



PATRIOT
WELL SOLUTIONS


**CEMENT BOND
GAMMA RAY
CCL**

Company		NOBLE ENERGY INC		Country		UNITED STATES	
Well		HOFFMAN C 2-33D					
Field		WATTENBERG					
County		WELD					
State		COLORADO					
Location:		AP1 # : 05-123-34680		Other Services		NONE	
Permanent Datum		SEC 2 TWP 4N RGE 64W		Elevation		K.B. 4620 D.F. G.L.	
Log Measured From				Elevation			
Drilling Measured From				Elevation			
Date		25-JAN-20					
Run Number		ONE					
Depth Driller							
Depth Logger							
Bottom Logged Interval							
Top Log Interval							
Open Hole Size							
Type Fluid		WATER					
Density / Viscosity							
Max. Recorded Temp.							
Estimated Cement Top							
Time Well Ready							
Time Logger on Bottom							
Equipment Number		1016					
Location		BRIGHTON					
Recorded By		D.MARTIN					
Witnessed By		S.RECORD					
Run Number		Bit		From		To	
Size		Mg/ft		Top		Bottom	
Casing Record							
Surface String							
Prot. String							
Production String							
Liner							

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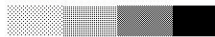
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

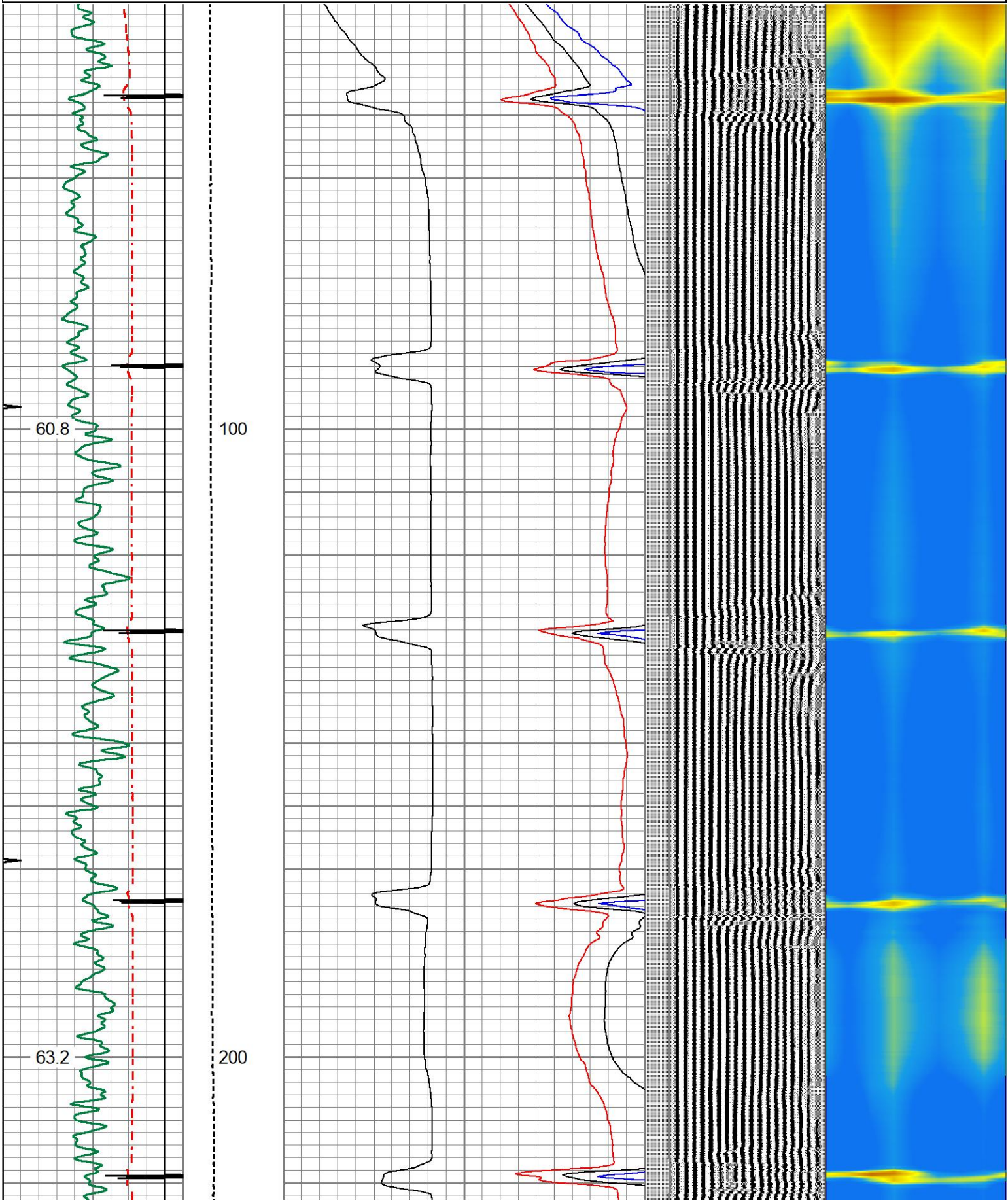
Comments	

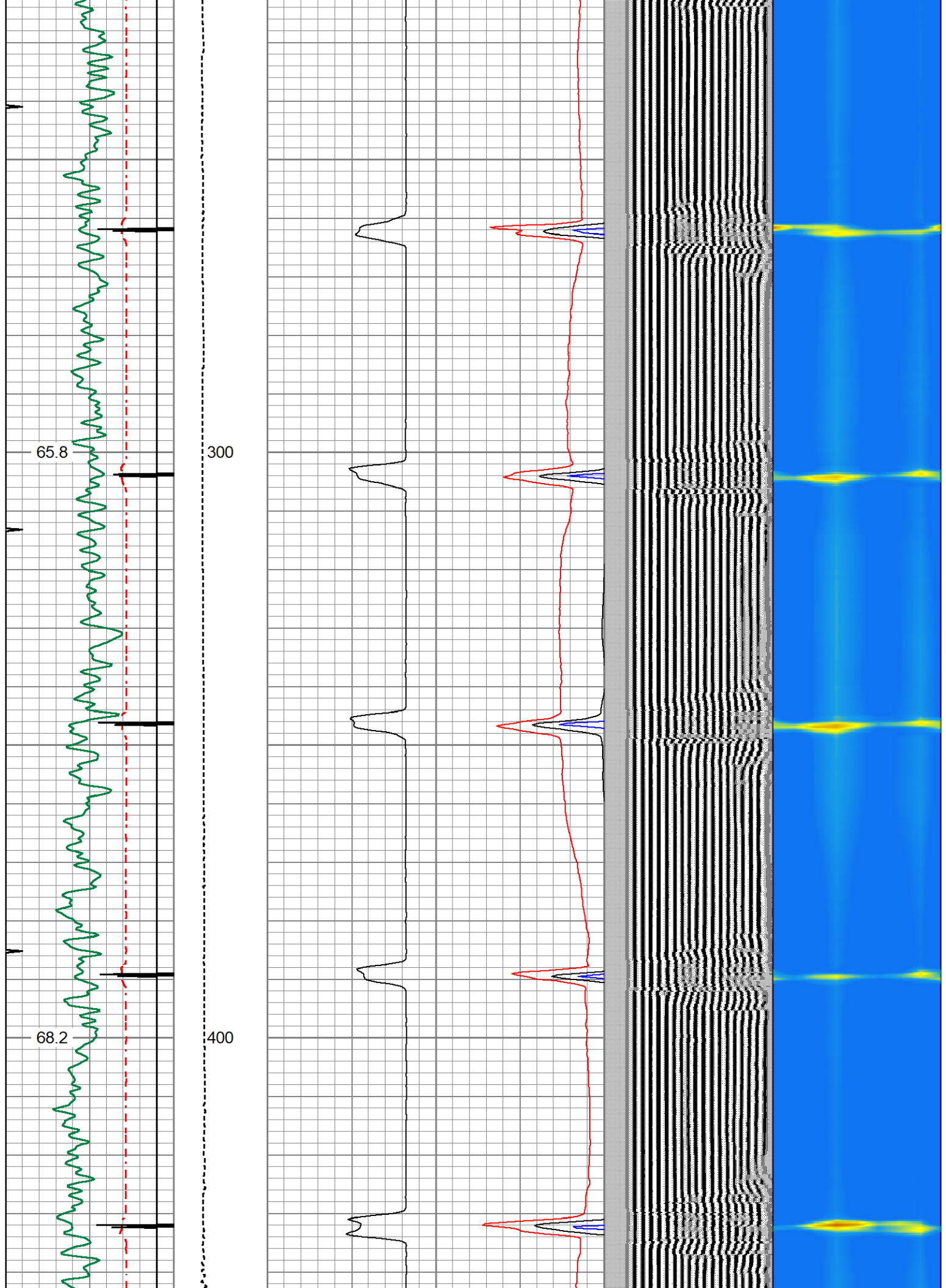
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan-1.4375 1 7/16 Titan Type II Cable Head	1.03	1.44	5.00

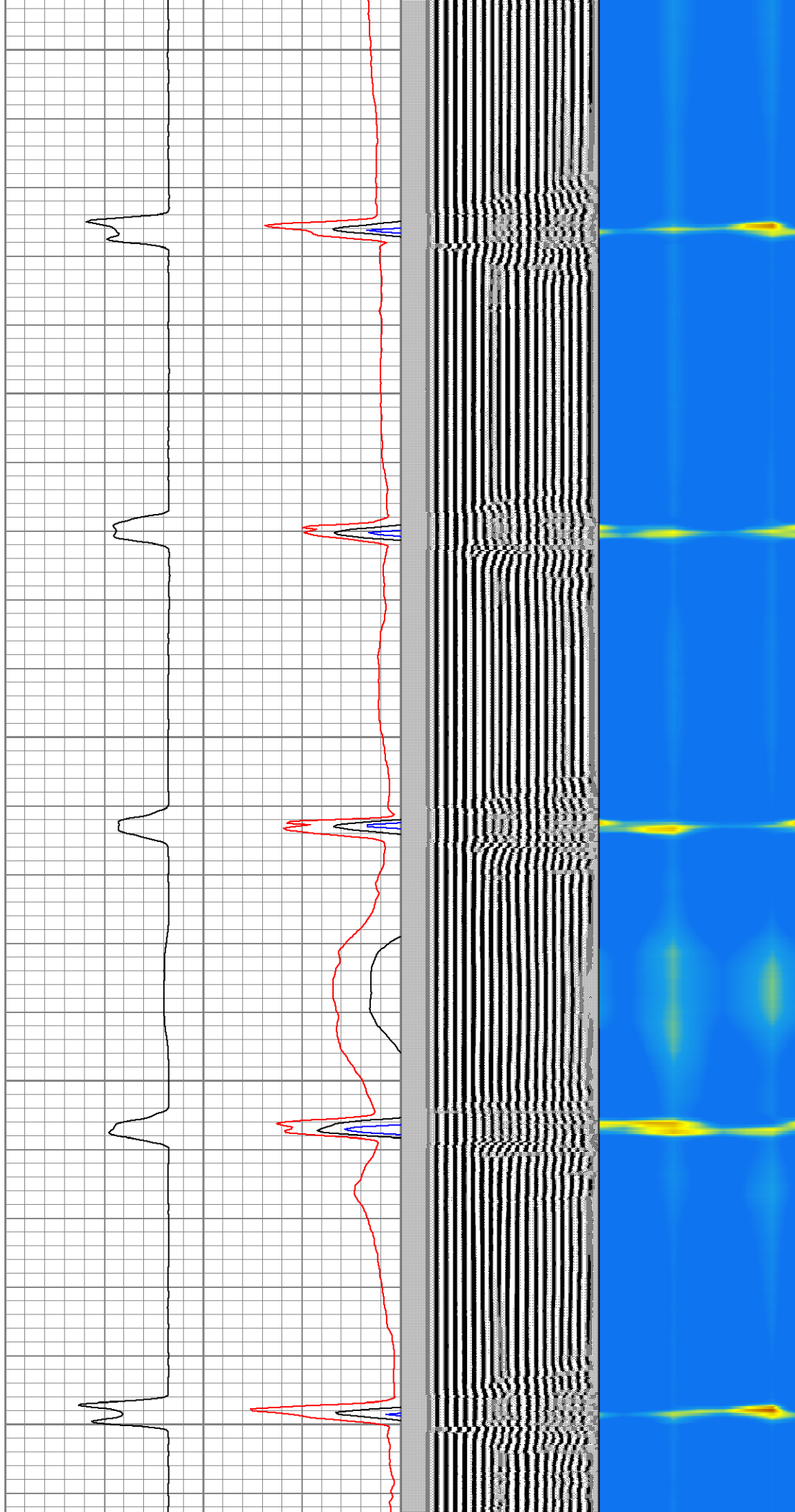
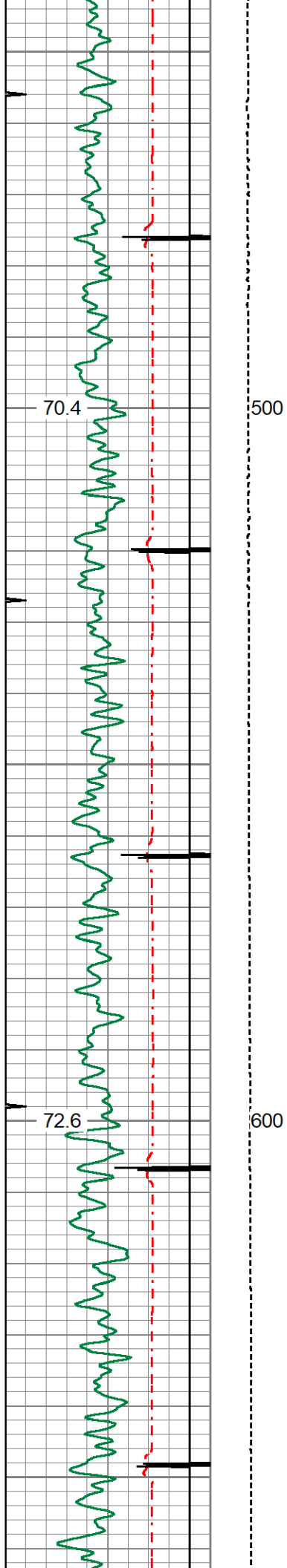
			Tek-2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
WVFSYNC	16.00					
WVFCAL	16.00					
TEMP	14.87					
WVFS8	13.58					
WVFS7	13.58		SCBLTEKSECT-275 Temp JS (IBUCO03)	9.13	2.75	130.00
WVFS6	13.58		TekCo 2 3/4" 400 Deg. F Sector Tool with Temperature (JS)			
WVFS5	13.58					
WVFS4	13.58					
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: hoffman c 2-33d cbl.db: field/well/run1/pass2 Total length: 21.39 ft Total weight: 259.00 lb O.D.: 2.75 in						

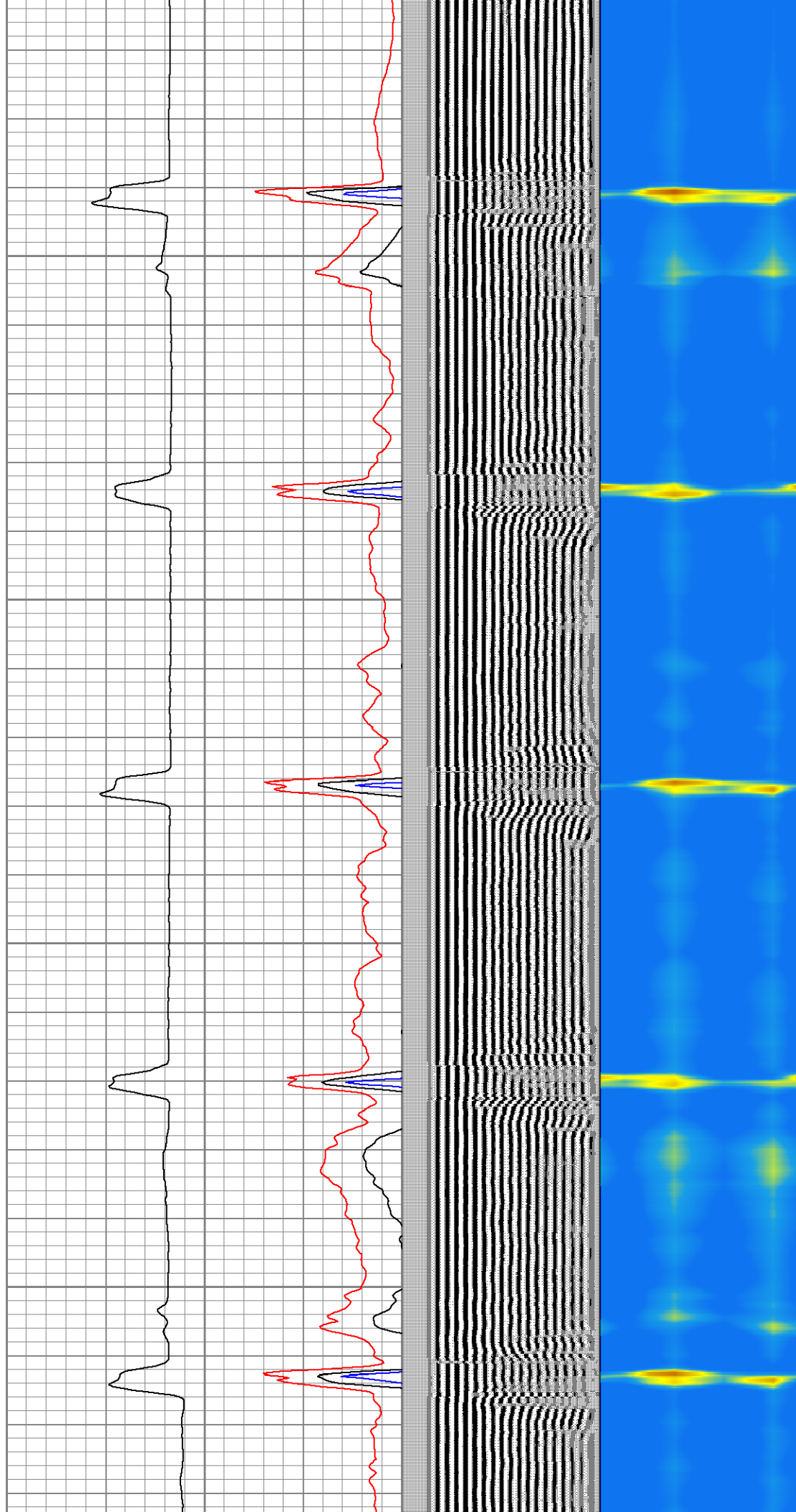
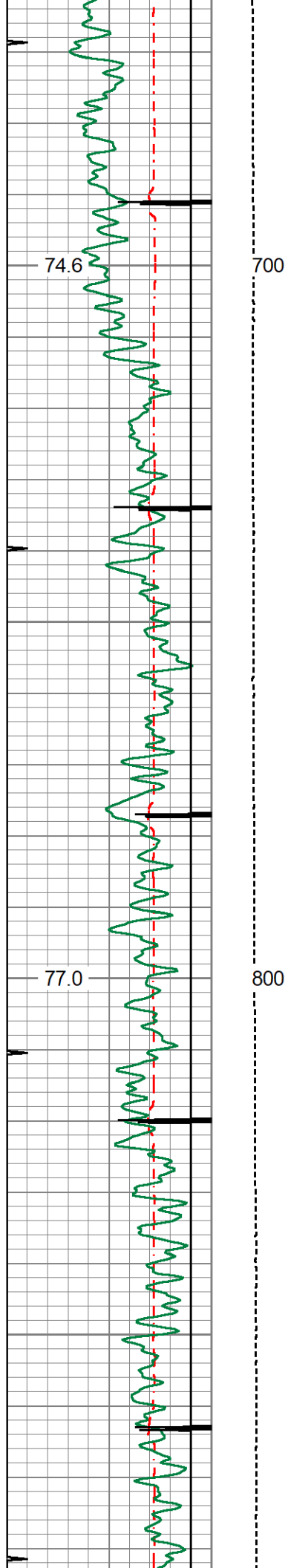
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 Dataset Pathname pass2
 Presentation Format 1patriotradii
 Dataset Creation Sat Jan 25 16:16:29 2020
 Charted by Depth in Feet scaled 1:240

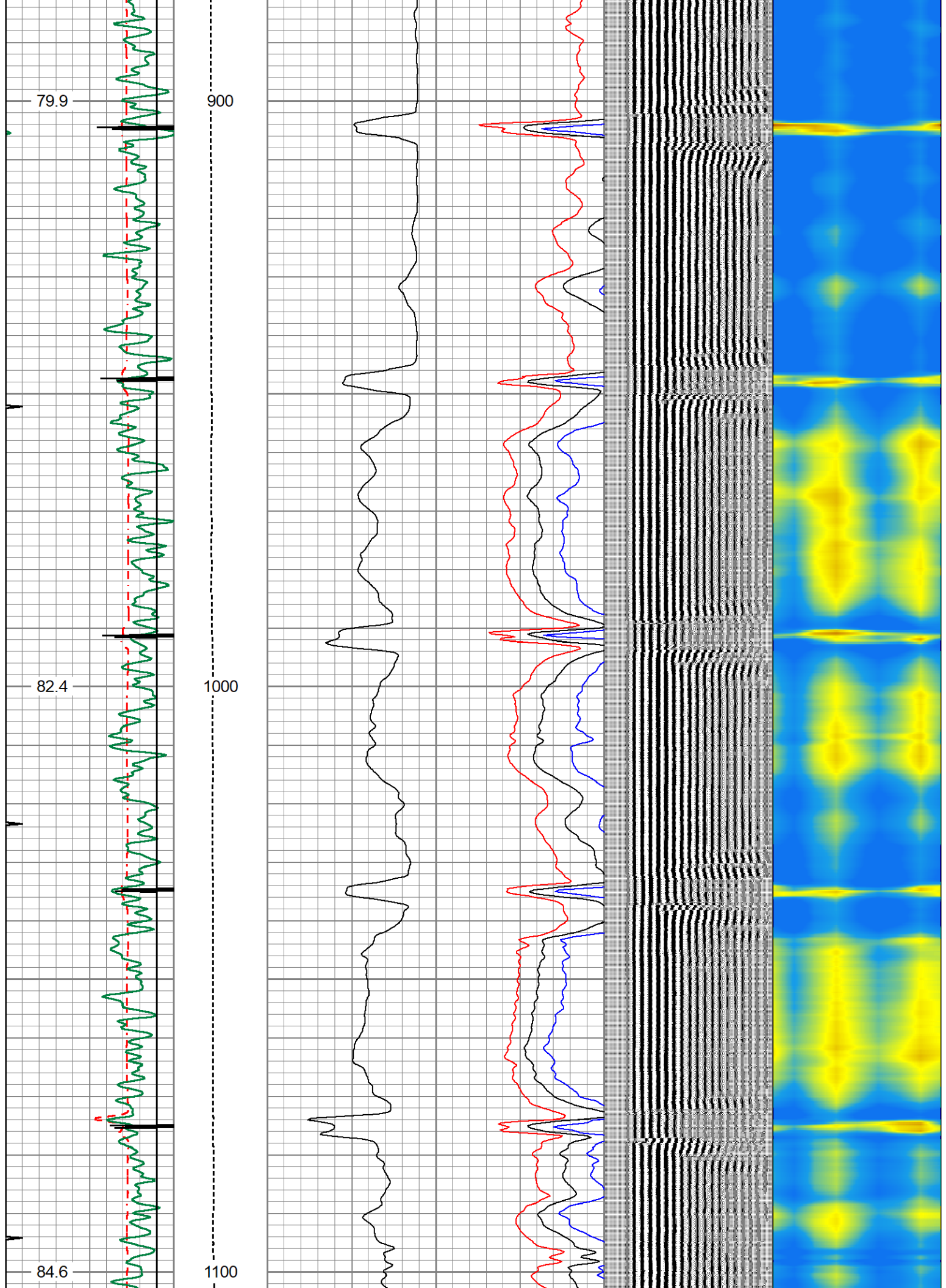
Charted by			Depth in Feet scaled 1.240																		
400	TT (usec)	200	LTEN	0	AMP (mV)	100	0	AMPAVG	100	200	VDL (usec)	1200	1	RADIAL MAP	8						
0	GR	150	0 (lb/1000)	0	3FT X 5 (mV)	20	0	AMPMAX	100												
9	CCL	-1					0	AMPMIN	100												
TEMP																					
(degF)																					

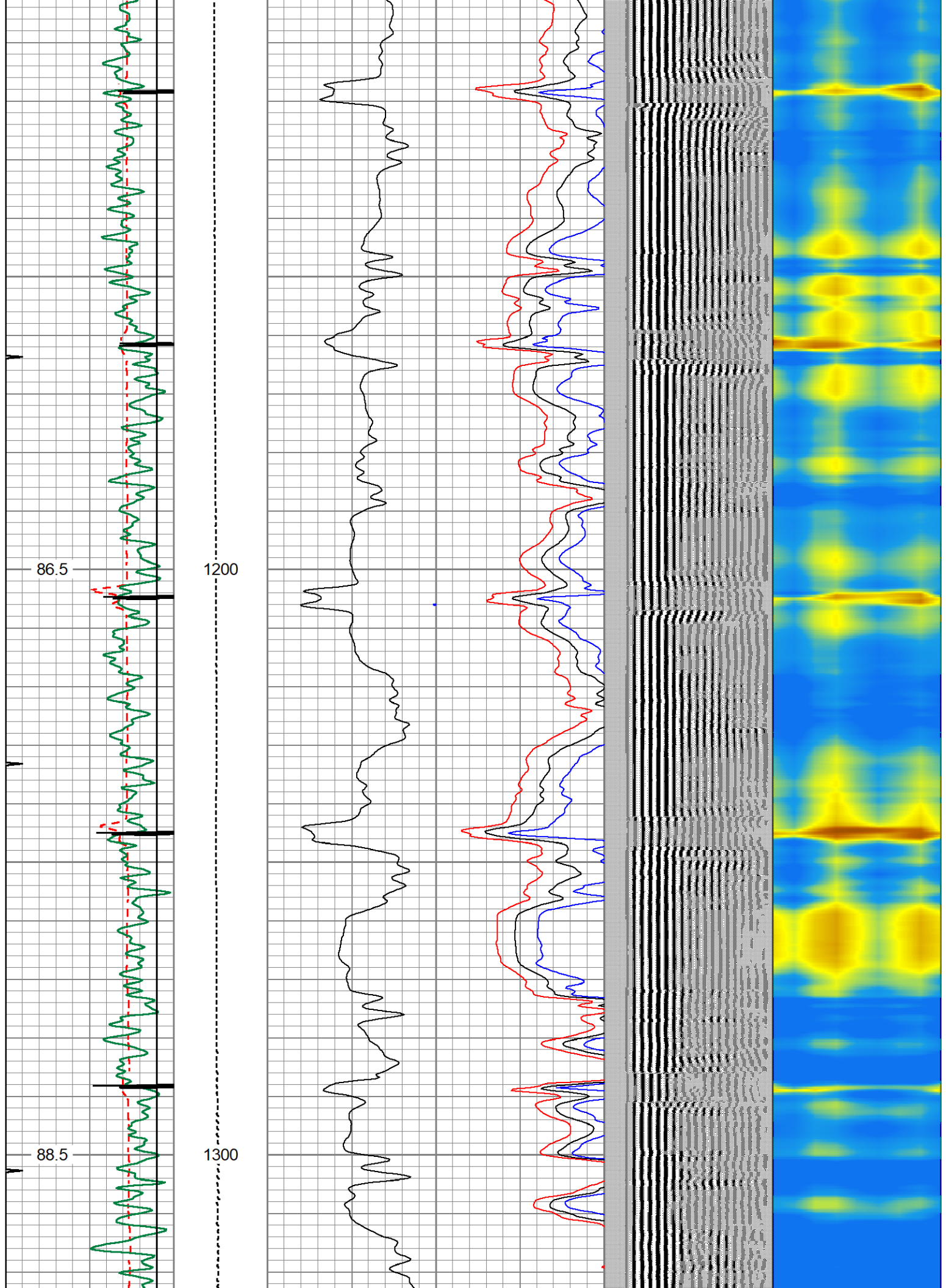


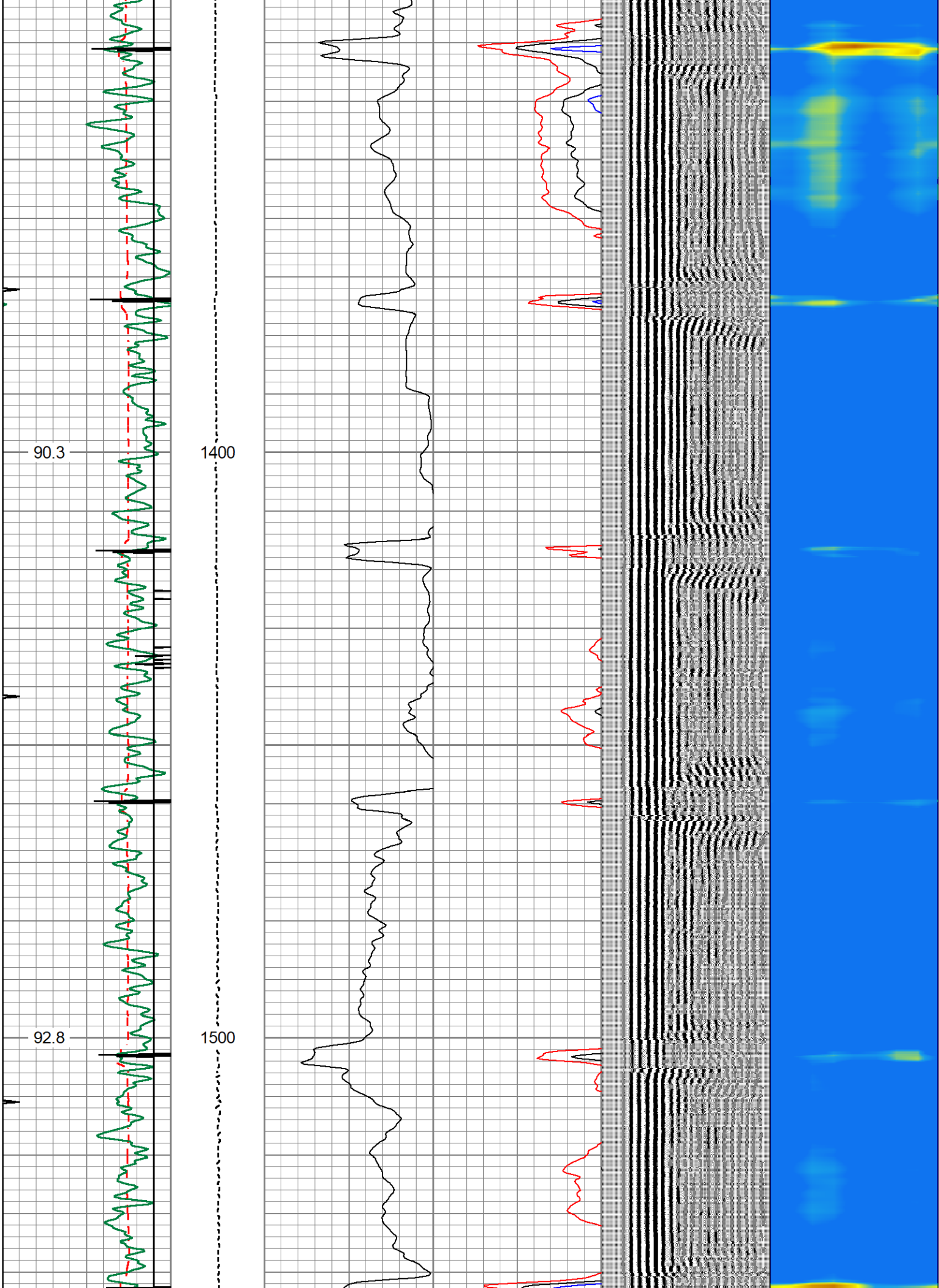


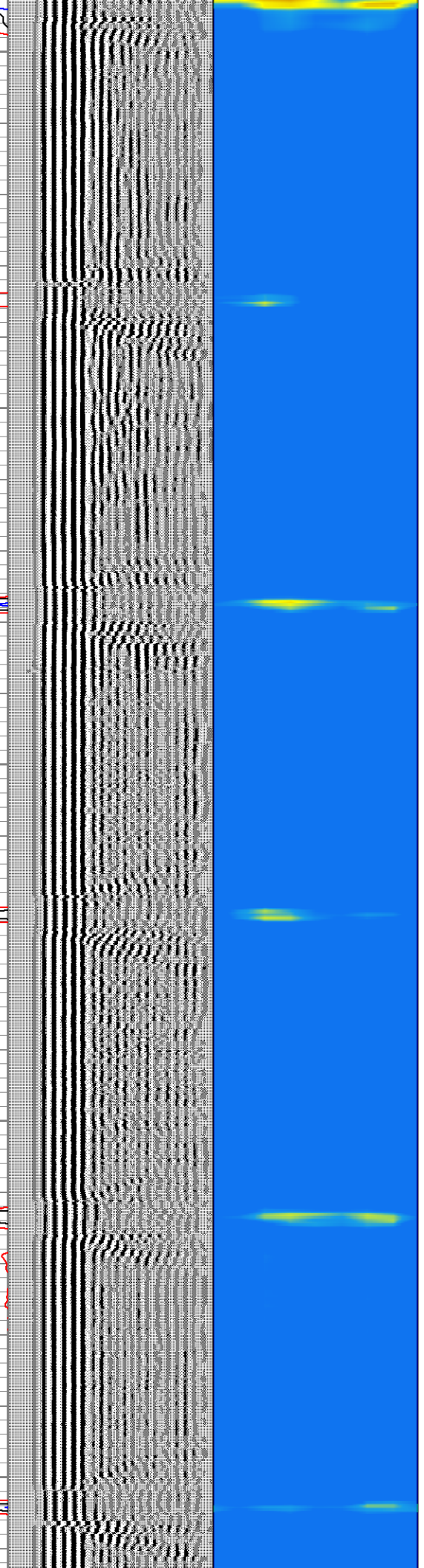
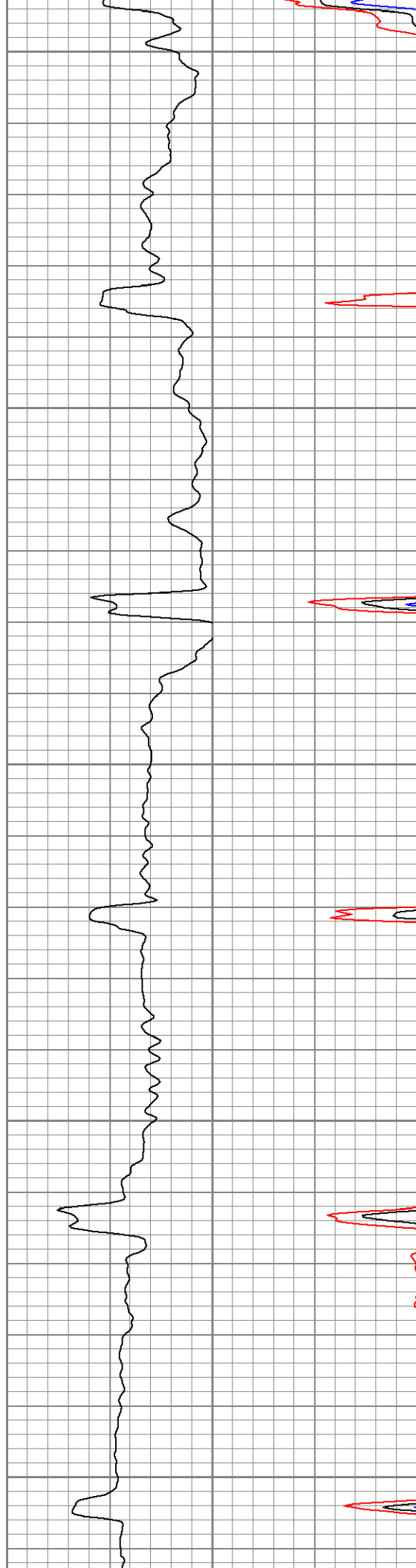
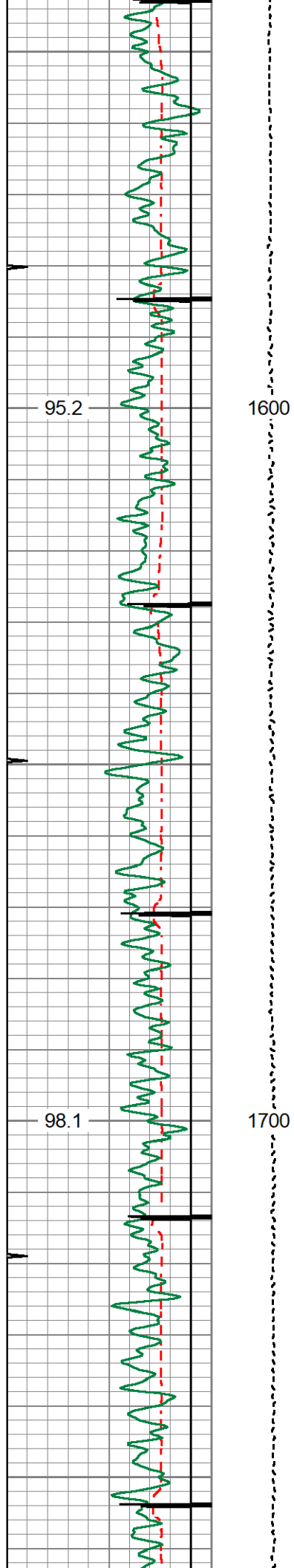


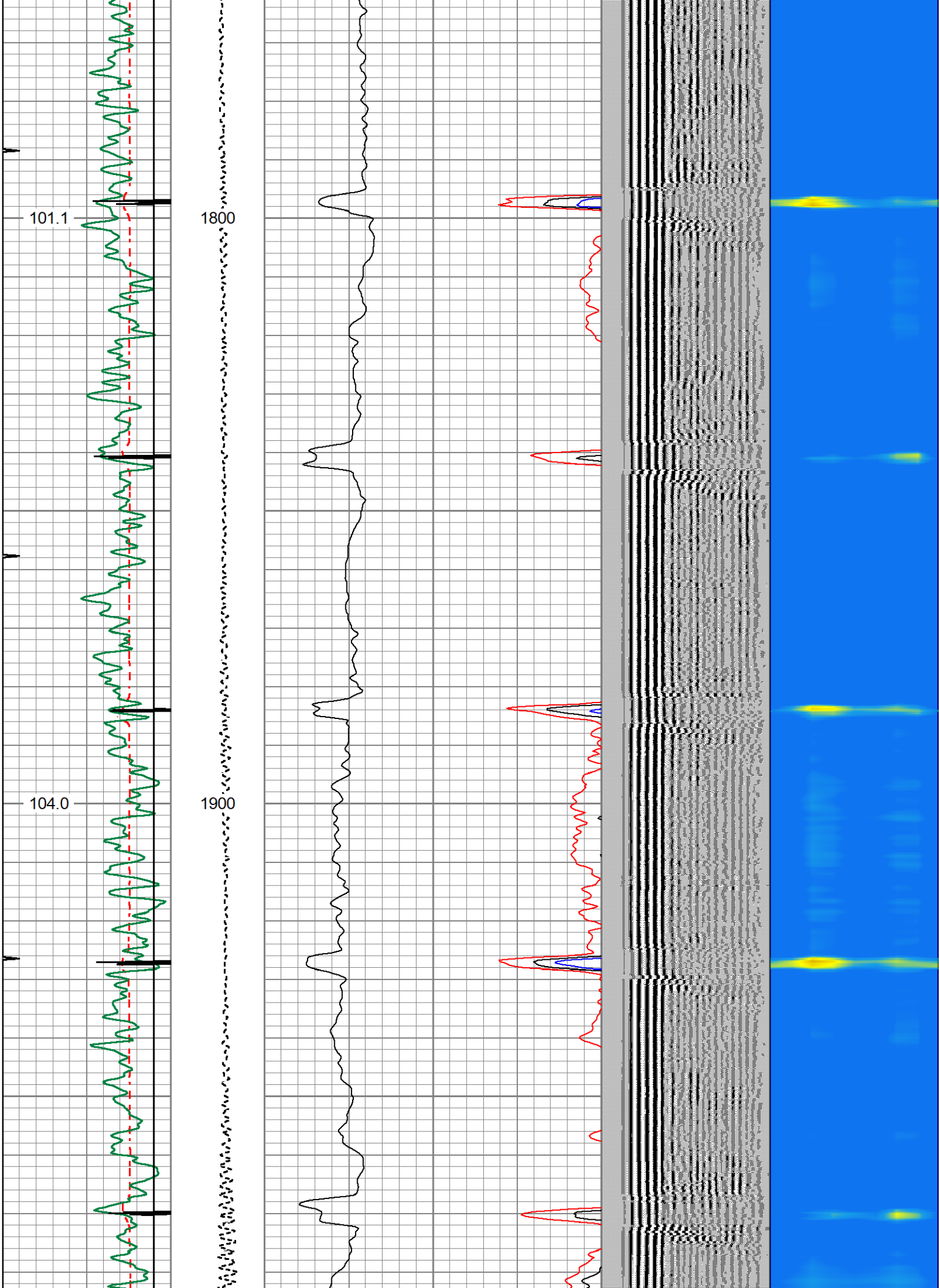


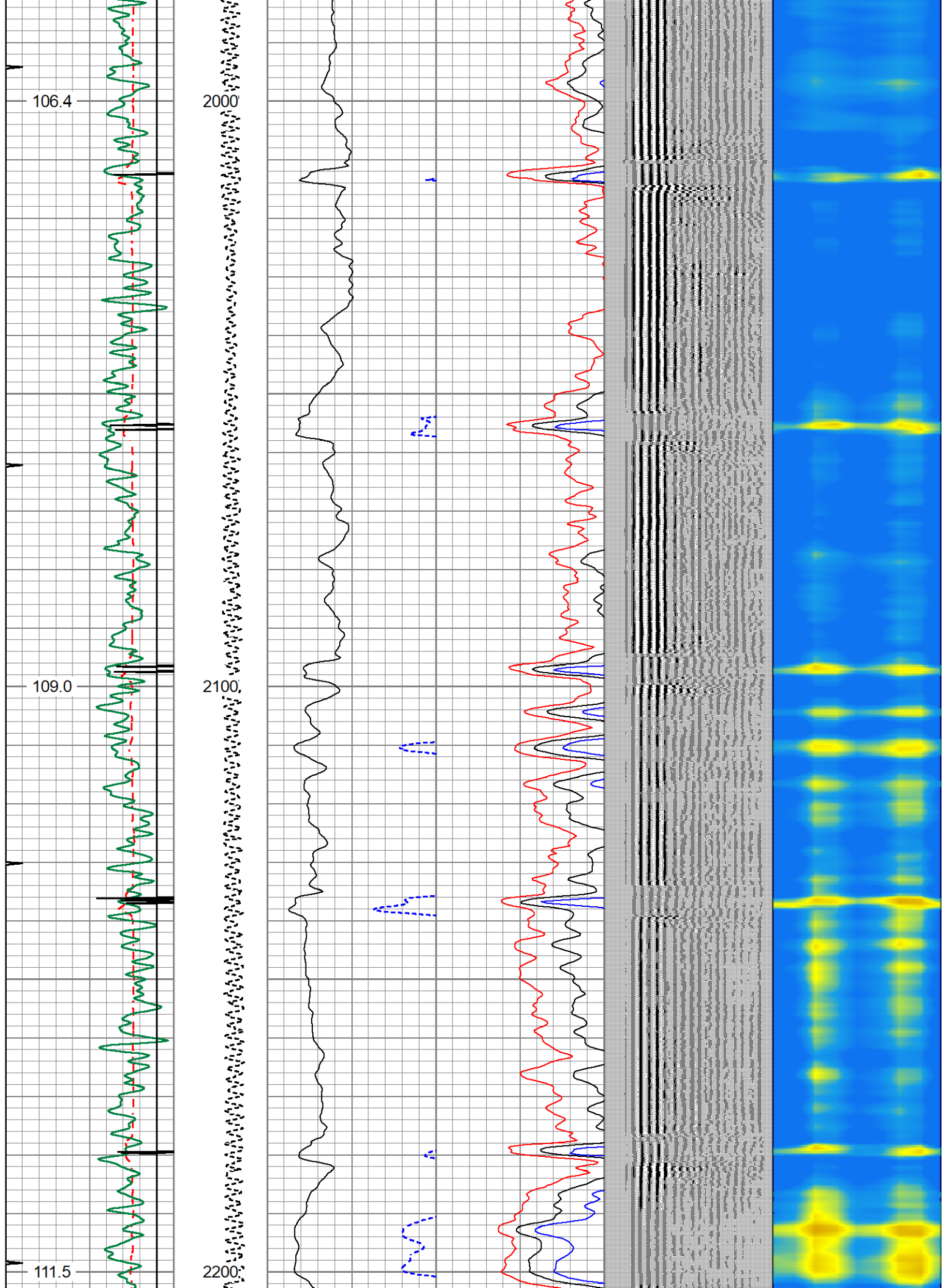


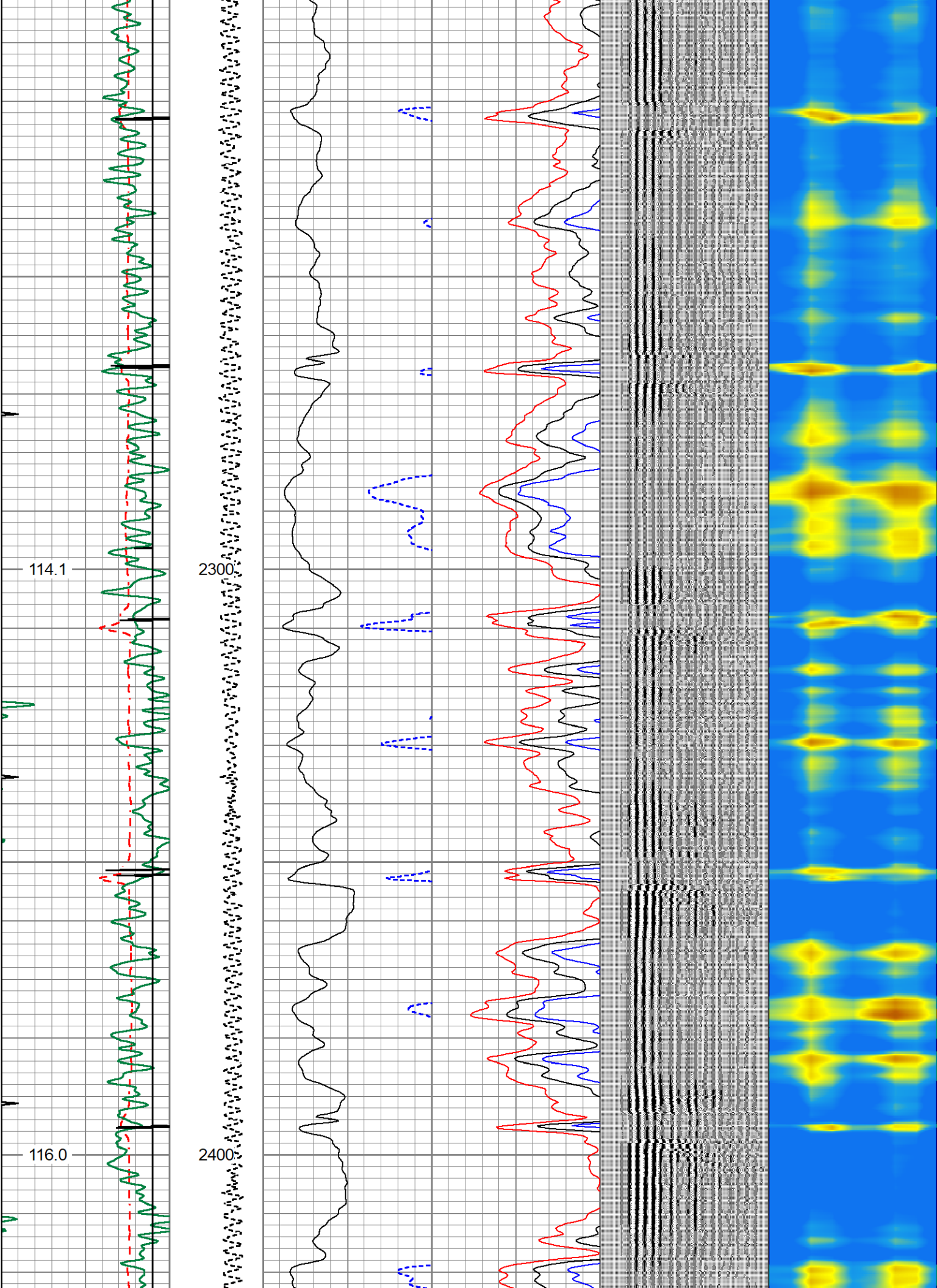












5'	-0.004	1.582	1.000	81.196	50.551	1.221
SUM						
S1	-0.006	0.682	0.000	100.000	145.434	0.849
S2	-0.006	0.586	0.000	100.000	168.946	0.990
S3	-0.006	0.767	0.000	100.000	129.448	0.755
S4	-0.006	0.870	0.000	100.000	114.155	0.661
S5	-0.006	0.666	0.000	100.000	148.829	0.865
S6	-0.006	0.528	0.000	100.000	187.122	1.108
S7	-0.006	0.646	0.000	100.000	153.420	0.891
S8	-0.006	0.817	0.000	100.000	121.530	0.714

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 Jan 25 16:00:39 2020:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	-0.006		0.000		0.001	
5'	-0.005		0.000		0.000	
SUM						
S1	-0.006		0.000		0.000	
S2	-0.007		0.000		0.001	
S3	-0.006		0.000		0.000	
S4	-0.006		0.000		-0.000	
S5	-0.005		0.000		-0.001	
S6	-0.002		0.000		-0.004	
S7	-0.001		0.000		-0.005	
S8	-0.004		0.000		-0.002	

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	