

Company: ENCANA OIL & GAS (USA) INC

Well: ROSE 22-1C (K22W)

Field: MAMM CREEK

County: GARFIELD State: COLORADO

SLIM CEMENT MAPPING LOG  
CBL-VDL  
GAMMA RAY-CCL

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 2319 FSL & 2226 FWL

Well: ROSE 22-1C (K22W)

Company: ENCANA OIL & GAS (USA) INC

LOCATION			
SHL: 2319 FSL & 2226 FWL	Elev.: K.B.	6973.00 ft	
BHL: 1165 FNL & 657 FEL	G.L.	6951.00 ft	
	D.F.	6972.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 6951.00 ft	
Log Measured From:	KELLY BUSHING	22.00 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section	Township	Range
05-045-22118-0C	22	7S	93W

Logging Date	4-Jan-2014					
Run Number	1					
Depth Driller	9668 ft					
Schlumberger Depth	9590 ft					
Bottom Log Interval	9581 ft					
Top Log Interval	100 ft					
Casing Fluid Type	FRESH WATER					
Salinity						
Density	8.4 lbm/gal					
Fluid Level	100 ft					
BIT/CASING/TUBING STRING						
Bit Size	7.875 in					
From	7295 ft					
To	9668 ft					
Casing/Tubing Size	4.500 in					
Weight	11.6 lbm/ft					
Grade	S-80					
From	22 ft					
To	9650 ft					
Maximum Recorded Temperatures	244 degF					
Logger On Bottom	4-Jan-2014	Time	22:15			
Unit Number	Location	391 GRAND JUNCTION				
Recorded By	KIRSTIE BUNTING					
Witnessed By	UNWITNESSED					

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						
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				Location		
Recorded By						
Witnessed By						

## DEPTH SUMMARY LISTING

Date Created: 14-AUG-2013 11:54:57

## Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-JB	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	6349	Serial Number:	3421	Serial Number:	112136
Calibration Date:	7-31-2013	Calibration Date:	14-AUG-201	Length:	19000 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:	-5	Calibration RMS:	3		
Wheel Correction 2:	-4	Calibration Peak Error:	8		

## 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 PROCEDURES USED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SPWT DRUM COUNTER USED AS SECONDARY DEPTH REFERENCE
- 4.
- 5.
- 6.

## DISCLAIMER

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OTHER SERVICES1	OTHER SERVICES2
OS1: RESERVOIR SATURATION	OS1:
OS2: LOG	OS2:
OS3: SIGMA MODE	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE CORRELATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
ENTRANCE: 21:30	
TIME ON BOTTOM: 22:15	
EXIT: 01:00	

MAXIMUM RECORDED TEMPERATURE: 244 DEGF	
MAXIMUM RECORDED PRESSURE: 3800 PSIA	
SHORT JOINTS: 7315 FT & 8345 FT	
MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE	
EXPECTED CBL AMPLITUDE IN FREE PIPE IS 80MV	
CREW: KBUNTING, KJOHNS, JMANN, SKRAMER	
THANK YOU FOR CHOOSING E&P WIRELINE. A SCHLUMBERGER COMPANY	

RUN 1 SERVICE ORDER #: CGF9-00195 PROGRAM VERSION: 19C0-187 FLUID LEVEL: 100 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			56.2
MH-22			
Detail MT			
AH-38	TelStatus		54.6
HBMS-B	CTEM		54.3
PSC-A			
HUDH-A			
HSTC-A			
HBMC-A			
GR	GR		49.4
CCL			
HBMC			
HTPS-A	CCL		47.0
HCQG_E_Mano	HSTC Aux.		
RTD_Thermometer	HBMC Aux.		45.5
	CQG Manom		
	Well_Temp		44.1
RST-C			43.2
RSCH-A 303			
RSC-E			
RSS-A 308			
RSXH-A 425			
RSX-E			
	RSC-A Far		34.1
	RSC-A PNG		
	RSC-A Nea		
	RSX-A PNG		33.6

SCMT-CB  
SCMC-CA 8120  
SECH-CA  
CMIR-AG  
SCMS-CB 8303  
SCMX-CA

20.2

DT 11.1  
CBL5 DTSC 9.6  
CBL3 8.6  
MAP 8.1  
AUX 7.1

AH-BNS

HV  
Tension SCMT 0.0  
TOOL ZERO

0.2

MAXIMUM STRING DIAMETER 2.07 IN  
MEASUREMENTS RELATIVE TO TOOL ZERO  
ALL LENGTHS IN FEET

Schlumberger

MAIN PASS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: ROSE 22-1C (K22W)

Input DLIS Files

DEFAULT SCMT\_RST\_HBMS\_030LUP FN:29 PRODUCER 04-Jan-2014 22:17 9597.0 FT 3.0 FT

Output DLIS Files

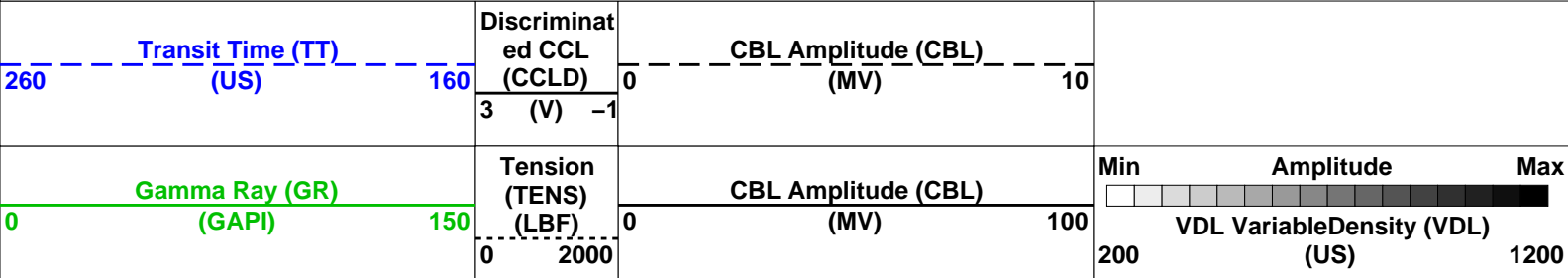
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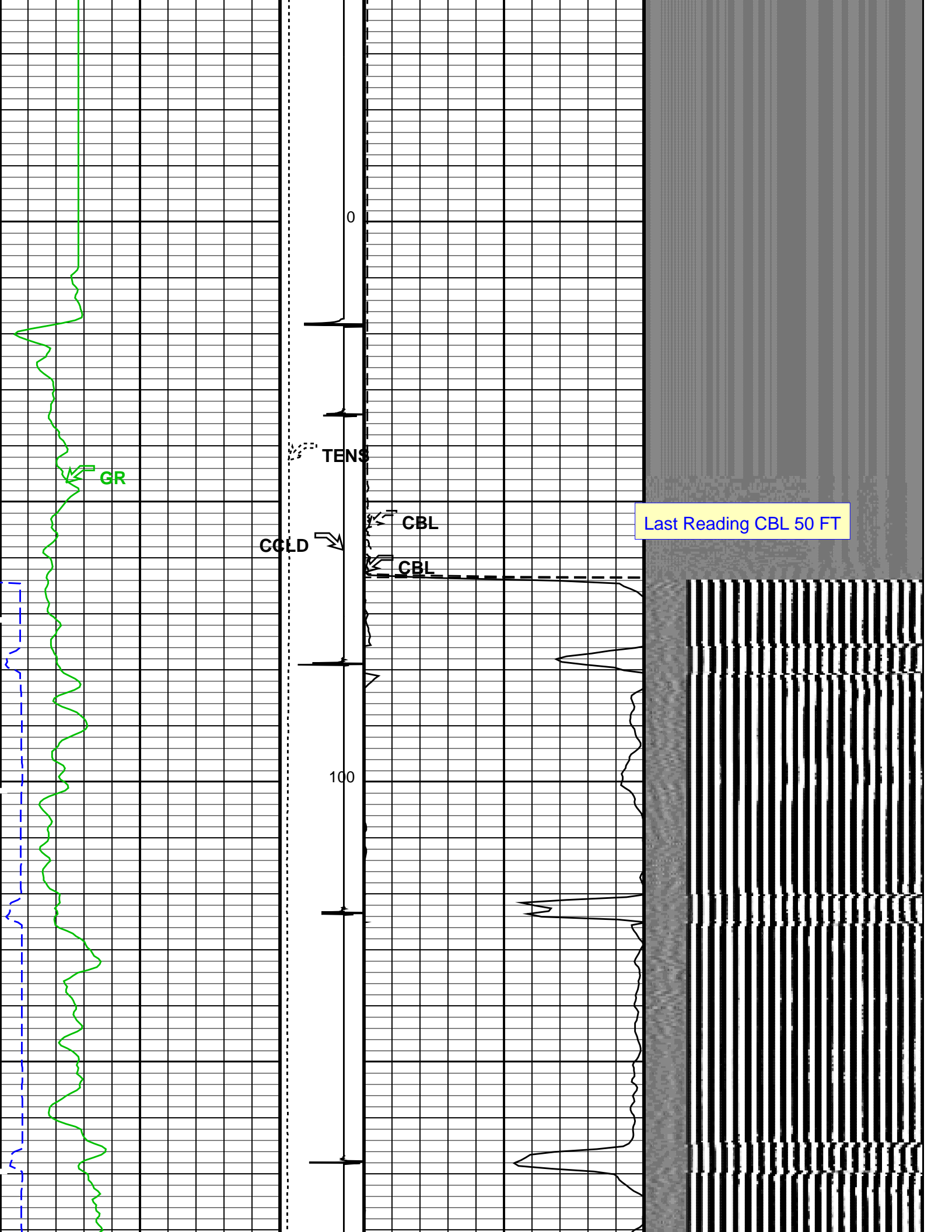
OP System Version: 19C0-187

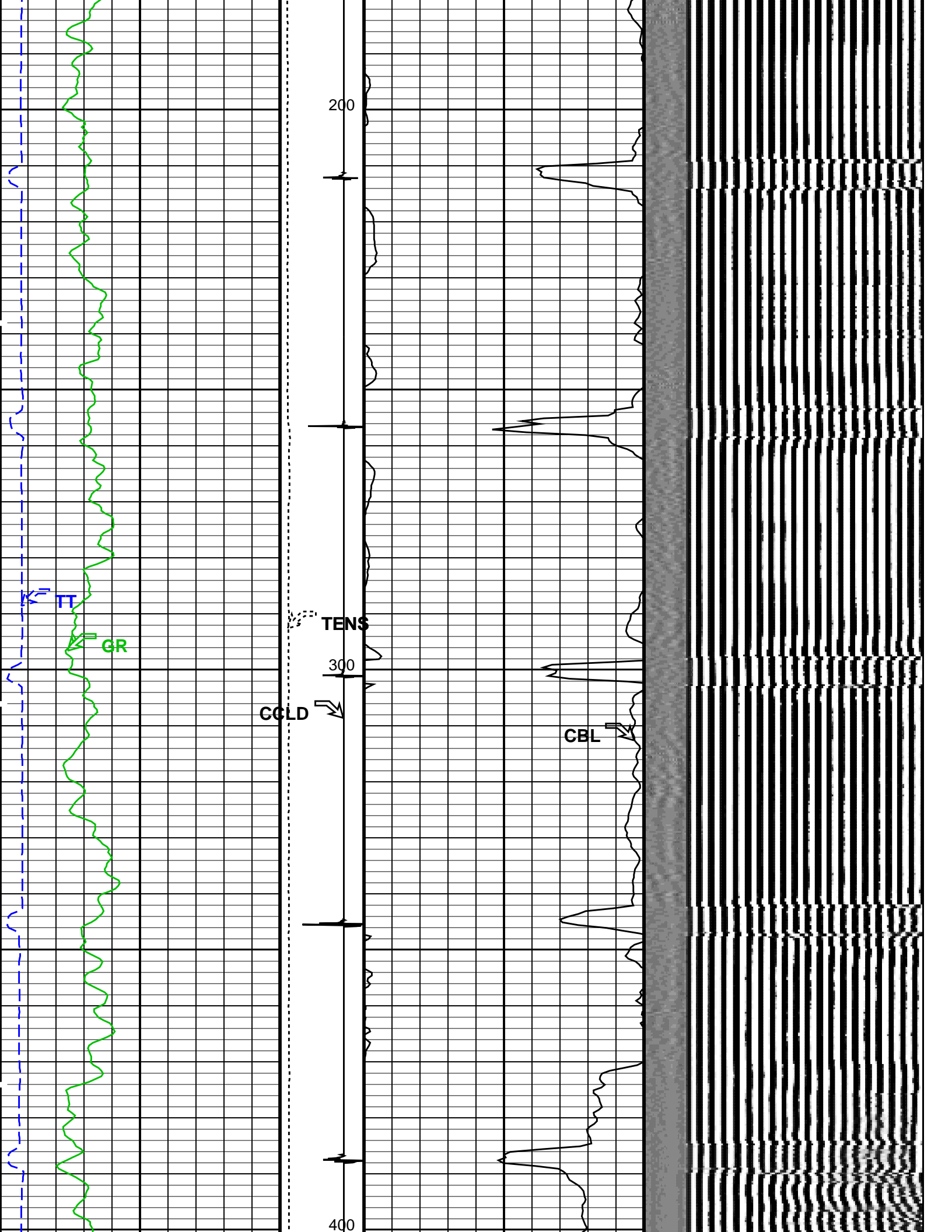
SCMT-CB 19C0-187 RST-C 19C0-187  
HBMS-B 19C0-187

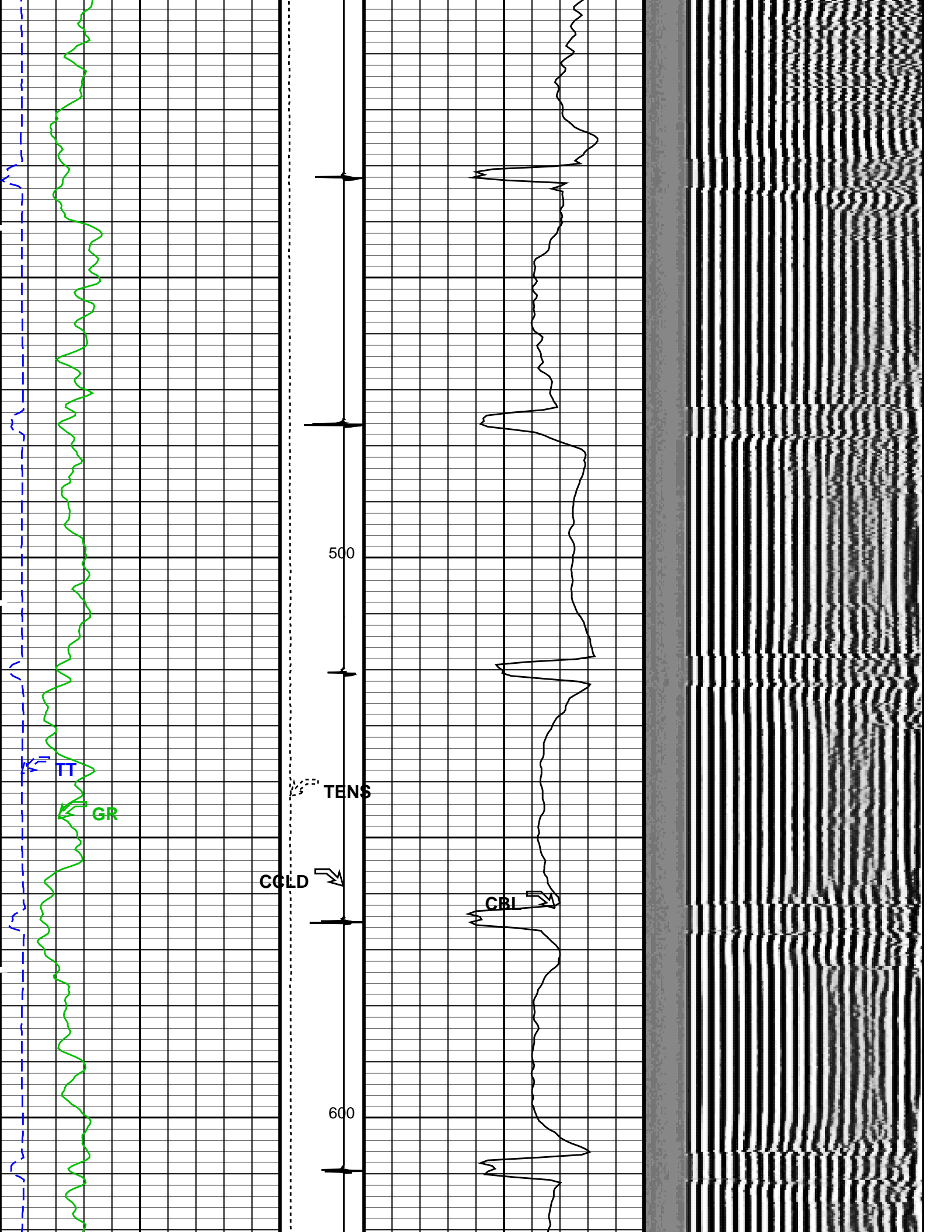
PIP SUMMARY

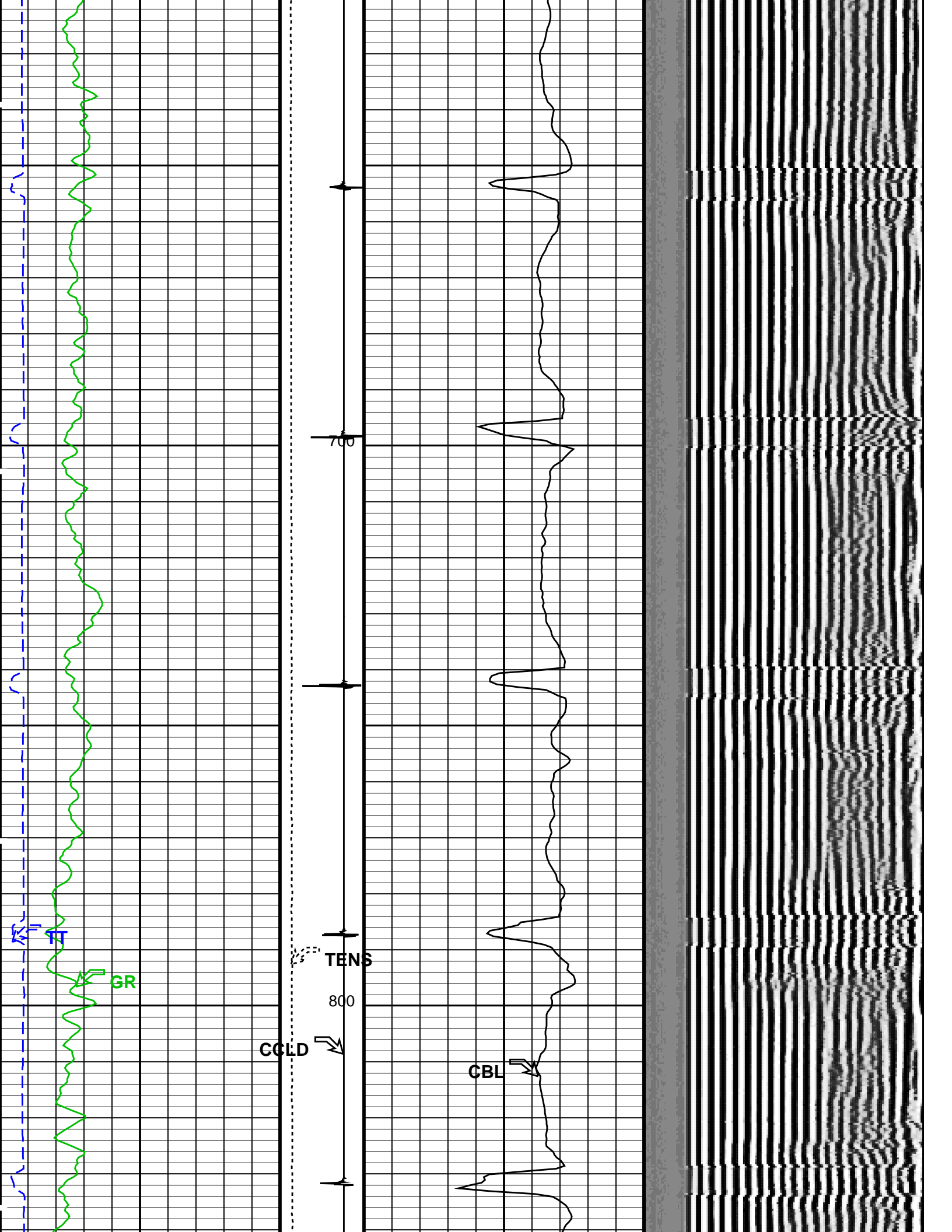
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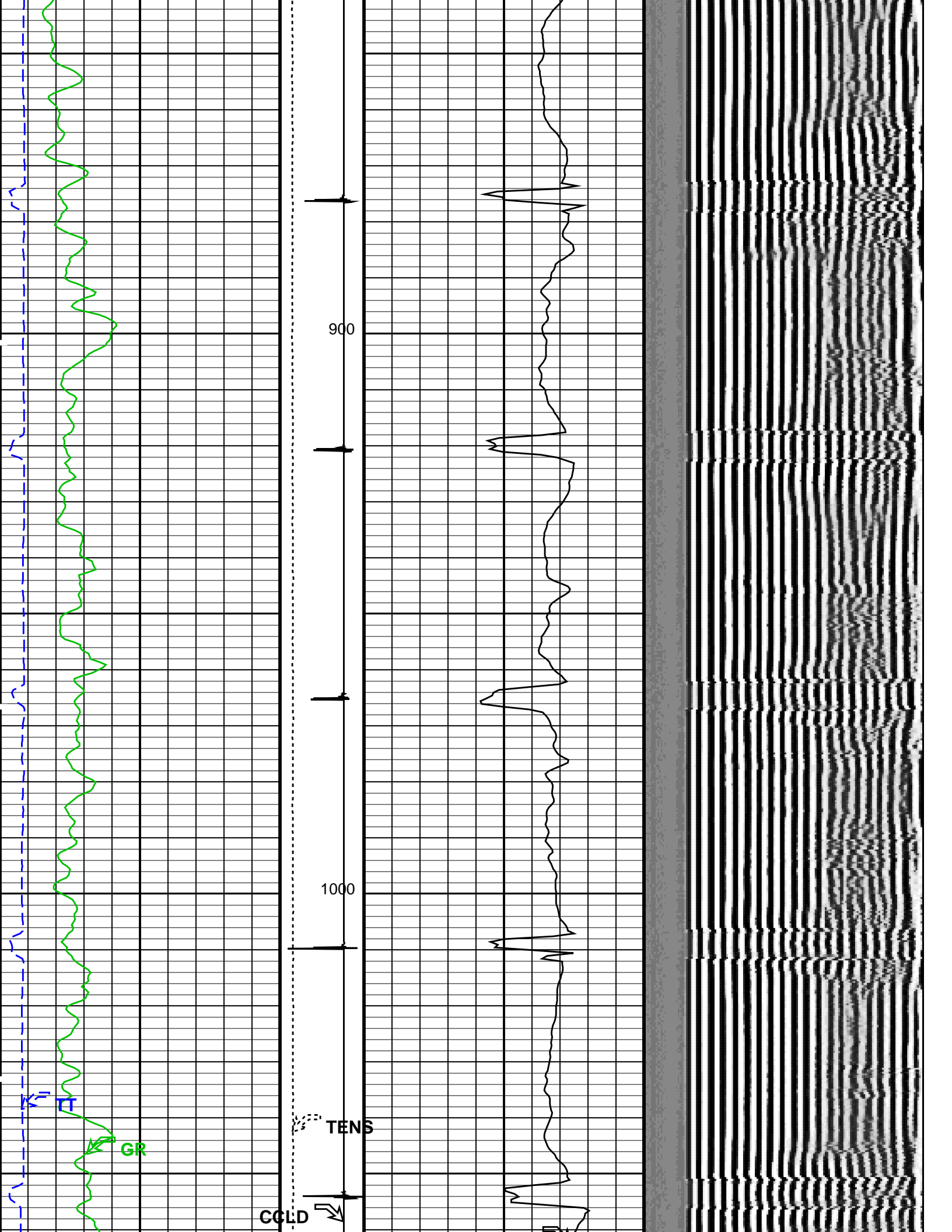


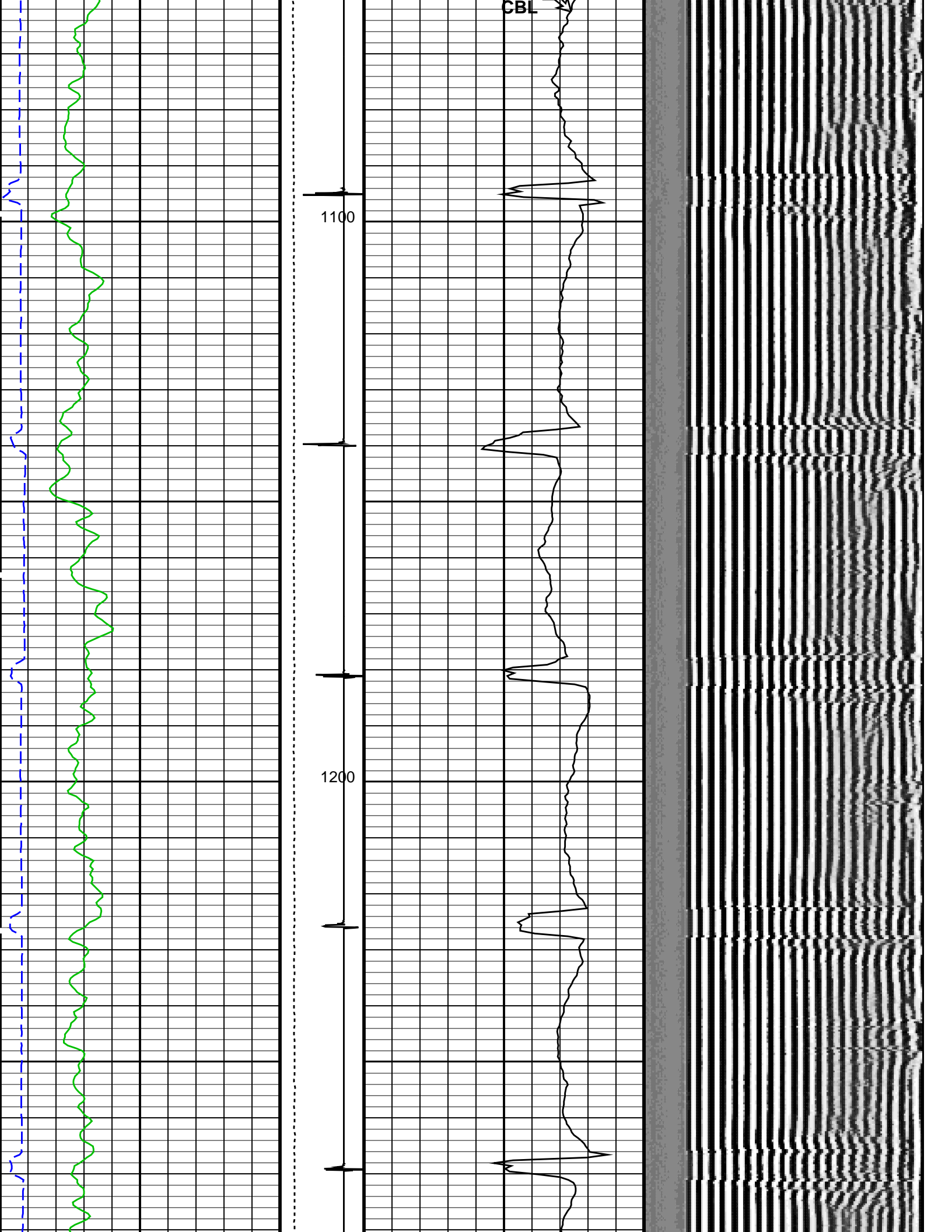


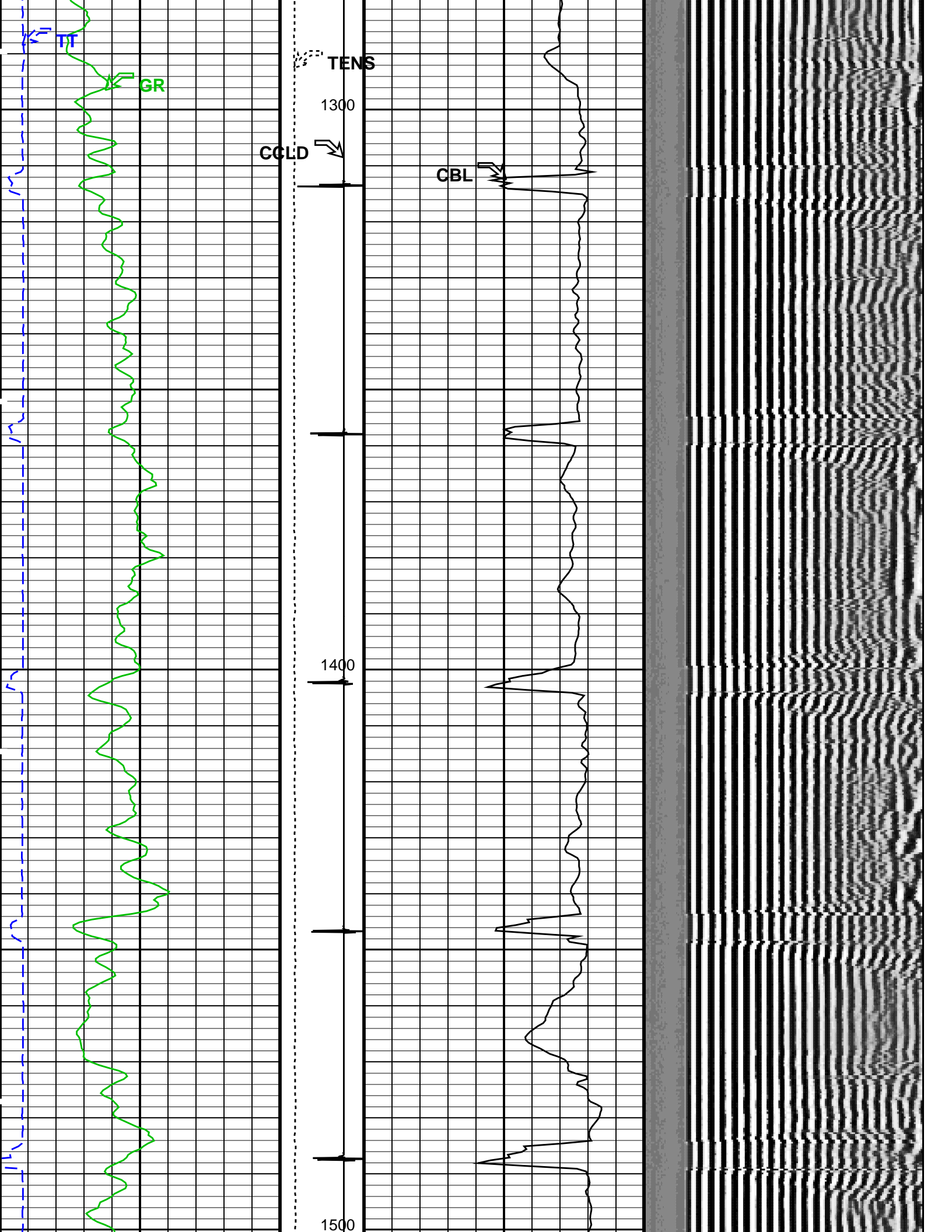


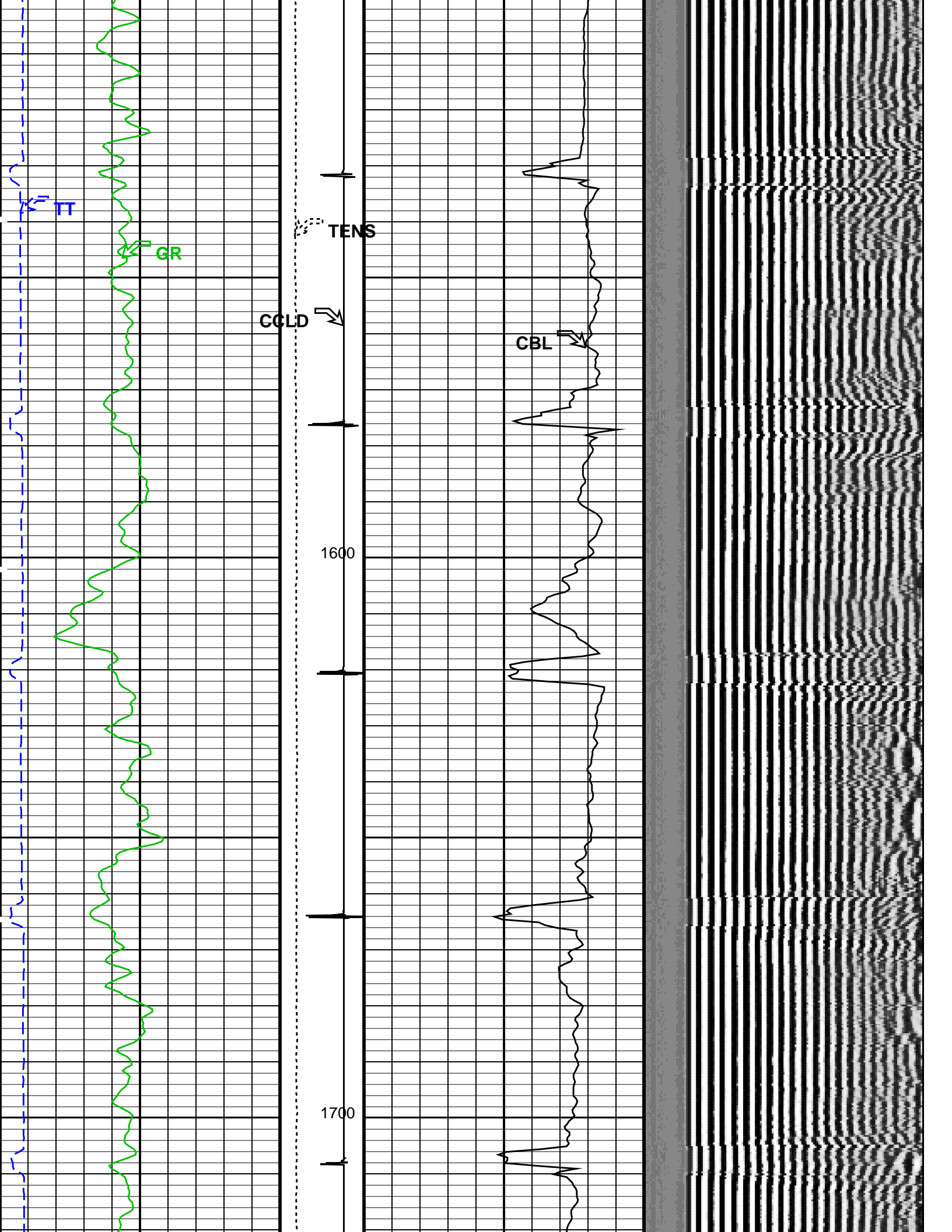


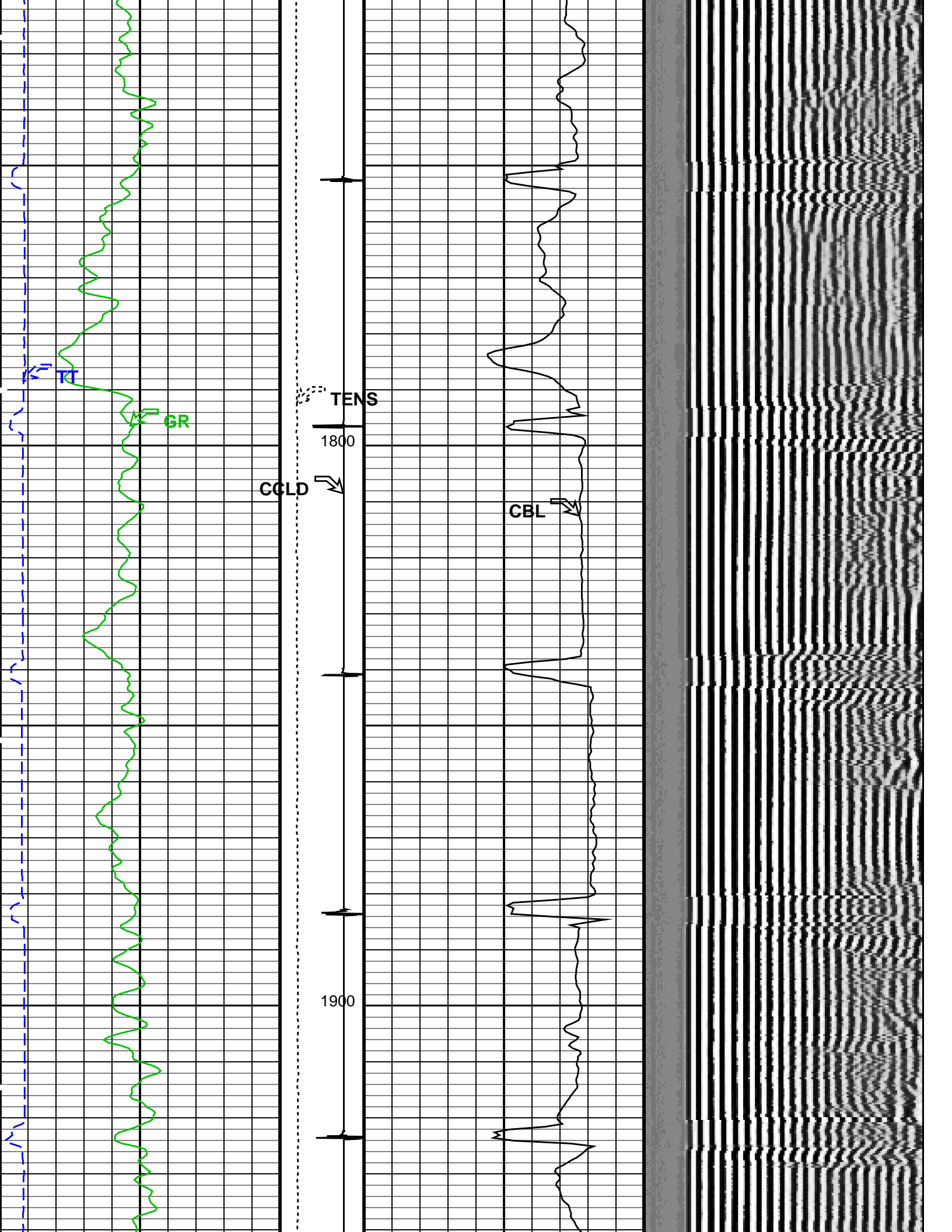


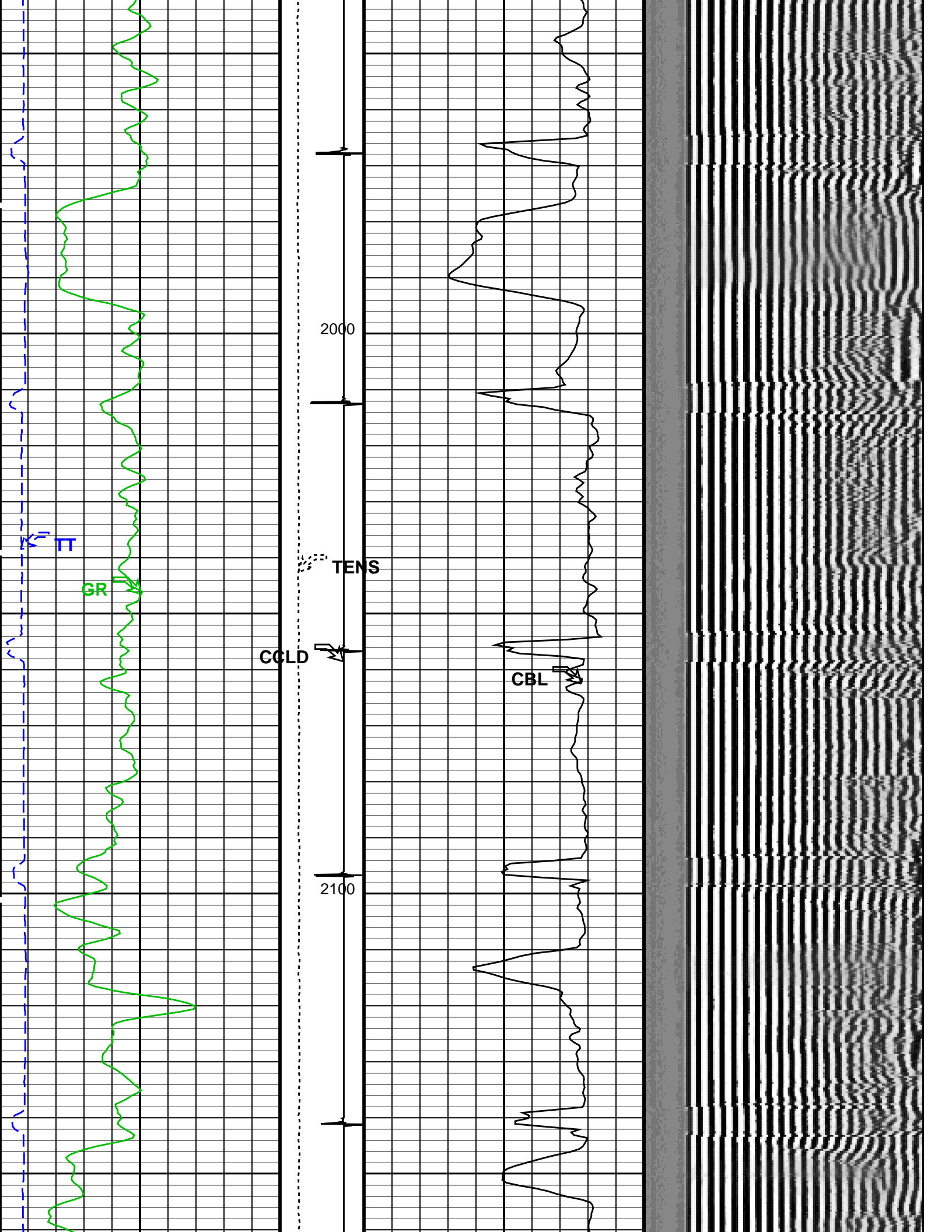


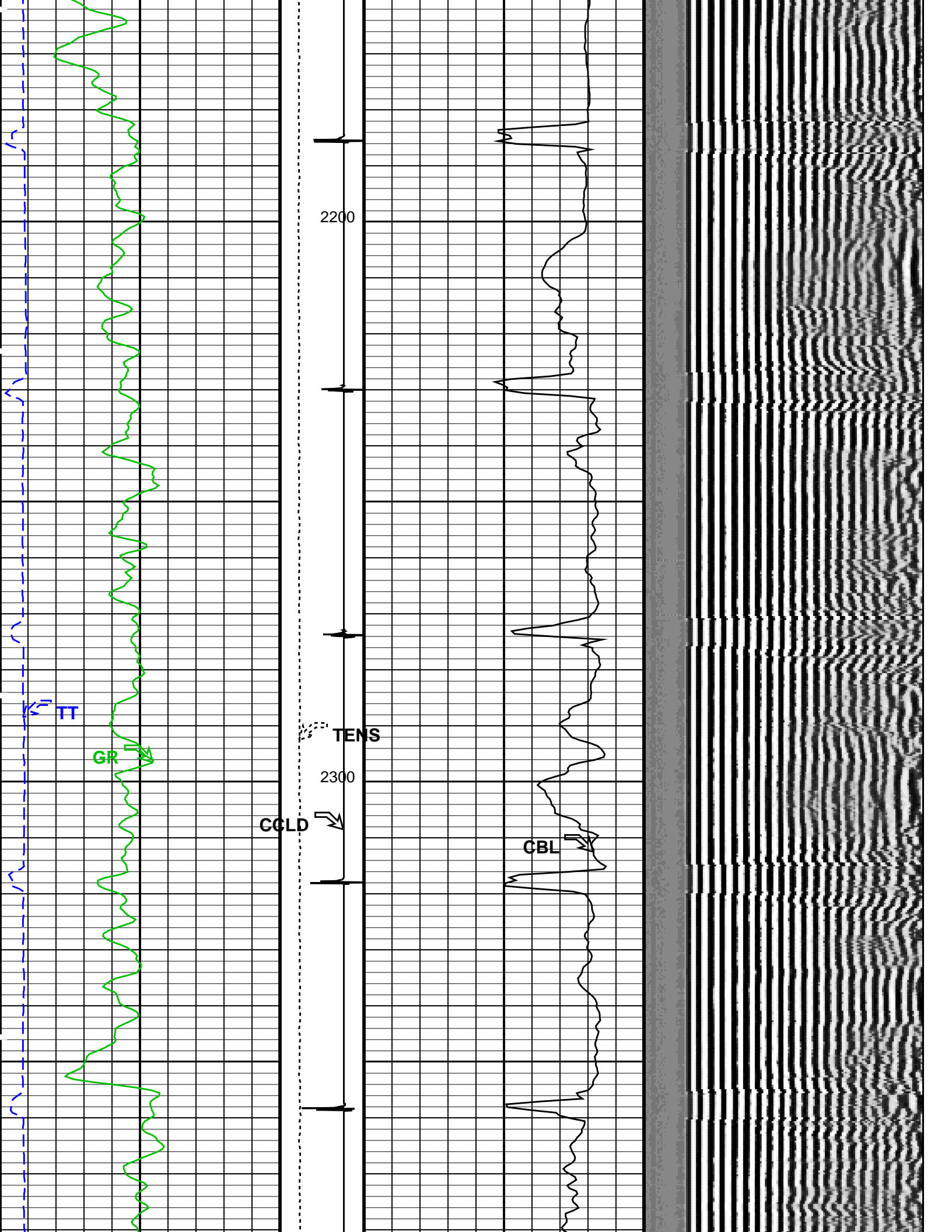


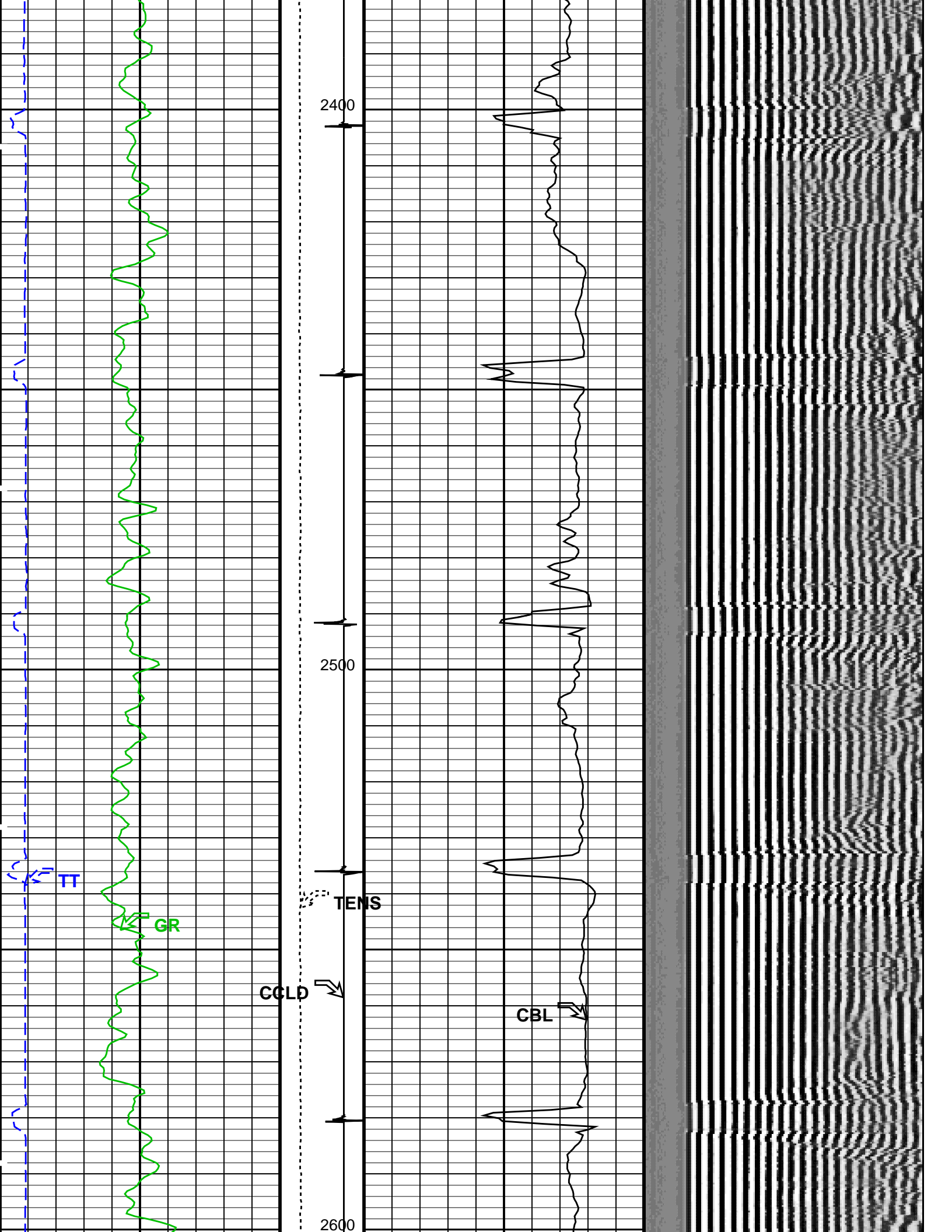


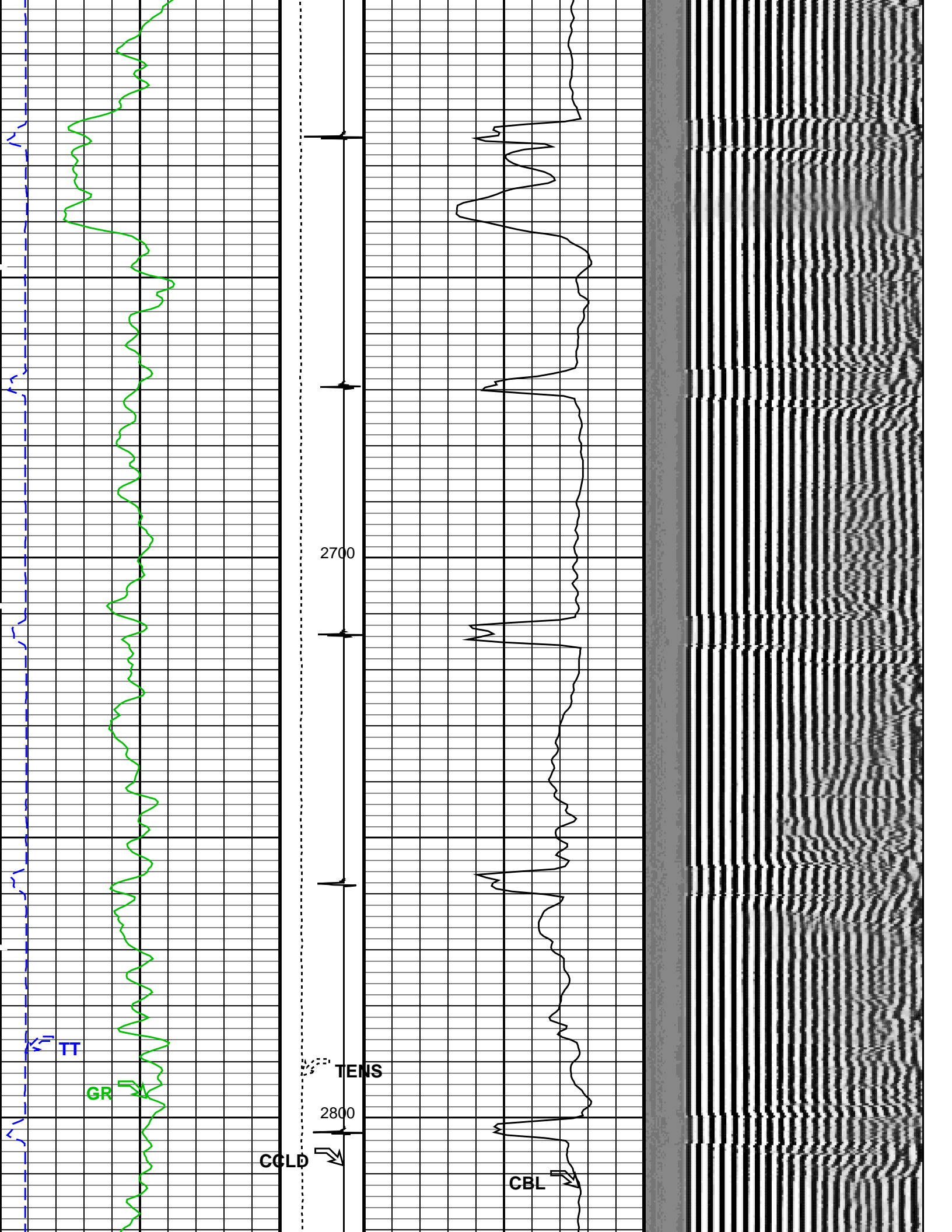


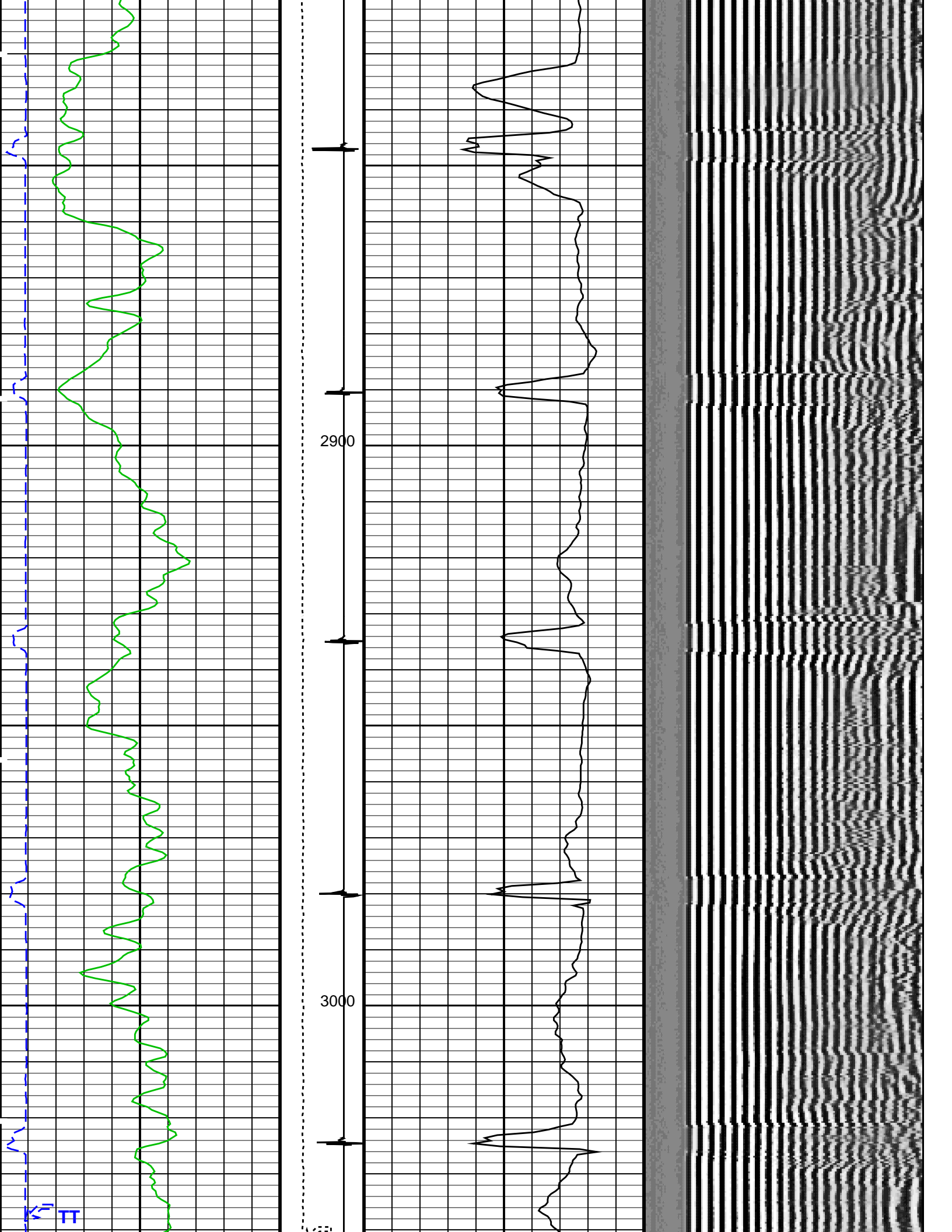


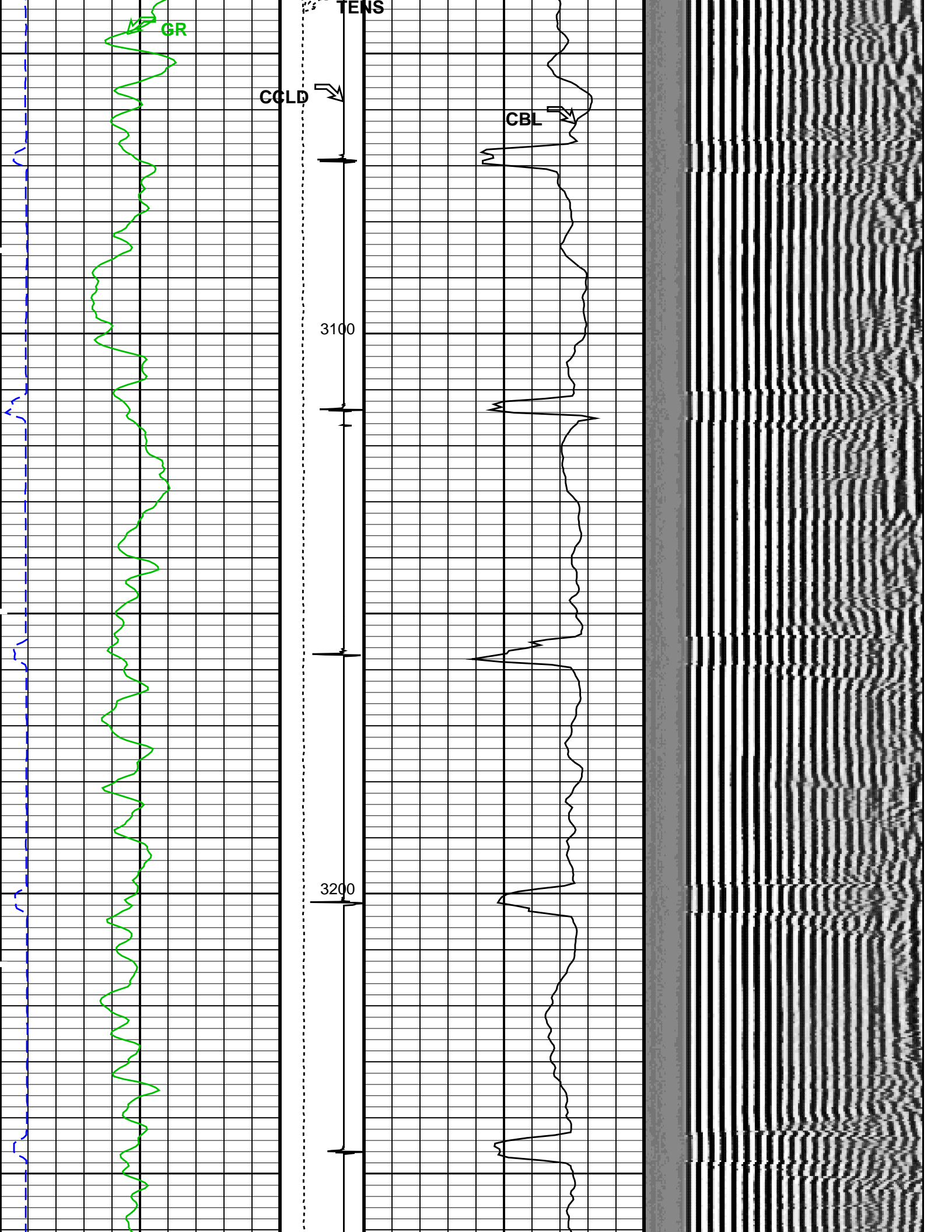


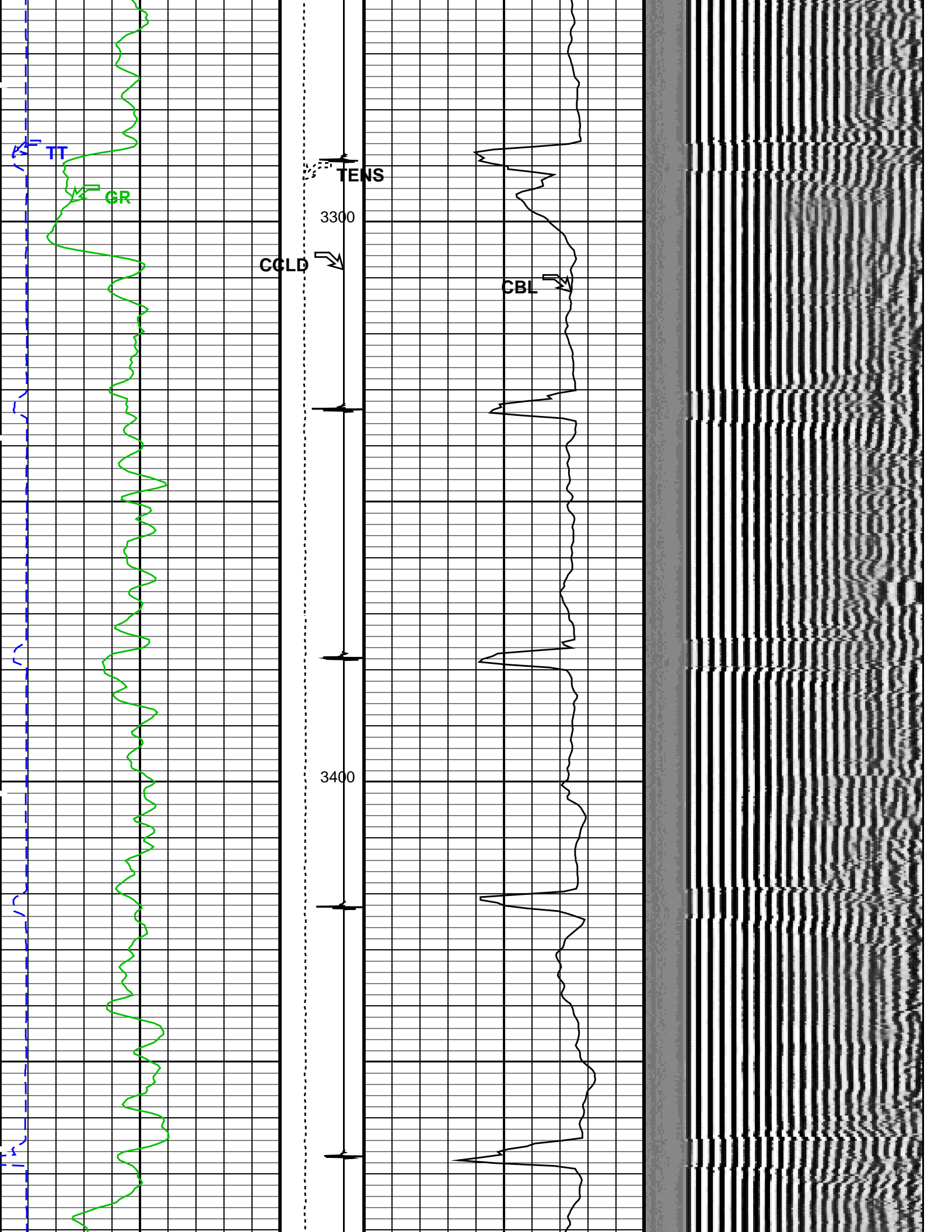


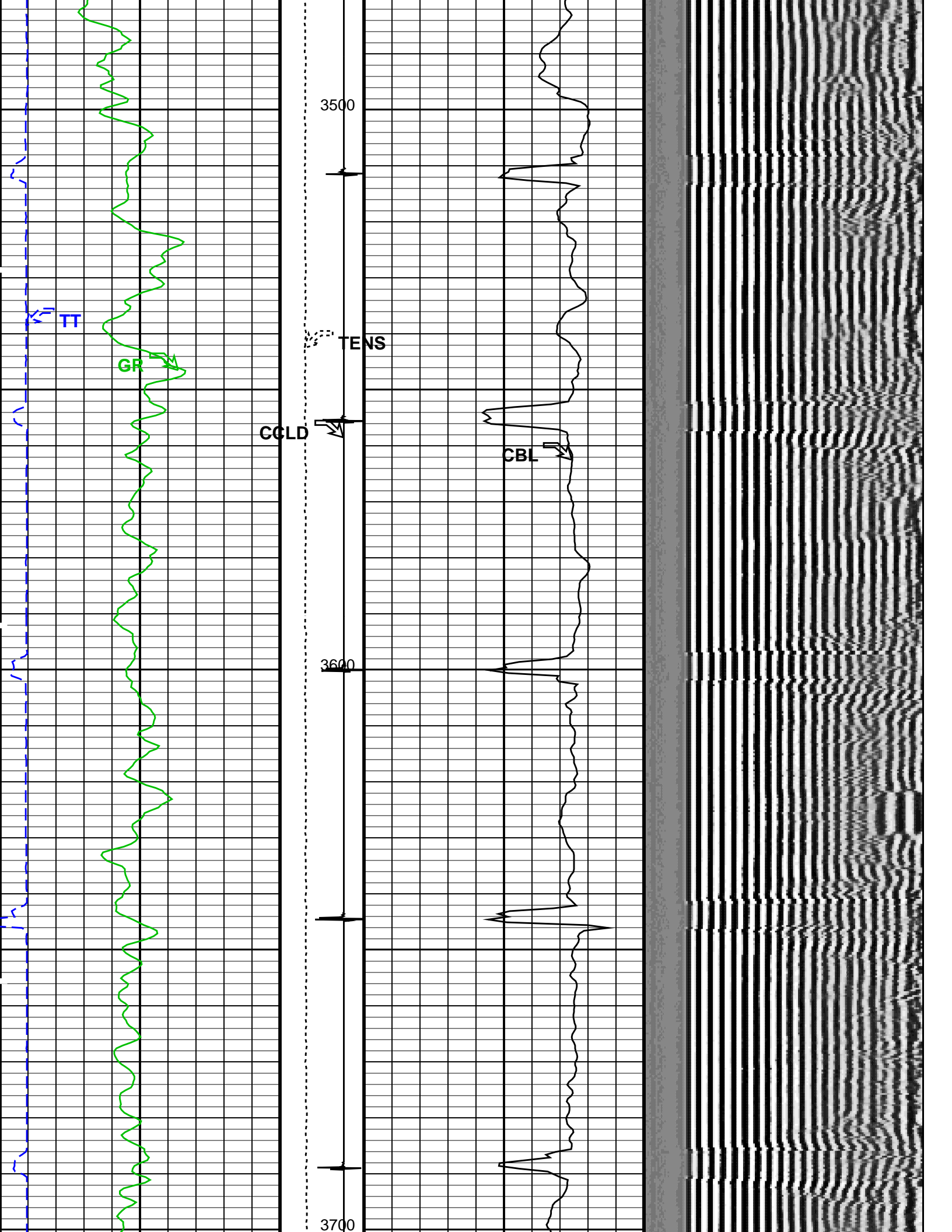


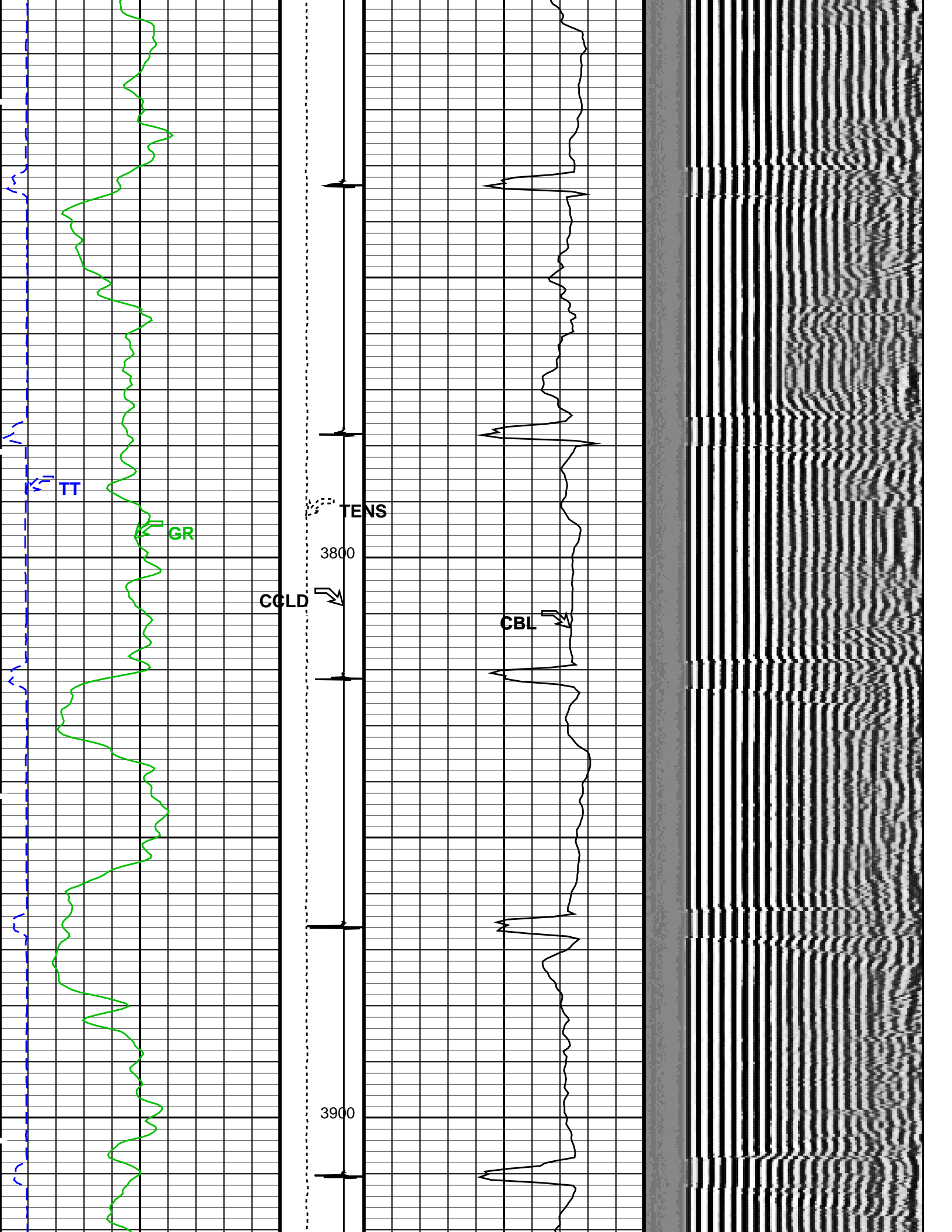


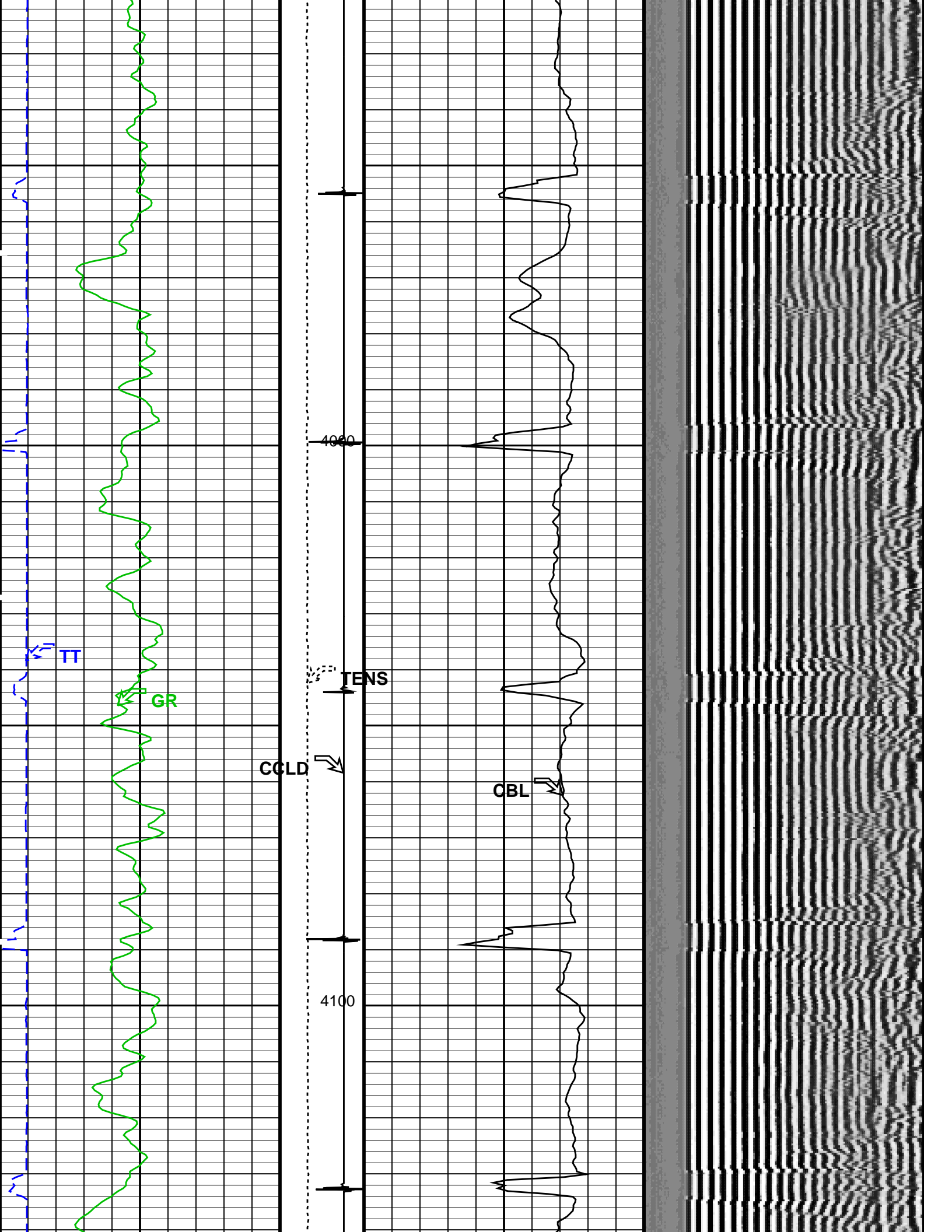


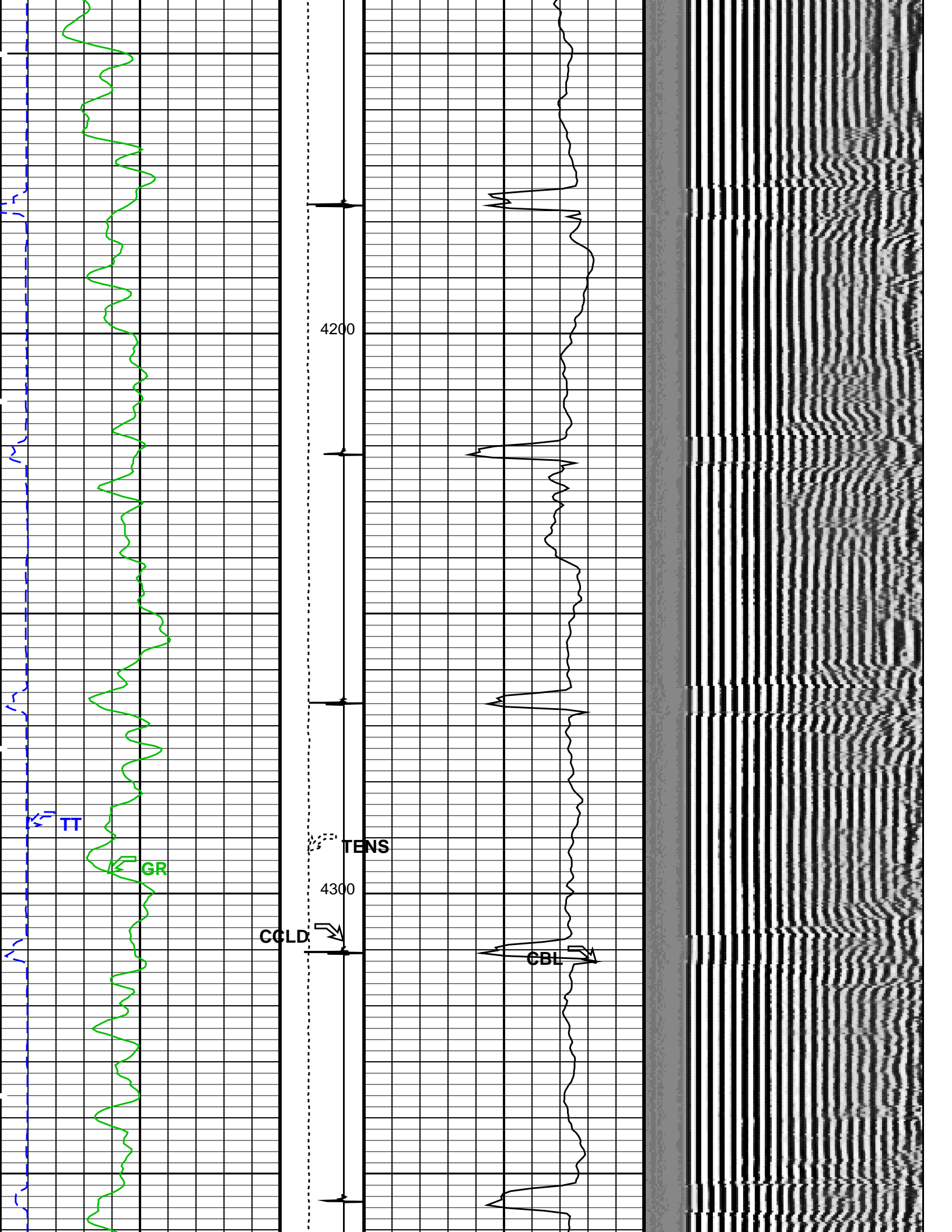


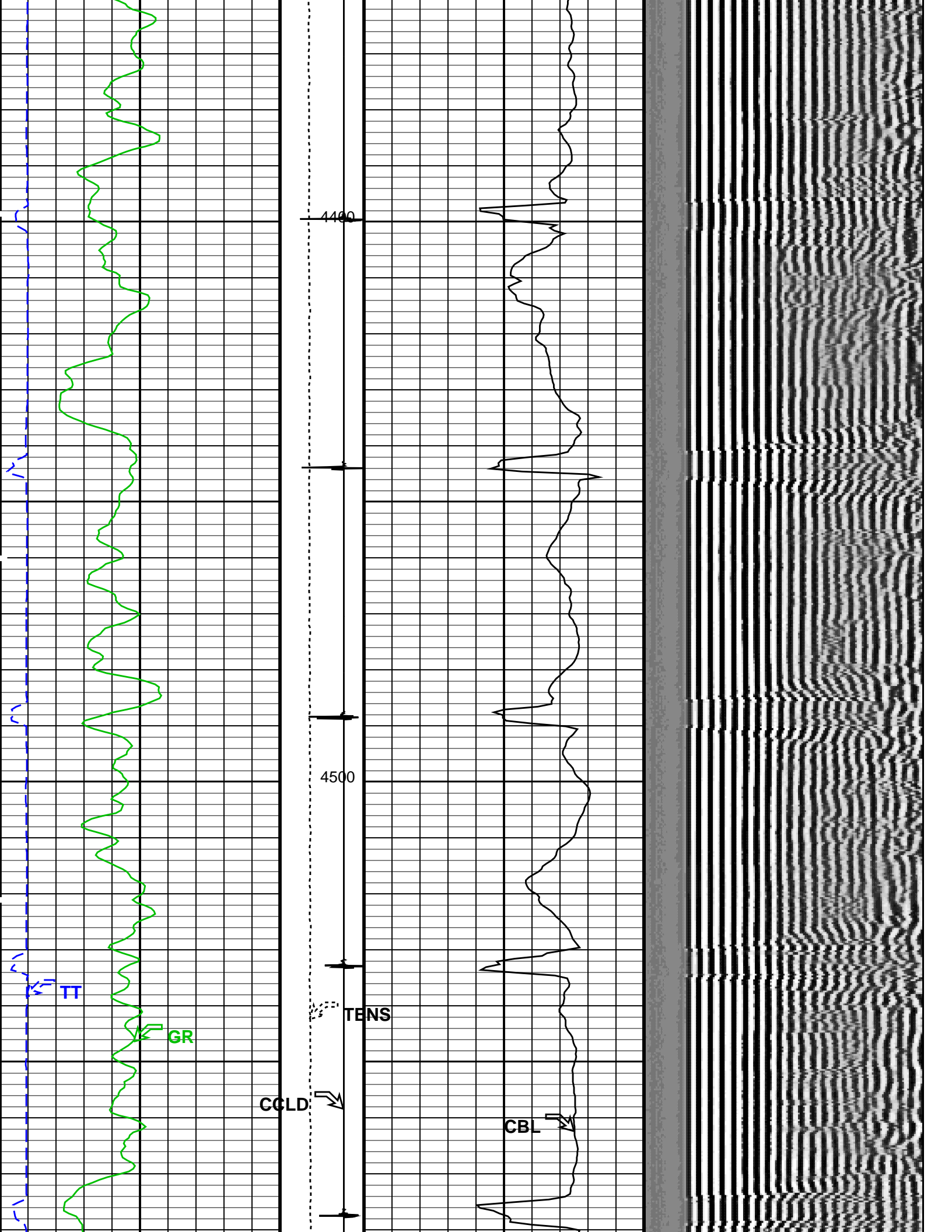


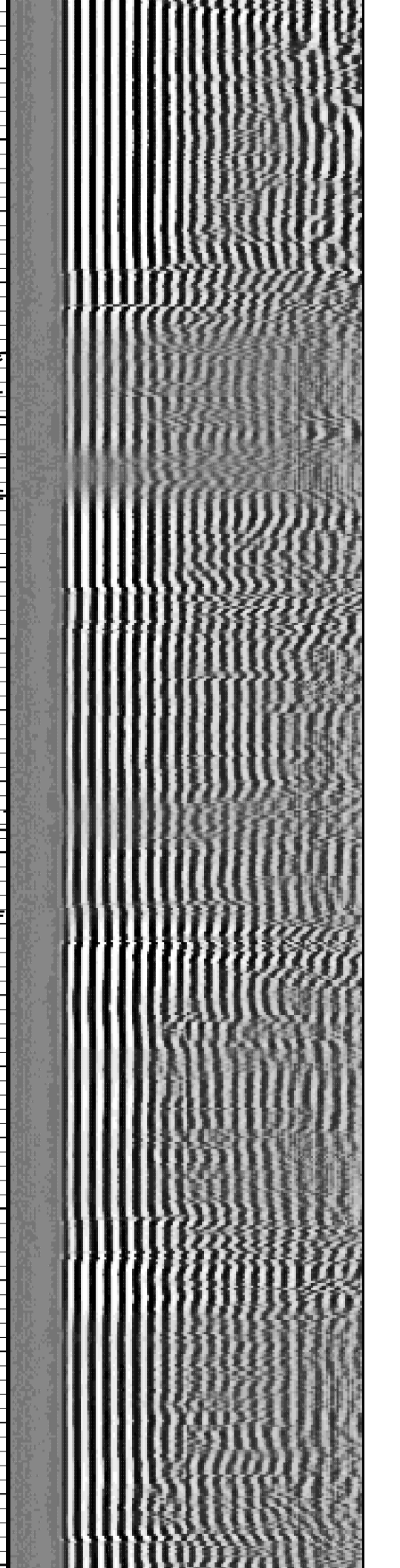
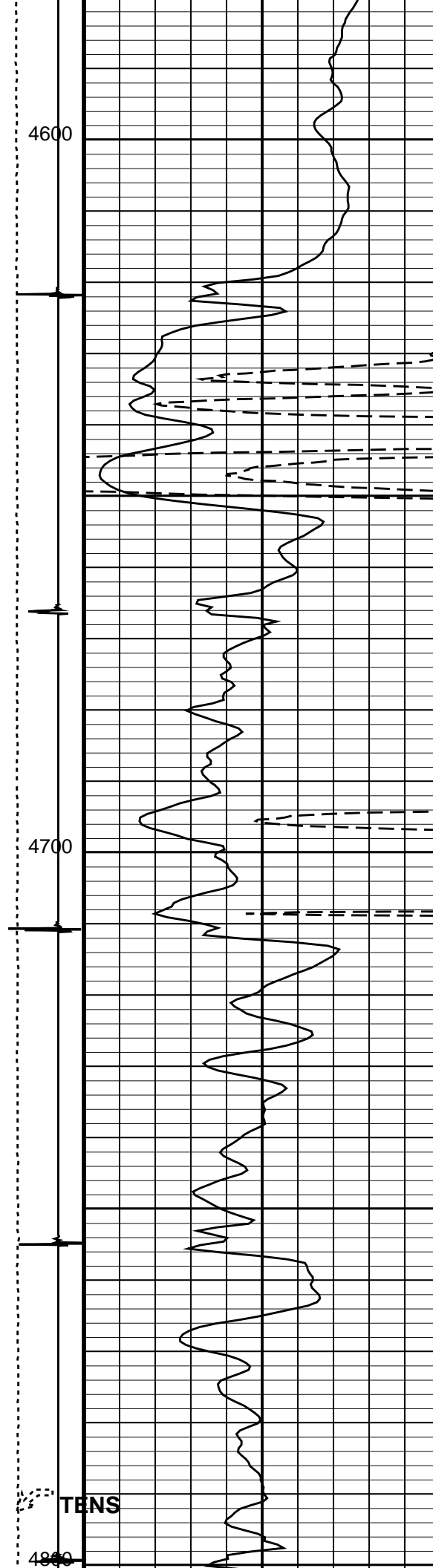
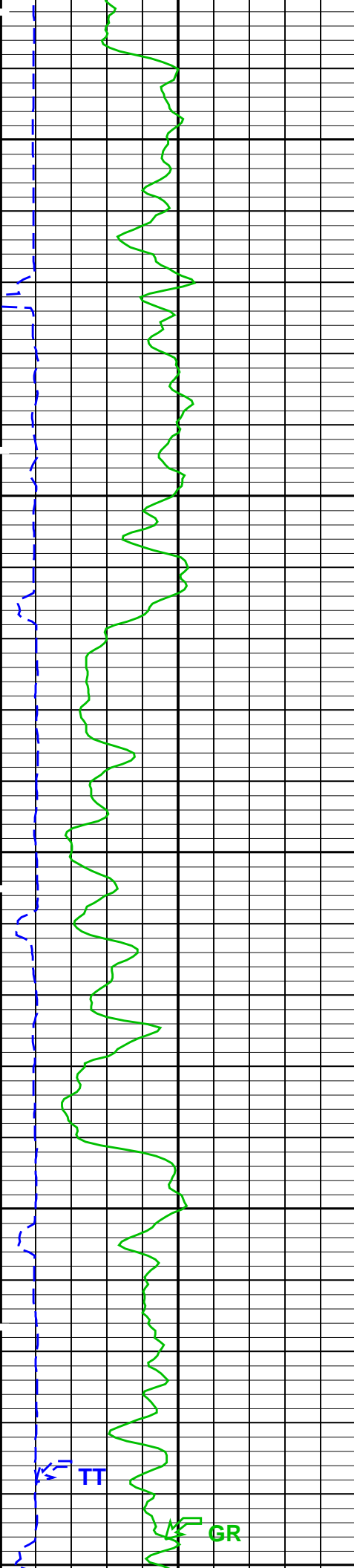


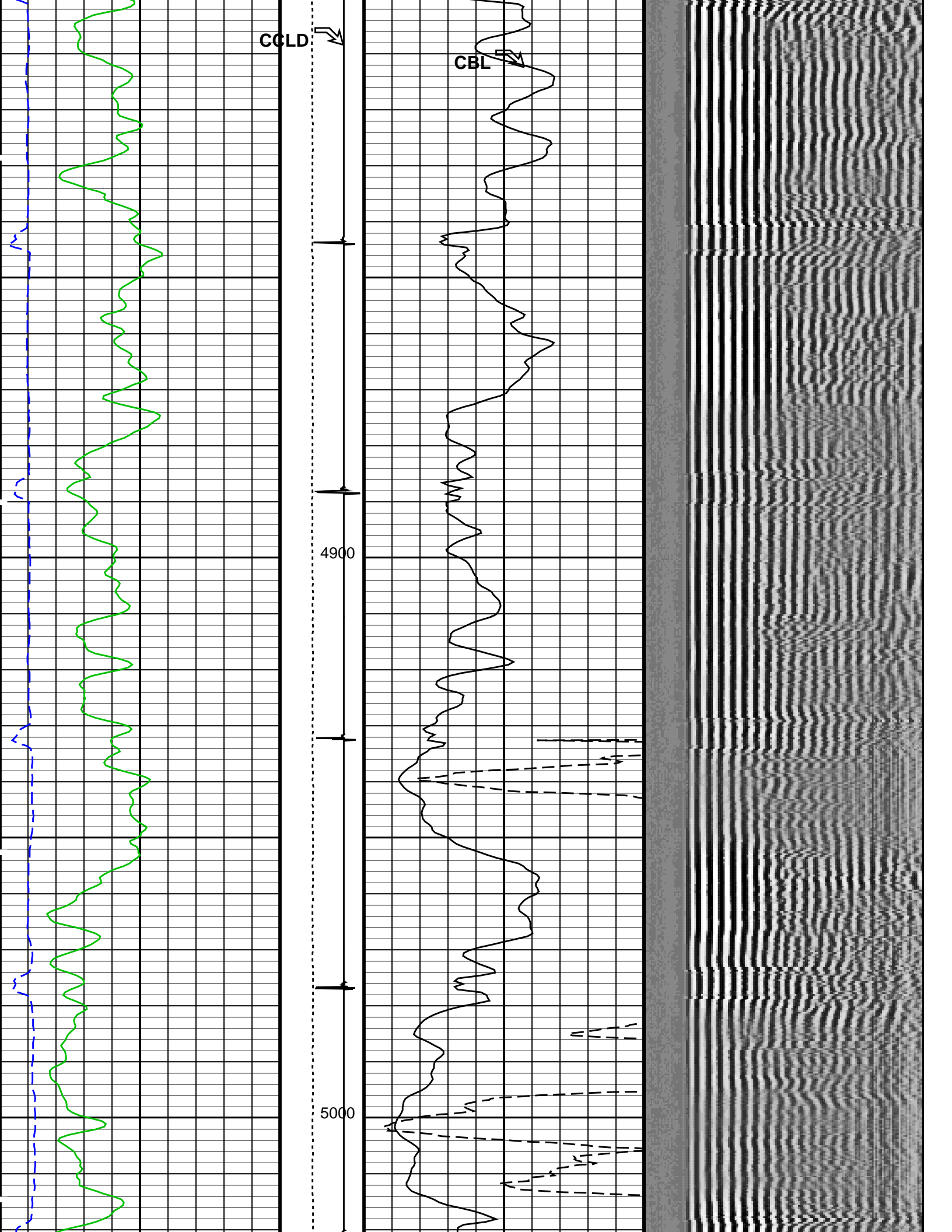


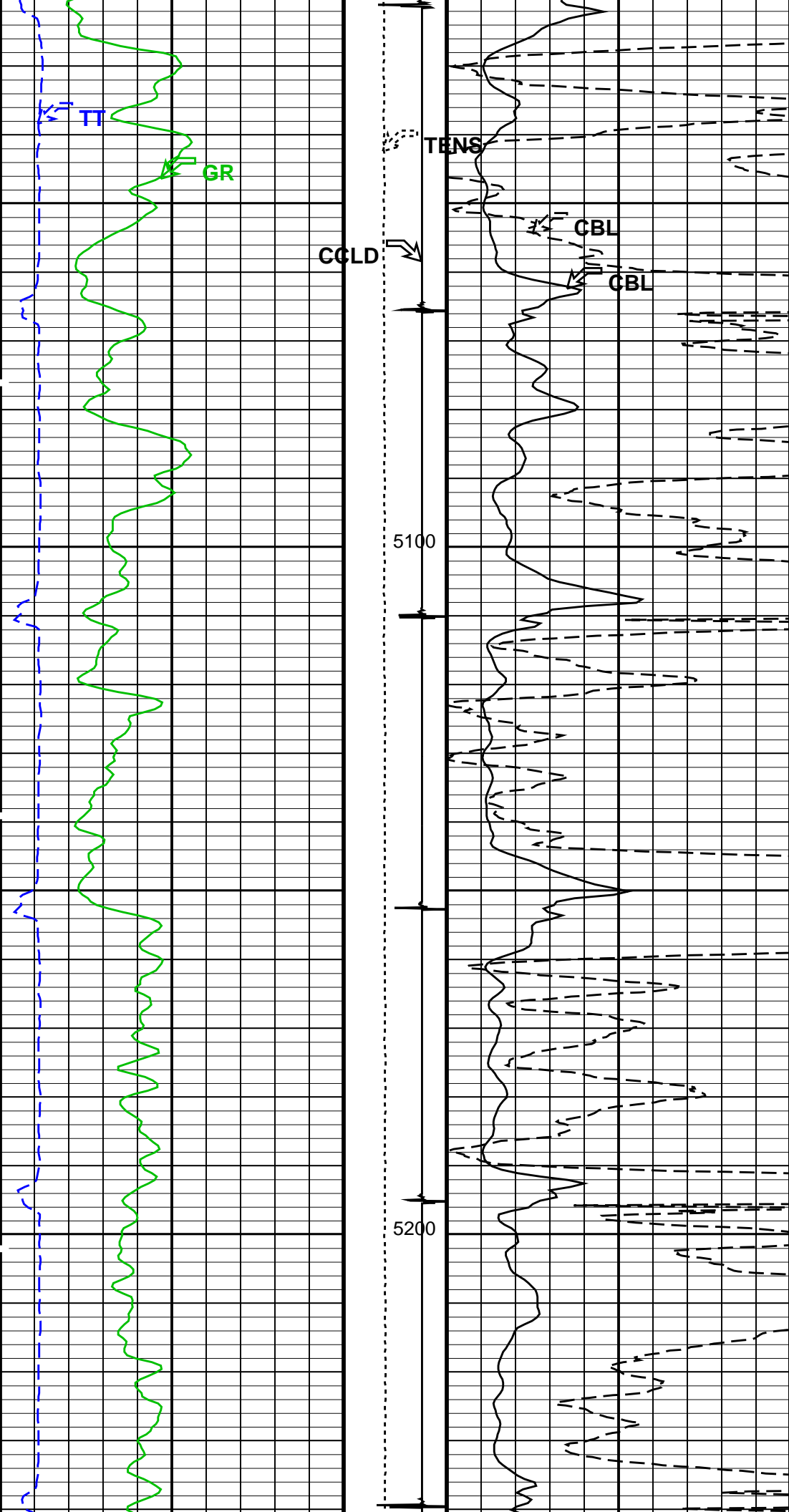


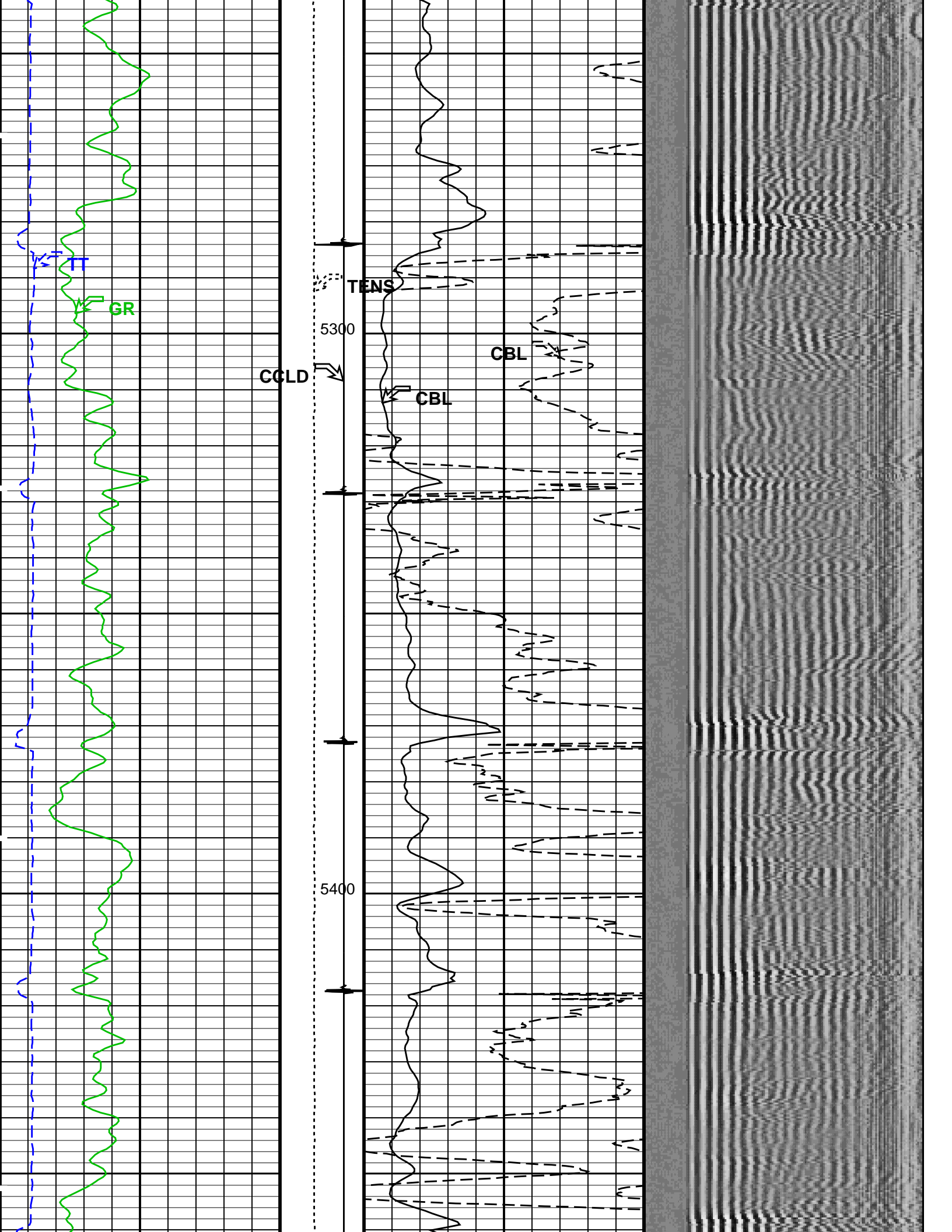


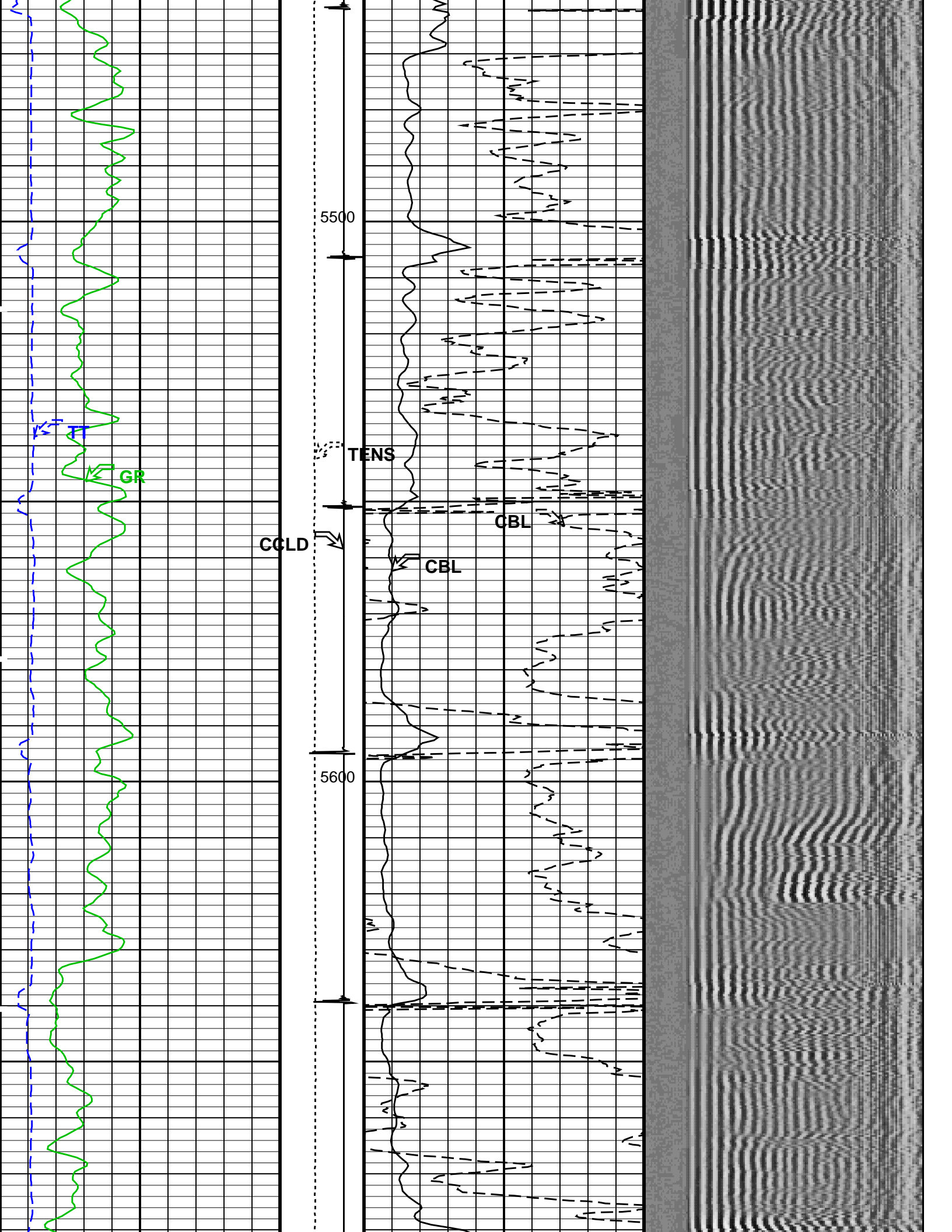


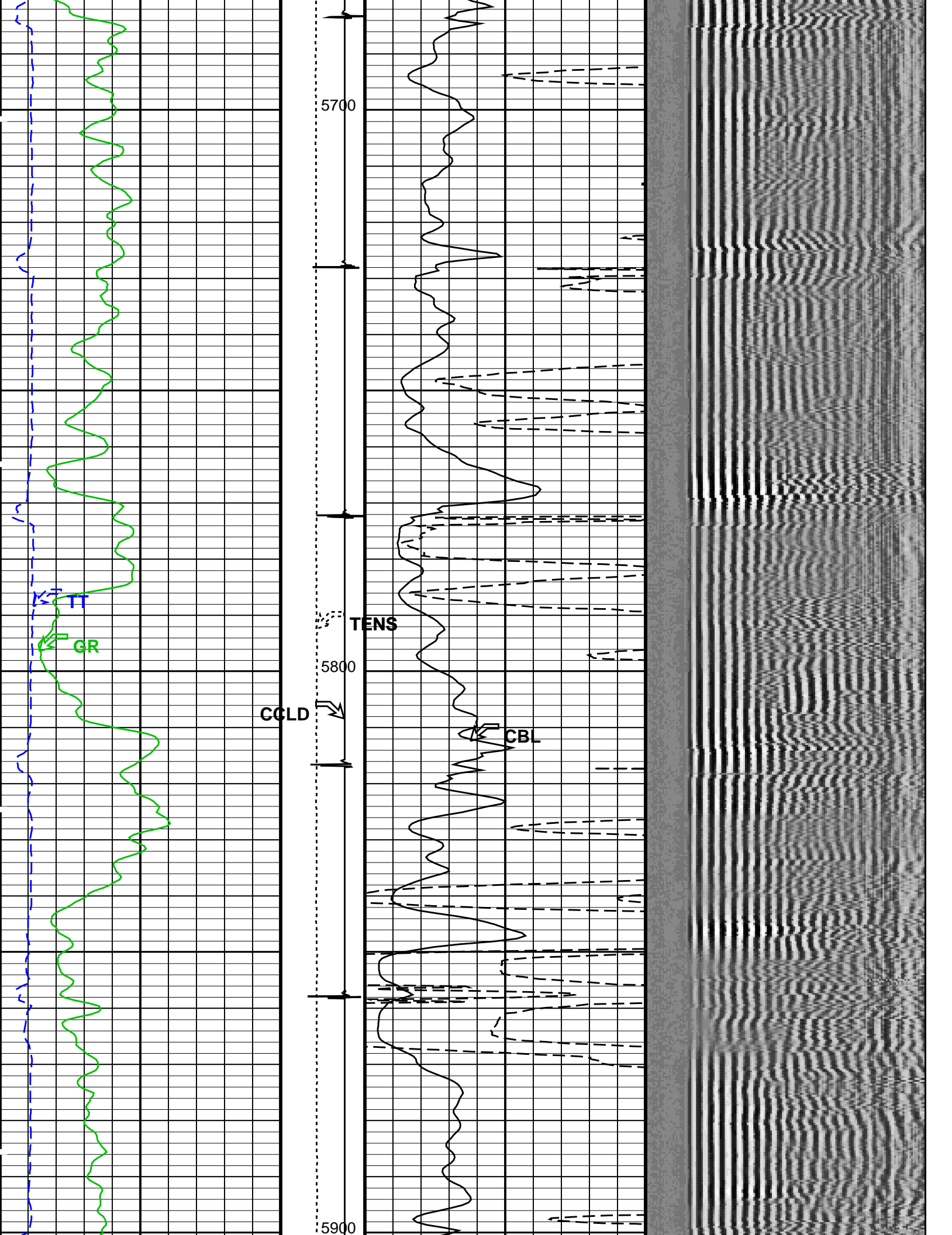


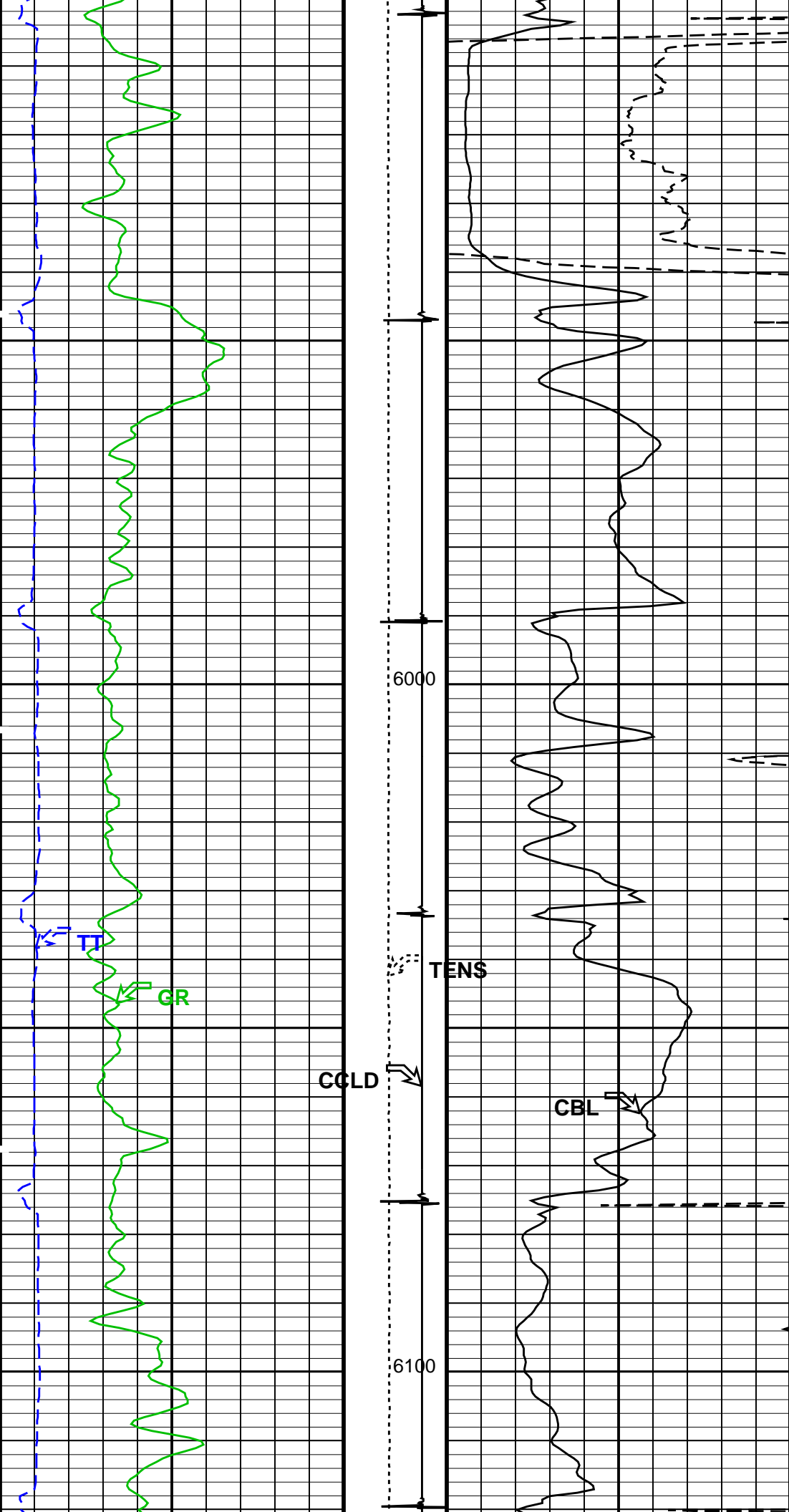


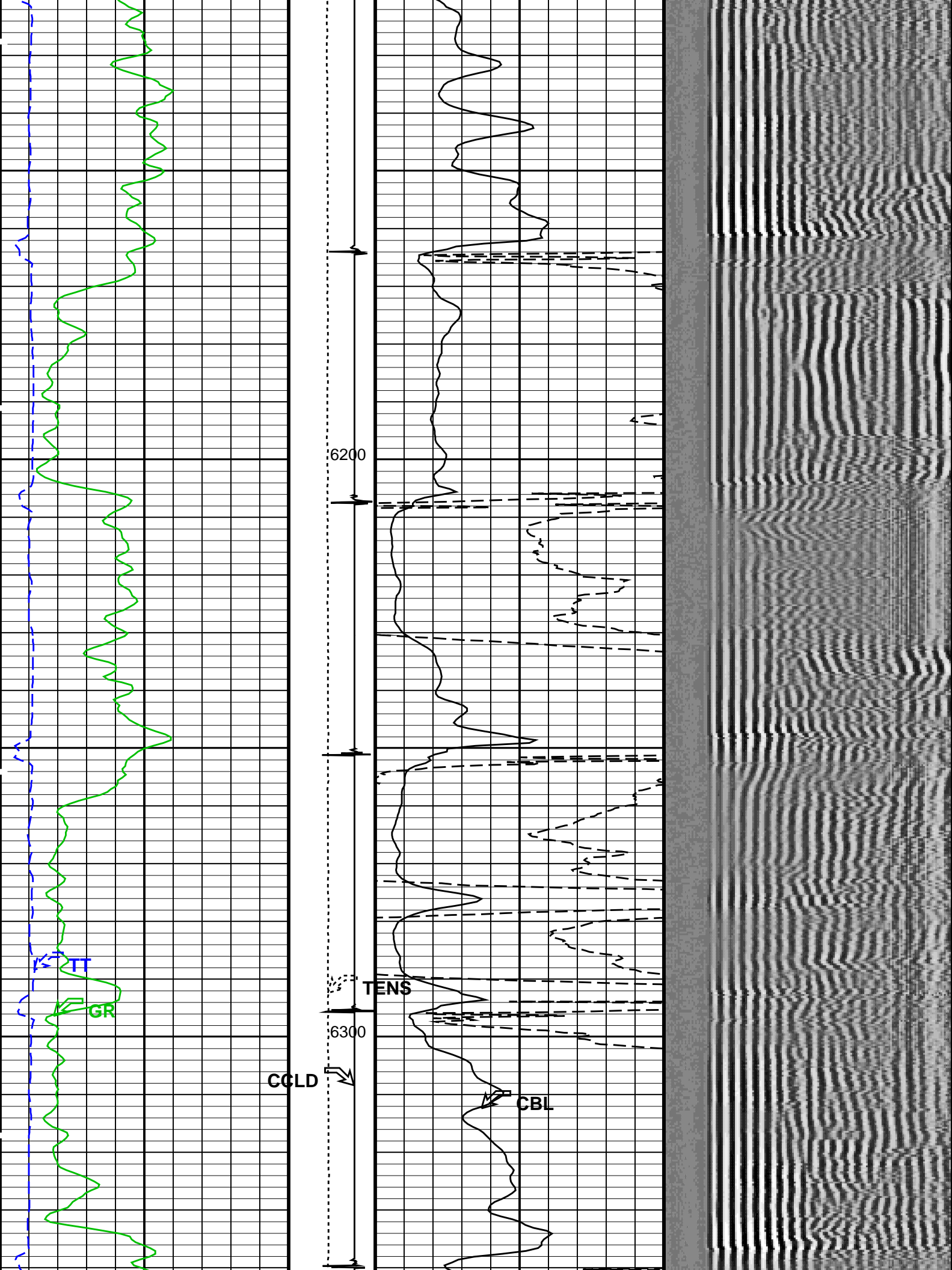


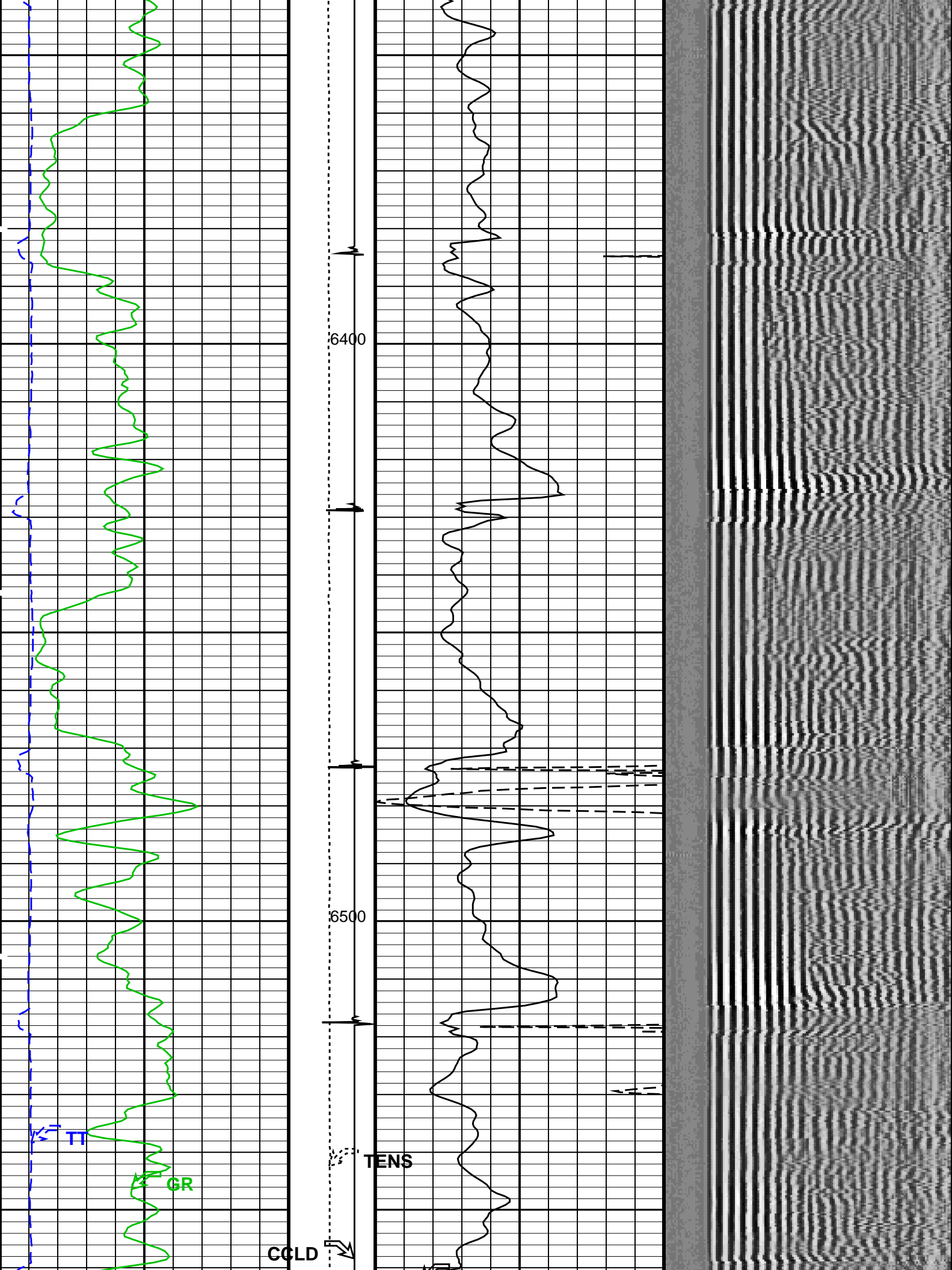


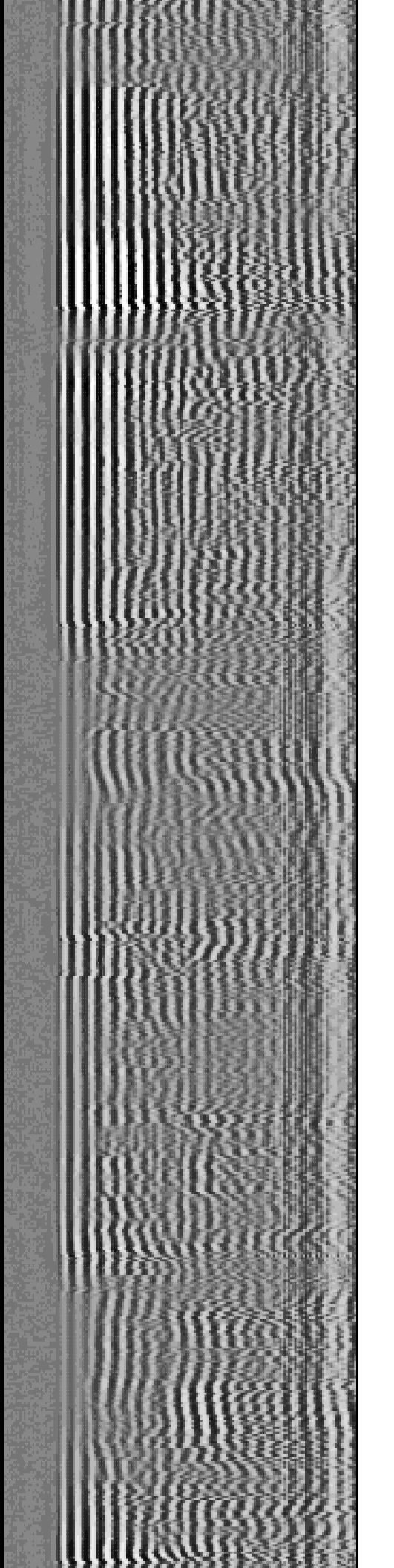
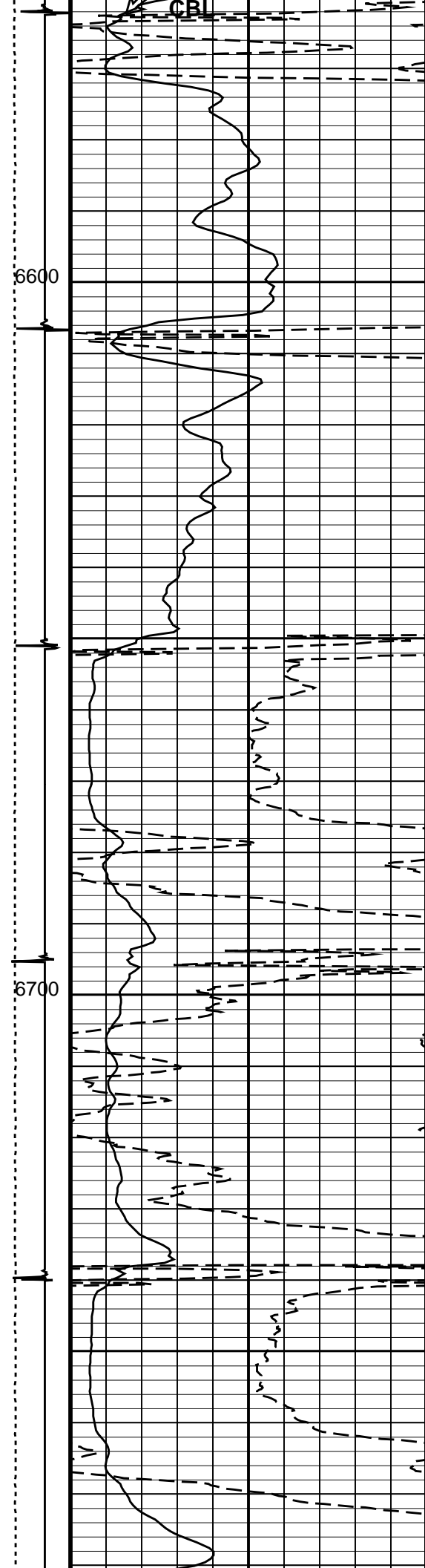
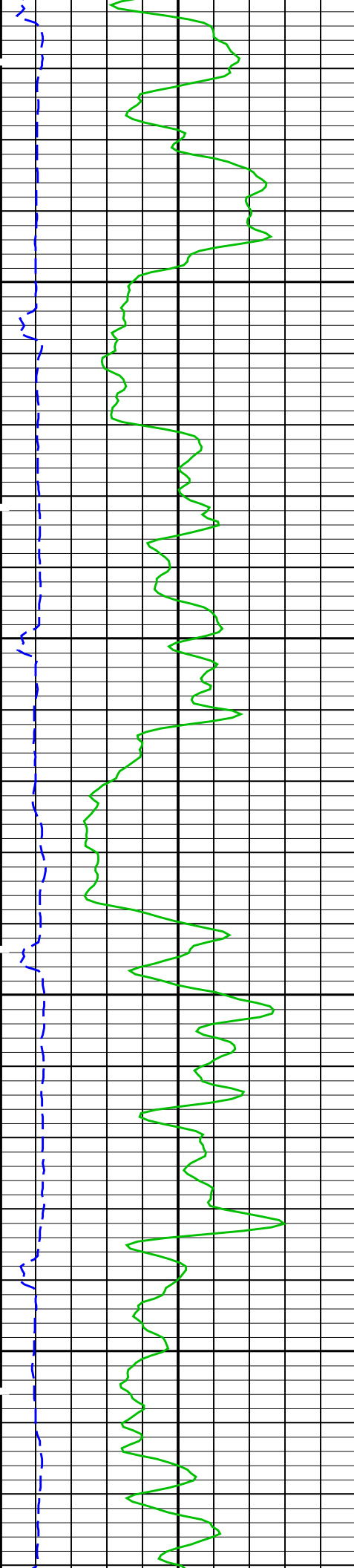


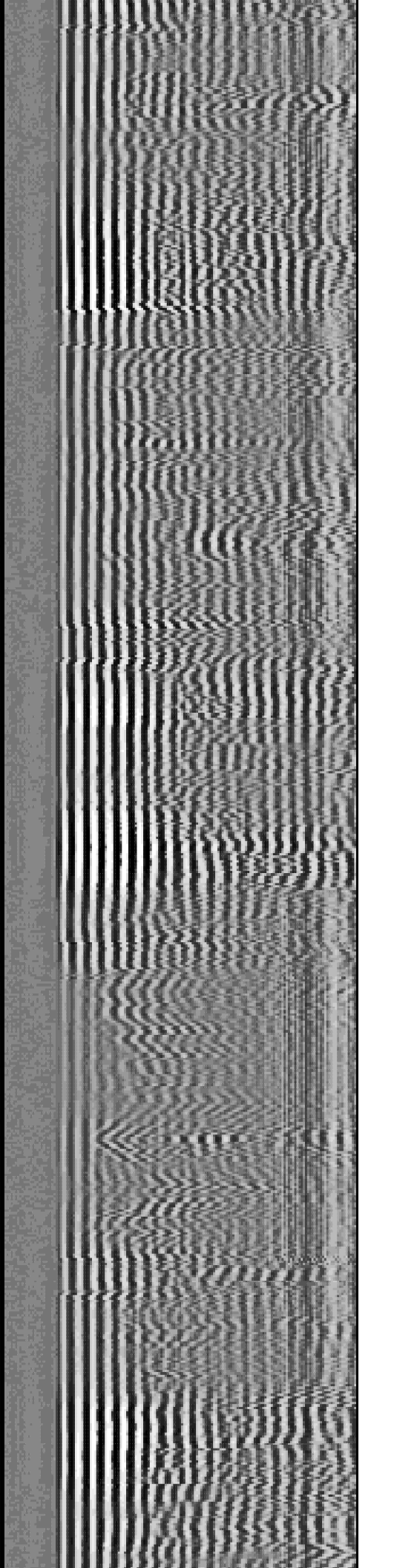
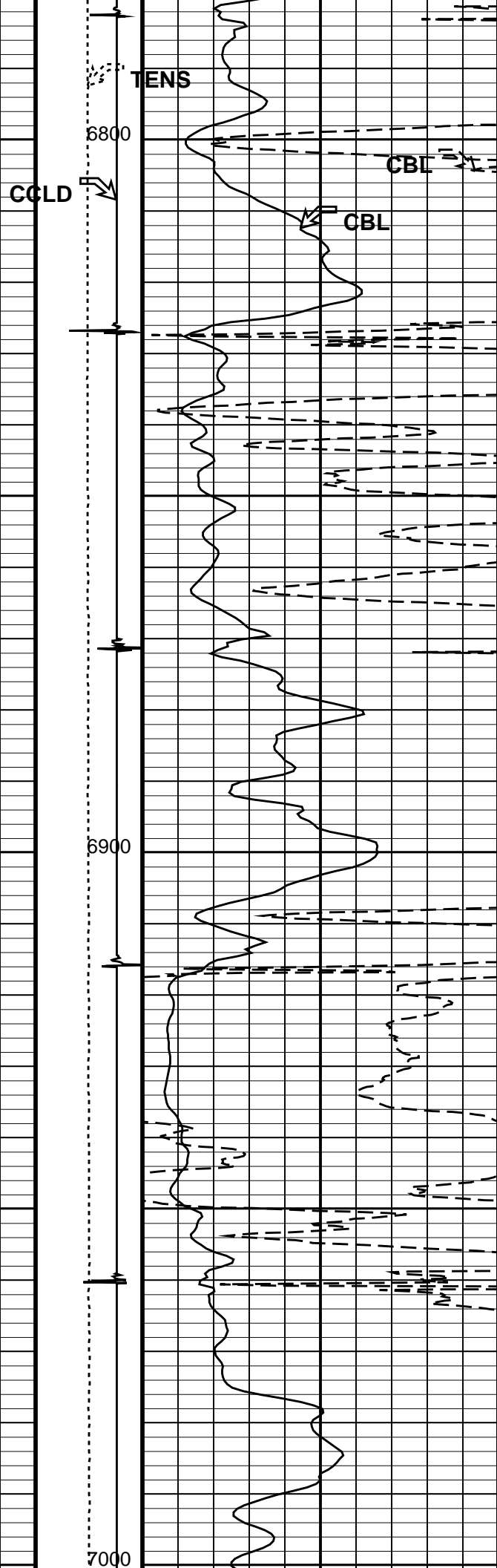
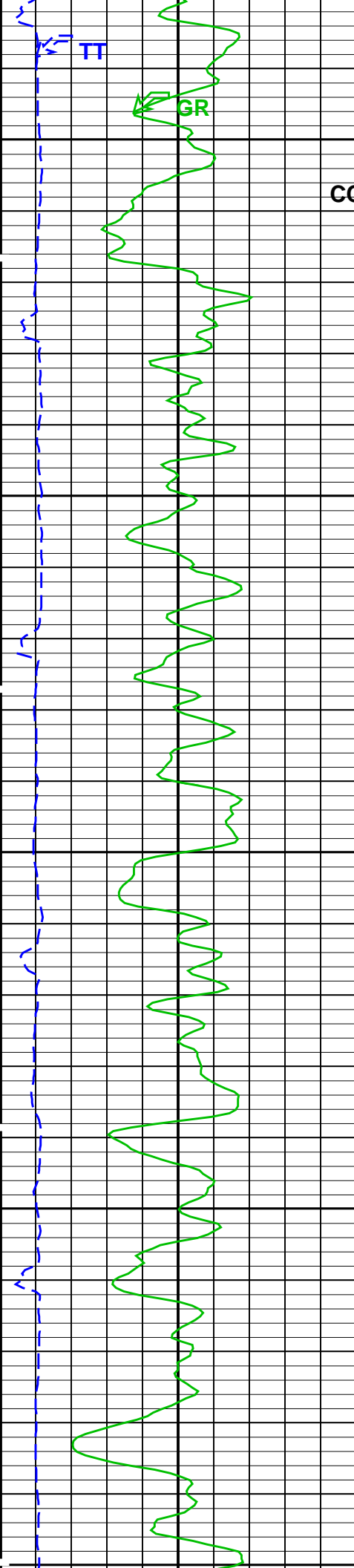


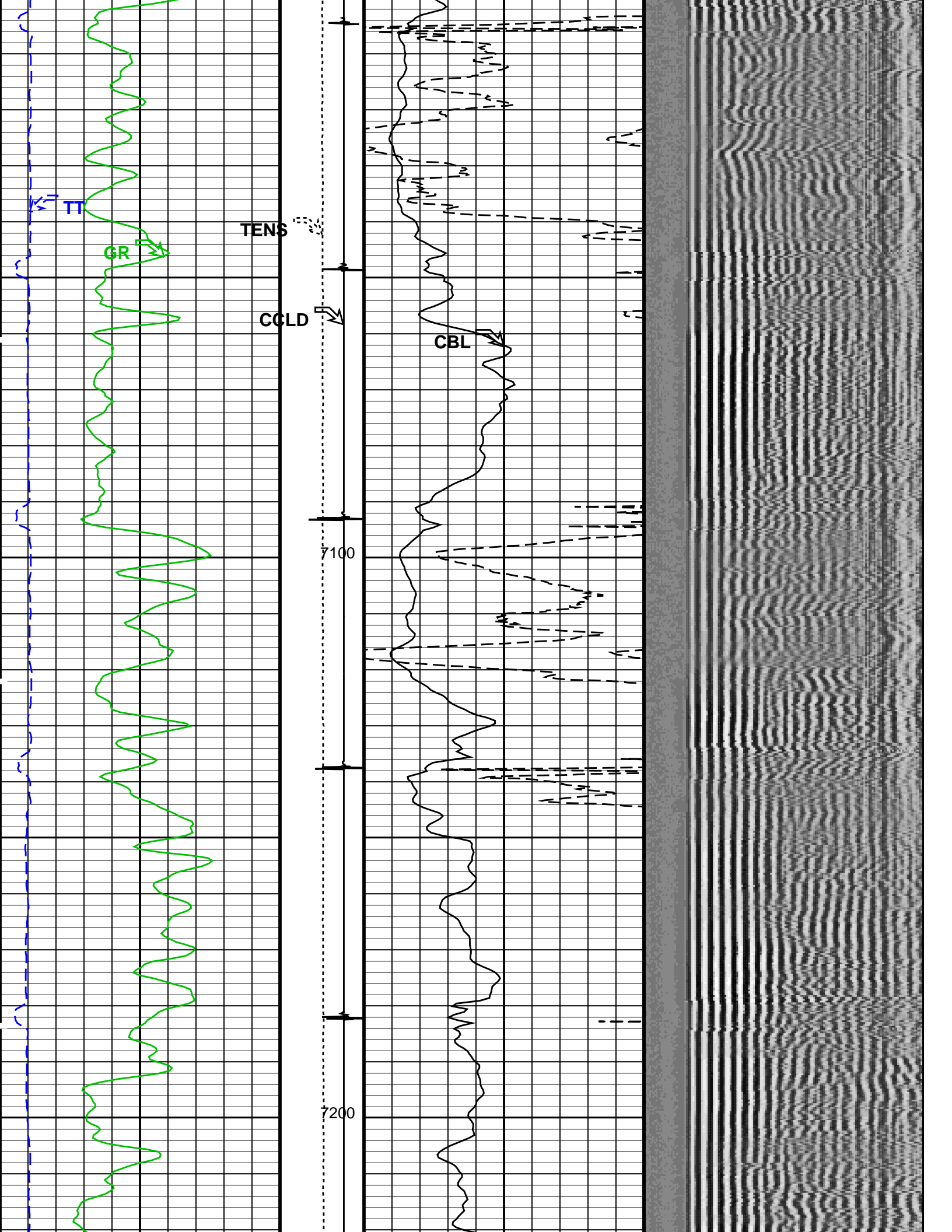


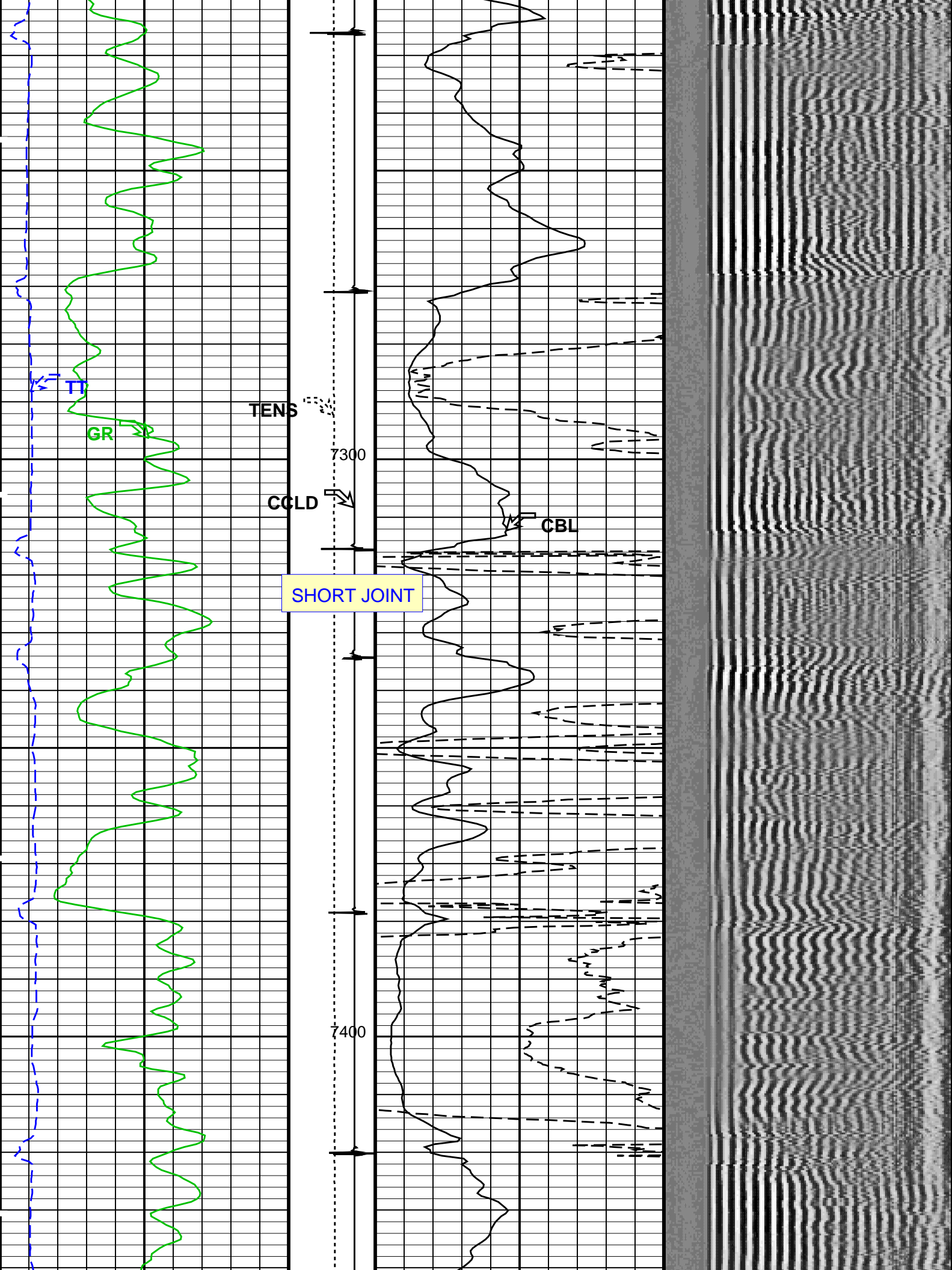


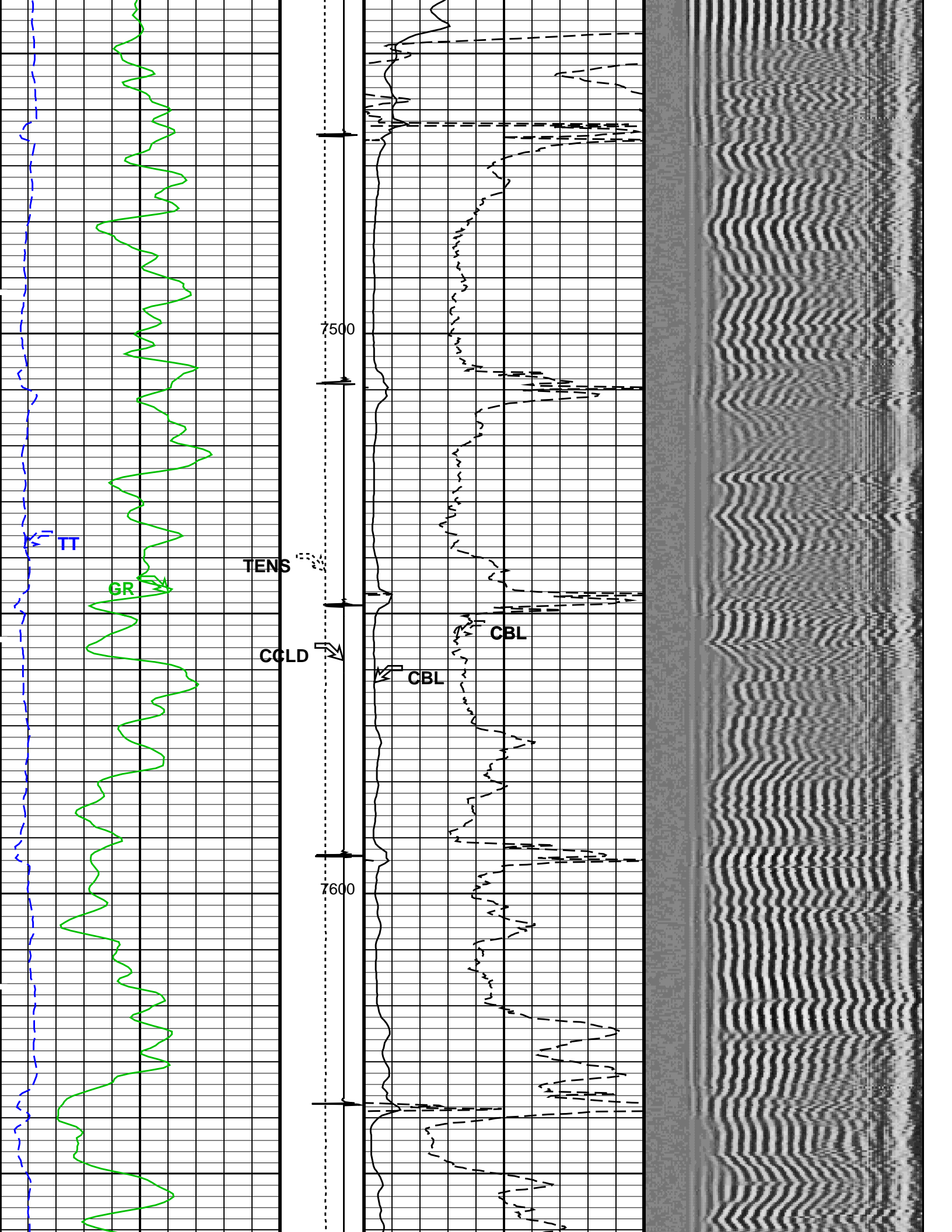


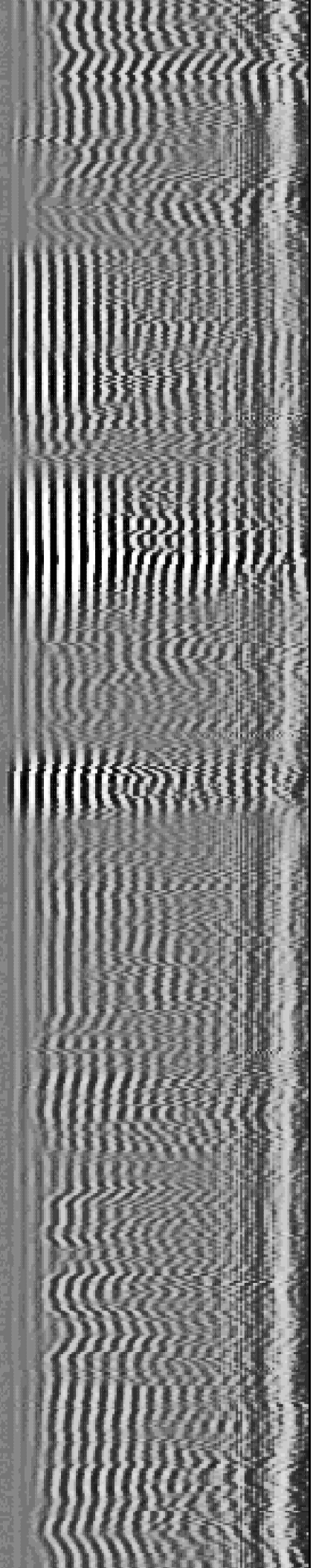
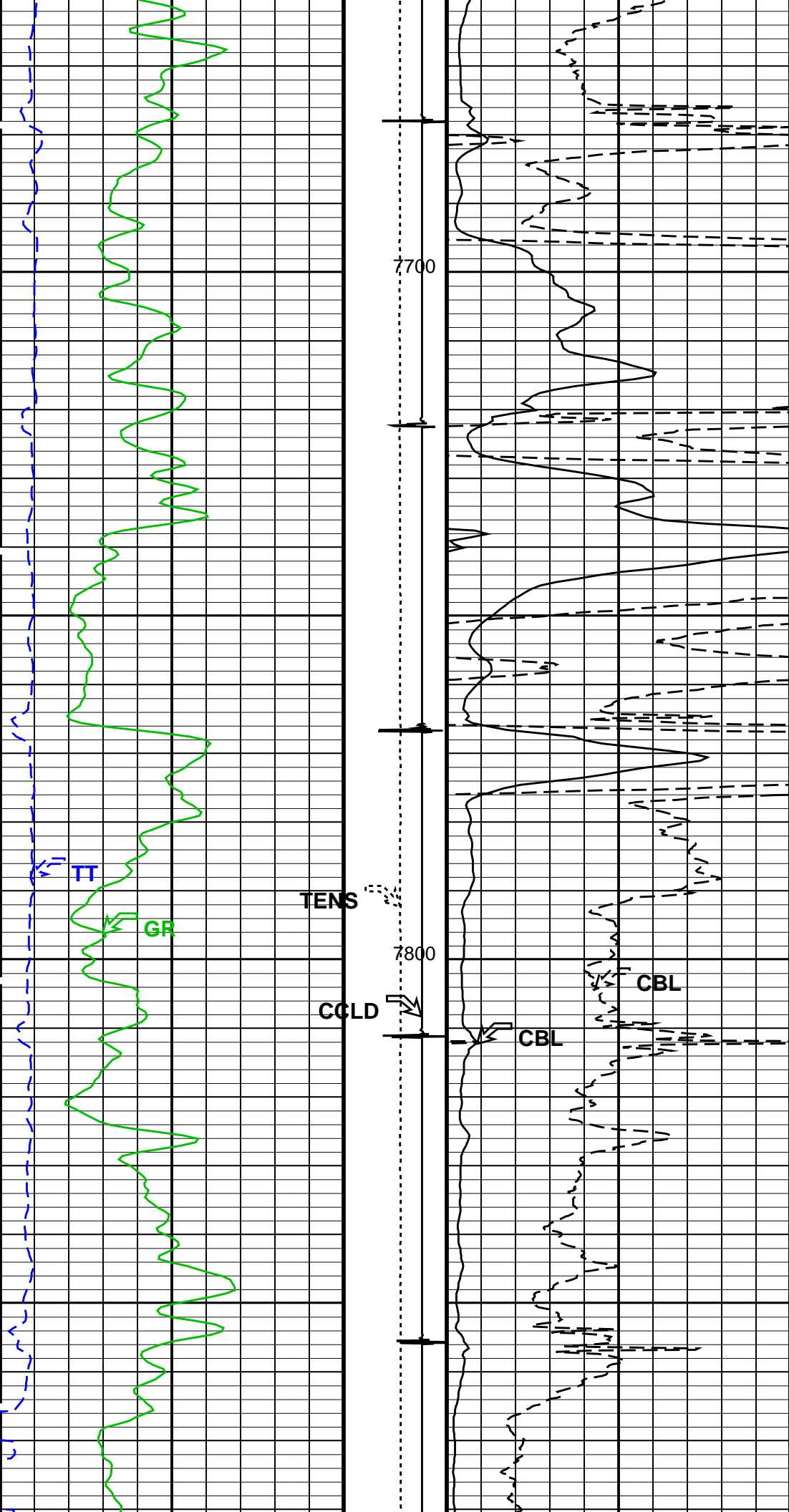


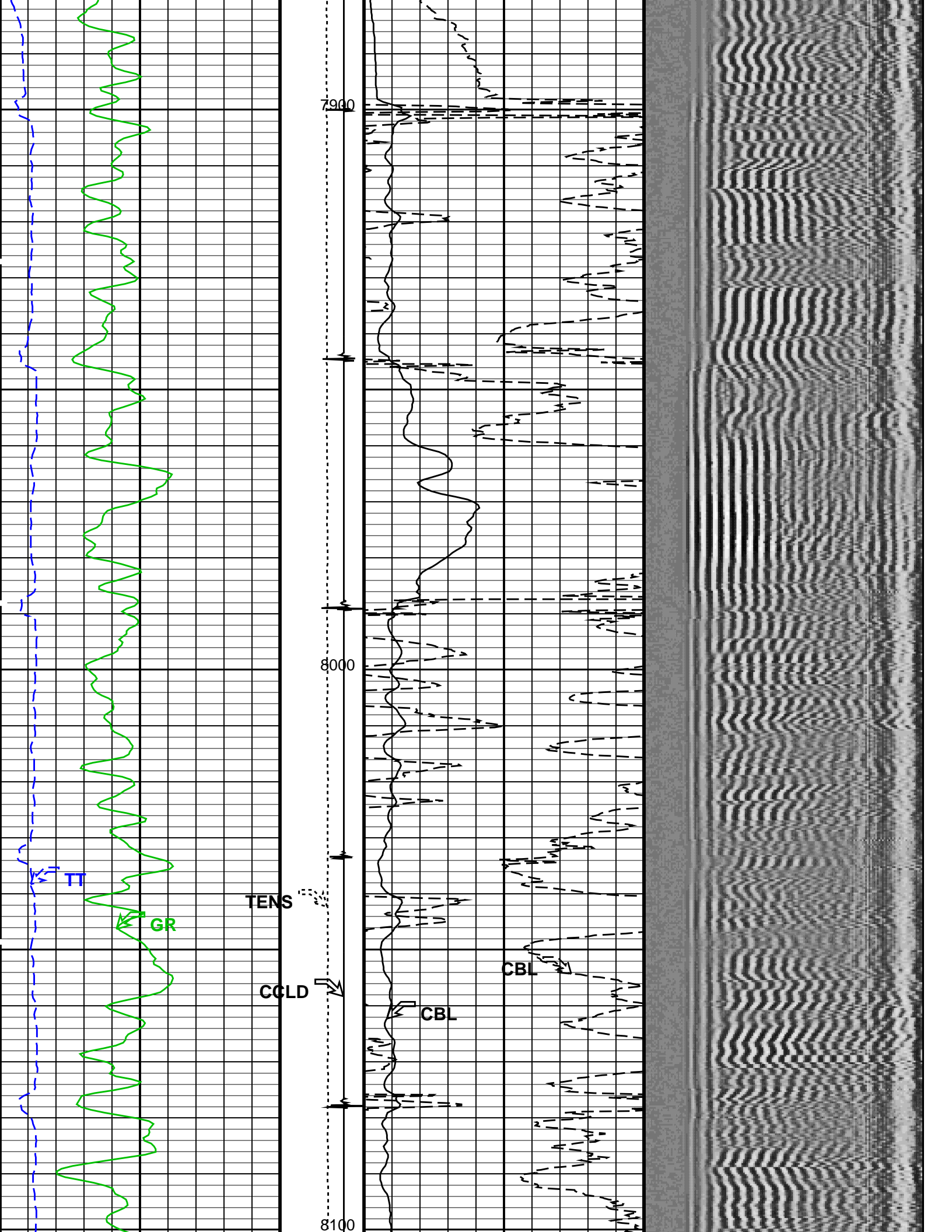


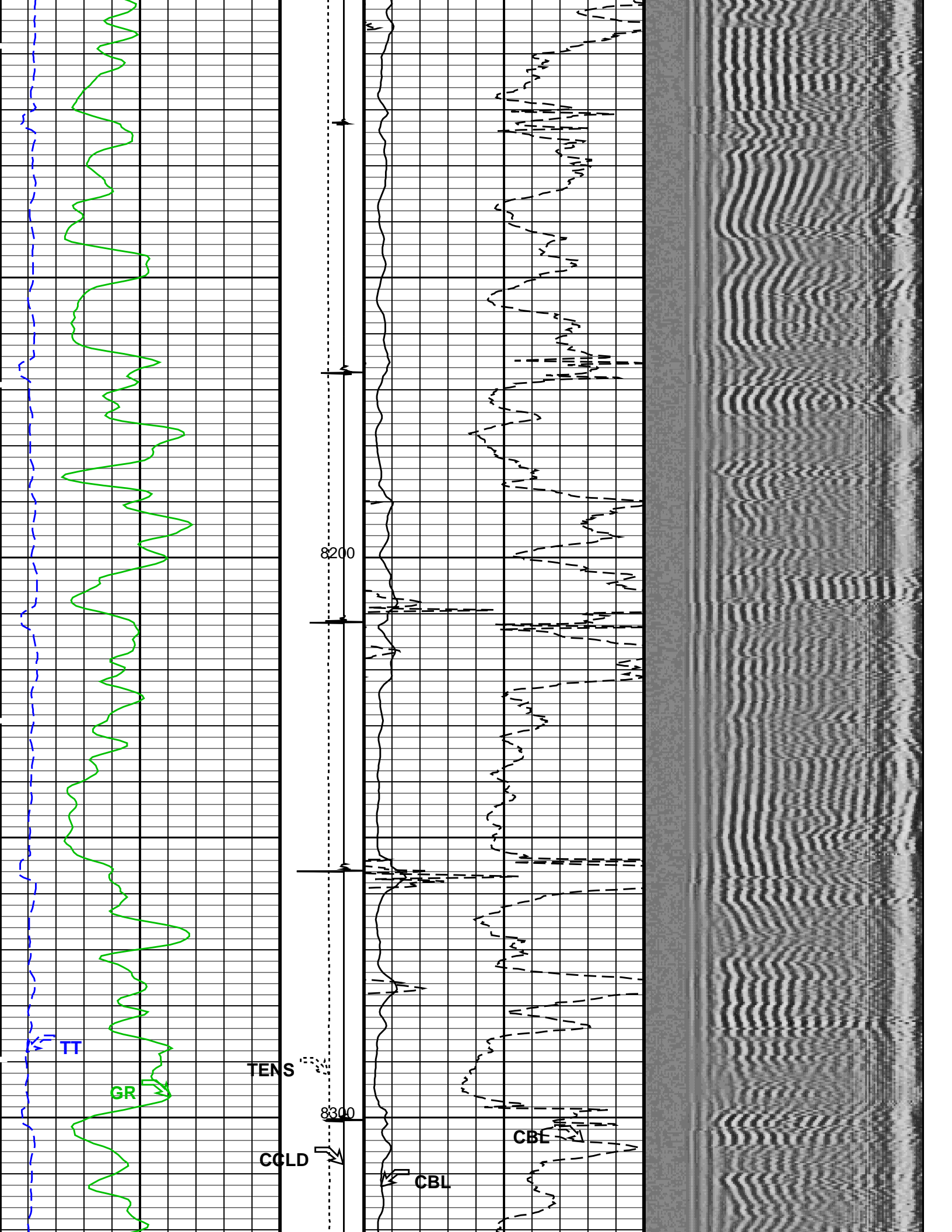


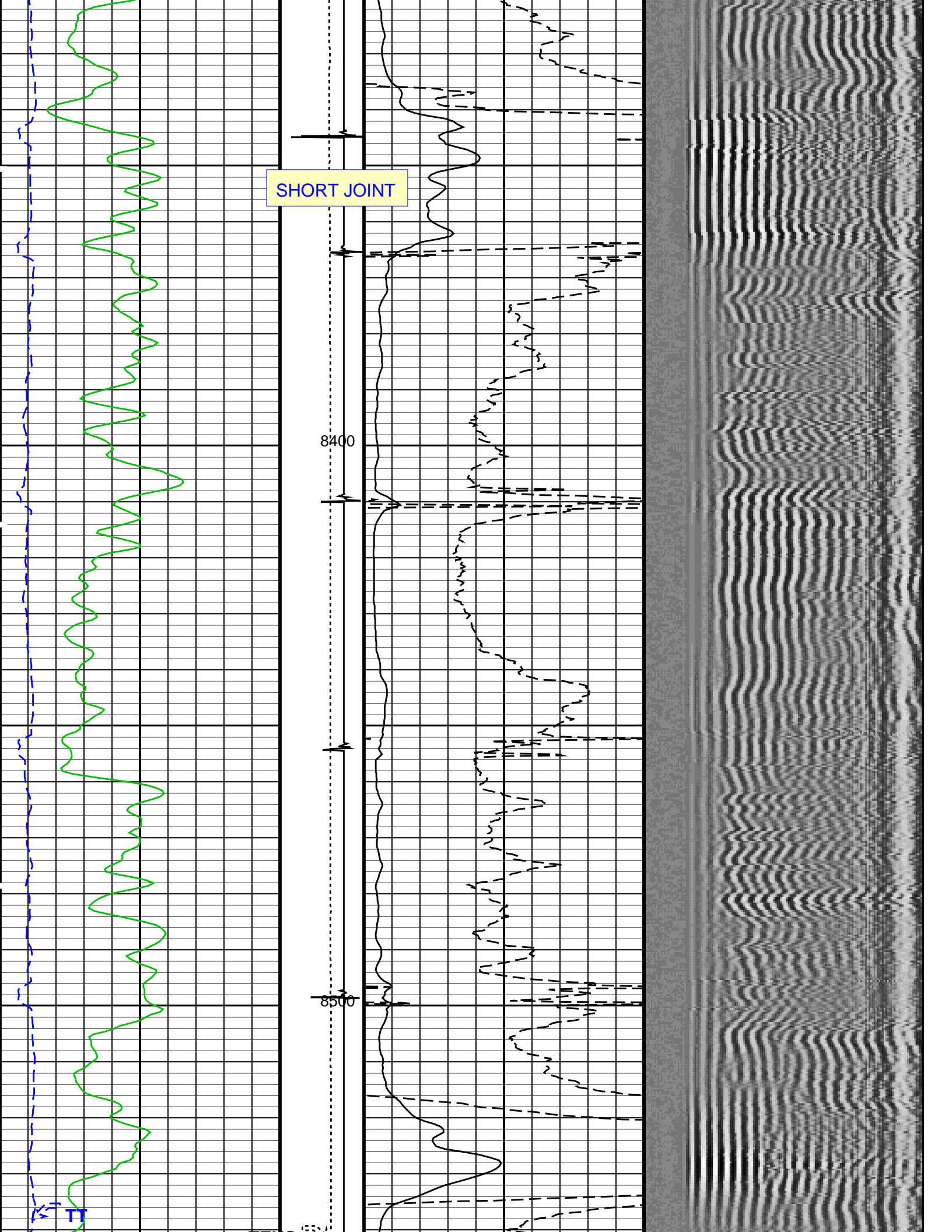


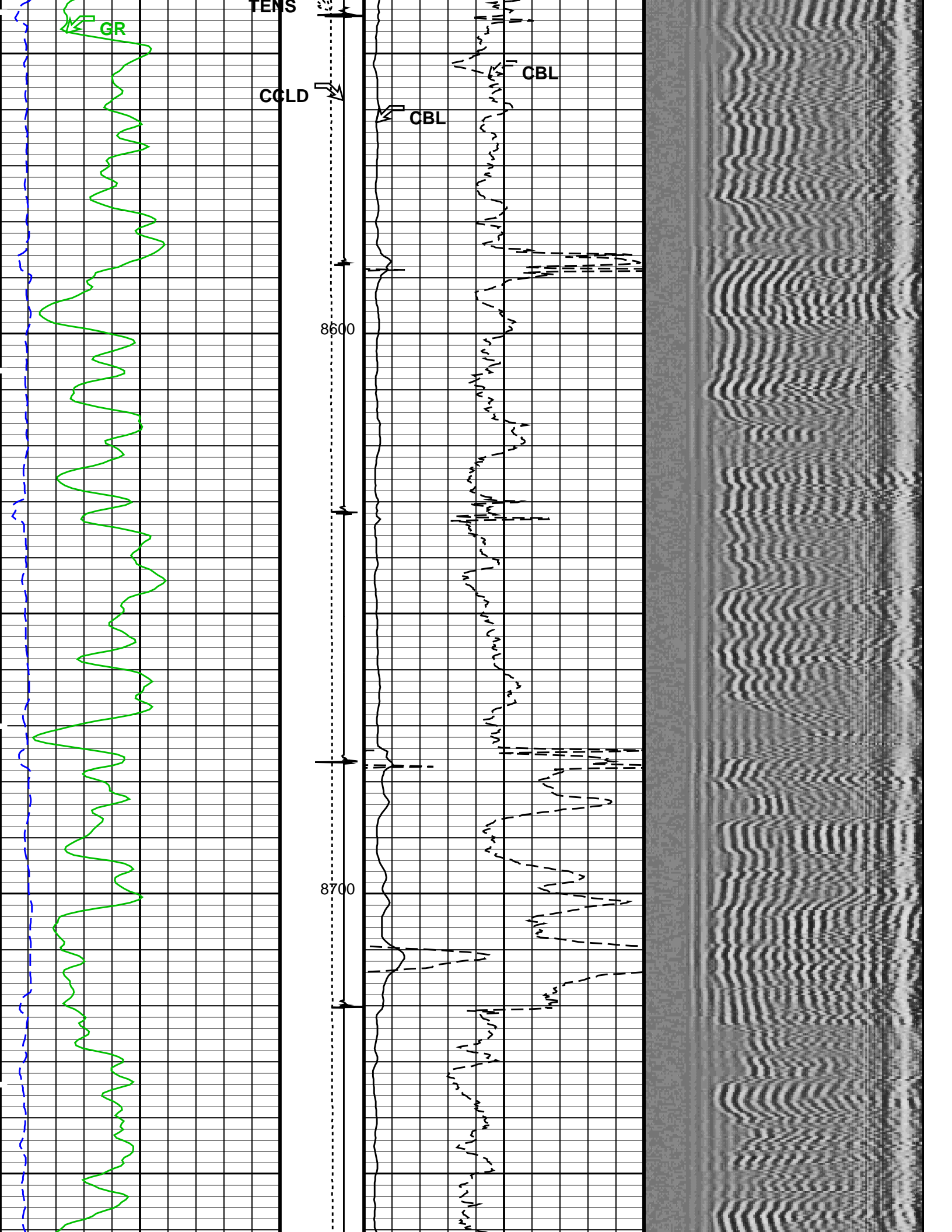


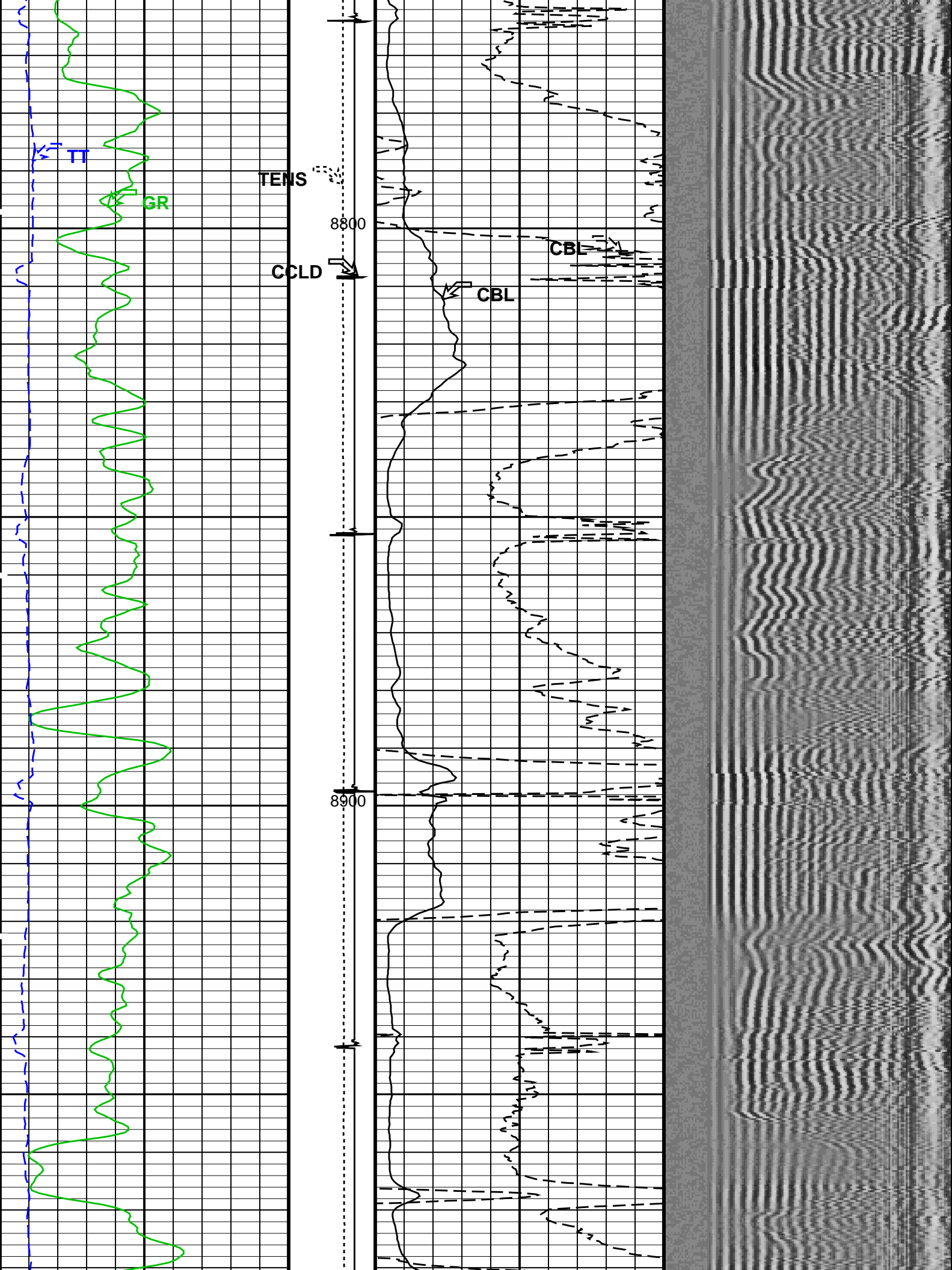


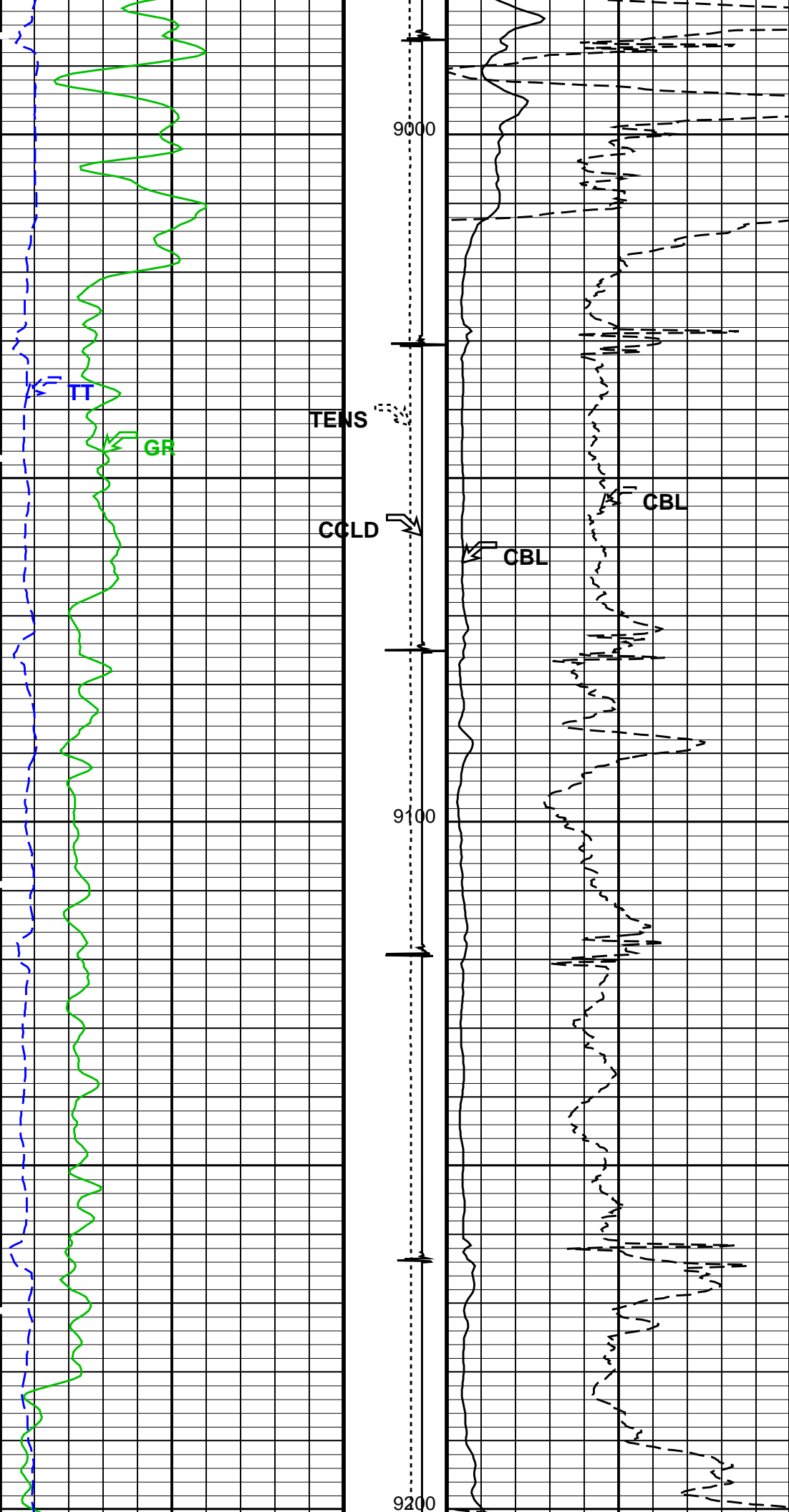


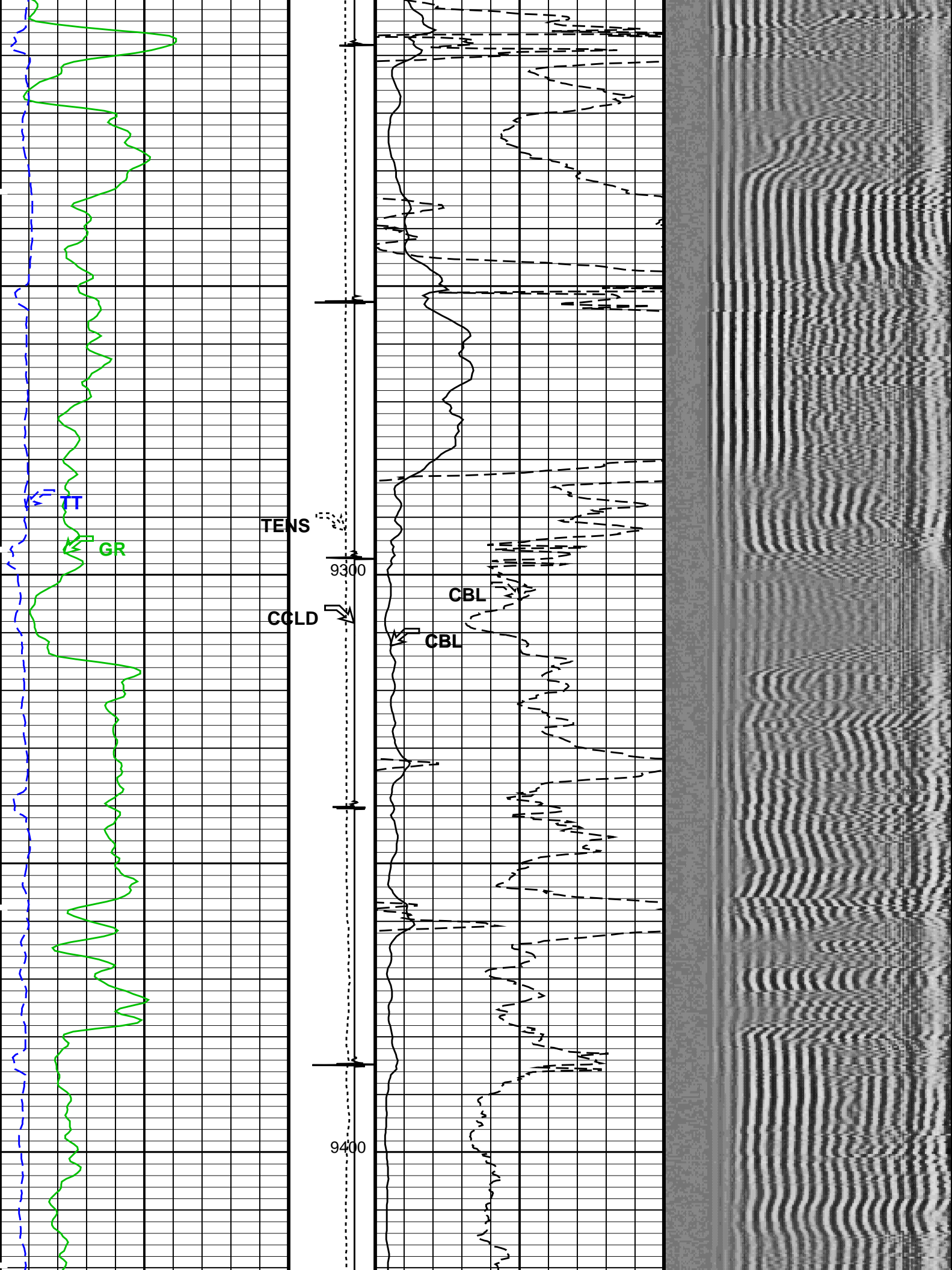


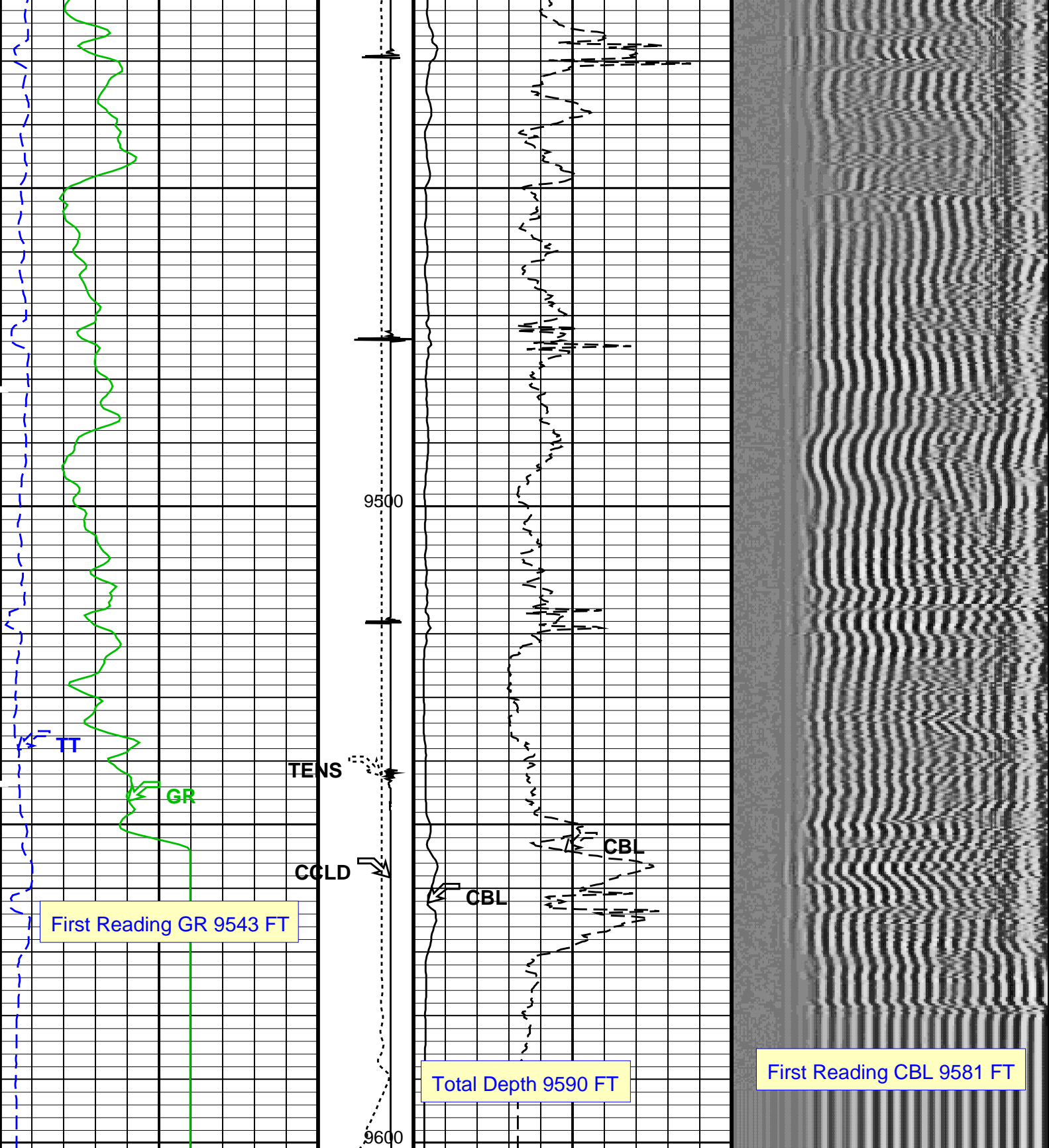












<p>Gamma Ray (GR) (GAPI)</p> <p>0 150</p>	<p>Tension (TENS) (LBF)</p> <p>0 2000</p>	<p>CBL Amplitude (CBL) (MV)</p> <p>0 100</p>	<p>Min Amplitude Max</p> <p>200 VDL VariableDensity (VDL) (US) 1200</p>
<p>Transit Time (TT) (US)</p> <p>260 160</p>	<p>Discriminat ed CCL (CCLD) (V)</p> <p>3 -1</p>	<p>CBL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

PIP SUMMARY

## OP System Version: 19C0-187

SCMT-CB	19C0-187	RST-C	19C0-187
HBMS-B	19C0-187		

## &lt;&lt;&lt;SCMT Cement Evaluation Information Summary&gt;&gt;&gt;

Sonde Serial Number	SCMS-CB 8303		
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	19-NOV-2013		
CBL Correction Factor	0.0743678	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.127925	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.120622		
MAP 3 Correction Factor	0.153607		
MAP 4 Correction Factor	0.159414		
MAP 5 Correction Factor	0.164508		
MAP 6 Correction Factor	0.182220		
MAP 7 Correction Factor	0.190086		
MAP 8 Correction Factor	0.182177		

## 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
PEDE	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	4.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	9590	FT

## Input DLIS Files

DEFAULT SCMT\_RST\_HBMS\_030LUP FN:29 PRODUCER 04-Jan-2014 22:17 9597.0 FT 3.0 FT

## Output DLIS Files

DEFAULT SCMT\_RST\_HBMS\_033PUP FN:32 PRODUCER 05-Jan-2014 00:58

**Schlumberger**

## REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC

Well: ROSE 22-1C (K22W)

## Input DLIS Files

DEFAULT SCMT\_RST\_HBMS\_028LUP FN:27 PRODUCER 04-Jan-2014 22:01 7440.5 FT 7137.0 FT  
DEFAULT SCMT\_RST\_HBMS\_033PUP FN:32 PRODUCER 05-Jan-2014 00:58 9601.0 FT -40.5 FT

## Output DLIS Files

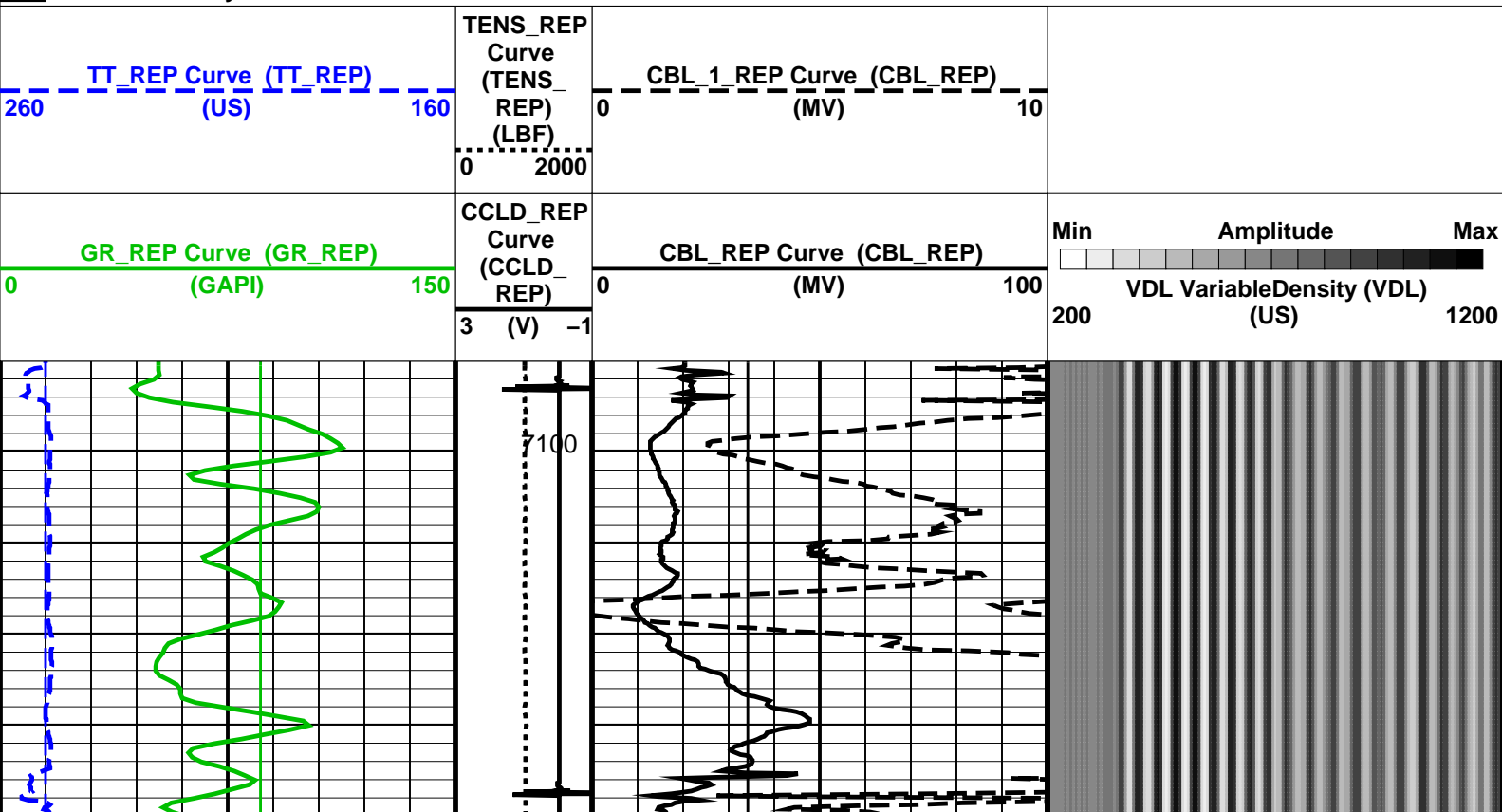
DEFAULT SCMT\_RST\_HBMS\_034PUP FN:33 PRODUCER 05-Jan-2014 01:03 7440.5 FT 7089.5 FT

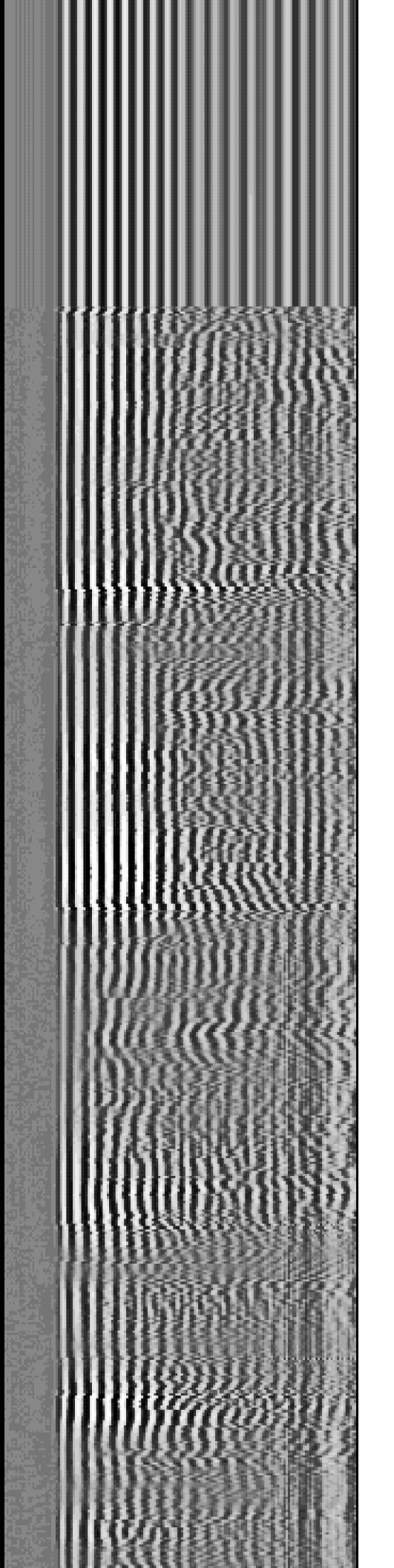
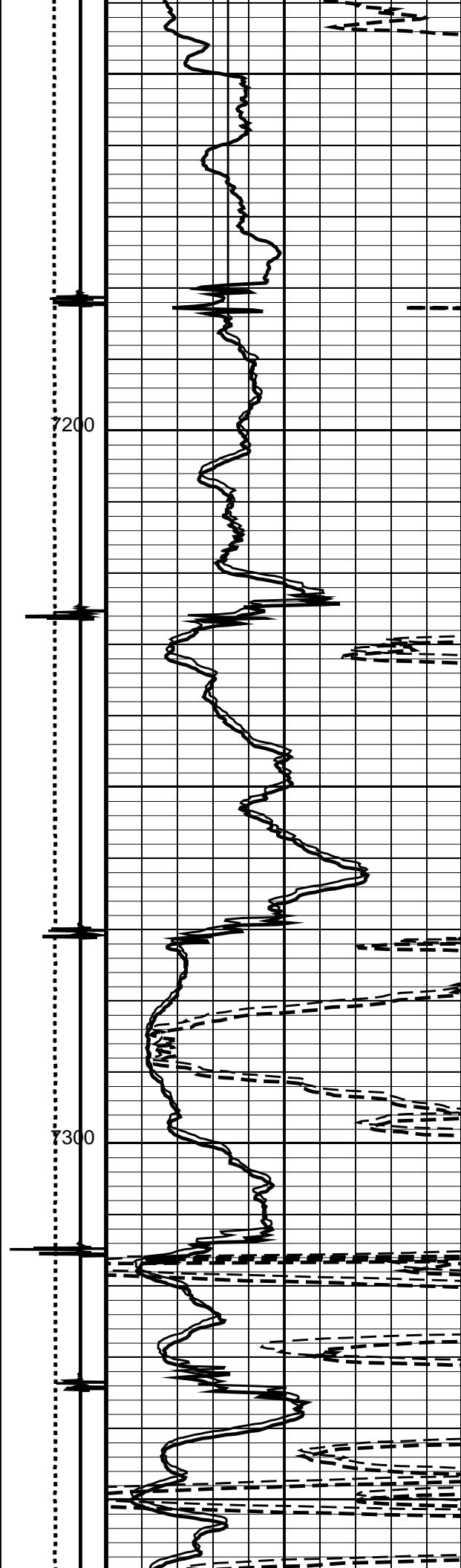
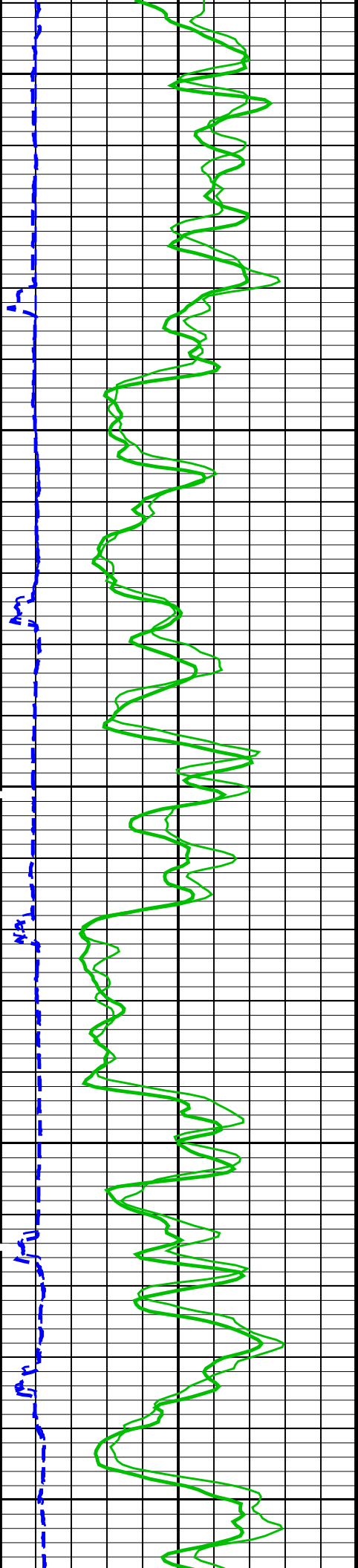
## OP System Version: 19C0-187

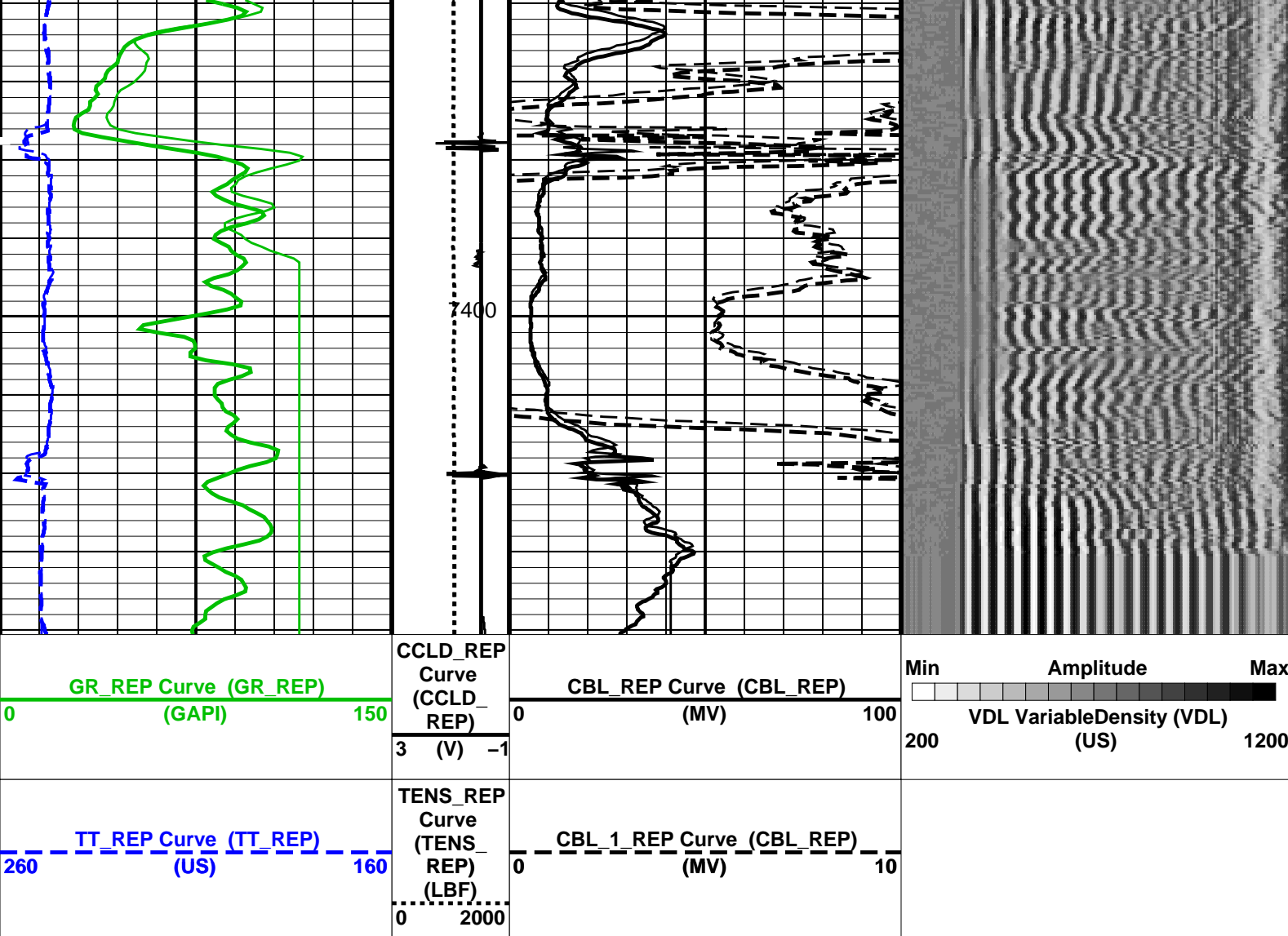
SCMT-CB 19C0-187 RST-C 19C0-187  
HBMS-B 19C0-187

## 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: 05-Jan-2014 01:03

## OP System Version: 19C0-187

SCMT-CB 19C0-187 RST-C 19C0-187  
HBMS-B 19C0-187

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

Sonde Serial Number SCMS-CB 8303

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 19-NOV-2013

CBL Correction Factor 0.0743678

CBL Adjustment Factor (CBAF) 1.0

MAP 1 Correction Factor 0.127925

MAP Adjustment Factor (MPAF) 1.0

MAP 2 Correction Factor 0.120622

MAP 3 Correction Factor 0.153607

MAP 4 Correction Factor 0.159414

MAP 5 Correction Factor	0.164508
MAP 6 Correction Factor	0.182220
MAP 7 Correction Factor	0.190086
MAP 8 Correction Factor	0.182177

## 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	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	9590	FT

## Input DLIS Files

DEFAULT	SCMT_RST_HBMS_028LUP	FN:27	PRODUCER	04-Jan-2014 22:01	7440.5 FT	7137.0 FT
DEFAULT	SCMT_RST_HBMS_033PUP	FN:32	PRODUCER	05-Jan-2014 00:58	9601.0 FT	-40.5 FT

## Output DLIS Files

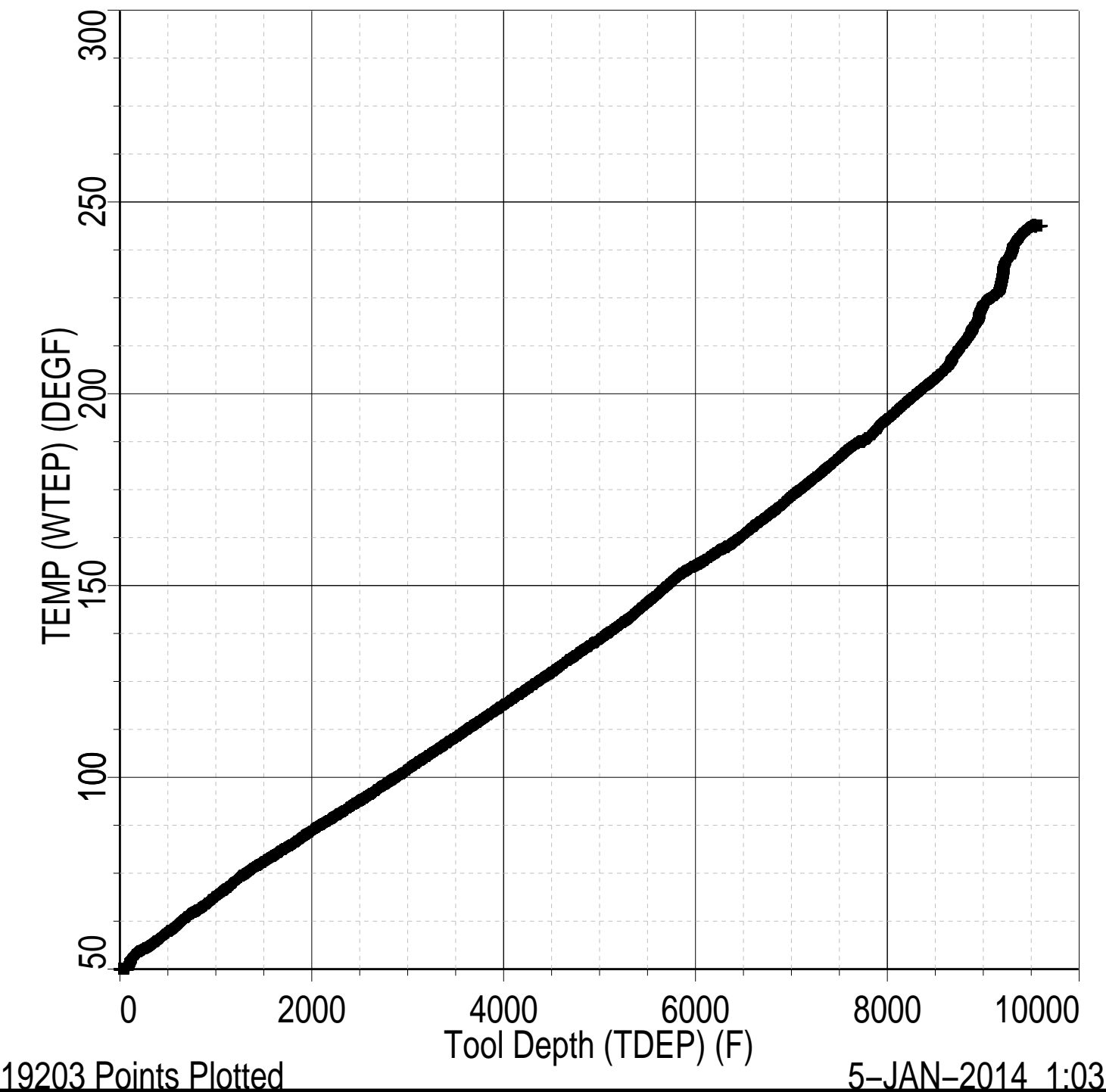
DEFAULT	SCMT_RST_HBMS_034PUP	FN:33	PRODUCER	05-Jan-2014 01:03
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**Schlumberger**

**TEMPERATURE PLOT**

MAXIS Field Log

Index: 9601.0 – -40.5 FT



**Schlumberger**

## HBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC  
Field: MAMM CREEK  
Well: ROSE 22-1C (K22W)  
Run date: 4-Jan-2014

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.37166,TOOL HBMS–BA2955. SENSOR S/N:

37166

280912

12

6646

GR HV Rt

	Rt**0	Rt**1
Rt**0	+.200000000000e+04	+.193000000000e+04

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Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: ROSE 22–1C (K22W)

Run date: 4–Jan–2014

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.2955 S/N:

2955

140513

16

9ABB

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	–.579466850375E+03	+.321000211776E+03	–.769493413393E+02
	Tt**3	Tt**4	Tt**5
Tt**0	+.118371810108E+02	–.654027317127E+00	0.0

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Client:	ENCANA OIL & GAS (USA) INC	Tool:	PSP
Field:	MAMM CREEK	Sub Type:	PBMS
Well:	ROSE 22-1C (K22W)	Sensor:	CQG
Run date:	4-Jan-2014		

PBMS Quartz Gauge type F

Sonde Serial NB	COEFFICIENTS FOR CQG PBMS-B.2955 S/N:
Sensor Serial NB	2955
Calib Date ddmmyy	140513
Matrix Size	66
Coeff CRC	AD6E

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+.805218055799E+04	+.230687803777E-01	+.120020876821E-07
Fc**1	-.107970514637E+01	-.131245085272E-04	-.102678735701E-09
Fc**2	+.111466223414E-05	+.524200534425E-10	+.949904926223E-15
Fc**3	+.255809900188E-11	+.160726360322E-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	-.772560939667E-10	-.145379238115E-14	-.218737246914E-19
Fc**1	+.968642492374E-16	+.223810216552E-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	2955
Calib Date ddmmyy	140513
Matrix Size	66
Coeff CRC	EC8A

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+.120725065588E+03	-.313379211795E-03	+.708634488020E-08

Fb**1	−.596235012256E−02	+ .182626448637E−07	+ .104369551702E−12
Fb**2	−.295513003186E−07	+ .341136223414E−12	−.998721617444E−18
Fb**3	−.375208992867E−12	+ .712560466778E−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	+ .136541410168E−12	−.403343086990E−17	−.830542374631E−21
Fb**1	−.618398112617E−18	+ .429129395353E−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 2955  
 Calib Date ddmmyy 140513  
 Matrix Size 16  
 Coeff CRC 6C01

Clock Freq Coeff

	(Fb'−Fc')**0	(Fb'−Fc')**1	(Fb'−Fc')**2
(Fb'−Fc')**0	+ .310812532328E+05	+ .224728840165E−02	+ .742962292518E−06
	(Fb'−Fc')**3	(Fb'−Fc')**4	(Fb'−Fc')**5
(Fb'−Fc')**0	−.673865003325E−10	−.911707425039E−16	−.961889742081E−20

PBMS Quartz Gauge type F

Sonde Serial NB :  
 Sensor Serial NB 2955  
 Calib Date ddmmyy 140513  
 Matrix Size 16  
 Coeff CRC D6FA

Clock Temp Coeff

	(Fb'−Fc')**0	(Fb'−Fc')**1	(Fb'−Fc')**2
(Fb'−Fc')**0	+ .122085335110E+03	−.602096613375E−02	−.167139647989E−07
	(Fb'−Fc')**3	(Fb'−Fc')**4	(Fb'−Fc')**5
(Fb'−Fc')**0	−.105604526136E−11	−.109719083283E−15	+ .100037226713E−19



## MASTER CALIBRATION

### MAXIS Field Log

#### Slim Cement Mapping Tool, 1–11/16 OD / Equipment Identification

##### Primary Equipment:

Slim Cement Mapping Xmitter Electronics

Slim Cement Mapping Sonde

Slim Cement Mapping Cartridge

SCMX – CA

SCMS – CB

SCMC – CA










8303

8120

##### Auxiliary Equipment:

Slim Electronics Cartridge Housing

SECH – CA

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			938.0	Master			994.8
	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			781.2	Master			752.8
	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			729.4	Master			658.5
	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			631.3	Master			658.7
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	CBL Amplitude Plus MV		Value				
Master			1291				
	1000 (Minimum)	1350 (Nominal)	1700 (Maximum)				
Master: 19–Nov–2013 13:46							

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

Well: **ROSE 22–1C (K22W)**

Field: **MAMM CREEK**

County: **GARFIELD**



State: **COLORADO**

SLIM CEMENT MAPPING LOG

CBL-VDL

GAMMA RAY-CCL