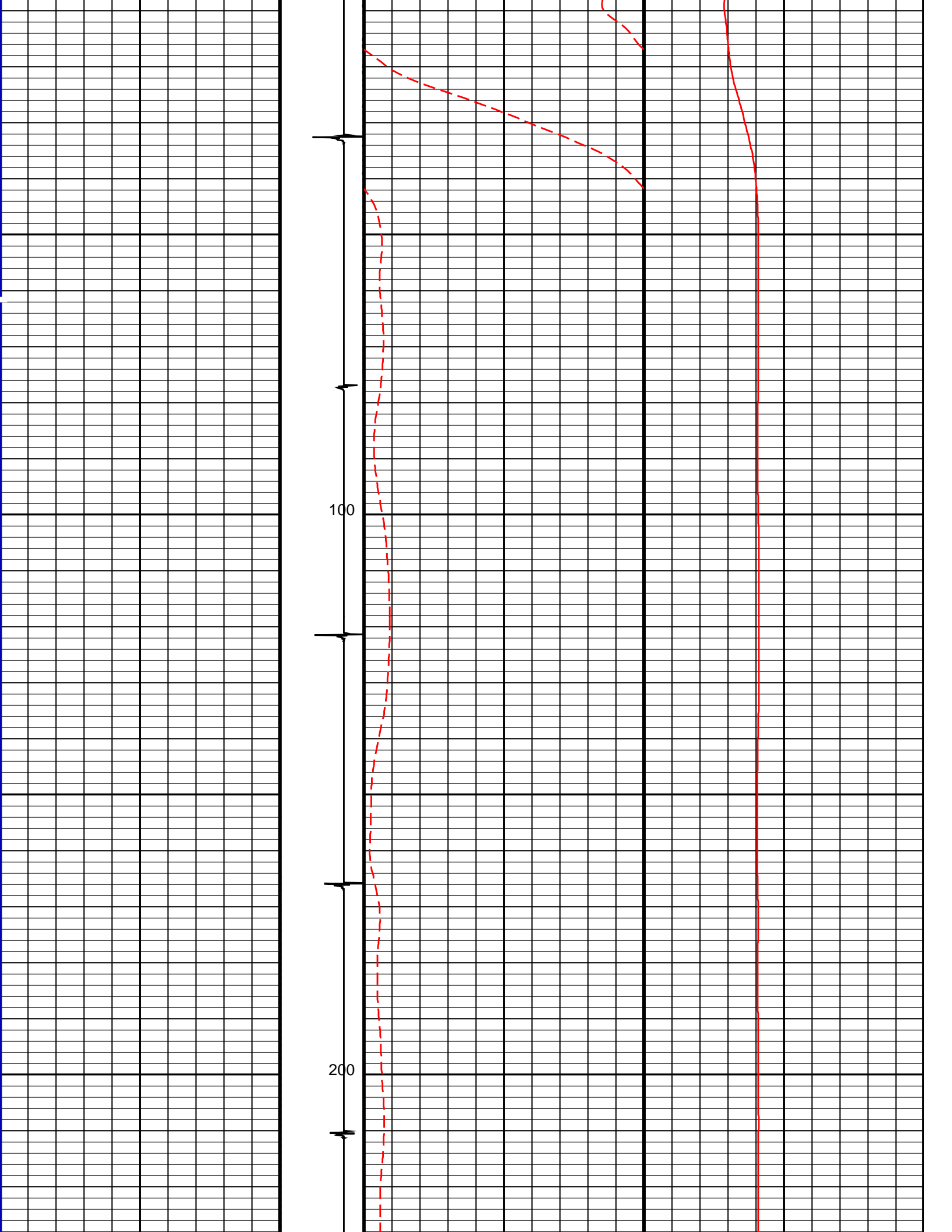
Index: 9604.0 – -10.5 FT

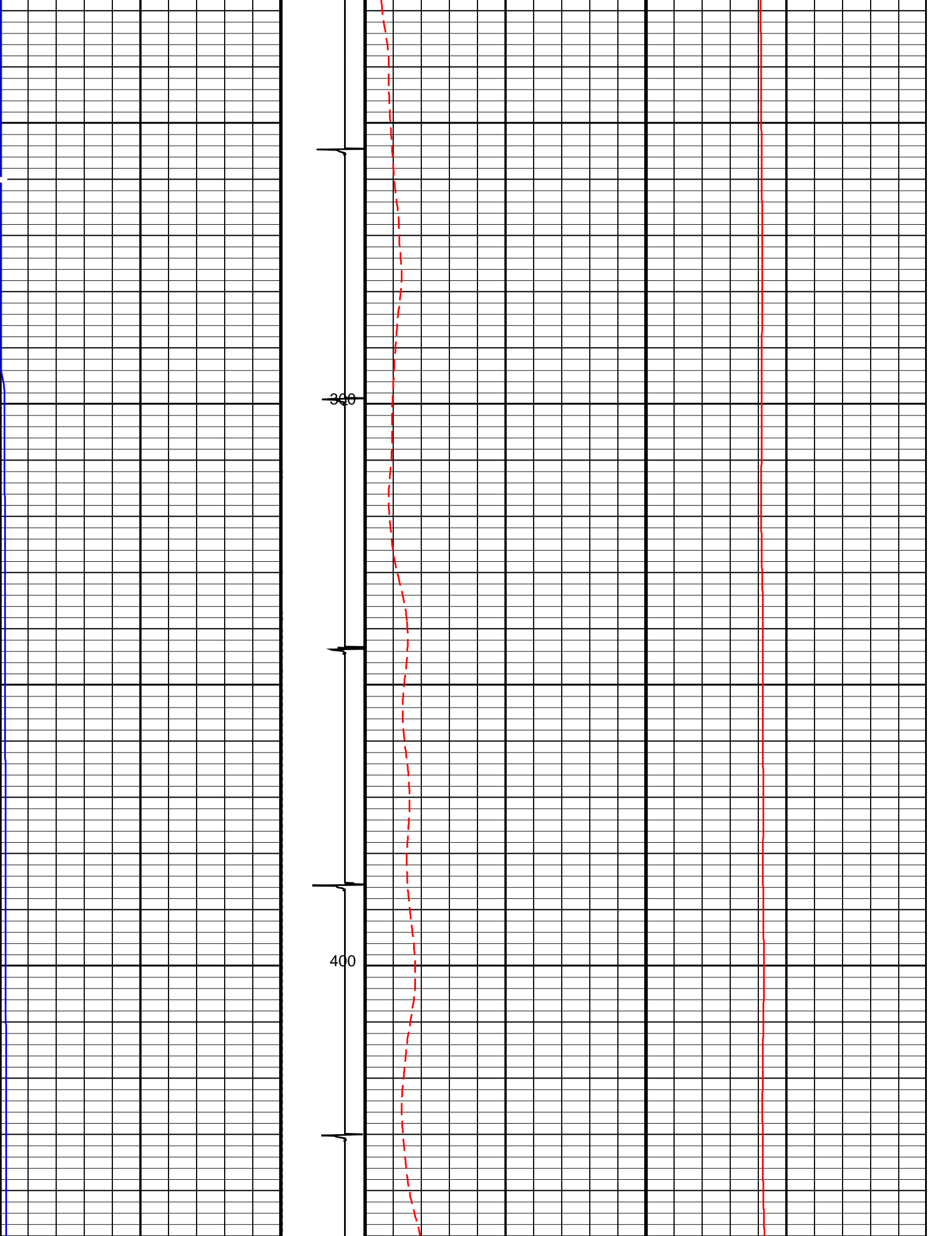


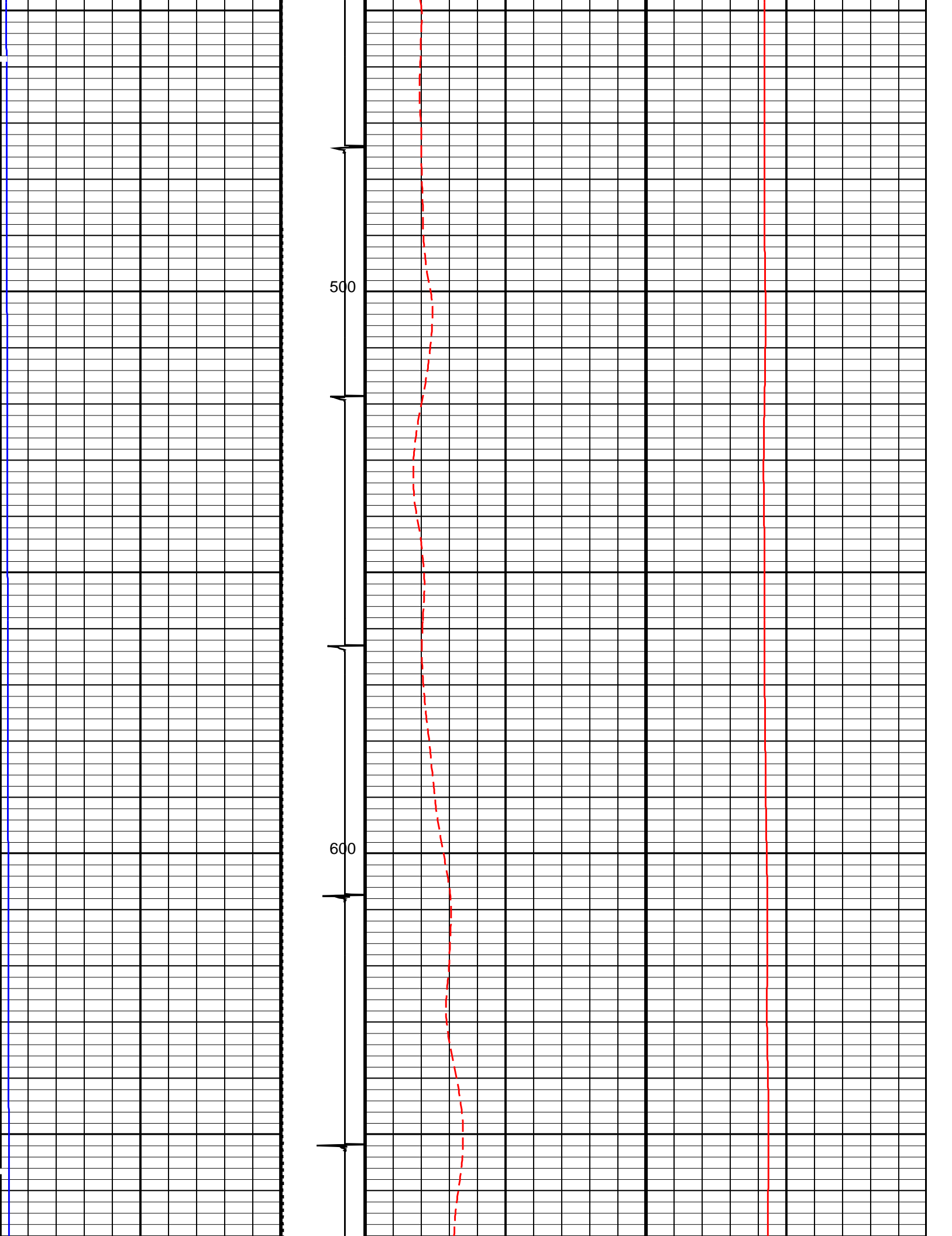


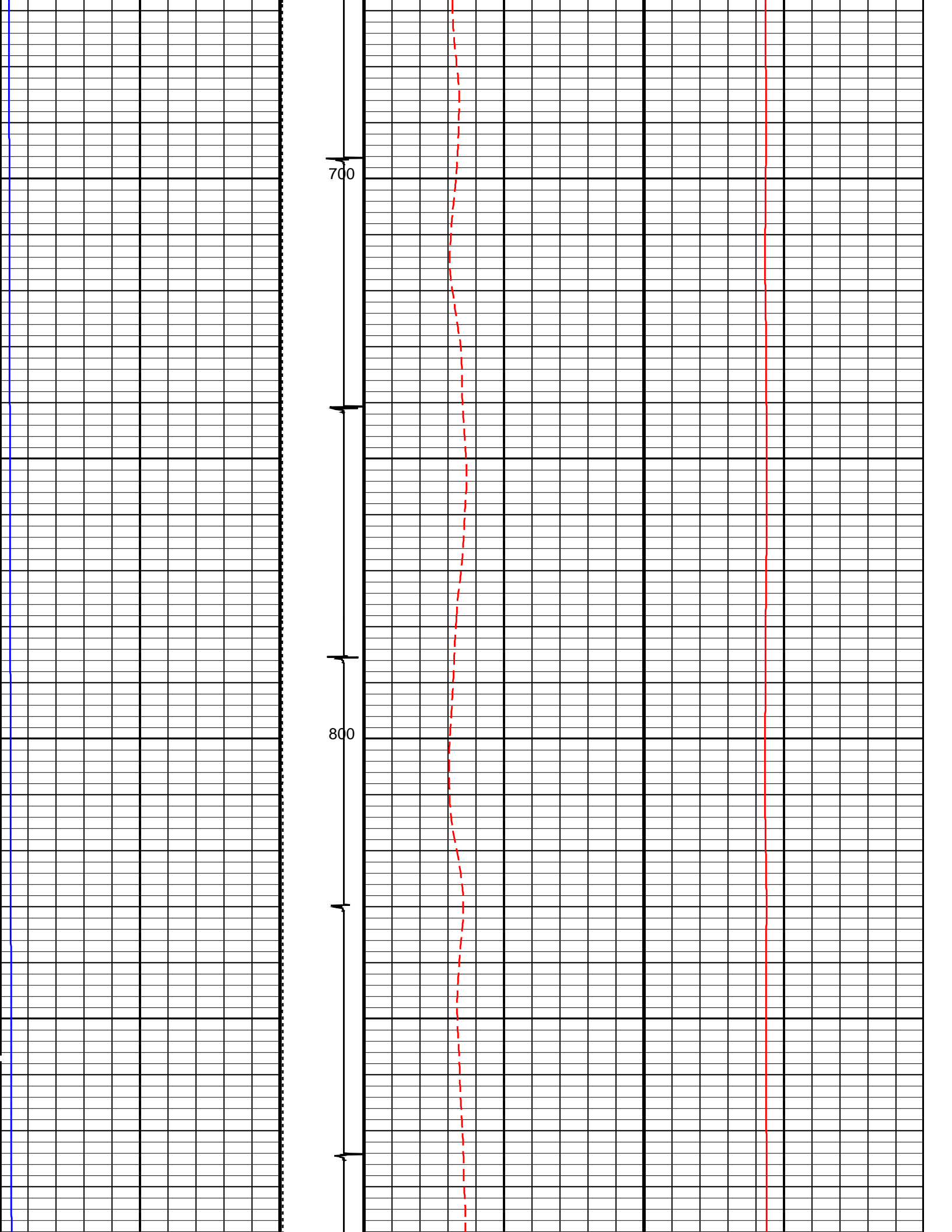
MAXIS Field Log

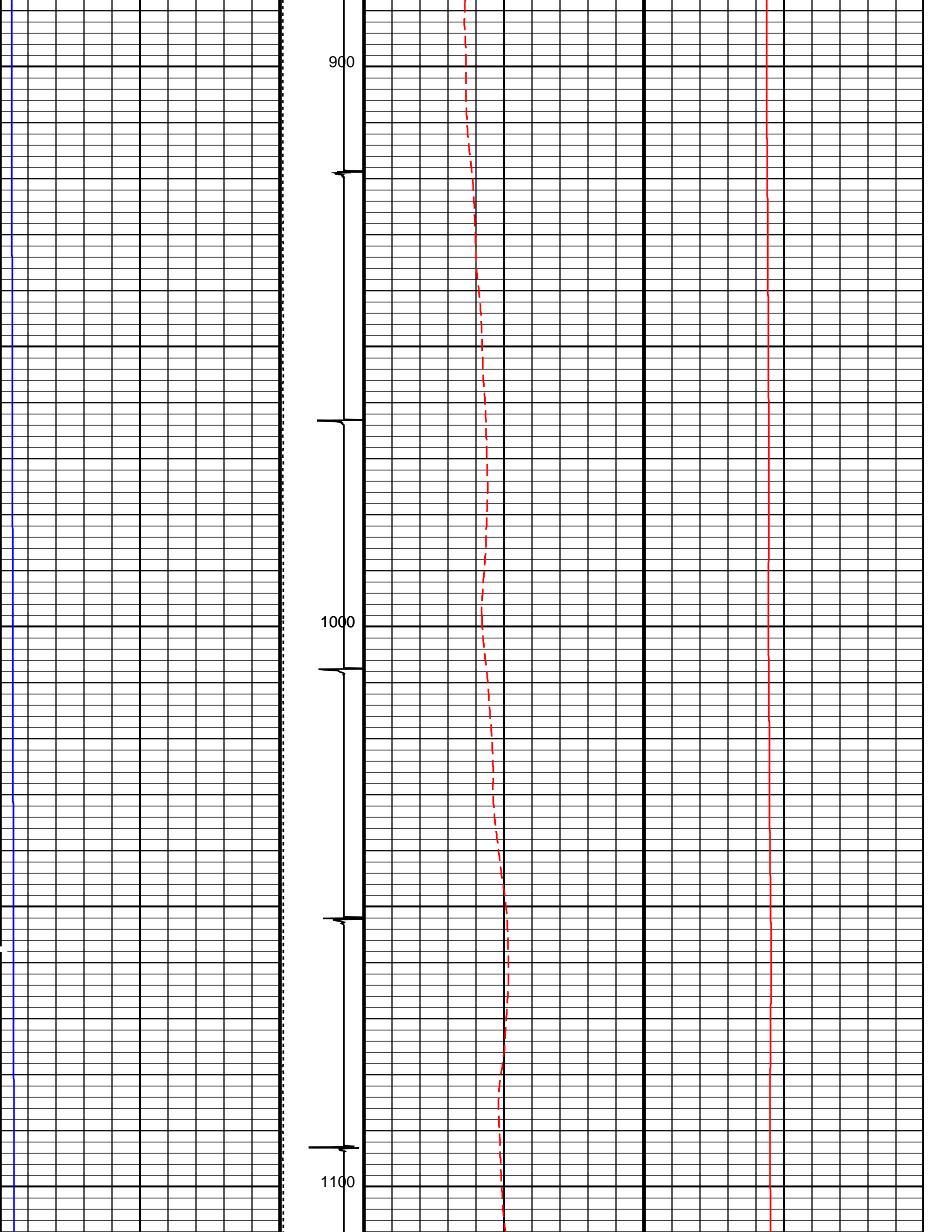
	Discriminat ed CCL (CCLD)		
	3 (V) -1		
Well Pressure (WPRE) (PSIA)	Tension (TENS) (LBF)	Well Temperature (WTEP) (DEGF)	Well Temperature (WTEP) (DEGF)
0 10000	0 2000	0 200	0 200
	0		

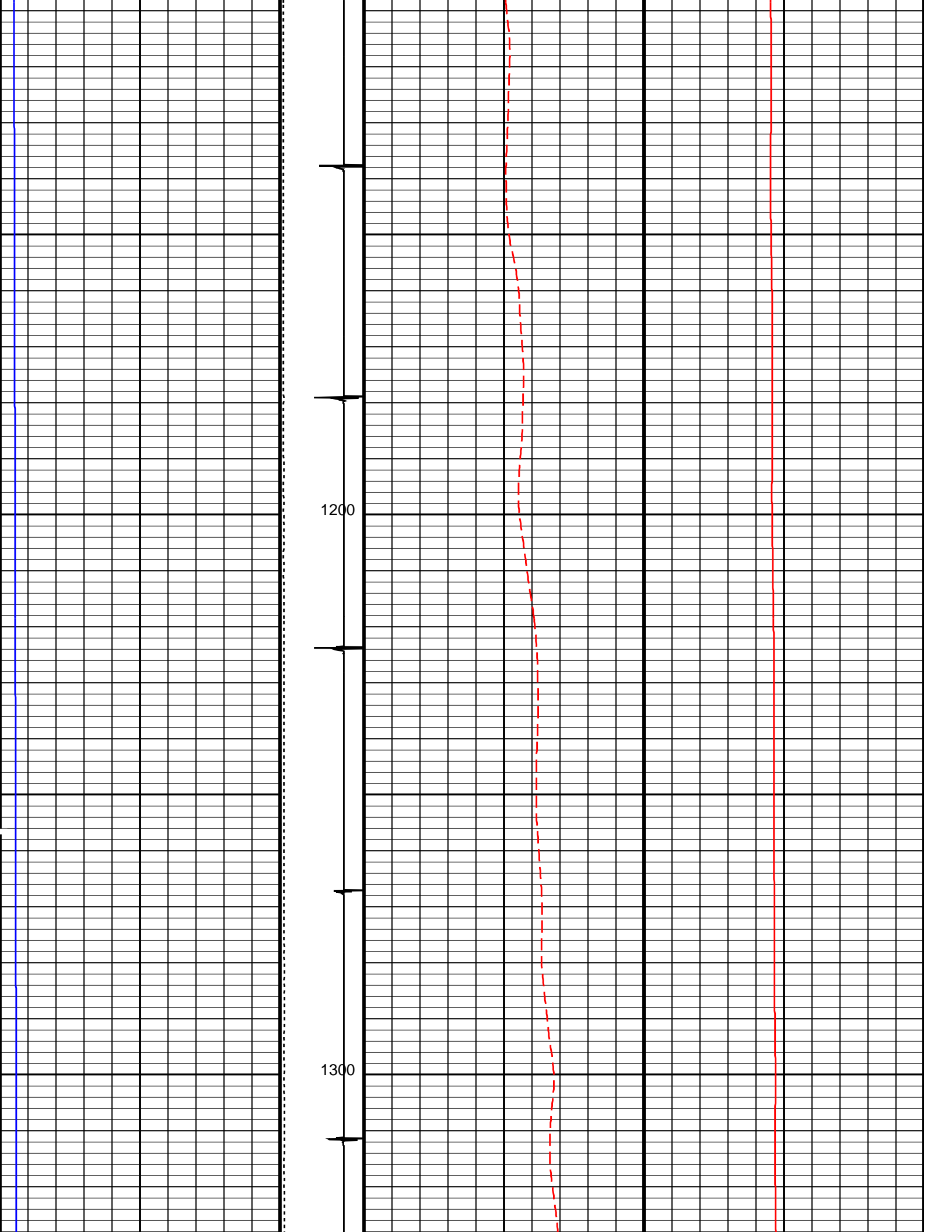


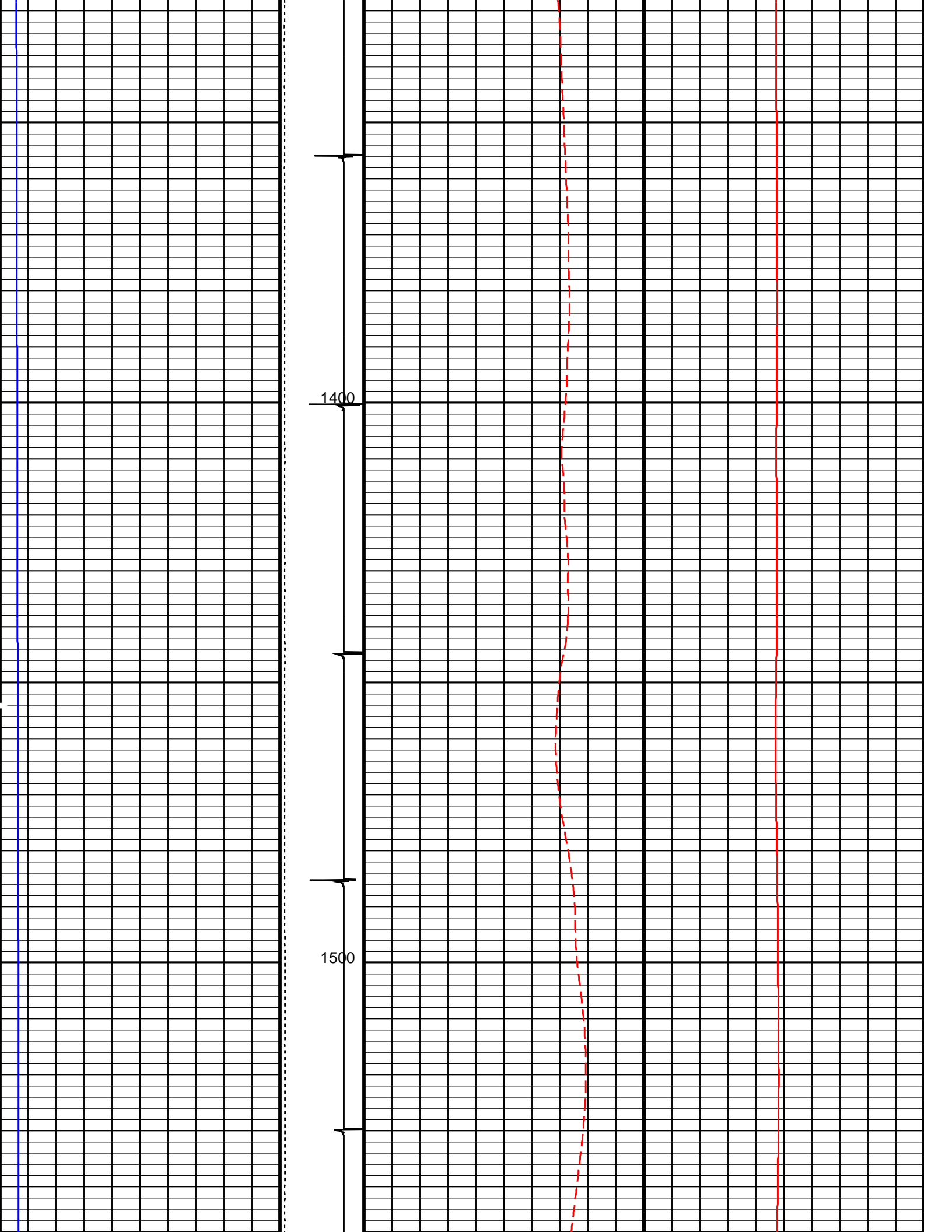


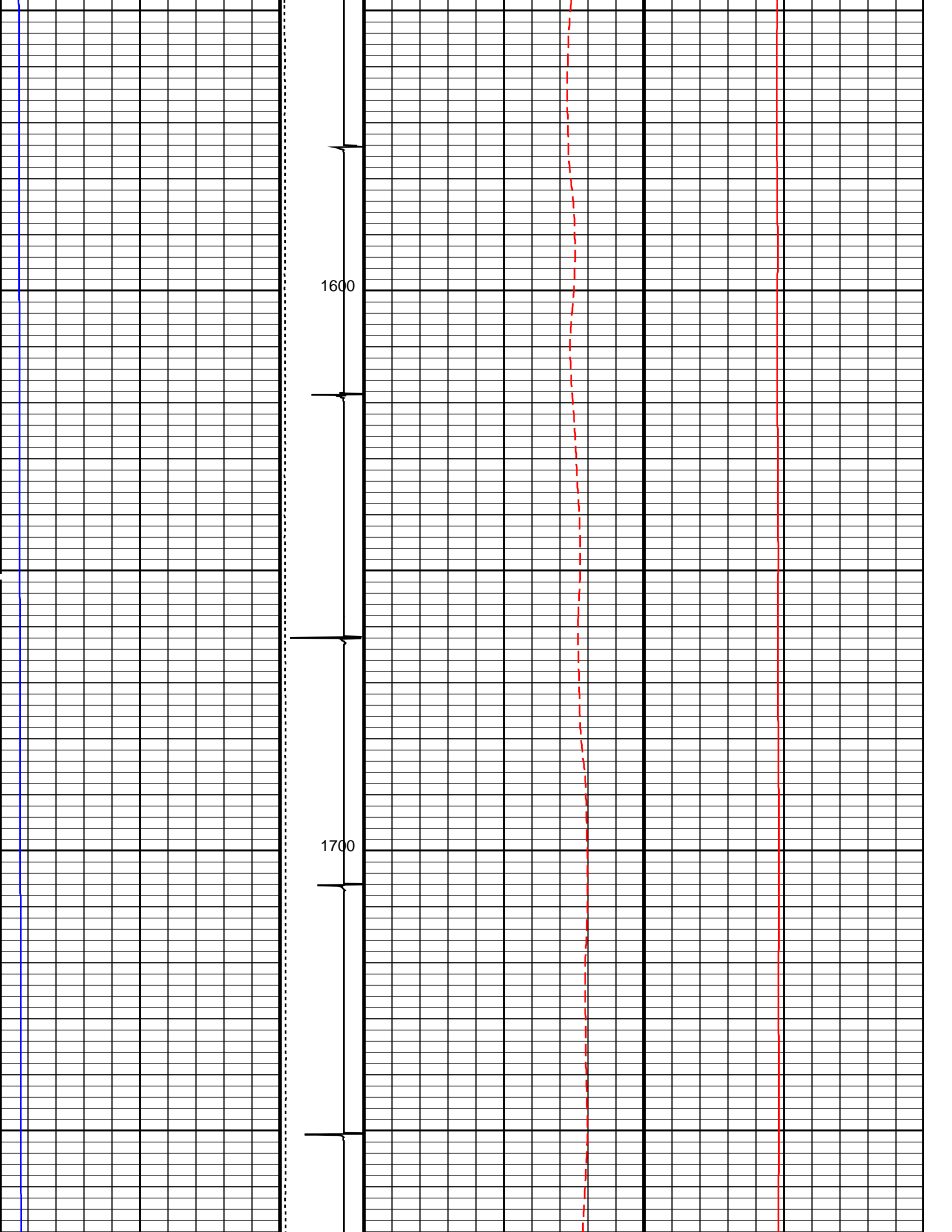


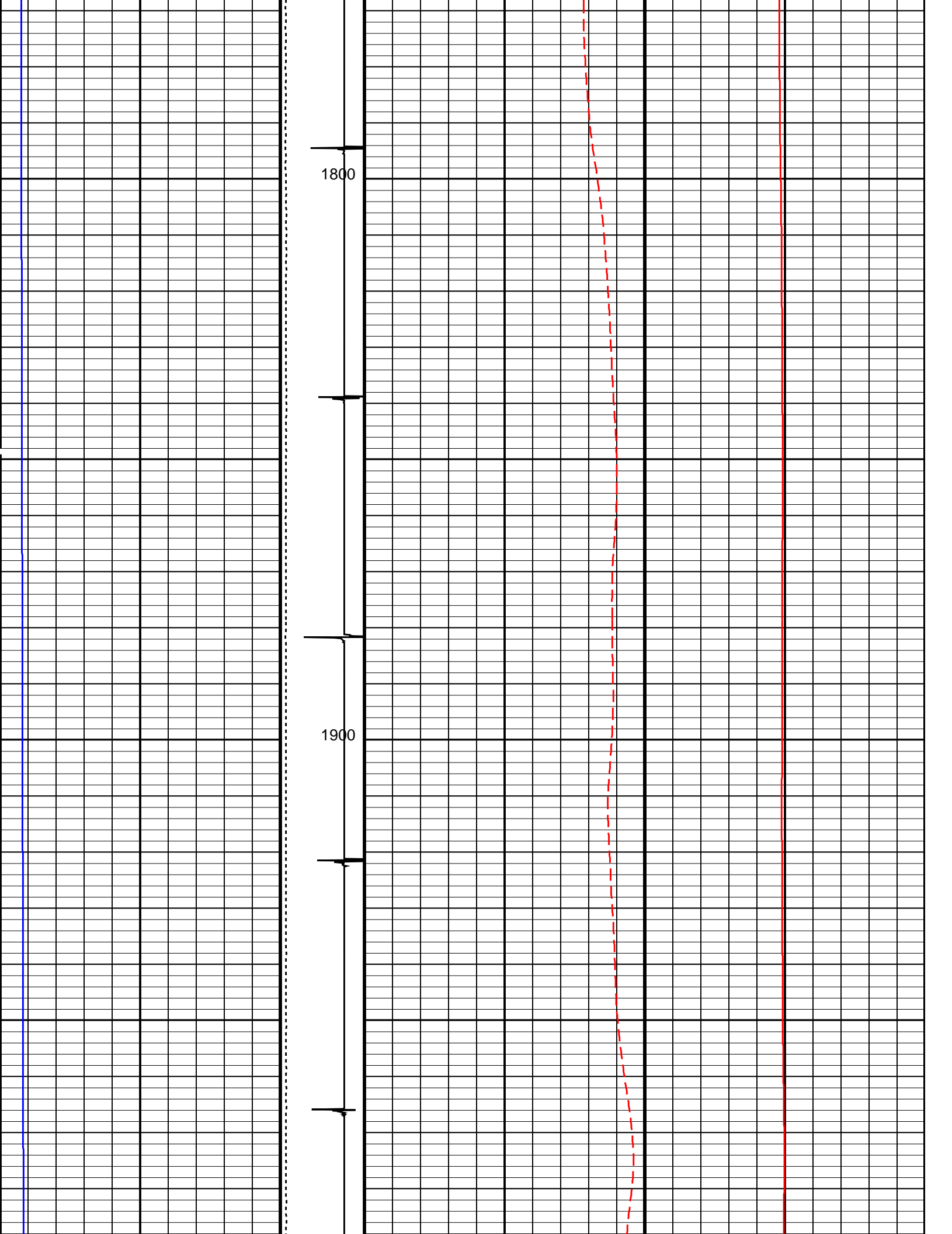


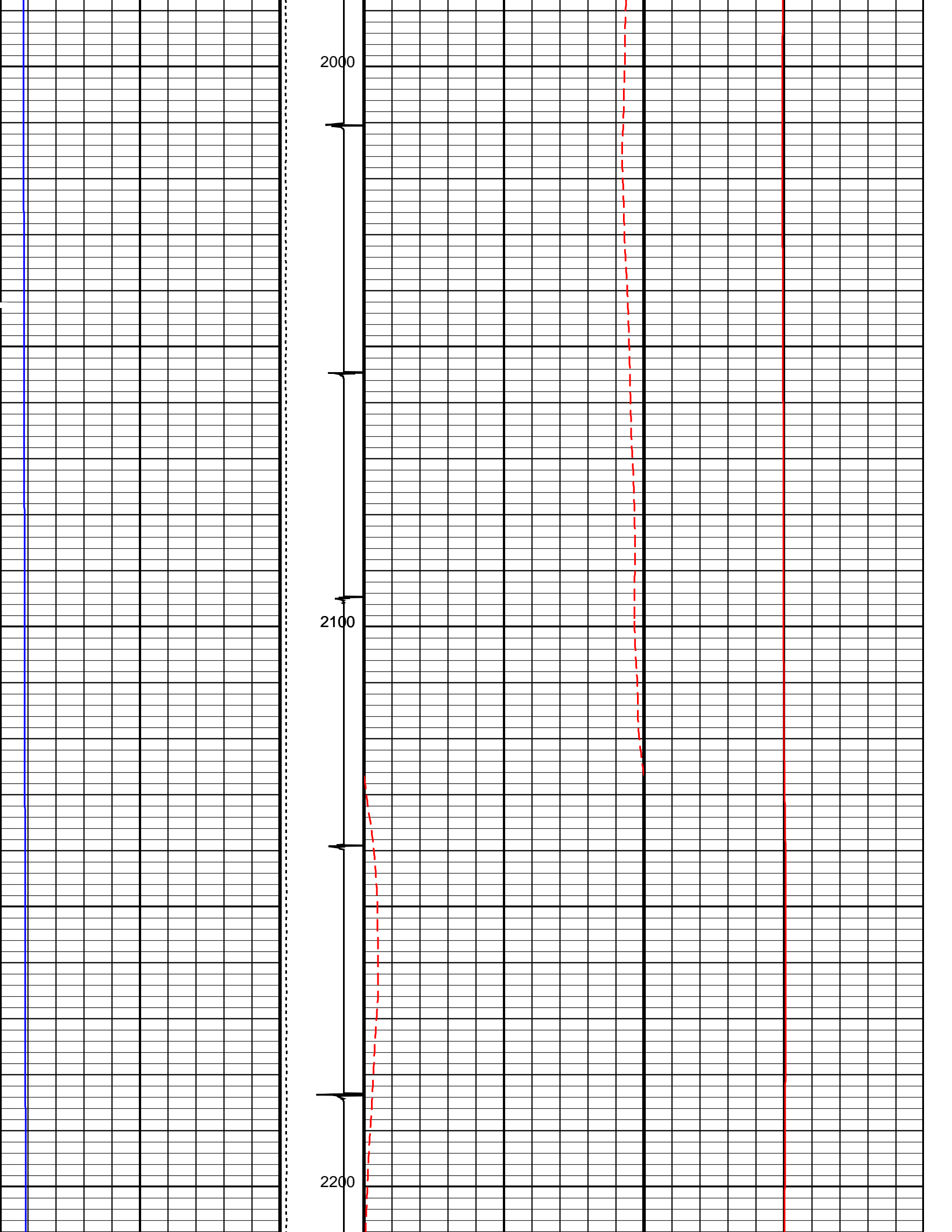


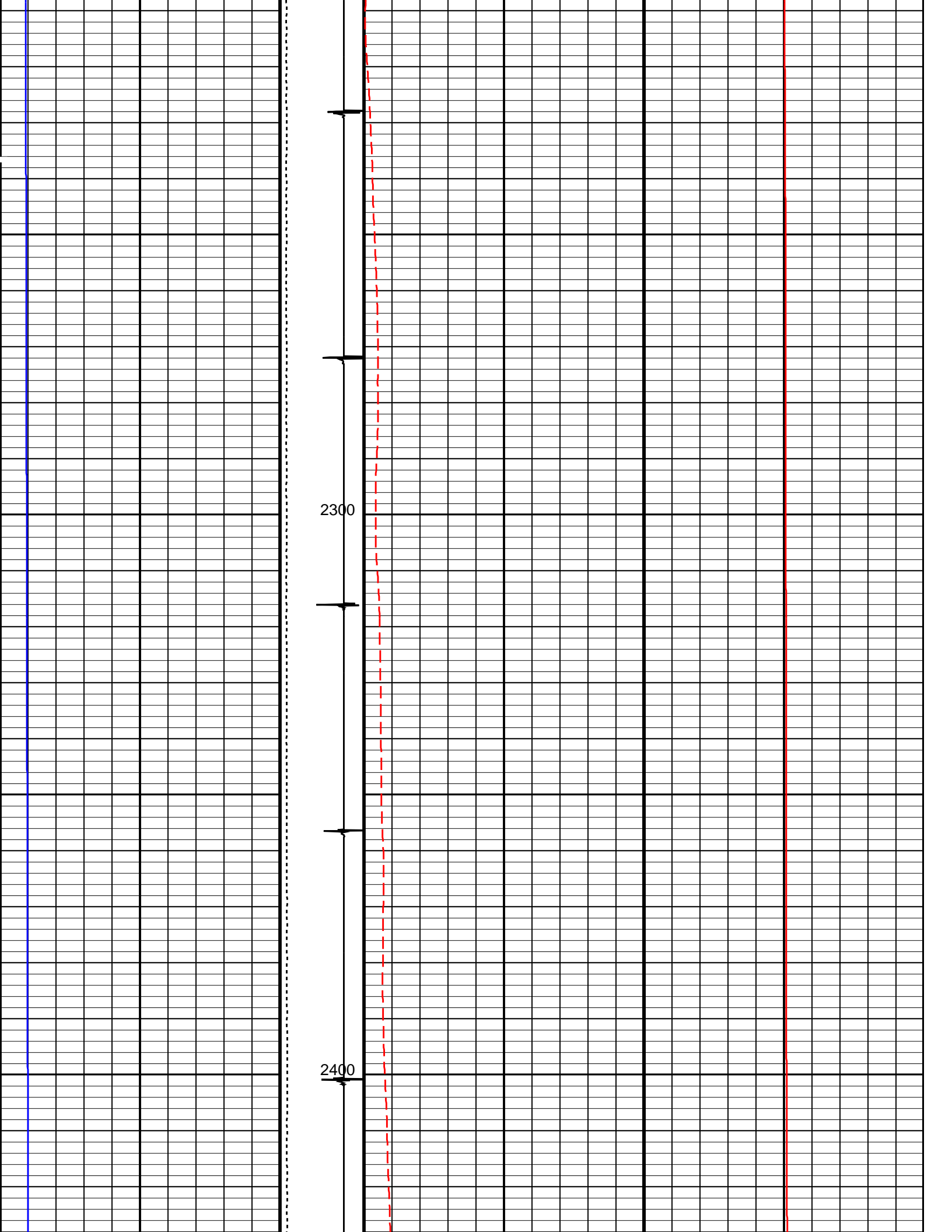


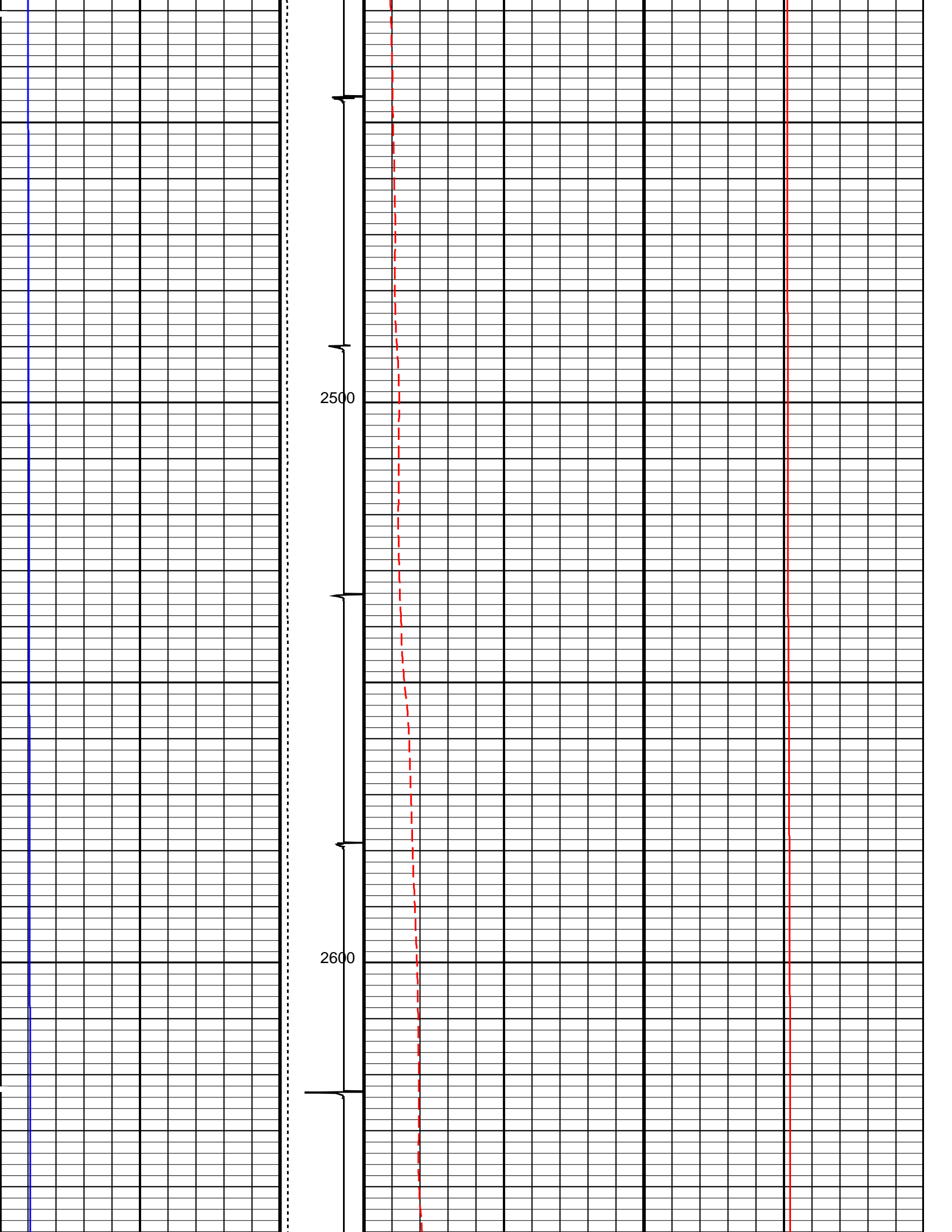


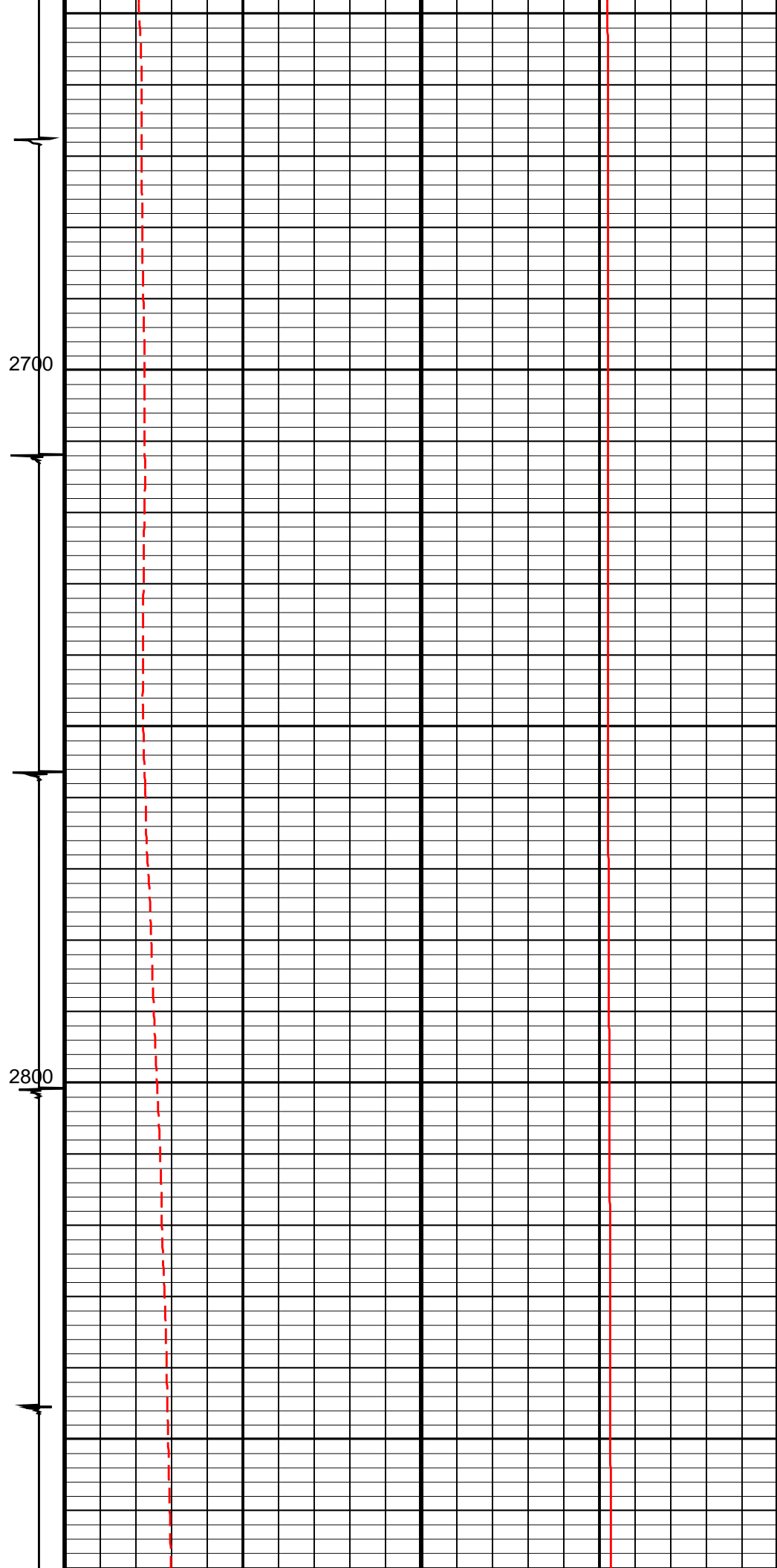
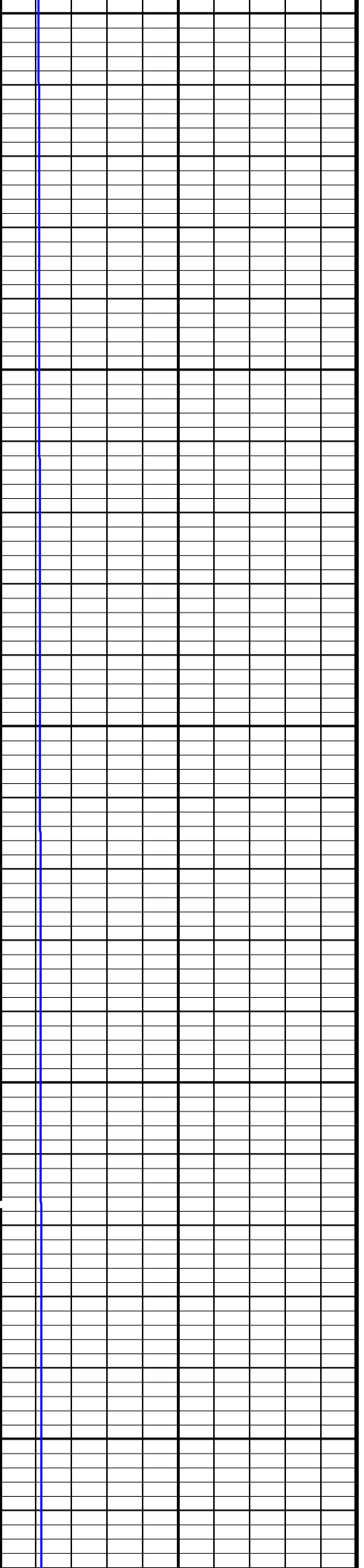


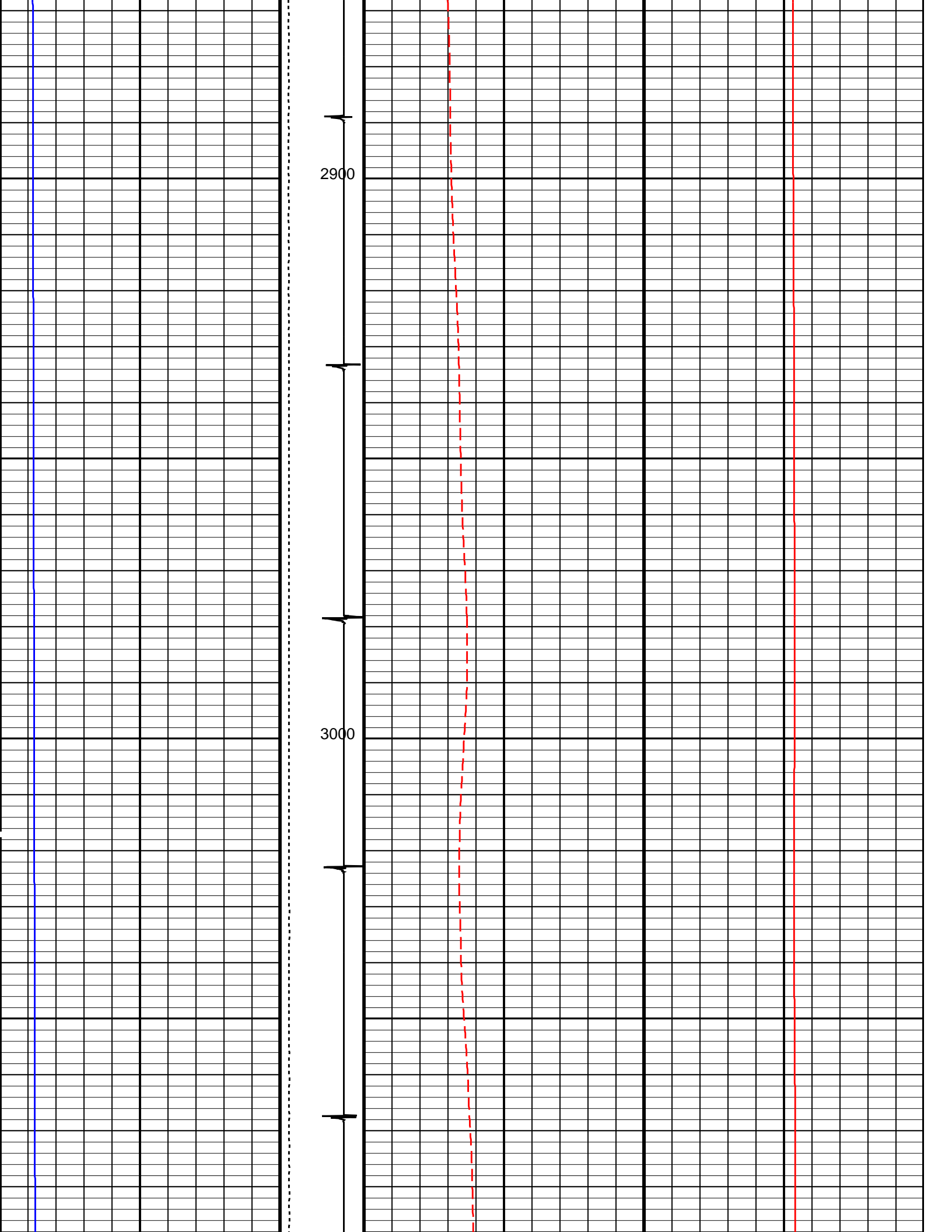


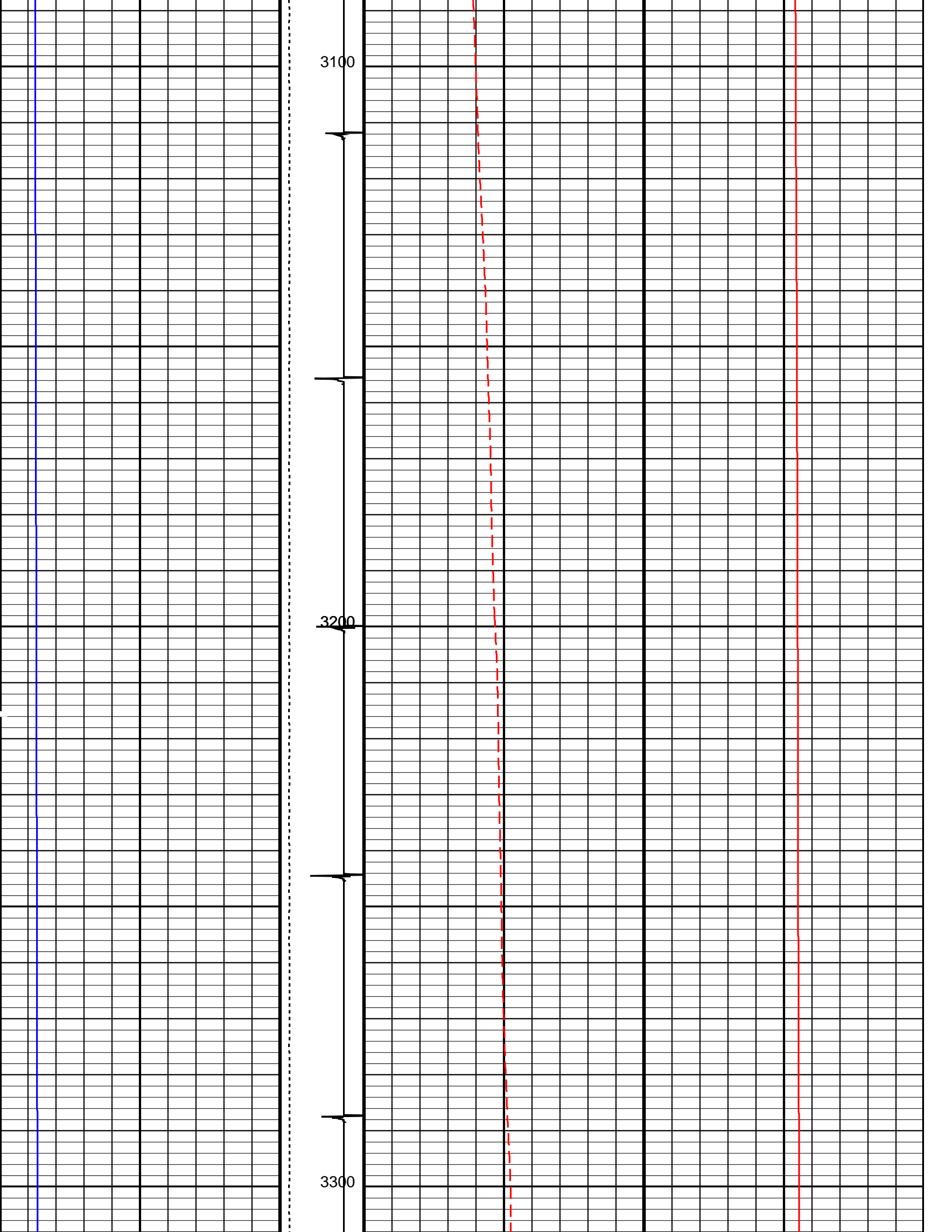


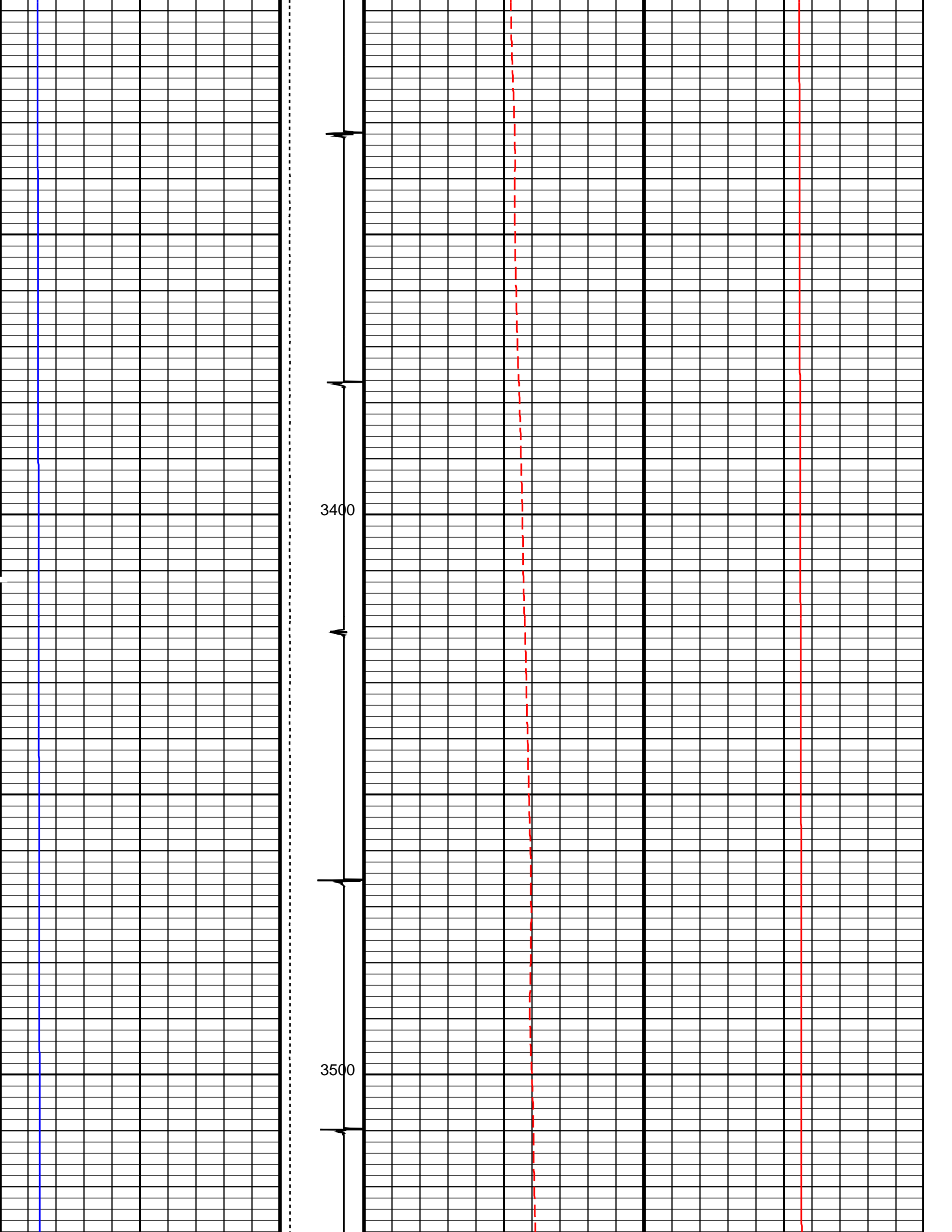


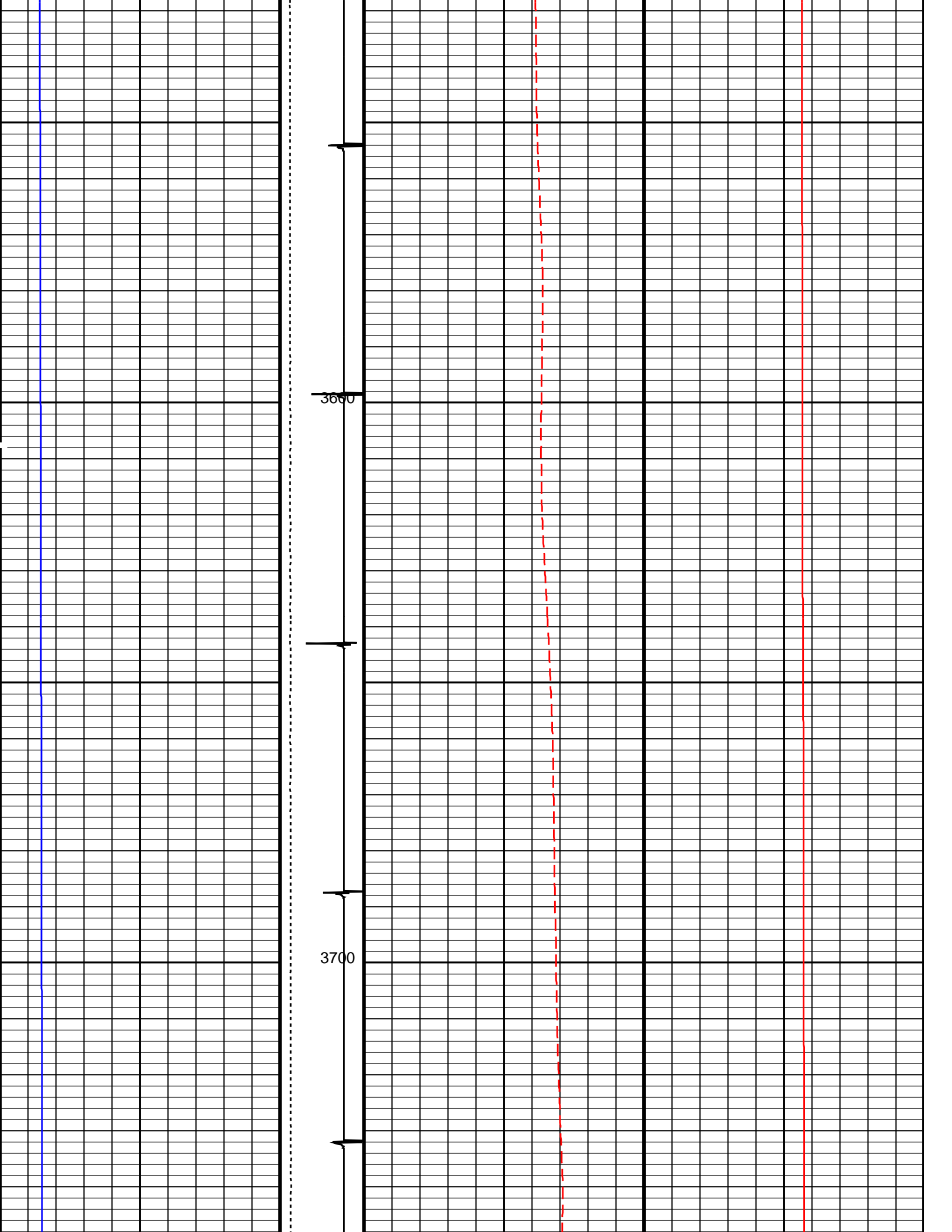


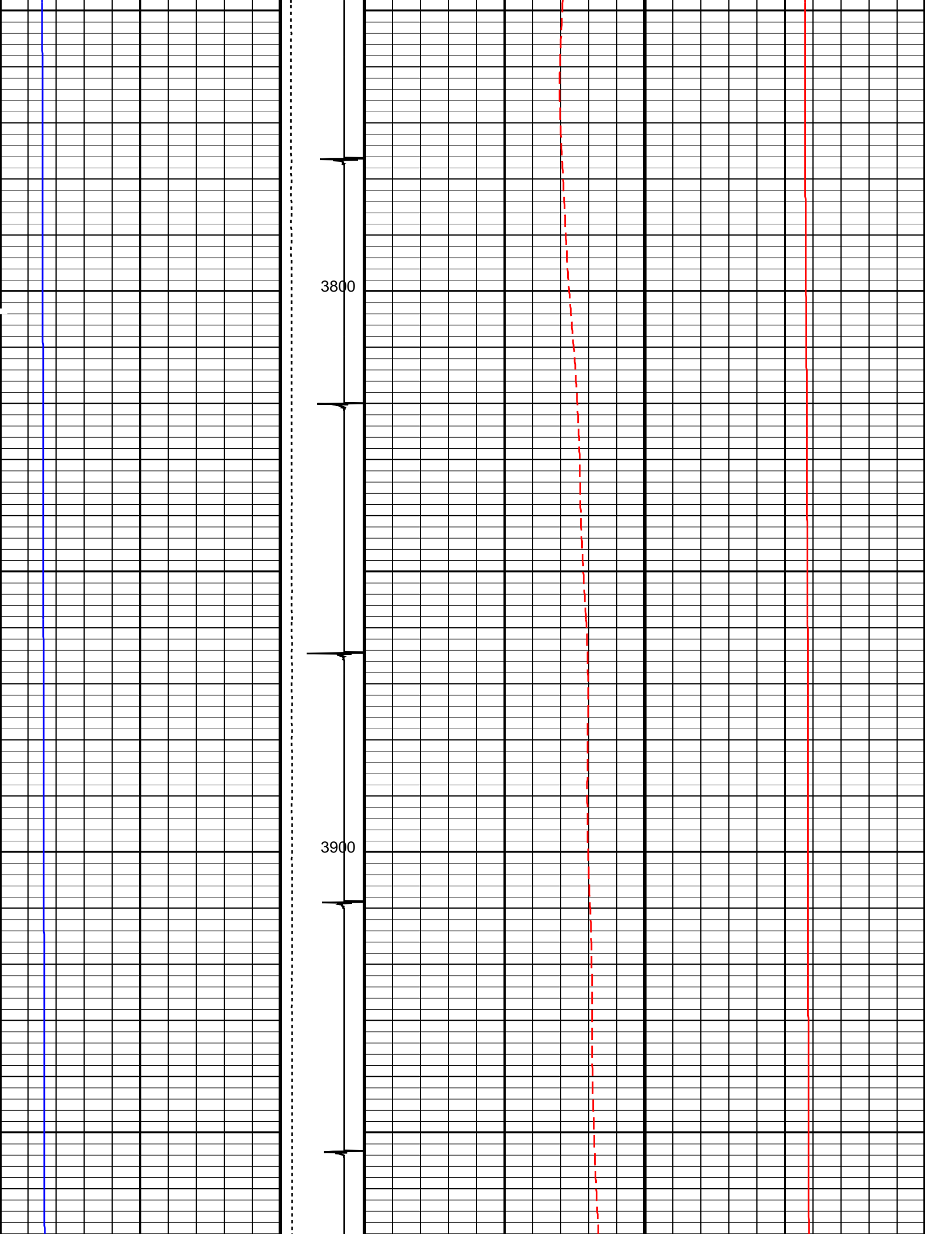


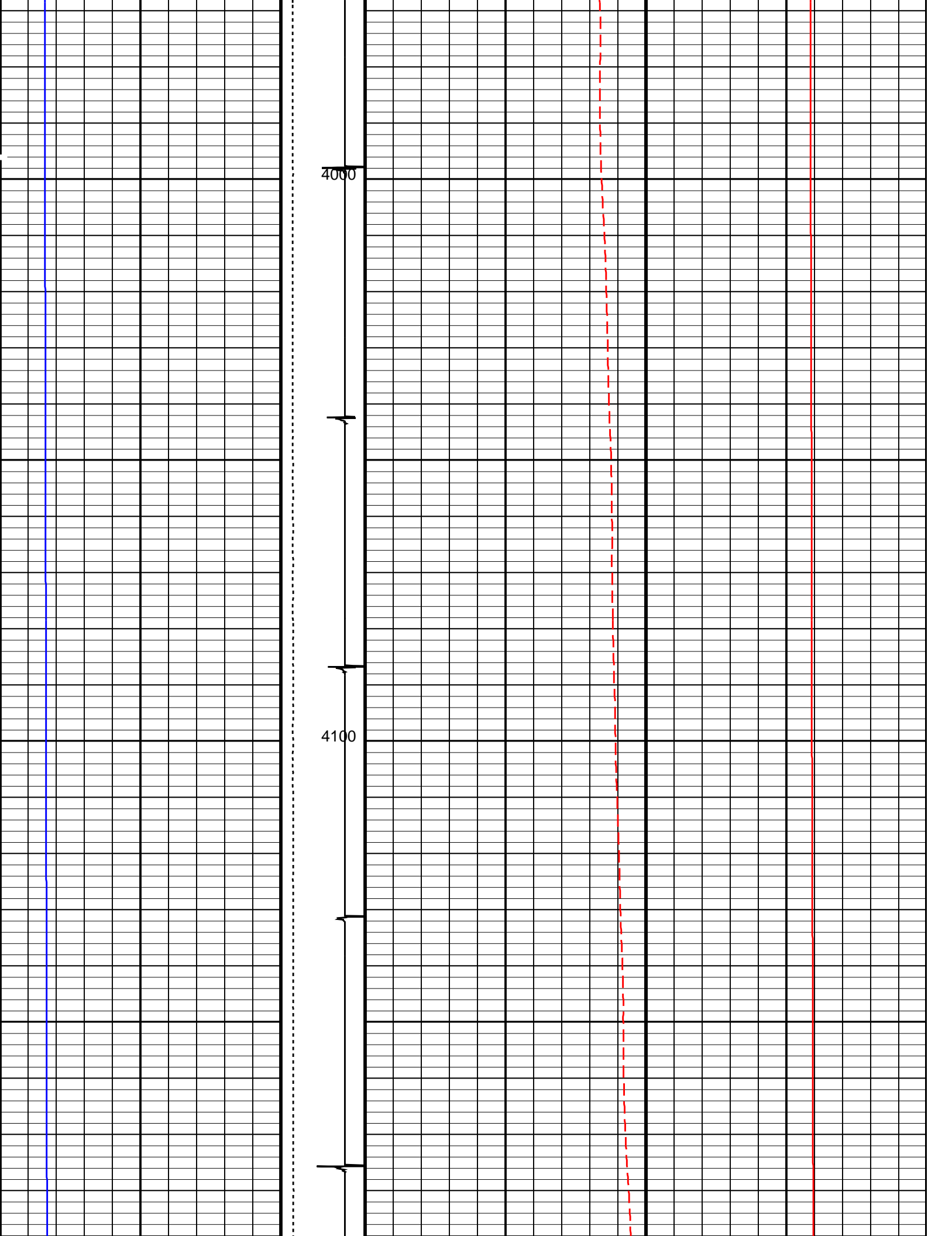


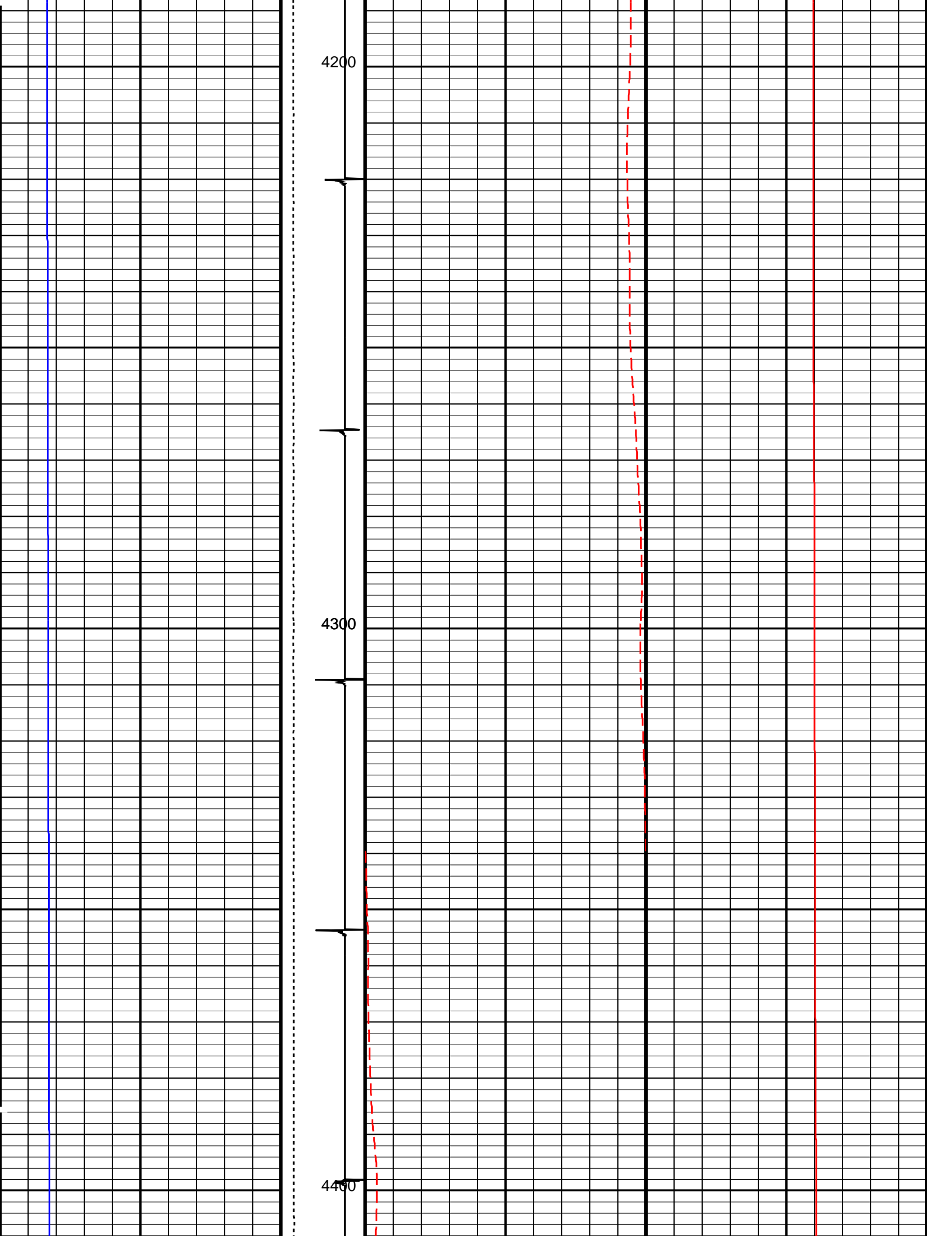


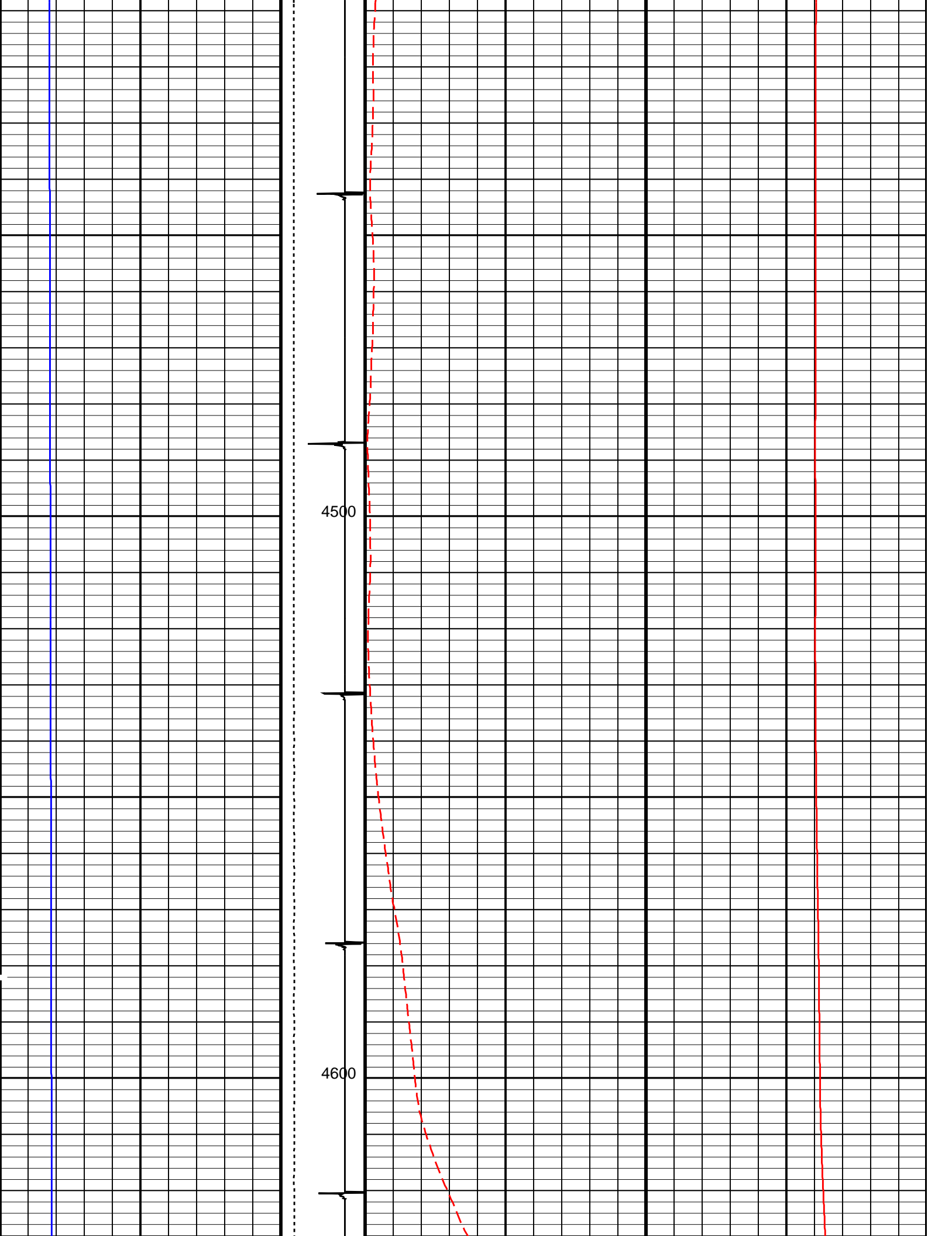


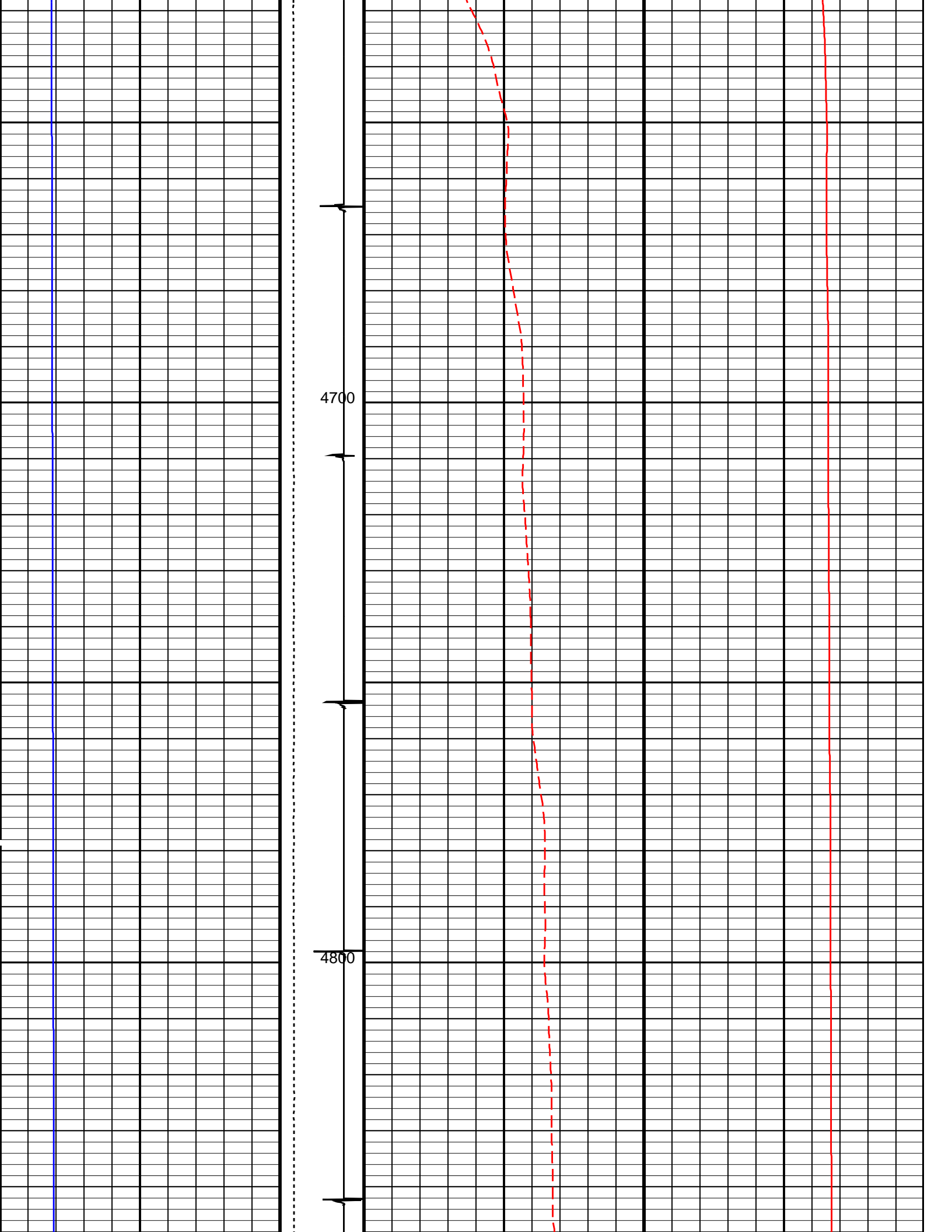


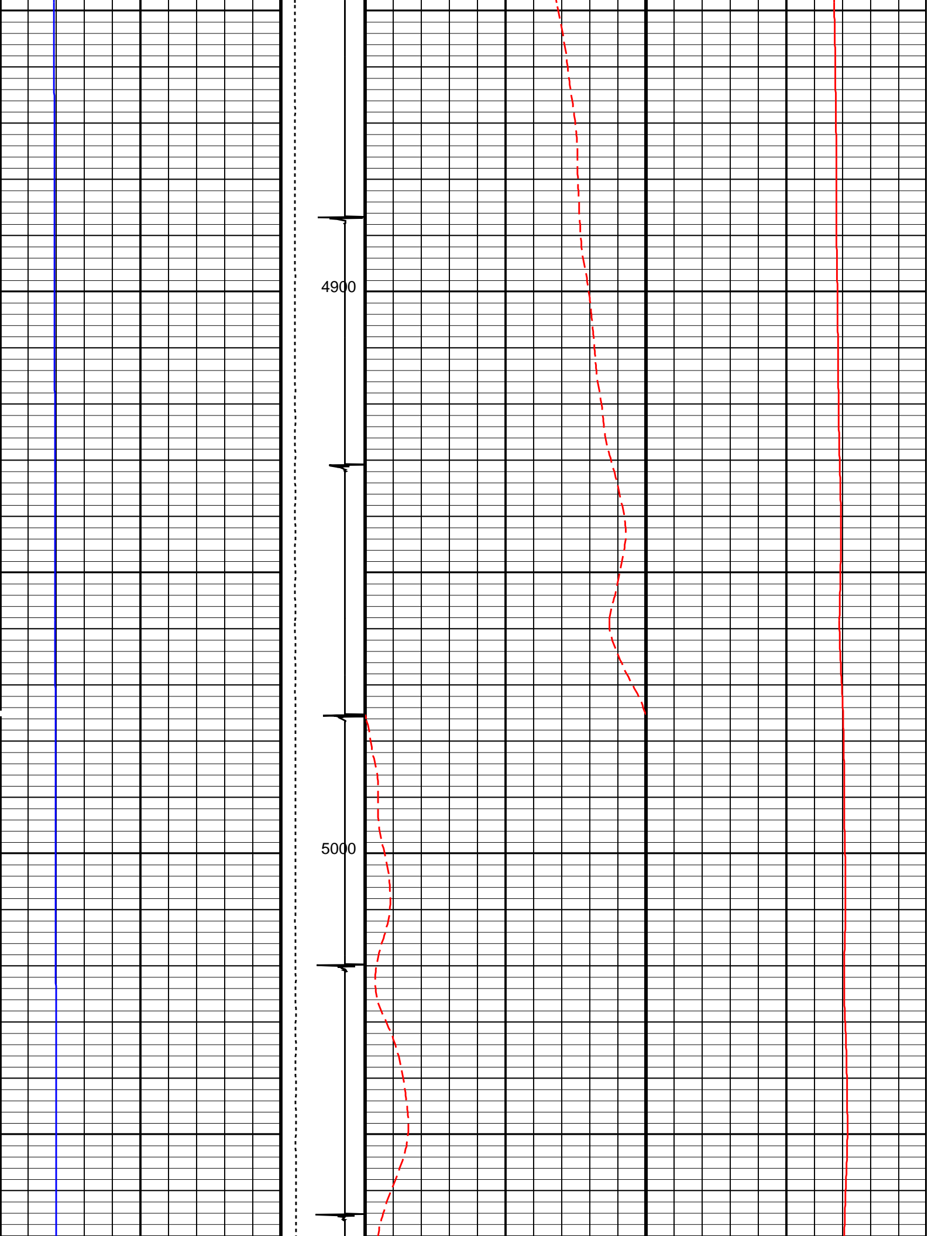


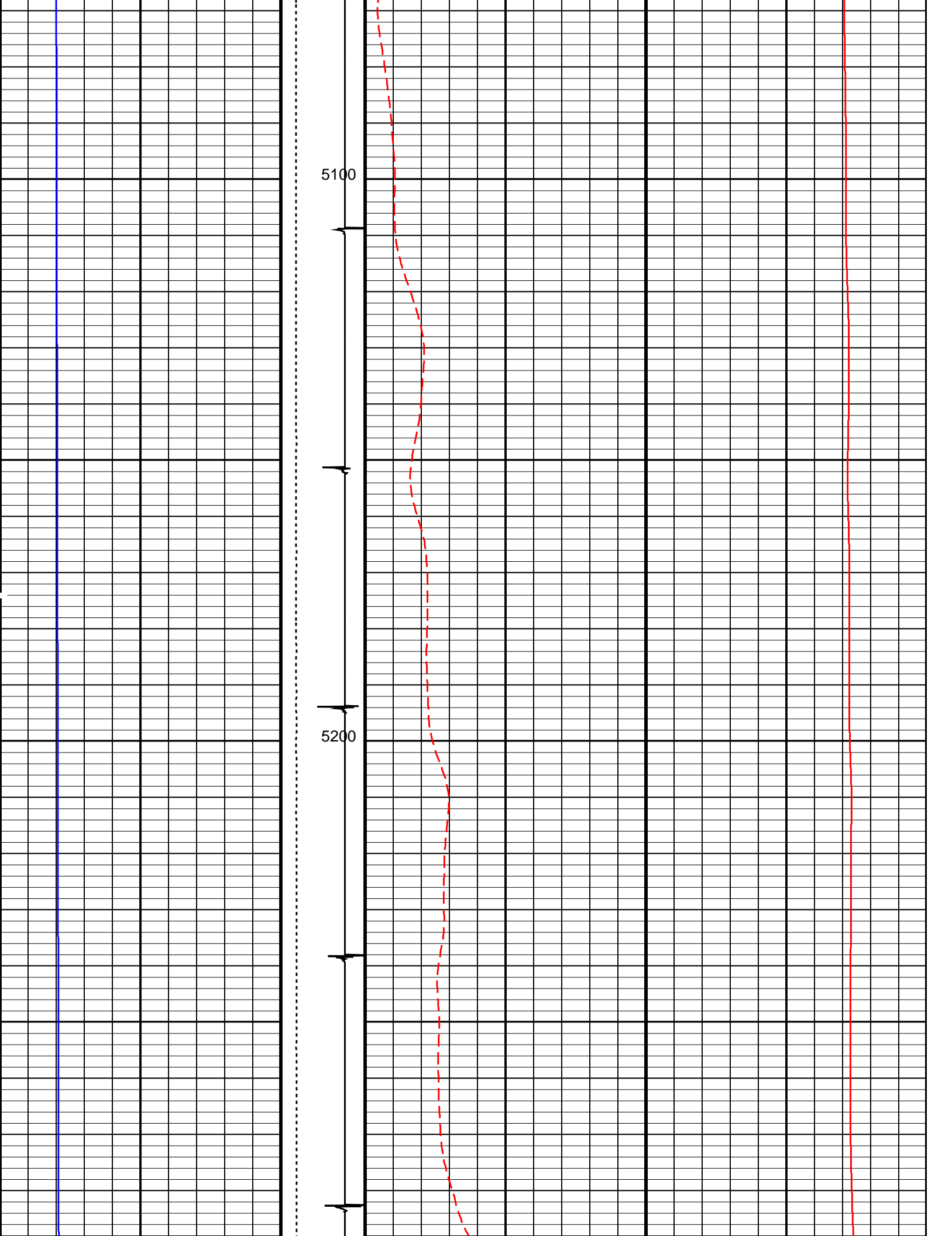


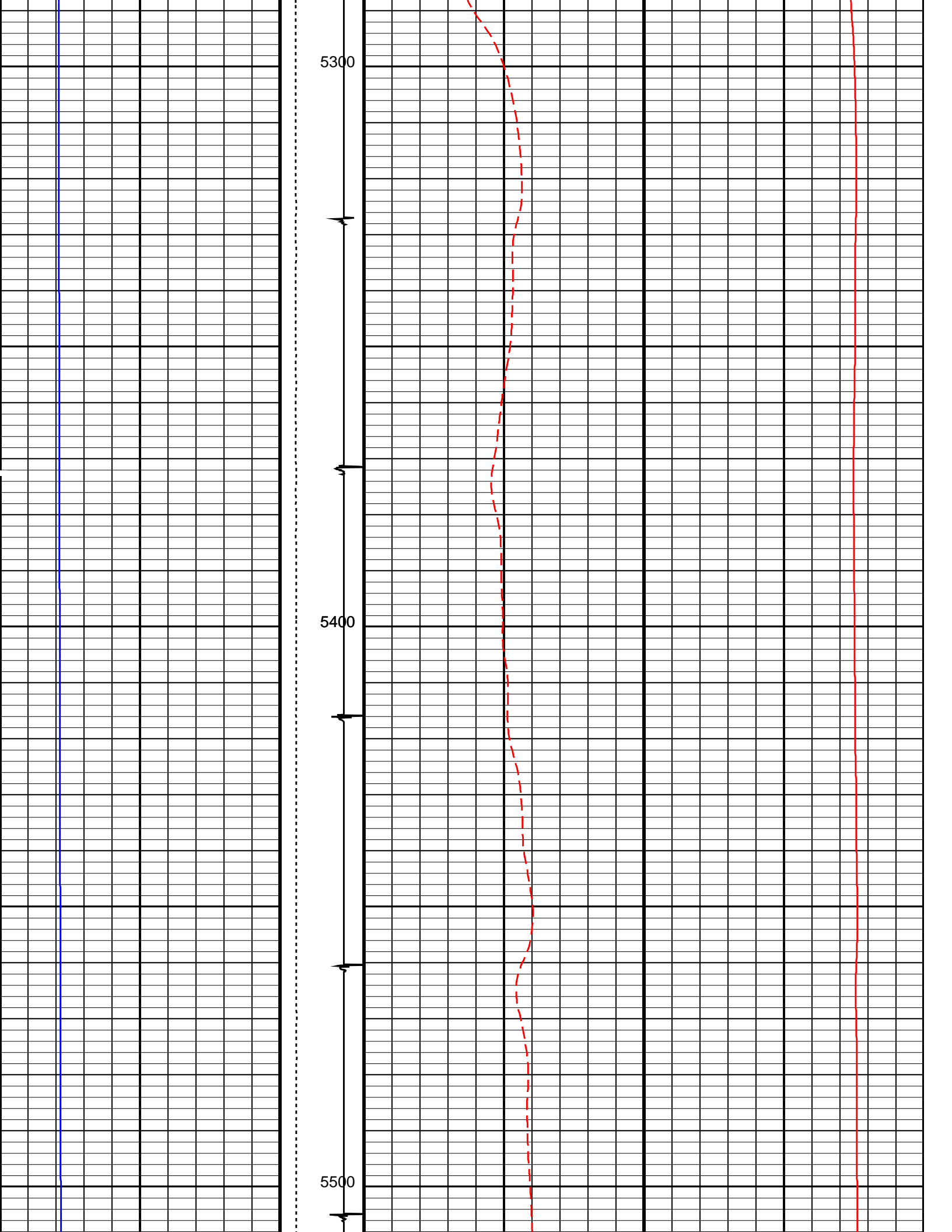


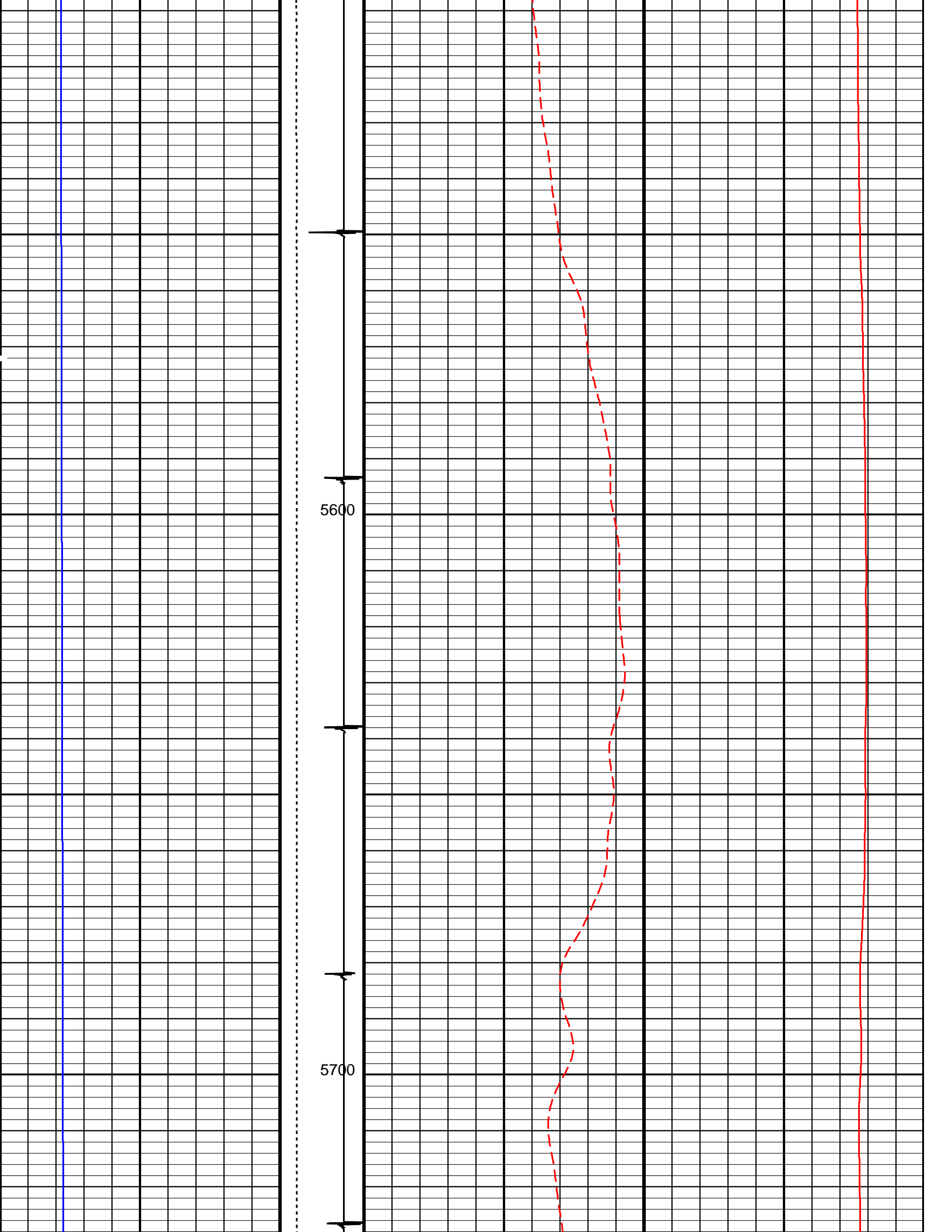


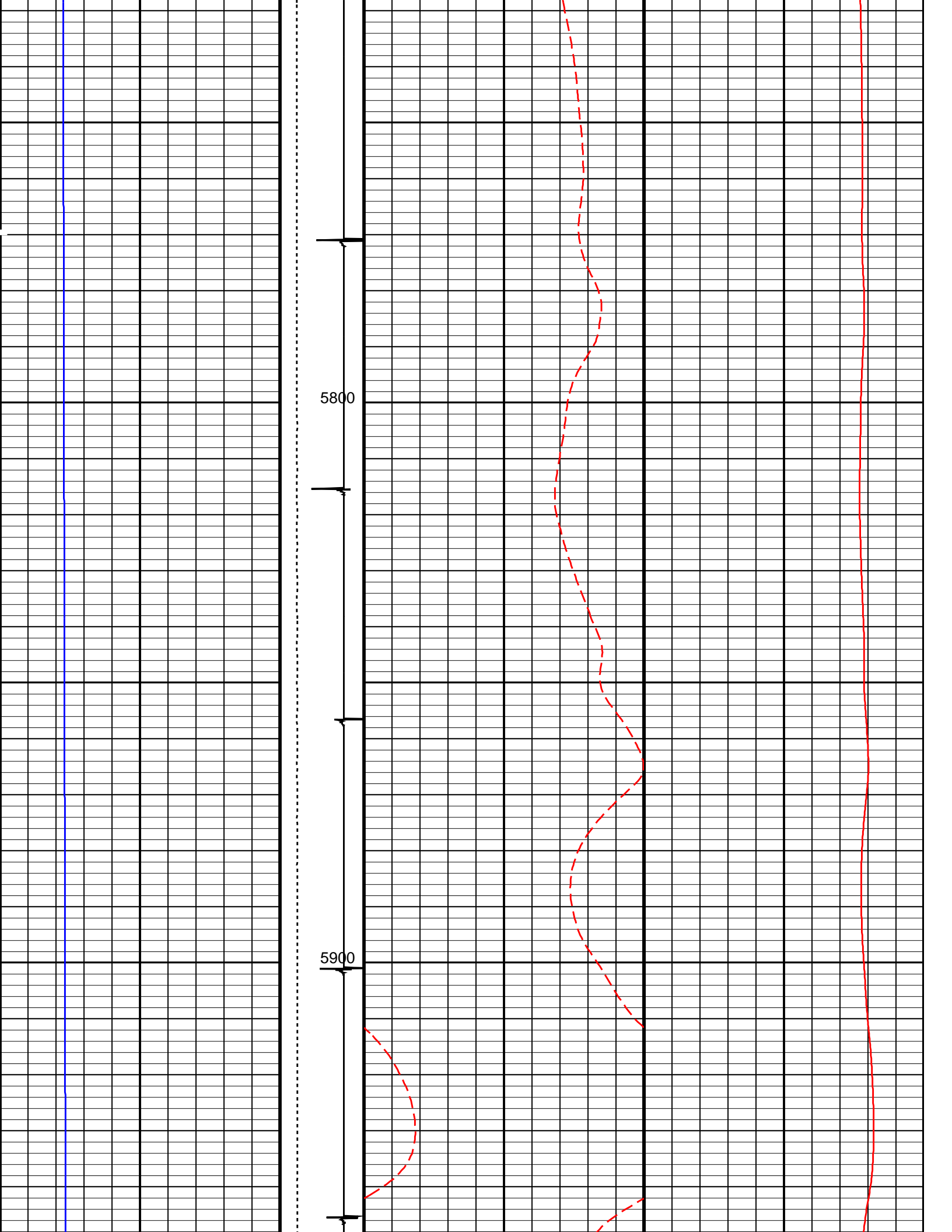


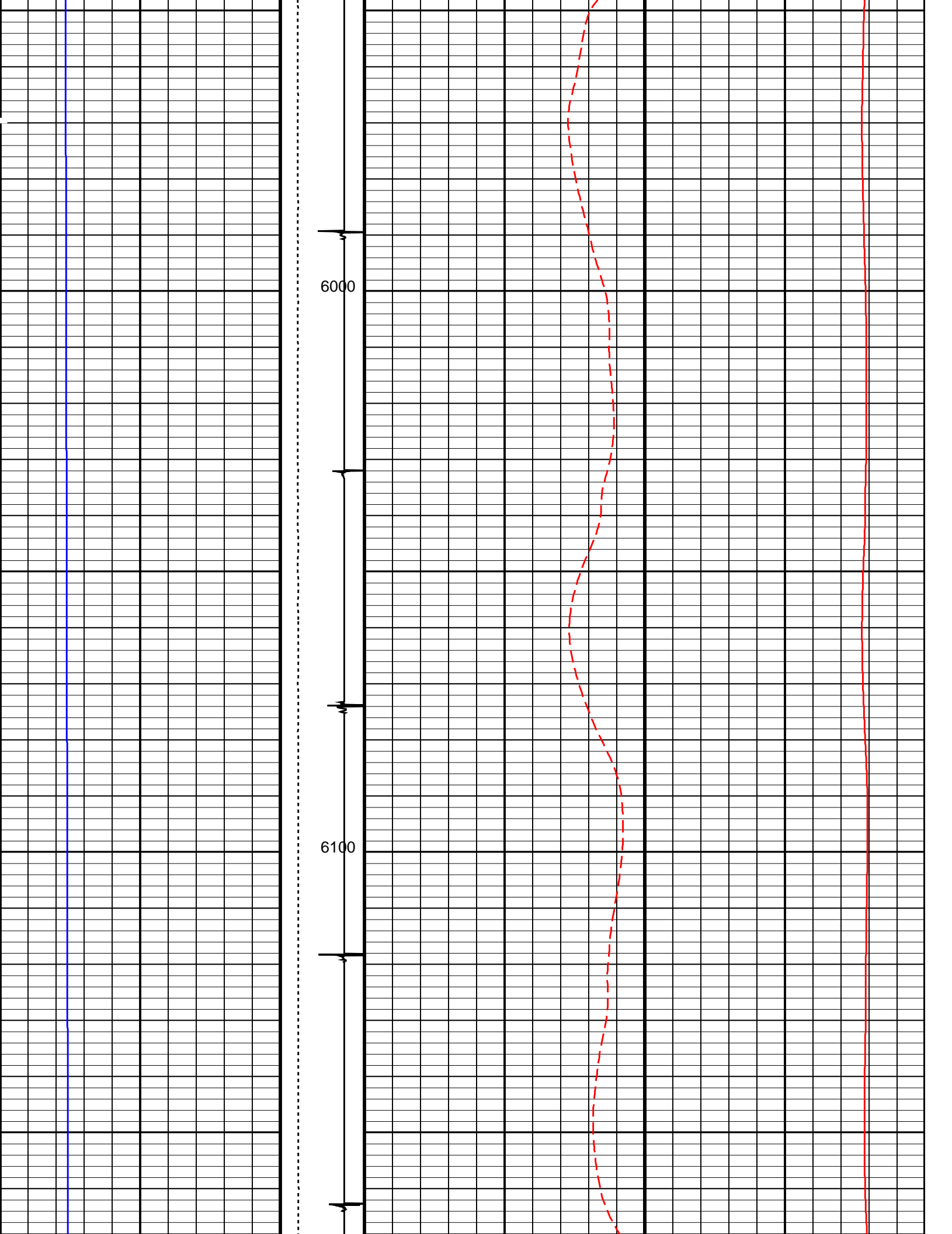


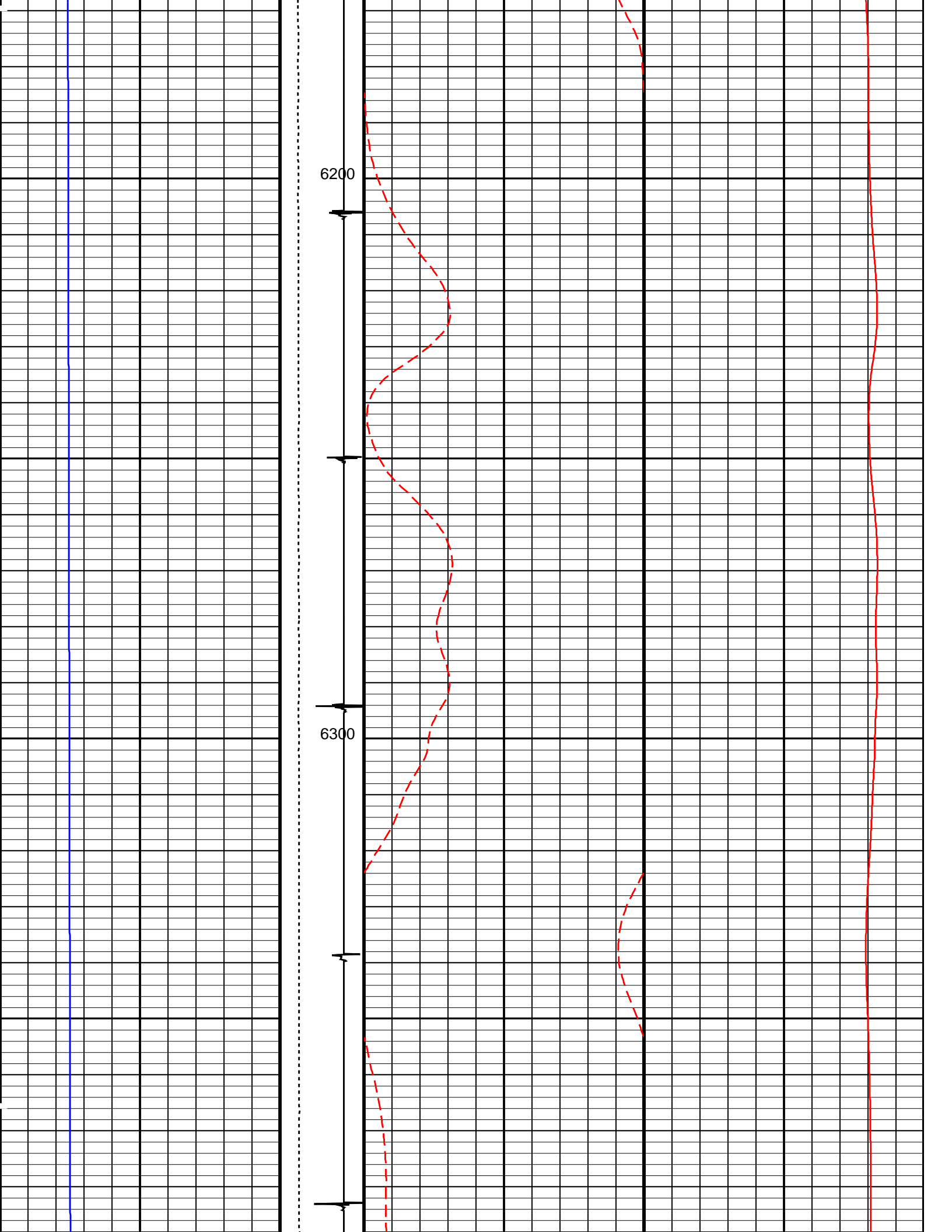


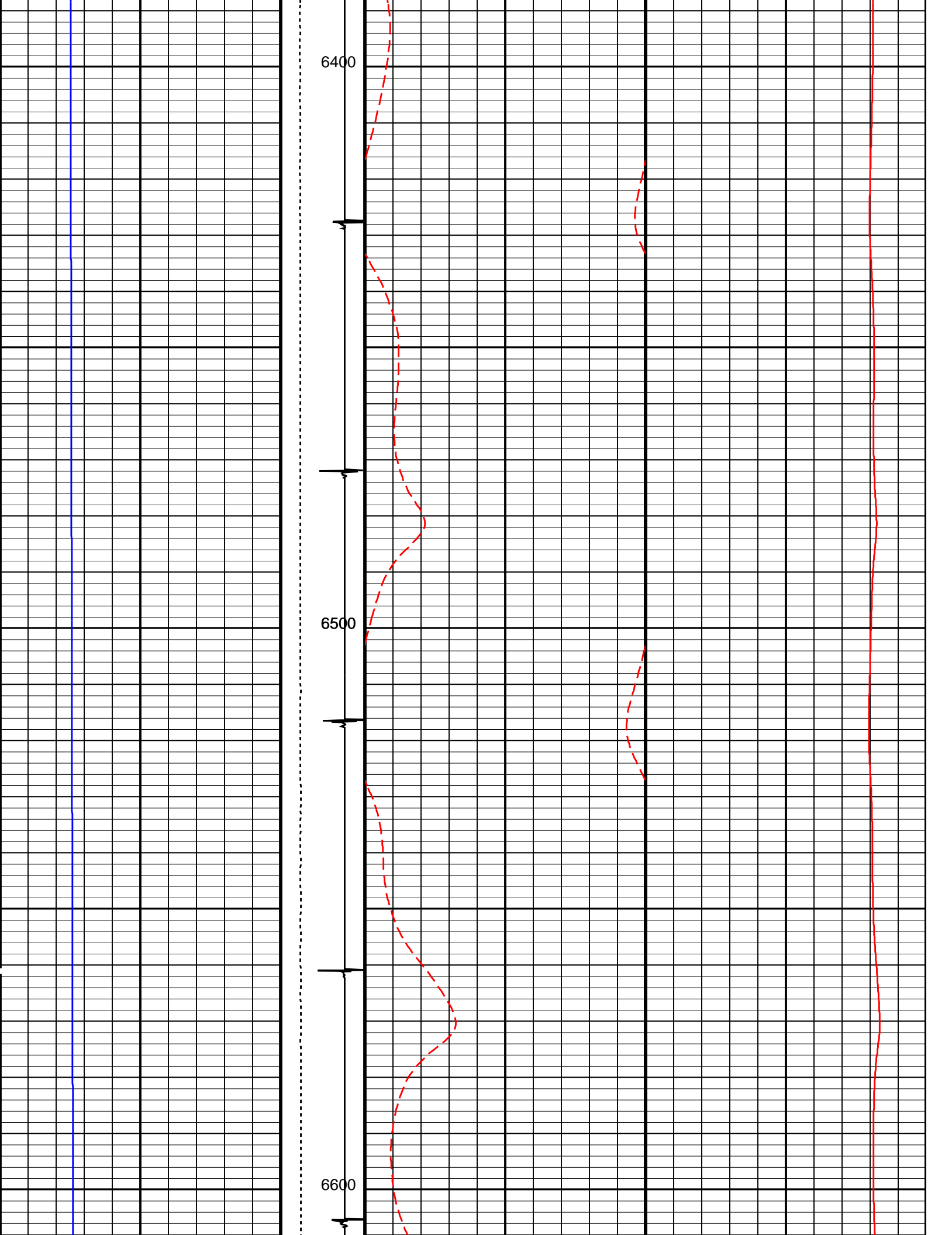


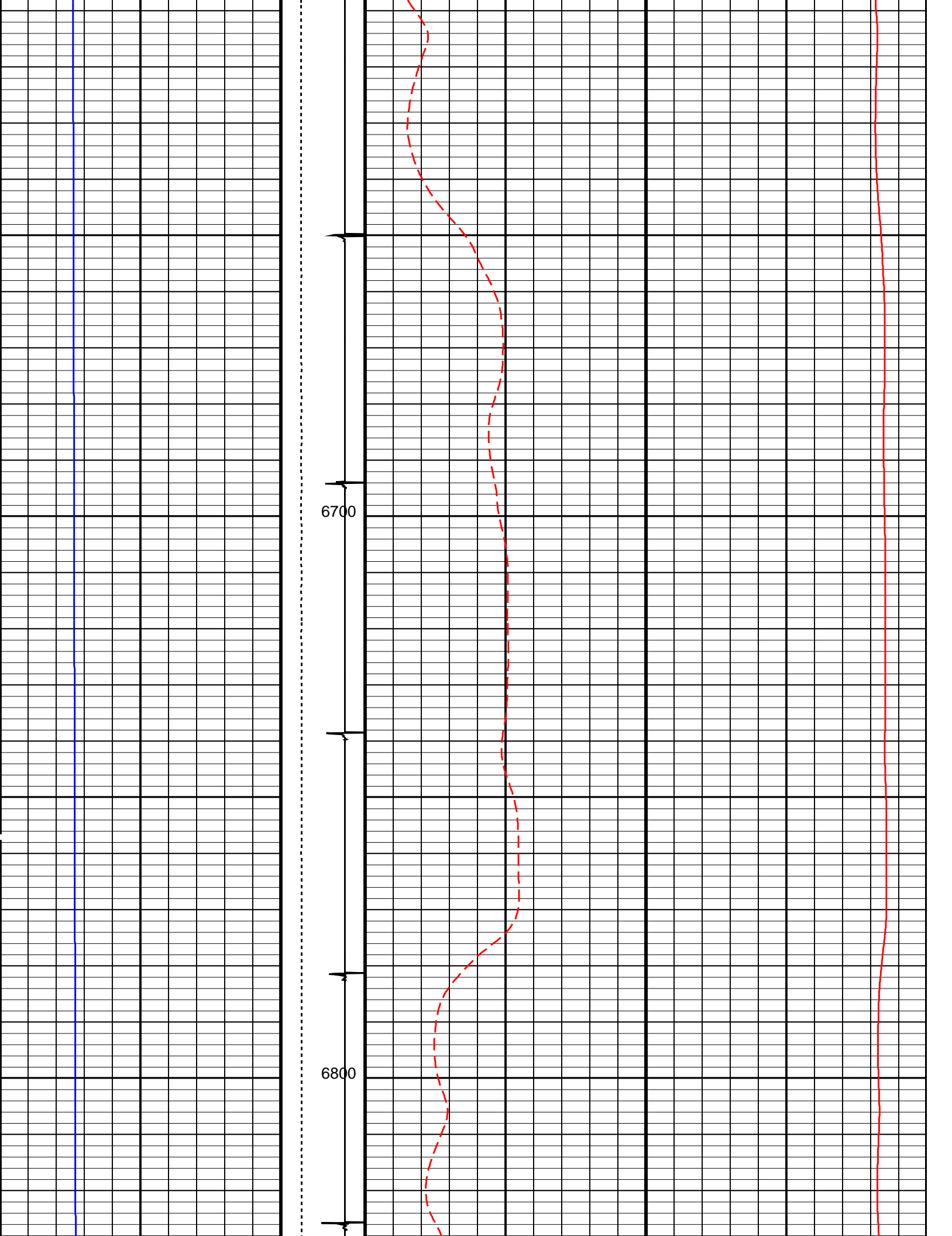


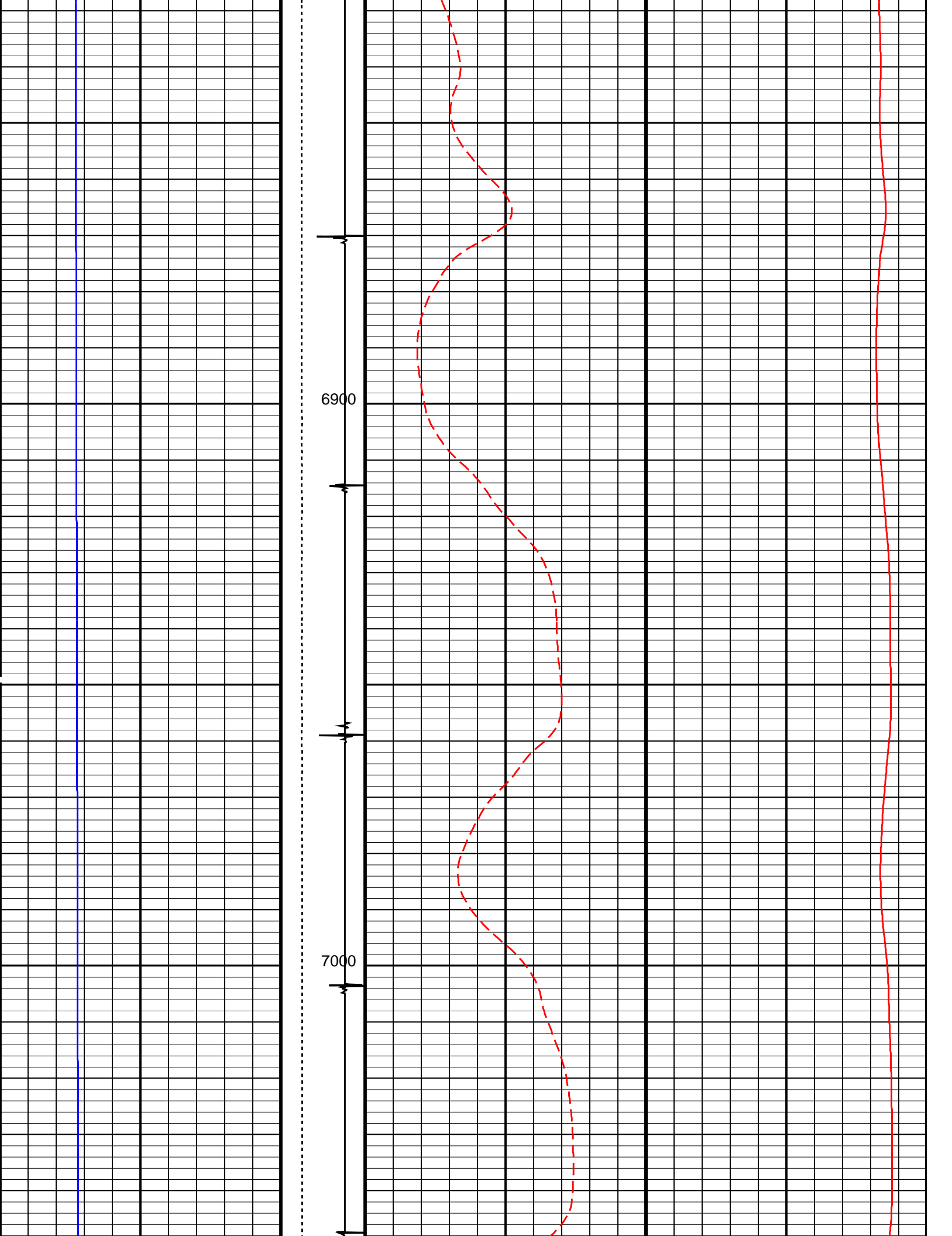


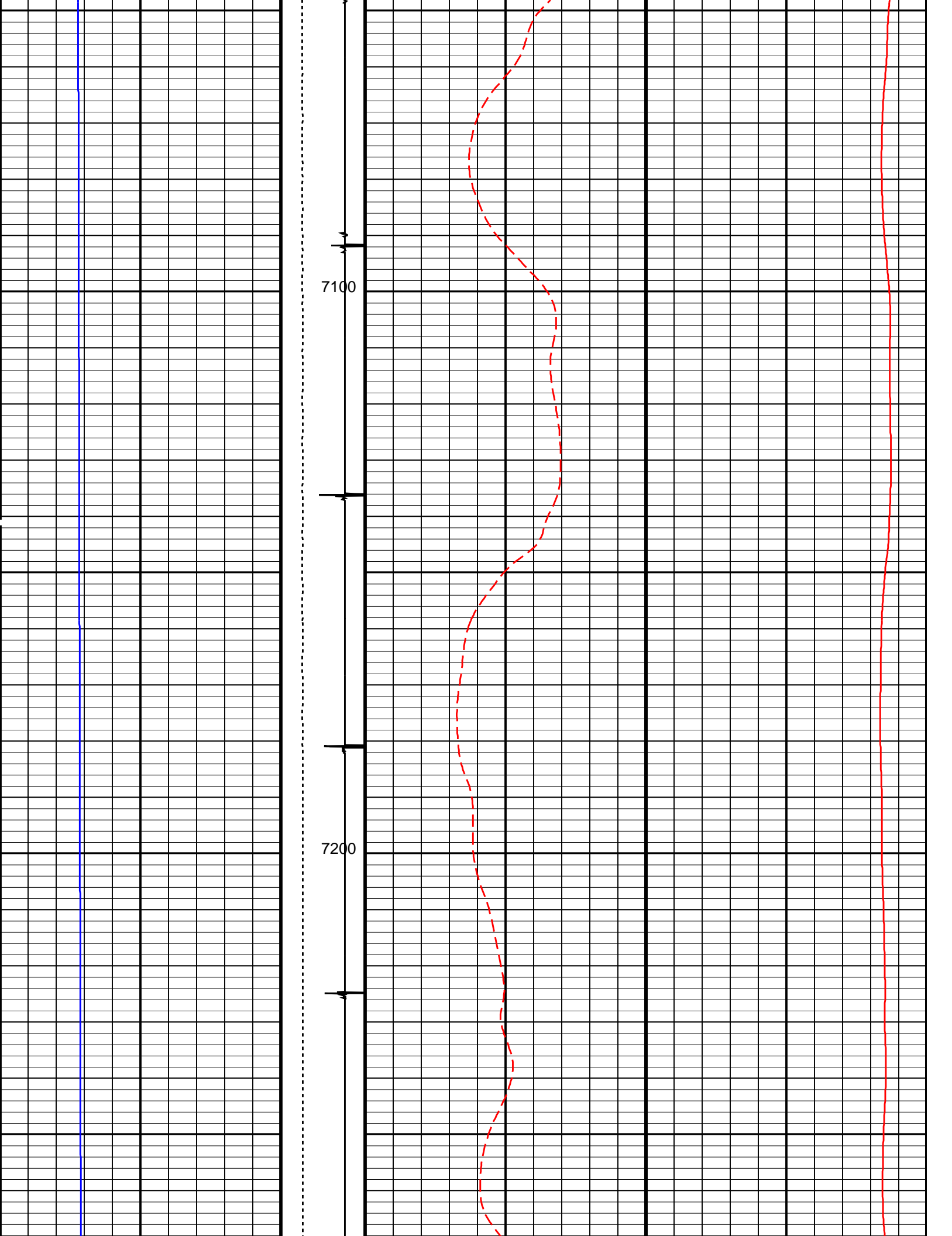


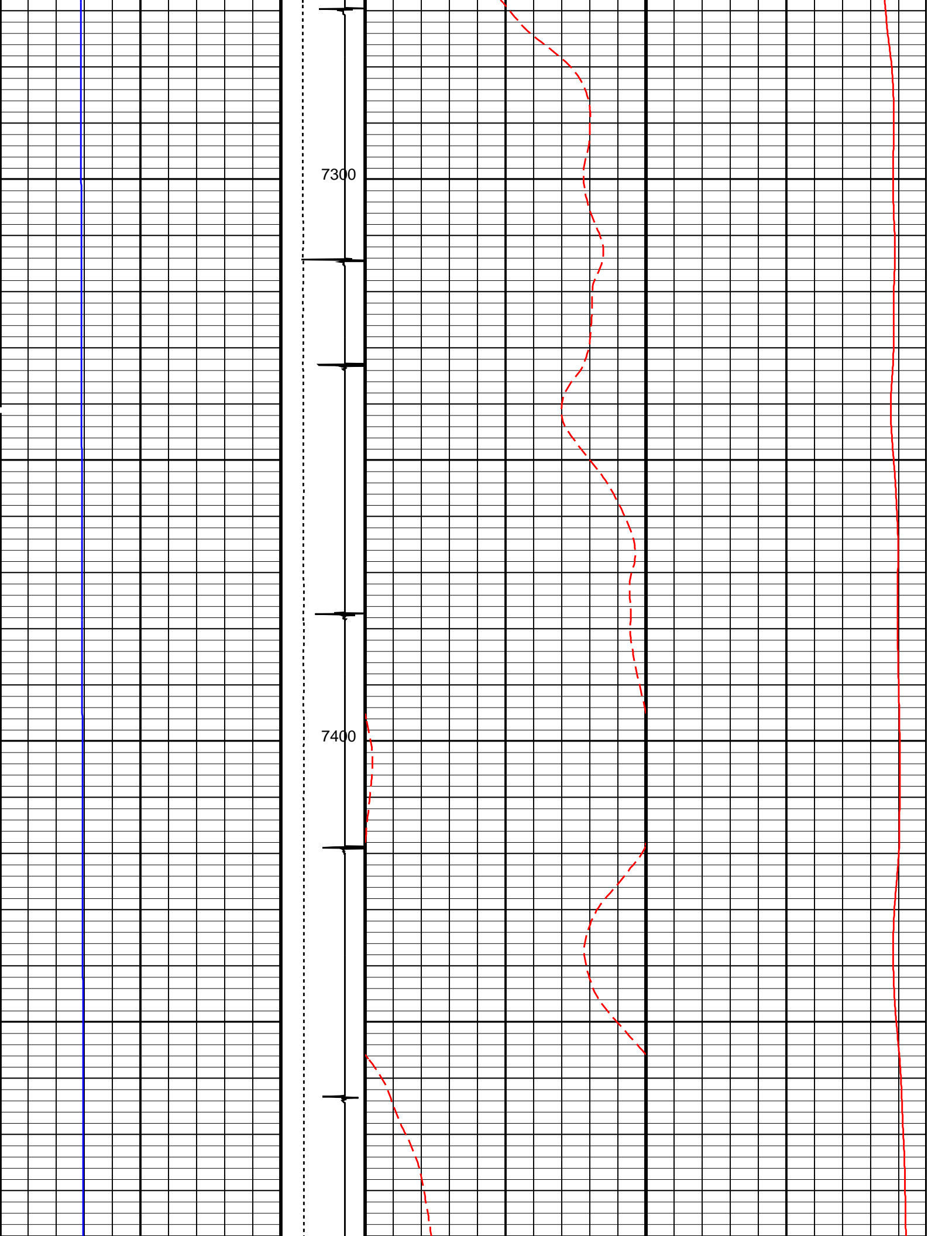


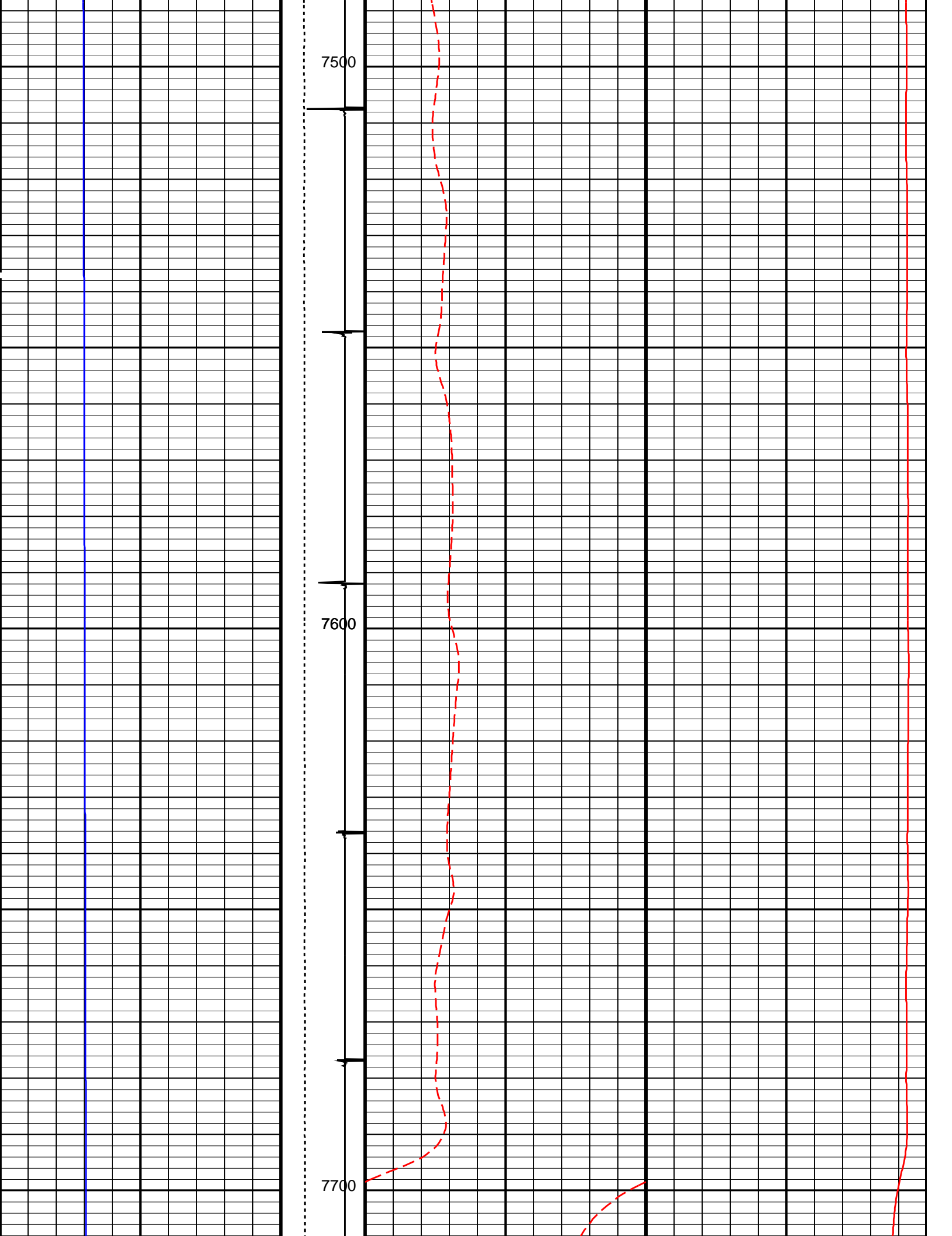


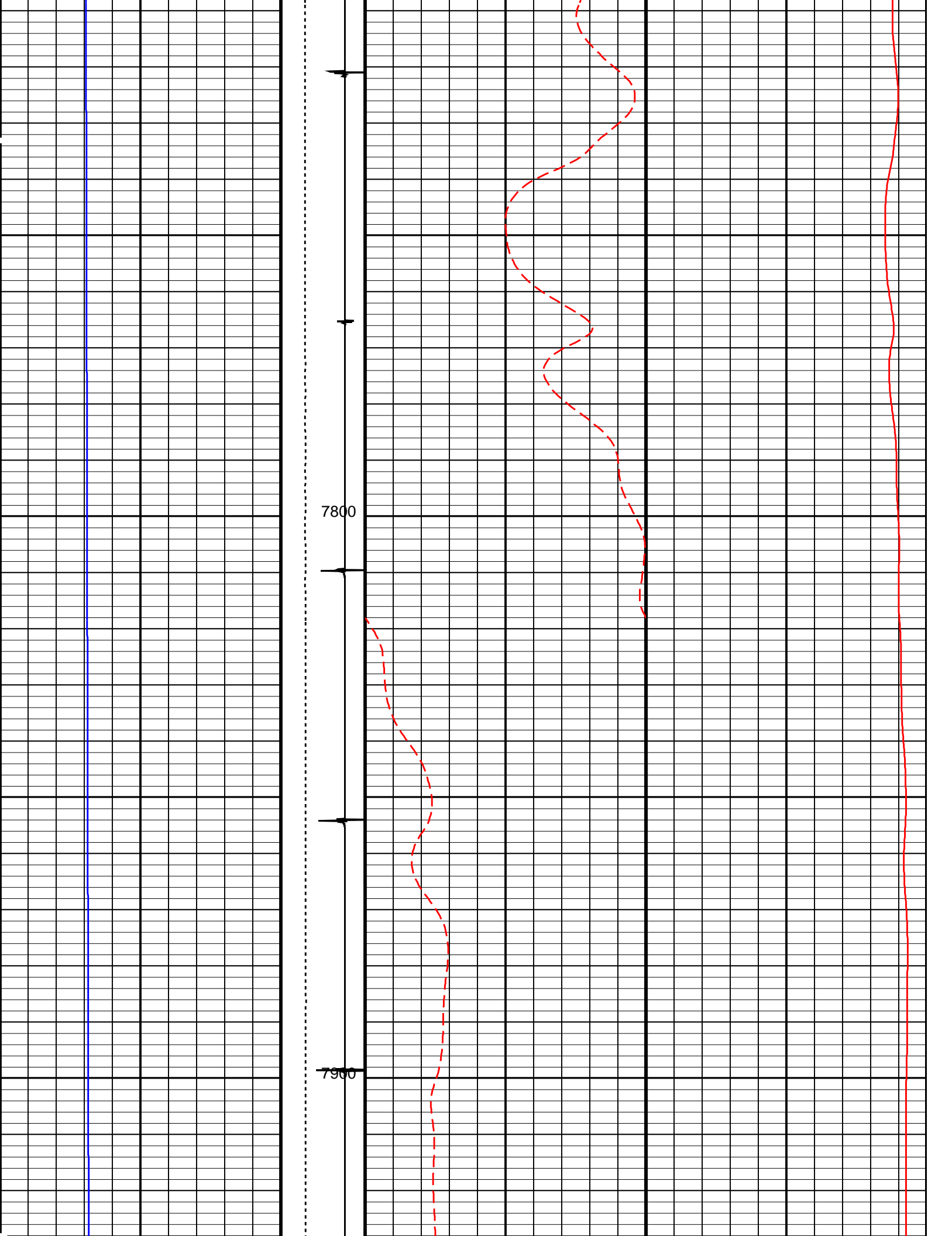


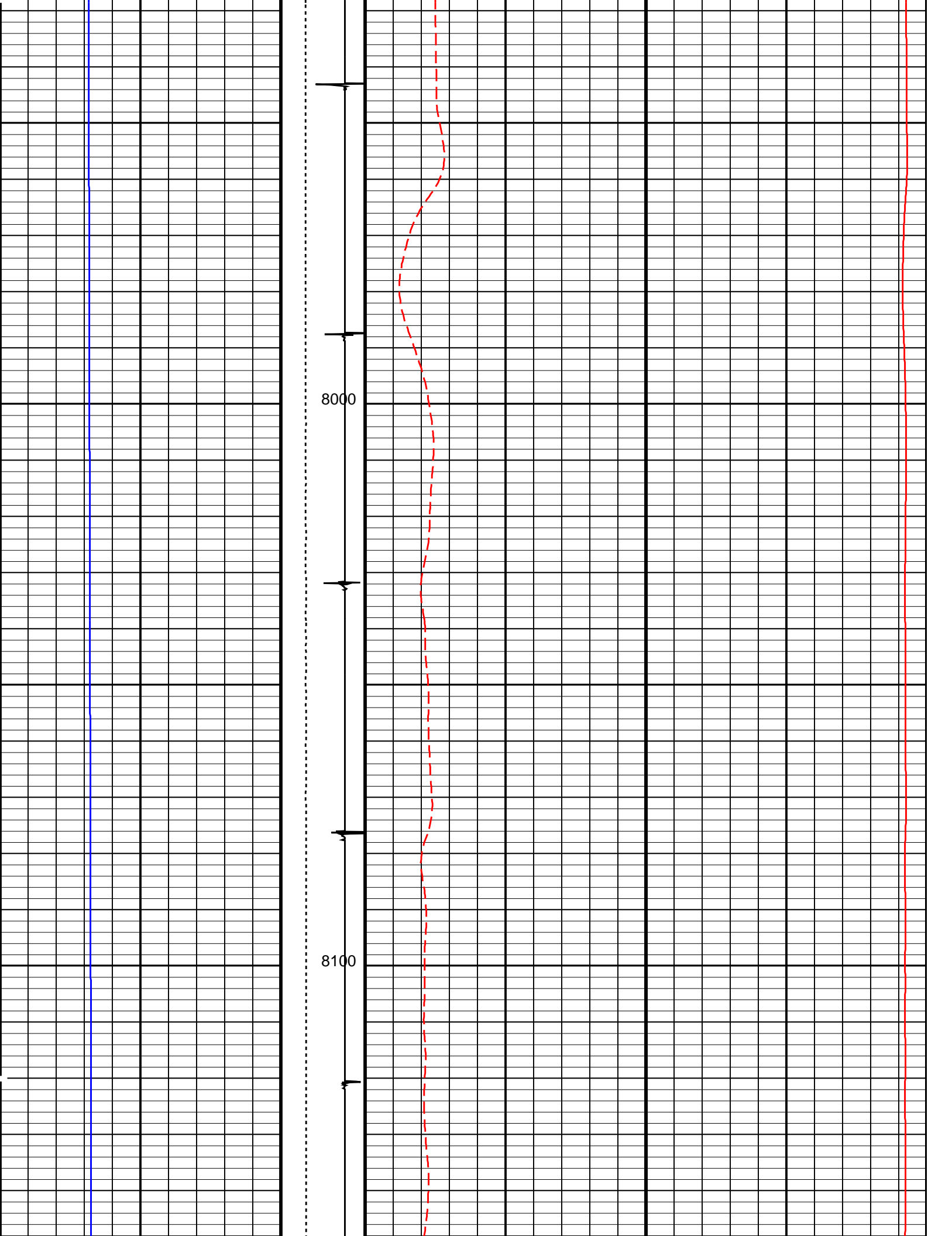


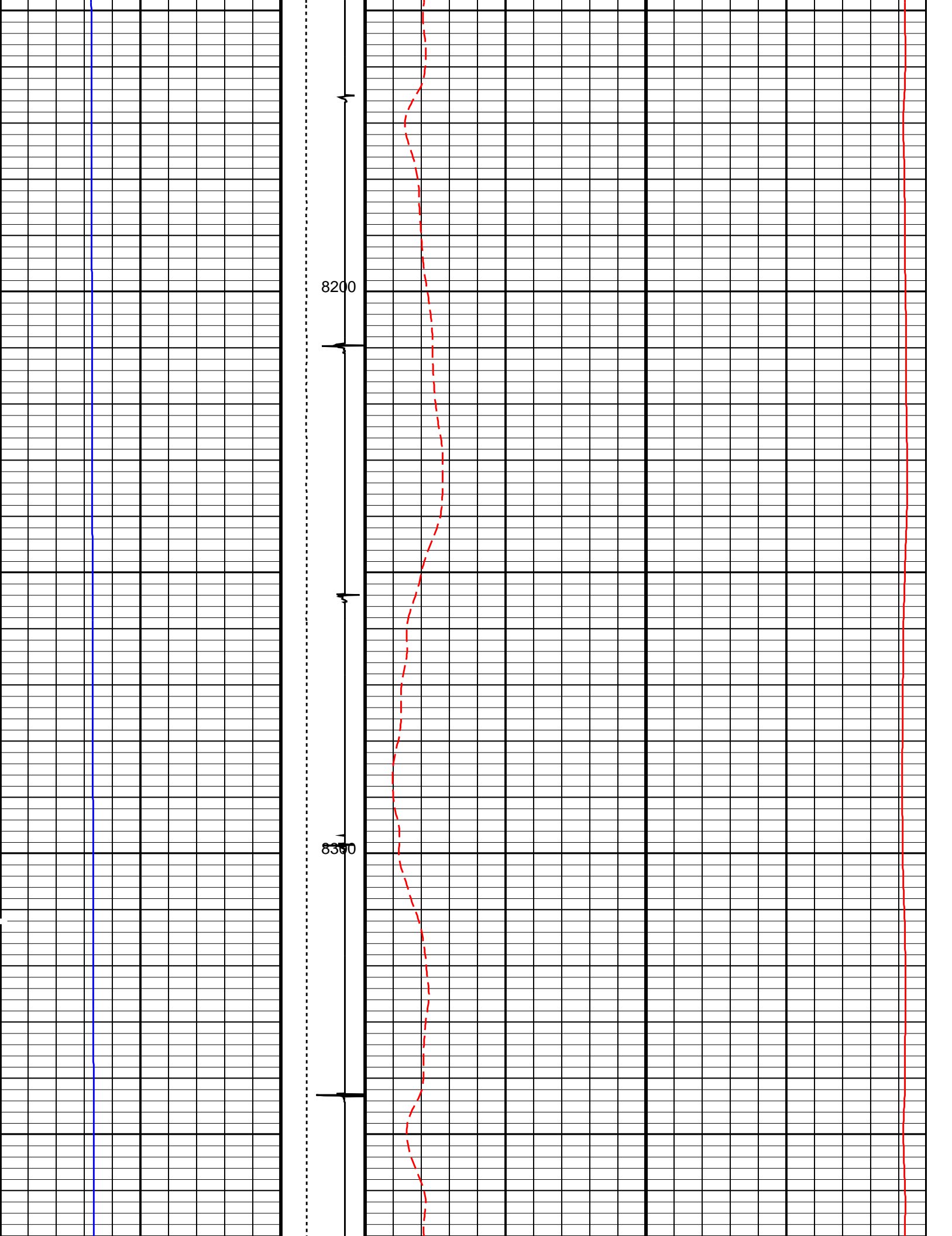


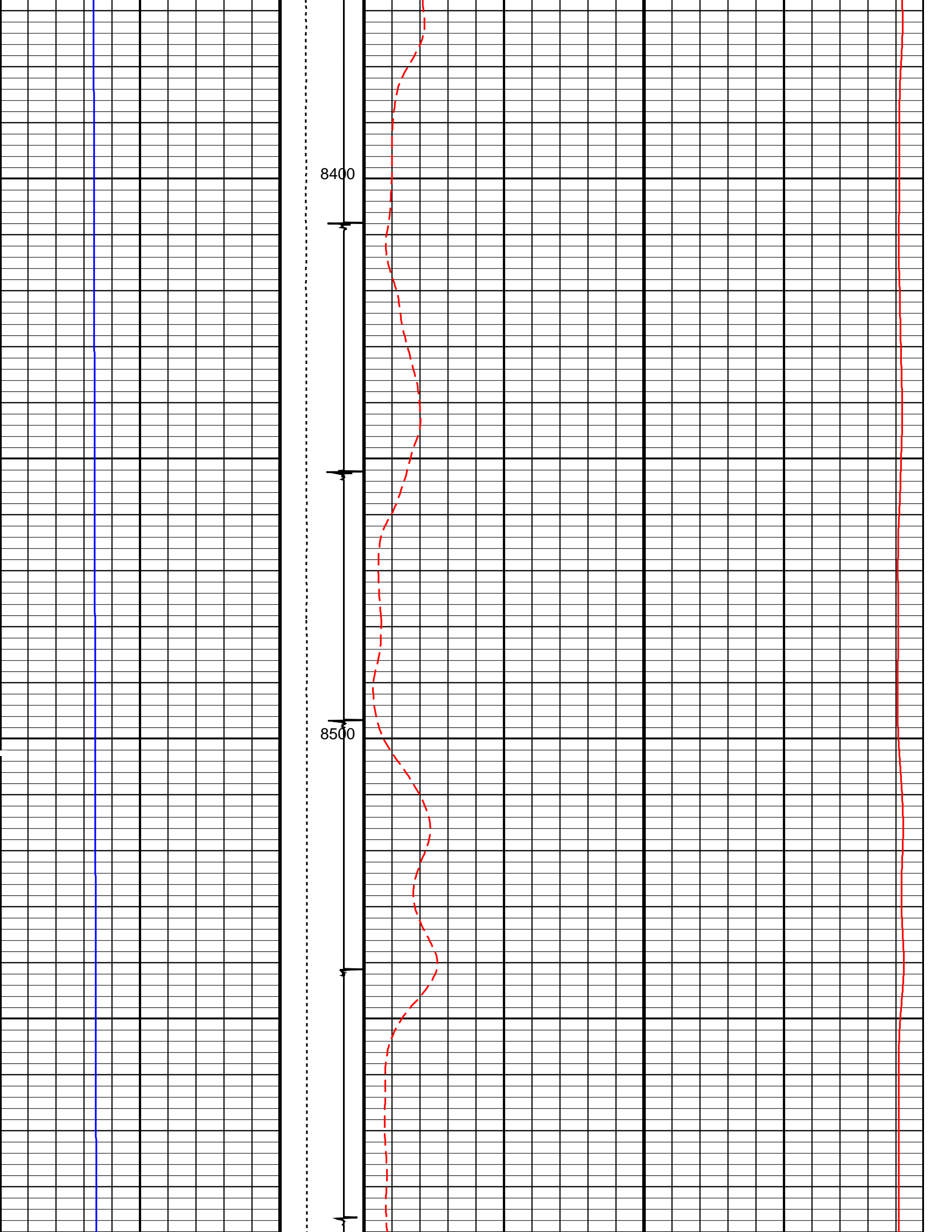


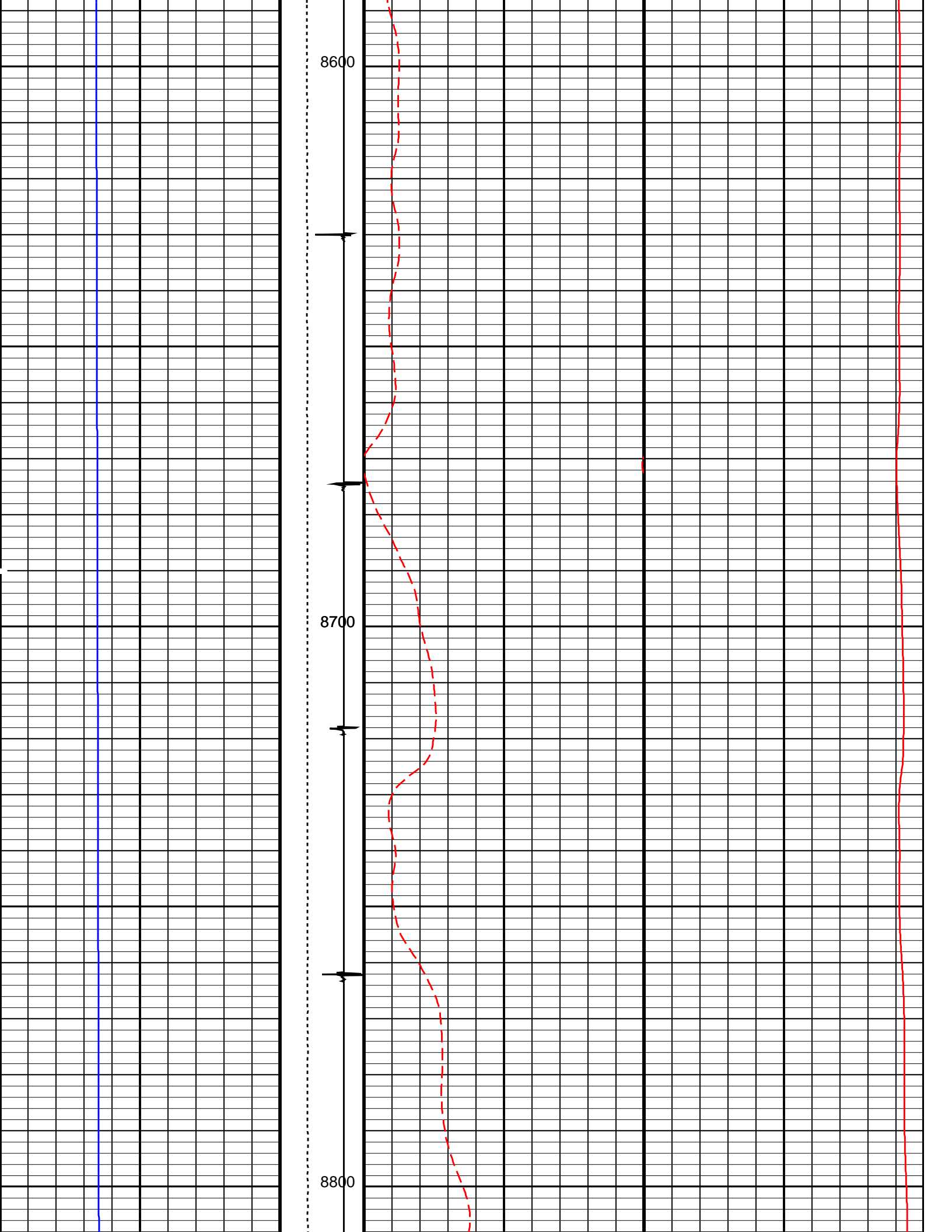


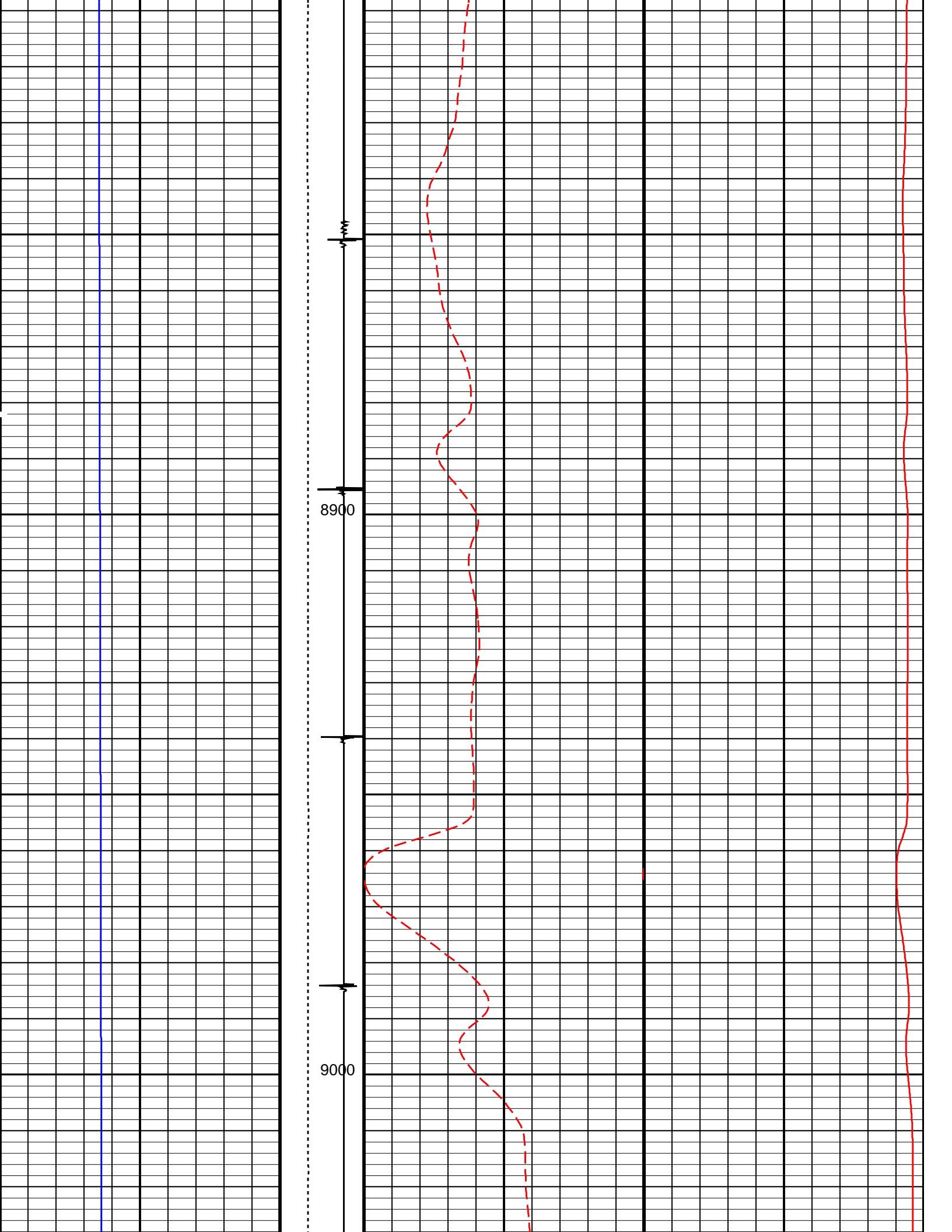


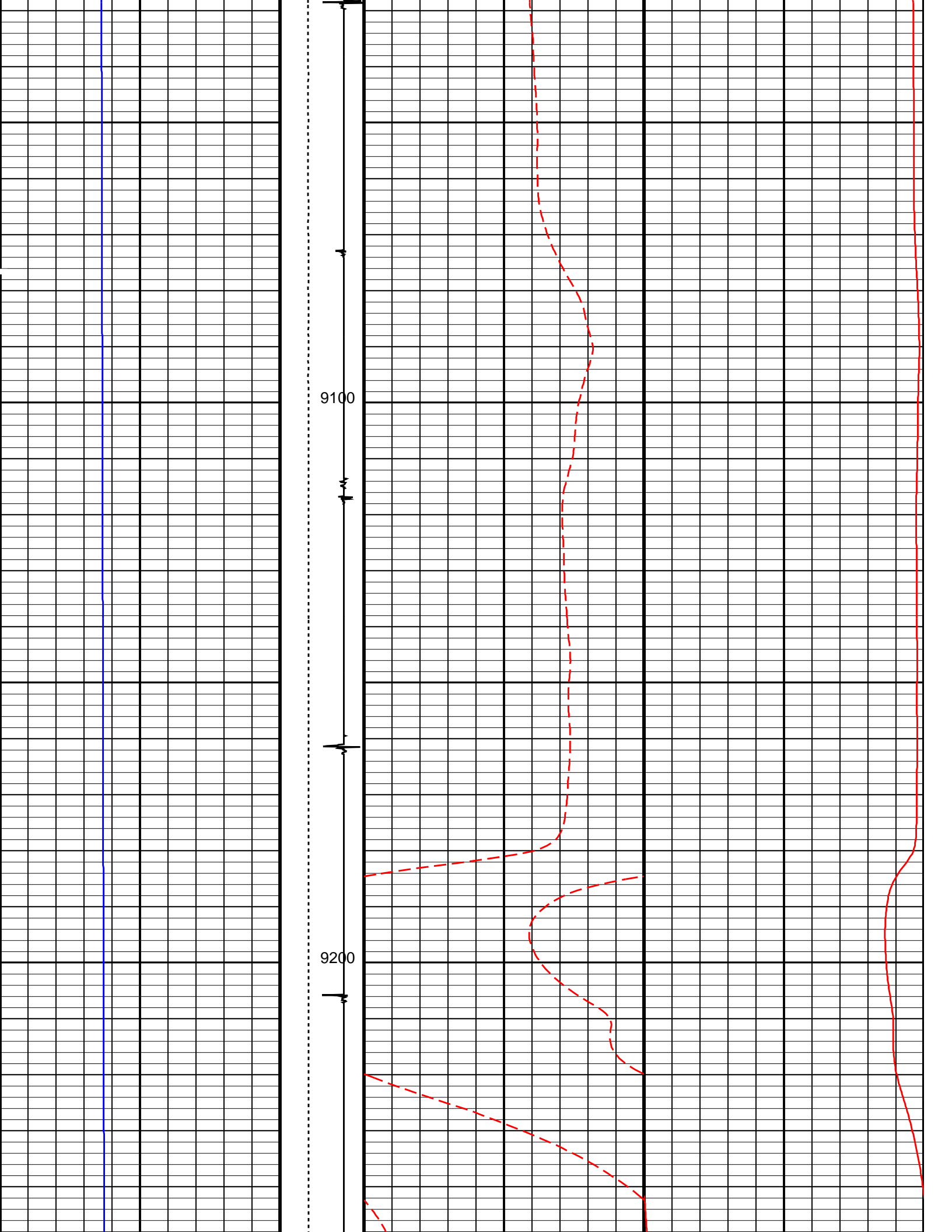


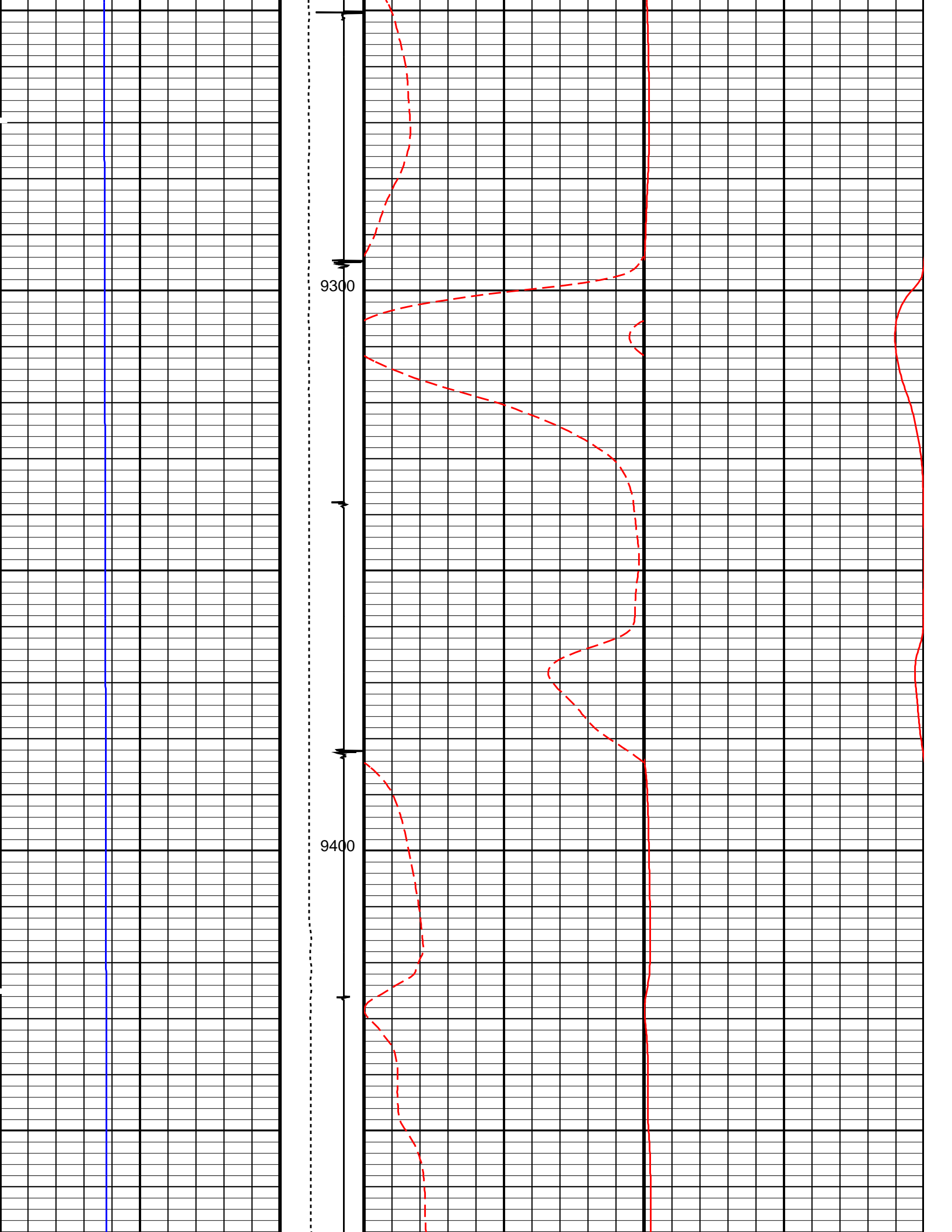


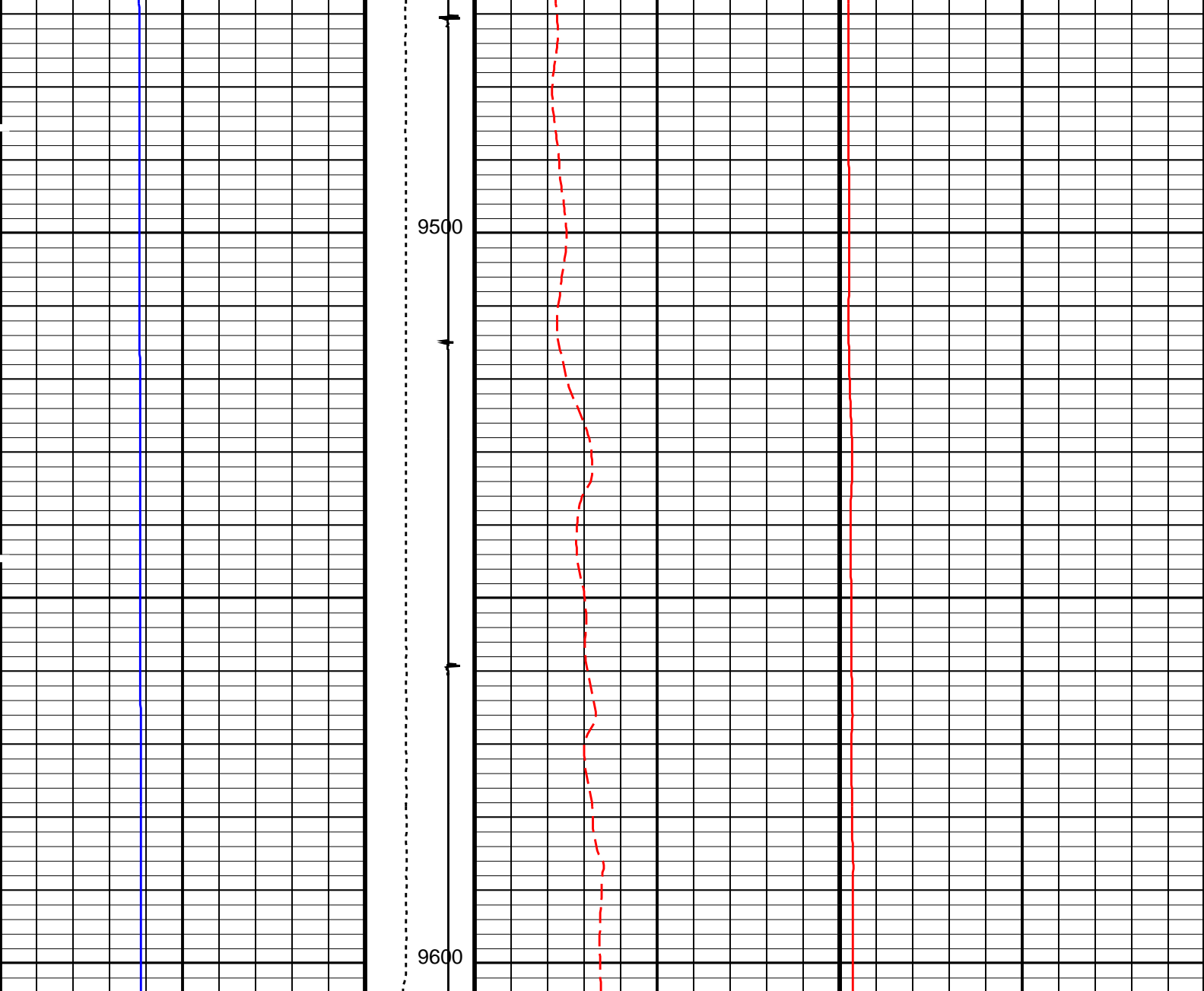












Well Pressure (WPRES) (PSIA)		Tension (TENS) (LBF)	Well Temperature (WTEMP) (DEGF)	Well Temperature (WTEMP) (DEGF)
0	10000	0 2000	0 20	0 200
		Discriminat ed CCL (CCLD)		
		3 (V) -1		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DO PP	System and Miscellaneous Depth Offset for Playback Playback Processing	-8.0 FT RECOMPUTE

Format: TEMP LOG Vertical Scale: 5" per 100' Graphics File Created: 16-Dec-2013 22:13

OP System Version: 19C0-187

HBMS-B 19C0-187

Input DLIS Files

Input DLIS Files

DEFAULT Flip_HBMS_004LUP PRODUCER 16-Dec-2013 22:04 9612.0 FT -2.5 FT

Output DLIS Files

DEFAULT HBMS_007PUP FN:4 PRODUCER 16-Dec-2013 22:13



REPEAT ANALYSIS

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC Well: ROSE 22-1C (K22W)

Input DLIS Files

DEFAULT Flip_HBMS_005LUP PRODUCER 16-Dec-2013 22:05 9610.0 FT 9389.5 FT
DEFAULT HBMS_007PUP FN:4 PRODUCER 16-Dec-2013 22:13 9604.0 FT -10.5 FT

Output DLIS Files

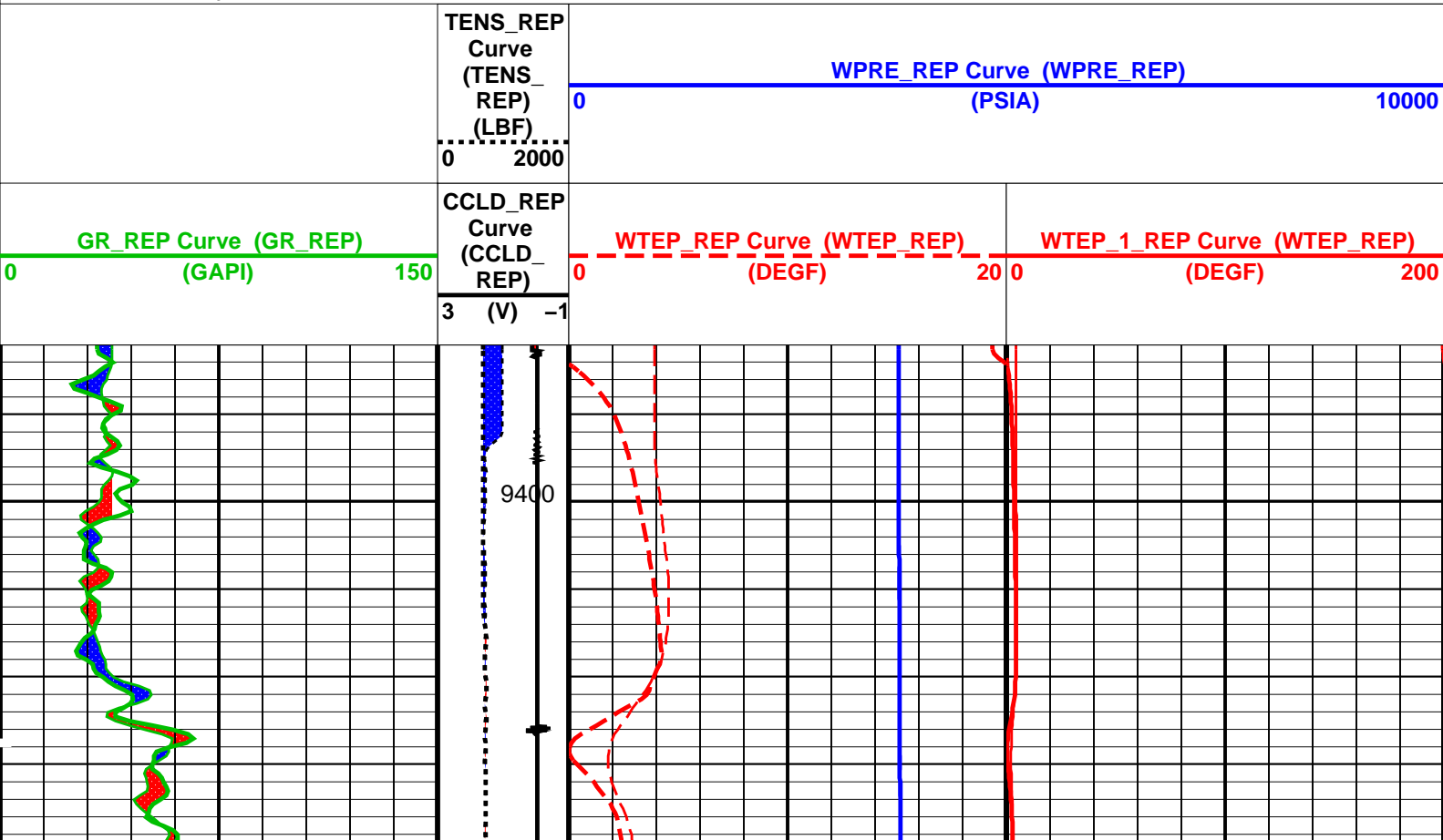
DEFAULT HBMS_009PUP FN:6 PRODUCER 16-Dec-2013 22:36 9602.0 FT 9381.5 FT

OP System Version: 19C0-187

HBMS-B 19C0-187

PIP SUMMARY

Time Mark Every 60 S



DLIS Name	Description	Value
DO	System and Miscellaneous	
DORL	Depth Offset for Playback	-8.0 FT
PP	Depth Offset for Repeat Analysis	0.0 FT
	Playback Processing	RECOMPUTE

Format: TEMP LOG_REP Vertical Scale: 5" per 100' Graphics File Created: 16-Dec-2013 22:36

OP System Version: 19C0-187

HBMS-B 19C0-187

Input DLIS Files

DEFAULT	Flip_HBMS_005LUP	PRODUCER	16-Dec-2013 22:05	9610.0 FT	9389.5 FT
DEFAULT	HBMS_007PUP	FN:4 PRODUCER	16-Dec-2013 22:13	9604.0 FT	-10.5 FT

Output DLIS Files

DEFAULT	HBMS_009PUP	FN:6 PRODUCER	16-Dec-2013 22:36
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Schlumberger

HBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC
Field: MAMM CREEK
Well: ROSE 22-1C (K22W)
Run date: 16-Dec-2013

Tool: PSP
Sub Type: PBMS
Sensor: GR

PBMS Gamma Ray

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

RESISTORS FOR GR SENSOR N.37166, TOOL HBMS-BA2955. SENSOR S/N:

37166

280912

12

6646

GR HV Rt

Rt**0

Rt**1

Rt**0

+.200000000000e+04

+.193000000000e+04

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: ROSE 22-1C (K22W)

Run date: 16-Dec-2013

Tool: PSP

Sub Type: PBMS

Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR RTD THERMOMETER PBMS-B.2955 S/N:

2955

140513

16

9ABB

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	-.579466850375E+03	+.321000211776E+03	-.769493413393E+02
	Tt**3	Tt**4	Tt**5
Tt**0	+.118371810108E+02	-.654027317127E+00	0.0

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: ROSE 22-1C (K22W)

Run date: 16-Dec-2013

Tool: PSP

Sub Type: PBMS

Sensor: CQG

PBMS Quartz Gauge type F

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

COEFFICIENTS FOR CQG PBMS-B.2955 S/N:

2955

140513

66

AD6E

Pres Coeff

	Fb**0	Fb**1	Fb**2
--	-------	-------	-------

Fc**0	+ .805218055799E+04	+ .230687803777E-01	+ .120020876821E-07
Fc**1	- .107970514637E+01	- .131245085272E-04	- .102678735701E-09
Fc**2	+ .111466223414E-05	+ .524200534425E-10	+ .949904926223E-15
Fc**3	+ .255809900188E-11	+ .160726360322E-15	0.0
Fc**4	0.0	0.0	0.0
Fc**5	0.0	0.0	0.0

	Fb**3	Fb**4	Fb**5
Fc**0	- .772560939667E-10	- .145379238115E-14	- .218737246914E-19
Fc**1	+ .968642492374E-16	+ .223810216552E-19	0.0
Fc**2	0.0	0.0	0.0
Fc**3	0.0	0.0	0.0
Fc**4	0.0	0.0	0.0
Fc**5	0.0	0.0	0.0

PBMS Quartz Gauge type F

Sonde Serial NB
Sensor Serial NB
Calib Date ddmmyy
Matrix Size
Coeff CRC

:
2955
140513
66
EC8A

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+ .120725065588E+03	- .313379211795E-03	+ .708634488020E-08
Fb**1	- .596235012256E-02	+ .182626448637E-07	+ .104369551702E-12
Fb**2	- .295513003186E-07	+ .341136223414E-12	- .998721617444E-18
Fb**3	- .375208992867E-12	+ .712560466778E-17	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

	Fc**3	Fc**4	Fc**5
Fb**0	+ .136541410168E-12	- .403343086990E-17	- .830542374631E-21
Fb**1	- .618398112617E-18	+ .429129395353E-21	0.0
Fb**2	0.0	0.0	0.0
Fb**3	0.0	0.0	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 2955
Calib Date ddmmyy 140513
Matrix Size 16
Coeff CRC 6C01

Clock Freq Coeff

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2
(Fb'-Fc')**0	+.310812532328E+05	+.224728840165E-02	+.742962292518E-06
	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	-.673865003325E-10	-.911707425039E-16	-.961889742081E-20

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 2955
Calib Date ddmmyy 140513
Matrix Size 16
Coeff CRC D6FA

Clock Temp Coeff

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2
(Fb'-Fc')**0	+.122085335110E+03	-.602096613375E-02	-.167139647989E-07
	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	-.105604526136E-11	-.109719083283E-15	+.100037226713E-19

Company: ENCANA OIL & GAS (USA) INC



Well: ROSE 22-1C (K22W)
Field: MAMM CREEK
County: GARFIELD
State: COLORADO

TEMPERATURE LOG
TEMP-CCL