



CEMENT BOND  
GAMMA RAY  
CCL LOG

WELL SOLUTIONS


PATRIOT

Company NOBLE ENERGY		Country USA					
Well DIETRICH C 7-18D		Well DIETRICH C 7-18D					
Field WATTENBERG		Field WATTENBERG					
County WELD		County WELD					
State COLORADO		State COLORADO					
Country USA		Country USA					
Location: API # : 05-123-34355		Other Services					
SEC 7 TWP 4N RGE 64W		Elevation					
Permanent Datum		K.B.					
Log Measured From		D.F.					
Drilling Measured From		G.L.					
Date 1/8/20		Run Number RUN 1 PASS 5					
Depth Driller							
Depth Logger							
Bottom Logged Interval							
Top Log Interval							
Open Hole Size							
Type Fluid H2O							
Density / Viscosity							
Max. Recorded Temp.							
Estimated Cement Top							
Time Well Ready 7:00							
Time Logger on Bottom 15:30							
Equipment Number 1016							
Location BRIGHTON							
Recorded By HARPER							
Witnessed By RECORD							
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Mgt/Ft	Top	Bottom			
Surface String							
Prot. String							
Production String							
Liner							

<<< 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

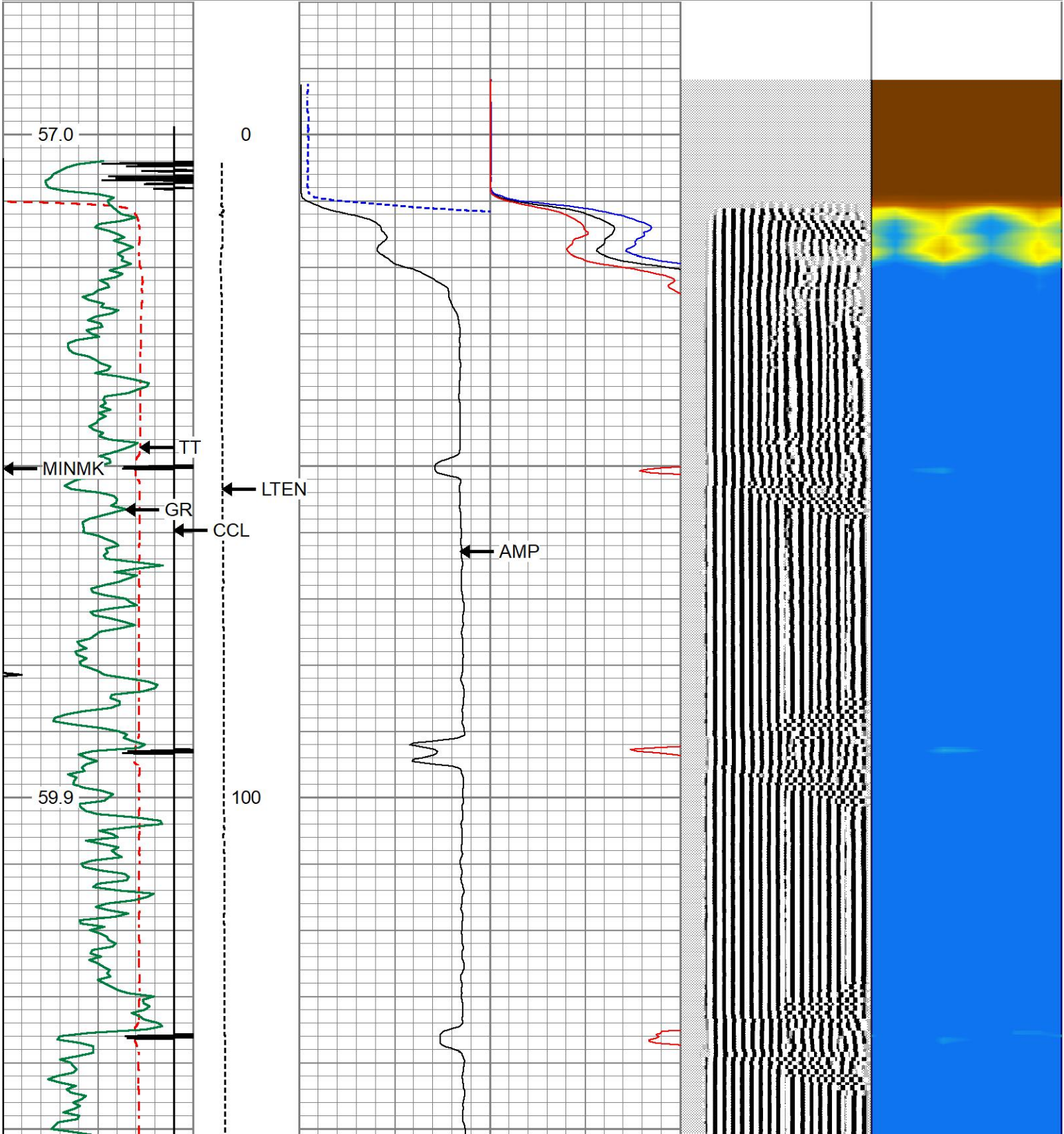
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan-1.4375 1 7/16 Titan Type II Cable Head	1.03	1.44	5.00

			Tek-2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
WVFSYNC	16.00					
WVFCAL	16.00					
TEMP	14.87					
WVFS8	13.58					
WVFS7	13.58		SCBLTEKSECT-275 Temp JS (IBUCO03)	9.13	2.75	130.00
WVFS6	13.58		TekCo 2 3/4" 400 Deg. F Sector Tool with Temperature (JS)			
WVFS5	13.58					
WVFS4	13.58					
WVFS3	13.58					
WVFS2	13.58					
WVFS1	13.58					
WVF3FT	12.83					
WVF5FT	11.83					
WVFTEMP	8.50					
			Tek-2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
CCL	4.62		CCL-275tekco (257) Tekco 2 3/4" 450 Deg. F Rare Earth Magnets	1.83	2.75	33.00
GR	1.31		GR-Tek-Co 2 3/4 (234GR4-267) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray	3.67	2.75	40.00
			Titan-1.375_Cap Titan 1 3/8" Cap	0.27	1.38	1.00
Dataset: dietrich c07-18d cbl.db: field/well/run1/pass5 Total length: 21.39 ft Total weight: 259.00 lb O.D.: 2.75 in						

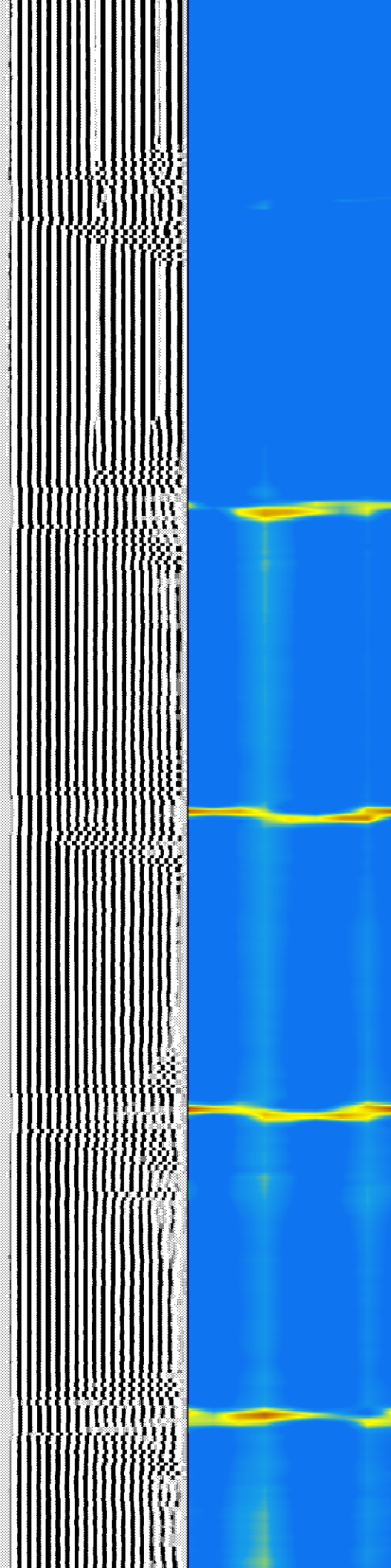
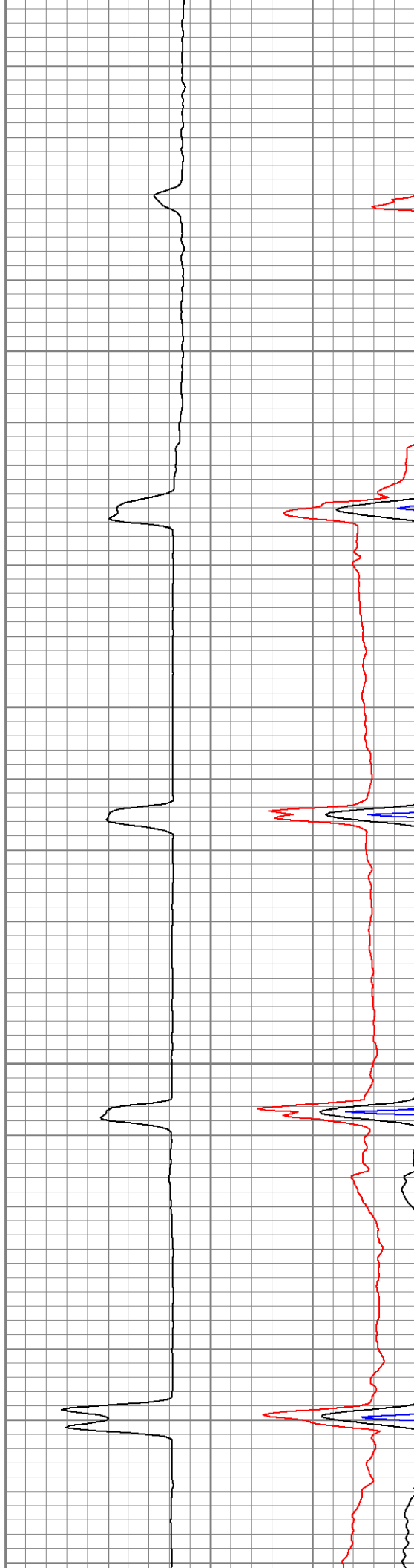
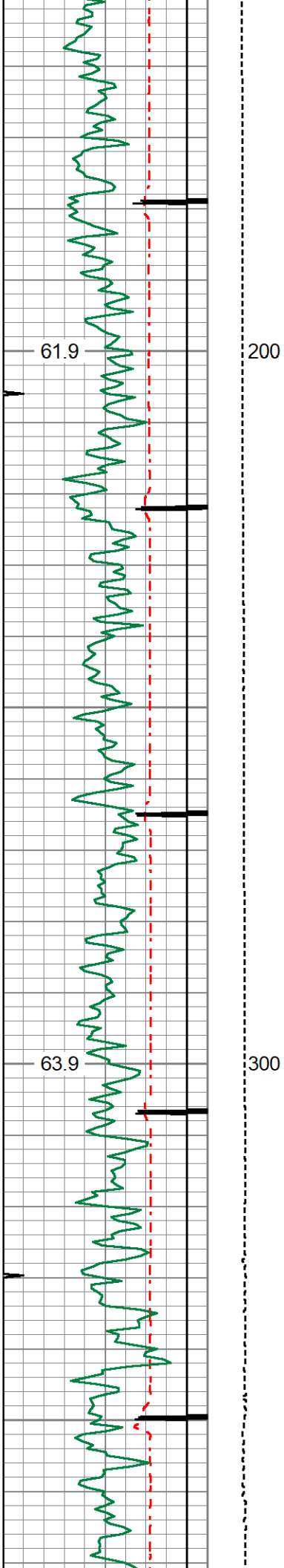
Database File     dietrich c07-18d cbl.db  
Dataset Pathname     pass5  
Presentation Format     1patriotradii  
Dataset Creation     Wed Jan 08 15:41:25 2020  
Charted by     Depth in Feet scaled 1:240

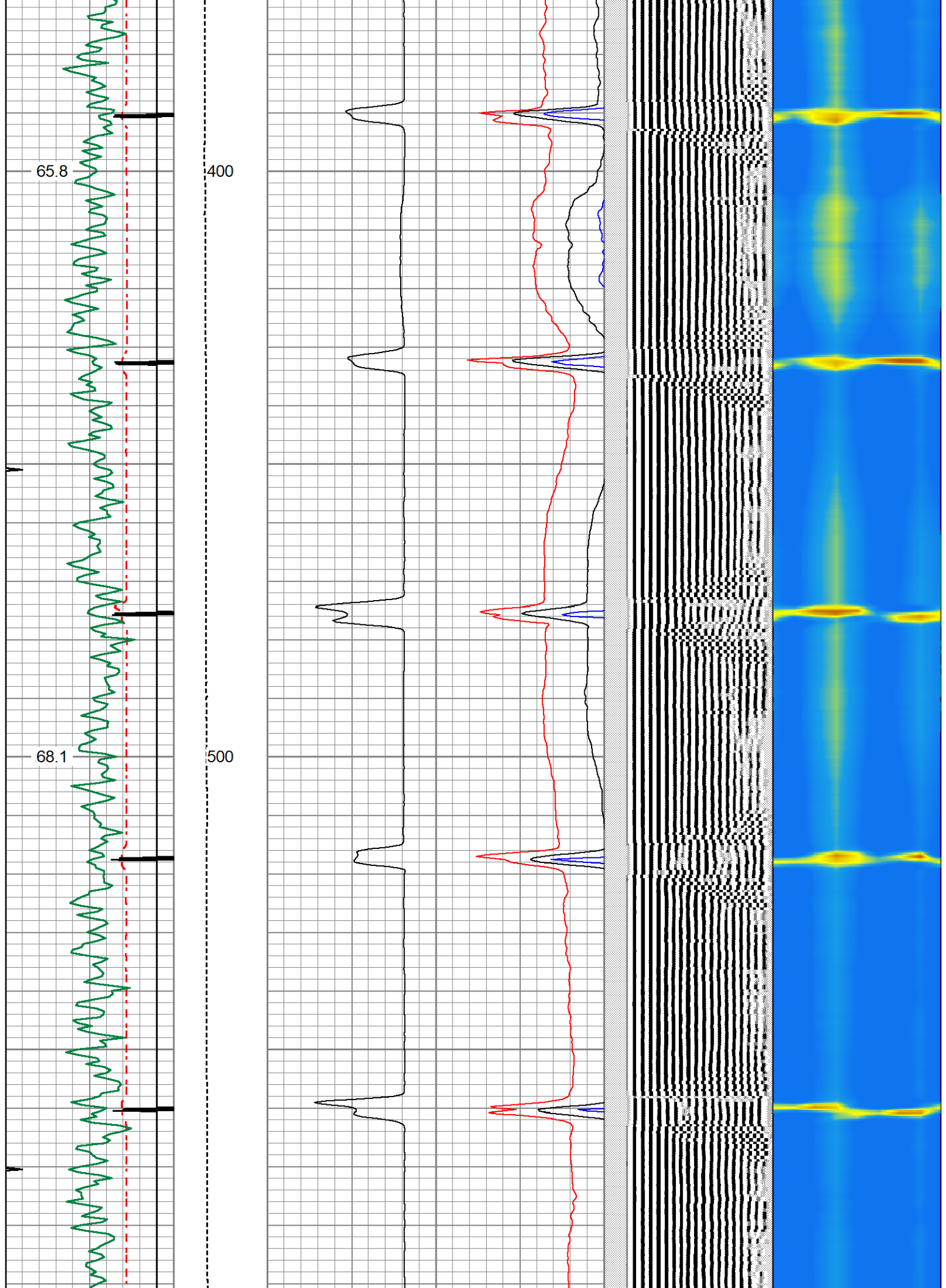
400	TT (usec)	200	LTEN	0	AMP (mV)	100	0	AMPAVG	100	200	VDL (usec)	1200	1	RADIAL MAP	8
0	GR	150	0 (lb/1000)	0	3FT X 5 (mV)	20	0	AMPMAX	100						
9	CCL	-1					0	AMPMIN	100						

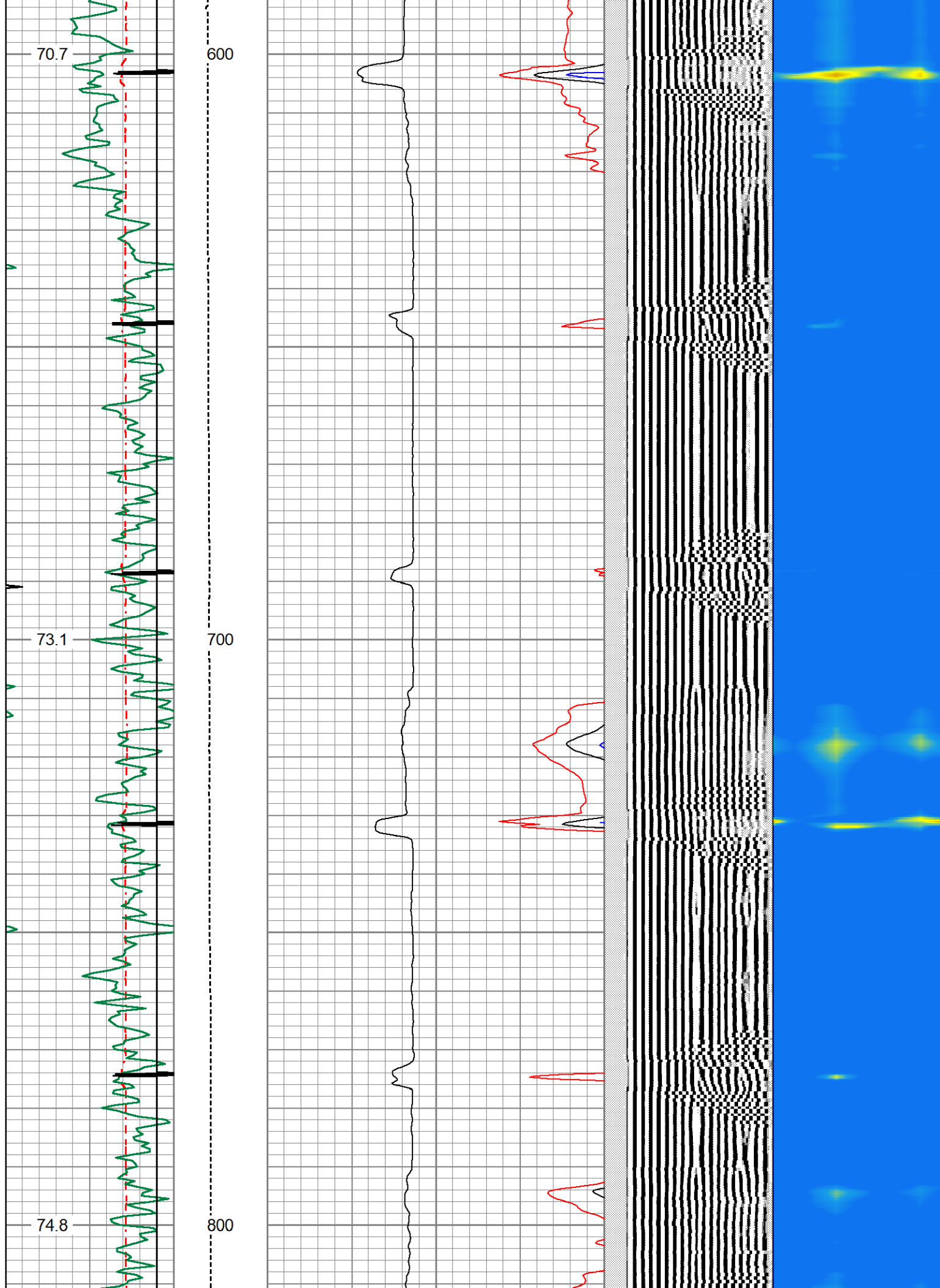
TEMP  
(degF)

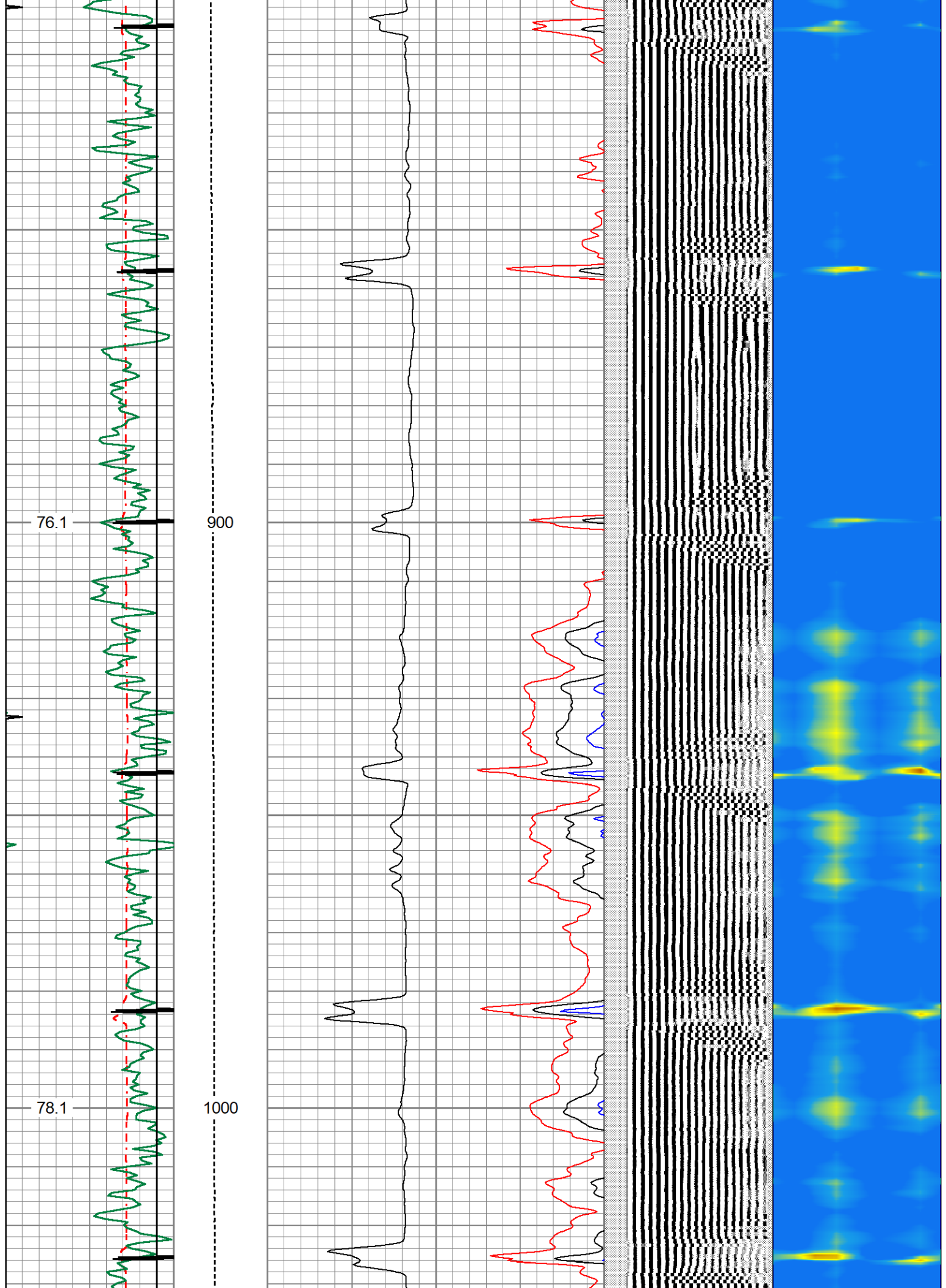




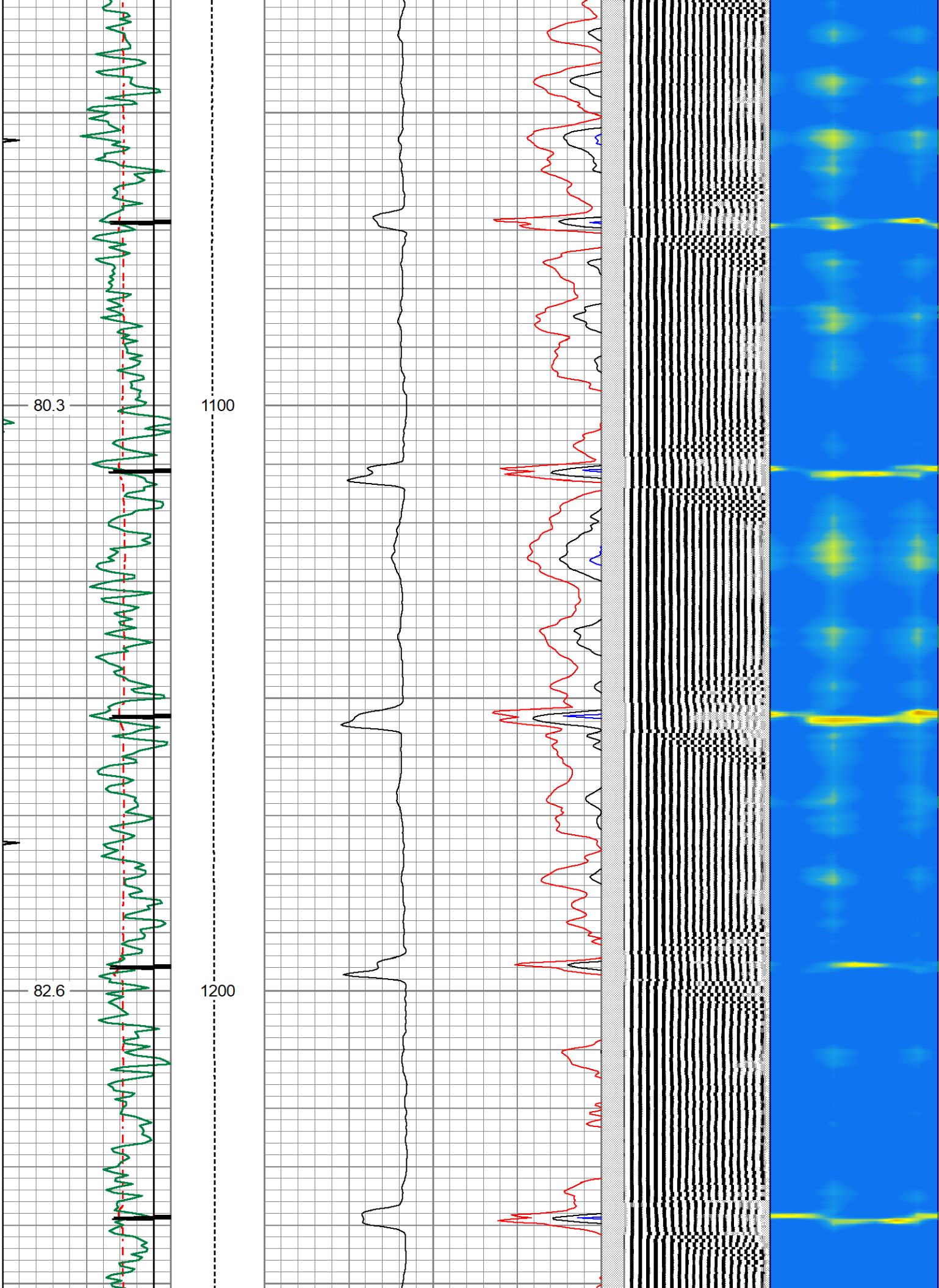




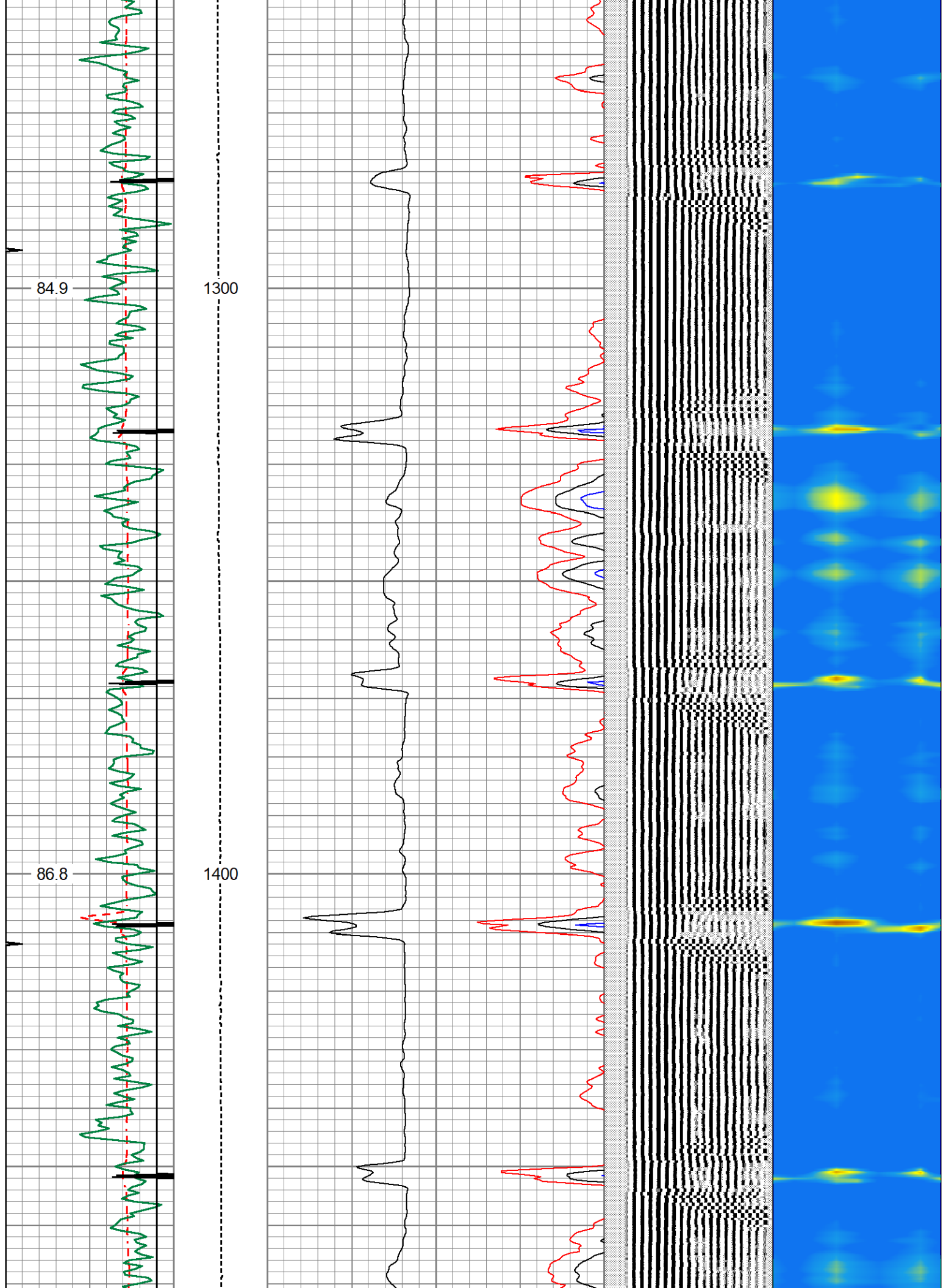


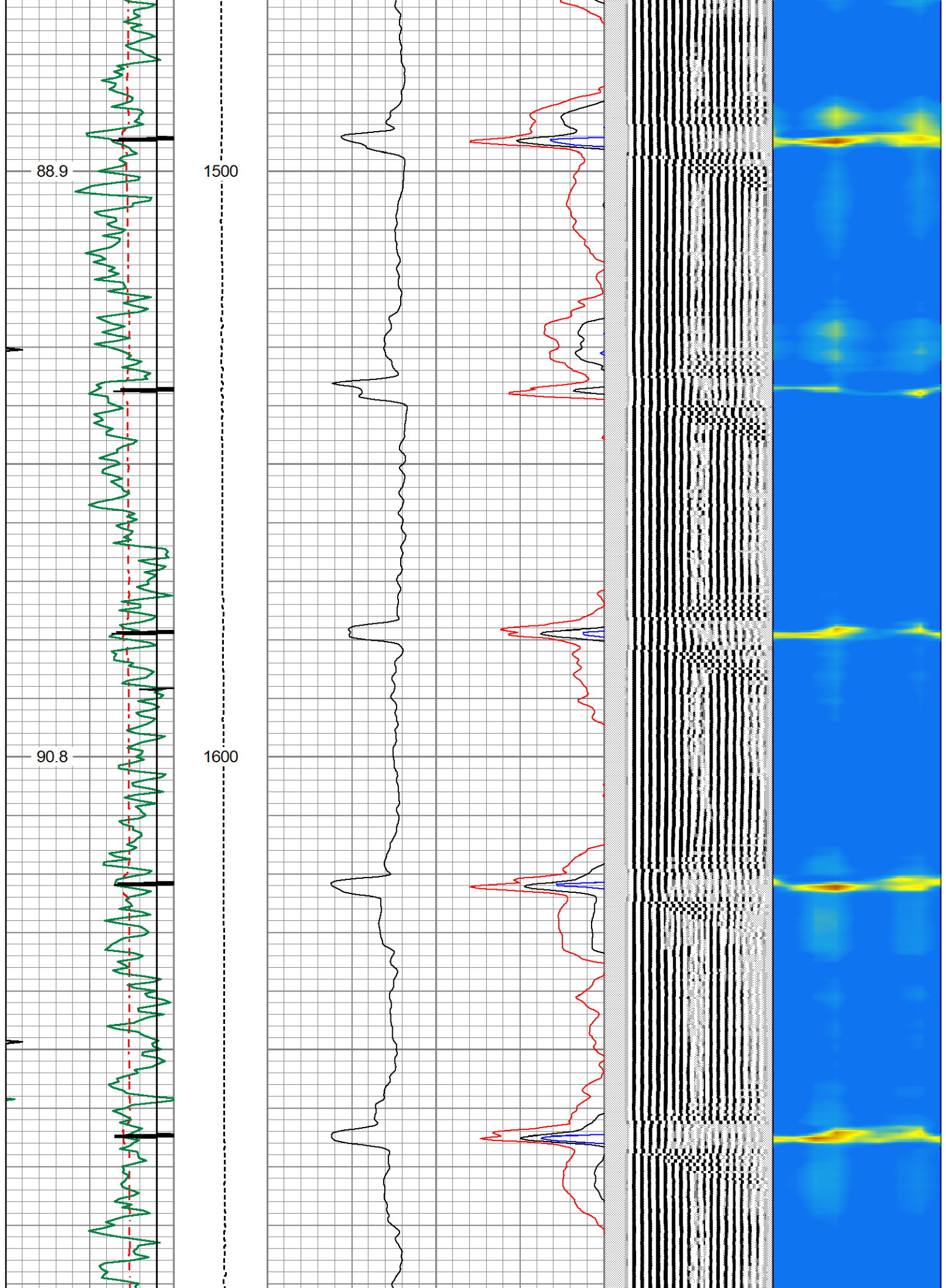


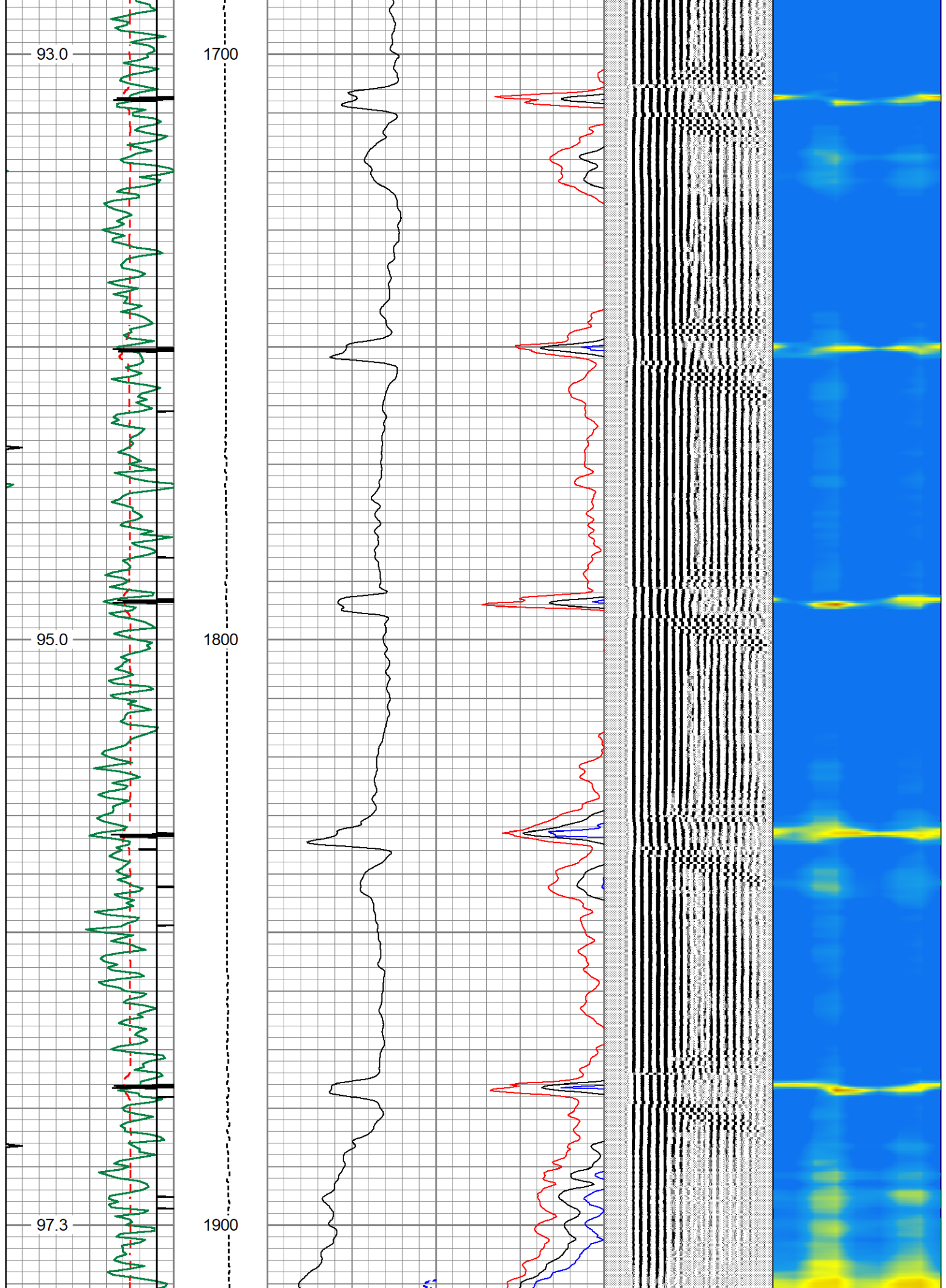




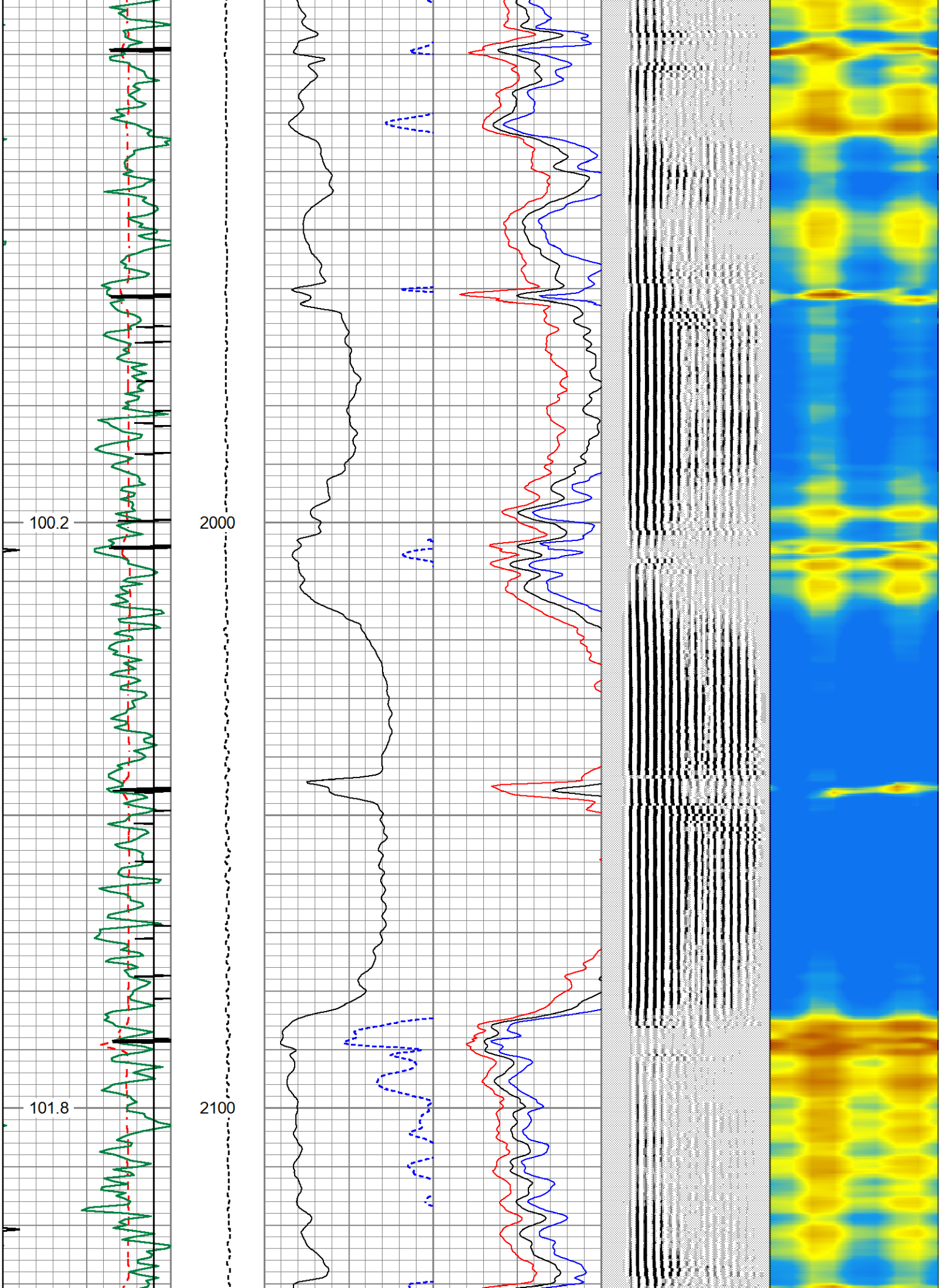




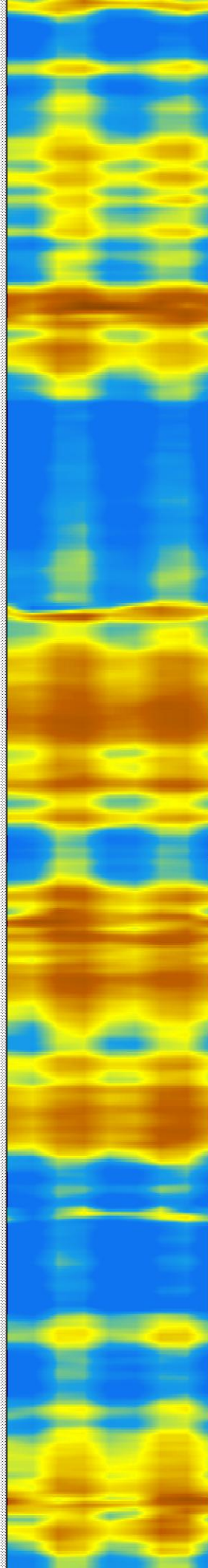
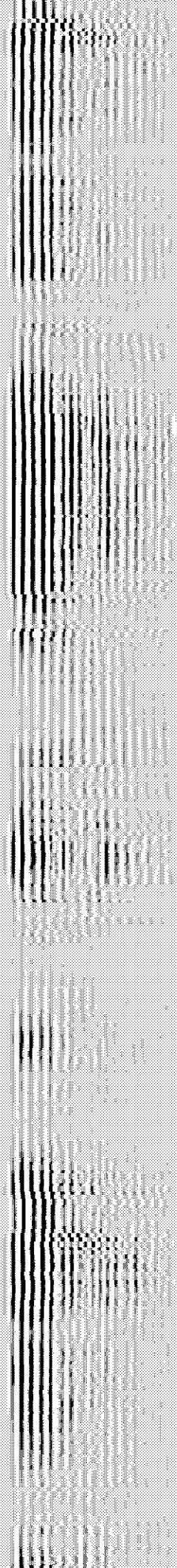
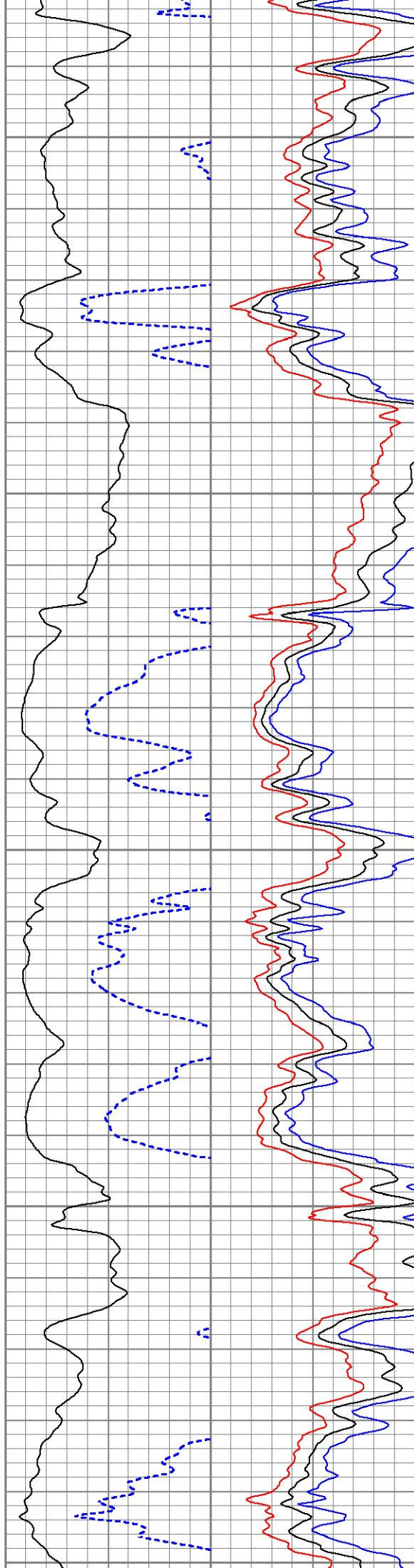
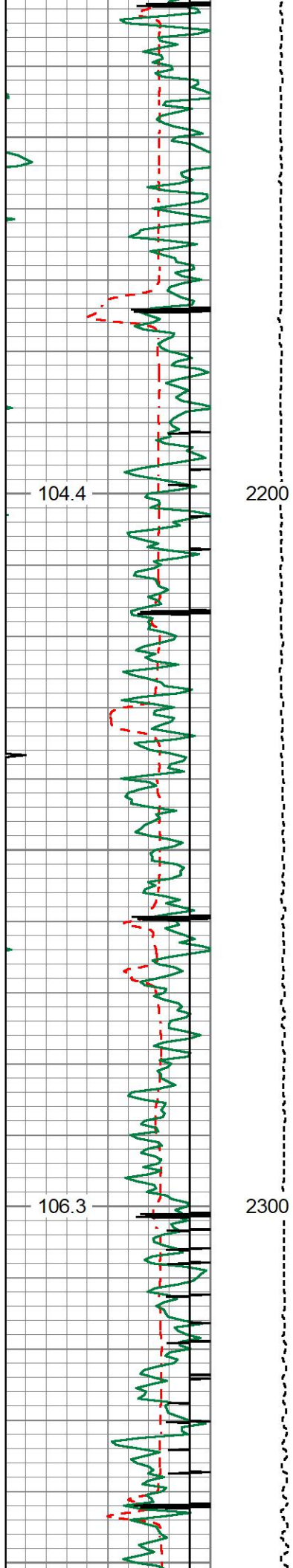




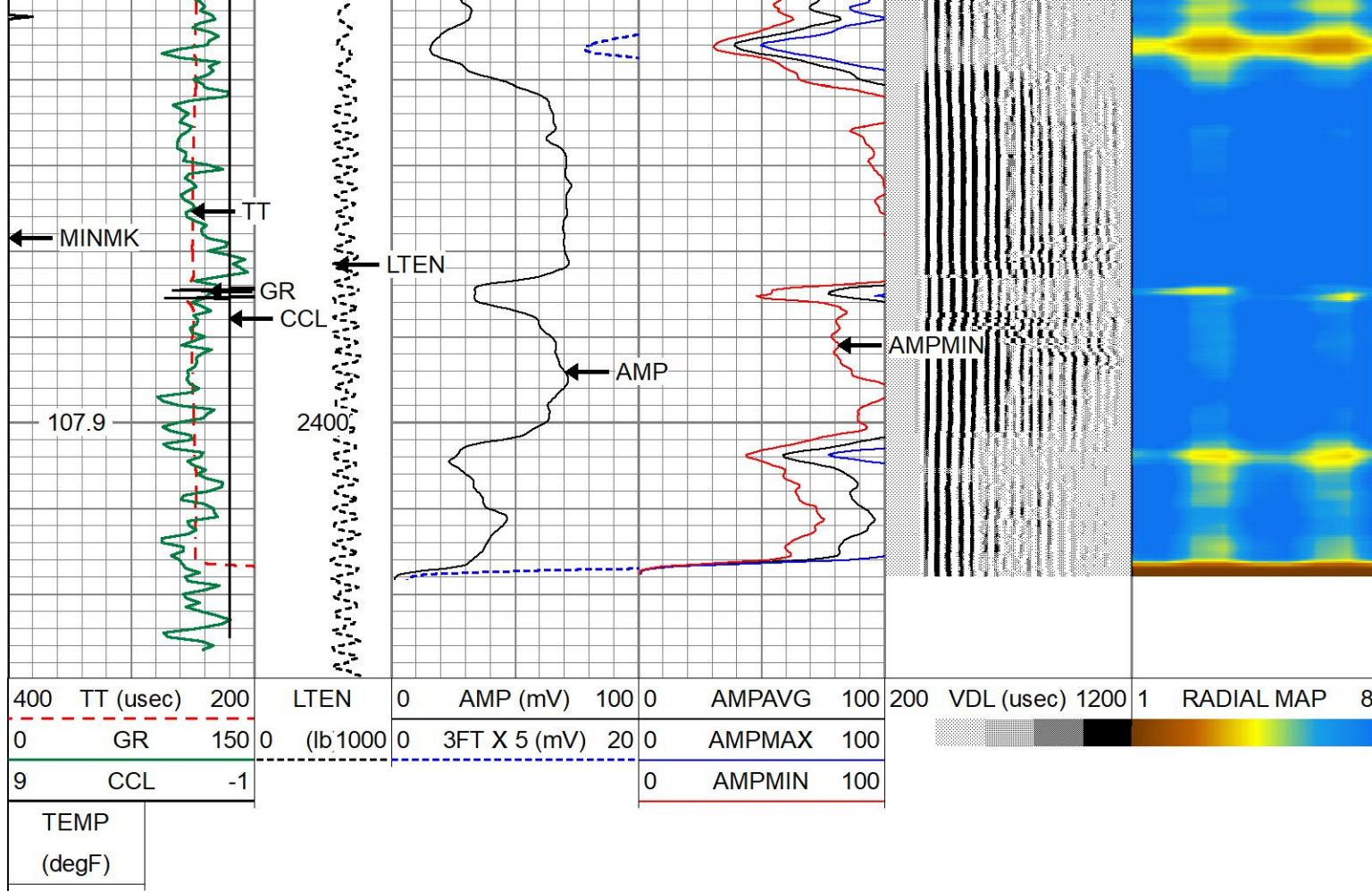










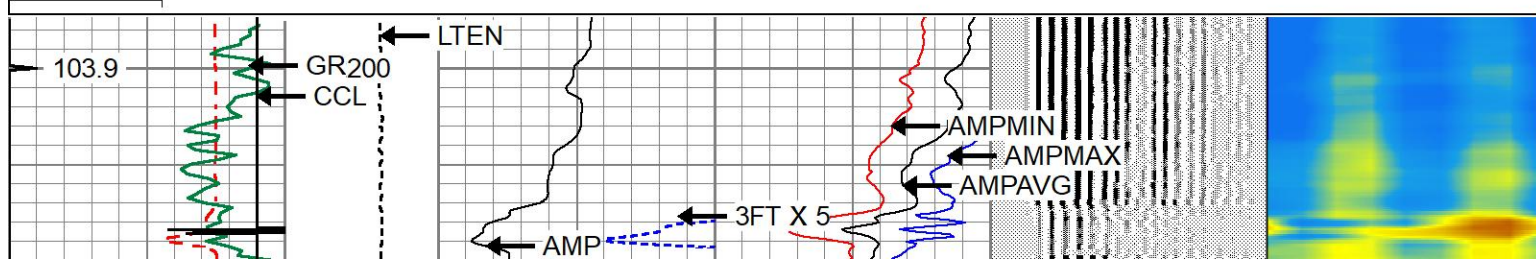
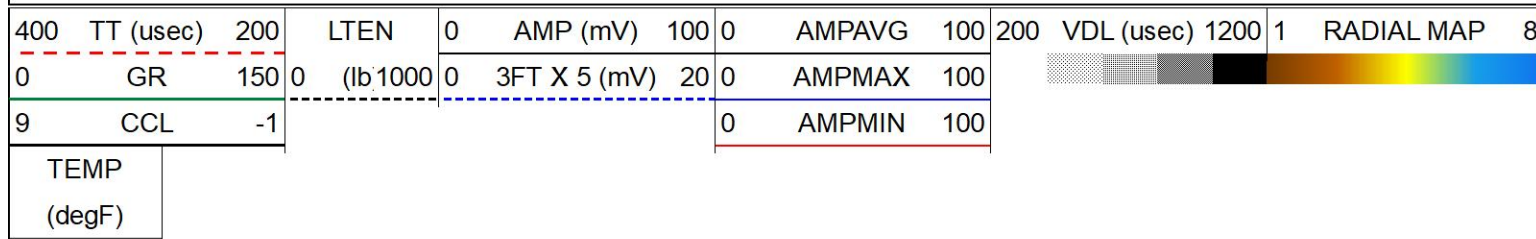


## MAIN PASS

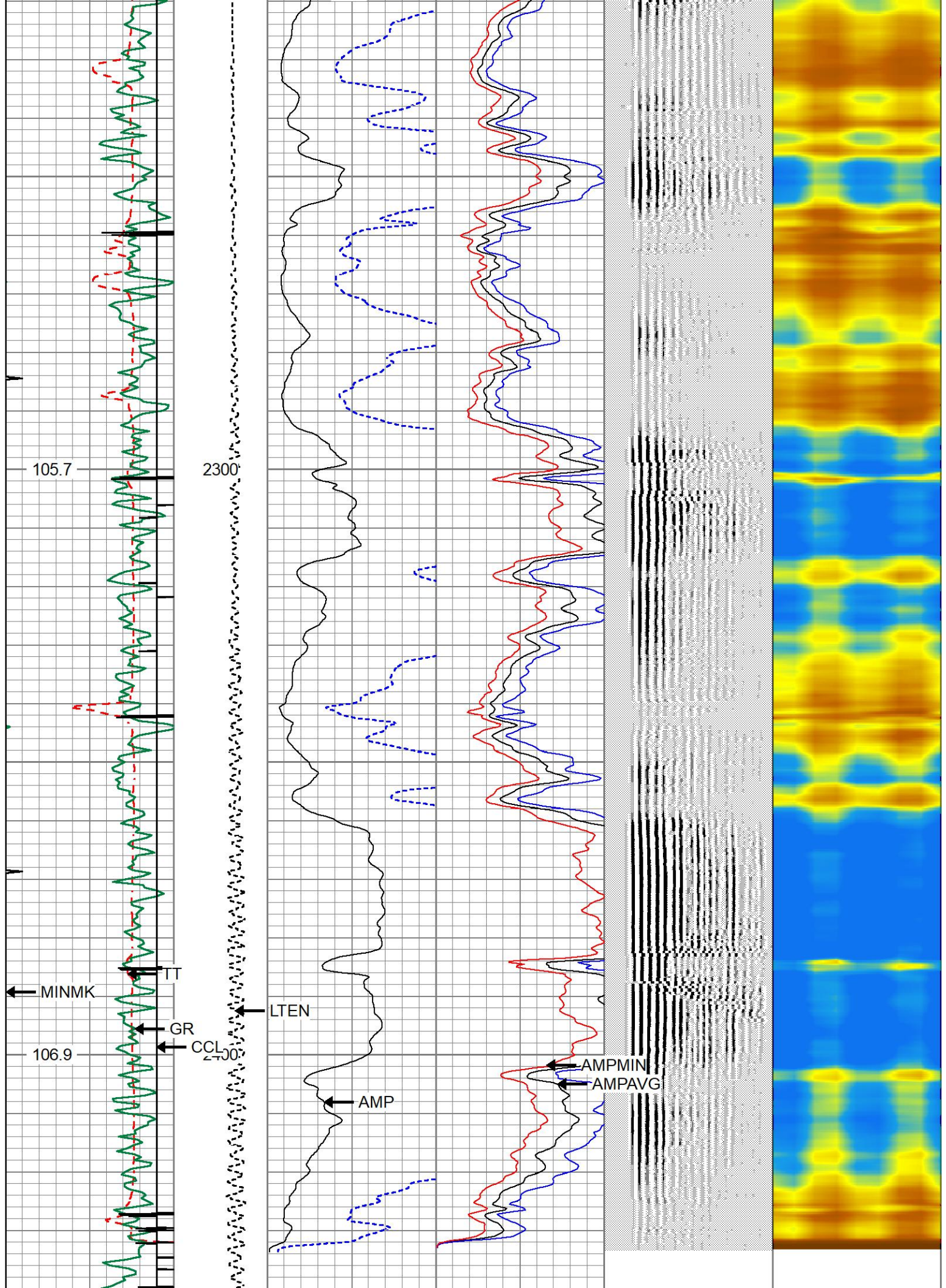


## REPEAT PASS

Database File dietrich c07-18d cbl.db  
 Dataset Pathname pass3  
 Presentation Format 1patriotradii  
 Dataset Creation Wed Jan 08 15:37:33 2020  
 Charted by Depth in Feet scaled 1:240









400	TT (usec)	200	LTEN	0	AMP (mV)	100	0	AMPAVG	100	200	VDL (usec)	1200	1	RADIAL MAP	8
0	GR	150	0 (lb 1000)	0	3FT X 5 (mV)	20	0	AMPMAX	100						
9	CCL	-1					0	AMPMIN	100						
TEMP															
(degF)															



# REPEAT PASS

## Calibration Report

Database File dietrich c07-18d cbl.db  
Dataset Pathname pass3  
Dataset Creation Wed Jan 08 15:37:33 2020

## Gamma Ray Calibration Report

Serial Number: 234GR4-267  
Tool Model: Tek-Co 2 3/4  
Performed: (Not Performed)

Calibrator Value: 1.0

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 /cps

## Segmented Cement Bond Log Calibration Report

Serial Number: IBUCO03  
Tool Model: 275 Temp JS

Calibration Casing Diameter: 7.000 in  
Calibration Depth: 139.733 ft

Master Calibration, performed Mon Jan 06 11:30:13 2020:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.005	1.169	1.000	62.165	52.091	1.276
CAL	-0.006	0.289				
5'	-0.005	1.582	1.000	62.165	38.536	1.199
SUM						
S1	-0.006	0.682	0.000	100.000	145.488	0.812
S2	-0.006	0.586	0.000	100.000	169.036	0.937
S3	-0.005	0.767	0.000	100.000	129.520	0.700
S4	-0.005	0.870	0.000	100.000	114.212	0.611
S5	-0.005	0.666	0.000	100.000	148.905	0.814
S6	-0.005	0.528	0.000	100.000	187.284	1.022
S7	-0.005	0.646	0.000	100.000	153.494	0.843
S8	-0.005	0.817	0.000	100.000	121.613	0.646

Internal Reference Calibration, performed Fri Nov 08 08:47:11 2019:

Raw (v)	Calibrated (v)	Results
---------	----------------	---------

	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	0.289	1.000	0.000

Air Zero Calibration, performed Sat Dec 21 13:09:31 2019:


	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
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

#### Temperature Calibration Report

Serial Number: IBUCO03  
 Tool Model: 275 Temp JS  
 Performed: Thu Jan 05 16:46:15 2017

	Reference	Reading
Low Reference:	0.00 degF	0.00 usec
High Reference:	1.00 degF	1.00 usec

Gain: 0.33  
 Offset: 0.00  
 Delta Spacing: 1

 <b>PATRIOT</b> WELL SOLUTIONS	Company	NOBLE ENERGY	
	Well	DIETRICH C 7-18D	
	Field	WATTENBERG	
	County	WELD	
	State	COLORADO	Country USA