

Company: ENCANA OIL & GAS (USA) INC

Well: ALP FEE 24-3D (J24NW)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

TEMPERATURE LOG CCL - TEMPERATURE

County: GARFIELD
 Field: MAMM CREEK
 Location: SHL: 2483 FSL & 1852 FEL
 Well: ALP FEE 24-3D (J24NW)
 Company: ENCANA OIL & GAS (USA) INC

LOCATION		SHL: 2483 FSL & 1852 FEL BHL: 1289 FNL & 2607 FWL	Elev.: K.B. 5702.00 ft G.L. 5680.00 ft D.F. 5701.00 ft
Permanent Datum:	GROUND LEVEL	Elev.: 5680.00 ft	
Log Measured From:	KELLY BUSHING	22.00 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section 24	Township 6S	Range 93W
05-045-21803-00			

Logging Date	7-Jun-2013		
Run Number	1		
Depth Driller	8115 ft		
Schlumberger Depth	8041 ft		
Bottom Log Interval	8041 ft		
Top Log Interval	0 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	0 ft		
BIT/CASING/TUBING STRING			
Bit Size	8.750 in		
From	0 ft		
To	8115 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	S80		
From	22 ft		
To	8095 ft		
Maximum Recorded Temperatures	203 degF		
Logger On Bottom	7-Jun-2013	10:30	
Unit Number	391	GRAND JUNCTION	
Recorded By	JASON BARRY		
Witnessed By	KIRBY BURCHETT		

	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: 2-APR-2013 0:10:44

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B	Type: CMTD-B/A	Type: 1-25ZT
Serial Number: 6217	Serial Number: 1117	Serial Number:
Calibration Date: 7-25-2012	Calibration Date: 4-1-2013	Length: 11045 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: -1	Calibration RMS: 7	
Wheel Correction 2: -3	Calibration Peak Error: 12	

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:

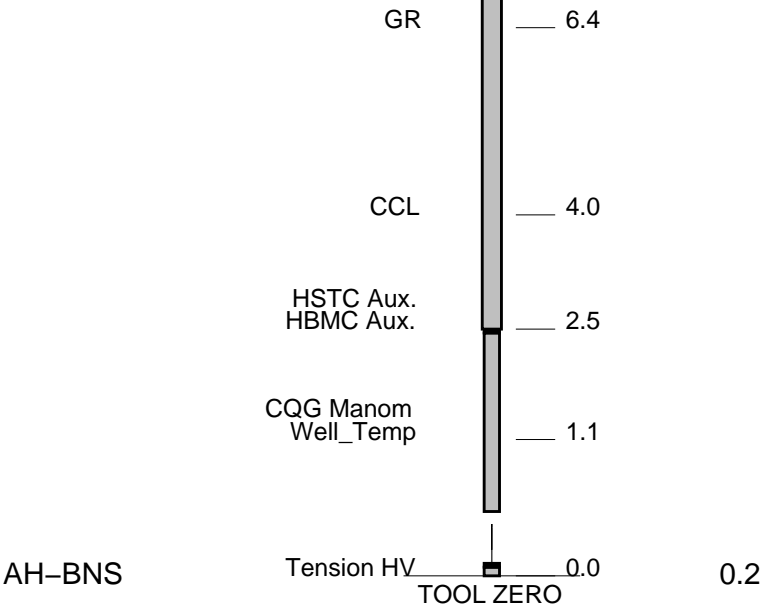
Depth Control Remarks

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	OTHER SERVICES2
OS1: NONE	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE	
TOOL RAN AS PER TOOL SKETCH	
ENTRANCE TIME: 10:00	
TIME ON BOTTOM: 10:45	
EXIT TIME: 11:15	

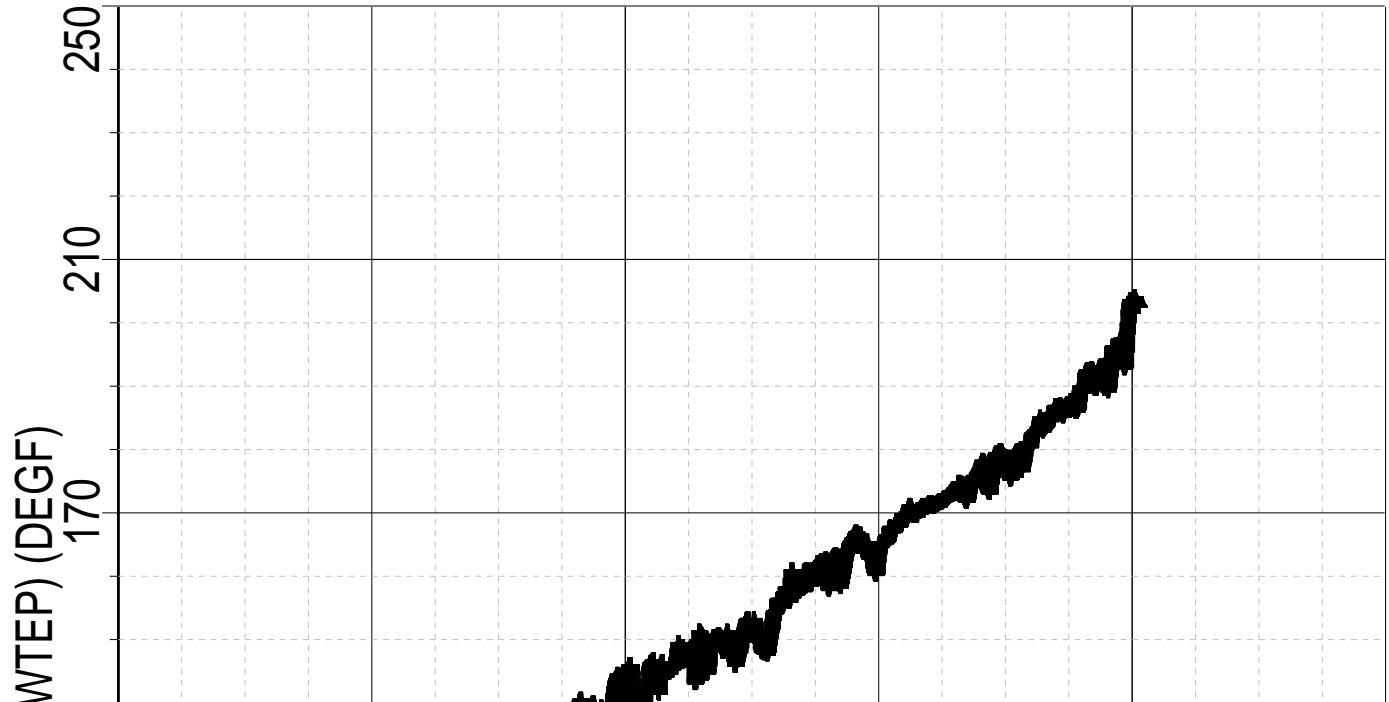


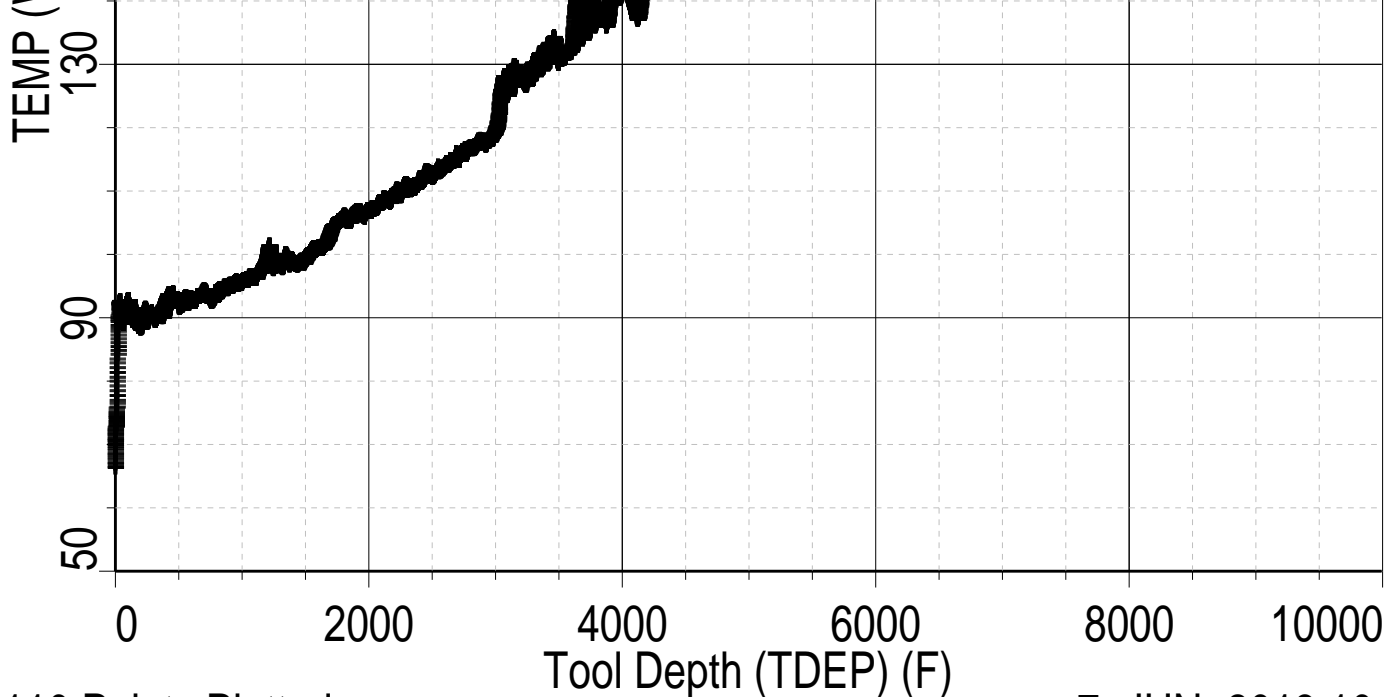
Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 8054.5 – -17.5 FT





16110 Points Plotted

7-JUN-2013 10:50

Schlumberger

TEMPERATURE LOG

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: ALP FEE 24-3D (J24NW)

Input DLIS Files

DEFAULT Flip_HBMS_005LUP PRODUCER 07-Jun-2013 10:39 8061.5 FT -10.5 FT

Output DLIS Files

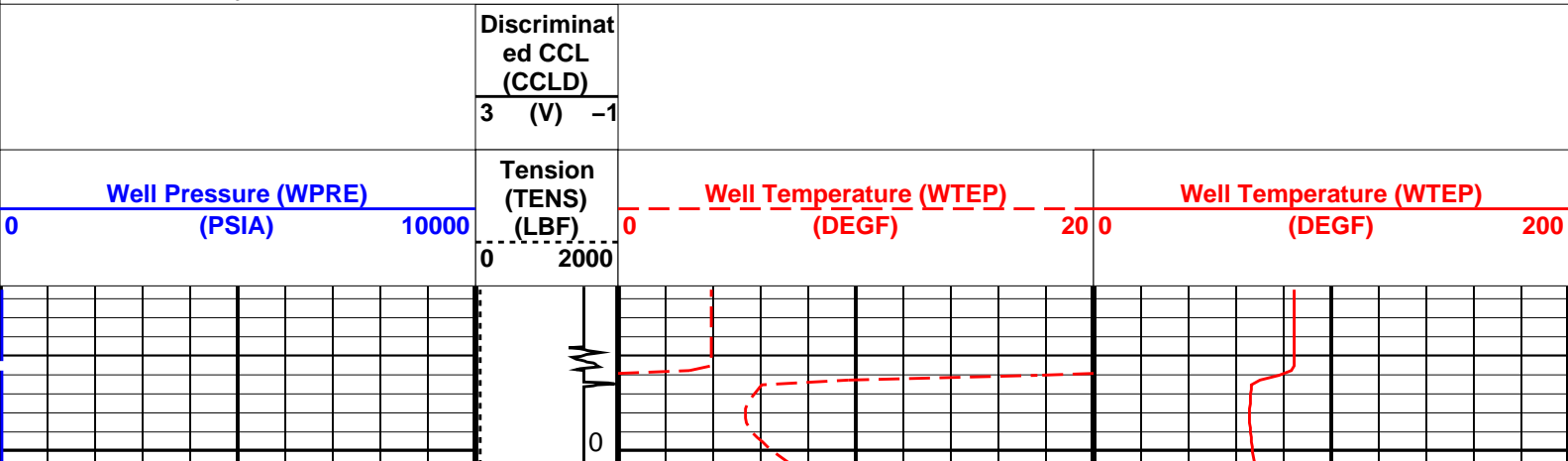
DEFAULT HBMS_008PUP FN:5 PRODUCER 07-Jun-2013 10:46 8054.5 FT -17.5 FT

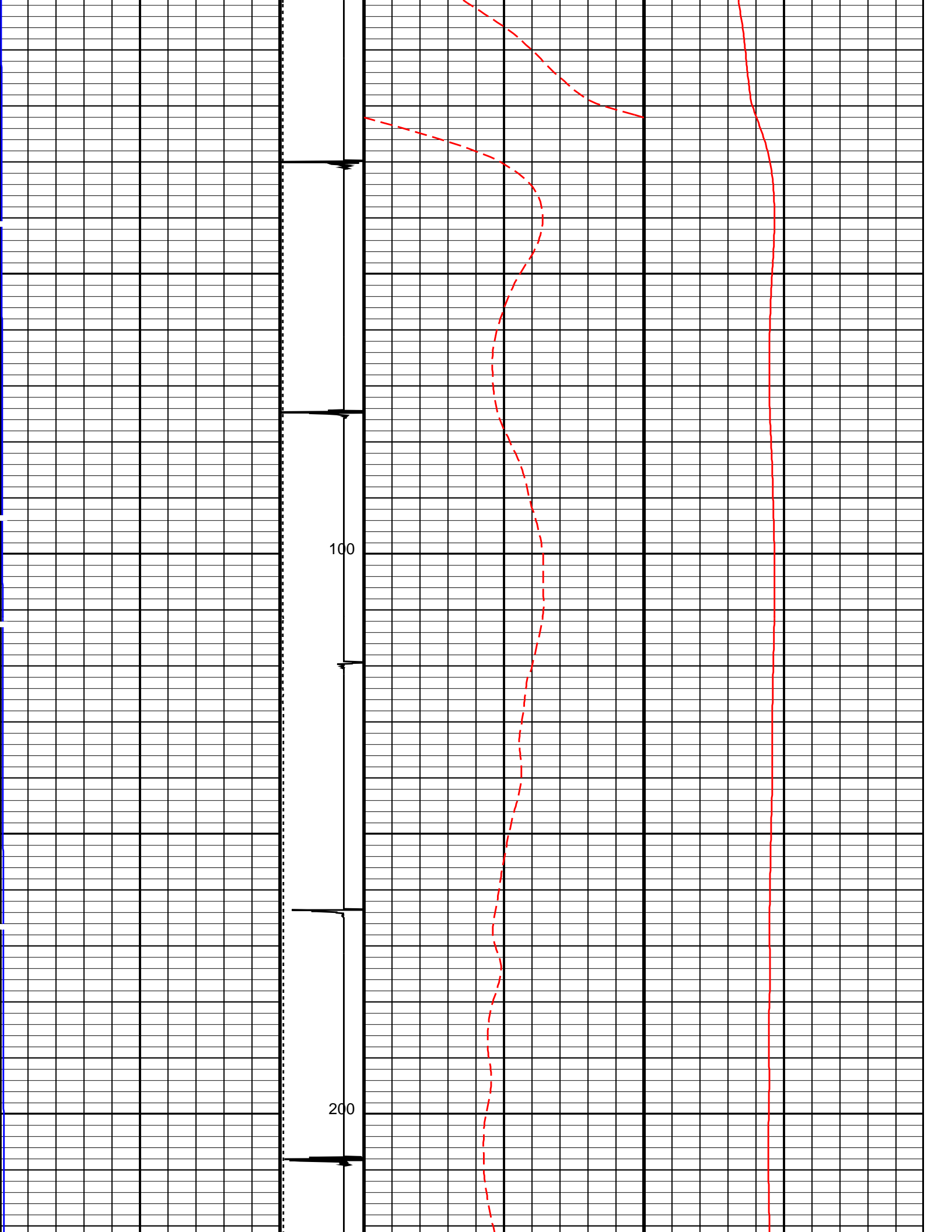
OP System Version: 19C0-187

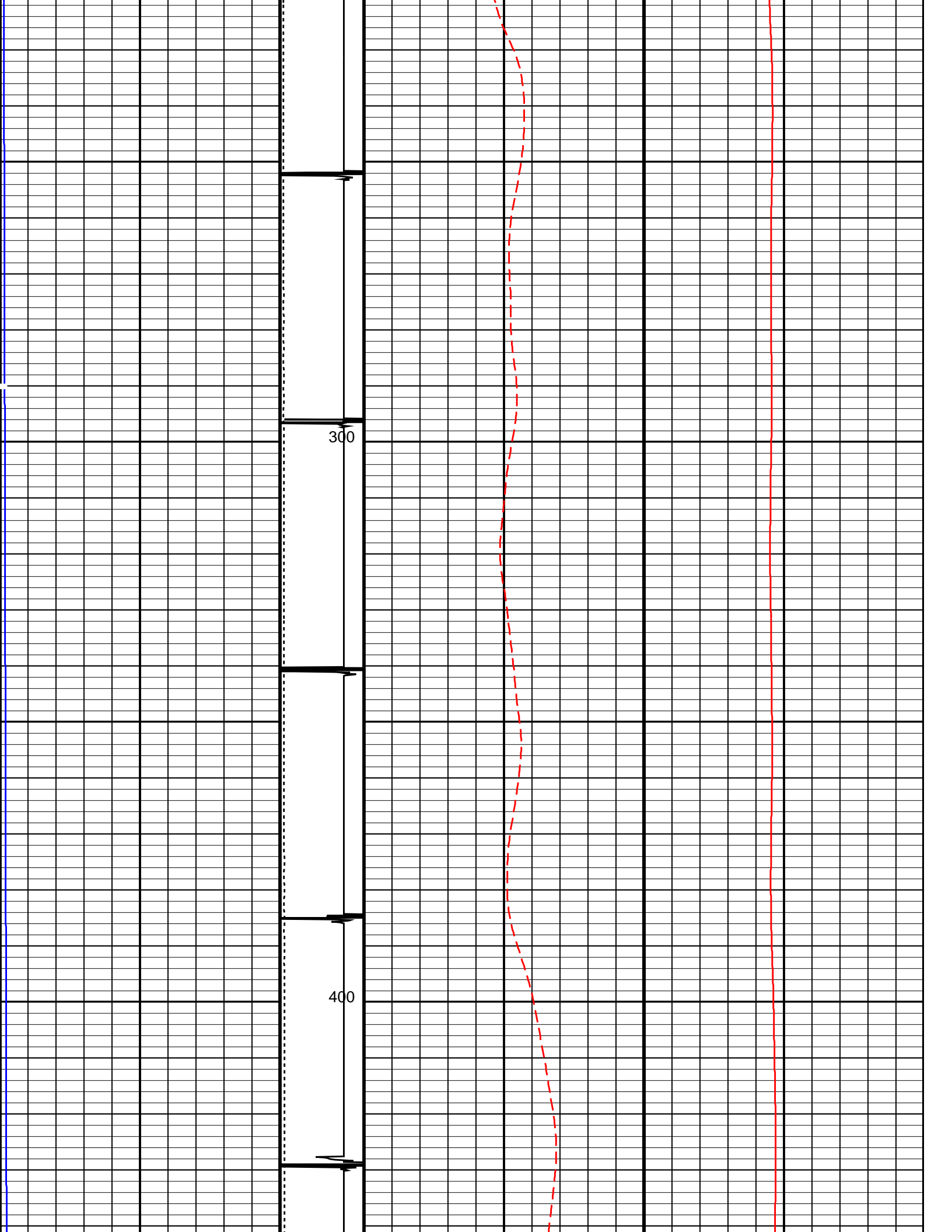
HBMS-B 19C0-187

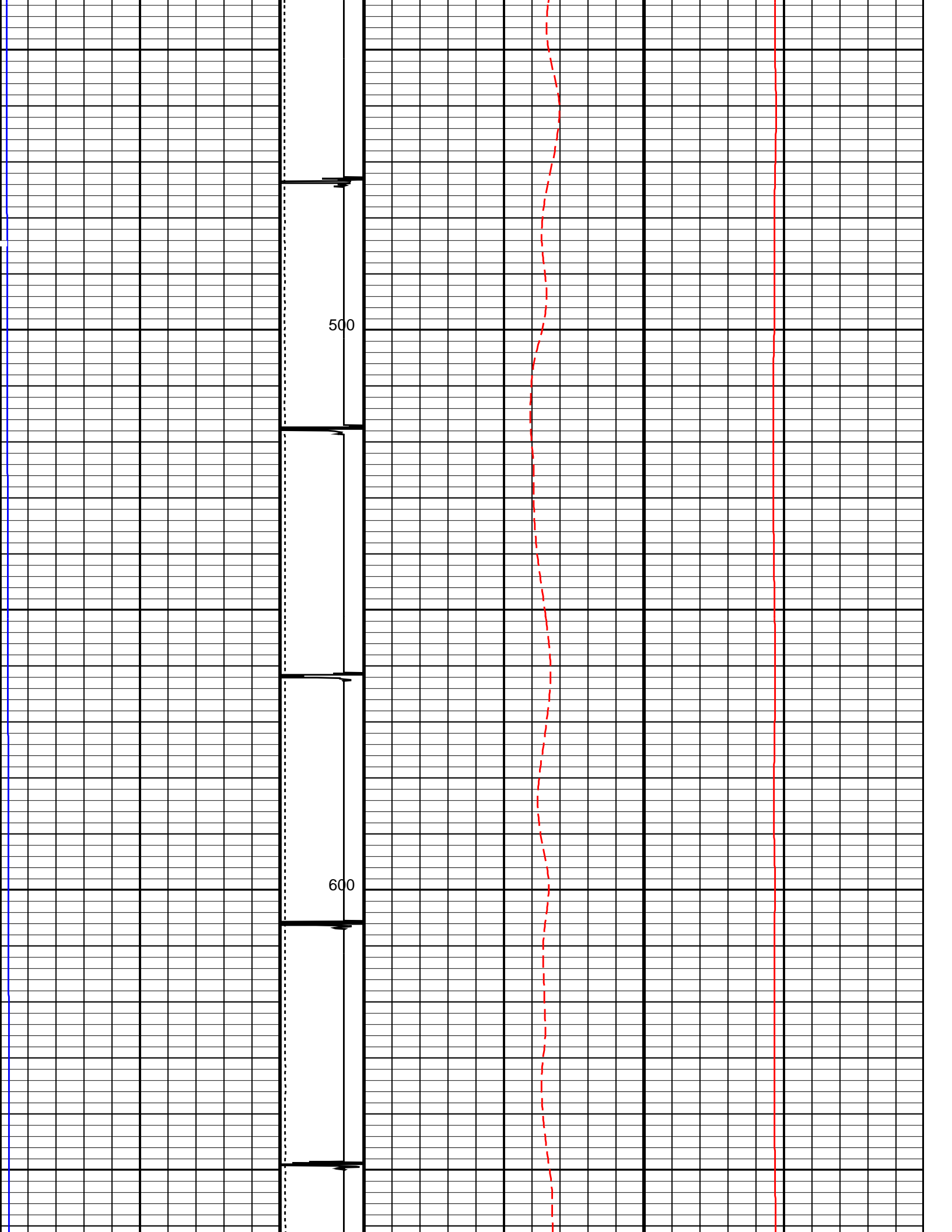
PIP SUMMARY

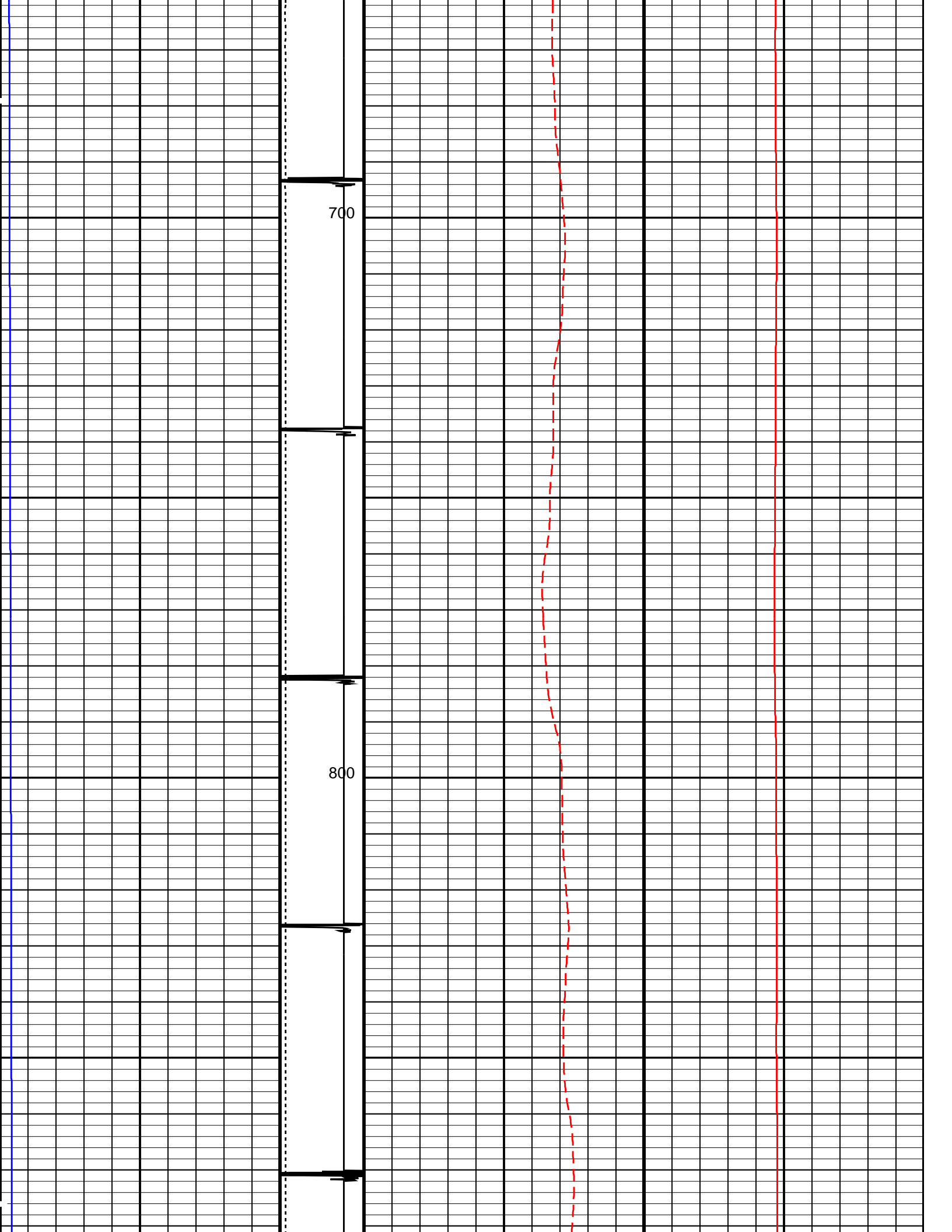
Time Mark Every 60 S

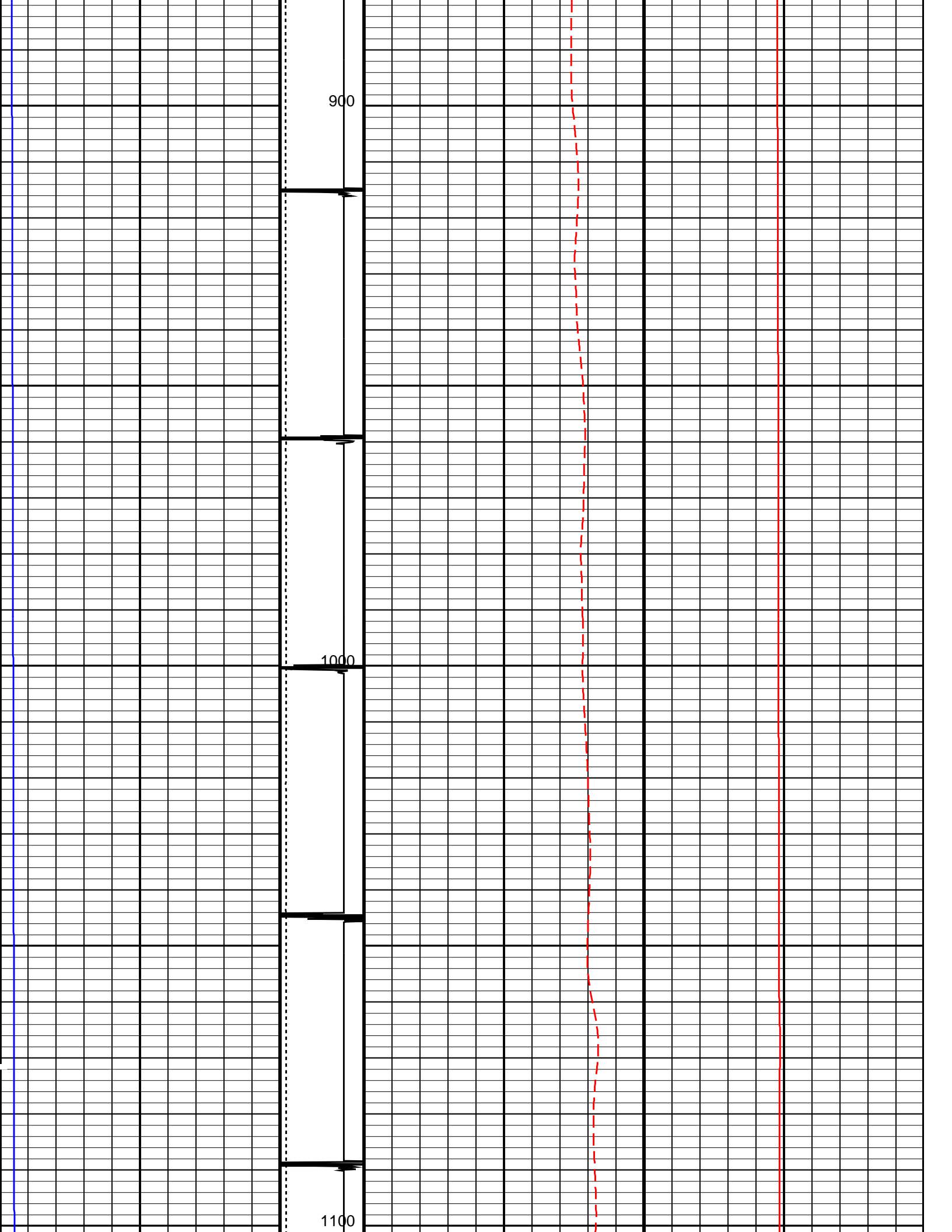


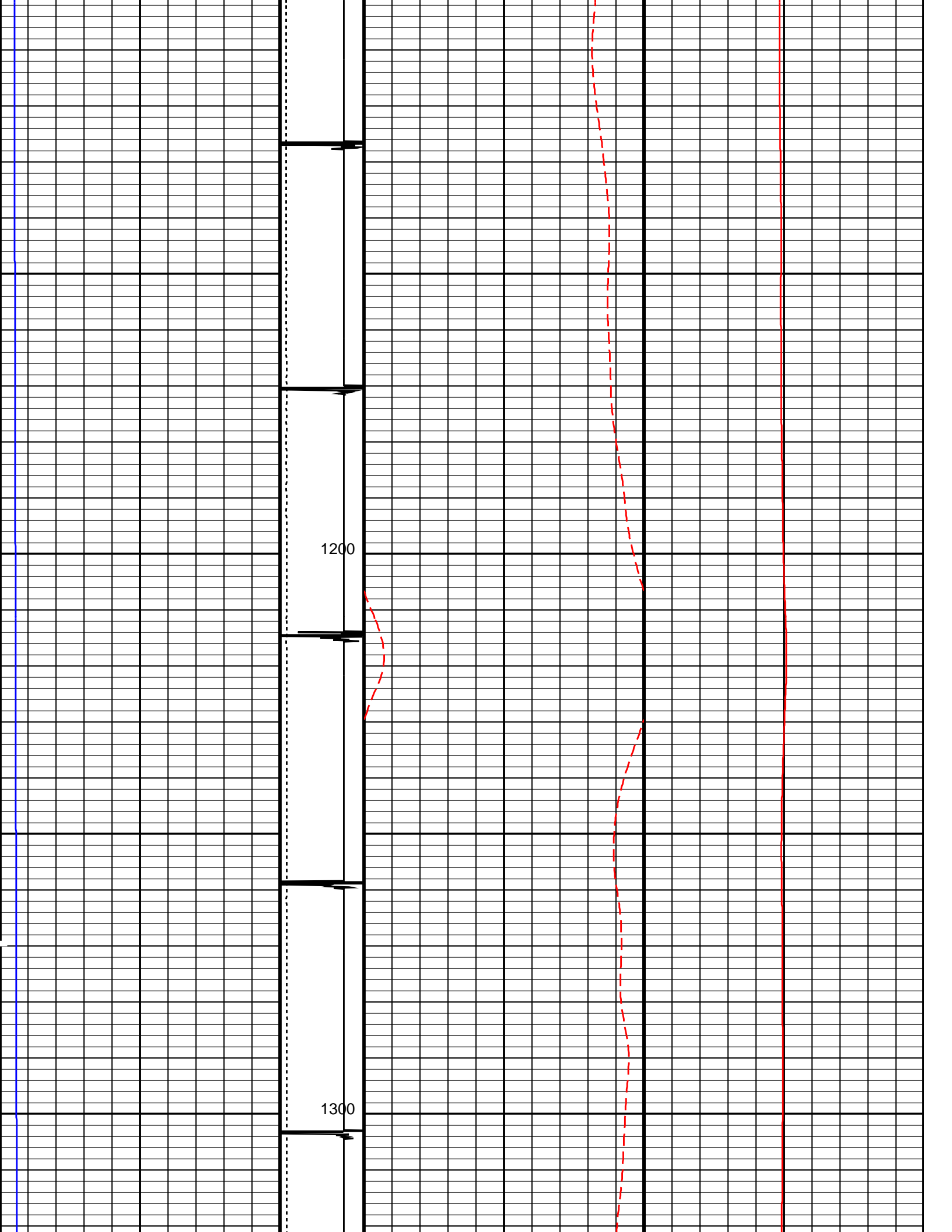






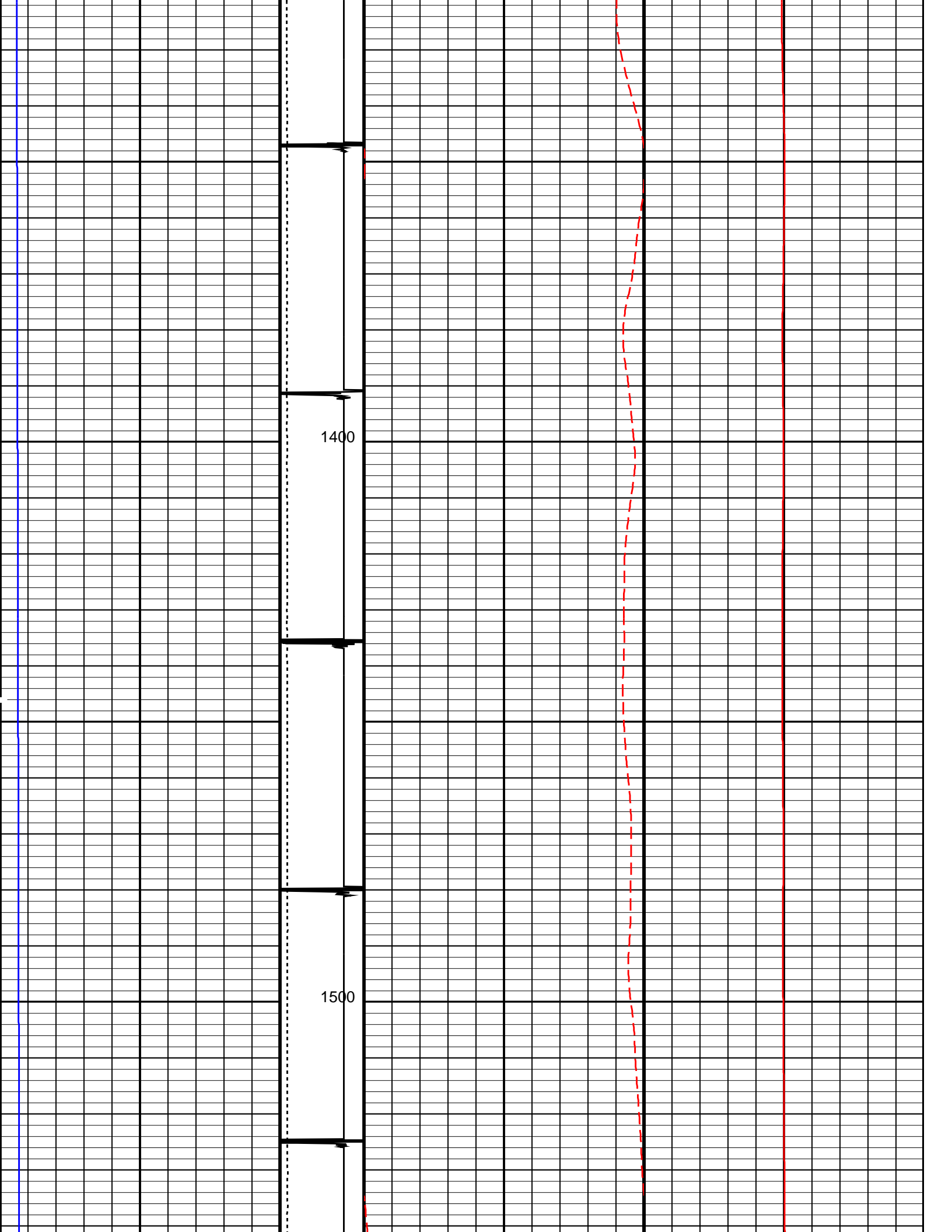


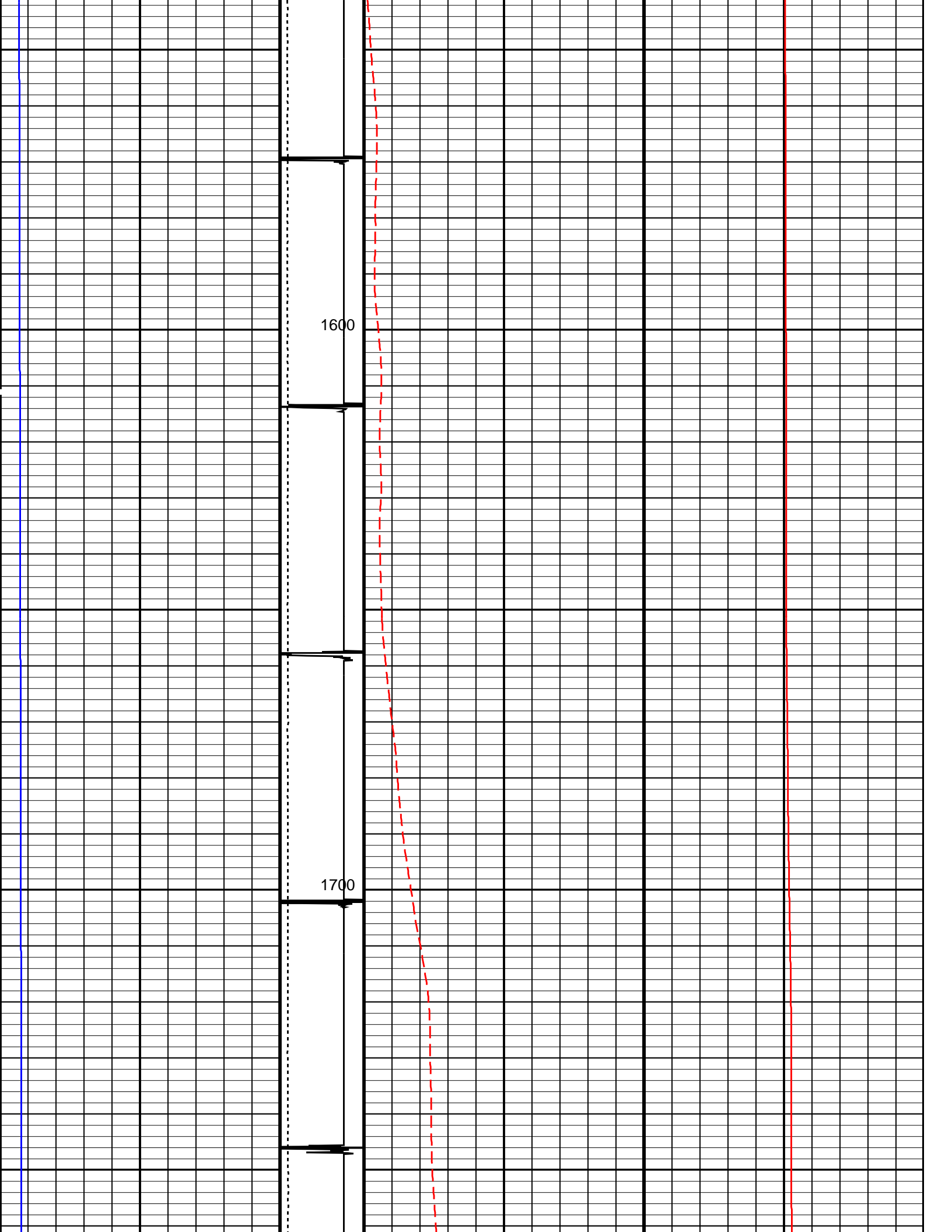


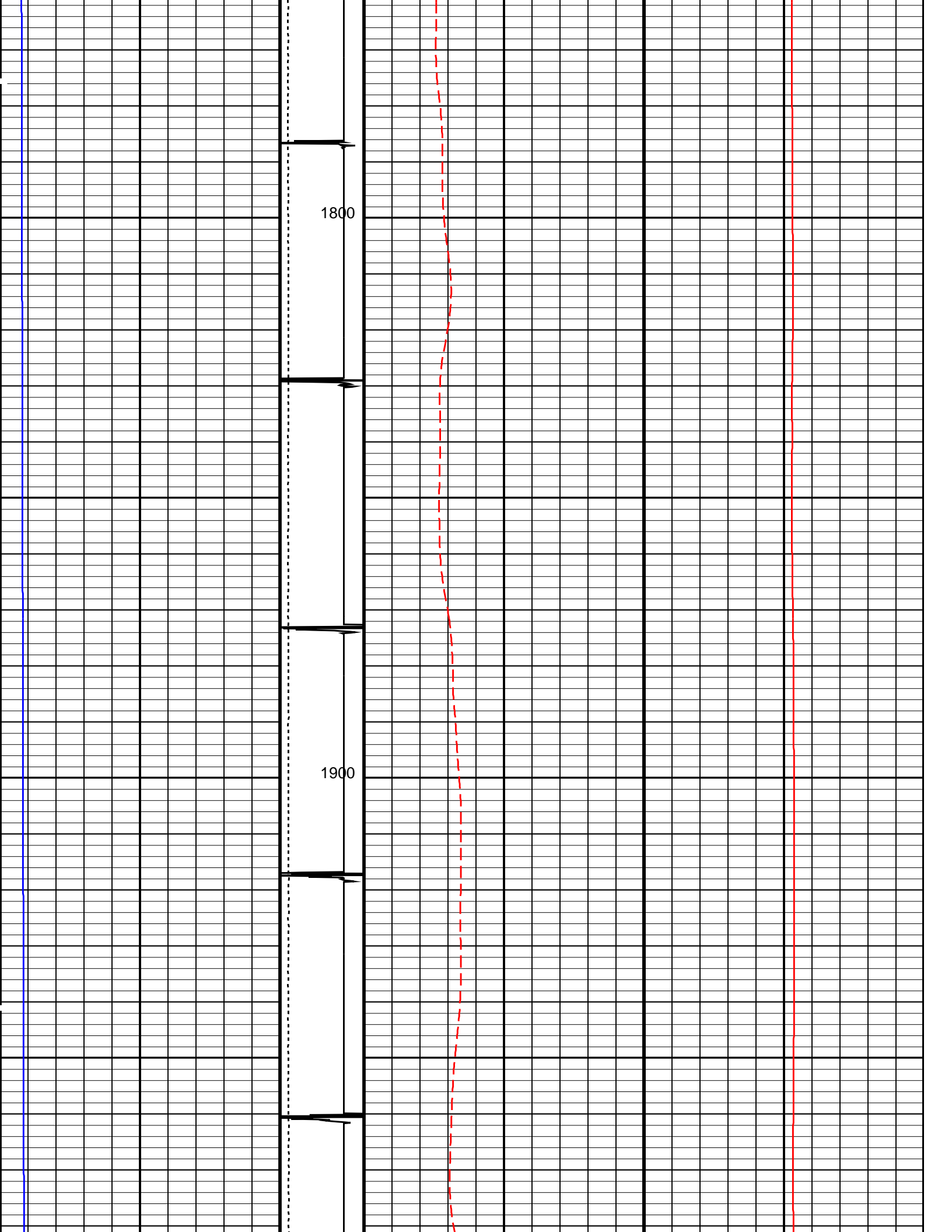


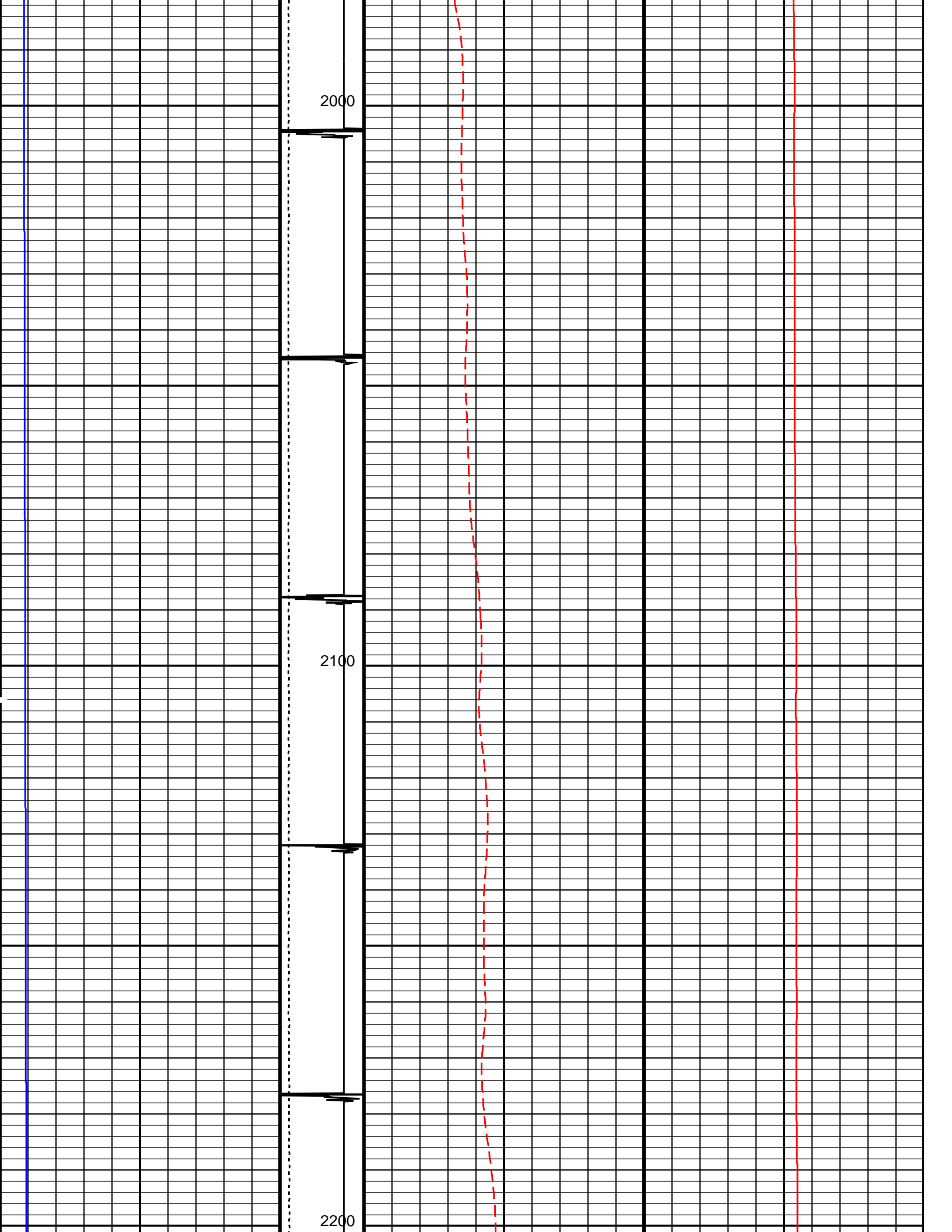
1200

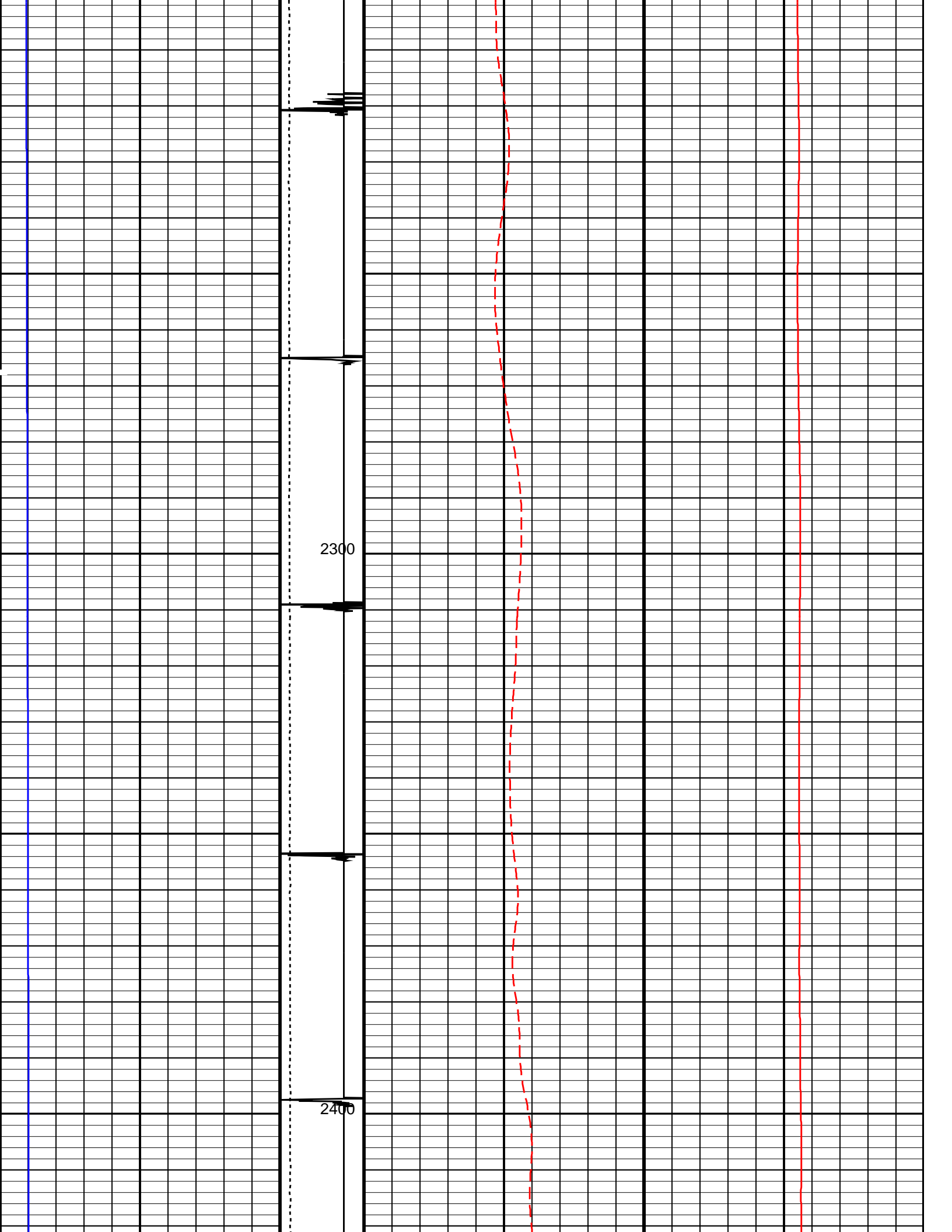
1300





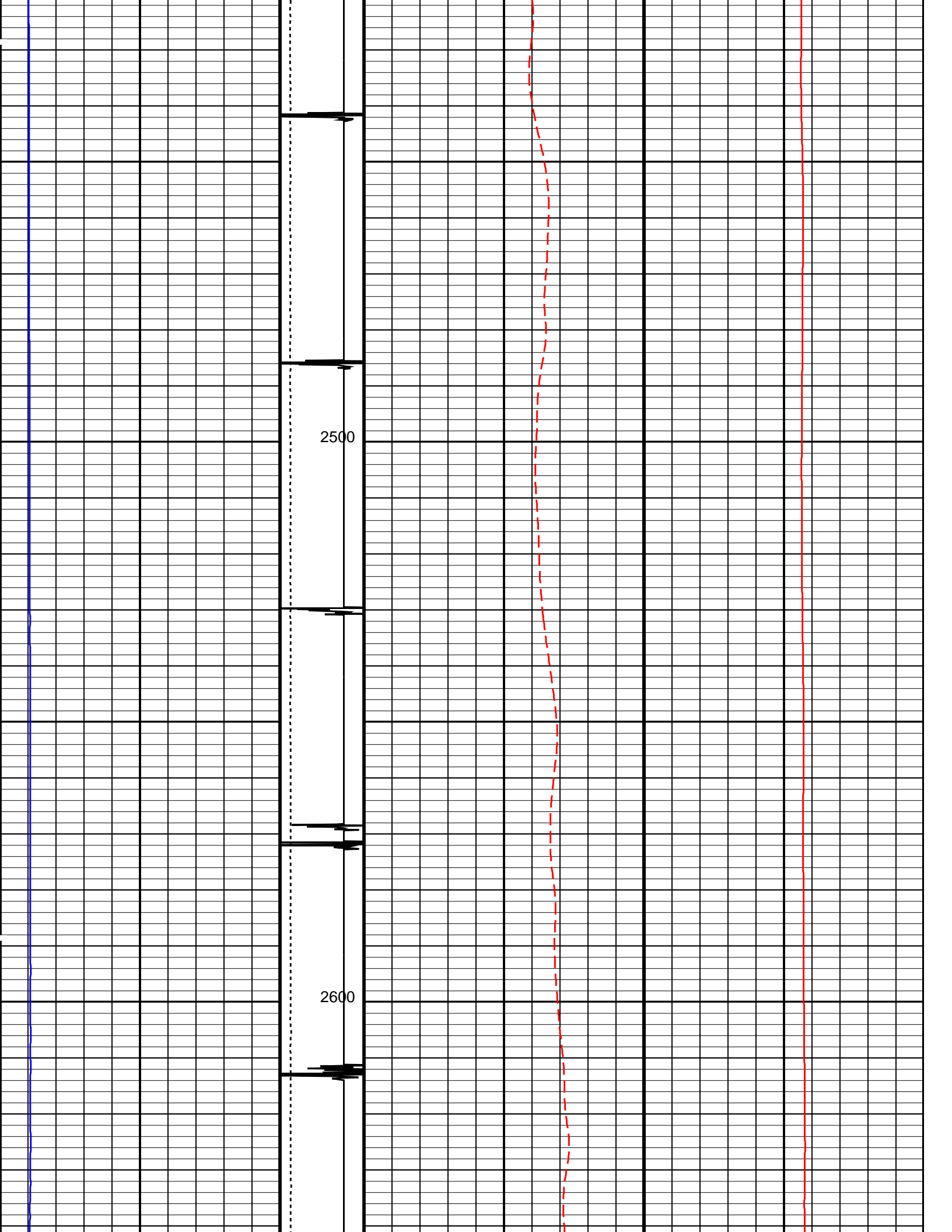


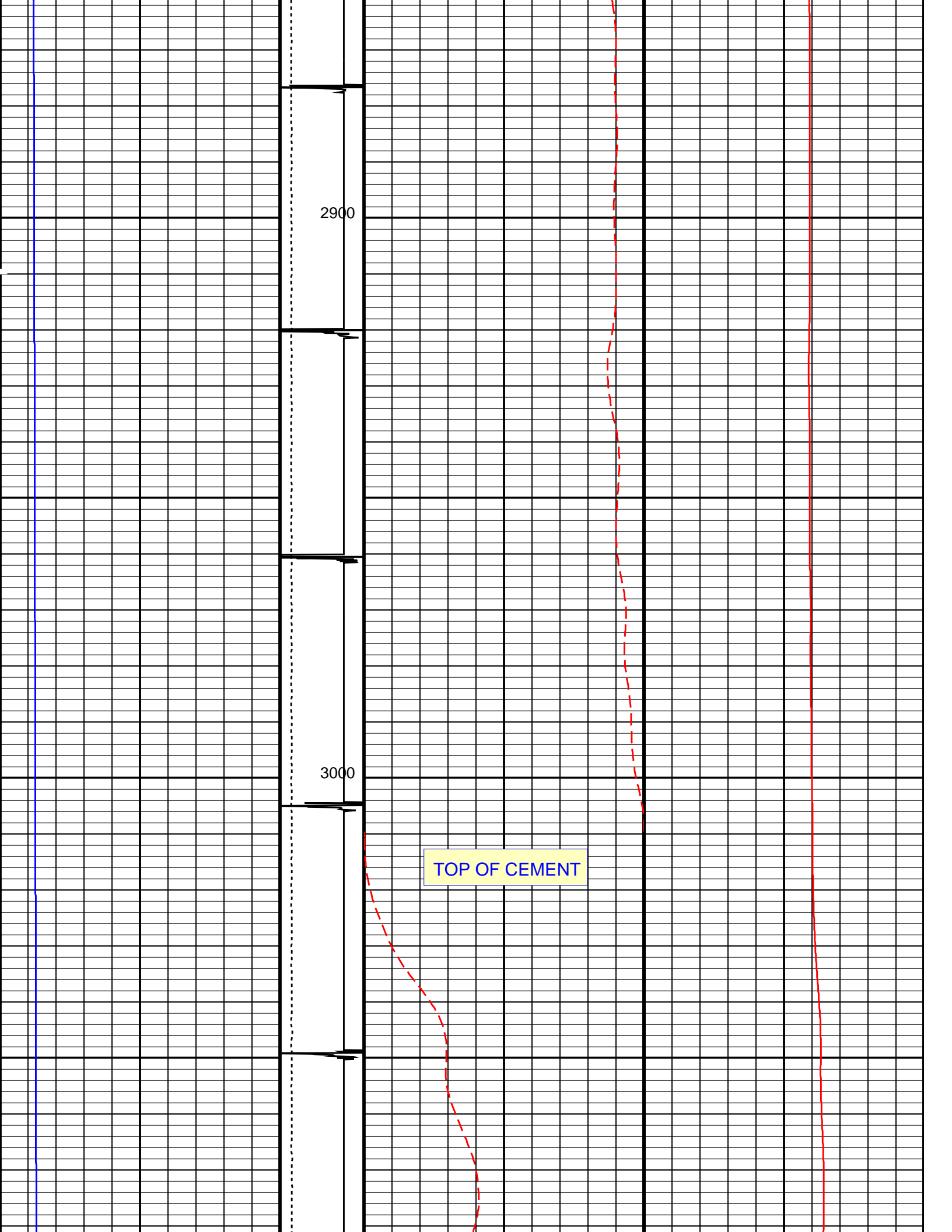




2300

2400

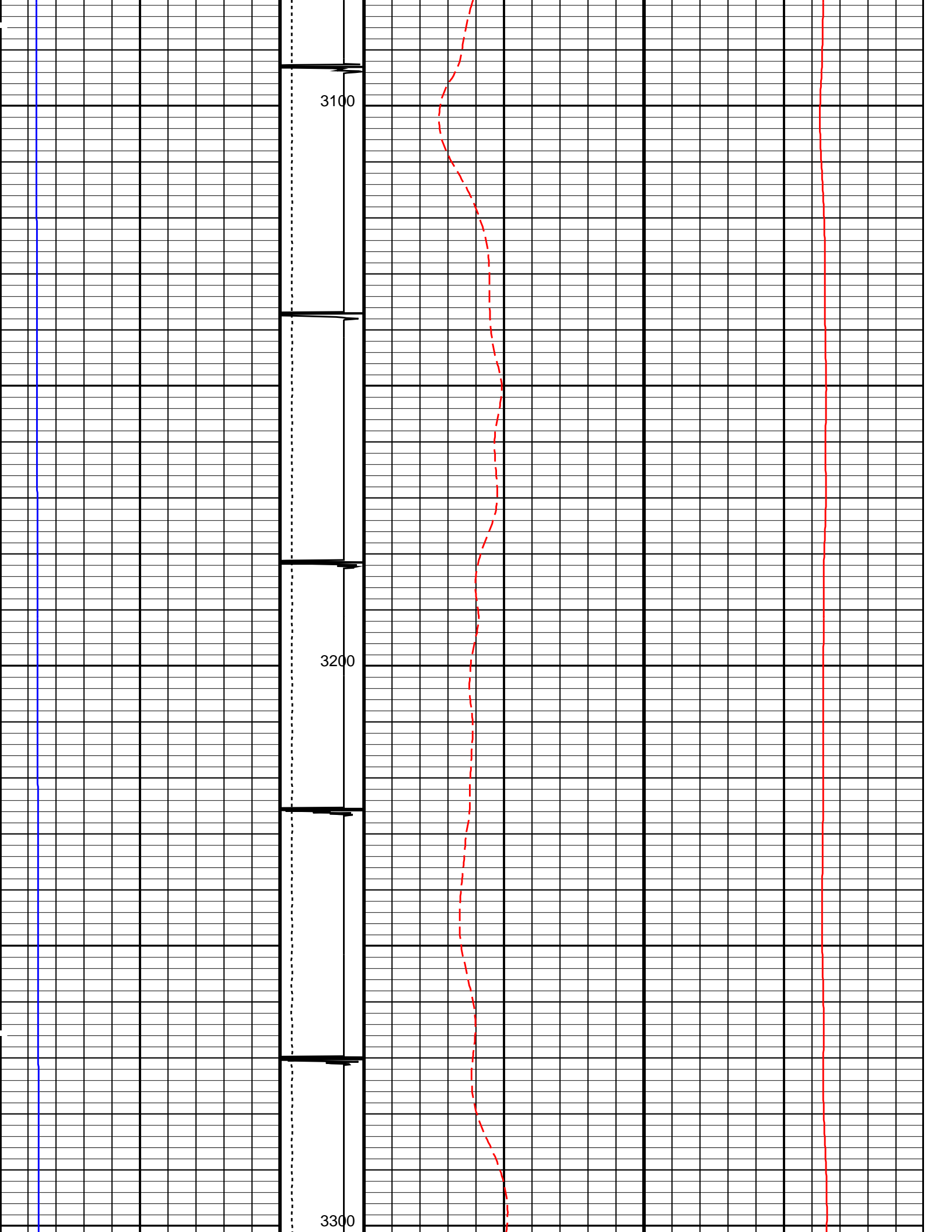


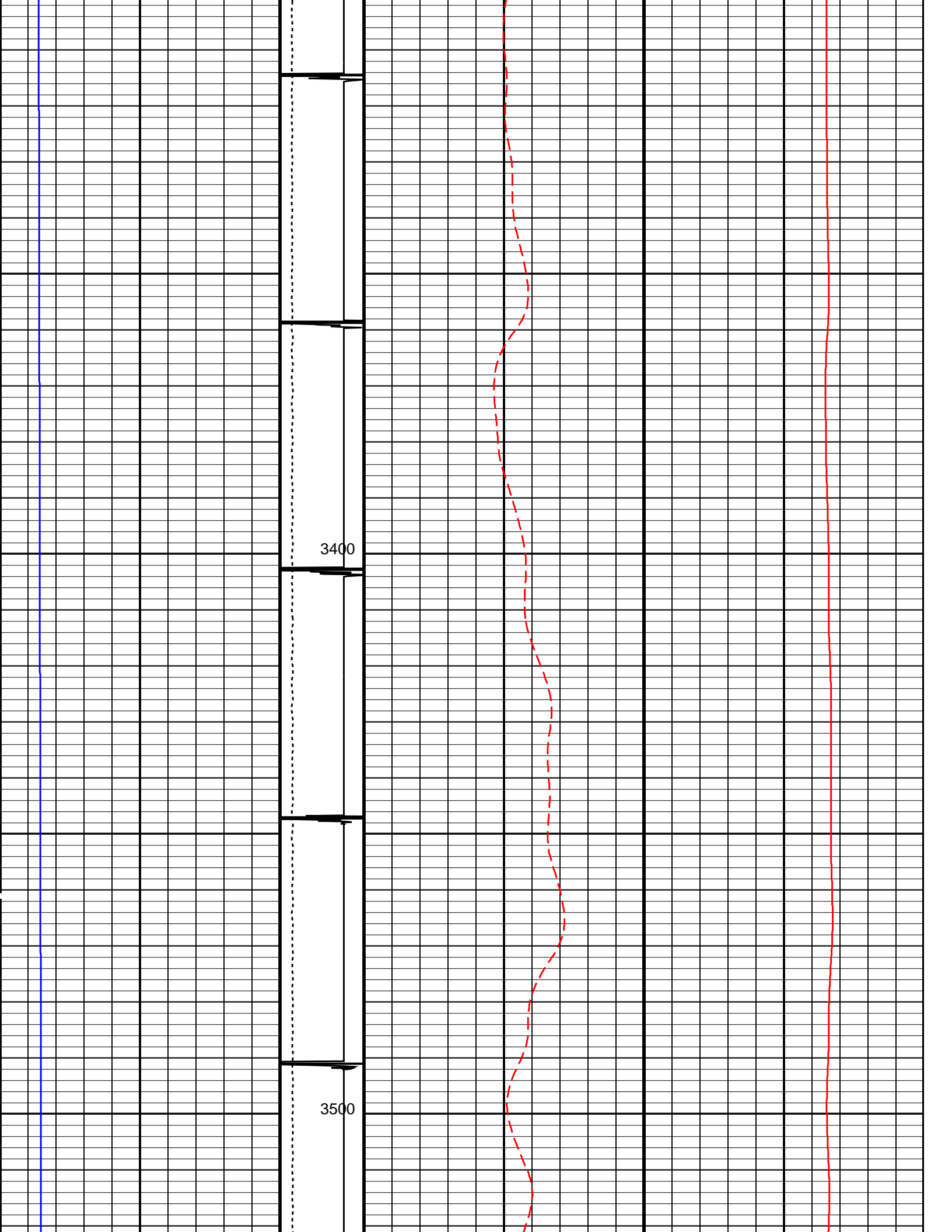


2900

3000

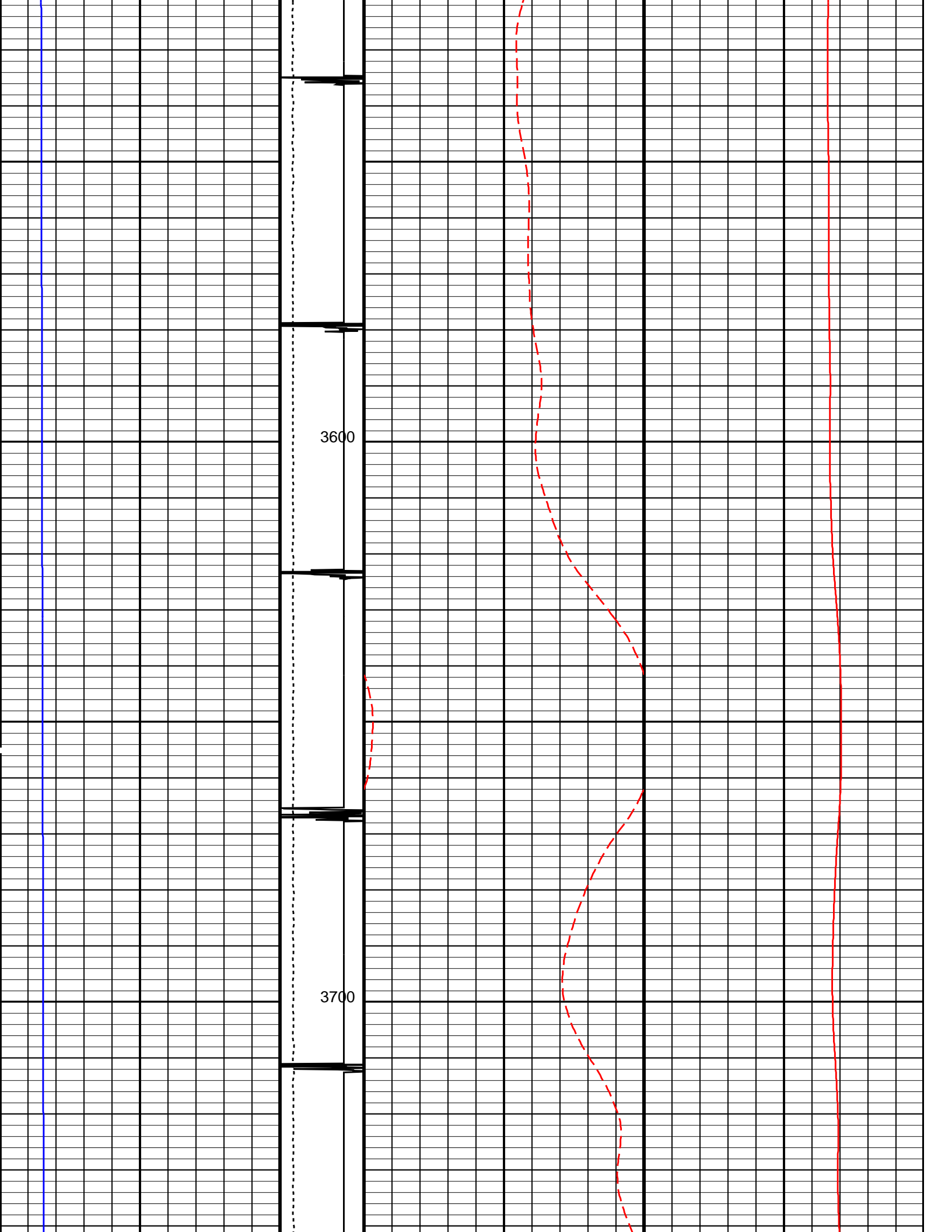
TOP OF CEMENT

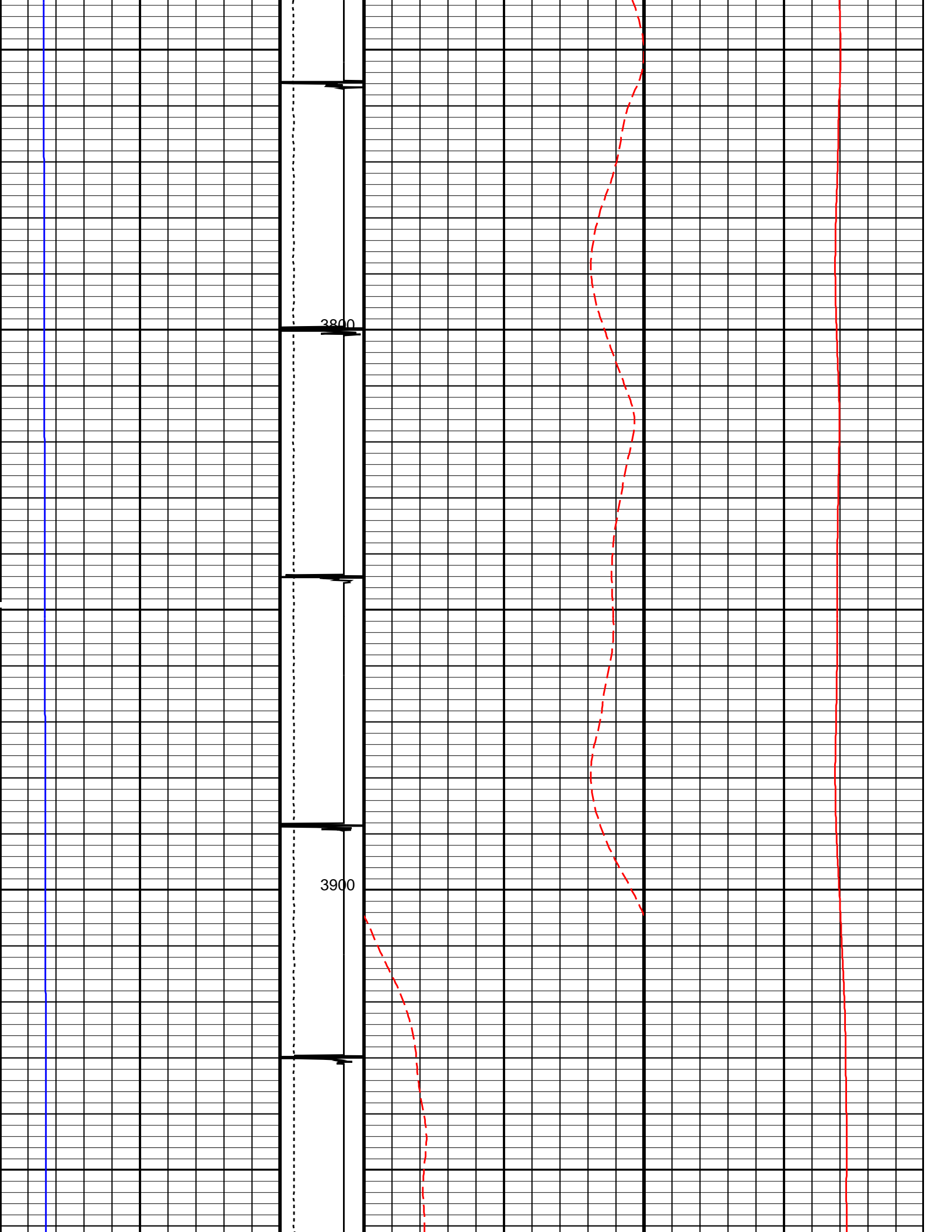


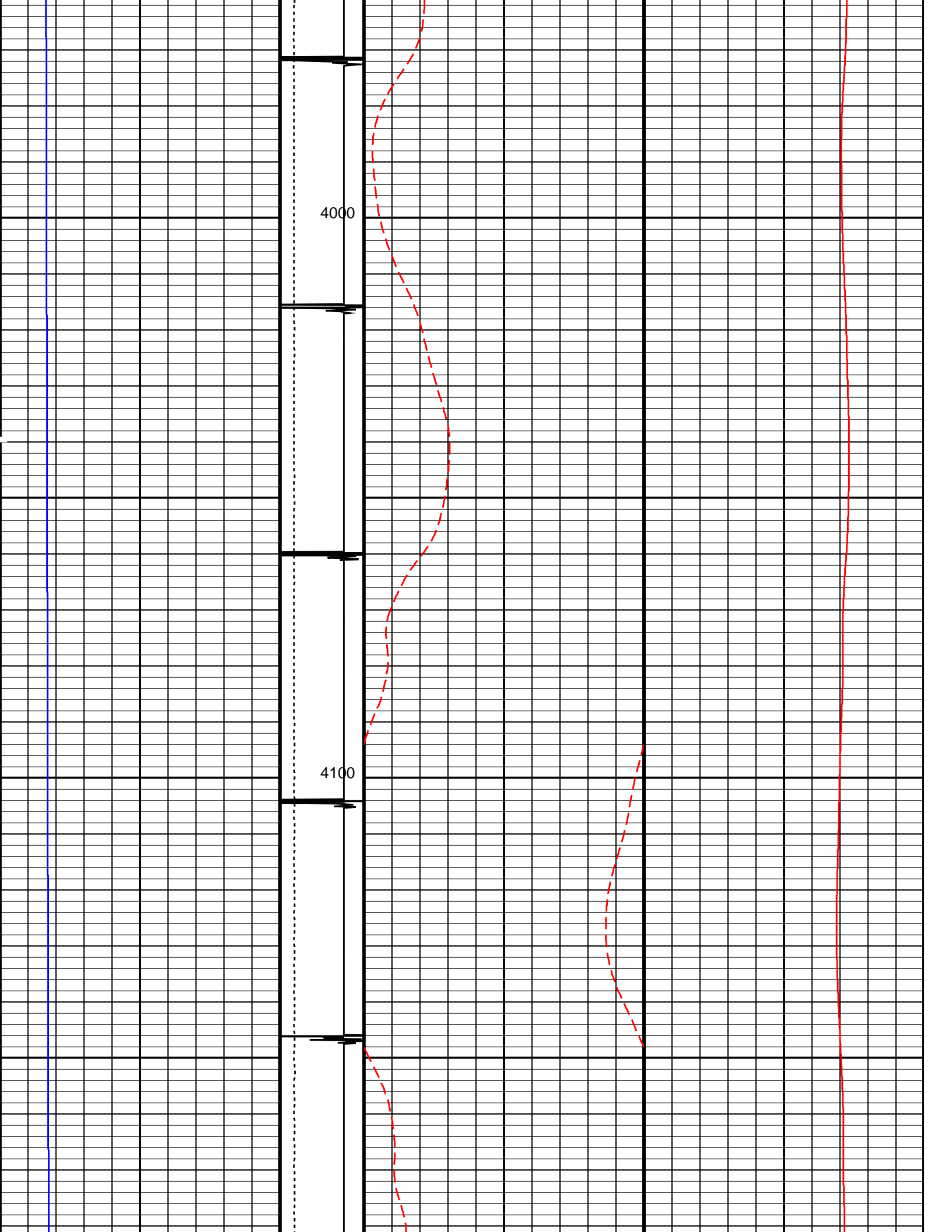


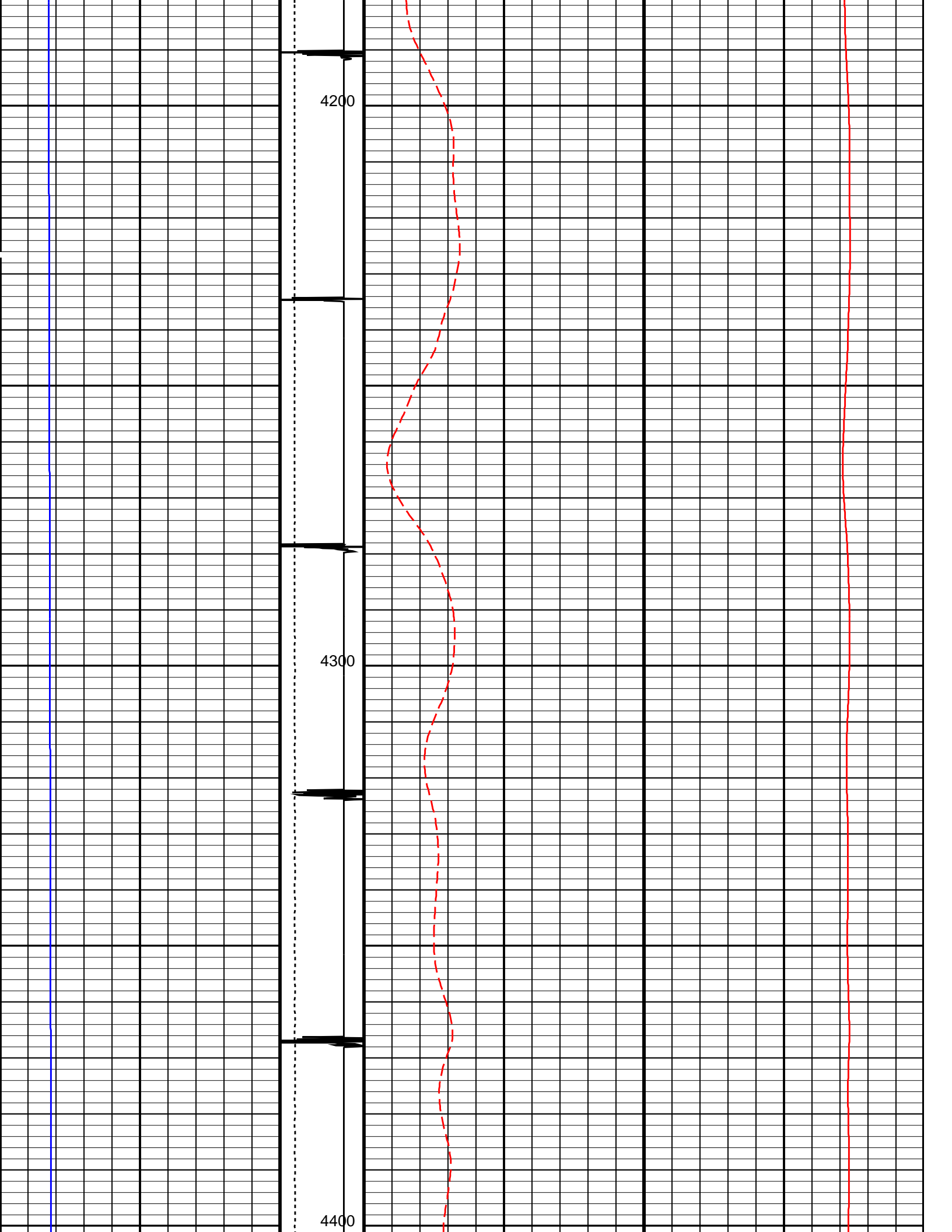
3400

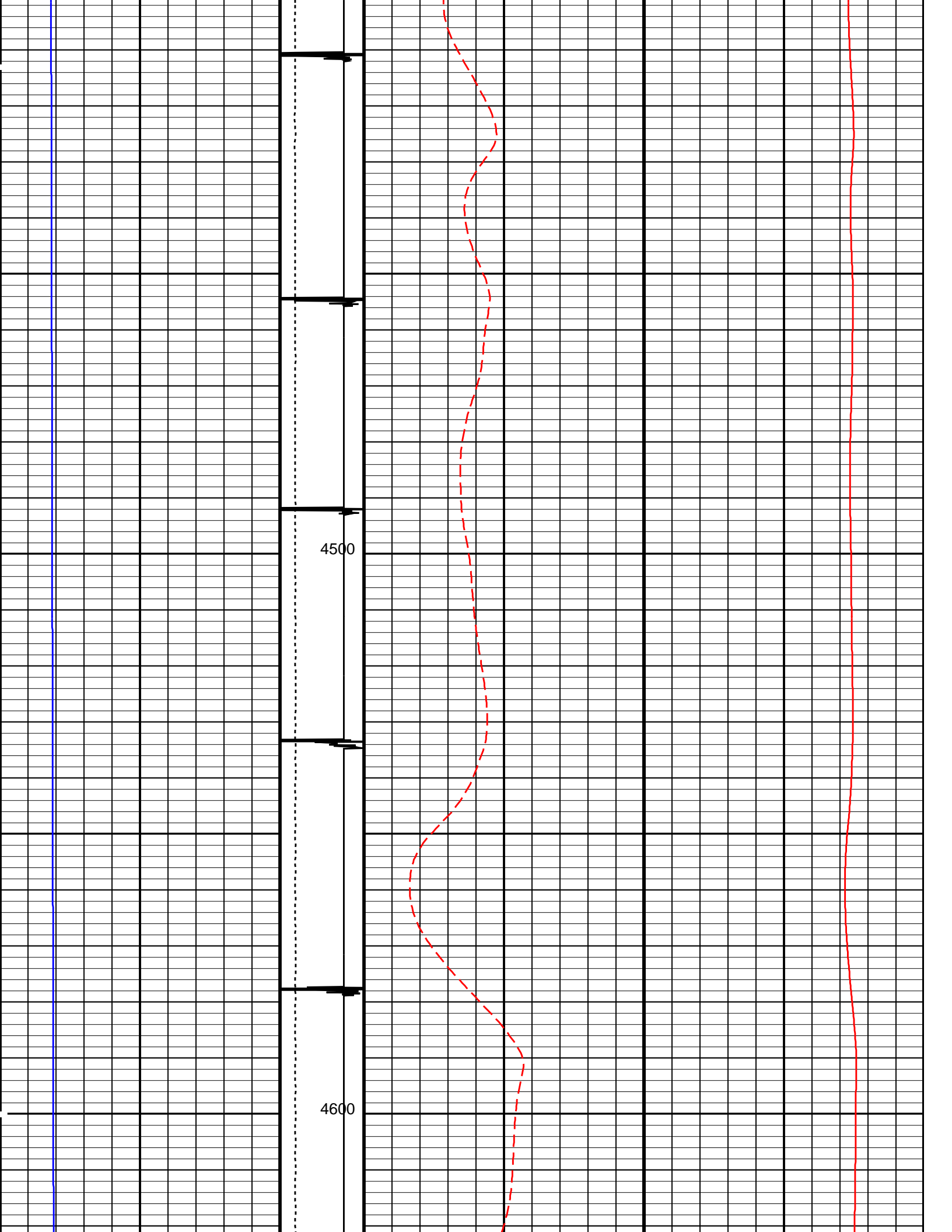
3500

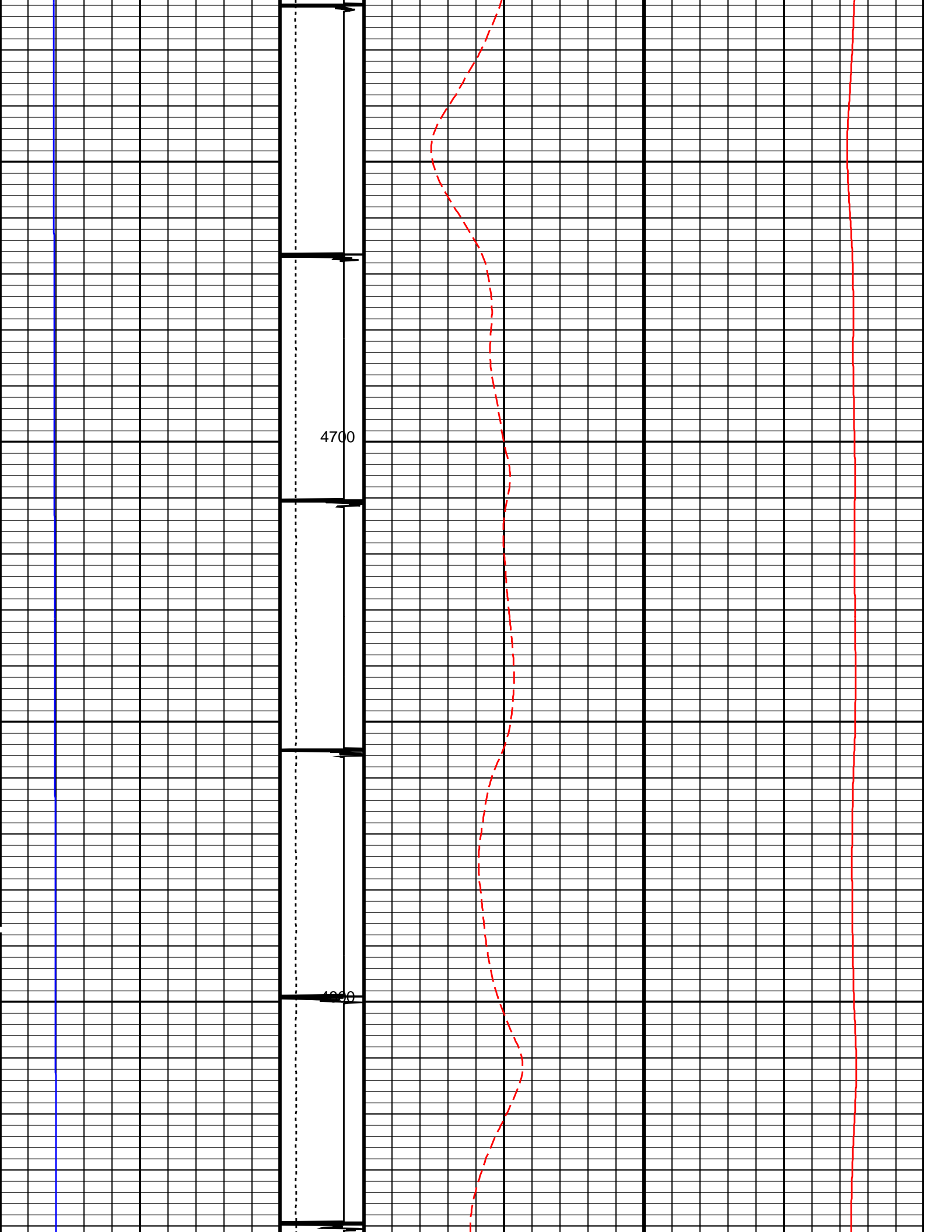


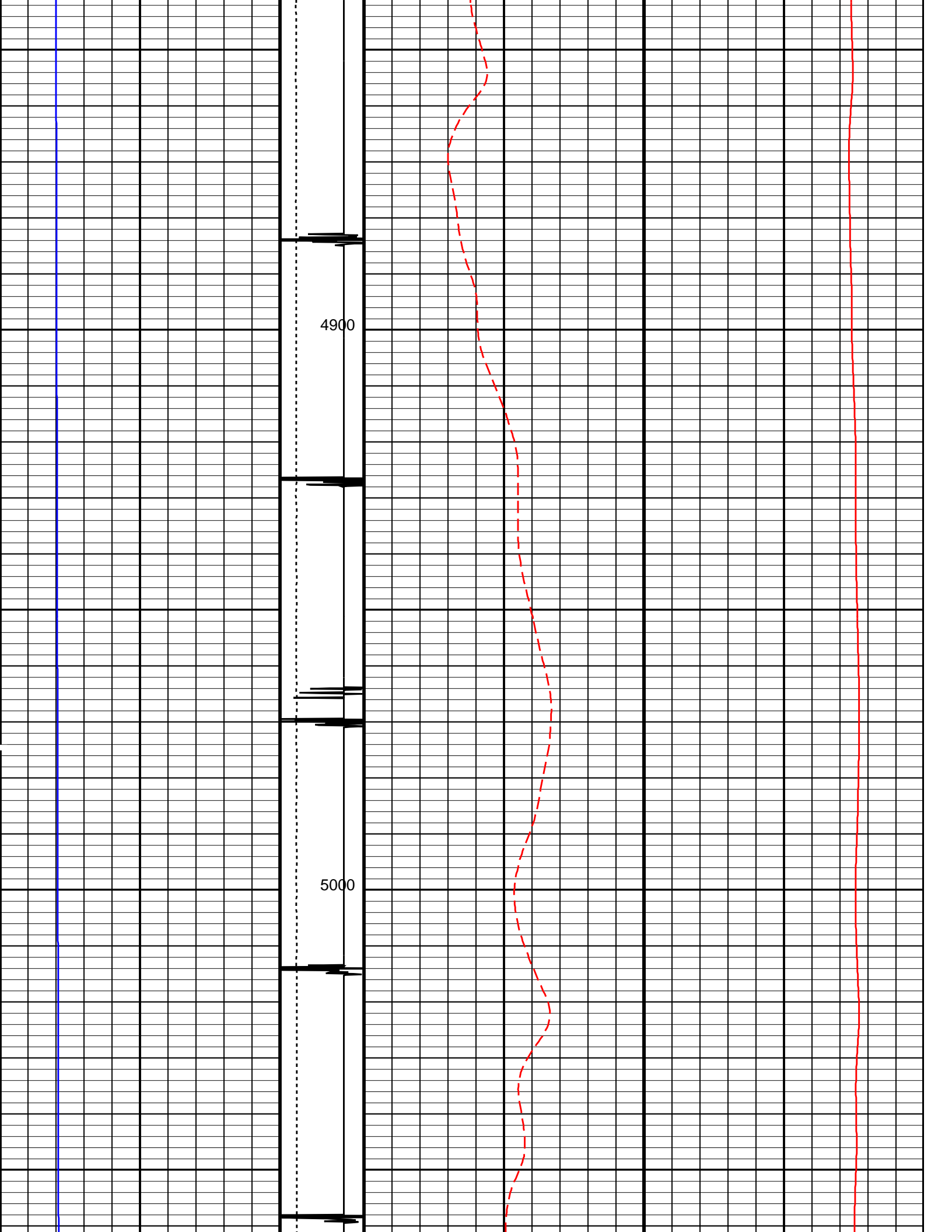


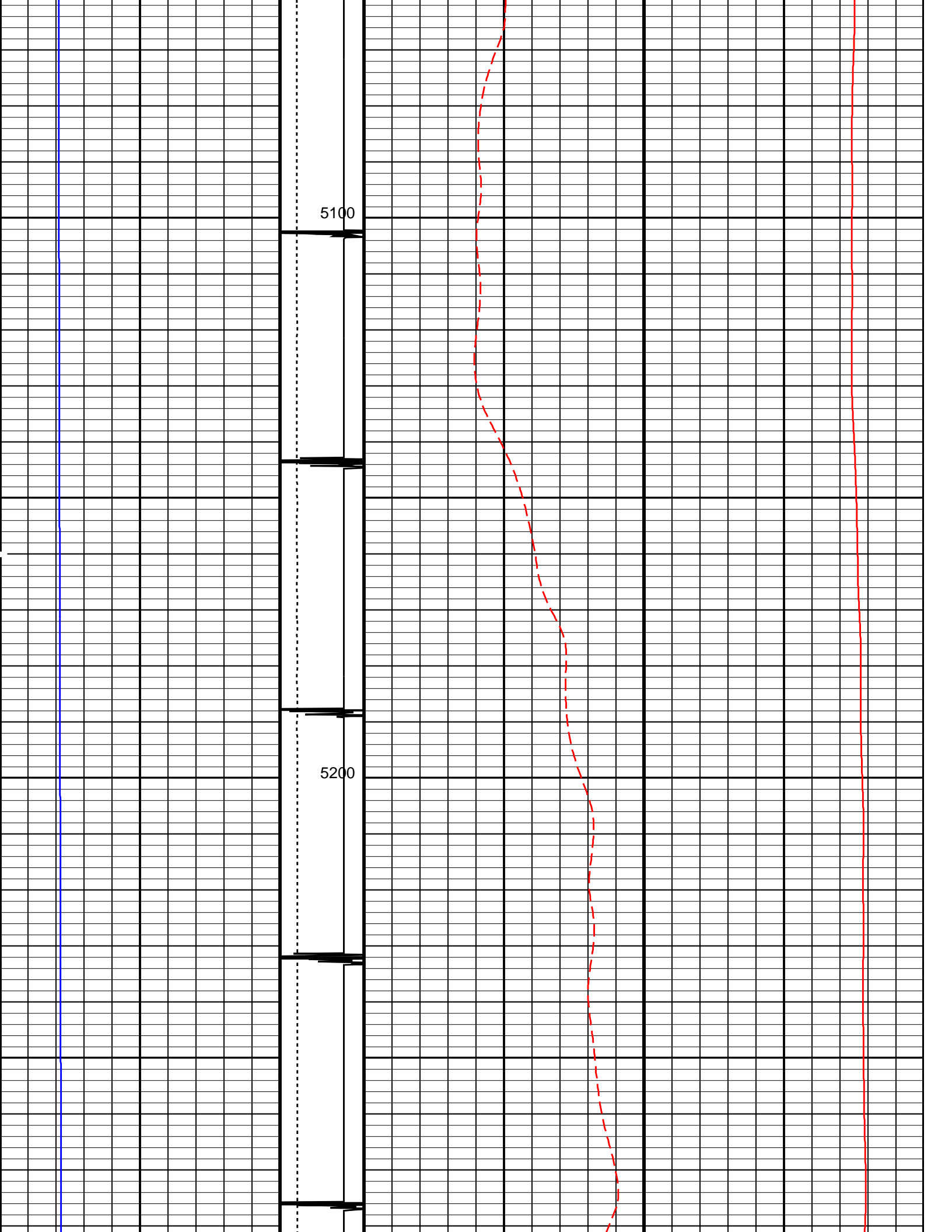


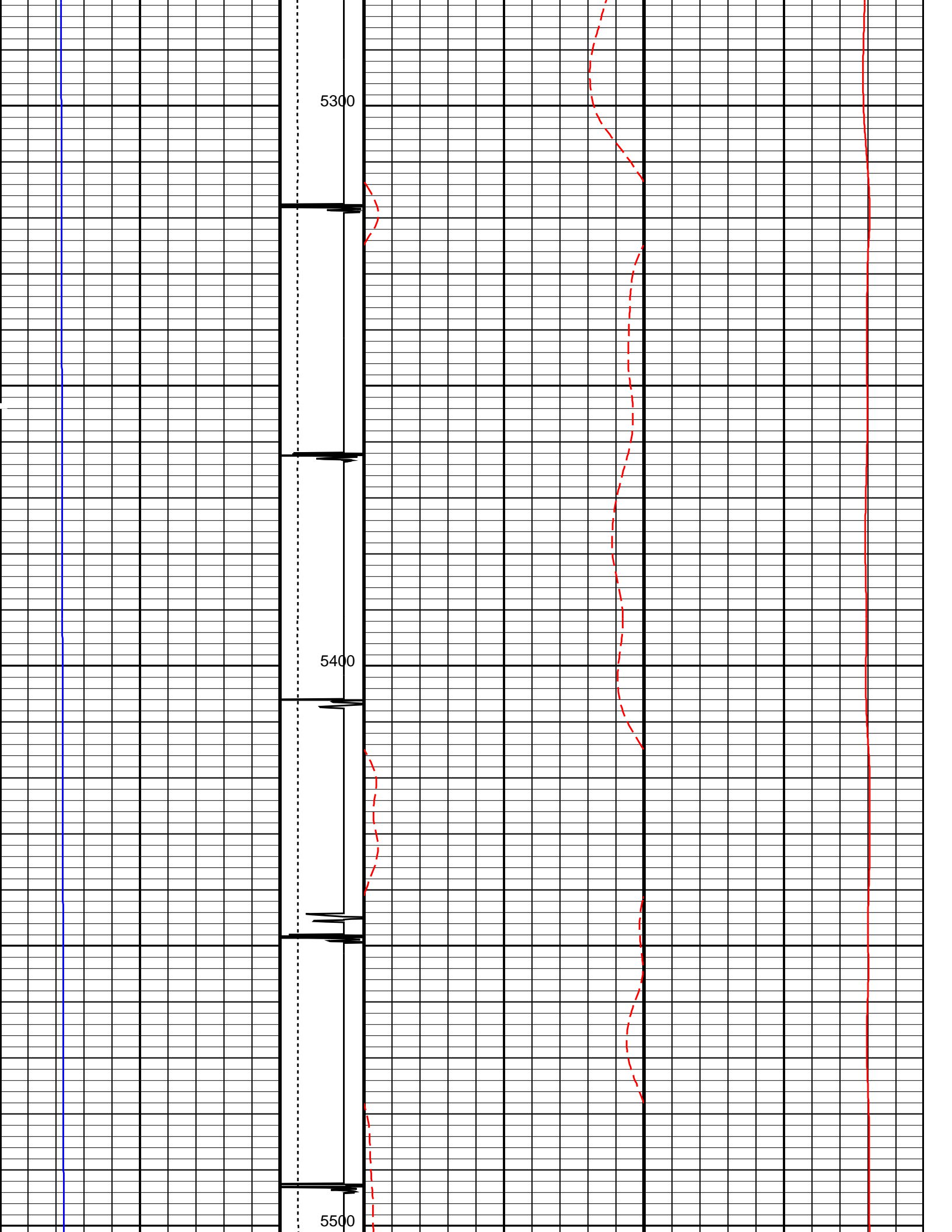


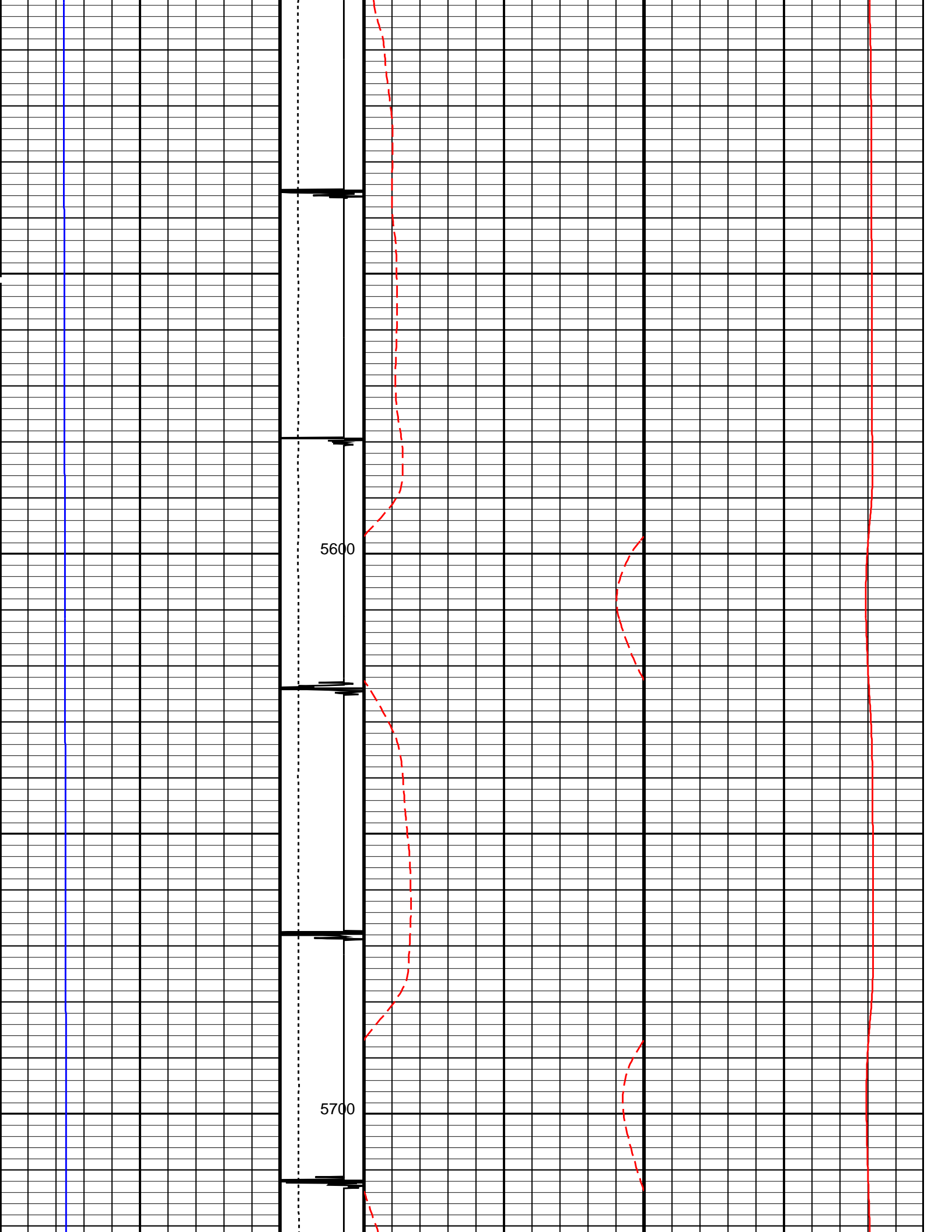


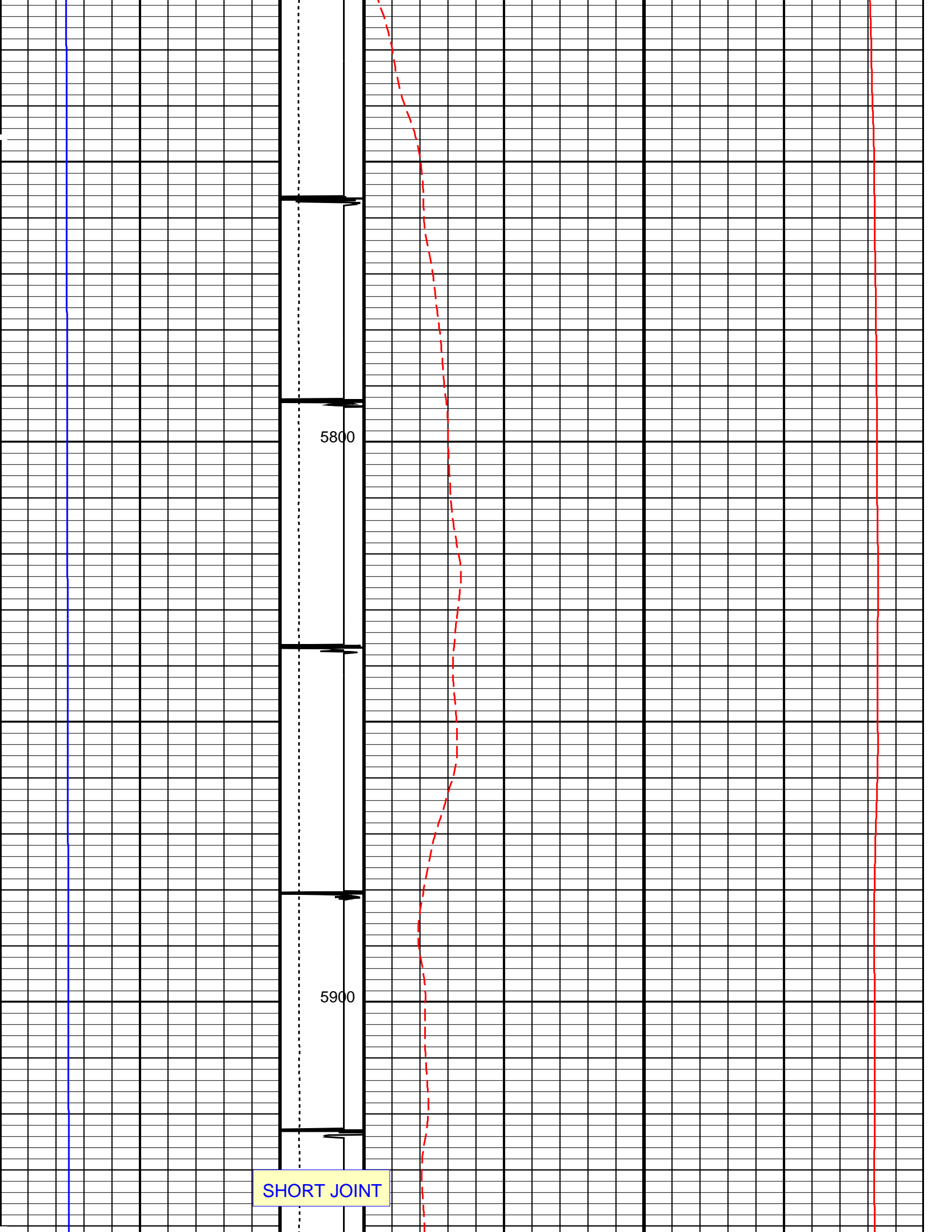








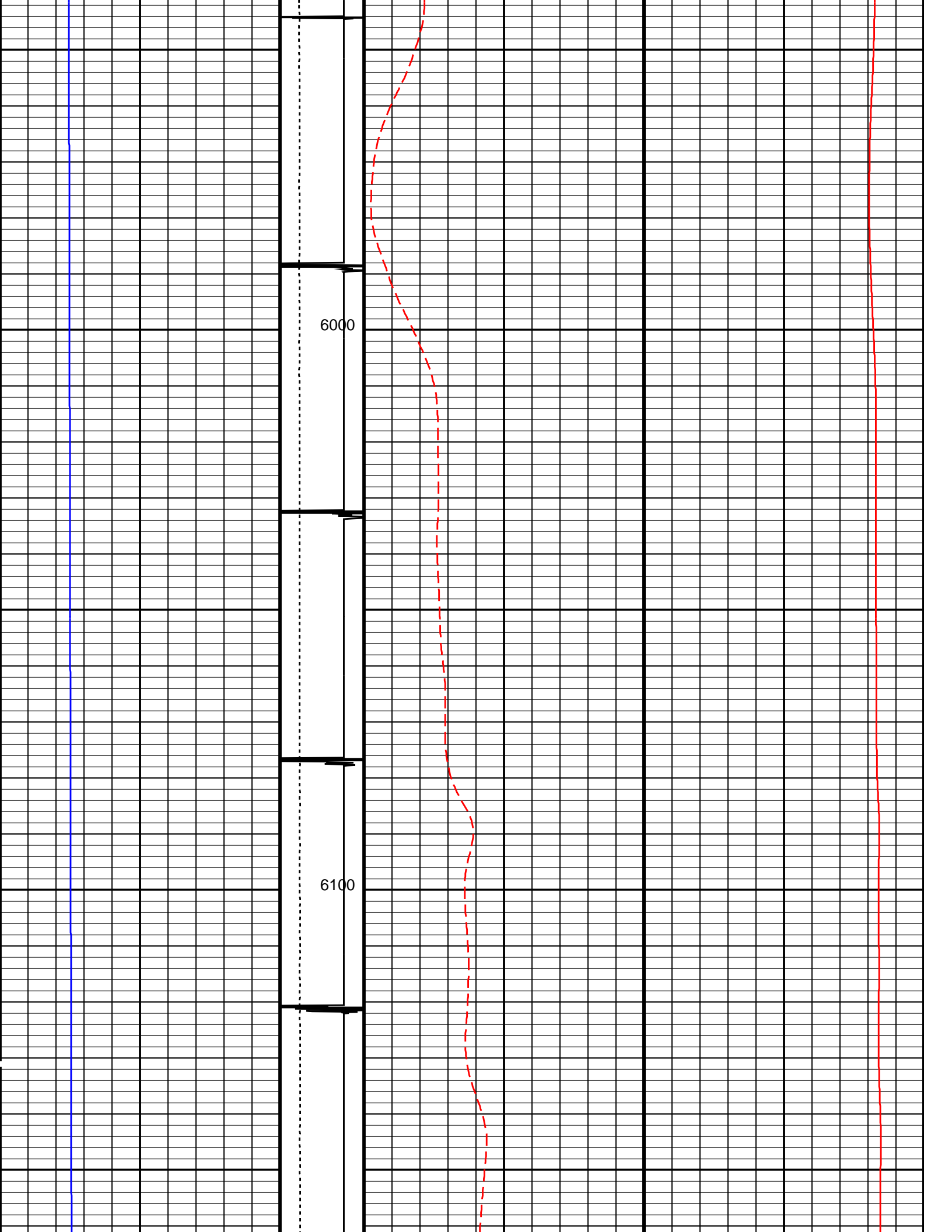


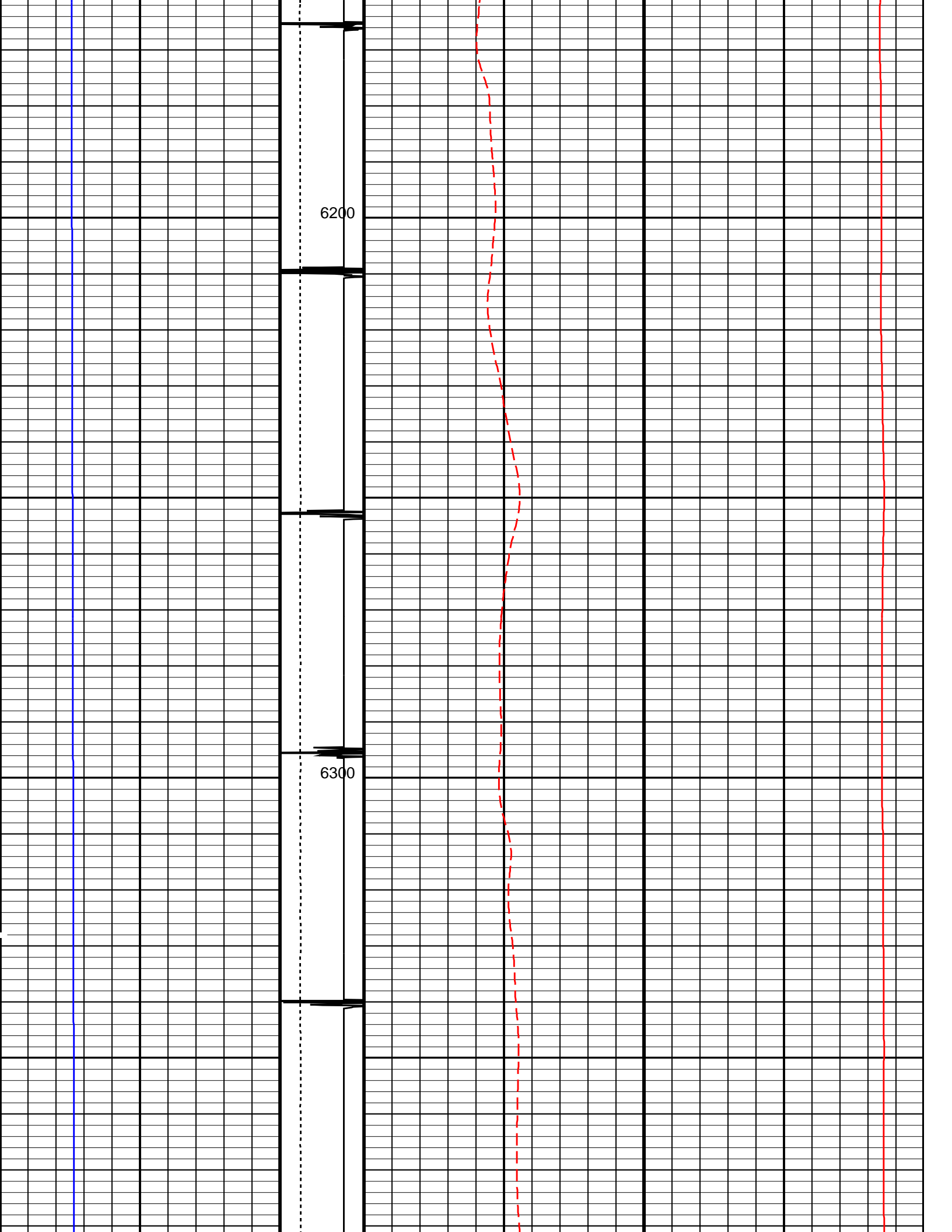


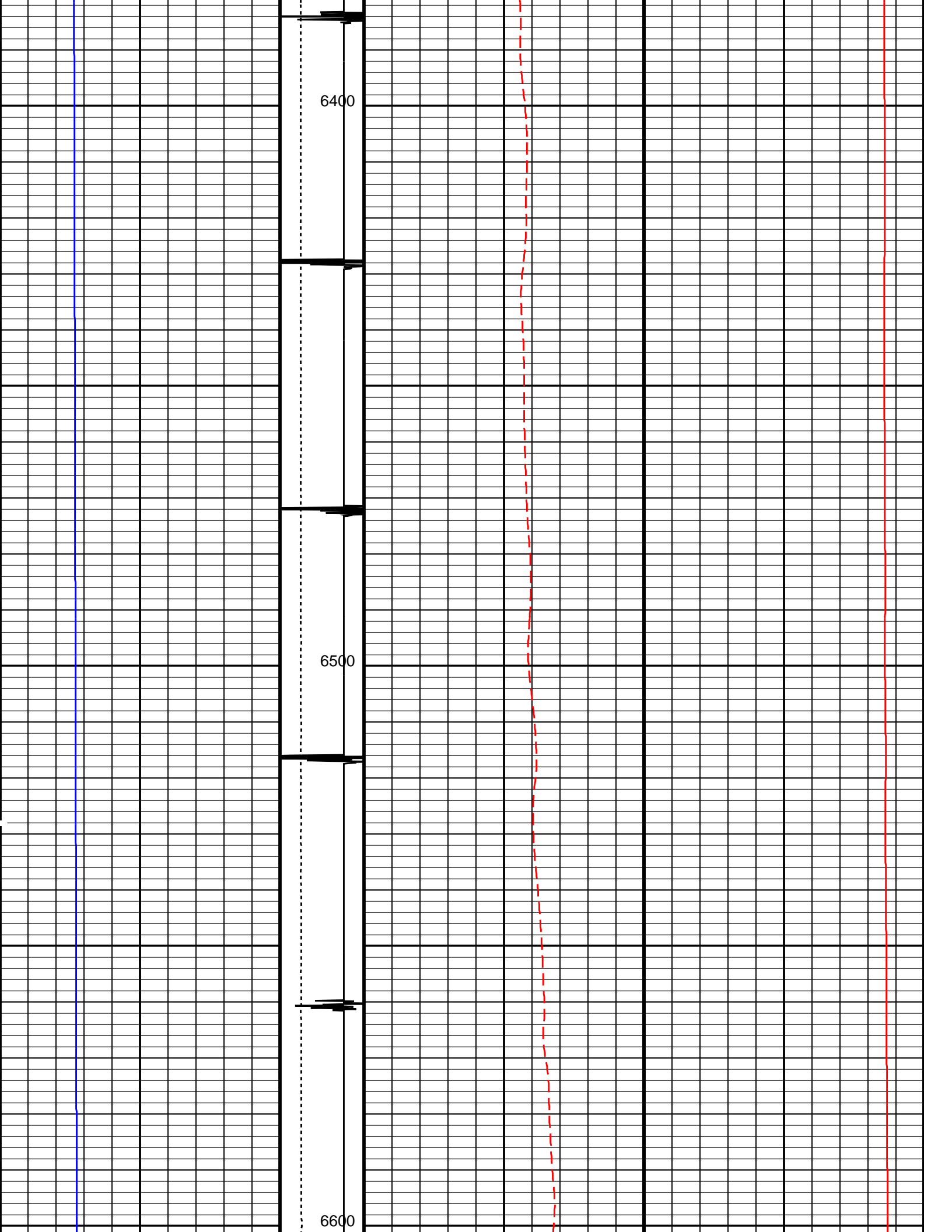
SHORT JOINT

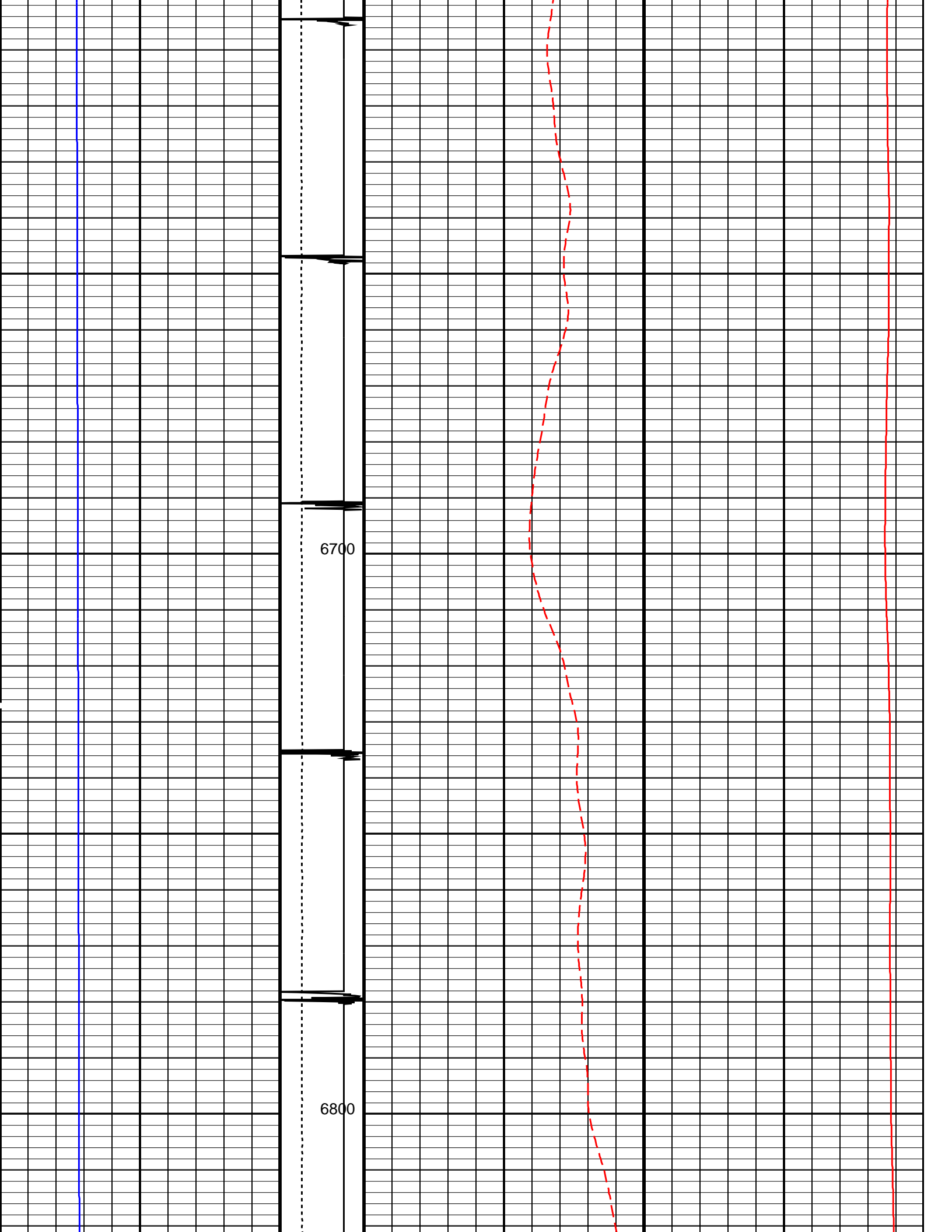
5800

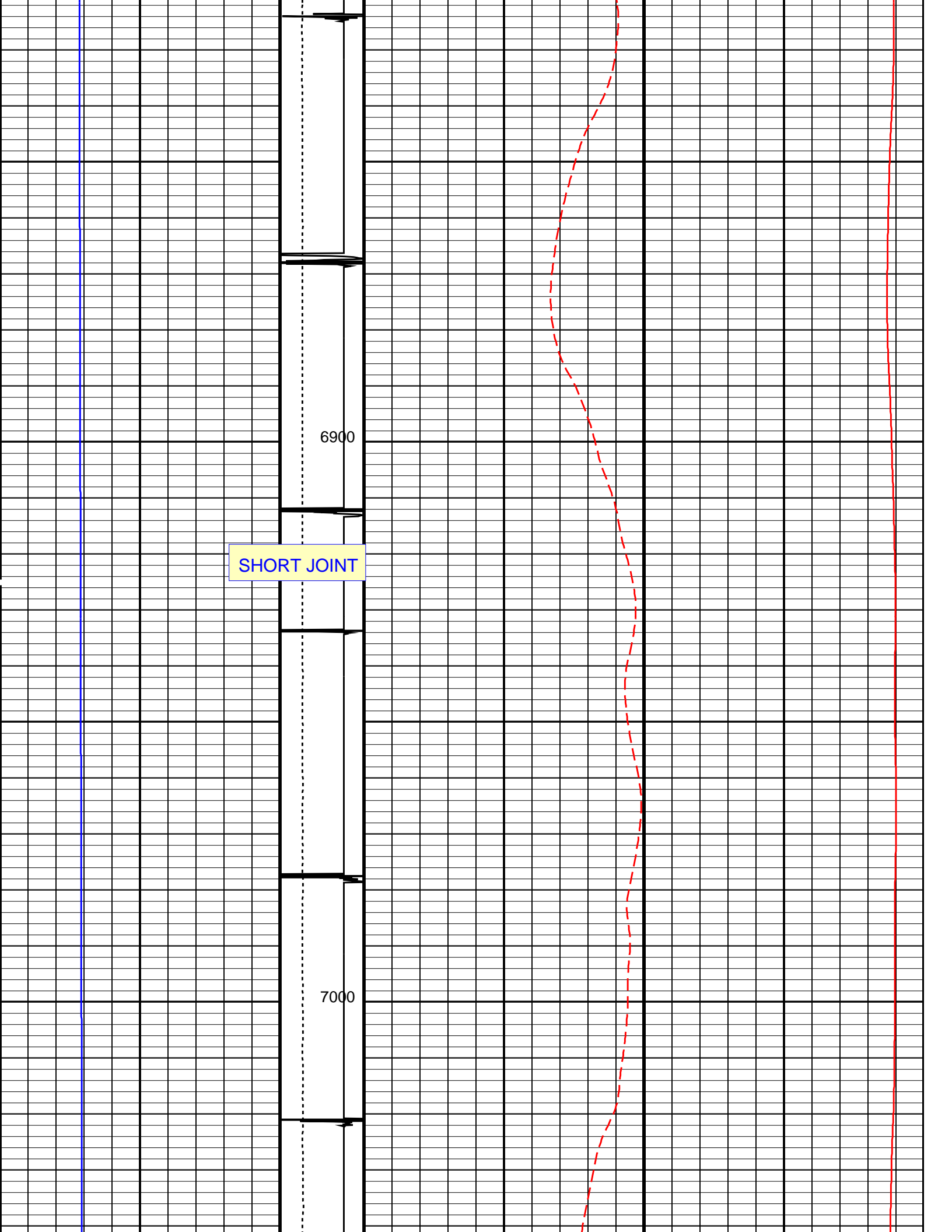
5900







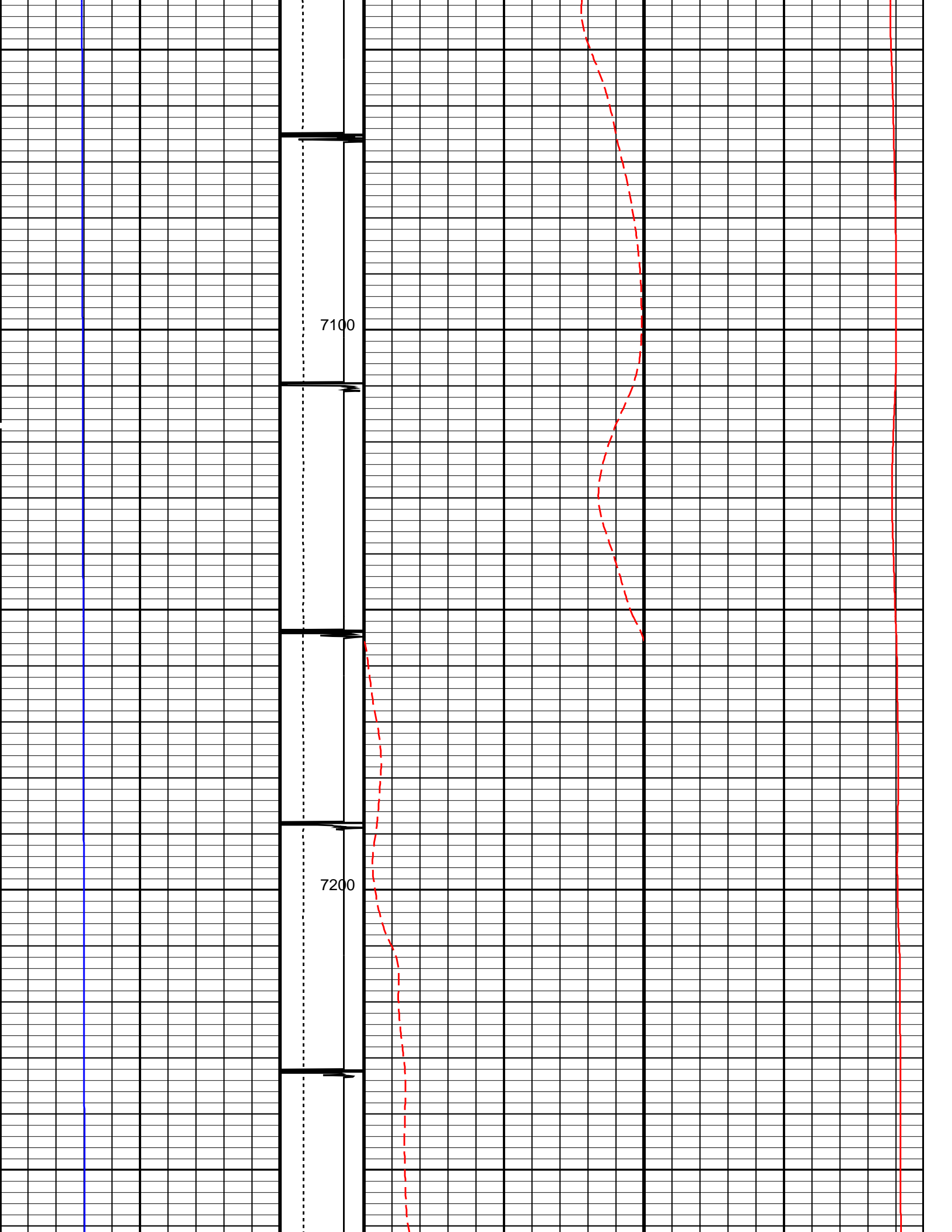


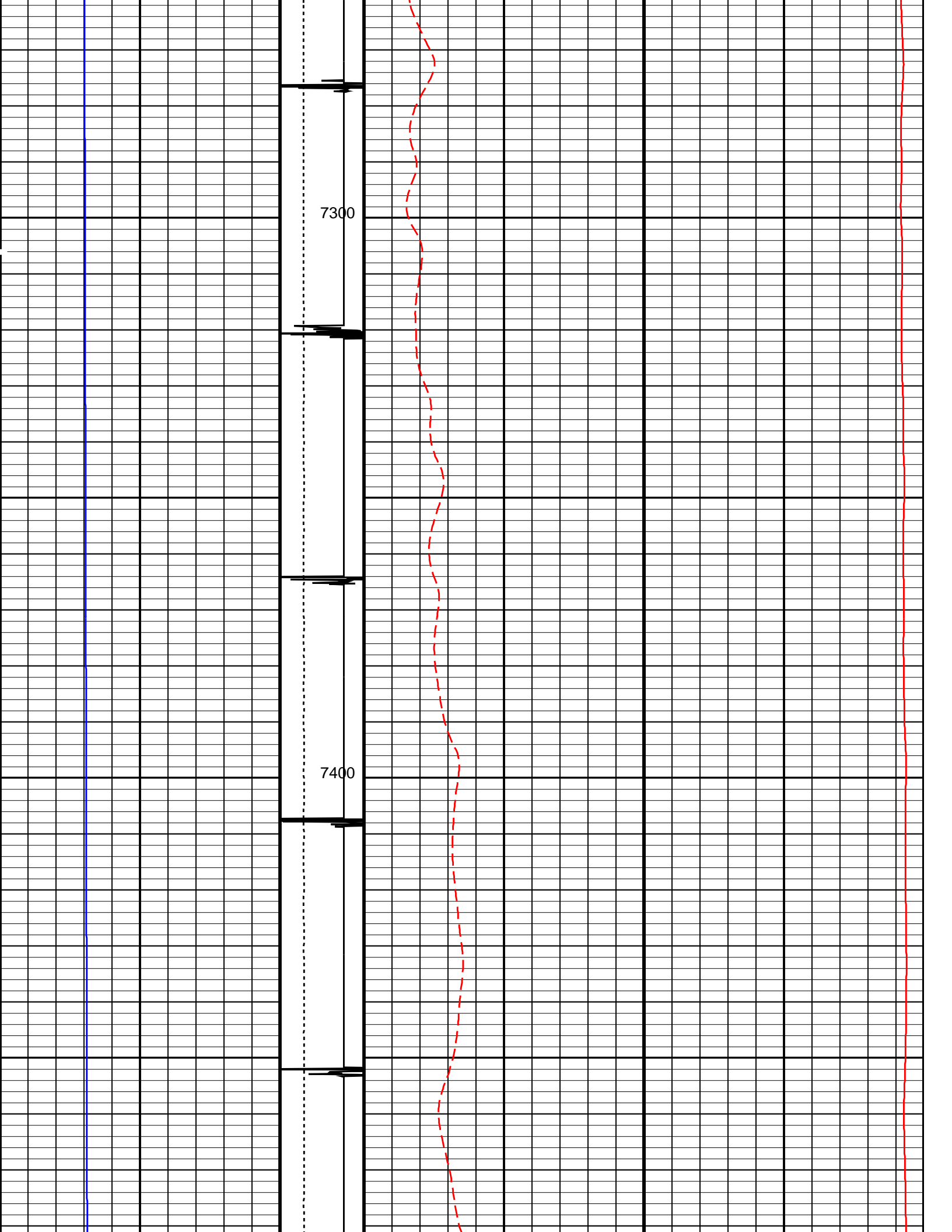


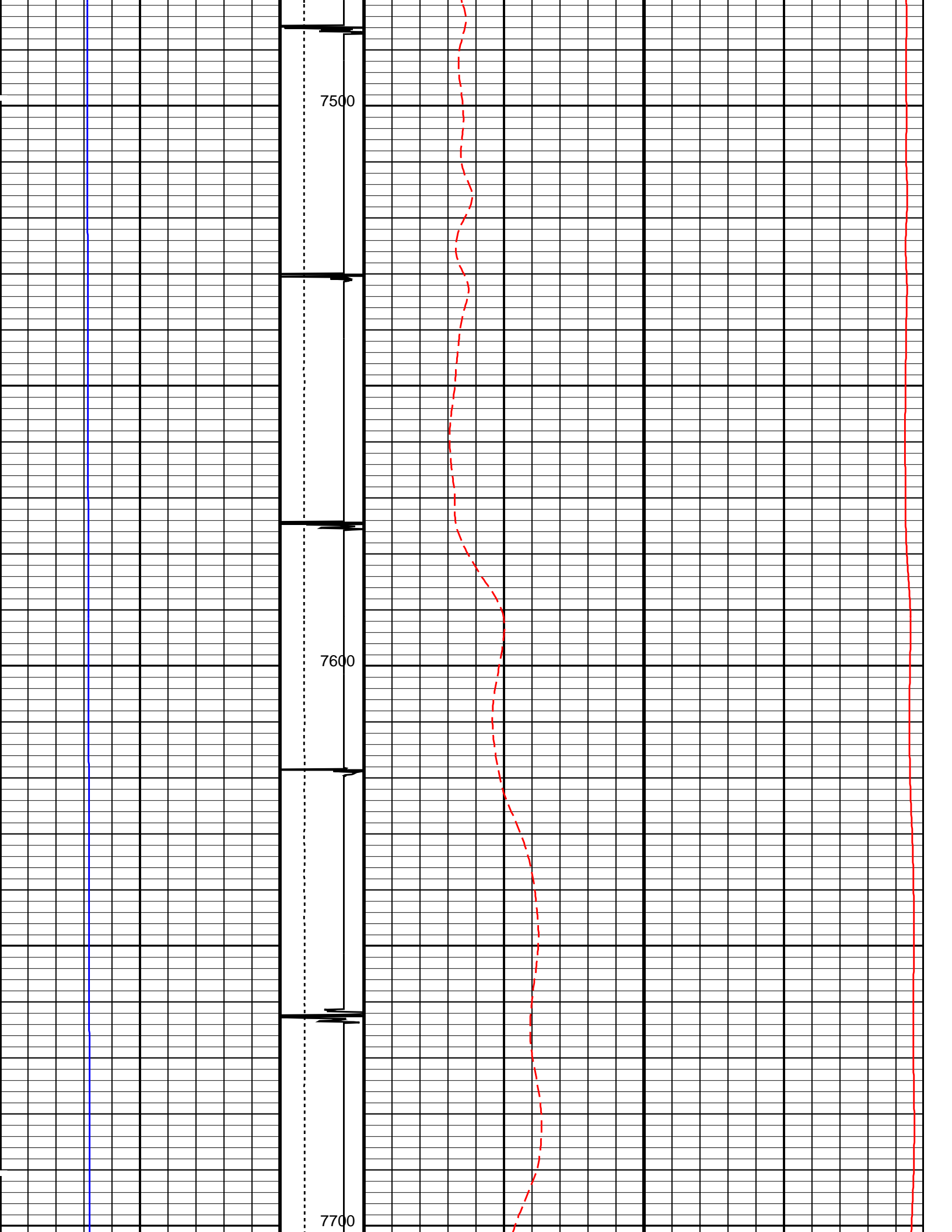
SHORT JOINT

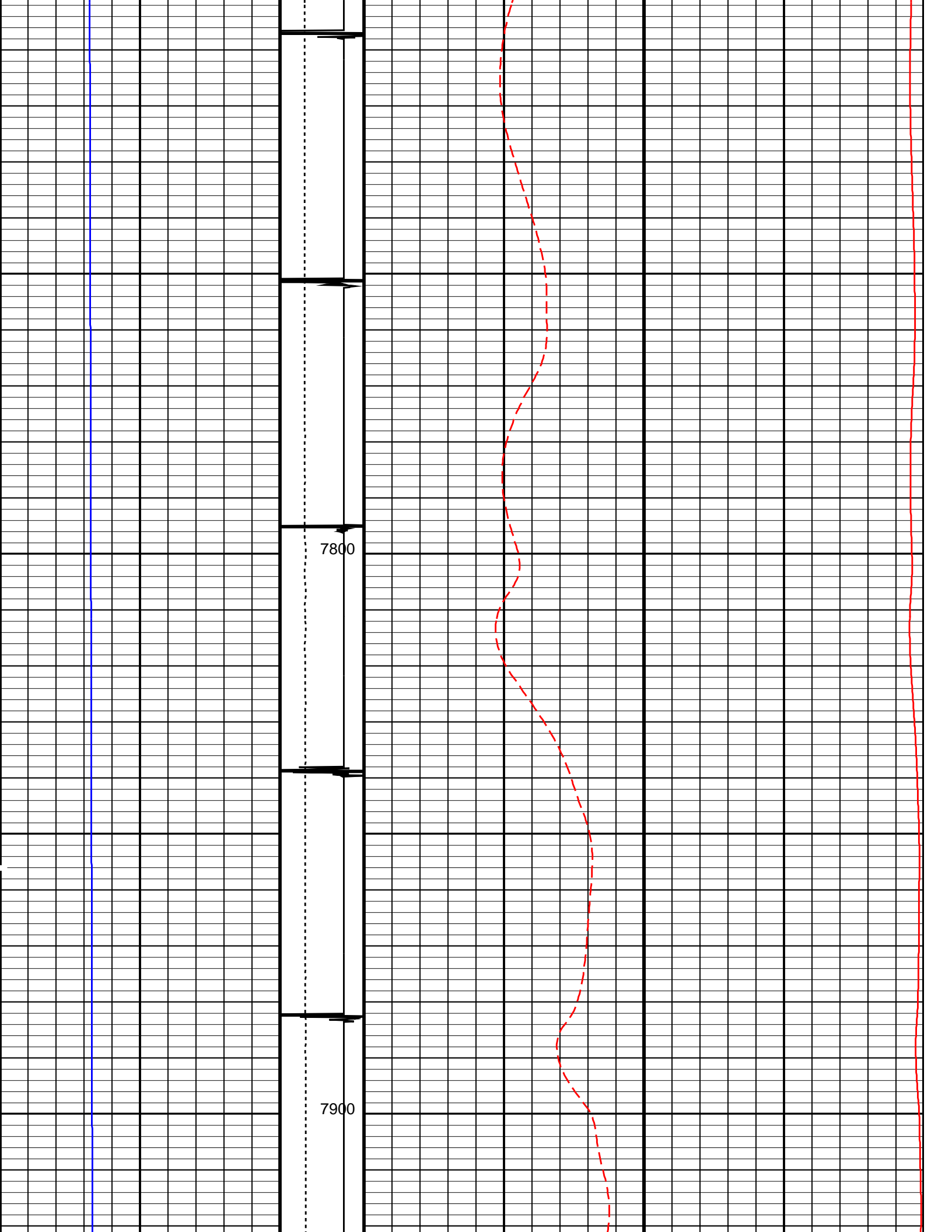
6900

7000



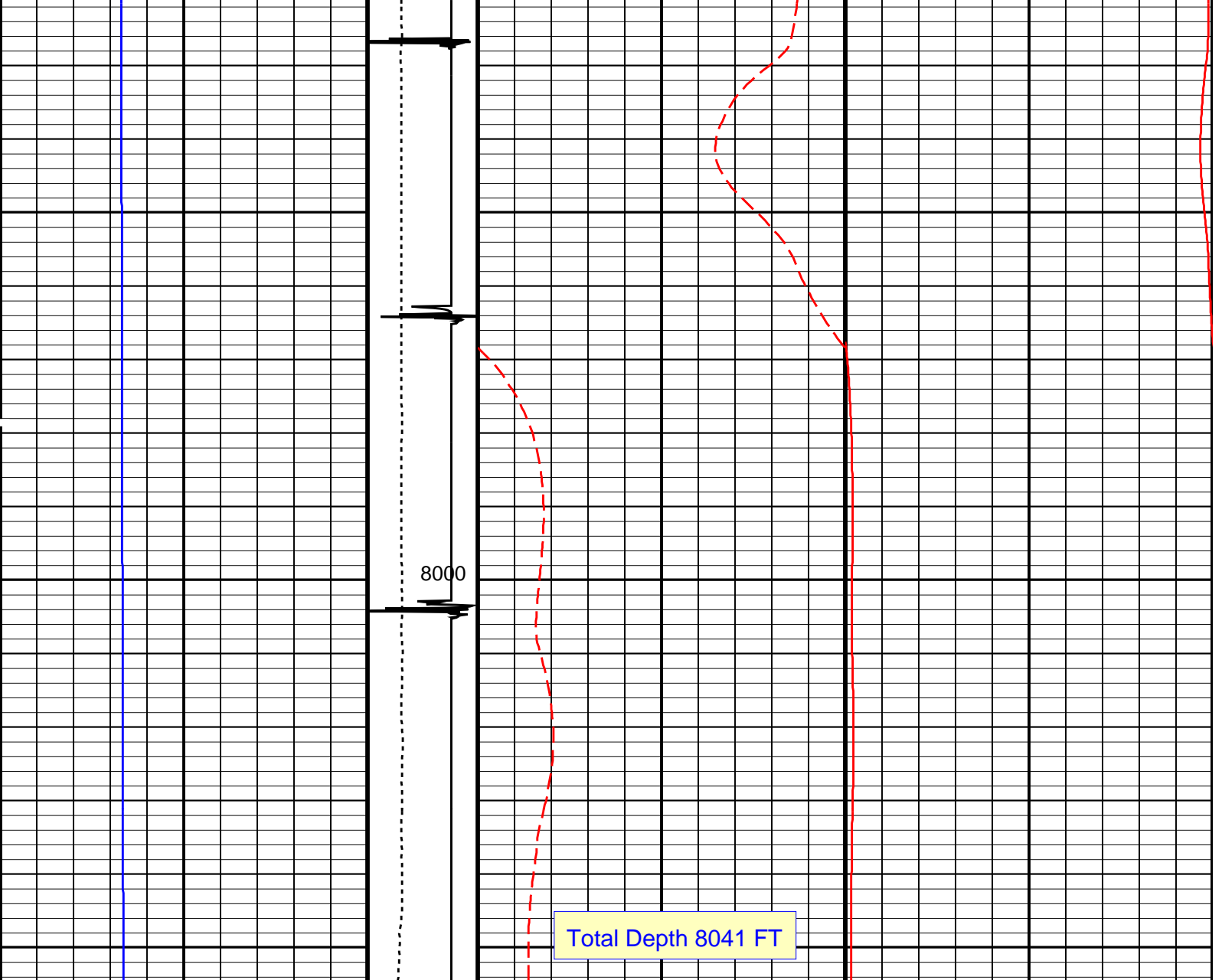






7800

7900



Well Pressure (WPRE) (PSIA)	Tension (TENS) (LBF)	Well Temperature (WTEP) (DEGF)	Well Temperature (WTEP) (DEGF)
0 10000	0 2000	0 200	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 Playback Processing	-7.0 FT
		RECOMPUTE

Format: TEMP LOG

Vertical Scale: 5" per 100'

Graphics File Created: 07-Jun-2013 10:46

OP System Version: 19C0-187

HBMS-B

19C0-187

Input DLIS Files

Output DLIS Files



REPEAT ANALYSIS

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC Well: ALP FEE 24-3D (J24NW)

Input DLIS Files

DEFAULT	Flip_HBMS_006LUP	PRODUCER	07-Jun-2013 10:39	7819.0 FT	7571.0 FT
DEFAULT	HBMS_008PUP	FN:5	PRODUCER	07-Jun-2013 10:46	8054.5 FT

Output DLIS Files

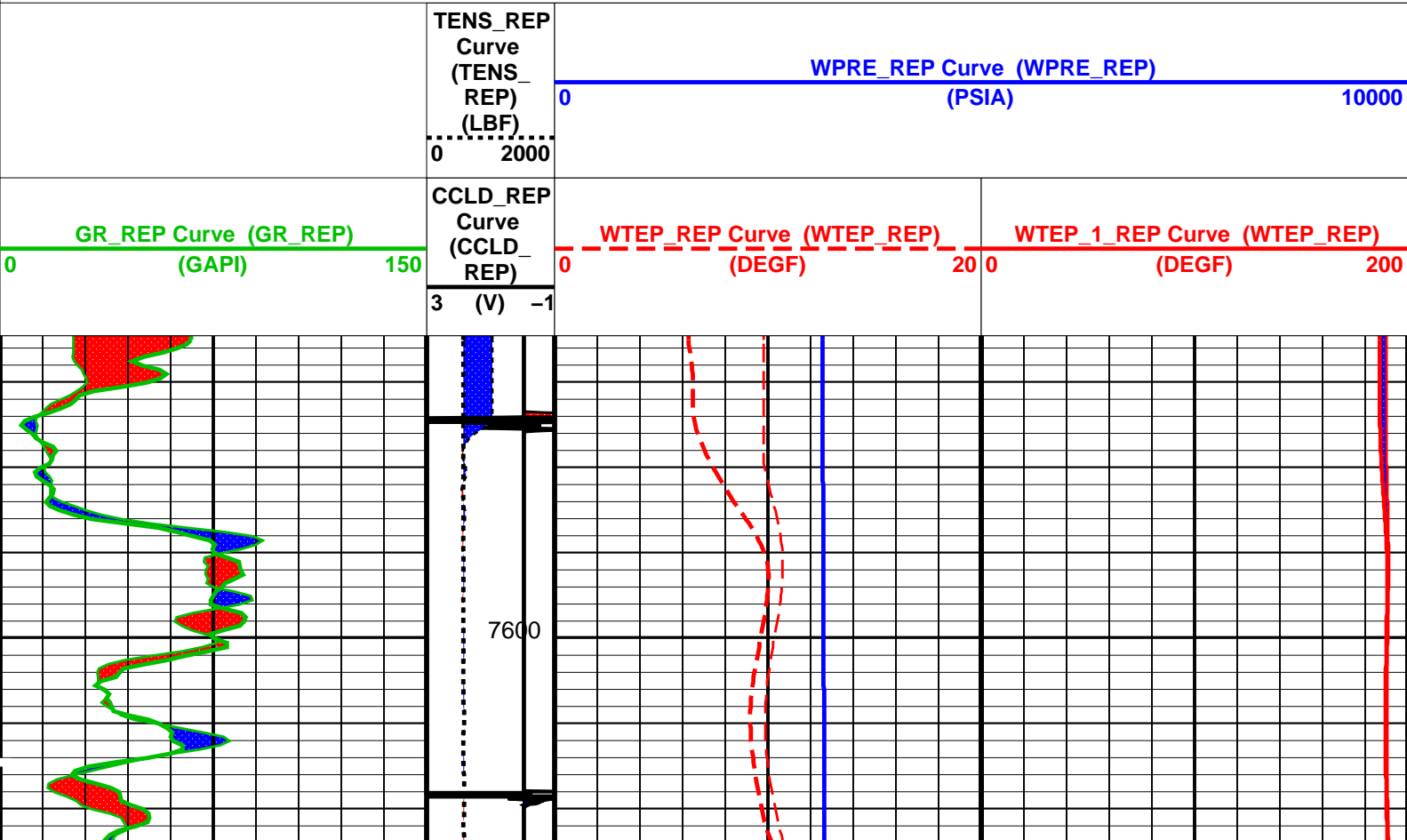
DEFAULT	HBMS_009PUP	FN:6	PRODUCER	07-Jun-2013 10:51	7812.0 FT	7564.0 FT
---------	-------------	------	----------	-------------------	-----------	-----------

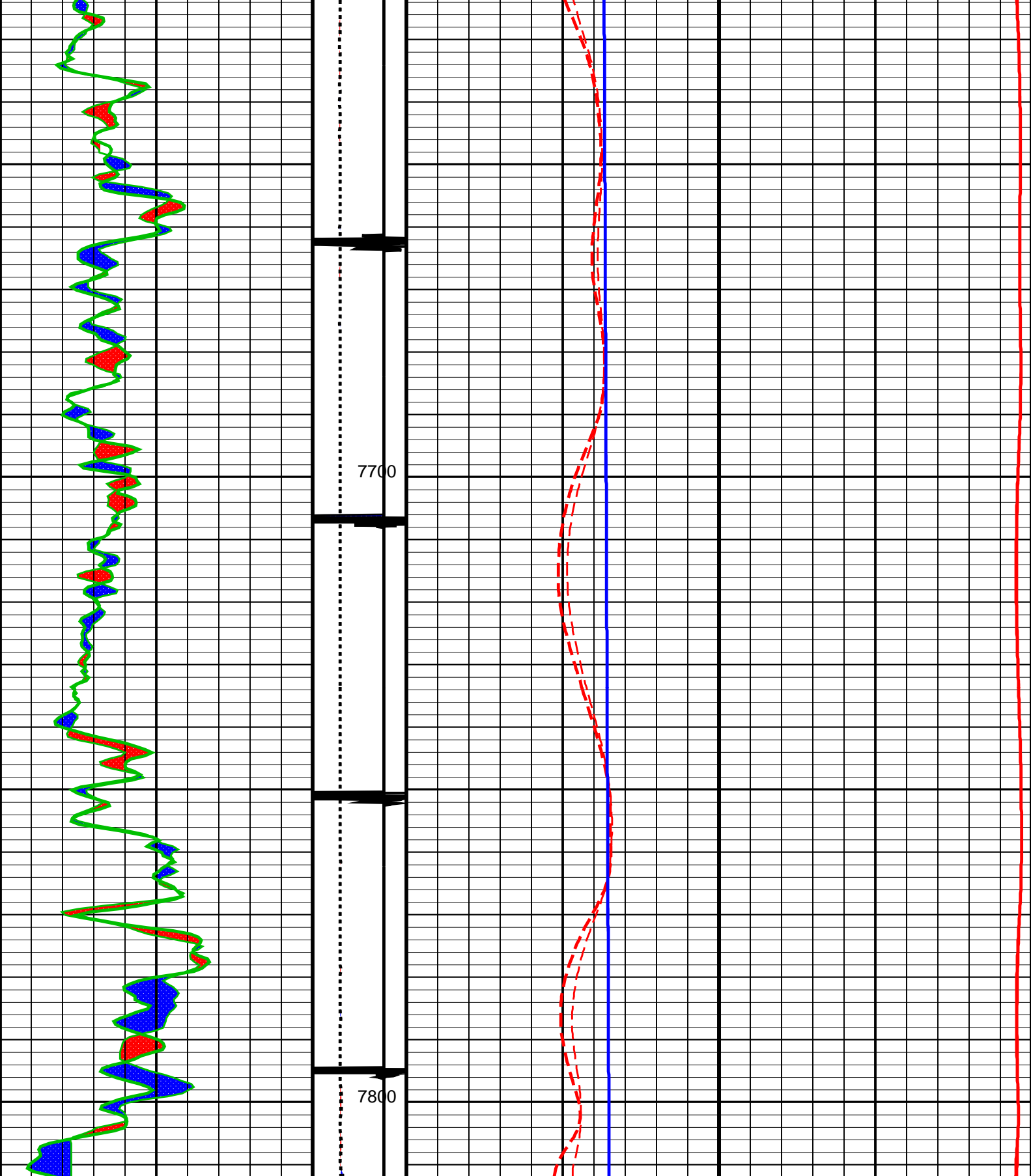
OP System Version: 19C0-187

HBMS-B 19C0-187

PIP SUMMARY

Time Mark Every 60 S





GR_REP Curve (GR_REP)
(GAPI) 0 150

CCLD_REP
Curve
(CCLD_REP)
3 (V) -1

WTEP_REP Curve (WTEP_REP)
(DEGF) 0 20

WTEP_1_REP Curve (WTEP_REP)
(DEGF) 0 200

TENS_REP
Curve
(TENS_REP)

WPRE_REP Curve (WPRE_REP)
(PSIA) 0 10000

(LBF)
0 2000

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	System and Miscellaneous	
DO	Depth Offset for Playback	-7.0 FT
DORL	Depth Offset for Repeat Analysis	0.0 FT
PP	Playback Processing	RECOMPUTE

Format: TEMP LOG_REP Vertical Scale: 5" per 100' Graphics File Created: 07-Jun-2013 10:51

OP System Version: 19C0-187

HBMS-B 19C0-187

Input DLIS Files

DEFAULT	Flip_HBMS_006LUP	PRODUCER	07-Jun-2013 10:39	7819.0 FT	7571.0 FT
DEFAULT	HBMS_008PUP	FN:5	PRODUCER	07-Jun-2013 10:46	-17.5 FT

Output DLIS Files

DEFAULT	HBMS_009PUP	FN:6	PRODUCER	07-Jun-2013 10:51
---------	-------------	------	----------	-------------------



HBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC
 Field: MAMM CREEK
 Well: ALP FEE 24-3D (J24NW)
 Run date: 7-Jun-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.34473, TOOL HBMS-BA2884. SENSOR S/N:
 34473
 090506
 12
 0708

GR HV Rt

Rt**0

Rt**1

Rt**0

+.200000000000e+04

+.190000000000e+04

Sensor Serial NB 2884
 Calib Date ddmmyy 290706
 Matrix Size 66
 Coeff CRC CA7A

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+7.746225778248E+04	+2.221418944849E-01	-.210426289152E-06
Fc**1	-.104881478055E+01	-.124860716120E-04	-.949662972749E-10
Fc**2	+8.72904863754E-06	+4.26833452654E-10	+7.59423319181E-15
Fc**3	+2.39319347612E-11	+2.290279345385E-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	-.812091932516E-10	-.147717591127E-14	-.150620854654E-19
Fc**1	+1.145644303959E-15	+1.60803895109E-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 2884
 Calib Date ddmmyy 290706
 Matrix Size 66
 Coeff CRC F21E

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+1.113897507996E+03	-.324965333678E-03	+6.97134219555E-08
Fb**1	-.601014483015E-02	+1.175847256148E-07	+1.180458009797E-12
Fb**2	-.317240807344E-07	+3.74112953741E-12	+1.133653042149E-17
Fb**3	-.236568542854E-12	+7.787205826536E-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	+8.81675188724E-13	-.146952444192E-16	-.415359060767E-21
Fb**1	-.553774805449E-18	-.739378844697E-21	0.0
Fb**2	0.0	0.0	0.0
Fb**3	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 2884
 Calib Date ddmmyy 290706
 Matrix Size 16
 Coeff CRC 72C9

Clock Freq Coeff

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2
(Fb'-Fc')**0	+310161623072E+05	+363878692519E-02	+311171630292E-06
	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	-.277965051815E-10	-.181738305366E-14	-.633170122188E-20

PBMS Quartz Gauge type F

Sonde Serial NB :
 Sensor Serial NB 2884
 Calib Date ddmmyy 290706
 Matrix Size 16
 Coeff CRC 3E80

Clock Temp Coeff

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2
(Fb'-Fc')**0	+111177101155E+03	-.545261137223E-02	-.112186276799E-06
	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	+756690675632E-11	-.207457772298E-16	-.121623071907E-19

Company: **ENCANA OIL & GAS (USA) INC**



Well: **ALP FEE 24-3D (J24NW)**

Field: **MAMM CREEK**

County: **GARFIELD**

State: **COLORADO**

TEMPERATURE LOG
 CCL - TEMPERATURE