

CEMENT BOND LOG

SCALE 1:240

[illegible]

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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 TO HES DENSITY LOG DATED 18 AUG 2014.

MARKER JOINT @ 4008' & 4248'
DV TOOL @ 2482'

CREW: HUMISTON, LAURIE.
THANKYOU FOR USING HES.

Service Ticket No.	901609589	API No.	15203202810000	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	

No.	4709'	480'	N/A	N/A				
	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			

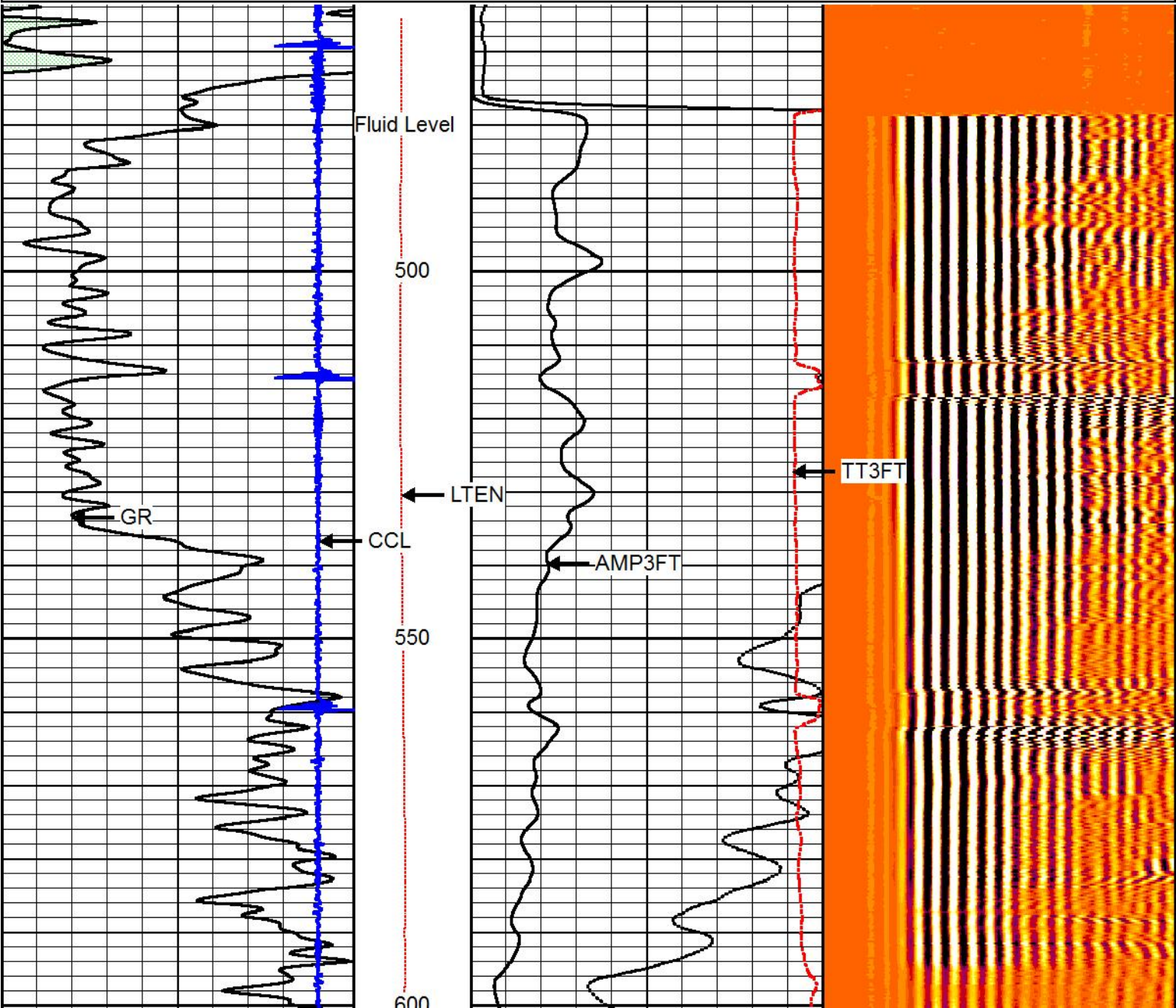
HALLIBURTON

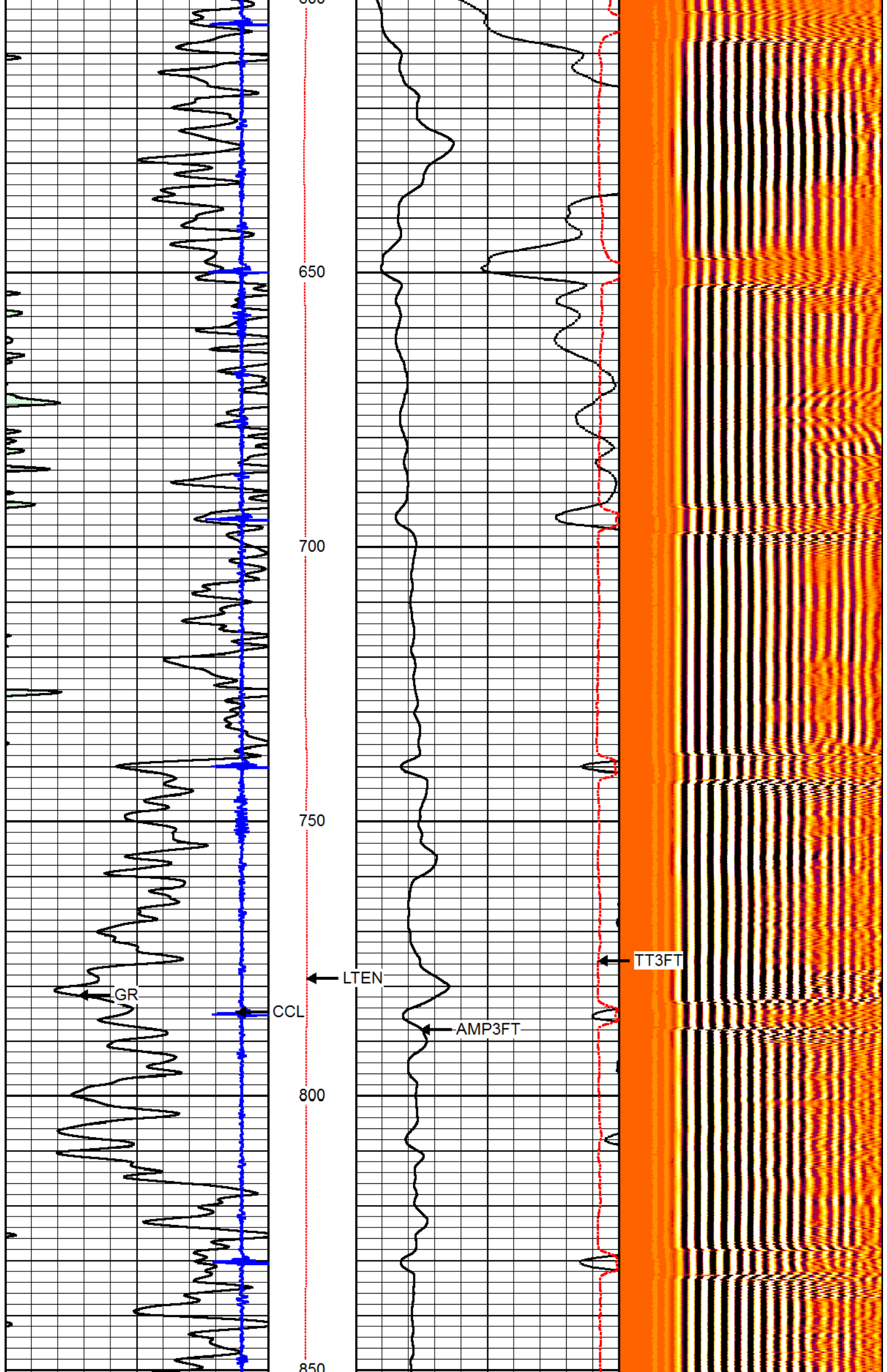
MAIN LOG SECTION

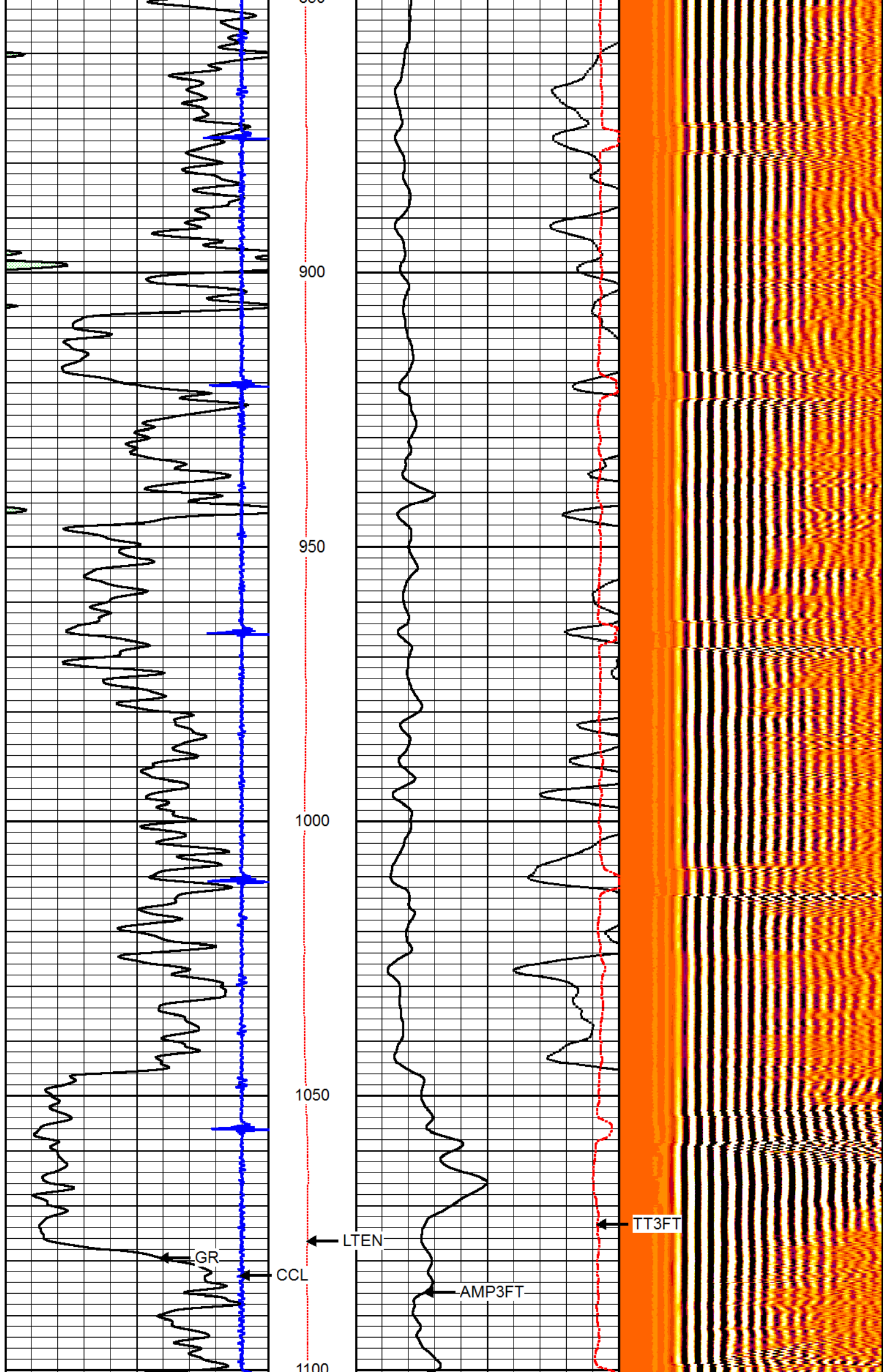
SCALE 1:240

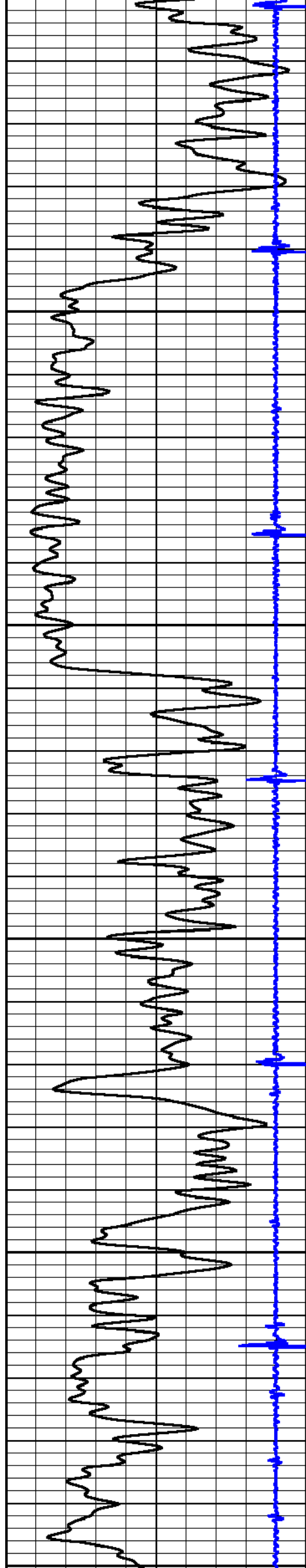
Database File	15203202810000_hartman_rose_4_1_cbl.db
Dataset Pathname	pass3
Presentation Format	cbl_lib
Dataset Creation	Mon Aug 25 12:06:55 2014
Charted by	Depth in Feet scaled 1:240

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			

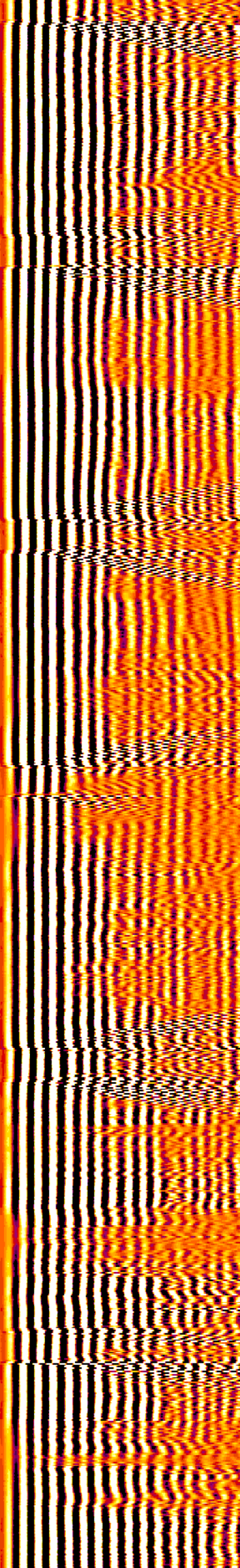
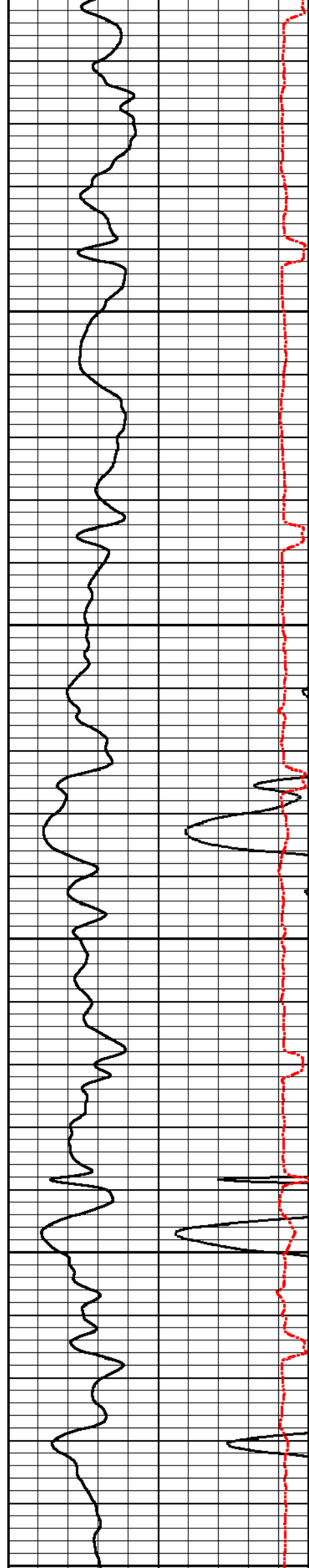


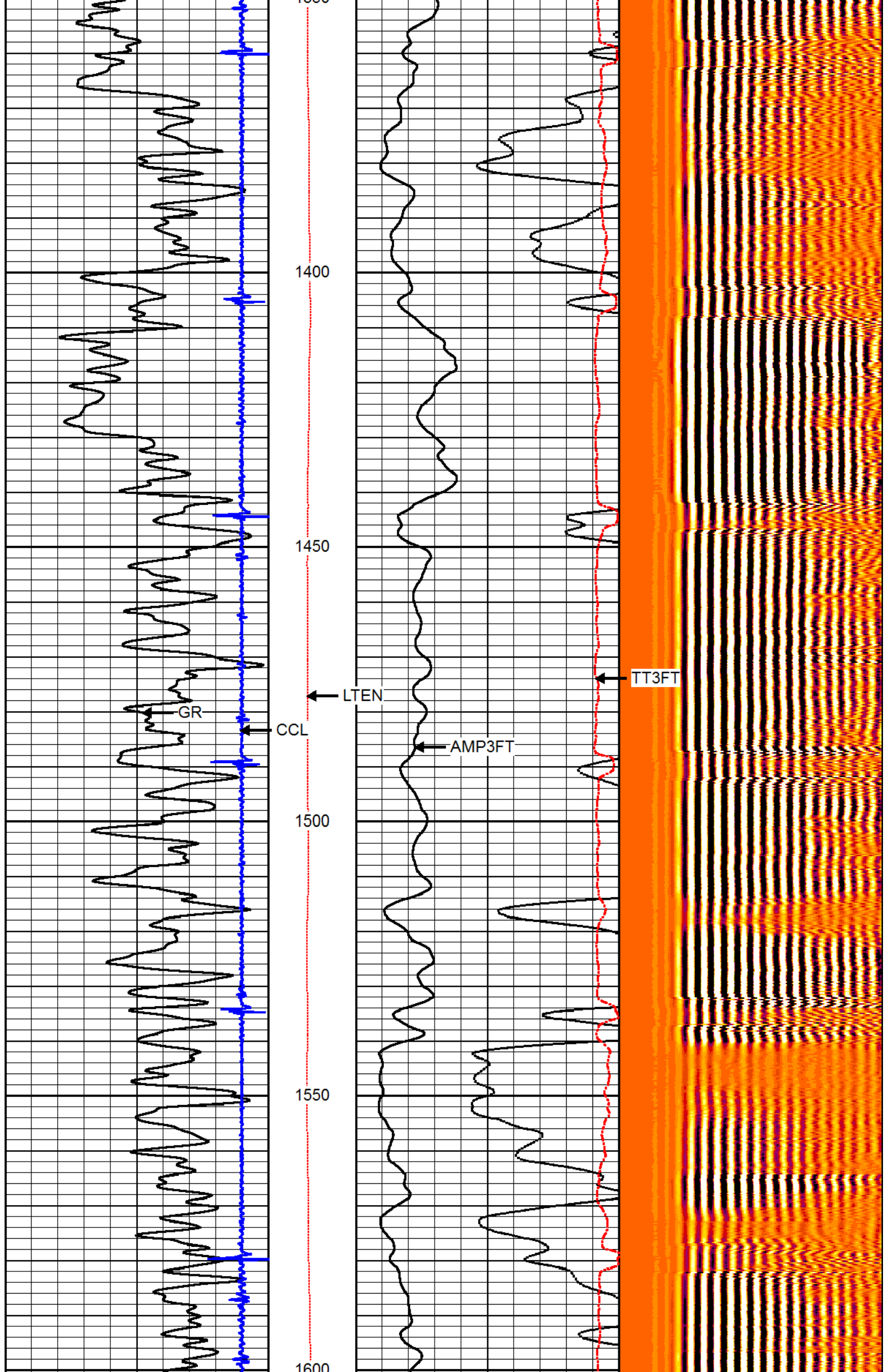


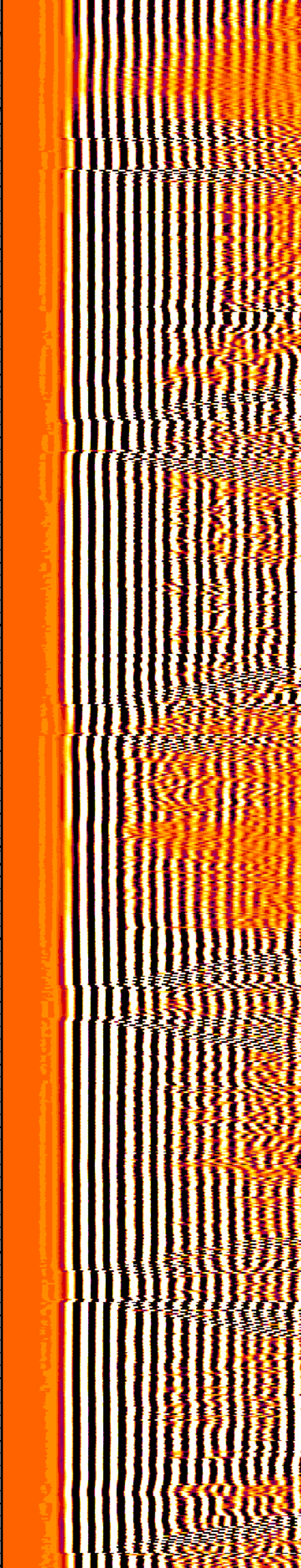
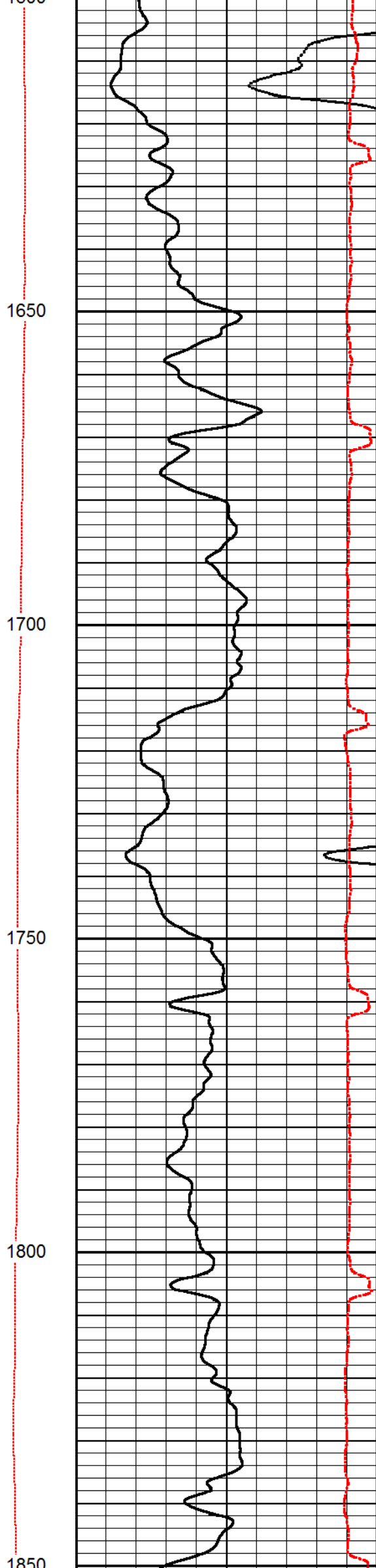
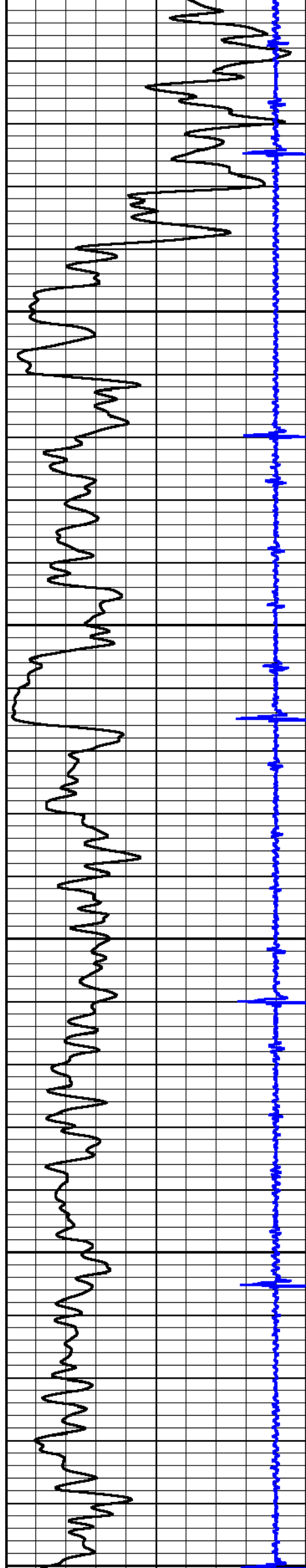


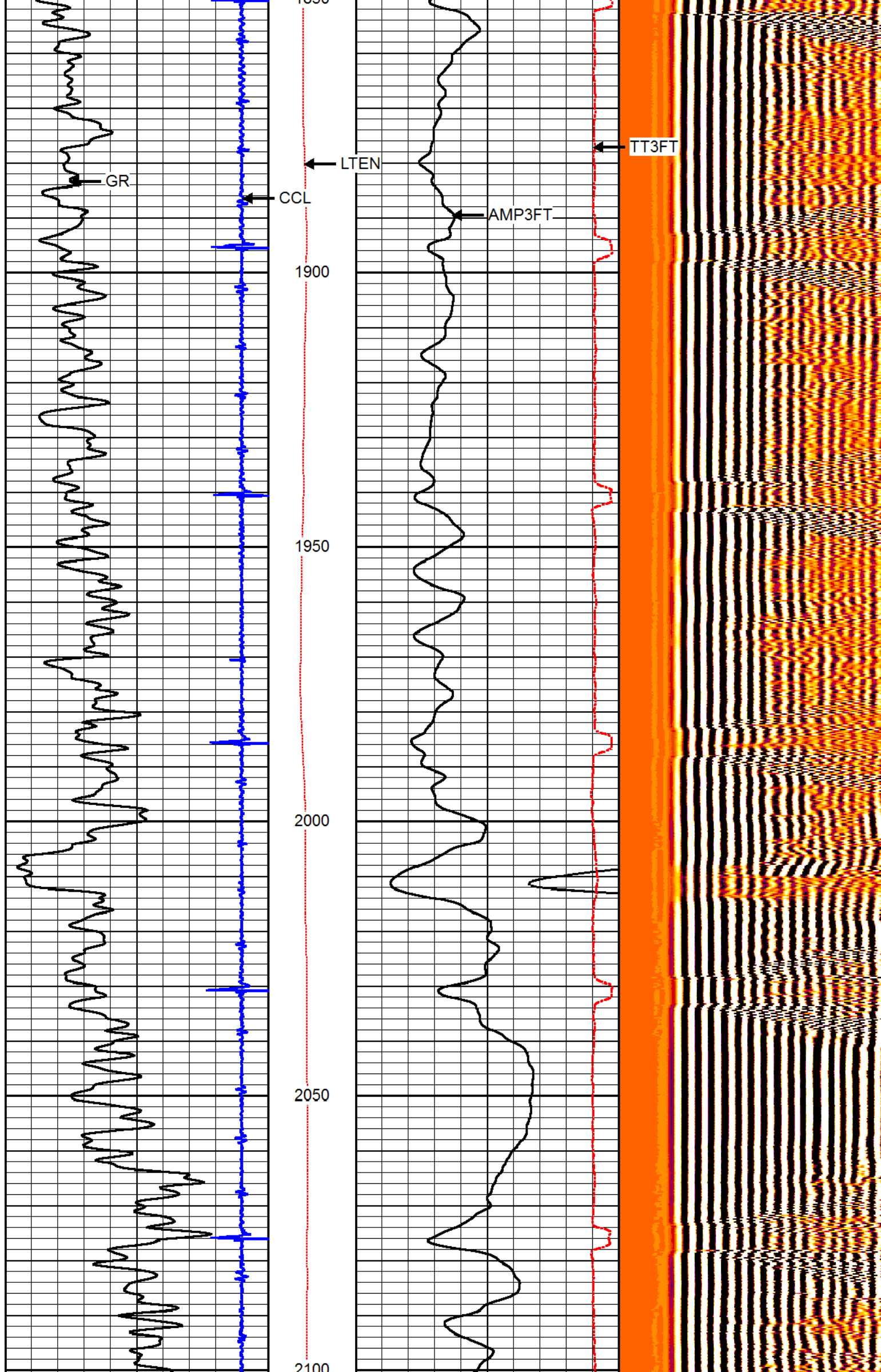


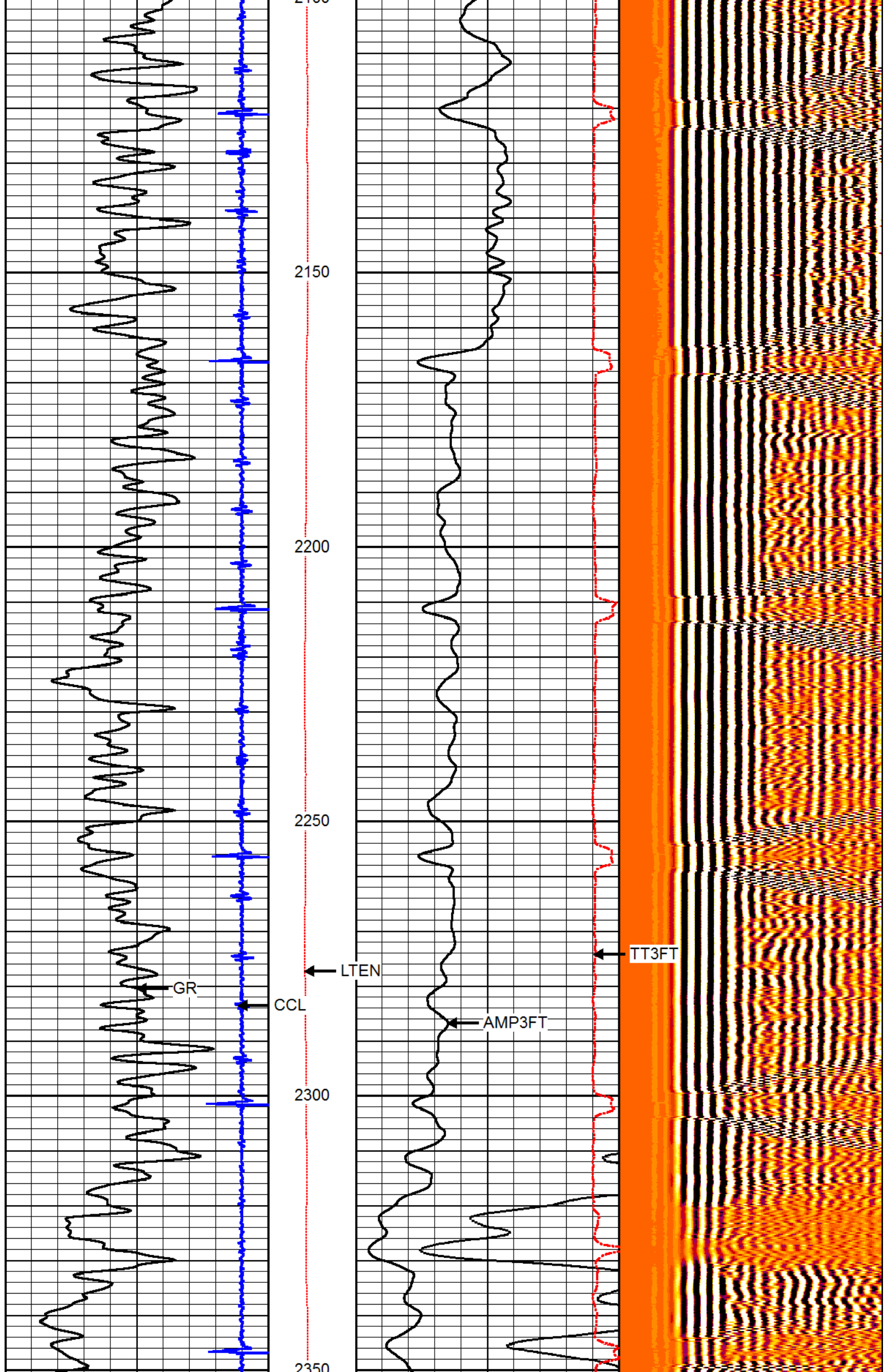
1150
1200
1250
1300
1350

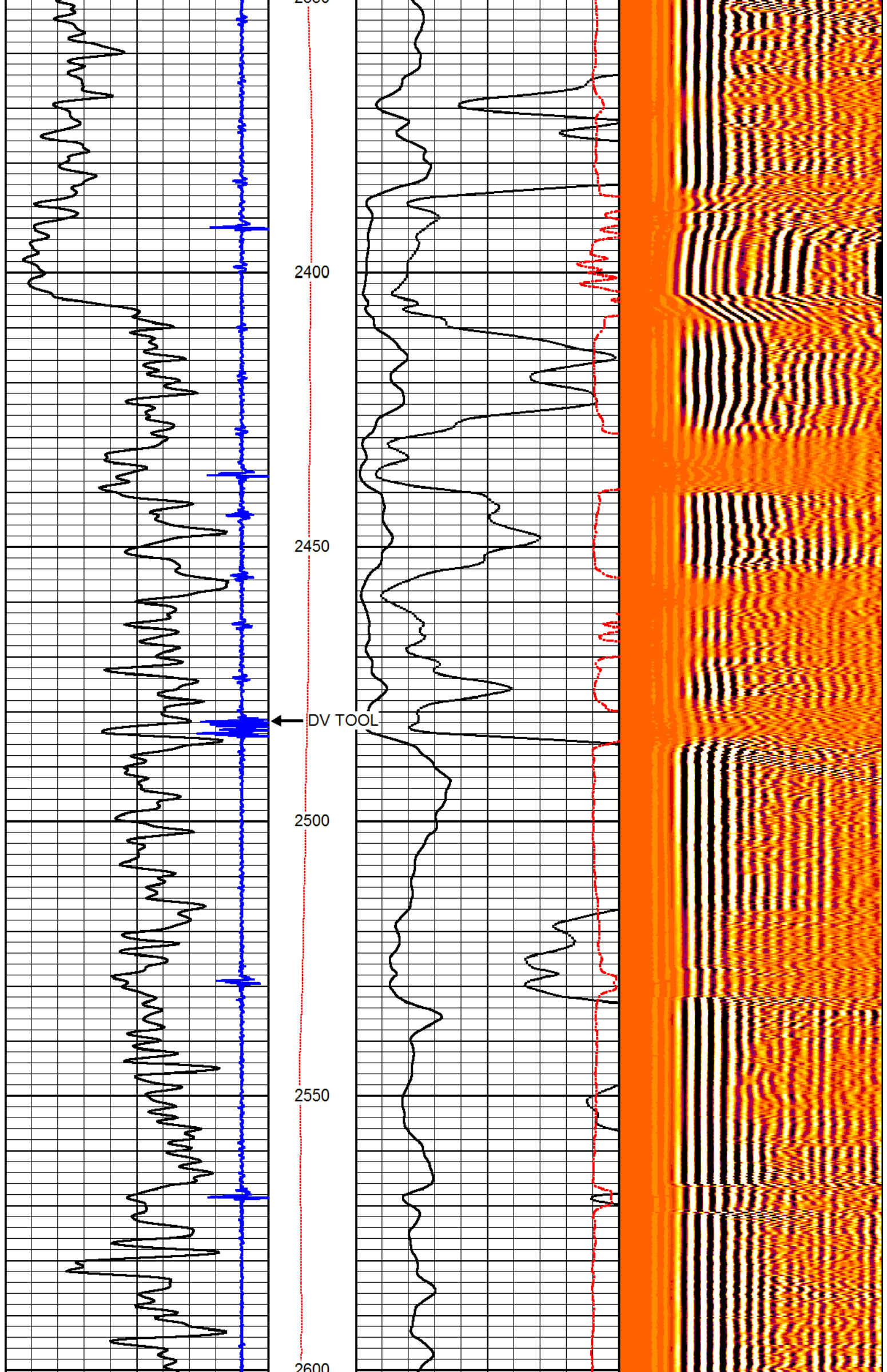


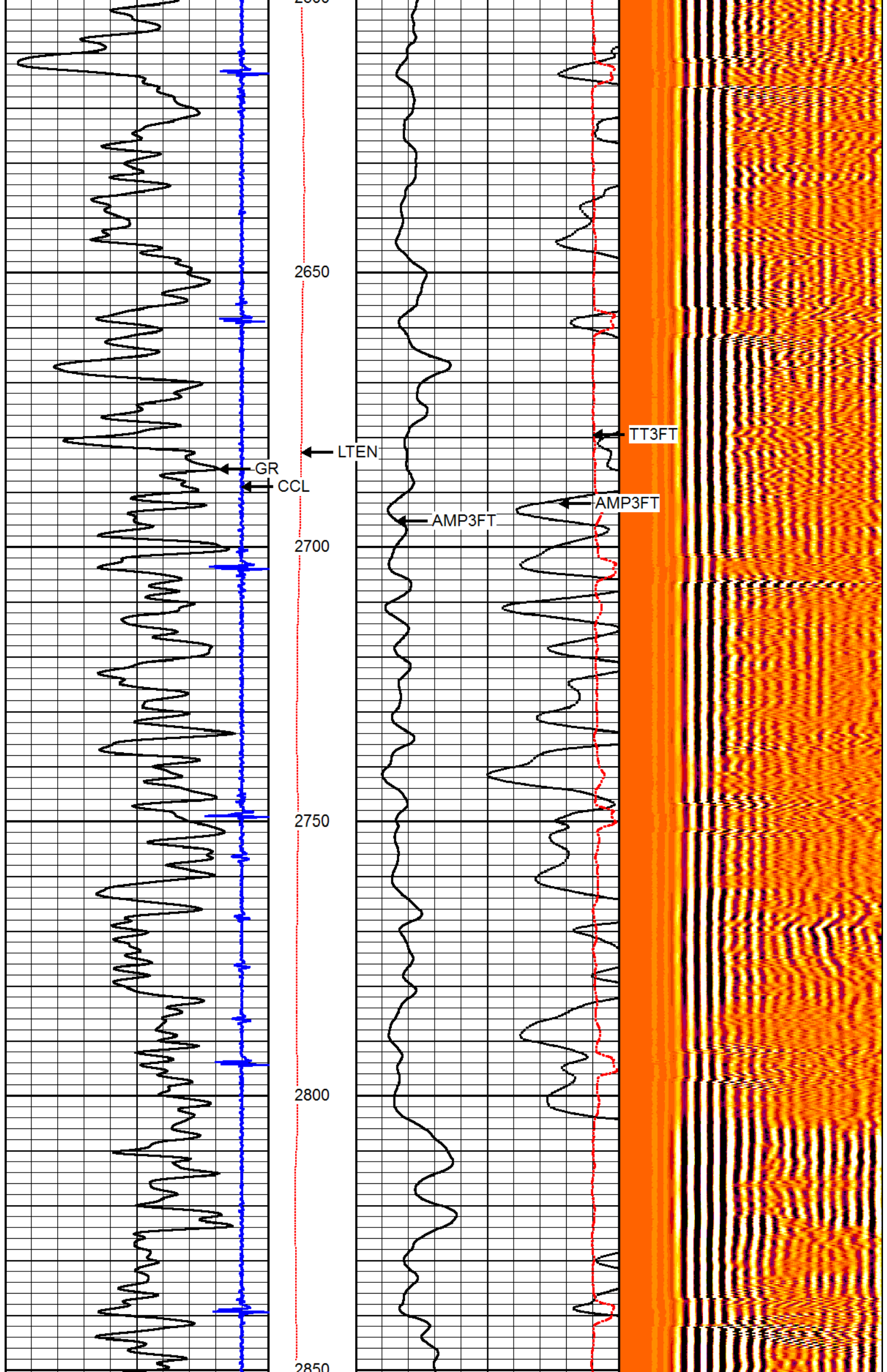


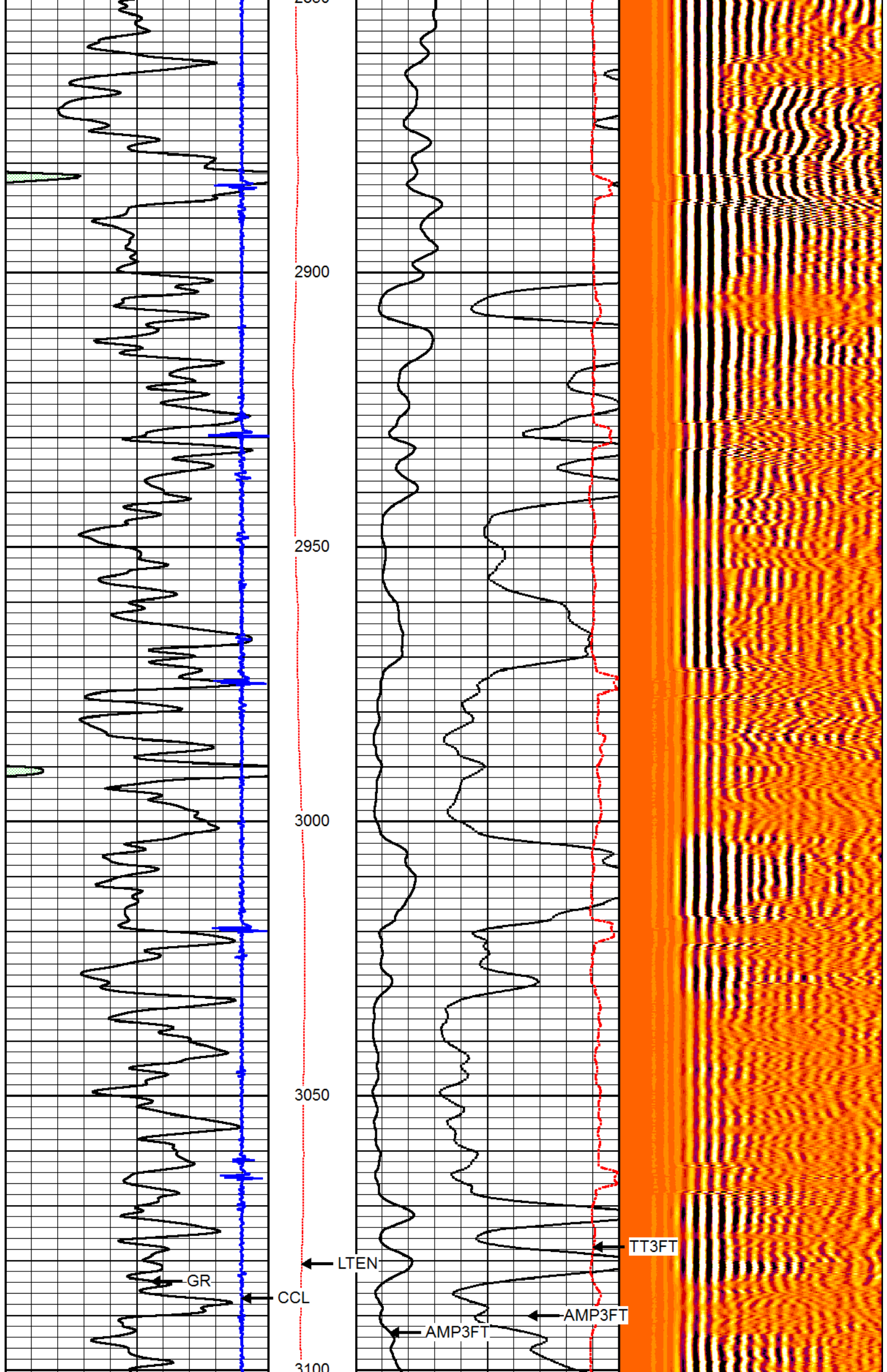


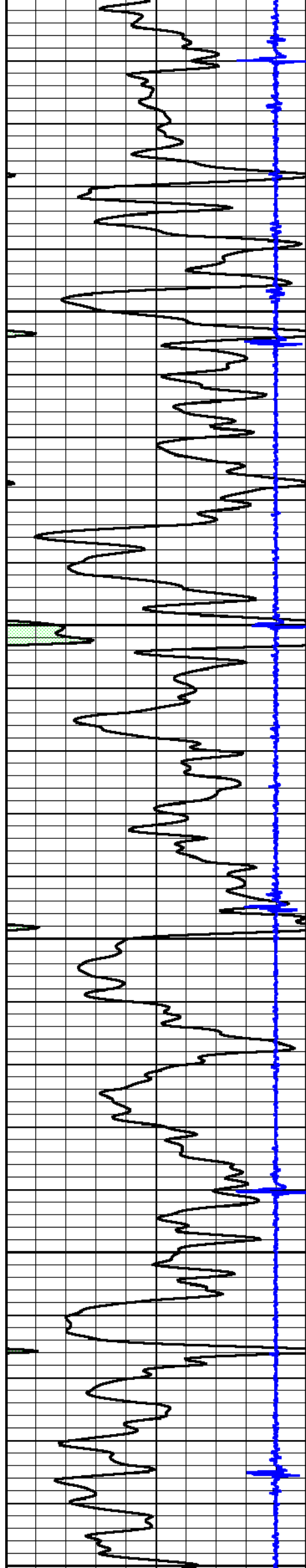




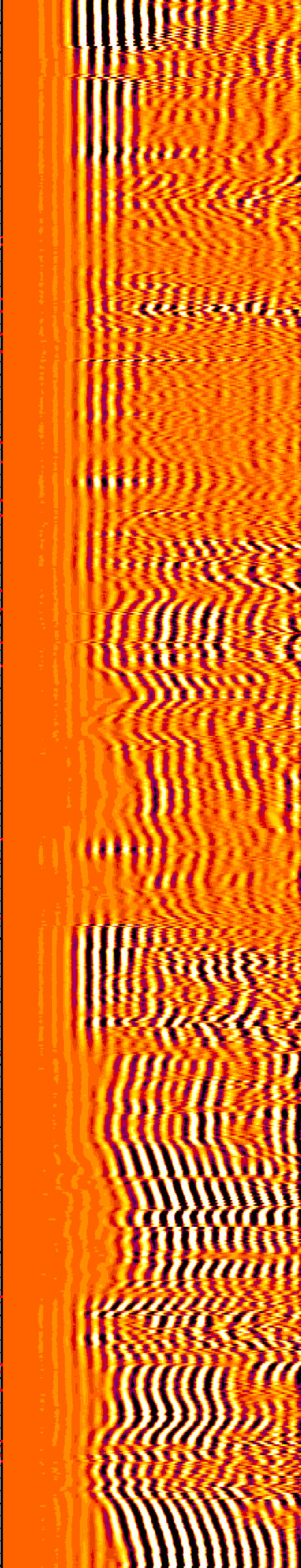
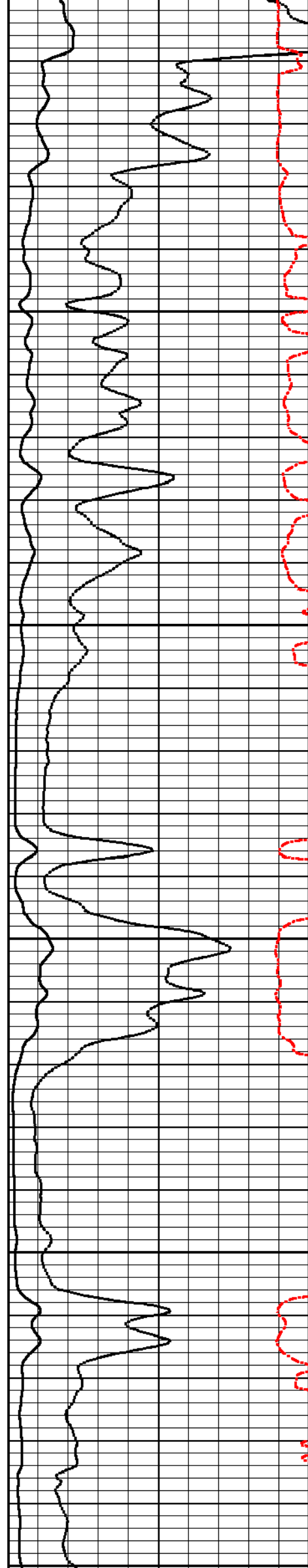


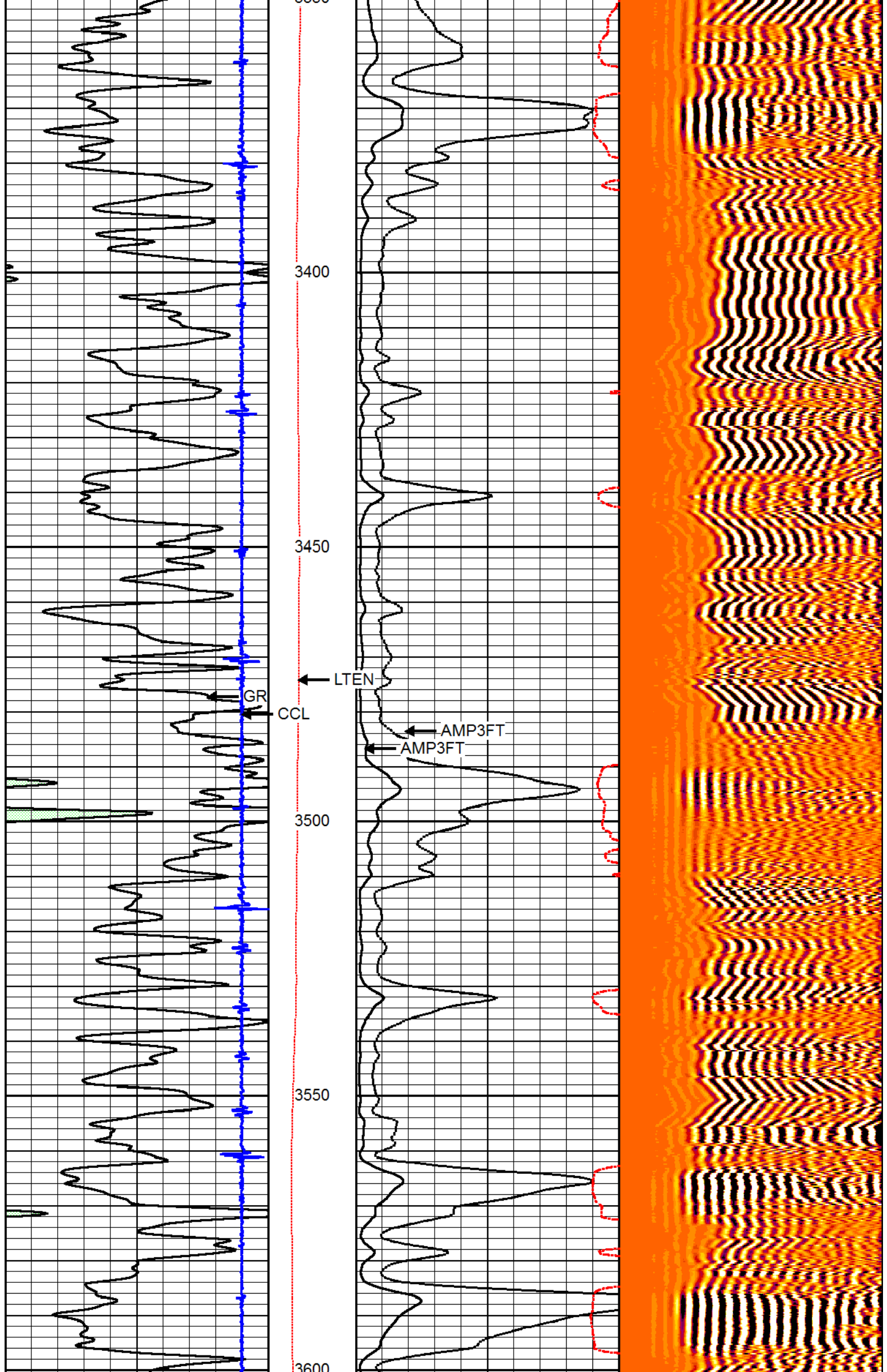


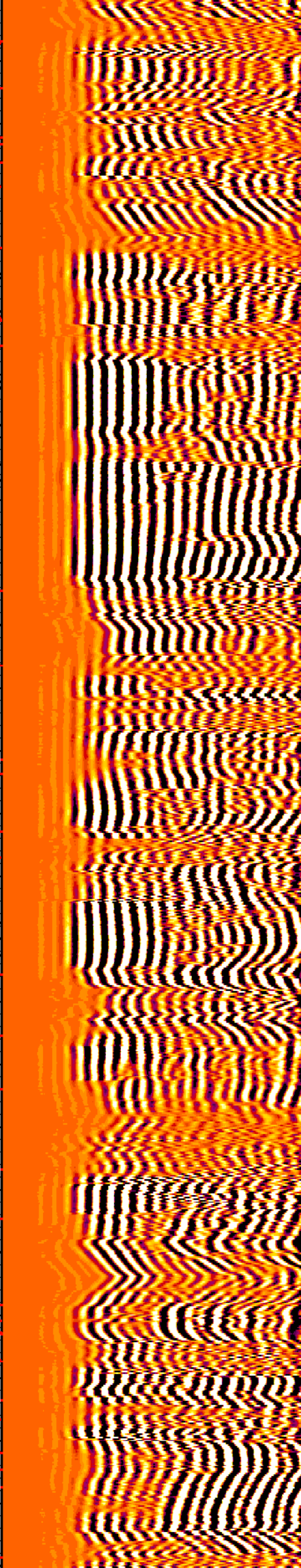
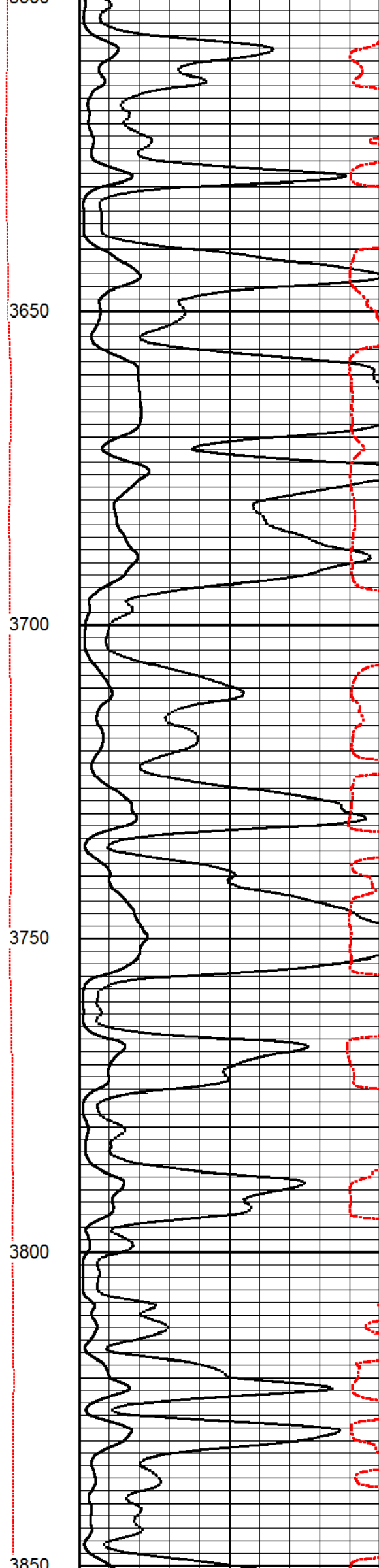
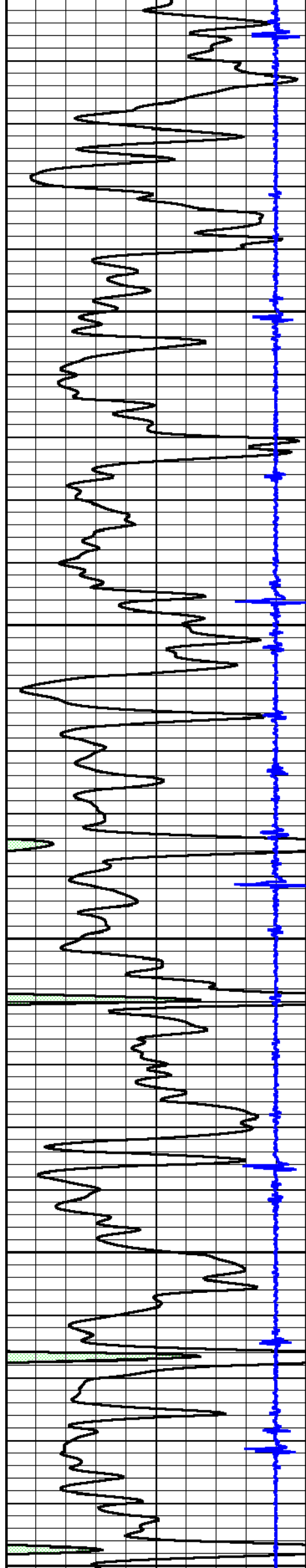


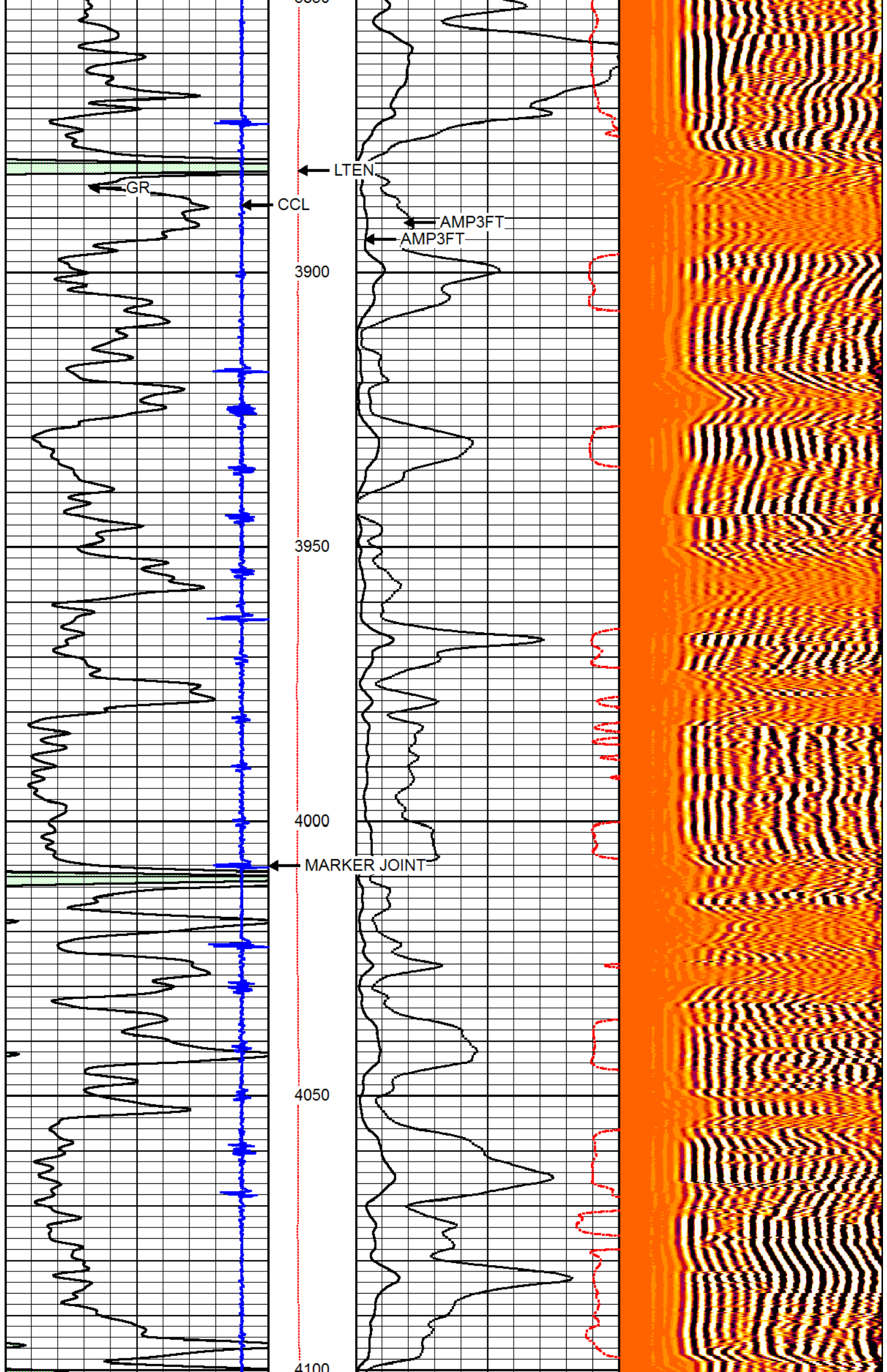


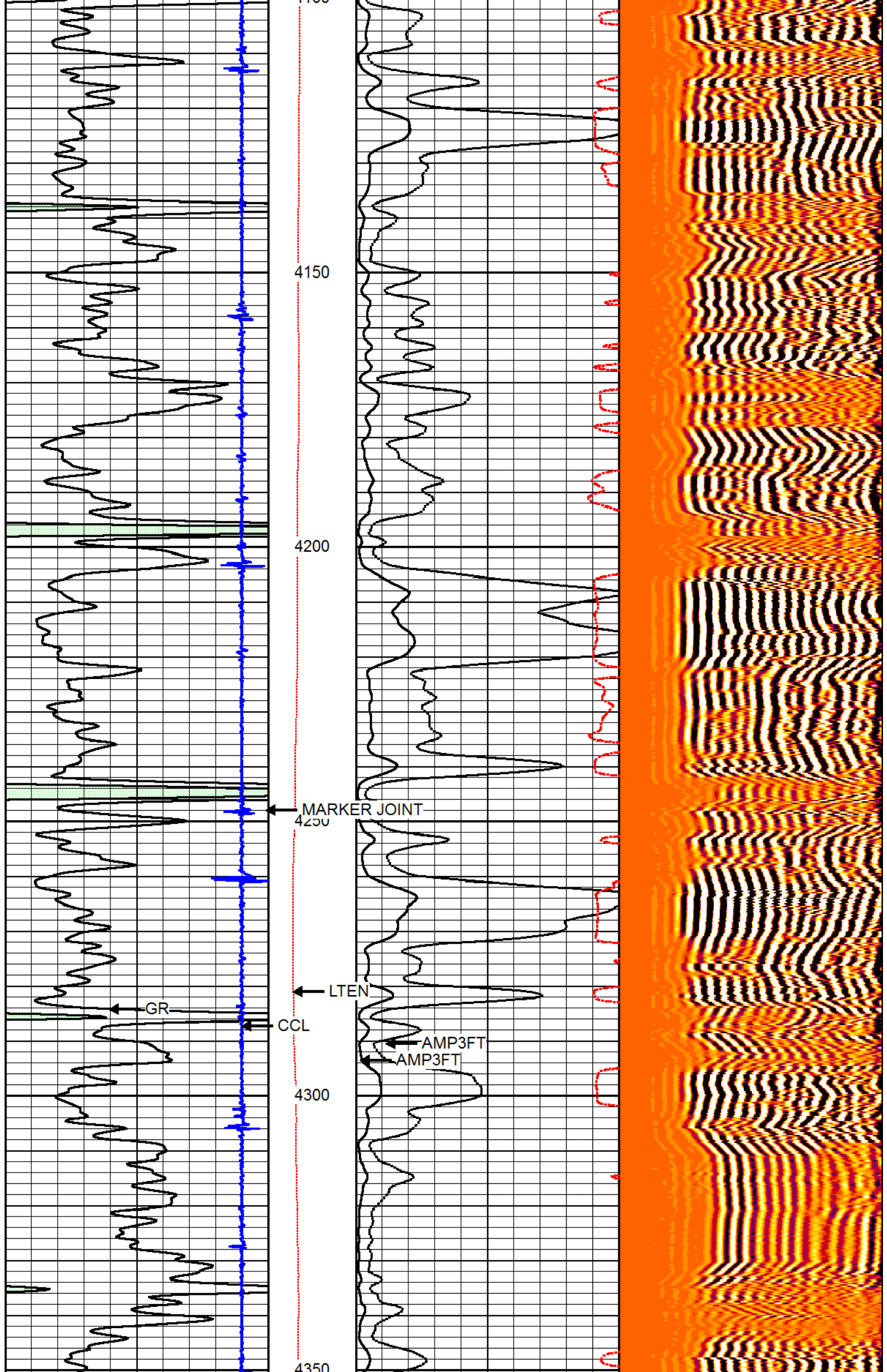
3100
3150
3200
3250
3300
3350

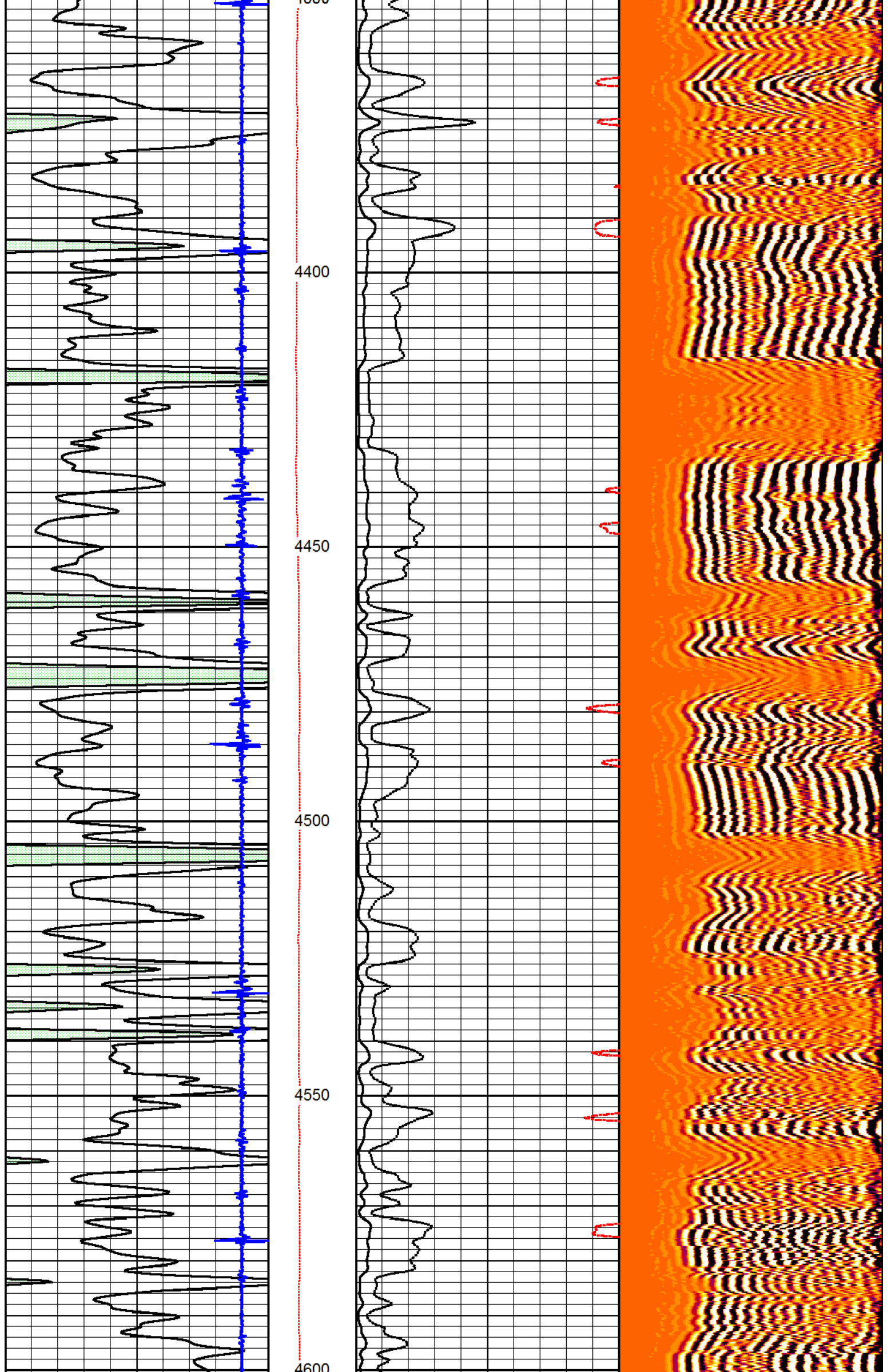


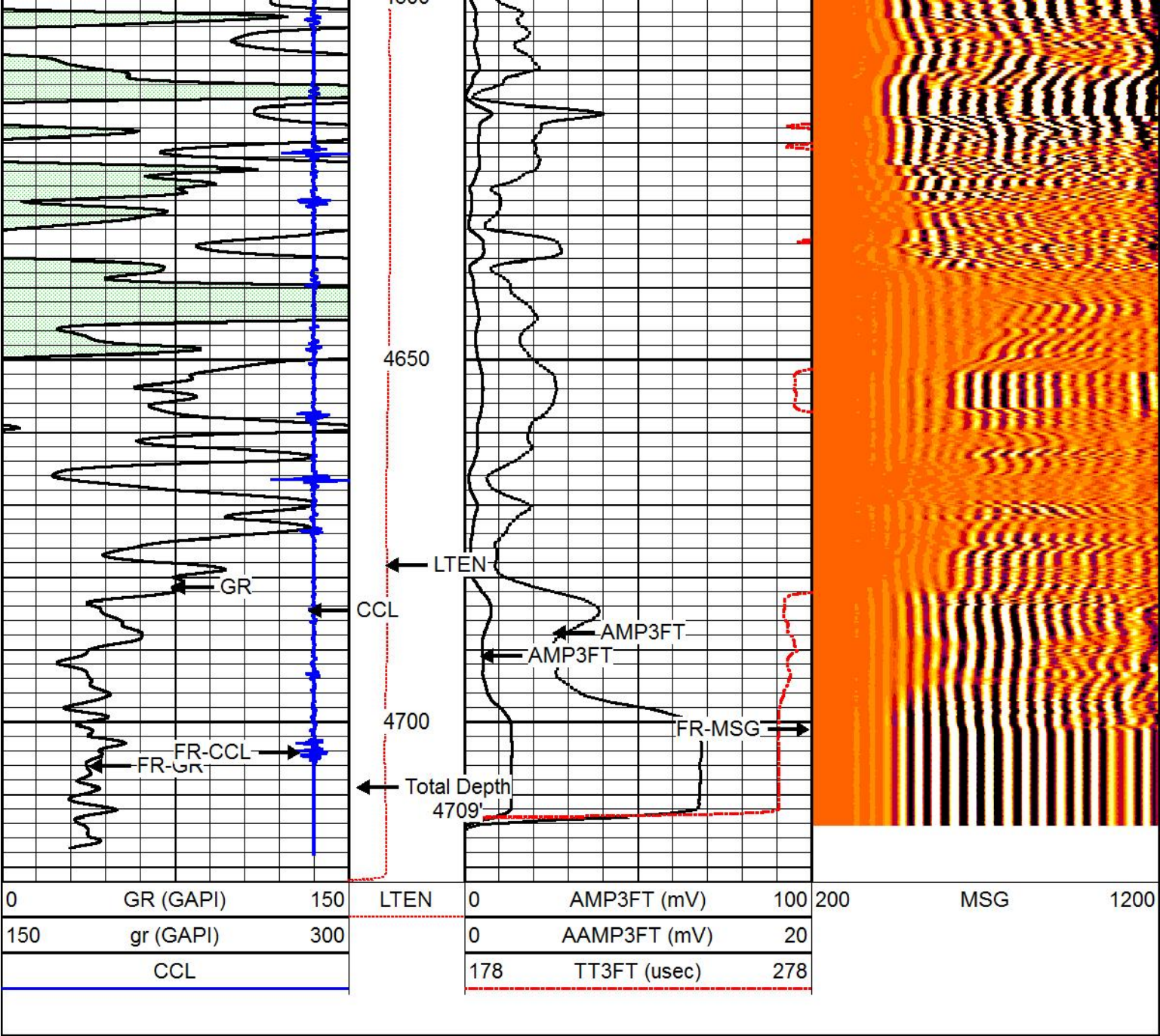










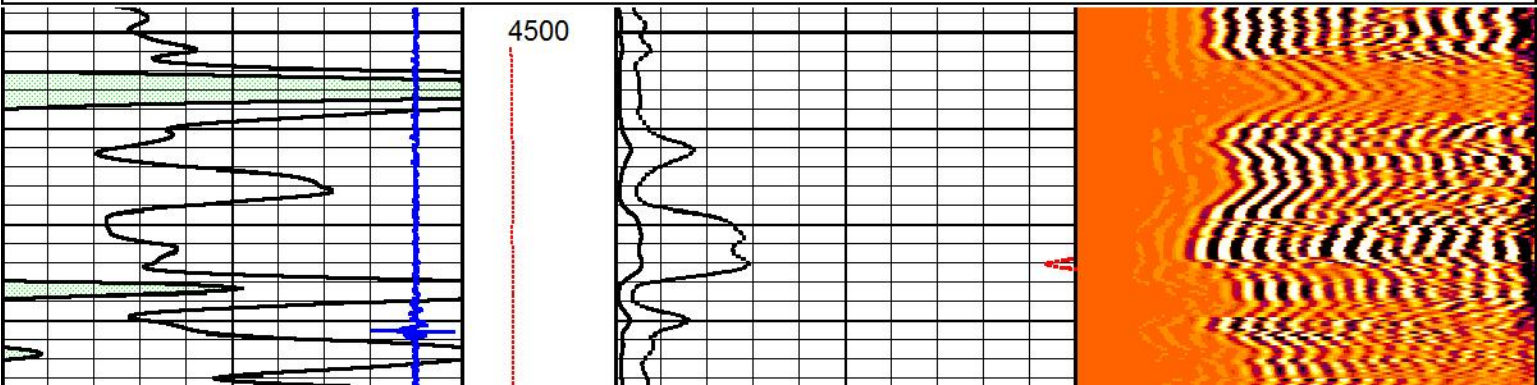


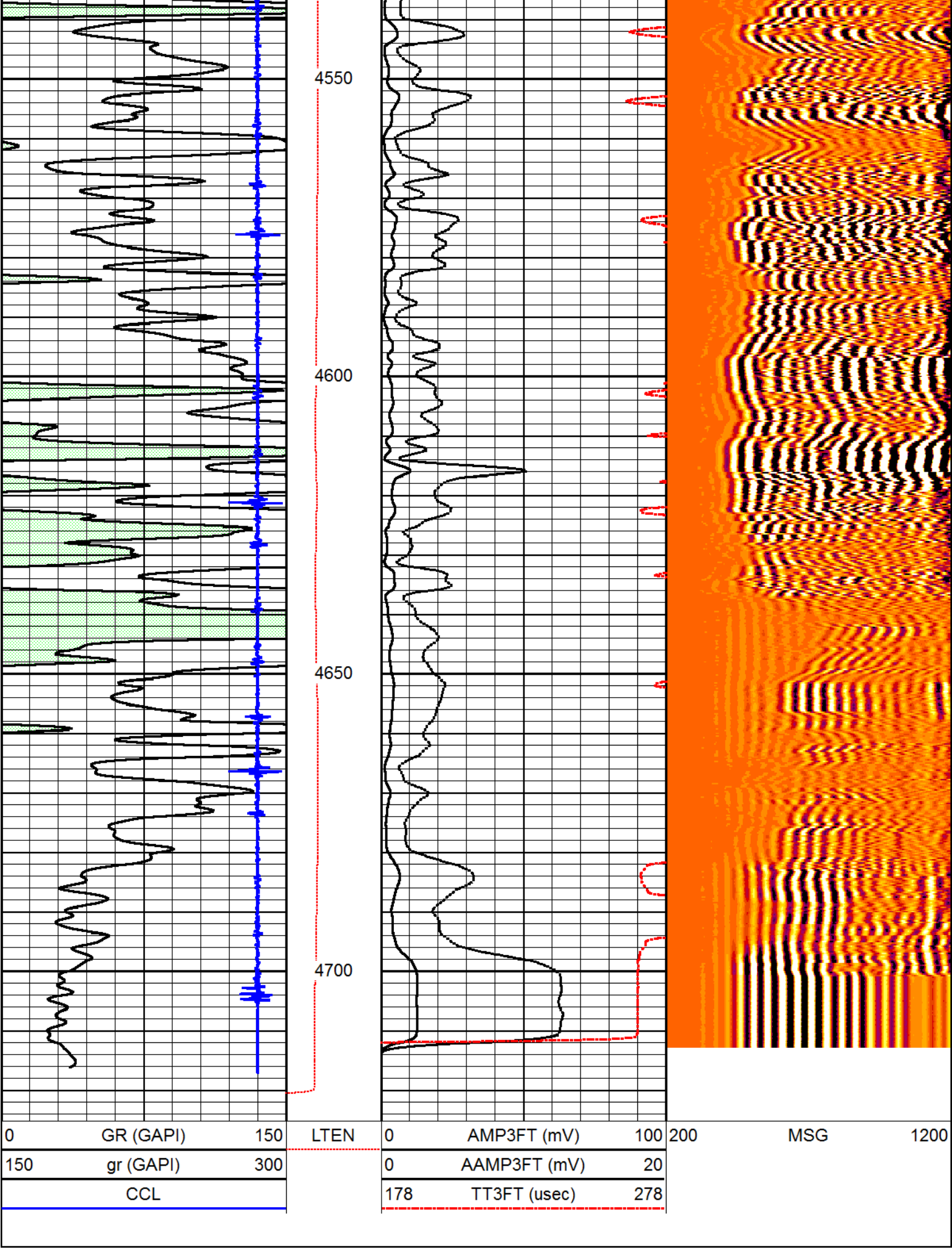
REPEAT SECTION

HALLIBURTON

Database File 15203202810000_hartman_rose_4_1_cbl.db
Dataset Pathname pass2
Presentation Format cbl_lib
Dataset Creation Mon Aug 25 12:01:05 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			





Calibration Report	
Database File	15203202810000_hartman_rose_4_1_cbl.db
Dataset Pathname	pass3
Dataset Creation	Mon Aug 25 12:06:55 2014
Gamma Ray Calibration Report	
Type / Serial:	Probe275dig / 060738
SHOP CALIBRATION	Fri Aug 08 09:33:41 2014

	Counts/Sec.	Gain	Offset	Jig	Units
Background	55.2				cps
Calibrator	374.0				cps
		1.0906			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
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Serial Number:	080640		
Tool Model:	Probe		
Calibration Casing Diameter:	5.500	in	
Calibration Depth:	2059.813	ft	

Master Calibration, performed Mon Aug 25 11:45:26 2014:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.292	0.000	71.921	55.661	-0.010
CAL	0.012	1.169				
5'	0.070	1.207	0.000	71.921	63.257	-4.427
SUM						
S1	0.037	1.290	0.000	100.000	79.777	-2.945
S2	0.019	1.342	0.000	100.000	75.545	-1.399
S3	0.010	1.260	0.000	100.000	80.013	-0.816
S4	0.003	1.173	0.000	100.000	85.486	-0.283
S5	-0.014	1.194	0.000	100.000	82.765	1.162
S6	0.002	1.260	0.000	100.000	79.486	-0.122
S7	-0.002	1.364	0.000	100.000	73.215	0.114
S8	0.010	1.381	0.000	100.000	72.930	-0.695

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.169	1.000	0.000

Air Zero Calibration, performed (Not Performed):			
	Raw (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
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

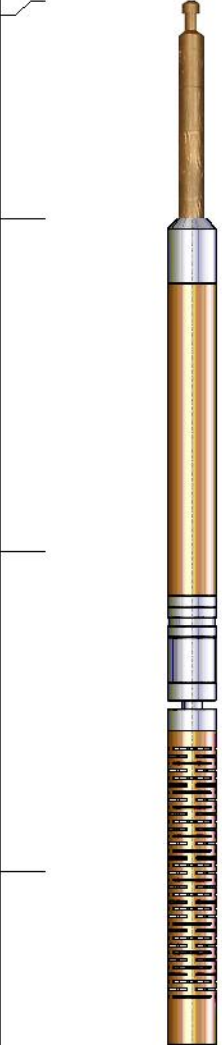
Temperature Calibration Report			
Serial Number:	080640		
Tool Model:	Probe		
Performed:	Mon Jun 10 14:52:07 2013		
	Reference	Reading	
Low Reference:	89.00 degF	101.15 degF	
High Reference:	134.00 degF	144.83 degF	
Gain:	1.03		
Offset:	-16.00		
Delta Spacing	1		

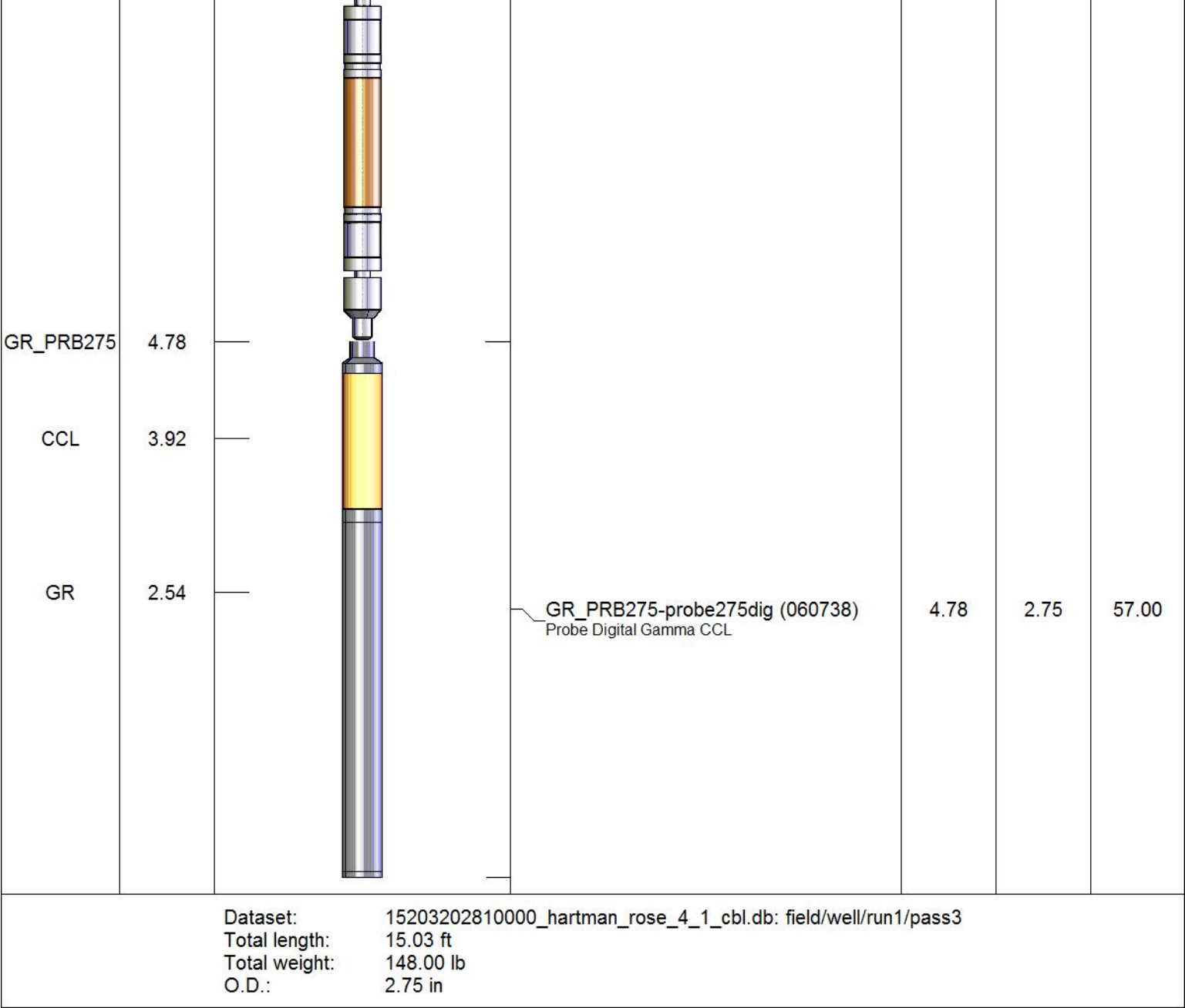
Log Variables

DatabaseC:\ProgramData\Warrior\Data\15203202810000_hartman_rose_4_1_cbl.db
Dataset field/well/run1/pass3

Top - Bottom

BHTEMP_Src 1	PPT usec 278	CASEWGHT lb/ft 15.5	MAXAMPL mV 72	MINAMPL mV 1	MINATTN db/ft 0.8	SRFTEMP degF 0
MudWgt lb/gal 9.5	CASETHCK in 0	CASEOD in 5.5	PERFS 0	TDEPTH ft 4709	BOTTEMP degF 128	BITSIZE in 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	HARTMAN OIL				
Well	ROSE 4-1				
Field	AMERICAN BEAUTY				
County	WICHITA	State	KANSAS		
HALLIBURTON		CEMENT BOND LOG			
		SCALE 1:240			