

Company: Noble Energy Inc.

Well: Gardner Trusts 34-29

Field: Schramm

County: Yuma

State: Colorado

CEMENT BOND LOG
GAMMA RAY
CASING COLLAR LOG

County: Yuma
Field: Schramm
Location: 510' FSL & 1850' FEL
Well: Gardner Trusts 34-29
Company: Noble Energy Inc.

LOCATION		Elev.:	
510' FSL & 1850' FEL		K.B.	3939.00 ft
		G.L.	3933.00 ft
		D.F.	
Permanent Datum:	GROUND LEVEL	Elev.: 3933.00 ft	
Log Measured From:	KELLY BUSHING	6.00 ft	above Perm. Datum
Drilling Measured From:	KELLY BUSHING		
API Serial No. 05-123-11948		Section 29	Township 2N Range 46W

Logging Date 12-Jan-2011

Run Number 1

Depth Driller 2752 ft

Schlumberger Depth 2692 ft

Bottom Log Interval 2684 ft

Top Log Interval 0 ft

Casing Fluid Type WATER

Salinity

Density 8.4 lbm/gal

Fluid Level

BIT/CASING/TUBING STRING

Bit Size 6.250 in

From

To

Casing/Tubing Size 4.500 in

Weight 10.5 lbm/ft

Grade

From

To

Maximum Recorded Temperatures 120 degF

Logger On Bottom 12-Jan-2011 9:27

Unit Number 354 FORT MORGAN

Recorded By C MARCH

Witnessed By MIKE BEAGEON

PVT DATA

Oil Density	Run 1	Run 2	Run 3
Water Salinity			
Gas Gravity			
Bo			
Bw			
1/Bq			
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

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: 12-JAN-2011 9:31:04

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	1-25P
Serial Number:	6380	Serial Number:	1105	Serial Number:	354
Calibration Date:	18-OCT-2010	Calibration Date:	17-17-2010	Length:	17800 FT
Calibrator Serial Number:	1	Calibrator Serial Number:	100513		
Calibration Cable Type:	1-25P	Number of Calibration Points:	0	Conveyance Method:	Wireline
Wheel Correction 1:	-3			Rig Type:	LAND
Wheel Correction 2:	-3				

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. IDW WHEELS PRIMARY DEPTH CONTROL
2. DRUM COUNTER USED AS SECONDARY DEPTH CONTROL
- 3.
- 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: SWAB,	OS1:
OS2: PERF	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
CORRELATED TO TRIPLE COMBO	
LOG RAN ON 15-DEC-2010 BU SCHLUMBERGER	
REPEAT AND MAIN PASS RAN	
UNDER 0 PSI	

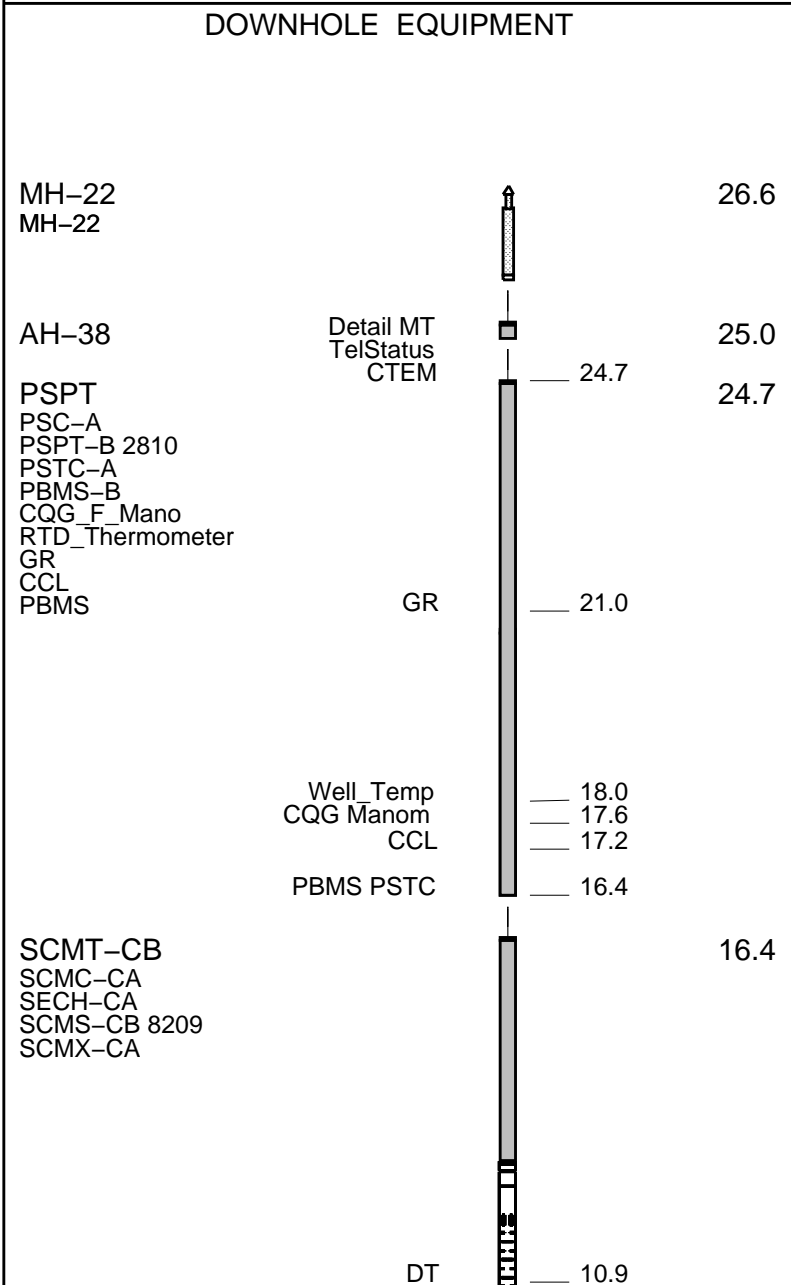
ORDER NO:	
CREW: WILEY, GOOD	
THANK YOU	

RUN 1			RUN 2		
SERVICE ORDER #:		AT90-00335	SERVICE ORDER #:		
PROGRAM VERSION:		19C0-187	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT

WITM-A
PSC_16MHZ



CBL5 DTSC — 9.4
CBL3 — 8.4
MAP — 7.9
AUX — 6.9

HV
Tension SCMT — 0.0
TOOL ZERO

MAXIMUM STRING DIAMETER 1.69 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Company: Noble Energy Inc.

Well: Gardner Trusts 34-29

Output DLIS Files

DEFAULT

SCMT_PSP_009LUP

FN:8

PRODUCER

12-Jan-2011 09:53

OP System Version: 19C0-187

SCMT-CB

19C0-187

PSPT

19C0-187

PIP SUMMARY

Time Mark Every 60 S

Discriminated CCL
(CCLD)

-3.5 (V) 0.5

COLLARS
From CCLD to T1

CASING PRESSURE 0 PSI

GOOD BOND
From ACBL to GOBO

MAIN PASS

Transit Time (TT)
(US) 400 200

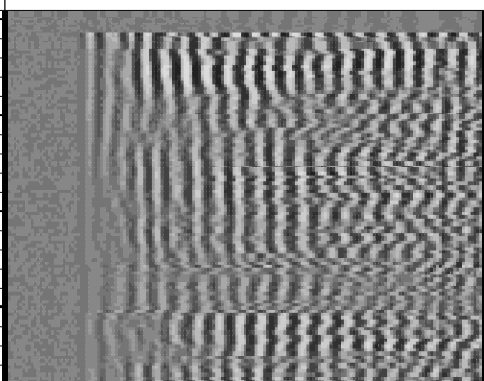
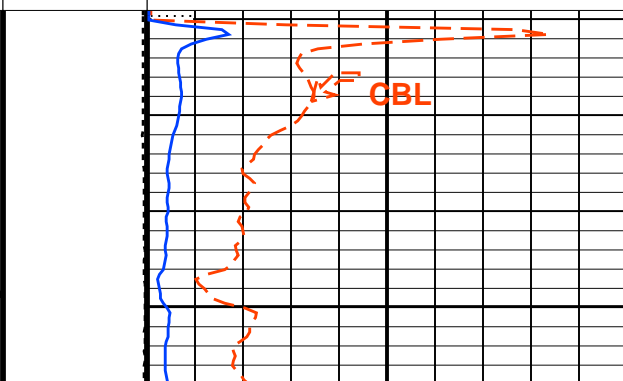
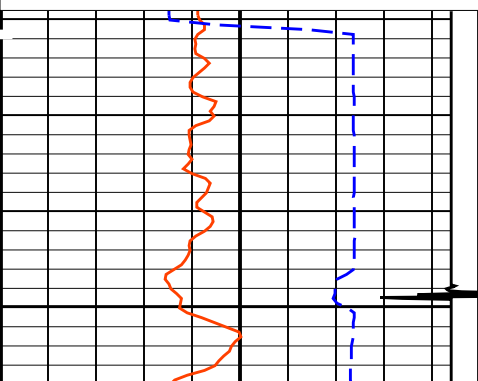
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(MV) 0 100

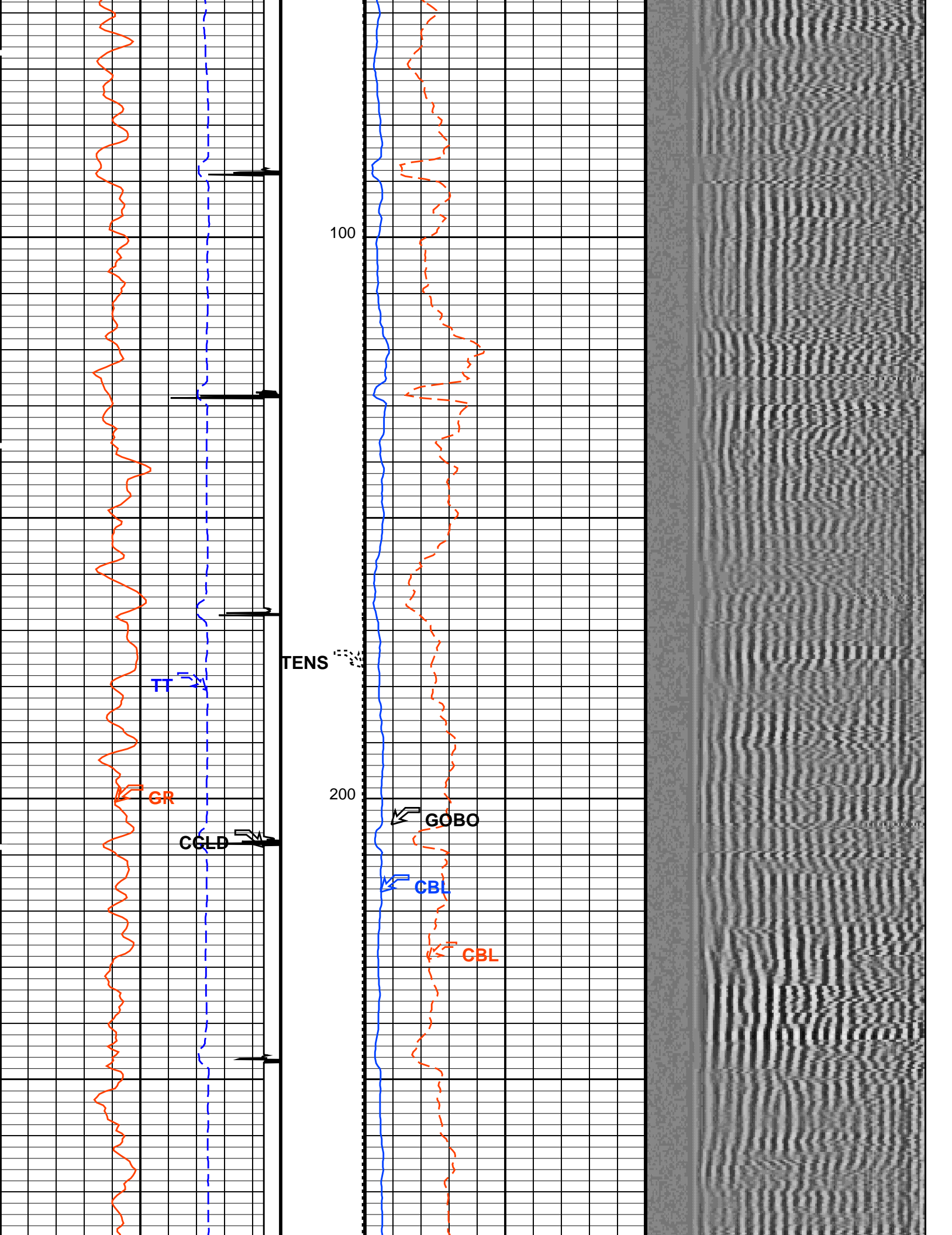
Gamma Ray (GR)
(GAPI) 0 150

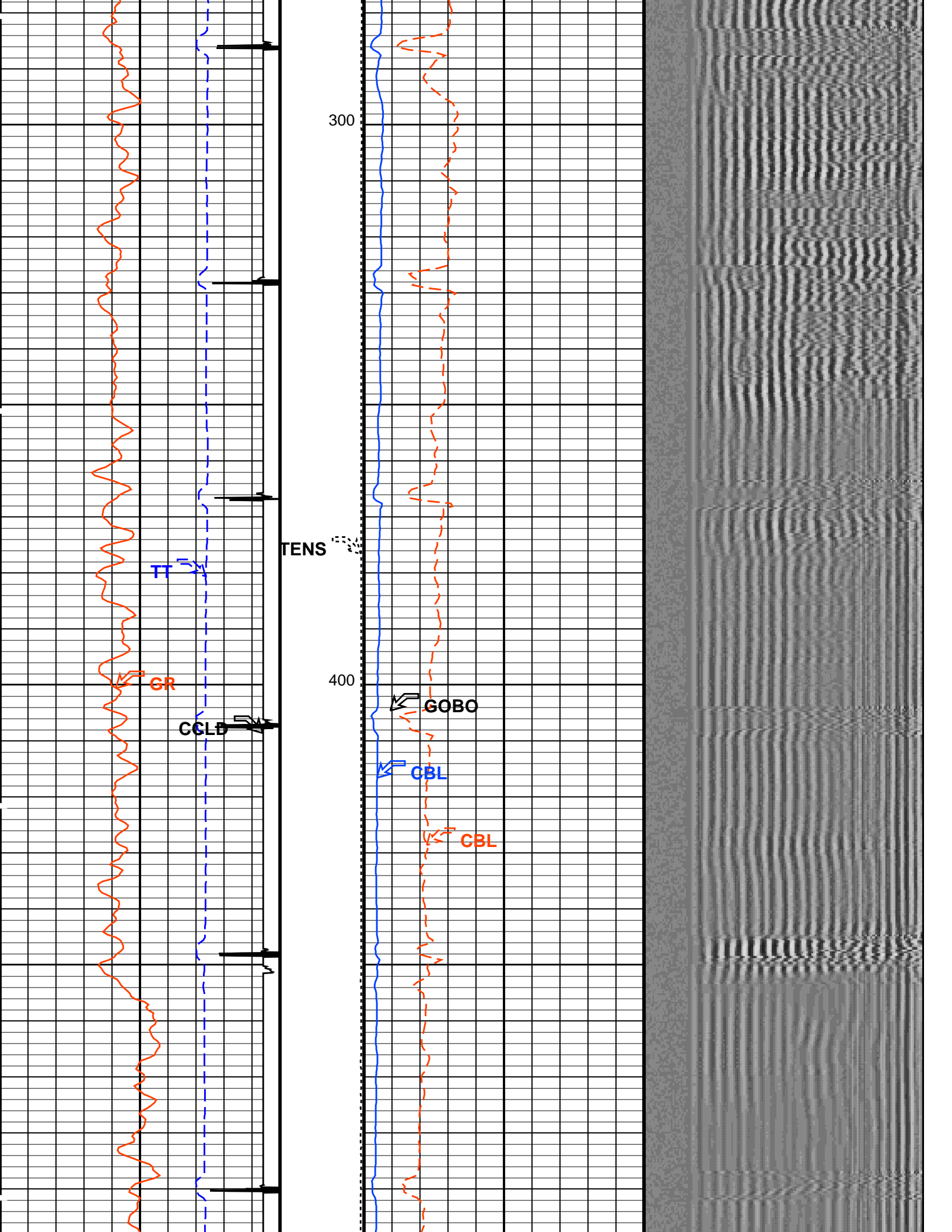
Tension
(TENS)
(LBF) 2000 0

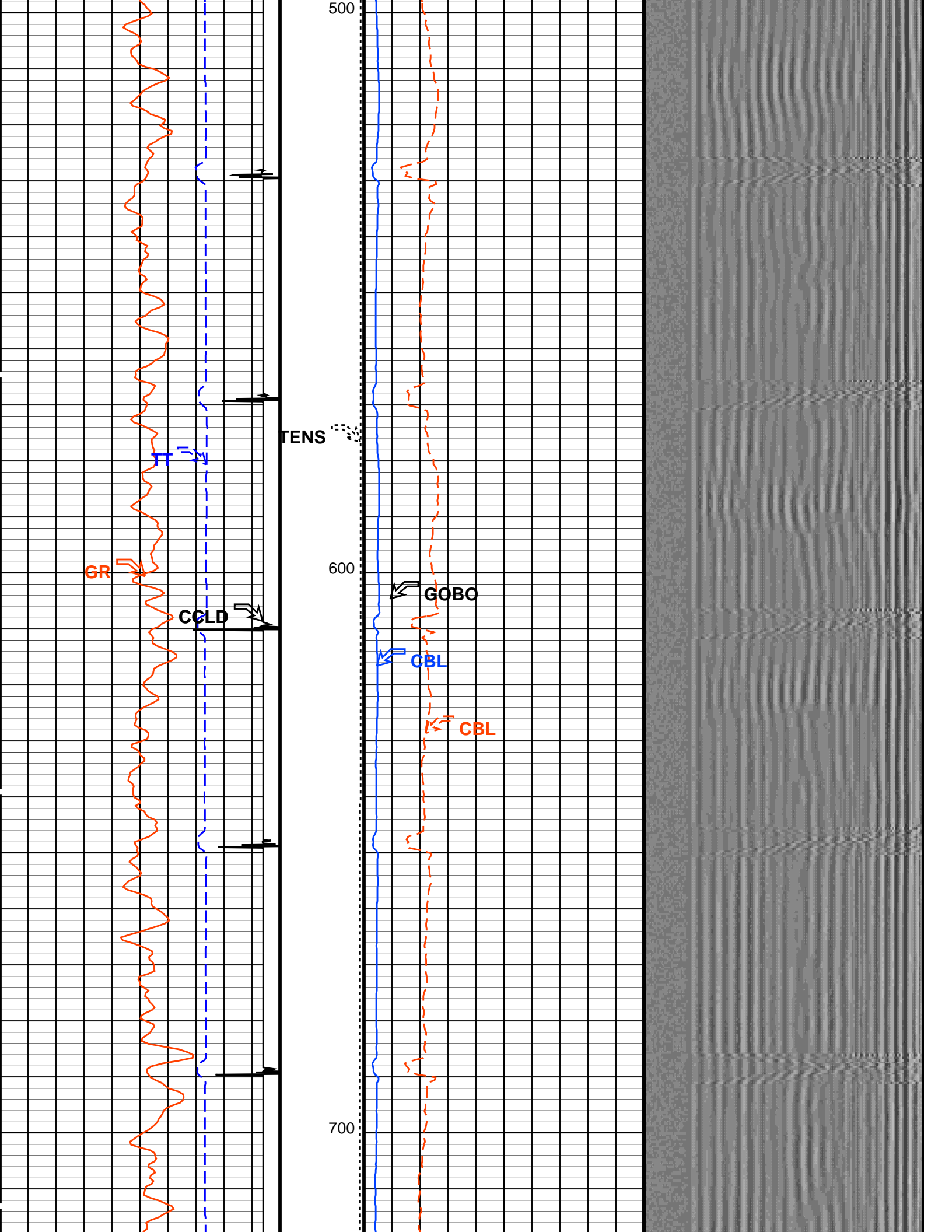
CBL Amplitude (CBL)
(MV) 0 20

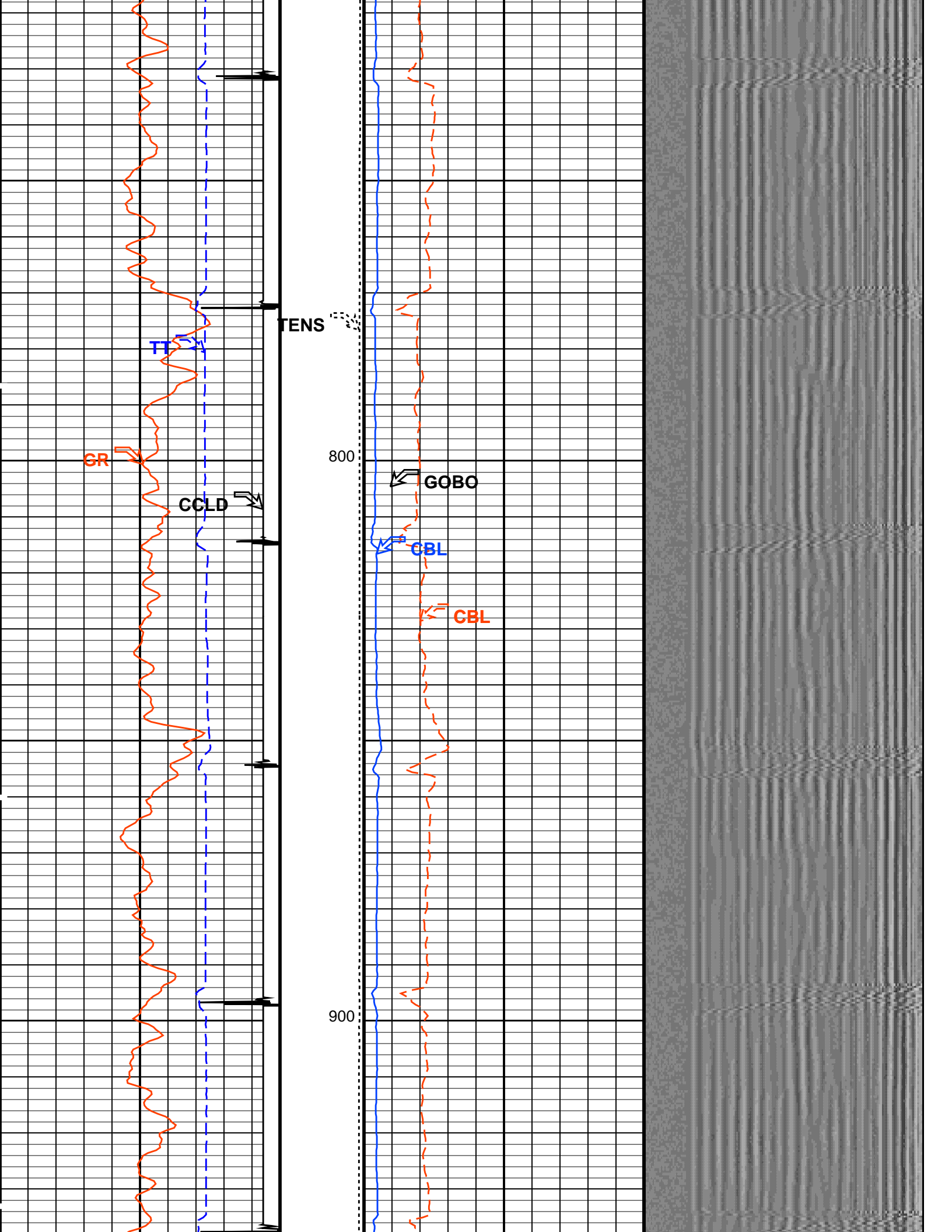
Min Amplitude Max
VDL VariableDensity (VDL)
(US) 200 1200

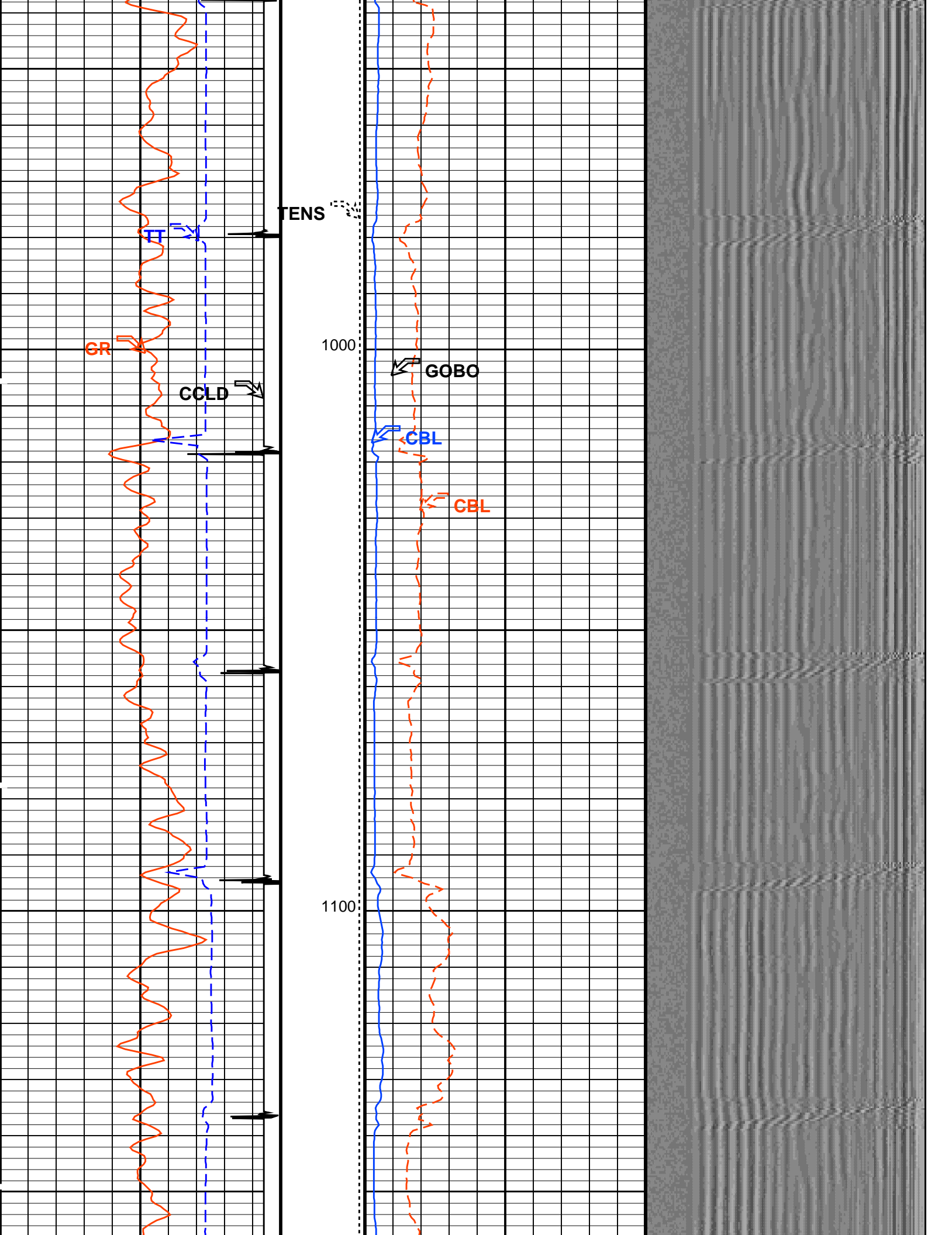


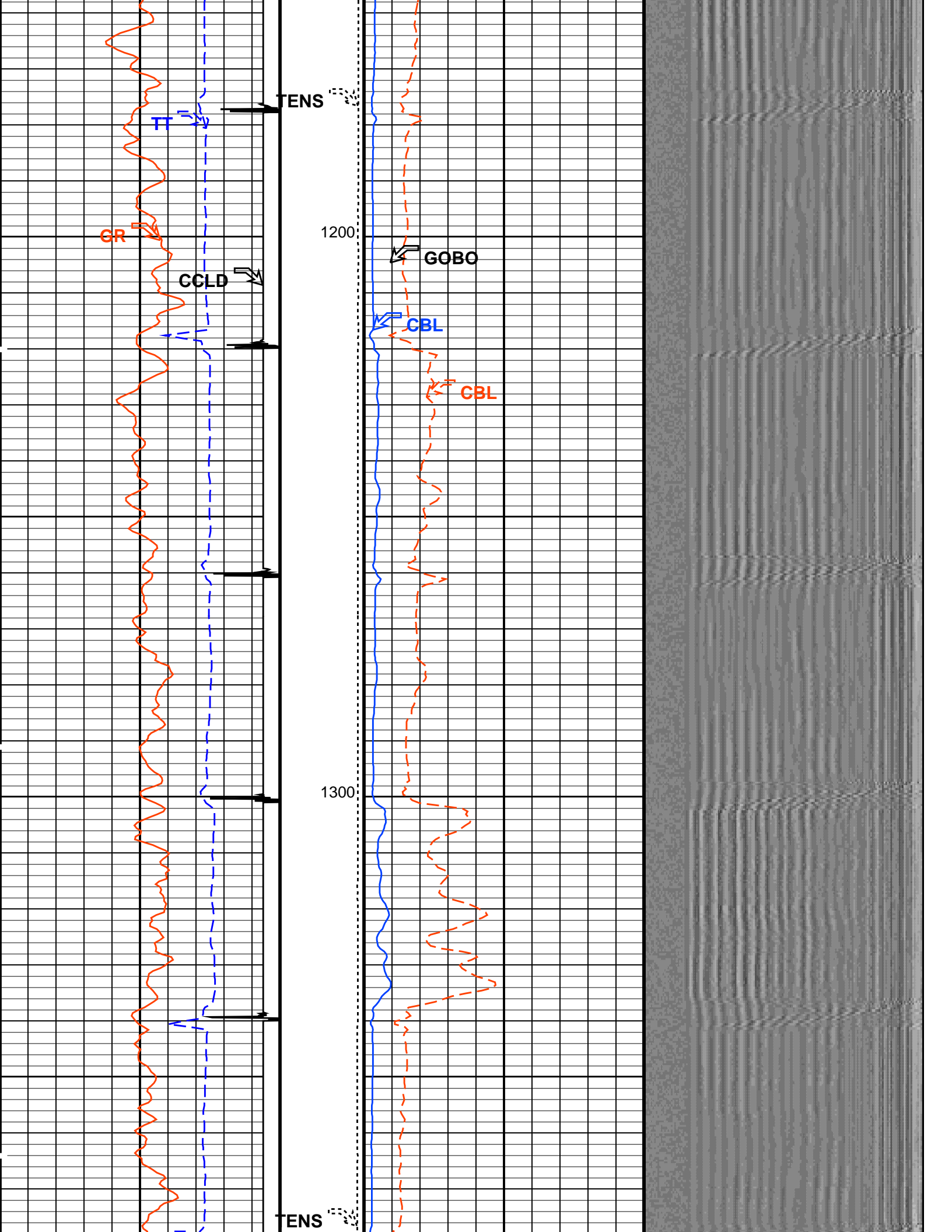


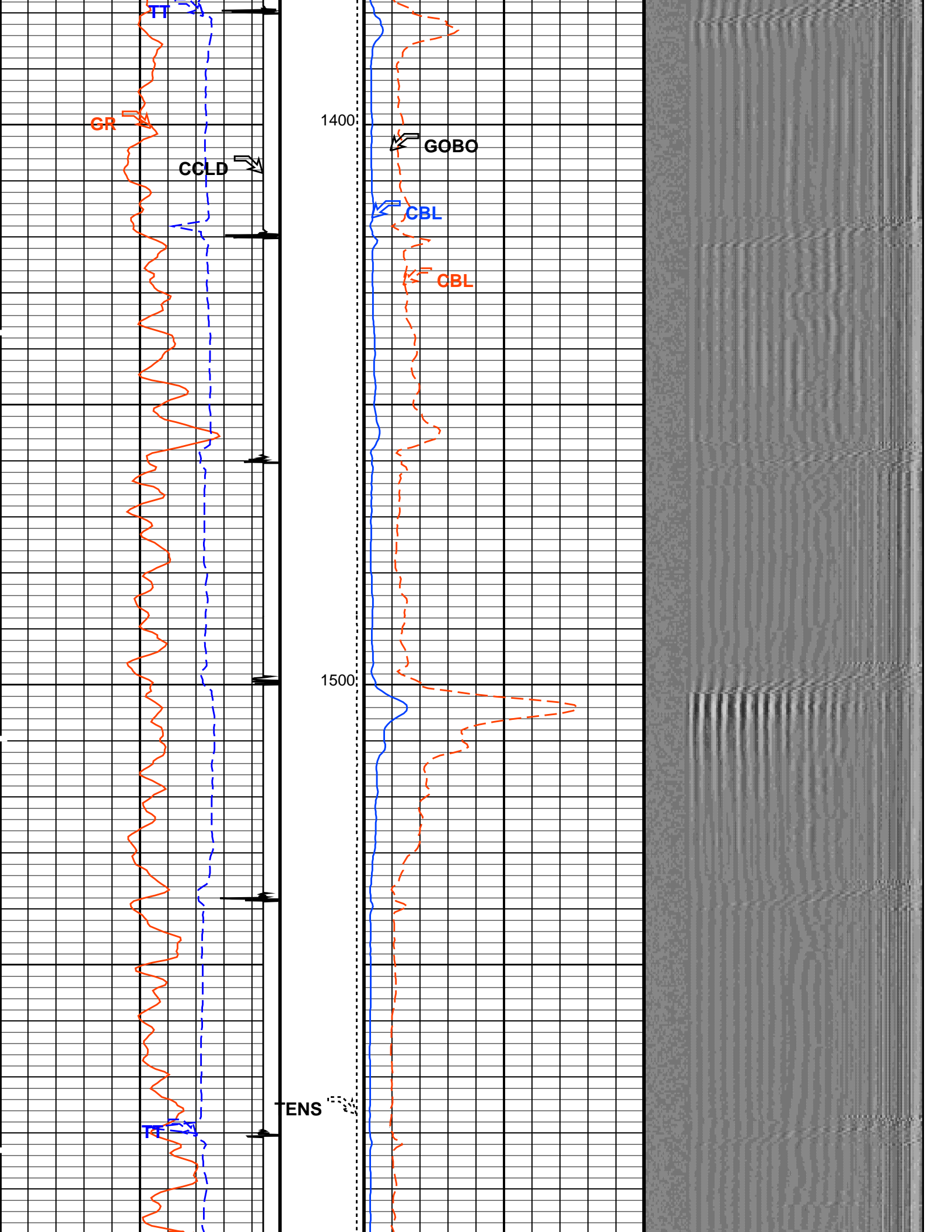


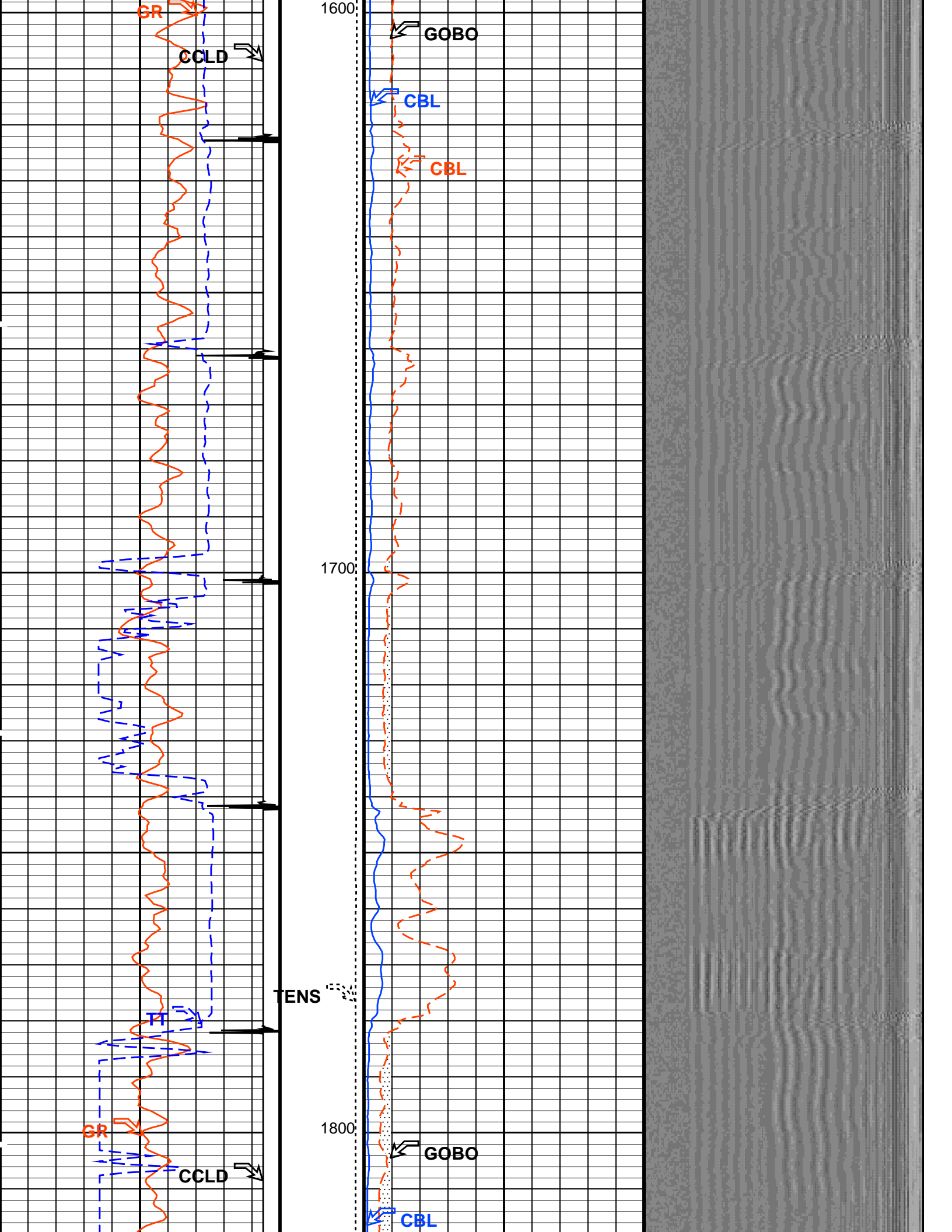


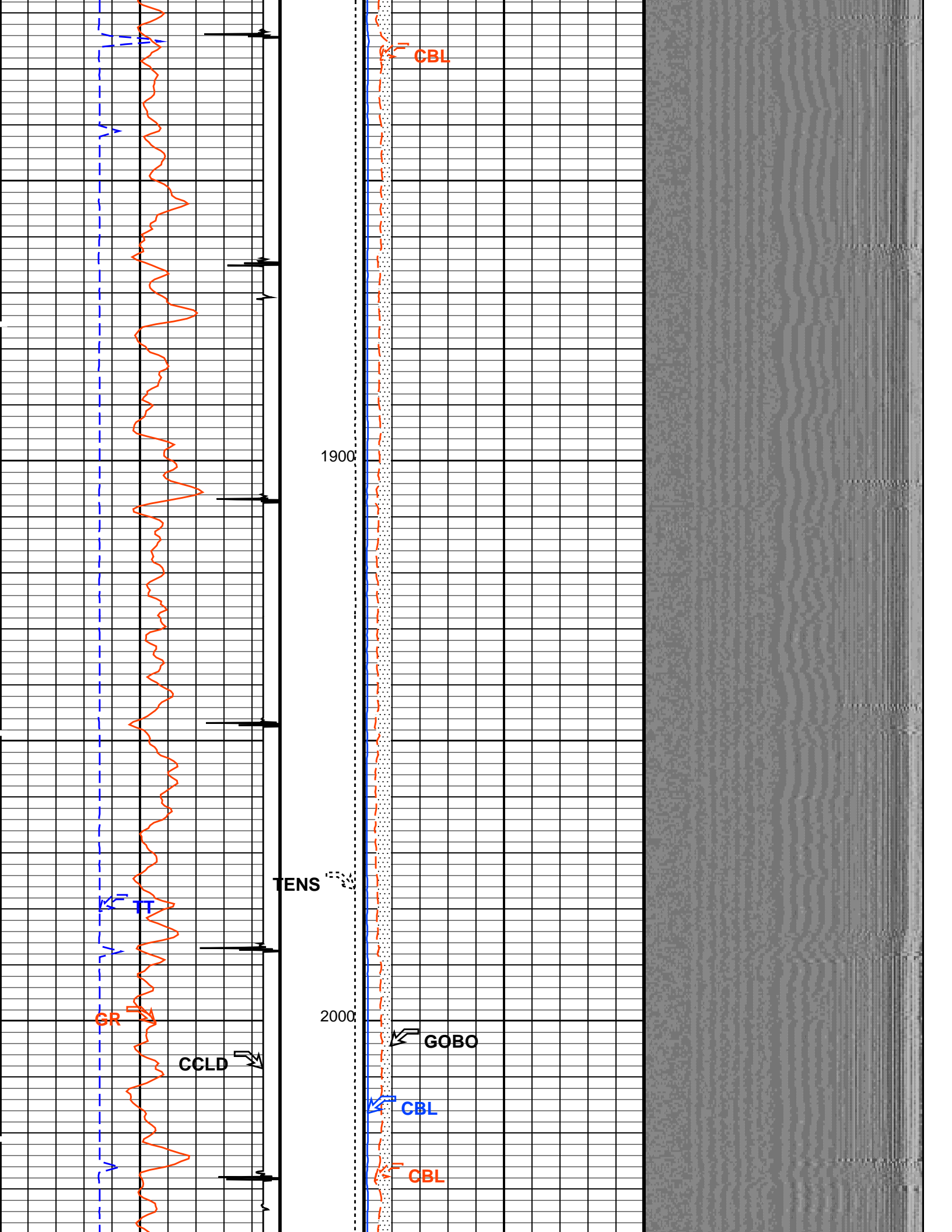


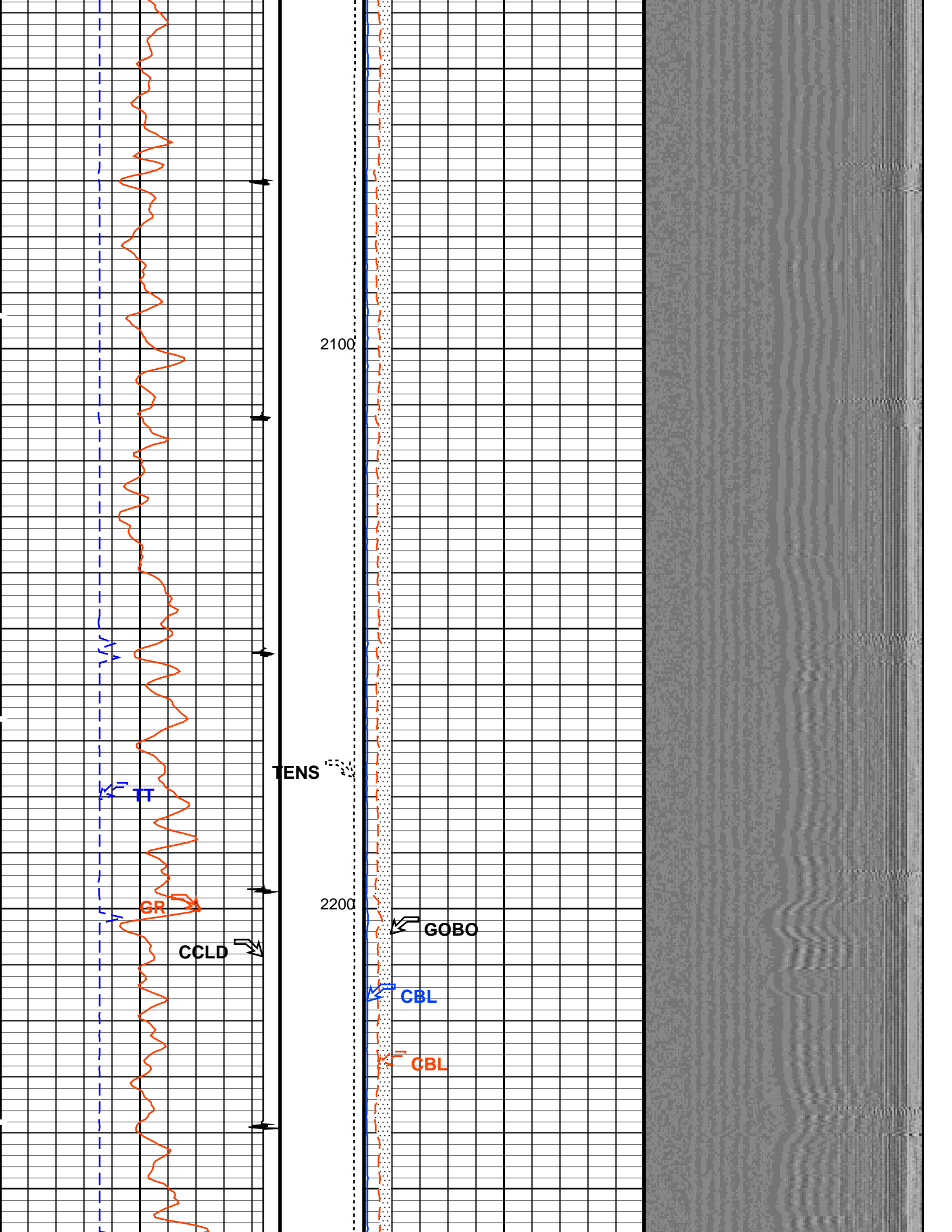


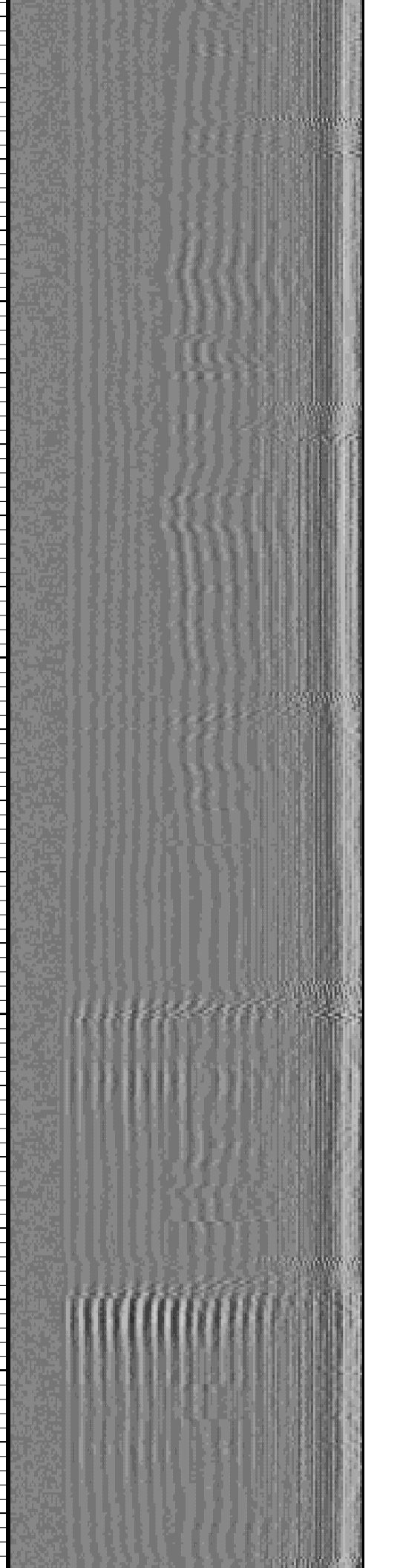
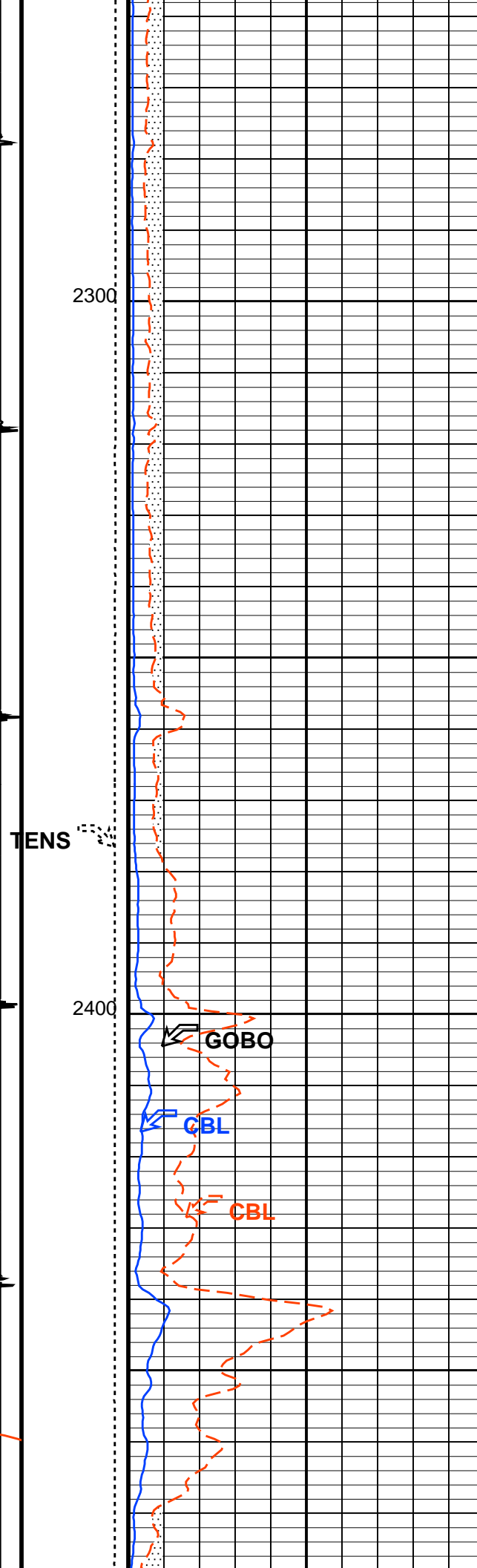
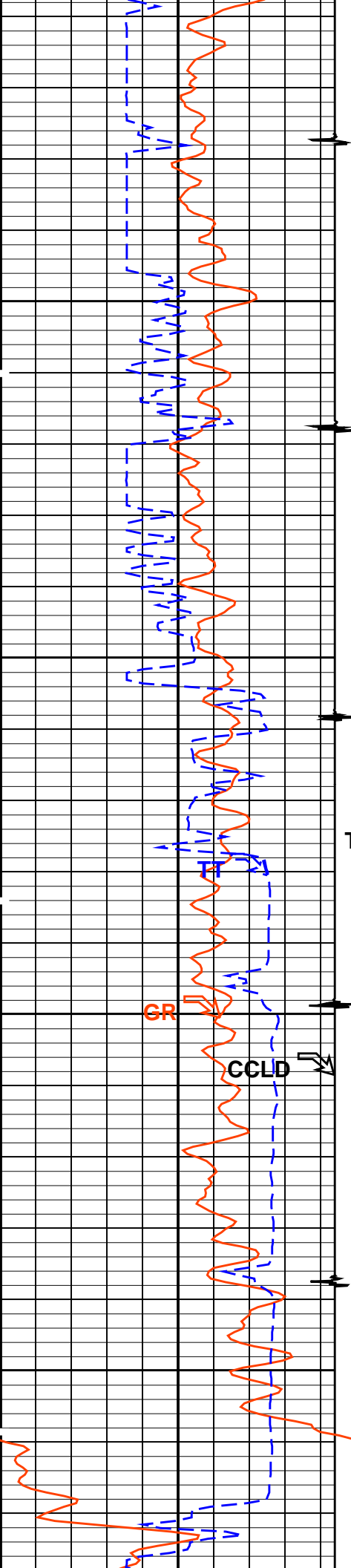


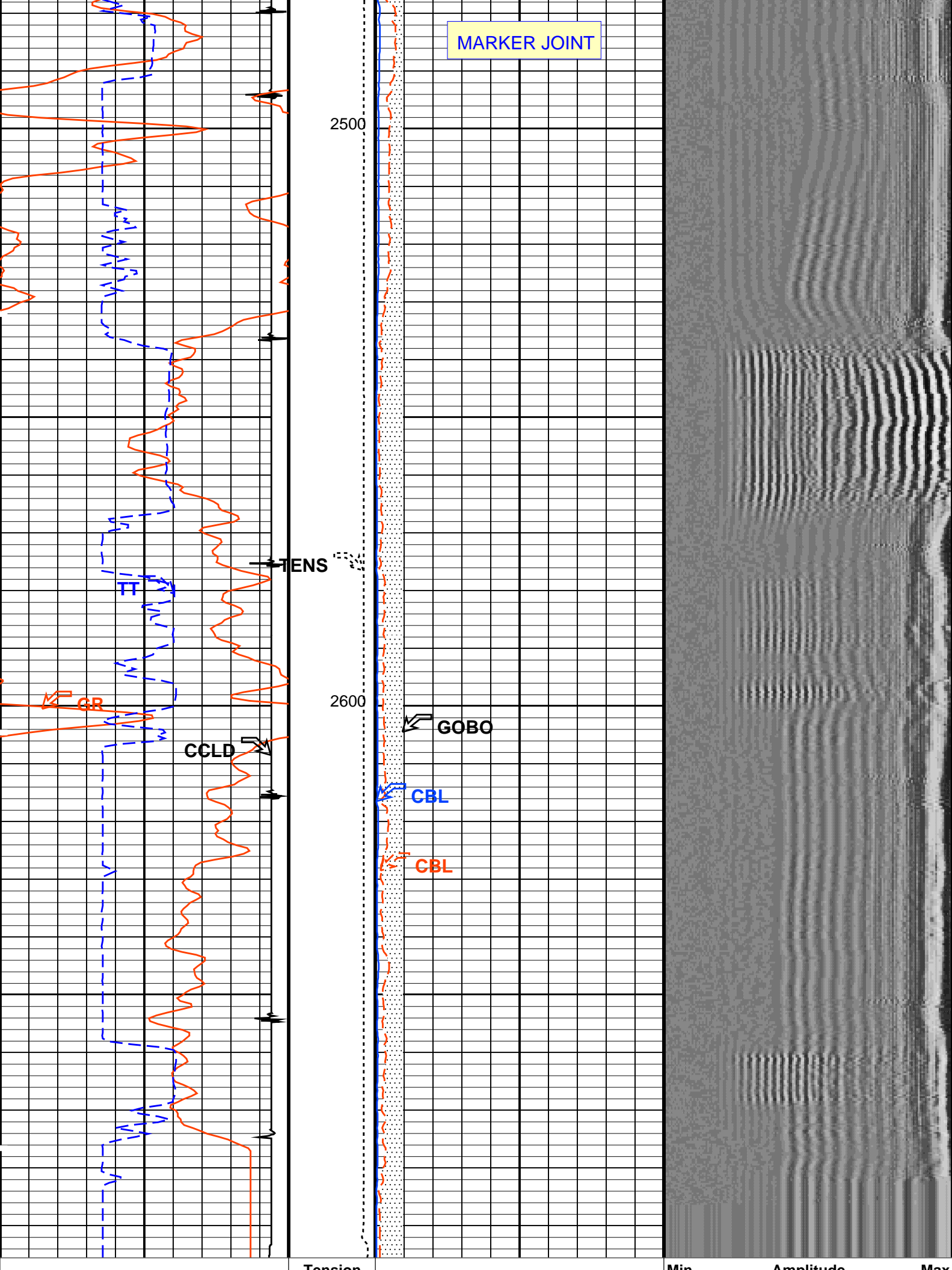


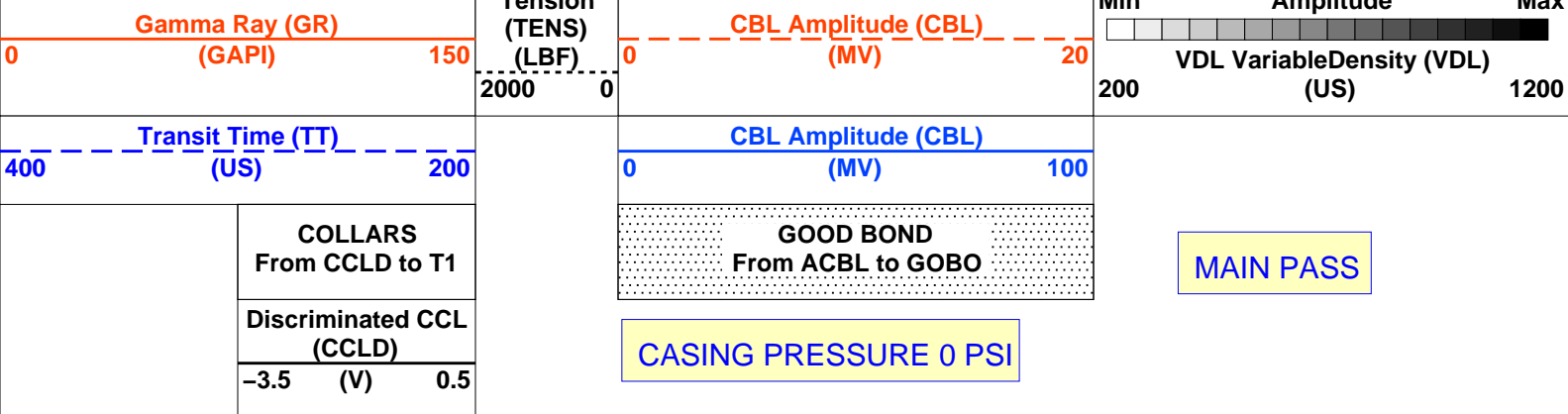












PIP SUMMARY

Time Mark Every

60 S

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	229.263	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	343.263	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	79	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	0.229988	IN
DTF	Delta-T Fluid	204.5	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	1	
GOBO	Good Bond	0.935443	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	172.263	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	18.4392	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	2.90666	MV
MSA	Minimum Sonic Amplitude	0.308578	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	10.50	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
TD	Total Depth	-50000	FT

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 12-Jan-2011 09:53

OP System Version: 19C0-187			
SCMT-CB	19C0-187	PSPT	19C0-187

Output DLIS Files			
DEFAULT	SCMT_PSP_009LUP	FN:8	PRODUCER 12-Jan-2011 09:53

Company: Noble Energy Inc. Well: Gardner Trusts 34-29

Output DLIS Files			
DEFAULT	SCMT_PSP_006LUP	FN:5	PRODUCER 12-Jan-2011 09:48 2694.0 FT 2481.5 FT

OP System Version: 19C0-187

PIP SUMMARY

Time Mark Every 60 S

Discriminated CCL (CCLD)
-3.5 (V) 0.5

COLLARS
From CCLD to T1

CASING PRESSURE 0 PSI

GOOD BOND
From ACBL to GOBO

REPEAT SECTION

Transit Time (TT)
(US)
400 200

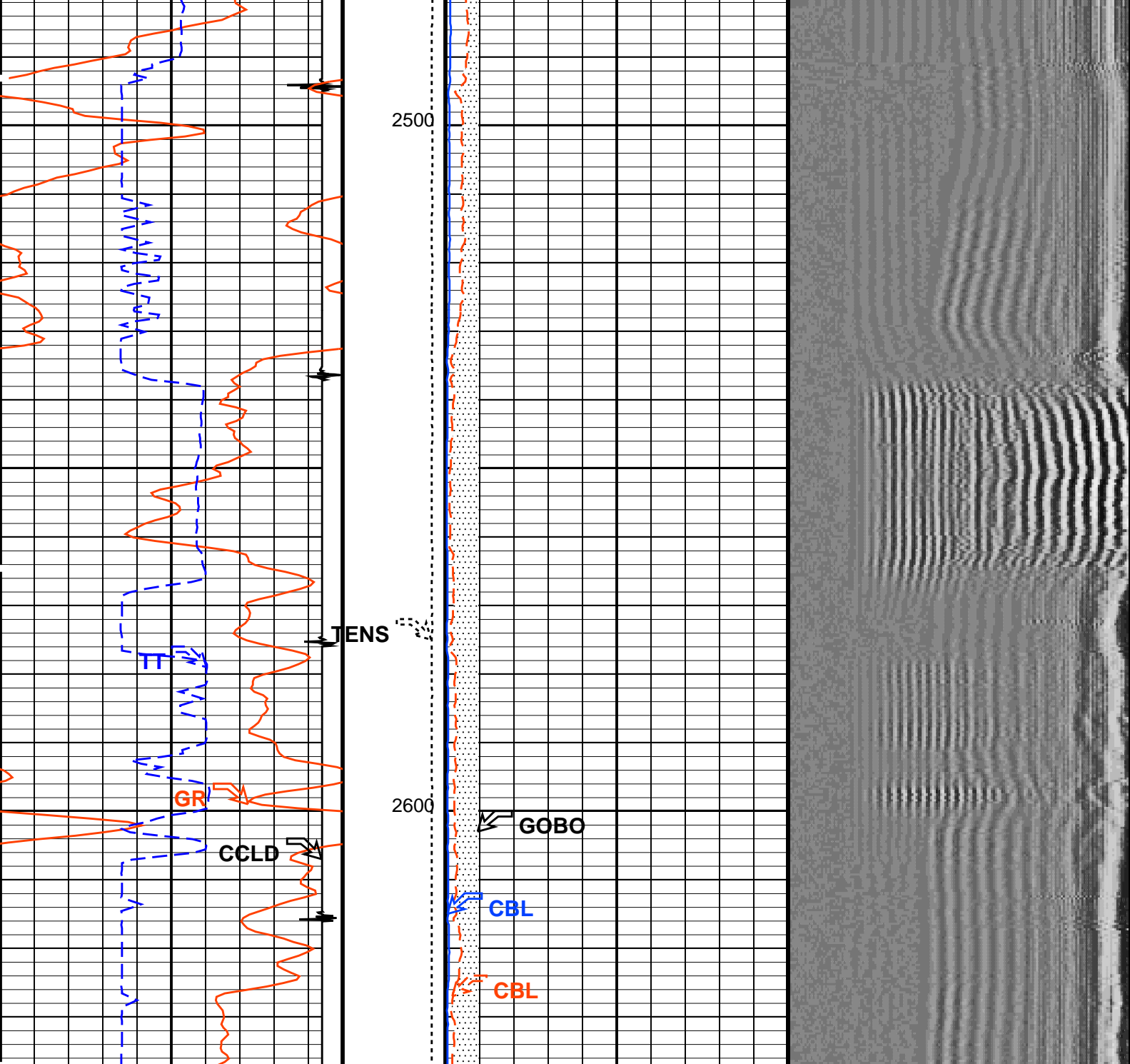
CBL Amplitude (CBL)
(MV)
0 100

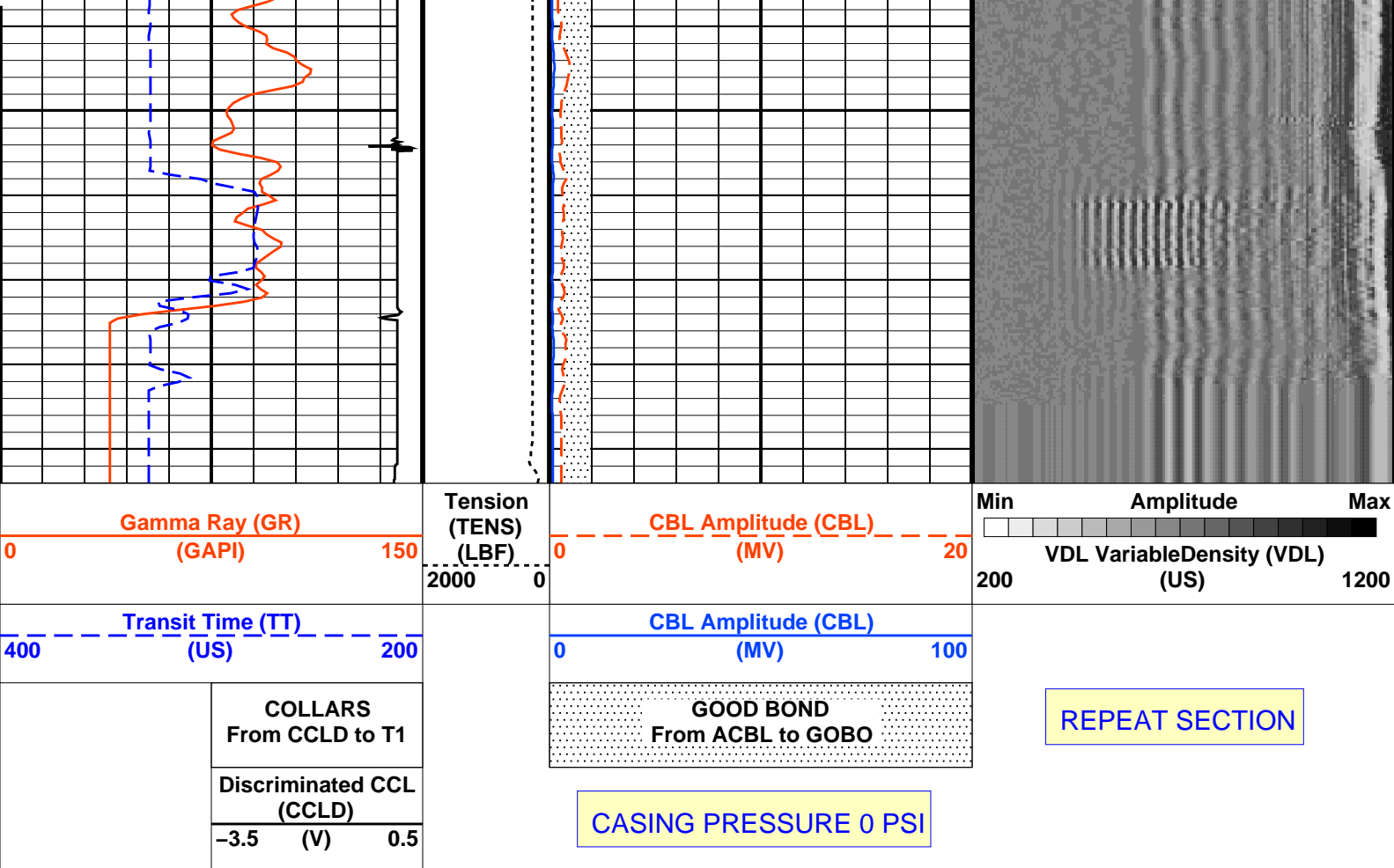
Gamma Ray (GR)
(GAPI)
0 150

Tension (TENS)
(LBF)
2000 0

CBL Amplitude (CBL)
(MV)
0 20

Min Amplitude Max
VDL VariableDensity (VDL)
(US) 200 1200





PIP SUMMARY

Time Mark Every 60 S

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	229.263 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	343.263 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	79 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	0.229988 IN
DTF	Delta-T Fluid	204.5 US/F
FATT	Acoustic Attenuation due to Fluid	0 DB/F
FCF	CBL Fluid Compensation Factor	1
GOBO	Good Bond	0.935443 MV
MAPD	SCMT MAP Peak Detection Mode	PEAK
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	172.263 US
MAPT	SCMT MAP Fixed Threshold Level	30 MV
MATT	Maximum Attenuation	18.4392 DB/F
MCCF	MAP Cement Type Compensation Factor	1
MCI	Minimum Cemented Interval for Isolation	1.25 FT
MMSA	MAP Minimum Sonic Amplitude	2.90666 MV
MSA	Minimum Sonic Amplitude	0.308578 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	10.50 LB/F
DFD	Drilling Fluid Density	8.40 LB/G
TD	Total Depth	-50000 FT

OP System Version: 19C0-187

SCMT-CB	19C0-187	PSPT	19C0-187
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Output DLIS Files

DEFAULT	SCMT_PSP_006LUP	FN:5	PRODUCER	12-Jan-2011 09:48
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Company: **Noble Energy Inc.**

Schlumberger

Well: **Gardner Trusts 34-29**

Field: **Schramm**

County: **Yuma**

State: **Colorado**

CEMENT BOND LOG

GAMMA RAY

CASING COLLAR LOG