

Company: IMPERIAL OIL RESOURCES

Well: IMP 06 H57-H06 COLD LK 12-10-66-4

Field: LEMING

Province: ALBERTA State: **MD**

PRODUCTION ANALYSIS

TEMP. / PRESSURE

Province:	ALBERTA			
Field:	LEMING			
Location:	6-9-66-4W4	Elev.:	K.B.	629.42 m
	104121006604W400		G.L.	622.30 m
			D.F.	
Well:	IMP 06 H57-H06 COLD LK 12-10-66-4			
Company:	IMPERIAL OIL RESOURCES			
Location:	Permanent Datum:	Ground Level	Elev.:	622.30
	Log Measured From:	Kelly Bushing	7.12 m	above Perm.Datum
	Drilling Measured From:	Kelly Bushing		
API Serial No.	Section:	Township:	Range:	
0363969	06-09	066	04W4	
Logging Date	01-Nov-2016			

Run Number	1	
Depth Driller	1722.00 m	
Schlumberger Depth	688.00 m	
Bottom Log Interval	688.00 m	
Top Log Interval	7.12 m	
Casing Fluid Type	Air	
Salinity		
Density	11.98 kg/m3	
Fluid Level	425.00 m	
BIT/CASING/TUBING STRING		
Bit Size	152.40 mm	
From	820.00 m	
To	1722.00 m	
Casing/Tubing Size	139.900 mm	
Weight	25.30 kg/m	
Grade	J55	
From	7.12 m	
To	694.20 m	
Max Recorded Temperatures	114 degC	
Logger on Bottom	01-Nov-2016	13:30:00
Unit Number	Location:	
Recorded By	Y. MUNOZ	LLOYDMINSTER
Witnessed By	TYSON LUCAS	

Disclaimer

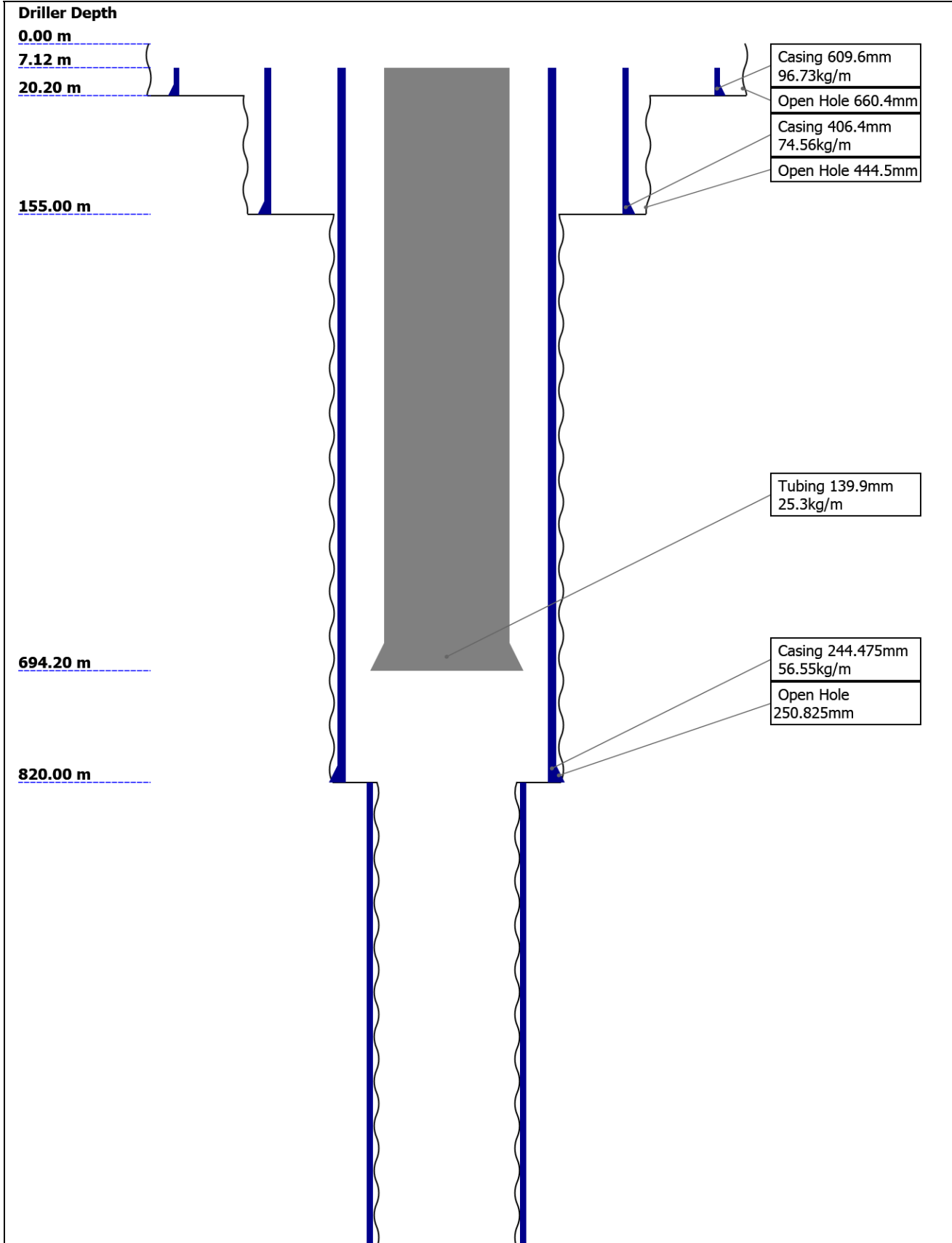
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE 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.

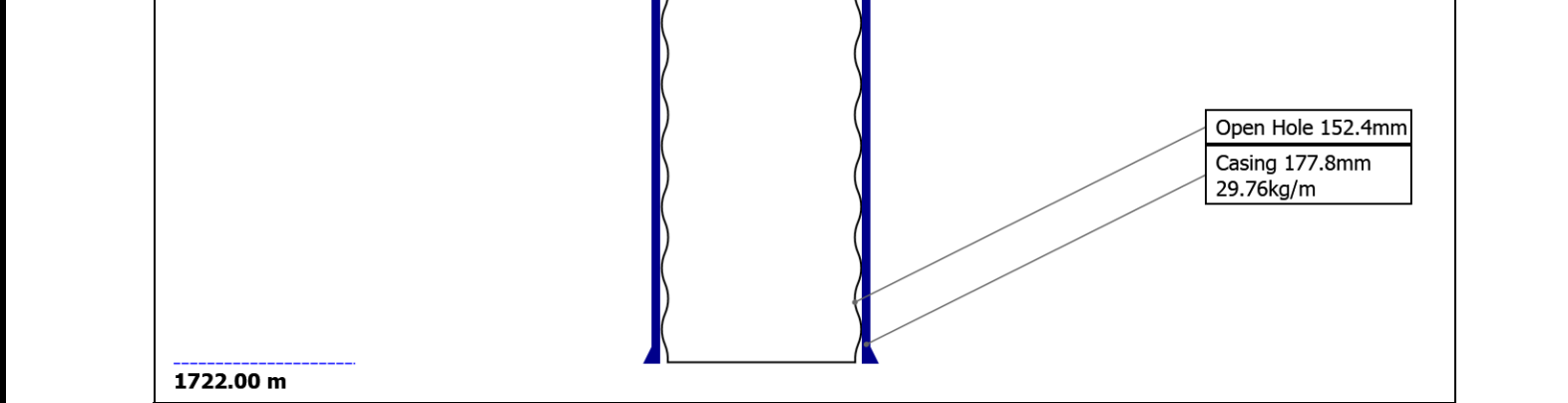
Contents

1. Header
2. Disclaimer
3. Contents
4. Well Sketch
5. Borehole Size/Casing/Tubing Record
6. Operational Run Summary
7. Remarks and Equipment Summary
8. Depth Summary
9. Composite 4 TEMP DOWN PASS 10 M/MIN
 - 9.1 Integration Summary
 - 9.2 Software Version
 - 9.3 Composite Summary
 - 9.4 Log (TEMP DOWN PASS)
 - 9.5 Parameter Listing
10. 1 TEMP UP PASS
 - 10.1 Integration Summary
 - 10.2 Software Version

- 10.3 Composite Summary
- 10.4 Log (TEMP DOWN PASS)
- 10.5 Parameter Listing
- 11. Tail

Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (mm)	660.4	444.5	250.825	152.4		
Top Driller (m)	0	20.2	155	820		
Top Logger (m)	0	20.2	155	820		
Bottom Driller (m)	20.2	155	820	1722		
Bottom Logger (m)	20.2	155	820	1722		
Casing						
Size (mm)	609.6	406.4	244.475	177.8		
Weight (kg/m)	96.73	74.56	56.55	29.76		
Inner Diameter (mm)	596.871	391.566	225.366	163.976		
Grade	N/A	N/A	N/A	N/A		
Top Driller (m)	7.12	7.12	7.12	820		
Top Logger (m)	7.12	7.12	7.12	7.12		
Bottom Driller (m)	20.2	155	820	1722		
Bottom Logger (m)	20.2	155	820	1722		
Tubing						
Size (mm)	139.9					
Weight (kg/m)	25.3					
Inner Diameter (mm)	124.721					
Grade	J55					
Top Driller (m)	7.12					
Top Logger (m)	7.12					
Bottom Driller (m)	694.2					
Bottom Logger (m)	694.2					

Operational Run Summary

Parameter (unit)	1					
Date Log Started	01-Nov-2016					
Time Log Started	11:10:42					
Date Log Finished						
Time Log Finished						
Top Log Interval (m)						
Bottom Log Interval (m)						

Total Depth (m)						
Max Hole Deviation (deg)						
Azimuth of Max Deviation (deg)						
Bit Size (mm)	152.400					
Logging Unit Number	222					
Logging Unit Location	LLOYDMINSTER					
Recorded By	Y. MUNOZ					
Witnessed By	TYSON LUCAS					
Service Order Number	CZ35-00171					

Remarks and Equipment Summary

1: Toolstring				1: Remarks	
Equip name	Length	MP name	Offset	TUBING SHUT IN PRESSURE 1450 KPA CASING SHUT IN PRESSURE 1650 KPA FLUID SHOT DATA: 57/68 JOINTS FLUID LEVEL FROM LOG AT 429 TOOL HUNG UP AT 193 MKB TROUBLE TRACTORING BY 463 MKB PSN AT 693 MKB; BURST NIPPLE AT 674 MKB TUBING SHUT IN PRESSURE 1530 KPA LOGGED TEMP DOWN AT 10 M/MIN TO 454 MKB TRACTORED DOWN FROM 454 MKB TO 688 MKB. WAITED HALF HOUR AT 688 MKB AND STARTED LOGGING TEMP UP AT 5 M/ LOGGED TEMP UP PASS AT 5 M/MIN 404 MKB (50 METERS PASSED POINT OF REFUSAL) MAX TEMPERATURE 114.3 DEGC AT 688 MKB	
PEH-E	3.99				
AH-38	3.48				
HBMS-B:2814	3.39				
HUDH-A:2814					
PSC-A:2814					
HSTC-A:2814					
HBMC-A:2814					
HTPS-A:2814					
		GR	1.87		
		CCL	1.14		
		PSTC	0.71		
		HSTC Tool String Bottom	0.00		
		CQG Pressure	0.28		
		Temperature	0.28		
		TOOL_ZERO			
Lengths are in m Maximum Outer Diameter = 52.451 mm Line: Sensor Location, Value: Gating Offset All measurements are relative to TOOL_ZERO					

Depth Summary

	1		
--	---	--	--

Depth Measuring Device			
Type	IDW-B		
Serial Number	6056		
Calibration Date	19-MAR-2015		
Calibrator Serial Number	004		
Calibration Cable Type	1-33 SLIC		
Wheel Correction 1	1		
Wheel Correction 2	1		

Tension Device			
Type	CMTD-B/A		
Serial Number	1084		
Calibration Date	22-MAR-2015		

Calibration Date	22-OCT-2016		
Calibrator Serial Number	232970		
Number of Calibration Points	10		
Calibration Root Mean Square Error			
Calibration Peak Error	31		

Logging Cable

Type	1-33A-SLC		
Serial Number			
Length	1.00 m		
Conveyance Type	Wireline		
Rig Type			

1:Depth Control Parameters		Depth Control Remarks
Log Sequence	Subsequent Log In the Well	ALL OF SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED
Reference Log Name	TUBING TALLY - BURST NIPPLE AT 674.52	IDW USED AS PRIMARY DEPTH CONTROL
Reference Log Run Number		Z-CHART USED AS SECONDARY DEPTH CONTROL
Reference Log Date		

Composite 4

TEMP DOWN PASS 10 M/MIN

Software Version

Acquisition System	Version
Maxwell 2016	6.0.53731.3100
Application Patch	Wireline_TestKit-EMIT-C-2016RC3_6.0.54288

Composite Summary

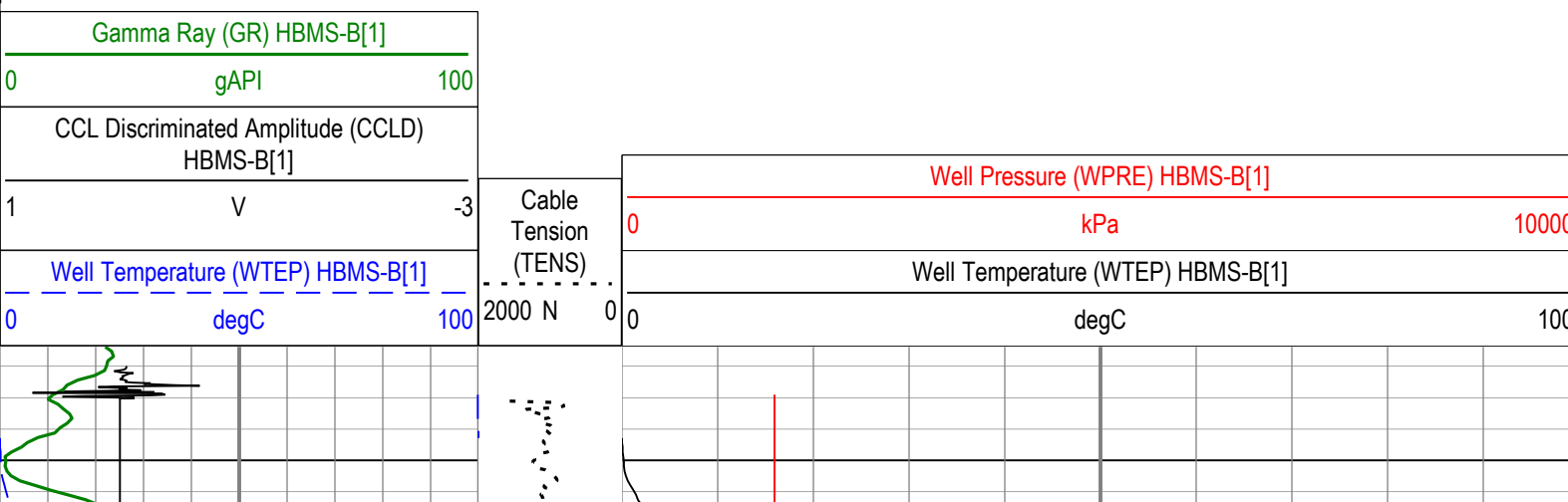
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1	Log[1]:Down	Down	3.09 m	204.46 m	01-Nov-2016 12:05:19 PM	01-Nov-2016 12:34:02 PM	ON	-1.00 m	No
1	Log[3]:Down	Down	188.88 m	453.50 m	01-Nov-2016 12:38:07 PM	01-Nov-2016 1:08:15 PM	ON	-1.00 m	No

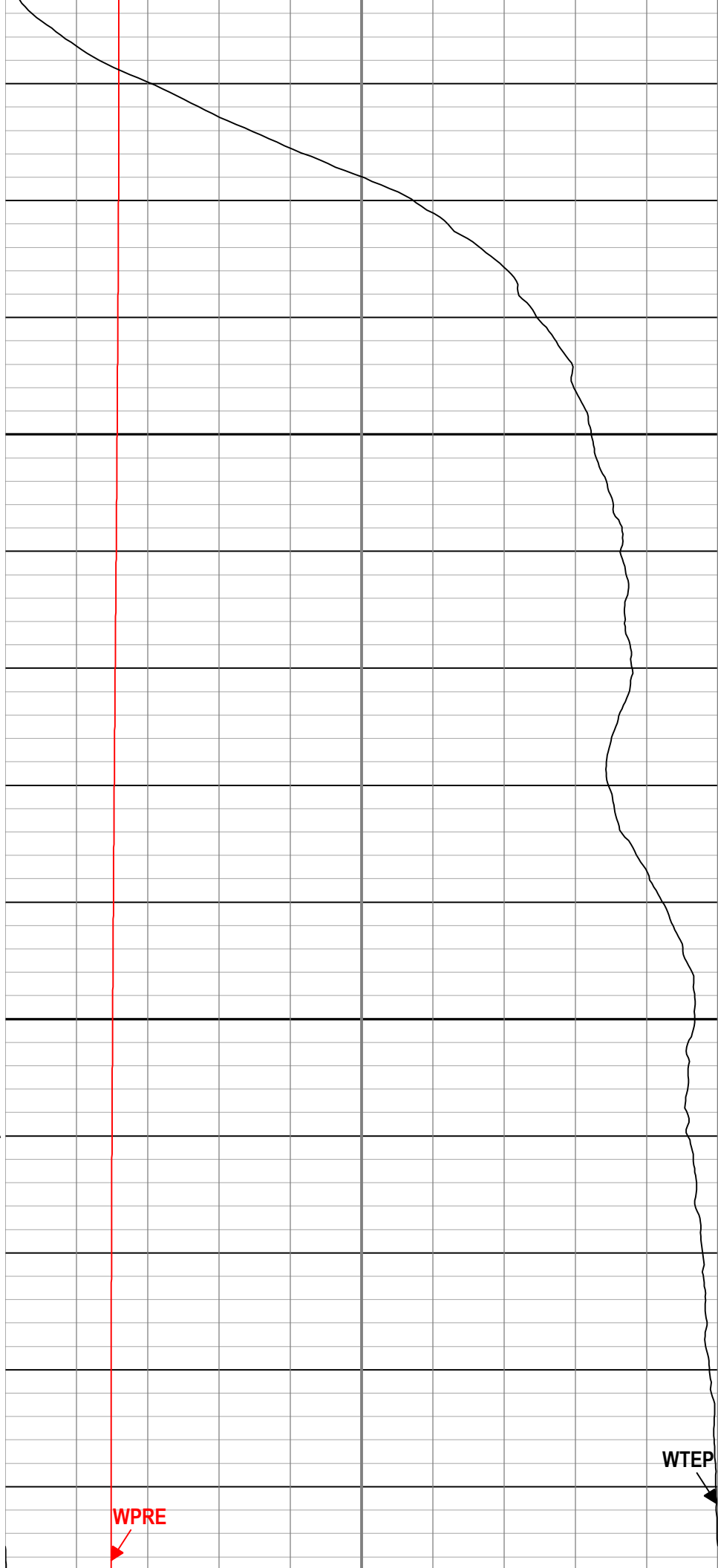
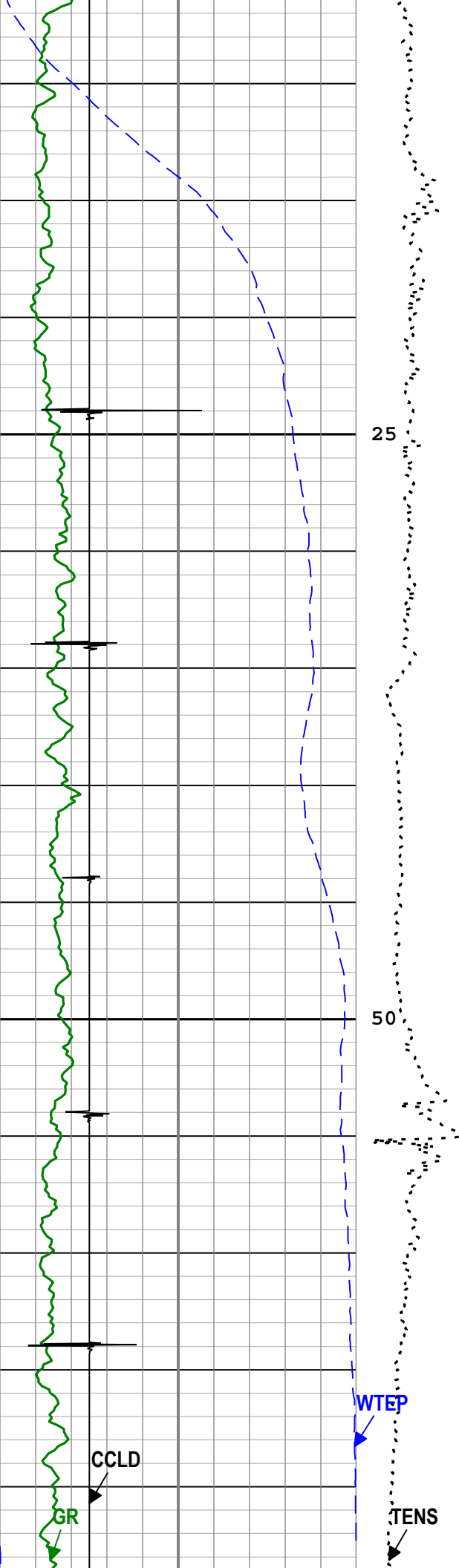
All depths are referenced to toolstring zero

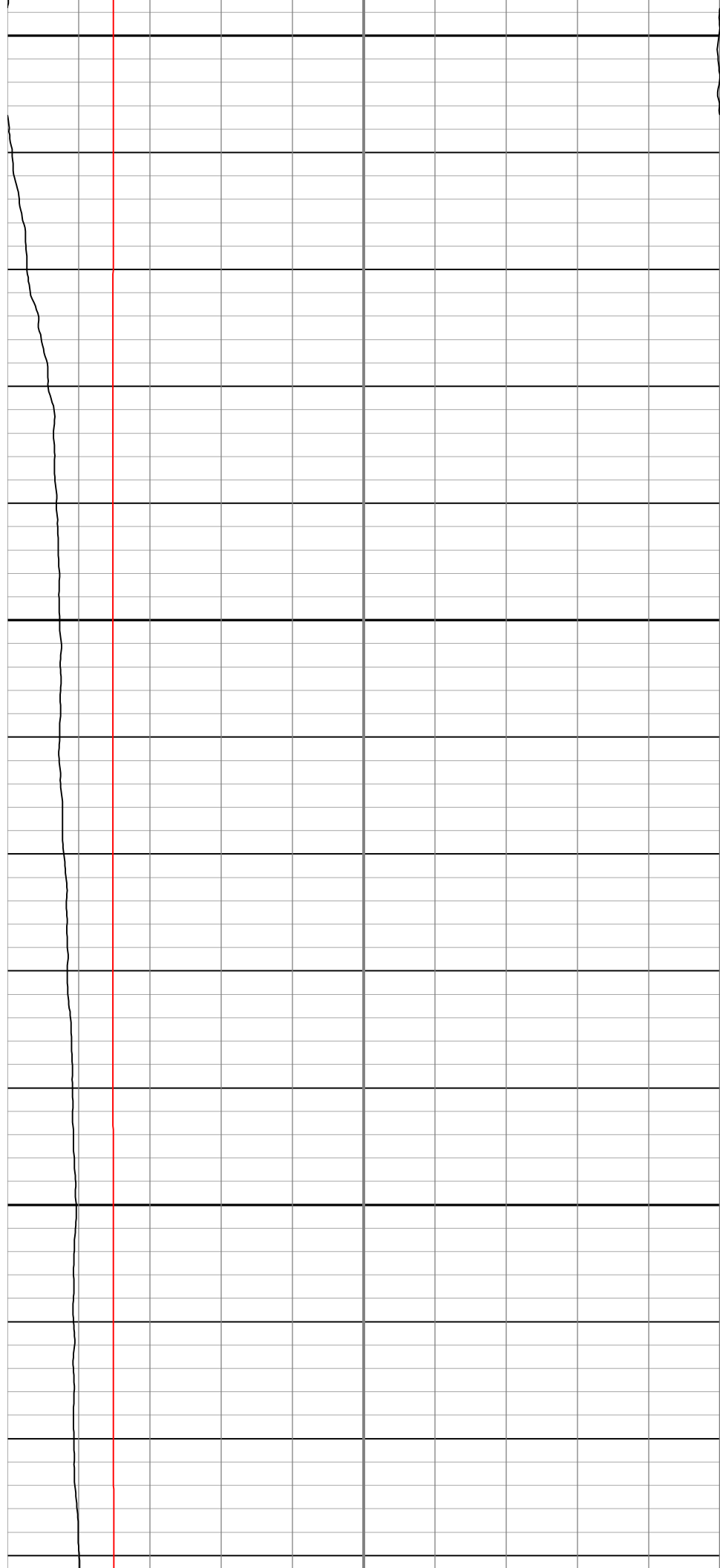
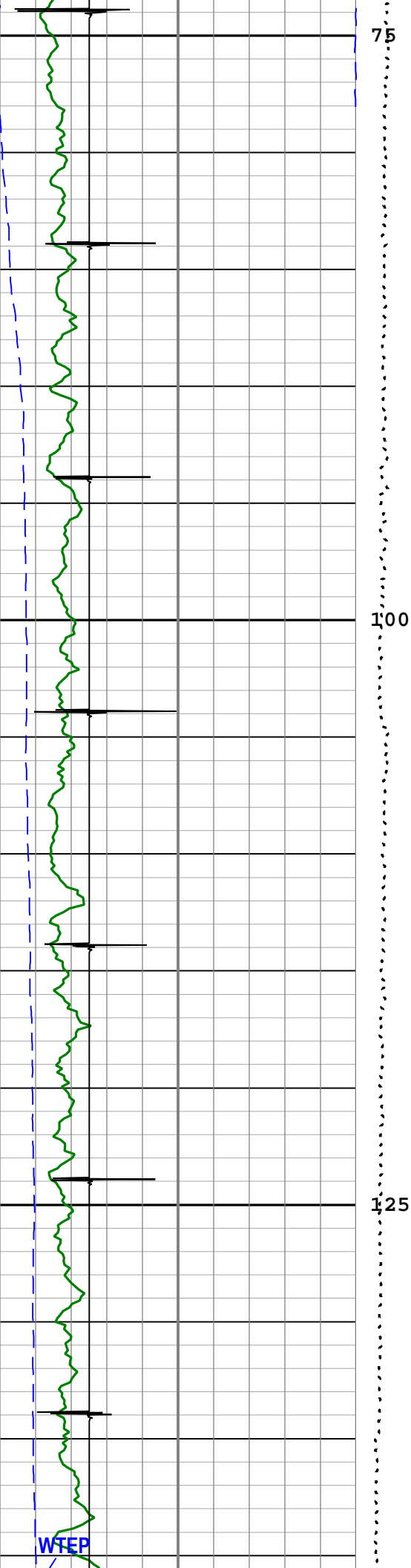
Log	Company:IMPERIAL OIL RESOURCES	Well:IMP 06 H57-H06 COLD LK 12-10-66-4	Composite 4:S007
-----	--------------------------------	--	------------------

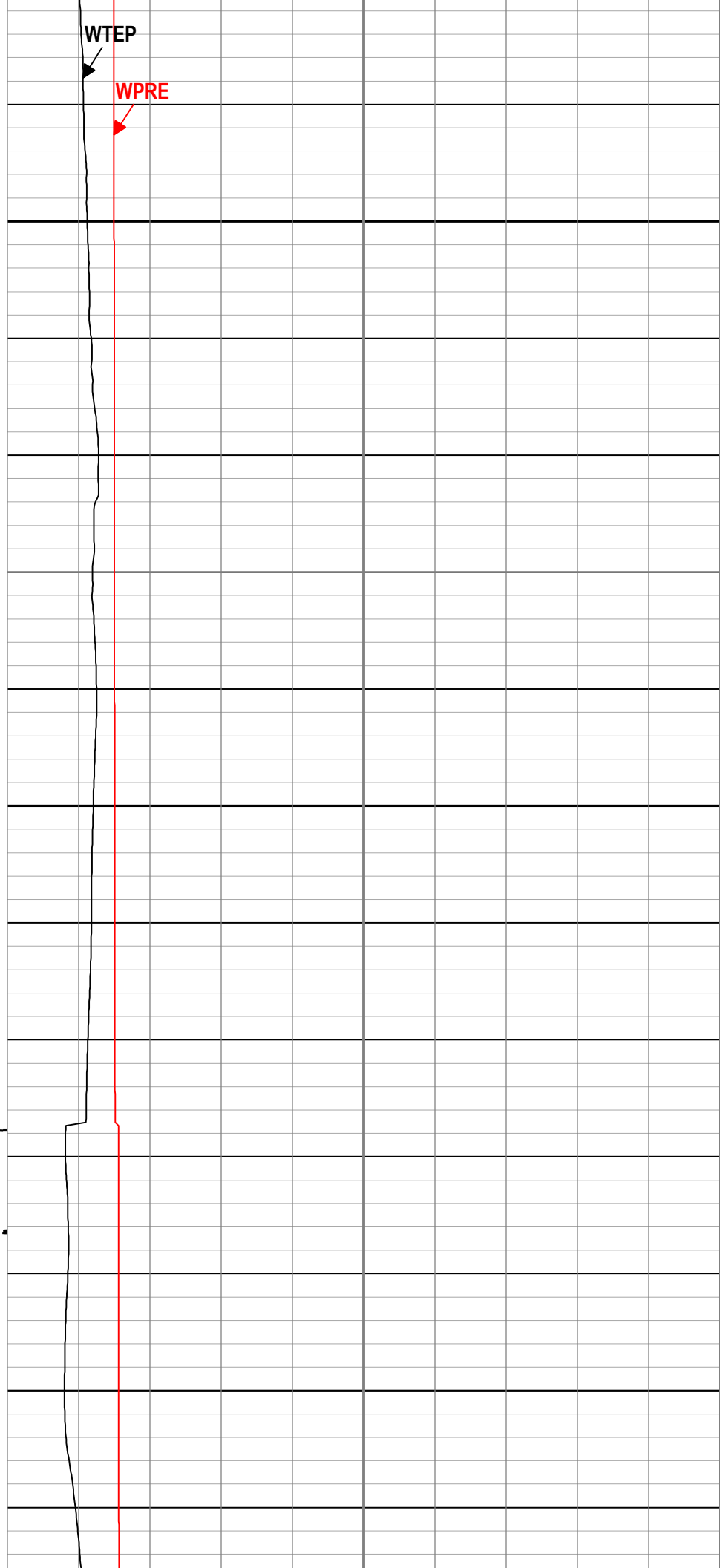
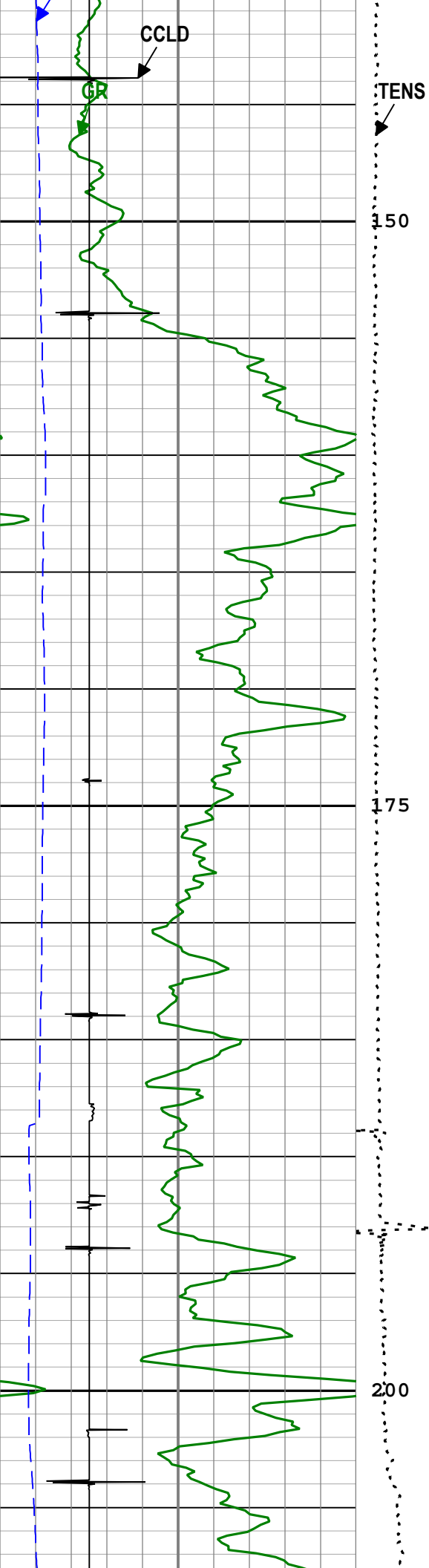
Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 01-Nov-2016 16:22:48

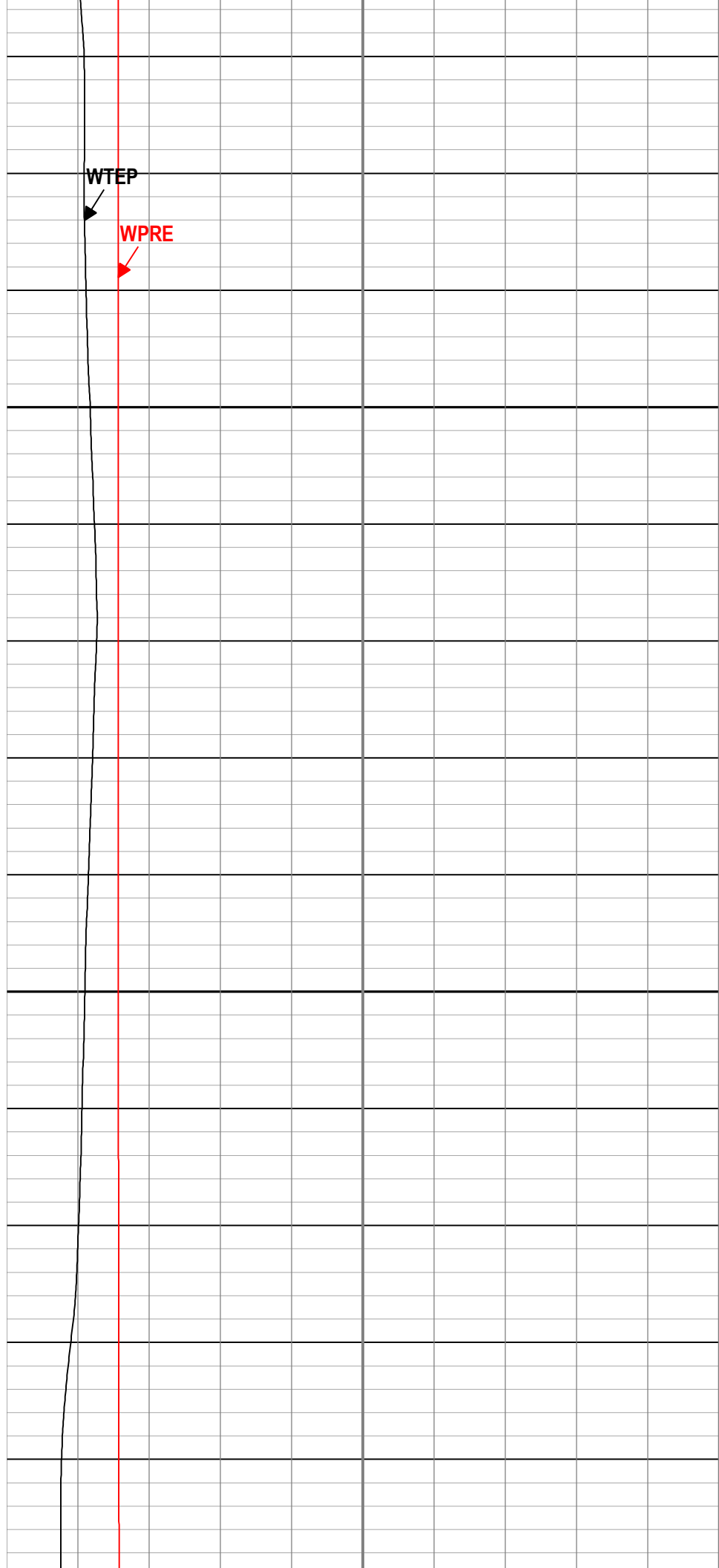
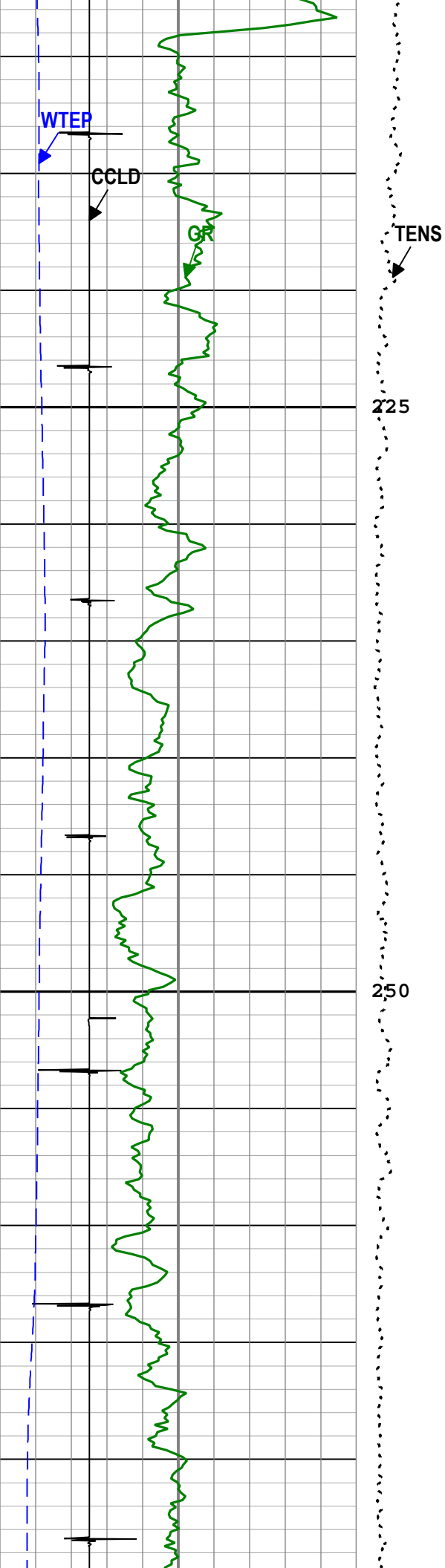
TIME_1900 - Time Marked every 60.00 (s)

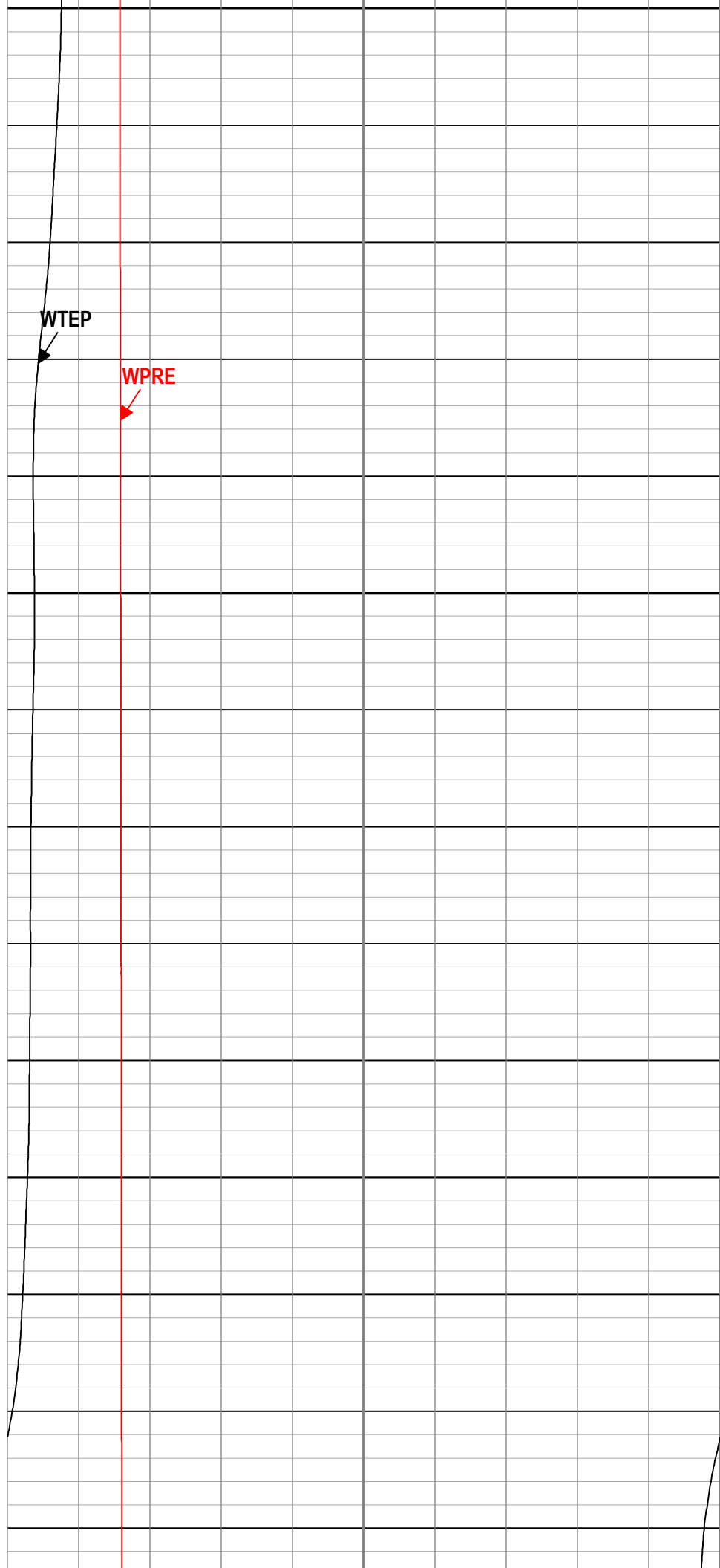
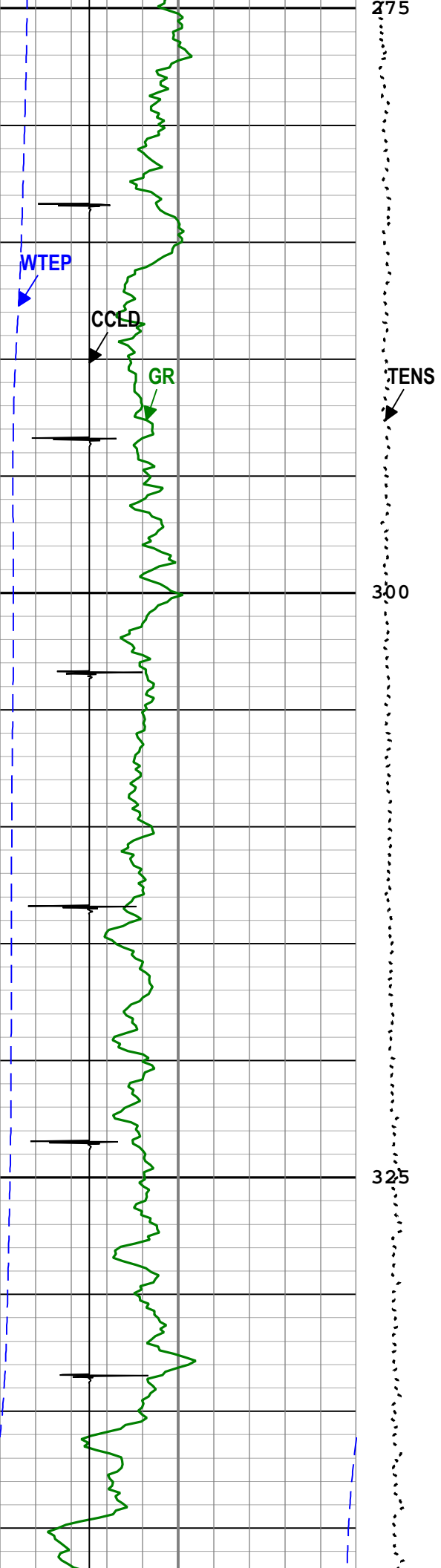


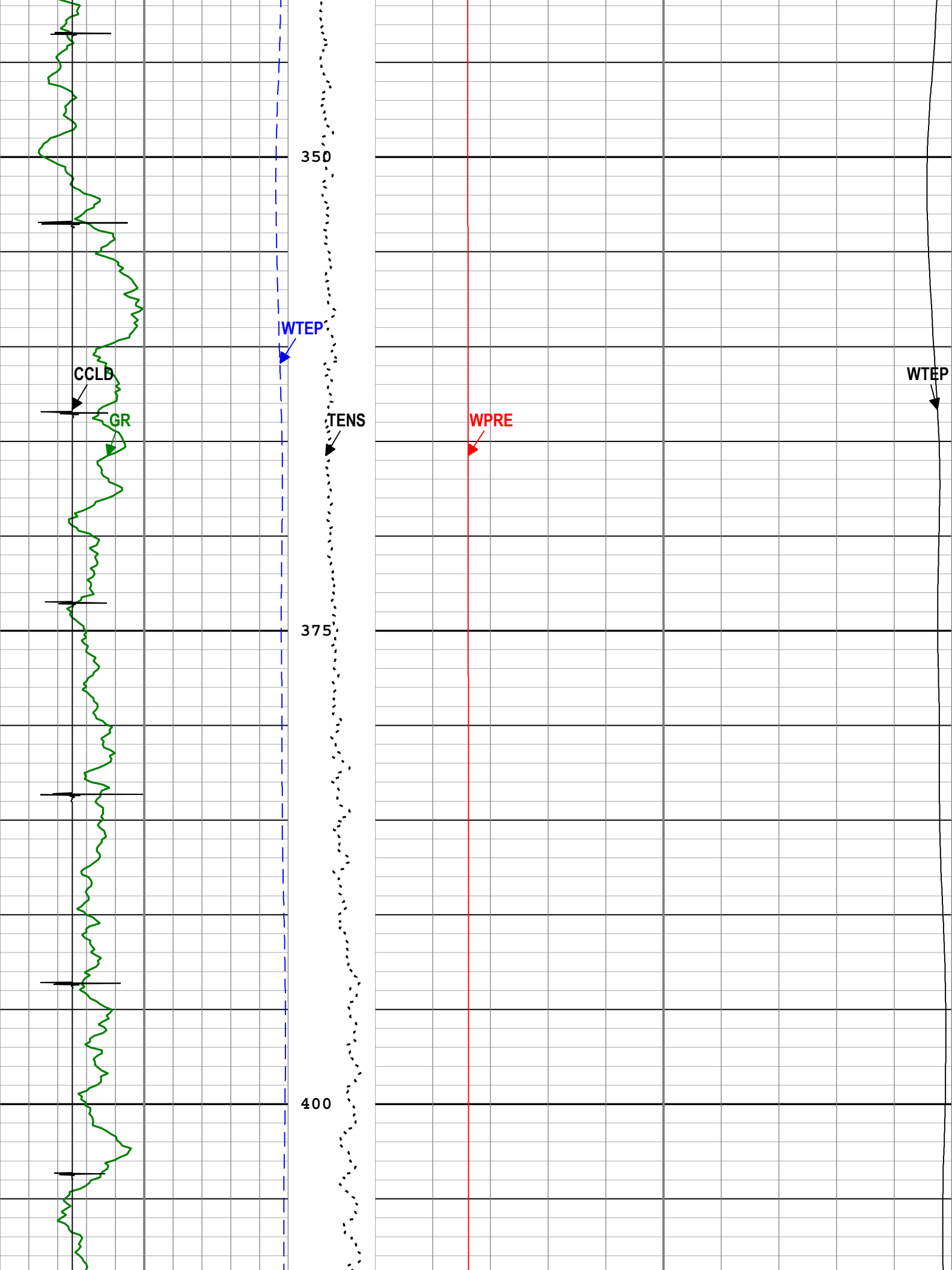


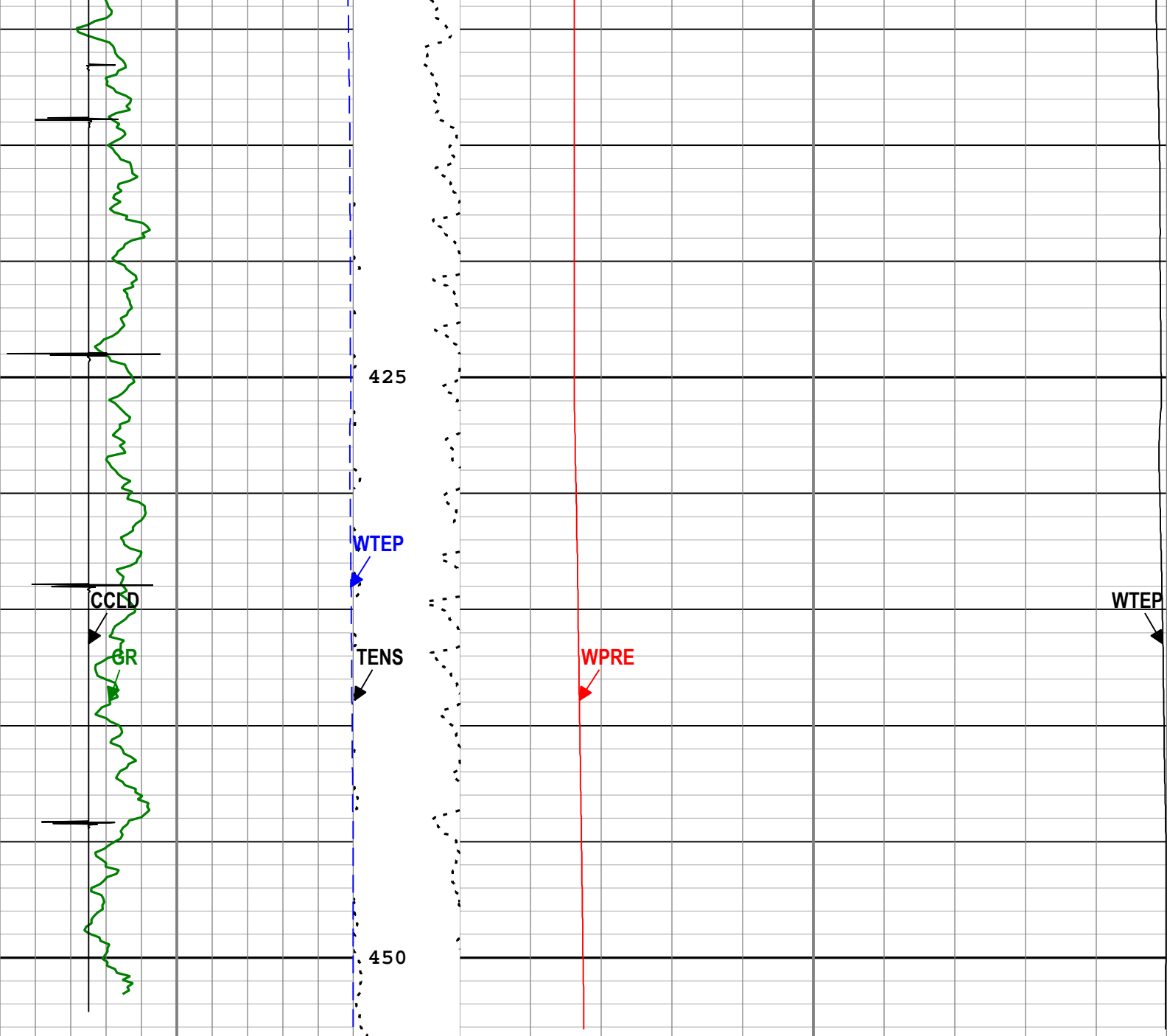












Gamma Ray (GR) HBMS-B[1]		Well Pressure (WPRE) HBMS-B[1]	
0	gAPI	100	10000
CCL Discriminated Amplitude (CCLD) HBMS-B[1]		Well Temperature (WTEP) HBMS-B[1]	
1	V	-3	100
Well Temperature (WTEP) HBMS-B[1]			
0	degC	100	

TIME_1900 - Time Marked every 60.00 (s)

Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 01-Nov-2016 16:22:48

Channel Processing Parameters

Tool Control Parameters

1: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	5486.4	m/h

PCCG	PSP Downhole CCL Gain	HBMS-B	12 dB	
------	-----------------------	--------	-------	--

1

TEMP UP PASS

Software Version

Acquisition System	Version
Maxwell 2016	6.0.53731.3100
Application Patch	Wireline_TestKit-EMIT-C-2016RC3_6.0.54288

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1	Log[4]:Up	Up	6.09 m	688.93 m	01-Nov-2016 2:30:27 PM	01-Nov-2016 4:20:01 PM	ON	0.00 m	No

All depths are referenced to toolstring zero

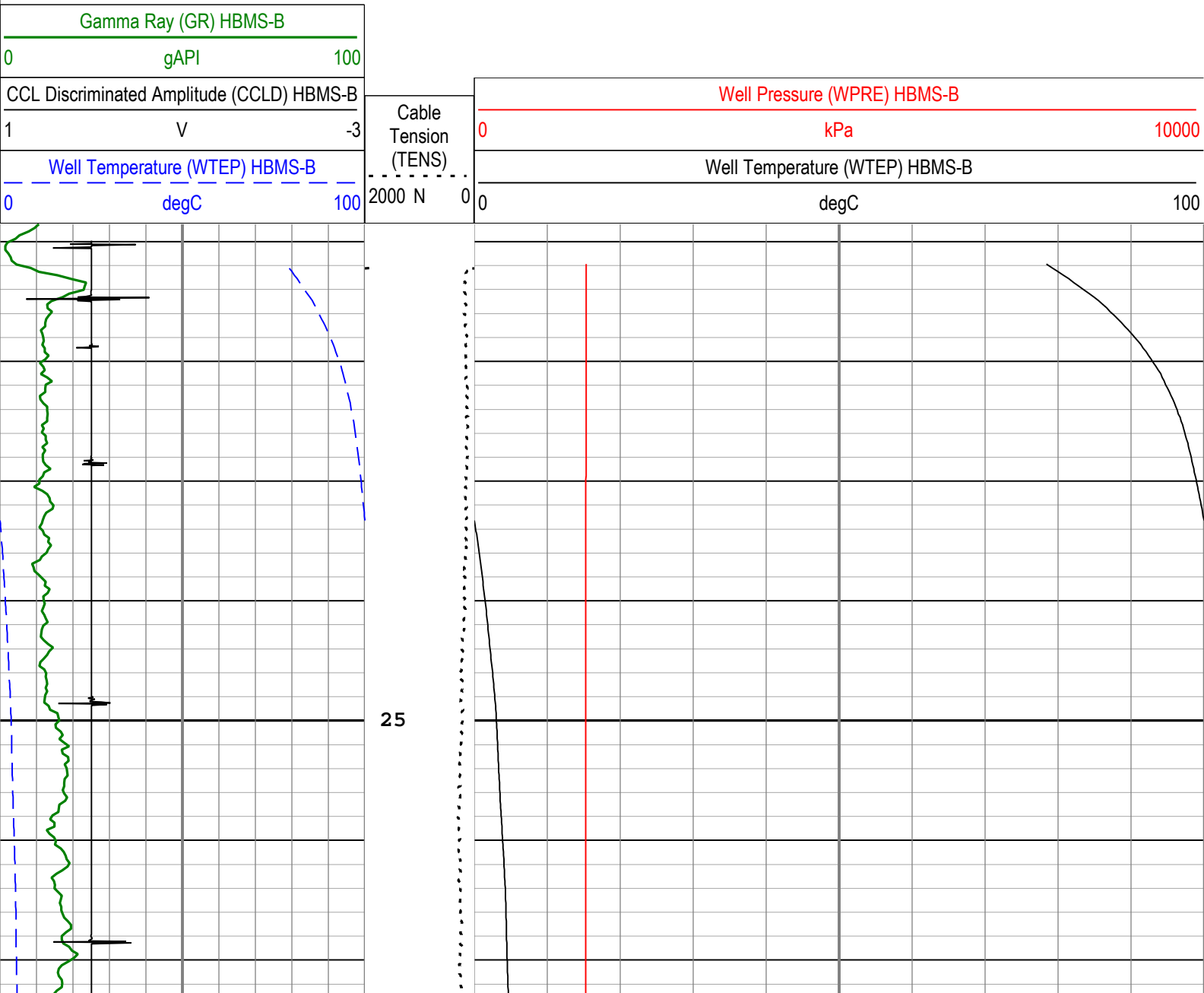
Log

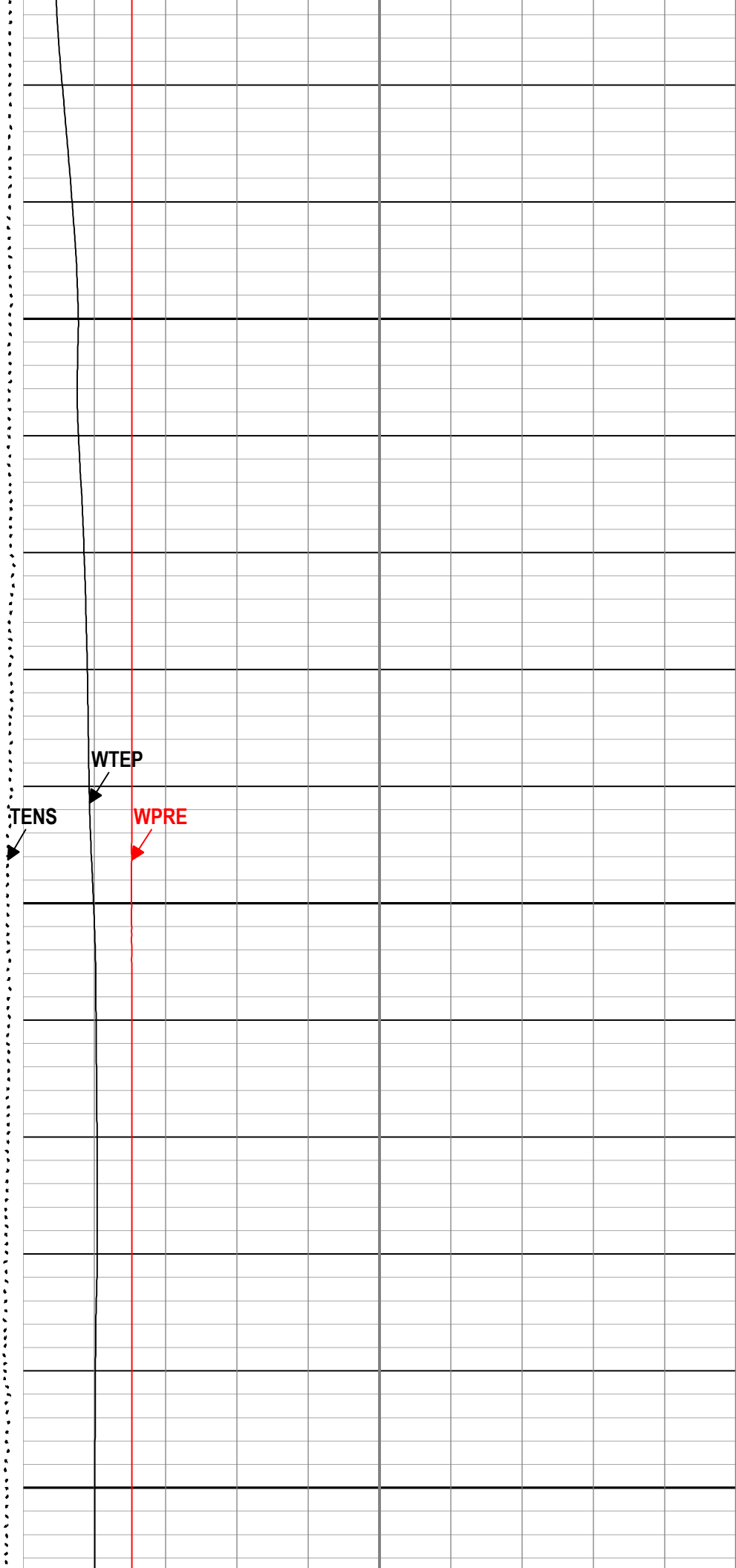
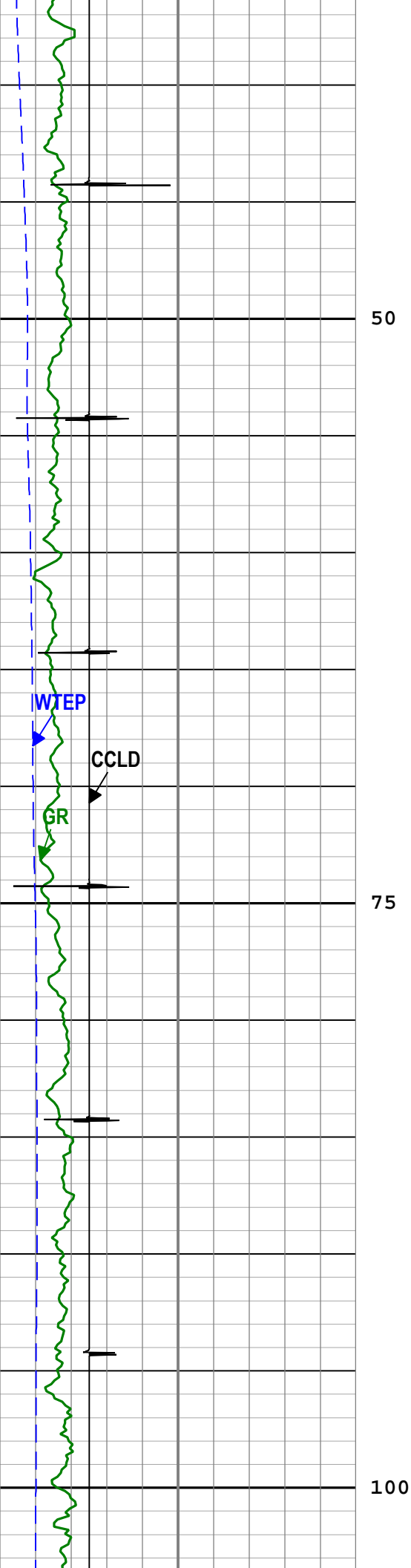
Company:IMPERIAL OIL RESOURCES Well:IMP 06 H57-H06 COLD LK 12-10-66-4

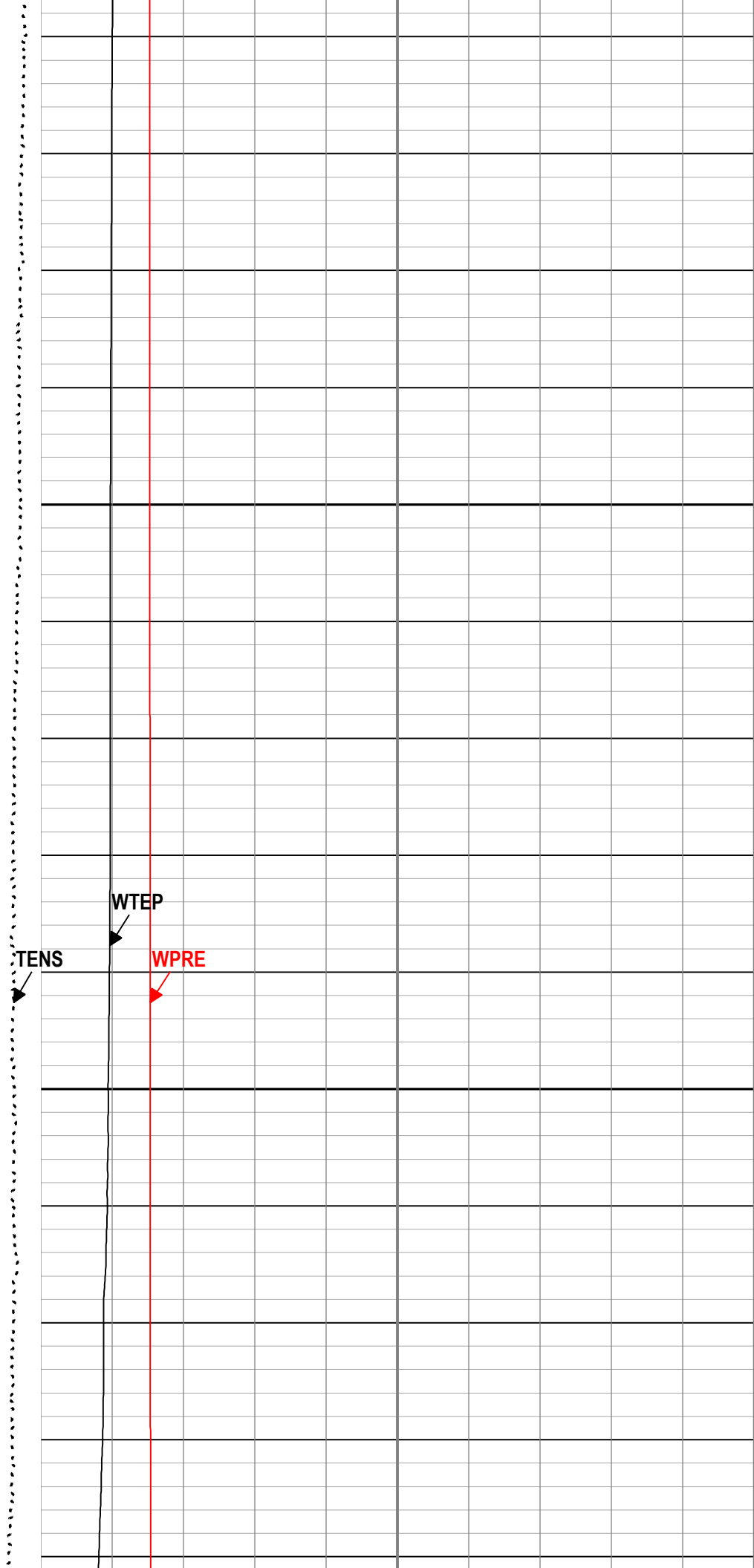
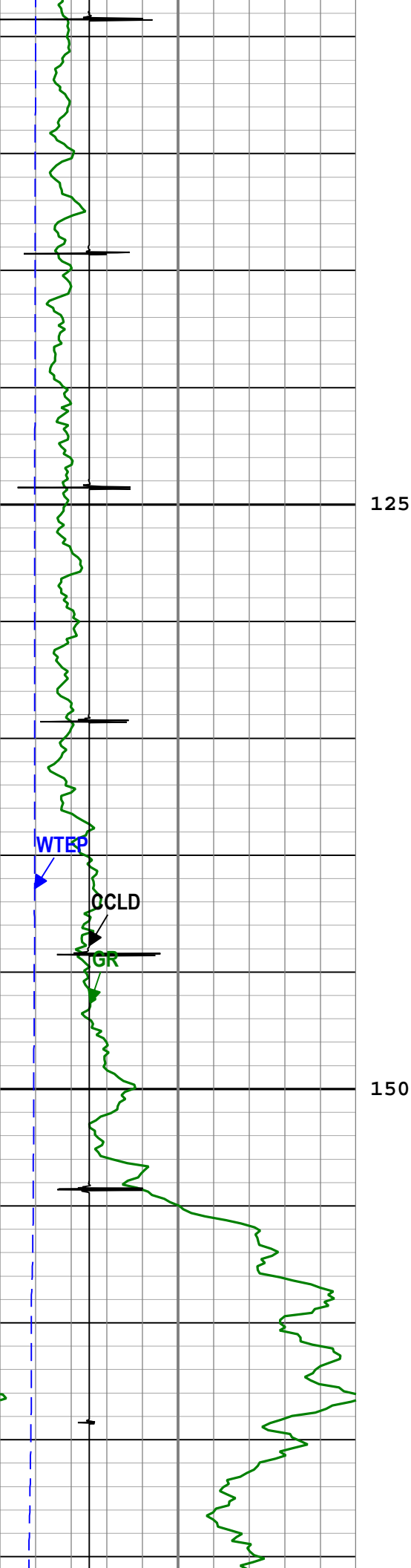
1: Log[4]:Up:S007

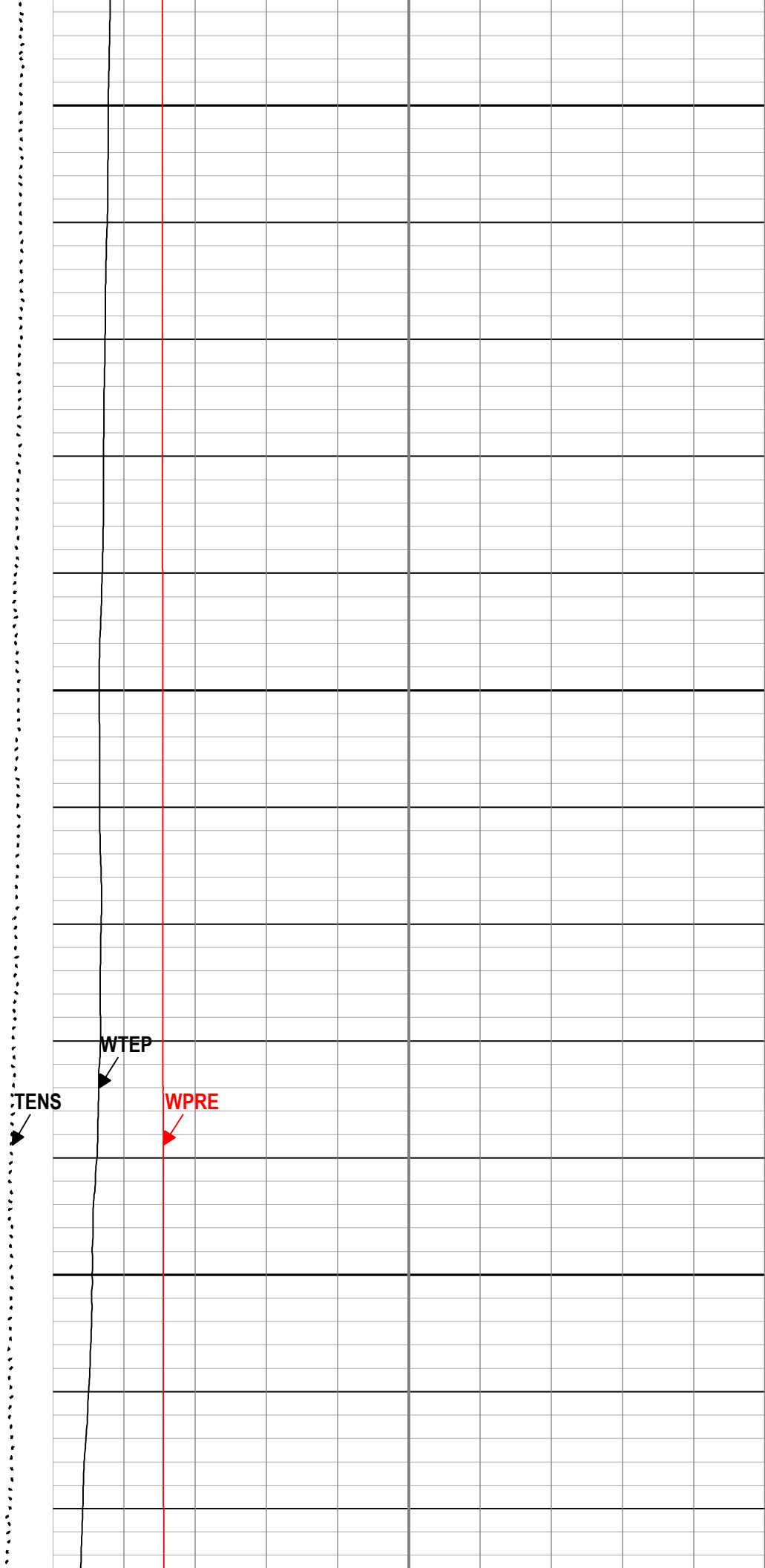
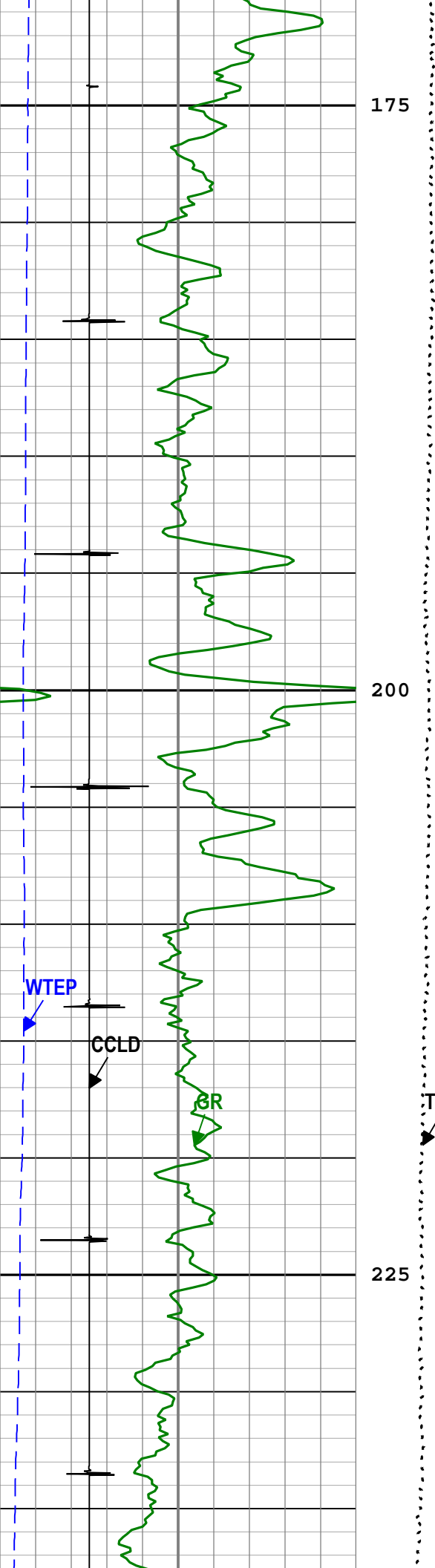
Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 01-Nov-2016 16:22:49

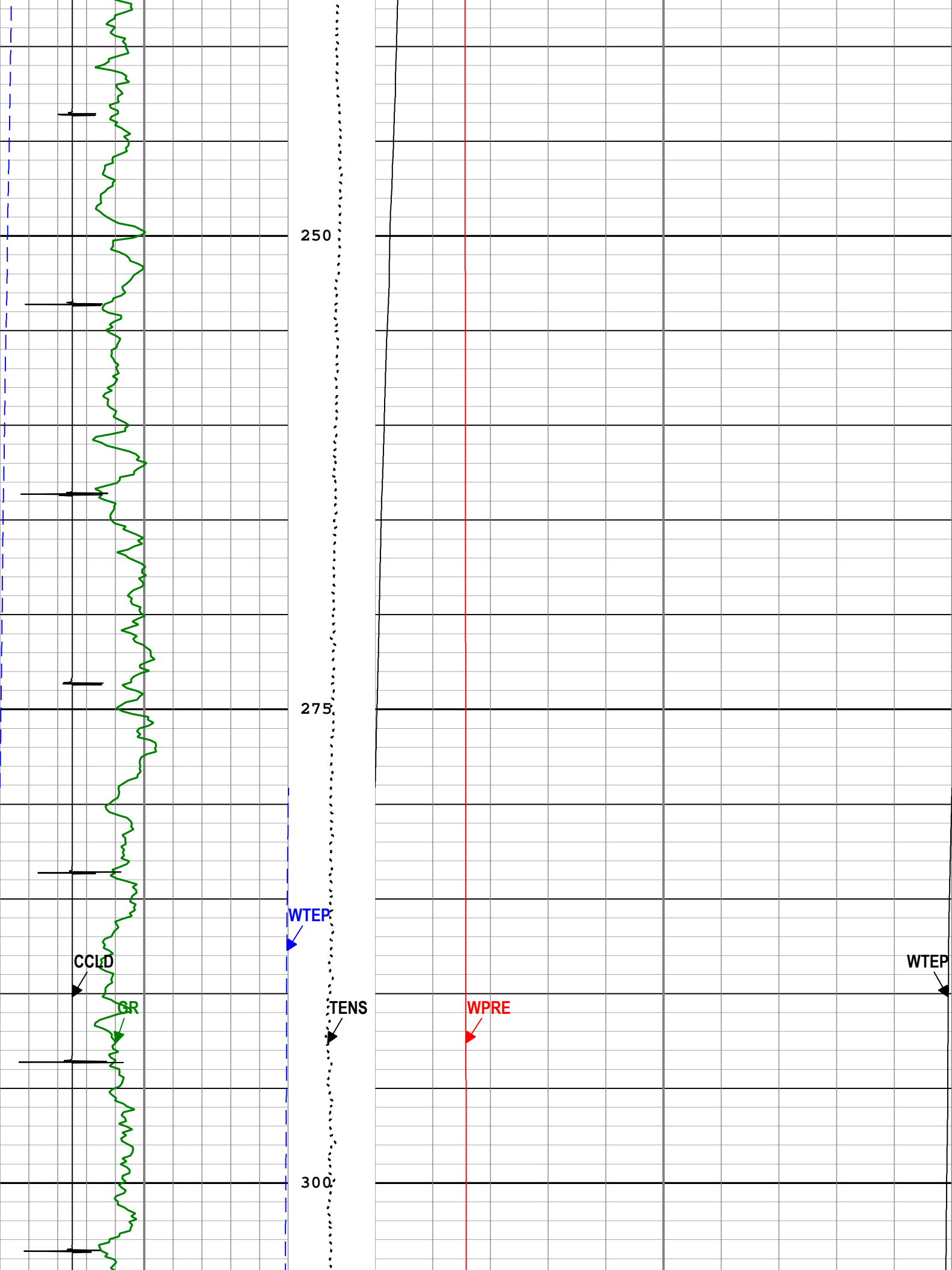
TIME_1900 - Time Marked every 60.00 (s)

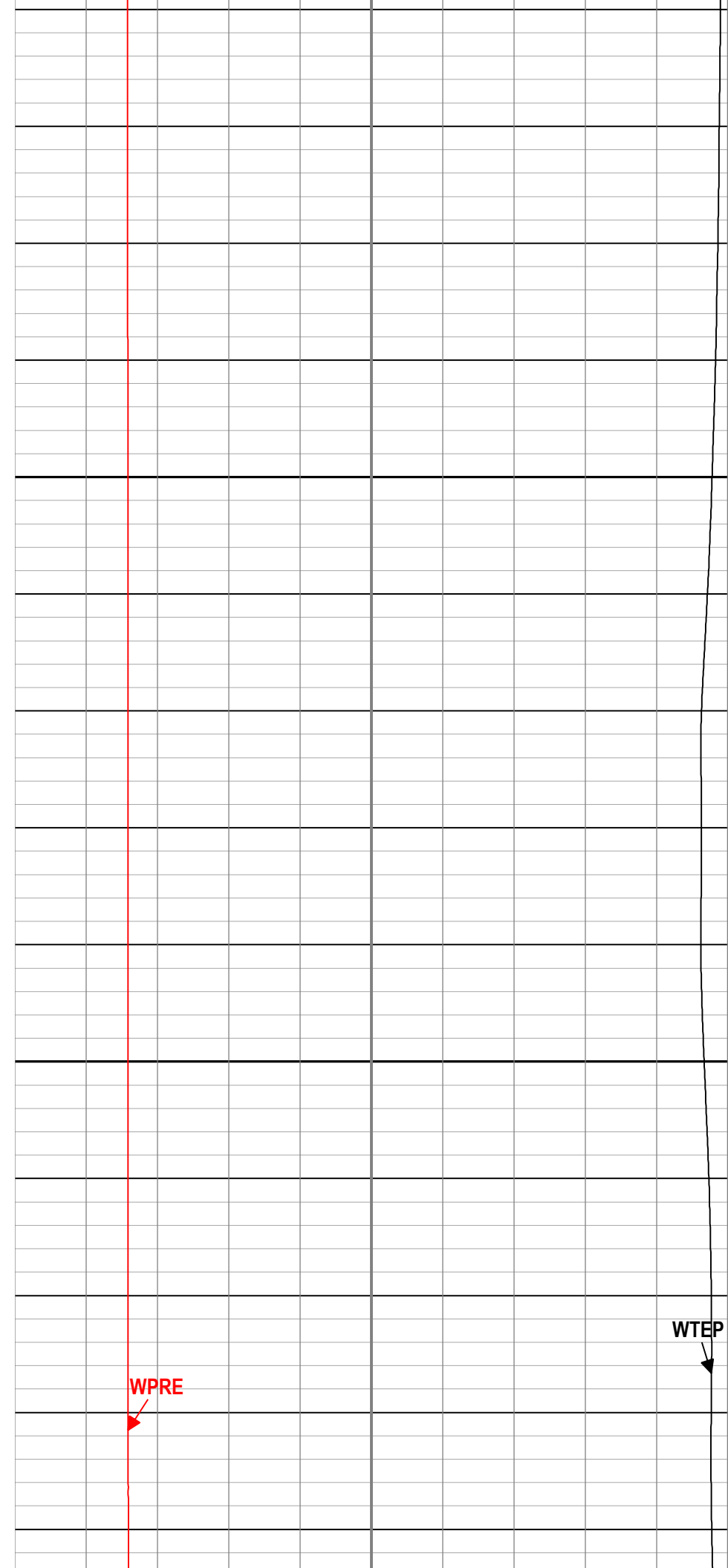
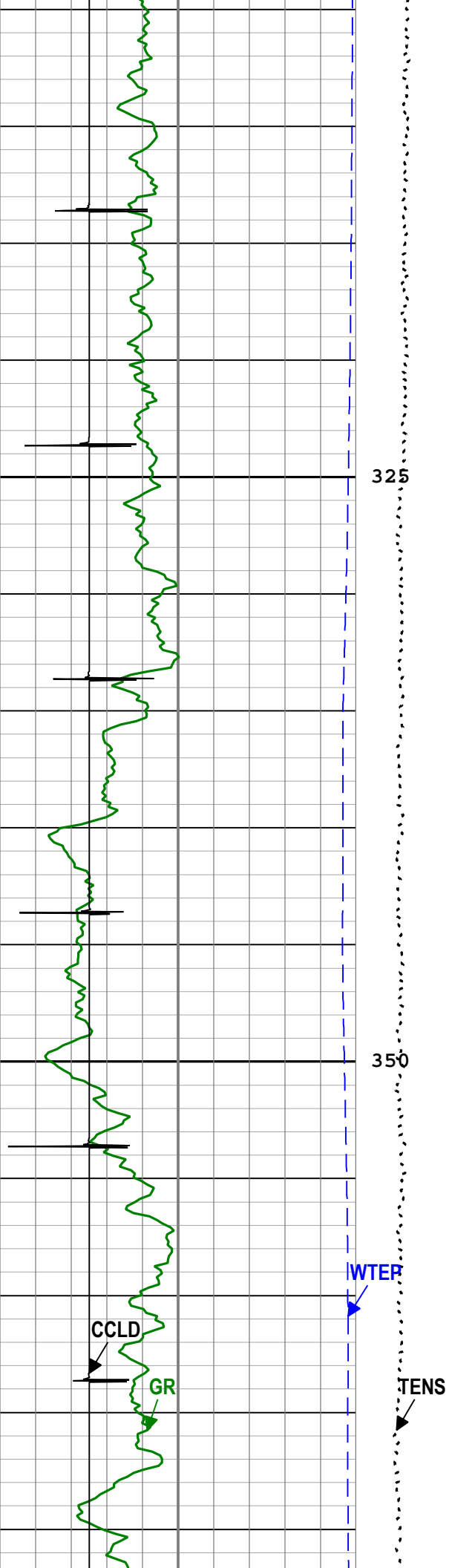


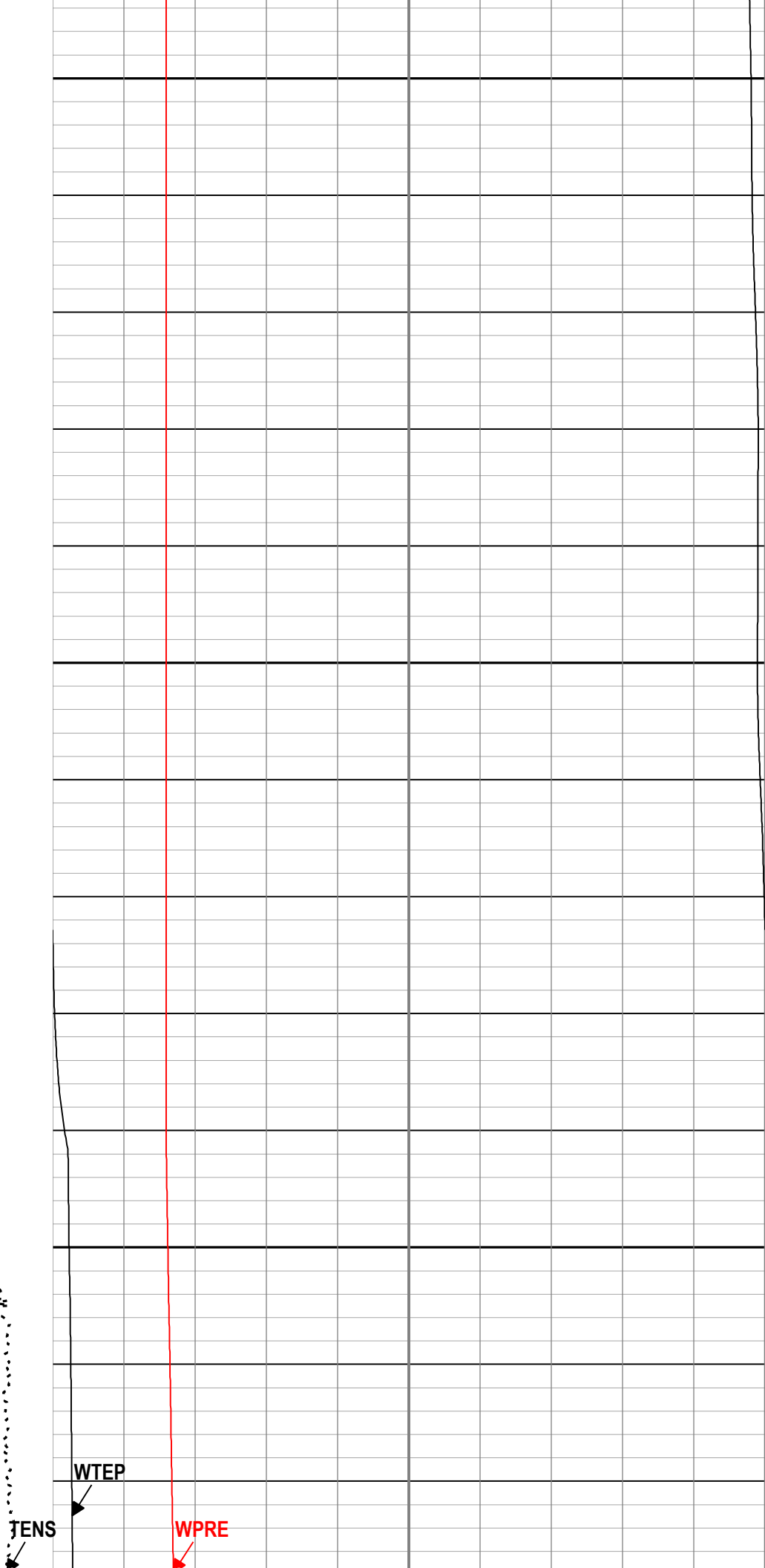
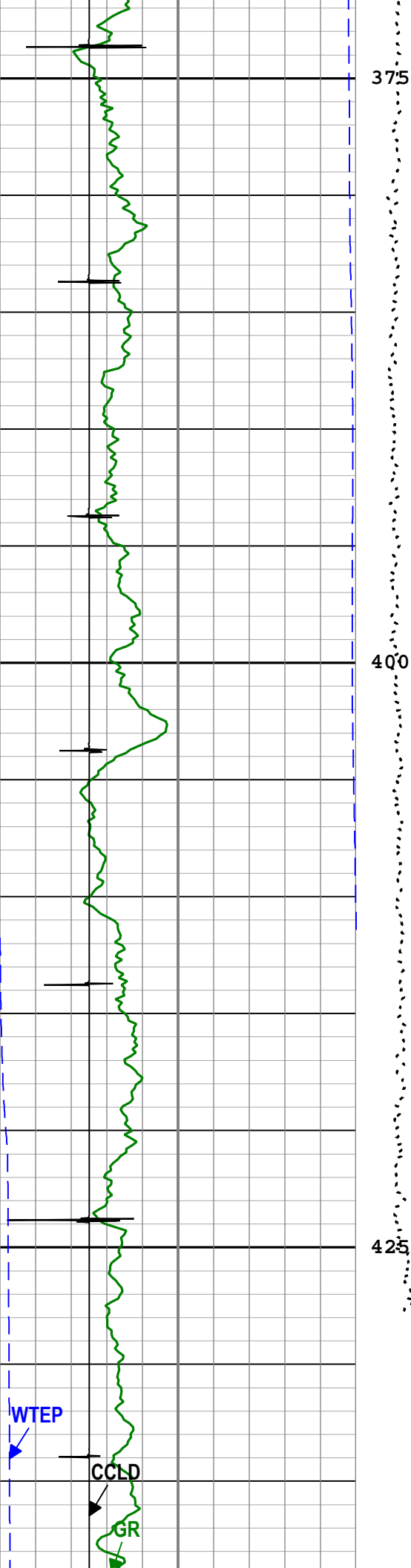


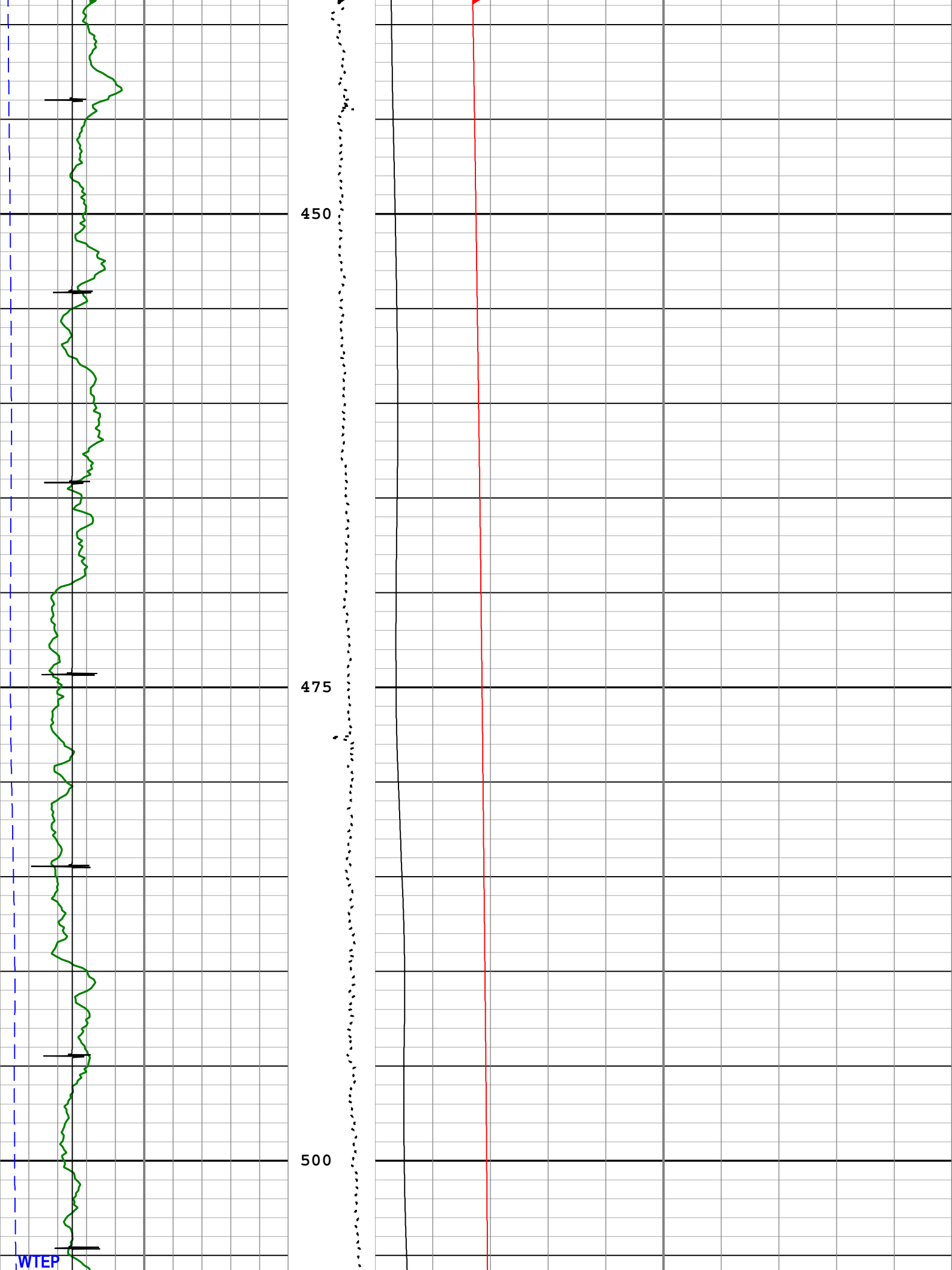


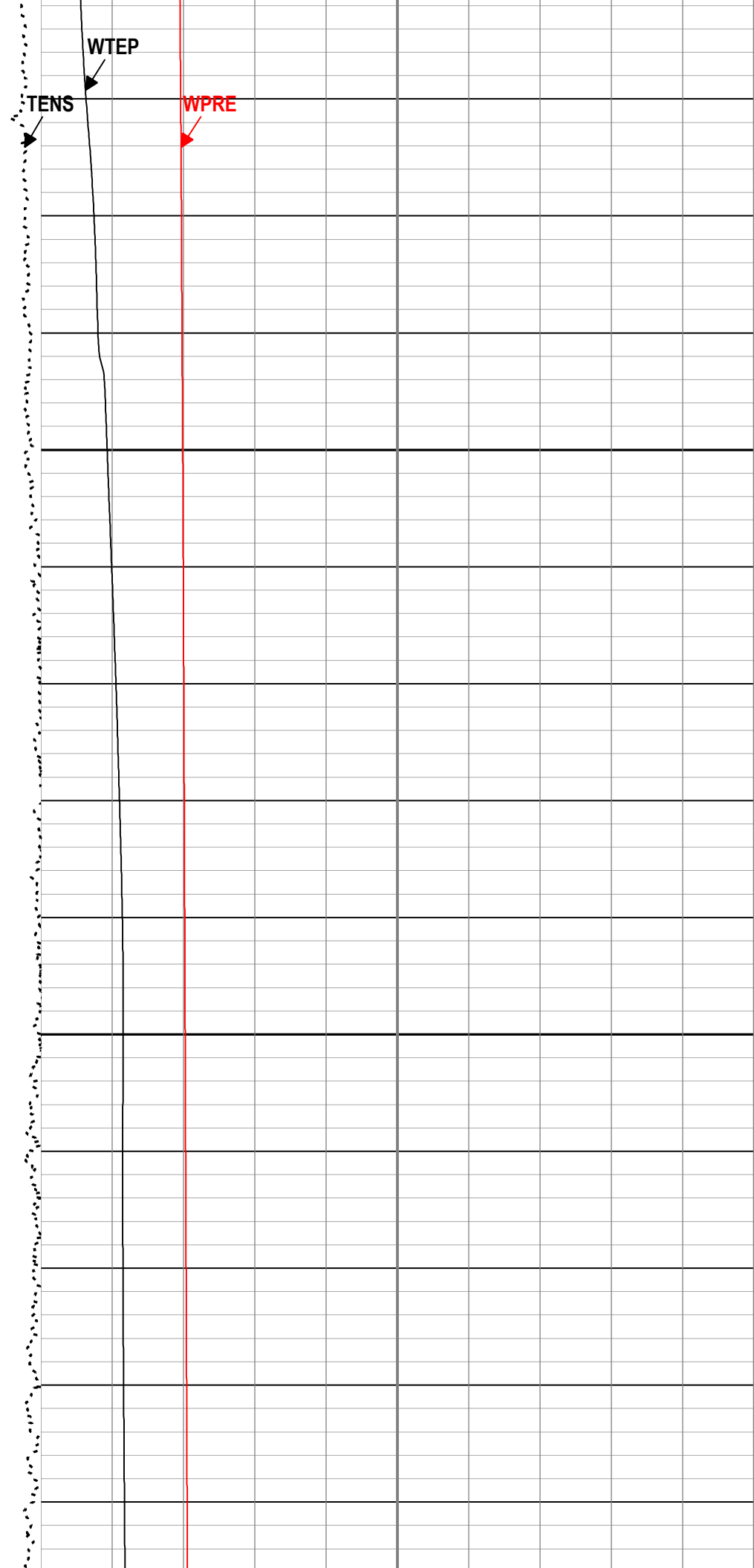
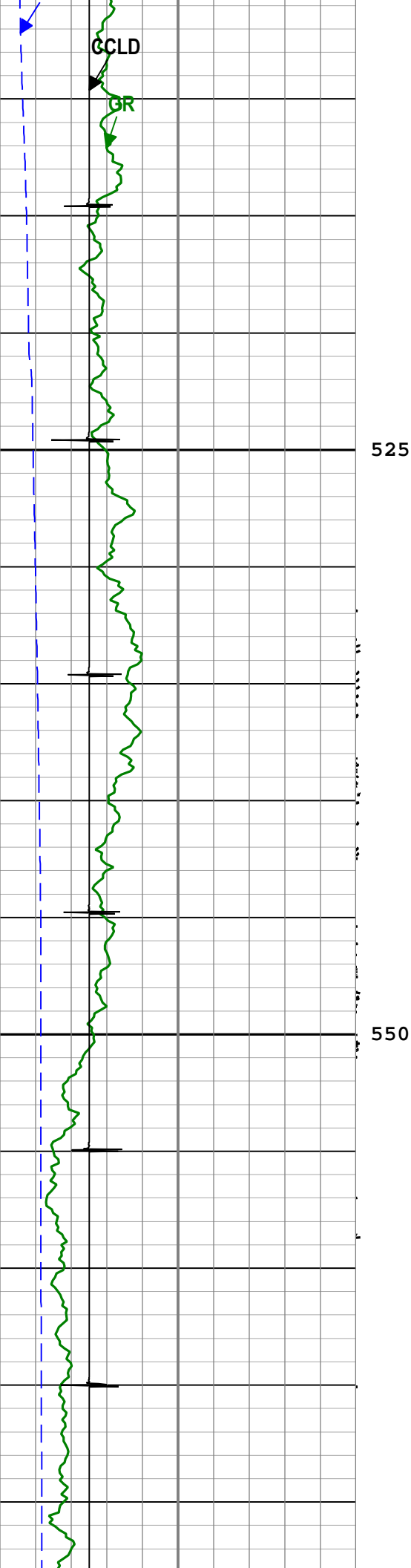


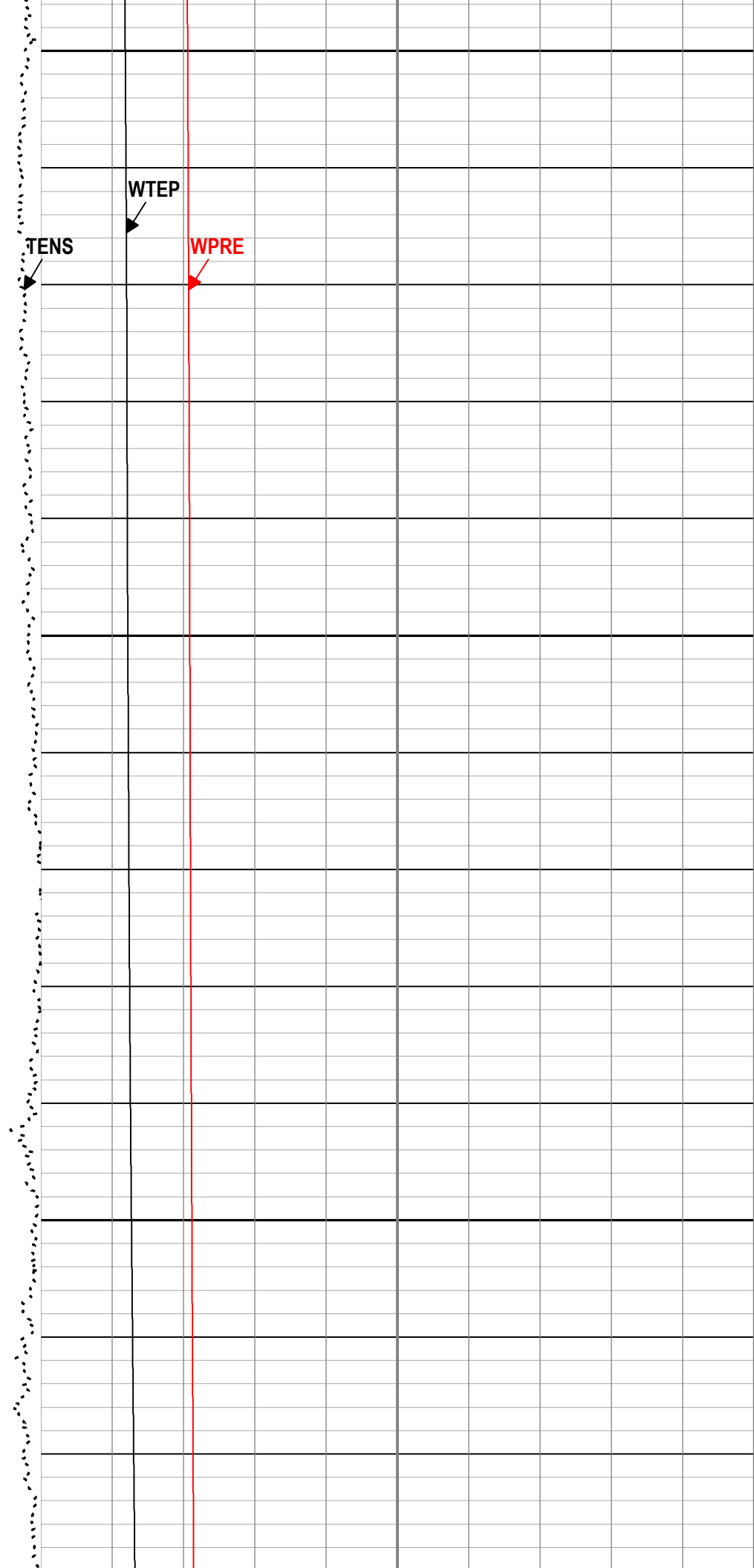
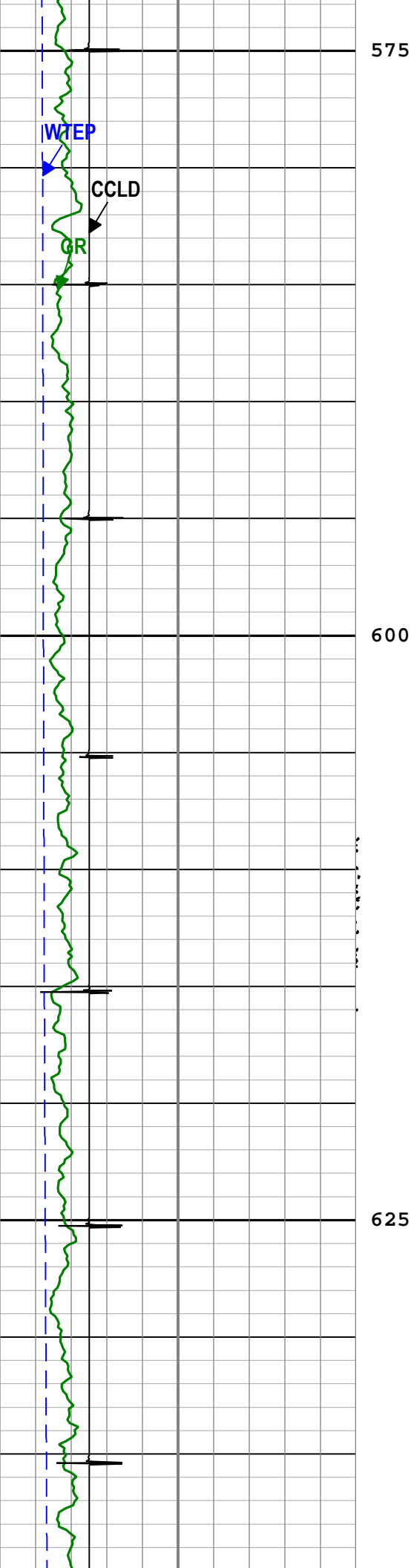


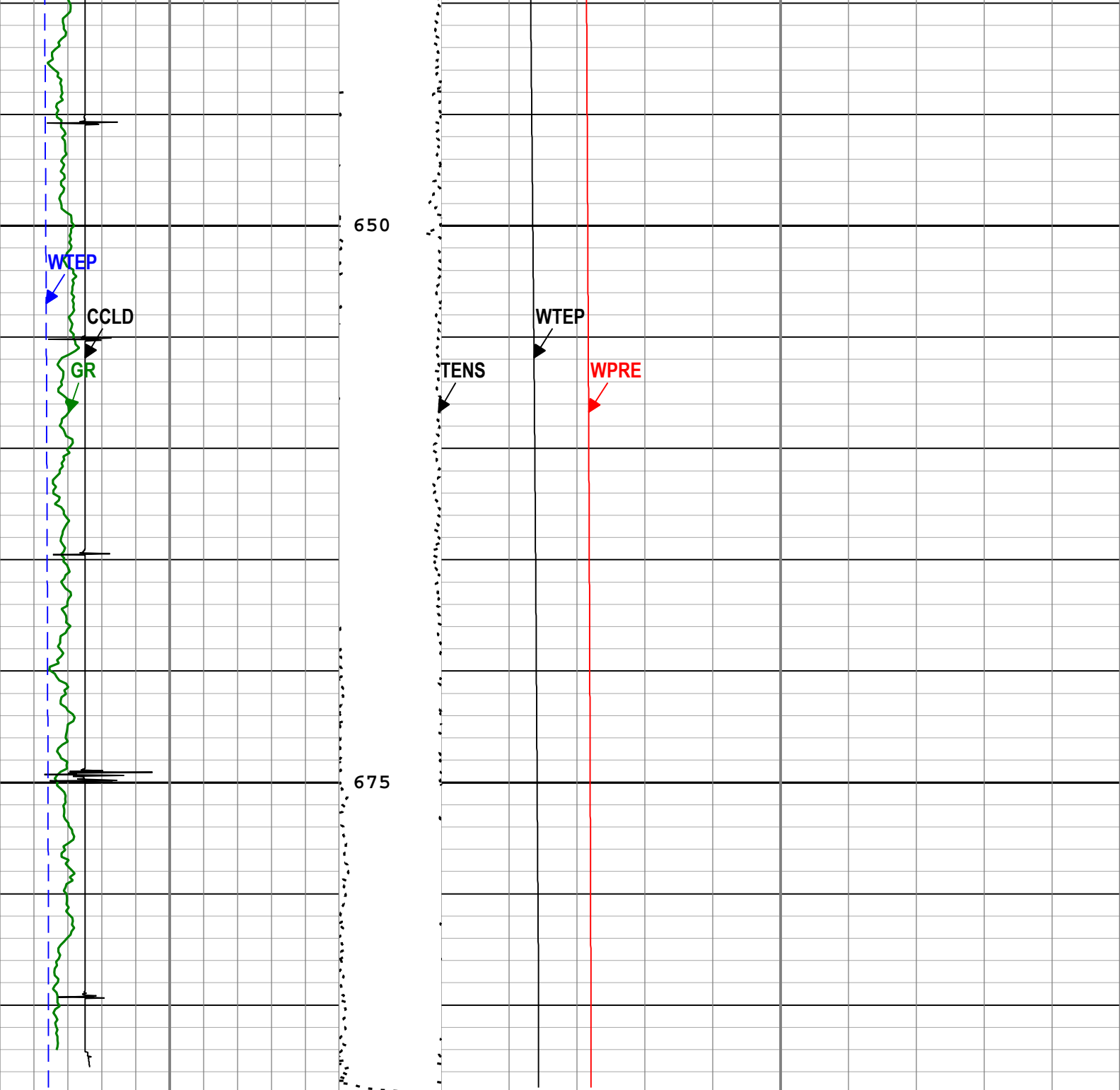












Gamma Ray (GR) HBMS-B			Cable Tension (TENS) 2000 N	Well Pressure (WPRE) HBMS-B		
0	gAPI	100		0	kPa	10000
CCL Discriminated Amplitude (CCLD) HBMS-B				Well Temperature (WTEP) HBMS-B		
1	V	-3		0	degC	100
Well Temperature (WTEP) HBMS-B						
0	degC	100				

TIME_1900 - Time Marked every 60.00 (s)

Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 01-Nov-2016 16:22:49

Channel Processing Parameters	
Tool Control Parameters	
1: Parameters	

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	5486.4	m/h
PCCG	PSP Downhole CCL Gain	HBMS-B	12 dB	

Company:	IMPERIAL OIL RESOURCES	Schlumberger
Well:	IMP 06 H57-H06 COLD LK 12-10-66-4	
Field:	LEMING	
Province:	ALBERTA	
State:	**MD**	
PRODUCTION ANALYSIS TEMP. / PRESSURE		