

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER 30-4A (O19EB)

Field: MAMM CREEK

County: GARFIELD State: COLORADO

SLIM CEMENT MAPPING LOGG
CBL – VDL
GR-CCL

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 622 FSL & 1618 FEL

Well: SHIDELER 30-4A (O19EB)

Company: ENCANA OIL & GAS (USA) INC

LOCATION	
SHL: 622 FSL & 1618 FEL BHL: 43 FNL & 587 FWL	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 _____

API Serial No. 05-045-21840-000C

Section 19

Township 7S

Range 92W

	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	27-Apr-2013		
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Run Number	1		
Depth Driller	9527 ft		
Schlumberger Depth	9433 ft		
Bottom Log Interval	9424 ft		
Top Log Interval	60 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	60 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	7341 ft		
To	9527 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade			
From	22 ft		
To	9503 ft		
Maximum Recorded Temperatures	256 degF		
Logger On Bottom	27-Apr-2013	21:30	
Unit Number	391	GRAND JUNCTION	
Recorded By	JASON BARRY		
Witnessed By	BILLY MYERS		

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: 14-MAR-2013 10:41:08

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:	20-FEB-2011	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:	4		
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 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	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	
MAXIMUM RECORDED TEMPERATURE= 256 DEGF	
MAXIMUM RECORDED PRESSURE= 3828 PSIA	
ENTRANCE TIME= 20:45	

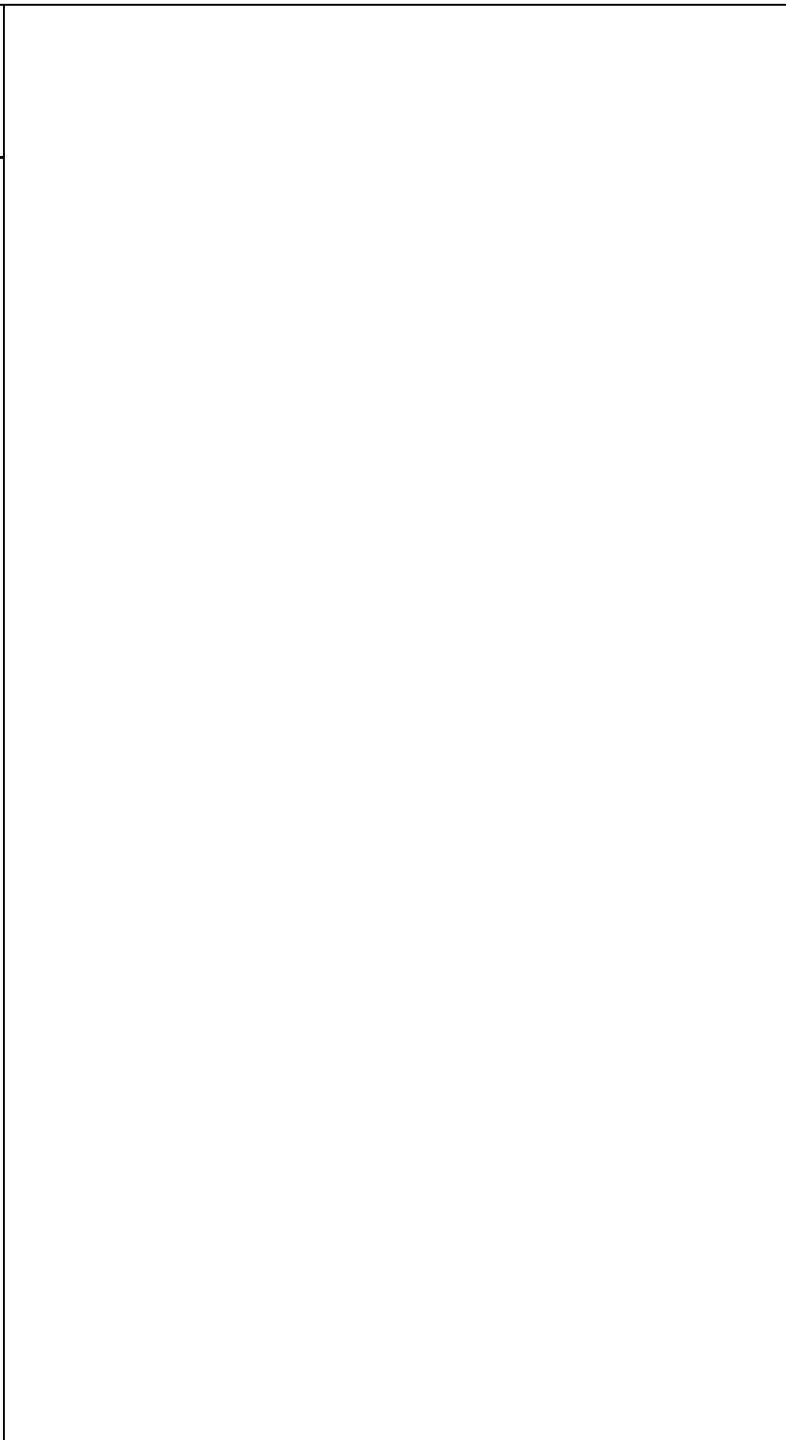
TIME ON BOTTOM= 21:30	
EXIT TIME= 00:15	
SHORT JOINTS: 6024 FT & 7012 FT	
MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE	
EXPECTED CBL AMP IN FREE PIPE = 0MV	
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGR COMPANY	
CREW: KBUNTING JBARRY KJOHNS JMANN	

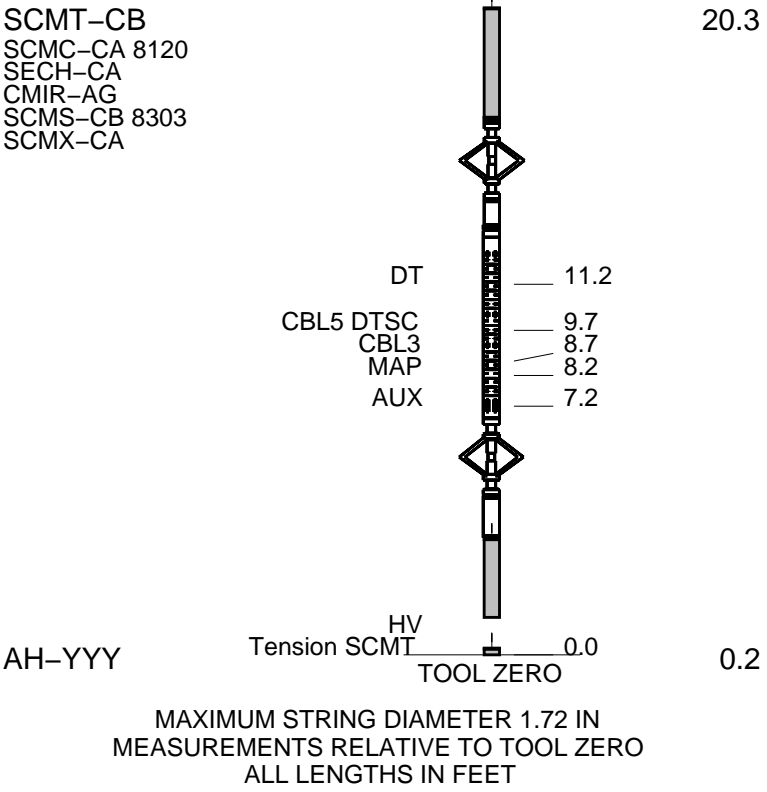
RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT	
WITM-A PSC_16MHZ	

DOWNHOLE EQUIPMENT	
MH-22	53.4
MH-22	
Detail MT	
AH-38	51.8
TelStatus	
PSPT	51.5
CTEM	
PSC-A	
PSPT-B	
PSTC-A	
PBMS-B 928	47.8
CQG_F_Mano	
RTD_Thermometer	
GR	
Well_Temp	44.8
CCL	44.5
CQG Manom	
CCL	44.0
PBMS	43.3
PBMS PSTC	
RST-C	43.3
RSCH-A 469	
RSC-E	
RSS-A 461	
RSXH-A 493	
RSX-E	
RSC-A Far	34.2
RSC-A PNG	
RSC-A Nea	
RSX-A PNG	33.7





Schlumberger

MAIN PASS CBL VDL

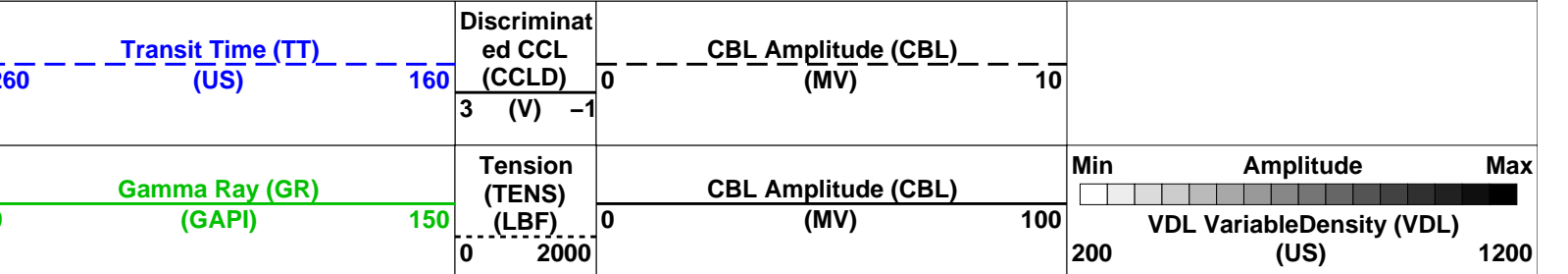
MAXIS Field Log

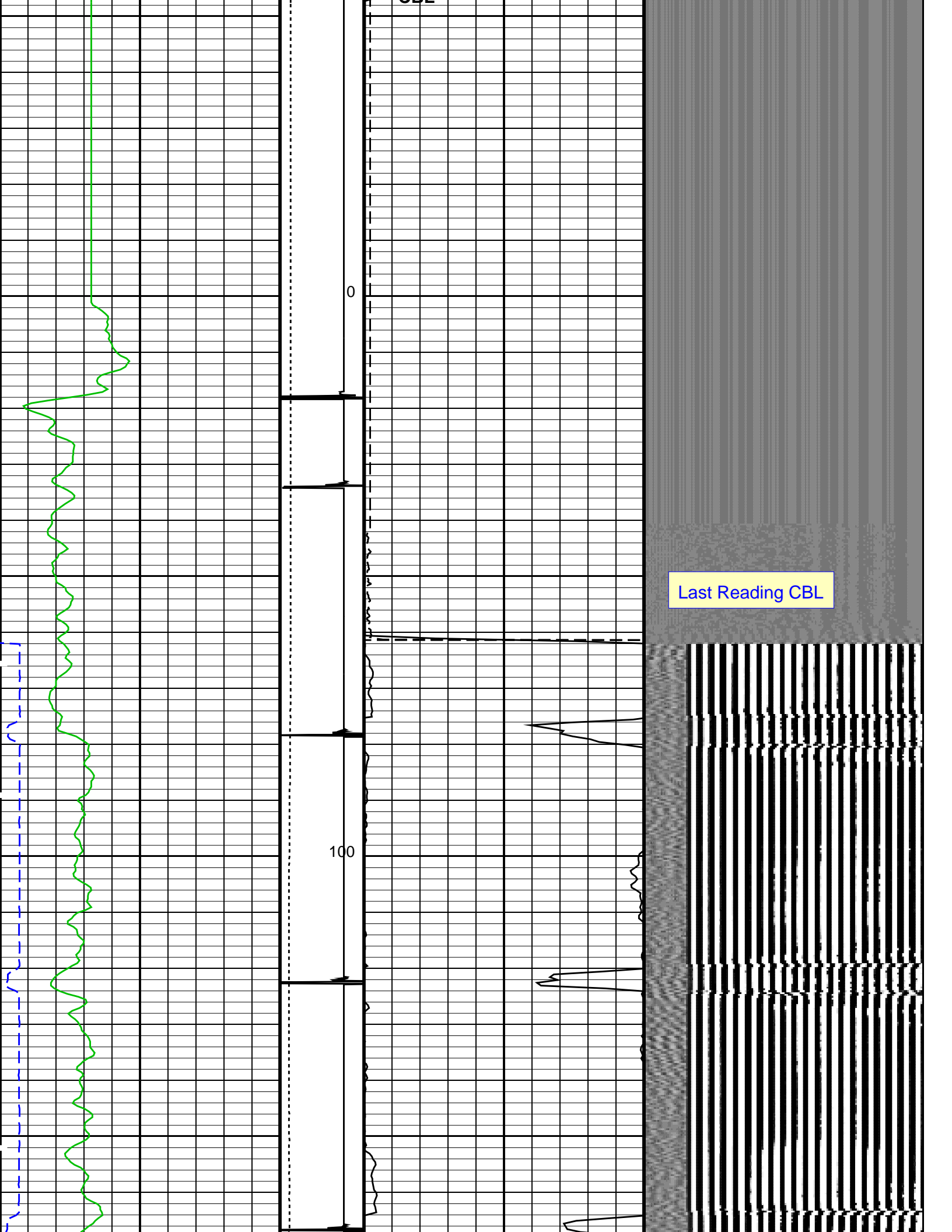
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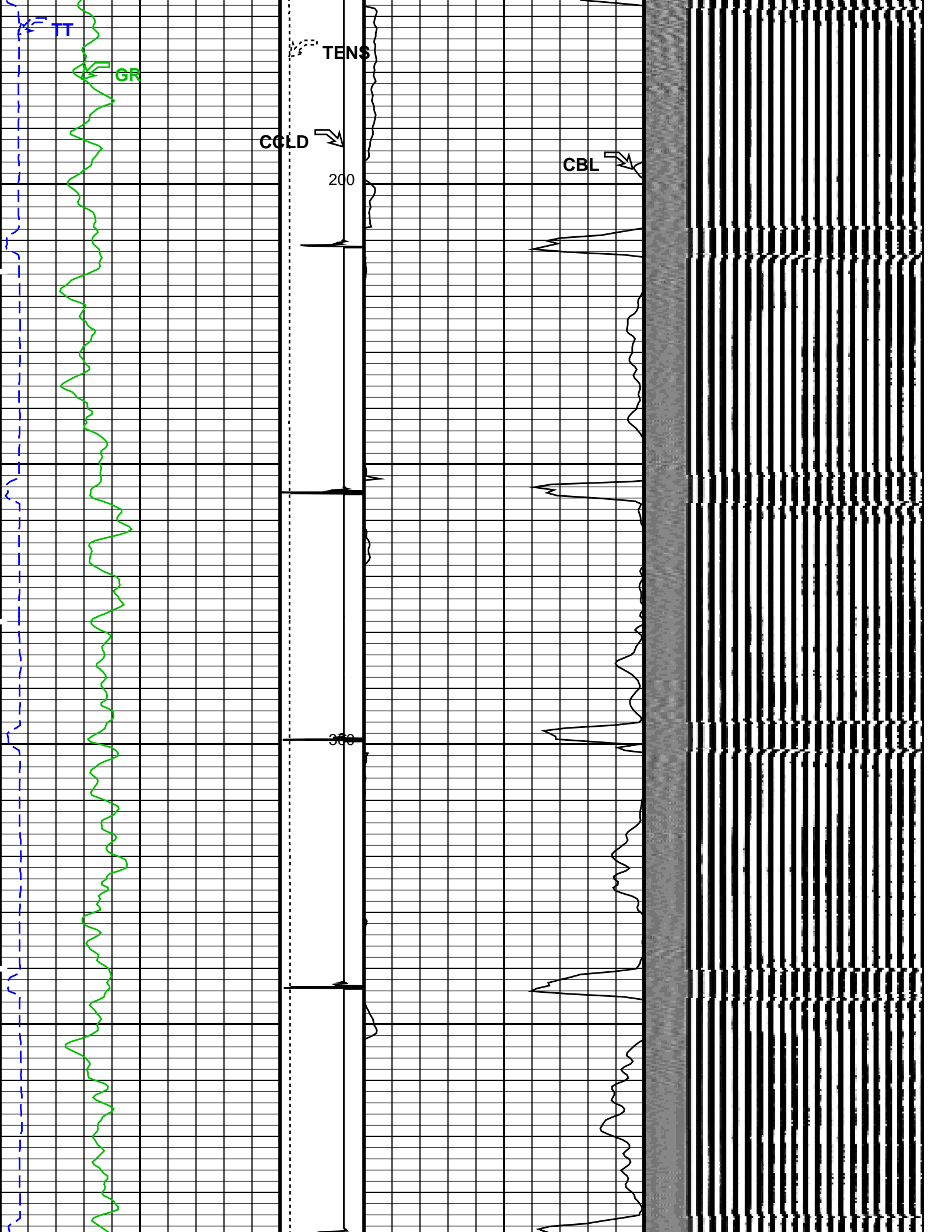
Input DLIS Files						
DEFAULT	SCMT_RST_PSP_037LUP	FN:35	PRODUCER	27-Apr-2013 21:46	9440.0 FT	-8.0 FT
Output DLIS Files						
DEFAULT	SCMT_RST_PSP_042PUP	FN:40	PRODUCER	28-Apr-2013 00:29	9446.0 FT	-54.0 FT
OP System Version: 19C0-187						
SCMT-CB	SRPC-5214-H2-2012-OP1	RST-C		SRPC-5214-H2-2012-OP1		
PSPT	SRPC-5214-H2-2012-OP1					

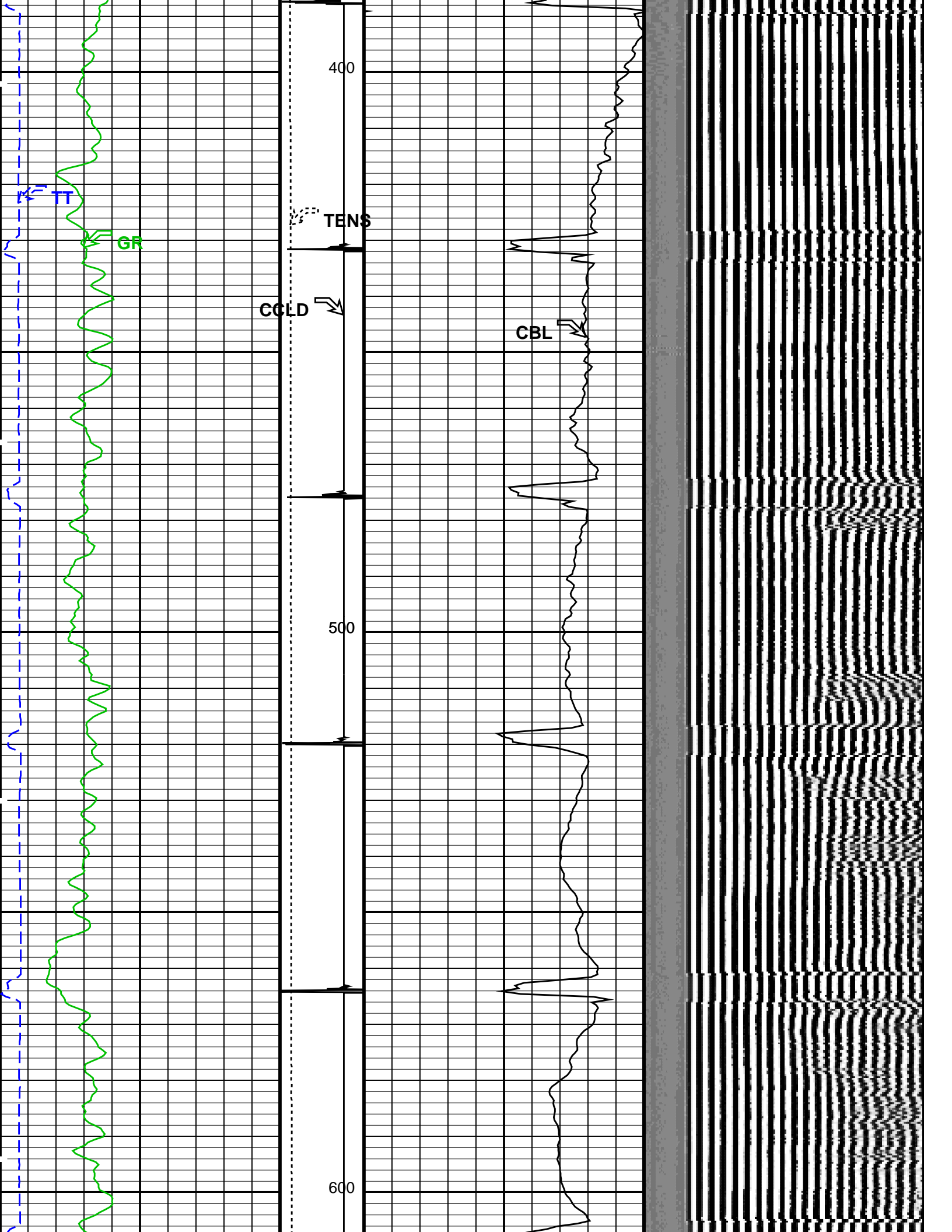
PIP SUMMARY

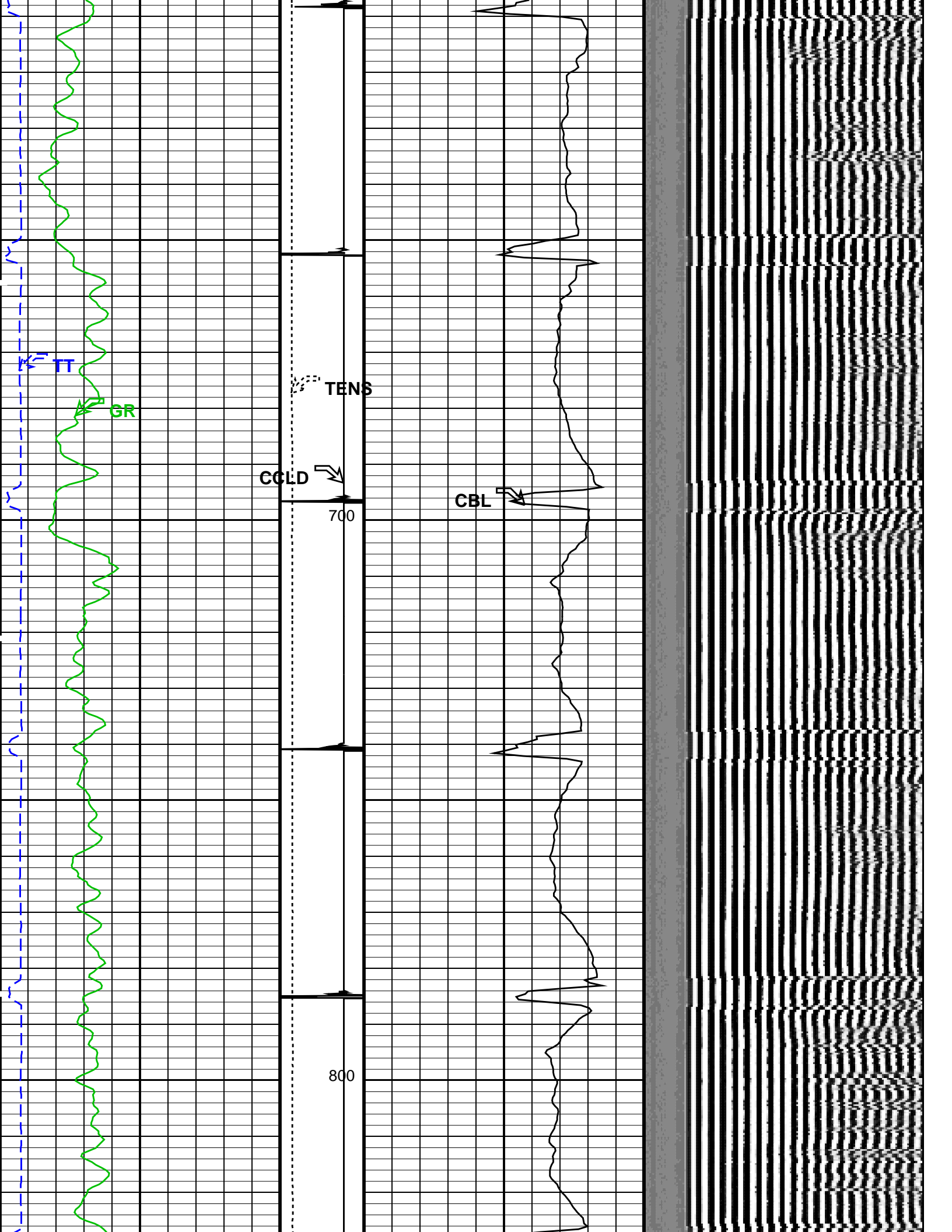
☒ Time Mark Every 60 S

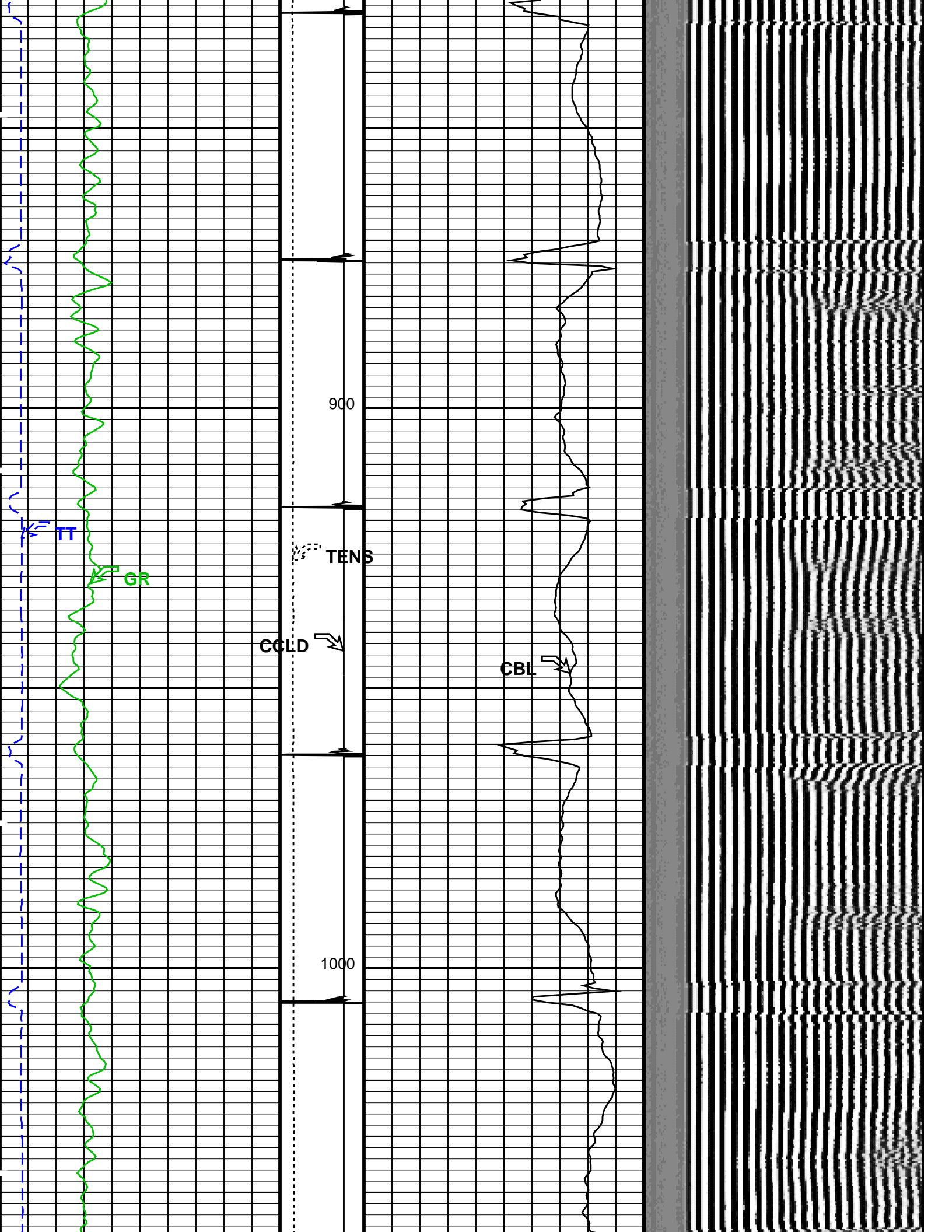


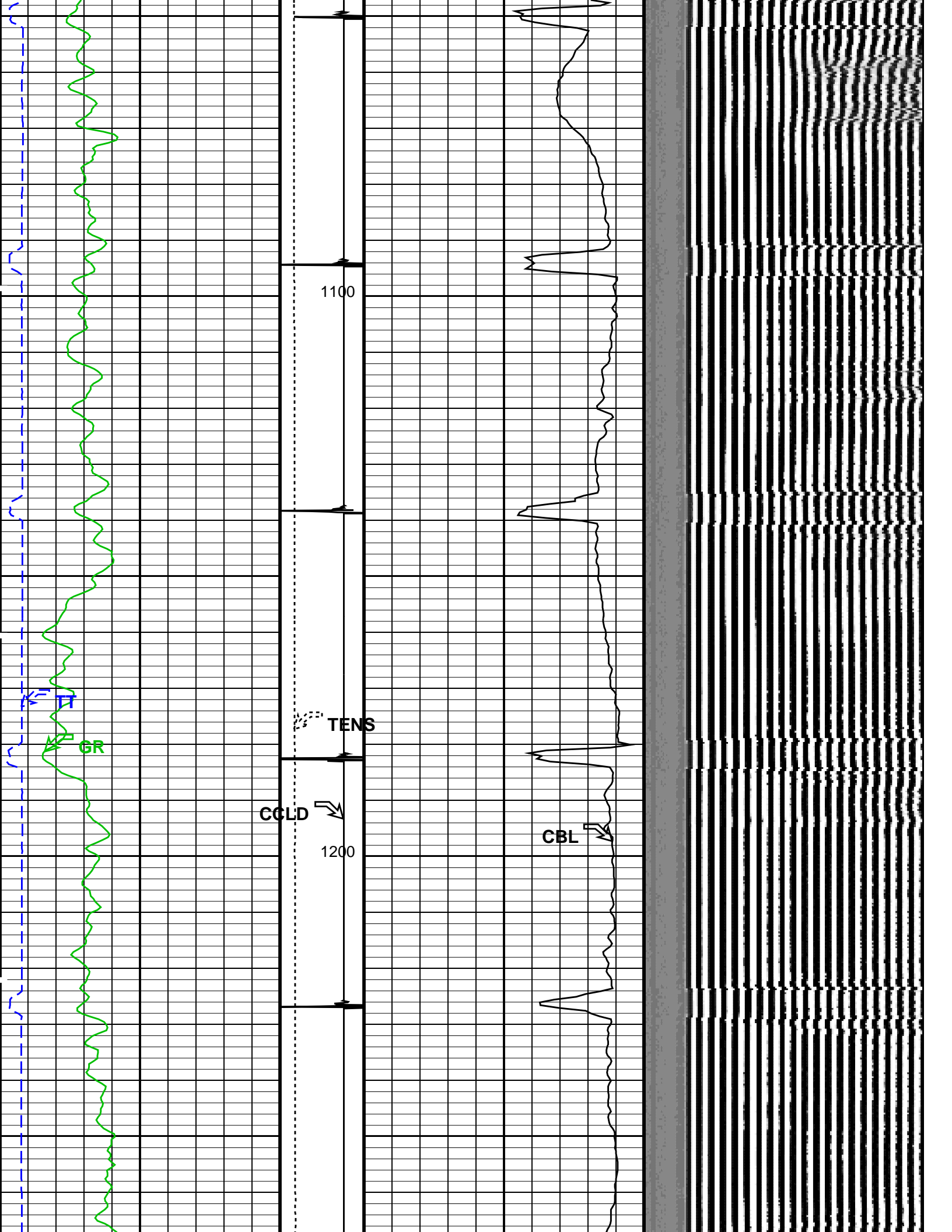


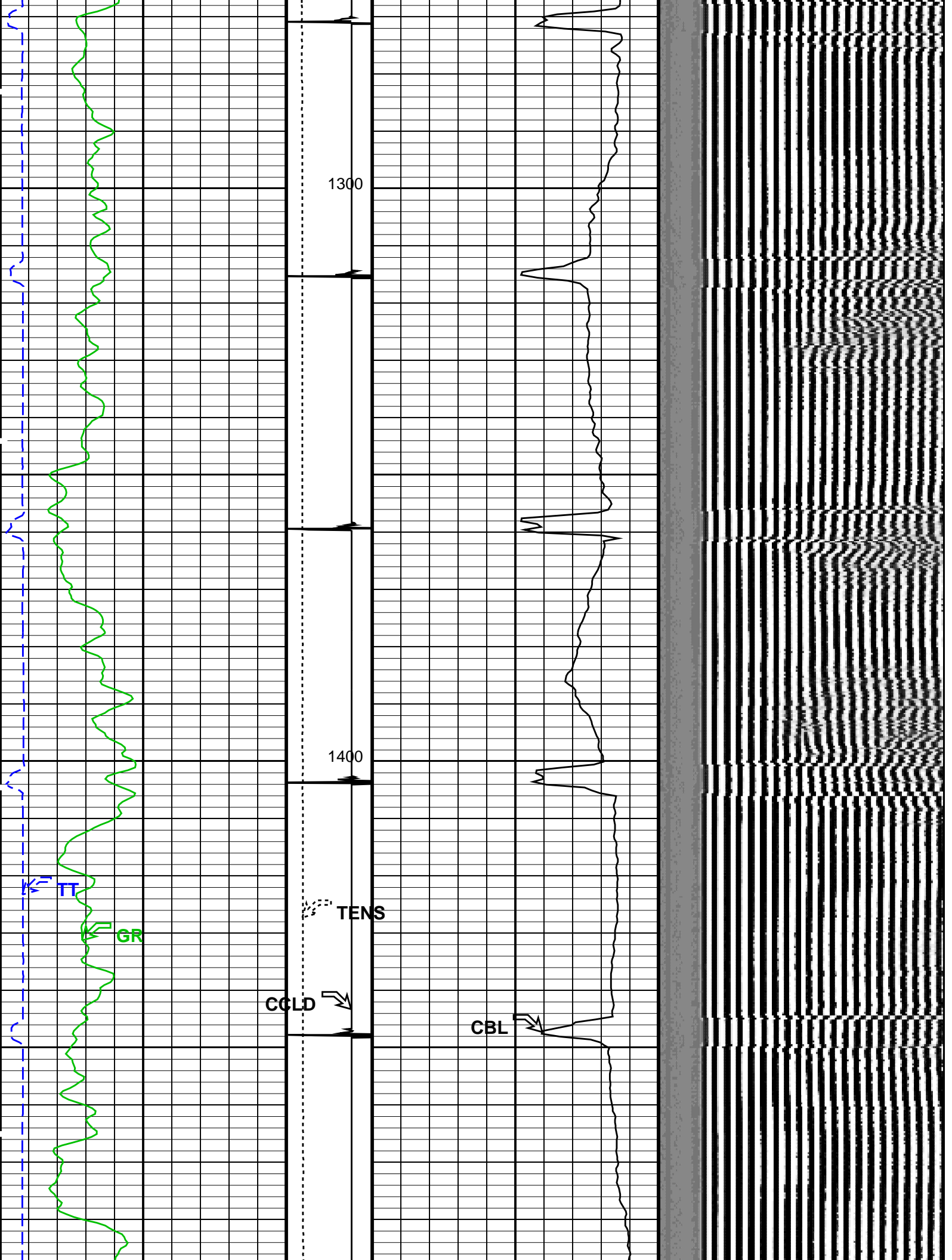


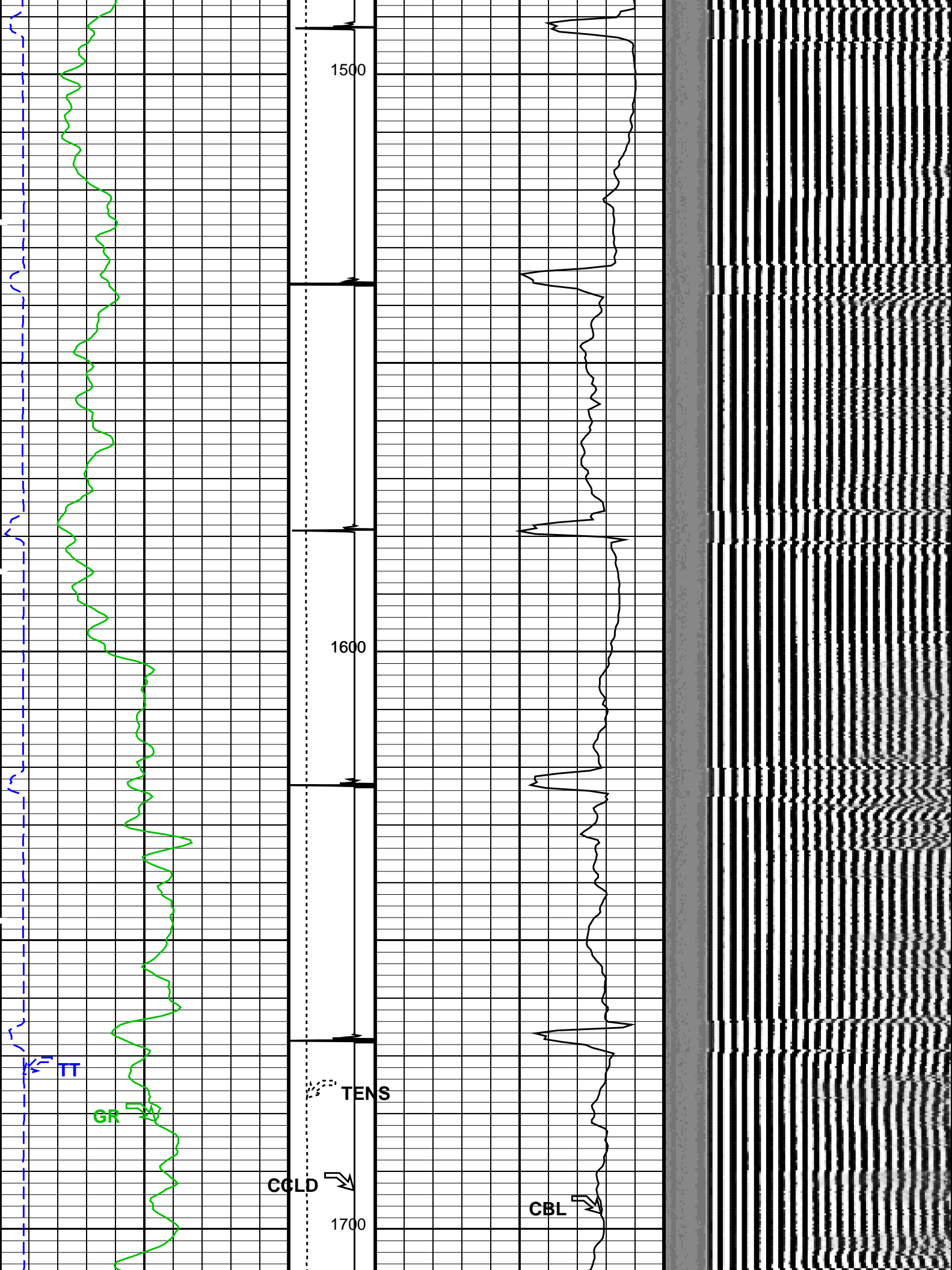


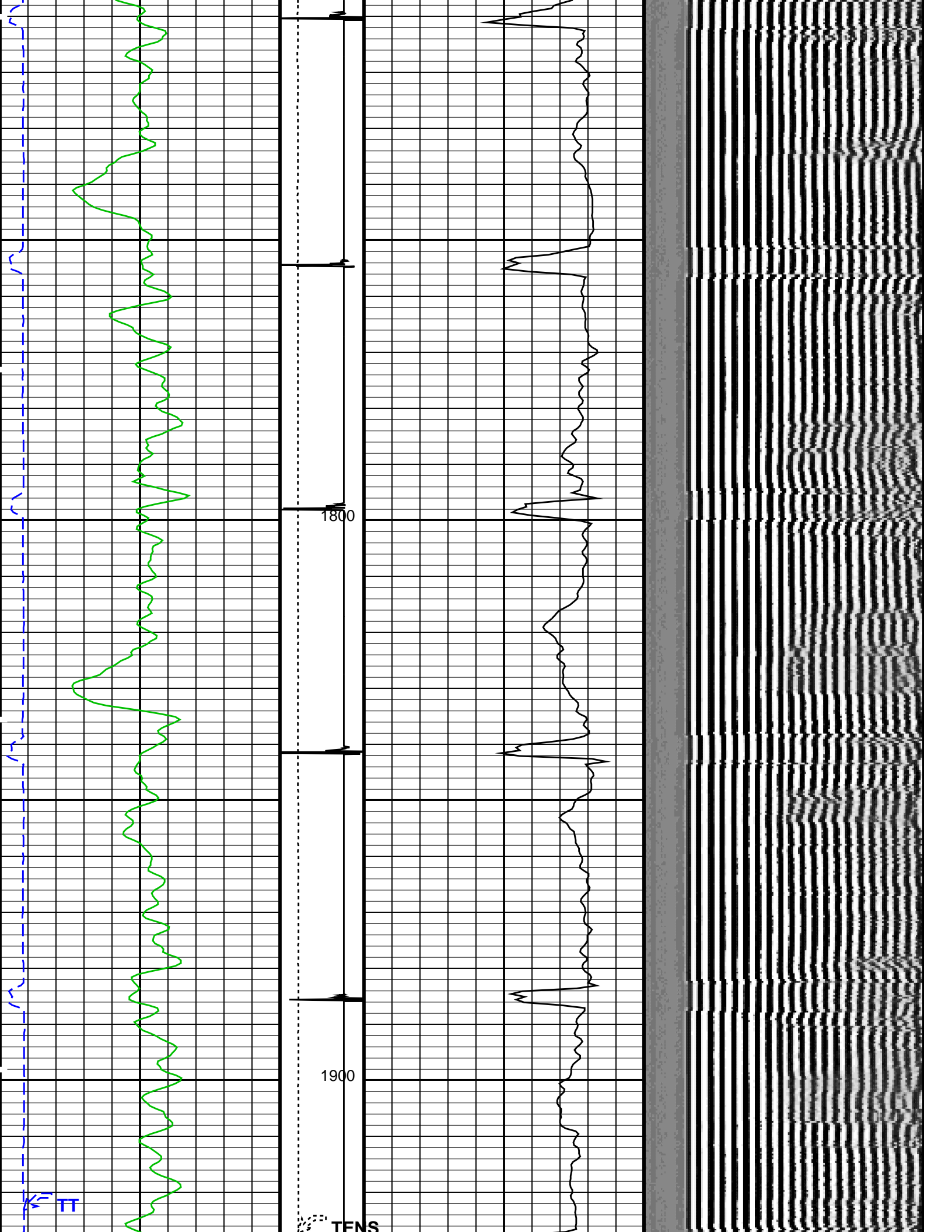


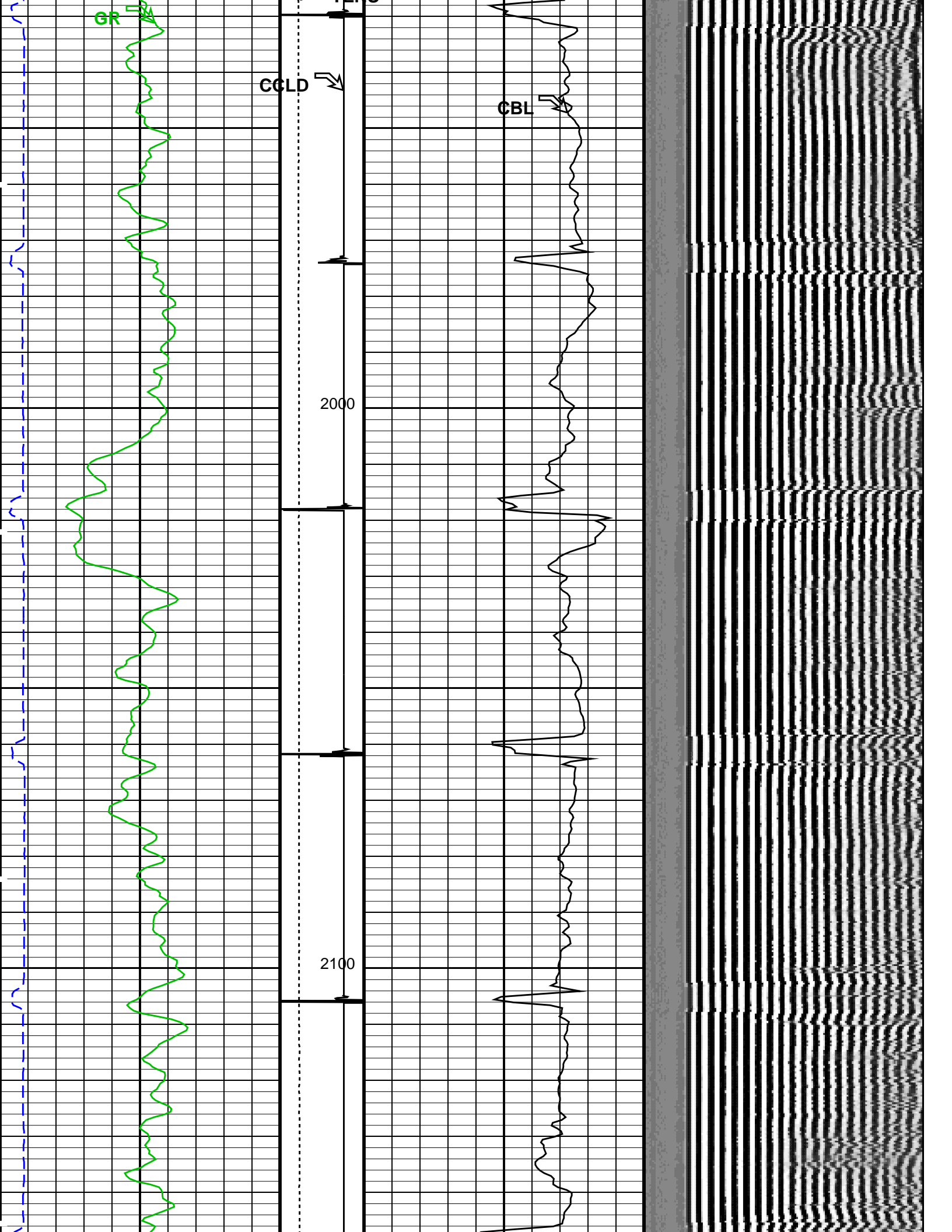


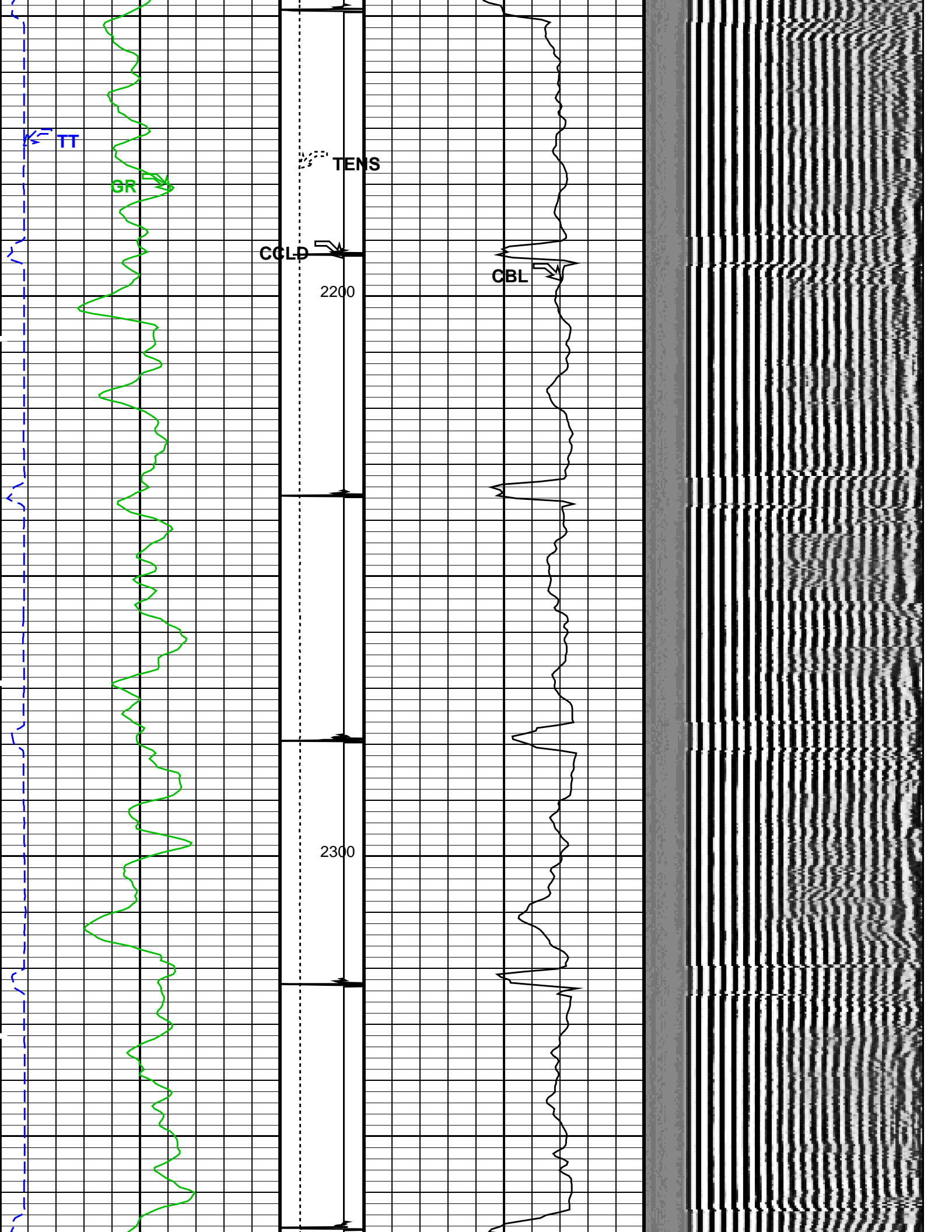


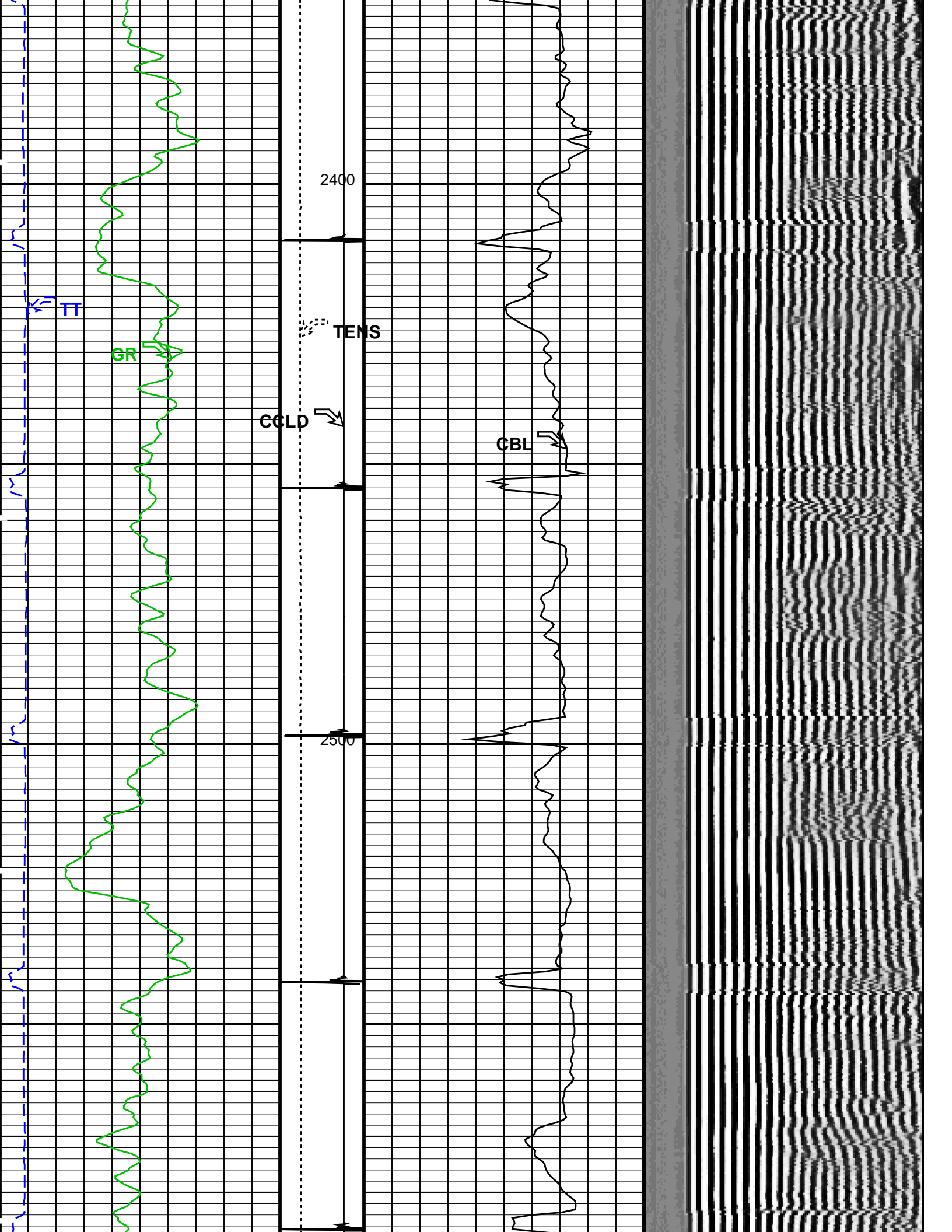


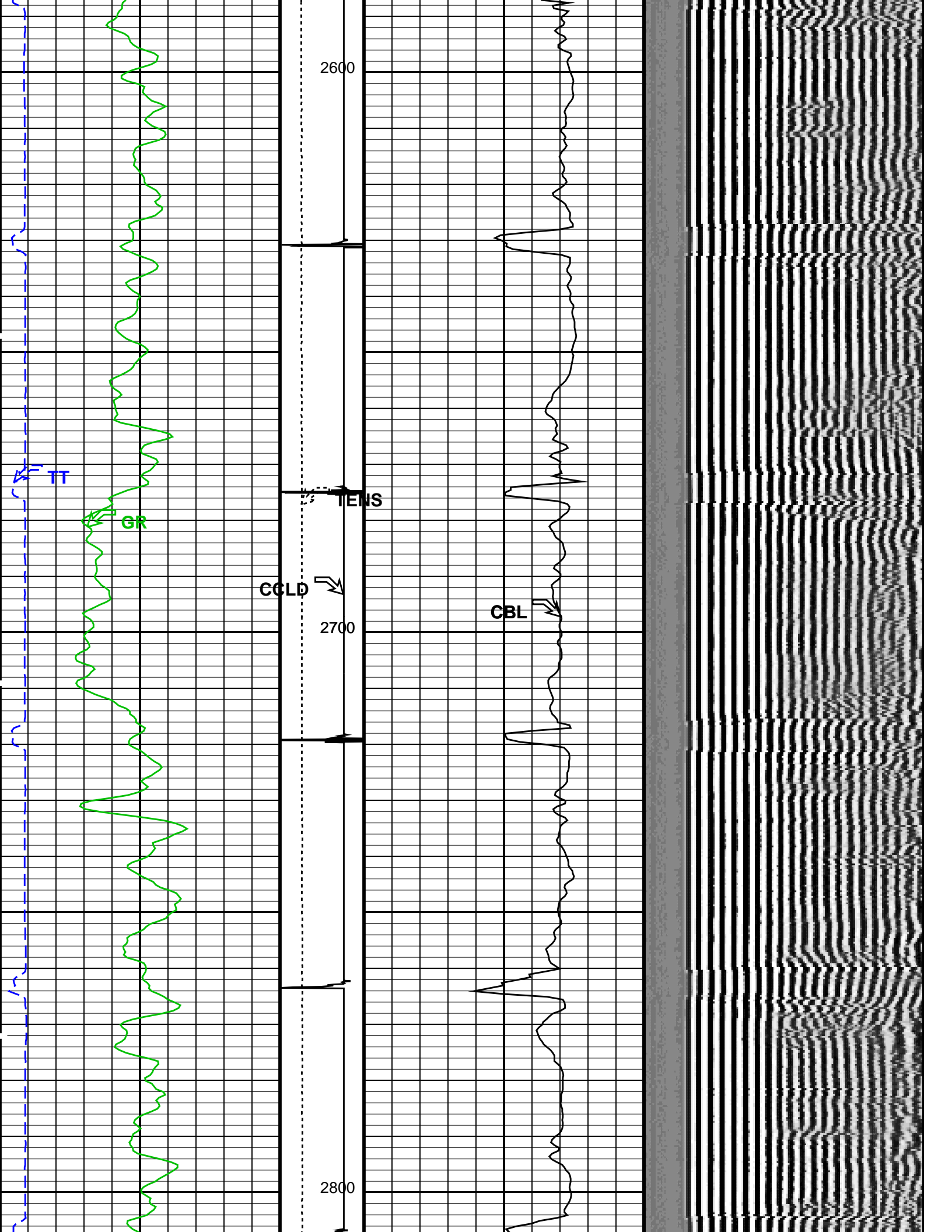


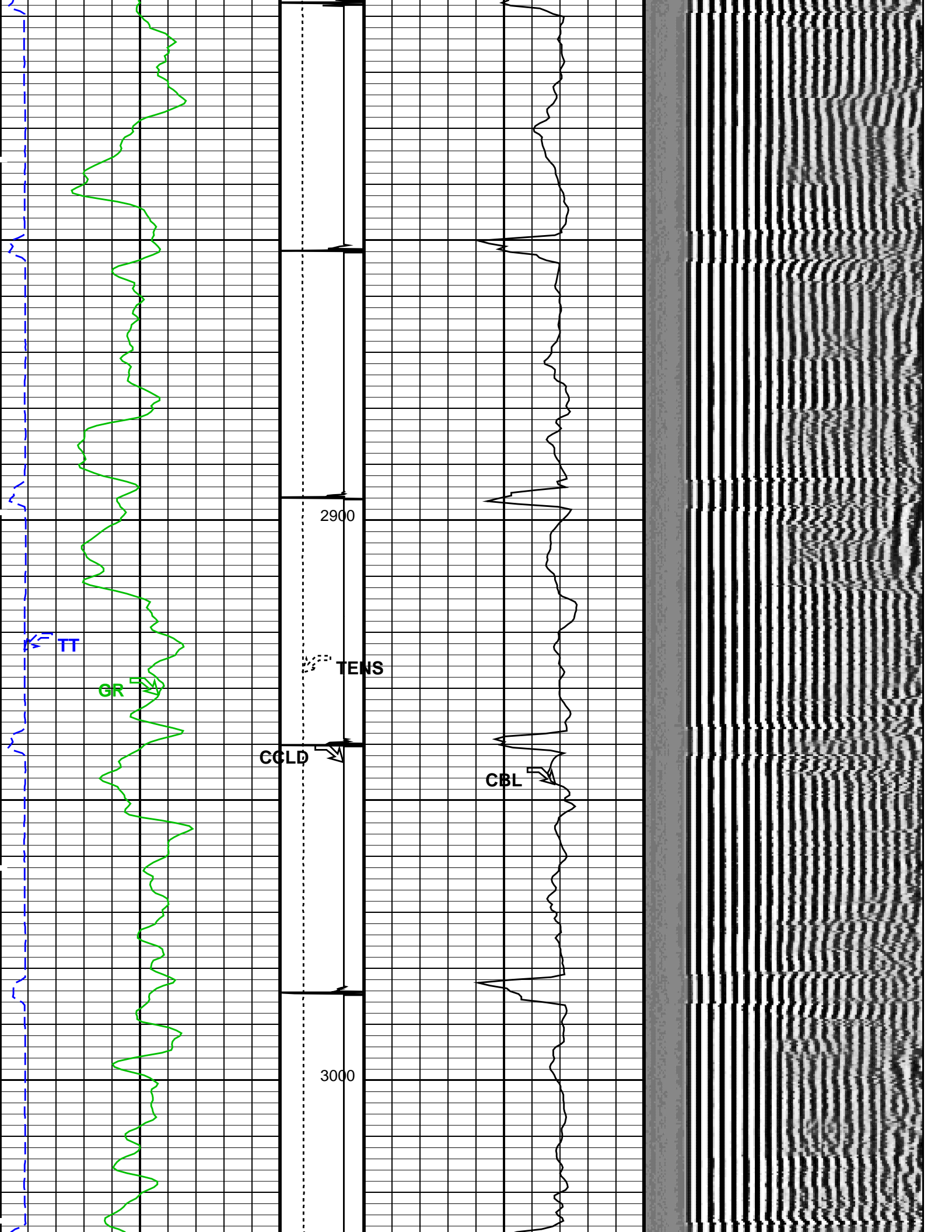


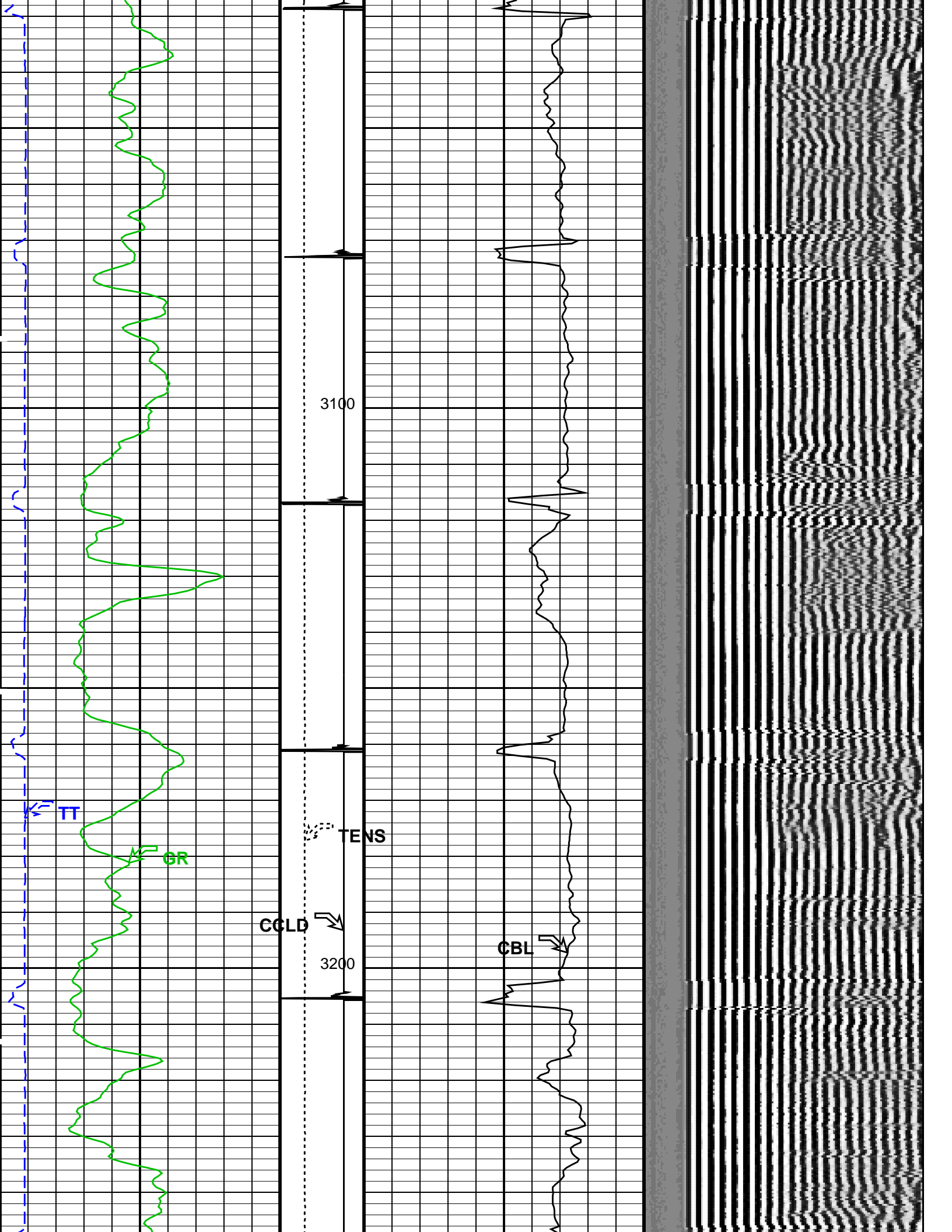


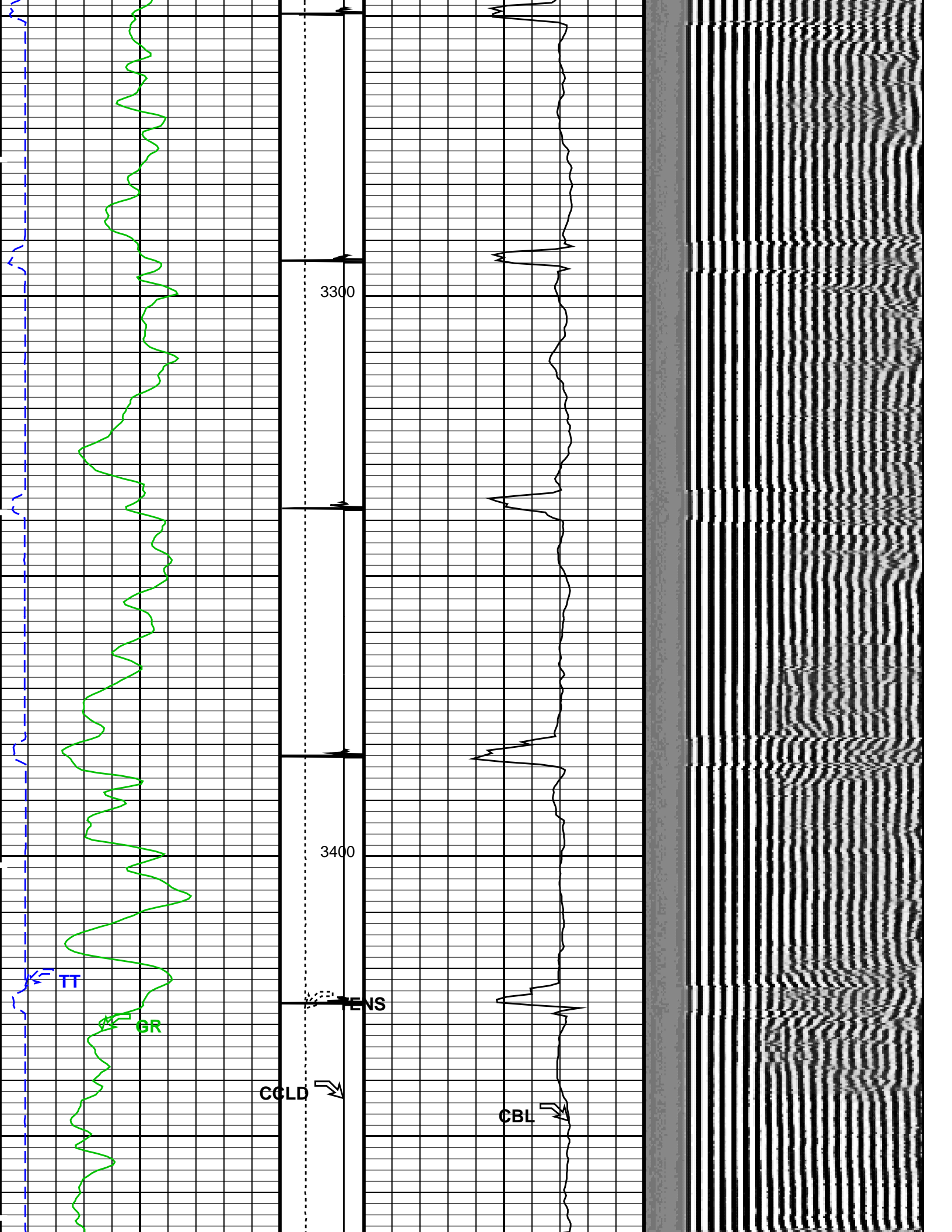


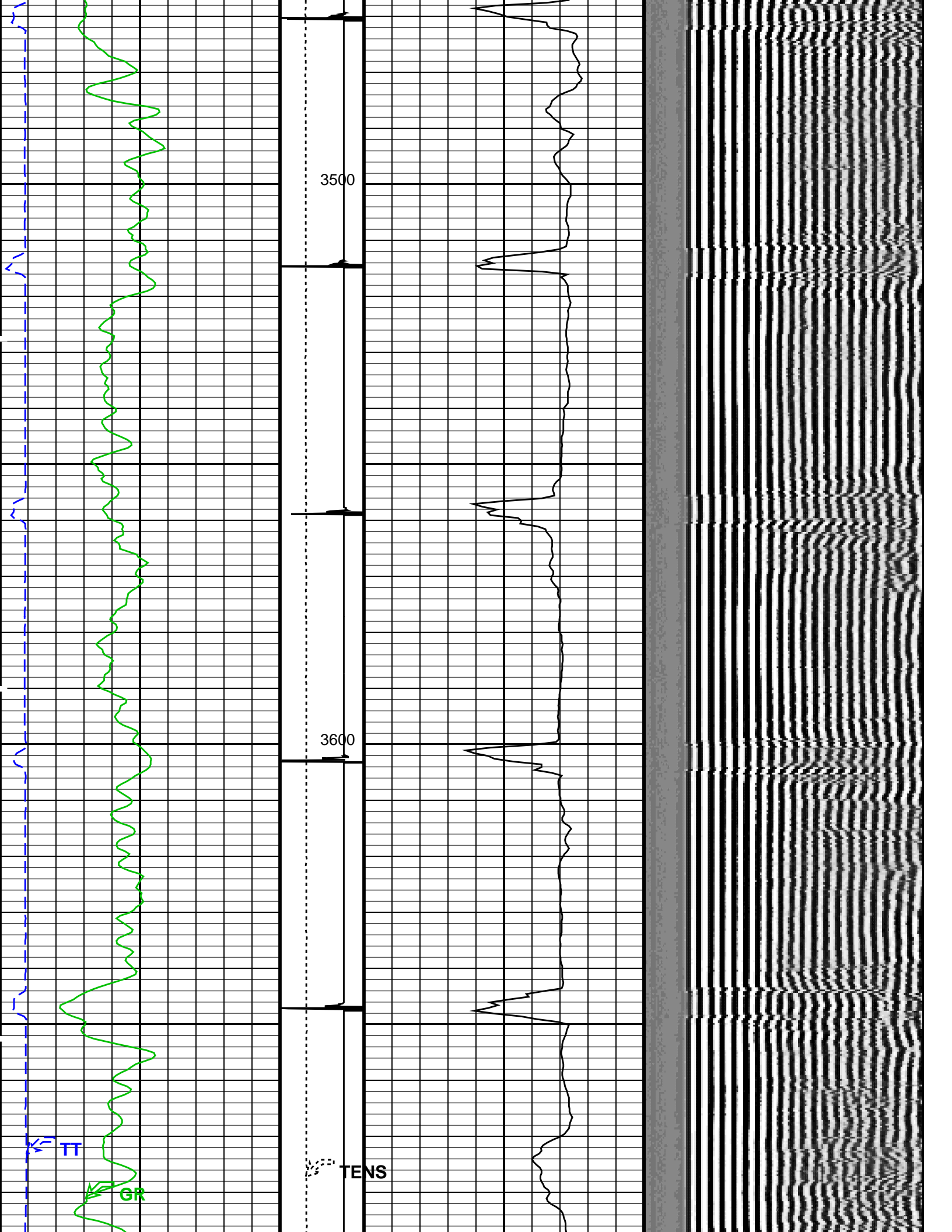


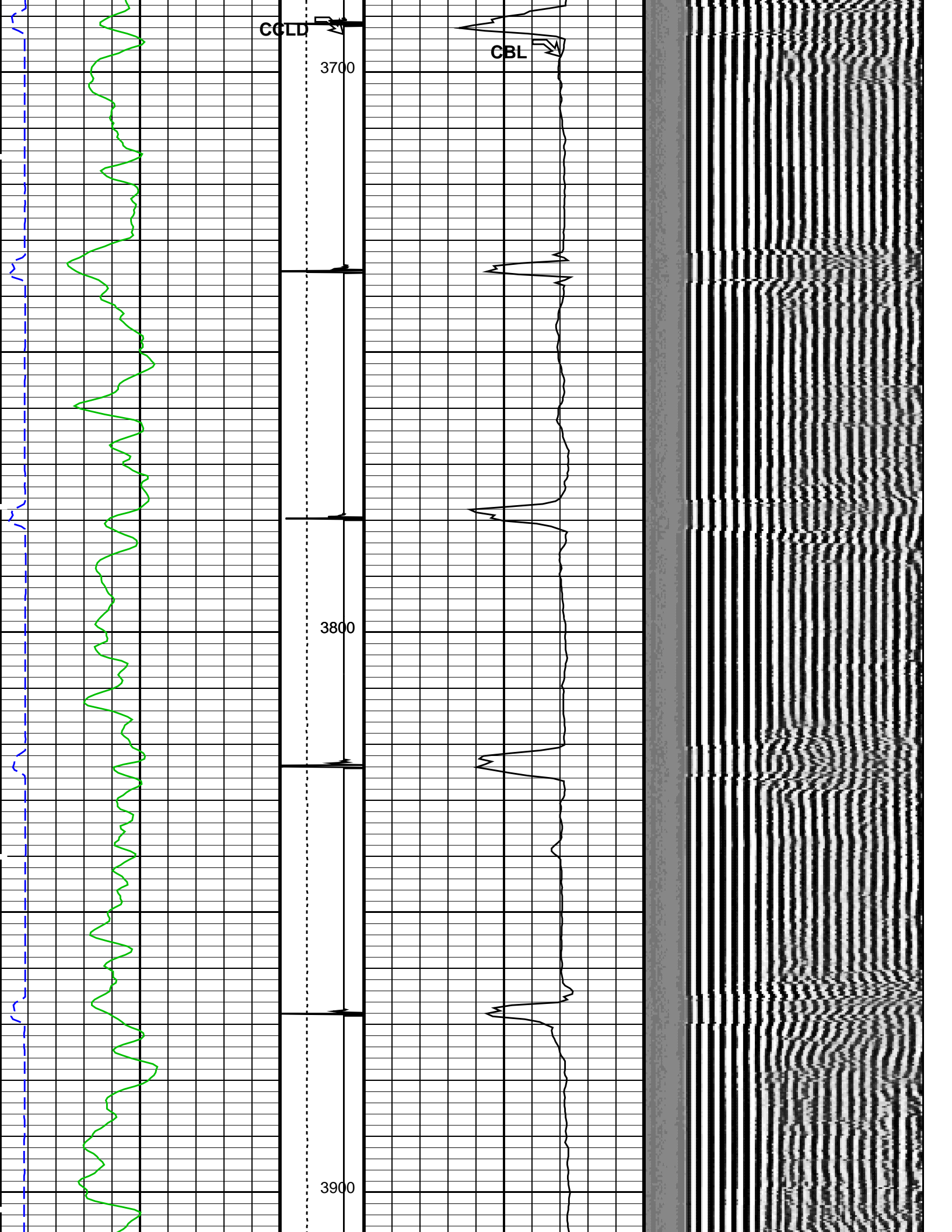


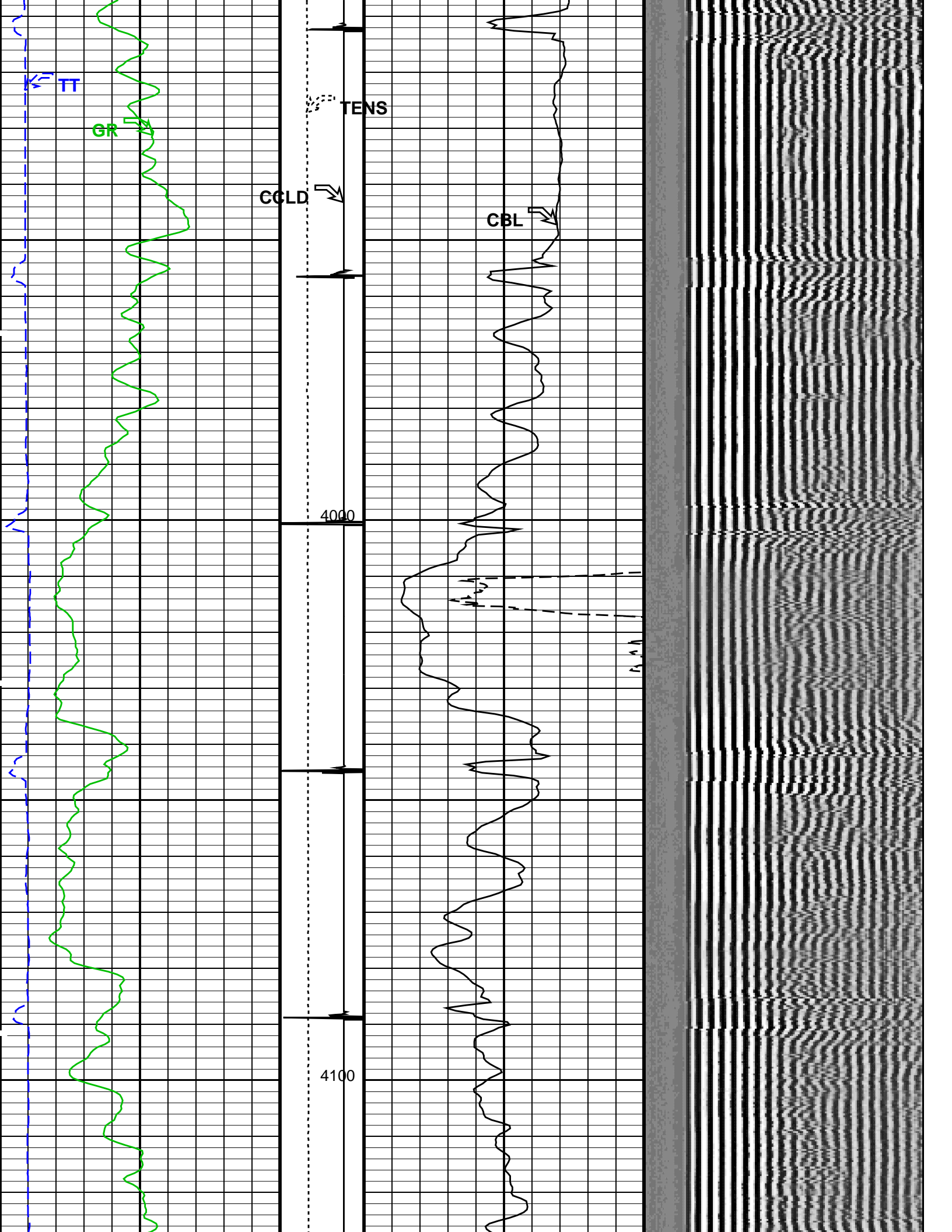


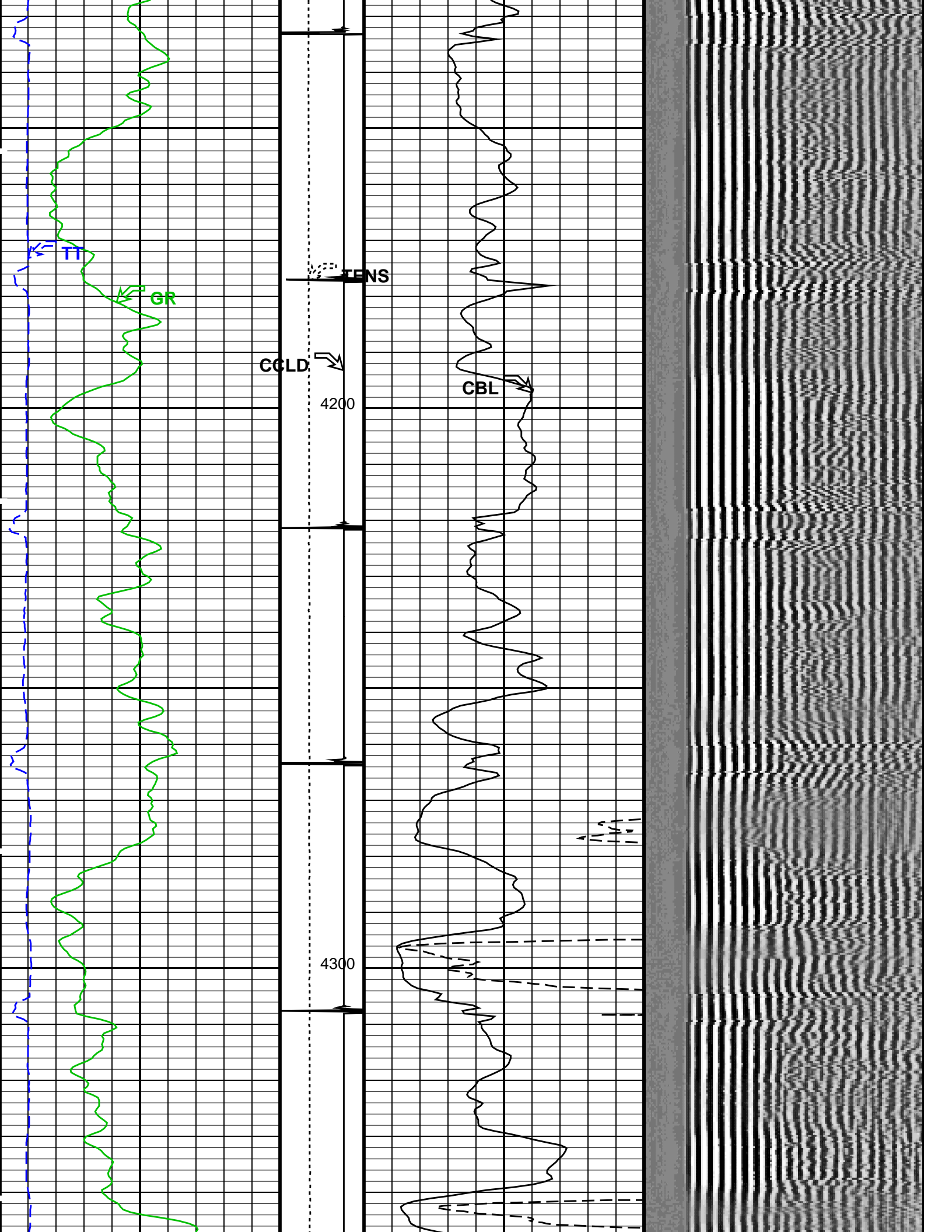


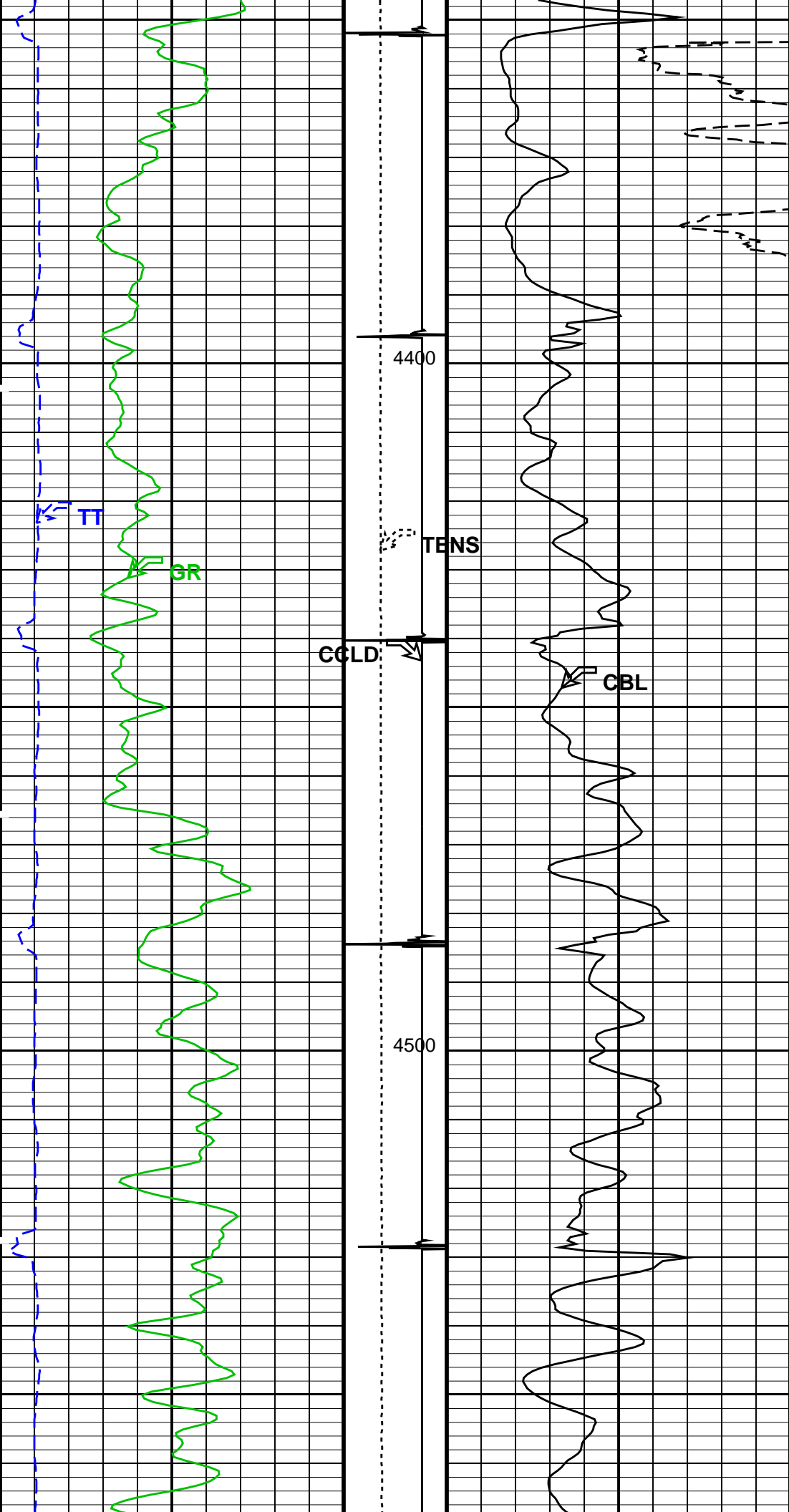


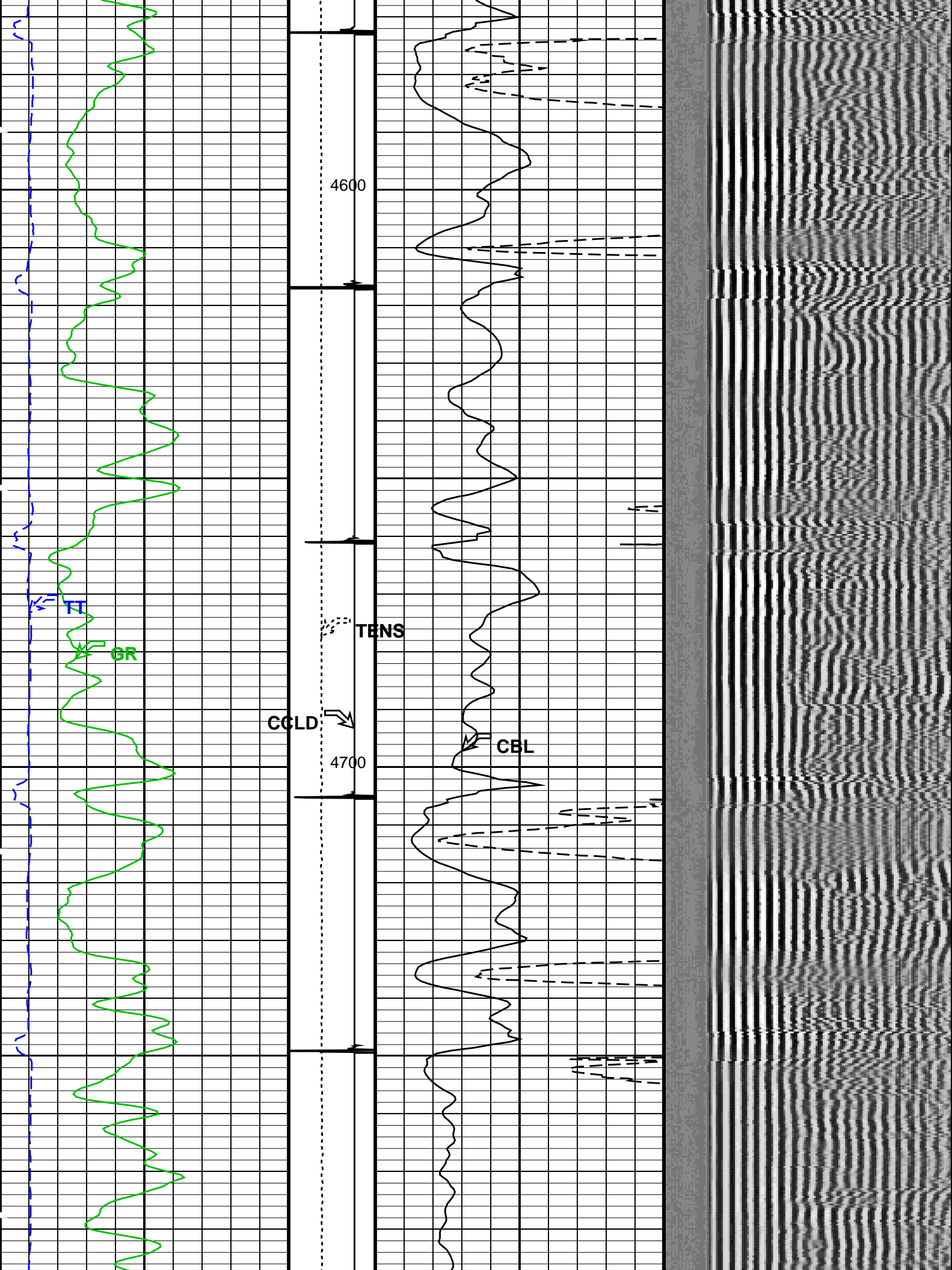


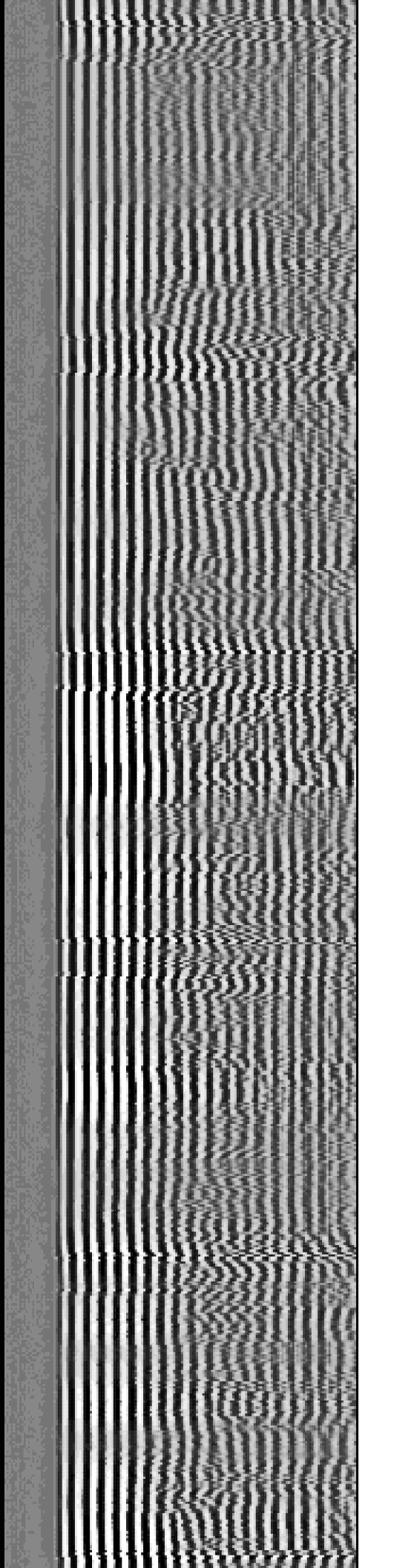
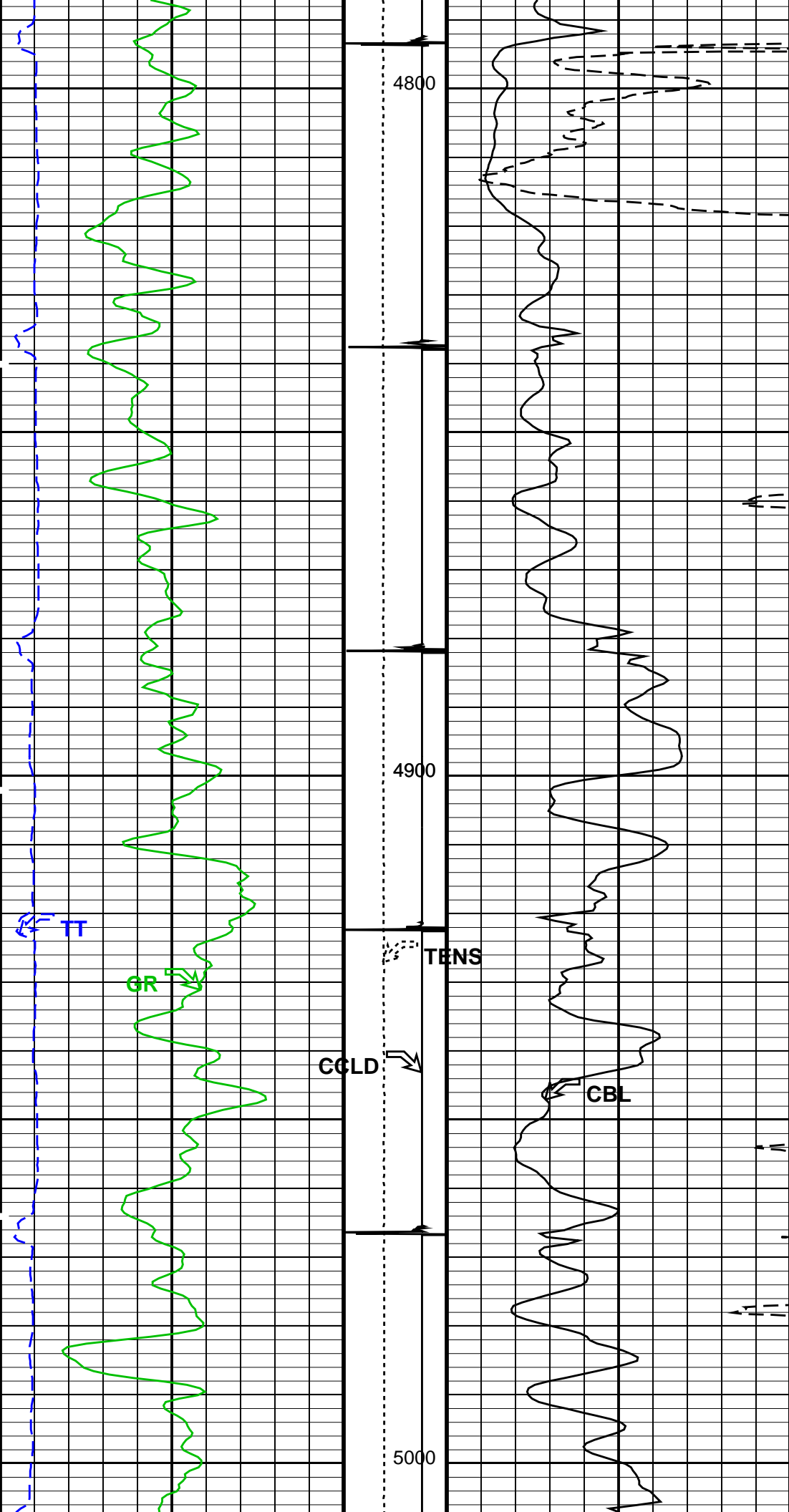


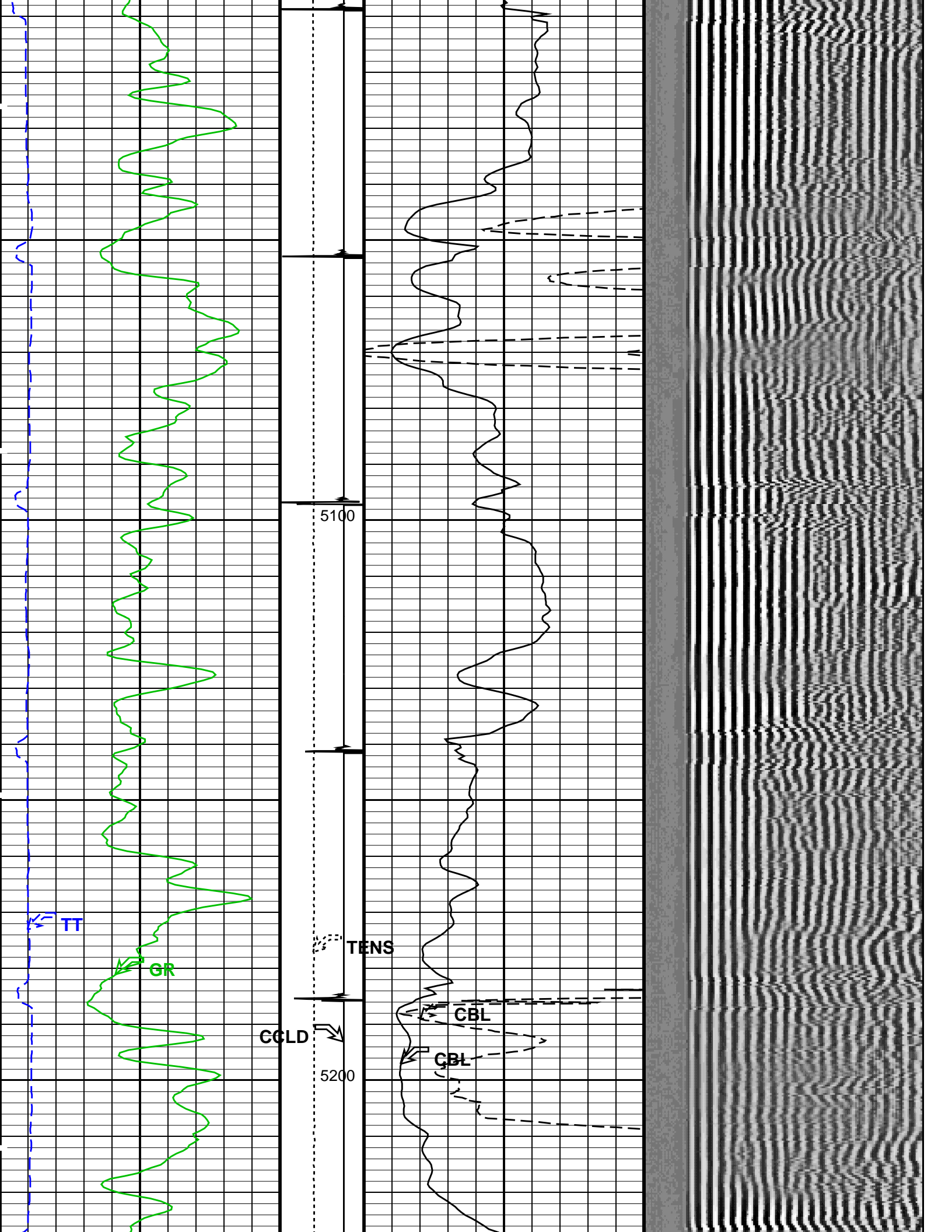


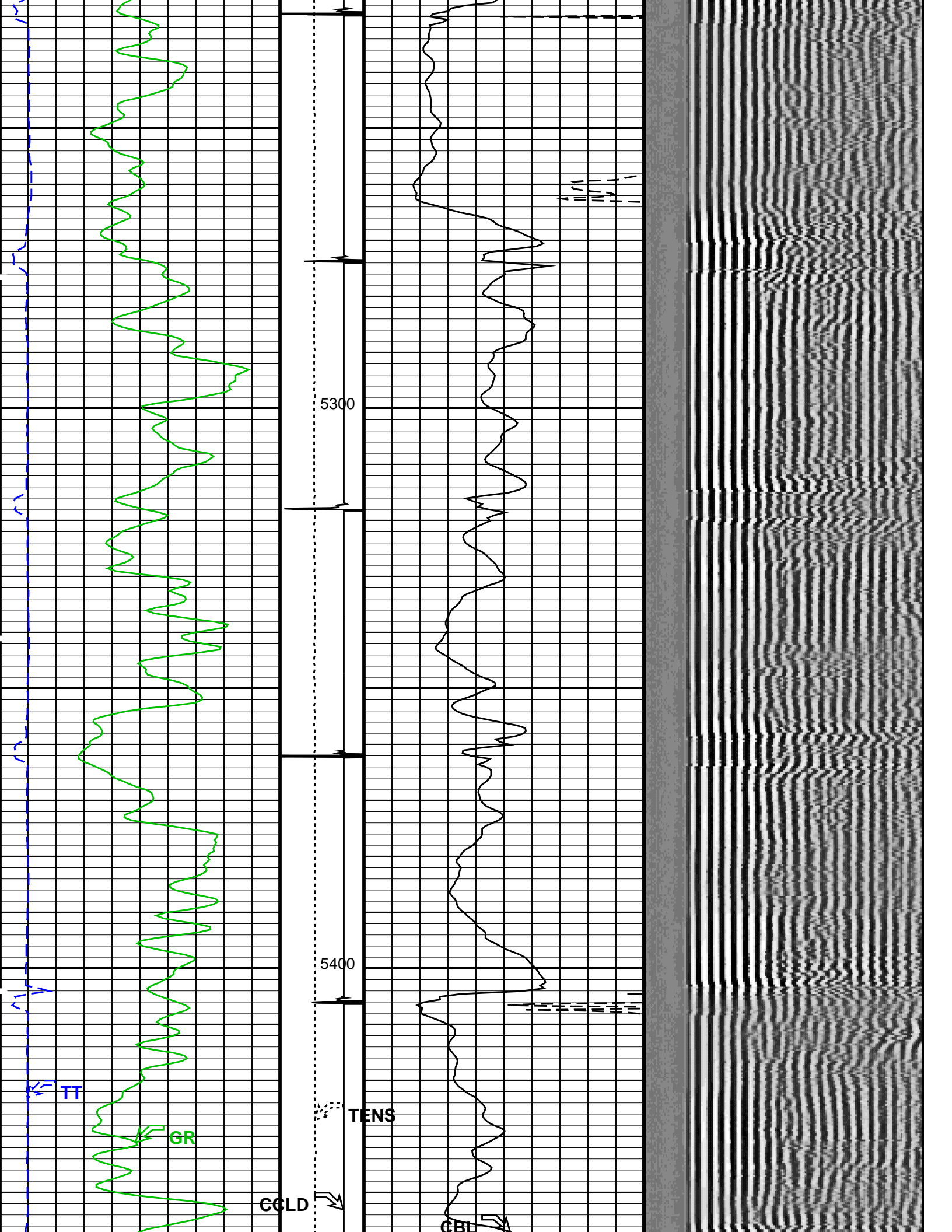


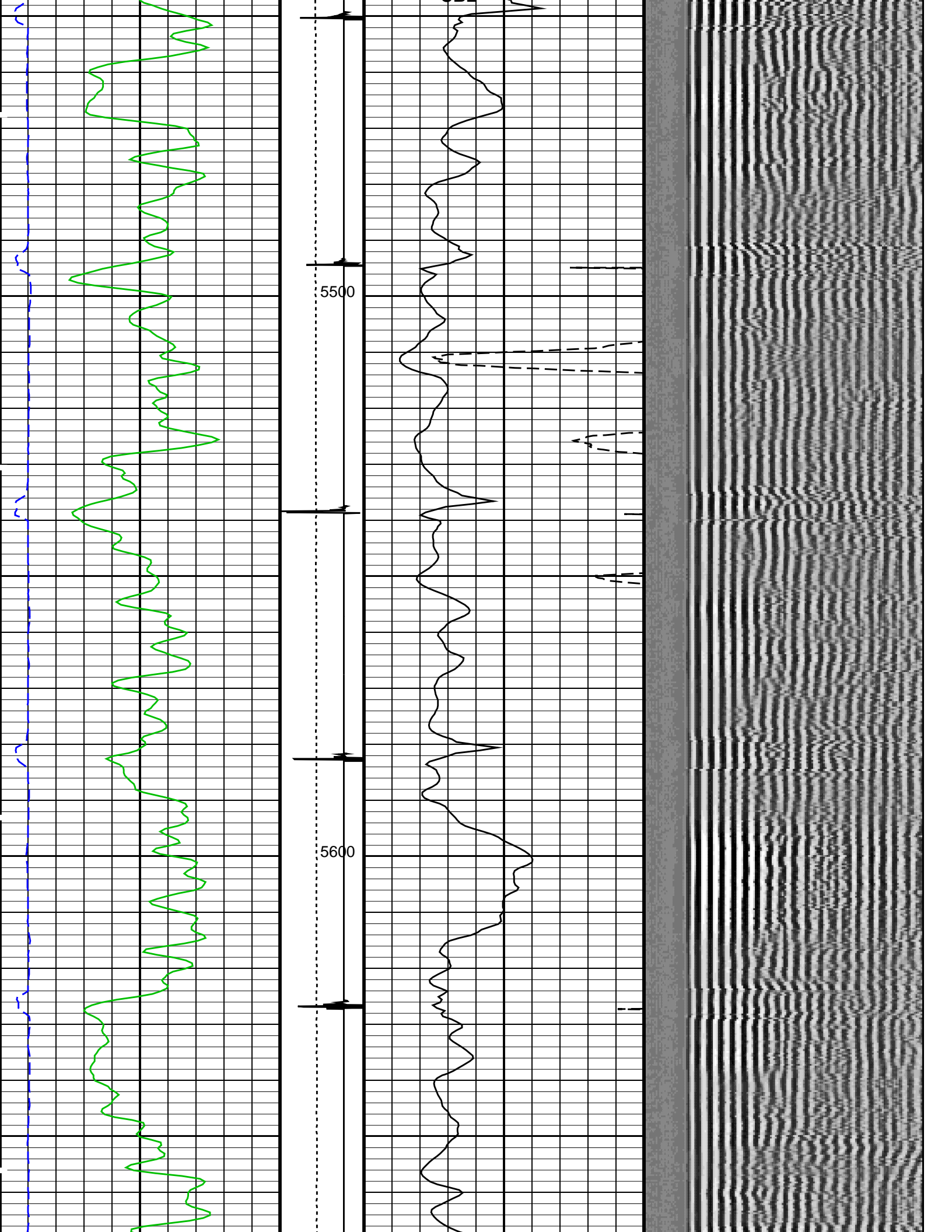


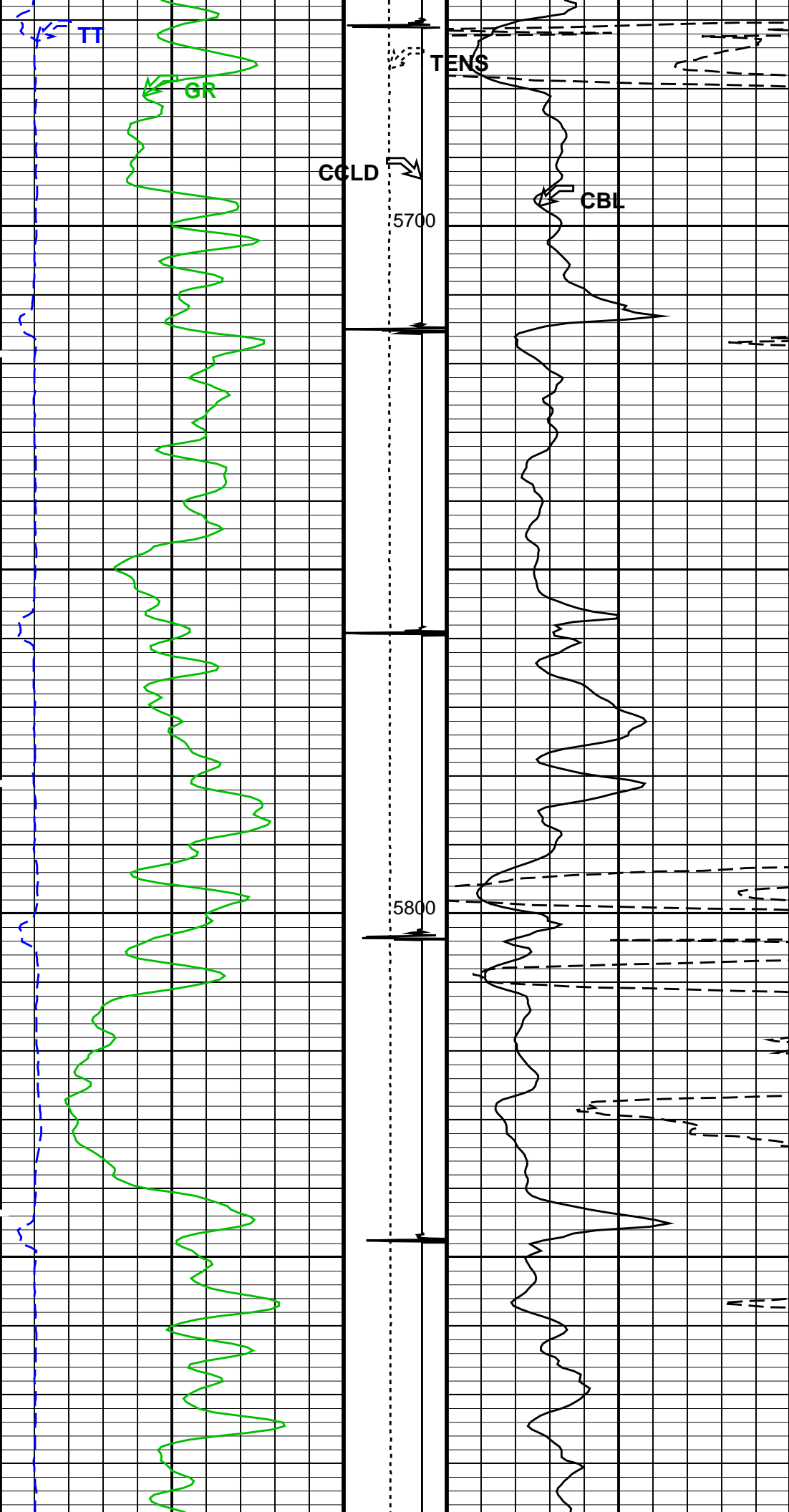


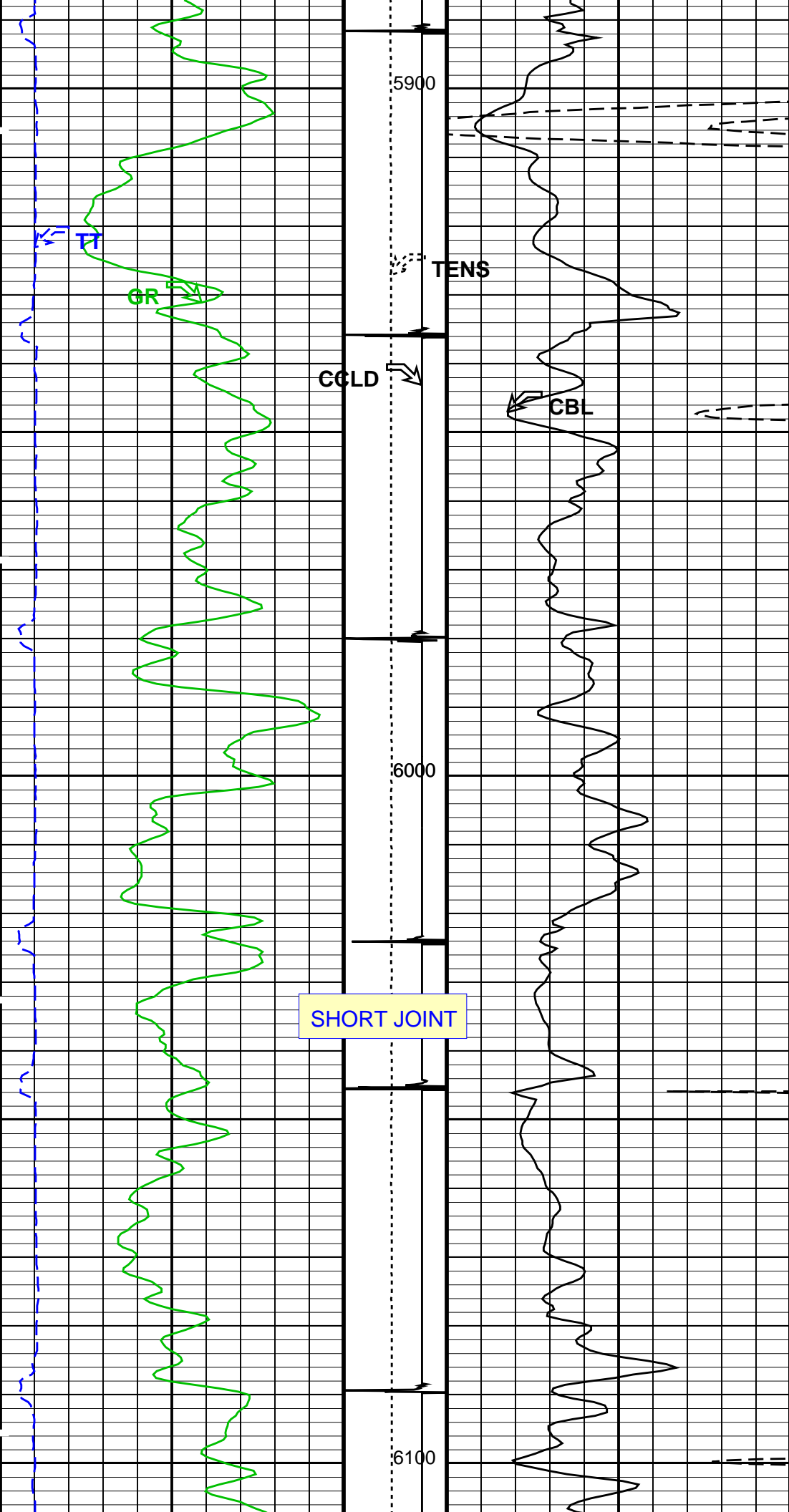


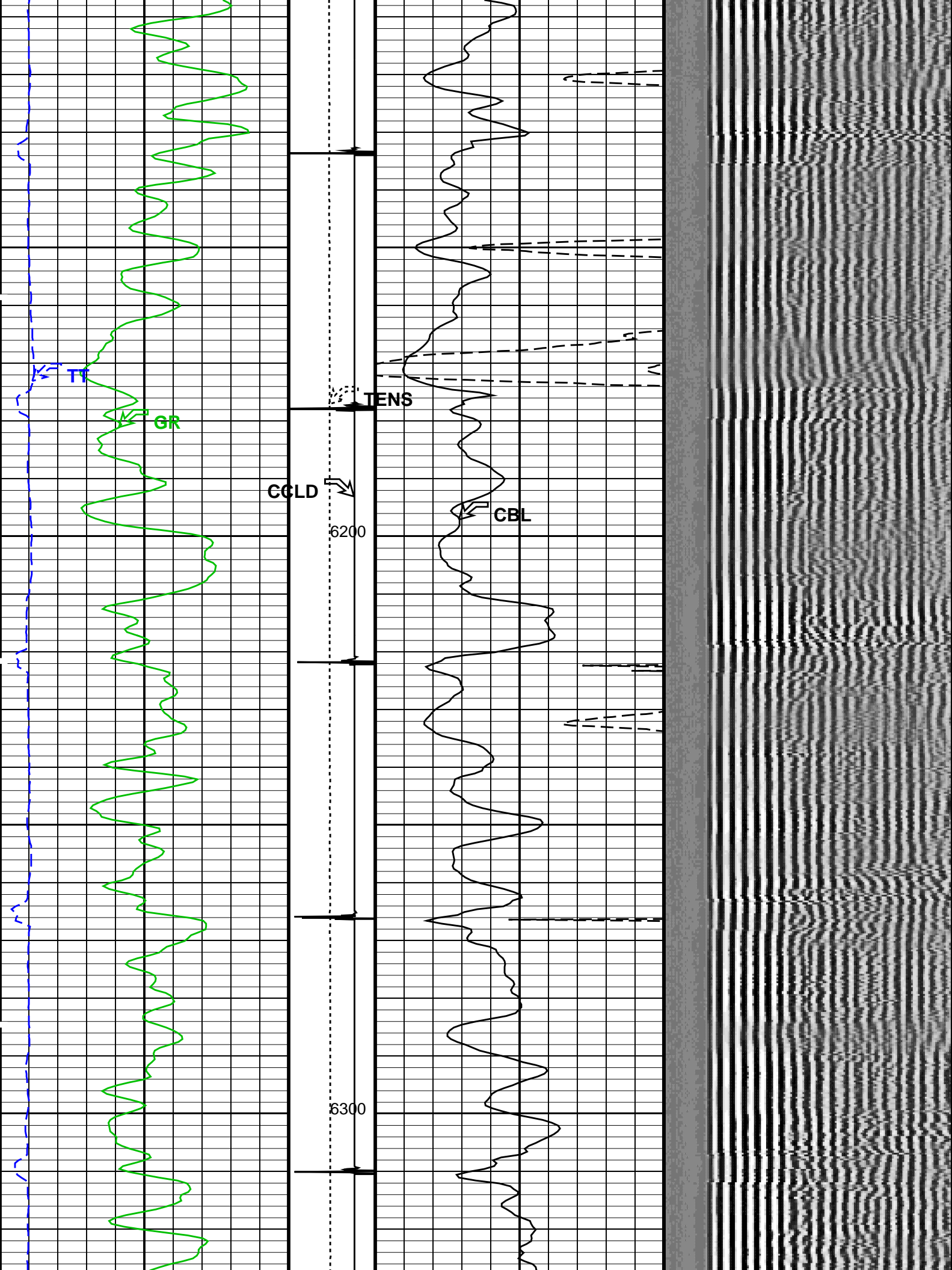


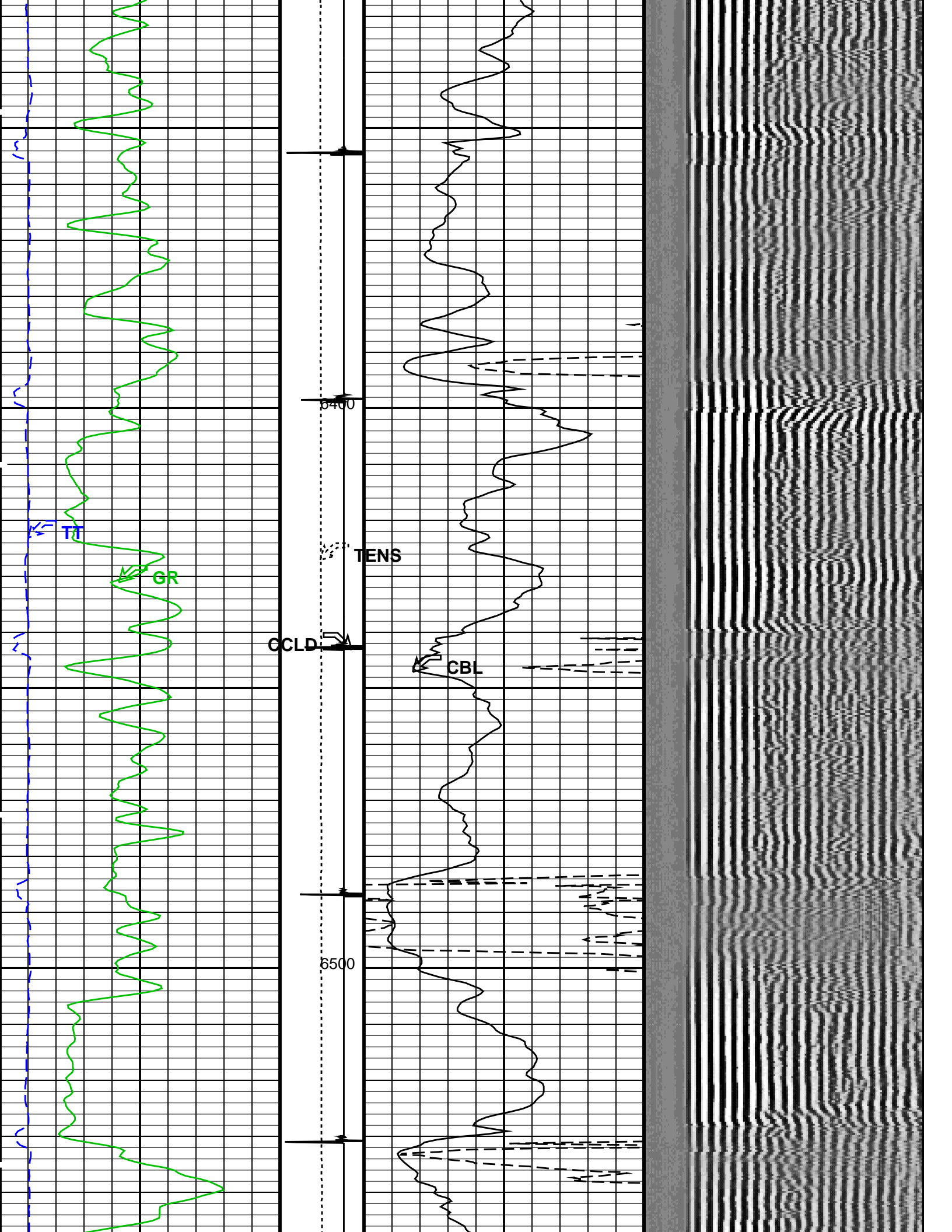


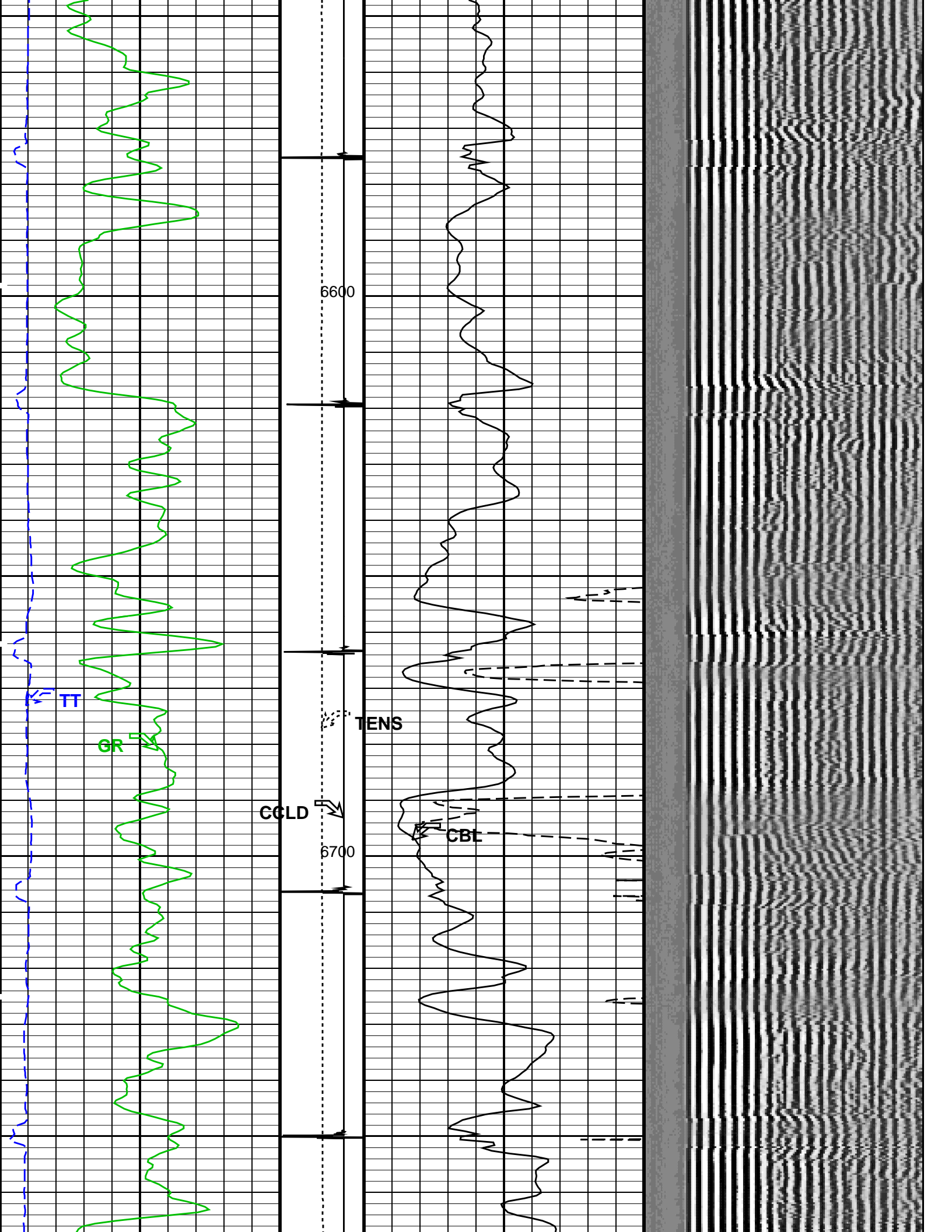


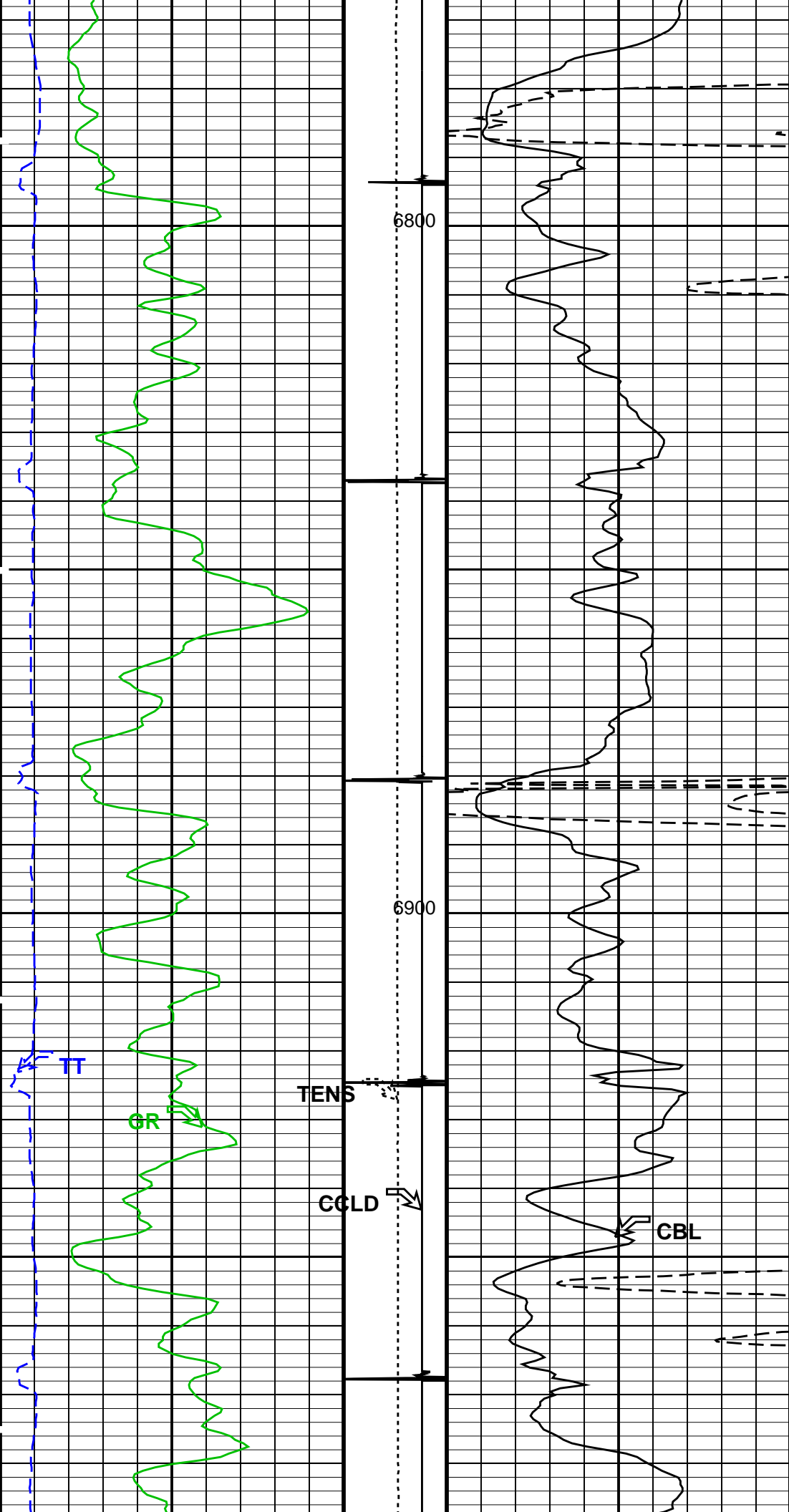


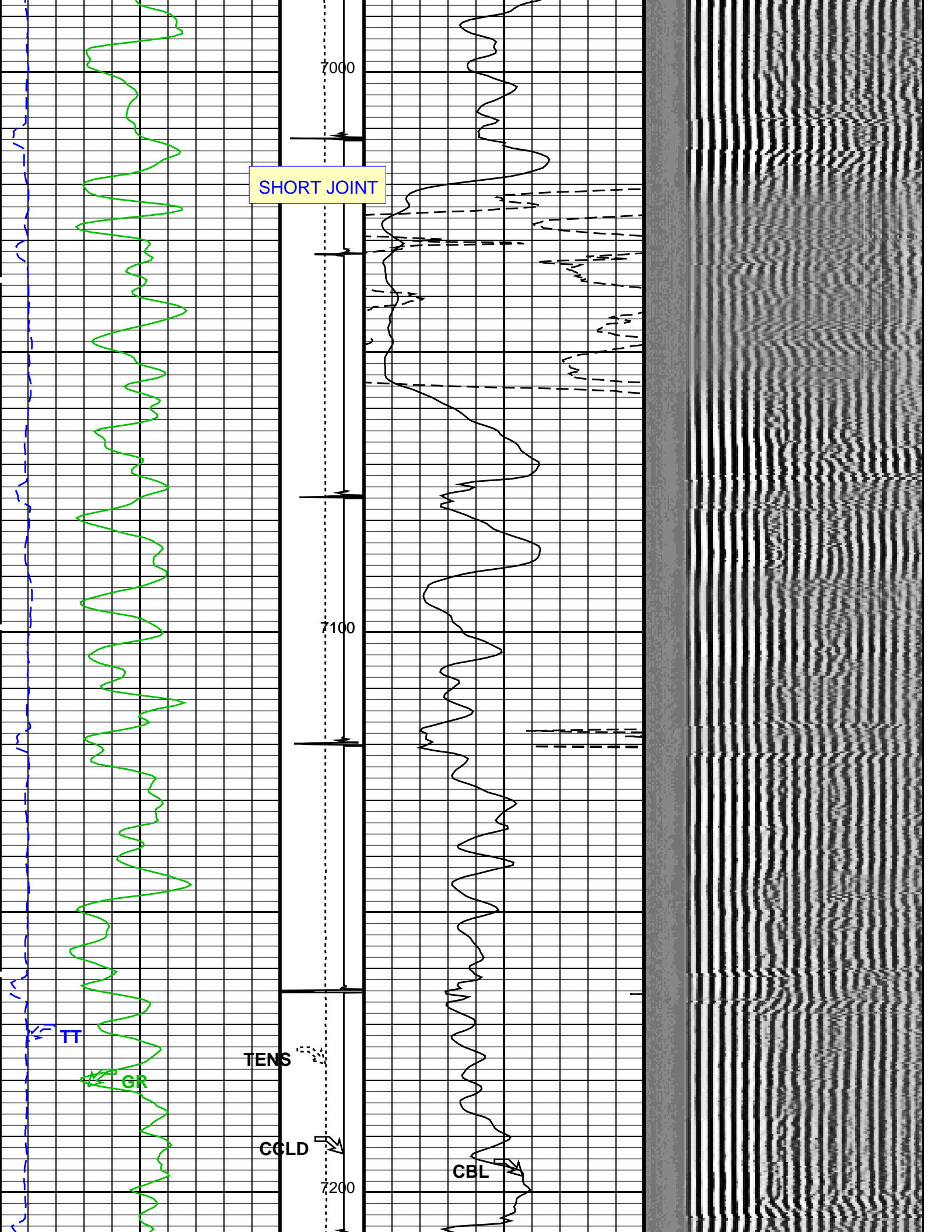


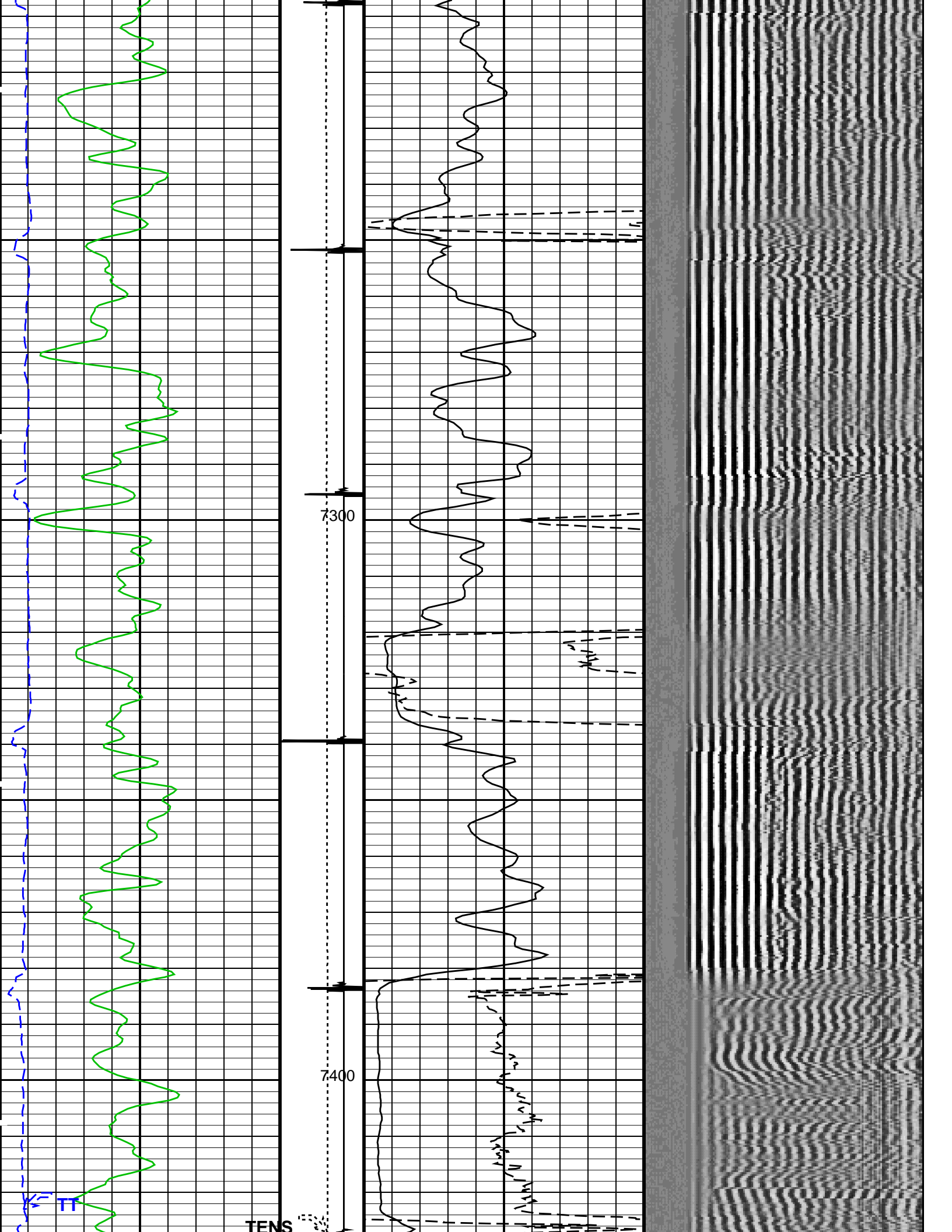


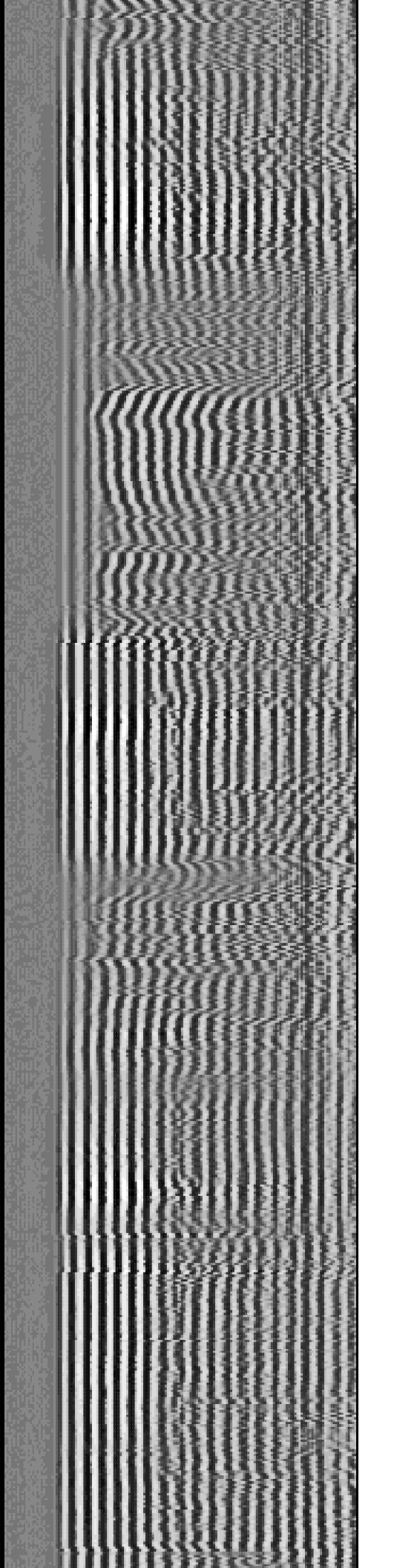
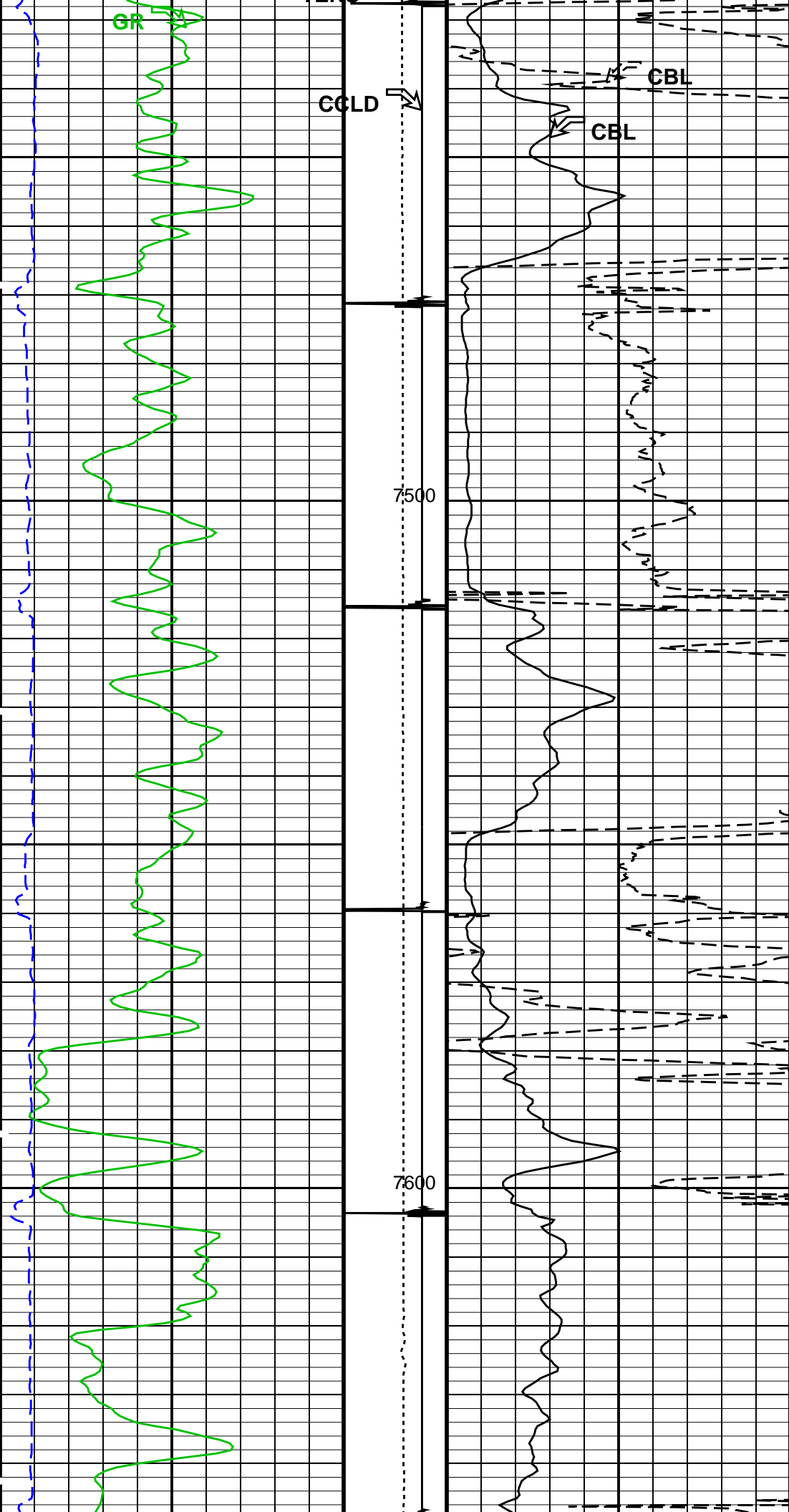


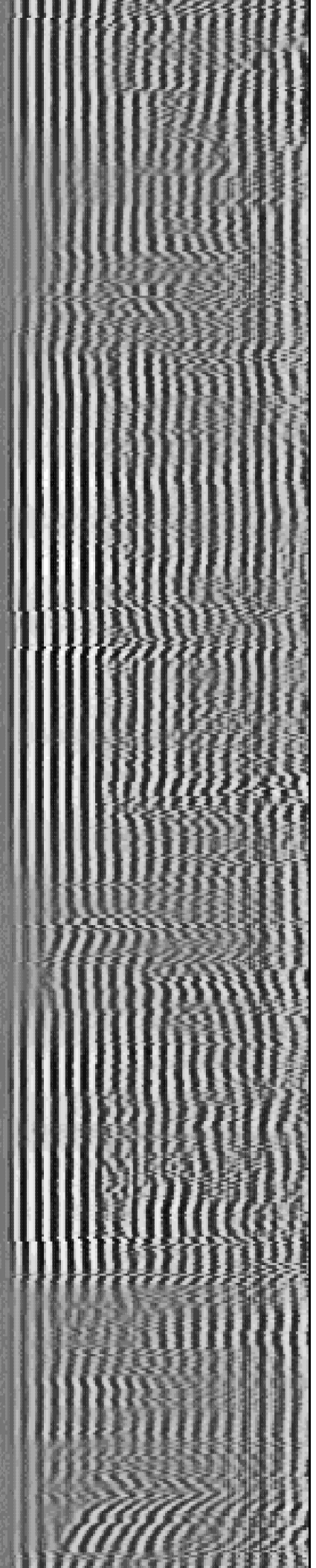
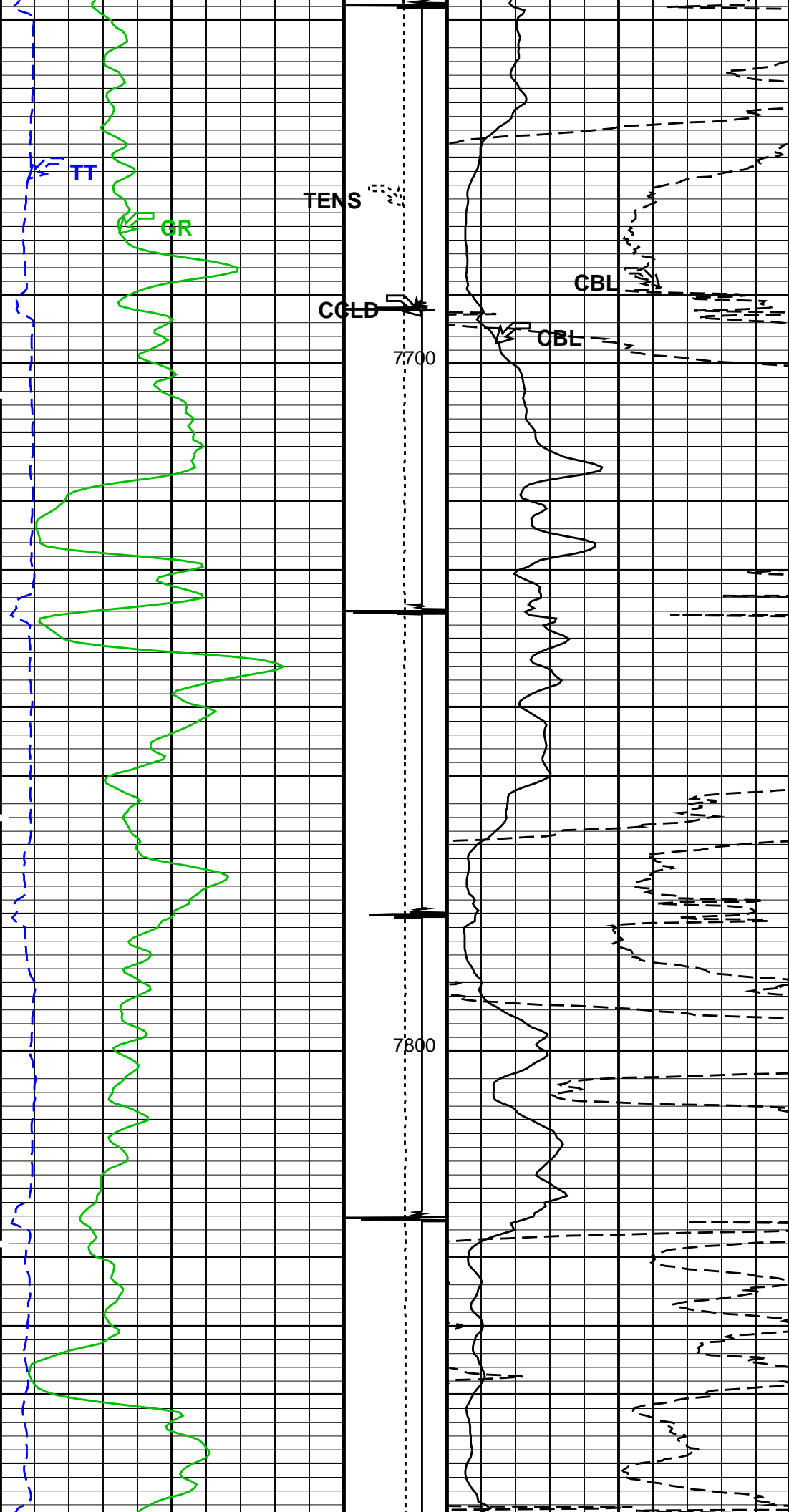


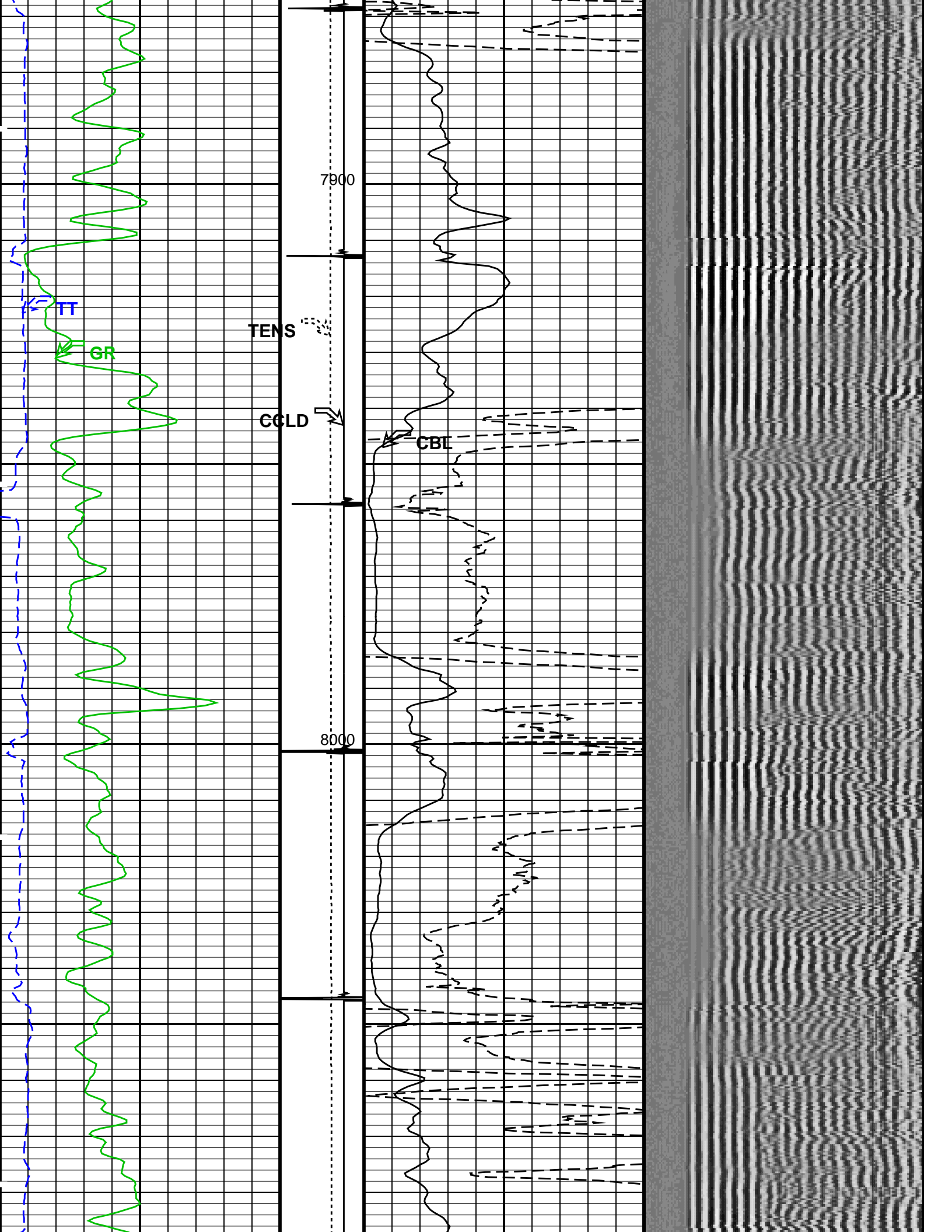


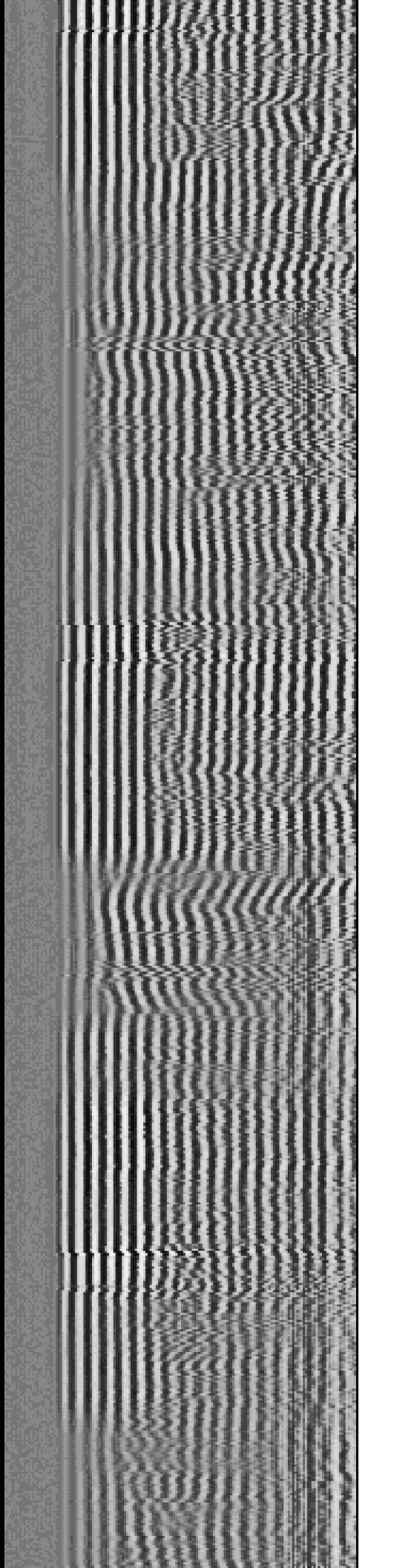
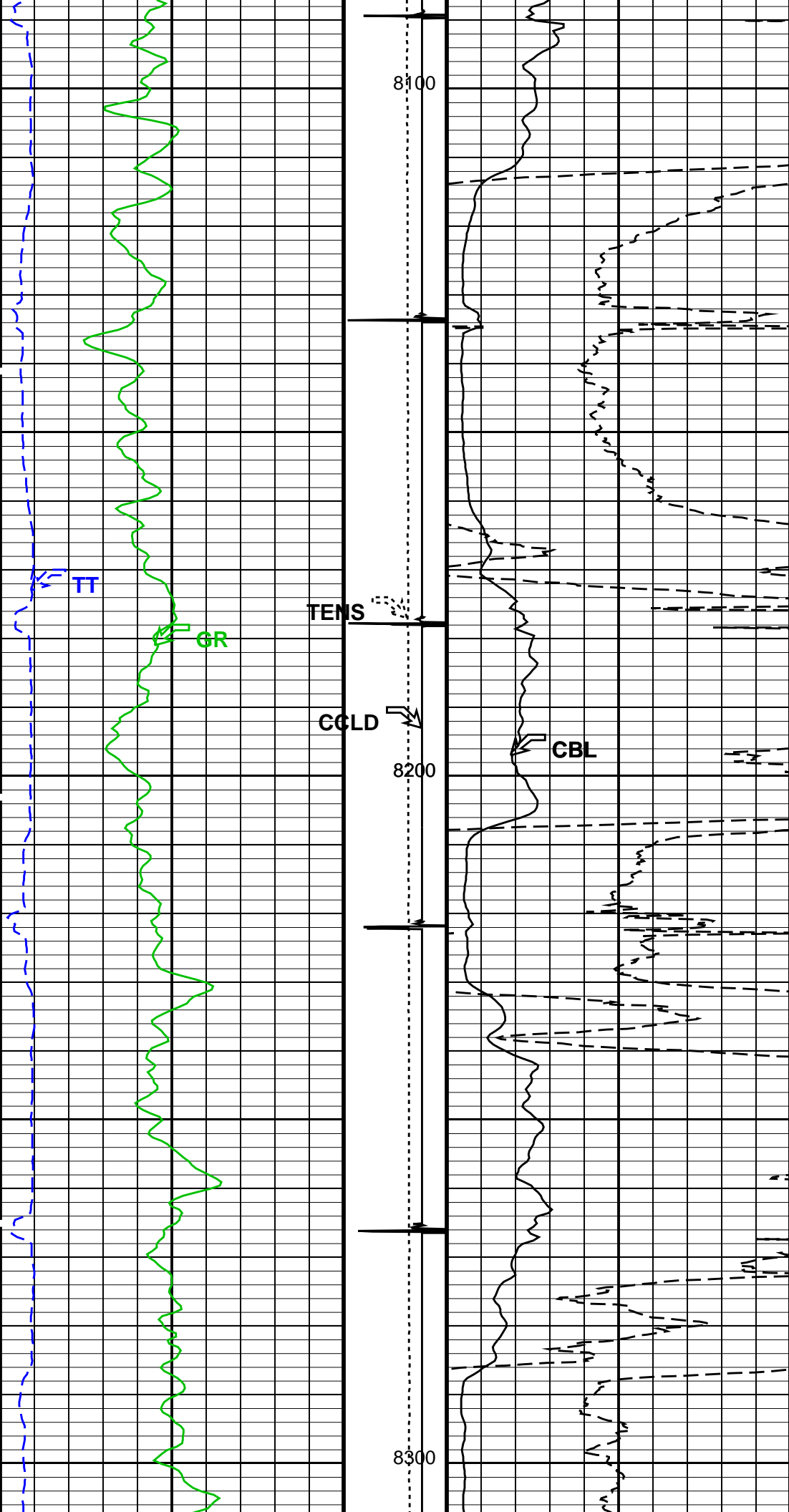


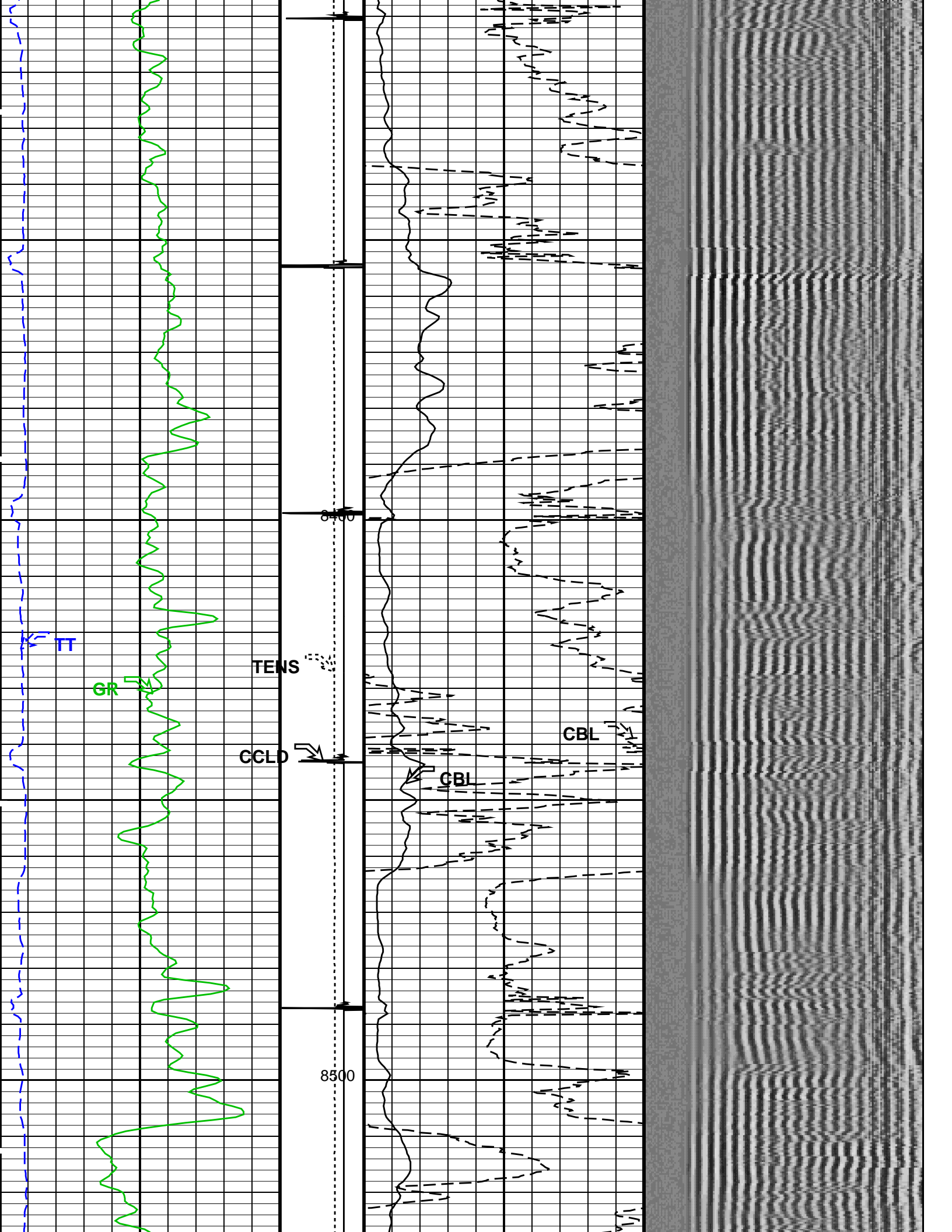


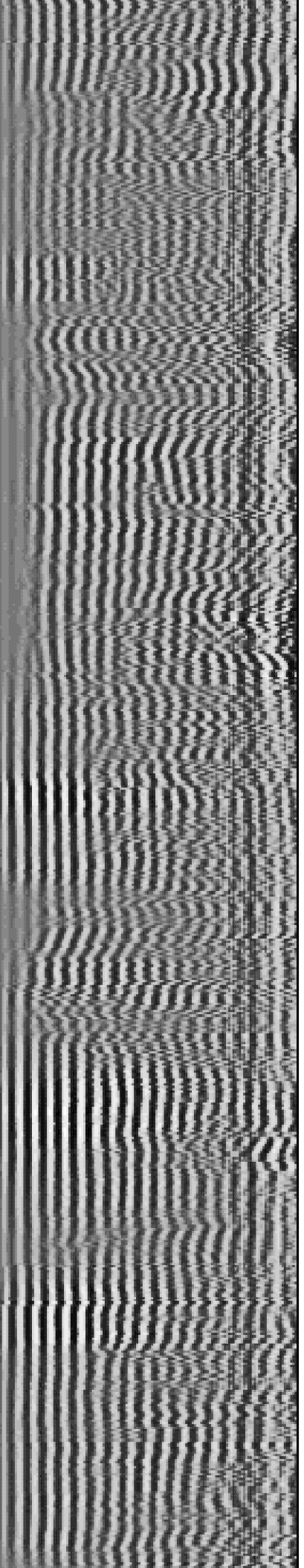
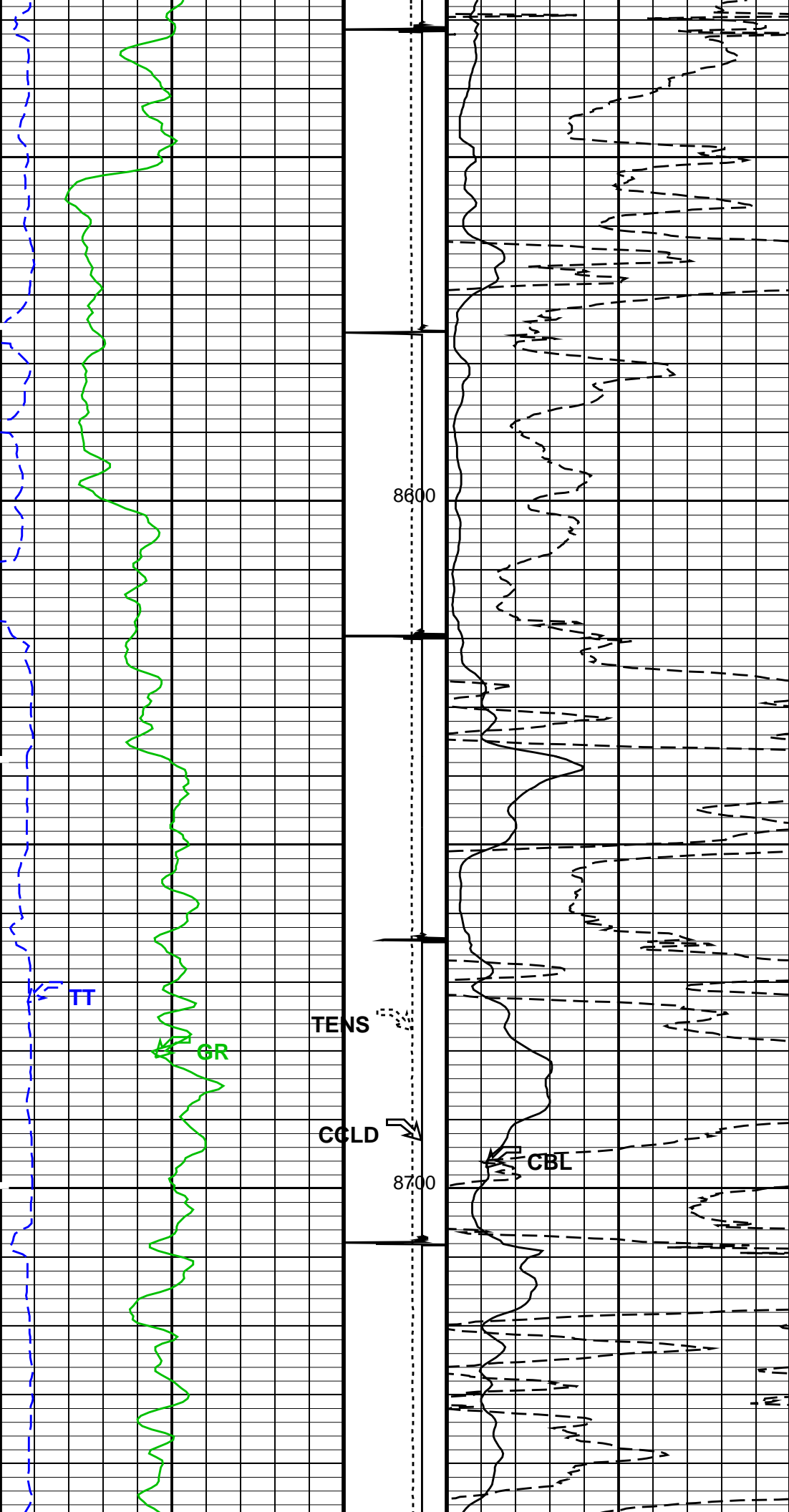


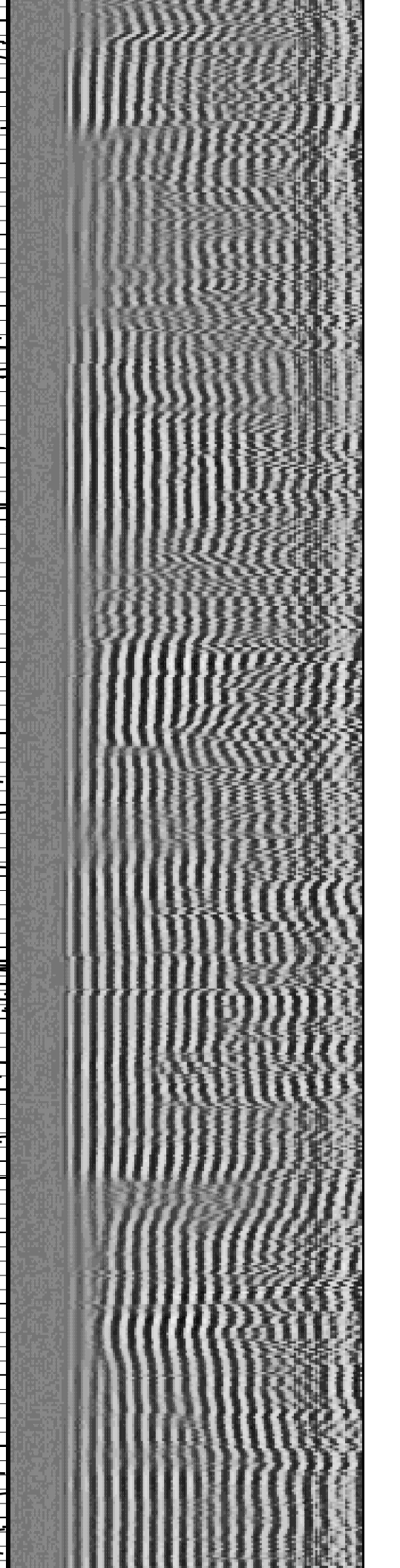
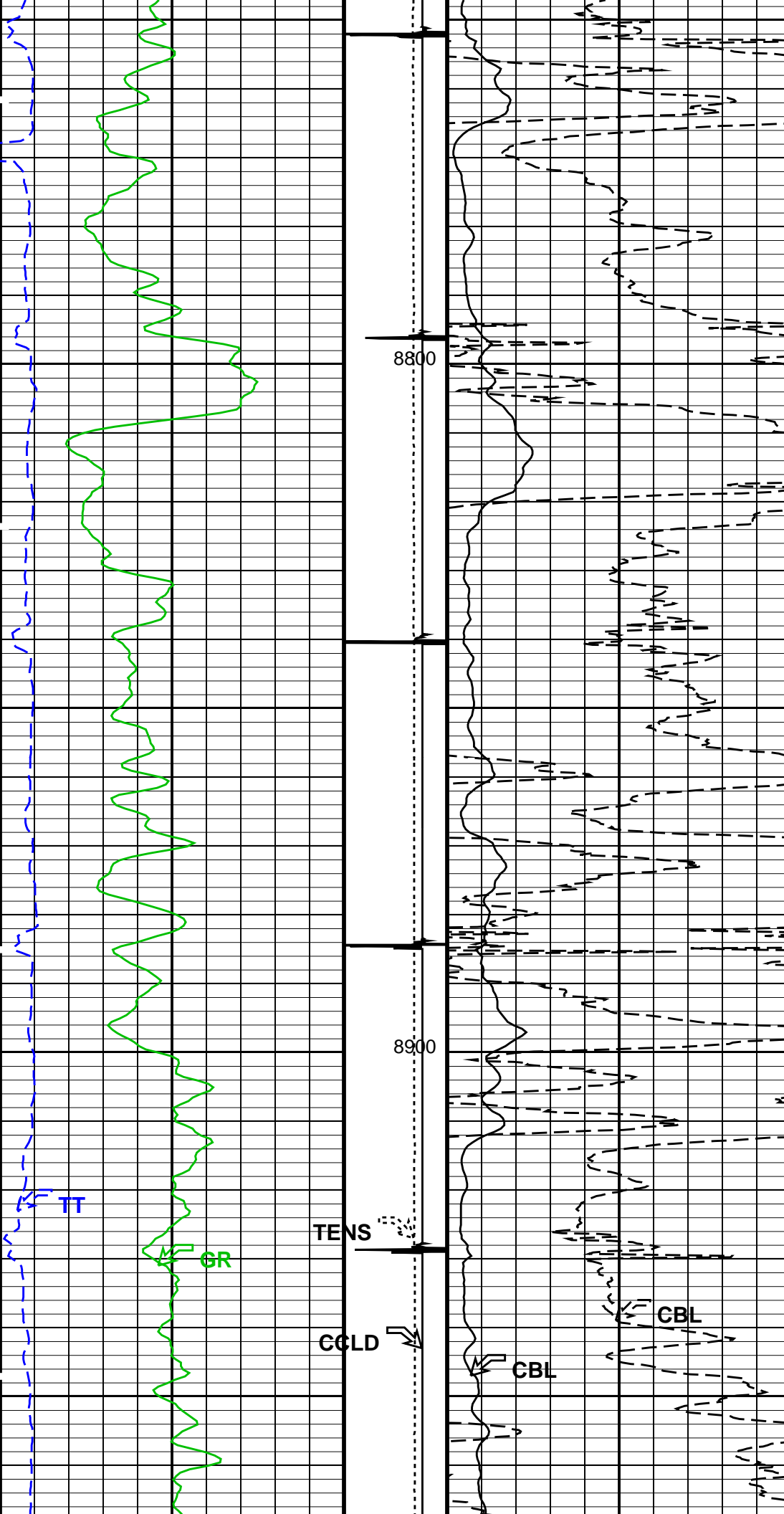


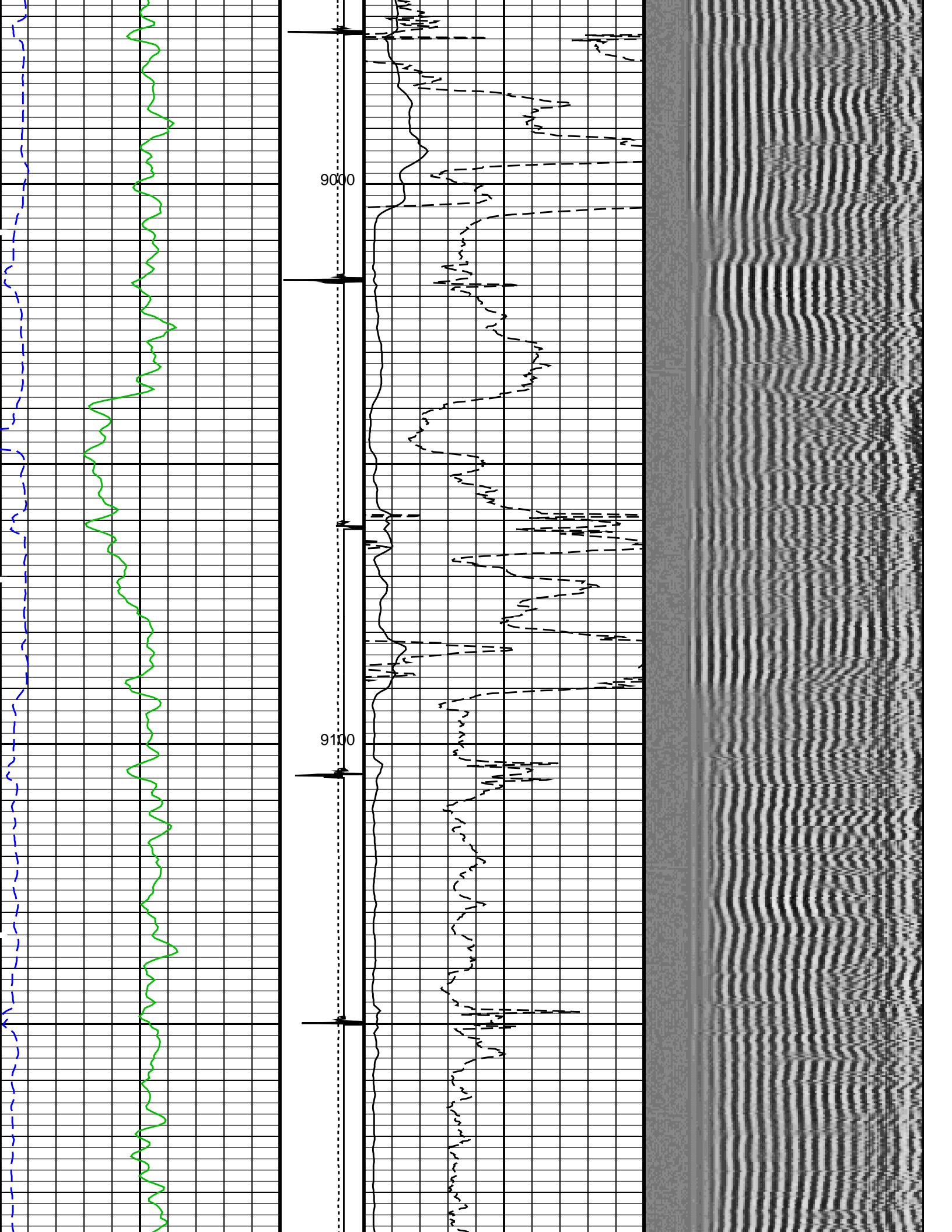


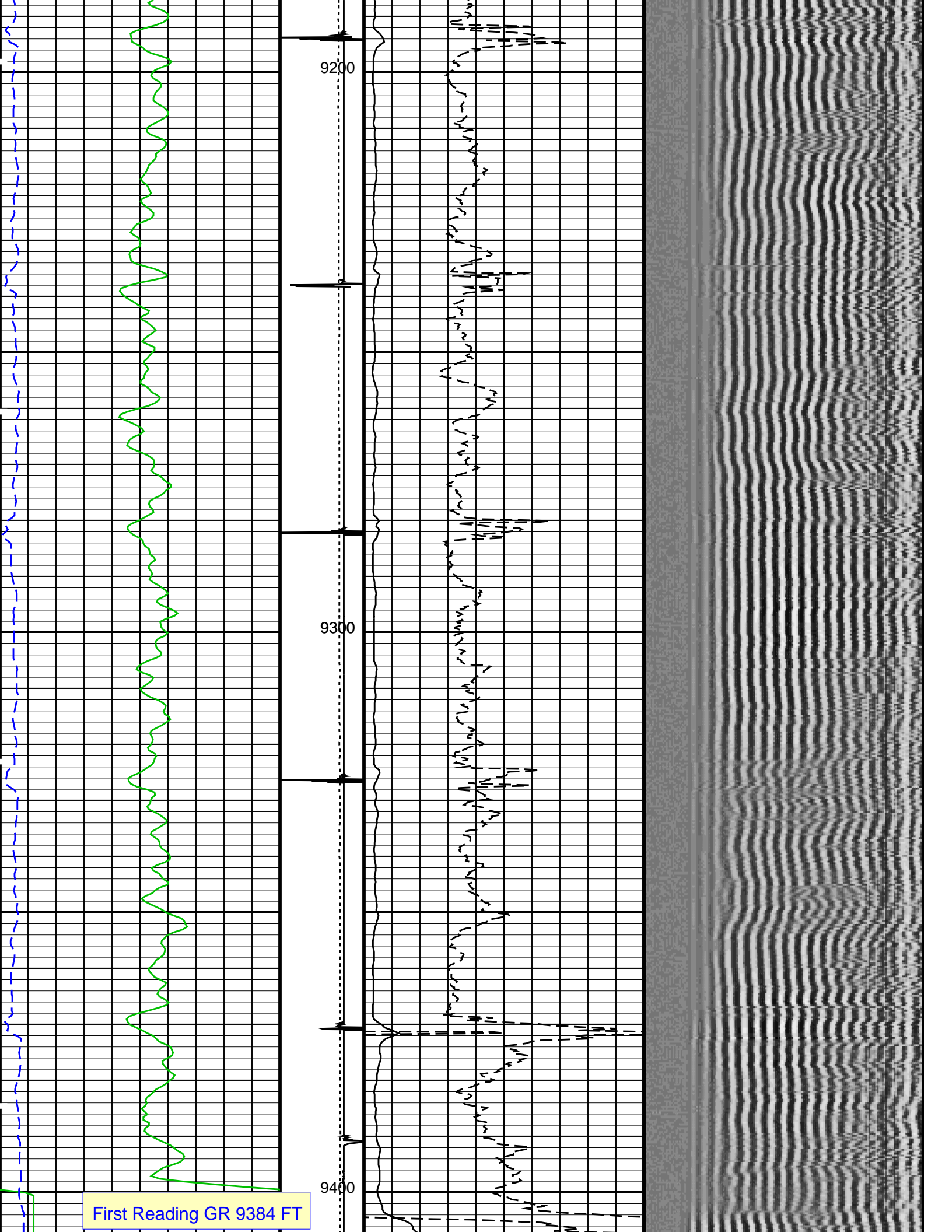


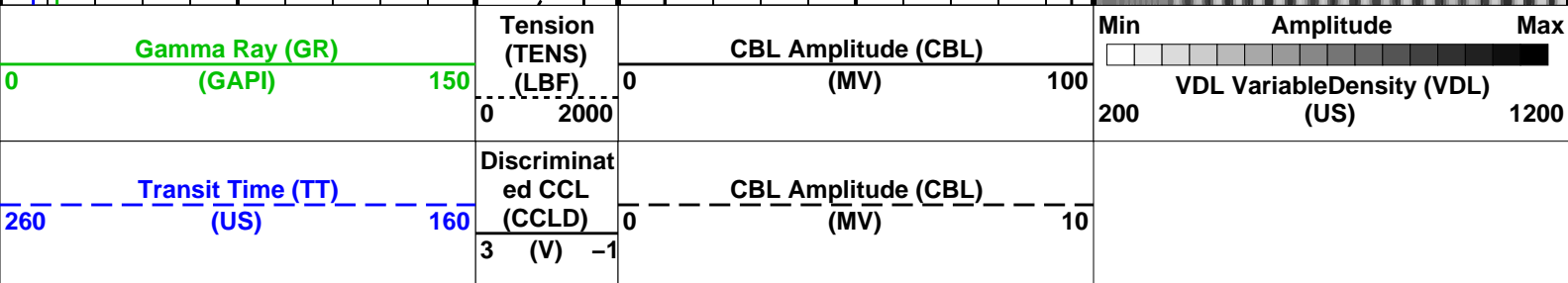
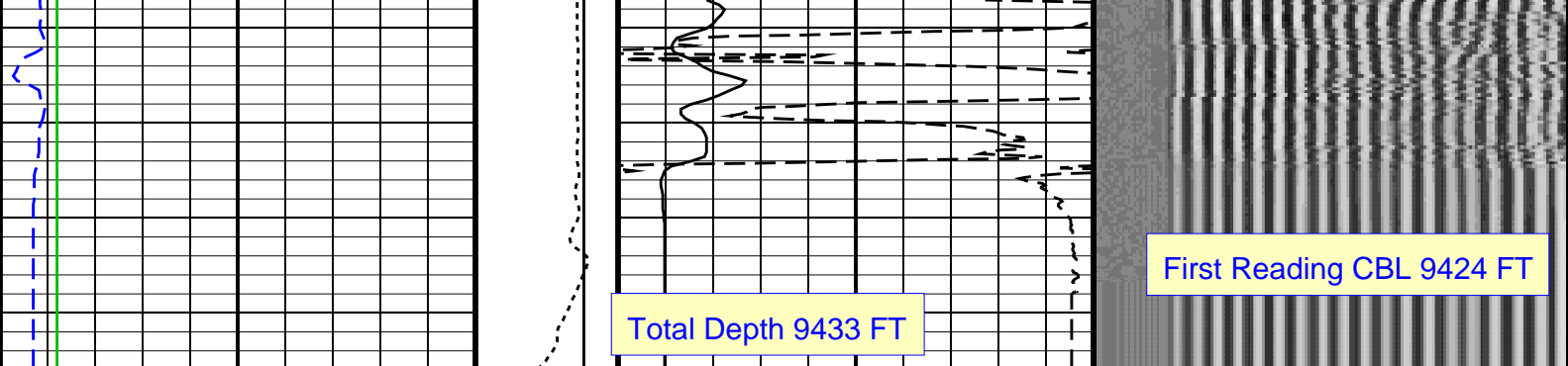












Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 28-Apr-2013 00:29

OP System Version: 19C0-187

SCMT-CB SRPC-5214-H2-2012-OP1! RST-C SRPC-5214-H2-2012-OP1!

PSPT SRPC-5214-H2-2012-OP1!

<<<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	7-SEP-2012		
CBL Correction Factor	0.0756720	CBL Adjustment Factor (CBAF)	0.900000
MAP 1 Correction Factor	0.136845	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.165126		
MAP 3 Correction Factor	0.125717		
MAP 4 Correction Factor	0.196395		
MAP 5 Correction Factor	0.147692		
MAP 6 Correction Factor	0.128887		
MAP 7 Correction Factor	0.150775		
MAP 8 Correction Factor	0.144577		

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			
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	9433	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_037LUP	FN:35	PRODUCER	27-Apr-2013 21:46	9440.0 FT	-8.0 FT
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Output DLIS Files

DEFAULT	SCMT_RST_PSP_042PUP	FN:40	PRODUCER	28-Apr-2013 00:29
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Schlumberger

REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC	Well: SHIDELER 30-4A (O19EB)
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Input DLIS Files

DEFAULT	SCMT_RST_PSP_034LUP	FN:32	PRODUCER	27-Apr-2013 20:59	6163.5 FT	5823.5 FT
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Output DLIS Files

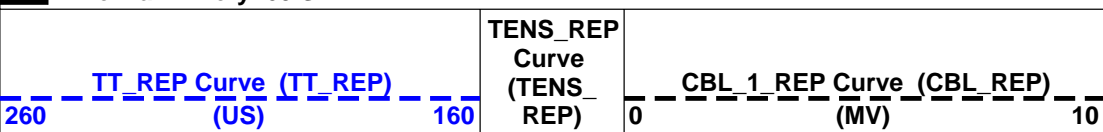
DEFAULT	SCMT_RST_PSP_043PUP	FN:41	PRODUCER	28-Apr-2013 00:38	6164.5 FT	5772.5 FT
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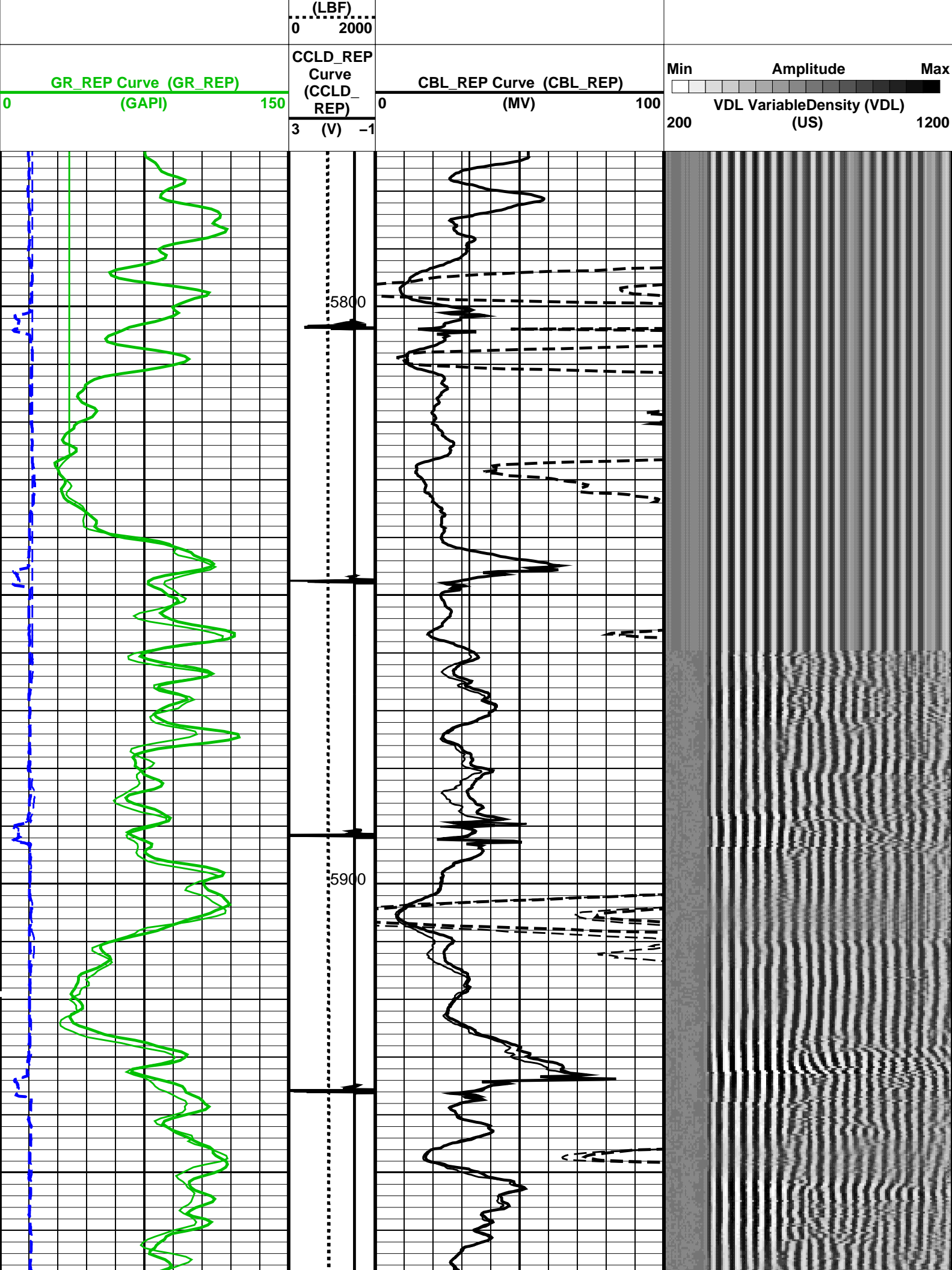
OP System Version: 19C0-187

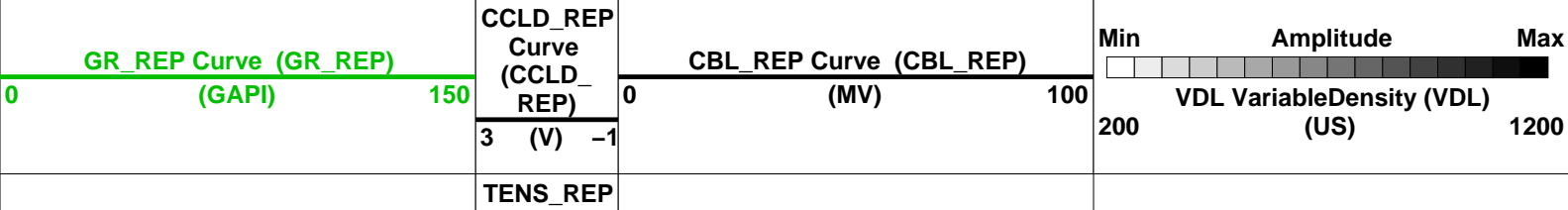
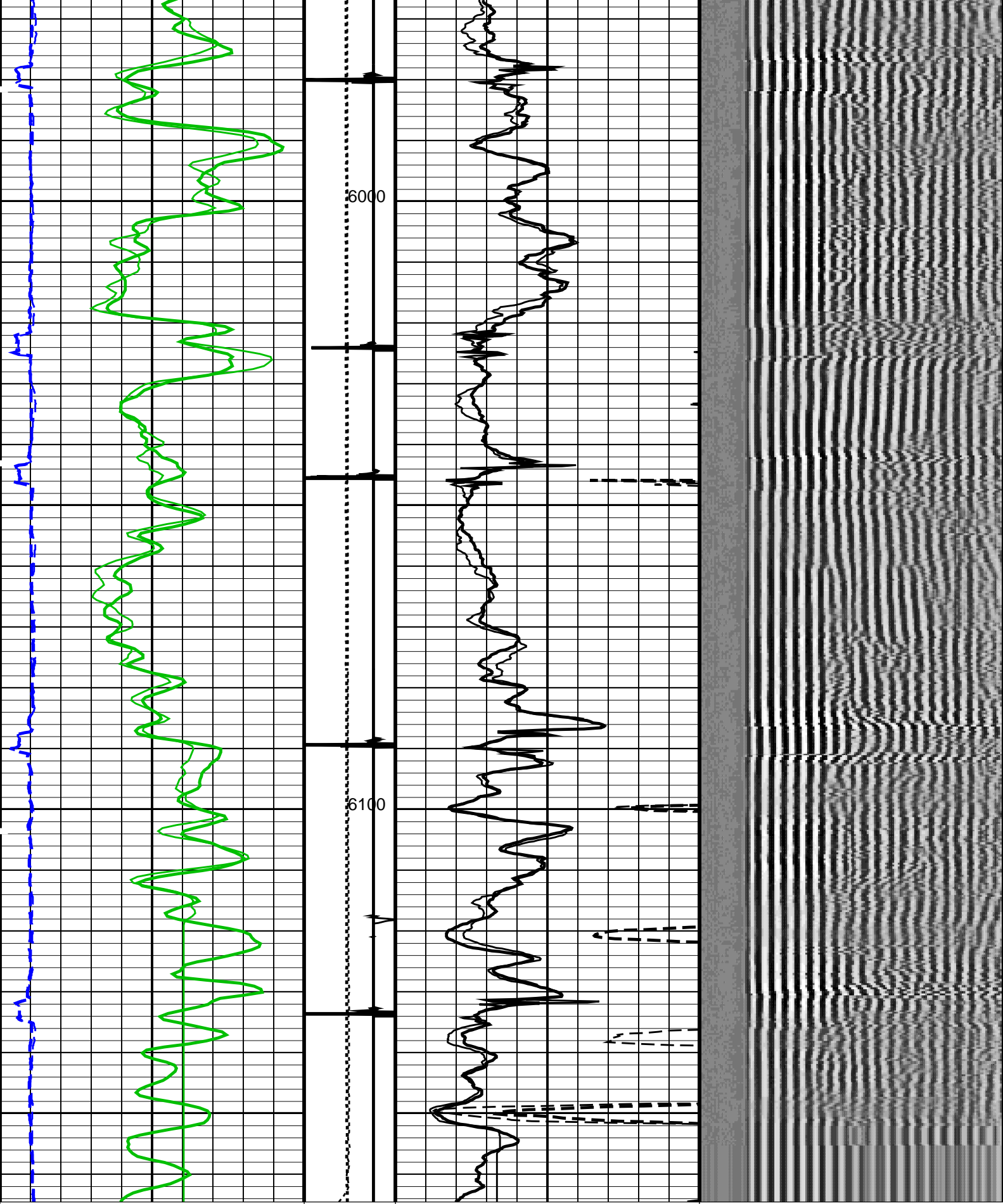
SCMT-CB	SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!
PSPT	SRPC-5214-H2-2012-OP1!		

PIP SUMMARY

Time Mark Every 60 S







TT_REP Curve (TT_REP) (US)	Curve (TENS- REP) (LBF)	CBL_1_REP Curve (CBL_REP) (MV)
260	0	10
160	0	2000

PIP SUMMARY		
Time Mark Every 60 S		
Format: CBL_VDL_REP	Vertical Scale: 5" per 100'	Graphics File Created: 28-Apr-2013 00:38

OP System Version: 19C0-187			
SCMT-CB PSPT	SRPC-5214-H2-2012-OP1! SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!

<<<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	7-SEP-2012		
CBL Correction Factor	0.0756720	CBL Adjustment Factor (CBAF)	0.900000
MAP 1 Correction Factor	0.136845	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.165126		
MAP 3 Correction Factor	0.125717		
MAP 4 Correction Factor	0.196395		
MAP 5 Correction Factor	0.147692		
MAP 6 Correction Factor	0.128887		
MAP 7 Correction Factor	0.150775		
MAP 8 Correction Factor	0.144577		

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			
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	1.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	9433	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_034LUP	FN:32	PRODUCER	27-Apr-2013 20:59	6163.5 FT	5823.5 FT
DEFAULT	SCMT_RST_PSP_042PUP	FN:40	PRODUCER	28-Apr-2013 00:29	9446.0 FT	-54.0 FT

Output DLIS Files

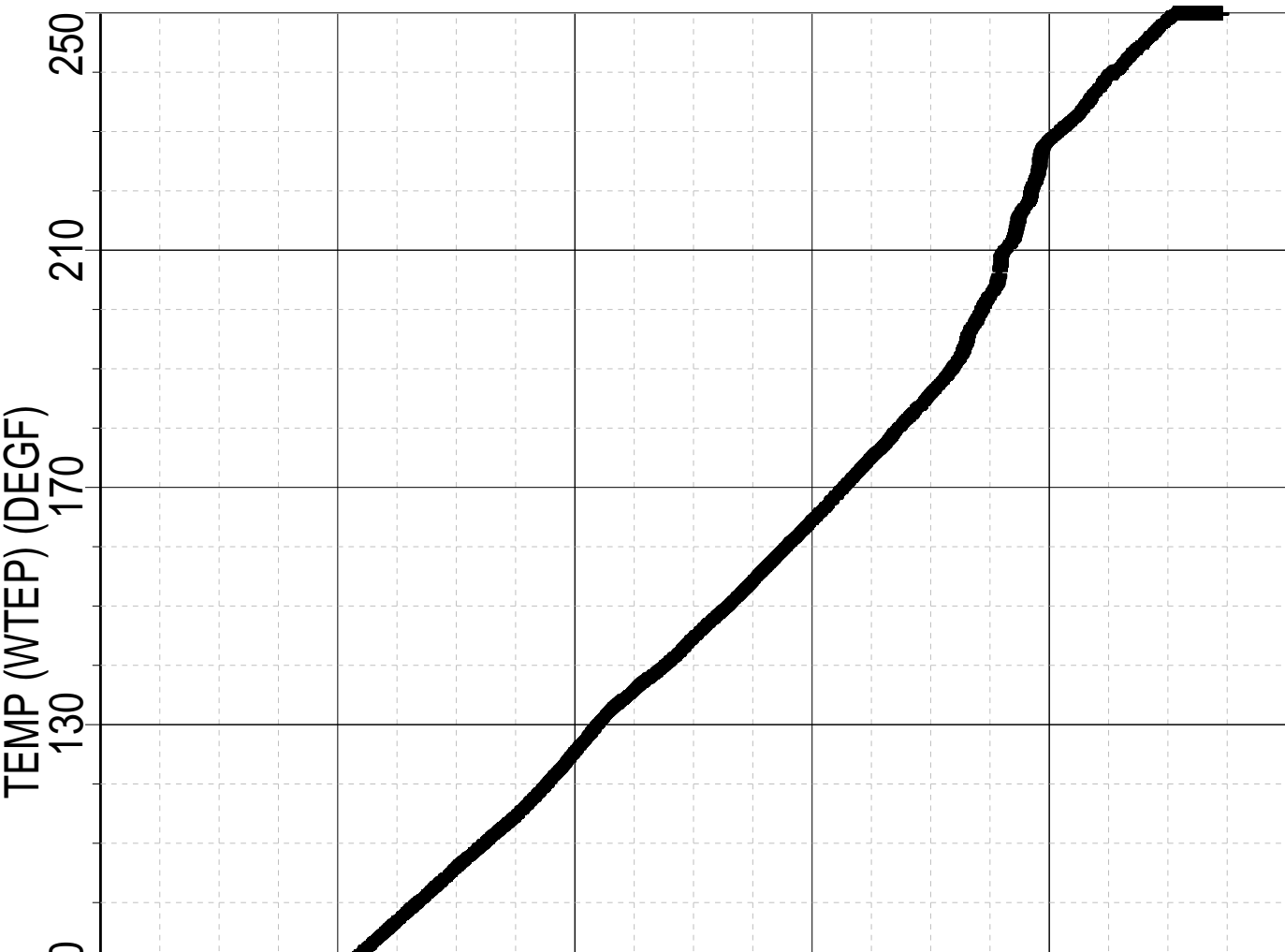
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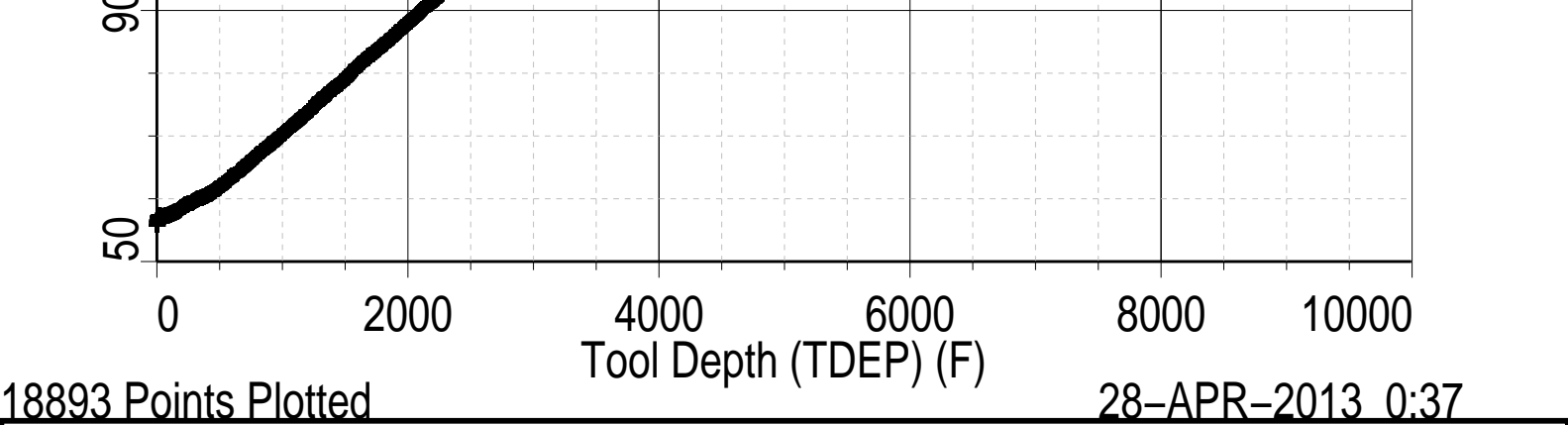
Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 9446.0 – -54.0 FT





PBMS COEFFICIENTS

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER 30-4A (O19EB)

Run date: 27-Apr-2013

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.33223, TOOL PBMS-BA0928. SENSOR S/N:

33223

090800

12

CFE2

GR HV Rt

	Rt**0	Rt**1
Rt**0	<div>+.182000000000e+04</div>	<div>+.332000000000e+04</div>

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER 30–4A (O19EB)

Run date: 27–Apr–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.928 S/N:

928

280612

16

A24E

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	–.391987973189E+03	+.191346892512E+03	–.440920753451E+02
	Tt**3	Tt**4	Tt**5
Tt**0	+.957191300908E+01	–.711421725686E+00	0.0

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER 30–4A (O19EB)

Run date: 27–Apr–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.928 S/N:

928

280612

66

9DC3

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+.714463802232E+04	+.183434658655E–01	–.156620073569E–06
Fc**1	–.100638308957E+01	–.119899563644E–04	–.912155899025E–10
Fc**2	+.936268101283E–06	+.423898071451E–10	+.958076371919E–15
Fc**3	+.185123362373E–11	+.203107925433E–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	−.746577997611E−10	−.588773826860E−15	−.622250441458E−19
Fc**1	−.120636521092E−15	+400325894750E−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 928
Calib Date ddmmyy 280612
Matrix Size 66
Coeff CRC 283B

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+1.17016867873E+03	−.284359629614E−03	+604391180345E−08
Fb**1	−.598309140812E−02	+182731130848E−07	+160166486172E−12
Fb**2	−.307621454576E−07	+300601550309E−12	+311233548560E−17
Fb**3	−.419658736767E−12	+117473708647E−16	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	+1.14322792679E−12	+153807711176E−17	−.736714260866E−21
Fb**1	−.528037875456E−18	−.220337637519E−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 928
Calib Date ddmmyy 280612

Matrix Size 16
Coeff CRC 093F

Clock Freq Coeff

	$(Fb'-Fc')^{**0}$	$(Fb'-Fc')^{**1}$	$(Fb'-Fc')^{**2}$
$(Fb'-Fc')^{**0}$	+.310874009898E+05	+.288920923041E-02	+.697940727038E-06
	$(Fb'-Fc')^{**3}$	$(Fb'-Fc')^{**4}$	$(Fb'-Fc')^{**5}$
$(Fb'-Fc')^{**0}$	-.657432344763E-10	-.412920638782E-15	+.213369826099E-20

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 16
Coeff CRC 8419

Clock Temp Coeff

	$(Fb'-Fc')^{**0}$	$(Fb'-Fc')^{**1}$	$(Fb'-Fc')^{**2}$
$(Fb'-Fc')^{**0}$	+.115369519827E+03	-.565338877075E-02	-.333717531829E-07
	$(Fb'-Fc')^{**3}$	$(Fb'-Fc')^{**4}$	$(Fb'-Fc')^{**5}$
$(Fb'-Fc')^{**0}$	-.124387135327E-12	+.713102327208E-16	-.316084316842E-20

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MASTER CALIBRATION

MAXIS Field Log

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	8303
Slim Cement Mapping Cartridge	SCMC - CA	8120


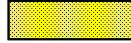





Auxiliary Equipment:

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		876.9	Master		726.7
	500.0 (Minimum)	1075 (Nominal)		500.0 (Minimum)	1075 (Nominal)
		1650 (Maximum)			1650 (Maximum)

(Minimum) (Maximum) (Nominal)			(Minimum) (Maximum) (Nominal)				
Phase	MAP 3 Amplitude Plus MV		Value	Phase	MAP 4 Amplitude Plus MV		Value
Master			954.5	Master			611.0
	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			812.5	Master			931.0
	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			795.9	Master			830.0
	500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)		500.0 (Minimum)	1075 (Nominal)	1650 (Maximum)
Phase	CBL Amplitude Plus MV		Value				
Master			1269				
	1000 (Minimum)	1350 (Nominal)	1700 (Maximum)				
Master: 7-Sep-2012 16:30							

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

Schlumberger

Well: **SHIDELER 30-4A (O19EB)**

Field: **MAMM CREEK**

County: **GARFIELD**

State: **COLORADO**

SLIM CEMENT MAPPING LOGG

CBL – VDL

GR-CCL