

HALLIBURTON

CEMENT BOND
LOG

SCALE 1:240

Company OXY USA INC.
Well ZM FARMS A-2
Field LOCKPORT TOWNSHIP
County HASKELL State KANSAS

Company OXY USA INC.
Well ZM FARMS A-2
Field LOCKPORT TOWNSHIP
County HASKELL State KANSAS

API No.: 15-081-21915
Location:

Serv #: 6

Other Services

1980' FSL & 330' FWL

N/A

Sec: 11 Twp: 30S Rge: 32W

GROUND LEVEL Elevation 2880'

Elevation

K.B. 11 Ft. above perm. datum

K.B

K.B. 2891'
D.F. 2890'
G.L. 2880'

Date @ Time Logged

14 AUG 2010 @ 22:00

Type Fluid in Hole

WATER

Run No.

ONE

Density of Fluid

8.9

Depth - Driller

5742'

Fluid Level

25'

Depth - Logger

5674'

Cement Top Est. Logged

3100'

Bottom - Logged Interval

5671.5'

Equipment / Location

10011206 /

Top - Log Interval

2600'

Recorded by

P.NICHOLS

Max. Recorded Temp.

135 F

Witnessed by

N/A

CEMENTING DATA

Surface

Protection

Production

Liner

Date / Time Cemented

N/A

String

String

Primary / Squeeze

N/A

String

N/A

Expected

psi@

hrs

psi@

hrs

Compressive Strength

psi@

hrs

psi@

hrs

Cement Volume

psi@

hrs

psi@

hrs

Cement Type / Weight

/

/

/

/

Formulation

/

/

/

/

Mud Type / Mud Wgt.

/

/

/

/

Borehole Record

From

To

Size

Weight

From

To

Run Number

N/A

1824'

8.625

24#

SURFACE

1820'

ONE

7.875

1824'

5.5

17#

SURFACE

5734'

TWO

1824'

5.5

17#

SURFACE

5734'

<<< Fold Here >>>

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

CORRELATED TO HES SPECTRAL DENSITY LOG DATED 09 AUG 2010.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICE
ANY QUESTION OR COMMENTS PLEASE CALL 1-620-624-8123

YOUR HALLIBURTON CREW TODAY WAS: GONZALEZ

Service Ticket No. 7567418

API No. 15-081-21915

PGM Ver WARRIOR 7.0

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

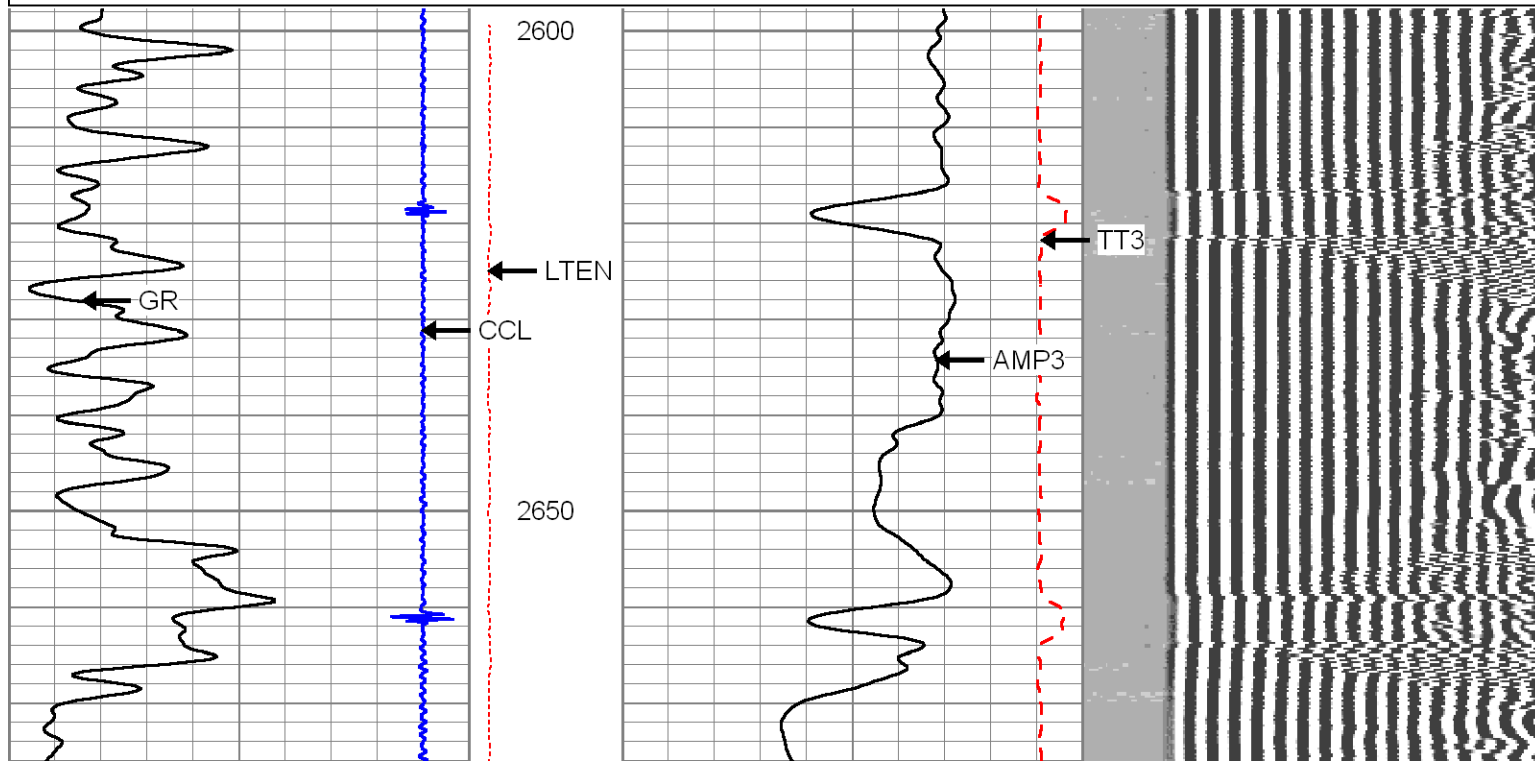
GAMMA RAY

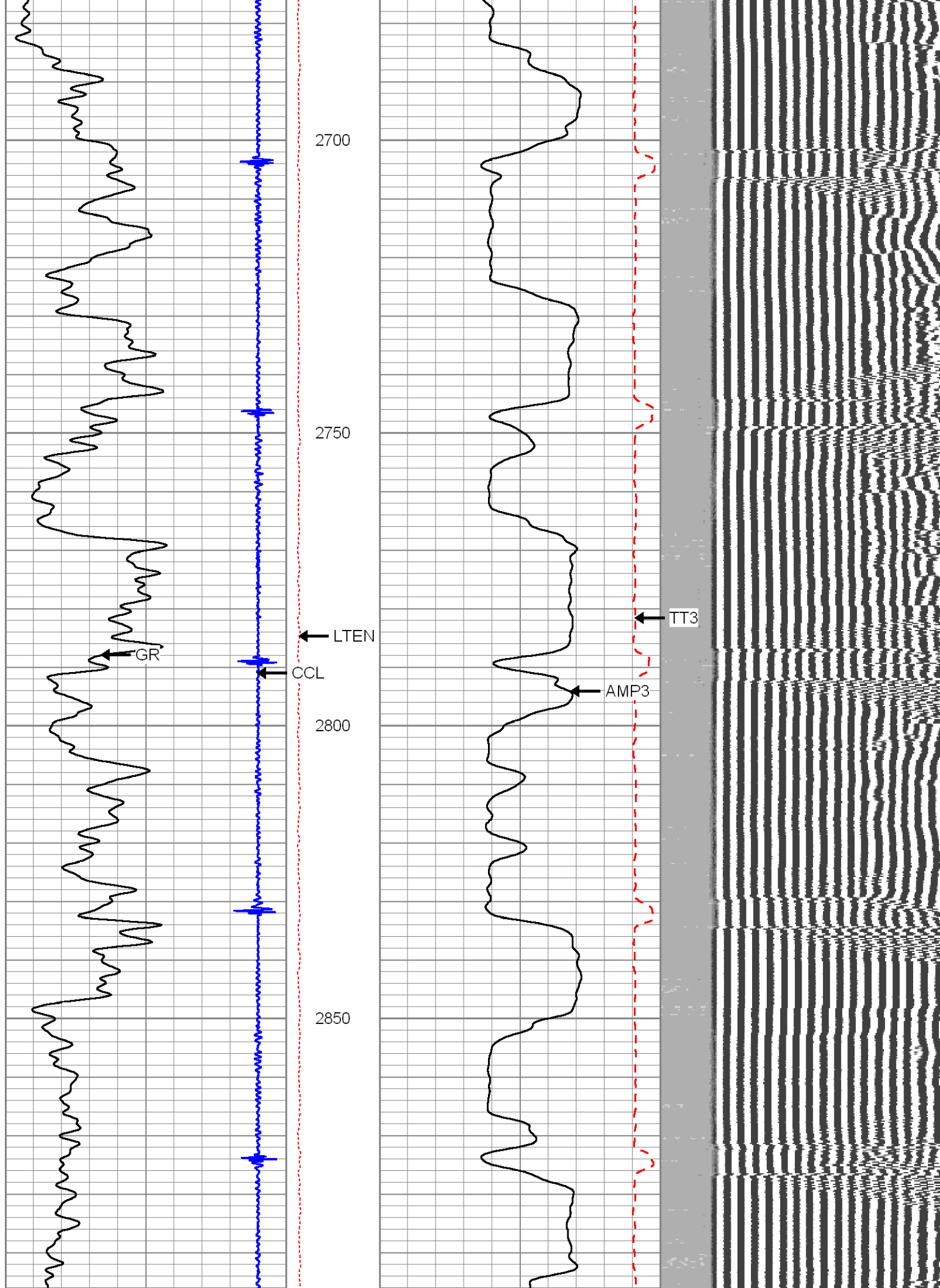
CBL

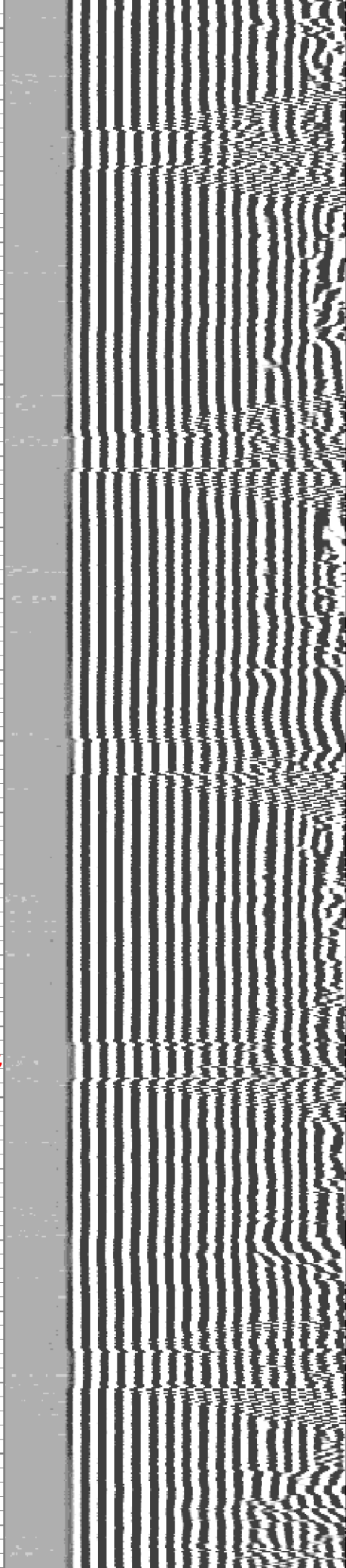
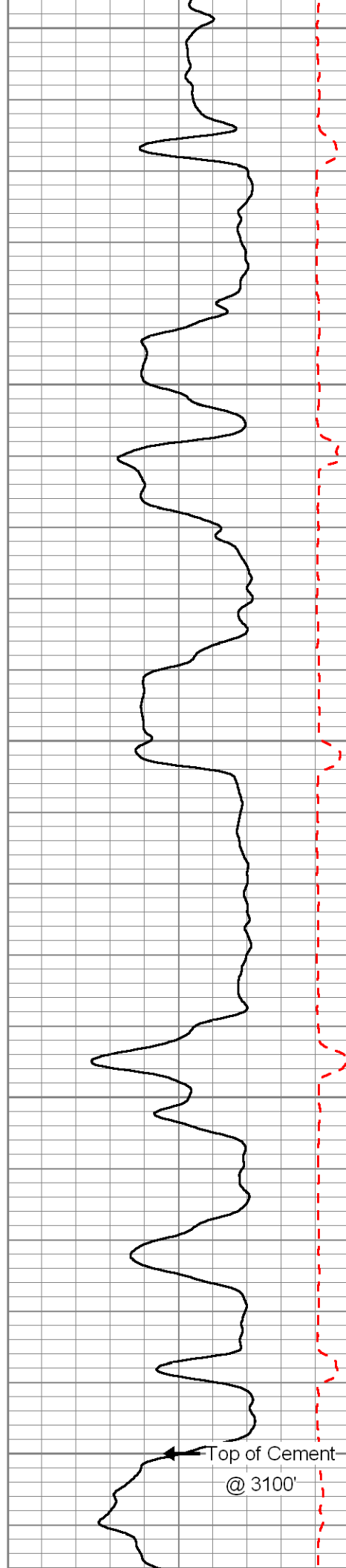
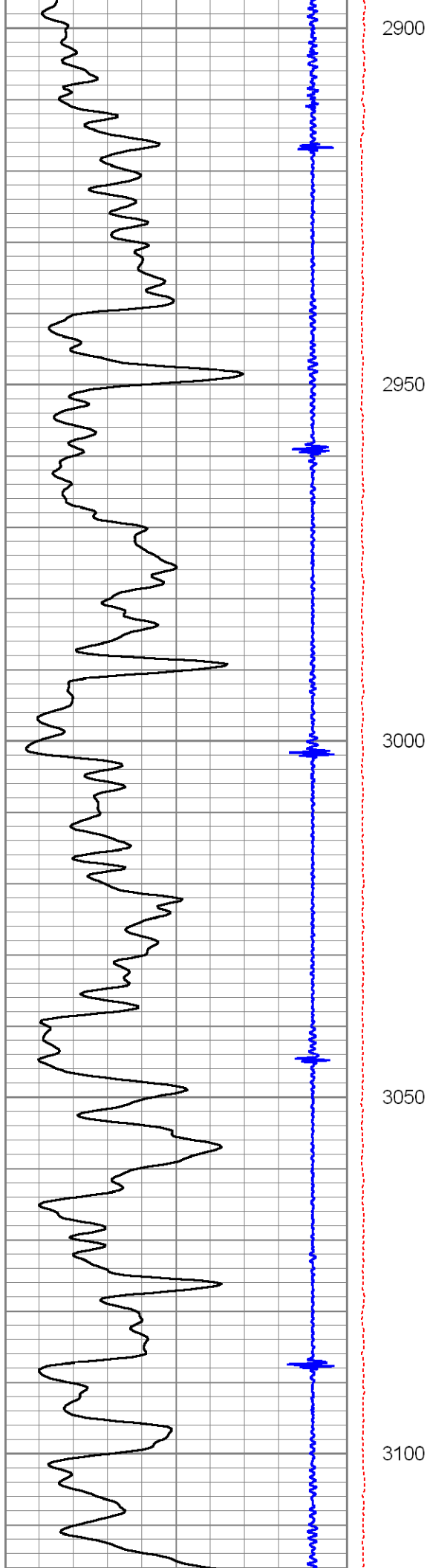
Run No. ONE Run No. ONE Run No. ONE Run No. ONE

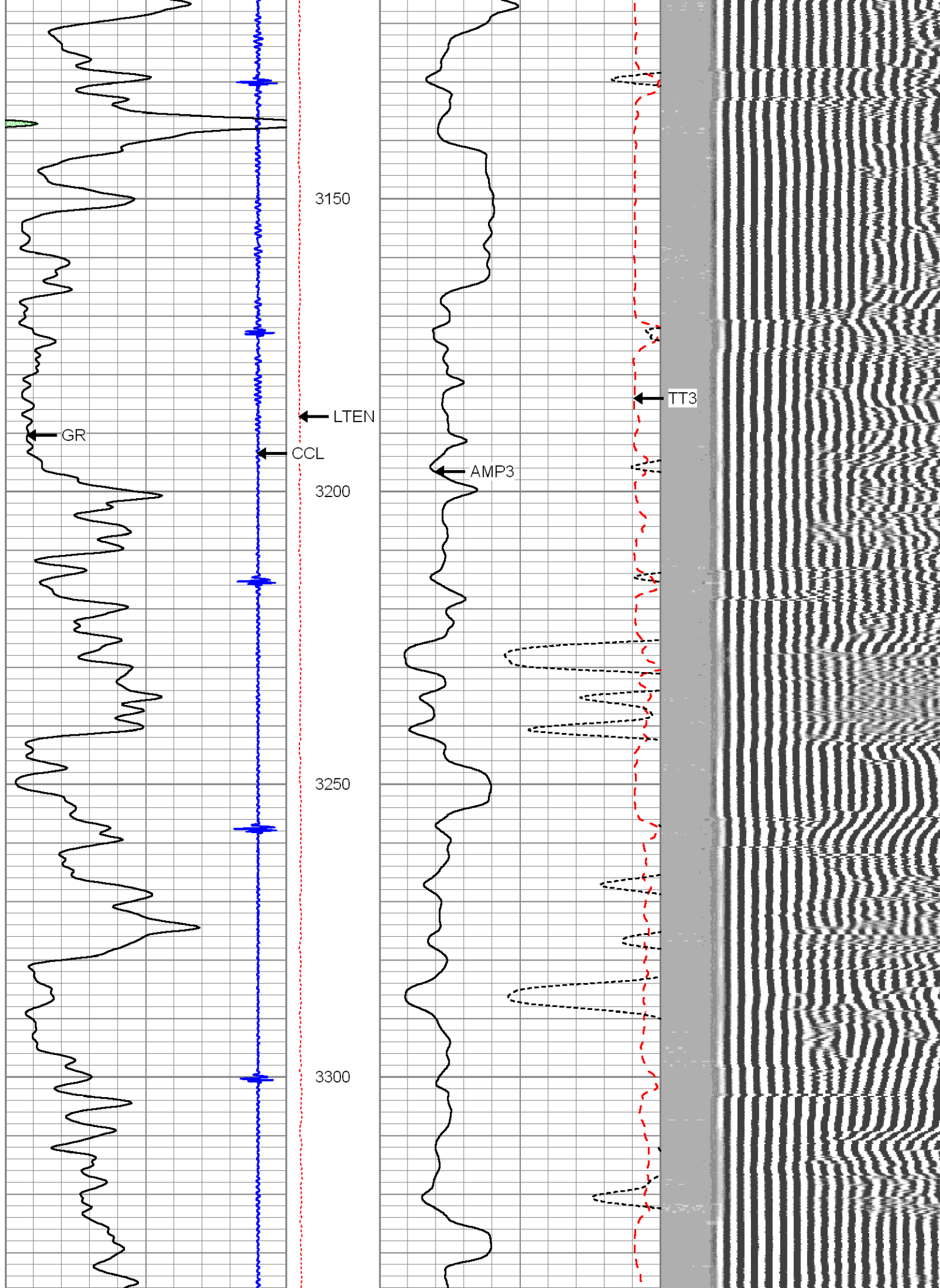
Run No.	ONE	Run No.	ONE	Run No.		Run No.	
Serial No.	060633	Serial No.	070714	Serial No.		Serial No.	
Model No.	PROBE	Model No.	PROBE	Model No.		Model No.	
Diameter	2.75	Diameter	2.75	Diameter		Diameter	
LOGGING DATA							
General Data							
Pass	Depths		Well Head	Speed	Logging Run Comments		
No.	From	To	Pressure	Ft/Min			
ONE	5674'	2600'	0	45	MAIN PASS		
	GAMMA RAY		AMPLITUDE		MSG		TRAVEL TIME
Pass	Scale		Scale		Scale		Scale
No.	L	R	L	R	L	R	L L
ONE	0	150	0	100	200	1200	177 277
	150	300	0	20			
DIRECTIONAL INFORMATION							
Maximum Deviation		deg. @		KOP			

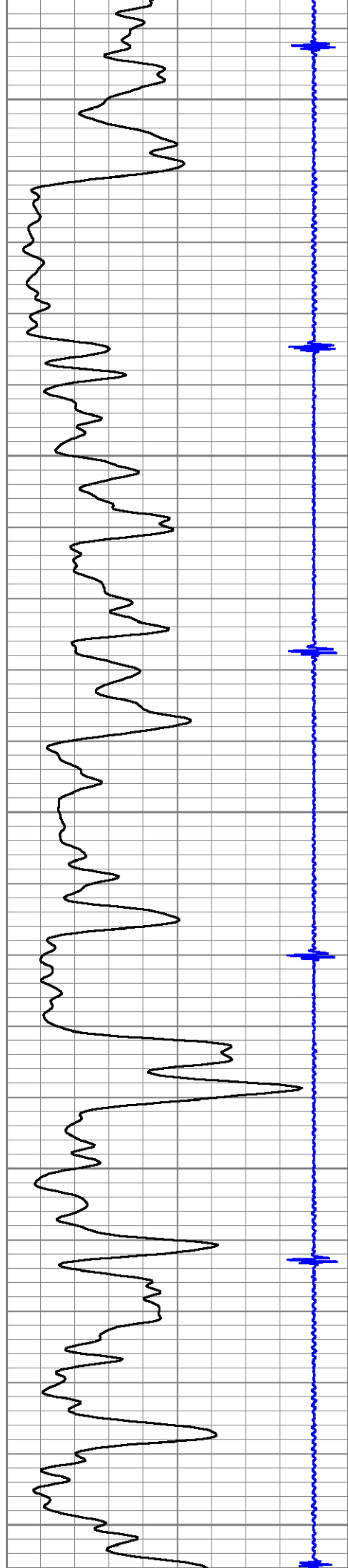
HALLIBURTON MAIN LOG SECTION SCALE 1:240							
Database File:		zm_farms_a2_cbl.db					
Dataset Pathname:		pass3					
Presentation Format:		cbl_pn					
Dataset Creation:		Sat Aug 14 21:15:58 2010 by Log Halliburton Casedho					
Charted by:		Depth in Feet scaled 1:240					
9	Collar Locator	-1	LTEN	0	Amplitude (mV)	100	200
0	GR (GAPI)	150	0	(lb)'1000	177	Travel Time (usec)	277
150	gr (GAPI)	300			0	AAMP (mV)	20











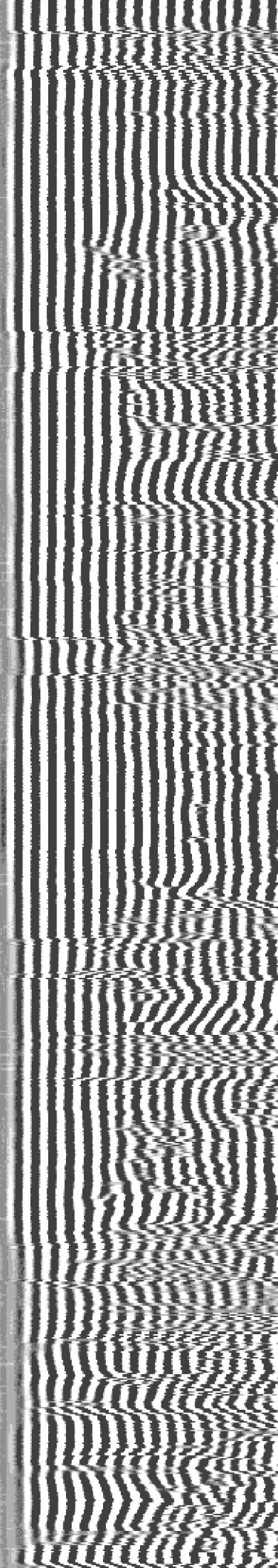
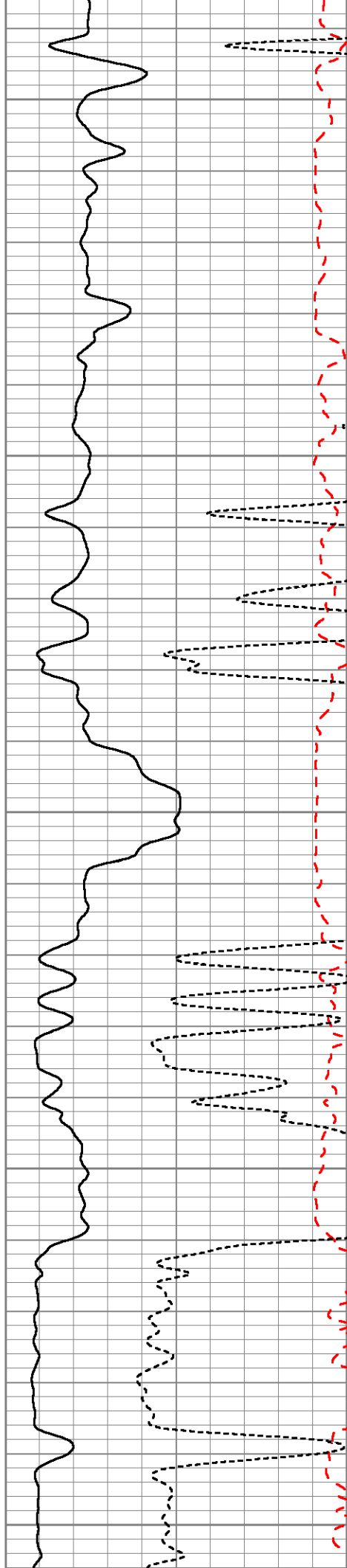
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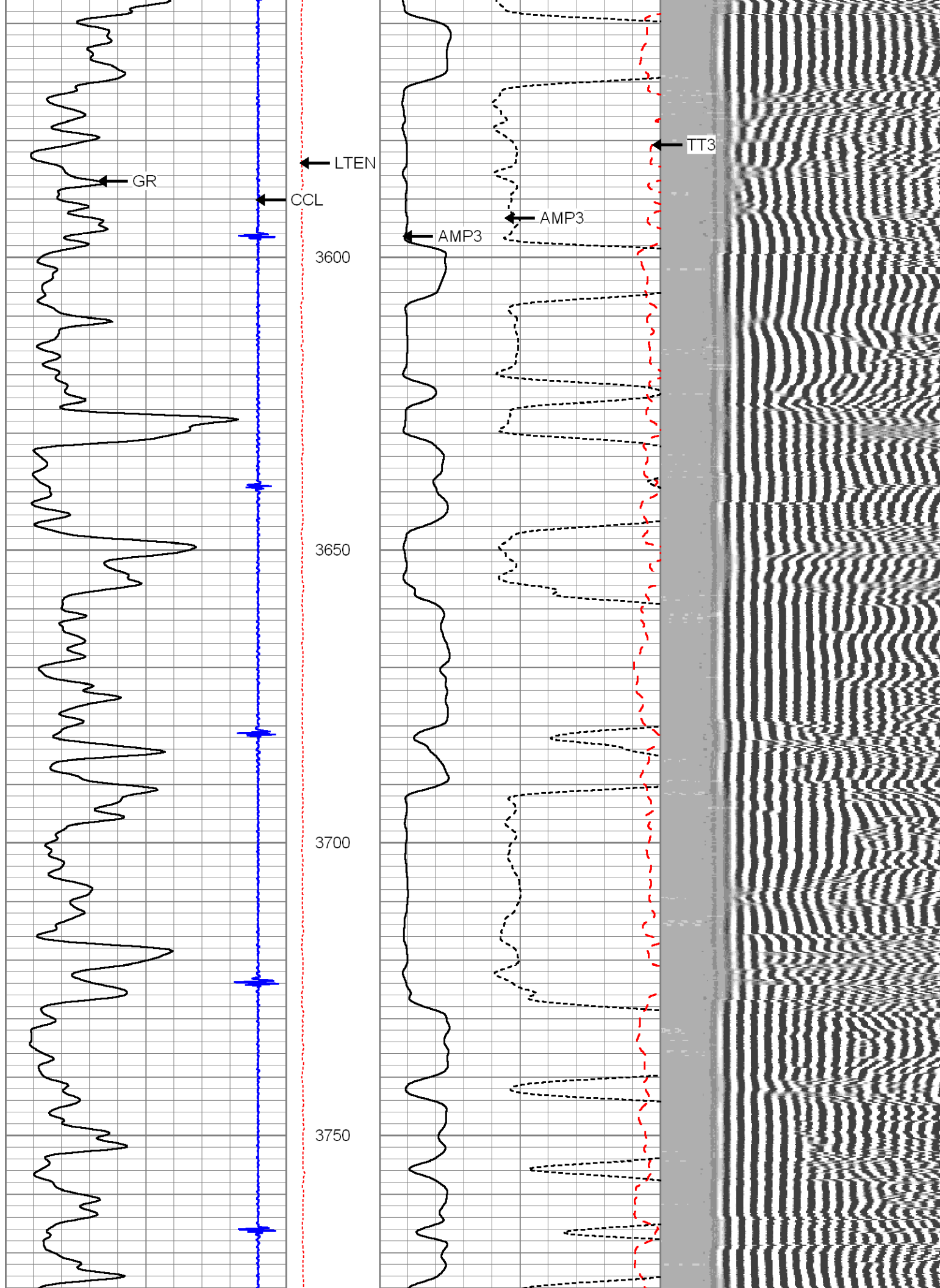
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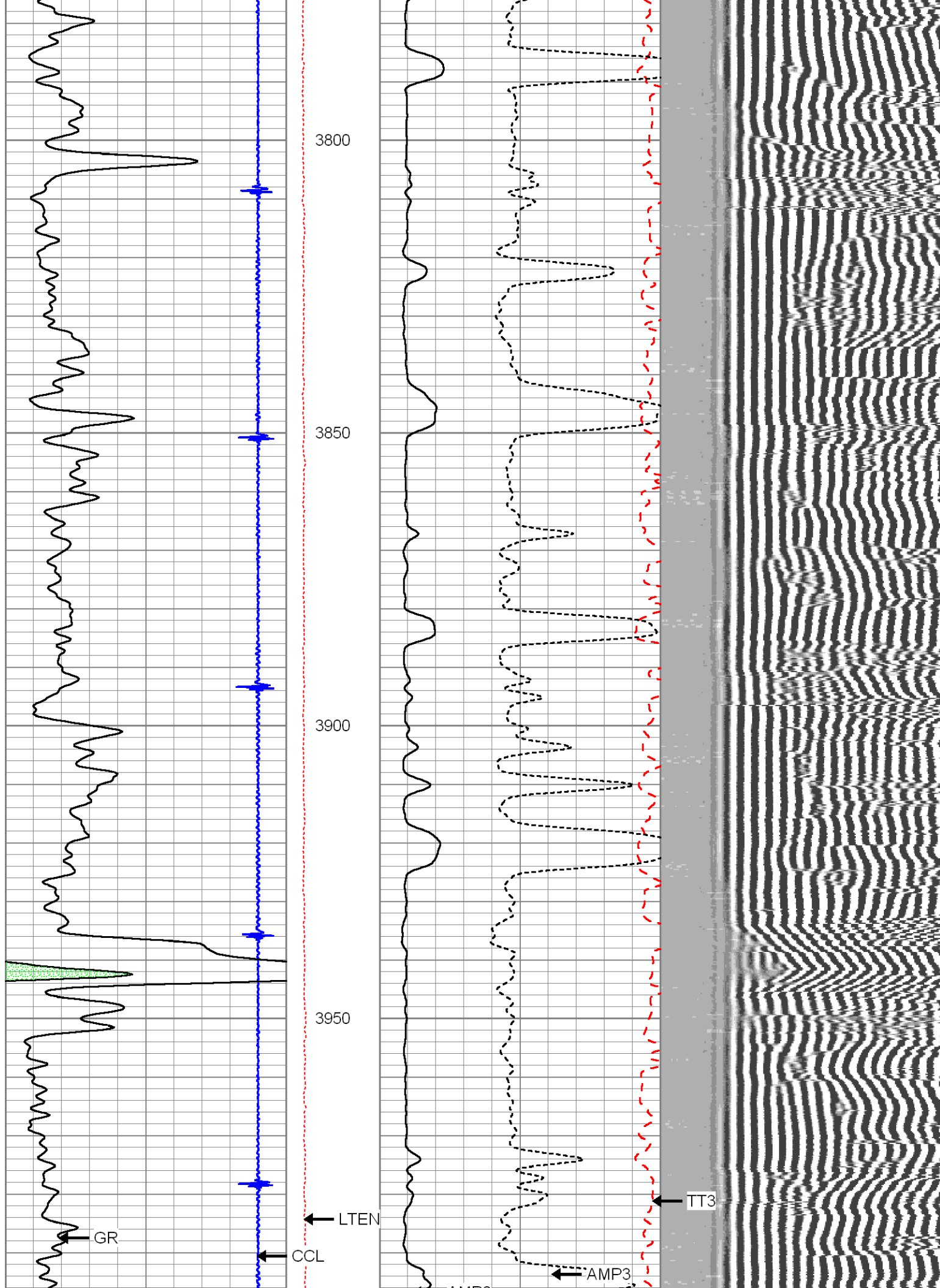
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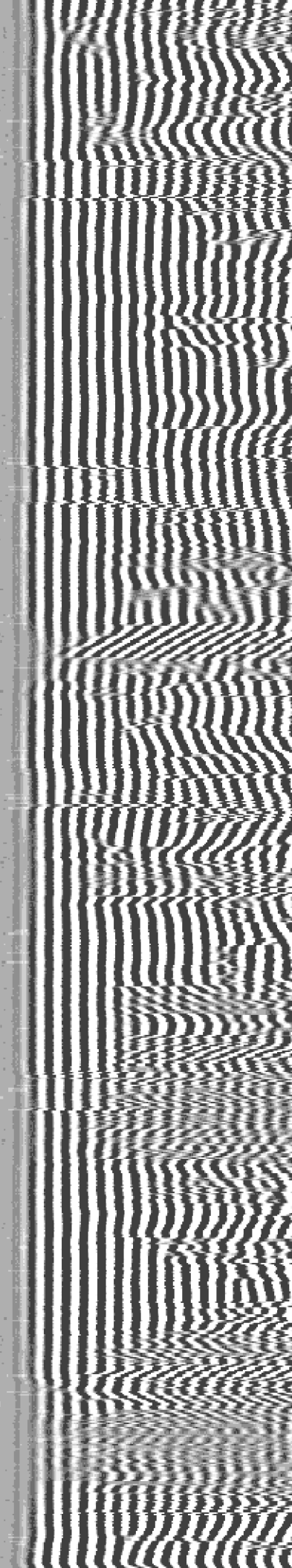
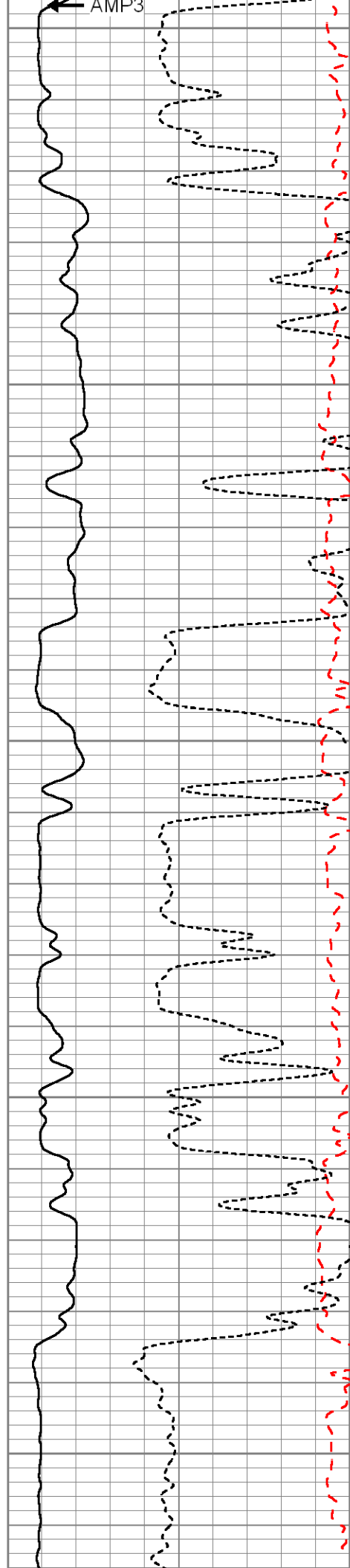
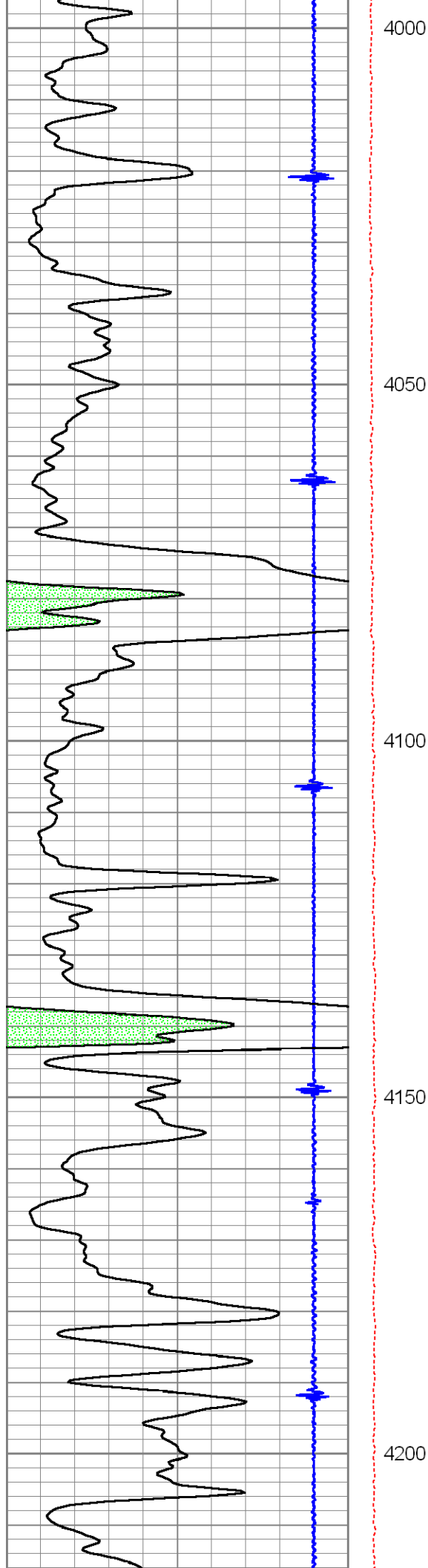
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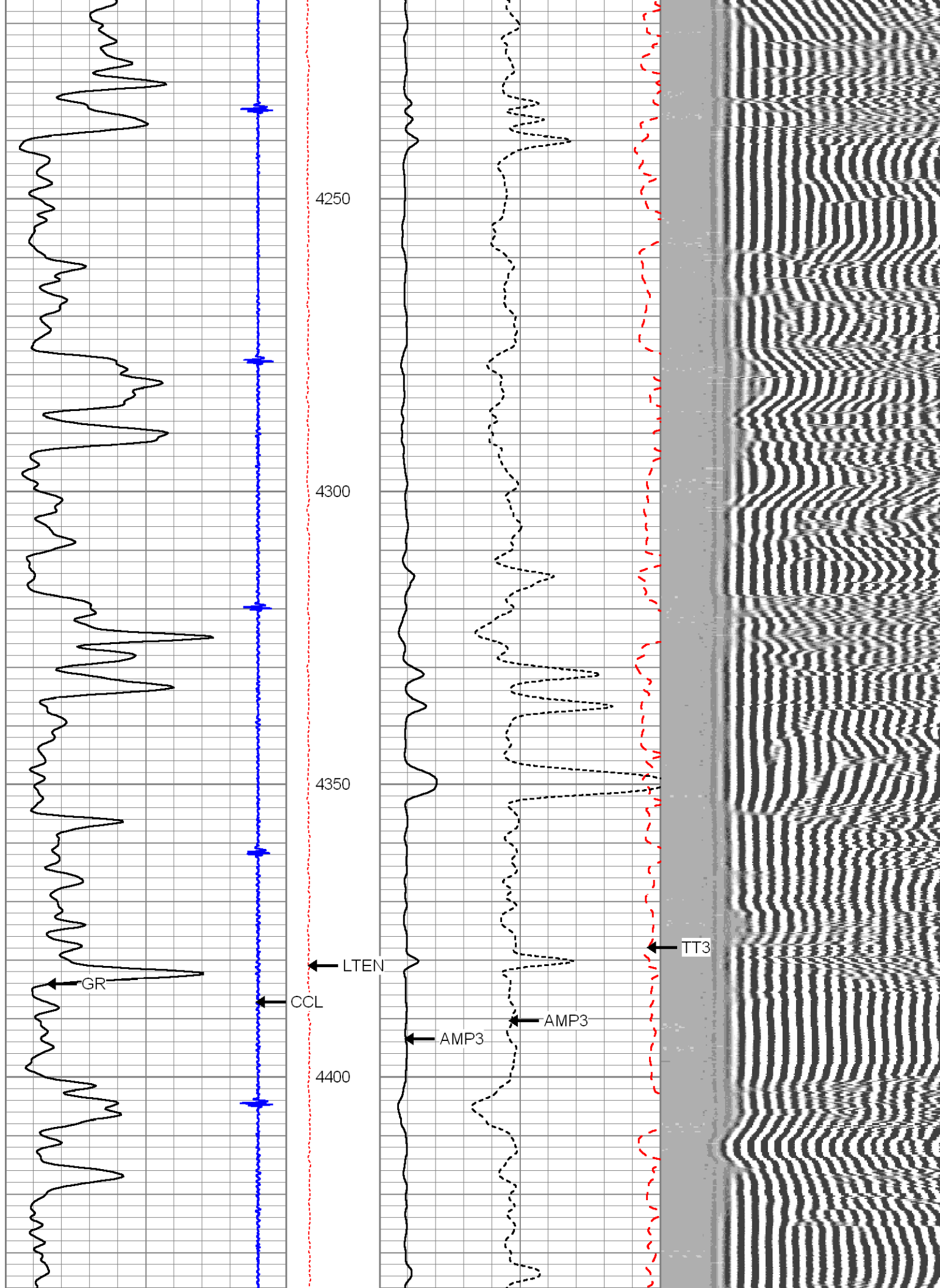
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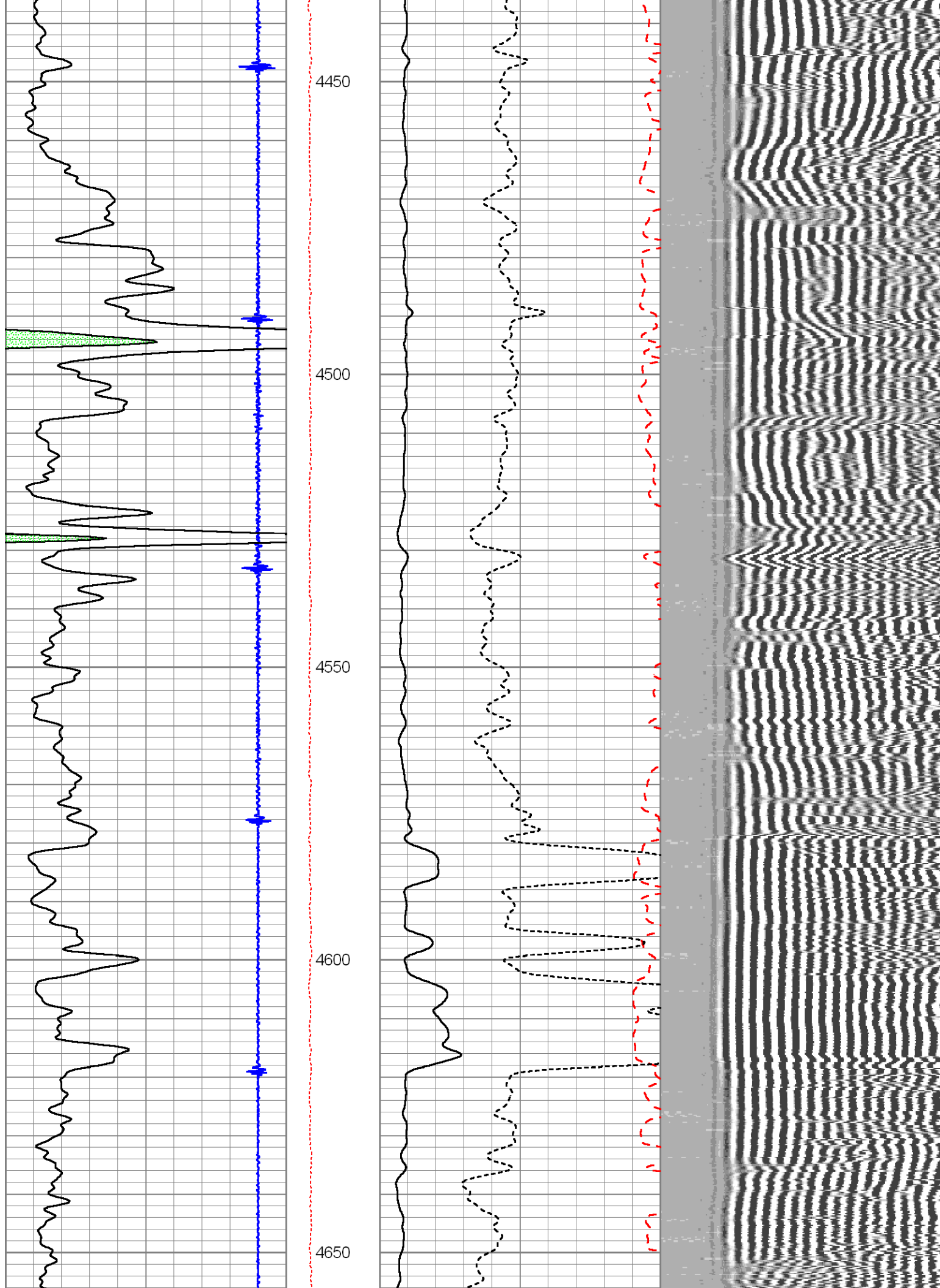


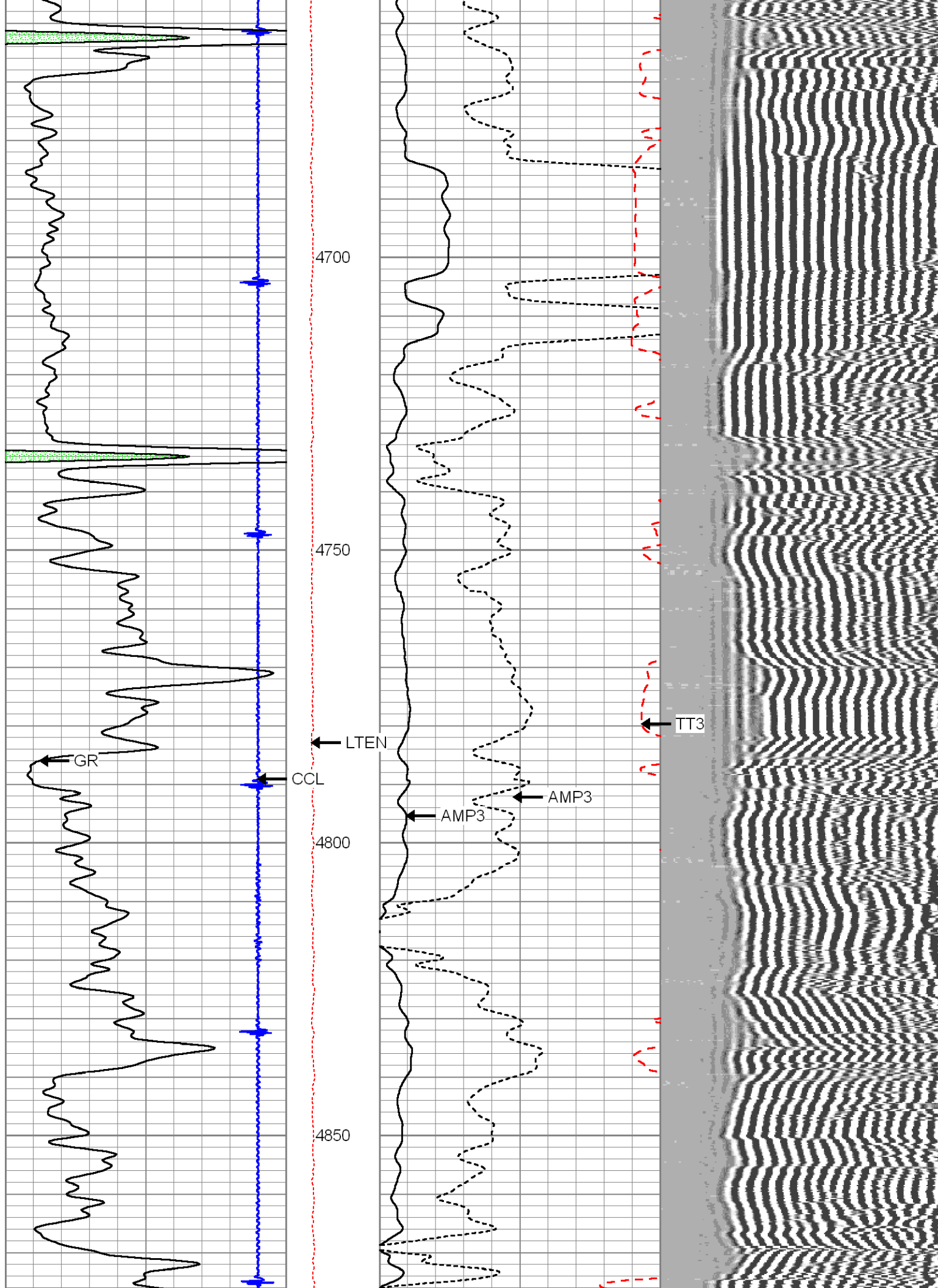


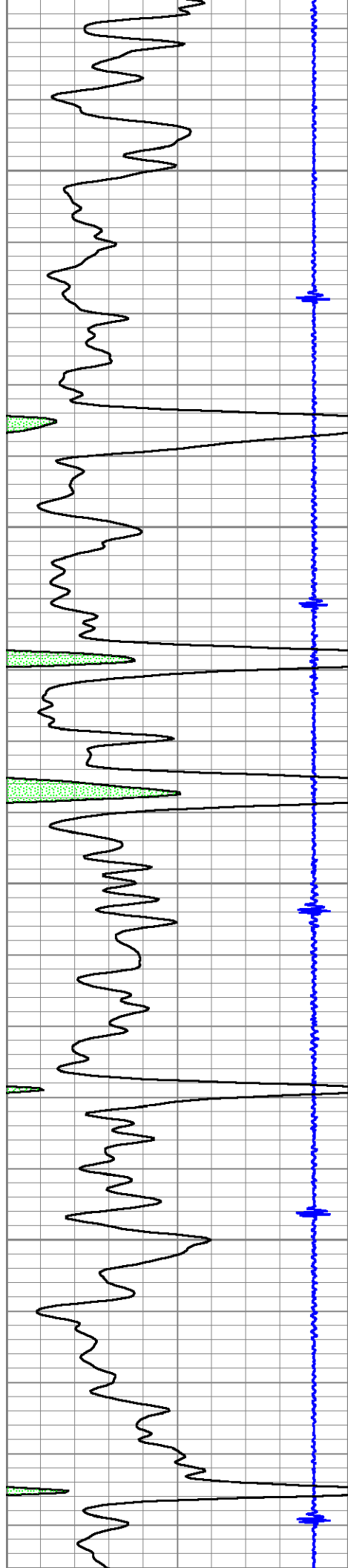










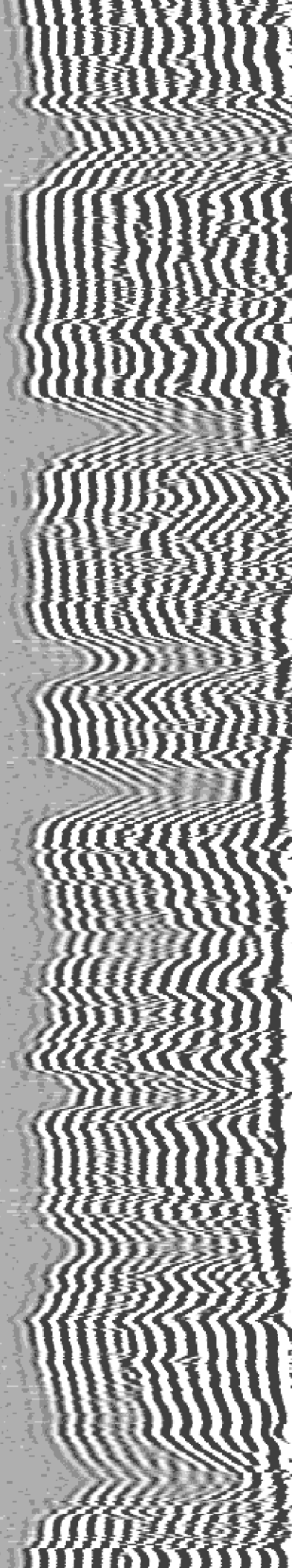
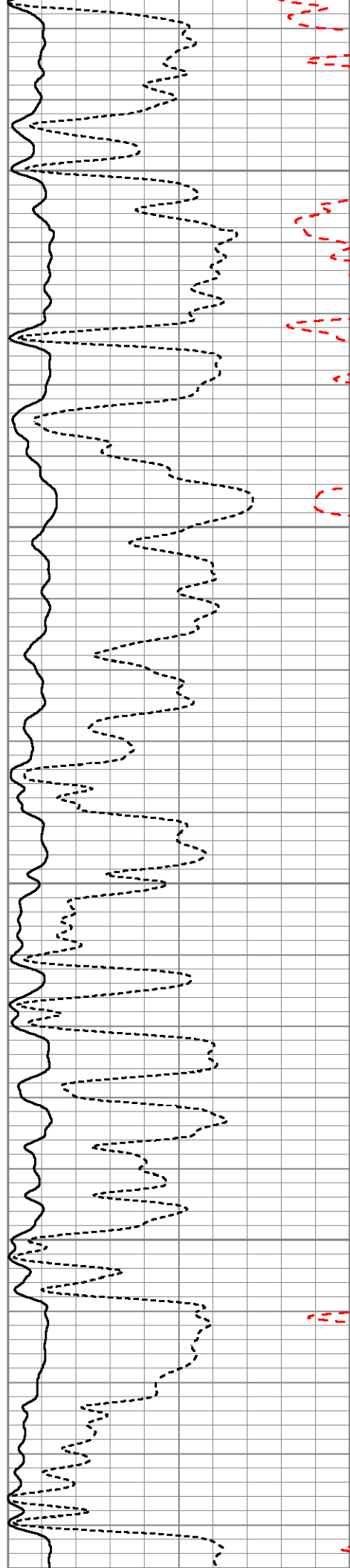


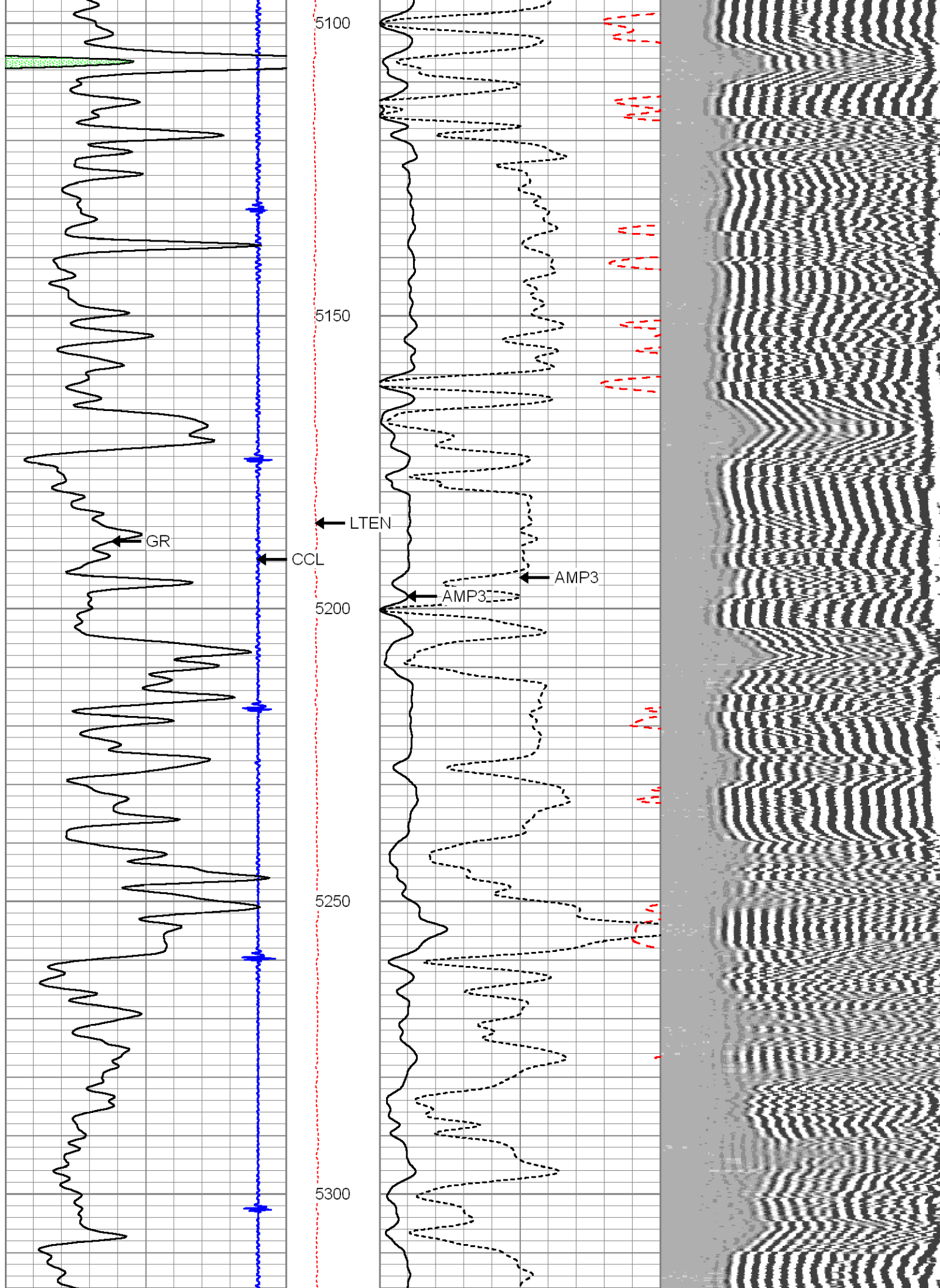
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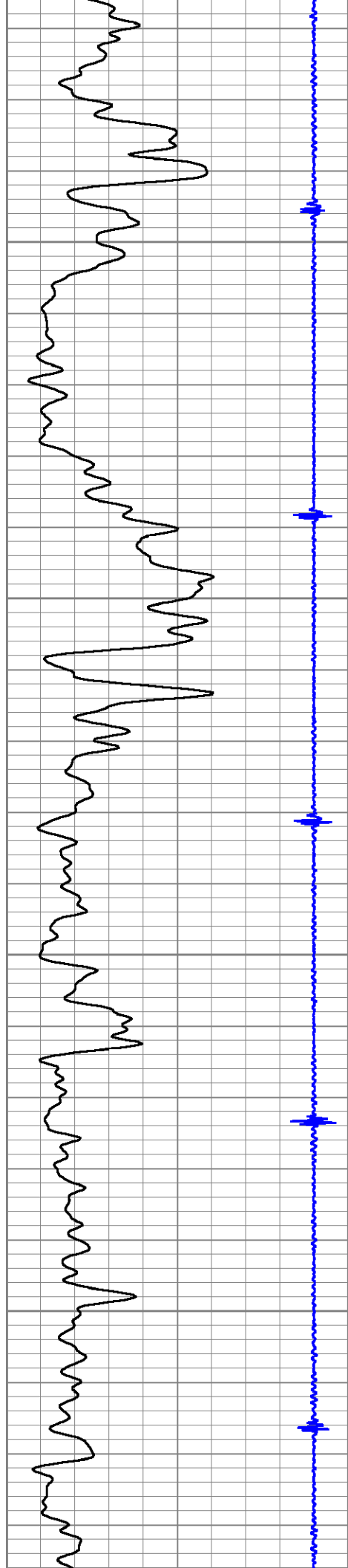
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5000

5050





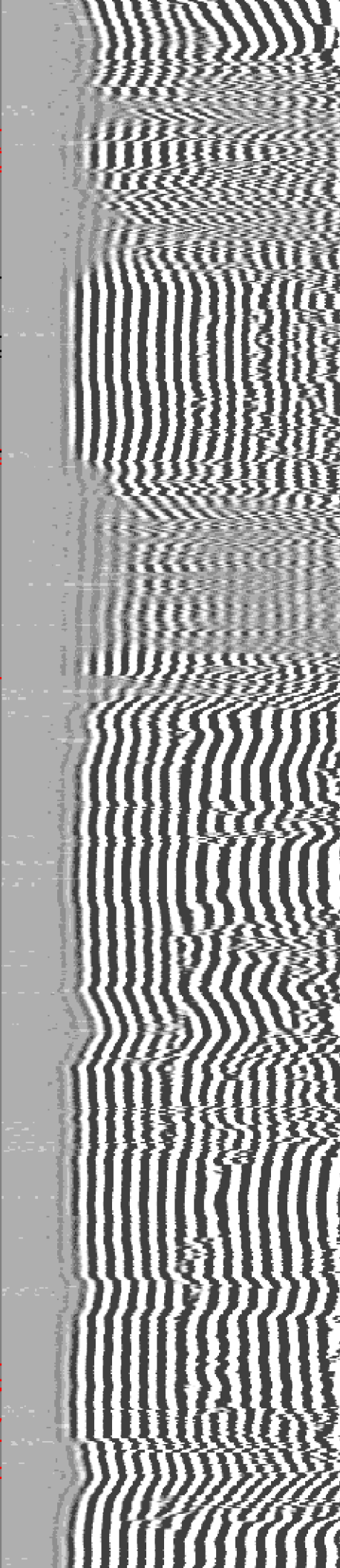
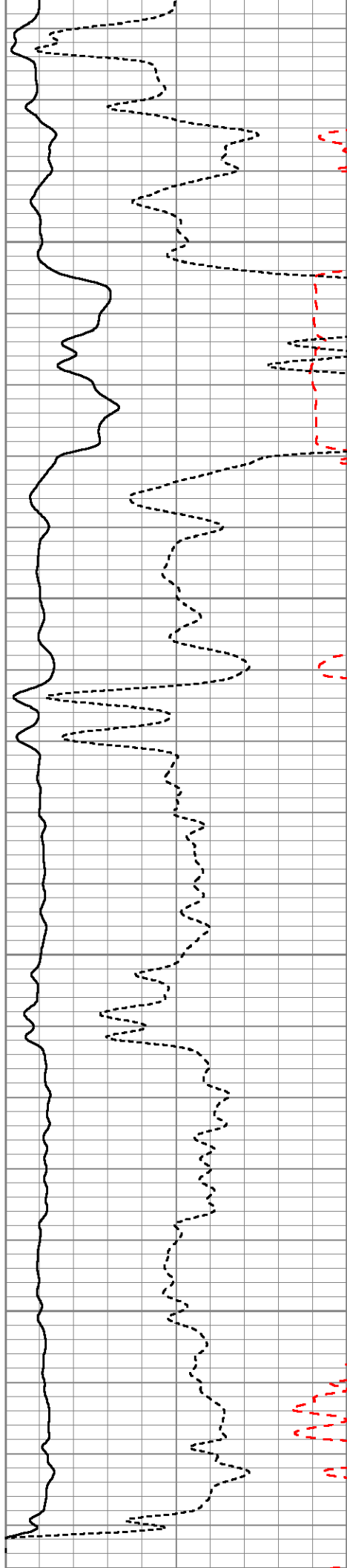


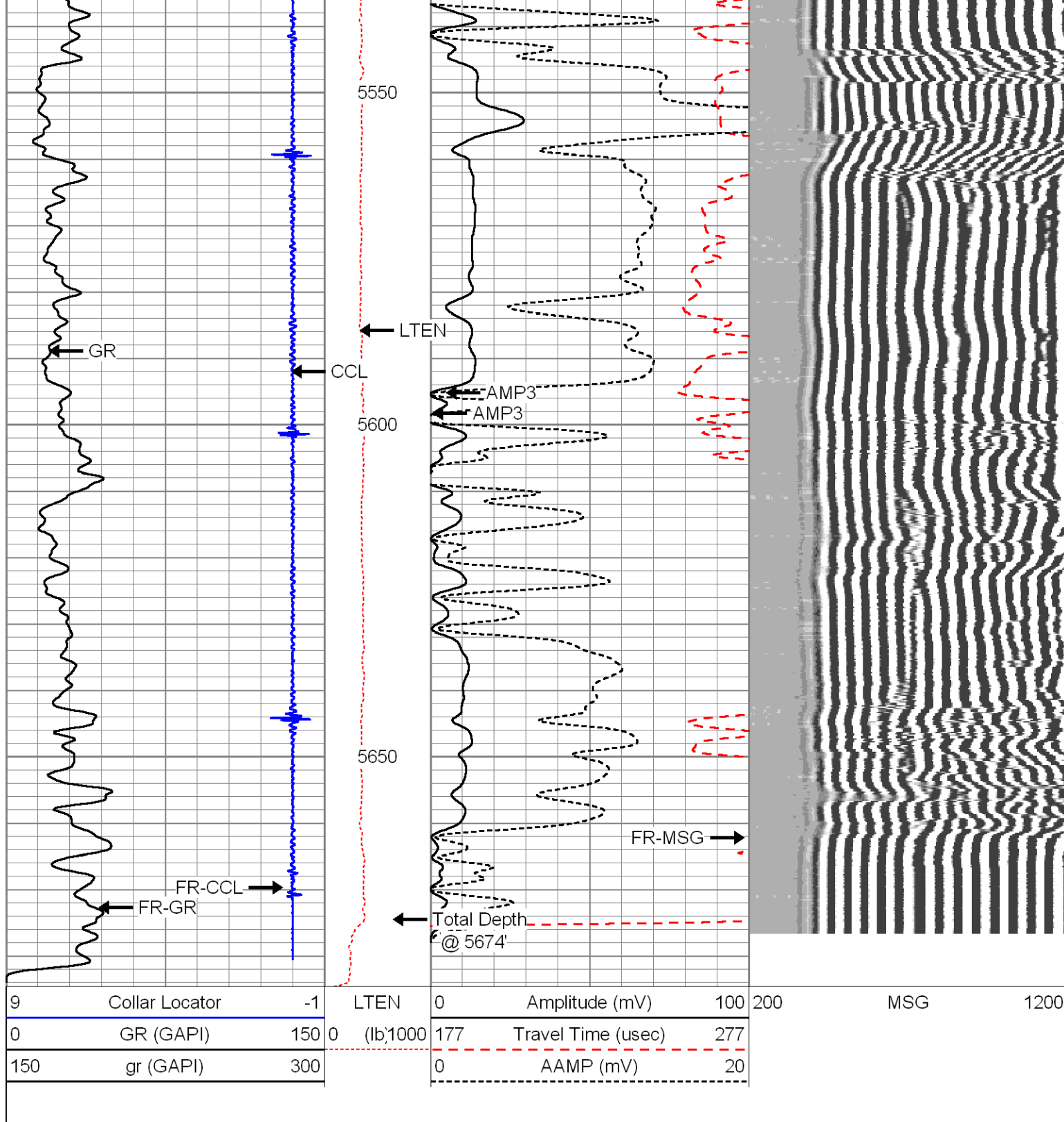
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5400

5450

5500





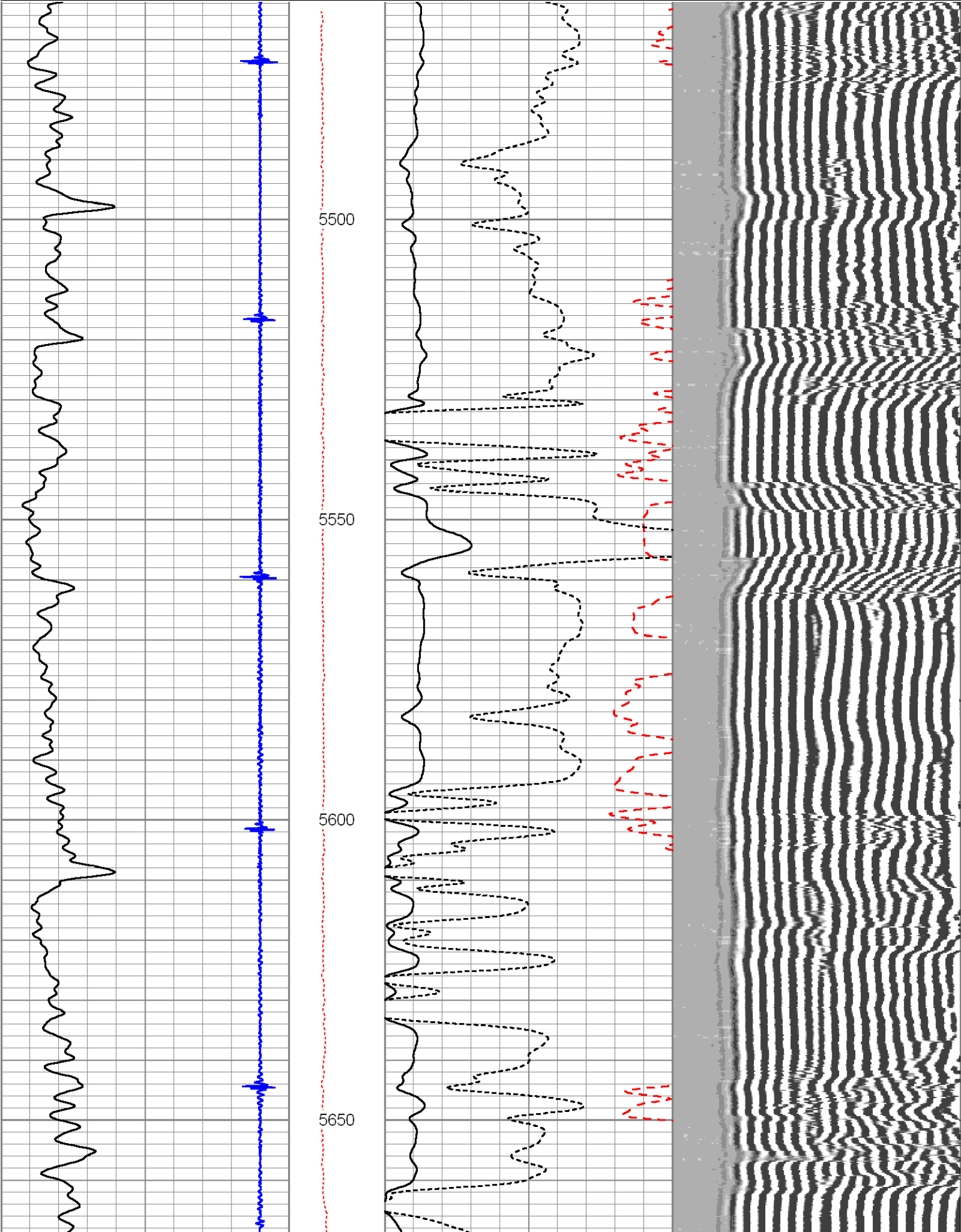
REPEAT SECTION

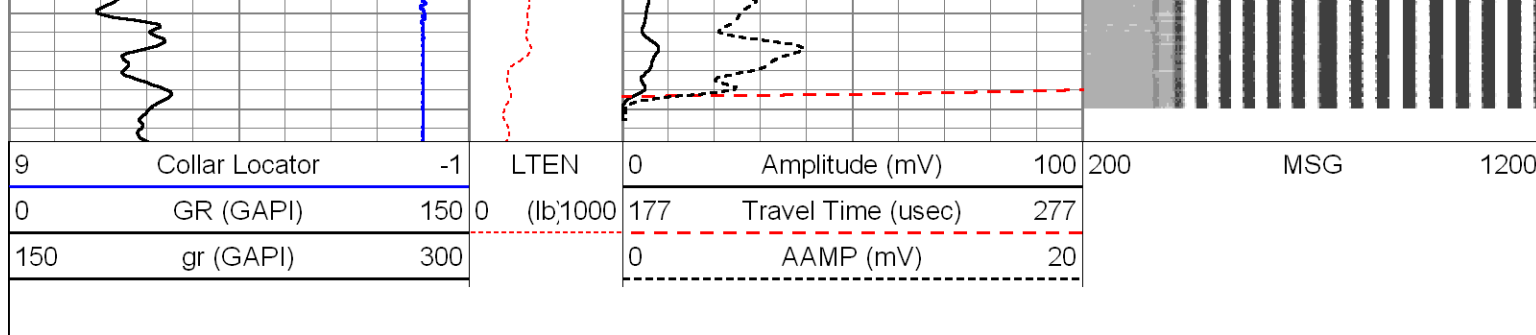
HALLIBURTON

Database File: zm_farms_a2_cbl.db
 Dataset Pathname: pass2
 Presentation Format: cbl_pn
 Dataset Creation: Sat Aug 14 21:10:07 2010 by Log Halliburton Casedho
 Charted by: Depth in Feet scaled 1:240

9	Collar Locator	-1	LTEN	0	Amplitude (mV)	100	200	MSG	1200
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0	GR (GAPI)	150	0	(lb,1000	177	Travel Time (usec)	0	277
150	gr (GAPI)	300			0	AAMP (mV)		20

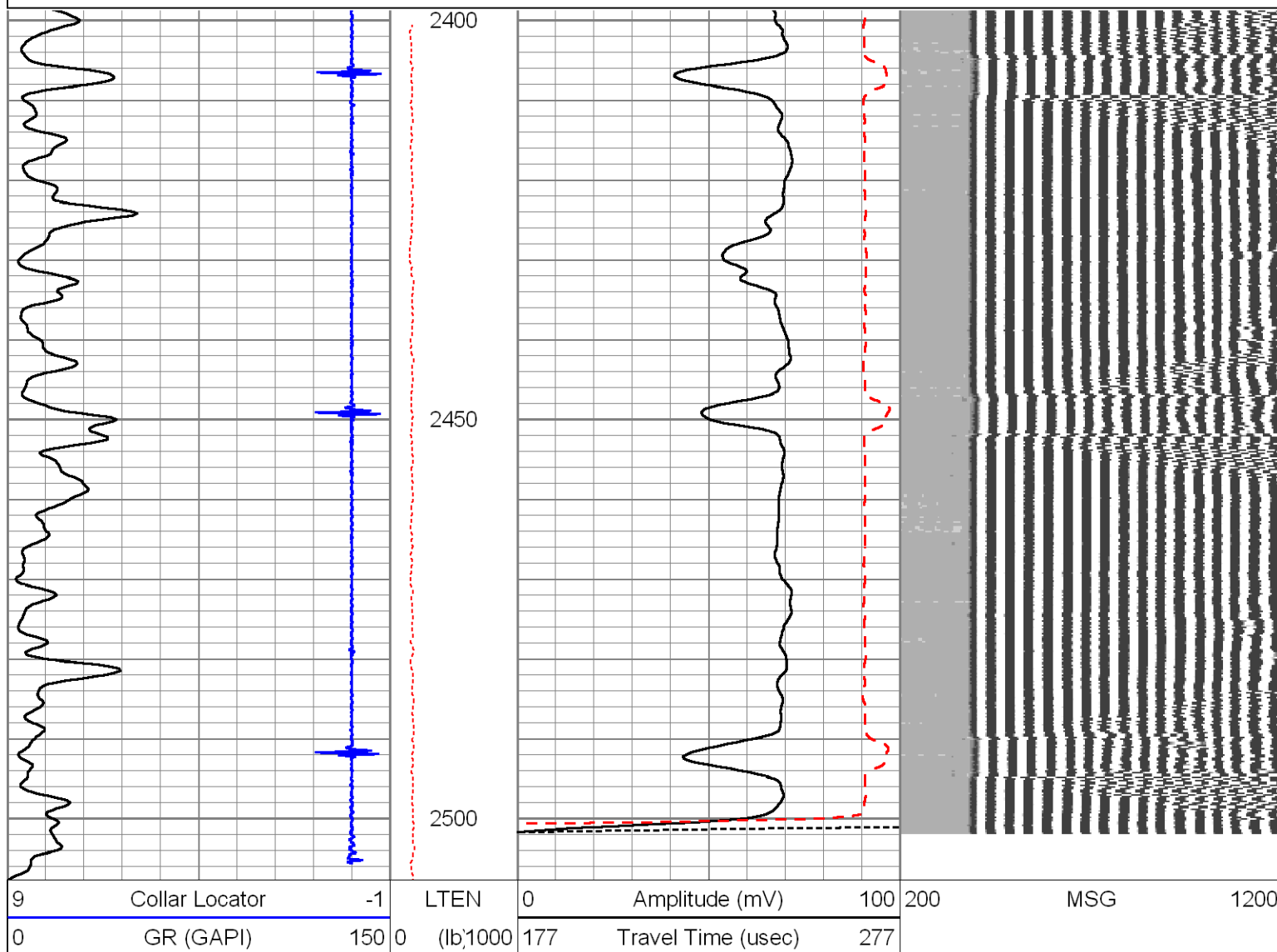
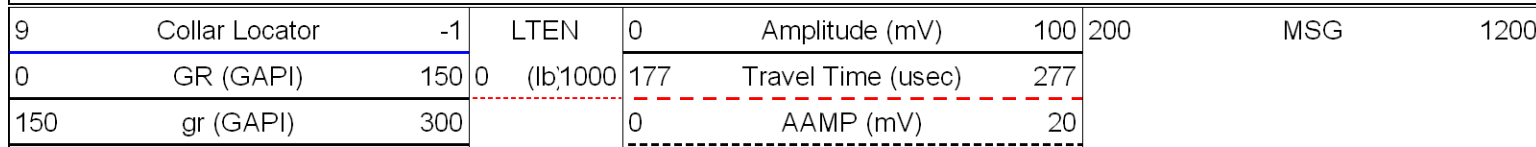




FREE PIPE SECTION

HALLIBURTON

Database File: zm_farms_a2_cbl.db
 Dataset Pathname: pass1
 Presentation Format: cbl_pn
 Dataset Creation: Sat Aug 14 20:51:12 2010 by Log Halliburton Casedho
 Charted by: Depth in Feet scaled 1:240



150	gr (GAPI)	300	0	AAMP (mV)	20

Calibration Report					
Database File:	zm_farms_a2_cbl.db				
Dataset Pathname:	pass3				
Dataset Creation:	Sat Aug 14 21:15:58 2010 by Log Halliburton Casedho				
Gamma Ray Calibration Report					
Type / Serial:		probe275dig / 070633			
SHOP CALIBRATION		Sat Aug 14 09:27:13 2010			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	52.0				cps
Calibrator	375.7				cps
		0.8310			GAPI/cps
PRIMARY VERIFICATION		Sat Aug 14 09:29:42 2010			
Background	42.1				cps
Calibrator	311.4				cps
Difference				269.3	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Cement Bond Log Calibration Report					
Serial Number:	060714				
Tool Model:	Probe275Digital				
Performed:	Sat Aug 14 21:30:16 2010				
Depth:	2481.53	ft			
Casing Diameter:	5.5	in			
	3' Spacing		5' Spacing		
Signal Zero:	0		0	mV	
Calibrated Amplitude:	71.921		71.921	mV	
Reading at Signal Zero:	0.0255859		0.0116211	V	
Reading in Free Pipe:	0.383032		0.368604	V	
Gain:	201.208		201.469		
Offset:	-5.14809		-2.34129		

Log Variables

Database:D:\warrior_data\zm_farms_a2_cbl.db
Dataset: field/well/run1/pass3

Top - Bottom

PPT usec 0	MAXAMPL mV 72	MINAMPL mV 0	MINATTN db/ft 0.8	CASEOD in 5.5	PERFS 0	TDEPTH ft 5674	BOTTEMP degF 135
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BITSIZE
in
7.875

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
STNDCH	14.41		STND_CH 1.4375 IN CABLE HEAD	0.92	1.44	1.00
WVF3	9.00		CBL-Probe275Digital (060714) Digital 3' 5' CBL Move voltage to +/- 150 for cal mode	8.75	2.75	92.00
WVF5	8.00					
GR	4.75		GR-Probe275dig (070633) Probe Digital Gamma CCL	4.75	2.75	57.00
CCL	3.92					
GR	2.54					

LLMTEN	0.00					
Dataset: zm_farms_a2_cbl.db: field/well/run1/pass3 Total Length: 14.41 ft Total Weight: 150.00 lb O.D. 2.75 in						

Company	OXY USA INC.				
Well	ZM FARMS A-2				
Field	LOCKPORT TOWNSHIP				
County	HASKELL		State	KANSAS	
HALLIBURTON	CEMENT BOND LOG SCALE 1:240				