

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER 30-8B (019EB)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 597 FSL & 1627 FEL

Well: SHIDELER 30-8B (019EB)

Company: ENCANA OIL & GAS (USA) INC

TEMPERATURE LOG

CCL - TEMPERATURE

SHL: 597 FSL & 1627 FEL

BHL: 1546 FNL & 499 FEL

Elev.: K.B. 6631.00 ft

G.L. 6509.00 ft

D.F. 6530.00 ft

Permanent Datum: GROUND LEVEL

Log Measured From: KELLY BUSHING

Drilling Measured From: KELLY BUSHING

Elev.: 22.00 ft above Perm. Datum

API Serial No. 05-045-21837-00

Section 19

Township 7S

Range 92W

PVT DATA				Run 1	Run 2	Run 3
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 12-Mar-2013

Run Number 1

Depth Driller 8100 ft

Schlumberger Depth 8010 ft

Bottom Log Interval 8009 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 22 ft

To 8100 ft

Casing/Tubing Size 4.500 in

Weight 11.6 lbm/ft

Grade S80

From 22 ft

To 8078 ft

Maximum Recorded Temperatures 209 degF

Logger On Bottom 12-Mar-2013

Unit Number 391

Location GRAND JUNCTION

Recorded By KIRSTIE BUNTING

Witnessed By ERASMO

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				
Location				
Recorded By				
Witnessed By				

## DEPTH SUMMARY LISTING

Date Created: 29-JAN-2013 10:07:01

## 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:	29-JAN-2013	Length:	19500 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:	-3	Calibration RMS:	13		
Wheel Correction 2:	-4	Calibration Peak Error:	23		

## Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	
Rig Up Length At Bottom:	
Rig Up Length Correction:	
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: 08:30	
TIME ON BOTTOM: 09:15	
EXIT TIME: 10:00	

MAX RECORDED TEMPERATURE: 209 DEGF	
MAX RECORDED PRESSURE: 3173 PSIA	
SHORT JOINTS: 5683' & 6682'	
CREW: K BUNTING W AZIZ K JOHNS B RANSBOTTOM	
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY	

RUN 1			RUN 2		
SERVICE ORDER #:		CGF9-00018	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

13.1

AH-38

Detail MT

TelStatus

CTEM

11.6

HBMS-B

PSC-A 2880

HUDH-A 2880

HSTC-A

HBMC-A

GR

CCL

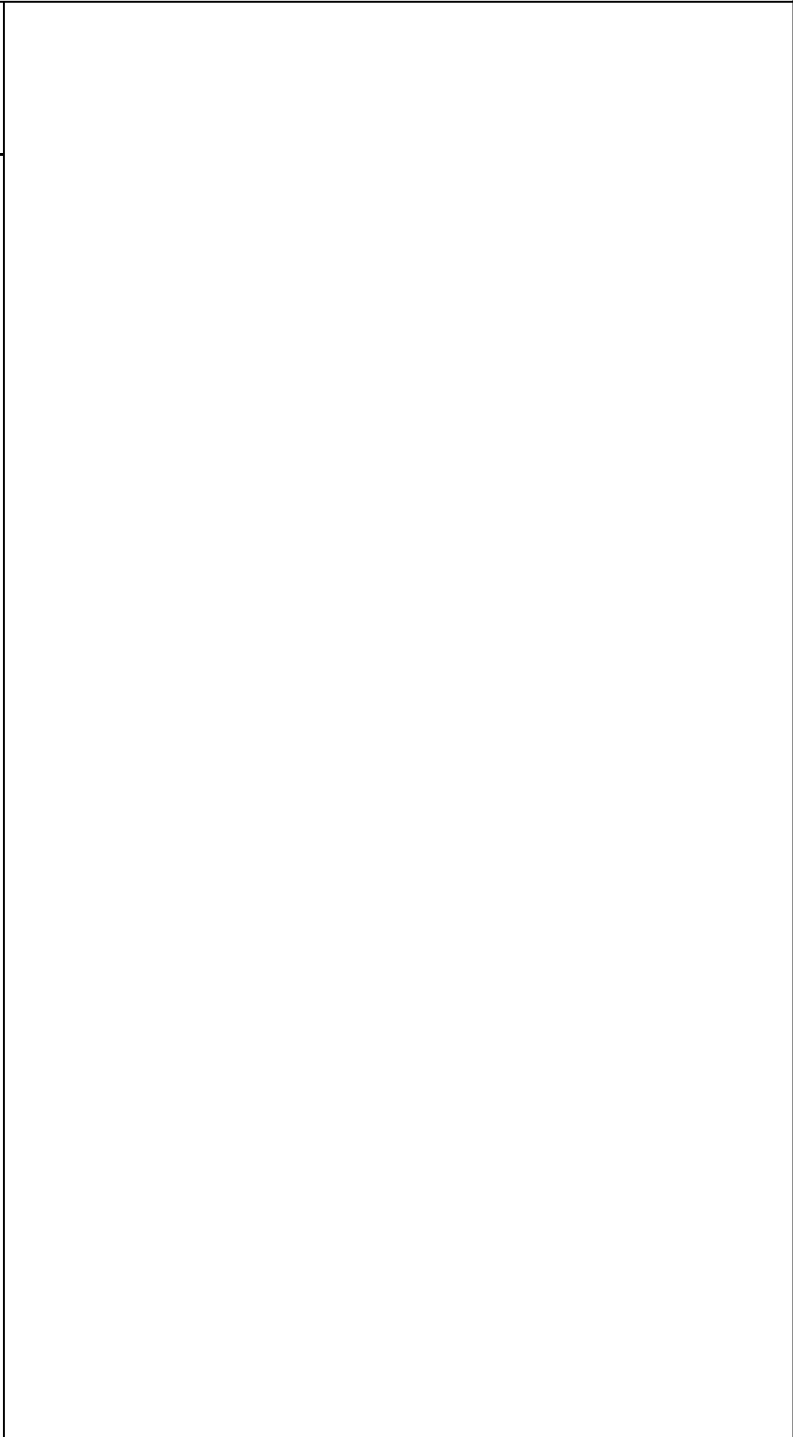
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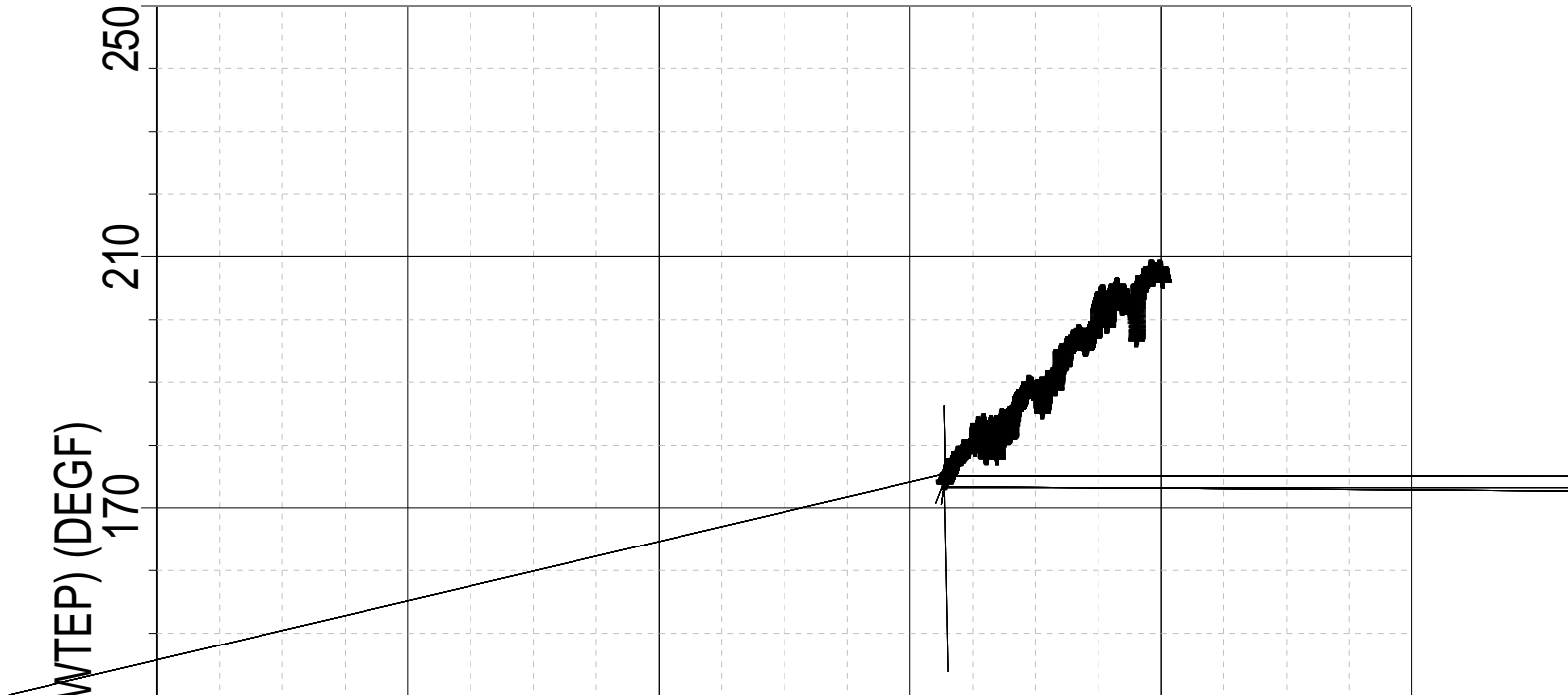
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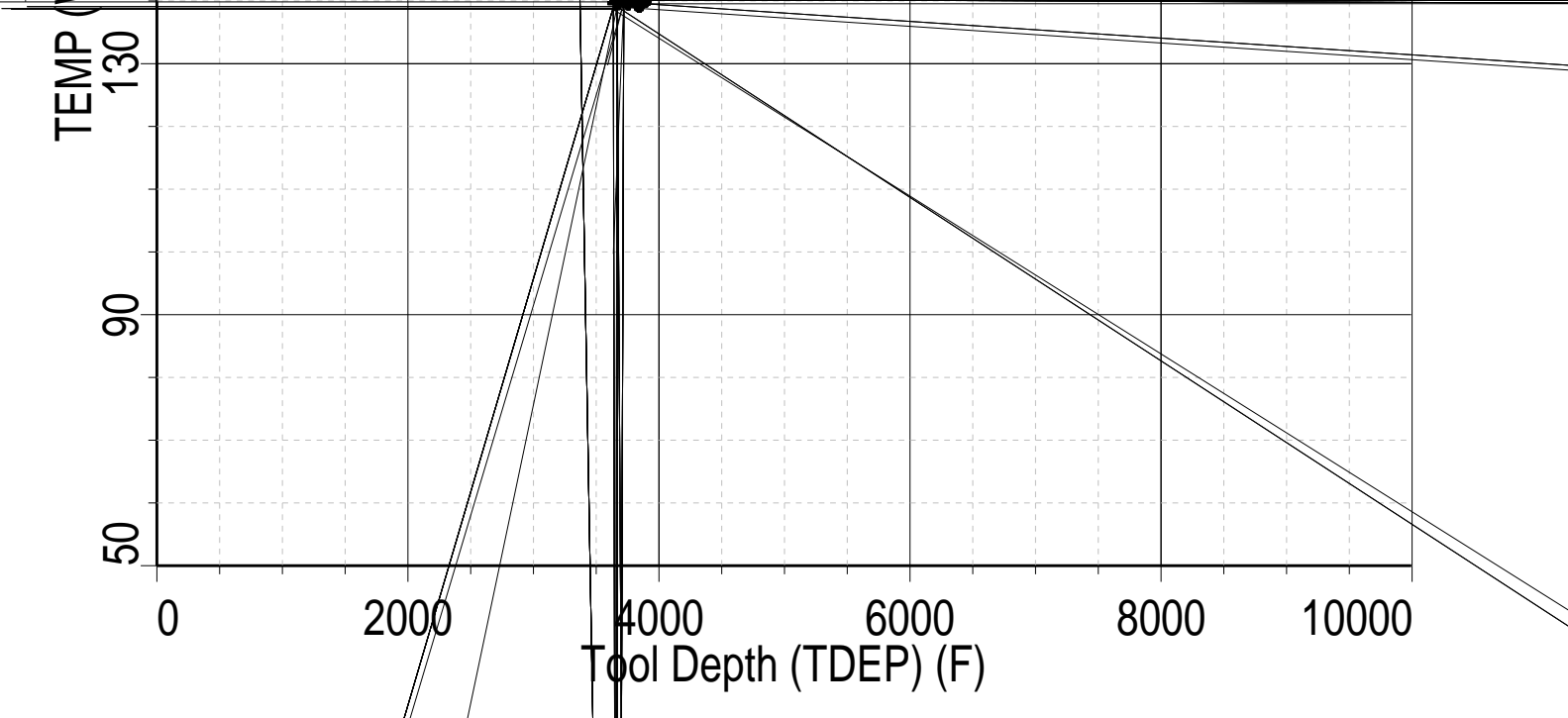
HCQG\_E\_Mano

RTD Thermometer

11.3







Company: ENCANA OIL & GAS (USA) INC

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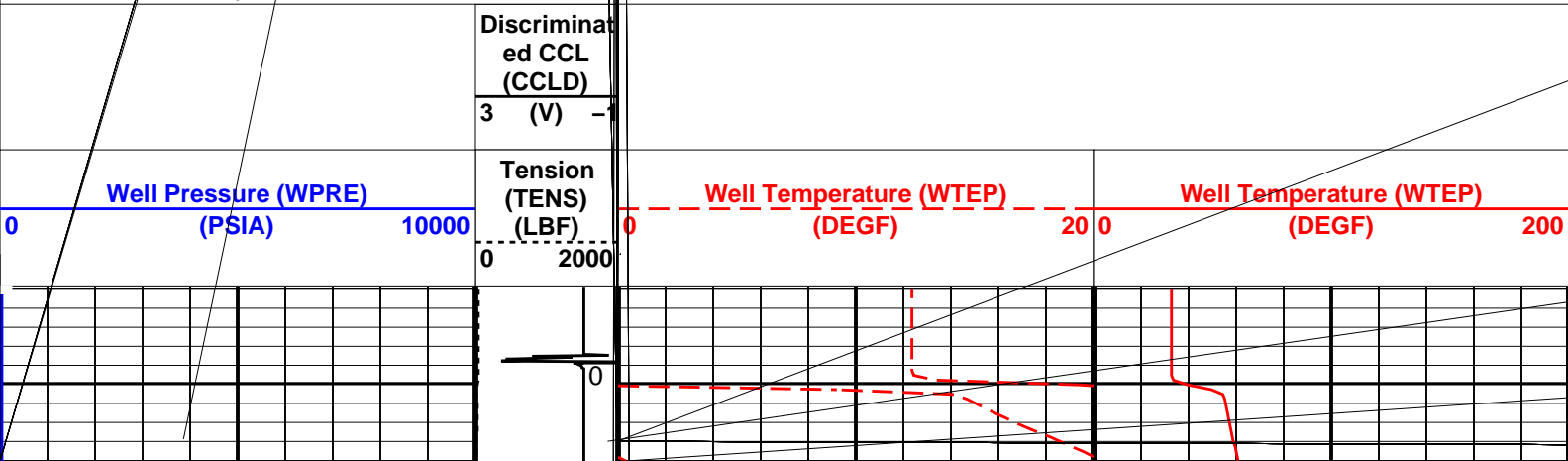
Input DLIS Files	
DEFAULT	Flip_HBMS_004LUP
PRODUCER	12-Mar-2013 09:24 8018.5 FT -10.5 FT
Output DLIS Files	
DEFAULT	HBMS_008PUP
FN:5	PRODUCER 12-Mar-2013 09:28 8018.5 FT -10.5 FT

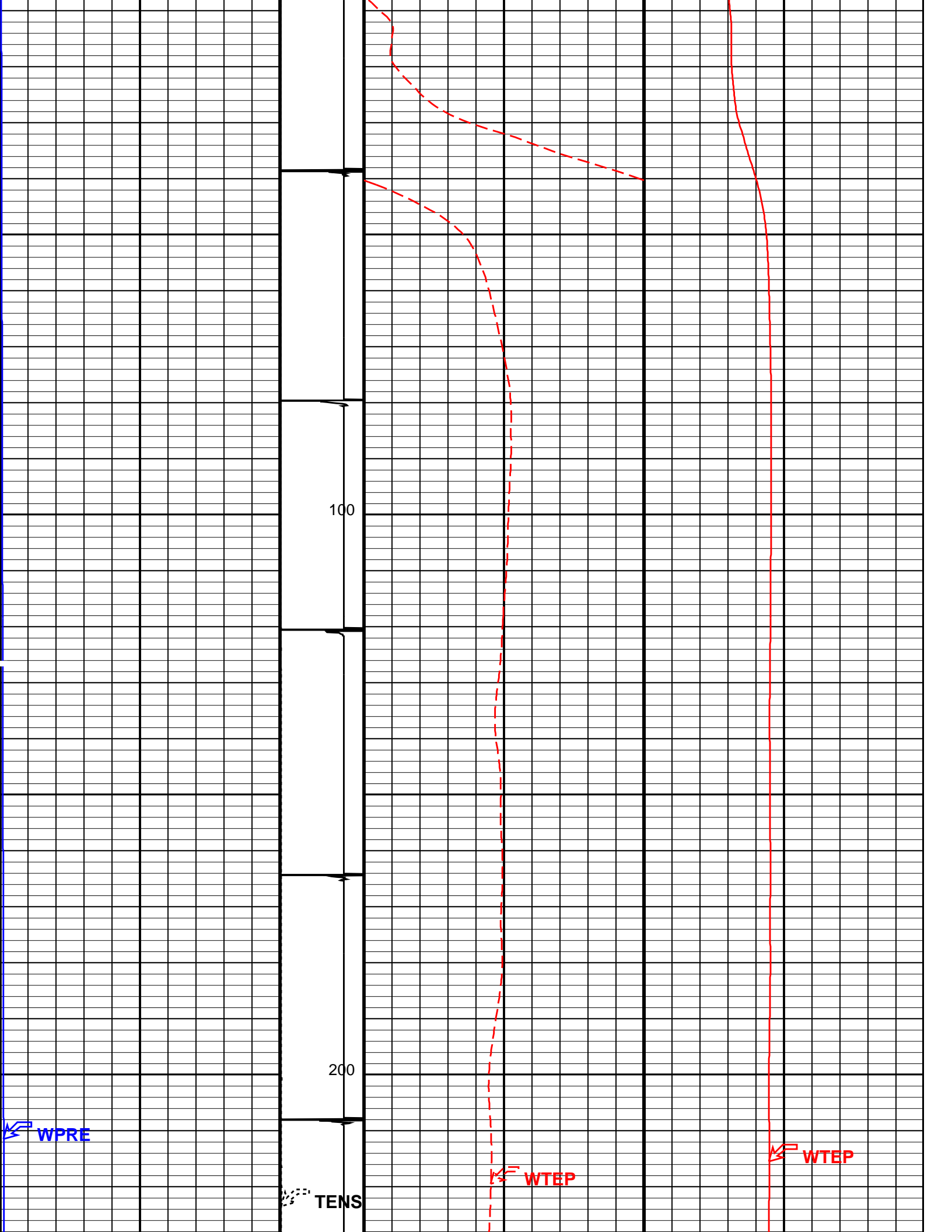
OP System Version: 19C0-187

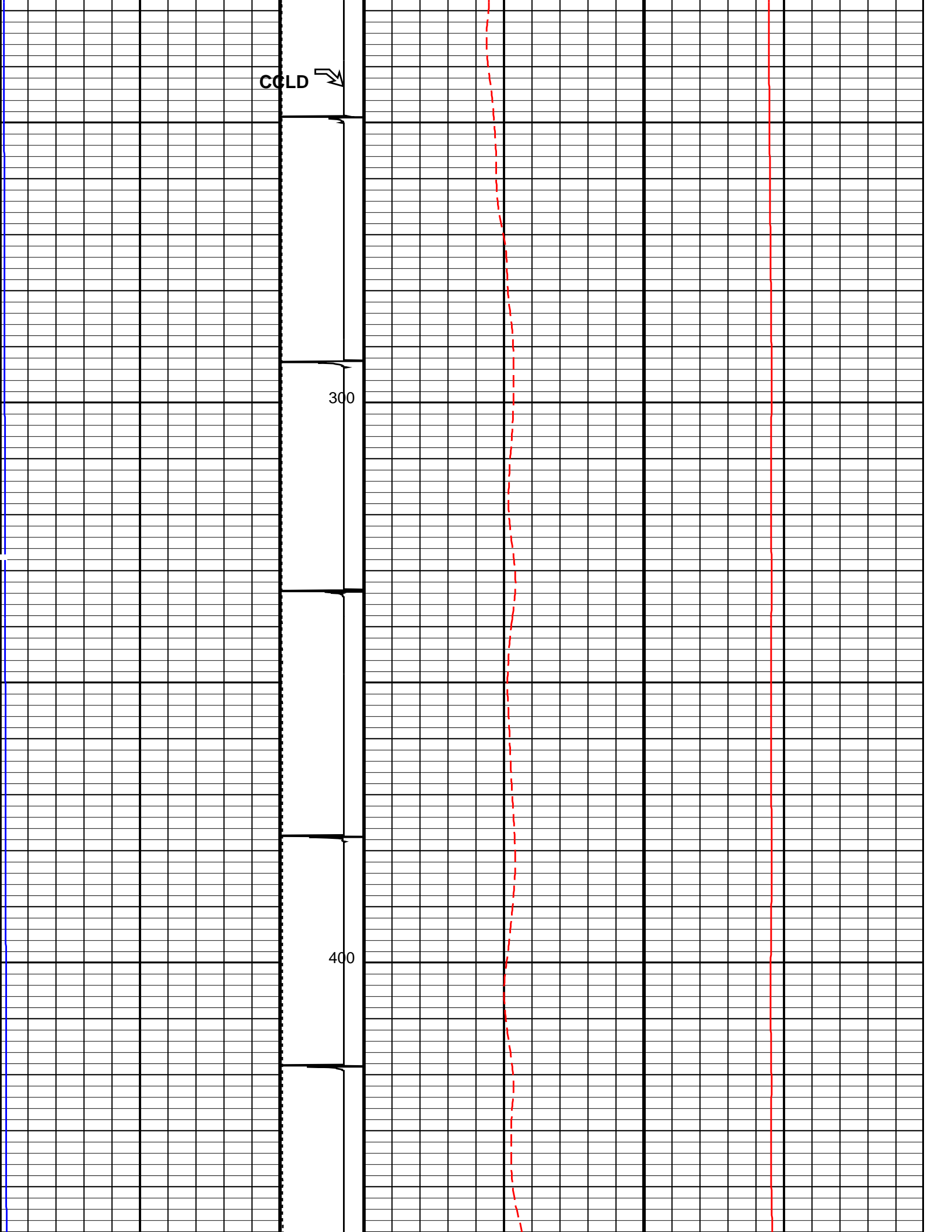
HBMS-B SRPC-5214-H2-2012-OP19

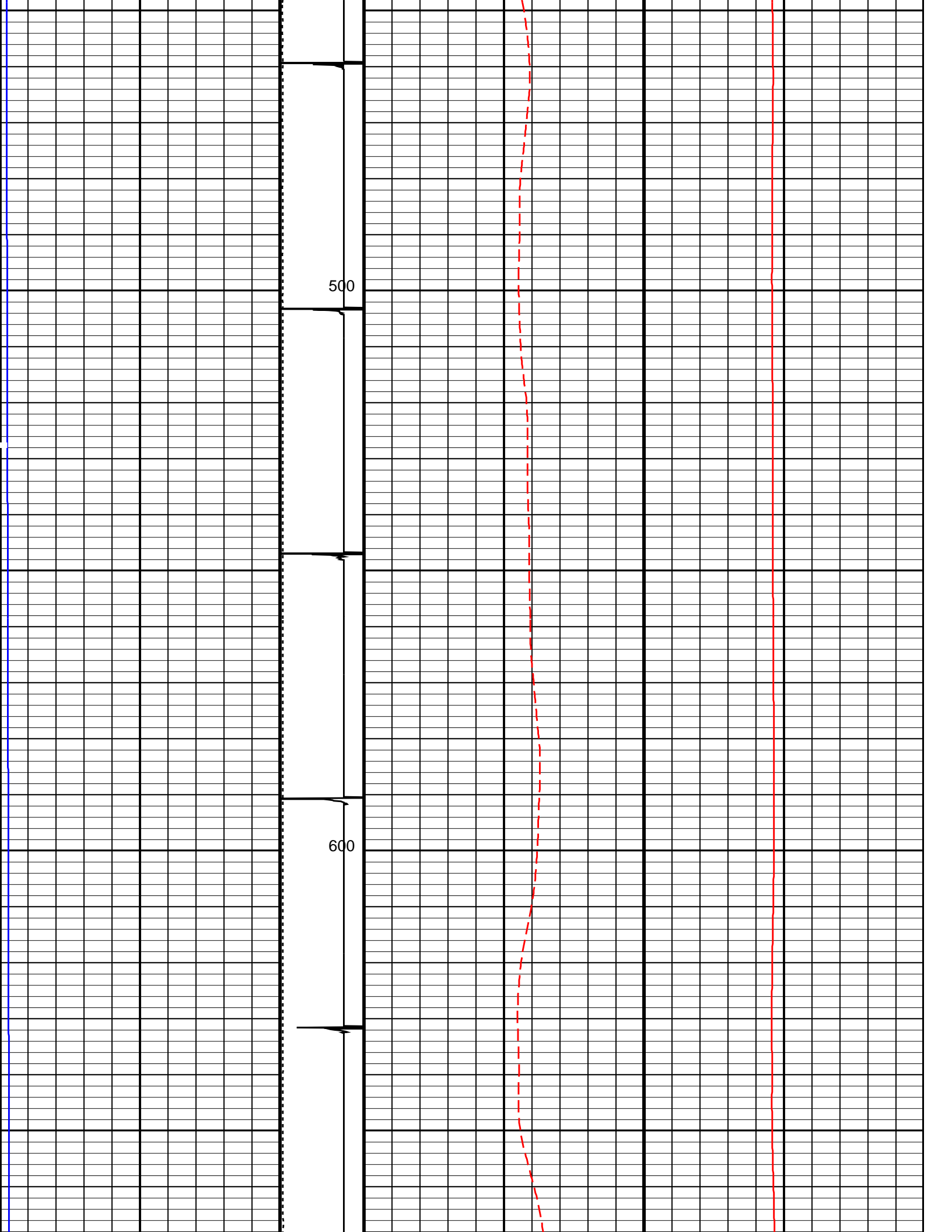
PIP SUMMARY

Time Mark Every 60 S

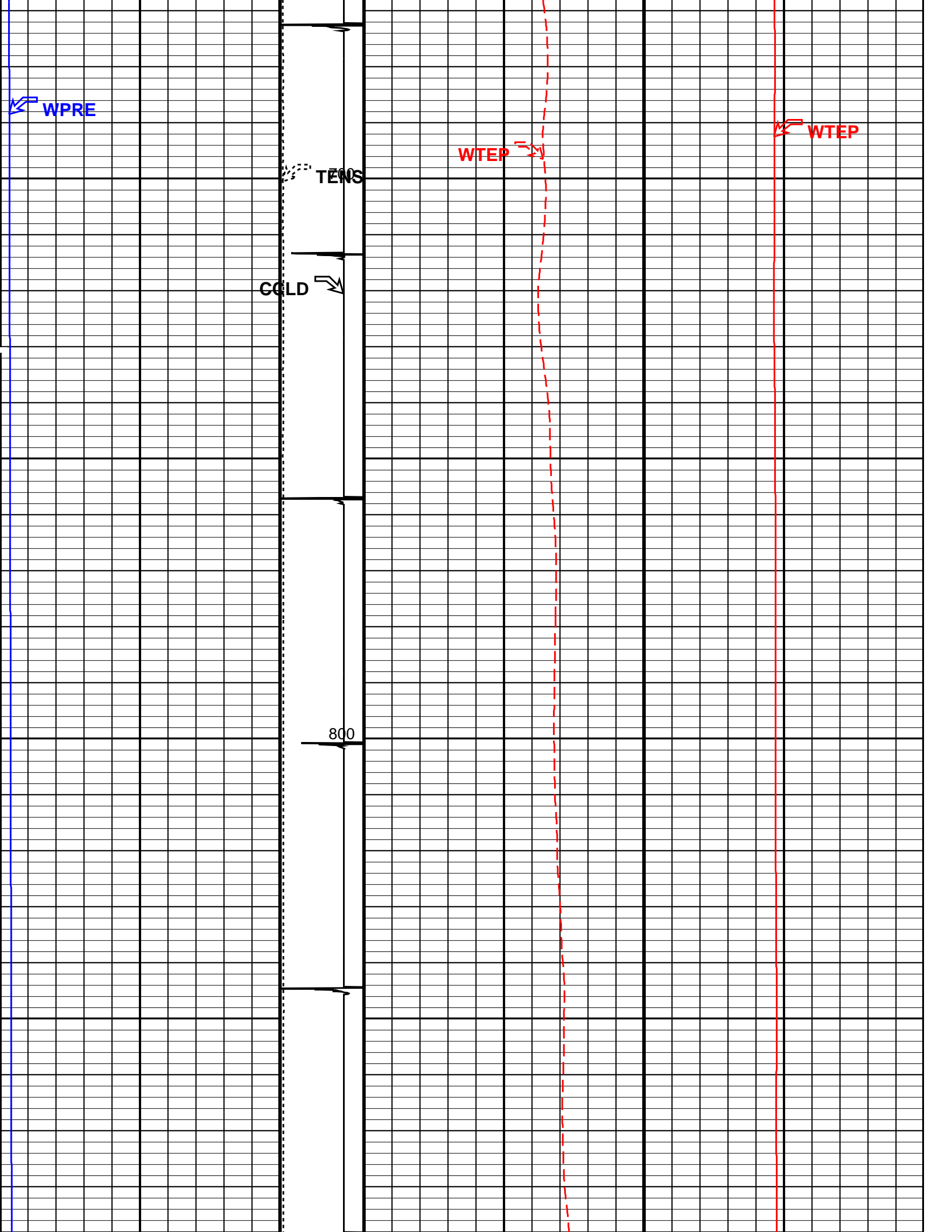


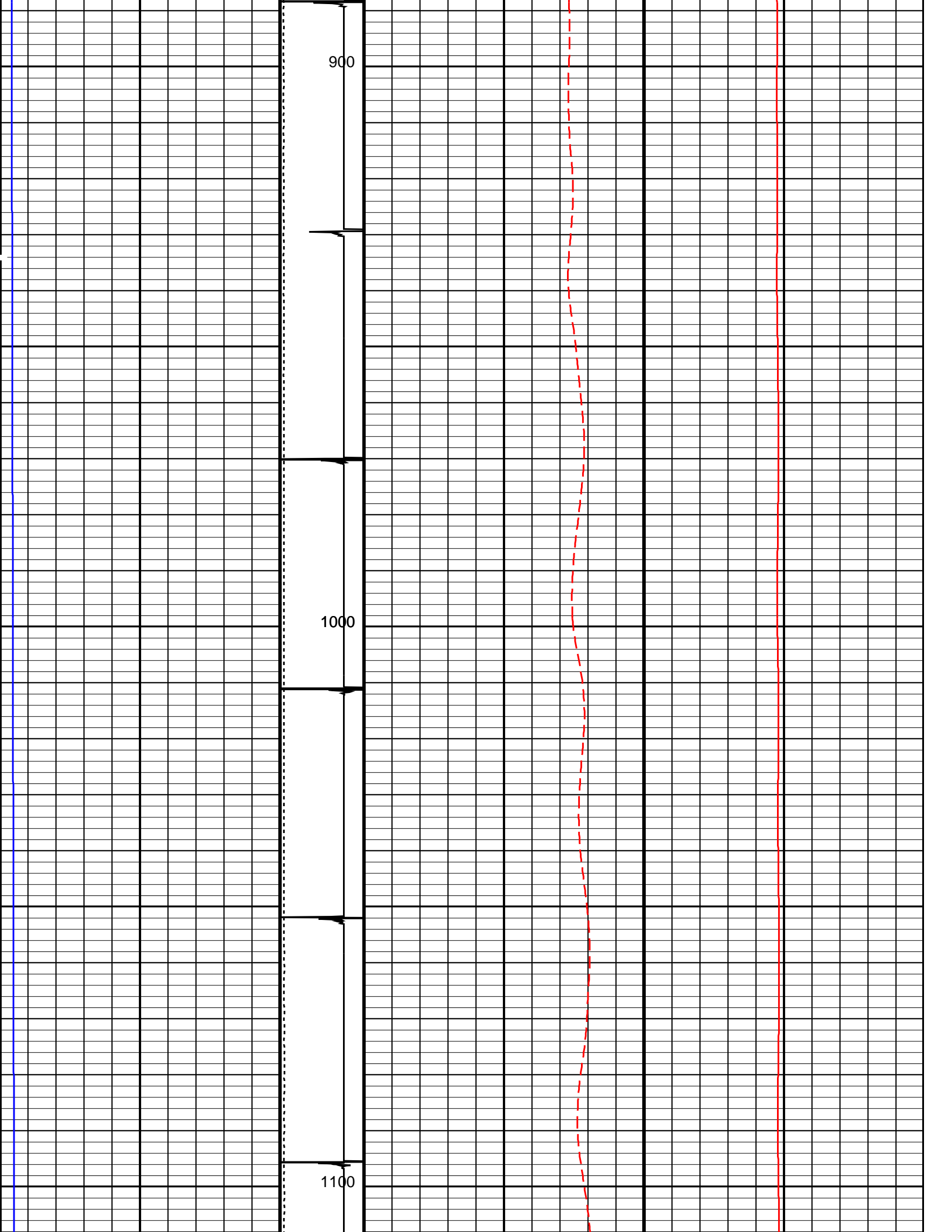


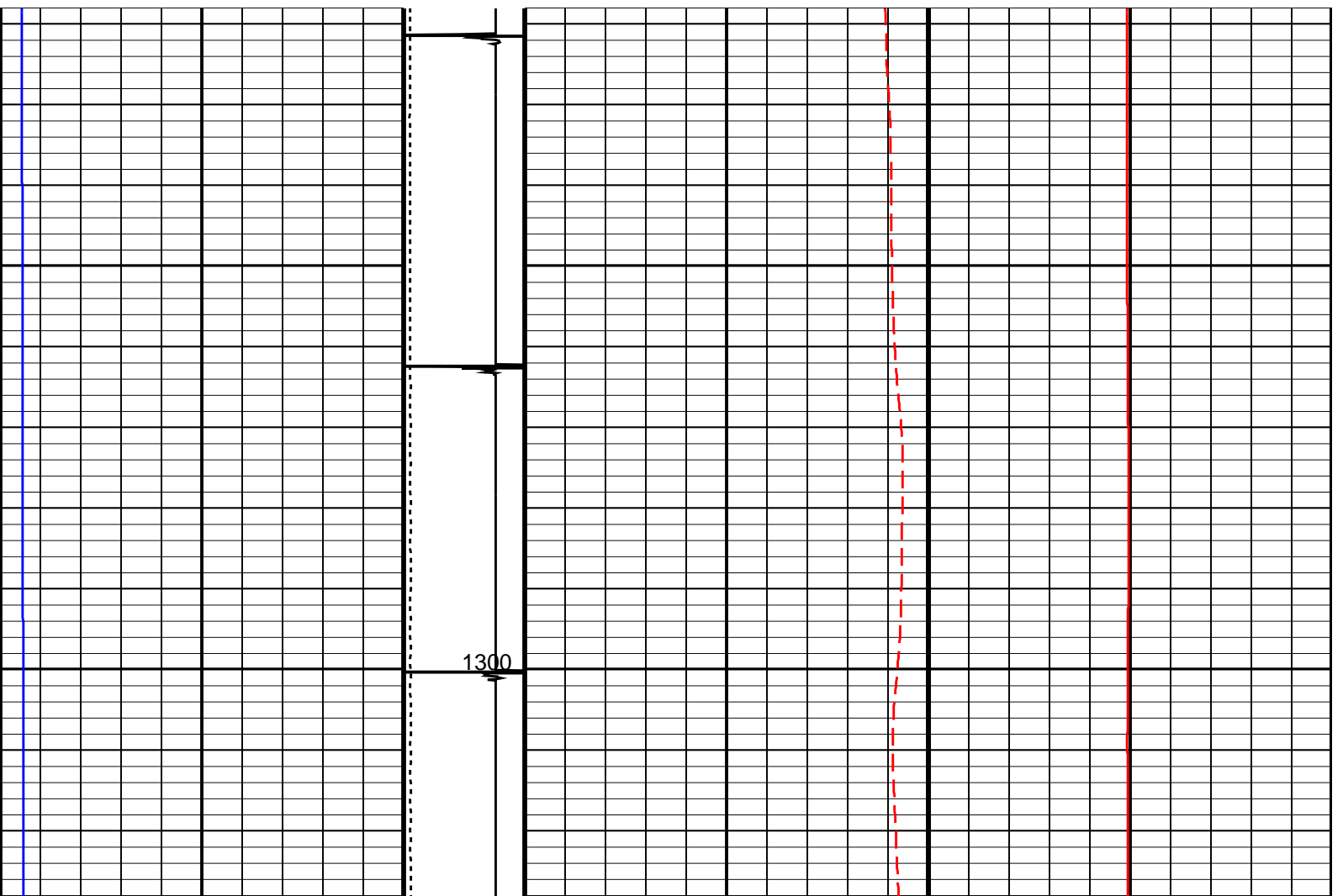
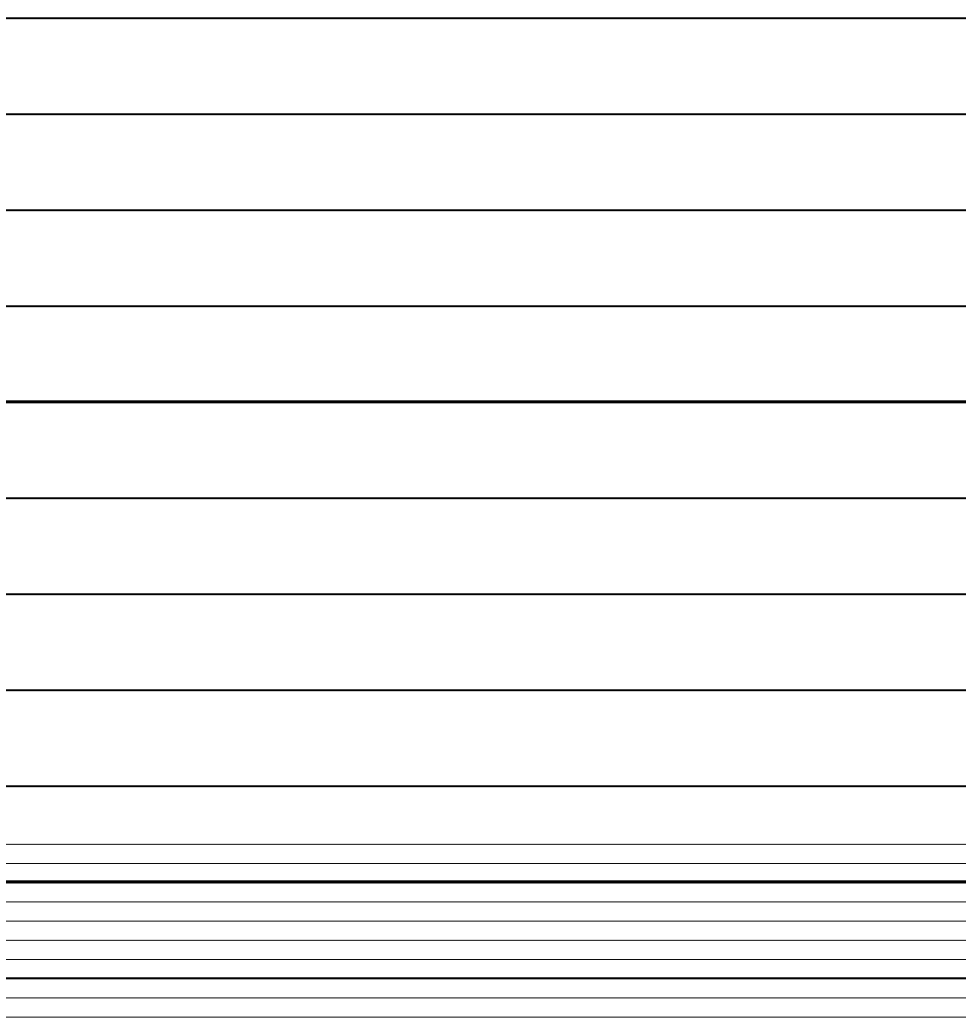


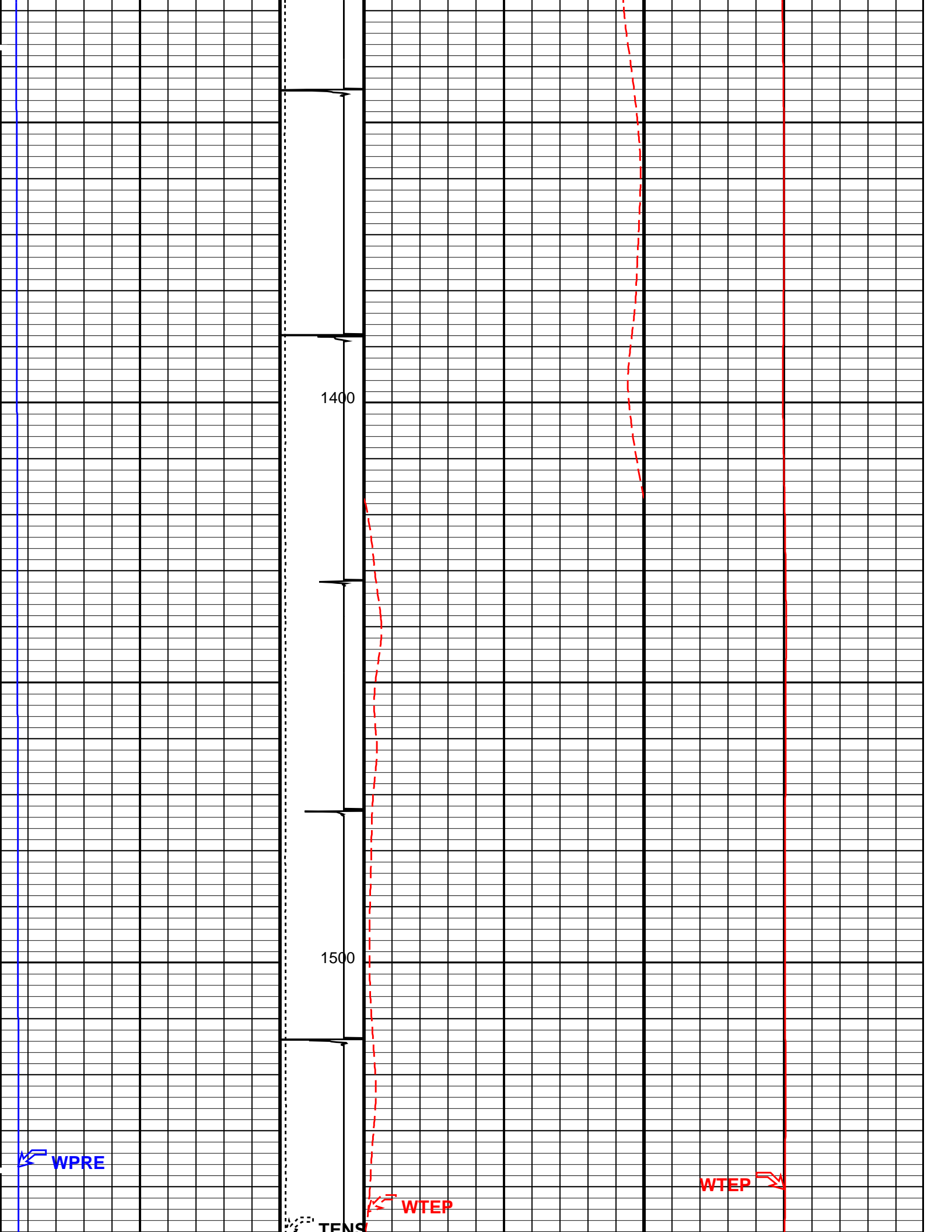


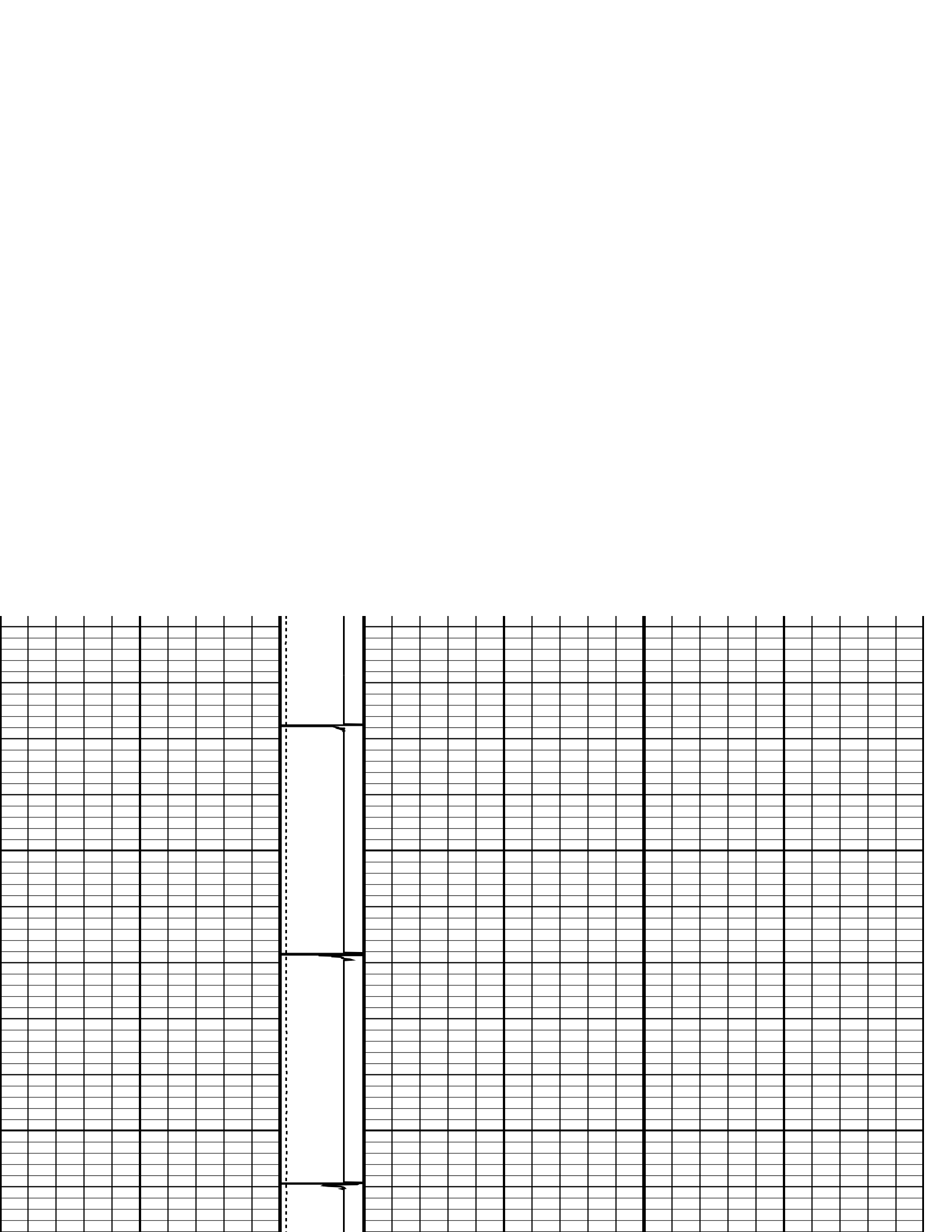


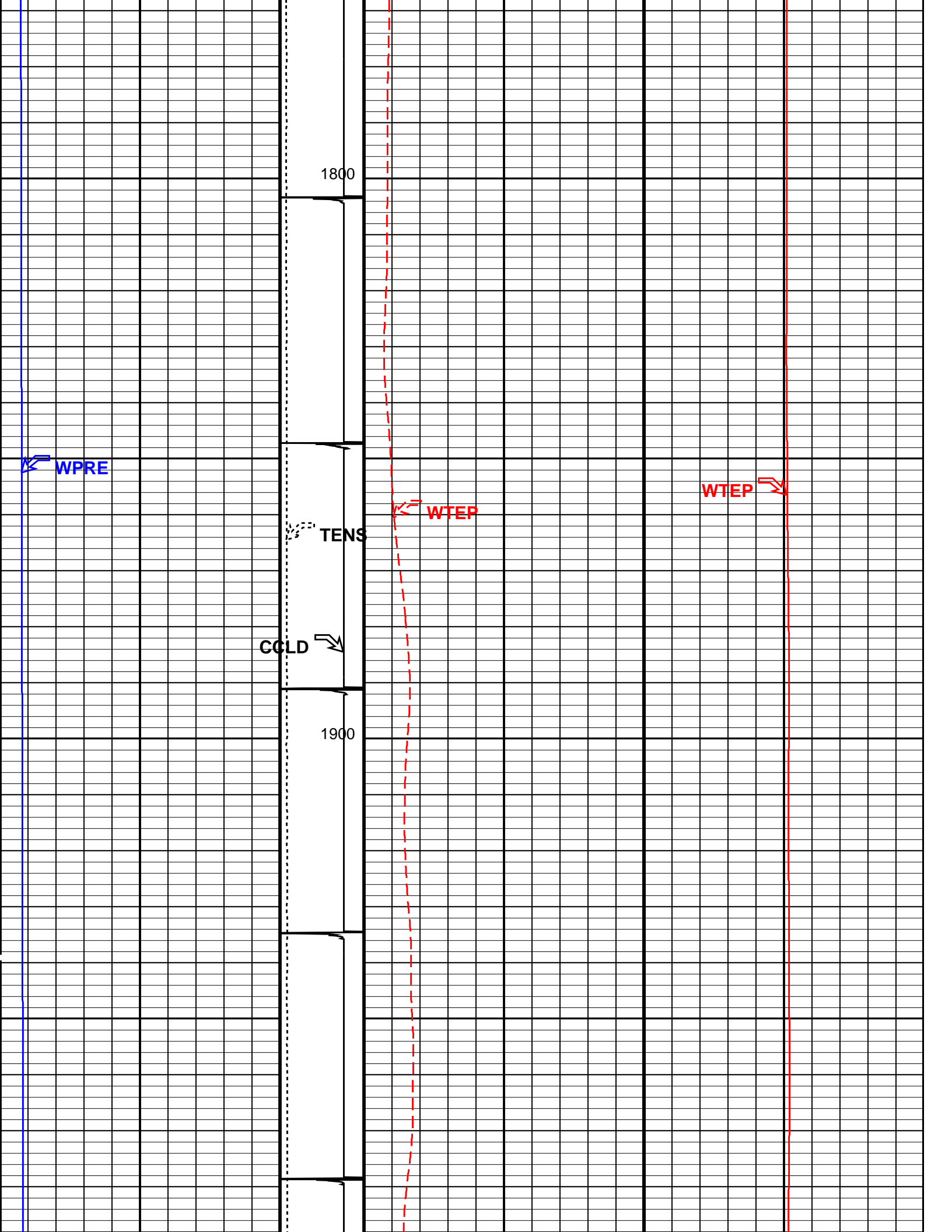




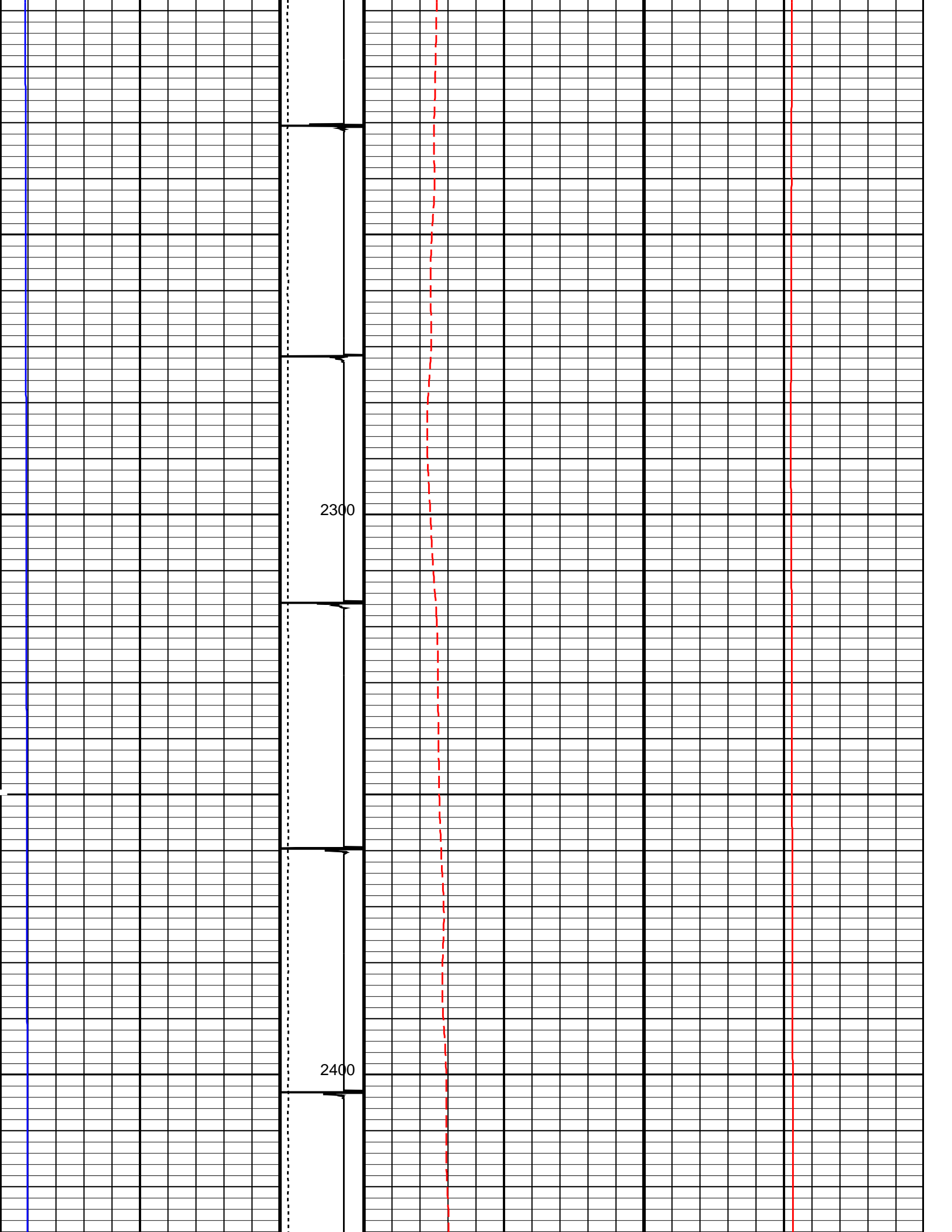














WPRE

TENS

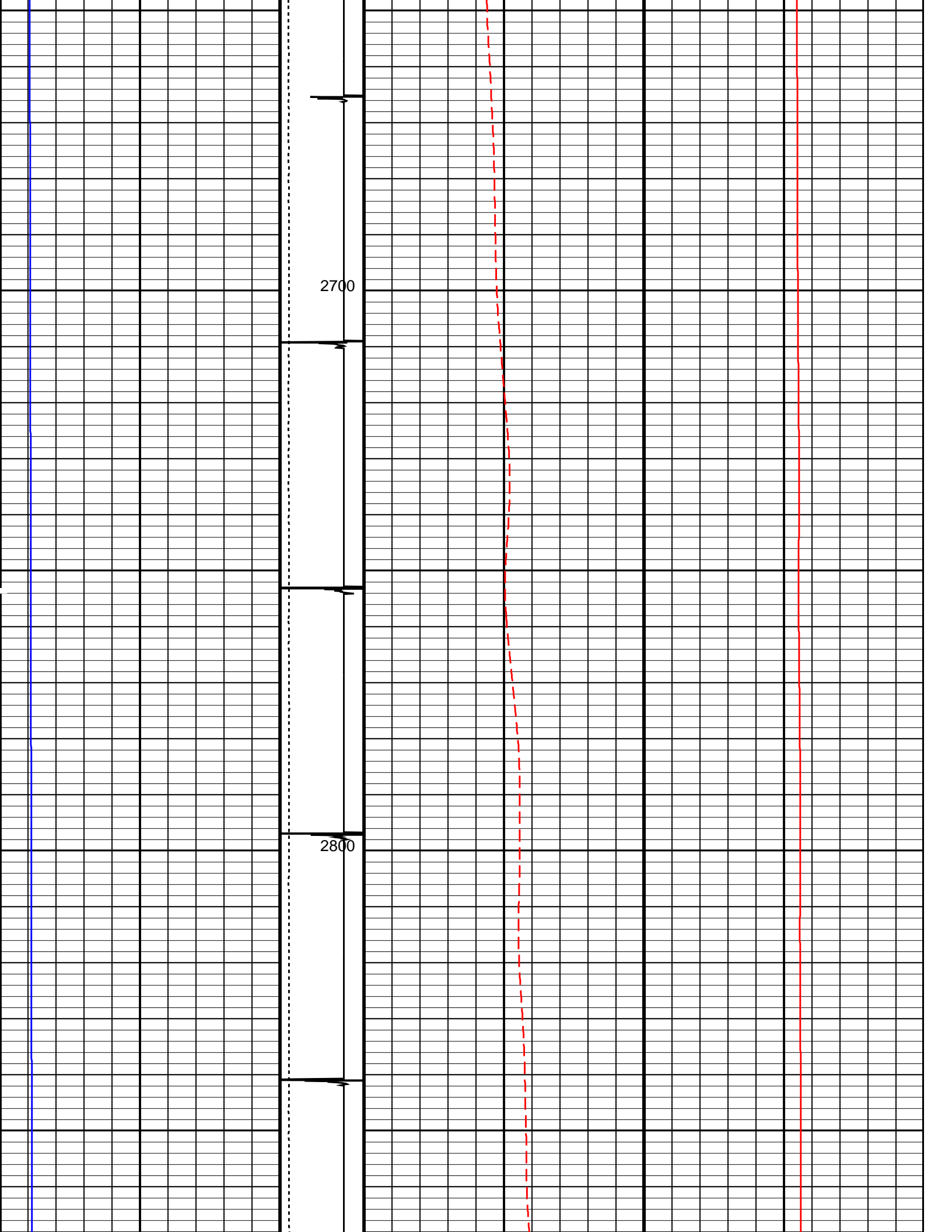
CCLD

2500

2600

WTEP

WTEP



WPRE

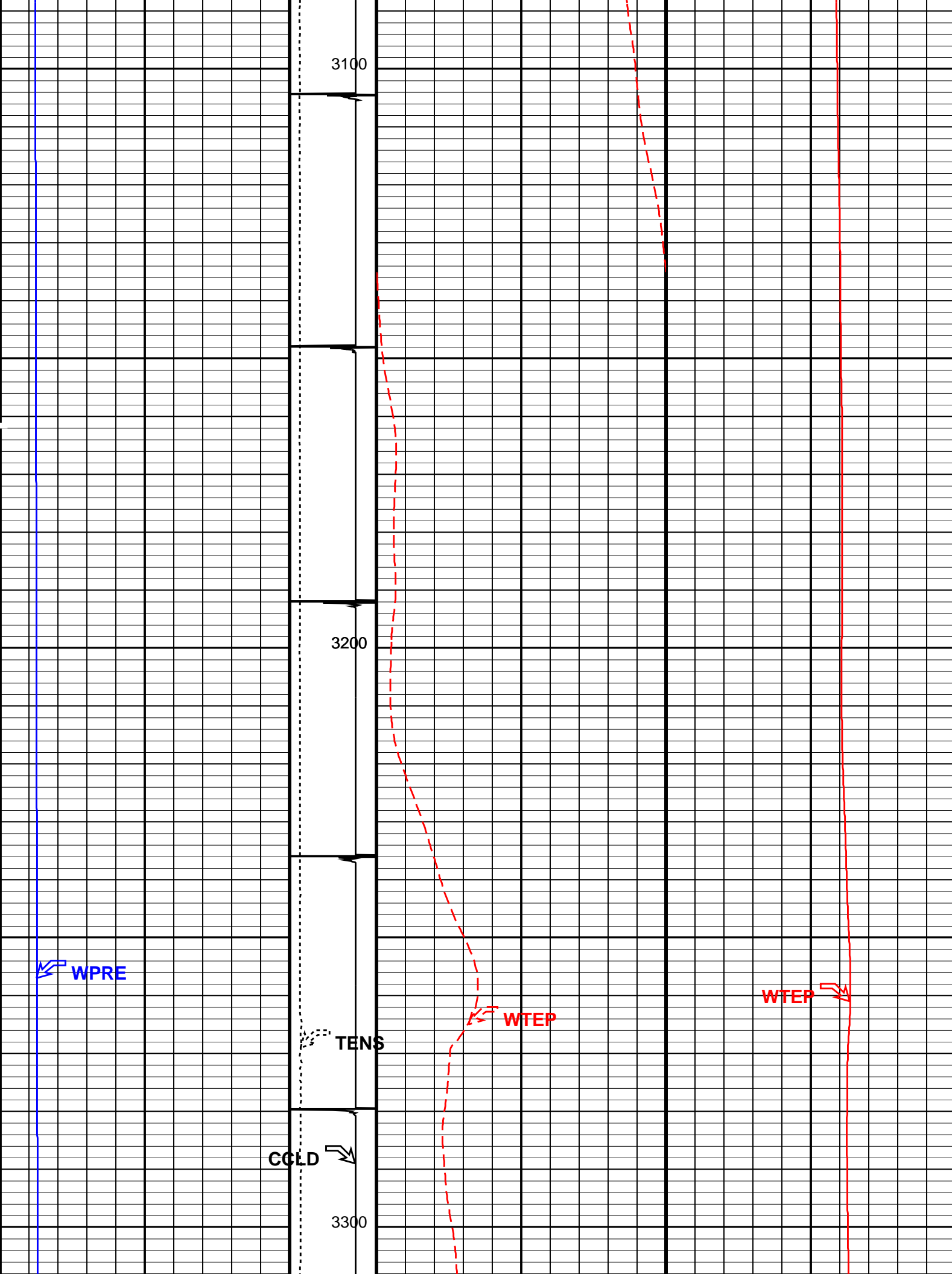
TENS  
2900

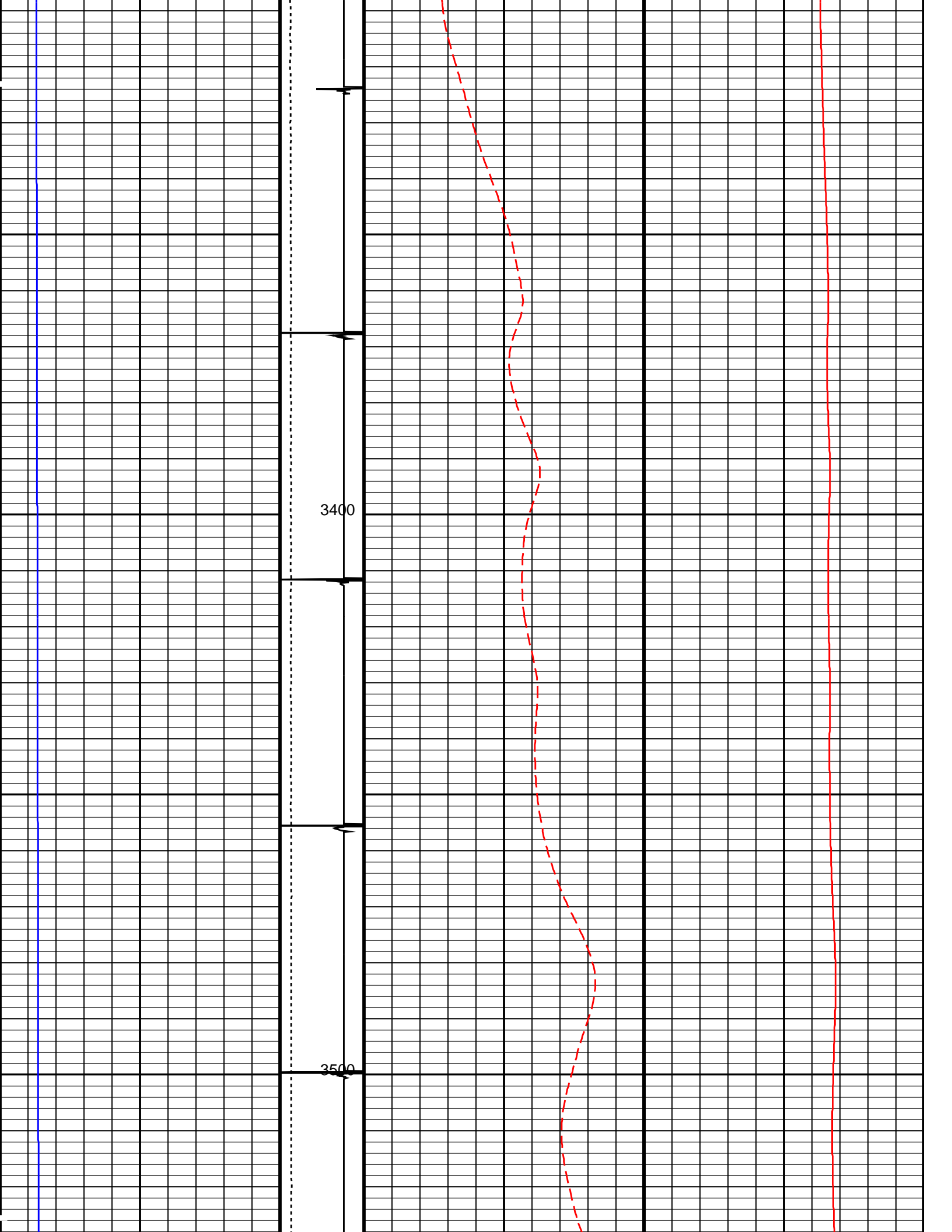
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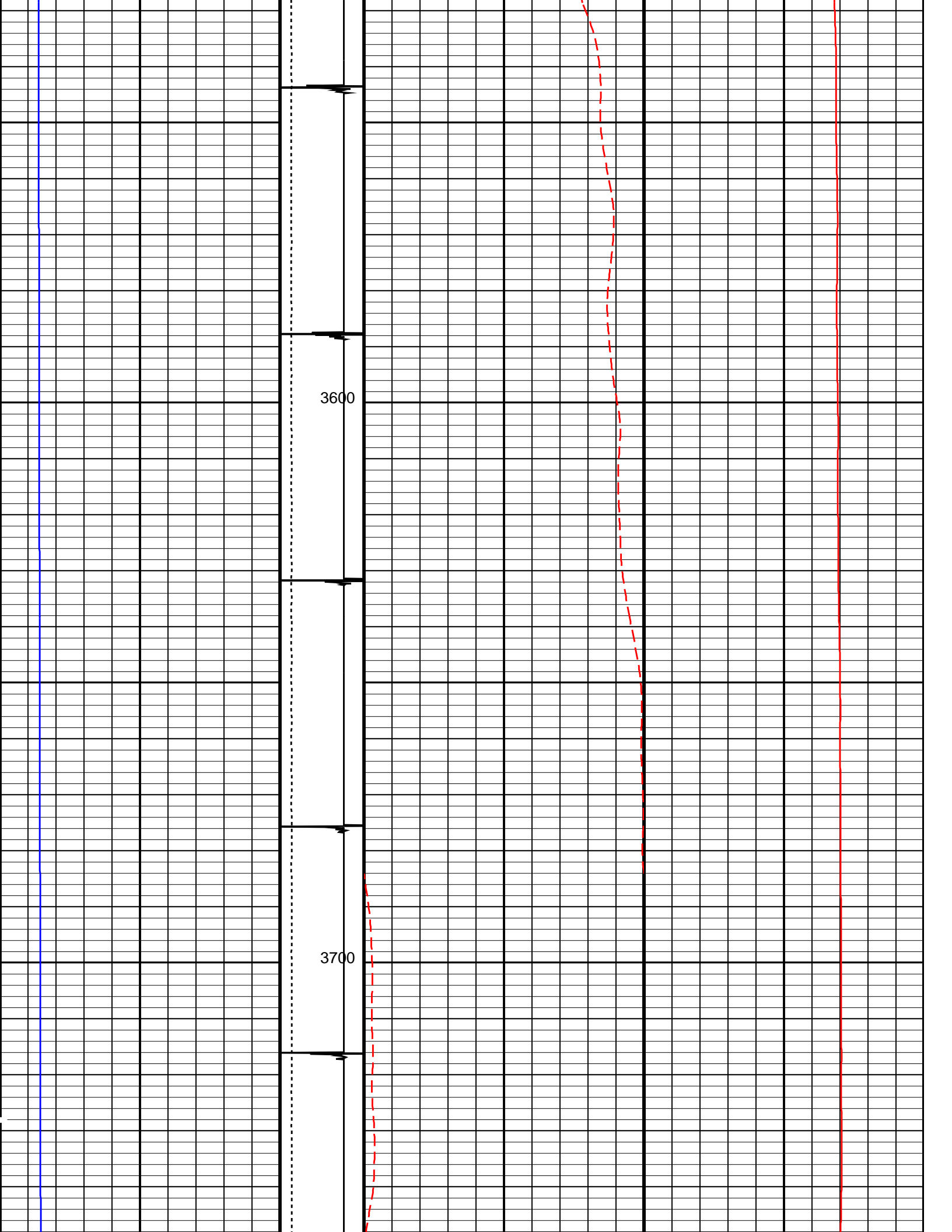
3000

WTEP

WTEP







WPRE

CCLD

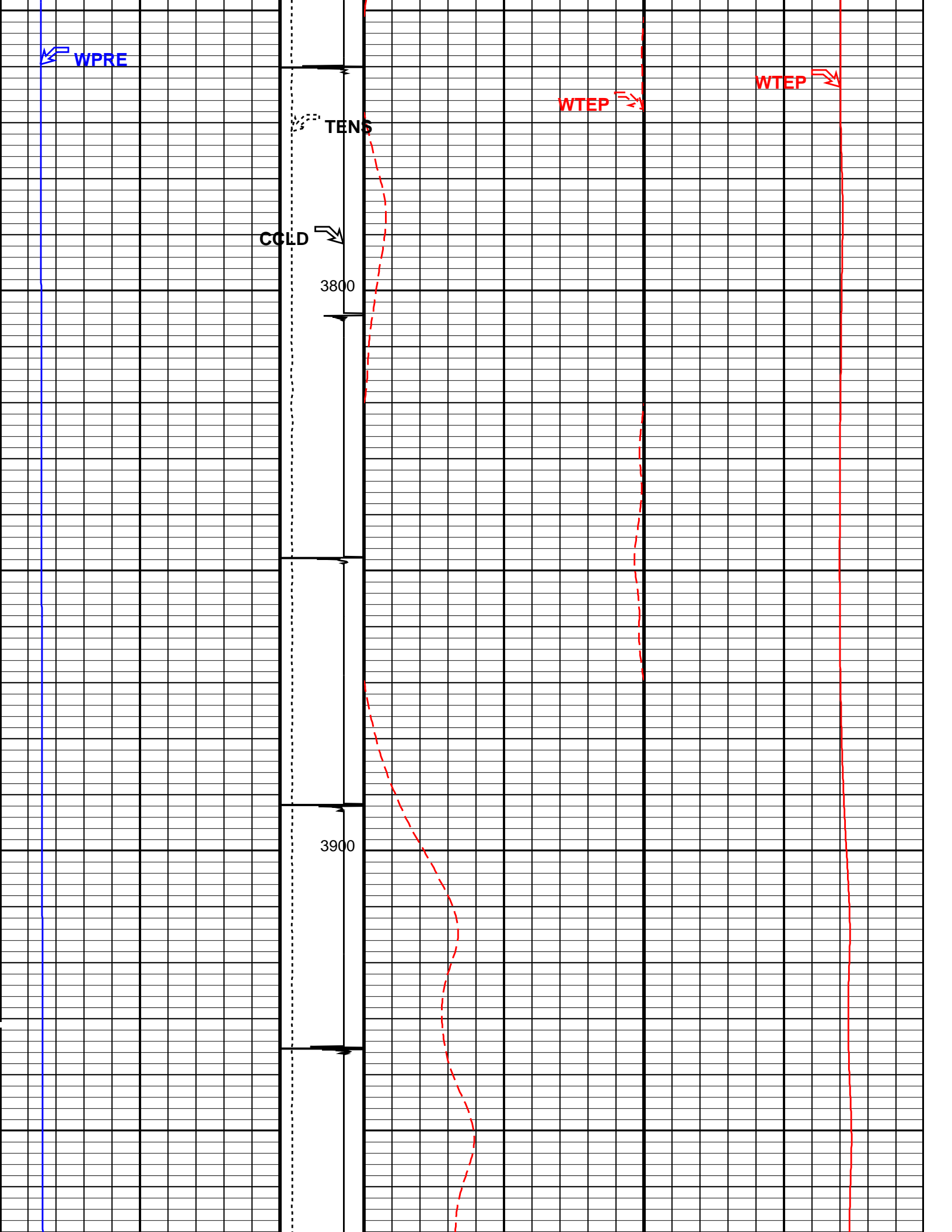
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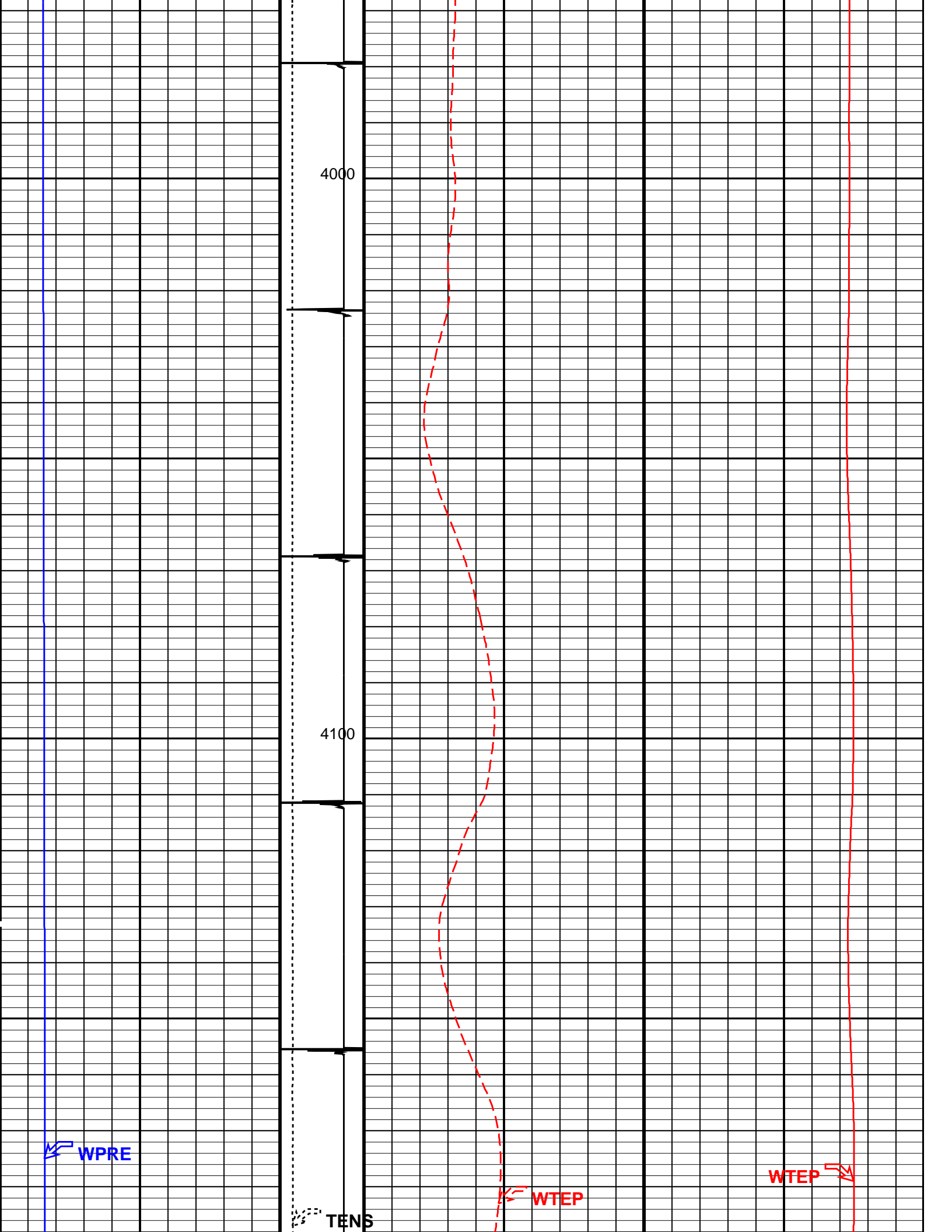
3900

TENS

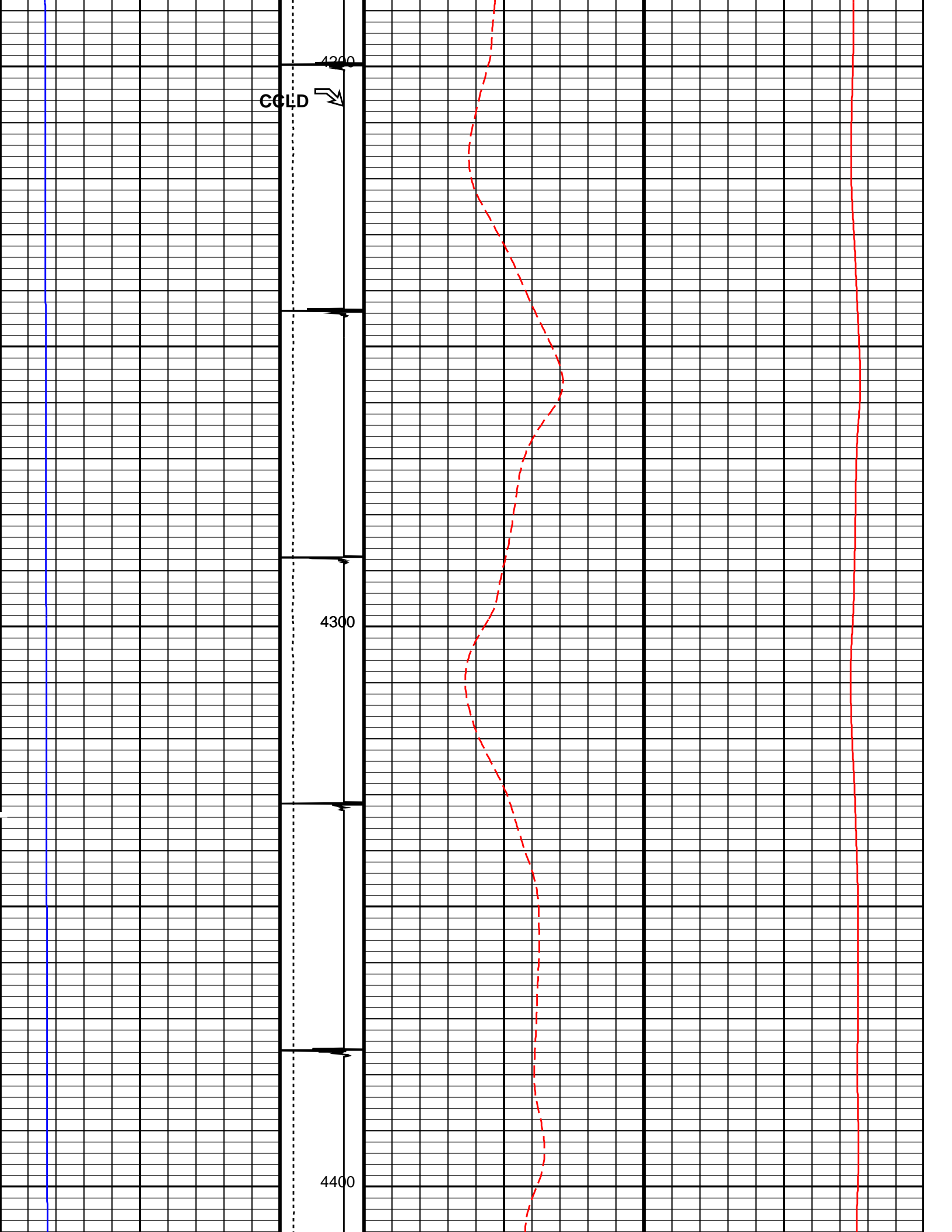
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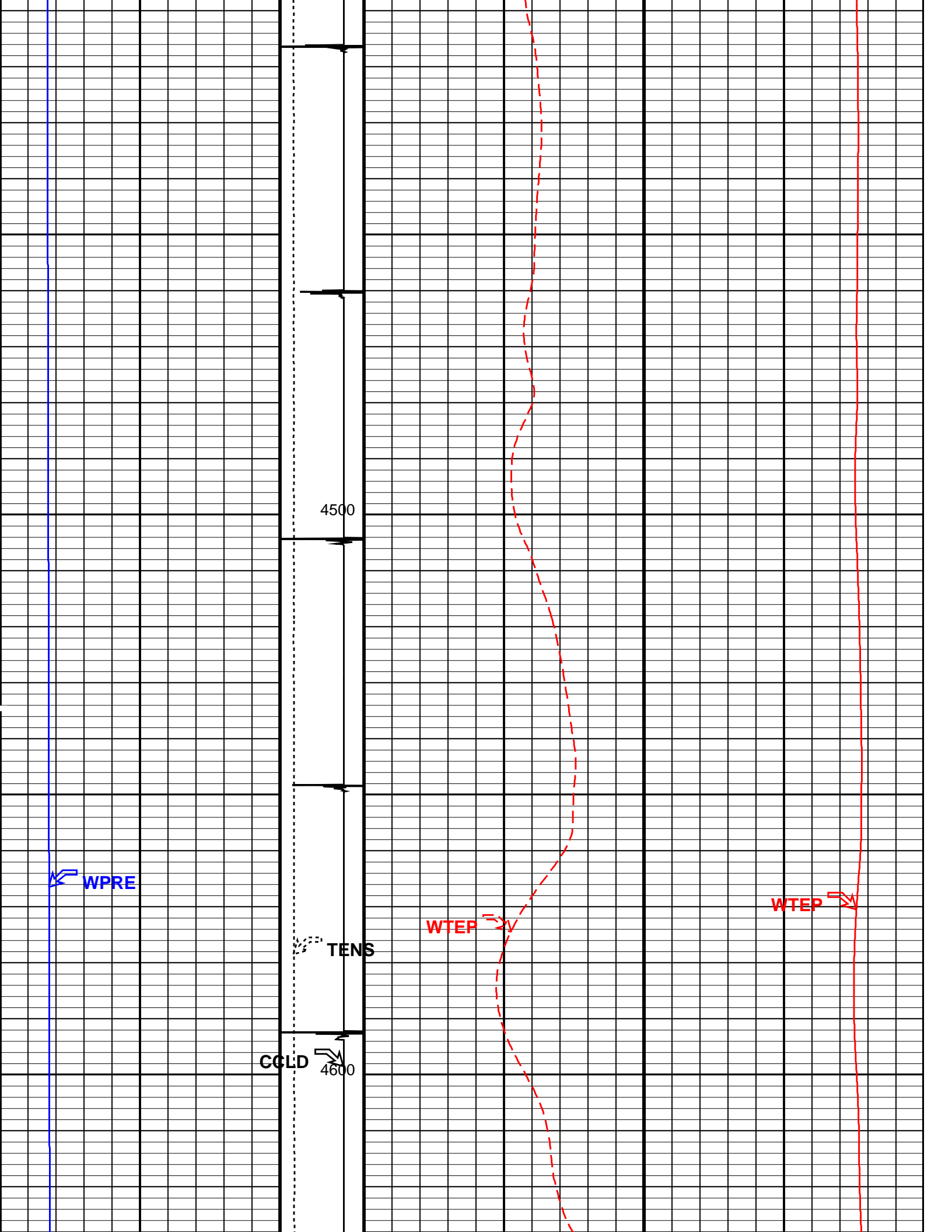
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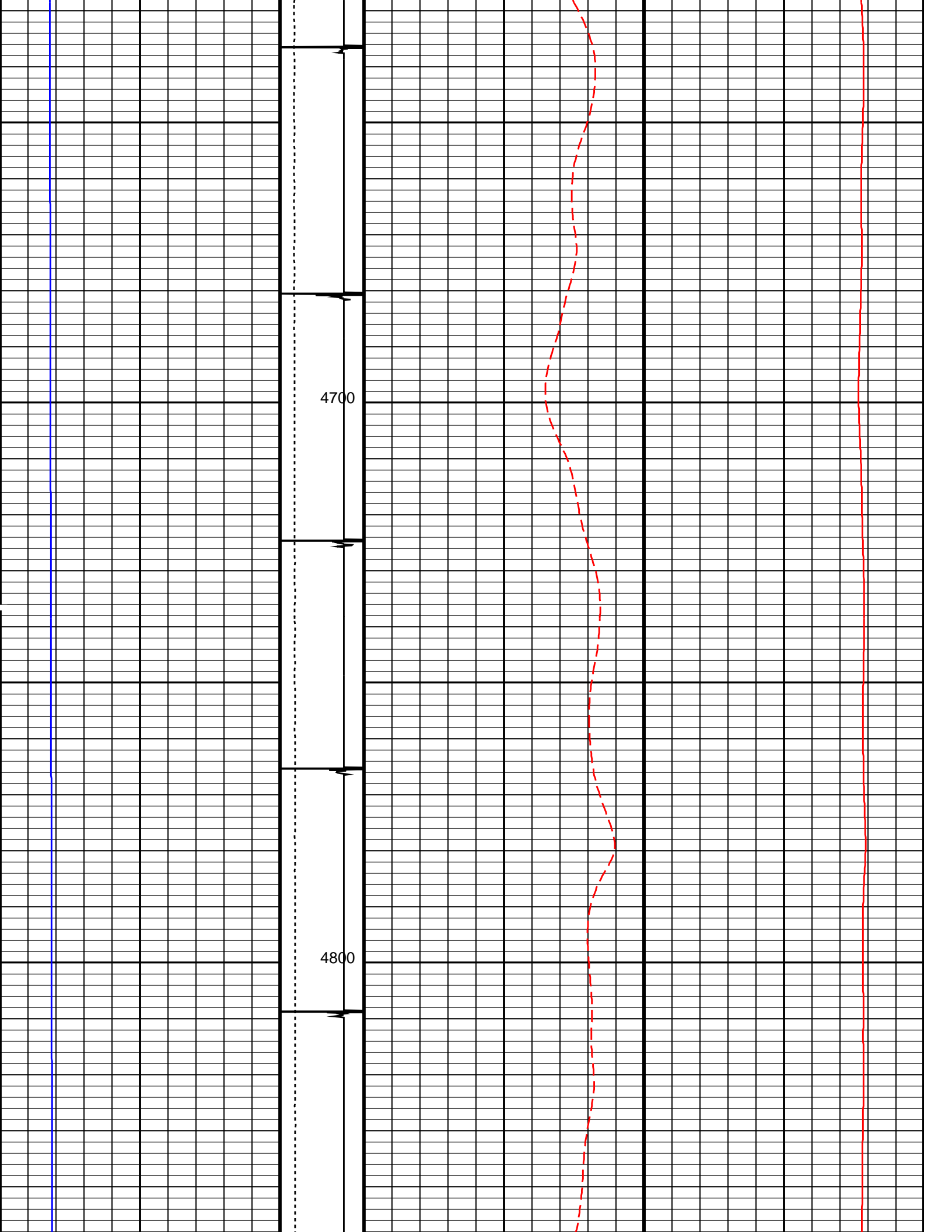


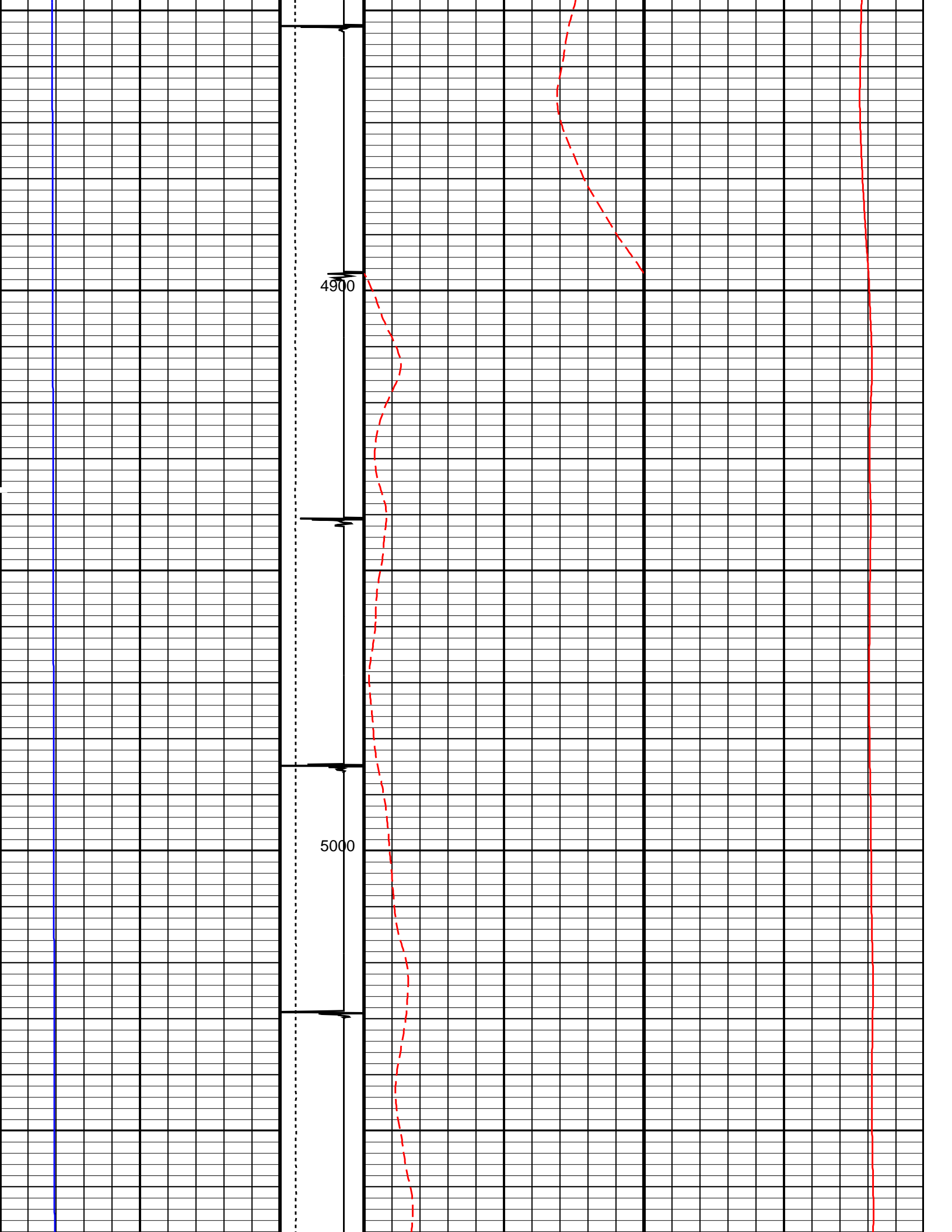


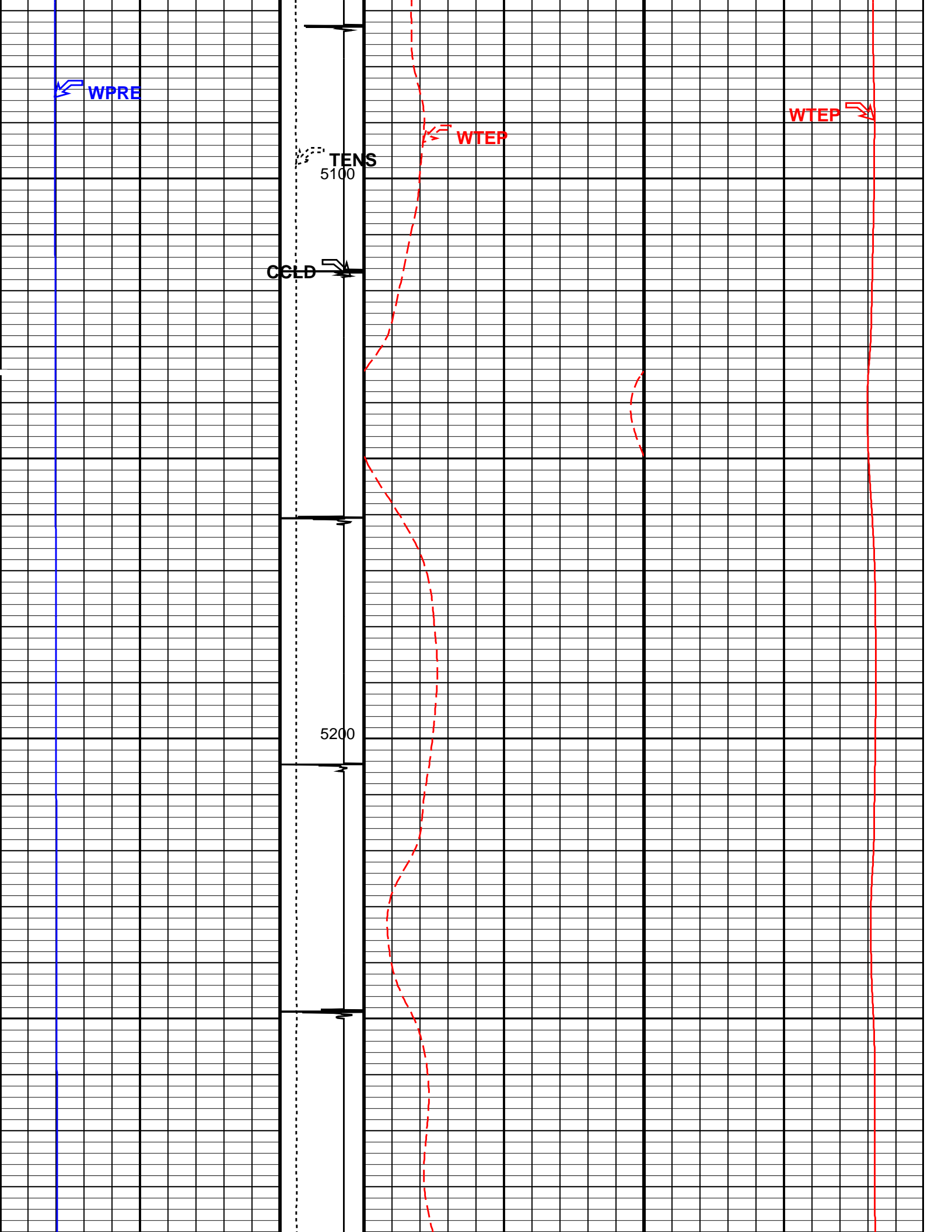


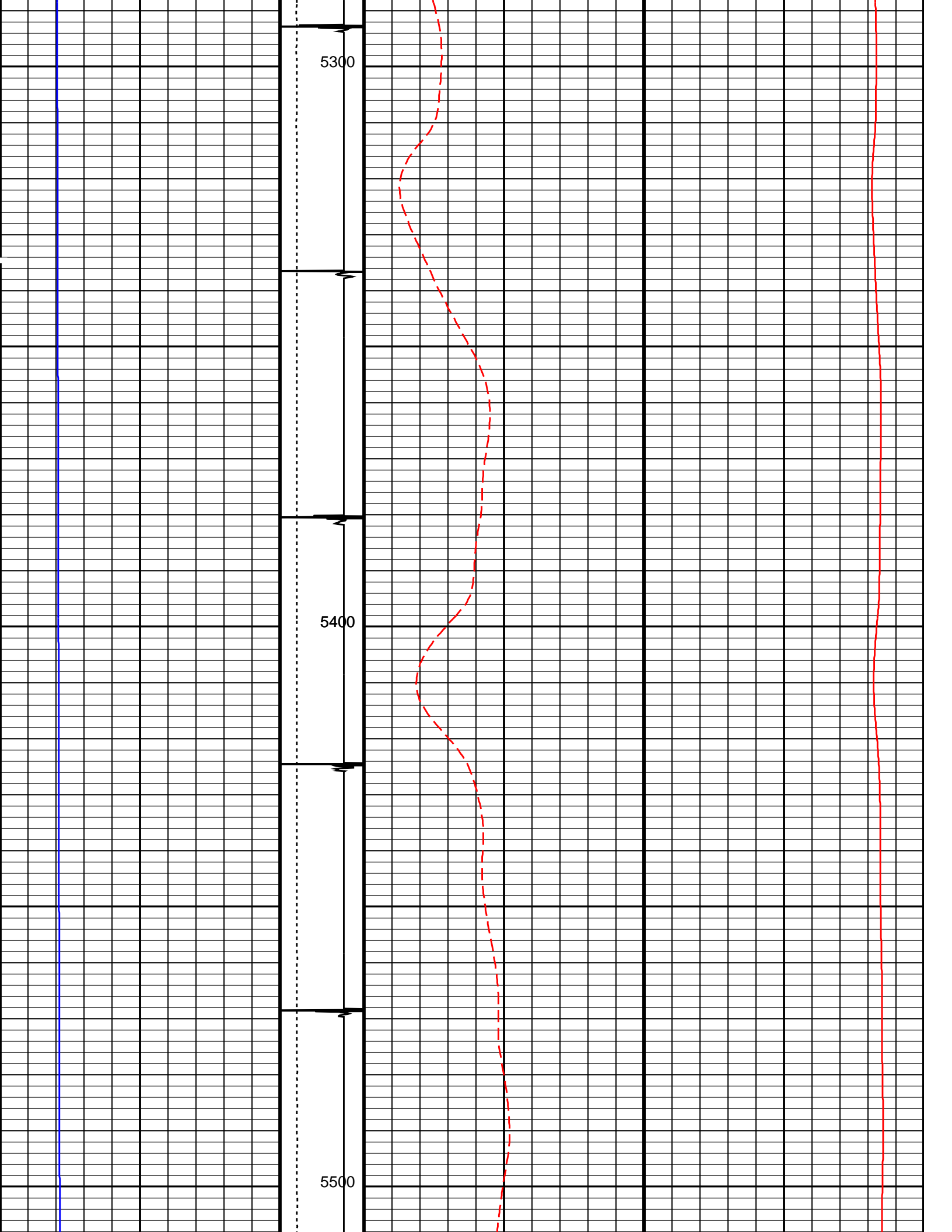


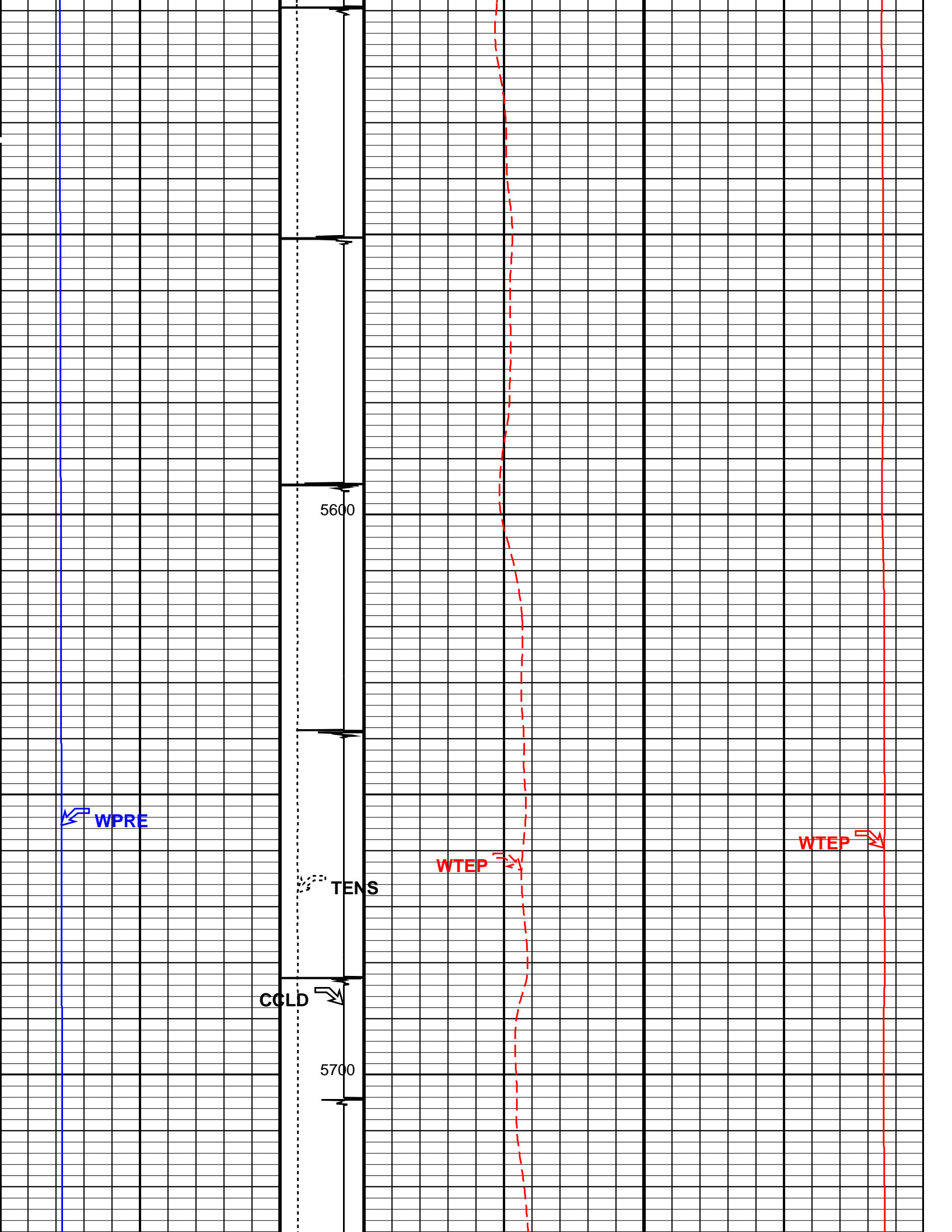


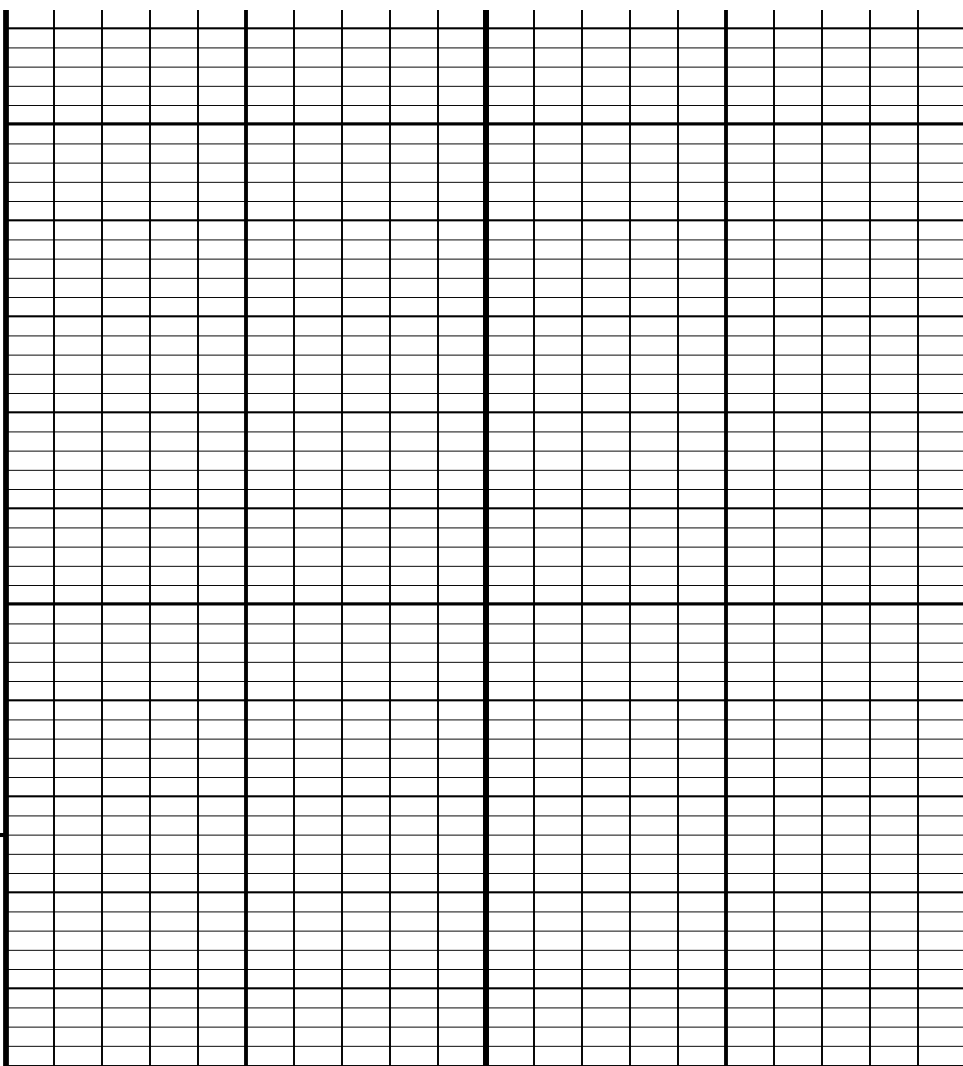
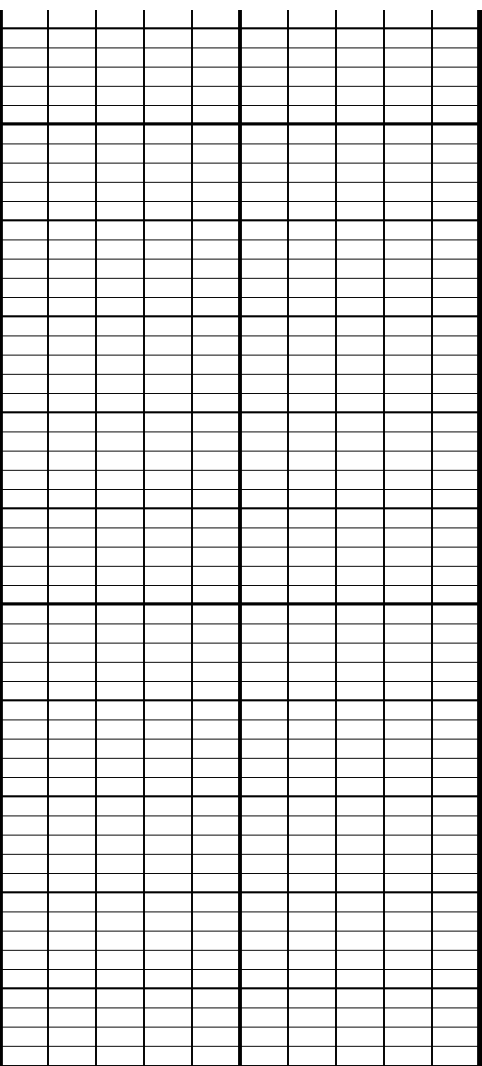




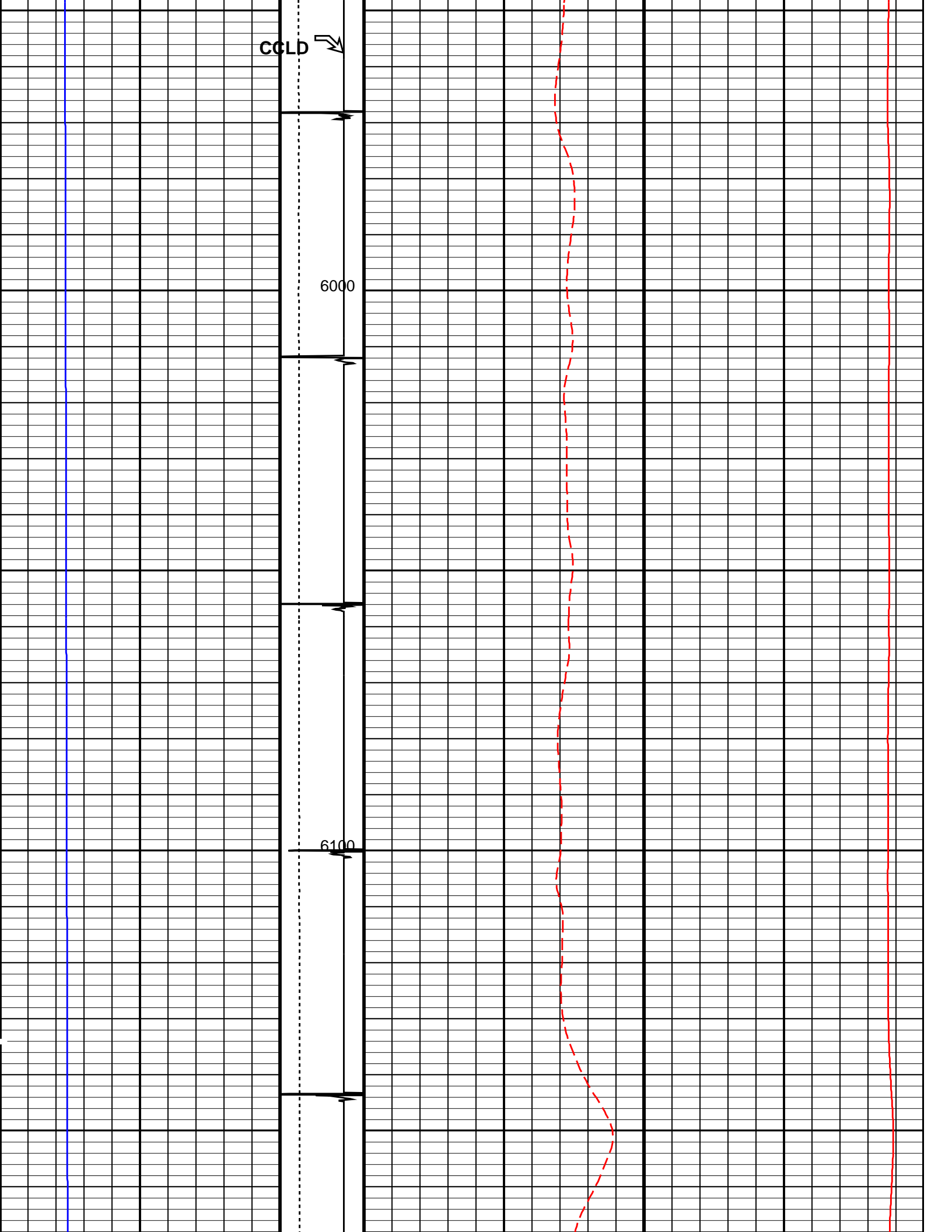




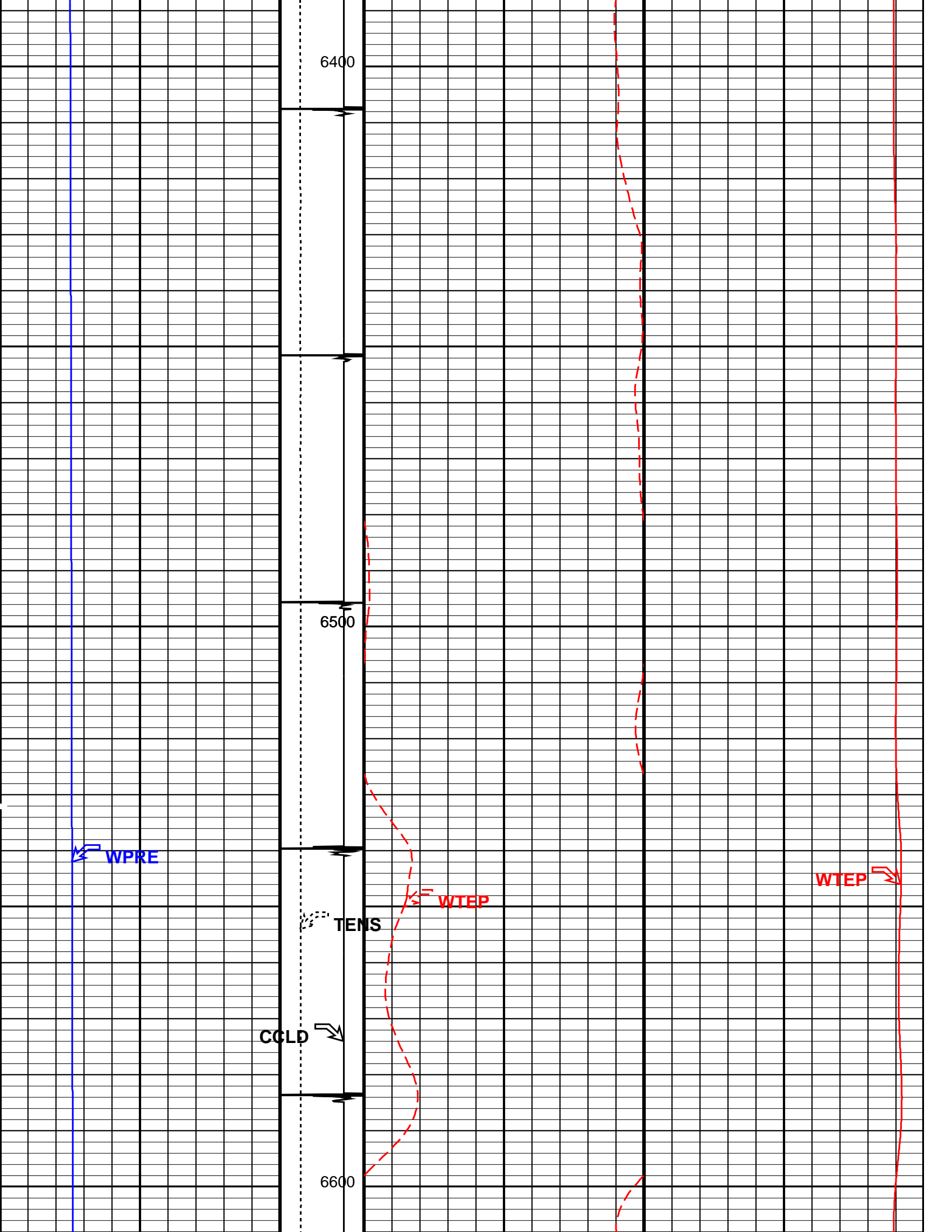




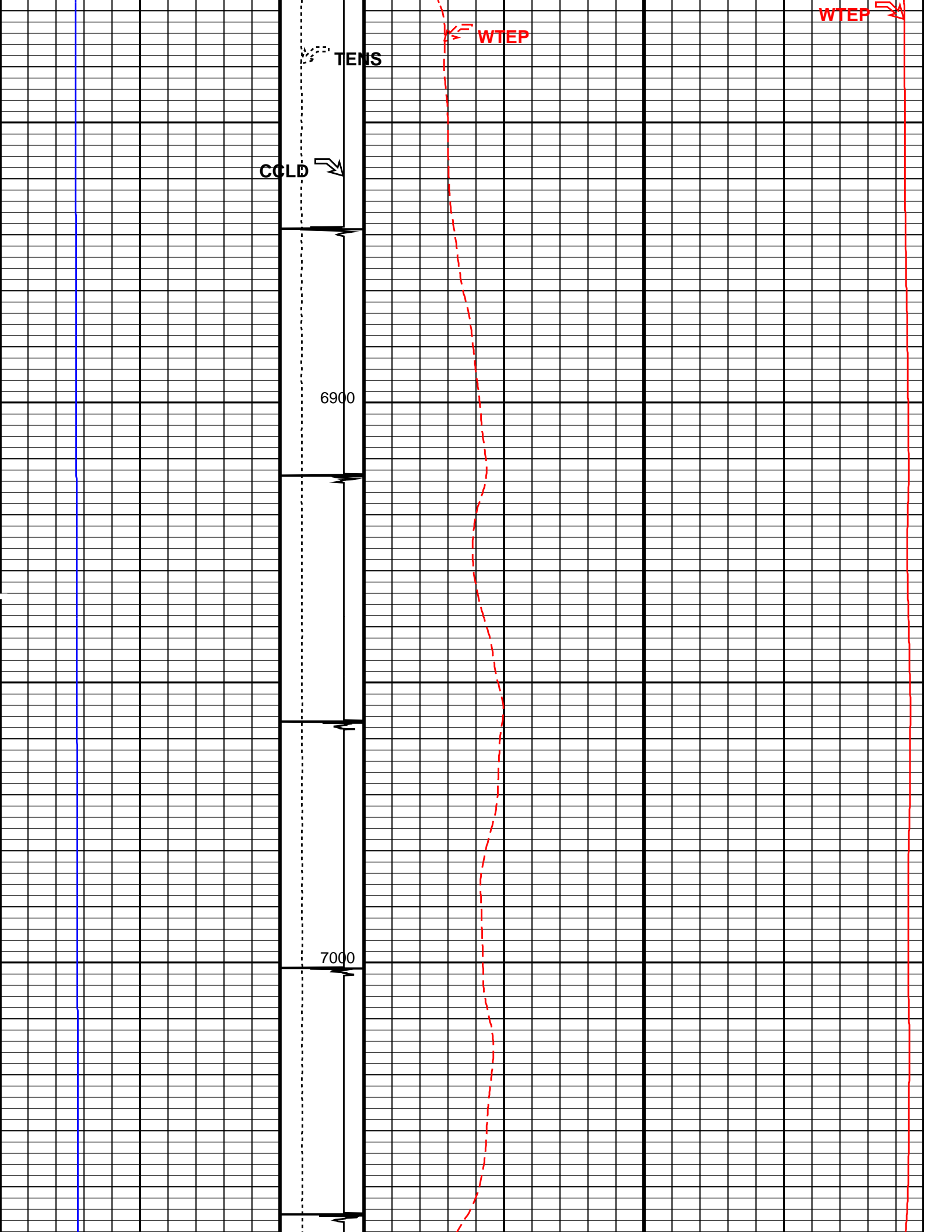




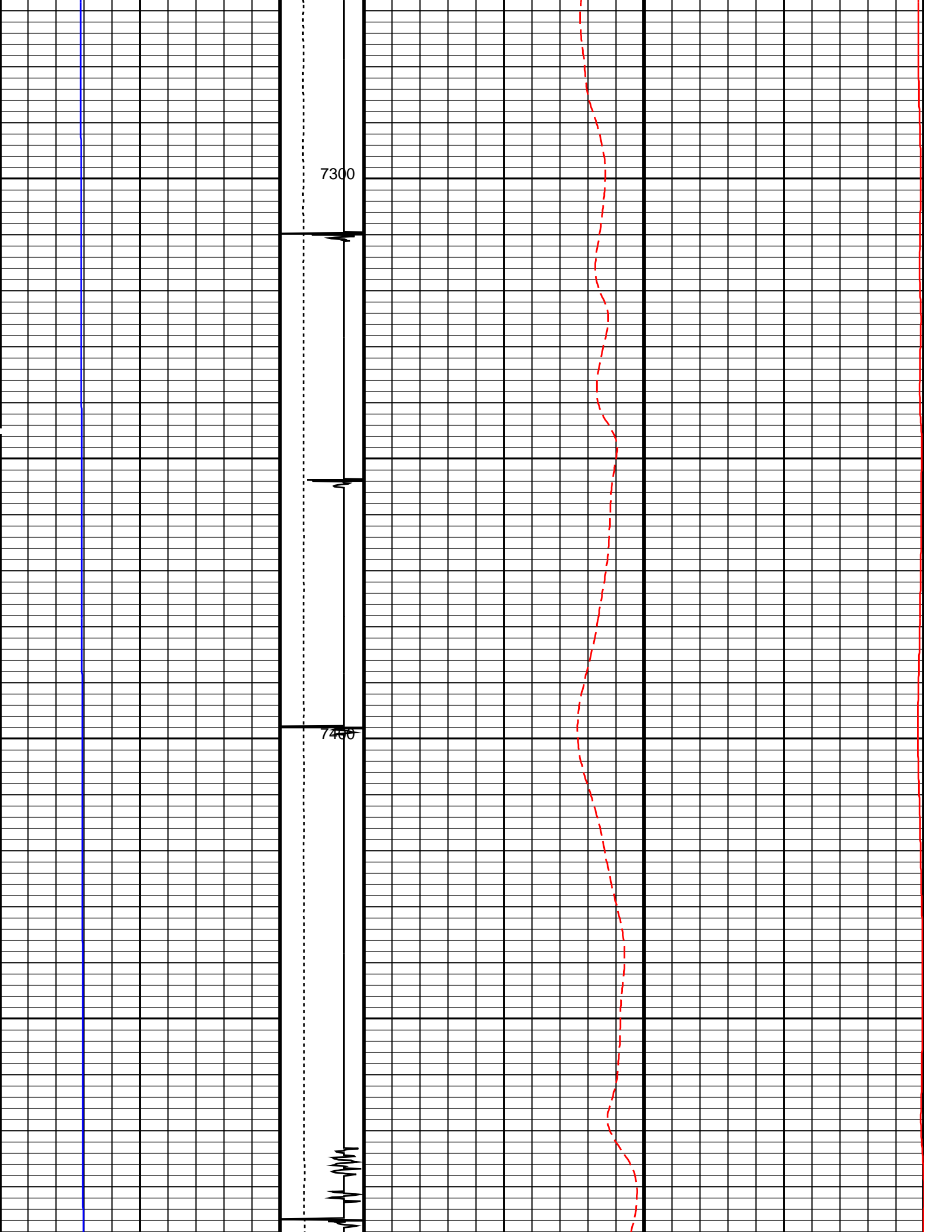






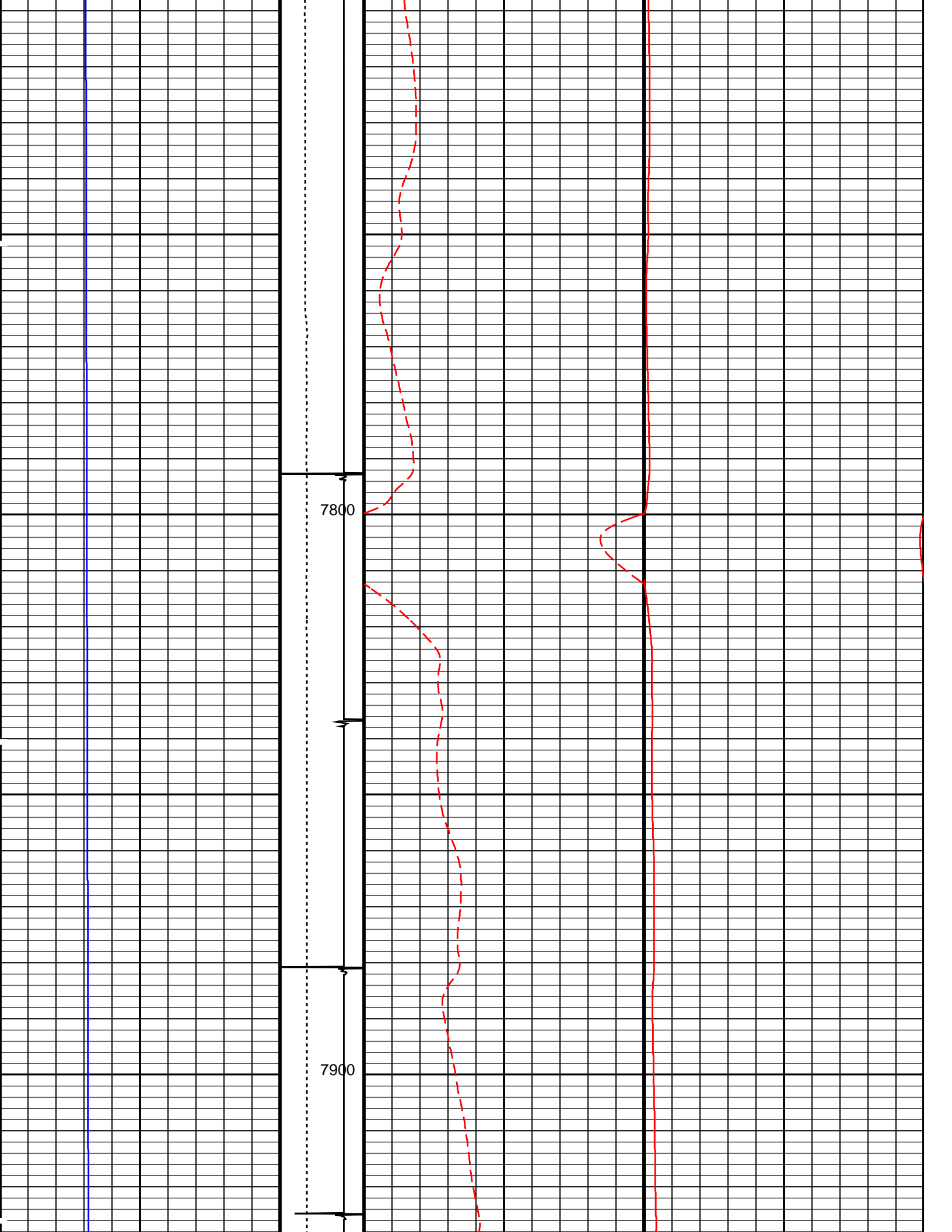


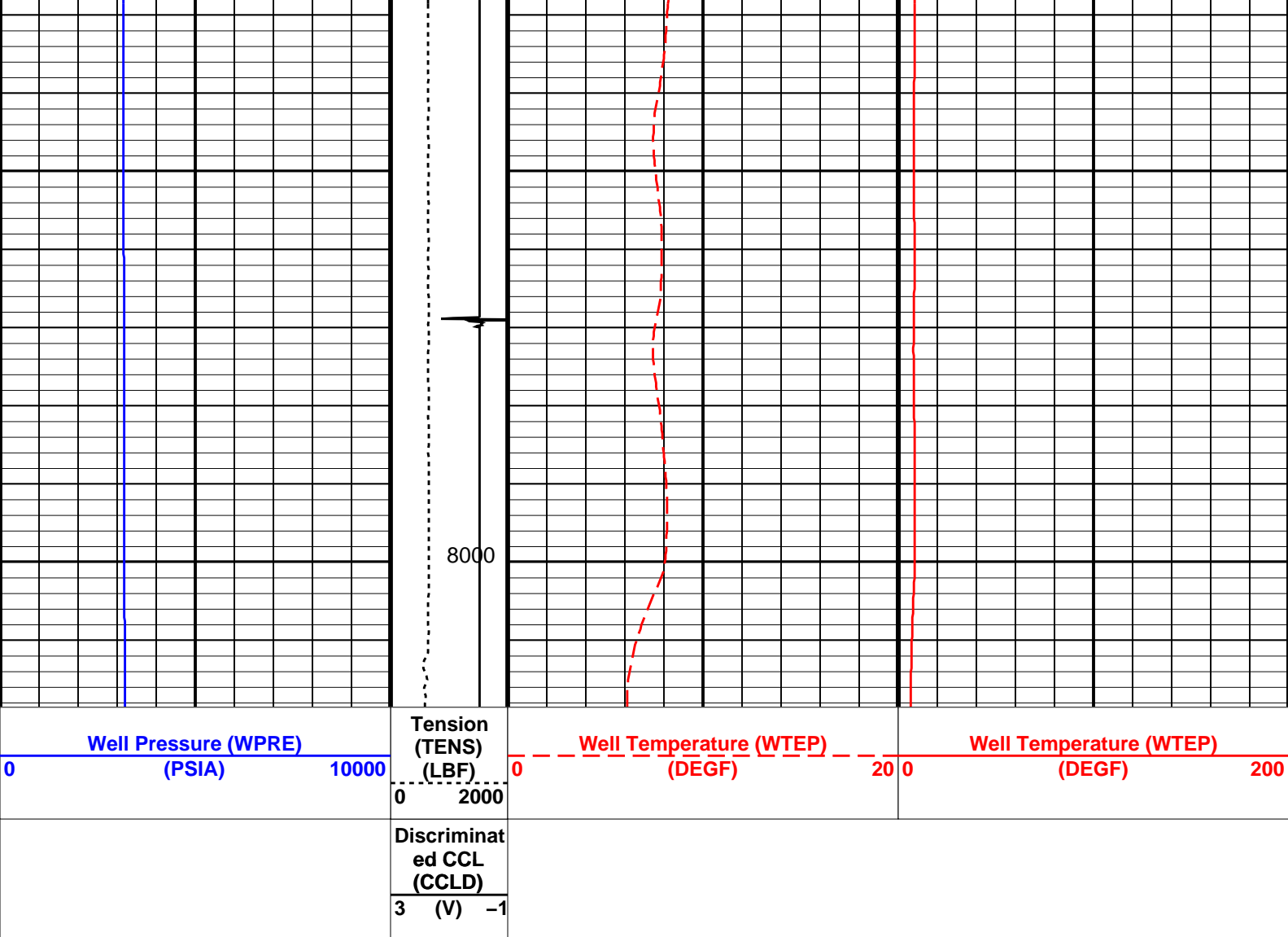












PIP SUMMARY

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: 12-Mar-2013 09:28

OP System Version: 19C0-187

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

Input DLIS Files

DEFAULT Flip\_HBMS\_004LUP PRODUCER 12-Mar-2013 09:24 8018.5 FT -10.5 FT

Output DLIS Files

DEFAULT HBMS\_008PUP FN:5 PRODUCER 12-Mar-2013 09:28

Company: ENCANA OIL & GAS (USA) INC Well: SHIDELER 30-8B (019EB)

Input DLIS Files

DEFAULT	Flip_HBMS_005LUP	PRODUCER	12-Mar-2013 09:24	8014.5 FT	7748.0 FT
DEFAULT	HBMS_008PUP	FN:5 PRODUCER	12-Mar-2013 09:28	8018.5 FT	-10.5 FT

Output DLIS Files

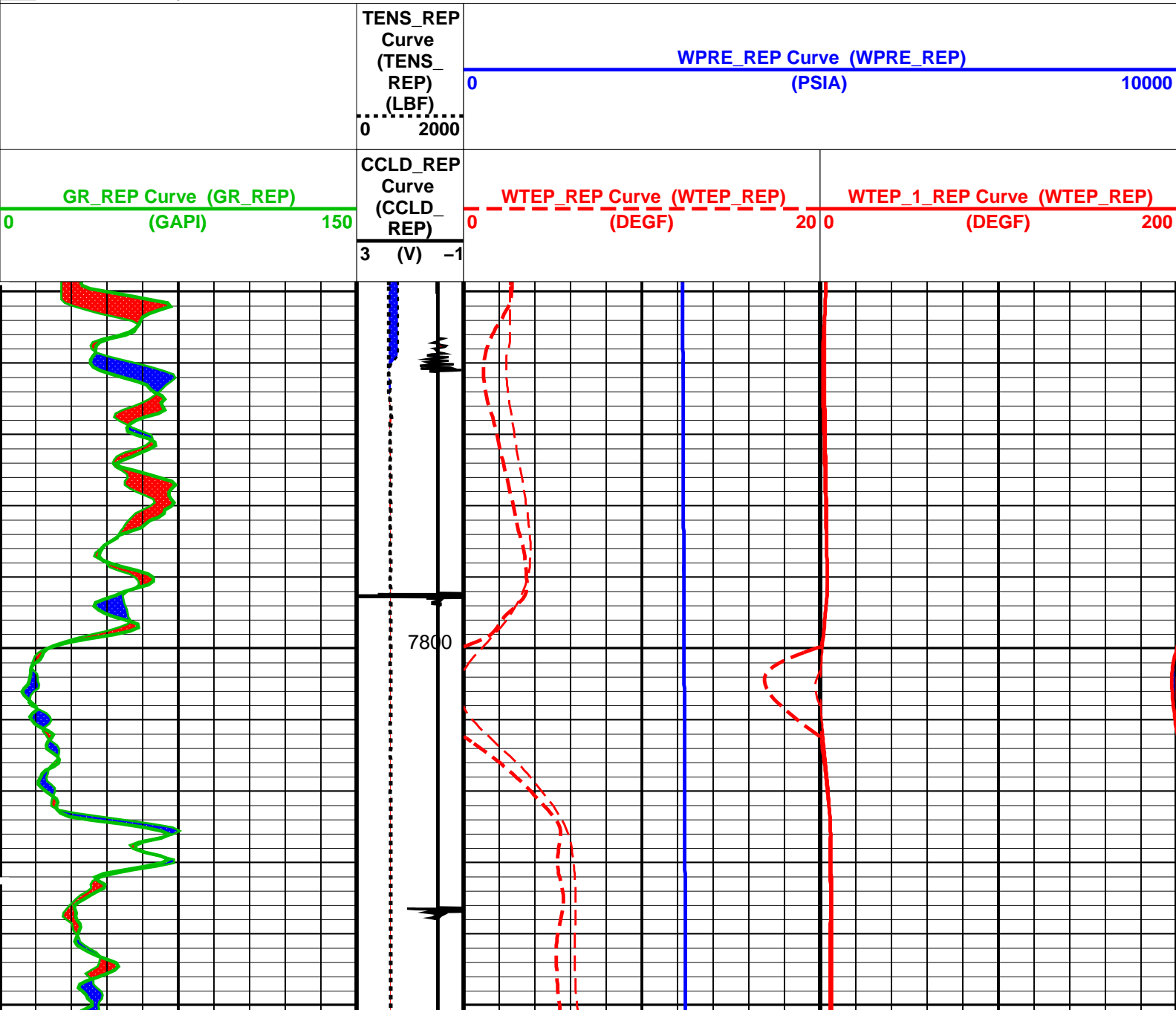
DEFAULT	HBMS_009PUP	FN:6 PRODUCER	12-Mar-2013 09:32	8014.5 FT	7748.0 FT
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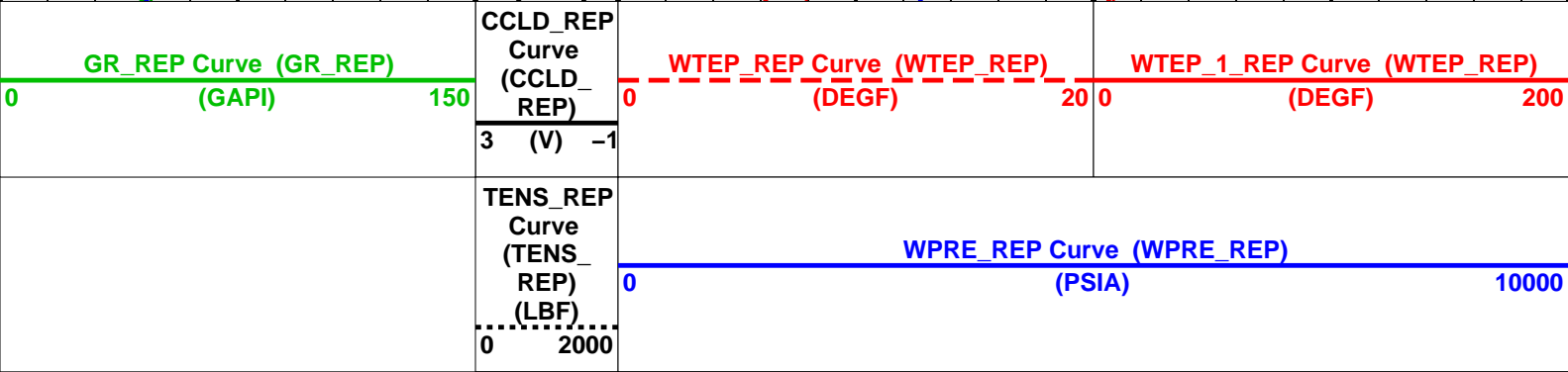
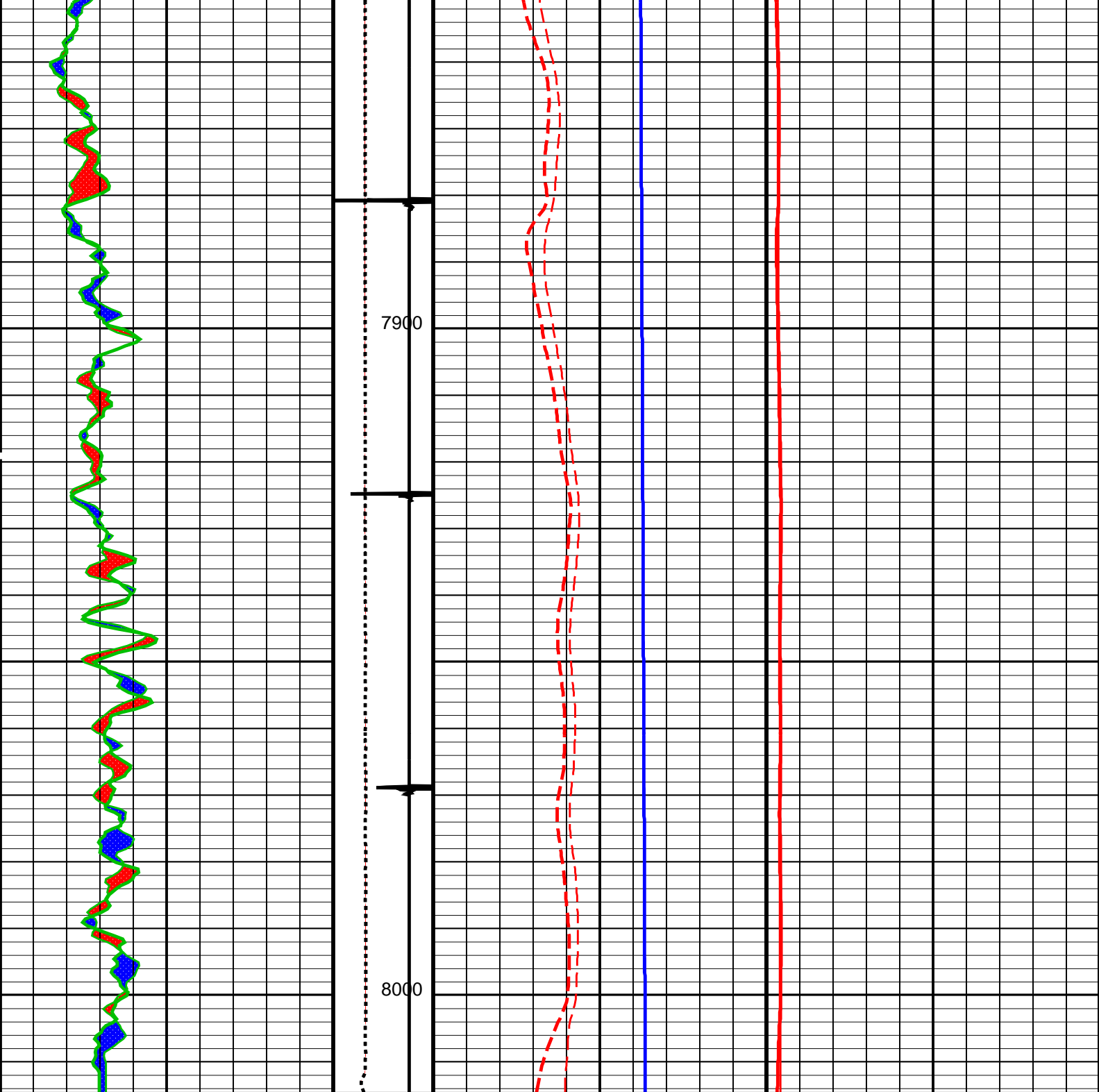
OP System Version: 19C0-187

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		0.0	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: 12-Mar-2013 09:32	
OP System Version: 19C0-187					
HBMS-B		SRPC-5214-H2-2012-OP19			
Input DLIS Files					
DEFAULT	Flip_HBMS_005LUP	PRODUCER	12-Mar-2013 09:24	8014.5 FT	7748.0 FT
DEFAULT	HBMS_008PUP	FN:5	PRODUCER	12-Mar-2013 09:28	8018.5 FT
Output DLIS Files					
DEFAULT	HBMS_009PUP	FN:6	PRODUCER	12-Mar-2013 09:32	

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER 30–8B (019EB)

Run date: 12–Mar–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 30–8B (019EB)

Run date: 12–Mar–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

Fh**0	Fh**1	Fh**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



Well: SHIDELER 30-8B (019EB)  
Field: MAMM CREEK  
County: GARFIELD  
State: COLORADO

TEMPERATURE LOG  
CCL - TEMPERATURE