



**RADIAL CEMENT
BOND LOG
GAMMA RAY/CCL**

Company		OCCIDENTAL PETROLEUM CORPORATION	
Well	HOWARD 29C - 21HZ		
Field	WATTENBERG		
County	WELD		
State	CO	Country	USA
Company		OCCIDENTAL PETROLEUM CORPORATION	
Well	HOWARD 29C - 21HZ		
Field	WATTENBERG		
County	WELD		
State	CO	Country	USA
Location:		API # : 05-123-36794	
Permanent Datum		GL	Elevation 5025'
Log Measured From		KB	16' above Perm. Datum
Drilling Measured From		KB	Elevation
SEC 21 TWP 1N RGE 67W		K.B. 5041'	
		D.F. 5040'	
		G.L. 5025'	
Date	07 JUNE 2022		
Run Number	ONE		
Depth Driller	12.195'		
Depth Logger	2.560'		
Bottom Logged Interval	2.550'		
Top Log Interval	SURFACE		
Open Hole Size	8.750"		
Type Fluid	WATER		
Density / Viscosity	8.34 lbm/gal		
Max. Recorded Temp.	112 deg F		
Estimated Cement Top	SEE LOG		
Time Well Ready	18:20		
Time Logger on Bottom	18:50		
Equipment Number	8045		
Location	WINDSOR, CO		
Recorded By	CHARLES AKPAN		
Witnessed By	VICTOR ILDEFONSO		
Borehole Record		Tubing Record	
Run Number	Bit	From	To
		Size	Weight
		From	To
Casing Record	Size	Wgt/Ft	Top
Surface String	9-5/8"	36 PPF	SURFACE
Prot. String			Bottom
Production String	7"	26 PPF	SURFACE
Liner	4-1/2"	11.6 PPF	7097'
			8076'
			12,185'

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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.

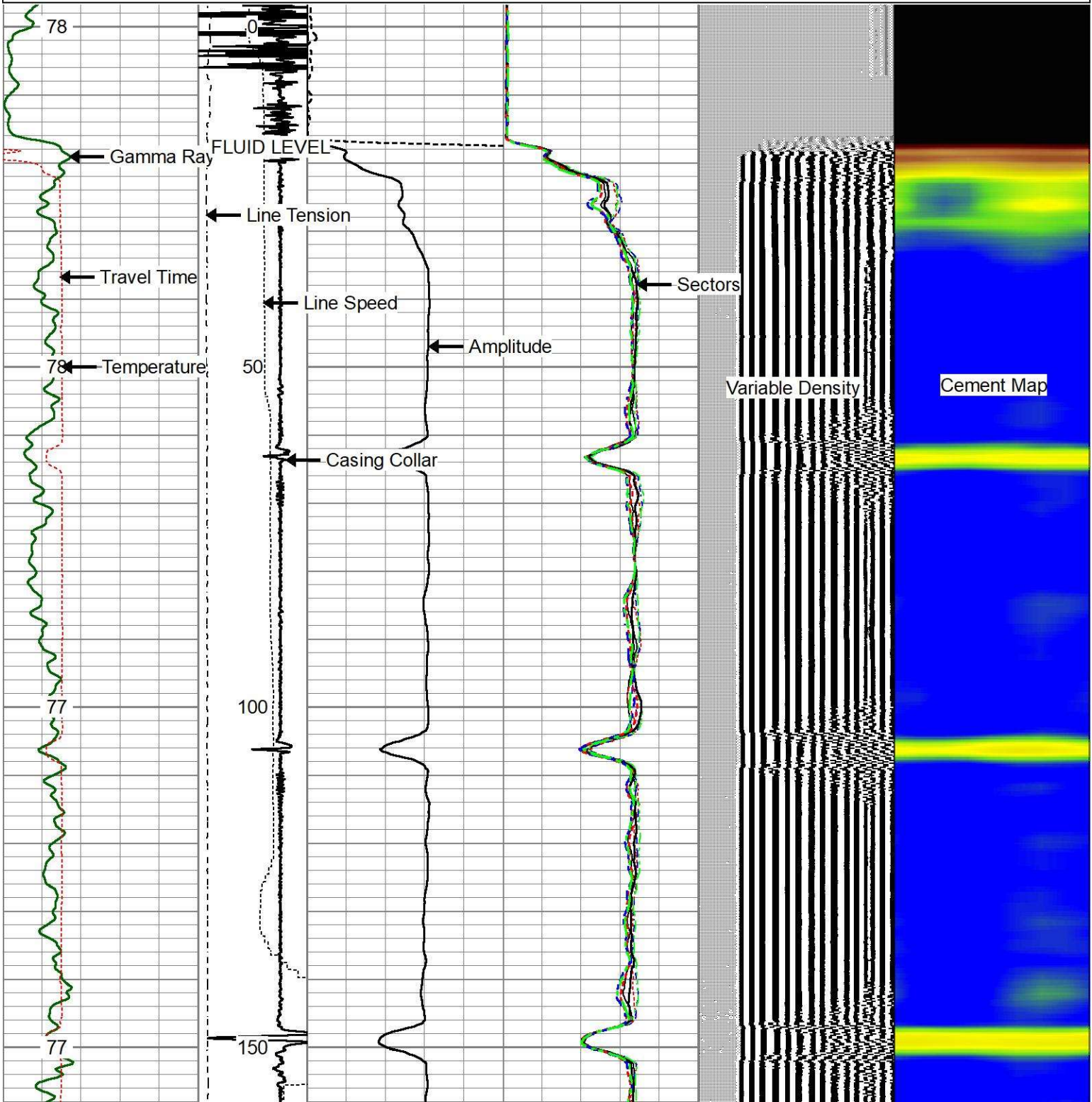
Comments

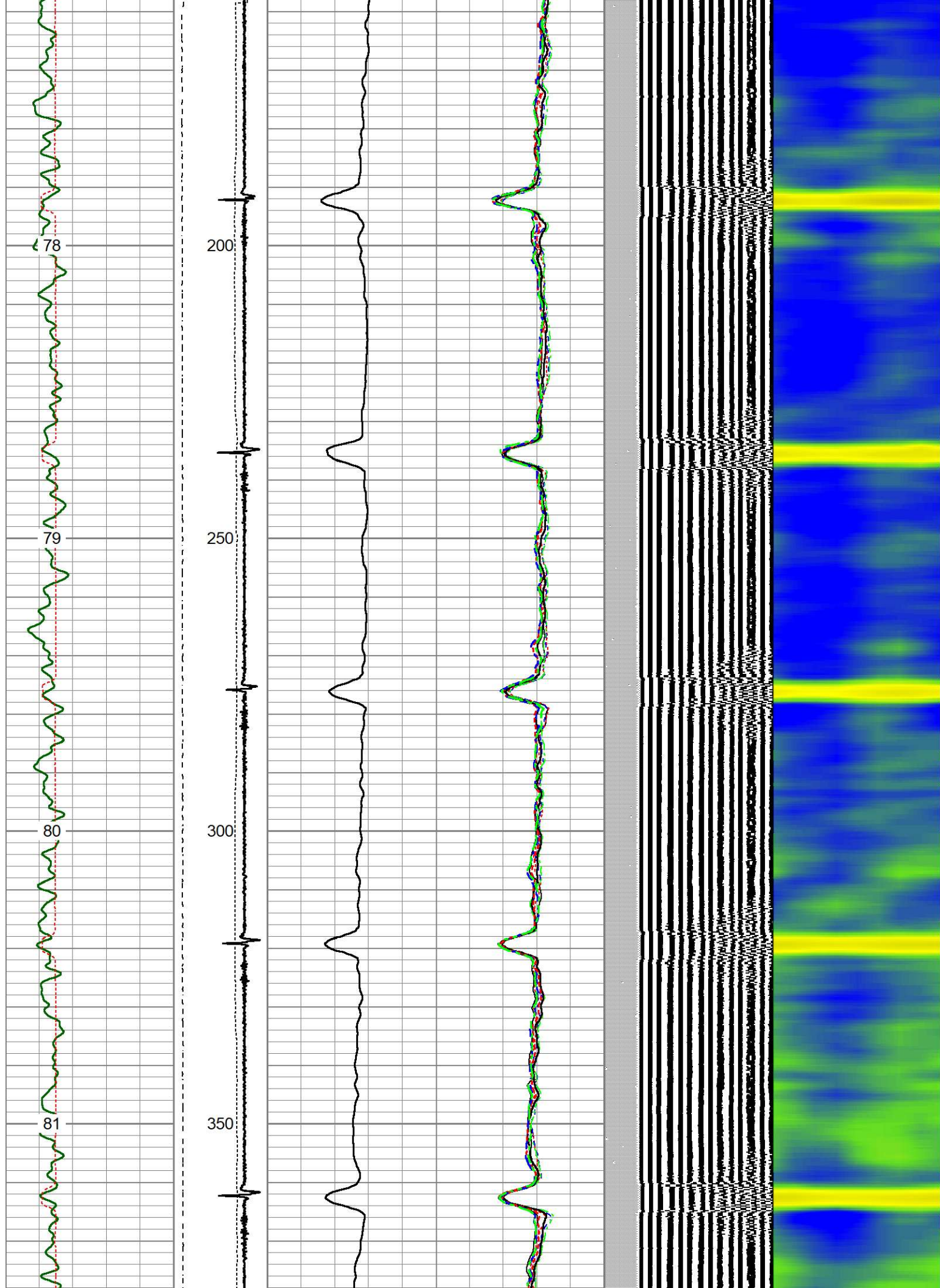
**CORRELATED TO RANGER ENERGY SERVICES SECTOR, GR/CCL LOG DATED 25-MAY-2022
MAIN PASS RAN WITH 0 PSI TO SURFACE
THANK YOU FOR USING THE WIRELINE GROUP!**

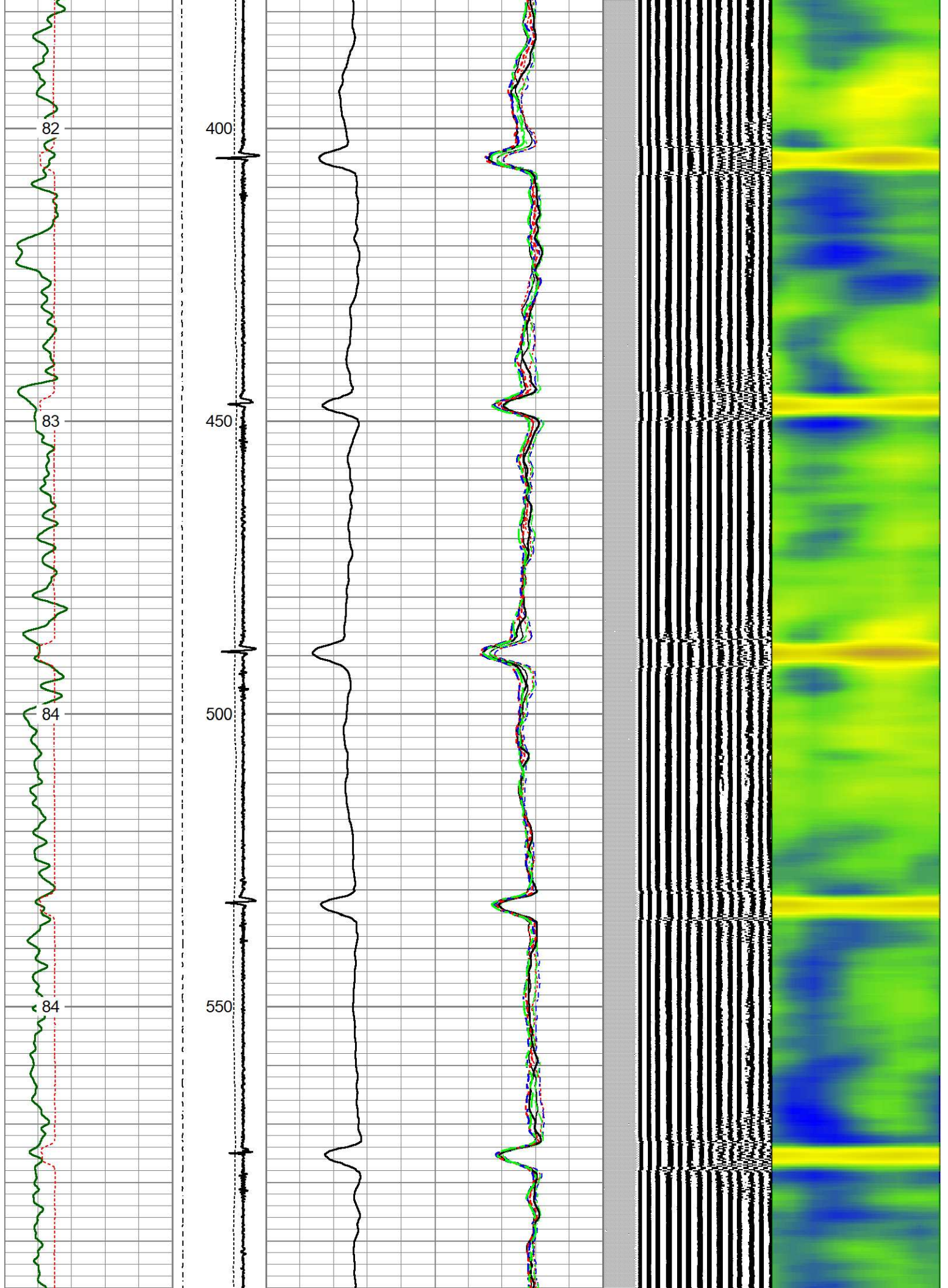


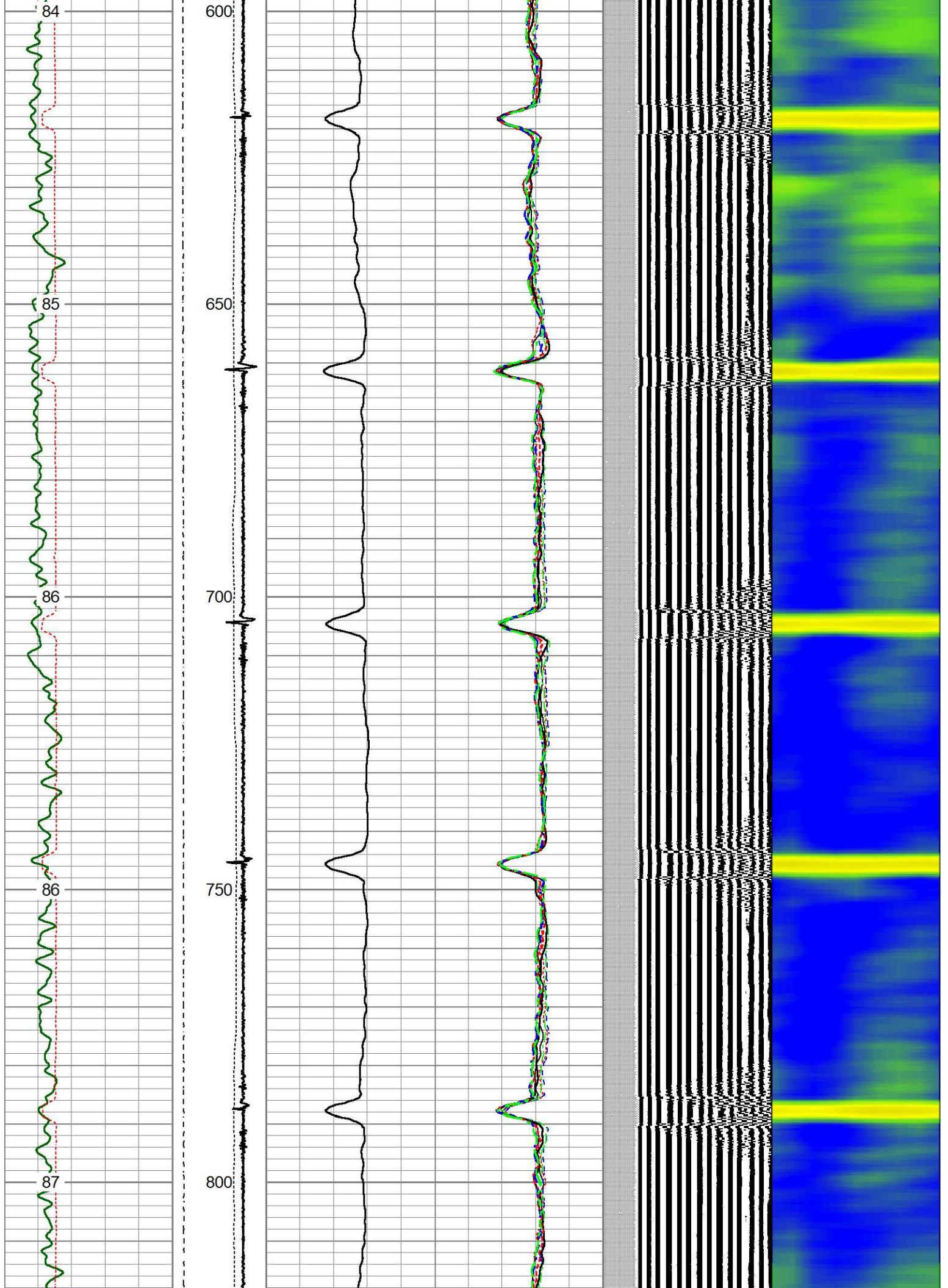
MAIN PASS (0 PSI)

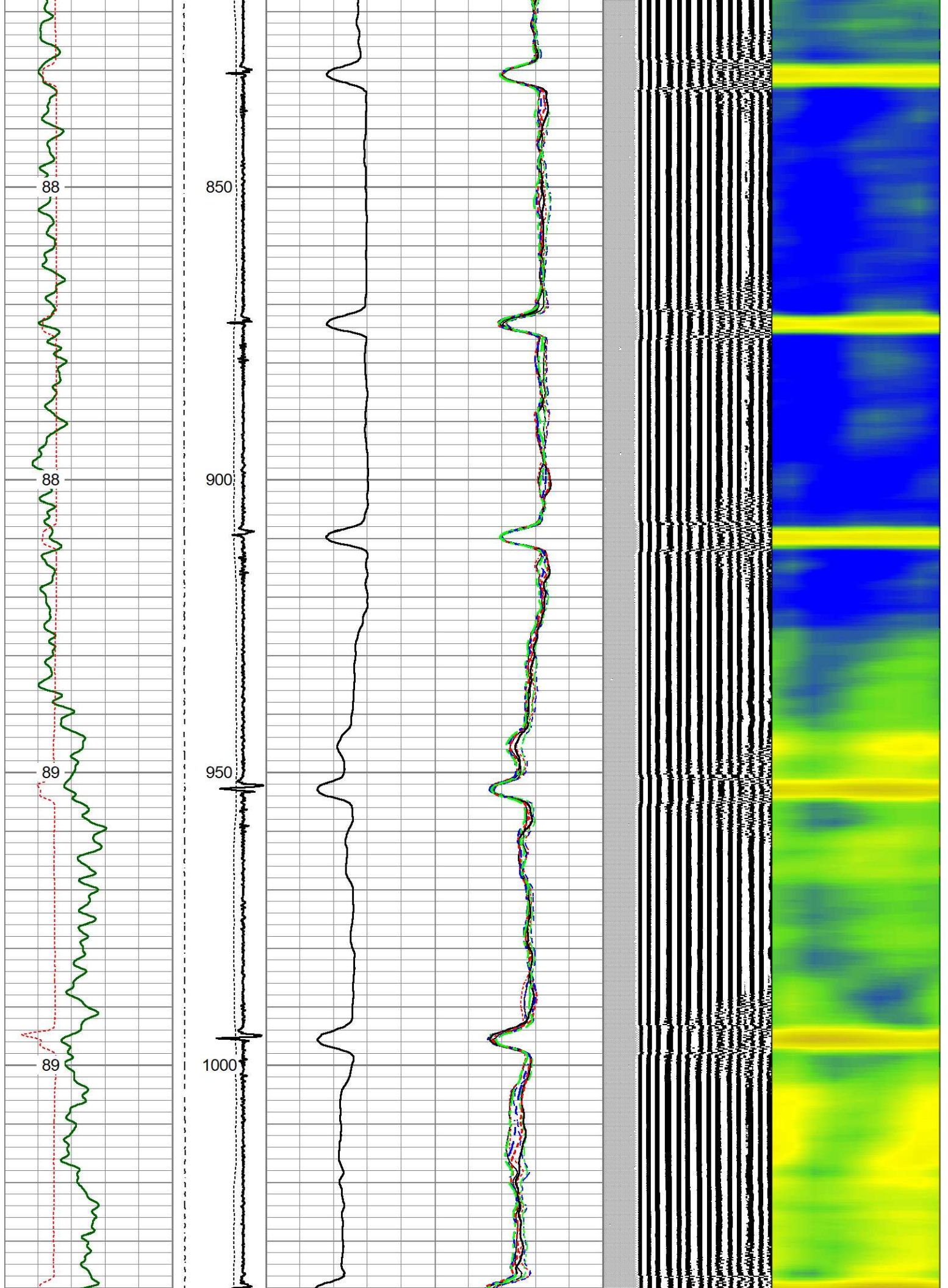
Gamma Ray	-3	CCL	1	0	AMP (mV)	100	-5	AMPS1	150	200	VDL (usec)	1200	1	Cement Map	8
0 (GAPI) 200	LTEN	0	AMPx10 (mV)	10	-5	AMPS2	150								
TT3FT	0 (lb/3000				-5	AMPS3	150								
335 (usec) 235	LSPD				-5	AMPS4	150								
TEMP	(ft/min)				-5	AMPS5	150								
(degF)	0 -100				-5	AMPS6	150								
					-5	AMPS7	150								
					-5	AMPS8	150								

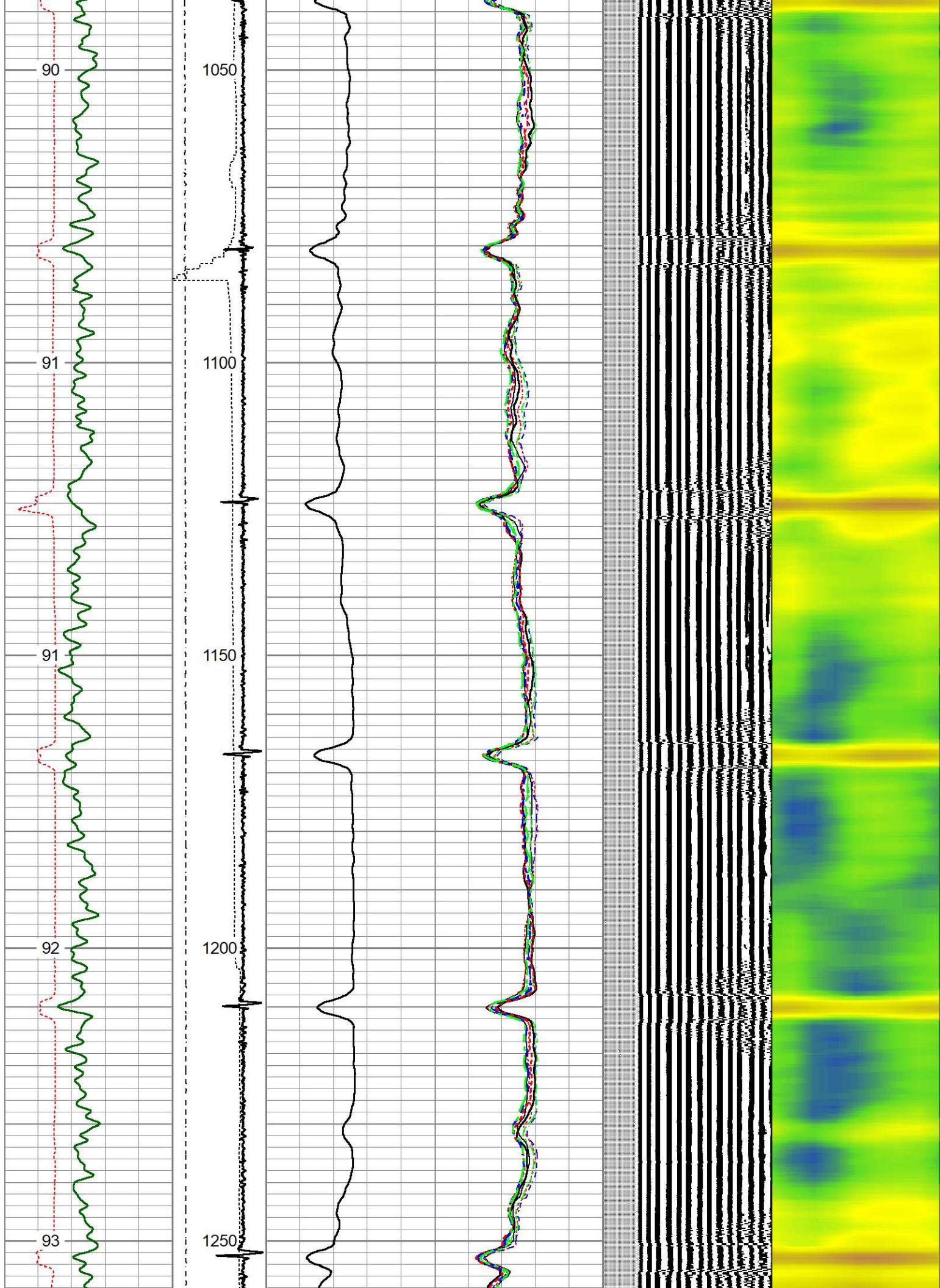


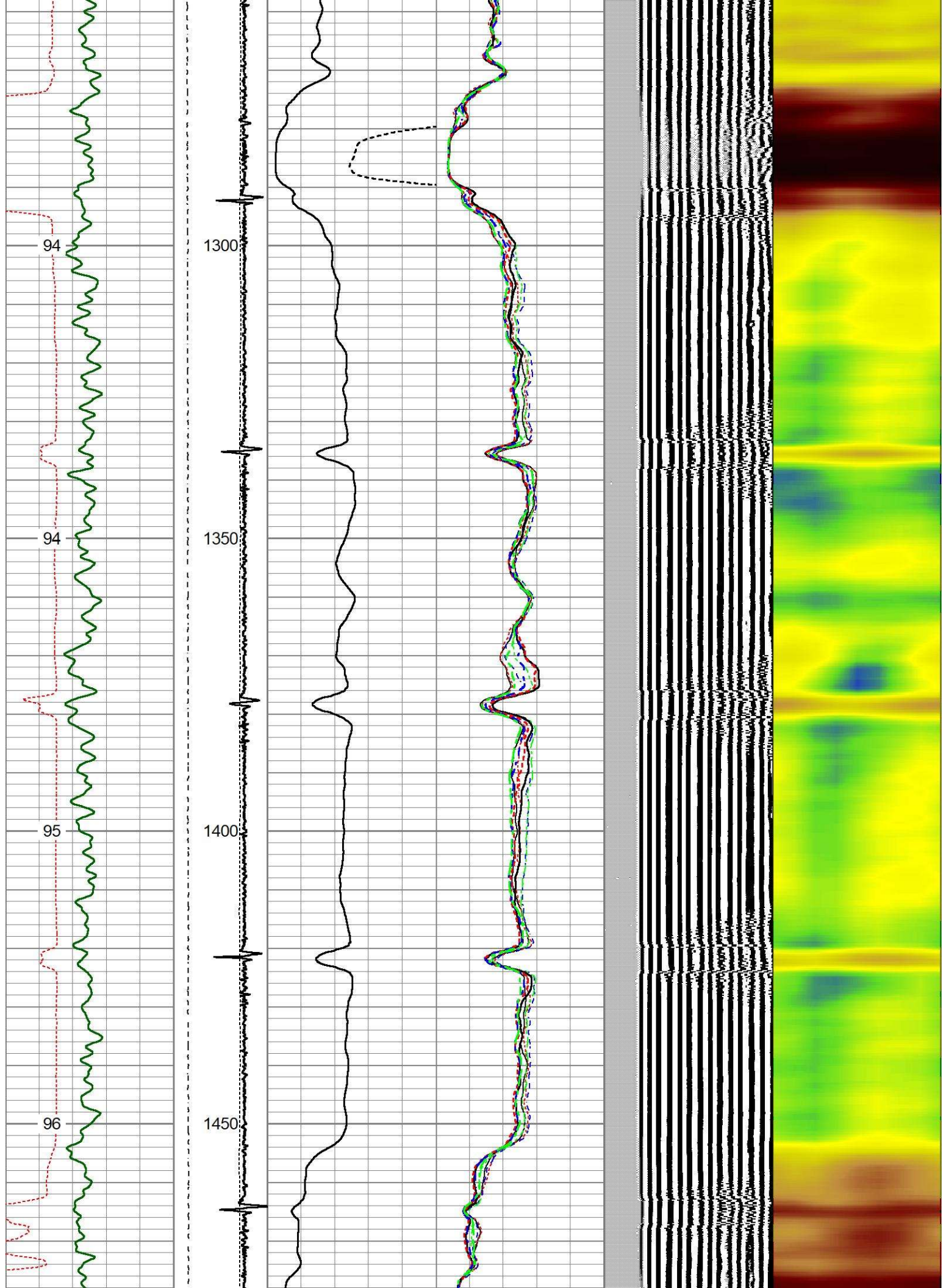


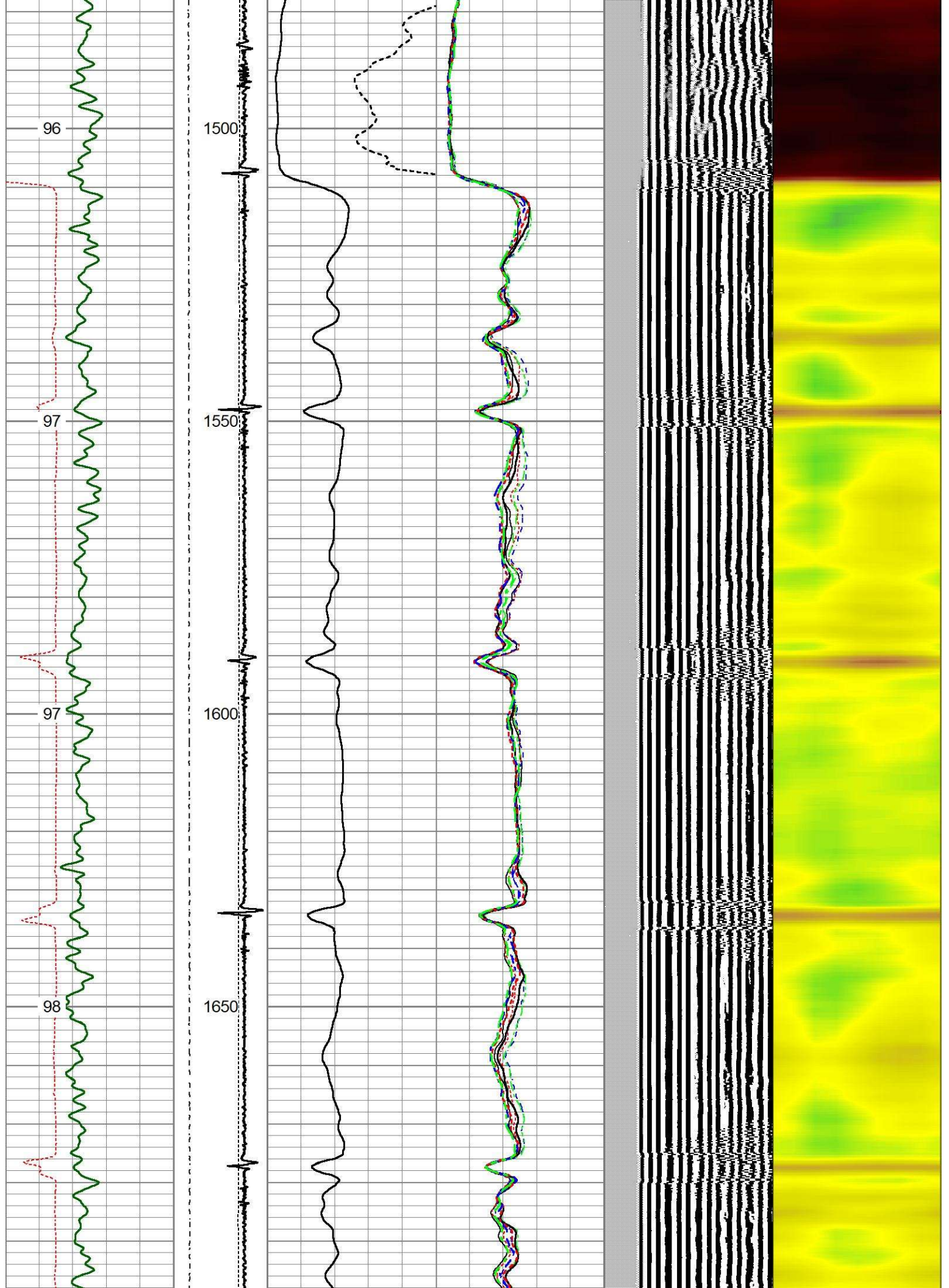


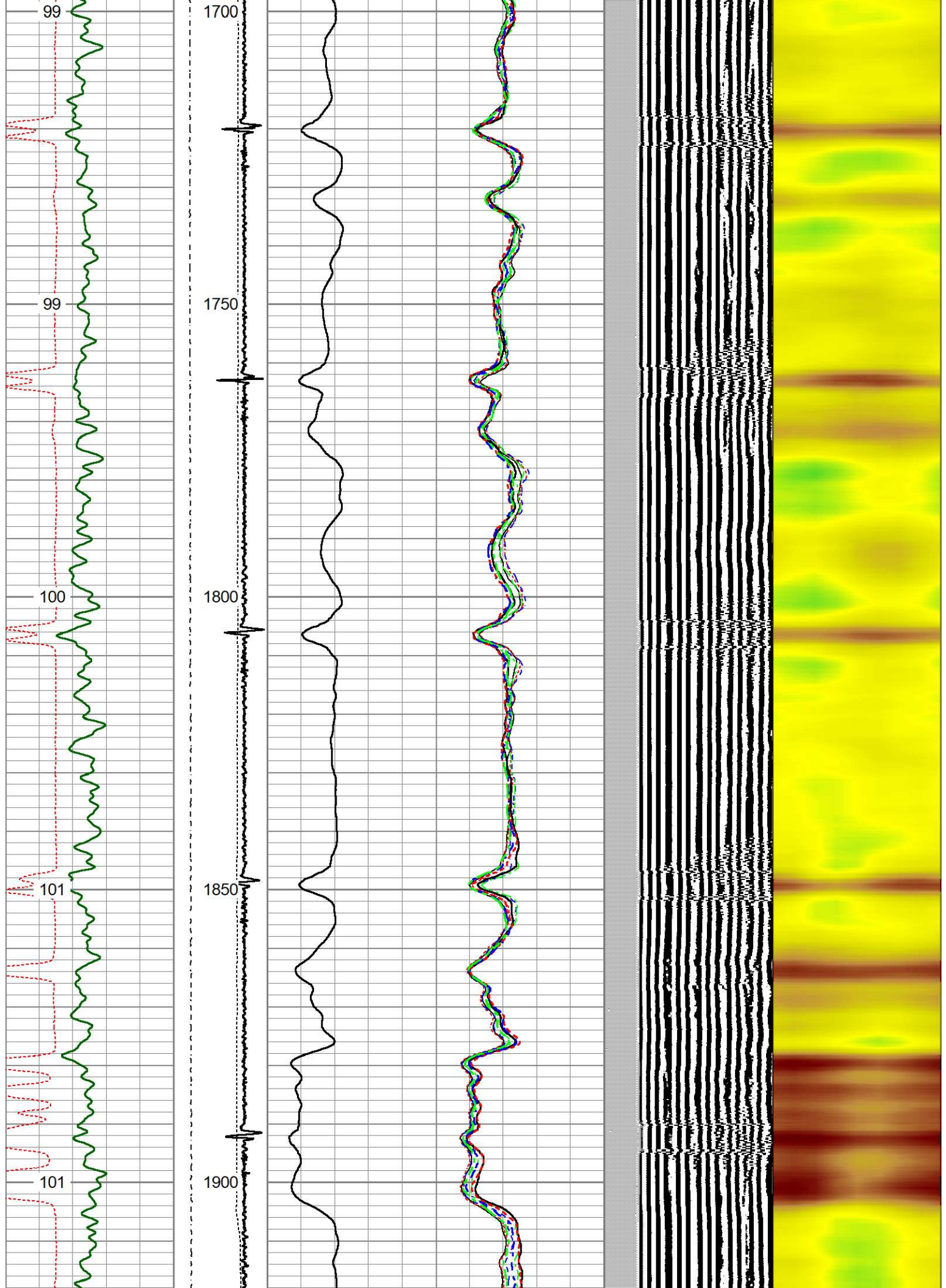


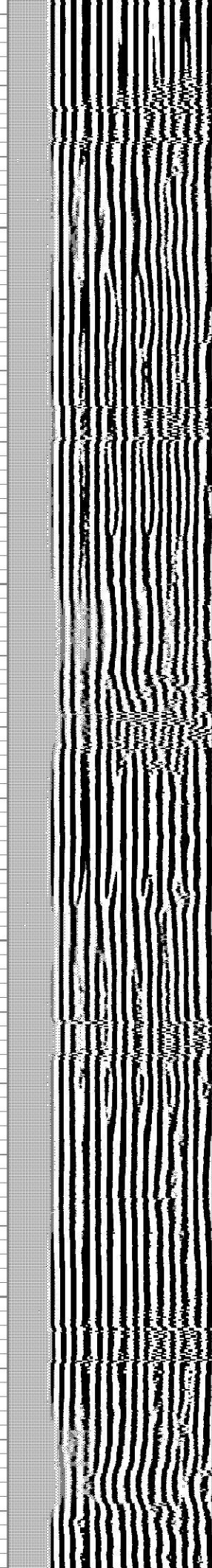
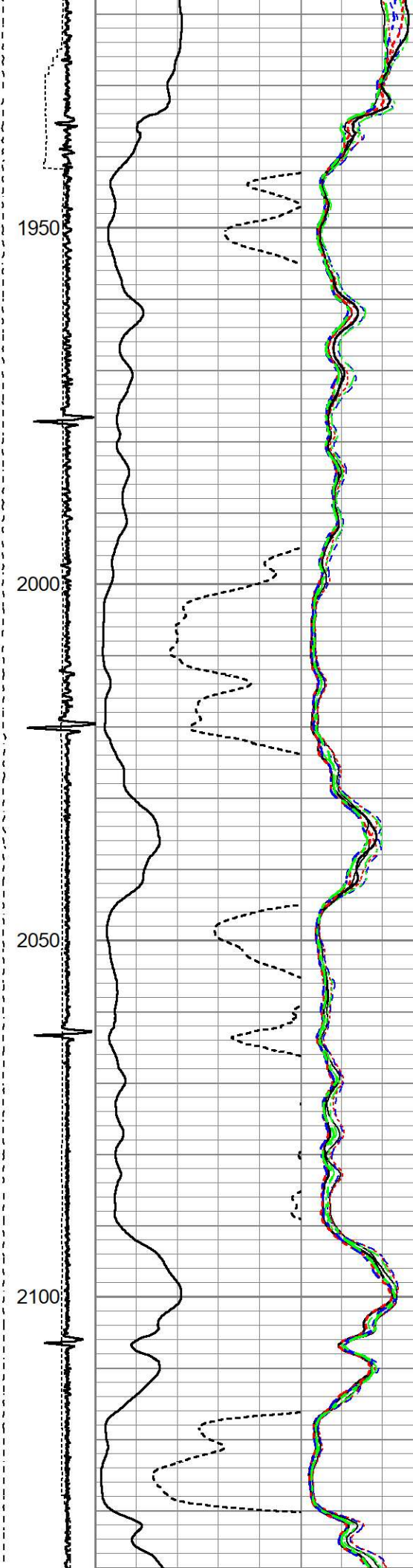
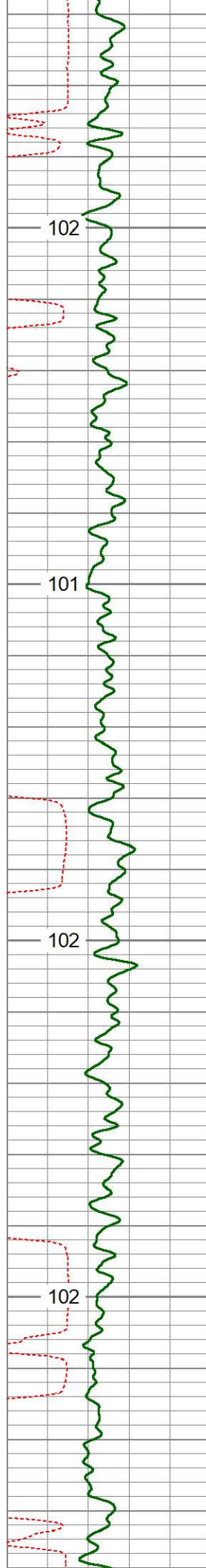


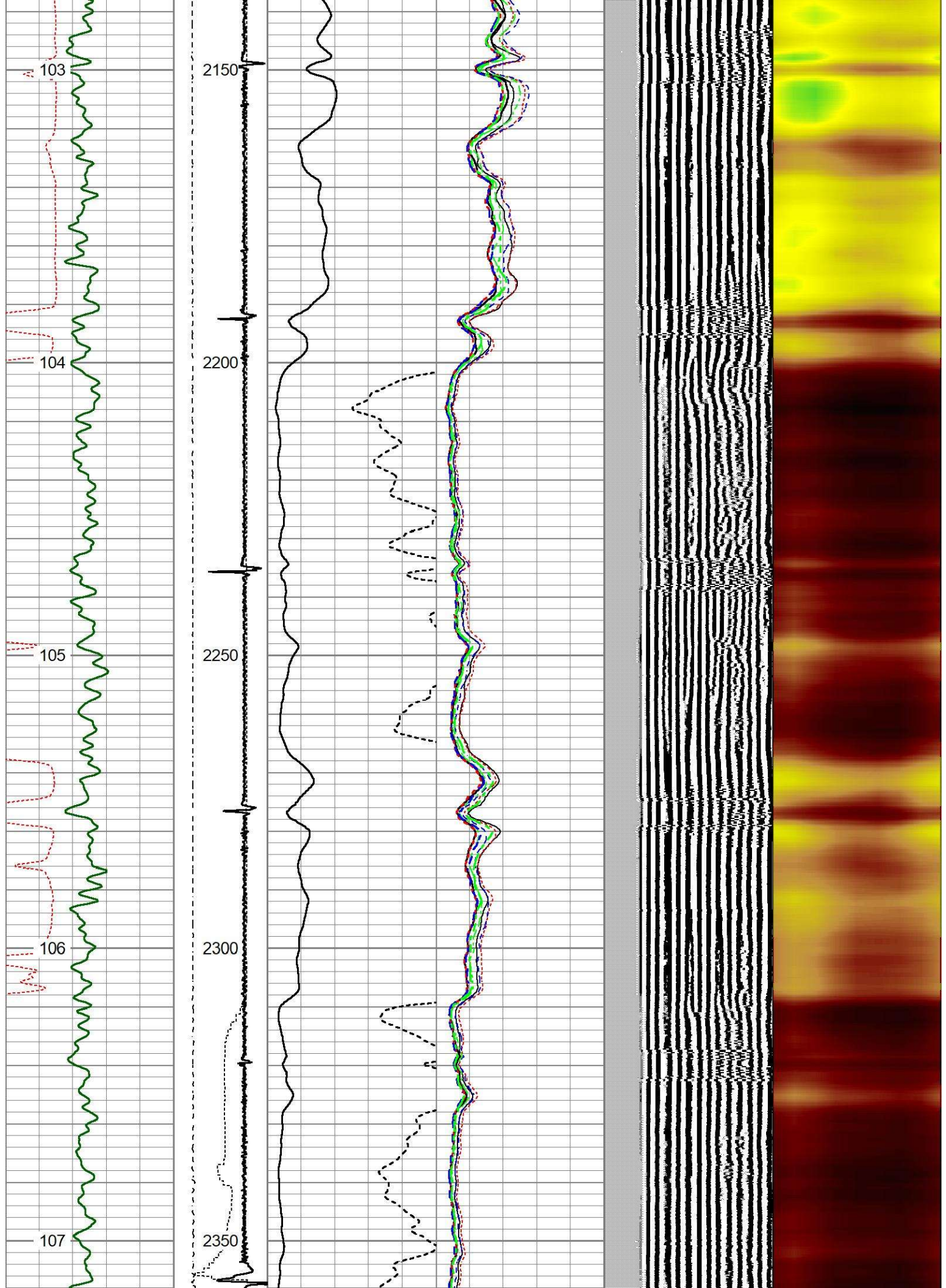


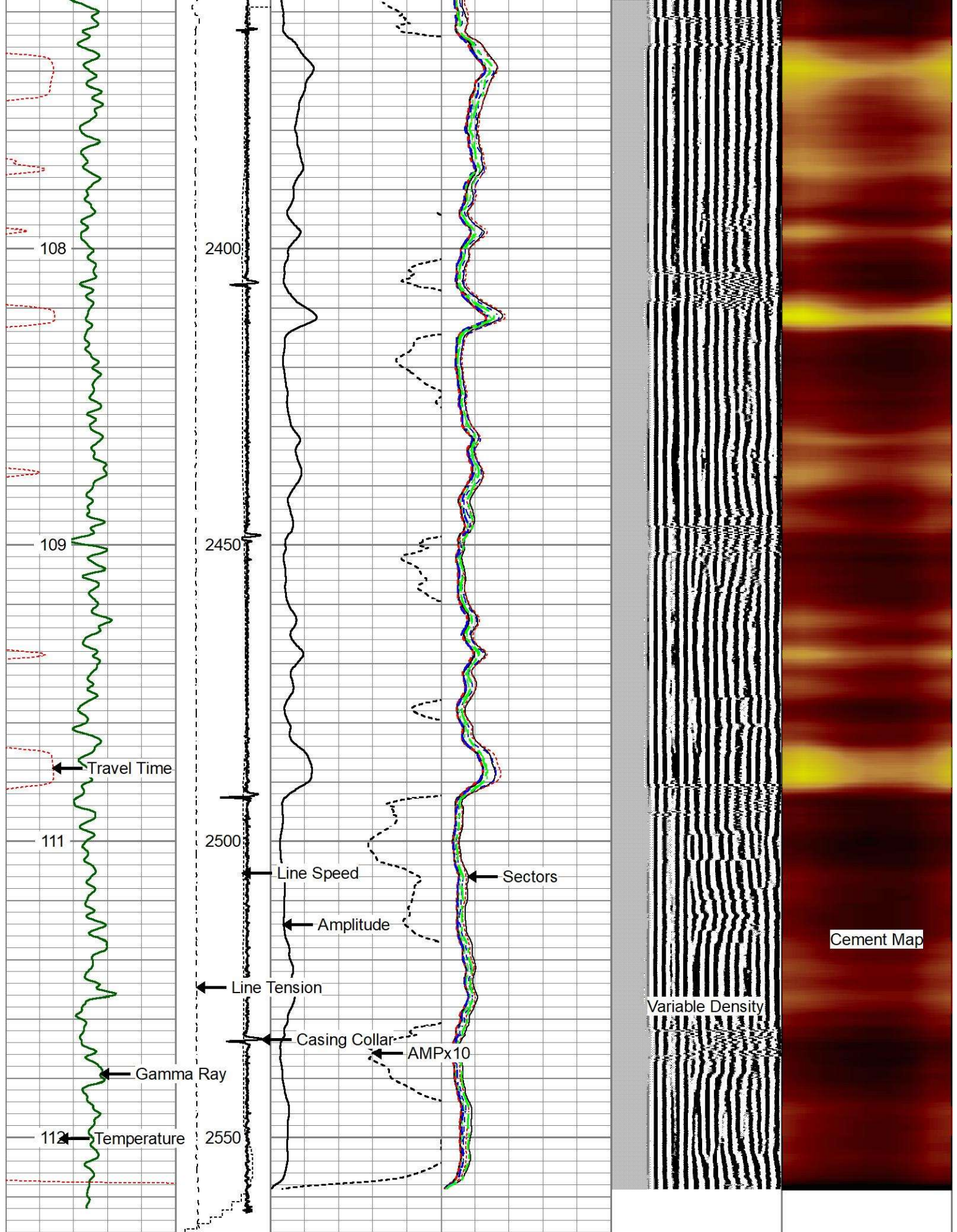












Gamma Ray	-3	CCL	1	0	AMP (mV)	100	-5	AMPS1	150	200	VDL (usec)	1200	1	Cement Map	8
0	(GAPI)	200	LTEN	0	AMPx10 (mV)	10	-5	AMPS2	150						
TT25T	0	400000					5	AMPS3	150						

TT3FT	0	(lb/3000)	-5	AMPS3	150
335 (usec)	235	LSPD	-5	AMPS4	150
TEMP		(ft/min)	-5	AMPS5	150
(degF)	0	-100	-5	AMPS6	150
			-5	AMPS7	150
			-5	AMPS8	150



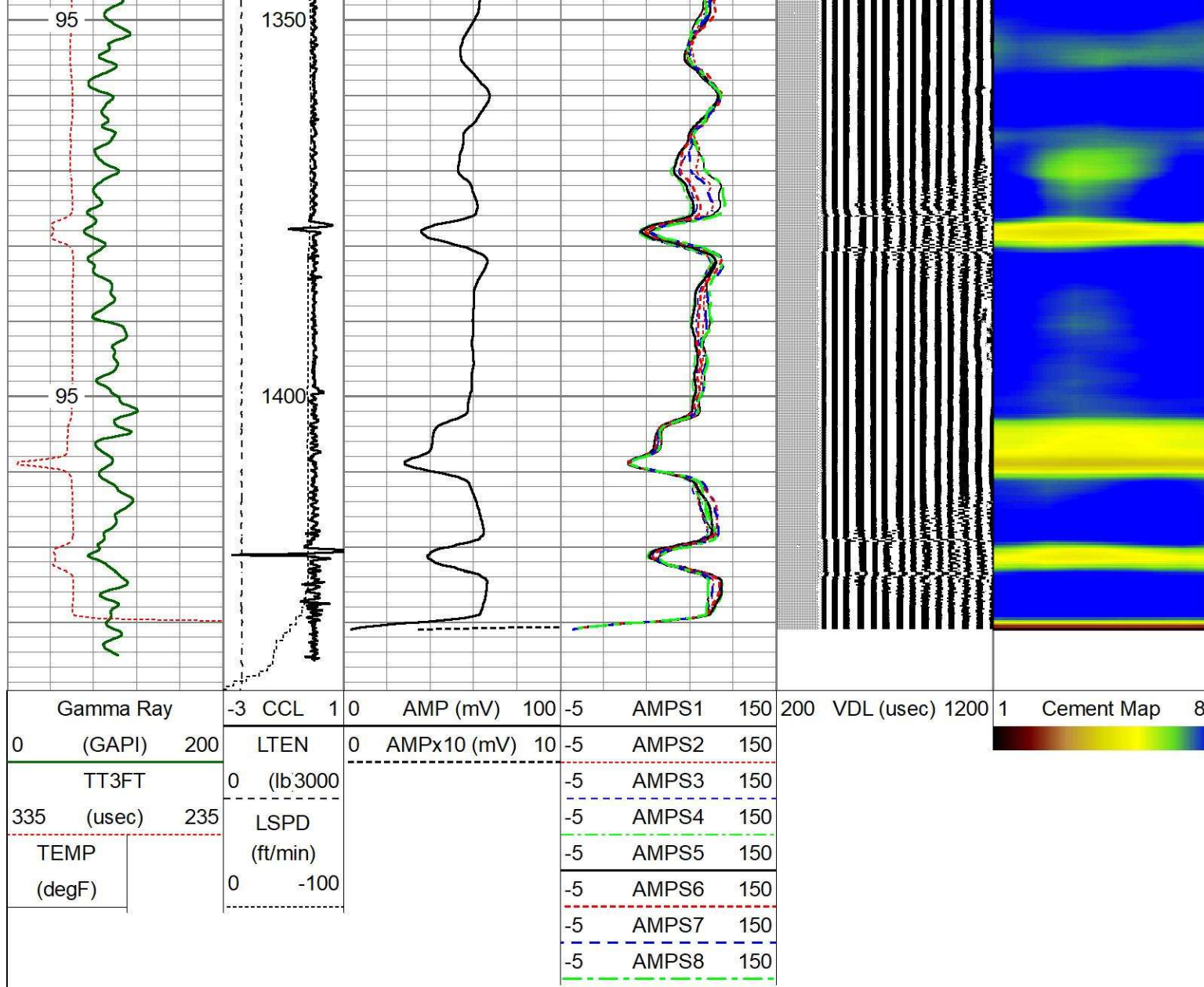
FREE PIPE

Database File
Dataset Pathname
Presentation Format
Dataset Creation
Charted by

0512336794_howard 29c - 21hz_oxy.db
RCBL/FREE_PIPE
rbt-gct8acc
Tue Jun 07 18:34:51 2022
Depth in Feet scaled 1:240

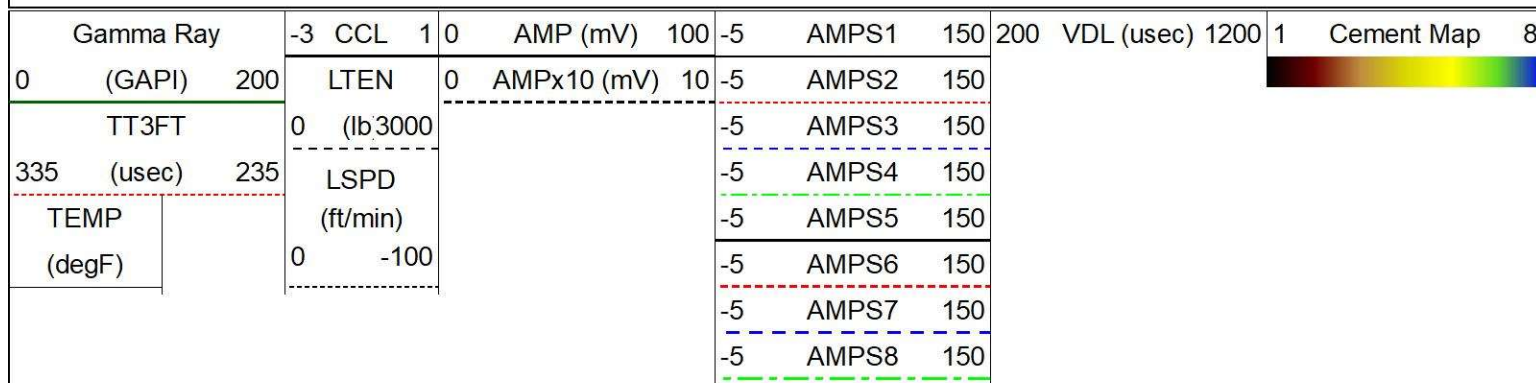
Gamma Ray	-3	CCL	1	0	AMP (mV)	100	-5	AMPS1	150	200	VDL (usec)	1200	1	Cement Map	8
0 (GAPI)	200	LTEN	0	AMPx10 (mV)	10	-5	AMPS2	150							
TT3FT		0 (lb/3000)				-5	AMPS3	150							
335 (usec)	235	LSPD				-5	AMPS4	150							
TEMP		(ft/min)				-5	AMPS5	150							
(degF)		0	-100			-5	AMPS6	150							
						-5	AMPS7	150							
						-5	AMPS8	150							

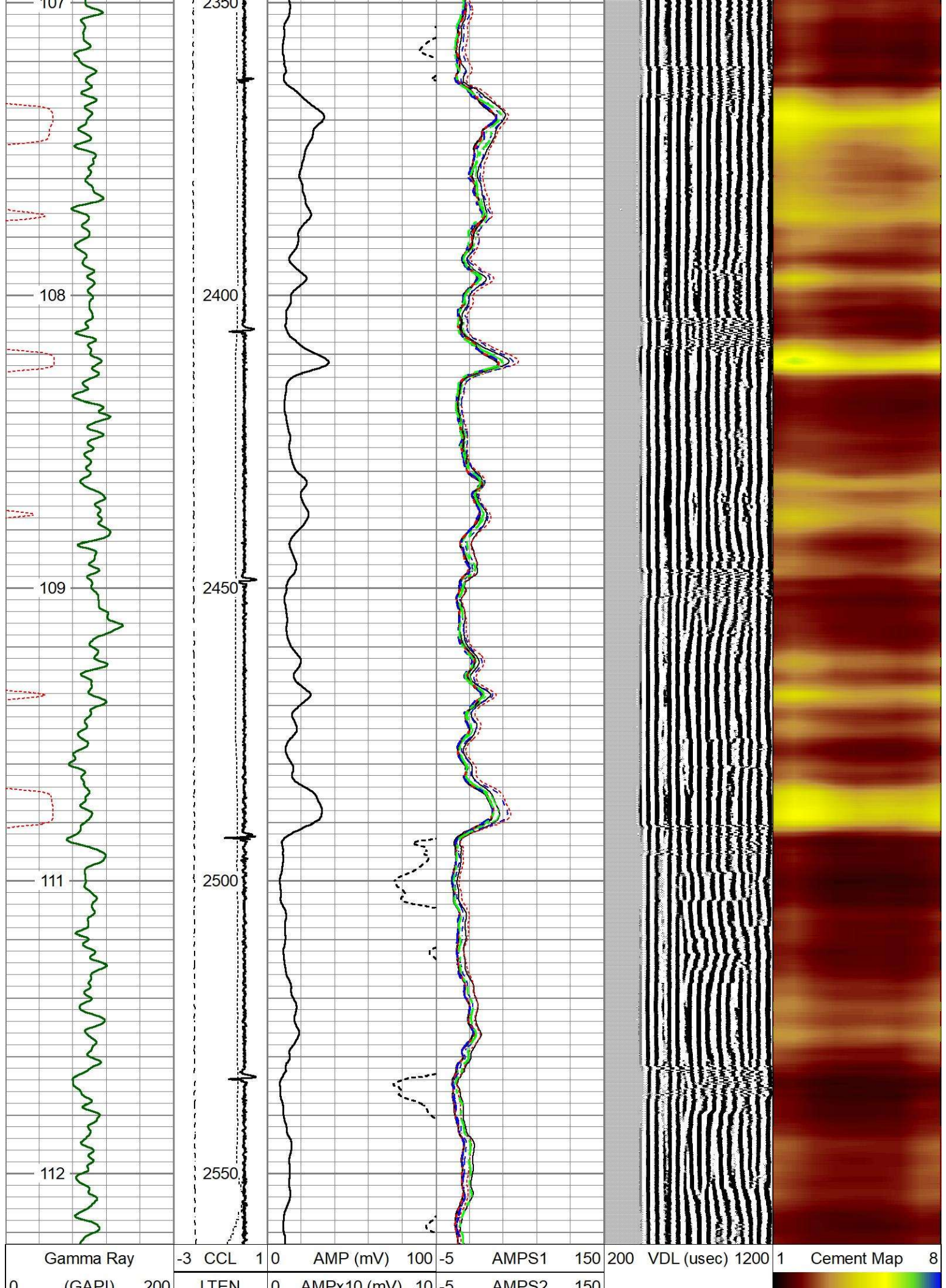




REPEAT PASS

Database File 0512336794_howard 29c - 21hz_oxy.db
Dataset Pathname RCBL/REPEAT
Presentation Format rbt-gct8acc
Dataset Creation Tue Jun 07 18:47:50 2022
Charted by Depth in Feet scaled 1:240





0	(GAPI)	200	LEN	0	AMPS x 10 (mV)	10	-5	AMPS2	150
TT3FT			0	(lb/3000			-5	AMPS3	150
335	(usec)	235	LSPD				-5	AMPS4	150
TEMP			(ft/min)				-5	AMPS5	150
(degF)			0	-100			-5	AMPS6	150
							-5	AMPS7	150
							-5	AMPS8	150

		Calibration Report	
Database File	0512336794_howard 29c - 21hz_oxy.db		
Dataset Pathname	RCBL/MAIN.1		
Dataset Creation	Tue Jun 07 19:49:37 2022		

Gamma Ray Calibration Report

Serial Number:	FW1905-206	
Tool Model:	Probe275	
Performed:	Fri Jan 7 14:01:56 2022	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.9474	GAPI/cps

Temperature Calibration Report

Serial Number:	FW1905-206		
Tool Model:	Probe275		
Performed:	Thu Dec 16 14:49:37 2021		
	Reference	Reading	
Low Reference:	100.00 degF	6258.73	
High Reference:	350.00 degF	26472.00	
Gain:	0.01		
Offset:	22.59		
Delta Spacing	2		

Segmented Cement Bond Log Calibration Report
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Serial Number:	FW1211-130		
Tool Model:	RBTC3		
Calibration Casing Diameter:	7.000	in	
Calibration Depth:	1438.056	ft	

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.021	2.123	1.000	62.165	29.095	0.400
CAL	0.000	2.499				
5'	-0.003	2.122	1.000	62.165	28.782	1.097
SUM						
S1	0.010	2.065	0.000	100.000	48.647	-0.468
S2	0.023	2.135	0.000	100.000	47.335	-1.075
S3	0.028	2.210	0.000	100.000	45.820	-1.275
S4	0.032	2.172	0.000	100.000	46.715	-1.487

Log Variables

Tool Joint	Depth (ft)	Tool Joint Diagram	Tool Joint Description	Length (ft)	Weight (lb)	O.D. (in)
WVFS1	9.02					
WVFCAL	9.02					
WV3FT	9.02					
WV5FT	8.02					
WVFSYNC	4.77					
DCCL	3.92					
CCL	3.92					
TEMP	3.17					
GR	2.42		GCT-Probe275 (FW1905-206) Probe 2 3/4" Gamma Ray CCL w/Temperature	4.77	2.75	40.00
Dataset: 0512336794_howard 29c - 21hz_oxy.db: field/well/RCBL/MAIN Total length: 15.39 ft Total weight: 131.00 lb O.D.: 2.75 in						