

Company: ENCANA OIL & GAS (USA) INC

Well: SG 8512A-24 (L24 496)

Field: STORY GULCH

County: GARFIELD

State: COLORADO

County: GARFIELD

Field: STORY GULCH

Location: SHL: 1642 FSL & 913 FWL

Well: SG 8512A-24 (L24 496)

Company: ENCANA OIL & GAS (USA) INC

SLIM CEMENT MAPPING LOG

CBL – VDL

GAMMA RAY – CCL

SHL: 1642 FSL & 913 FWL

BHL: 2598 FSL & 669 FWL

Elev.: K.B. 8210.00 ft

G.L. 8180.00 ft

D.F. 8209.00 ft

Permanent Datum: GROUND LEVEL

Log Measured From: KELLY BUSHING

Drilling Measured From: KELLY BUSHING

API Serial No. 05-045-21159-000C

Section 24

Township 4S

Range 96W

| PVT DATA | | | | Run 1 | Run 2 | Run 3 |
|--------------------------|--|--|--|---------|-------|-------|
| Oil Density | | | | | | |
| Water Salinity | | | | | | |
| Gas Gravity | | | | | | |
| Bo | | | | | | |
| Bw | | | | | | |
| 1/Bg | | | | | | |
| Bubble Point Pressure | | | | | | |
| Bubble Point Temperature | | | | | | |
| Solution GOR | | | | | | |
| Maximum Deviation | | | | | | |
| CEMENTING DATA | | | | | | |
| Primary/Squeeze | | | | Primary | | |
| Casing String No | | | | | | |
| Lead Cement Type | | | | | | |
| Volume | | | | | | |
| Density | | | | | | |
| Water Loss | | | | | | |
| Additives | | | | | | |
| Tail Cement Type | | | | | | |
| Volume | | | | | | |
| Density | | | | | | |
| Water Loss | | | | | | |
| Additives | | | | | | |
| Expected Cement Top | | | | | | |

Logging Date 26-Jul-2013

Run Number 1

Depth Driller 12465 ft

Schlumberger Depth 12390 ft

Bottom Log Interval 12381 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 8076 ft

To 12465 ft

Casing/Tubing Size 4.500 in

Weight 11.6 lbm/ft

Grade

From 30 ft

To 12440 ft

Maximum Recorded Temperatures 289 degF

Logger On Bottom 26-Jul-2013

Unit Number 391

Location 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 | | | | |
| Location | | | | |
| Recorded By | | | | |
| Witnessed By | | | | |

DEPTH SUMMARY LISTING

Date Created: 16-JUL-2013 13:40:46

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: | 4-24-2012 | Calibration Date: | 16-JUL-2013 | Length: | 19500 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: | -3 | Calibration RMS: | 12 | | |
| Wheel Correction 2: | -4 | Calibration Peak Error: | 23 | | |

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 CONTROL
3. SWPT DRUM COUNTER USED AS SECONDARY DEPTH CONTROL
- 4.
- 5.
- 6.

DISCLAIMER

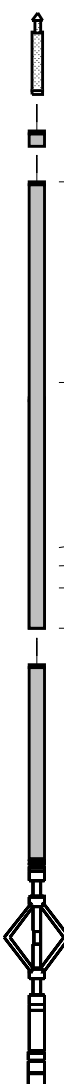
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (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.

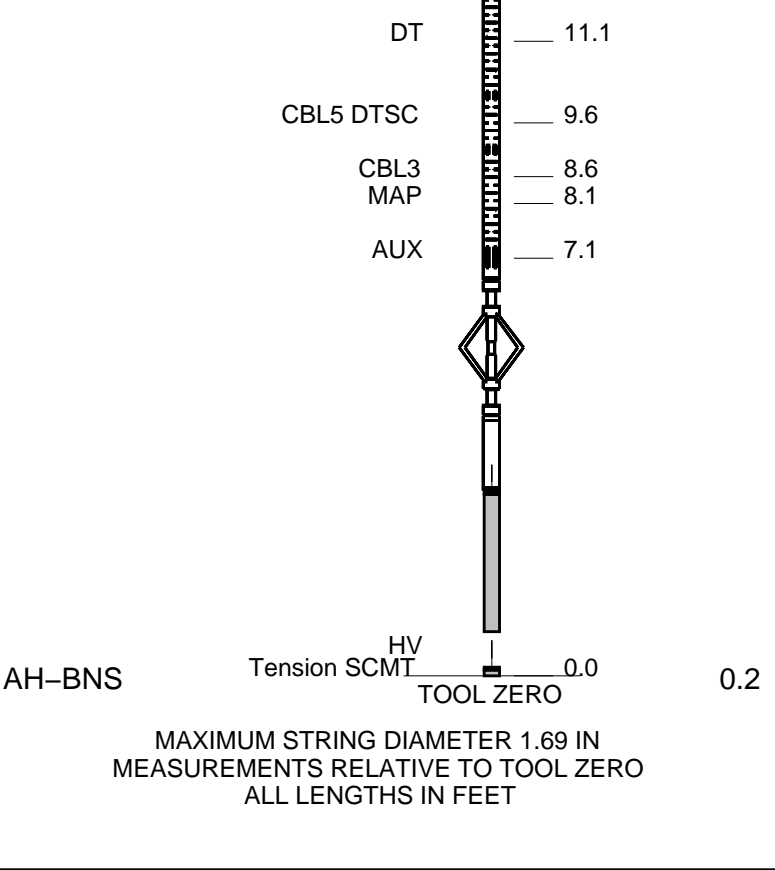
| | |
|--|---|
| OTHER SERVICES1 OS1: NONE OS2: OS3: OS4: OS5: | OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5: |
| REMARKS: RUN NUMBER 1 | REMARKS: RUN NUMBER 2 |
| FIRST RUN IN HOLE CORRELATED TO DOWNLOG | |
| TOOL RAN AS PER TOOL SKETCH | |
| | |
| ENTRANCE TIME: 18:00 | |
| TIME AT BOTTOM: 18:30 | |
| EXIT TIME: 22:00 | |
| | |

| | |
|---|--|
| MAX RECORDED TEMPERATURE: 289 DEGF | |
| MAX RECORDED PRESSURE: 5198 PSIA | |
| | |
| SHORT JOINTS: 7764 FT & 10939 FT | |
| | |
| MAIN PASS LOGGED UNDER ZERO SURFACE PRESSURE | |
| EXPECTED CBL AMP IN FREE PIPE = 80 MV | |
| | |
| CREW: J BARRY, K JOHNS, J ORTIZ | |
| THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY | |

| | | | | | |
|---|-------|------|---|-------|------|
| RUN 1 SERVICE ORDER #: C920-00103 PROGRAM VERSION: 19C0-187 FLUID LEVEL: 75 ft | | | RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL: | | |
| LOGGED INTERVAL | START | STOP | LOGGED INTERVAL | START | STOP |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

[illegible]

| SURFACE EQUIPMENT | | | |
|--|--|--|------|
| WITM-A PSC_16MHZ | | | |
| DOWNHOLE EQUIPMENT | | | |
| MH-22 MH-22 | |  | 30.3 |
| AH-38 | Detail MT TelStatus CTEM | 28.4 | 28.7 |
| PSPT PSC-A 2880 PSPT-B 928 PSTC-A PBMS-B CQG_F Mano RTD_Thermometer GR CCL PBMS | GR | 24.7 | 28.4 |
| | Well_Temp CQG Manom CCL PBMS PSTC | 21.7 21.3 20.9 20.2 | |
| SCMT-CB SCMC-CA 8120 SECH-CA CMIR-AG SCMS-CB 8303 SCMX-CA | | | 20.2 |



MAIN PASS CBL VDL

MAXIS Field Log

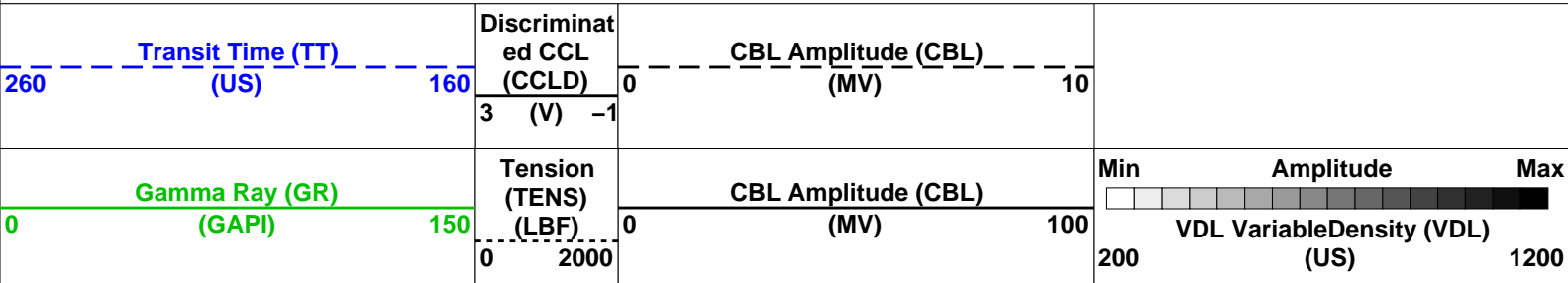
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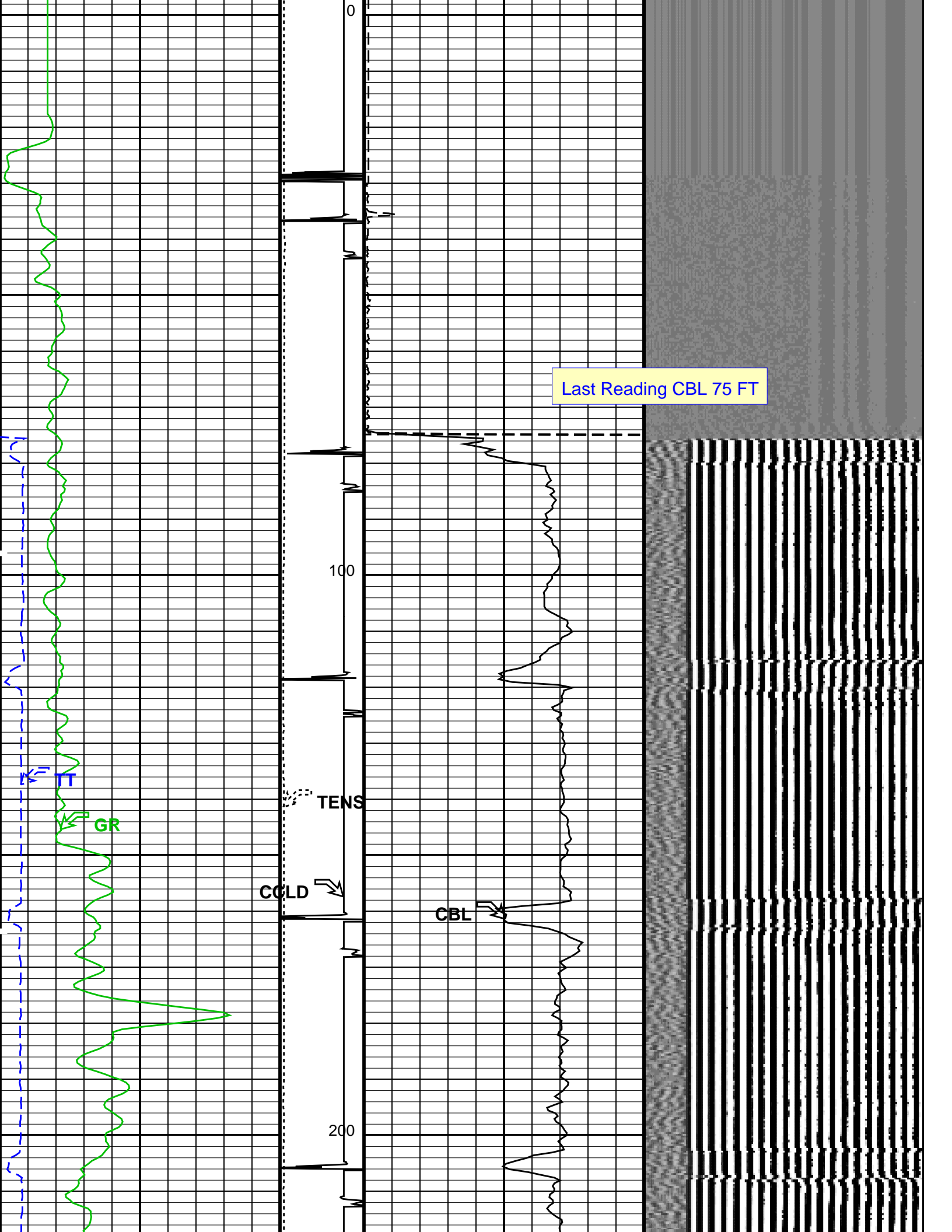
| Input DLIS Files | | | | | | |
|-------------------|-----------------|-------|----------|-------------------|------------|---------|
| DEFAULT | SCMT_PSP_018LUP | FN:17 | PRODUCER | 26-Jul-2013 18:36 | 12415.0 FT | 11.5 FT |
| Output DLIS Files | | | | | | |
| DEFAULT | SCMT_PSP_020PUP | FN:19 | PRODUCER | 26-Jul-2013 22:01 | 12420.0 FT | -5.0 FT |

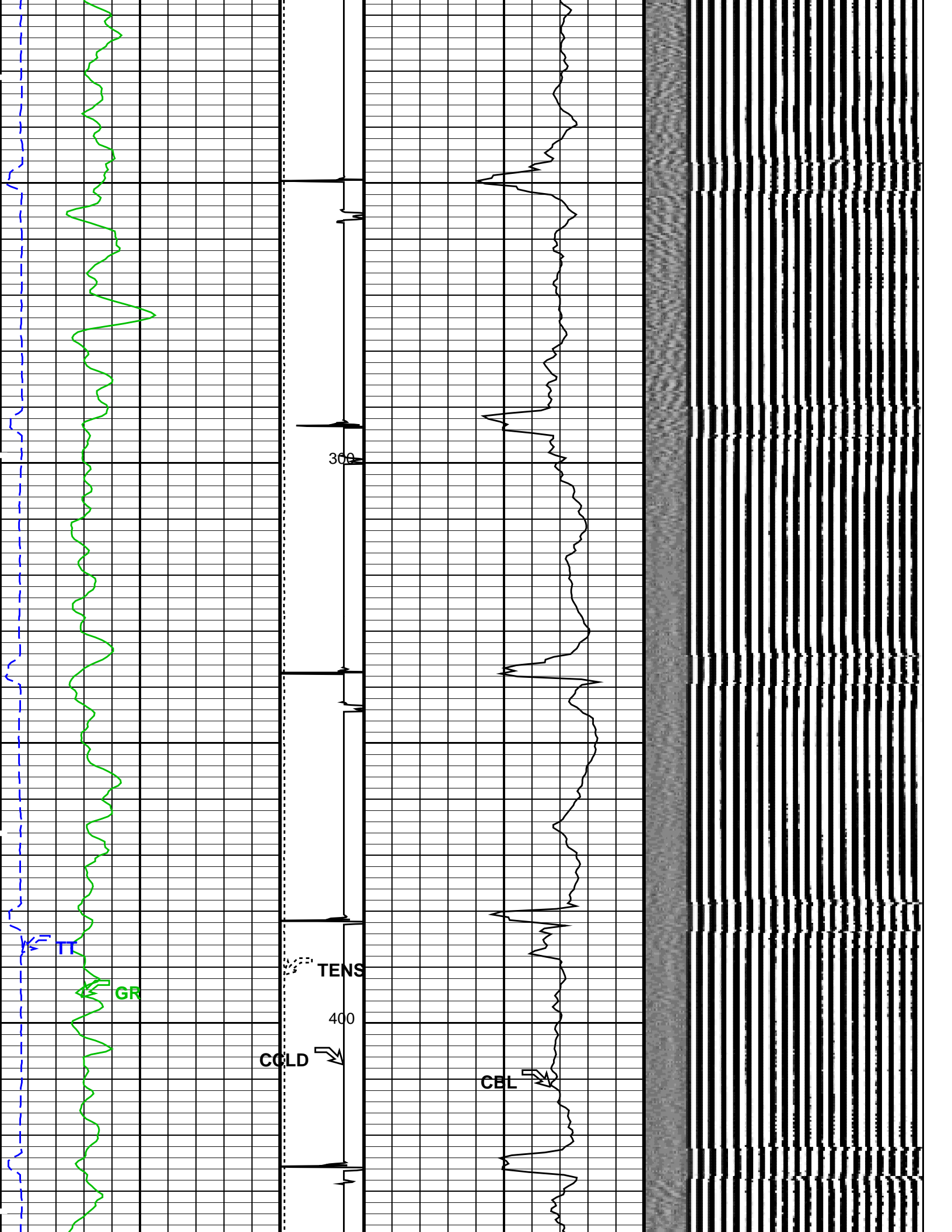
| OP System Version: 19C0-187 | | | |
|-----------------------------|-----------------------|------|-----------------------|
| SCMT-CB | SRPC-5214-H2-2012-OP1 | PSPT | SRPC-5214-H2-2012-OP1 |

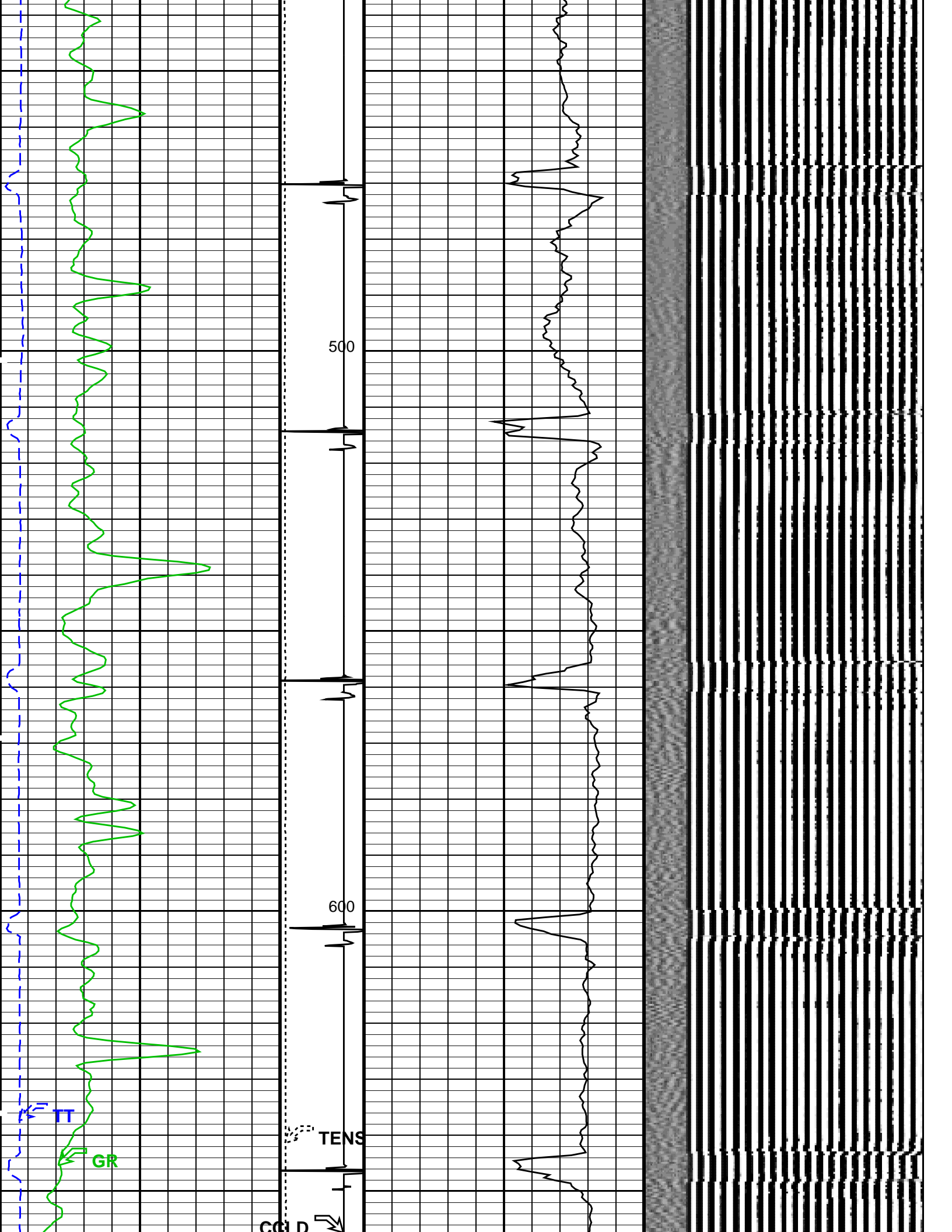
PIP SUMMARY

Time Mark Every 60 S

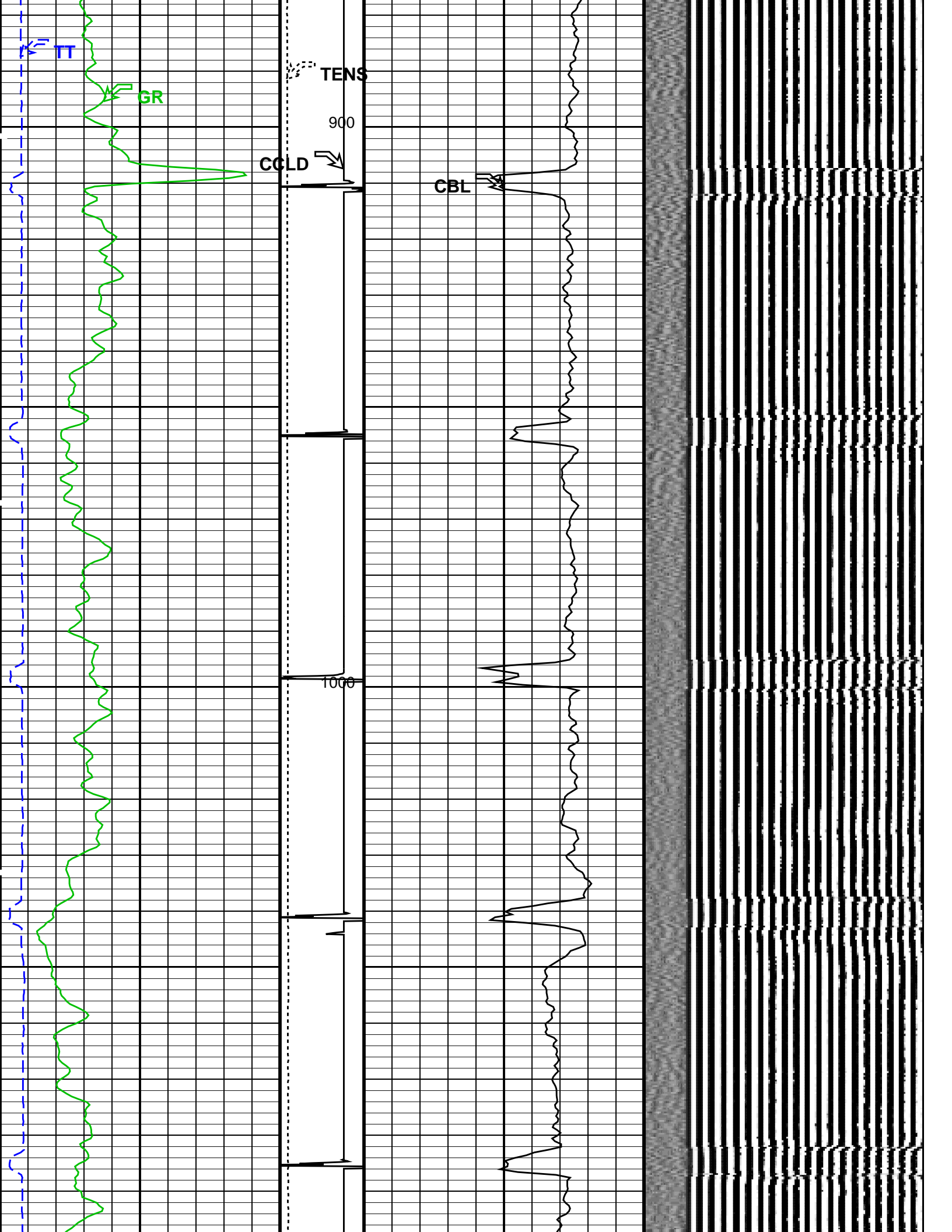


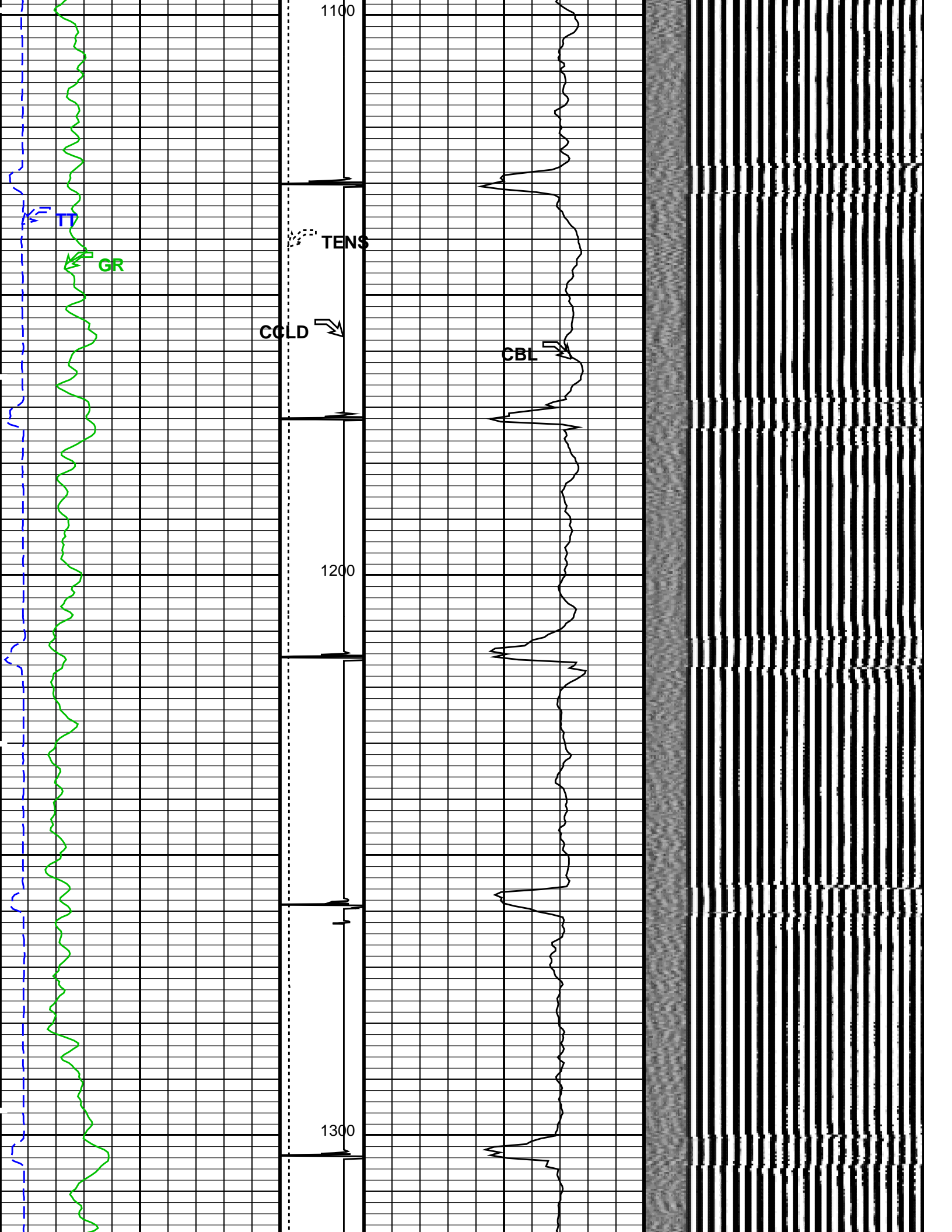


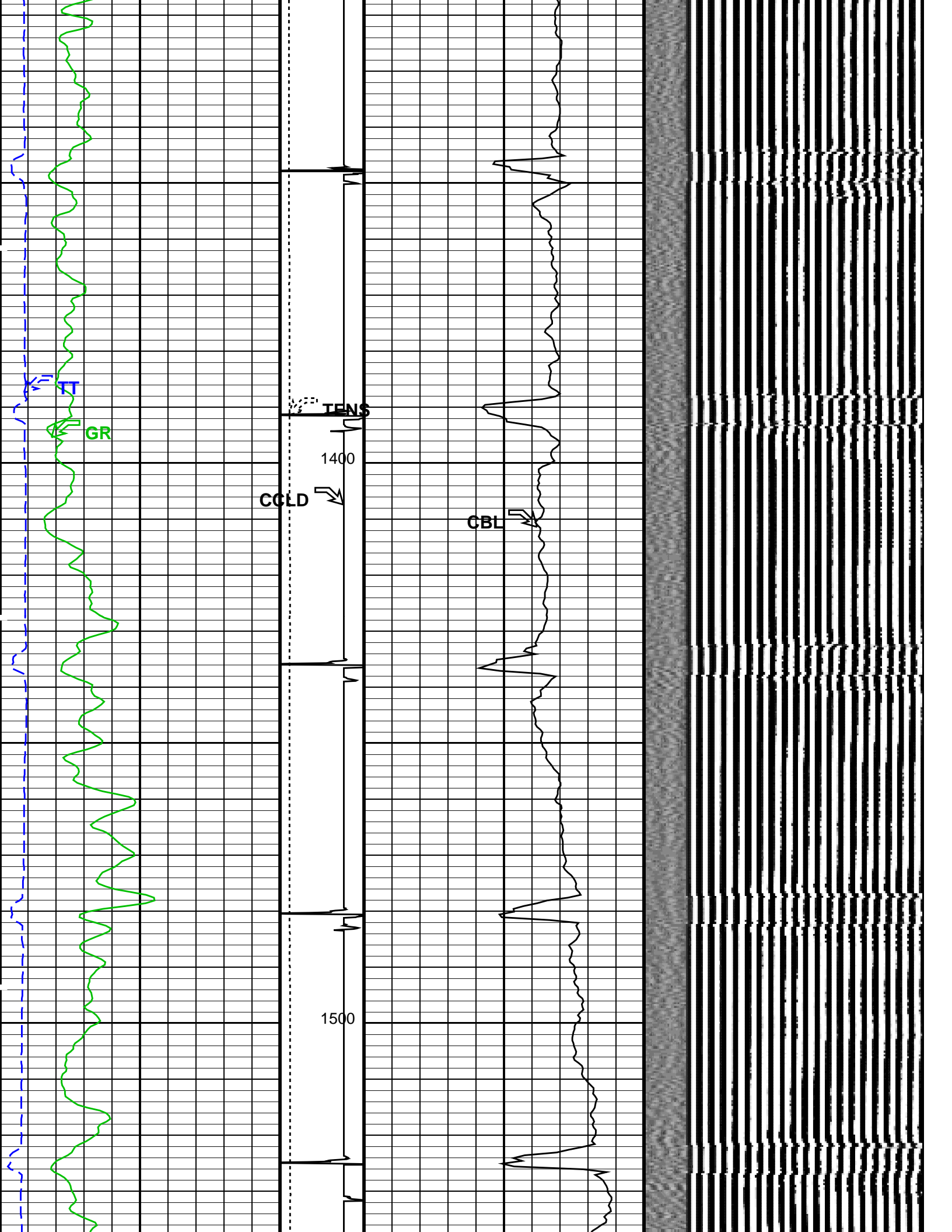


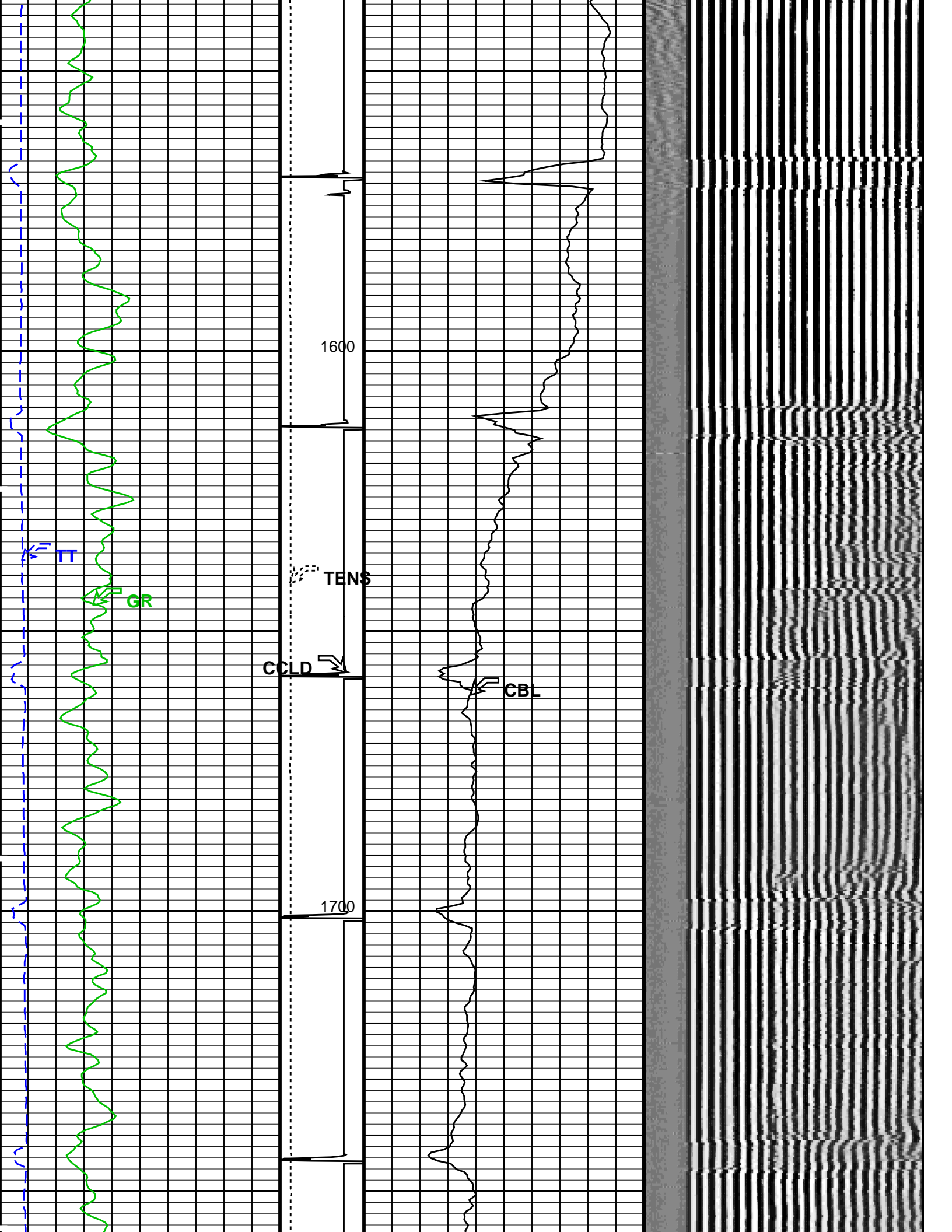


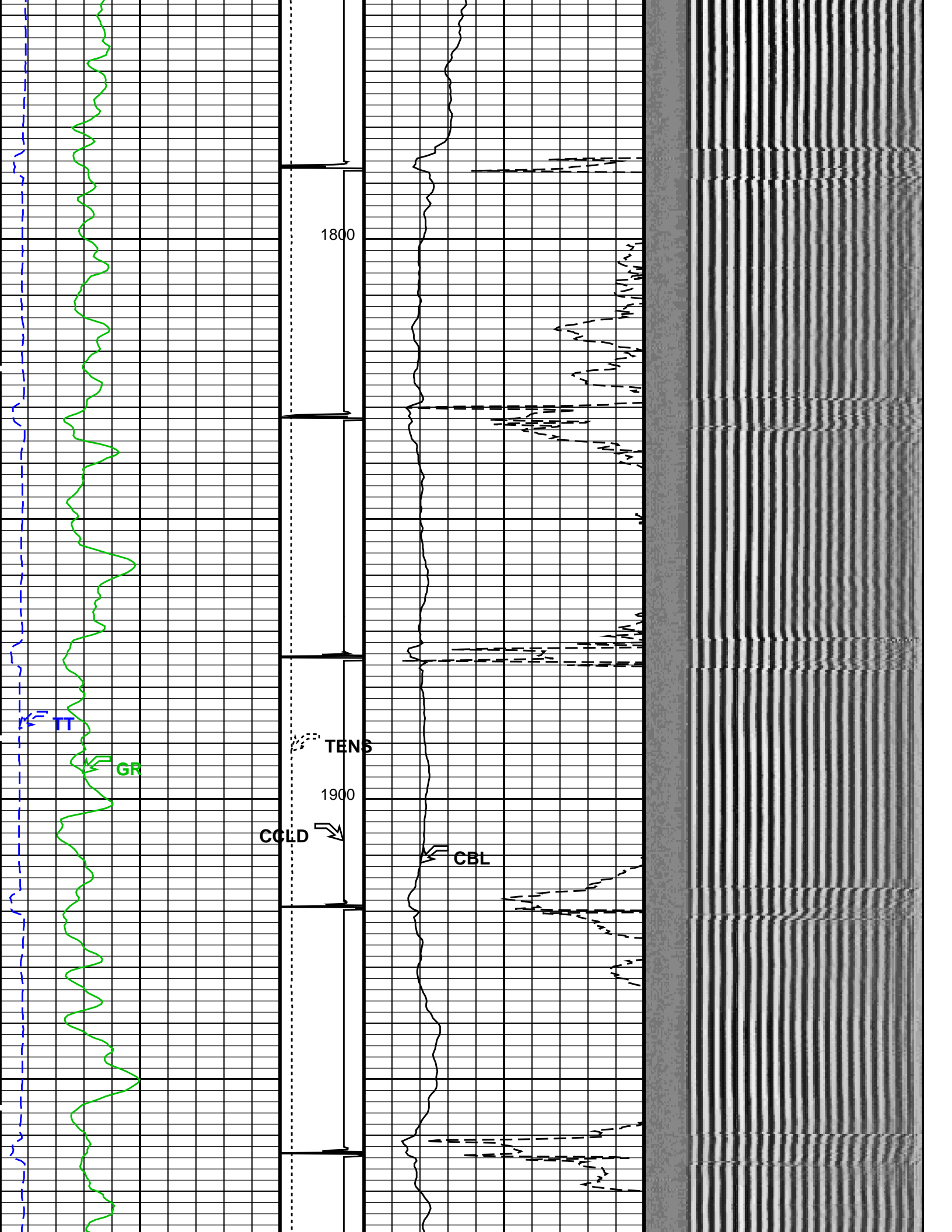


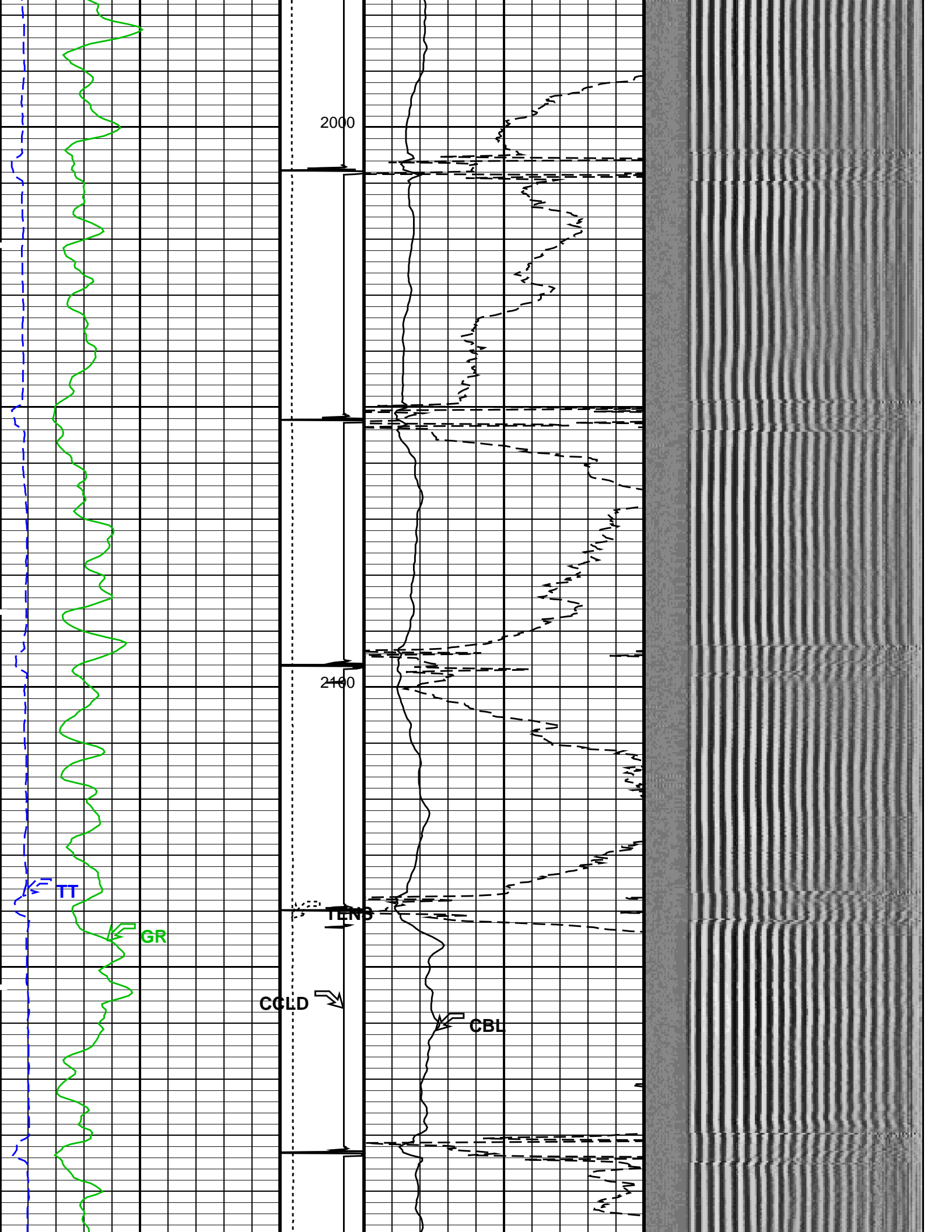


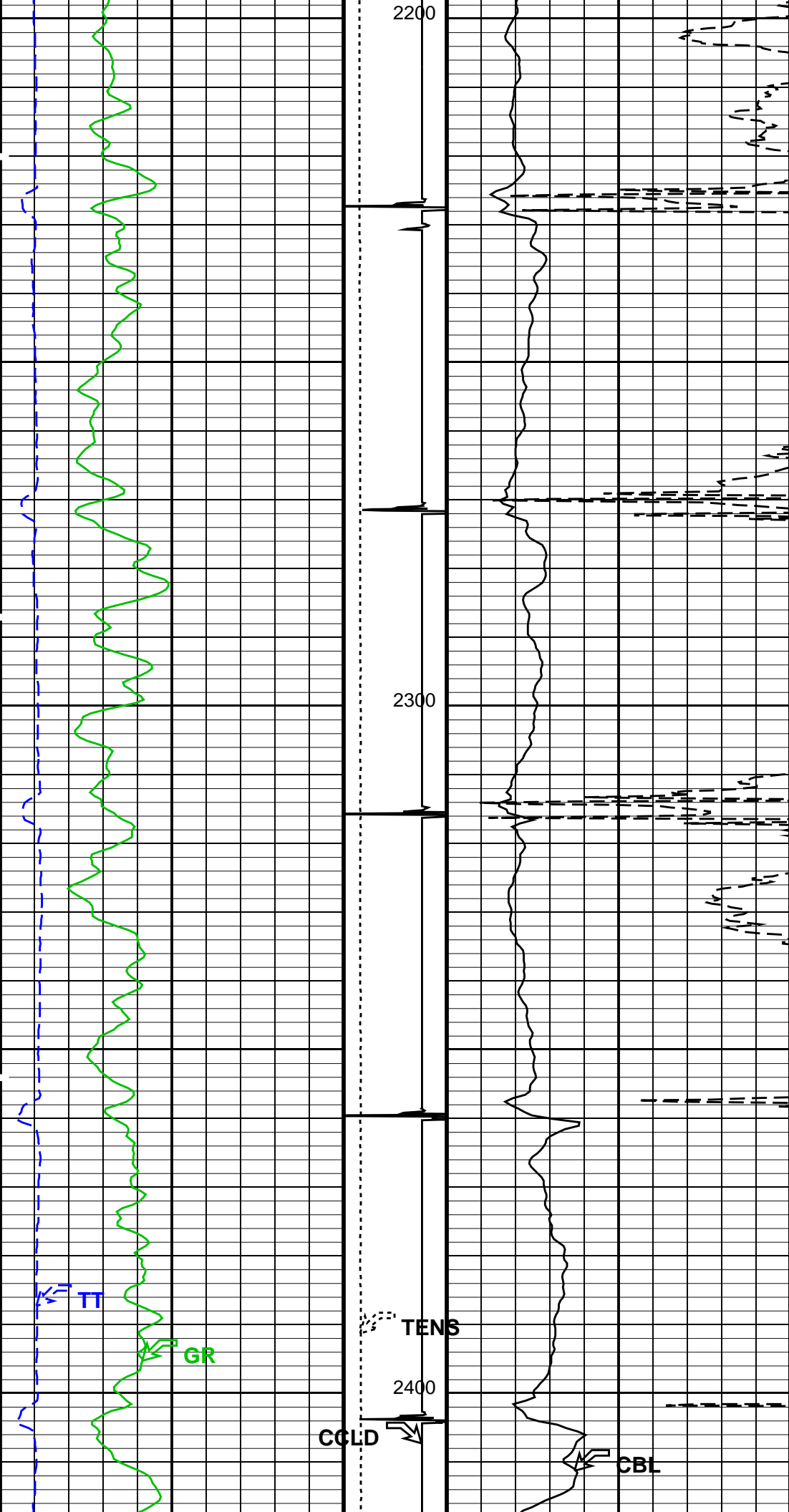


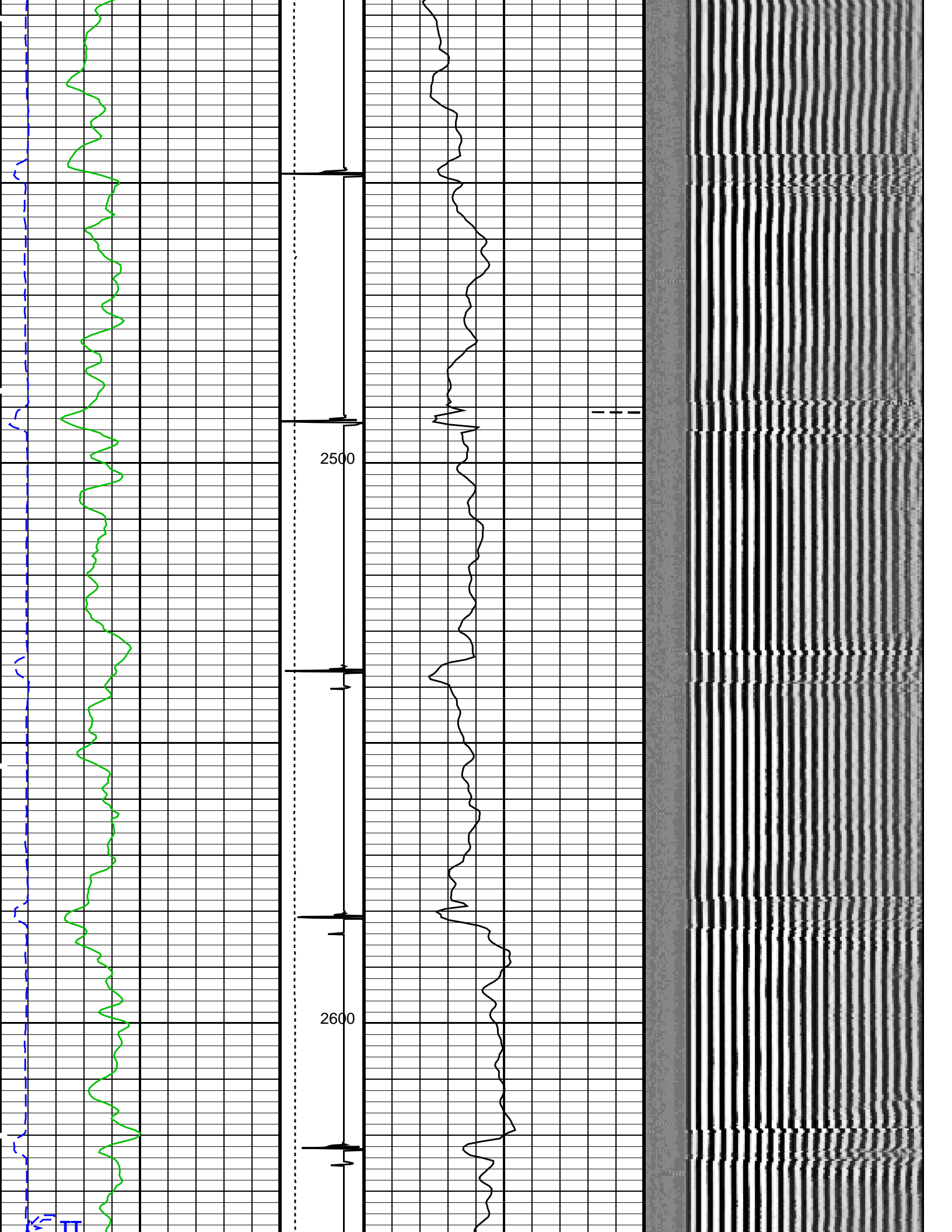


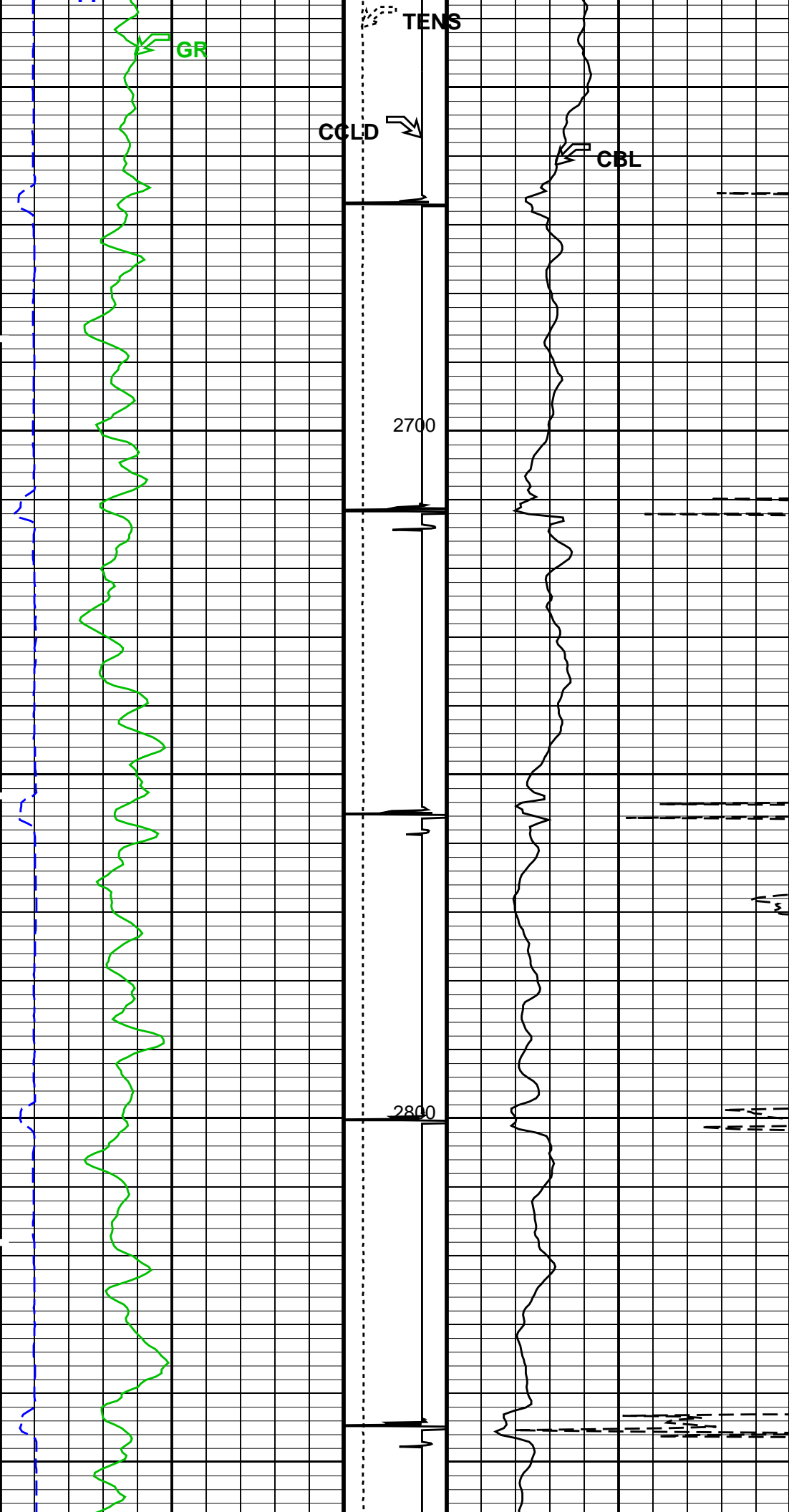


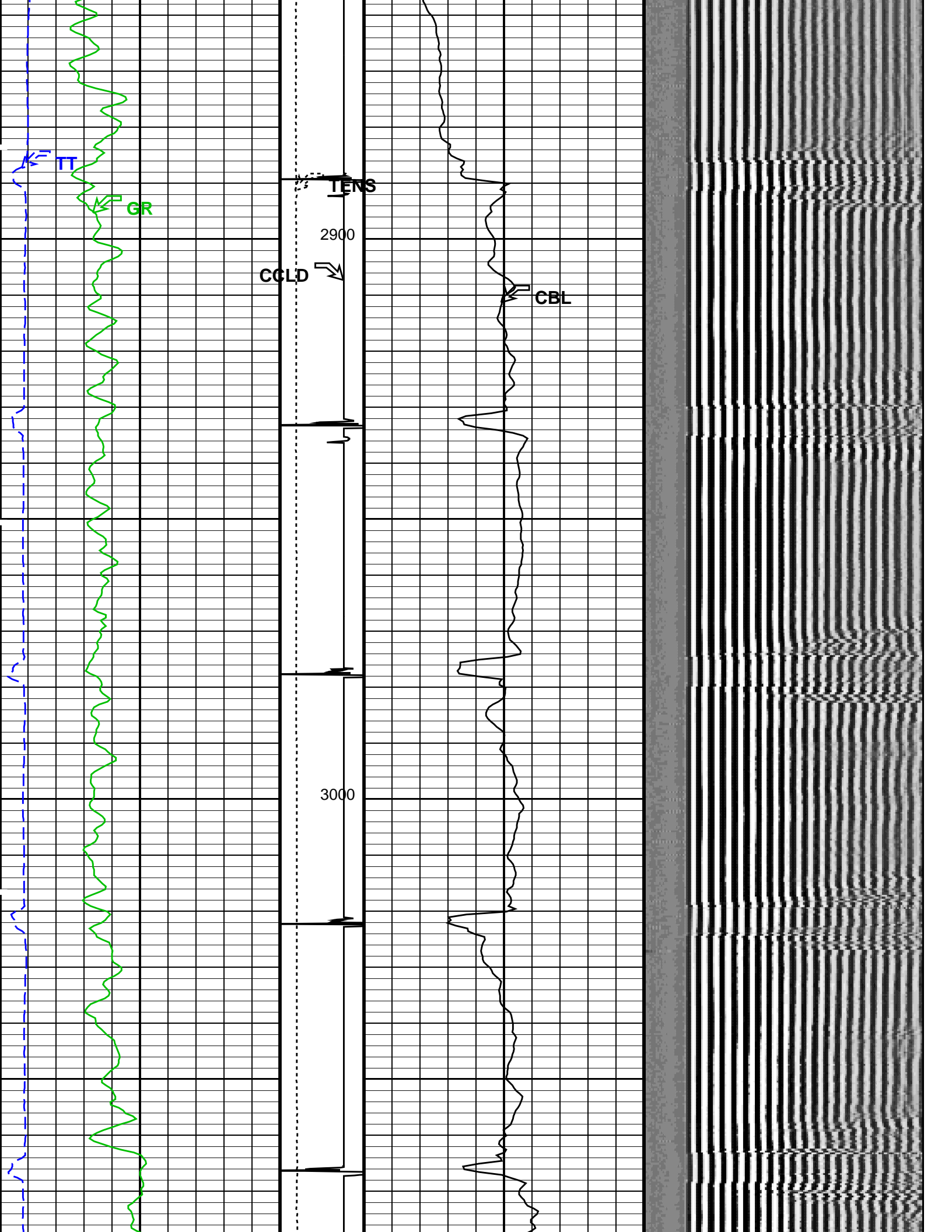


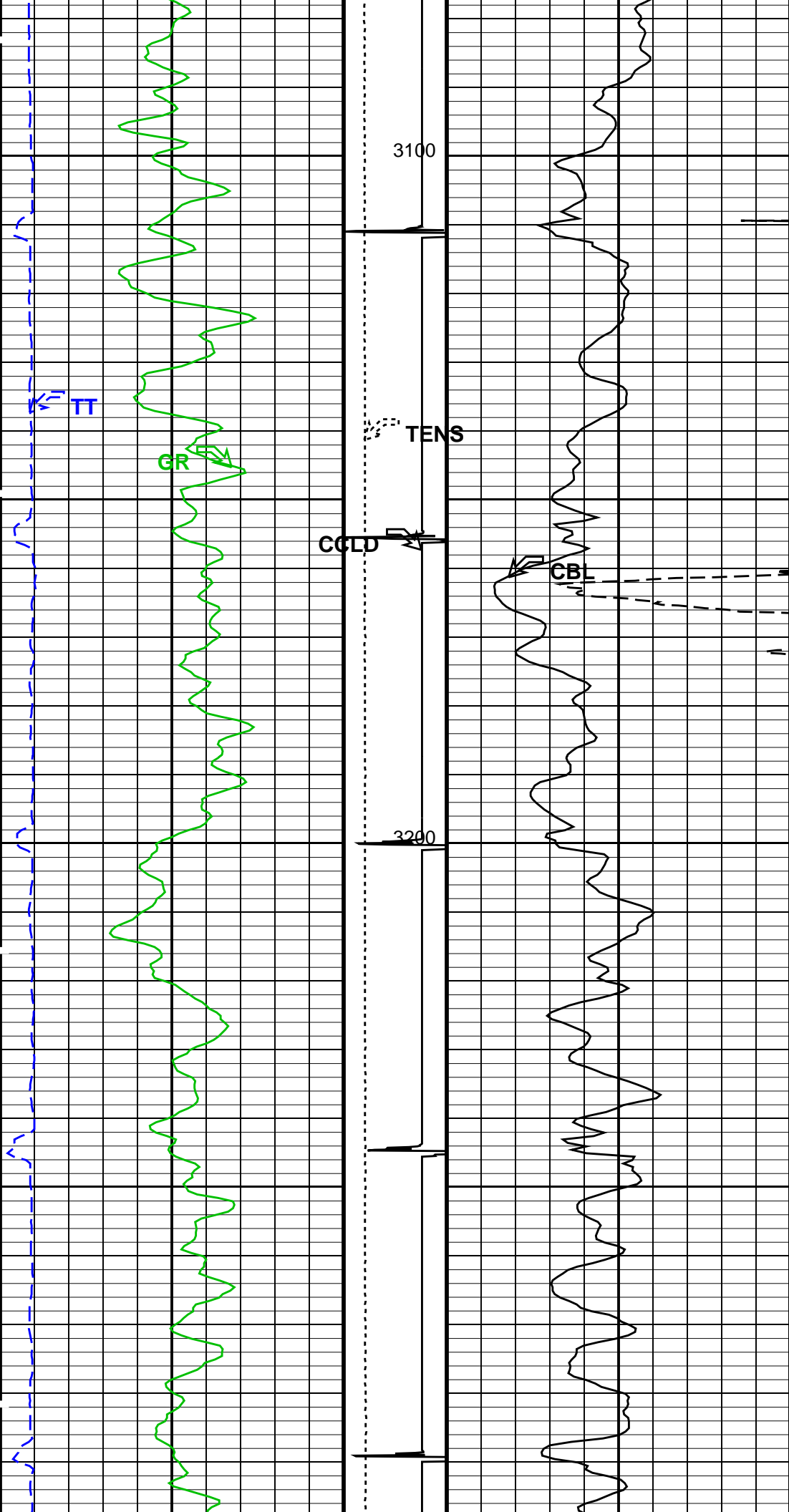


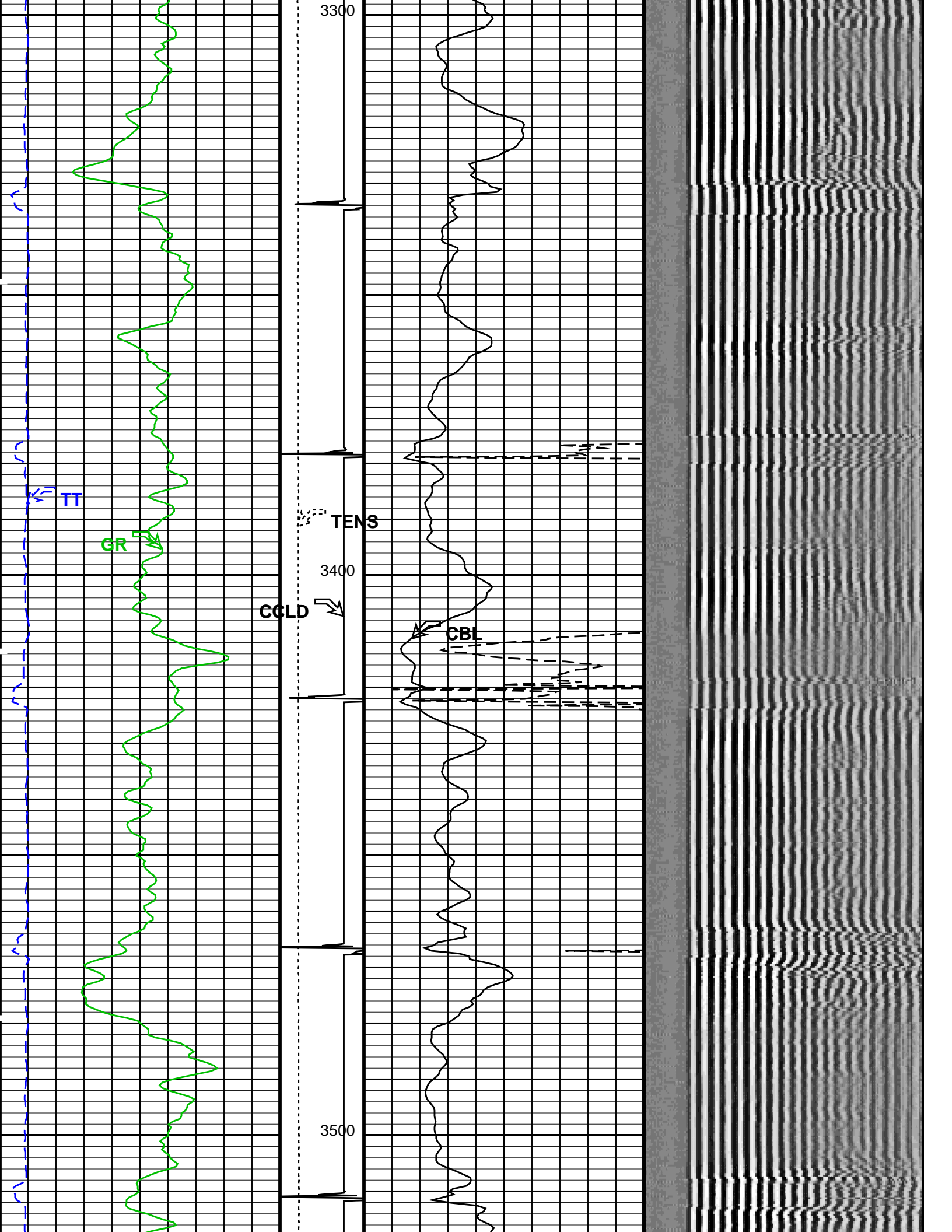


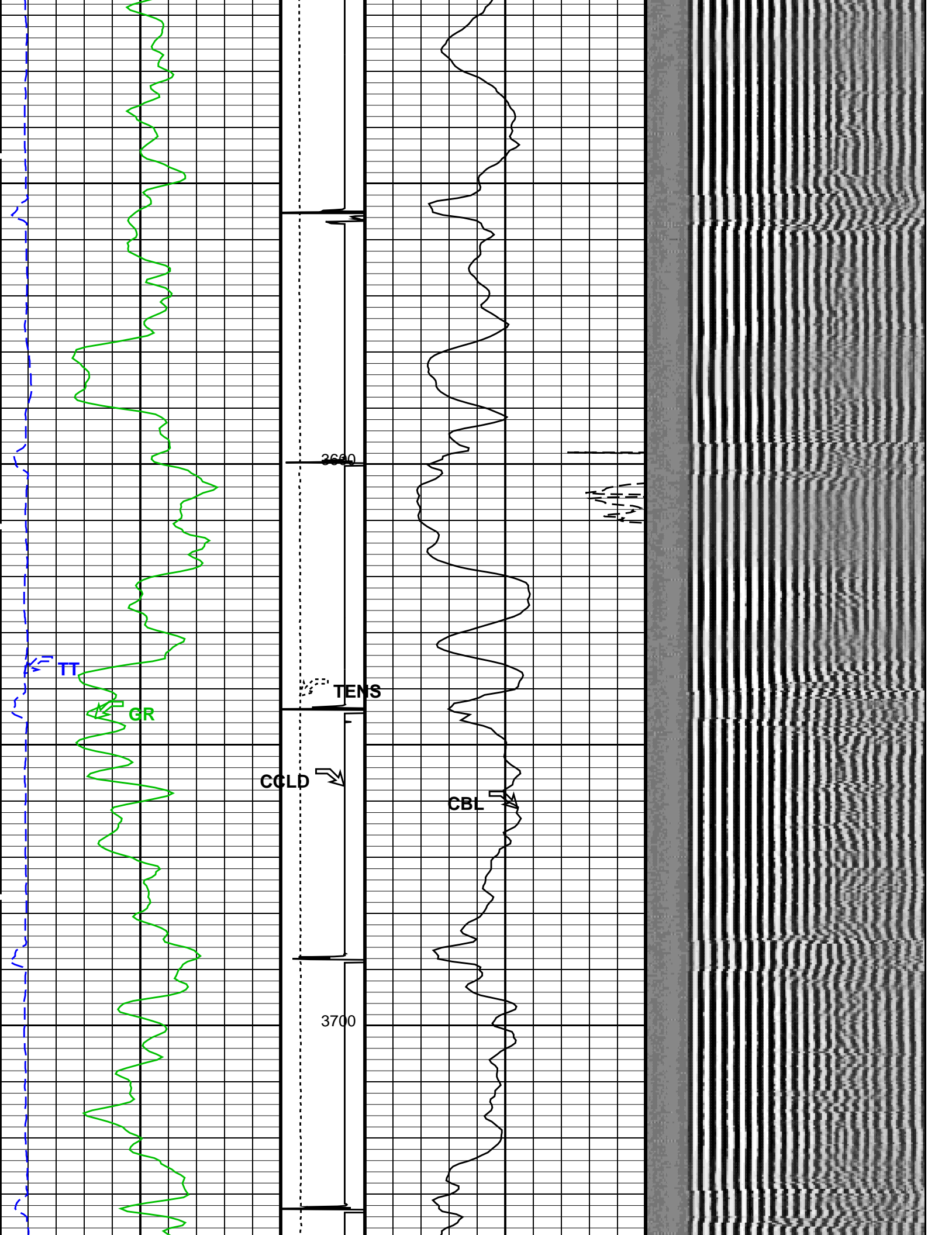


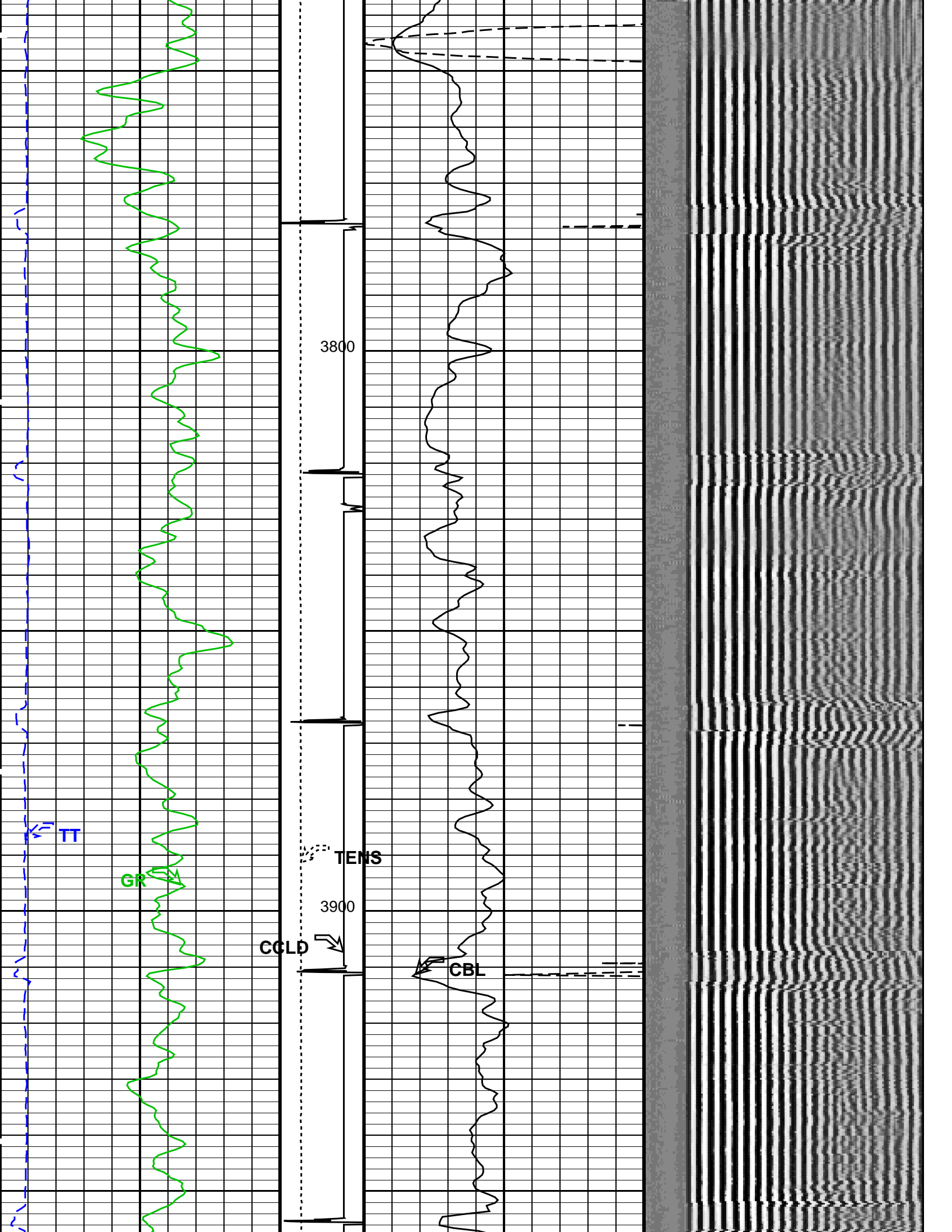


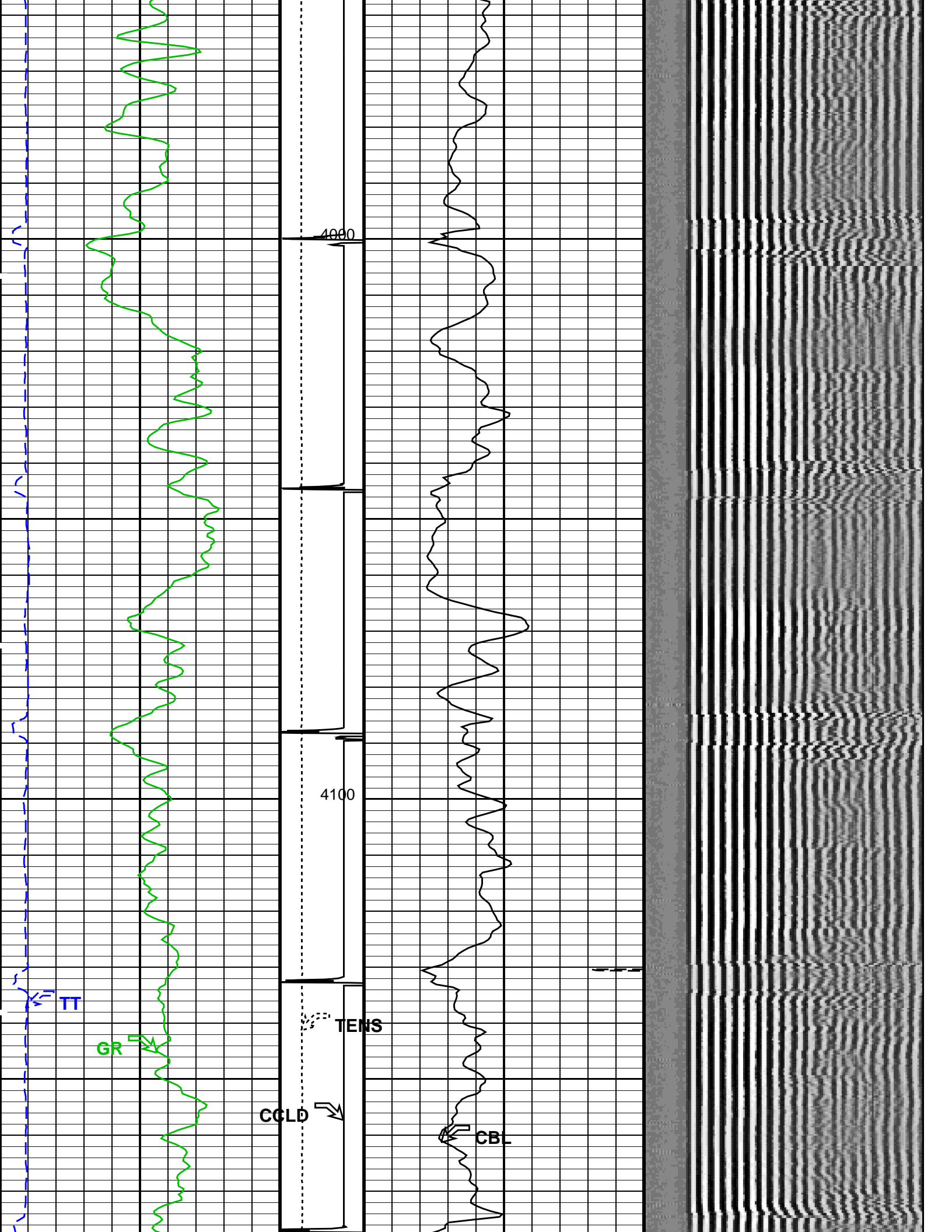


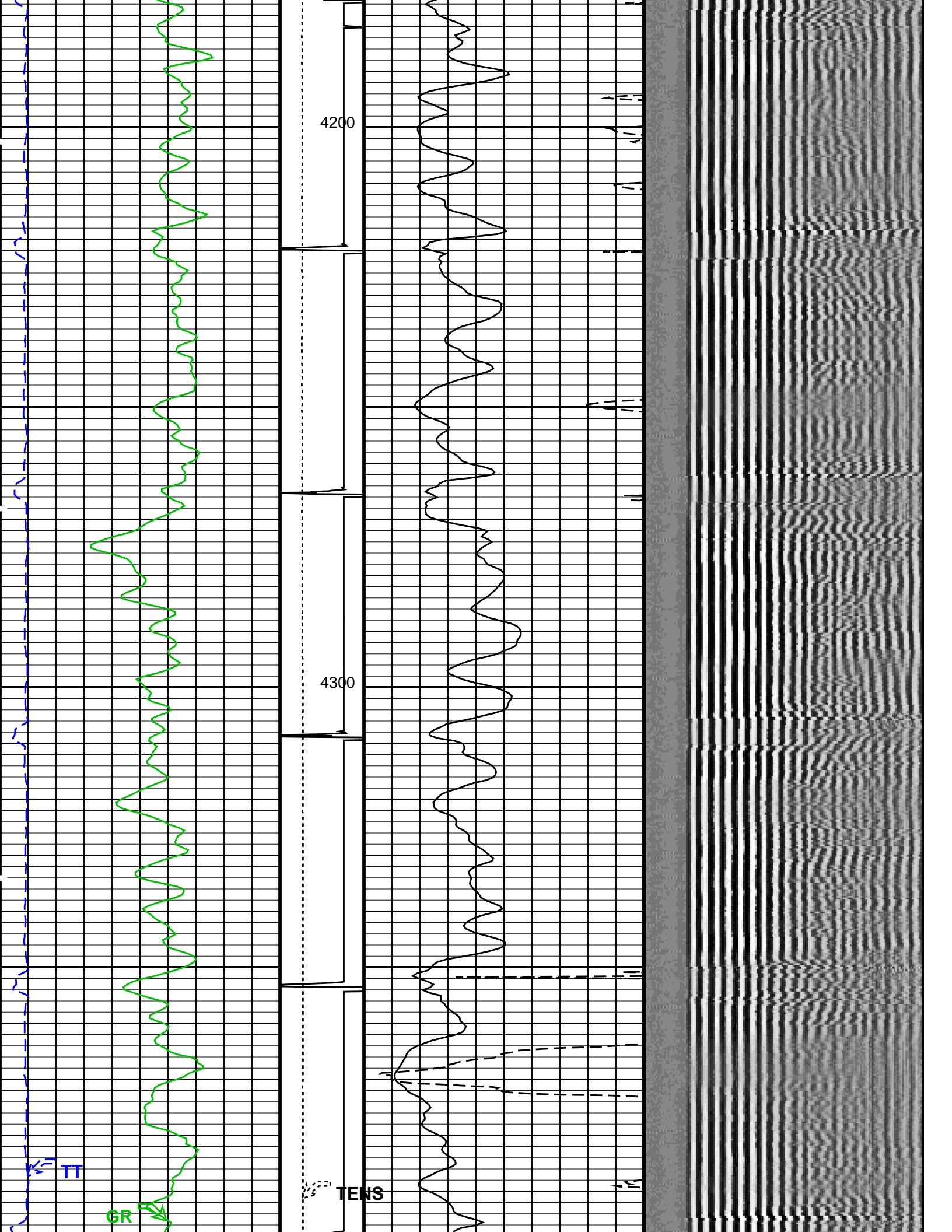


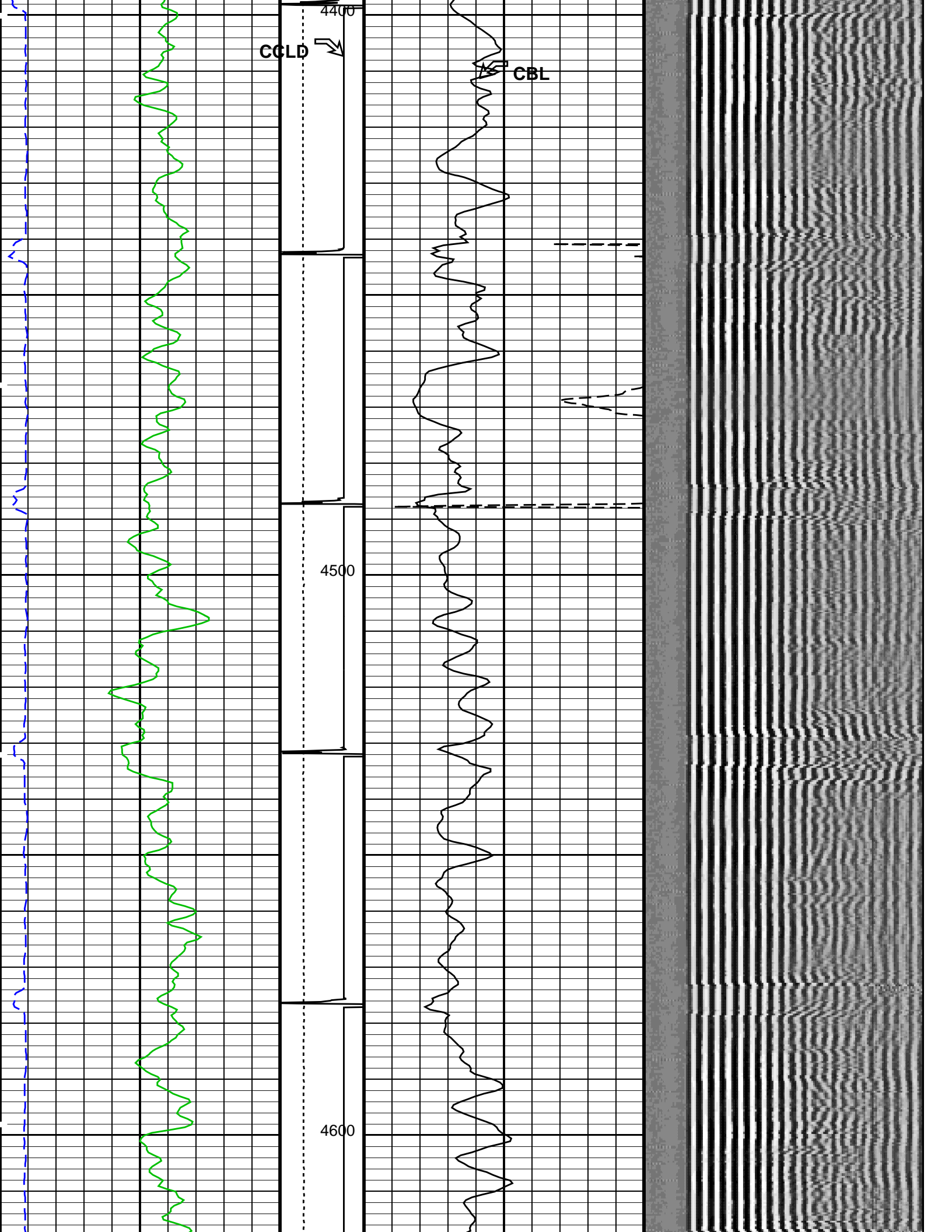


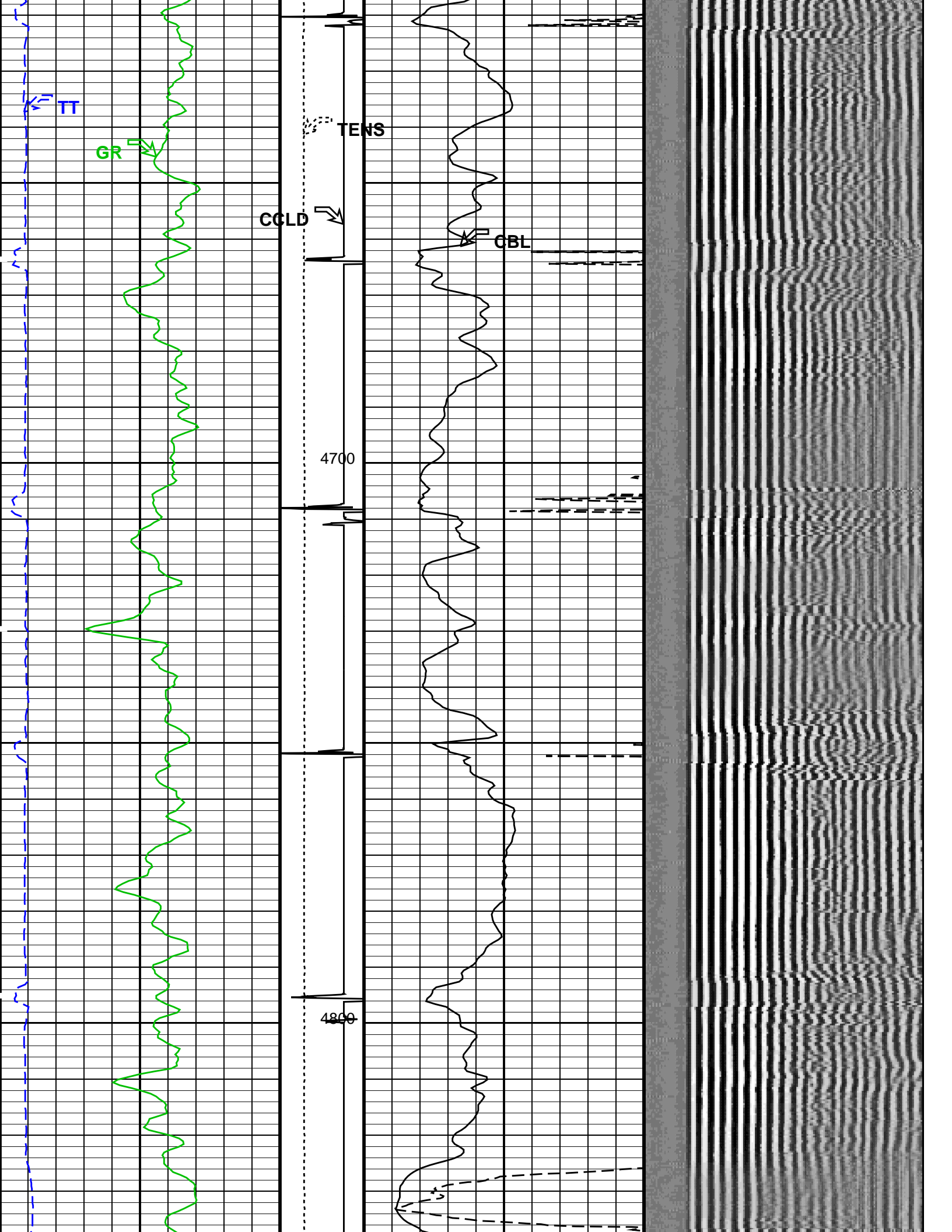


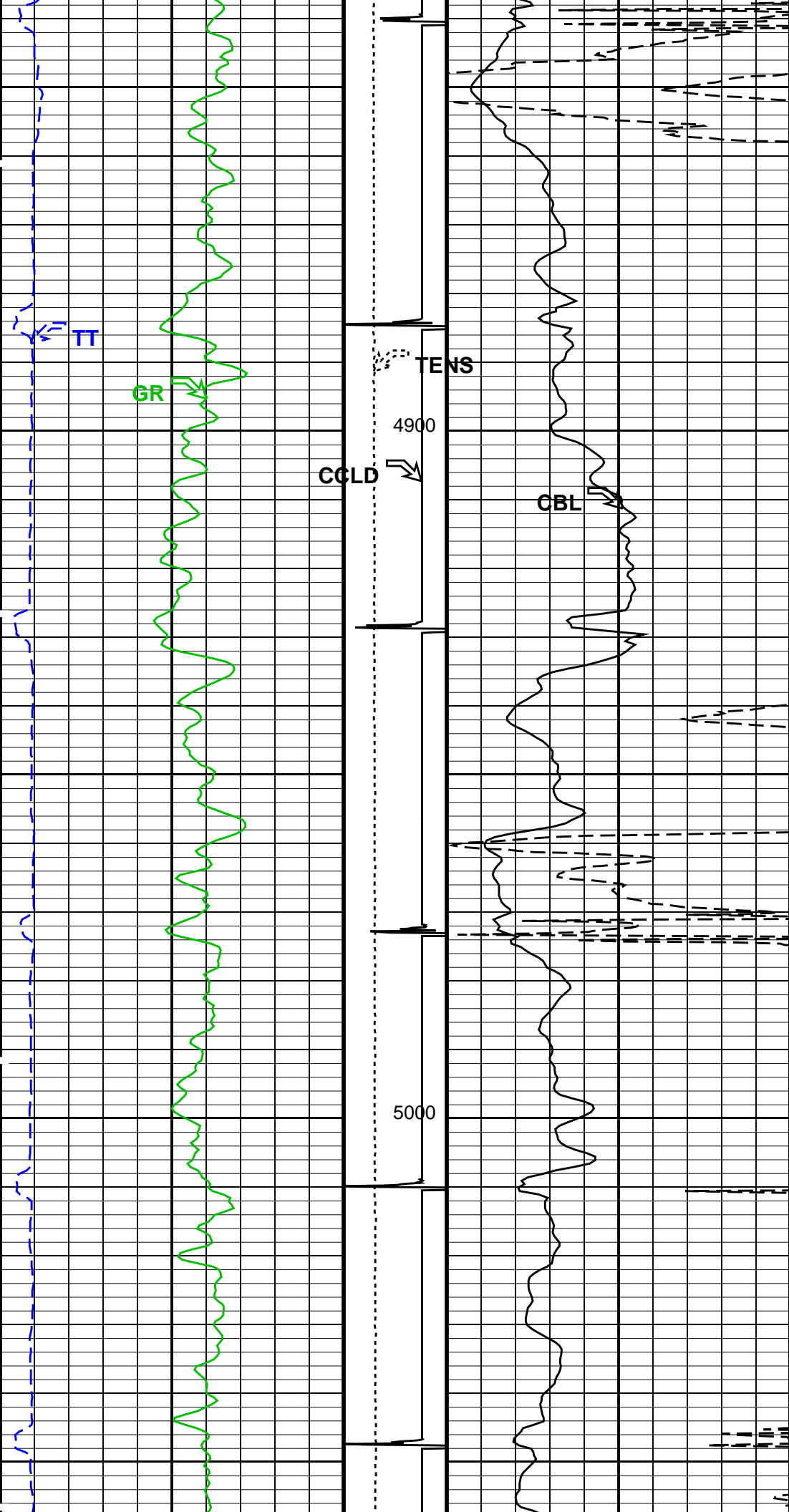


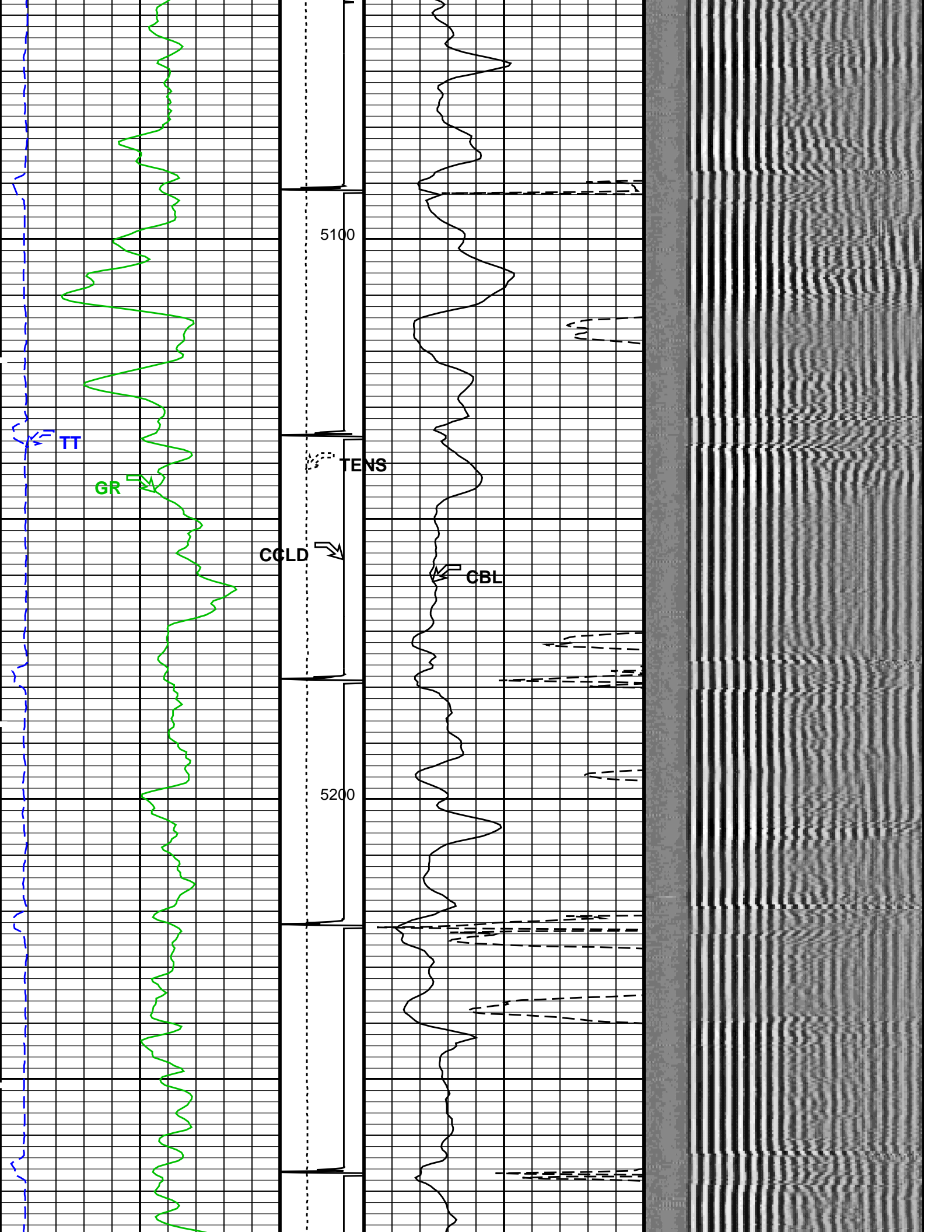


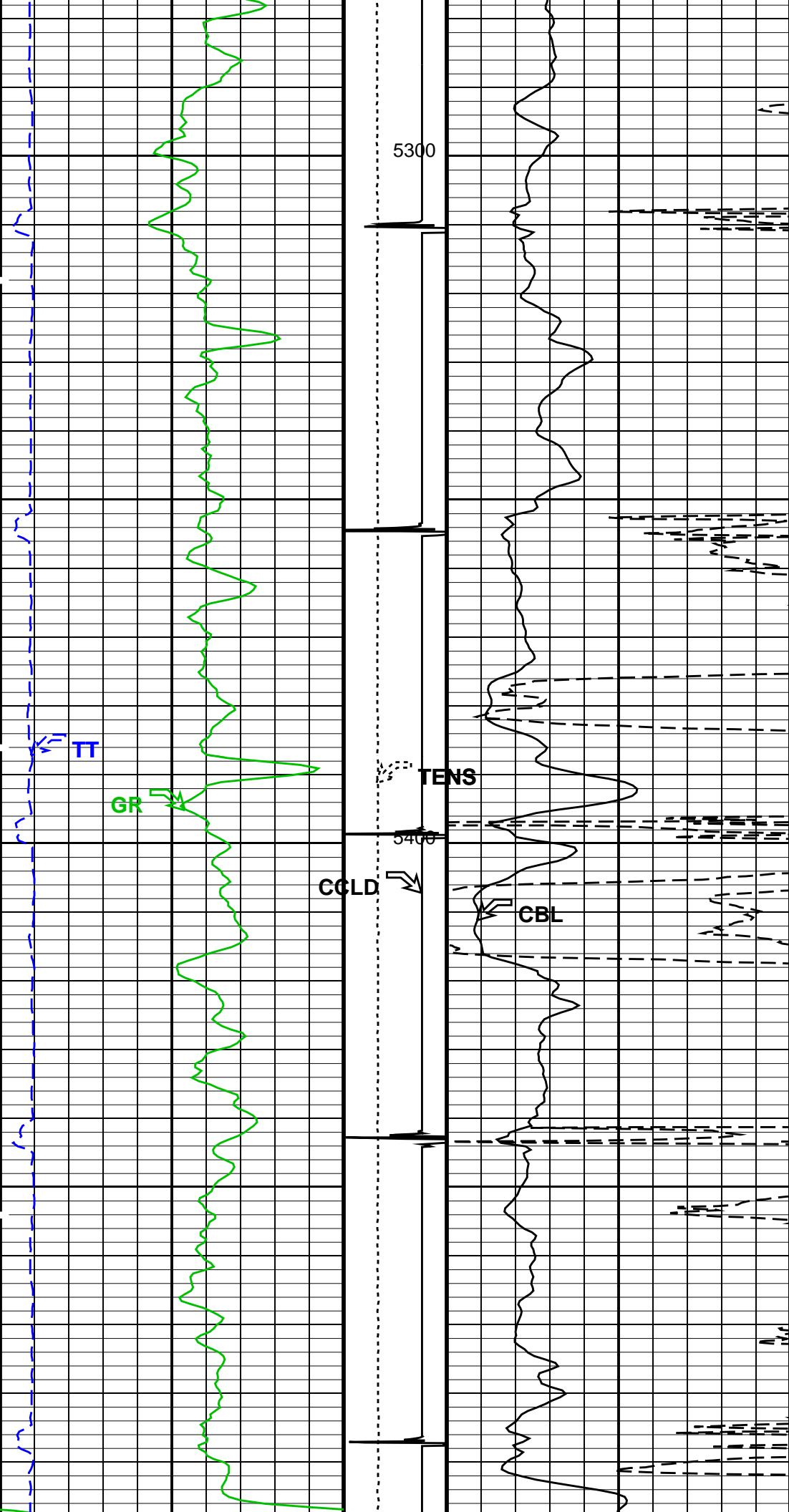


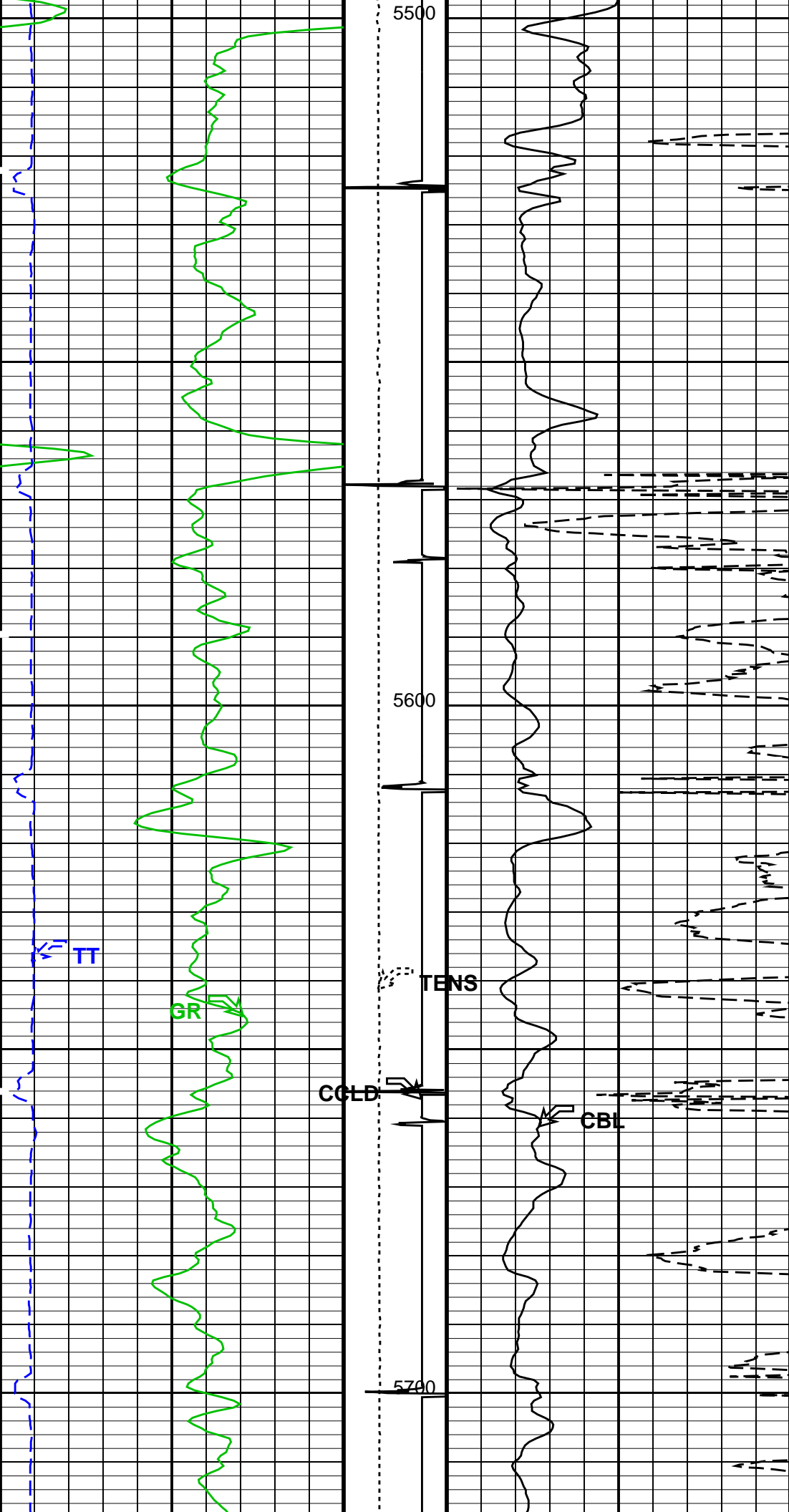


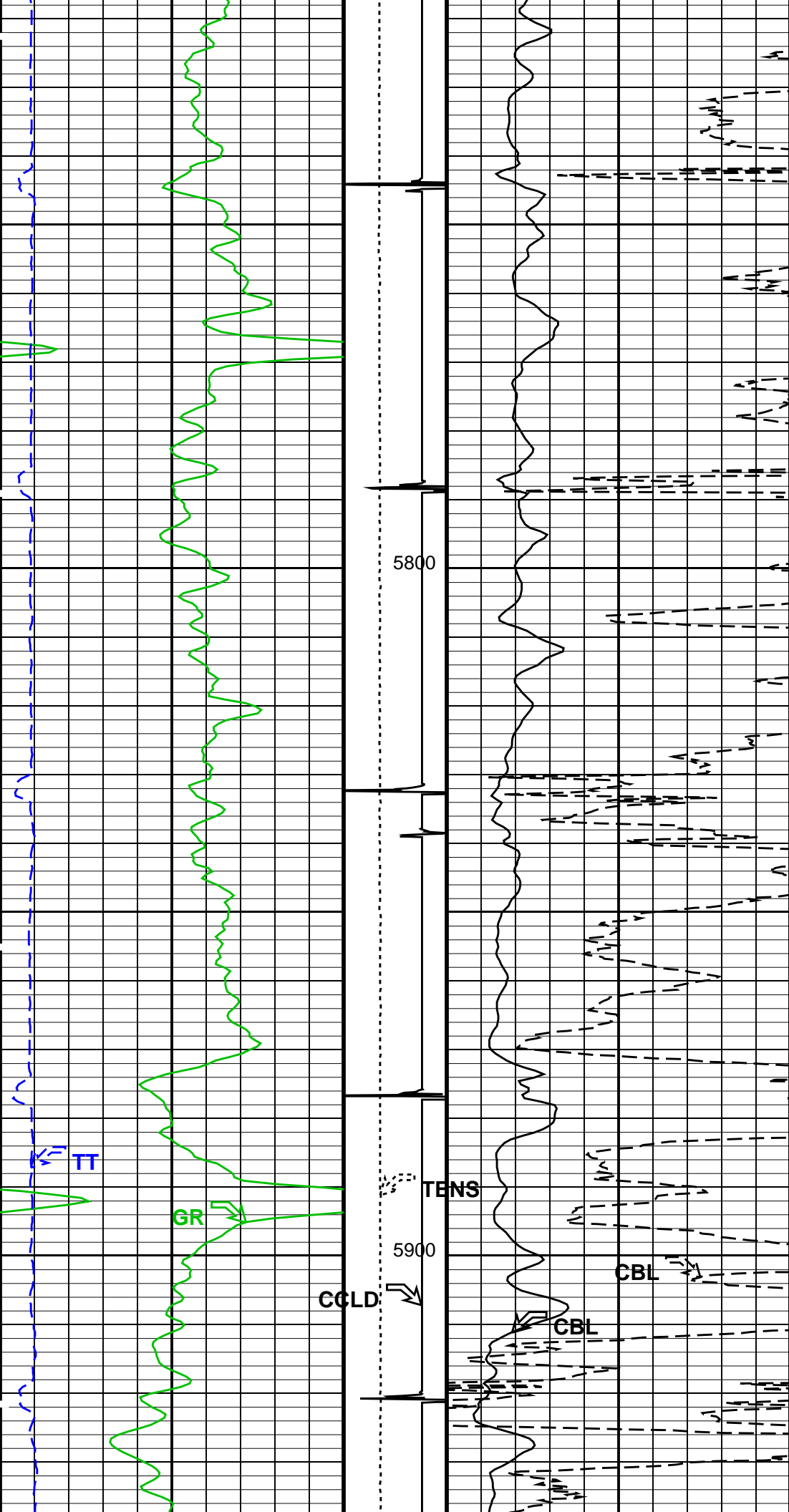


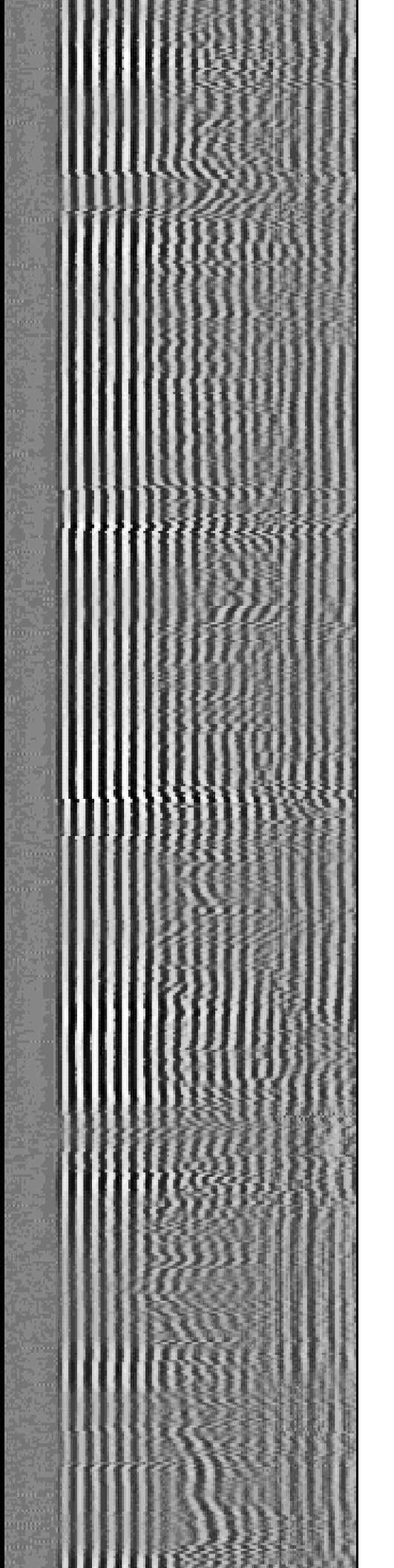
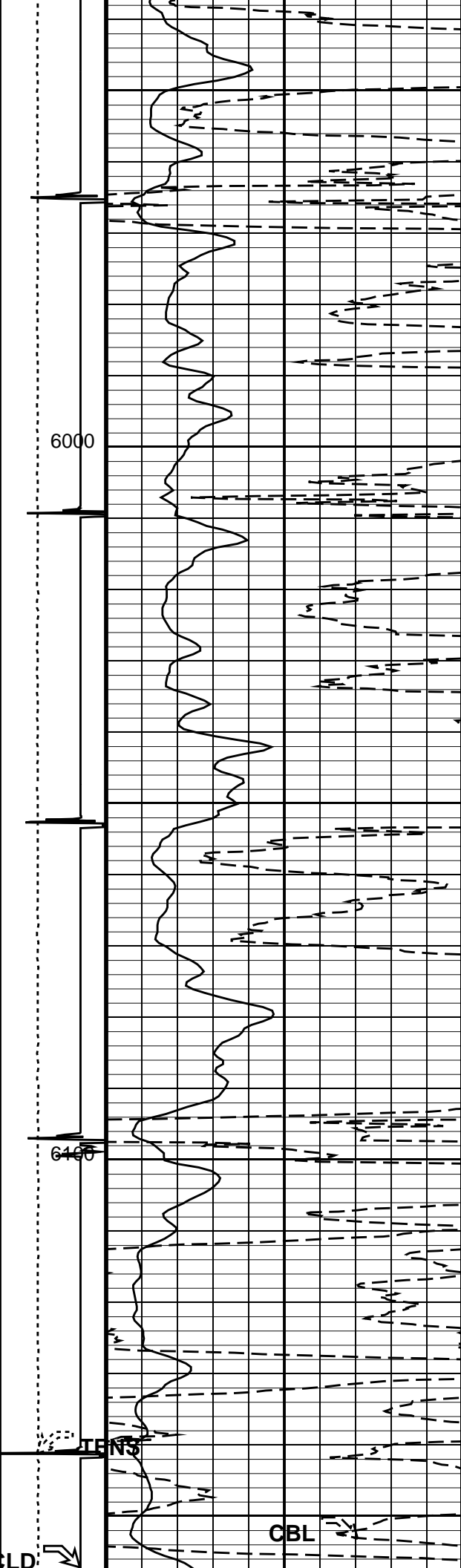
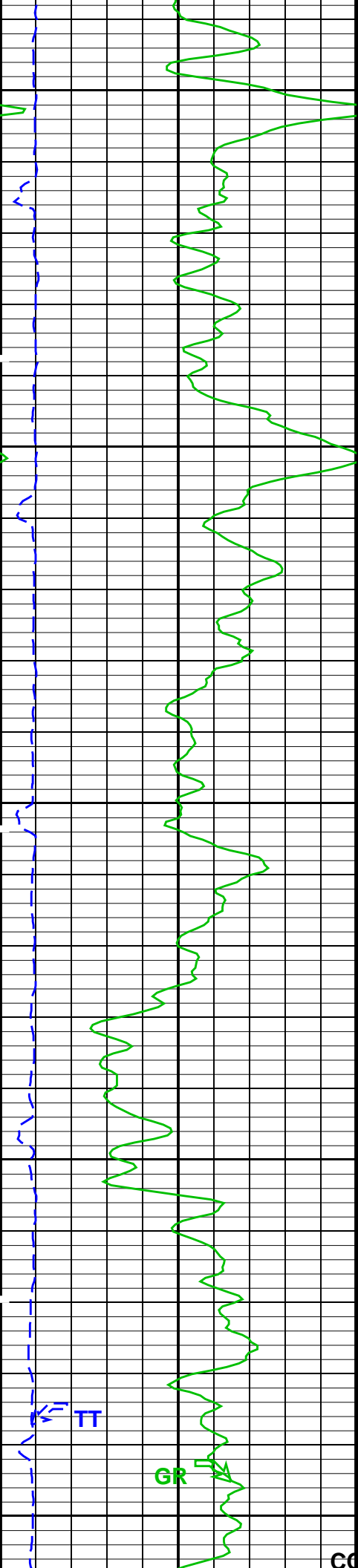


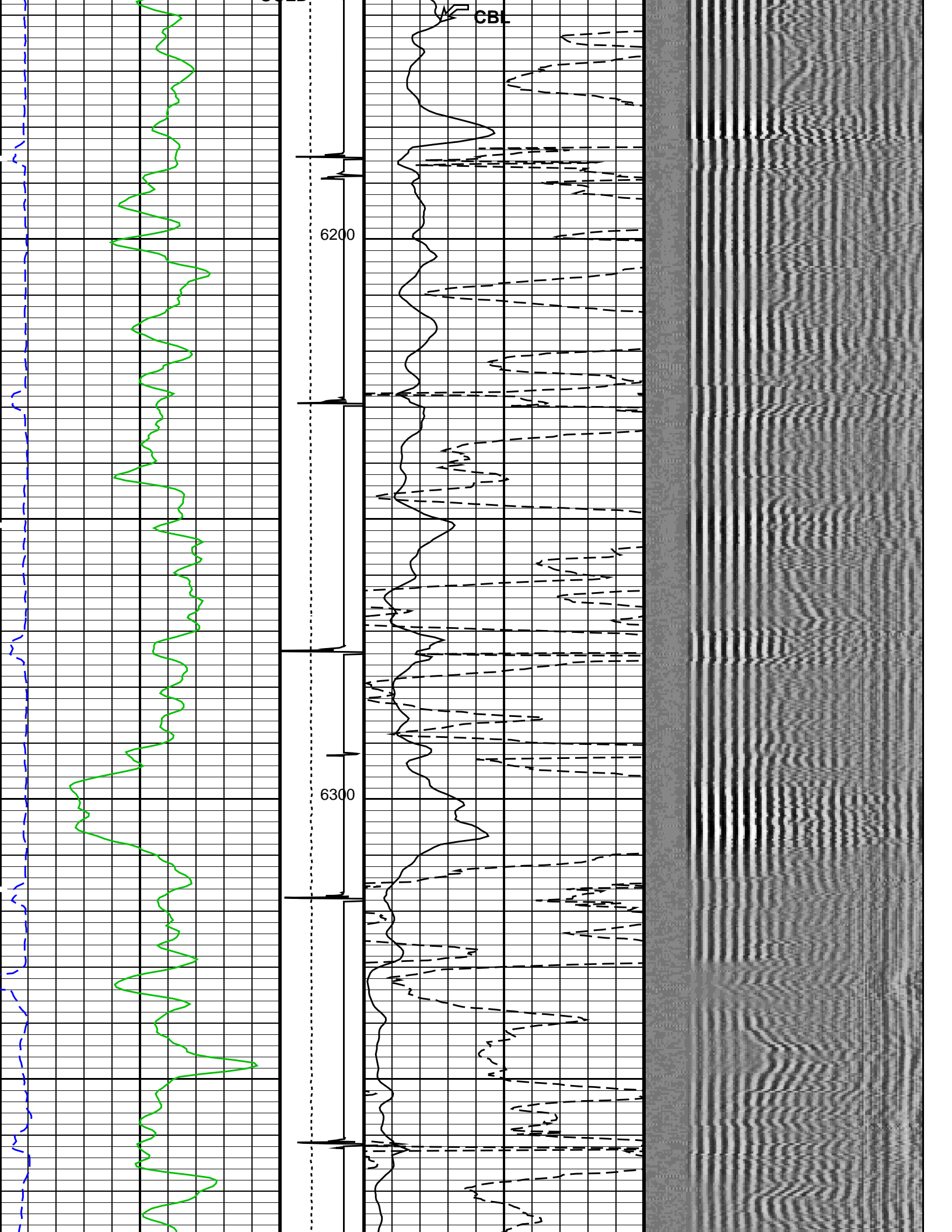


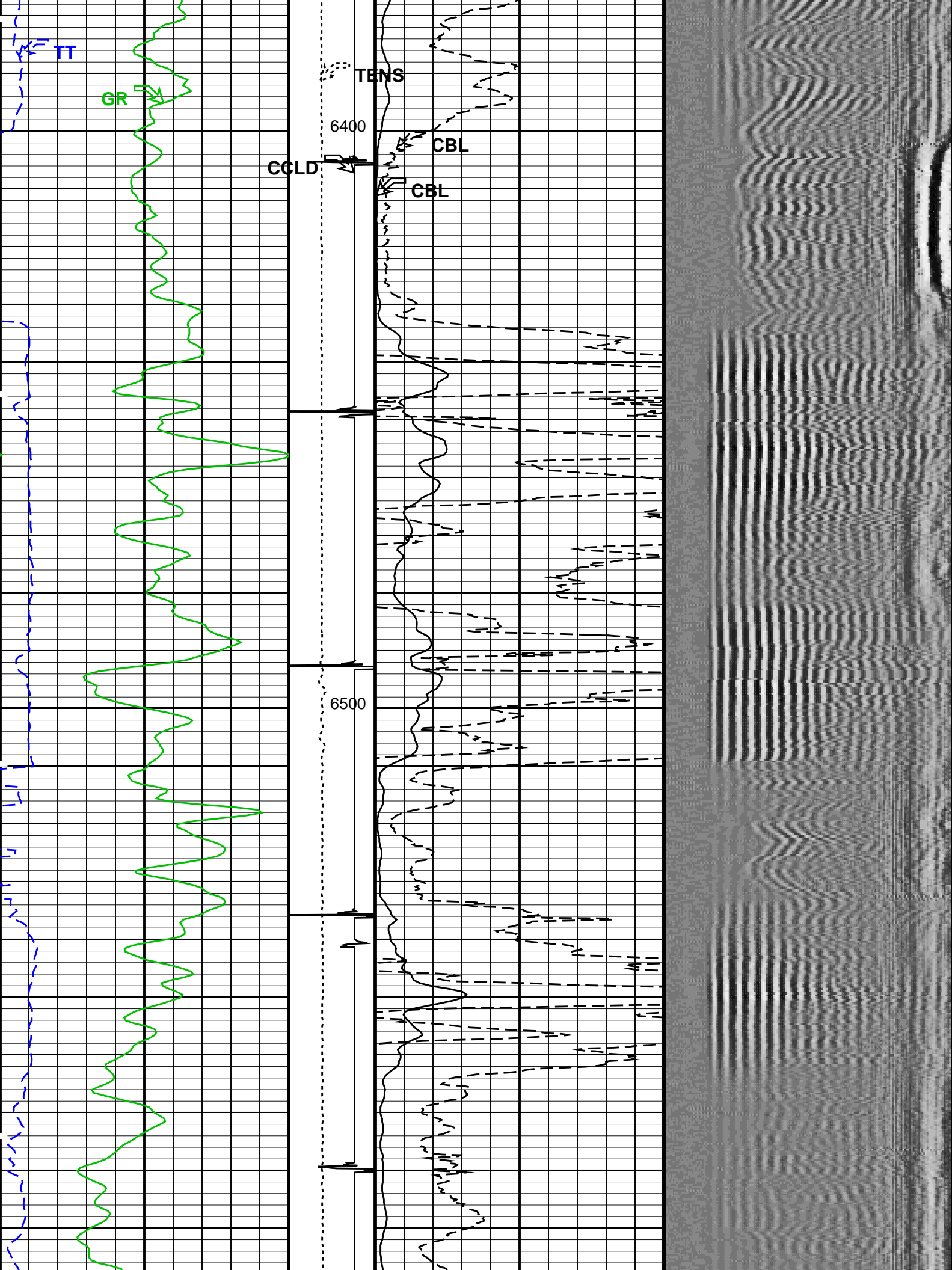


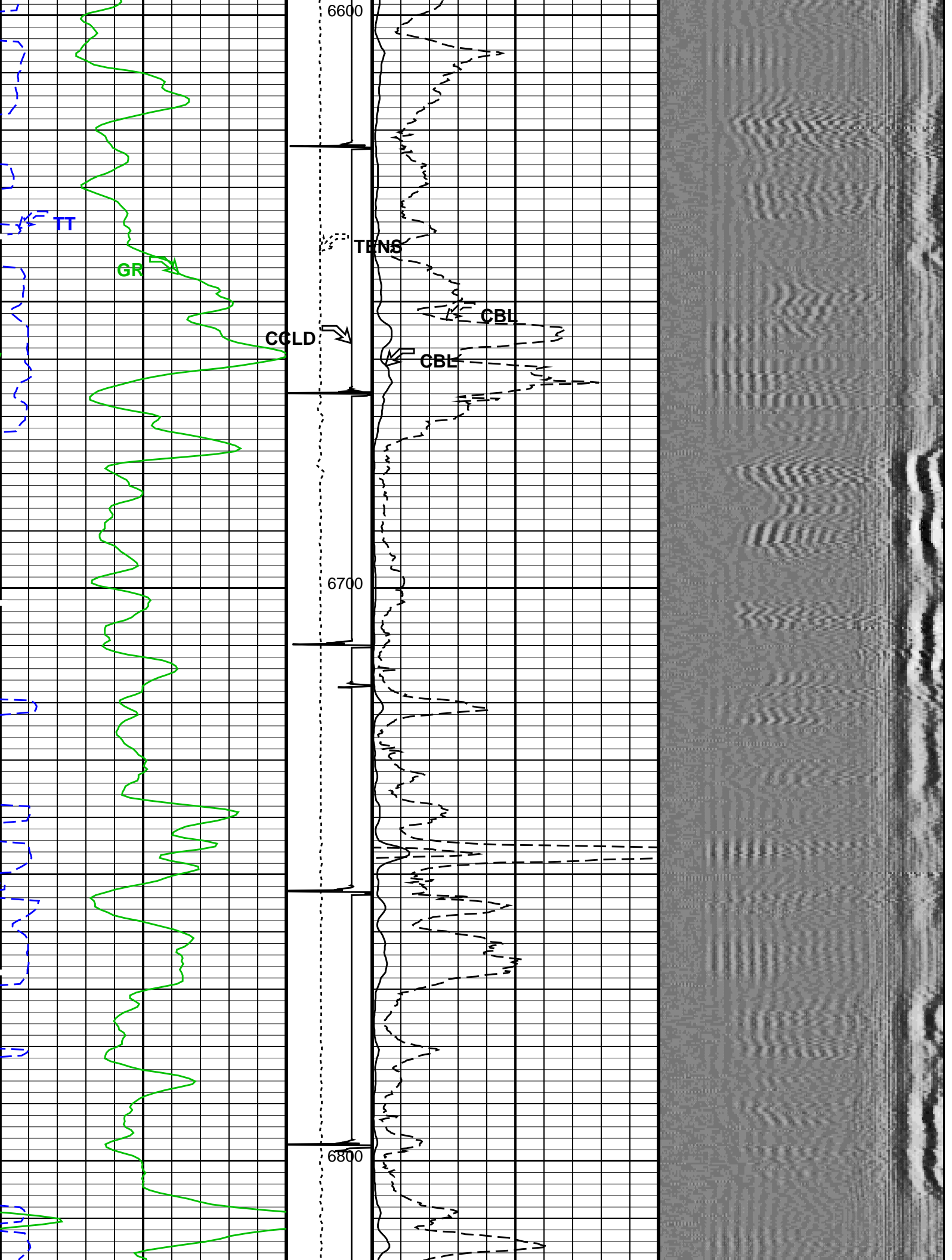


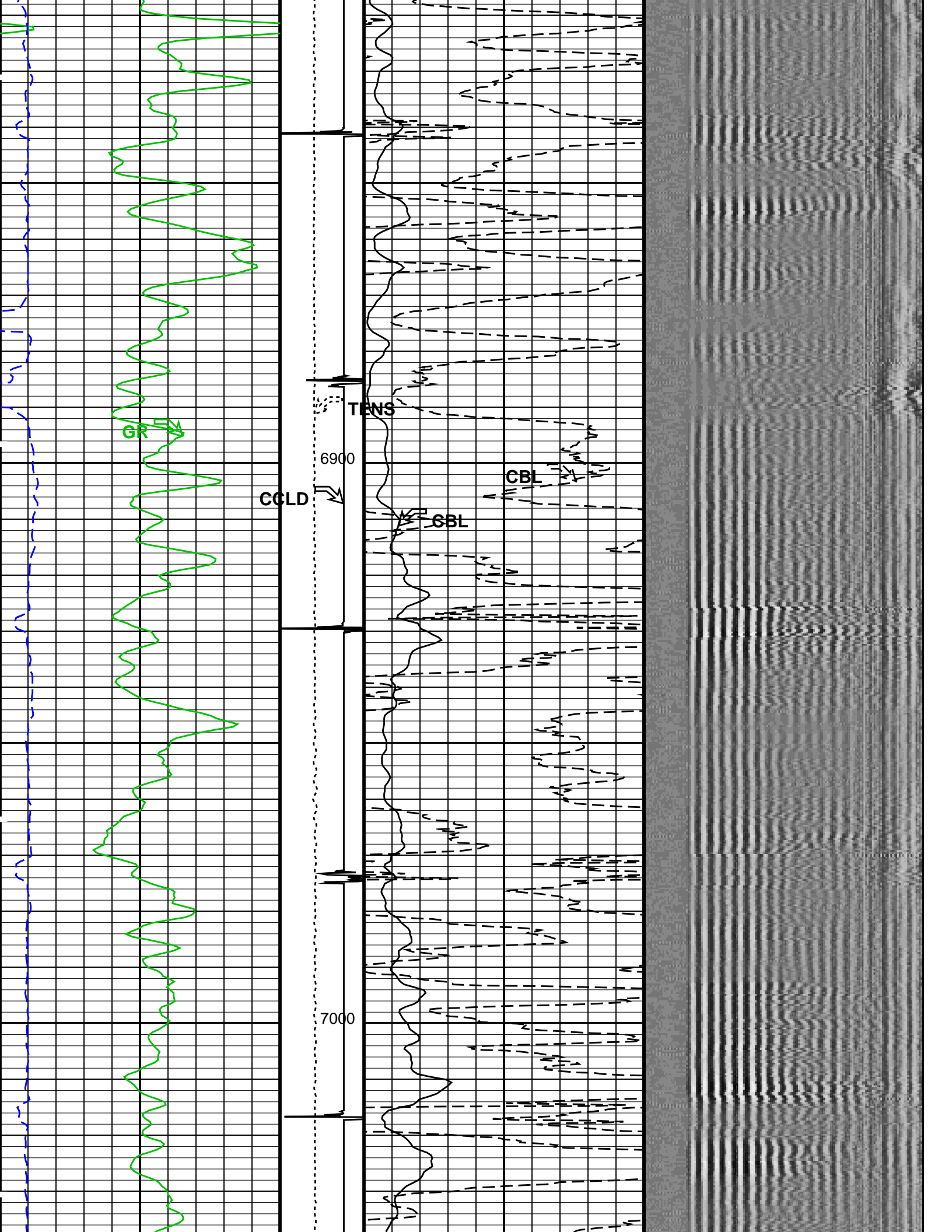


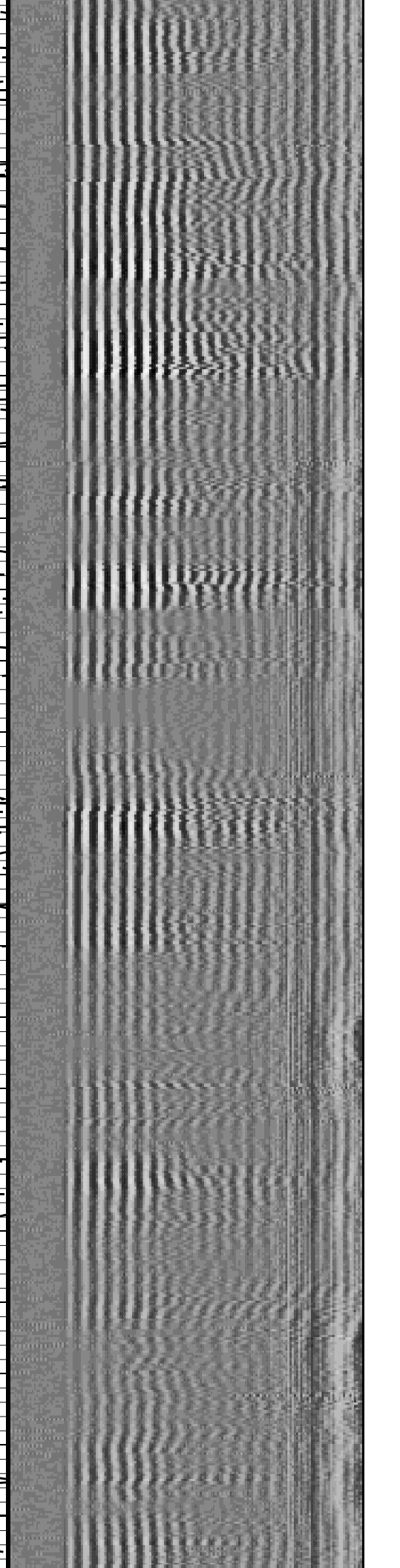
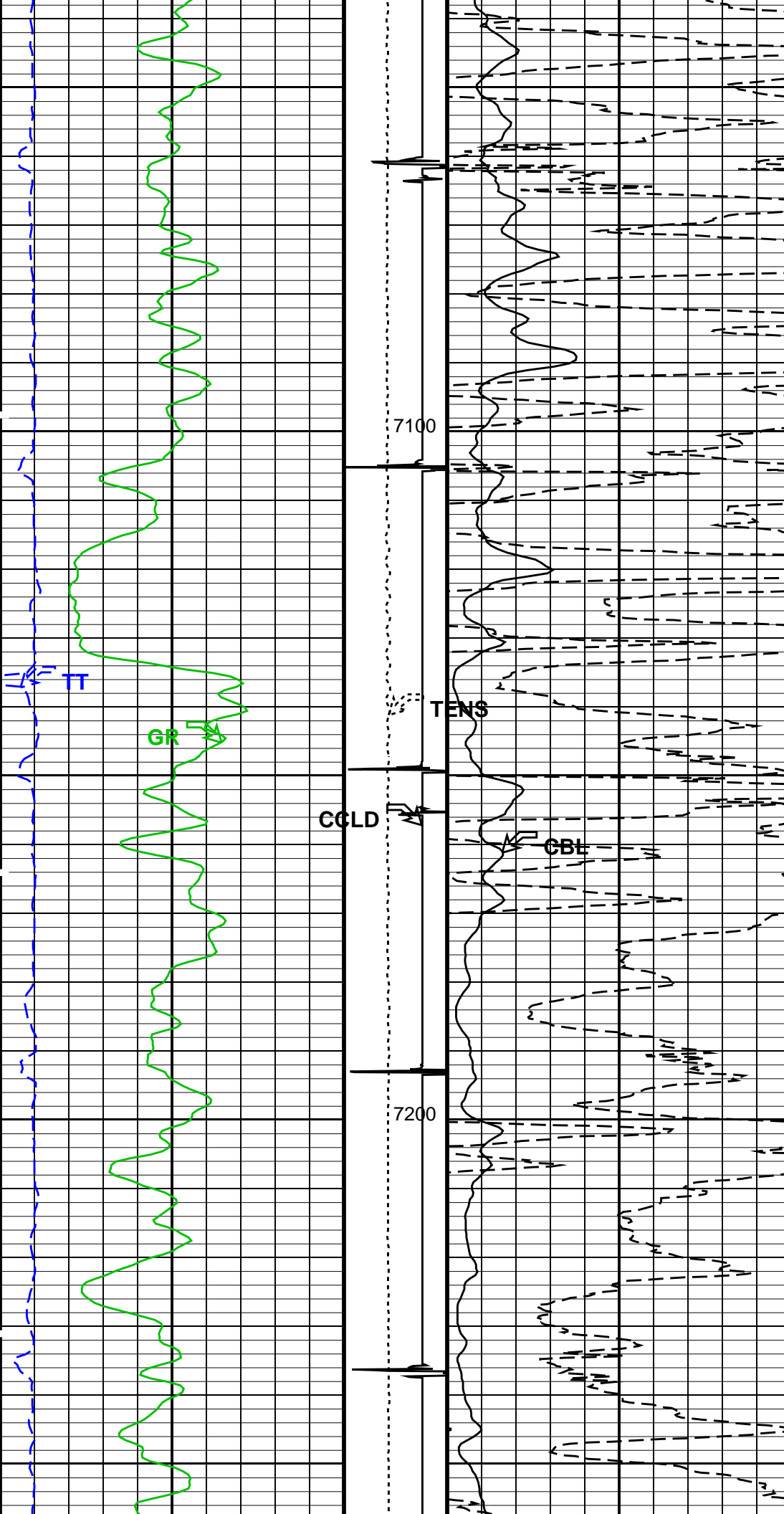


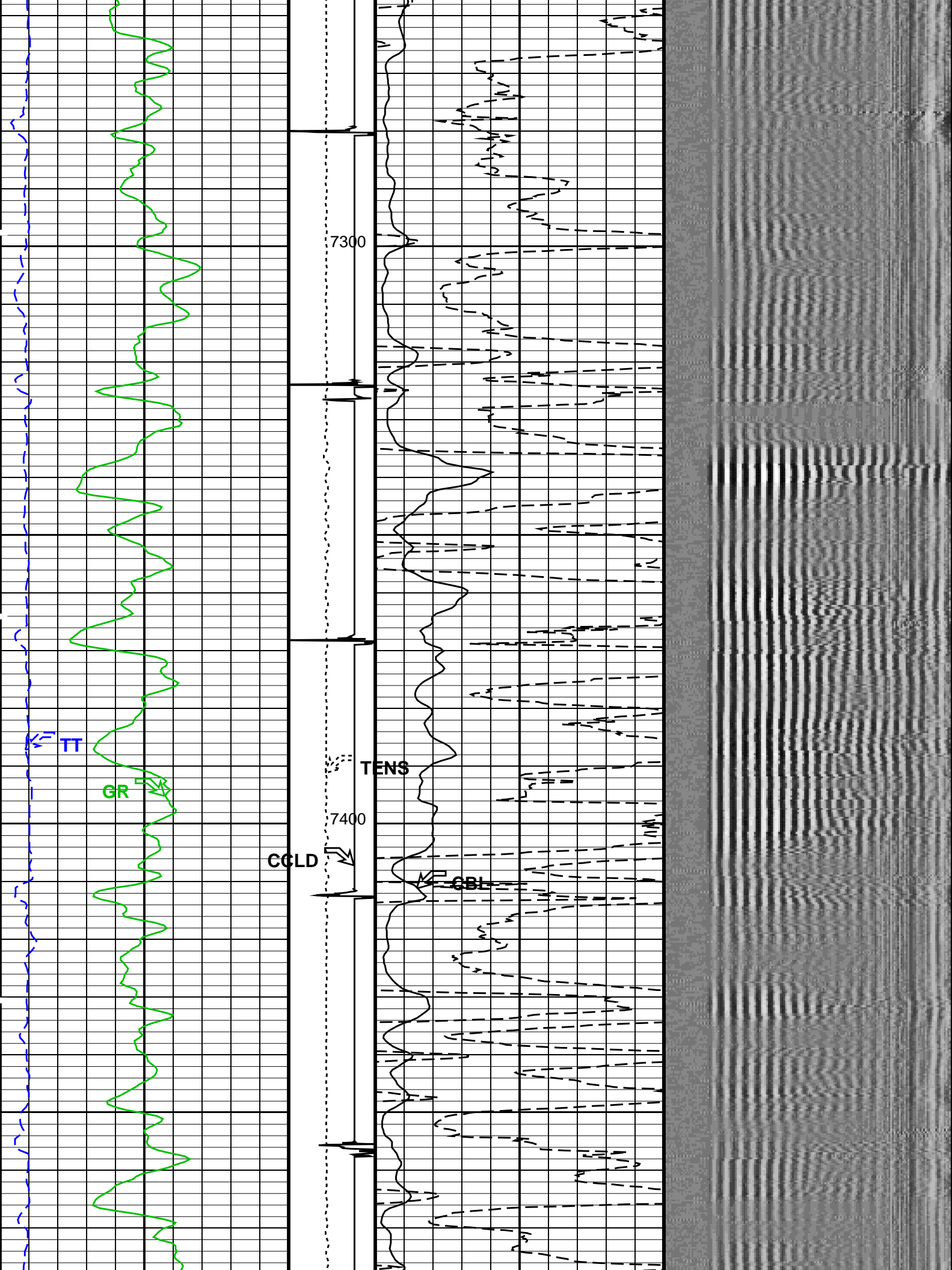


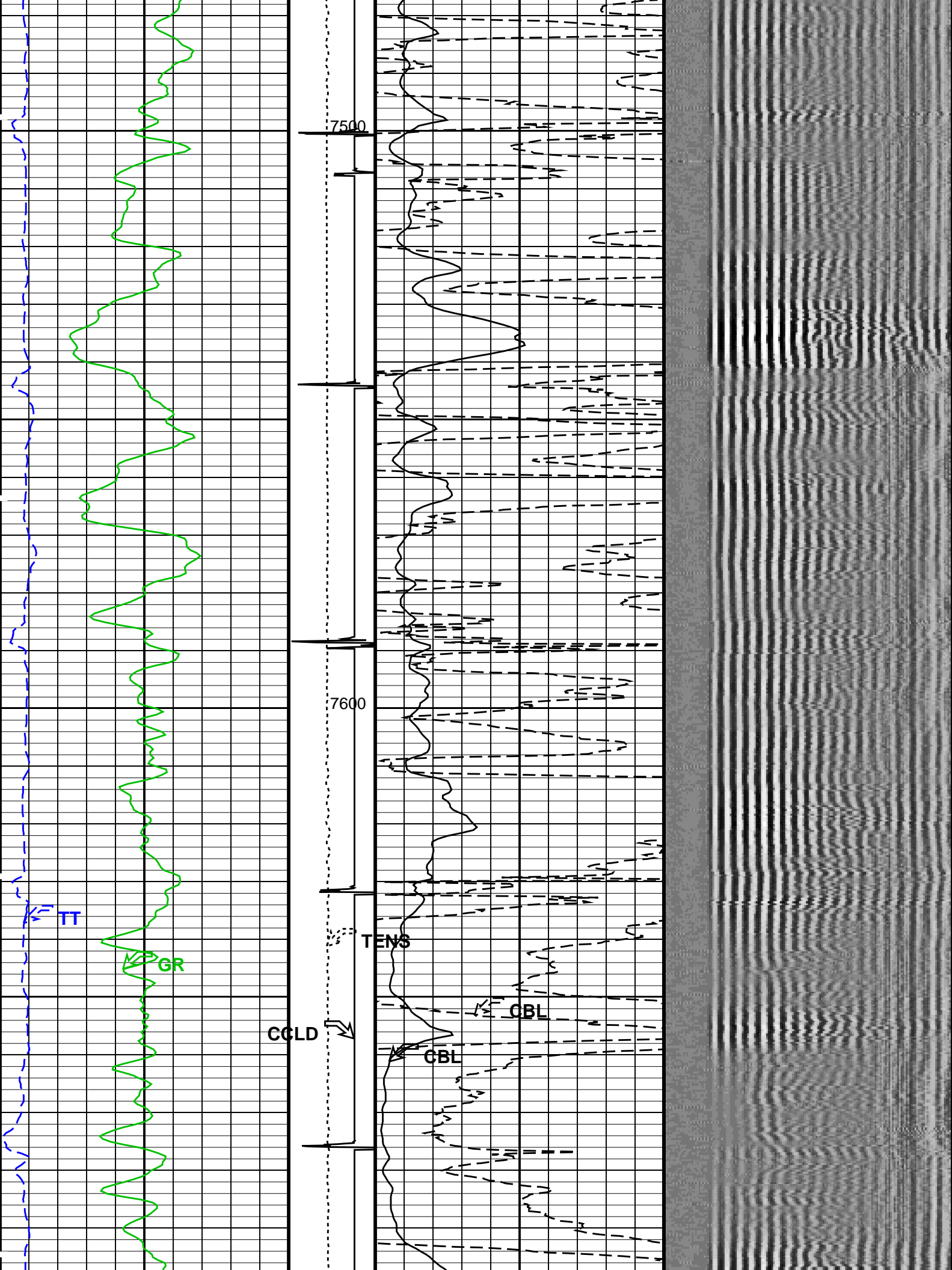


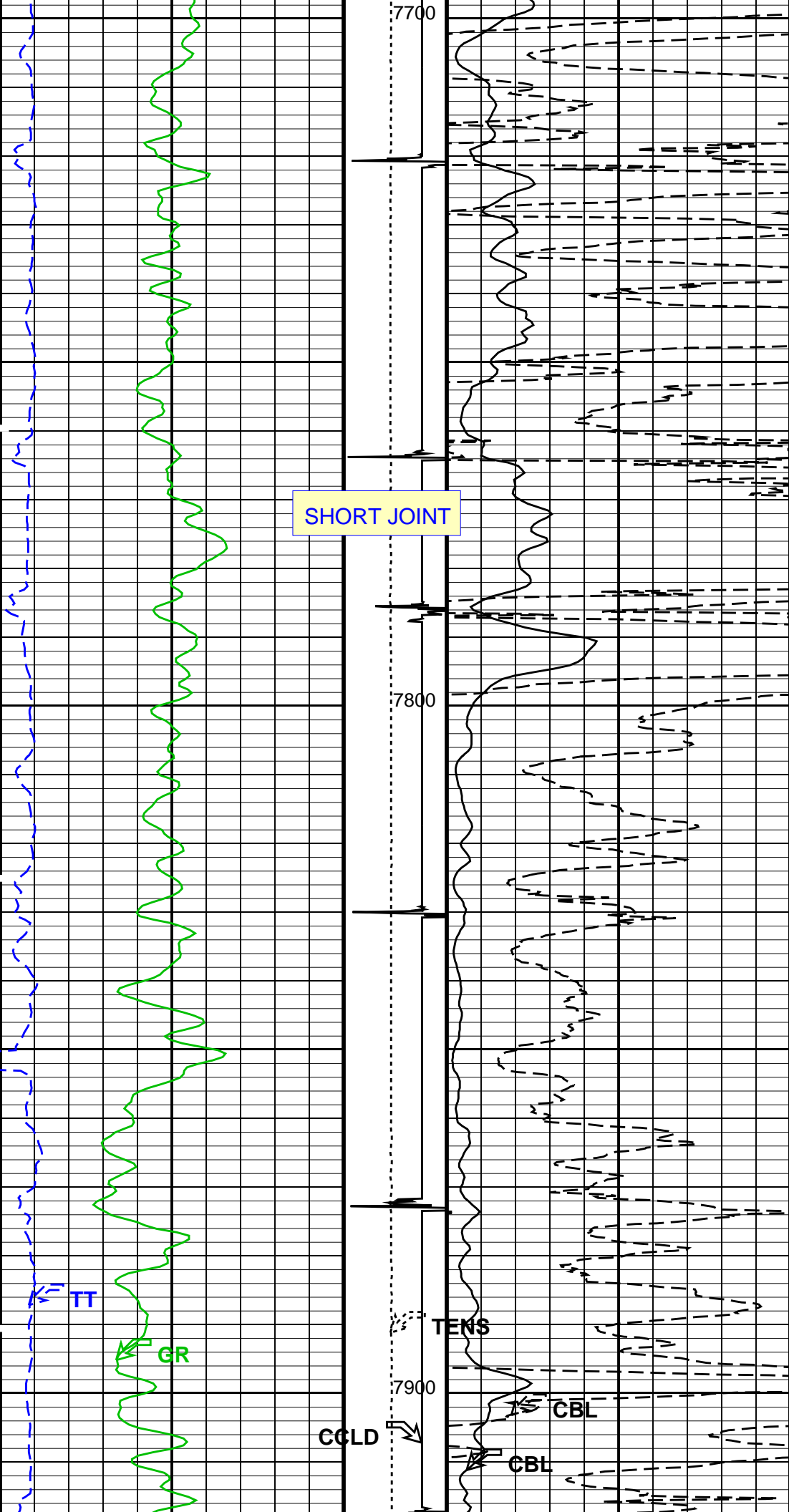


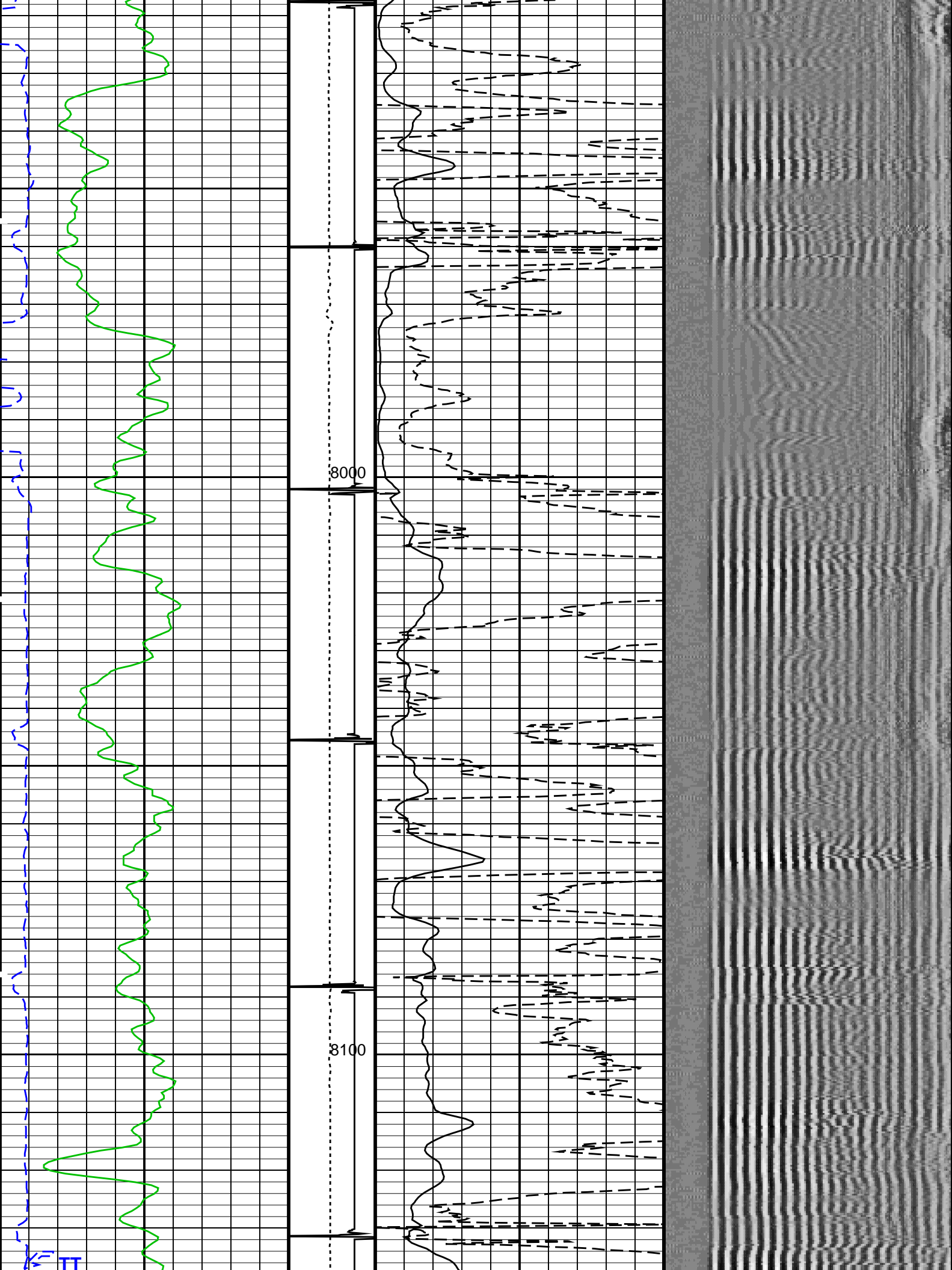


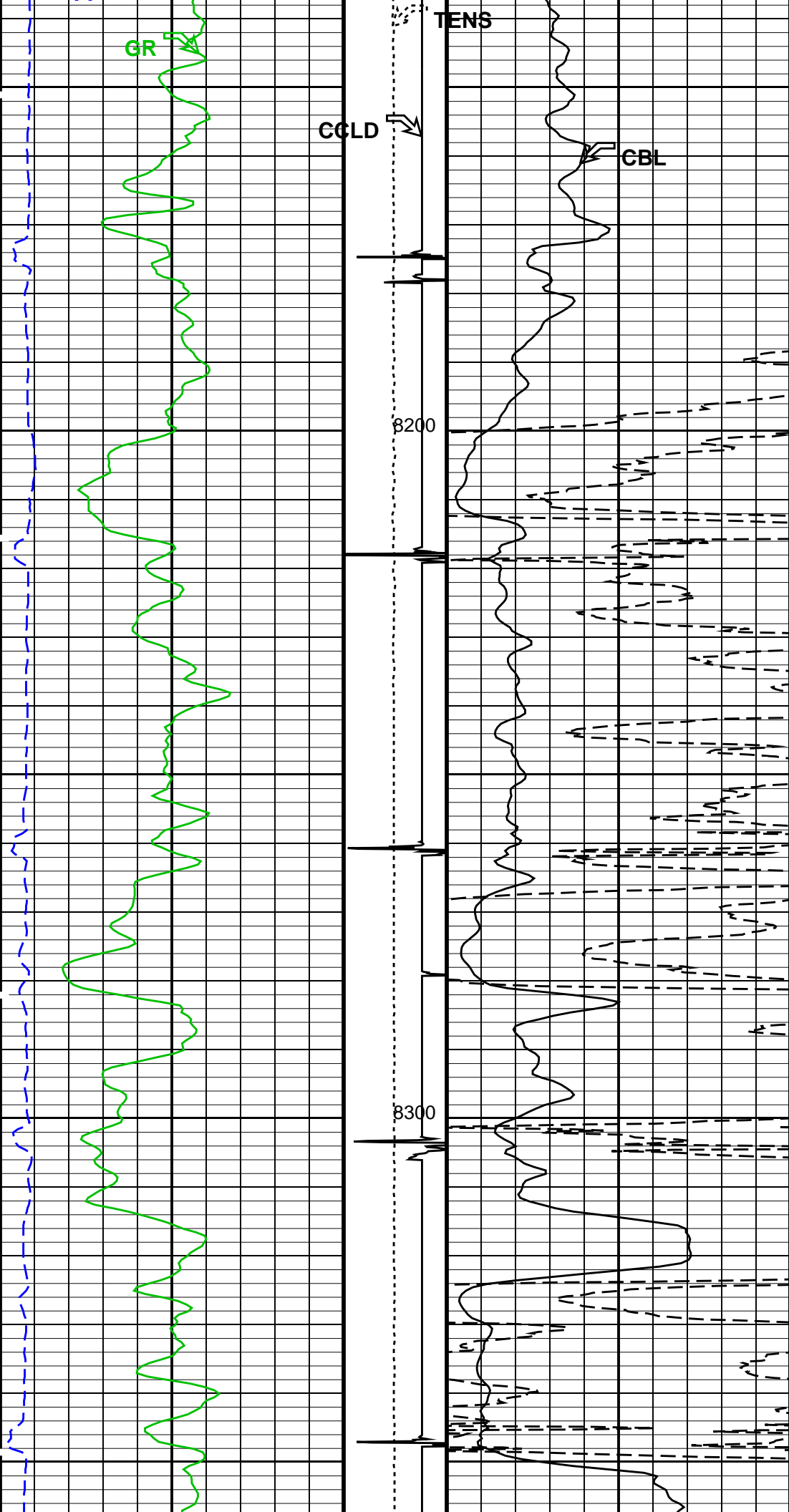


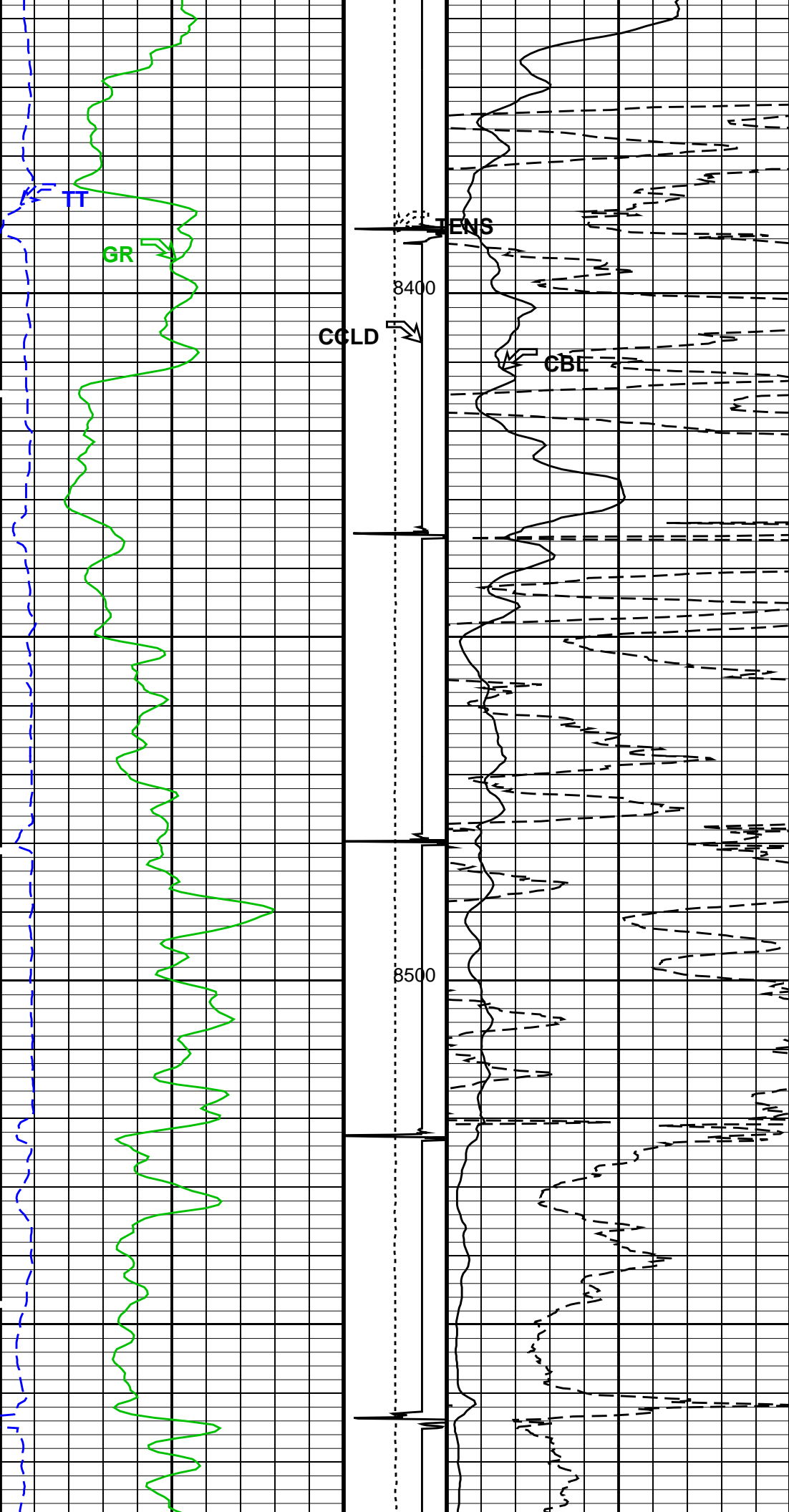


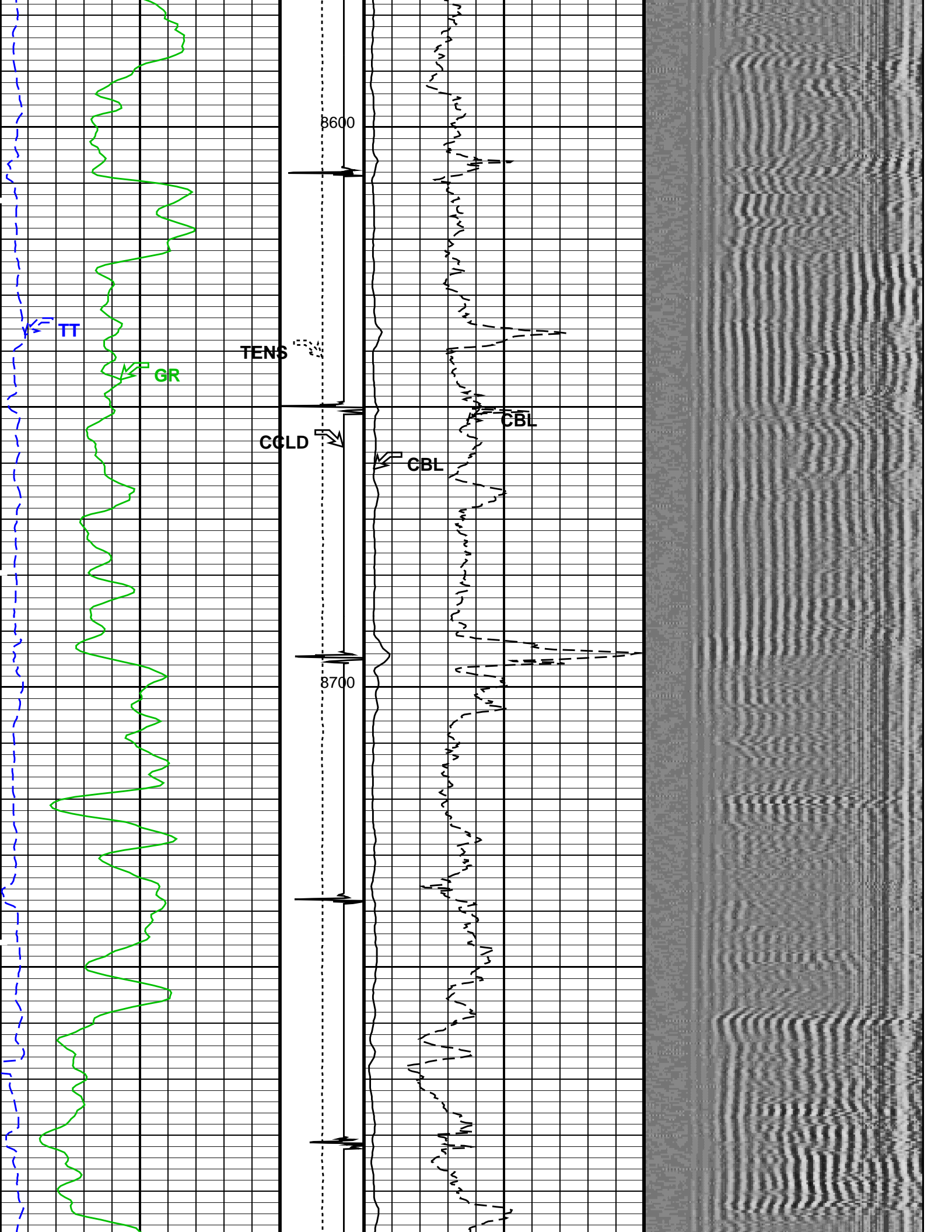


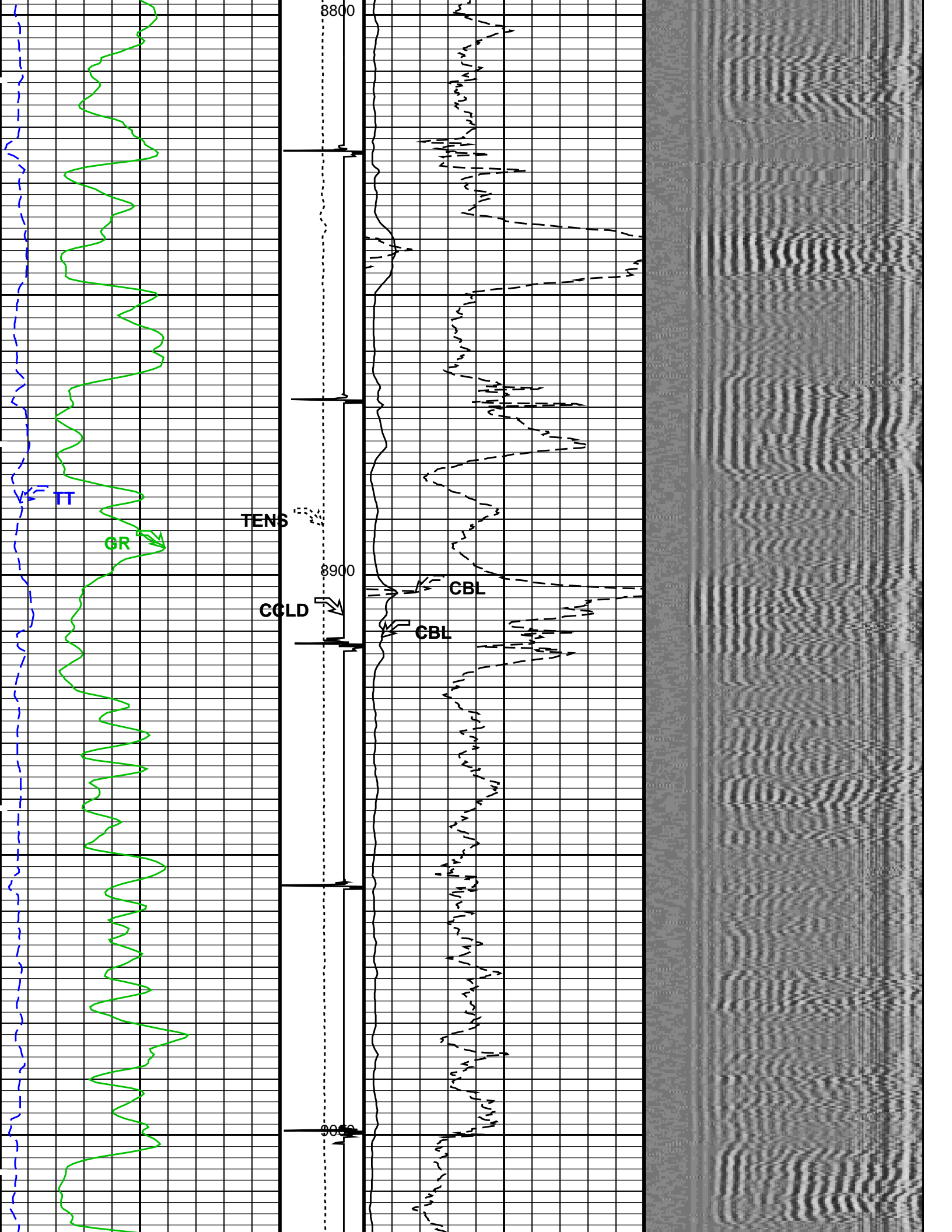


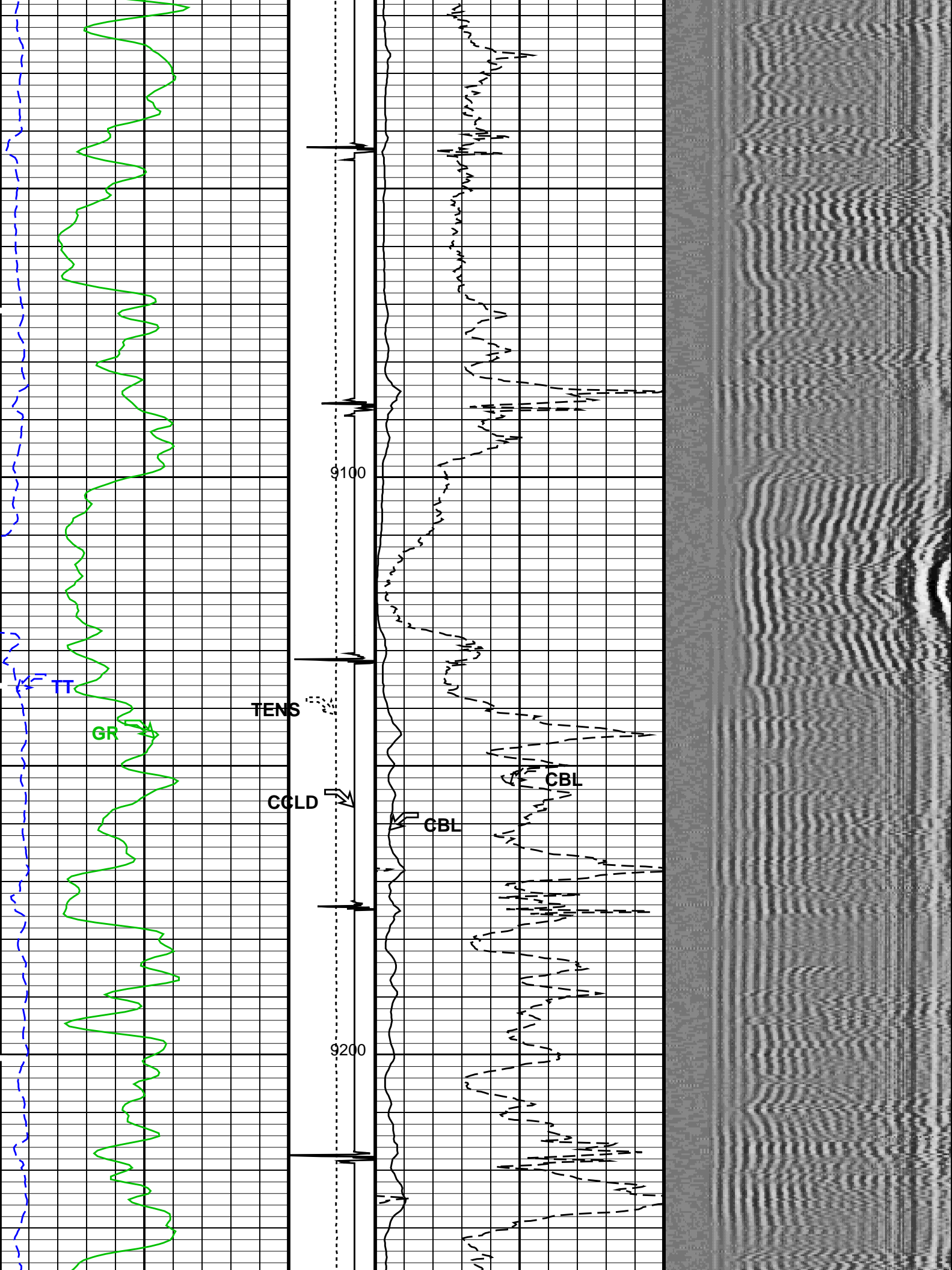


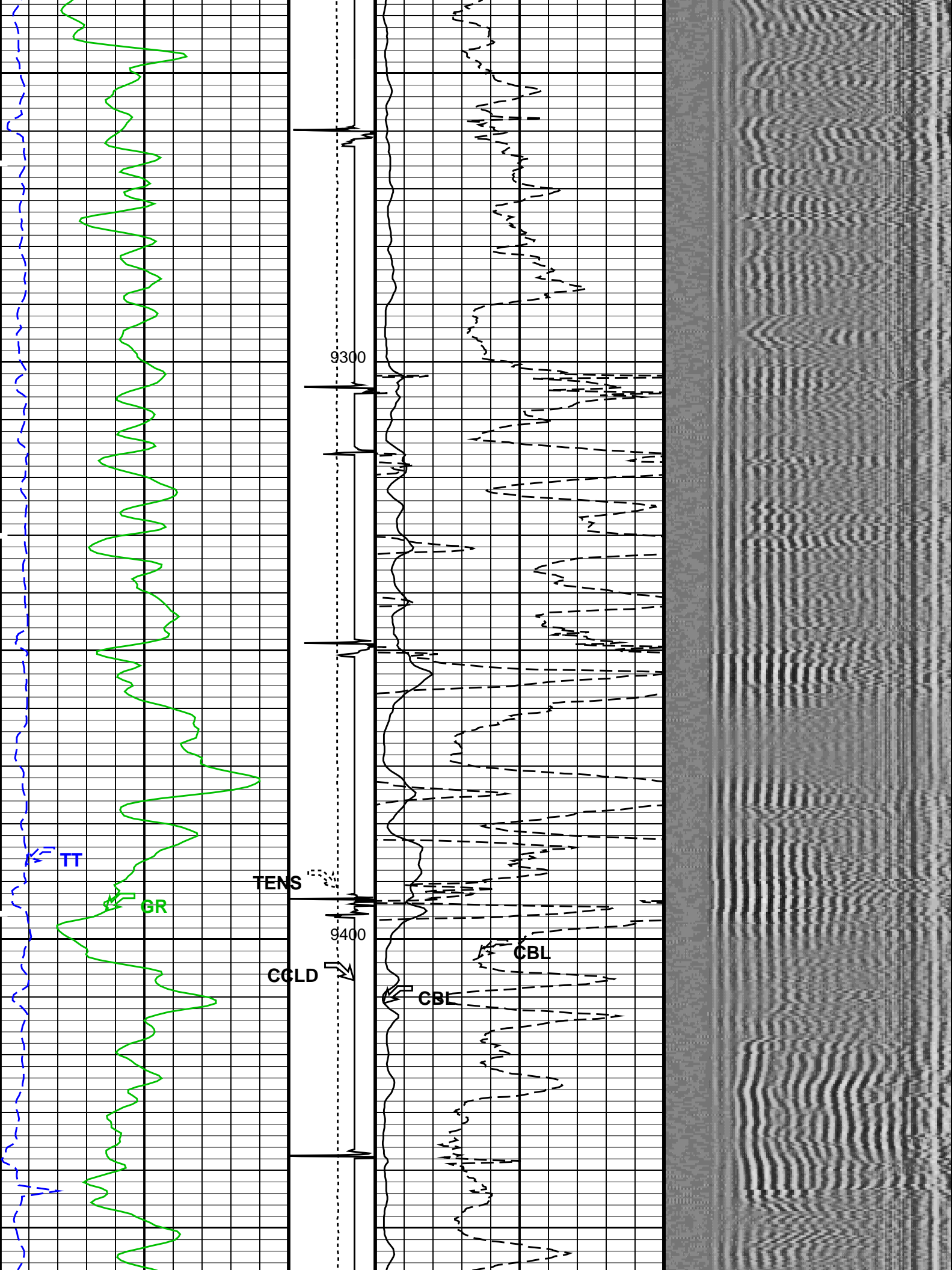


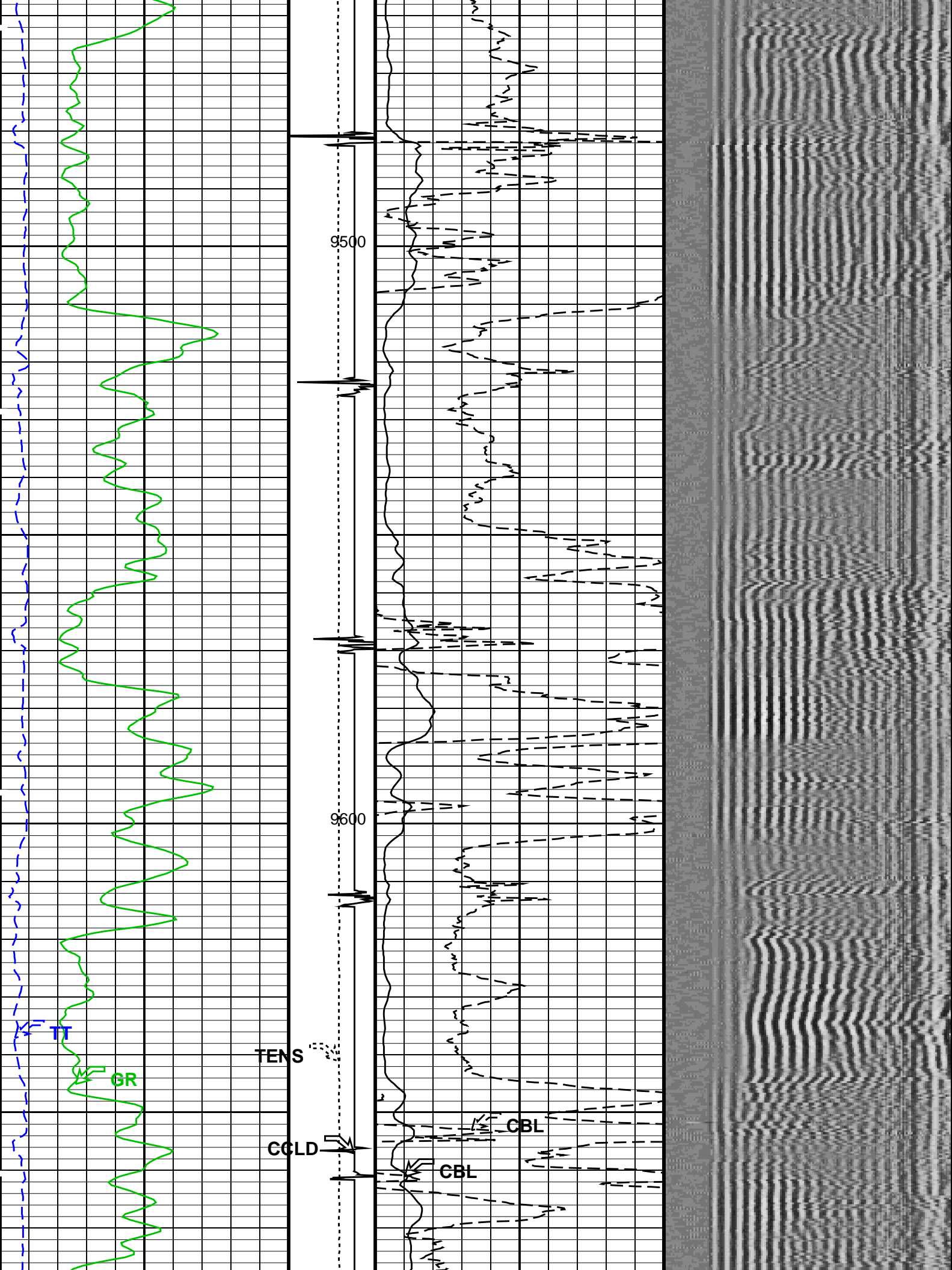


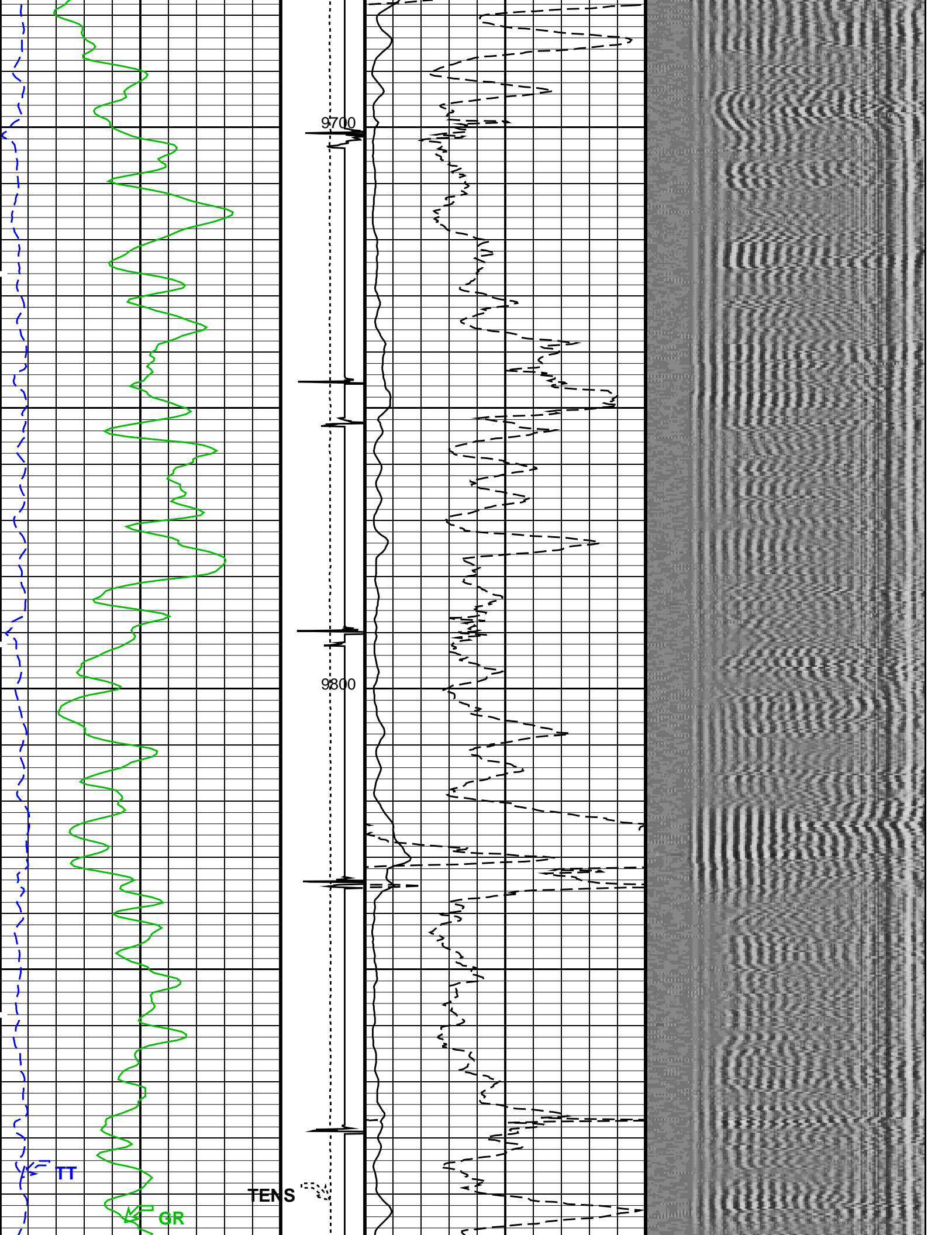


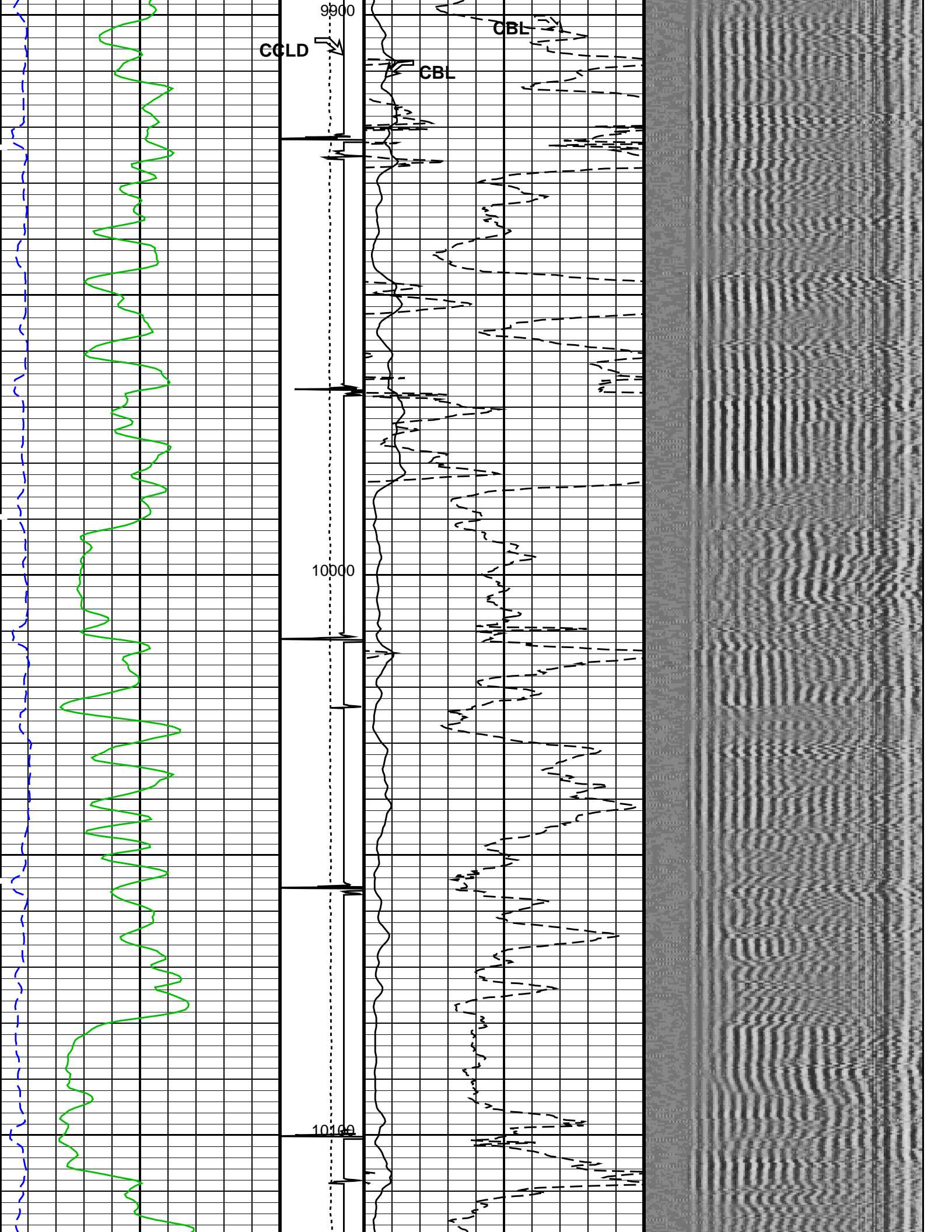


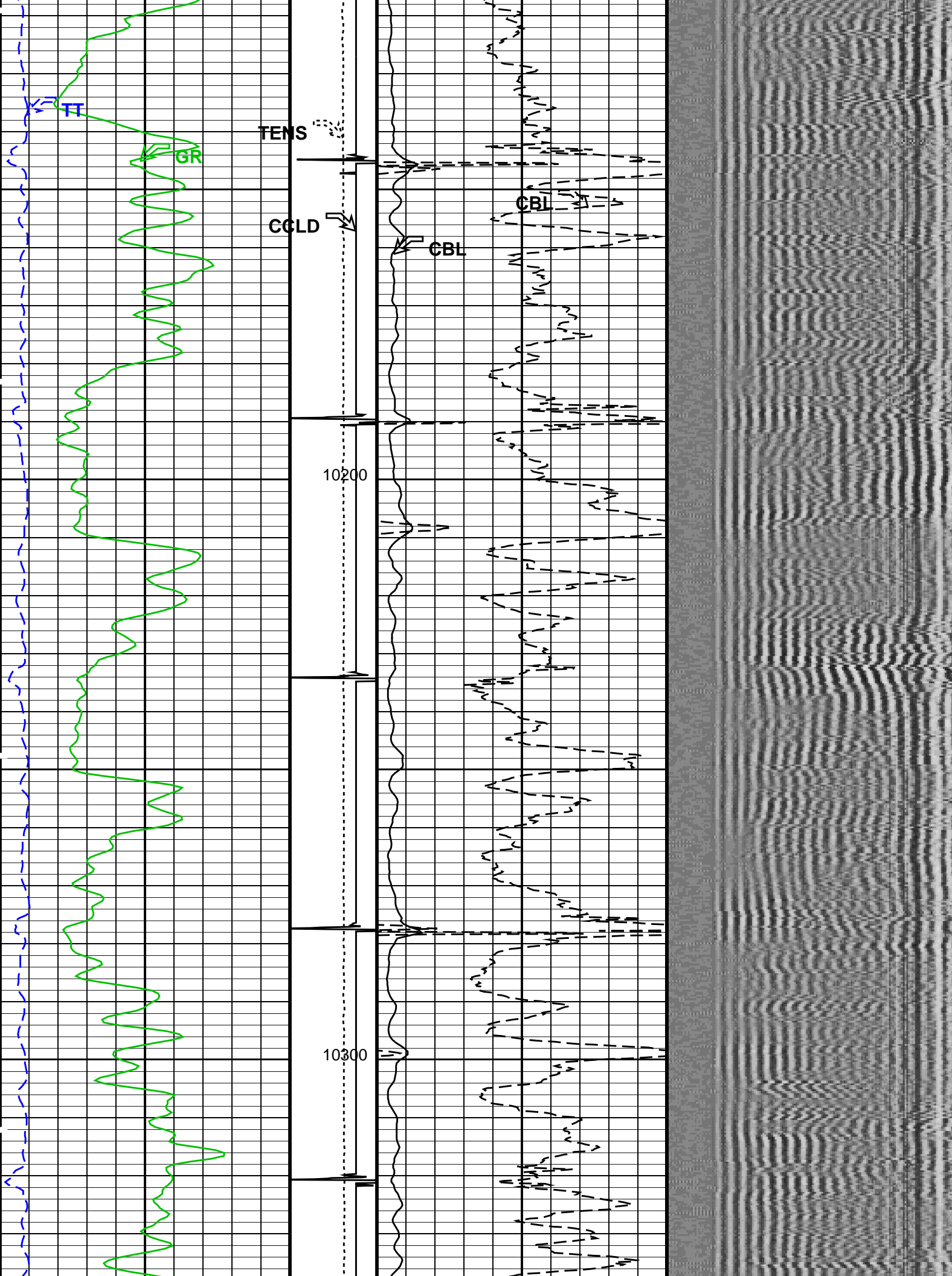


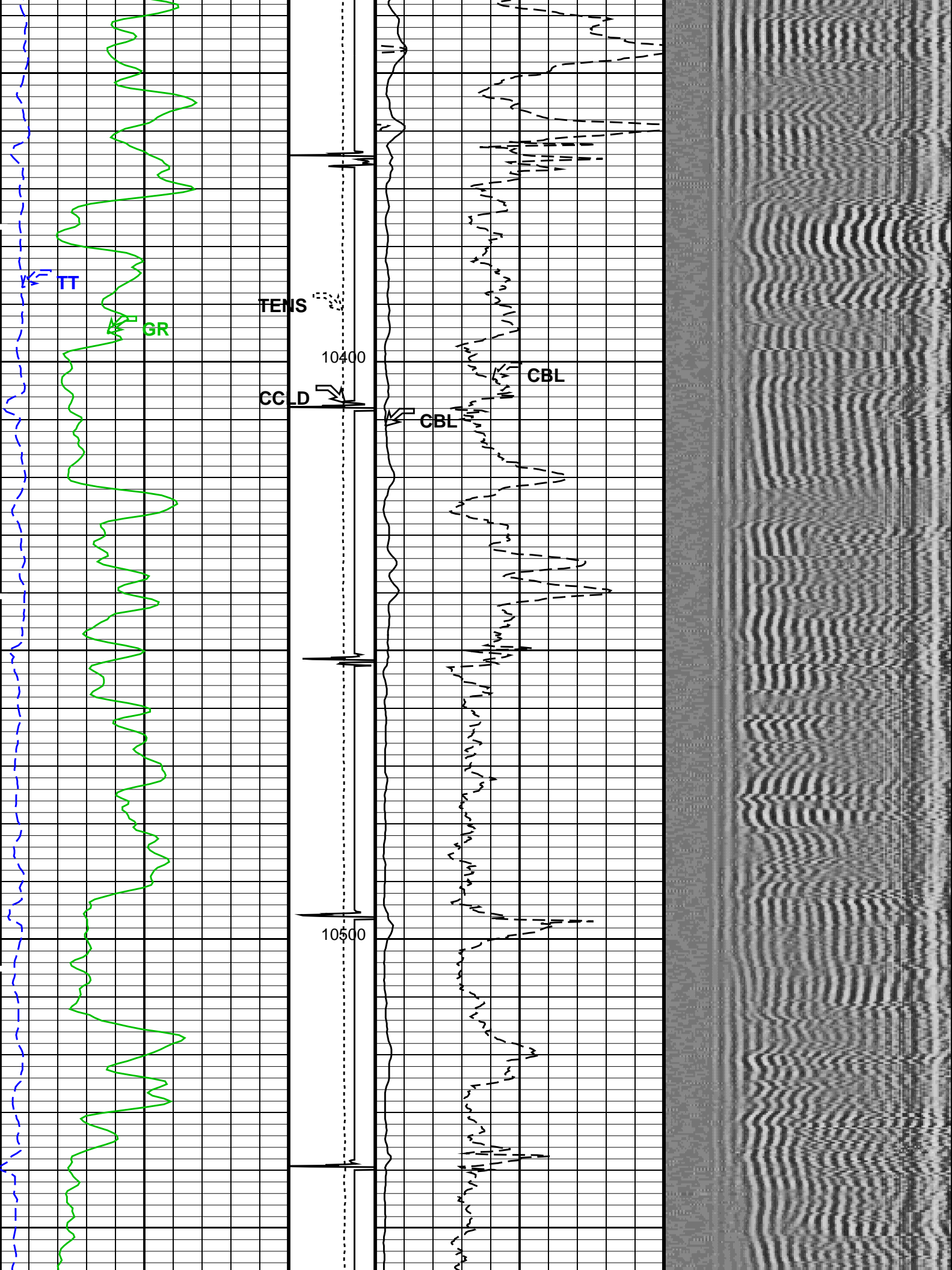


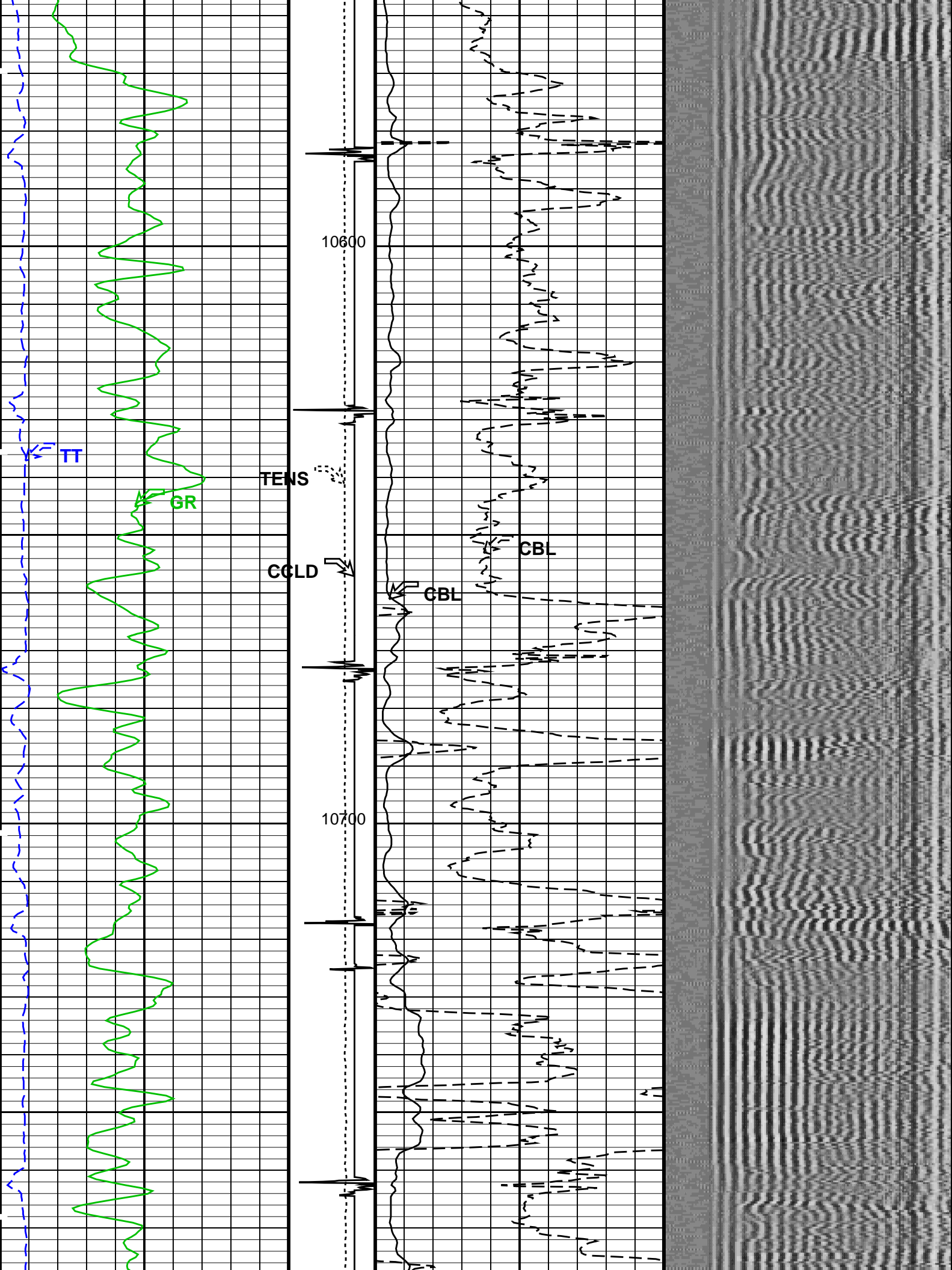


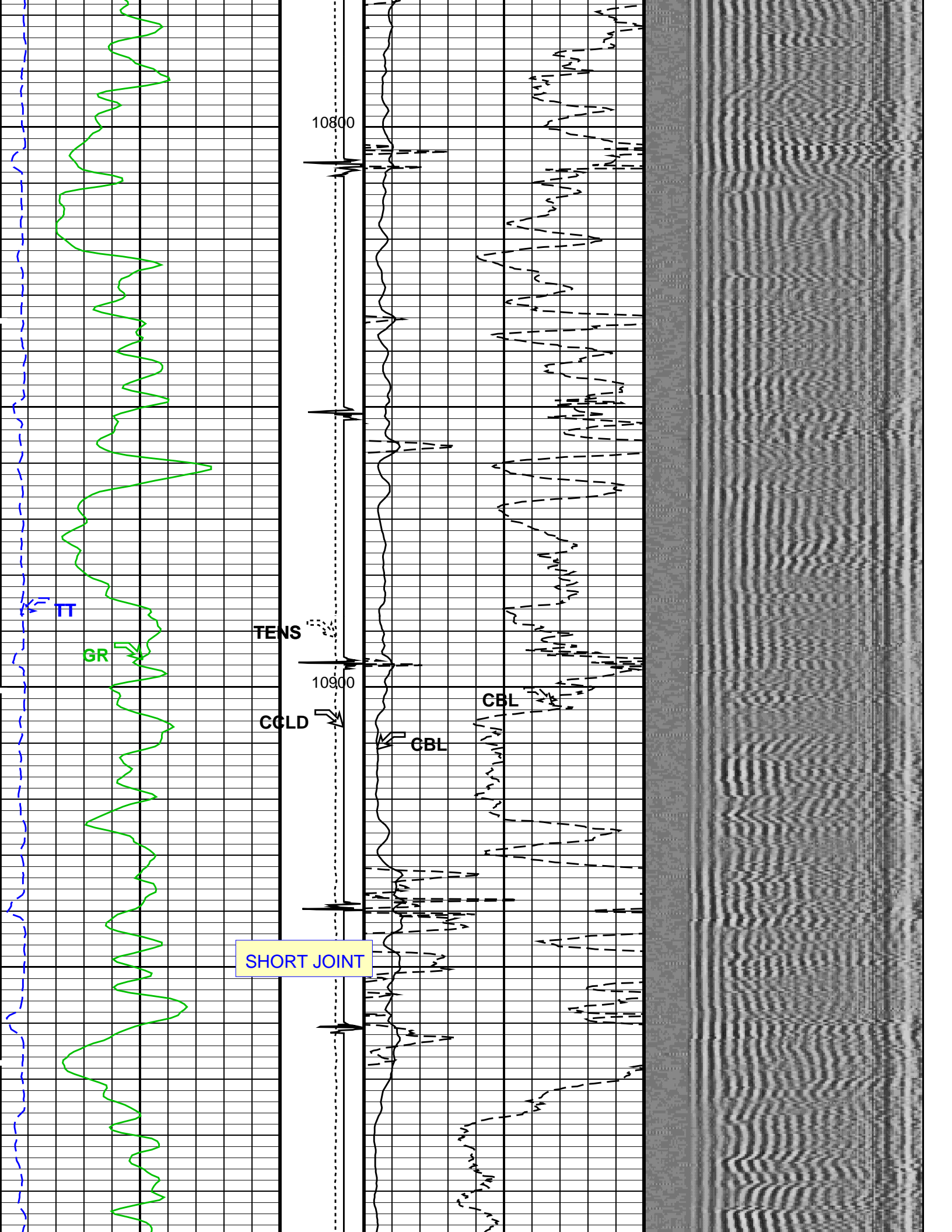


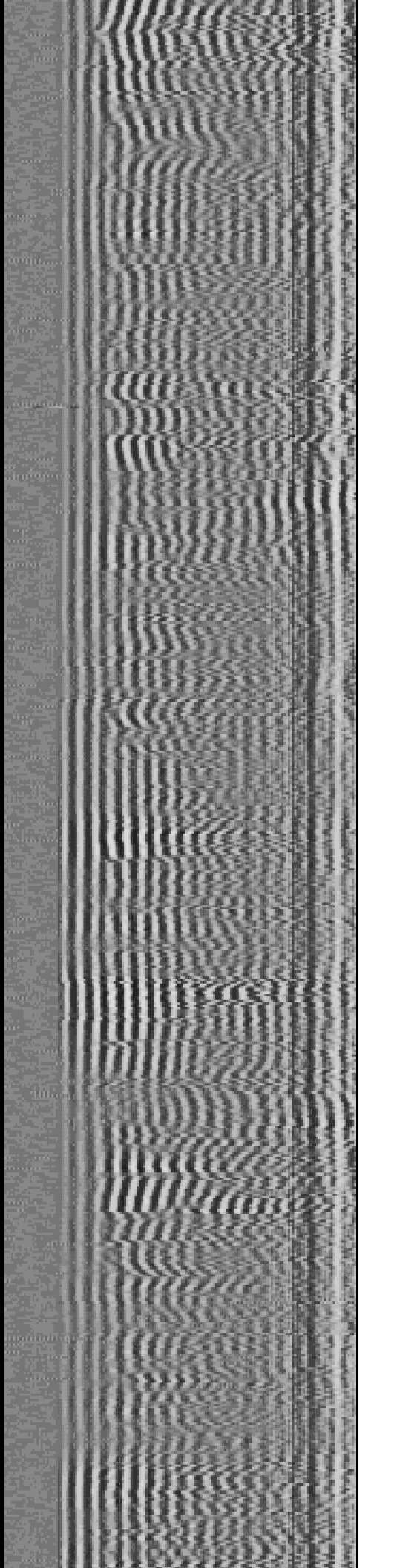
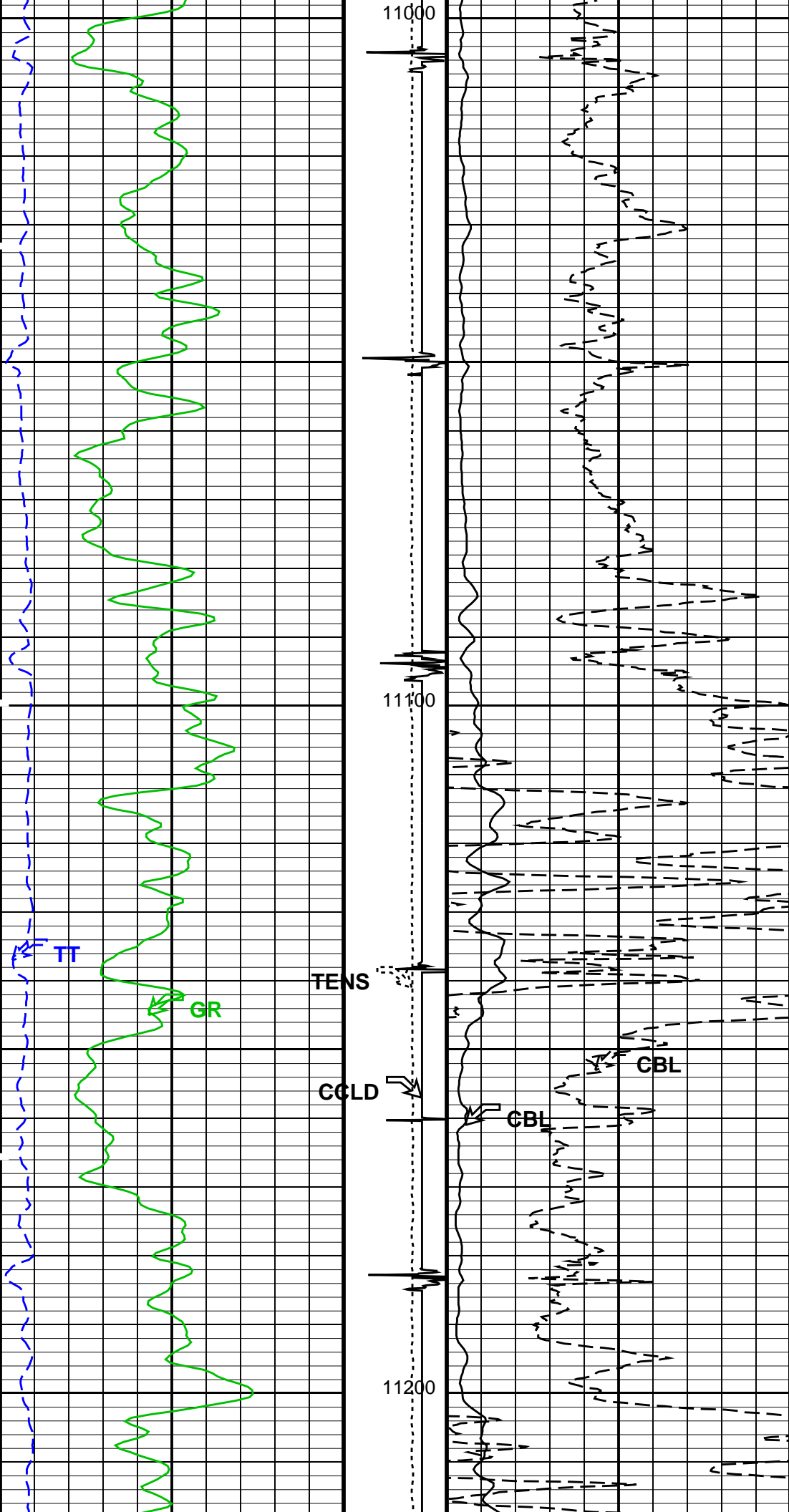


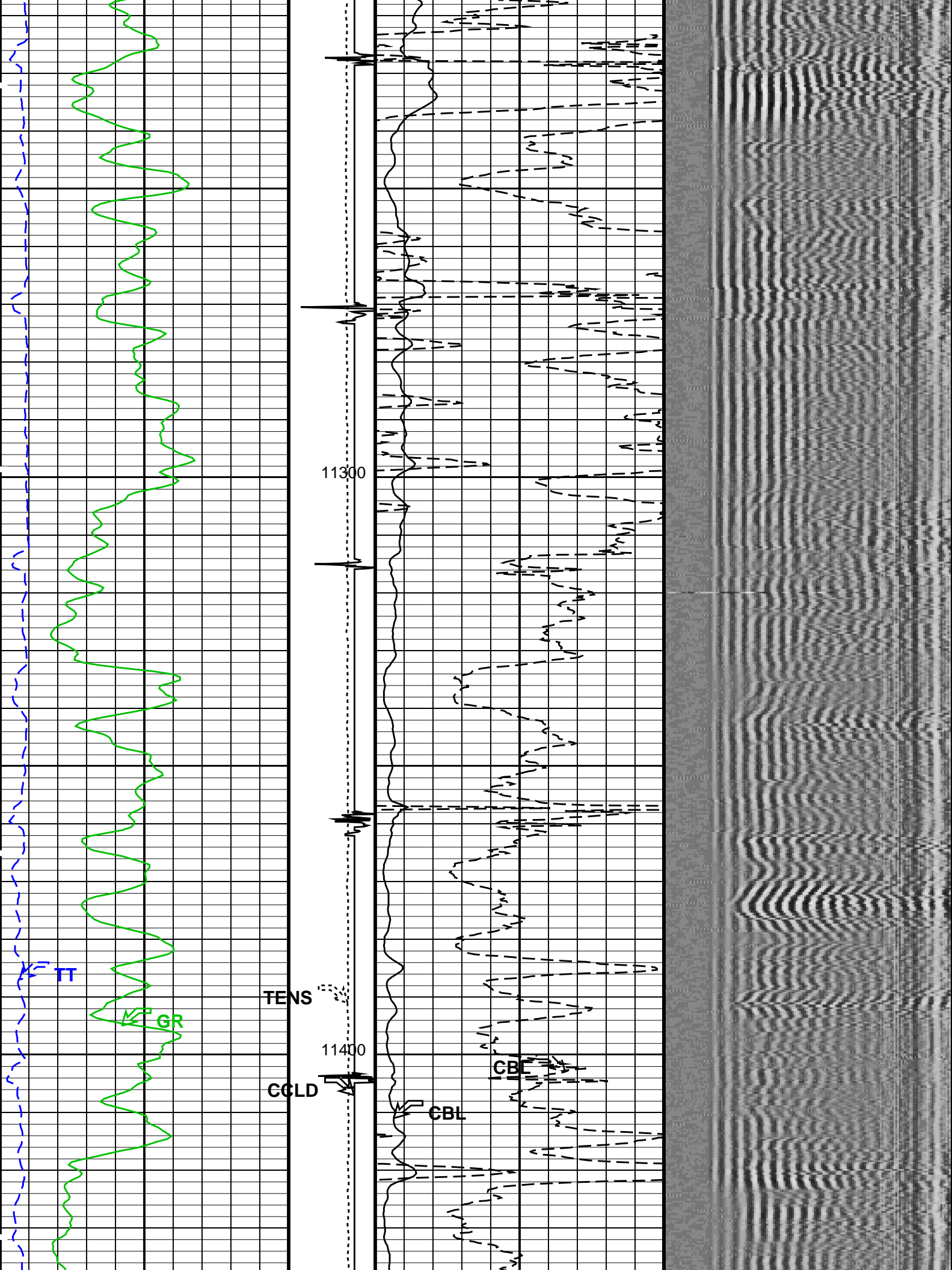


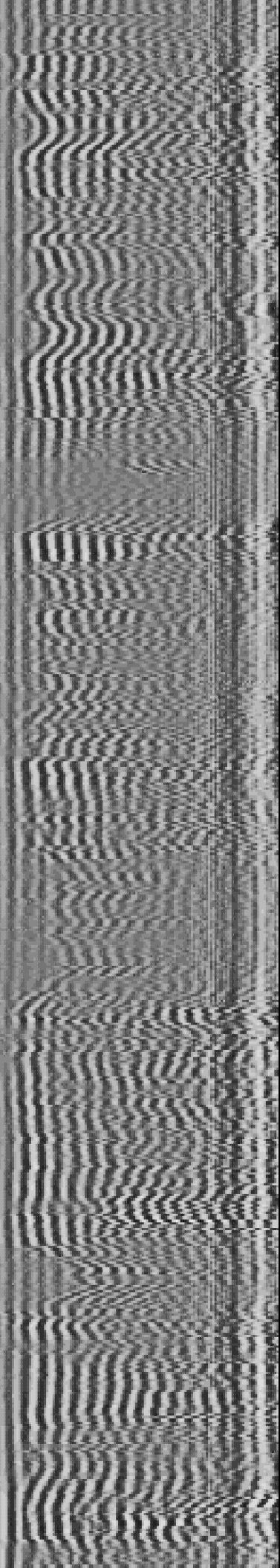
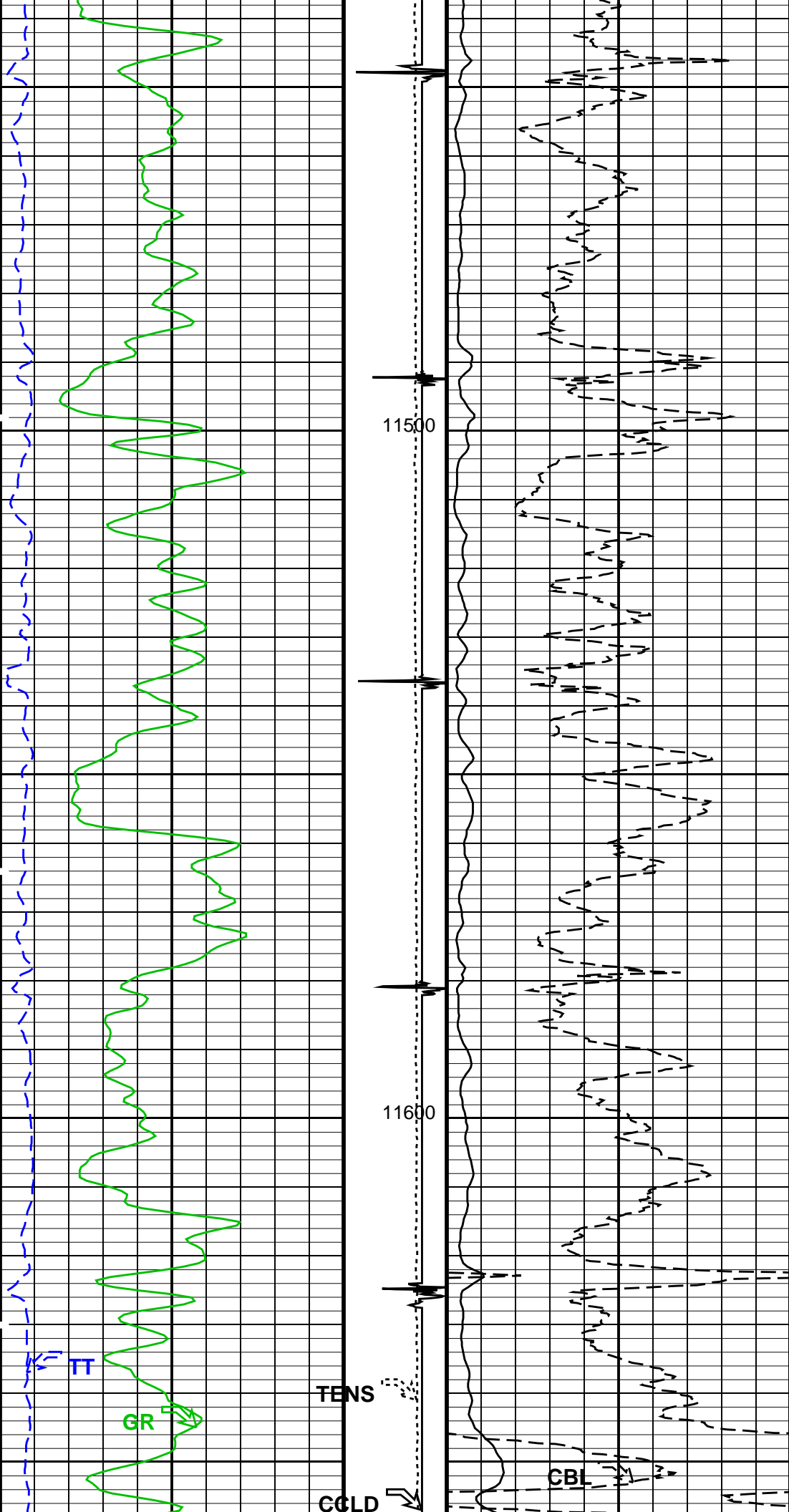


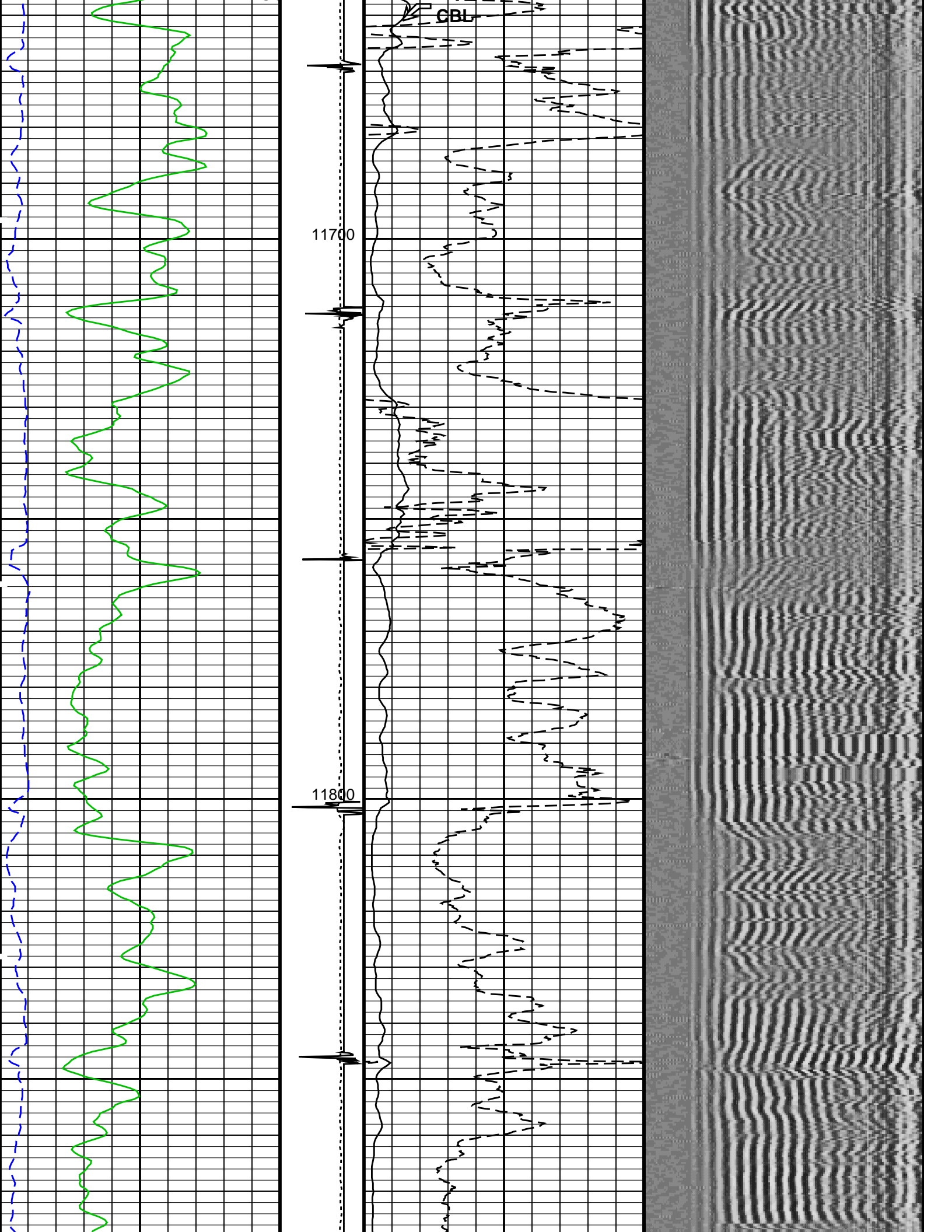


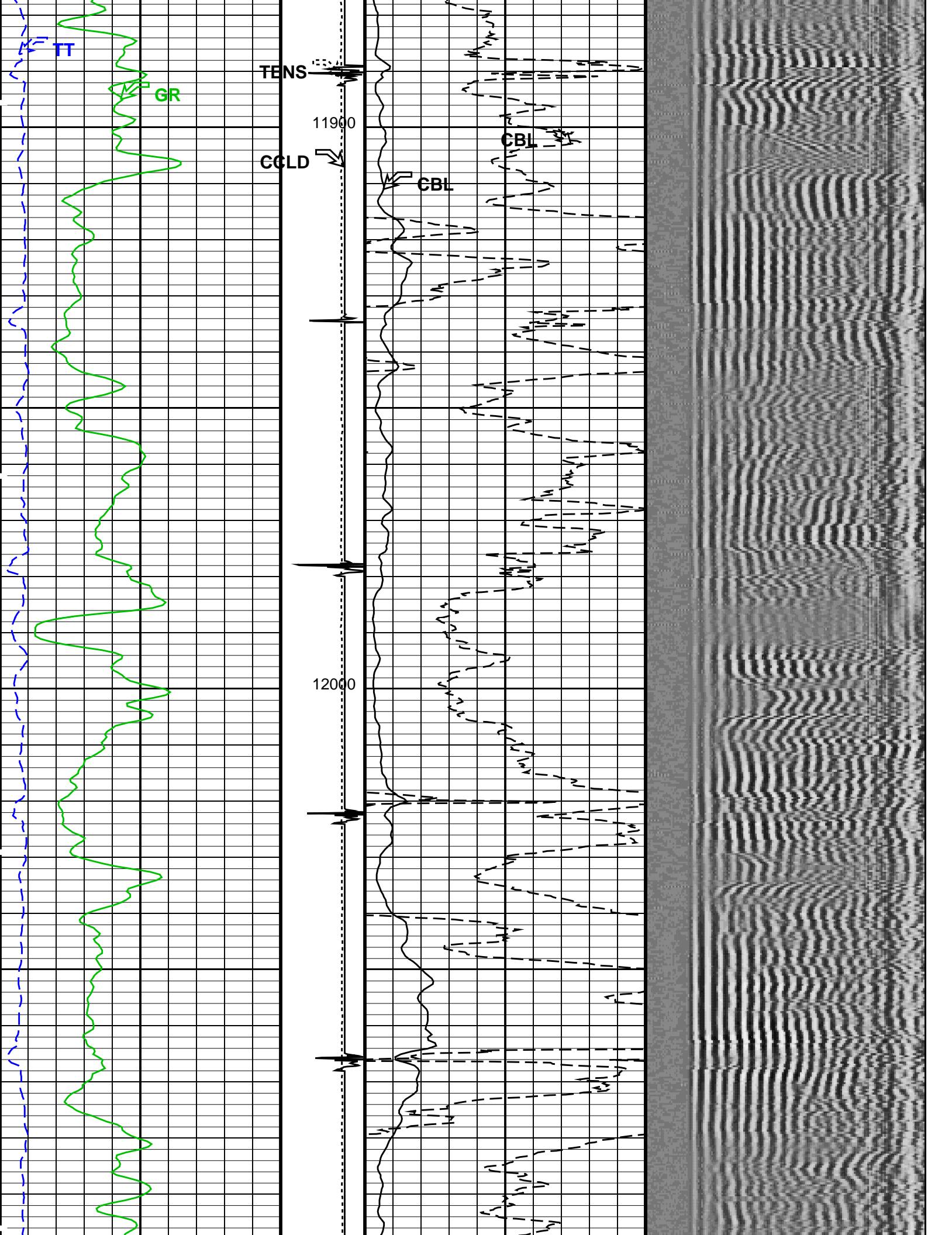


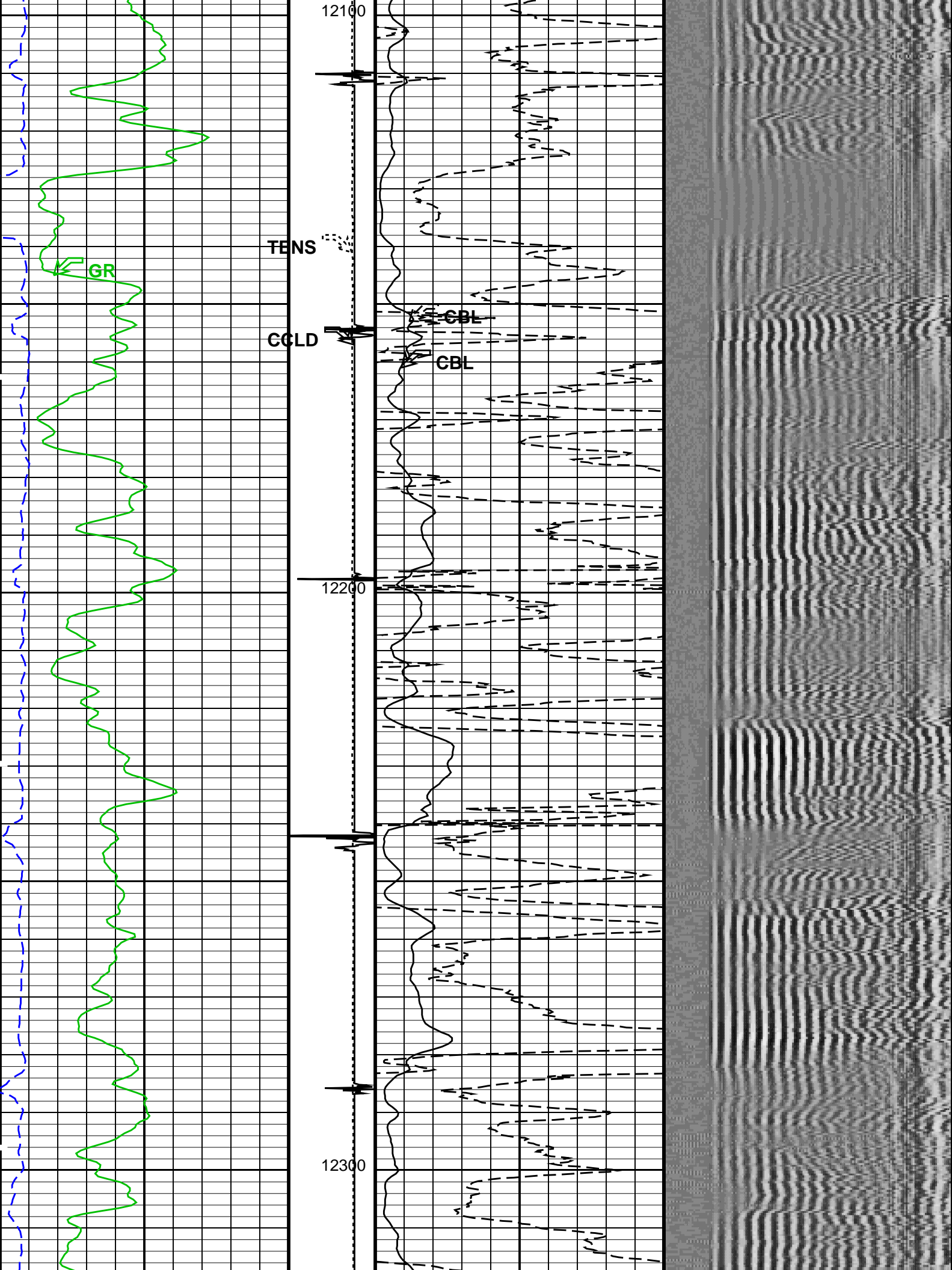


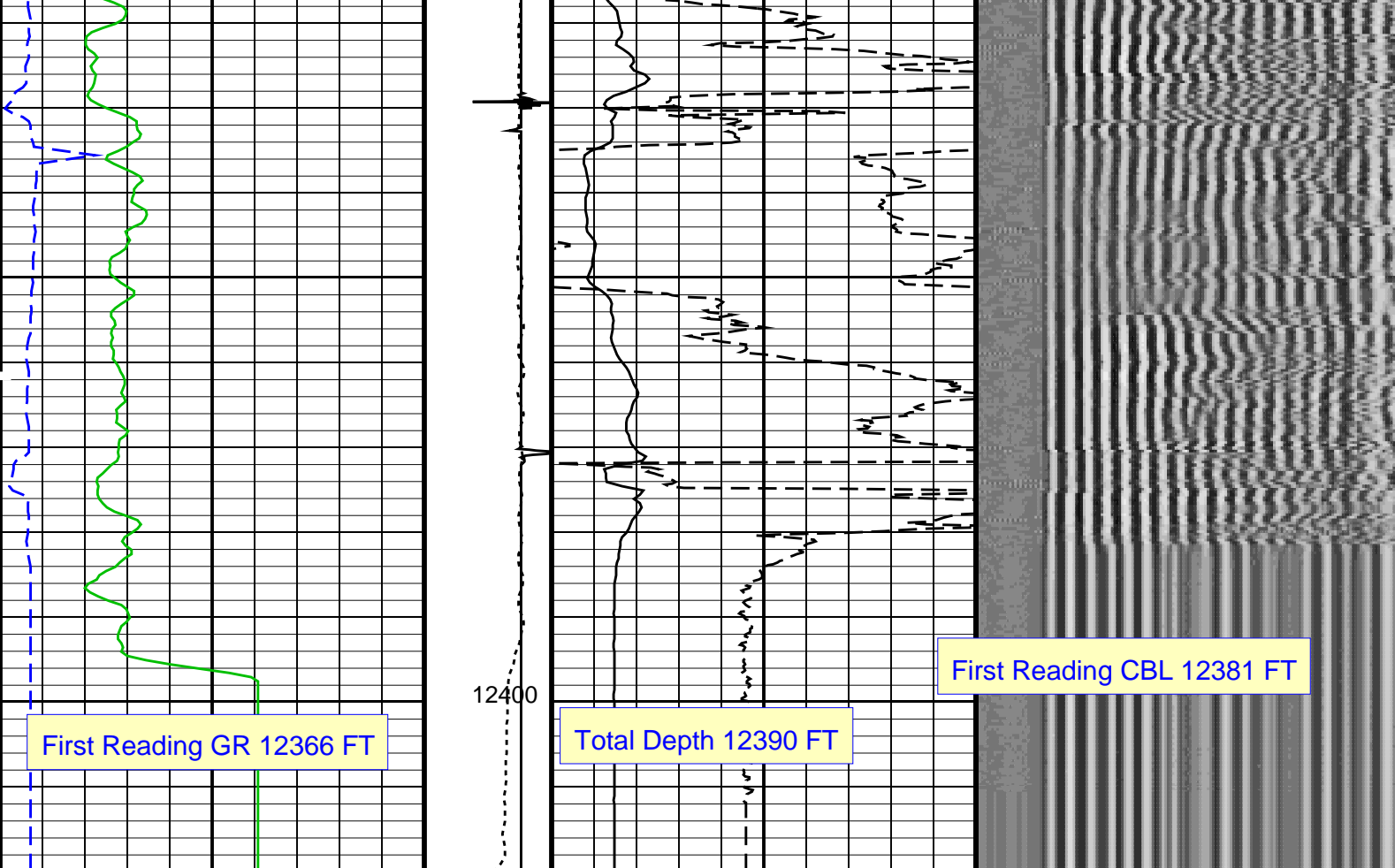












| | | | | | | |
|---------------------------|-----|--|-----------------------------|-----|-----------------------------------|------|
| Gamma Ray (GR) (GAPI) | | Tension (TENS) (LBF) | CBL Amplitude (CBL) (MV) | Min | Amplitude | Max |
| 0 | 150 | 0 2000 | 0 100 | 200 | VDL VariableDensity (VDL) (US) | 1200 |
| 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: 26-Jul-2013 22:01

OP System Version: 19C0-187

SCMT-CB 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) | 0.750000 |
| 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 | | | |
| 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 | 12390 | FT |

Input DLIS Files

| | | | | | | |
|---------|-----------------|-------|----------|-------------------|------------|---------|
| DEFAULT | SCMT_PSP_018LUP | FN:17 | PRODUCER | 26-Jul-2013 18:36 | 12415.0 FT | 11.5 FT |
|---------|-----------------|-------|----------|-------------------|------------|---------|

Output DLIS Files

| | | | | |
|---------|-----------------|-------|----------|-------------------|
| DEFAULT | SCMT_PSP_020PUP | FN:19 | PRODUCER | 26-Jul-2013 22:01 |
|---------|-----------------|-------|----------|-------------------|



REPEAT ANALYSIS CBL VDL

MAXIS Field Log

Input DLIS Files

| | | | | | | |
|---------|-----------------|-------|----------|-------------------|------------|-----------|
| DEFAULT | SCMT_PSP_016LUP | FN:15 | PRODUCER | 26-Jul-2013 18:13 | 7968.0 FT | 7665.0 FT |
| DEFAULT | SCMT_PSP_020PUP | FN:19 | PRODUCER | 26-Jul-2013 22:01 | 12420.0 FT | -5.0 FT |

Output DLIS Files

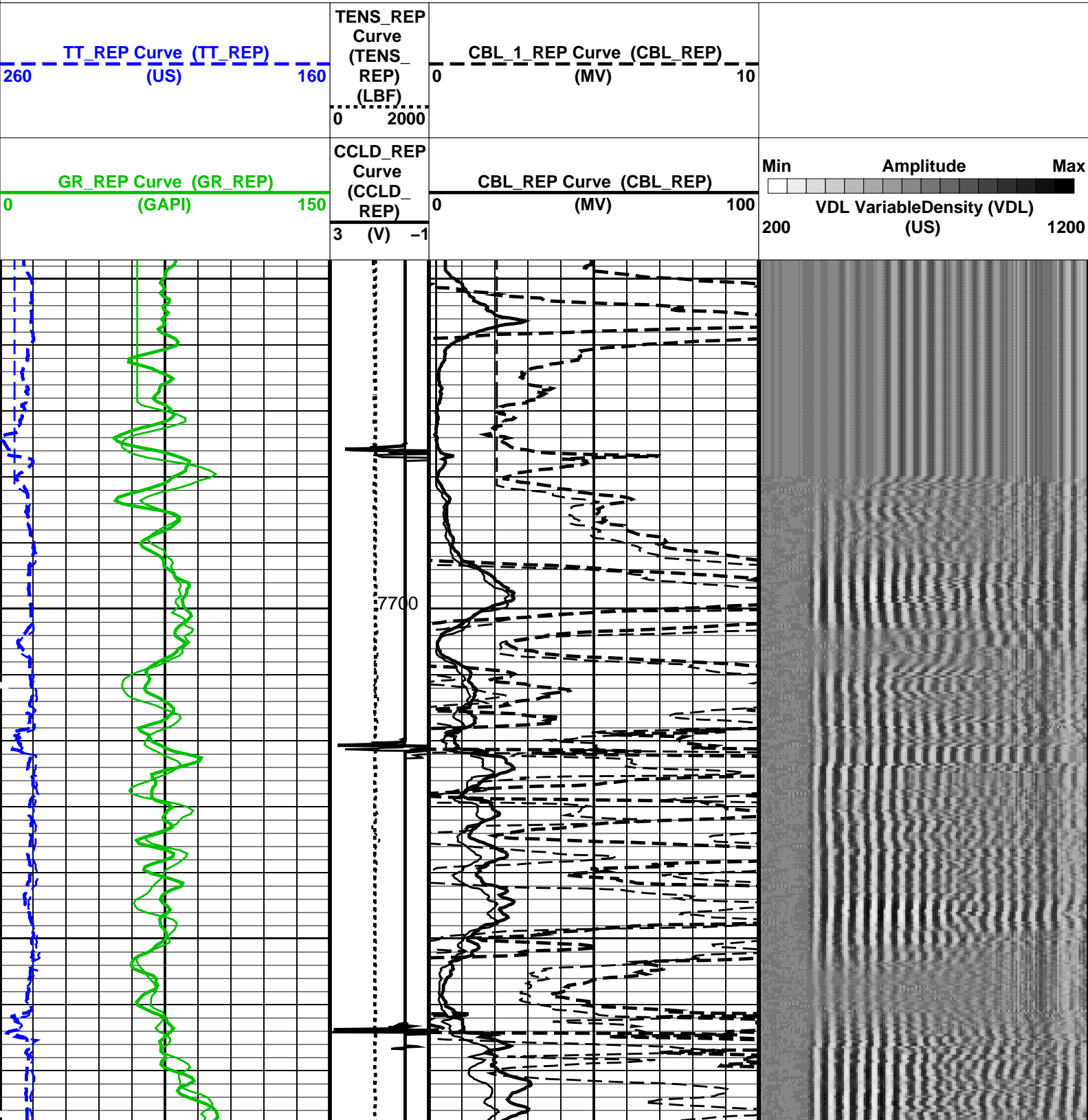
| | | | | | | |
|---------|-----------------|-------|----------|-------------------|-----------|-----------|
| DEFAULT | SCMT_PSP_021PUP | FN:20 | PRODUCER | 26-Jul-2013 22:09 | 7971.0 FT | 7646.5 FT |
|---------|-----------------|-------|----------|-------------------|-----------|-----------|

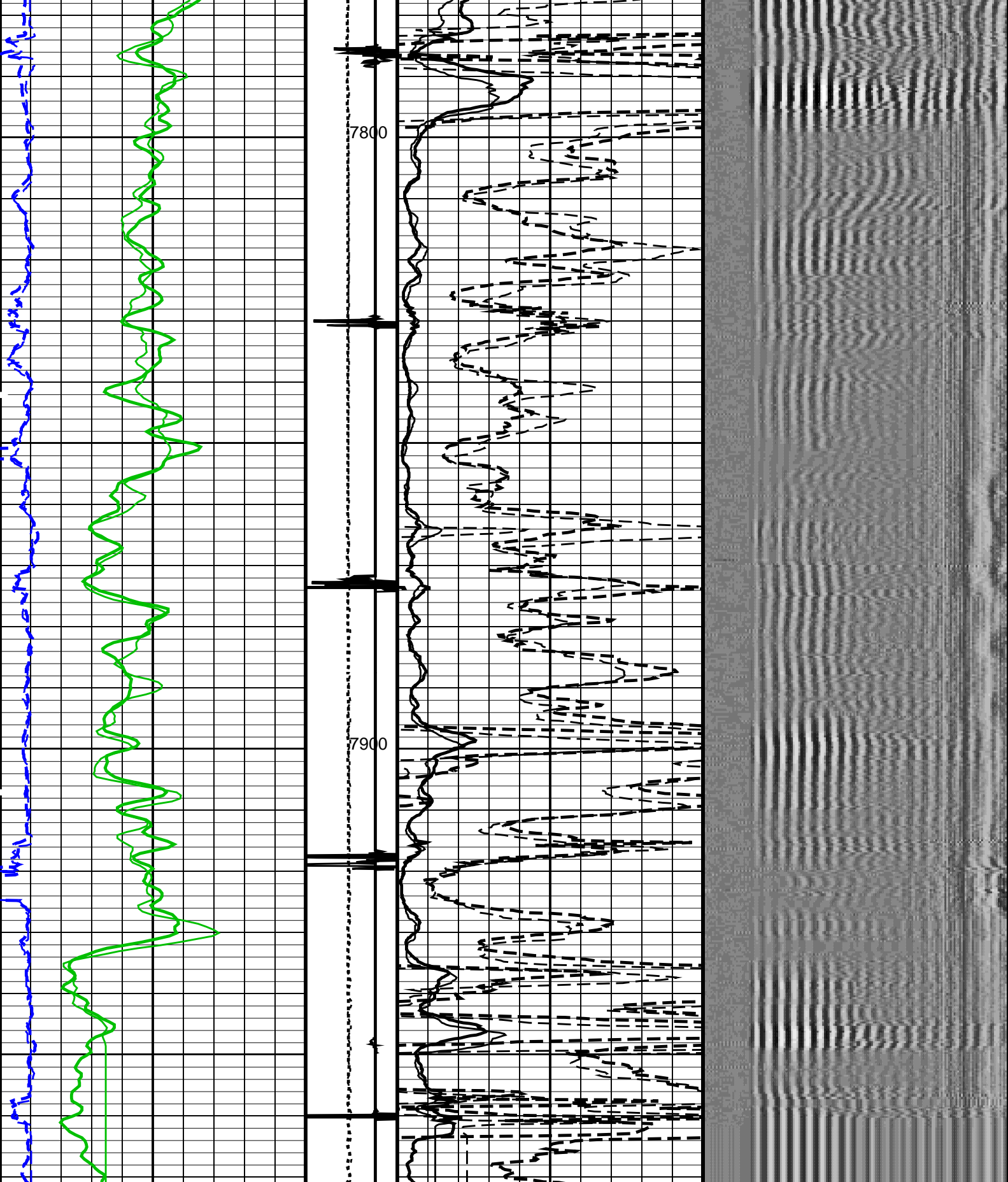
OP System Version: 19C0-187

| | | | |
|---------|-----------------------|------|-----------------------|
| SCMT-CB | SRPC-5214-H2-2012-OP1 | PSPT | SRPC-5214-H2-2012-OP1 |
|---------|-----------------------|------|-----------------------|

PIP SUMMARY

Time Mark Every 60 S





| | | | |
|--|---|--|---|
| <p>GR_REP Curve (GR_REP) (GAPI)</p> <p>0 150</p> | <p>CCLD_REP Curve (CCLD_REP) 3 (V) -1</p> | <p>CBL_REP Curve (CBL_REP) (MV)</p> <p>0 100</p> | <p>Min Amplitude Max</p> <p>200 VDL VariableDensity (VDL) (US) 1200</p> |
| <p>TT_REP Curve (TT_REP)</p> | <p>TENS_REP Curve (TENS)</p> | <p>CBL_1_REP Curve (CBL_1_REP)</p> | |

| | | | | | | |
|--|--|---------------------------------|-----------------------------|-----------------------|--|----|
| 260 | 11/16" CBL (US) | 160 | (REP) | 0 | 0 | 10 |
| | | | (LBF) | | | |
| | | 0 | 2000 | | | |
| PIP SUMMARY | | | | | | |
| Time Mark Every 60 S | | | | | | |
| Format: CBL_VDL_REP | | | Vertical Scale: 5" per 100' | | Graphics File Created: 26-Jul-2013 22:09 | |
| OP System Version: 19C0-187 | | | | | | |
| SCMT-CB | 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) | 0.750000 | | | |
| 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 | | | |
| 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 | 3.0 | FT |
| DORL | Depth Offset for Repeat Analysis | 0.0 | FT |
| PP | Playback Processing | RECOMPUTE | |
| TD | Total Depth | 12390 | FT |

Input DLIS Files

| | | | | | | |
|---------|-----------------|-------|----------|-------------------|------------|-----------|
| DEFAULT | SCMT_PSP_016LUP | FN:15 | PRODUCER | 26-Jul-2013 18:13 | 7968.0 FT | 7665.0 FT |
| DEFAULT | SCMT_PSP_020PUP | FN:19 | PRODUCER | 26-Jul-2013 22:01 | 12420.0 FT | -5.0 FT |

Output DLIS Files

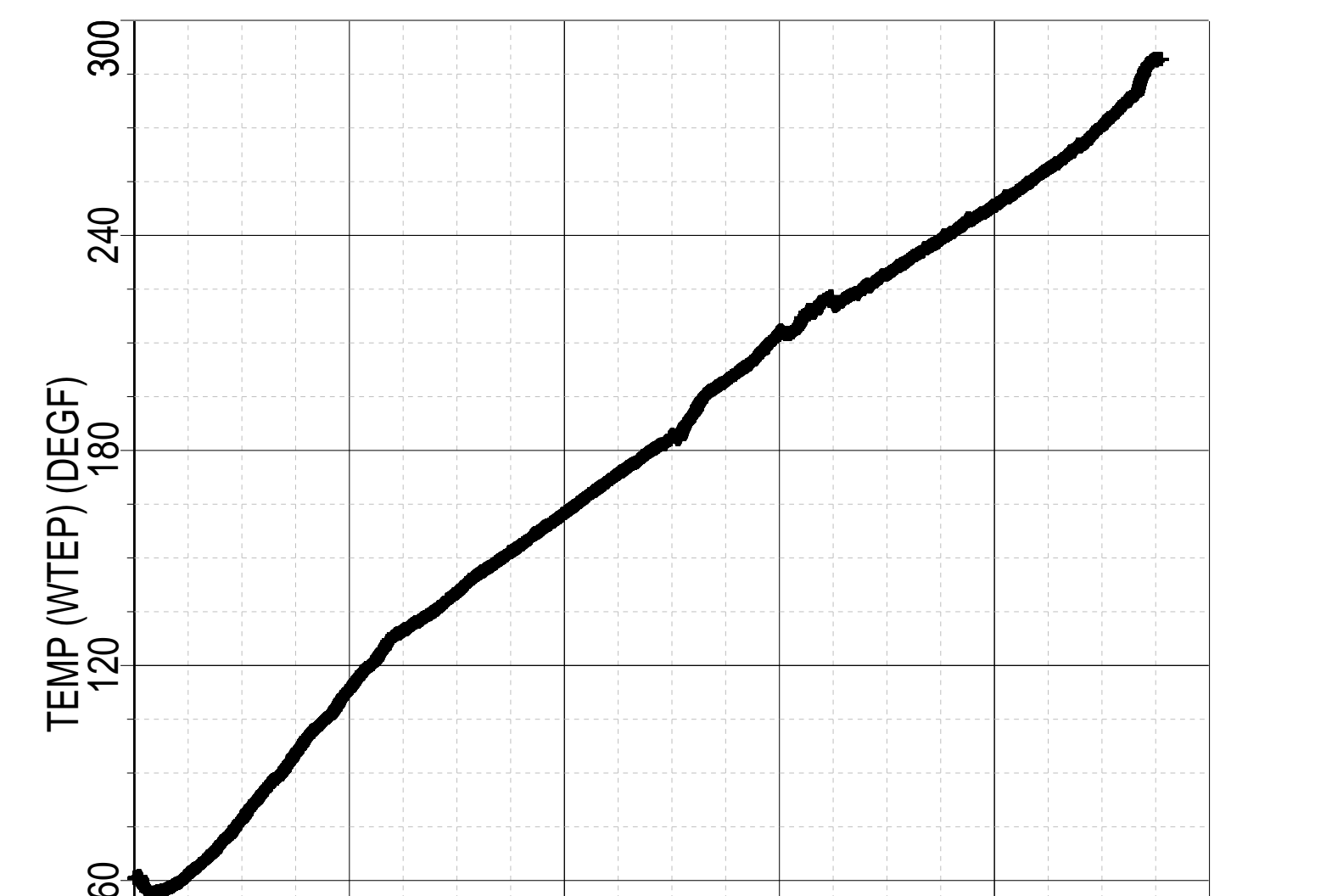
| | | | | | | |
|---------|-----------------|-------|----------|-------------------|--|--|
| DEFAULT | SCMT_PSP_021PUP | FN:20 | PRODUCER | 26-Jul-2013 22:09 | | |
|---------|-----------------|-------|----------|-------------------|--|--|

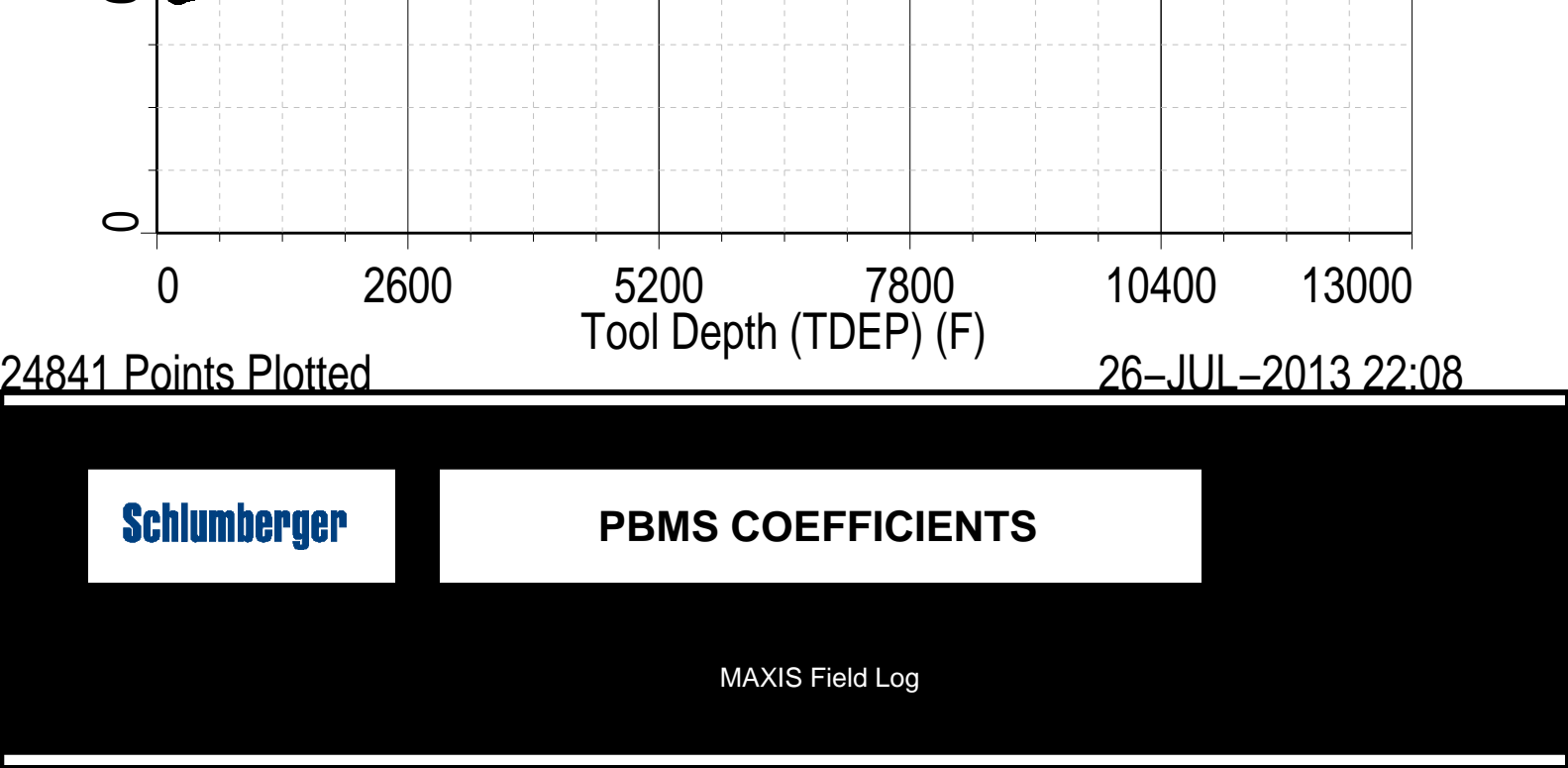
Schlumberger

TEMPERATURE PLOT

MAXIS Field Log

Index: 12420.0 – -5.0 FT





| | | | |
|-----------|----------------------------|-----------|------|
| Client: | ENCANA OIL & GAS (USA) INC | Tool: | PSP |
| Field: | STORY GULCH | Sub Type: | PBMS |
| Well: | SG 8512A-24 (L24 496) | Sensor: | GR |
| Run date: | 26-Jul-2013 | | |

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 | +1.182000000000e+04 | +3.320000000000e+04 |

Client: ENCANA OIL & GAS (USA) INC

Field: STORY GULCH

Well: SG 8512A-24 (L24 496)

Run date: 26-Jul-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: STORY GULCH

Well: SG 8512A-24 (L24 496)

Run date: 26-Jul-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
Calib Date ddmmyy
Matrix Size
Coeff CRC

:
928
280612
66
283B

Temp Coeff

| | | | |
|-------|--------------------|--------------------|--------------------|
| | Fc**0 | Fc**1 | Fc**2 |
| Fb**0 | +.117016867873E+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 | +.114322792679E-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
Calib Date ddmmyy
Matrix Size

:
928
280612
16

Coeff CRC093F

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 |

Schlumberger

MASTER CALIBRATION








MAXIS Field Log

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

Primary Equipment:
Slim Cement Mapping Xmitter ElectronicsSCMX – CA
Slim Cement Mapping SondeSCMS – CB8317
Slim Cement Mapping CartridgeSCMC – CA8120

Auxiliary Equipment:
Slim Electronics Cartridge HousingSECH – 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> | | 1029 | Master | <div><div></div></div> | | 864.7 |
| | 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 |

| | | | | | | | |
|---------------------------|---|-------------------|-------------------|--------|---|-------------------|-------------------|
| Phase | MAP 3 Amplitude Plus MV | | Value | Phase | MAP 4 Amplitude Plus MV | | Value |
| Master |  | | 776.8 | Master |  | | 948.8 |
| | 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 |  | | 1034 | Master |  | | 949.7 |
| | 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 |  | | 890.8 | Master |  | | 866.8 |
| | 500.0 (Minimum) | 1075 (Nominal) | 1650 (Maximum) | | 500.0 (Minimum) | 1075 (Nominal) | 1650 (Maximum) |
| Phase | CBL Amplitude Plus MV | | Value | | | | |
| Master |  | | 1334 | | | | |
| | 1000 (Minimum) | 1350 (Nominal) | 1700 (Maximum) | | | | |
| Master: 26-Sep-2012 14:15 | | | | | | | |

Company: ENCANA OIL & GAS (USA) INC

Schlumberger

Well: SG 8512A-24 (L24 496)
Field: STORY GULCH
County: GARFIELD
State: COLORADO

SLIM CEMENT MAPPING LOG
CBL – VDL
GAMMA RAY – CCL