



Company: ENCANA OIL & GAS (USA) INC

Well: SGU 8512C-24 (L24 496)

Field: STORY GULCH

County: GARFIELD State: COLORADO

SLIM CEMENT MAPPING LOG  
GAMMA RAY - CCL - TEMPERATUR  
CBL - VDL

County:	GARFIELD		
Field:	STORY GULCH		
Location:	SHL: 1591' FSL & 889' FWL		
Well:	SGU 8512C-24 (L24 496)		
Company:	ENCANA OIL & GAS (USA) INC		
	LOCATION		
	SHL: 1591' FSL & 889' FWL BHL: 2071' FSL & 670' FWL	Elev.: K.B. 8210.00 ft G.L. 8180.00 ft D.F. 8109.00 ft	
	Permanent Datum: _____ Log Measured From: _____ Drilling Measured From: _____	GROUND LEVEL _____ KELLY BUSHING _____ KELLY BUSHING _____	Elev.: 8180.00 ft _____ 30.00 ft above Perm. Datum
	API Serial No. _____ 05-045-21163-0000		Section 24 Township 4S Range 96W

	Run 1	Run 2	Run
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	18-Mar-2013		
Run Number	1		
Depth Driller	12207 ft		
Schlumberger Depth	12129 ft		
Bottom Log Interval	12121 ft		
Top Log Interval	75 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	75 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	9221 ft		
To	12207 ft		
Casing/Tubing Size	4.500 in		
Weight	13.5 lbm/ft		
Grade			
From	30 ft		
To	12178 ft		
Maximum Recorded Temperatures	276 degF		
Logger On Bottom	18-Mar-2013	10:45	
Unit Number	391	GRAND JUNCTION	
Recorded By	JASON BARRY		
Witnessed By	JOHN MILLER		

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: 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:    RSEVOIR SATURATION	OS1:
OS2:    LOG	OS2:
OS3:    SIGMA MODE	OS3:
OS4:    GAMMA RAY – CCL	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE	
TOOL RAN AS PER TOOL SKETCH	
MAX RECORDED TEMPERATURE: 276 DEGF	
MAX RECORDED PRESSURE: 5114 PSI	
SHORT JOINTS: 10666 FT & 7635 FT	

ENTRANCE TIME: 9:30	
TIME ON BOTTOM: 10:45	
EXIT TIME: 14:00	
MAIN PASS LOGGED UNDER 0 SURFACE PRESSURE	
EXPECTED CBL AMP = 80 MV IN FREE PIPE	
CREW: J BARRY, B CUPP, J MANN, W AZIZ, K JOHNS	
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY	

RUN 1 SERVICE ORDER #: C920-00053 PROGRAM VERSION: 19C0-187 FLUID LEVEL: 75 ft			RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION	
1	...
2	...
3	...
4	...
5	...
6	...
7	...
8	...
9	...
10	...
11	...
12	...
13	...
14	...
15	...
16	...
17	...
18	...
19	...
20	...
21	...
22	...
23	...
24	...
25	...
26	...
27	...
28	...
29	...
30	...
31	...
32	...
33	...
34	...
35	...
36	...
37	...
38	...
39	...
40	...
41	...
42	...
43	...
44	...
45	...
46	...
47	...
48	...
49	...
50	...
51	...
52	...
53	...
54	...
55	...
56	...
57	...
58	...
59	...
60	...
61	...
62	...
63	...
64	...
65	...
66	...
67	...
68	...
69	...
70	...
71	...
72	...
73	...
74	...
75	...
76	...
77	...
78	...
79	...
80	...
81	...
82	...
83	...
84	...
85	...
86	...
87	...
88	...
89	...
90	...
91	...
92	...
93	...
94	...
95	...
96	...
97	...
98	...
99	...
100	...

	RUN 1	RUN 2
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1
13	1	1
14	1	1
15	1	1
16	1	1
17	1	1
18	1	1
19	1	1
20	1	1
21	1	1
22	1	1
23	1	1
24	1	1
25	1	1
26	1	1
27	1	1
28	1	1
29	1	1
30	1	1
31	1	1
32	1	1
33	1	1
34	1	1
35	1	1
36	1	1
37	1	1
38	1	1
39	1	1
40	1	1
41	1	1
42	1	1
43	1	1
44	1	1
45	1	1
46	1	1
47	1	1
48	1	1
49	1	1
50	1	1
51	1	1
52	1	1
53	1	1
54	1	1
55	1	1
56	1	1
57	1	1
58	1	1
59	1	1
60	1	1
61	1	1
62	1	1
63	1	1
64	1	1
65	1	1
66	1	1
67	1	1
68	1	1
69	1	1
70	1	1
71	1	1
72	1	1
73	1	1
74	1	1
75	1	1
76	1	1
77	1	1
78	1	1
79	1	1
80	1	1
81	1	1
82	1	1
83	1	1
84	1	1
85	1	1
86	1	1
87	1	1
88	1	1
89	1	1
90	1	1
91	1	1
92	1	1
93	1	1
94	1	1
95	1	1
96	1	1
97	1	1
98	1	1
99	1	1
100	1	1

WITM-A PSC_16MHZ	SURFACE EQUIPMENT	
---------------------	-------------------	--

DOWNHOLE EQUIPMENT			
MH-22			56.2
MH-22			
Detail MT			
AH-38	TelStatus		54.6
HBMS-B	CTEM		54.3
PSC-A 2880			54.3
HUDH-A 2880			
HSTC-A			
HBMC-A			
GR	GR		49.4
CCL			
HBMC			
HTPS-A 2880	CCL		47.0
HCQG_E_Mano	HSTC Aux.		
RTD_Thermometer	HBMC Aux.		45.5
	CQG Manom		44.1
	Well_Temp		
RST-C			43.2
RSCH-A 469			
RSC-E			
RSS-A 461			
RSXH-A 493			
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 8179  
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: SGU 8512C-24 (L24 496)

Input DLIS Files

SCMT\_RST\_HBMS\_004LUP FN:3 18-Mar-2013 16:08 12144.0 FT 12.5 FT

Output DLIS Files

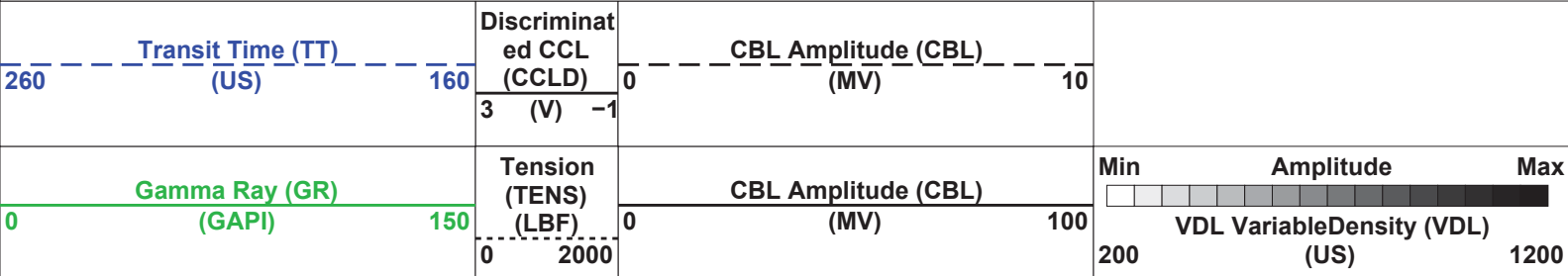
DEFAULT SCMT\_RST\_HBMS\_002PUP FN:1 PRODUCER 18-Mar-2013 16:11 12144.0 FT 12.5 FT

OP System Version: 19C0-187

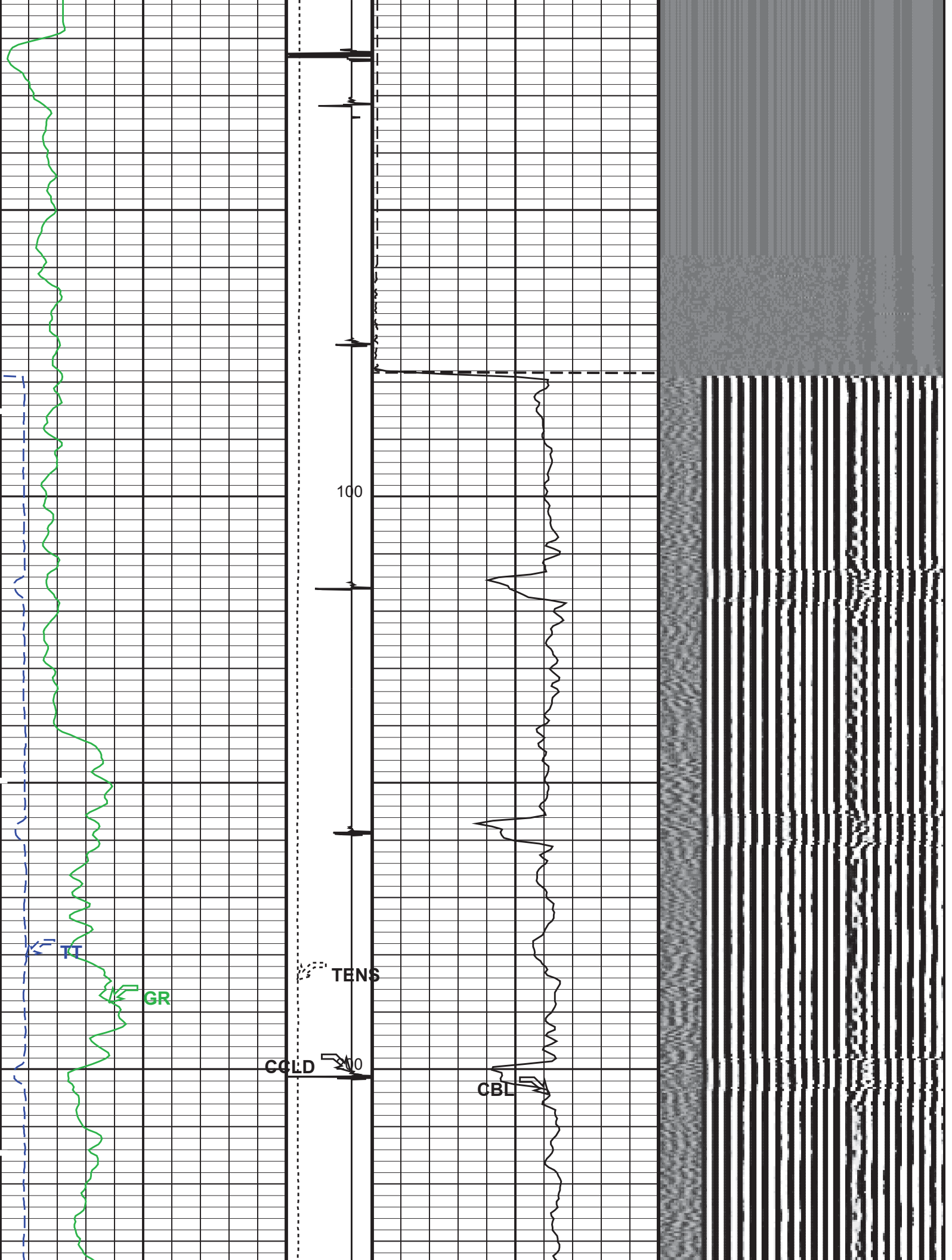
SCMT-CB 19C0-187 RST-C 19C0-187  
HBMS-B 19C0-187

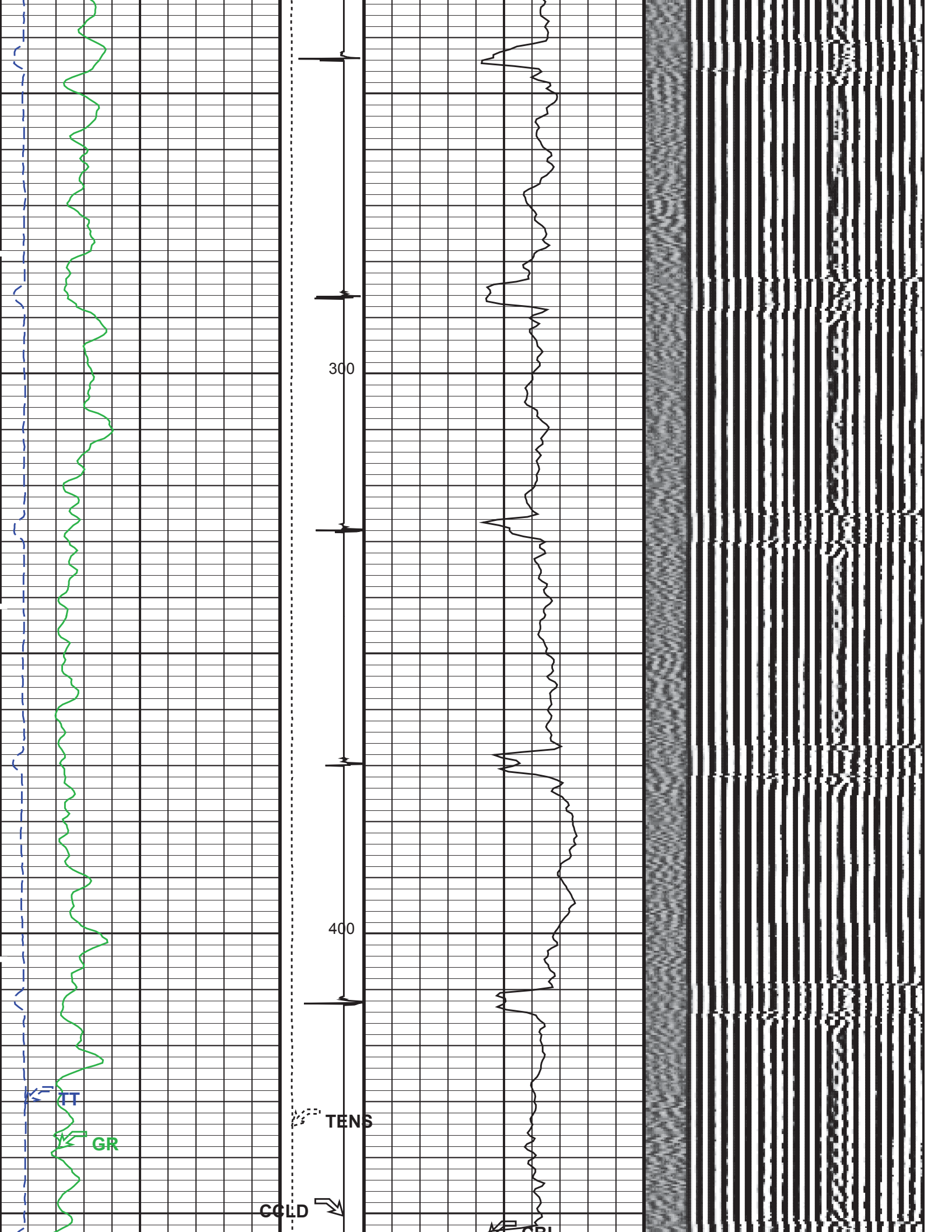
PIP SUMMARY

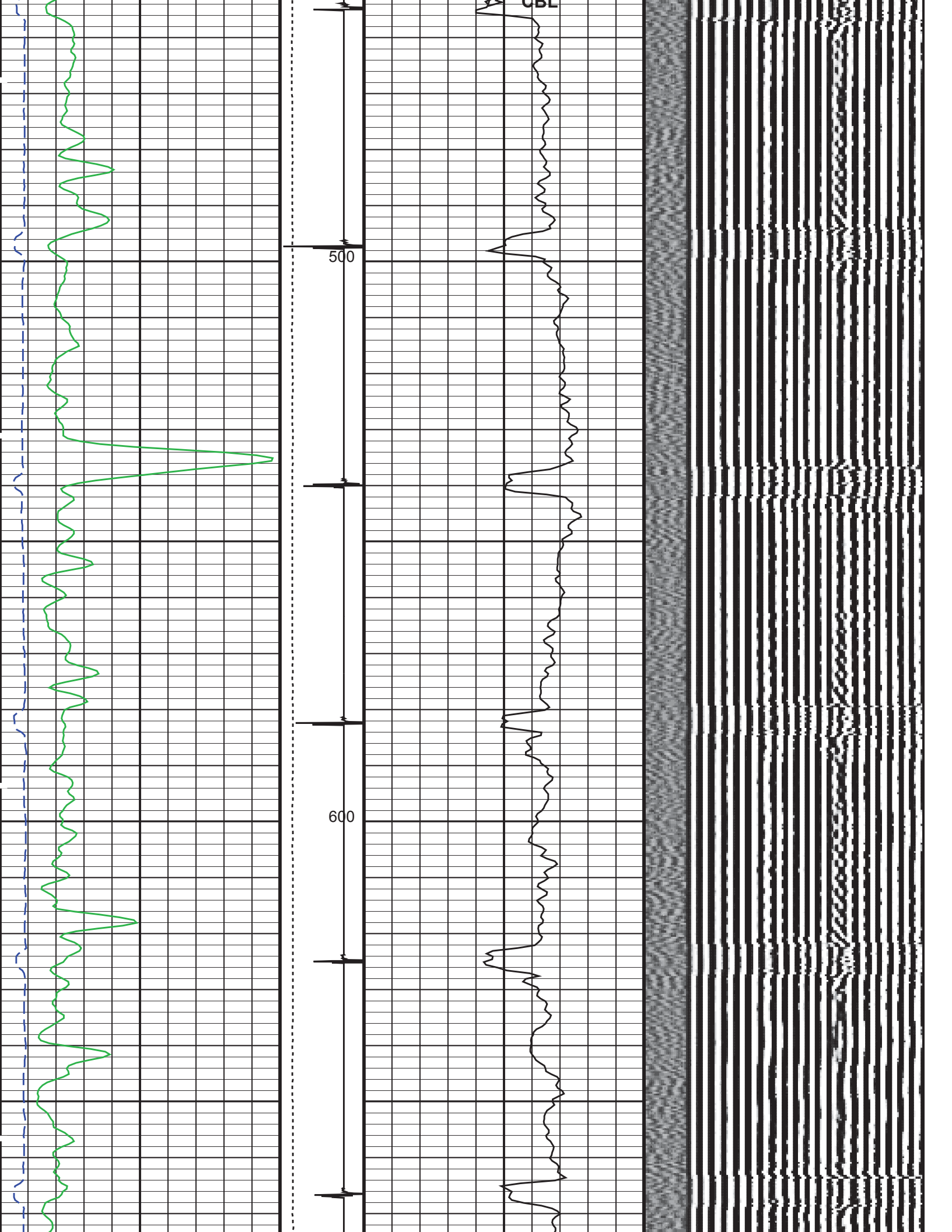
Time Mark Every 60 S

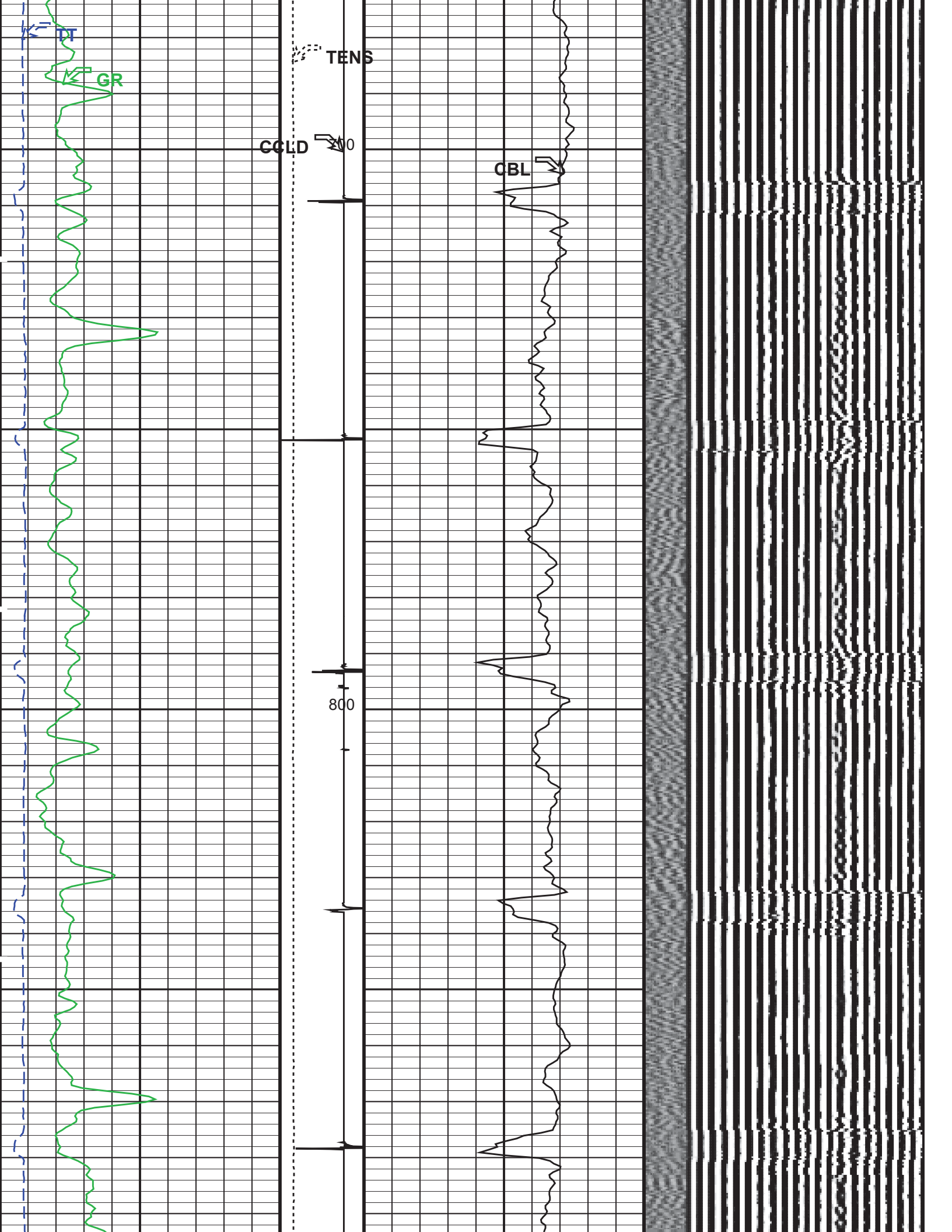


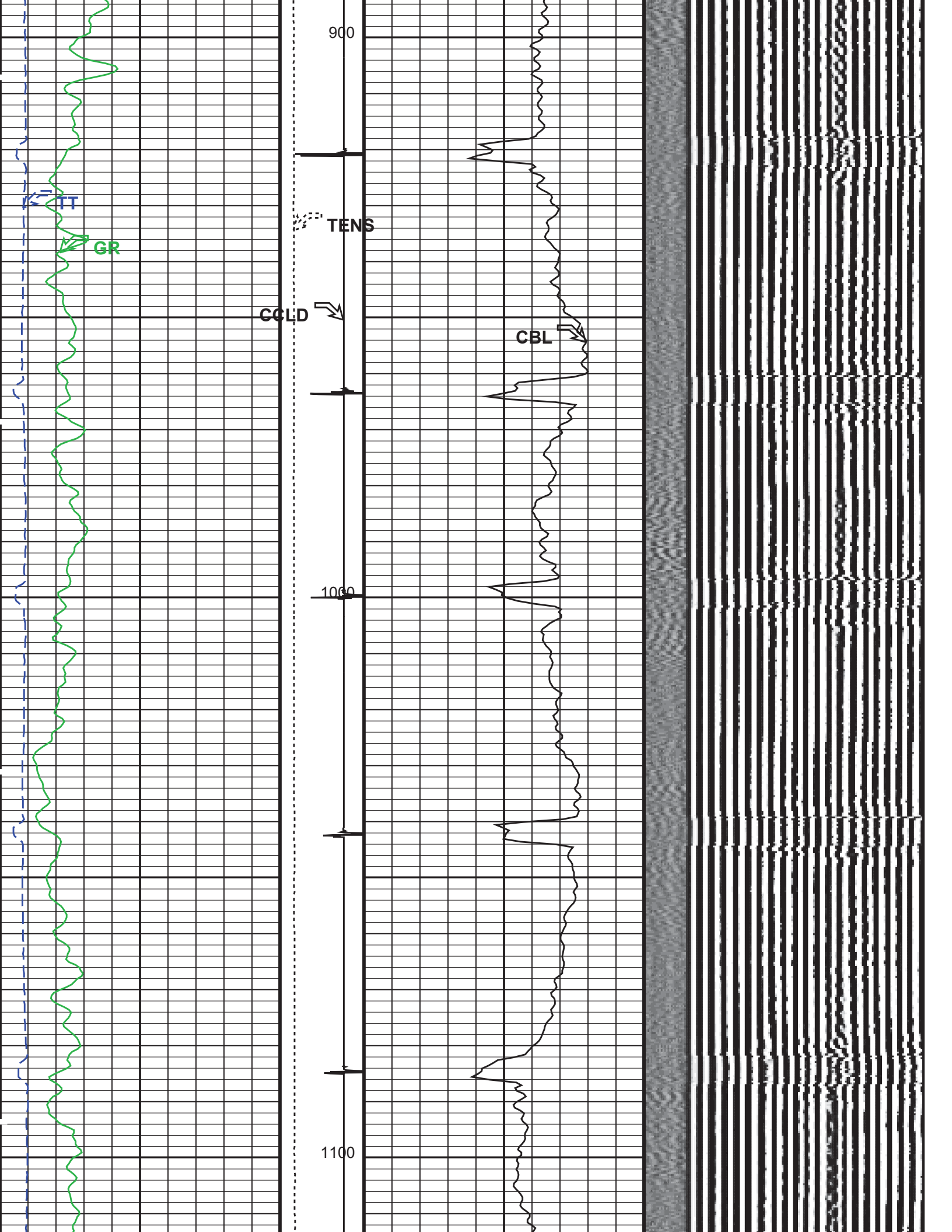




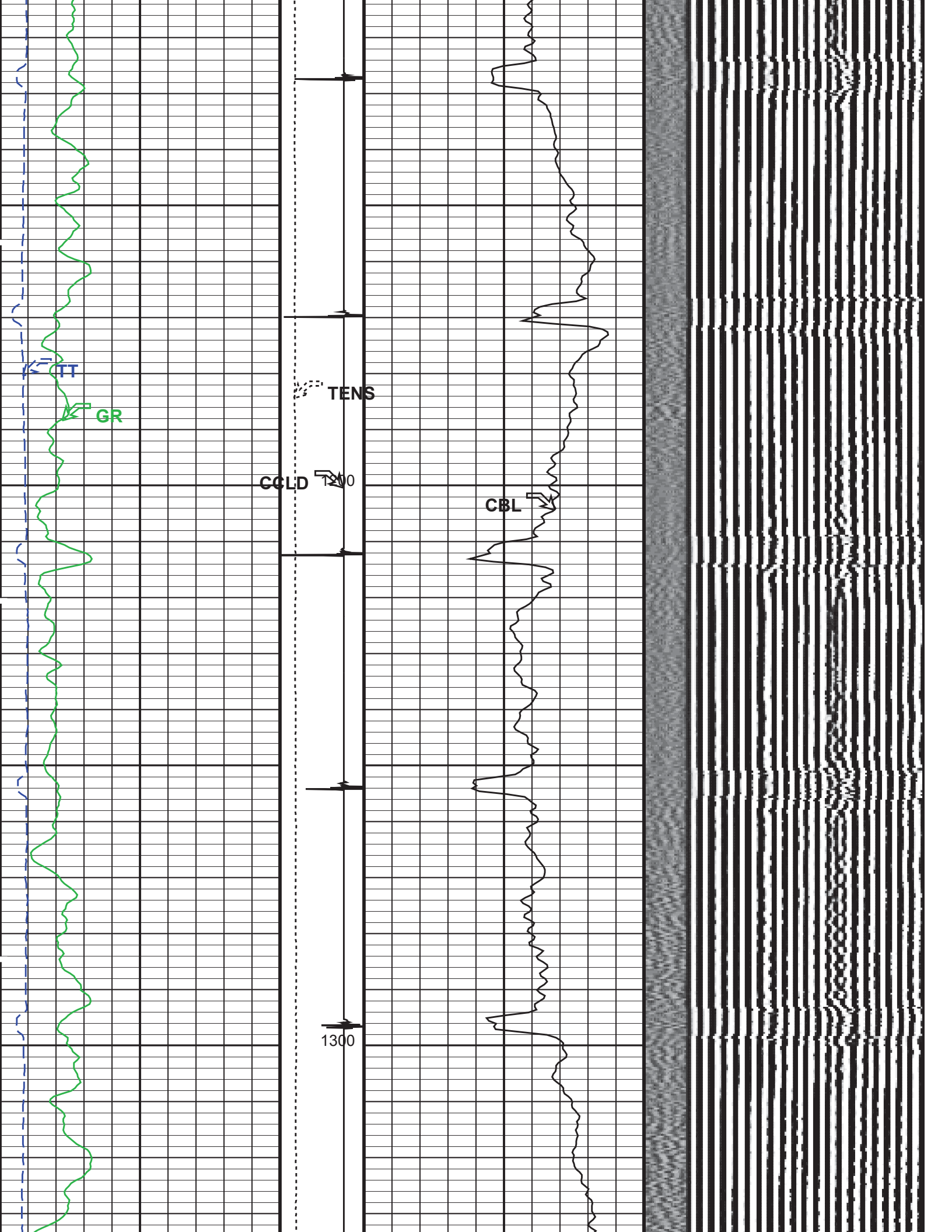


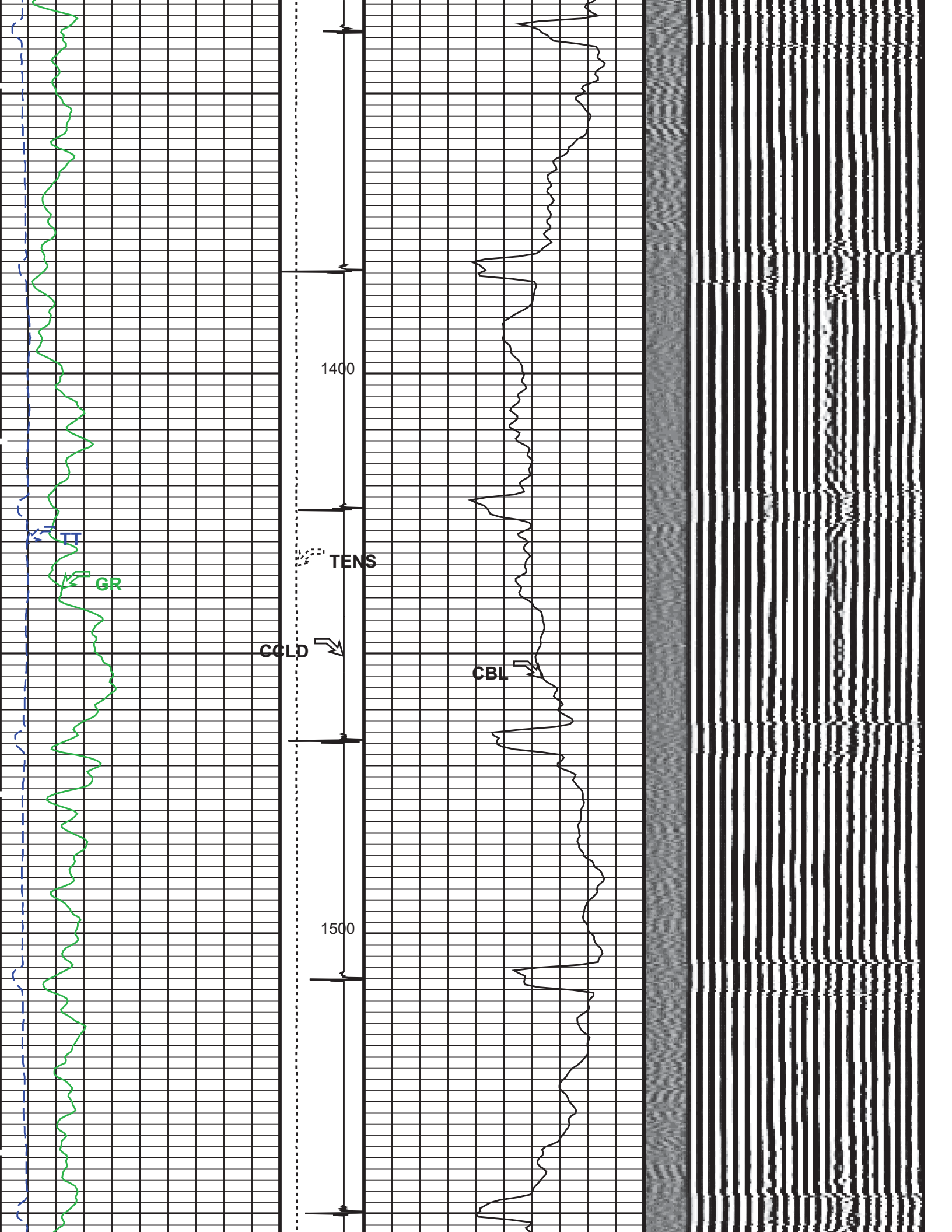


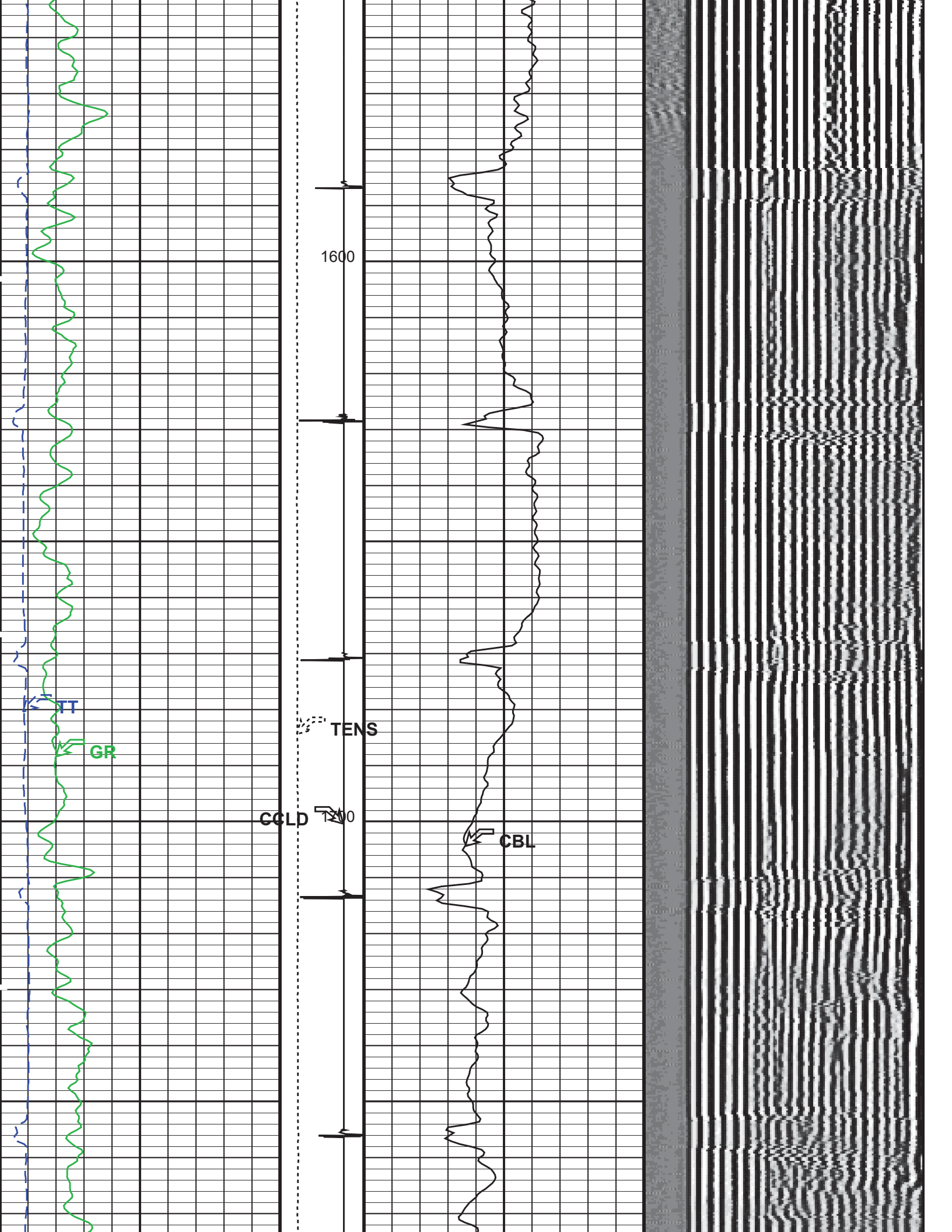




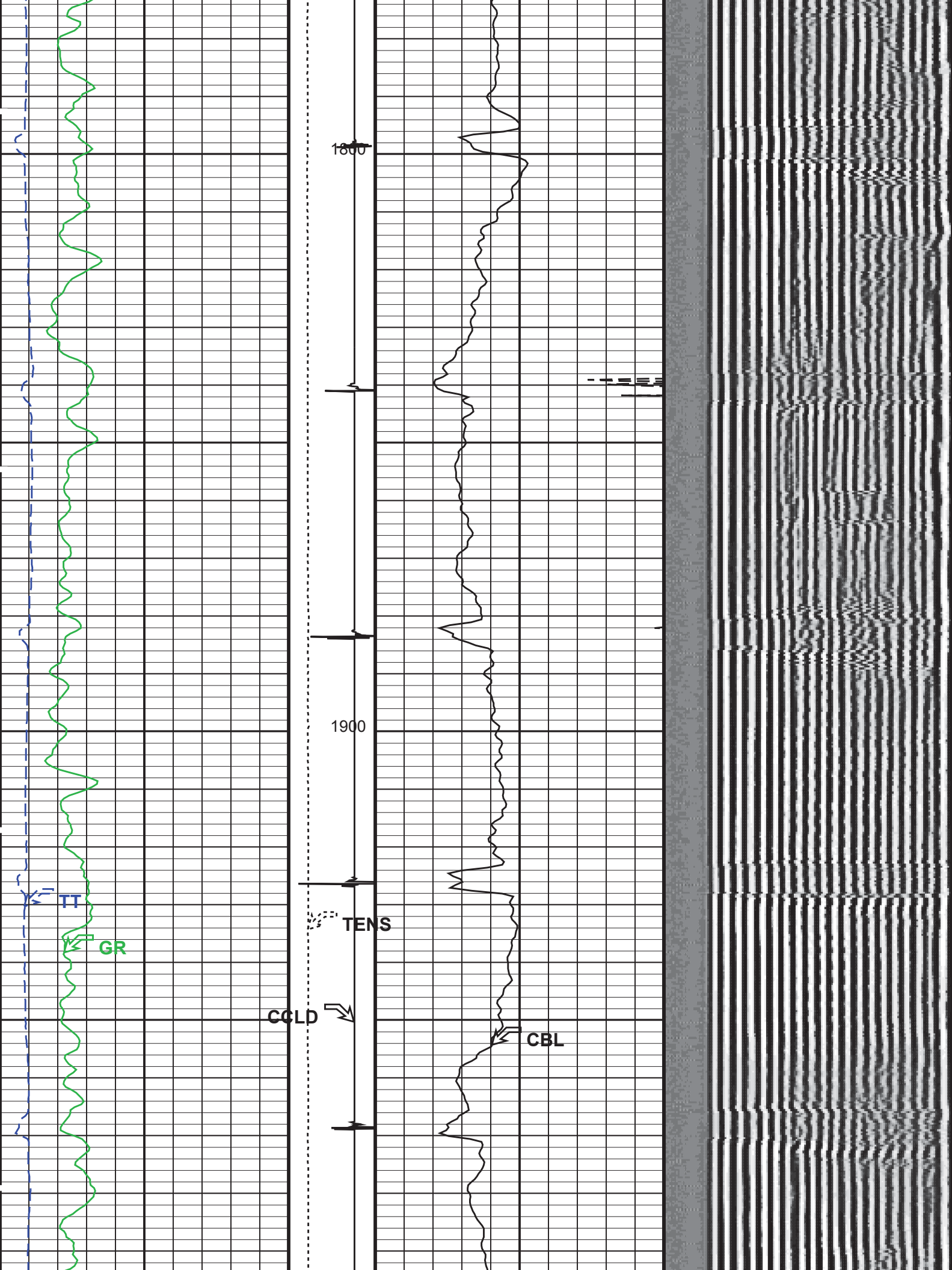


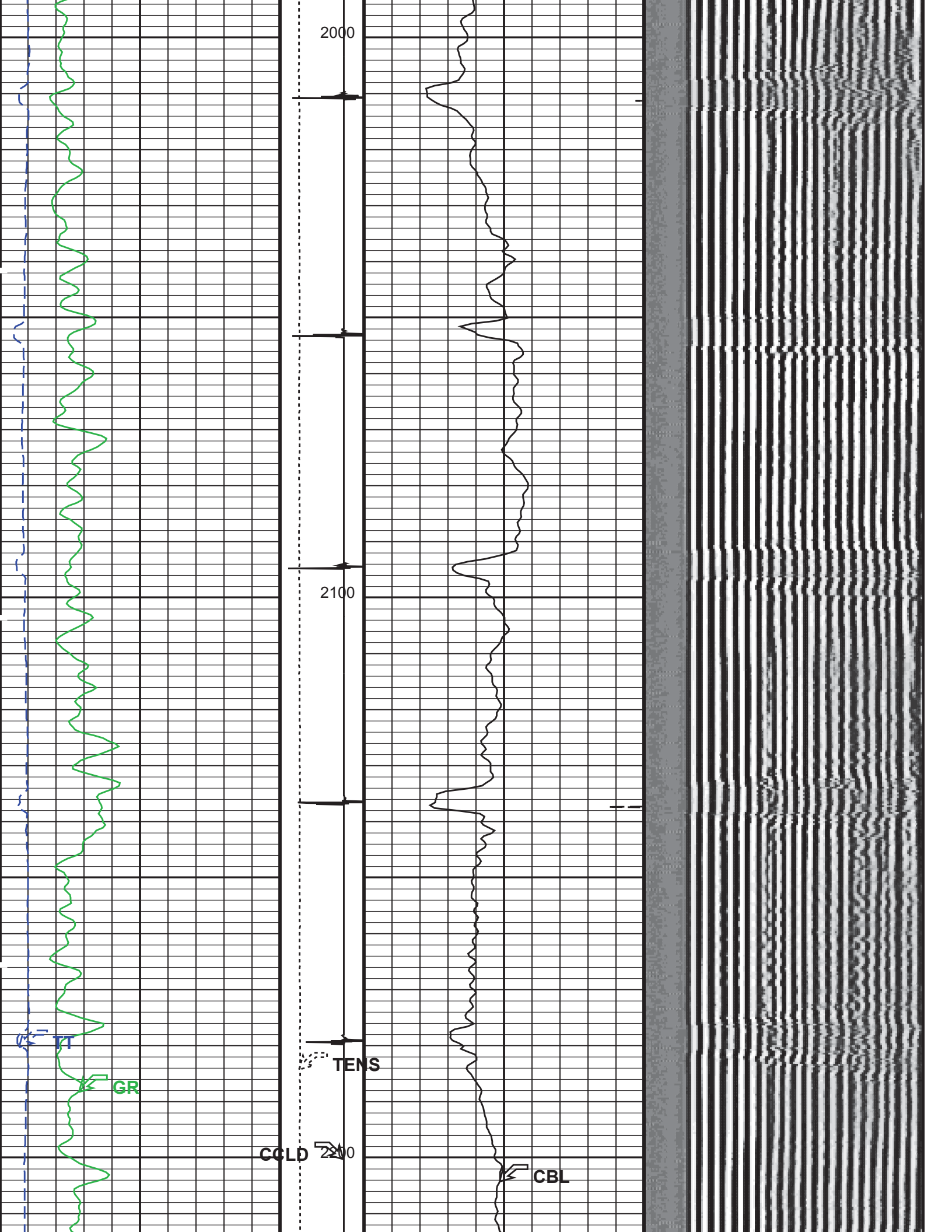


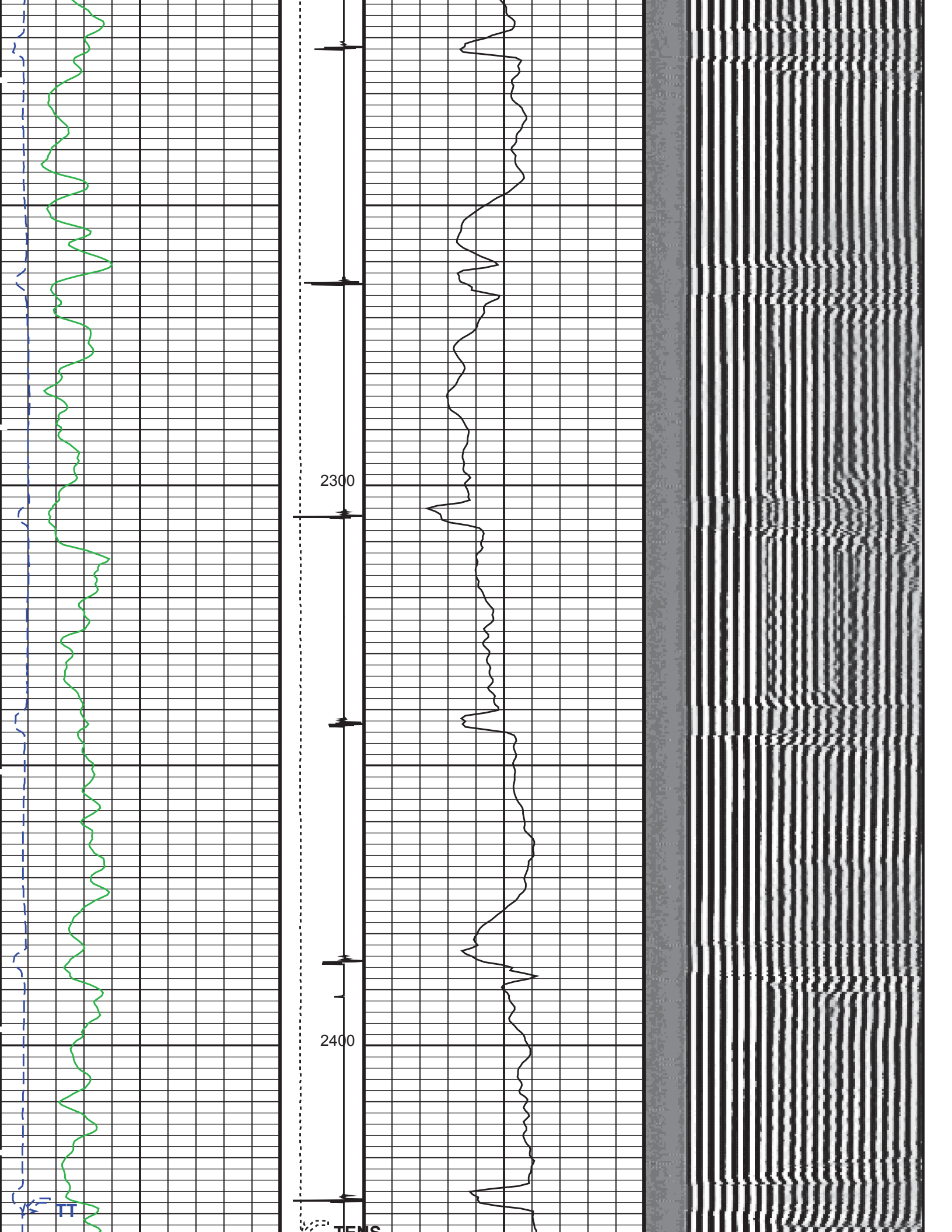


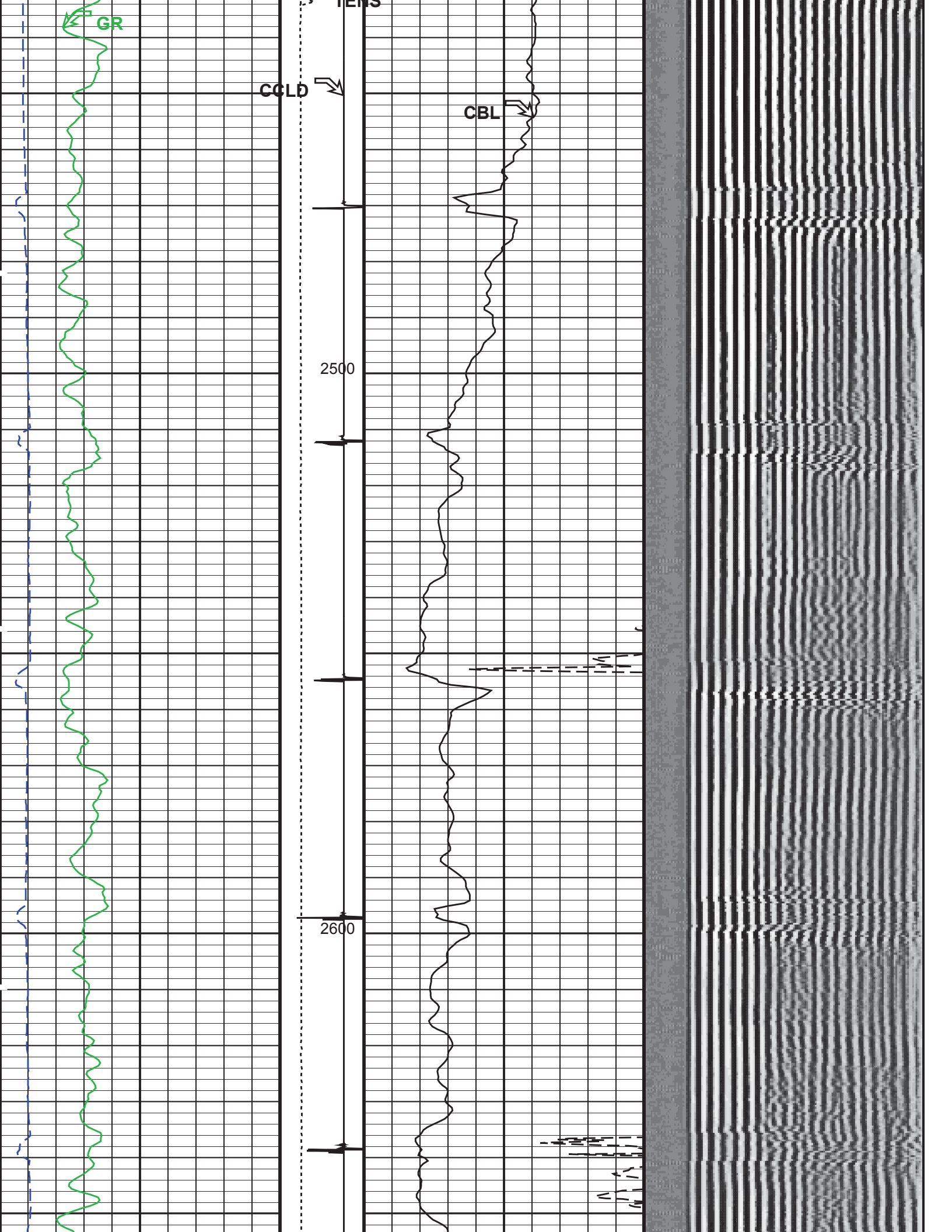




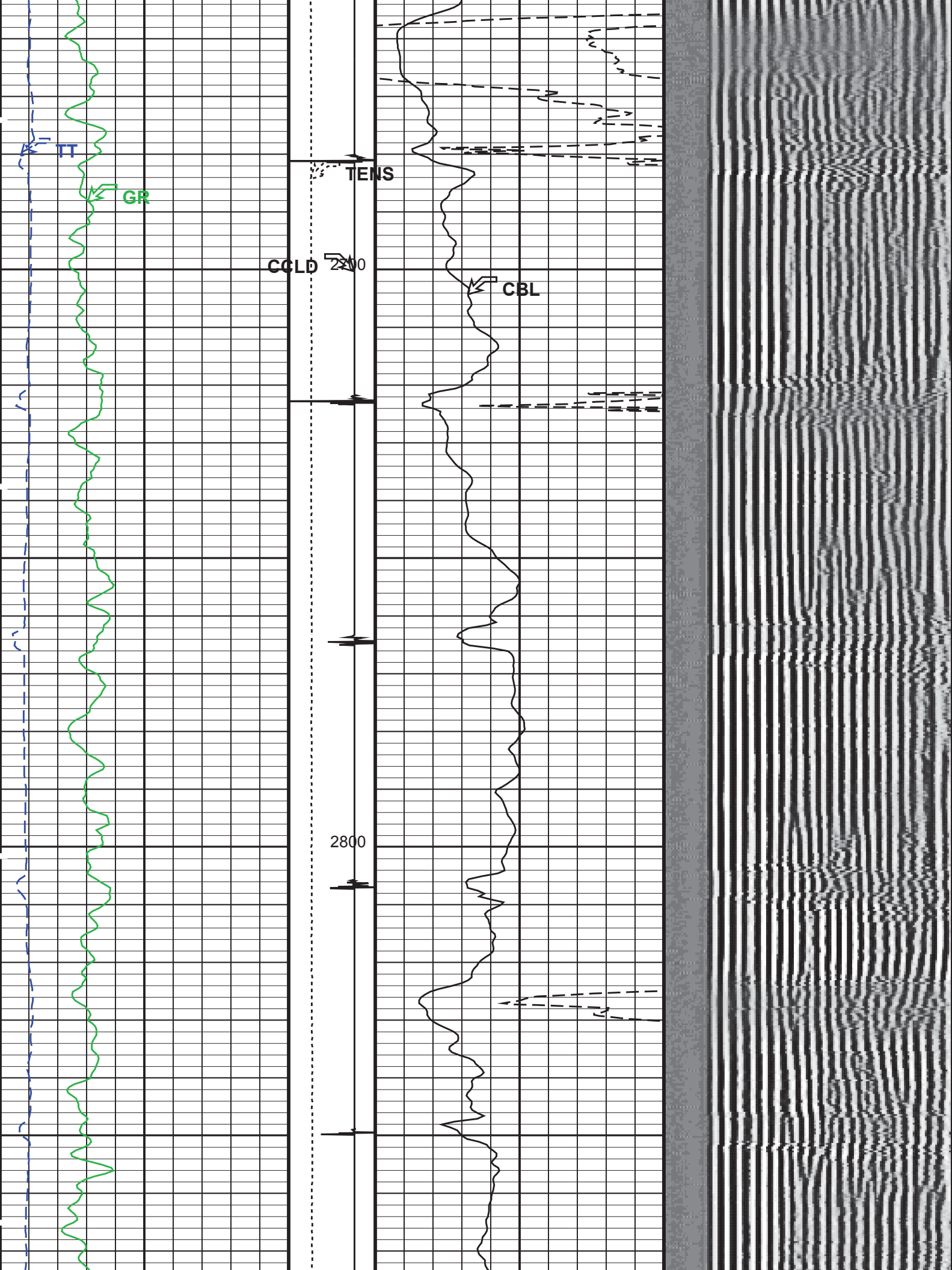


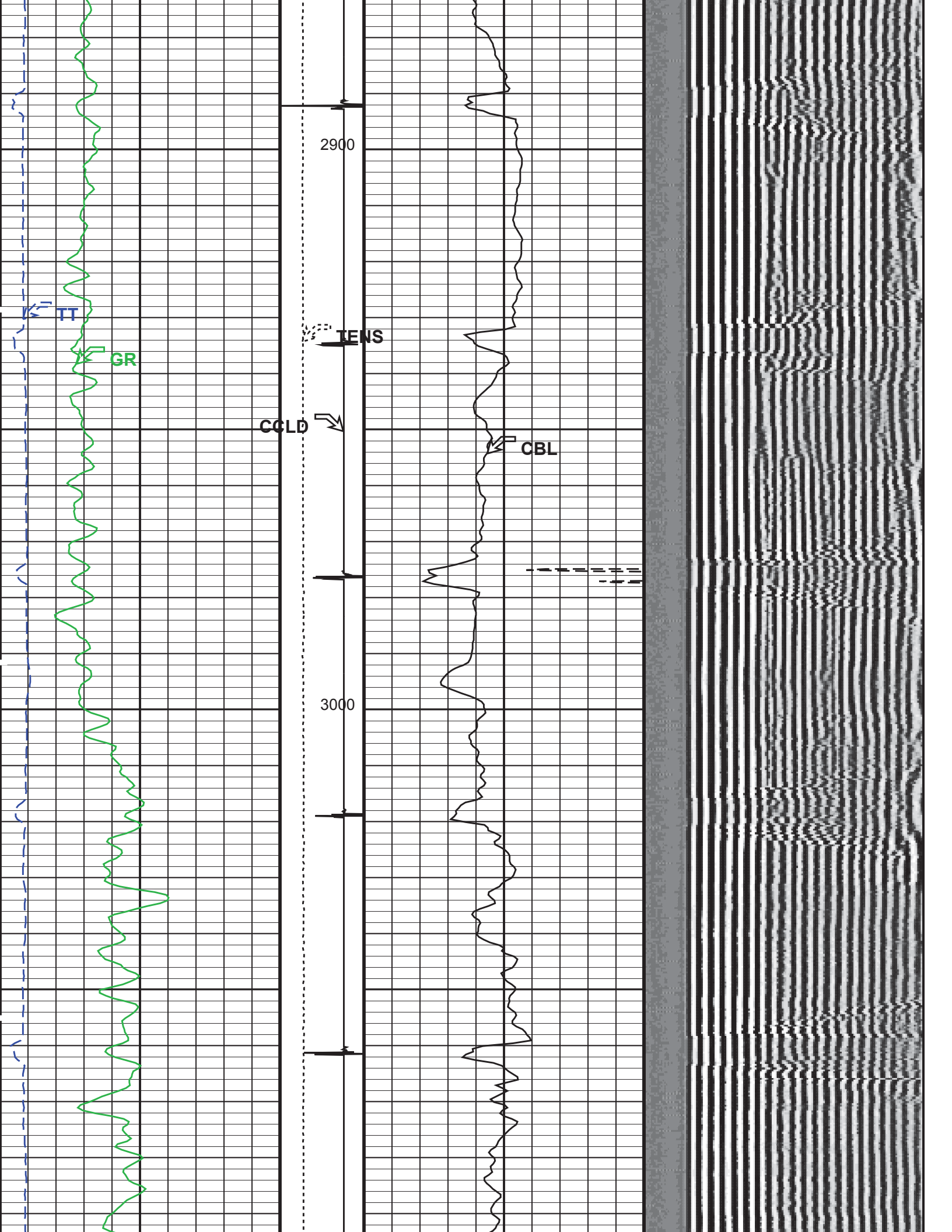


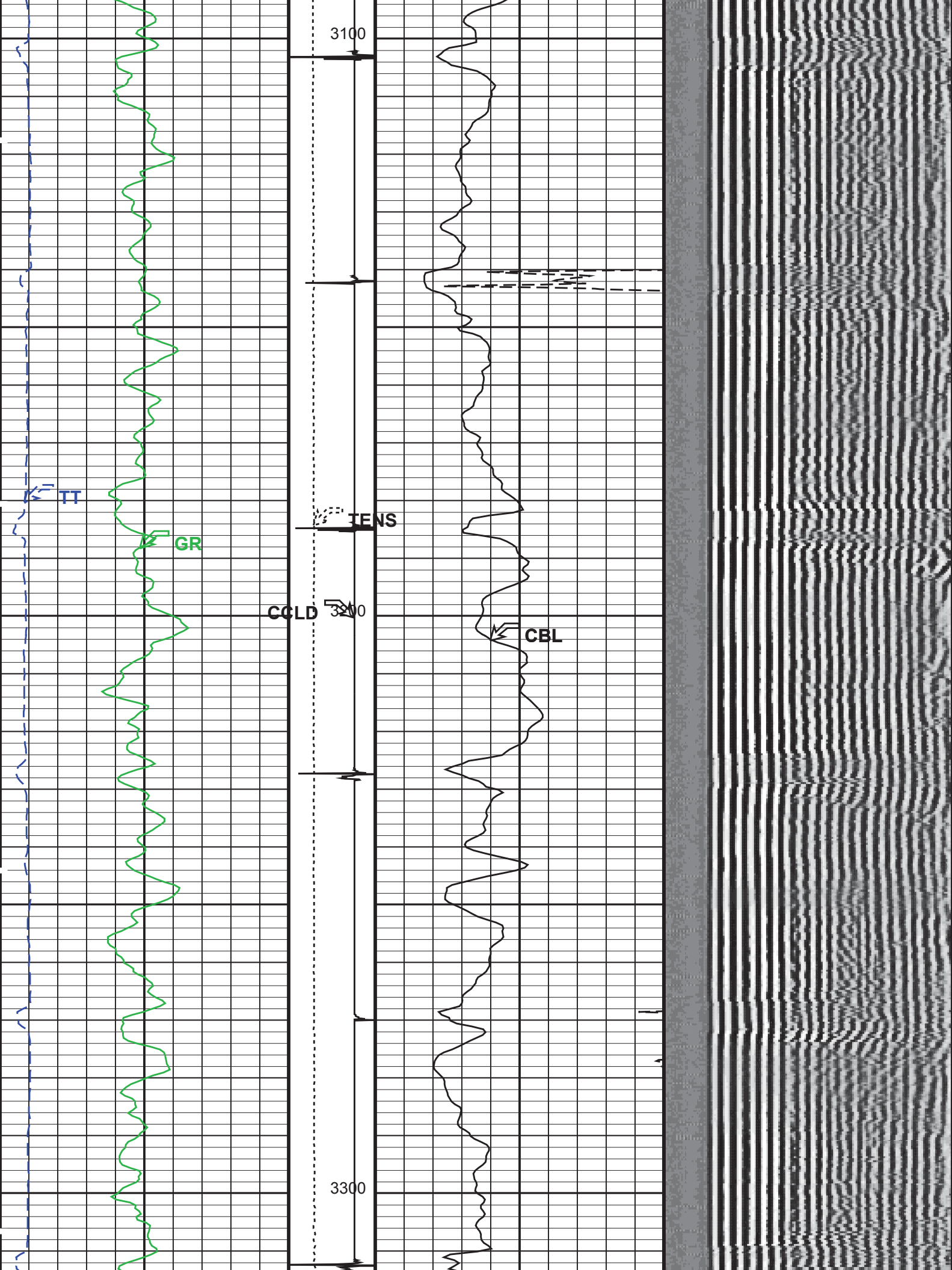




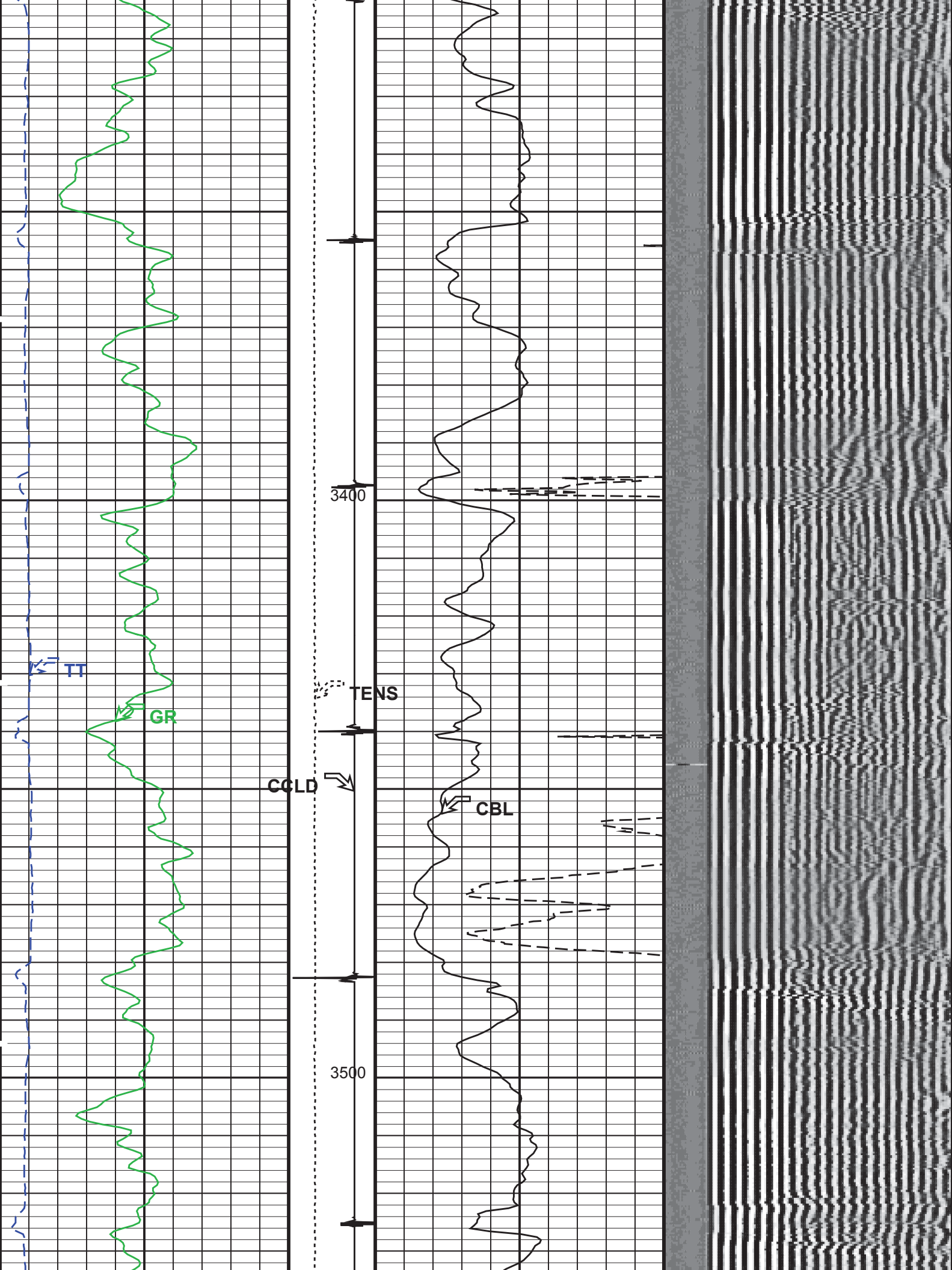




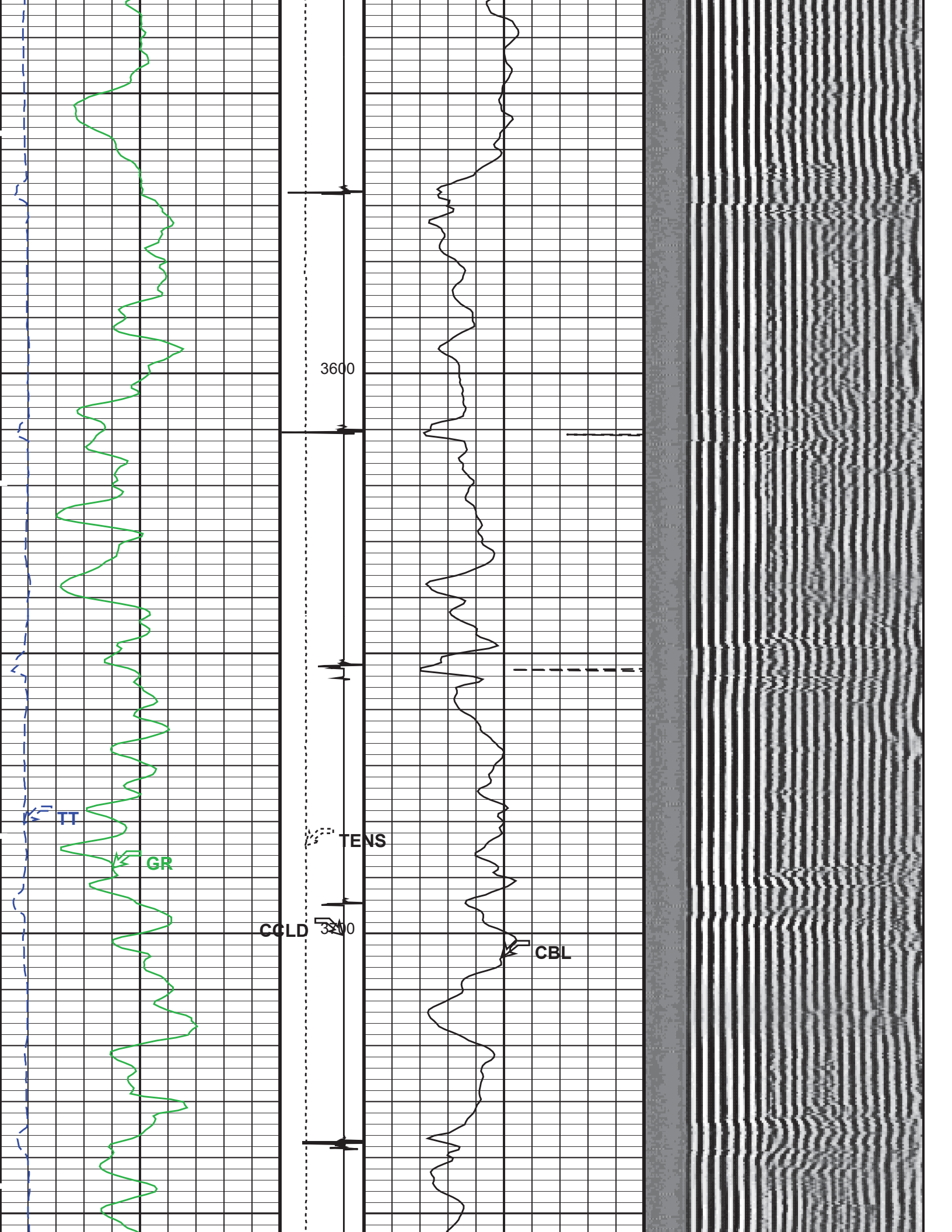


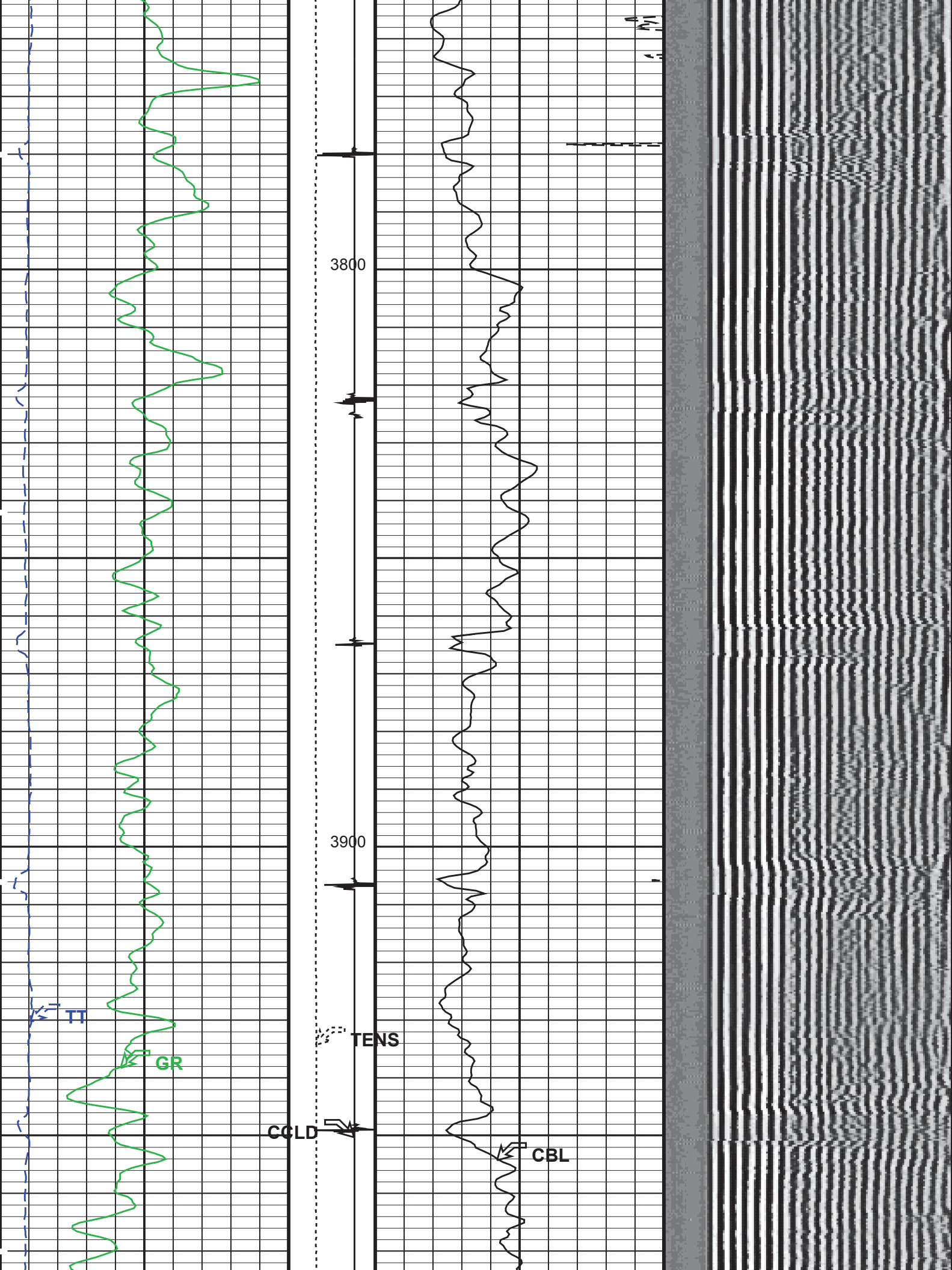


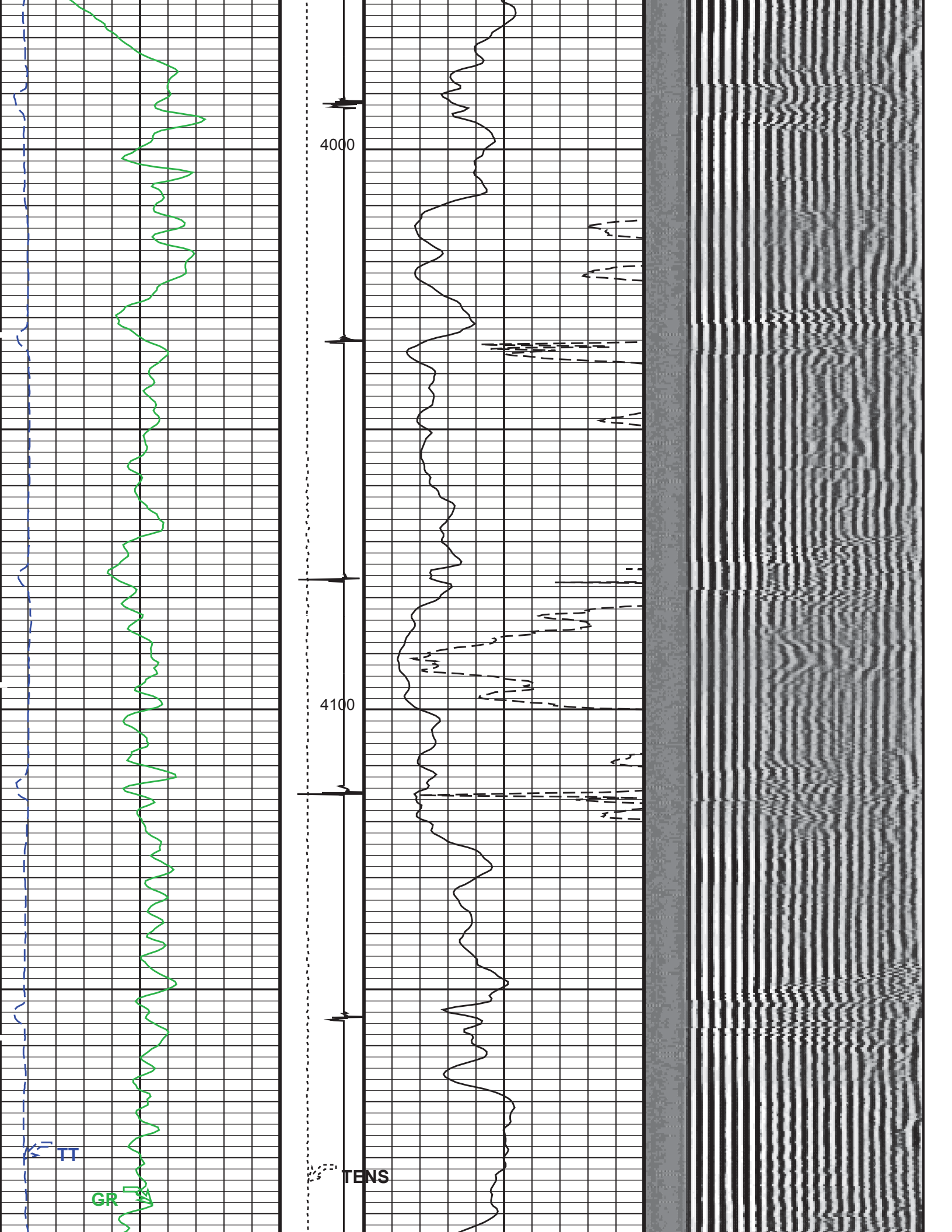




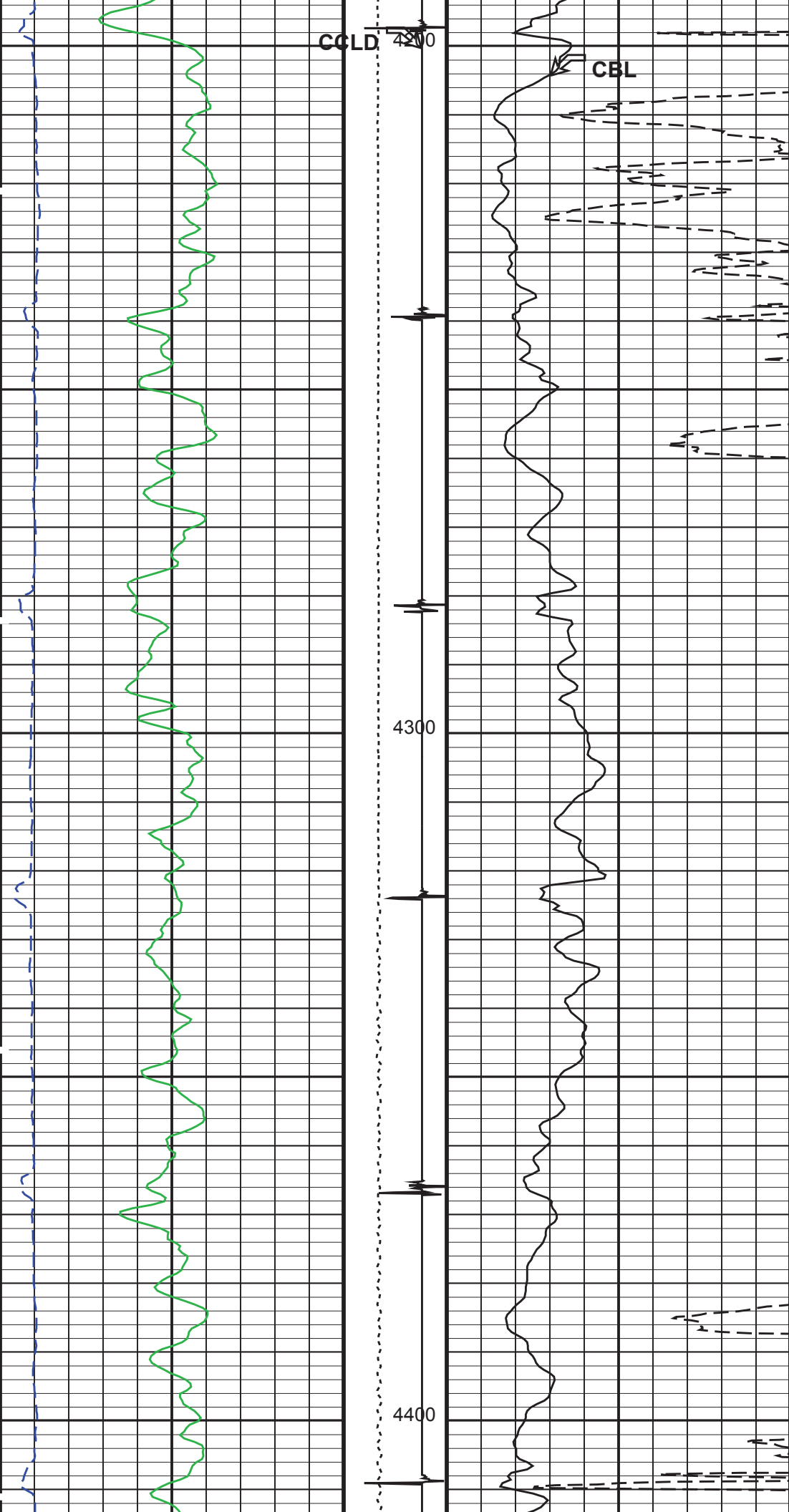


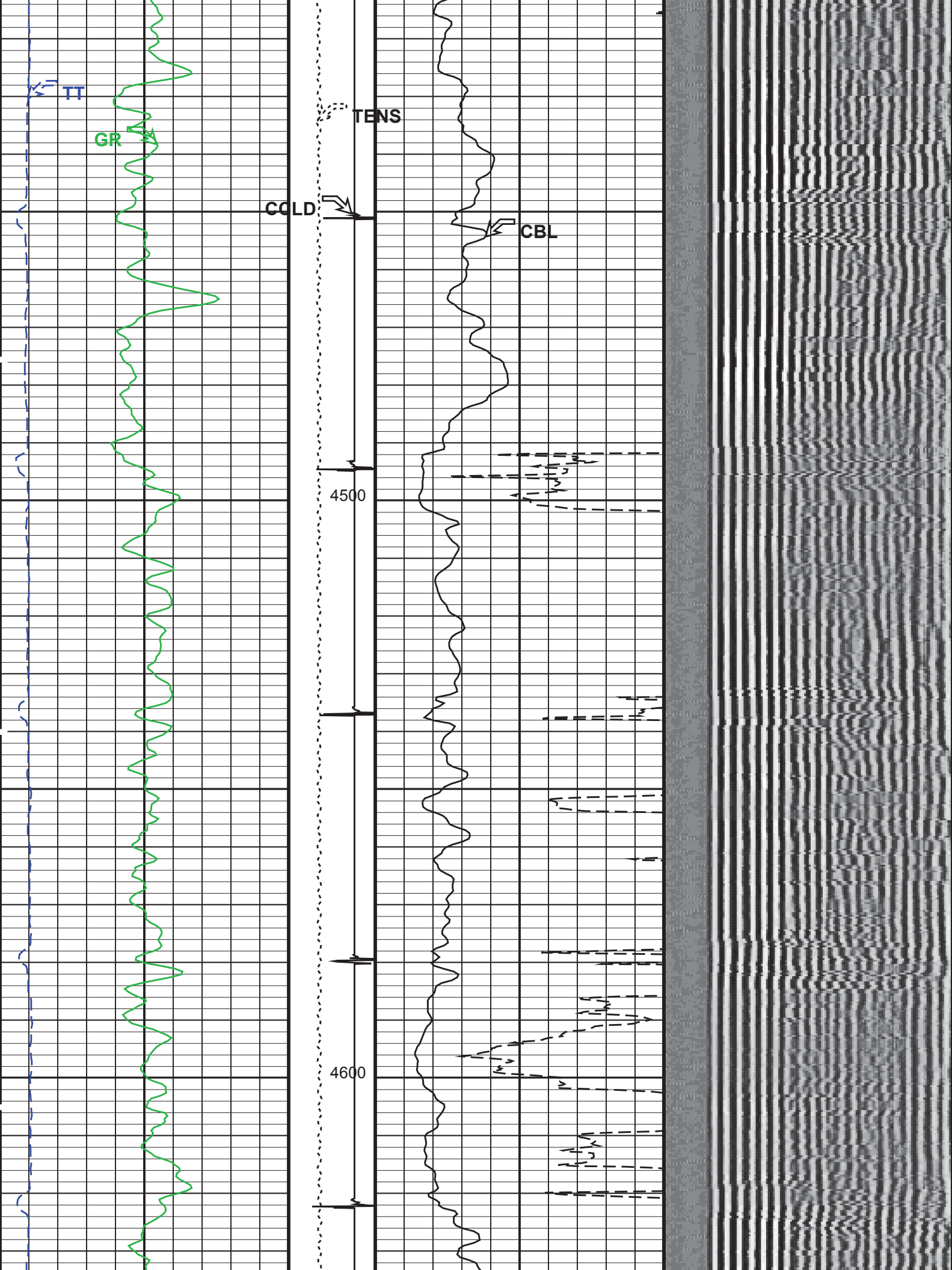


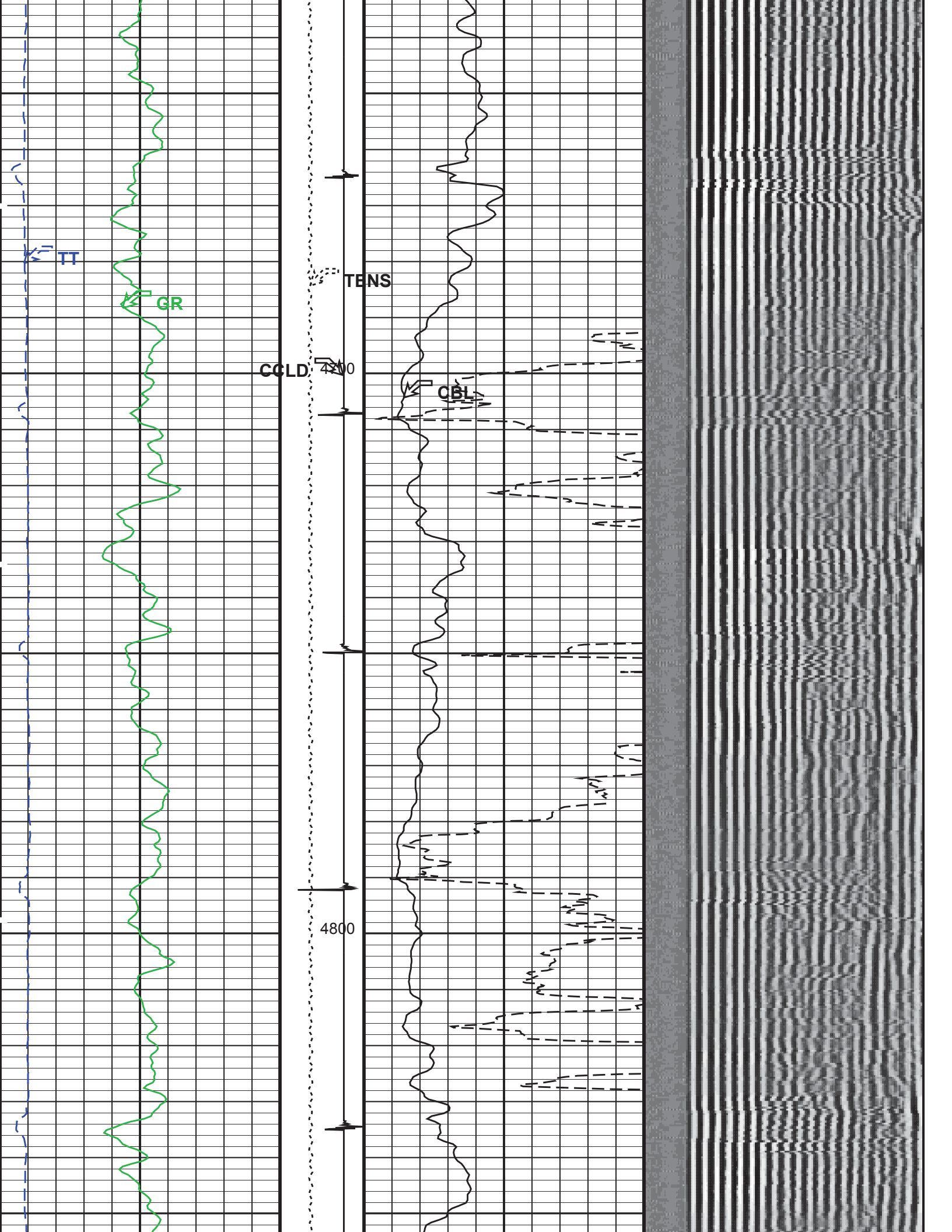




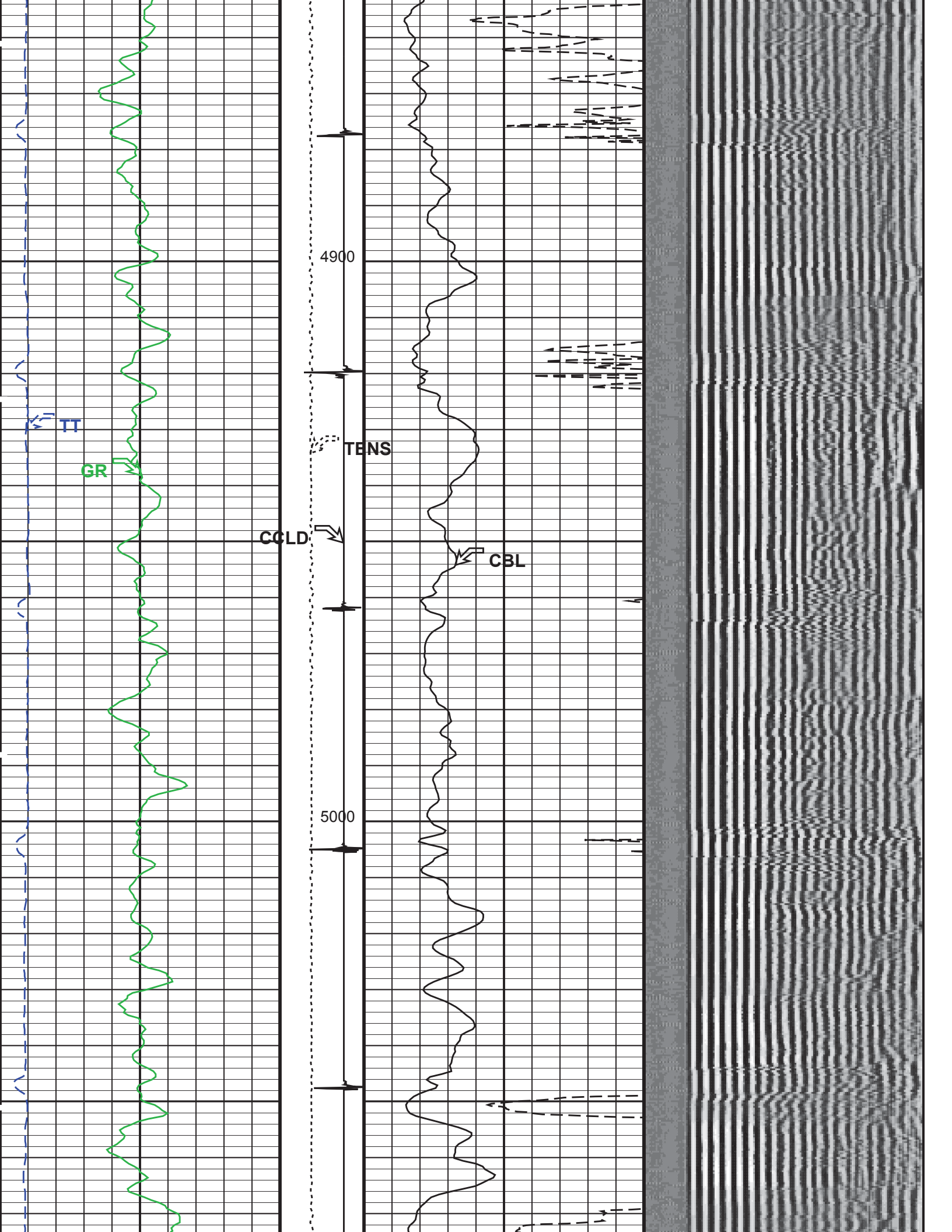


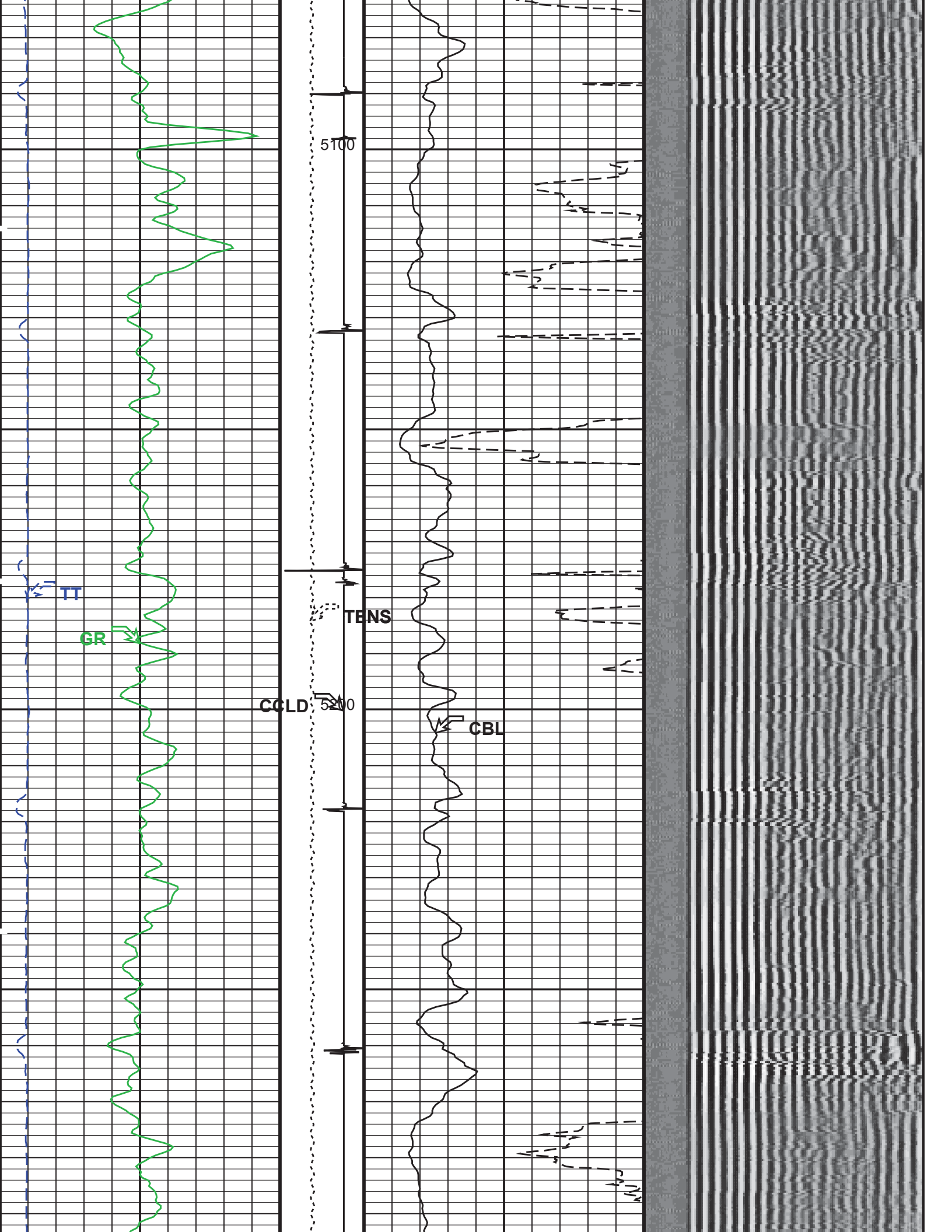




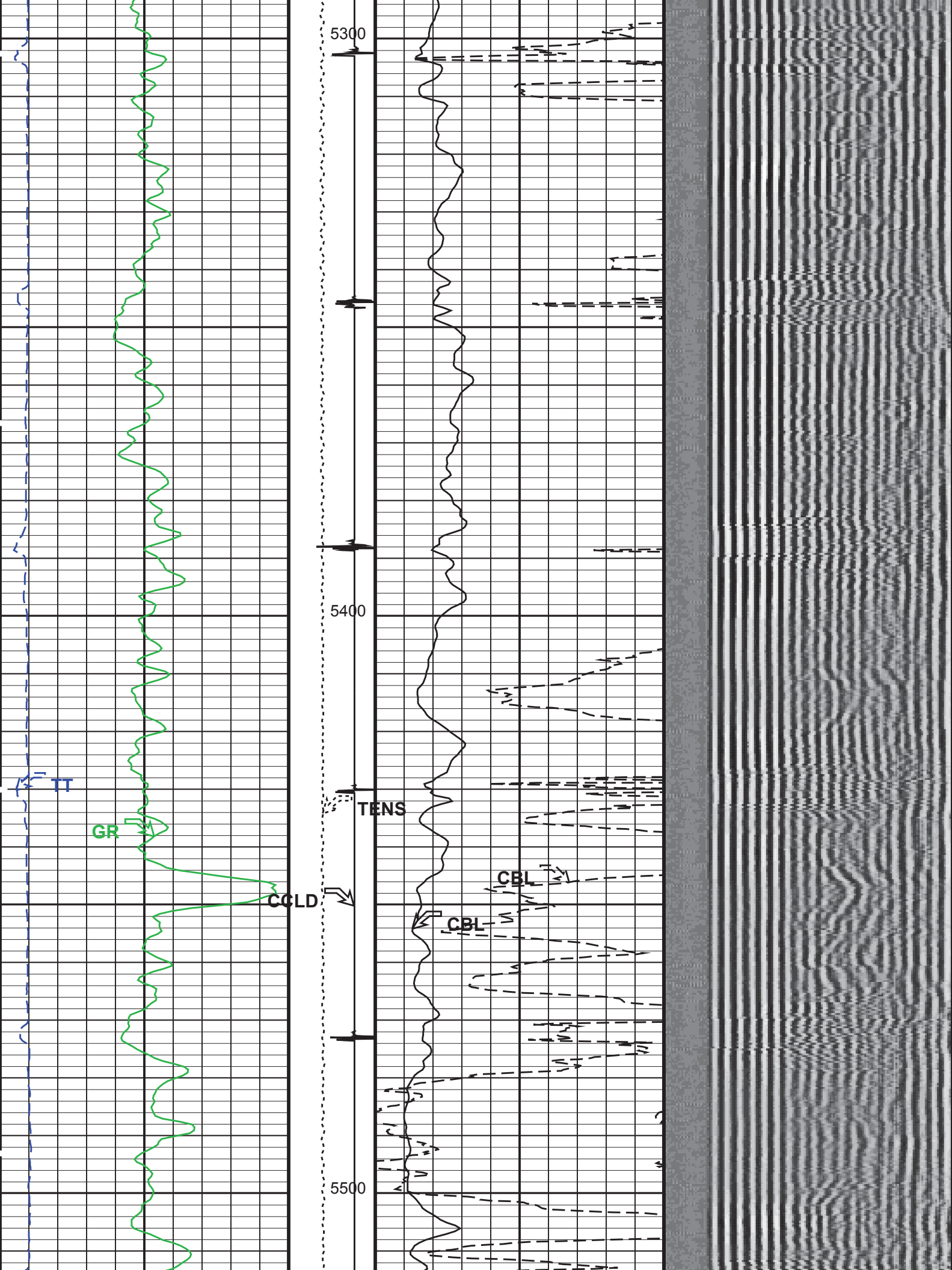


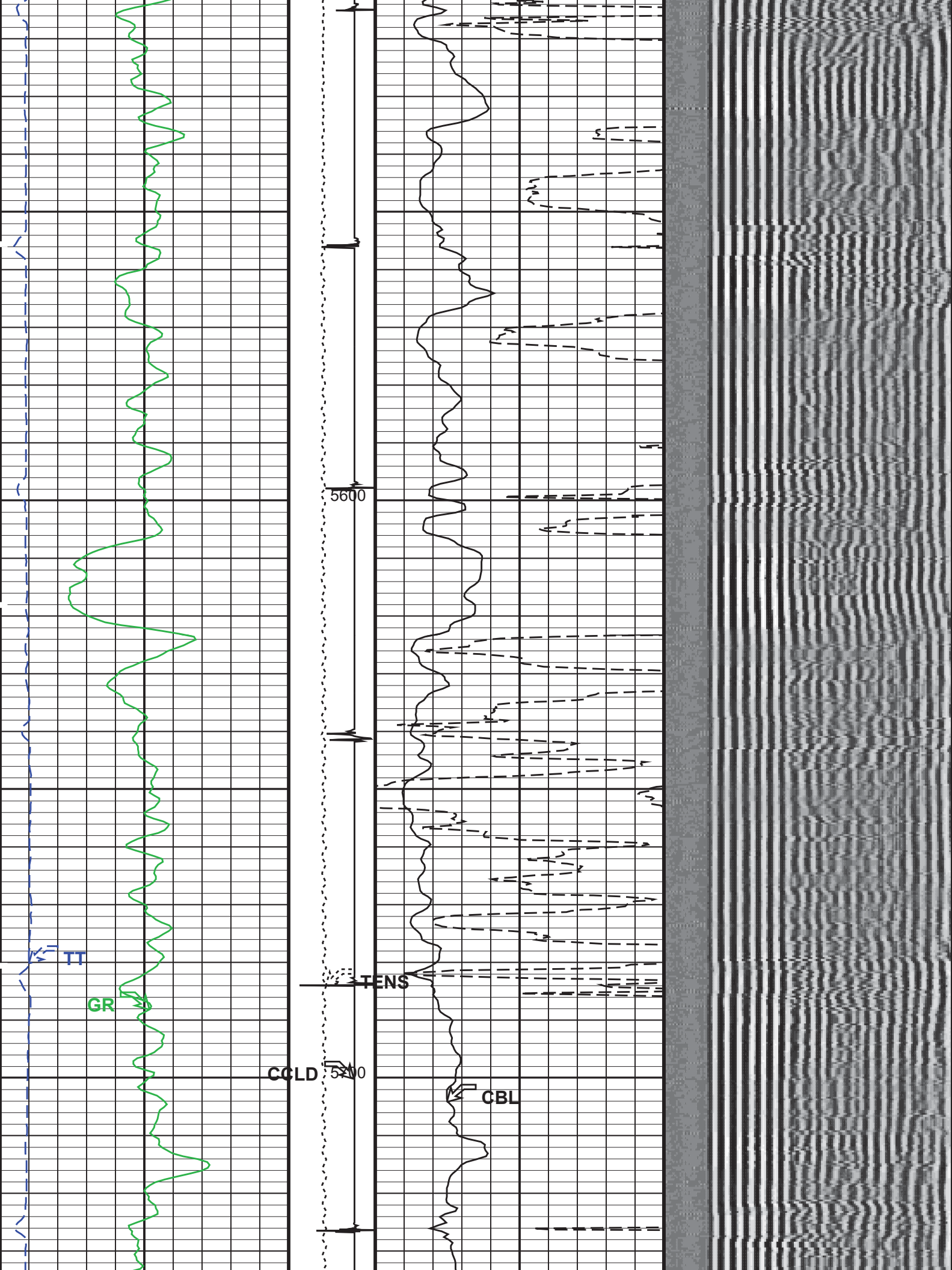


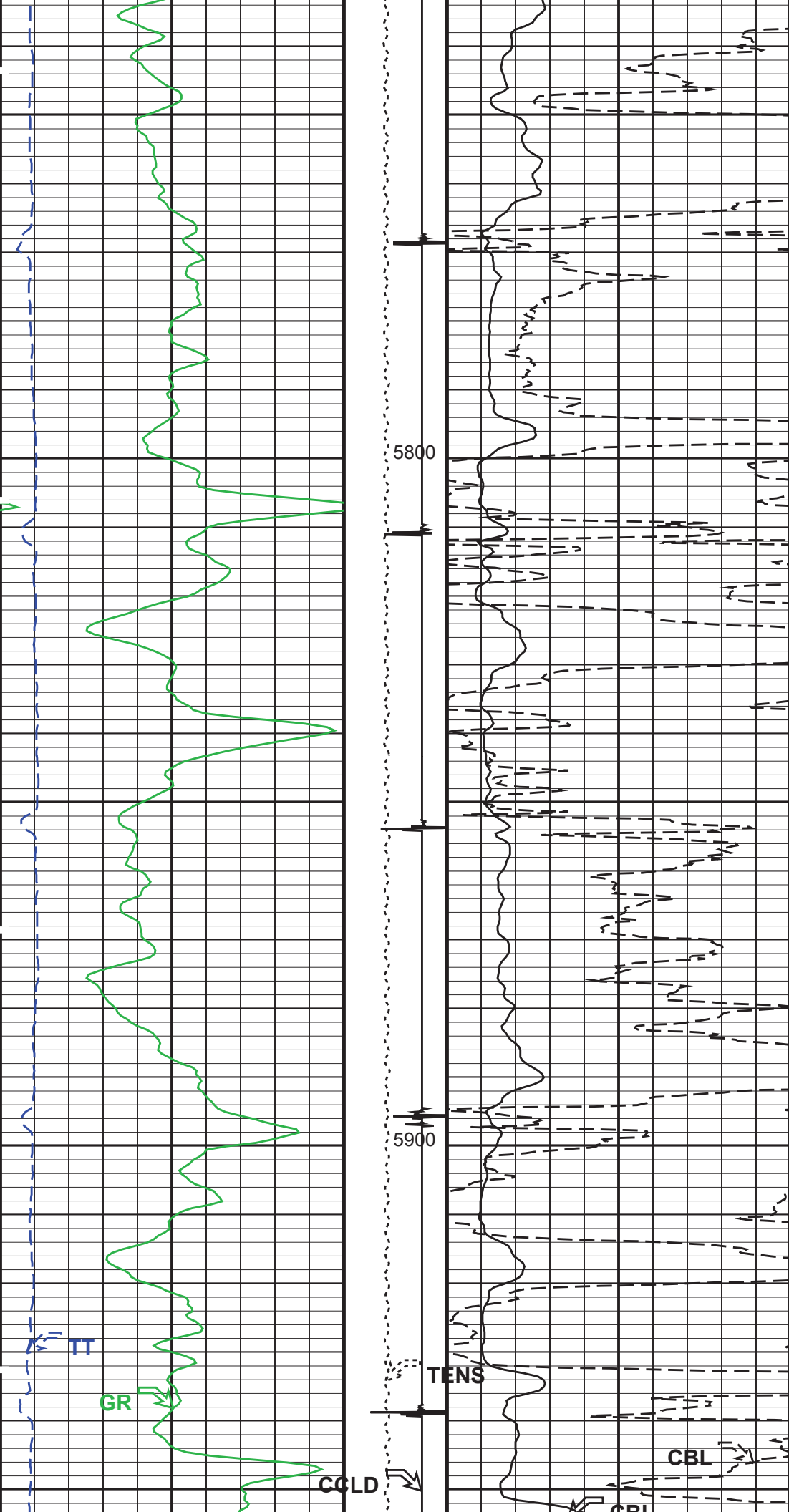




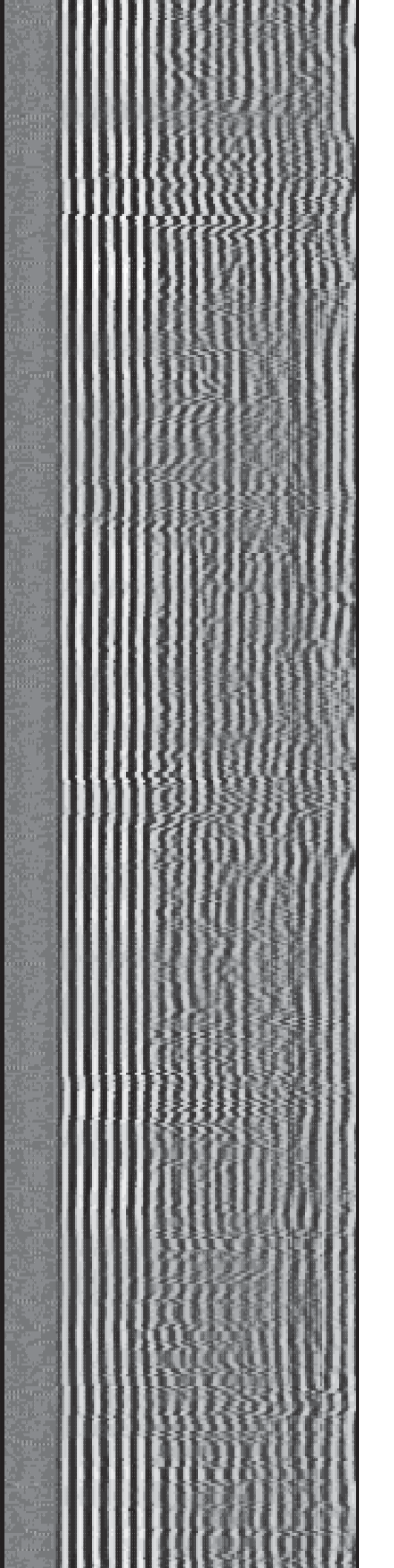
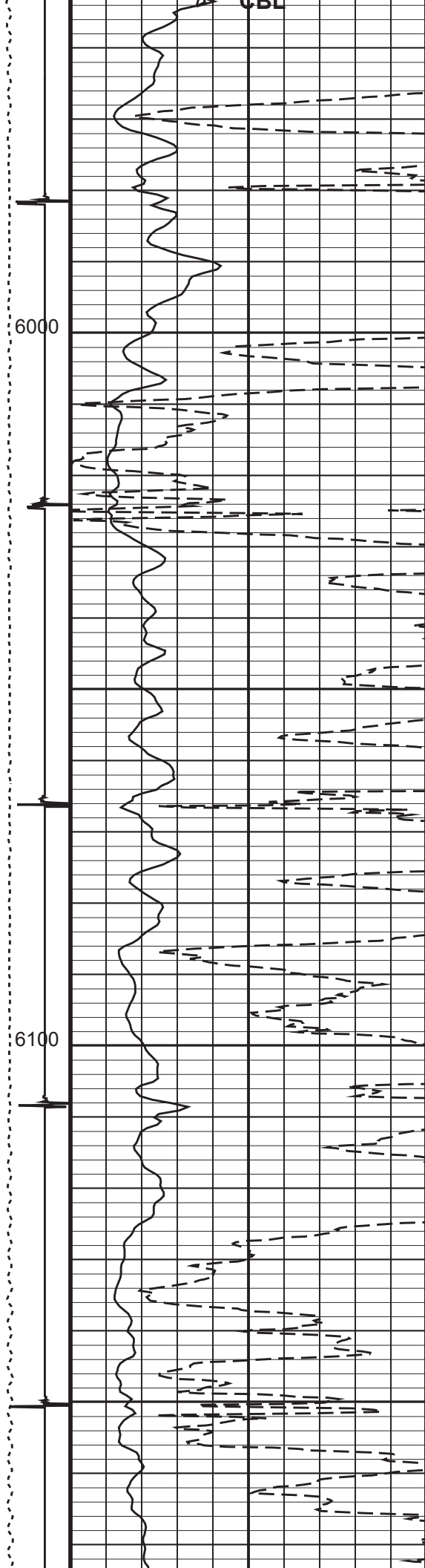
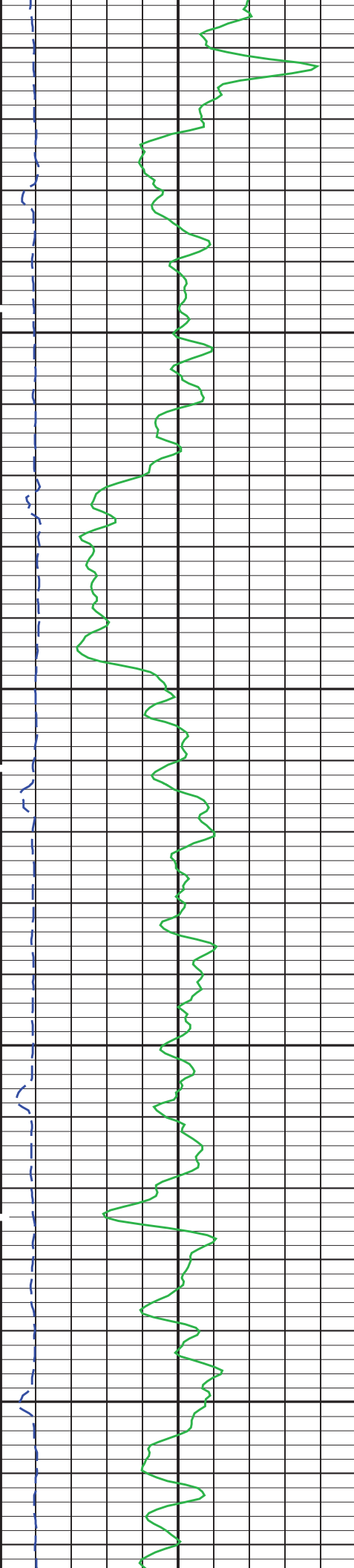


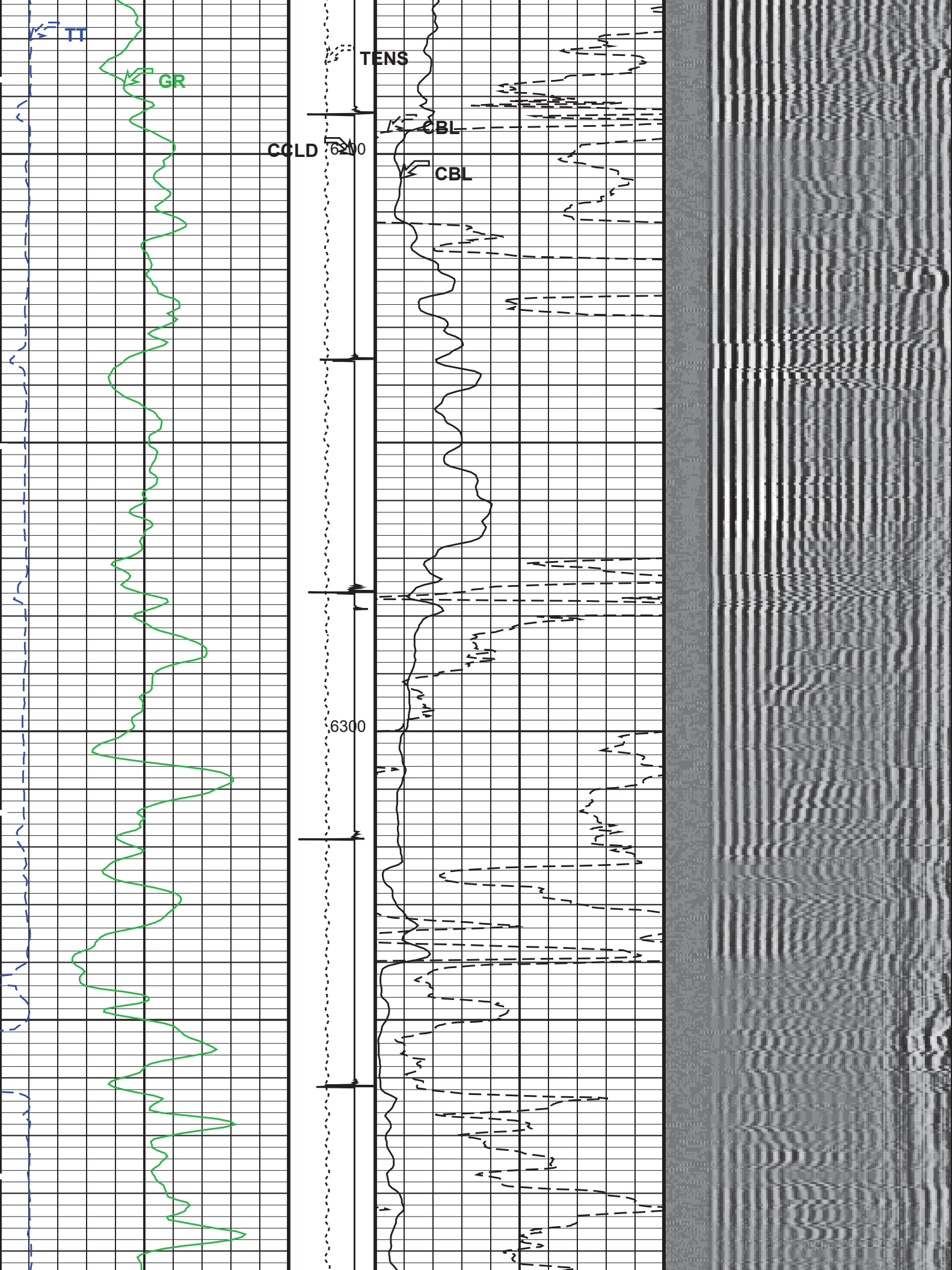


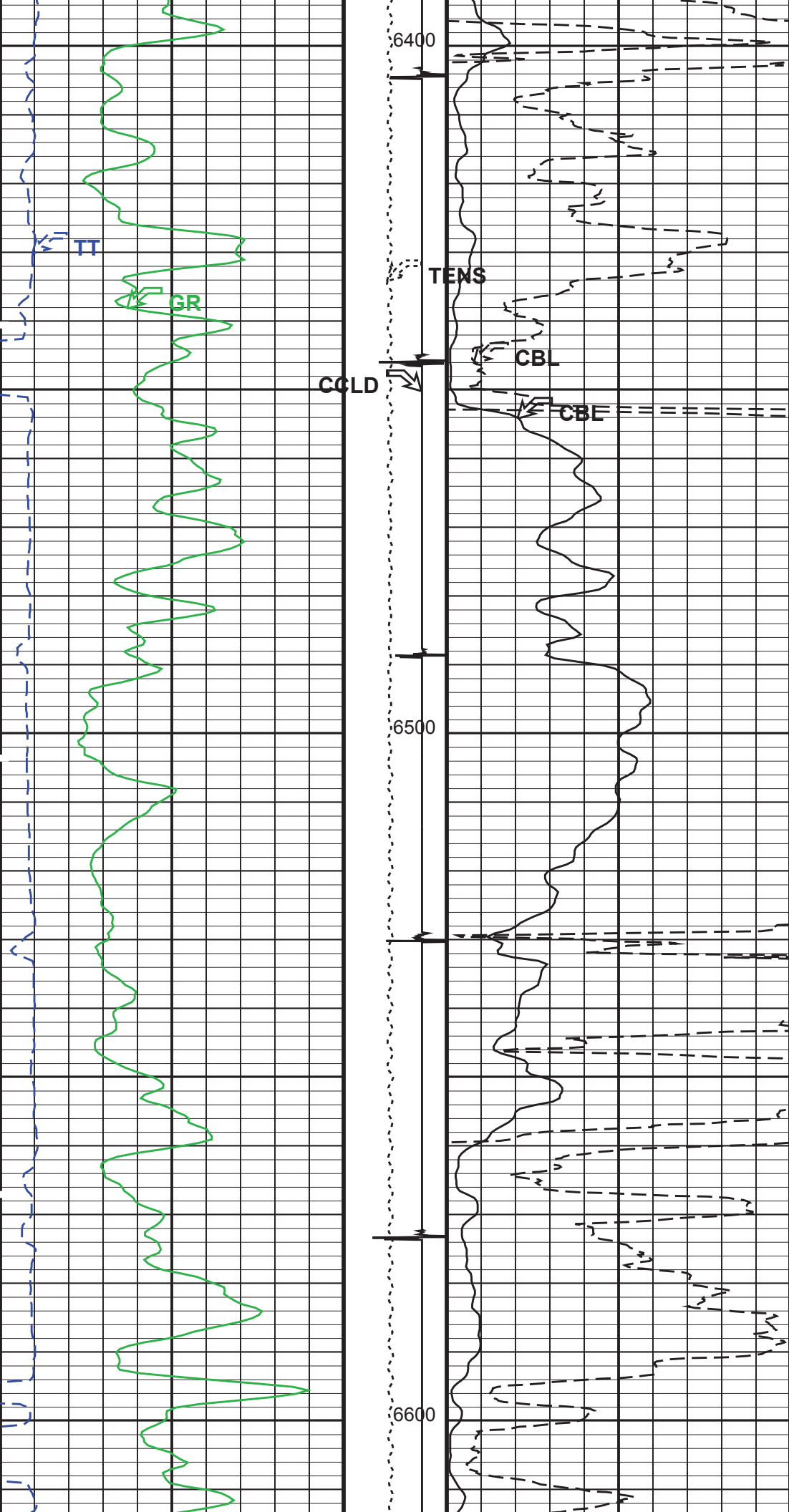




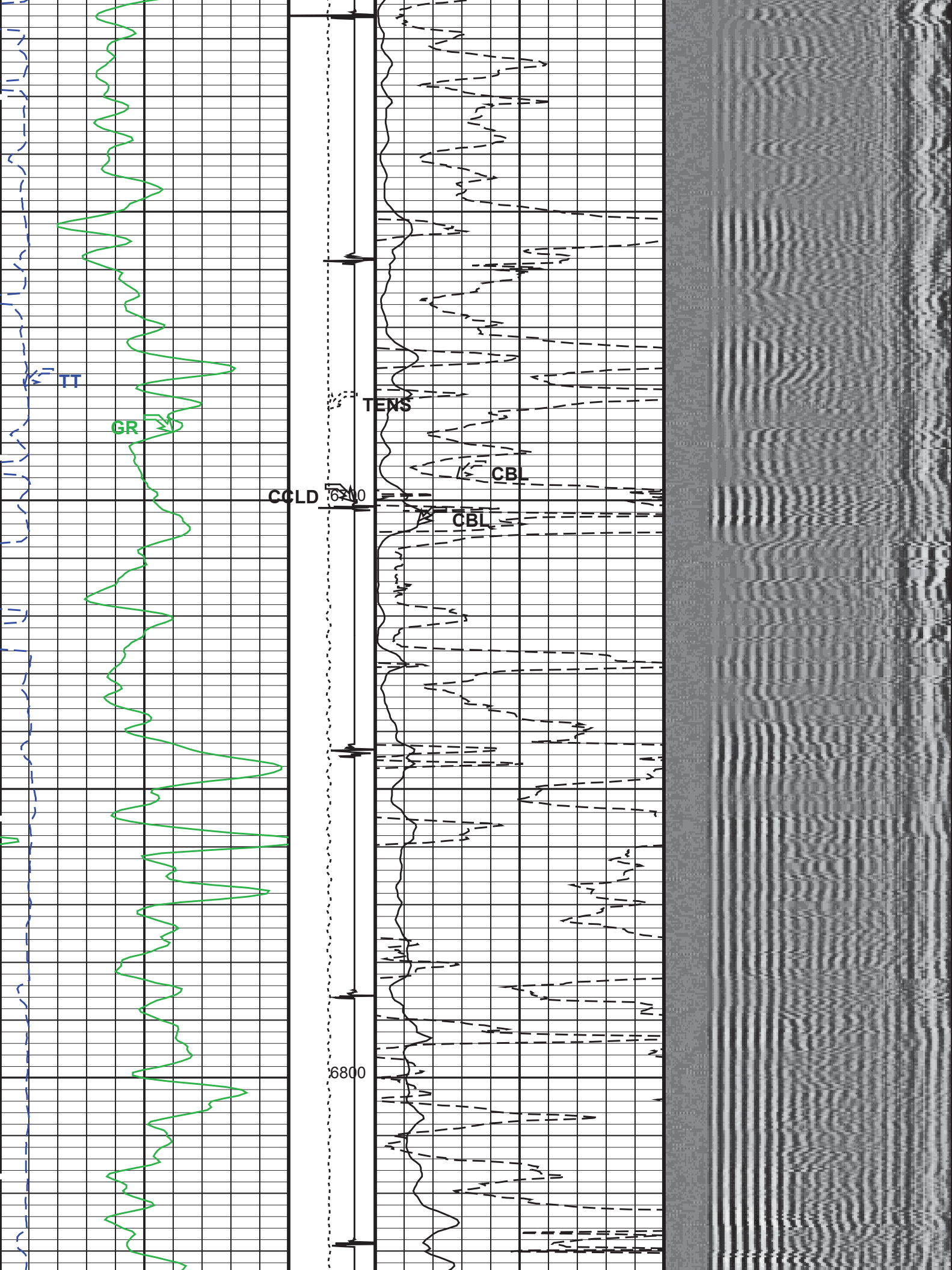


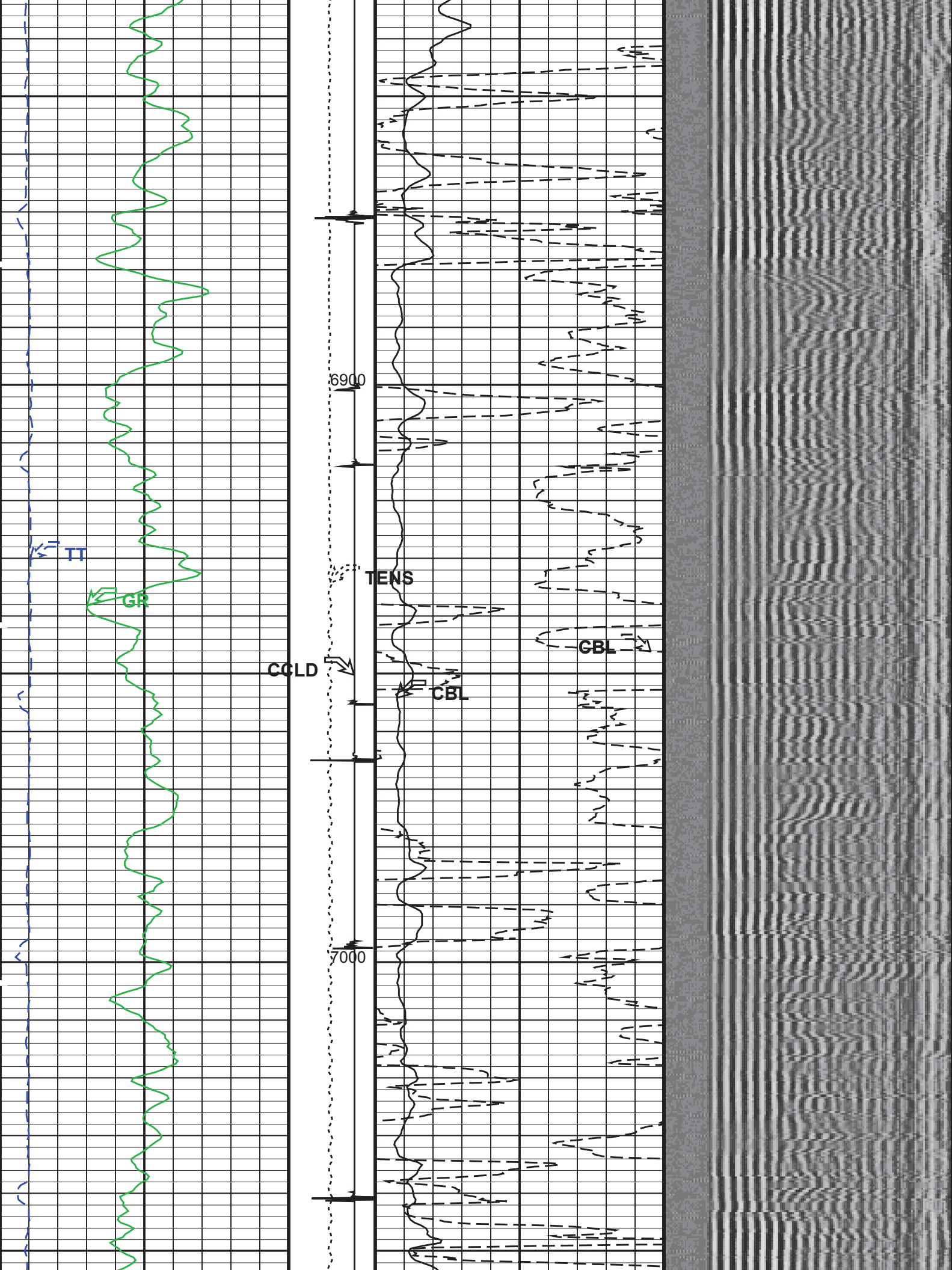




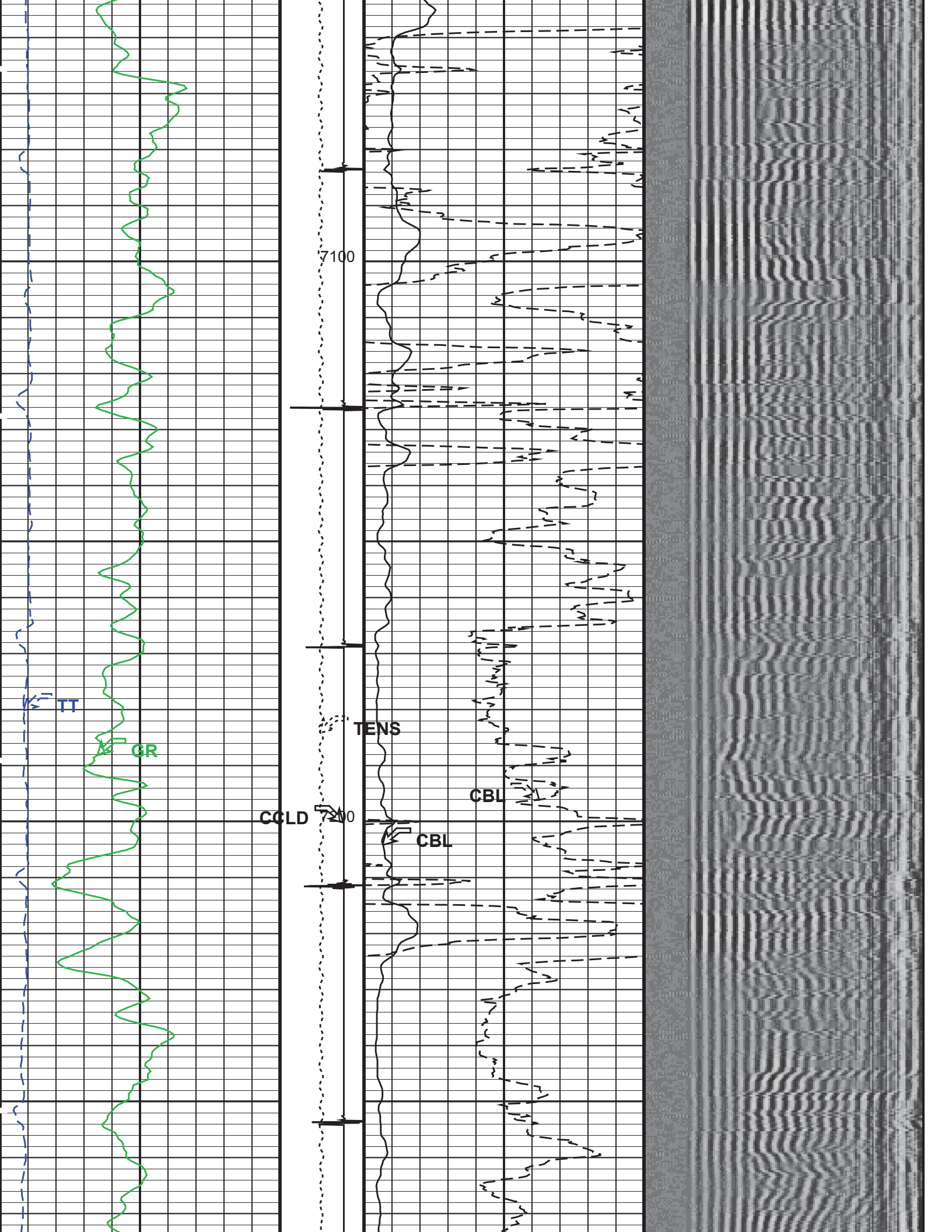


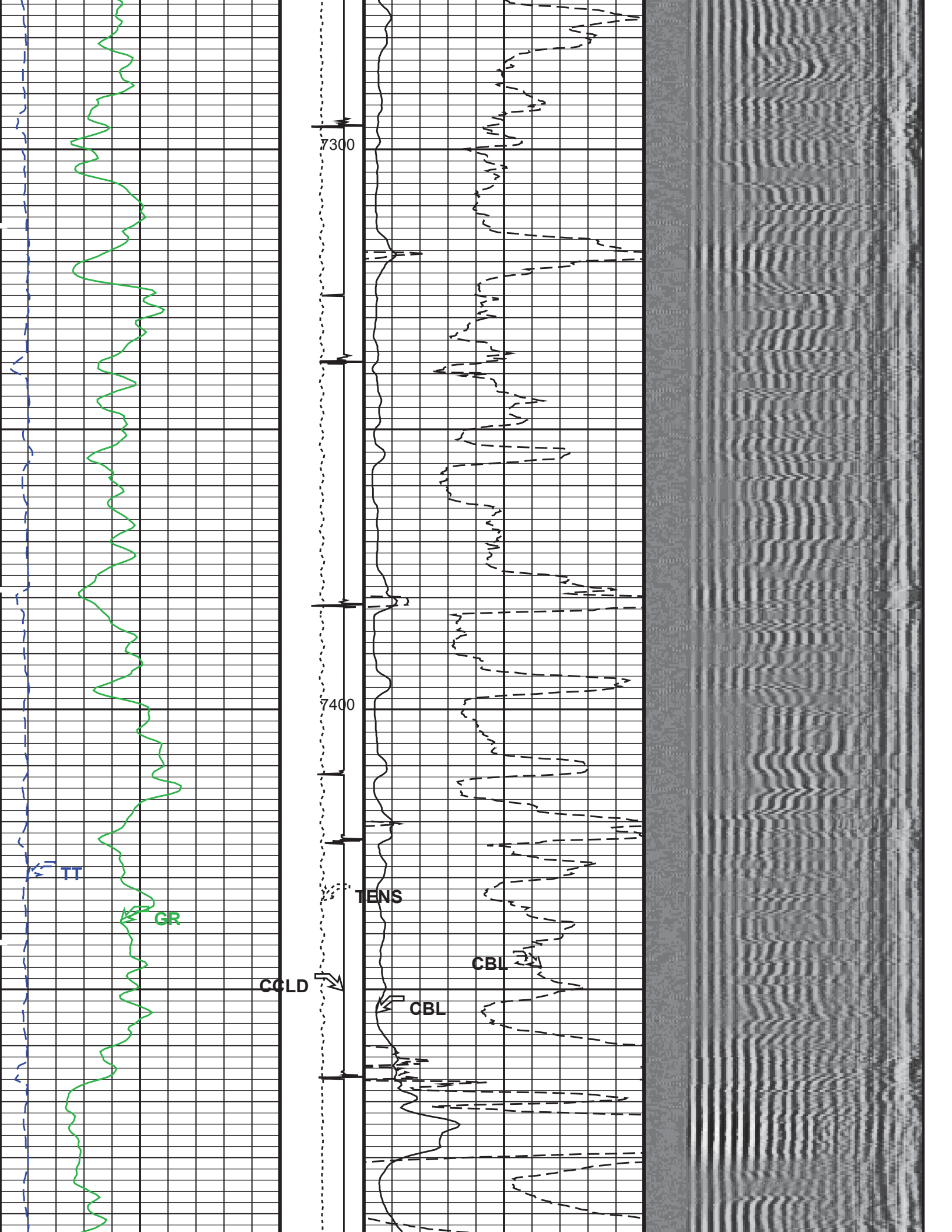


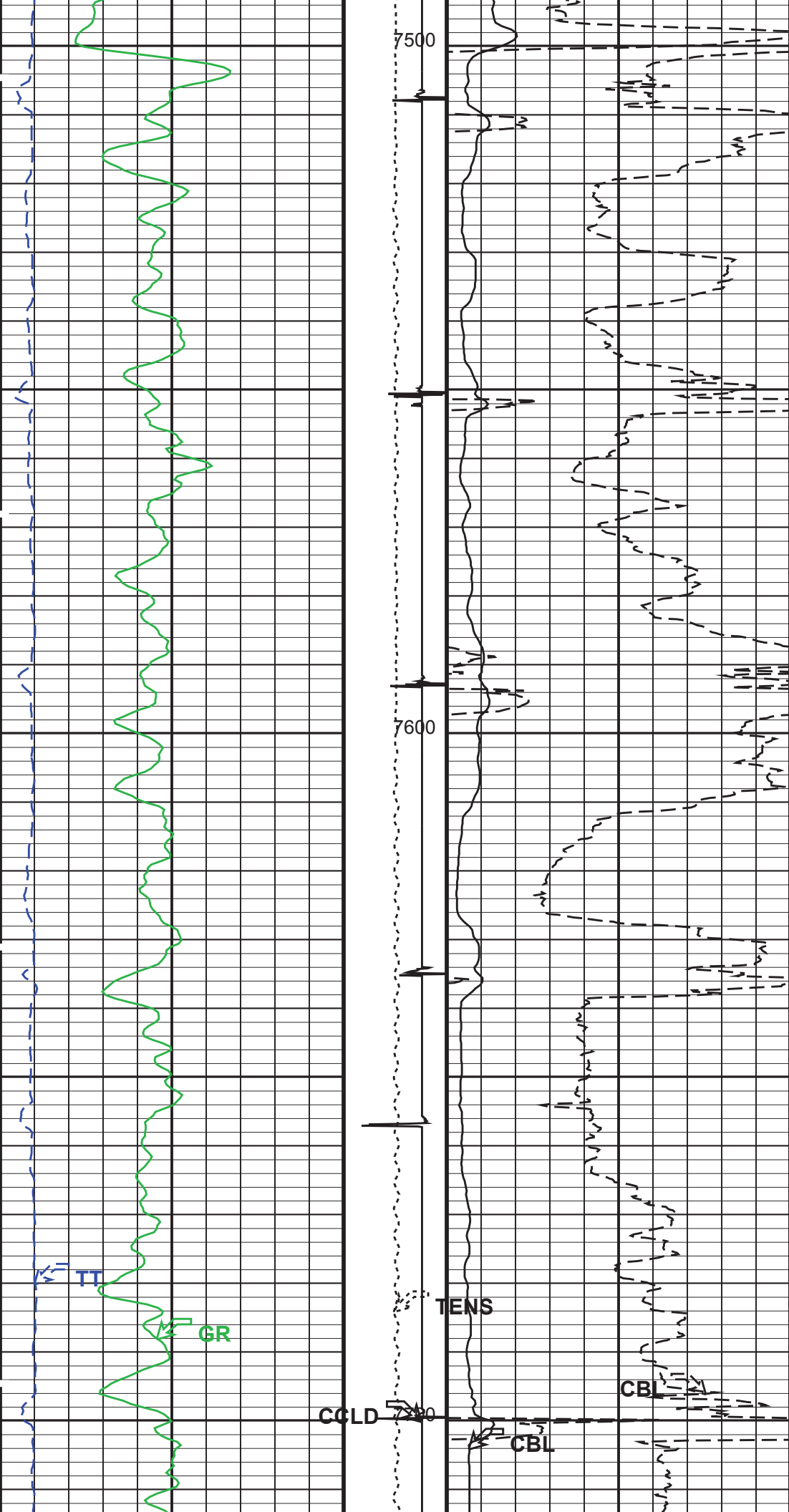




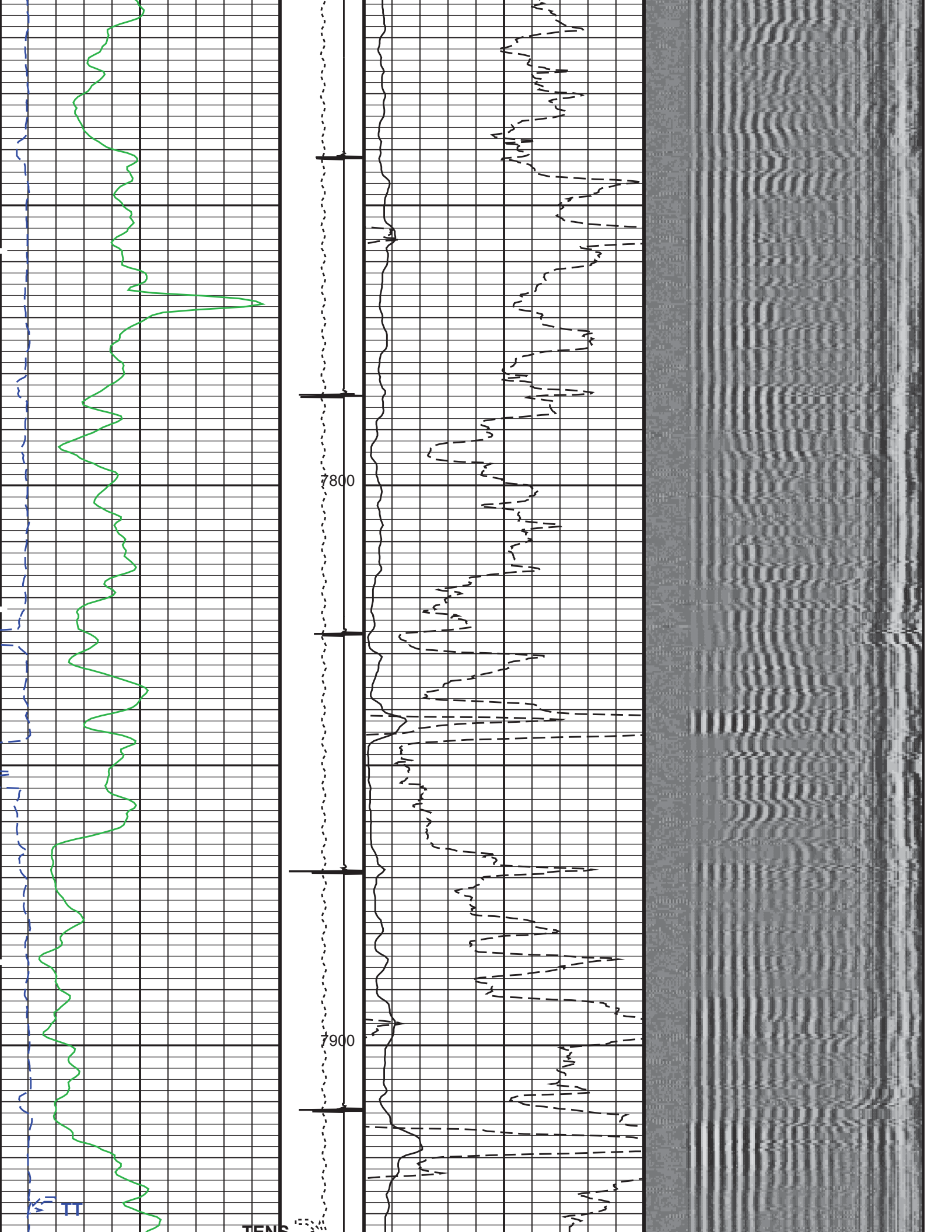




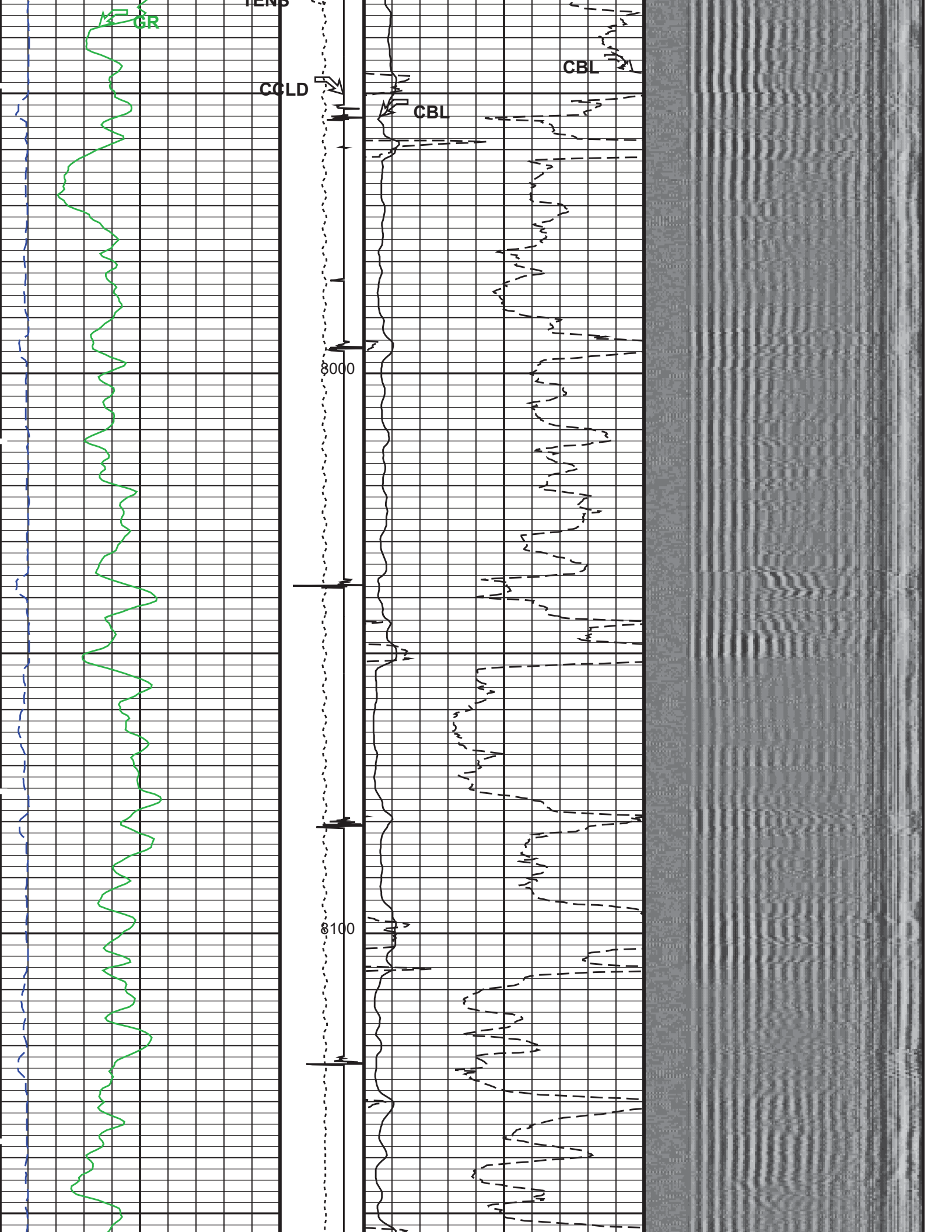


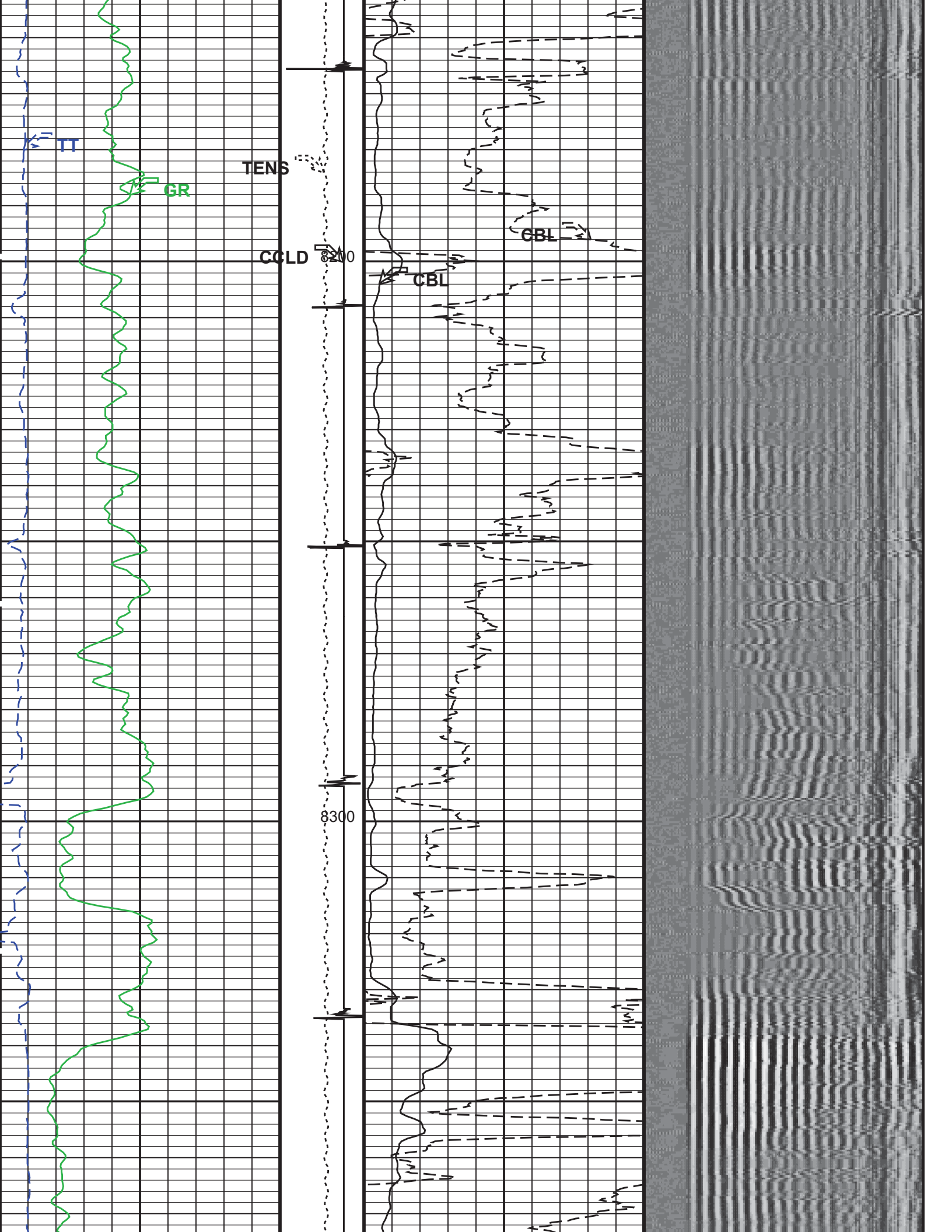


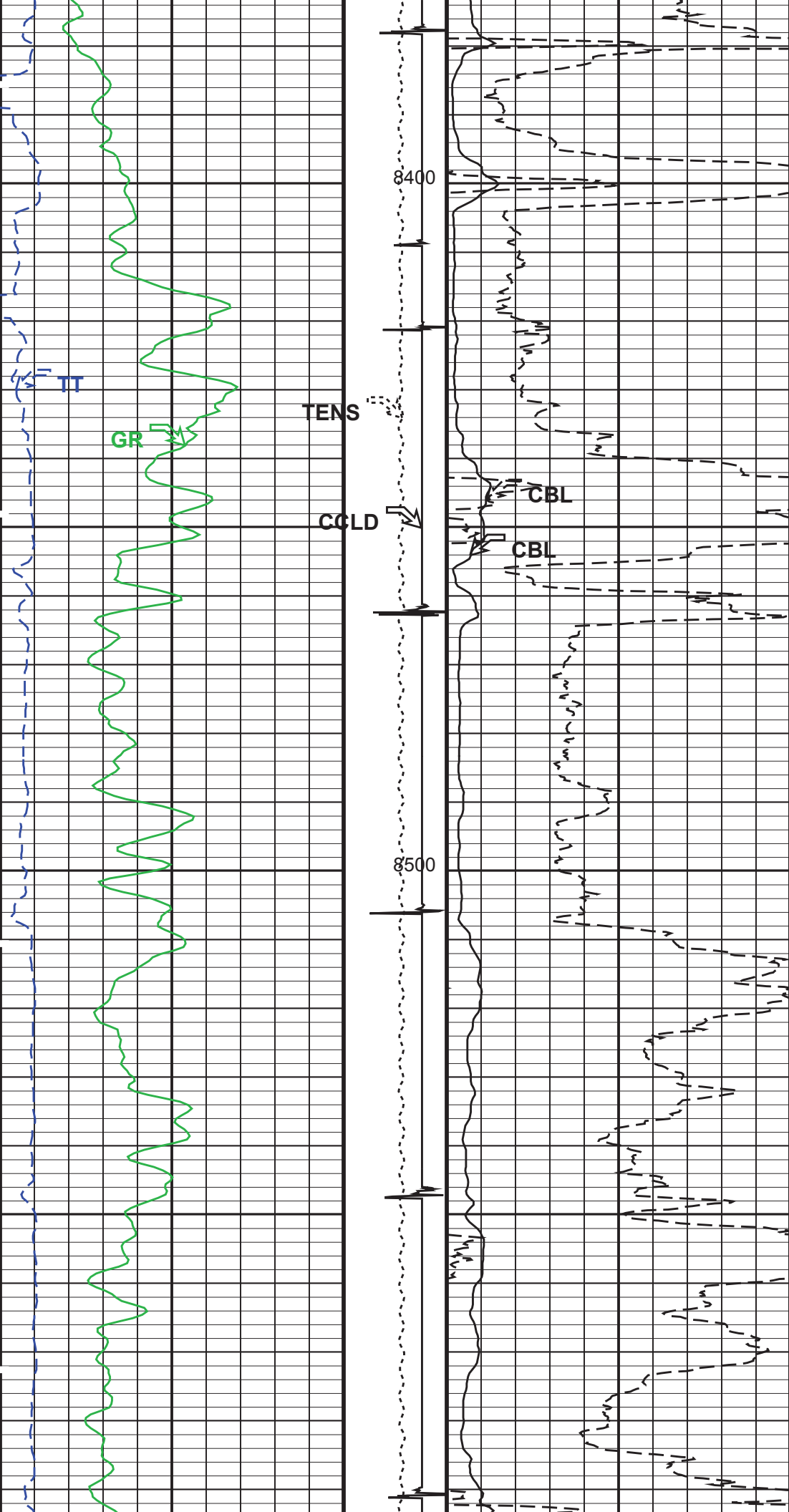




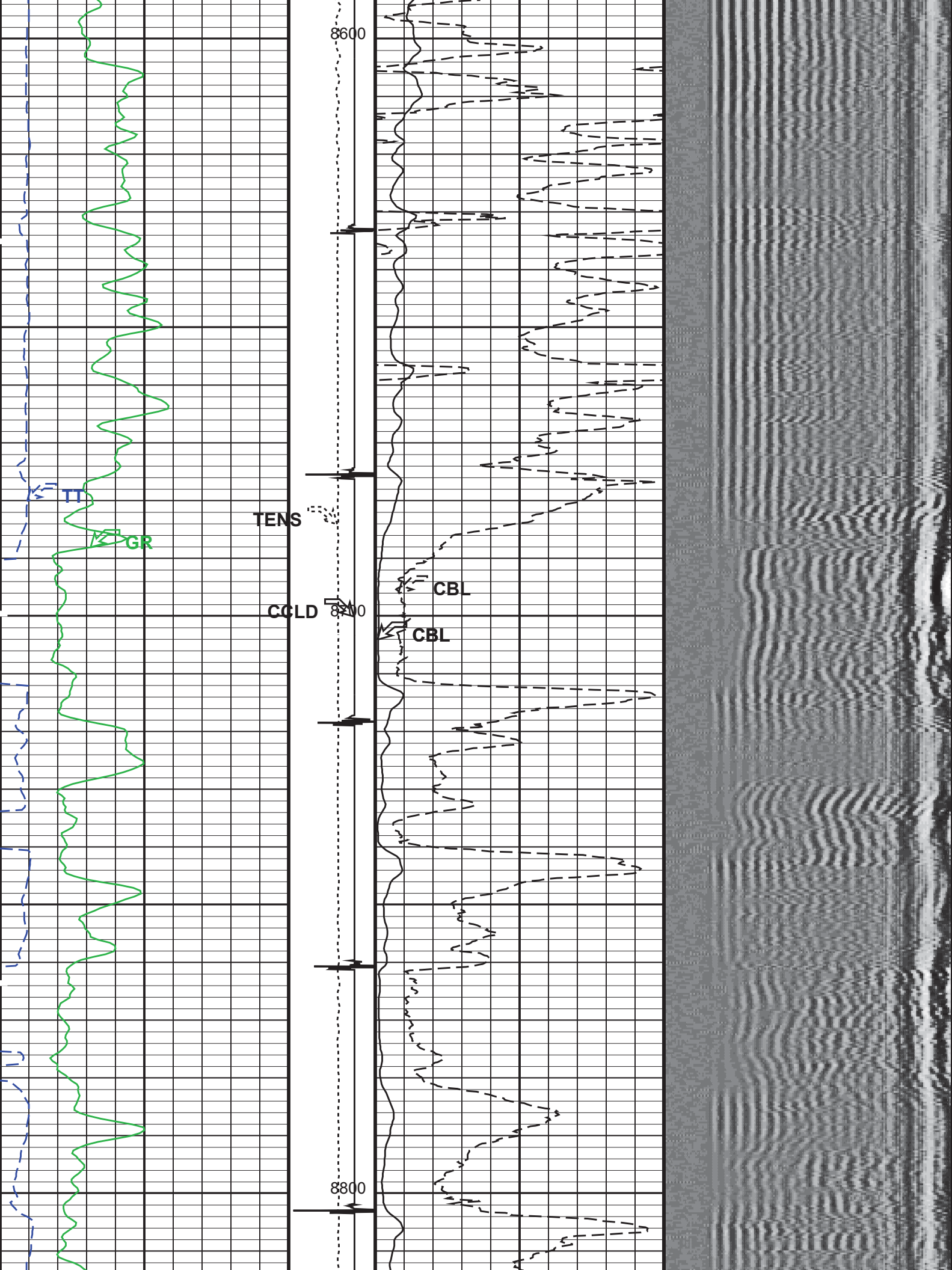




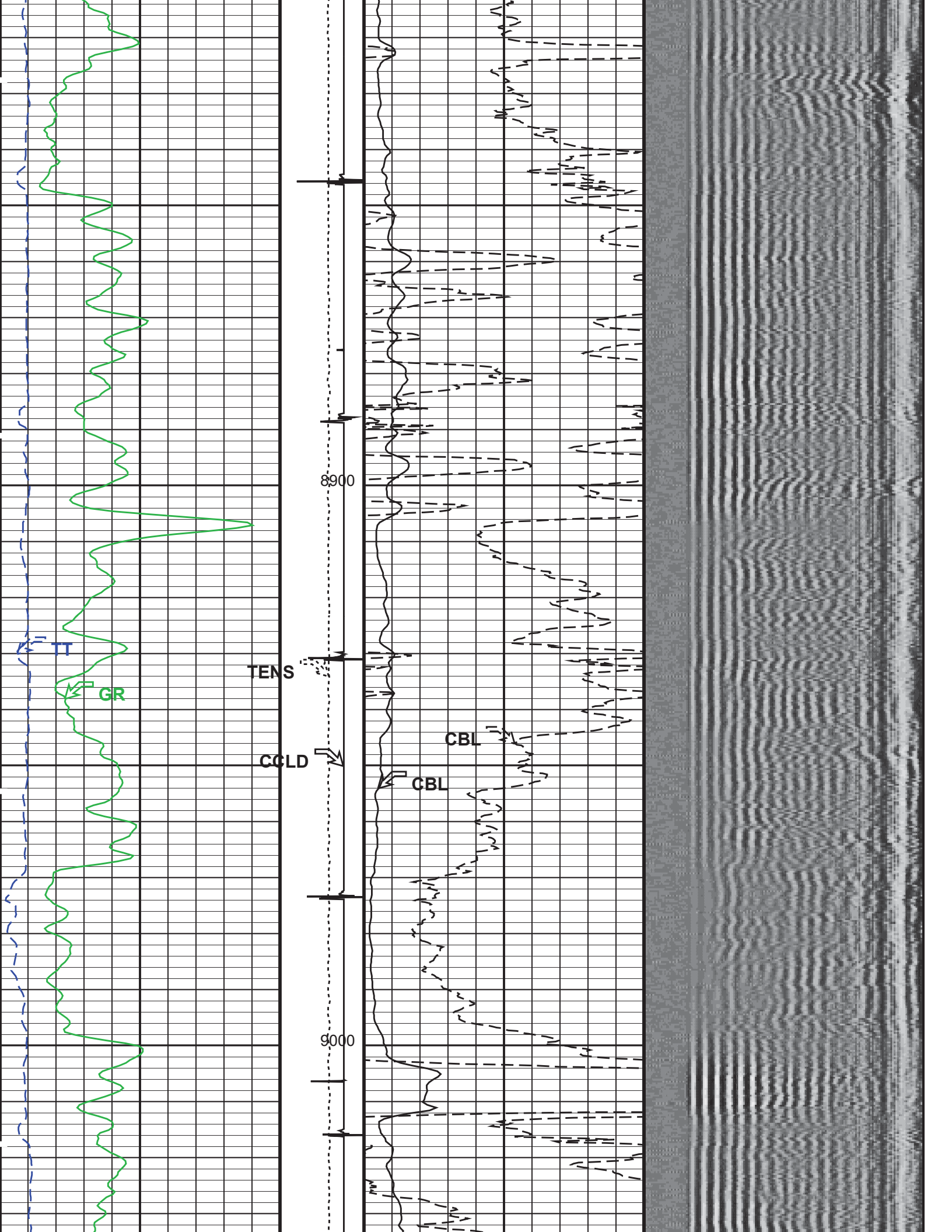


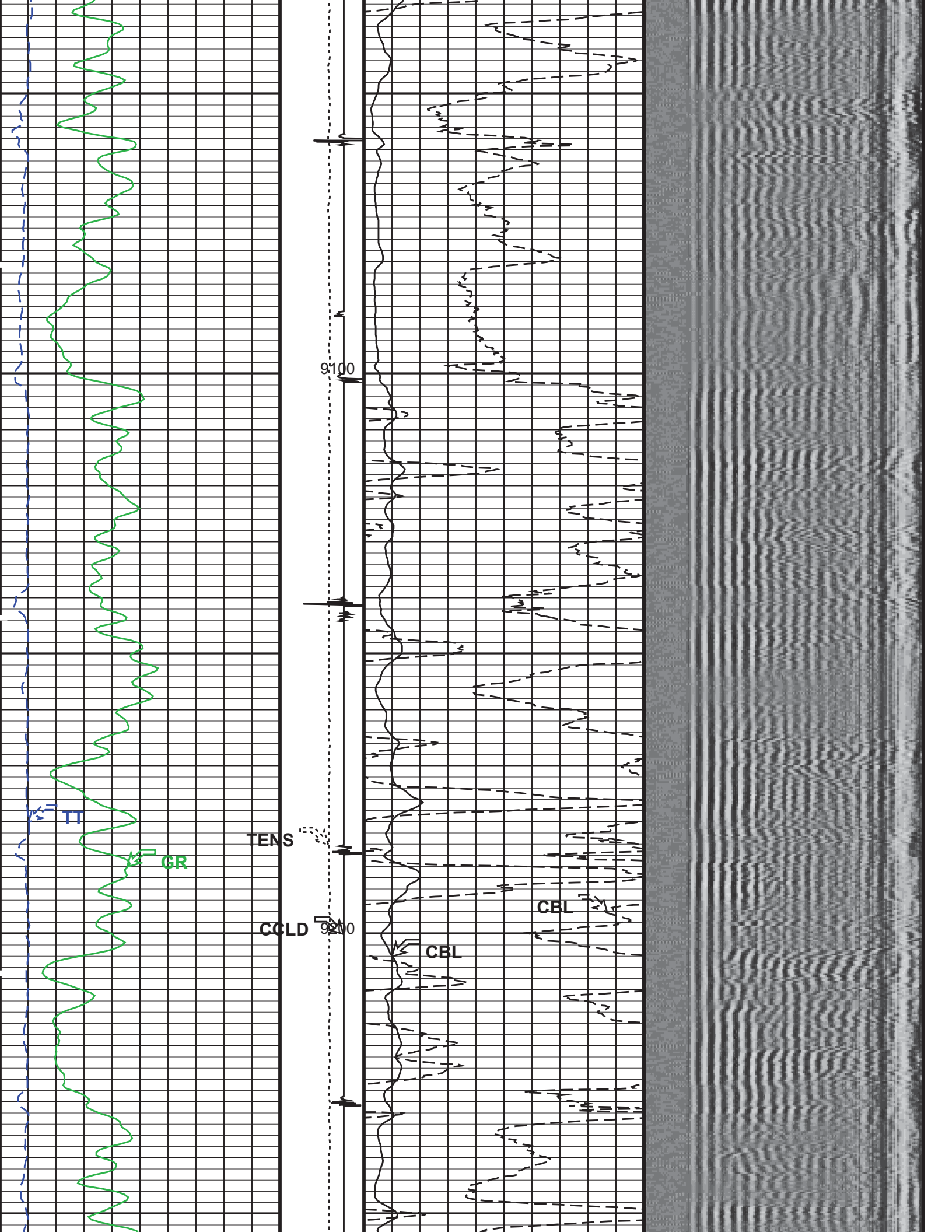


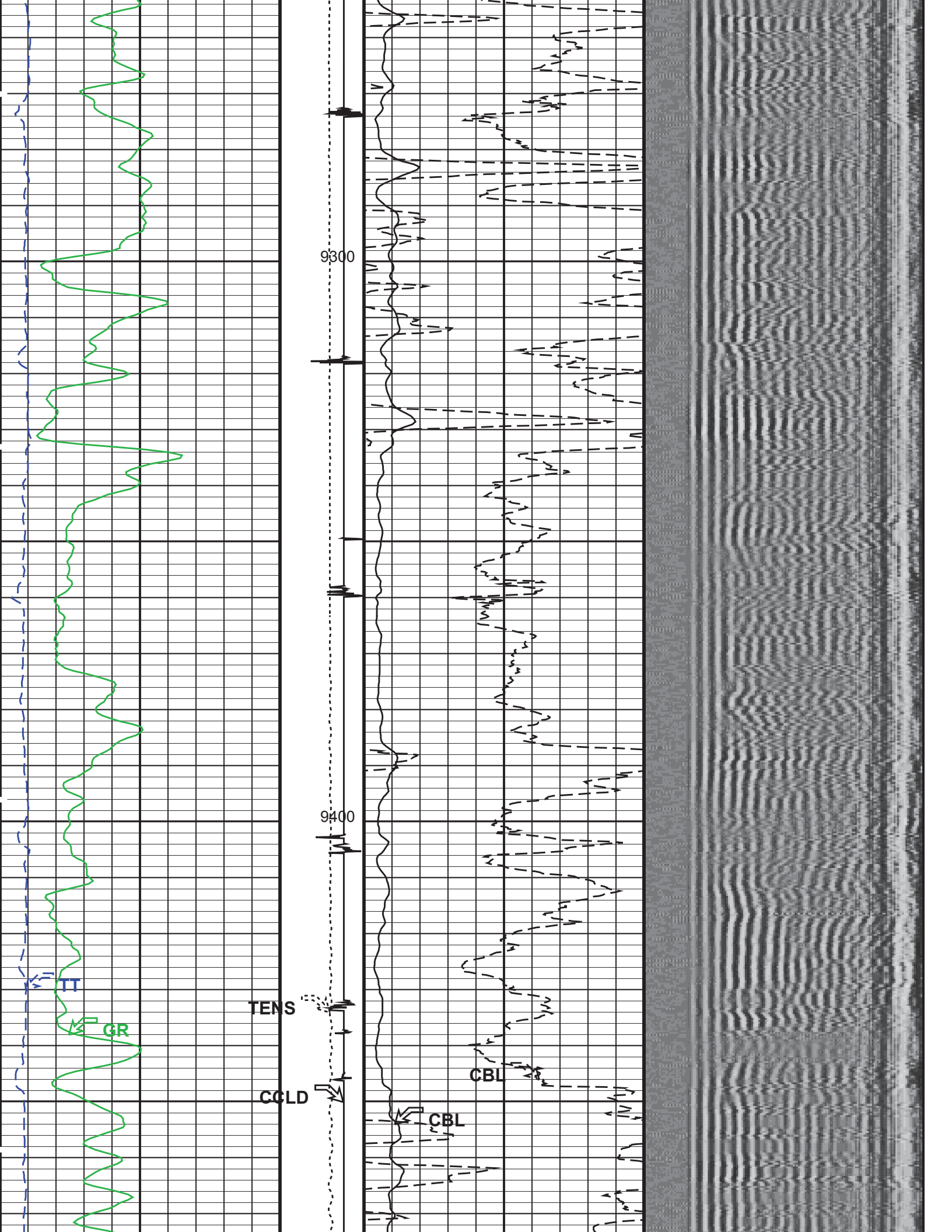




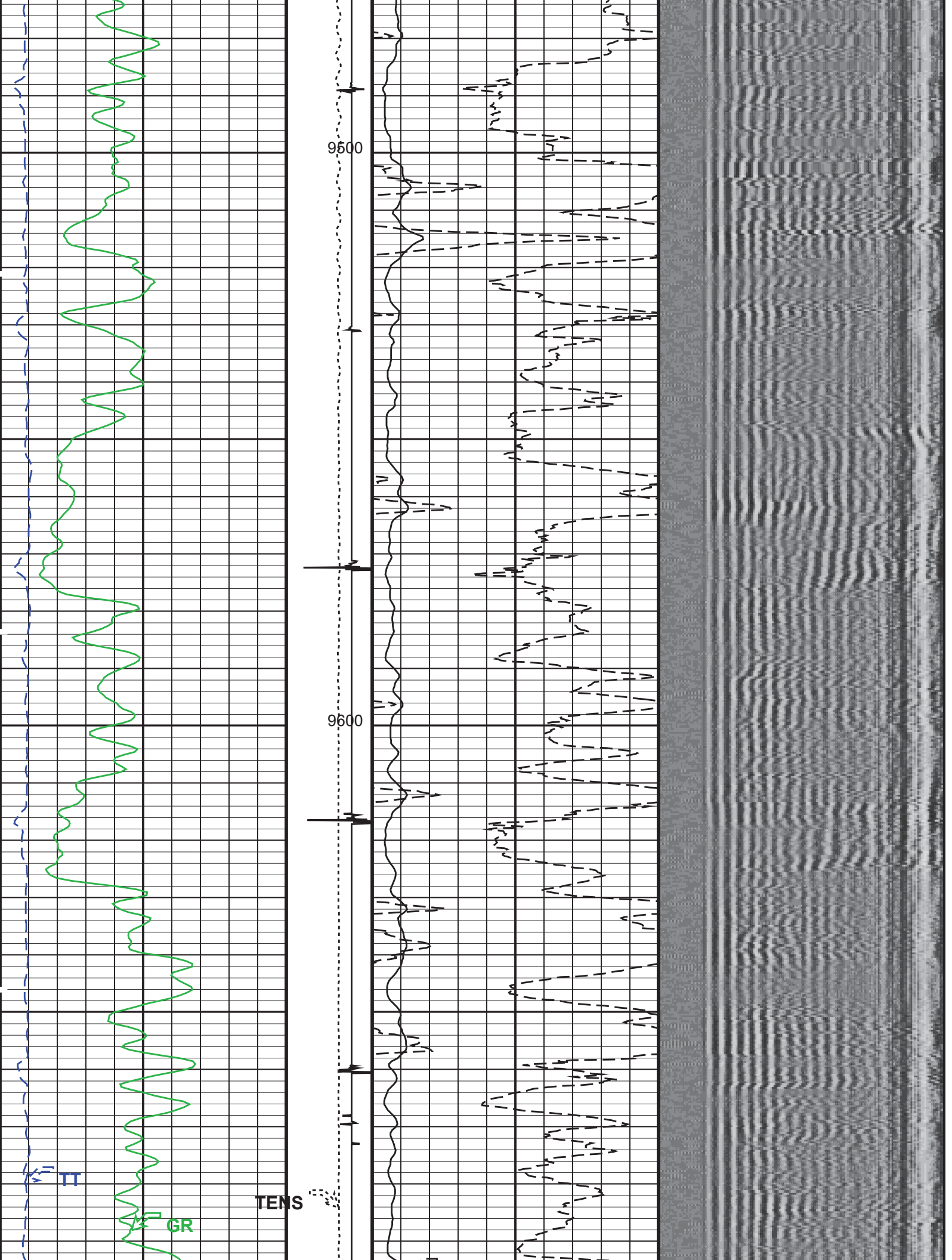




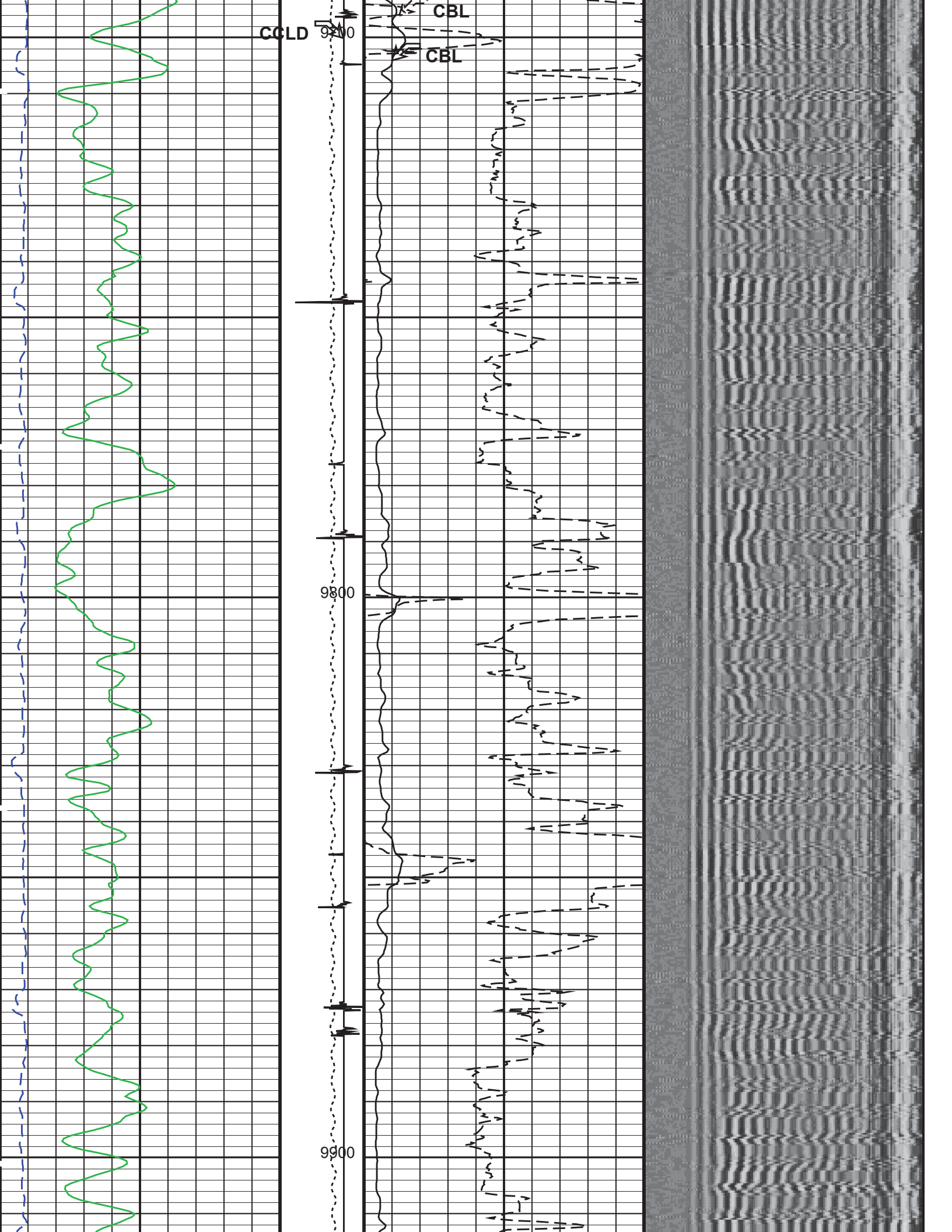


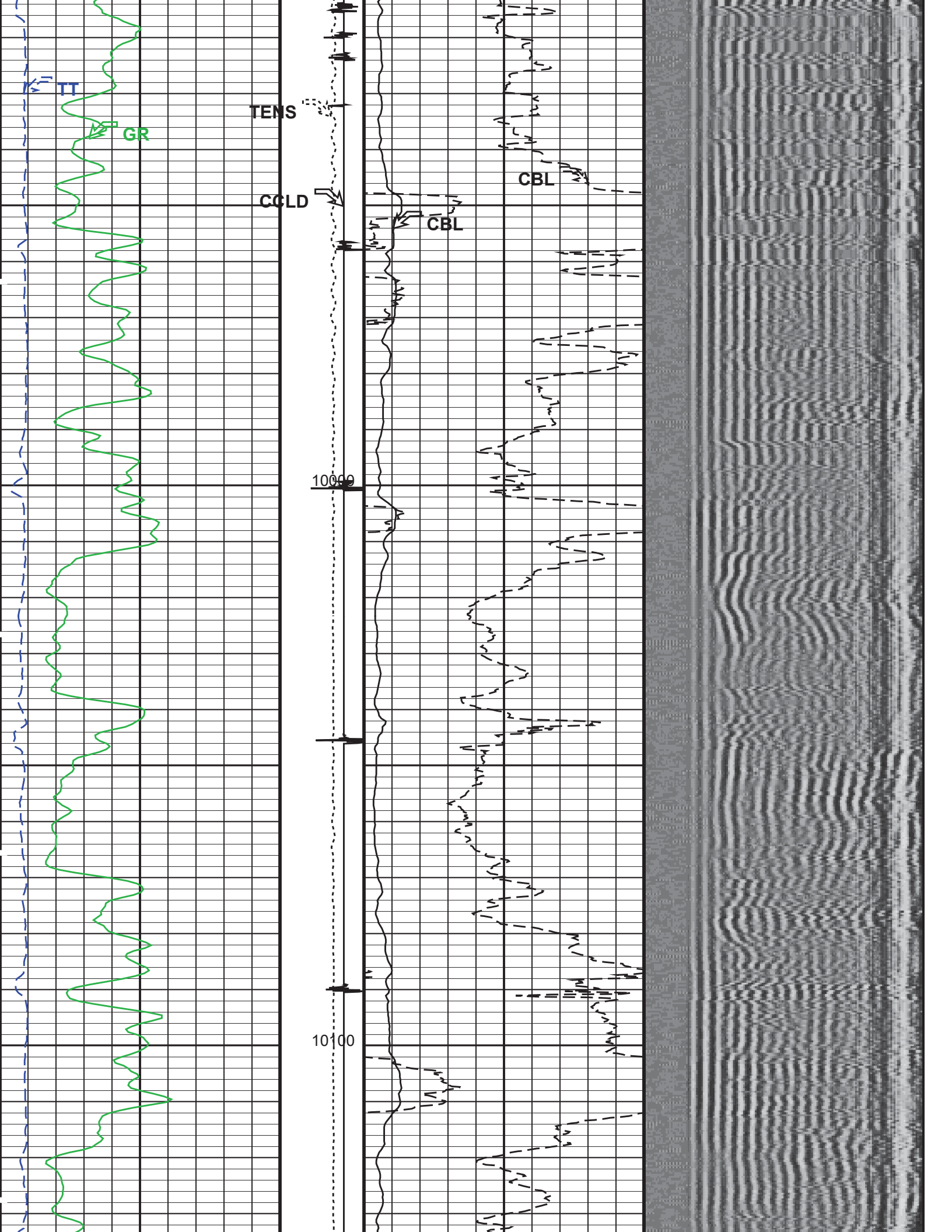


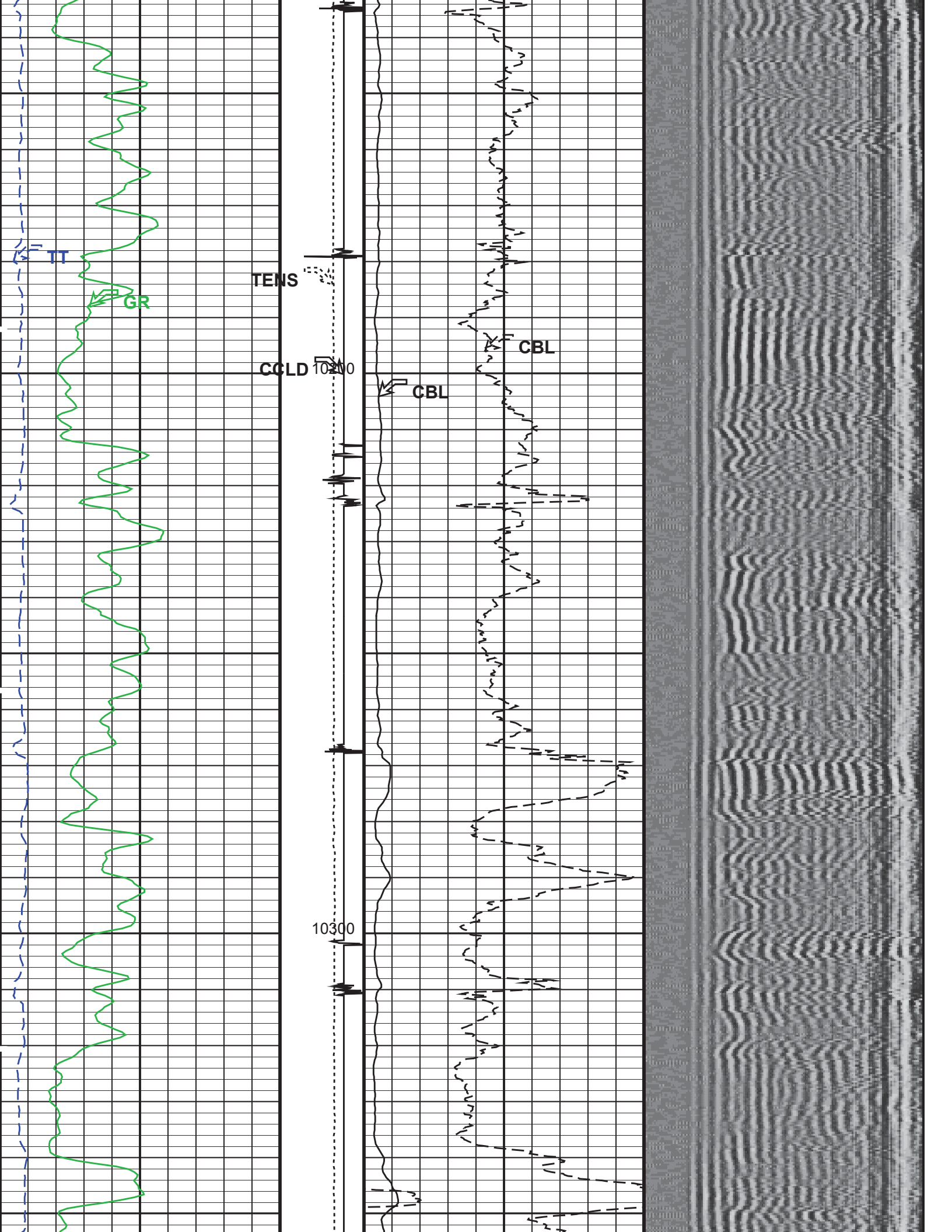




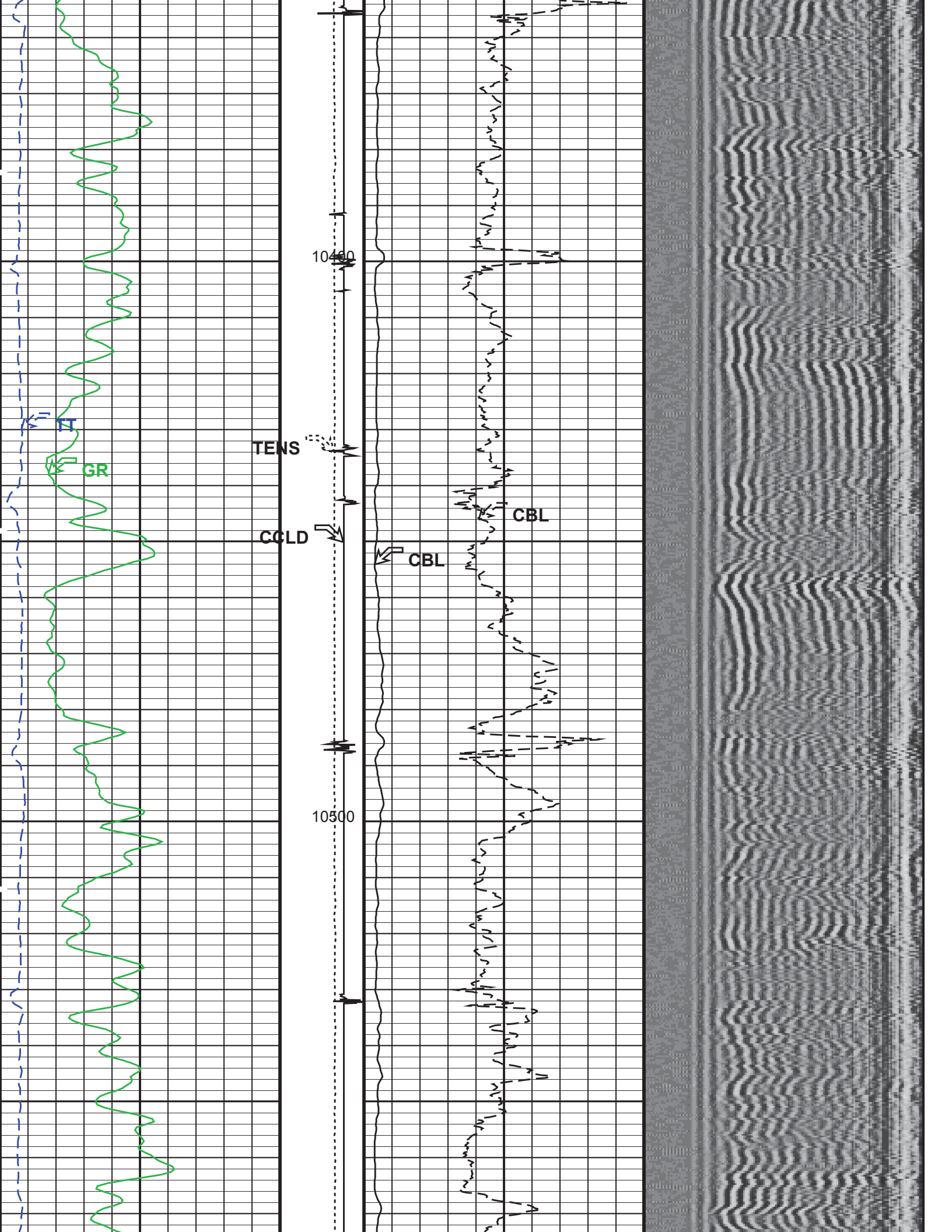




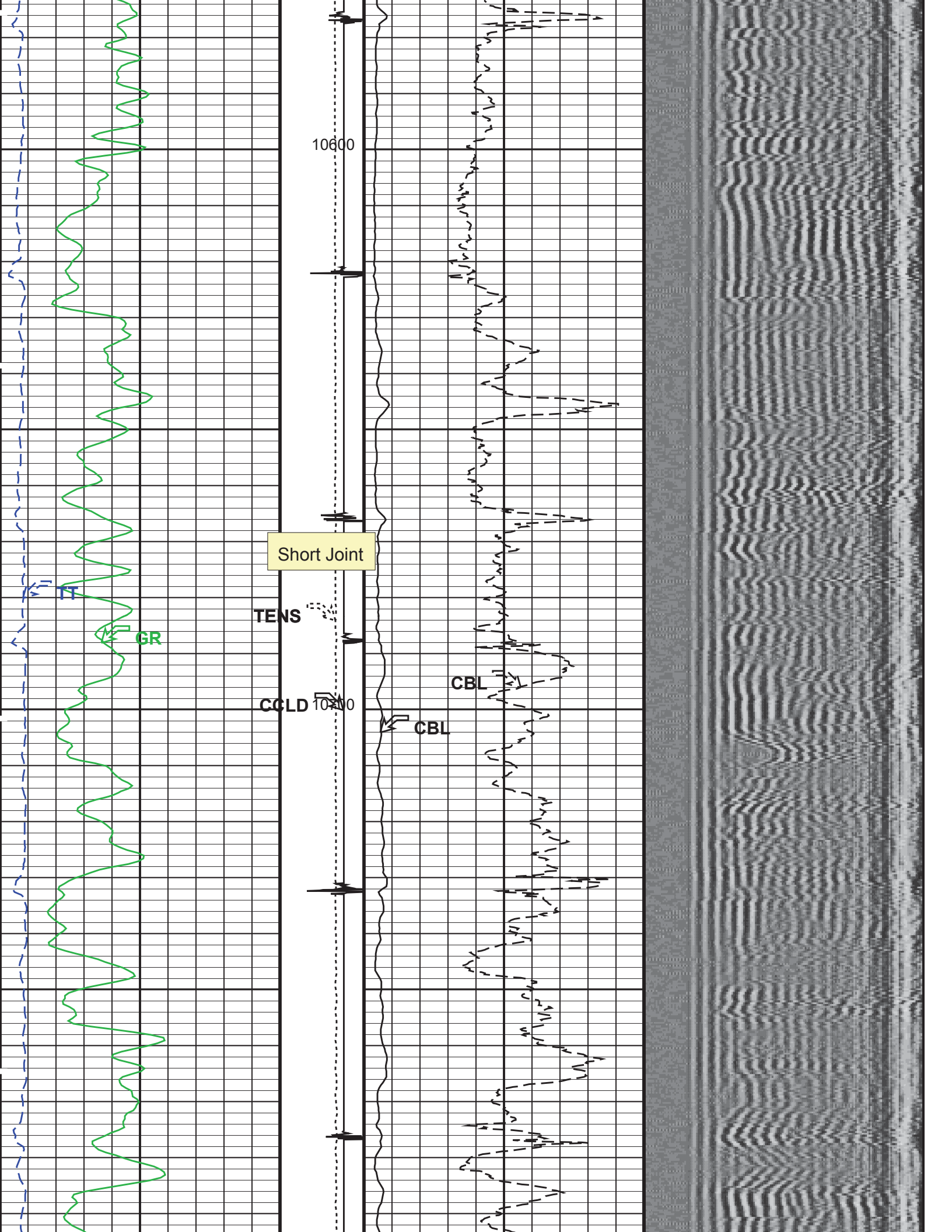


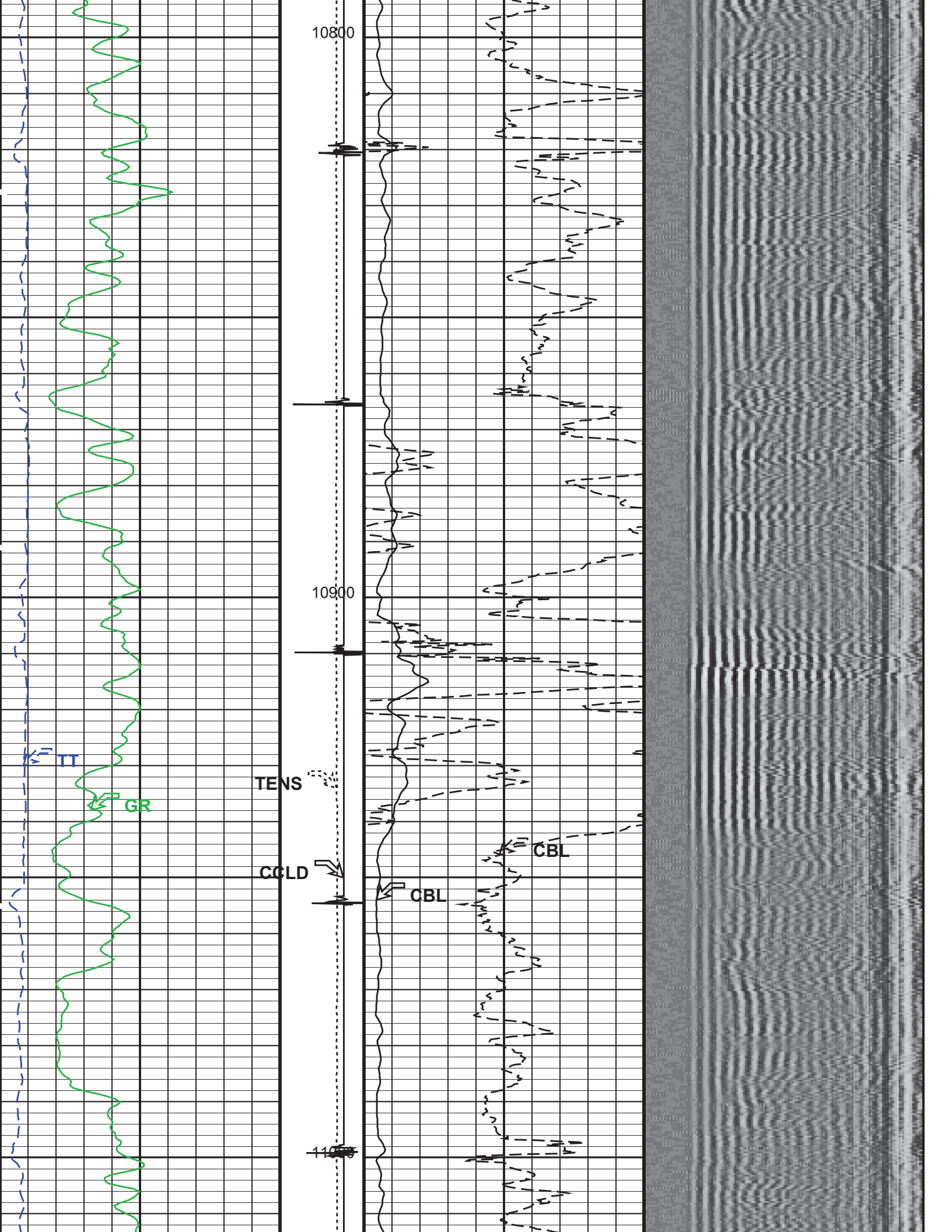


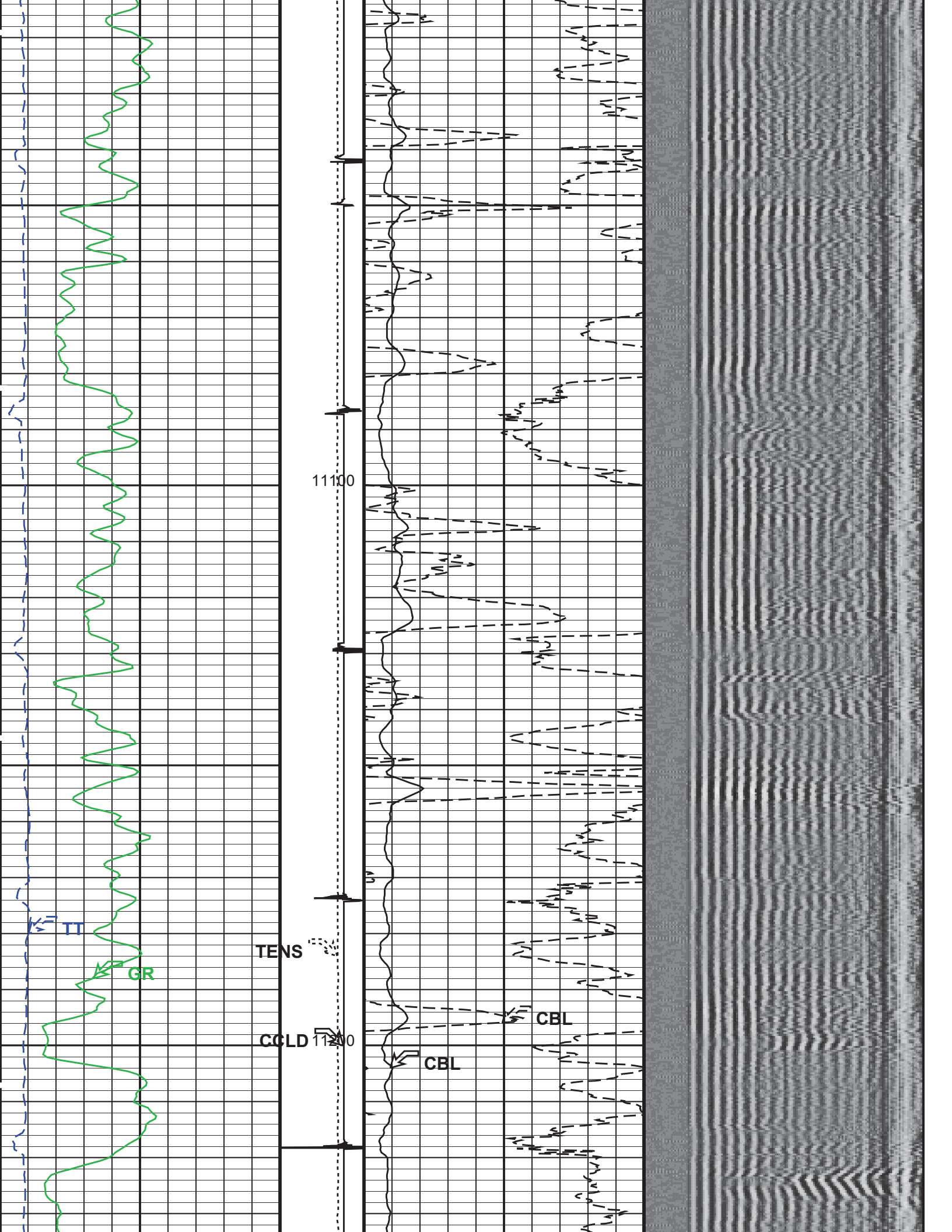




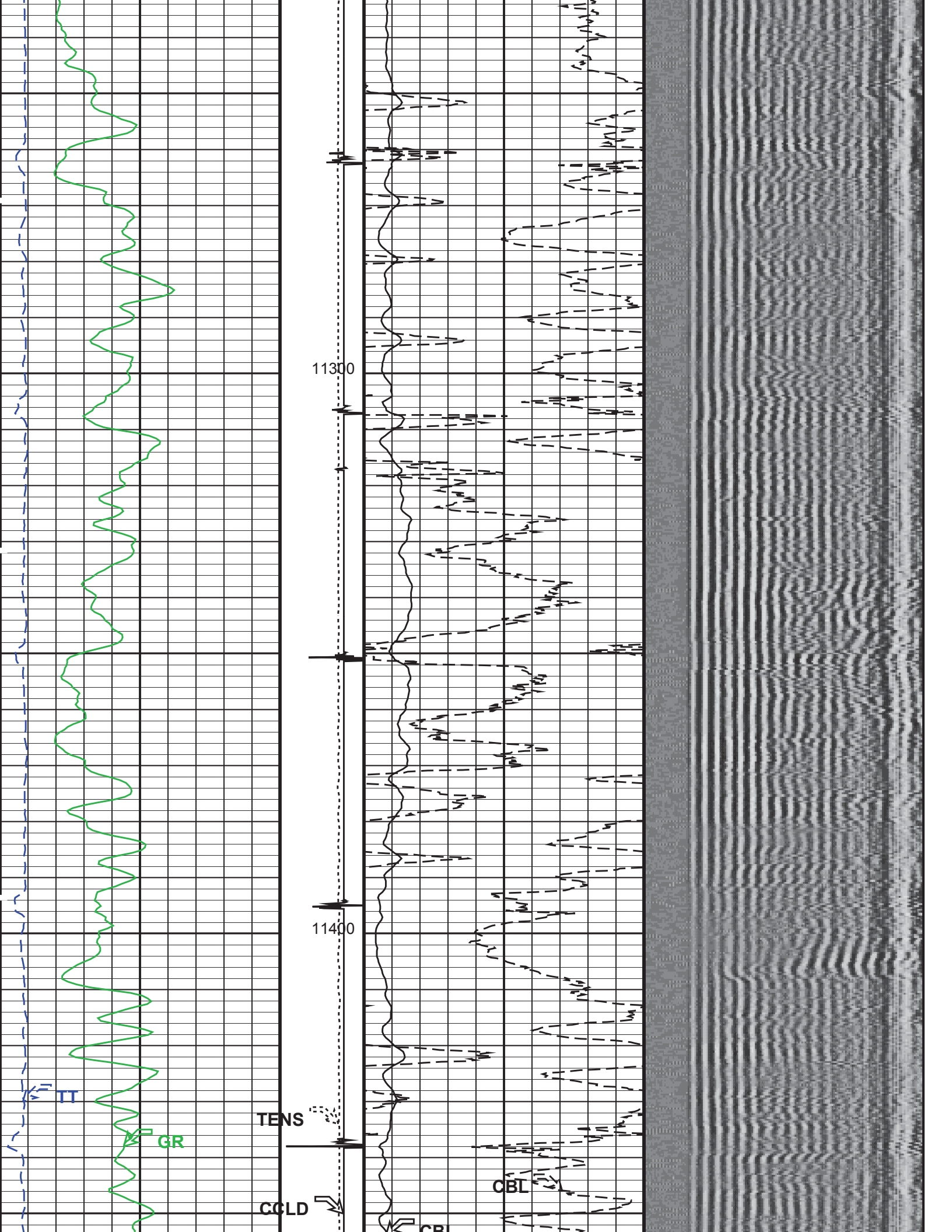




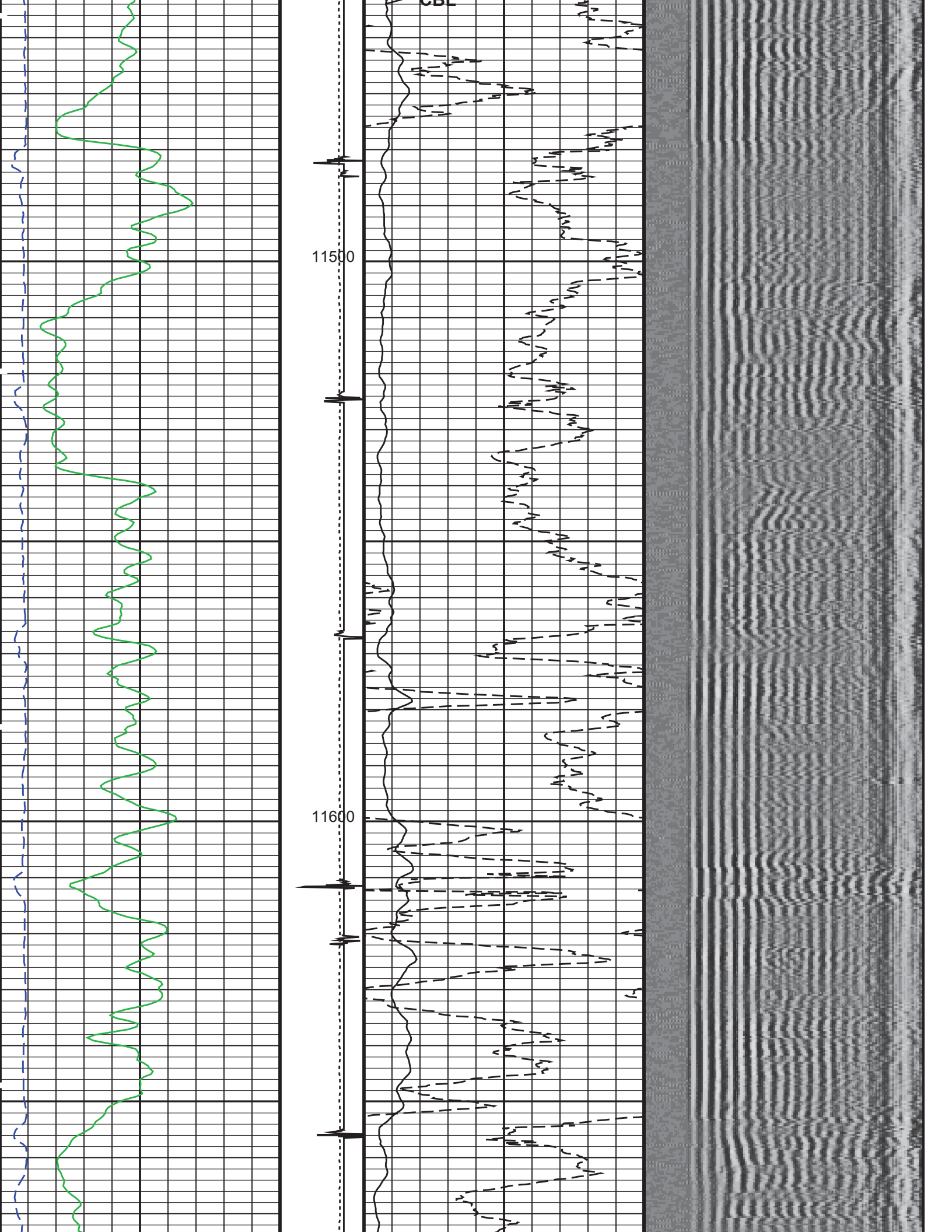


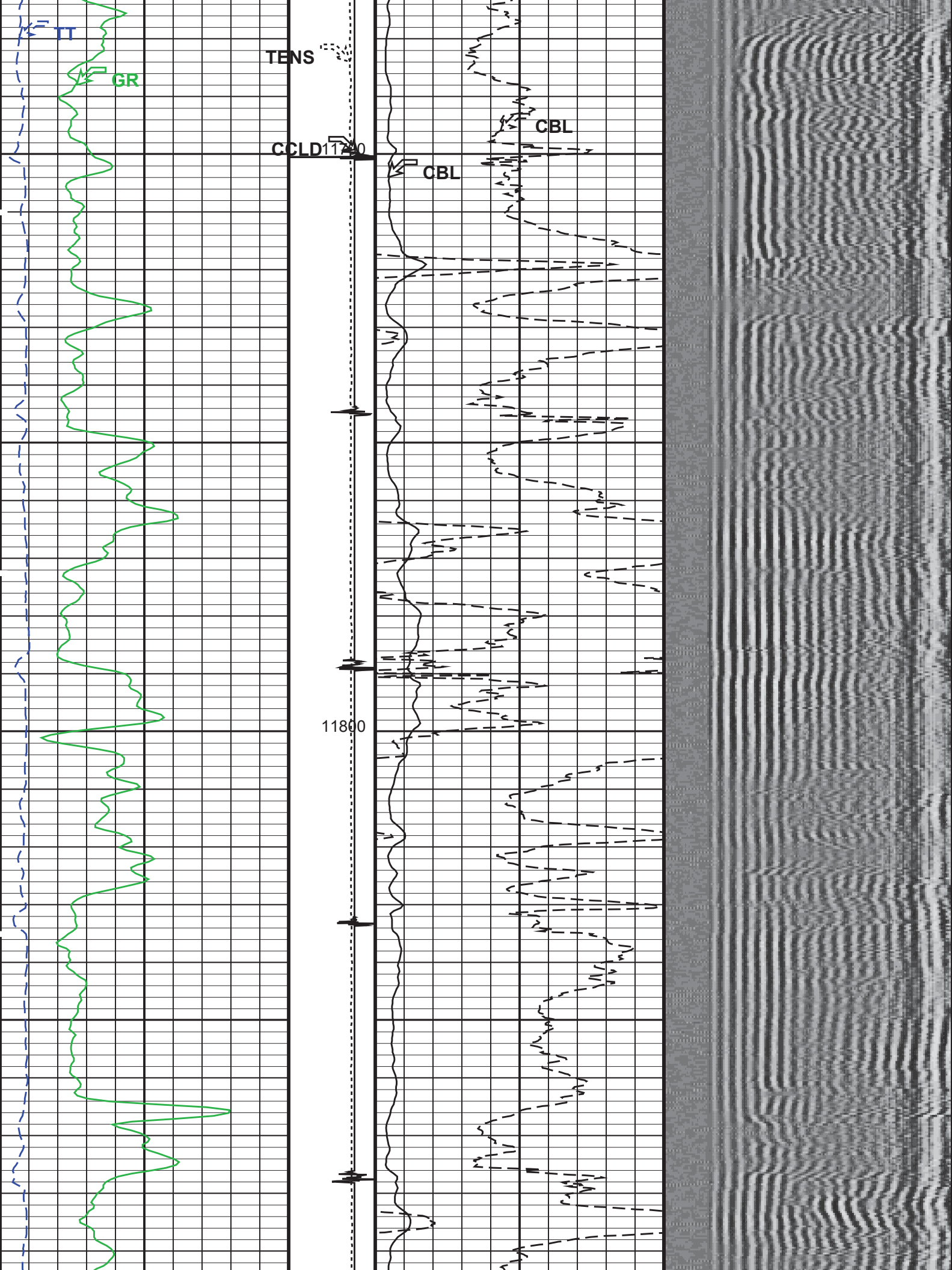


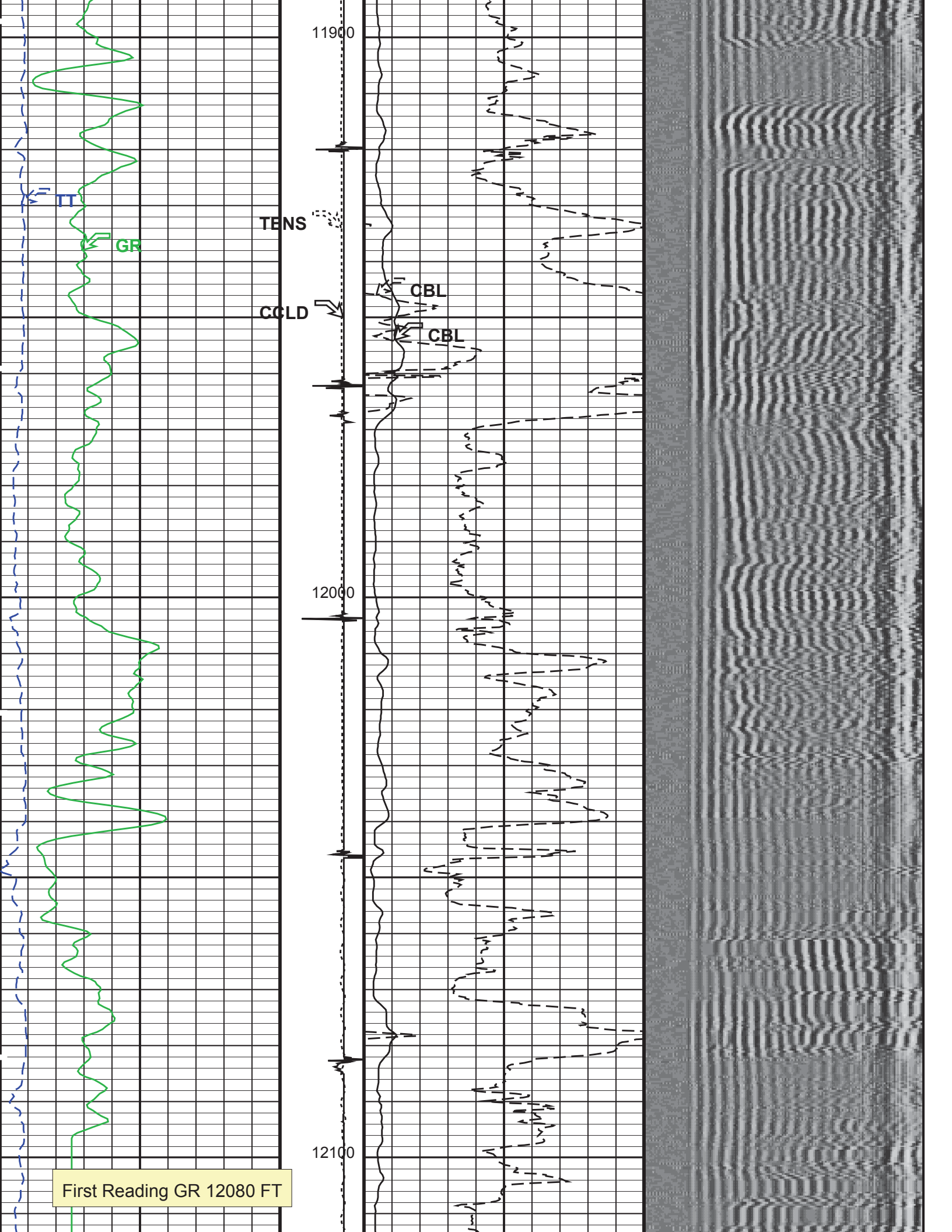




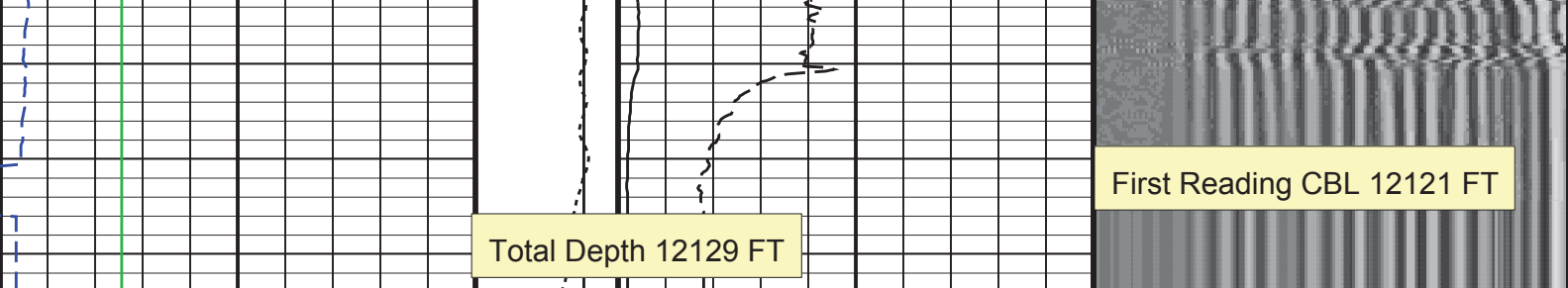












Gamma Ray (GR) (GAPI)	Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)	Min	Amplitude	Max
0	0	0	200	VDL VariableDensity (VDL) (US)	1200
150	2000	100			
Transit Time (TT) (US)	Discriminat ed CCL (CCLD)	CBL Amplitude (CBL) (MV)			
260	3 (V) -1	0			
160		10			

PIP SUMMARY		
Time Mark Every 60 S		
Format: CBL_VDL	Vertical Scale: 5" per 100'	Graphics File Created: 18-Mar-2013 16:11

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 8179		
Current Casing Size	4.50000 IN		
Casing Weight	13.5000 LB/F		
Expected CBL Amplitude in Free Pipe Section	81 MV	Minimum Sonic Amplitude	1.28673 MV (100% Cement)
			2.94636 MV (80% Cement)
		MAP Minimum Sonic Amplitude	7.12449 MV (100% Cement)
			12.0838 MV (80% Cement)
Master Calibration (Normalization)		Before Calibration (Adjustment)	
Date of Master Calibration	6-MAR-2012		
CBL Correction Factor	0.0704263	CBL Adjustment Factor (CBAF)	0.800000
MAP 1 Correction Factor	0.0993191	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.0941329		
MAP 3 Correction Factor	0.101552		
MAP 4 Correction Factor	0.114415		
MAP 5 Correction Factor	0.127992		
MAP 6 Correction Factor	0.121190		
MAP 7 Correction Factor	0.112867		
MAP 8 Correction Factor	0.102913		

Parameters		
DLIS Name	Description	Value
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD		
BILI	Bond Index Level for Zone Isolation	0.8
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	223.206 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	337.206 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	81 MV

CMTF	CBL Cement Type Compensation Factor	1	SCAN
CMTD	SCMT Slow Channel Multiplexer Mode	LOG	LOG
CMTM	SCMT Operating Mode	VCC	VCC
CSCS	SCMT Slow Channel Index	0.300677	IN
CTHI	Casing Thickness	189	US/F
DTF	Delta-T Fluid	0	DB/F
FATT	Acoustic Attenuation due to Fluid	0.924277	
FCF	CBL Fluid Compensation Factor	2.94636	MV
GOBO	Good Bond	PEAK	
MAPD	SCMT MAP Peak Detection Mode	166.206	US
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	30	MV
MAPT	SCMT MAP Fixed Threshold Level	14.0905	DB/F
MATT	Maximum Attenuation	1	
MCCF	MAP Cement Type Compensation Factor	1.25	FT
MCI	Minimum Cemented Interval for Isolation	7.12449	MV
MMSA	MAP Minimum Sonic Amplitude	1.28673	MV
MSA	Minimum Sonic Amplitude	OFF	
PEDE	Peak Detection On/Off Switch in Playback	5	
VDLG	VDL Manual Gain	6.8	MRAY
ZCMT	Acoustic Impedance of Cement		
System and Miscellaneous			
CWEI	Casing Weight	13.50	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	12129	FT

### Input DLIS Files

SCMT\_RST\_HBMS\_004LUP      FN:3      18-Mar-2013 16:08      12144.0 FT      12.5 FT

### Output DLIS Files

DEFAULT      SCMT\_RST\_HBMS\_002PUP      FN:1      PRODUCER      18-Mar-2013 16:11

**Schlumberger**

**REPEAT ANALYSIS CBL VDL**

MAXIS Field Log

Company: ENCANA OIL & GAS (USA) INC      Well: SGU 8512C-24 (L24 496)

### Input DLIS Files

SCMT\_RST\_HBMS\_002LUP      FN:1      18-Mar-2013 16:07      7805.0 FT      7435.0 FT  
 DEFAULT      SCMT\_RST\_HBMS\_002PUP      FN:1      PRODUCER      18-Mar-2013 16:11      12144.0 FT      12.5 FT

### Output DLIS Files

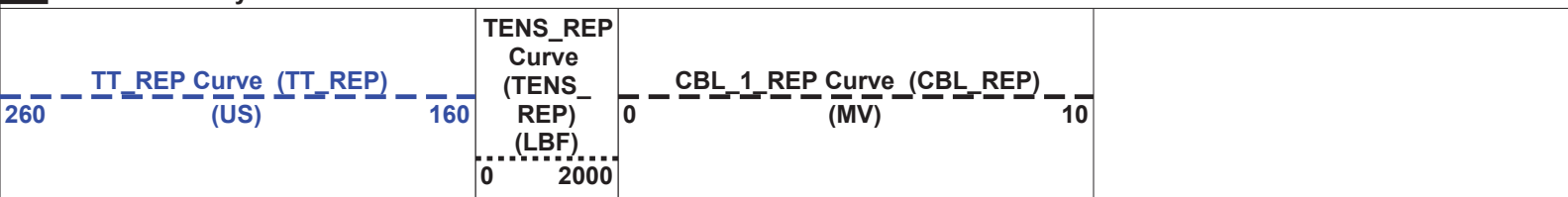
DEFAULT      SCMT\_RST\_HBMS\_003PUP      FN:2      PRODUCER      18-Mar-2013 16:21      7802.0 FT      7432.0 FT

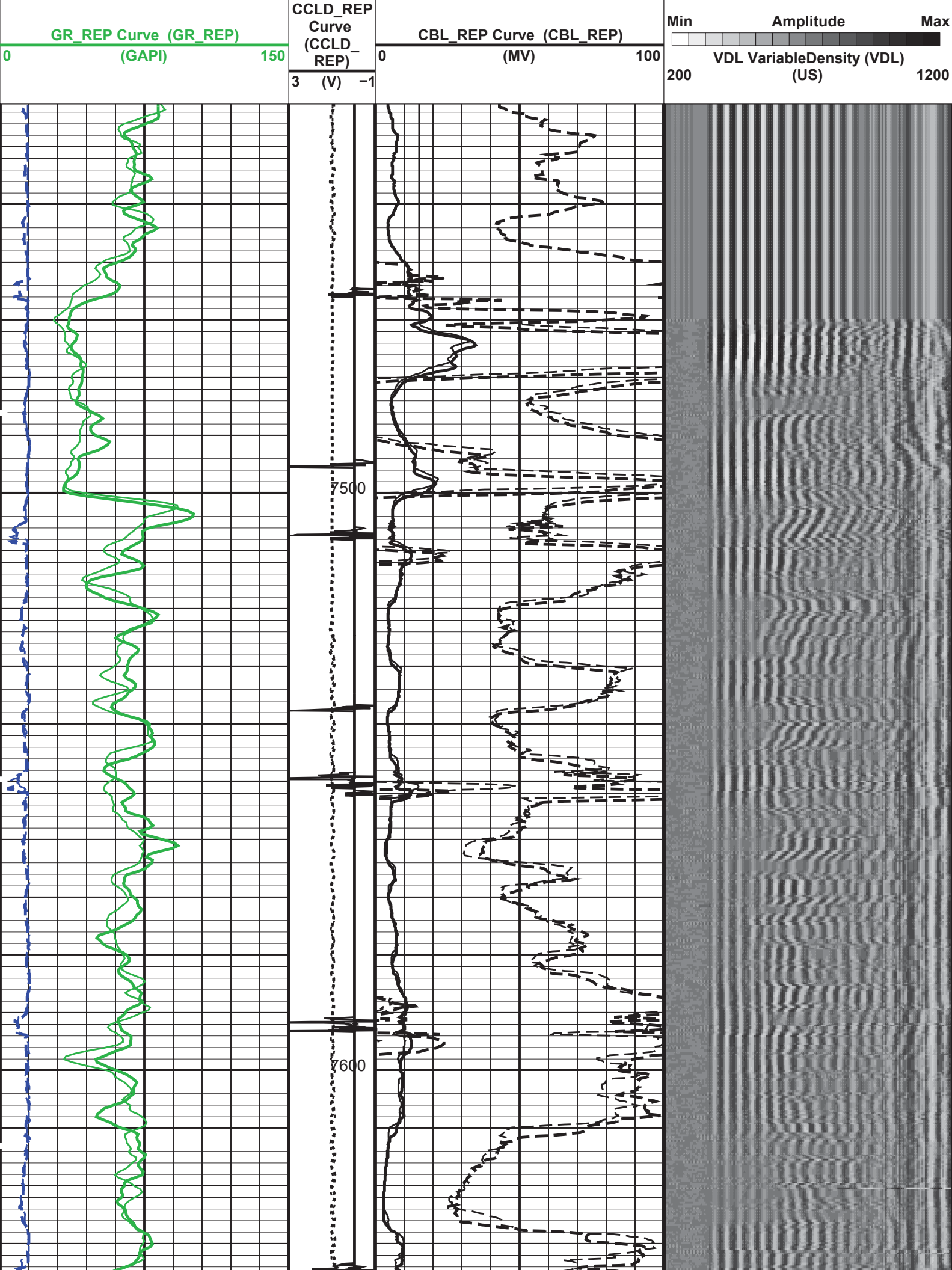
### OP System Version: 19C0-187

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

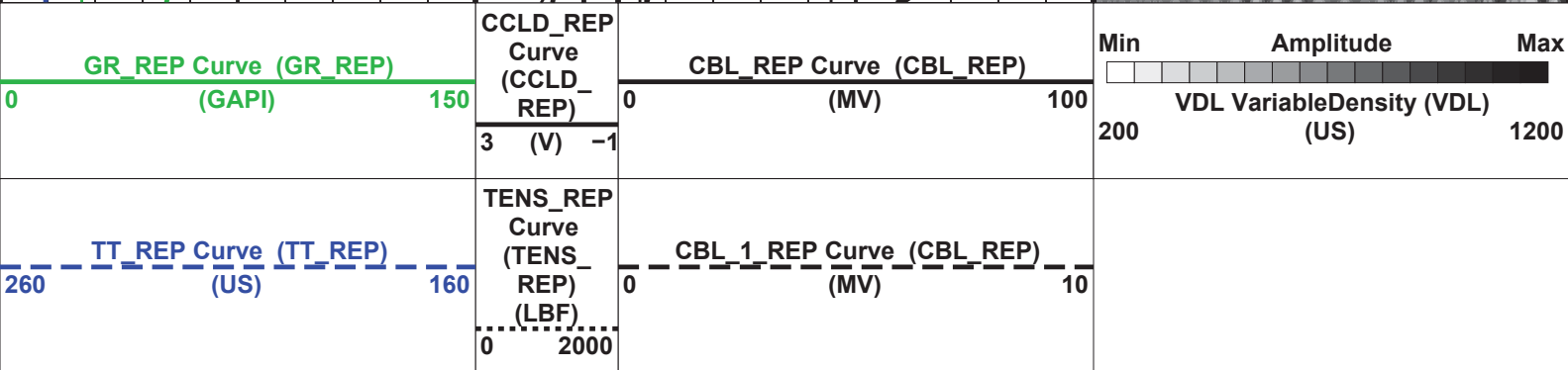
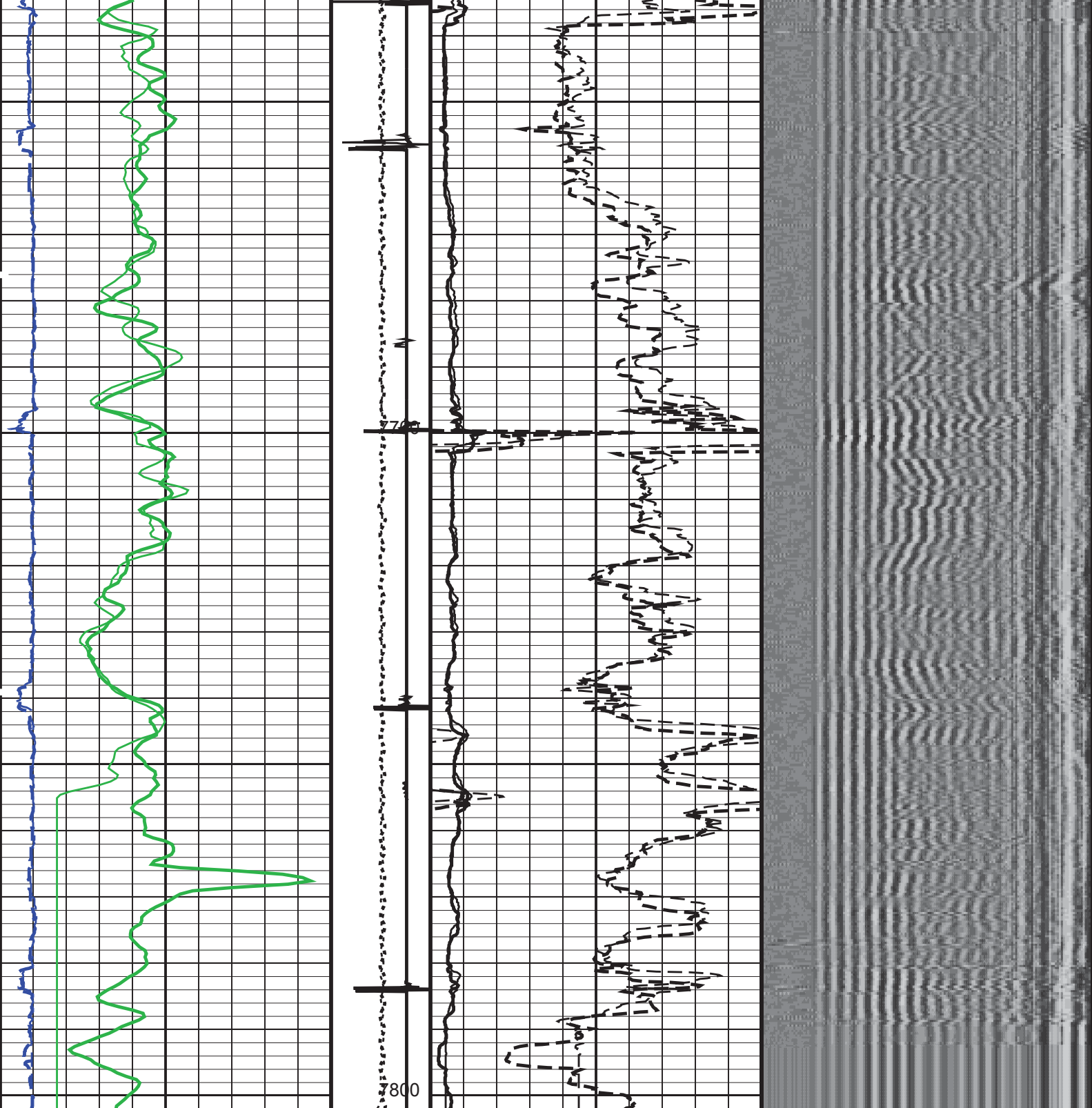
### PIP SUMMARY

Time Mark Every 60 S









PIP SUMMARY

# 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 8179		
Current Casing Size	4.50000 IN		
Casing Weight	13.5000 LB/F		
Expected CBL Amplitude in Free Pipe Section	81 MV	Minimum Sonic Amplitude	1.28673 MV (100% Cement)
			2.94636 MV (80% Cement)
		MAP Minimum Sonic Amplitude	7.12449 MV (100% Cement)
			12.0838 MV (80% Cement)
Master Calibration (Normalization)	Before Calibration (Adjustment)		
Date of Master Calibration	6-MAR-2012		
CBL Correction Factor	0.0704263	CBL Adjustment Factor (CBAF)	0.800000
MAP 1 Correction Factor	0.0993191	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.0941329		
MAP 3 Correction Factor	0.101552		
MAP 4 Correction Factor	0.114415		
MAP 5 Correction Factor	0.127992		
MAP 6 Correction Factor	0.121190		
MAP 7 Correction Factor	0.112867		
MAP 8 Correction Factor	0.102913		

## Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	223.206	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	337.206	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	81	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTD	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.300677	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	2.94636	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	166.206	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	14.0905	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	7.12449	MV
MSA	Minimum Sonic Amplitude	1.28673	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	13.50	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	-3.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	12129	FT

# Input DLIS Files

	SCMT_RST_HBMS_002LUP	FN:1		18-Mar-2013 16:07	7805.0 FT	7435.0 FT
DEFAULT	SCMT_RST_HBMS_002PUP	FN:1	PRODUCER	18-Mar-2013 16:11	12144.0 FT	12.5 FT

# Output DLIS Files

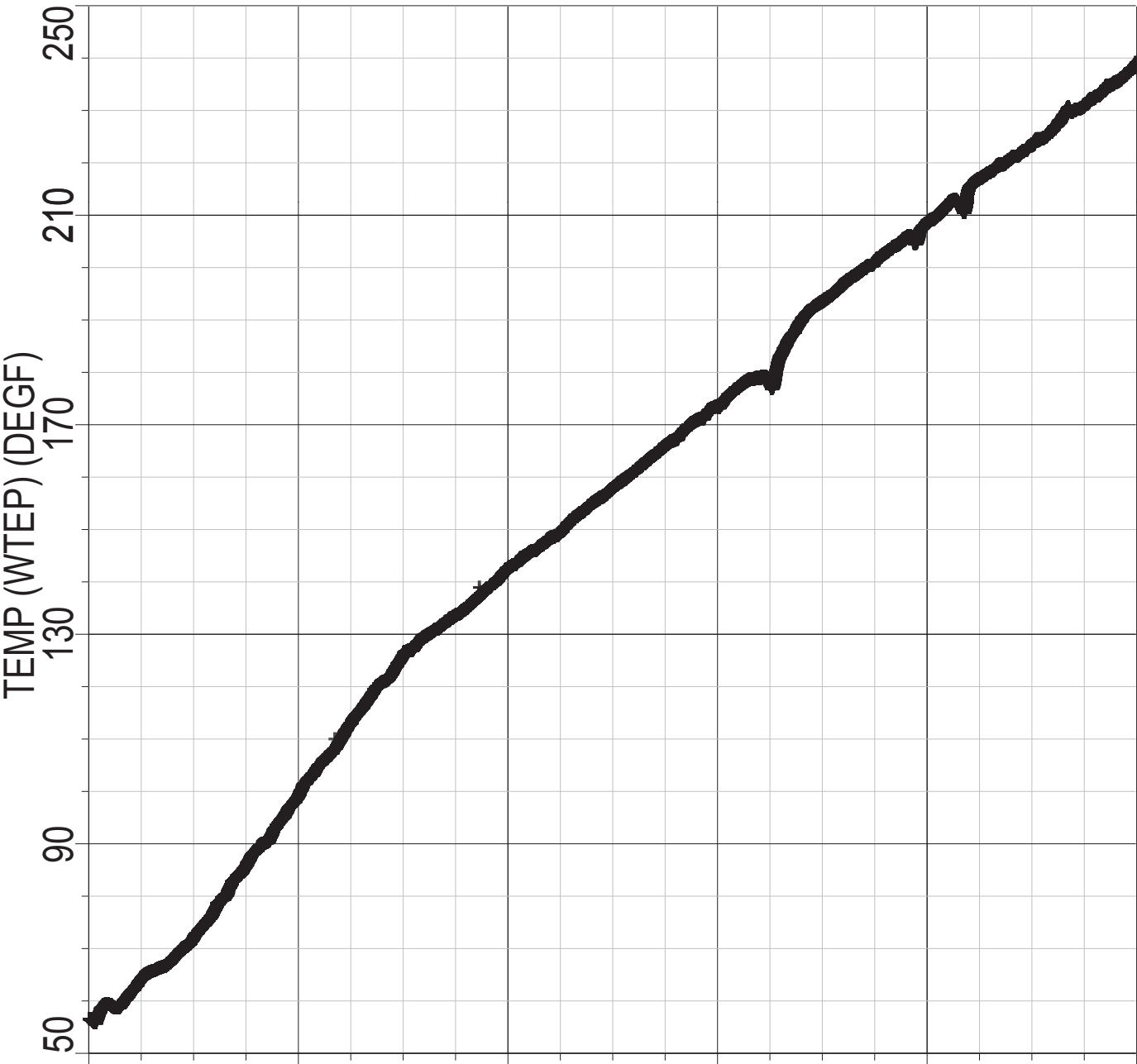
DEFAULT	SCMT_RST_HBMS_003PUP	FN:2	PRODUCER	18-Mar-2013 16:21
---------	----------------------	------	----------	-------------------

Schlumberger

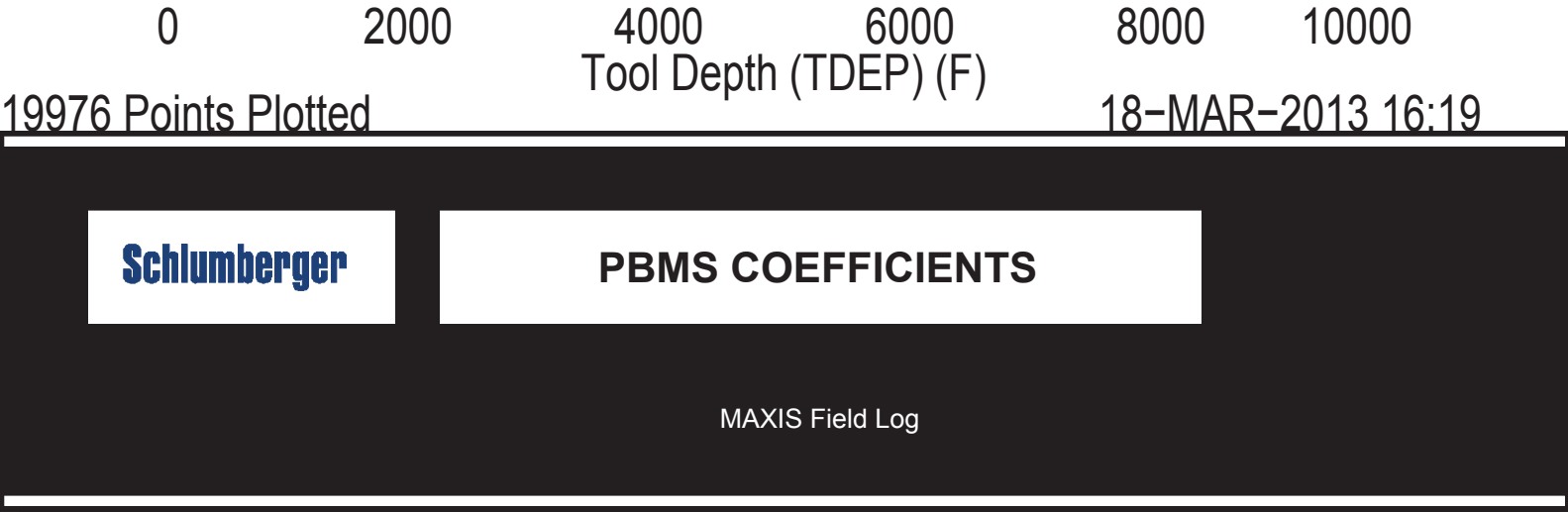
## TEMPERATURE PLOT

MAXIS Field Log

Index: 12144.0 – 12.5 FT







Client: ENCANA OIL & GAS (USA) INC

Field: STORY GULCH

Well: SGU 8512C-24 (L24 496)

Run date: 18-Mar-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.34384,TOOL HBMS-BA2880. SENSOR S/N:

34384

160206

12

D8B5

GR HV Rt		
	Rt**0	Rt**1
Rt**0	+.200000000000e+04	+.173000000000e+04

Client: ENCANA OIL & GAS (USA) INC

Field: STORY GULCH

Well: SGU 8512C-24 (L24 496)

Run date: 18-Mar-2013

Tool: PSP

Sub Type: PBMS

Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB	COEFFICIENTS FOR RTD THERMOMETER PBMS-B.2880 S/N:		
Sensor Serial NB	2880		
Calib Date ddmmyy	260408		
Matrix Size	16		
Coeff CRC	A3AF		

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	-.104337336008E+04	+.798824971753E+03	-.251944021281E+03
	Tt**3	Tt**4	Tt**5
Tt**0	+.406192777109E+02	-.240958437264E+01	0.0

Client:	ENCANA OIL & GAS (USA) INC	Tool:	PSP
Field:	STORY GULCH	Sub Type:	PBMS
Well:	SGU 8512C-24 (L24 496)	Sensor:	CQG
Run date:	18-Mar-2013		

PBMS Quartz Gauge type F

Sonde Serial NB	COEFFICIENTS FOR CQG PBMS-B.2880 S/N:		
Sensor Serial NB	2880		
Calib Date ddmmyy	260408		
Matrix Size	66		
Coeff CRC	66B8		

Pres Coeff

	Fb**0	Fb**1	Fb**2
Fc**0	+.694668499013E+04	+.138137467574E-01	-.206148488488E-06
Fc**1	-.104285125976E+01	-.125721589078E-04	-.971577899959E-10
Fc**2	+.101045175546E-05	+.480801816357E-10	+.889110474366E-15
Fc**3	+.127326781620E-11	+.130693902354E-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	-.802395356069E-10	-.148392899370E-14	-.162952476494E-19
Fc**1	+.114970383999E-15	+.186330526680E-19	0.0

<b>Fc**2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fc**3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fc**4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fc**5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

PBMS Quartz Gauge type F

Sonde Serial NB :  
Sensor Serial NB 2880  
Calib Date ddmmyy 260408  
Matrix Size 66  
Coeff CRC 3690

Temp Coeff

	<b>Fc**0</b>	<b>Fc**1</b>	<b>Fc**2</b>
<b>Fb**0</b>	<b>+ .114978632240E+03</b>	<b>- .318843725686E-03</b>	<b>+ .651766172344E-08</b>
<b>Fb**1</b>	<b>- .590205352250E-02</b>	<b>+ .168686572404E-07</b>	<b>+ .162345150354E-12</b>
<b>Fb**2</b>	<b>- .362996279263E-07</b>	<b>+ .407654559315E-12</b>	<b>+ .452411391342E-17</b>
<b>Fb**3</b>	<b>- .276281361281E-12</b>	<b>+ .871817059405E-17</b>	<b>0.0</b>
<b>Fb**4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fb**5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
	<b>Fc**3</b>	<b>Fc**4</b>	<b>Fc**5</b>
<b>Fb**0</b>	<b>+ .199118144093E-13</b>	<b>- .260997933236E-18</b>	<b>+ .618908211390E-21</b>
<b>Fb**1</b>	<b>+ .250084591851E-17</b>	<b>+ .455070709200E-21</b>	<b>0.0</b>
<b>Fb**2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fb**3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fb**4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Fb**5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

PBMS Quartz Gauge type F

Sonde Serial NB :  
Sensor Serial NB 2880  
Calib Date ddmmyy 260408  
Matrix Size 16  
Coeff CRC 71B5

Clock Freq Coeff

	<b>(Fb'-Fc')**0</b>	<b>(Fb'-Fc')**1</b>	<b>(Fb'-Fc')**2</b>
<b>(Fb'-Fc')**0</b>	<b>+ .310736316923E+05</b>	<b>+ .273670214709E-02</b>	<b>+ .731815197856E-06</b>
	<b>(Fb'-Fc')**3</b>	<b>(Fb'-Fc')**4</b>	<b>(Fb'-Fc')**5</b>



(Fb'–Fc')**0	–.654219198492E–10	–.150585137208E–15	–.117697151708E–19
--------------	--------------------	--------------------	--------------------

PBMS Quartz Gauge type F

Sonde Serial NB :  
Sensor Serial NB 2880  
Calib Date ddmmyy 260408  
Matrix Size 16  
Coeff CRC ECB5

Clock Temp Coeff

	(Fb'–Fc')**0	(Fb'–Fc')**1	(Fb'–Fc')**2
(Fb'–Fc')**0	+ .116053417872E+03	–.554118045908E–02	–.348241454518E–07
	(Fb'–Fc')**3	(Fb'–Fc')**4	(Fb'–Fc')**5
(Fb'–Fc')**0	+ .207992675474E–12	–.353168788938E–17	–.345142848607E–21












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 8179  
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			1158	Master			1232
	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			1237	Master			1118
	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			1061	Master			1299
	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

Phase	MAP 7 Amplitude Plus MV			Value	Phase	MAP 8 Amplitude Plus MV			Value
Master				1258	Master				1267
500.0 (Minimum)					500.0 (Minimum)				
1075 (Nominal)					1075 (Nominal)				
1650 (Maximum)					1650 (Maximum)				
Phase	CBL Amplitude Plus MV			Value					
Master				1351					
1000 (Minimum)									
1350 (Nominal)									
1700 (Maximum)									
Master: 2-Jan-2013 15:55									

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

**Schlumberger**

Well: **SGU 8512C-24 (L24 496)**

Field: **STORY GULCH**

County: **GARFIELD**

State: **COLORADO**

SLIM CEMENT MAPPING LOG  
GAMMA RAY - CCL - TEMPERATUR  
CBL - VDL