

Company: Noble Energy Inc.

Well: RMR Ranch 13-36

Field: Schramm

County: Yuma

State: Colorado

County: Yuma

Field: Schramm

Location: 1620' FSL & 325' FWL

Well: RMR Ranch 13-36

Company: Noble Energy Inc.

CMENT BOND LOG

GAMMA RAY

CASING COLLAR LOG

1620' FSL & 325' FWL

Elev.: K.B. 4002.00 ft
G.L. 3996.00 ft
D.F.

Permanent Datum: _____

GROUND LEVEL _____

Elev.: 3996.00 ft _____

Log Measured From: KELLY BUSHING

6.00 ft above Perm. Datum

Drilling Measured From: KELLY BUSHING

API Serial No. 05-123-11945

Section 36

Township 2N

Range 47W

Logging Date 12-Jan-2011			
Run Number	1		
Depth Driller	2784 ft		
Schlumberger Depth	2734 ft		
Bottom Log Interval	2726 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	124 degF		
Logger On Bottom	12-Jan-2011	13:27	
Unit Number	-354	FORT MORGAN	
Recorded By	C MARCH		
Witnessed By	MIKE BEARGEON		

Oil Density		Run 1	Run 2	Run 3
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				
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 13:25:35

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-DEC-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:	1.00 FT

Depth Control Remarks

1. IDW WHEELS PRIMARY DEPTH CONTROL
2. DRUM COUNTER USED AS SECONDARY DEPTH CONTROL
- 3.
- 4.
- 5.
- 6.

DISCLAIMER

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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	
RAN BY SCHLUMBERGER ON 19-DEC-2010	
REPEAT AND MAIN PASS	

RAN UNDER 0 PSI					
CREW: WILEY, GOOD					
THANKS					
RUN 1			RUN 2		
SERVICE ORDER #:		AT90-00336	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					
DOWNHOLE EQUIPMENT					
MH-22		26.6			
MH-22					
AH-38	Detail MT	25.0			
	TelStatus				
	CTEM	24.7			
PSPT		24.7			
PSC-A 2810					
PSPT-B					
PSTC-A					
PBMS-B					
CQG_F_Mano					
RTD_Thermometer					
GR					
CCL					
PBMS	GR	21.0			
Well_Temp		18.0			
CQG Manom		17.6			
CCL		17.2			
PBMS PSTC		16.4			
SCMT-CB		16.4			
SCMC-CA					
SECH-CA					
SCMS-CB 8209					
SCMX-CA					
DT		10.9			

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: RMR Ranch 13-36

Output DLIS Files

DEFAULT SCMT_PSP_007LUP FN:6 PRODUCER 12-Jan-2011 13:52 2737.5 FT 28.5 FT

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

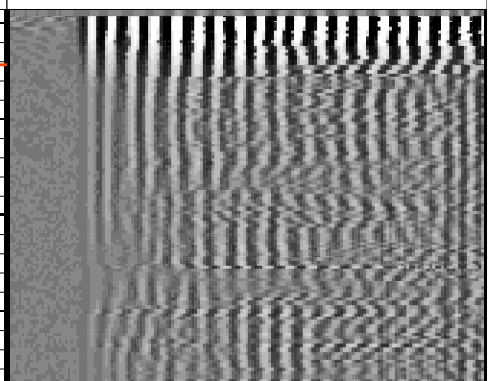
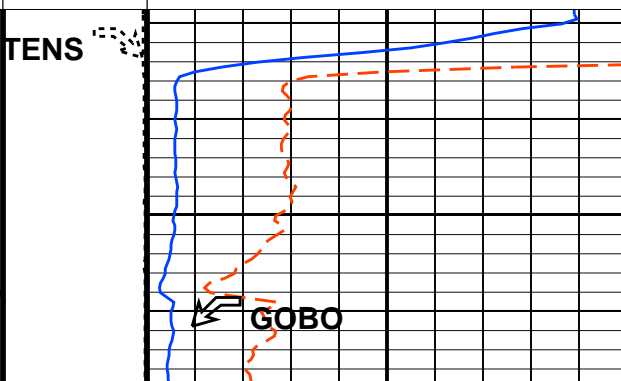
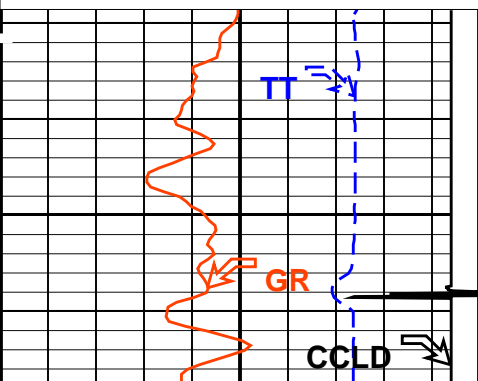
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(MV) 0 100

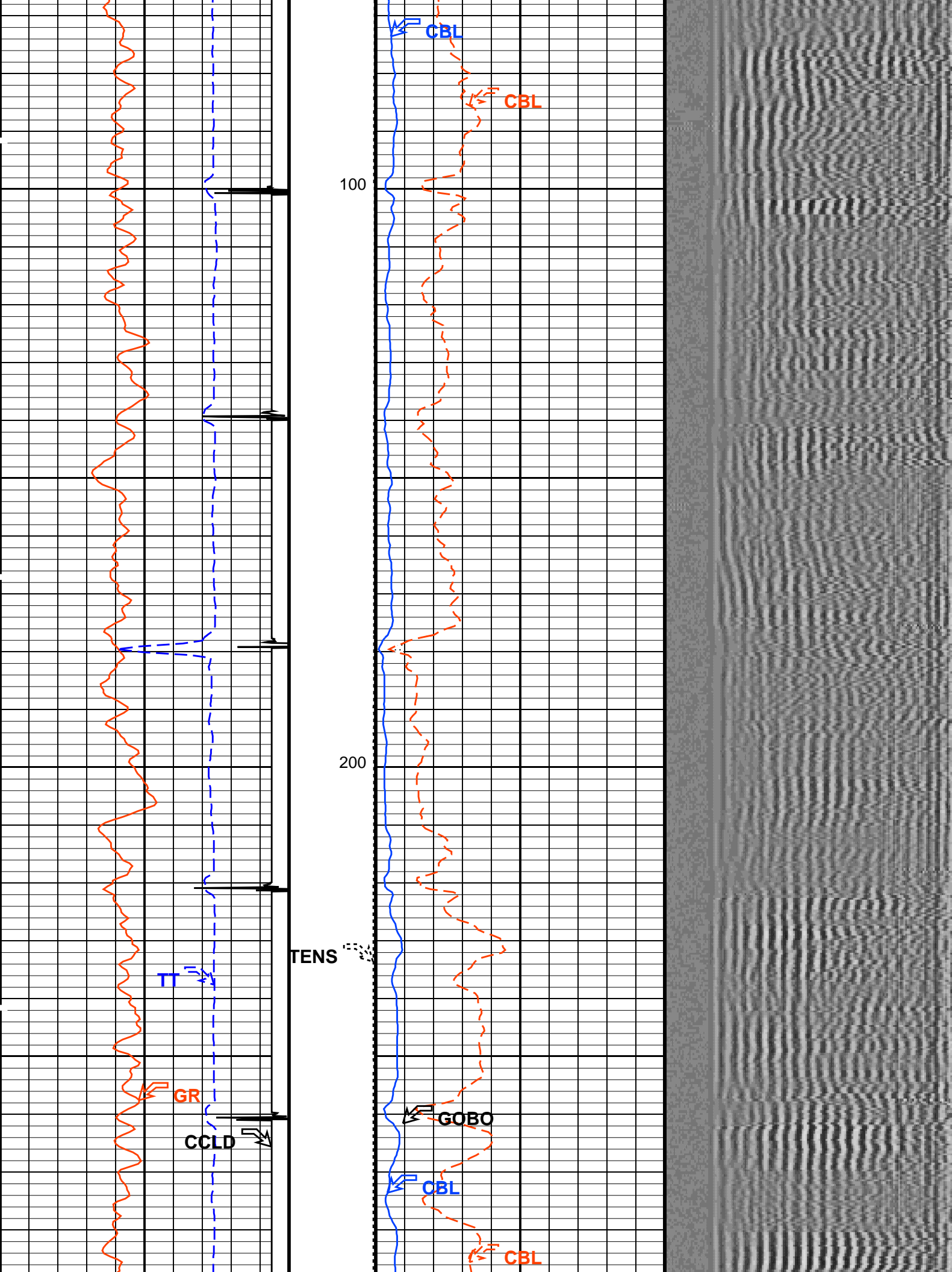
Gamma Ray (GR)
(GAPI) 0 150

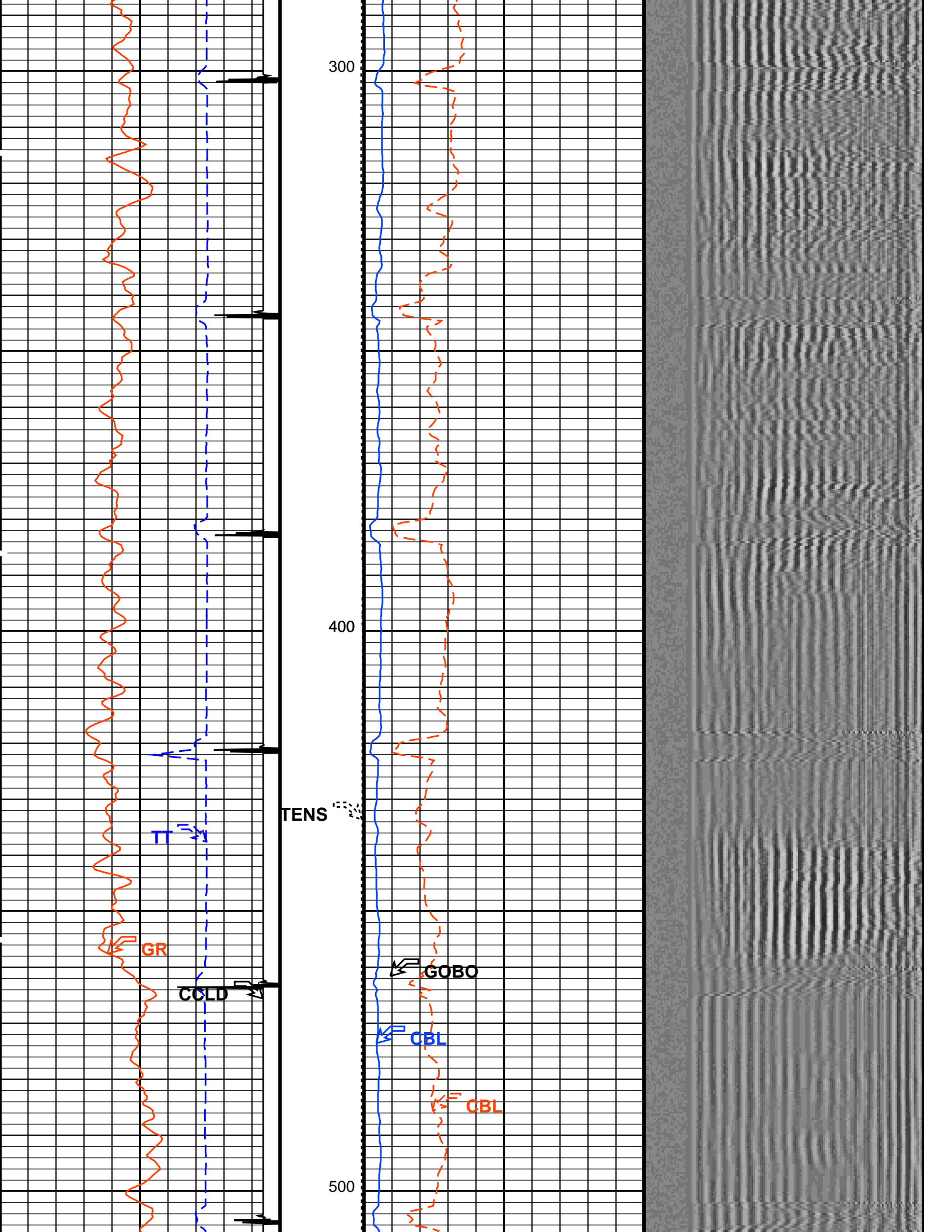
Tension
(TENS)
(LBF) 2000 0

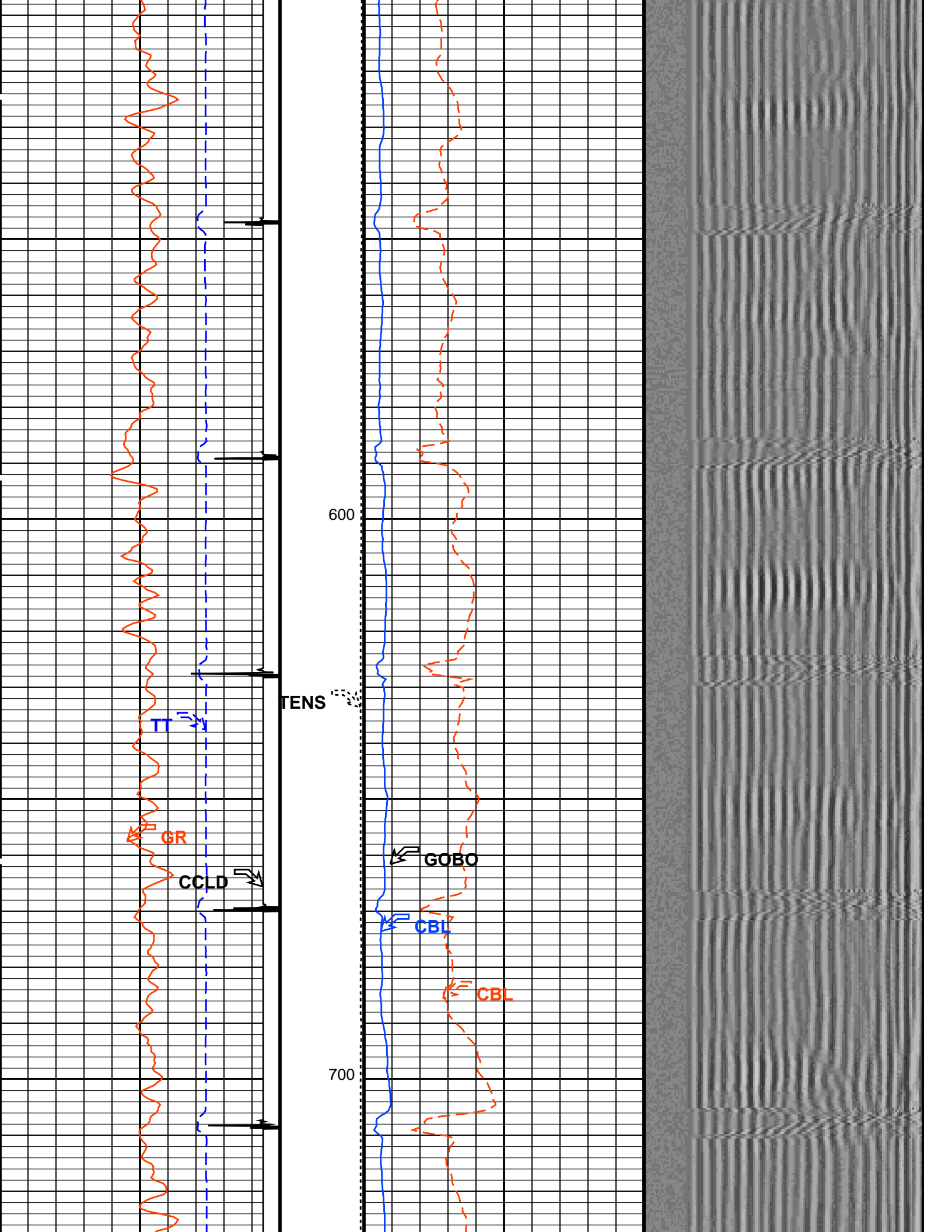
CBL Amplitude (CBL)
(MV) 0 20

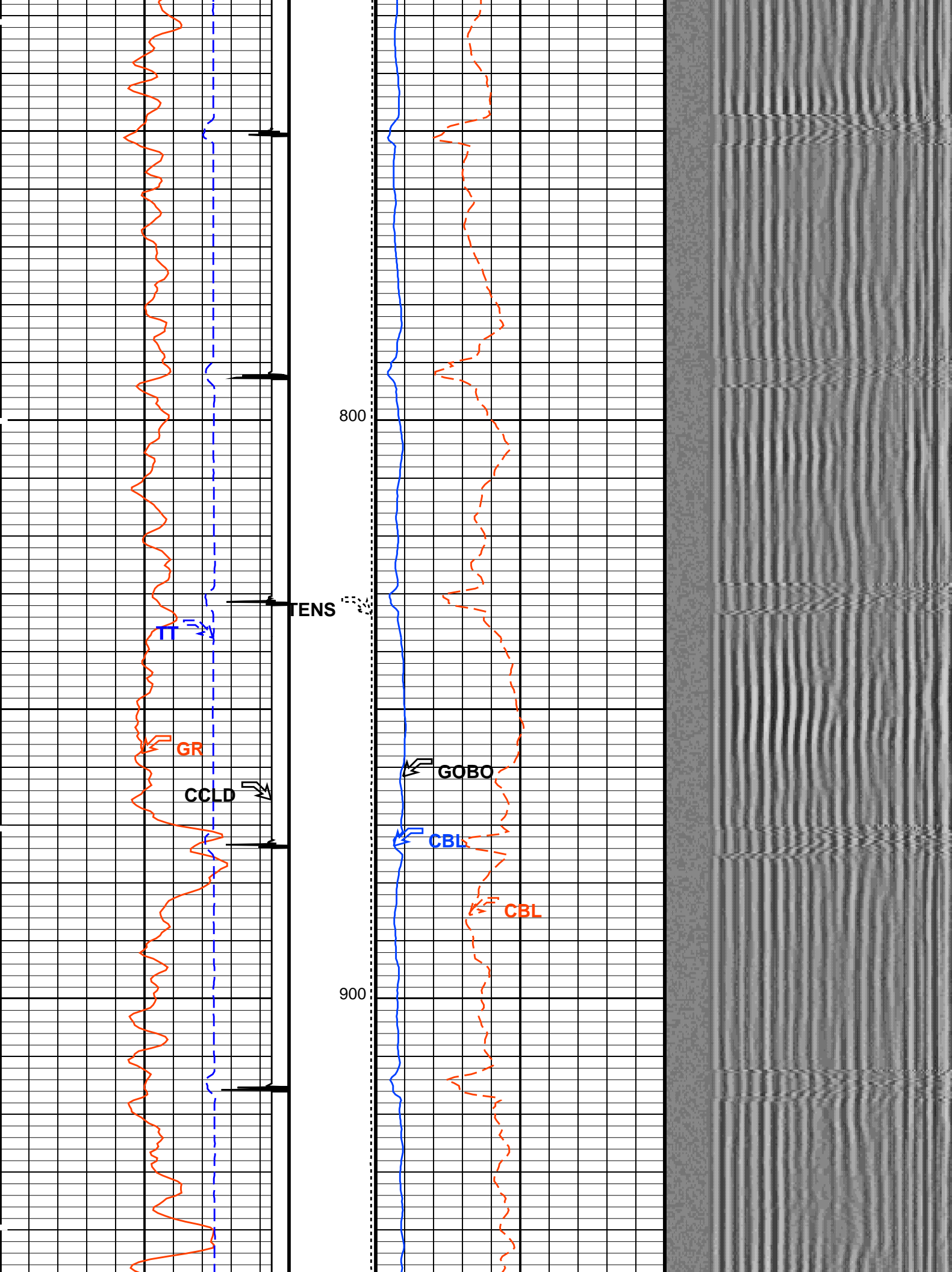
Min Amplitude Max
VDL VariableDensity (VDL)
(US) 200 1200

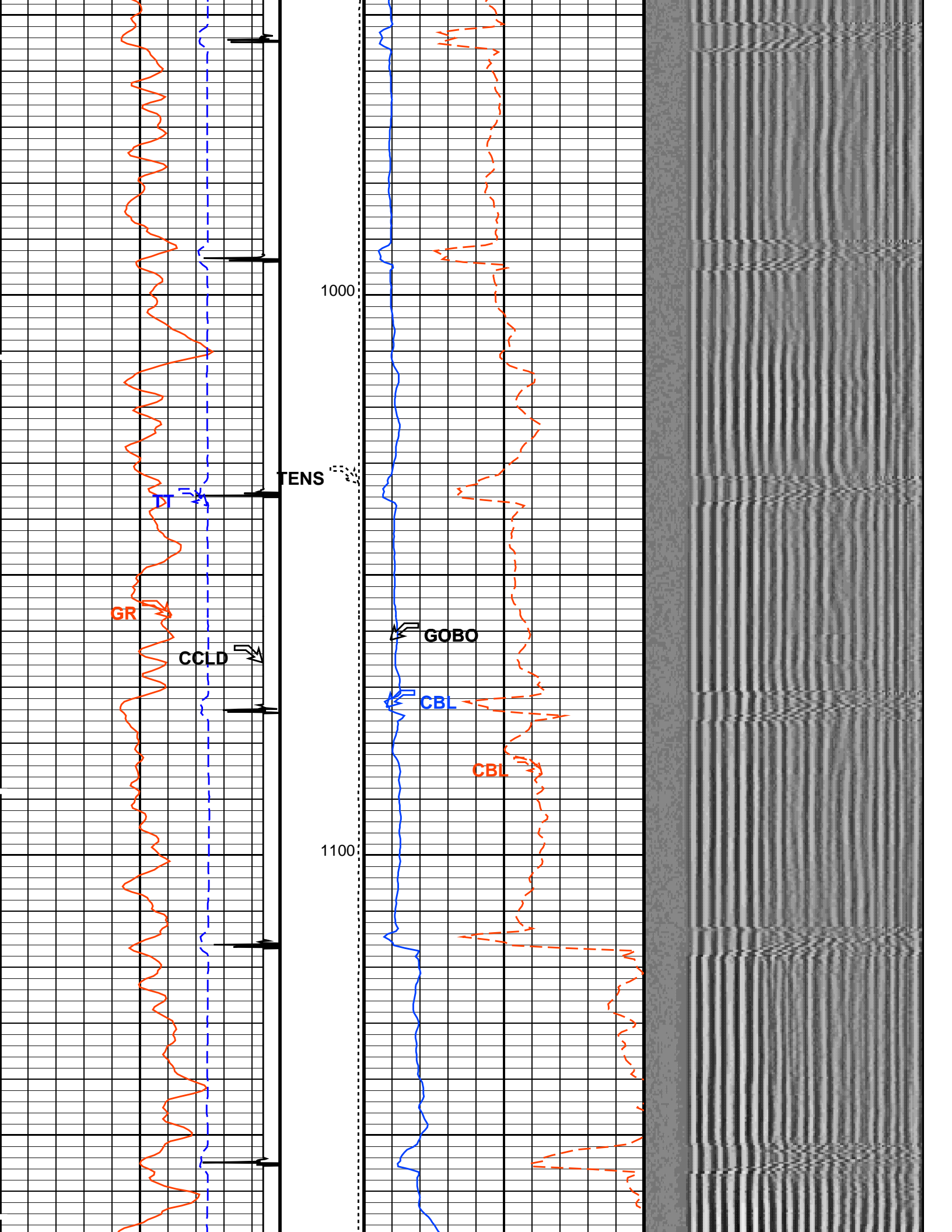


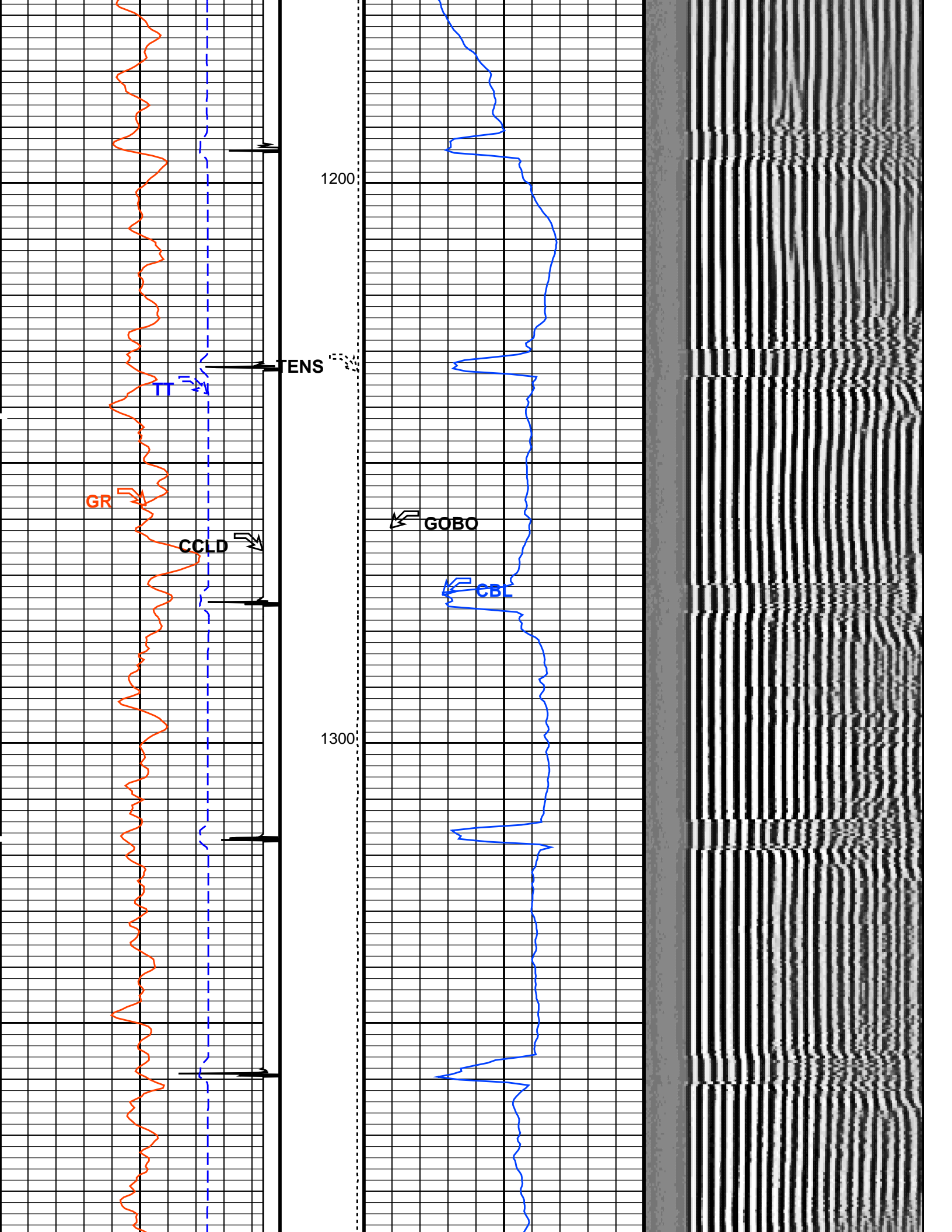


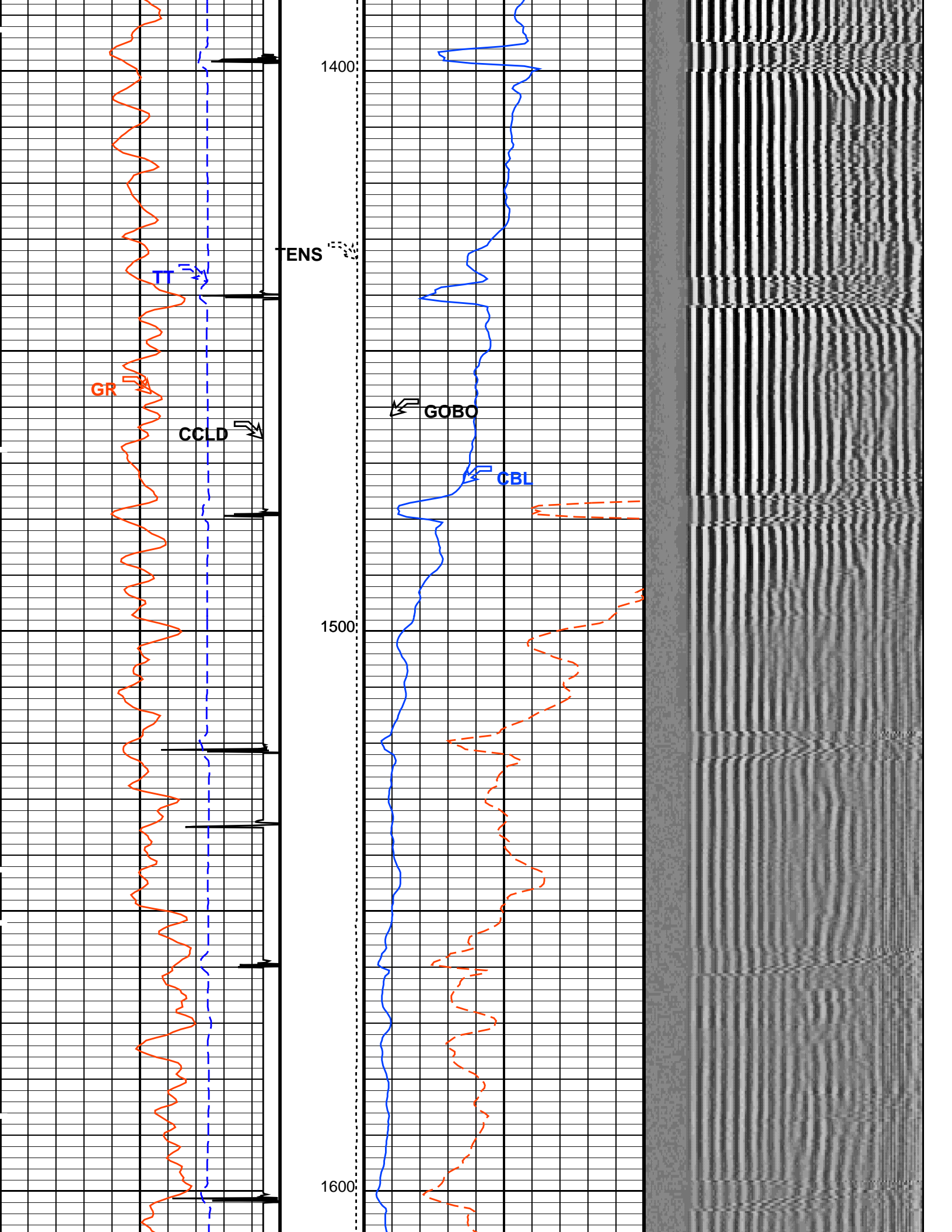


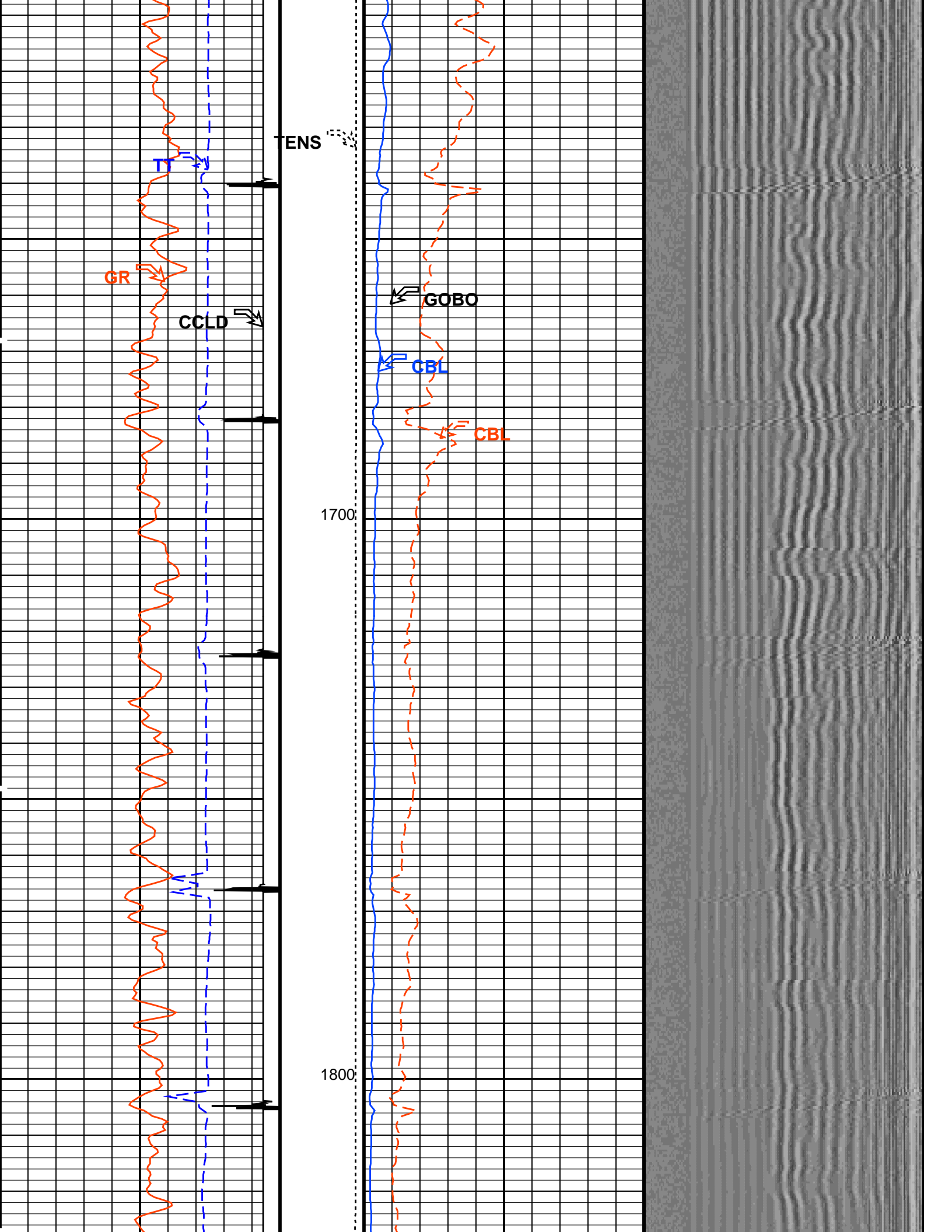


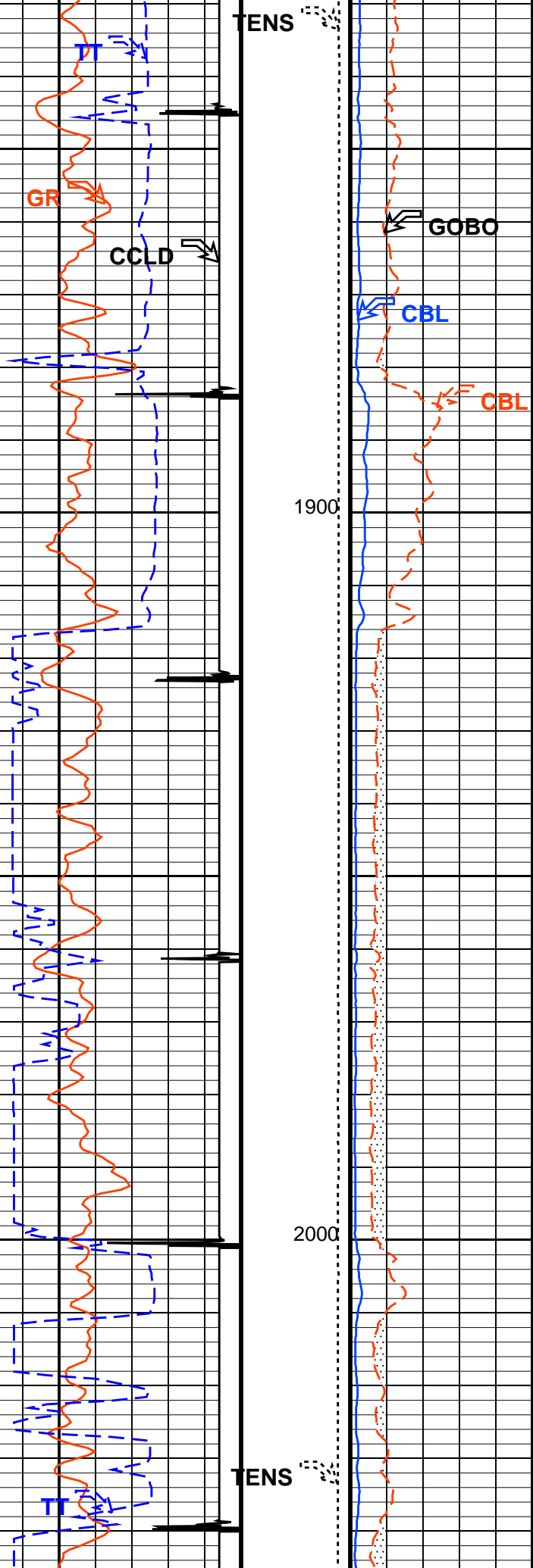


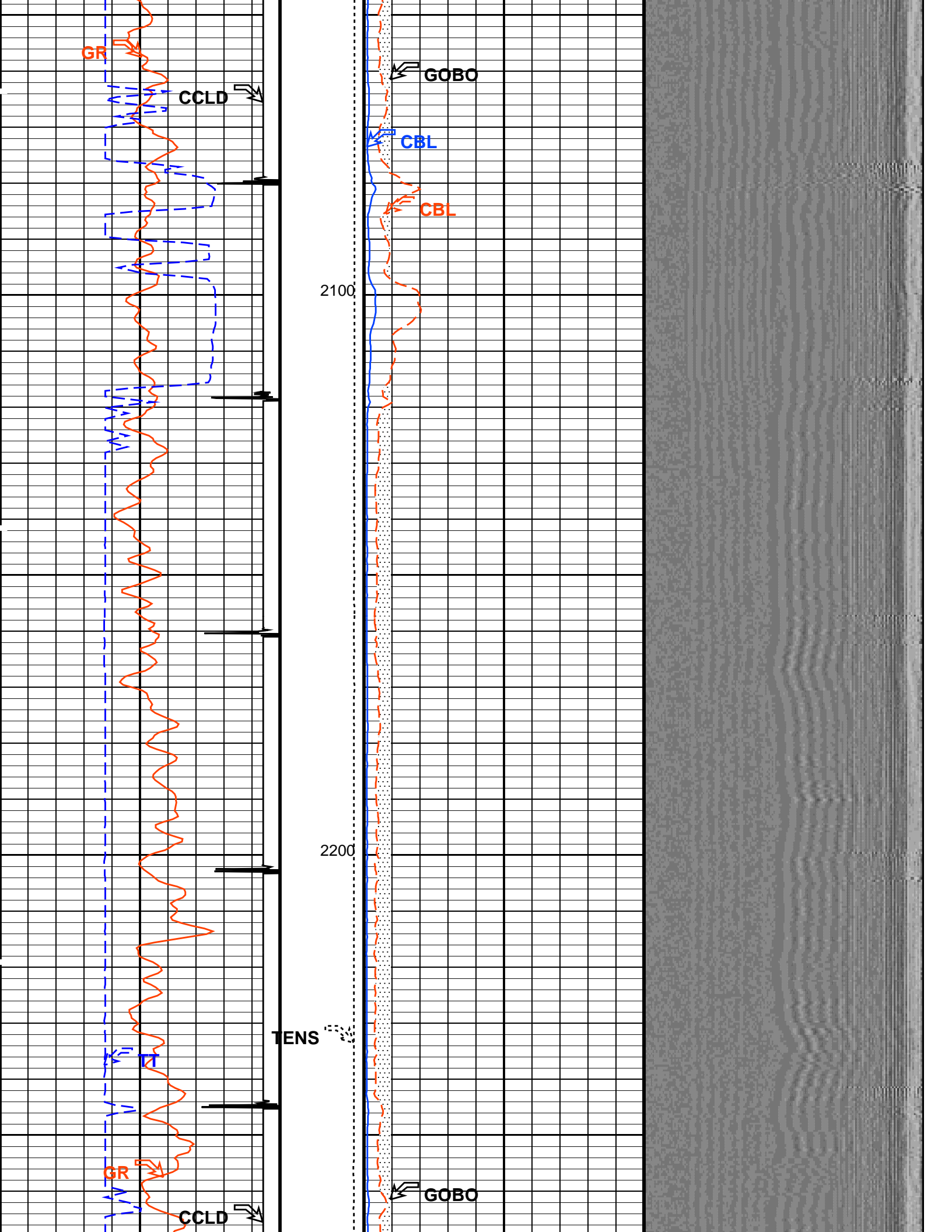


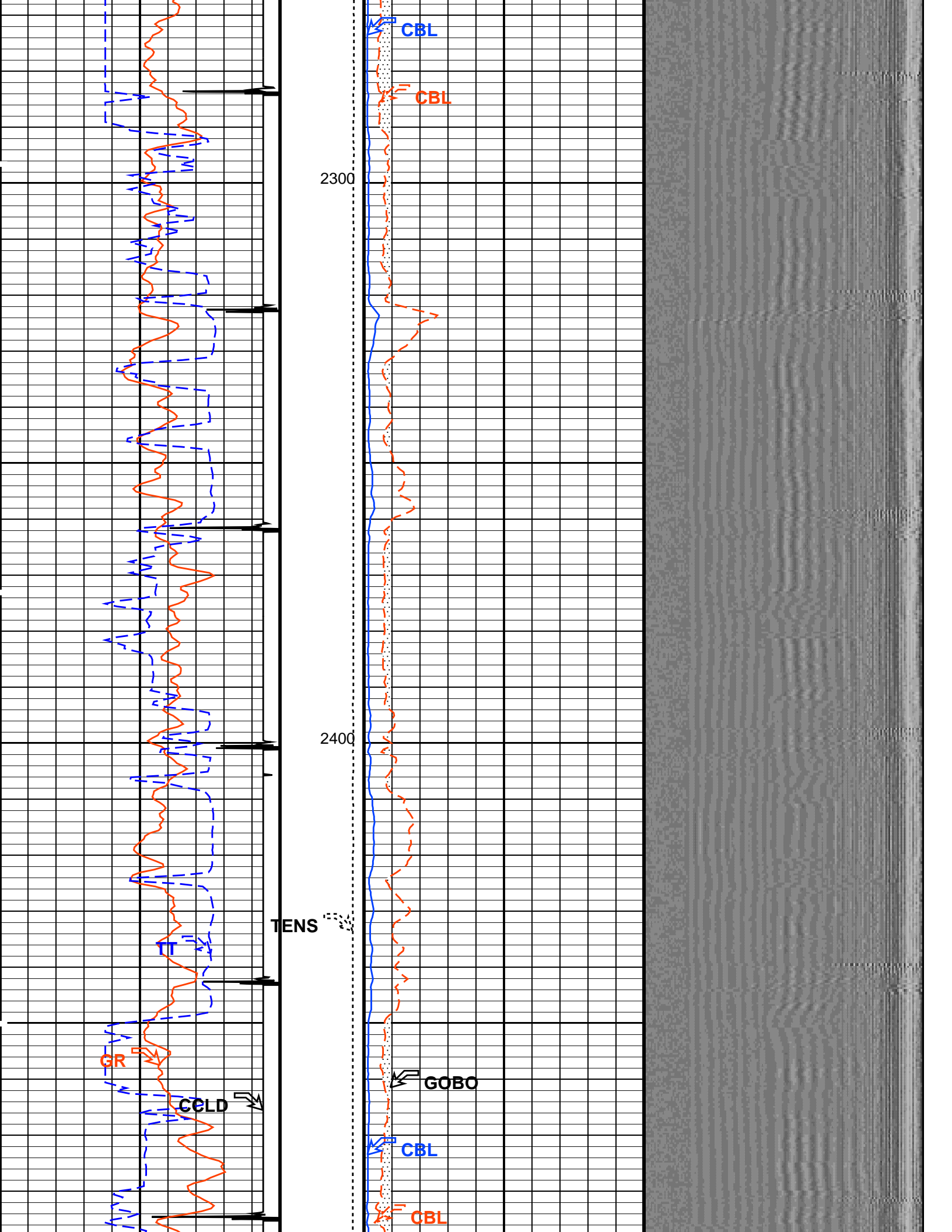


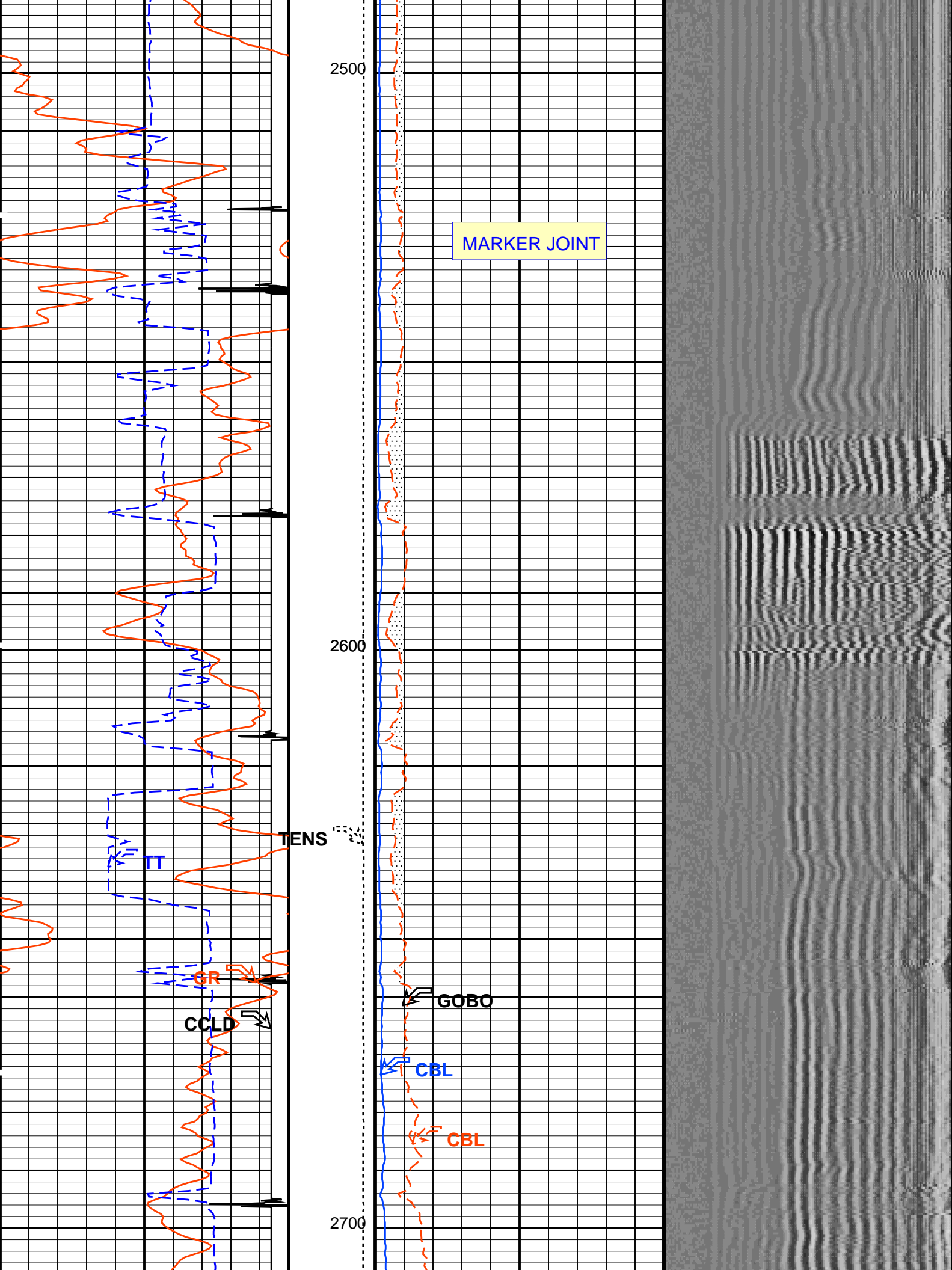


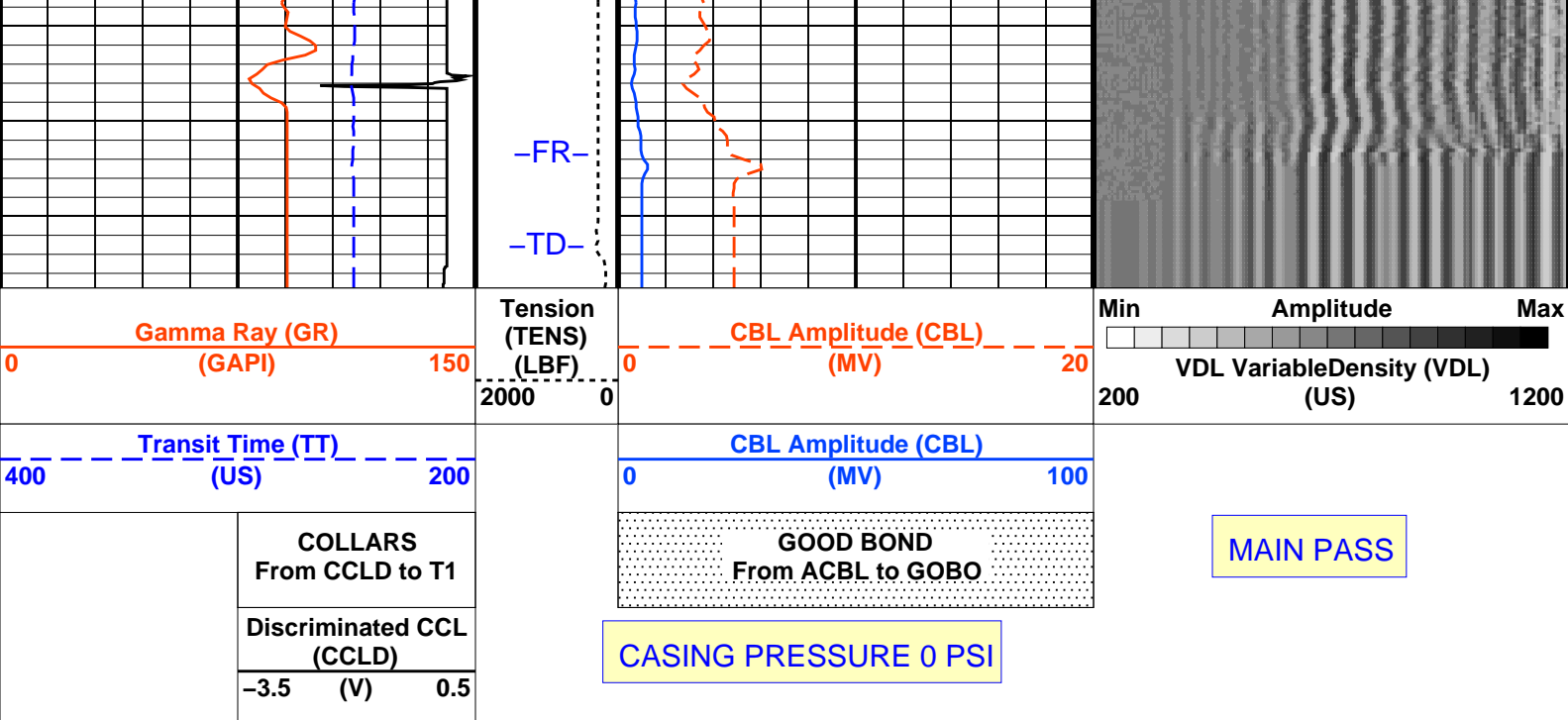












PIP SUMMARY

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	225.329 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	339.329 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
CMTG	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	189 US/F
FATT	Acoustic Attenuation due to Fluid	0 DB/F
FCF	CBL Fluid Compensation Factor	0.924277
GOBO	Good Bond	0.945006 MV
MAPD	SCMT MAP Peak Detection Mode	PEAK
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	168.329 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	2.94385 MV
MSA	Minimum Sonic Amplitude	0.312526 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 13:52

OP System Version: 19C0-187

SCMT-CB 19C0-187 PSPT 19C0-187

Output DLIS Files

Output DLIS Files

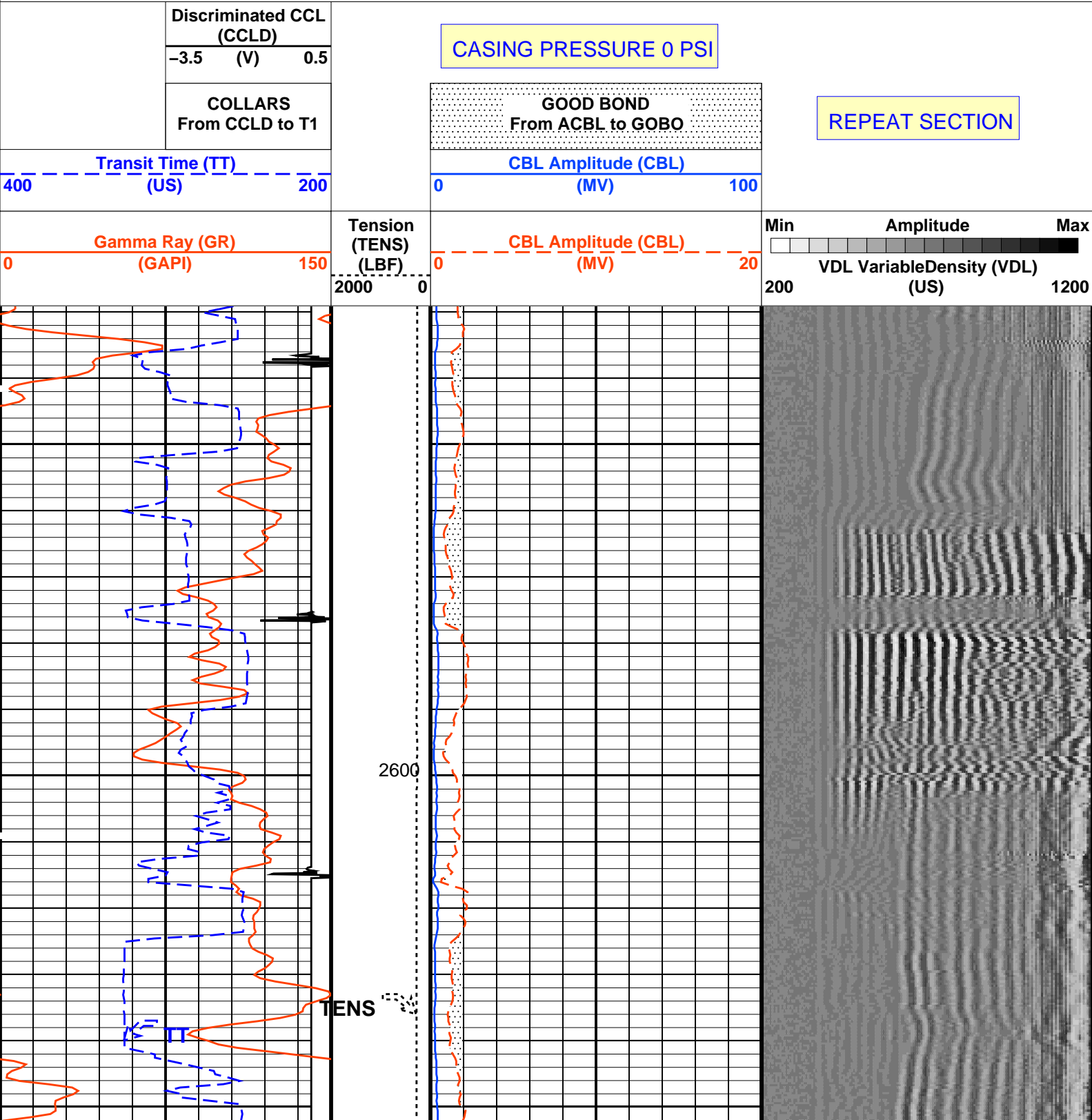
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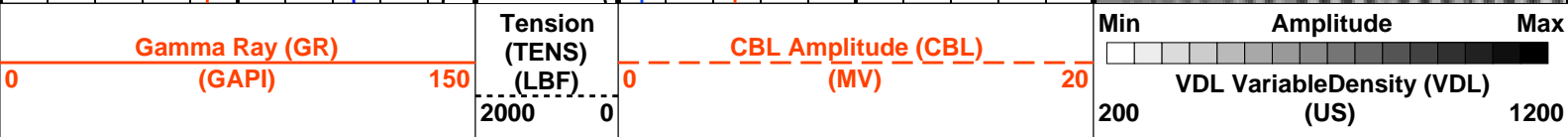
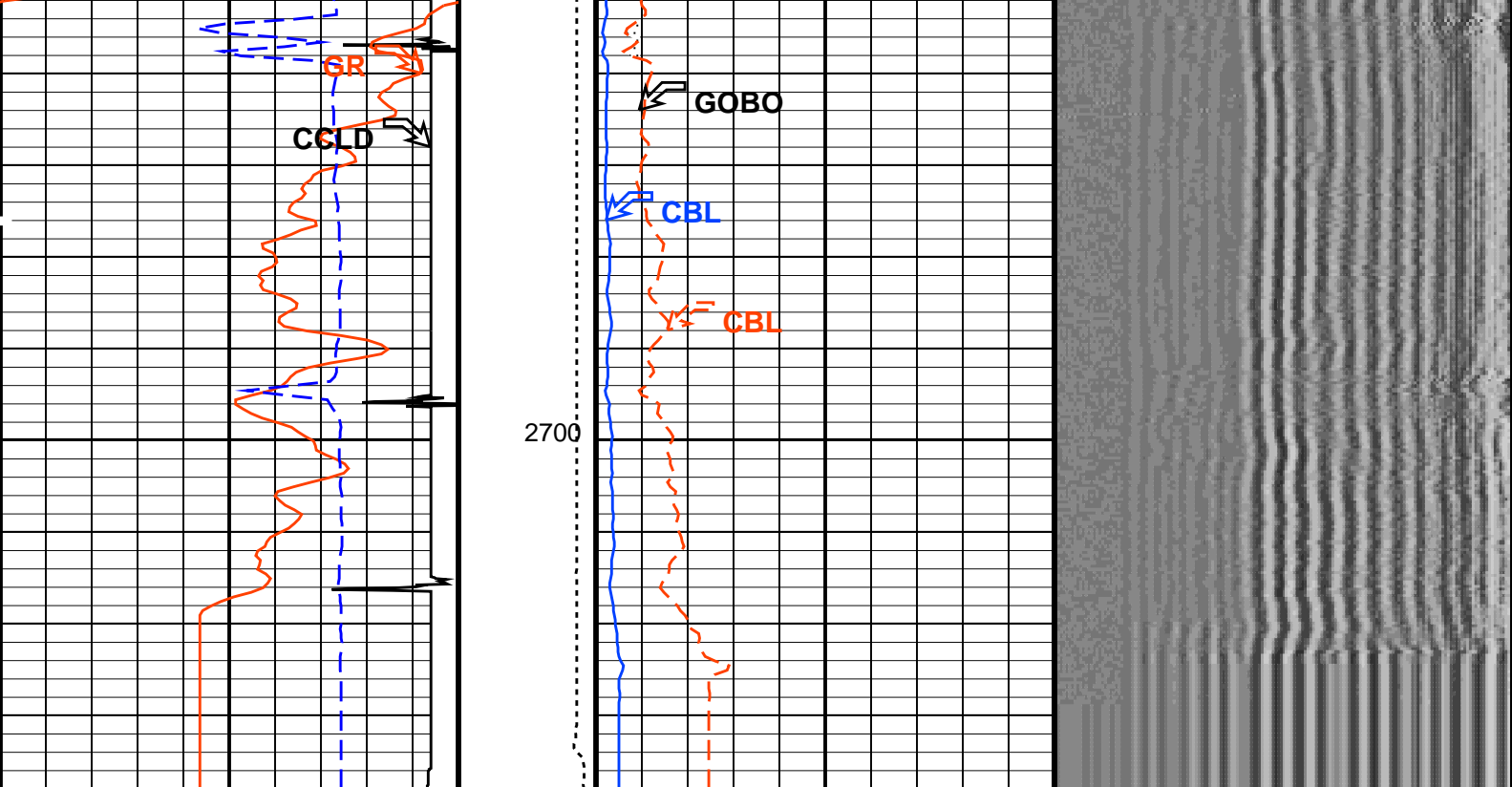
OP System Version: 19C0-187

SCMT-CB19C0-187PSPT19C0-187

PIP SUMMARY

Time Mark Every 60 S





Transit Time (TT)		CBL Amplitude (CBL)		REPEAT SECTION
400	(US)	0	(MV) 100	
COLLARS From CCLD to T1		GOOD BOND From ACBL to GOBO		
Discriminated CCL (CCLD)		CASING PRESSURE 0 PSI		
-3.5	(V)	0.5		

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	225.329 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	339.329 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	189 US/F
FATT	Acoustic Attenuation due to Fluid	0 DB/F
FCF	CBL Fluid Compensation Factor	0.924277
GOBO	Good Bond	0.945006 MV
MAPD	SCMT MAP Peak Detection Mode	PEAK
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	168.329 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	2.94385	MV
MSA	Minimum Sonic Amplitude	0.312526	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 13:47

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

Output DLIS Files			
DEFAULT	SCMT_PSP_006LUP	FN:5	PRODUCER 12-Jan-2011 13:47

Company:	Noble Energy Inc.	Schlumberger
Well:	RMR Ranch 13-36	
Field:	Schramm	
County:	Yuma	
State:	Colorado	

CMENT BOND LOG
GAMMA RAY
CASING COLLAR LOG