

HALLIBURTON

CEMENT
BOND LOG

SCALE 1:240

CompanyMERIT ENERGY

WellSPENCE 4-28

FieldWILDCAT

CountyFINNEYStateKANSAS

CompanyMERIT ENERGY

WellSPENCE 4-28

FieldWILDCAT

CountyFINNEYStateKANSAS

API No.: 15-055-223225

Serv #: 12

Other Services

Location:

Permanent Datum

Elevation2880'

Elevation

Log Measured From

KB

15 Ft. above perm. datum

K.B. 2895'

D.F. N/A

G.L. 2880'

Drilling Measured From

Date @ Time Logged

23 JUL 2014 @ 12:30

Type Fluid in Hole

WATER

Run No.

ONE

Density of Fluid

8.33

Depth - Driller

6362'

Fluid Level

35'

Depth - Logger

6279'

Cement Top Est. Logged

2698'

Bottom - Logged Interval

6276.5'

Equipment / Location

10971670 / LIB

Top - Log Interval

2498'

Recorded by

STEVE KALBERER

Max. Recorded Temp.

141 F

Witnessed by

P.NICHOLS

CEMENTING DATA

Surface String

Protection String

Production String

Liner

Date / Time Cemented

Primary / Squeeze

Expected Compressive Strength

psi@ hrs

psi@ hrs

psi@ hrs

psi@ hrs

Cement Volume

Cement Type / Weight

/

/

/

/

Formulation

Mud Type / Mud Wgt.

/

/

/

/

Borehole Record

Run Number

Bit

From

To

Size

Weight

From

To

ONE

8.625"

24#

SURFACE

1800'

TWO

5.5"

17#

SURFACE

5250'

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

CORRELATED TOHES DENSITY LOG DATED 23 APR 2014.

MARKER JOINT @ 4684'

CREW :HUMISTON, LAURIE.

THANKYOU FOR USING HES.

Service Ticket No.	9015	API No.	15055223250000	PGM Ver	
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client					
EQUIPMENT DATA					
RCBL		gamma			
Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	080640	Serial No.	060738	Serial No.	
Model No.	PROBE	Model No.	PROBE	Model No.	
Diameter	2.75'	Diameter	2.75"	Diameter	
LOGGING DATA					
General Data					
Pass	Depths		Well Head	Speed	Logging Run Comments
No	From	To	Pressure	Ft/Min	

100'	5279'	2488'	N/A	36				
	GAMMA RAY		AMPLITUDE		MSG		TRAVEL TIME	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
	0	120	0	20	200	1200	178	278
	120	240	0	100				
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

HALLIBURTON

MAIN LOG SECTION

SCALE 1:240

Database File

15055223250000_merit_spence_4_28_cbl.db

Dataset Pathname

pass3

Presentation Format

cbl_war8

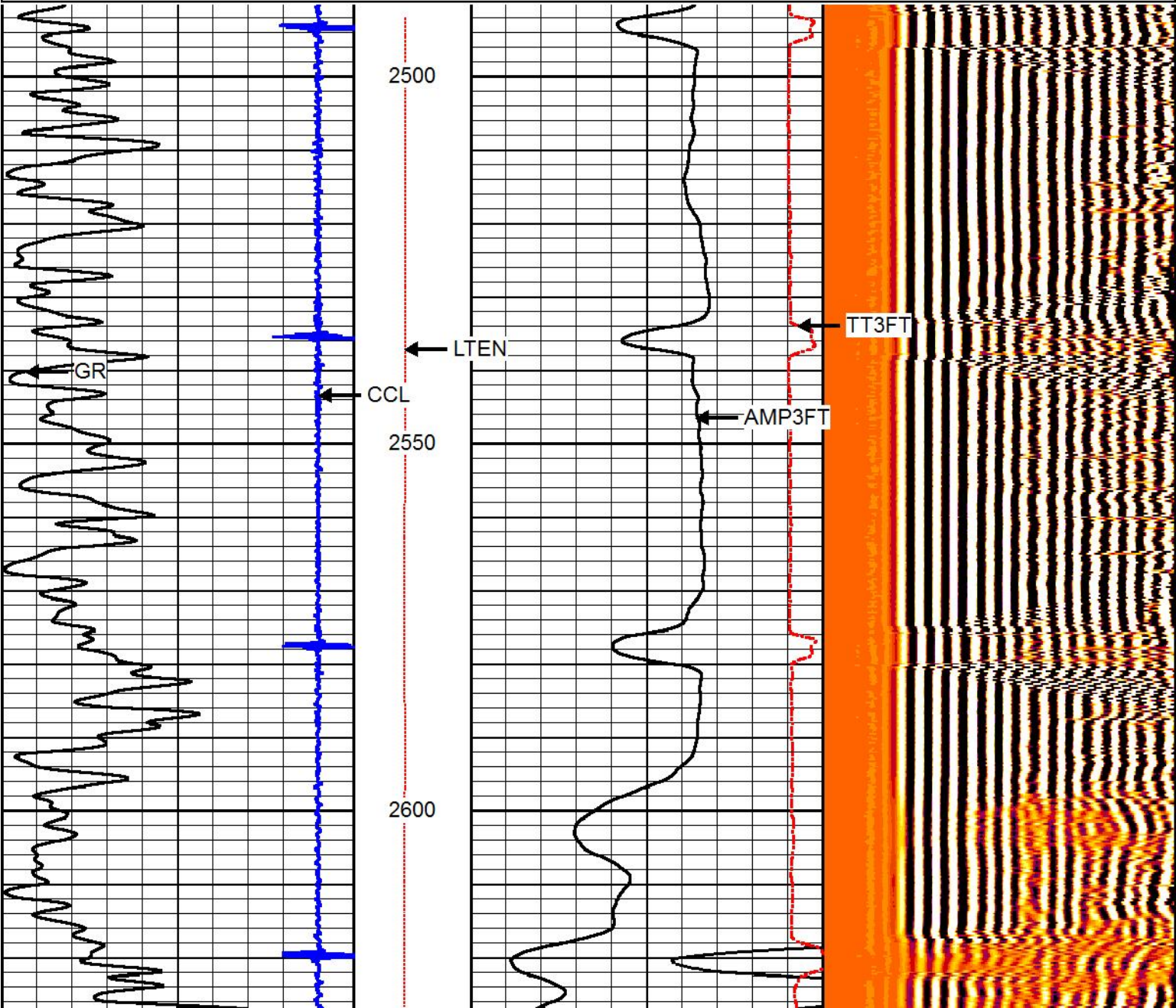
Dataset Creation

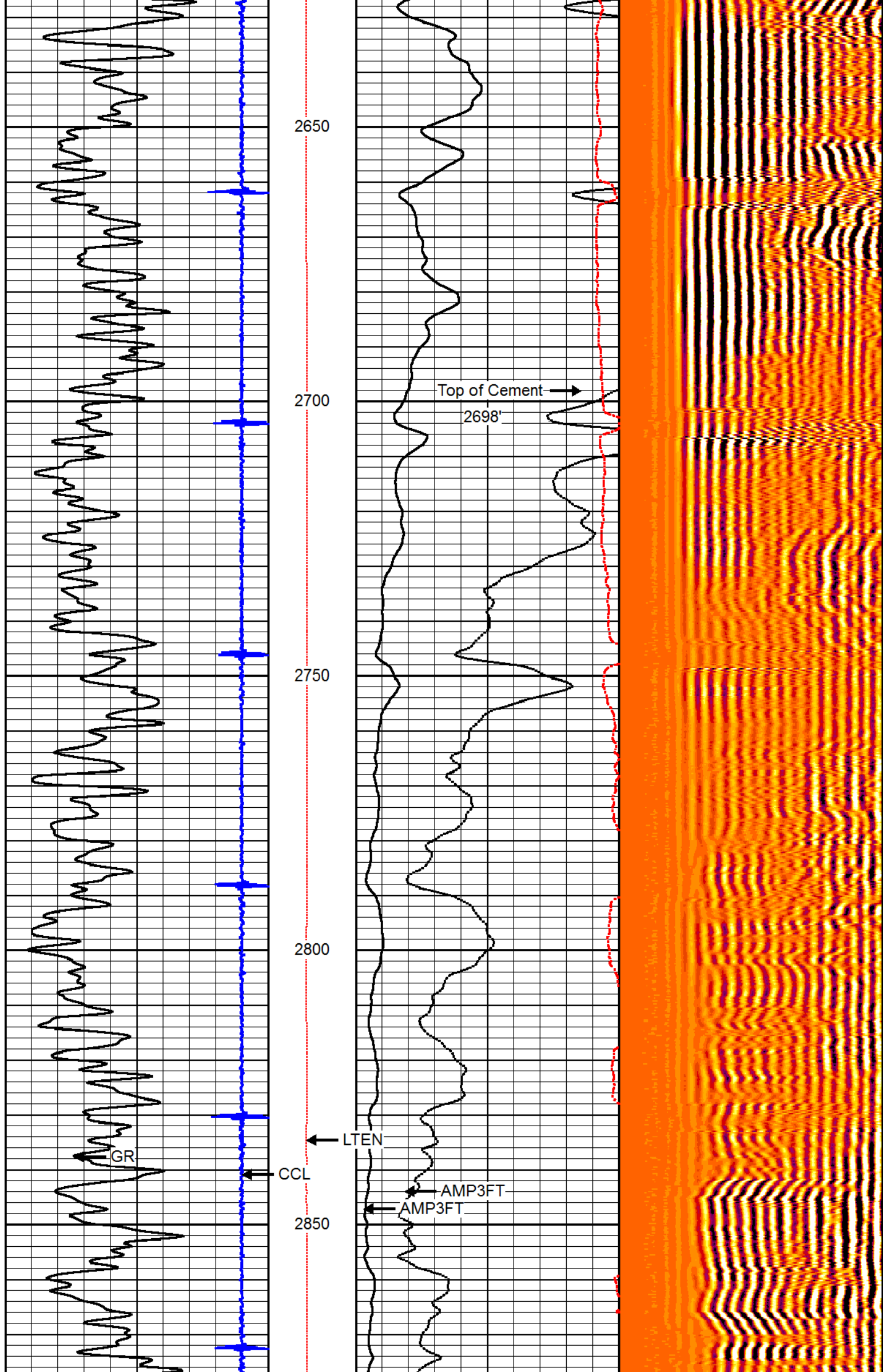
Wed Jul 23 10:44:48 2014

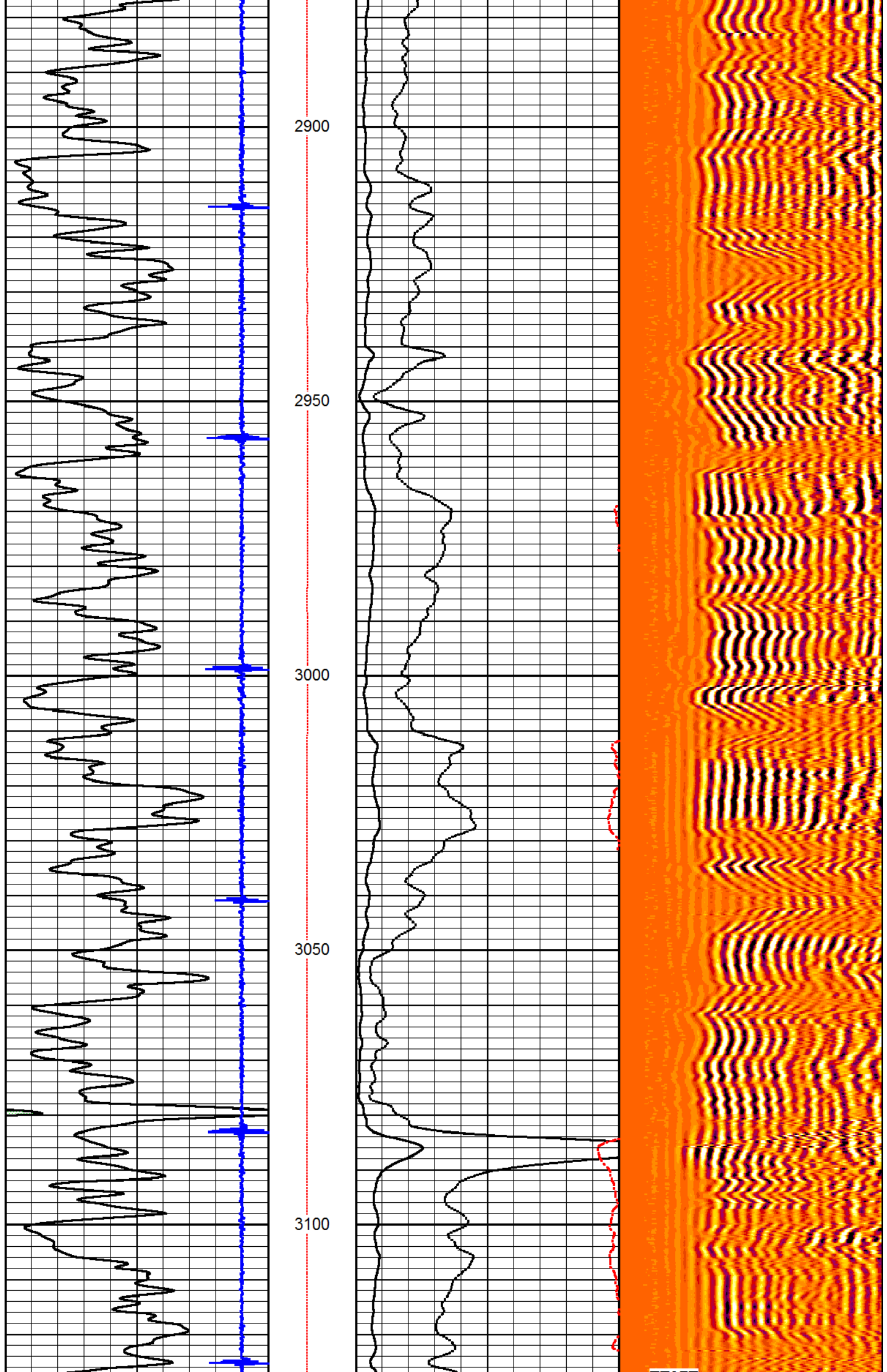
Charted by

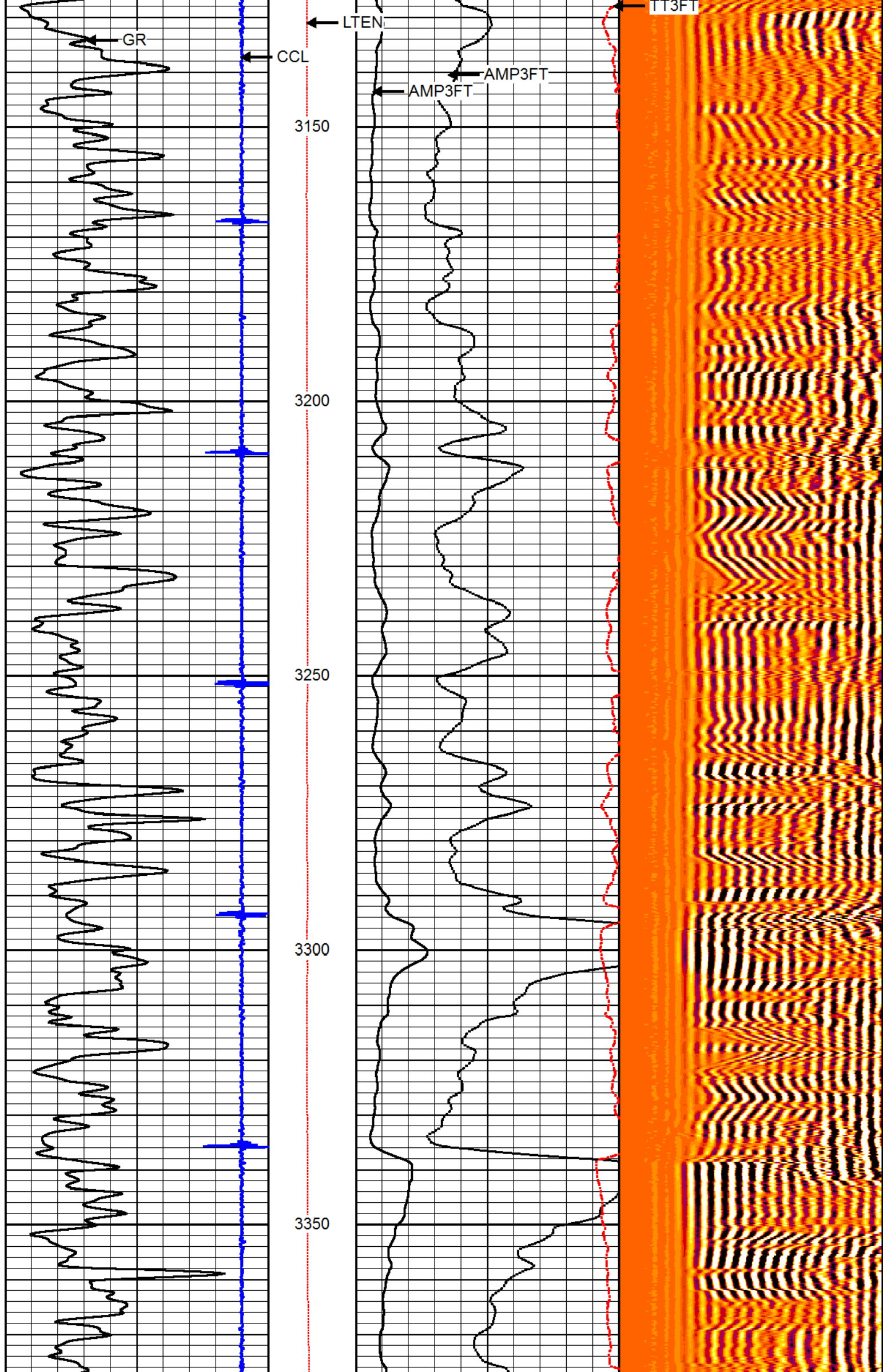
Depth in Feet scaled 1:240

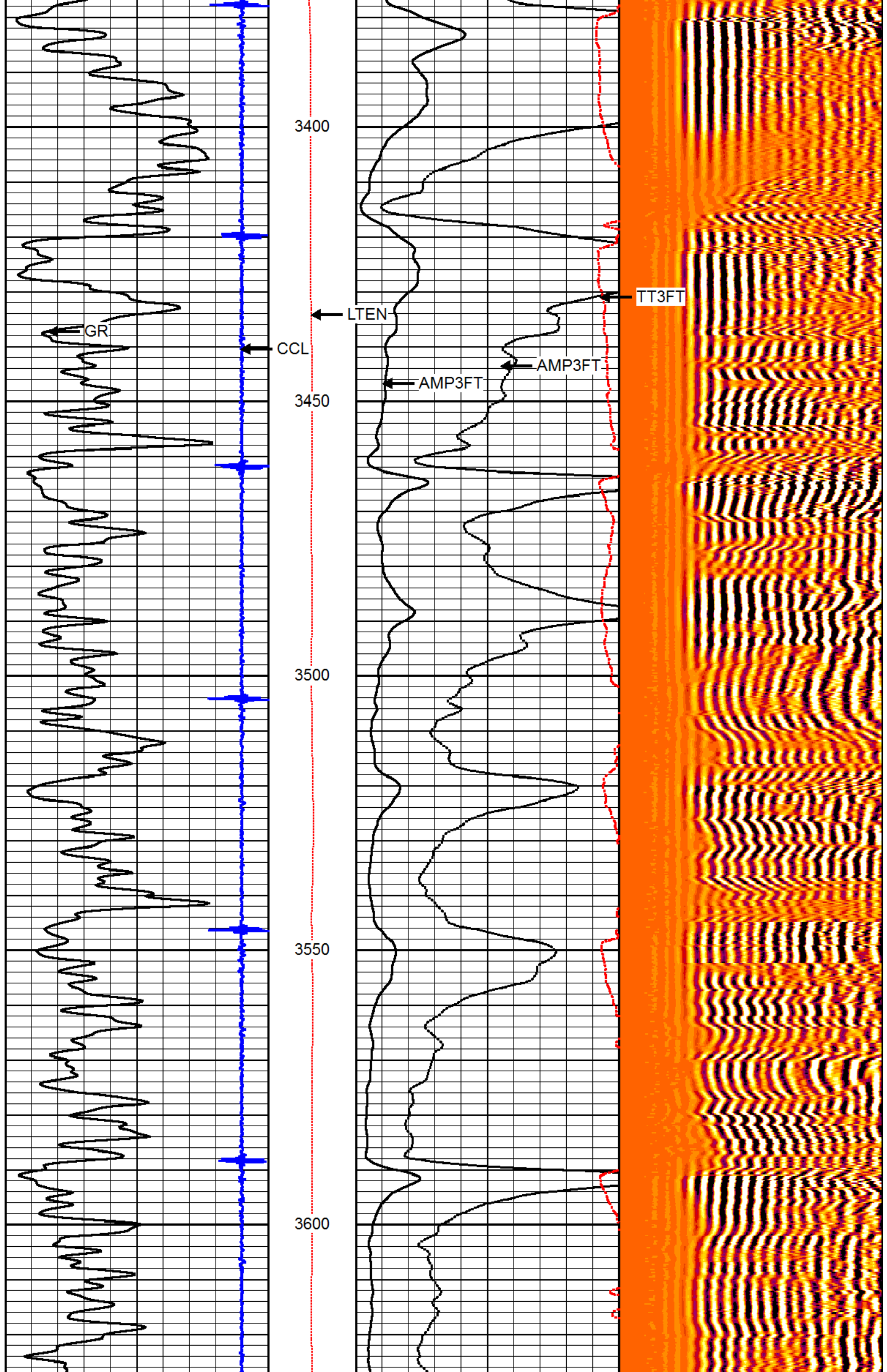
0	GR (GAPI)	150	LTEN	0	AMP3FT (mV)	100	200	MSG	1200
150	gr (GAPI)	300		0	AAMP3FT (mV)	20			
	CCL			178	TT3FT (usec)	278			

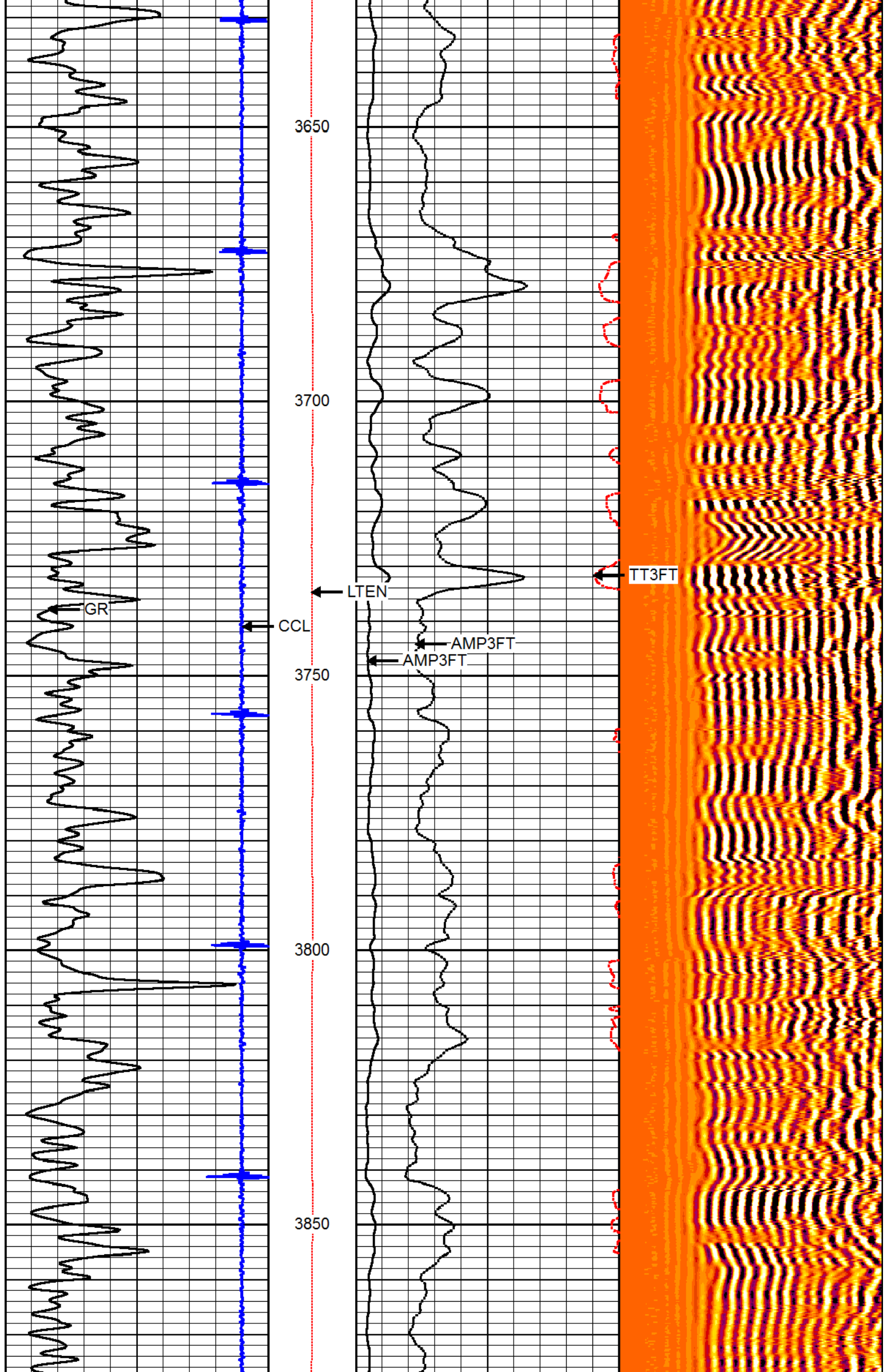


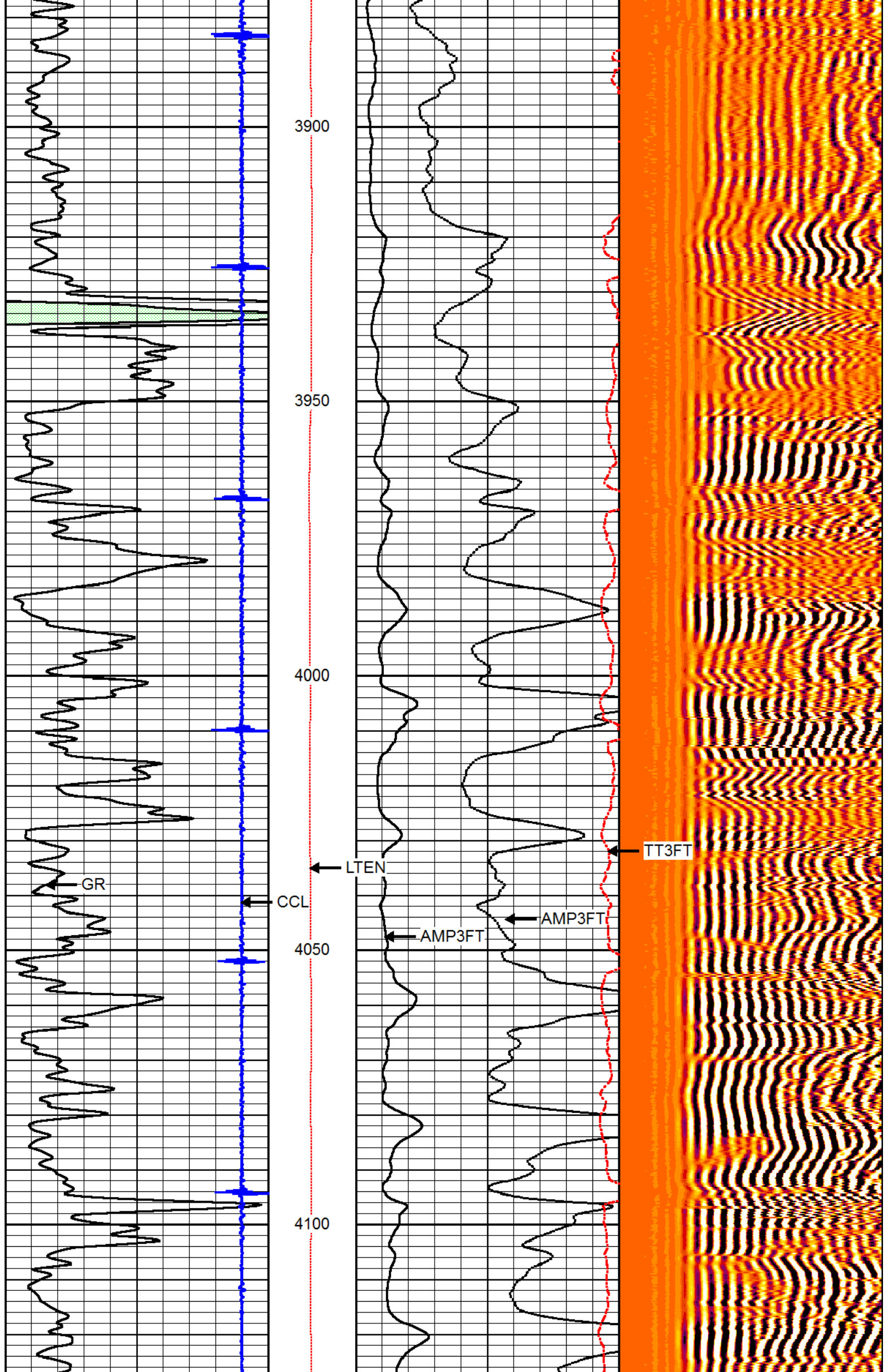


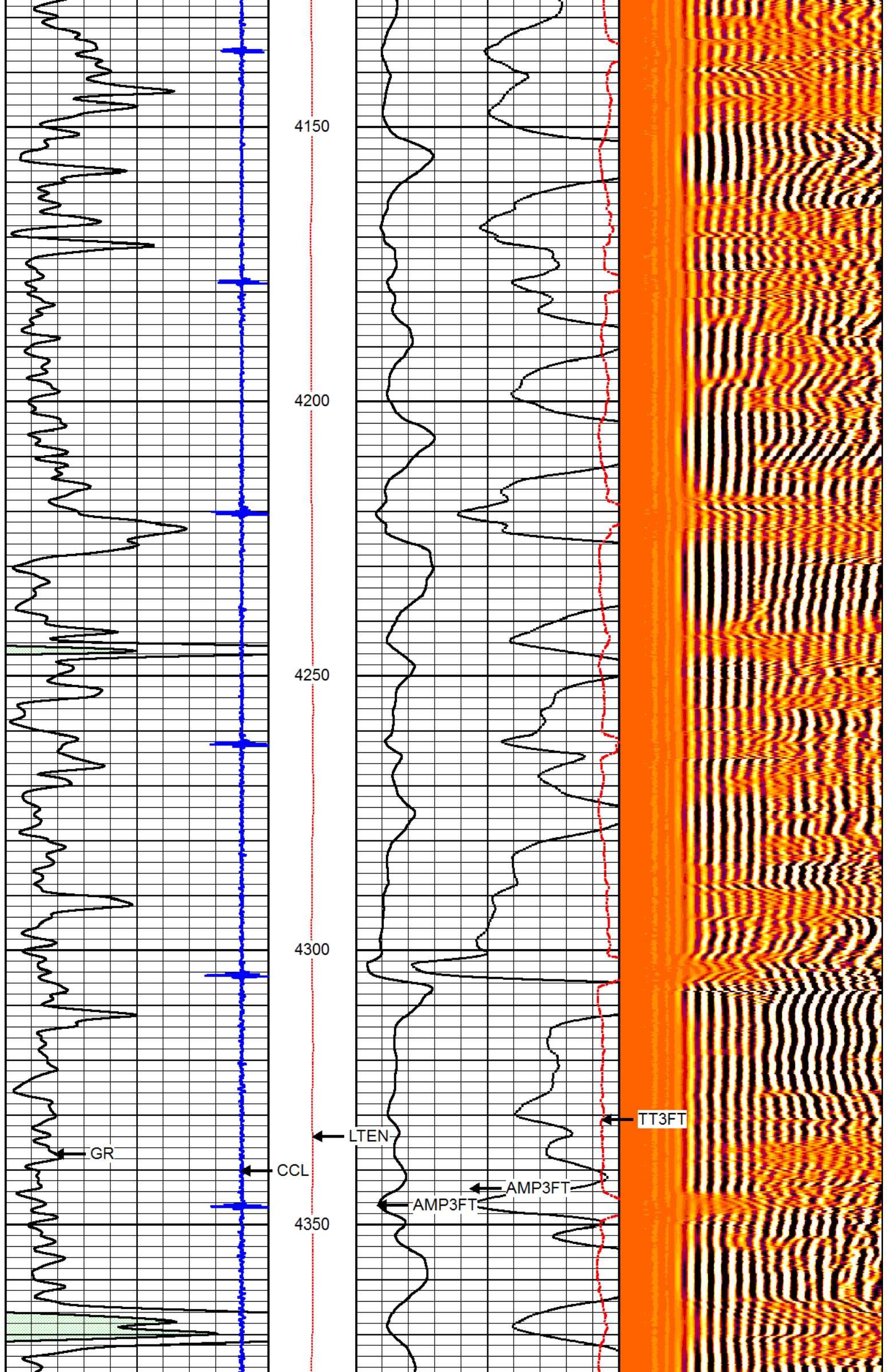


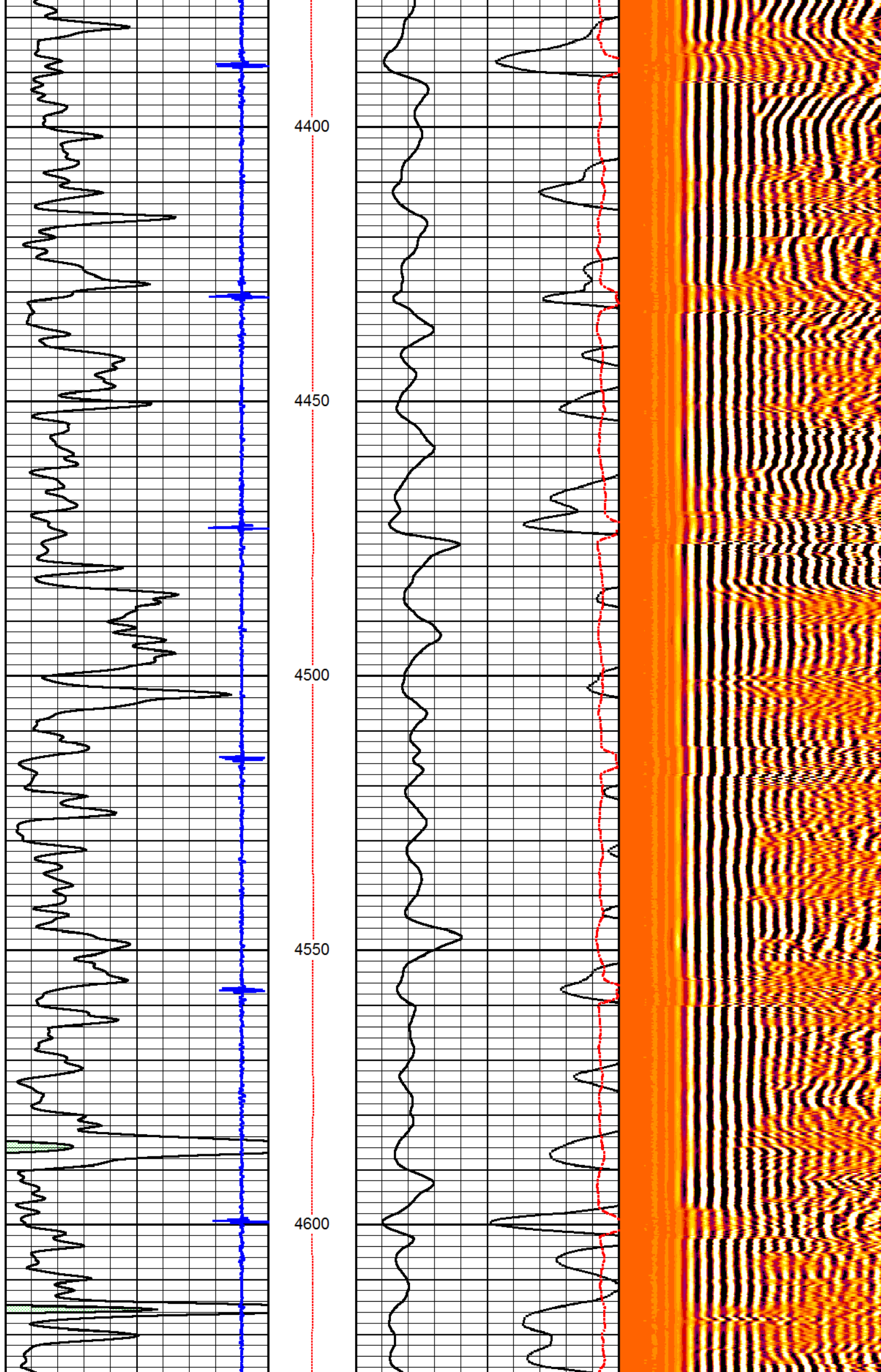


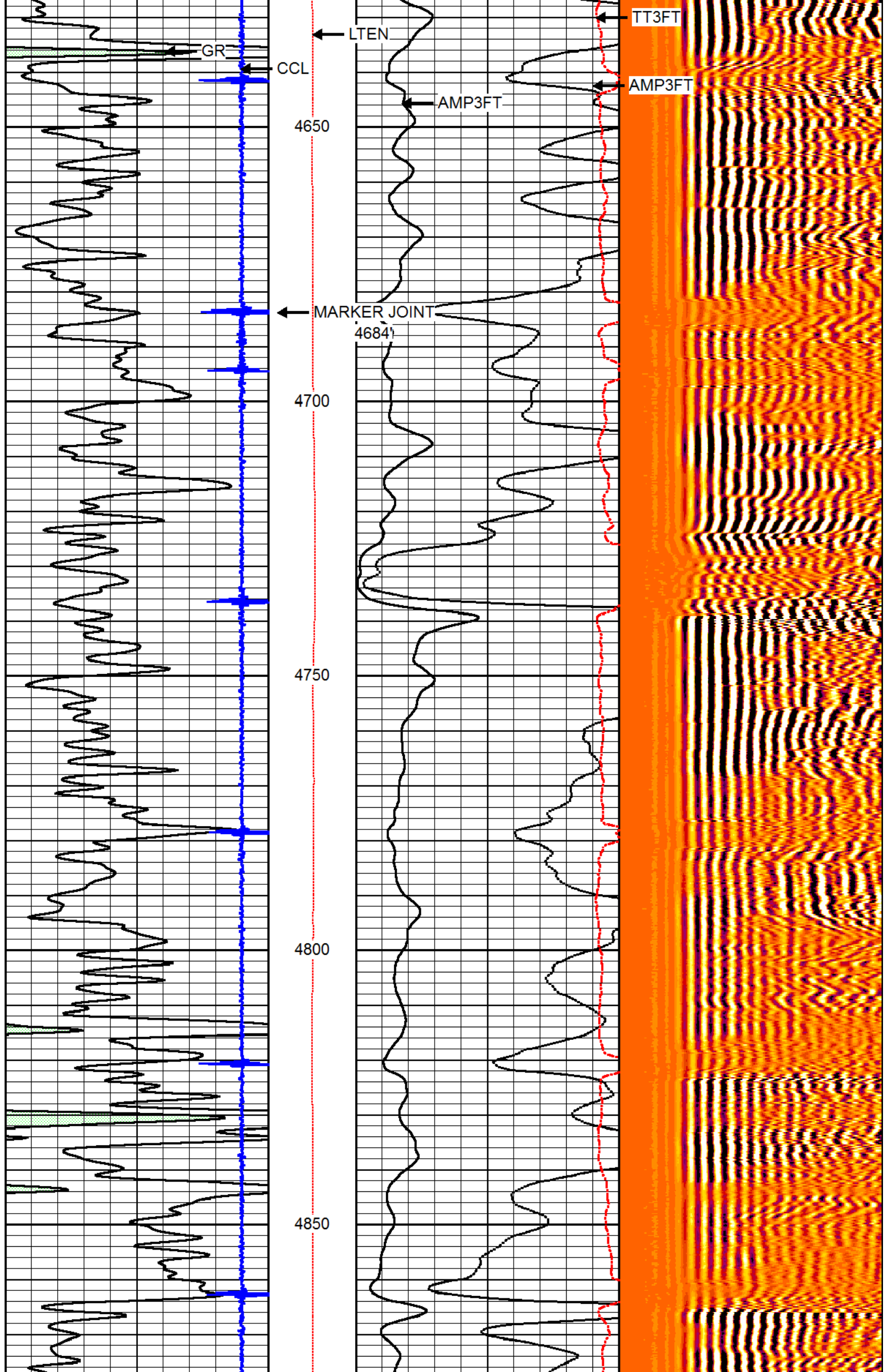


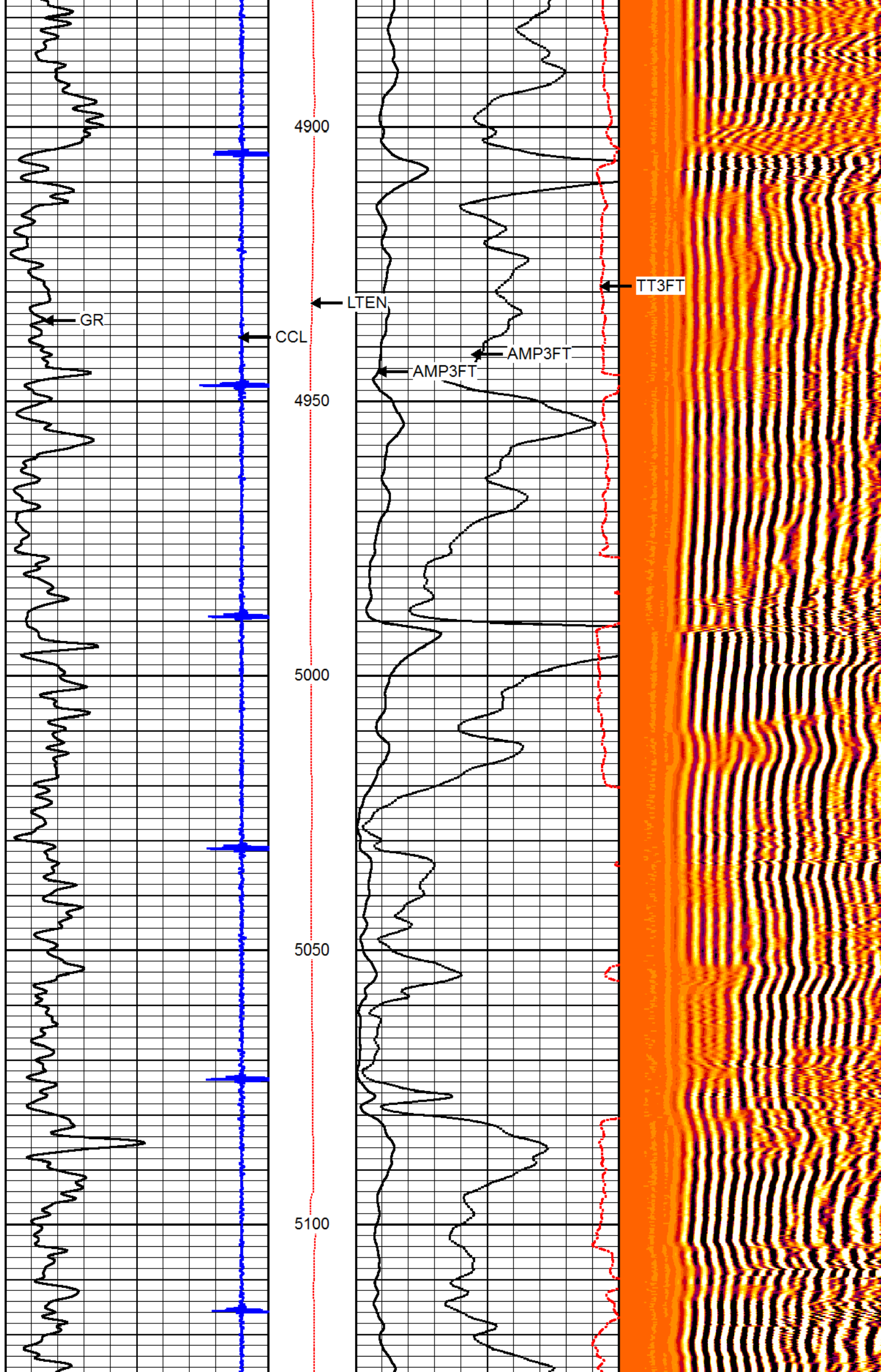


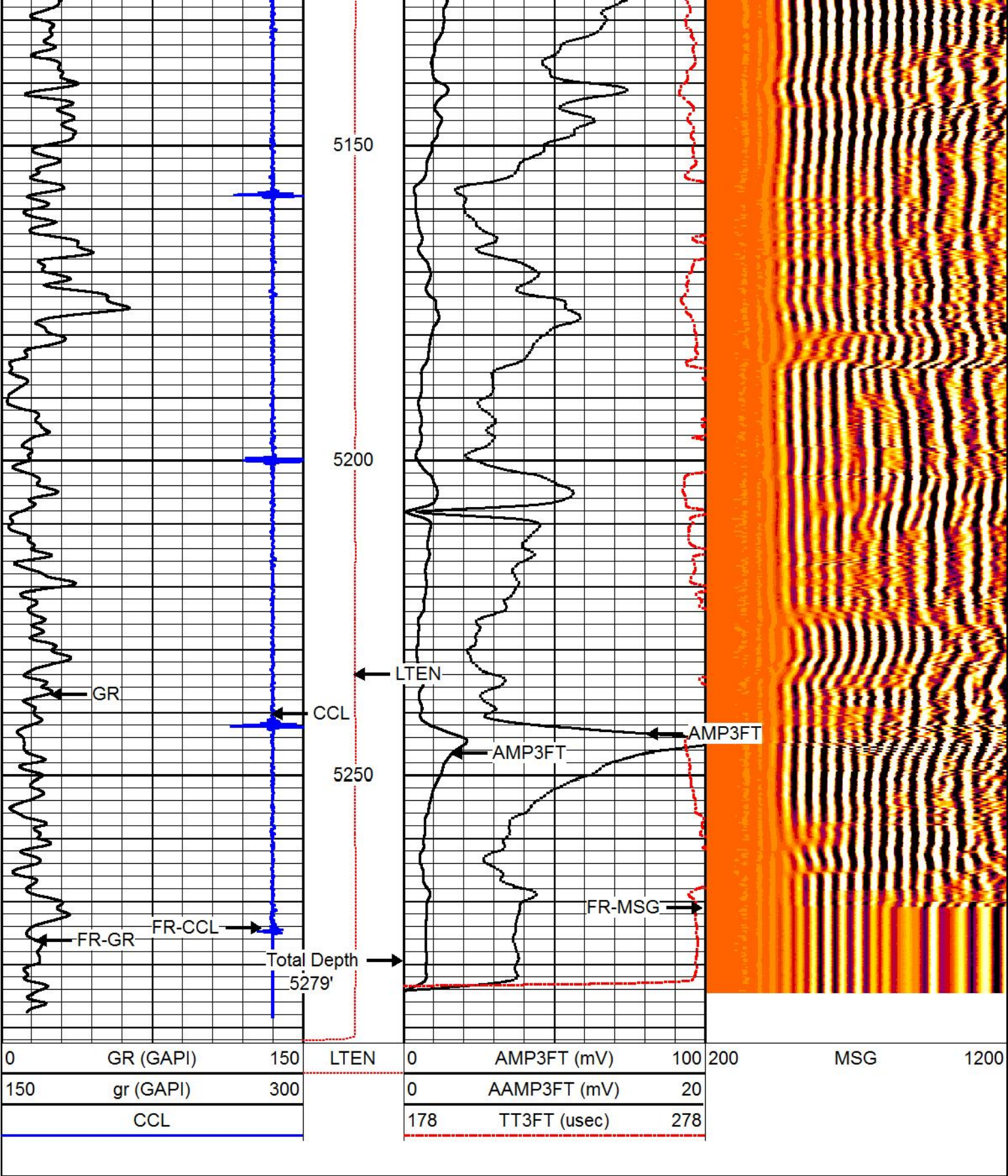










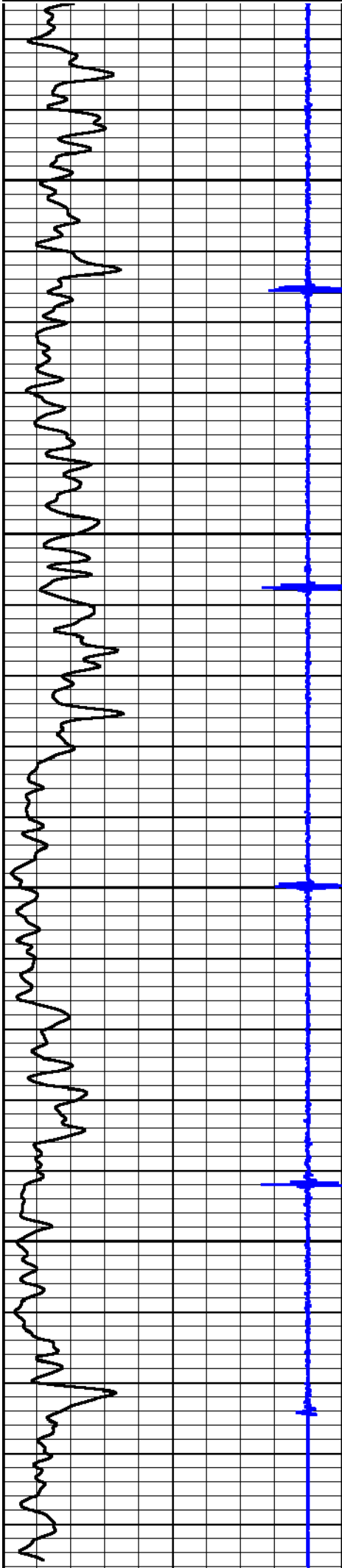


REPEAT SECTION

HALLIBURTON

Database File 15055223250000_merit_spence_4_28_cbl.db
Dataset Pathname pass2
Presentation Format cbl_lib
Dataset Creation Wed Jul 23 10:39:15 2014
Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150	LTEN	0	AMP3FT (mV)	100	200	MSG	1200
150	gr (GAPI)	300		0	AAMP3FT (mV)	20			
	CCL			178	TT3FT (usec)	278			



5100

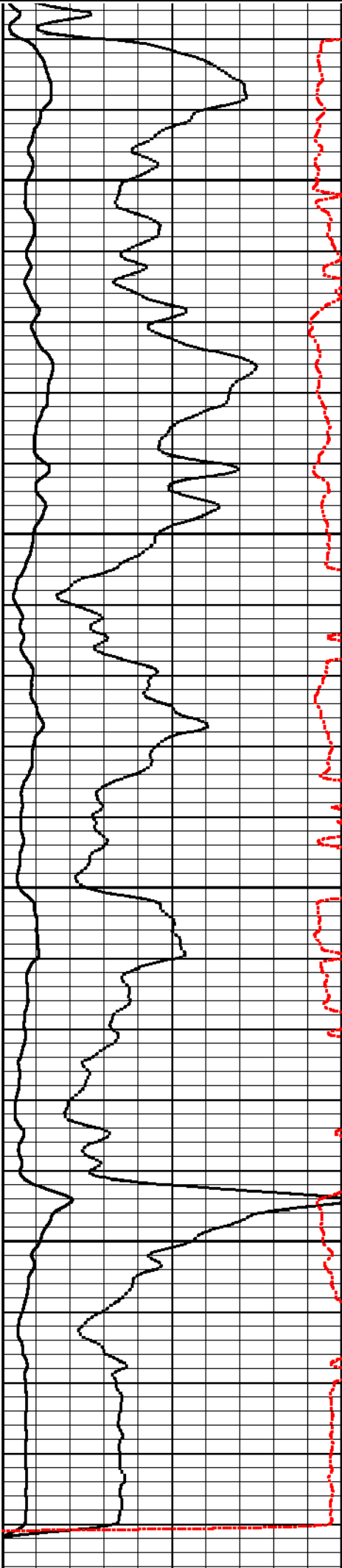
5150

5200

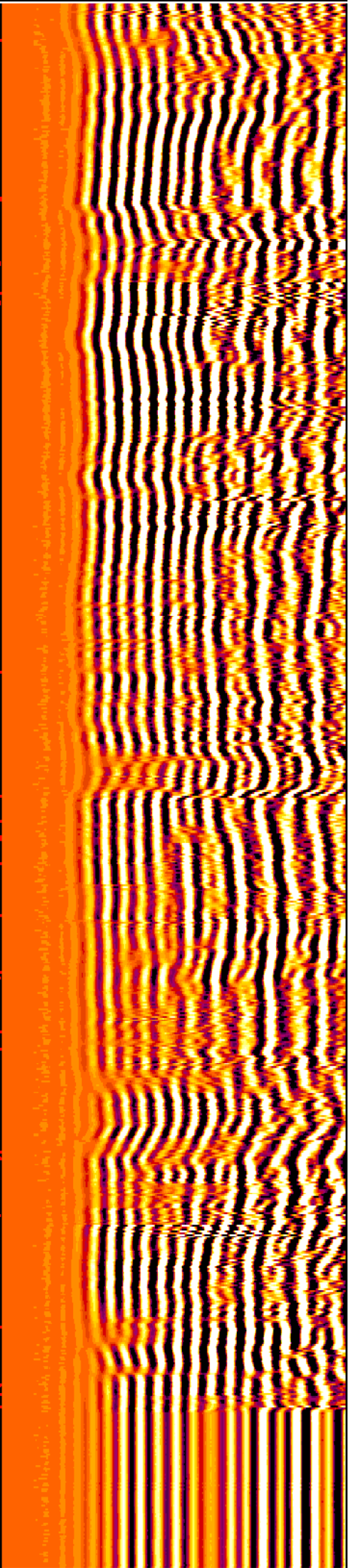
5250

5300

0	GR (GAPI)	150
150	gr (GAPI)	300
CCL		



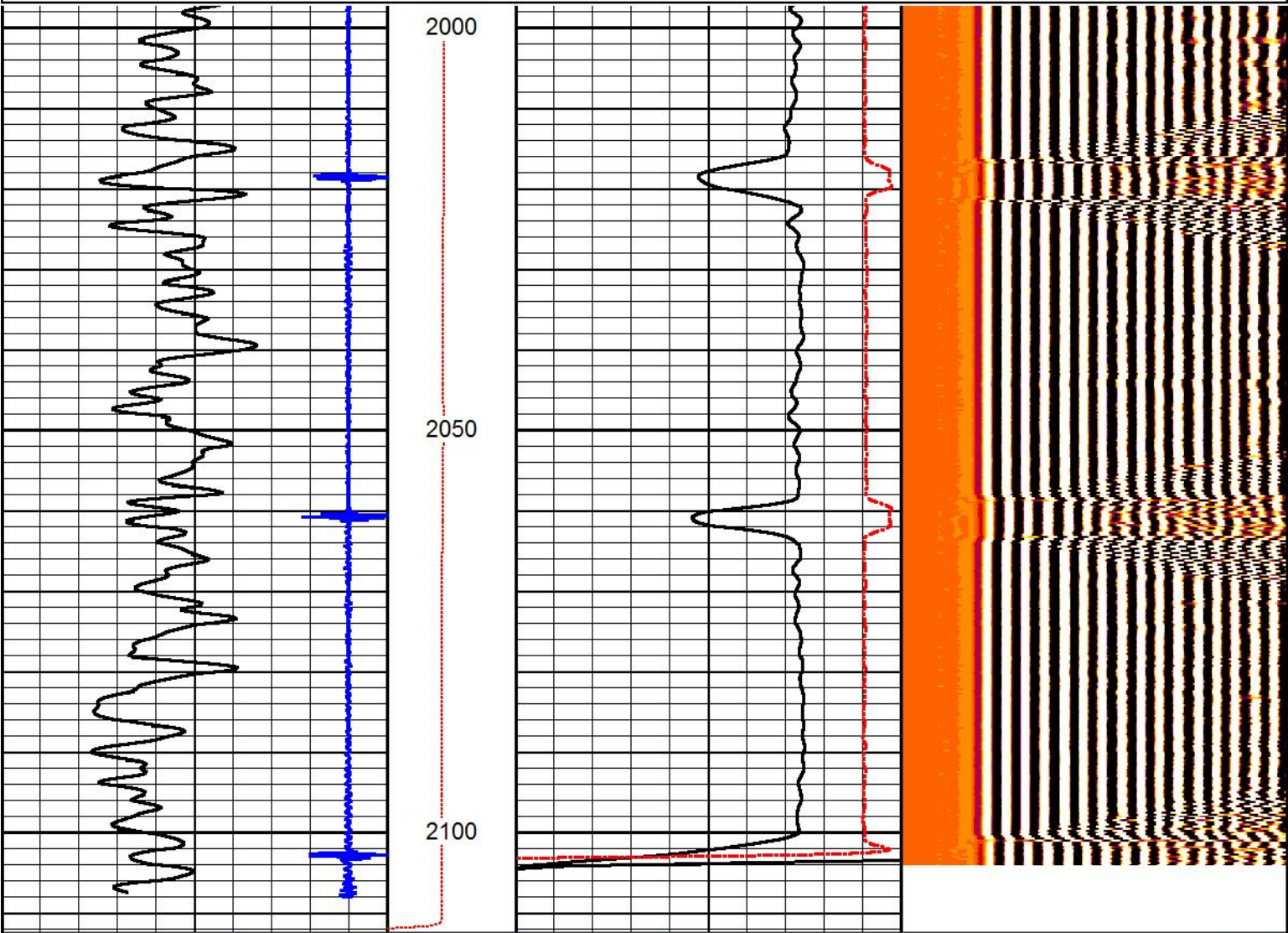
0	AMP3FT (mV)	100
0	AAMP3FT (mV)	20
178	TT3FT (usec)	278



200	MSG	1200
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Database File 15055223250000_merit_spence_4_28_cbl.db
Dataset Pathname pass1
Presentation Format cbl_lib
Dataset Creation Wed Jul 23 10:24:13 2014
Charted by Depth in Feet scaled 1:240

0	GR (GAPI)	150	LTEN	0	AMP3FT (mV)	100	200	MSG	1200
150	gr (GAPI)	300		0	AAMP3FT (mV)	20			
	CCL			178	TT3FT (usec)	278			



0	GR (GAPI)	150	LTEN	0	AMP3FT (mV)	100	200	MSG	1200
150	gr (GAPI)	300		0	AAMP3FT (mV)	20			
	CCL			178	TT3FT (usec)	278			

Calibration Report

Database File 15055223250000_merit_spence_4_28_cbl.db
Dataset Pathname pass3
Dataset Creation Wed Jul 23 10:44:48 2014

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 060738

SHOP CALIBRATION

Wed Aug 21 17:21:52 2013

	Background	55.2	Counts/Sec.	Gain	Offset	Jig	Units
	Calibrator	374.0					cps
				1.3906			cps
							GAPI/cps
PRIMARY VERIFICATION							
	Background	0.0					cps
	Calibrator	0.0					cps
	Difference				0.0		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

Segmented Cement Bond Log Calibration Report

Serial Number:	080640		
Tool Model:	Probe		
Calibration Casing Diameter:	5.500	in	
Calibration Depth:	2358.792	ft	

Master Calibration, performed Wed Jul 23 10:28:40 2014:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.010	0.810	0.000	71.921	89.929	-0.930
CAL	0.012	1.059				
5'	0.011	0.686	0.000	71.921	106.567	-1.150
SUM						
S1	0.038	0.828	0.000	100.000	126.590	-4.786
S2	0.015	0.704	0.000	100.000	145.277	-2.236
S3	0.012	0.724	0.000	100.000	140.464	-1.691
S4	0.001	0.792	0.000	100.000	126.519	-0.185
S5	-0.002	0.860	0.000	100.000	116.011	0.177
S6	0.002	0.851	0.000	100.000	117.821	-0.214
S7	0.013	0.859	0.000	100.000	118.206	-1.489
S8	0.016	0.861	0.000	100.000	118.383	-1.935

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.059	1.000	0.000

Air Zero Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	

S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Temperature Calibration Report			
Serial Number:	080640		
Tool Model:	Probe		
Performed:	Mon Jun 10 14:52:07 2013		
	Reference	Reading	
Low Reference:	89.00 degF	101.15 degF	
High Reference:	134.00 degF	144.83 degF	
Gain:	1.03		
Offset:	-16.00		
Delta Spacing	1		

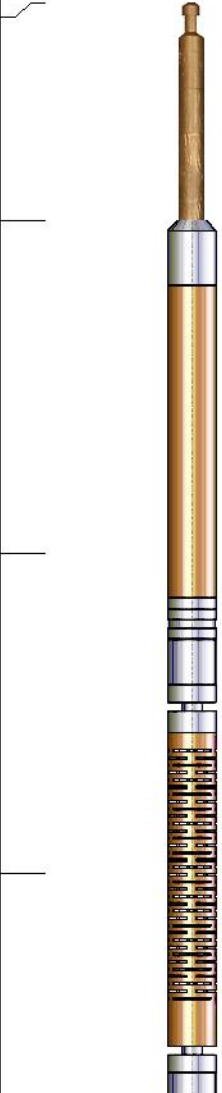
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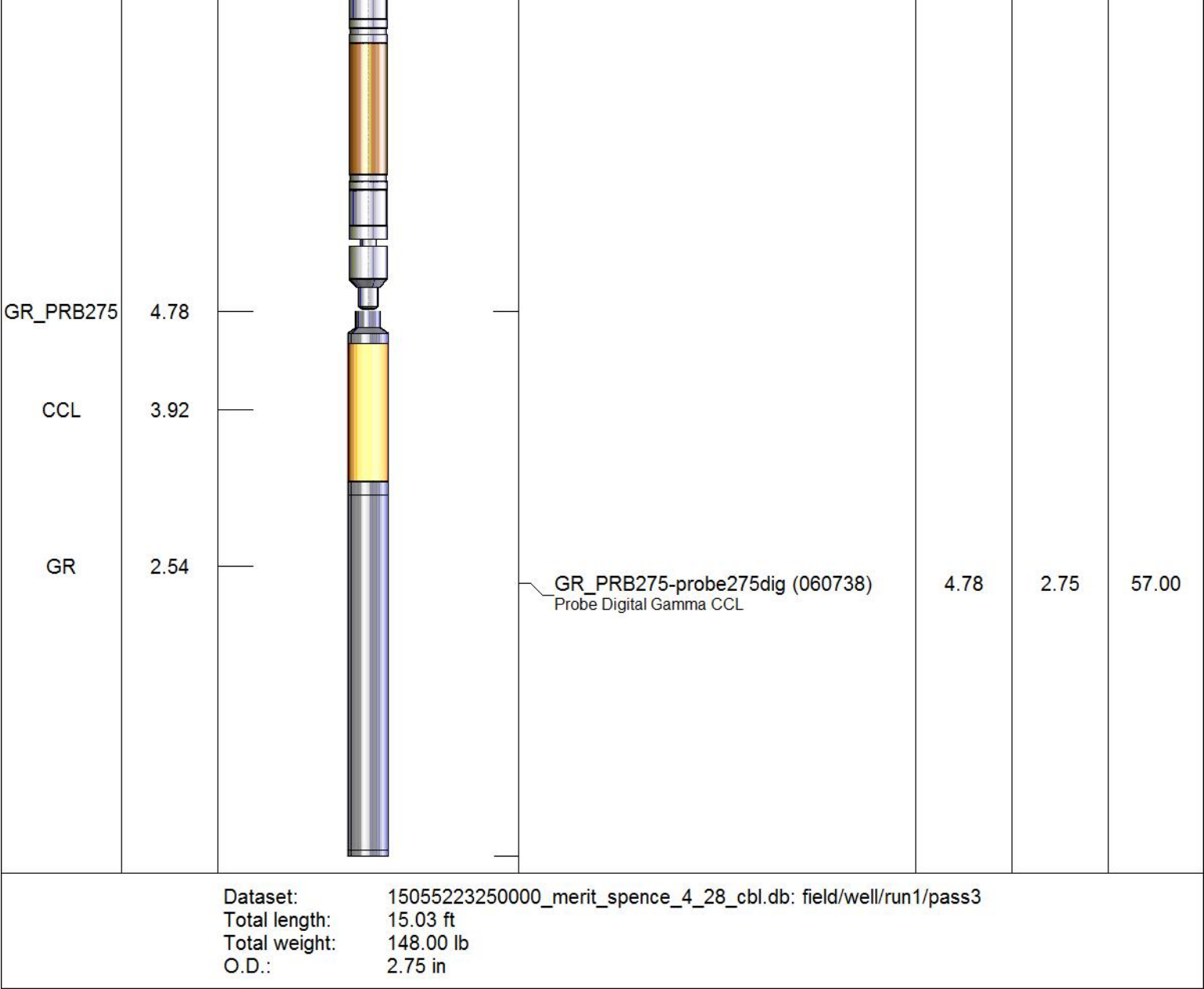
Dataset field/well/run1/pass3

Log Variables

Top - Bottom

BHTEMP_Src	PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF
1	268	17	72	1	0.8	0
MudWgt lb/gal	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BITSIZE in
9.5	0	5.5	0	5279	141	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
STNDCH	15.03					
			STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
RBT_PRB275	13.53					
TEMP	11.24					
WVFCAL	9.03		RBT_PRB275-Probe (080640) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00



Company	MERIT ENERGY				
Well	SPENCE 4-28				
Field	WILDCAT				
County	FINNEY		State	KANSAS	
HALLIBURTON	CEMENT BOND LOG				
	SCALE 1:240				