

Company: Noble Energy Inc.

Well: Nelson 41-36B

Field: Schramm

County: Yuma

State: Colorado

CMENT BOND LOG
GAMMA RAY
CASING COLLAR LOG

County:	Yuma		
Field:	Schramm		
Location:	1160' FNL X 1160' FEL NENE		
Well:	Nelson 41-36B		
Company:	Noble Energy Inc.		
LOCATION	1160' FNL X 1160' FEL NENE		Elev.: K.B. 4010.00 ft G.L. 4004.00 ft D.F. 4009.00 ft
	Permanent Datum:	GROUND LEVEL	Elev.: 4004.00 ft
	Log Measured From:	KELLY BUSHING	6.00 ft above Perm. Datum
	Drilling Measured From:	KELLY BUSHING	
API Serial No.	Section 36	Township 2N	Range 47W
05-123-11945			

	Run 1	Run 2	Run 3
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	13-Jan-2011		
Run Number	1		
Depth Driller	2783 ft		
Schlumberger Depth	2708 ft		
Bottom Log Interval	2700 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	123 degF		
Logger On Bottom	13-Jan-2011	Time	13:16
Unit Number	354	Location	FORT MORGAN
Recorded By	C MARCH		
Witnessed By	MIKE BEARGEON		

DEPTH SUMMARY LISTING

Date Created: 13-JAN-2011 13:08:51

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	Conveyance Method: Wireline Rig Type: LAND	
Calibration Cable Type:	1-25P	Number of Calibration Points:	0		
Wheel Correction 1:	-3				
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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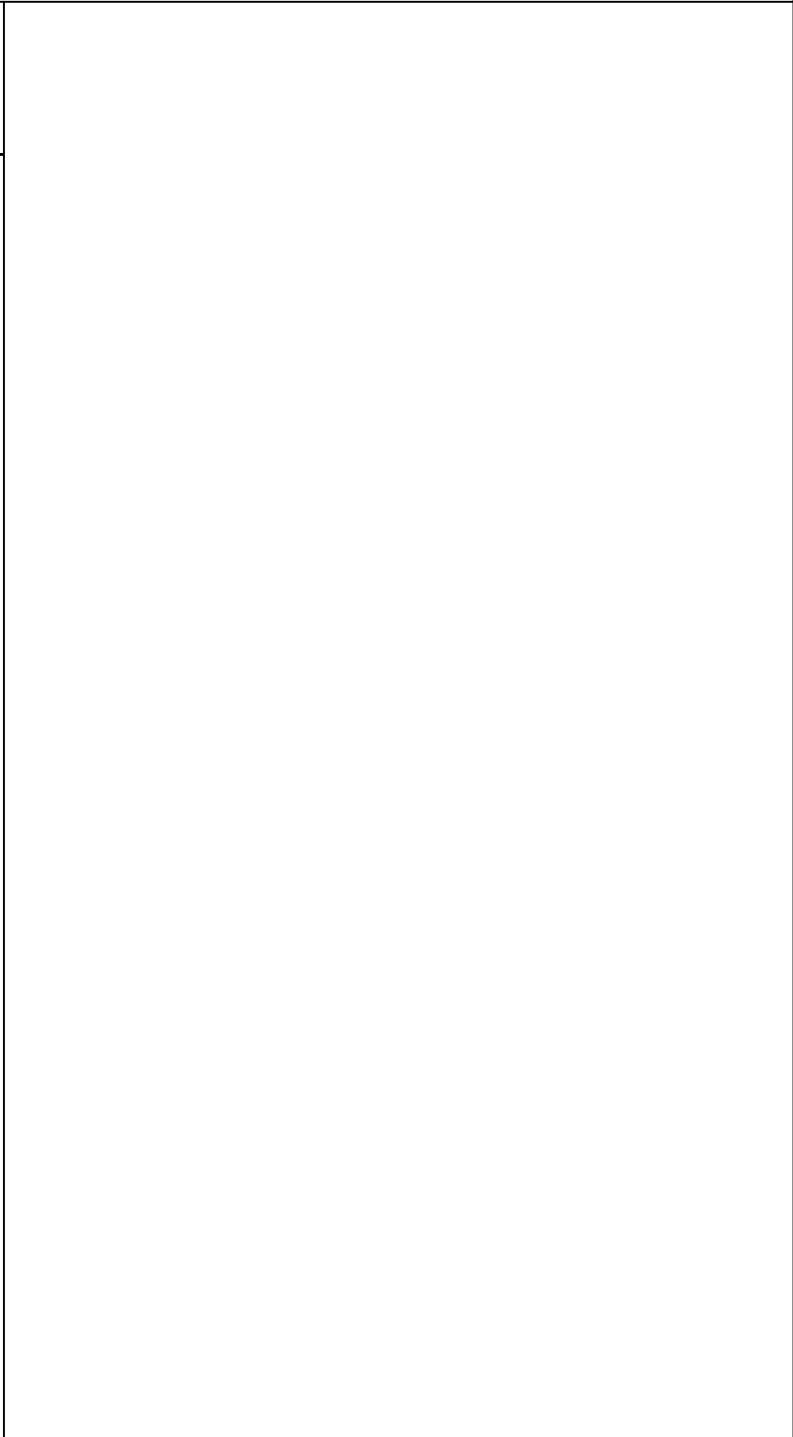
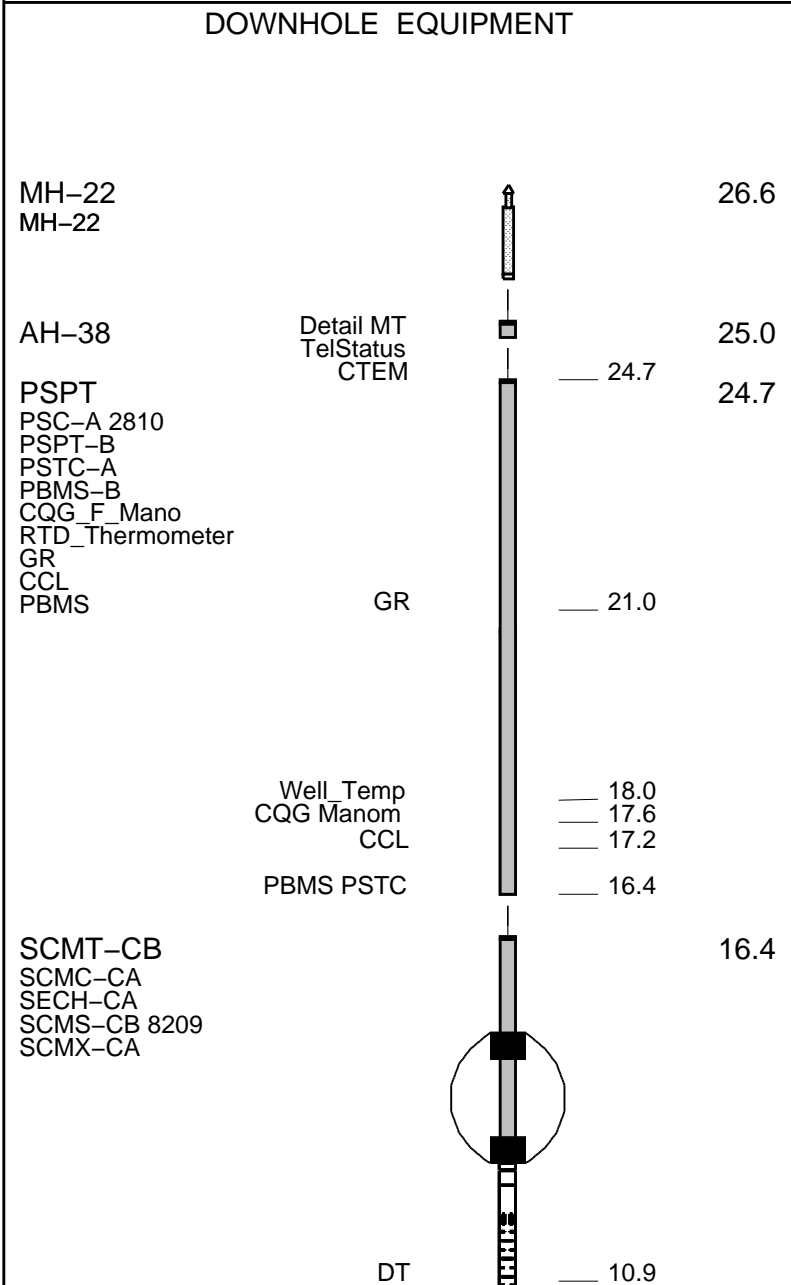
OTHER SERVICES1	OTHER SERVICES2
OS1: SWAB	OS1:
OS2: PERF	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
CORRELATED TO TRIPLE COMBO	
RAN BY SCHLUMBERGER ON 19-DEC-2010	
REPEAT AND MAIN PASS	

RAN UNDER 0 PSI	
CREW: WILEY, GOOD	
THANKS	

RUN 1			RUN 2		
SERVICE ORDER #:		AT90-00338	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 7.50 IN
 MEASUREMENTS RELATIVE TO TOOL ZERO
 ALL LENGTHS IN FEET

Company: Noble Energy Inc. Well: Nelson 41-36B

Output DLIS Files

DEFAULT SCMT_PSP_005LUP FN:4 PRODUCER 13-Jan-2011 13:34

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

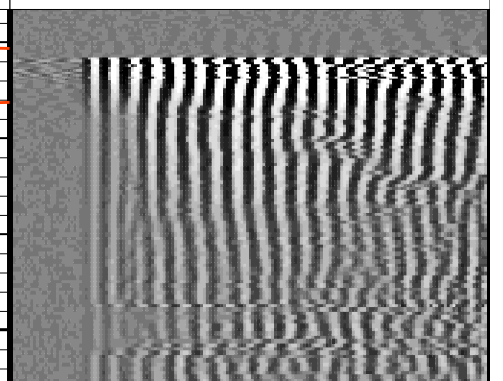
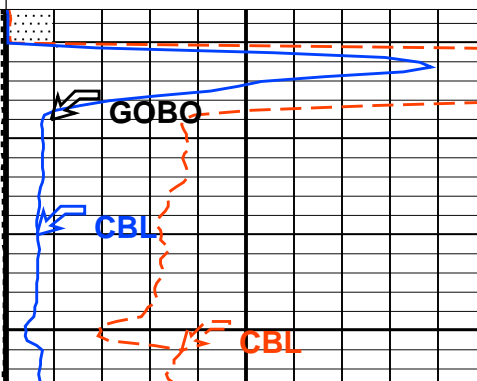
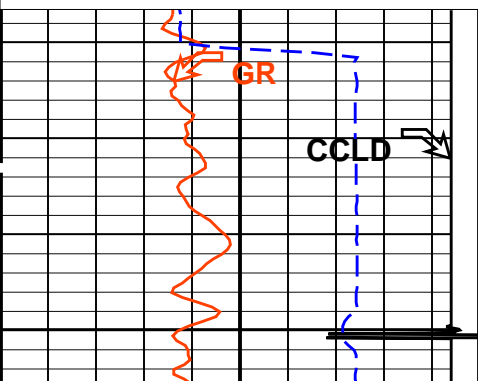
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 (MV) 0 100

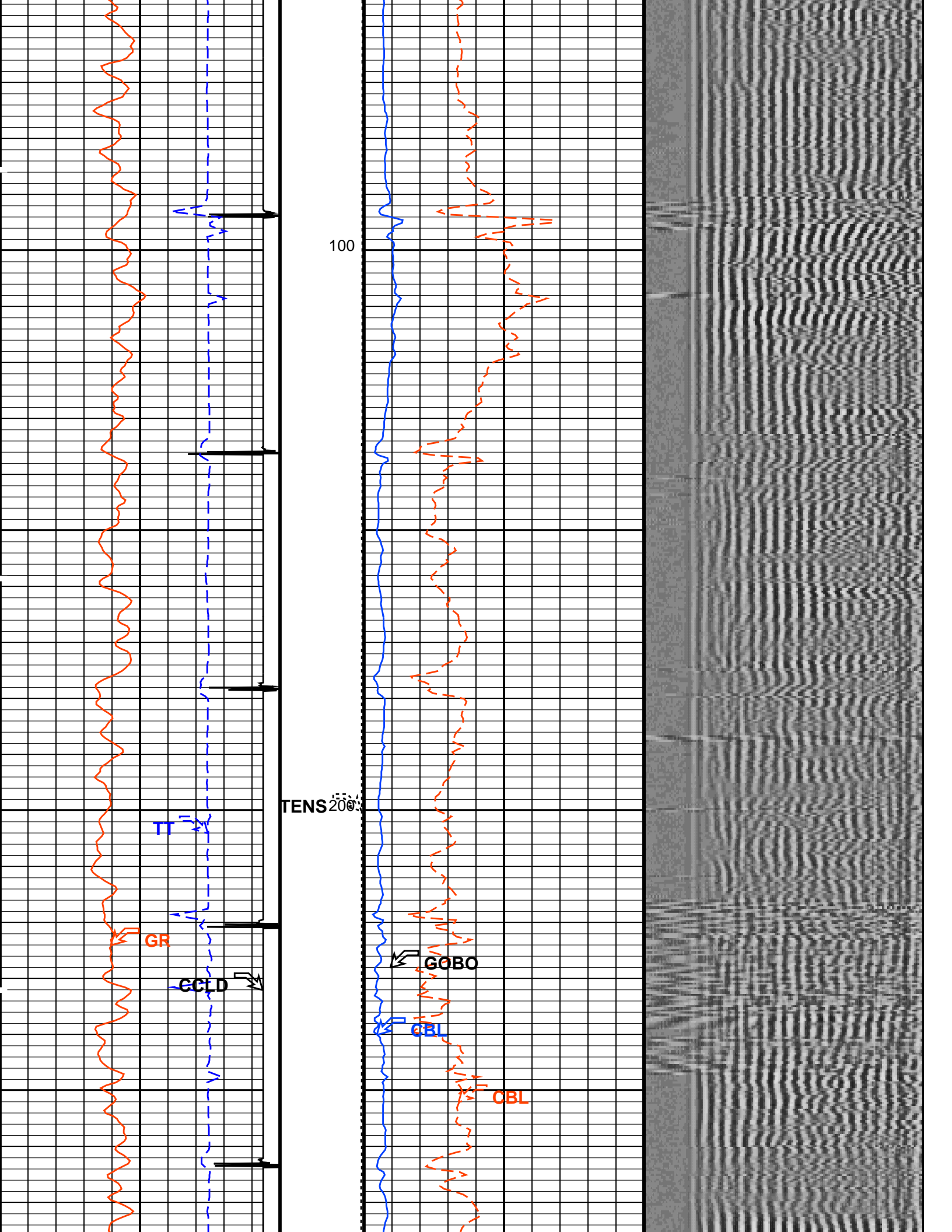
Gamma Ray (GR)
 (GAPI) 0 150

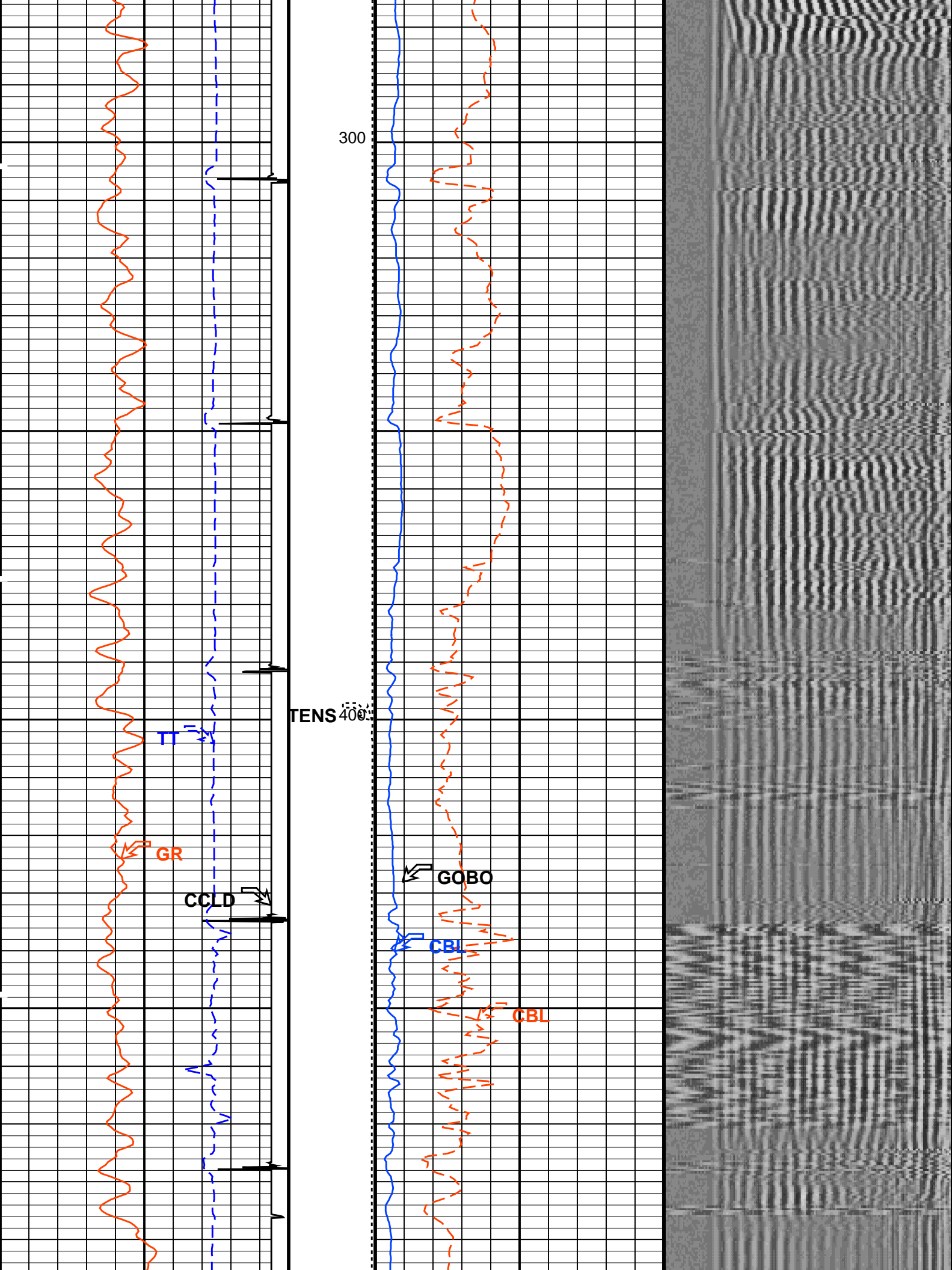
Tension
 (TENS)
 (LBF) 2000 0

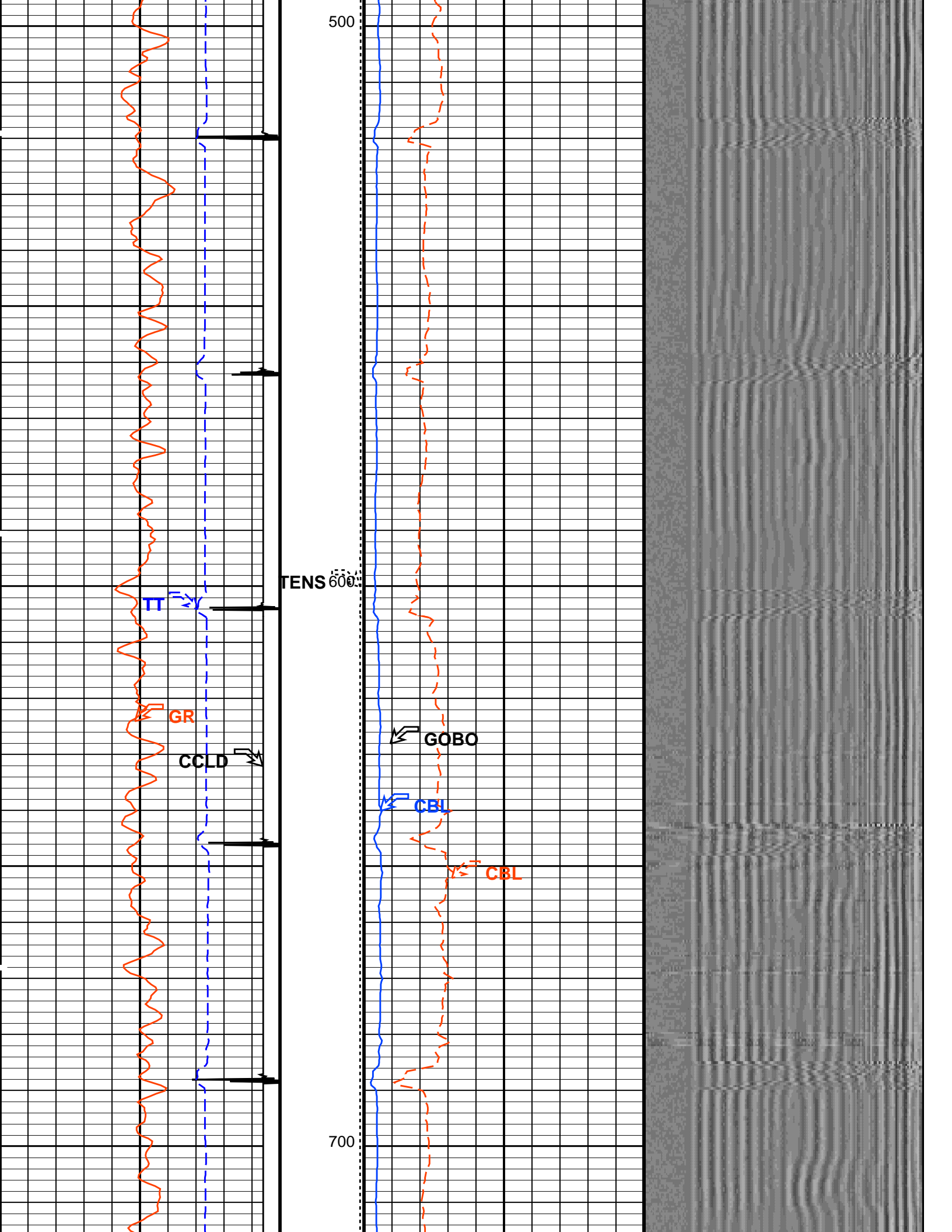
CBL Amplitude (CBL)
 (MV) 0 20

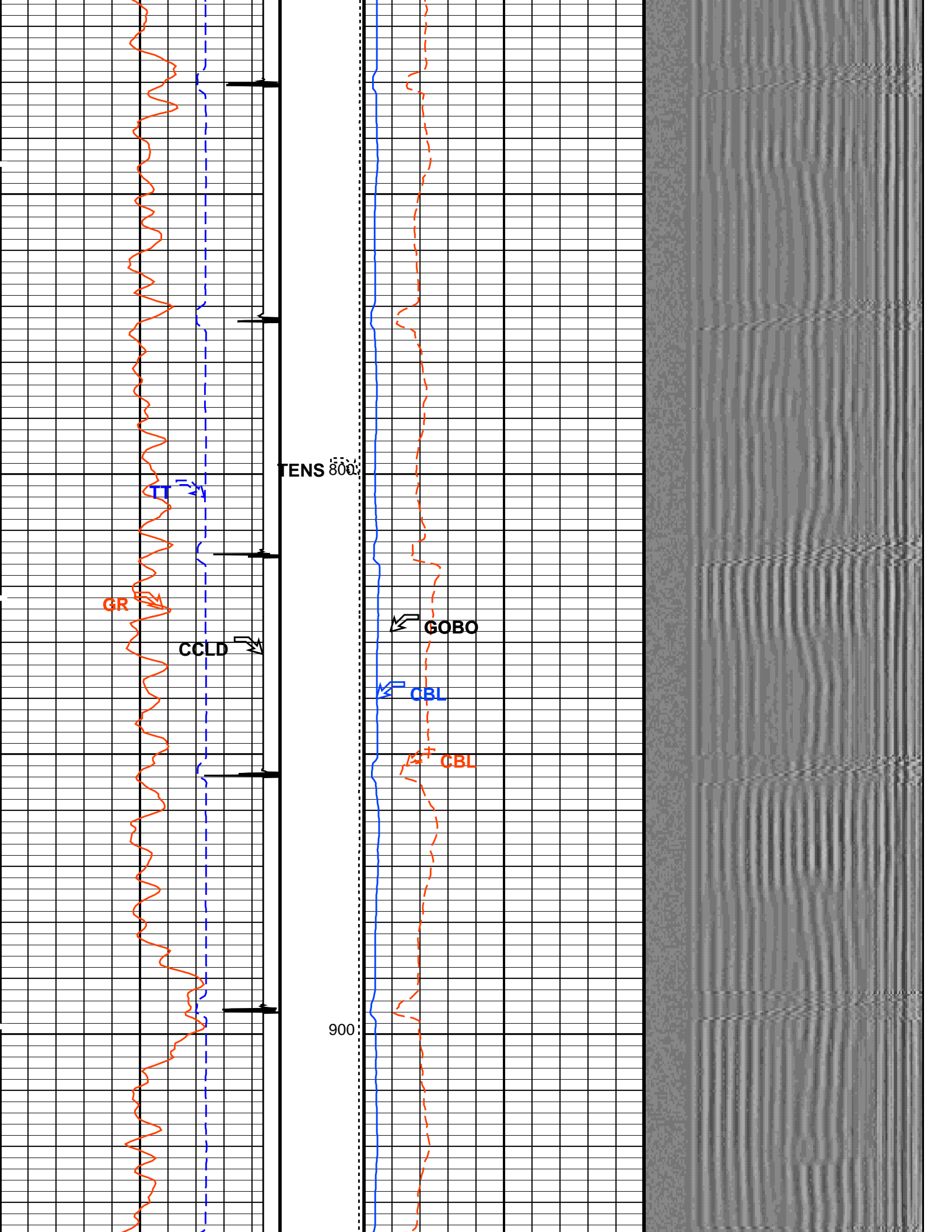
Min Amplitude Max
 VDL VariableDensity (VDL)
 (US) 200 1200

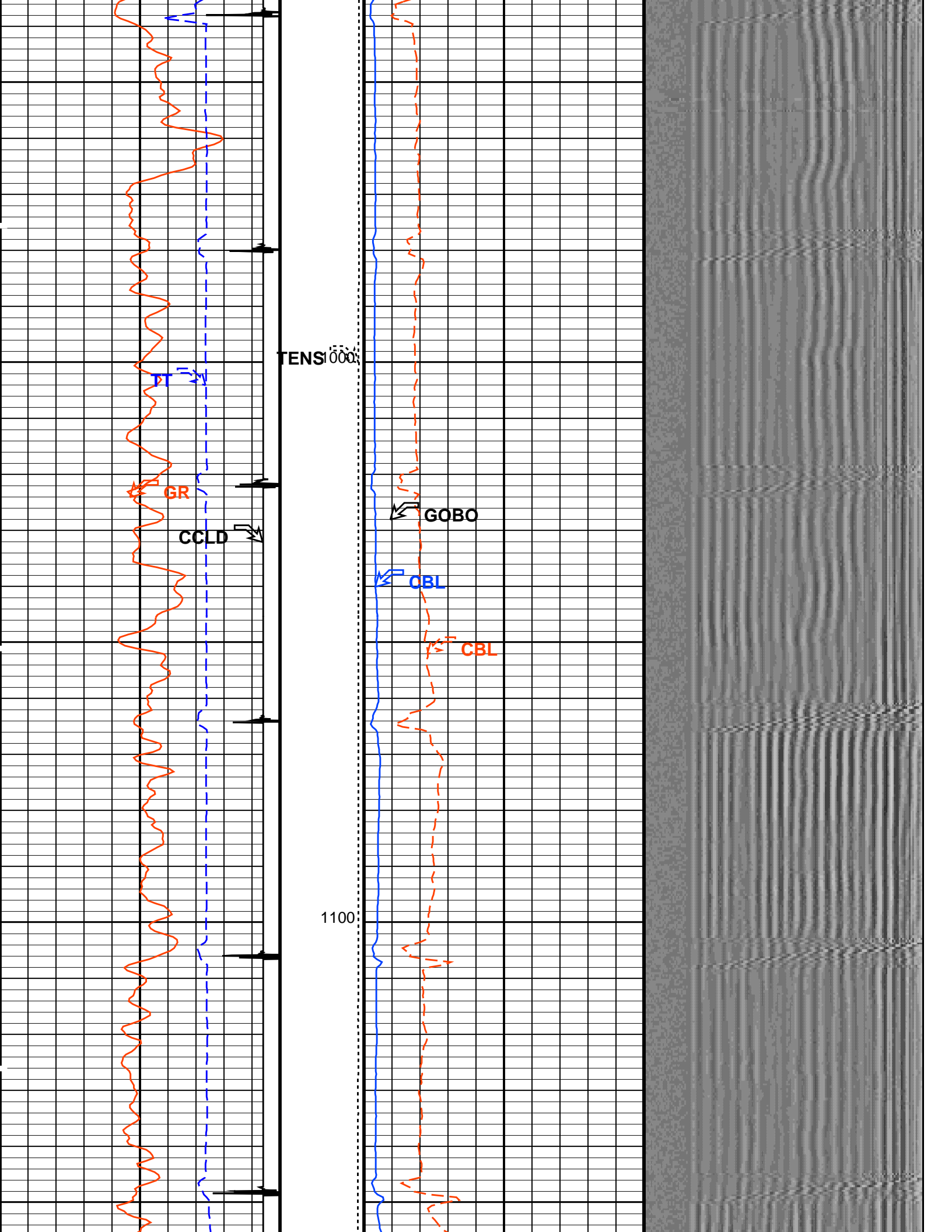


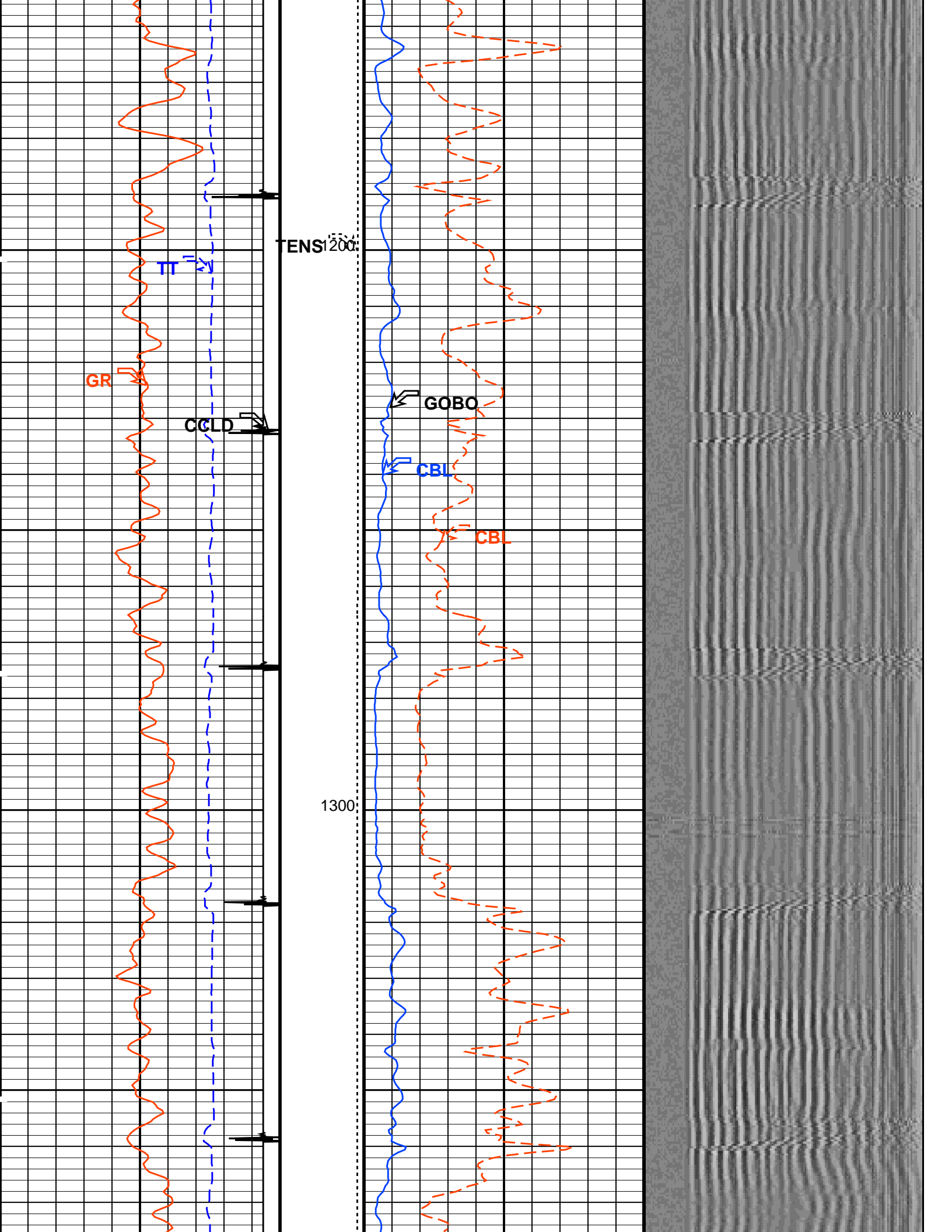


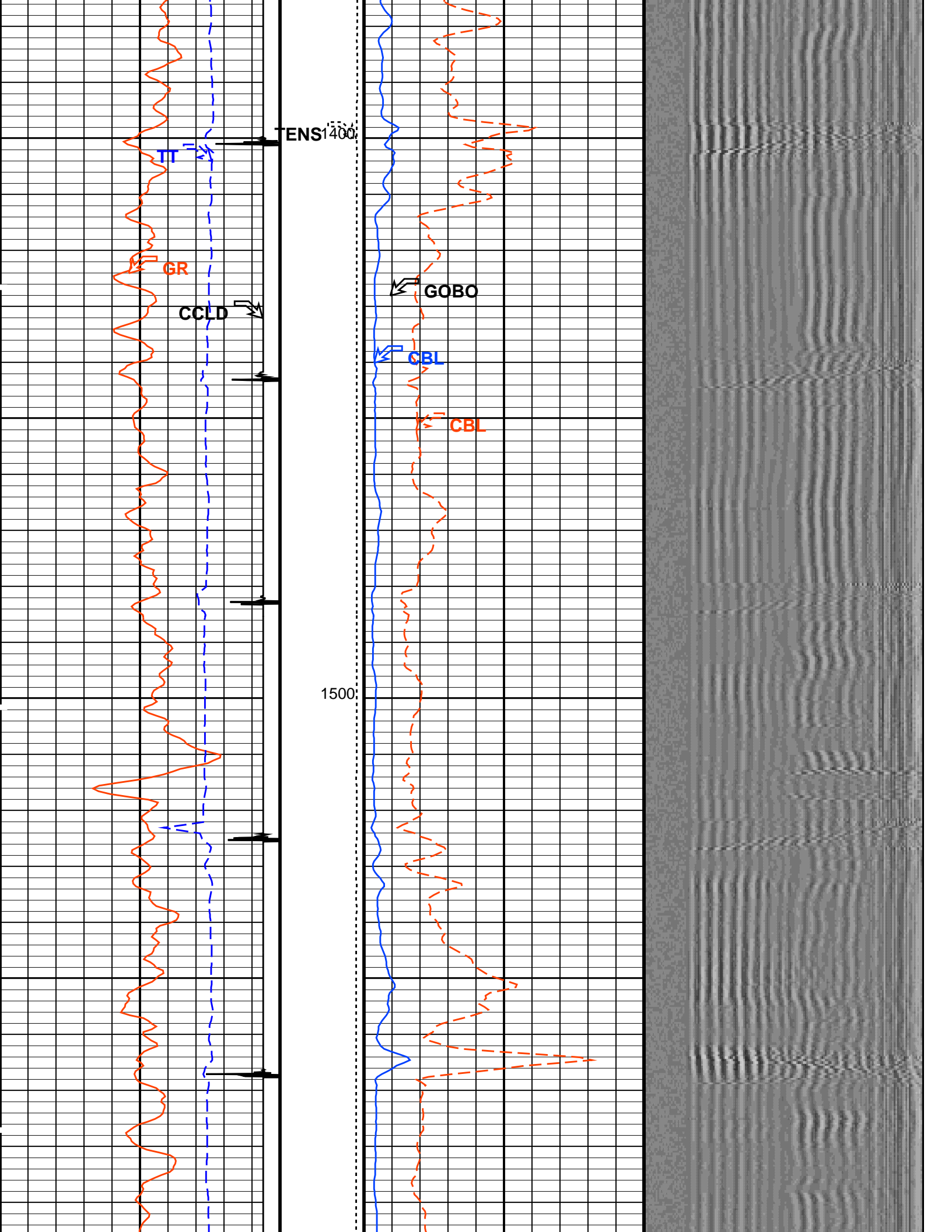


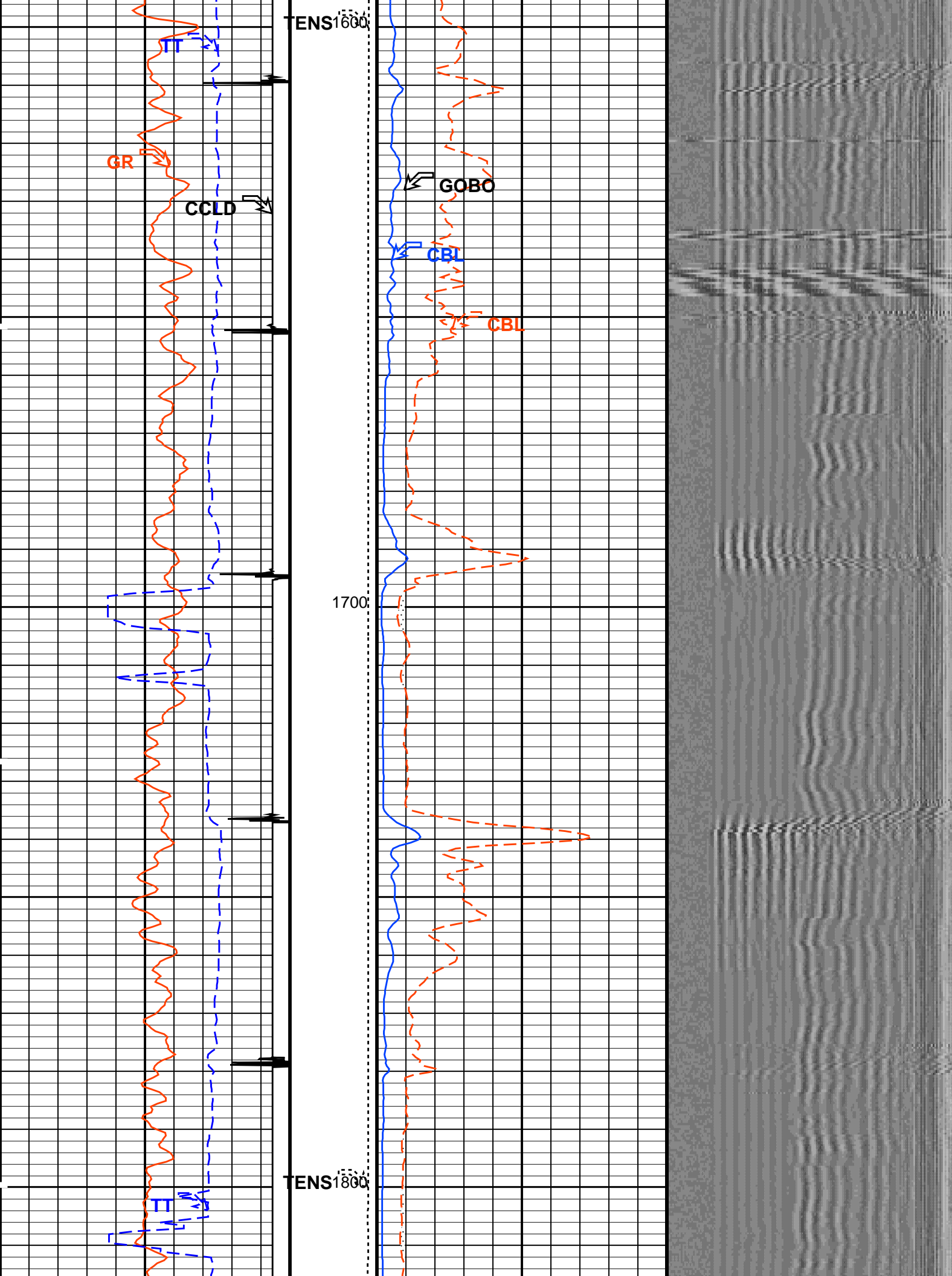


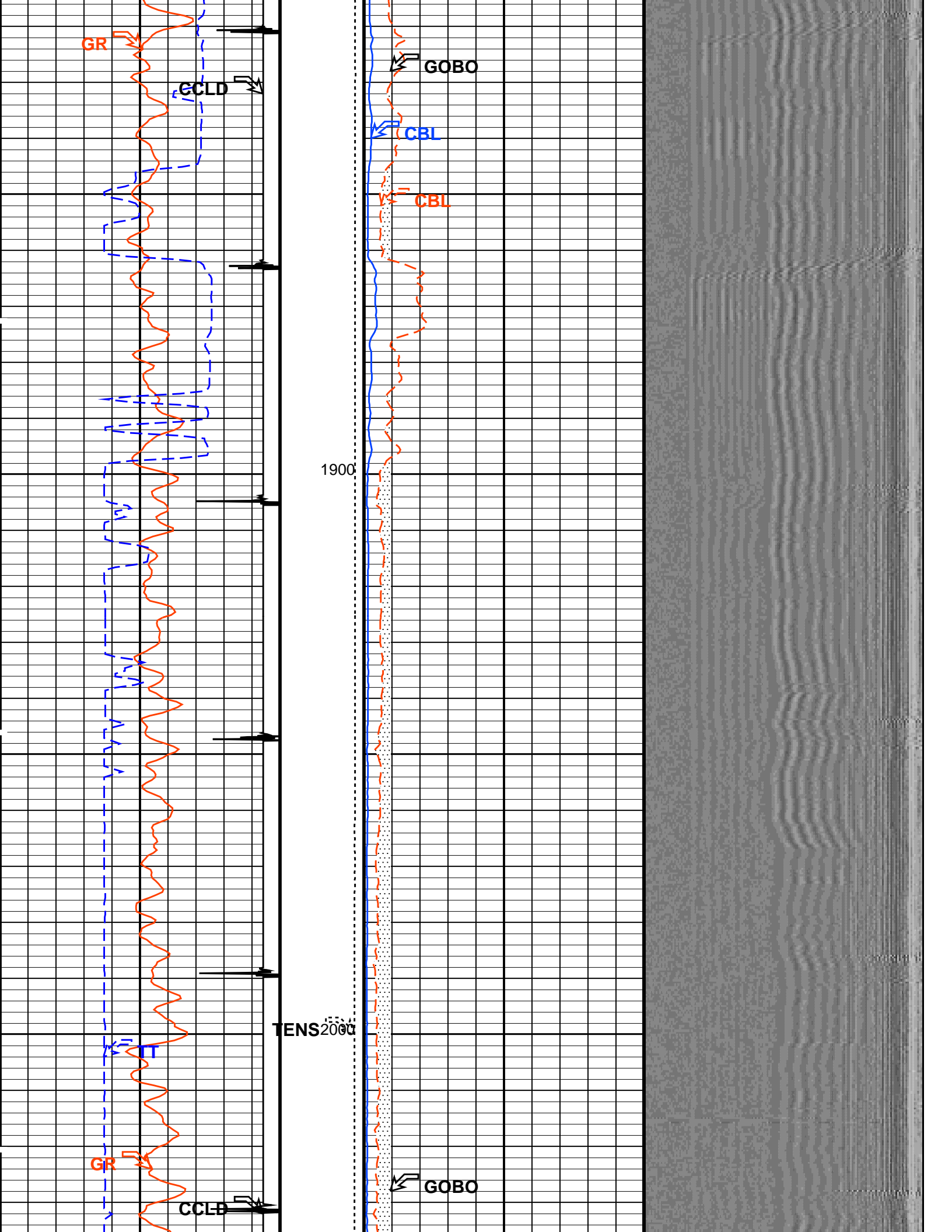


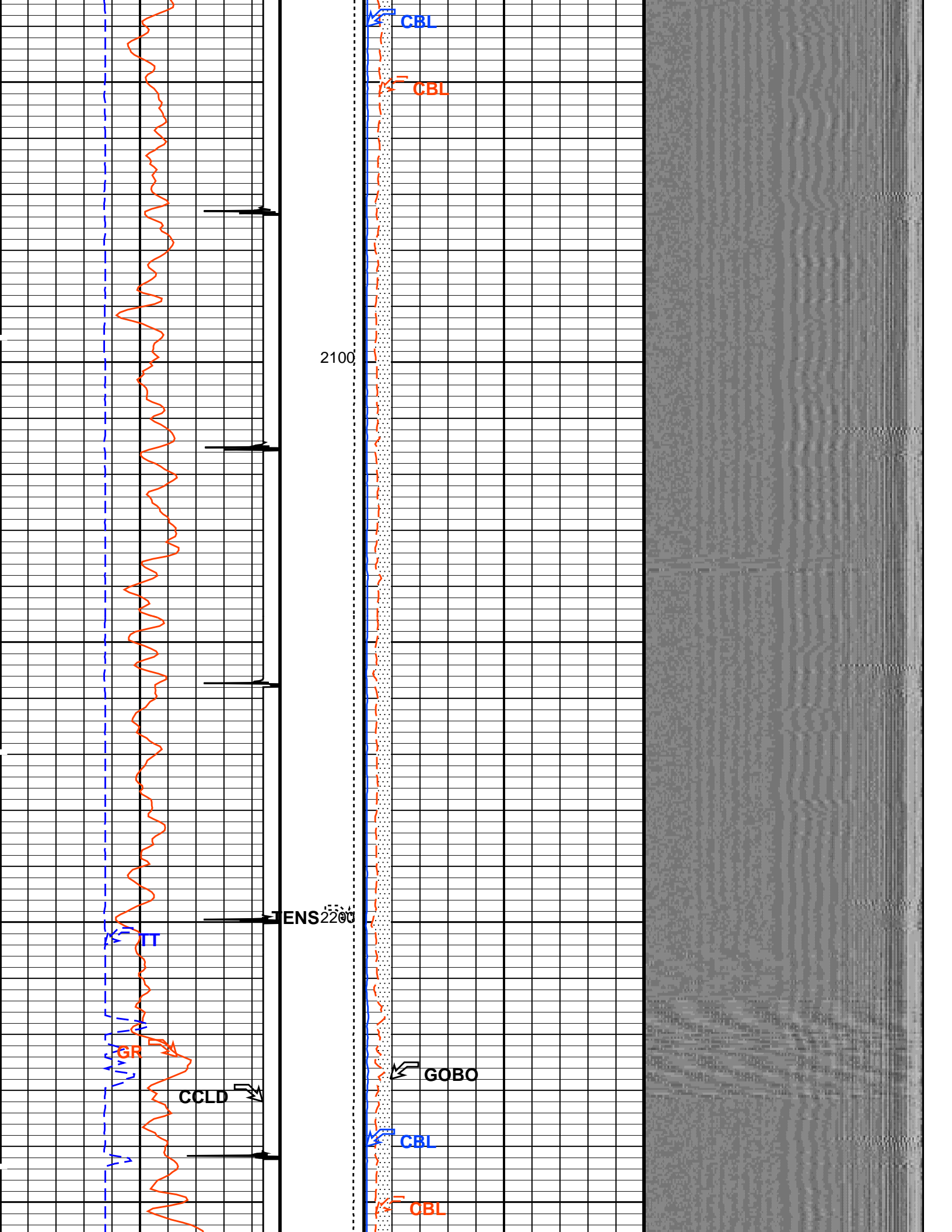


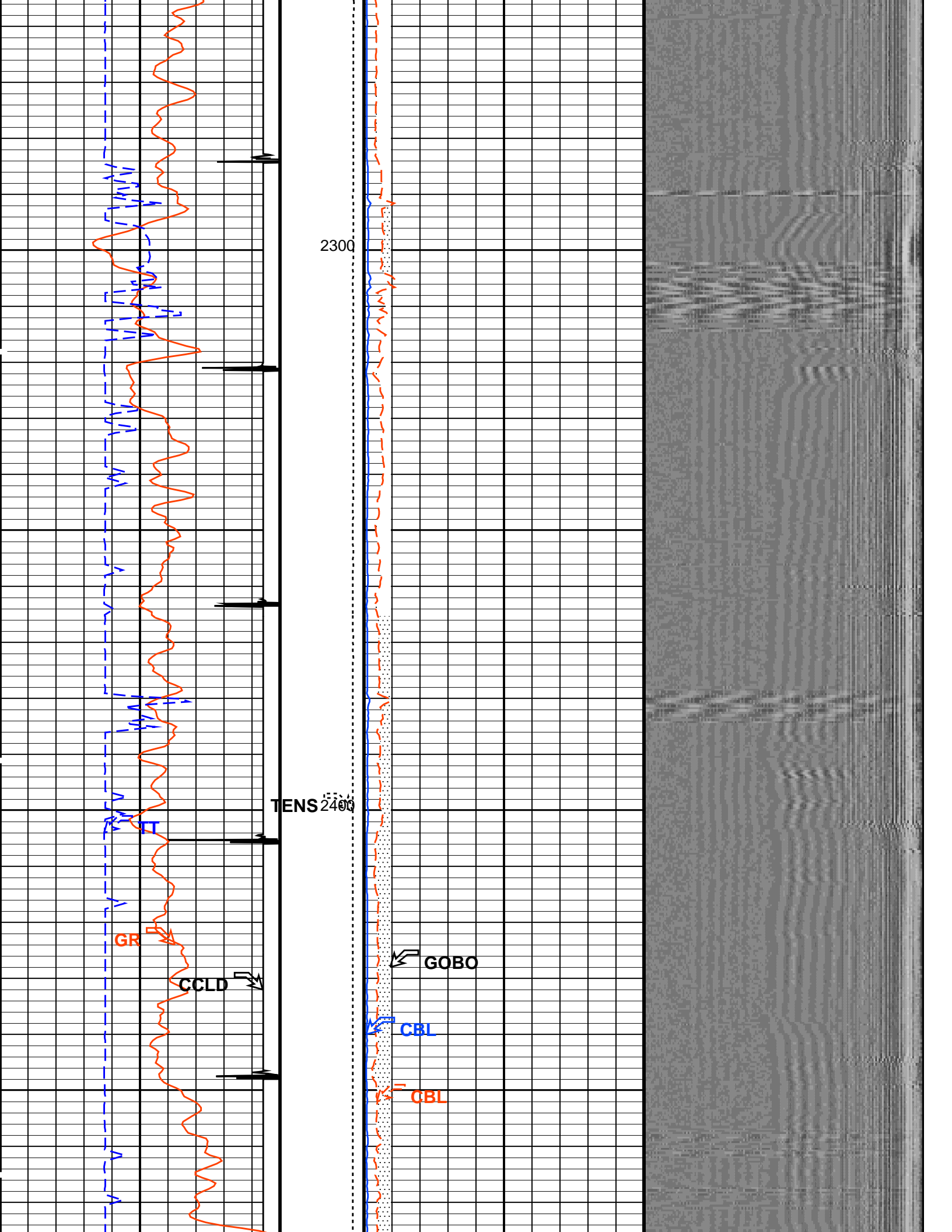


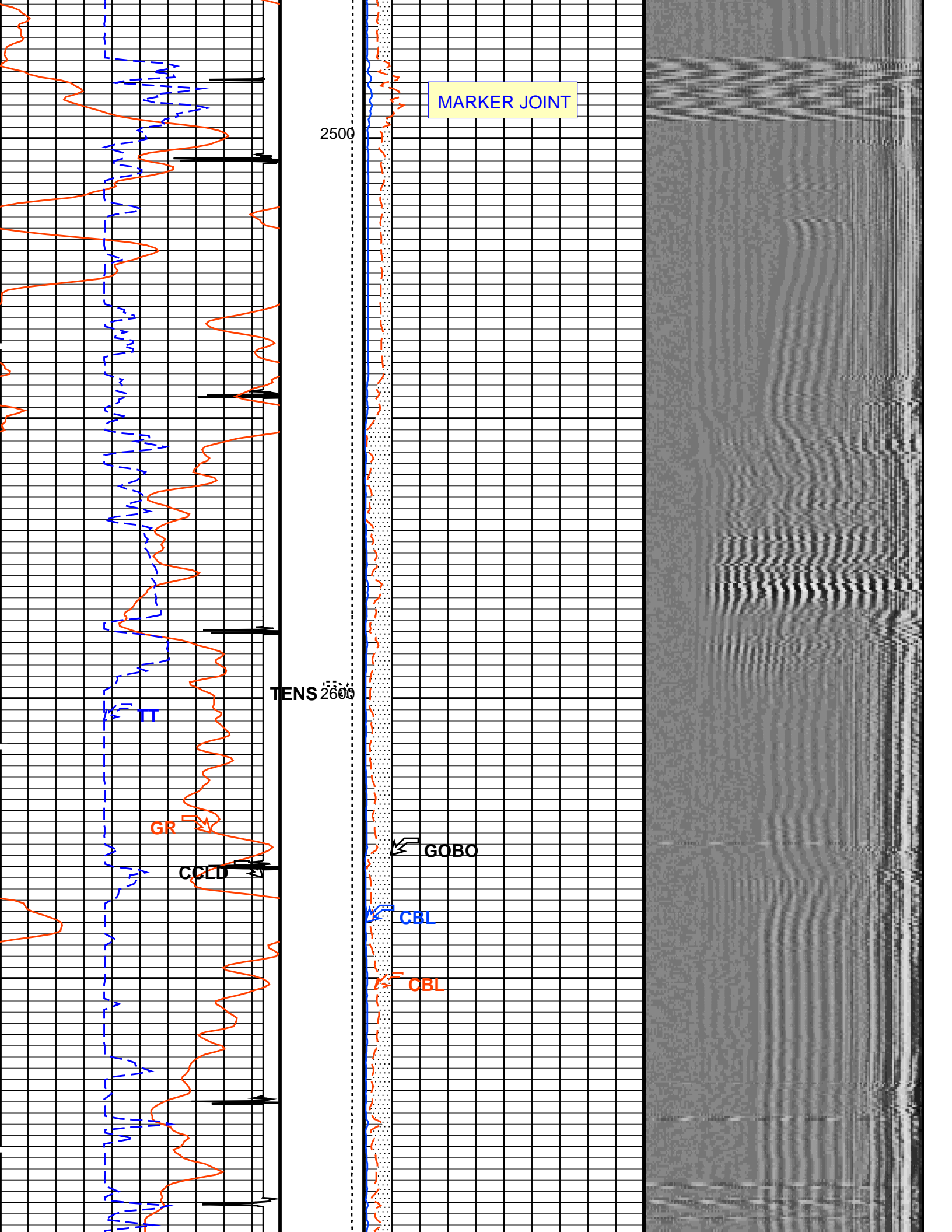


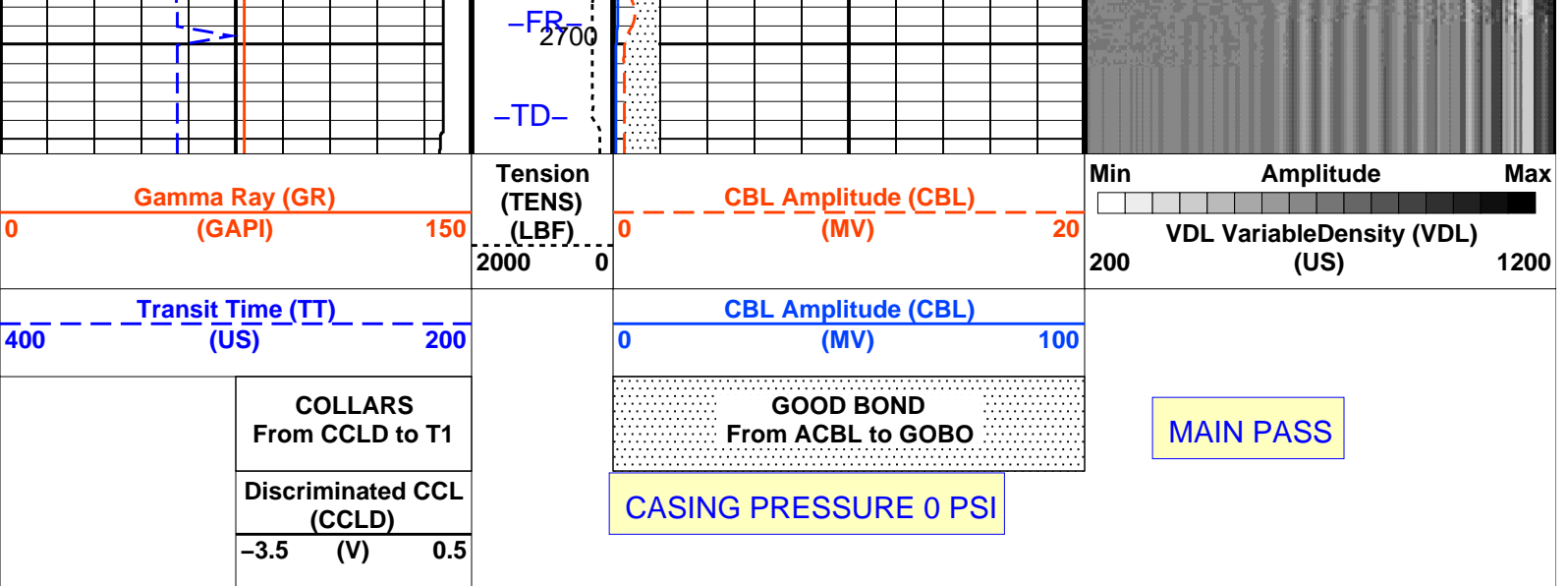












PIP SUMMARY

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
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: 13-Jan-2011 13:34

OP System Version: 19C0-187

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

Output DLIS Files

DEFAULT SCMT_PSP_005LUP FN:4 PRODUCER 13-Jan-2011 13:34

Output DLIS Files

DEFAULT

SCMT_PSP_004LUP

FN:3

PRODUCER

13-Jan-2011 13:29

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

REPEAT SECTION

Transit Time (TT)
(US) 400 200

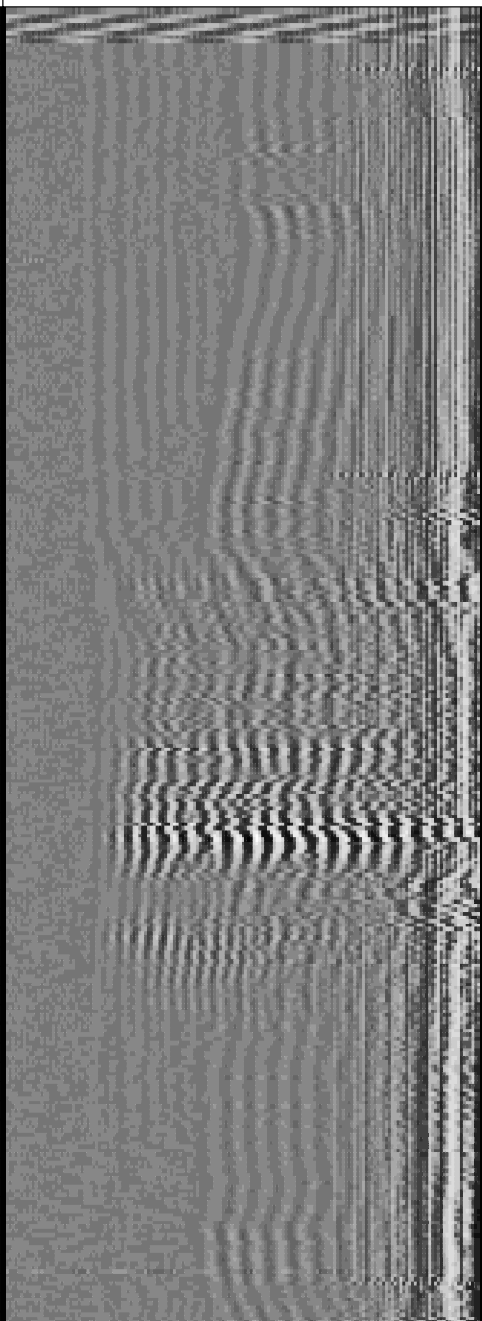
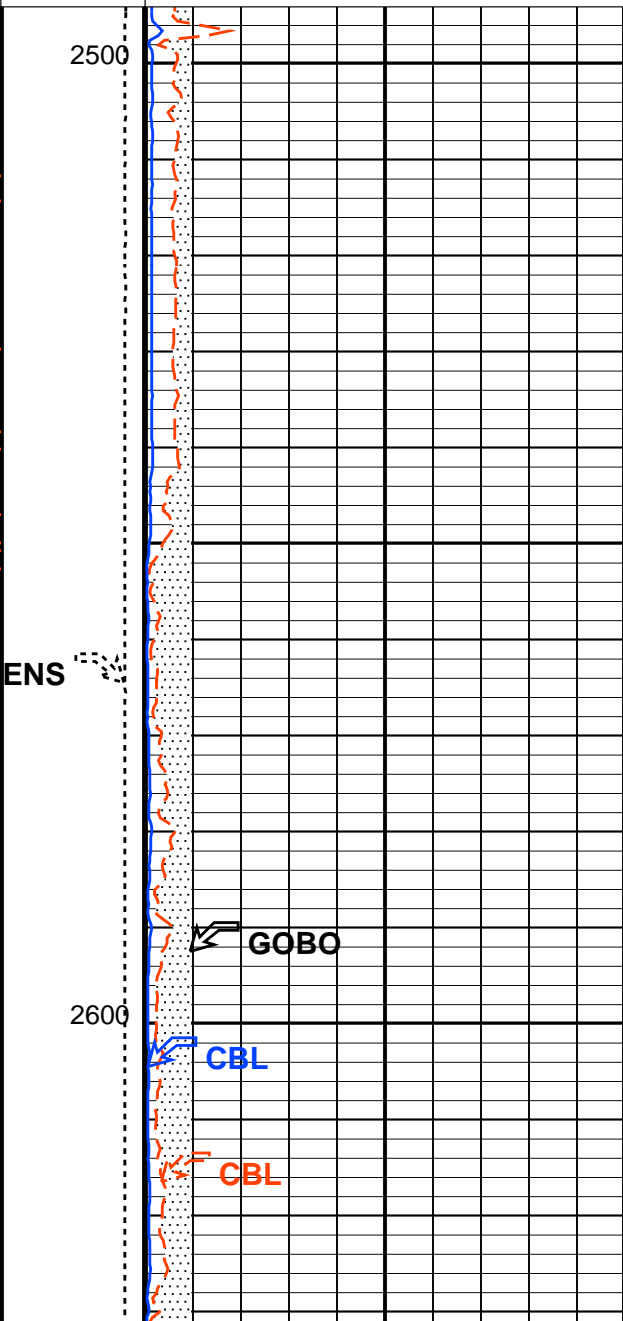
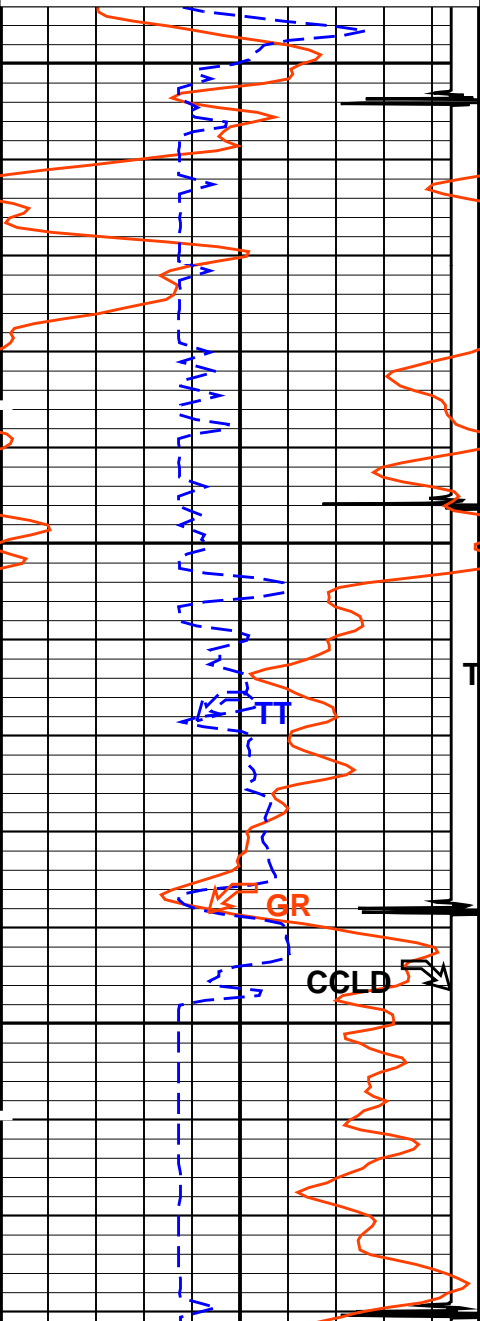
CBL Amplitude (CBL)
(MV) 0 100

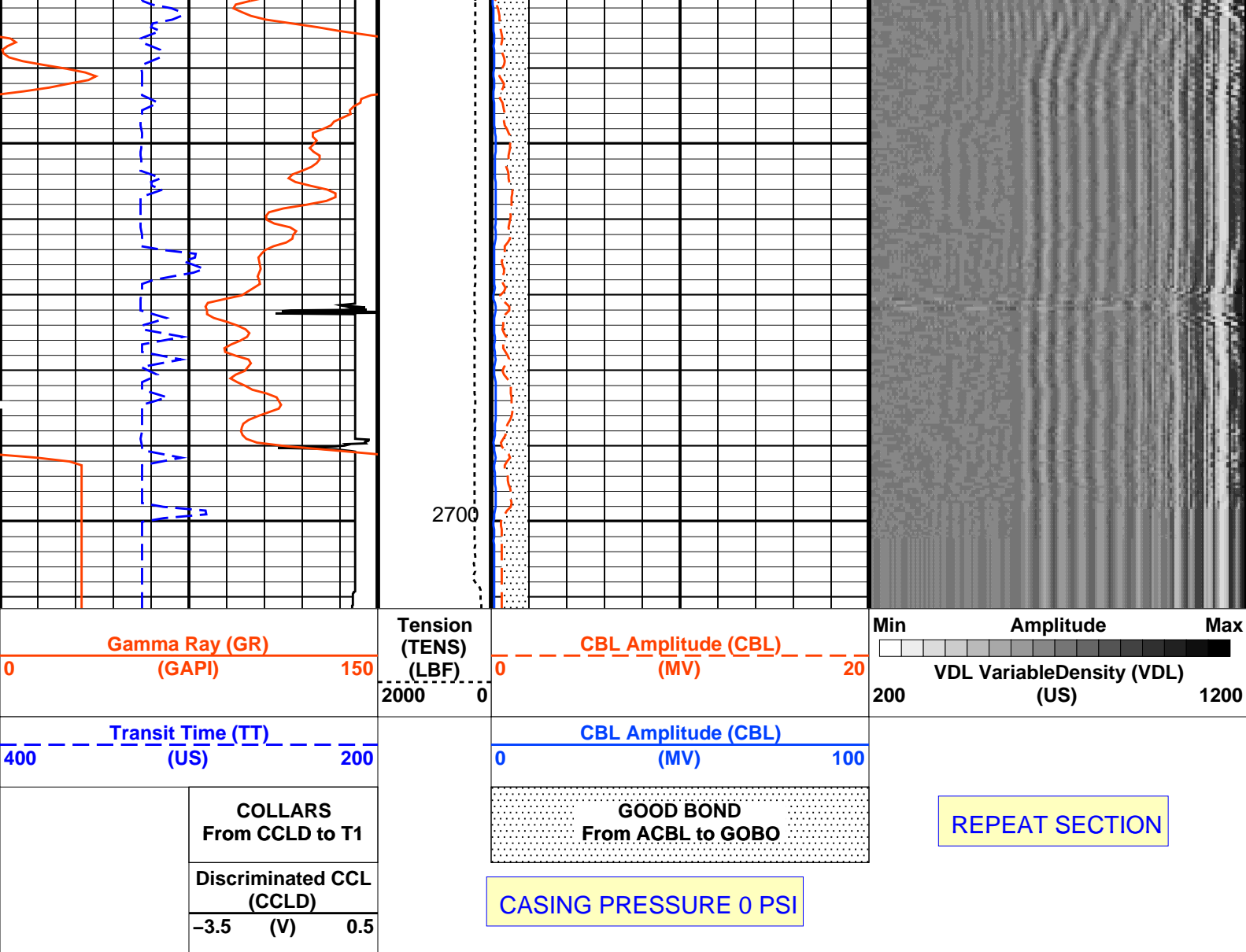
Gamma Ray (GR)
(GAPI) 0 150

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

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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
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Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 13-Jan-2011 13:29

OP System Version: 19C0-187

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

Output DLIS Files

DEFAULT SCMT_PSP_004LUP FN:3 PRODUCER 13-Jan-2011 13:29

Company: **Noble Energy Inc.**

Schlumberger

Well: **Nelson 41-36B**

Field: **Schramm**

County: **Yuma**

State: **Colorado**

CMENT BOND LOG

GAMMA RAY

CASING COLLAR LOG