

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER 19-16CC (019EB)

Field: MAMM CREEK

County: GARFIELD State: COLORADO

TEMPERATURE LOG
CCL – TEMPERATURE

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 624 FSL & 1607 FEL

Well: SHIDELER 19-16CC (019EB)

Company: ENCANA OIL & GAS (USA) INC

LOCATION

SHL: 624 FSL & 1607 FEL
BHL: 69 FSL & 652 FEL

Elev.: K.B. 6631.00 ft
G.L. 6509.00 ft
D.F. 6530.00 ft

Permanent Datum: _____
Log Measured From: KELLY BUSHING
Drilling Measured From: KELLY BUSHING

Elev.: 6509.00 ft
22.00 ft above Perm. Datum

API Serial No. 05-045-21842-00

Section 19

Township 7S

Range 92W

Logging Date	4-Apr-2013			
Run Number	1			
Depth Driller	7619 ft			
Schlumberger Depth	7562 ft			
Bottom Log Interval	7562 ft			
Top Log Interval	0 ft			
Casing Fluid Type	FRESH WATER			
Salinity				
Density	8.4 lbm/gal			
Fluid Level	22 ft			
BIT/CASING/TUBING STRING				
Bit Size	8.750 in			
From	0 ft			
To	7619 ft			
Casing/Tubing Size	4.500 in			
Weight	11.6 lbm/ft			
Grade				
From	22 ft			
To	7619 ft			
Maximum Recorded Temperatures	205 degF			
Logger On Bottom	4-Apr-2013		17:30	
Unit Number	Location			
Recorded By	JASON BARRY			
Witnessed By	ERASMO PARRAS			

Oil Density		Run 1	Run 2	Run 3
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-MAR-2013 10:41:08

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	6214	Serial Number:	3421	Serial Number:	112136
Calibration Date:	24-APR-2012	Calibration Date:	20-FEB-2012	Length:	19500 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878	<div>Conveyance Method: Wireline</div> <div>Rig Type: LAND</div>	
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10		
Wheel Correction 1:	-3	Calibration RMS:	4		
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 POLICIES APPLIED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SWPT 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
FIRST RUN IN HOLE	
TOOL RAN AS PER TOOL SKETCH	
ENTRANCE TIME: 16:45	
TIME ON BOTTOM: 17:30	
EXIT TIME: 18:00	

MAX RECORDED TEMPERATURE: 205 DEGF	
MAX RECORDED PRESSURE: 3193 PSI	
SHORT JOINTS: 5103 FT & 6096 FT	
CREW: J BARRY, J ORTIZ	
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY	

RUN 1			RUN 2		
SERVICE ORDER #:		C920-00058	SERVICE ORDER #:		
PROGRAM VERSION:		19C0-187	PROGRAM VERSION:		
FLUID LEVEL:		22 ft	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT

WITM-A
PSC_16MHZ

DOWNHOLE EQUIPMENT

MH-22
MH-22

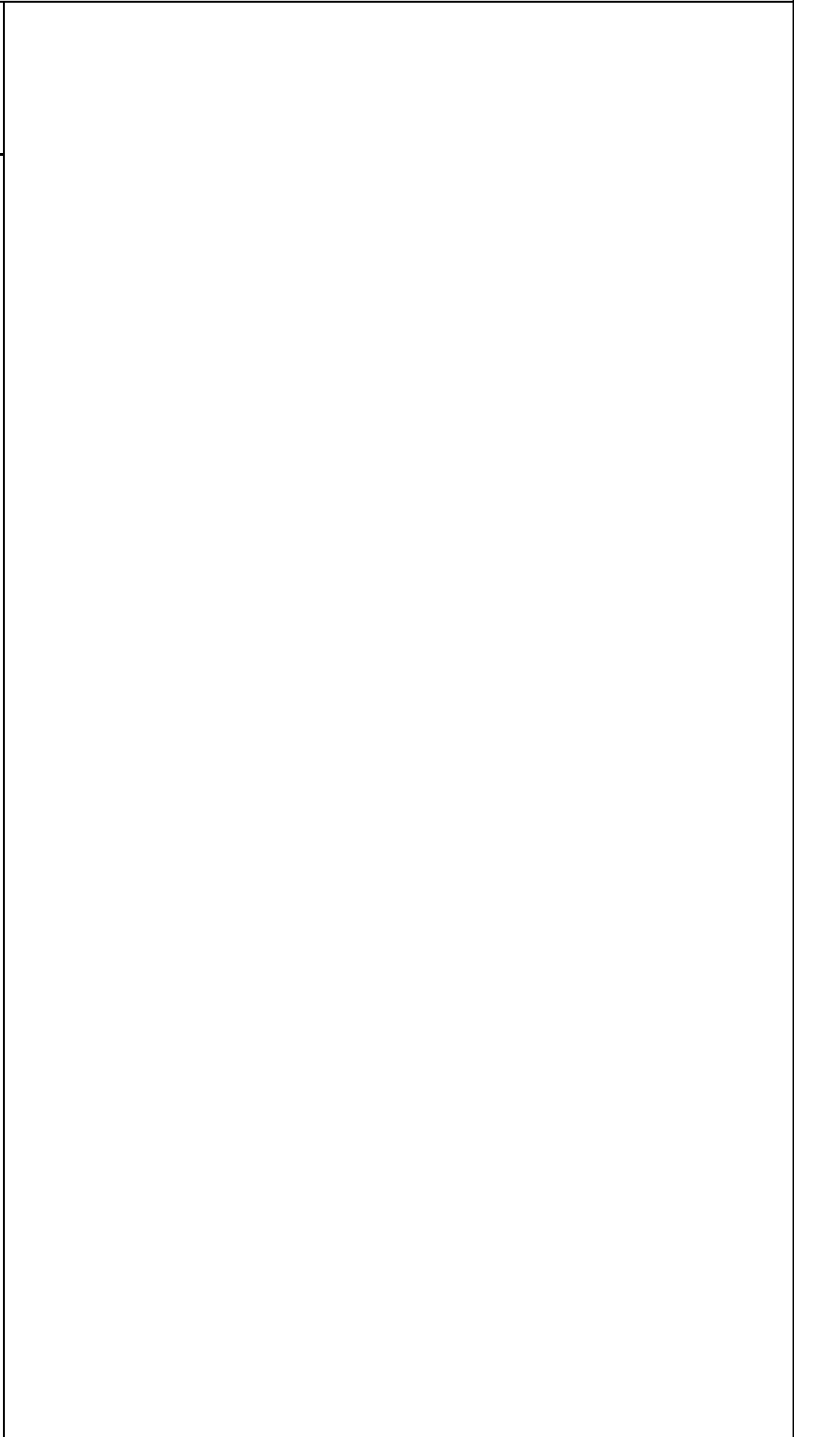
AH-38

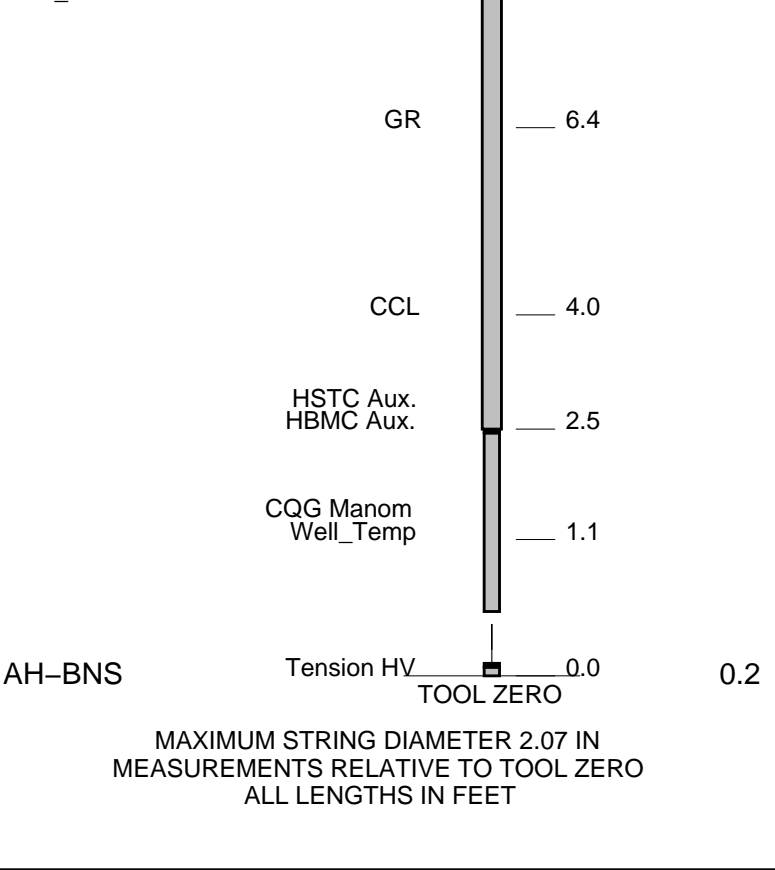
HBMS-B
PSC-A 2880
HUDH-A 2880
HSTC-A
HBMC-A
GR
CCL
HBMC
HTPS-A 2880
HCQG_E_Mano
RTD Thermometer

13.1

11.6

11.3



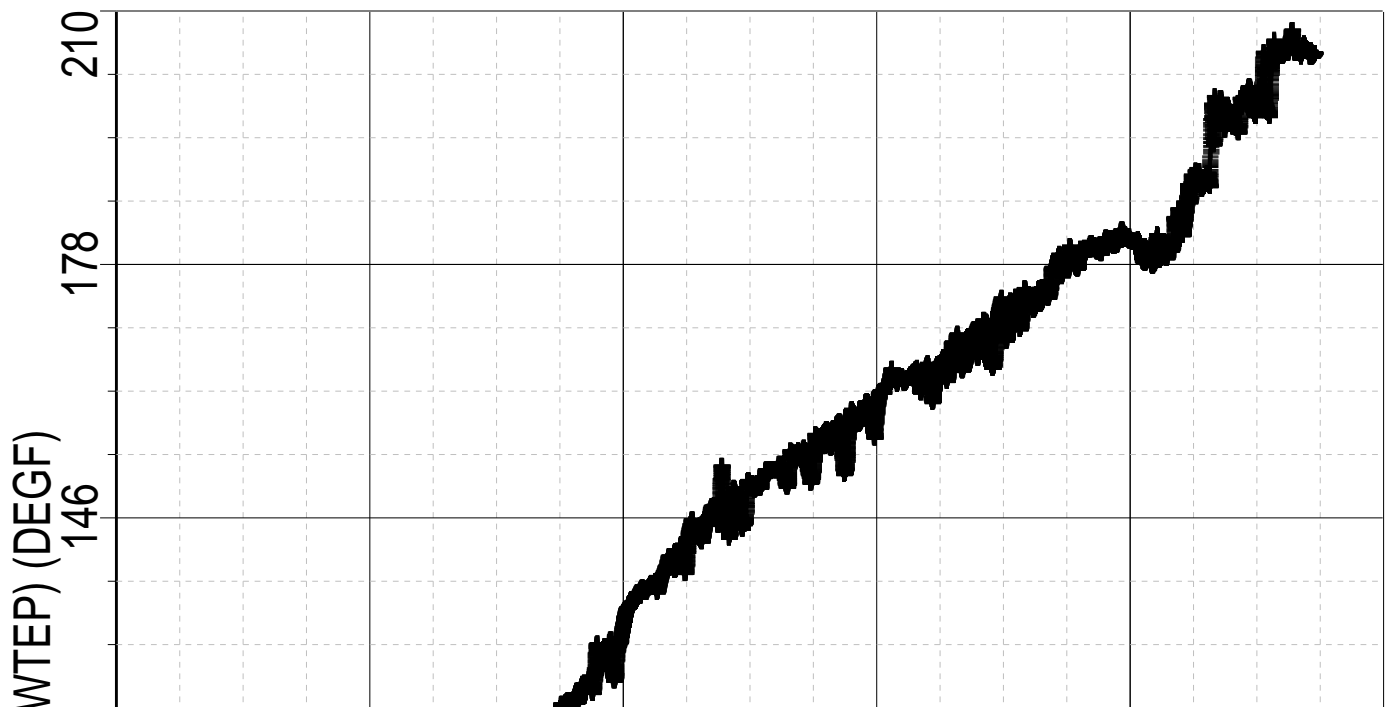


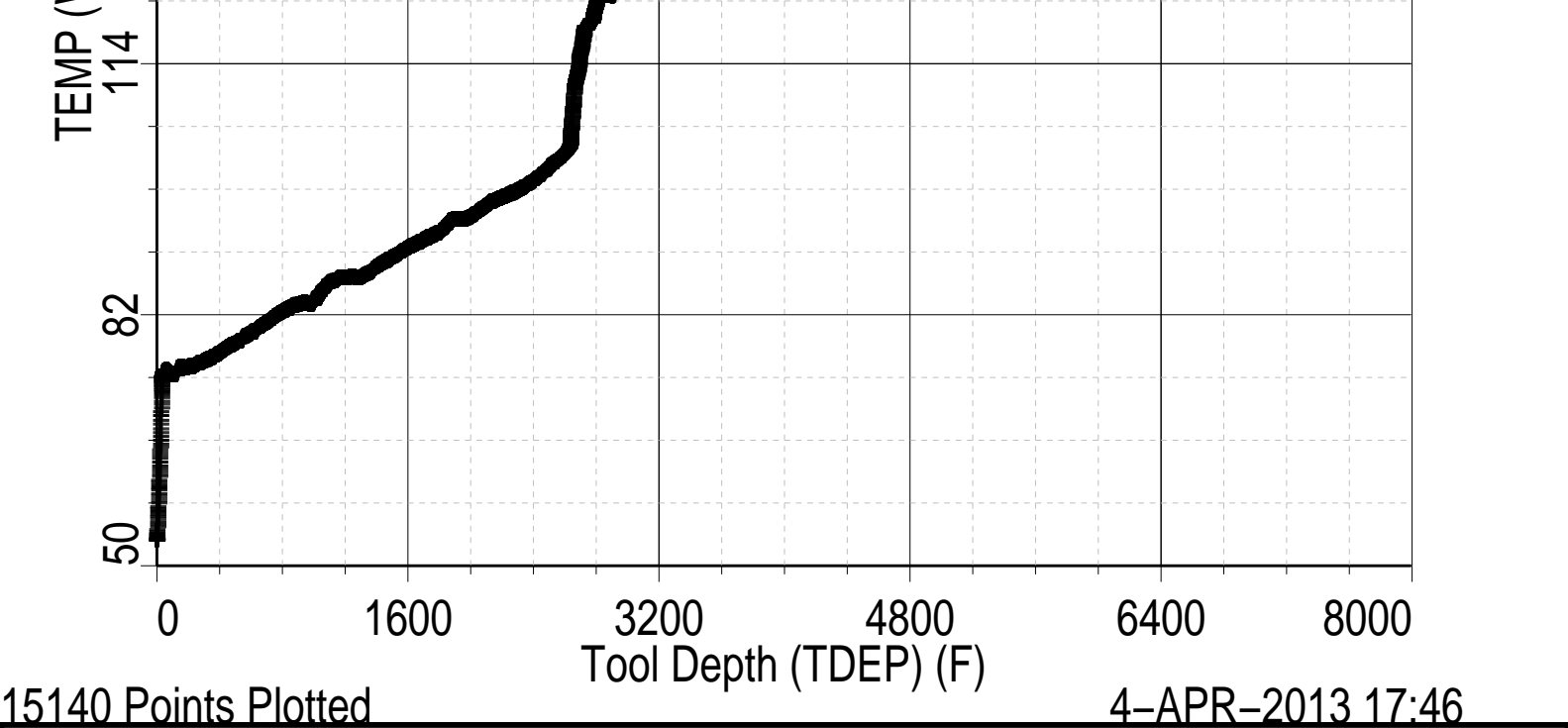
Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 7569.5 – -16.0 FT





Schlumberger

TEMPERATURE LOG

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER 19-16CC (019EB)

Input DLIS Files

DEFAULT Flip_HBMS_004LUP PRODUCER 04-Apr-2013 17:40 7569.5 FT -16.0 FT

Output DLIS Files

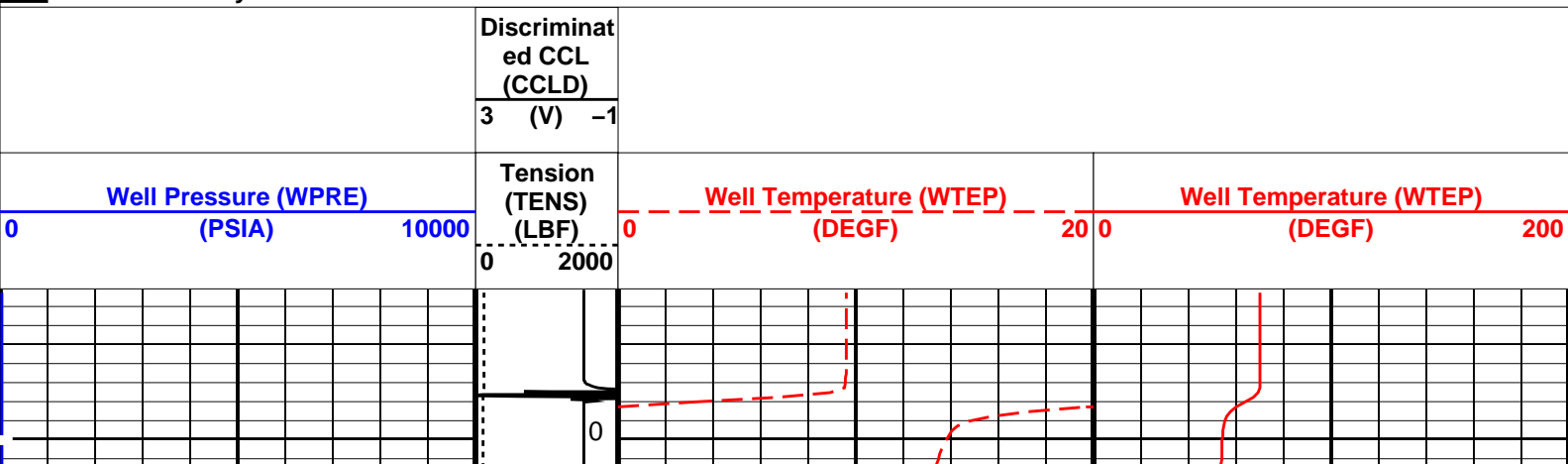
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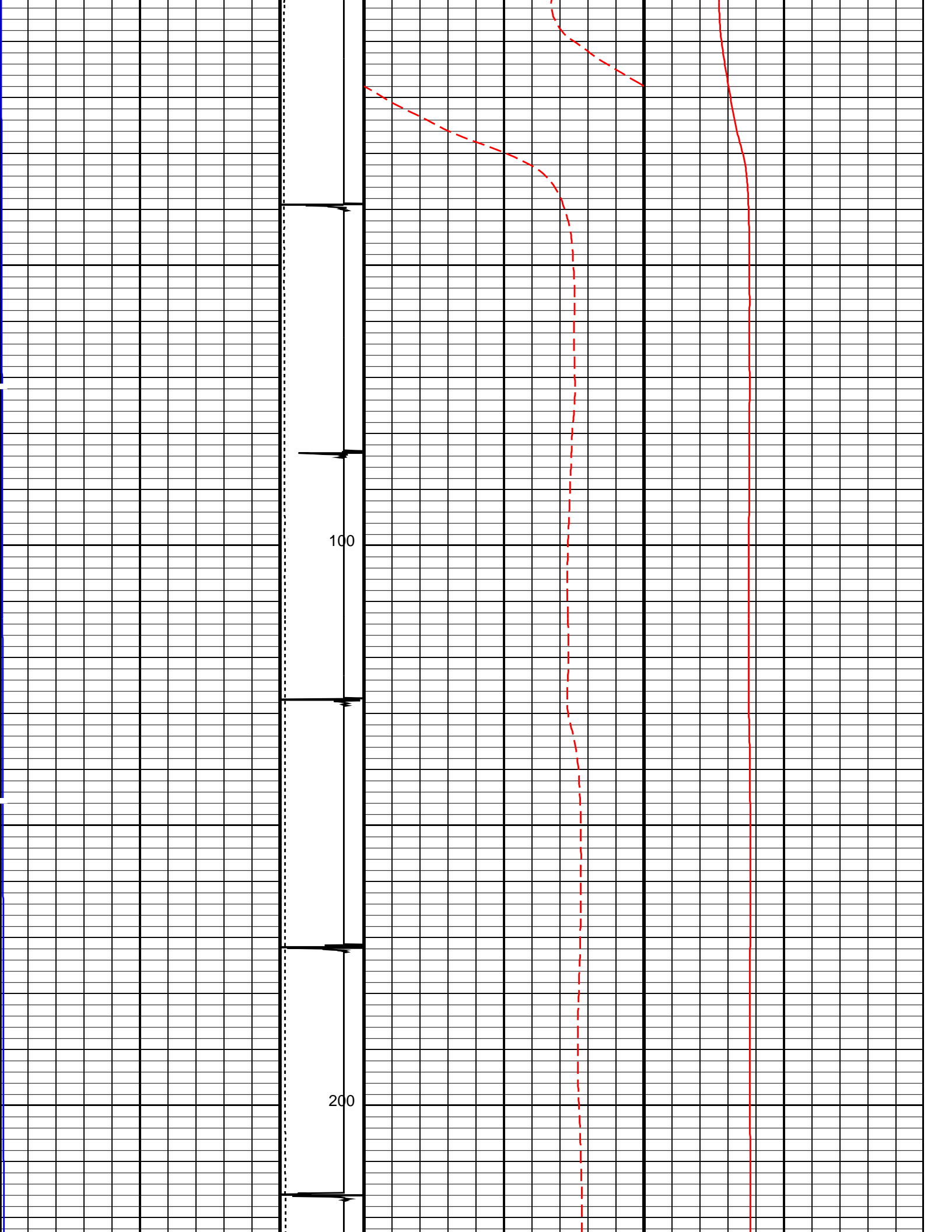
OP System Version: 19C0-187

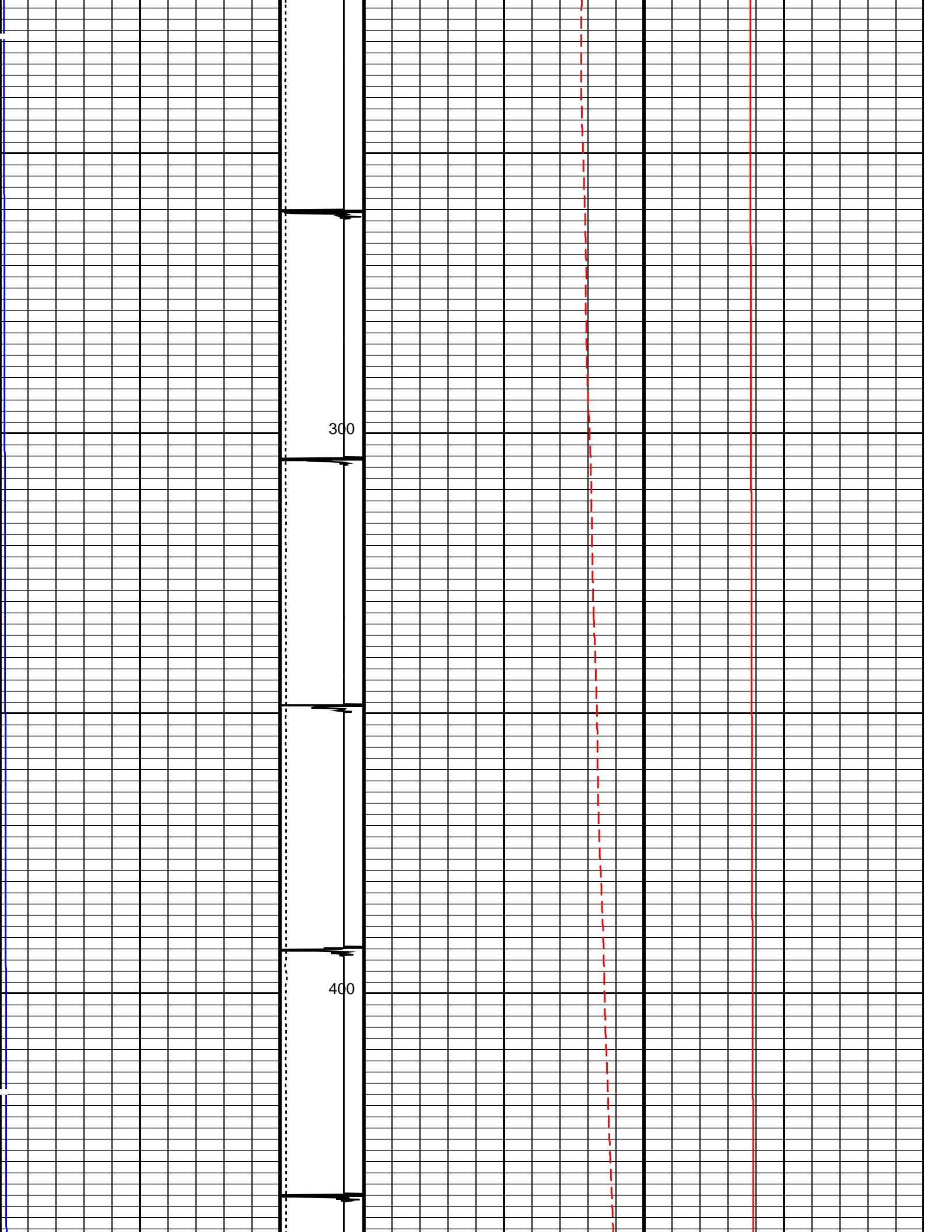
HBMS-B SRPC-5214-H2-2012-OP19

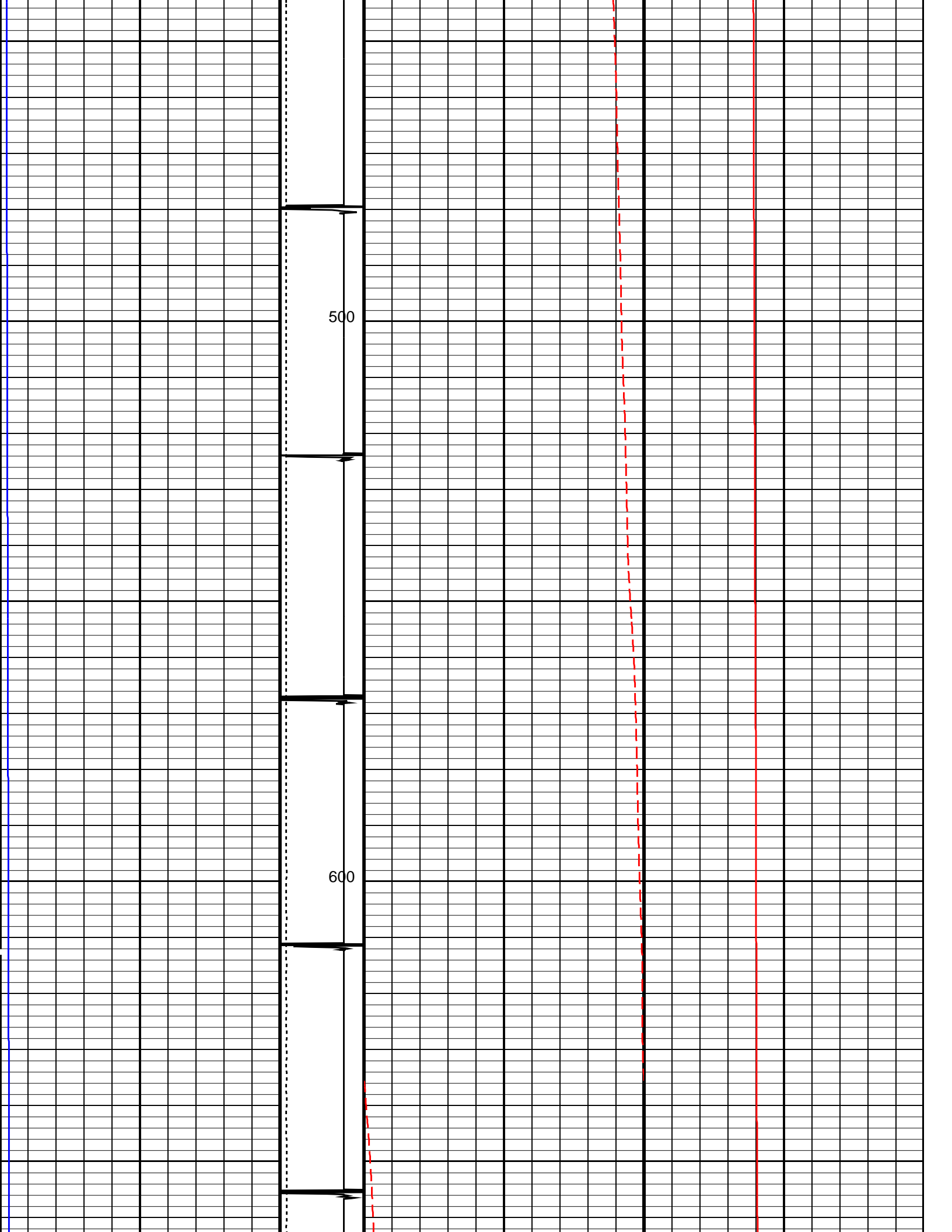
PIP SUMMARY

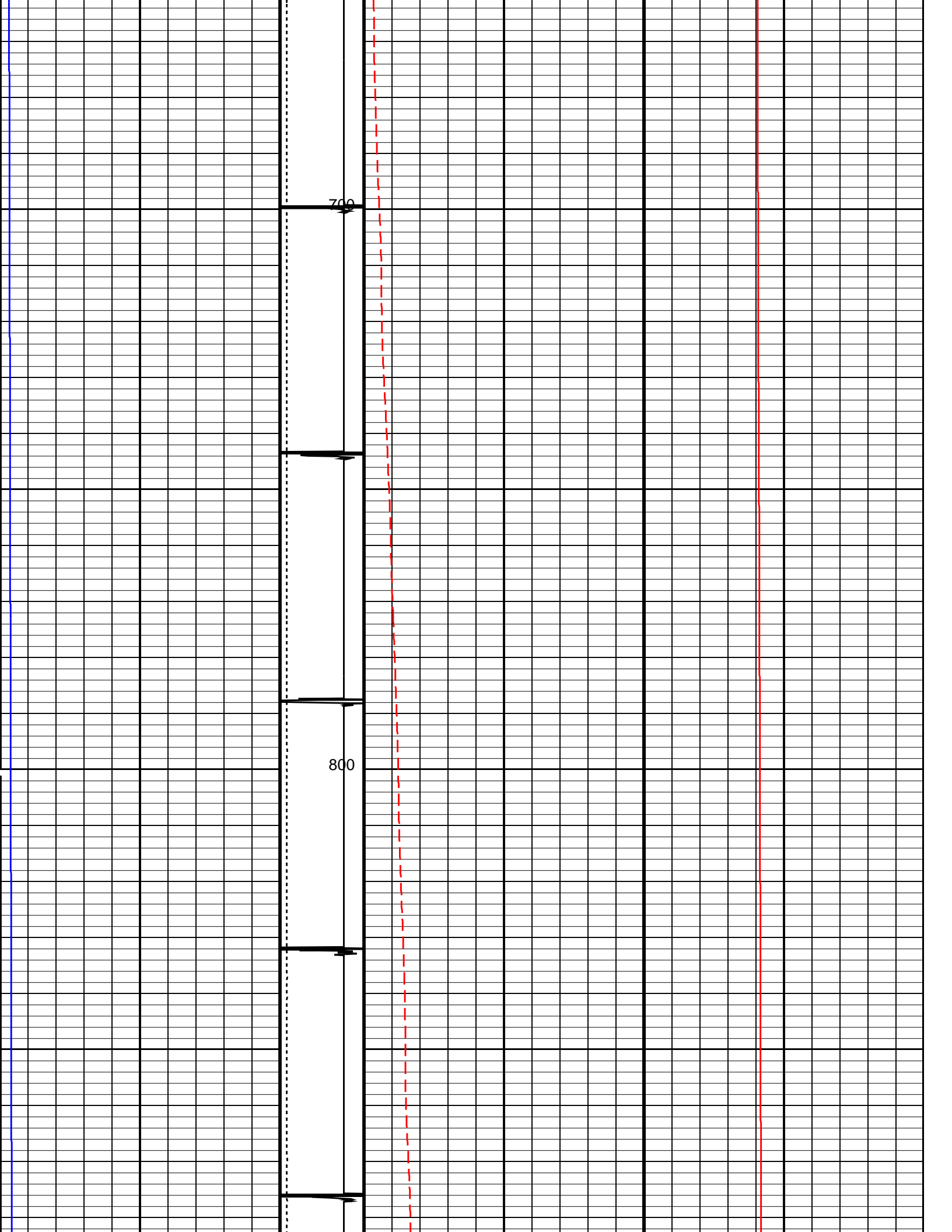
Time Mark Every 60 S

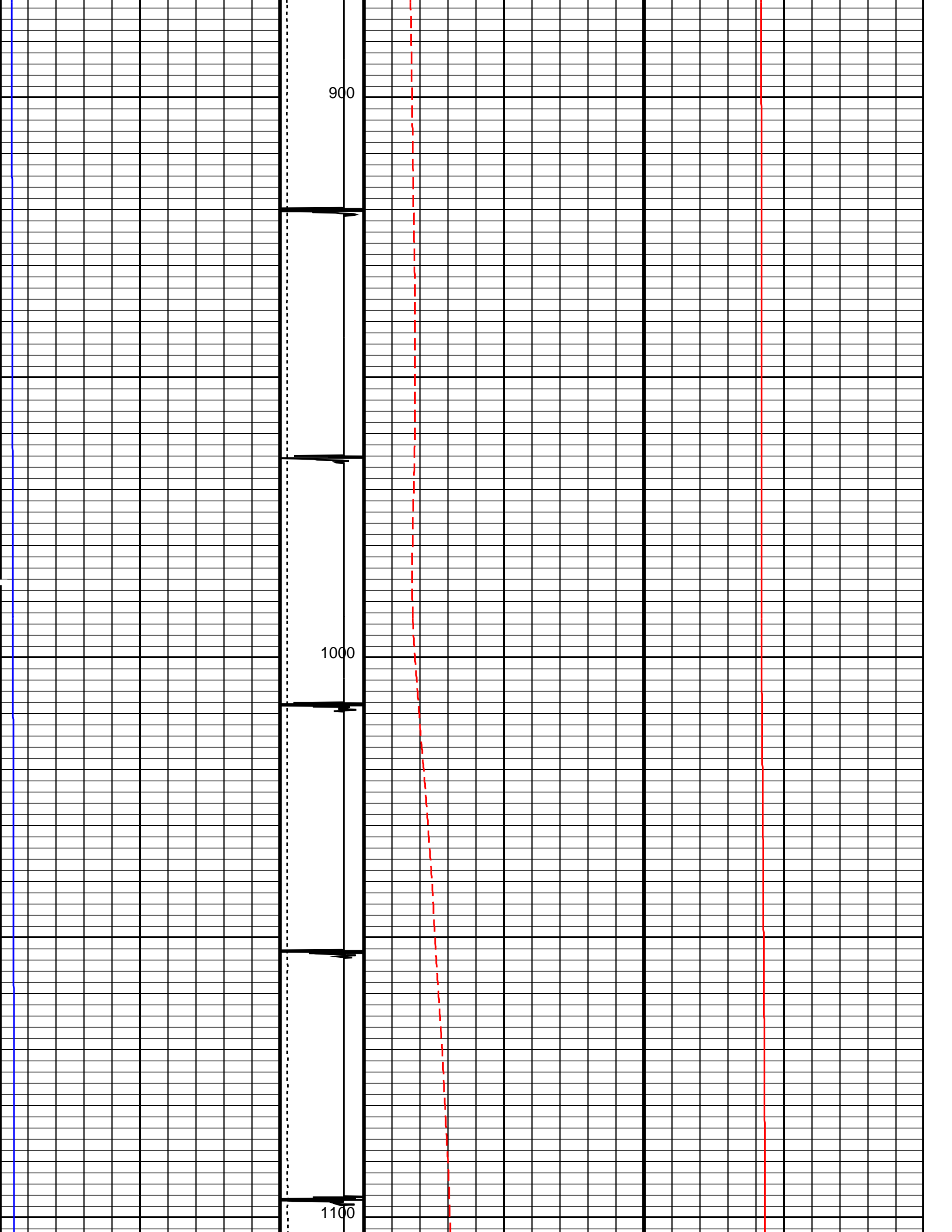


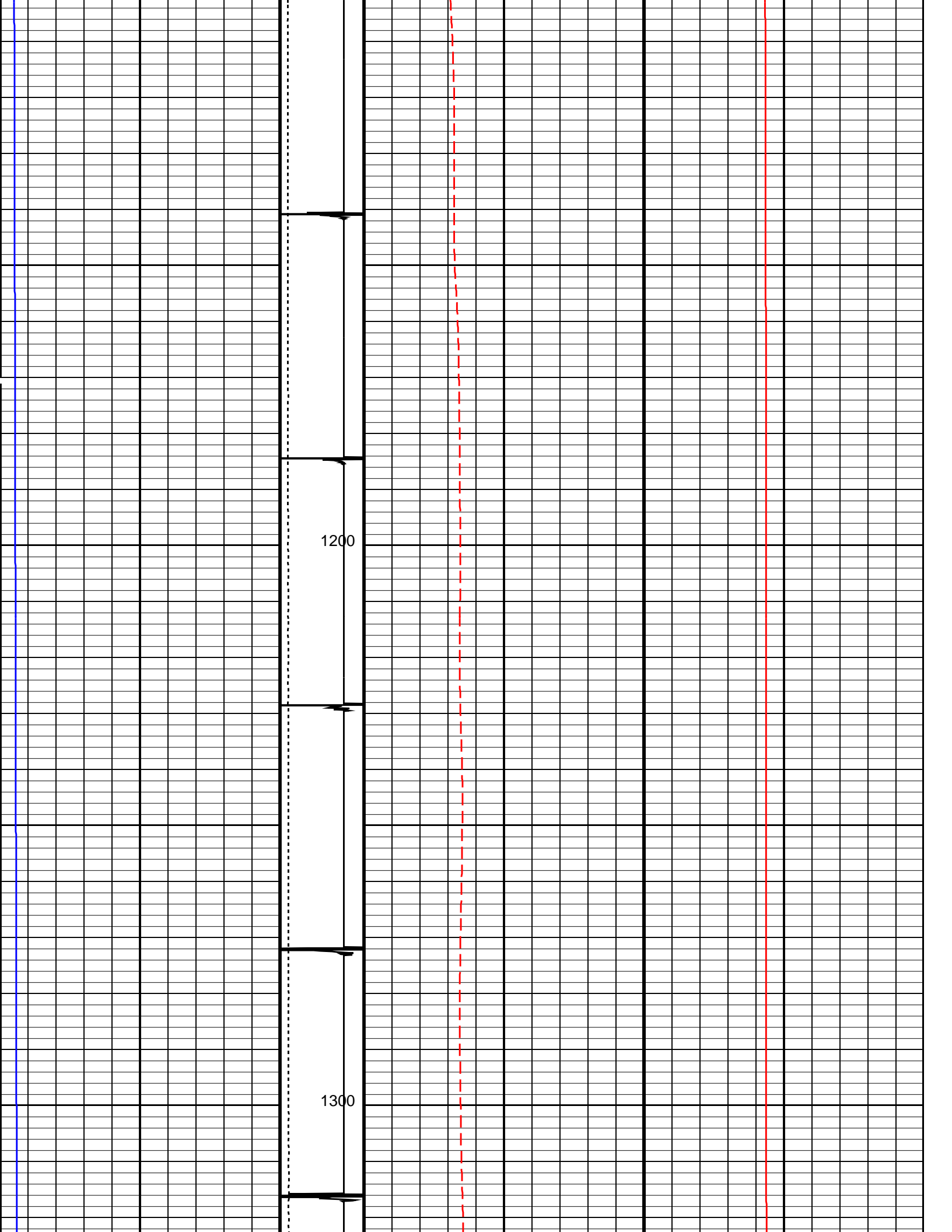


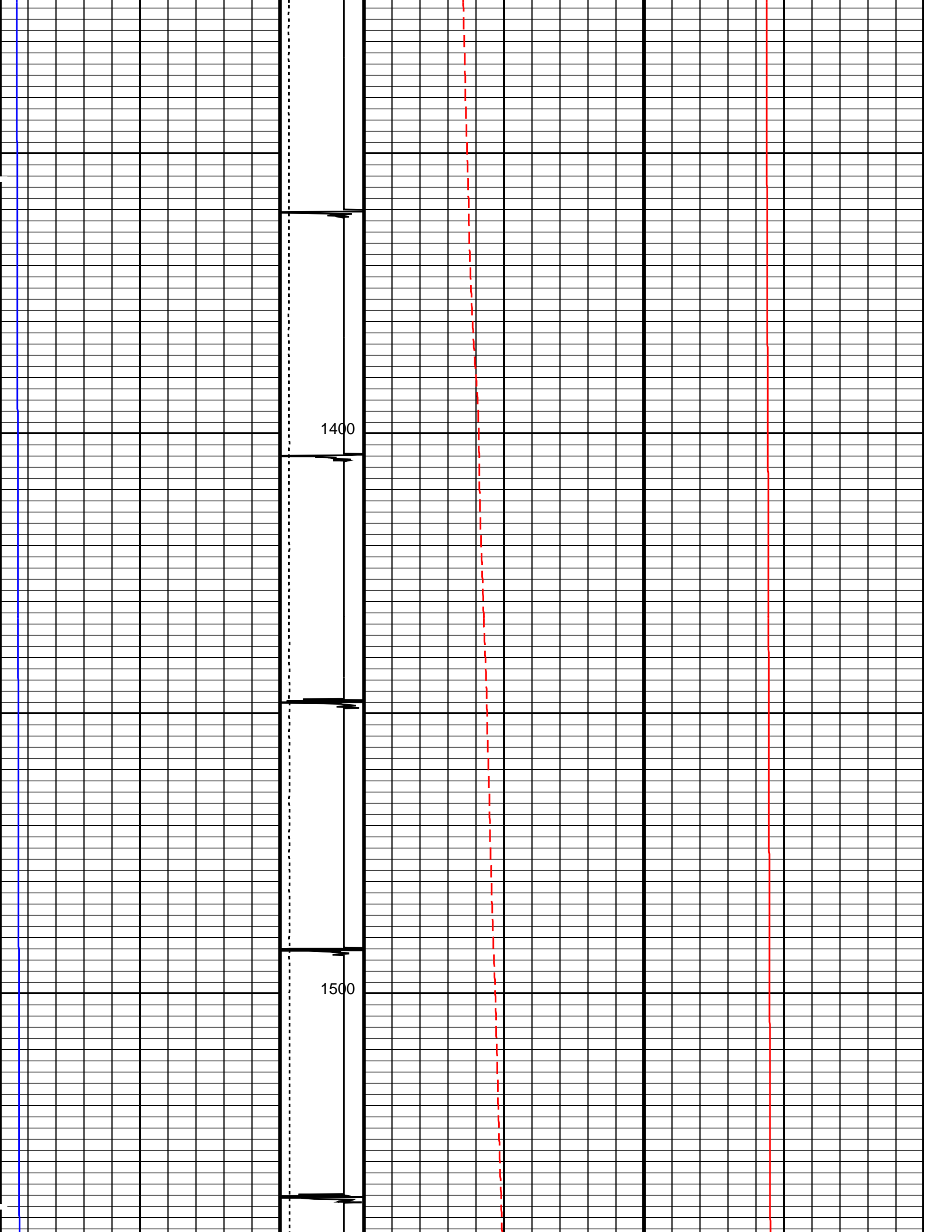


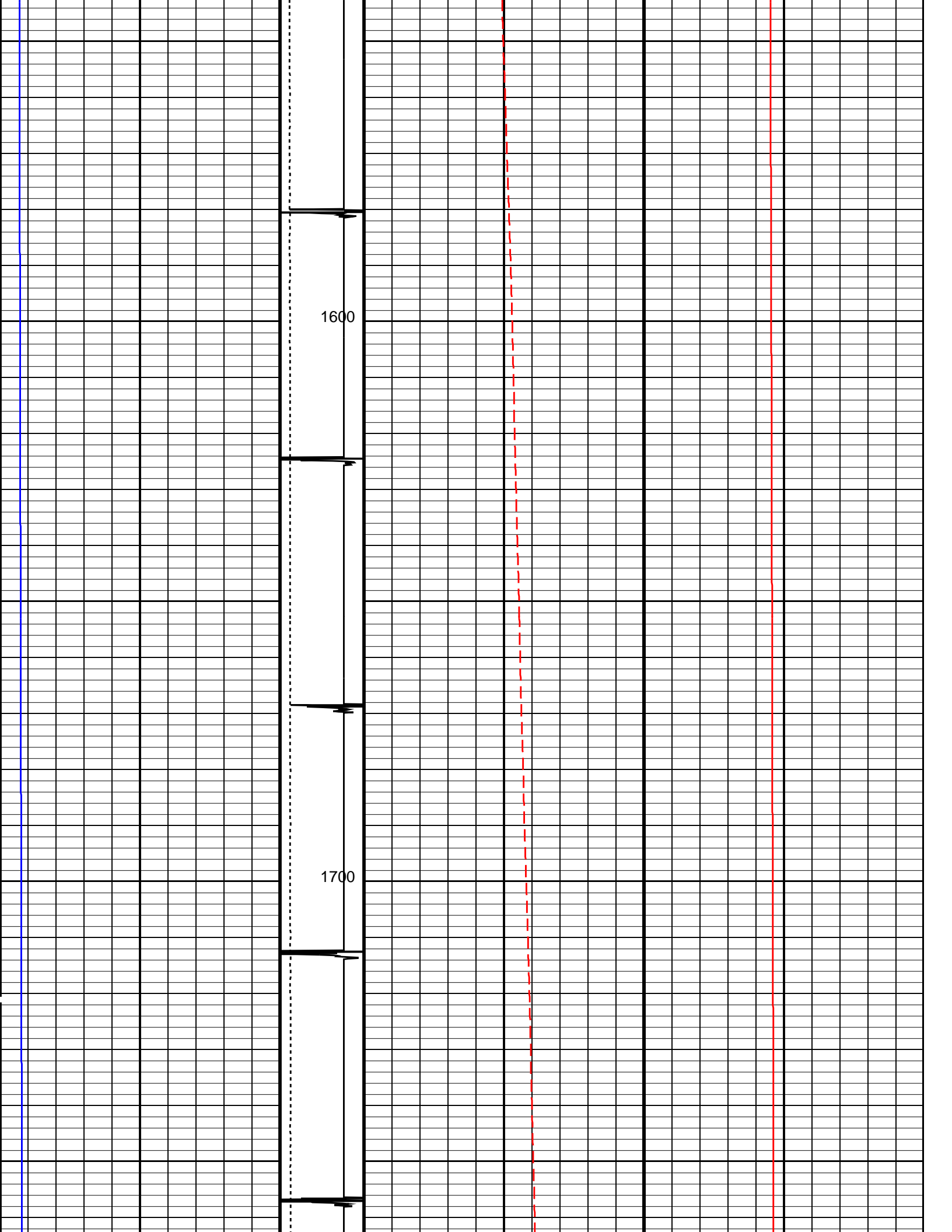


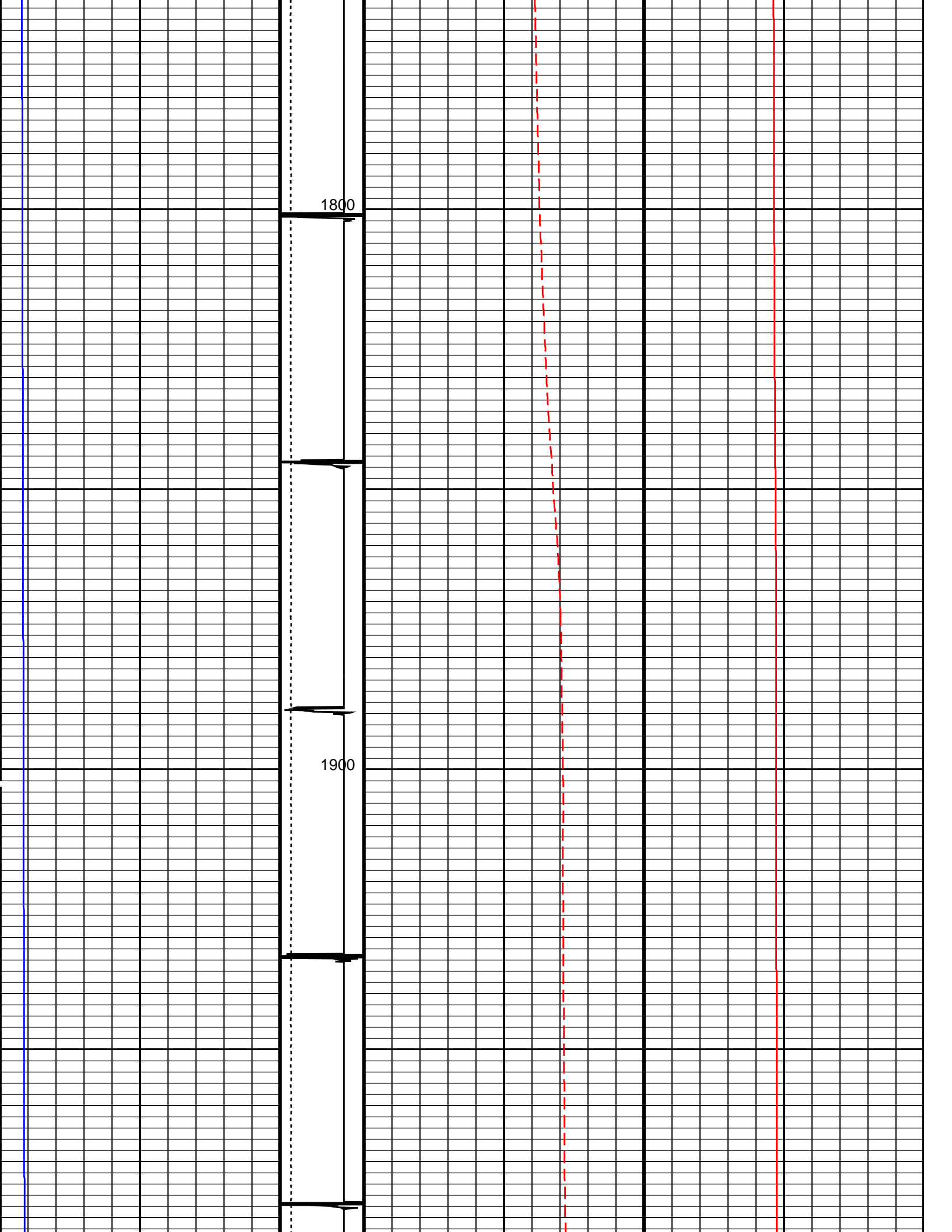


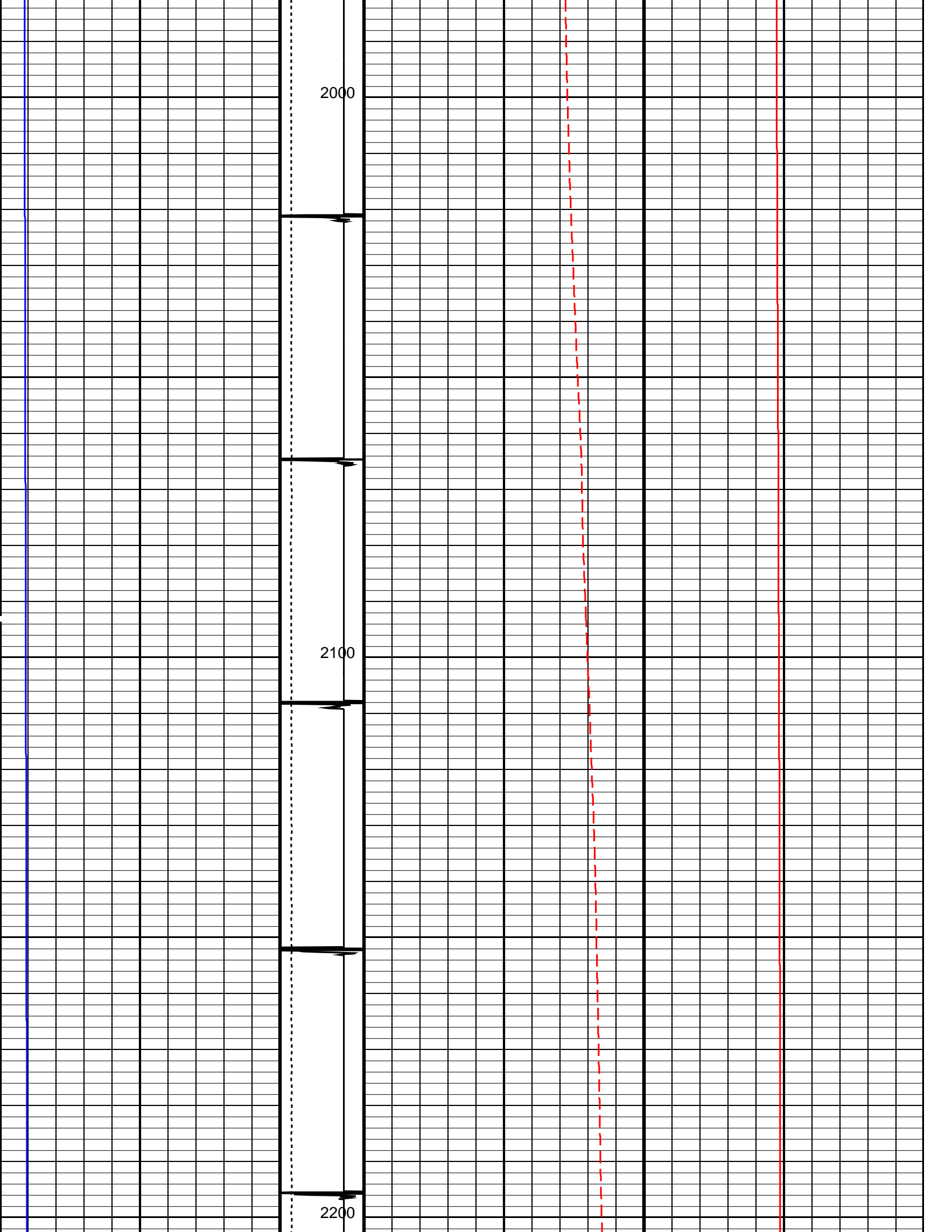


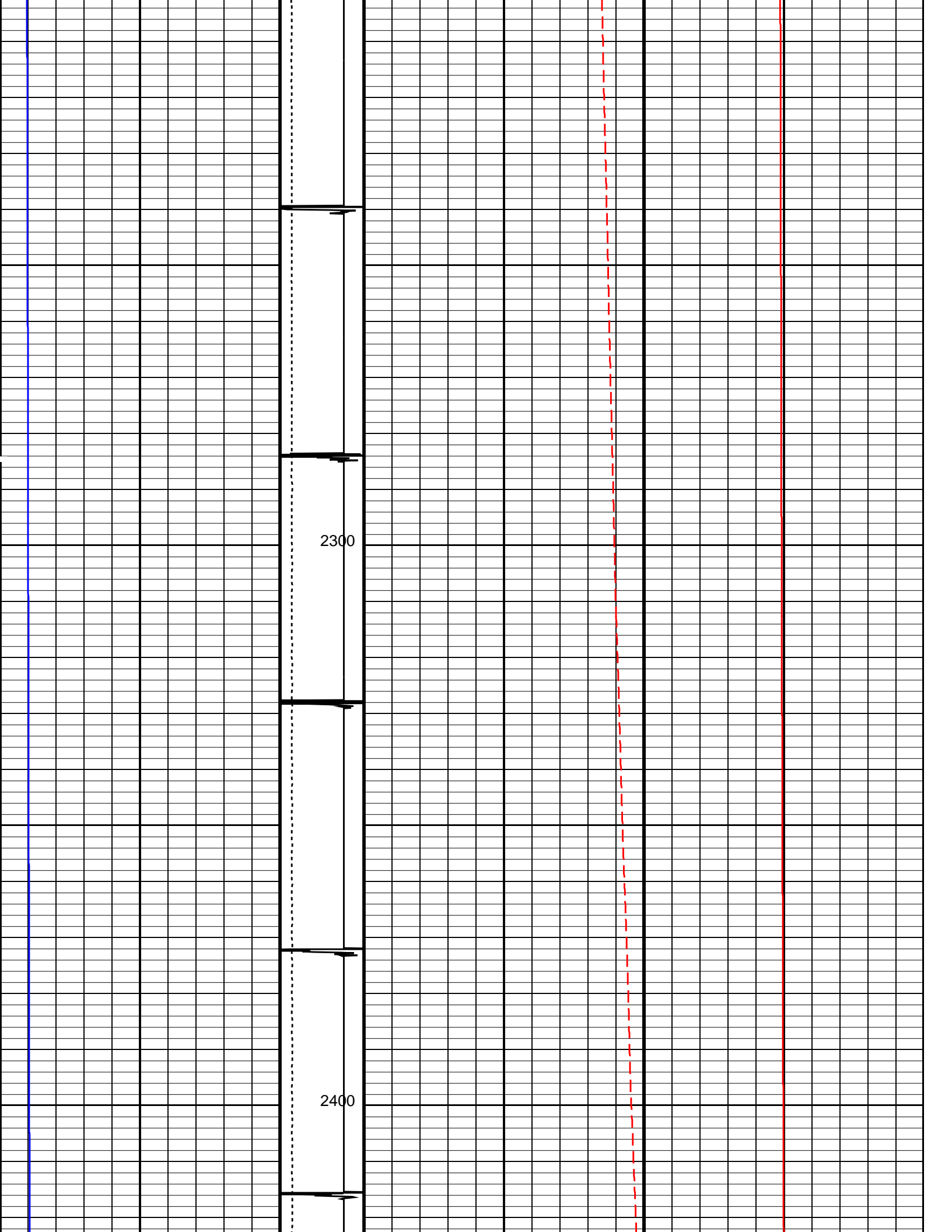


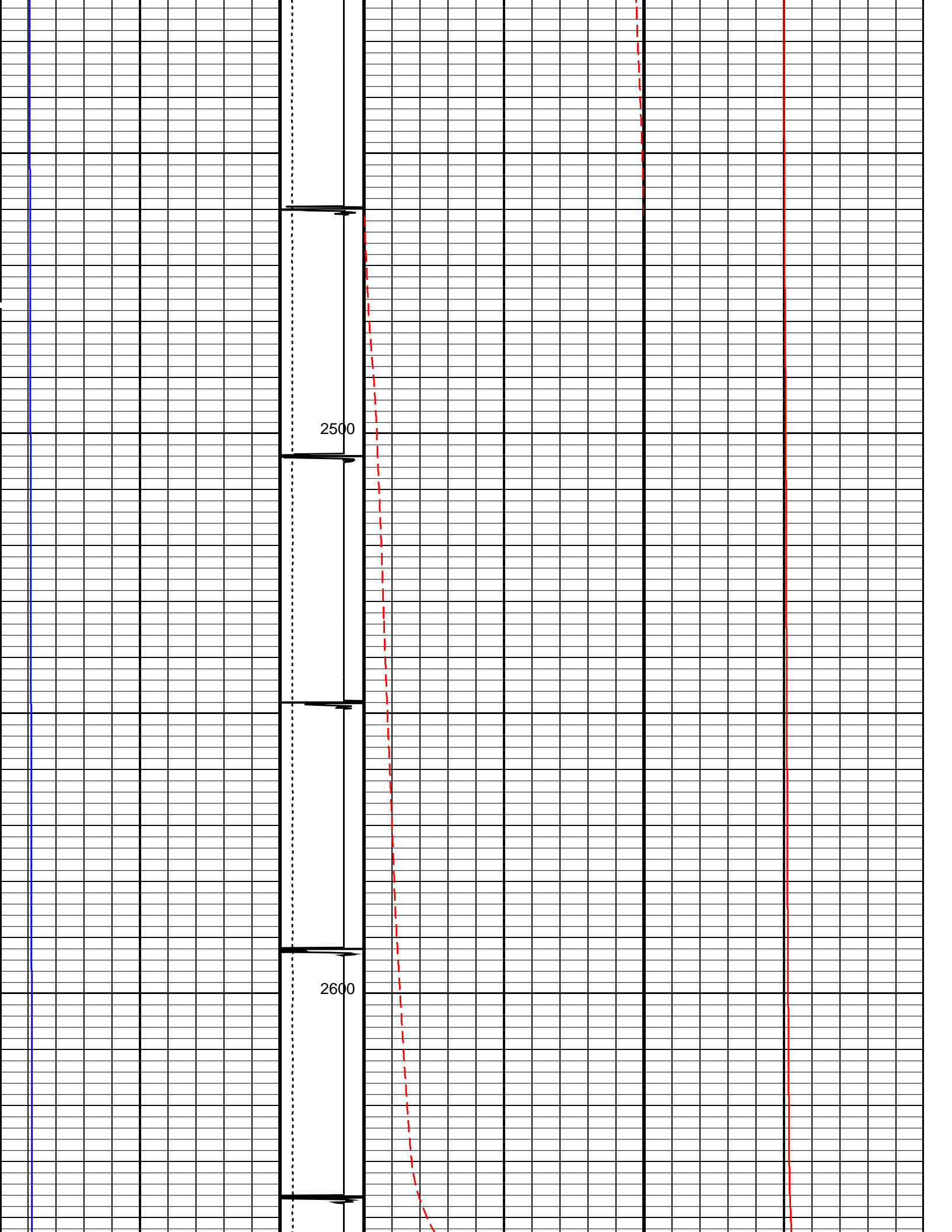


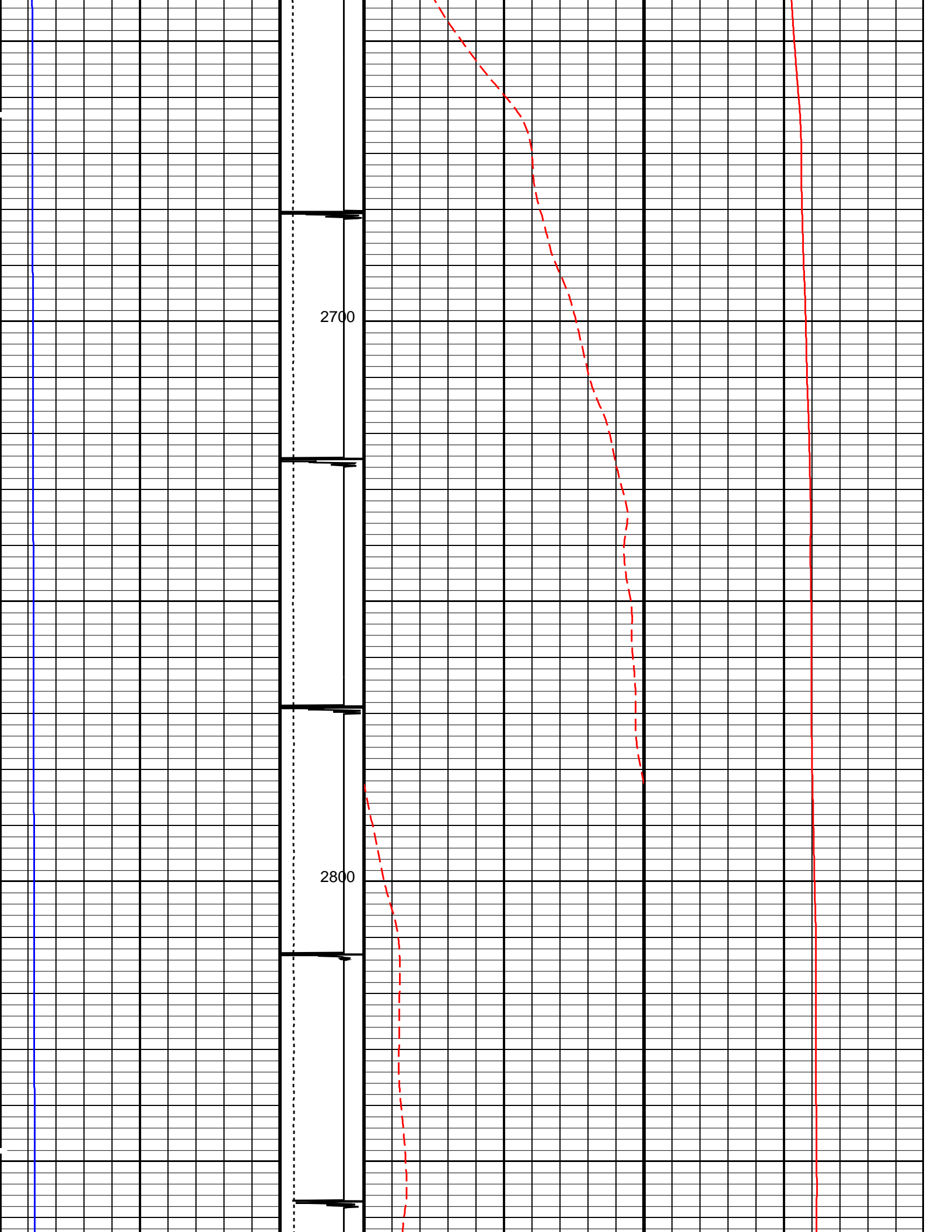


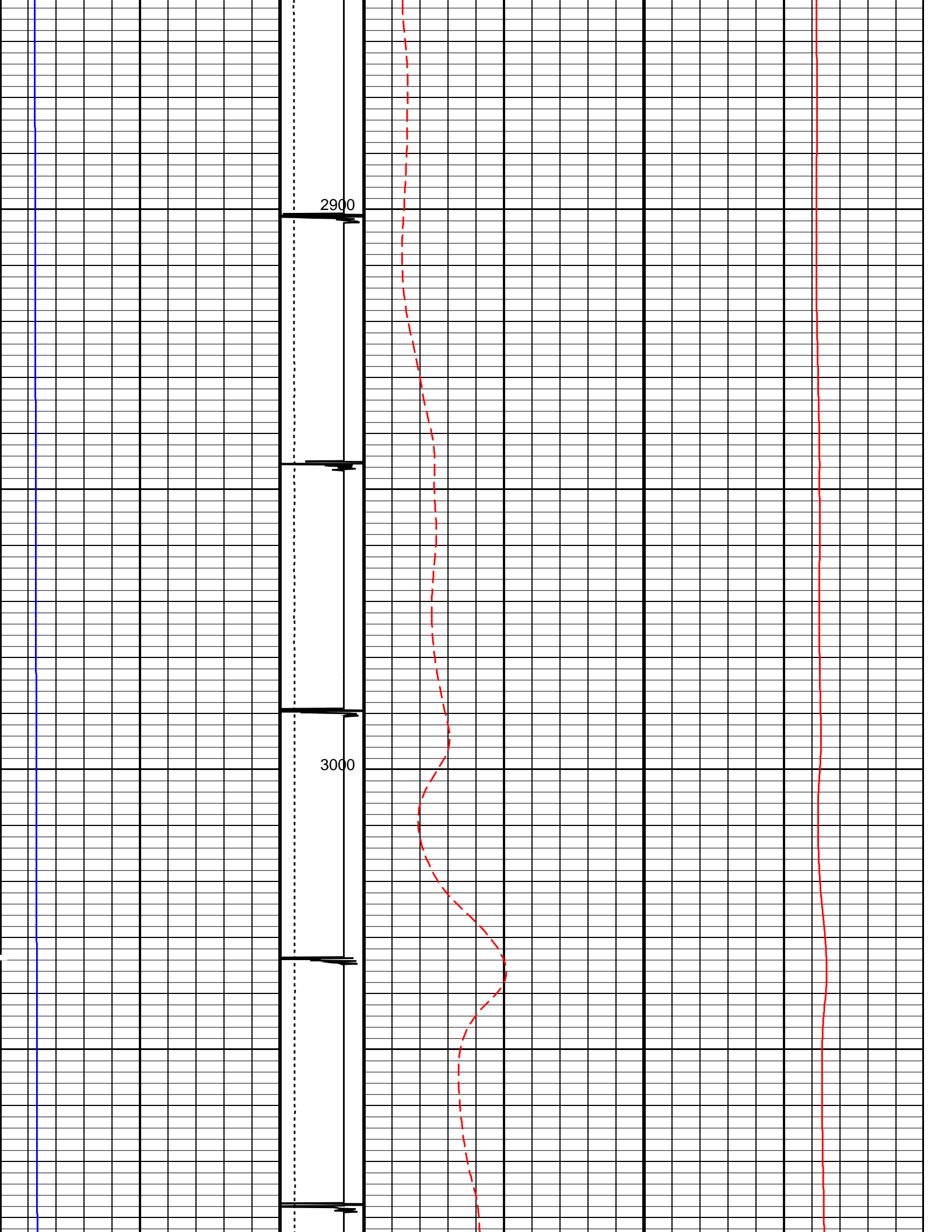


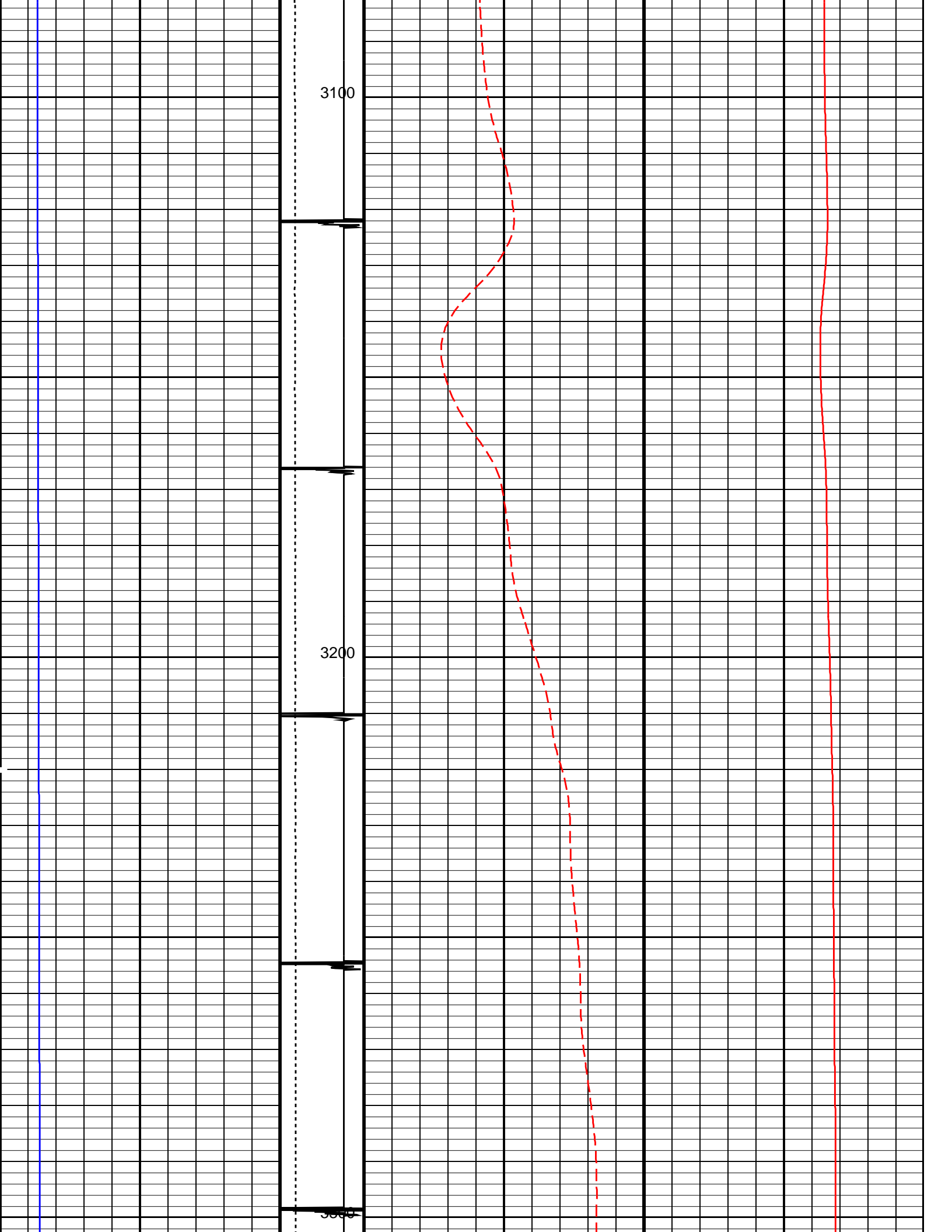


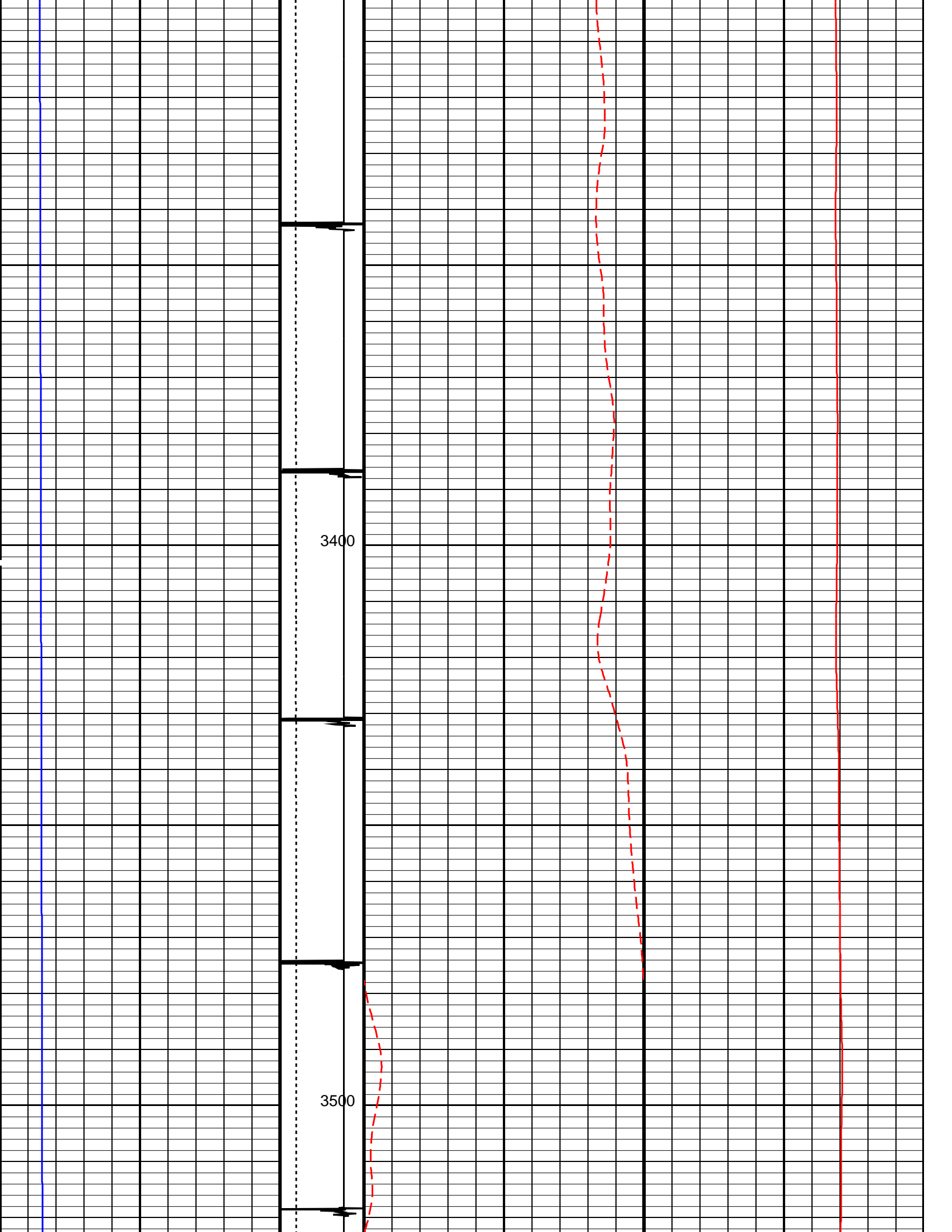


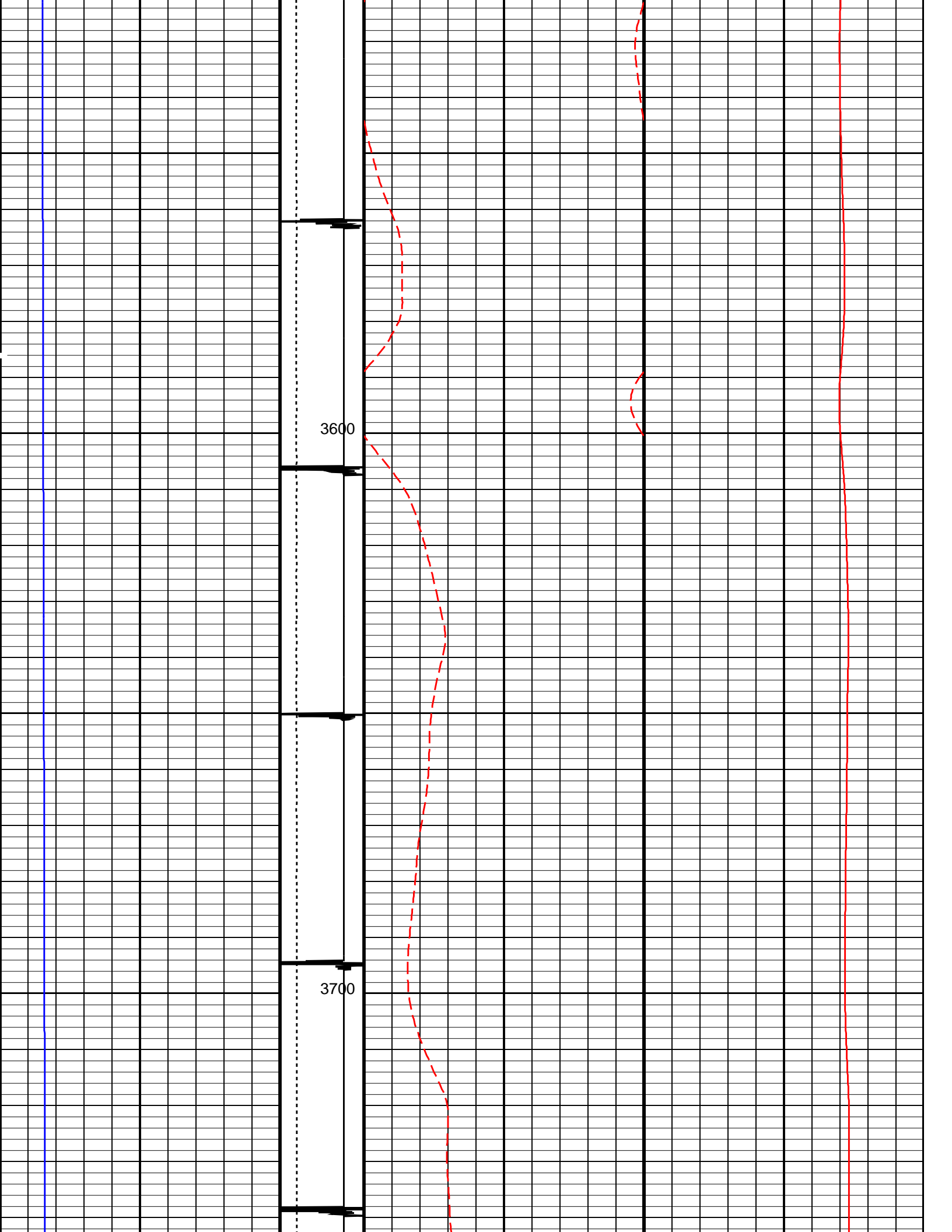


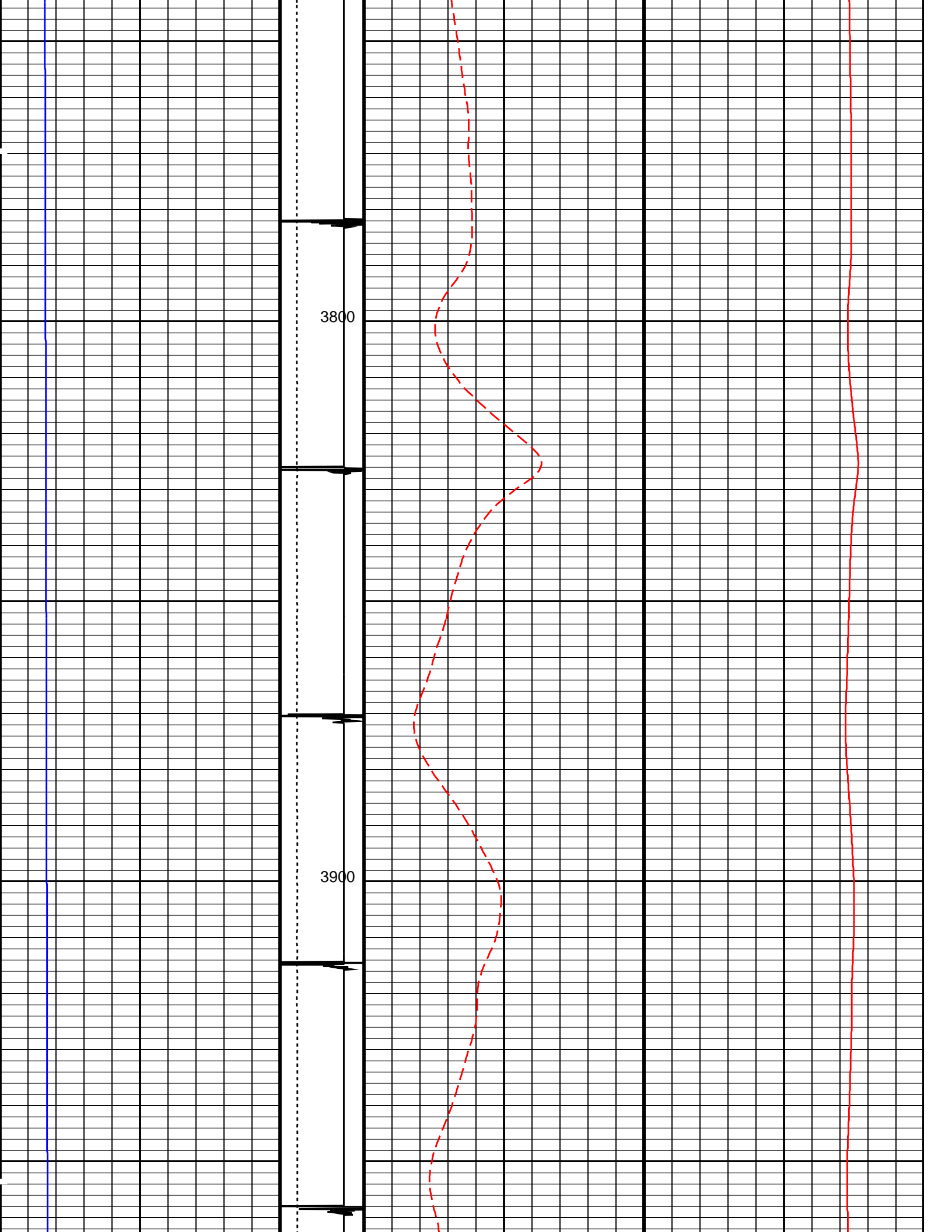


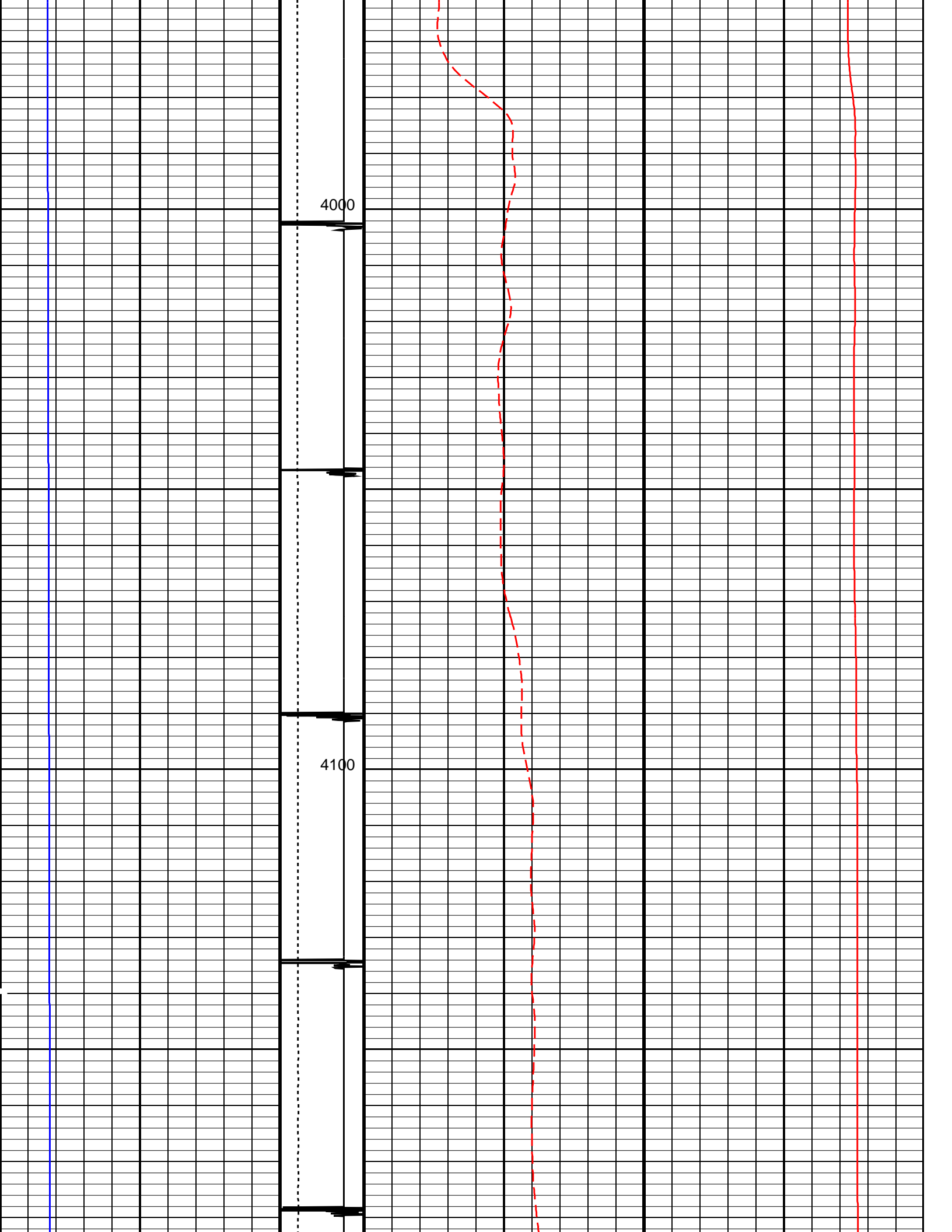


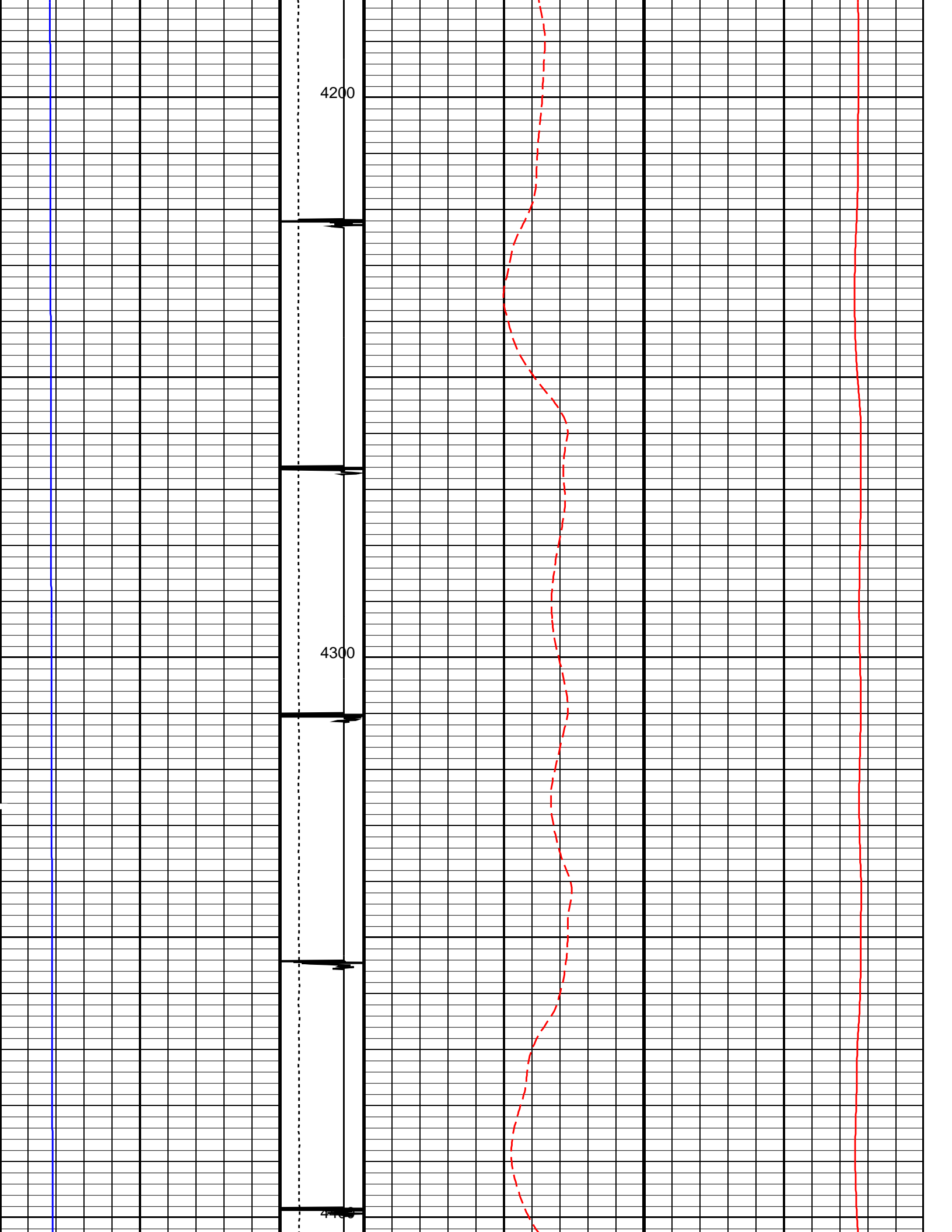


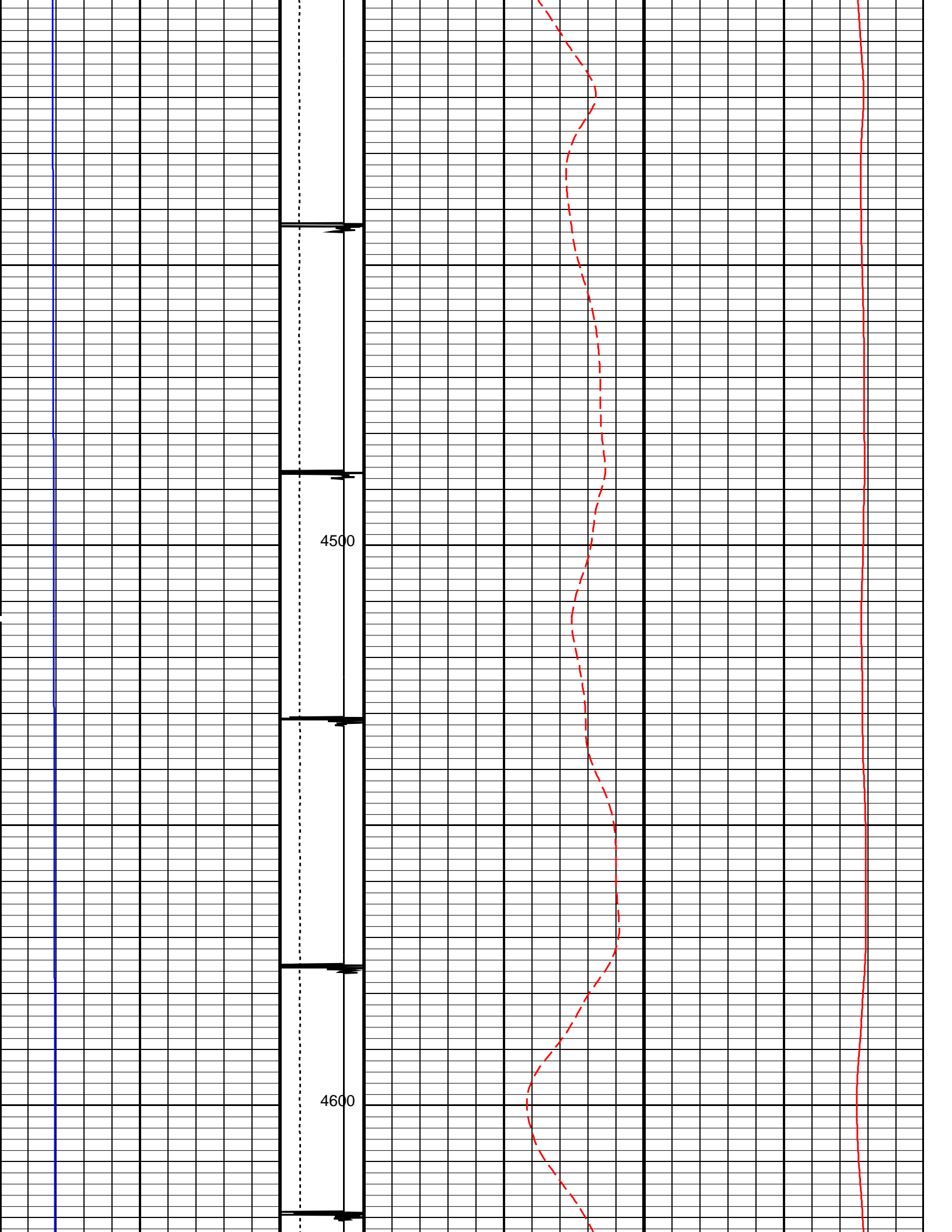


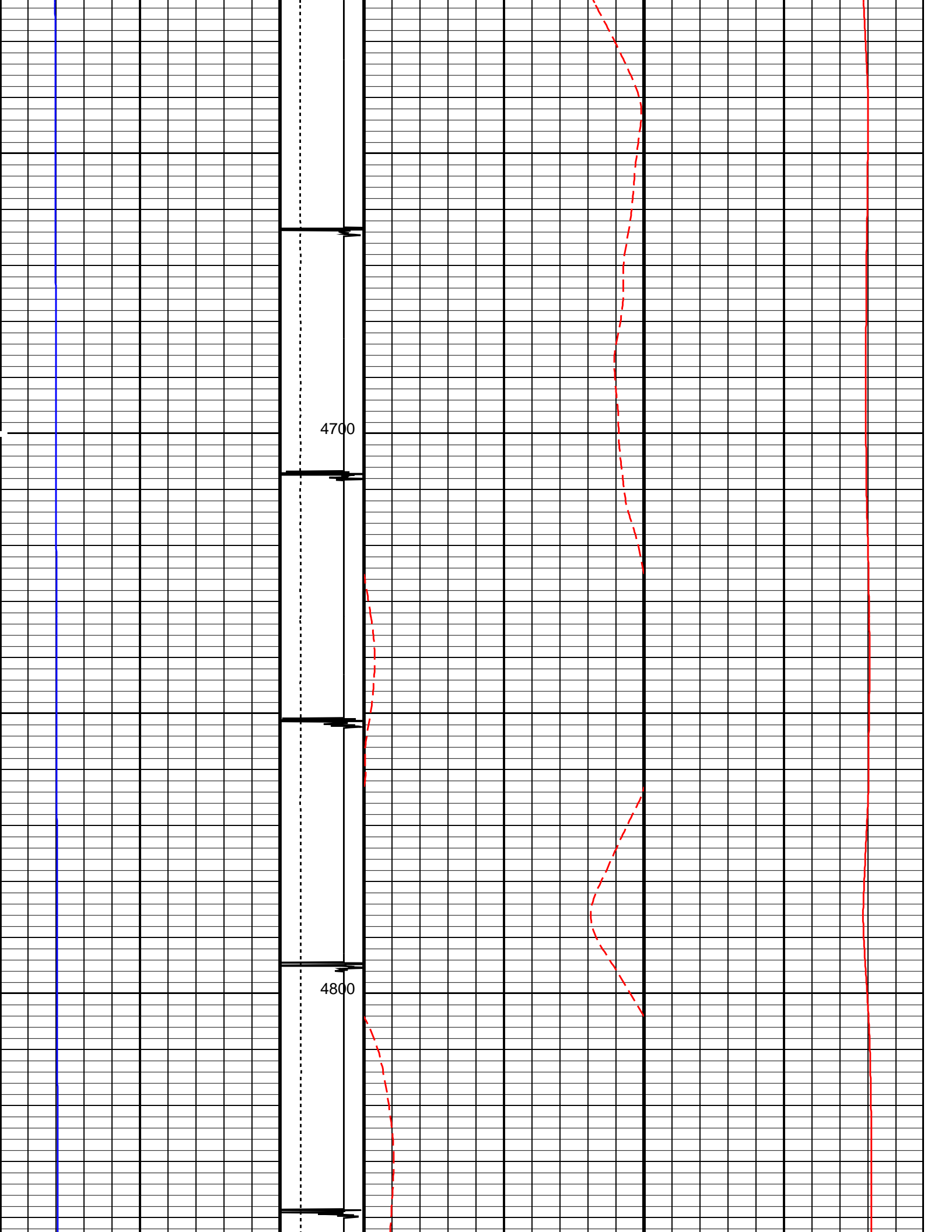


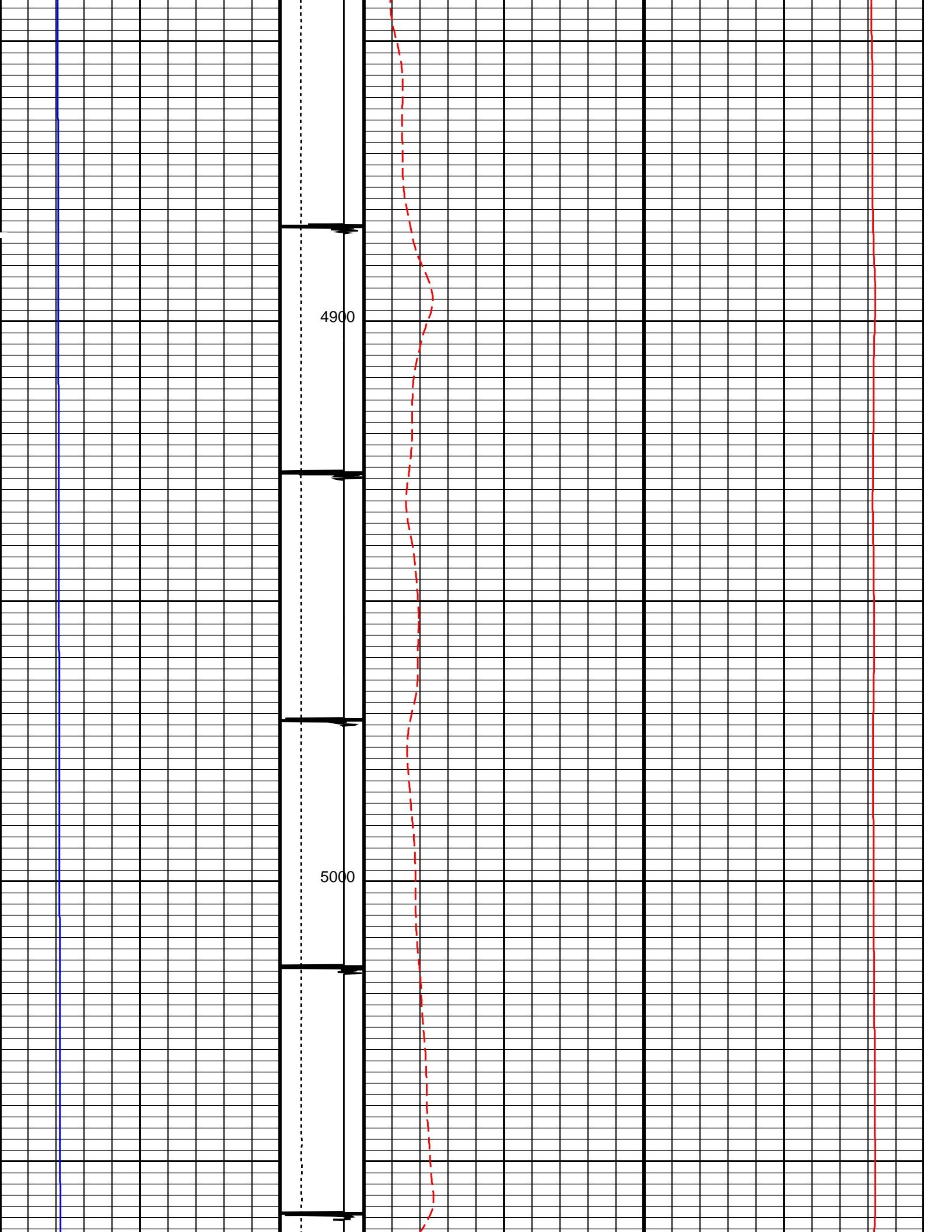






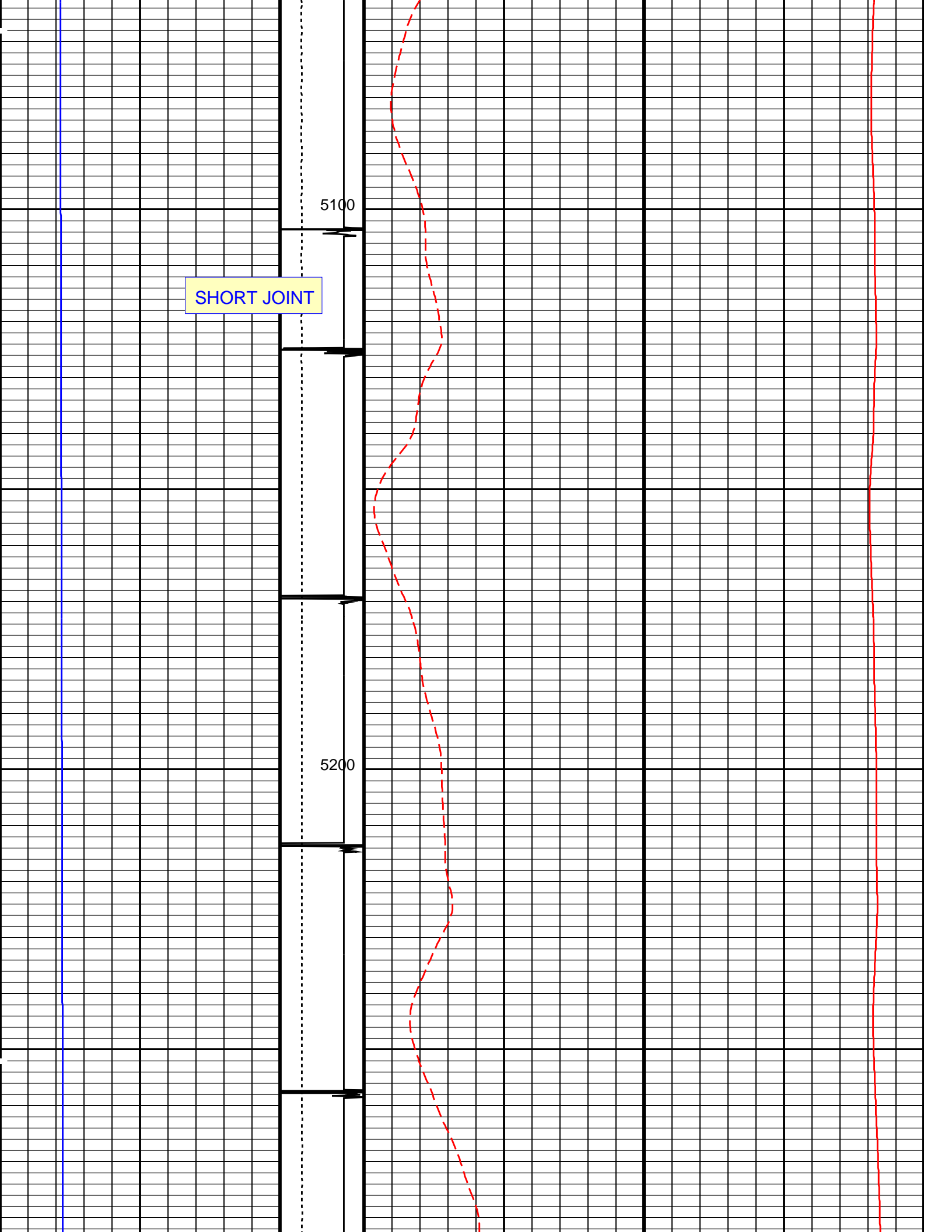


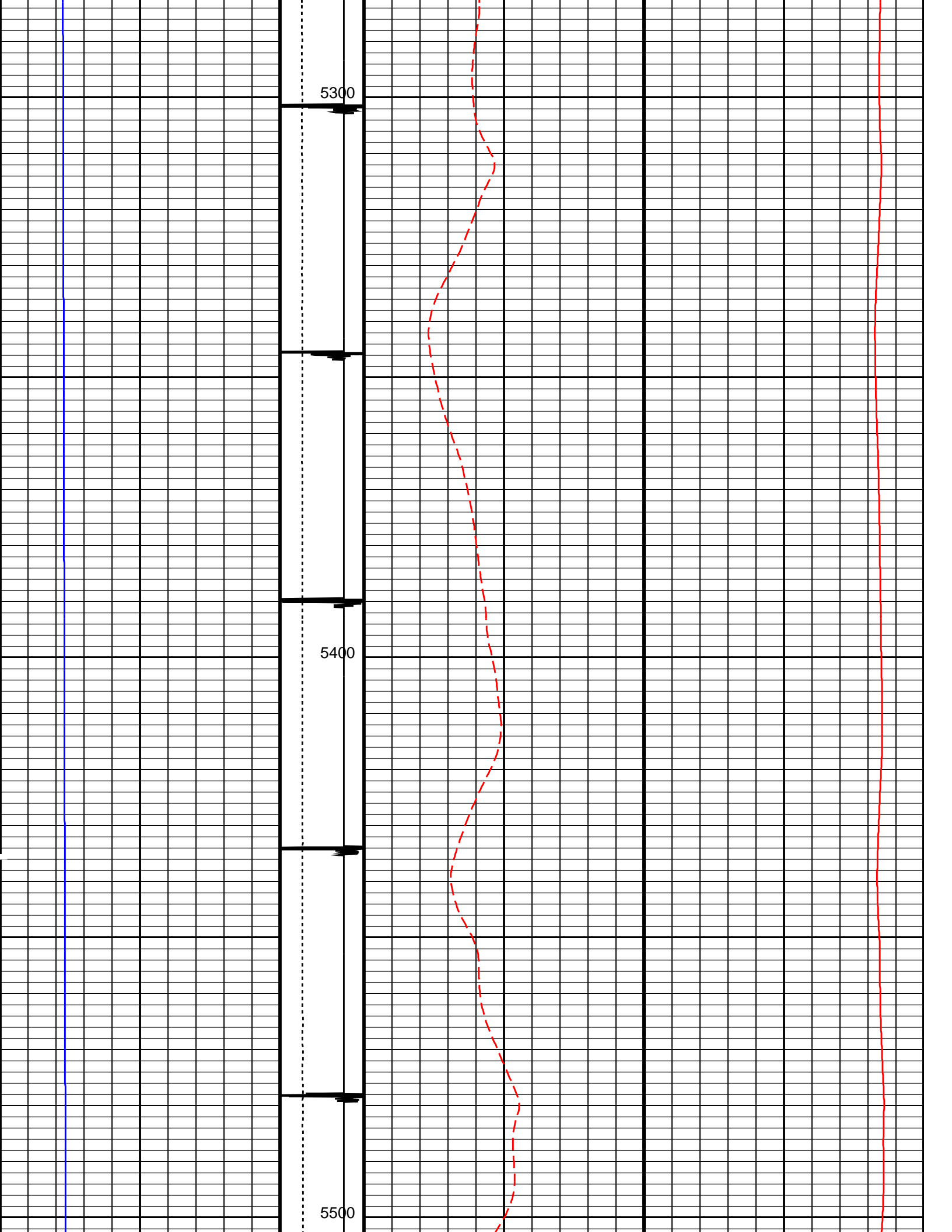


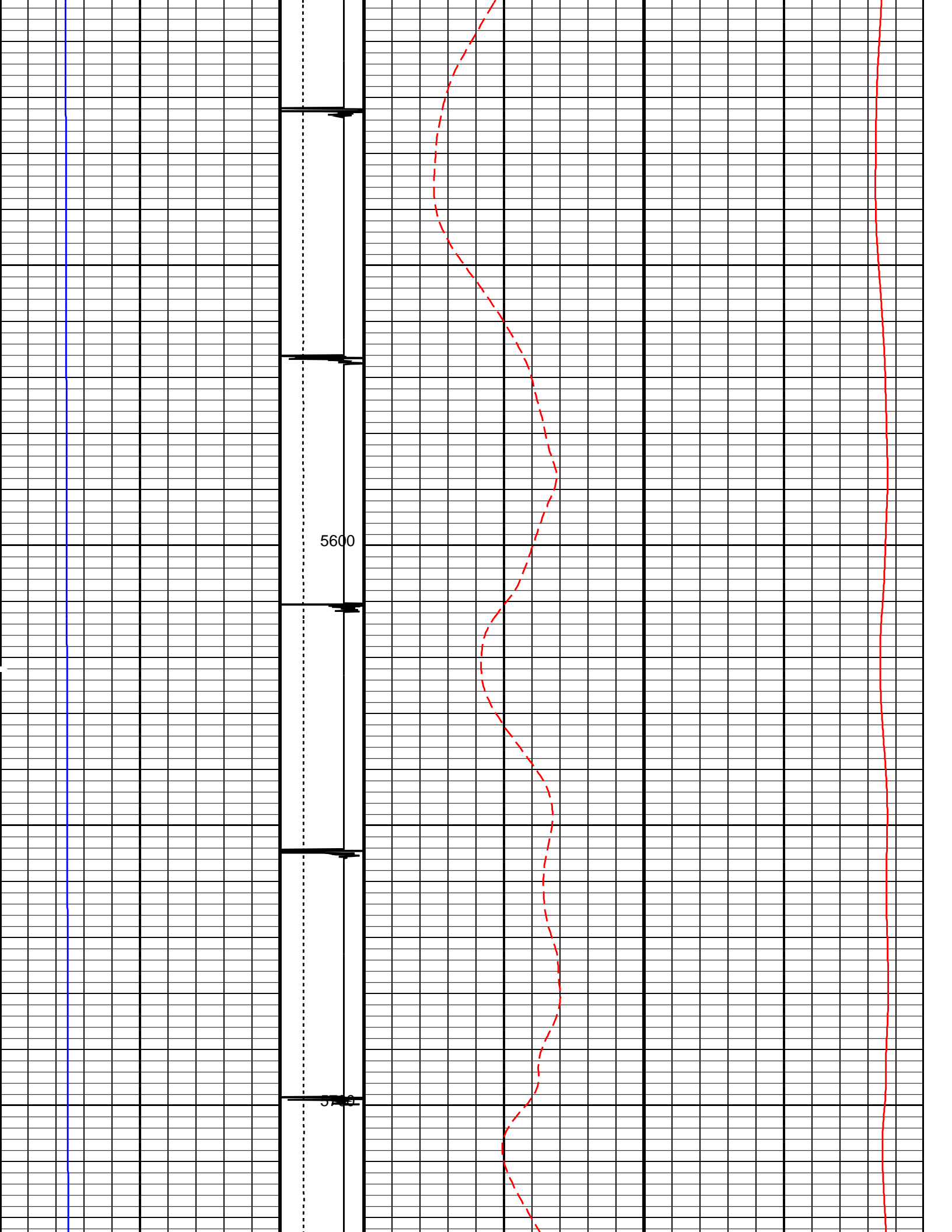


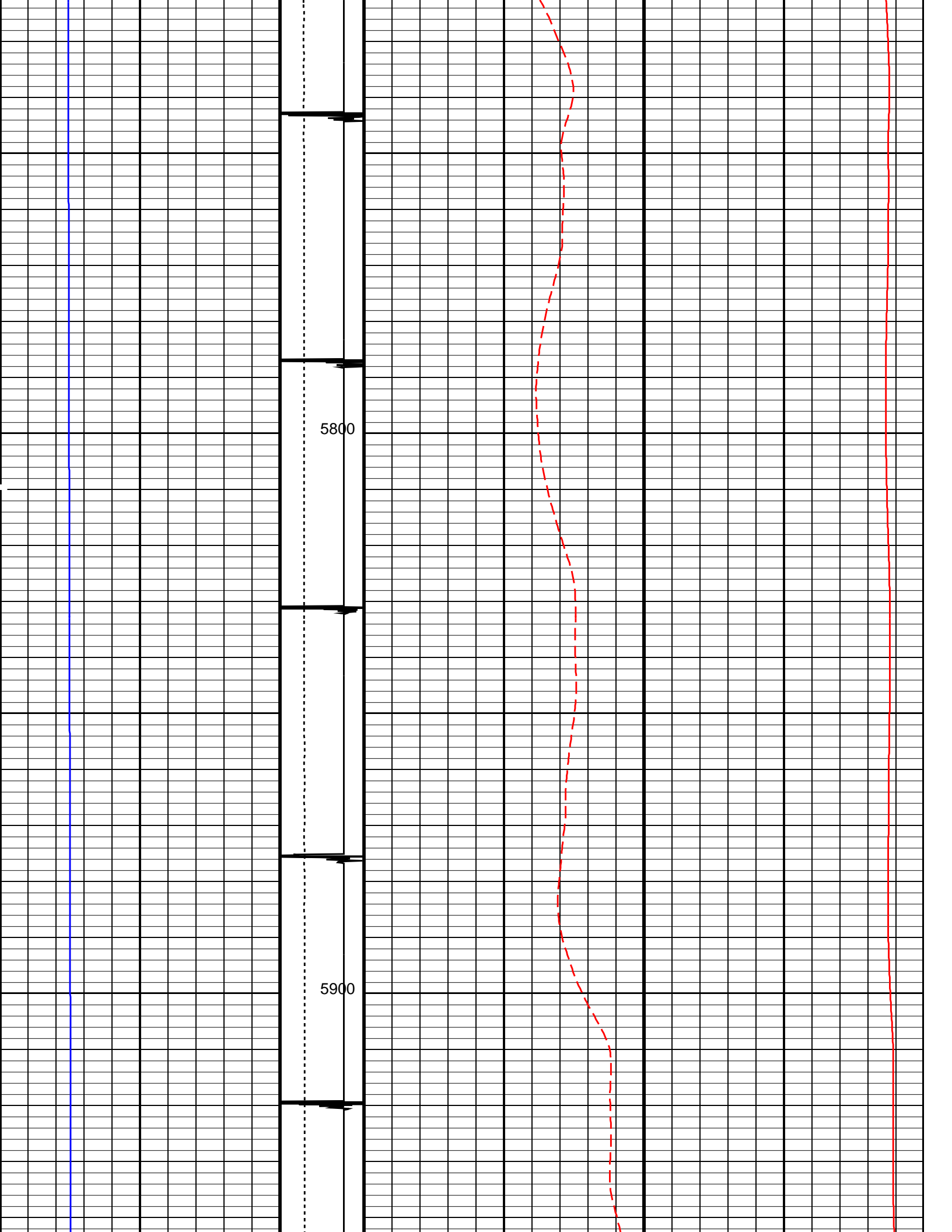
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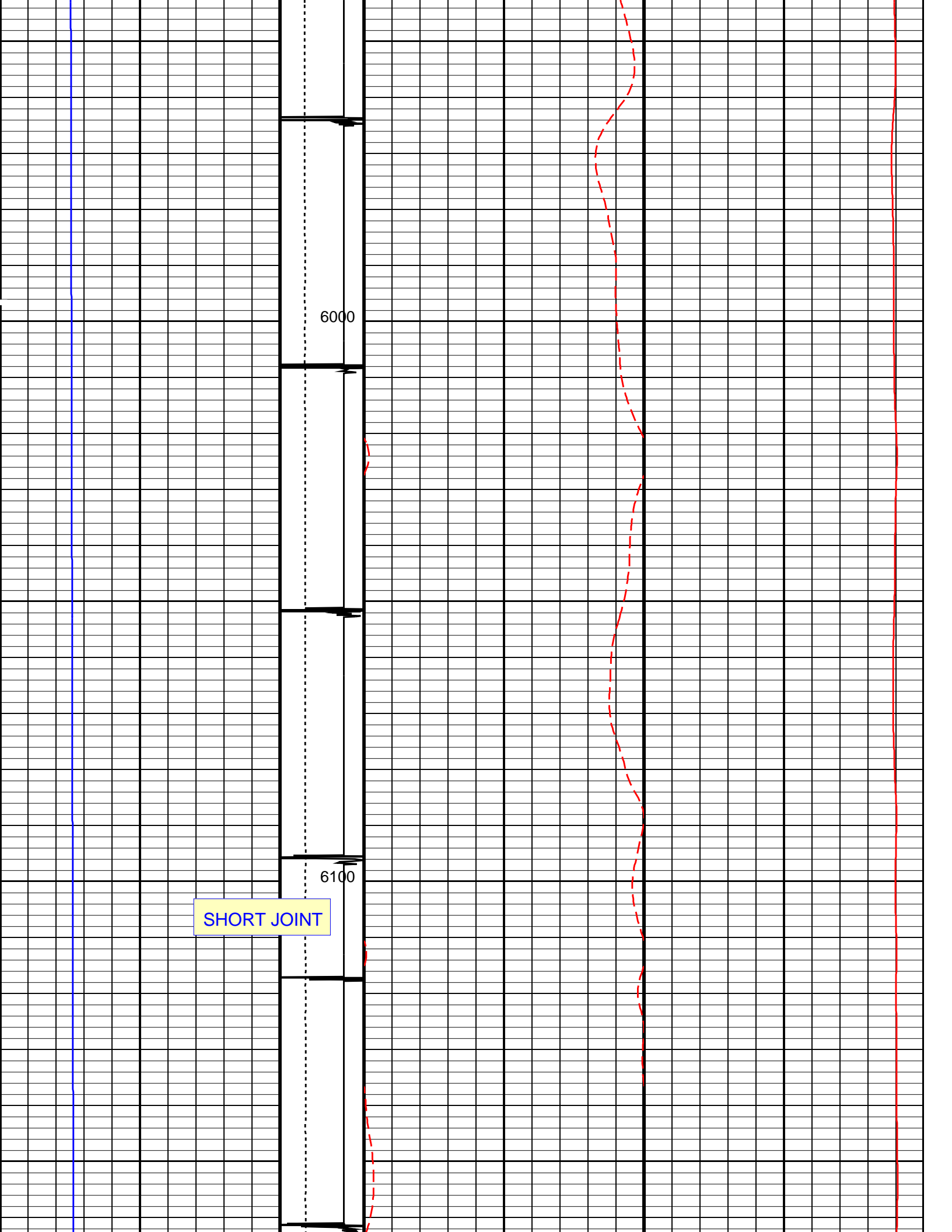
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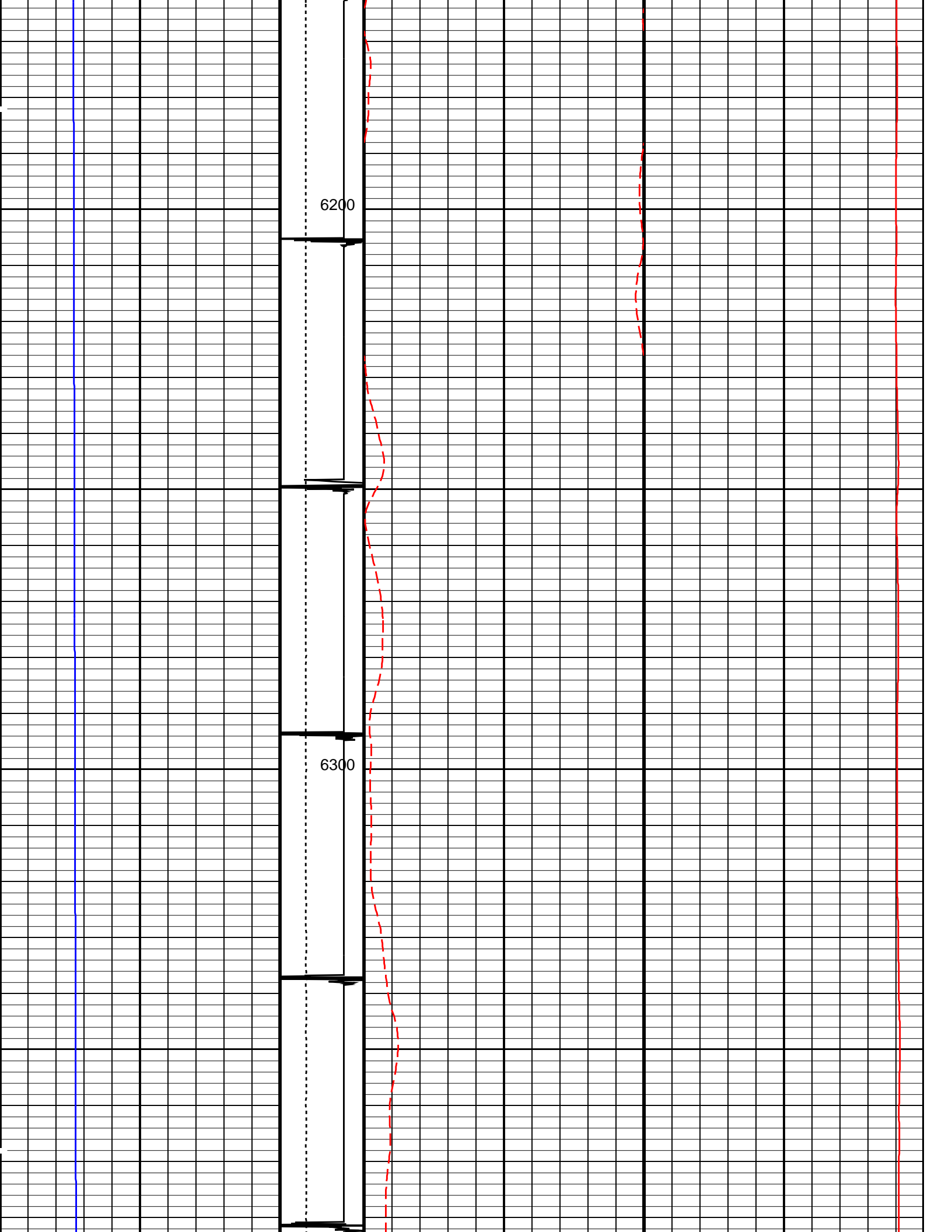


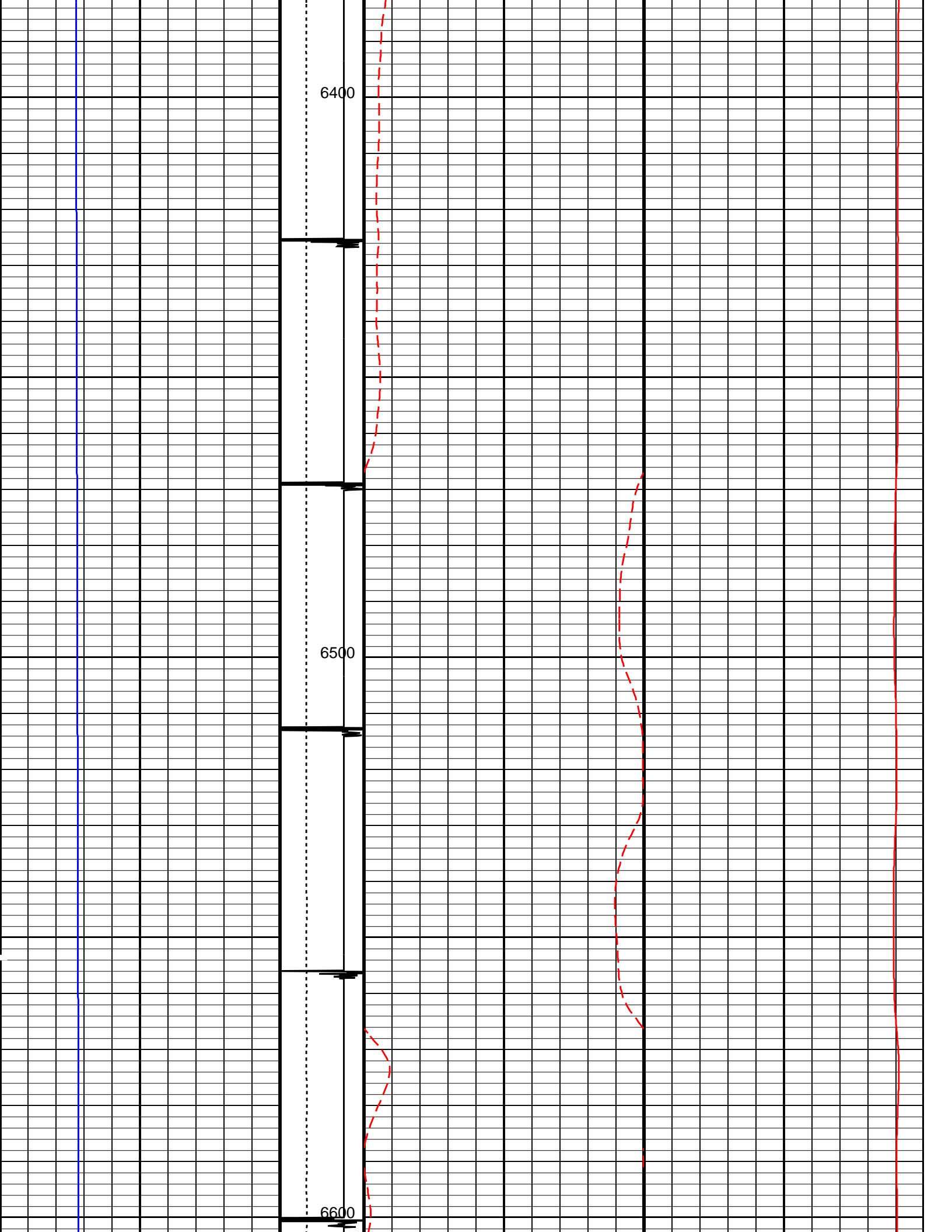


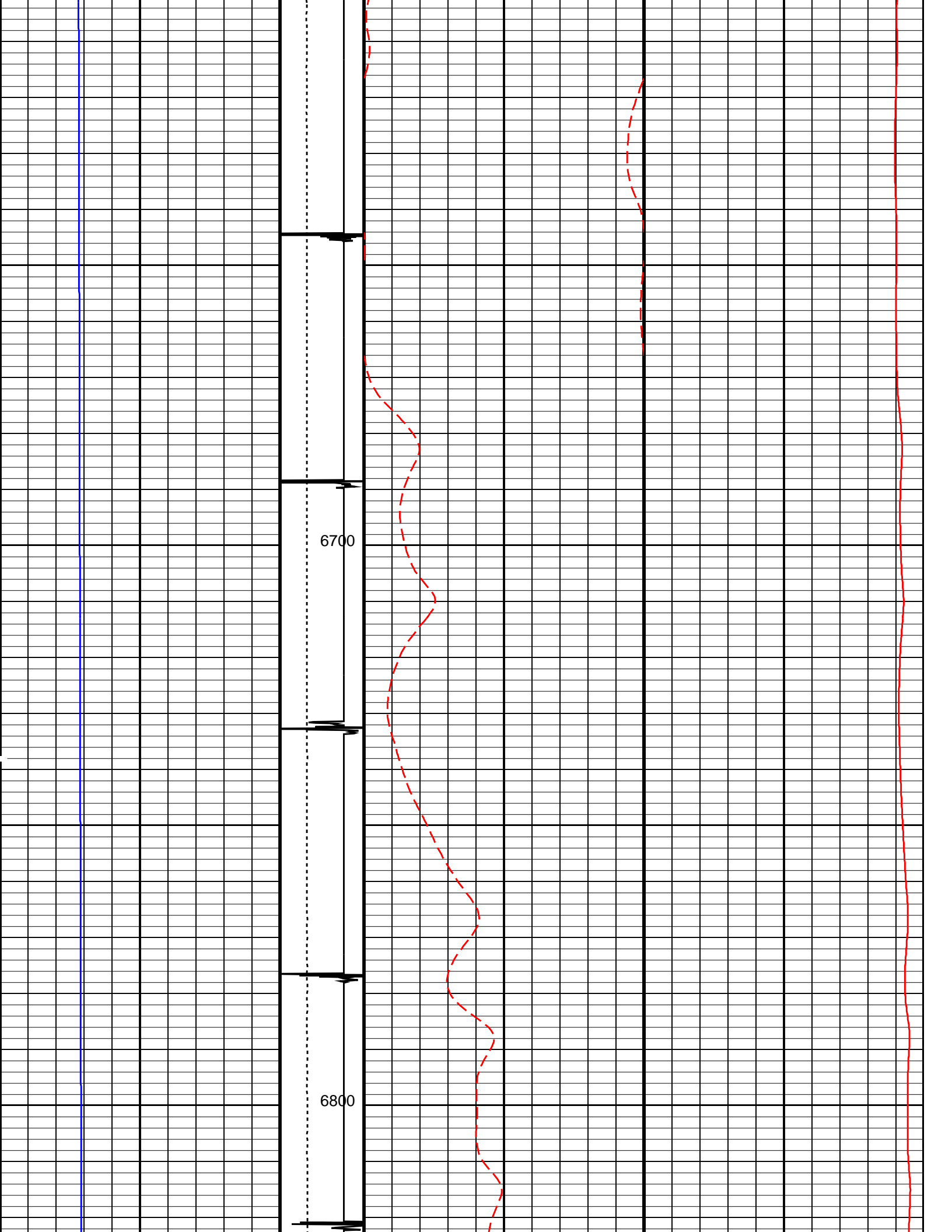


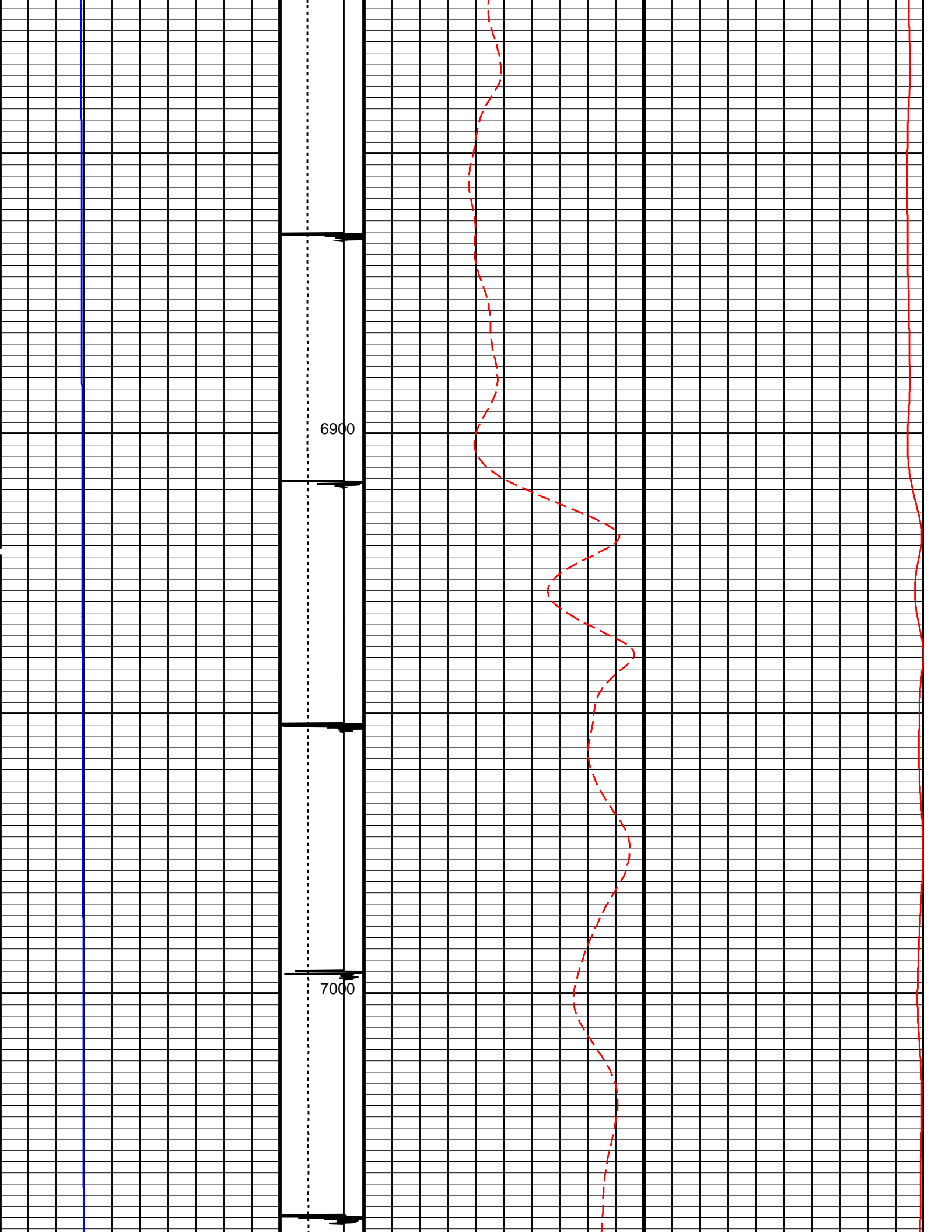


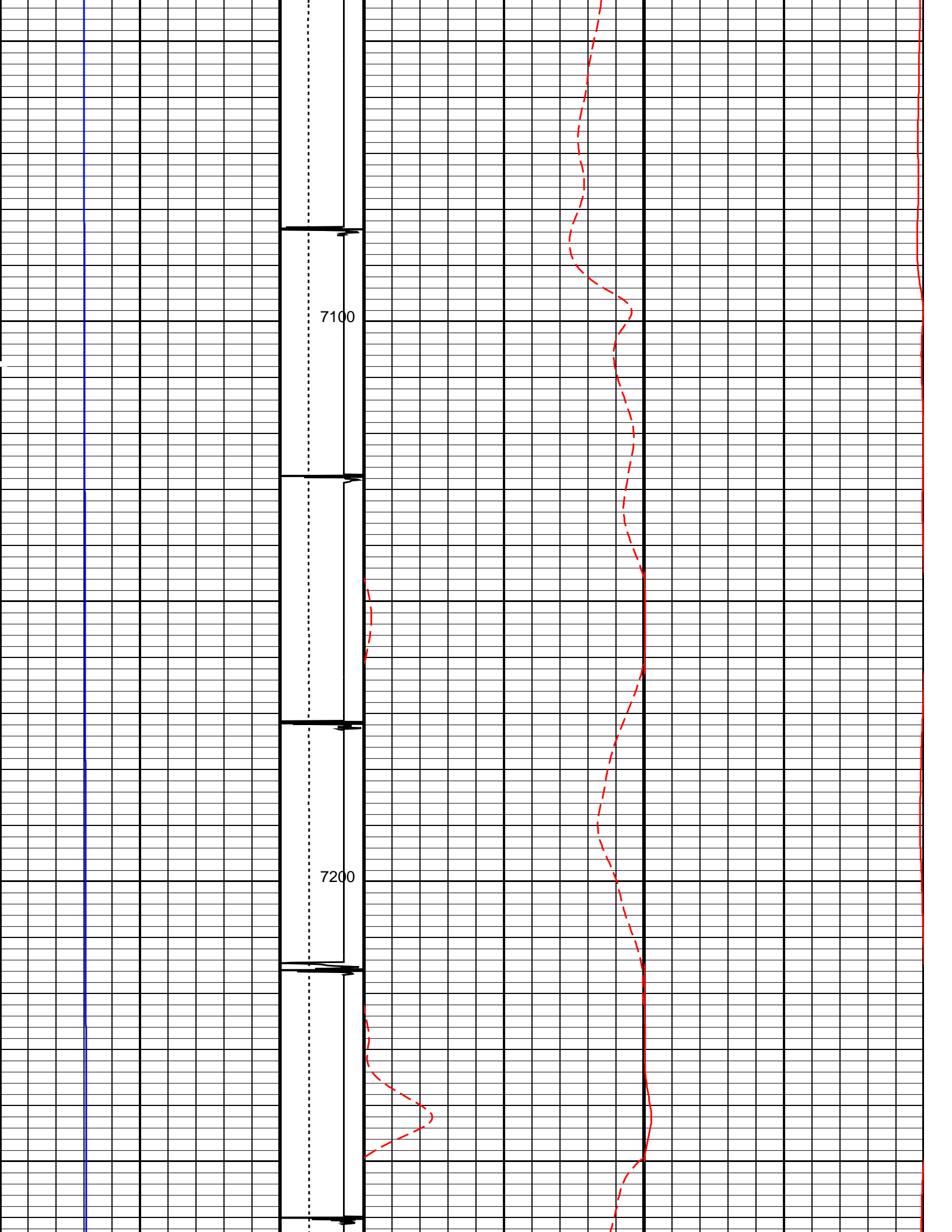


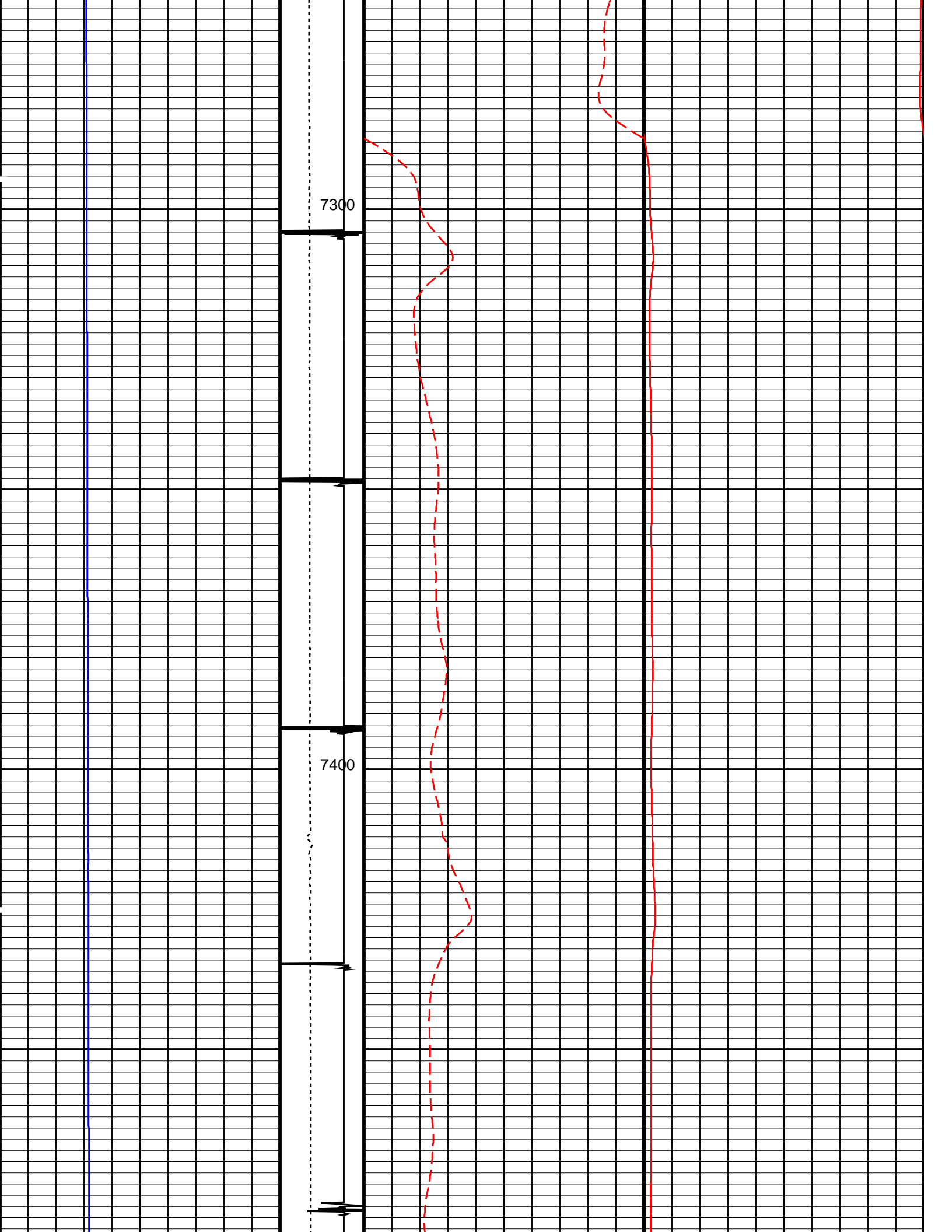


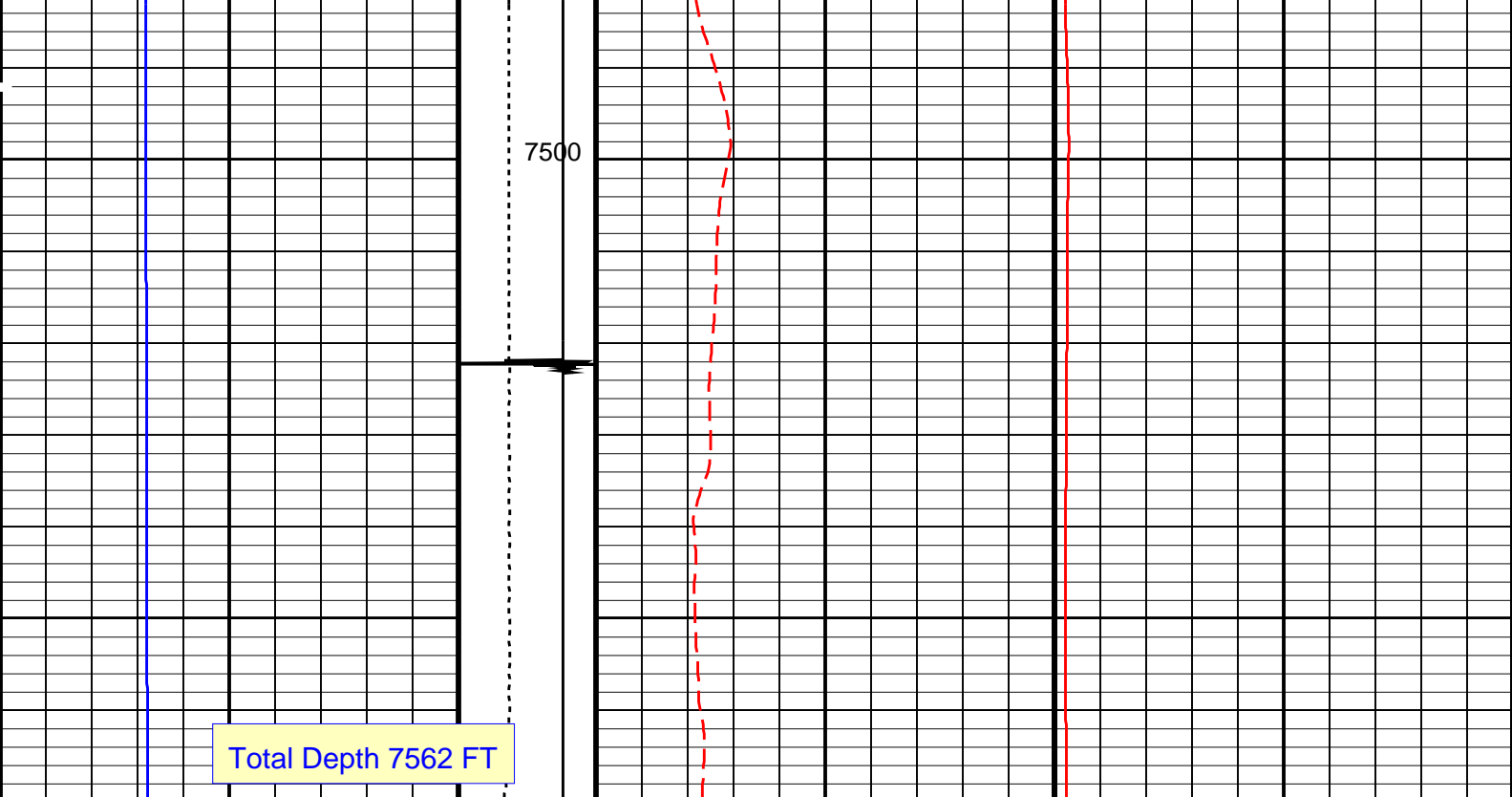












Well Pressure (WPRE) (PSIA)		Tension (TENS) (LBF)		Well Temperature (WTEP) (DEGF)		Well Temperature (WTEP) (DEGF)	
0	10000	0	2000	0	20	0	200
		Discriminat ed CCL (CCLD)					
		3 (V) -1					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DO	System and Miscellaneous	
PP	Depth Offset for Playback	0.0 FT
	Playback Processing	RECOMPUTE

Format: TEMP LOG Vertical Scale: 5" per 100' Graphics File Created: 04-Apr-2013 17:42

OP System Version: 19C0-187

HBMS-B SRPC-5214-H2-2012-OP19

Input DLIS Files

DEFAULT Flip_HBMS_004LUP PRODUCER 04-Apr-2013 17:40 7569.5 FT -16.0 FT

Output DLIS Files

DEFAULT HBMS_006PUP FN:3 PRODUCER 04-Apr-2013 17:42

Schlumberger

REPEAT ANALYSIS

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER 19-16CC (019EB)

Input DLIS Files

DEFAULT	Flip_HBMS_005LUP	PRODUCER	04-Apr-2013 17:40	7406.5 FT	7156.0 FT
DEFAULT	HBMS_006PUP	FN:3	PRODUCER	04-Apr-2013 17:42	7569.5 FT
				7569.5 FT	-16.0 FT

Output DLIS Files

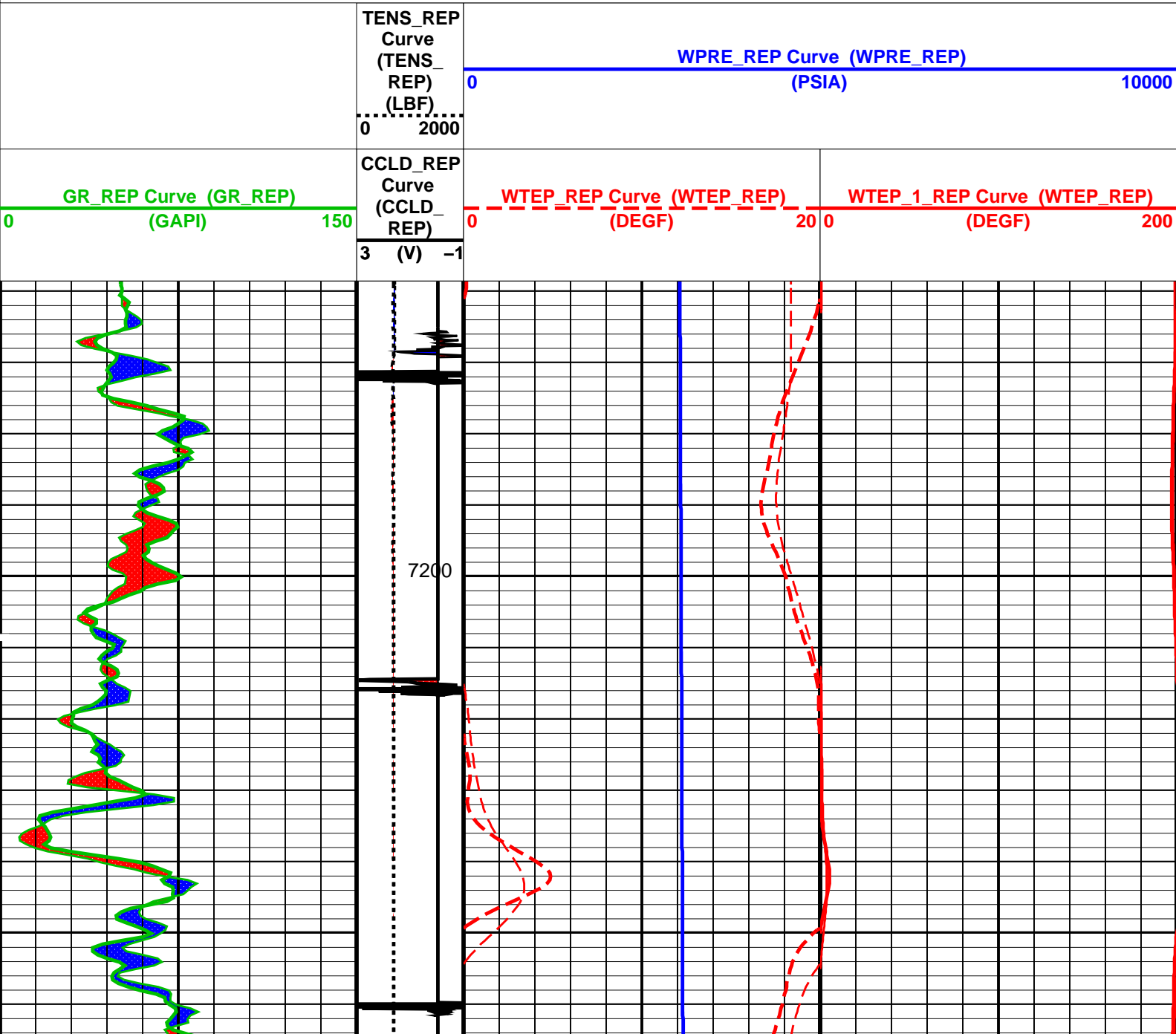
DEFAULT	HBMS_009PUP	FN:6	PRODUCER	04-Apr-2013 17:49	7408.5 FT	7158.0 FT
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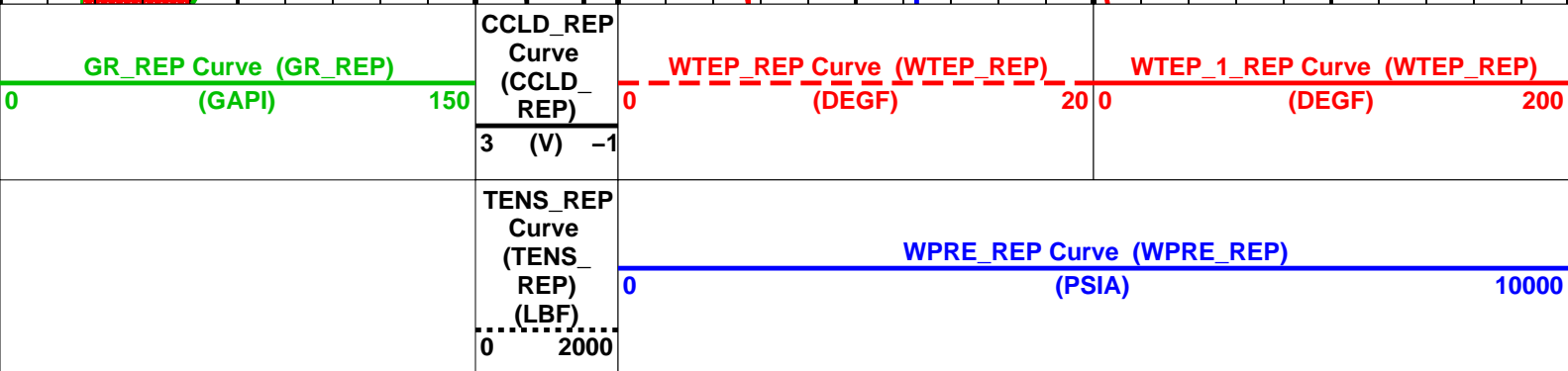
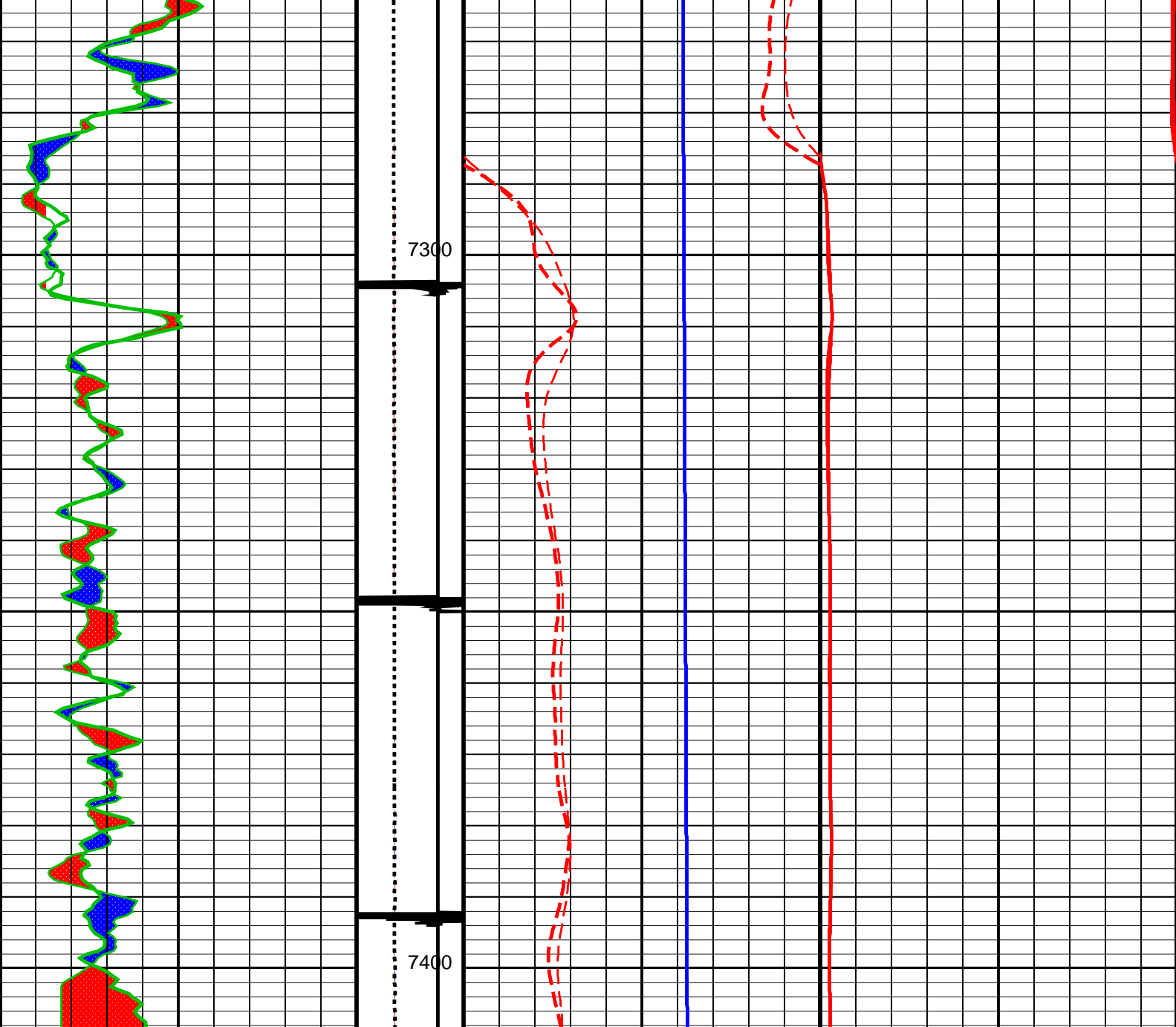
OP System Version: 19C0-187

HBMS-B SRPC-5214-H2-2012-OP19

PIP SUMMARY

Time Mark Every 60 S





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
System and Miscellaneous		
DO	Depth Offset for Playback	2.0 FT
DORL	Depth Offset for Repeat Analysis	0.0 FT
PP	Playback Processing	RECOMPUTE

OP System Version: 19C0-187

HBMS-B SRPC-5214-H2-2012-OP19

Input DLIS Files

DEFAULT	Flip_HBMS_005LUP	PRODUCER	04-Apr-2013 17:40	7406.5 FT	7156.0 FT
DEFAULT	HBMS_006PUP	FN:3	PRODUCER	04-Apr-2013 17:42	7569.5 FT
					-16.0 FT

Output DLIS Files

DEFAULT	HBMS_009PUP	FN:6	PRODUCER	04-Apr-2013 17:49
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Schlumberger

HBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC
Field: MAMM CREEK
Well: SHIDELER 19-16CC (019EB)
Run date: 4-Apr-2013

Tool: PSP
Sub Type: PBMS
Sensor: GR

PBMS Gamma Ray

Sonde Serial NB	RESISTORS FOR GR SENSOR N.34384, TOOL HBMS-BA2880. SENSOR S/N:
Sensor Serial NB	34384
Calib Date ddmmyy	160206
Matrix Size	12
Coeff CRC	D8B5

GR HV Rt

Rt**0

Rt**1

Rt**0

+.200000000000e+04

+.173000000000e+04

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER 19-16CC (019EB)

Run date: 4-Apr-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.2880 S/N:

2880

260408

16

A3AF

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	-.104337336008E+04	+.798824971753E+03	-.251944021281E+03
	Tt**3	Tt**4	Tt**5
Tt**0	+.406192777109E+02	-.240958437264E+01	0.0

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER 19-16CC (019EB)

Run date: 4-Apr-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.2880 S/N:

2880

260408

66

66B8

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+.694668499013E+04	+.138137467574E-01	-.206148488488E-06
Fc**1	-.104285125976E+01	-.125721589078E-04	-.971577899959E-10
Fc**2	+.101045175546E-05	+.480801816357E-10	+.889110474366E-15

Fc**3	+1.127326781620E-11	+1.130693902354E-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	-.802395356069E-10	-.148392899370E-14	-.162952476494E-19
Fc**1	+1.114970383999E-15	+1.186330526680E-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

:
2880
260408
66
3690

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+1.114978632240E+03	-.318843725686E-03	+6.51766172344E-08
Fb**1	-.590205352250E-02	+1.168686572404E-07	+1.162345150354E-12
Fb**2	-.362996279263E-07	+4.07654559315E-12	+4.452411391342E-17
Fb**3	-.276281361281E-12	+8.71817059405E-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	+1.199118144093E-13	-.260997933236E-18	+6.18908211390E-21
Fb**1	+2.50084591851E-17	+4.455070709200E-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

:
2880

Calib Date ddmmyy 260408
Matrix Size 16
Coeff CRC 71B5

Clock Freq Coeff

	(Fb'–Fc')**0	(Fb'–Fc')**1	(Fb'–Fc')**2
(Fb'–Fc')**0	+.310736316923E+05	+.273670214709E–02	+.731815197856E–06
	(Fb'–Fc')**3	(Fb'–Fc')**4	(Fb'–Fc')**5
(Fb'–Fc')**0	–.654219198492E–10	–.150585137208E–15	–.117697151708E–19

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 2880
Calib Date ddmmyy 260408
Matrix Size 16
Coeff CRC ECB5

Clock Temp Coeff

	(Fb'–Fc')**0	(Fb'–Fc')**1	(Fb'–Fc')**2
(Fb'–Fc')**0	+.116053417872E+03	–.554118045908E–02	–.348241454518E–07
	(Fb'–Fc')**3	(Fb'–Fc')**4	(Fb'–Fc')**5
(Fb'–Fc')**0	+.207992675474E–12	–.353168788938E–17	–.345142848607E–21

Company: ENCANA OIL & GAS (USA) INC



Well: SHIDELER 19–16CC (019EB)
Field: MAMM CREEK
County: GARFIELD
State: COLORADO

TEMPERATURE LOG
CCL – TEMPERATURE