

Company: ENCANA OIL & GAS (USA) INC

Well: ENCANA FEE 24-9B (K19CNE)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 2337 FSL & 315 FWL

Well: ENCANA FEE 24-9B (K19CNE)

Company: ENCANA OIL & GAS (USA) INC

SLIM CEMENT MAPPING LOG

CBL-VDL

GAMMA RAY – CCL

SHL: 2337 FSL & 315 FWL

BHL: 2500 FSL & 845 FEL

Elev.: K.B. 5668.00 ft

G.L. 5666.00 ft

D.F. 5666.00 ft

Permanent Datum: GROUND LEVEL

Log Measured From: KELLY BUSHING

Drilling Measured From: KELLY BUSHING

API Serial No. 05-045-20760-0C

Section 19

Township 6S

Range 92W

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 Date1-May-2013

Run Number1

Depth Driller7779 ft

Schlumberger Depth7687 ft

Bottom Log Interval7678 ft

Top Log Interval80 ft

Casing Fluid TypeFRESH WATER

Salinity

Density8.4 lbm/gal

Fluid Level80 ft

BIT/CASING/TUBING STRING

Bit Size8.750 in

From22 ft

To7779 ft

Casing/Tubing Size4.500 in

Weight11.6 lbm/ft

Grade

From22 ft

To7755 ft

Maximum Recorded Temperatures214 degF

Logger On Bottom1-May-2013

Unit Number391

Recorded ByKIRSTIE BUNTING

Witnessed ByEUGENE

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: 30-APR-2013 11:07:37

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:	30-APR-201	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:	7		
Wheel Correction 2:	-4	Calibration Peak Error:	15		

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 DOWNLOG	
TOOL RAN AS PER TOOL SKETCH	
ENTRANCE TIME: 19:15	
TIME ON BOTTOM: 19:45	
EXIT TIME: 22:00	

MAX RECORDED TEMPERATURE: 214 DEGF	
MAX RECORDED PRESSURE: 3207 PSIA	
SHORT JOINTS: 5560 FT & 6539 FT	
MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE	
EXPECTED CBL AMPLITUDE IN FREE PIPE IS 80MV	
CREW: J BARRY, K BUNTING, K JOHNS, K BOZARTH, T LEGGITT	
THANK YOU FOR CHOOSING E&P WIRELINE. A SCHLUMBERGER COMPANY	

RUN 1 SERVICE ORDER #: C920-00069 PROGRAM VERSION: 19C0-187 FLUID LEVEL: 80 ft			RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT	DESCRIPTION

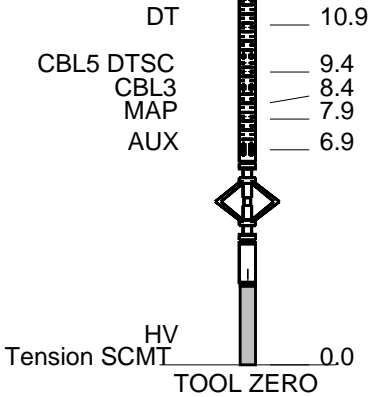
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2	1	1
3	1	1
4	1	1
5	1	1
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9	1	1
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98	1	1
99	1	1
100	1	1

SURFACE EQUIPMENT	
WITM-A PSC_16MHZ	

DOWNHOLE EQUIPMENT			
MH-22			53.2
MH-22			
Detail MT			
AH-38	TelStatus		51.6
PSPT	CTEM		51.3
PSC-A			51.3
PSPT-B 928			
PSTC-A			
PBMS-B	GR		47.6
CQG_F_Mano			
RTD_Thermometer			
GR	Well_Temp		44.5
CCL	CQG Manom		44.2
PBMS	CCL		43.8
	PBMS PSTC		43.0
RST-C			43.0
RSCH-A 469			
RSC-E			
RSS-A 255			
RSXH-A 493			
RSX-E			
	RSC-A Far		33.9
	RSC-A PNG		
	RSC-A Nea		
	RSX-A PNG		33.4

SCMT-CB
SCMC-CA 8317
SECH-CA
CMIR-AG
SCMS-CB 8303
SCMX-CA

20.0



MAXIMUM STRING DIAMETER 1.72 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: ENCANA FEE 24-9B (K19CNE)

Input DLIS Files

DEFAULT SCMT_RST_PSP_020LUP FN:19 PRODUCER 01-May-2013 19:39 7691.0 FT 22.5 FT

Output DLIS Files

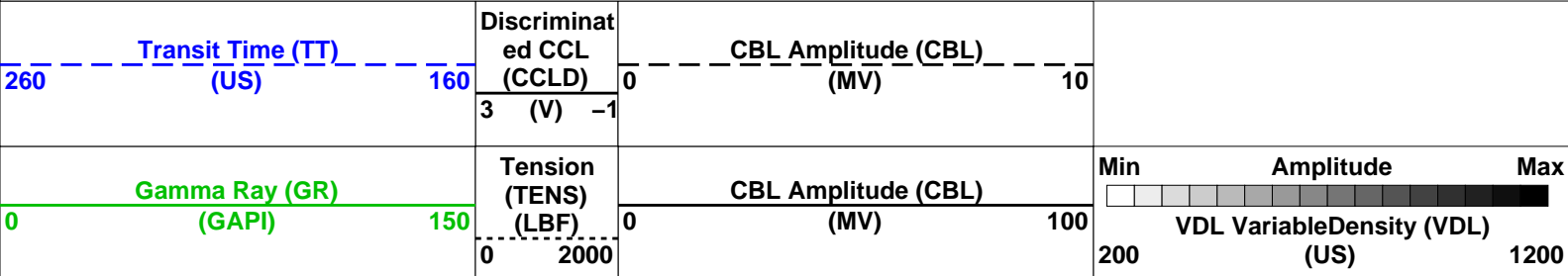
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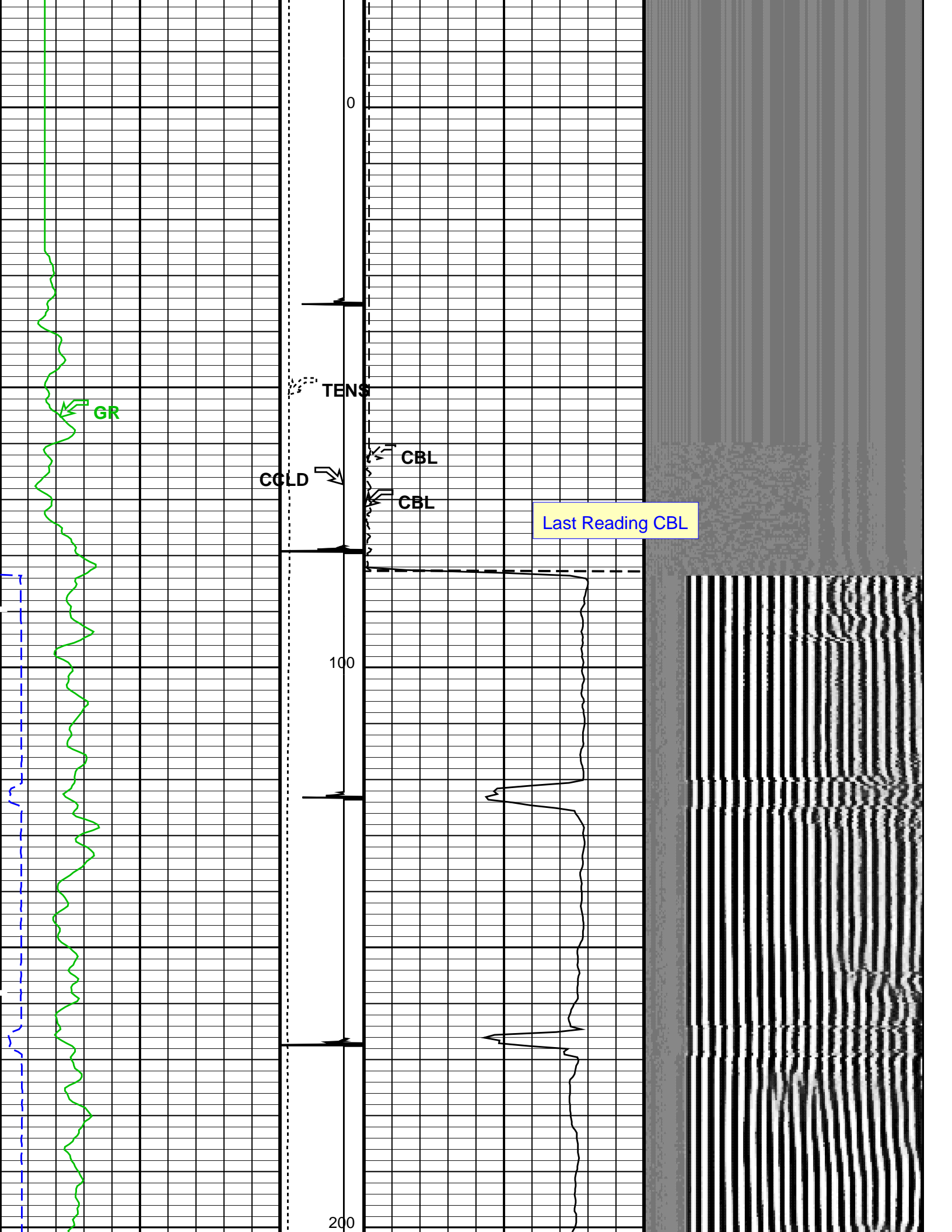
OP System Version: 19C0-187

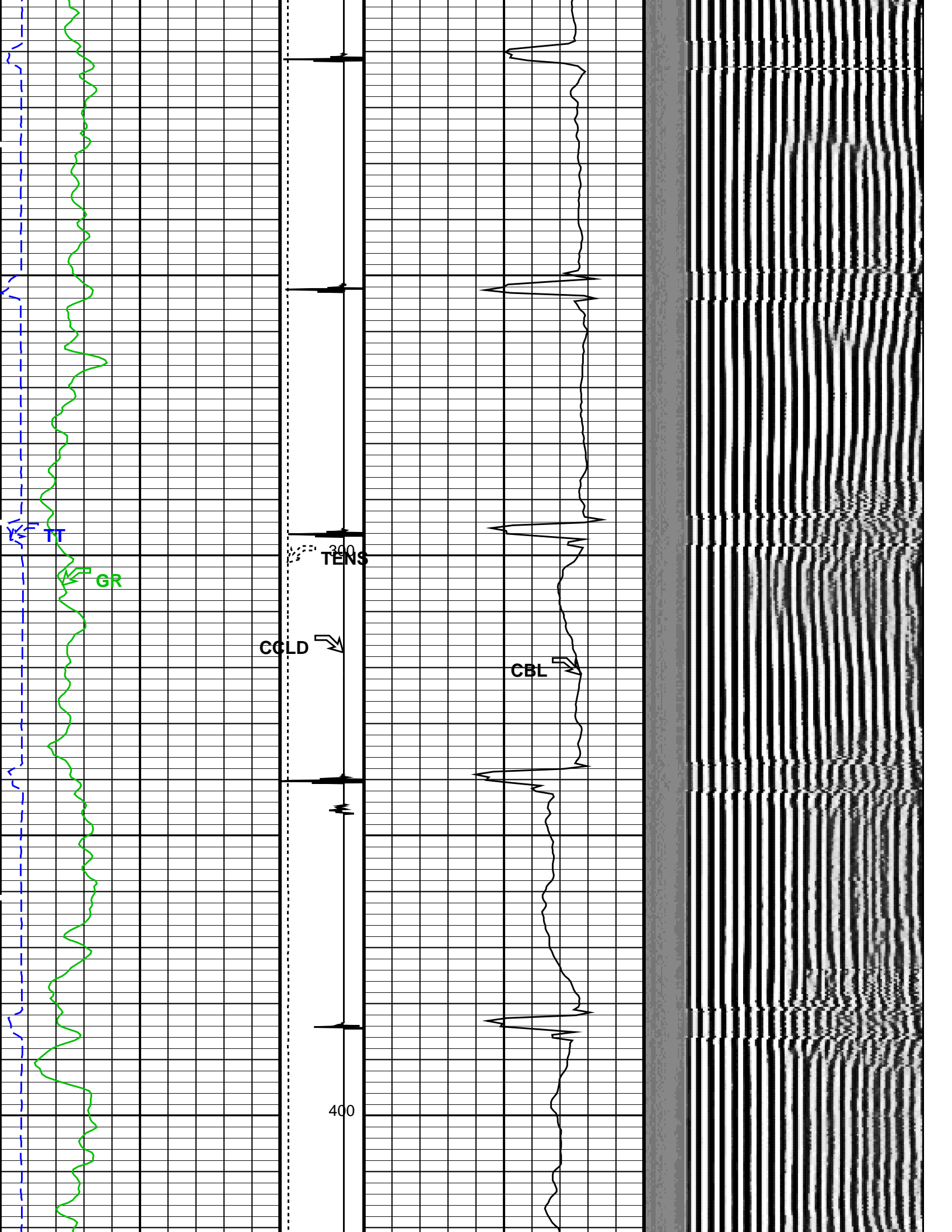
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PSPT SRPC-5214-H2-2012-OP1

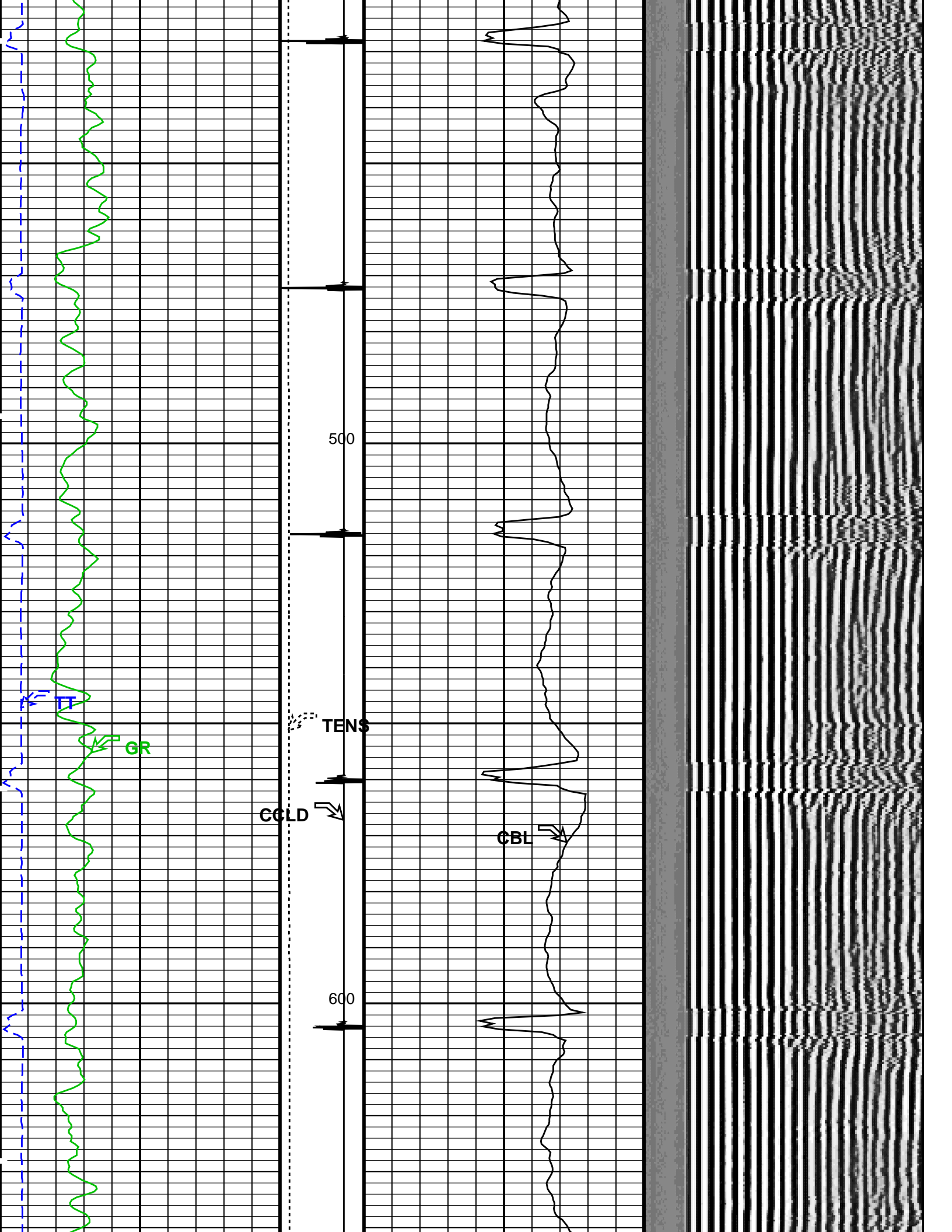
PIP SUMMARY

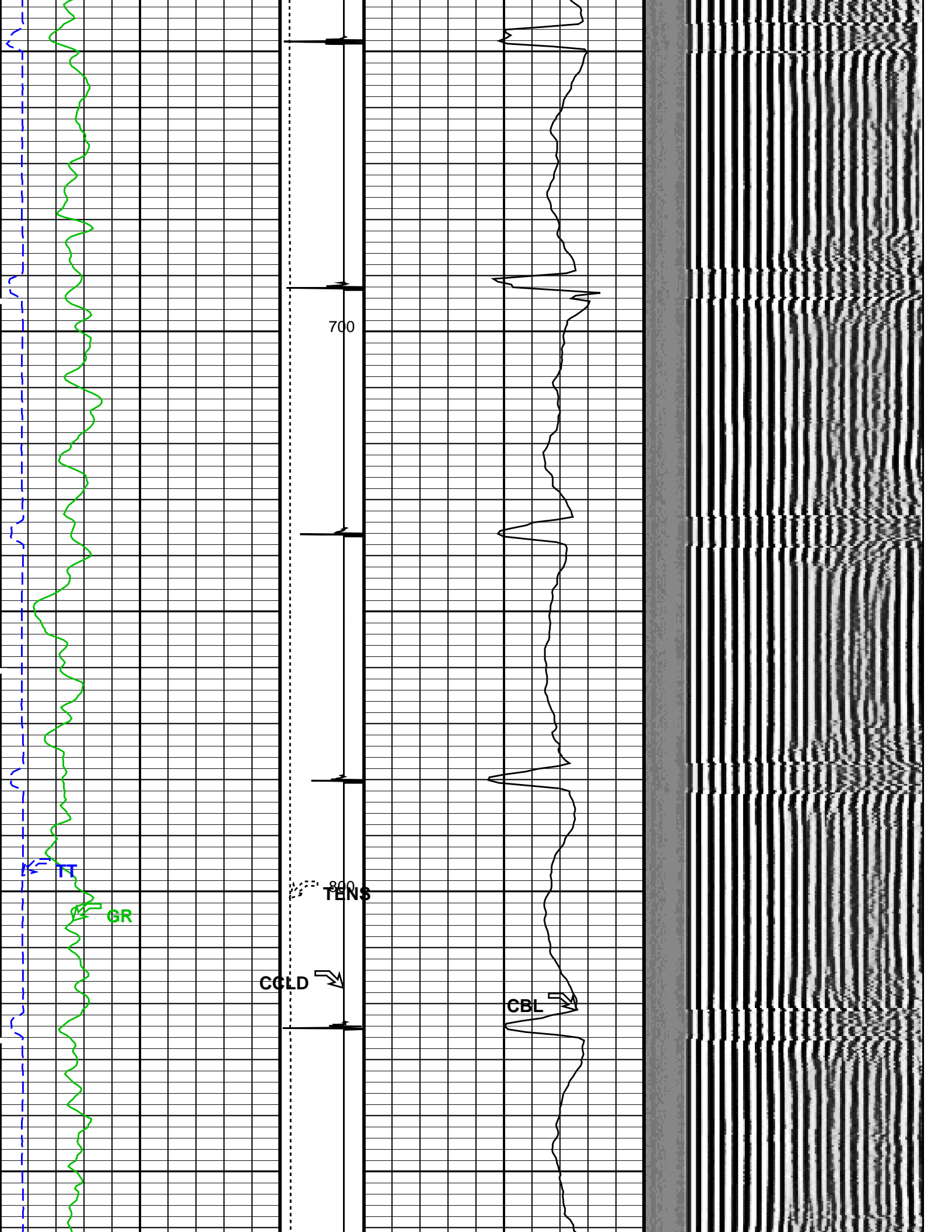
Time Mark Every 60 S

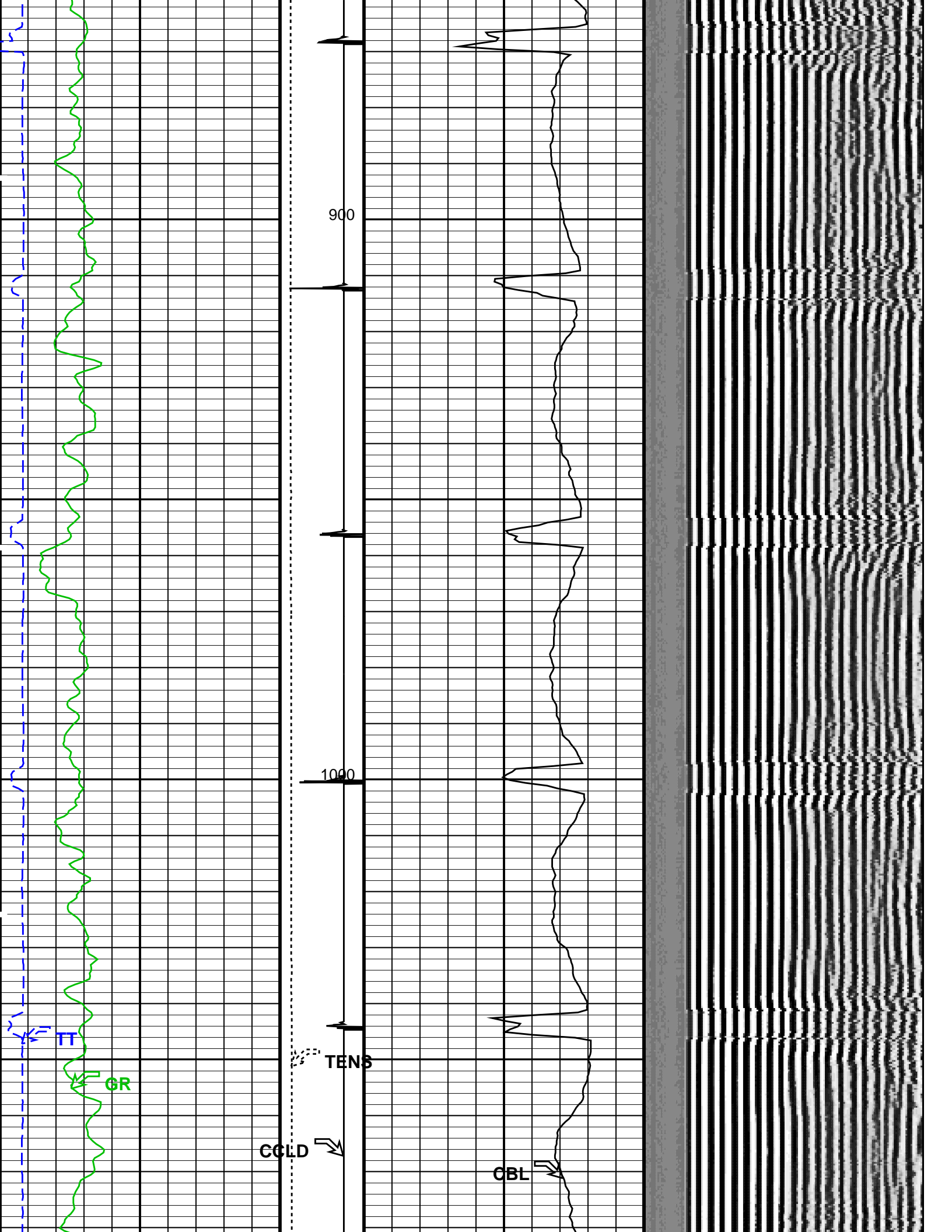


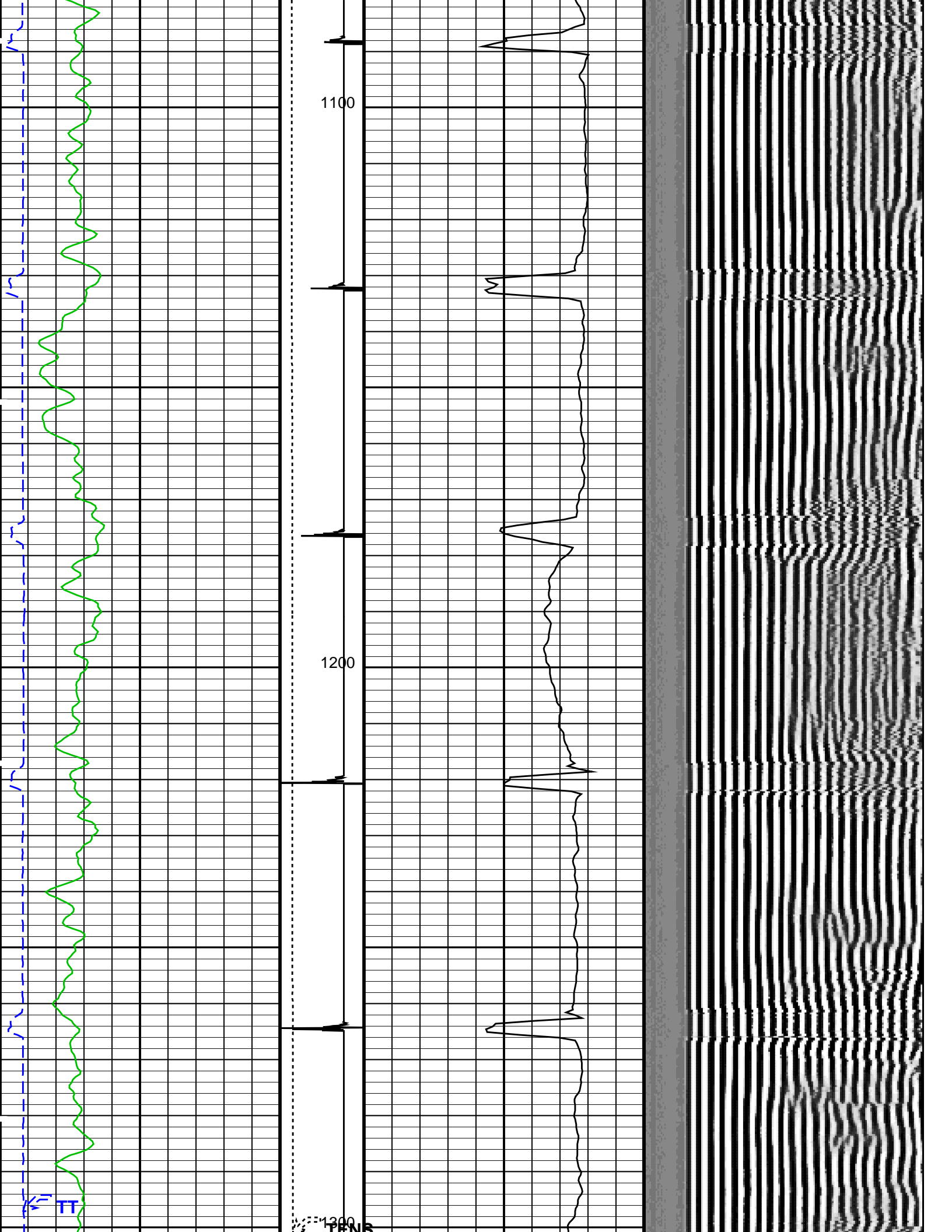


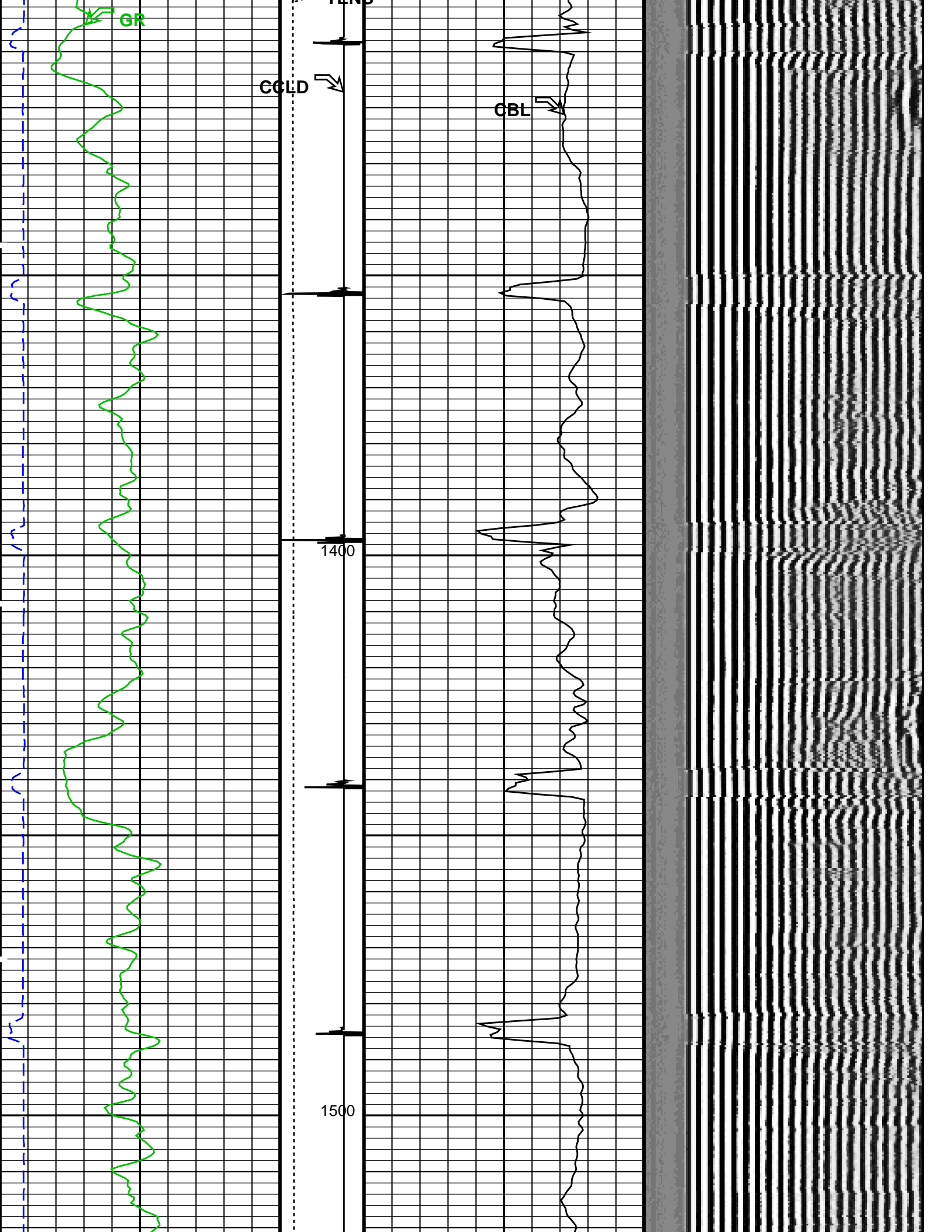


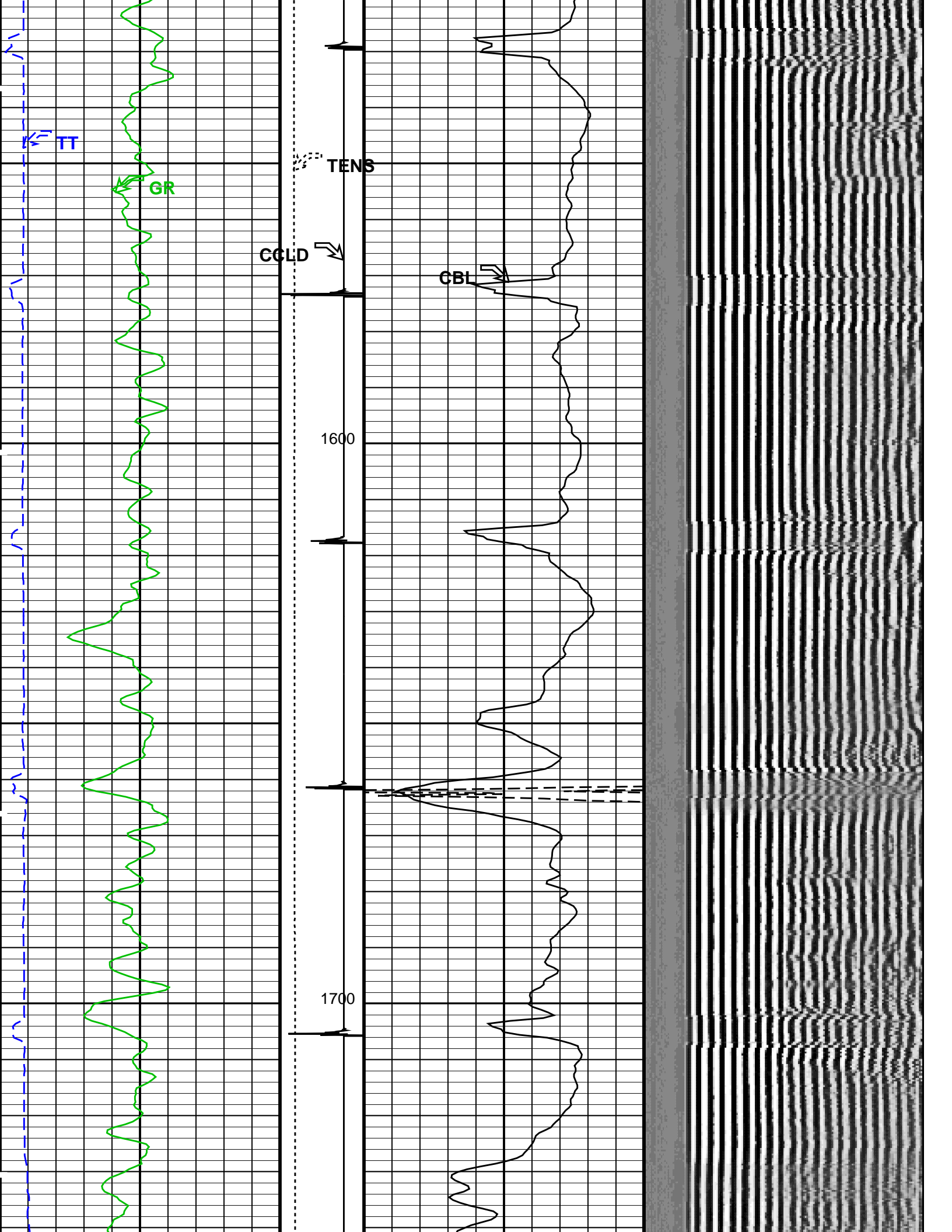


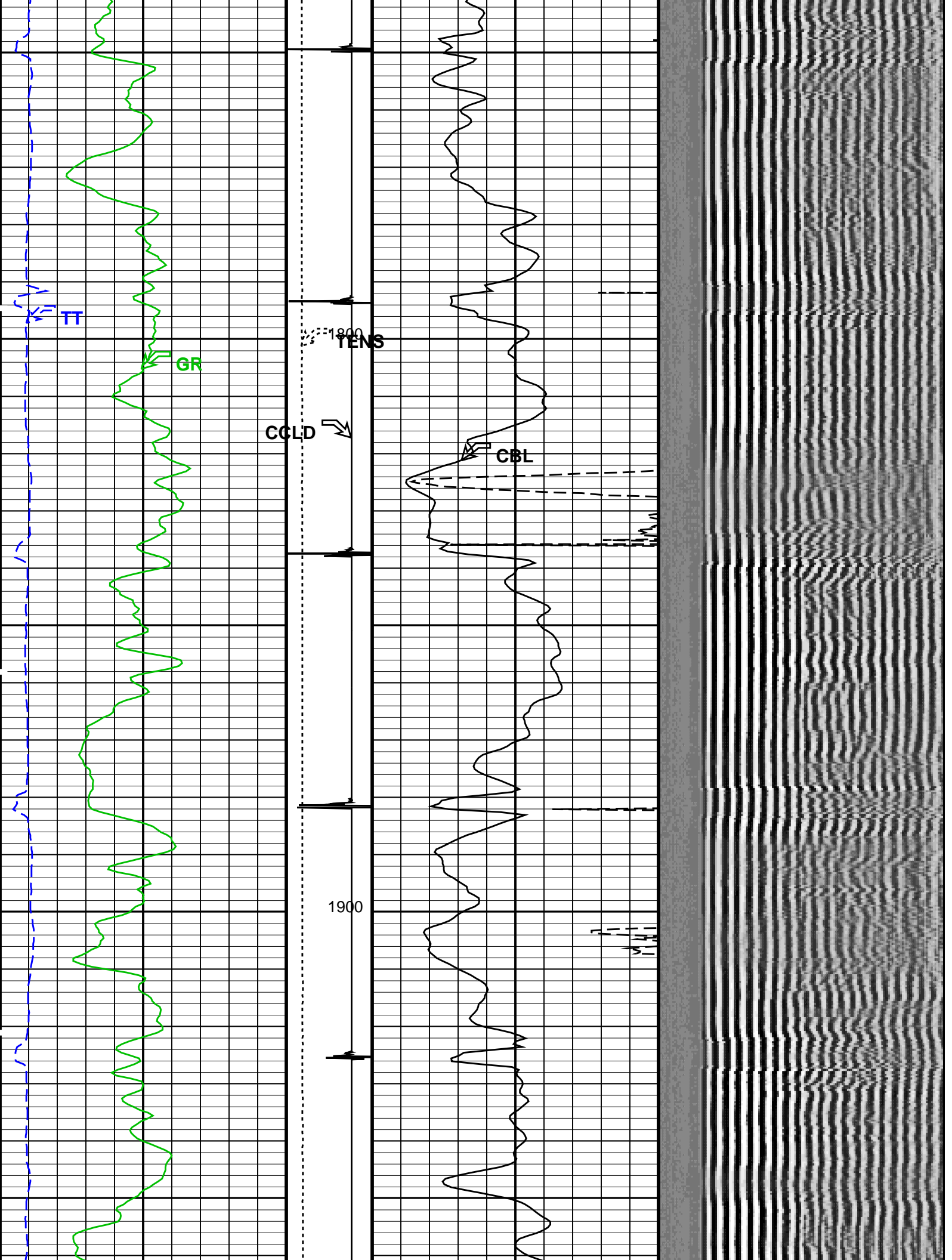


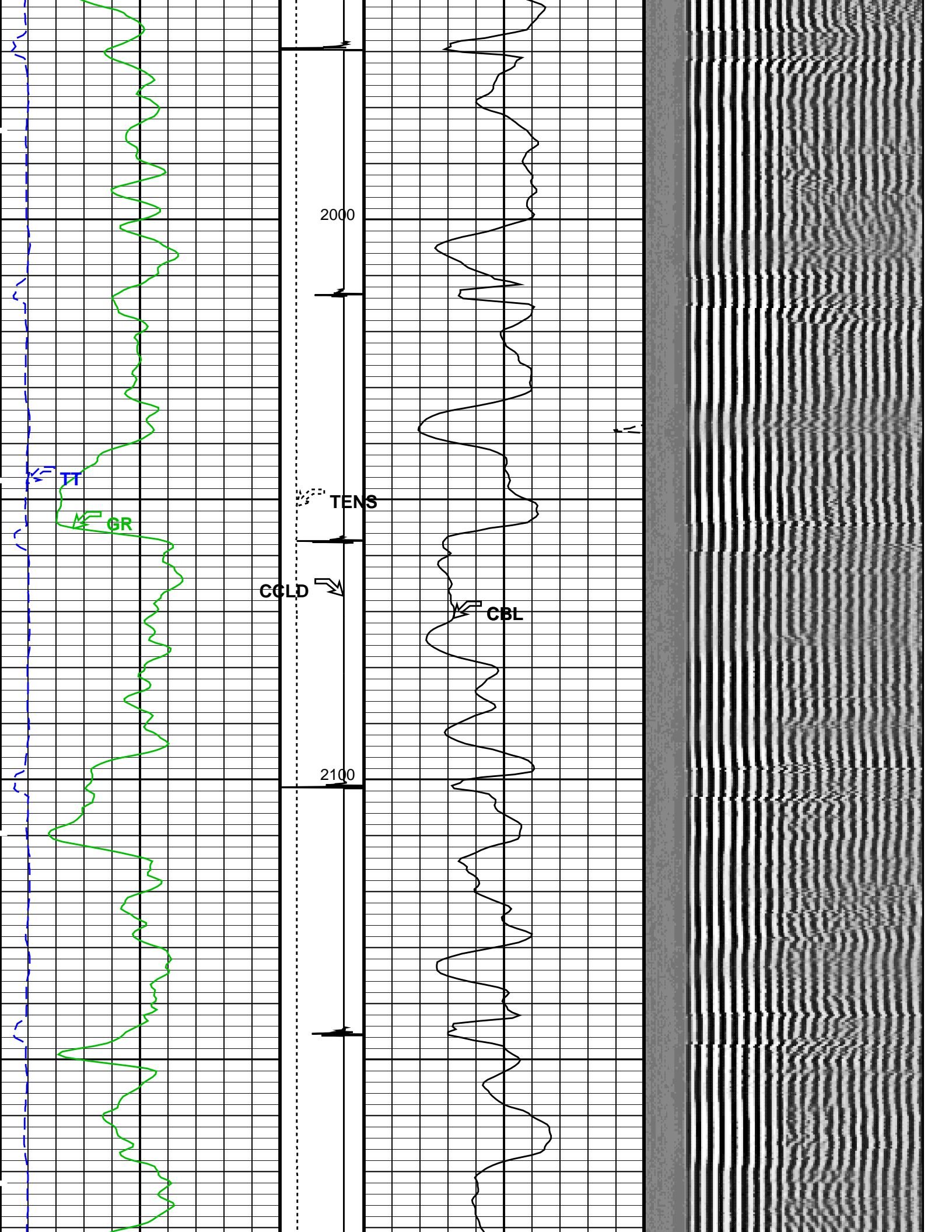


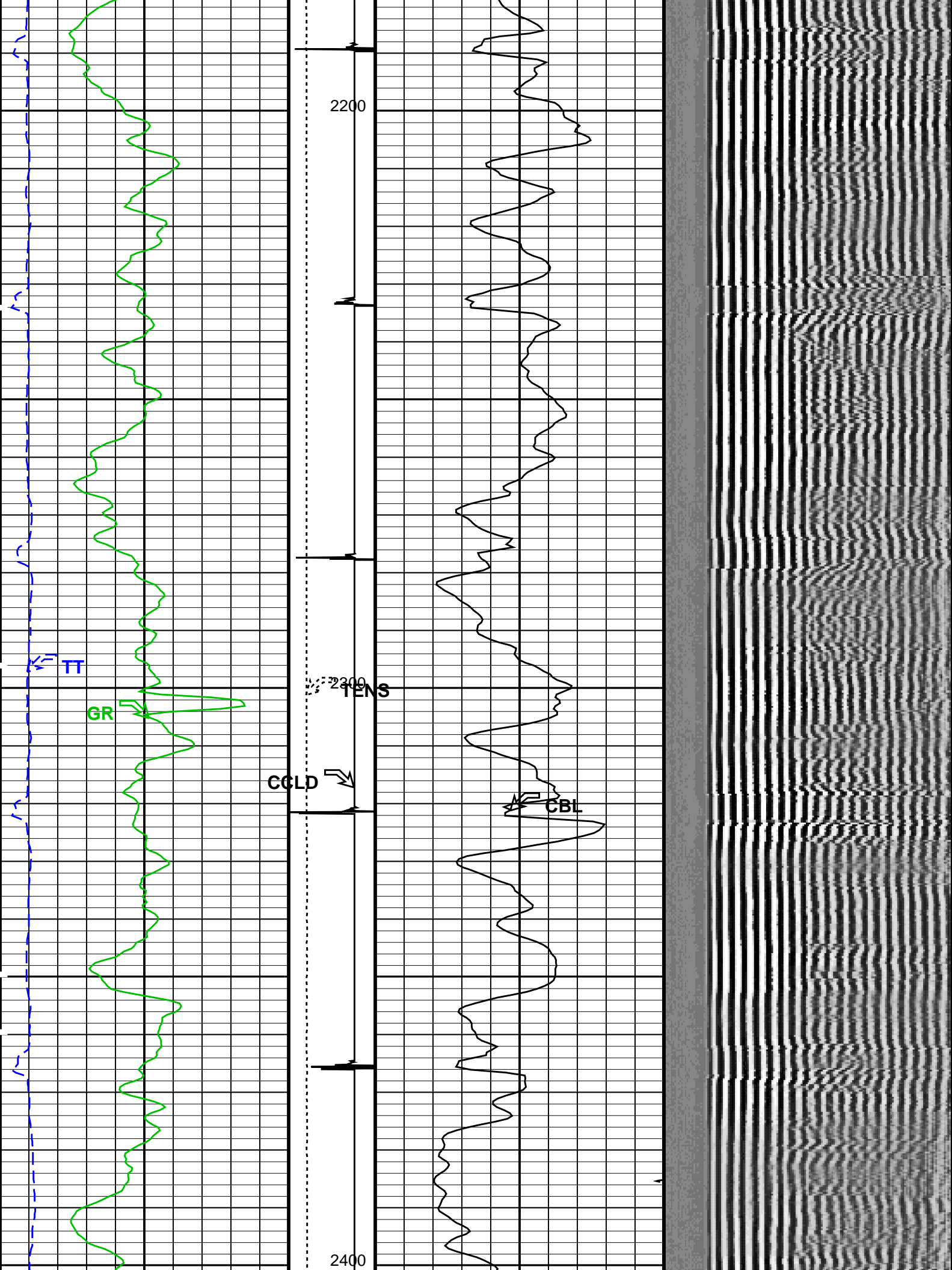


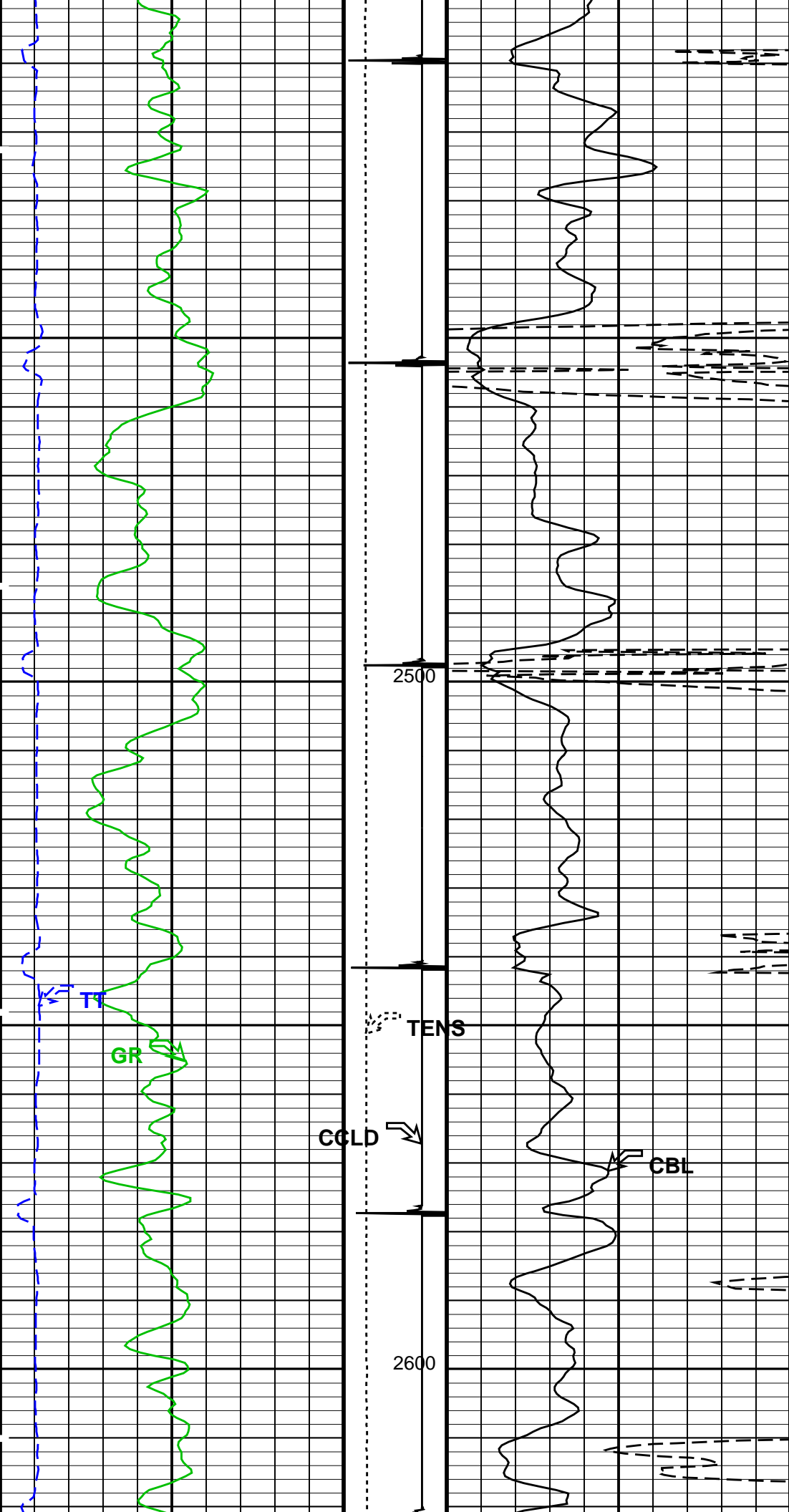


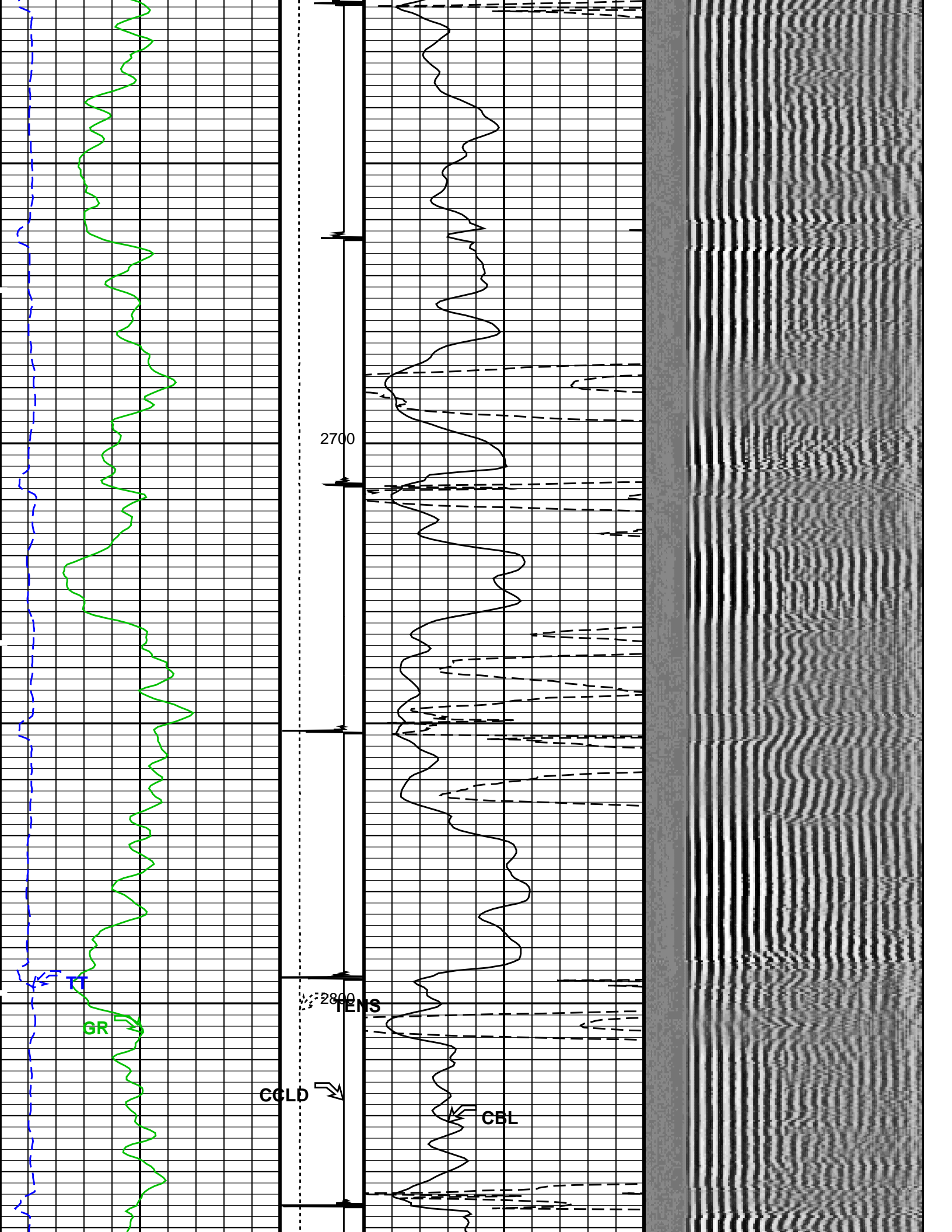


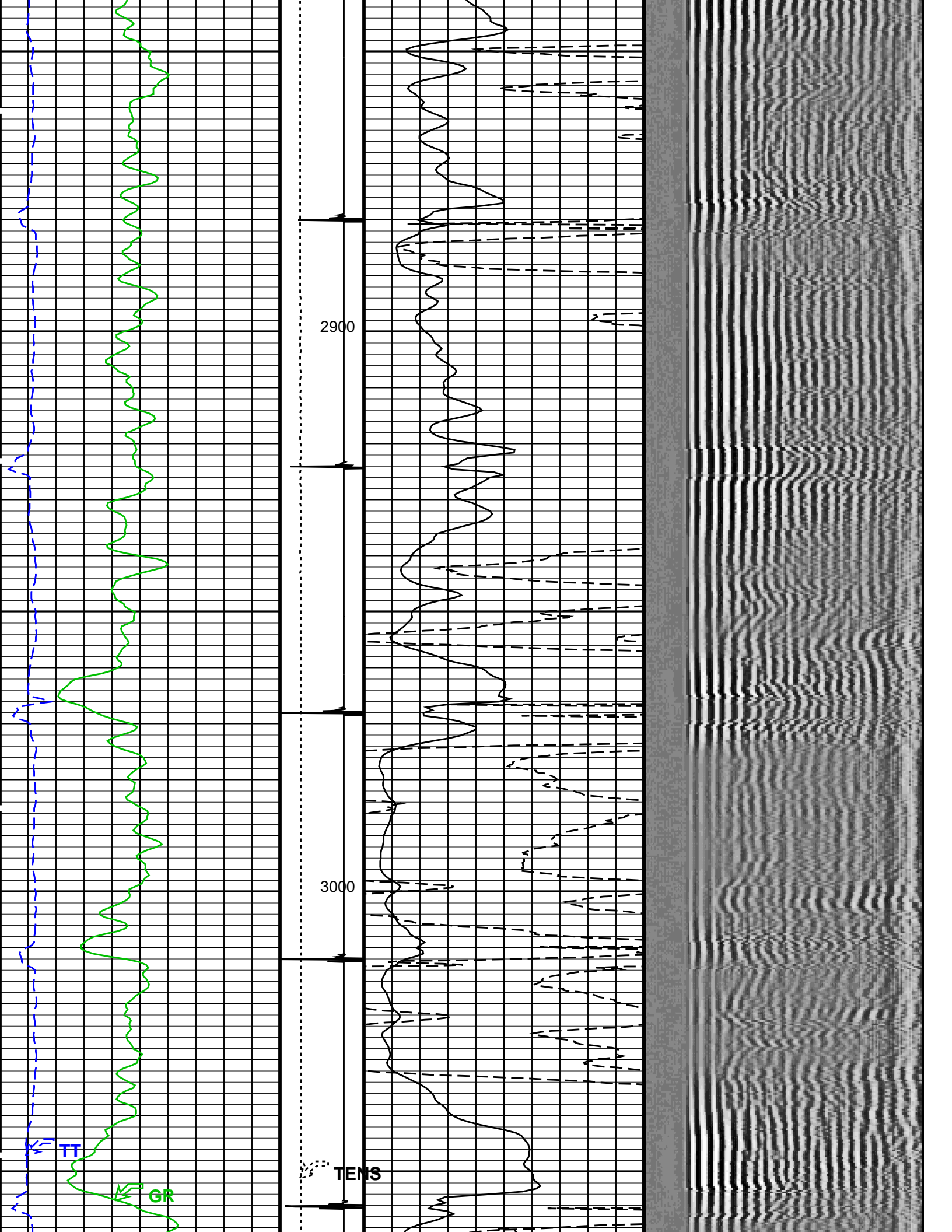


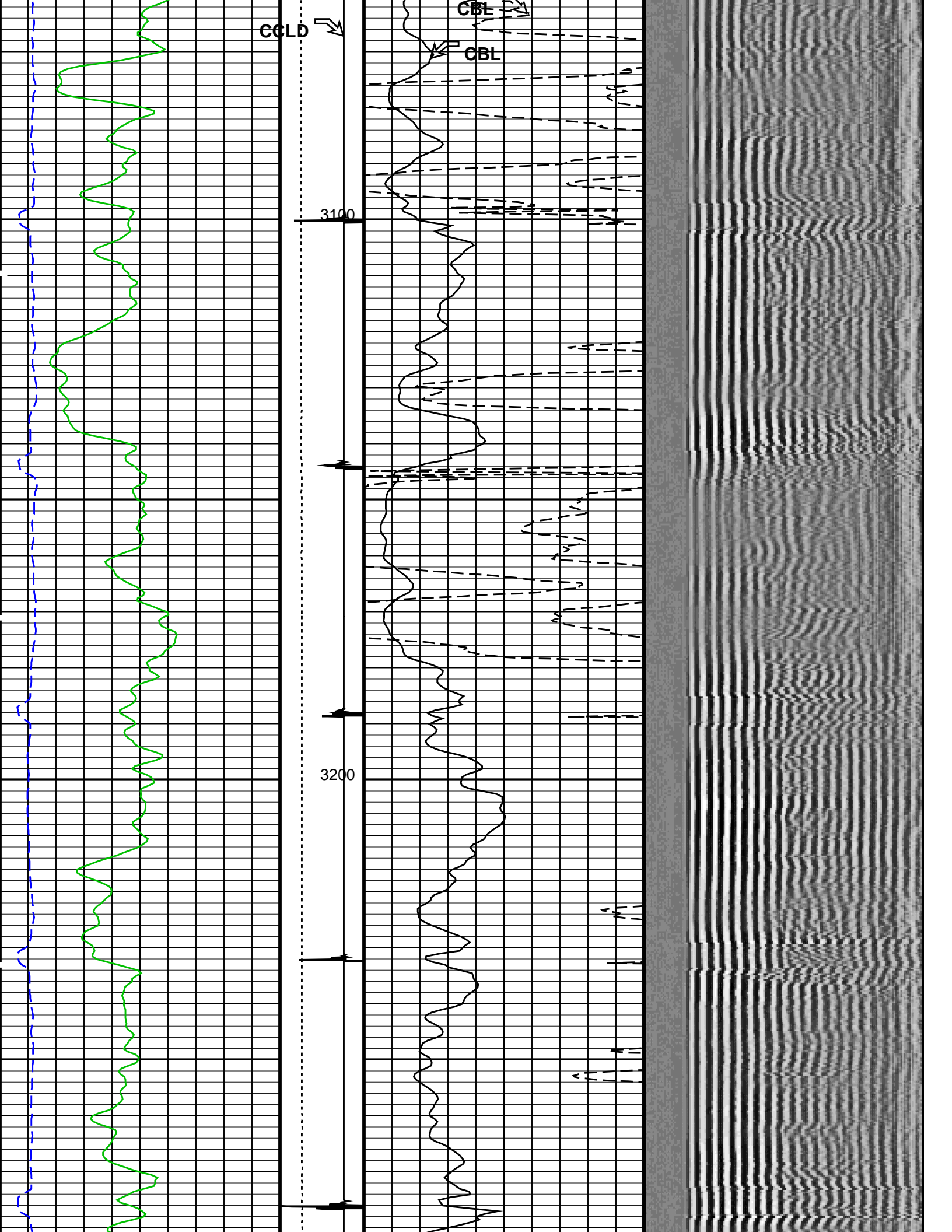


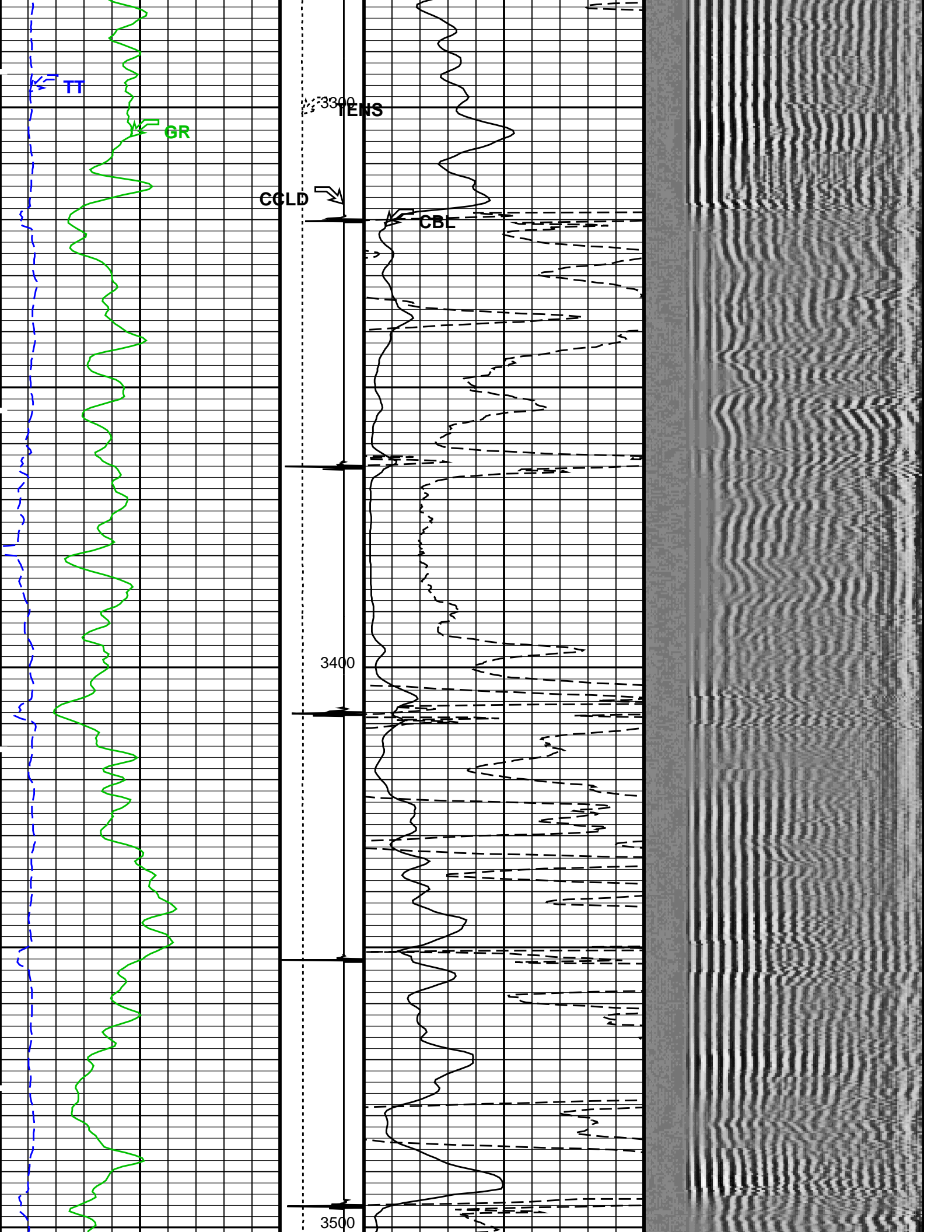


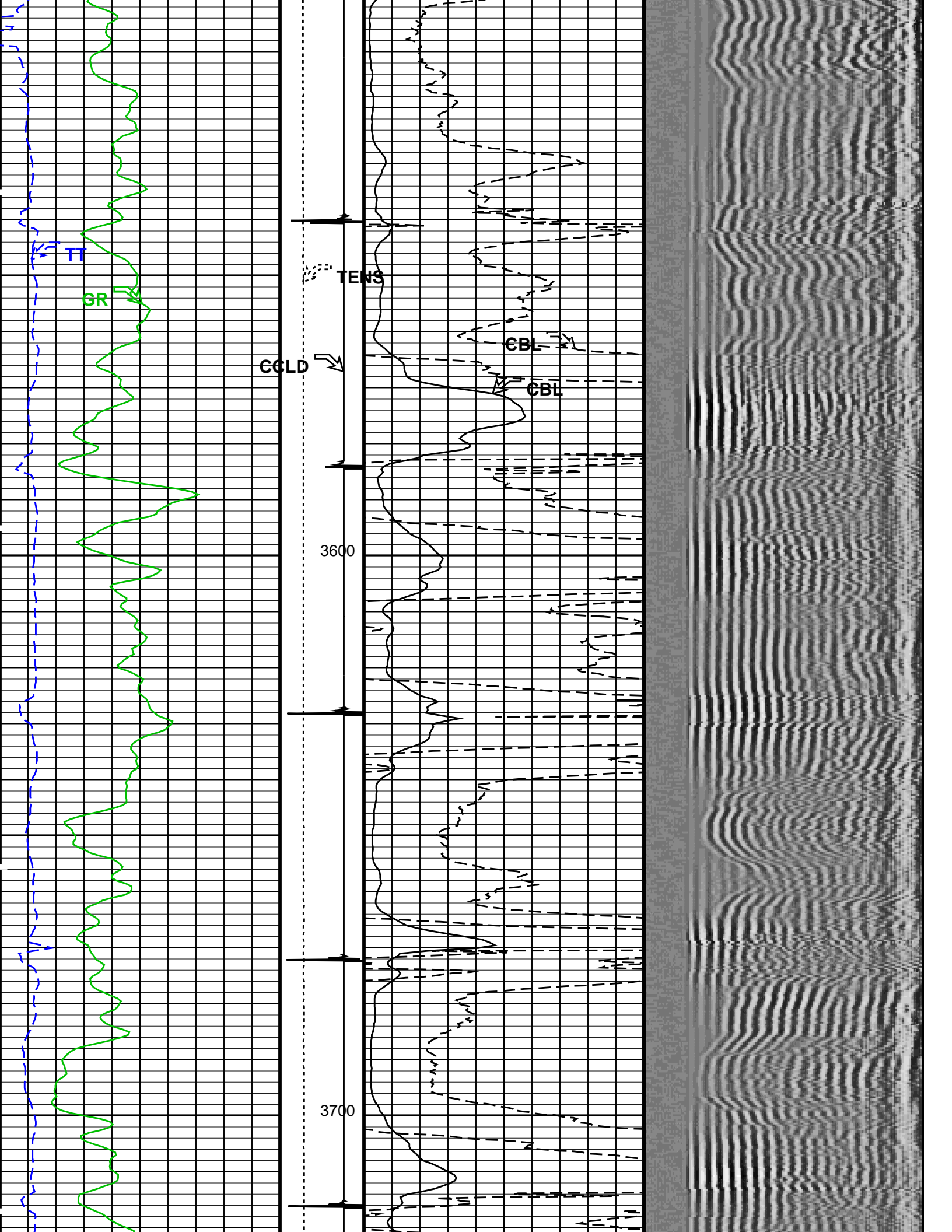


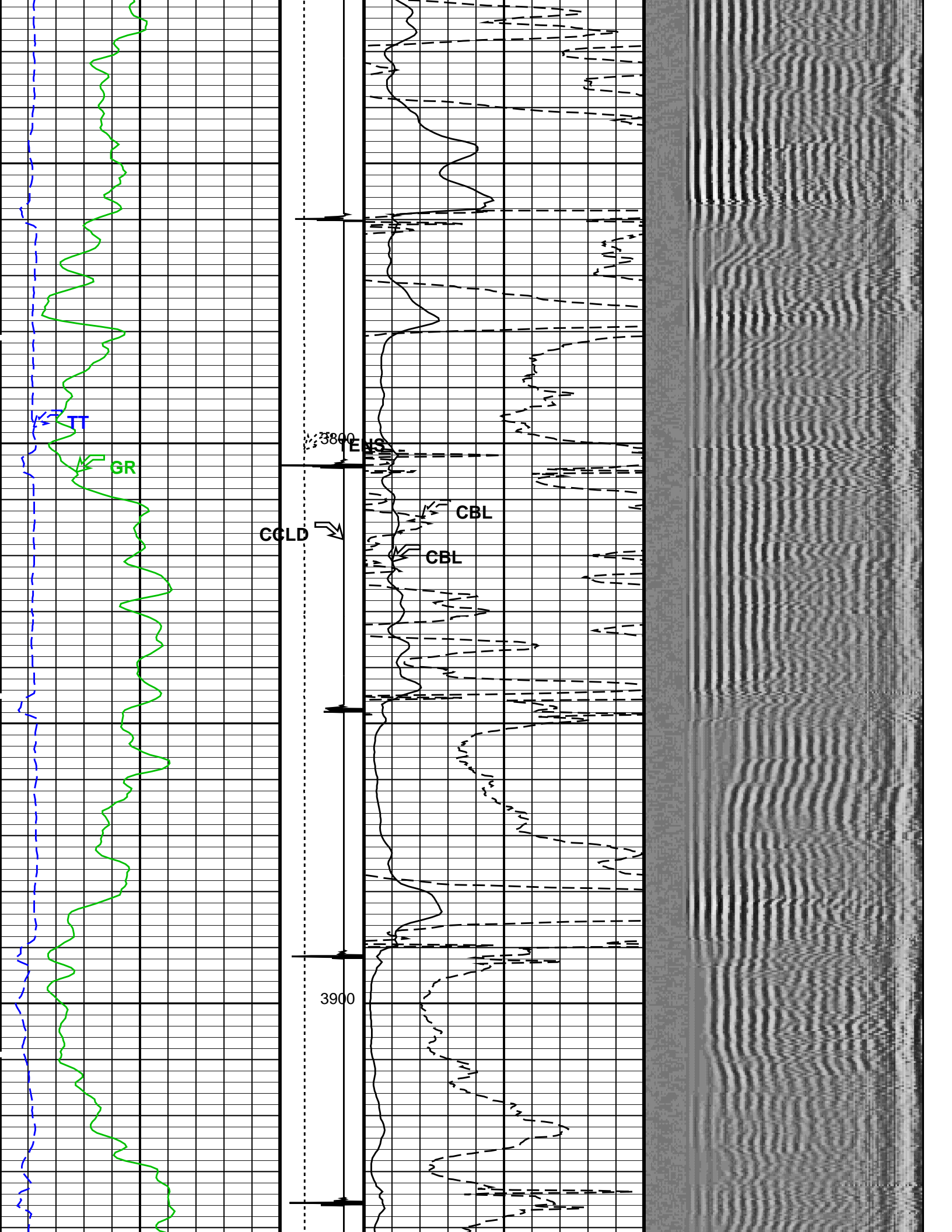


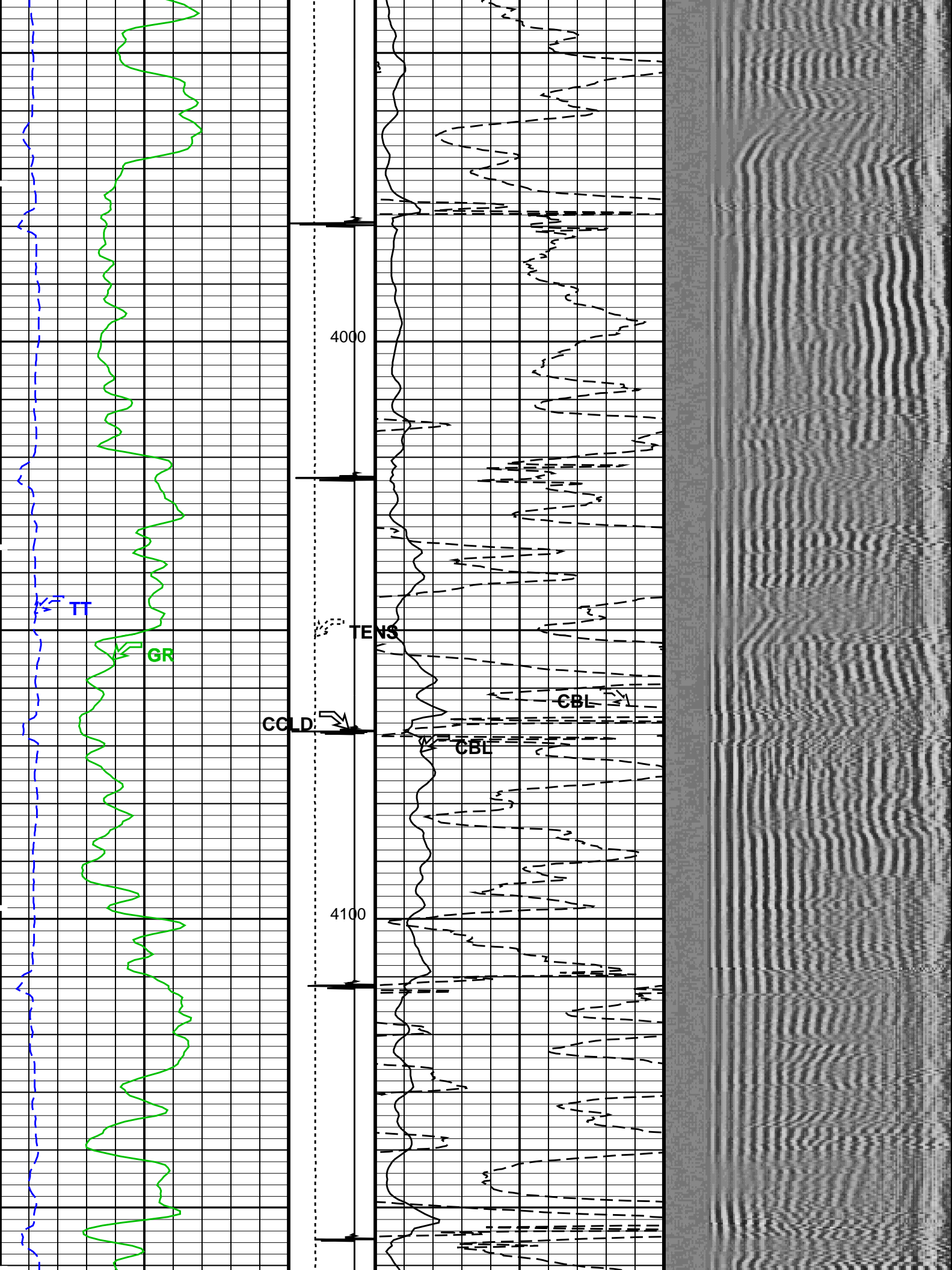


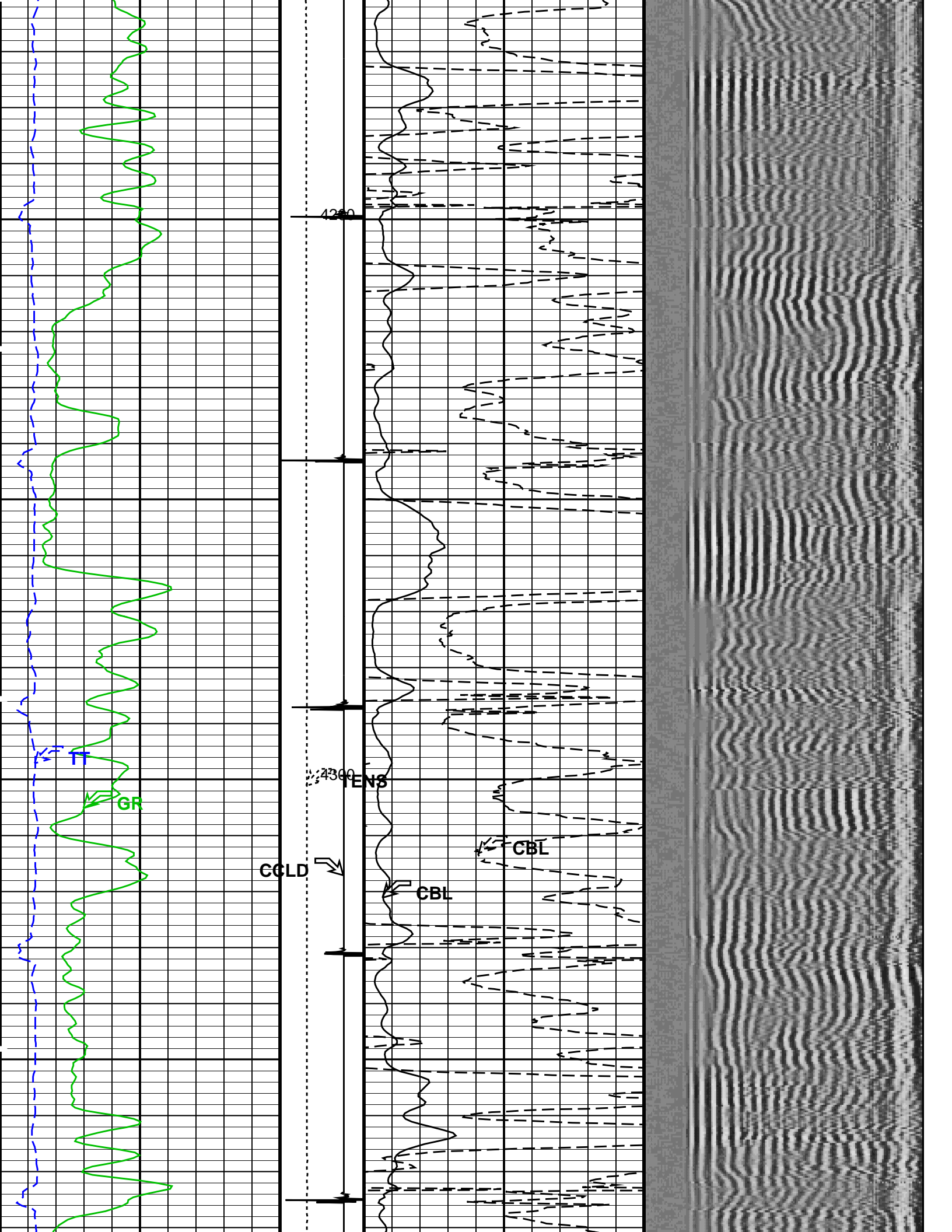


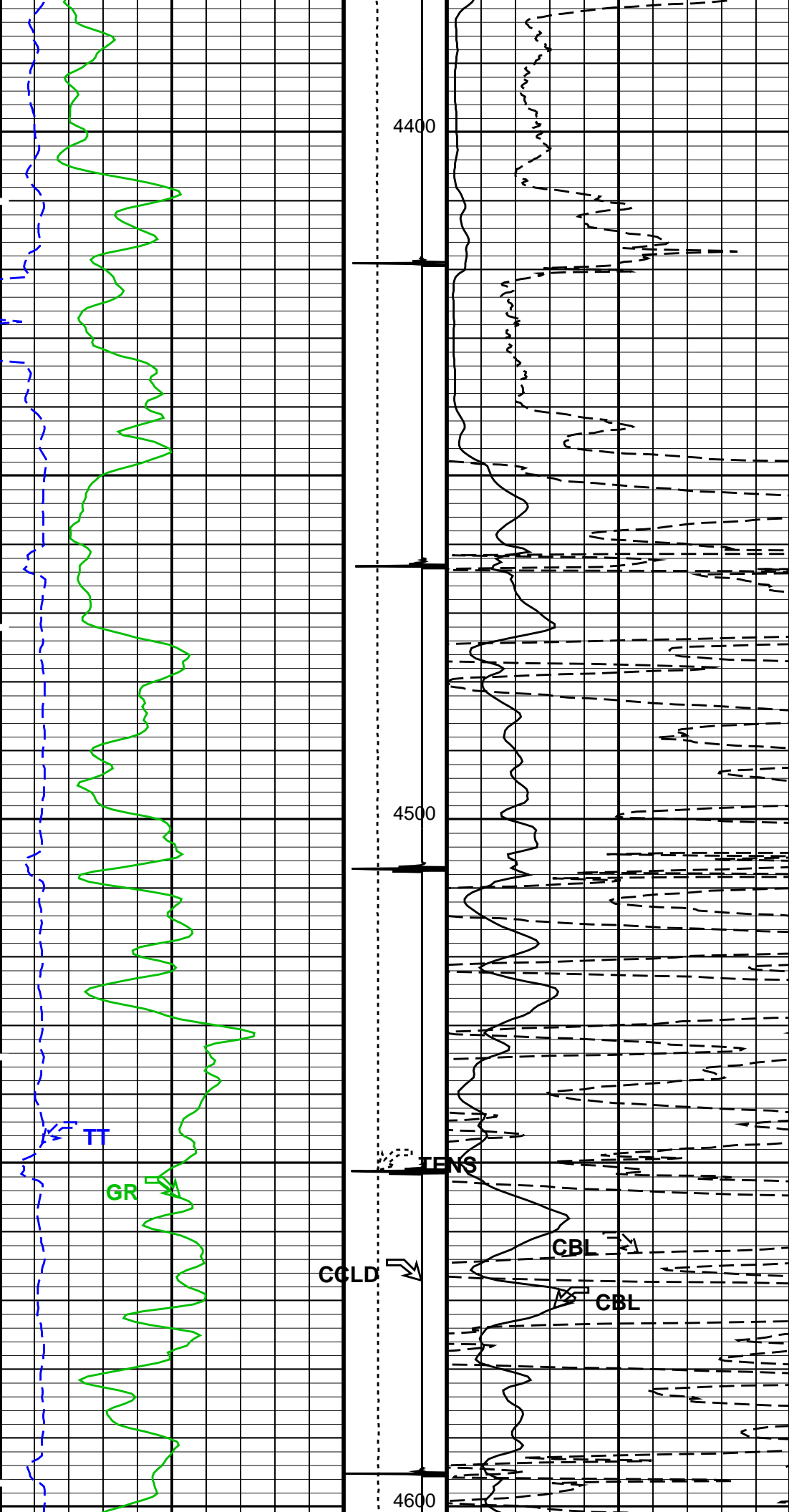


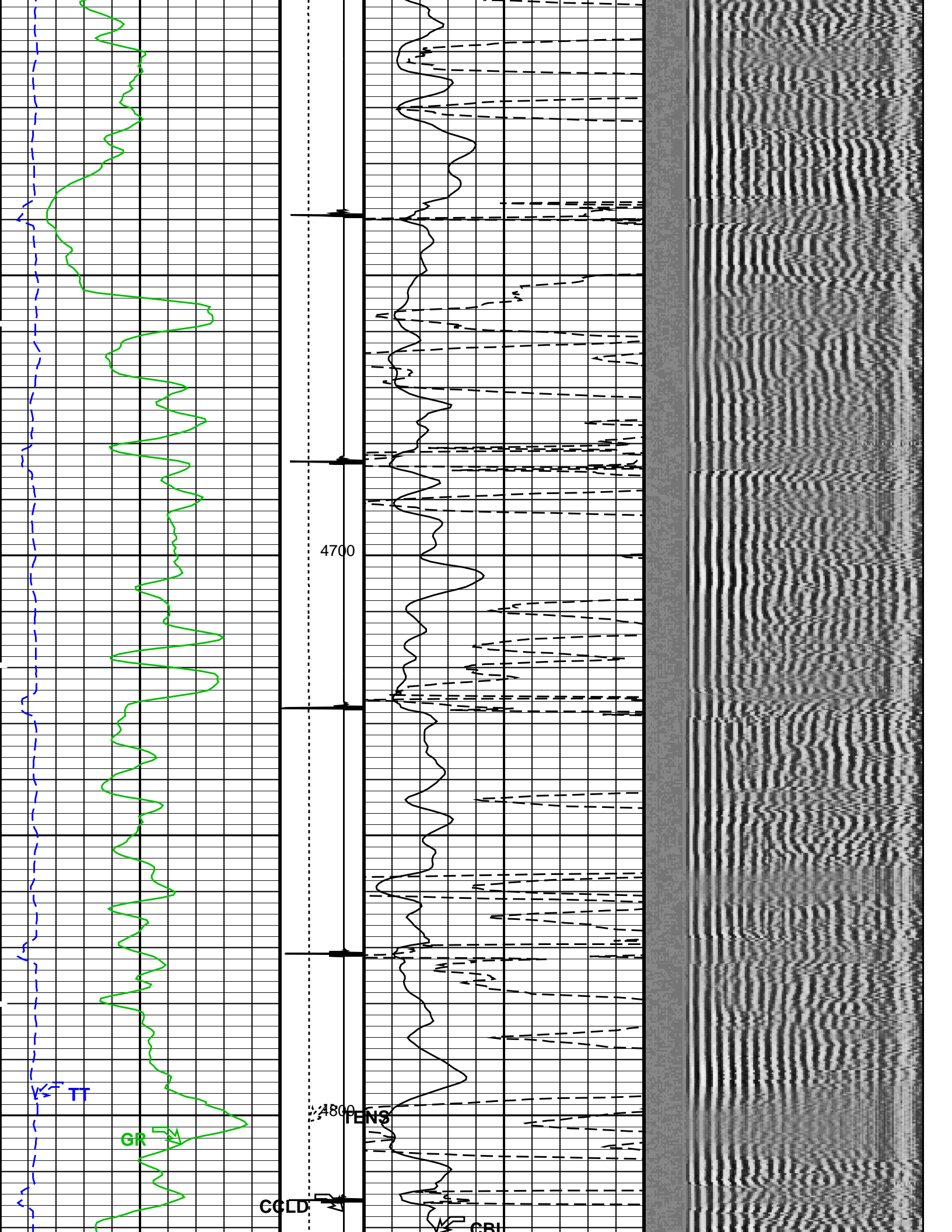


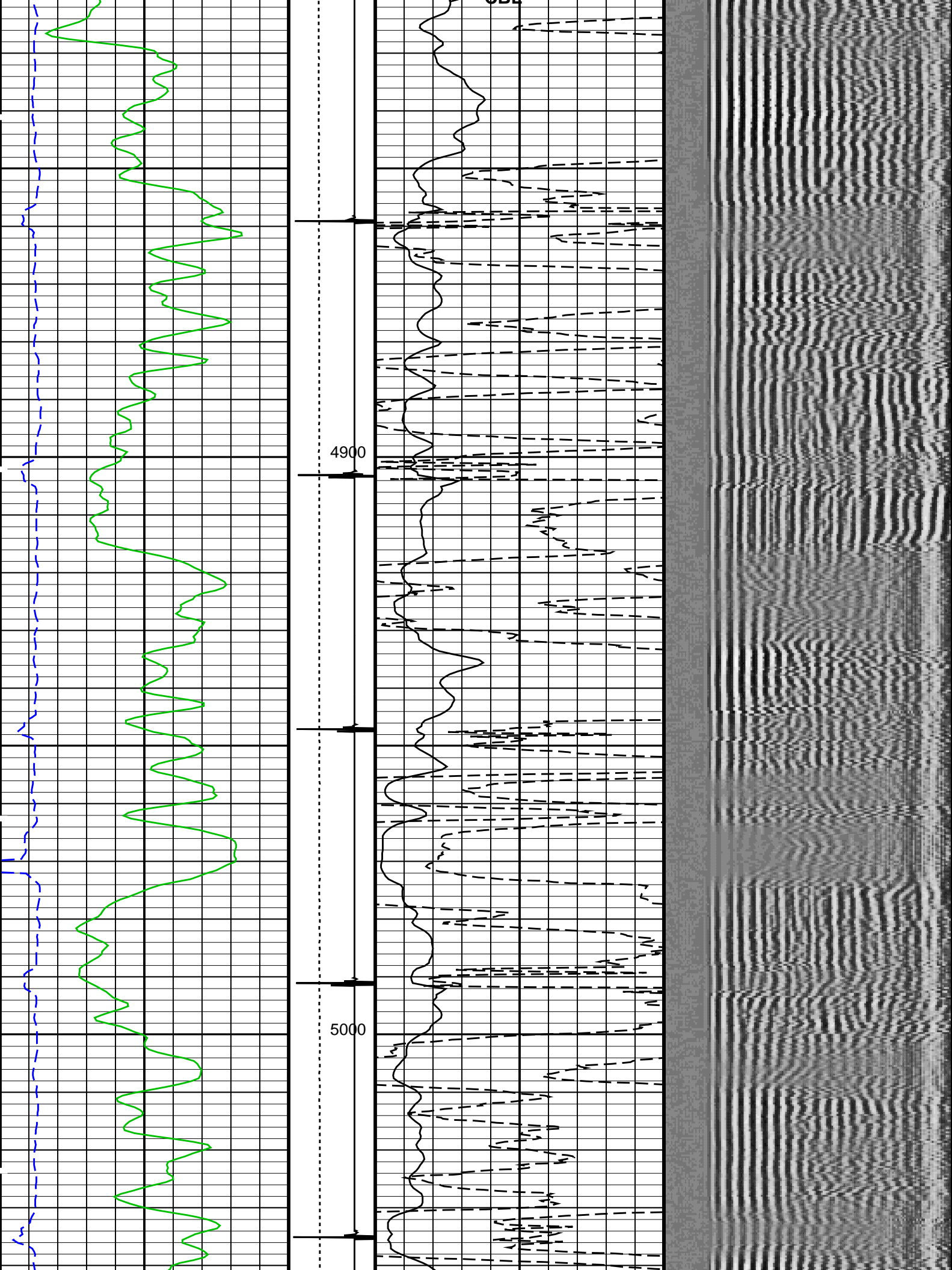


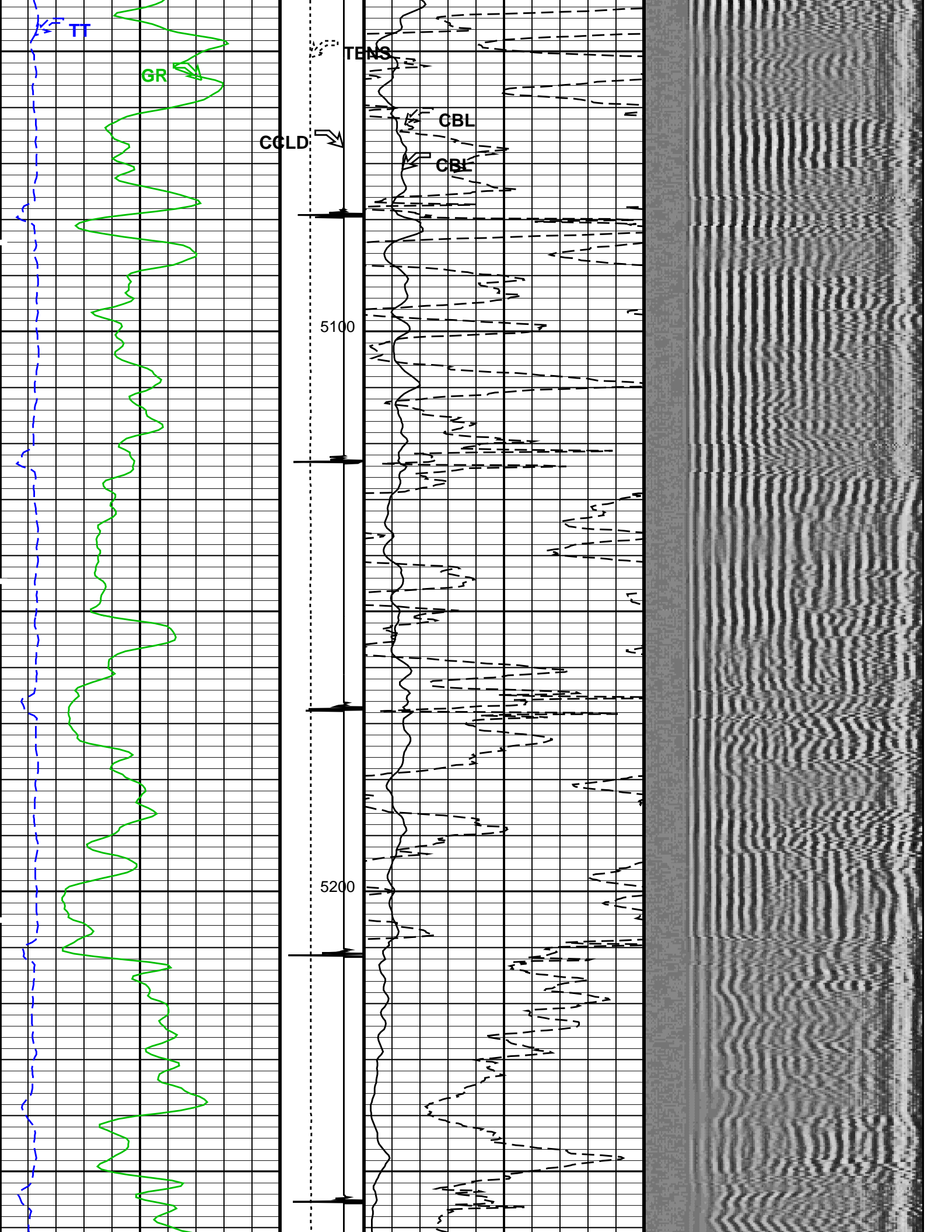


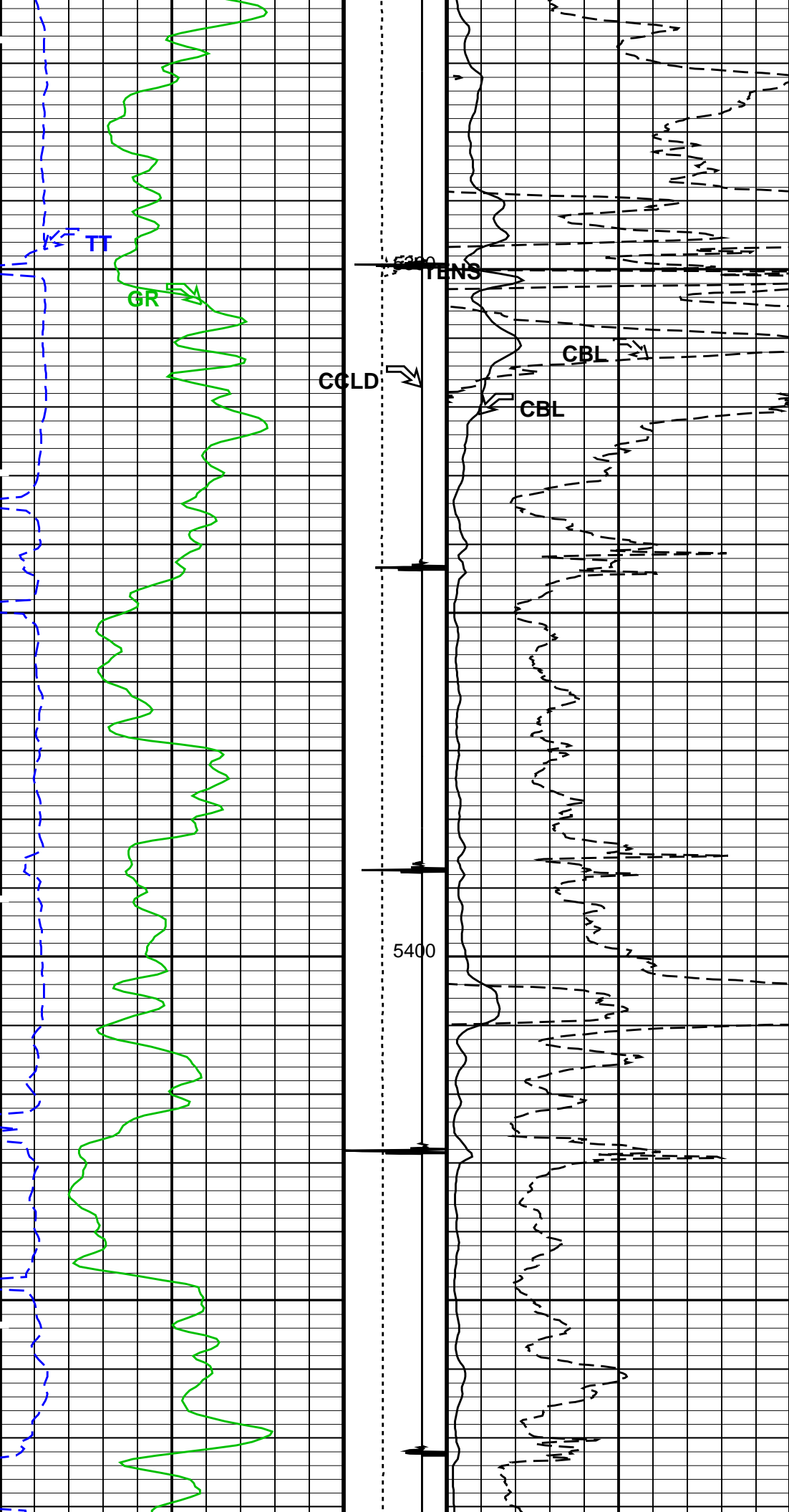


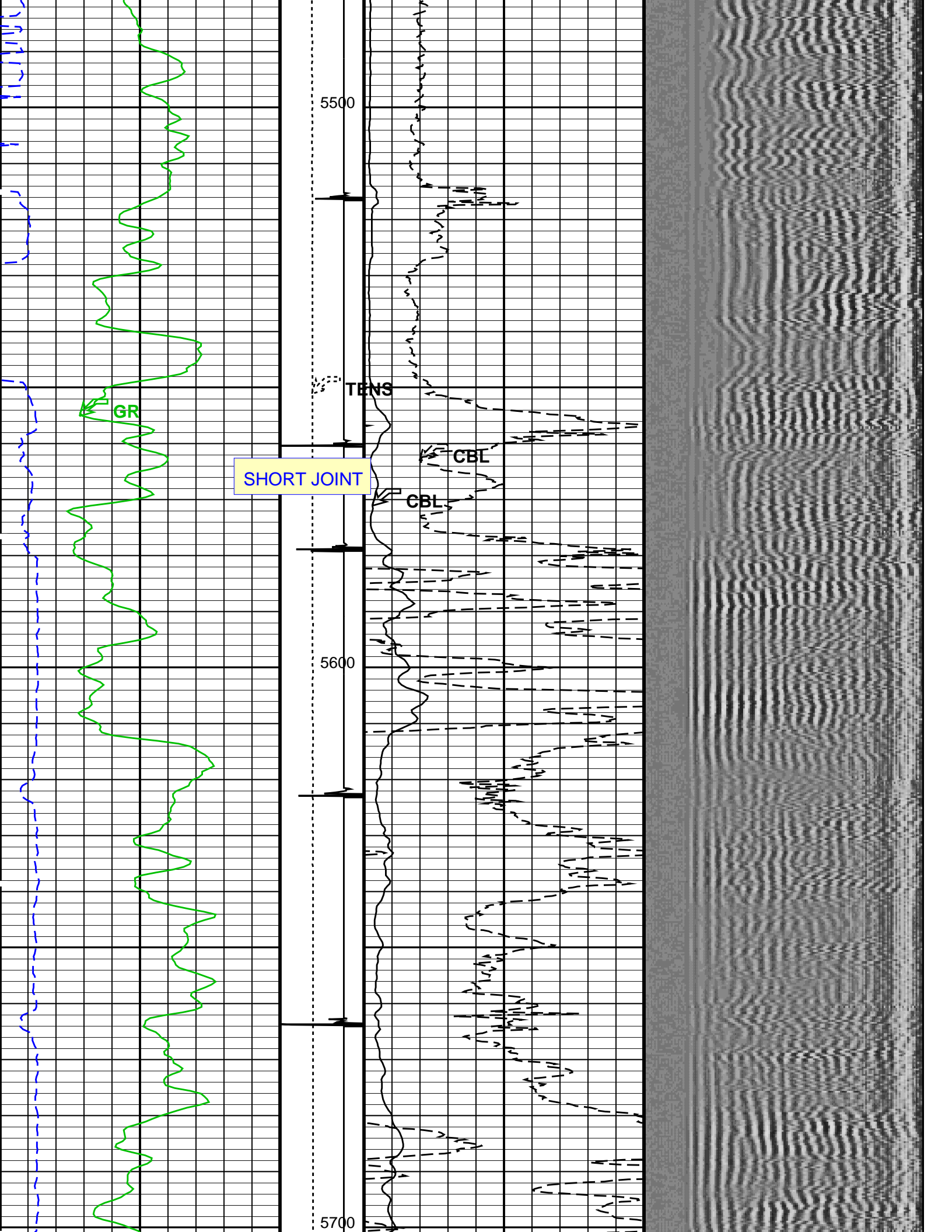


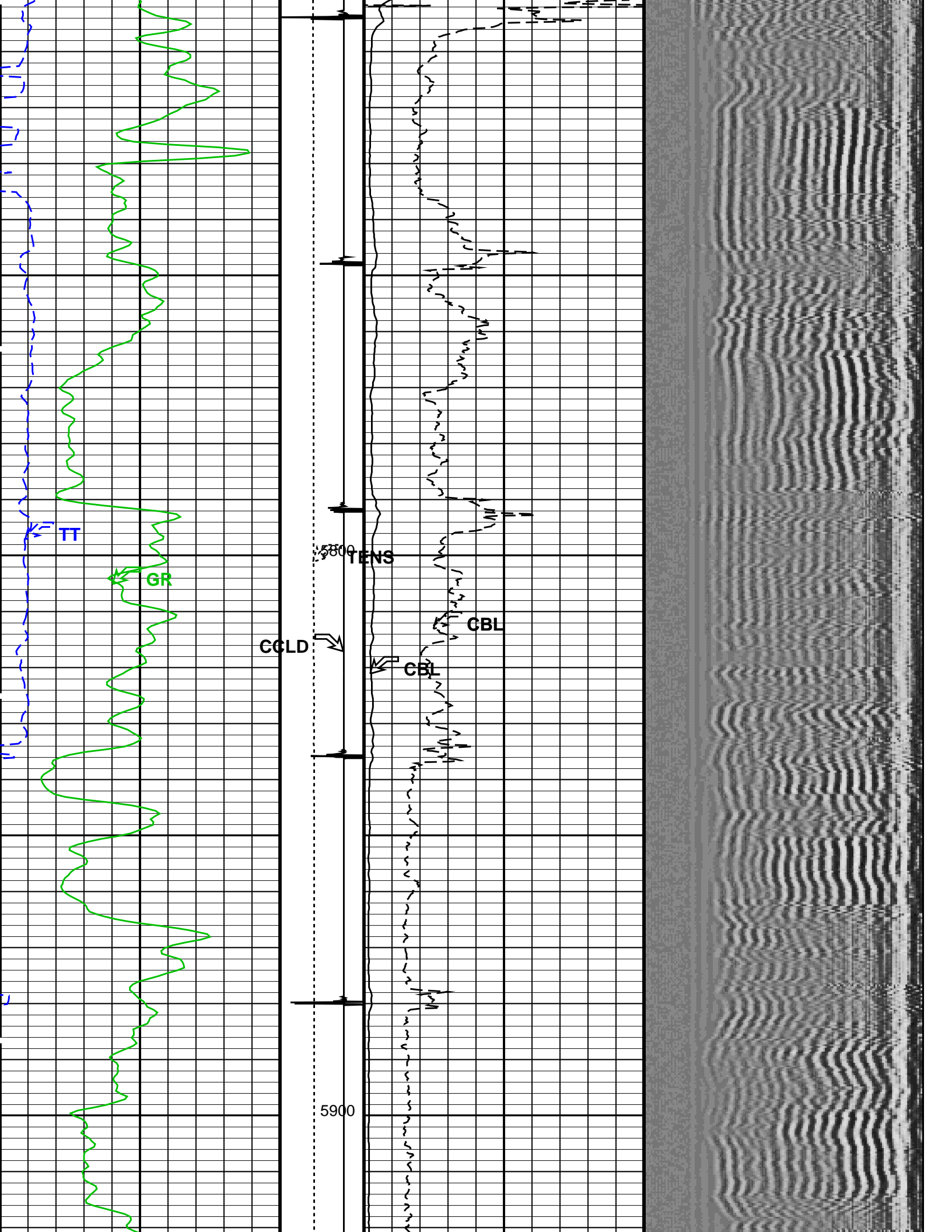


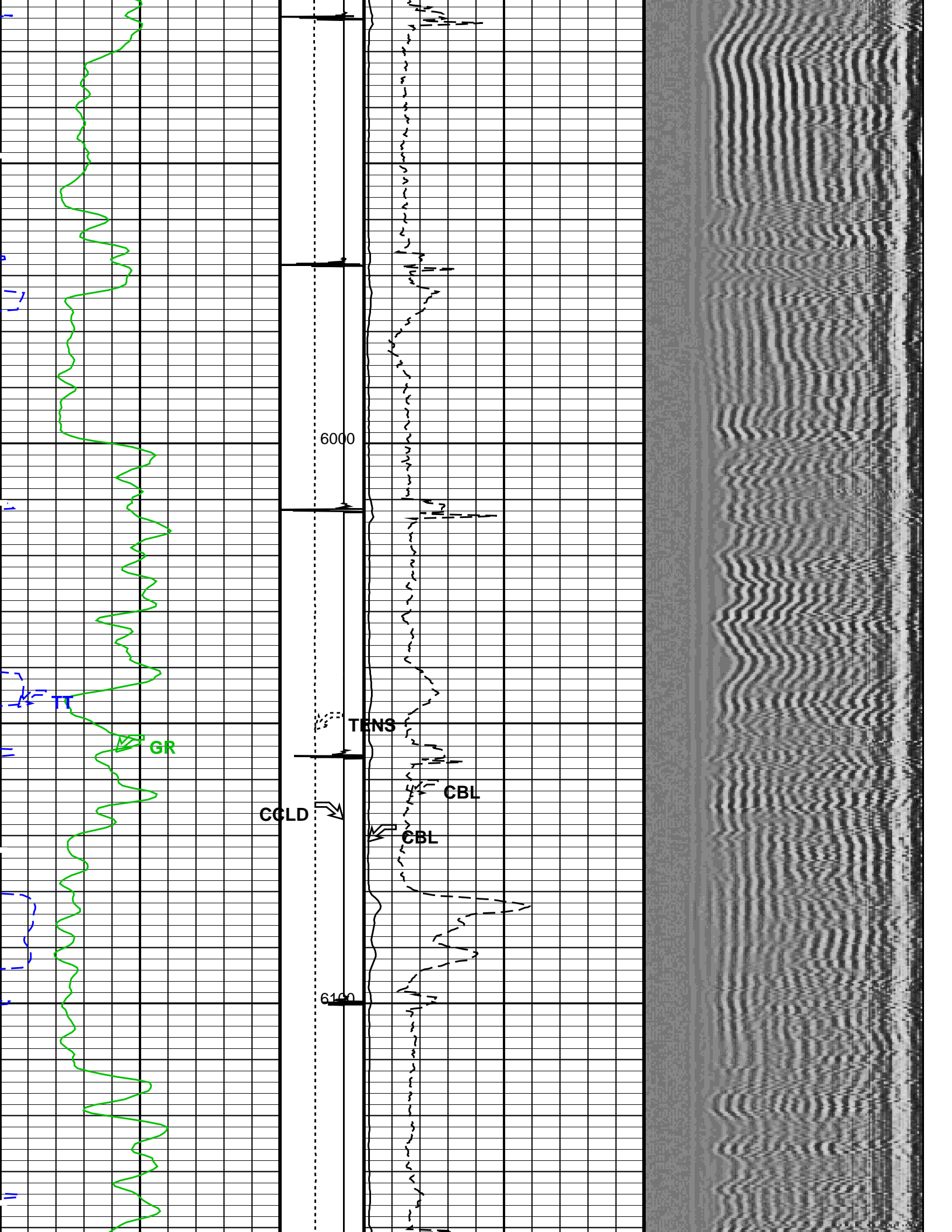


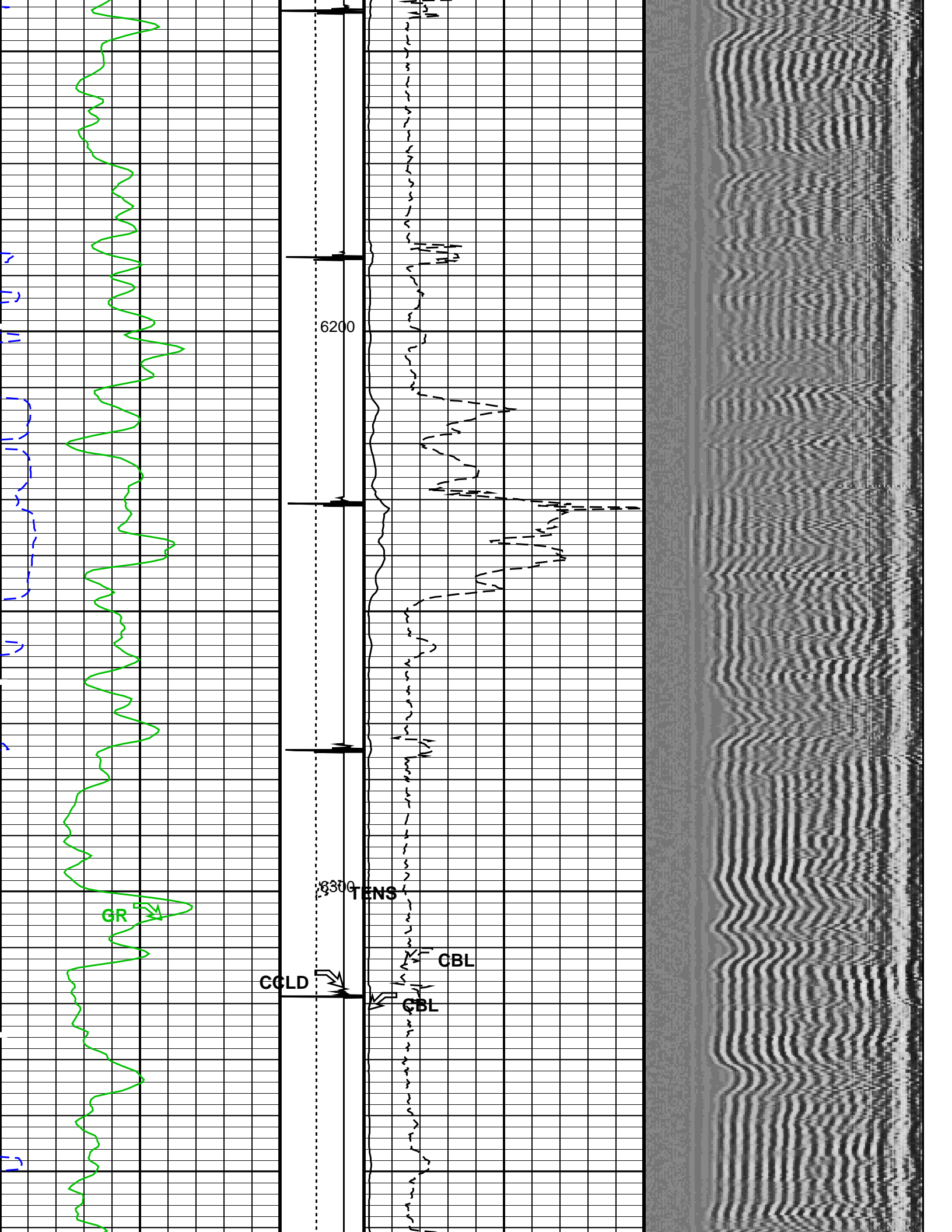


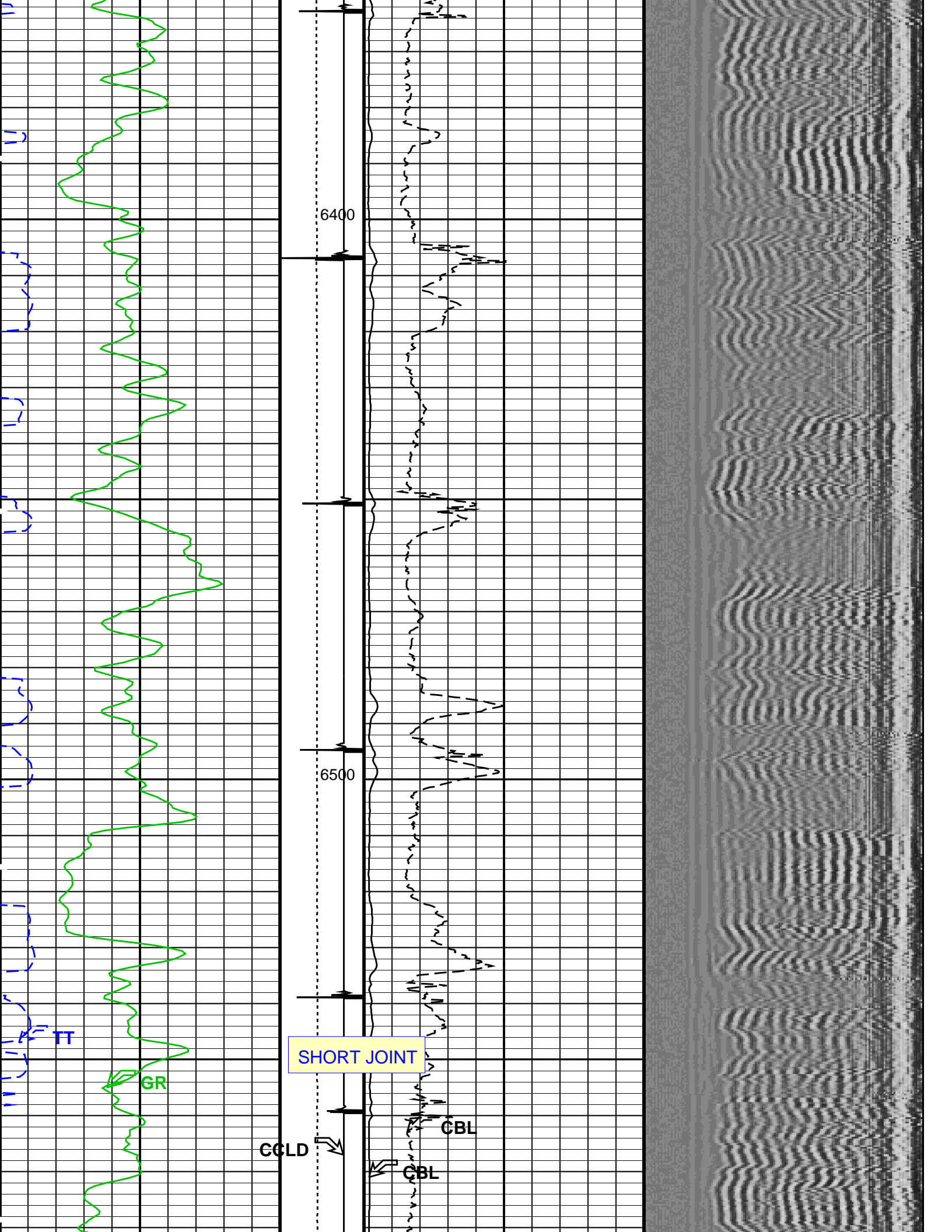


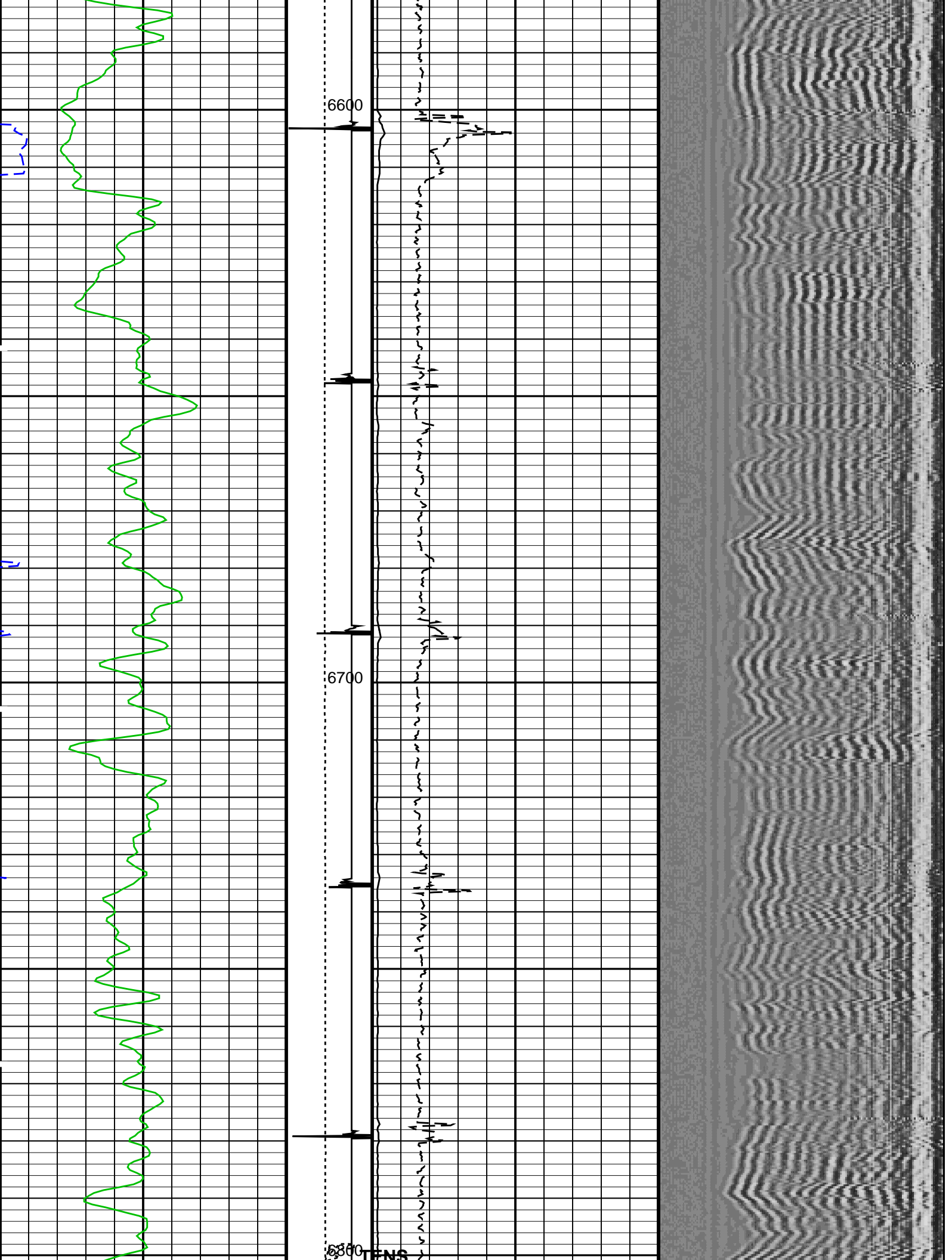


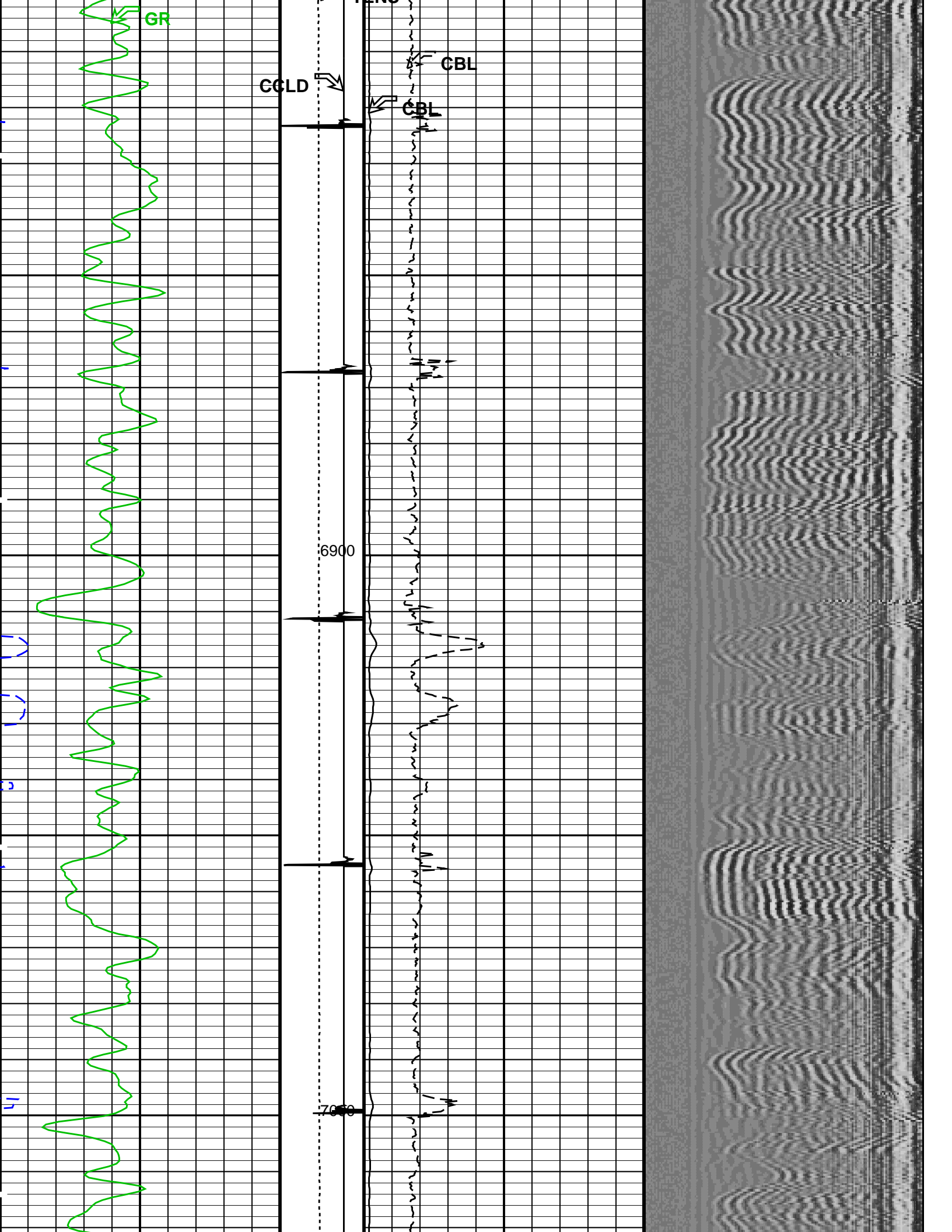


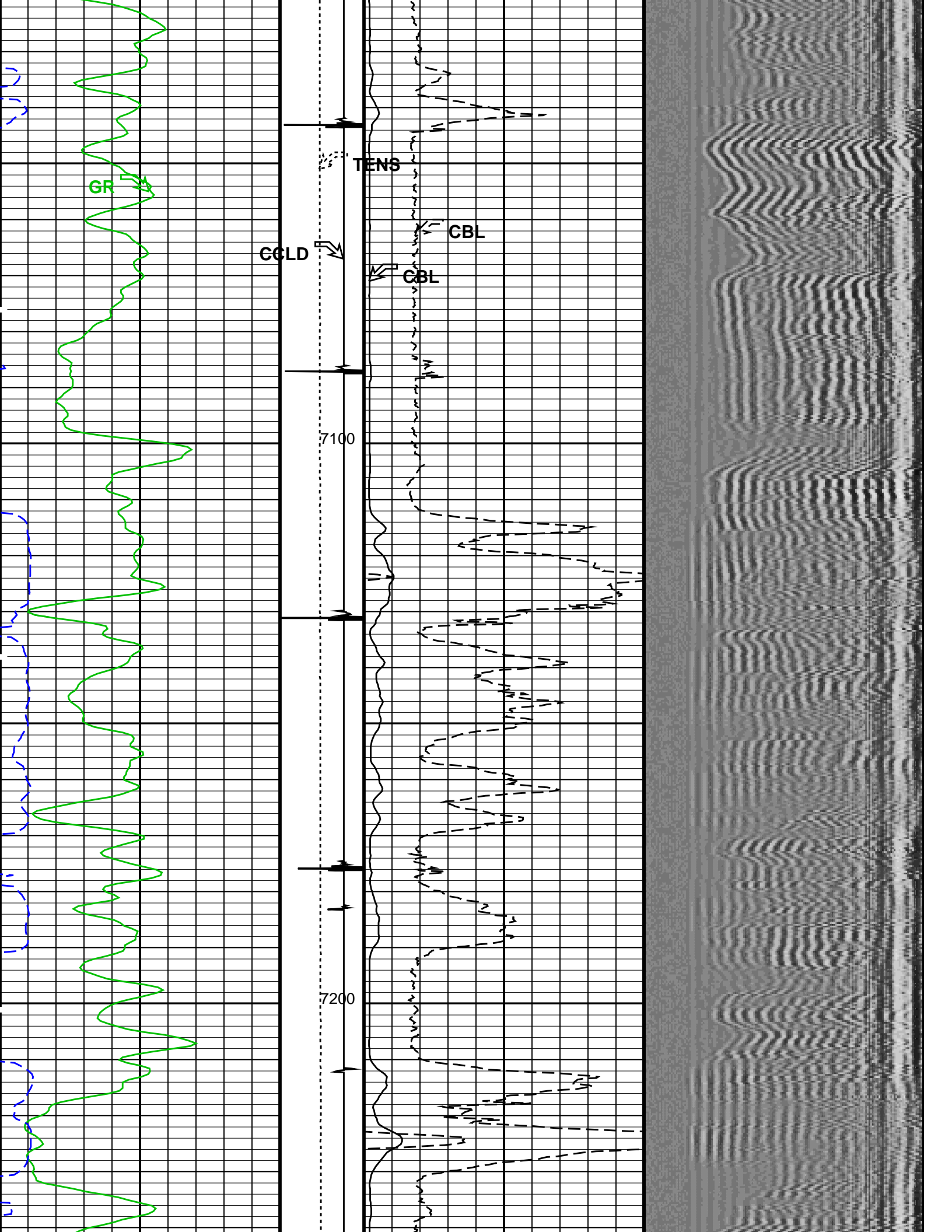


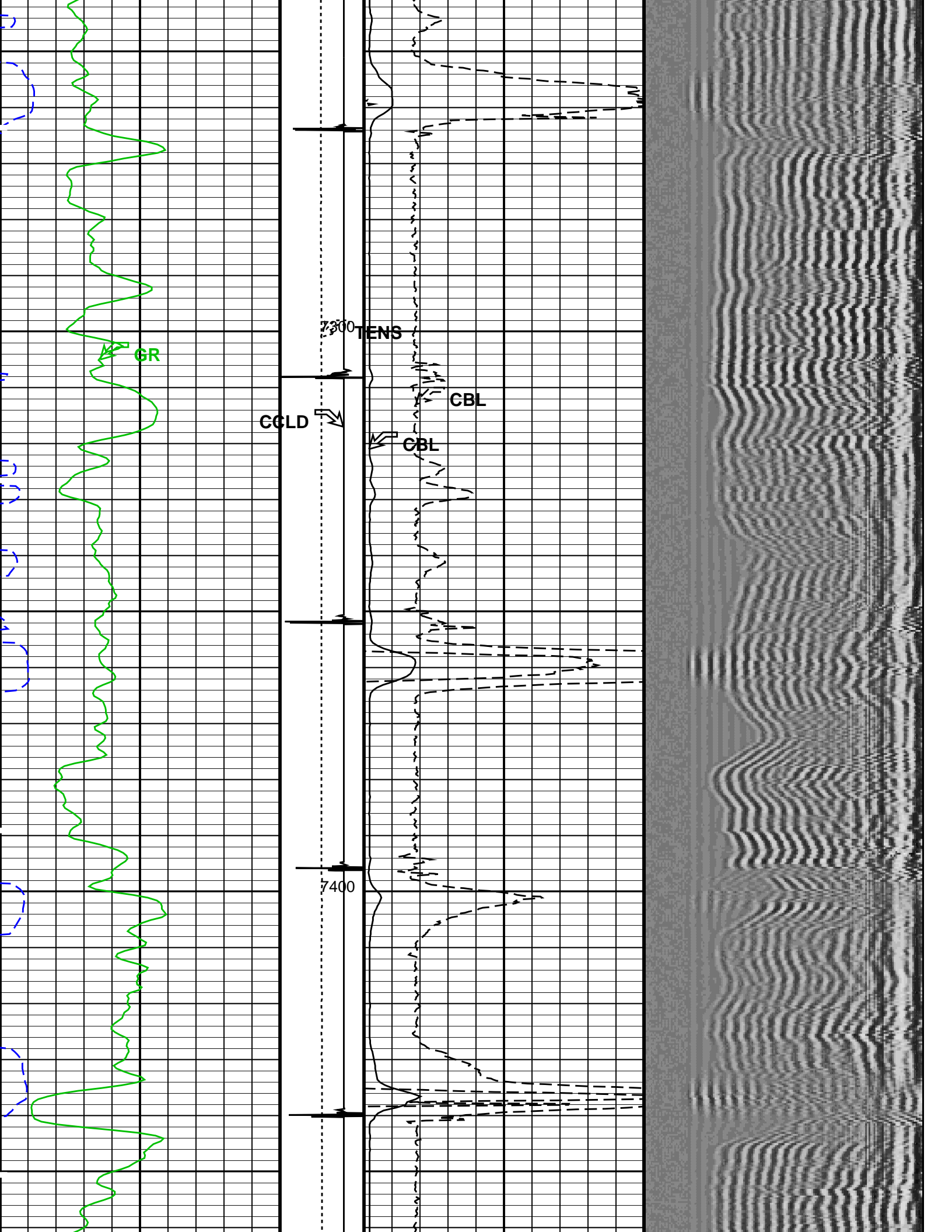


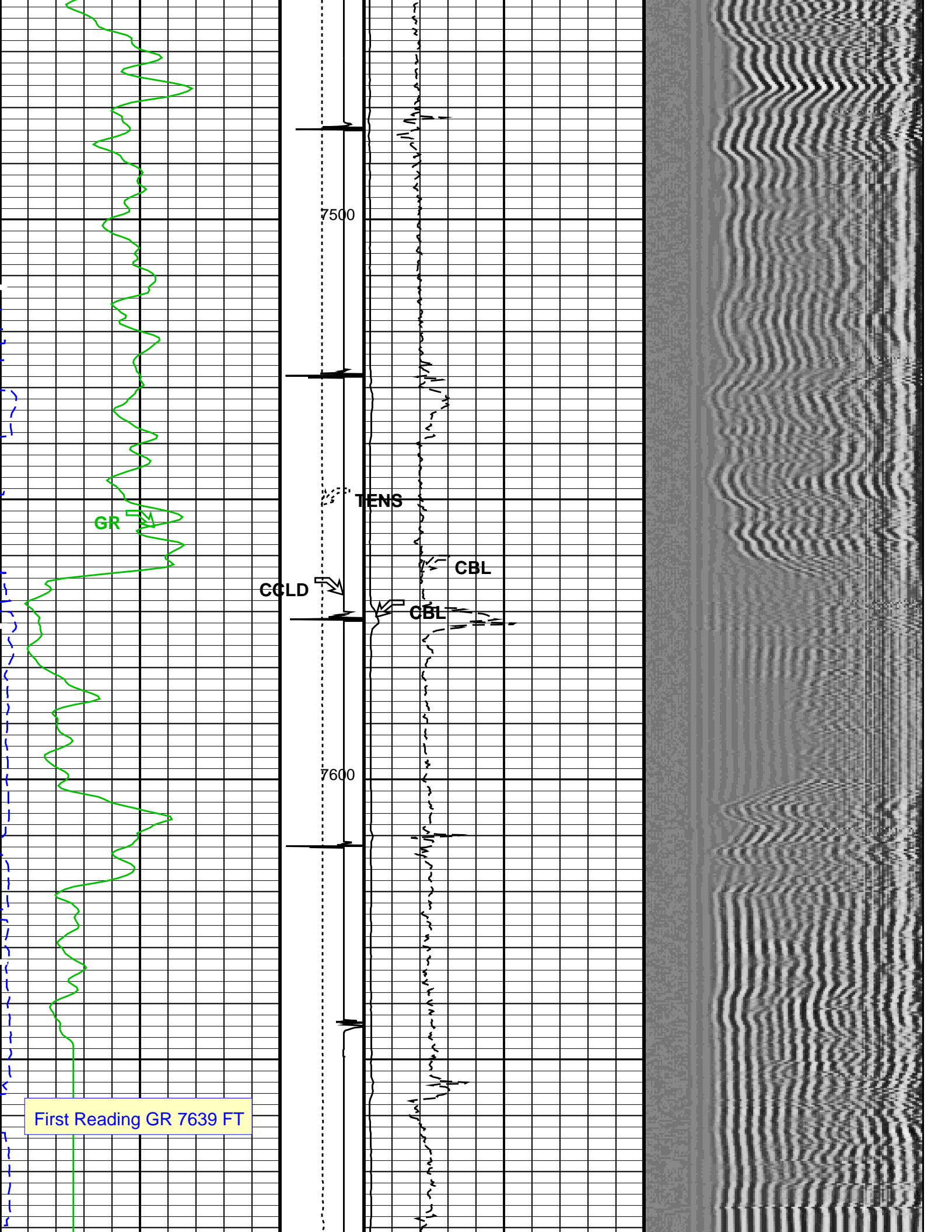


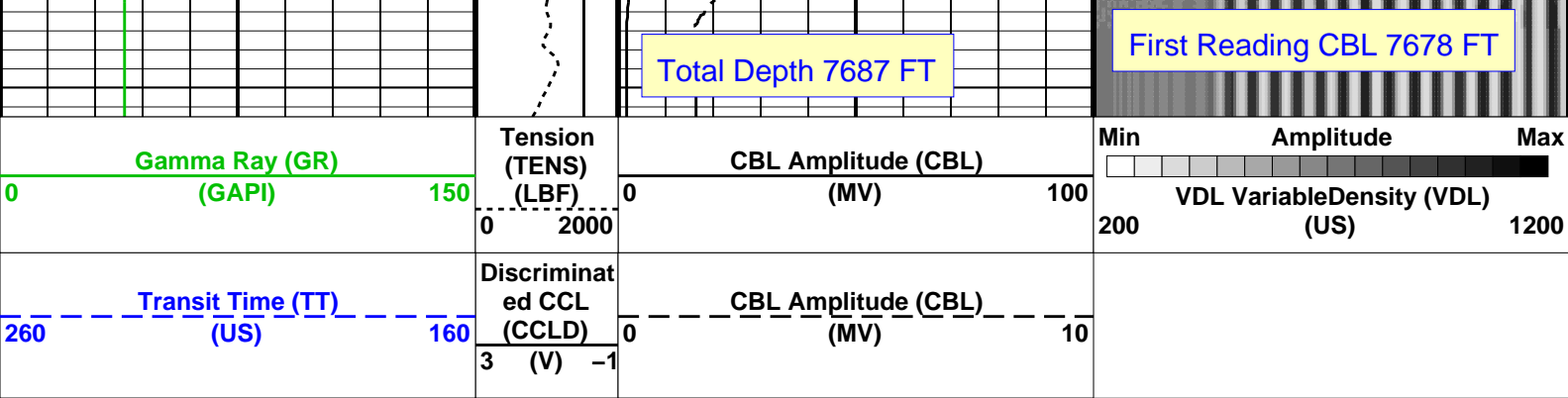












Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 01-May-2013 21:47

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)	1.0
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	40	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
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	7687	FT

Input DLIS Files

DEFAULT SCMT_RST_PSP_020LUP FN:19 PRODUCER 01-May-2013 19:39 7691.0 FT 22.5 FT

Output DLIS Files

DEFAULT SCMT_RST_PSP_023PUP FN:22 PRODUCER 01-May-2013 21:47



REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC Well: ENCANA FEE 24-9B (K19CNE)

Input DLIS Files

DEFAULT SCMT_RST_PSP_018LUP FN:17 PRODUCER 01-May-2013 19:24 5761.0 FT 5435.5 FT
DEFAULT SCMT_RST_PSP_023PUP FN:22 PRODUCER 01-May-2013 21:47 7693.0 FT -20.0 FT

Output DLIS Files

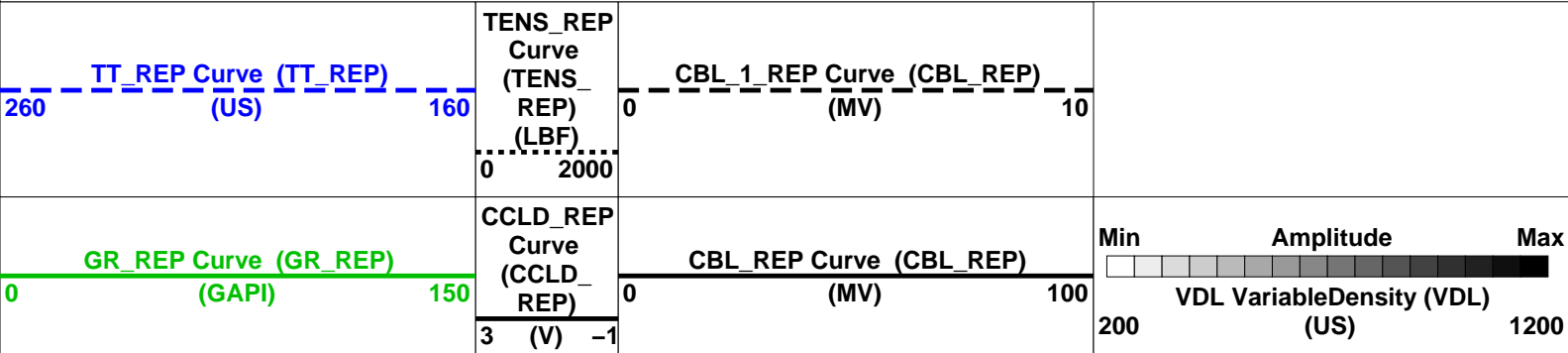
DEFAULT SCMT_RST_PSP_024PUP FN:23 PRODUCER 01-May-2013 22:00 5761.0 FT 5391.0 FT

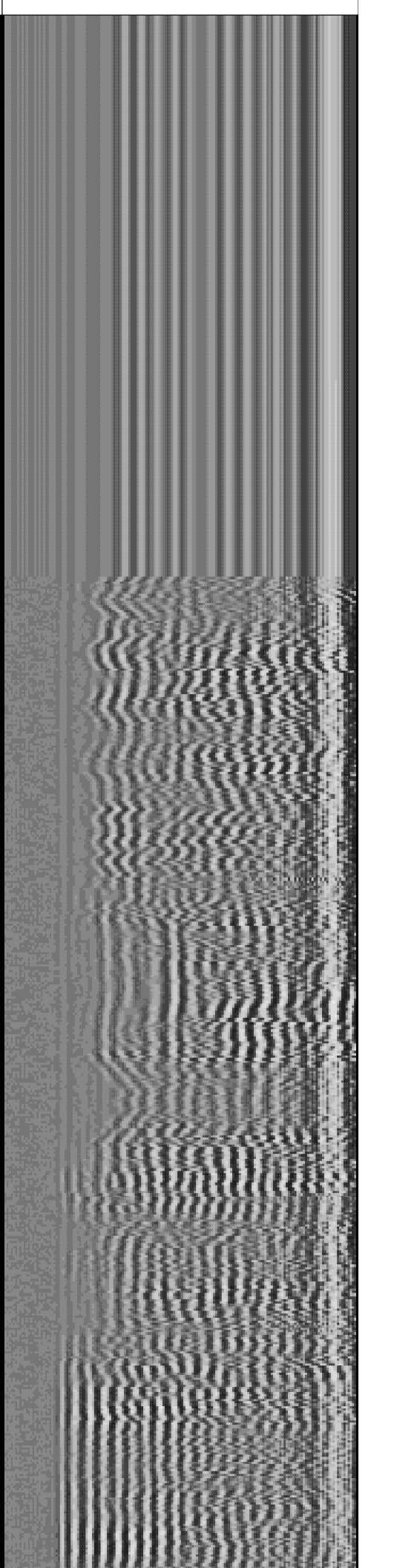
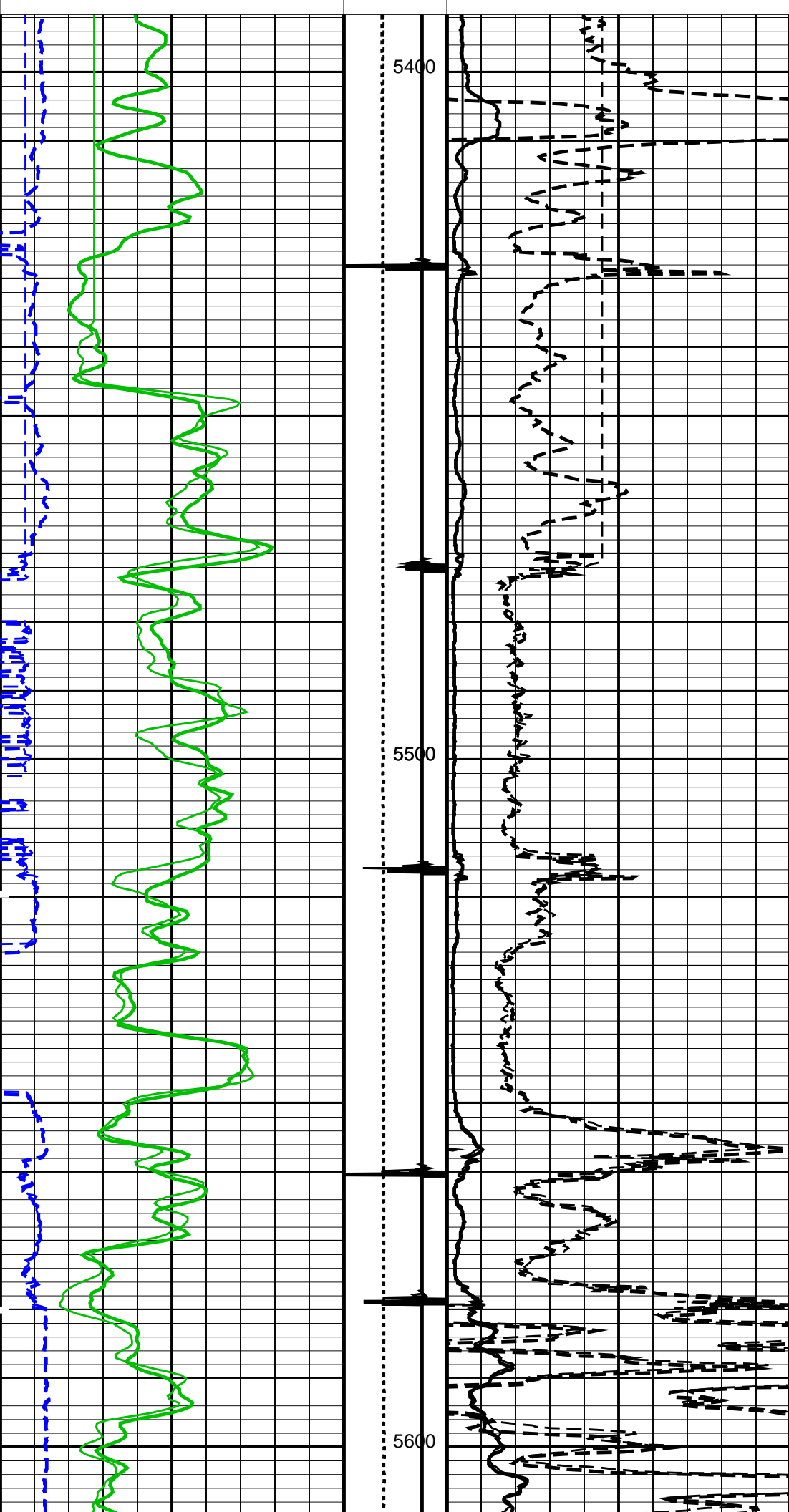
OP System Version: 19C0-187

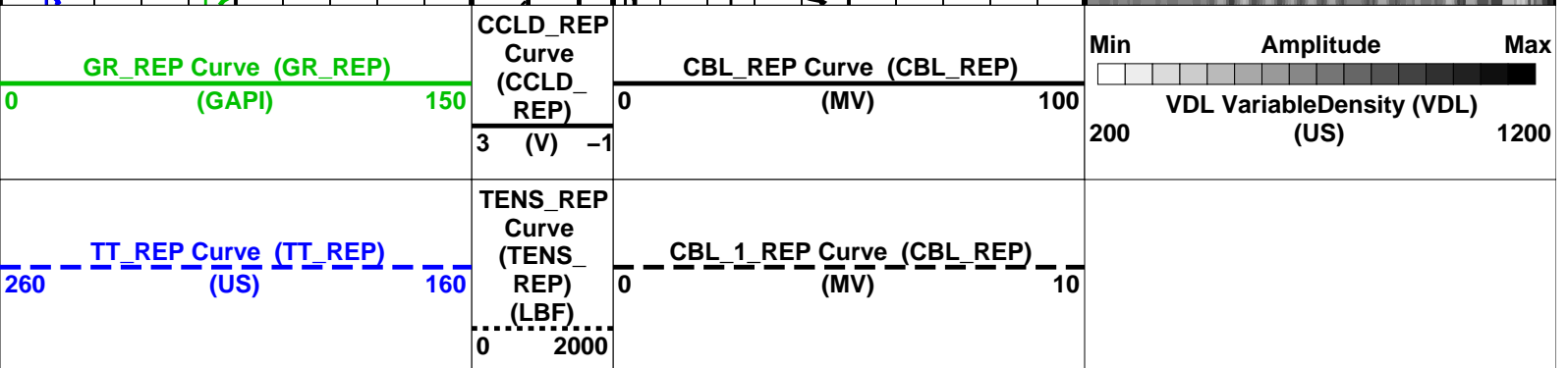
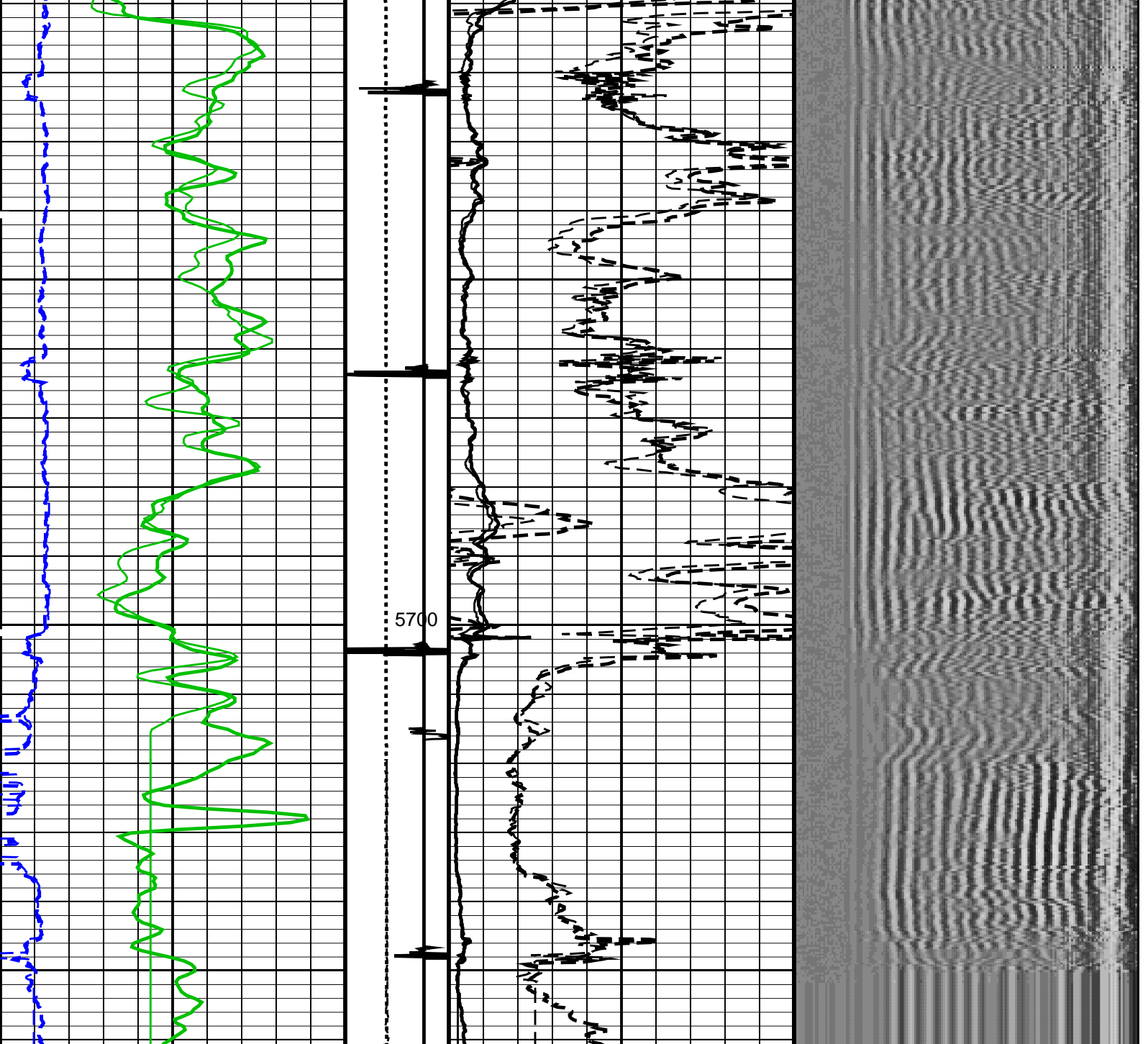
SCMT-CB SRPC-5214-H2-2012-OP1; RST-C SRPC-5214-H2-2012-OP1;
PSPT SRPC-5214-H2-2012-OP1;

PIP SUMMARY

Time Mark Every 60 S







PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL_REP Vertical Scale: 5" per 100'

Graphics File Created: 01-May-2013 22:00

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)	1.0
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	40	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	7687	FT

Input DLIS Files

DEFAULT	SCMT_RST_PSP_018LUP	FN:17	PRODUCER	01-May-2013 19:24	5761.0 FT	5435.5 FT
DEFAULT	SCMT_RST_PSP_023PUP	FN:22	PRODUCER	01-May-2013 21:47	7693.0 FT	-20.0 FT

Output DLIS Files

DEFAULT

SCMT_RST_PSP_024PUP

FN:23

PRODUCER

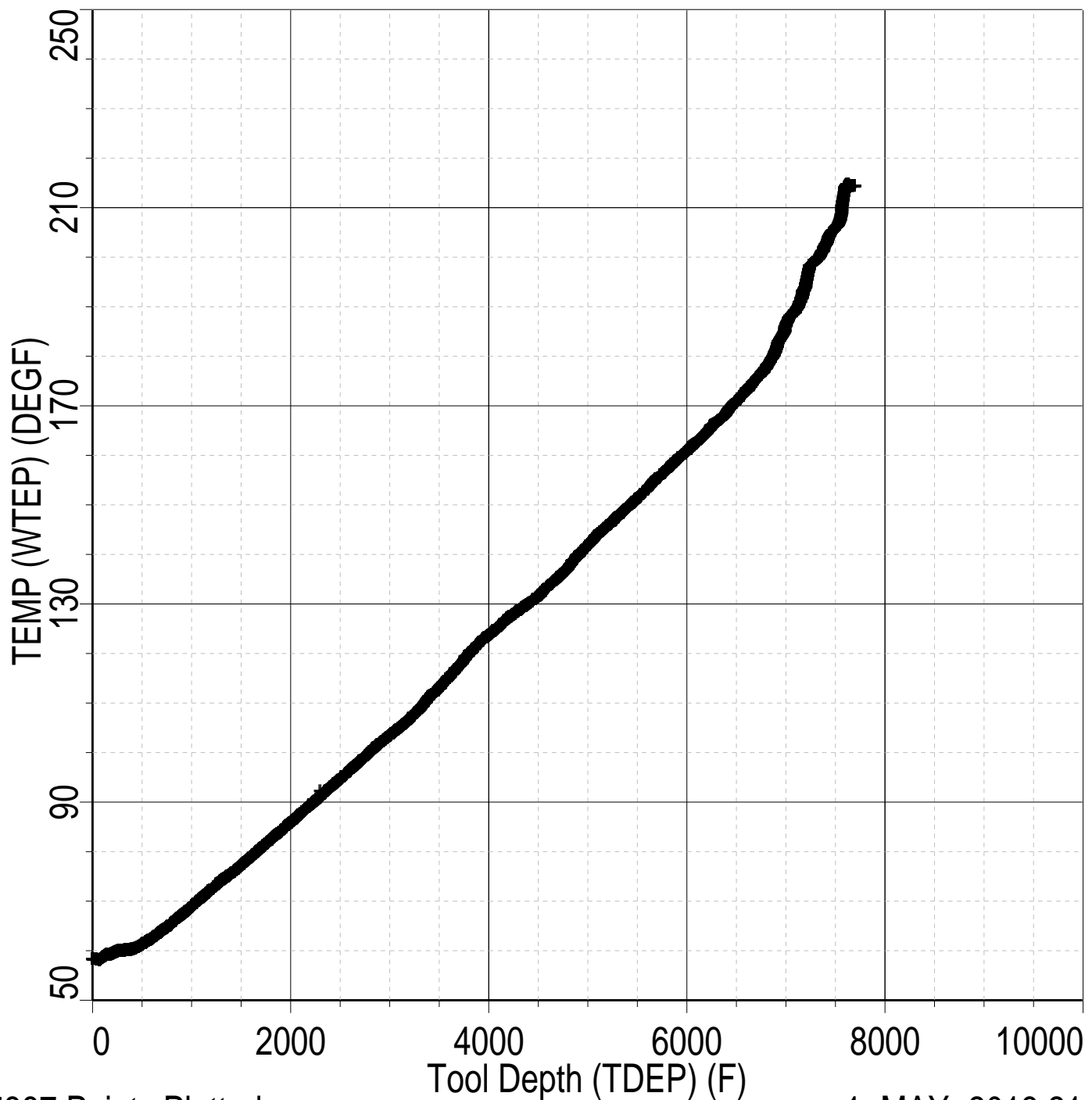
01-May-2013 22:00

Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 7693.0 – -20.0 FT



15387 Points Plotted

1-MAY-2013 21:57

MAXIS Field Log

Client: ENCANA OIL & GAS (USA) INC
Field: MAMM CREEK
Well: ENCANA FEE 24-9B (K19CNE)
Run date: 1-May-2013

Tool: PSP
Sub Type: PBMS
Sensor: GR

PBMS Gamma Ray

Sonde Serial NB RESISTORS FOR GR SENSOR N.33223, TOOL PBMS-BA0928. SENSOR S/N:
Sensor Serial NB 33223
Calib Date ddmmyy 090800
Matrix Size 12
Coeff CRC CFE2

GR HV Rt

Rt**0

Rt**1

Rt**0

+.182000000000e+04

+.332000000000e+04

Client: ENCANA OIL & GAS (USA) INC
Field: MAMM CREEK
Well: ENCANA FEE 24-9B (K19CNE)
Run date: 1-May-2013

Tool: PSP
Sub Type: PBMS
Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB COEFFICIENTS FOR RTD THERMOMETER PBMS-B.928 S/N:
Sensor Serial NB 928

Calib Date ddmmyy 280612
Matrix Size 16
Coeff CRC 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	Tool:	PSP
Field:	MAMM CREEK	Sub Type:	PBMS
Well:	ENCANA FEE 24-9B (K19CNE)	Sensor:	CQG
Run date:	1-May-2013		

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	+1.117016867873E+03	−.284359629614E−03	+604391180345E−08
Fb**1	−.598309140812E−02	+1.182731130848E−07	+1.160166486172E−12
Fb**2	−.307621454576E−07	+3.00601550309E−12	+3.11233548560E−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 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	+3.10874009898E+05	+2.88920923041E−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 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

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	<div><div></div></div>			876.9	Master	<div><div></div></div>			726.7
	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	<div><div></div></div>			954.5	Master	<div><div></div></div>			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	<div><div></div></div>			812.5	Master	<div><div></div></div>			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	<div><div></div></div>			795.9	Master	<div><div></div></div>			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: **ENCANA FEE 24-9B (K19CNE)**

Field: **MAMM CREEK**

County: **GARFIELD**

State: **COLORADO**

SLIM CEMENT MAPPING LOG

CBL-VDL

GAMMA RAY – CCL