

Schlumberger

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER FEE 31-13C

Field: MAMM CREEK

County: GARFIELD State: COLORADO

TEMPERATURE LOG  
GAMMA RAY - CCL - TEMPERATURE

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 208 FSL & 2021 FEL

Well: SHIDELER FEE 31-13C

Company: ENCANA OIL & GAS (USA) INC

LOCATION		GROUND LEVEL		Elev.:			
SHL: 208 FSL & 2021 FEL		Permanent Datum:		K.B.	7129.00 ft		
BHL: 538 FSL & 38 FWL		Log Measured From: KELLY BUSHING		G.L.	7107.00 ft		
		Drilling Measured From: KELLY BUSHING		D.F.	7128.00 ft		
API Serial No. 05-045-21736-00		Section 31	Township 7S	Range 92W			
Logging Date 10-Dec-2012							
Run Number	1						
Depth Driller	9100 ft						
Schlumberger Depth	7300 ft						
Bottom Log Interval	7300 ft						
Top Log Interval	22 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							
To							
Casing/Tubing Size	0.000 in						
Weight	11.6 lbm/ft						
Grade							
From							
To							
Maximum Recorded Temperatures	193 degF						
Logger On Bottom	10-Dec-2012	Time	13:00				
Unit Number	391	GRAND JUNCTION					
Recorded By	JASON BARRY						
Witnessed By	MIKE OLSON						

PVT DATA						Run 1	Run 2	Run
Oil Density								
Water Salinity								
Gas Gravity								
Bo								
Bw								
1/Bq								
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		Time						
Unit Number								
Recorded By								
Witnessed By								

## DEPTH SUMMARY LISTING

Date Created: 29-AUG-2012 2:29:56

### 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:	5006	Serial Number:	
Calibration Date:	24-APR-2012	Calibration Date:	26-JUL-2012	Length:	19000 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878	Conveyance Method: Wireline Rig Type: LAND	
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10		
Wheel Correction 1:	-3	Calibration RMS:	6		
Wheel Correction 2:	-4	Calibration Peak Error:	10		

### Depth Control Parameters

Log Sequence: First Log In the Well

Rig Up Length At Surface: 200.00 FT

Rig Up Length At Bottom: 200.00 FT

Rig Up Length Correction: 0.00 FT

Stretch Correction:

Tool Zero Check At Surface:

### Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH PROCEDURES USED
2. PRIMARY DEPTH CONTROL: IDW
3. SECONDARY DEPTH CONTROL: DRUM COUNTER (SWPT)
- 4.
- 5.
- 6.

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#### OTHER SERVICES1

OS1: NONE

OS2:

OS3:

OS4:

OS5:

#### OTHER SERVICES2

OS1:

OS2:

OS3:

OS4:

OS5:

REMARKS: RUN NUMBER 1

FIRST RUN IN HOLE

TOOL RAN AS PER TOOL SKETCH

ENTRANCE TIME: 12:30

TIME LOGGER AT BOTTOM: 13:15

EXIT TIME: 14:00

REMARKS: RUN NUMBER 2

CREW: JASON BARRY, MATT BROWN, WALEED AZIZ, KELLY JOHNS	
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY	

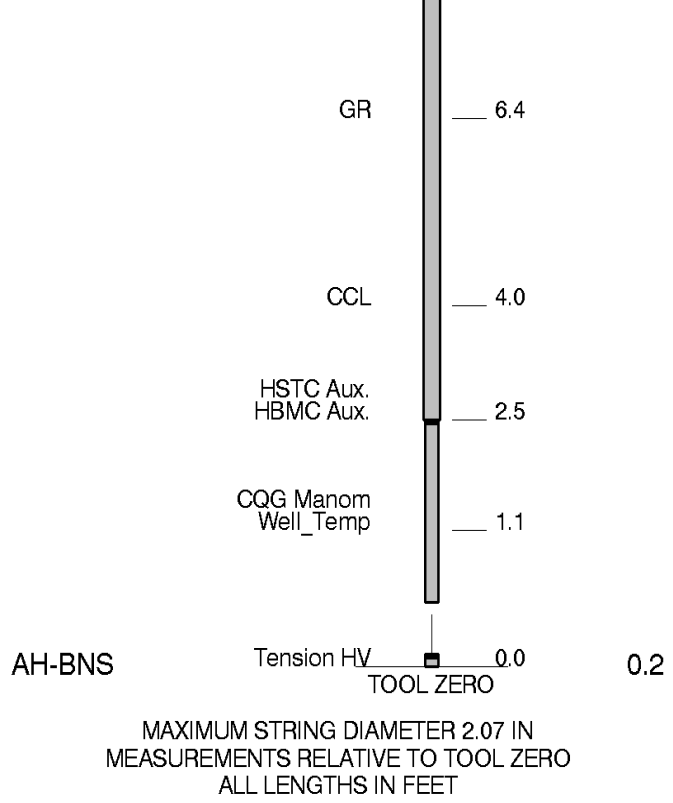
[illegible]

WITM-A PSC_16MHZ	SURFACE EQUIPMENT	
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MH-22		13.1
MH-22		

AH-38	Detail MT		11.6
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HBMS-B

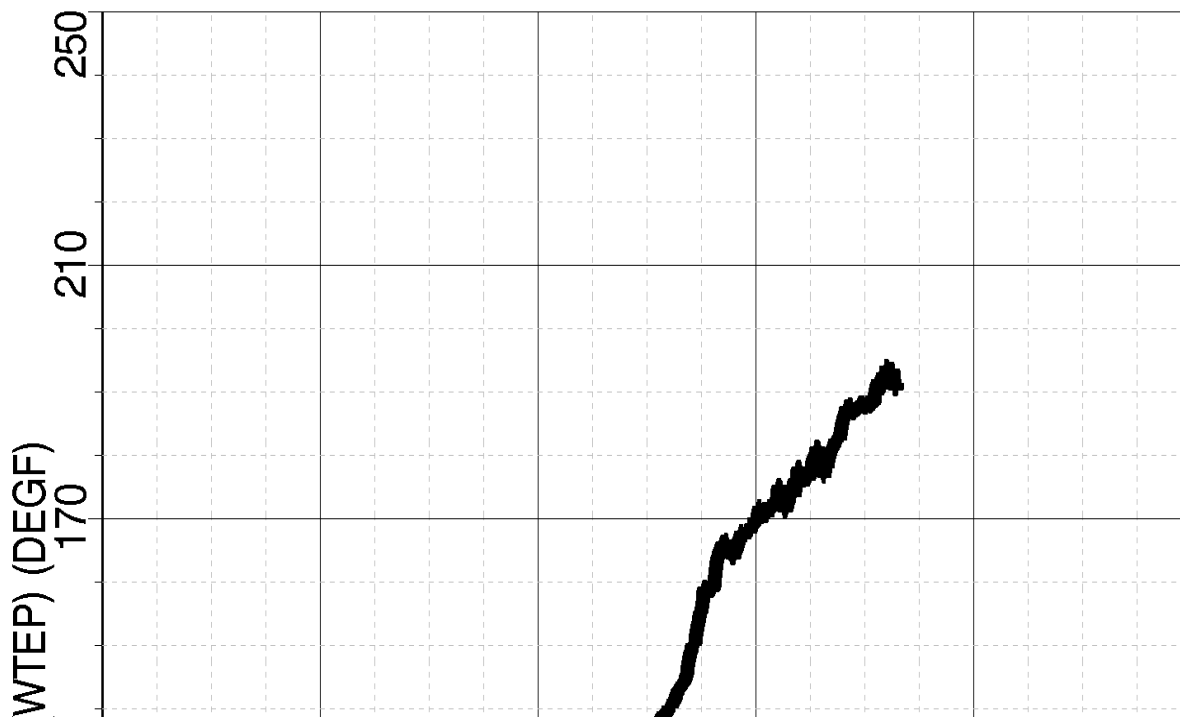


Schlumberger

## TEMPERATURE PLOT

MAXIS Field Log

Index: 7299.5 - -11.0 FT

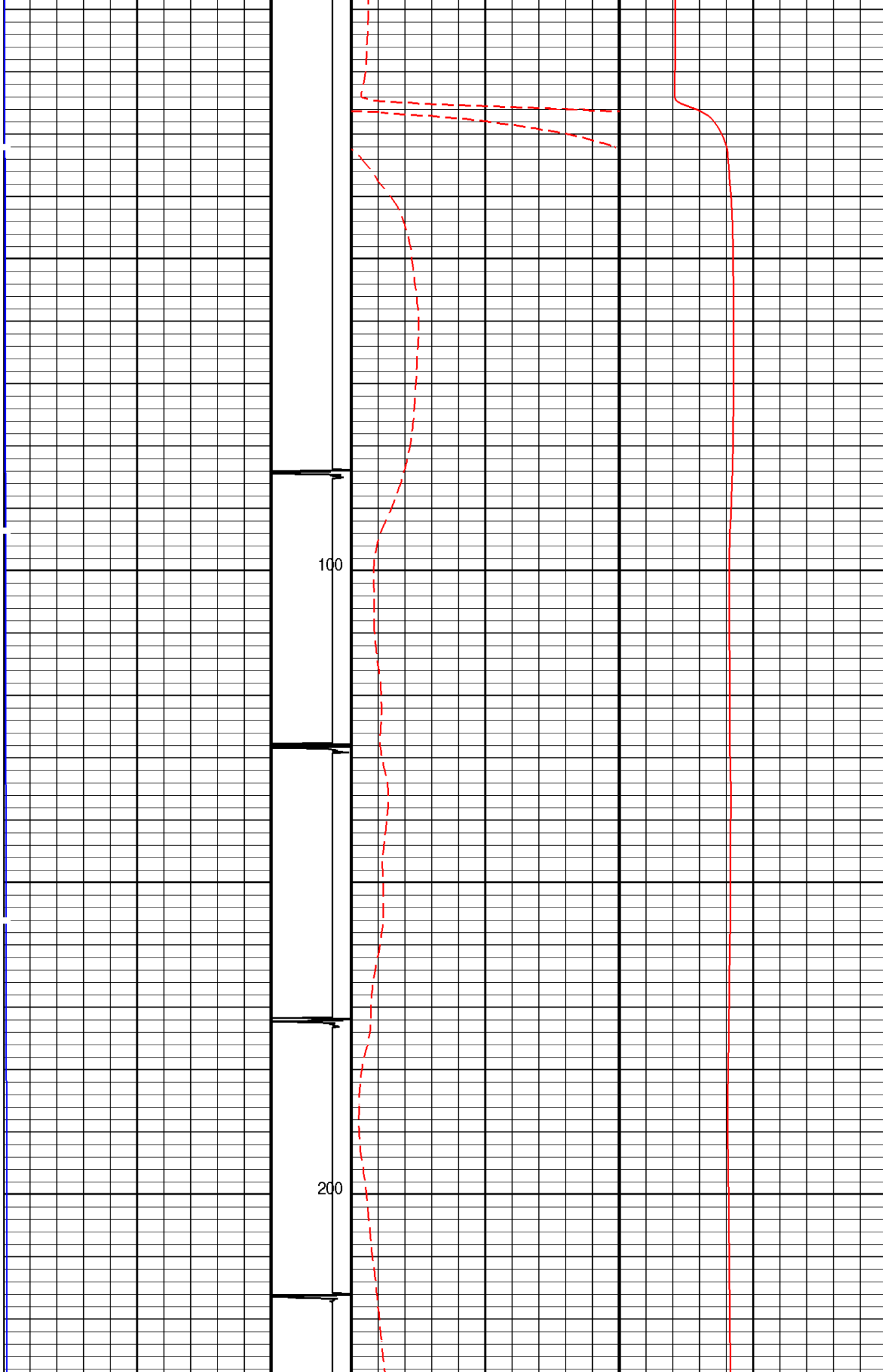


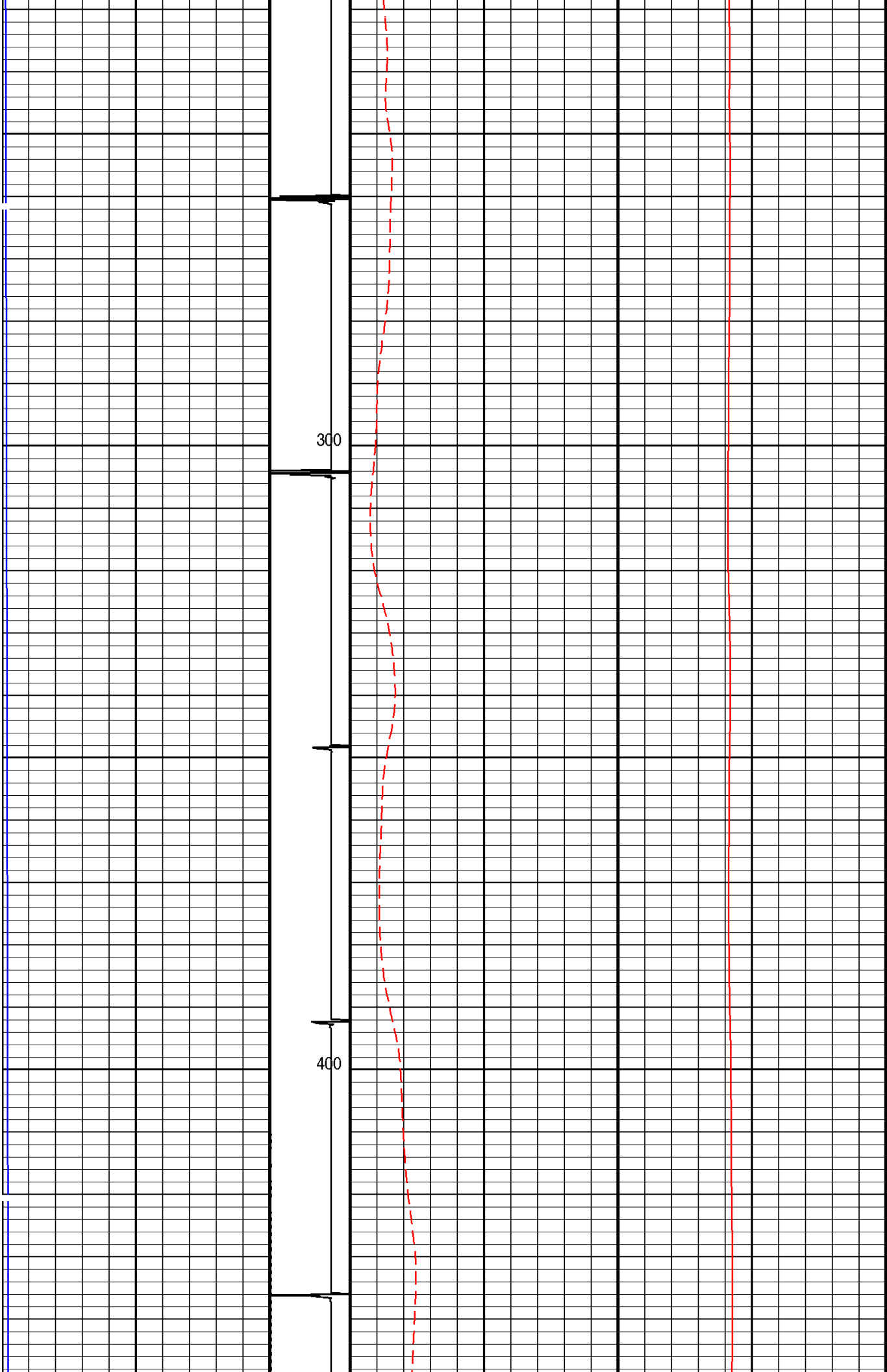


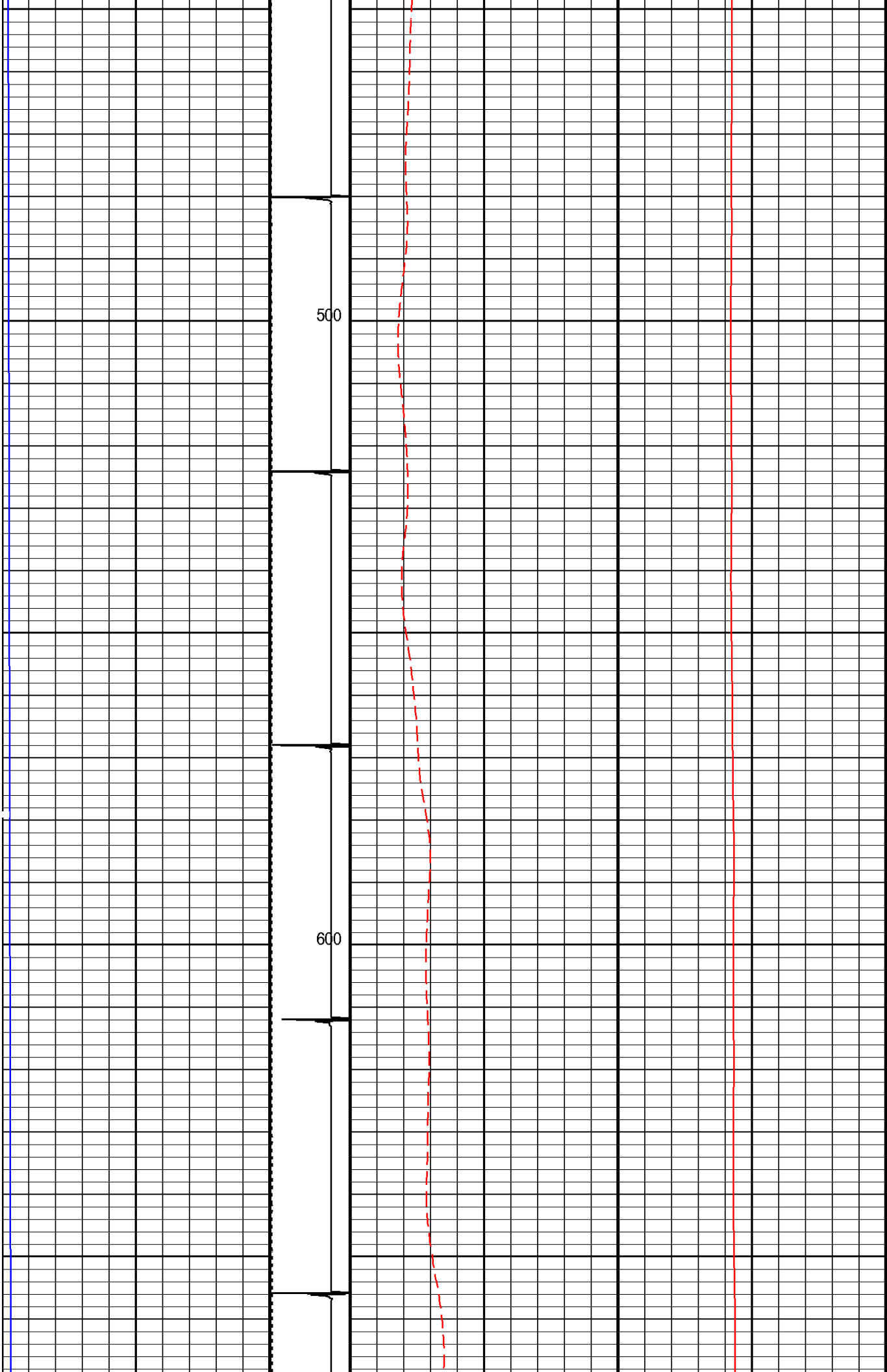
MAXIS Field Log

Well: SHIDELER FEE 31-13C

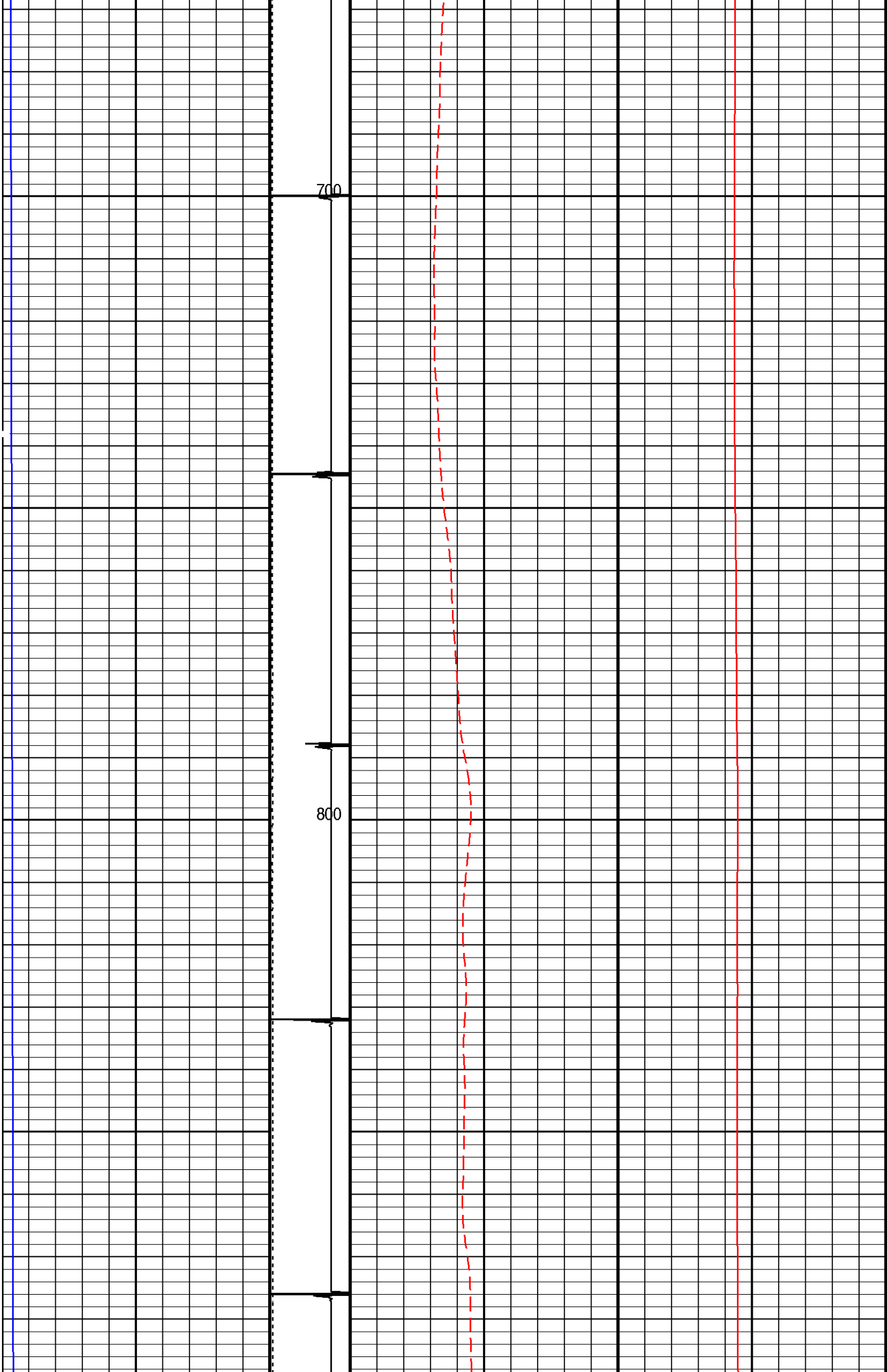
	Discriminat ed CCL (CCLD)		
	3 (V) -1		
Well Pressure (WPRE) 0 (PSIA) 10000	Tension (TENS) (LBF) 0 2000	Well Temperature (WTEP) 0 (DEGF) 200	Well Temperature (WTEP) 0 (DEGF) 200

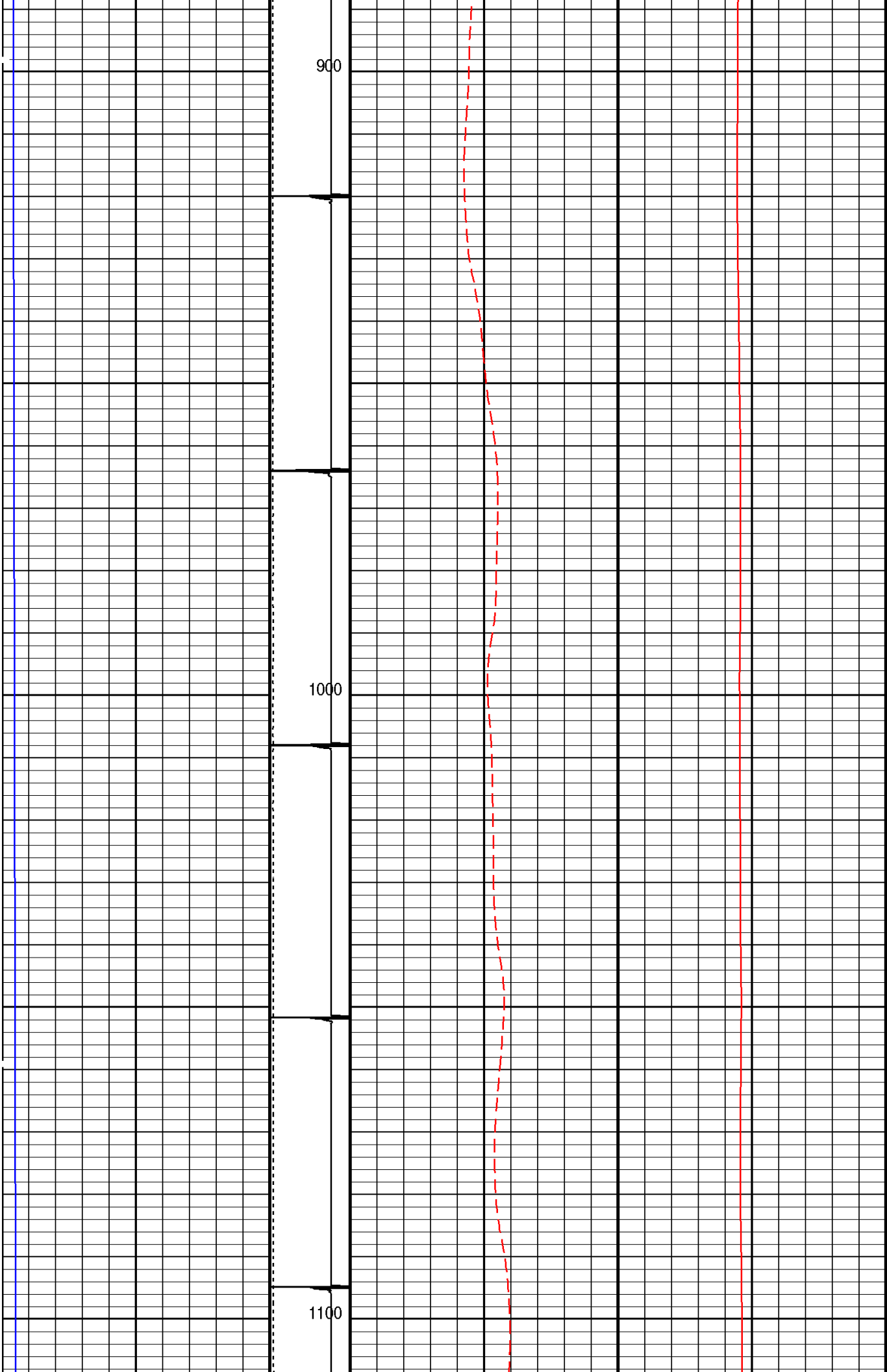


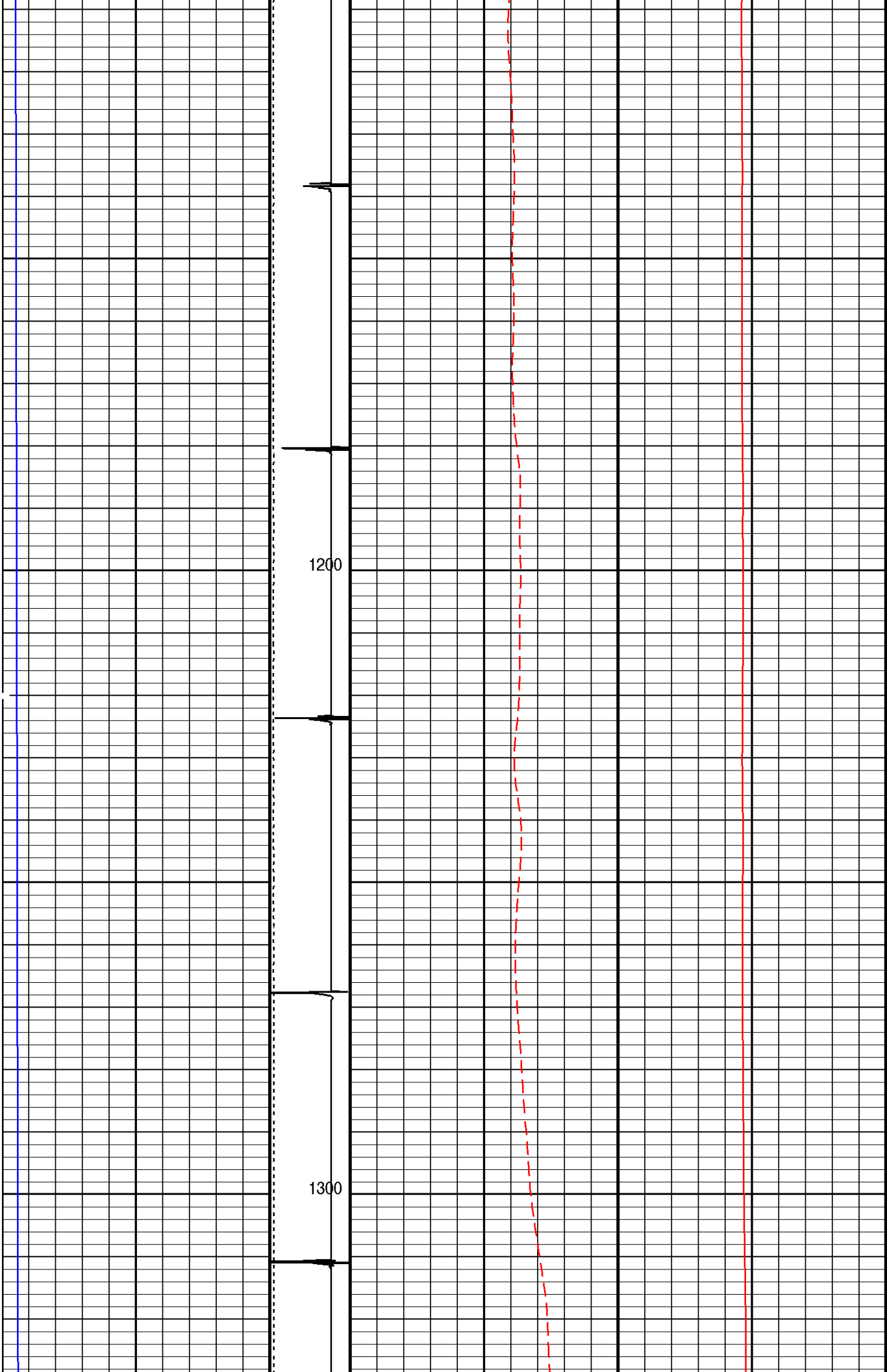


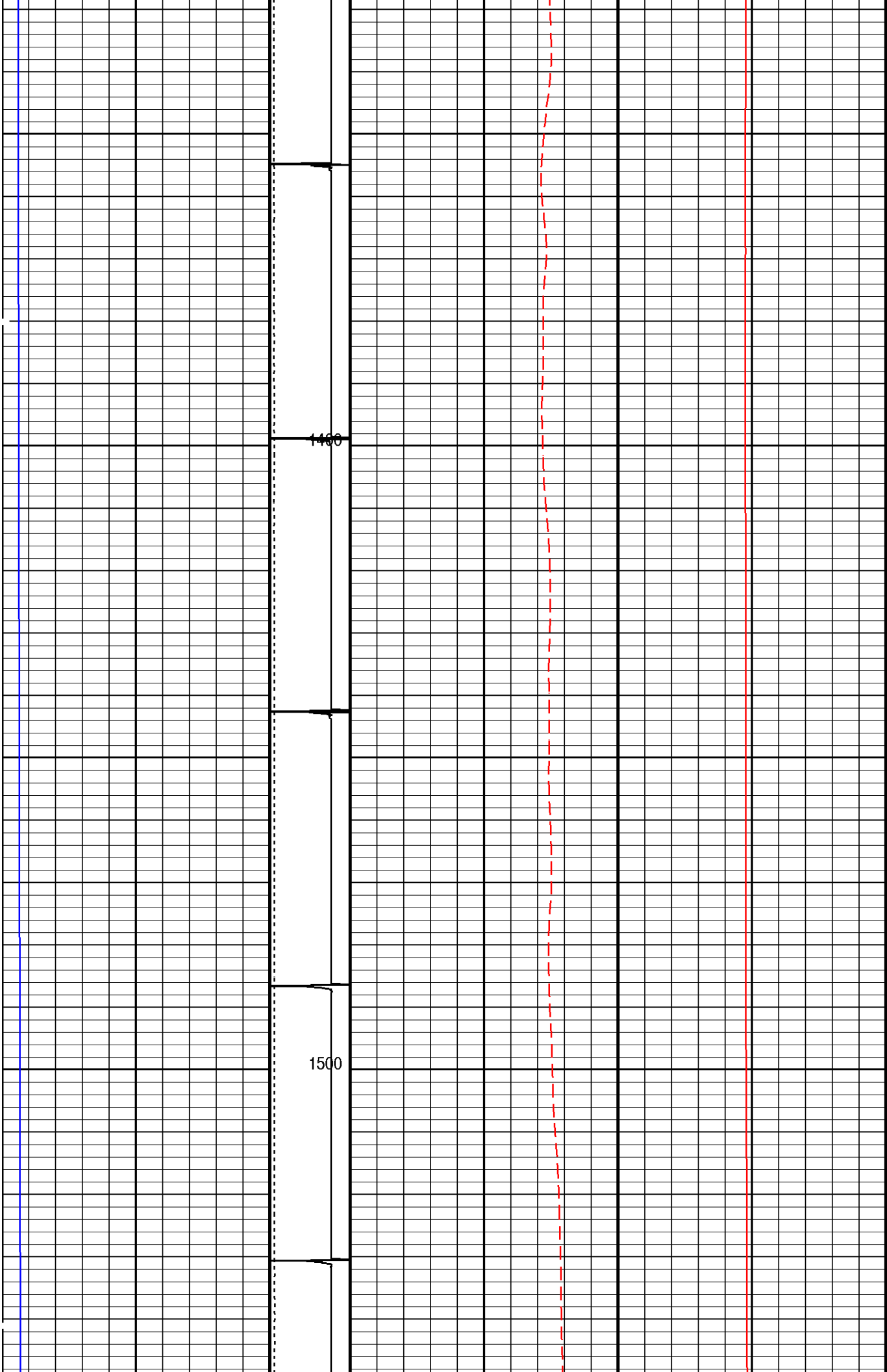


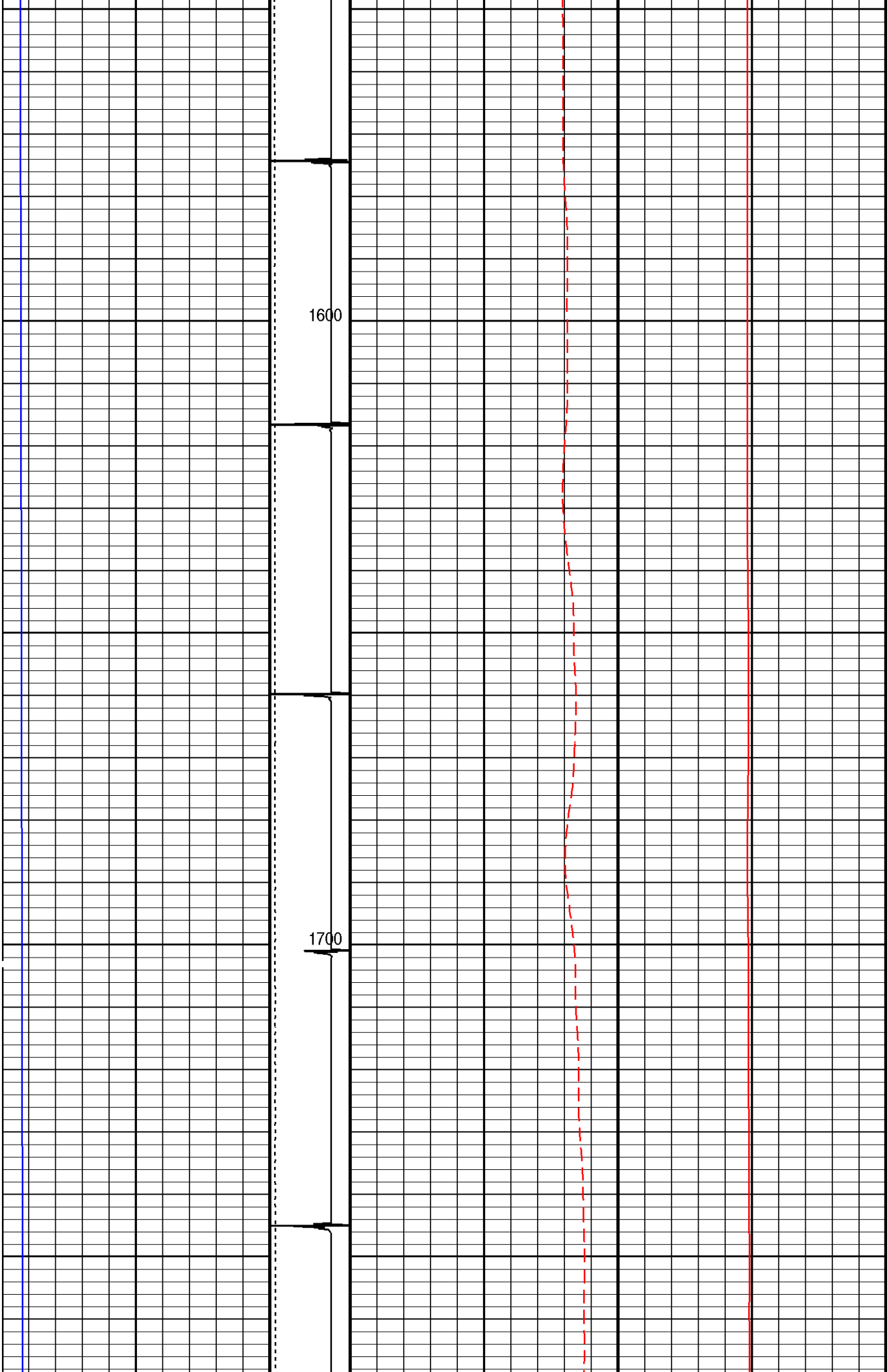


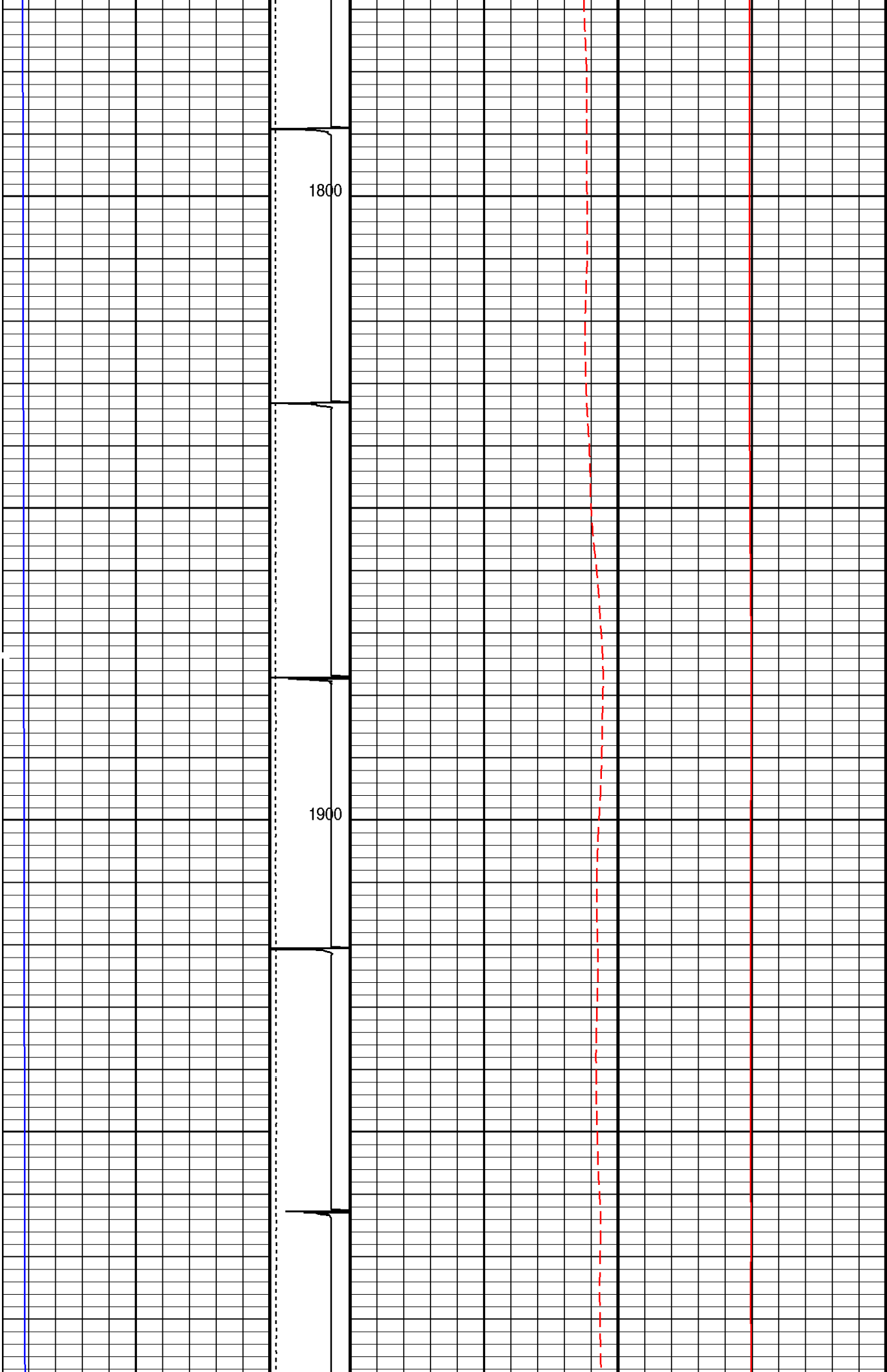








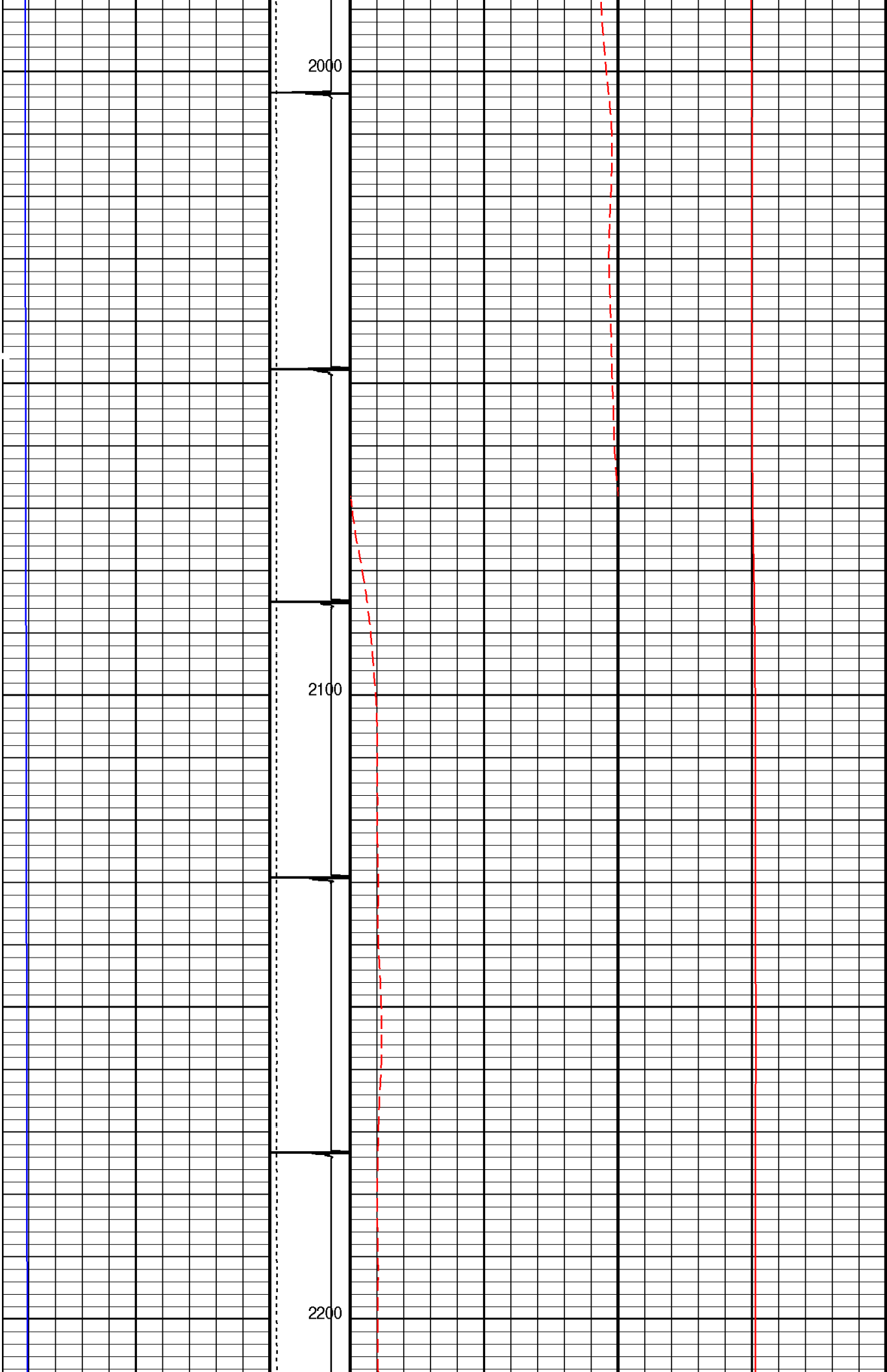


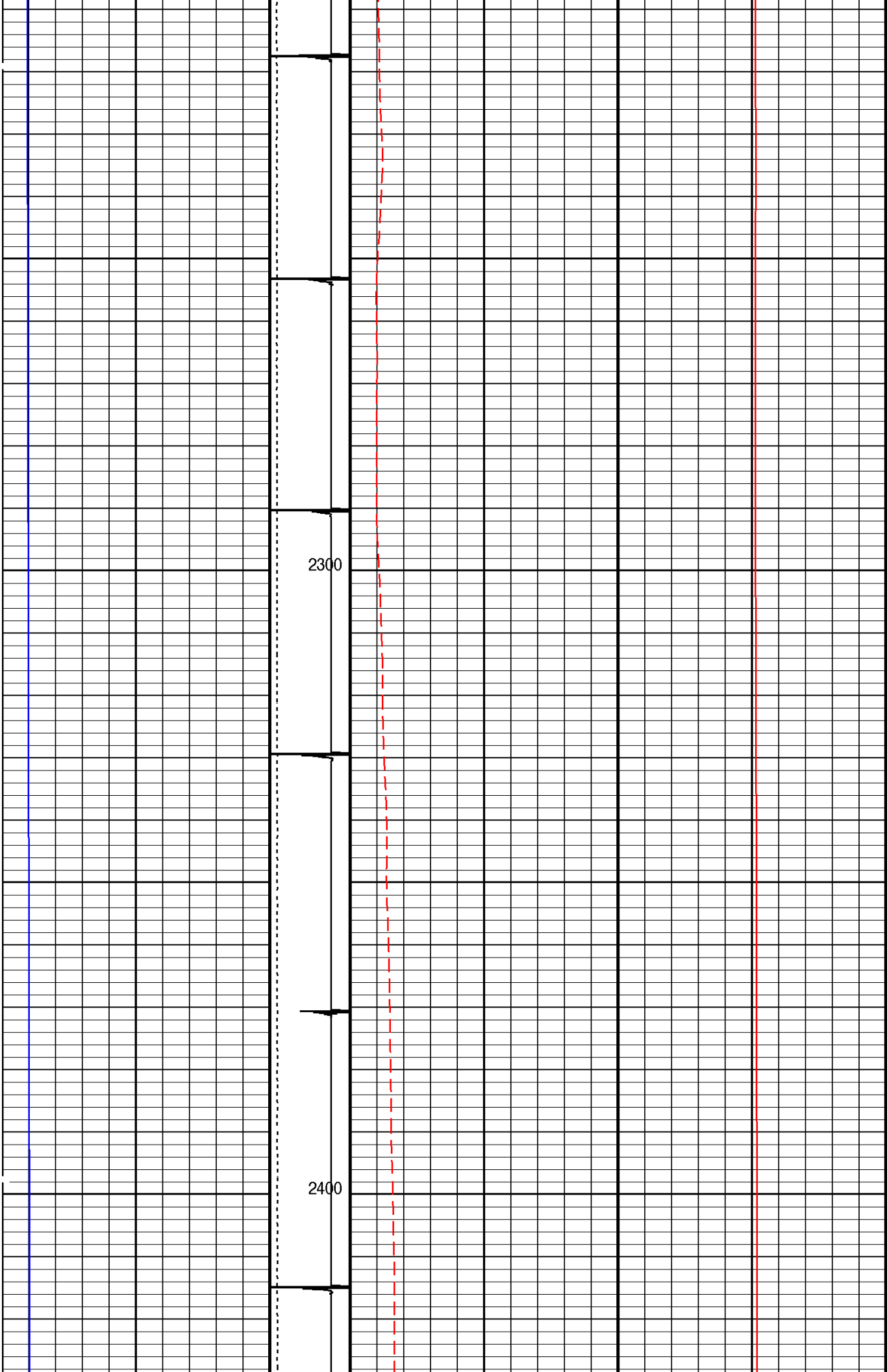


2000

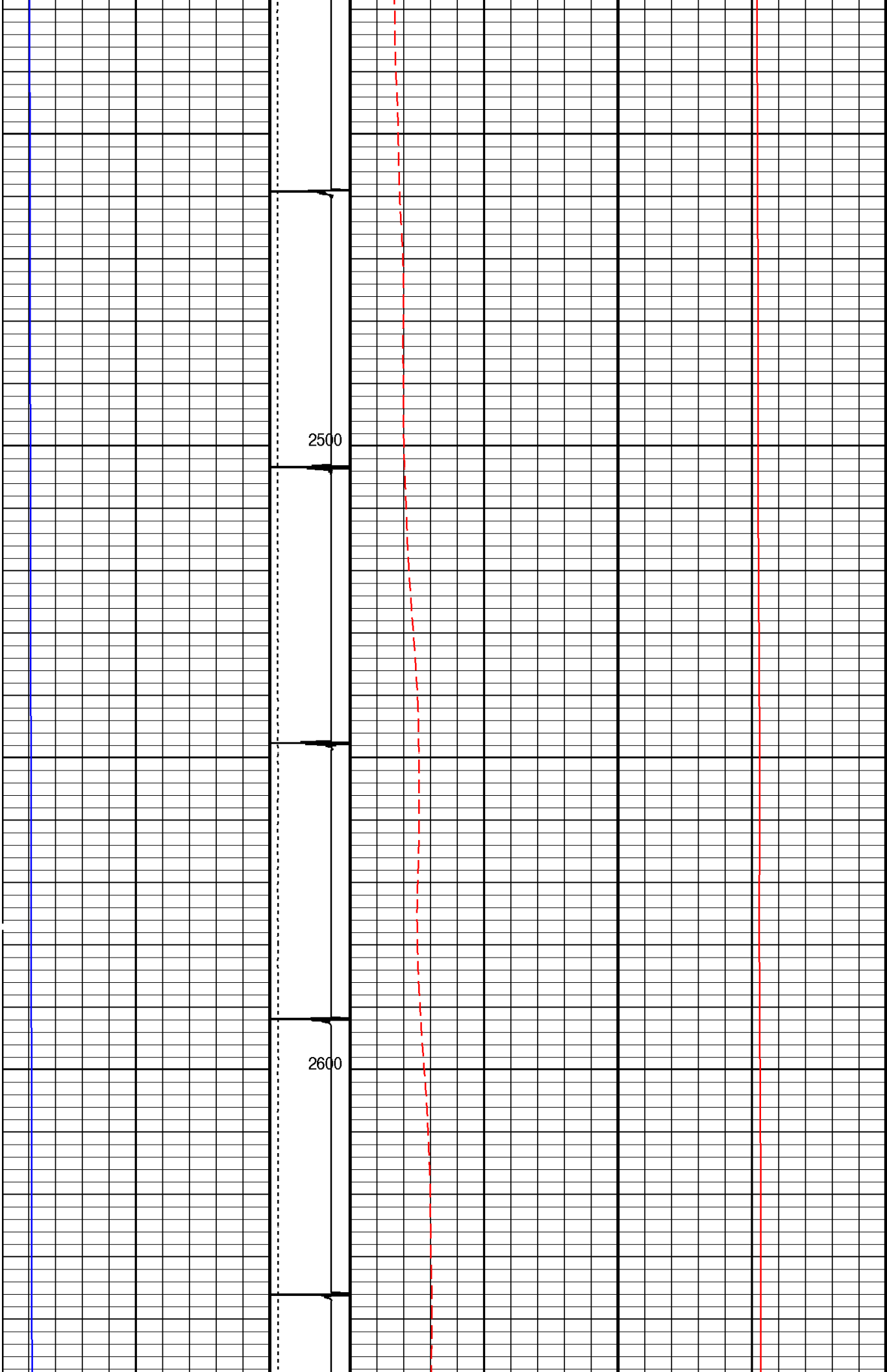
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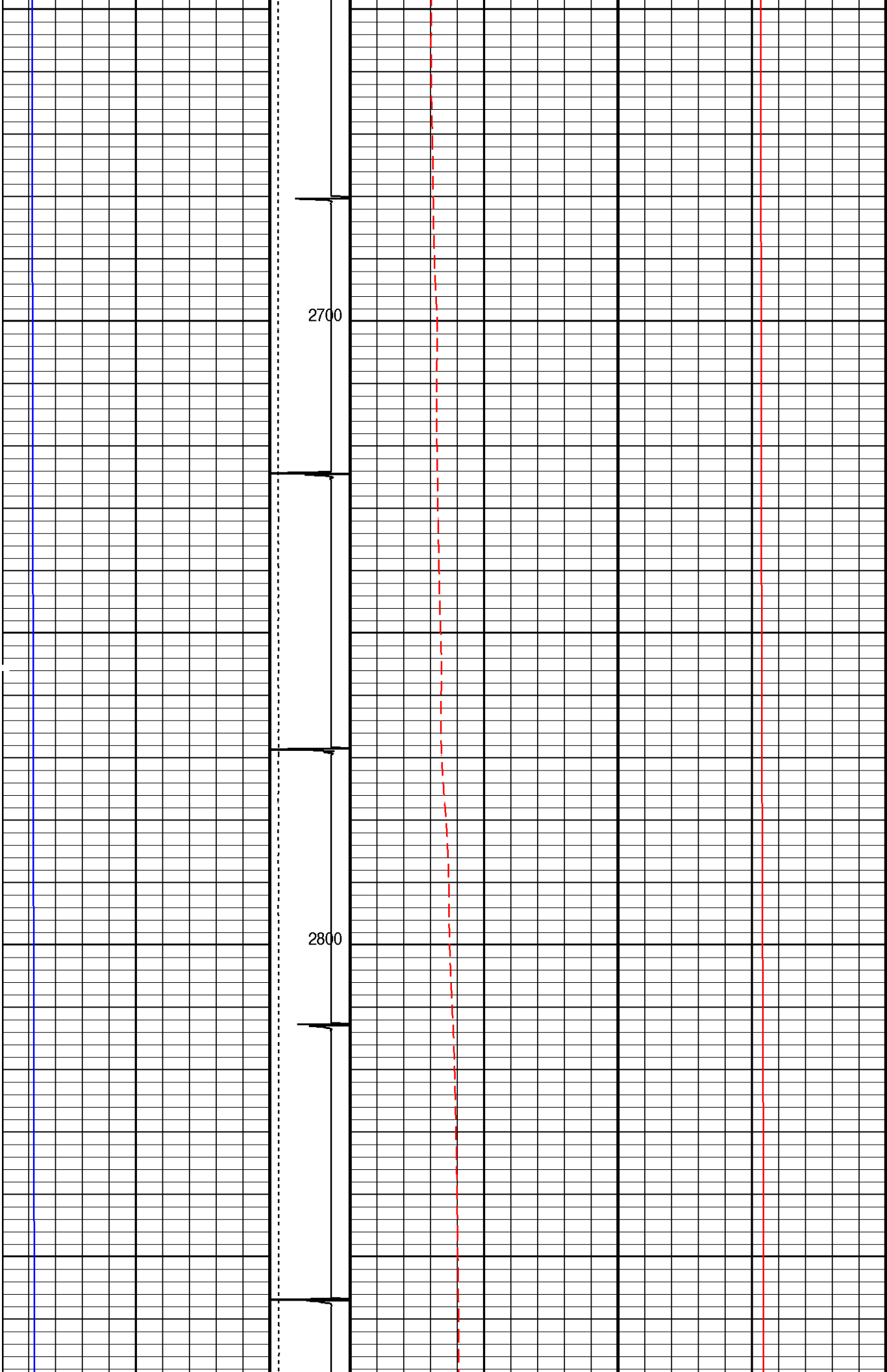
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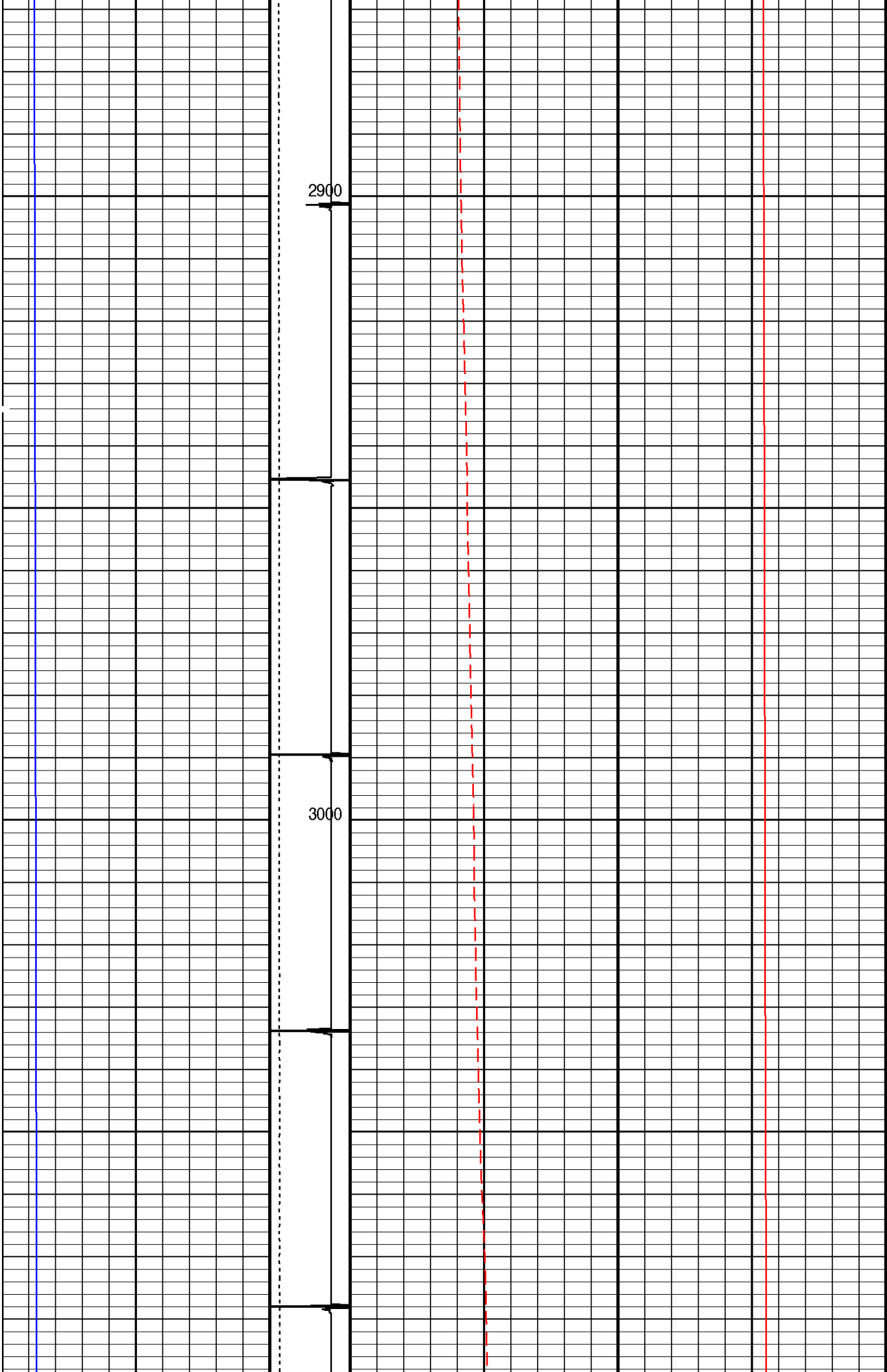


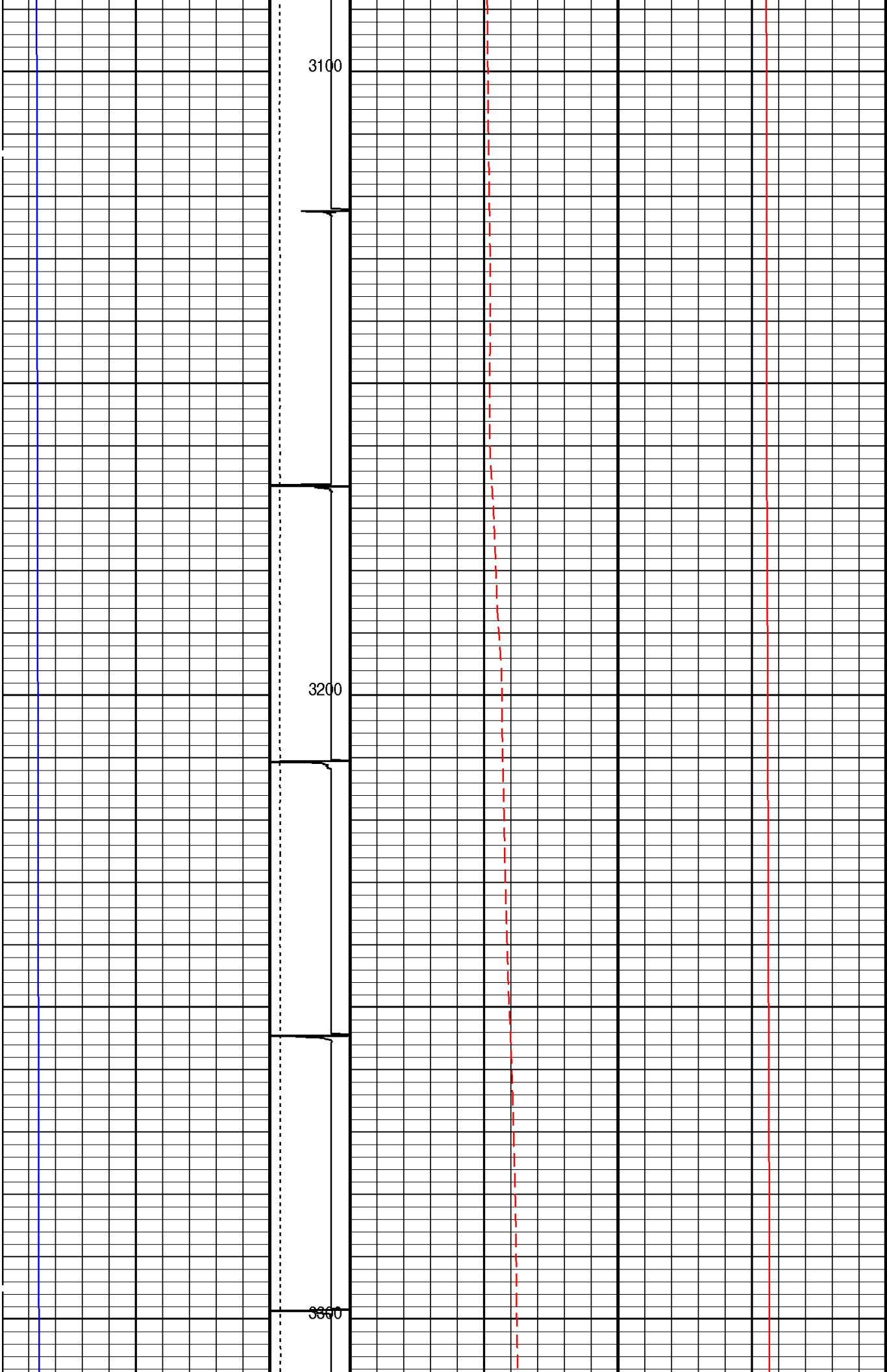


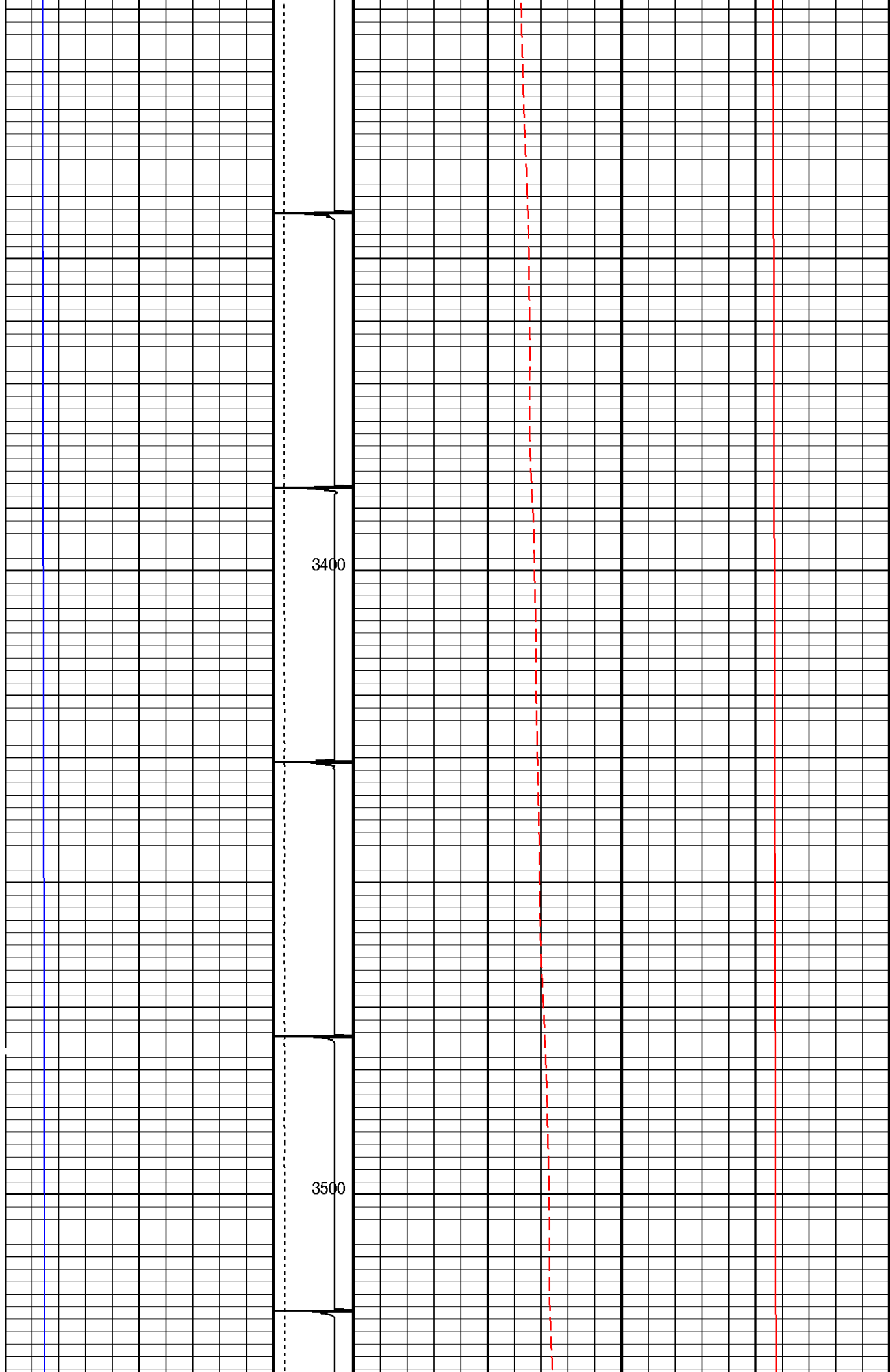


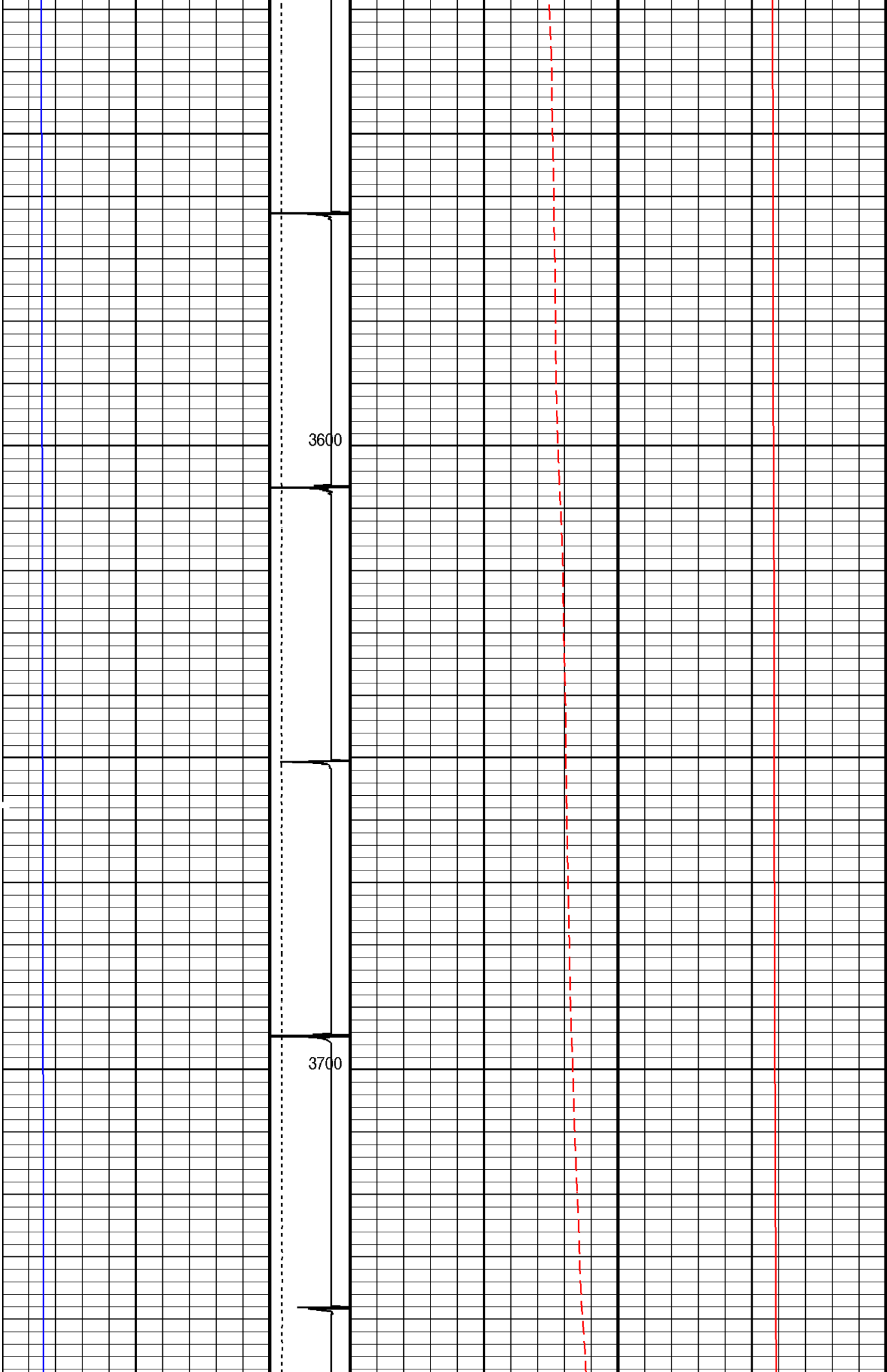


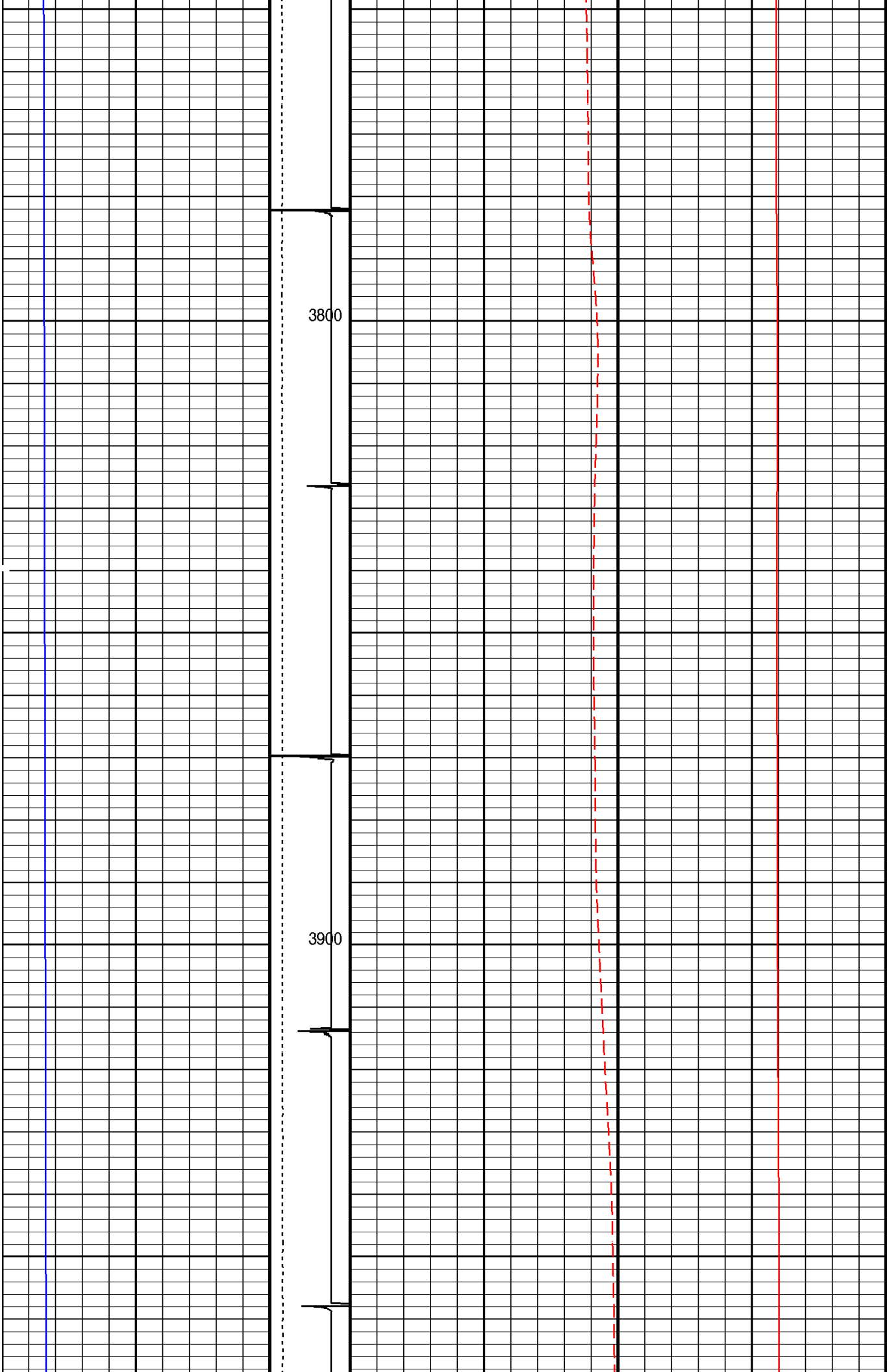








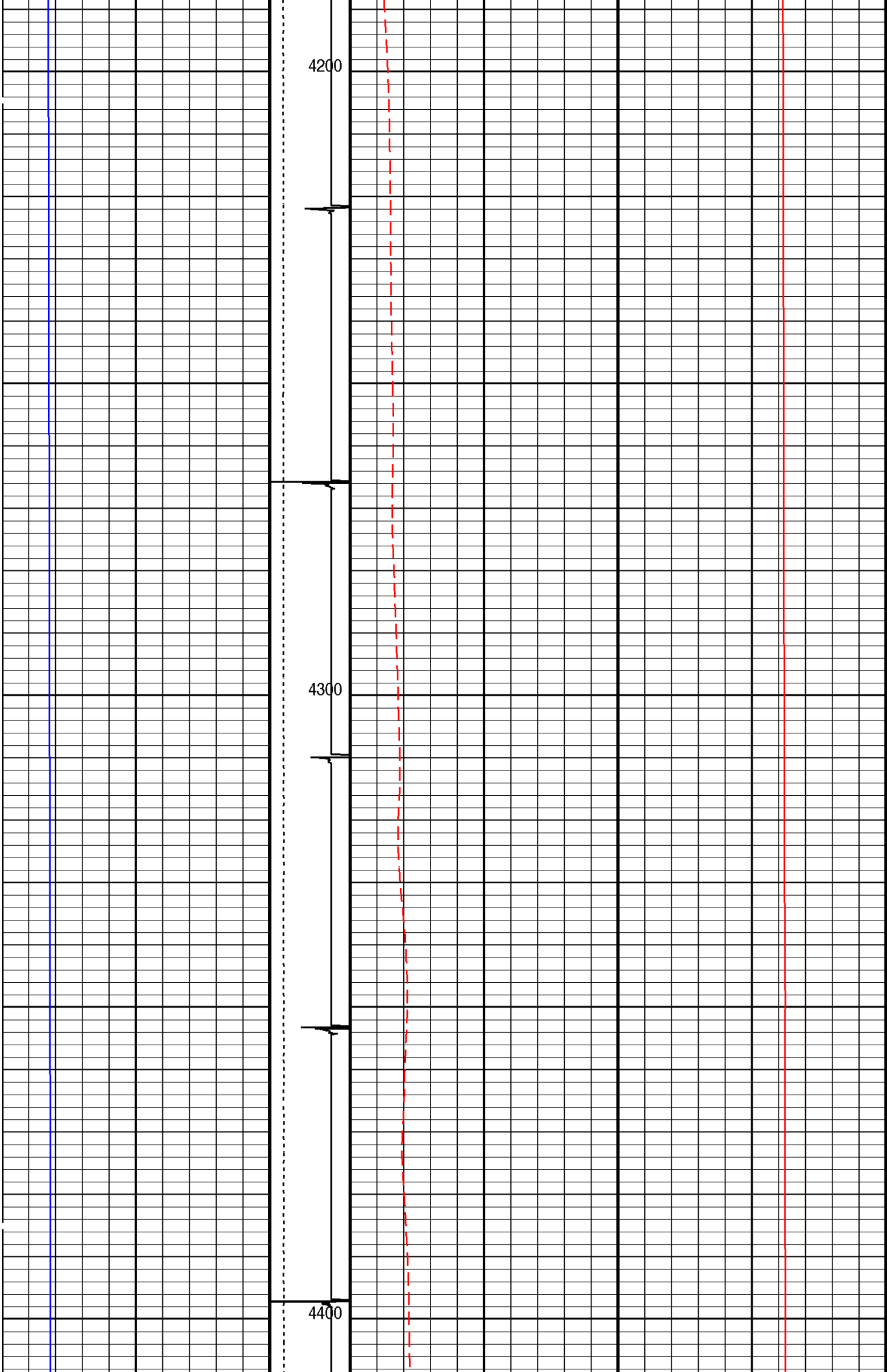


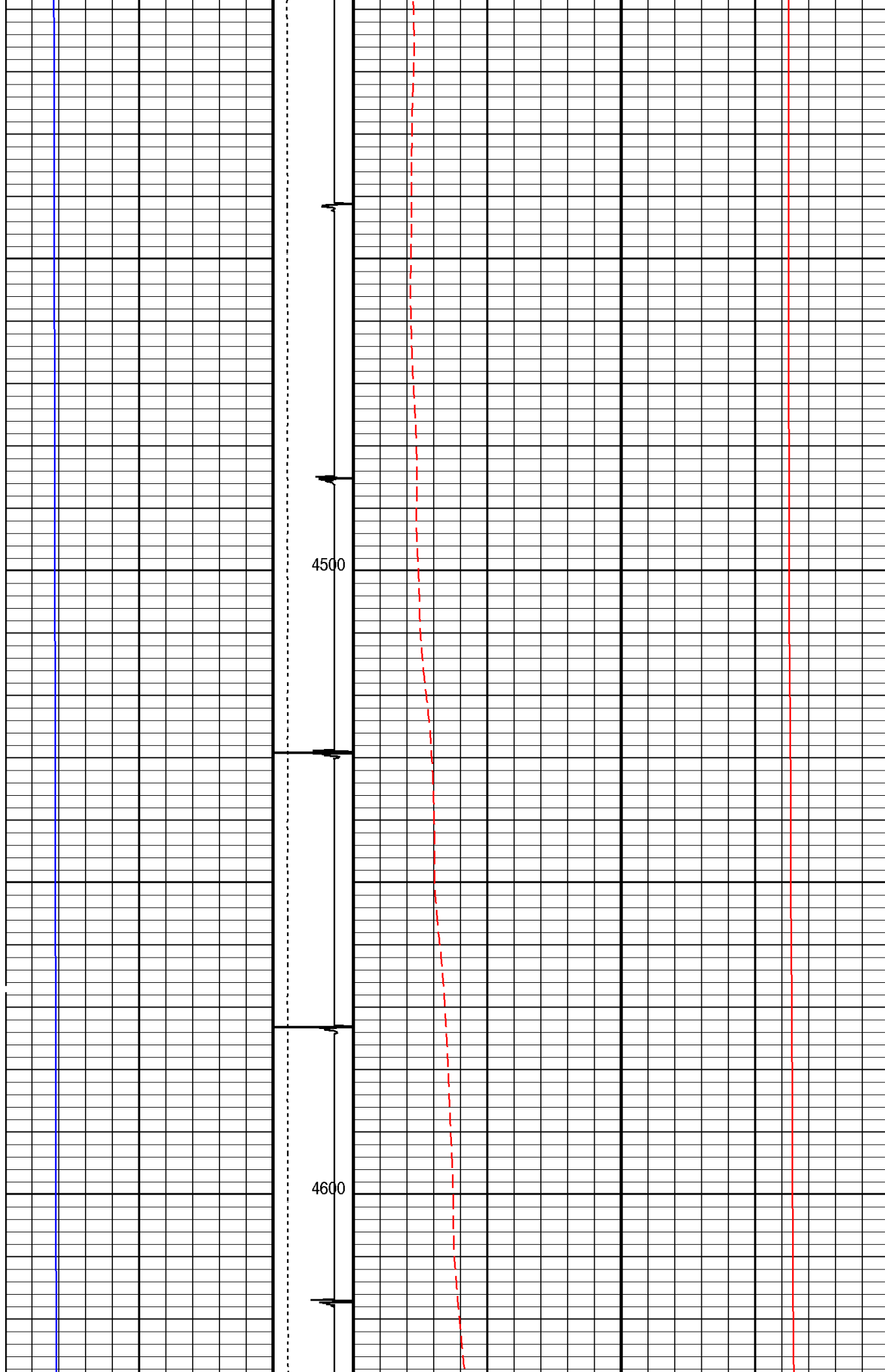


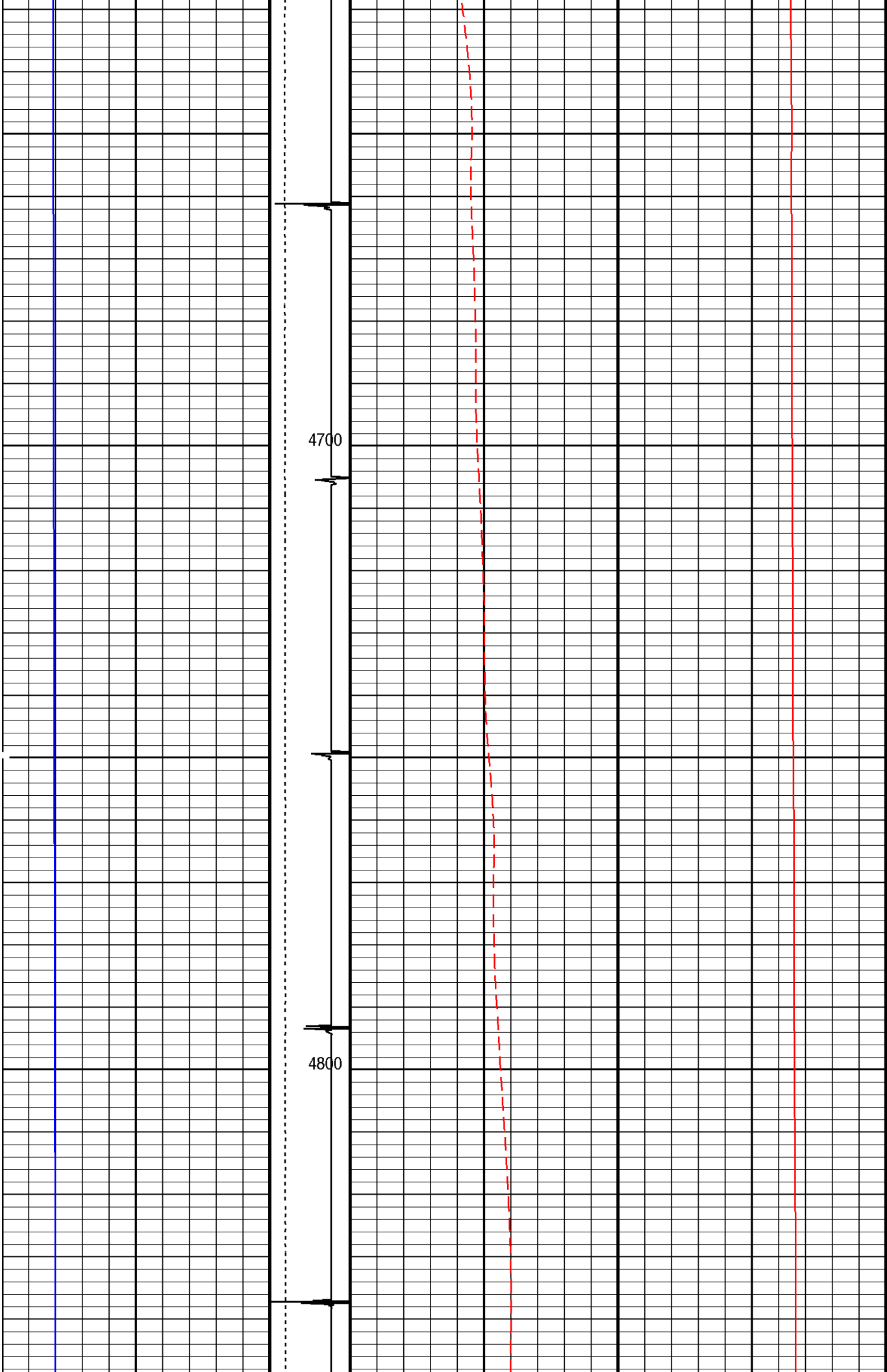
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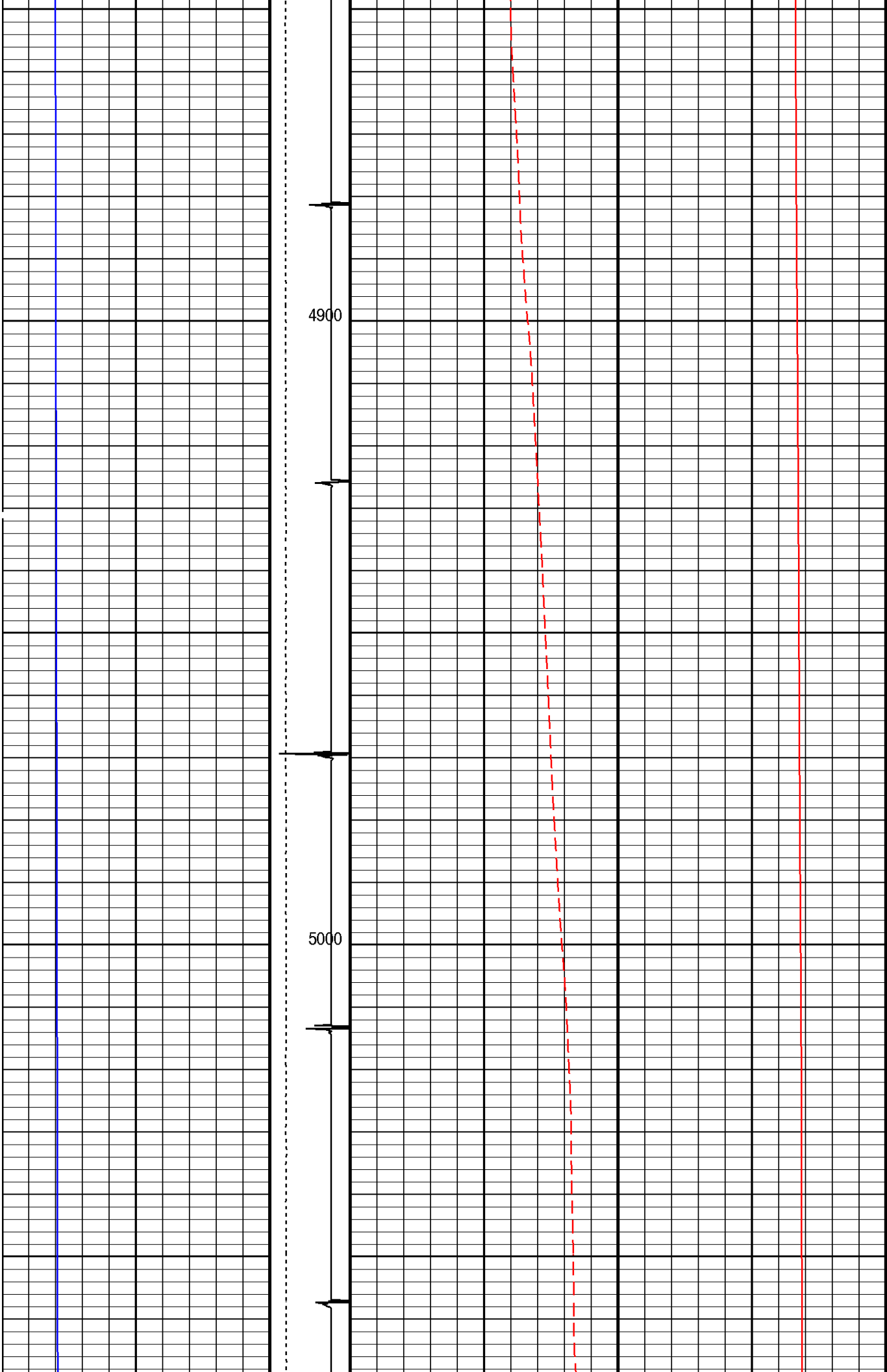
4100

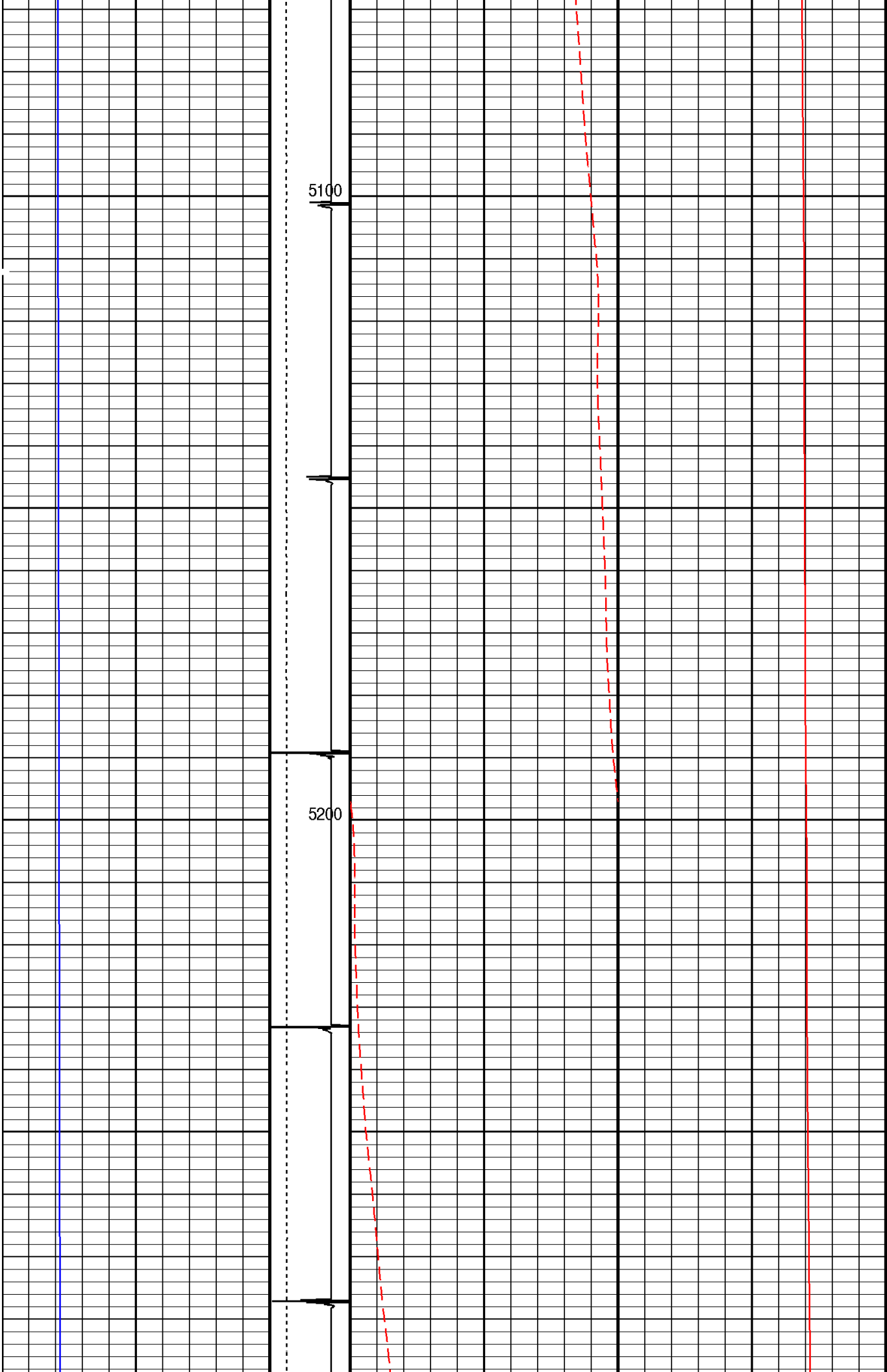


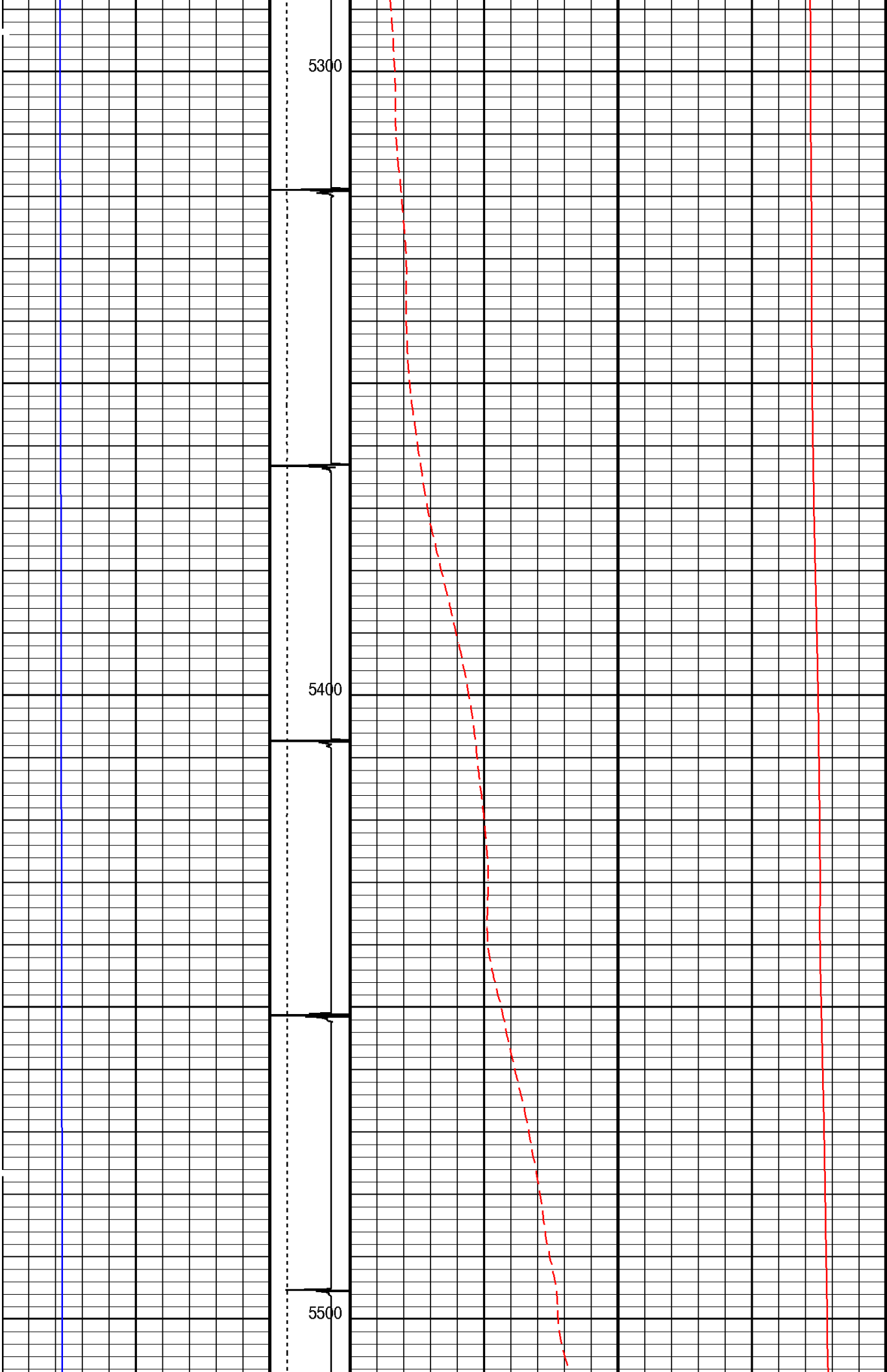


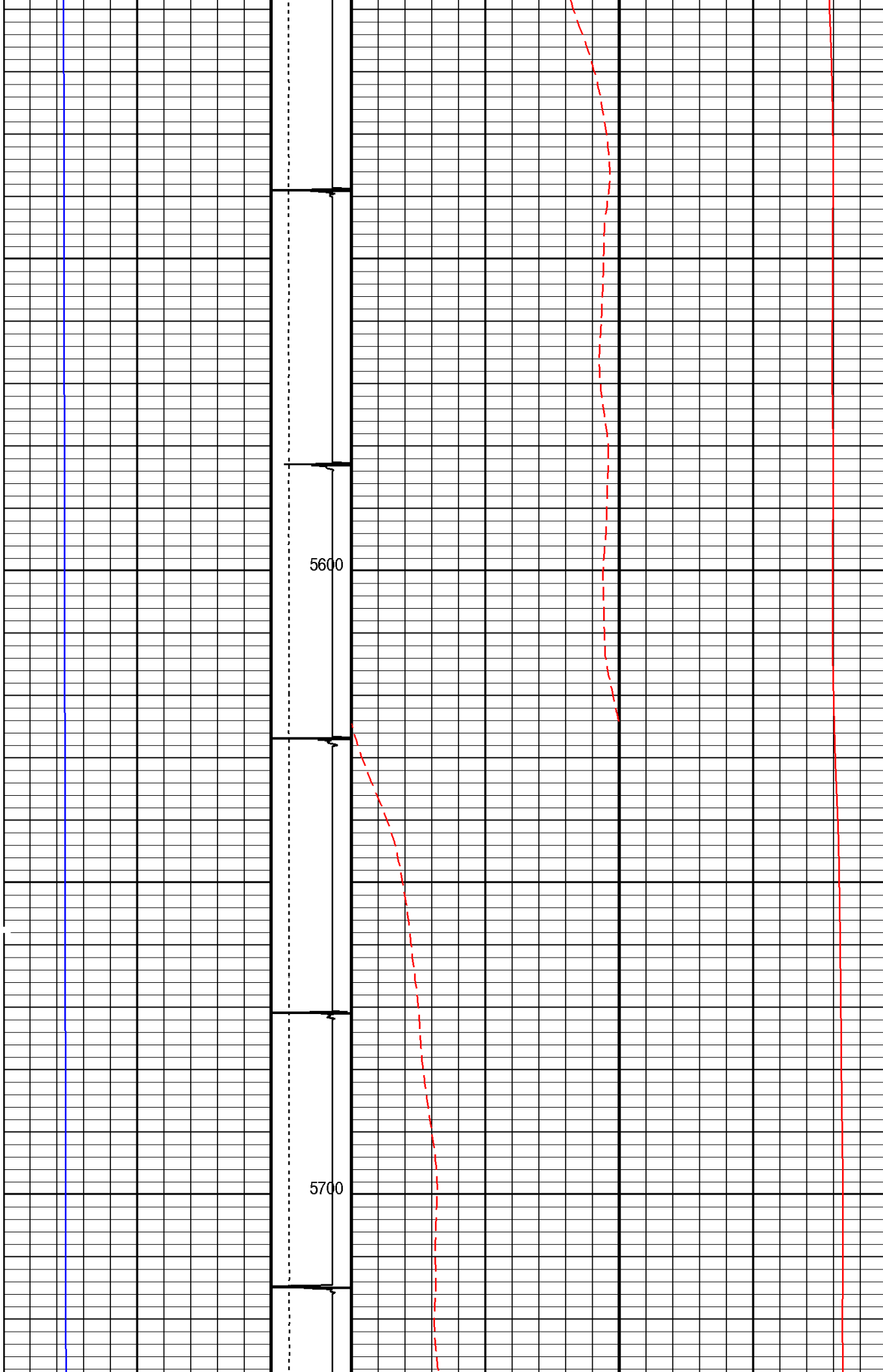


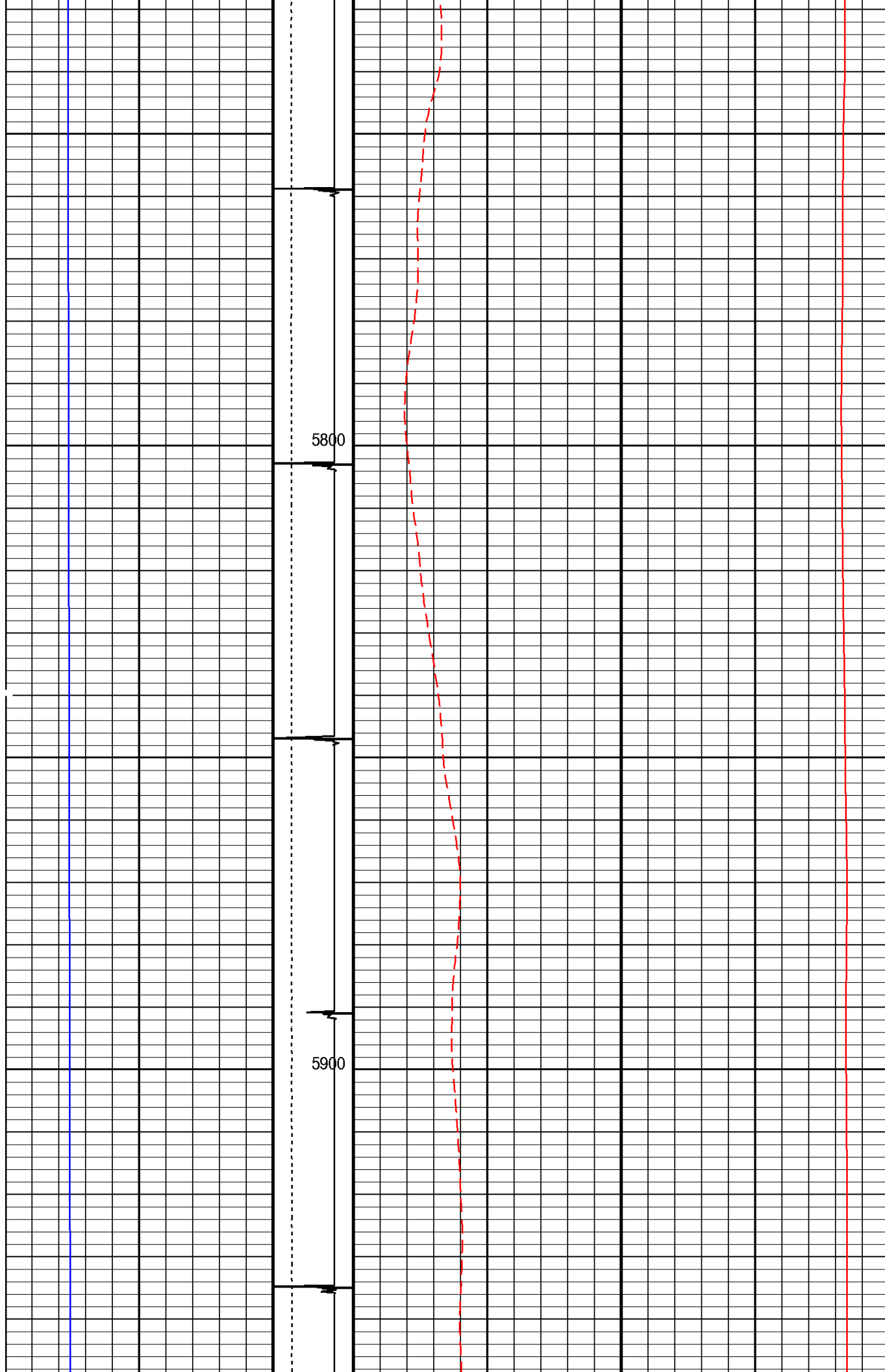




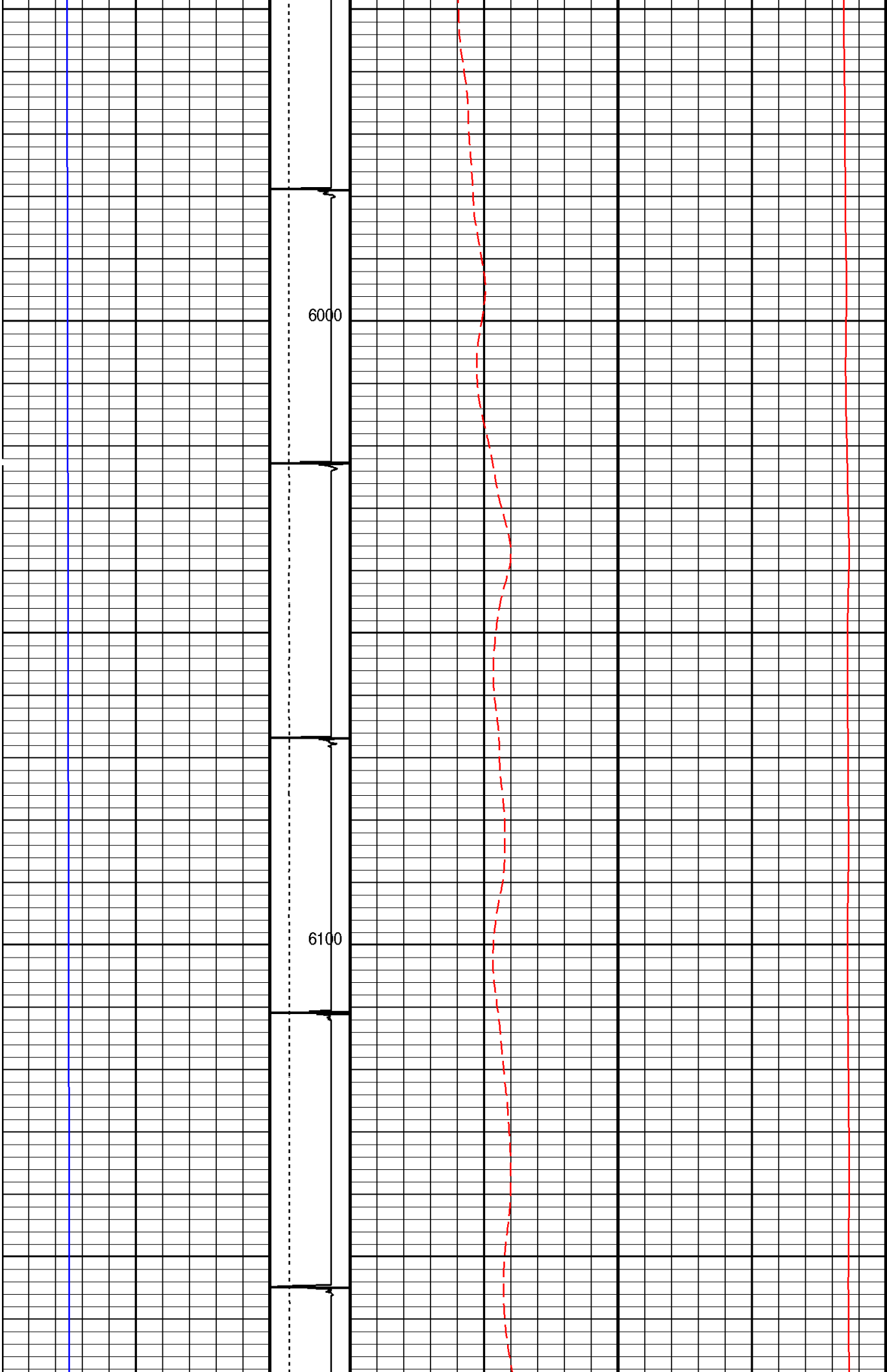


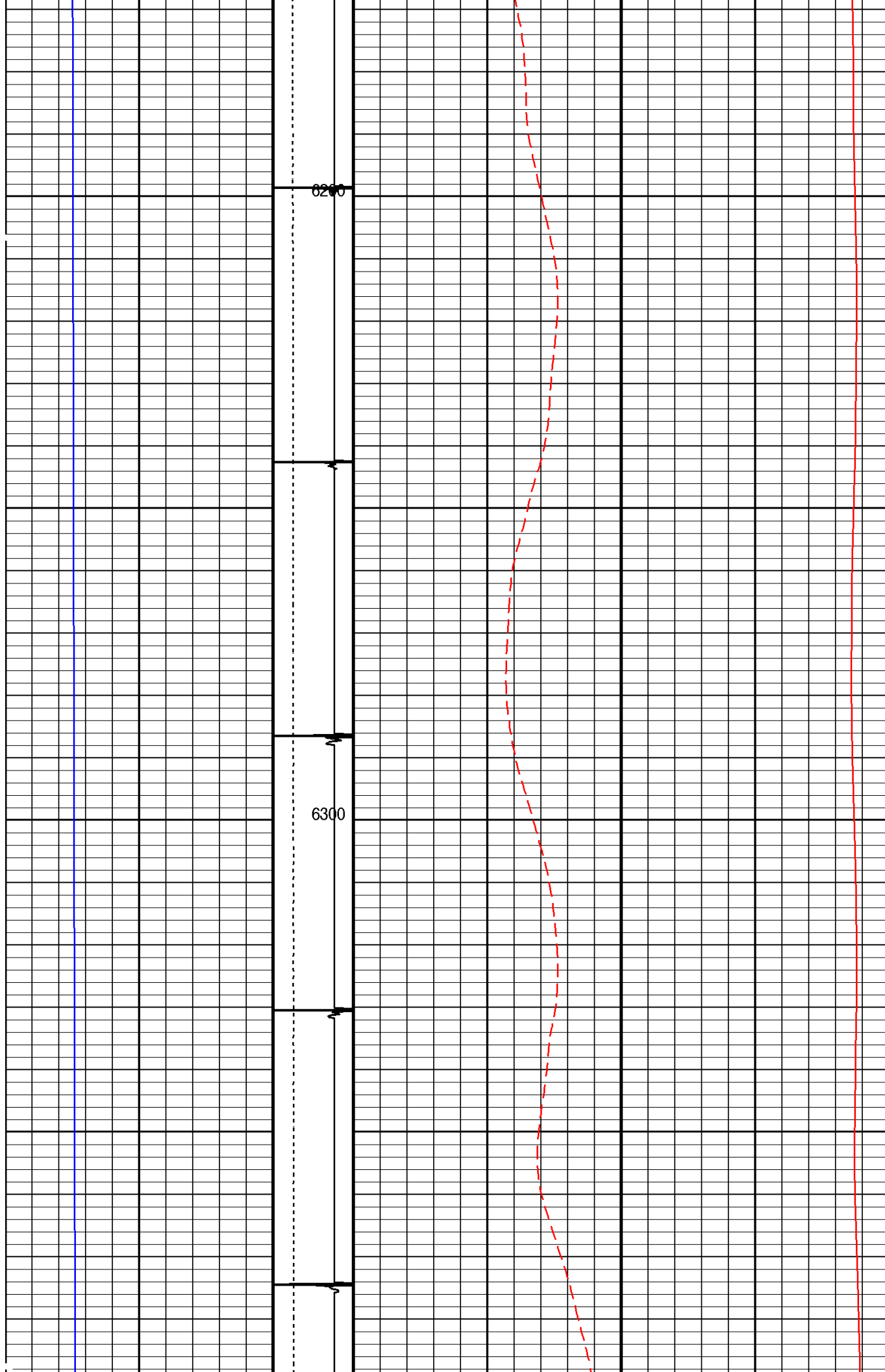


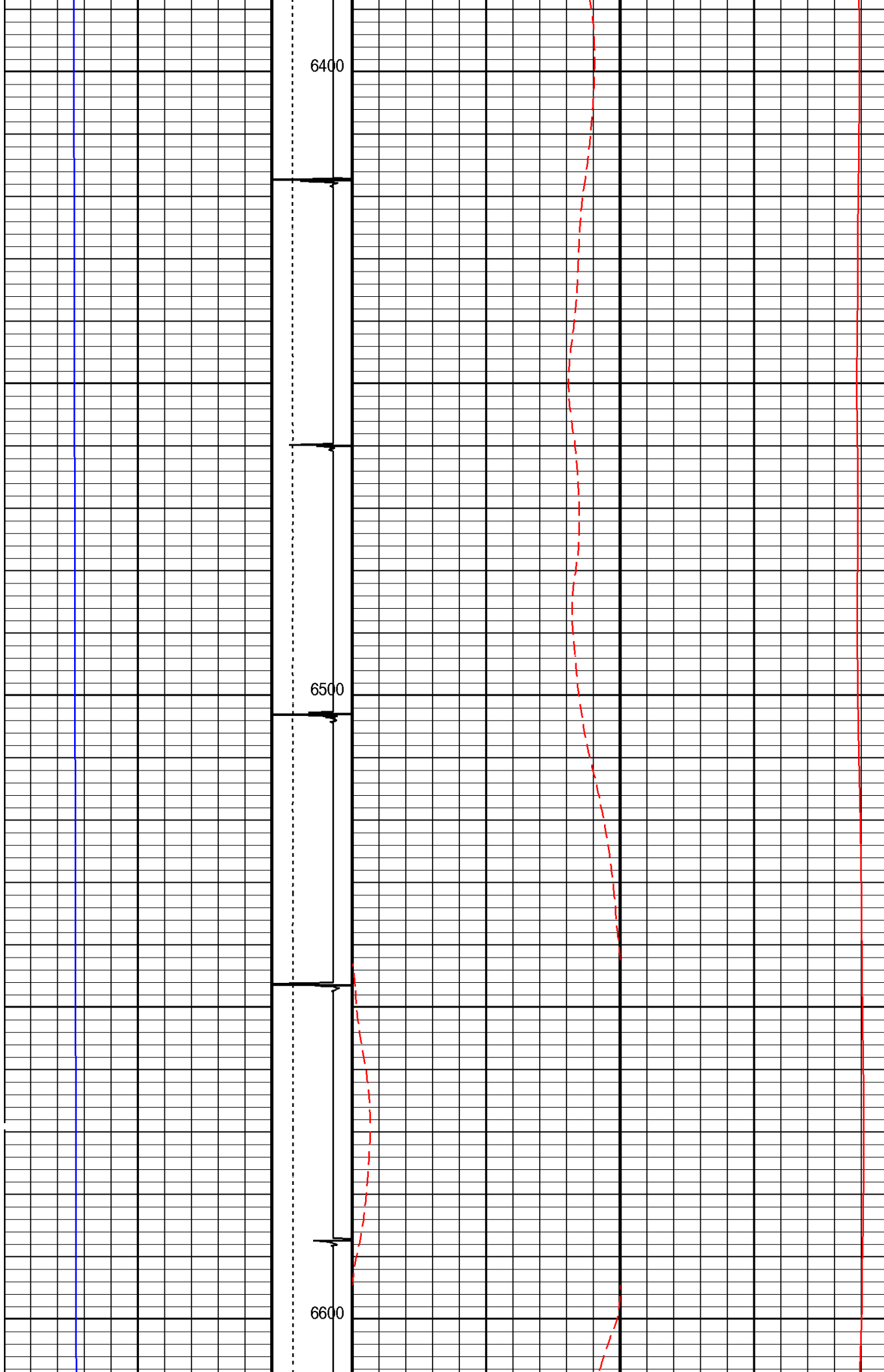


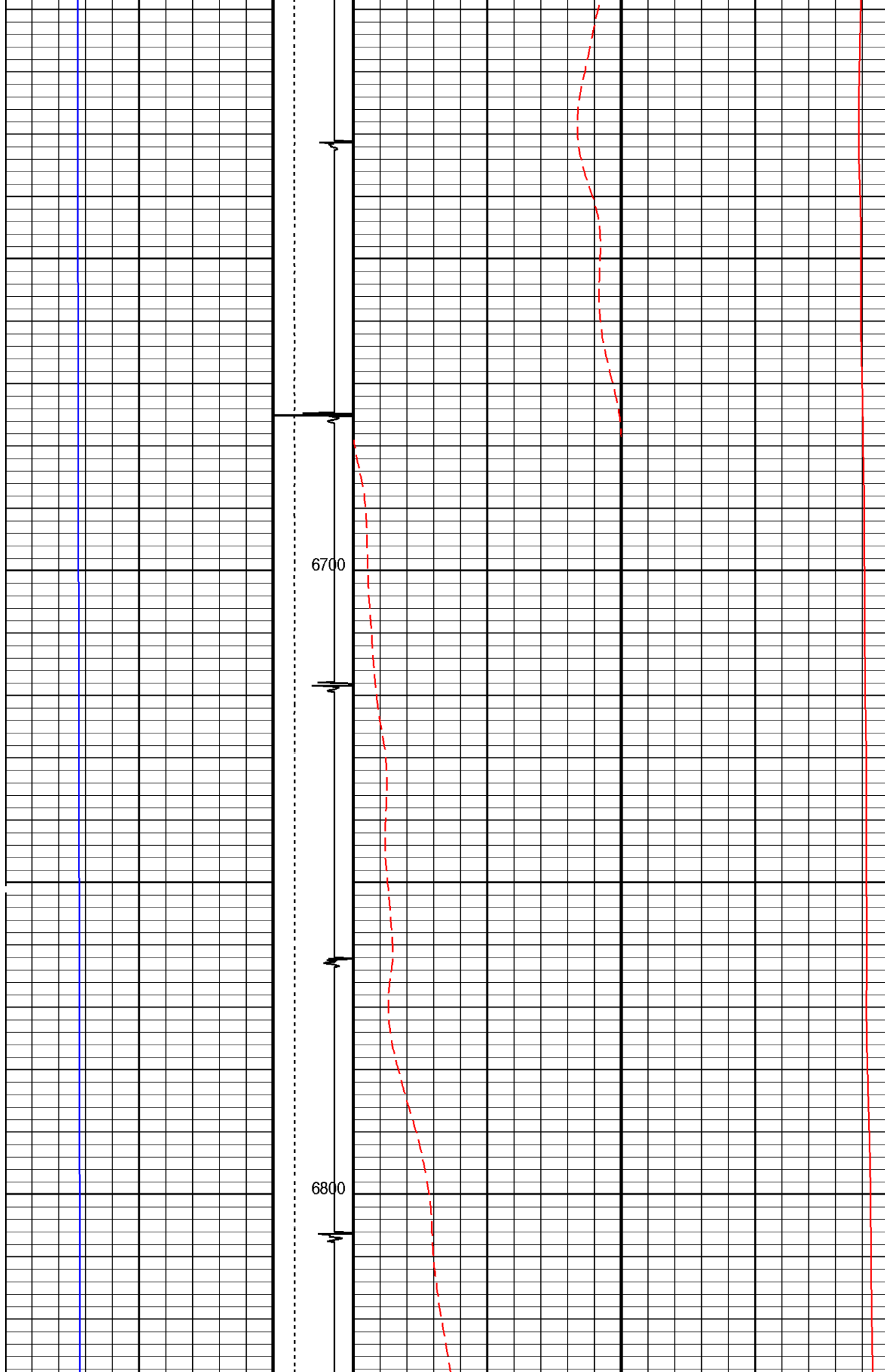


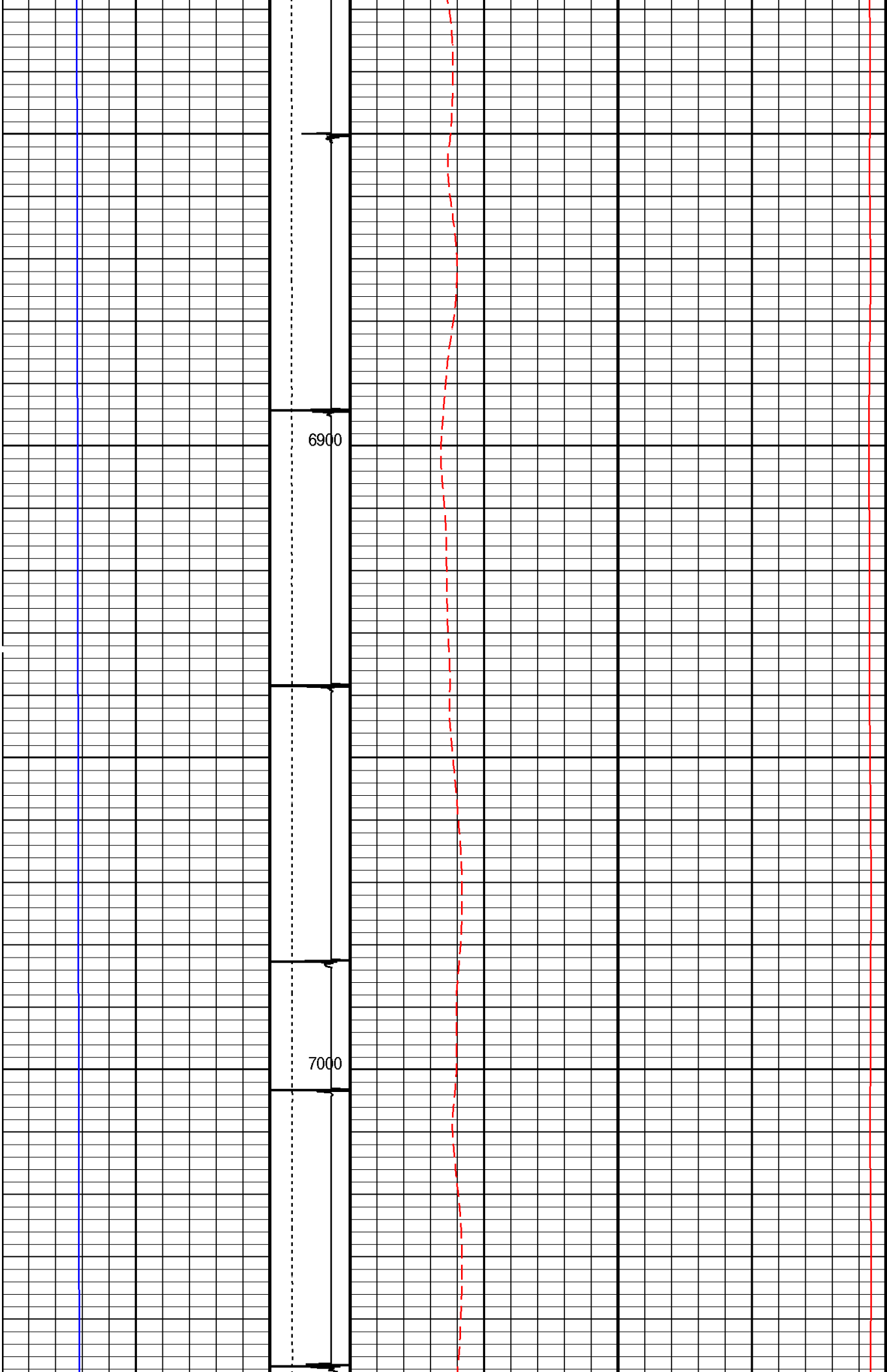


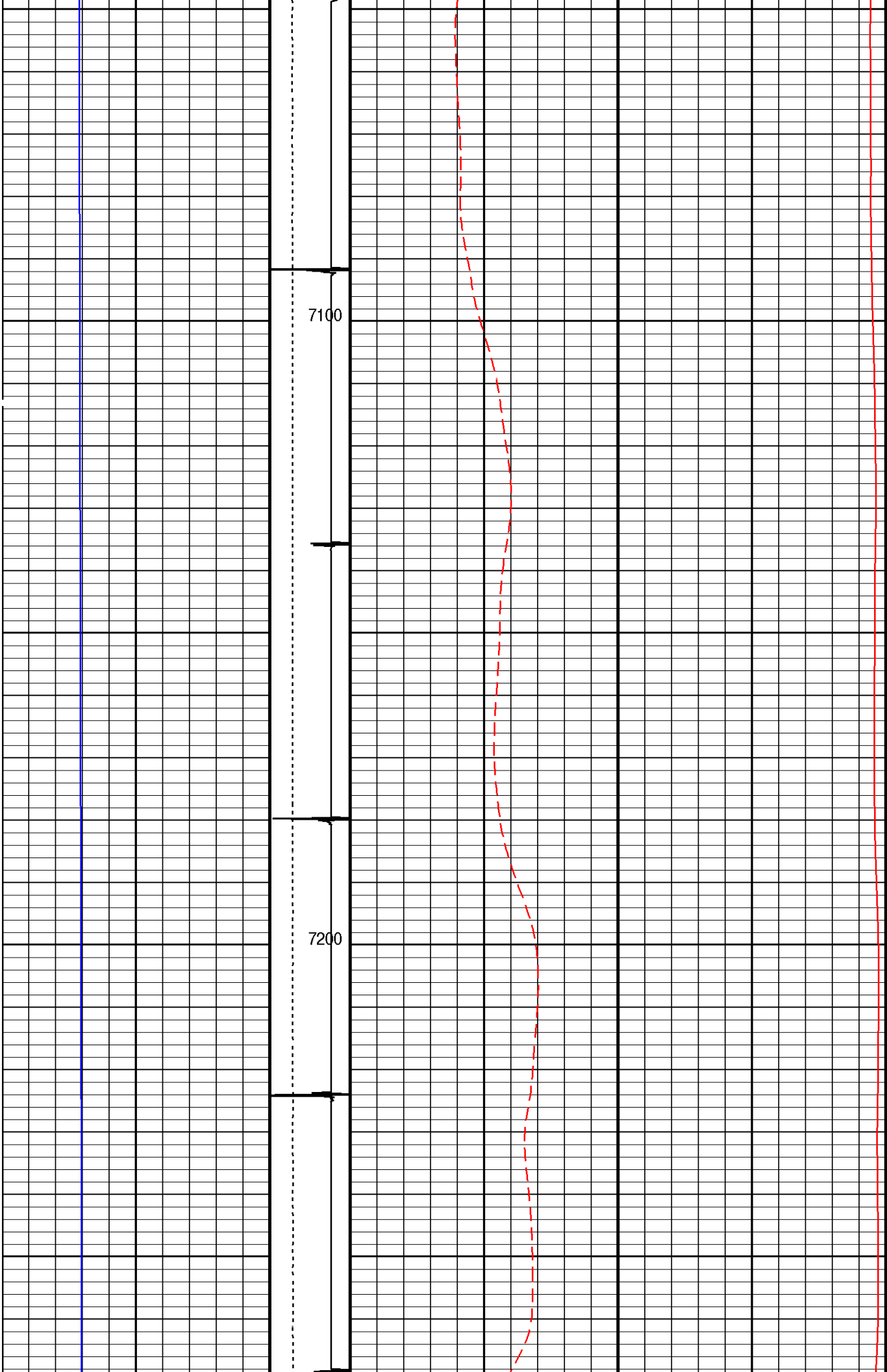


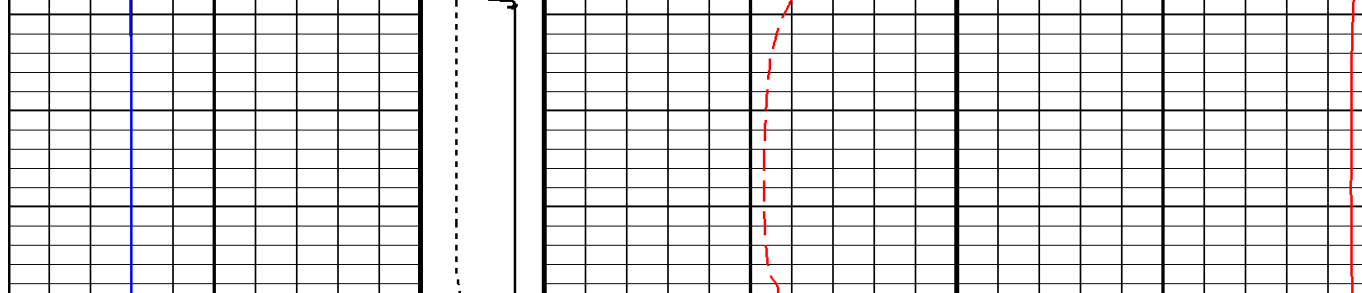












Well Pressure (WPRE)		Tension (TENS)	Well Temperature (WTEP)		Well Temperature (WTEP)	
0	(PSIA)	(LBF)	0 (DEGF)		0 (DEGF)	
10000		0 2000	20		200	
		Discriminat ed CCL (CCLD)				
		3 (V) -1				

#### PIP SUMMARY

 Time Mark Every 60 S

#### Parameters

DLIS Name	Description	Value
System and Miscellaneous		
DO	Depth Offset for Playback	-22.0 FT
DORL	Depth Offset for Repeat Analysis	0.0 FT
PP	Playback Processing	NORMAL

Format: TEMP LOG    Vertical Scale: 5" per 100'    Graphics File Created: 10-Dec-2012 14:23

#### OP System Version: 19C0-187

HBMS-B    SRPC-5214-H2-2012-OP19

#### Input DLIS Files

DEFAULT	Flip_HBMS_004LUP	PRODUCER	10-Dec-2012 14:11	7321.5 FT	11.0 FT
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#### Output DLIS Files

DEFAULT	HBMS_007PUP	FN:4	PRODUCER	10-Dec-2012 14:23
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**Schlumberger**

**REPEAT ANALYSIS**

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER FEE 31-13C

#### Input DLIS Files

DEFAULT	Flip_HBMS_005LUP	PRODUCER	10-Dec-2012 14:13	7252.5 FT	6875.5 FT
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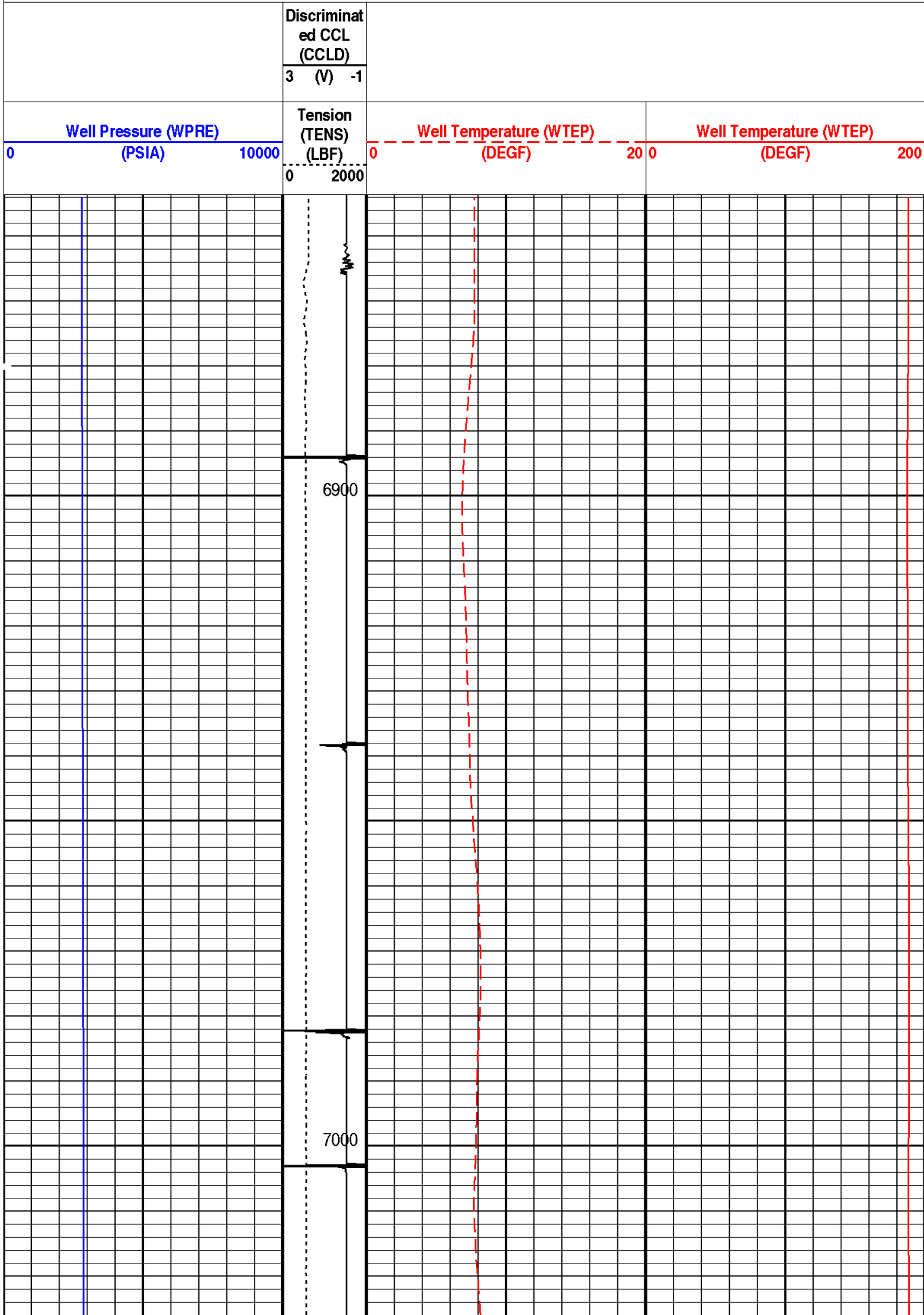
#### Output DLIS Files

DEFAULT	HBMS_008PUP	FN:5	PRODUCER	10-Dec-2012 14:28	7230.5 FT	6853.5 FT
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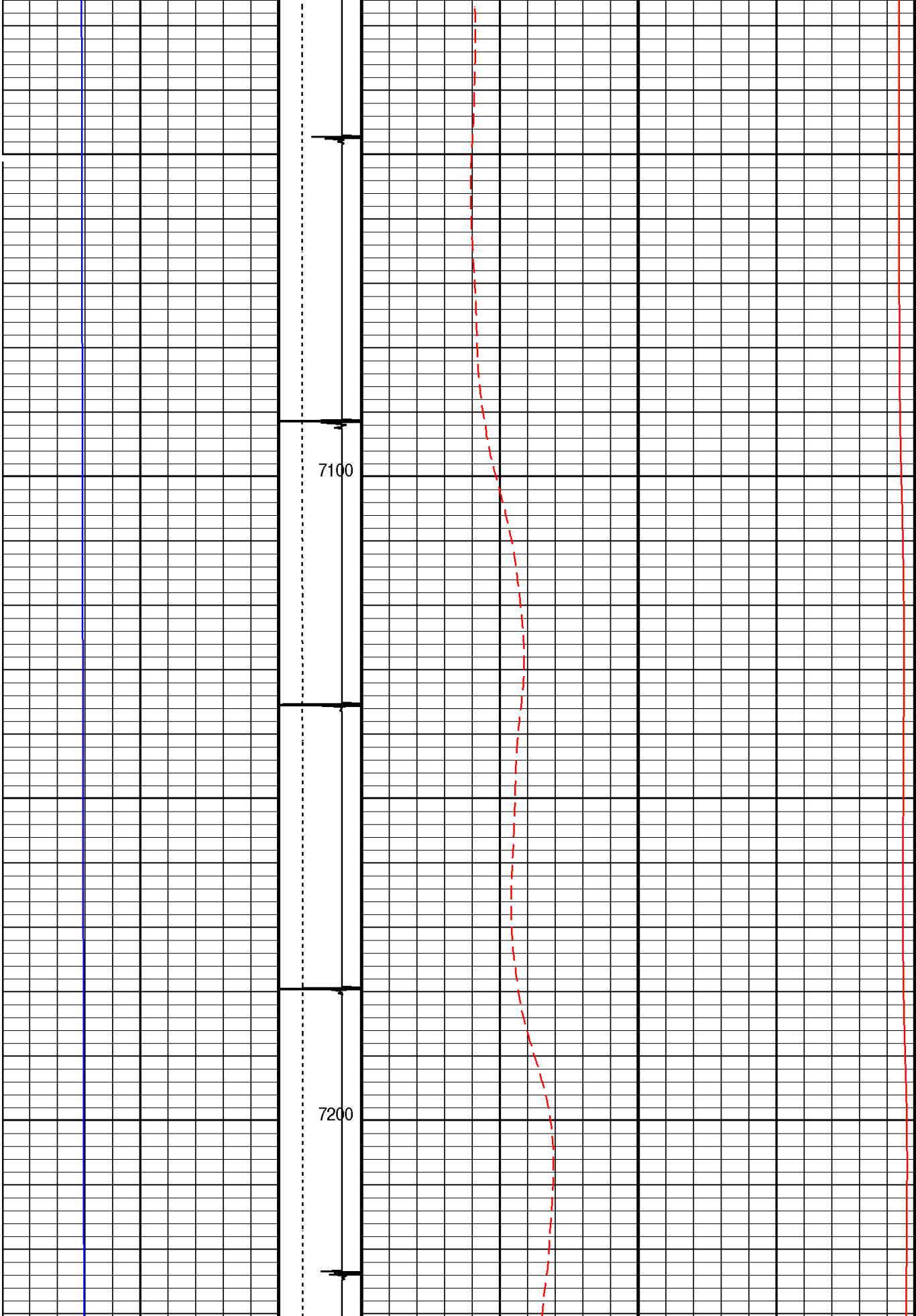
#### OP System Version: 19C0-187

PIP SUMMARY

Time Mark Every 60 S







Well Pressure (WP)	Tension (TENS)	Well Temperature (WTEP)	Well Temperature (WTEP)
(PSIA)	(LBF)	(DEGF)	(DEGF)
0	0	0	0
10000	2000	200	200

Discriminat  
ed CCL  
(CCLD)  
3 (V) -1

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	System and Miscellaneous	
DO	Depth Offset for Playback	-22.0 FT
DORL	Depth Offset for Repeat Analysis	0.0 FT
PP	Playback Processing	NORMAL

Format: TEMP LOG Vertical Scale: 5" per 100' Graphics File Created: 10-Dec-2012 14:29

OP System Version: 19C0-187

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

Input DLIS Files

DEFAULT	Flip_HBMS_005LUP	PRODUCER	10-Dec-2012 14:13	7252.5 FT	6875.5 FT
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Output DLIS Files

DEFAULT	HBMS_008PUP	FN:5	PRODUCER	10-Dec-2012 14:28
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Schlumberger

HBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER FEE 31-13C

Run date: 10-Dec-2012

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.34384, TOOL HBMS-BA2880. SENSOR S/N:

34384

160206

12

D8B5

GR HV Rt

Rt\*\*0

Rt\*\*1

Rt\*\*0

+.200000000000e+04

+.173000000000e+04

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Client: ENCANA OIL & GAS (USA) INC  
Field: MAMM CREEK  
Well: SHIDELER FEE 31-13C  
Run date: 10-Dec-2012

Tool: PSP  
Sub Type: PBMS  
Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB COEFFICIENTS FOR RTD THERMOMETER PBMS-B.2880 S/N:  
Sensor Serial NB 2880  
Calib Date ddmmyy 260408  
Matrix Size 16  
Coeff CRC 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

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Client: ENCANA OIL & GAS (USA) INC  
Field: MAMM CREEK  
Well: SHIDELER FEE 31-13C  
Run date: 10-Dec-2012

Tool: PSP  
Sub Type: PBMS  
Sensor: CQG

PBMS Quartz Gauge type F

Sonde Serial NB COEFFICIENTS FOR CQG PBMS-B.2880 S/N:

COEFFICIENTS FOR CQG PBMS-B.2880 S/N:

Sonde Serial NB	2880
Sensor Serial NB	2880
Calib Date ddmmyy	260408
Matrix Size	66
Coeff CRC	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	+.127326781620E-11	+.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	+.114970383999E-15	+.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	2880
Calib Date ddmmyy	260408
Matrix Size	66
Coeff CRC	3690

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+.114978632240E+03	-.318843725686E-03	+.651766172344E-08
Fb**1	-.590205352250E-02	+.168686572404E-07	+.162345150354E-12
Fb**2	-.362996279263E-07	+.407654559315E-12	+.452411391342E-17
Fb**3	-.276281361281E-12	+.871817059405E-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	+.199118144093E-13	-.260997933236E-18	+.618908211390E-21
Fb**1	+.250084591851E-17	+.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

Schlumberger

Well: SHIDELER FEE 31-13C  
Field: MAMM CREEK  
County: GARFIELD  
State: COLORADO

TEMPERATURE LOG  
GAMMA RAY - CCL - TEMPERATURE

