



**RADIAL CEMENT BOND LOG
VARIABLE DENSITY LOG
GAMMA/CCL/TEMP**

Company ANTERO RESOURCES
Well MARGERY-GLAMDRING 2H
Field RABBIT EARS
County TYLER State WV

Location: 39.520117, -80.834338 (ENTERANCE) API #: 47-095-02743 Other Services

Permanent Datum GROUND LEVEL Elevation 25.5"
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Company ANTERO RESOURCES
Well MARGERY-GLAMDRING 2H
Field RABBIT EARS
County TYLER
State WV

SEC TWP RGE

Elevation

K.B. 1650.5
D.F. 1650.5
G.L. 1625

Date DECEMBER 3, 2021

Run Number 1

Depth Driller 22744

Bottom Logger 7400

Top Log Interval 7388

Open Hole Size SURFACE

Type Fluid NA

Density / Viscosity FRESH WATER

Max. Recorded Temp. 8.6 LB/GAL

Estimated Cement Top 148

Time Well Ready 5652

Time Logger on Bottom UPON ARRIVAL

Equipment Number 10:40 AM

Location 116

Recorded By CHARLEROI, PA

Witnessed By JAKE BELL

MR. BRYAN CARTER

Borehole Record

Run Number Bit From To

Size From To

Weight From To

Tubing Record

Run Number Bit From To

Size From To

Weight From To

Casing Record

Surface String N/A

Prof. String NA

Production String 5.5

Liner 23#

Size Wgt/Ft Top Bottom

NA NA NA NA

NA NA NA NA

5.5 23# SURFACE 22744

NA NA NA NA

NA NA NA NA

NA NA NA NA

NA NA NA NA

NA NA NA NA

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

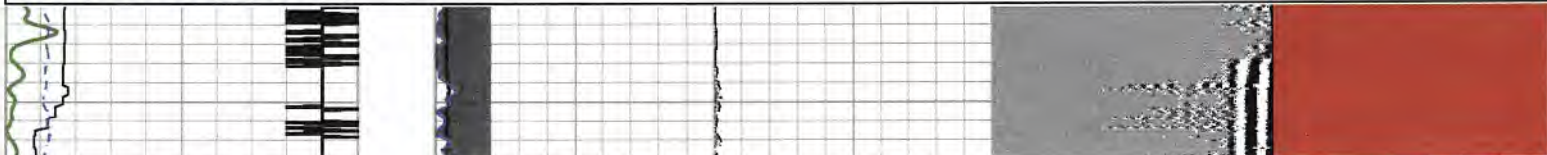
LOG CORRELATED TO MARKER JOINT
 DEPTH SHIFT +3
 MARKER JOINT 6417-6427
 ALL PASSES MADE WITH 1500 PSI
 THANK YOU FOR USING NINE ENERGY SERVICES

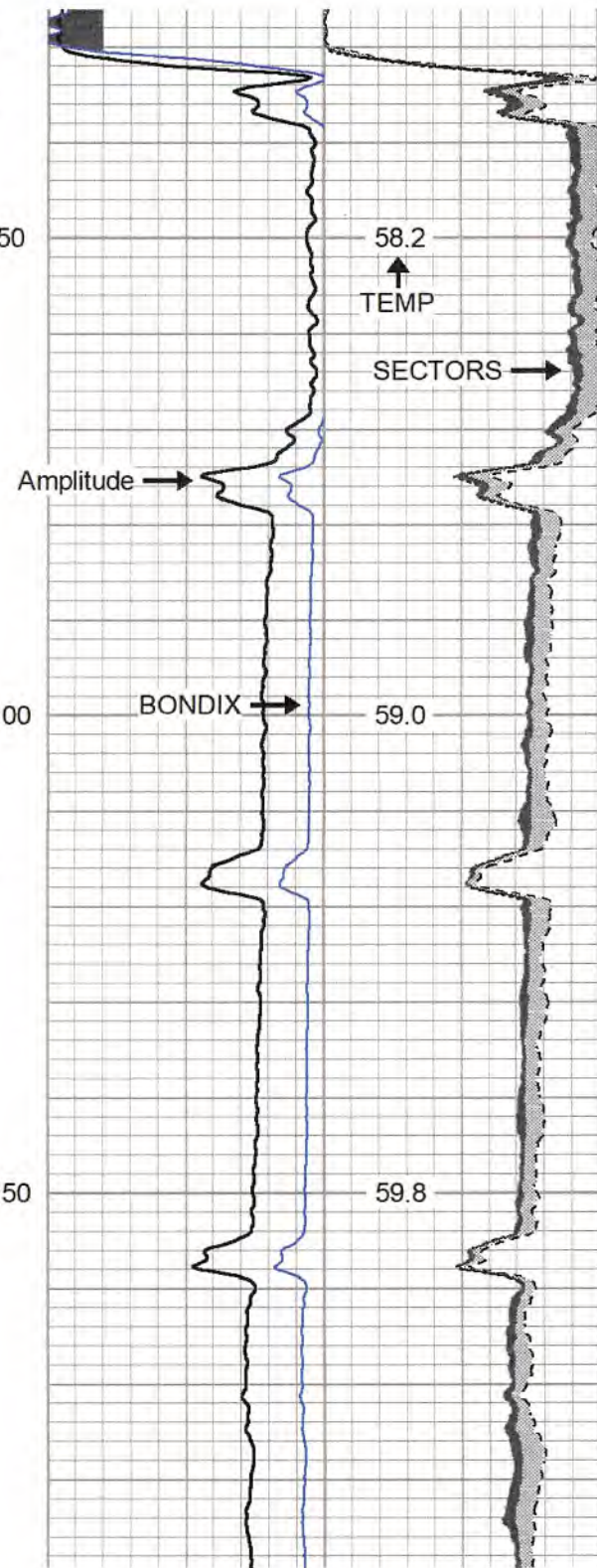
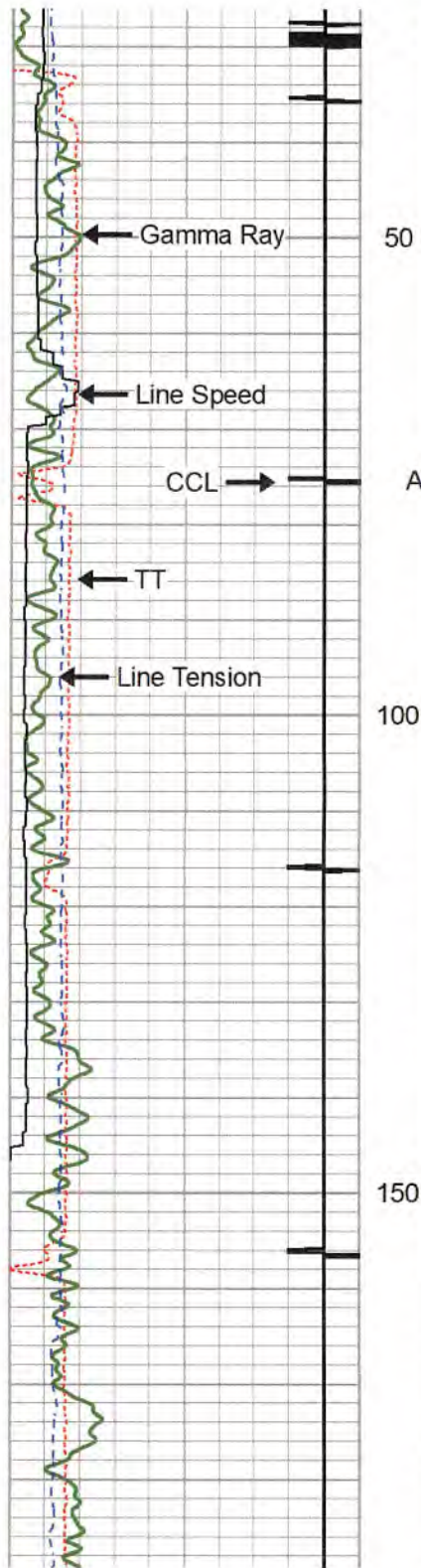


MAIN PASS-1500 PSI

Database File antero-glamdring 2h-12-3-21.db
 Dataset Pathname GLAMDRING_2H/RCBL/pass12
 Presentation Format antero rcbl
 Dataset Creation Fri Dec 03 11:49:25 2021
 Charted by Depth in Feet scaled 1:240

270	Travel Time (usec)	160	0	Amplitude (mV)	100	0	AMPMIN	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	1	BONDIX	0	0	AMPMAX	150	200 (usec)	1200		
0	Gamma Ray (GAPI)	150				0	AMPAVG	150				
Line Speed				TEMP								
-100	(ft/min)	100			(degF)							
0	Line Tension (lb)	2000										



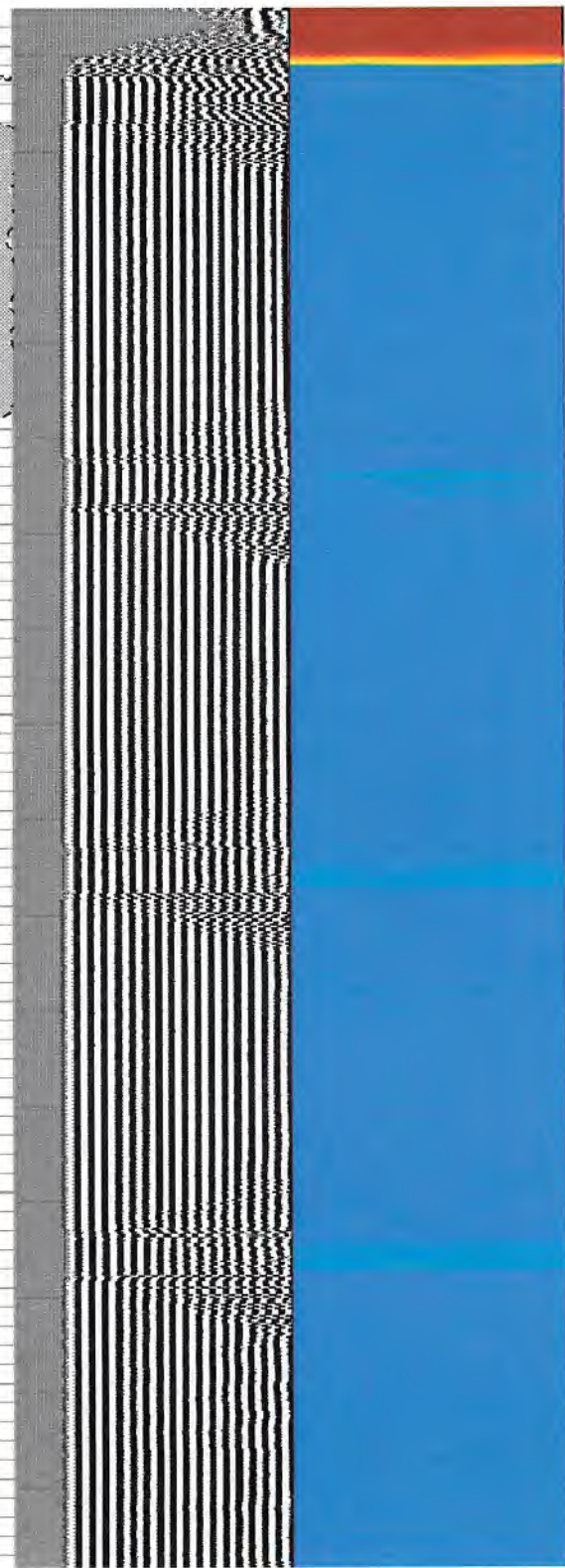


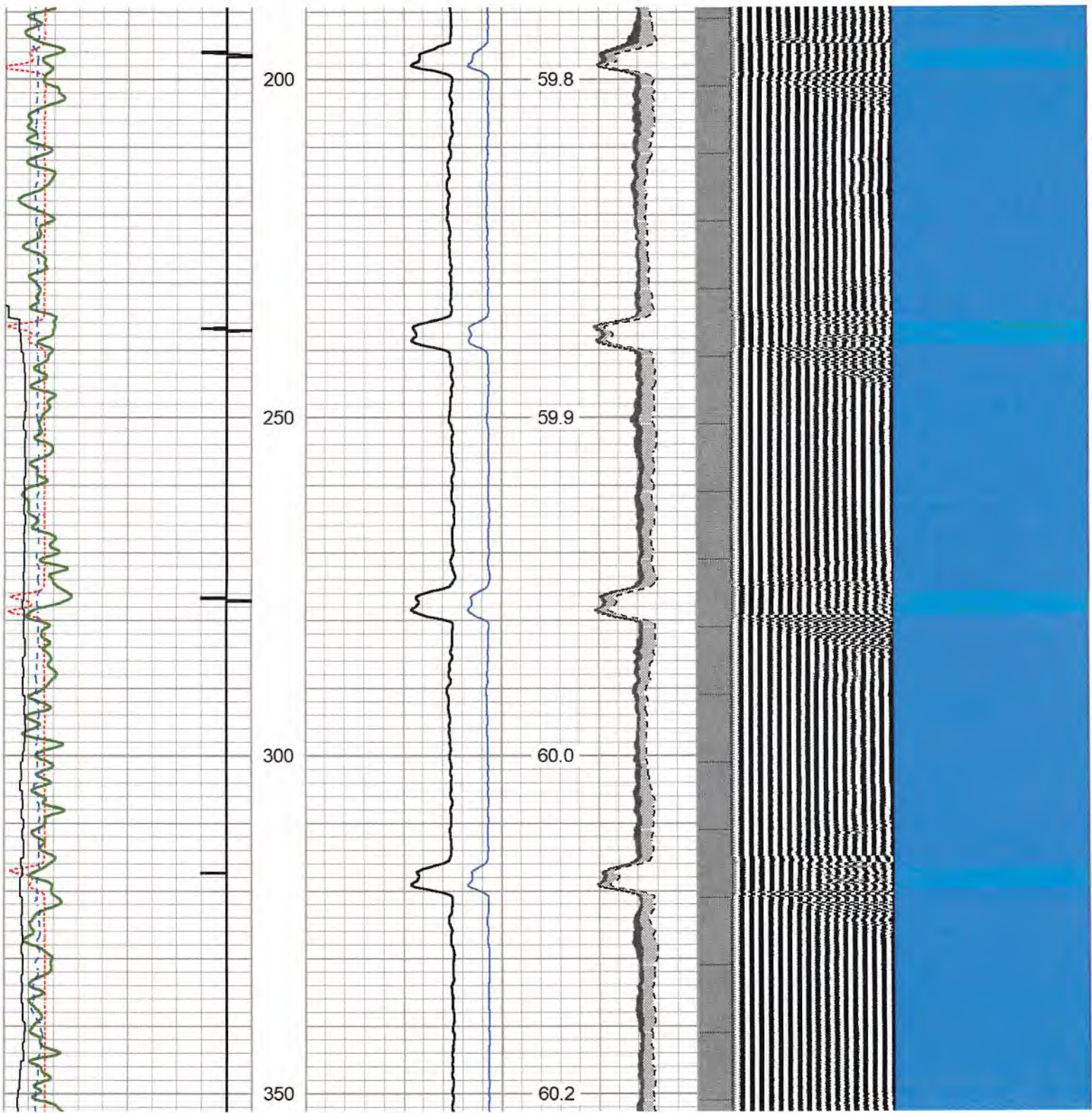
58.2
↑
TEMP

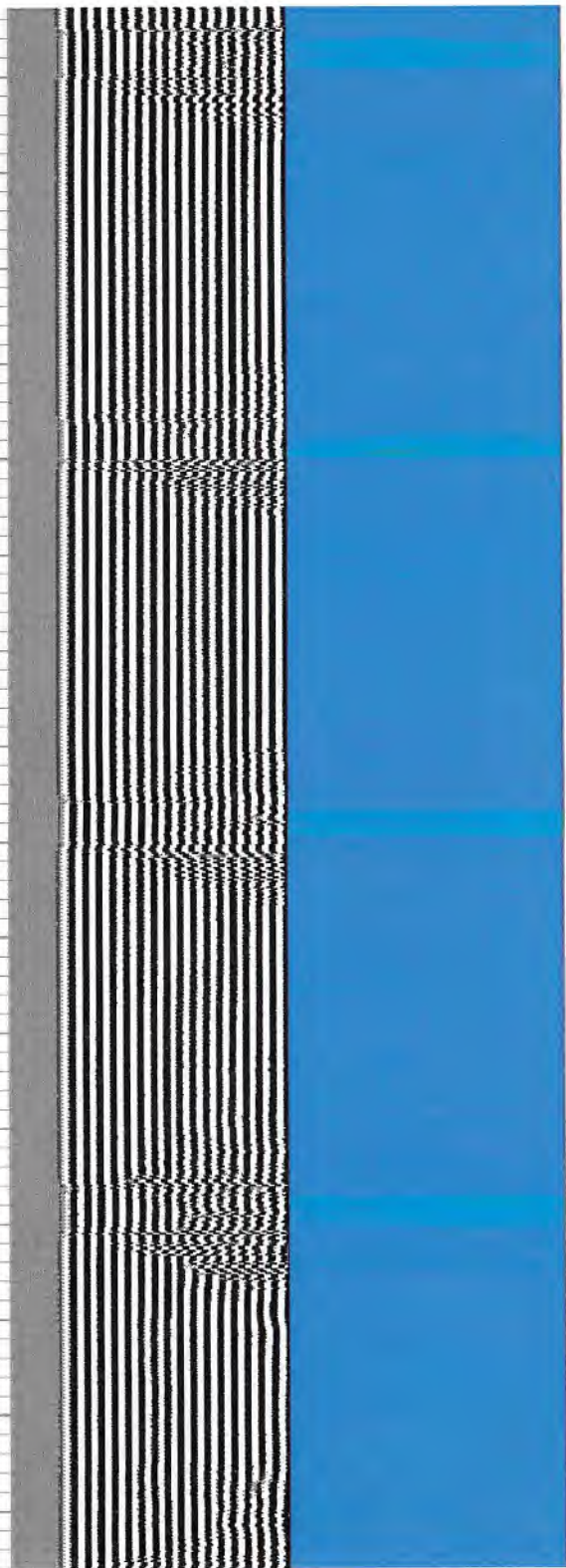
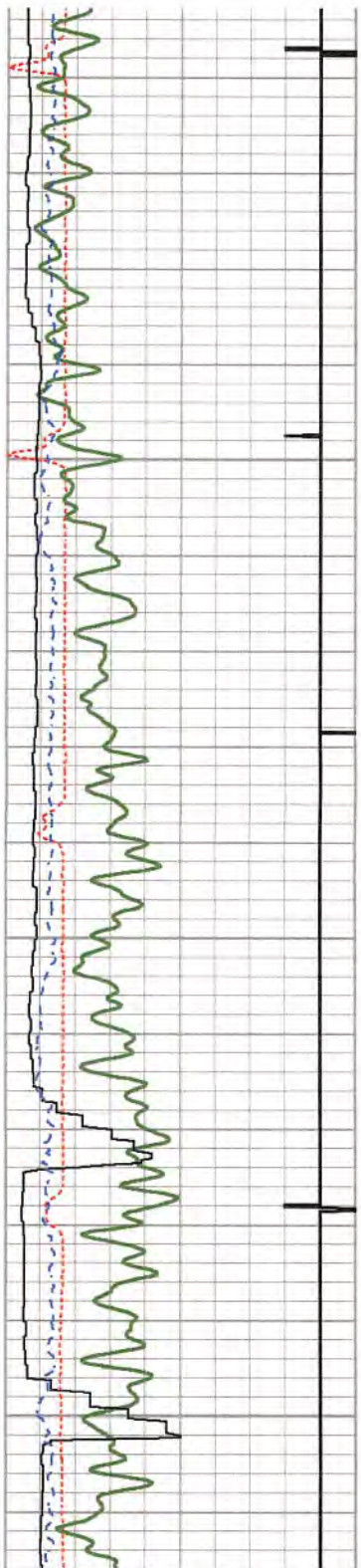
SECTORS →

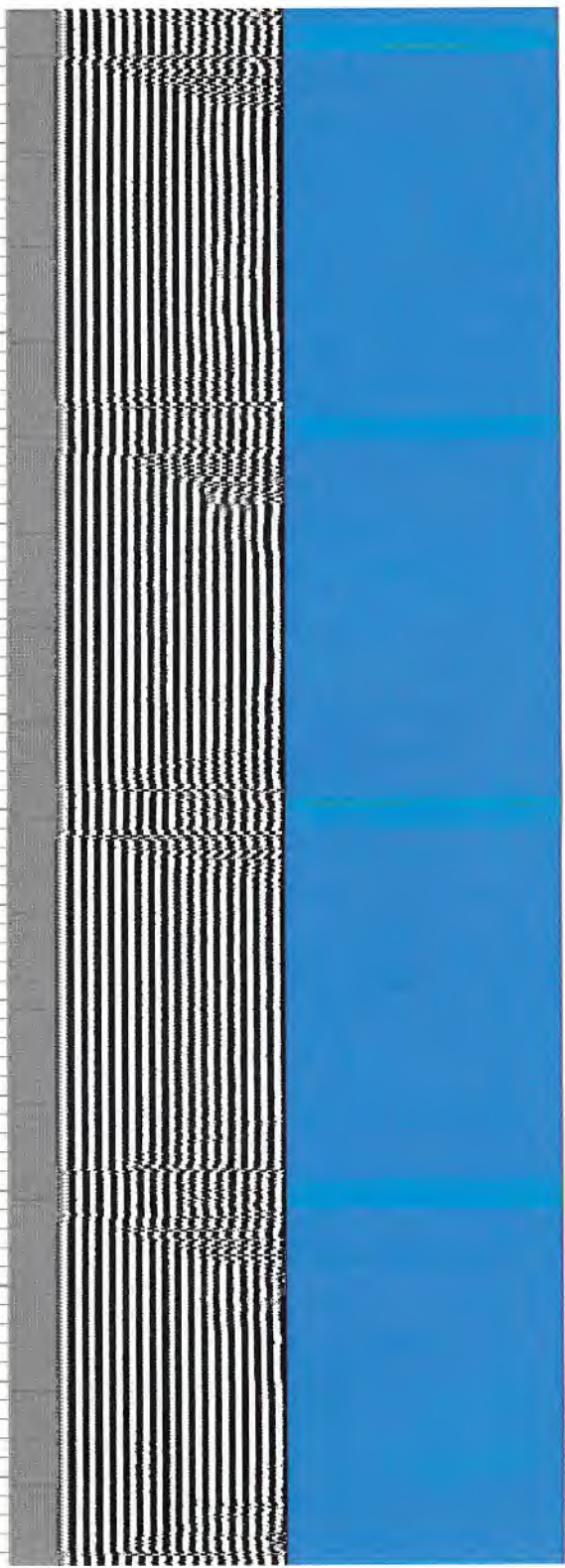
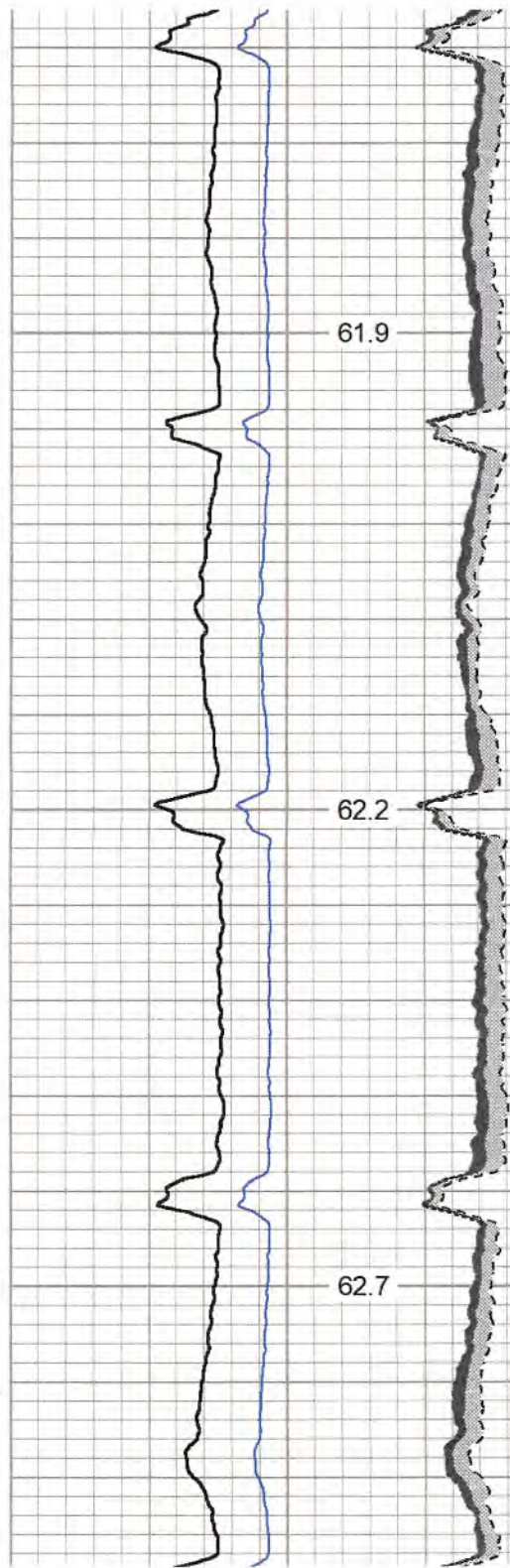
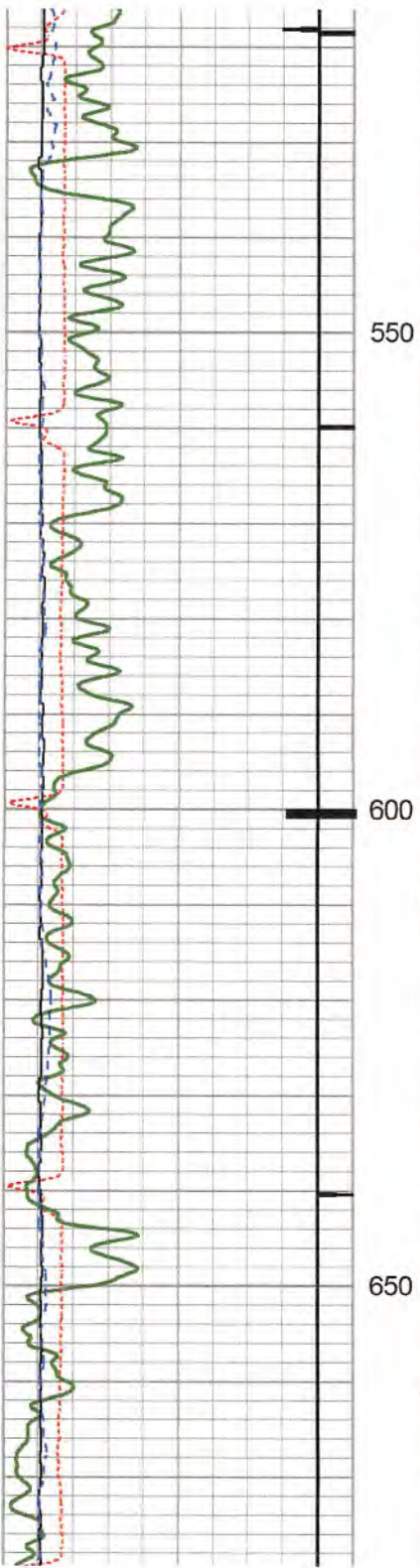
59.0

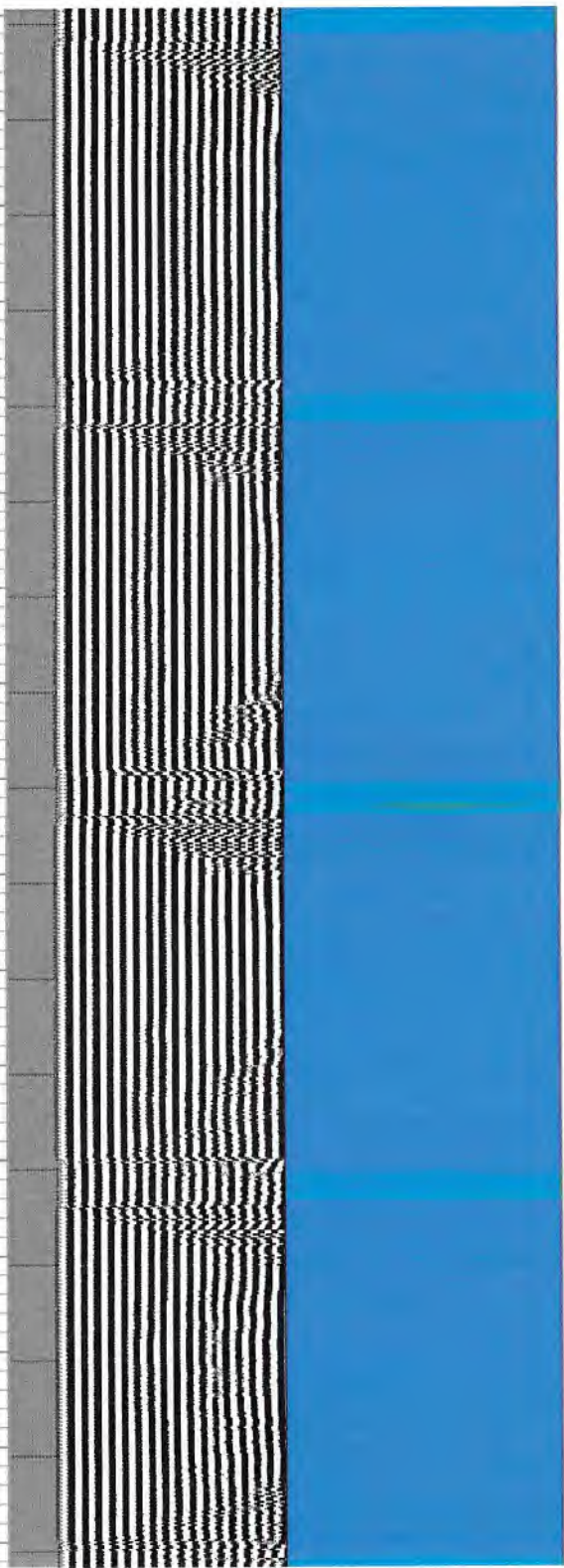
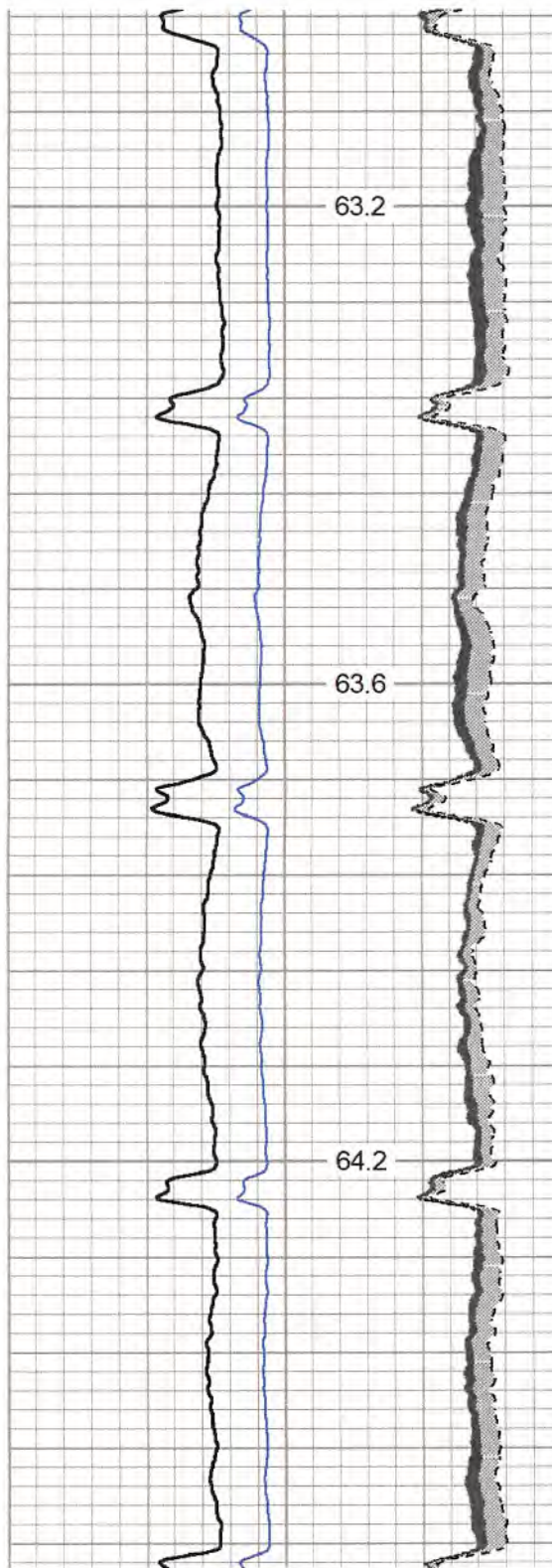
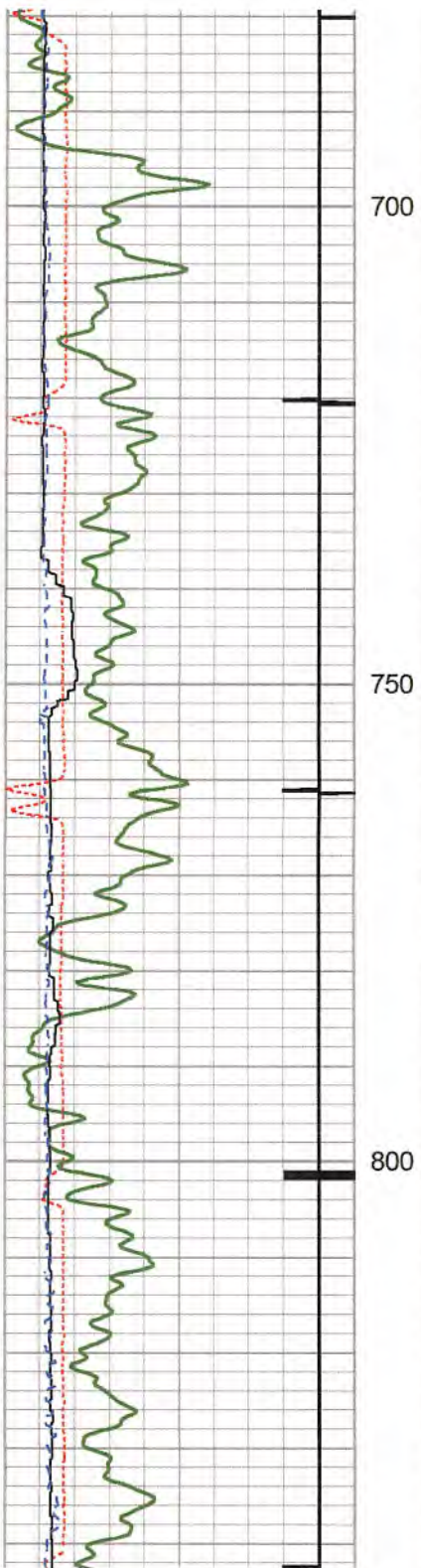
59.8

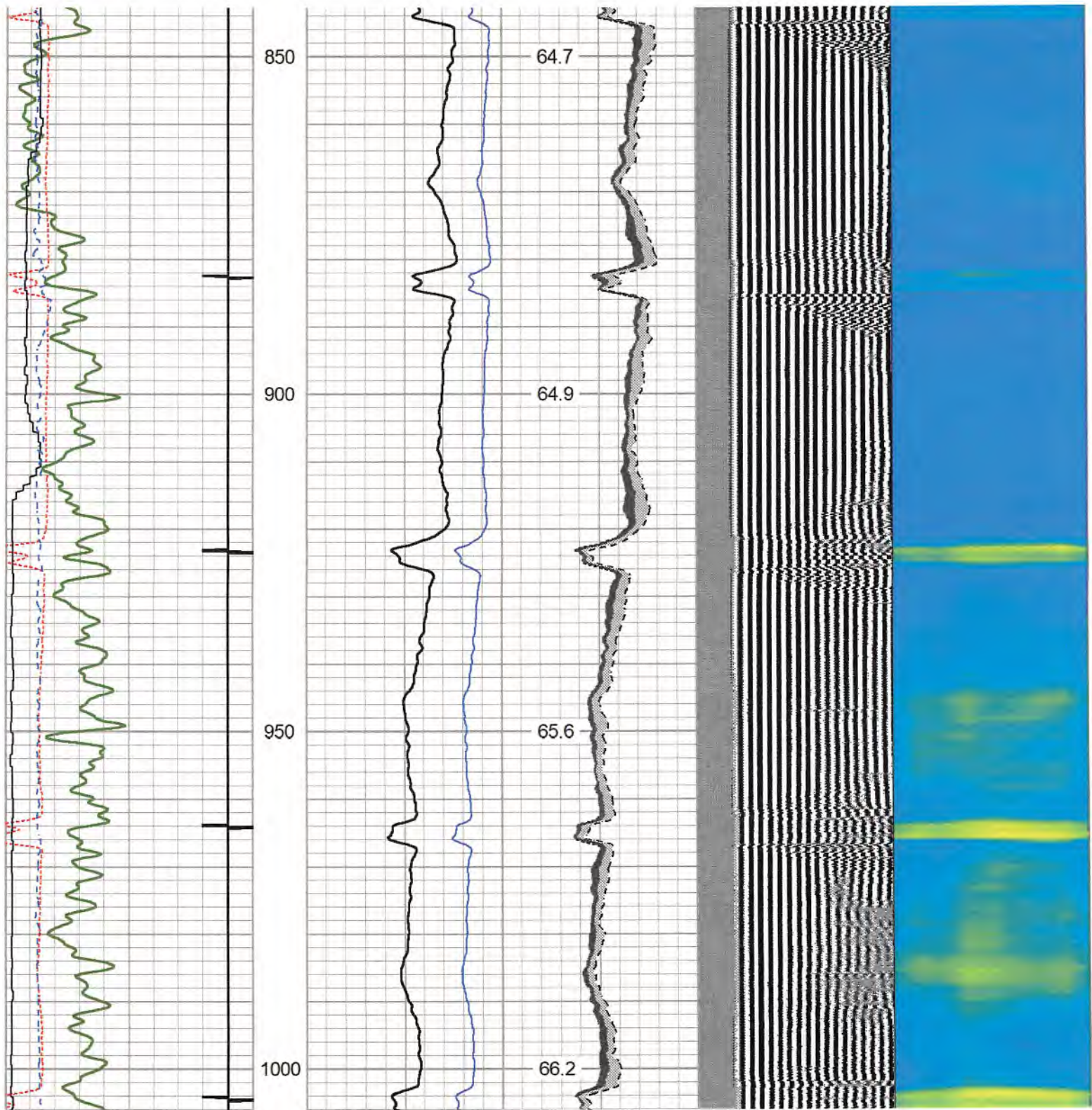


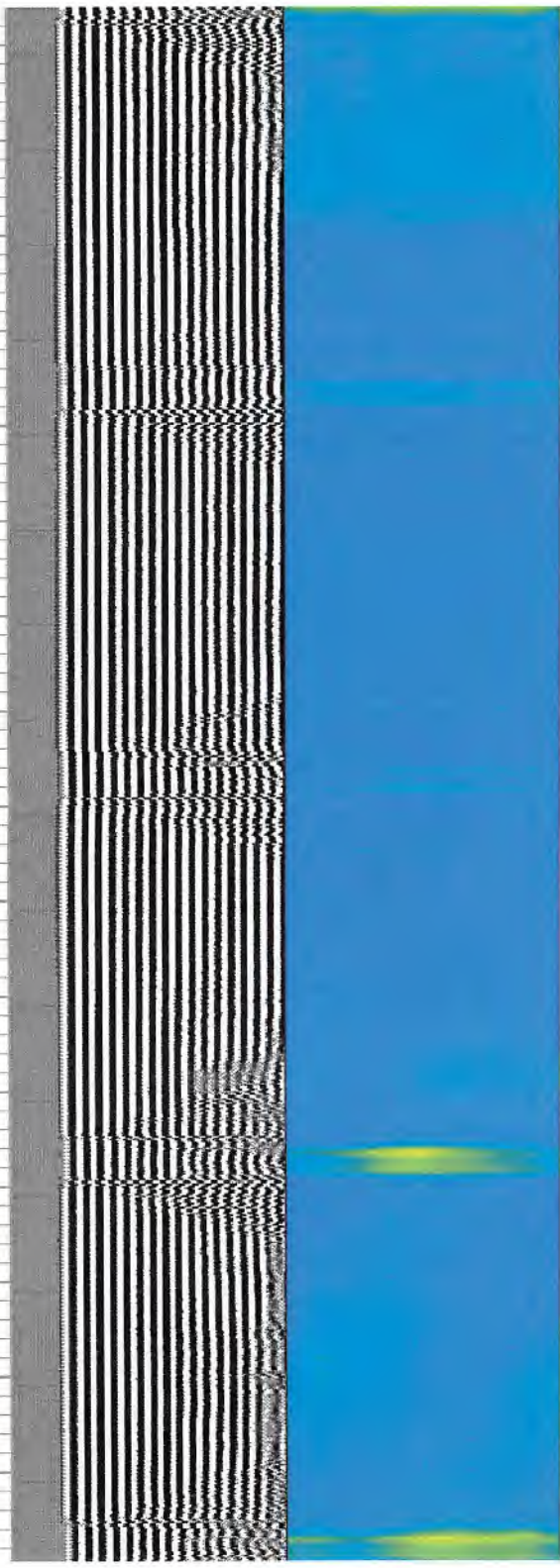
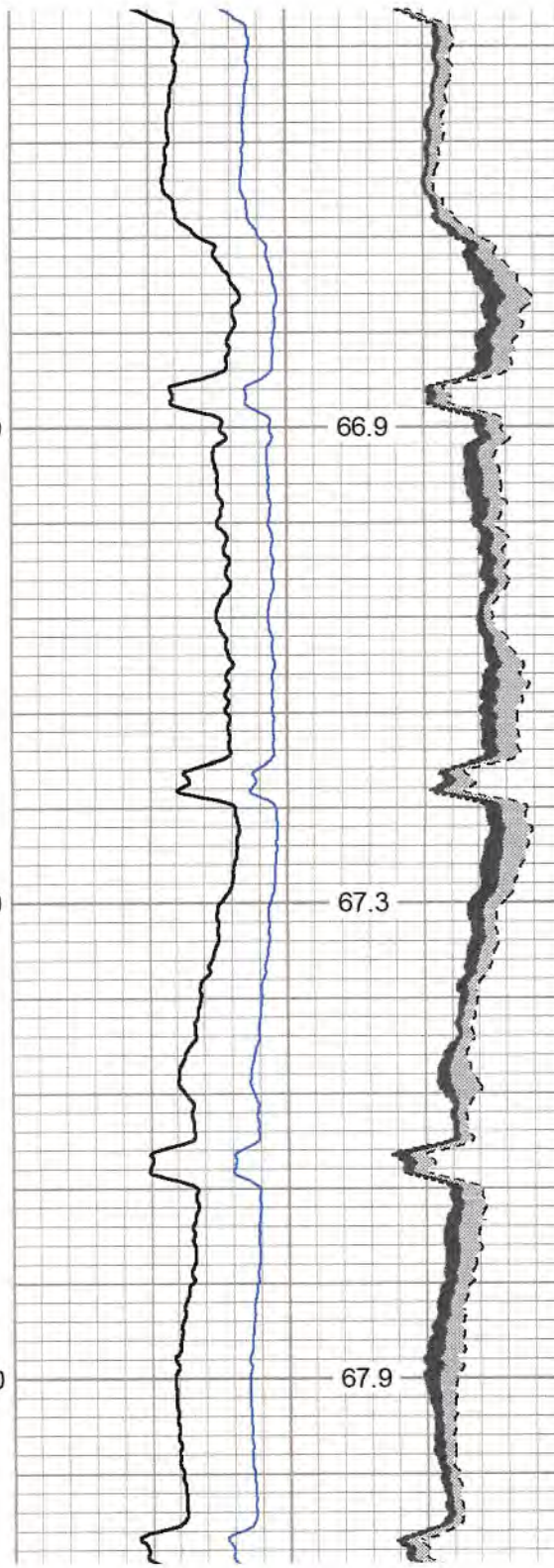
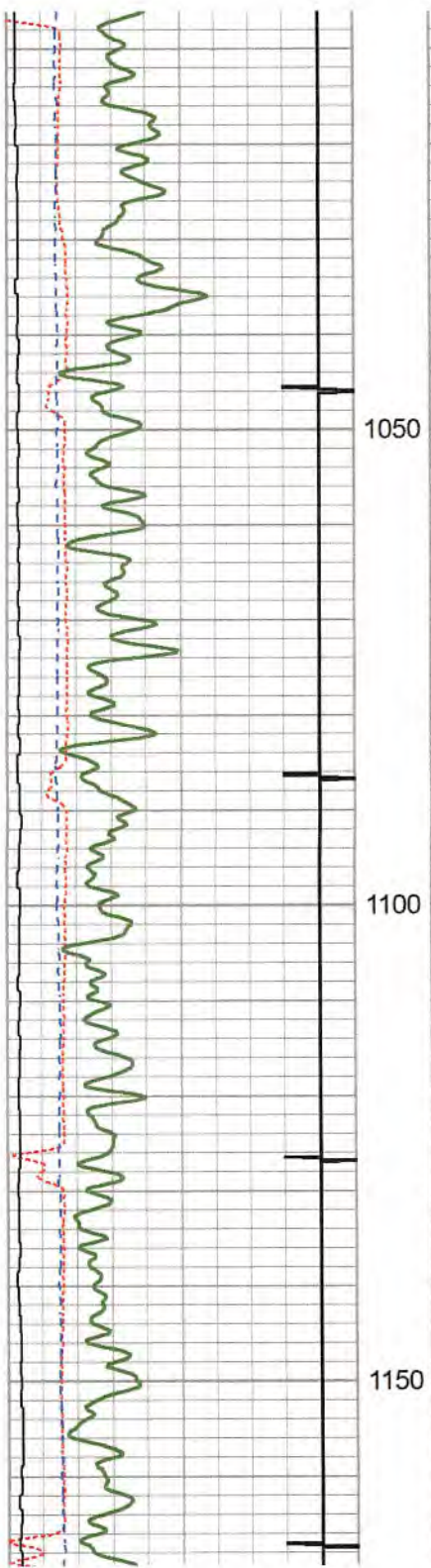


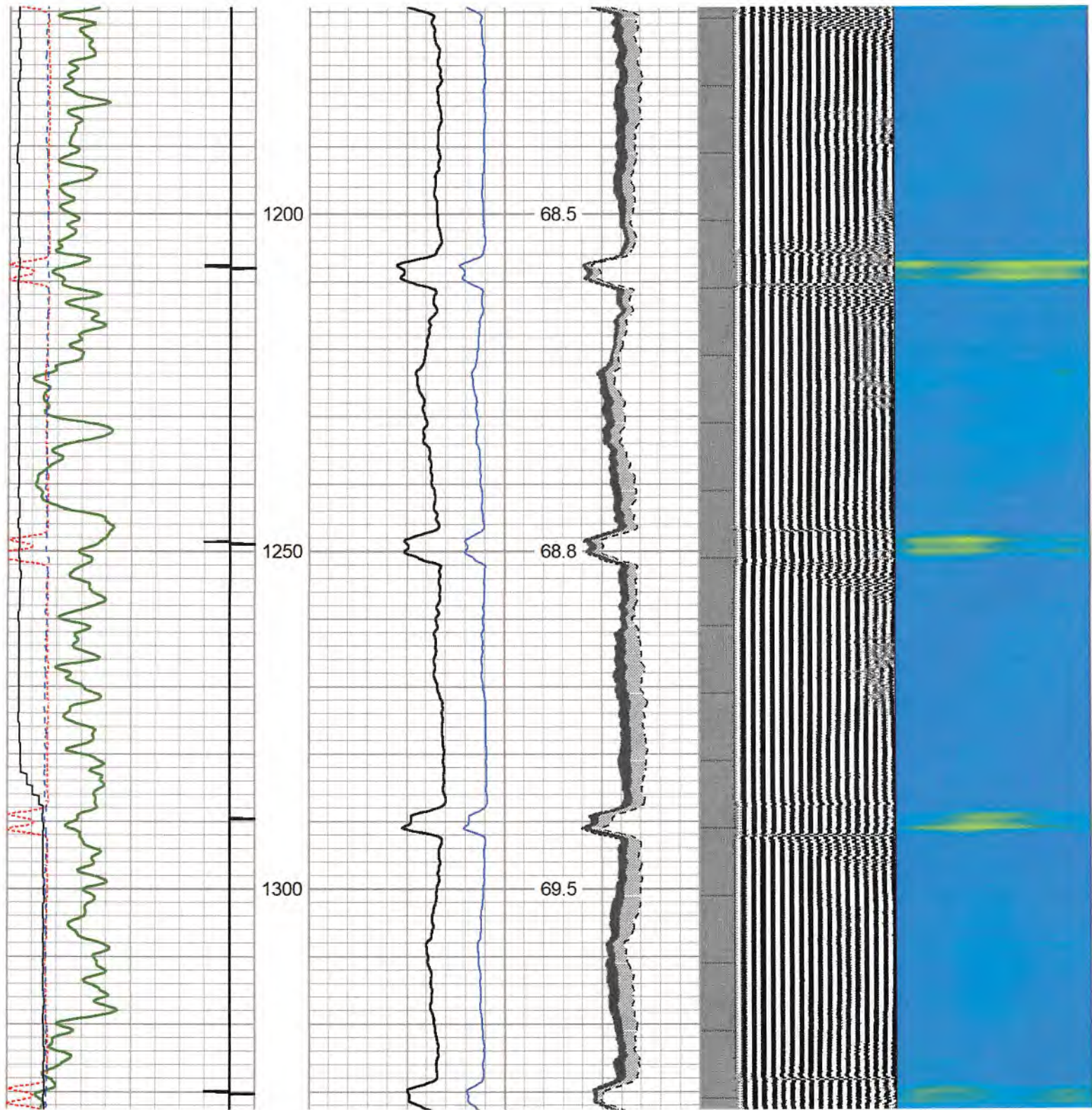


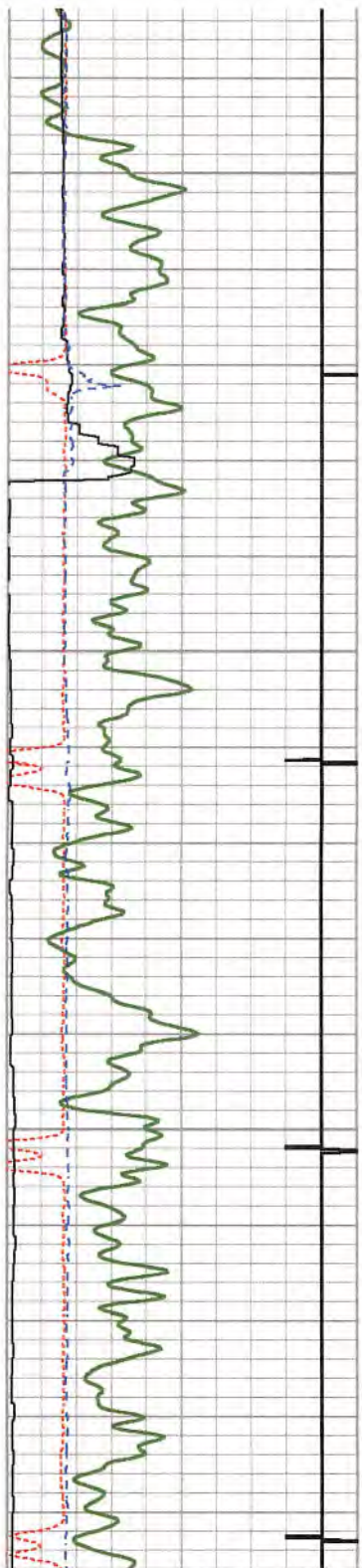








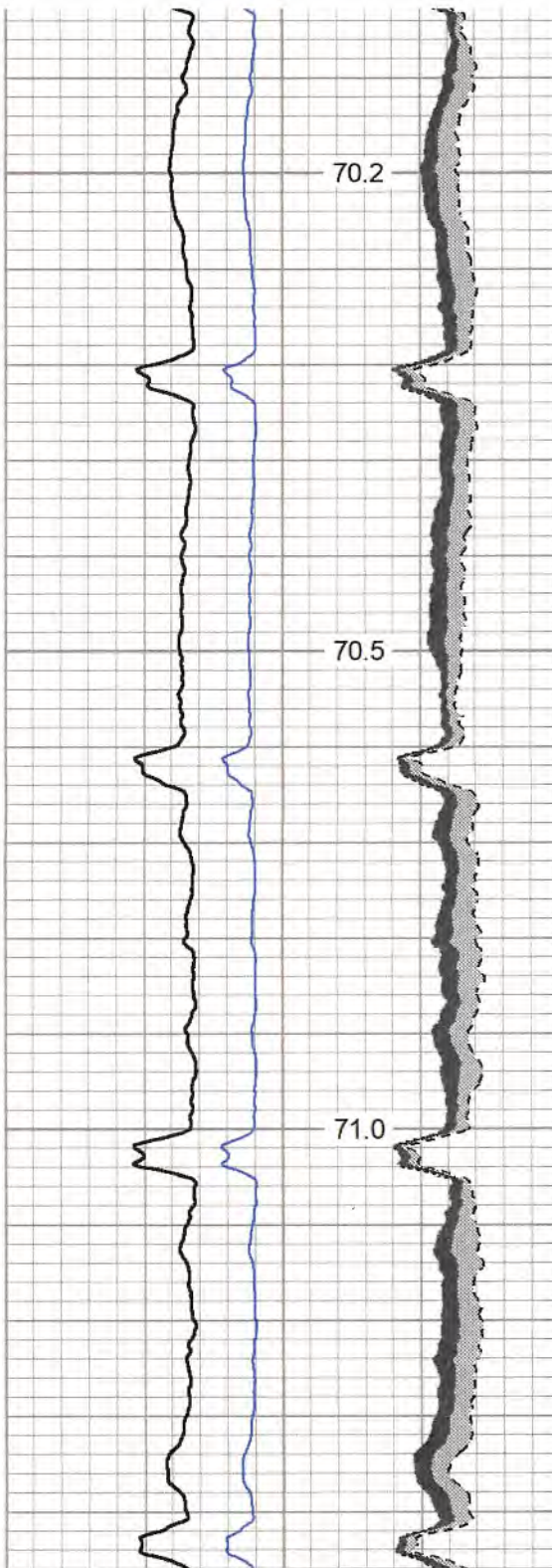




1350

1400

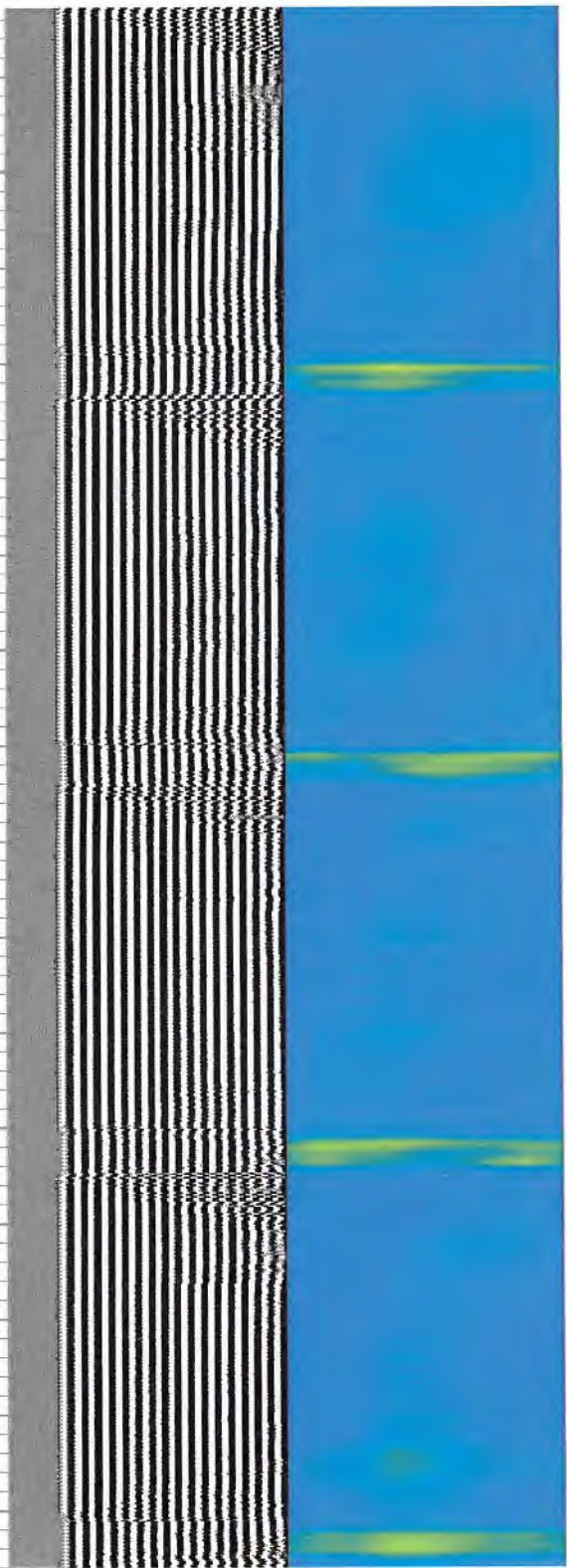
1450

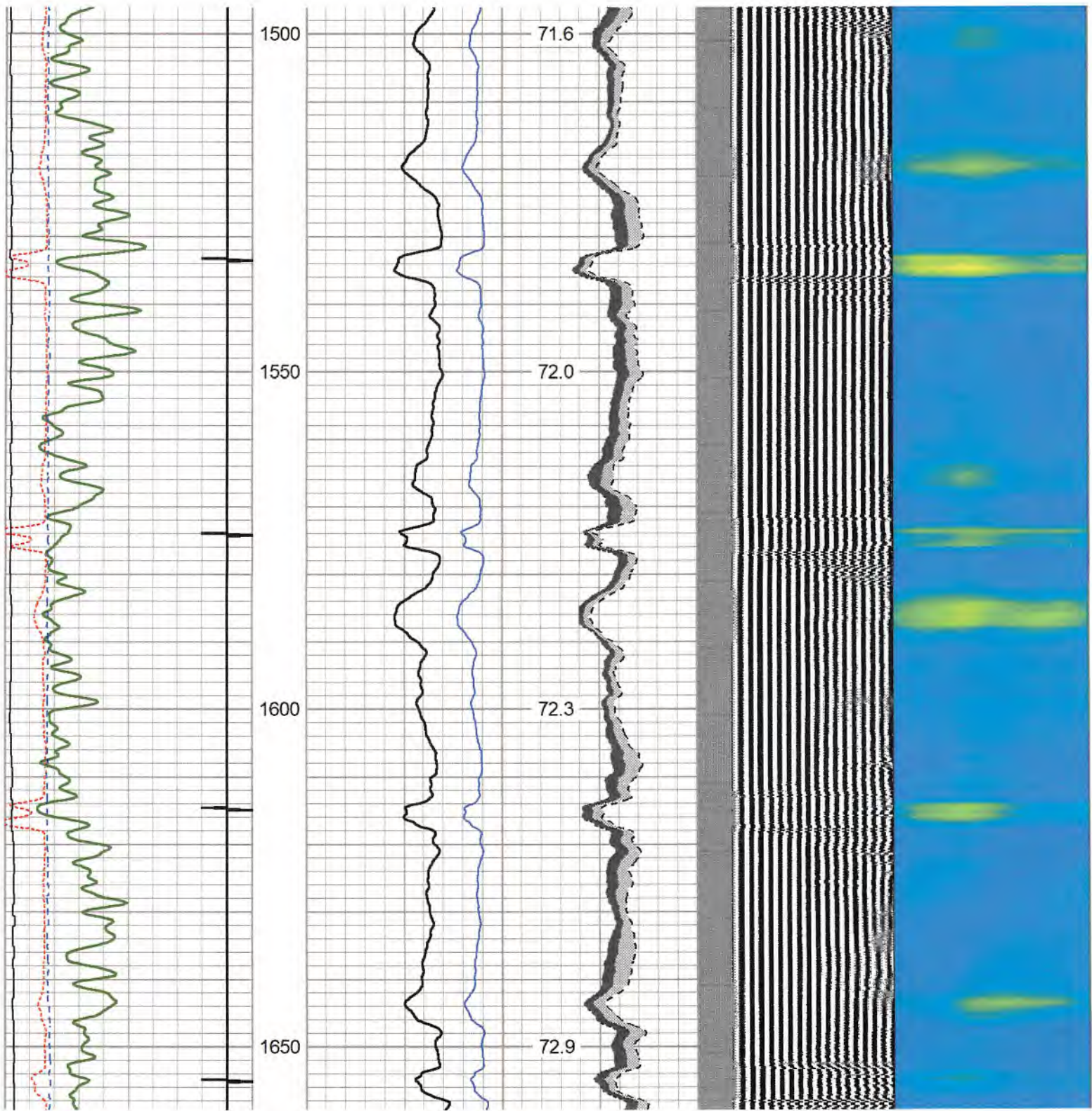


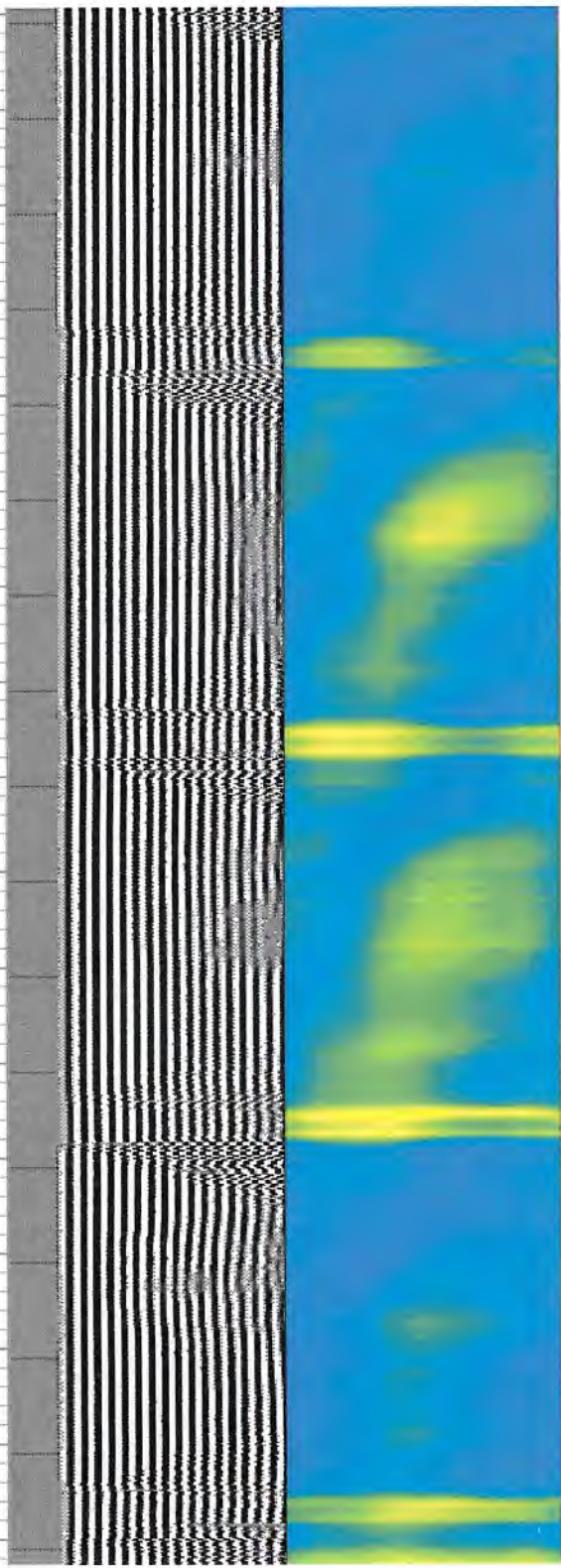
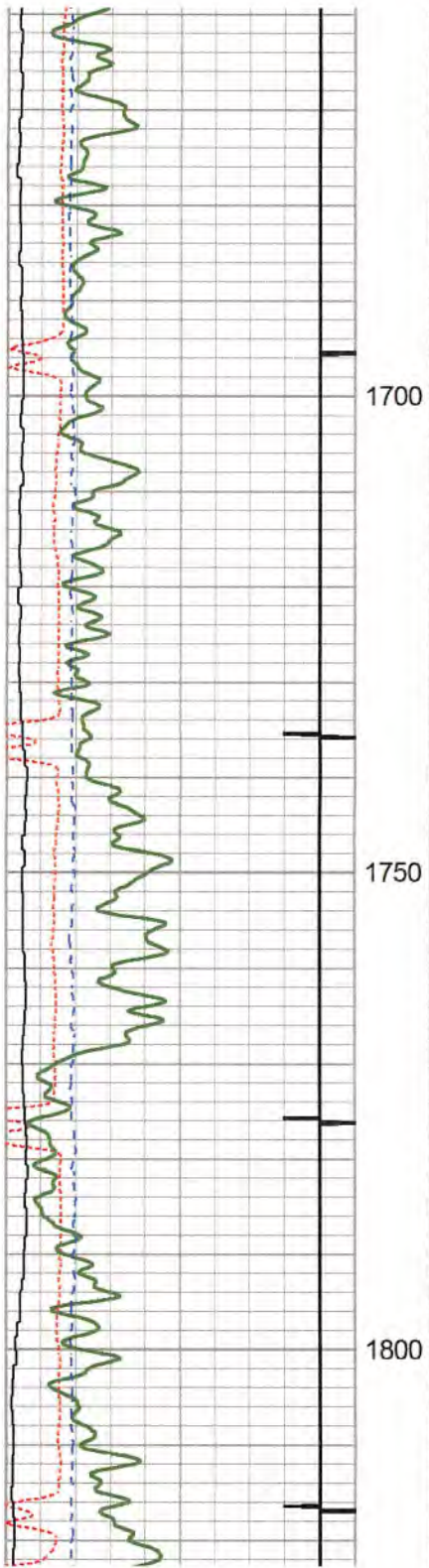
70.2

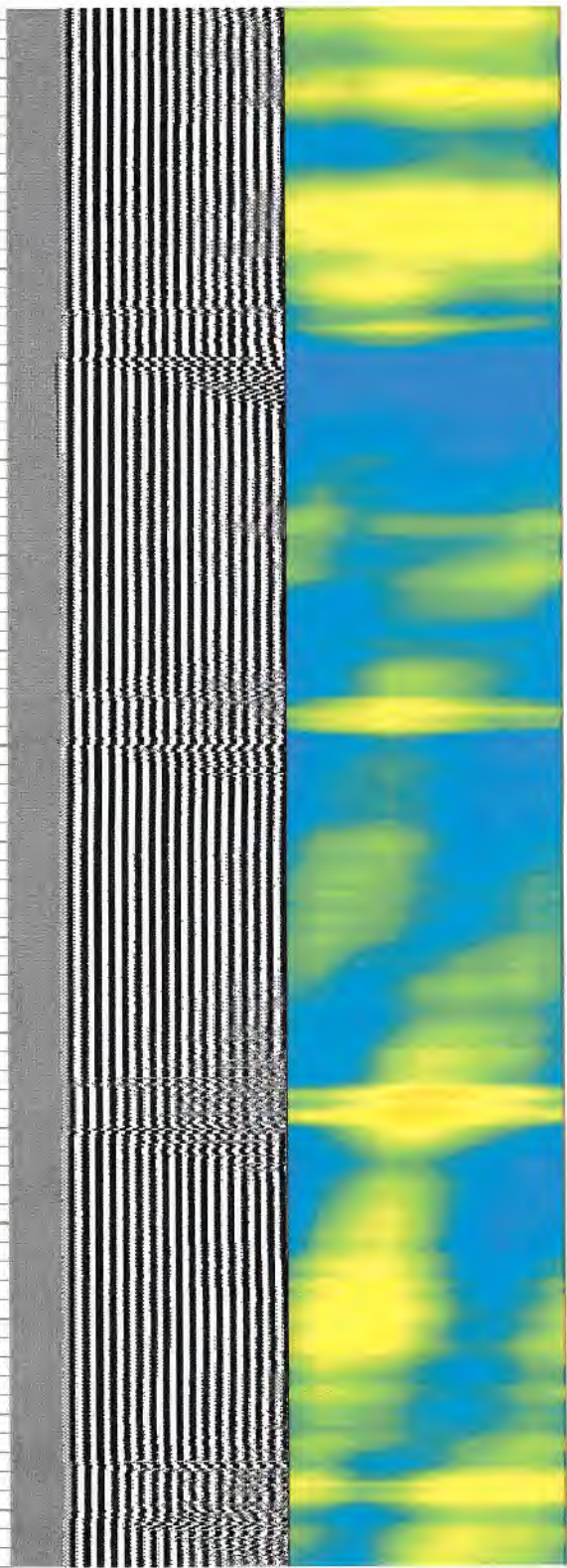
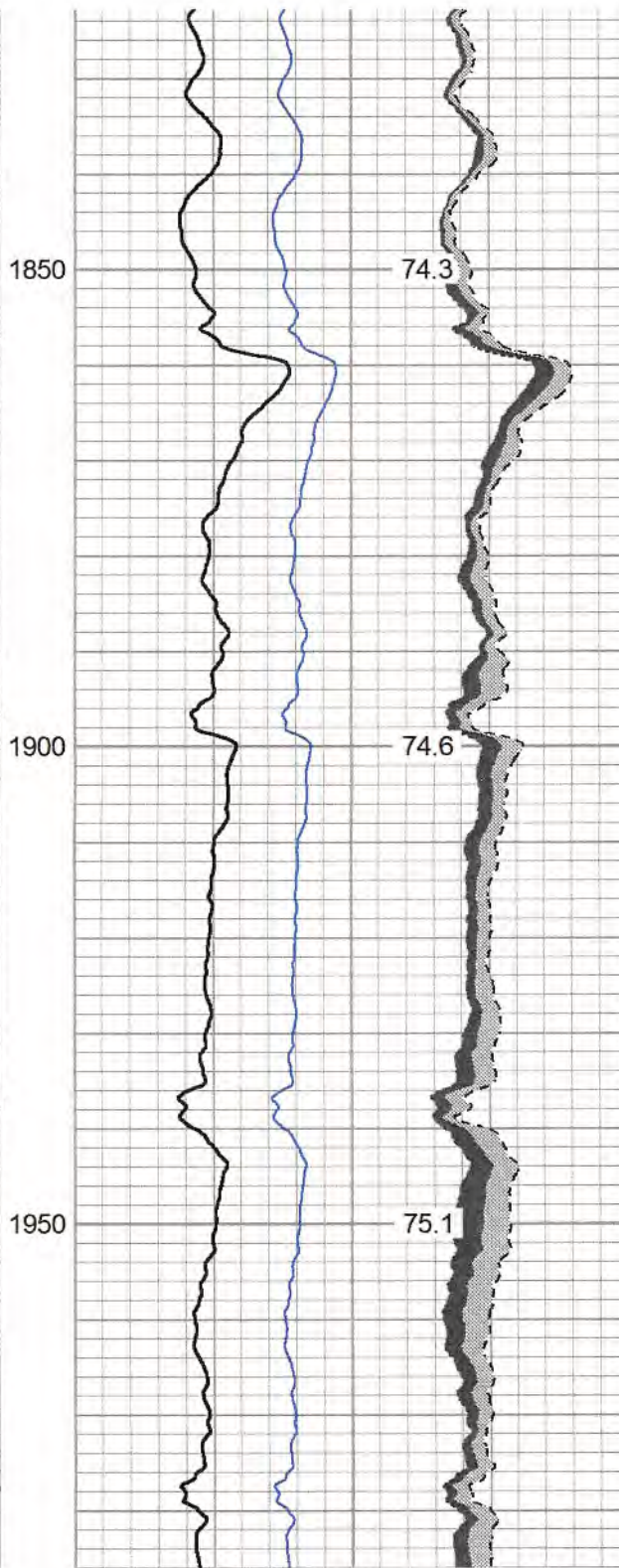
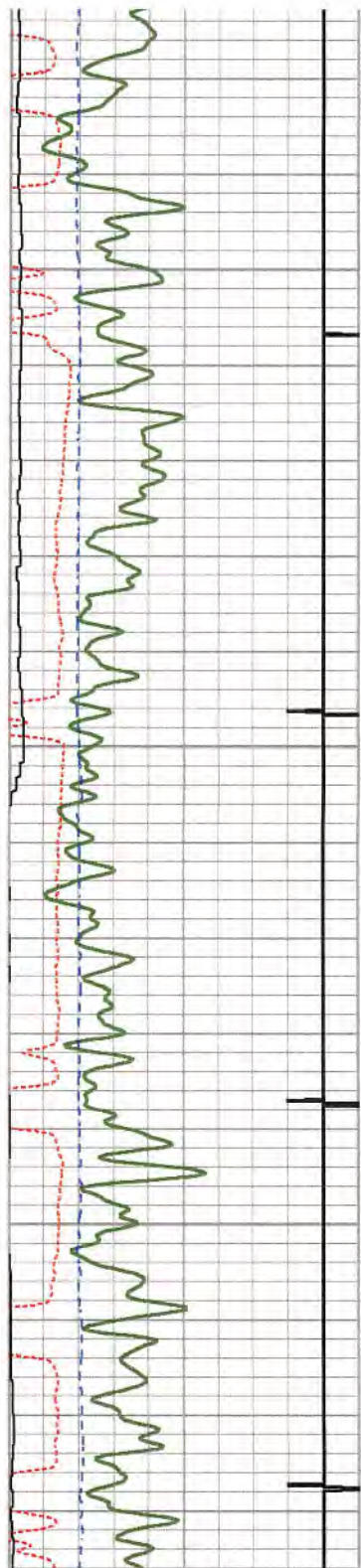
70.5

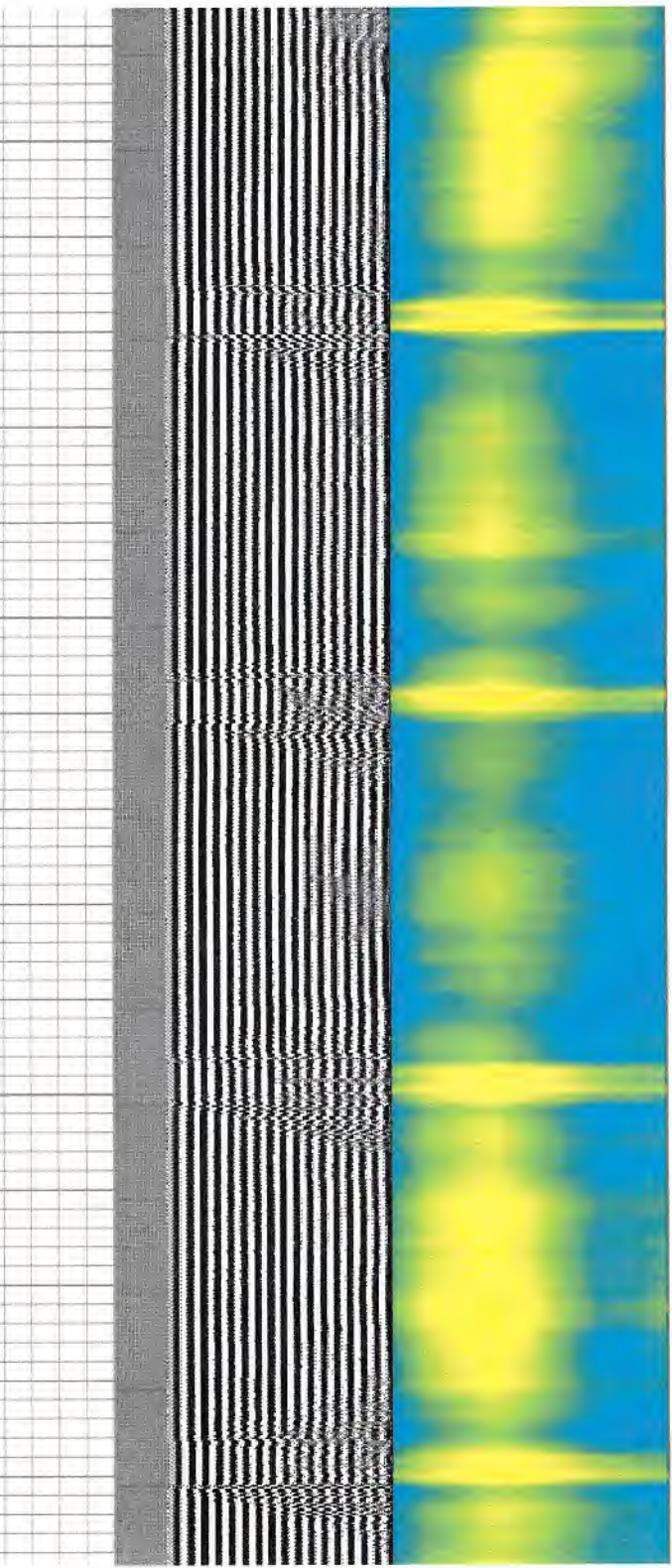
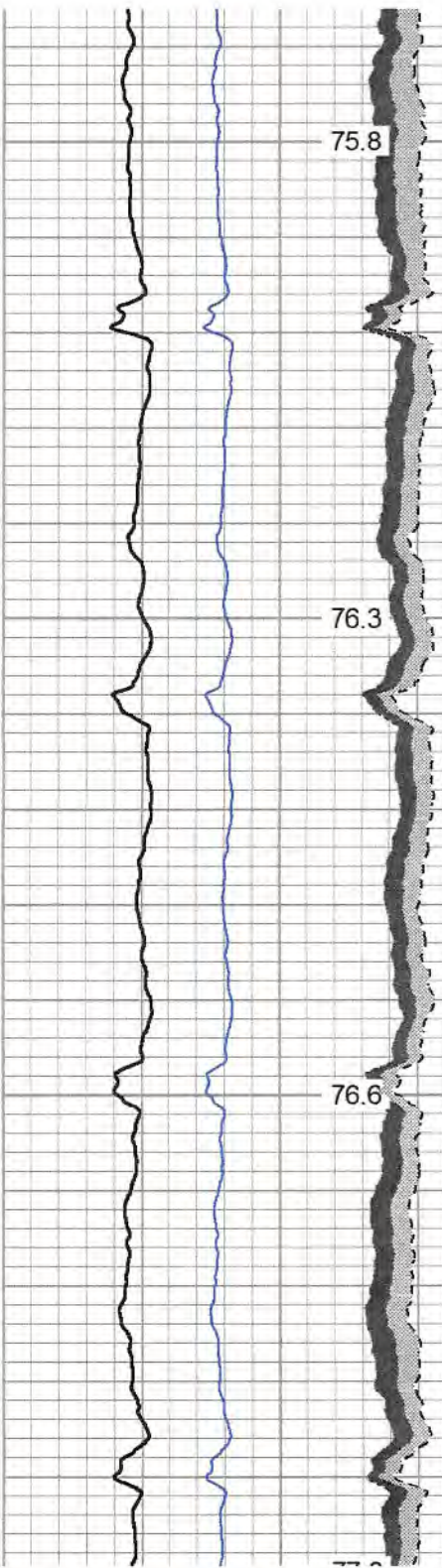
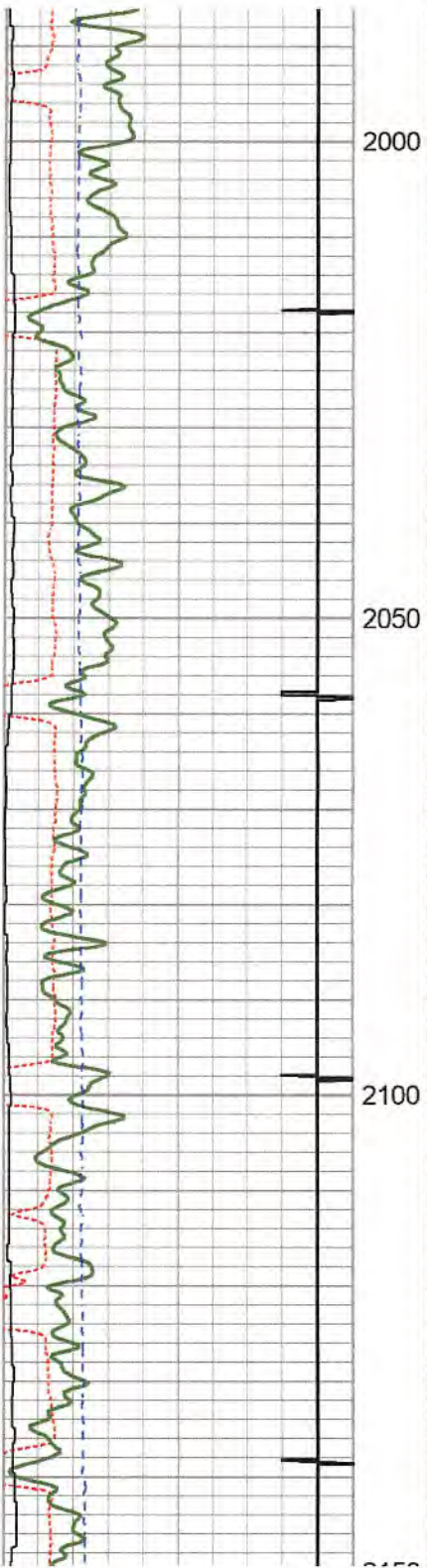
71.0

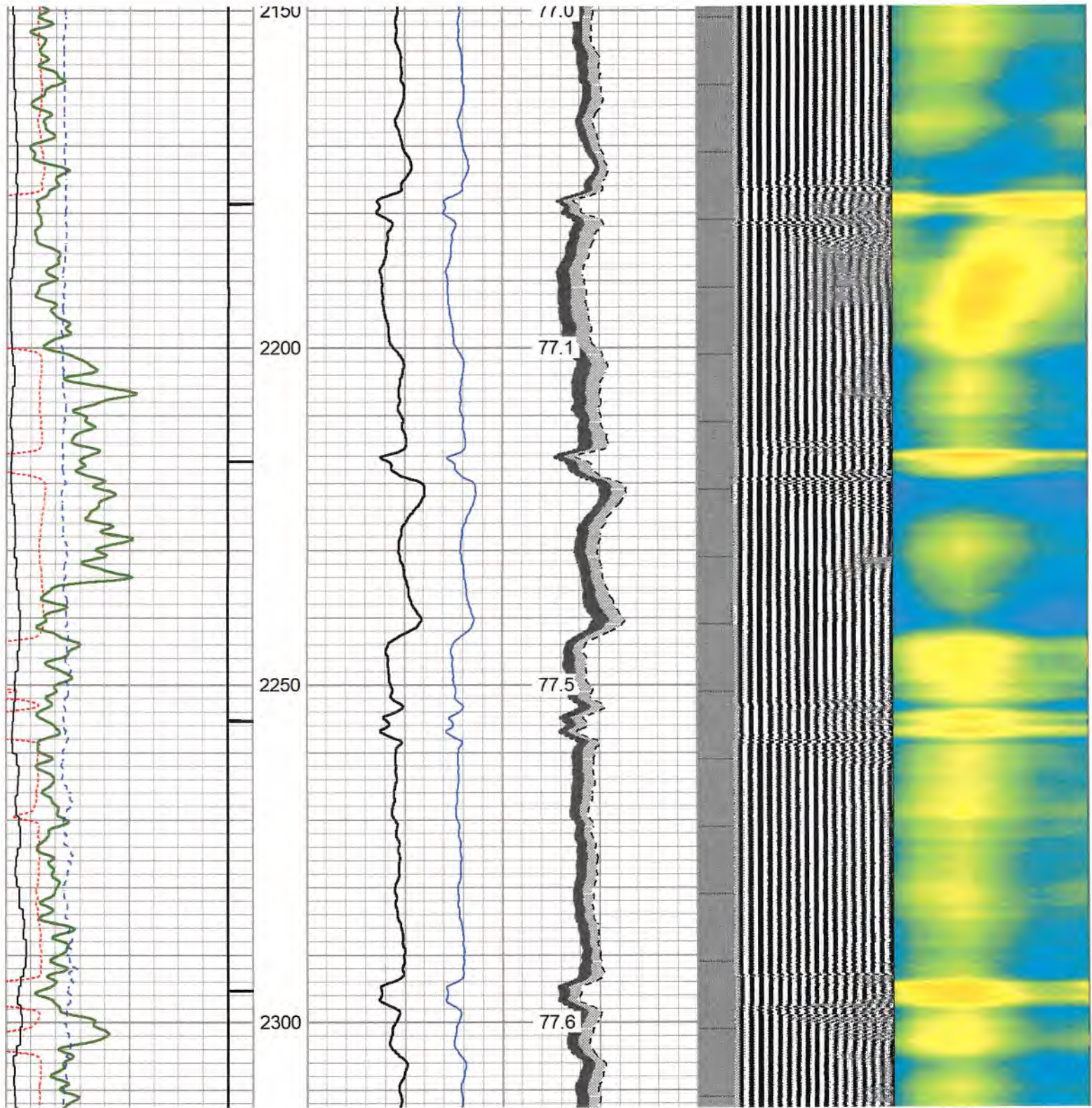


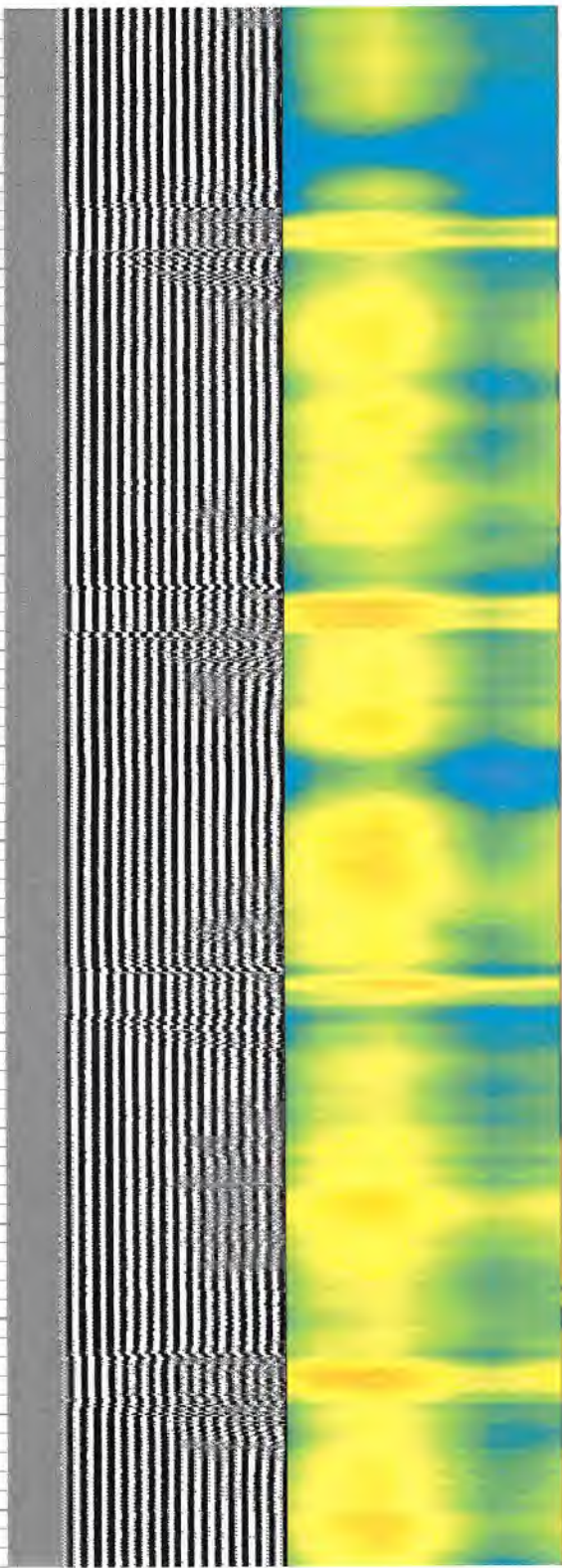
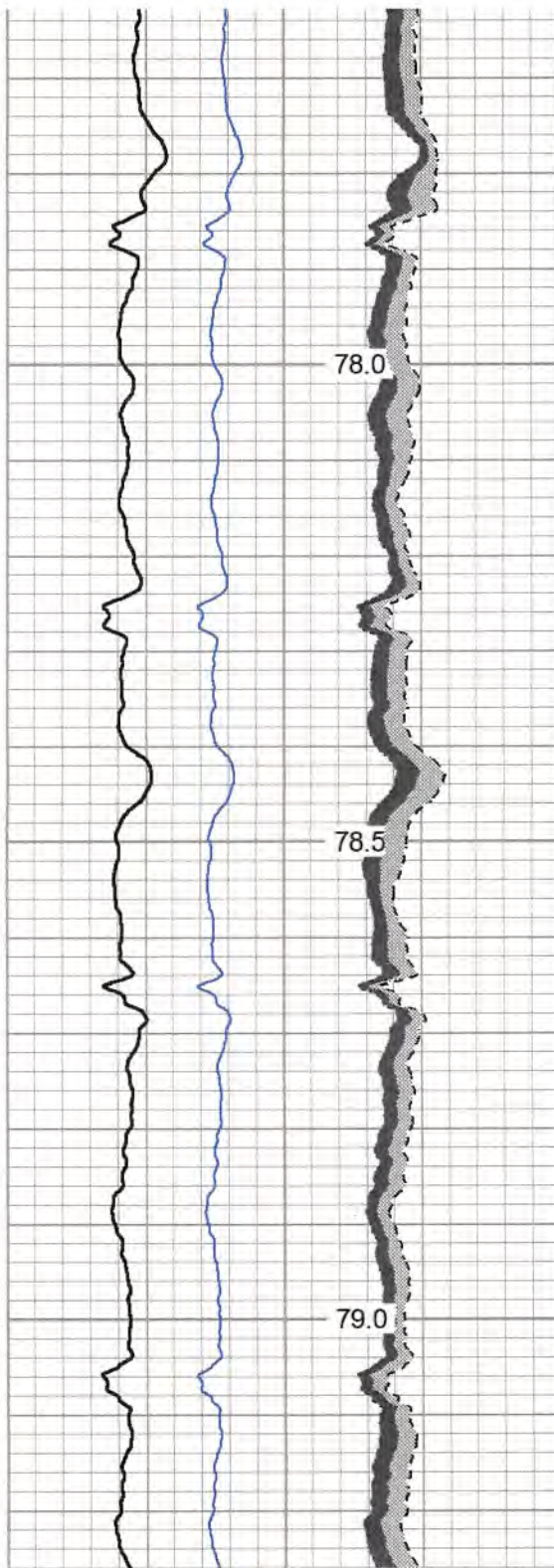
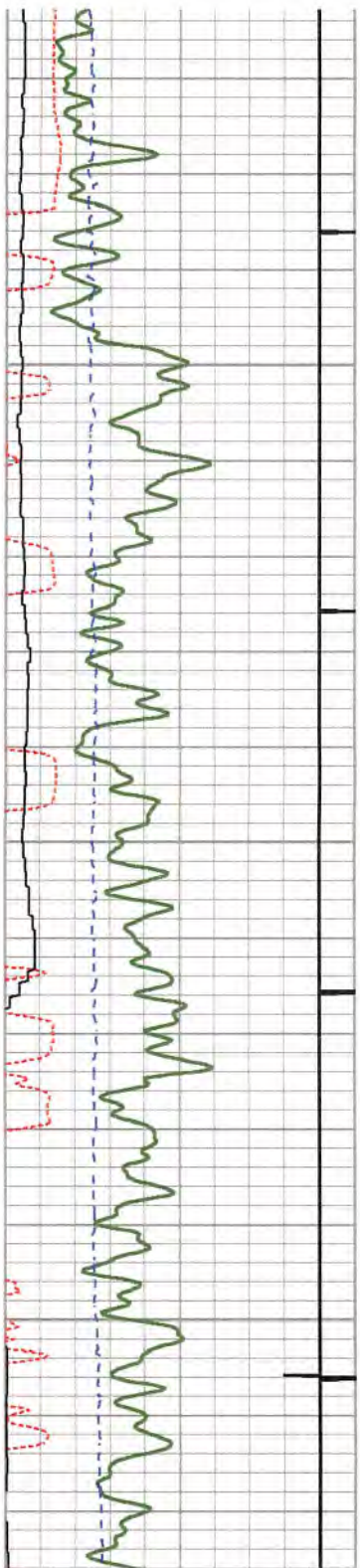


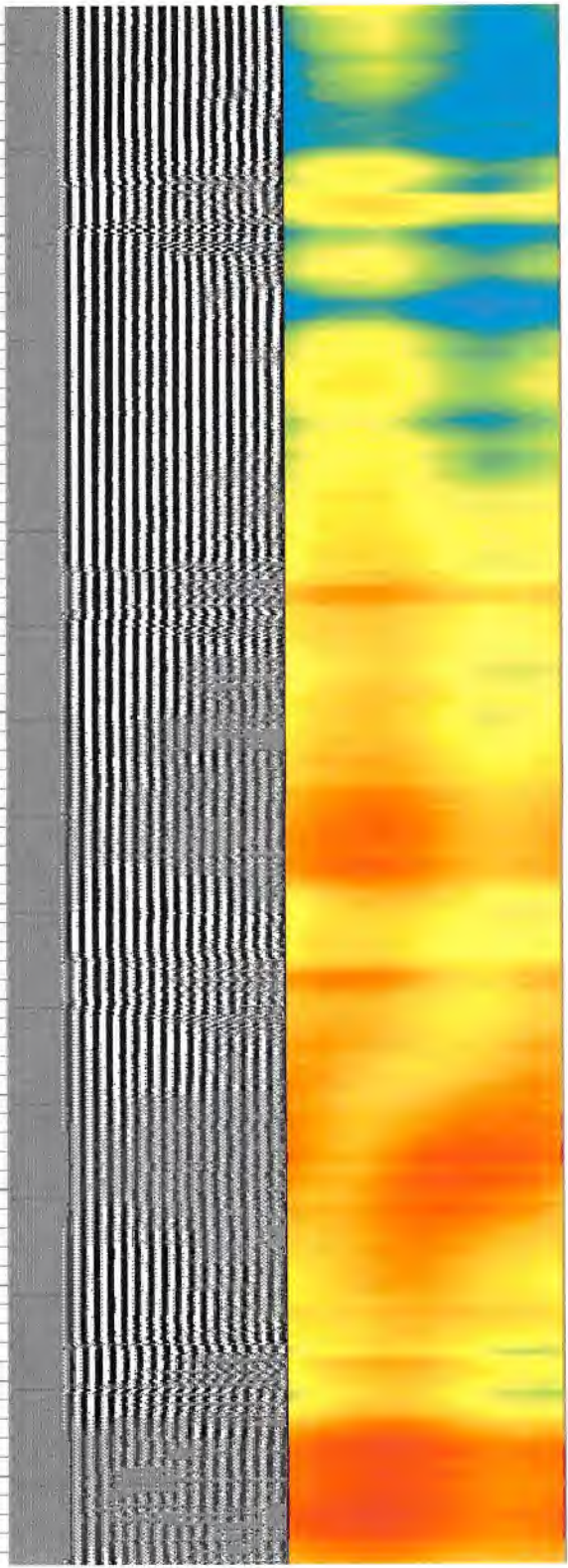
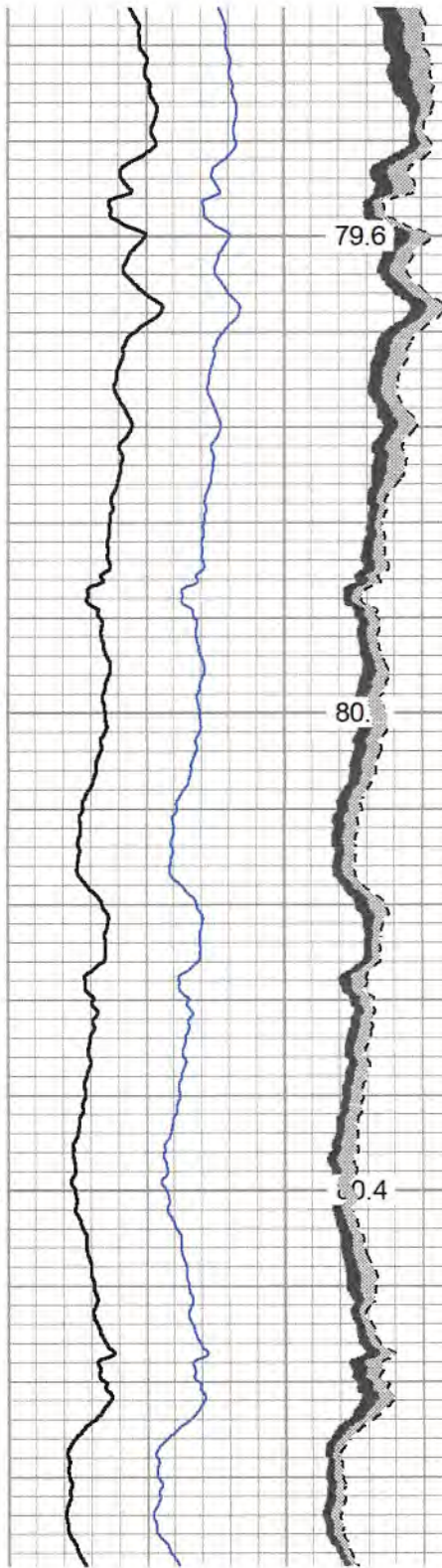
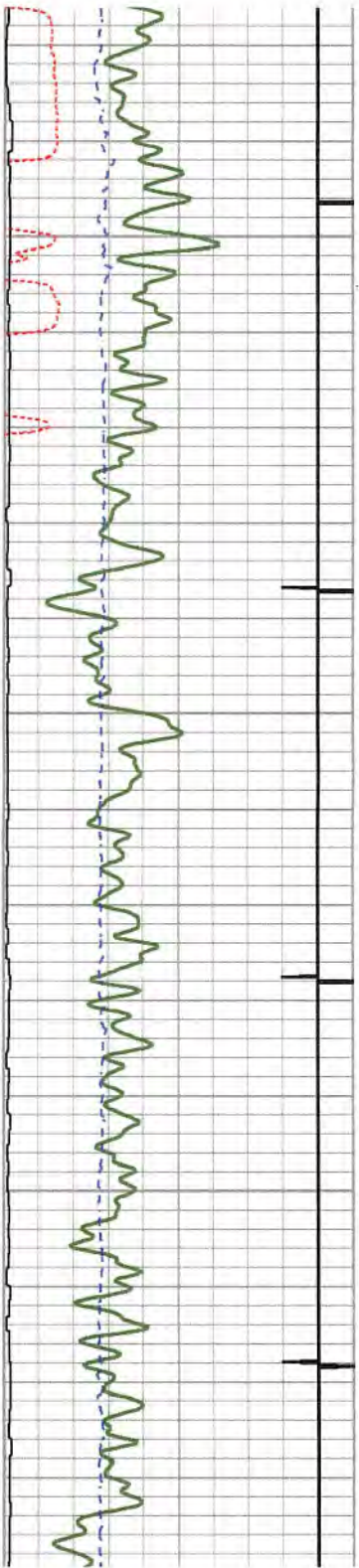


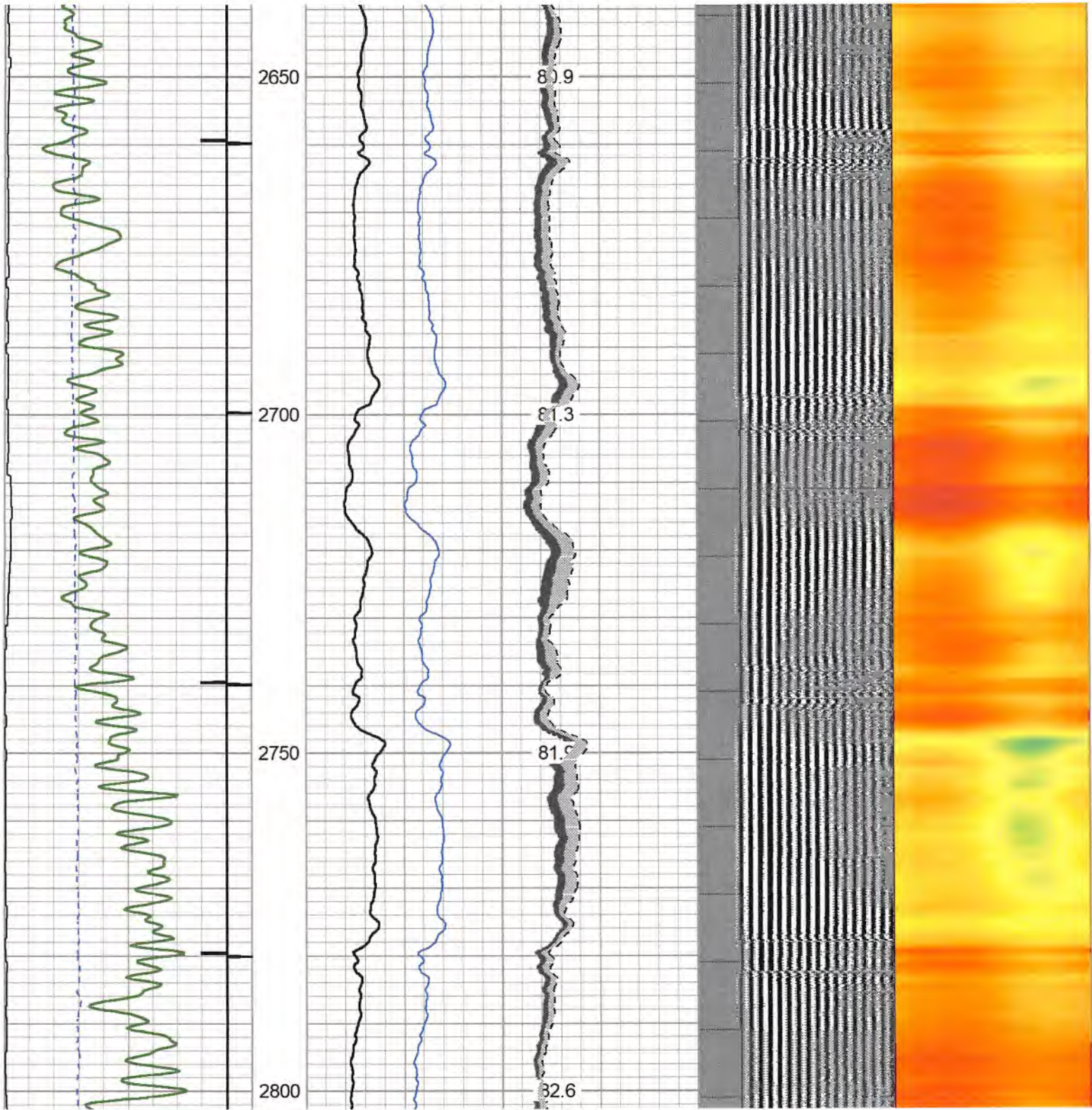


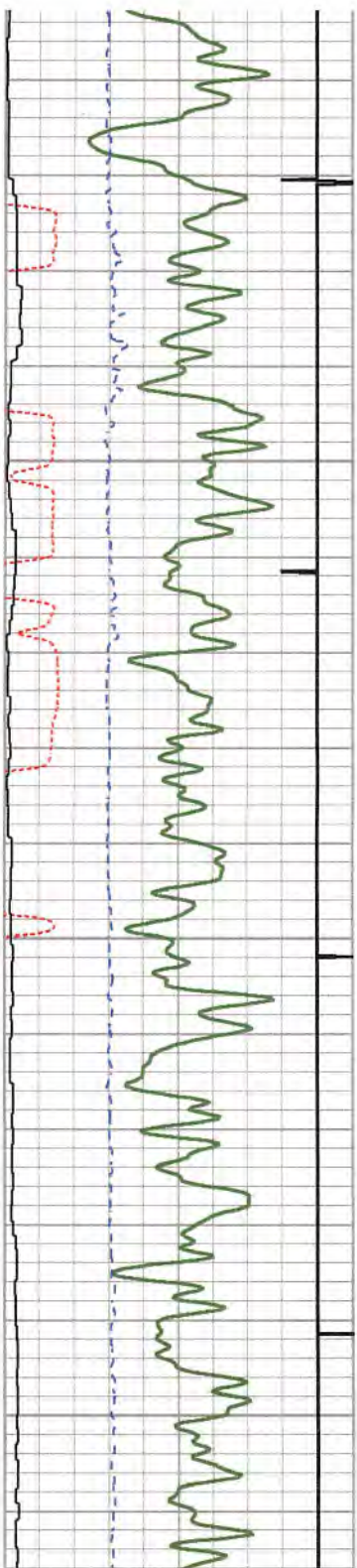








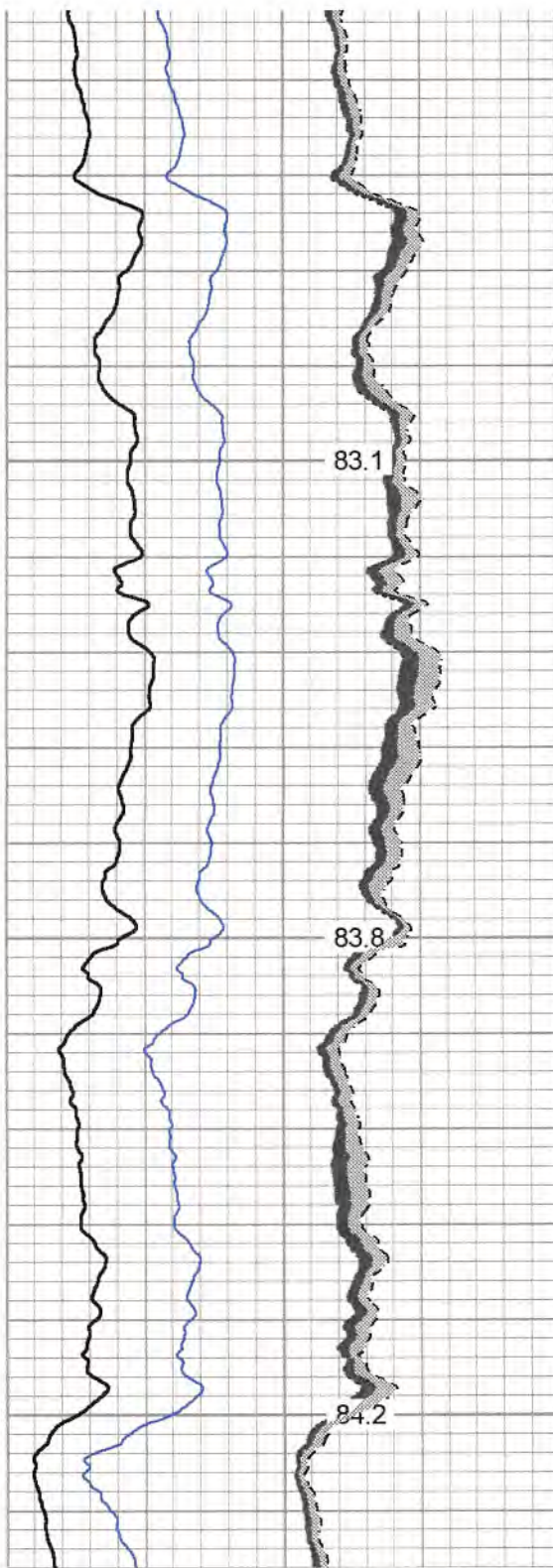




2850

2900

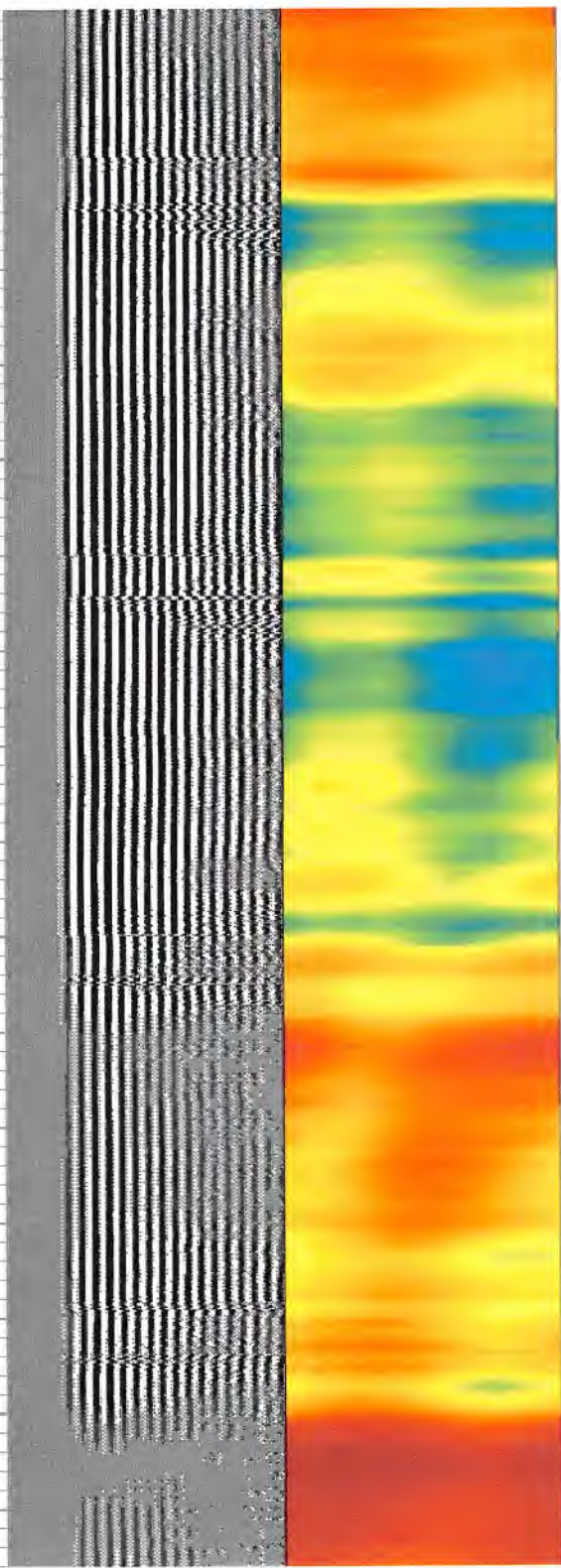
2950

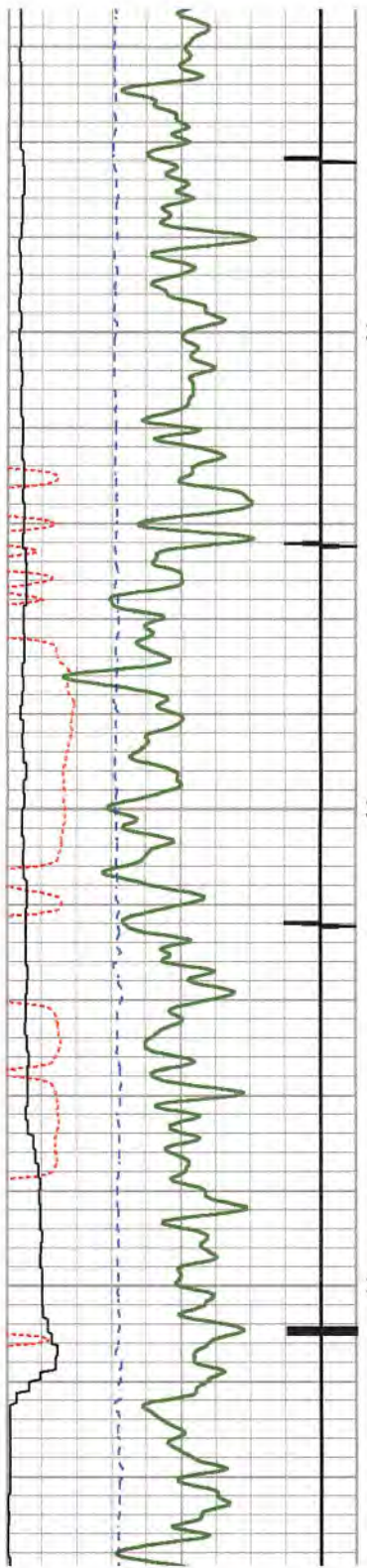


83.1

83.8

84.2

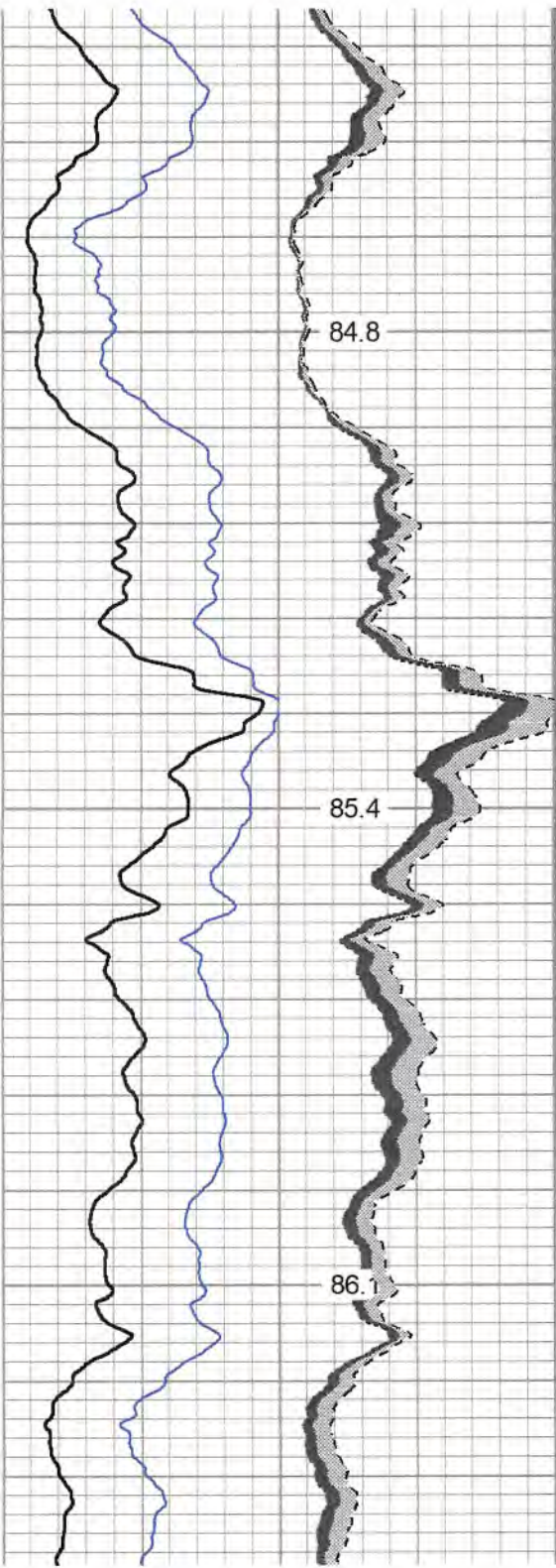




3000

3050

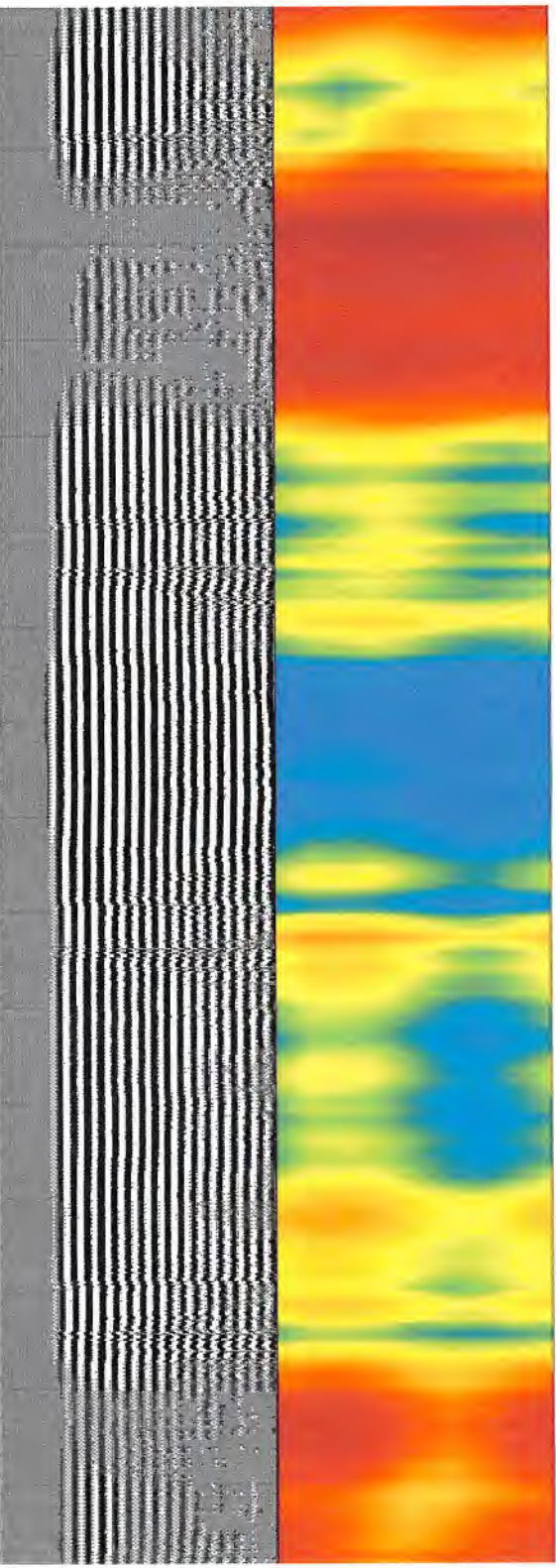
3100

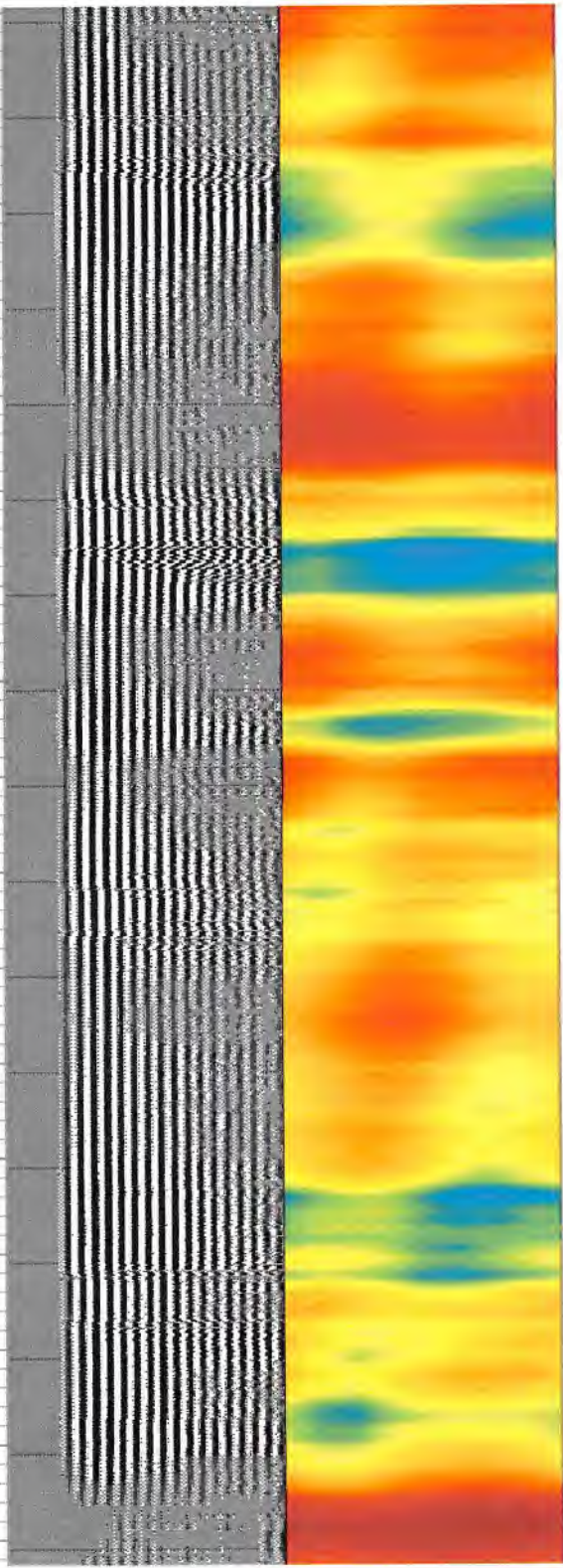
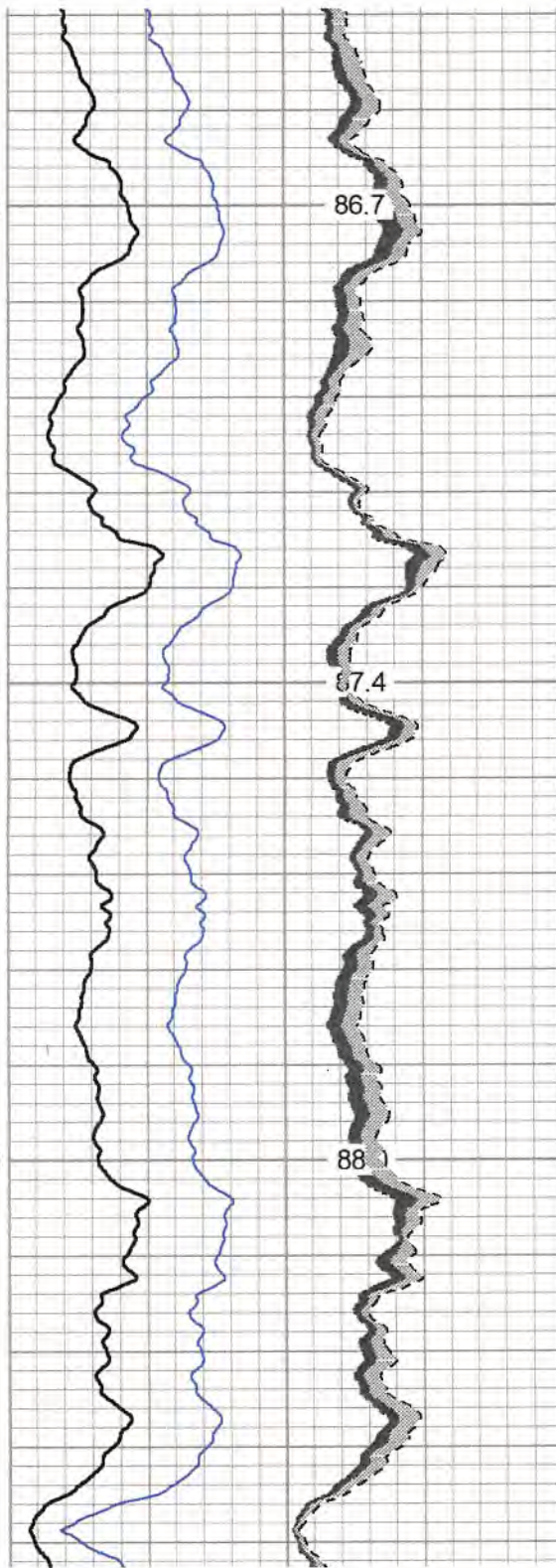
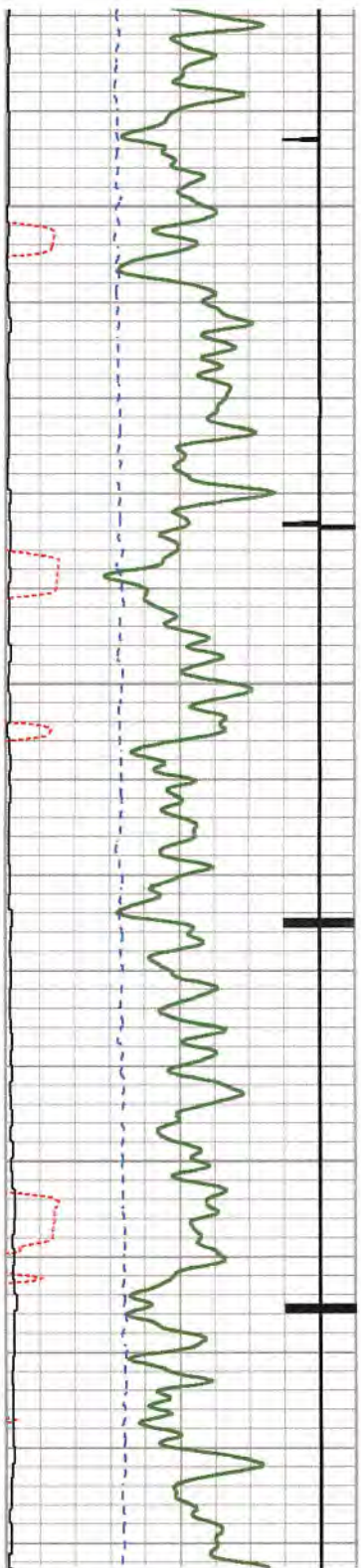


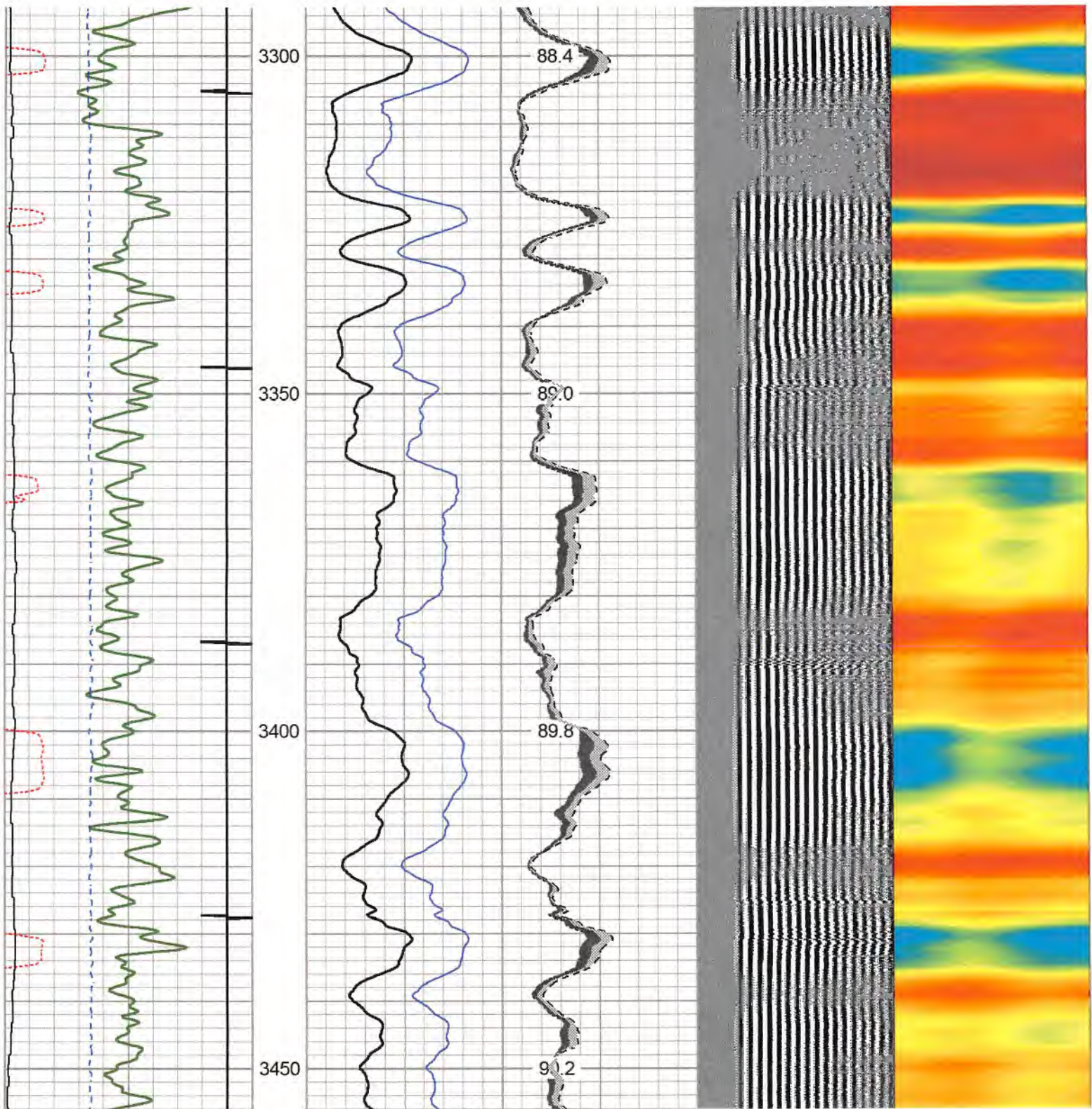
84.8

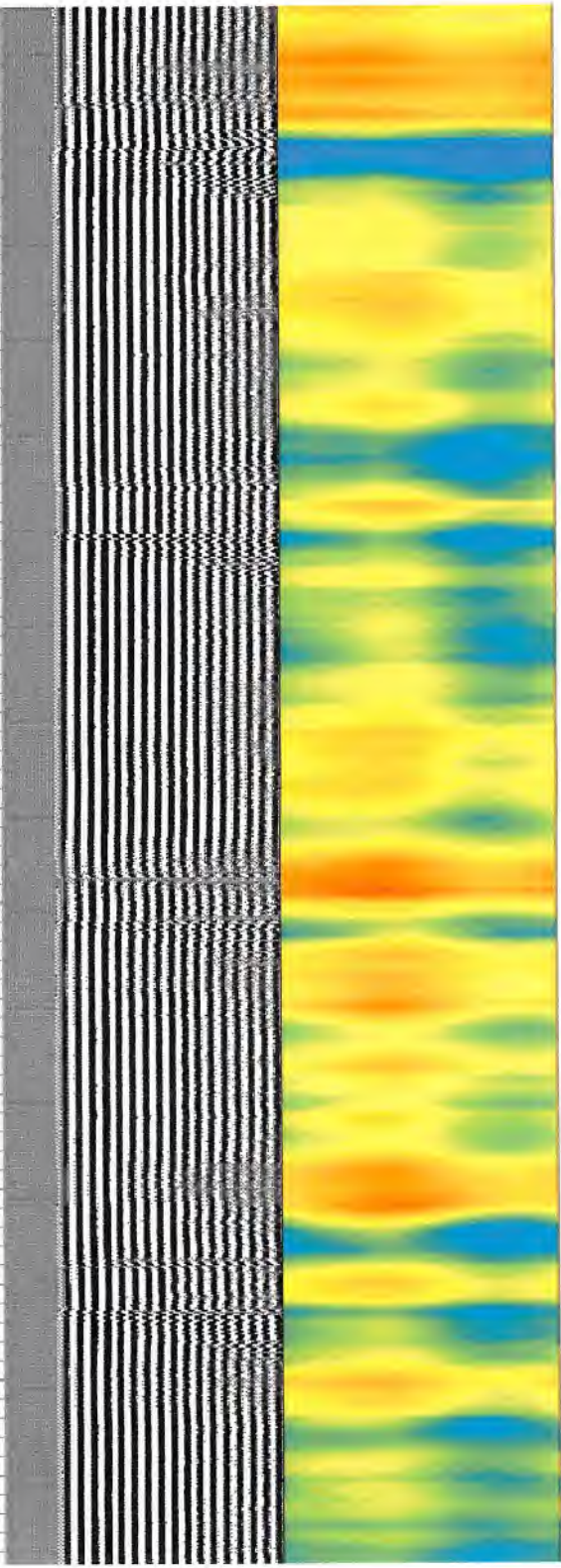
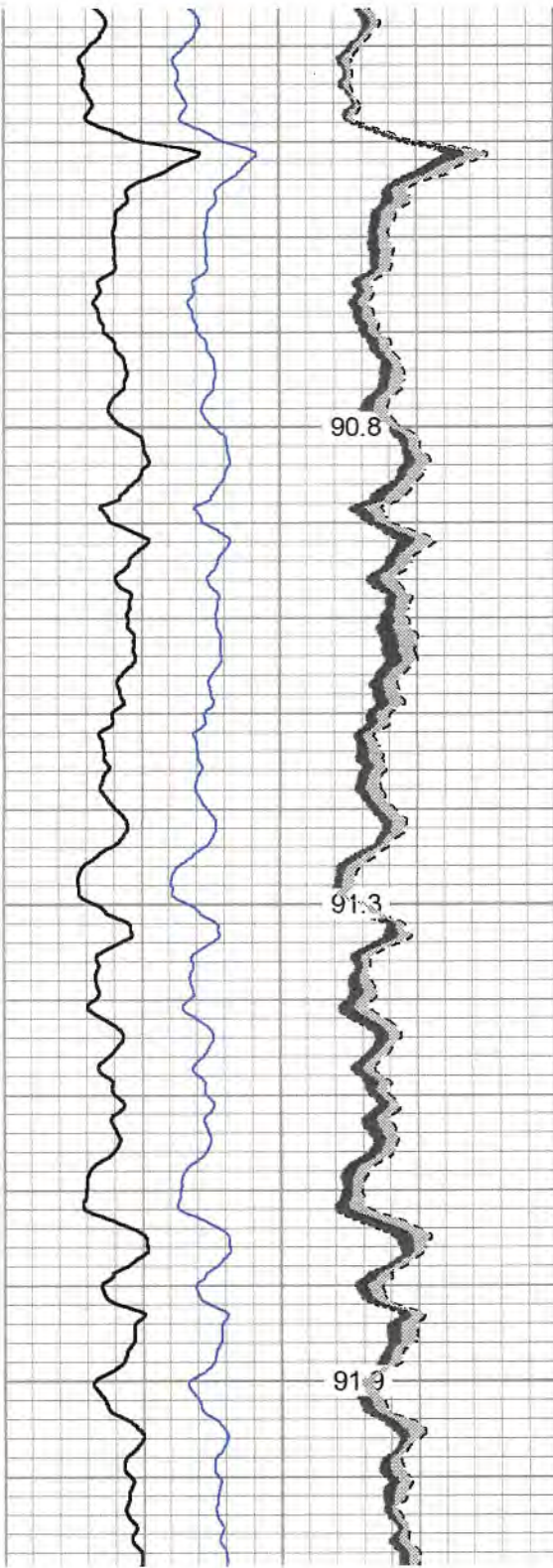
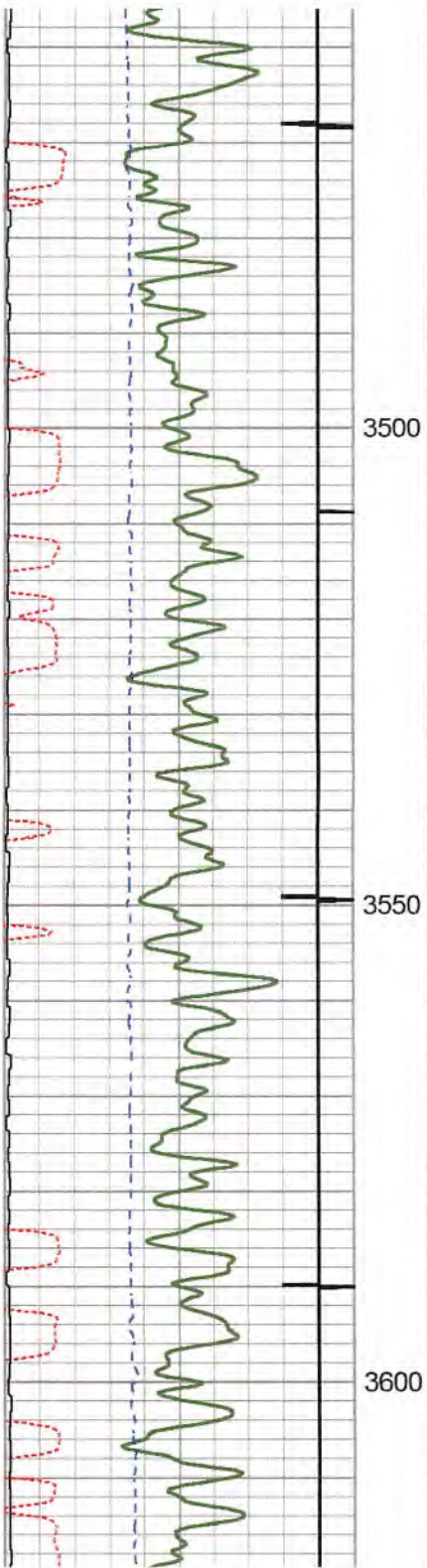
85.4

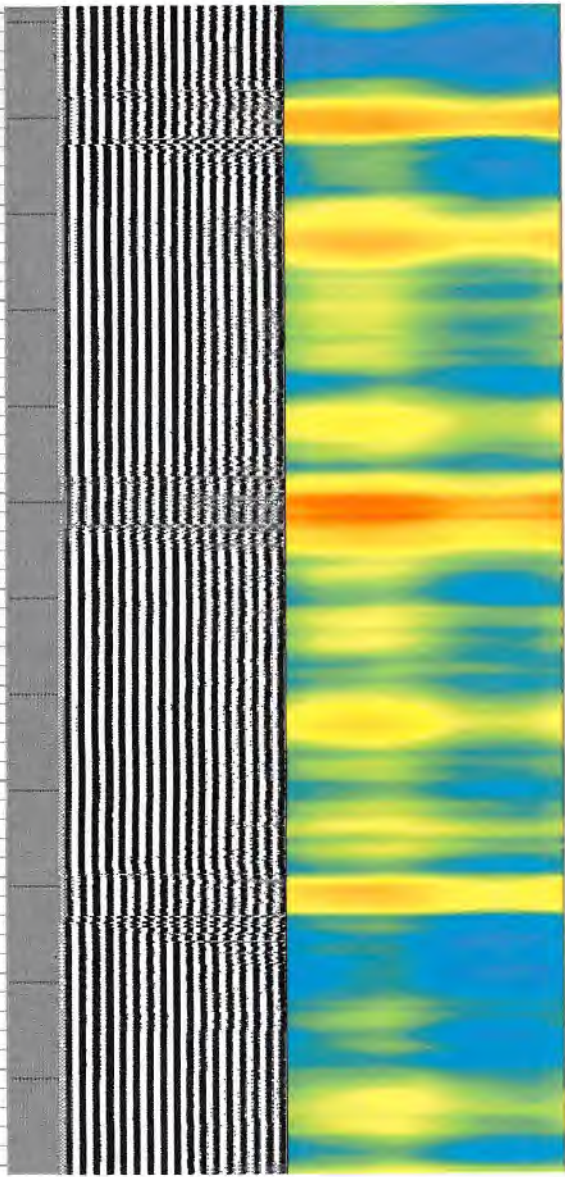
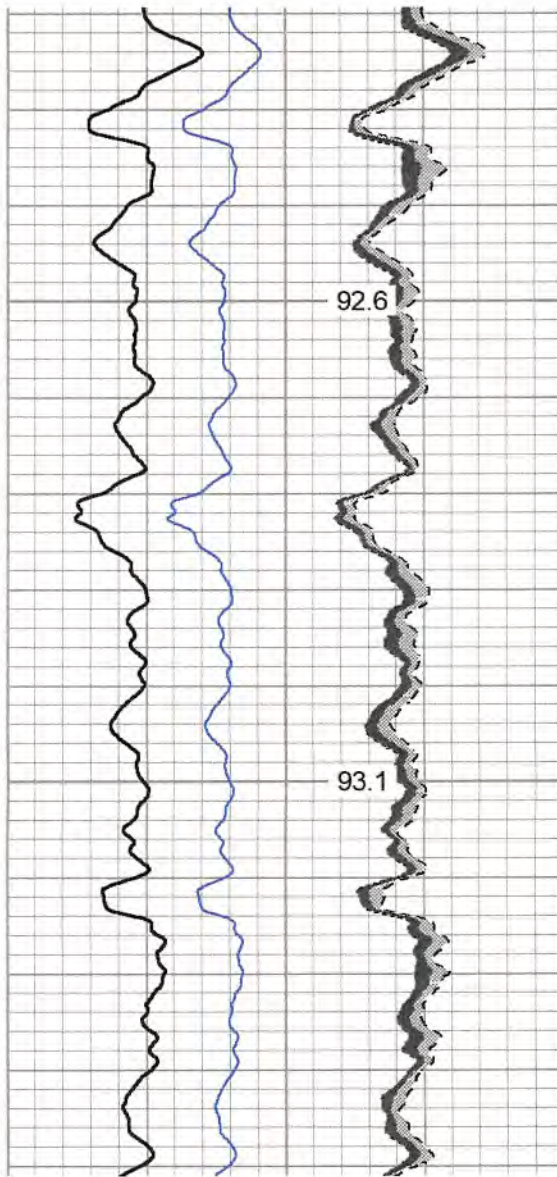
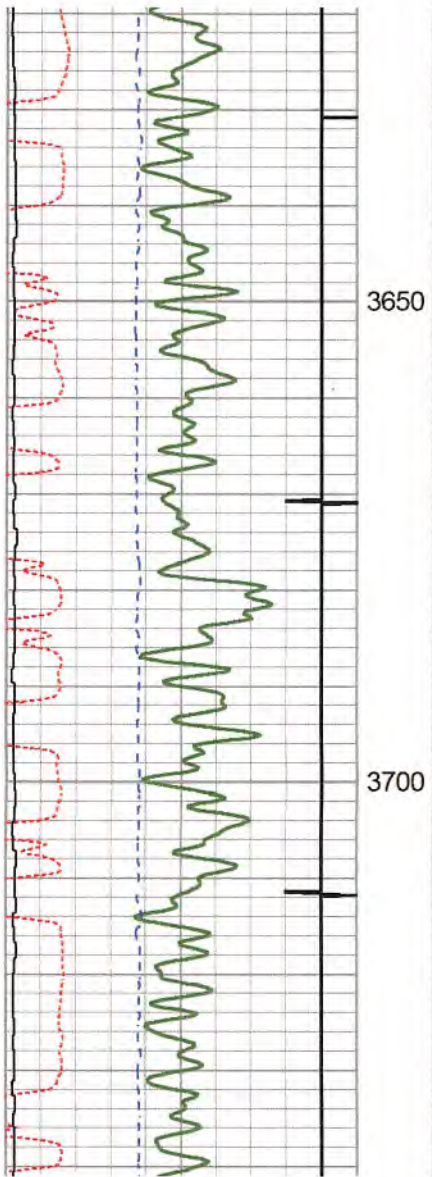
86.1

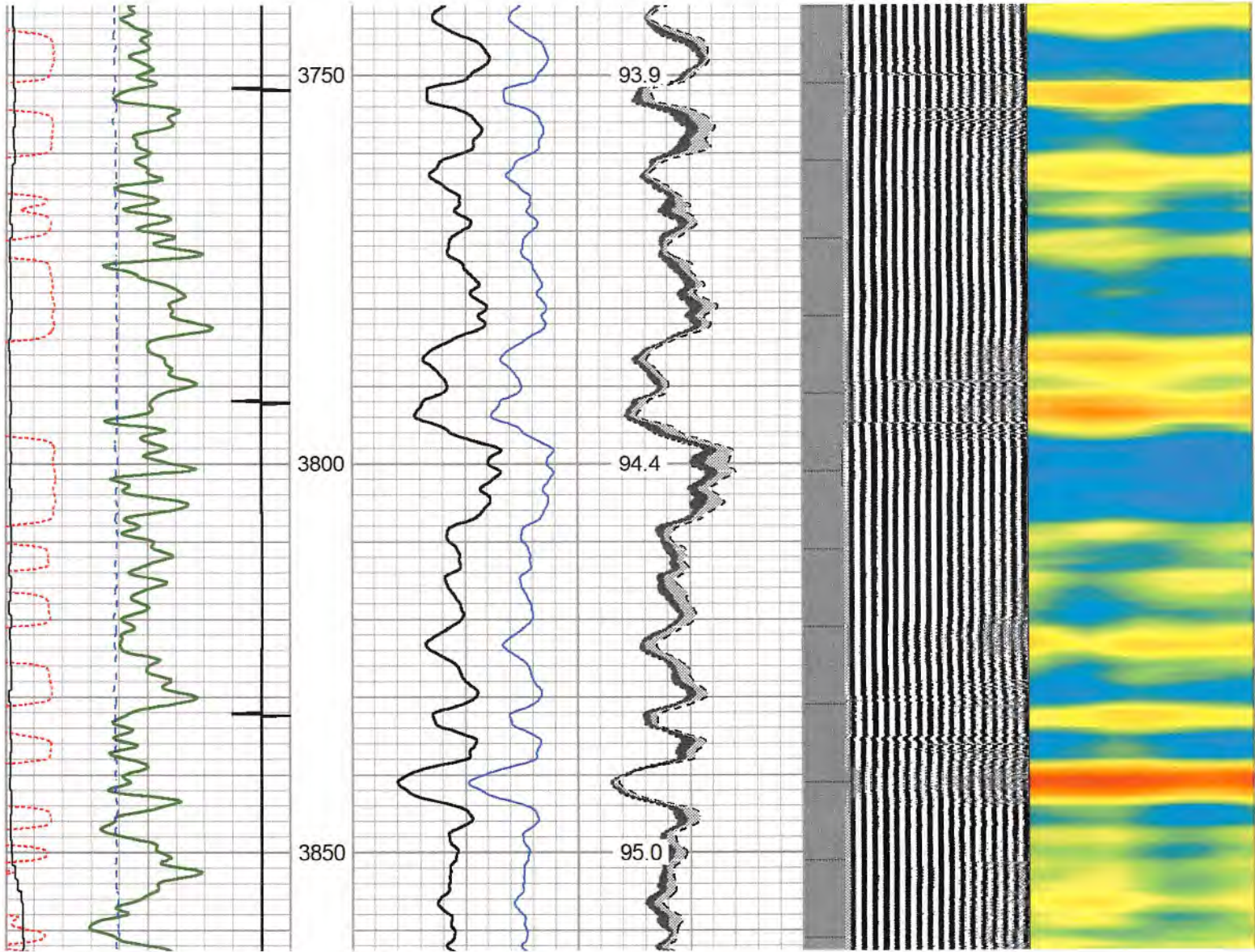


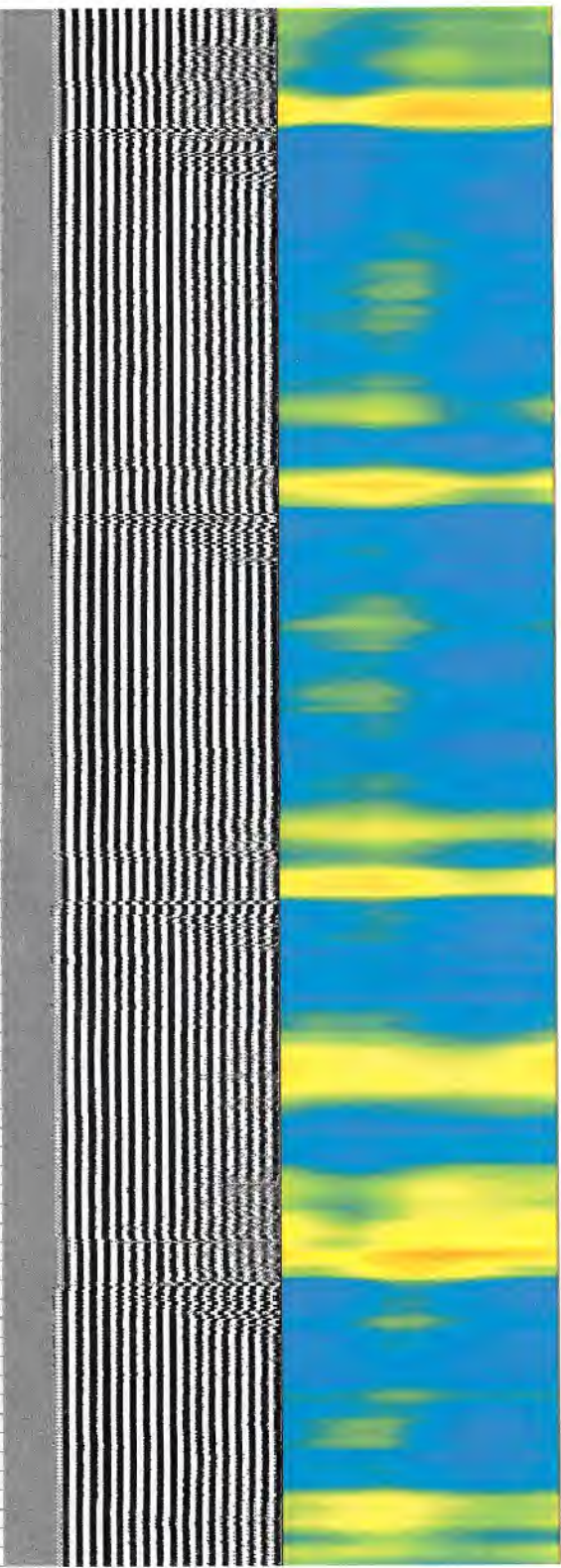
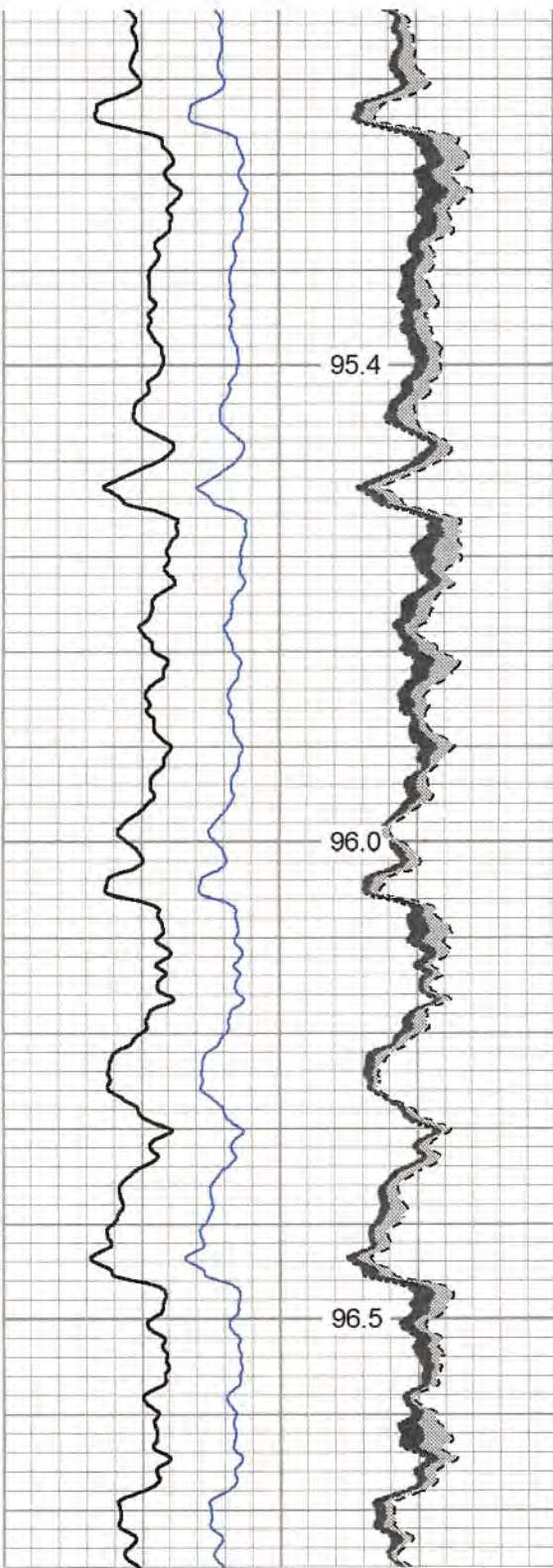
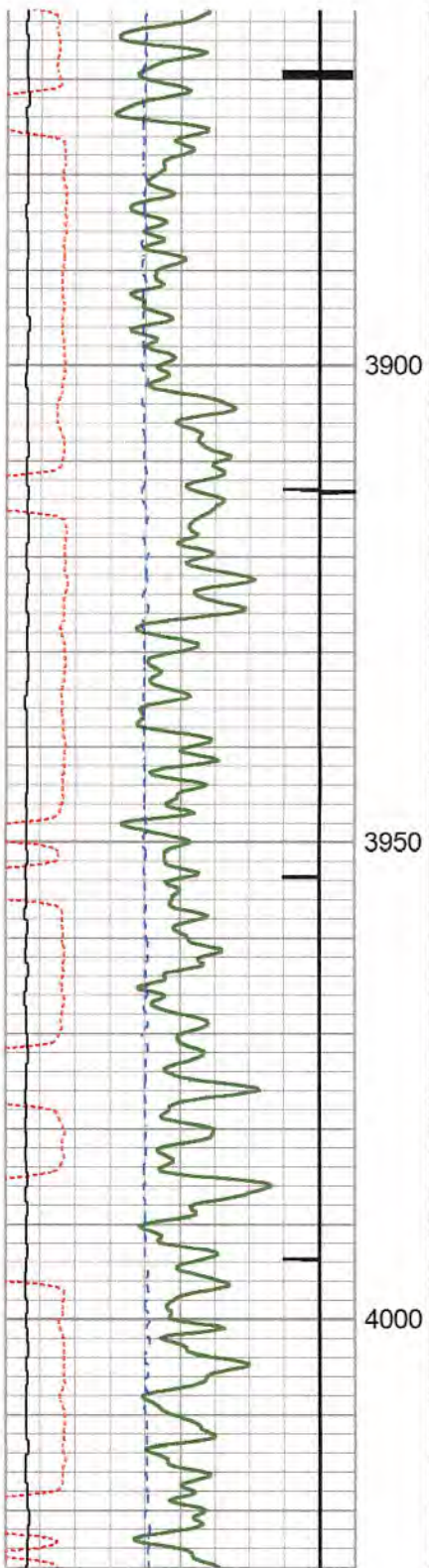


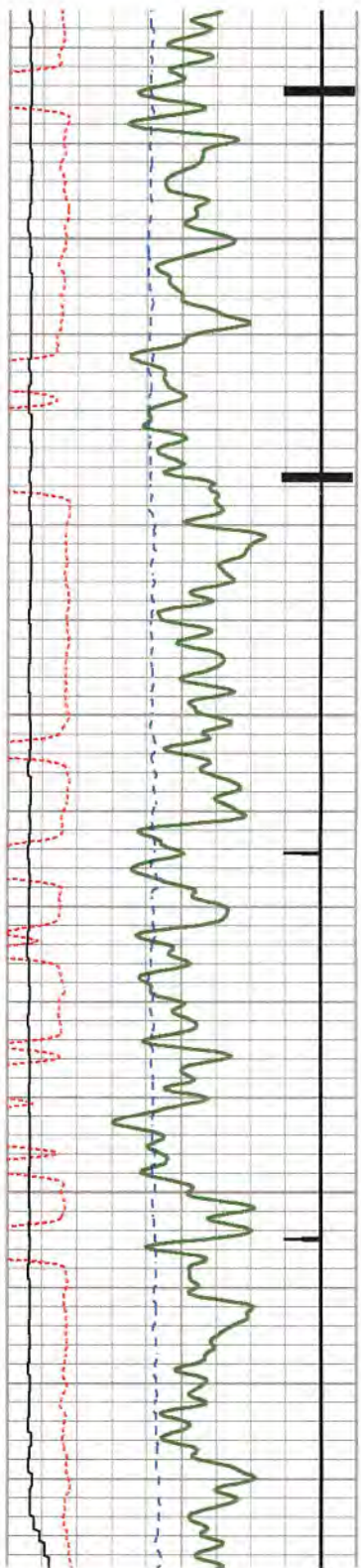








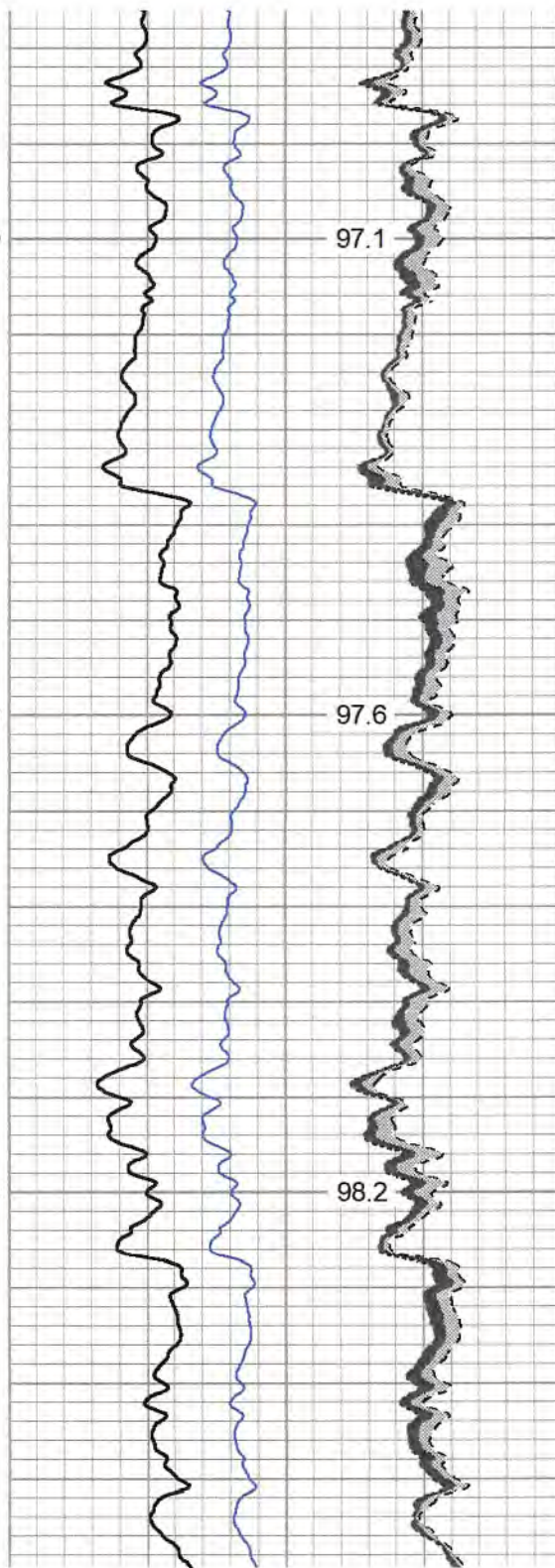




4050

4100

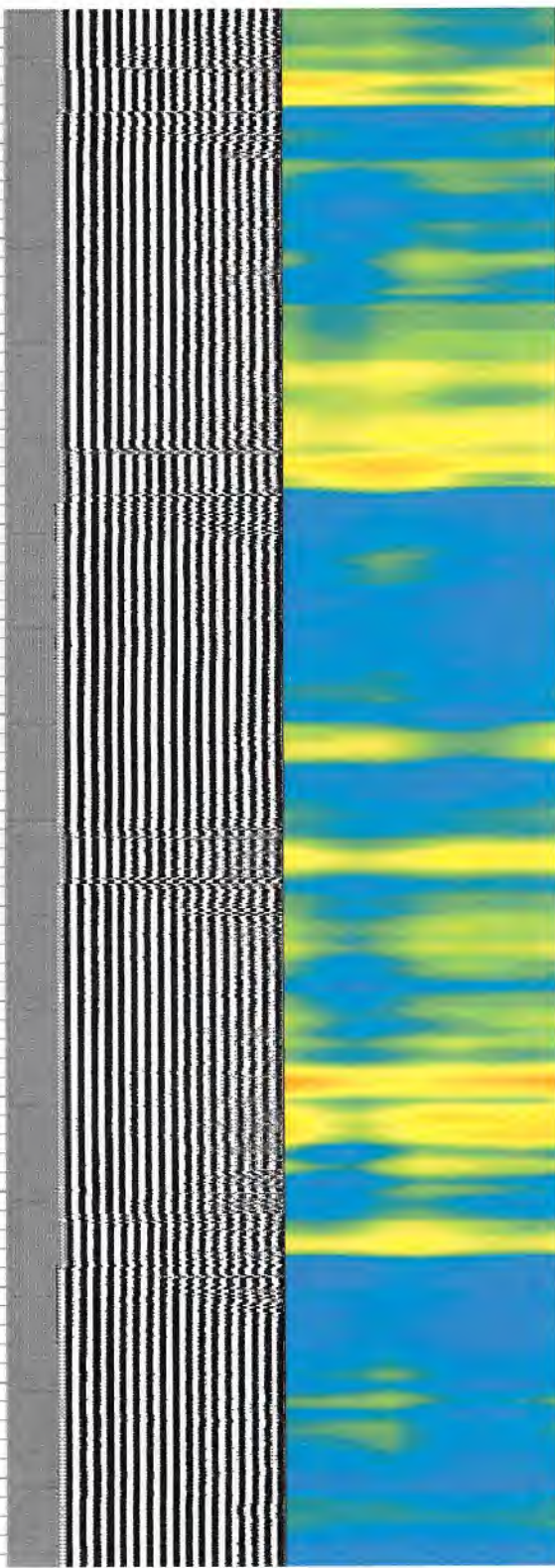
4150

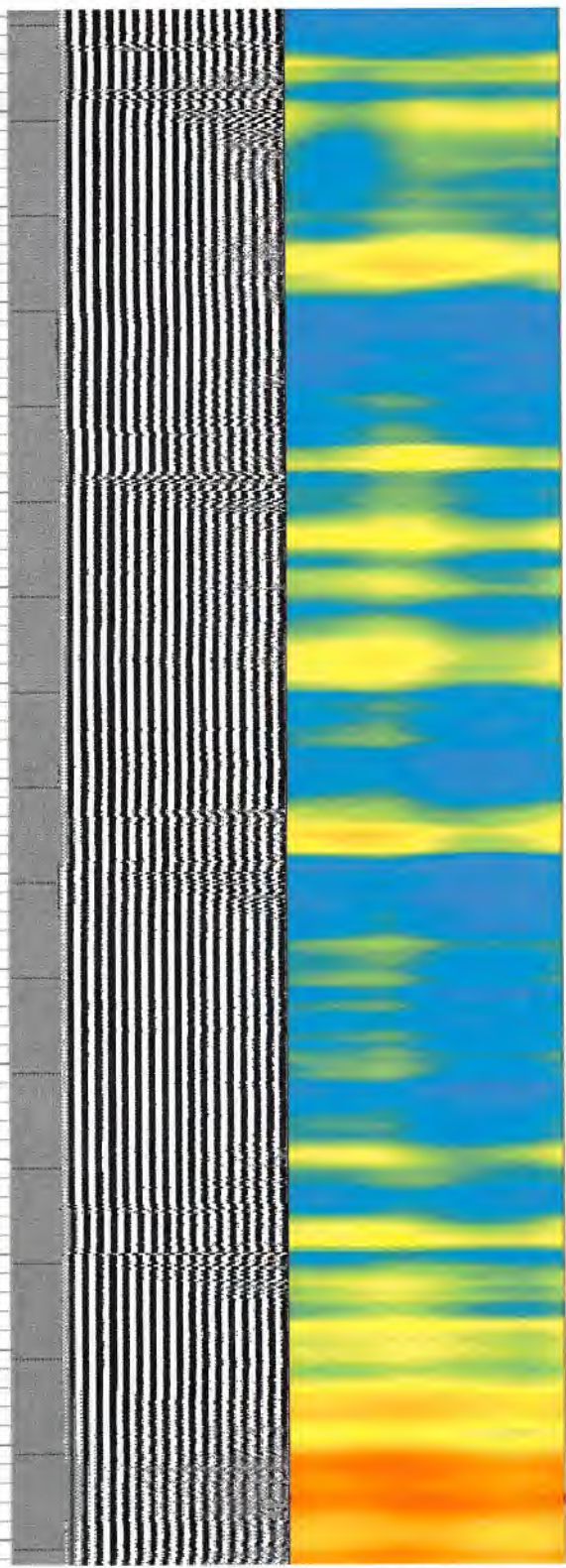
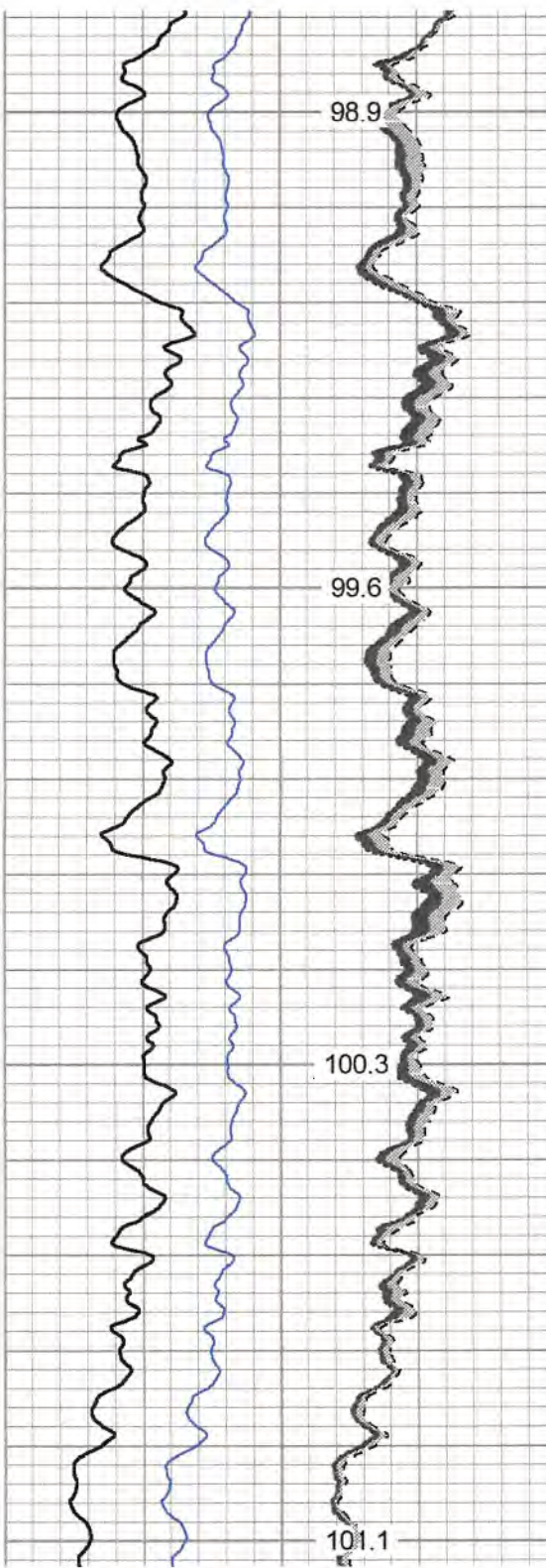
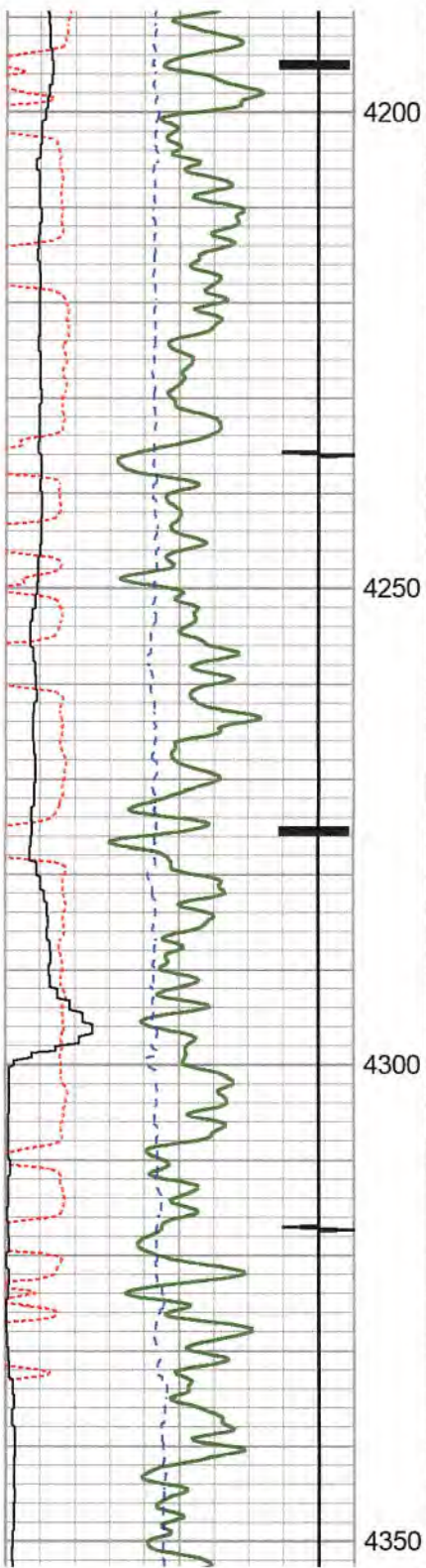


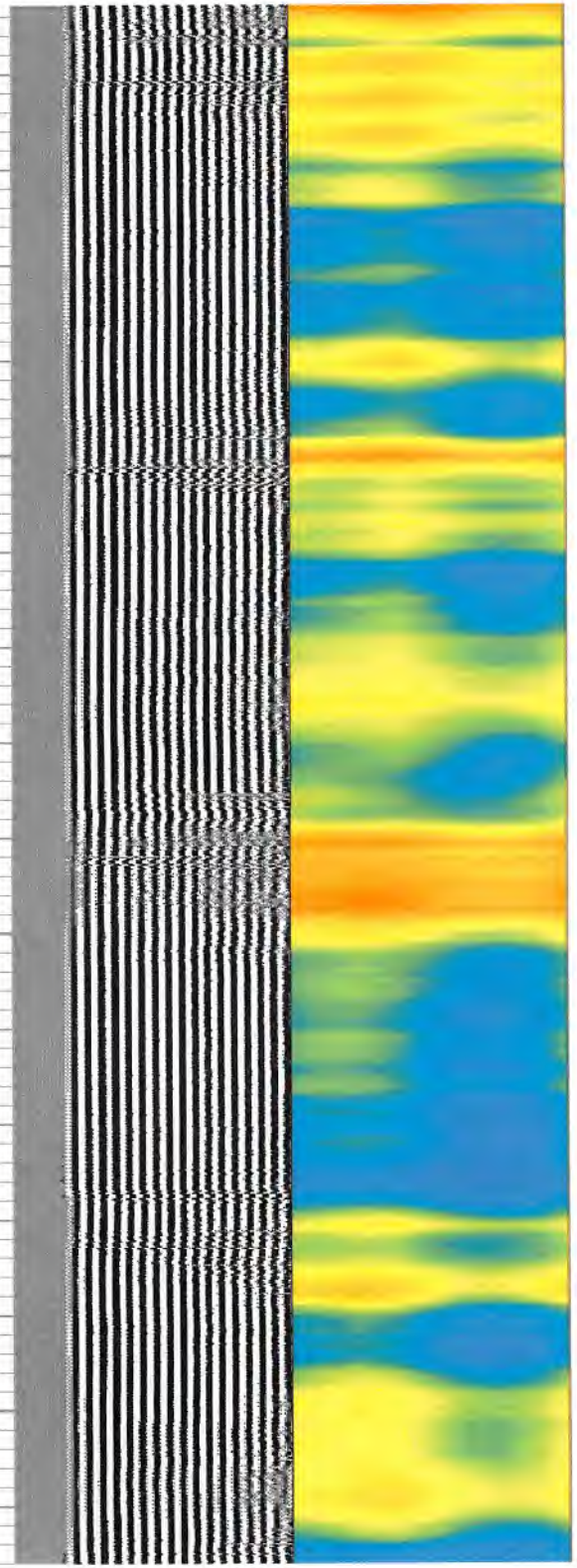
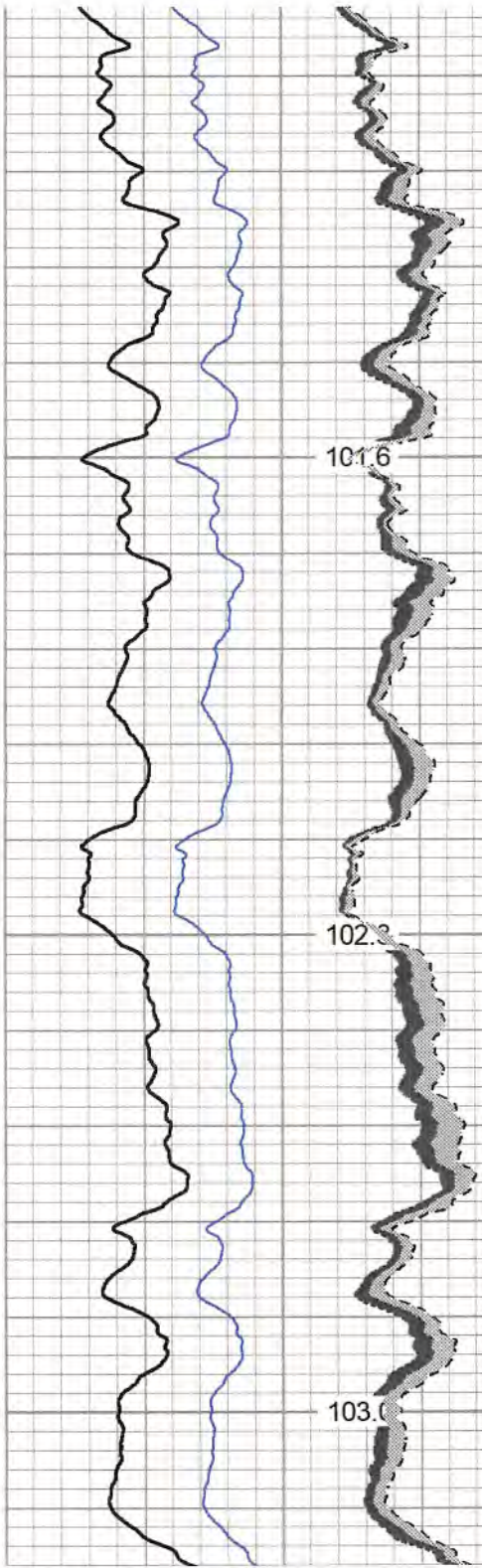
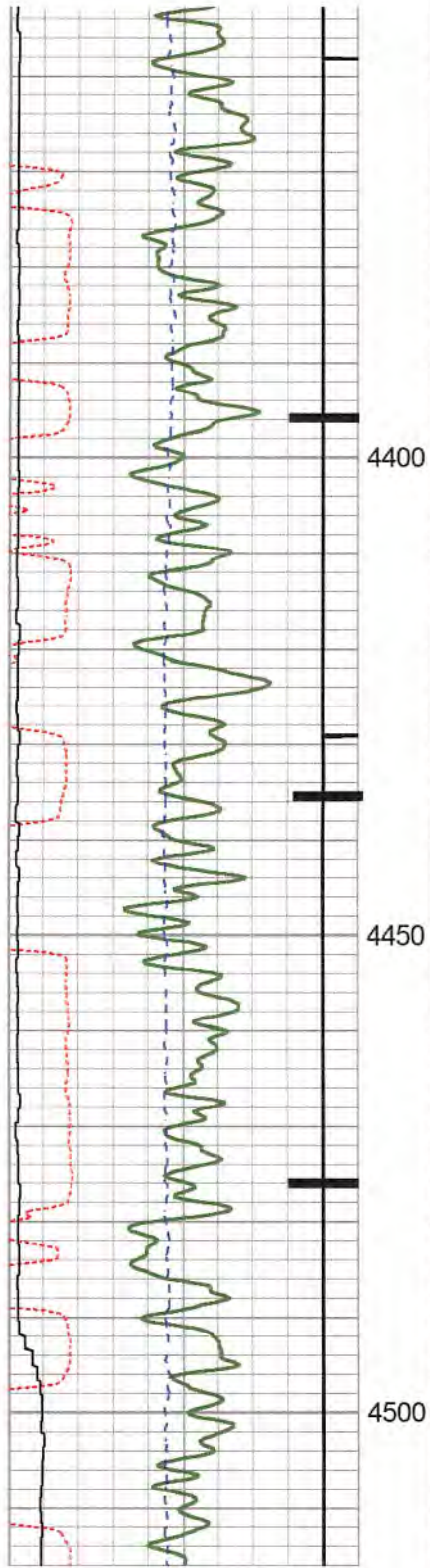
97.1

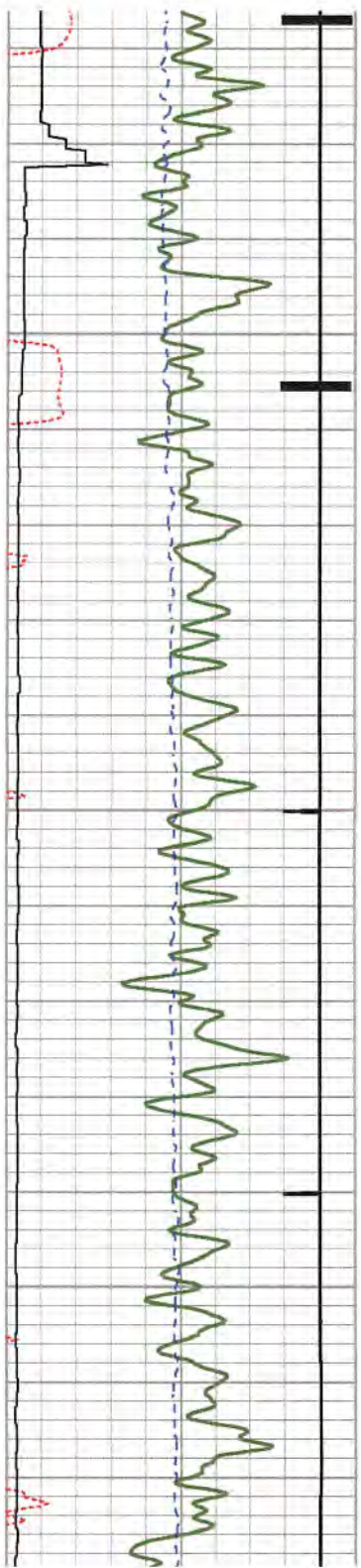
97.6

98.2





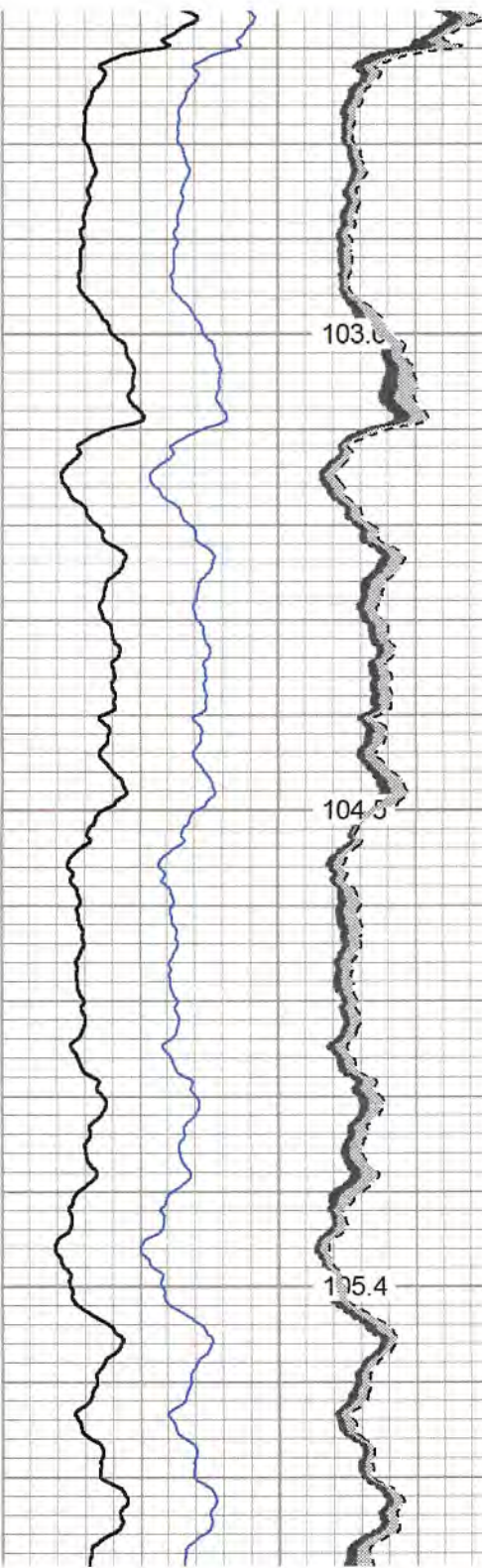




4550

4600

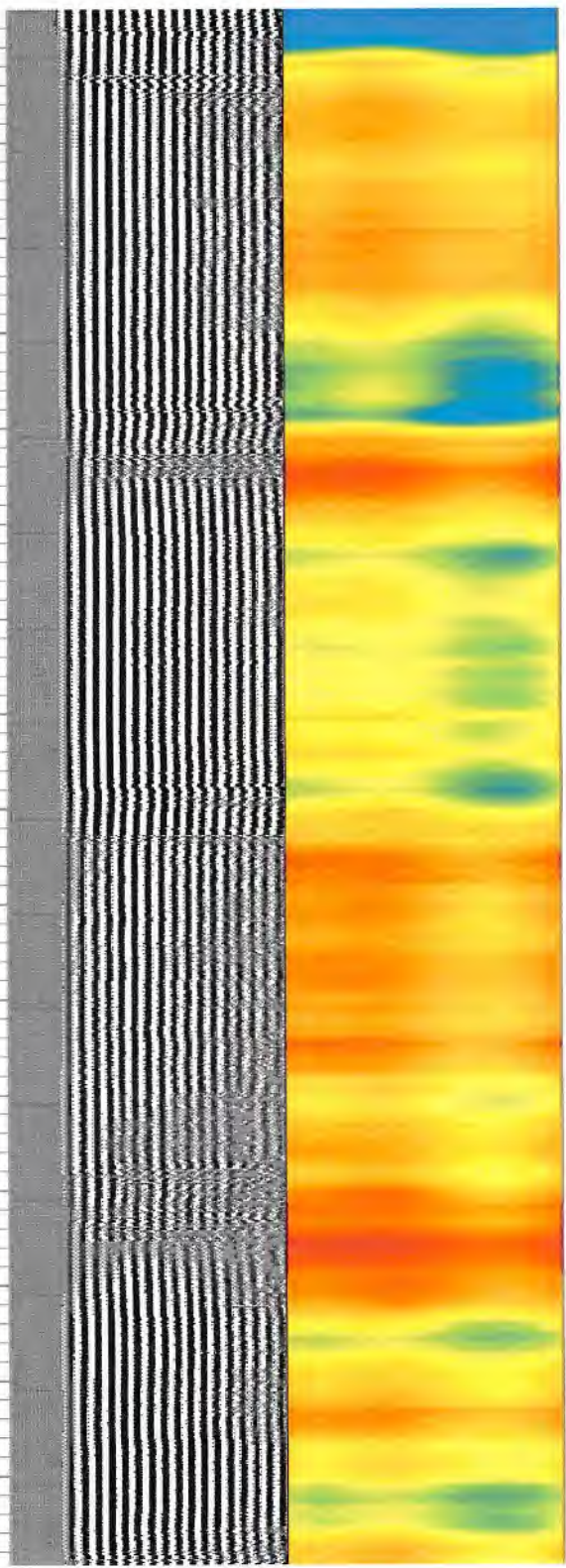
4650

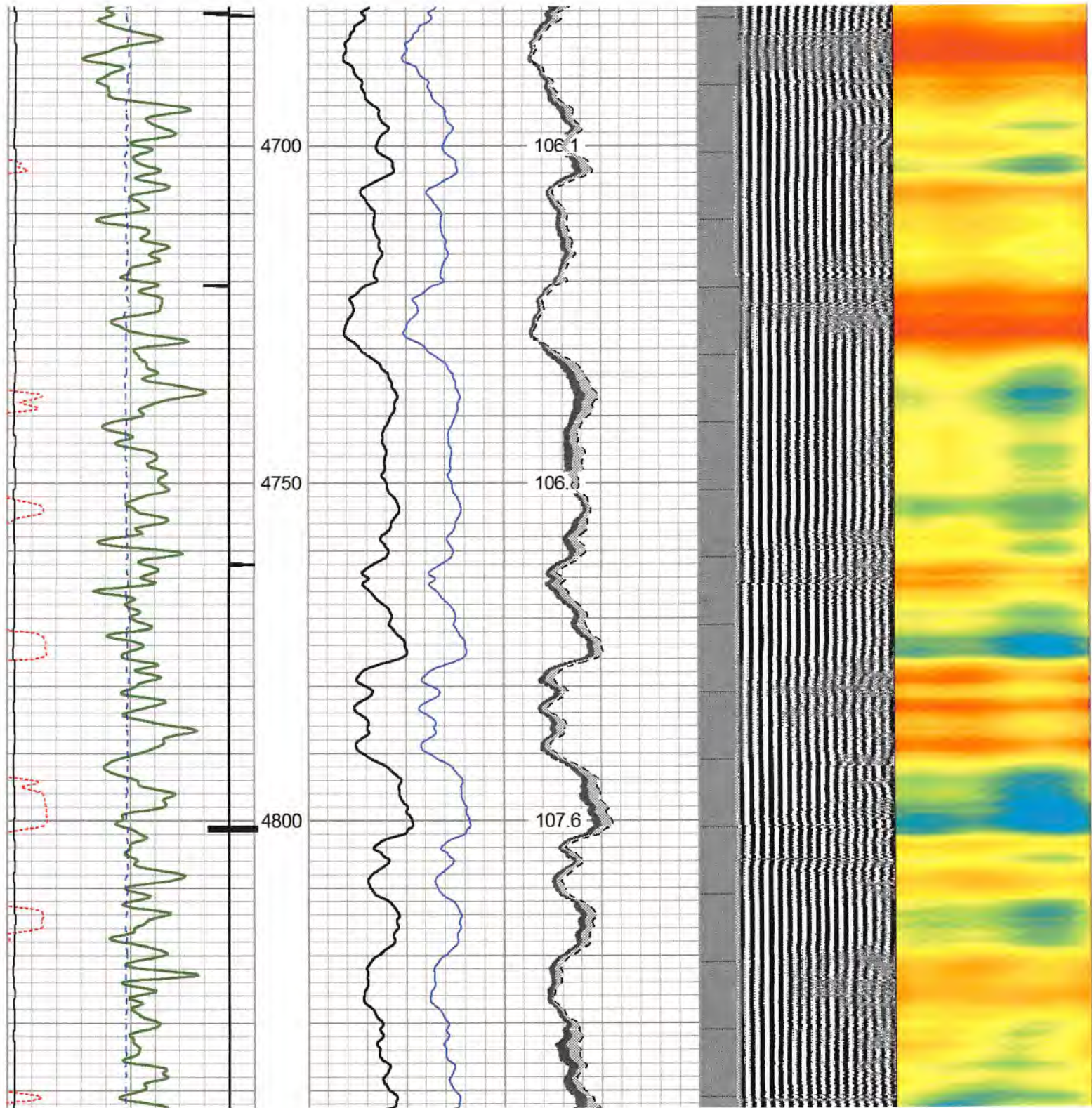


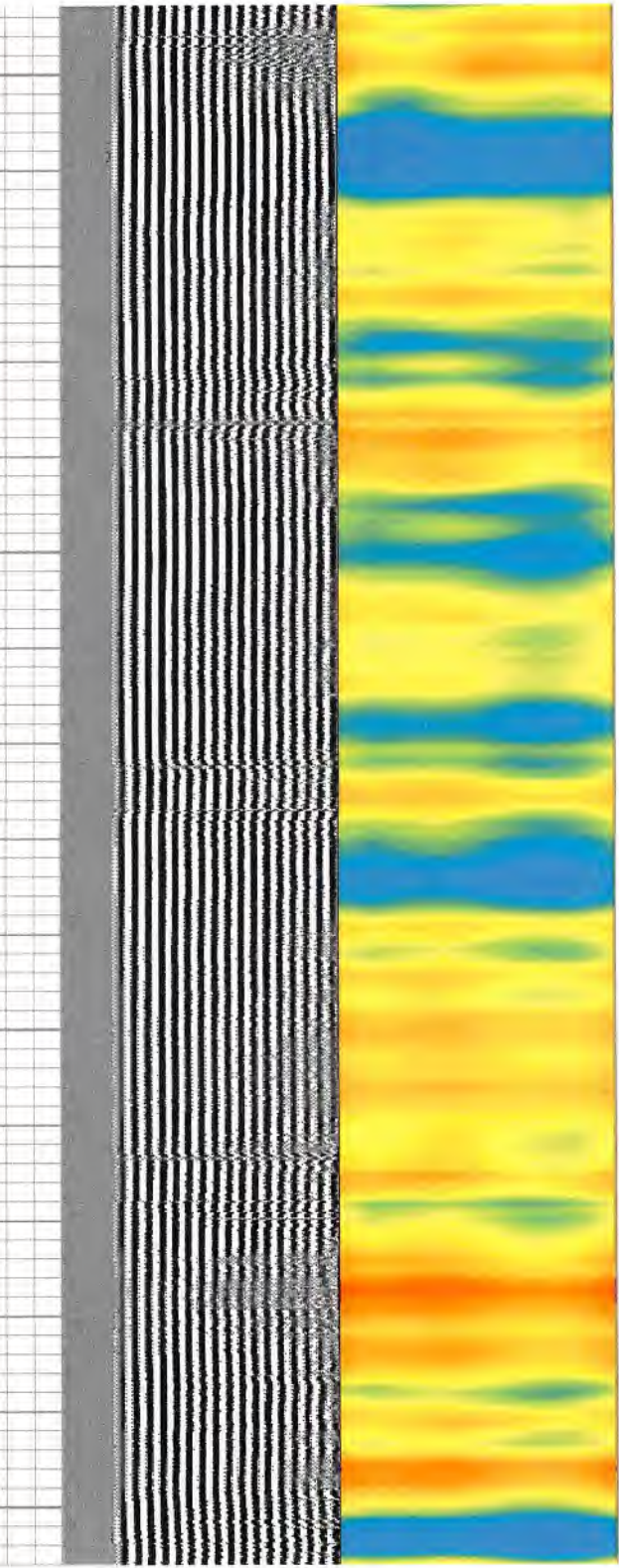
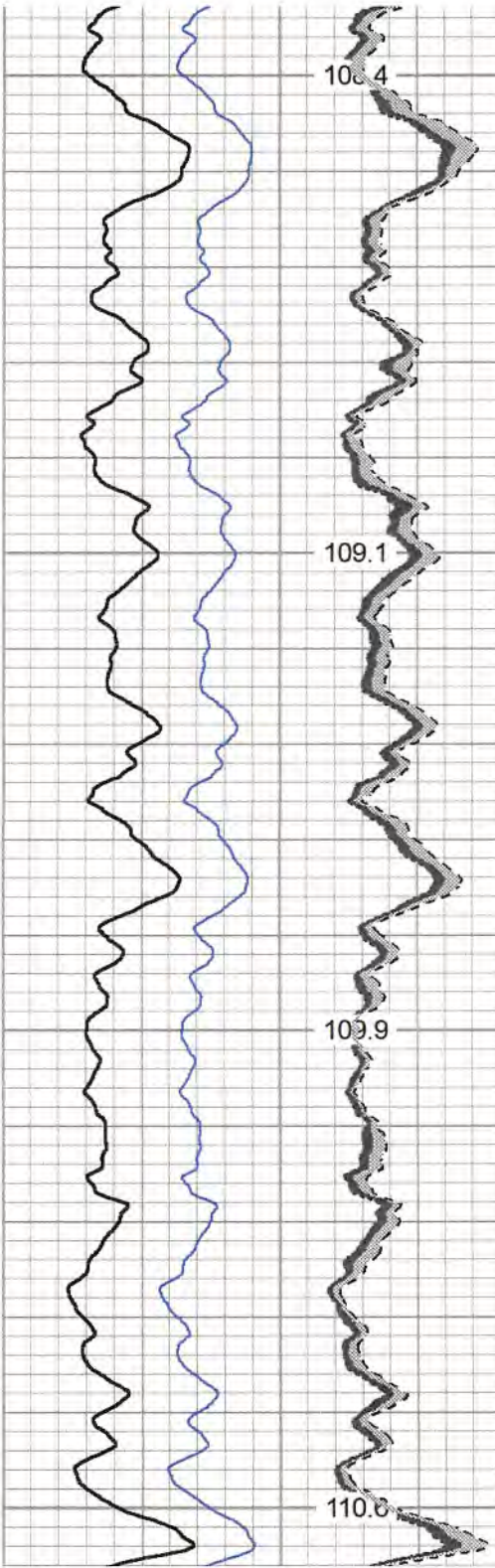
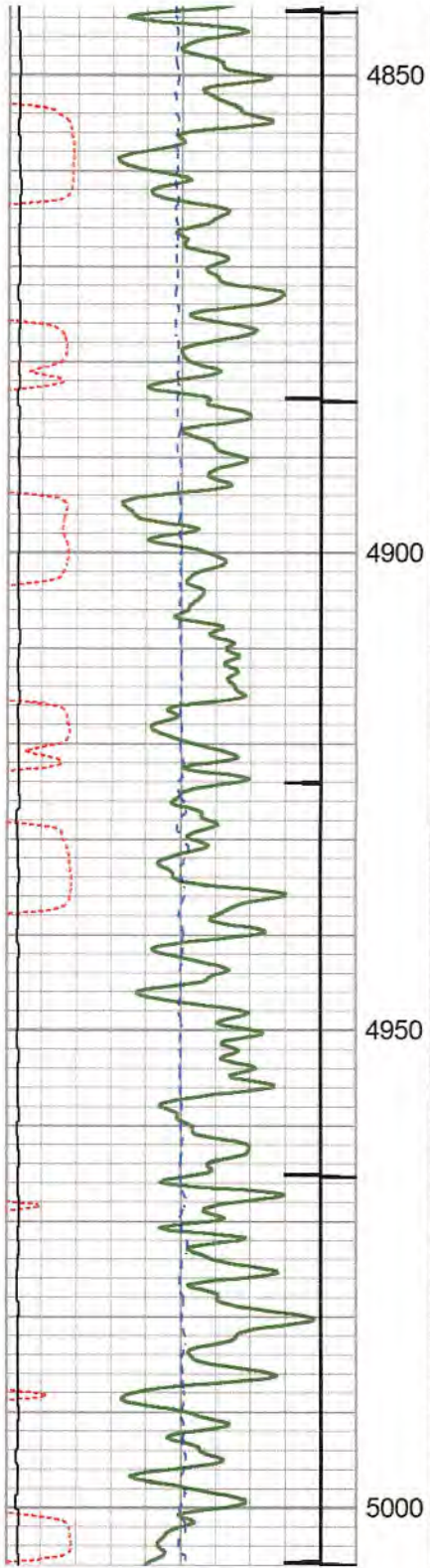
103.6

104.5

105.4







108.4

109.1

109.9

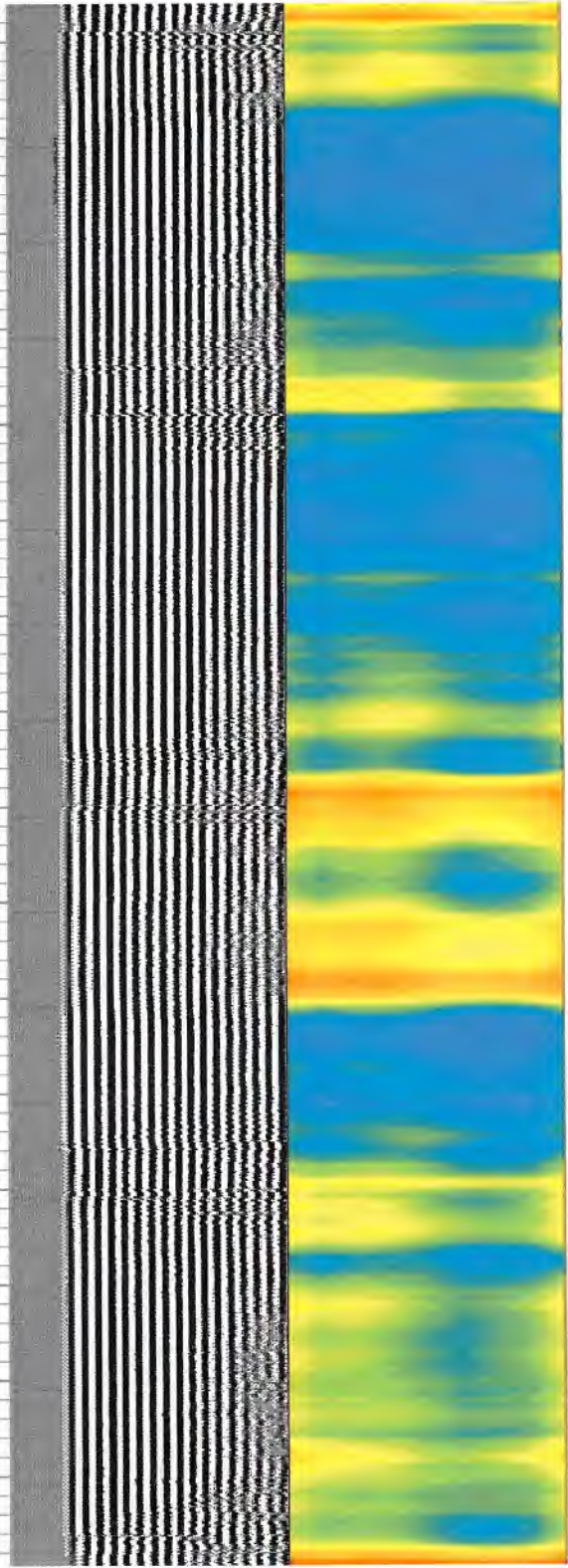
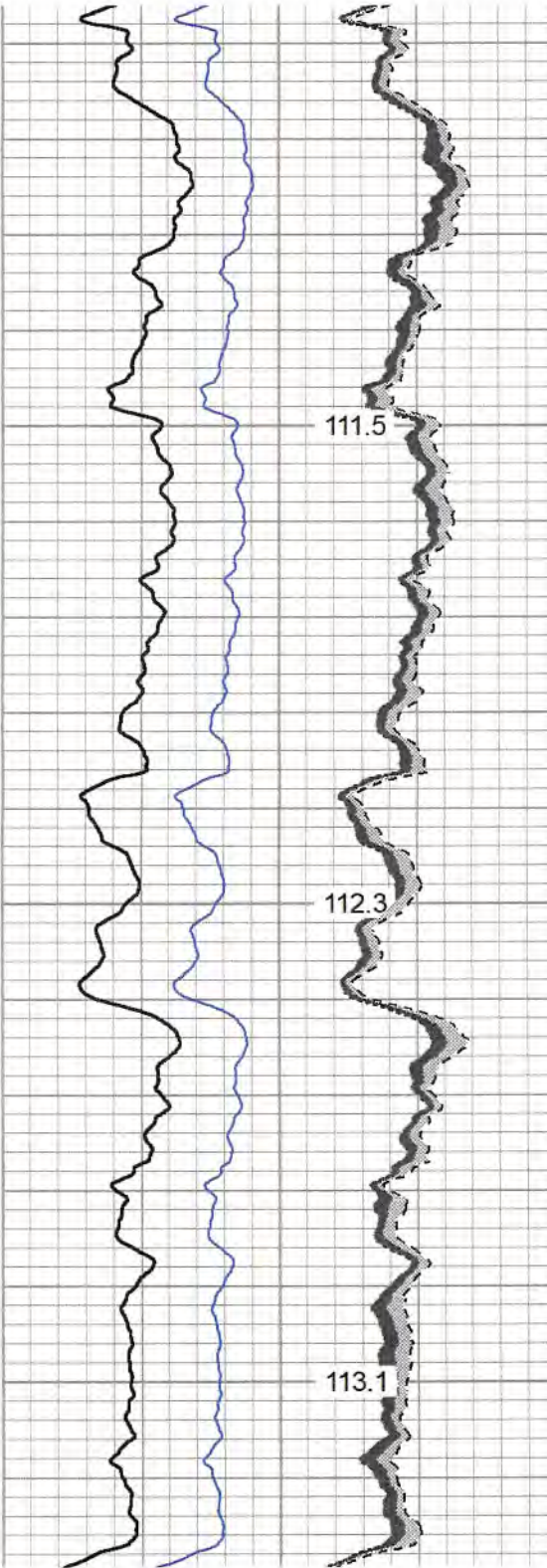
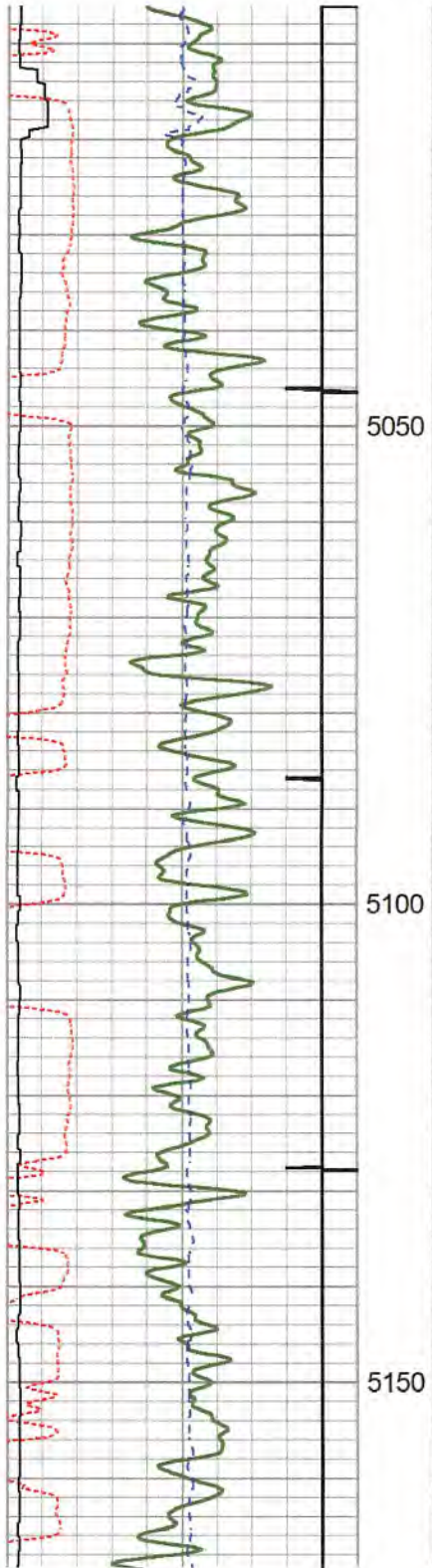
110.6

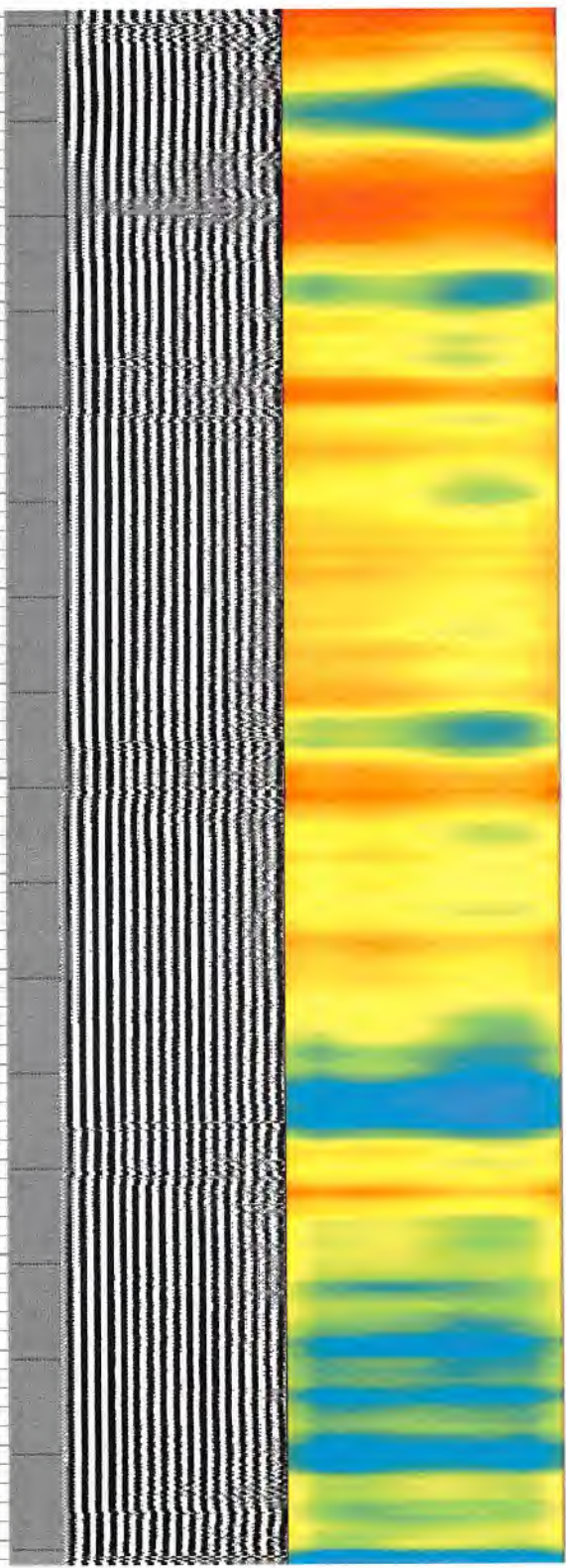
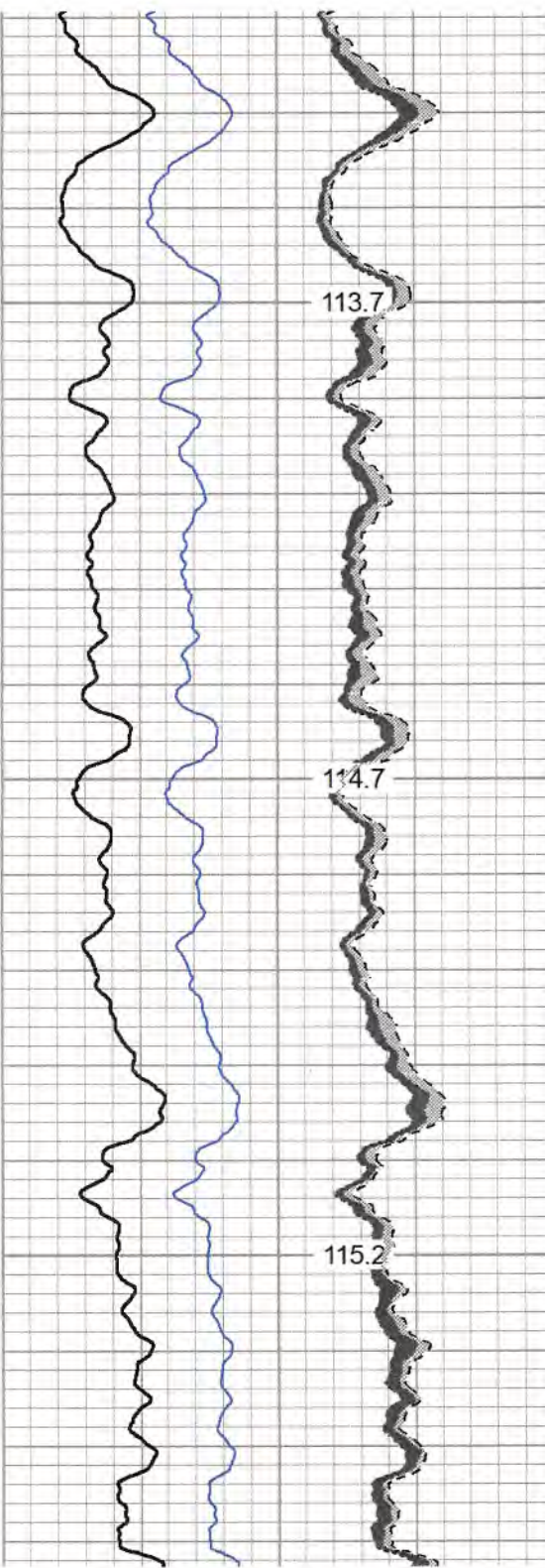
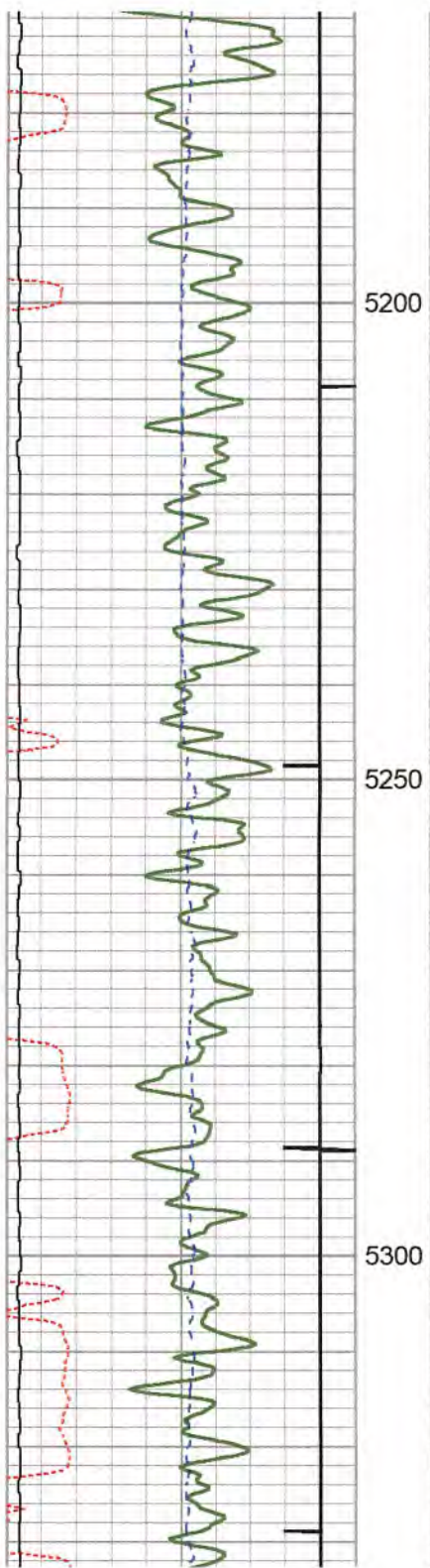
4850

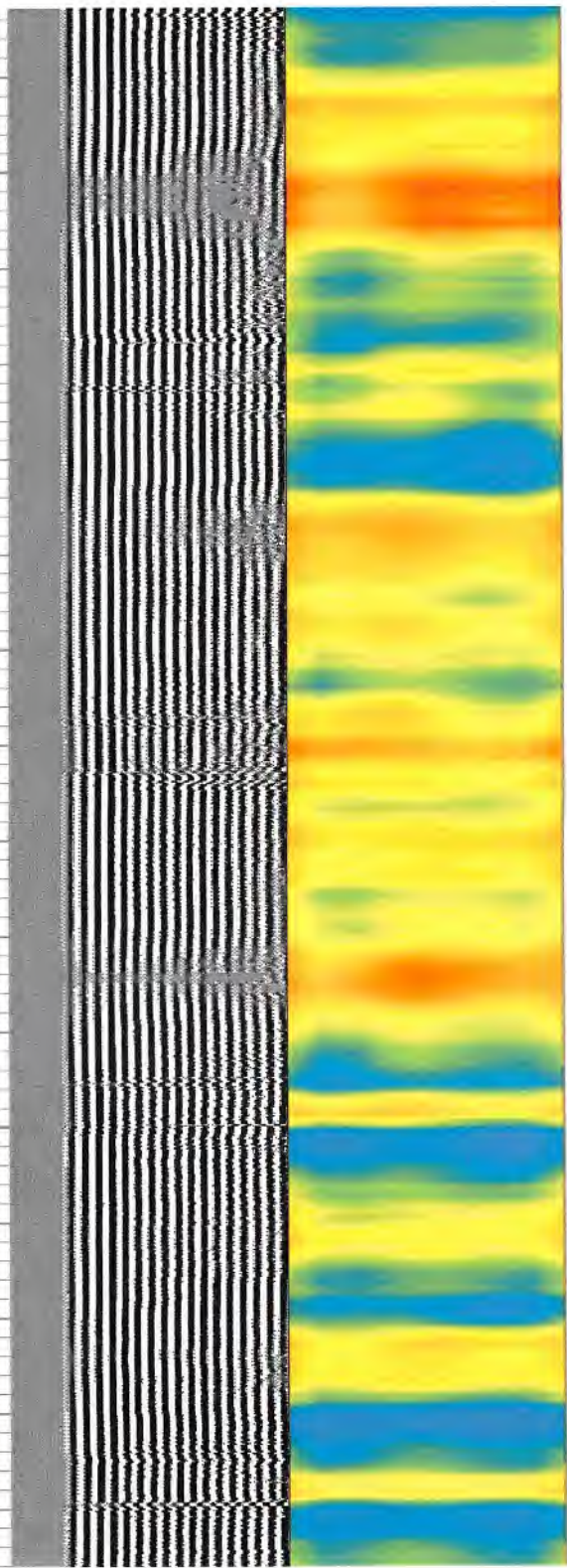
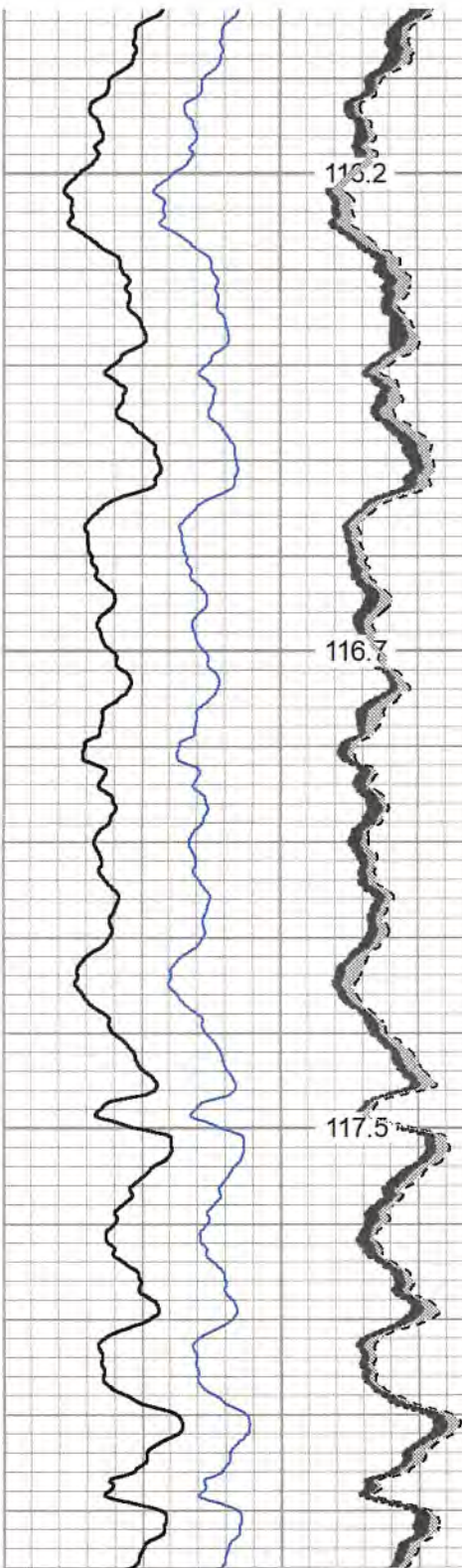
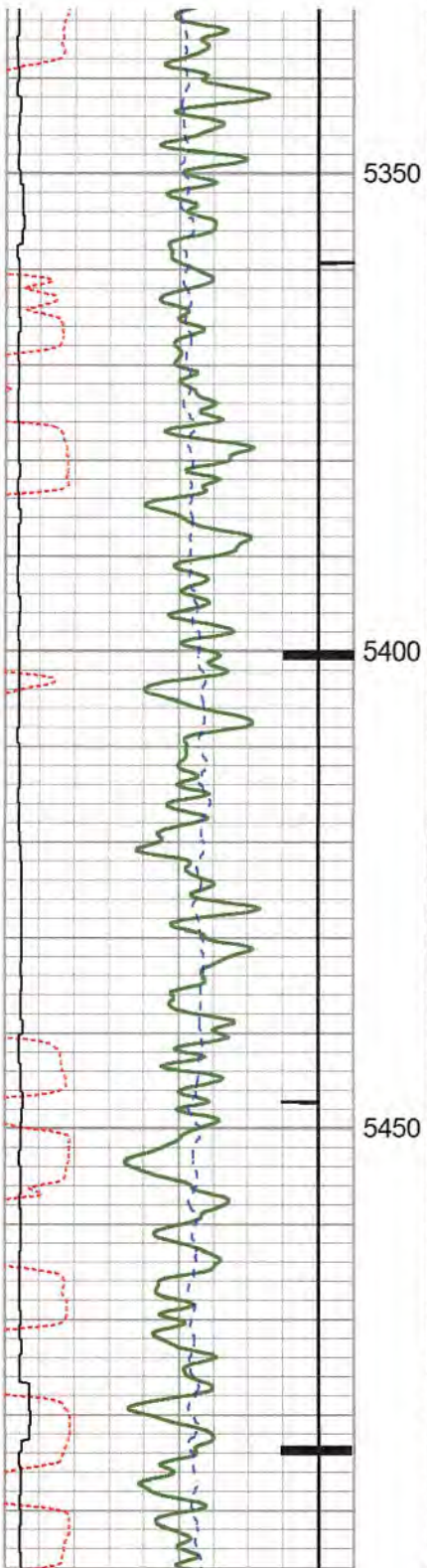
4900

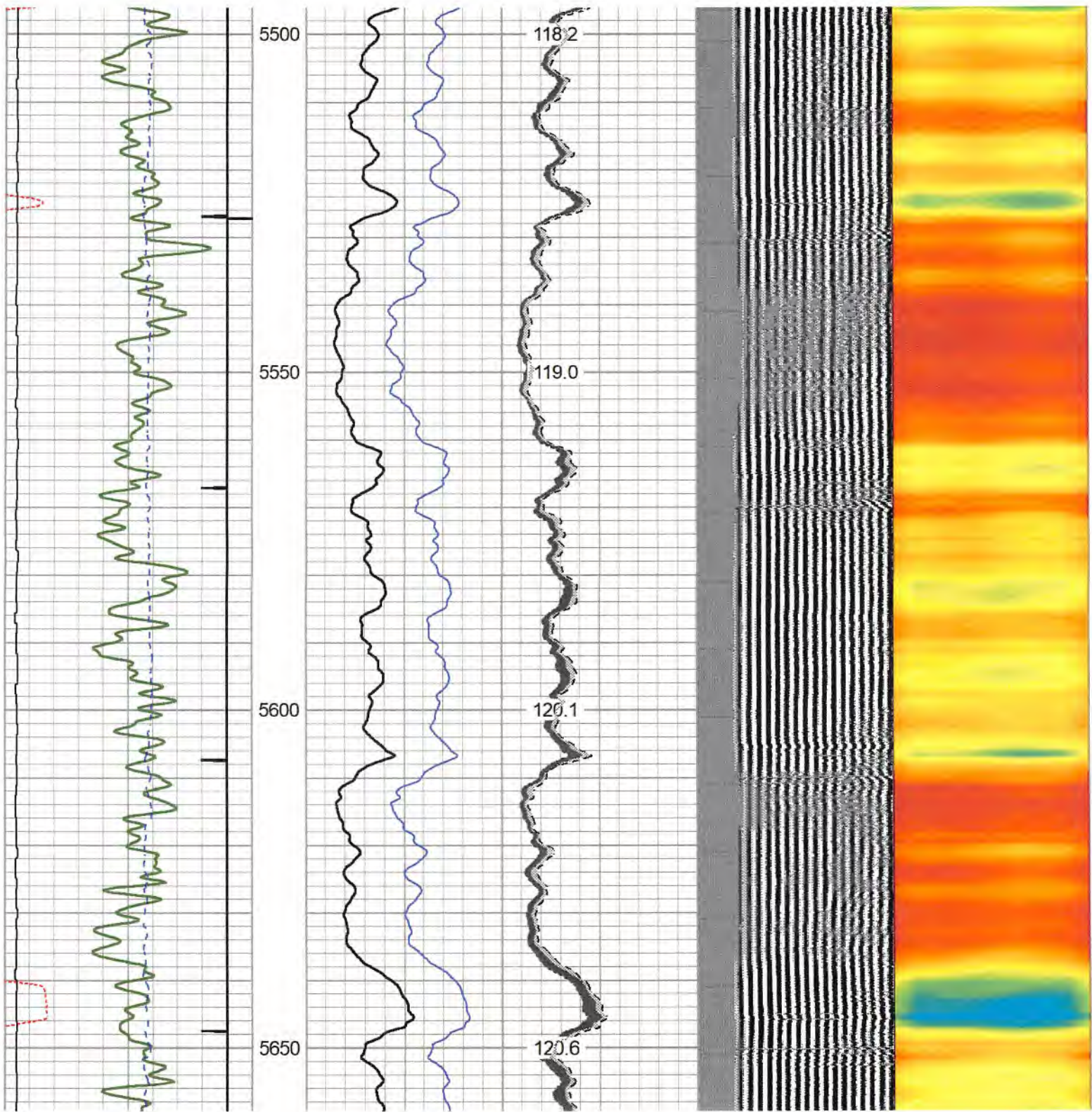
4950

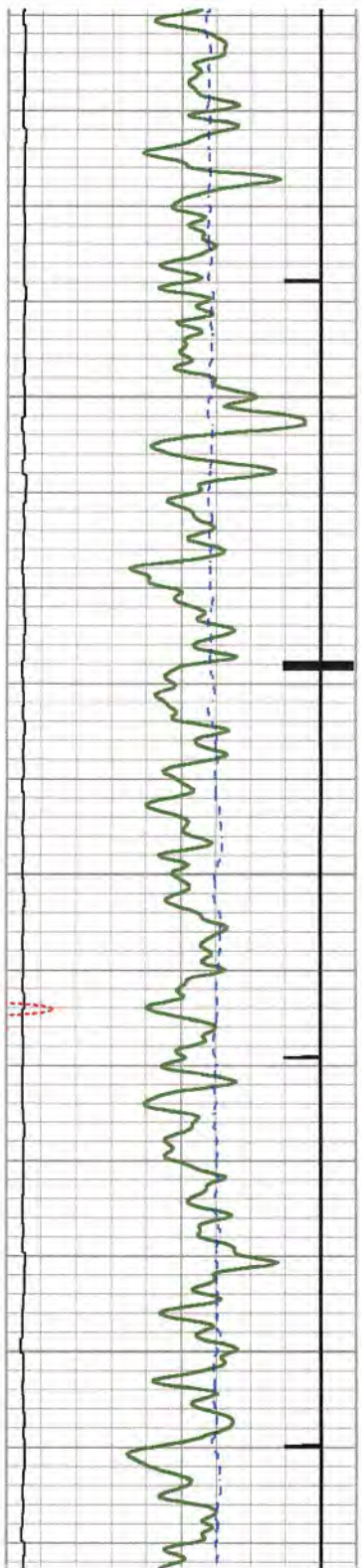
5000







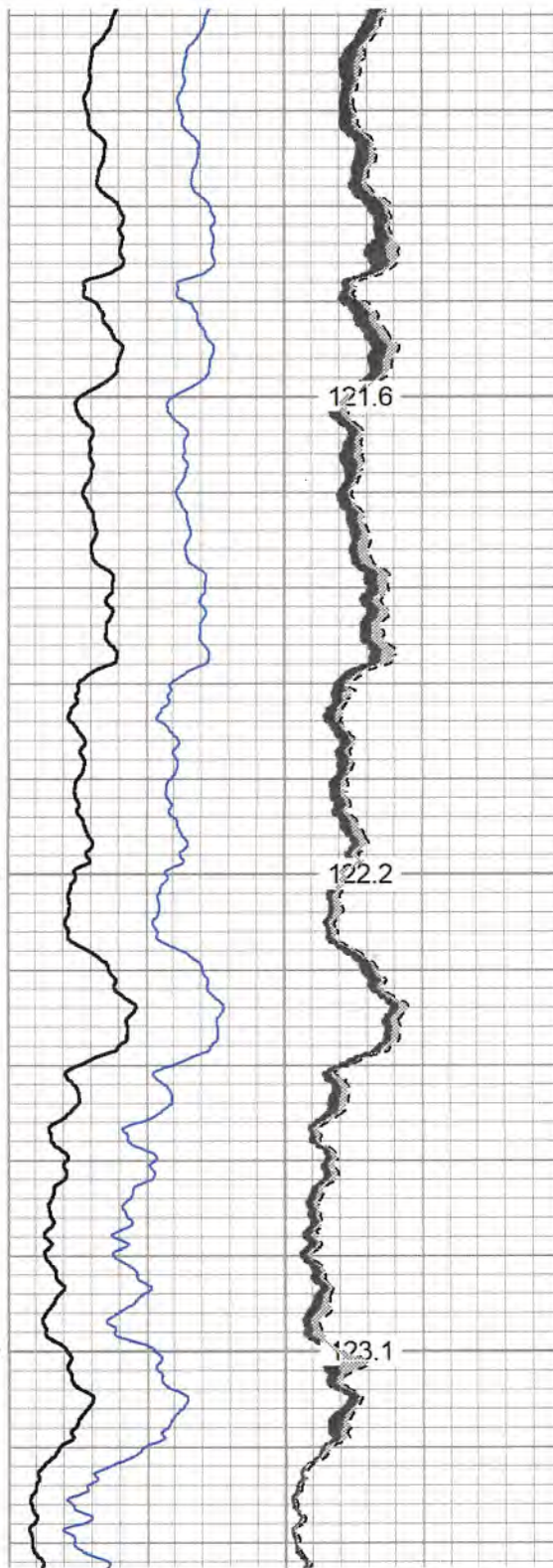




5700

5750

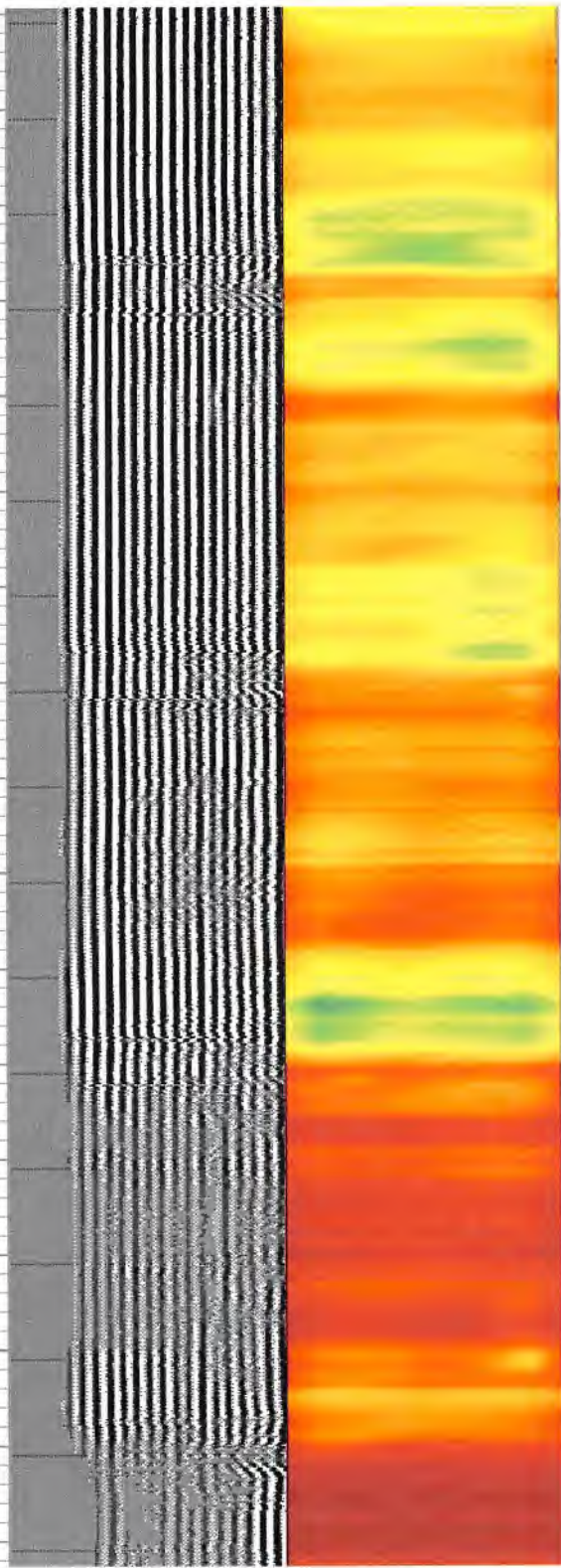
5800

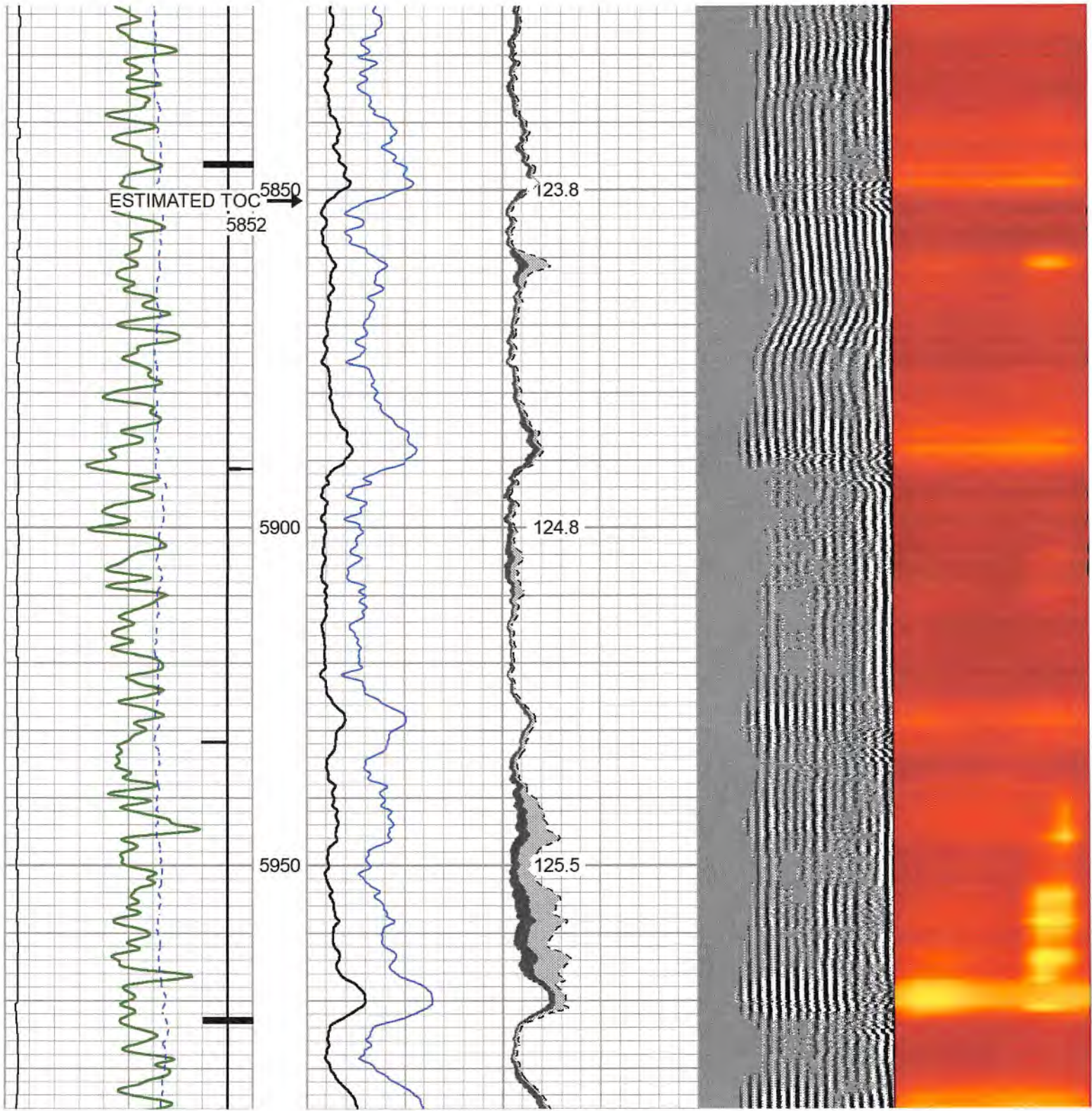


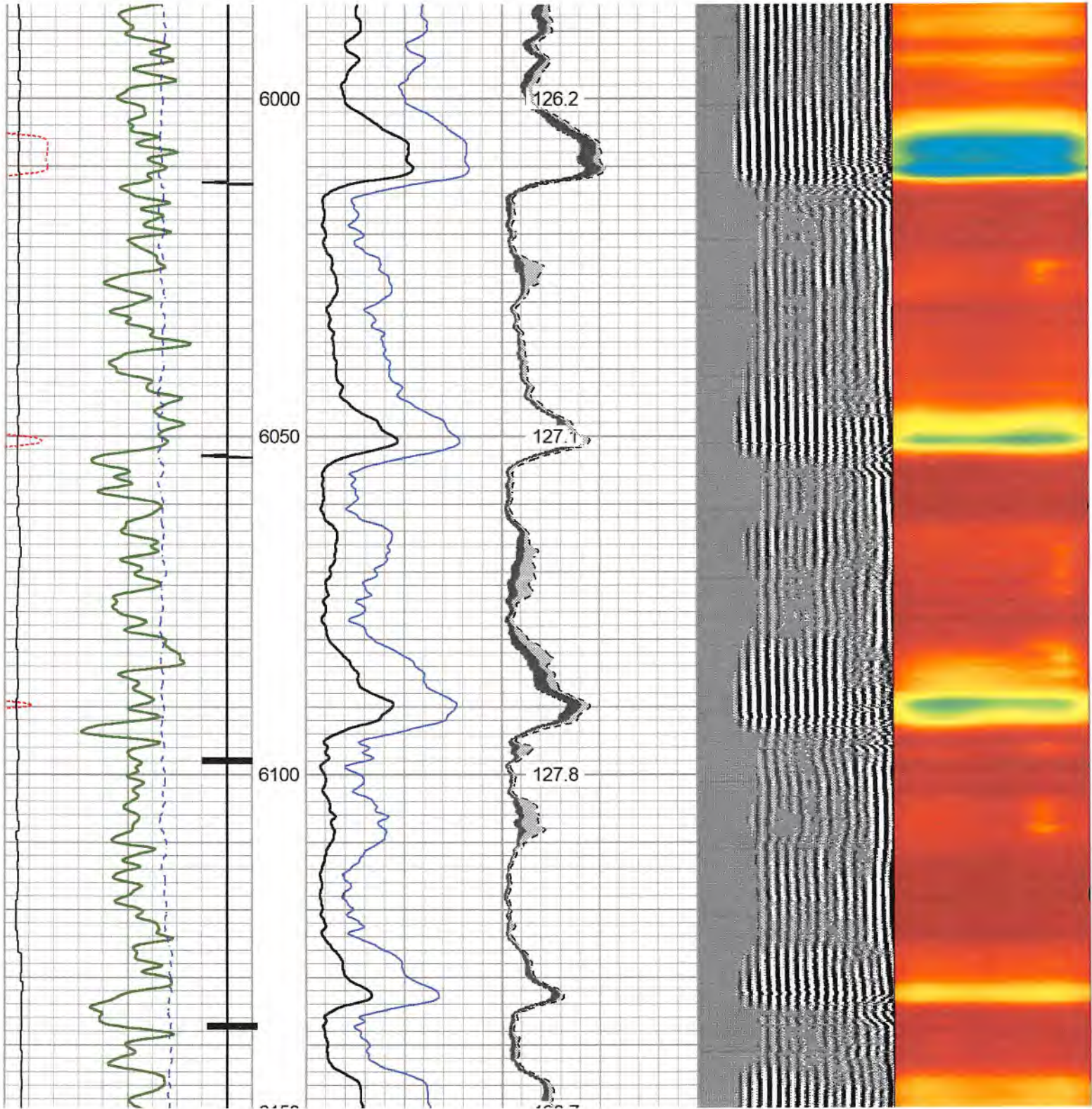
121.6

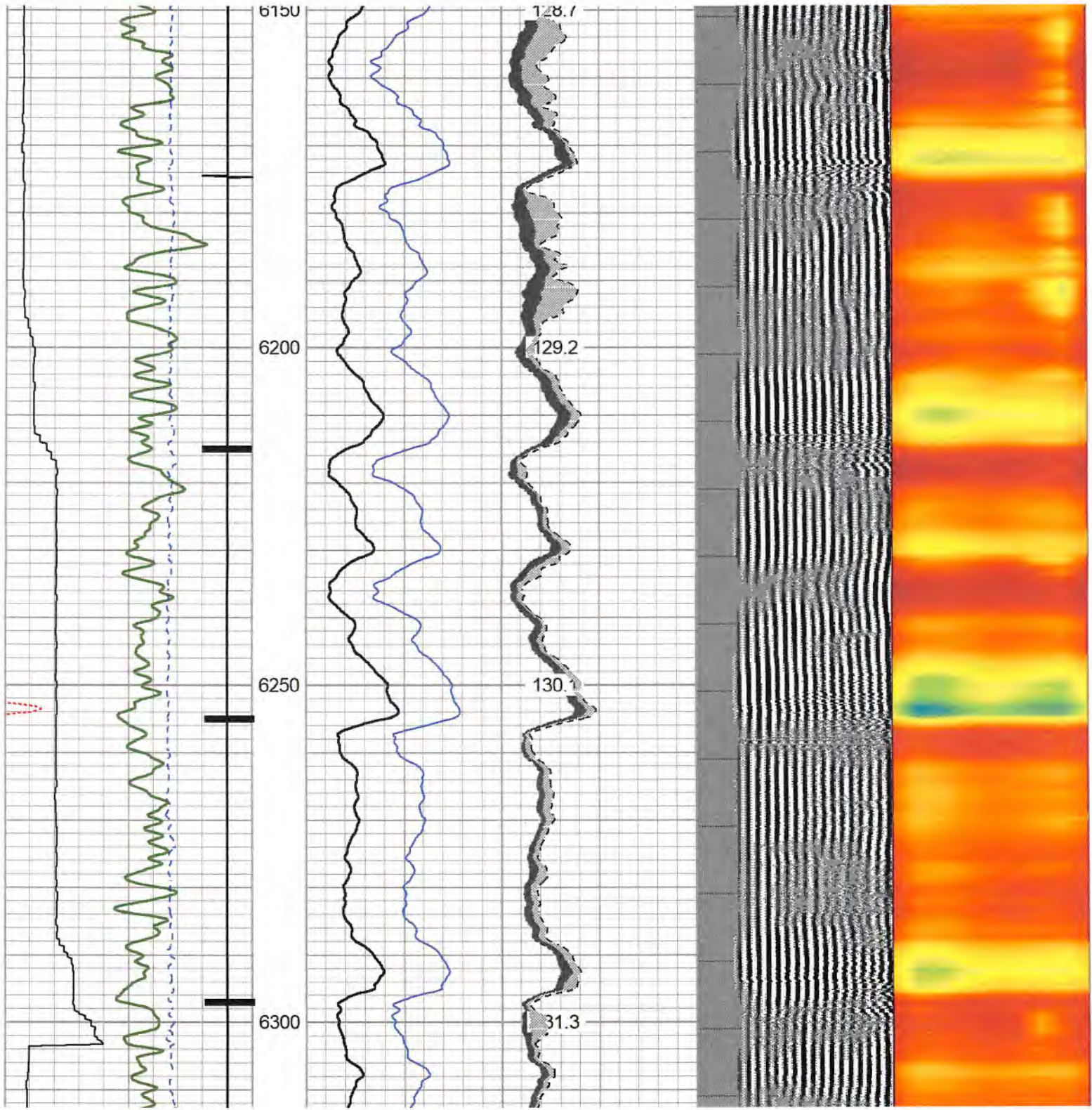
122.2

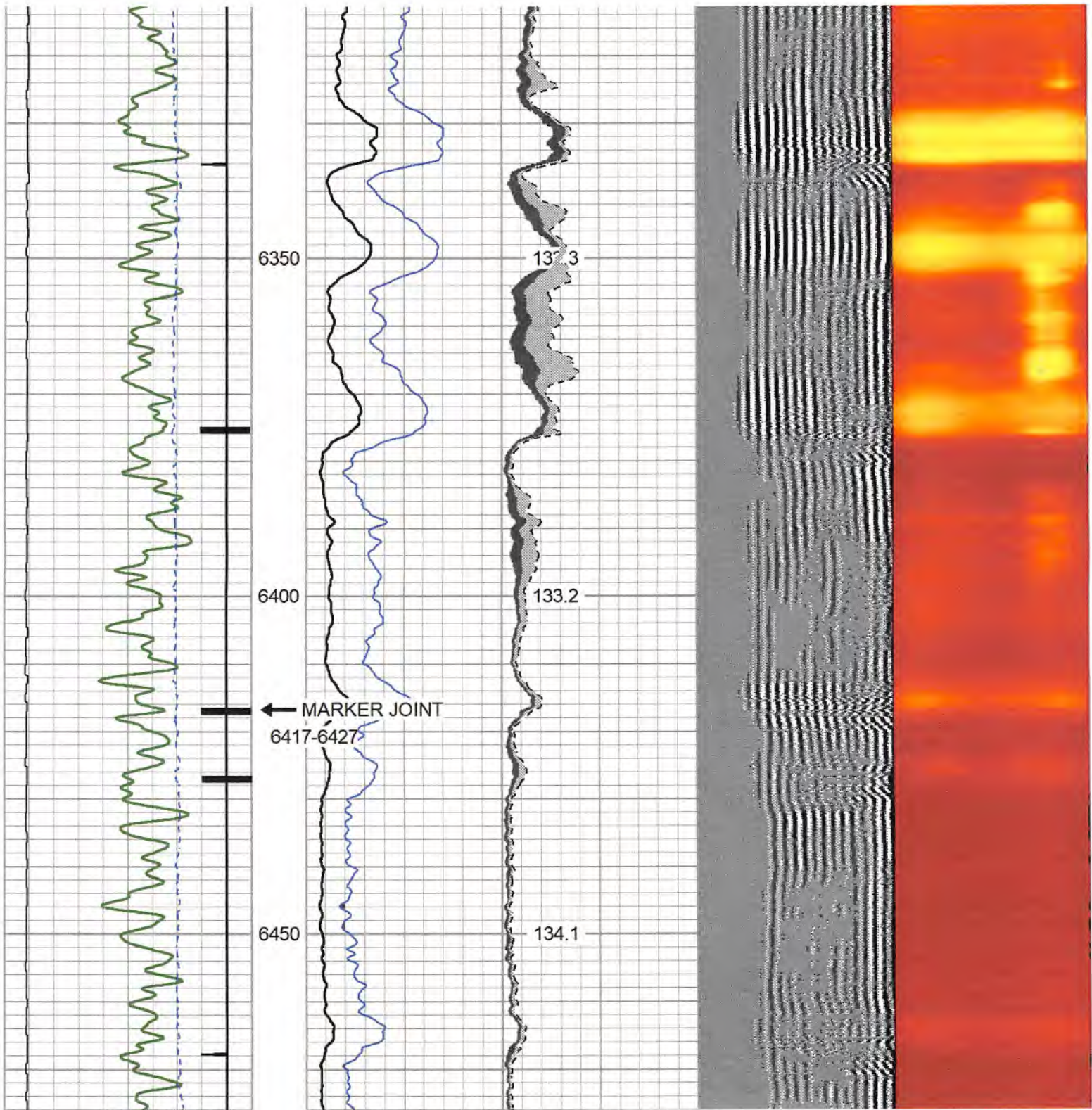
123.1

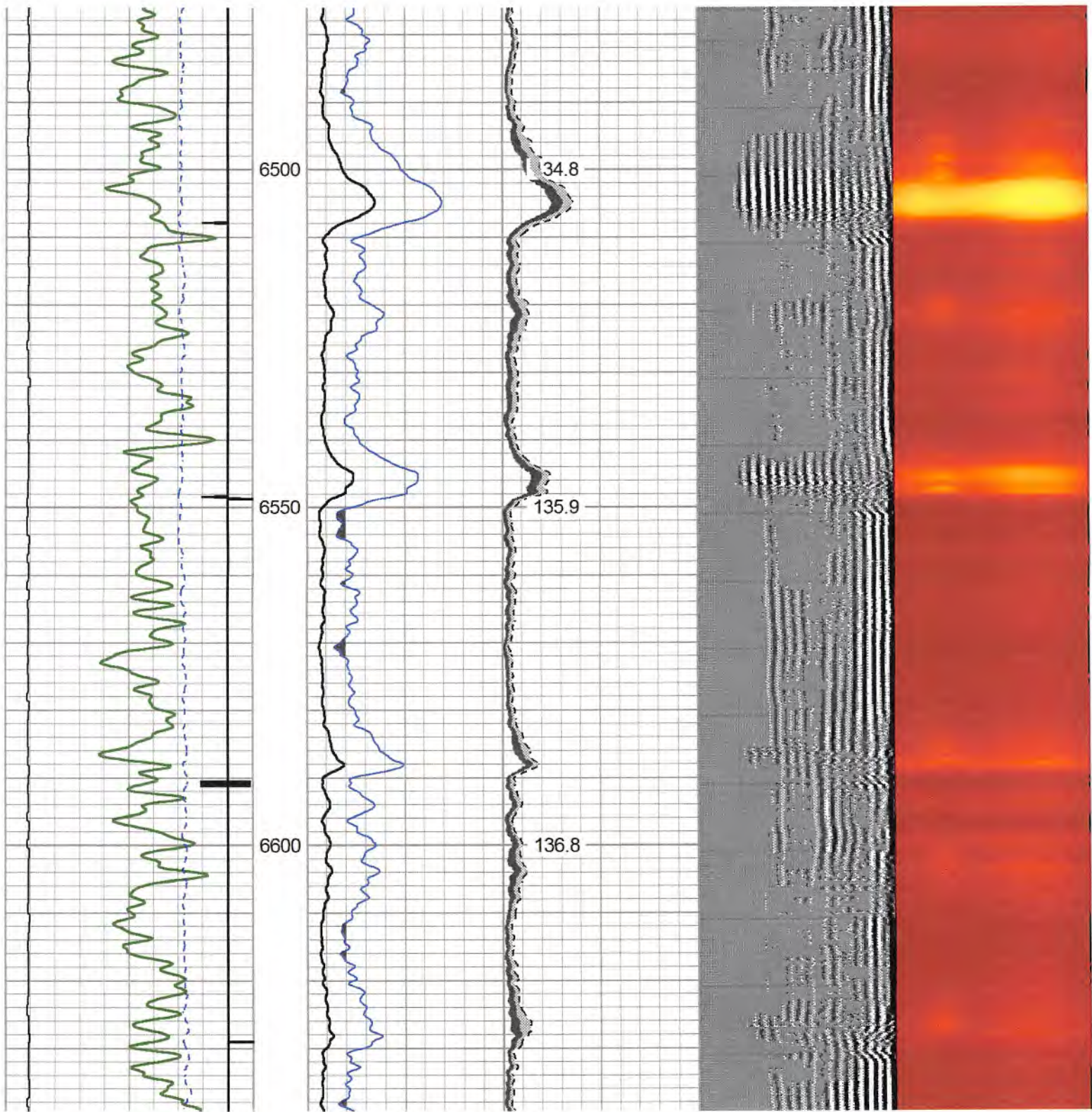


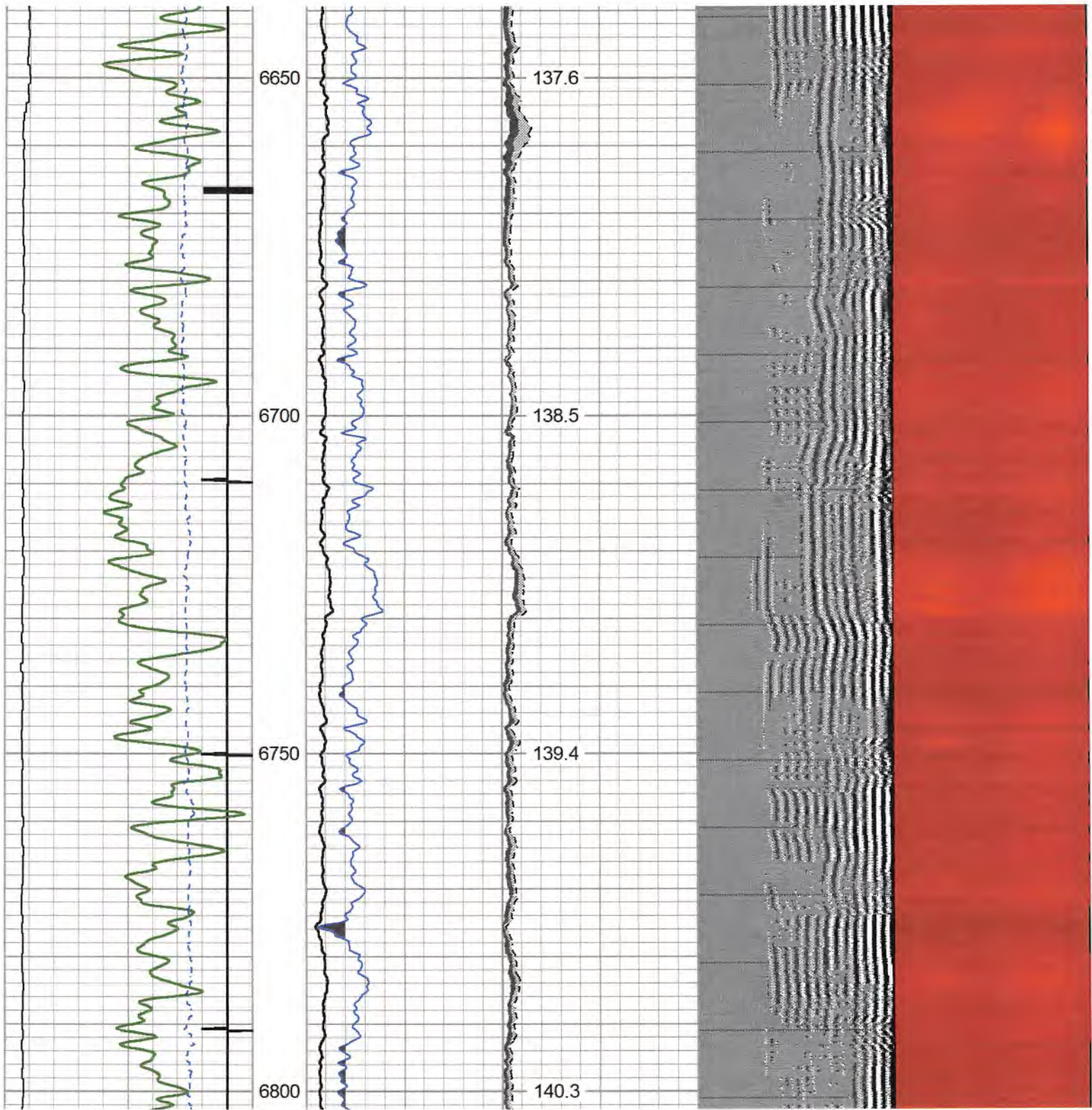


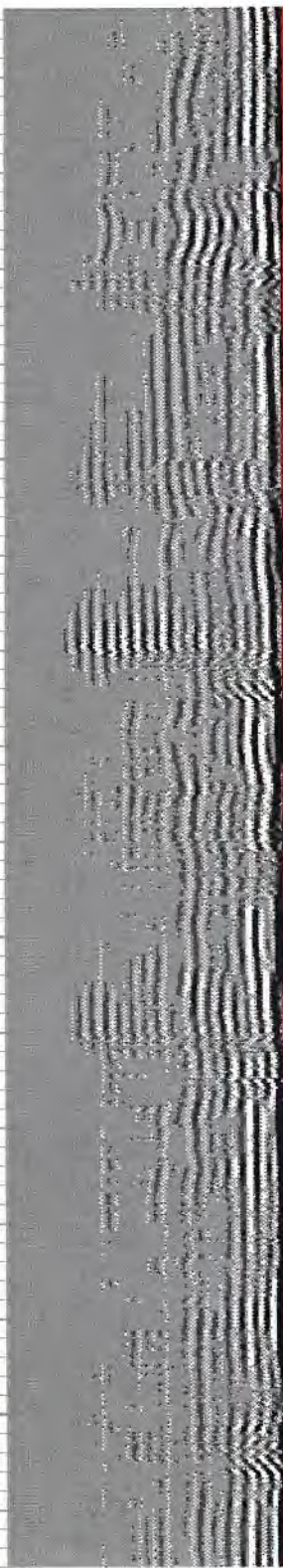
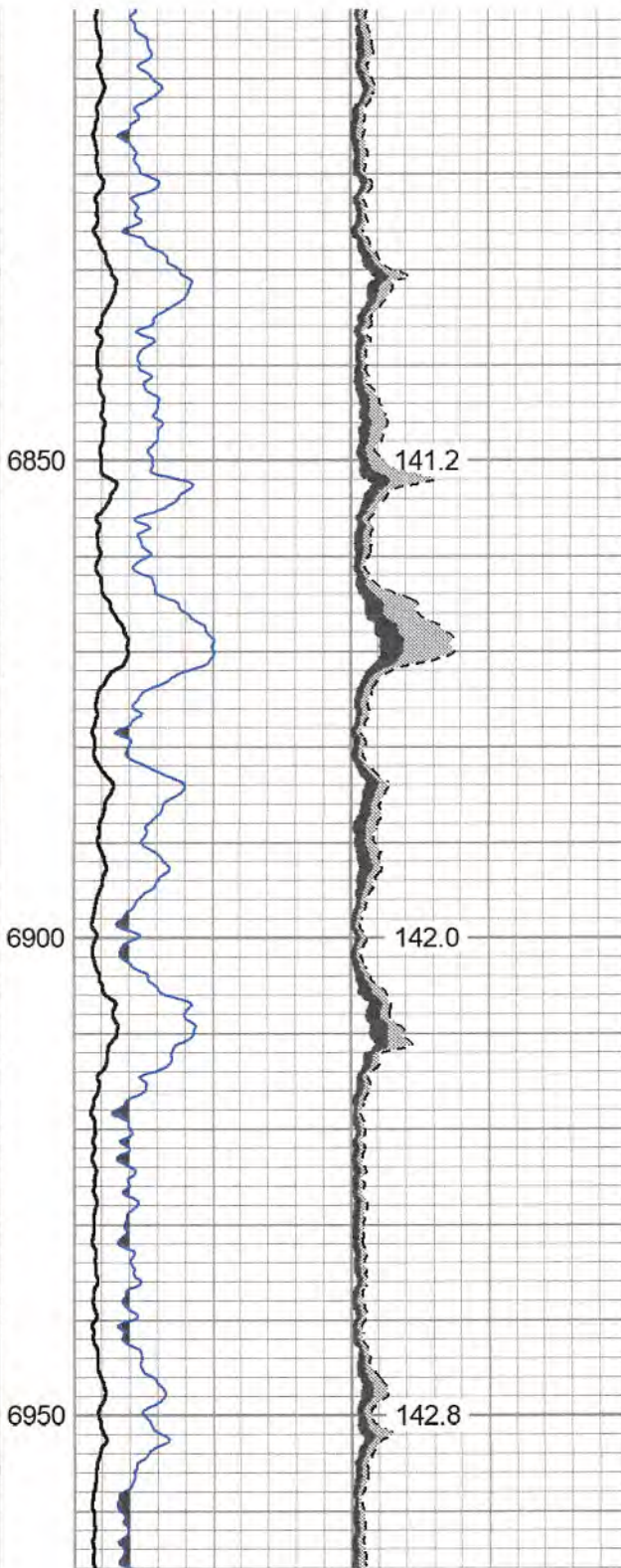
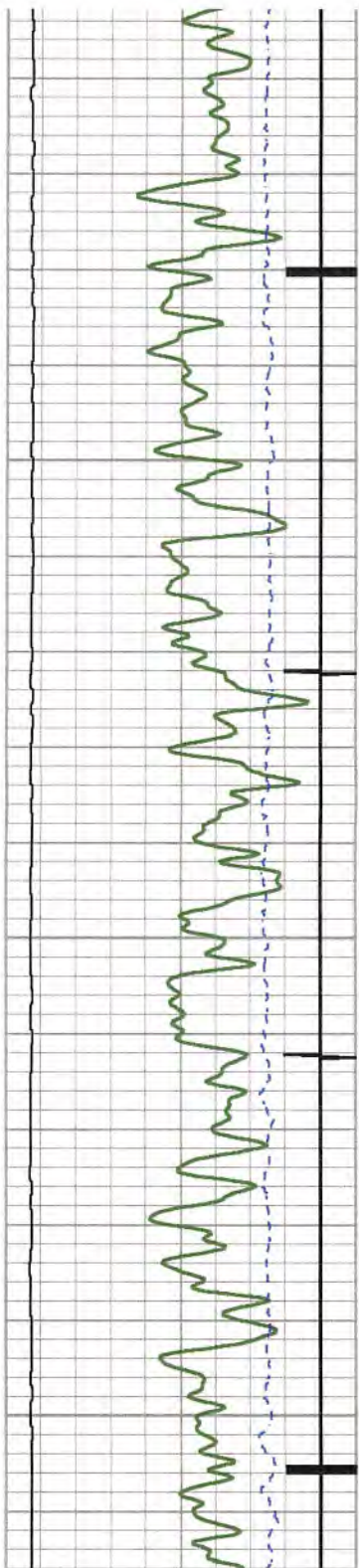


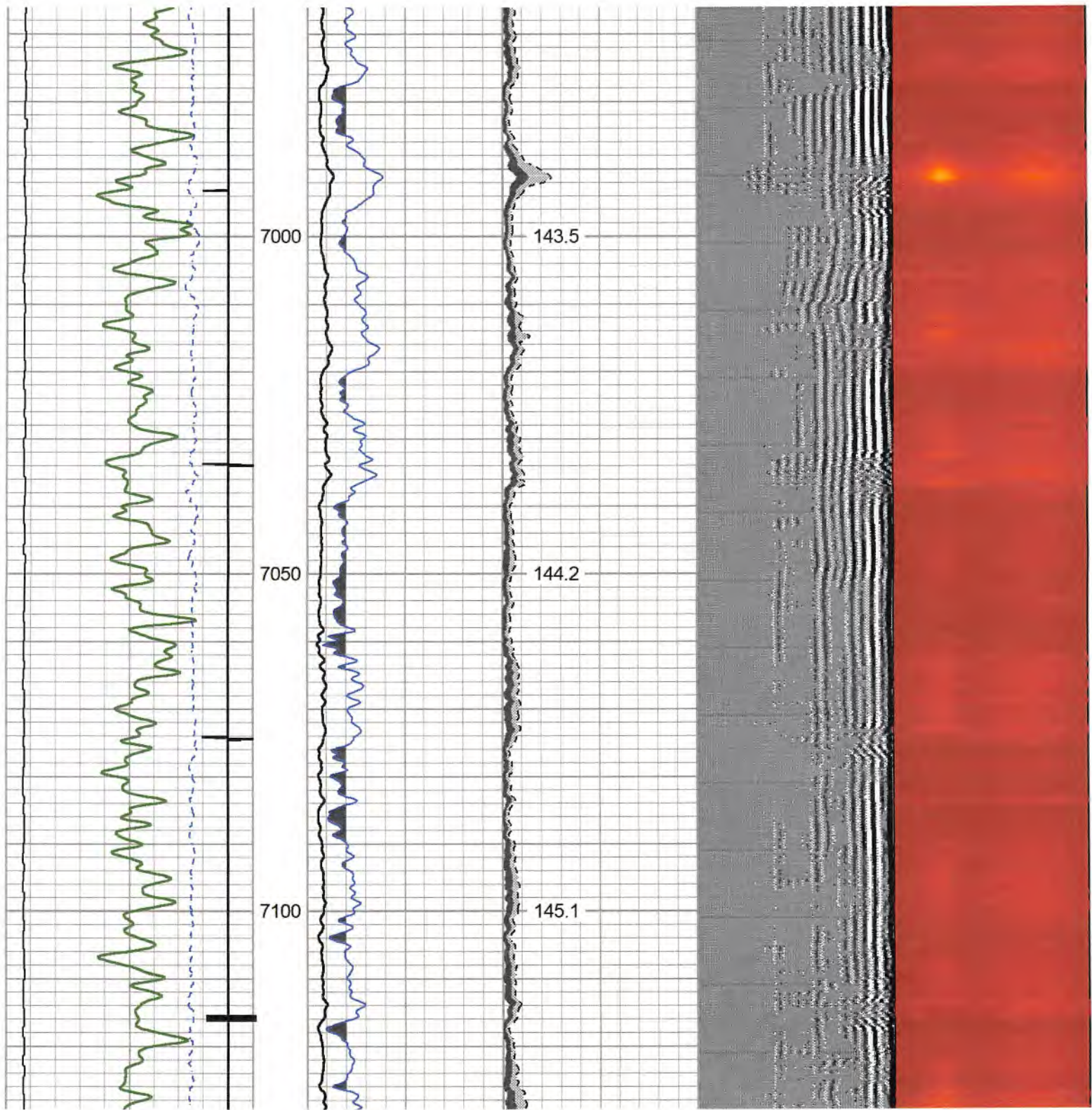


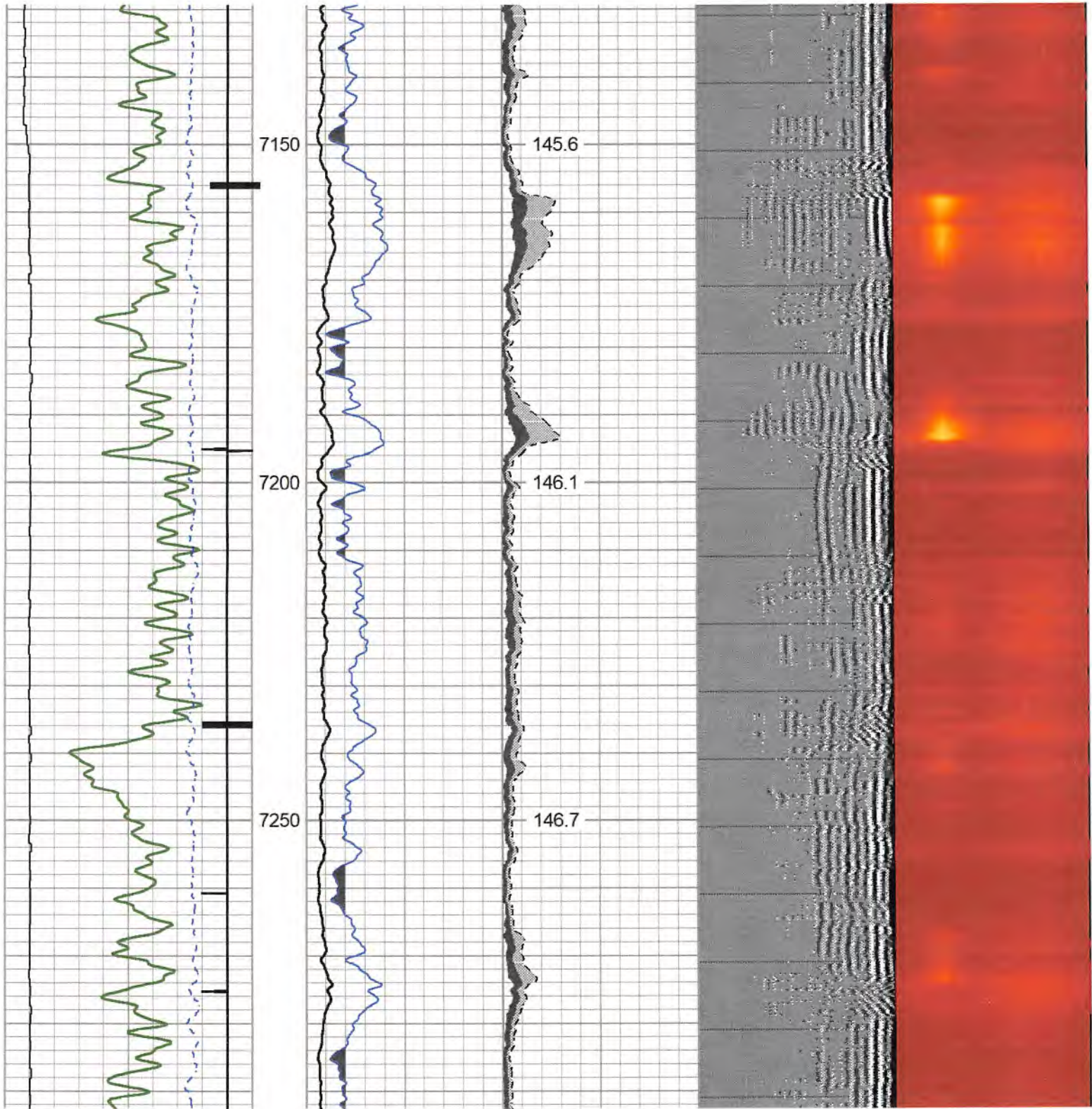


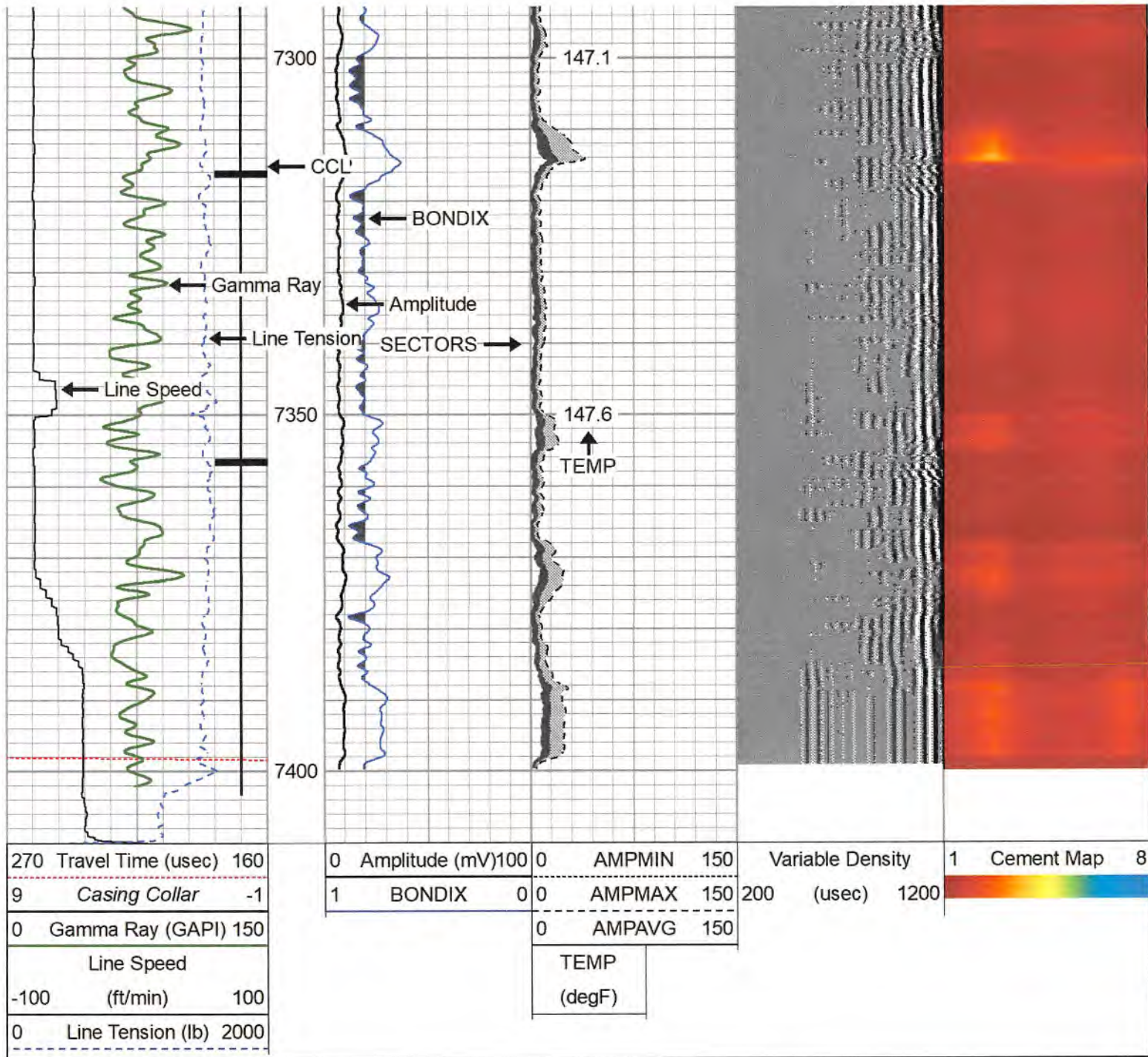








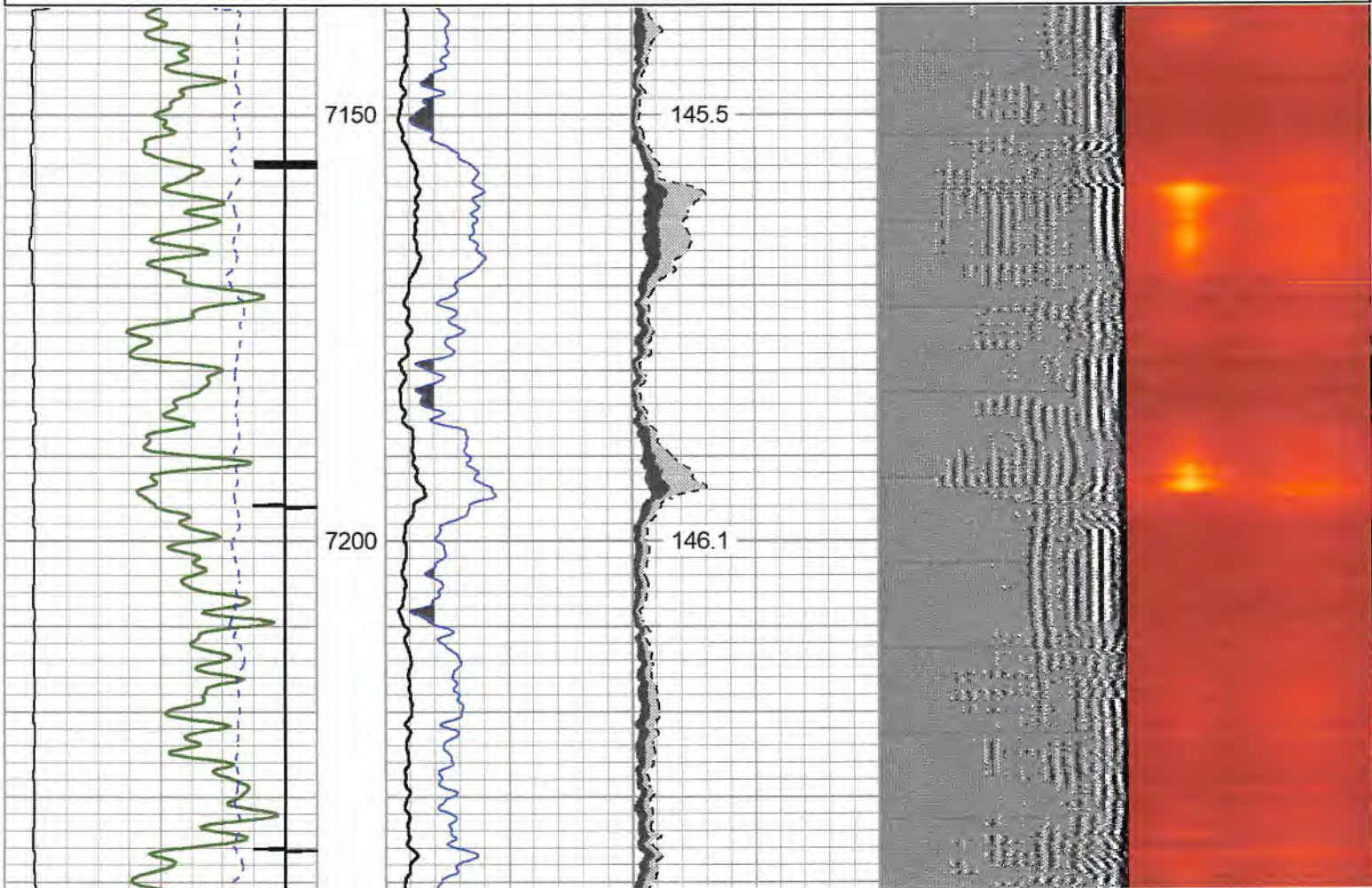


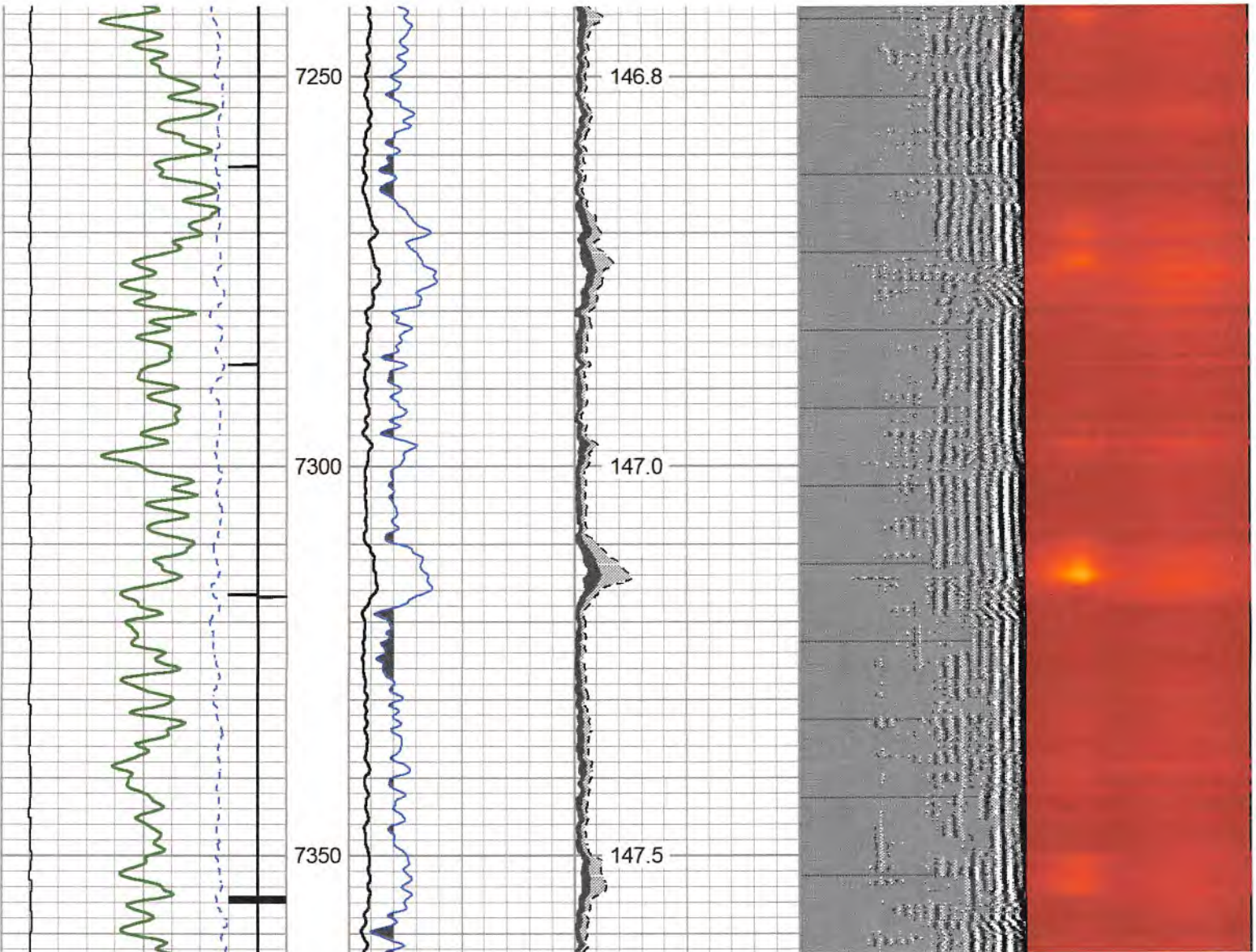


REDEAT DASS_1500 DSI

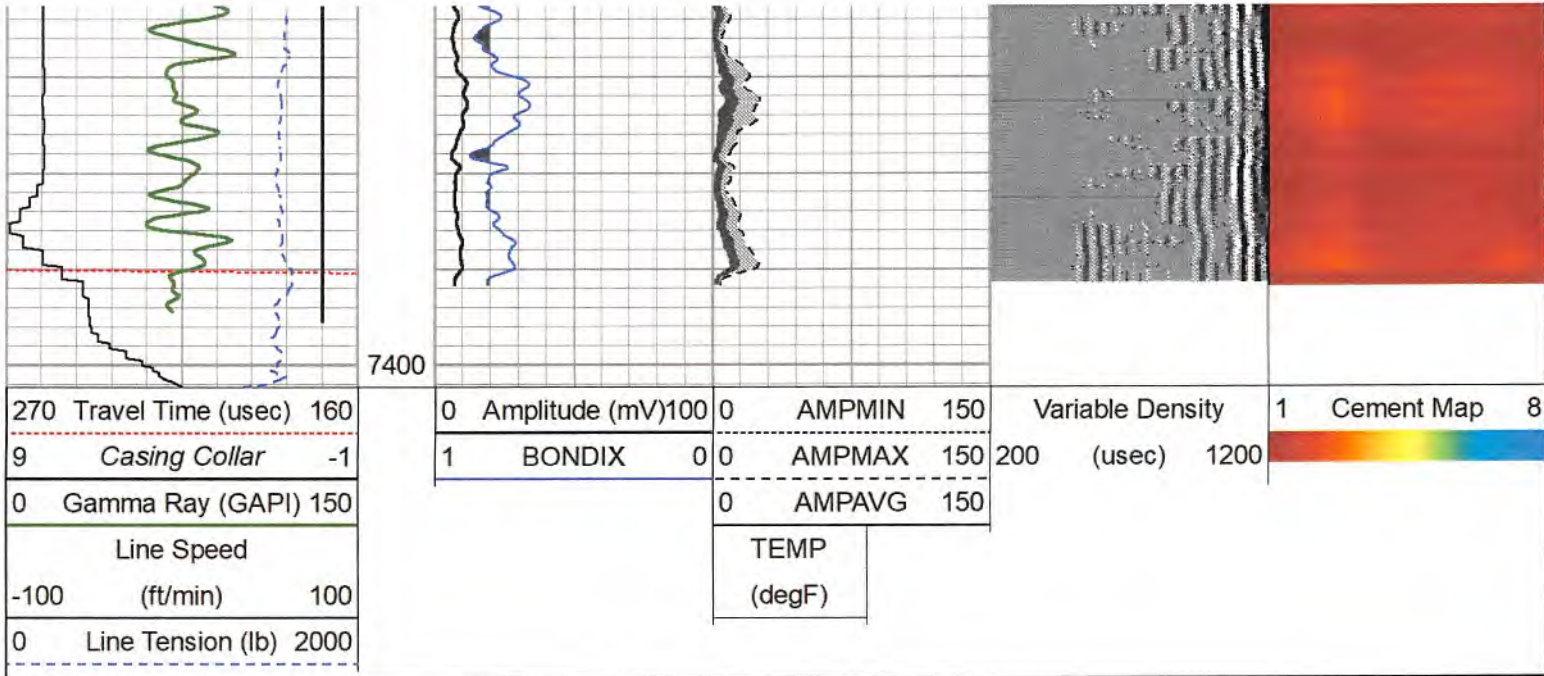
Database File antero-glamdring 2h-12-3-21.db
 Dataset Pathname GLAMDRING_2H/RCBL/pass10
 Presentation Format antero rcbl
 Dataset Creation Fri Dec 03 11:43:33 2021
 Charted by Depth in Feet scaled 1:240

270	Travel Time (usec)	160	0	Amplitude (mV)	100	0	AMPMIN	150	Variable Density	1	Cement Map	8
9	Casing Collar	-1	1	BONDIX	0	0	AMPMAX	150	200 (usec)	1200		
0	Gamma Ray (GAPI)	150	0	AMPAVG	150							
Line Speed			TEMP									
-100	(ft/min)	100	(degF)									
0	Line Tension (lb)	2000										





RECEIVED
Office of Oil and Gas
MAR 03 2023
WV Department of
Environmental Protection



Calibration Report

Database File antero-glamdring 2h-12-3-21.db
 Dataset Pathname GLAMDRING_2H/RCBL/pass12
 Dataset Creation Fri Dec 03 11:49:25 2021

Gamma Ray Calibration Report

Serial Number: FW1211-86
 Tool Model: Probe
 Performed: Mon Nov 15 11:21:05 2021
 Calibrator Value: 1.0 GAPI
 Background Reading: 0.0 cps

Calibrator Reading: 1.0 cps
 Sensitivity: 0.7000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 2.75"
 Tool Model: Probe275T
 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 826.783 ft

Master Calibration, performed Fri Dec 03 09:44:38 2021:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.015	0.288	4.000	70.000	218.083	7.224
CAL	0.490	0.493				
5'	-0.014	0.281	4.000	70.000	223.695	7.045
SUM						
S1	-0.004	0.251	0.000	100.000	393.203	1.402
S2	-0.012	0.277	0.000	100.000	345.639	4.164
S3	-0.014	0.285	0.000	100.000	334.149	4.654
S4	-0.014	0.307	0.000	100.000	311.471	4.224
S5	-0.013	0.309	0.000	100.000	310.045	4.057
S6	-0.014	0.308	0.000	100.000	310.856	4.277
S7	-0.014	0.291	0.000	100.000	328.205	4.623
S8	-0.014	0.286	0.000	100.000	334.136	4.585

Internal Reference Calibration, performed Wed Nov 23 14:17:52 2011:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.490	0.493	1.000	0.000

Air Zero Calibration, performed Fri Dec 03 08:57:17 2021:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						

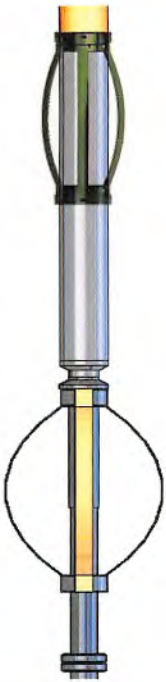
WV Department of Environmental Protection

RECEIVED
 Office of Oil and Gas
 MAR 09 2023

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	16.99		CHD-Titan Standard 1 7/16" Cable Head	1.02	1.44	1.00
			Centralizer-2.75_Overbody	1.67	3.12	5.00
Temp	14.14		RBT-Probe275T (2.75") Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	11.91					
WVFS7	11.91					
WVFS6	11.91					
WVFS5	11.91					
WVFS4	11.91					
WVFS3	11.91					
WVFS2	11.91					
WVFS1	11.91					
WV3FT	11.91					
WV5FT	10.91					
WVFCAL HEADVOLT	7.66 7.66					
CCL	6.75					

RECEIVED
 Office of Oil and Gas
 MAR 03 2023
 WV Department of
 Environmental Protection

GR	5.42		Centralizer-2.75_Overbody	1.67	3.12	5.00
			GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
			CENT-Probe275 2.75" Centralizer	2.88	2.75	20.00
Dataset: antero-glamdring 2h-12-3-21.db: field/GLAMDRING_2H/RCBL/pass12 Total length: 18.07 ft Total weight: 178.00 lb O.D.: 3.12 in						

	Company	ANTERO RESOURCES
	Well	MARGERY-GLAMDRING 2H
	Field	RABBIT EARS
	County	TYLER
	State	WV

RECEIVED
 Office of Oil and Gas
 MAR 03 2023
 WV Department of
 Environmental Protection