

Company: ENCANA OIL & GAS (USA) INC

Well: HMU 6-12DD (J6SEB)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

SLIM CEMENT MAPPING LOG
CBL-VDL
GAMMA RAY-CCL

County:	GARFIELD		
Field:	MAMM CREEK		
Location:	SHL: 1945 FSL & 1919 FEL		
Well:	HMU 6-12DD (J6SEB)		
Company:	ENCANA OIL & GAS (USA) INC		
LOCATION			
SHL: 1945 FSL & 1919 FEL BHL: 1468 FSL & 756 FWL		Elev.: K.B. 7166.00 ft G.L. 7144.00 ft D.F. 7165.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 7144.00 ft	
Log Measured From:	KELLY BUSHING	22.00 ft	above Perm. Datum
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section 6	Township 8S	Range 92W
05-045-21942-000C			

	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	25-Nov-2013		
Run Number	1		
Depth Driller	10124 ft		
Schlumberger Depth	10049 ft		
Bottom Log Interval	10040 ft		
Top Log Interval	70 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	70 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	7084 ft		
To	10124 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	S-80		
From	22 ft		
To	10095 ft		
Maximum Recorded Temperatures	272 degF		
Logger On Bottom	25-Nov-2013	9:45	
Unit Number	Location		
Recorded By	KIRSTIE BUNTING		
Witnessed By	JIM DYKEMAN		

Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Fluid Type			
Salinity			
Density			
Fluid Level			
BIT/CASING/TUBING STRING			
Bit Size			
From			
To			
Casing/Tubing Size			
Weight			
Grade			
From			
To			
Maximum Recorded Temperatures			
Logger On Bottom			
Unit Number	Location		
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 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	<div>Conveyance Method: Wireline</div> <div>Rig Type: LAND</div>	
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10		
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

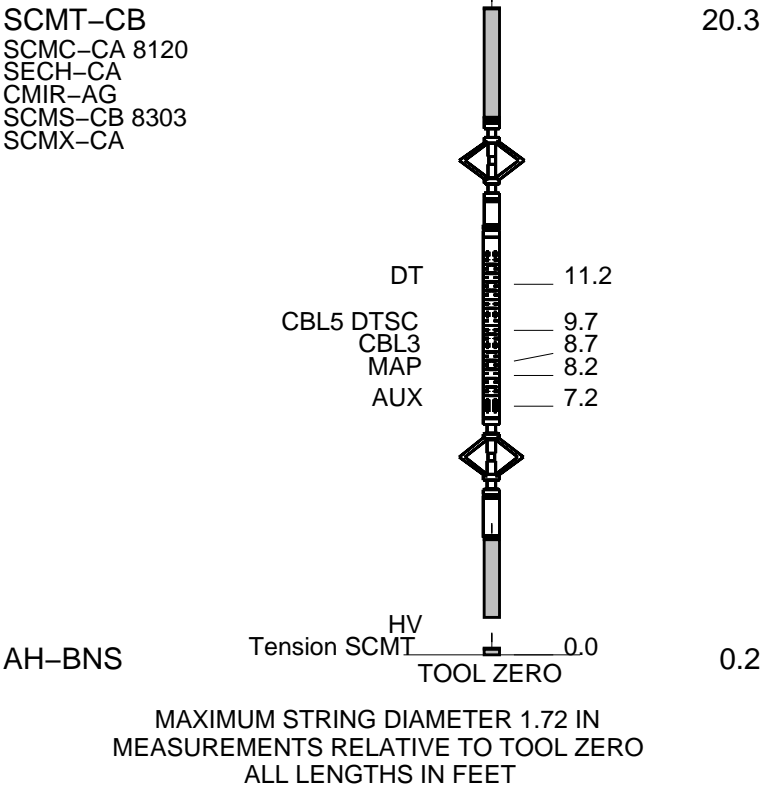
1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES USED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SPWT DRUM COUNTER USED AS SECONDARY DEPTH REFERENCE
- 4.
- 5.
- 6.

DISCLAIMER

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 CORRLEATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
ENTRANCE: 09:00	
TIME ON BOTTOM: 09:45	
EXIT: 13:00	

MAXIMUM RECORDED TEMPERATURE: 272 DEGF					
MAXIMUM RECORDED PRESSURE: 4176 PSIA					
SHORT JOINTS: 6798 FT & 7835 FT					
MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE					
EXPECTED CBL AMPLITUDE IN FREE PIPE IS 80 MV					
CREW: KBUNTING, WAZIZ, KJOHNS, KBOZARTH					
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY					
RUN 1			RUN 2		
SERVICE ORDER #:	CGF9-00170		SERVICE ORDER #:		
PROGRAM VERSION:	19C0-187		PROGRAM VERSION:		
FLUID LEVEL:	70 ft		FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP
EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		
SURFACE EQUIPMENT					
WITM-A PSC_16MHZ					
DOWNHOLE EQUIPMENT					
MH-22 MH-22					53.4
AH-38	Detail MT				
PSPT	TelStatus		51.5		51.8
PSC-A	CTEM				51.5
PSPT-B					
PSTC-A					
PBMS-B 928	GR		47.8		
CQG_F_Mano					
RTD_Thermometer					
GR	Well_Temp		44.8		
CCL	CQG Manom		44.5		
PBMS	CCL		44.0		
	PBMS PSTC		43.3		
RST-C					43.3
RSCH-A					
RSS-E 155					
RSS-A 255					
RSXH-A					
RSX-E 309					
	RSC-A Far		34.2		
	RSC-A PNG				
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	RSX-A PNG		33.7		



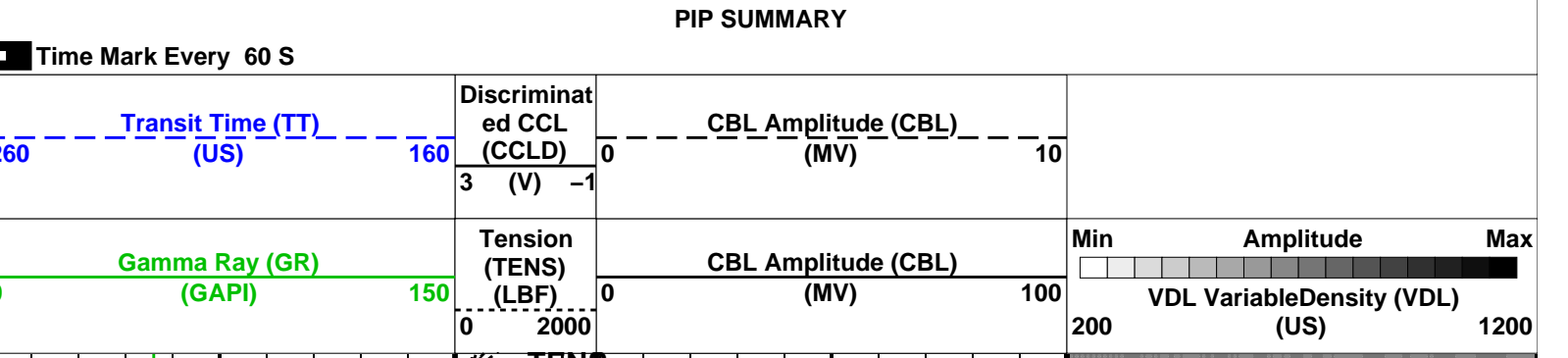
Schlumberger

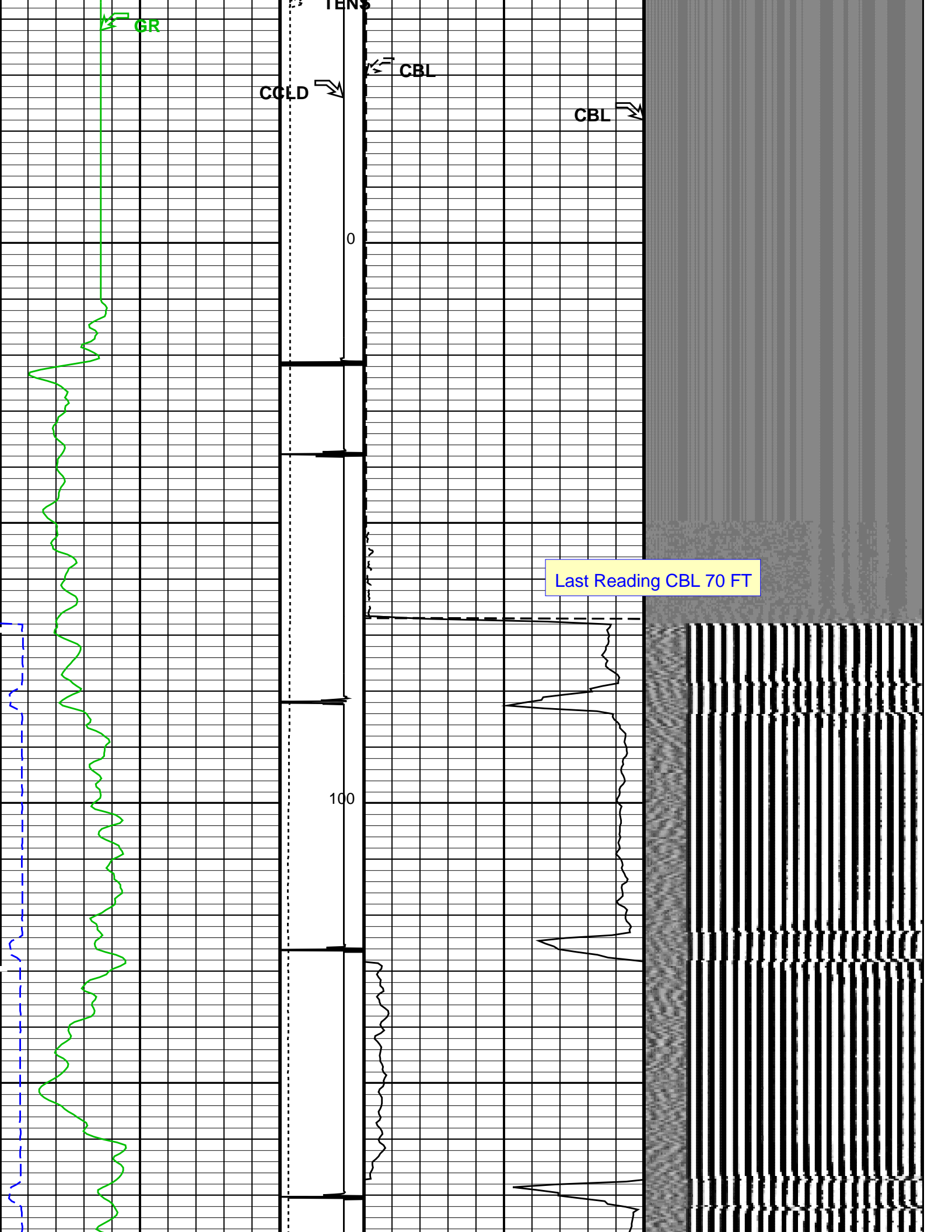
MAIN PASS CBL VDL

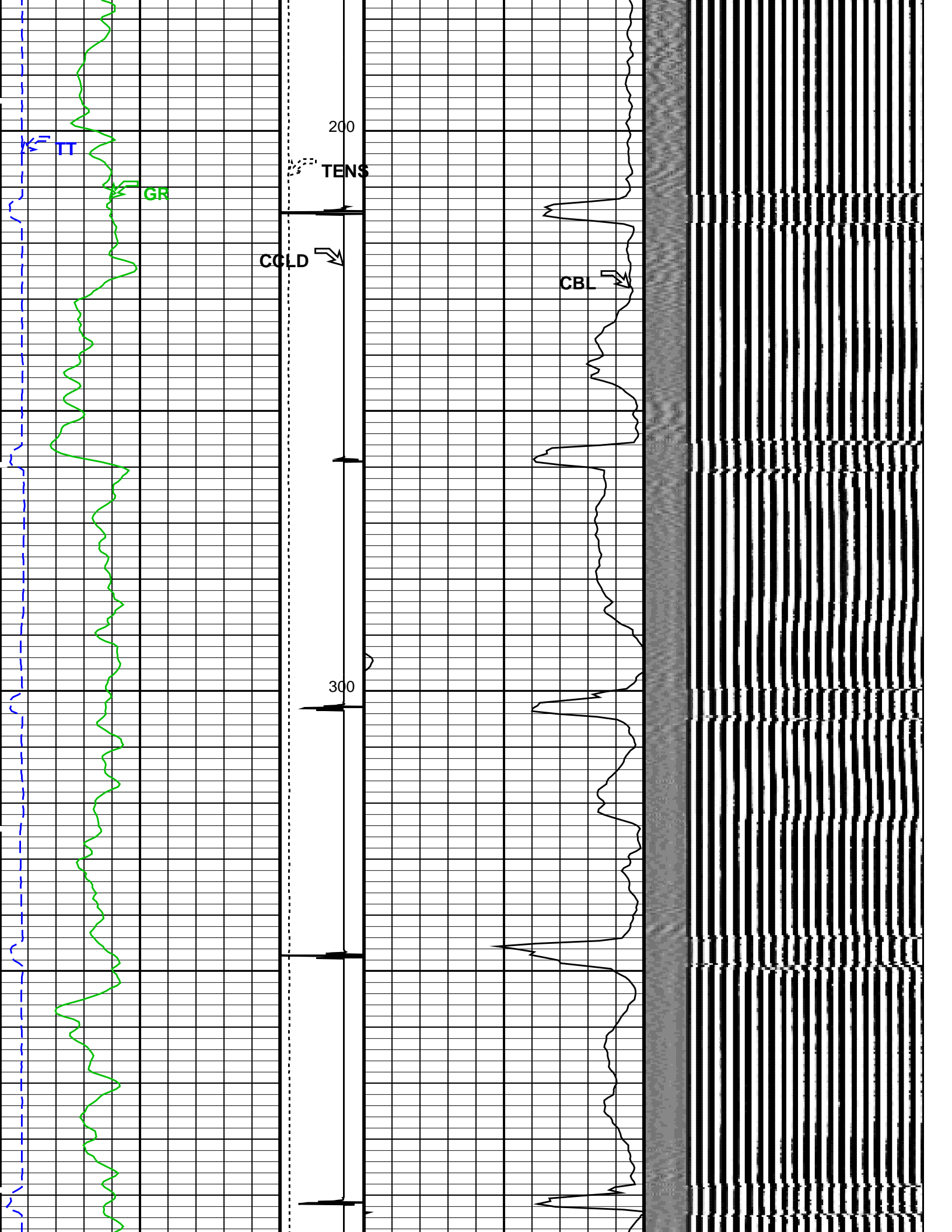
MAXIS Field Log

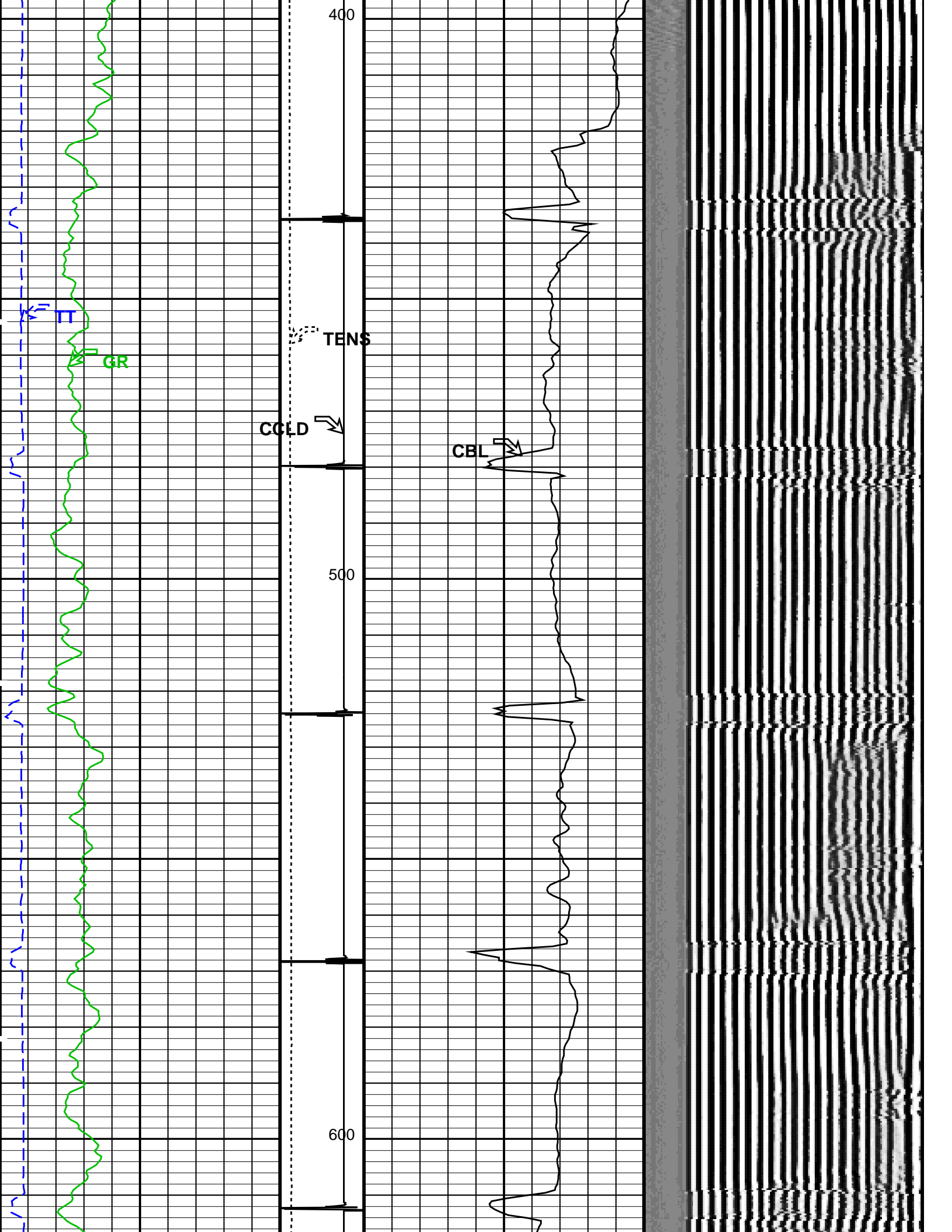
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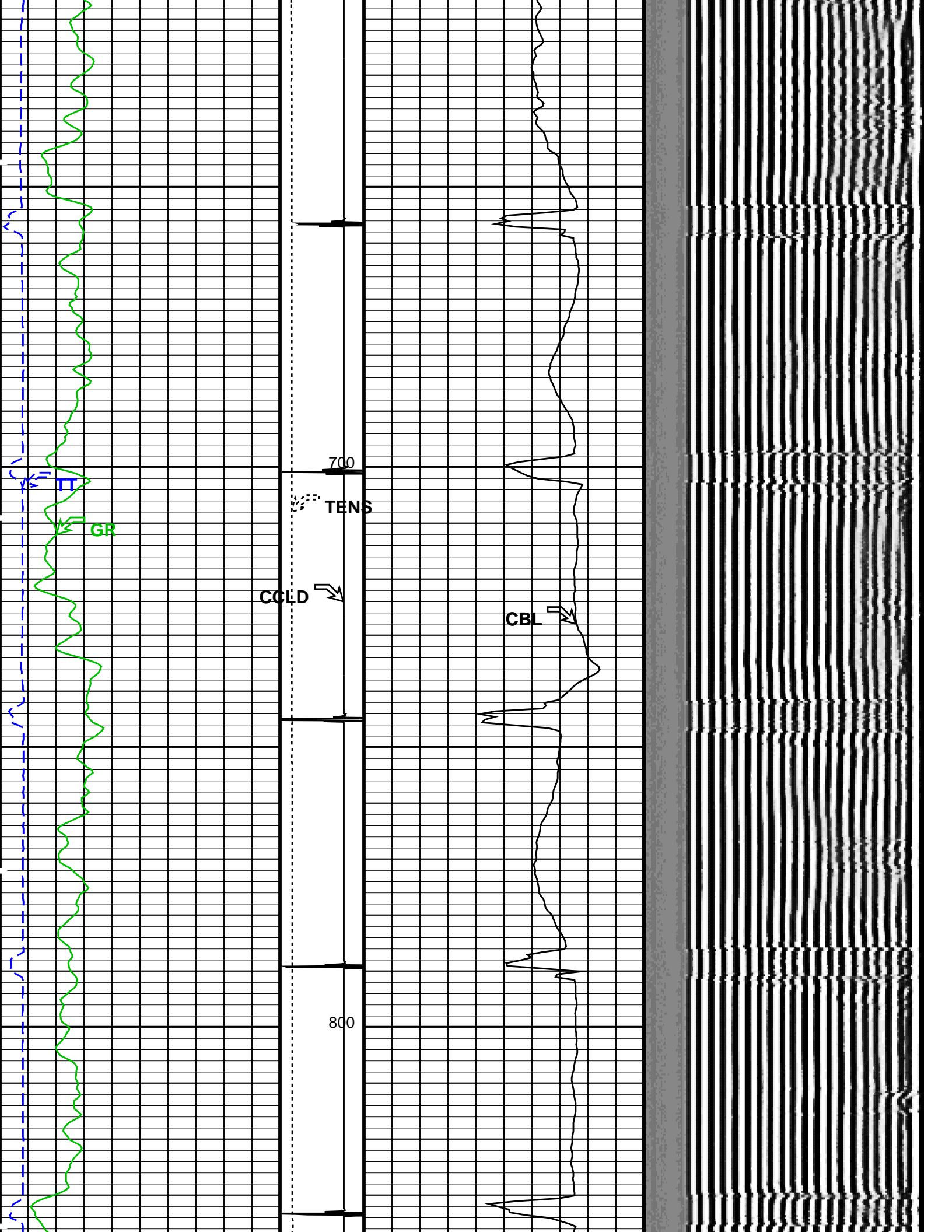
Input DLIS Files						
DEFAULT	Splice_SCMT_RST_PSP_015CUP	FN:1	PRODUCER	25-Nov-2013 12:55	12000.0 FT	2.2 FT
Output DLIS Files						
DEFAULT	SCMT_RST_PSP_017PUP	FN:15	PRODUCER	25-Nov-2013 13:03	10061.0 FT	-44.5 FT
OP System Version: 19C0-187						
SCMT-CB	SRPC-5214-H2-2012-OP1		RST-C		SRPC-5214-H2-2012-OP1	
PSPT	SRPC-5214-H2-2012-OP1					

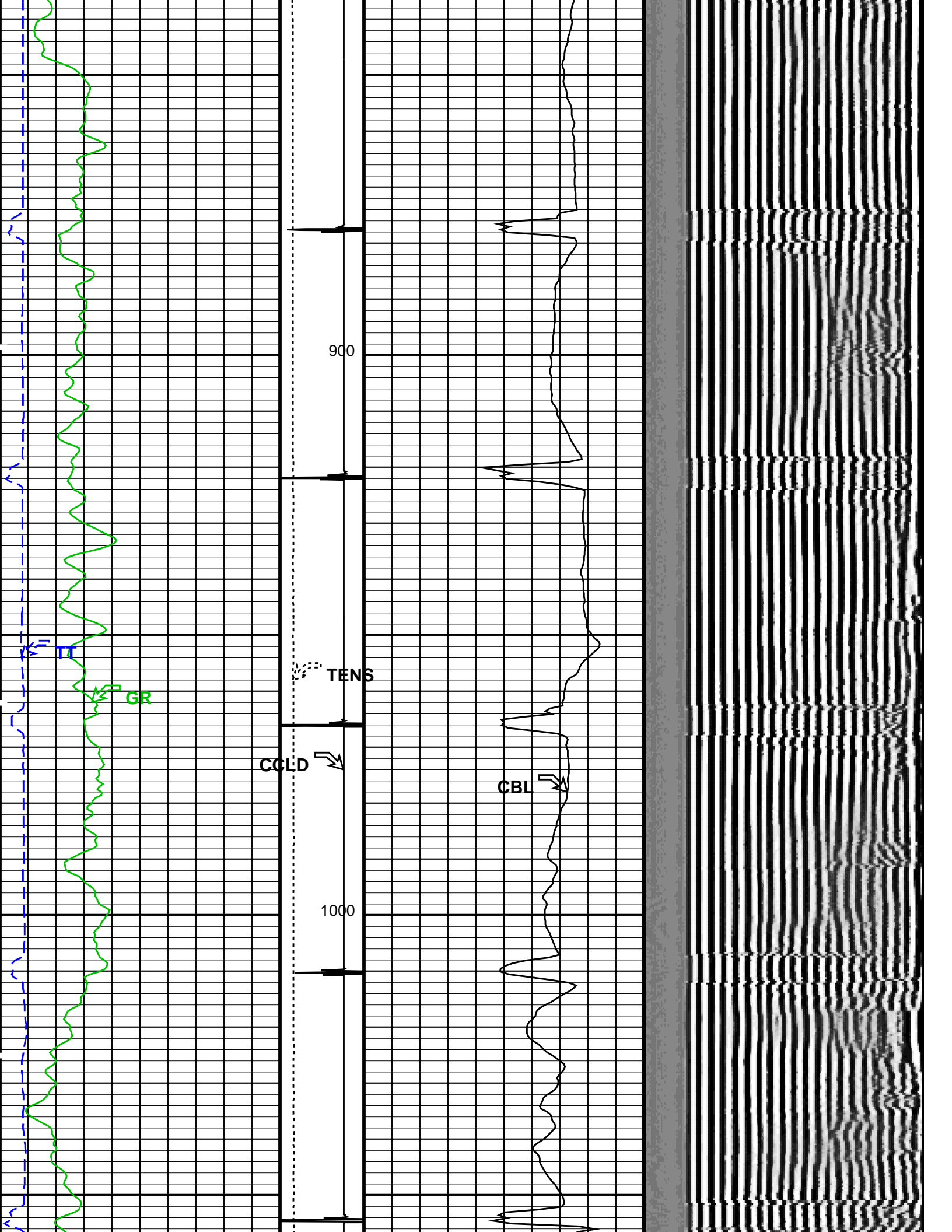


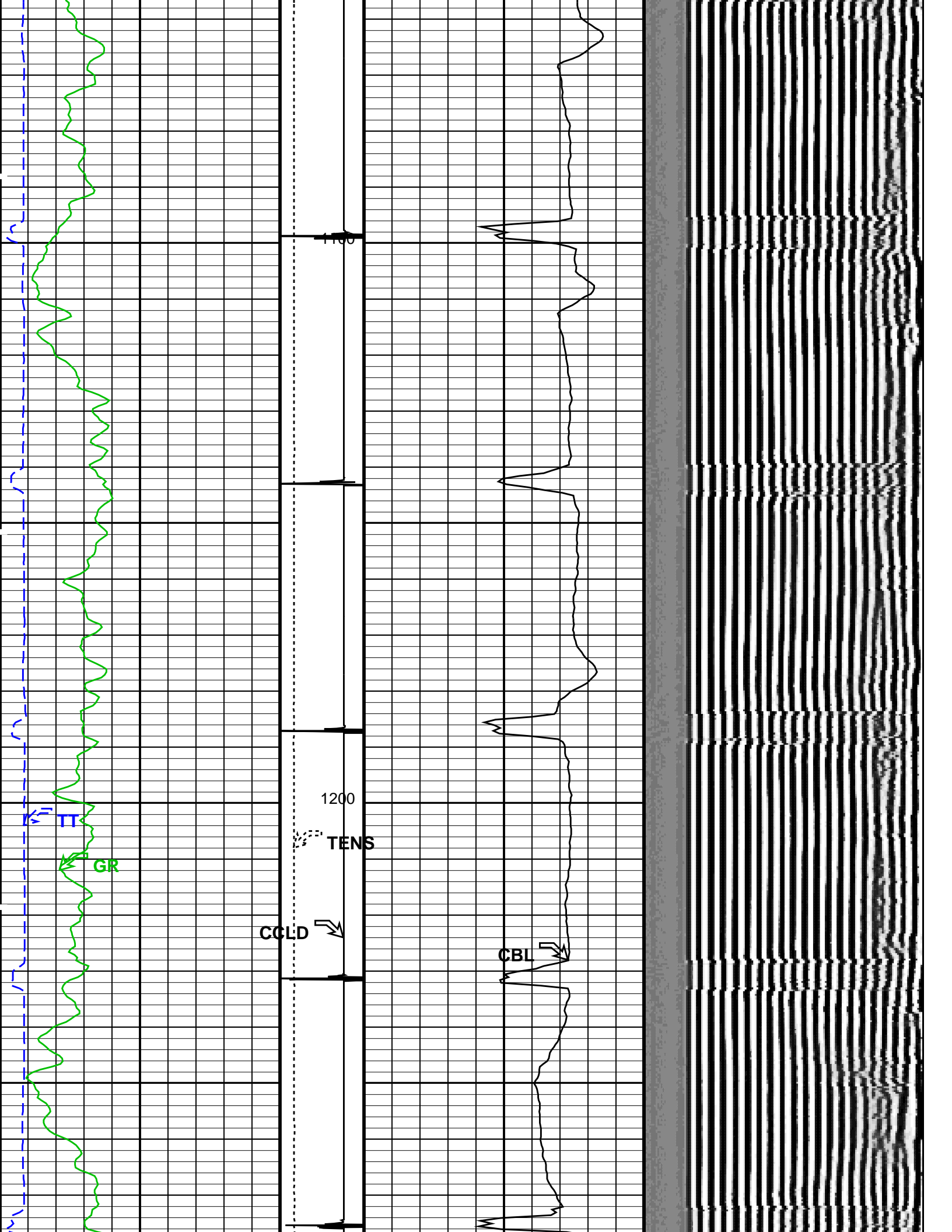


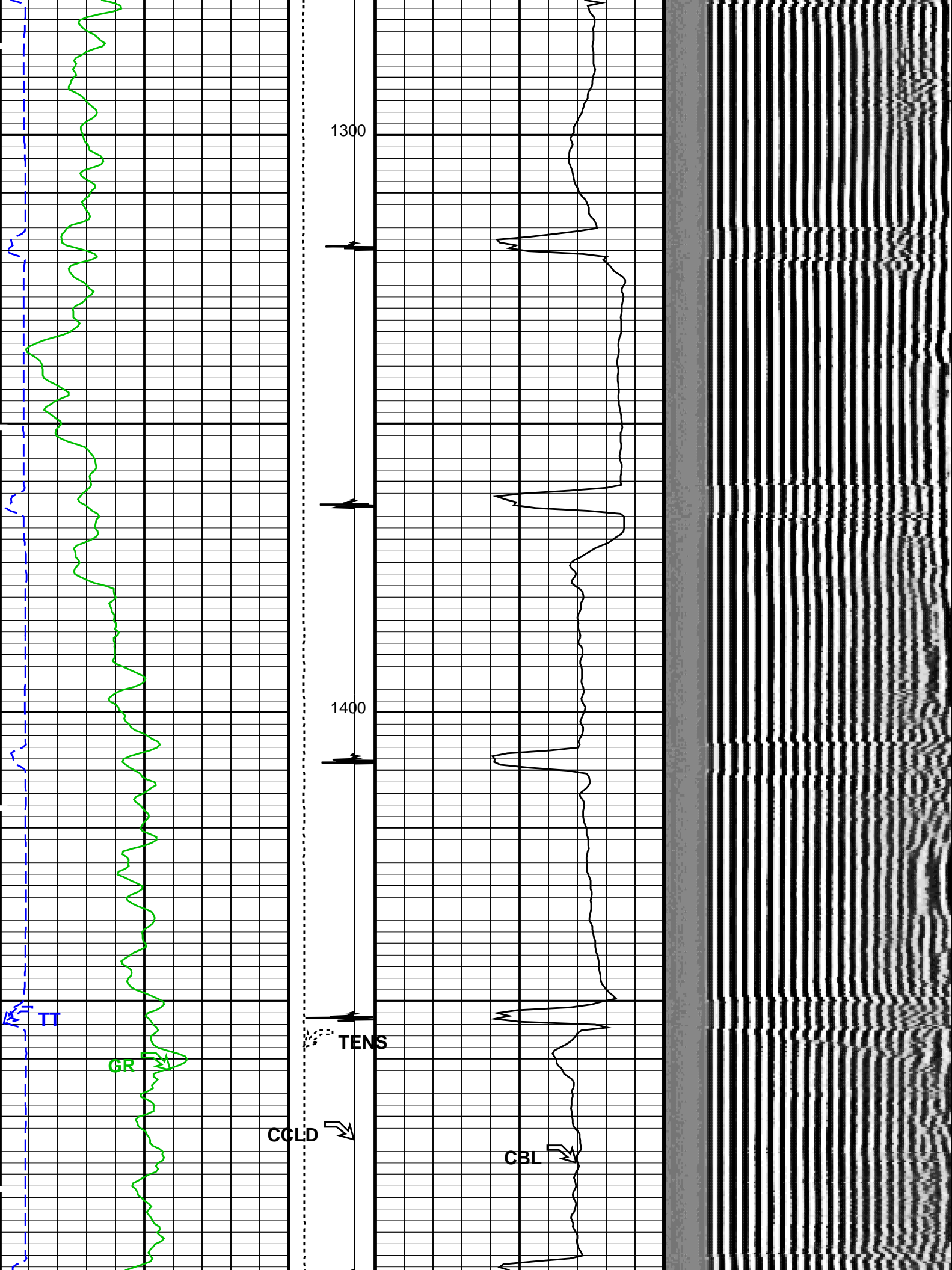


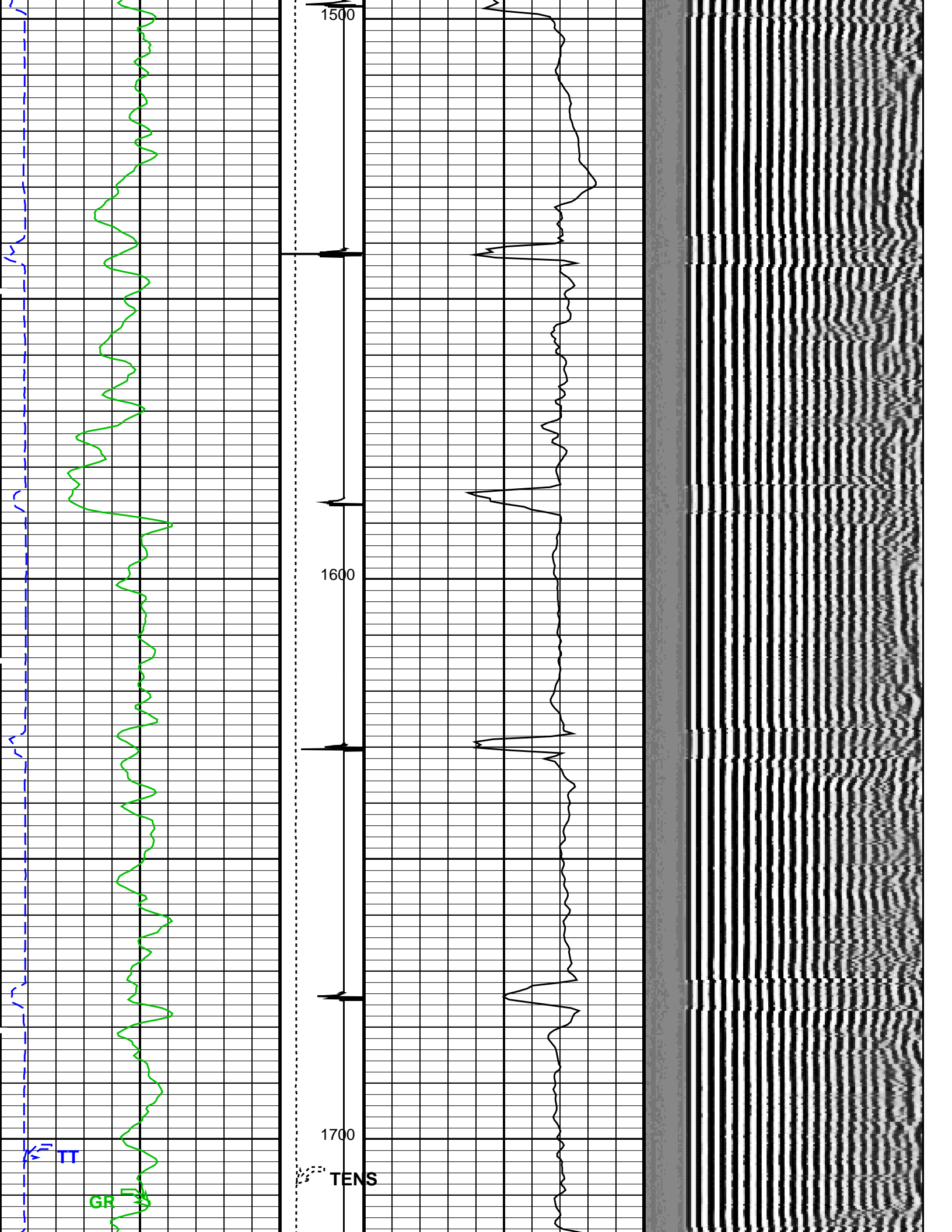


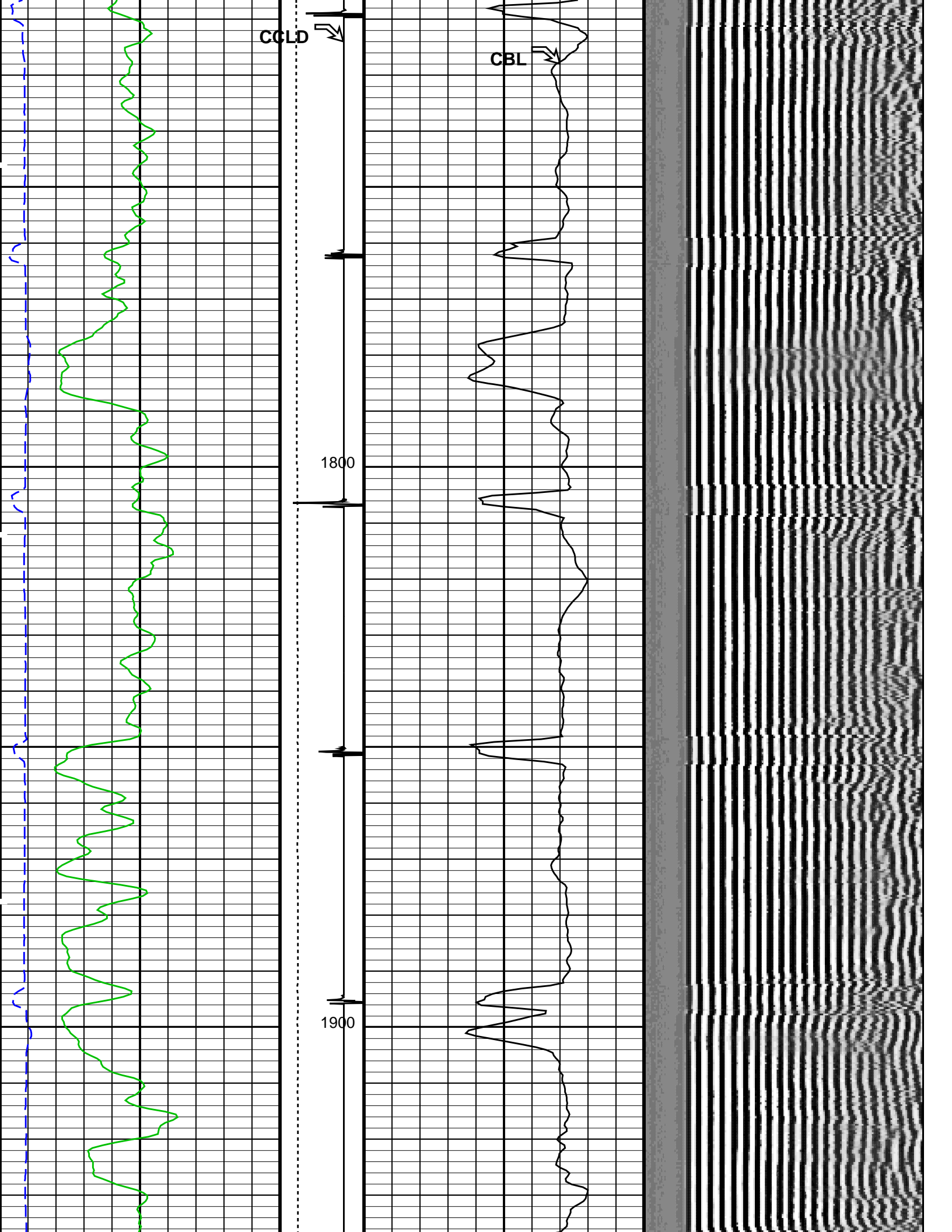


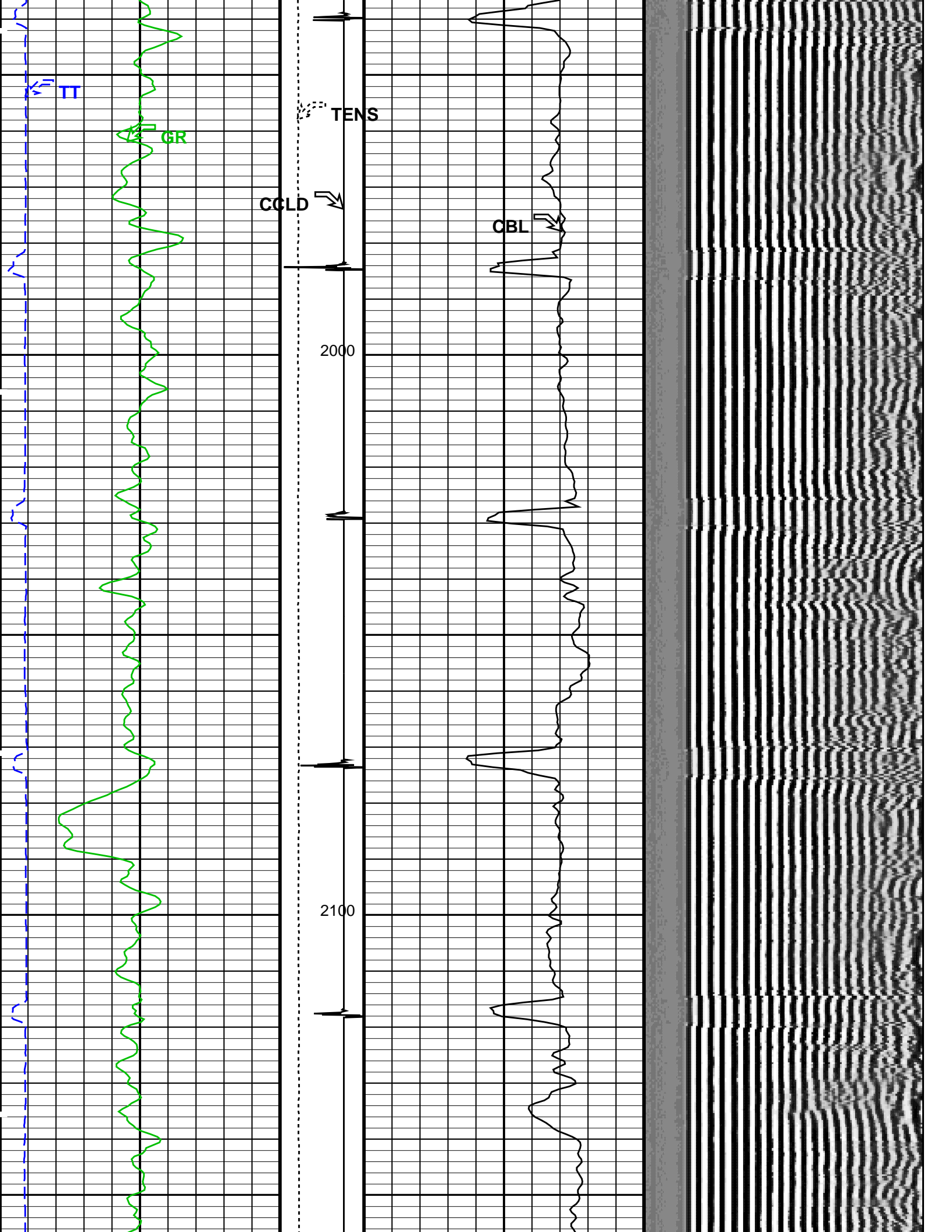


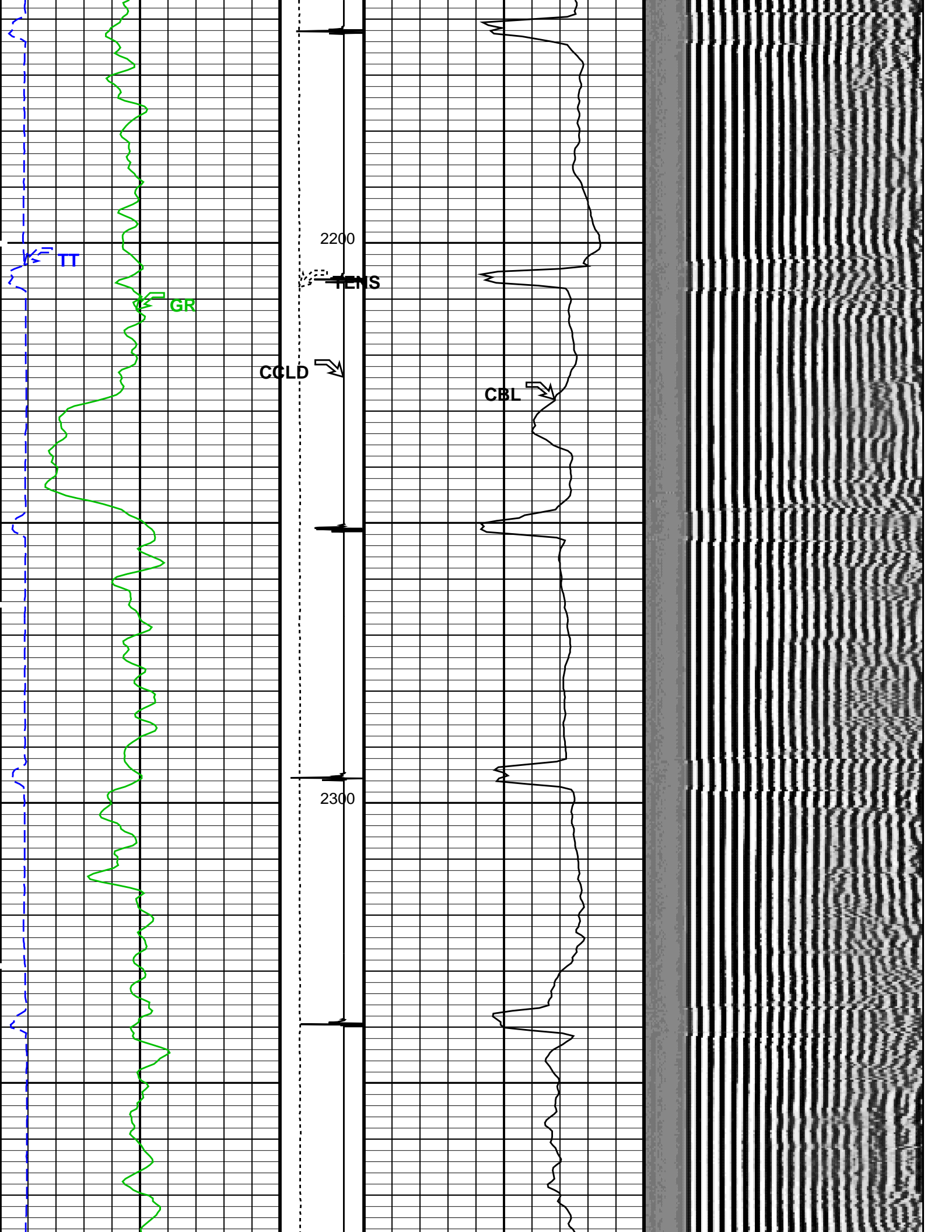


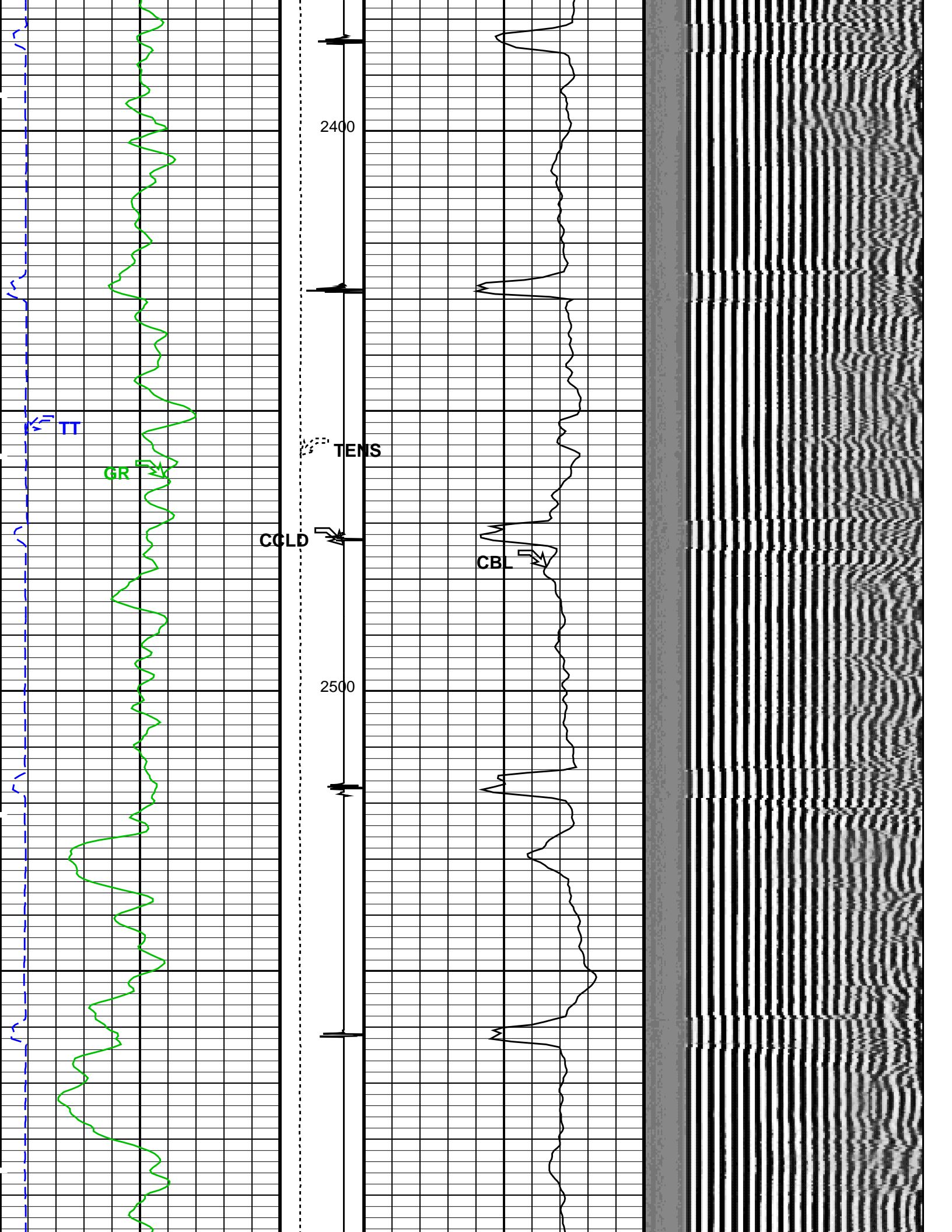


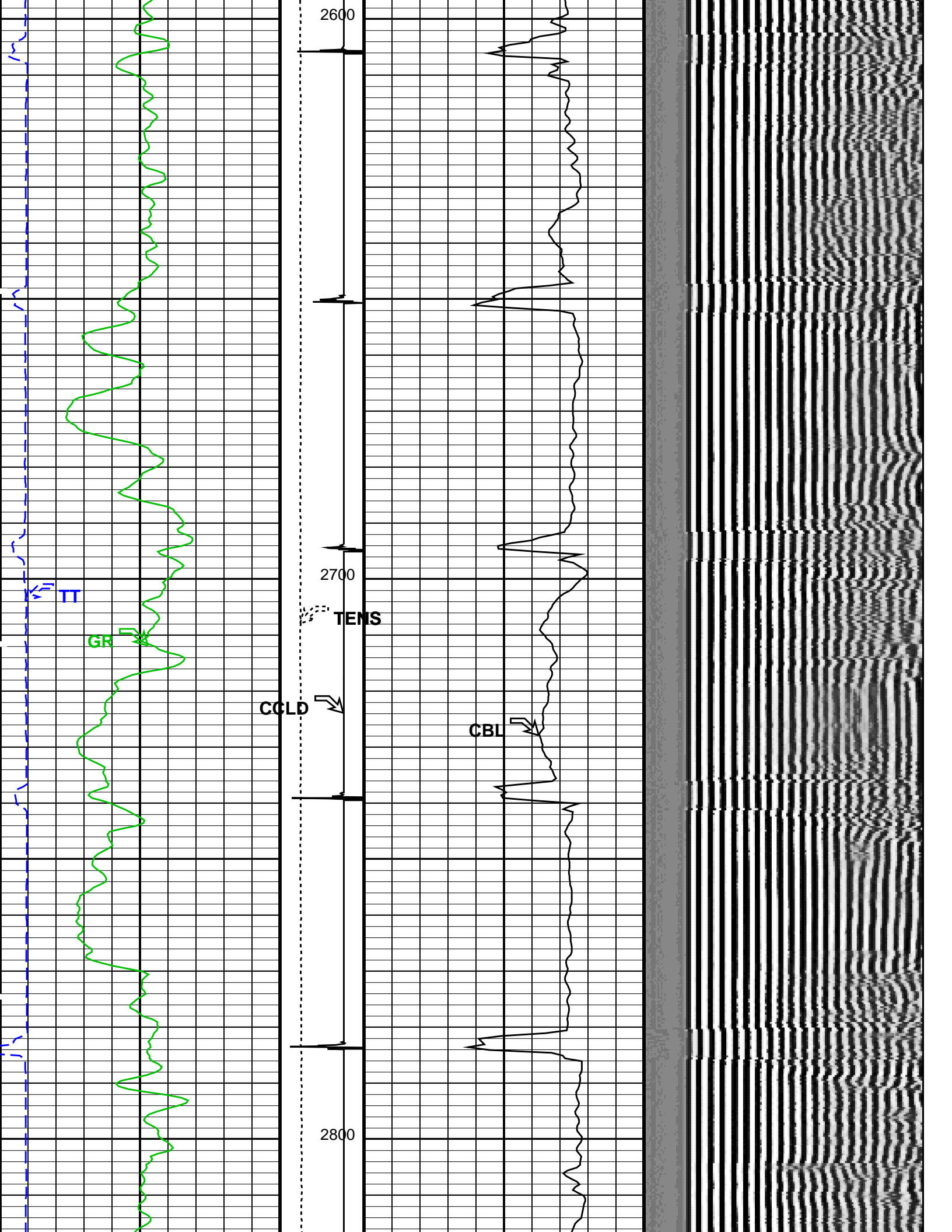


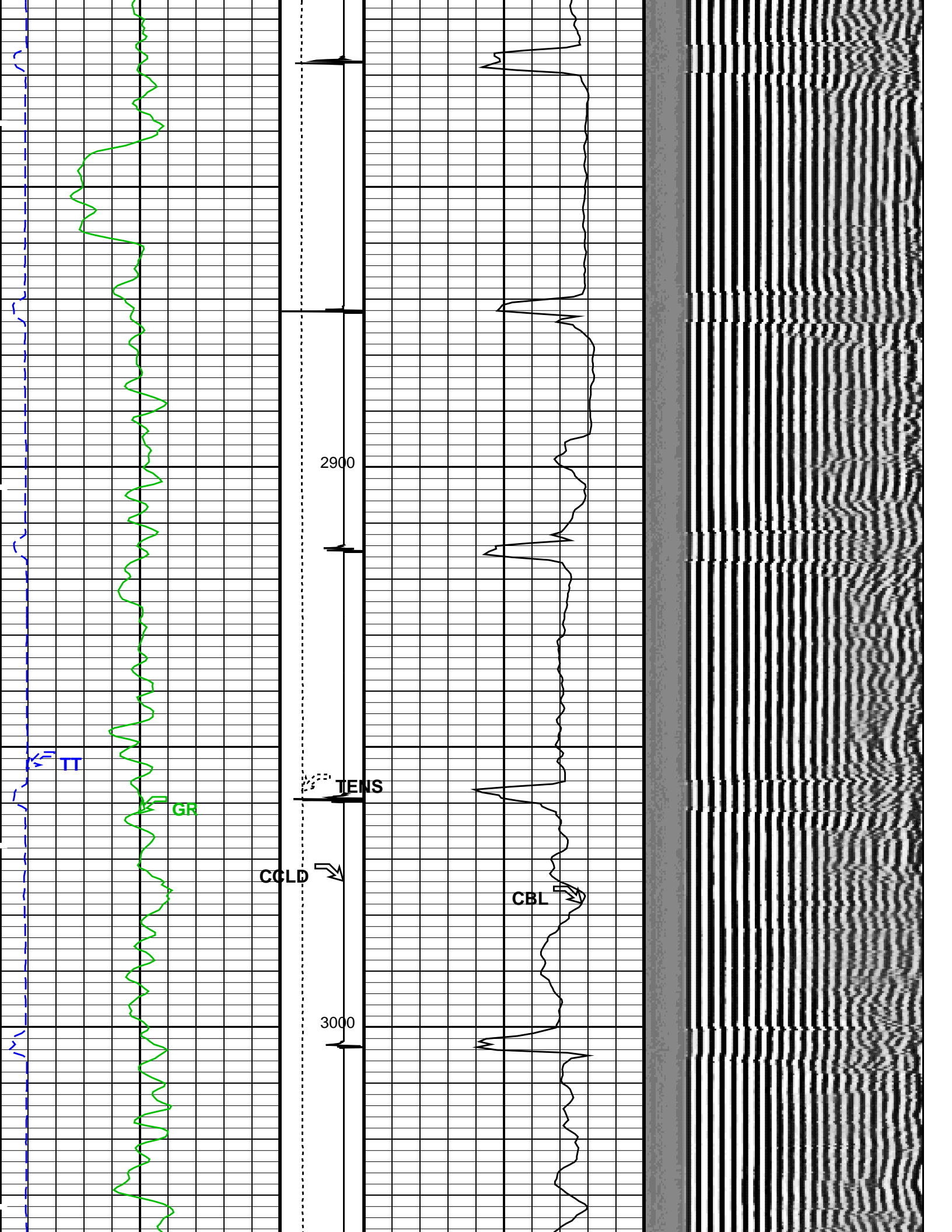


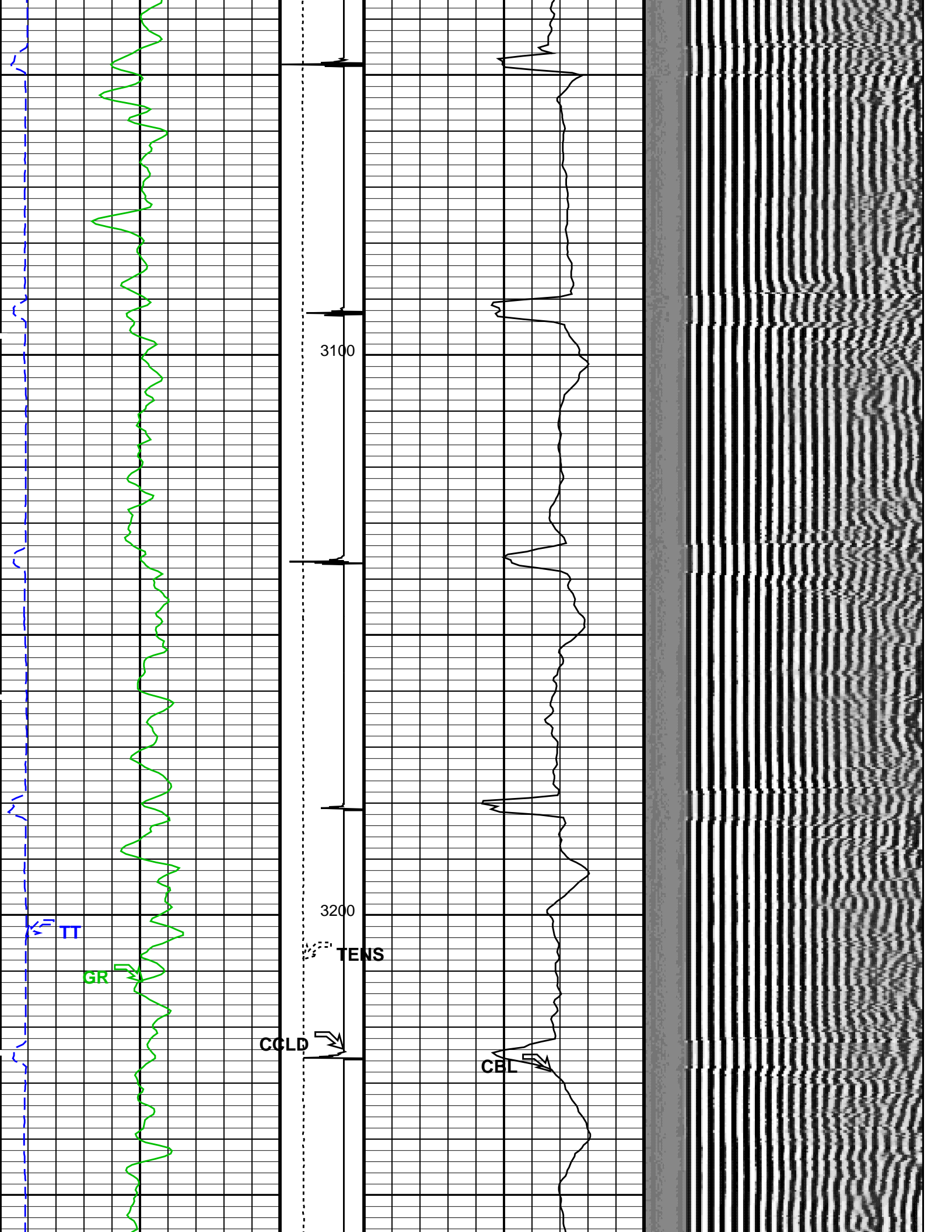


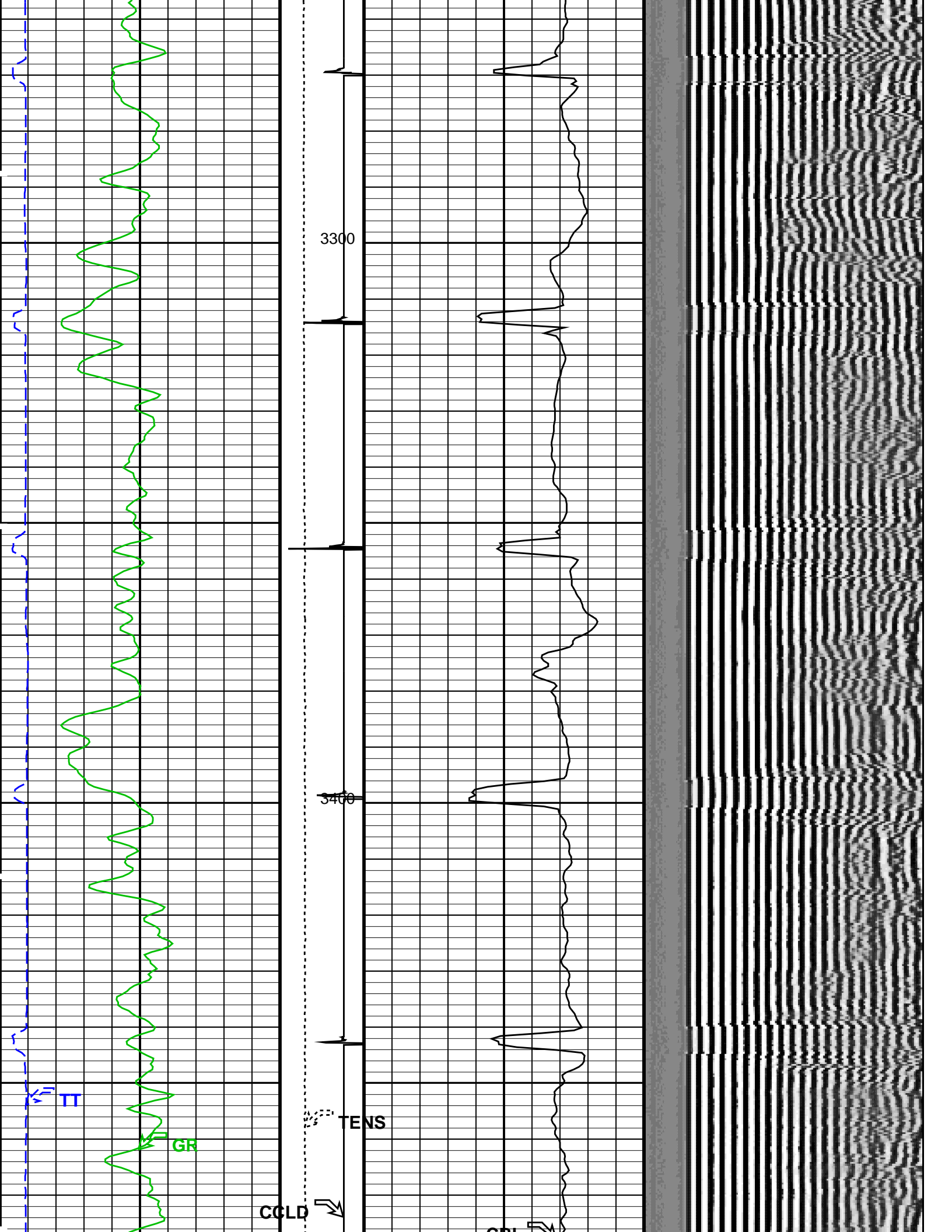


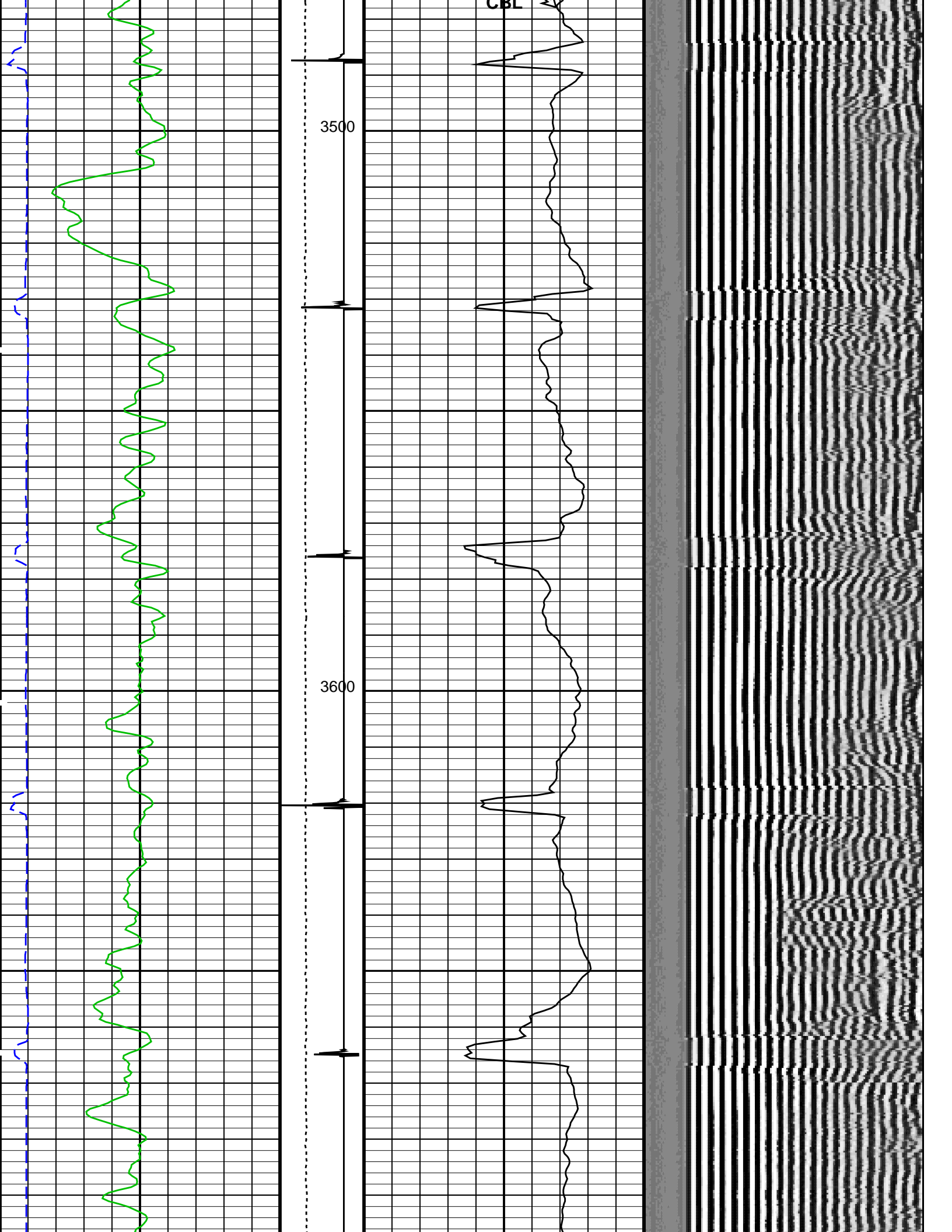


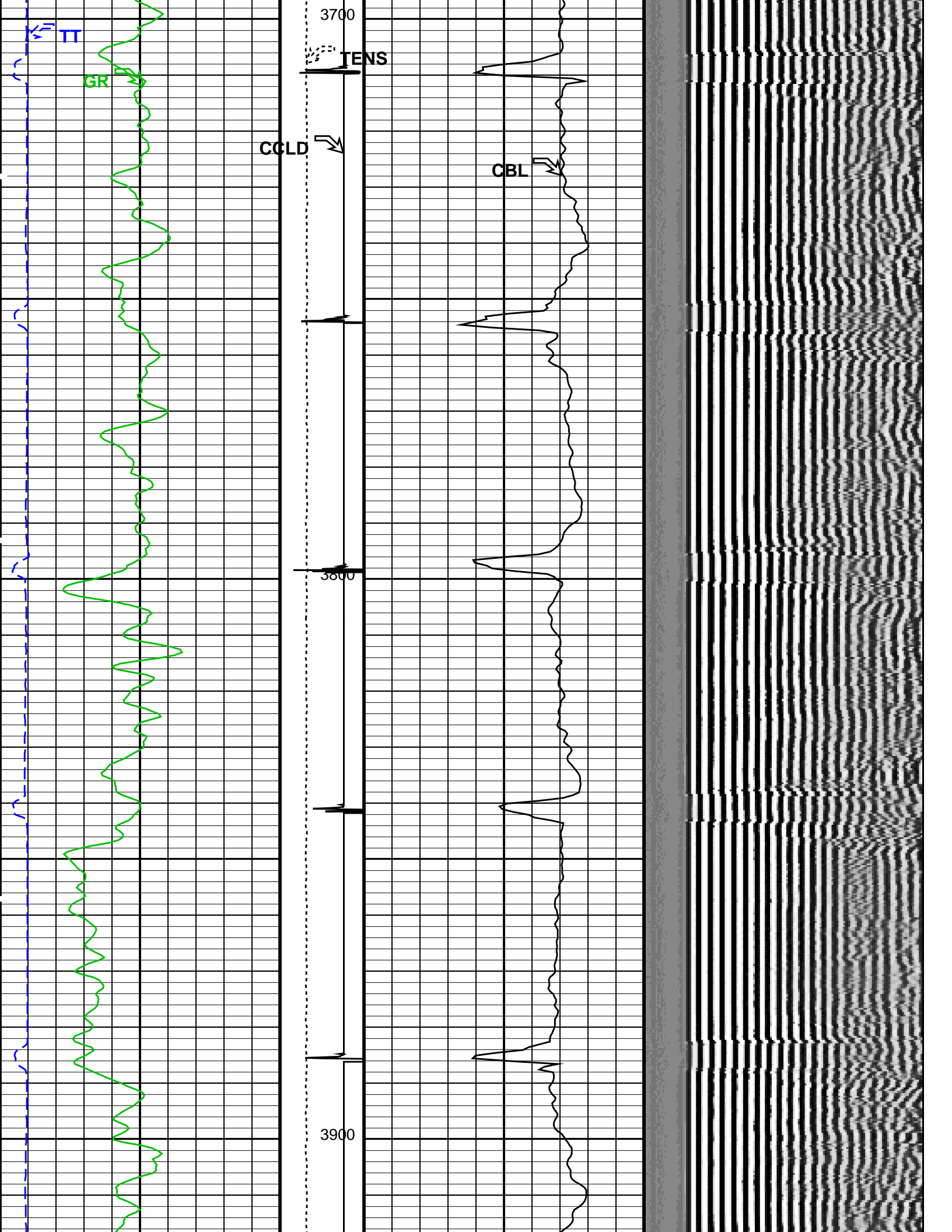


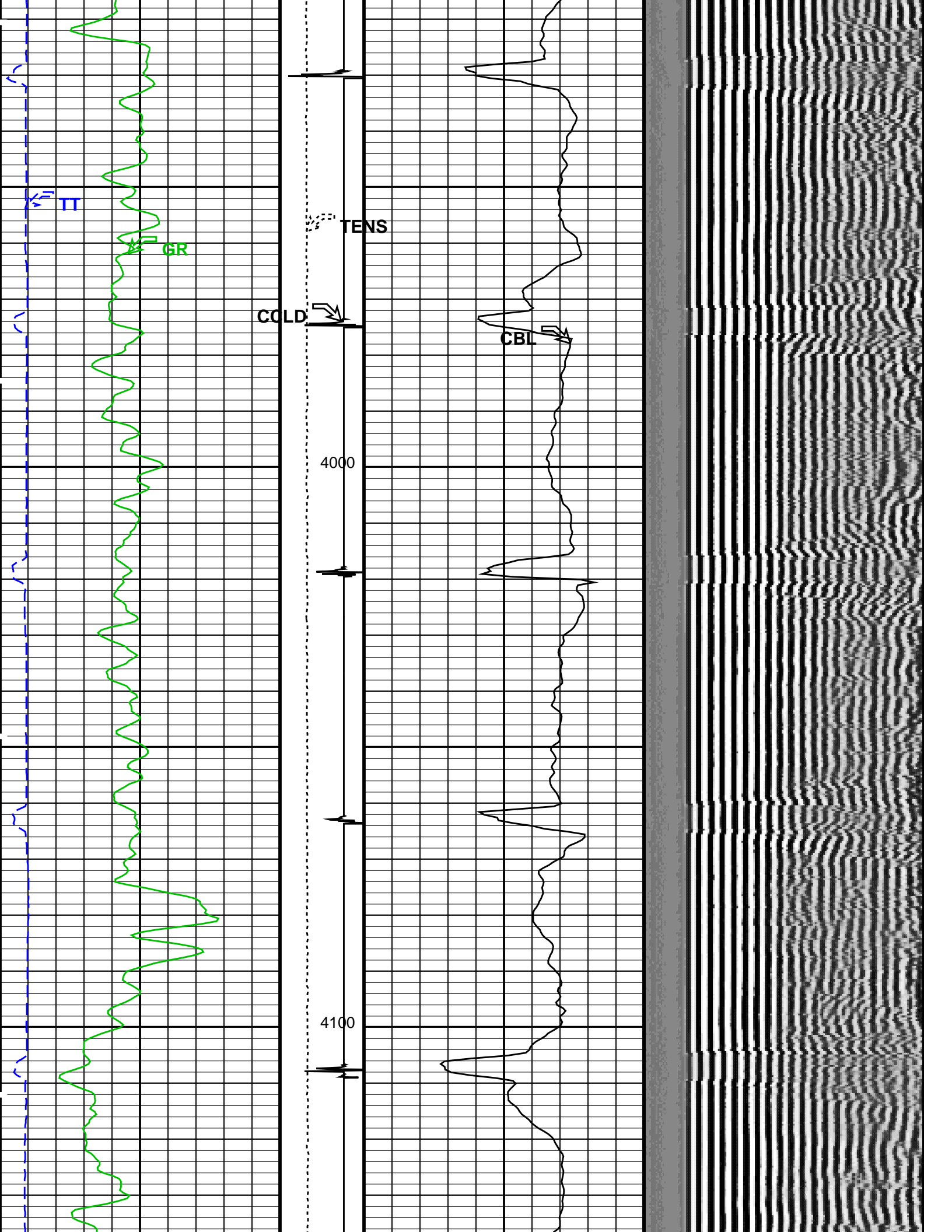


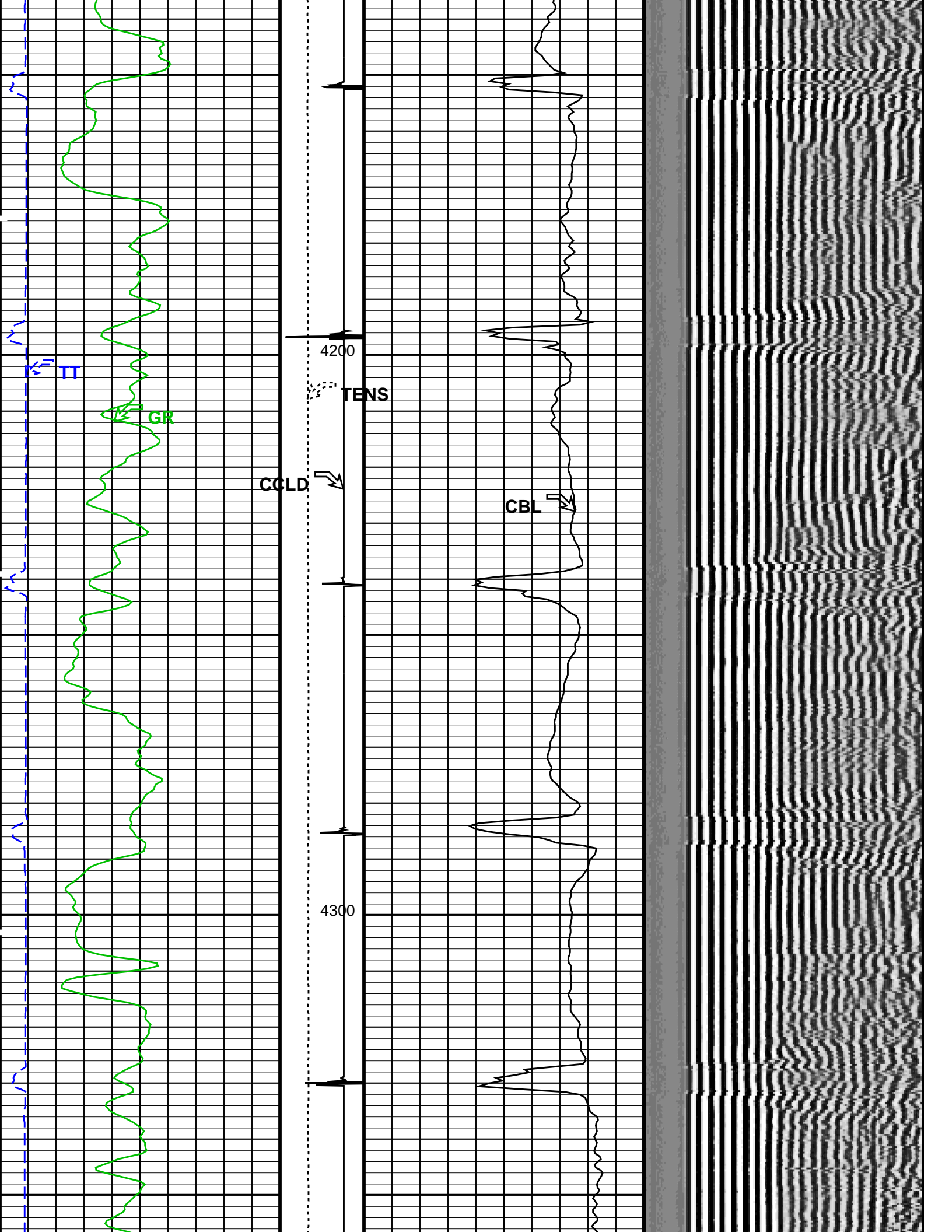


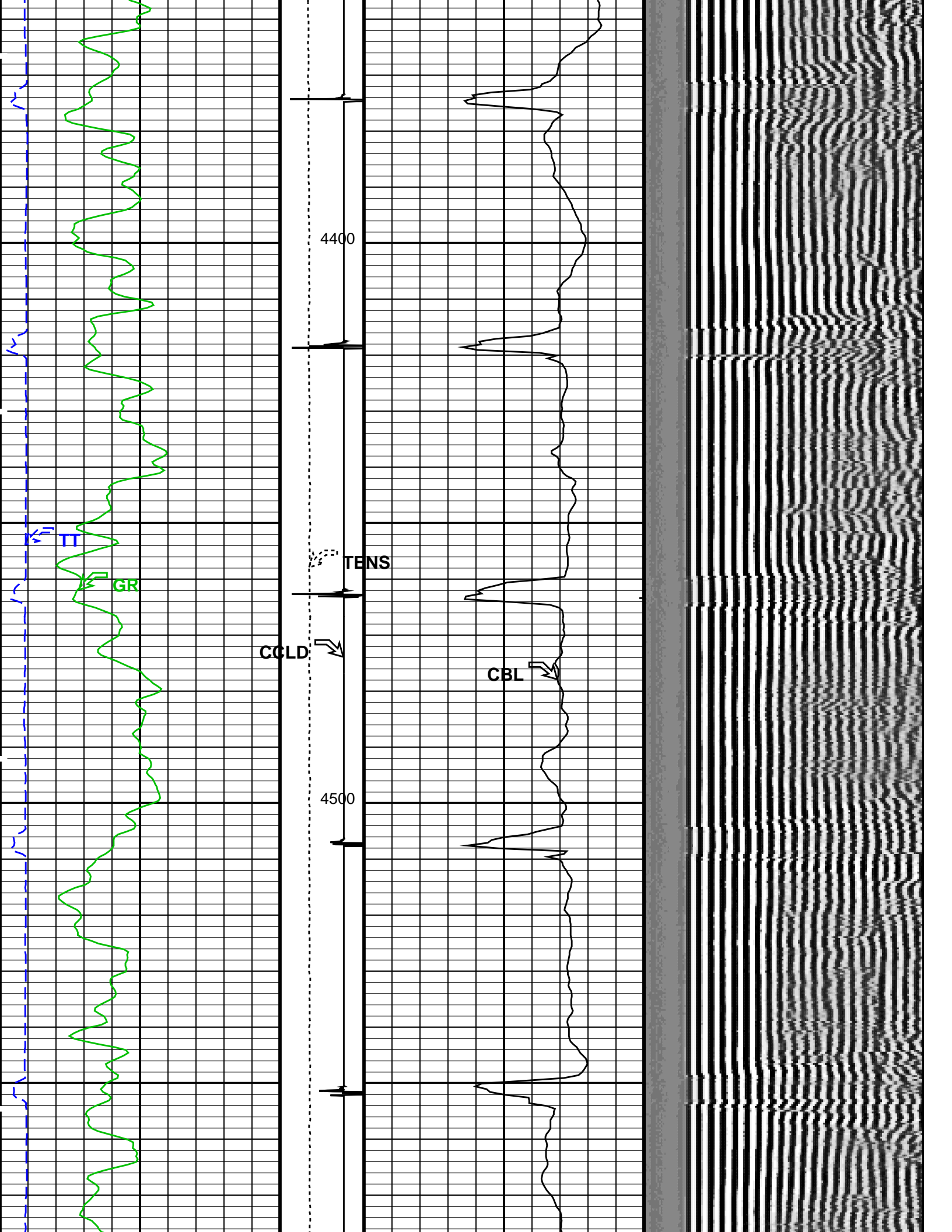


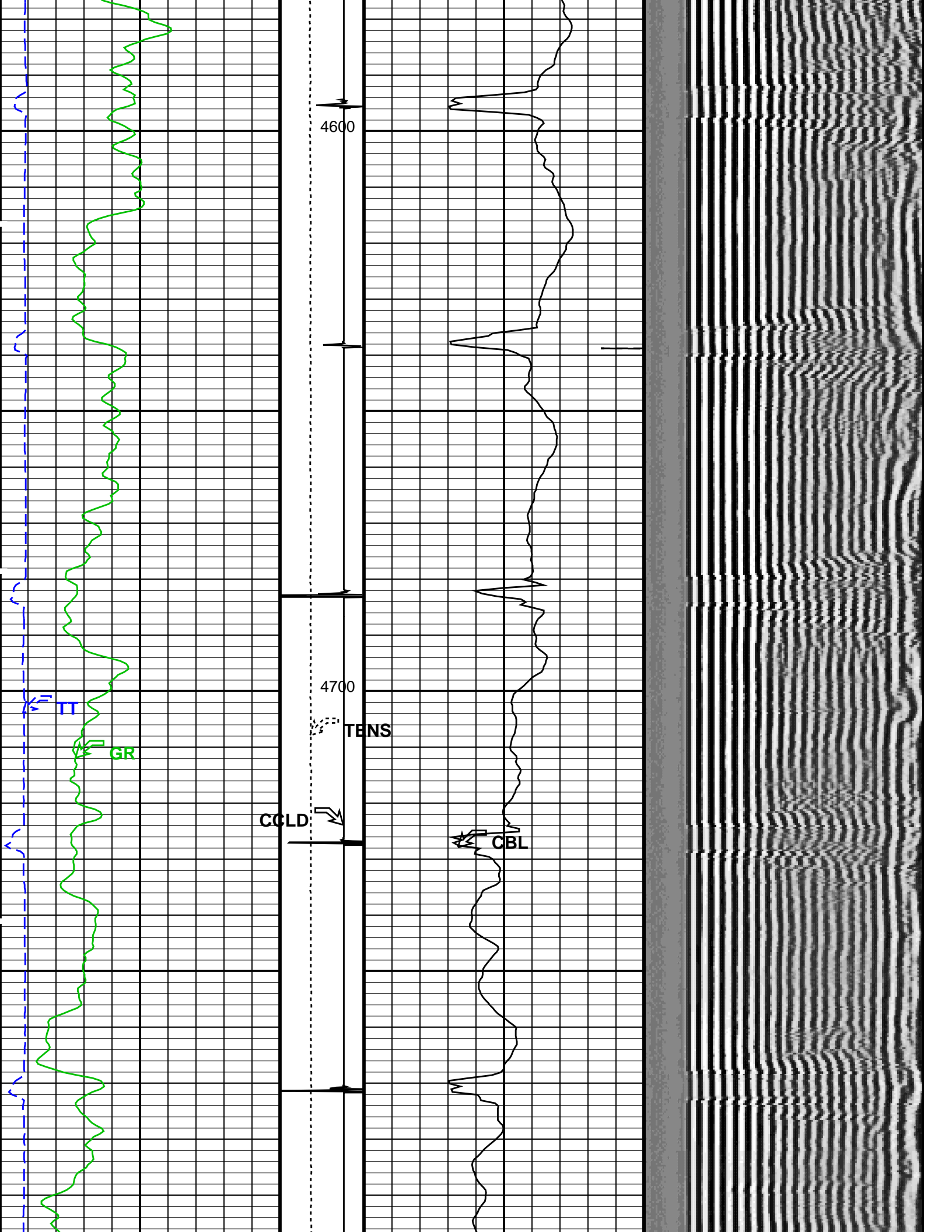


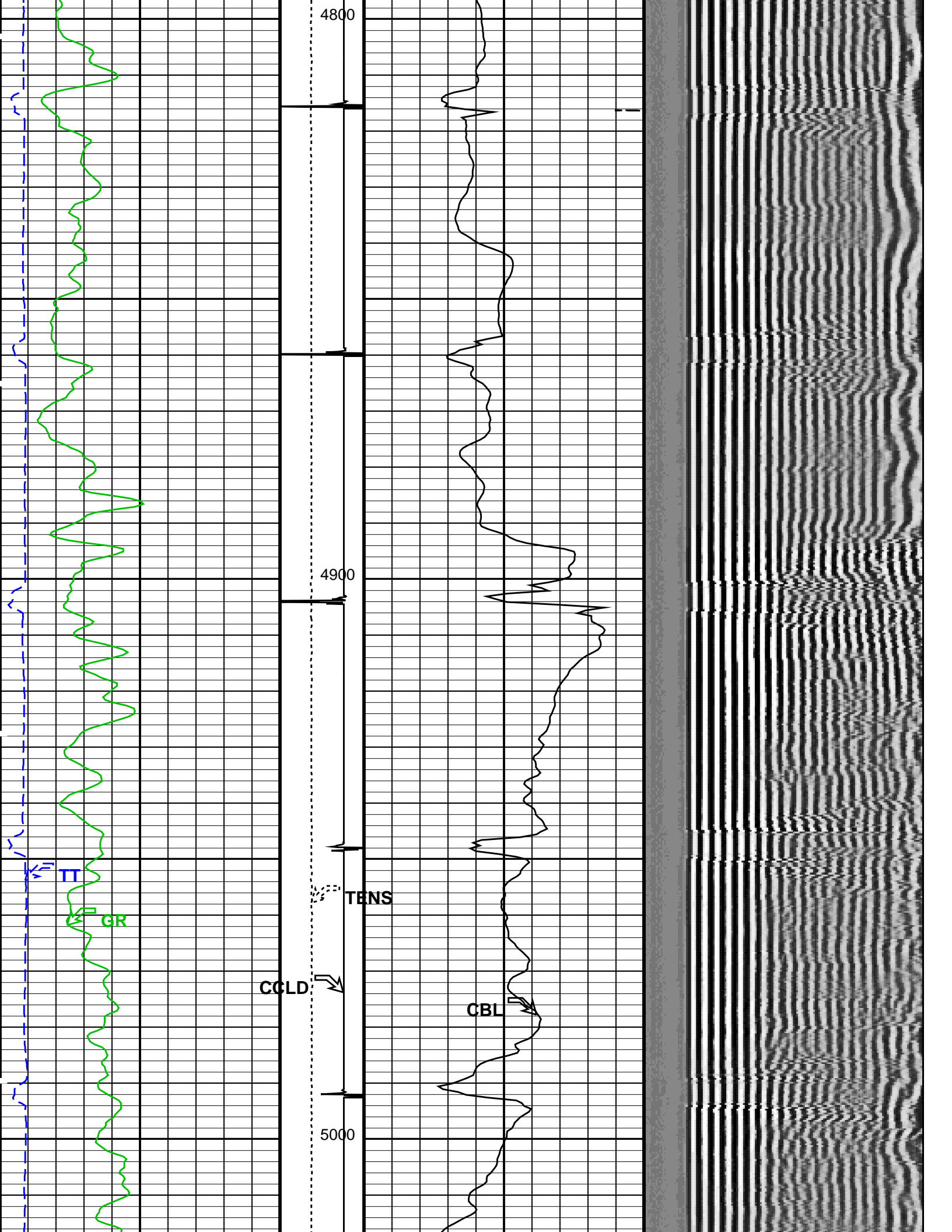


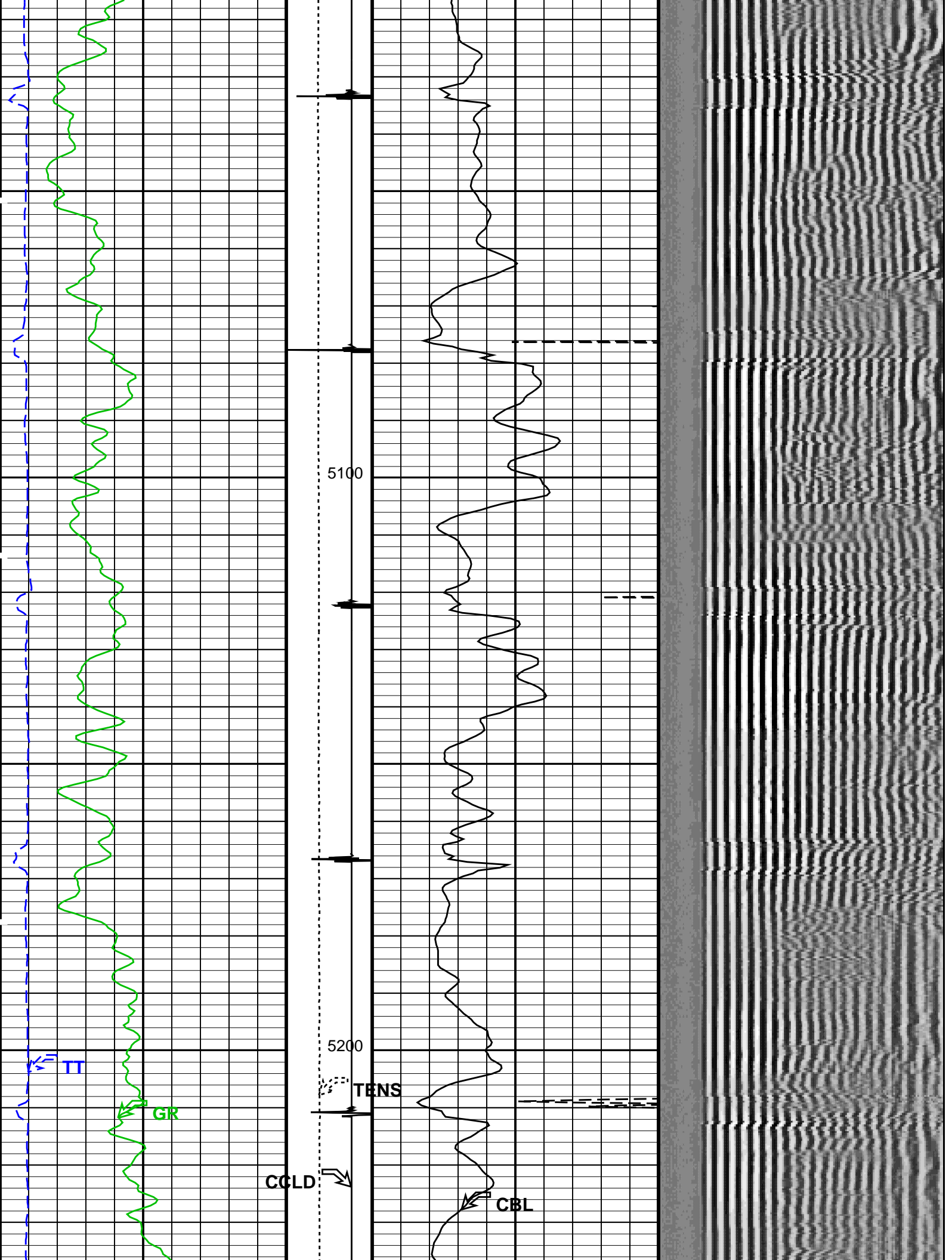


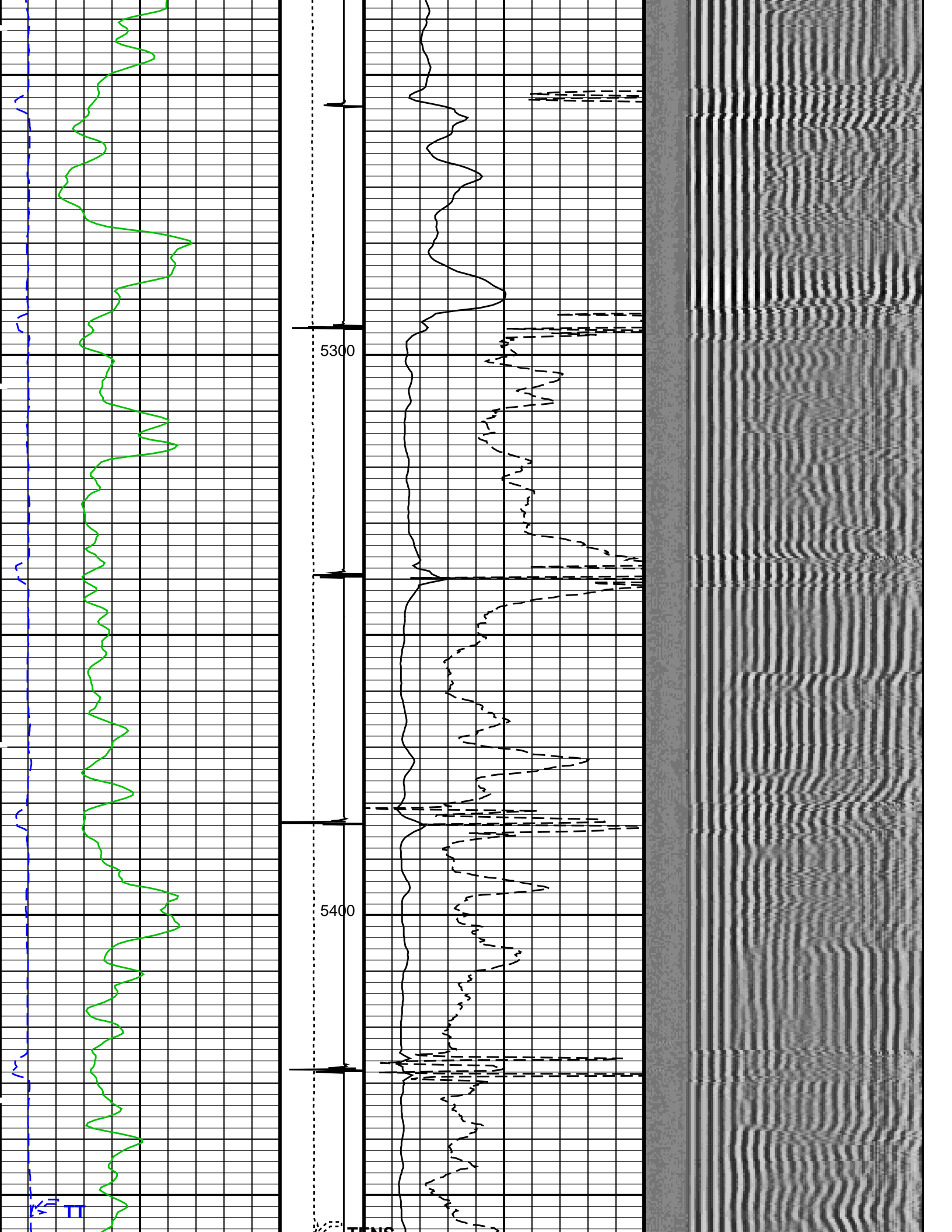


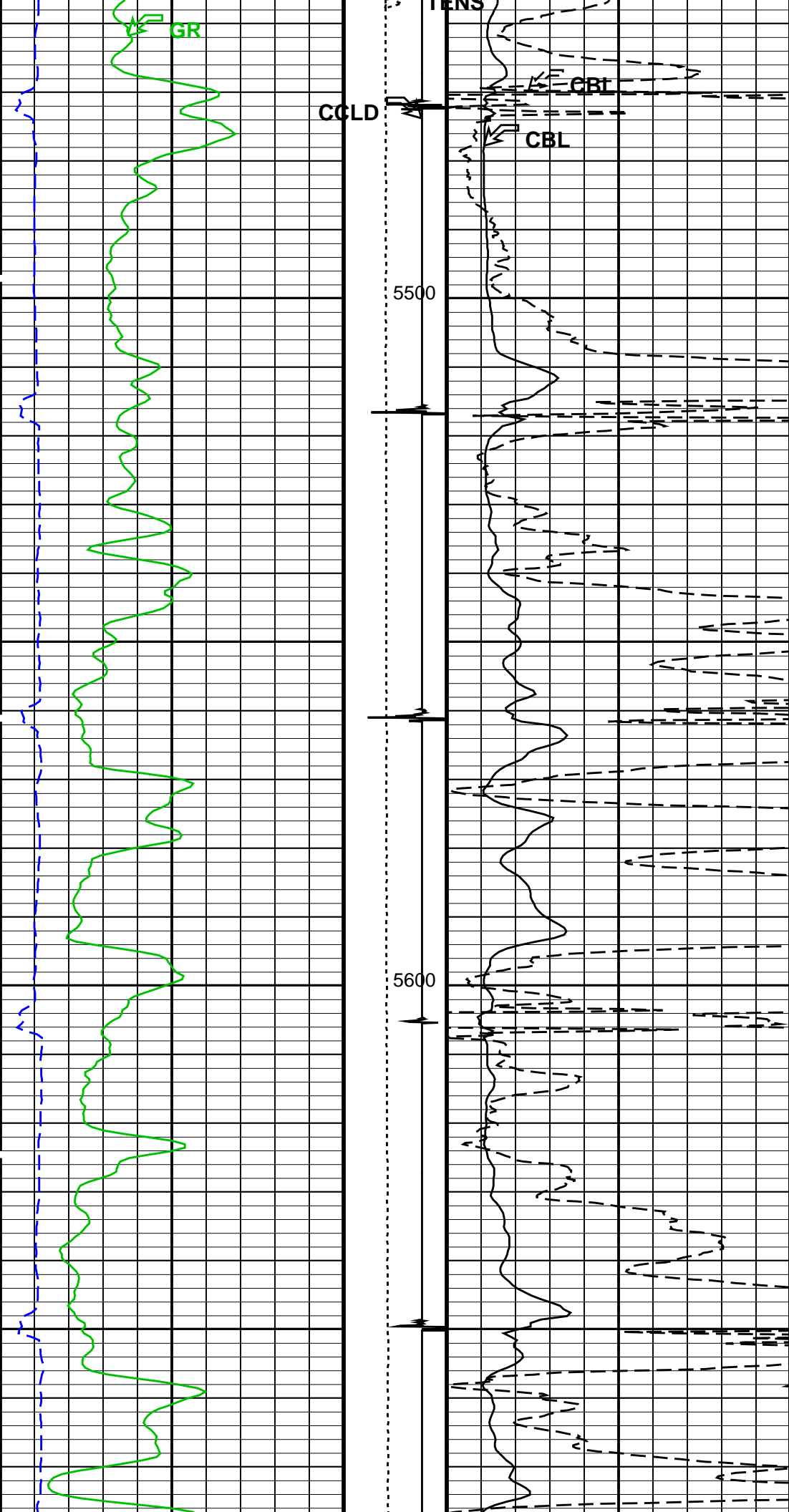


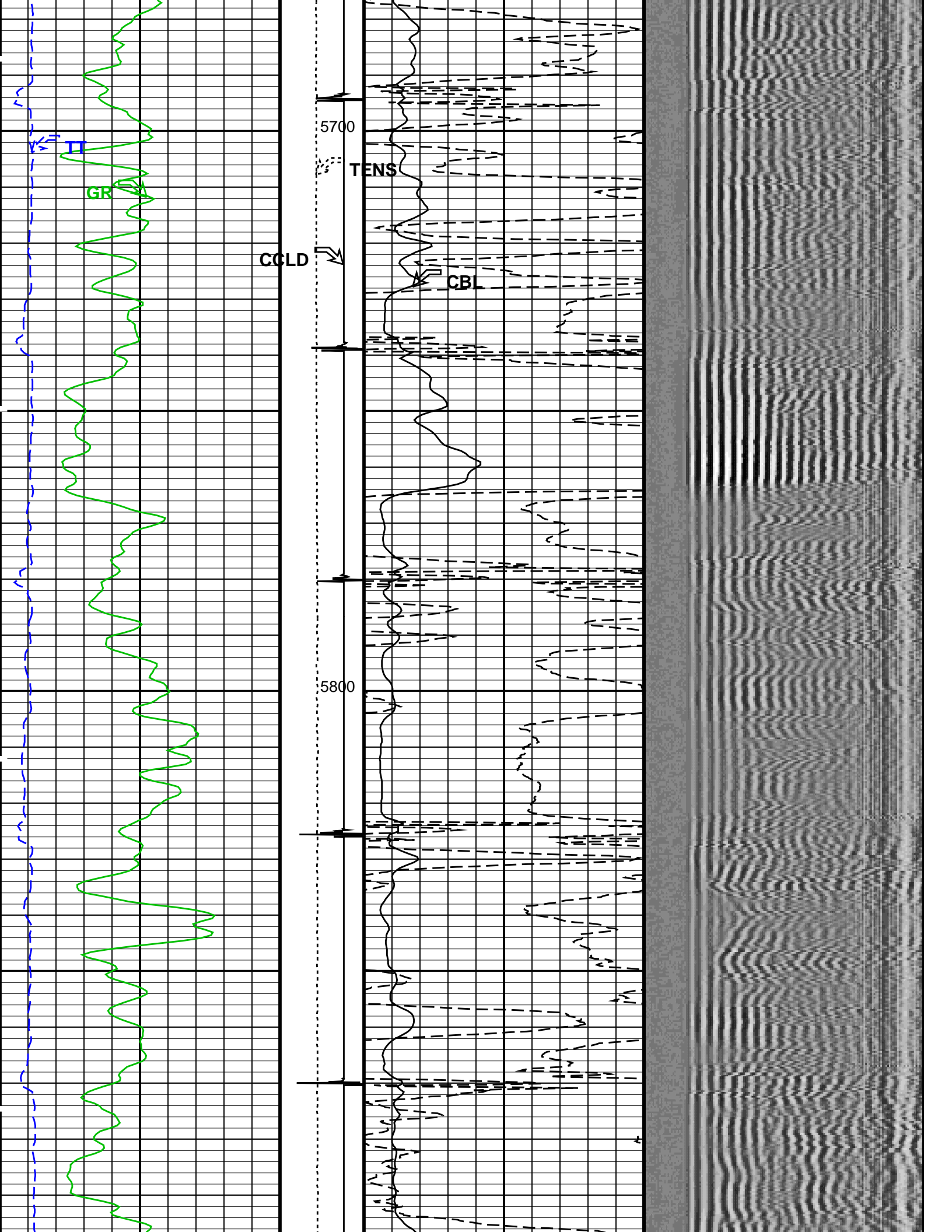


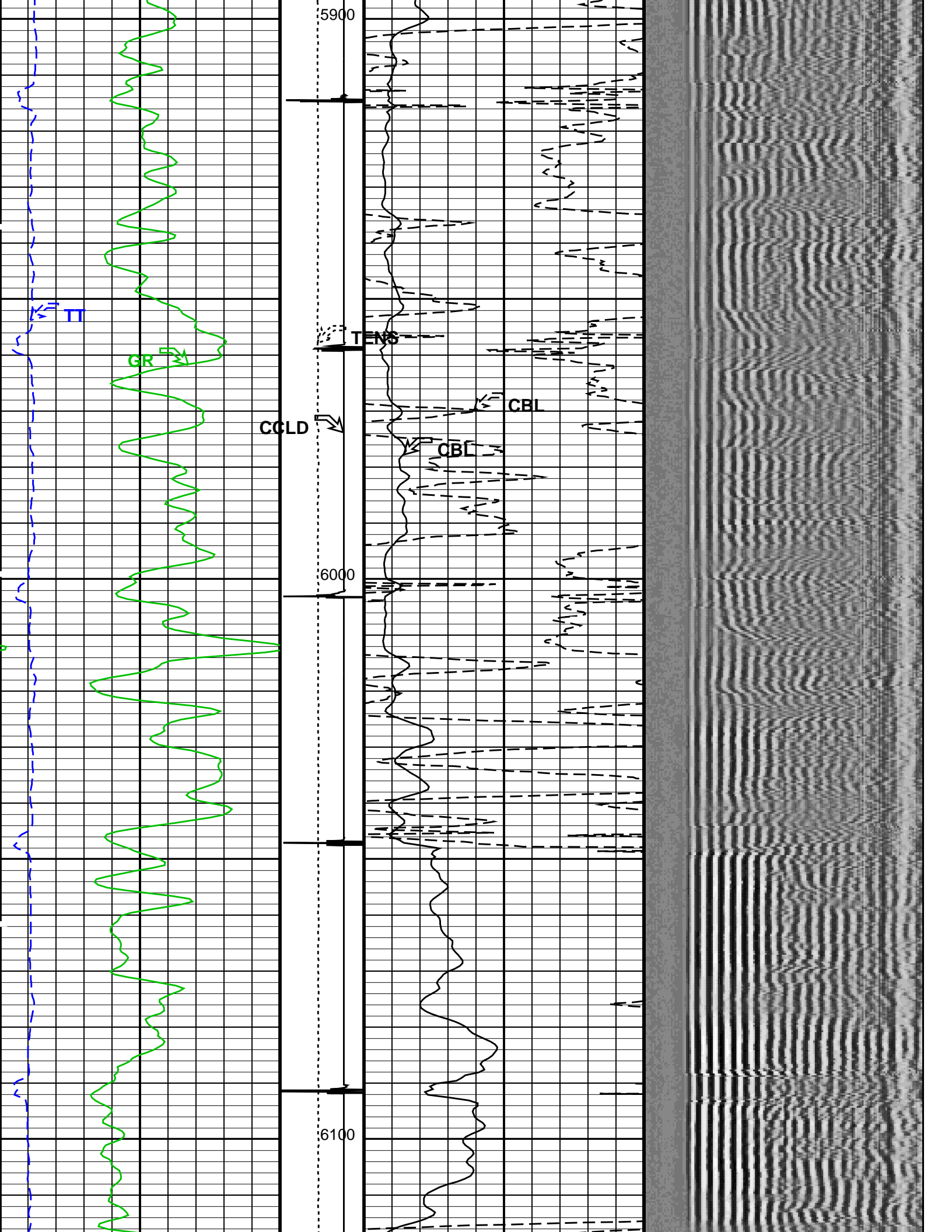


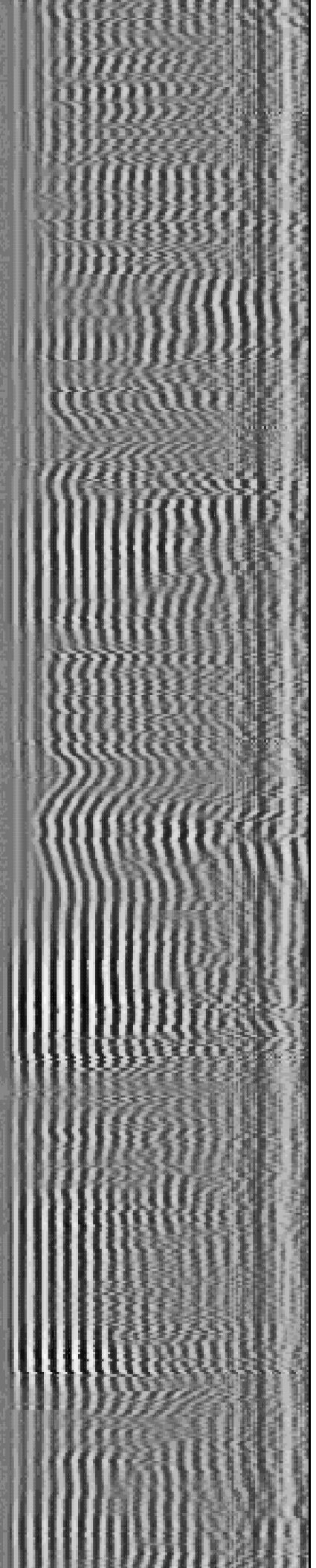
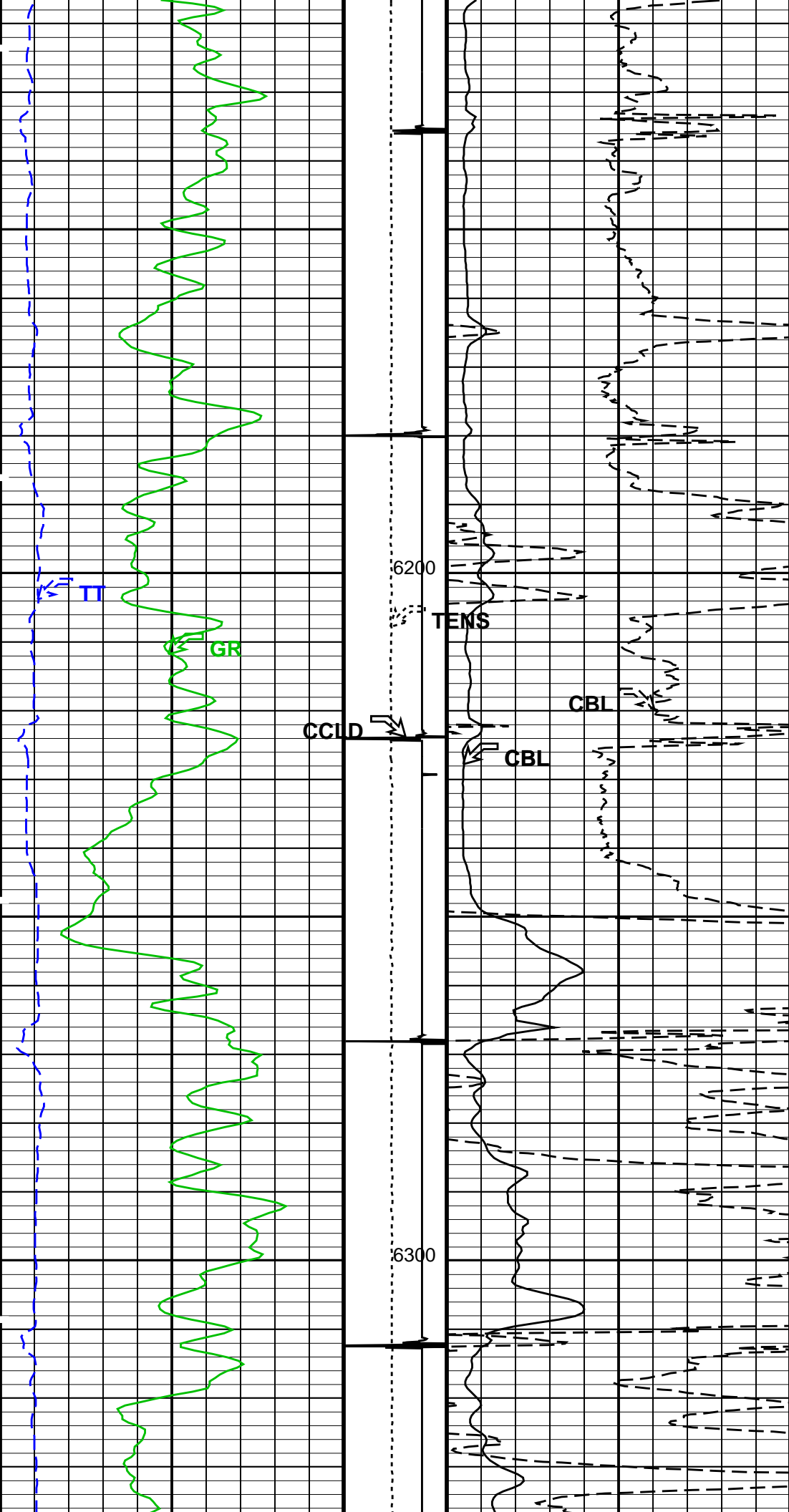


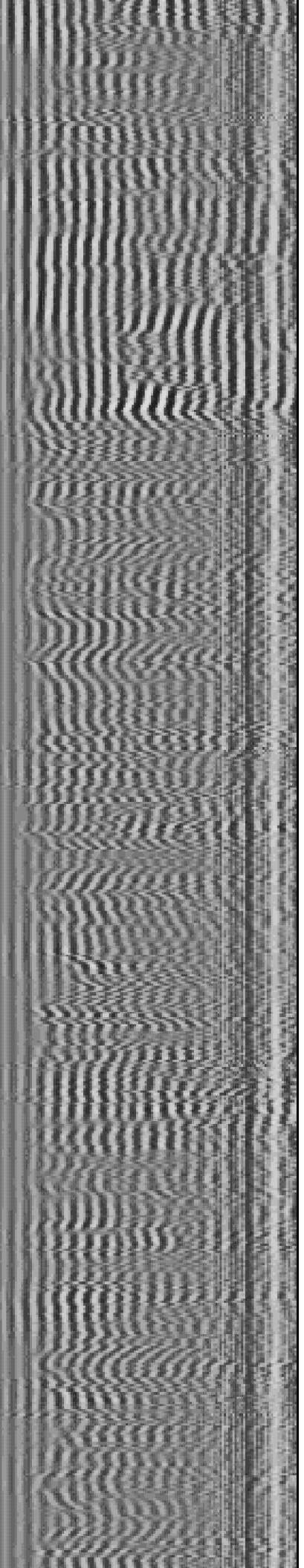
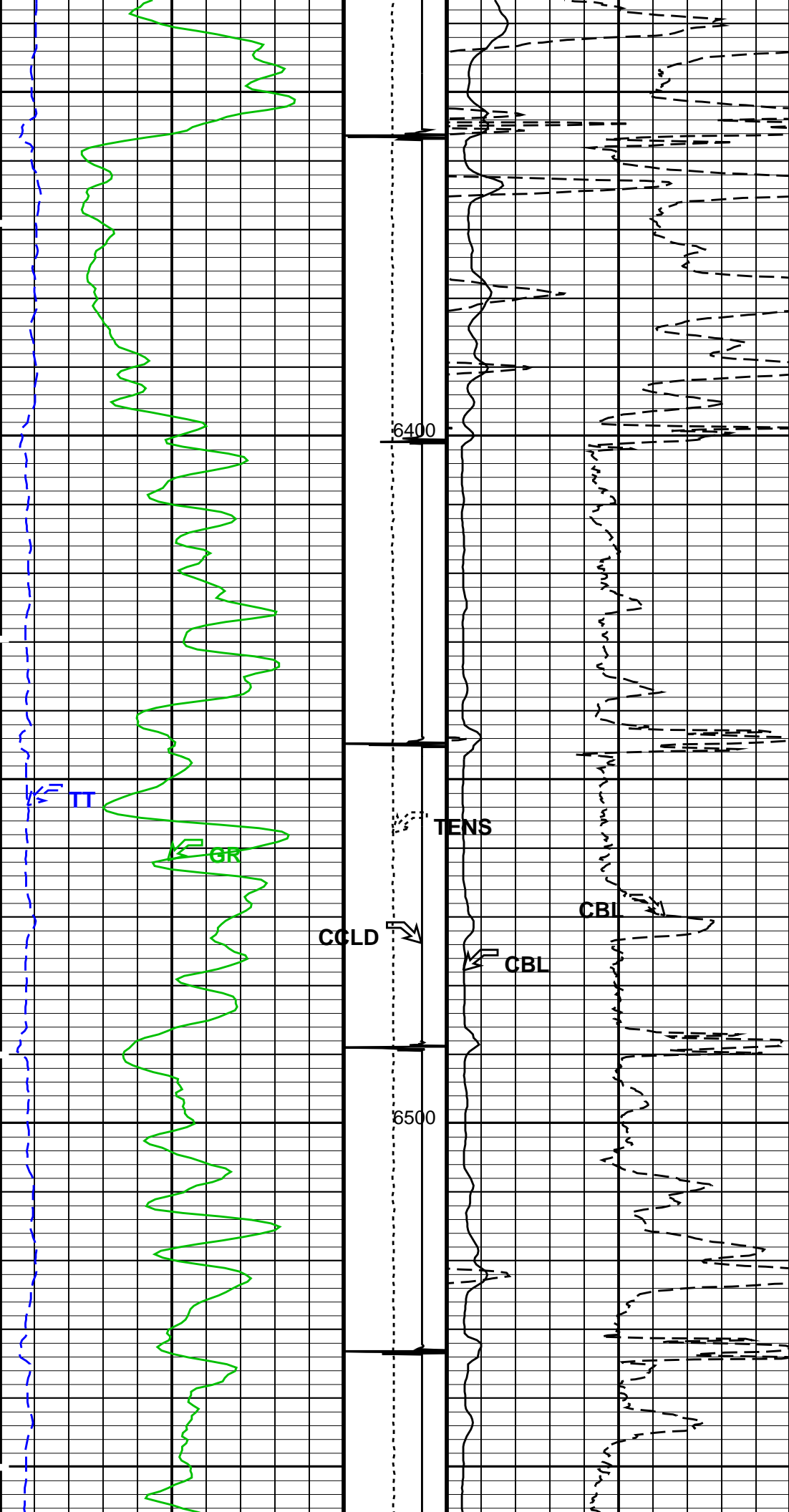


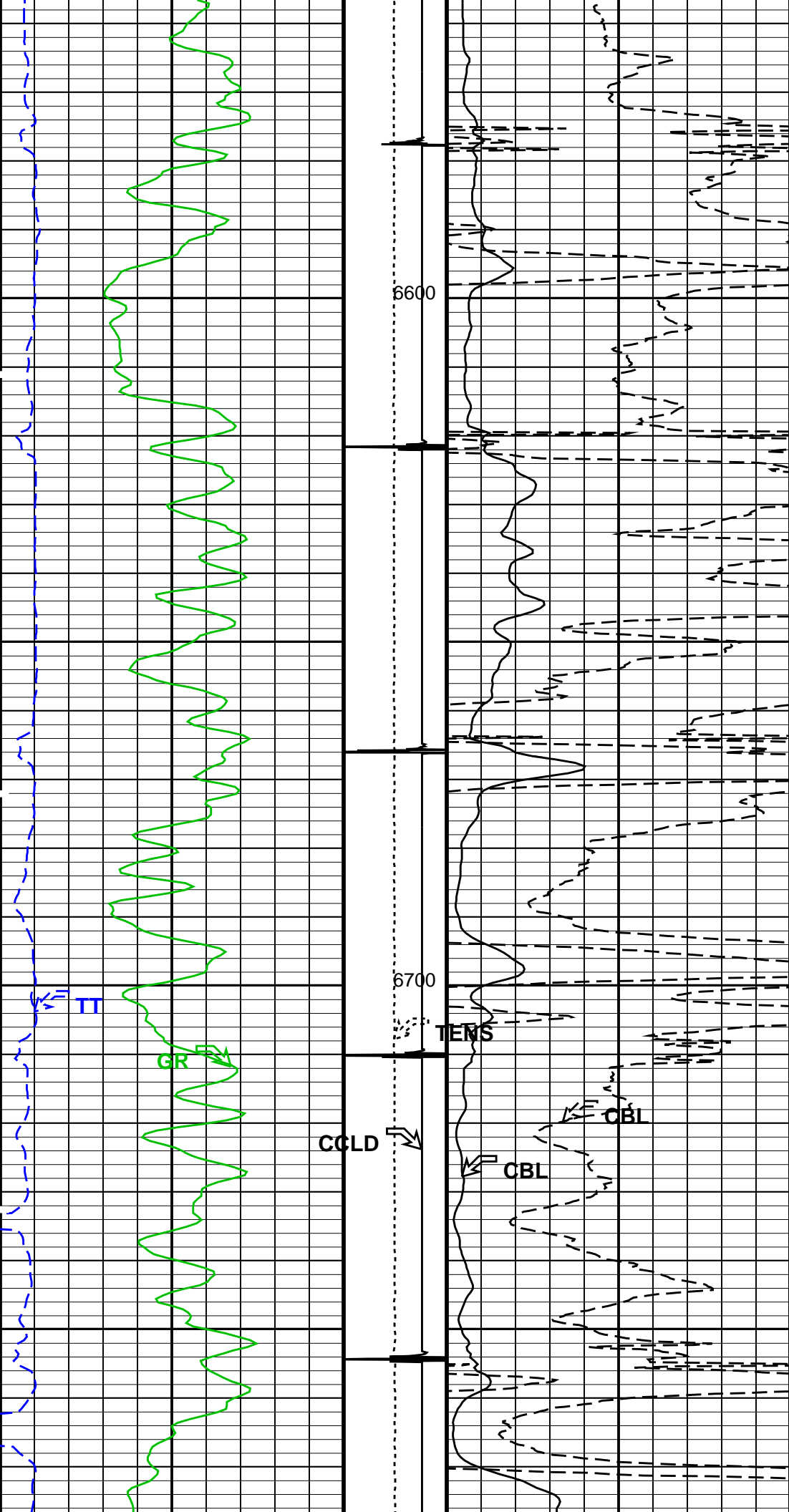


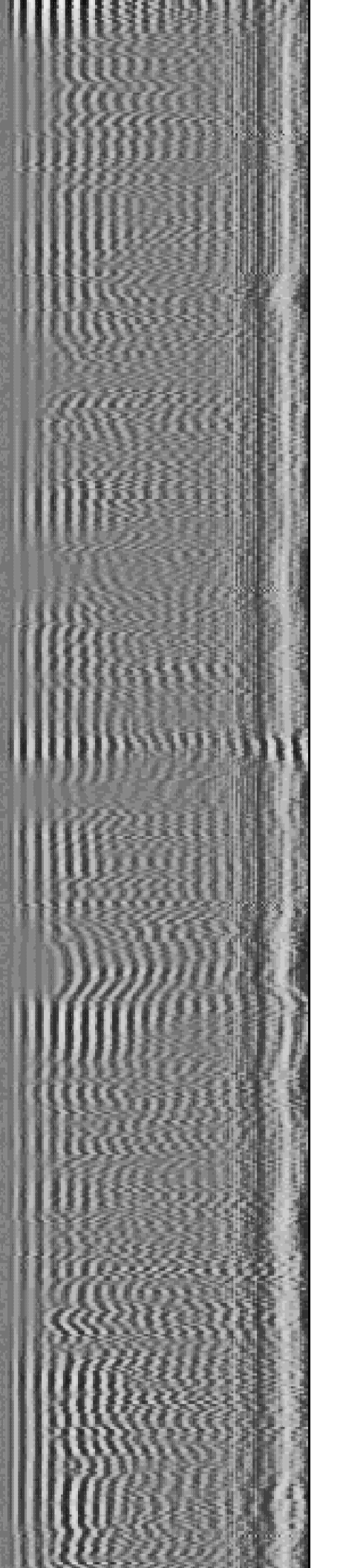
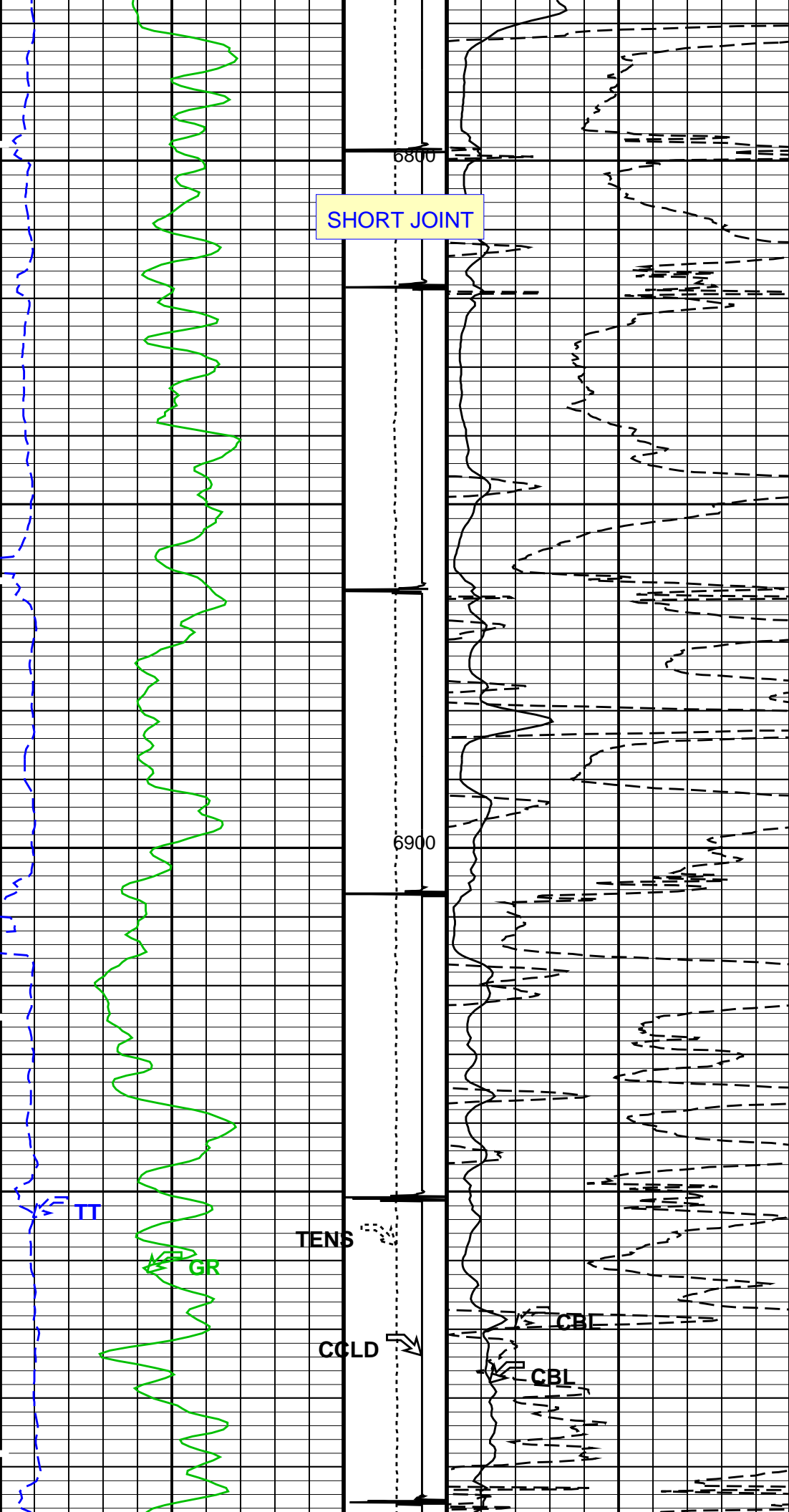


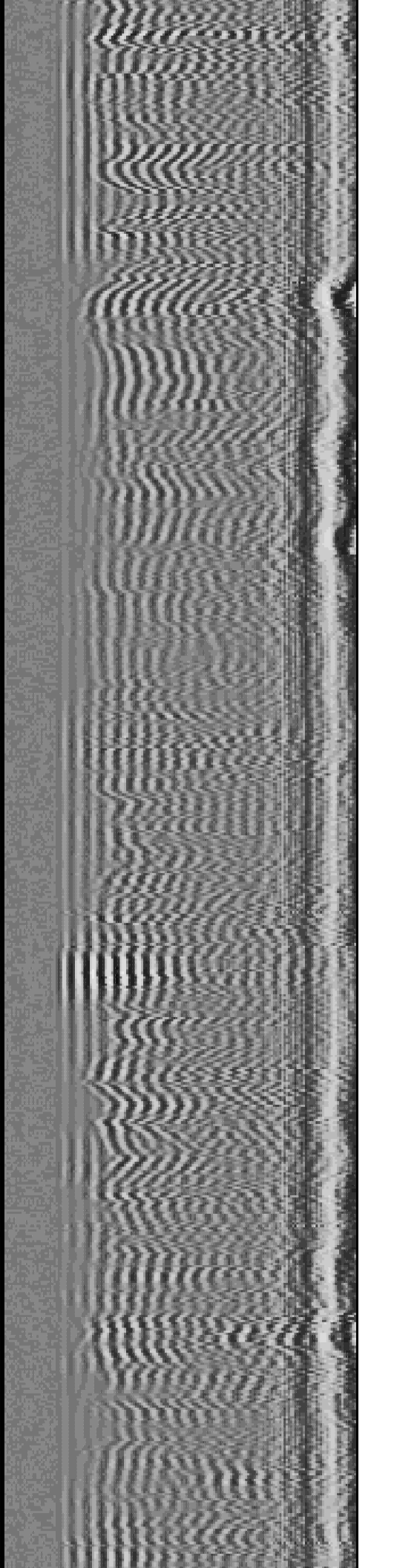
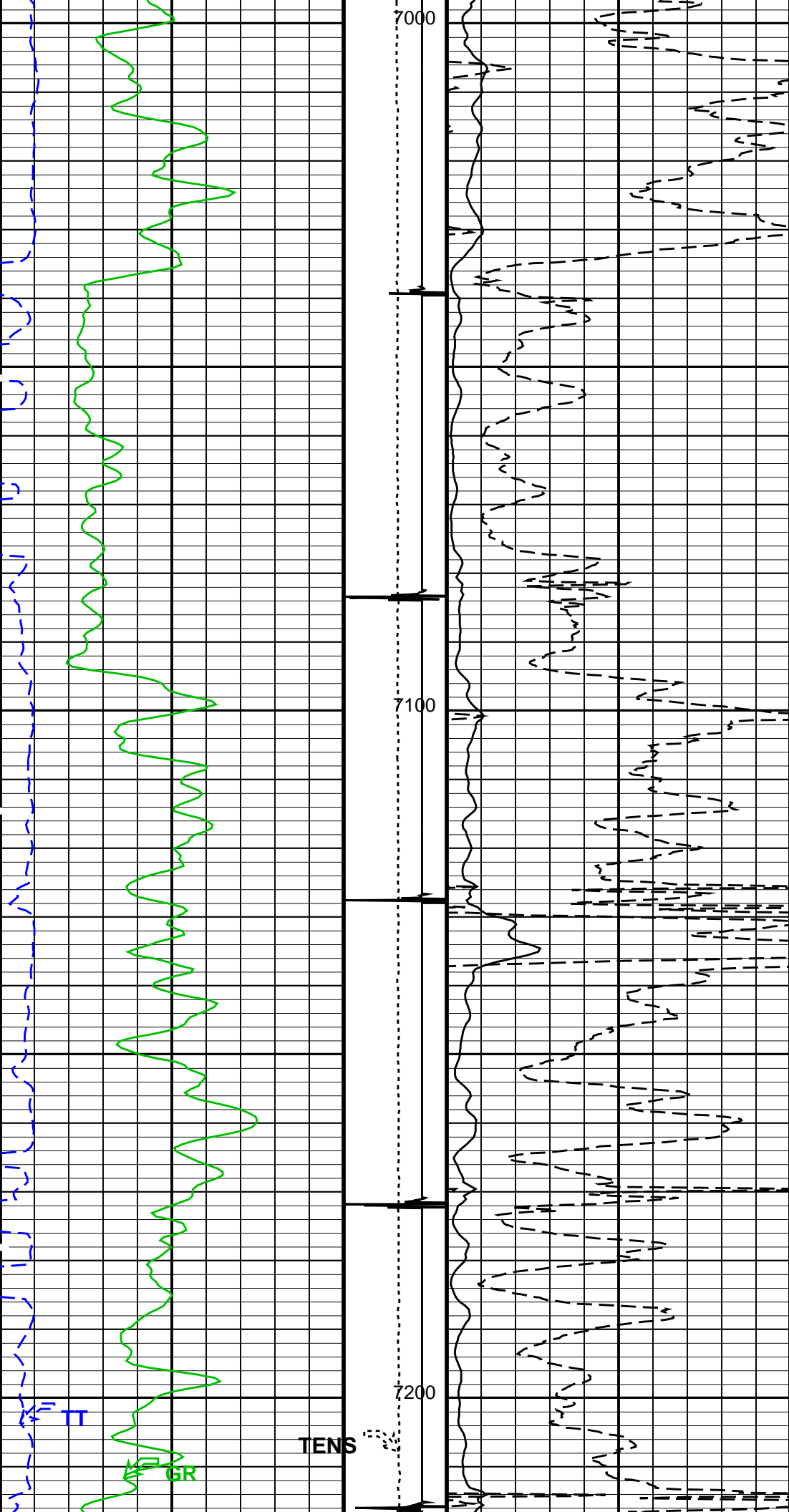


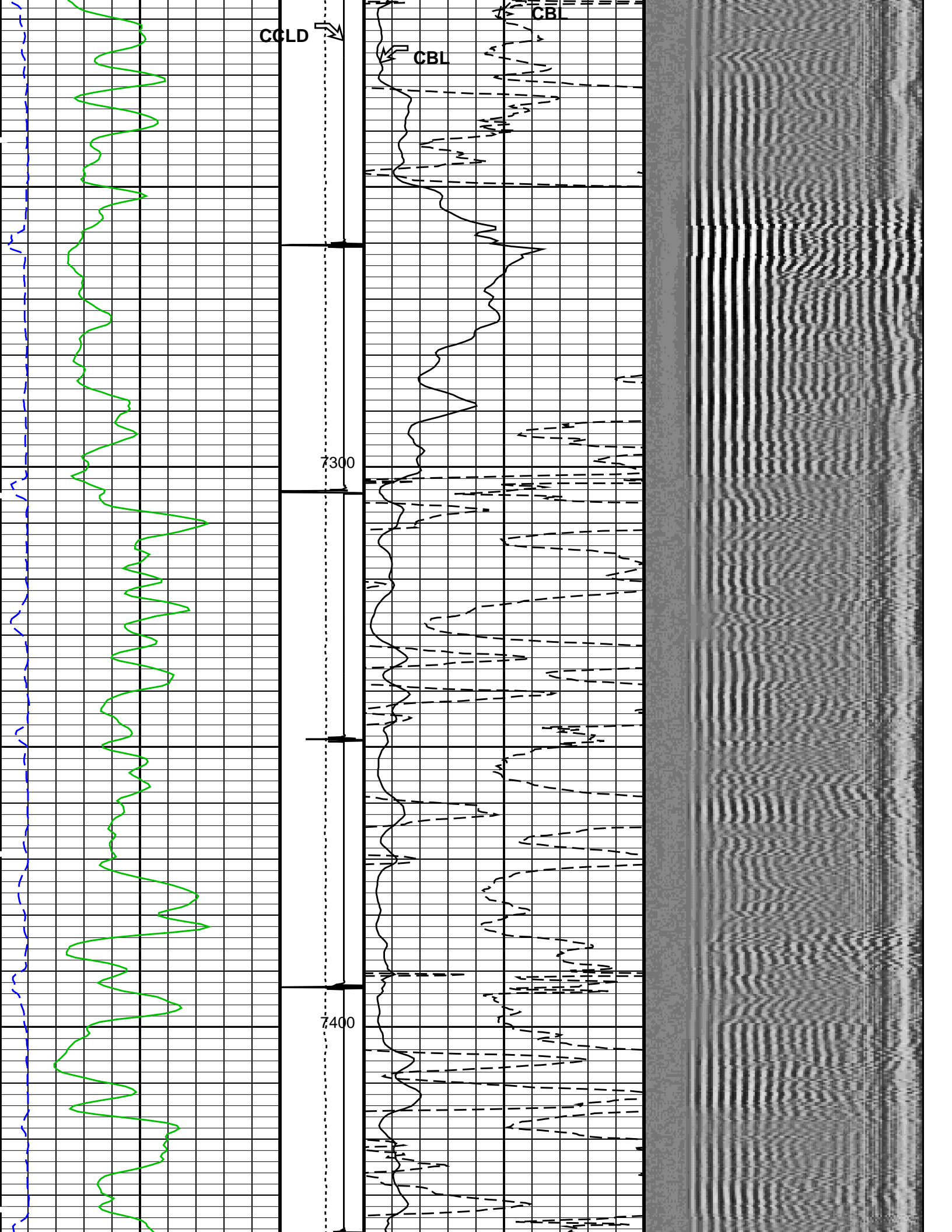


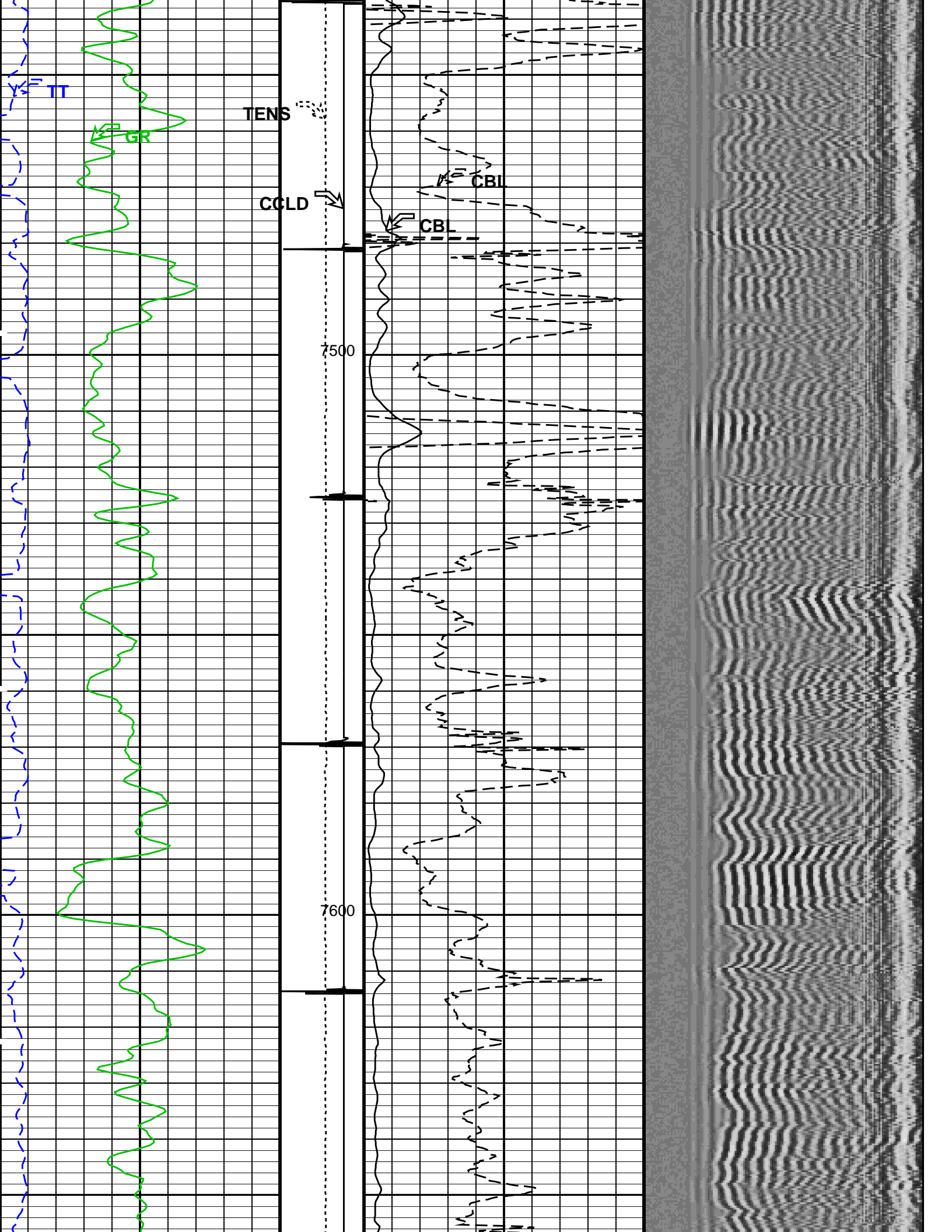


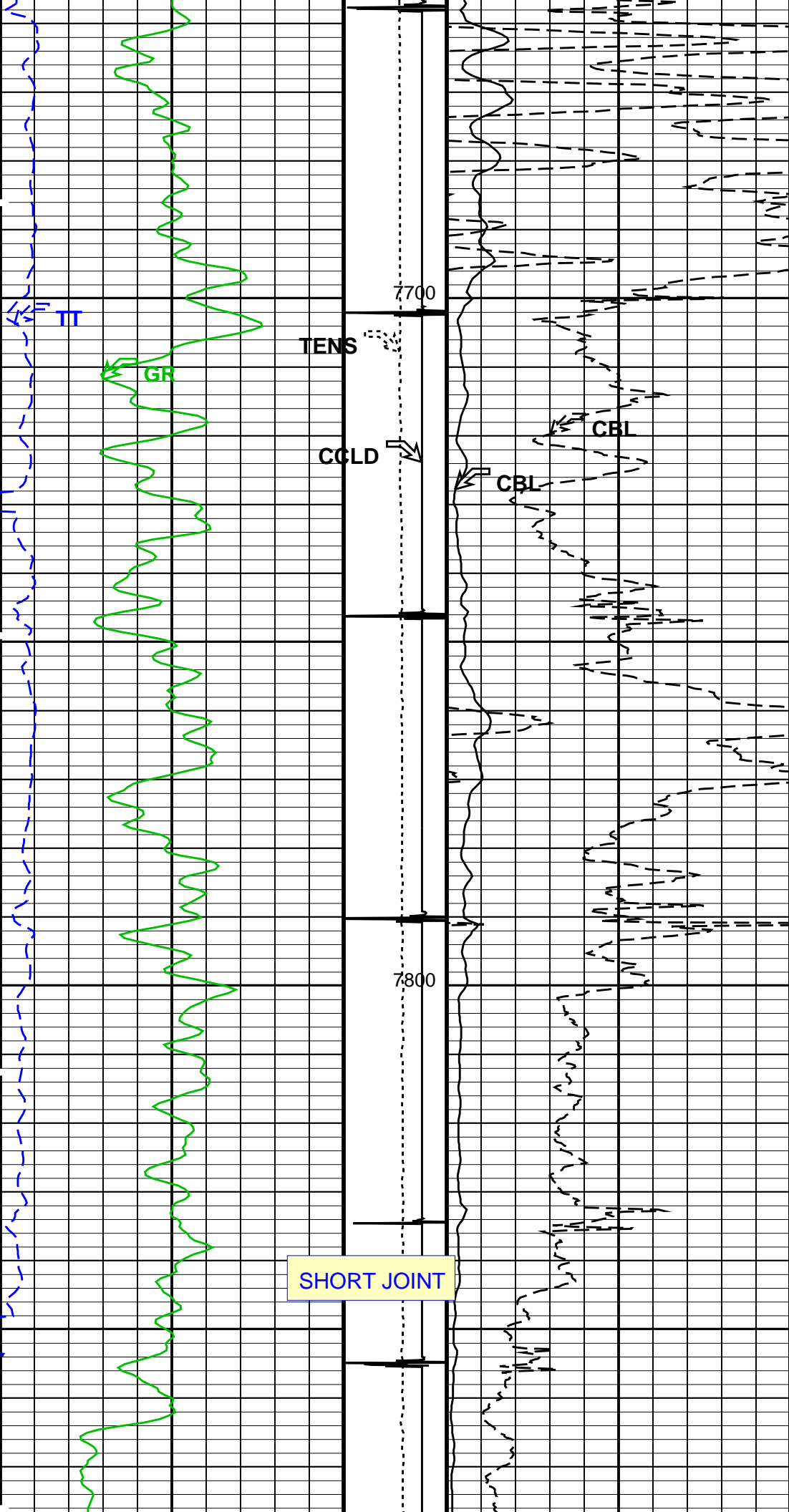


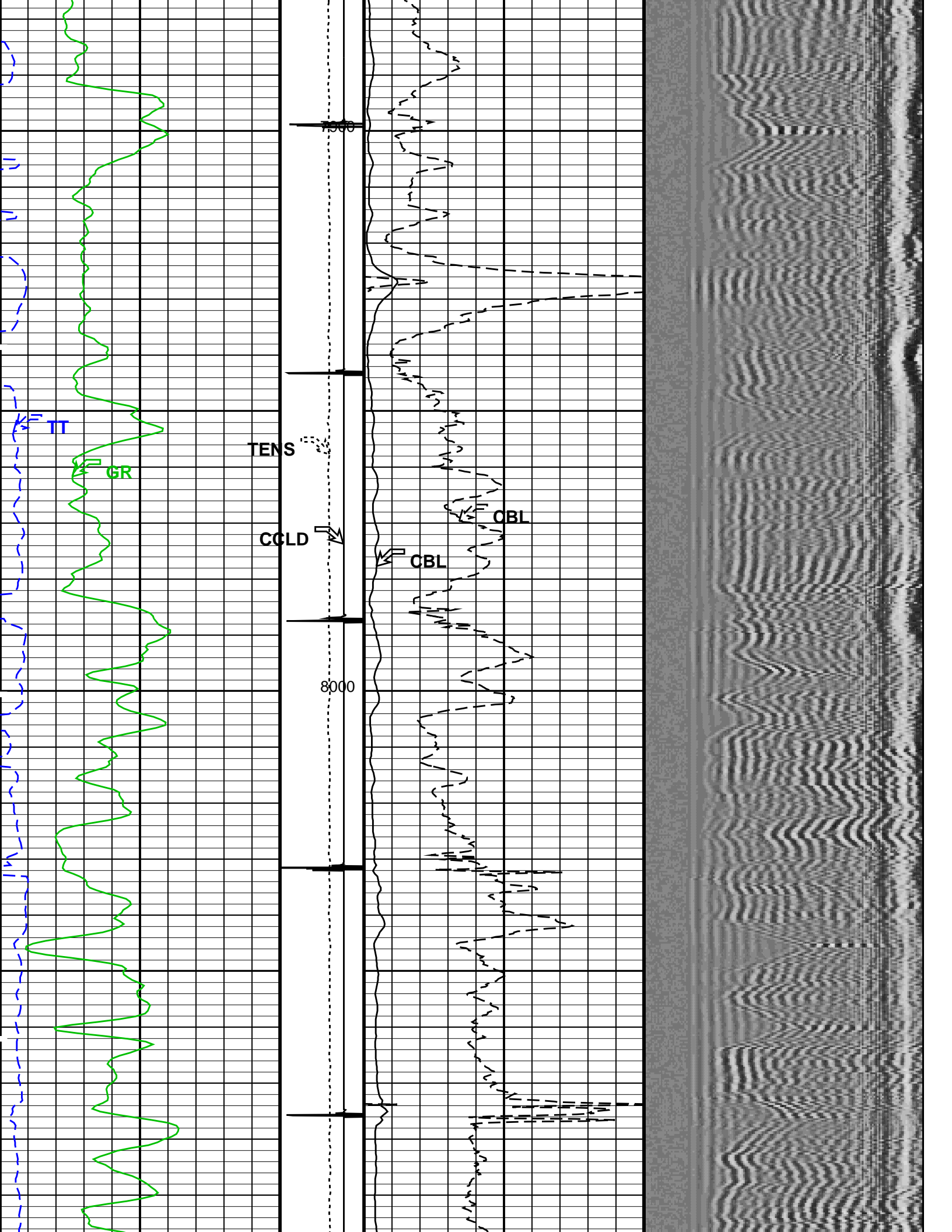


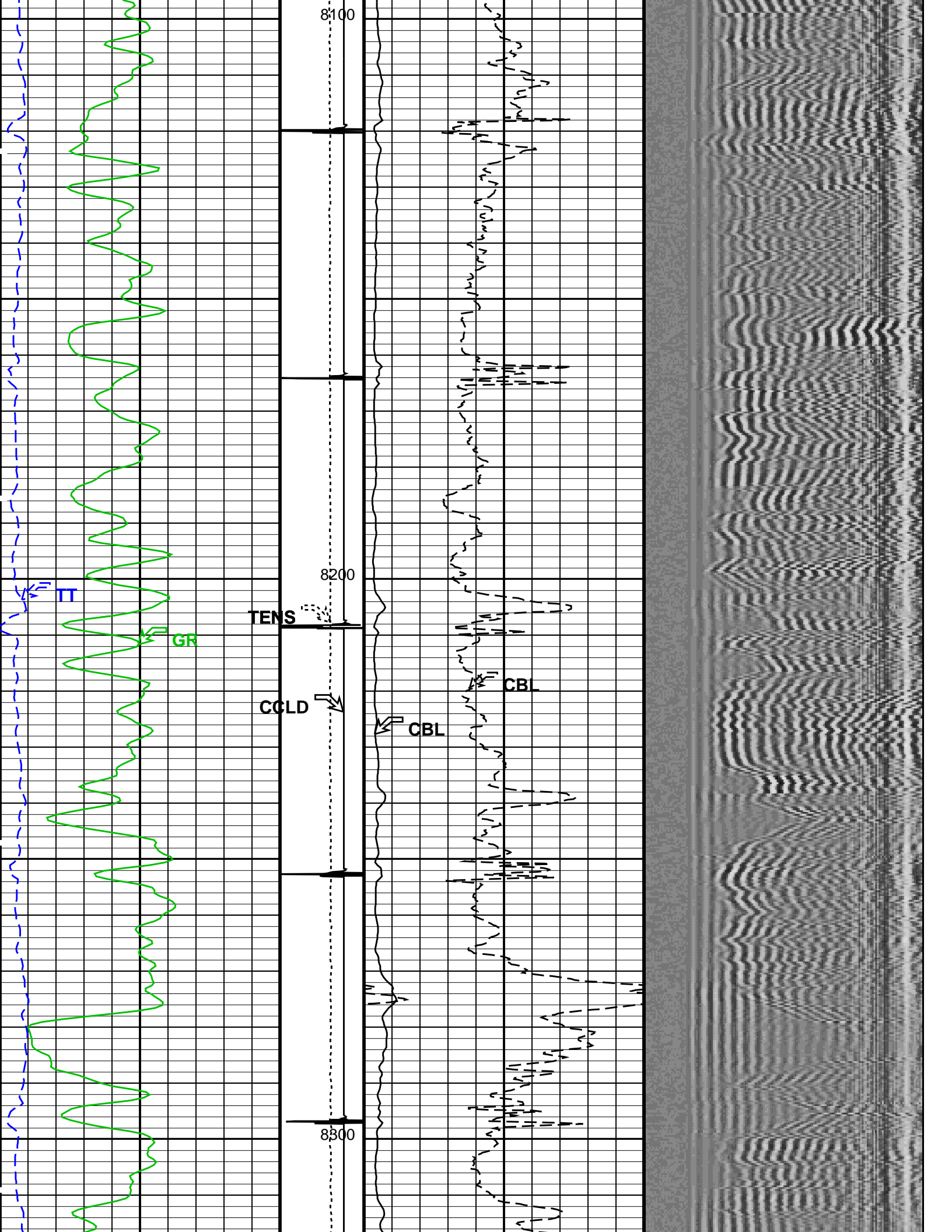


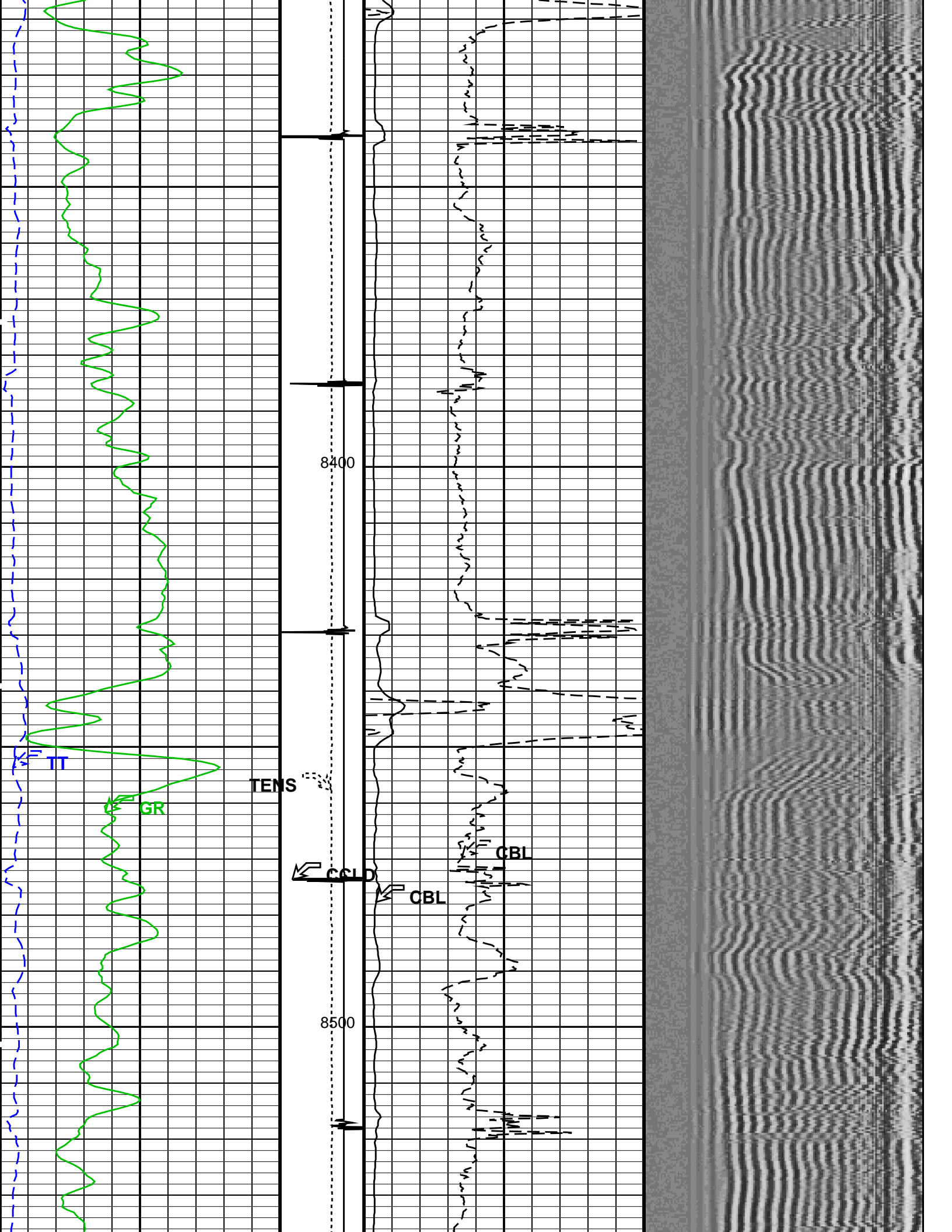


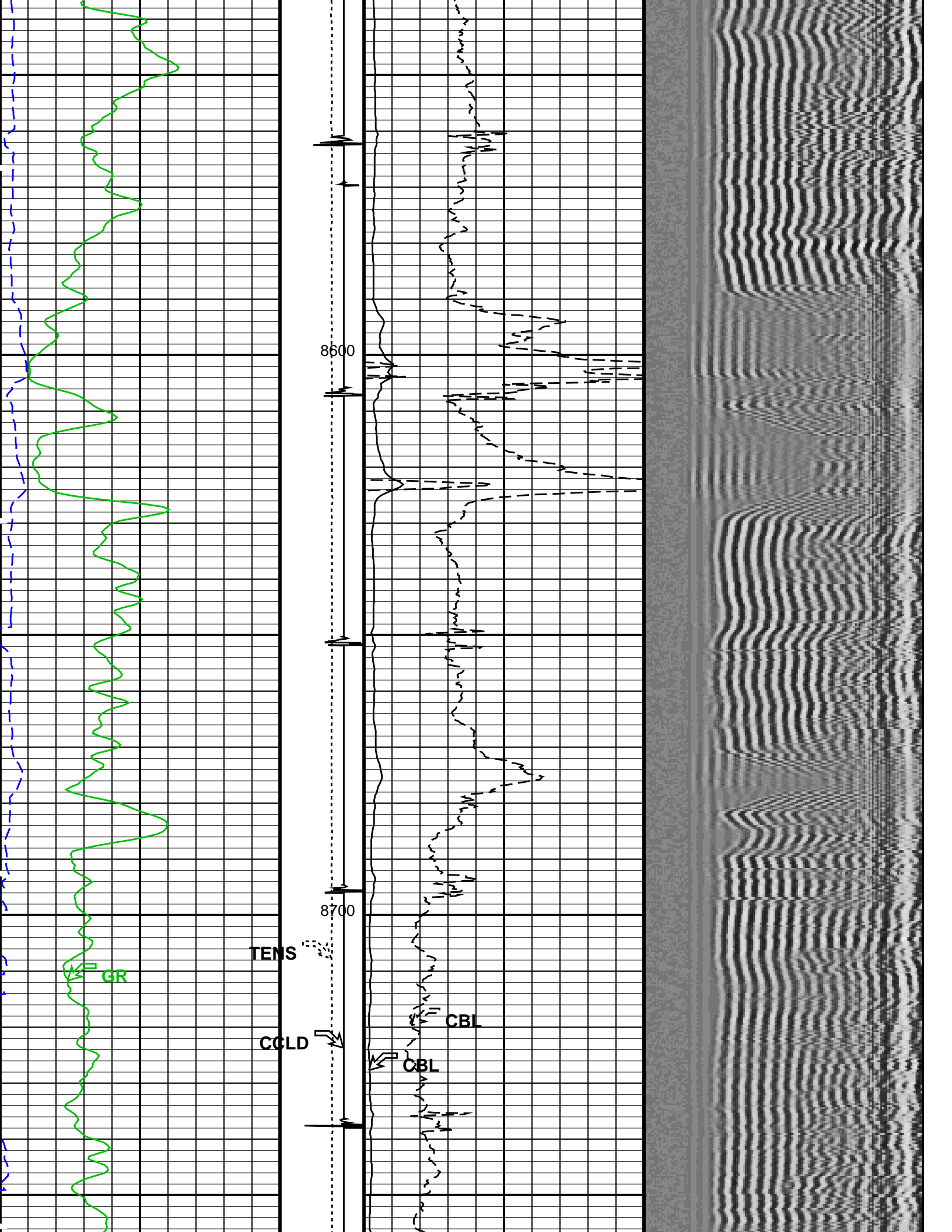


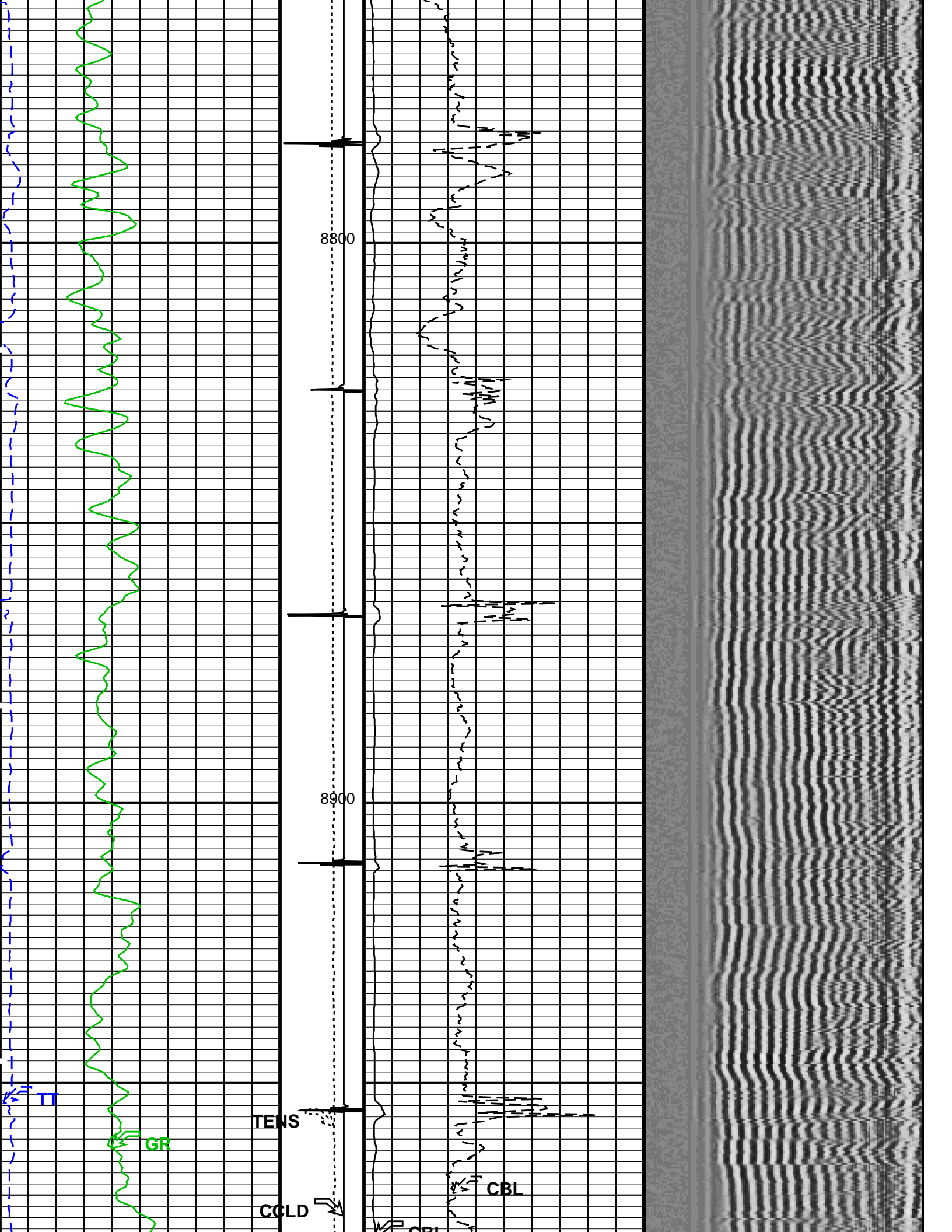


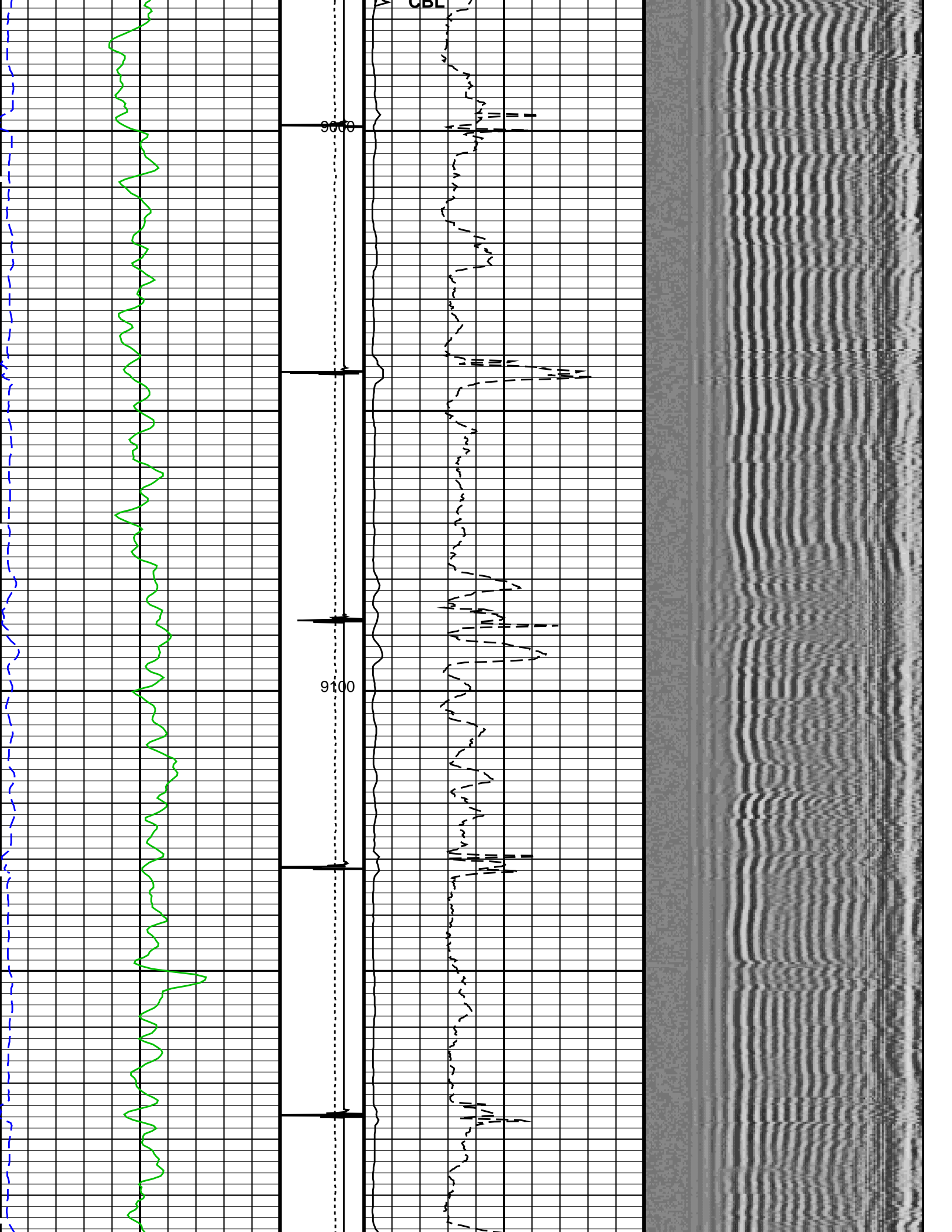


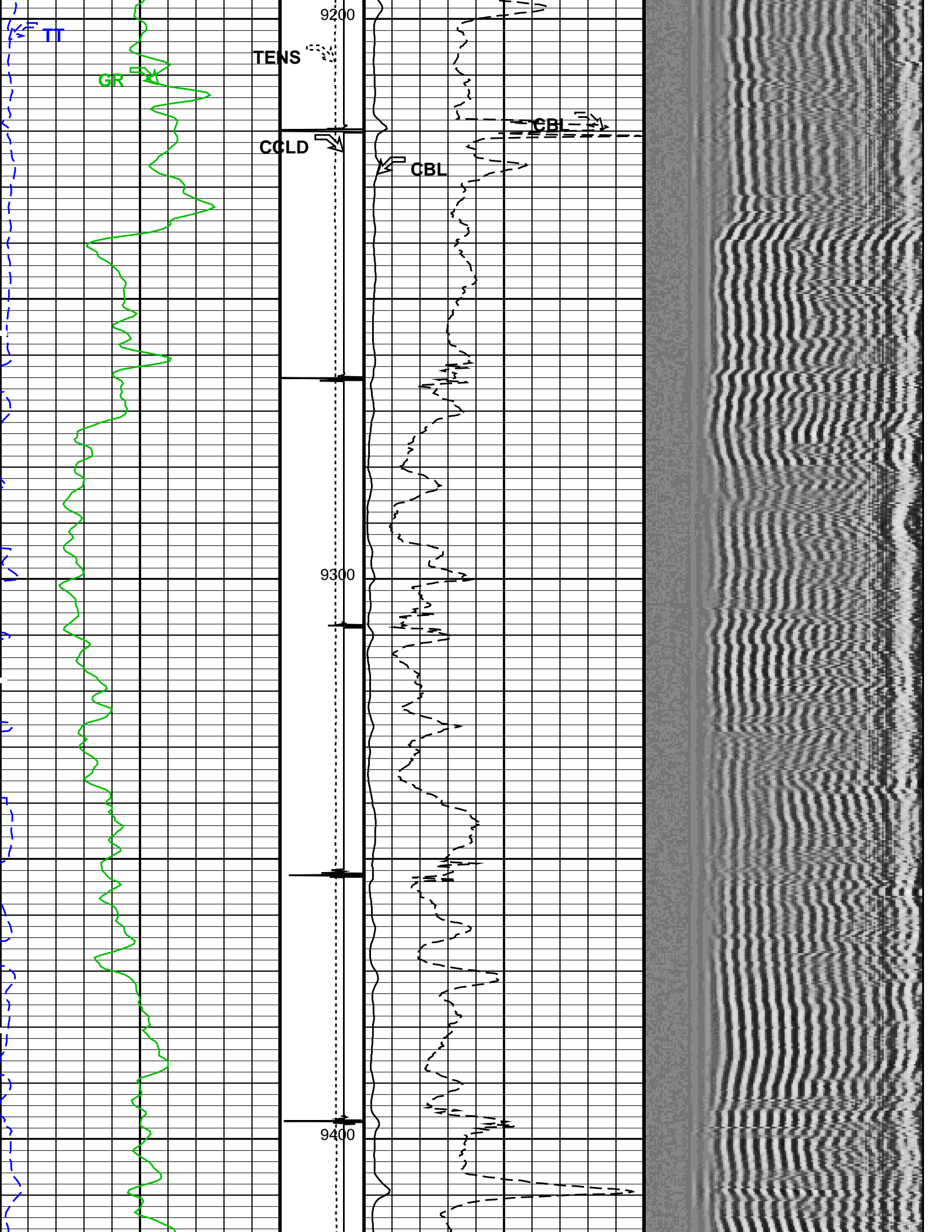


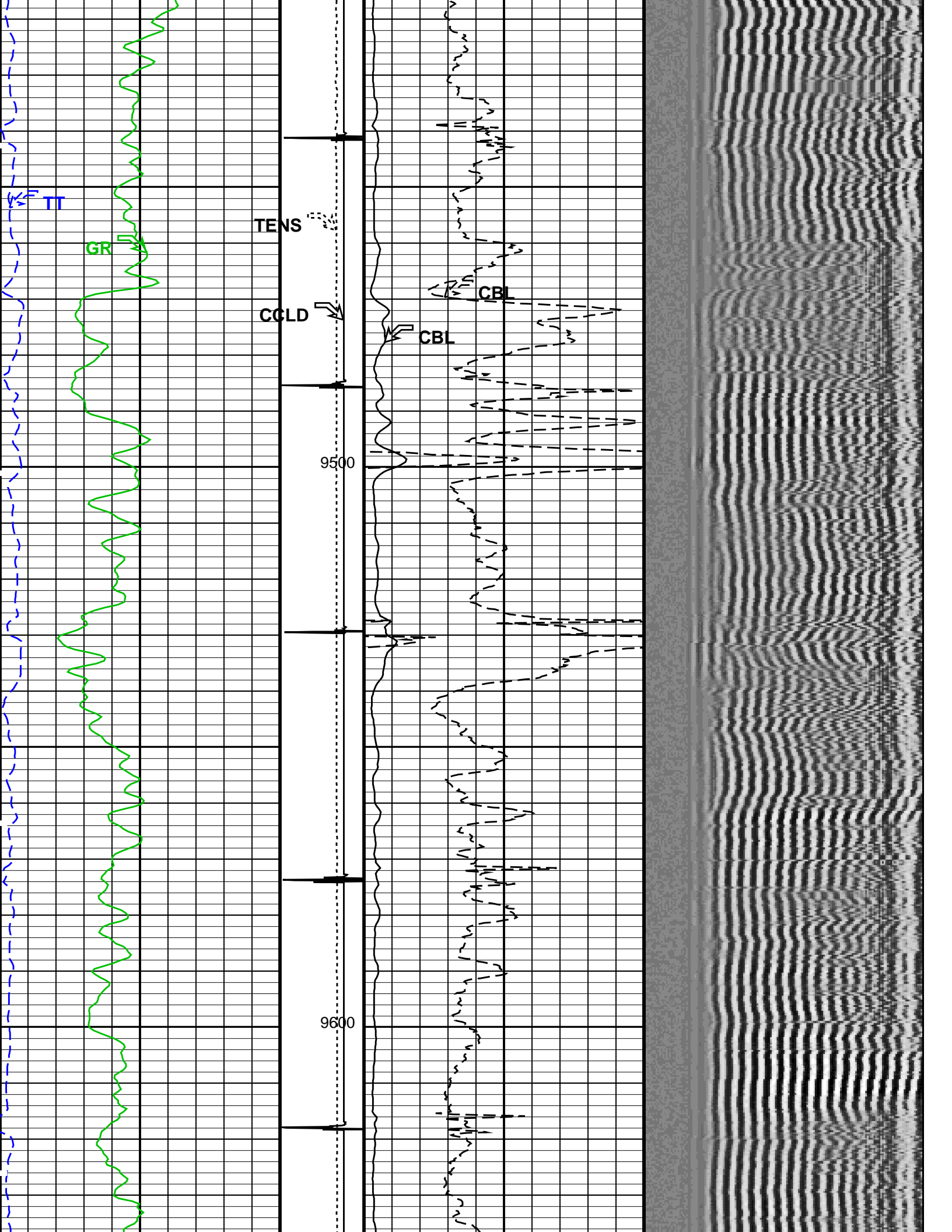


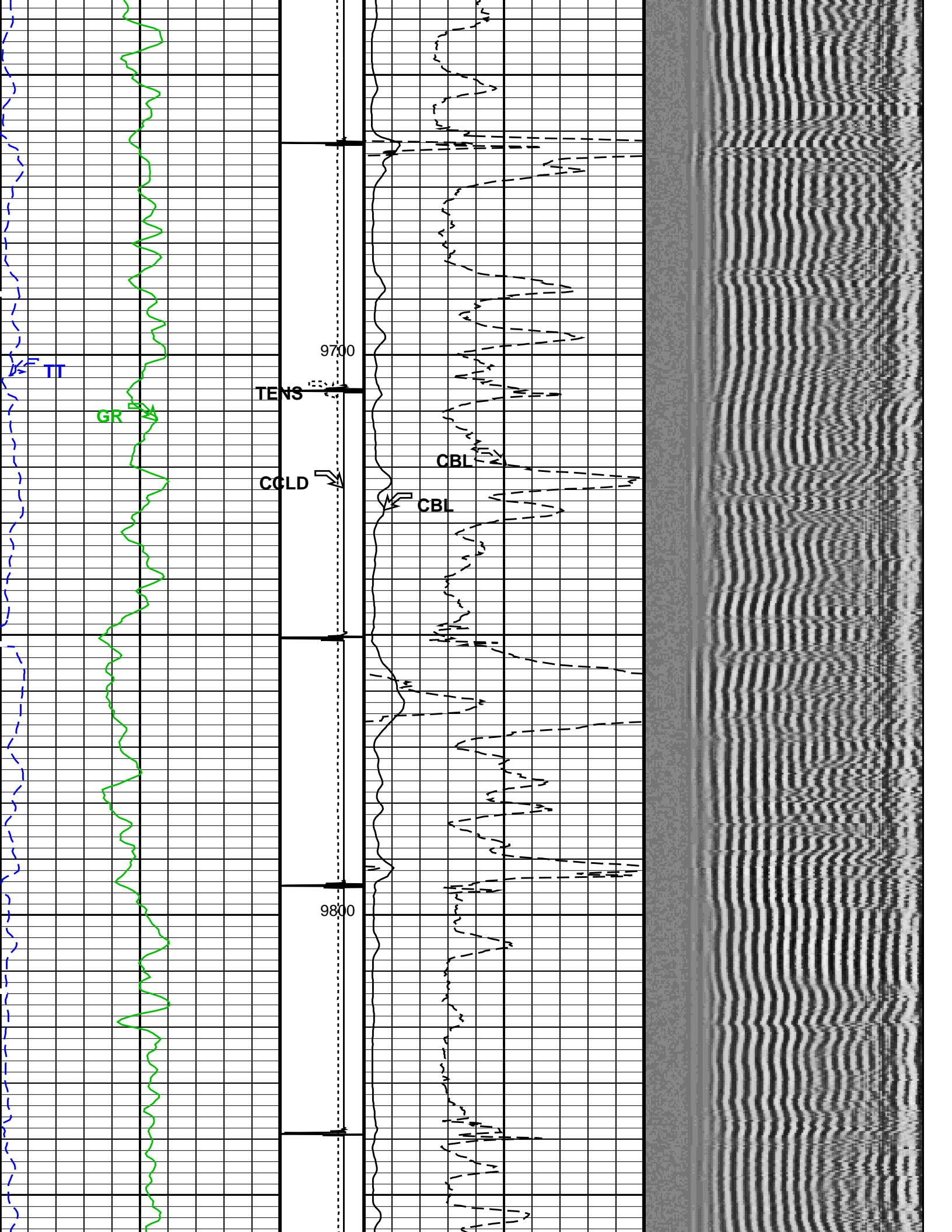


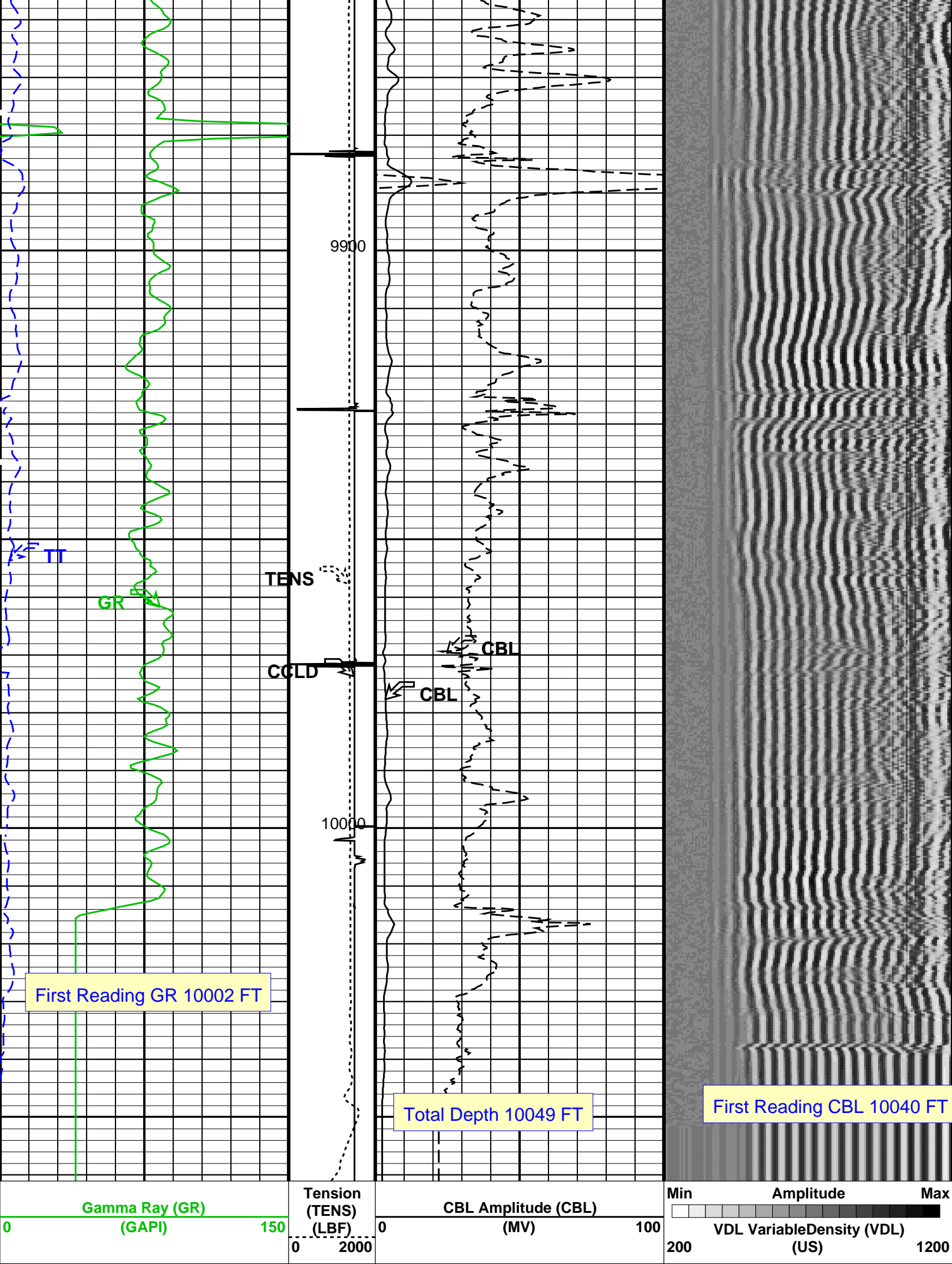












Transit Time (TT) (US)		Discriminat ed CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)	
260	160	3 -1	0	10
PIP SUMMARY				
Time Mark Every 60 S				
Format: CBL_VDL Vertical Scale: 5" per 100'			Graphics File Created: 25-Nov-2013 13:03	
OP System Version: 19C0-187				
SCMT-CB PSPT	SRPC-5214-H2-2012-OP1 SRPC-5214-H2-2012-OP1	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	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	5.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	10049	FT

Input DLIS Files

DEFAULT	Splice_SCMT_RST_PSP_015CUP	FN:1	PRODUCER	25-Nov-2013 12:55	12000.0 FT	2.2 FT
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Output DLIS Files

DEFAULT	SCMT_RST_PSP_017PUP	FN:15	PRODUCER	25-Nov-2013 13:03		
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Schlumberger

REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC	Well: HMU 6-12DD (J6SEB)
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Input DLIS Files

DEFAULT	SCMT_RST_PSP_005LUP	FN:4	PRODUCER	25-Nov-2013 09:16	6907.5 FT	6602.5 FT
DEFAULT	SCMT_RST_PSP_017PUP	FN:15	PRODUCER	25-Nov-2013 13:03	10061.0 FT	-44.5 FT

Output DLIS Files

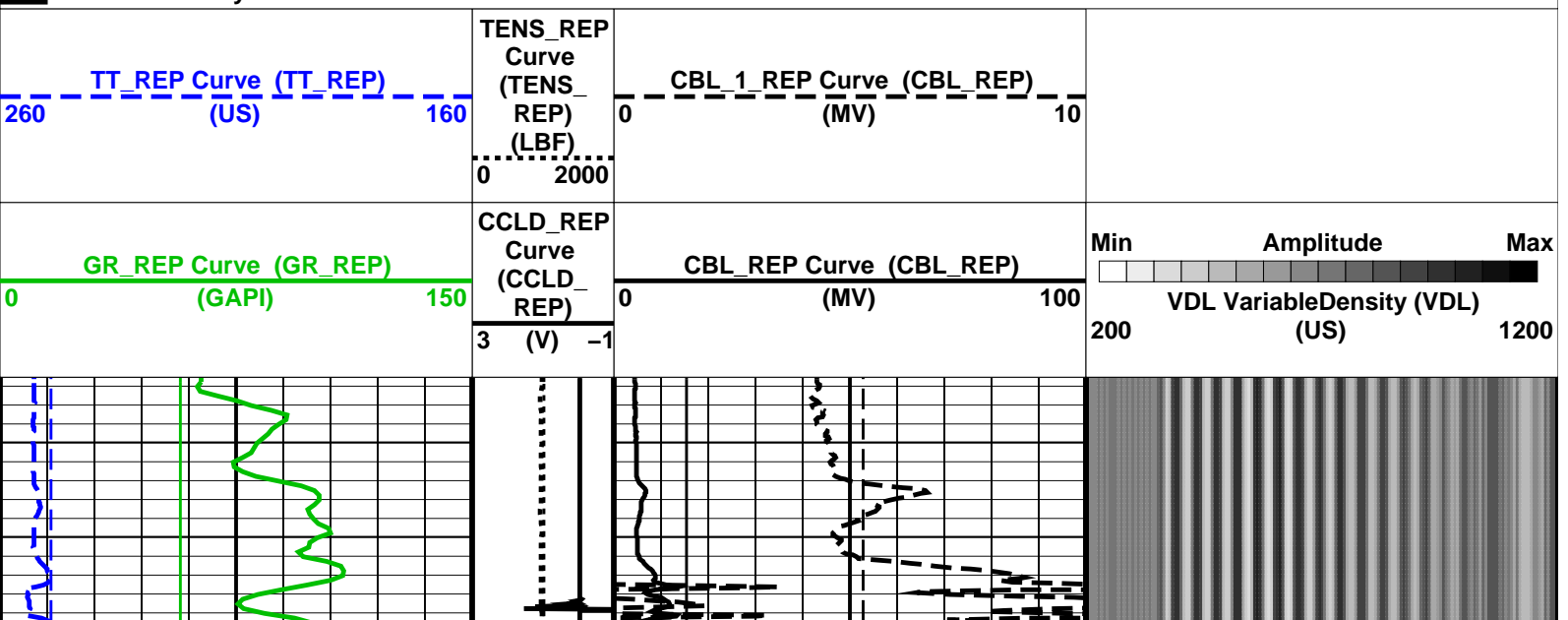
DEFAULT	SCMT_RST_PSP_018PUP	FN:16	PRODUCER	25-Nov-2013 13:09	6909.5 FT	6552.5 FT
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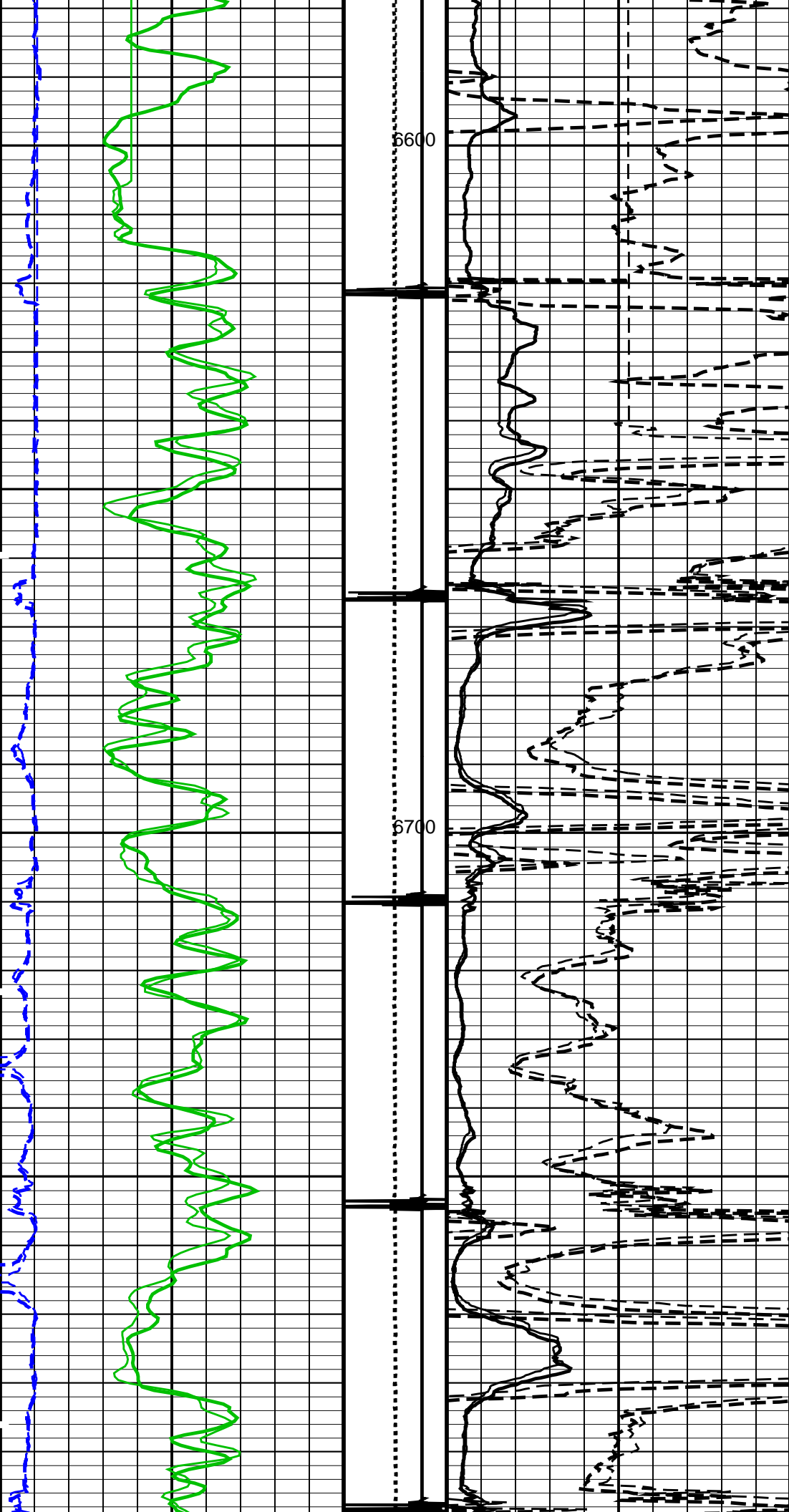
OP System Version: 19C0-187

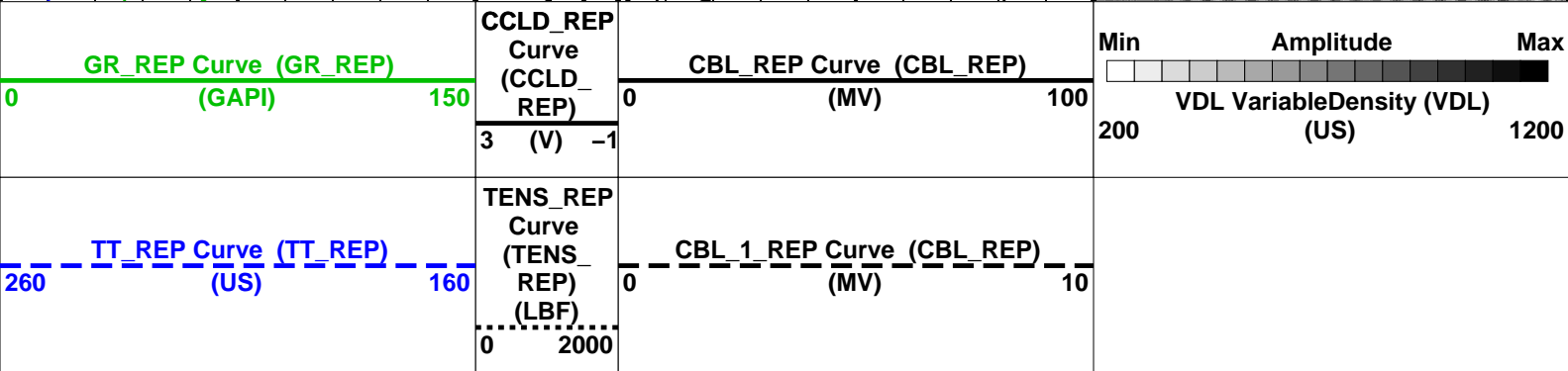
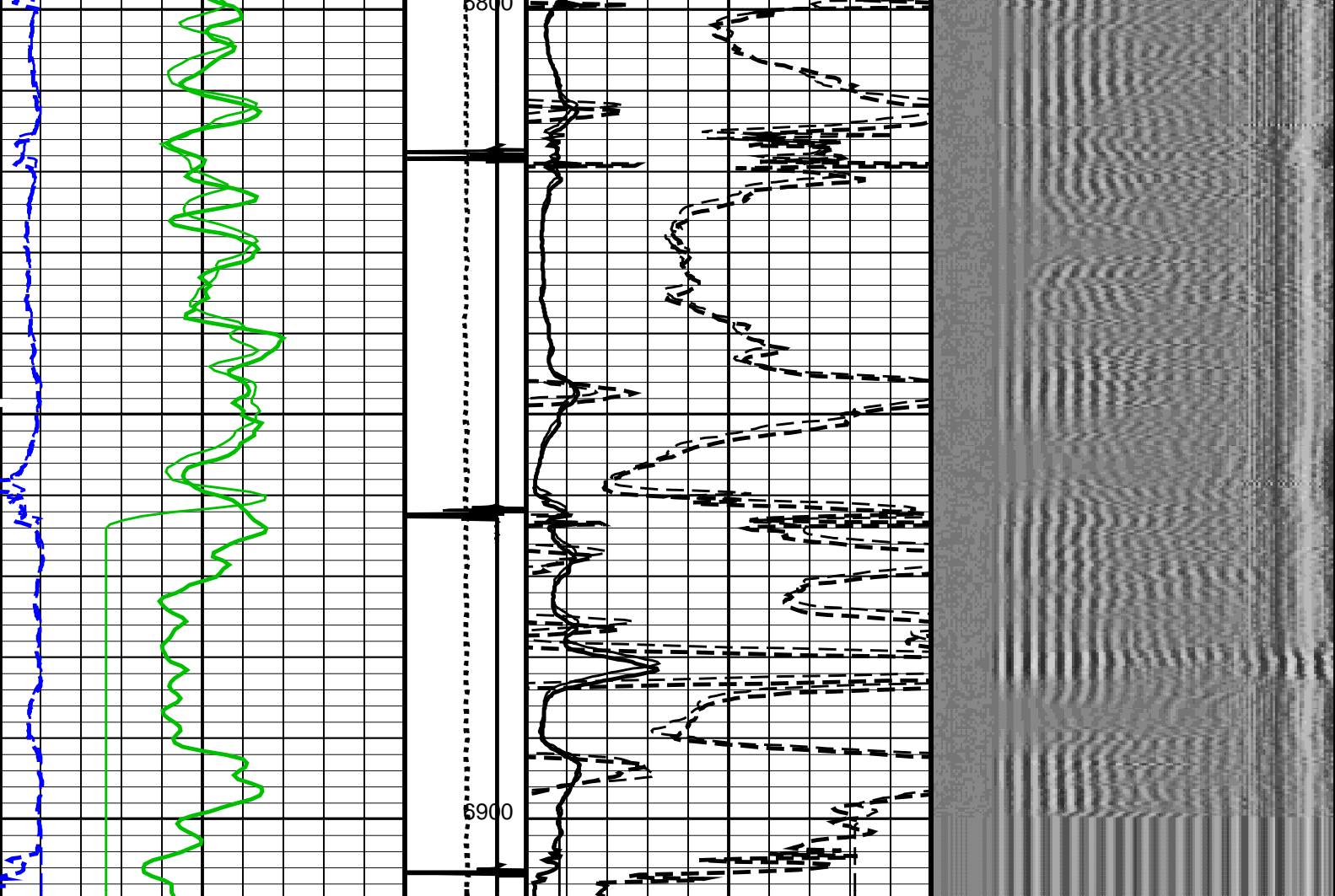
SCMT-CB	SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!
PSPT	SRPC-5214-H2-2012-OP1!		

PIP SUMMARY

Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100'

Graphics File Created: 25-Nov-2013 13:09

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	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	2.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	10049	FT

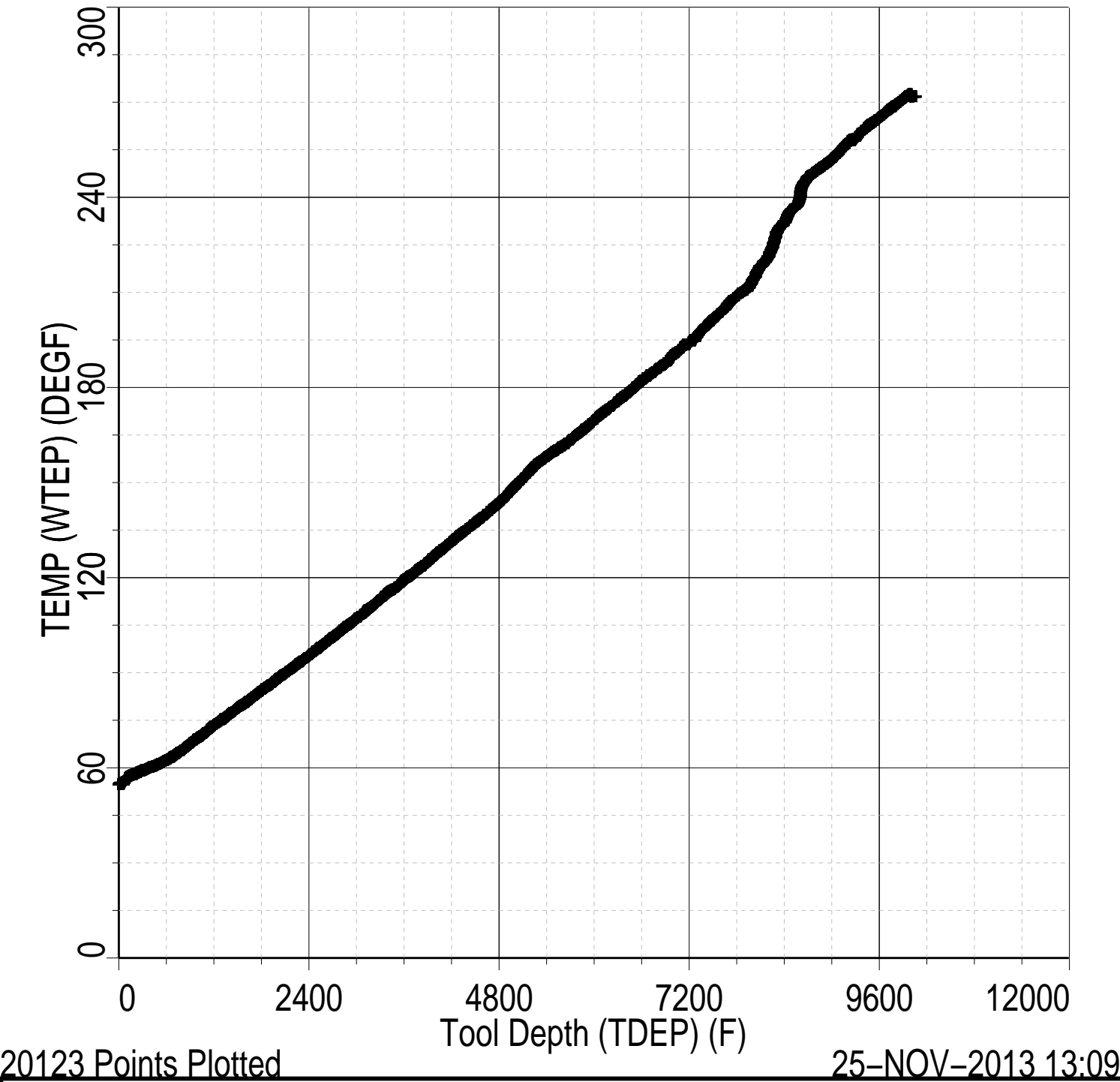
Input DLIS Files

DEFAULT	SCMT_RST_PSP_005LUP	FN:4	PRODUCER	25-Nov-2013 09:16	6907.5 FT	6602.5 FT
DEFAULT	SCMT_RST_PSP_017PUP	FN:15	PRODUCER	25-Nov-2013 13:03	10061.0 FT	-44.5 FT

Output DLIS Files

DEFAULT	SCMT_RST_PSP_018PUP	FN:16	PRODUCER	25-Nov-2013 13:09
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Index: 10061.0 – -44.5 FT



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PBMS COEFFICIENTS

Client: ENCANA OIL & GAS (USA) INC00000000000000000000
Field: MAMM CREEK
Well: HMU 6-12DD (J6SEB)
Run date: 25-Nov-2013

Tool: PSP
Sub Type: PBMS
Sensor: CQG

PBMS Quartz Gauge type F

Sonde Serial NB COEFFICIENTS FOR CQG PBMS-B.928 S/N:
Sensor Serial NB 928
Calib Date ddmmyy 280612
Matrix Size 66
Coeff CRC 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 ddmmyy280612

Matrix Size66

Coeff CRC283B

Temp Coeff

	Fc**0	Fc**1	Fc**2
Fb**0	+1.117016867873E+03	−.284359629614E−03	+604391180345E−08
Fb**1	−.598309140812E−02	+1.182731130848E−07	+1.160166486172E−12
Fb**2	−.307621454576E−07	+3.300601550309E−12	+3.311233548560E−17
Fb**3	−.419658736767E−12	+1.117473708647E−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	+1.114322792679E−12	+1.153807711176E−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 NB928

Calib Date ddmmyy280612

Matrix Size16

Coeff CRC093F

Clock Freq Coeff

	(Fb'−Fc')**0	(Fb'−Fc')**1	(Fb'−Fc')**2
(Fb'−Fc')**0	+3.10874009898E+05	+2.288920923041E−02	+6.97940727038E−06

	(Fb'−Fc')**3	(Fb'−Fc')**4	(Fb'−Fc')**5
(Fb'−Fc')**0	−.657432344763E−10	−.412920638782E−15	+2.13369826099E−20

PBMS Quartz Gauge type F

Sonde Serial NB:

Sensor Serial NB928

Calib Date ddmmyy280612

Matrix Size16

Coeff CRC8419

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

Slim Cement Mapping Sonde

Slim Cement Mapping Cartridge

SCMX - CA

SCMS - CB

8303

SCMC - CA

8120









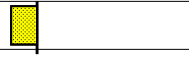
Auxiliary Equipment:

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: HMU 6-12DD (J6SEB)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

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SLIM CEMENT MAPPING LOG
CBL-VDL
GAMMA RAY-CCL