

Company: ENCANA OIL & GAS (USA) INC.

Well: NP EF11D-27 (P27 595)

Field: NORTH PARACHUTE

County: GARFIELD State: COLORADO

SLIM CEMENT MAPPING TOOL  
CBL-VDL  
GR-CCL

County: GARFIELD

Field: NORTH PARACHUTE

Location: SHL: 732' FSL & 604' FEL  
BHL: 1869' FSL & 2053' FWL

Well: NP EF11D-27 (P27 595)

Company: ENCANA OIL & GAS (USA) INC.

LOCATION			
SHL: 732' FSL & 604' FEL	Elev.: K.B.	6673.50 ft	
BHL: 1869' FSL & 2053' FWL	G.L.	6650.00 ft	
	D.F.	6672.50 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 6650.00 ft	
Log Measured From:	KELLY BUSHING	23.50 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section	Township	Range
05-045-20290-00	27	5S	95W

Logging Date	15-Aug-2012		
Run Number	1		
Depth Driller	10933 ft		
Schlumberger Depth	10856 ft		
Bottom Log Interval	10847 ft		
Top Log Interval	100 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	70 ft		
BIT/CASING/TUBING STRING			
Bit Size	8.750 in		
From	23.5 ft		
To	10933 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	S80		
From	23.5 ft		
To	10897 ft		
Maximum Recorded Temperatures	278 degF		
Logger On Bottom	16-Aug-2012	Time	0:45
Unit Number	391	Location	GRAND JUNCTION
Recorded By	KIRSTIE BUNTING		
Witnessed By	JOHN MILLER		

	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: 15-AUG-2012 9:56:44

## 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:	111306
Calibration Date:	04-24-2012	Calibration Date:	08-14-2012	Length:	16000 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	174878	Conveyance Method: Wireline Rig Type: LAND	
Calibration Cable Type:	1-25P	Number of Calibration Points:	10		
Wheel Correction 1:	-3	Calibration RMS:	5		
Wheel Correction 2:	-4	Calibration Peak Error:	7		

## 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
<b>Stretch Correction:</b>	<b>0.00 FT</b>
Tool Zero Check At Surface:	

### Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES UTILIZED
2. PRIMARY DEPTH CONTROL : IDW
3. SECONDARY DEPTH CONTROL: DRUM COUNTER (SWPT)
- 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 CORRELATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
TOTAL DEPTH TAGGED = 10856 FT	
STRETCH CORRECTION = 6 FT	
MAXIMUM RECORDED TEMPERATURE = 278 DEGF	
MAXIMUM RECORDED PRESSURE = 4314 PSIA	

EXPECTED CBL AMPLITUDE 80MV IN FREE PIPE					
CYCLE SKIPPING DUE TO GOOD BOND					
MAIN LOG RAN WITH ZERO SURFACE PRESSURE					
THANK YOU FOR CHOOSING E&P WIRELINE A SCHLUMBERGER COMPANY					
SLB CREW: KBUNTING, WFLOYD, WAZIZ, KJOHNS, CARNOLD					
RUN 1 SERVICE ORDER #: CADB-00015 PROGRAM VERSION: 19C0-187 FLUID LEVEL: 70 ft			RUN 2 SERVICE ORDER #: PROGRAM VERSION: 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		32.9			
	Detail MT TelStatus CTEM	31.3			
HBMS-B PSC-A HUDH-A HSTC-A 2884 HBMC-A GR CCL HBMC HTPS-A HCQG_E_Mano RTD_Thermometer		31.3			
	GR	26.4			
	CCL	24.0			
	HSTC Aux. HBMC Aux.	22.5			
	CQG Manom Well_Temp	21.1			
SCMT-CB SCMC-CA SECH-CA CMIR-AG SCMS-CB 8179 SCMX-CA 8120		20.2			



## 7.1

0.2

# Schlumberger

## MAIN PASS CBL – VDL

MAXIS Field Log

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

Well: NP EF11D-27 (P27 595)

## Input DLIS Files

DEFAULT	SCMT_HBMS_050LUP	FN:49	PRODUCER	16-Aug-2012 00:45	10874.0 FT	32.0 FT
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## Output DLIS Files

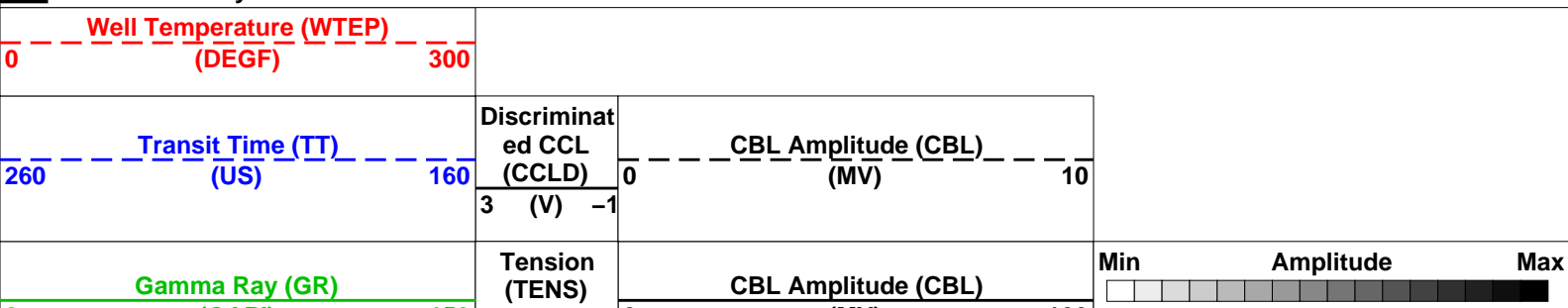
DEFAULT	SCMT_HBMS_053PUP	FN:52	PRODUCER	16-Aug-2012 03:47	10880.0 FT	13.5 FT
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**OP System Version: 19C0-187**

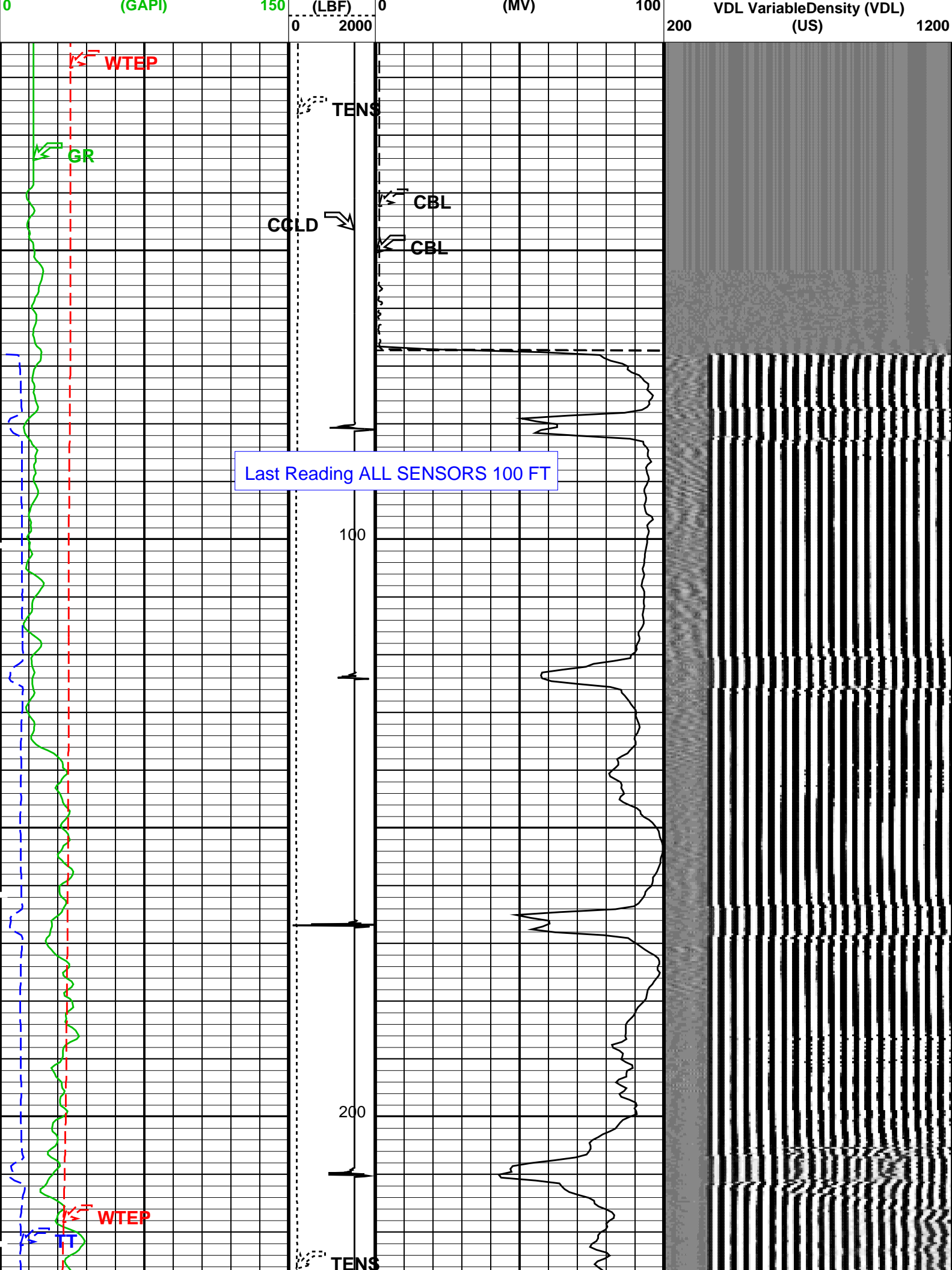
SCMT-CB                      SRPC-5095-H2-2011-OP19                      HBMS-B                      19C0-187

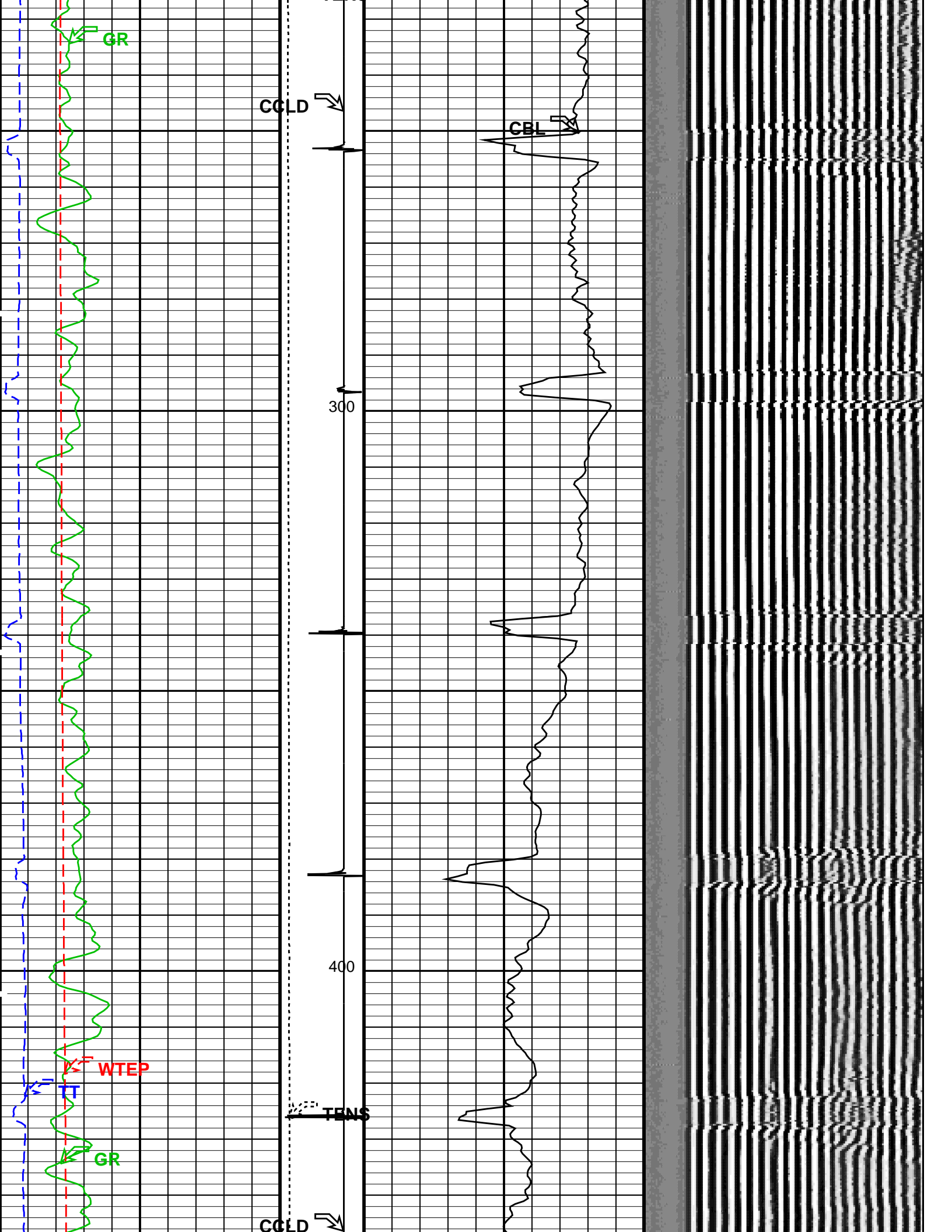
## PIP SUMMARY

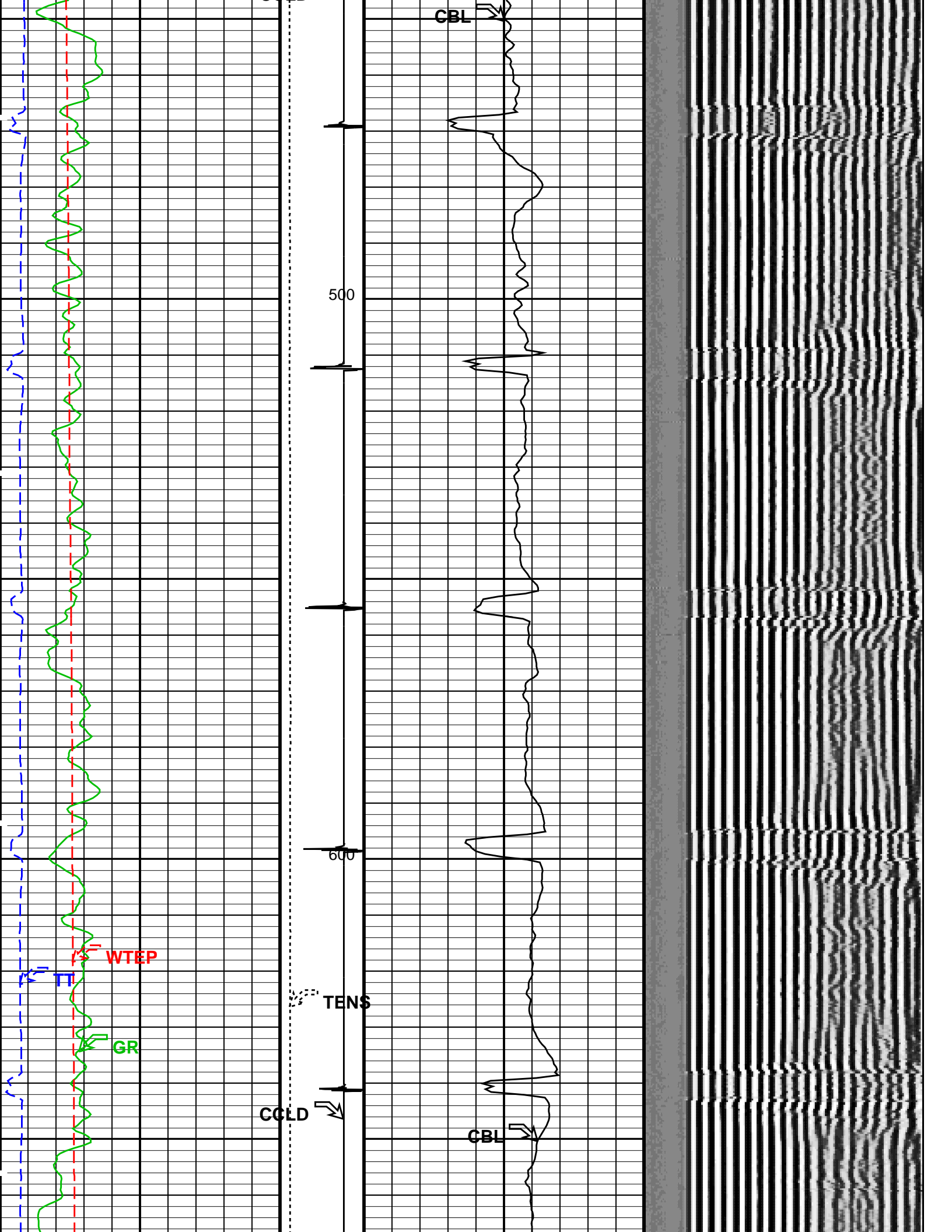
**Time Mark Every 60 S**

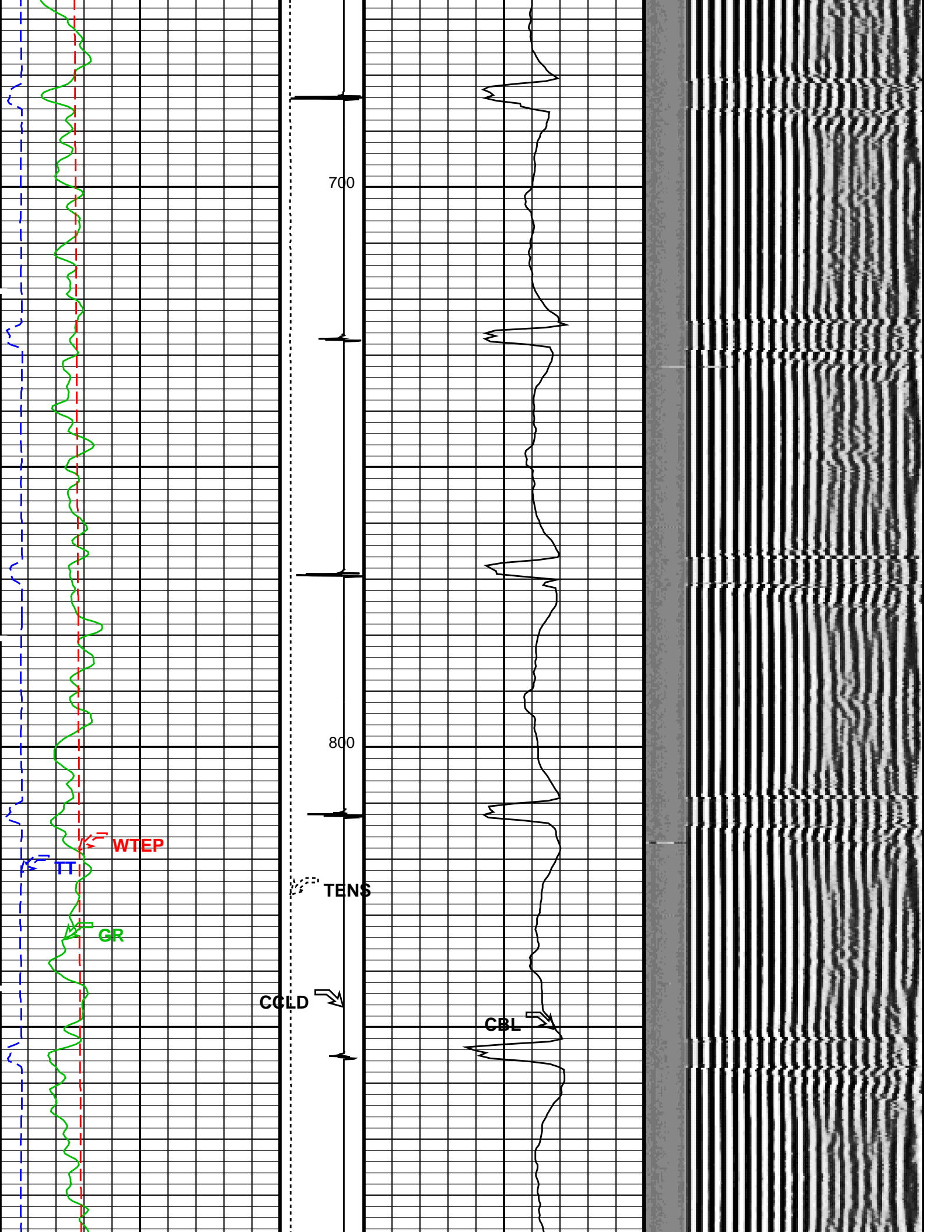


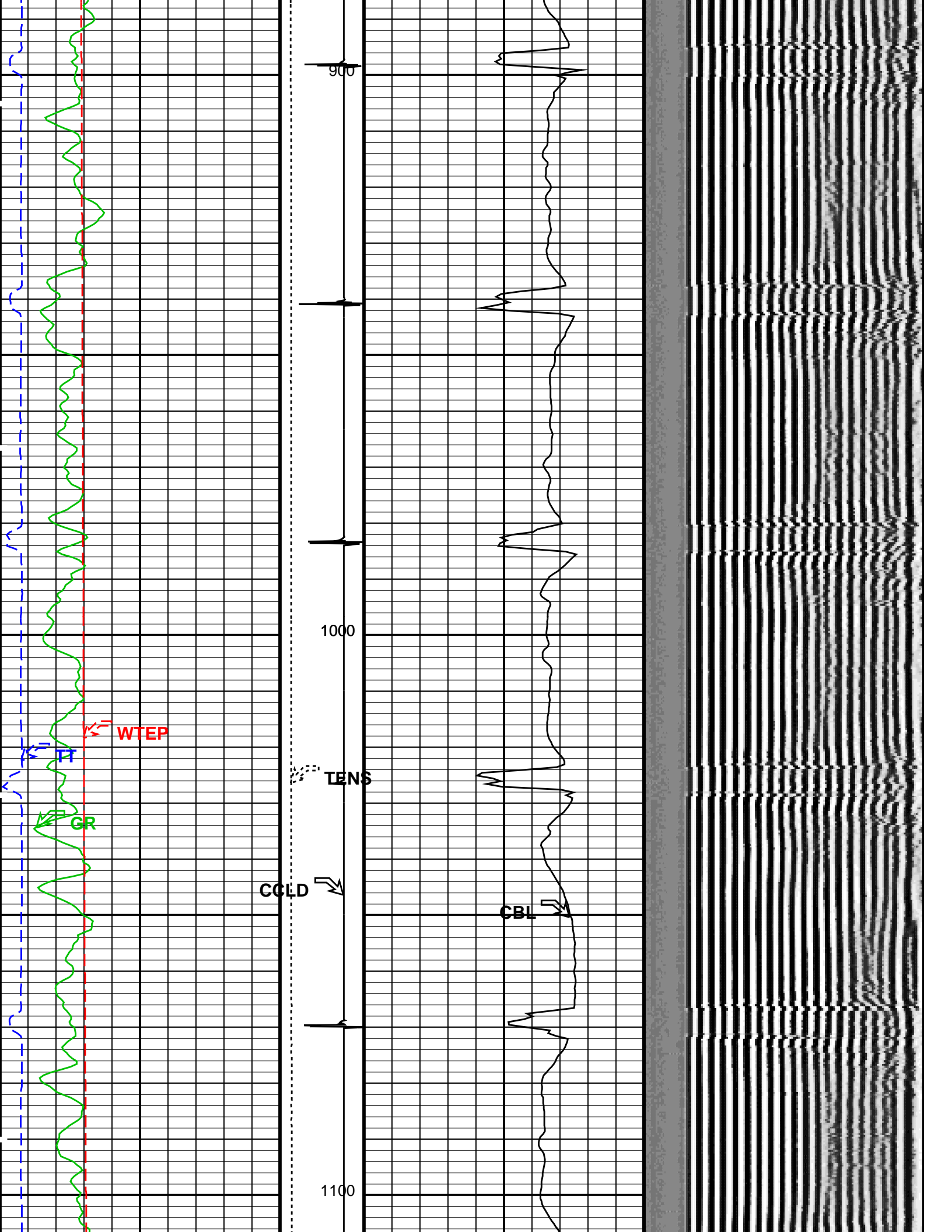




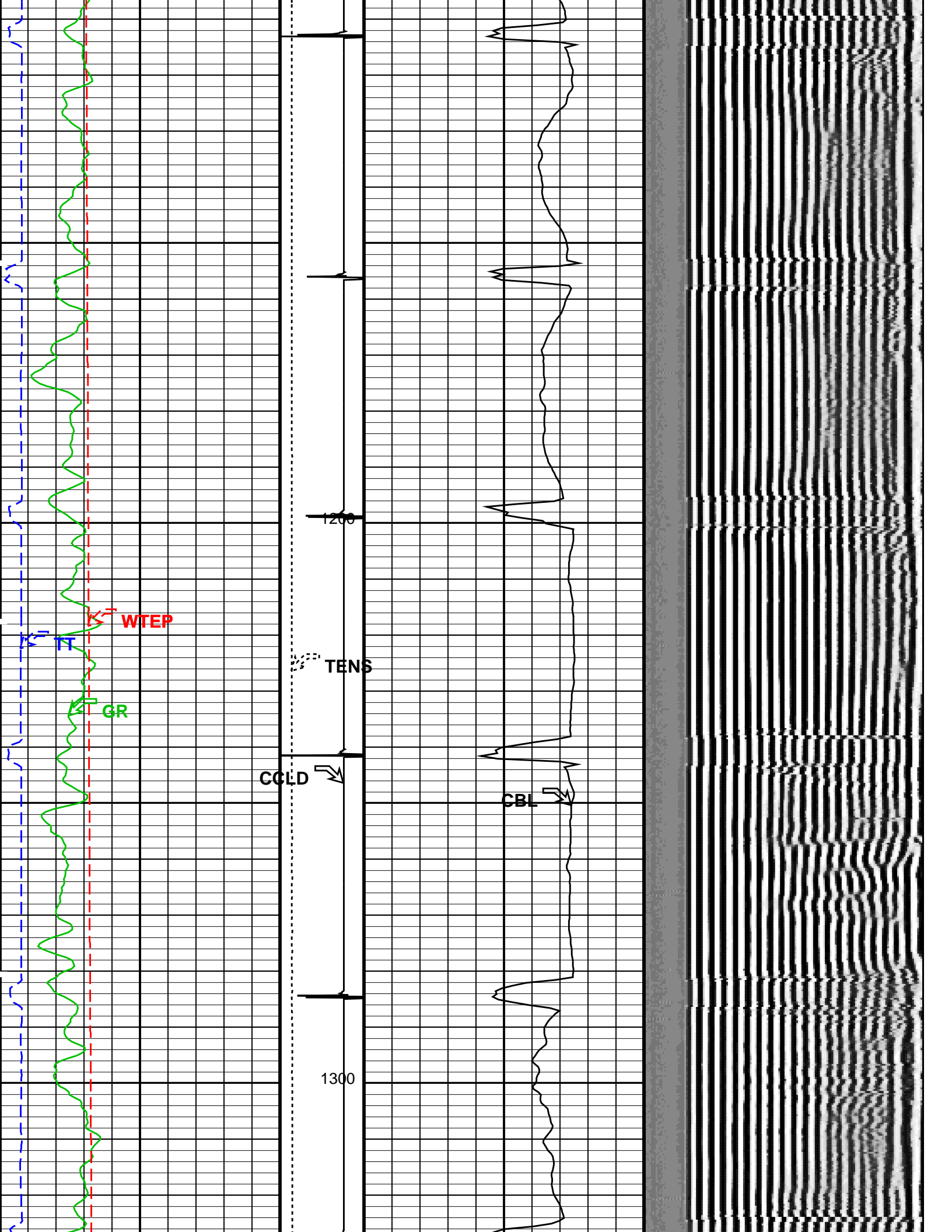


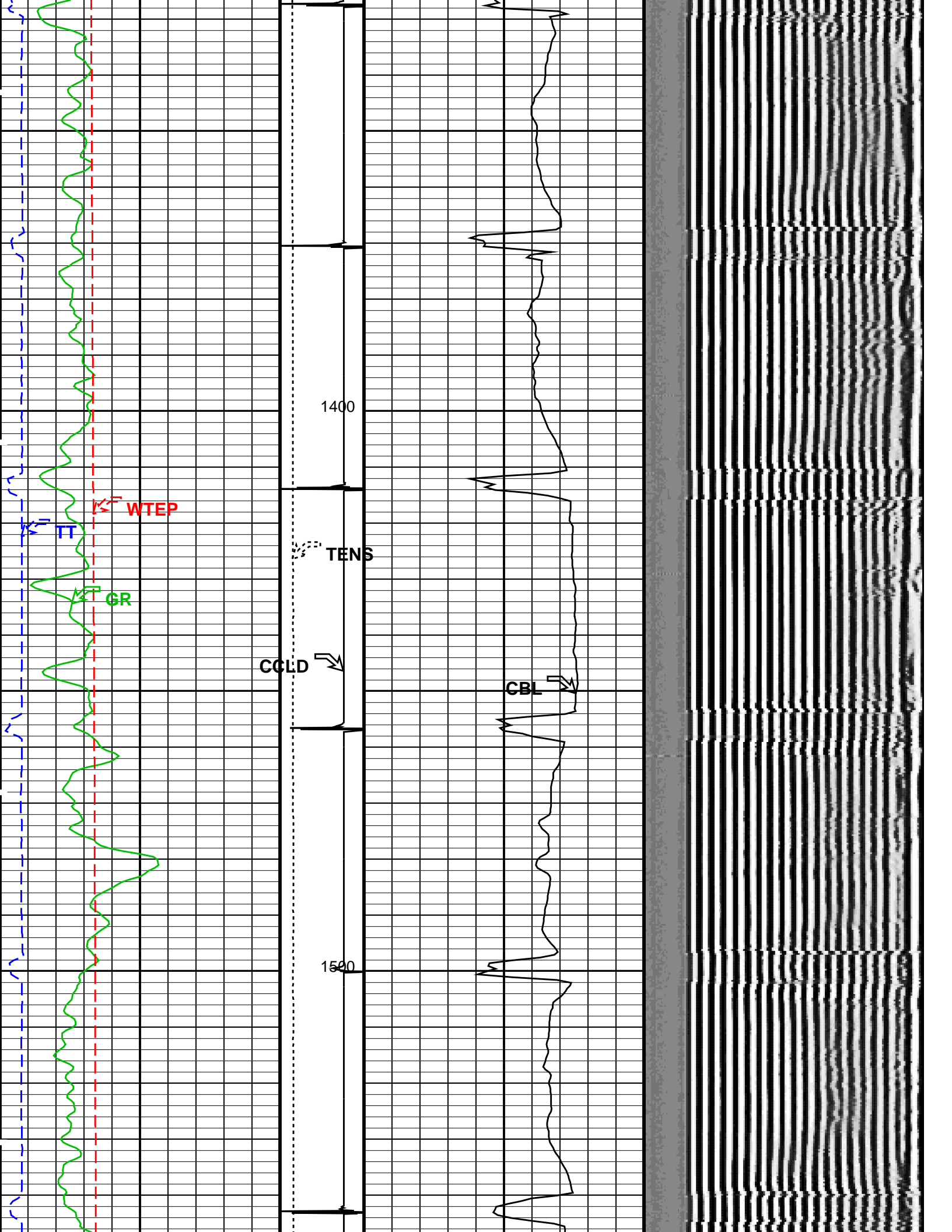


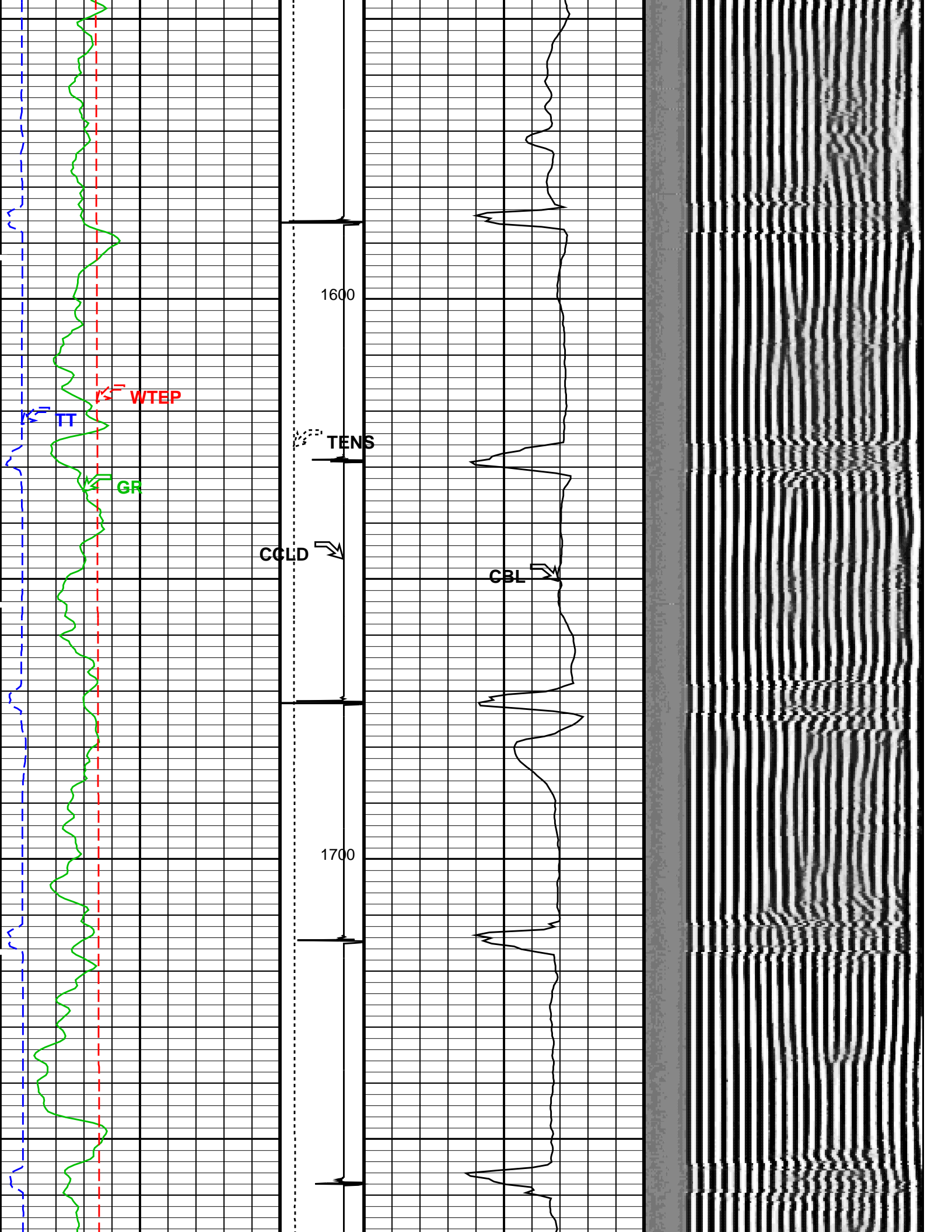




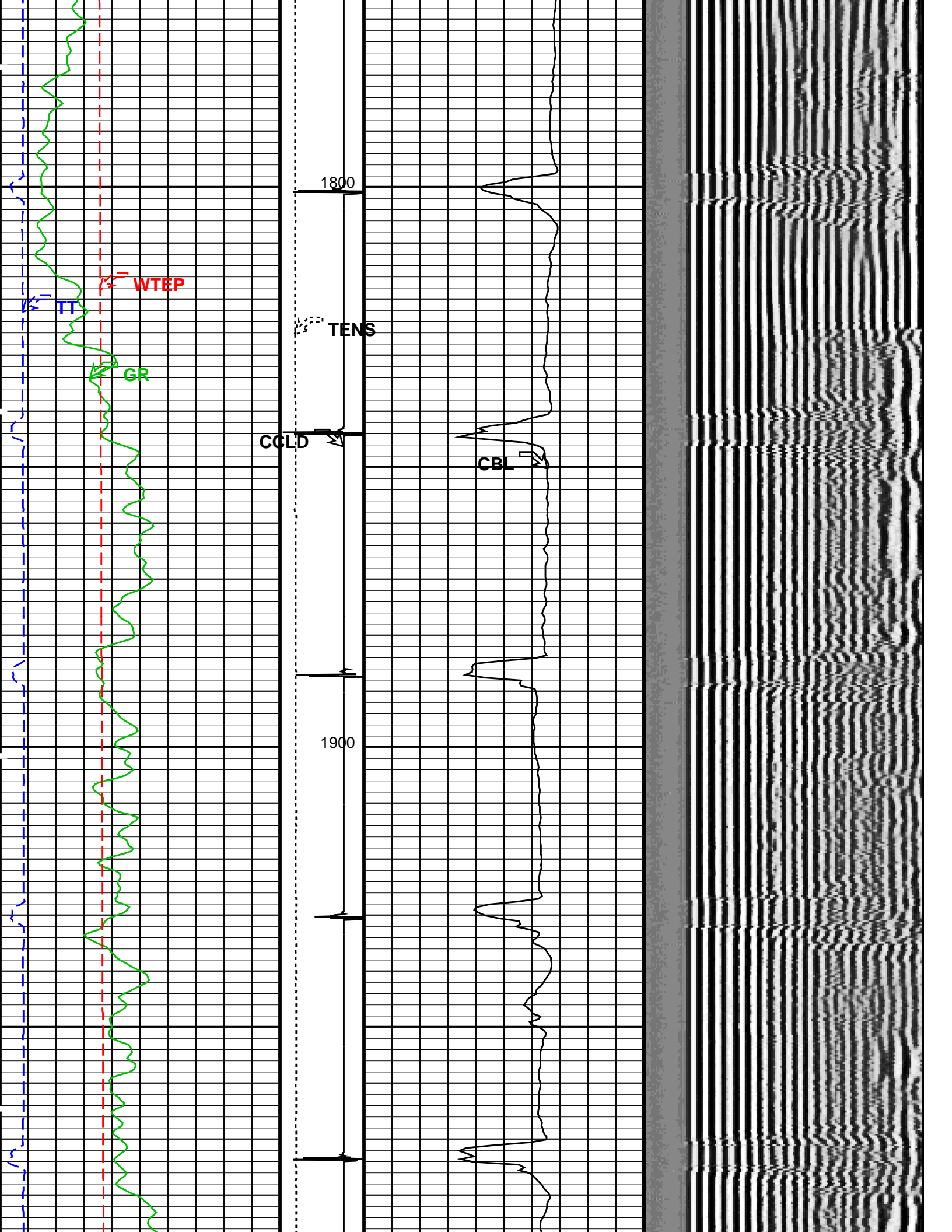


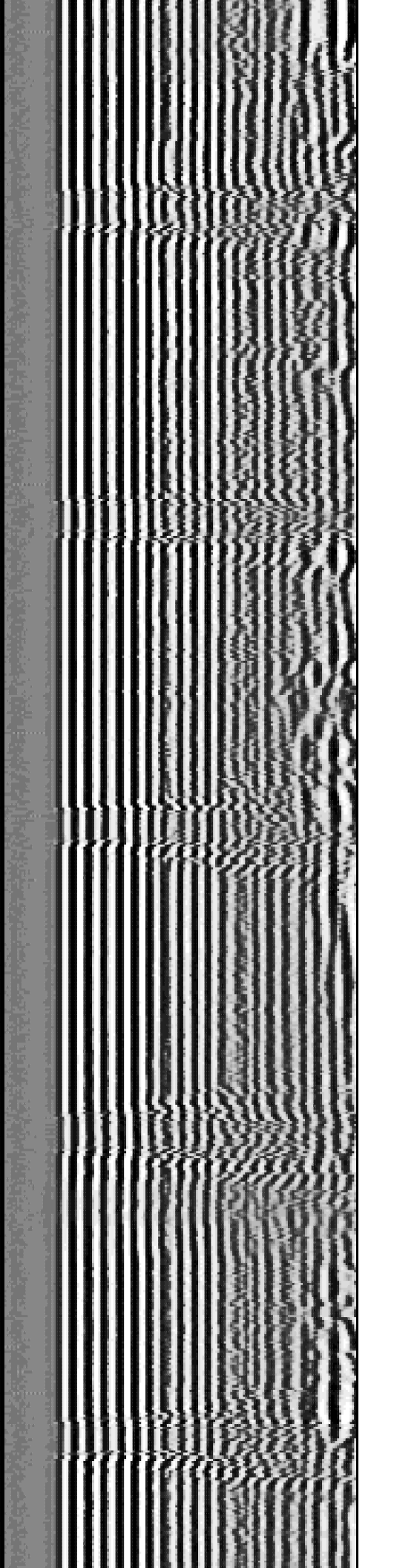
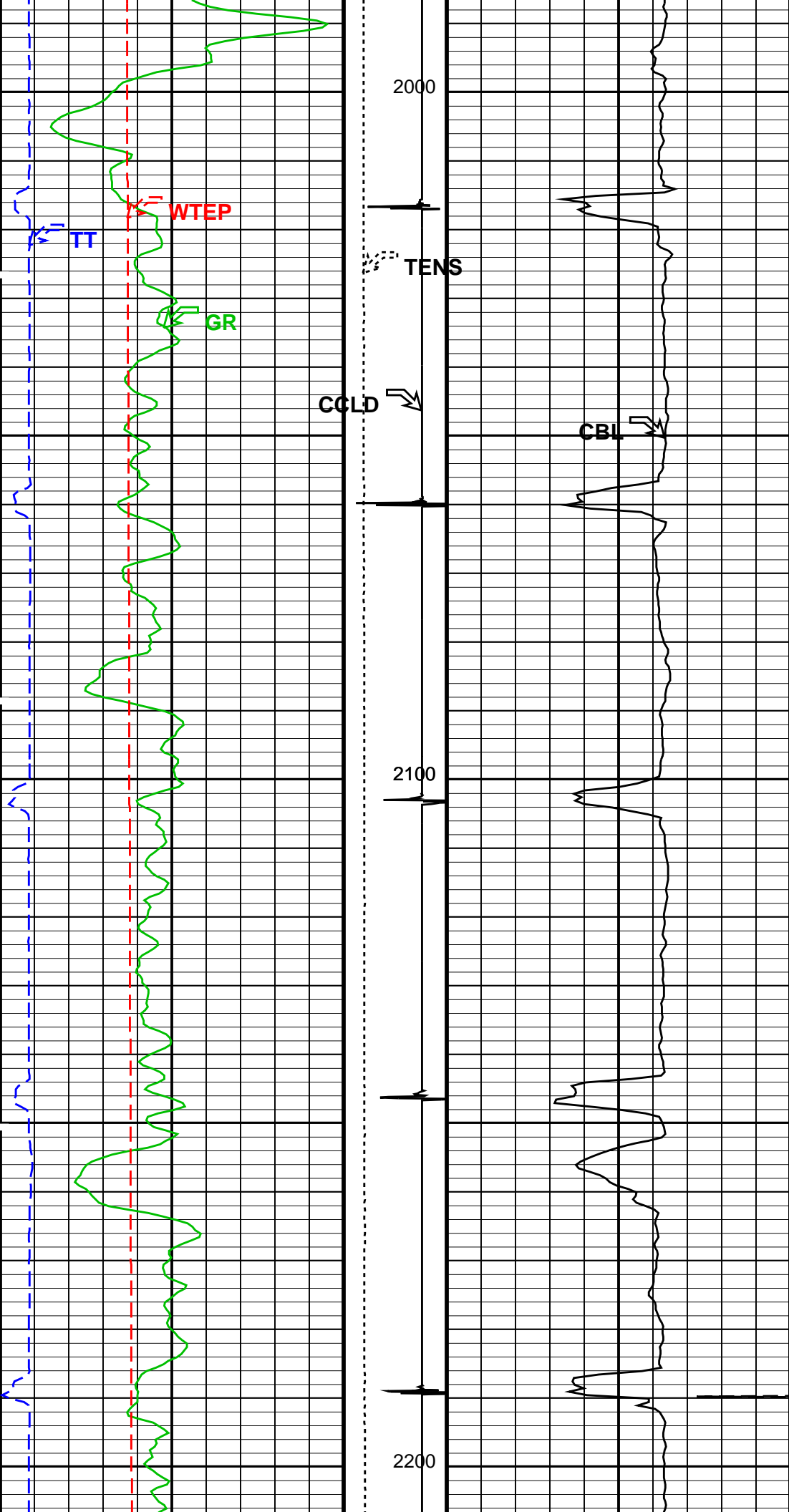


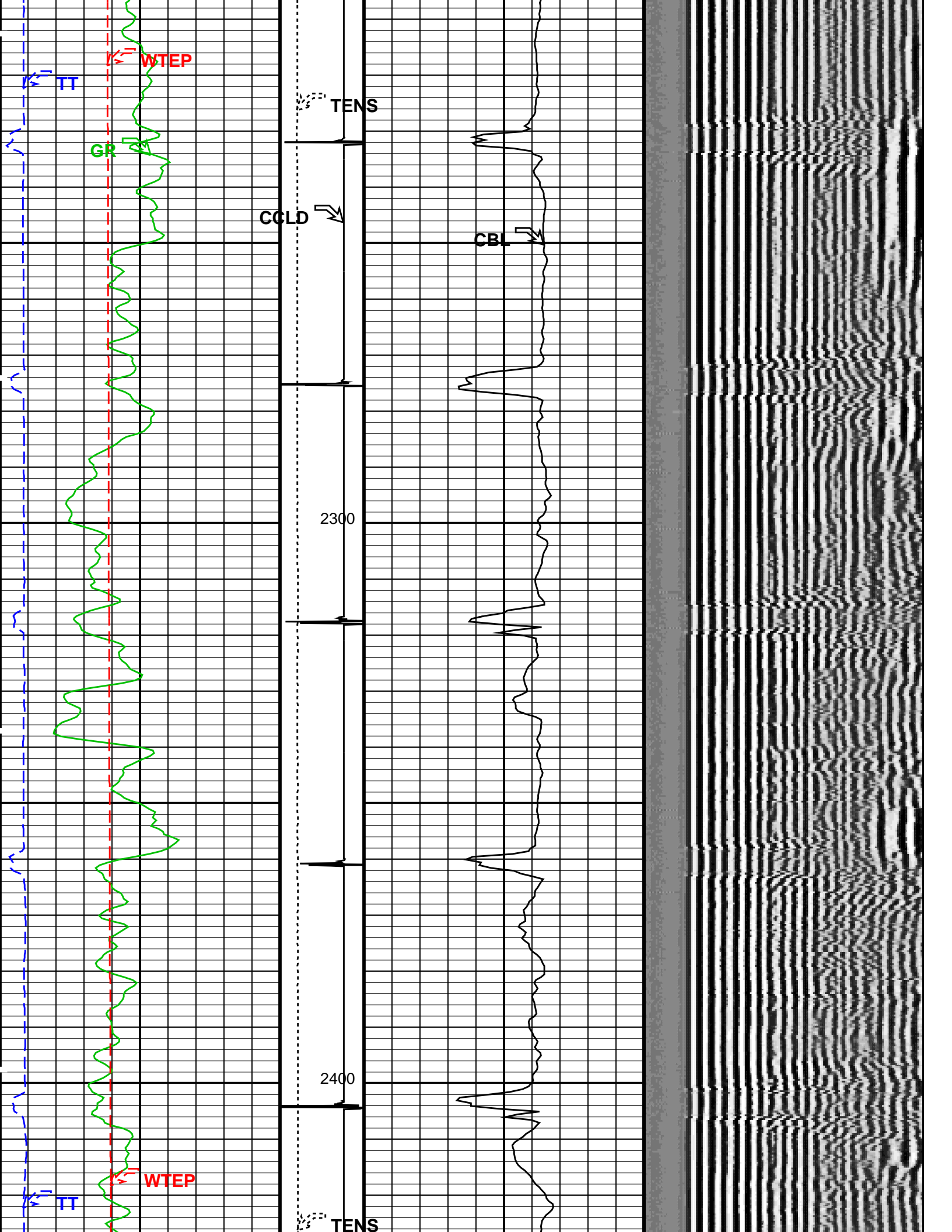


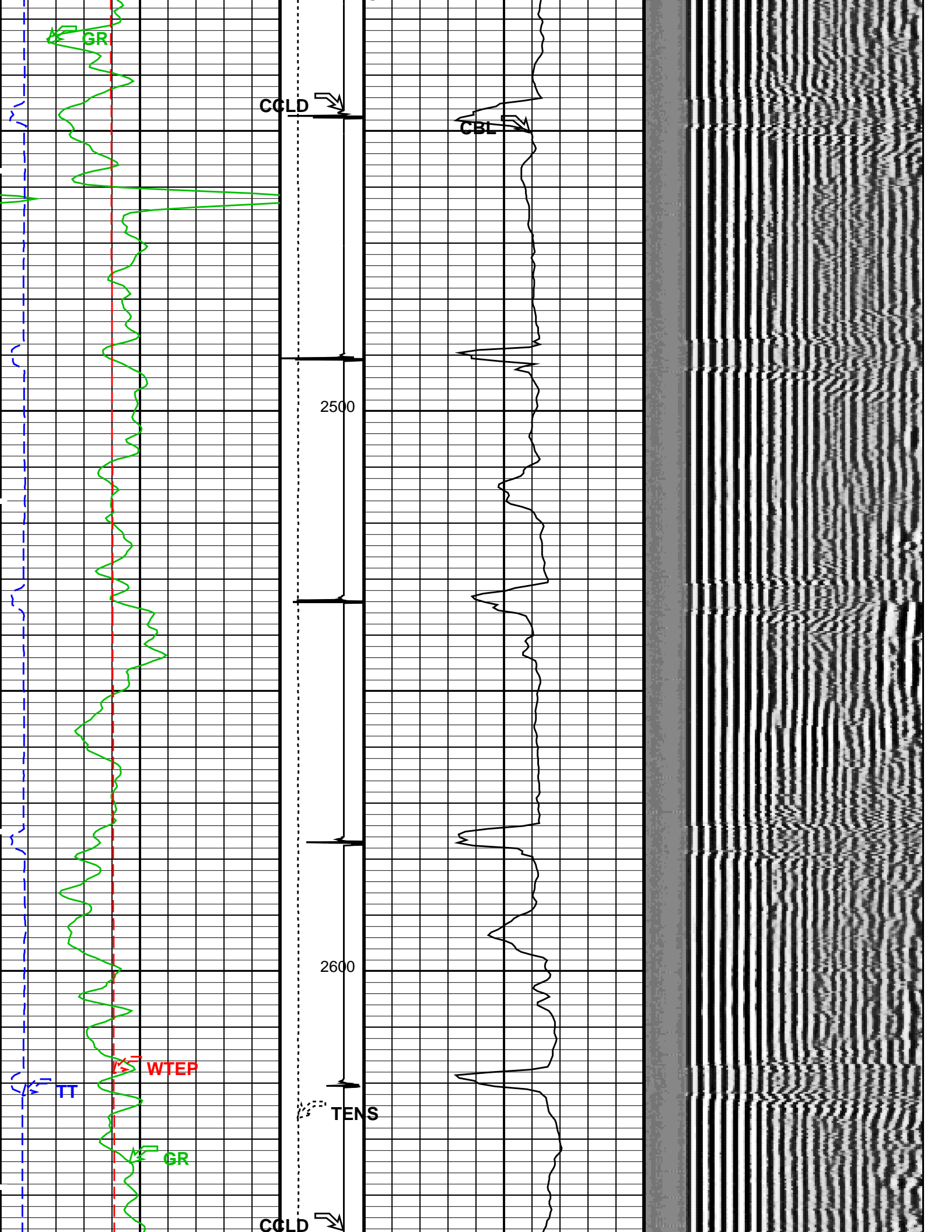




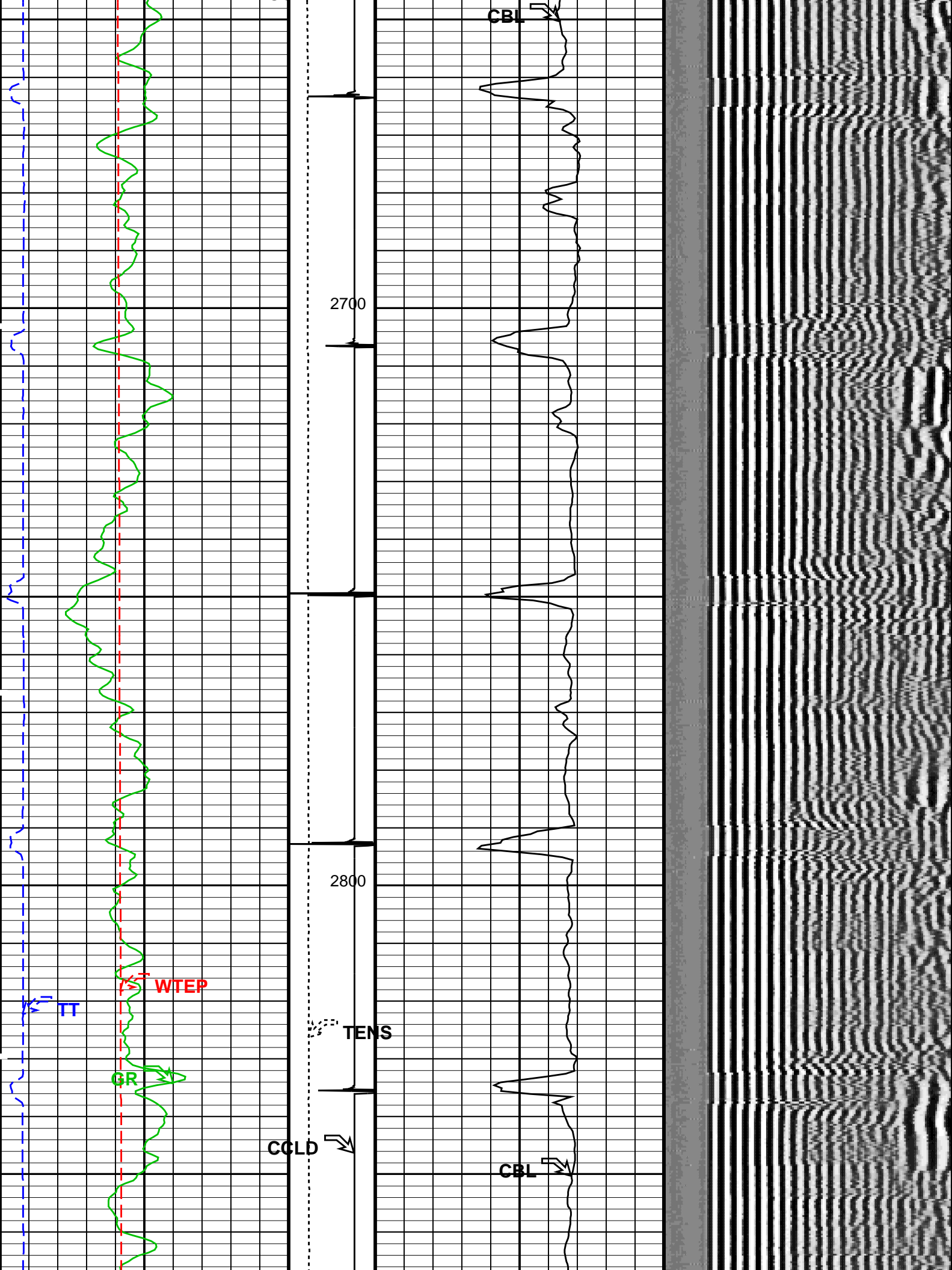


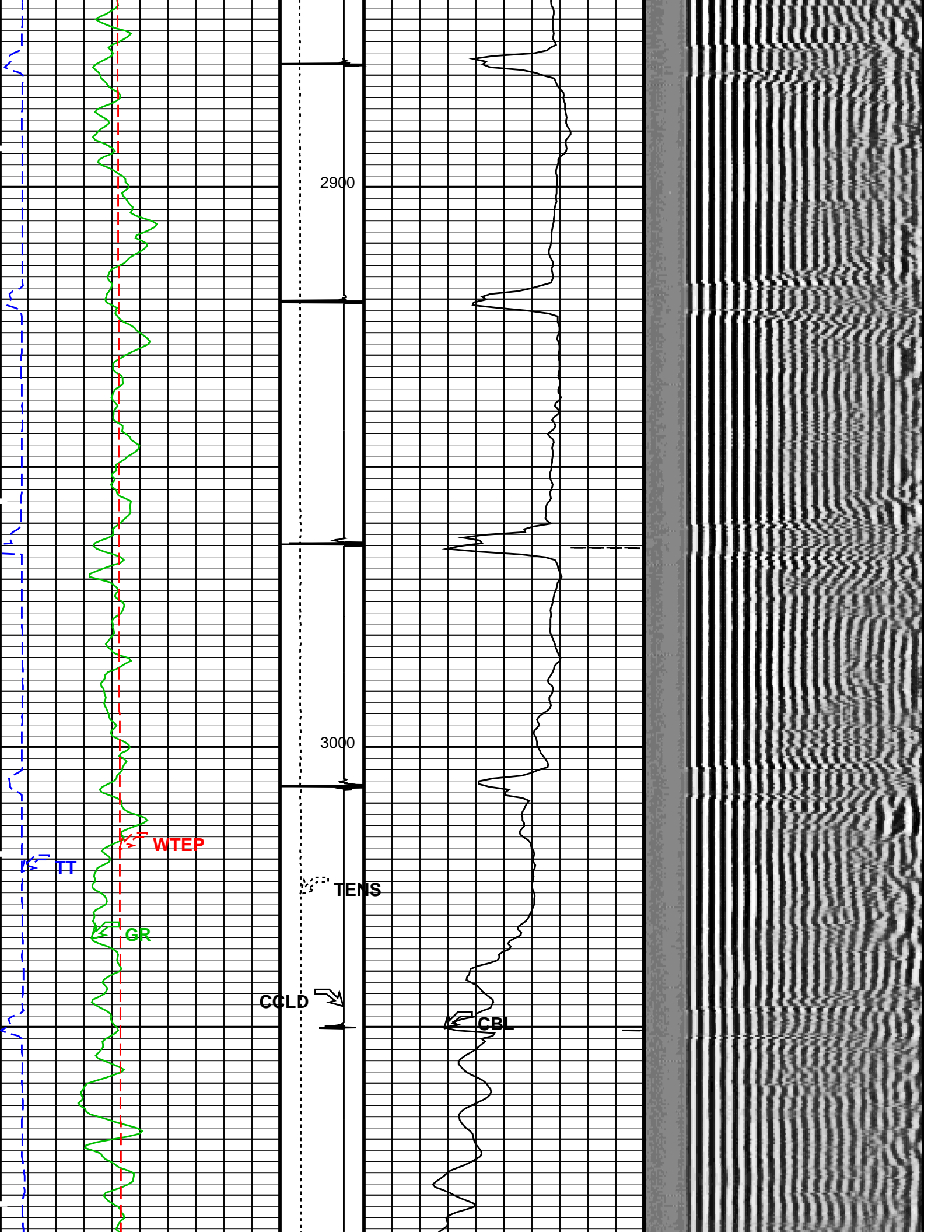


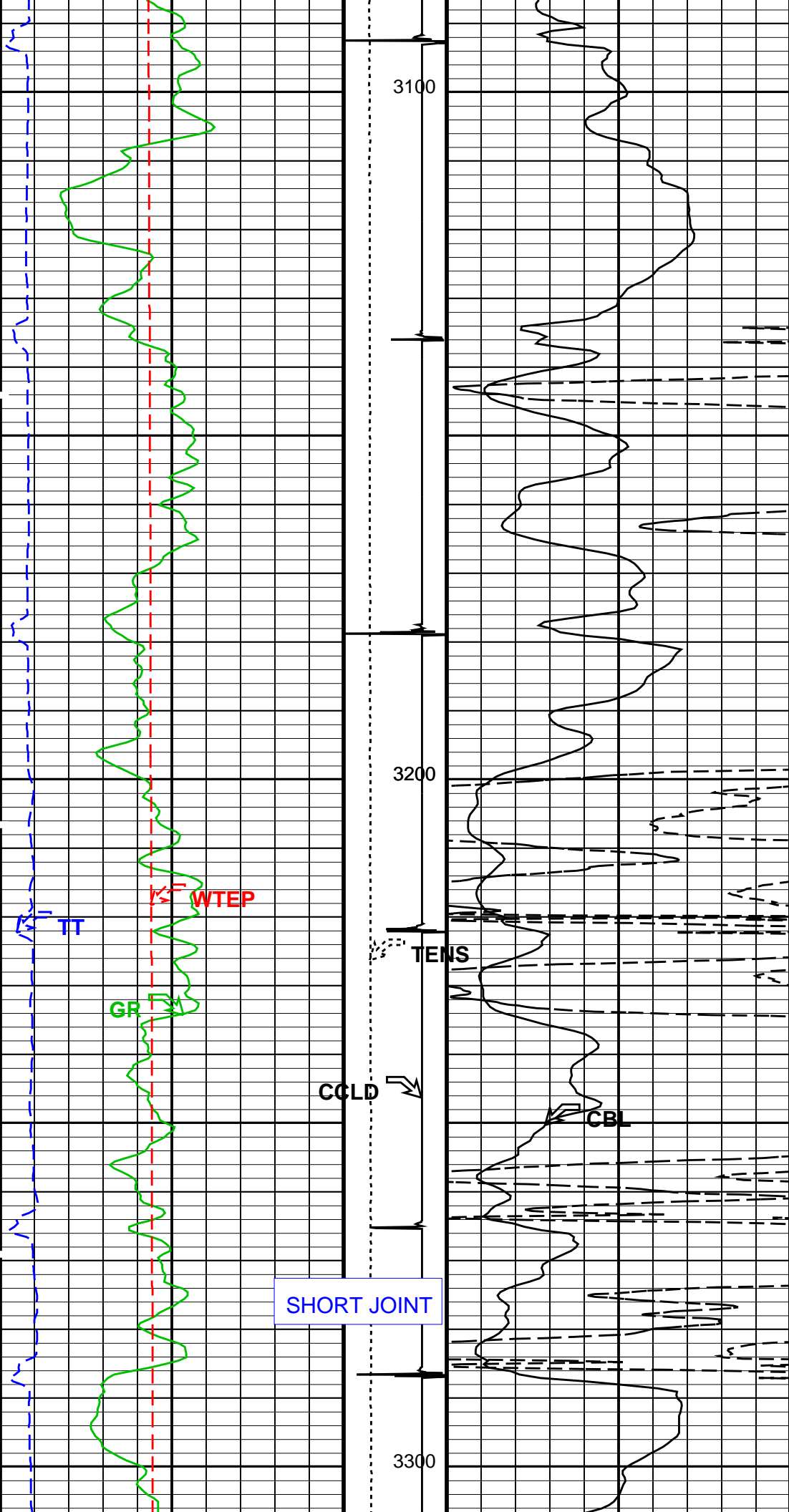


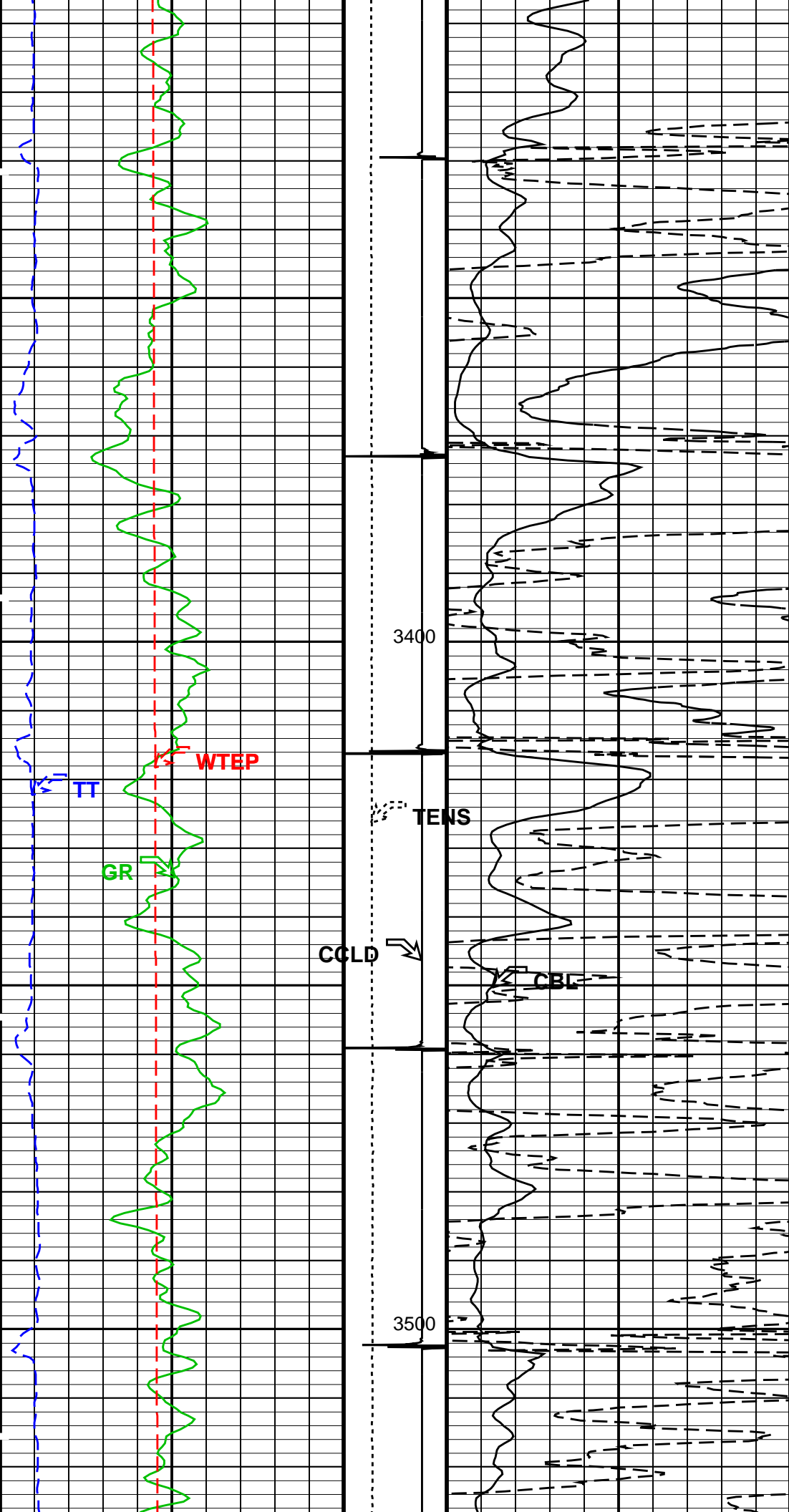




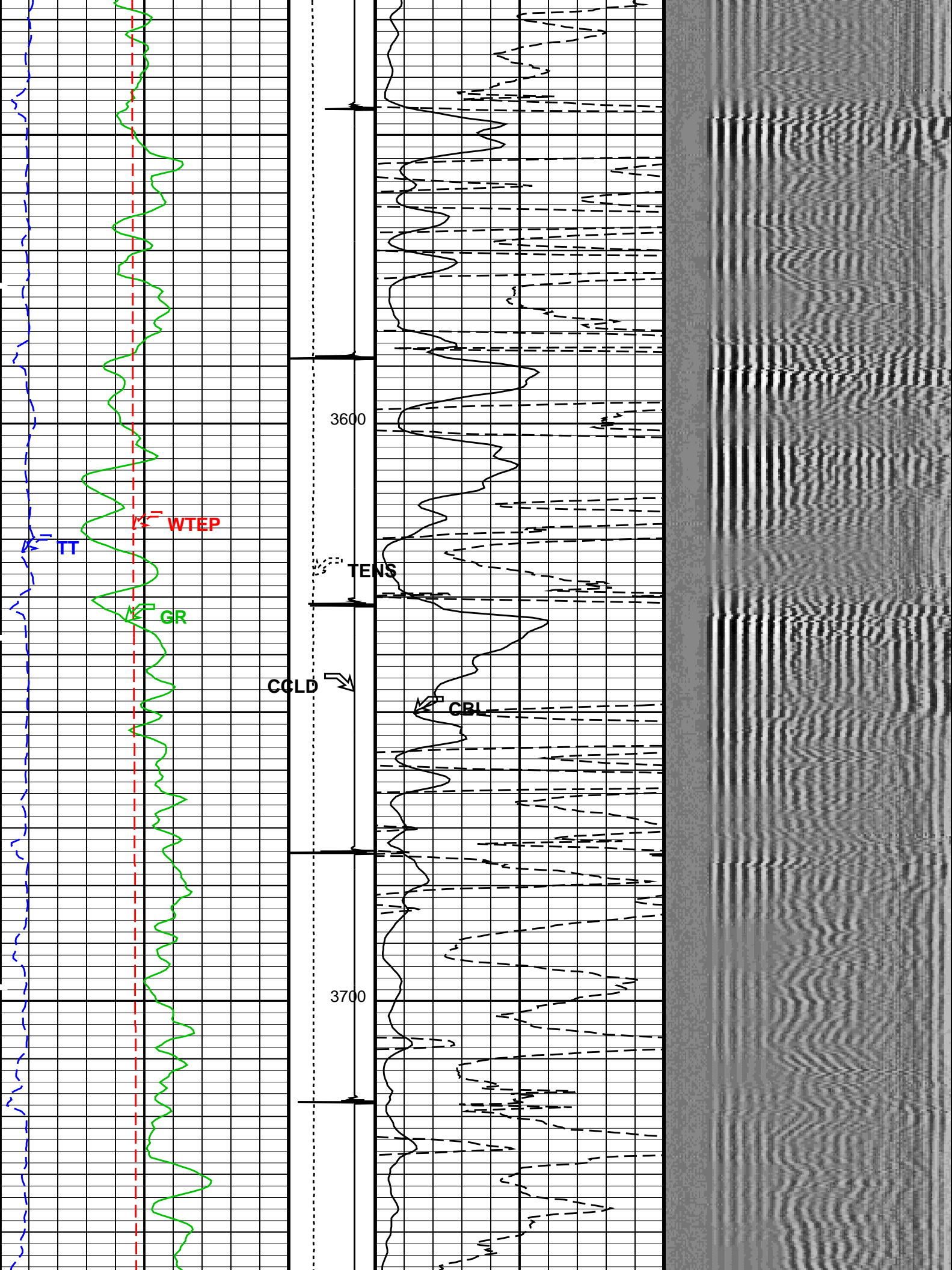


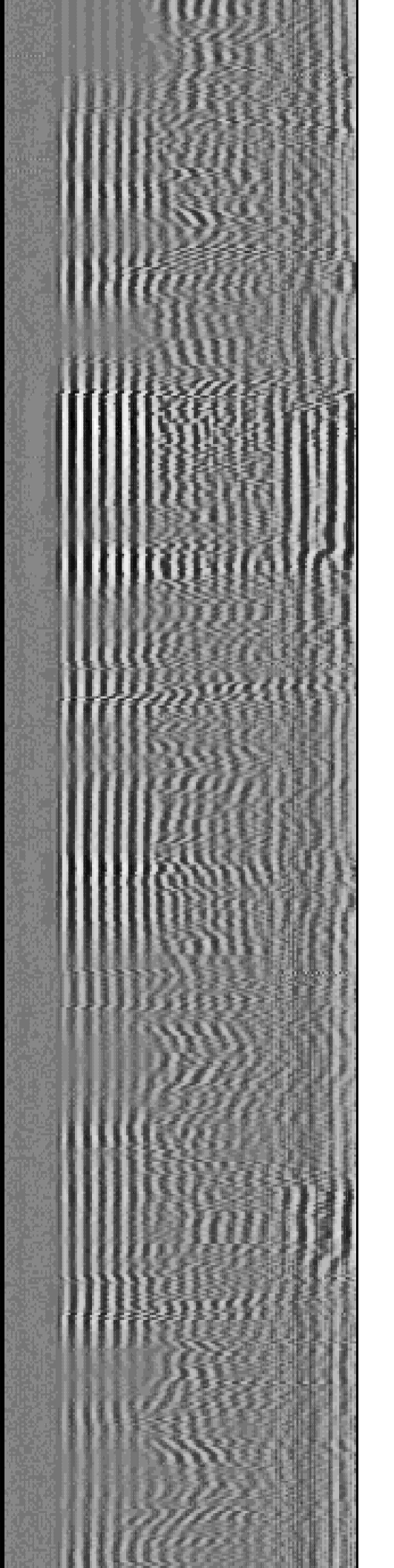
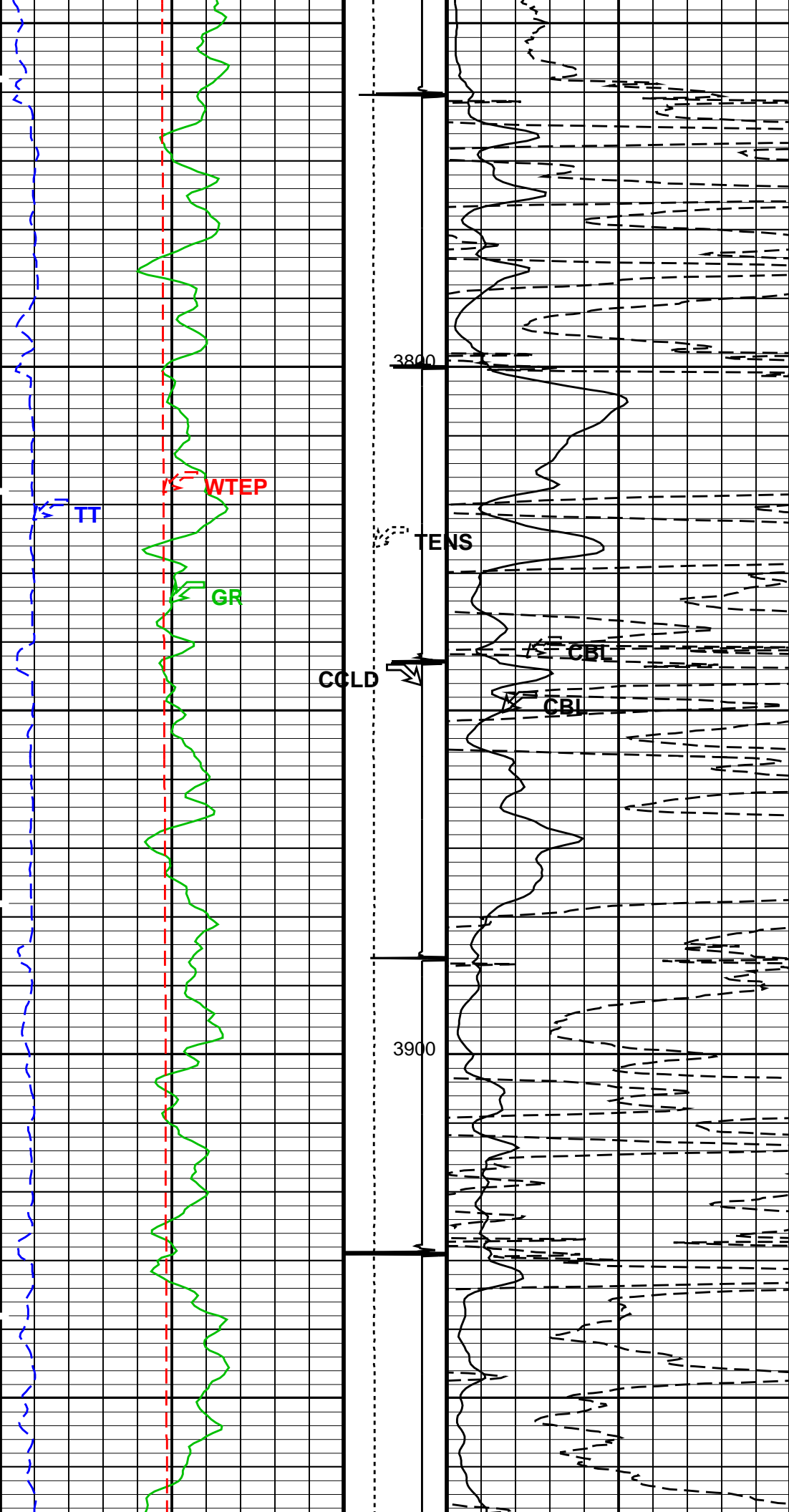


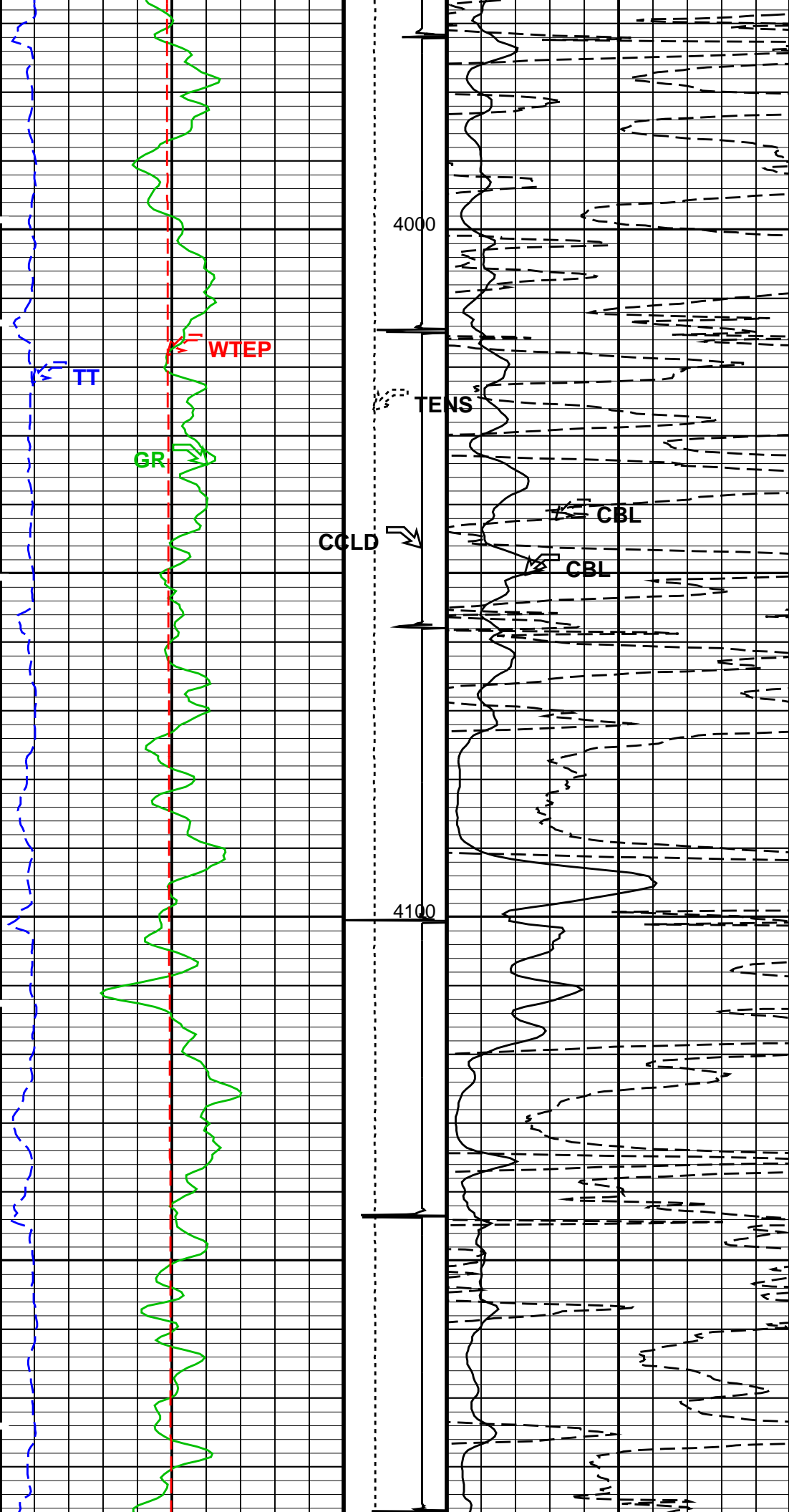




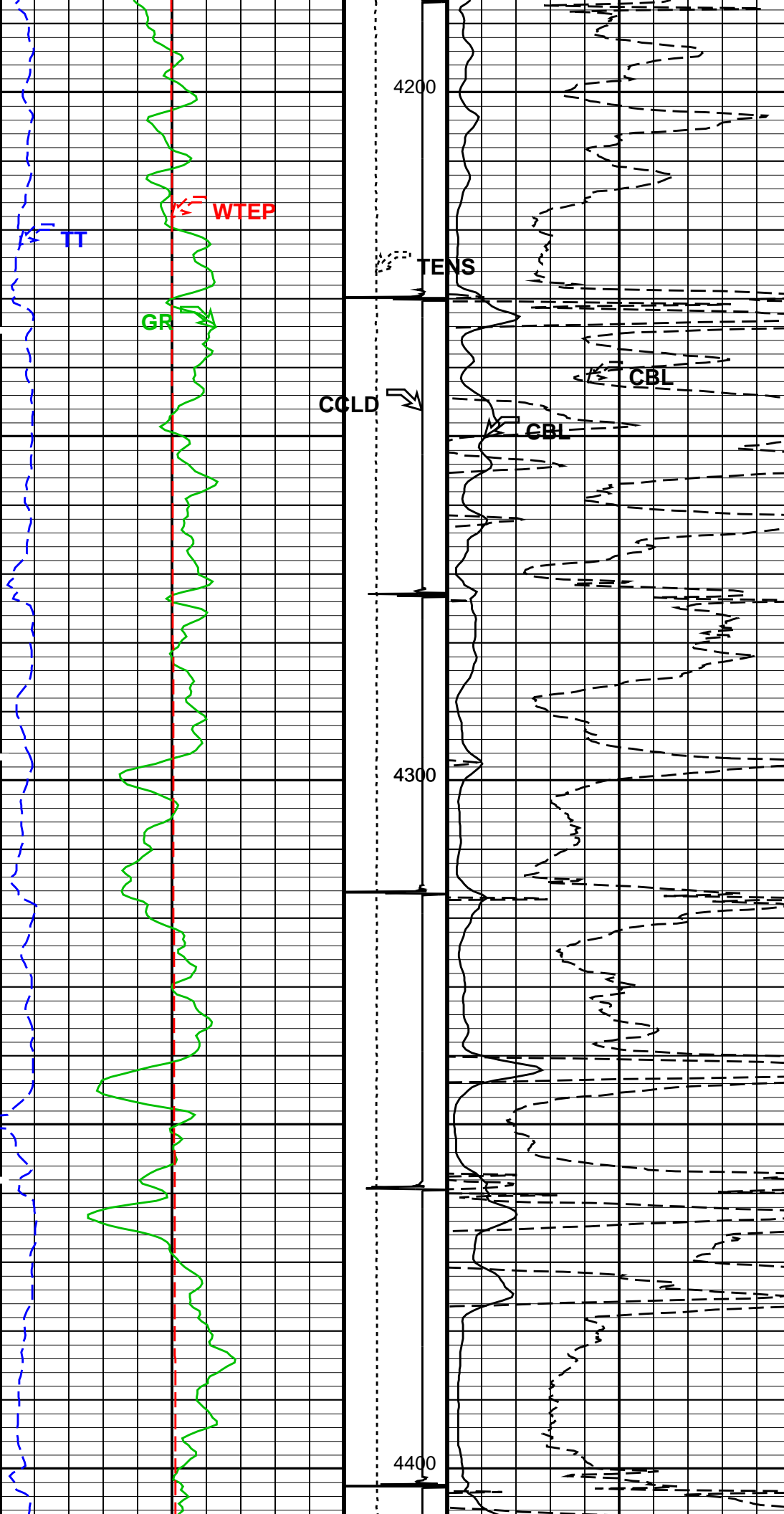


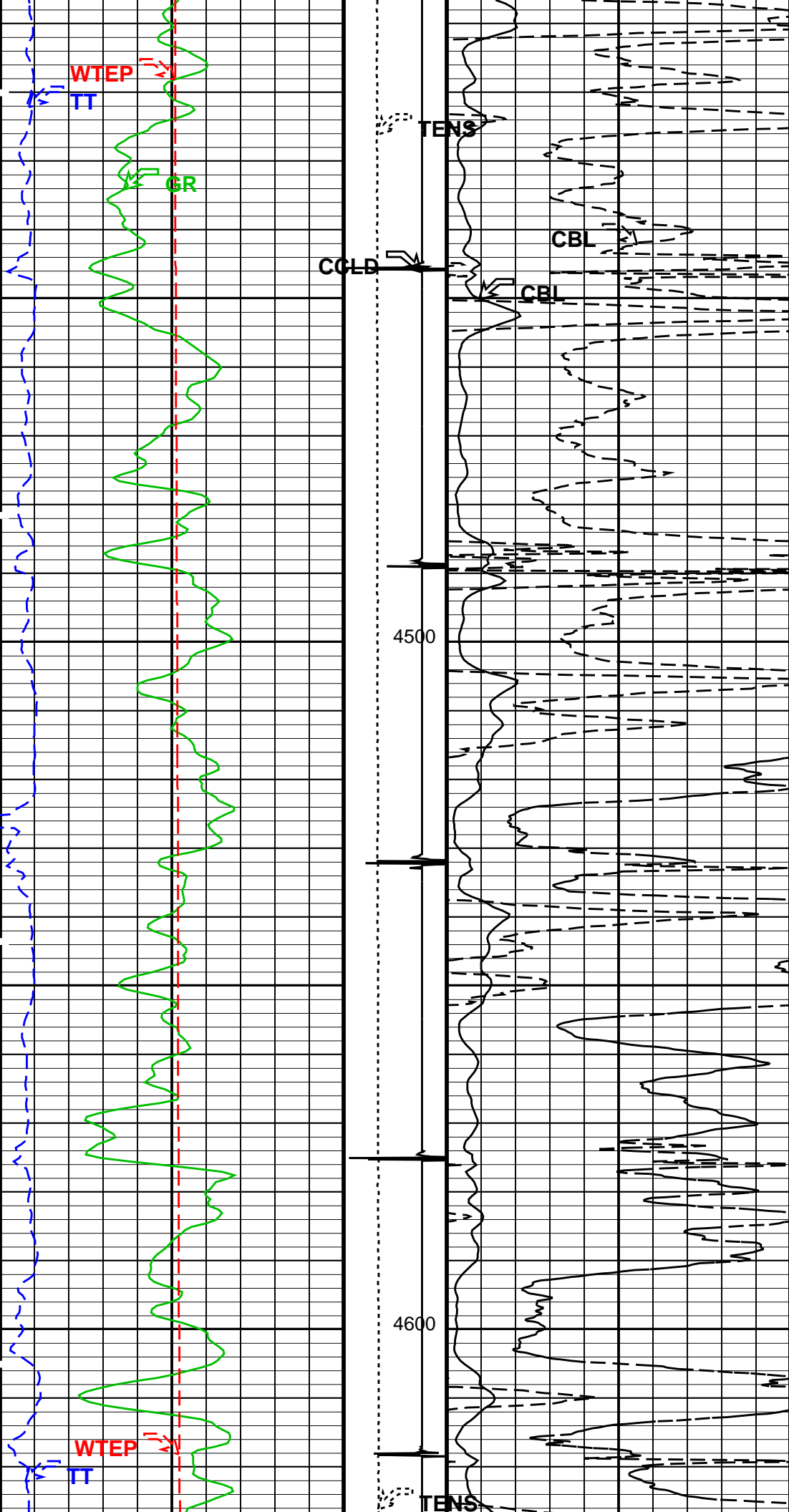


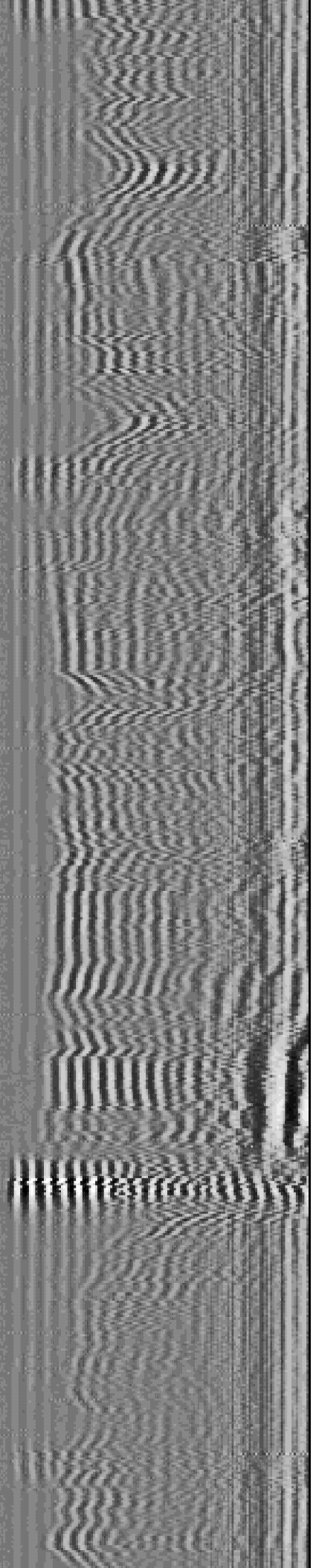
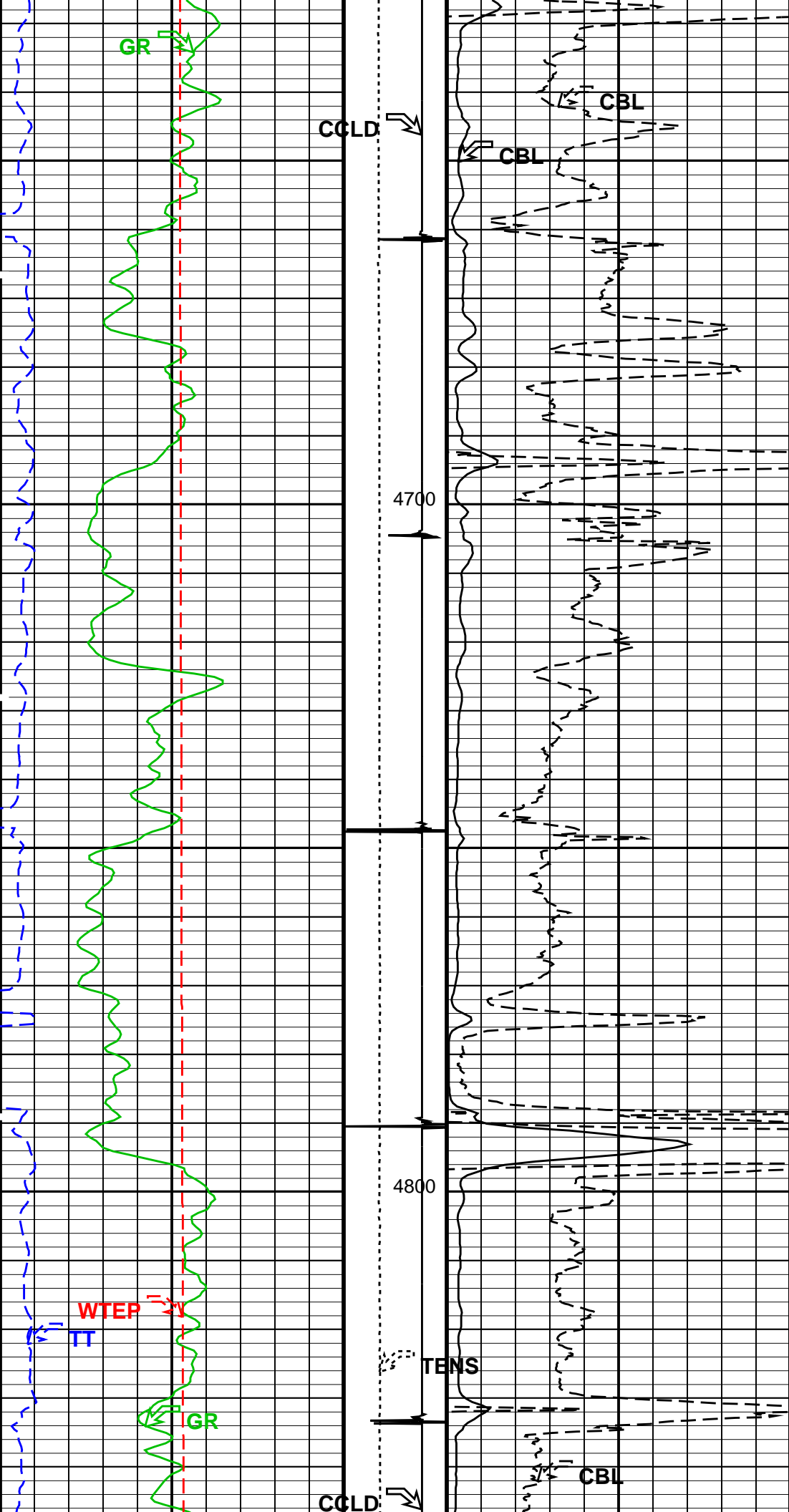




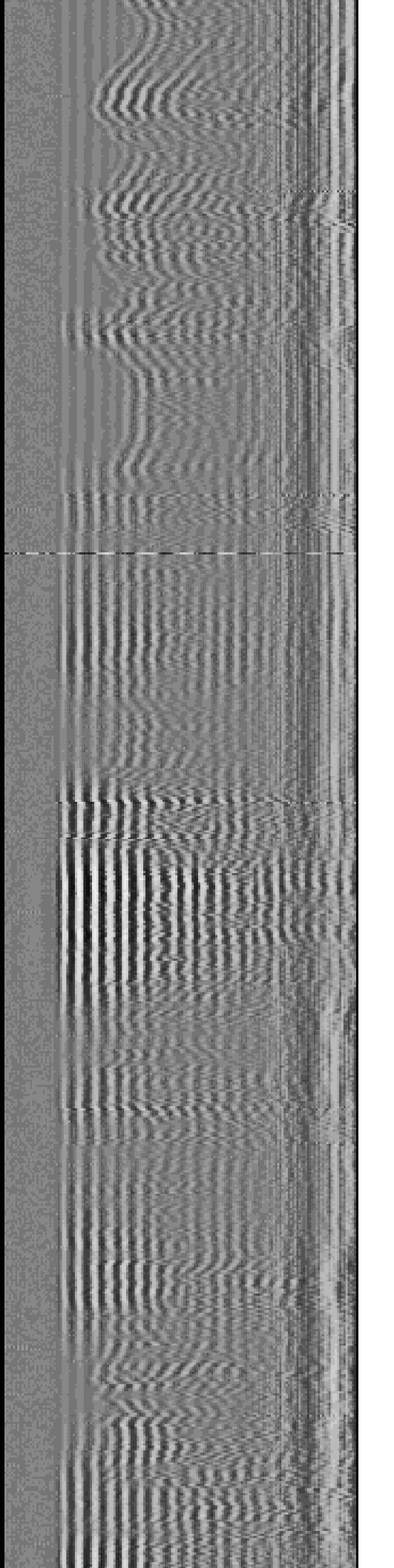
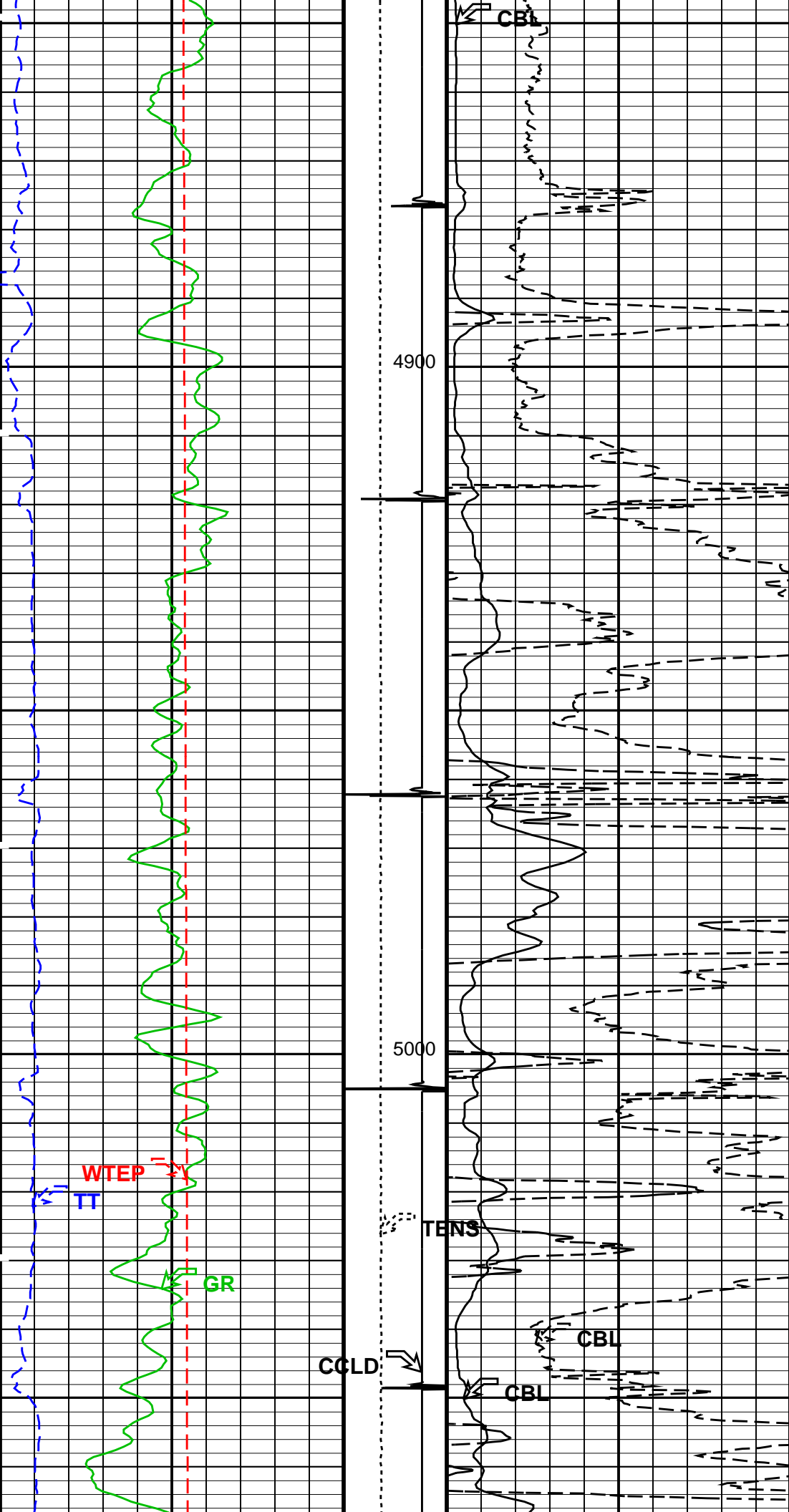


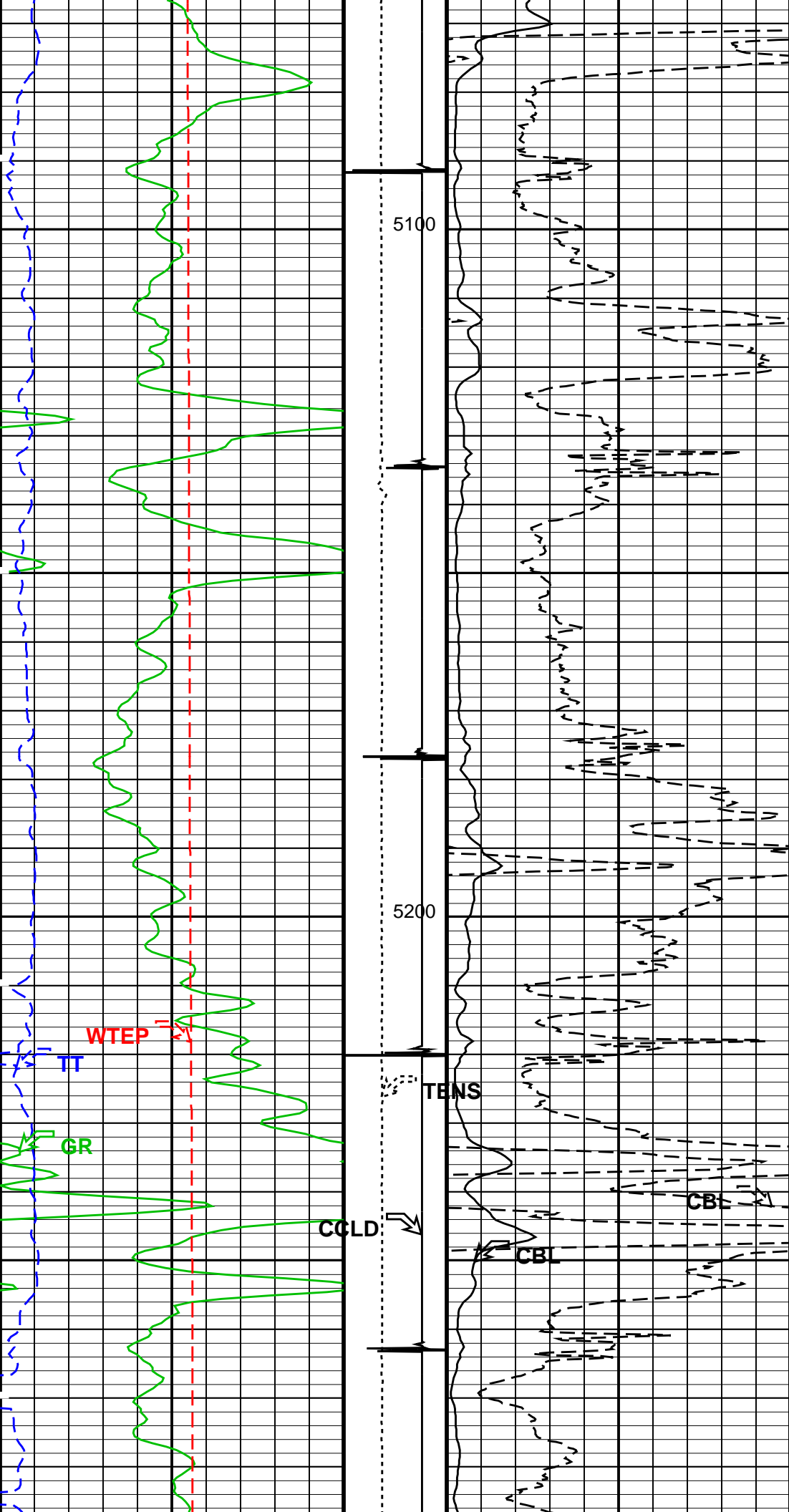




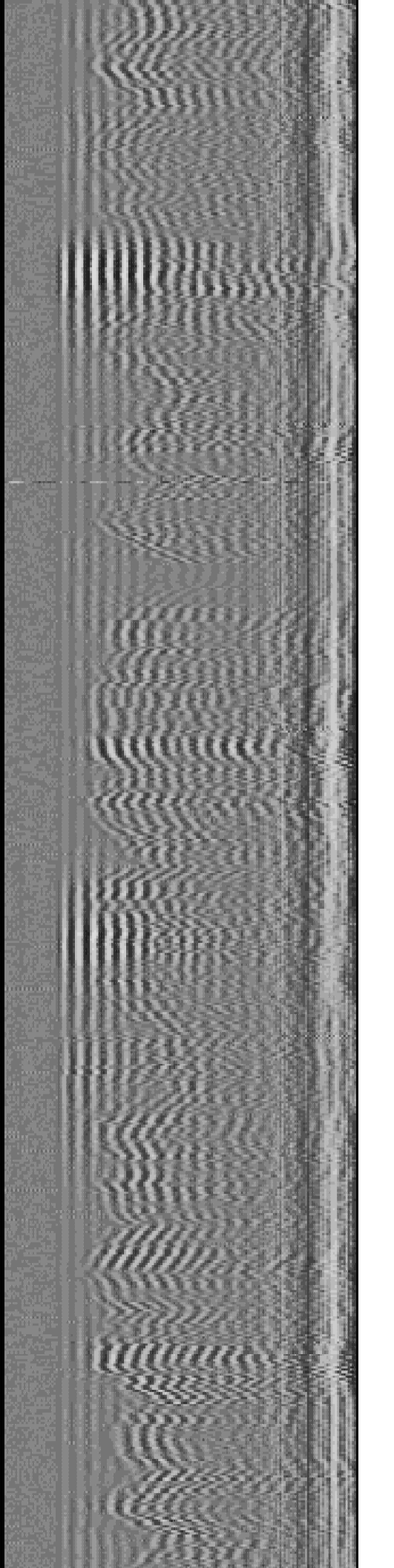
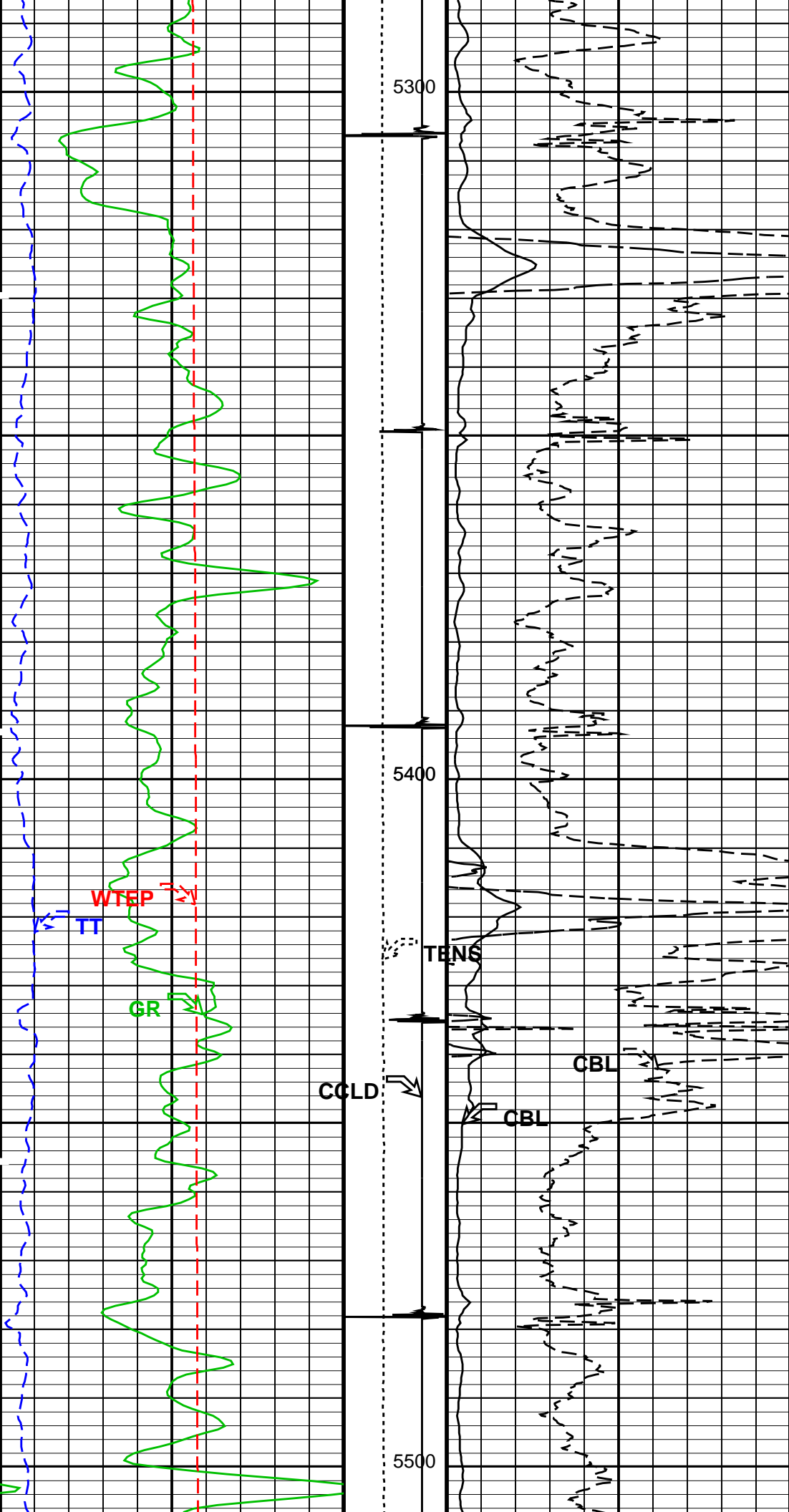


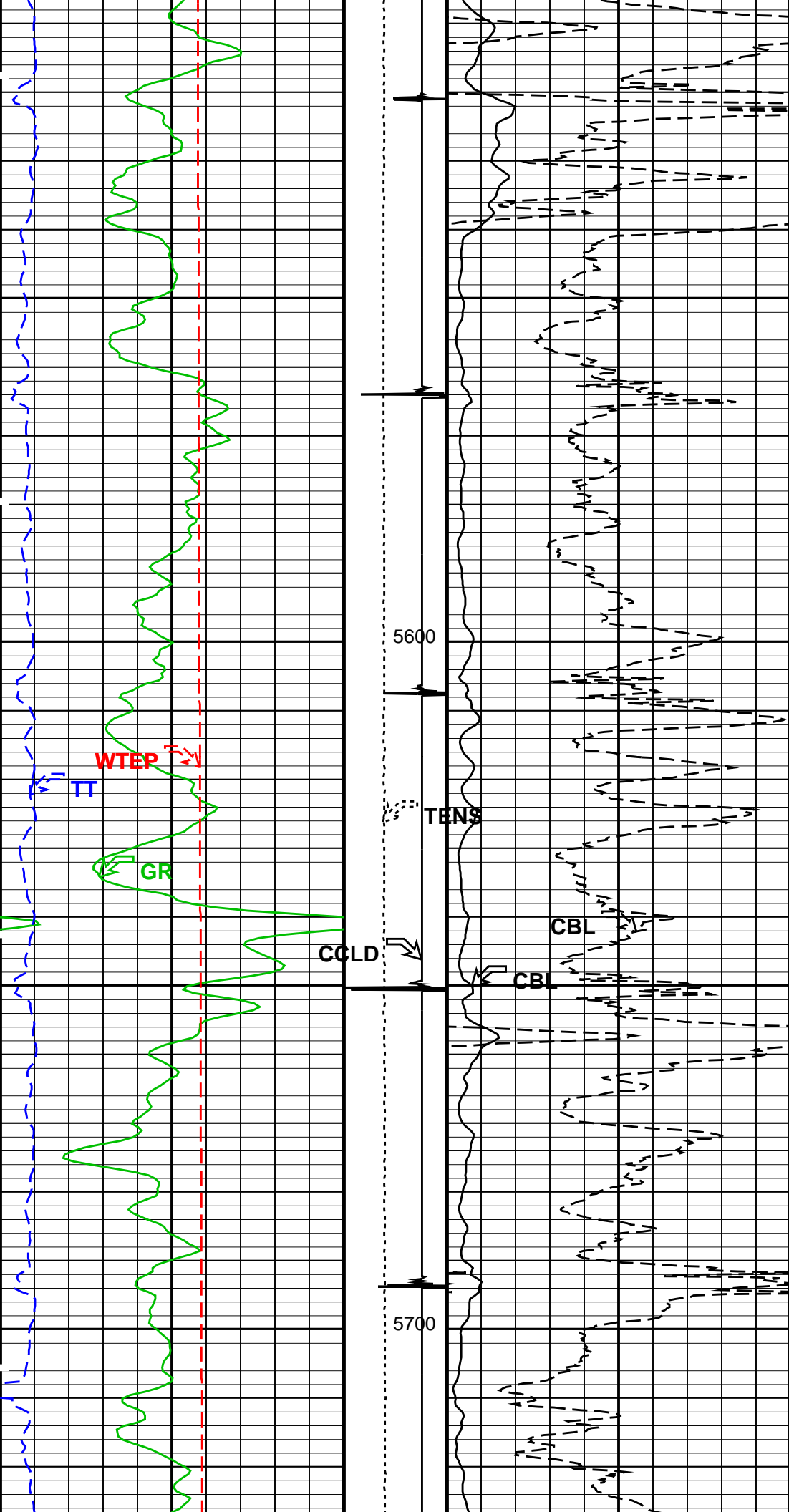


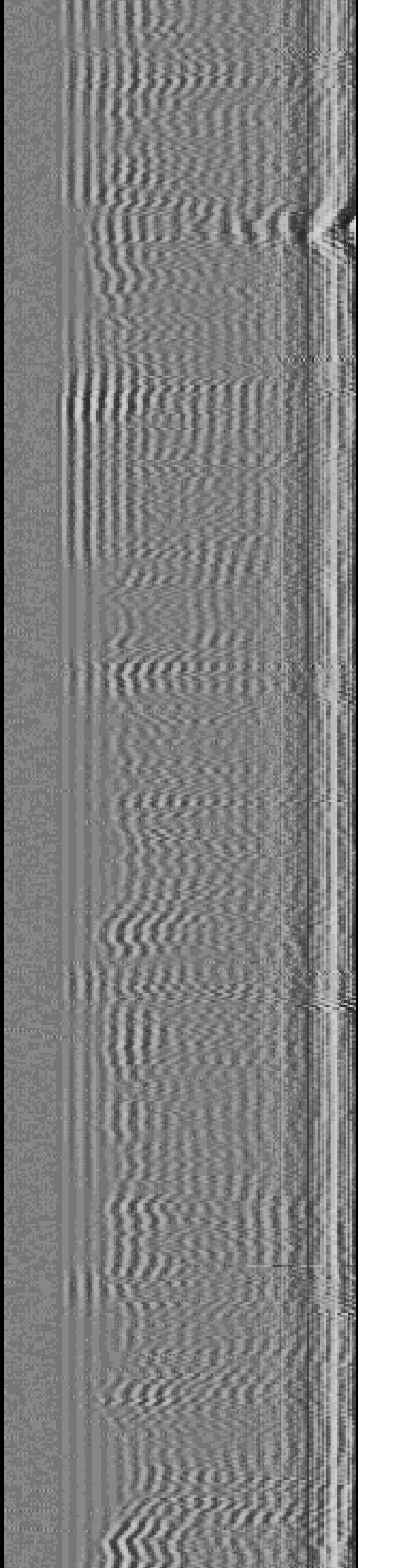
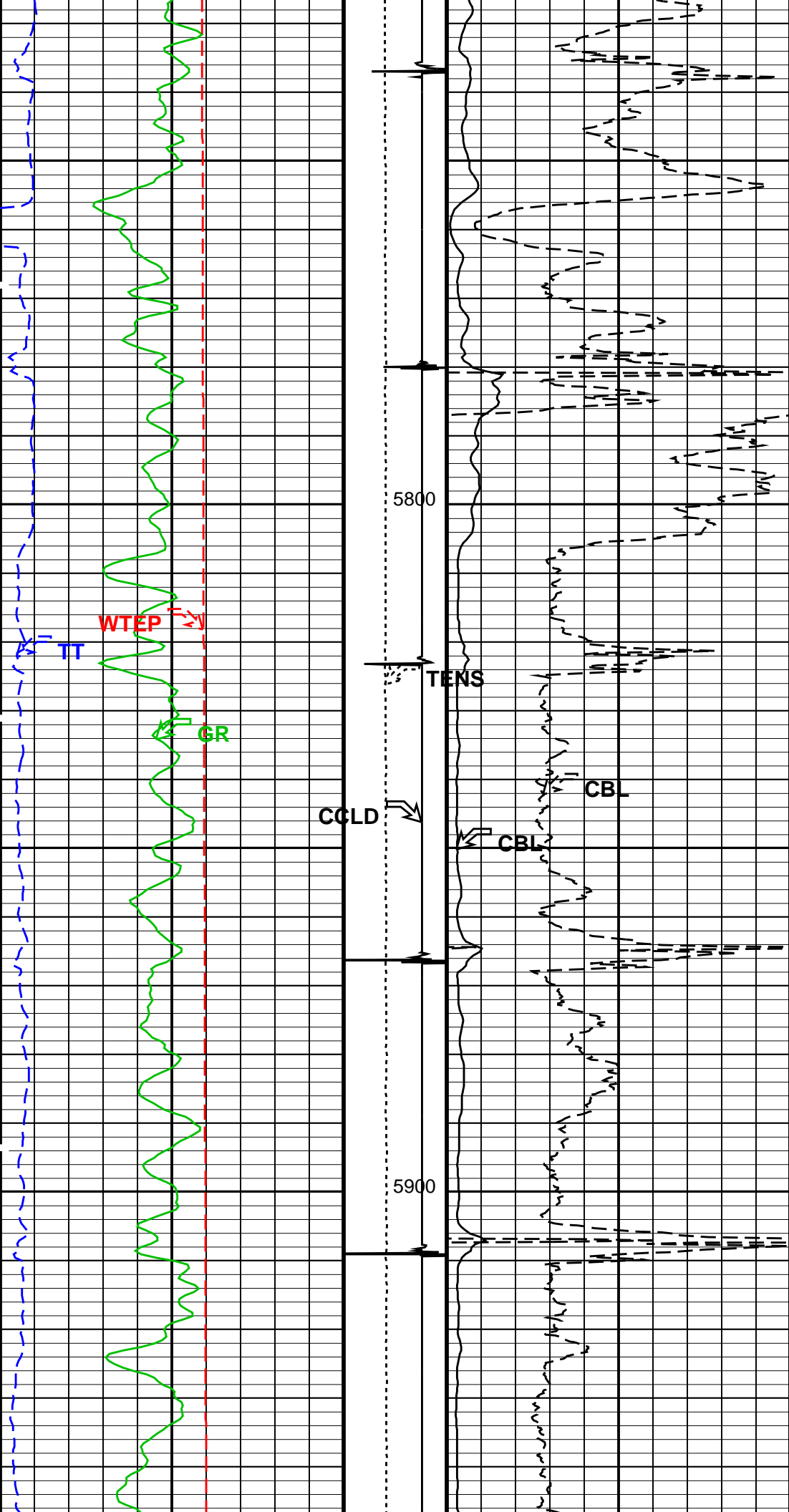


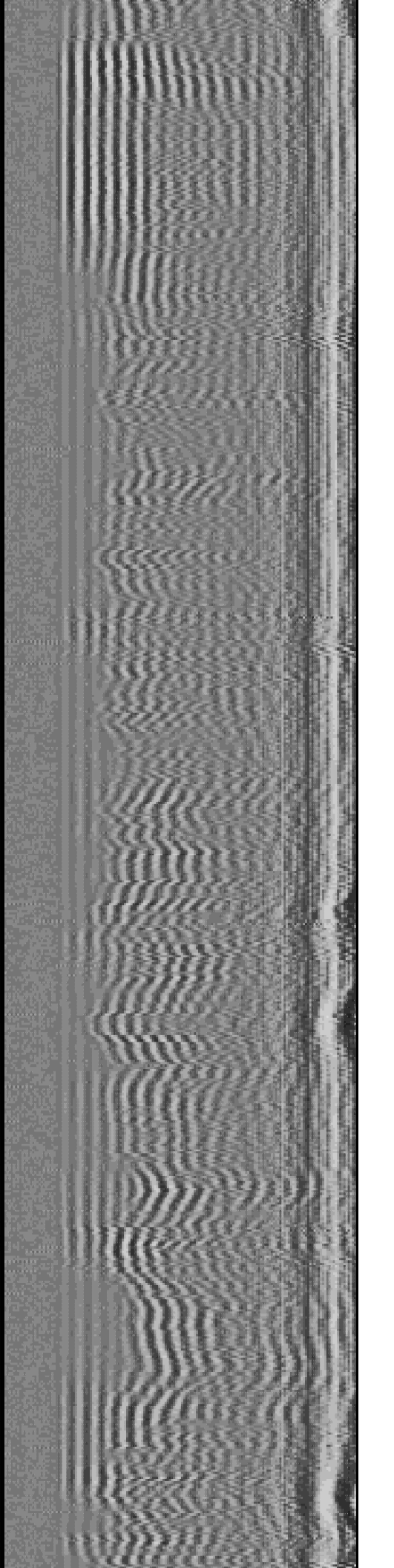
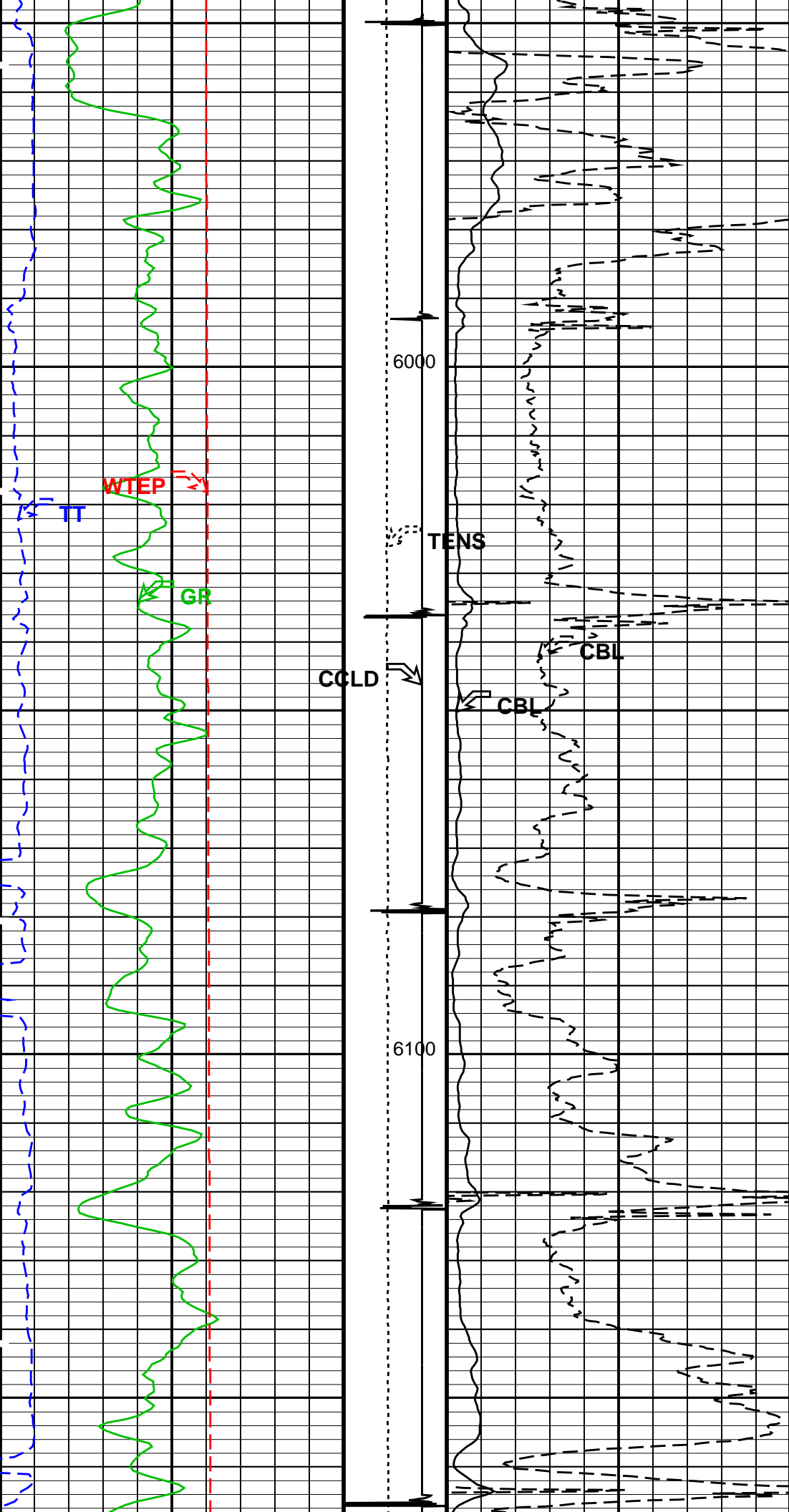




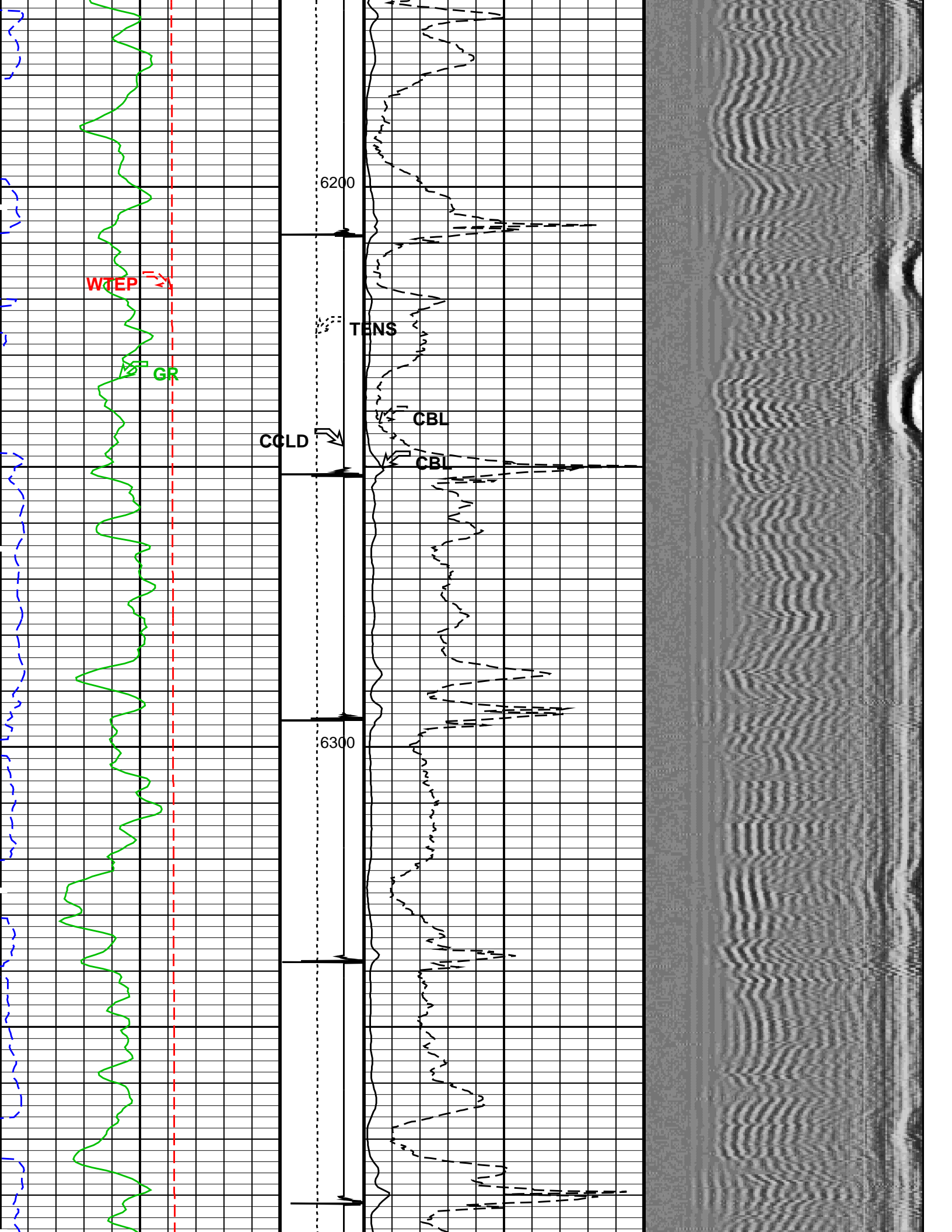




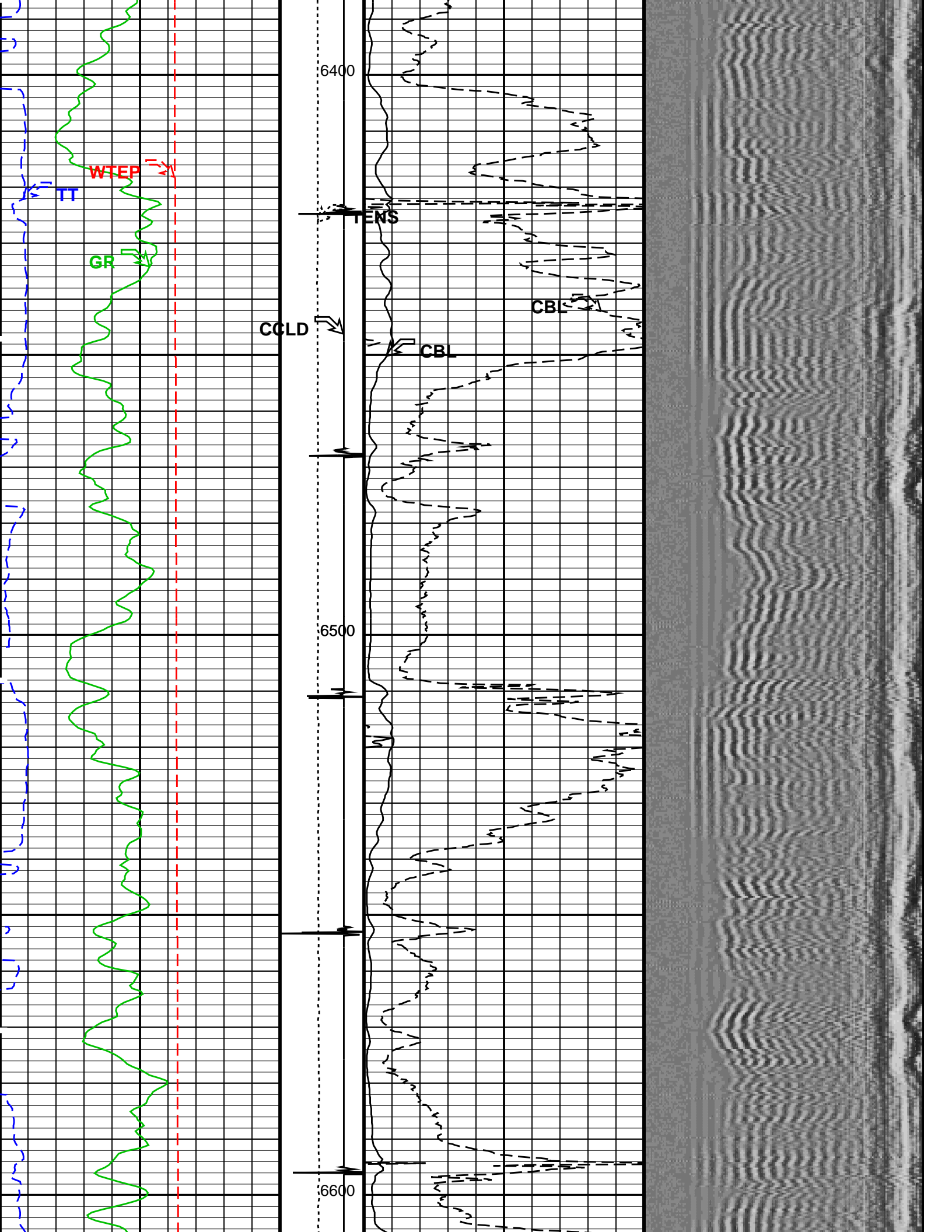


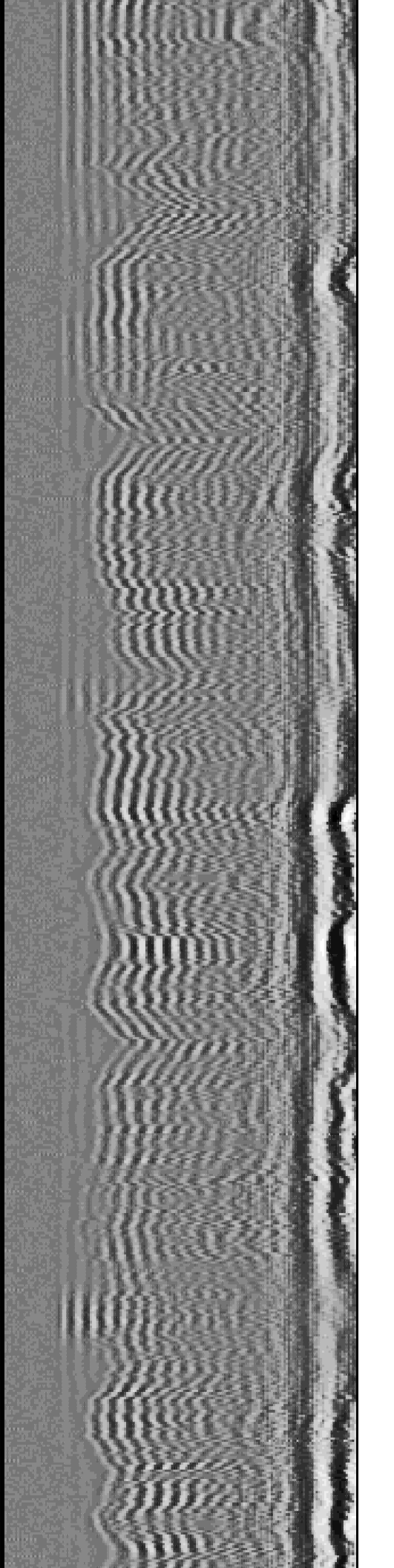
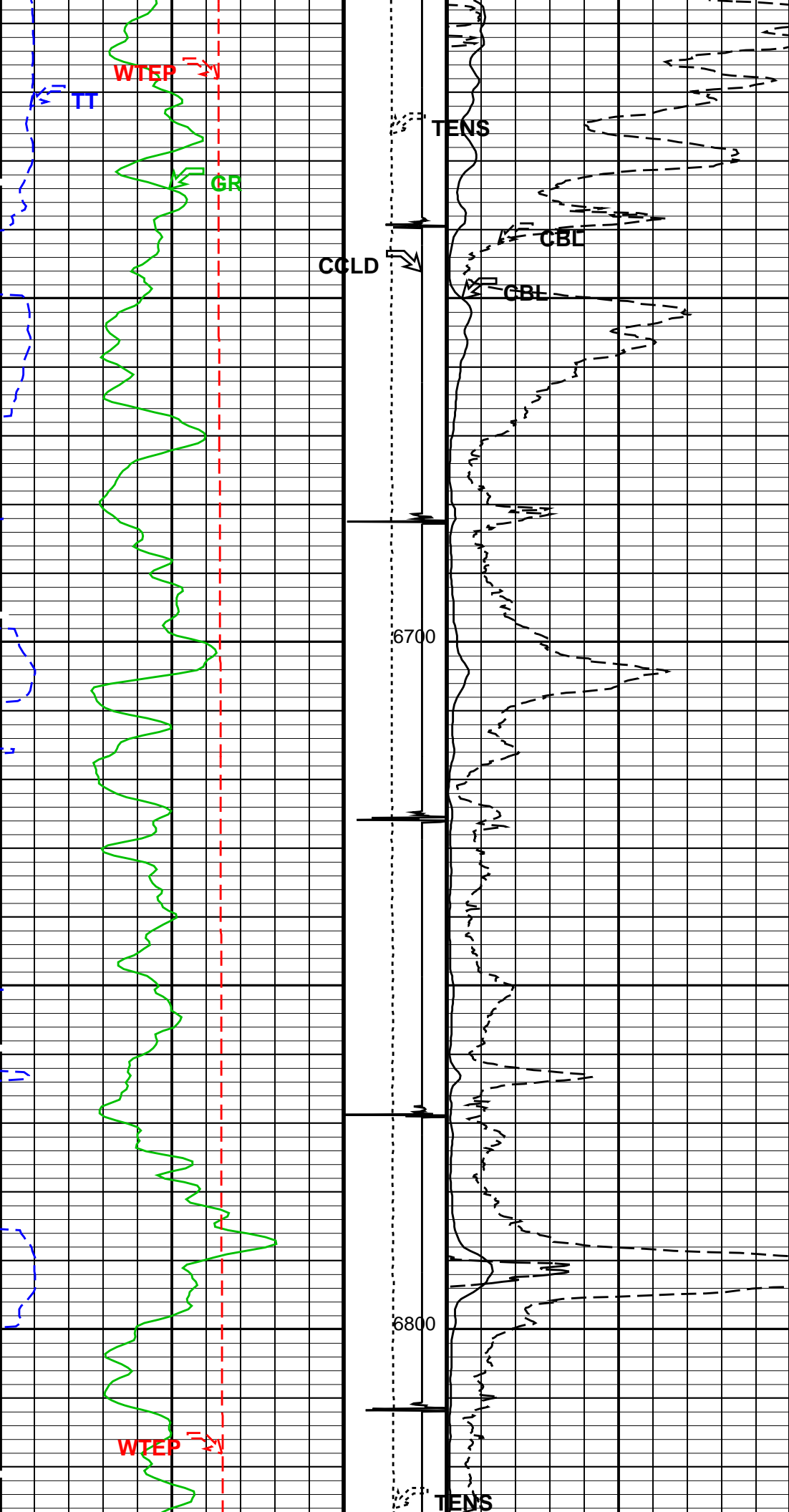


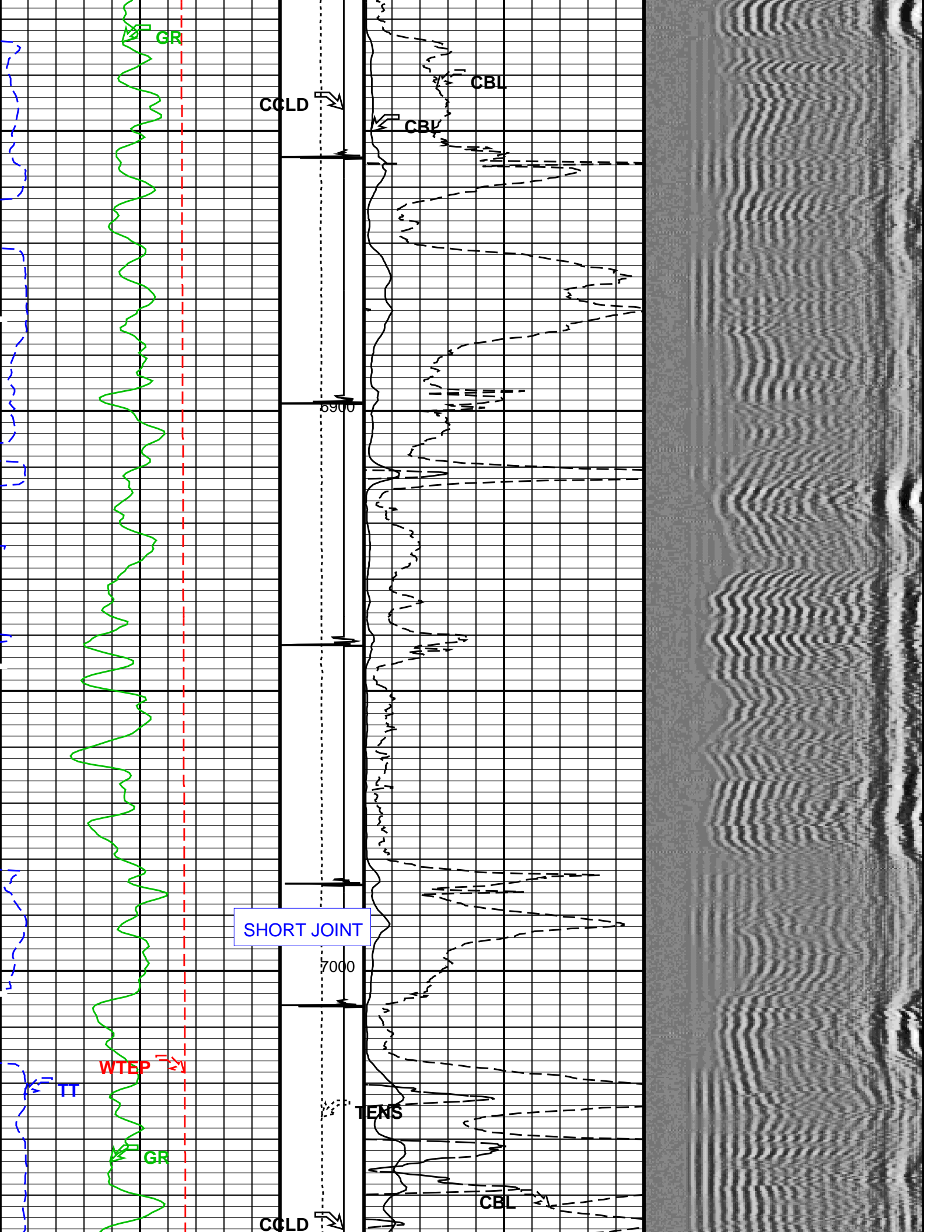




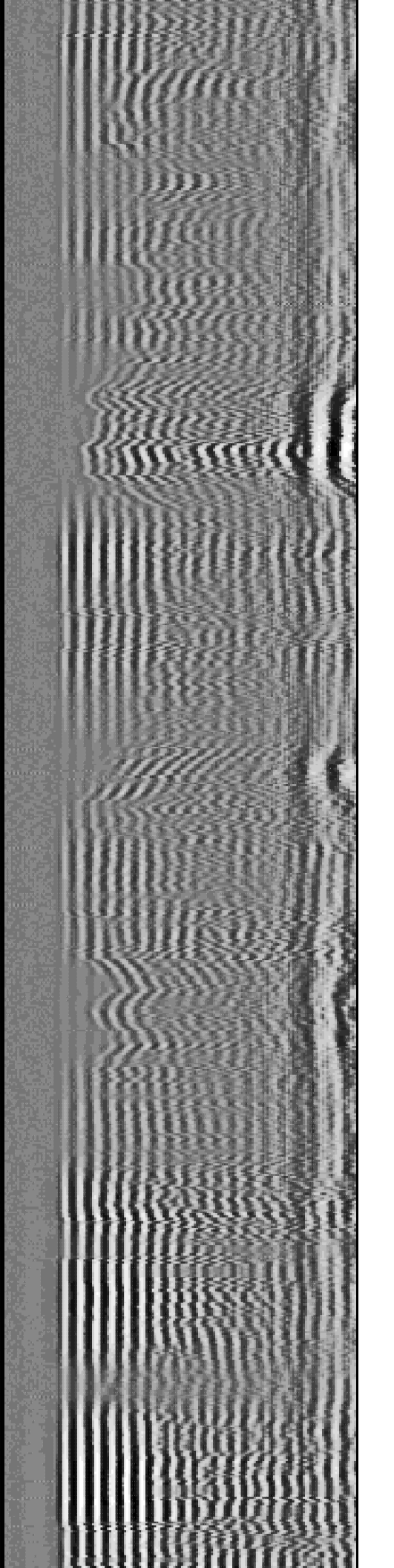
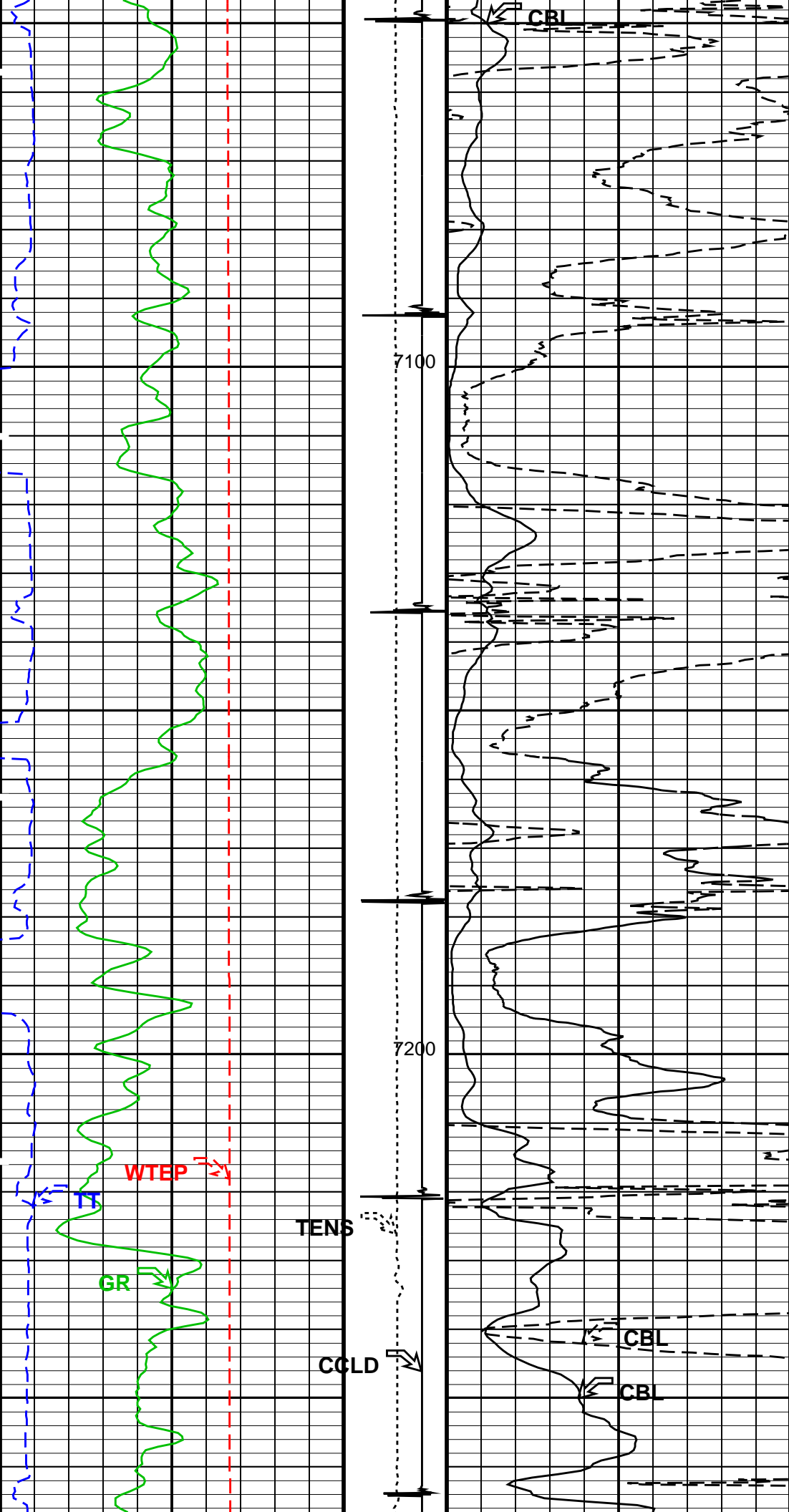




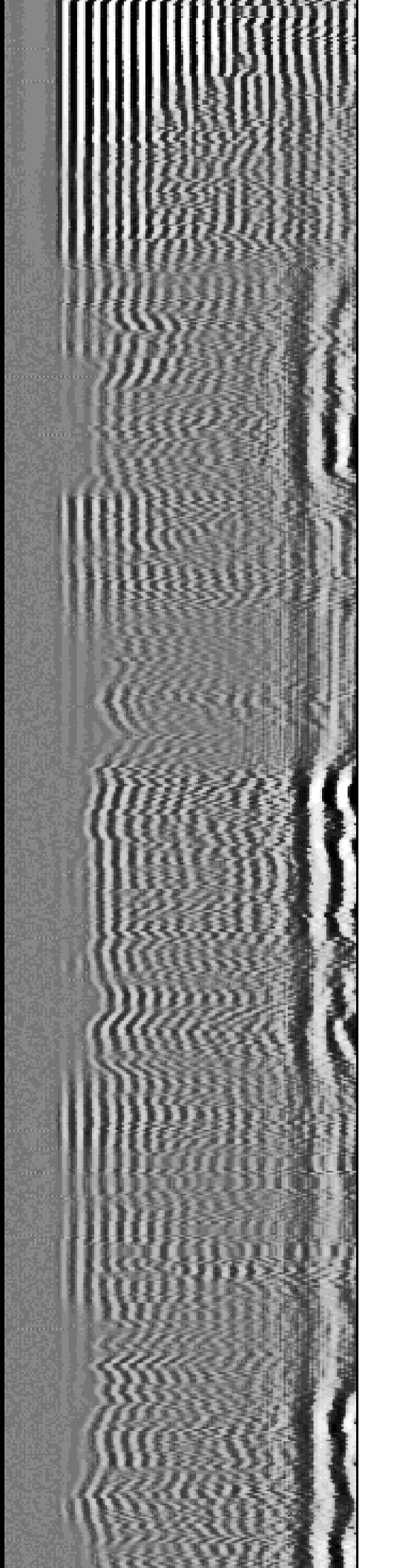
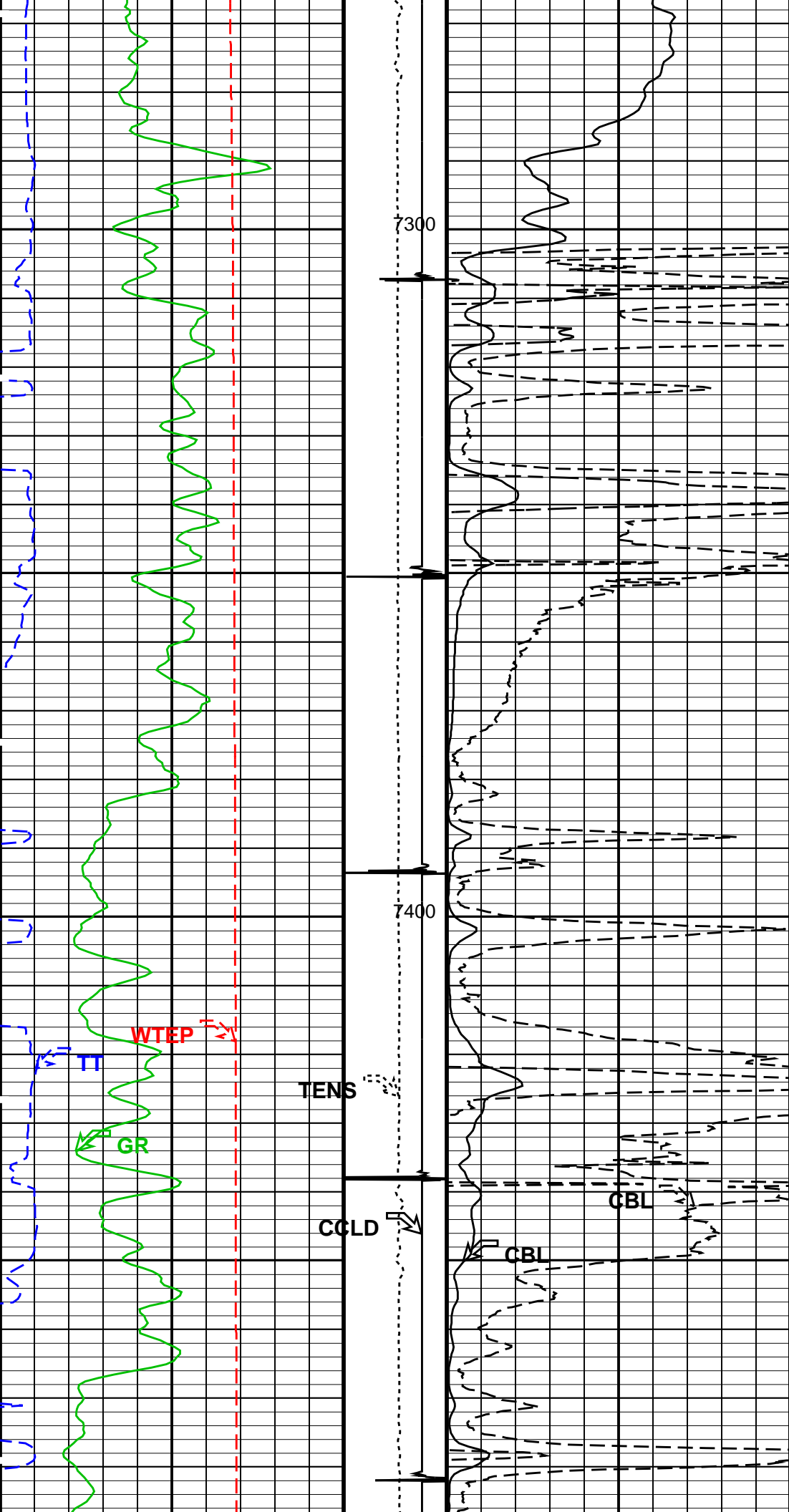


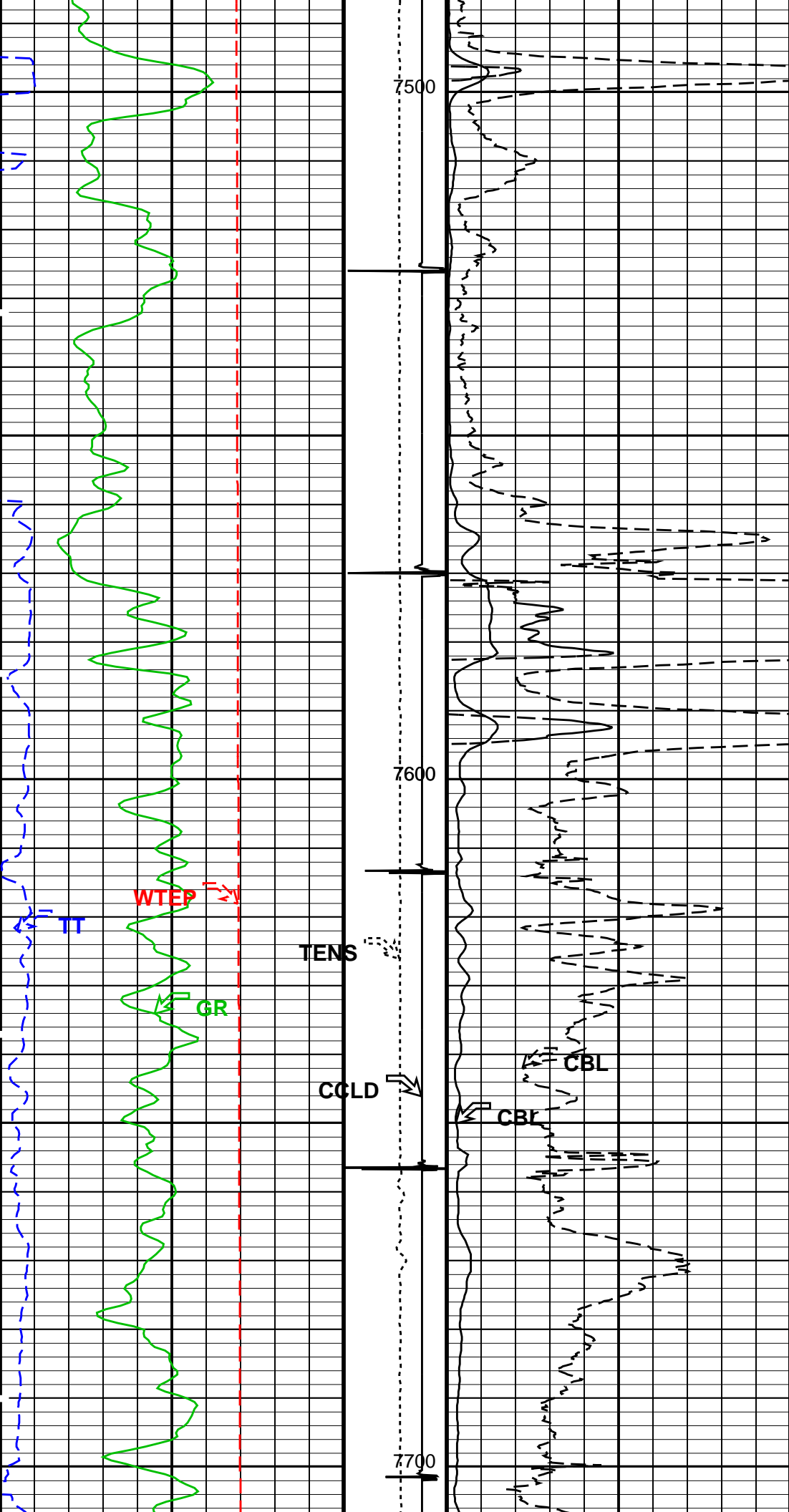


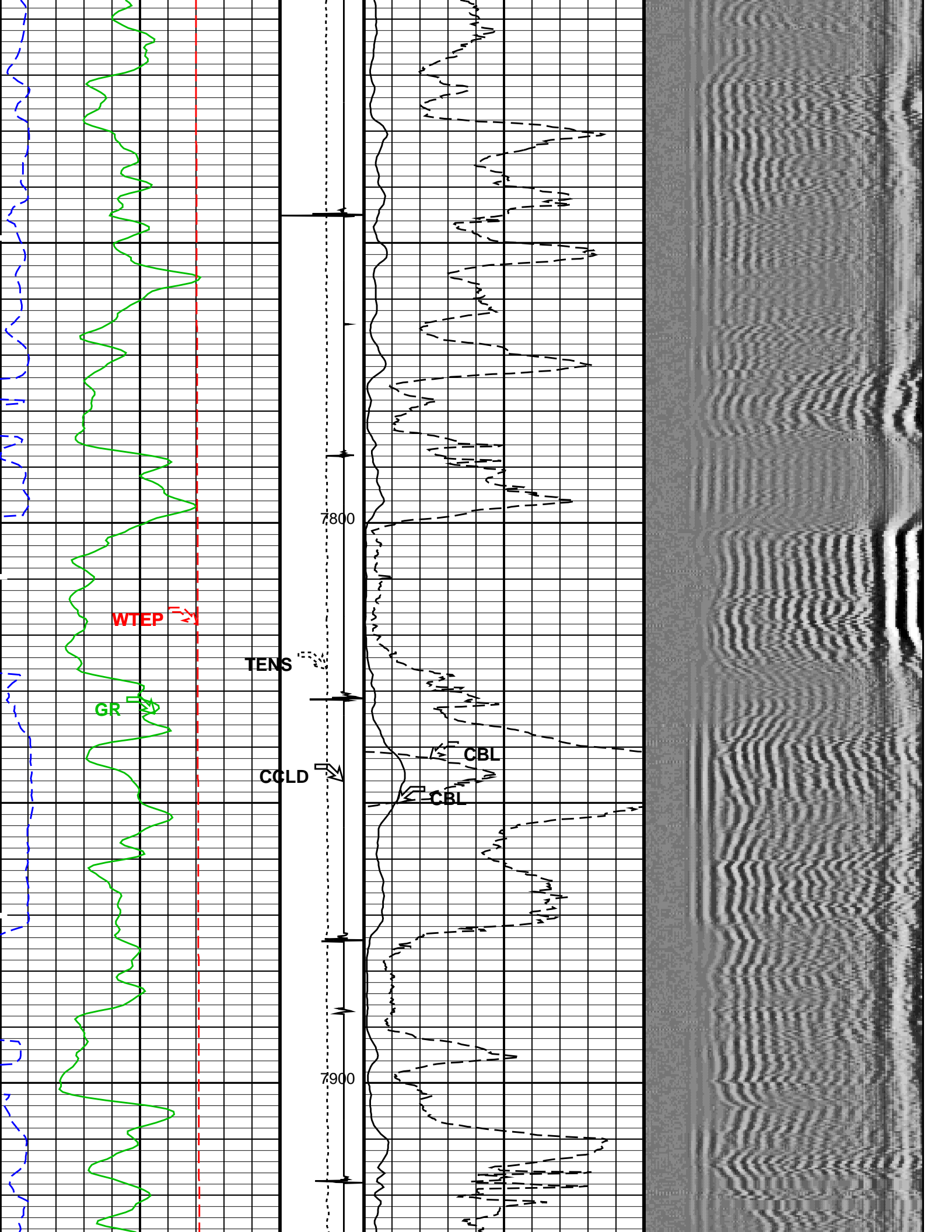




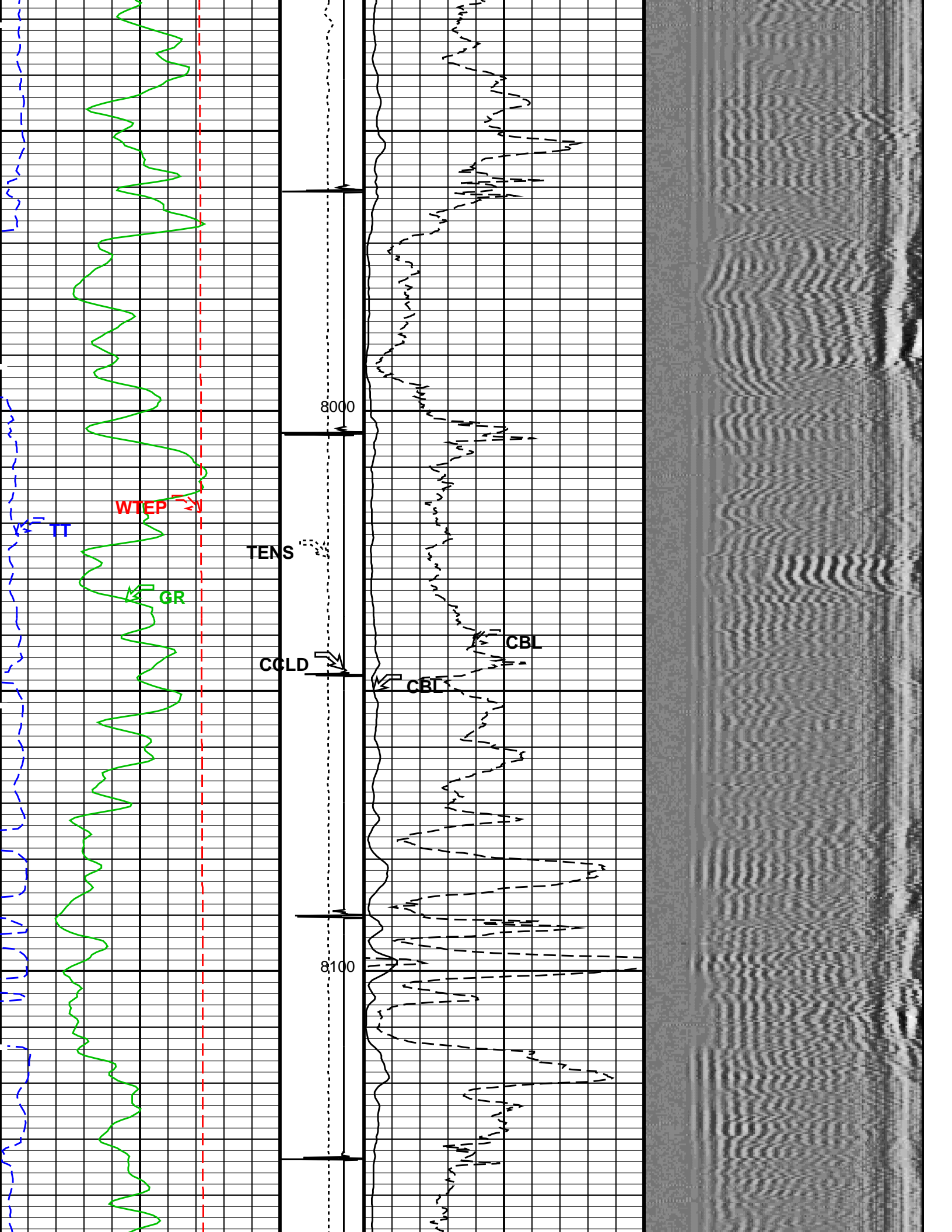




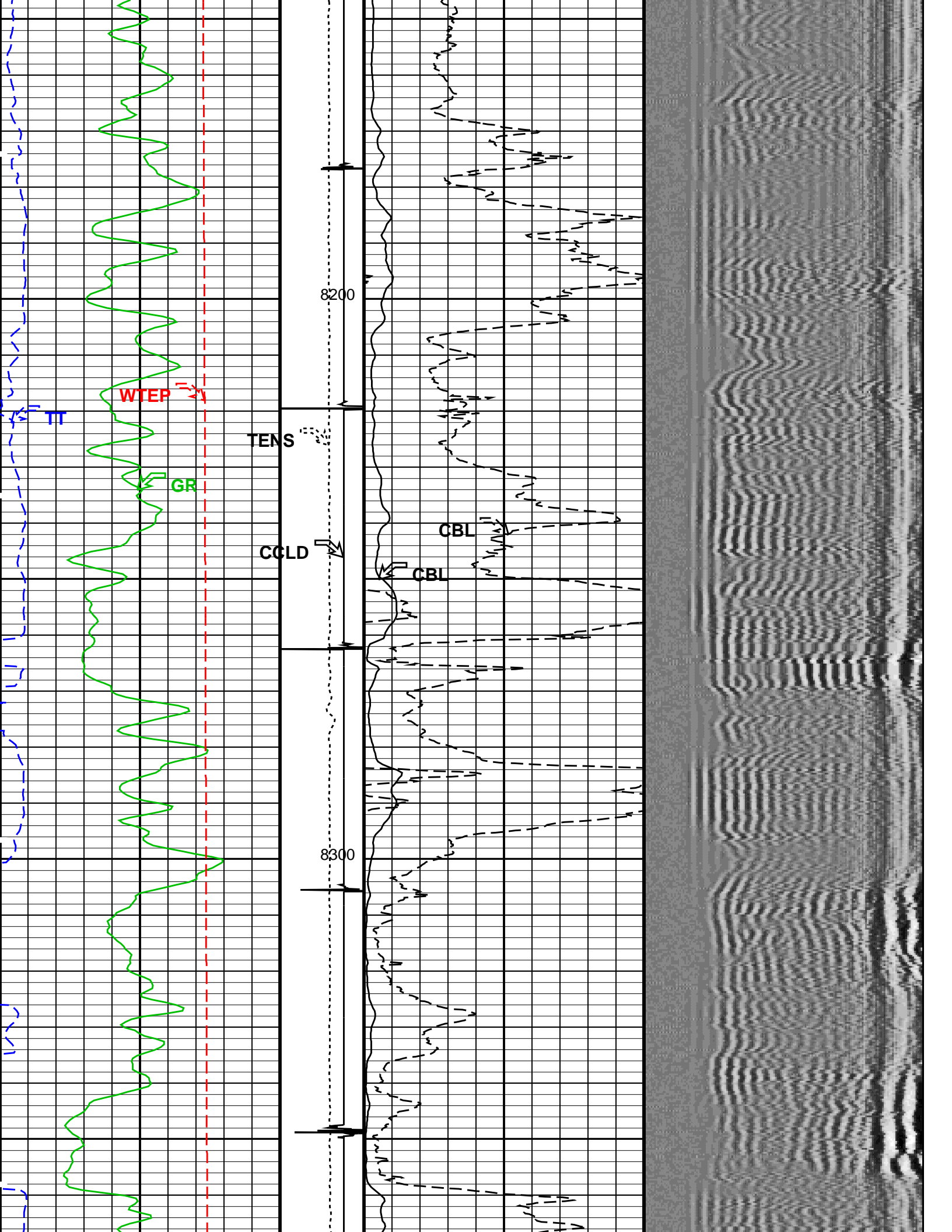


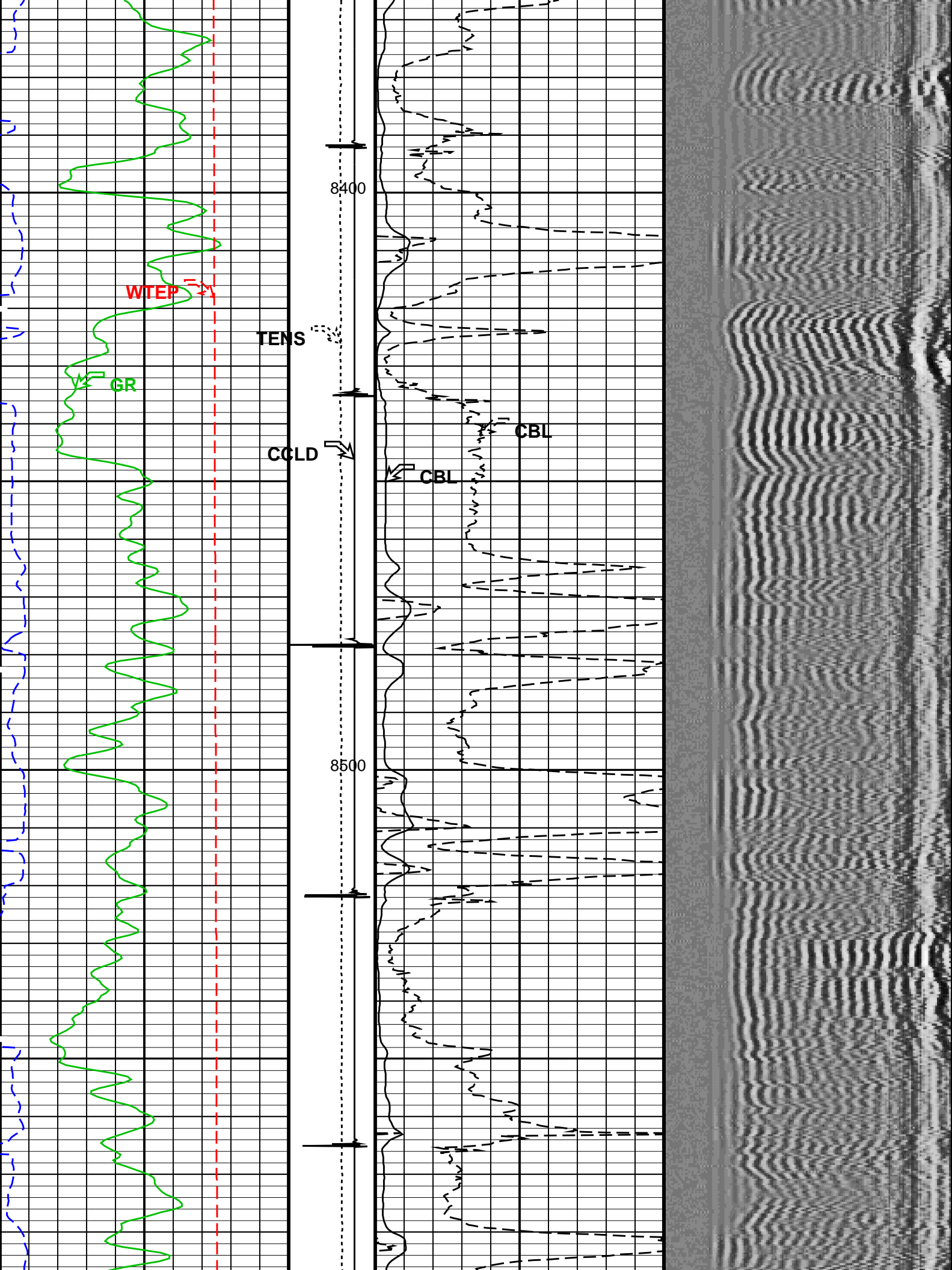


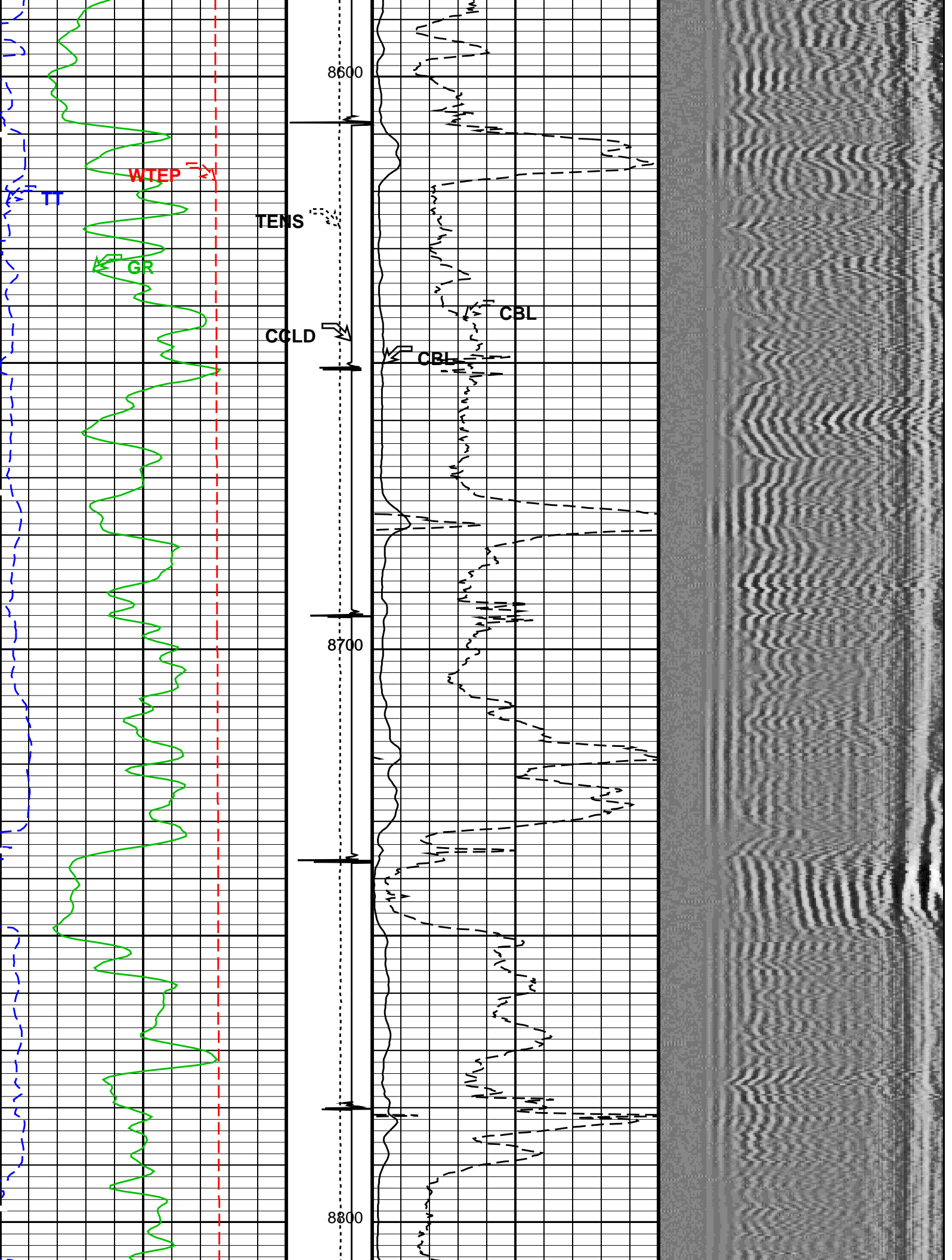




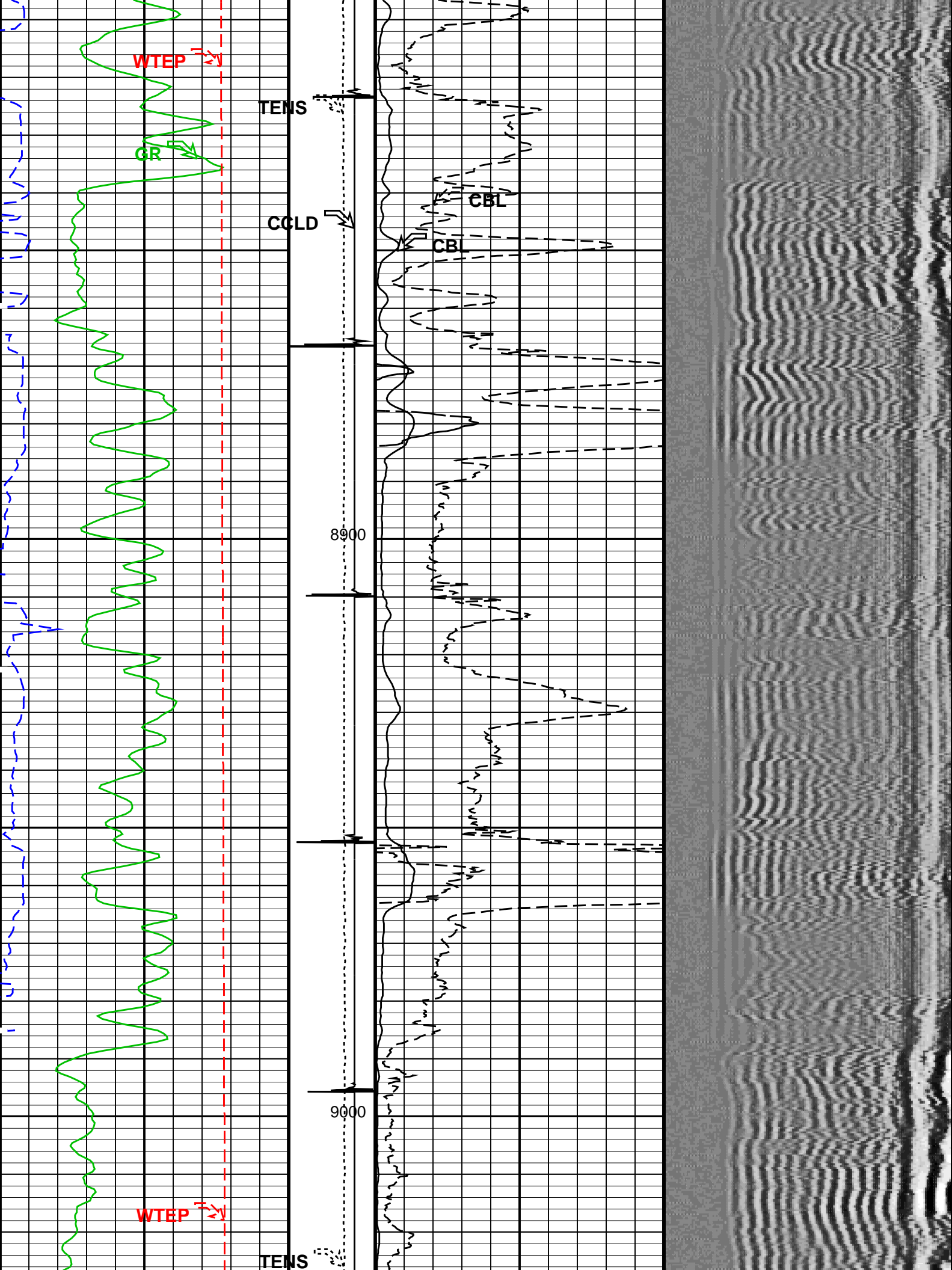




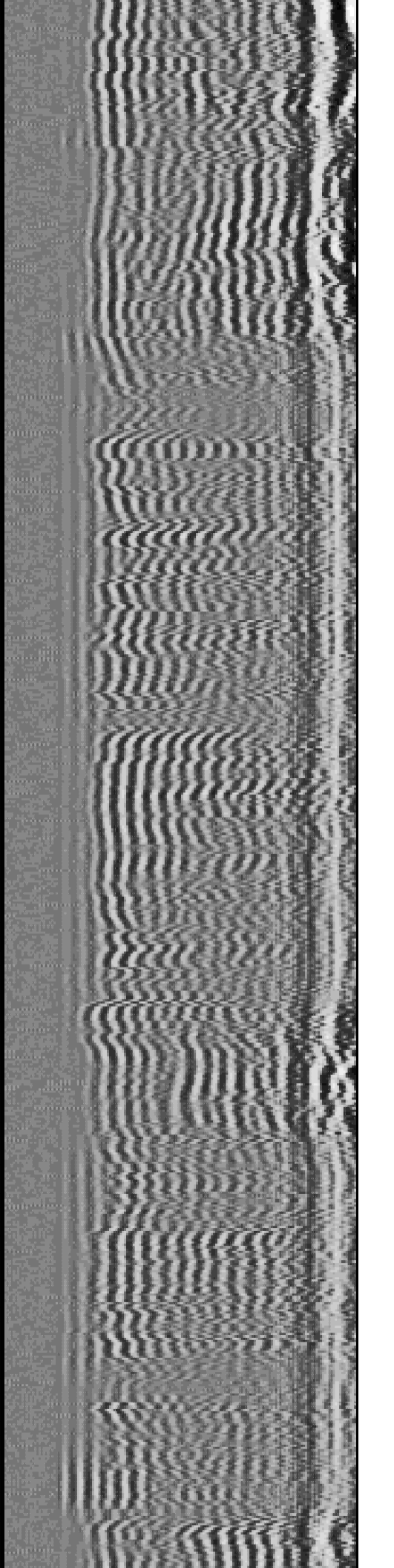
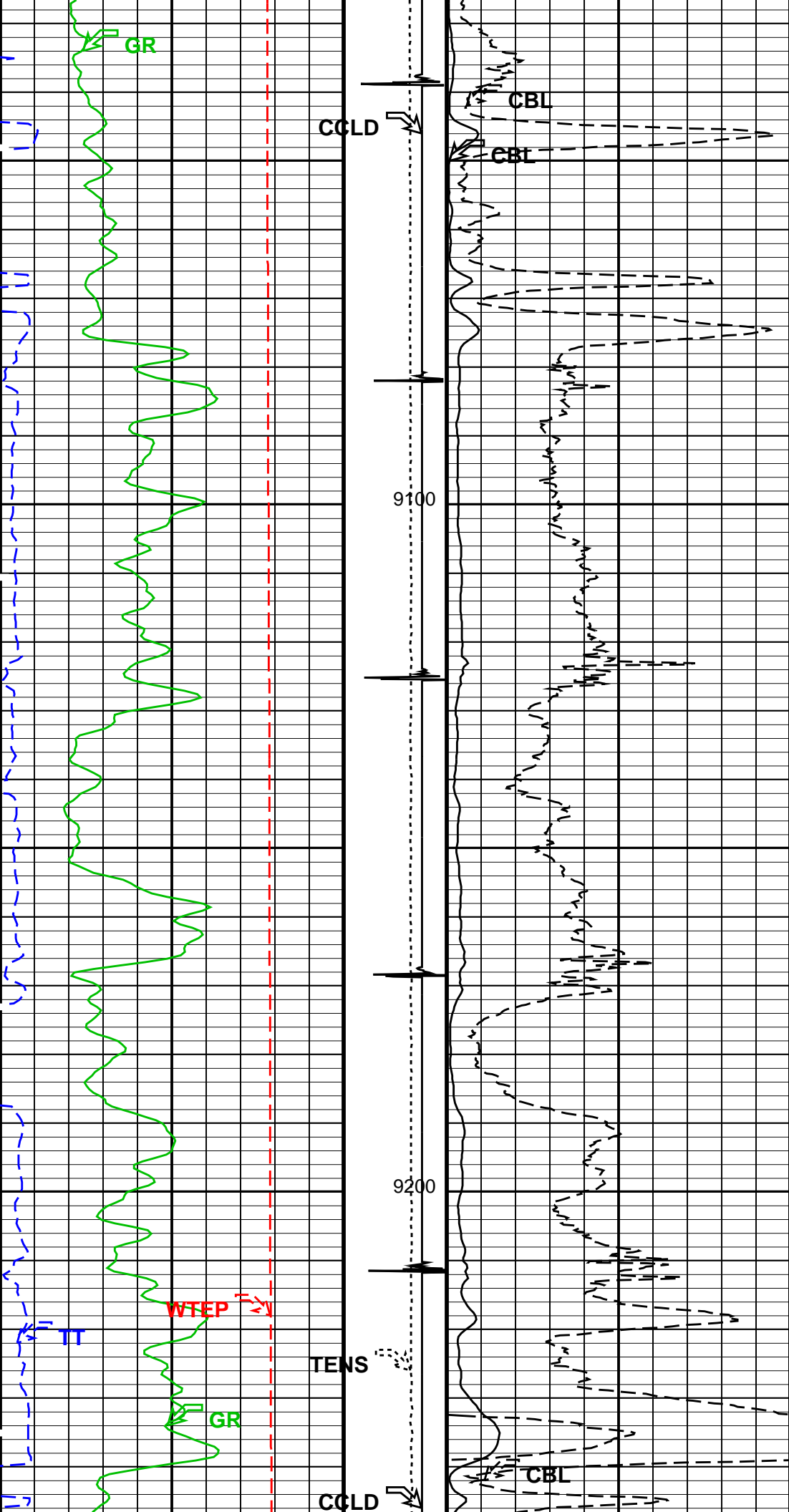


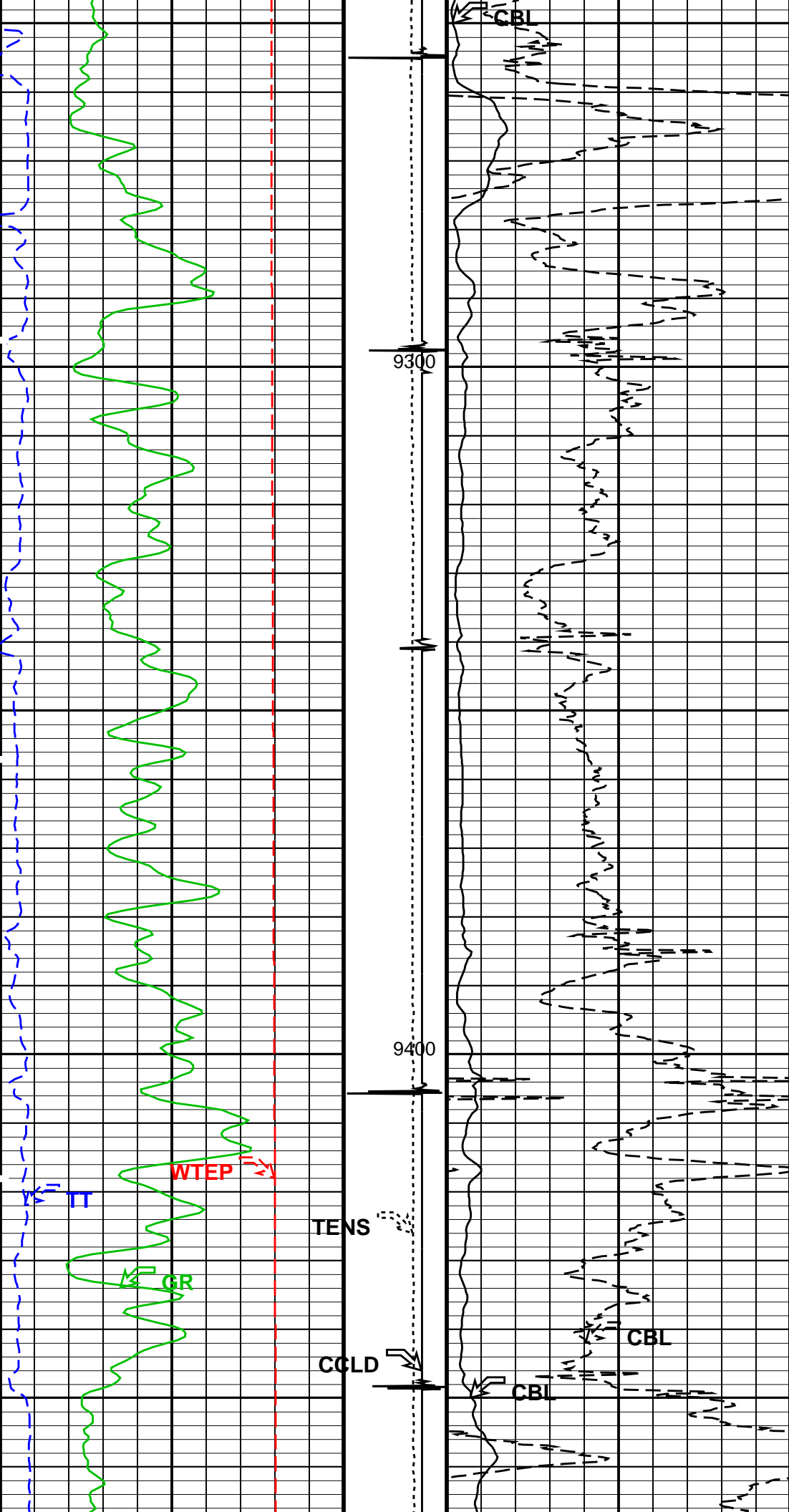


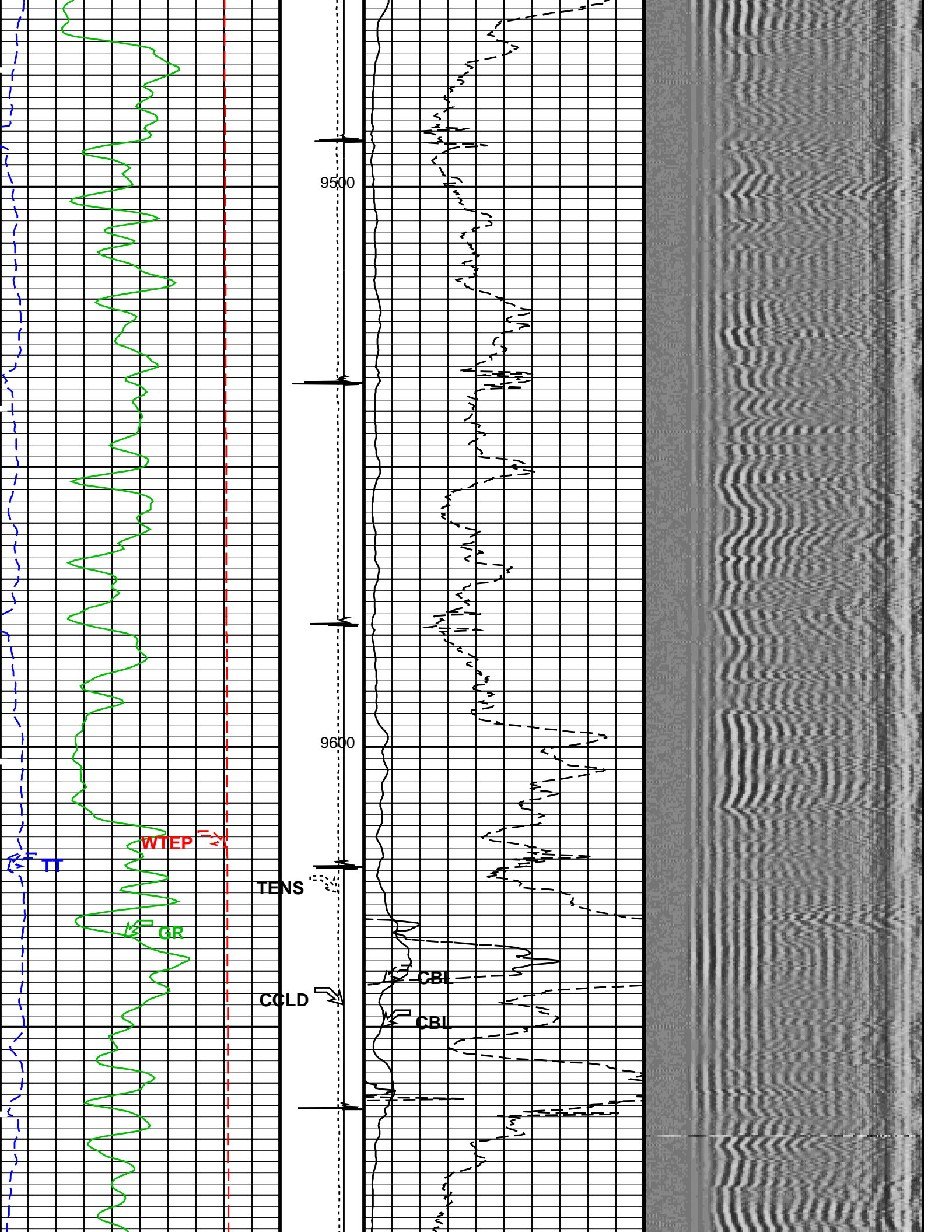




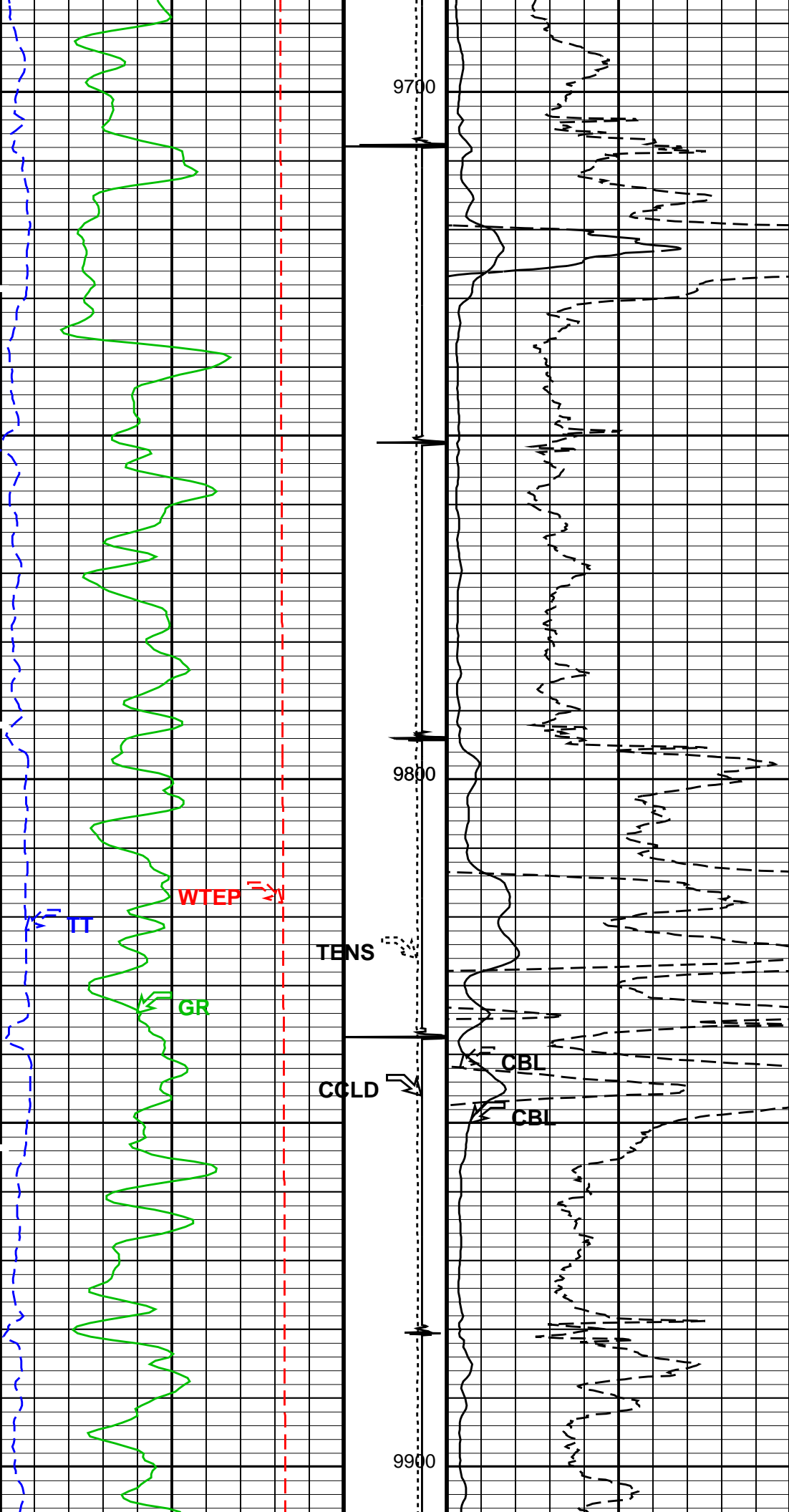




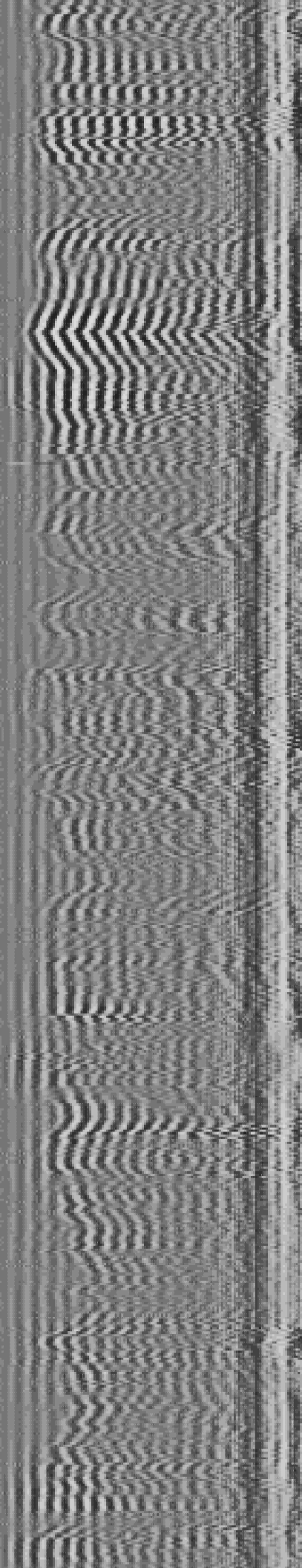
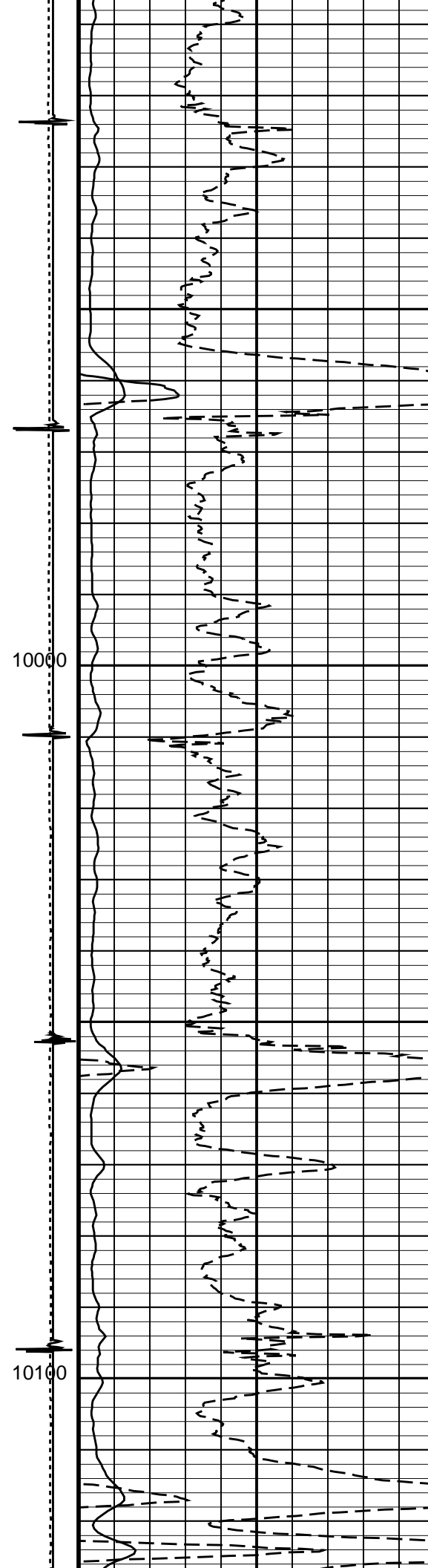
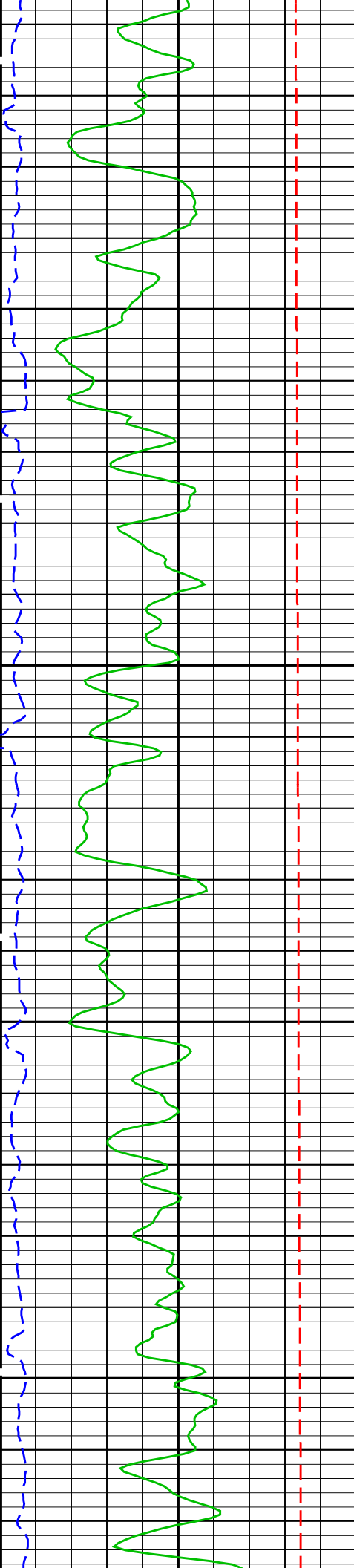


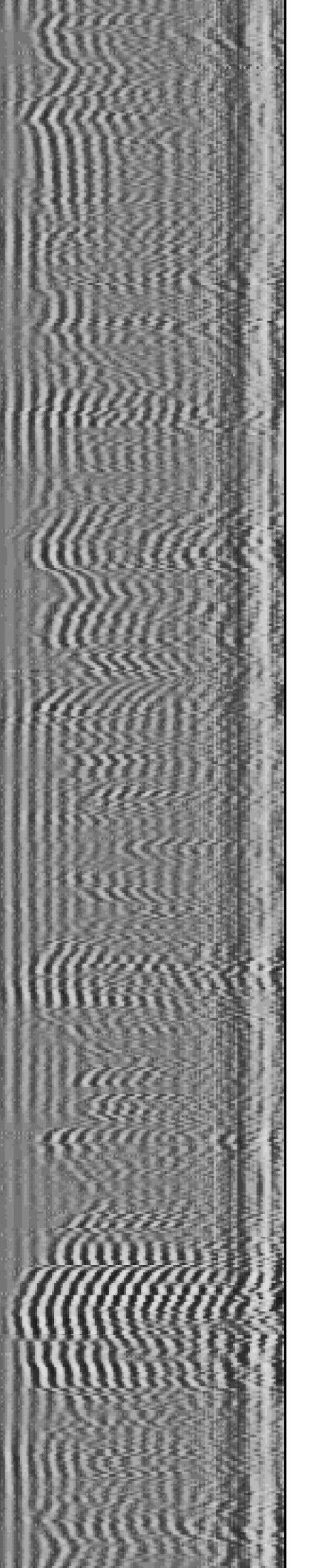
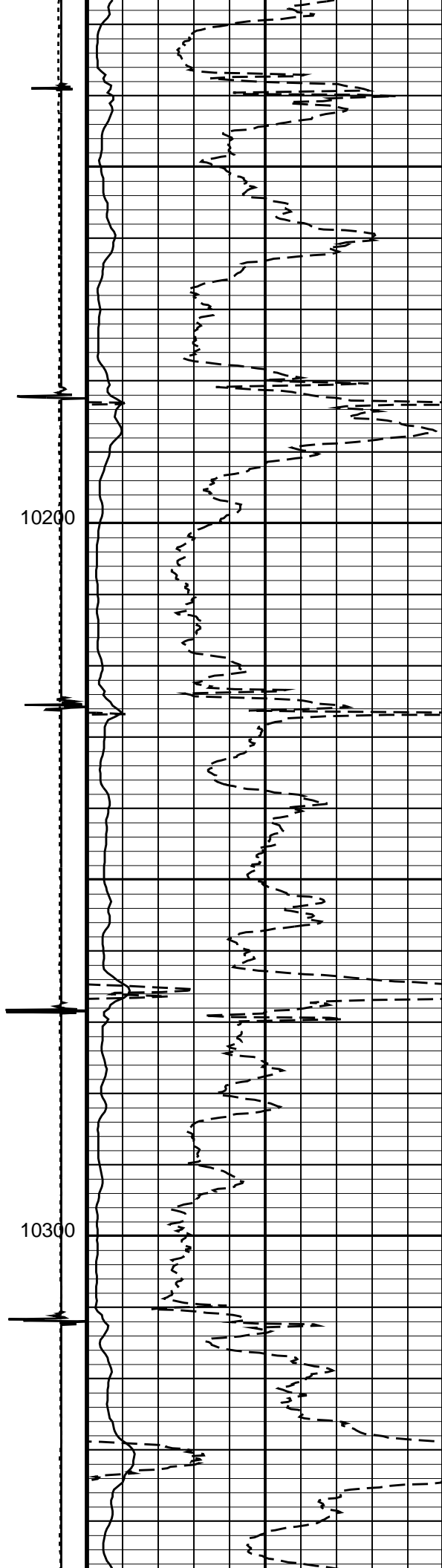
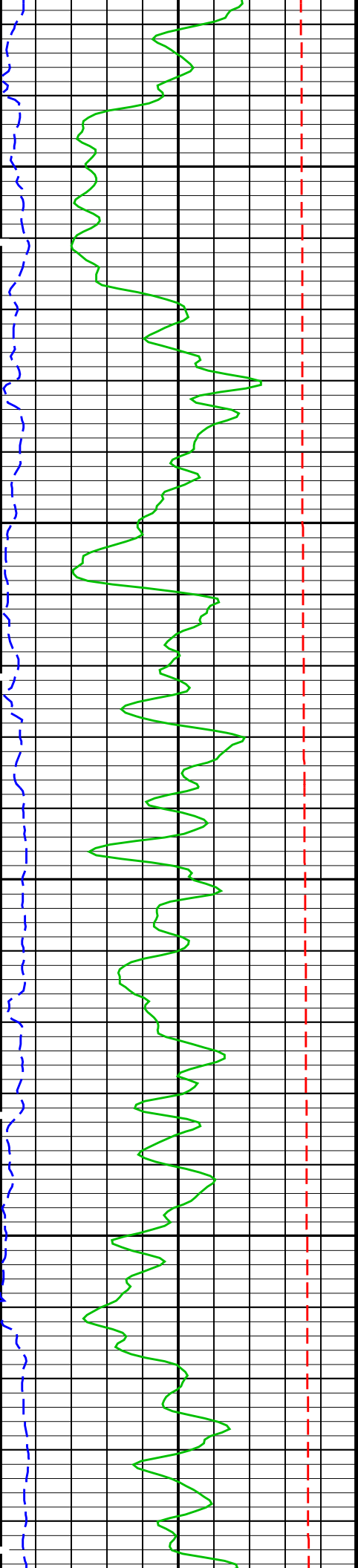


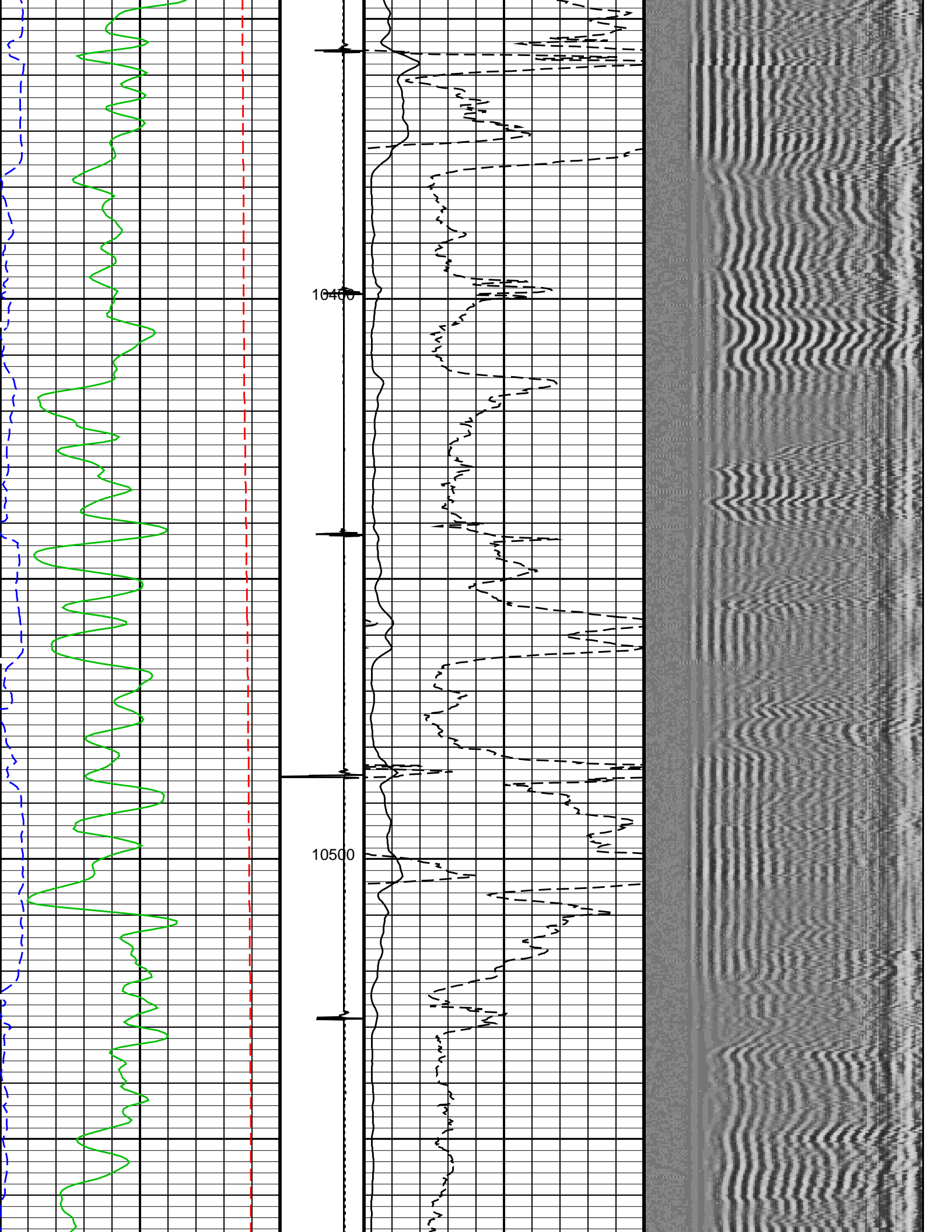


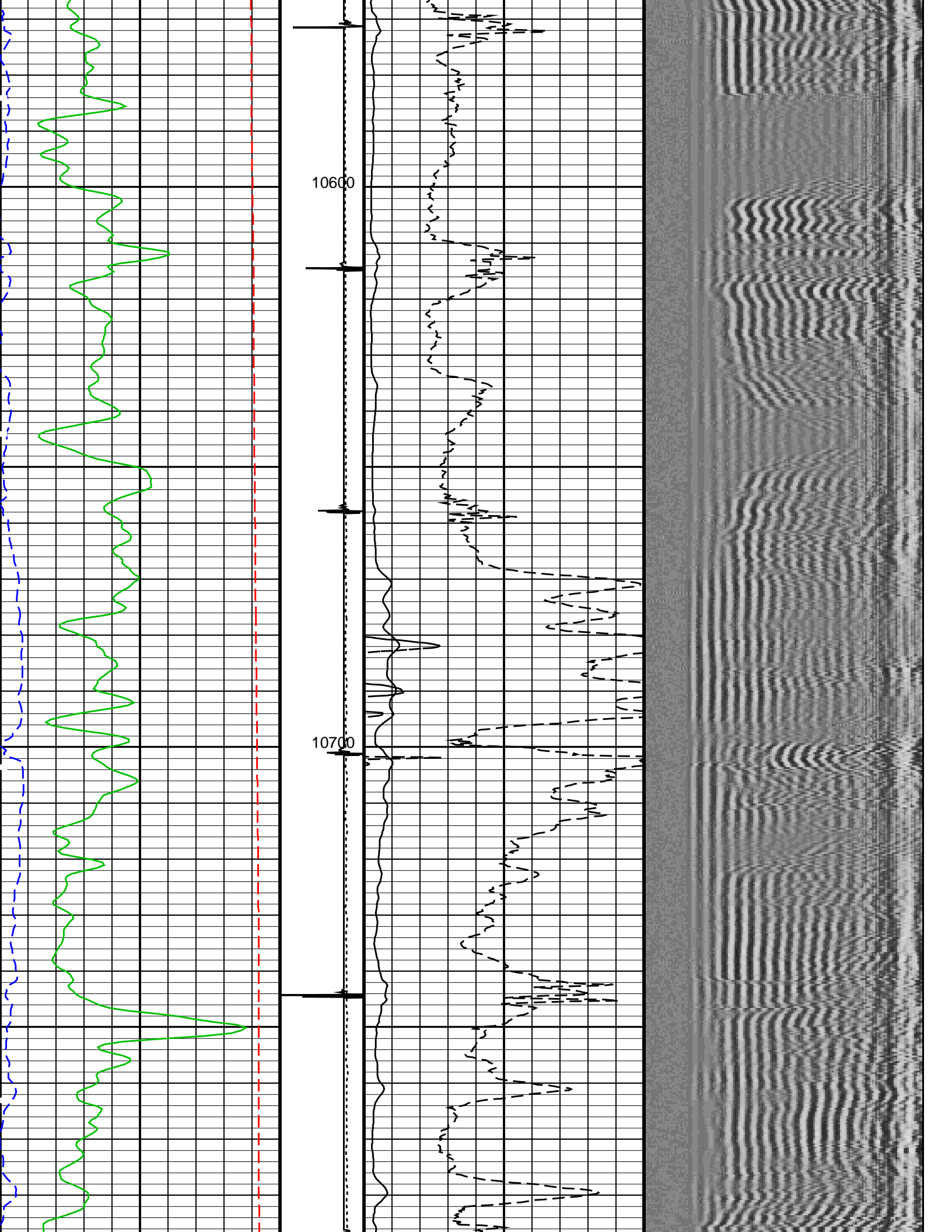




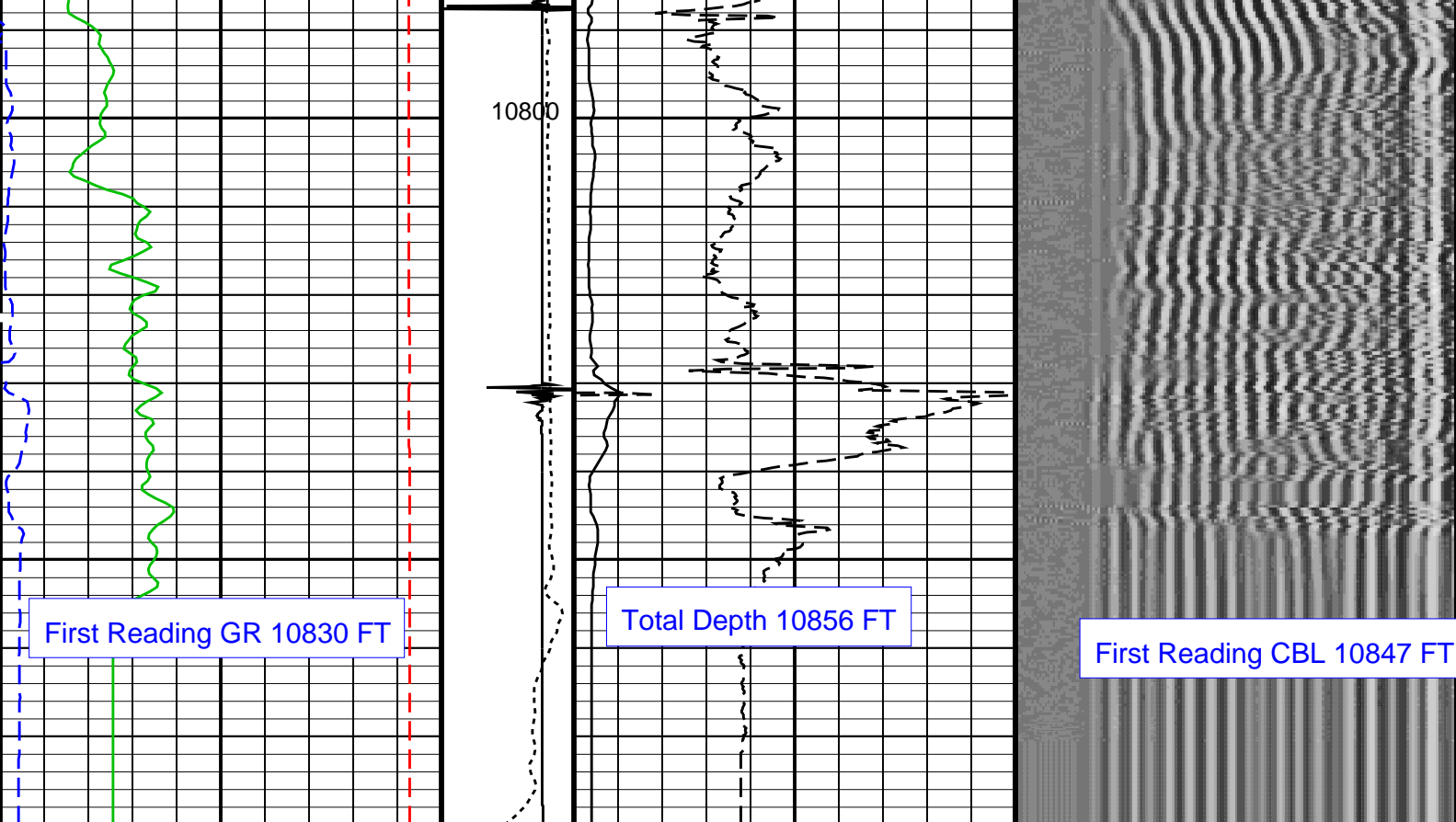












Gamma Ray (GR) (GAPI)	0	150	Tension (TENS) (LBF)	0	2000	CBL Amplitude (CBL) (MV)	0	100	Min	Amplitude	Max
Transit Time (TT) (US)	260	160	Discriminat ed CCL (CCLD)	3	(V) -1	CBL Amplitude (CBL) (MV)	0	10	200	VDL VariableDensity (VDL) (US)	1200
Well Temperature (WTEP) (DEGF)	0	300									

#### PIP SUMMARY

Time Mark Every 60 S

Format: CBL\_VDL Vertical Scale: 5" per 100'

Graphics File Created: 16-Aug-2012 03:47

### OP System Version: 19C0-187

SCMT-CB SRPC-5095-H2-2011-OP19 HBMS-B 19C0-187

#### <<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CB 8179		
Current Casing Size	4.50000 IN		
Casing Weight	11.6000 LB/F		
Expected CBL Amplitude in Free Pipe Section	80 MV	Minimum Sonic Amplitude	0.579149 MV (100% Cement) 1.55185 MV (80% Cement)
		MAP Minimum Sonic Amplitude	4.32284 MV (100% Cement) 8.10244 MV (80% Cement)
Master Calibration (Normalization)		Before Calibration (Adjustment)	
Date of Master Calibration	6-MAR-2012		
CBL Correction Factor	0.0704263	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.0993191	MAP Adjustment Factor (MPAF)	1.0

MAP 2 Correction Factor	0.0941329
MAP 3 Correction Factor	0.101552
MAP 4 Correction Factor	0.114415
MAP 5 Correction Factor	0.127992
MAP 6 Correction Factor	0.121190
MAP 7 Correction Factor	0.112867
MAP 8 Correction Factor	0.102913

## Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTc	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	6.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	10856	FT

## Input DLIS Files

DEFAULT SCMT\_HBMS\_050LUP FN:49 PRODUCER 16-Aug-2012 00:45 10874.0 FT 32.0 FT

## Output DLIS Files

DEFAULT SCMT\_HBMS\_053PUP FN:52 PRODUCER 16-Aug-2012 03:47

**Schlumberger**

**REPEAT PASS CBL – VDL**

MAXIS Field Log

Input DLIS Files

DEFAULT	SCMT_HBMS_048LUP	FN:47	PRODUCER	16-Aug-2012 00:02	3530.5 FT	2975.5 FT
DEFAULT	SCMT_HBMS_053PUP	FN:52	PRODUCER	16-Aug-2012 03:47	10880.0 FT	13.5 FT

Output DLIS Files

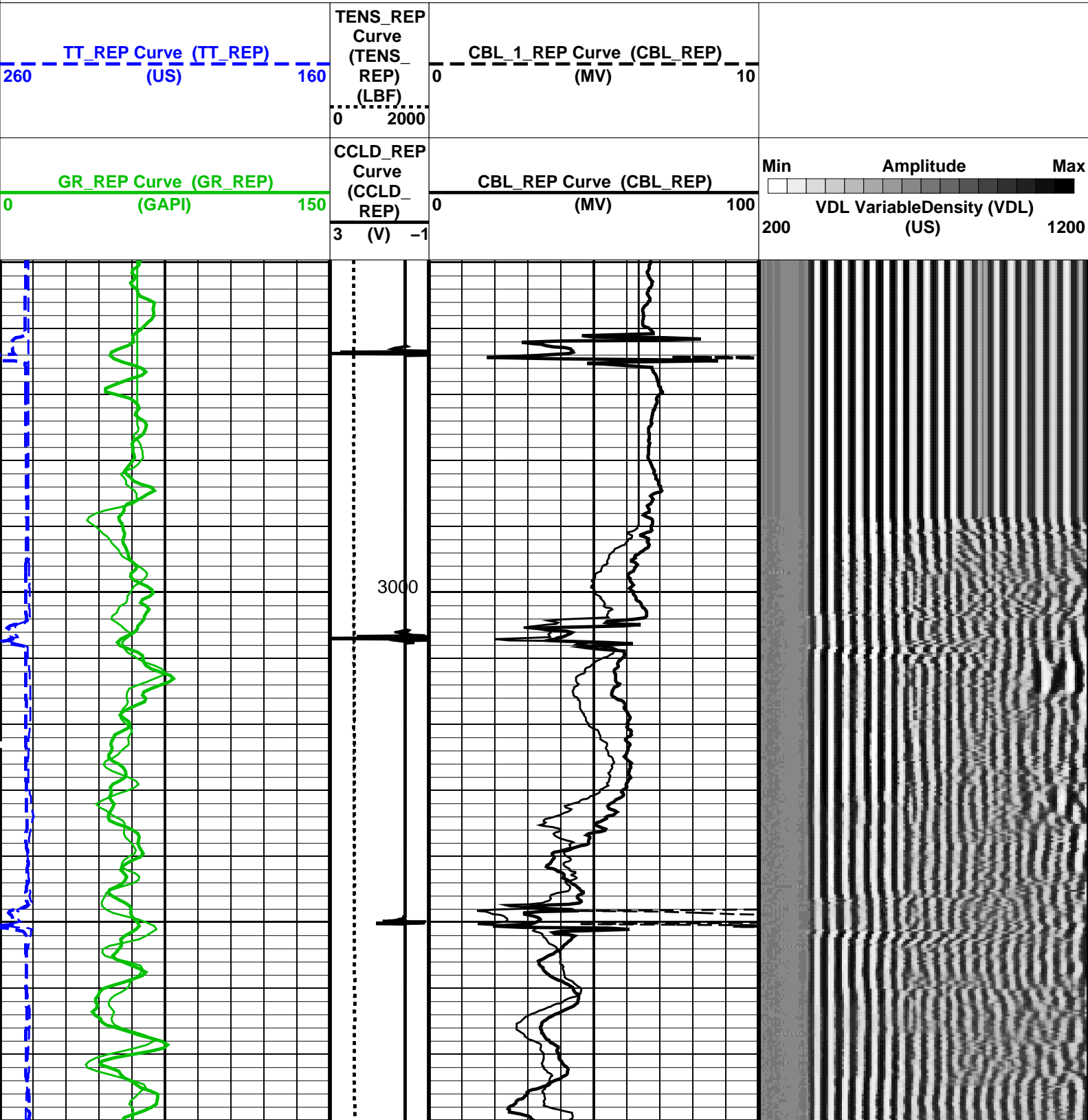
DEFAULT	SCMT_HBMS_057PUP	FN:56	PRODUCER	16-Aug-2012 03:56	3528.5 FT	2949.0 FT
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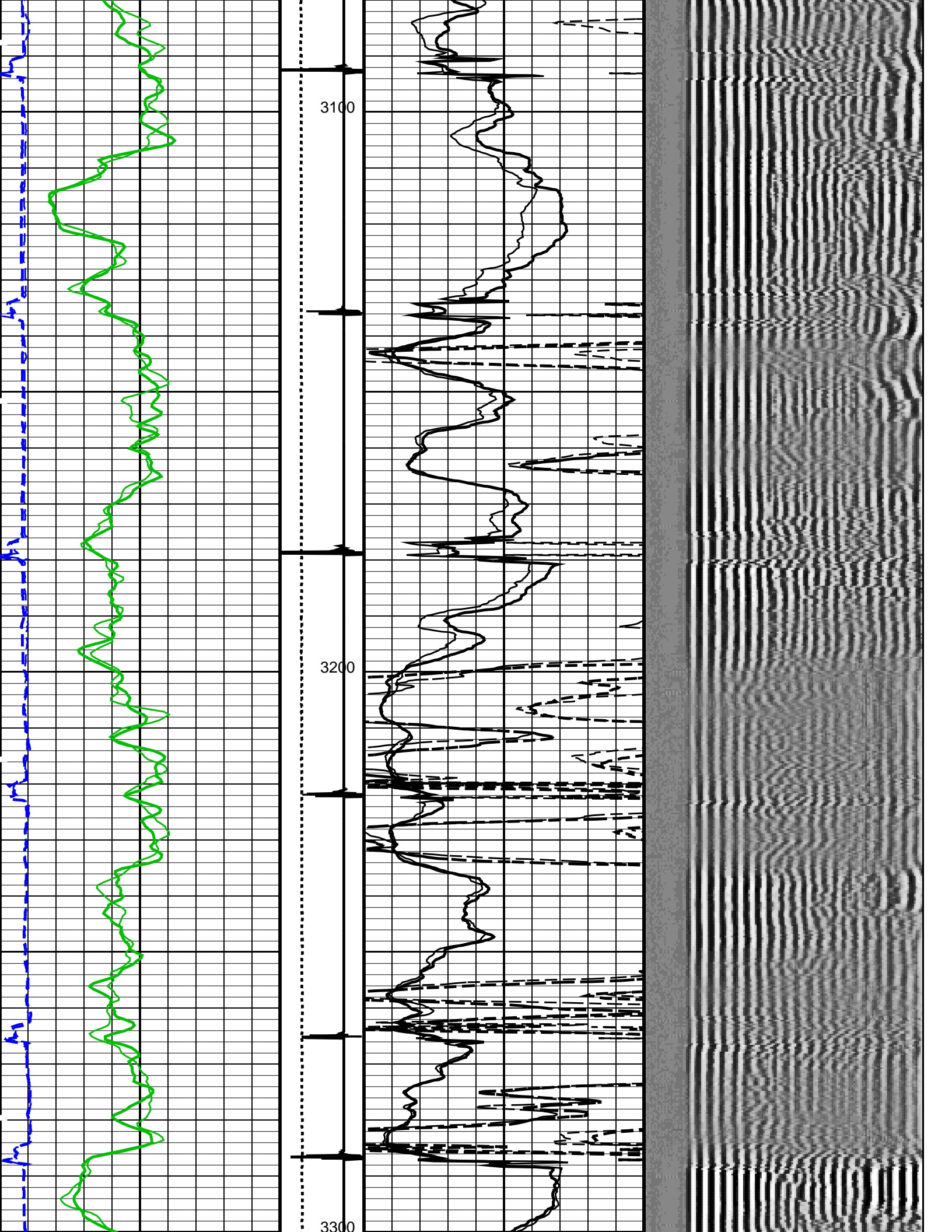
OP System Version: 19C0-187

SCMT-CB	SRPC-5095-H2-2011-OP19	HBMS-B	19C0-187
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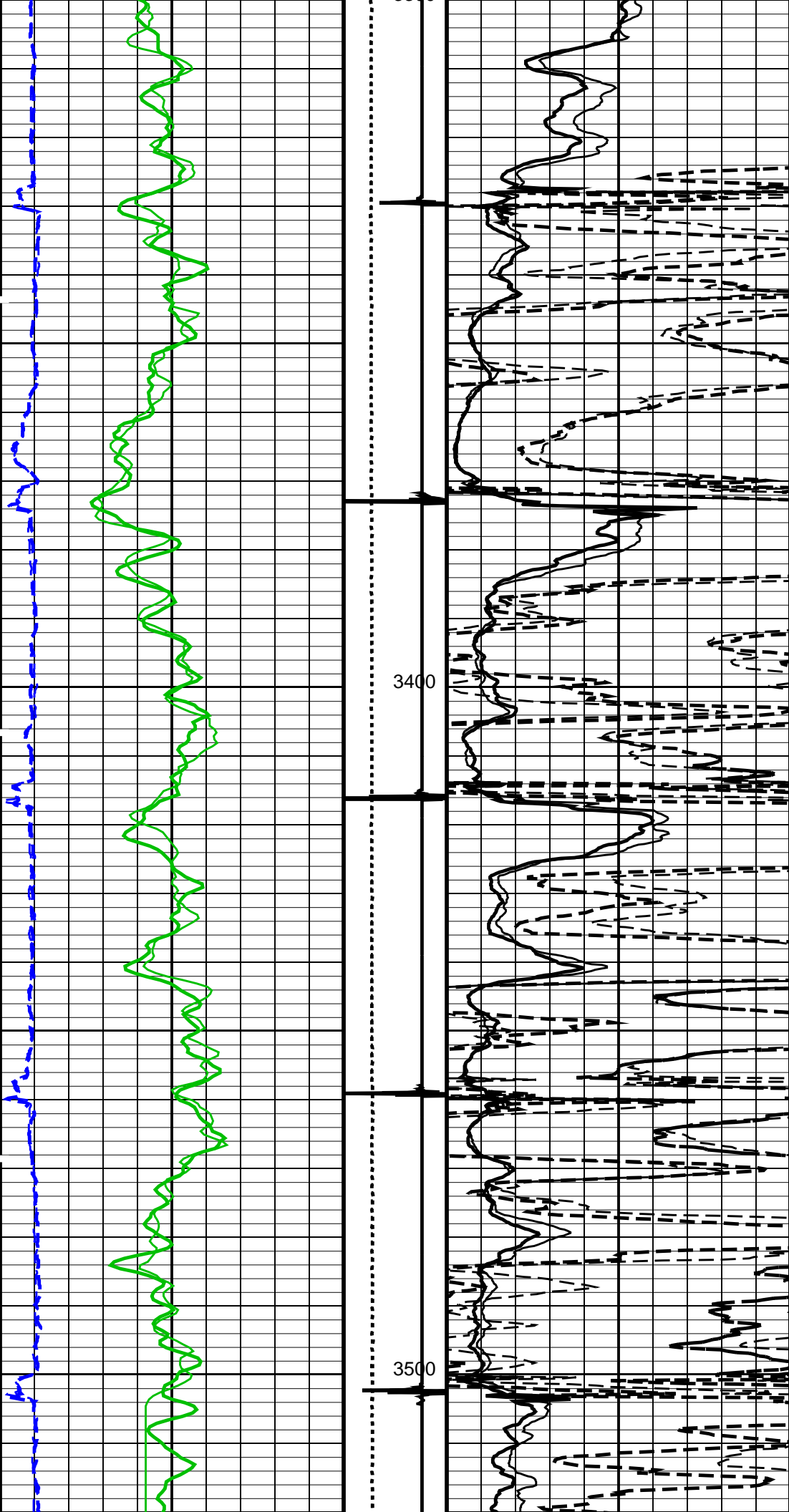
PIP SUMMARY

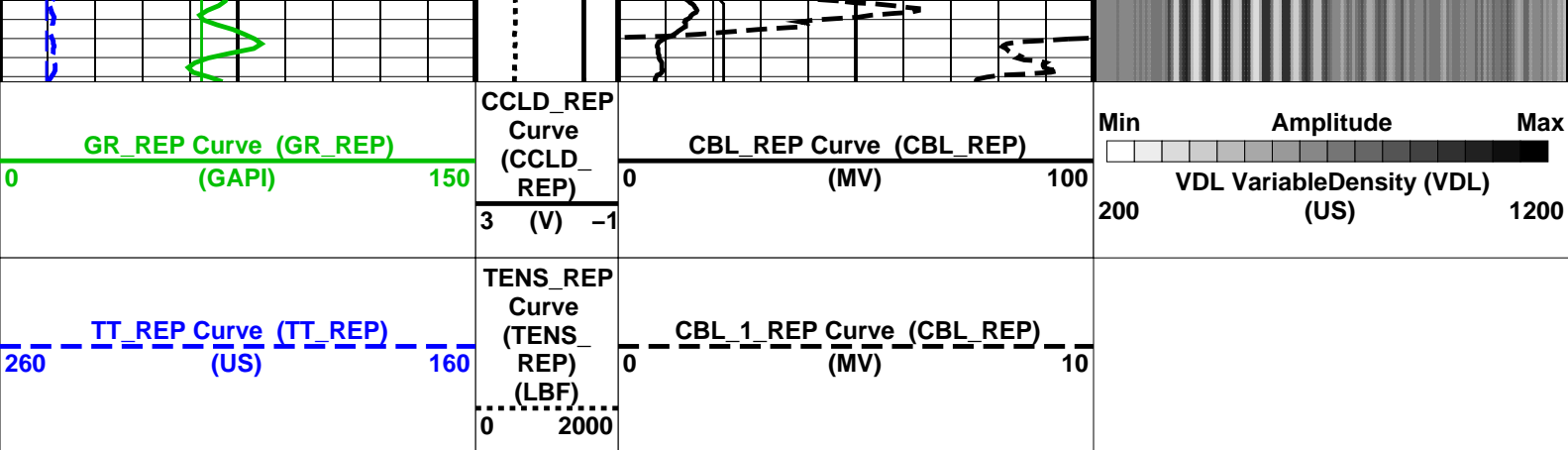
Time Mark Every 60 S











PIP SUMMARY

Time Mark Every 60 S

Format: CBL\_VDL\_REP Vertical Scale: 5" per 100' Graphics File Created: 16-Aug-2012 03:56

## OP System Version: 19C0-187

SCMT-CB SRPC-5095-H2-2011-OP19 HBMS-B 19C0-187

<<<SCMT Cement Evaluation Information Summary>>>			
Sonde Serial Number	SCMS-CB 8179		
Current Casing Size	4.50000 IN		
Casing Weight	11.6000 LB/F		
Expected CBL Amplitude in Free Pipe Section	80 MV	Minimum Sonic Amplitude	0.579149 MV (100% Cement)
			1.55185 MV (80% Cement)
		MAP Minimum Sonic Amplitude	4.32284 MV (100% Cement)
			8.10244 MV (80% Cement)
Master Calibration (Normalization)		Before Calibration (Adjustment)	
Date of Master Calibration	6-MAR-2012		
CBL Correction Factor	0.0704263	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.0993191	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.0941329		
MAP 3 Correction Factor	0.101552		
MAP 4 Correction Factor	0.114415		
MAP 5 Correction Factor	0.127992		
MAP 6 Correction Factor	0.121190		
MAP 7 Correction Factor	0.112867		
MAP 8 Correction Factor	0.102913		

## Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTE	Delta-T Fluid	189	US/F

DN	Delta-T Fluid	185	US
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	-2.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	10856	FT

Input DLIS Files						
DEFAULT	SCMT_HBMS_048LUP	FN:47	PRODUCER	16-Aug-2012 00:02	3530.5 FT	2975.5 FT
DEFAULT	SCMT_HBMS_053PUP	FN:52	PRODUCER	16-Aug-2012 03:47	10880.0 FT	13.5 FT
Output DLIS Files						
DEFAULT	SCMT_HBMS_057PUP	FN:56	PRODUCER	16-Aug-2012 03:56		

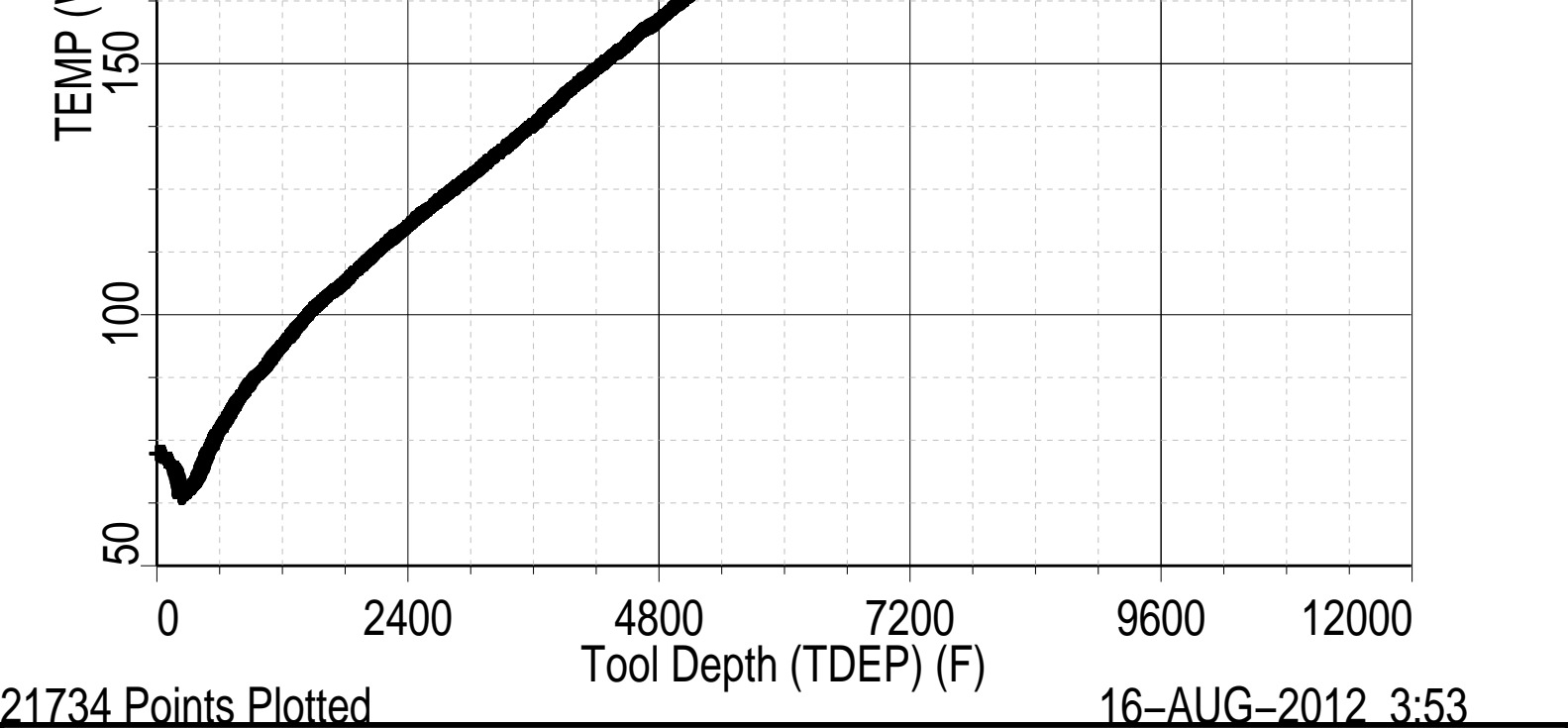


# TEMPERATURE PLOT

MAXIS Field Log

Index: 10880.0 – 13.5 FT





Schlumberger

PBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC.  
Field: NORTH PARACHUTE  
Well: NP EF09D-27 (P27 595)  
Run date: 15-Aug-2015

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



Client: ENCANA OIL & GAS (USA) INC.

Field: NORTH PARACHUTE

Well: NP EF09D-27 (P27 595)

Run date: 15-Aug-2015

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.2884 S/N:

2884

290706

16

B134

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	-.111322977181E+04	+.870150832462E+03	-.279503665762E+03
	Tt**3	Tt**4	Tt**5
Tt**0	+.449965652060E+02	-.264920434334E+01	0.0

Client: ENCANA OIL & GAS (USA) INC.

Field: NORTH PARACHUTE

Well: NP EF09D-27 (P27 595)

Run date: 15-Aug-2015

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.2884 S/N:

2884

290706

66

CA7A

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+.746225778248E+04	+.221418944849E-01	-.210426289152E-06
Fc**1	-.104881478055E+01	-.124860716120E-04	-.949662972749E-10
Fc**2	+.872904863754E-06	+.426833452654E-10	+.759423319181E-15
Fc**3	+.239319347612E-11	+.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	+.145644303959E-15	+.160803895109E-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

:

2884

290706

66

F21E

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+.113897507996E+03	-.324965333678E-03	+.697134219555E-08
Fb**1	-.601014483015E-02	+.175847256148E-07	+.180458009797E-12
Fb**2	-.317240807344E-07	+.374112953741E-12	+.133653042149E-17
Fb**3	-.236568542854E-12	+.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	+.881675188724E-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**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



SCMT MASTER CALIBRATION

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
-------------	---------	--------	--------	-------	--------	-------	-------

Master: 6-Mar-2012 15:06								
MAP 1 Amplitude Plus	1075	1208	--	--	--	--	--	MV
MAP 2 Amplitude Plus	1075	1275	--	--	--	--	--	MV
MAP 3 Amplitude Plus	1075	1182	--	--	--	--	--	MV
MAP 4 Amplitude Plus	1075	1049	--	--	--	--	--	MV
MAP 5 Amplitude Plus	1075	937.6	--	--	--	--	--	MV
MAP 6 Amplitude Plus	1075	990.2	--	--	--	--	--	MV
MAP 7 Amplitude Plus	1075	1063	--	--	--	--	--	MV
MAP 8 Amplitude Plus	1075	1166	--	--	--	--	--	MV
CBL Amplitude Plus	1350	1363	--	--	--	--	--	MV



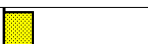
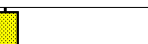
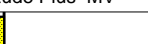
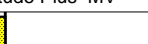
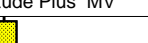
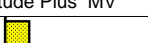
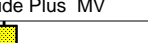
**Slim Cement Mapping Tool, 1-11/16 OD / Equipment Identification**

**Primary Equipment:**

Slim Cement Mapping Xmitter Electronics	SCMX – CA	
Slim Cement Mapping Sonde	SCMS – CB	8179
Slim Cement Mapping Cartridge	SCMC – CA	8172

**Auxiliary Equipment:**

Slim Electronics Cartridge Housing	SECH – CA
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Slim Cement Mapping Tool, 1–11/16 OD Master Calibration							
SCMT CBL and MAP Amplitude Normalization in SFT–155/–255							
Phase	MAP 1 Amplitude Plus MV		Value	Phase	MAP 2 Amplitude Plus MV		Value
Master			1208	Master			1275
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	MAP 3 Amplitude Plus MV		Value	Phase	MAP 4 Amplitude Plus MV		Value
Master			1182	Master			1049
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	MAP 5 Amplitude Plus MV		Value	Phase	MAP 6 Amplitude Plus MV		Value
Master			937.6	Master			990.2
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	MAP 7 Amplitude Plus MV		Value	Phase	MAP 8 Amplitude Plus MV		Value
Master			1063	Master			1166
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	CBL Amplitude Plus MV		Value				
Master			1363				
	1000 (Minimum)	1350 (Nominal)	1700 (Maximum)				
Master: 6–Mar–2012 15:06							

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

**Schlumberger**

**Well: NP EF11D-27 (P27 595)**

**Field: NORTH PARACHUTE**

**County: GARFIELD**

**State: COLORADO**

**SLIM CEMENT MAPPING TOOL  
CBL-VDL**



