

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

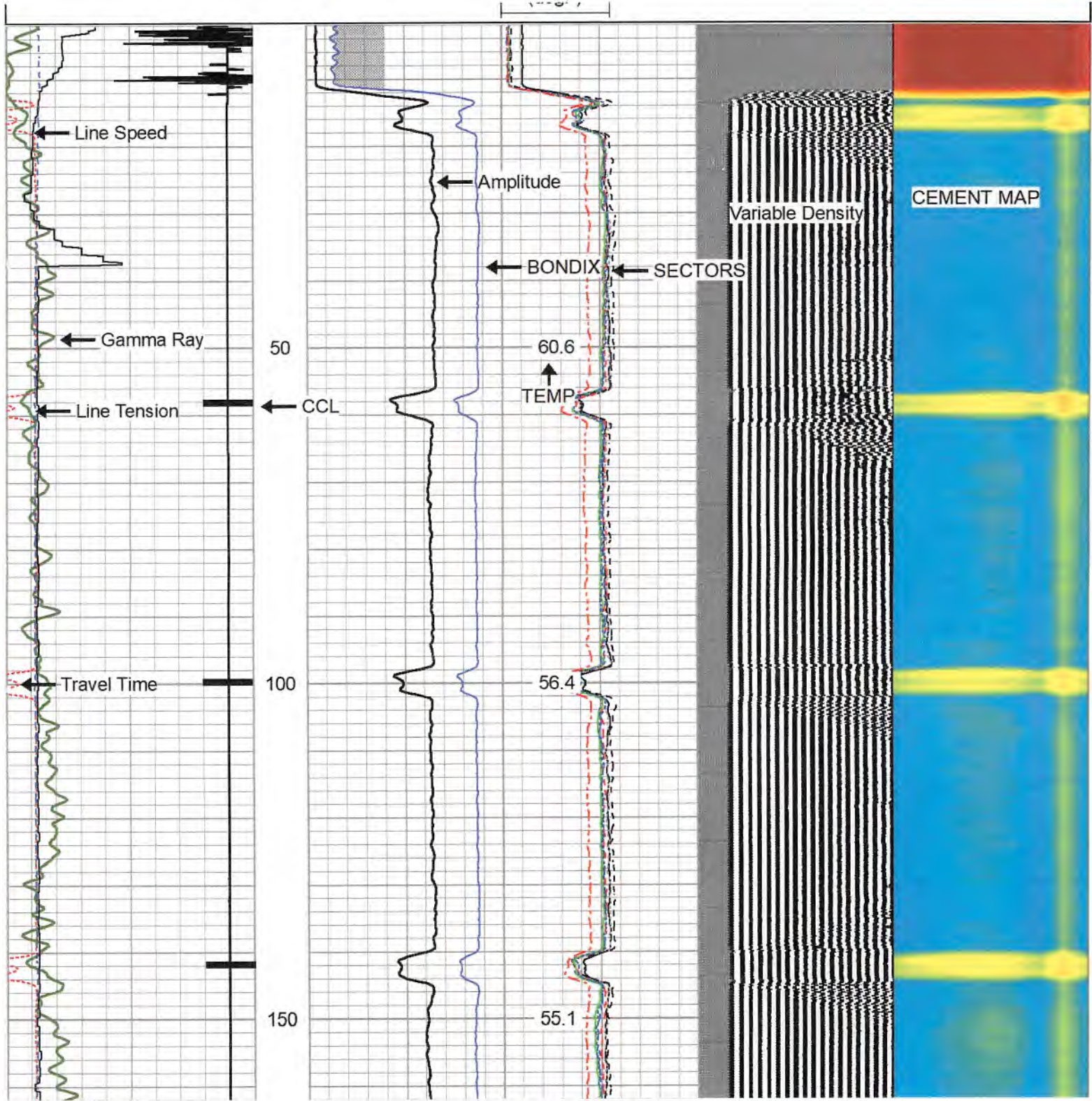
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 DEPTH SHIFT -16'
 MARKER JOINT 6116-6126
 LOG RAN OFF WELLTECH TRACTOR
 THANK YOU FOR USING NINE ENERGY

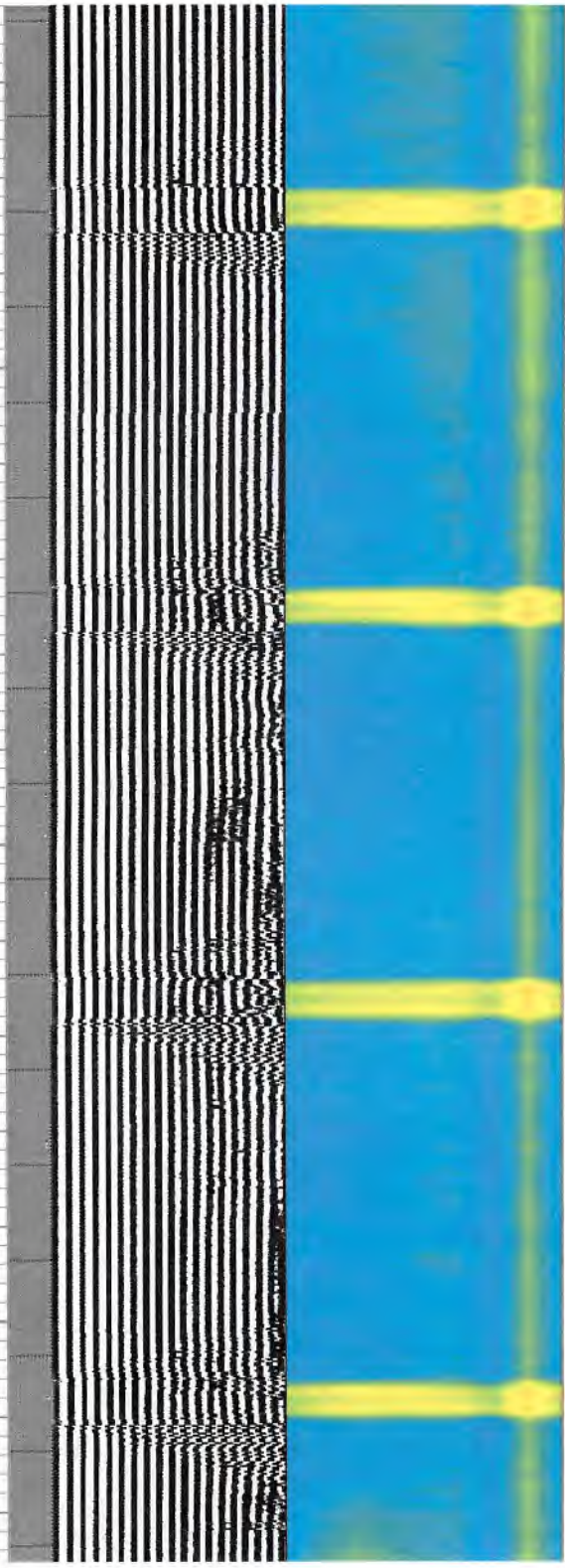
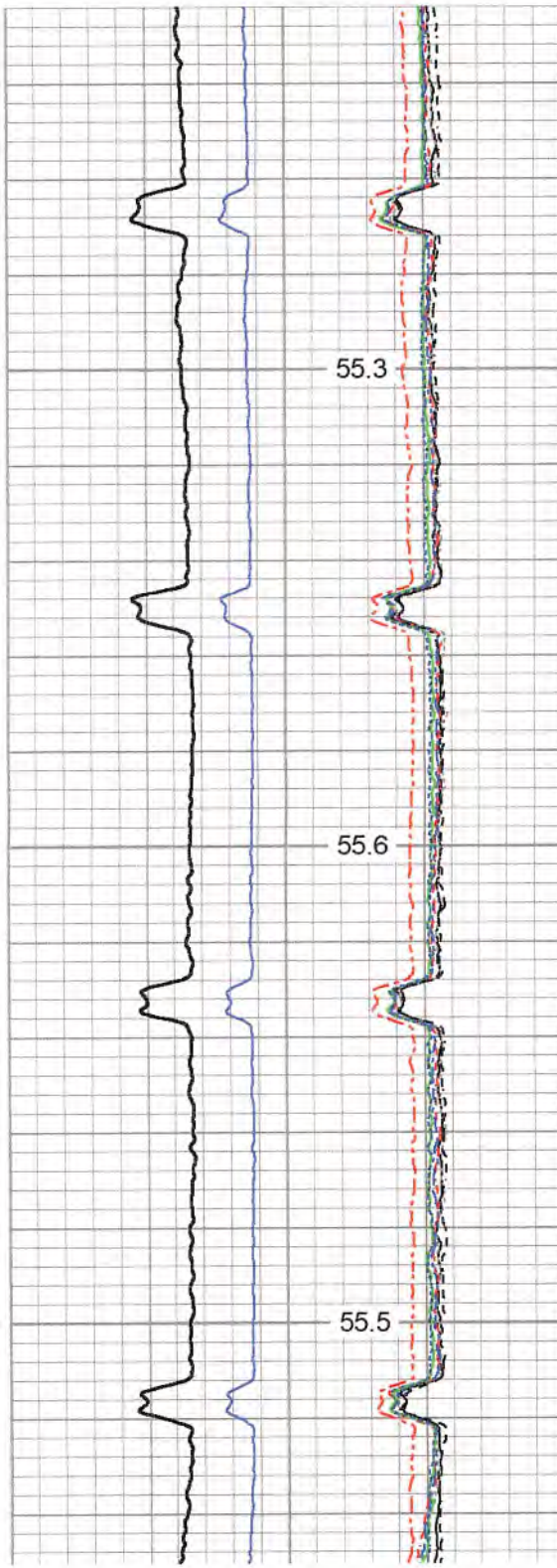
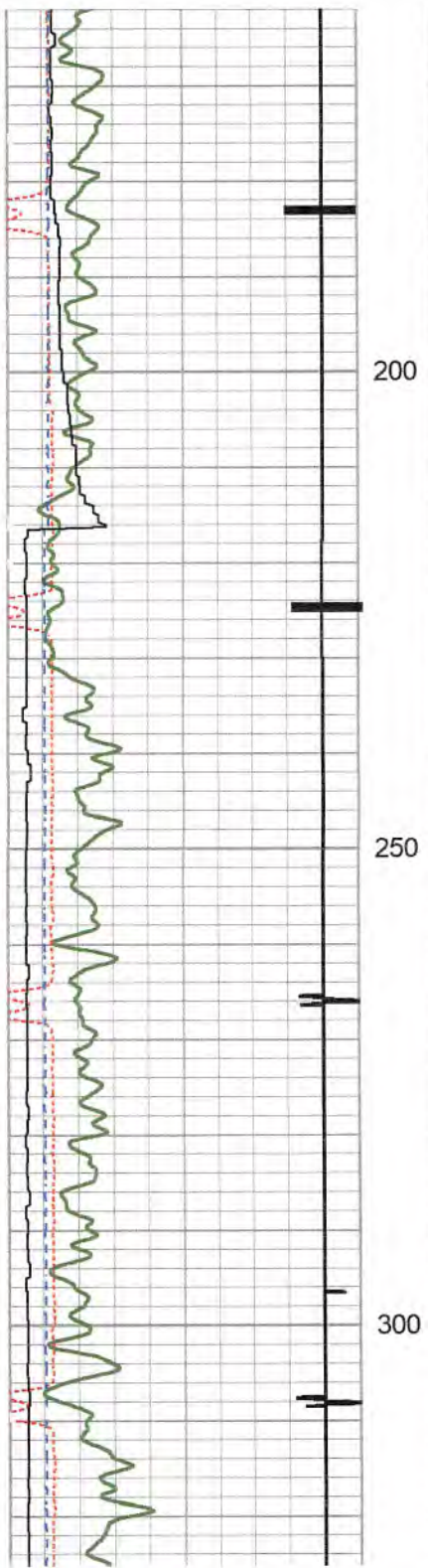


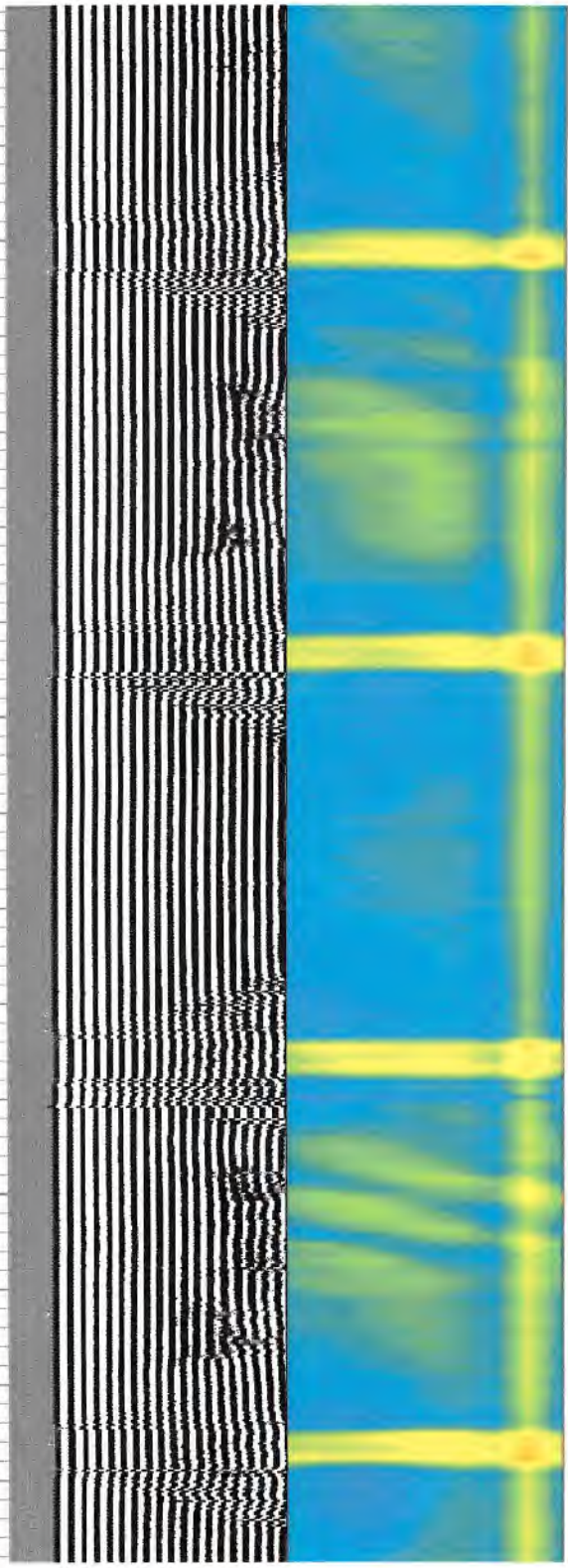
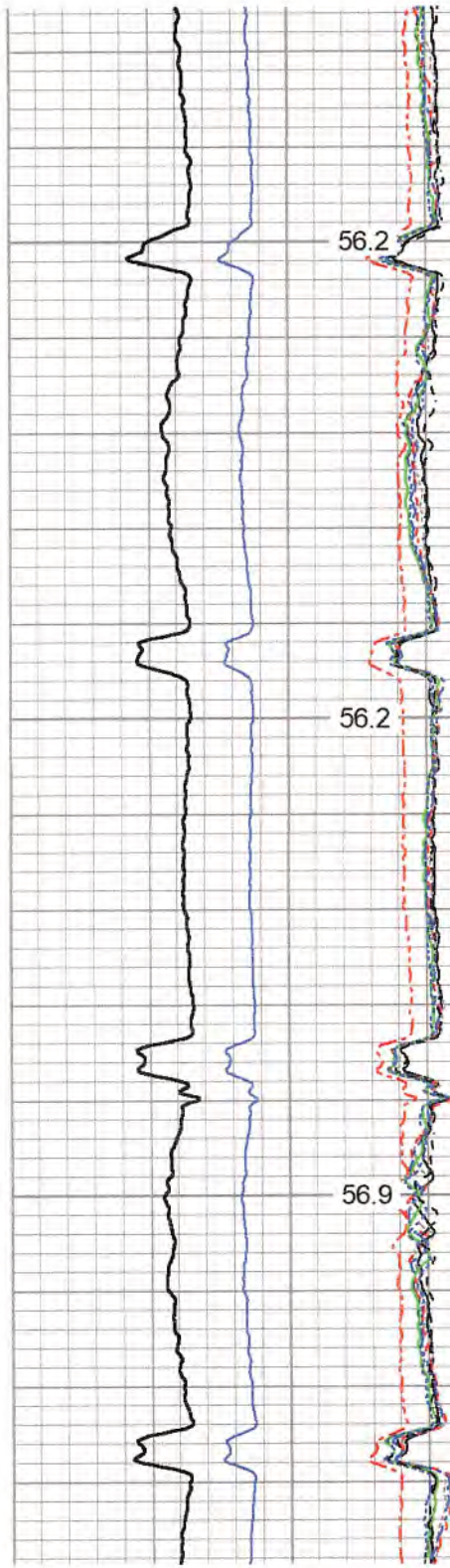
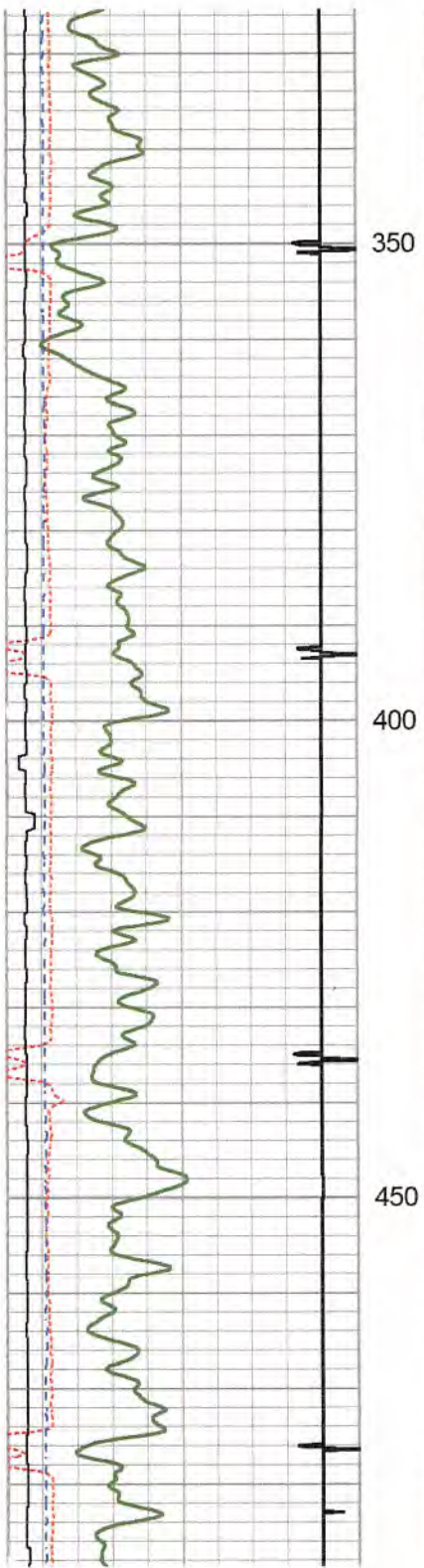
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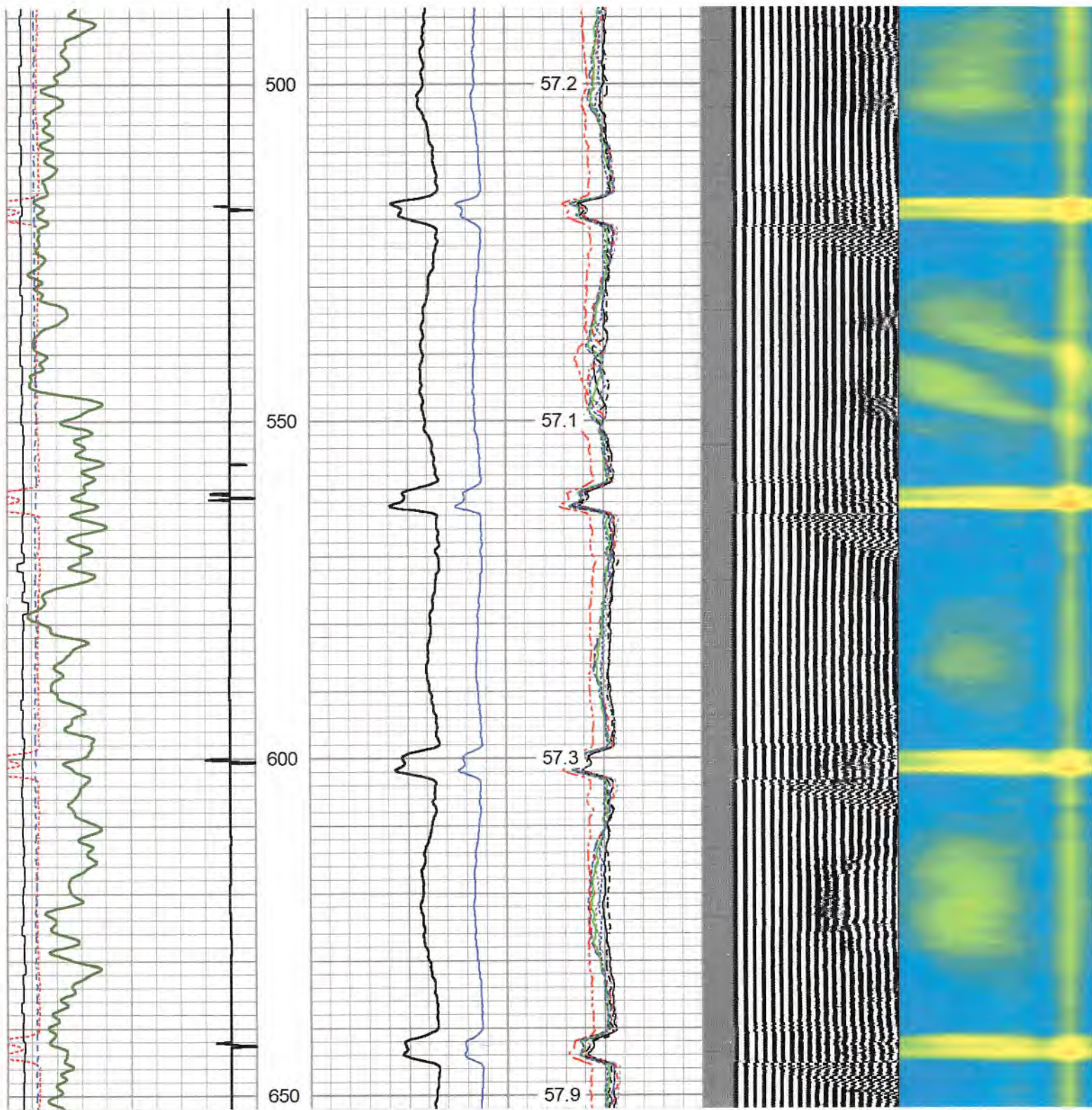
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 Dataset Pathname calhoun_1h/rcbl/pass13.1
 Presentation Format rcbl-bond index for antero 1020
 Dataset Creation Sun Jul 24 18:28:55 2022
 Charted by Depth in Feet scaled 1:240

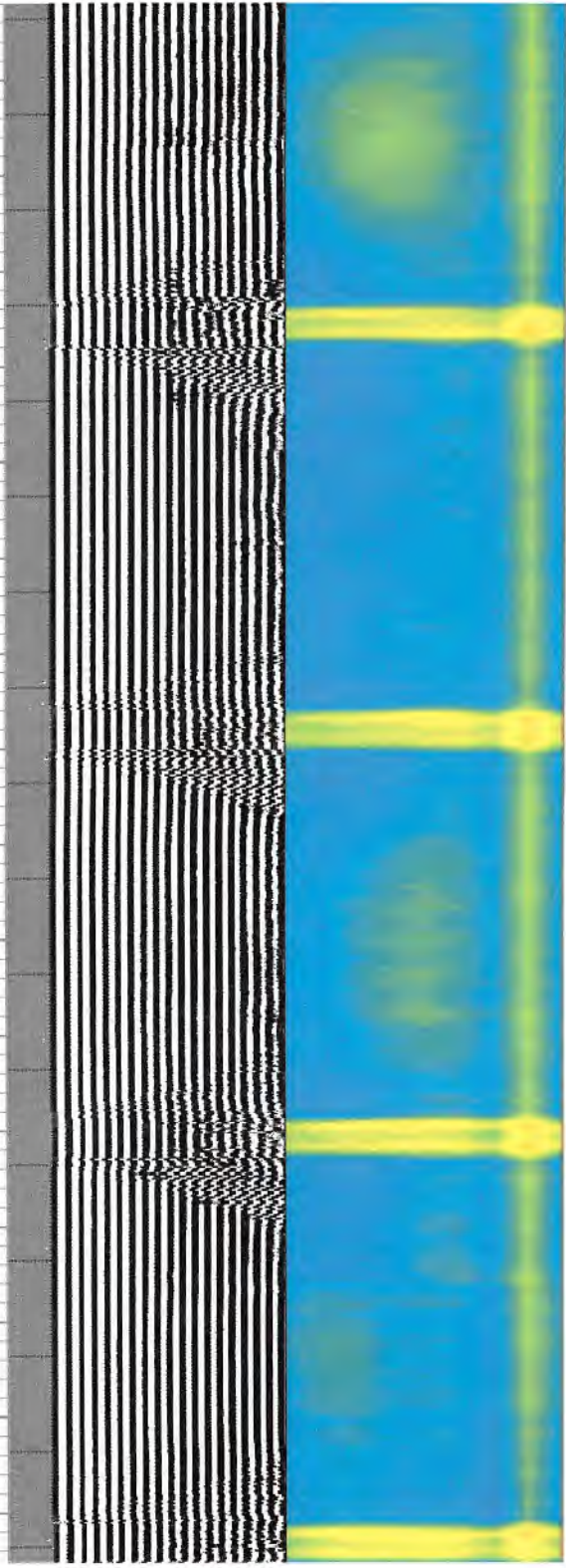
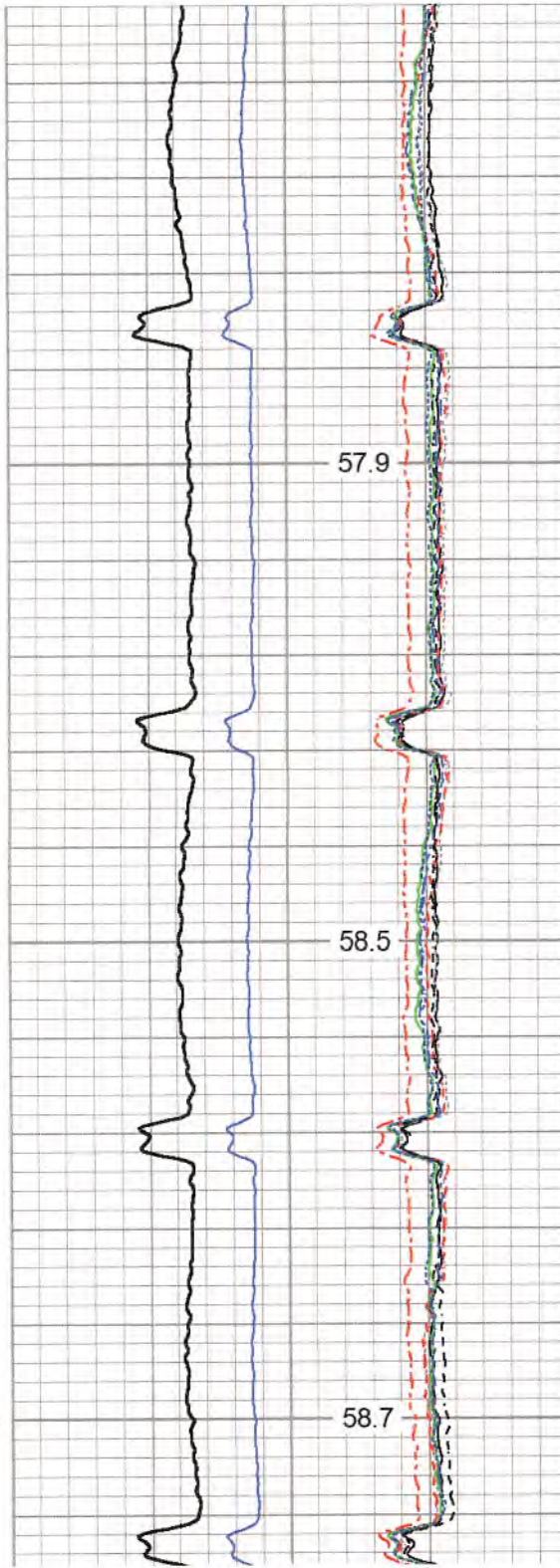
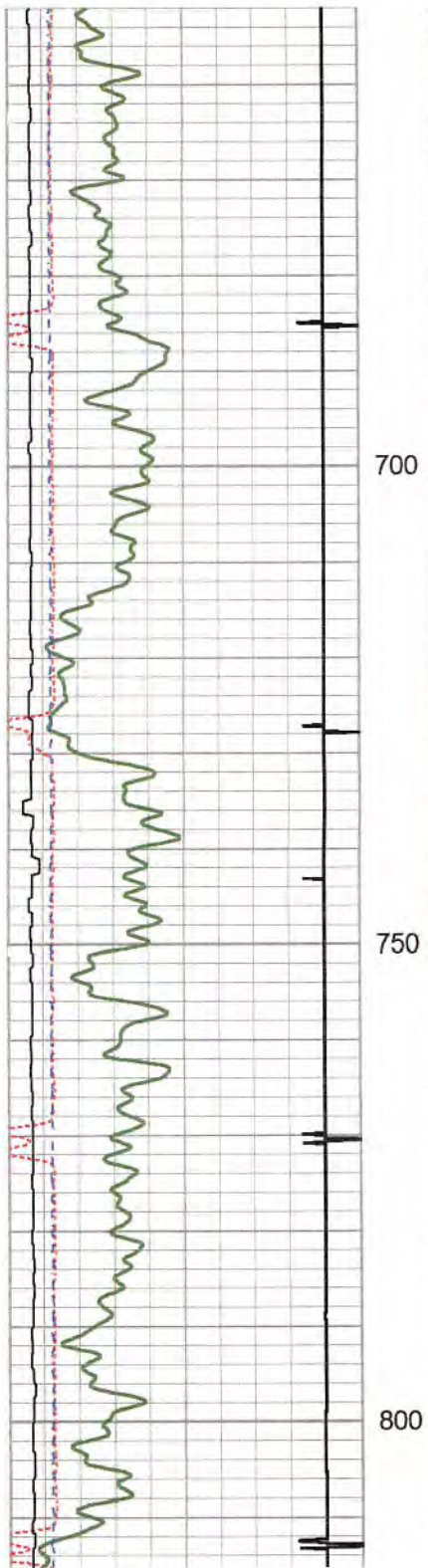
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9	Casing Collar	-1	1	BONDIX	0	-5	Sector 2	150	200 (usec)	1200		
0	Gamma Ray (GAPI)	200				-5	Sector 3	150				
0	Line Tension (lb)	5000				-5	Sector 4	150				
-100	LSPD (ft/min)	100				-5	Sector 5	150				
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				TEMP								
				(degF)								

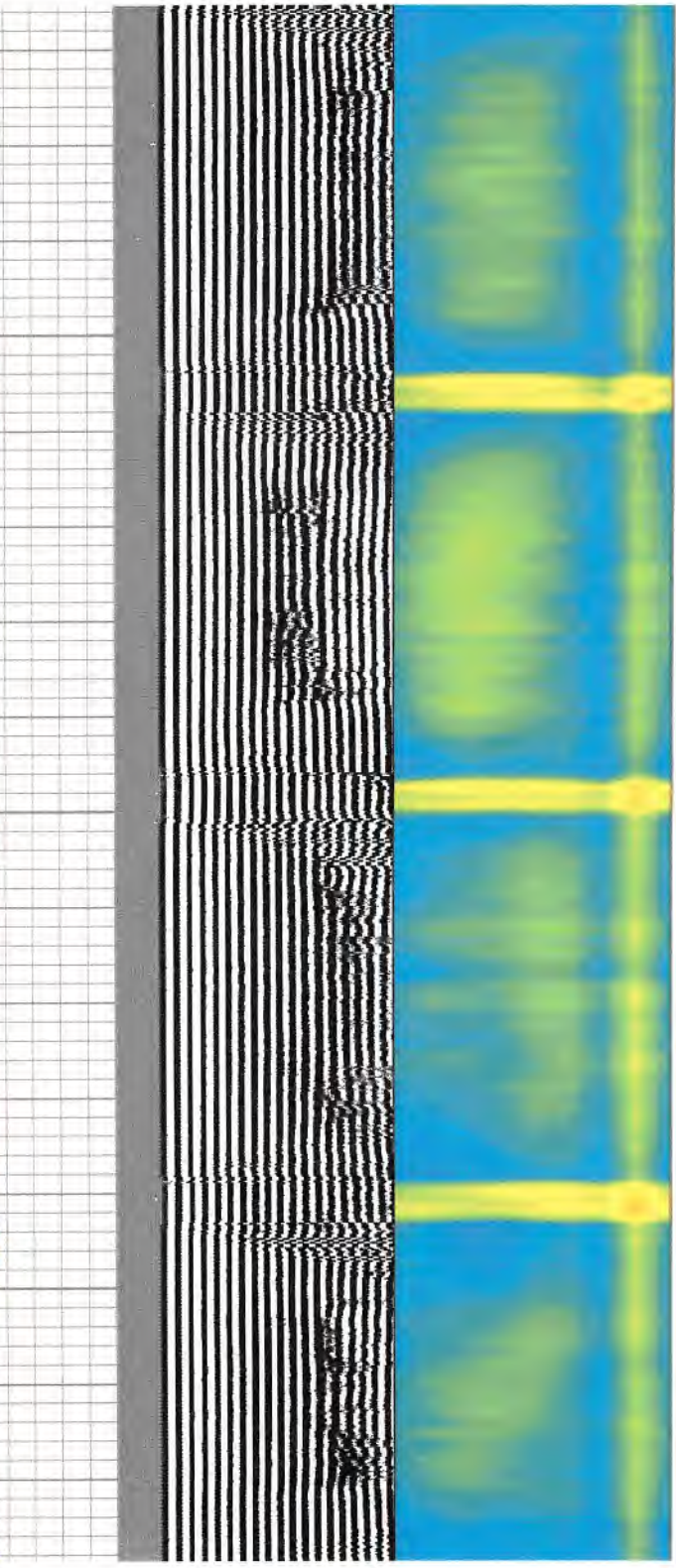
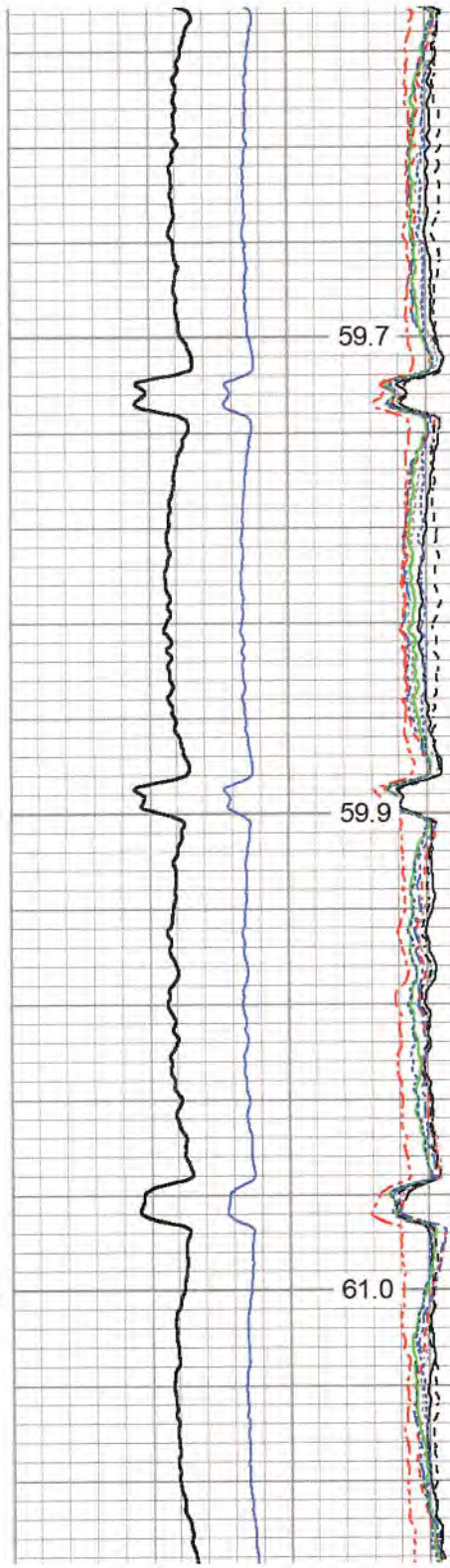
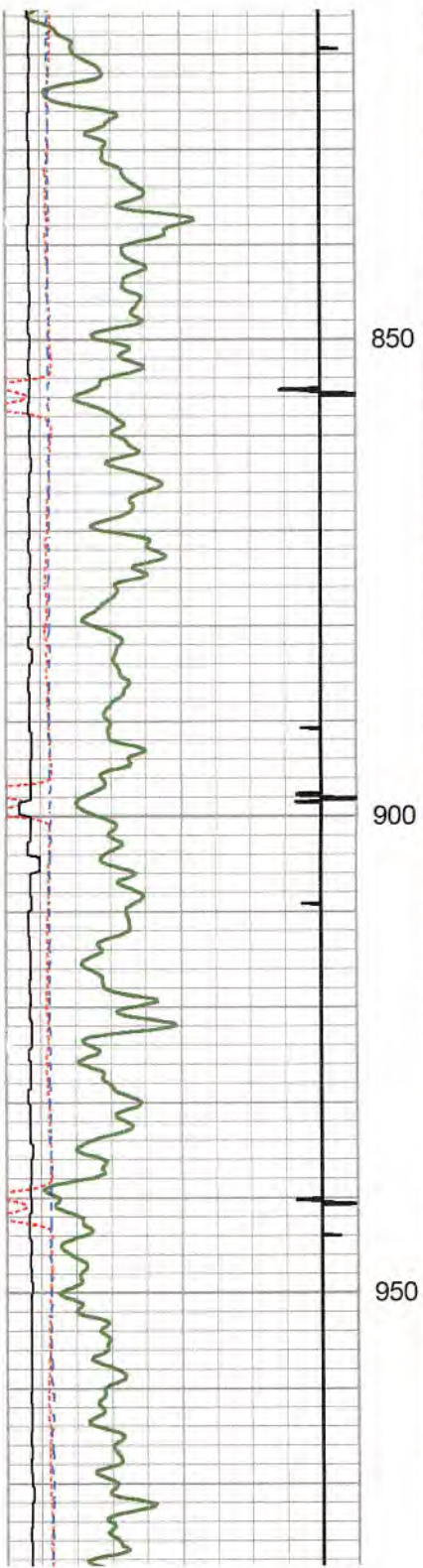


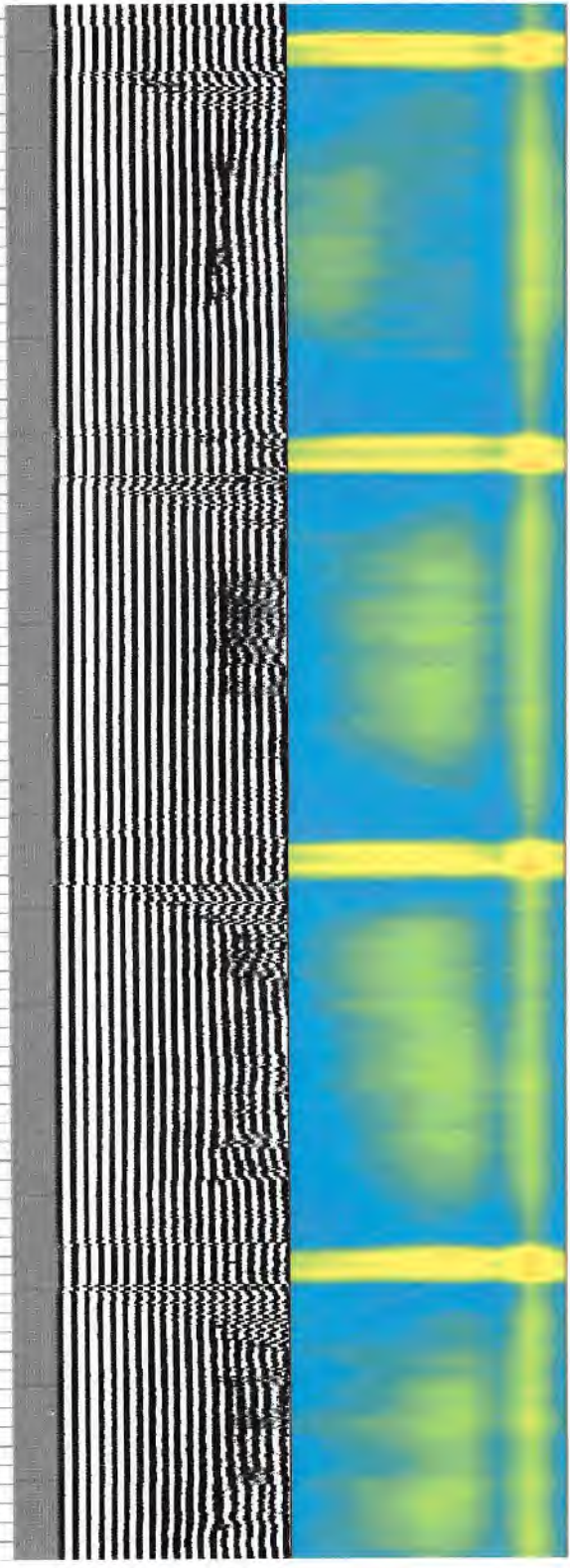
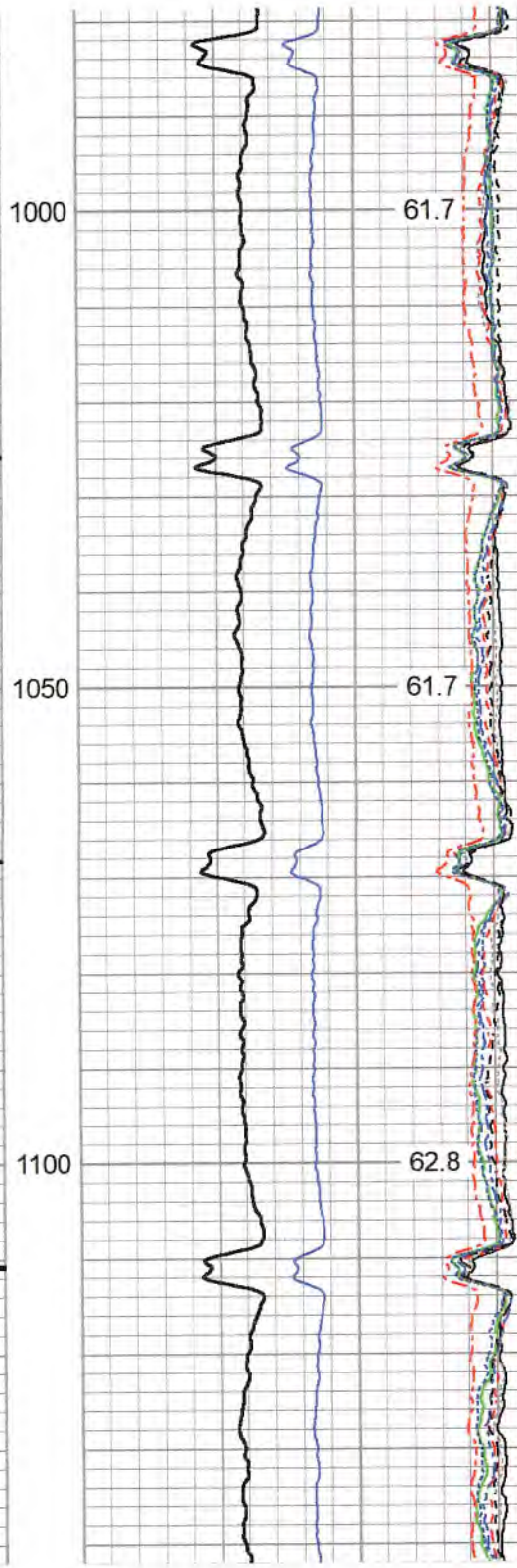
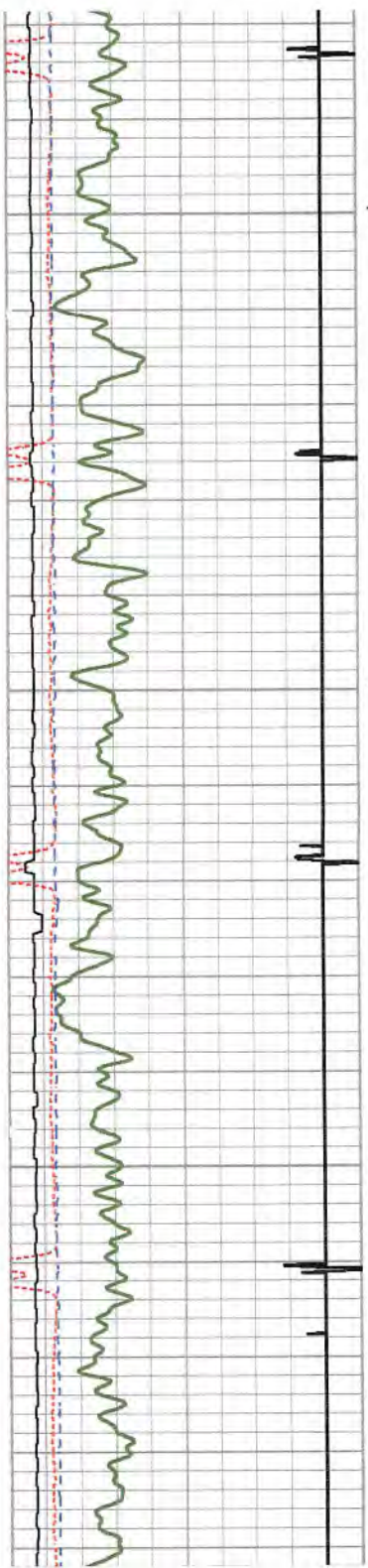


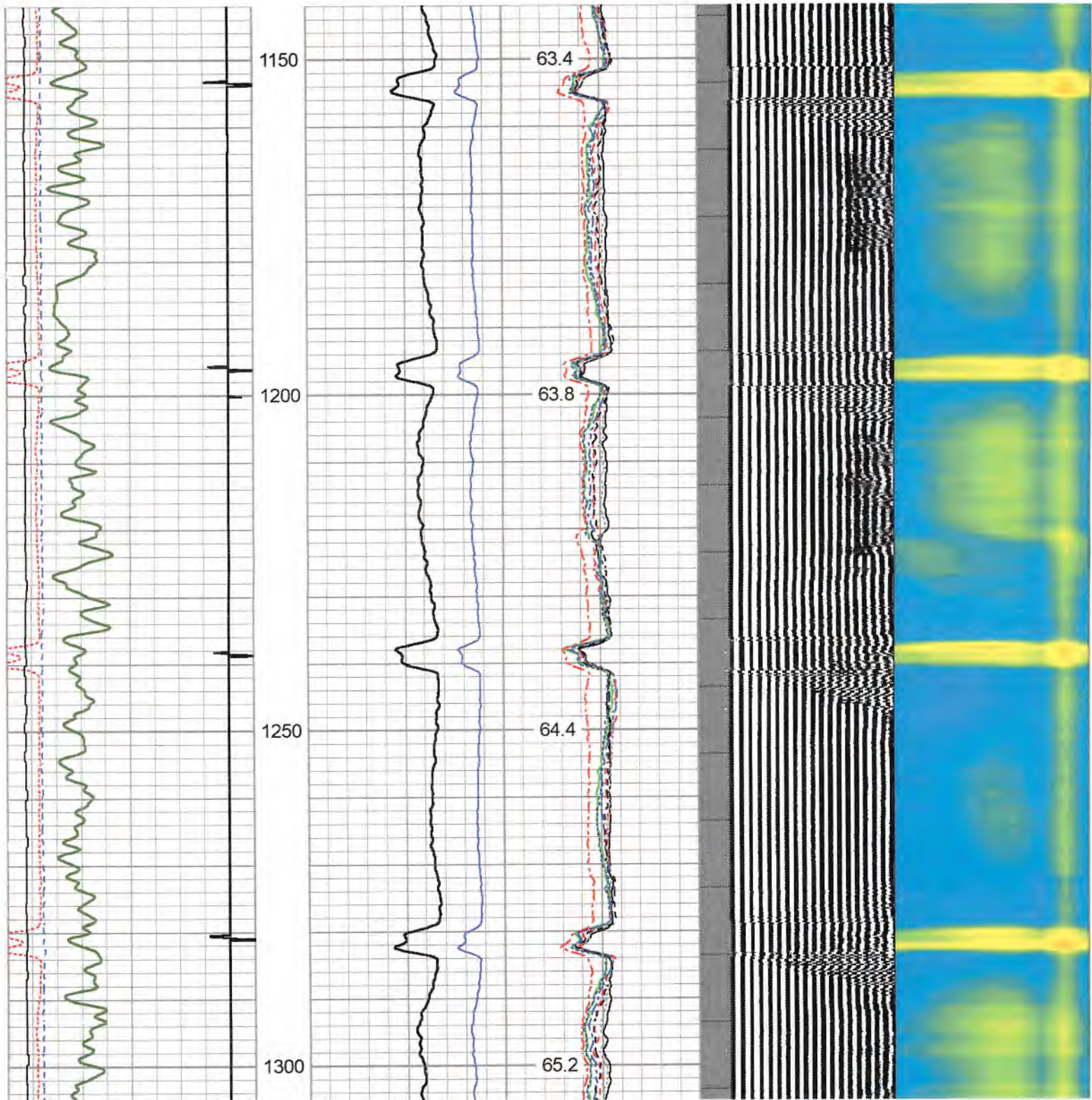


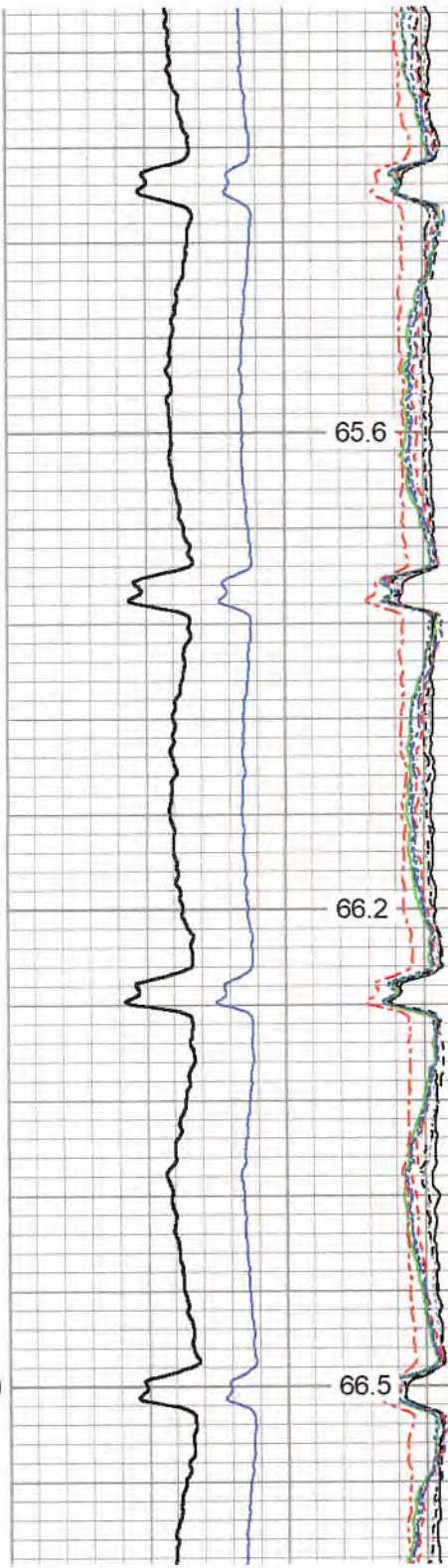
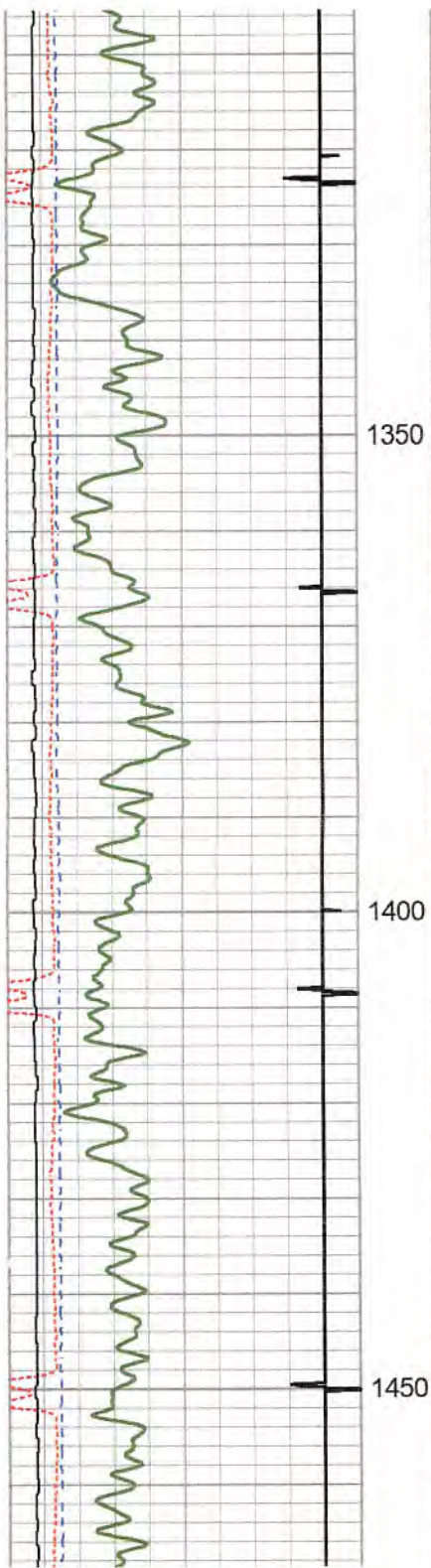








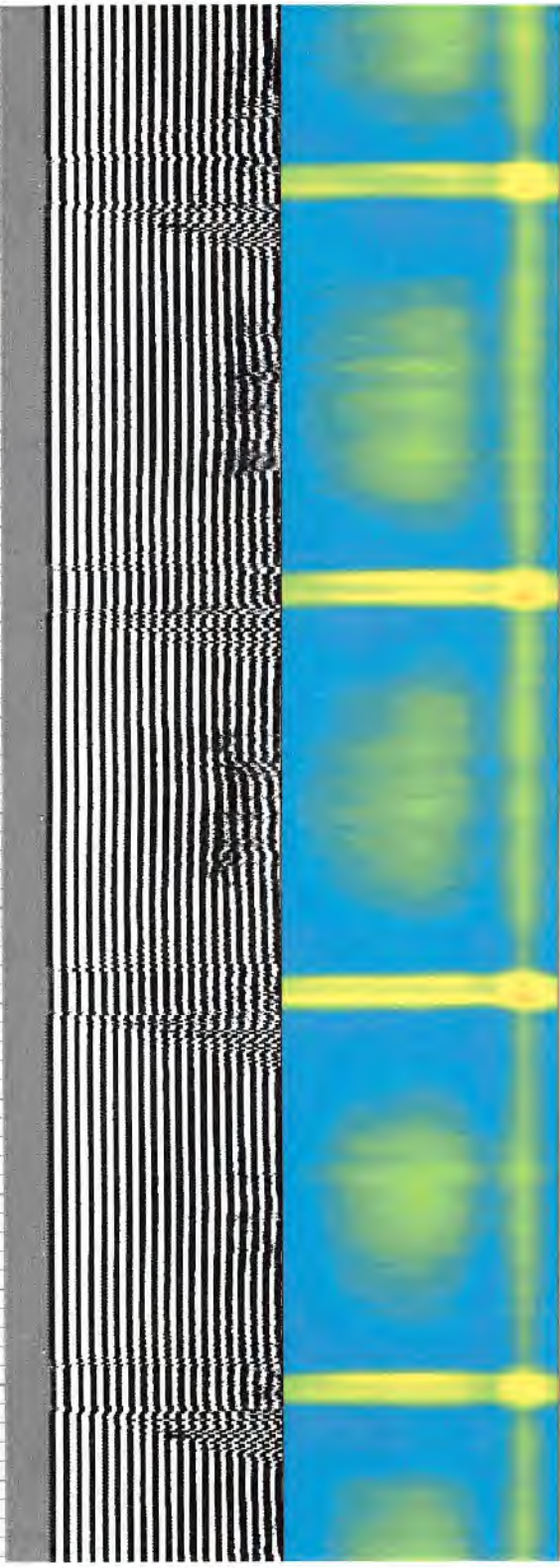


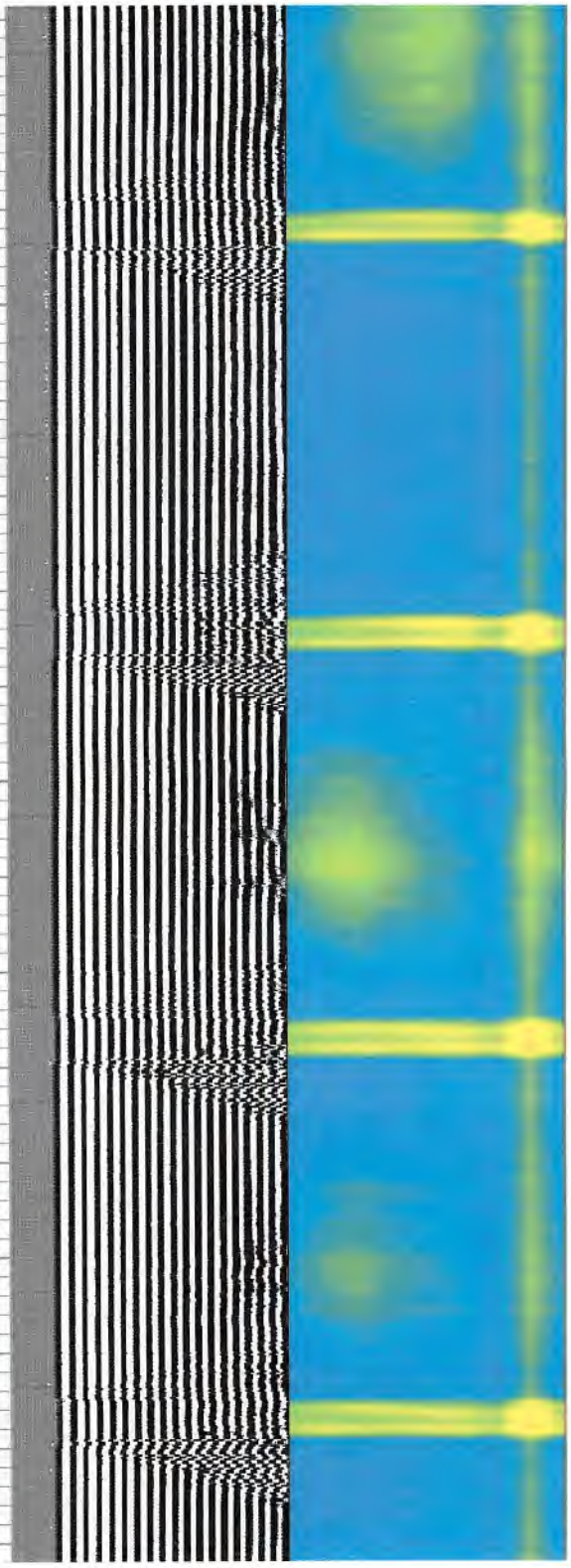
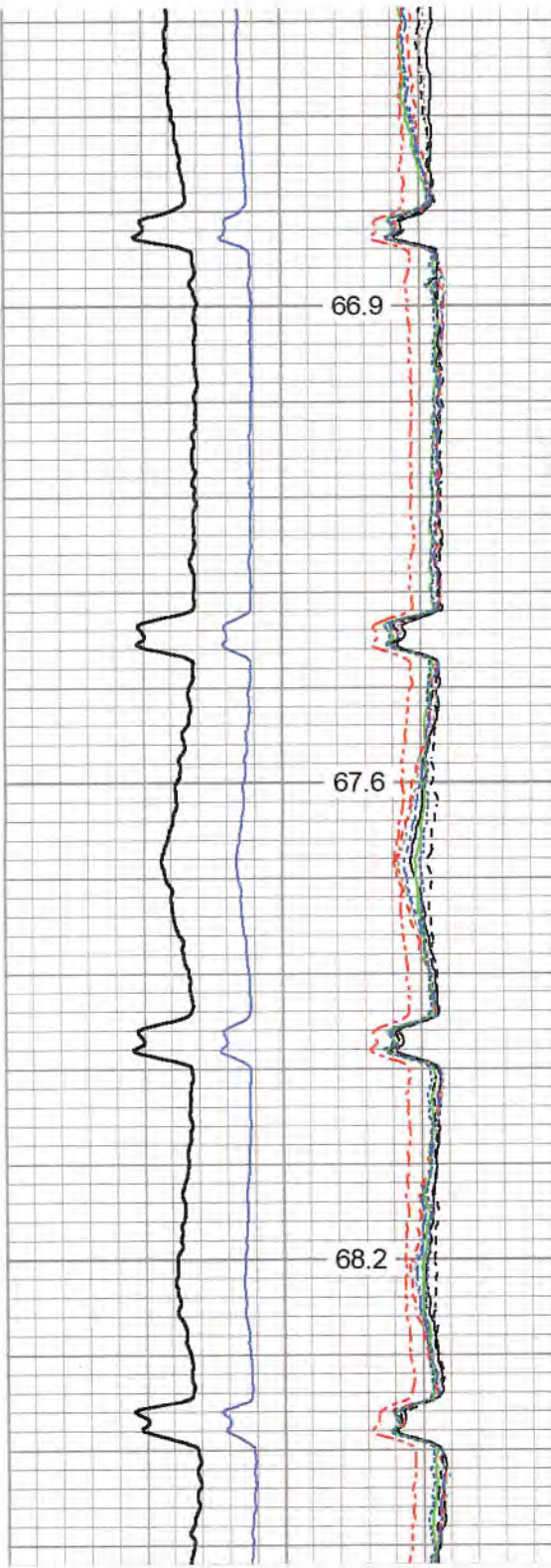
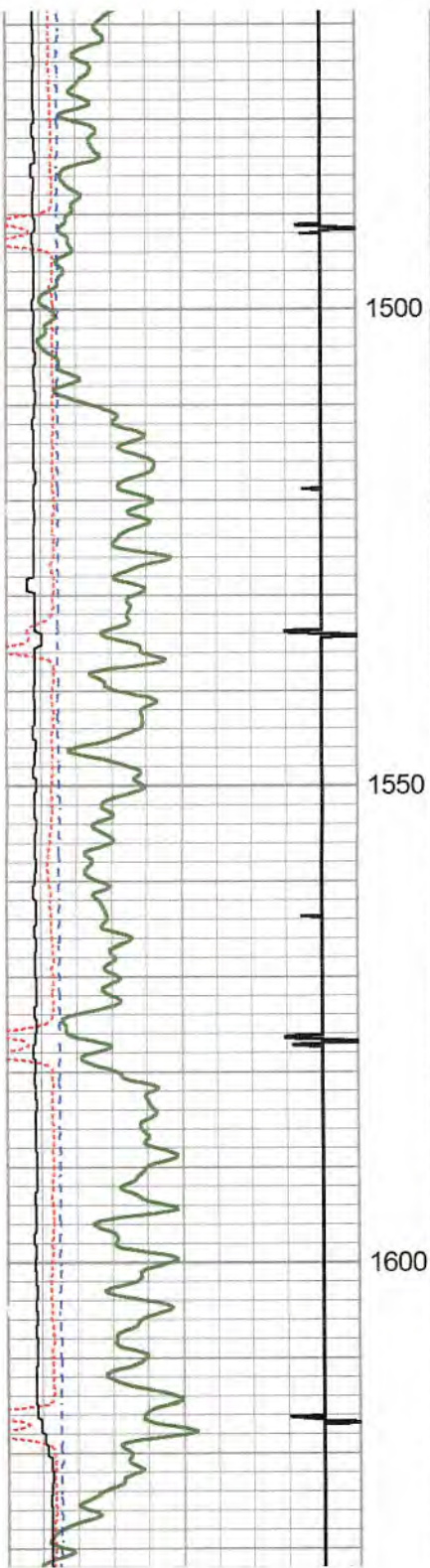


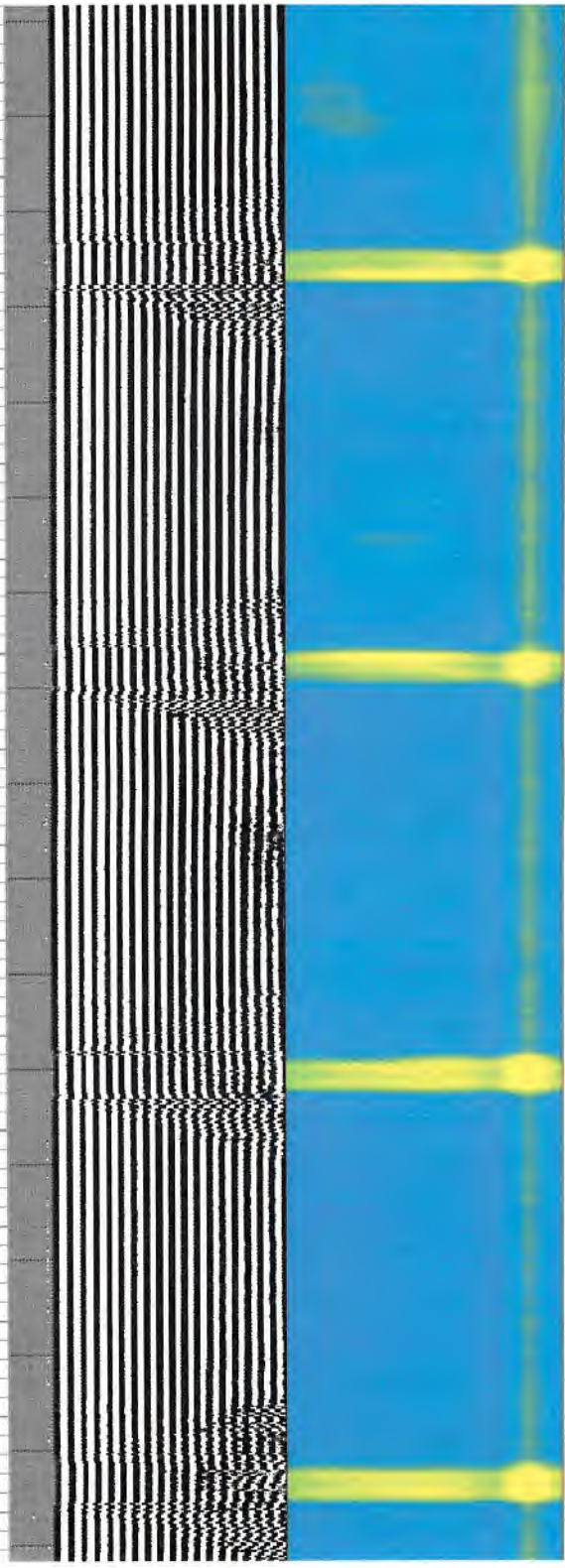
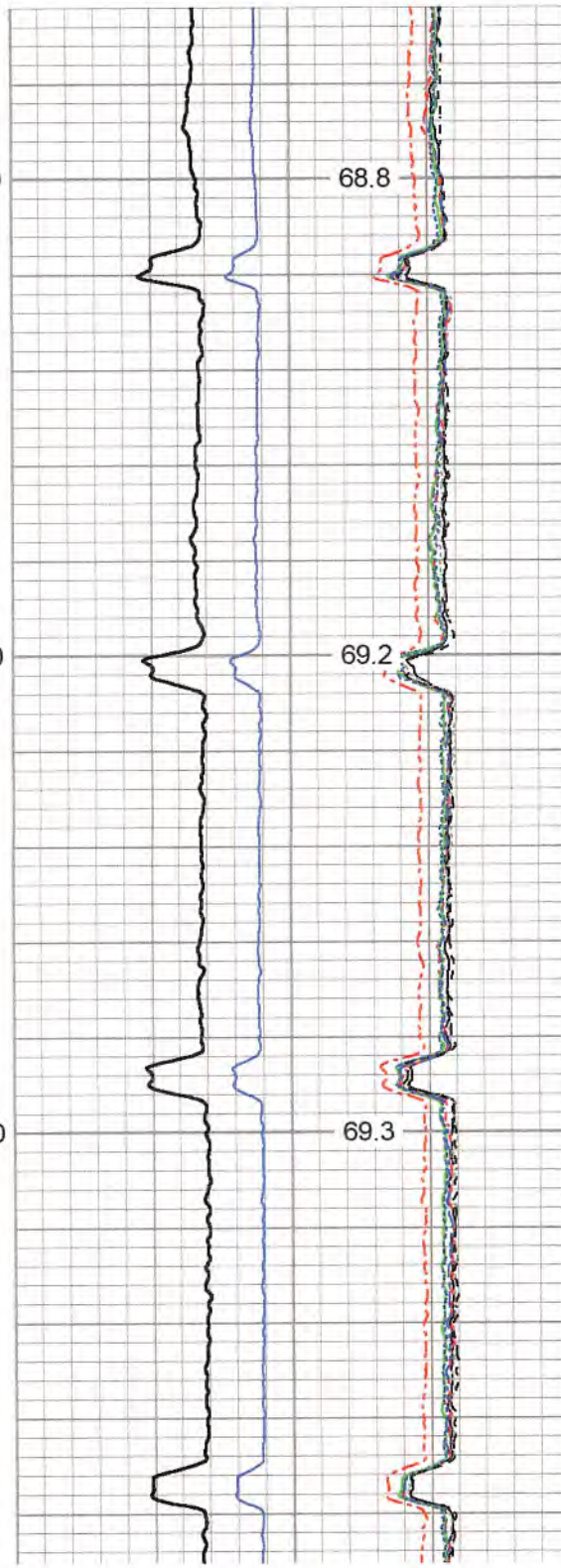
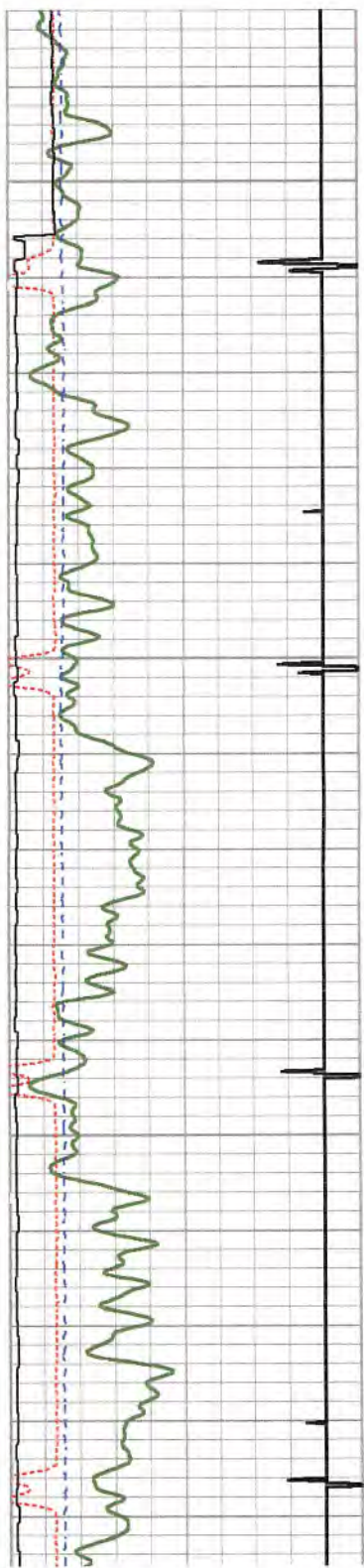
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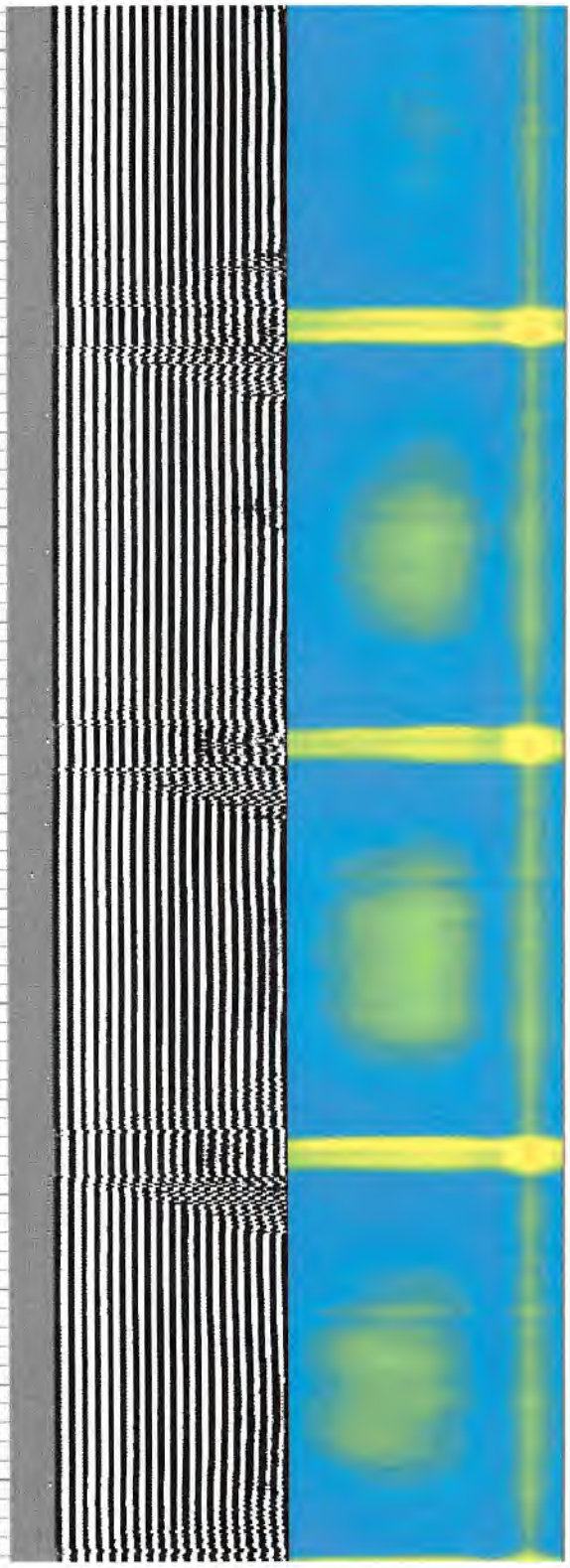
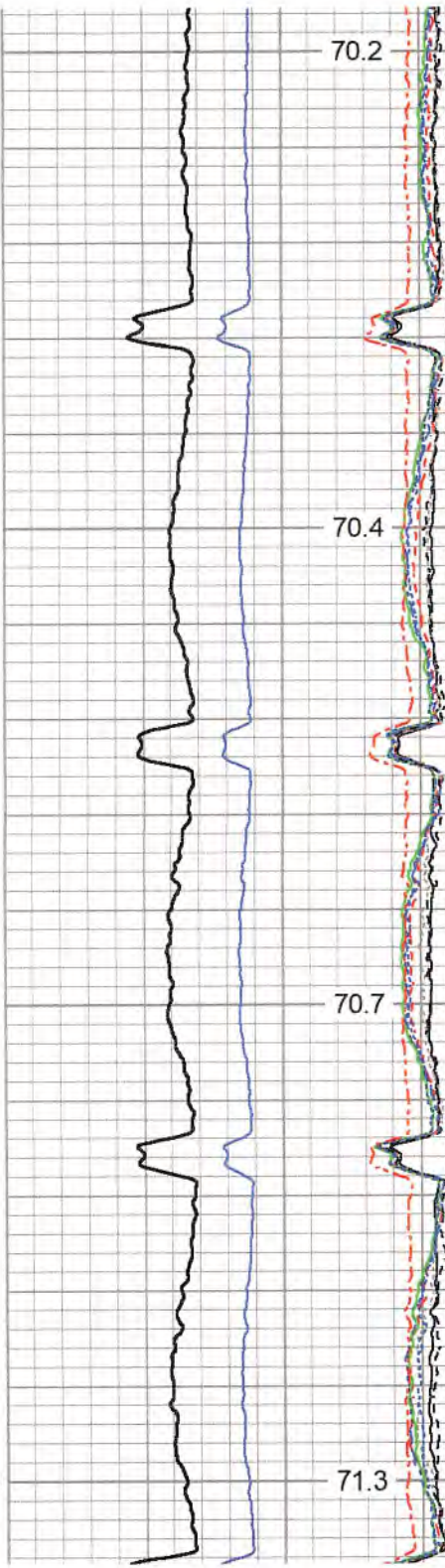
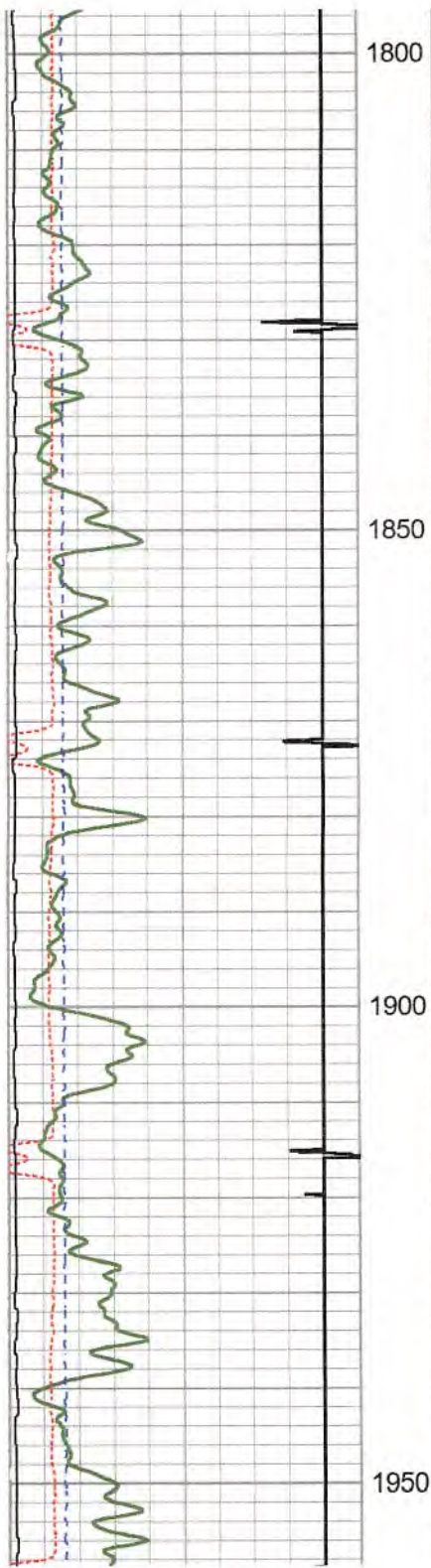
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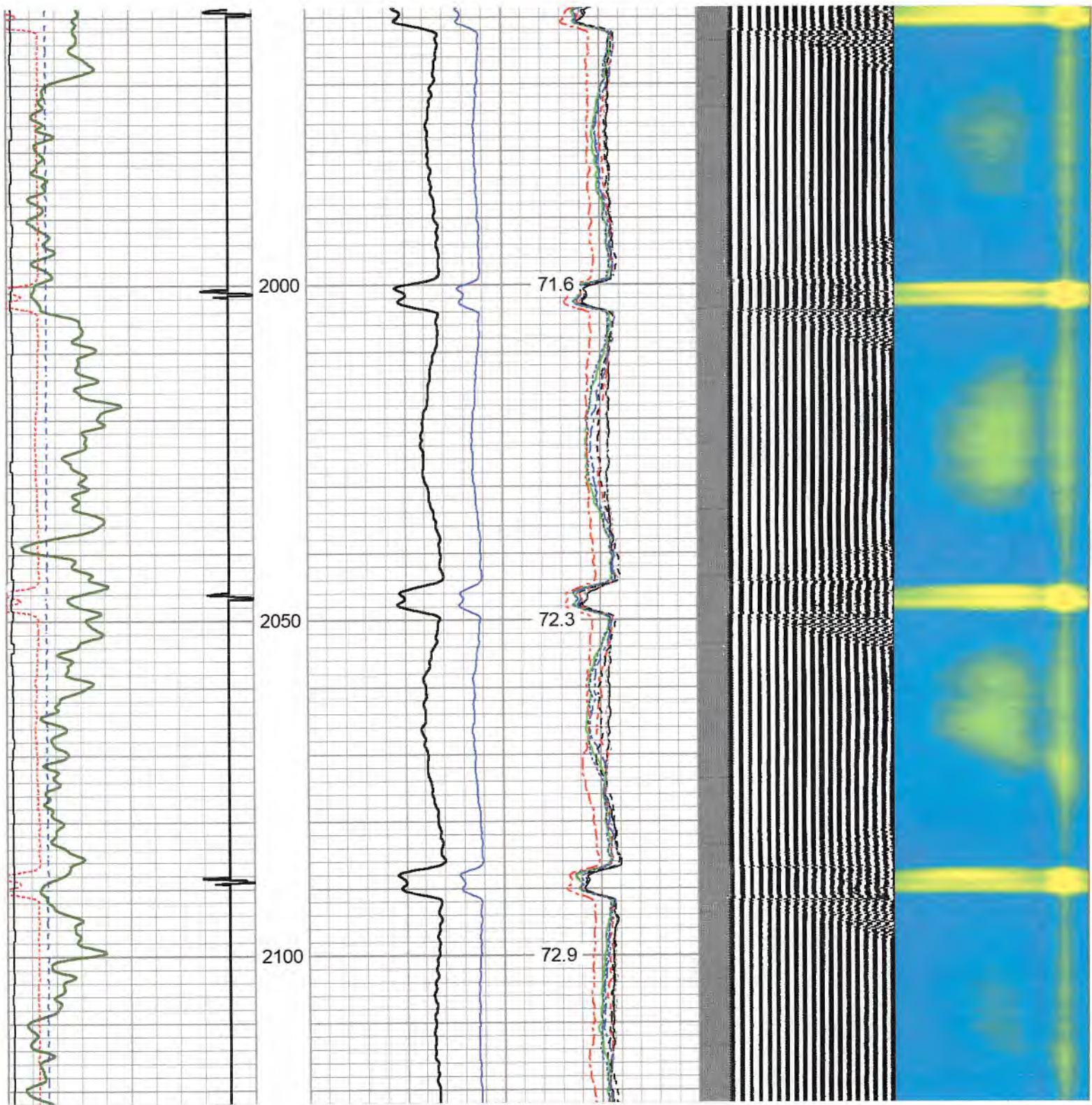
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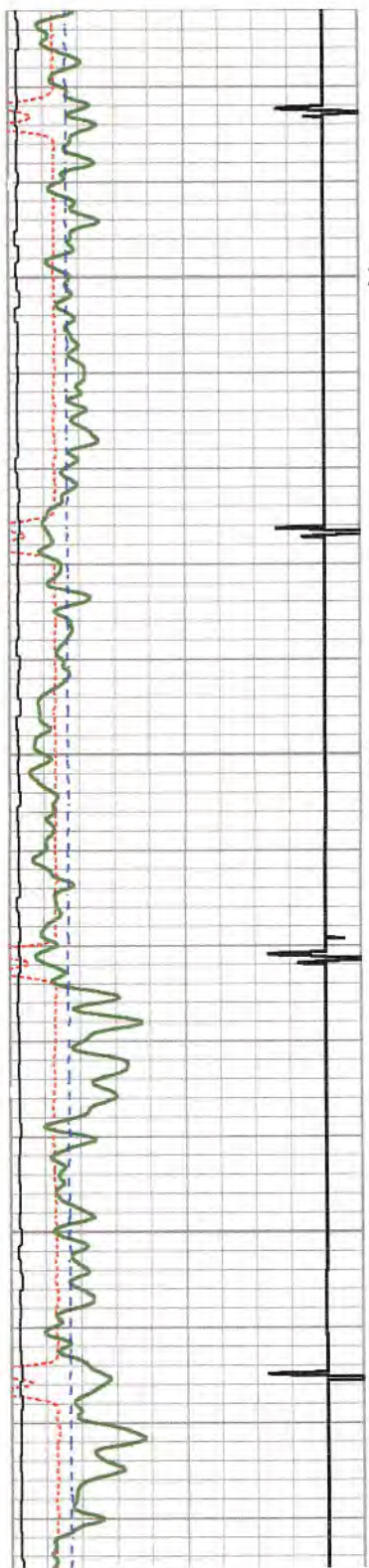








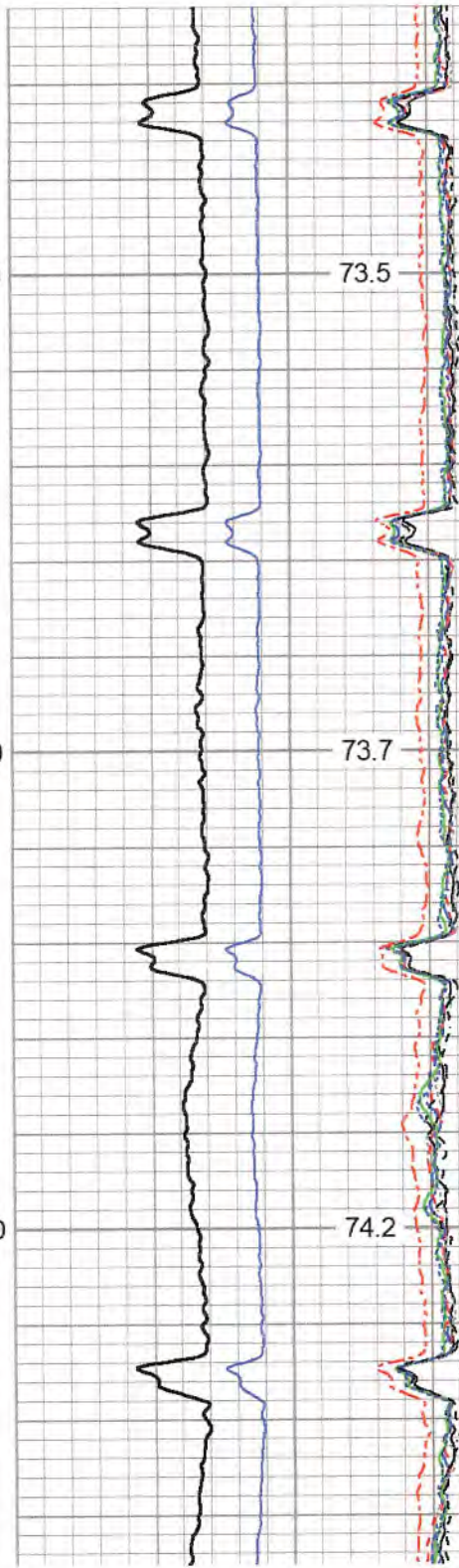




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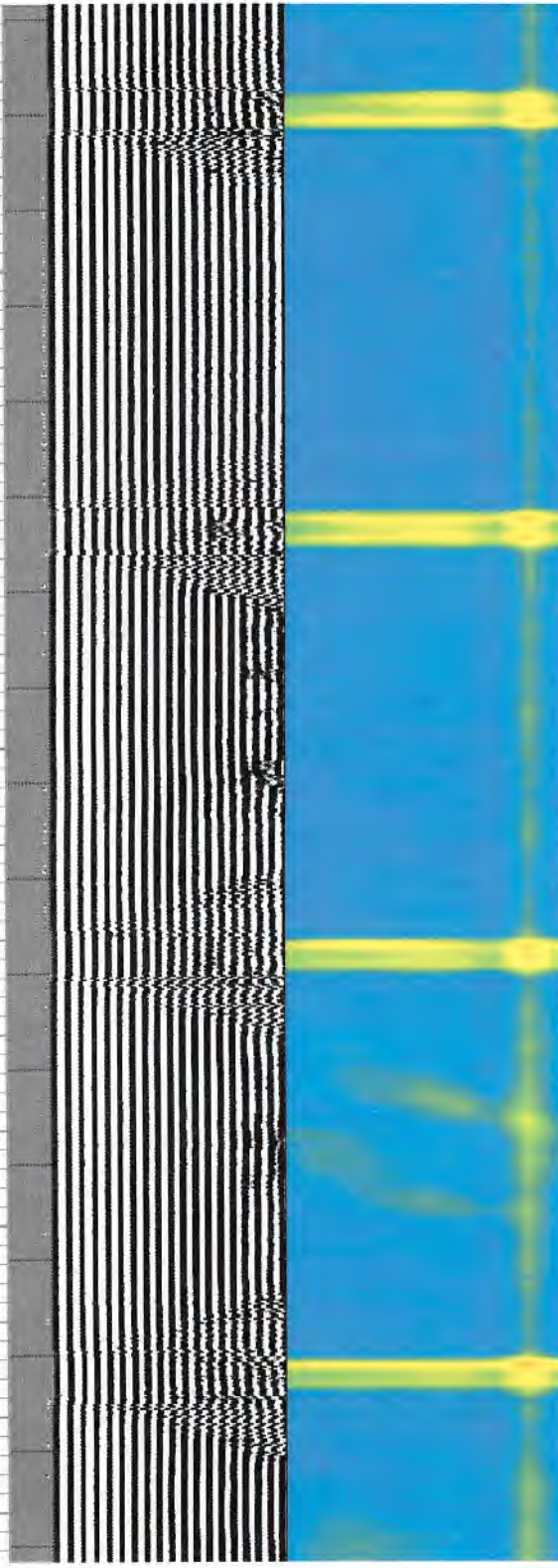
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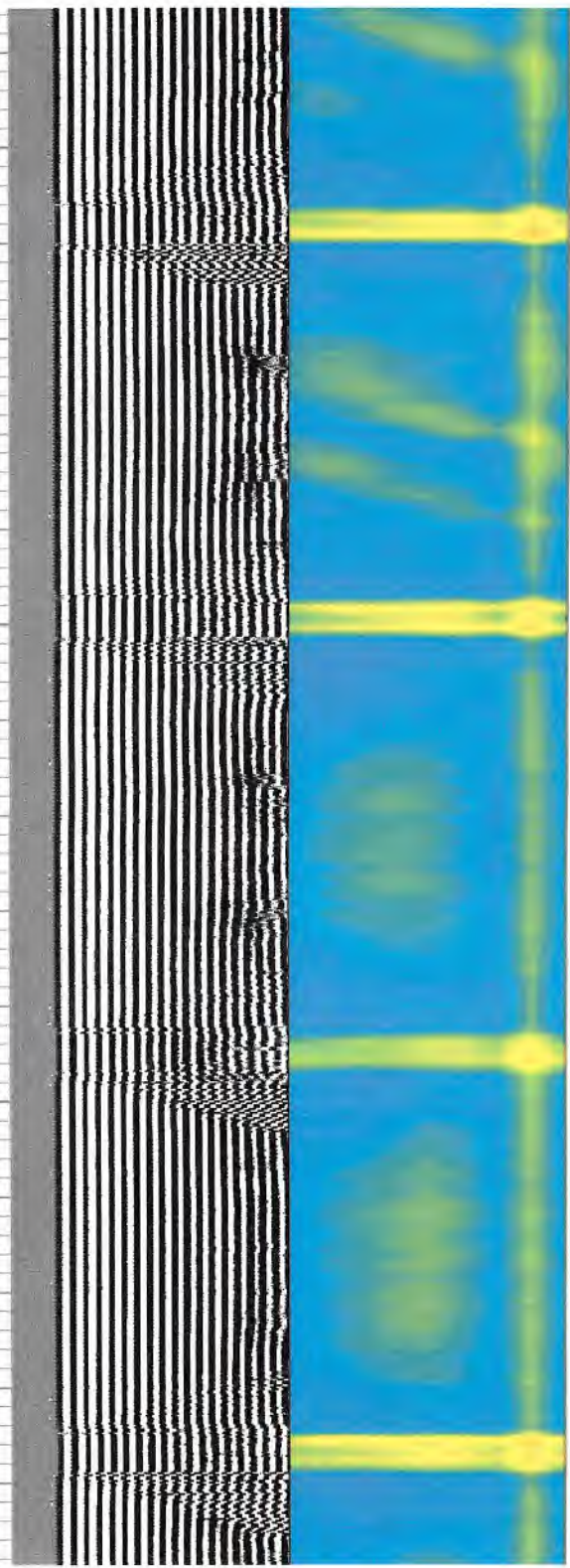
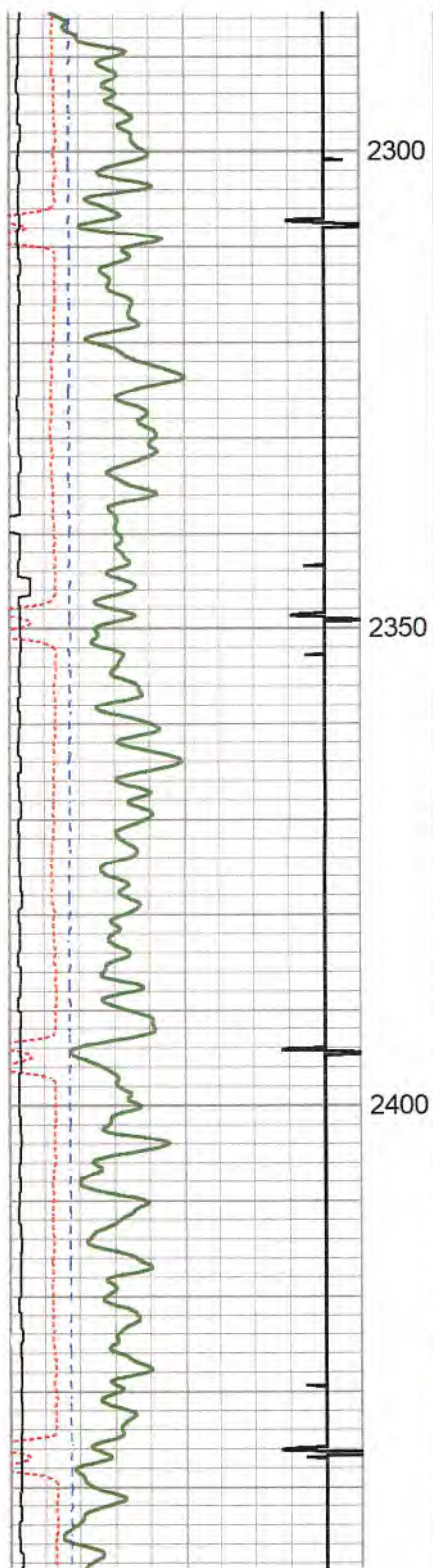


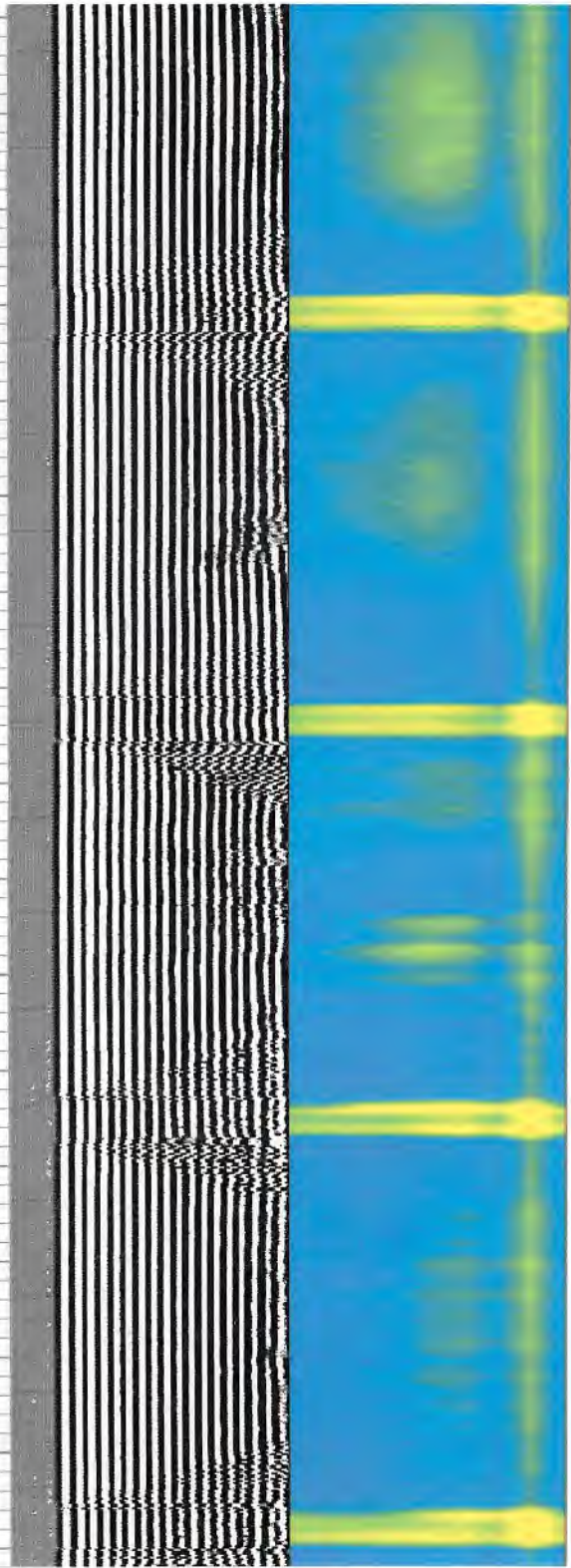
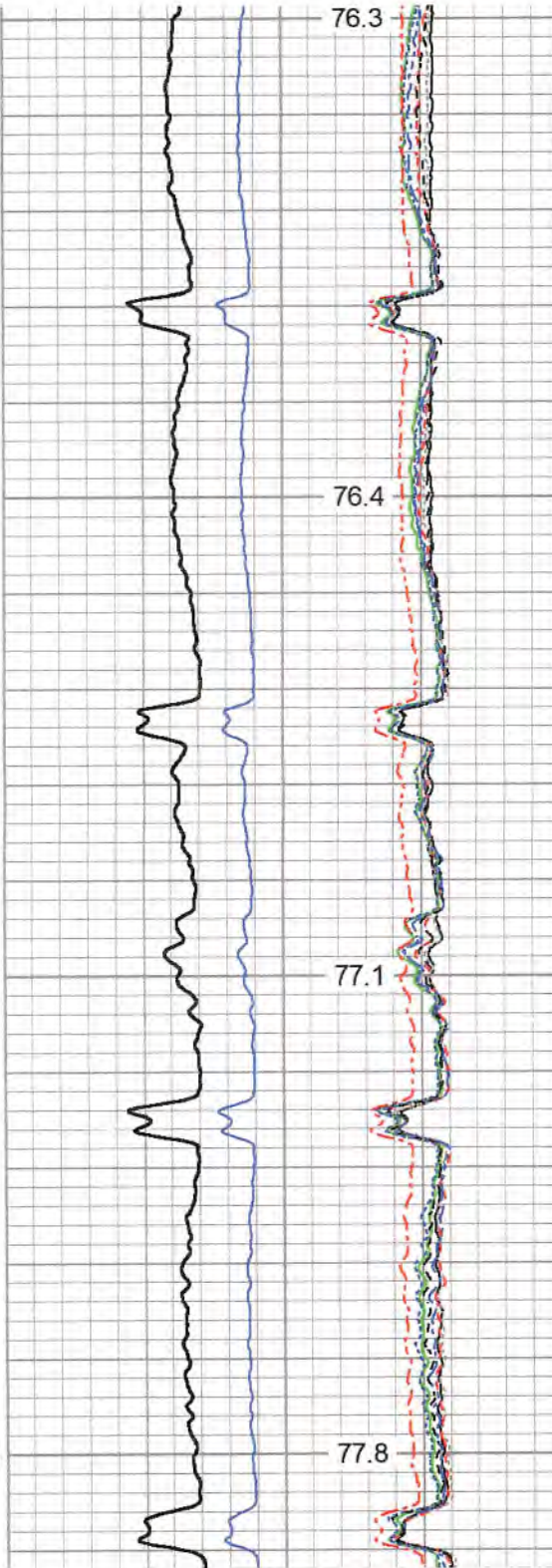
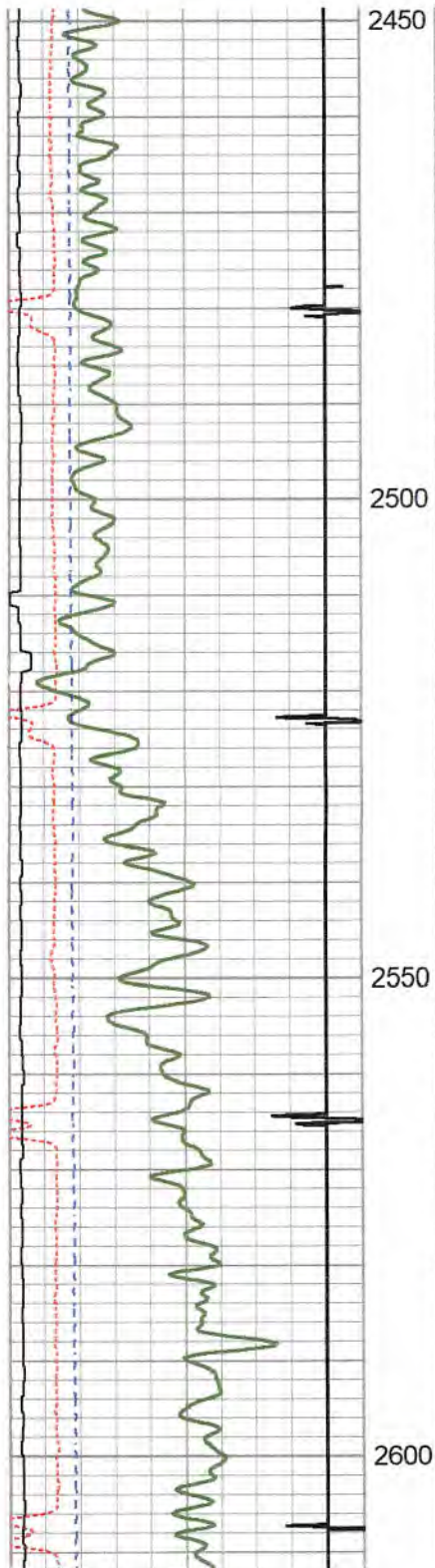
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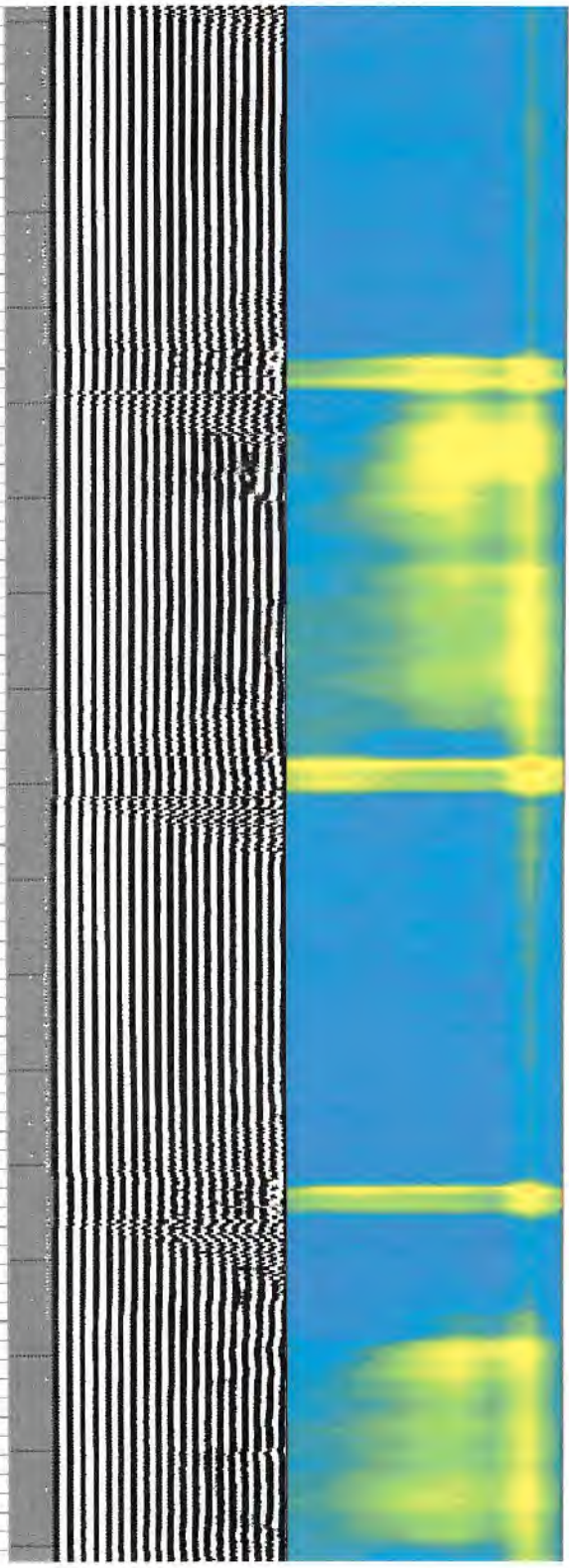
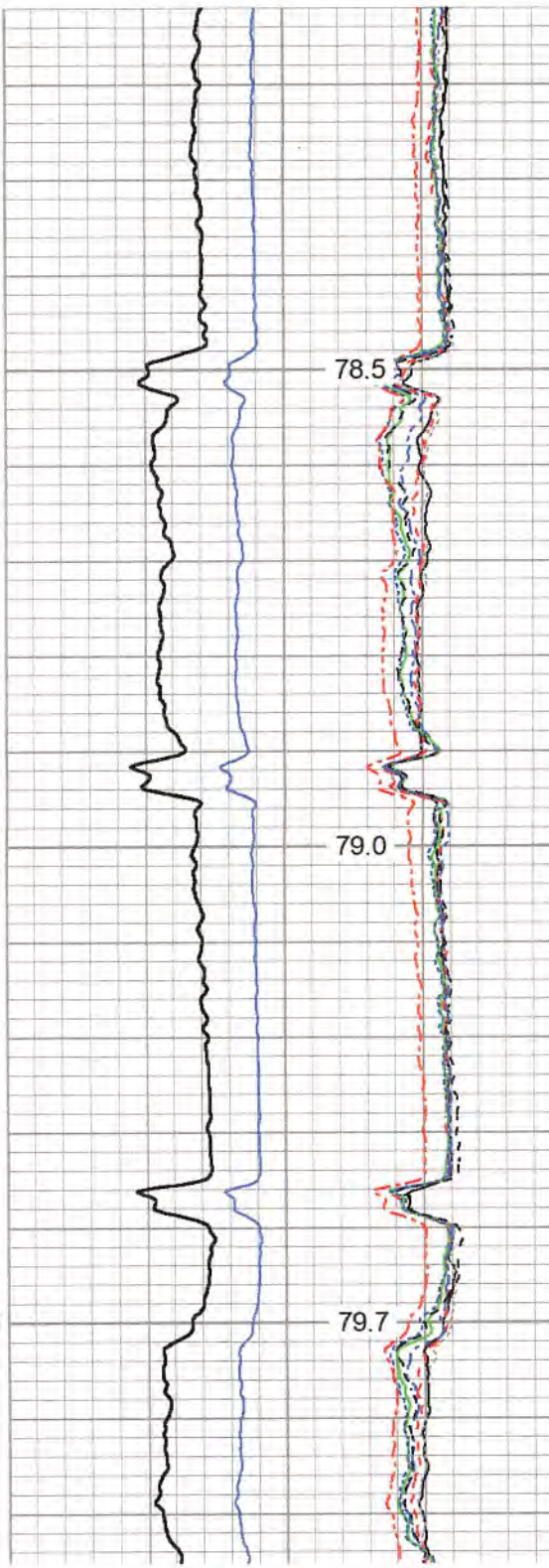
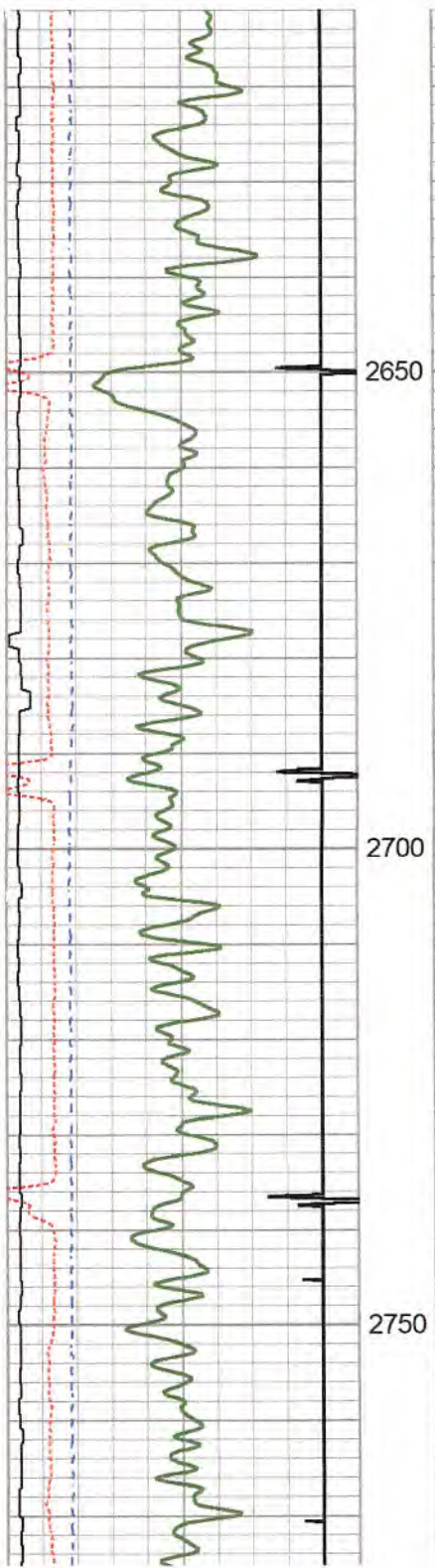
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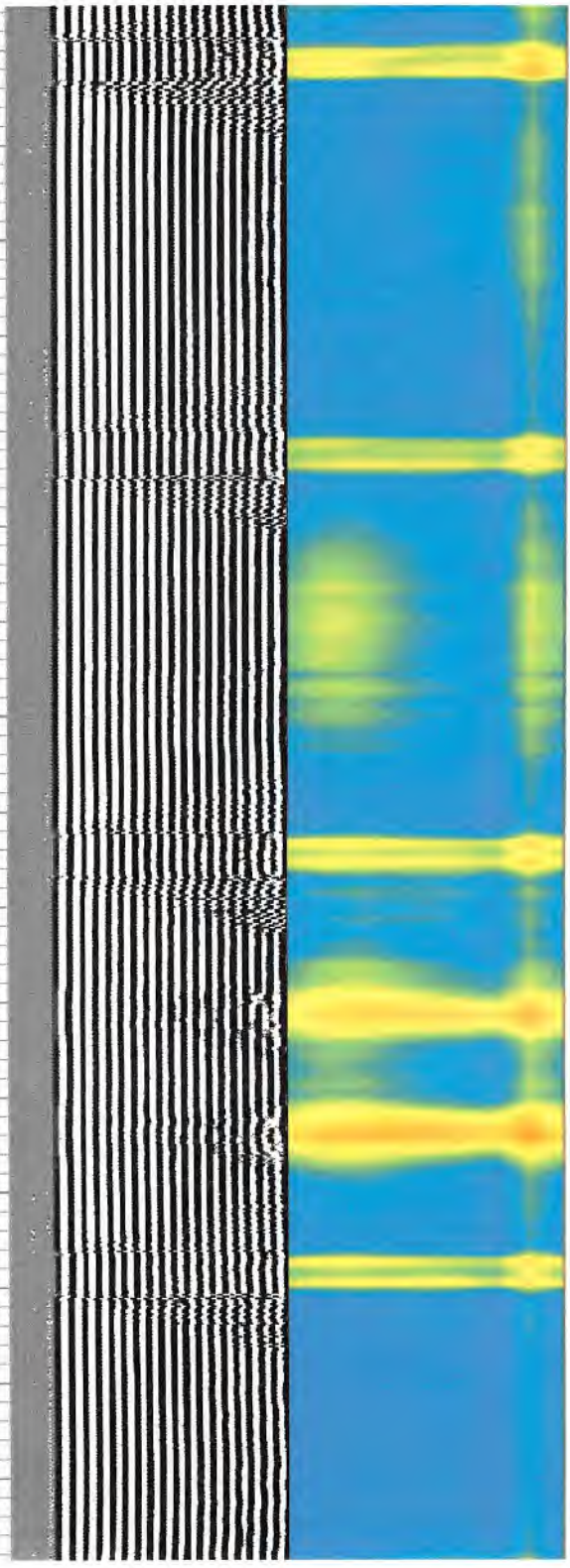
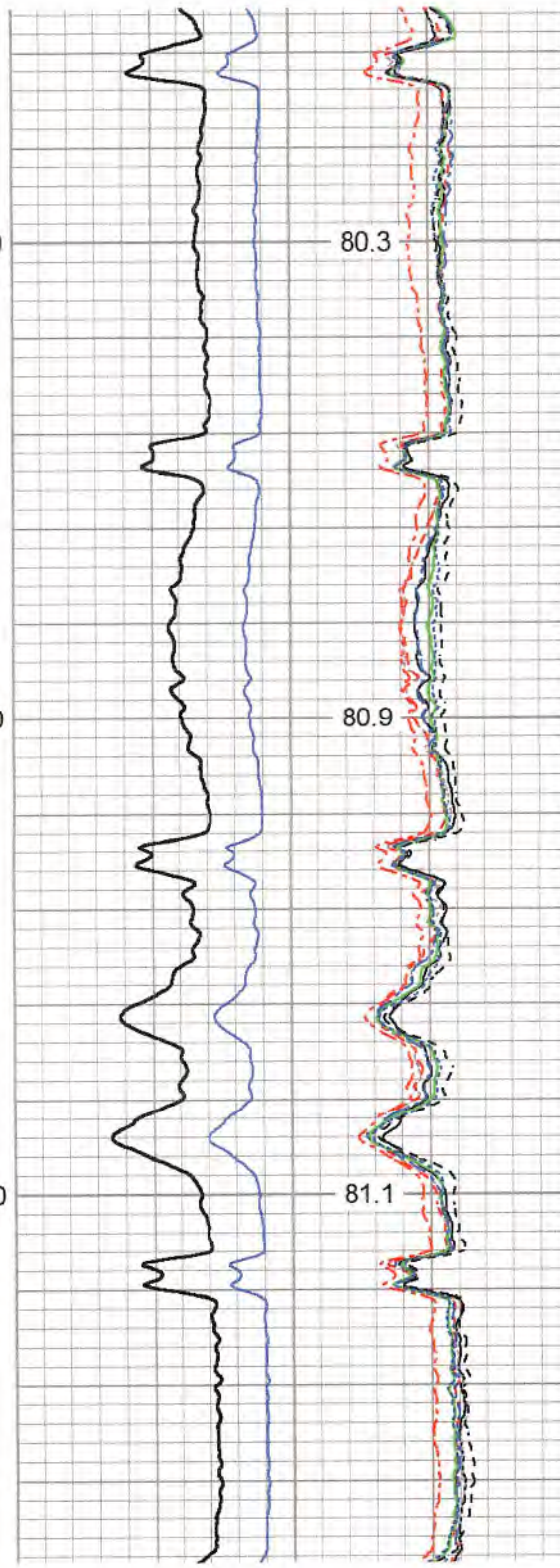
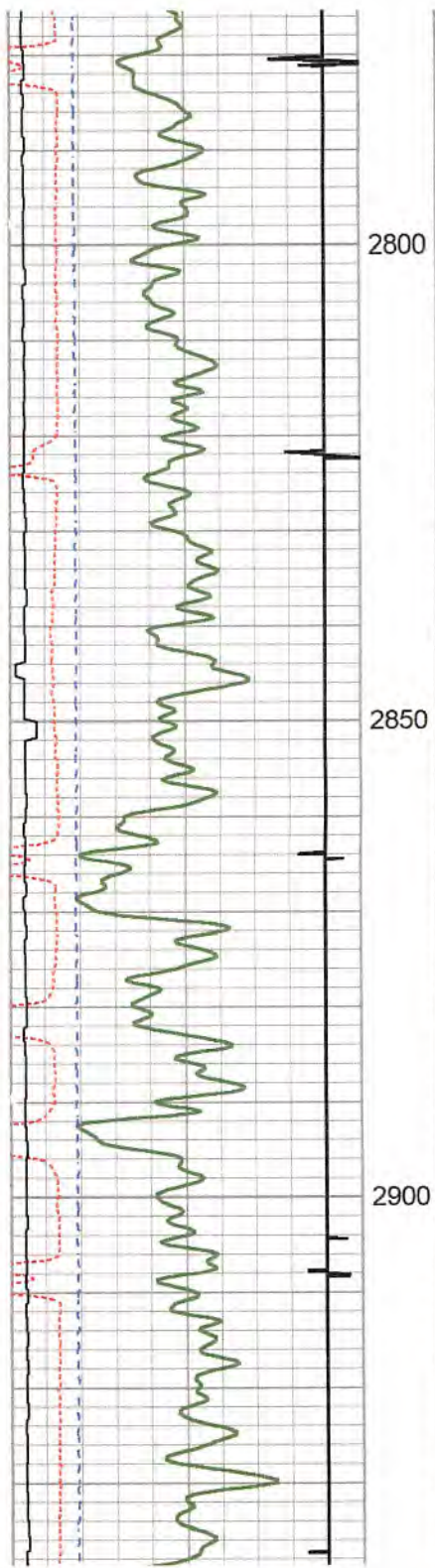
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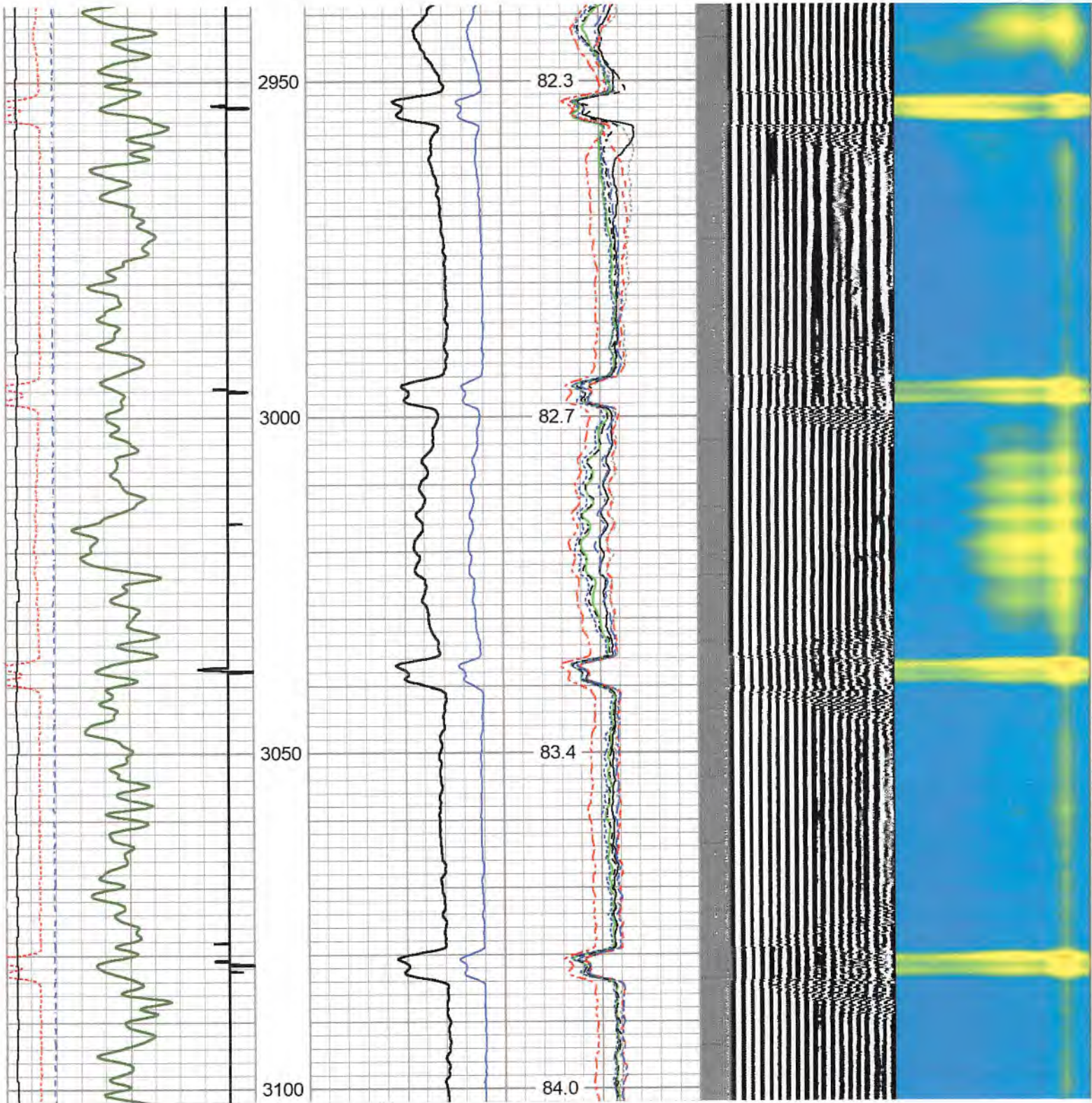


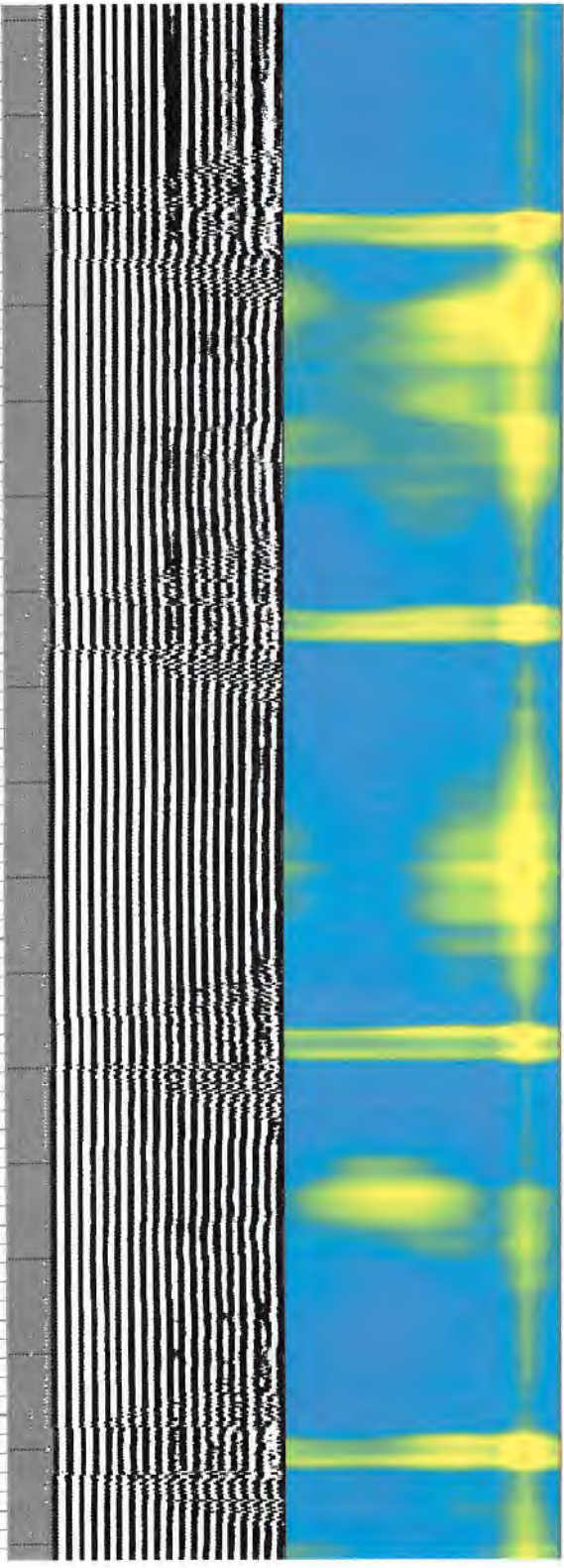
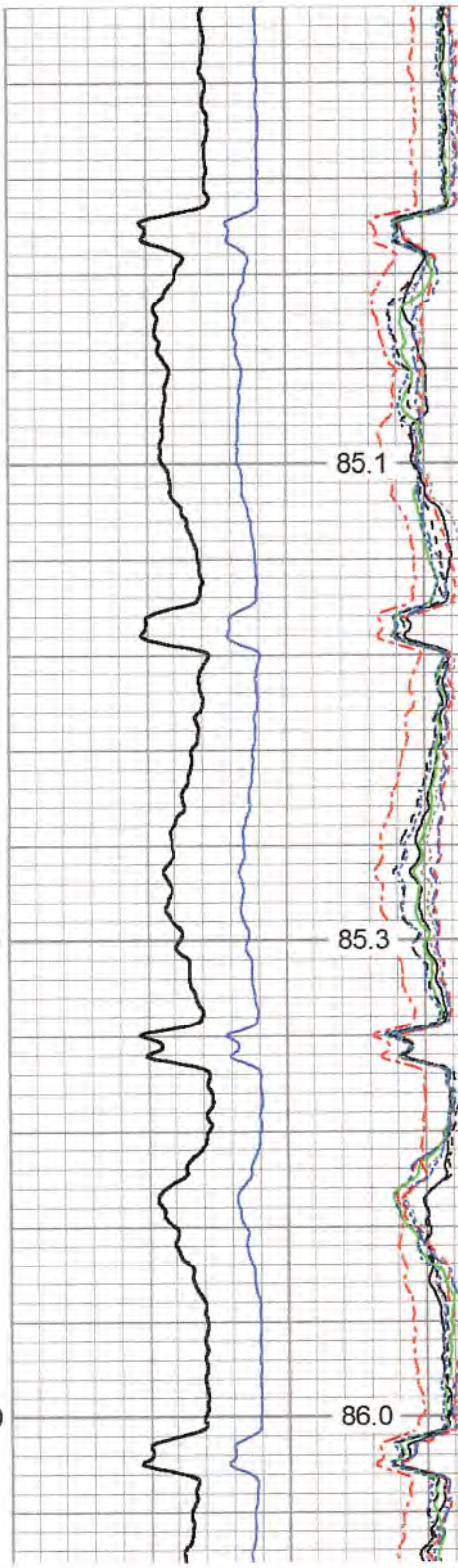
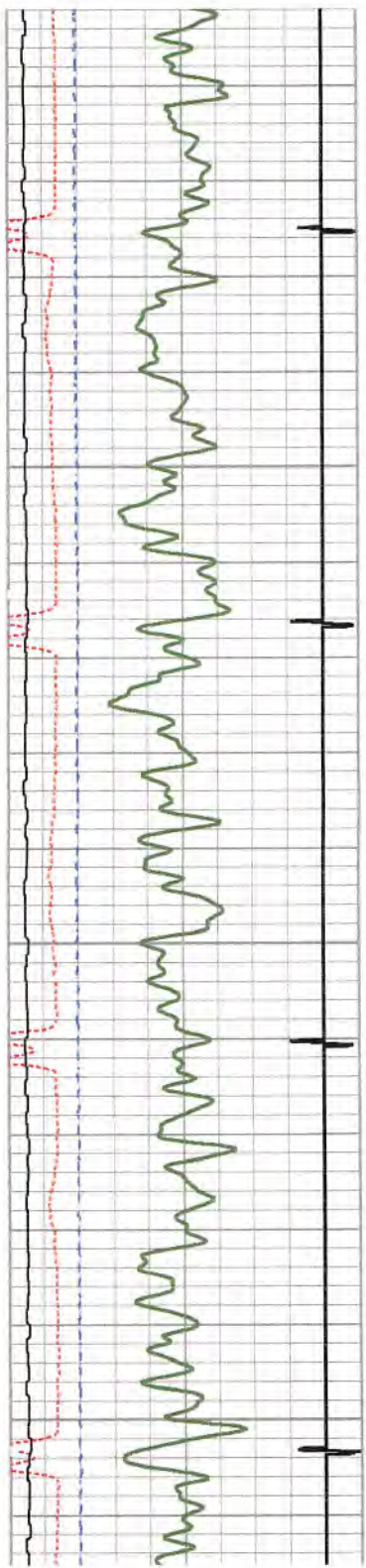


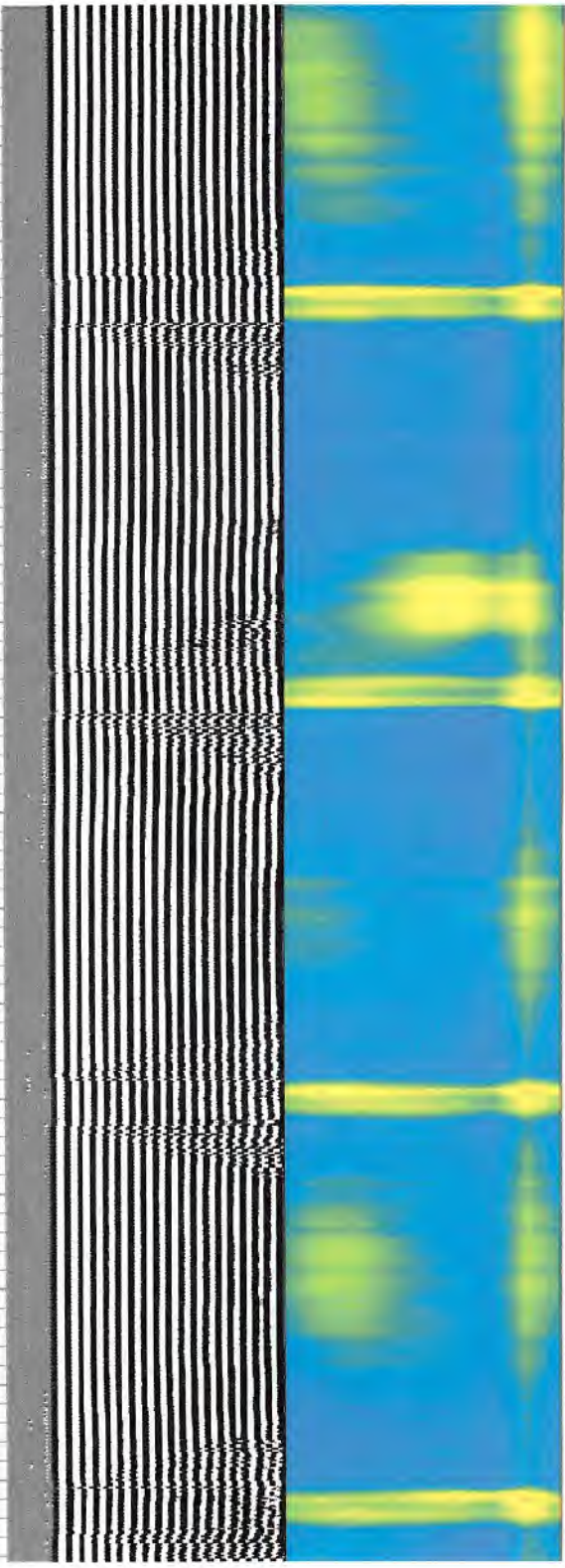
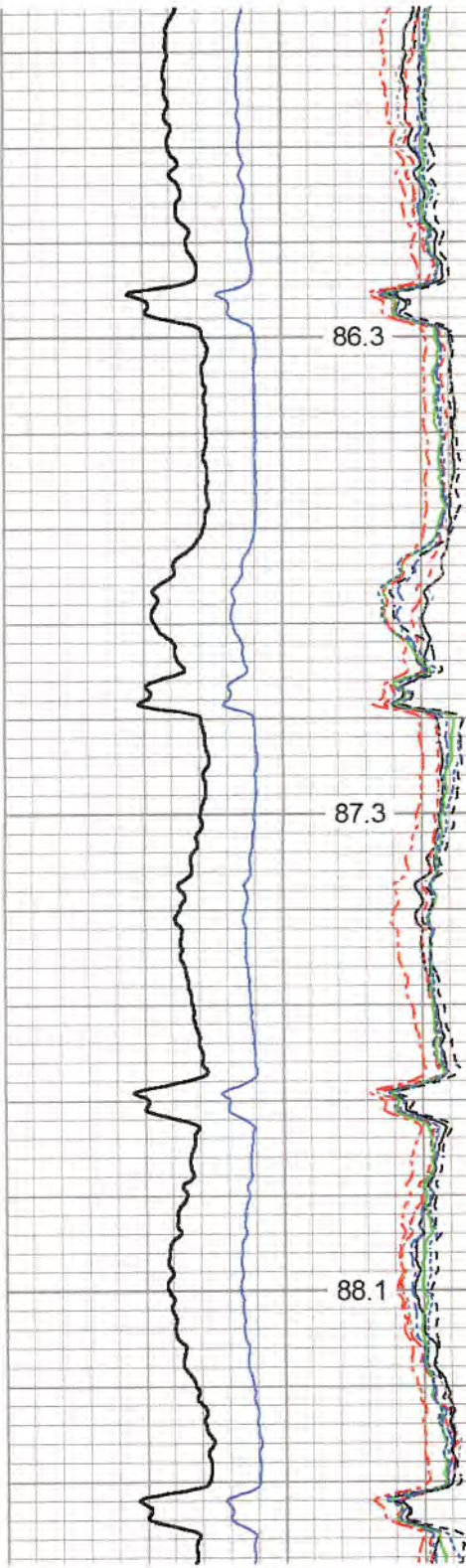
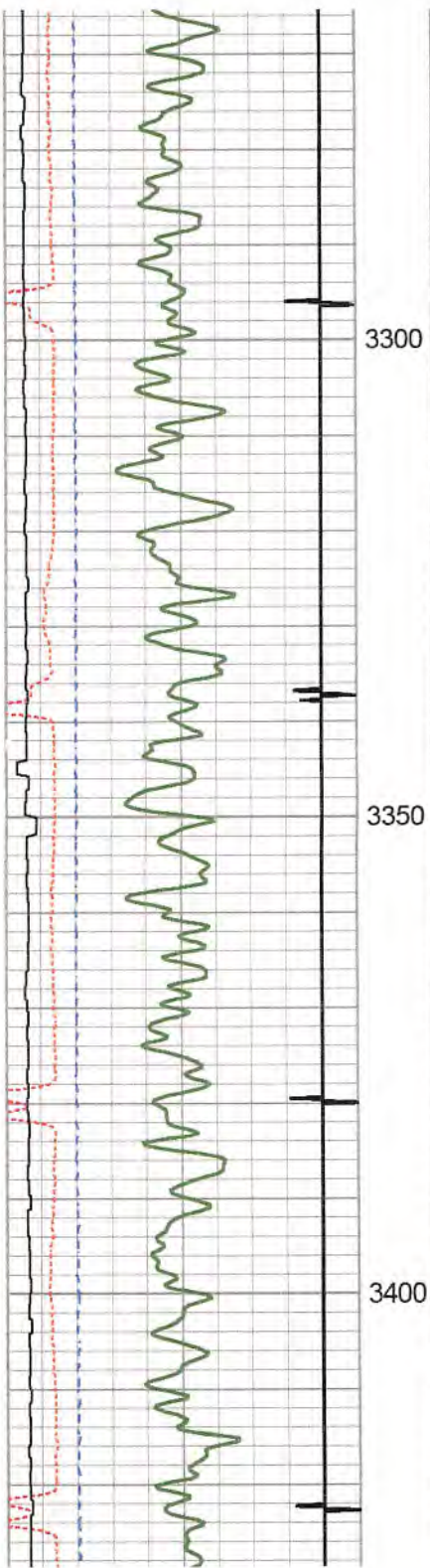


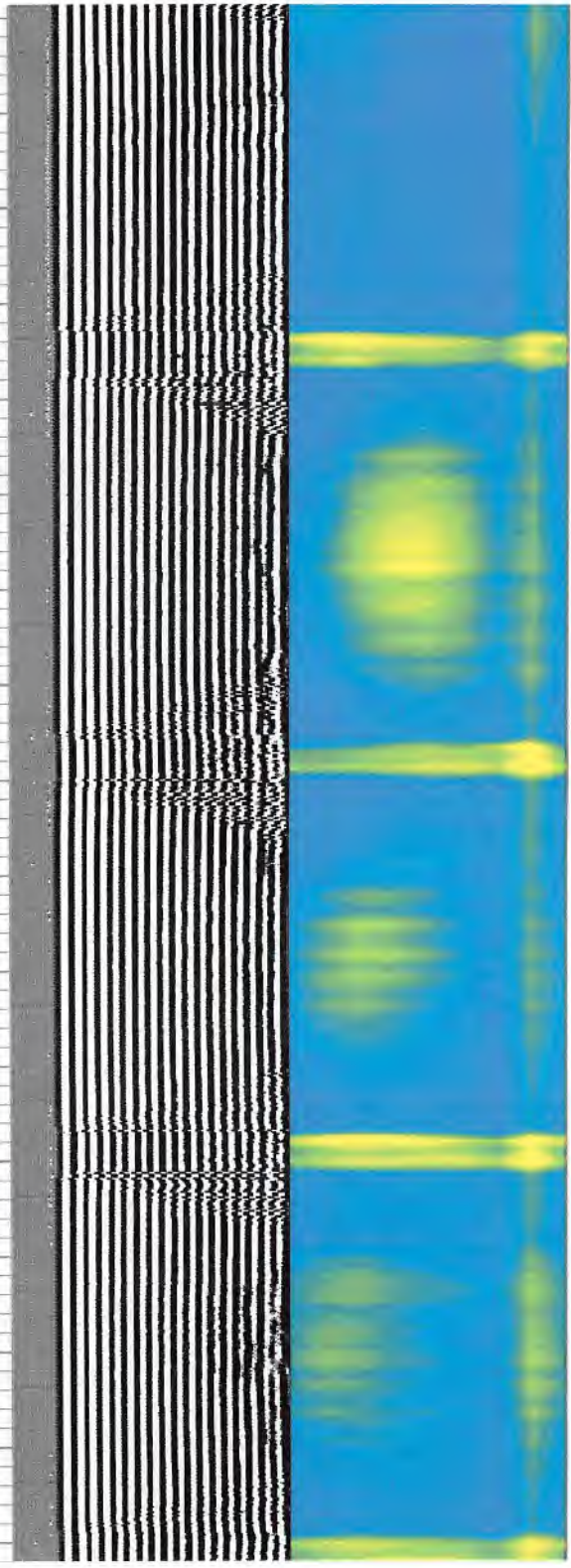
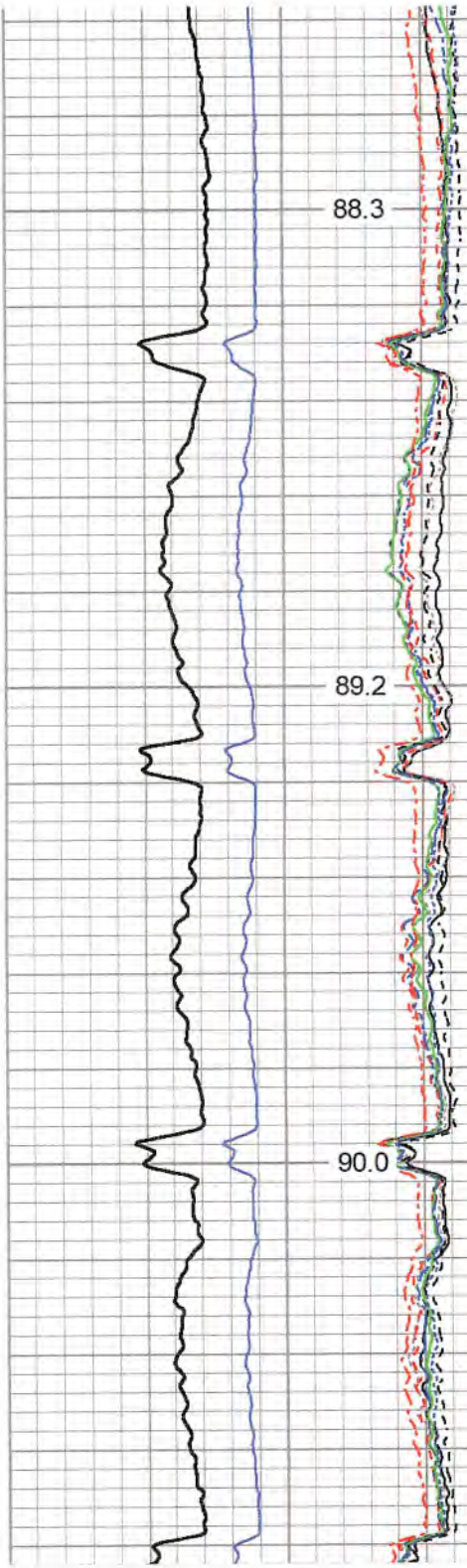
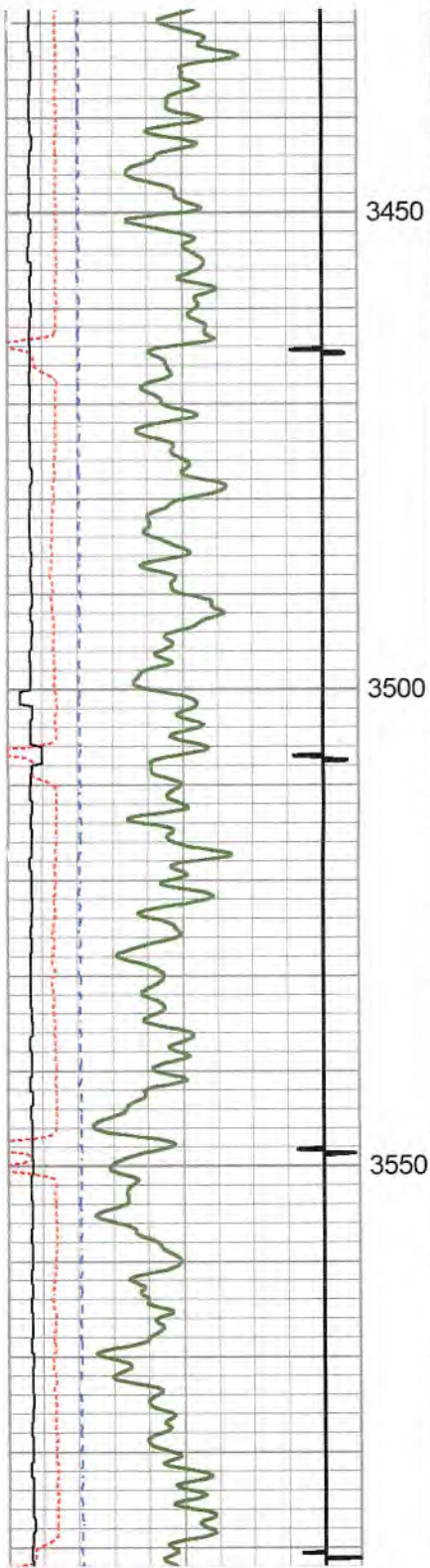


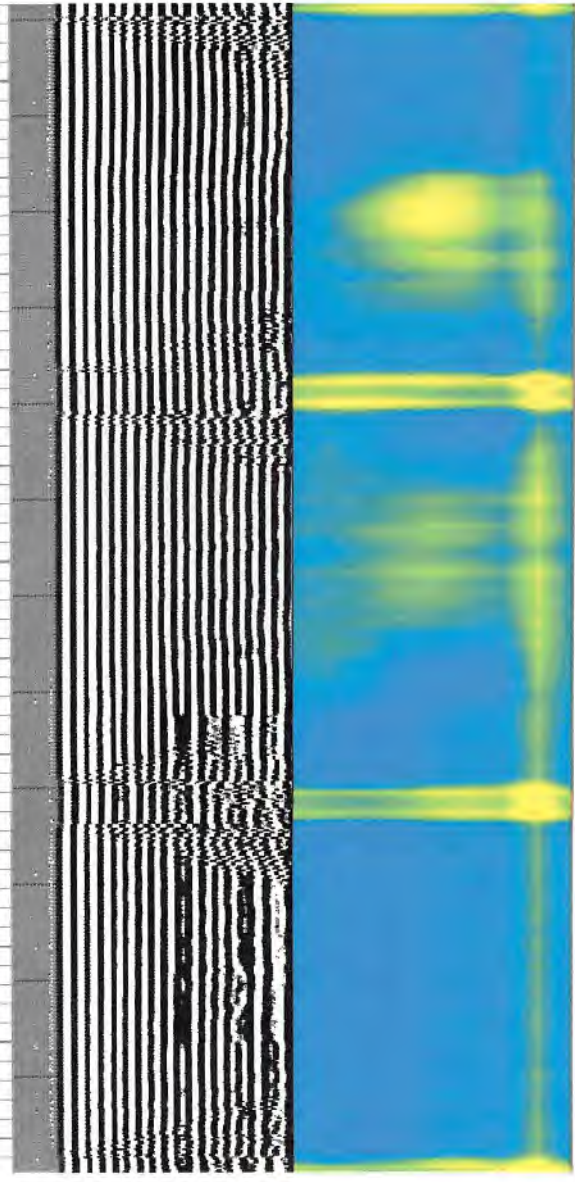
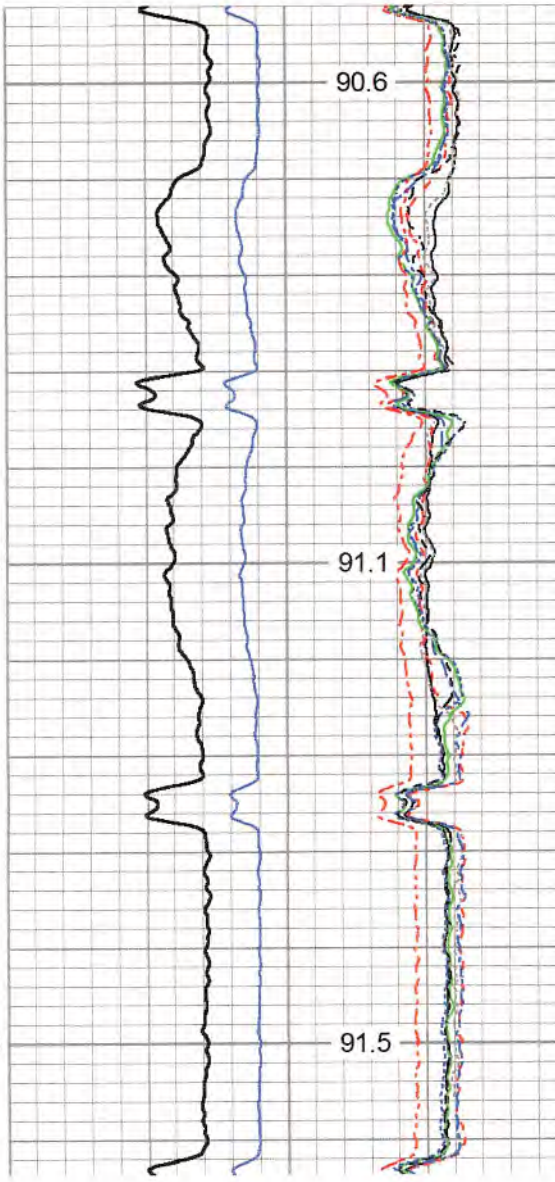
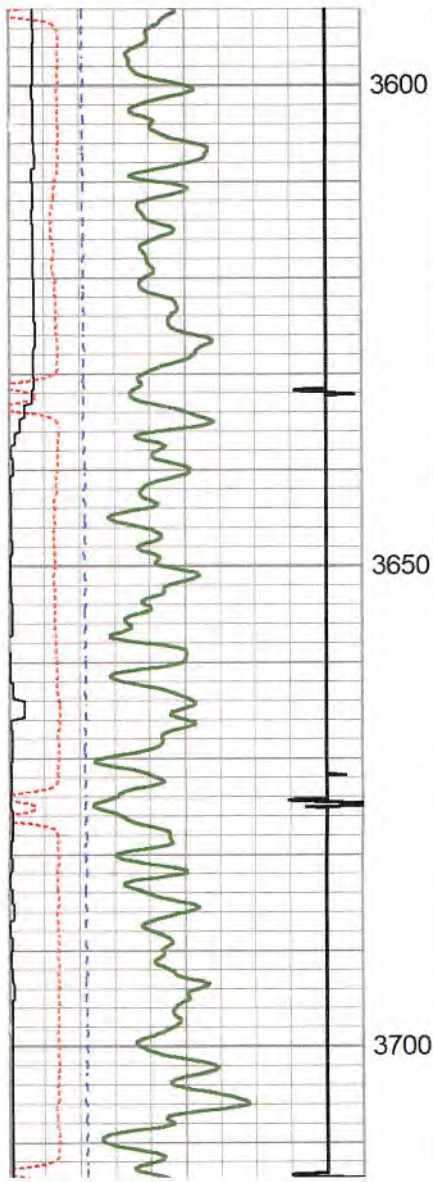


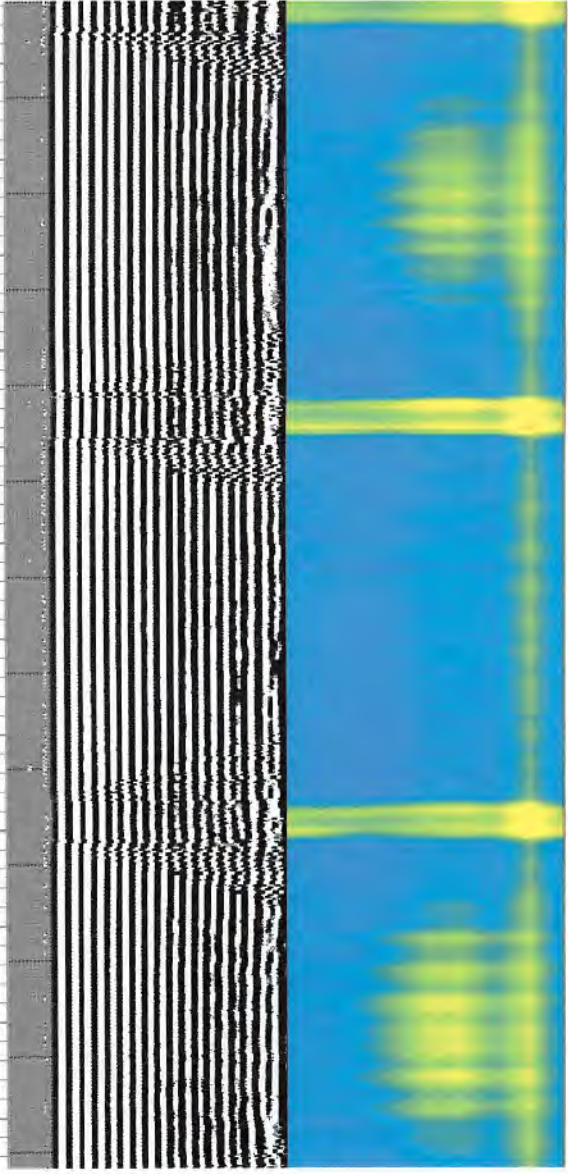
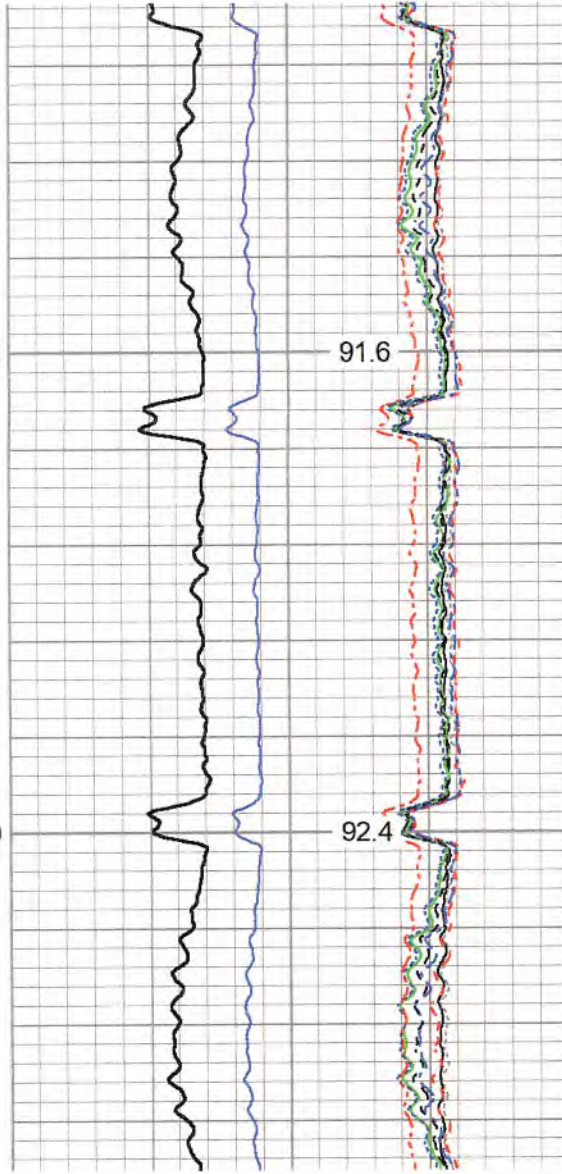
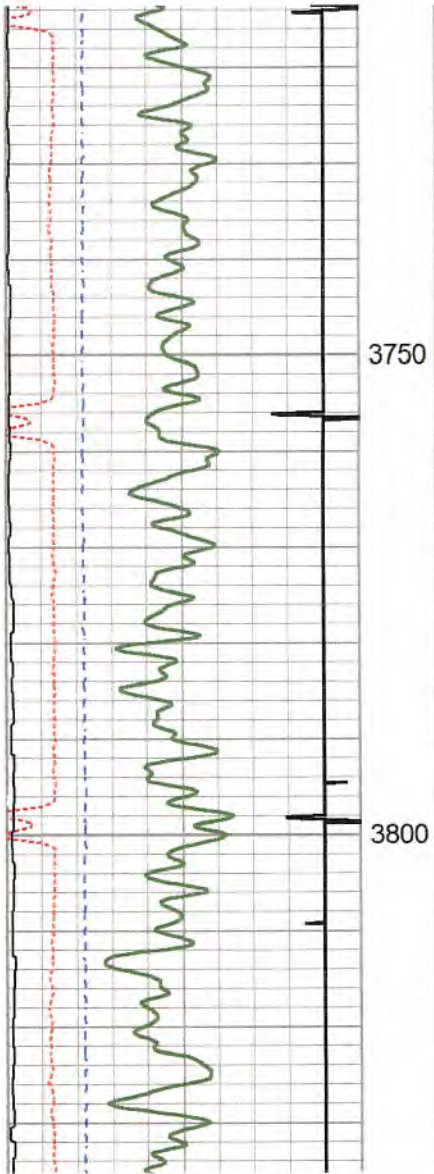


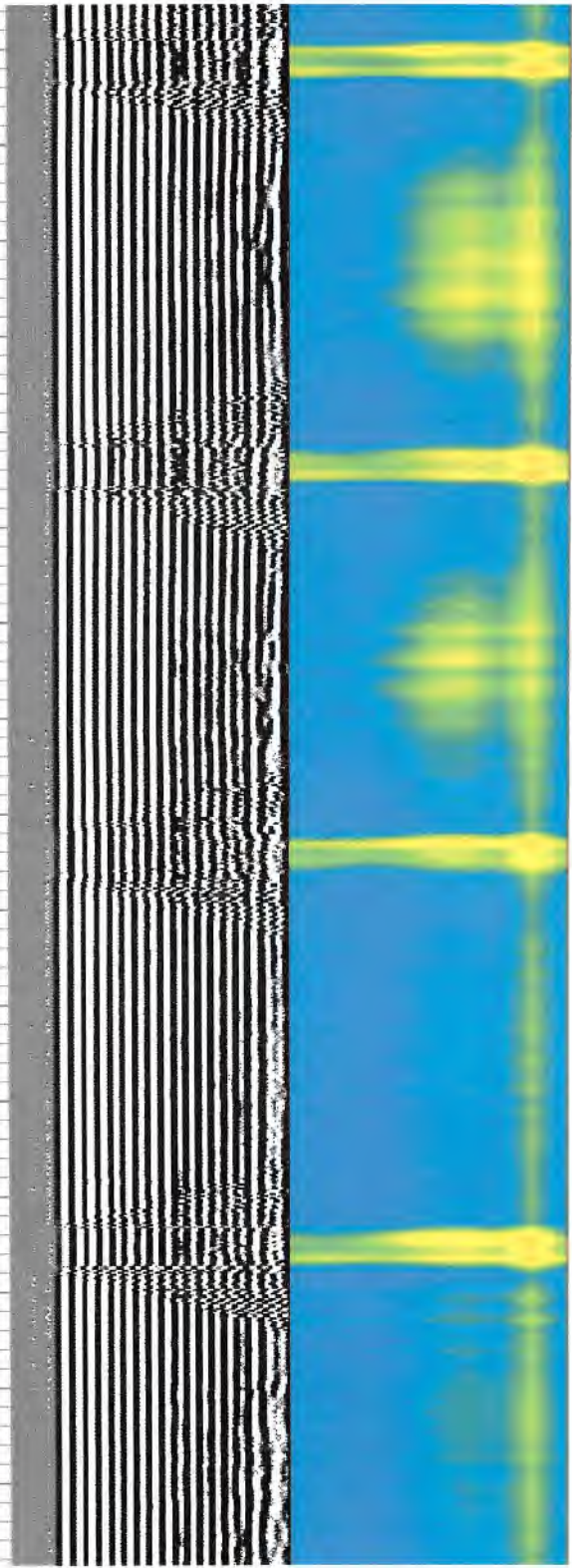
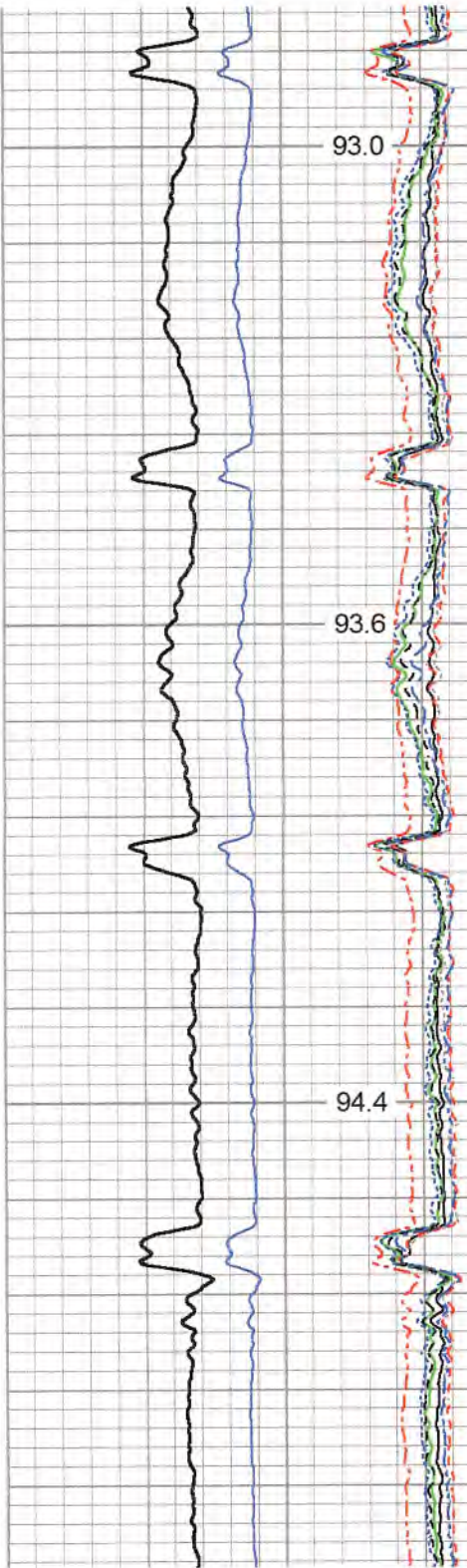
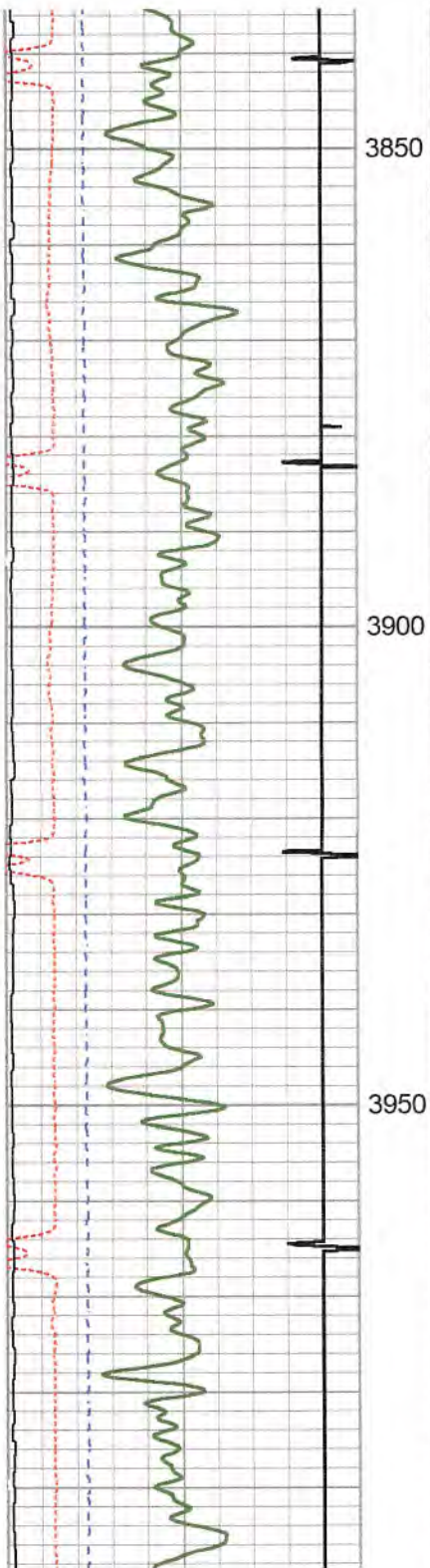


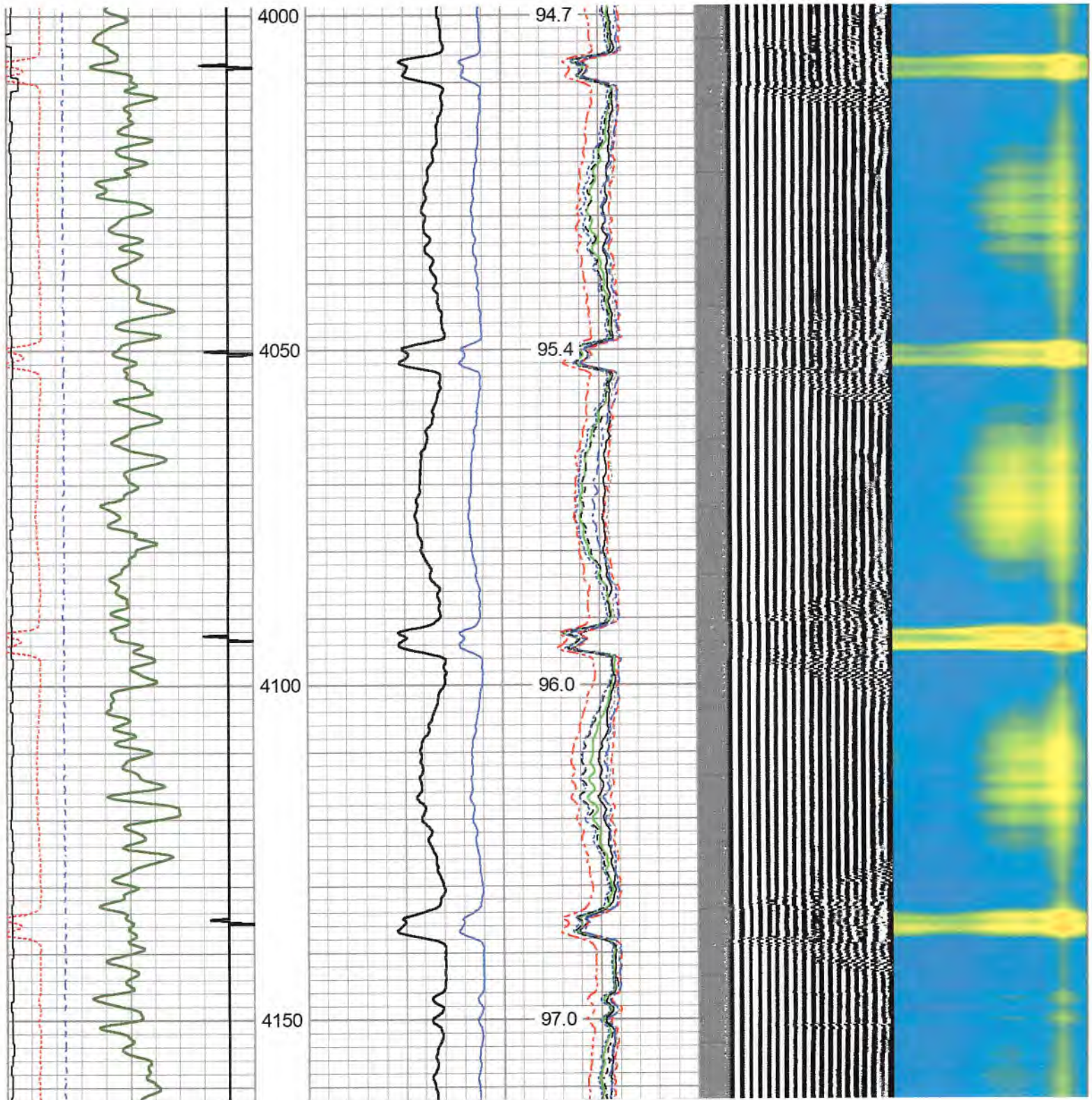


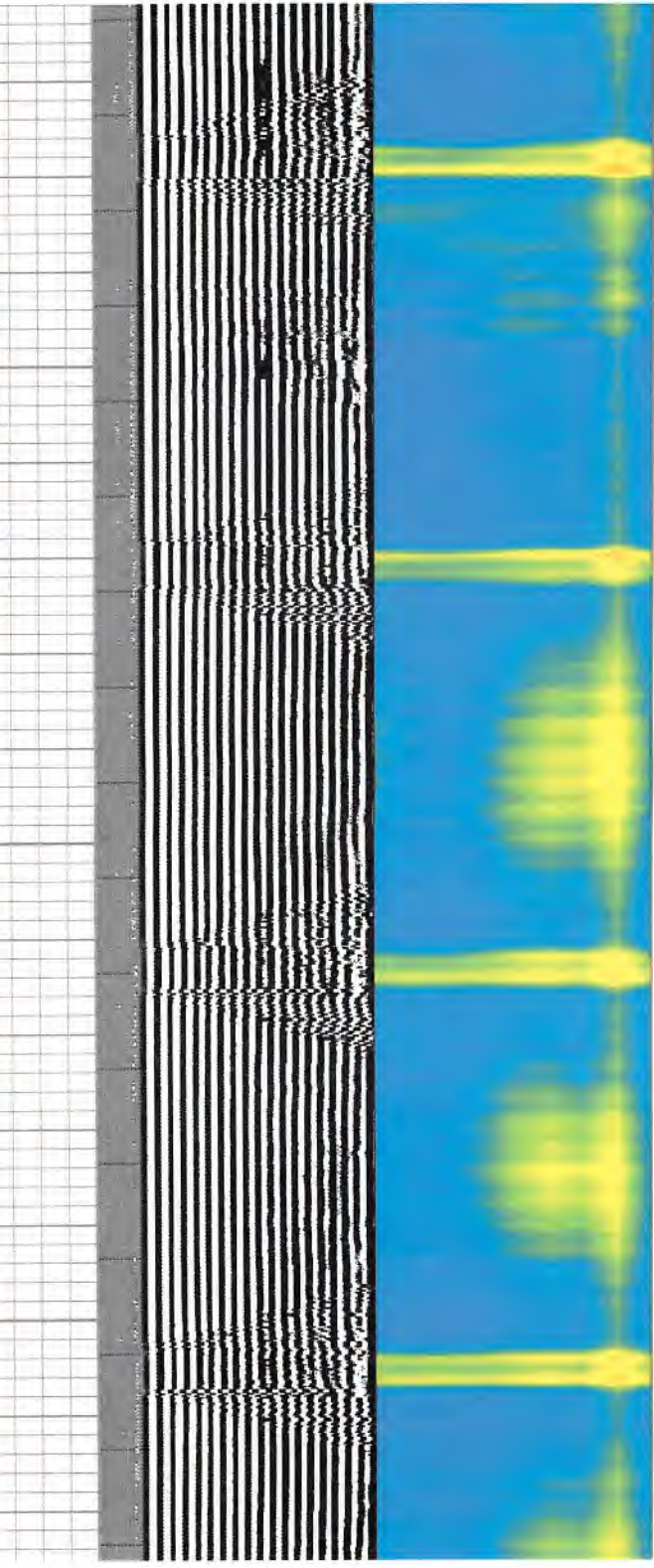
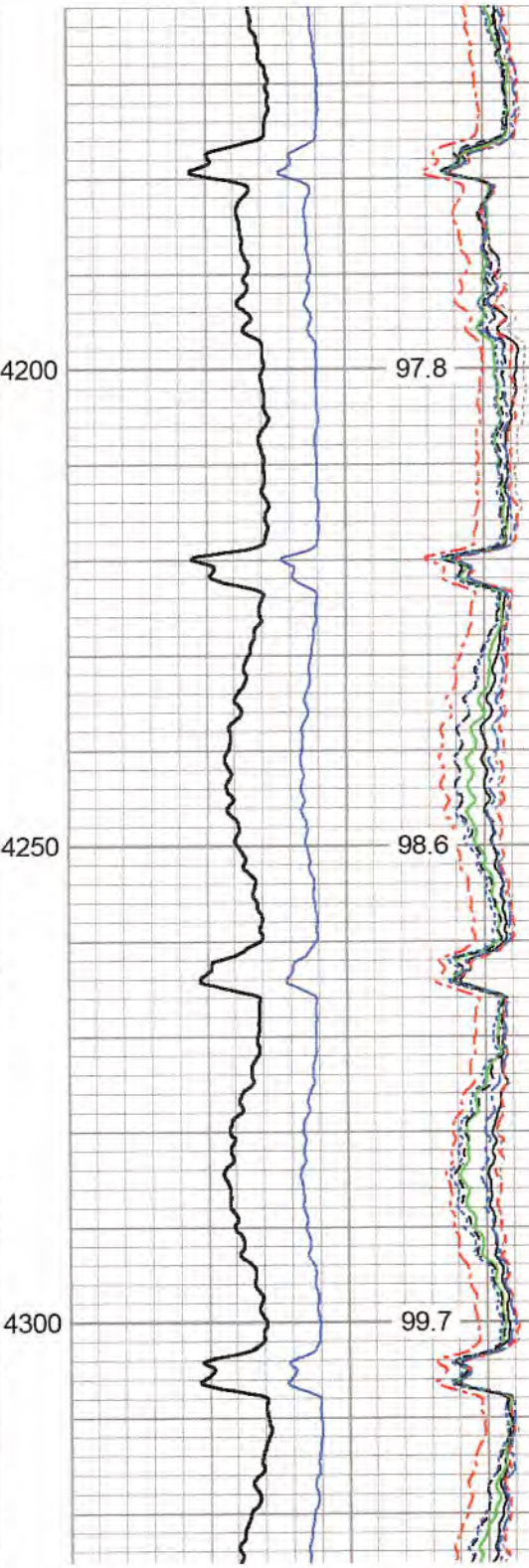
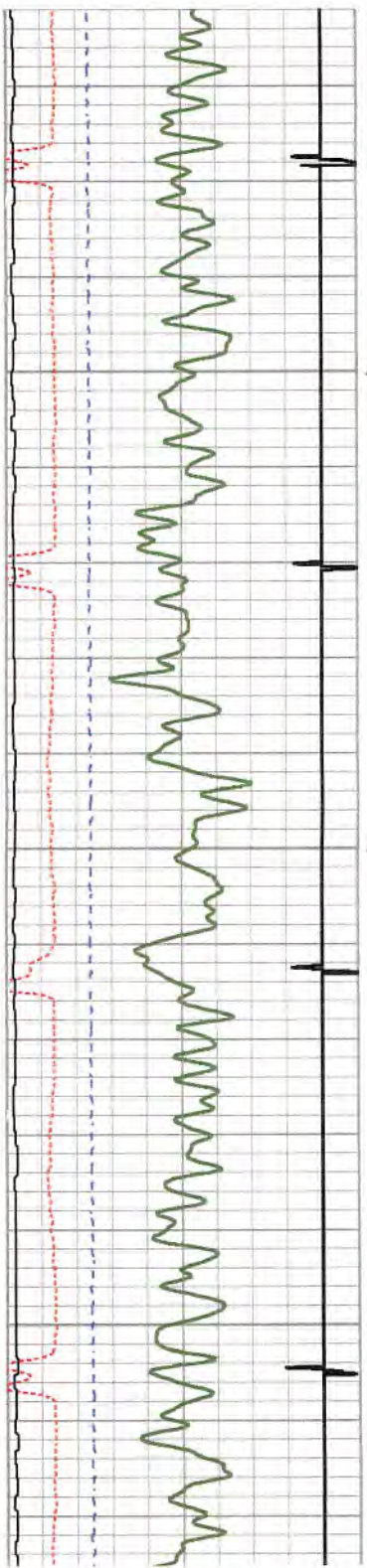


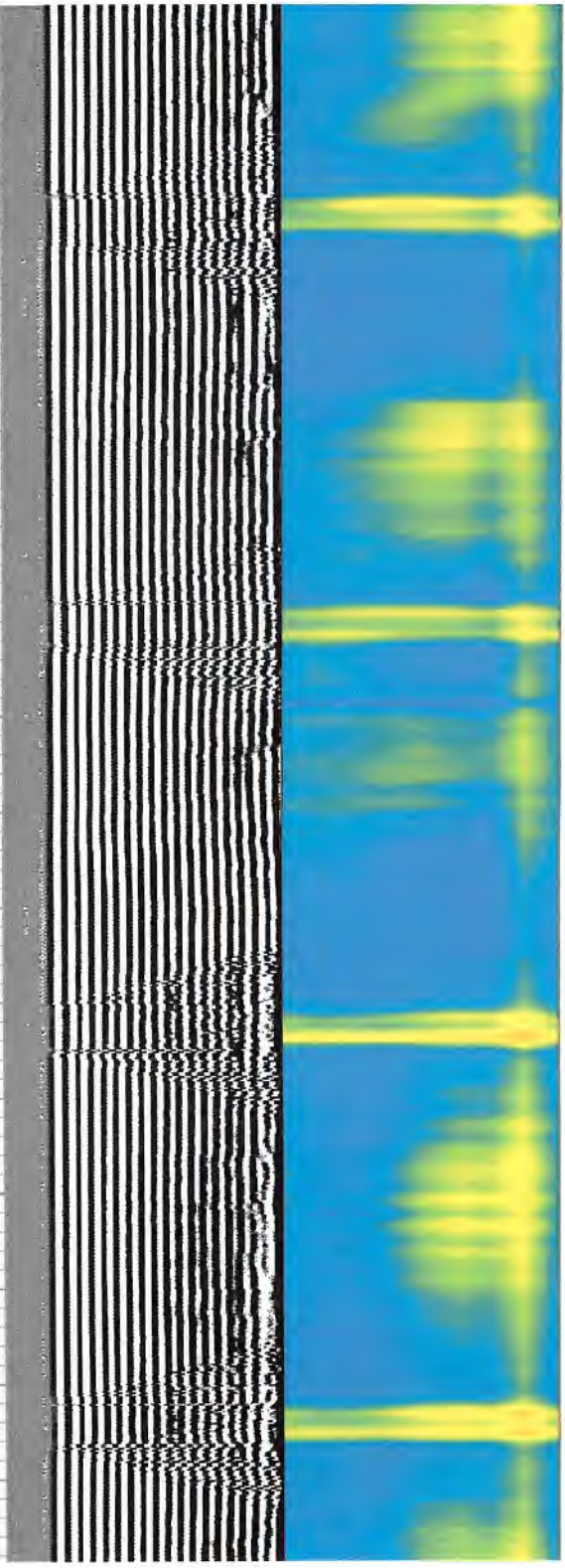
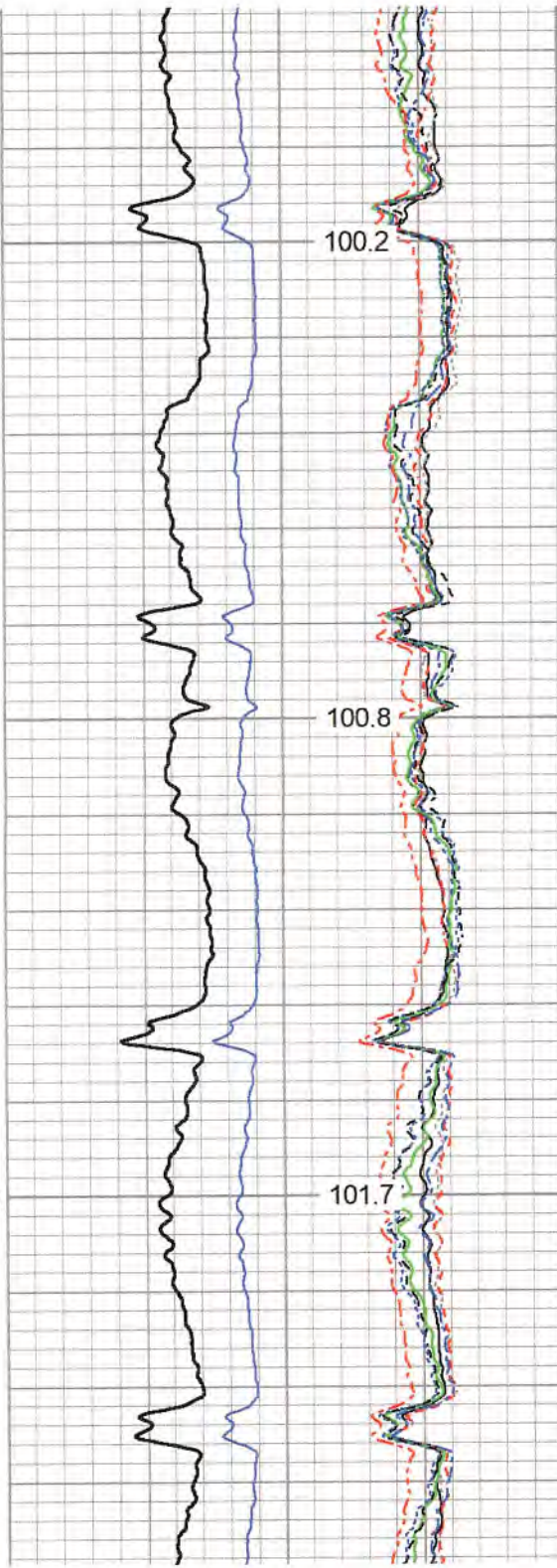
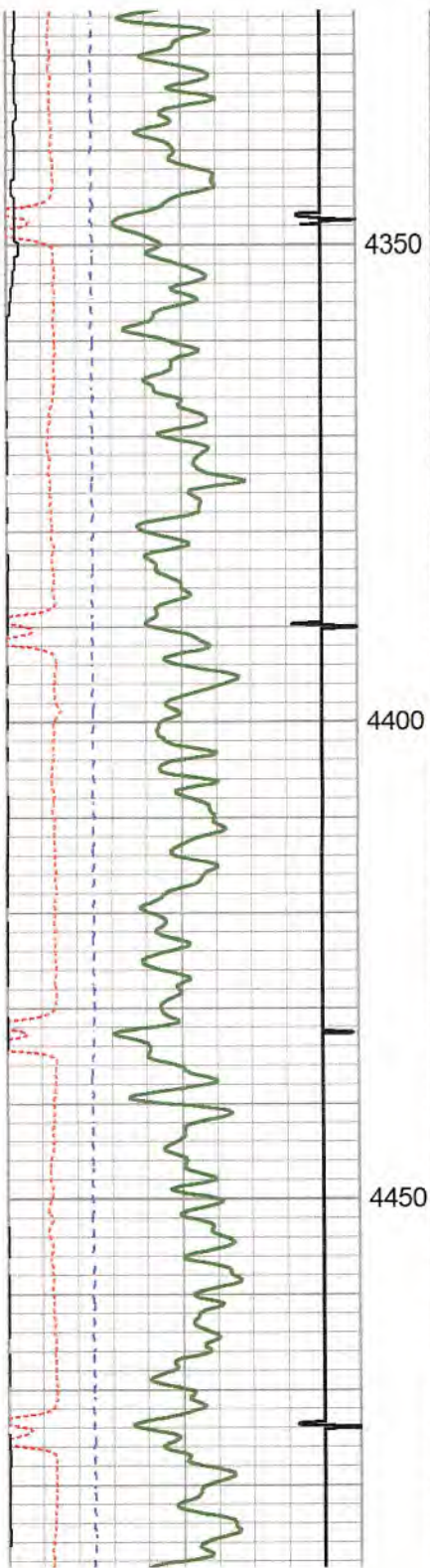


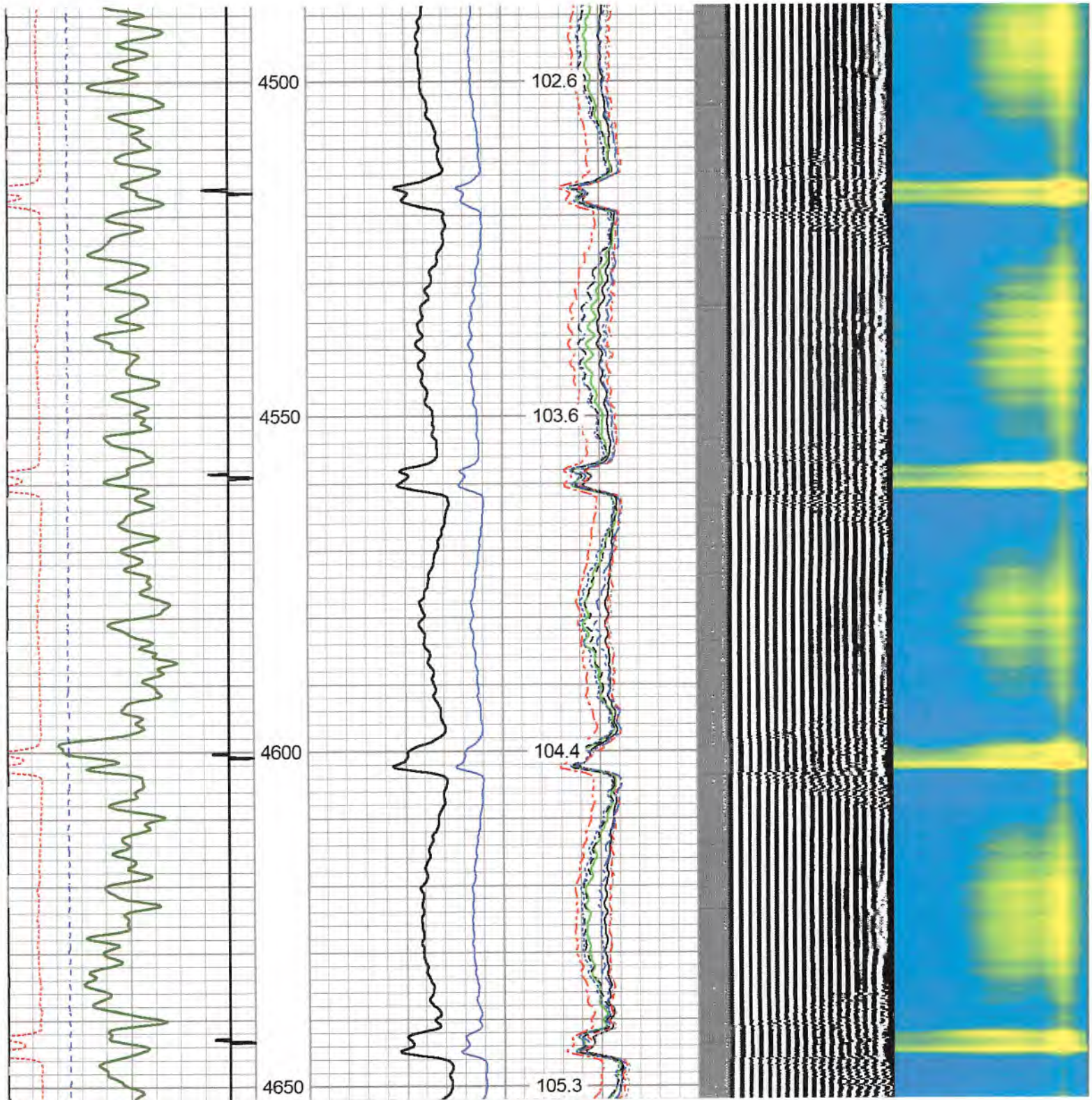


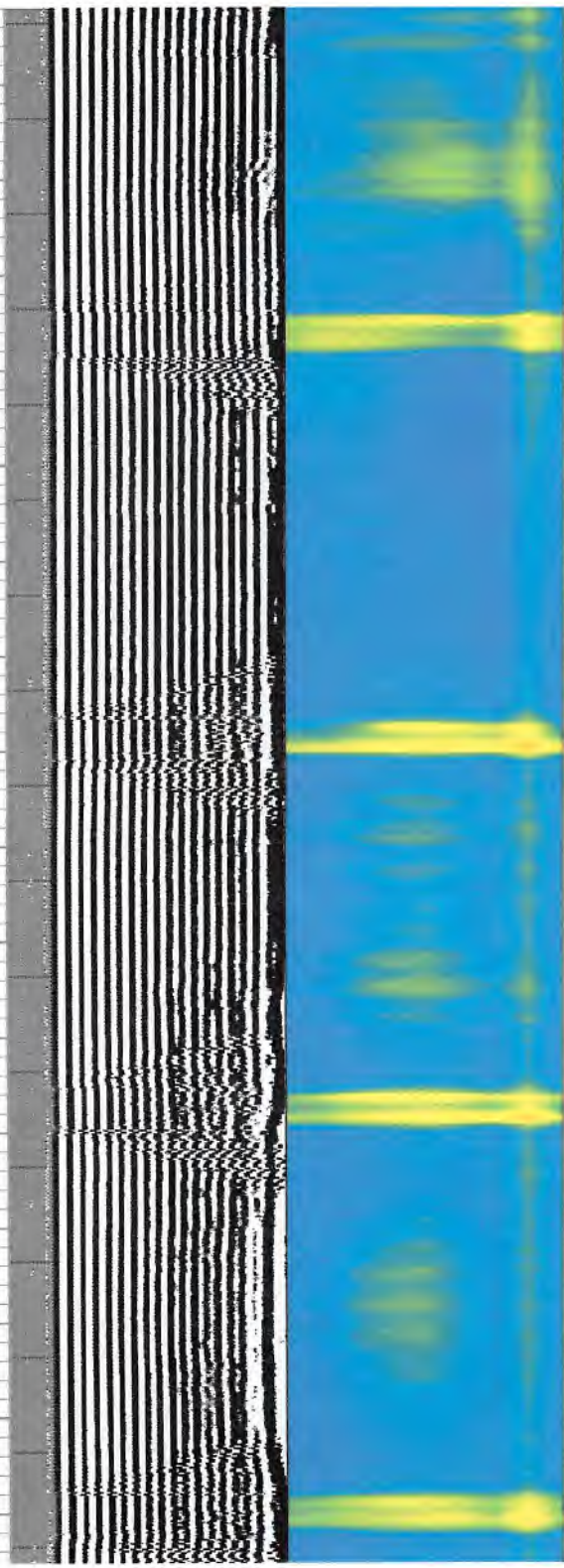
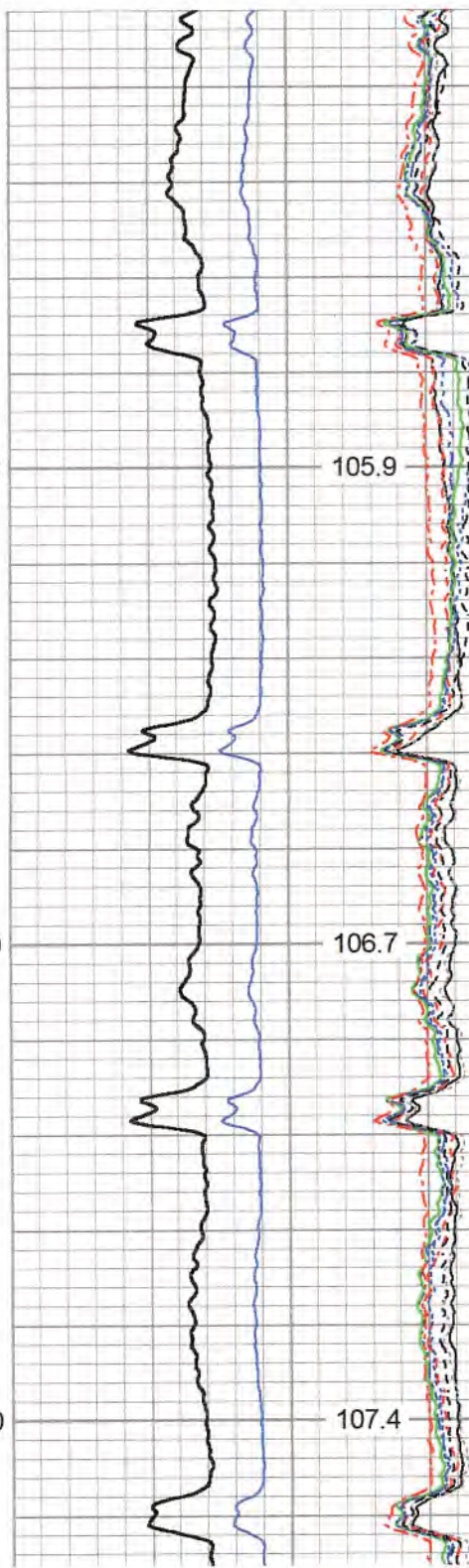
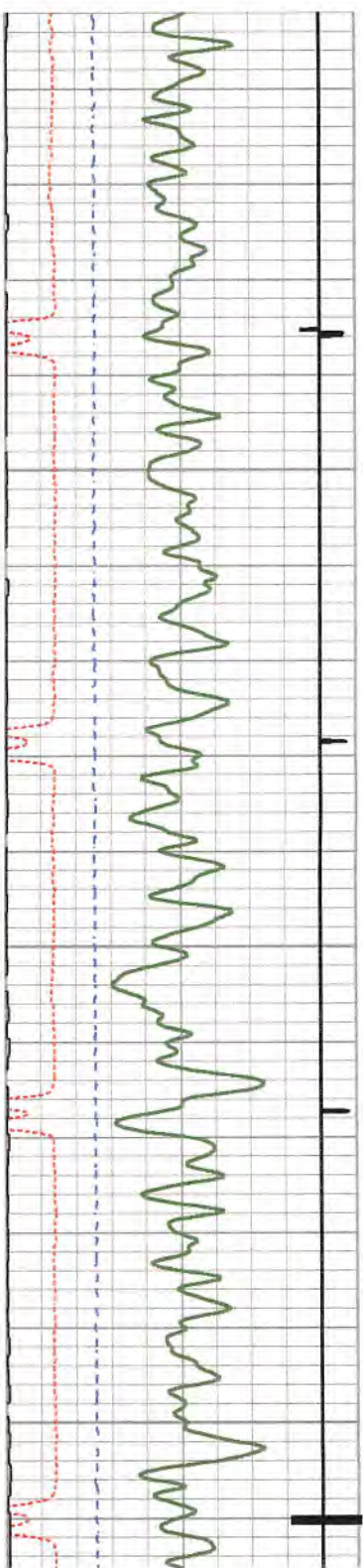


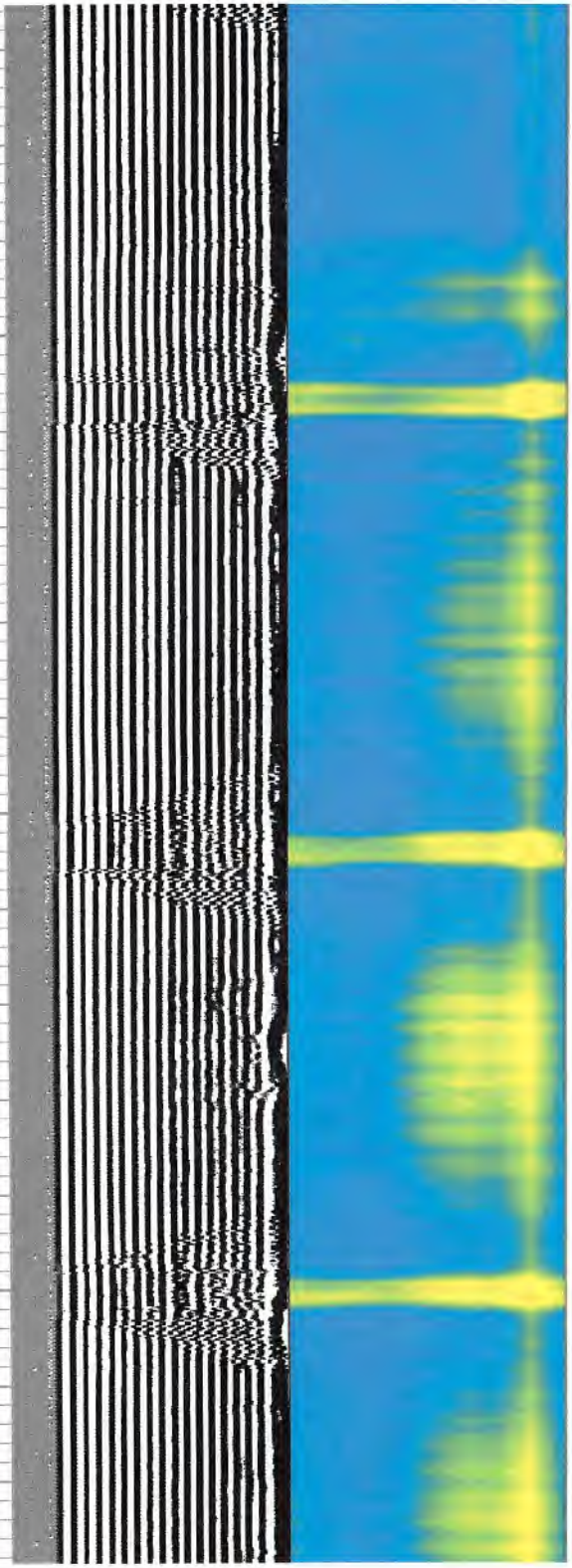
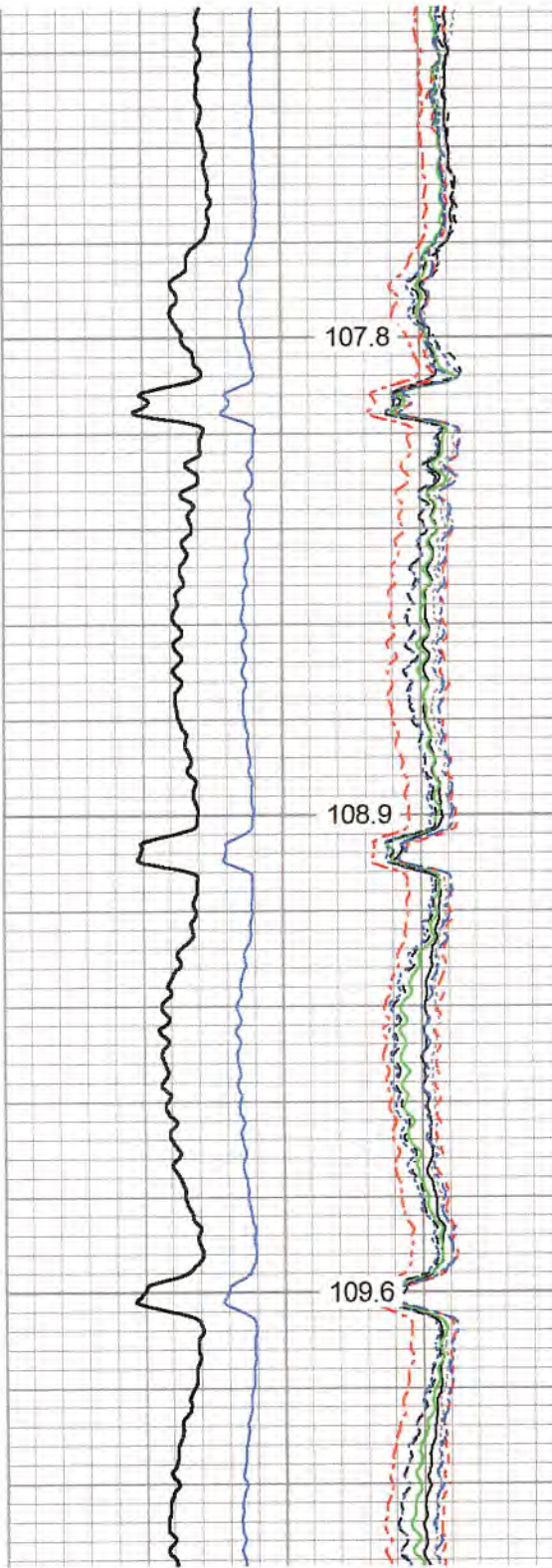
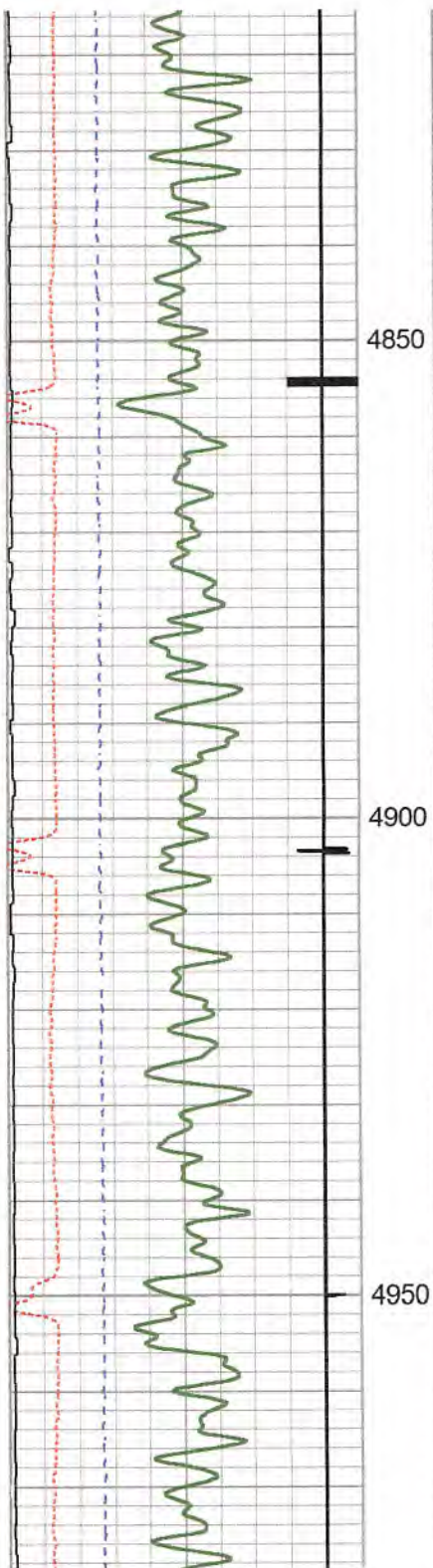


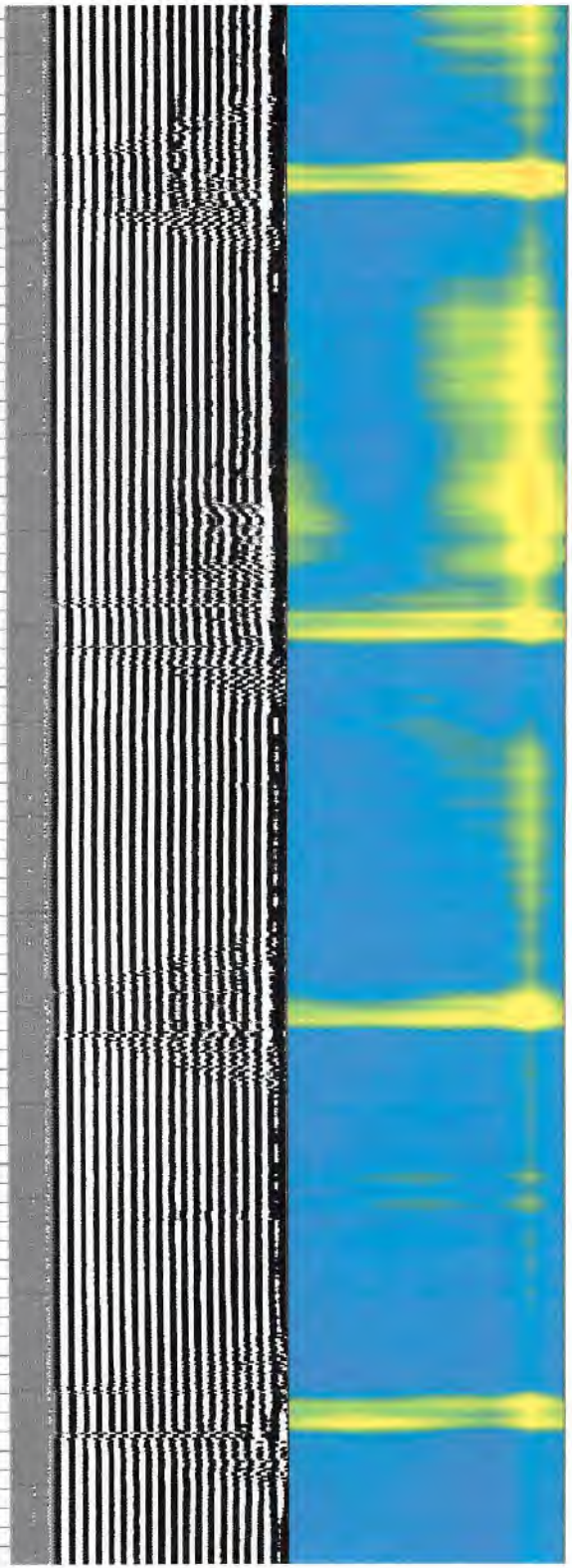
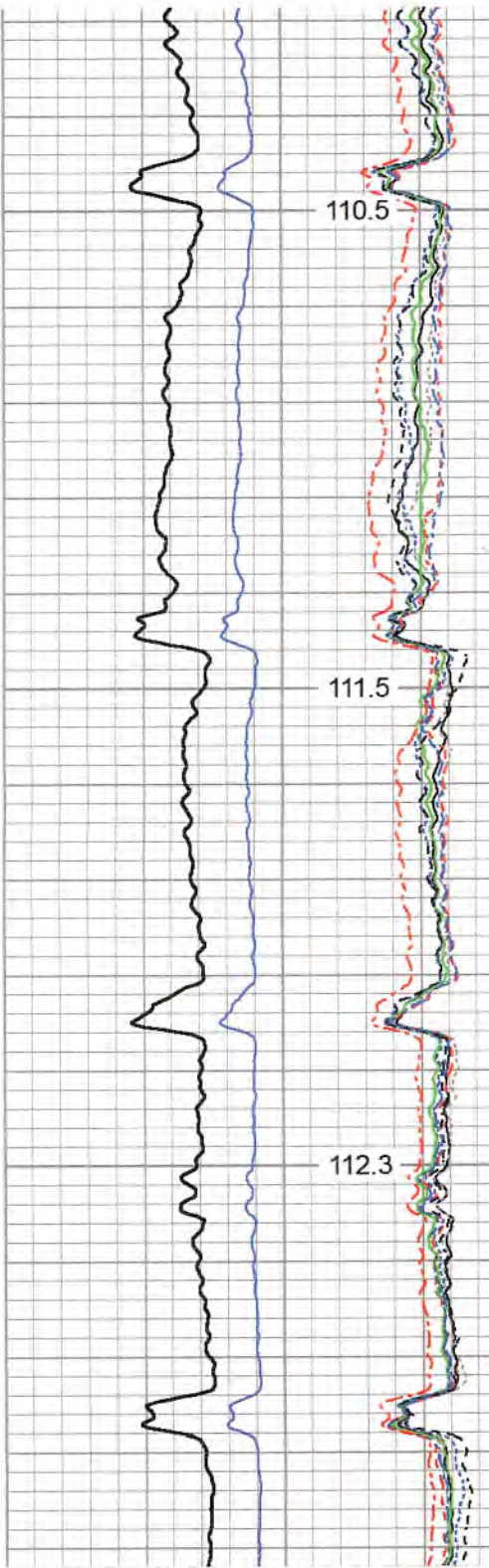
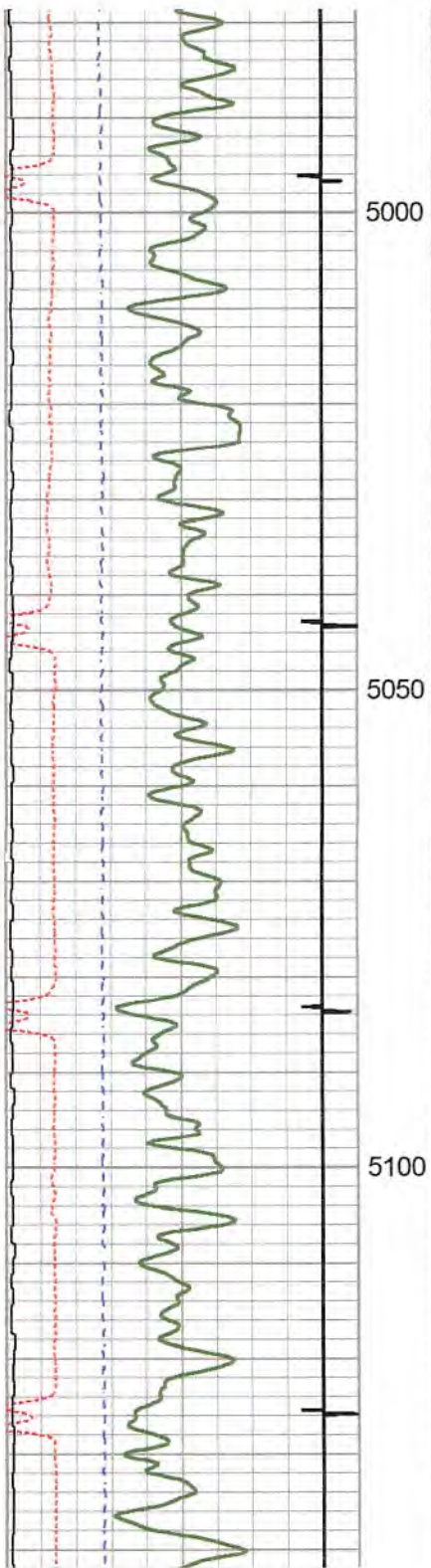


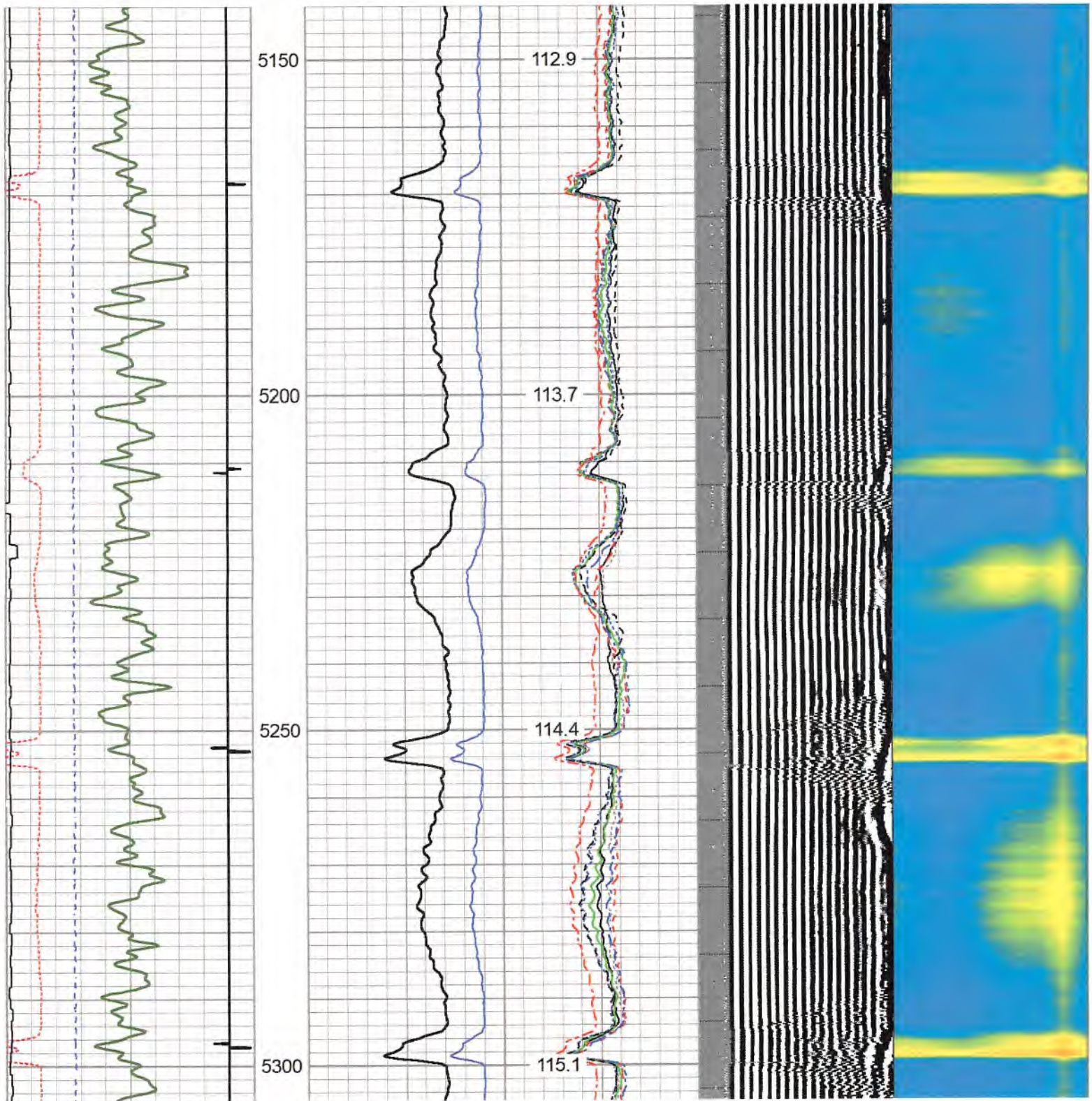


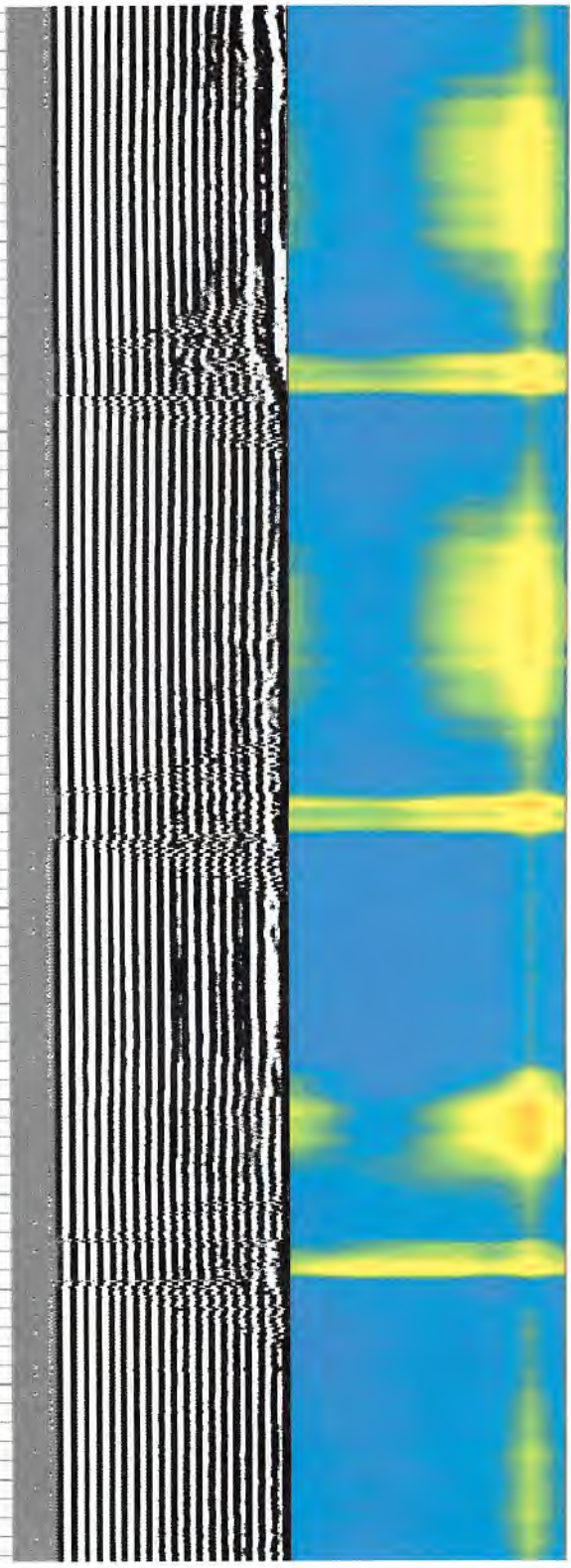
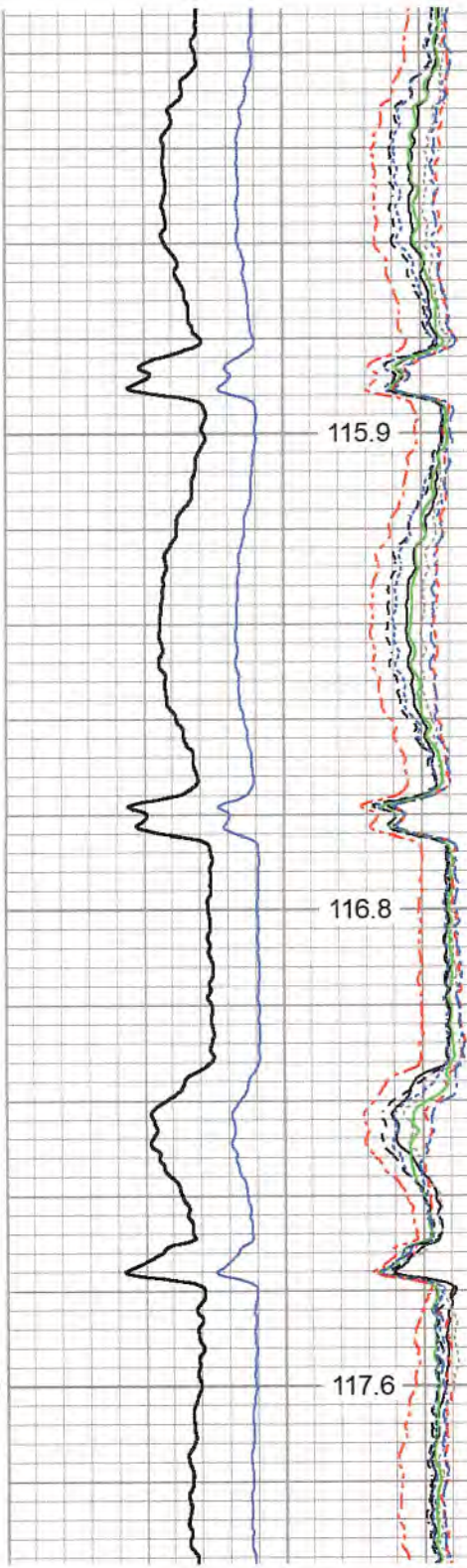
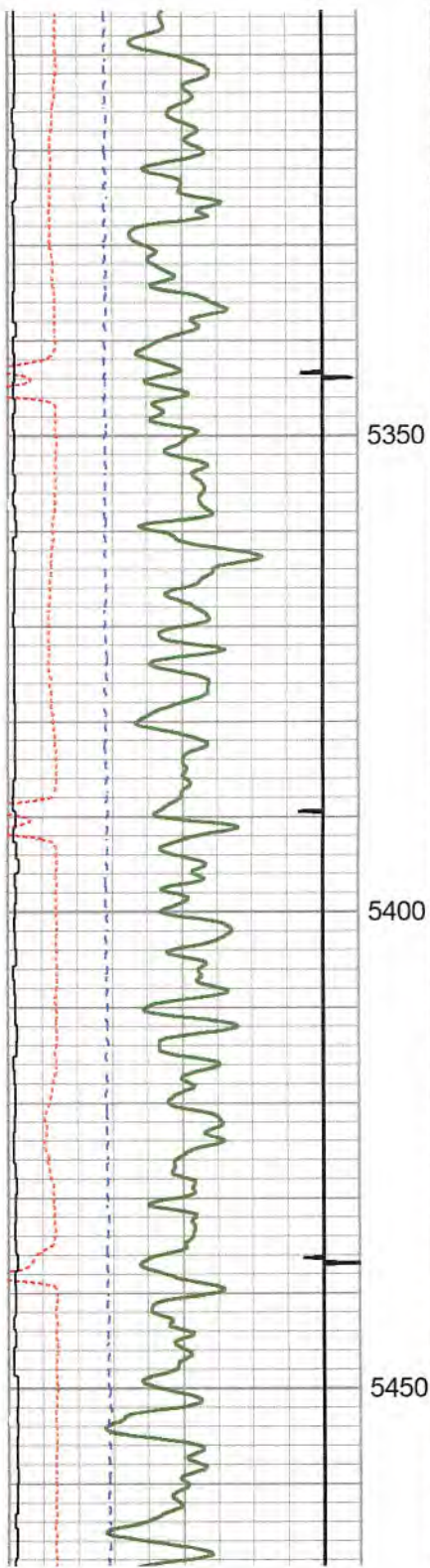


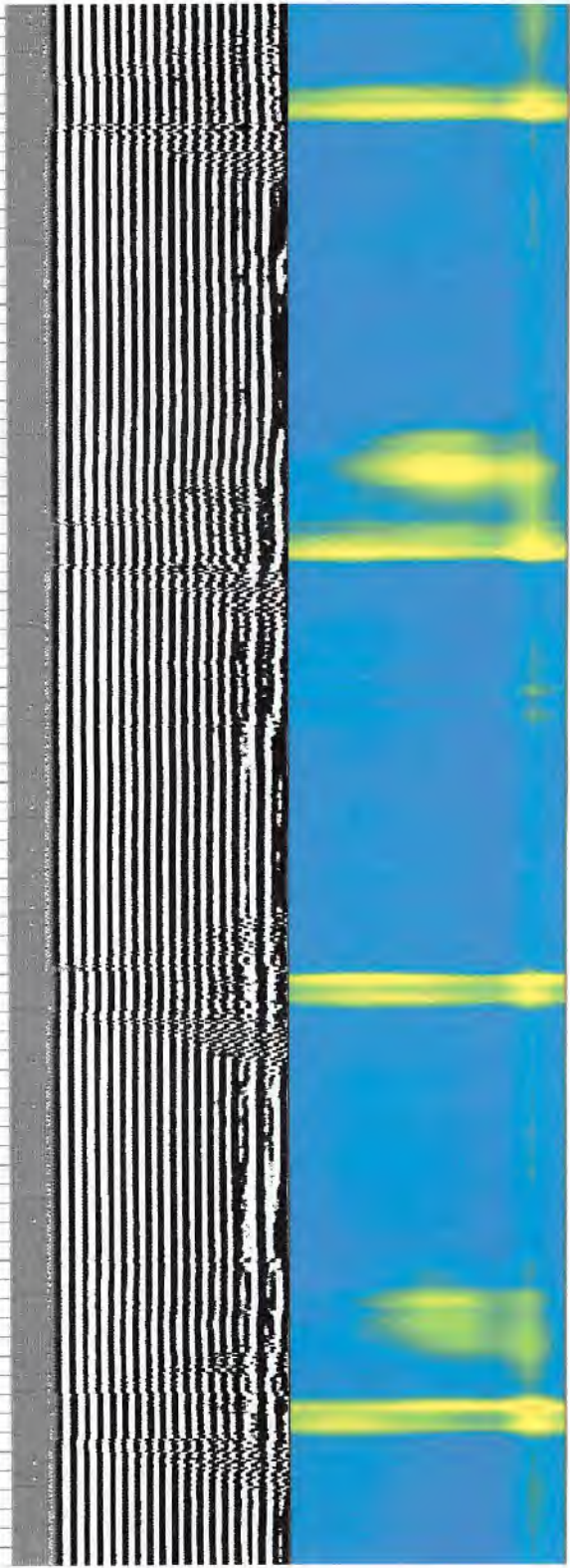
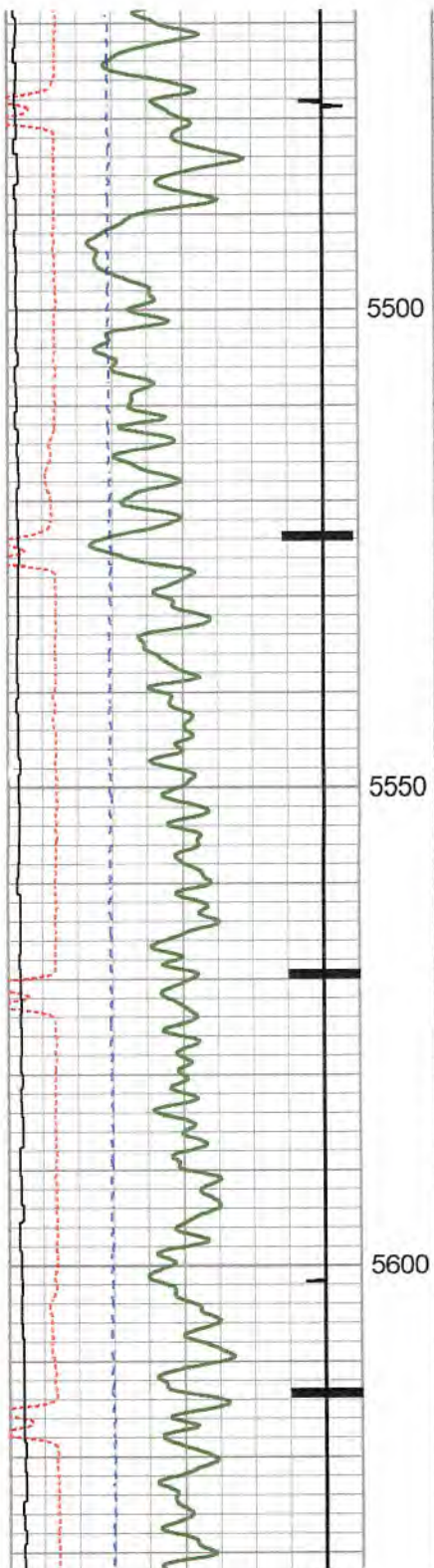


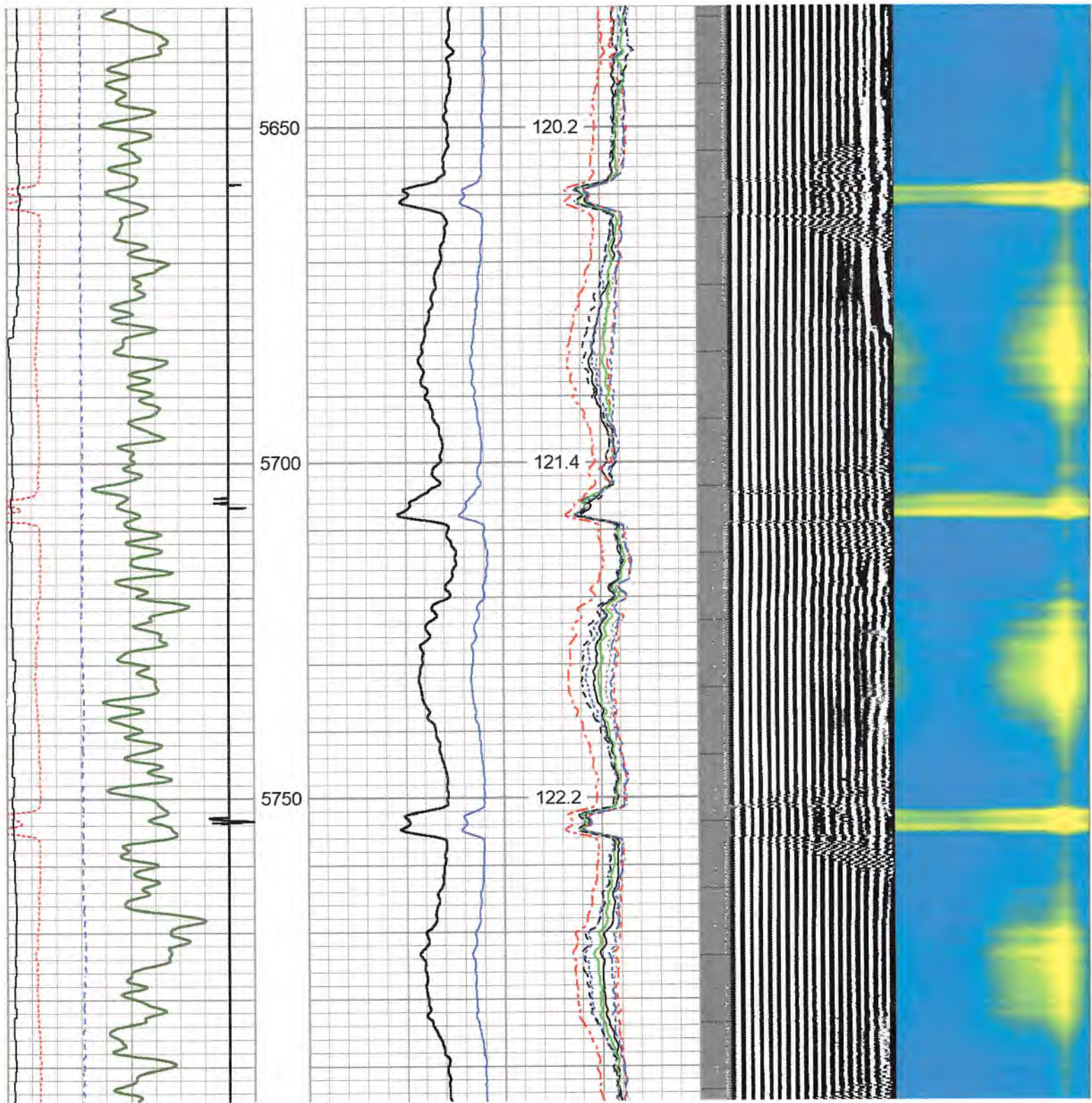


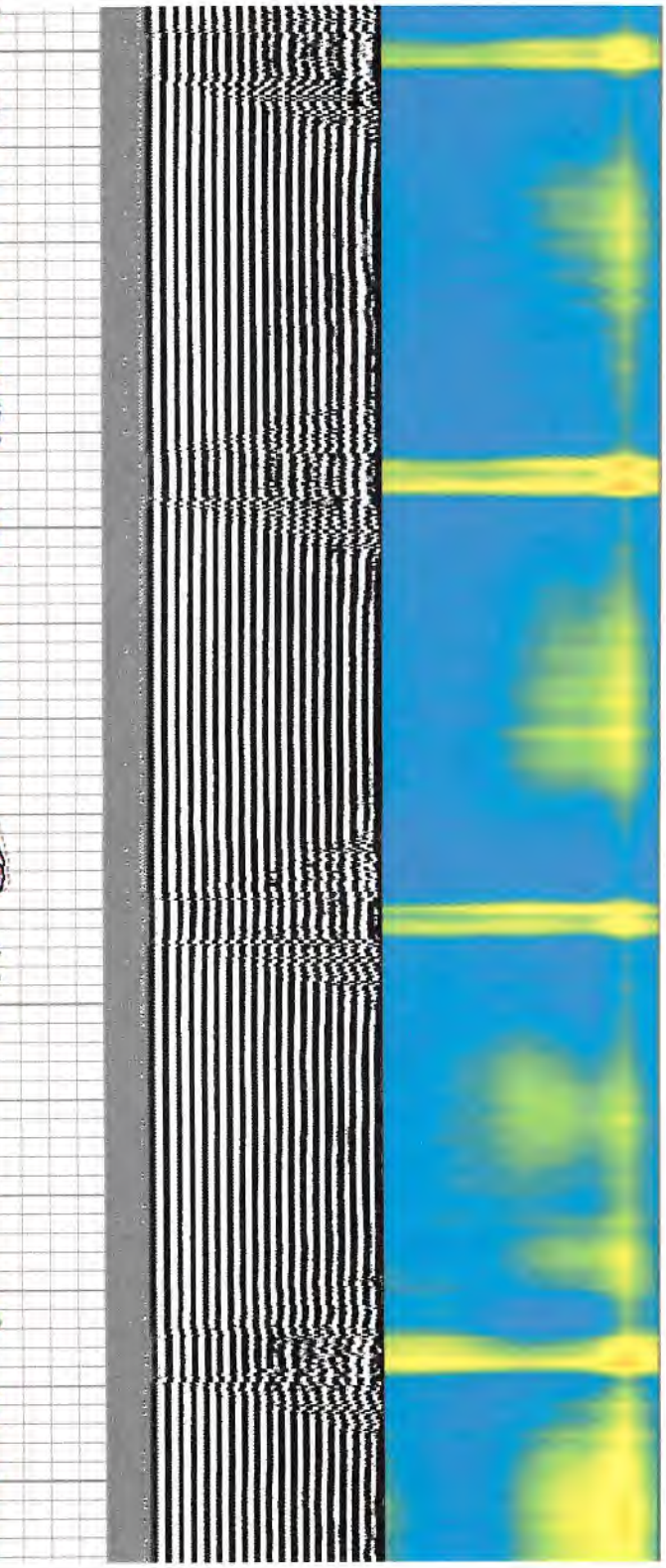
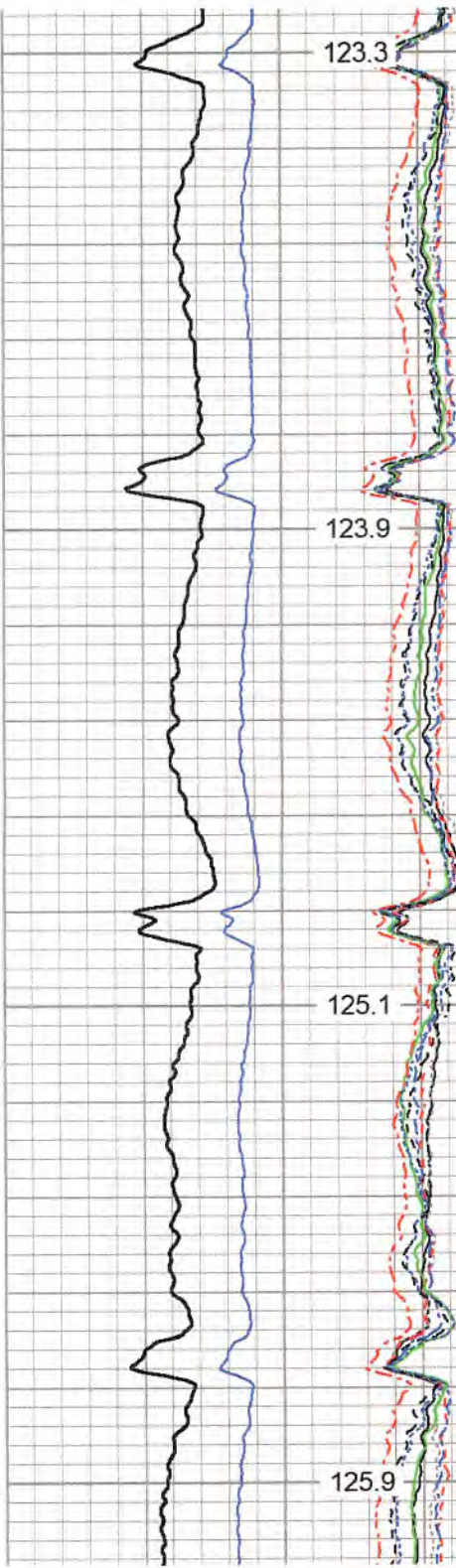
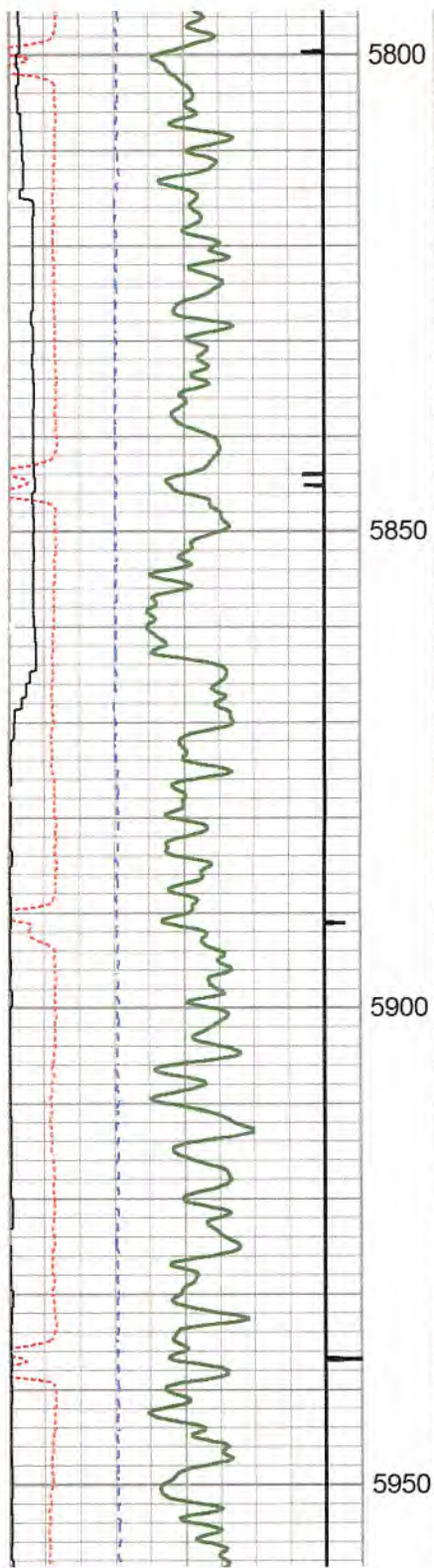


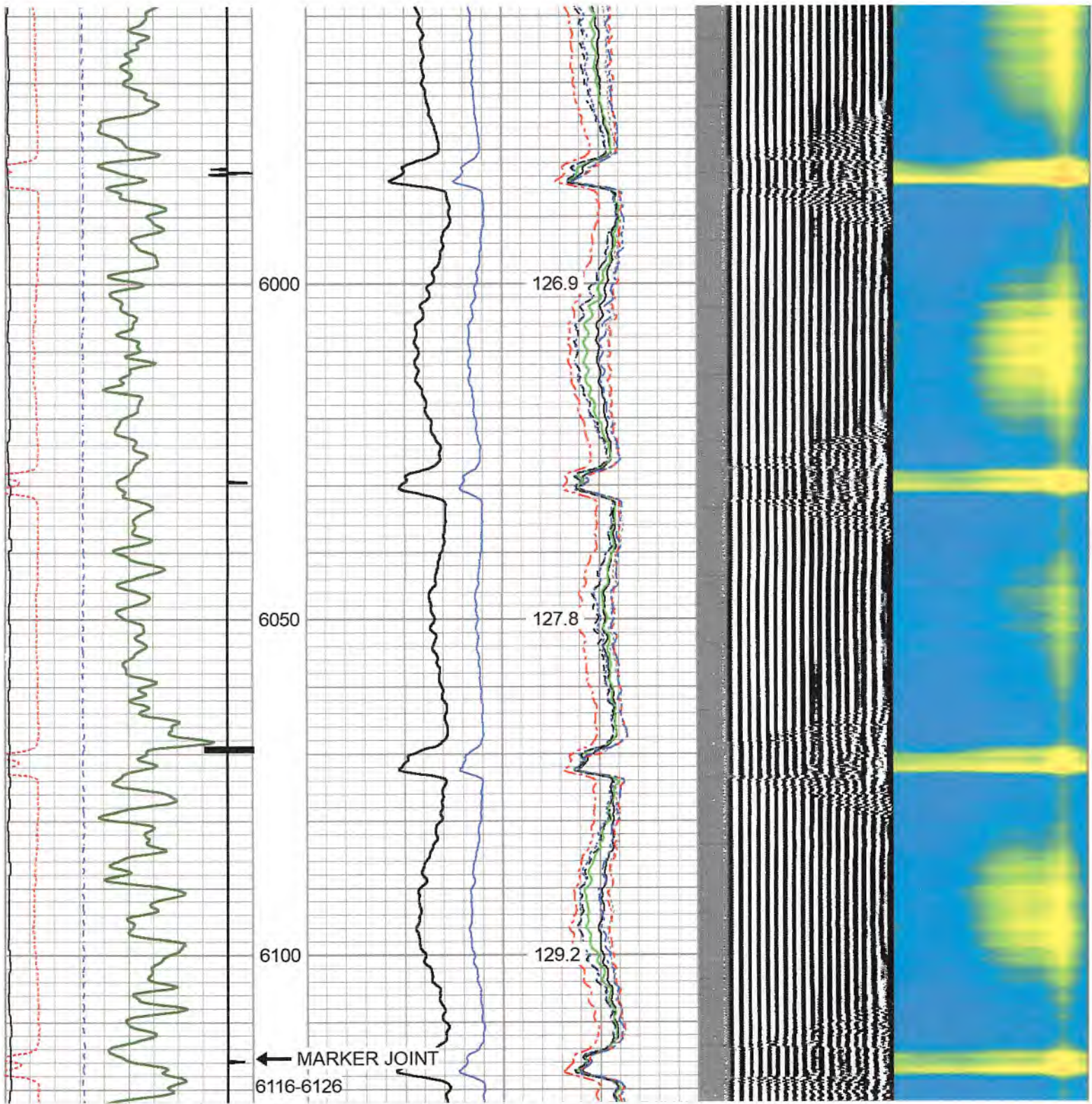


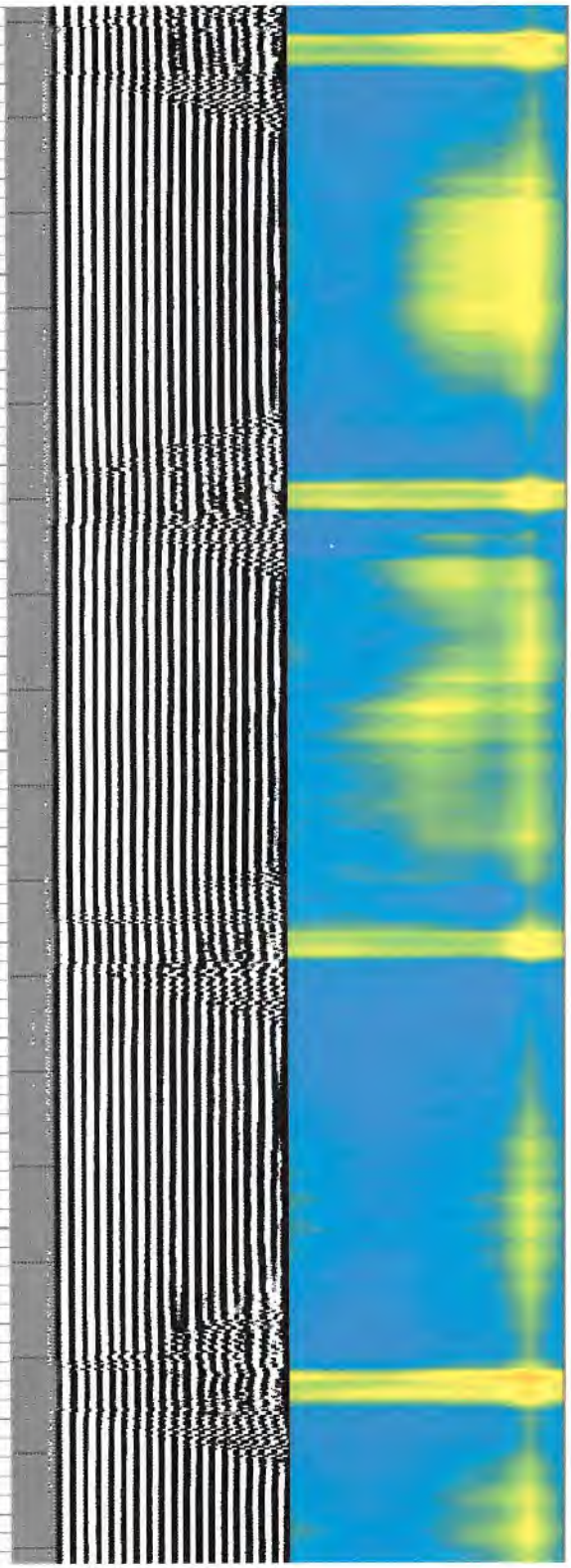
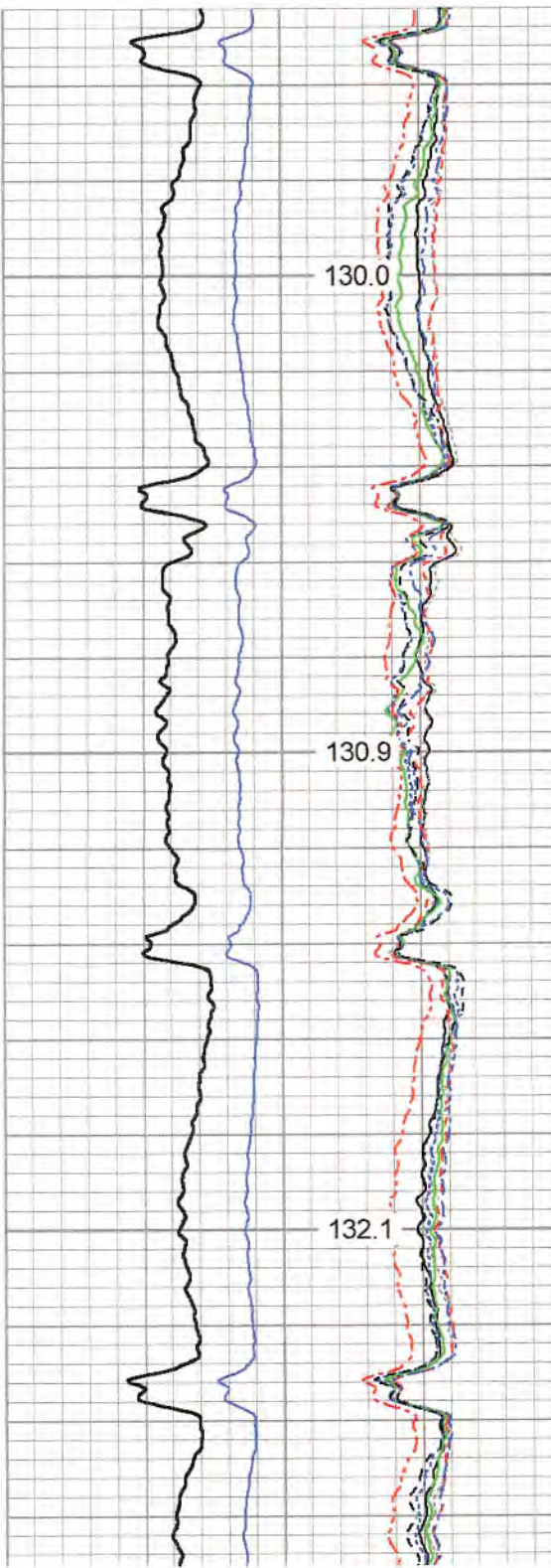
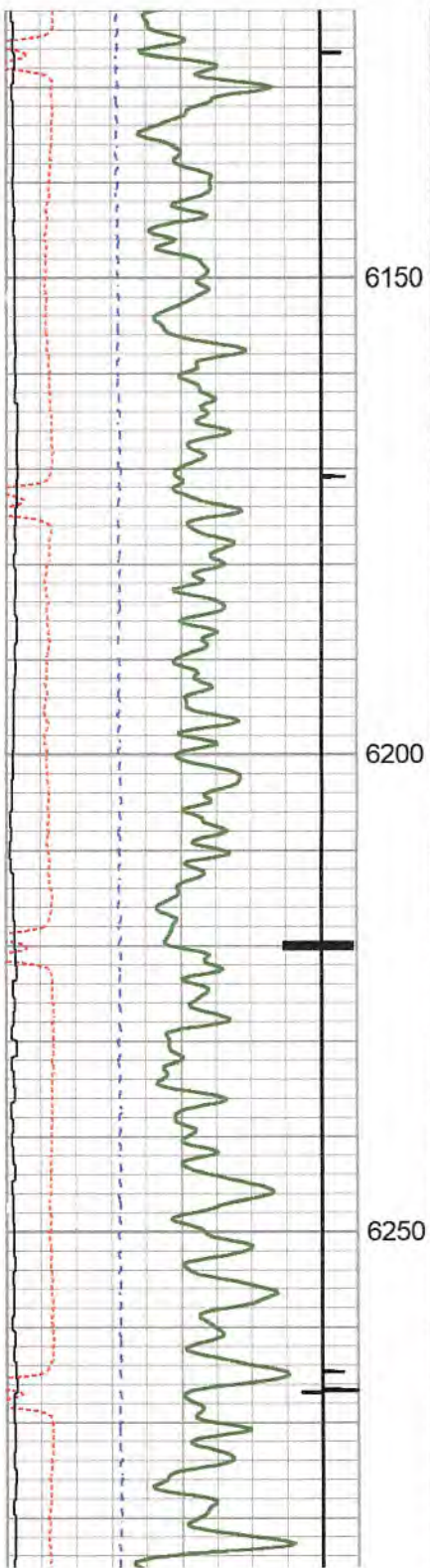


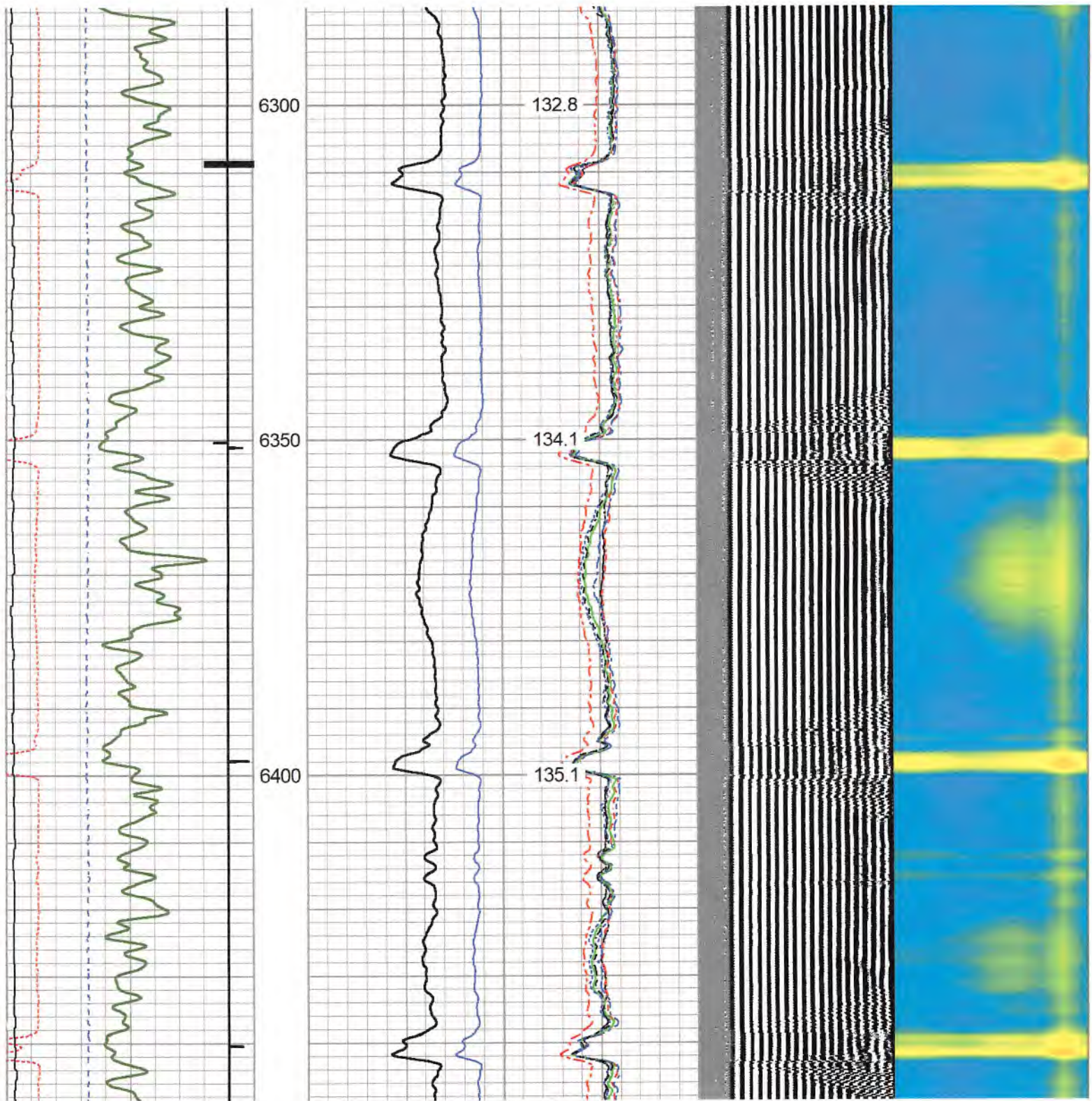


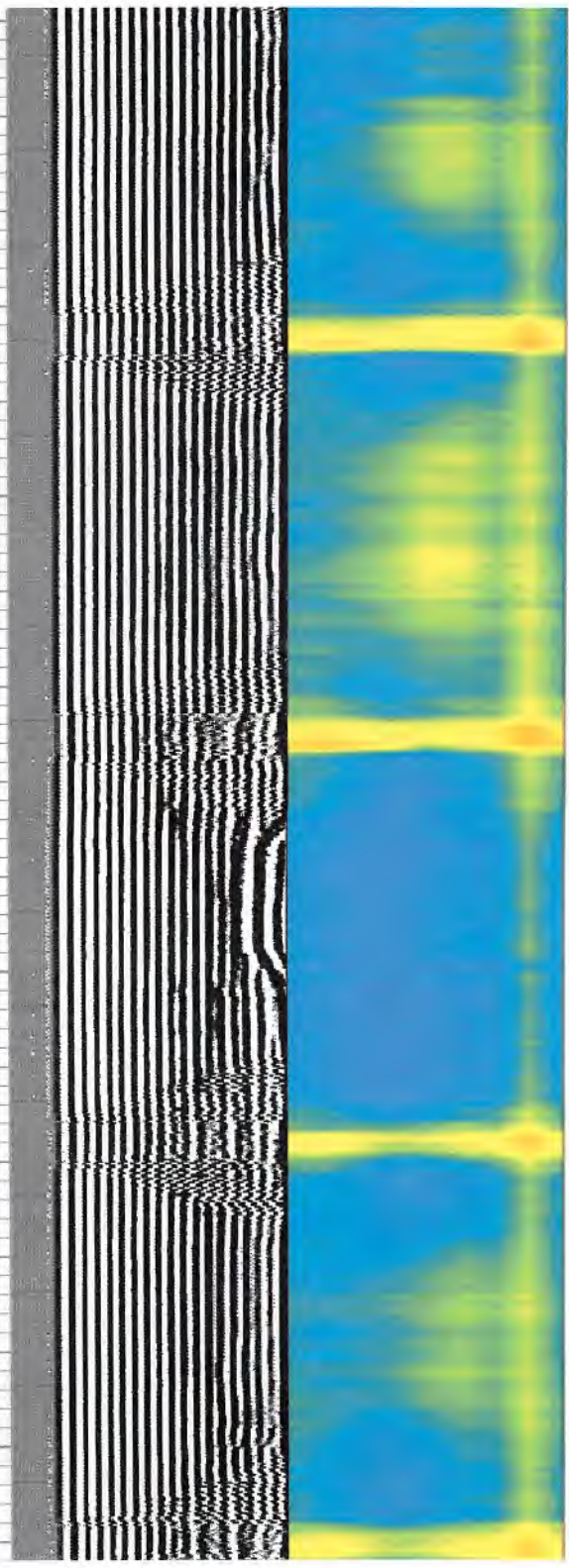
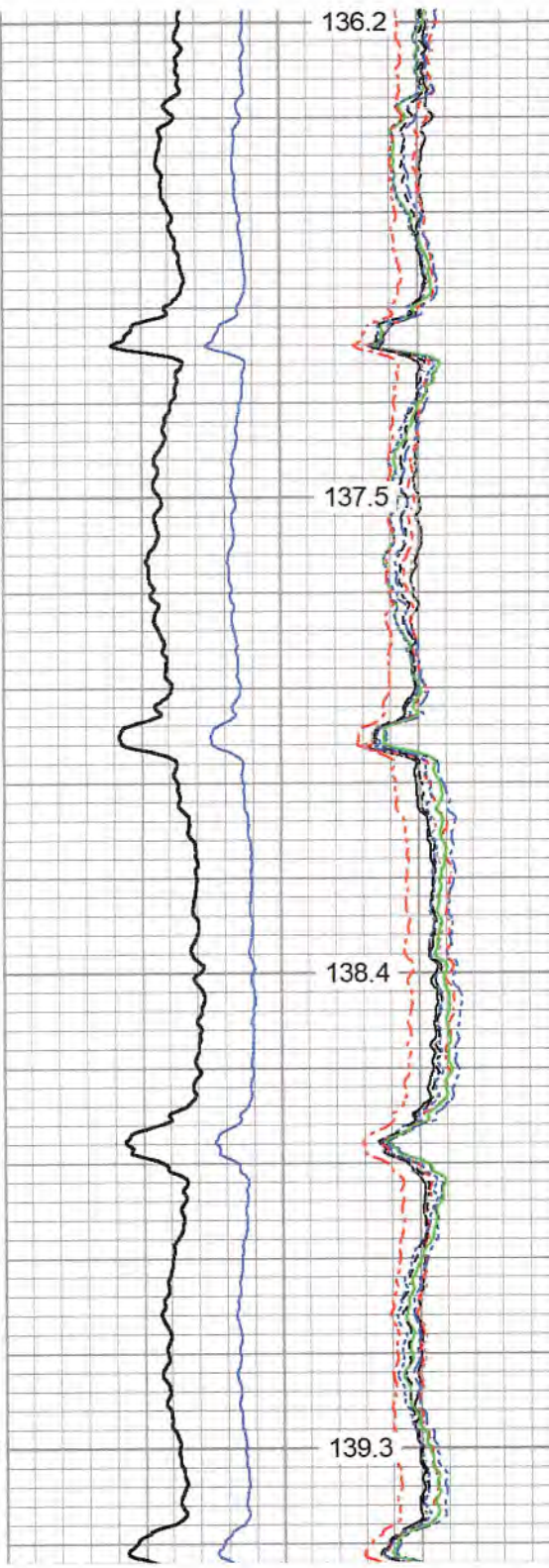
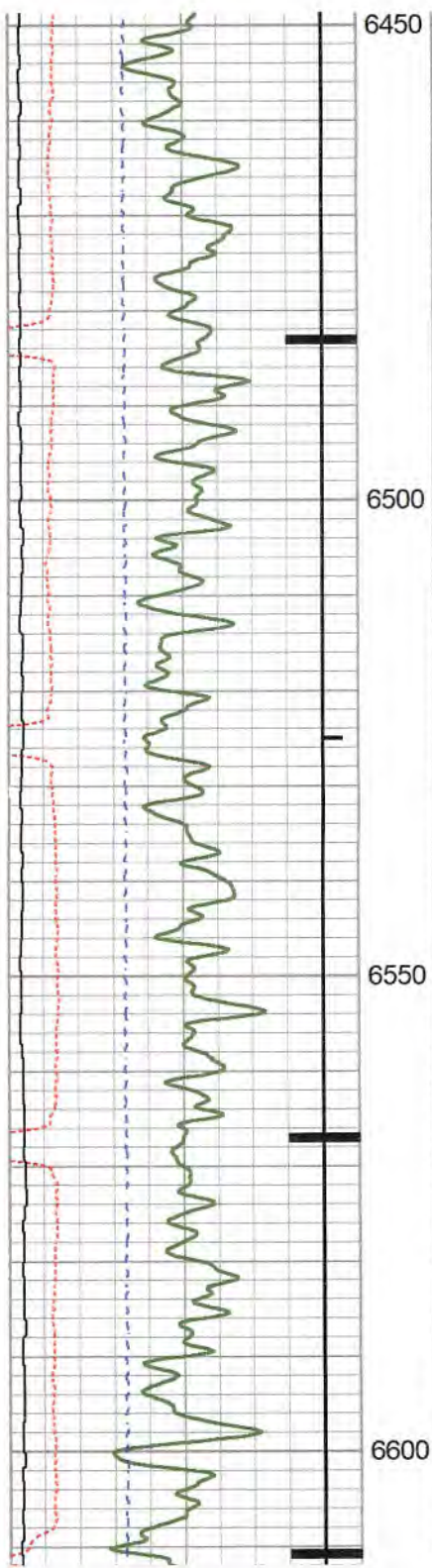


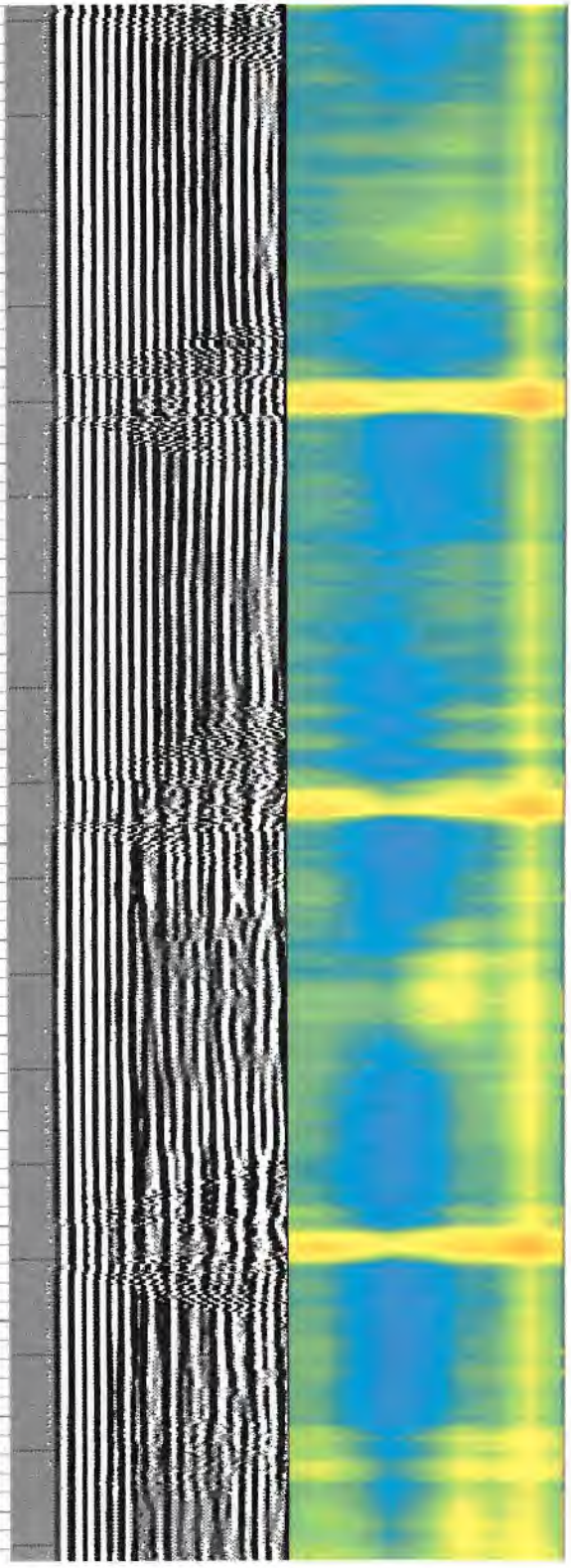
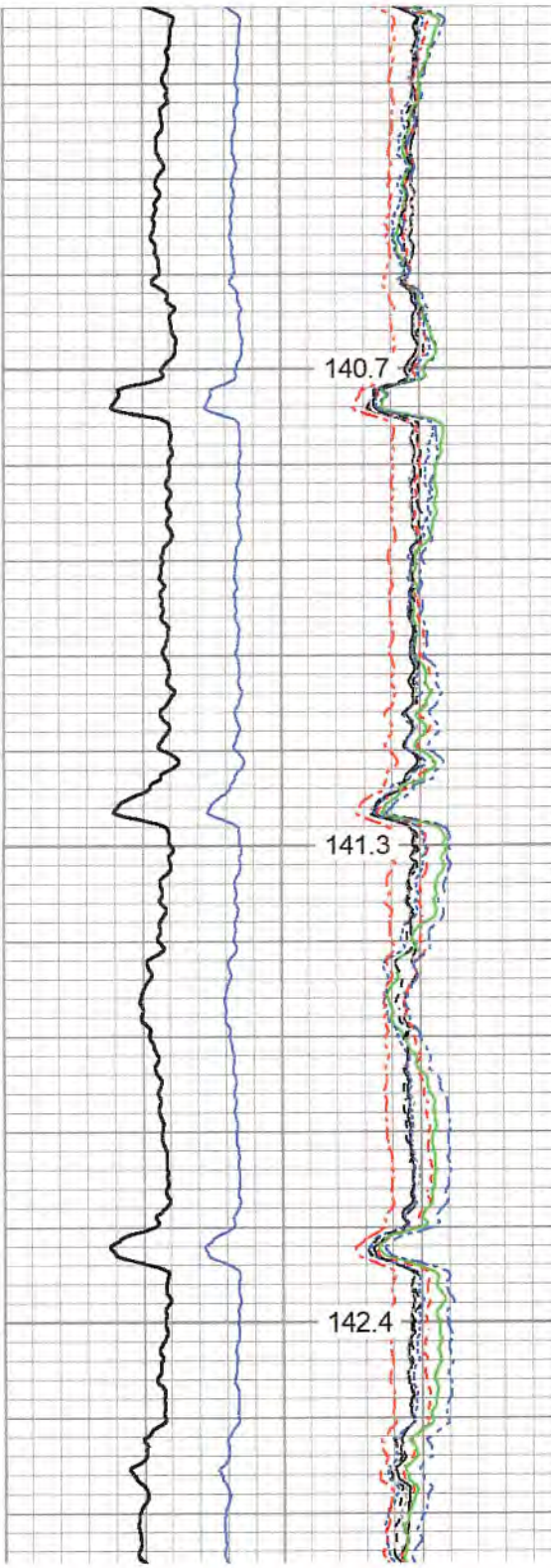
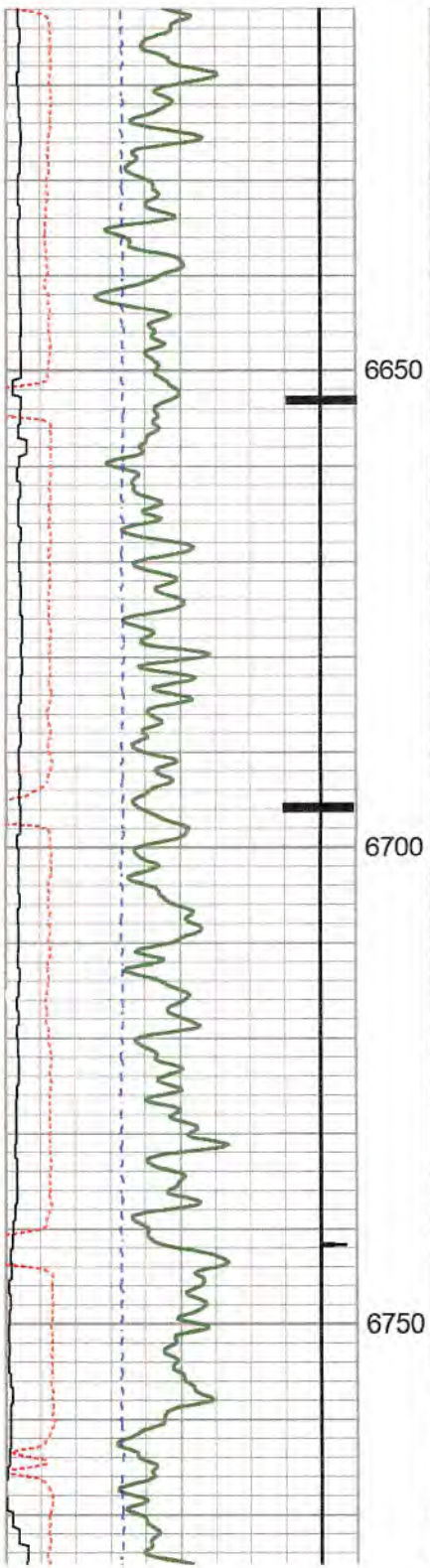


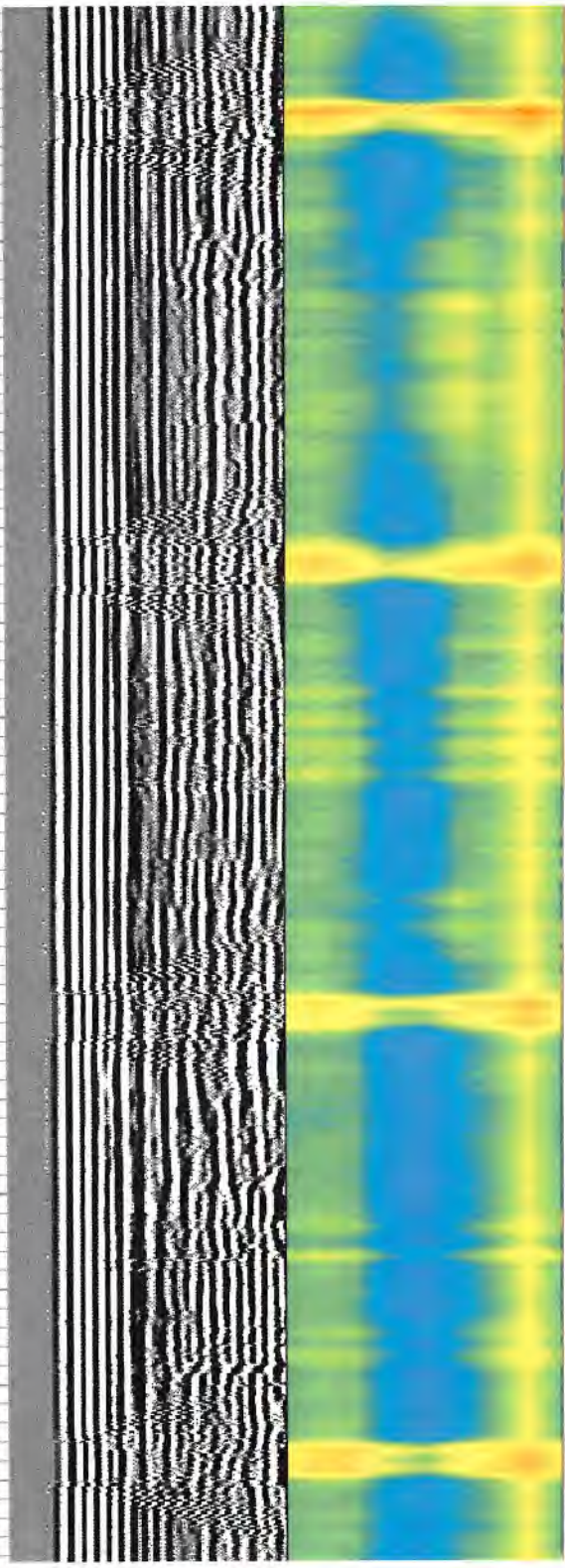
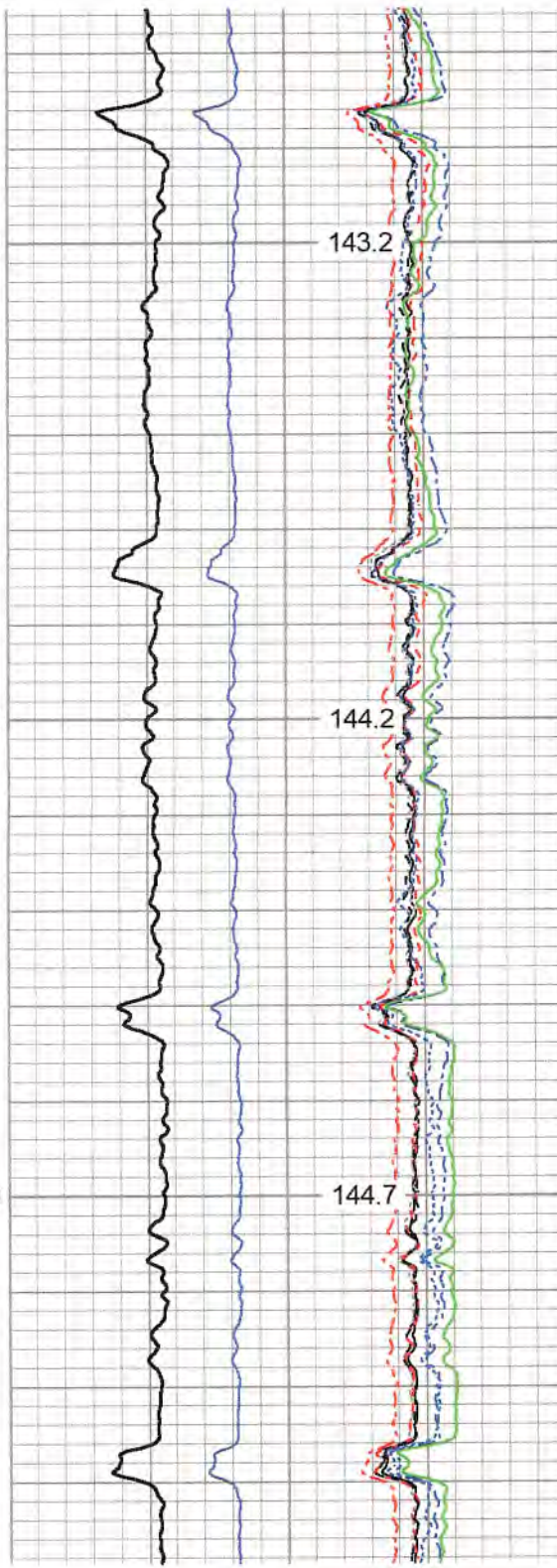
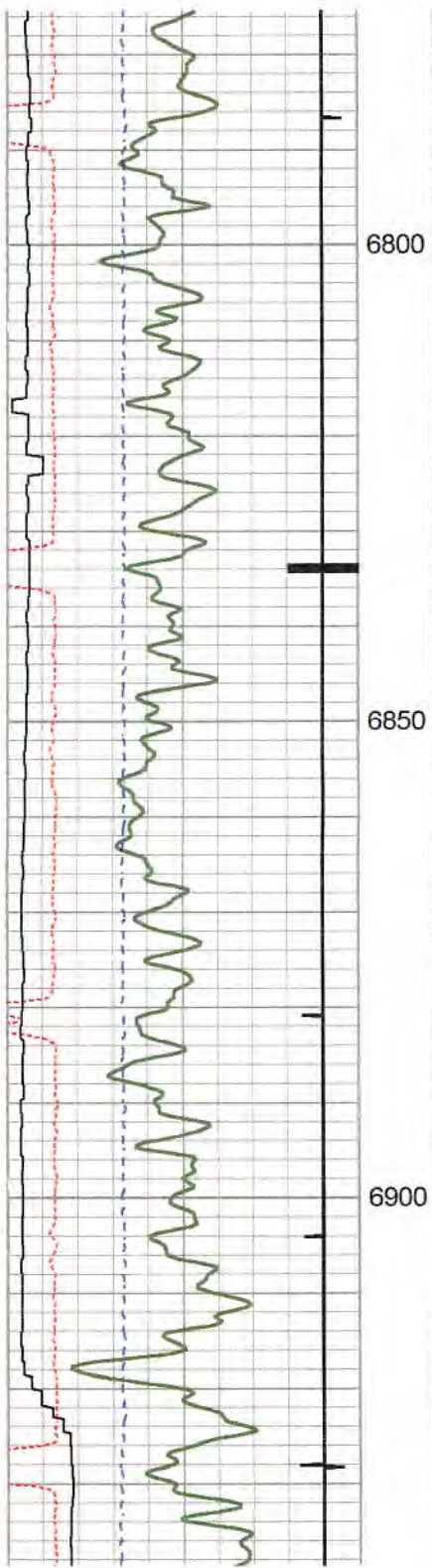


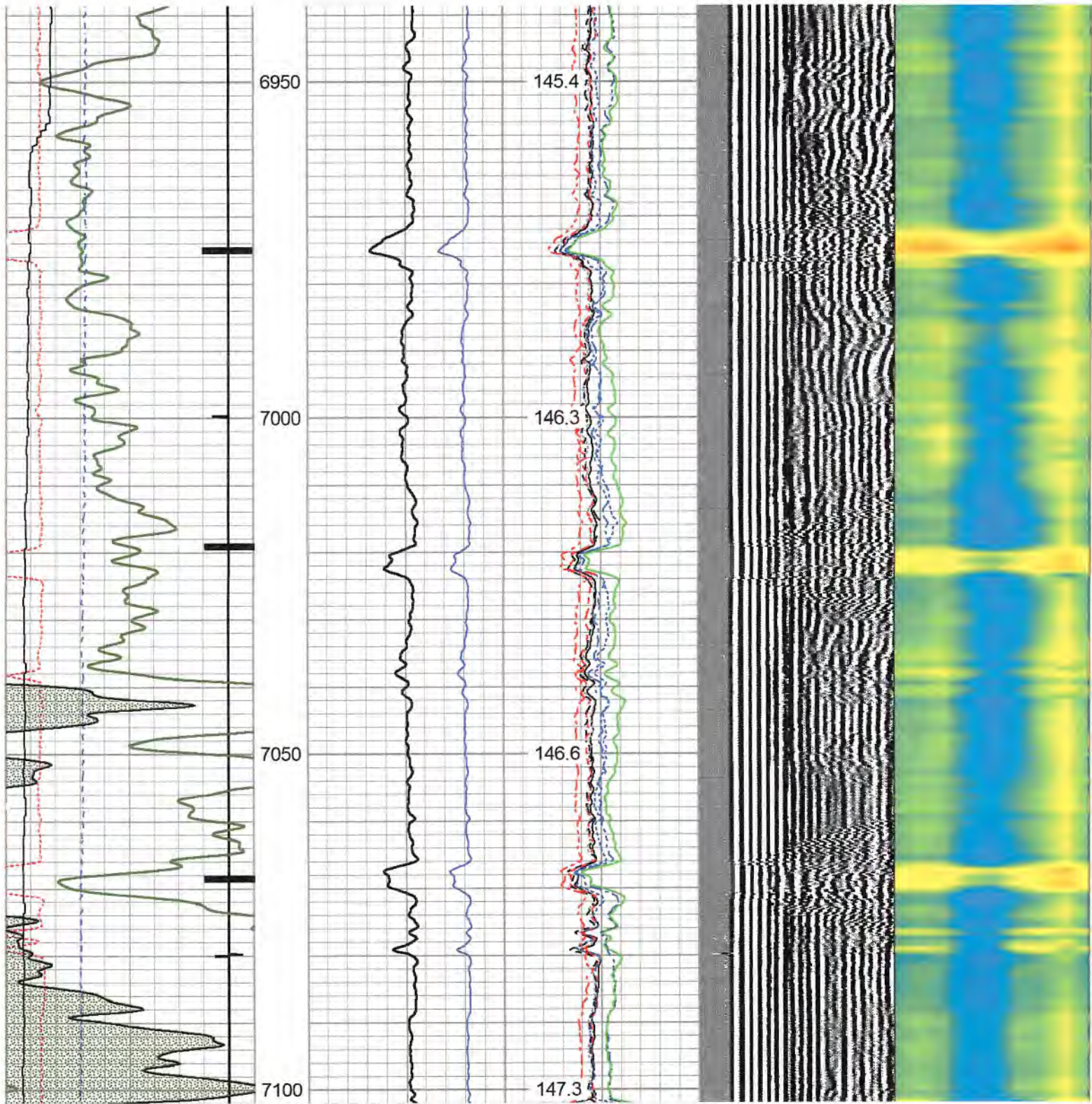


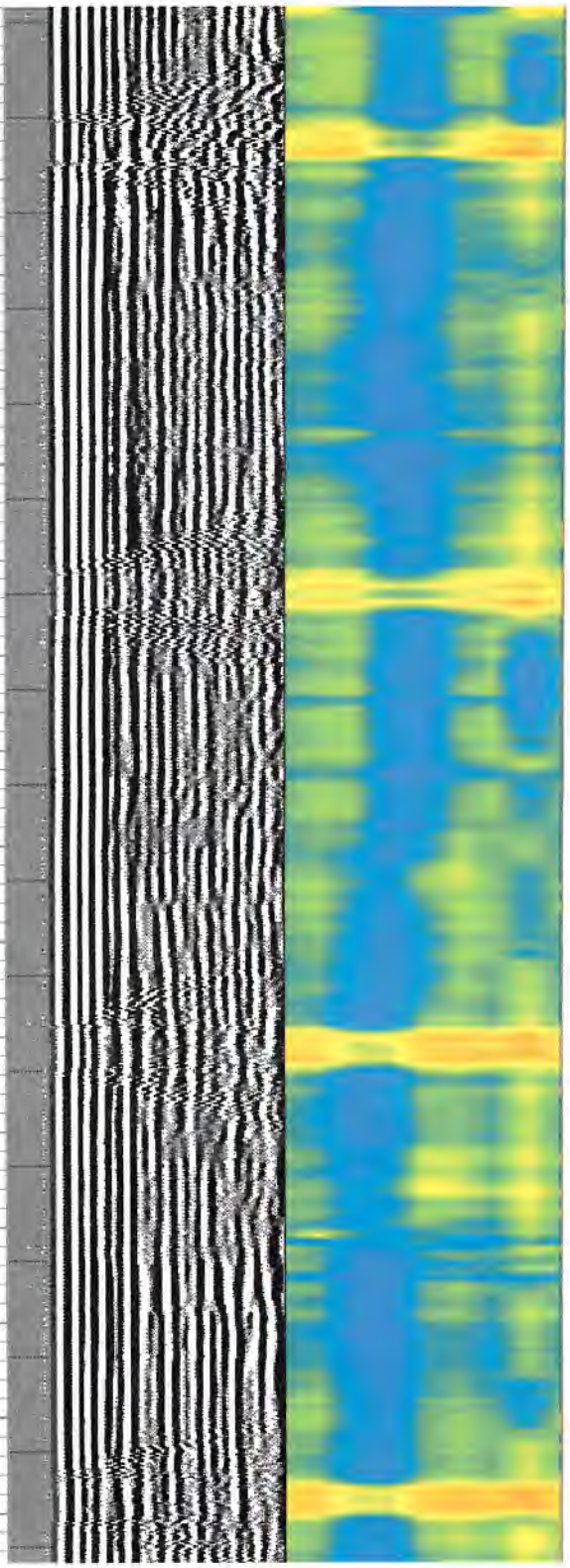
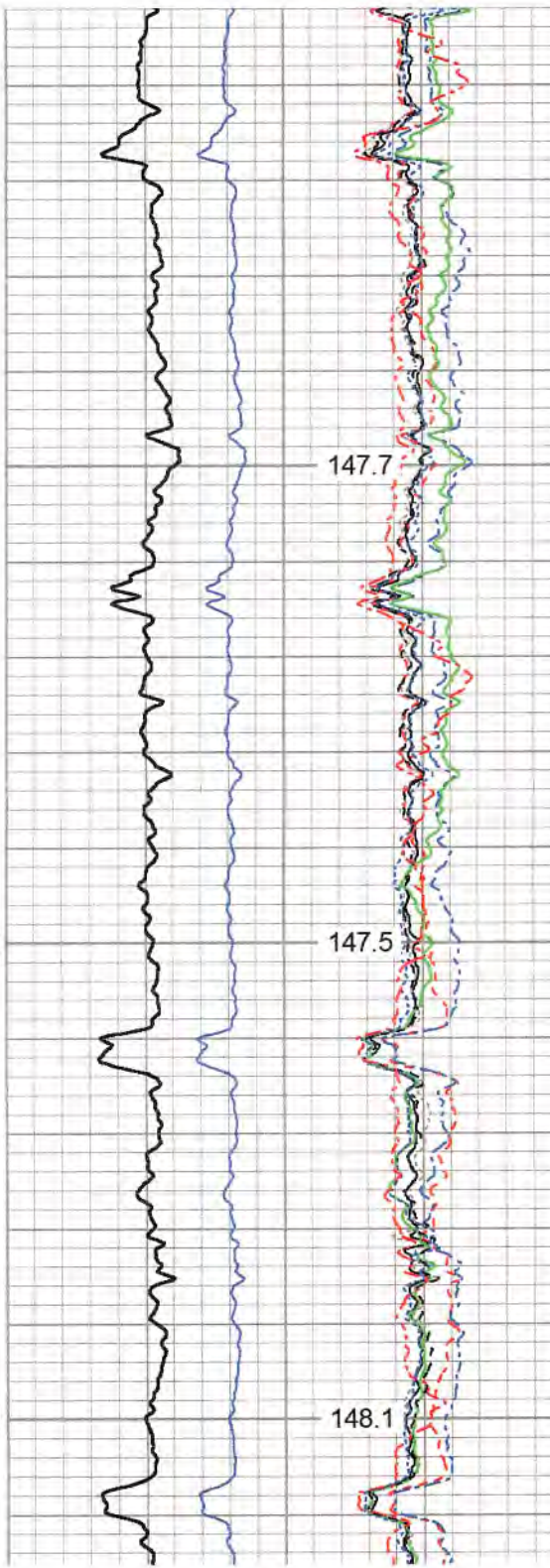
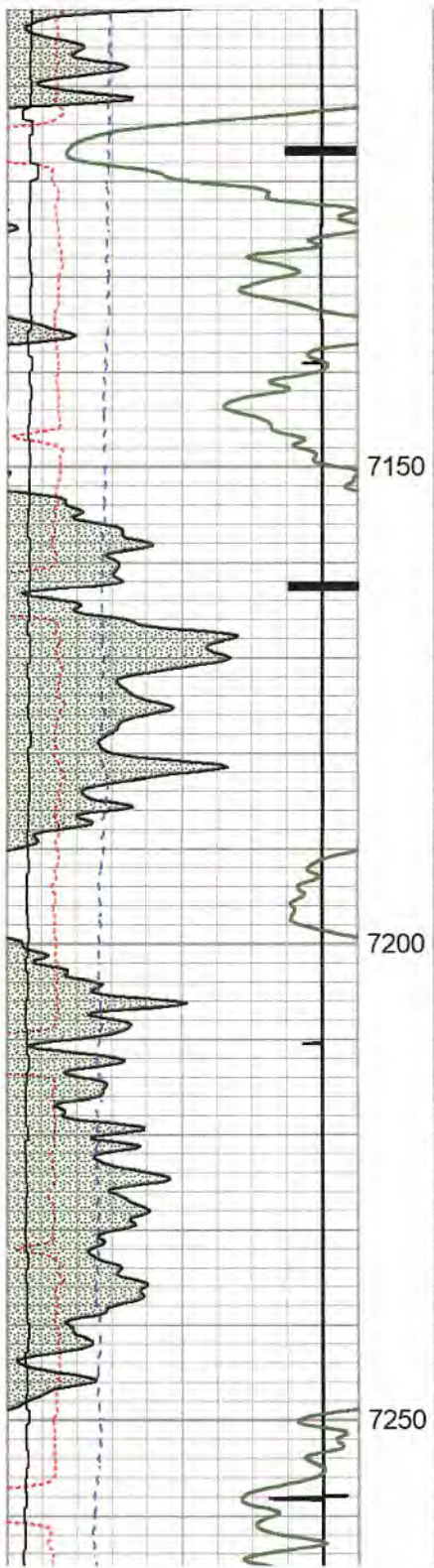


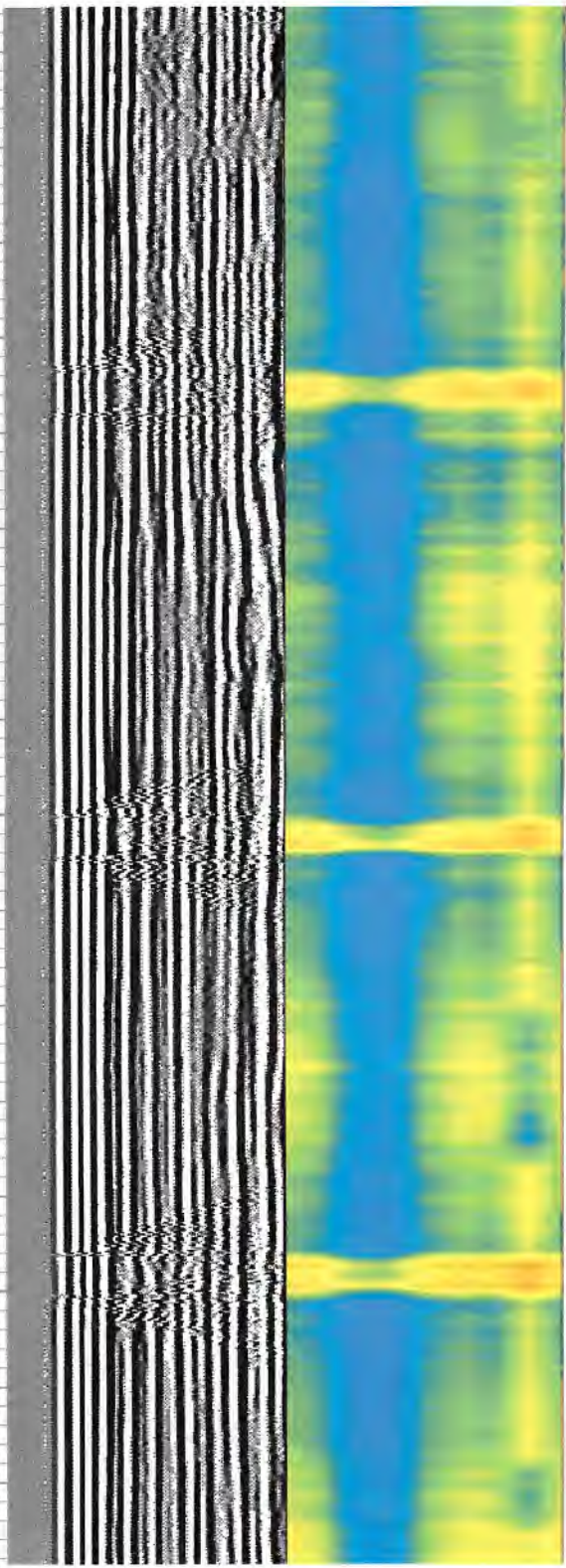
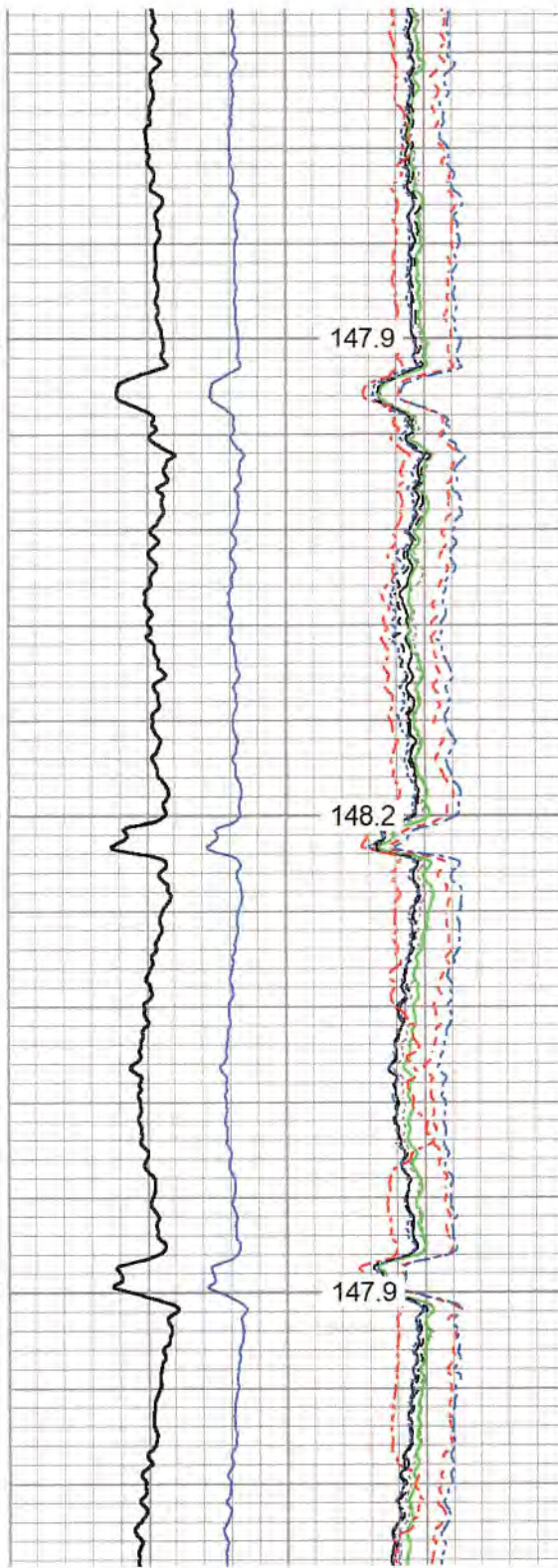
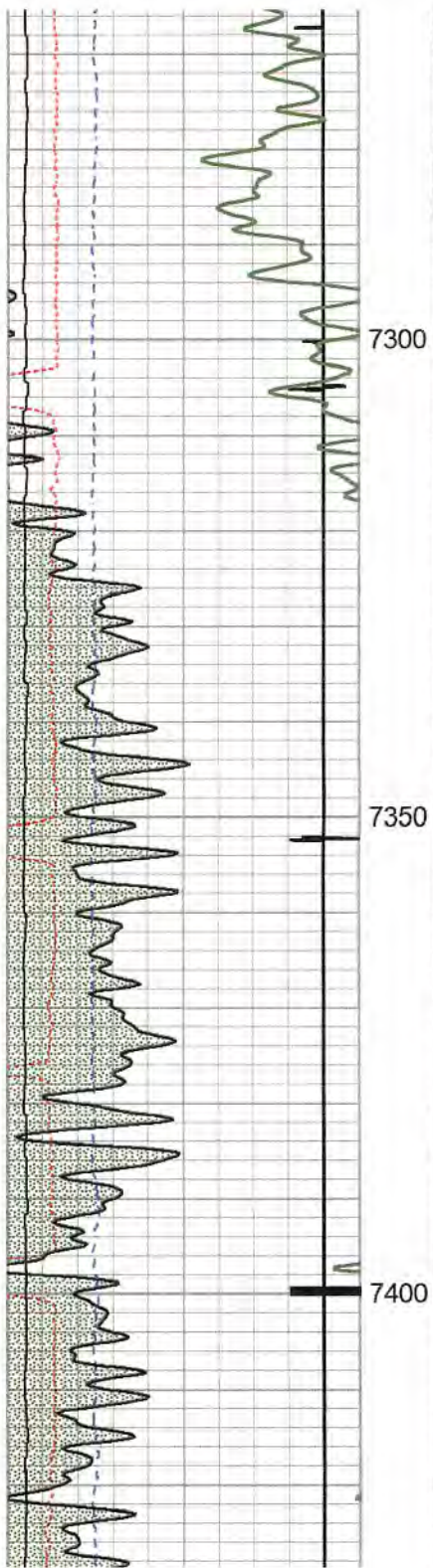


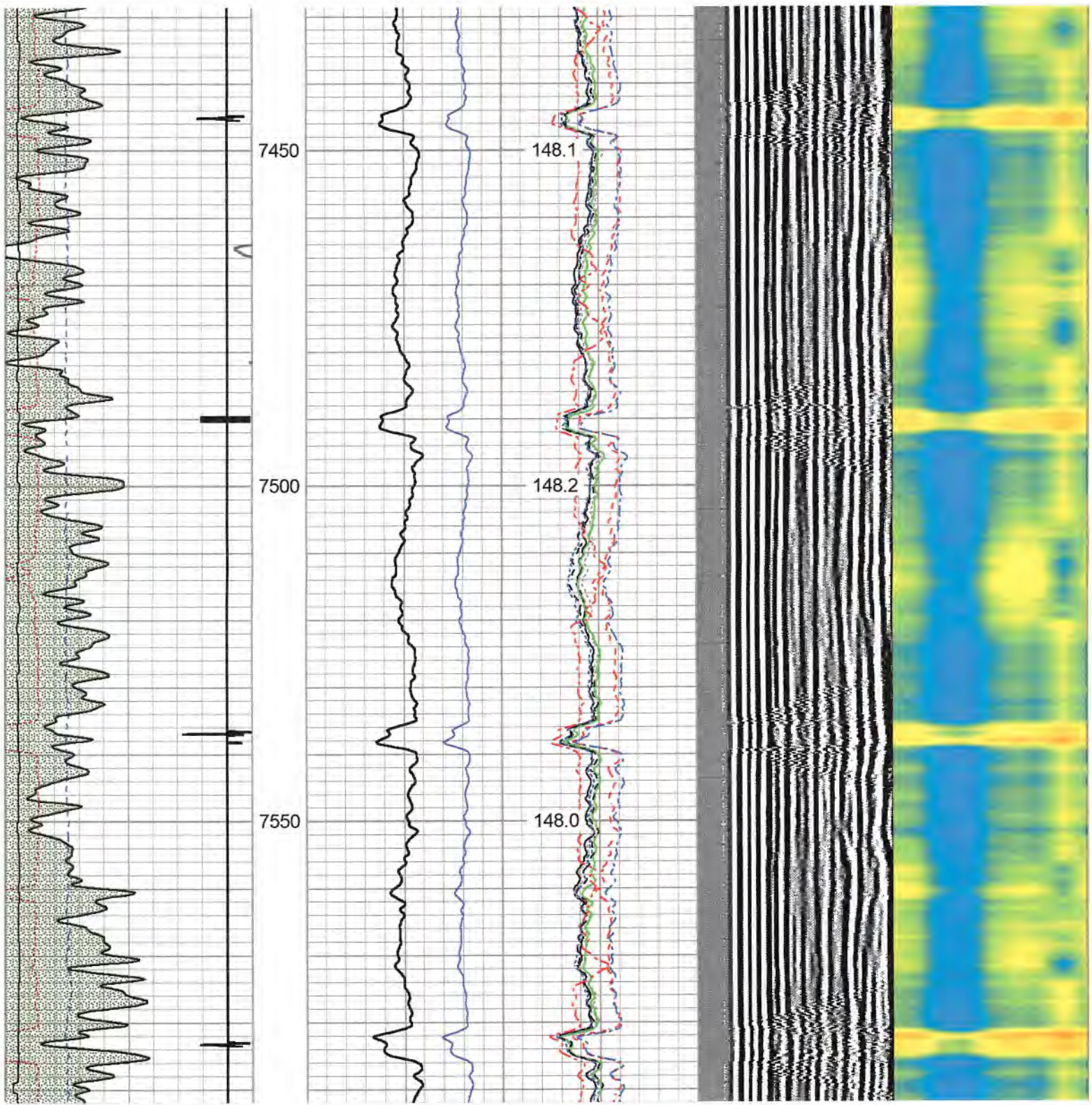


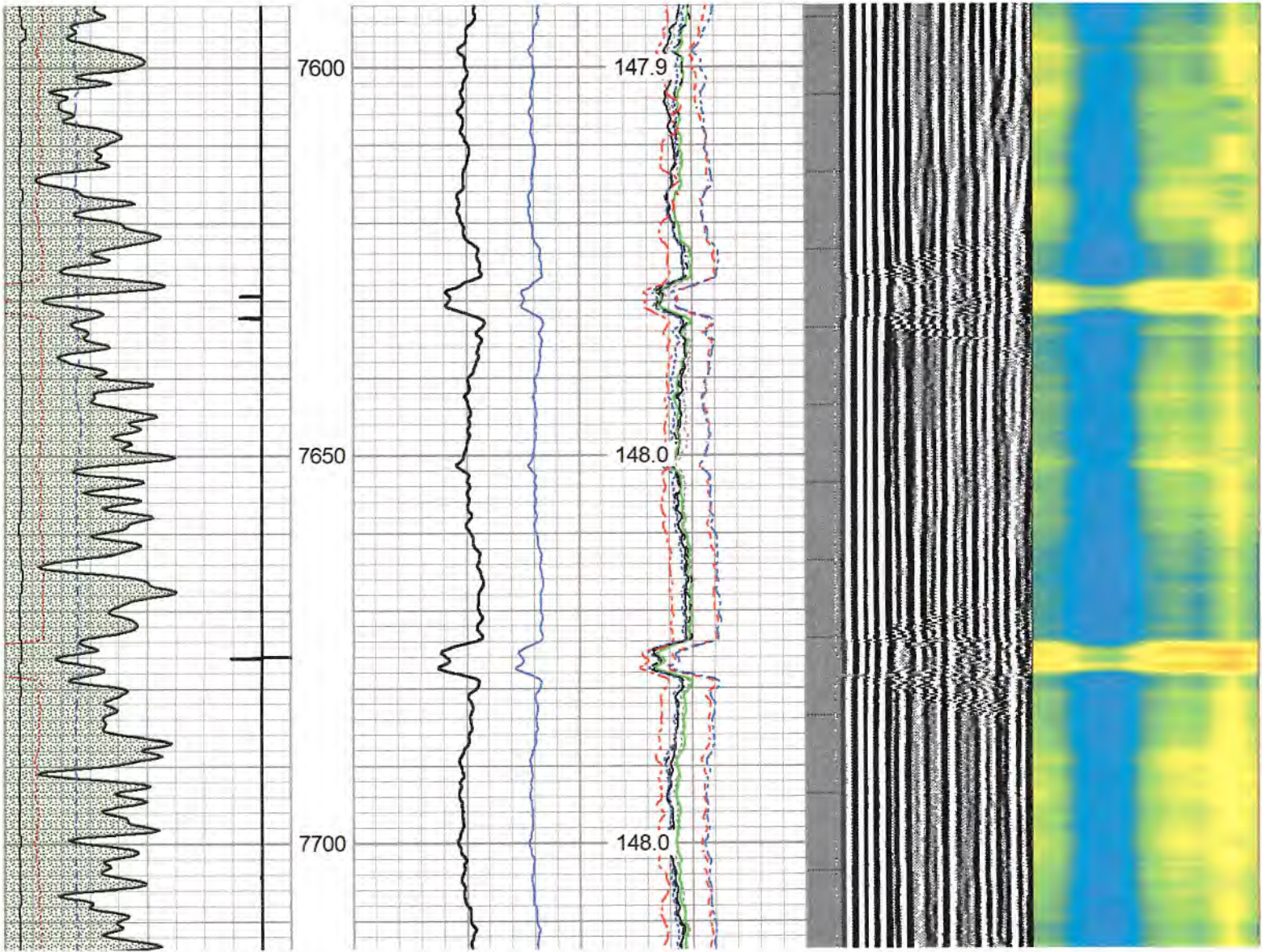


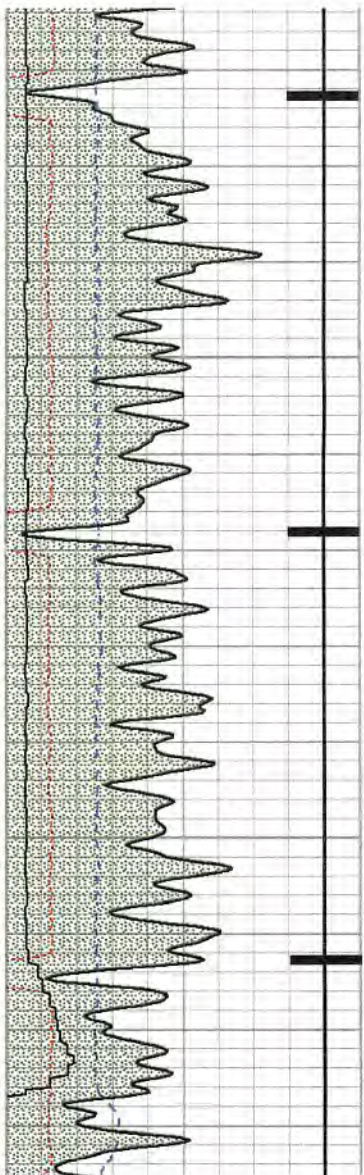






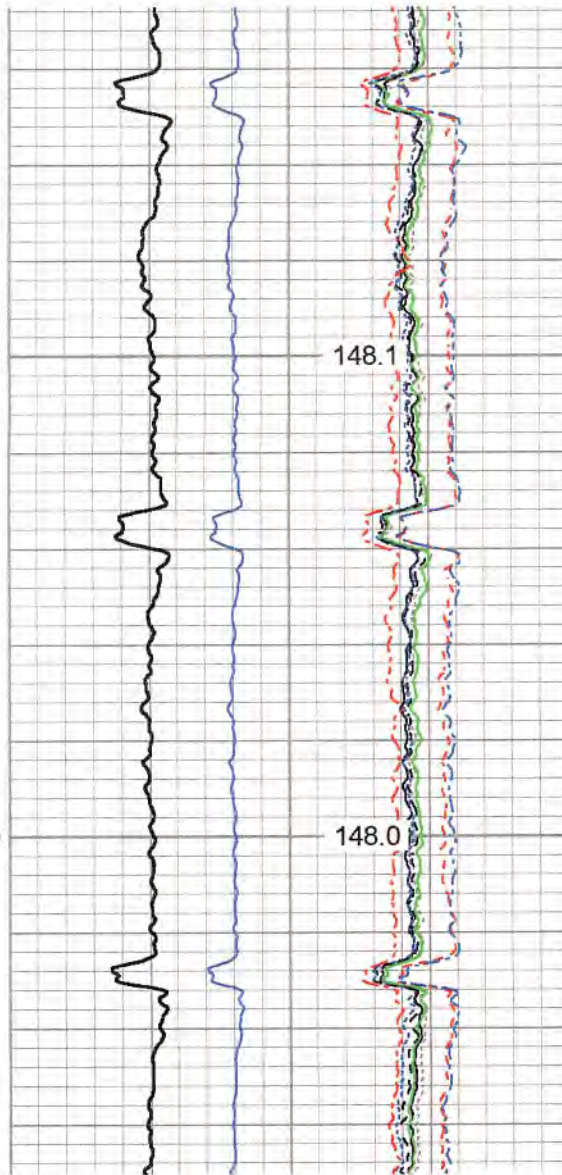






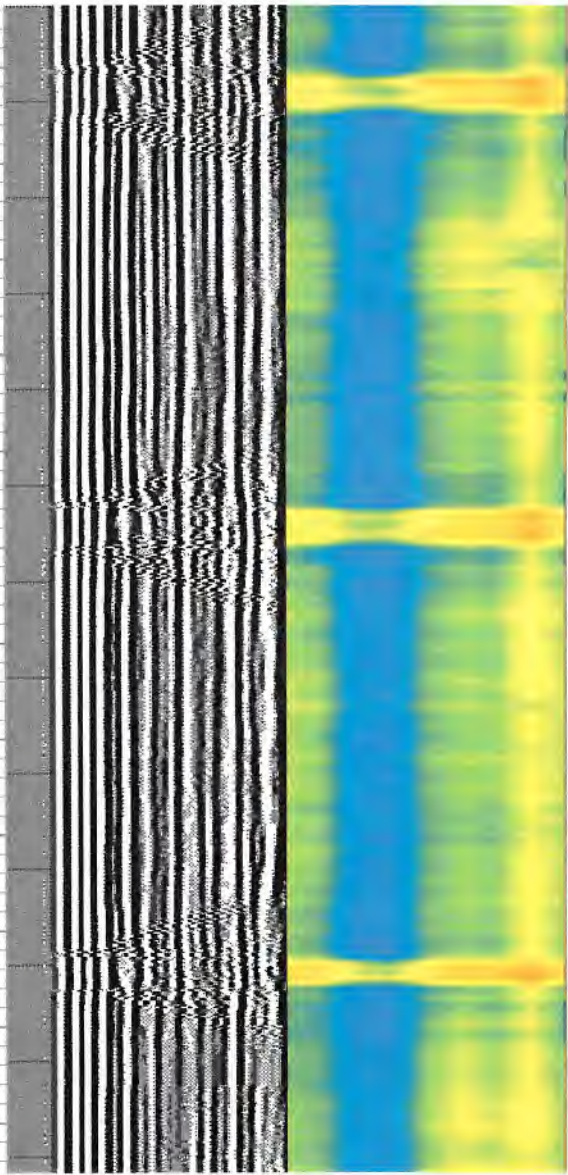
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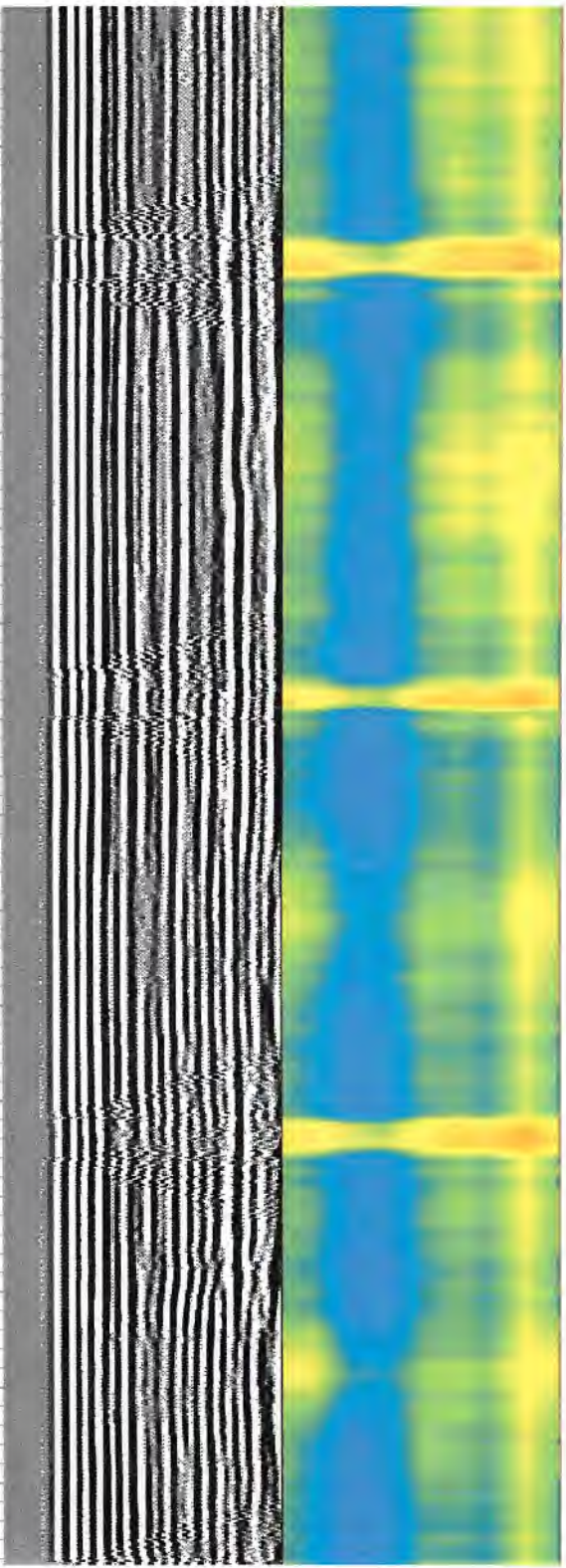
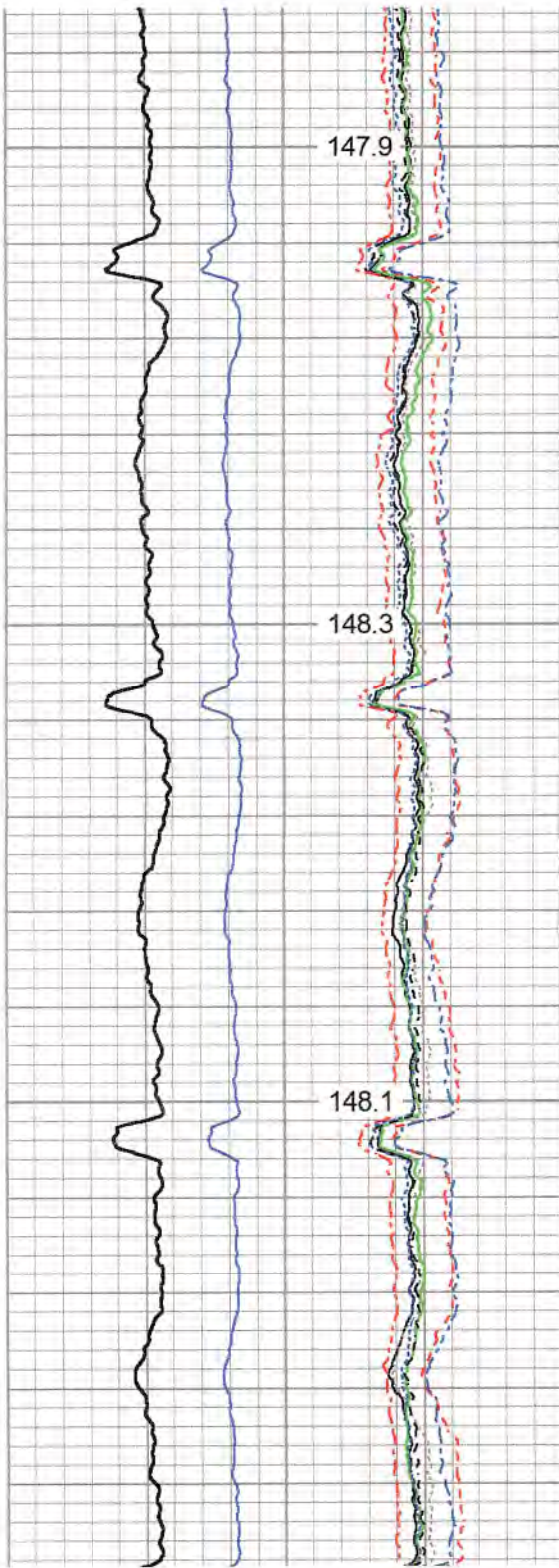
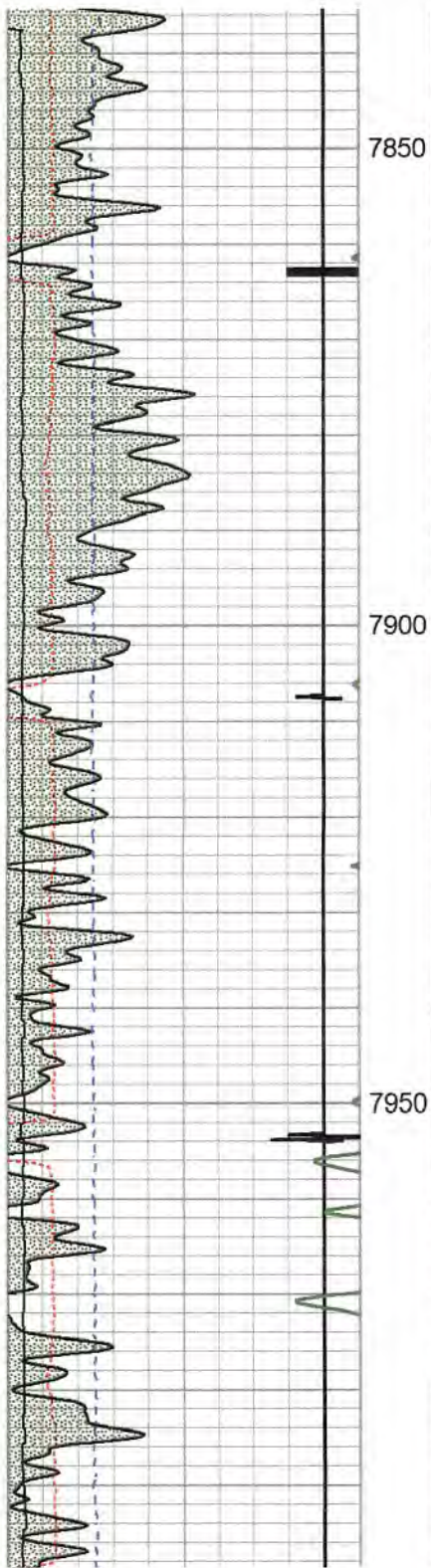
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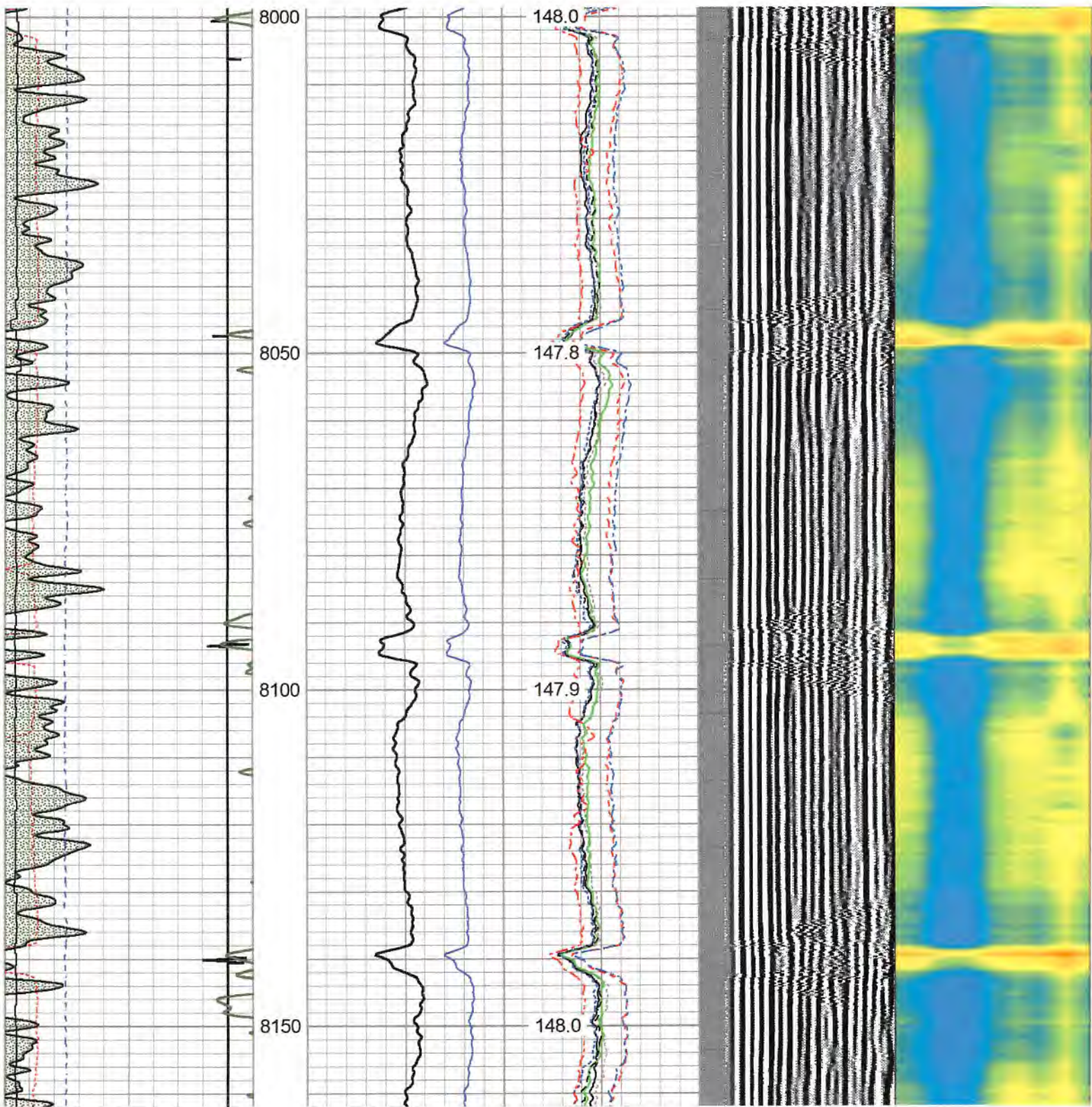


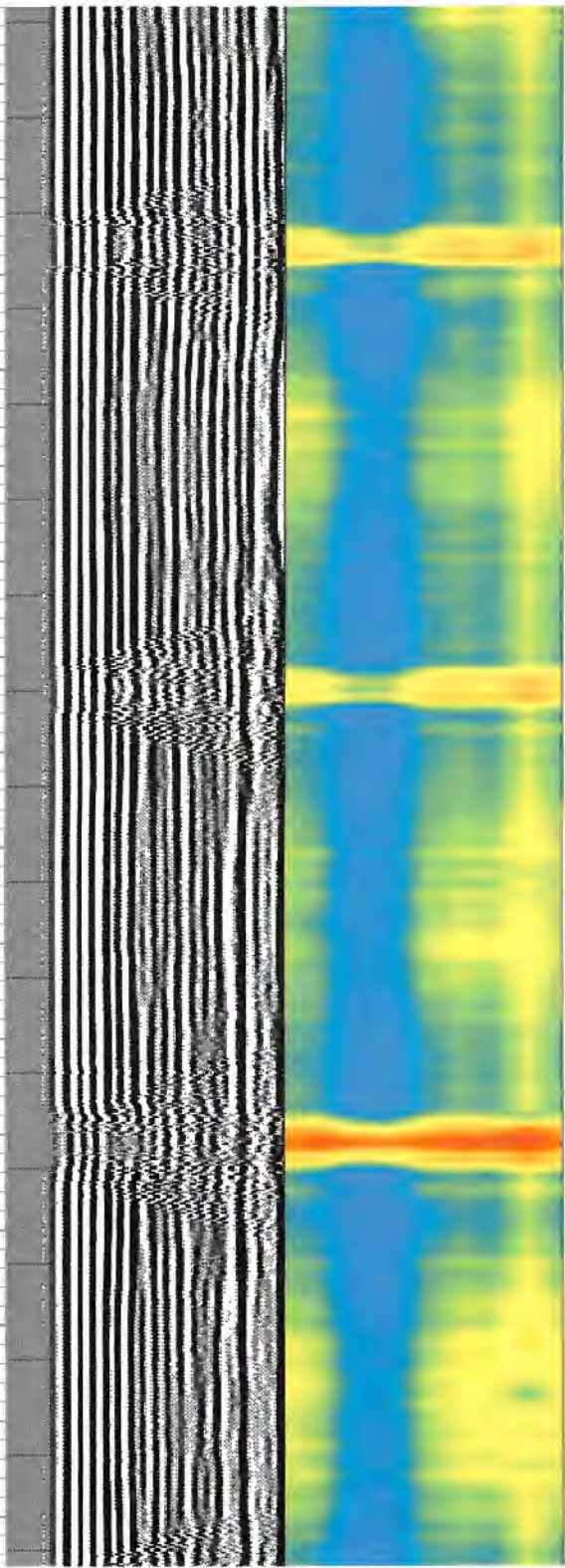
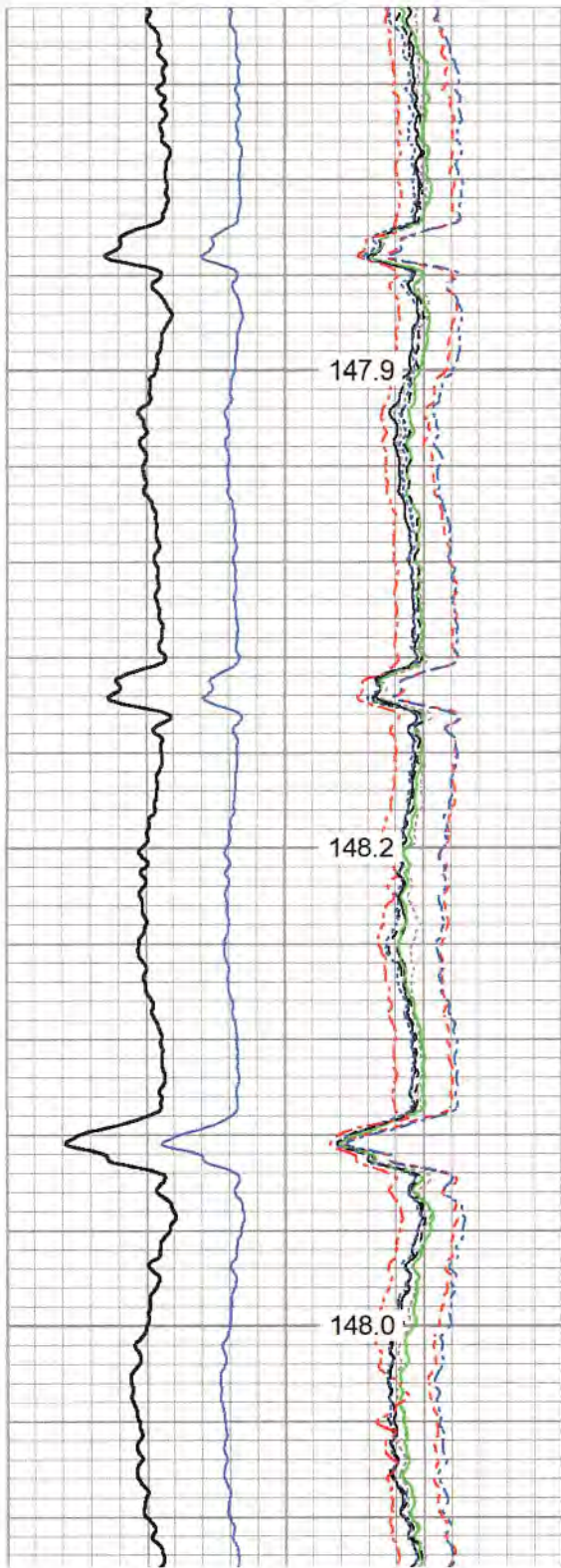
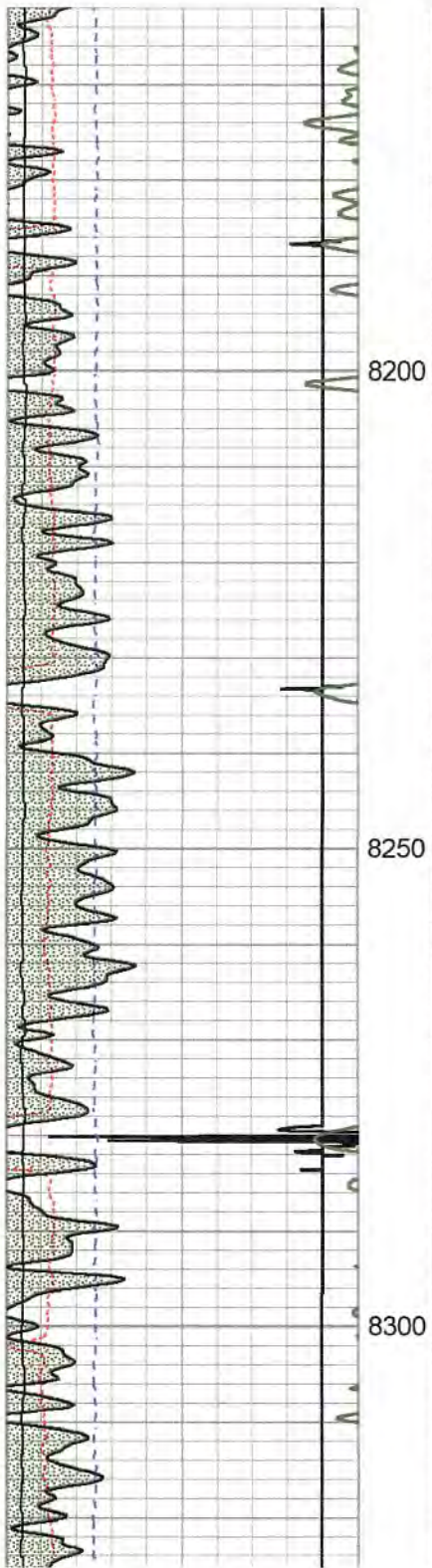
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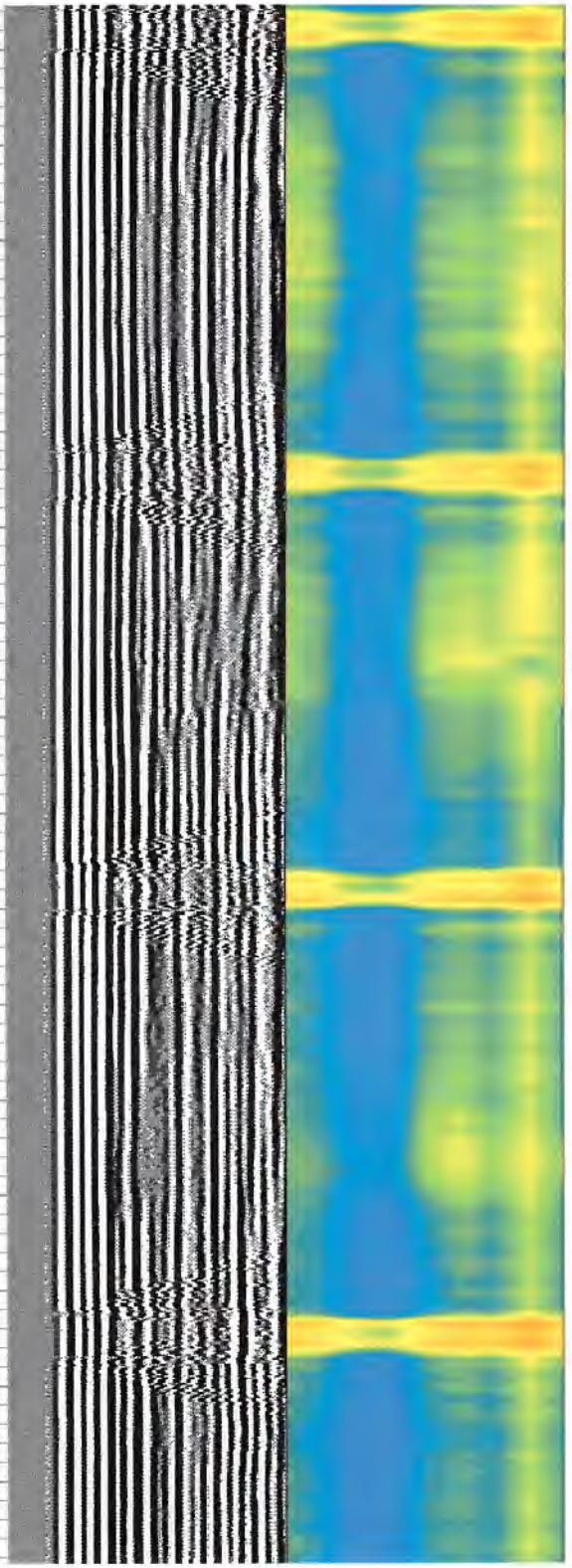
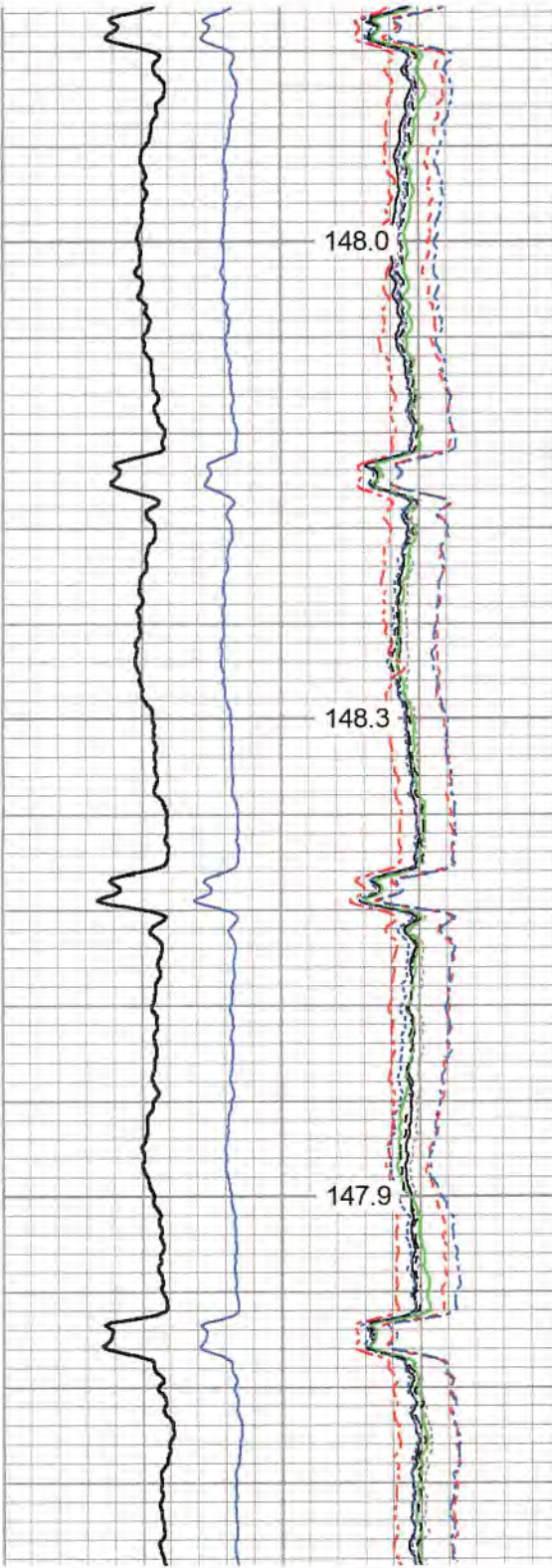
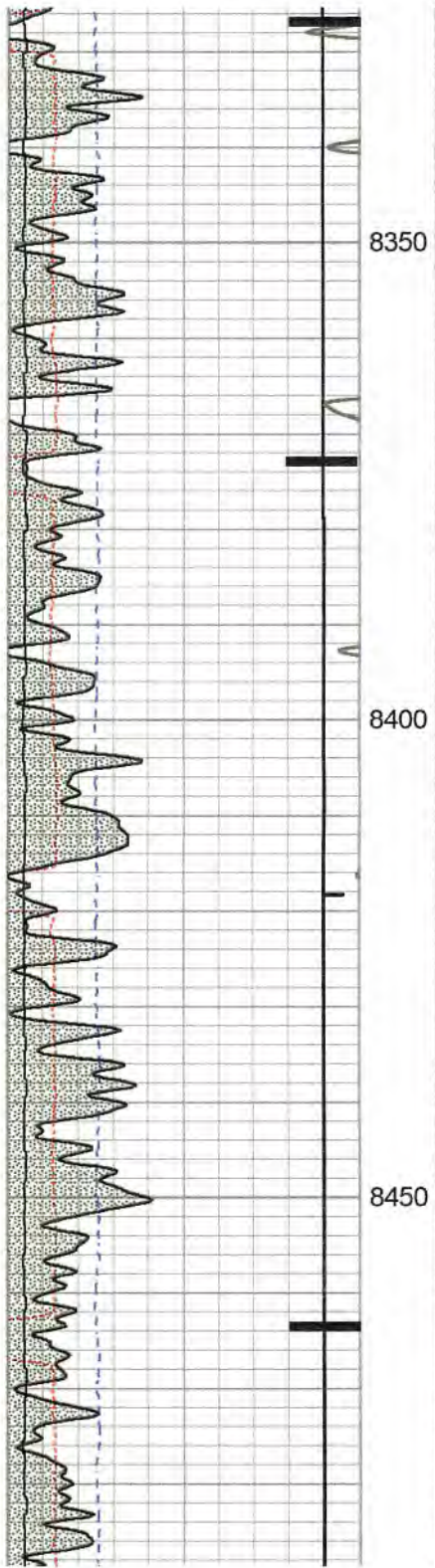
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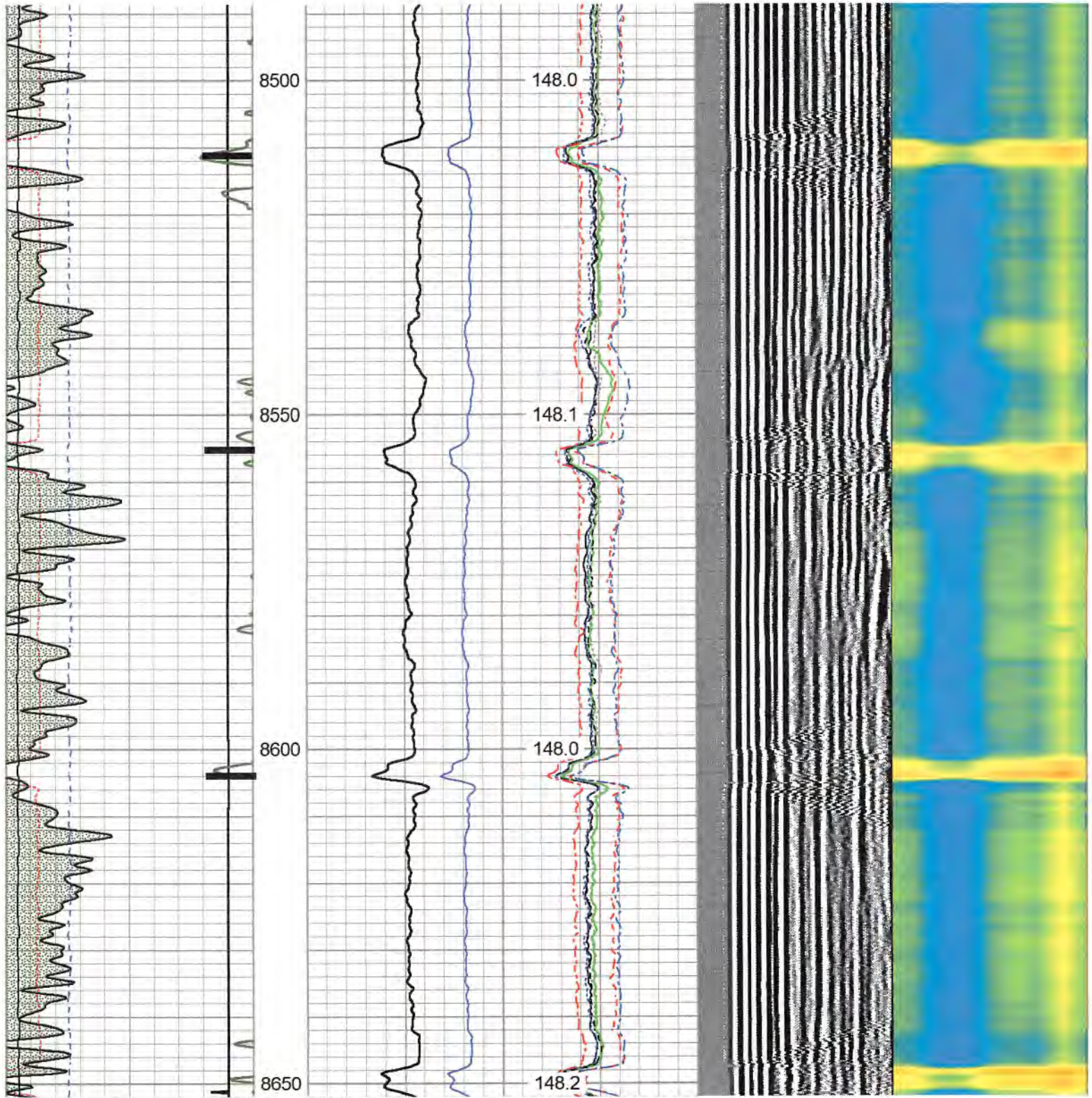


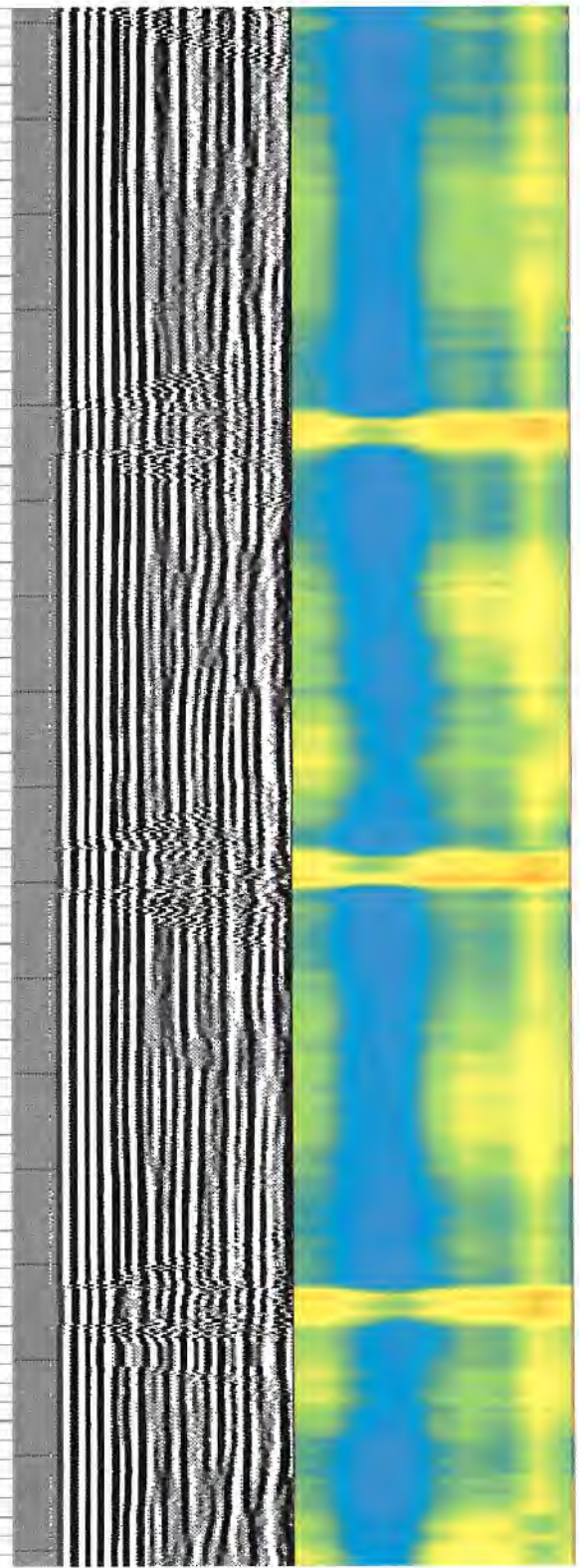
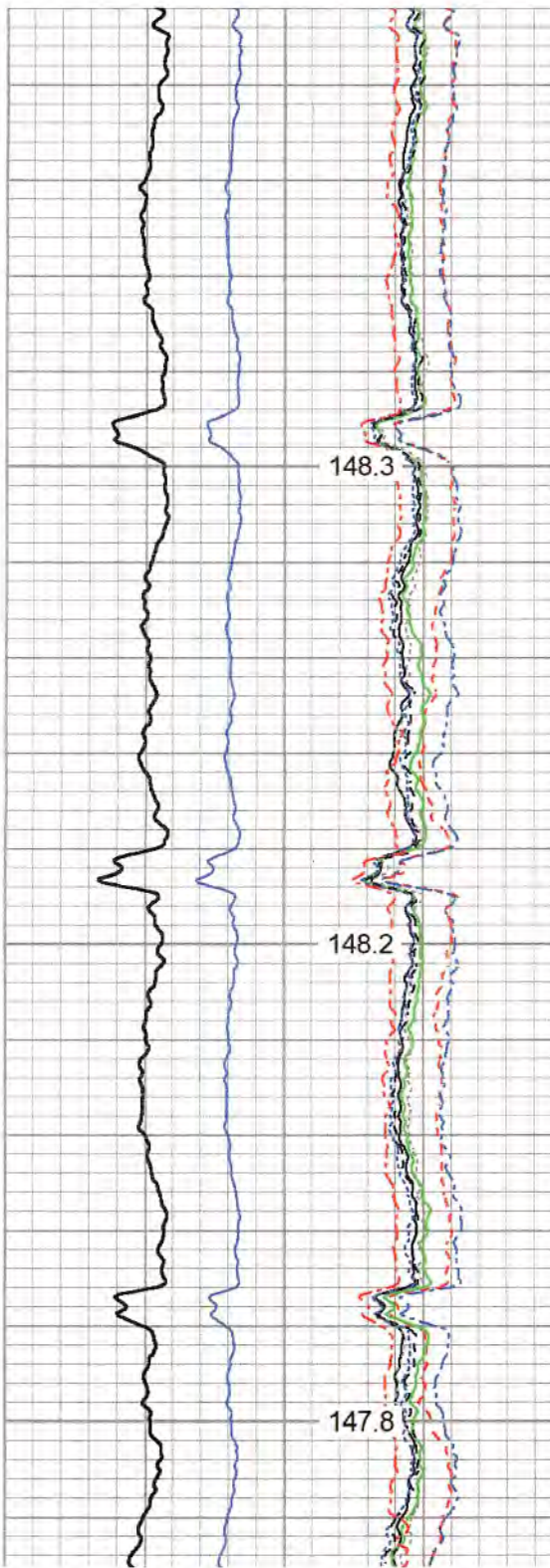
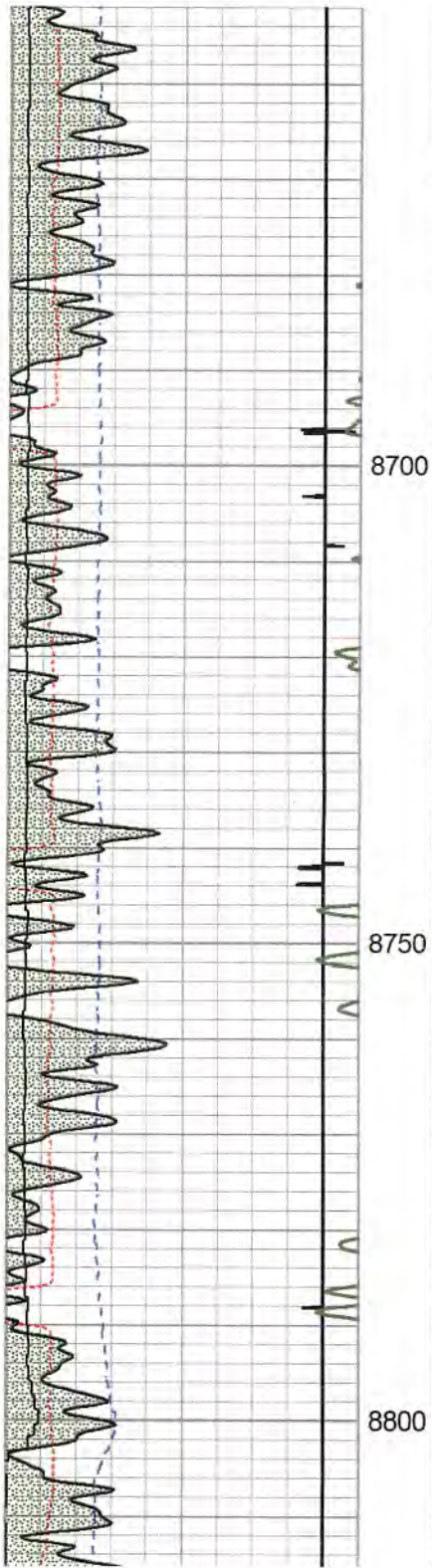


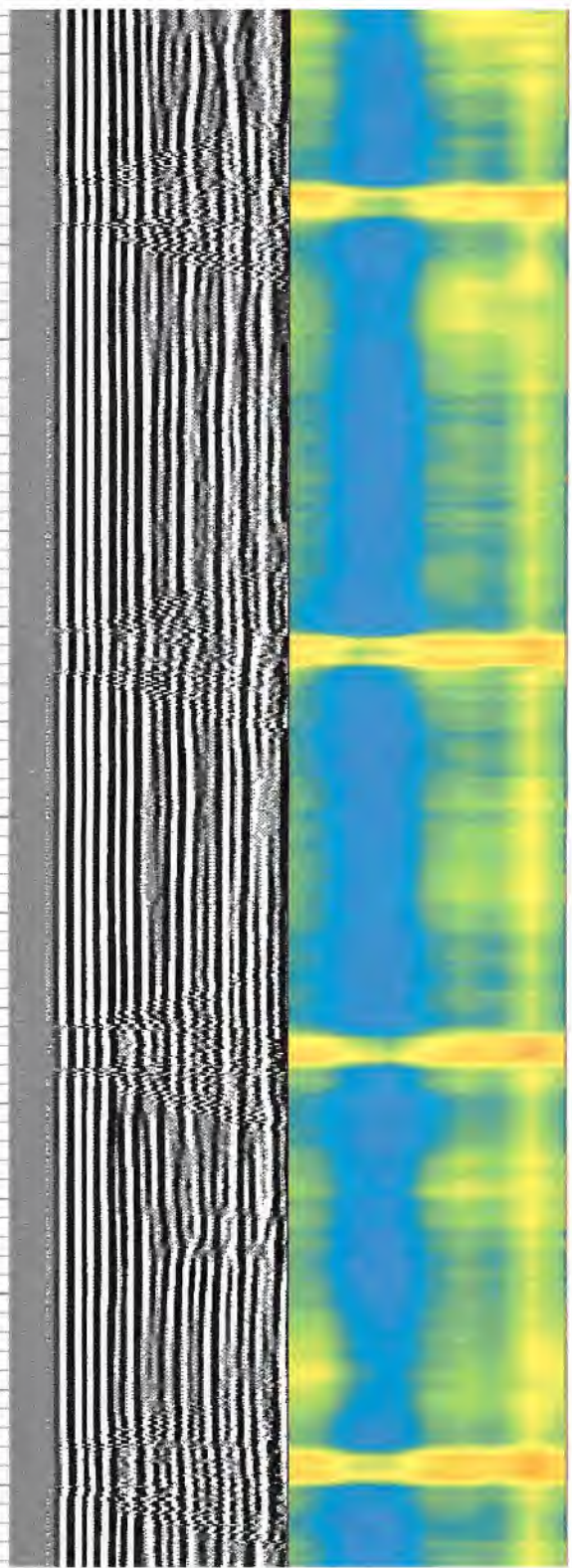
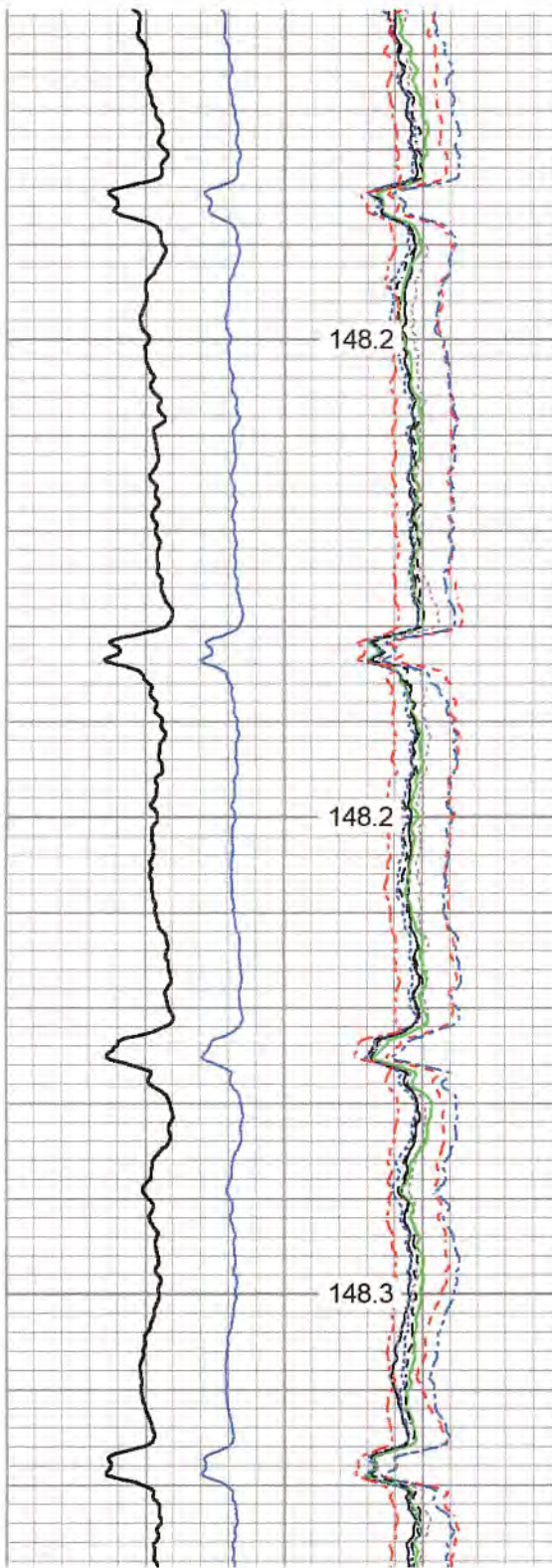
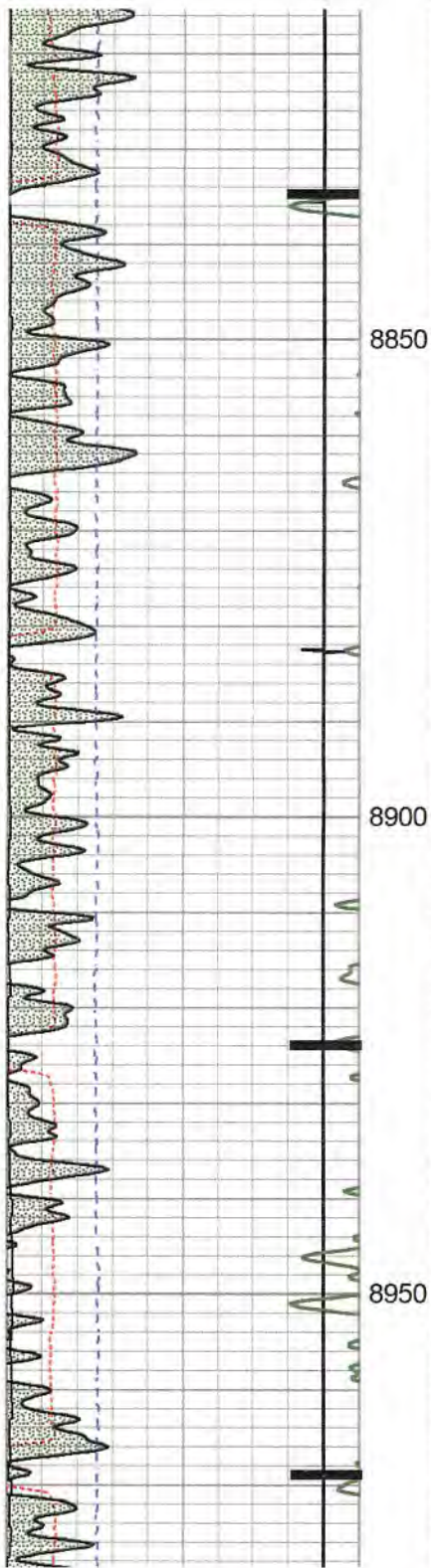


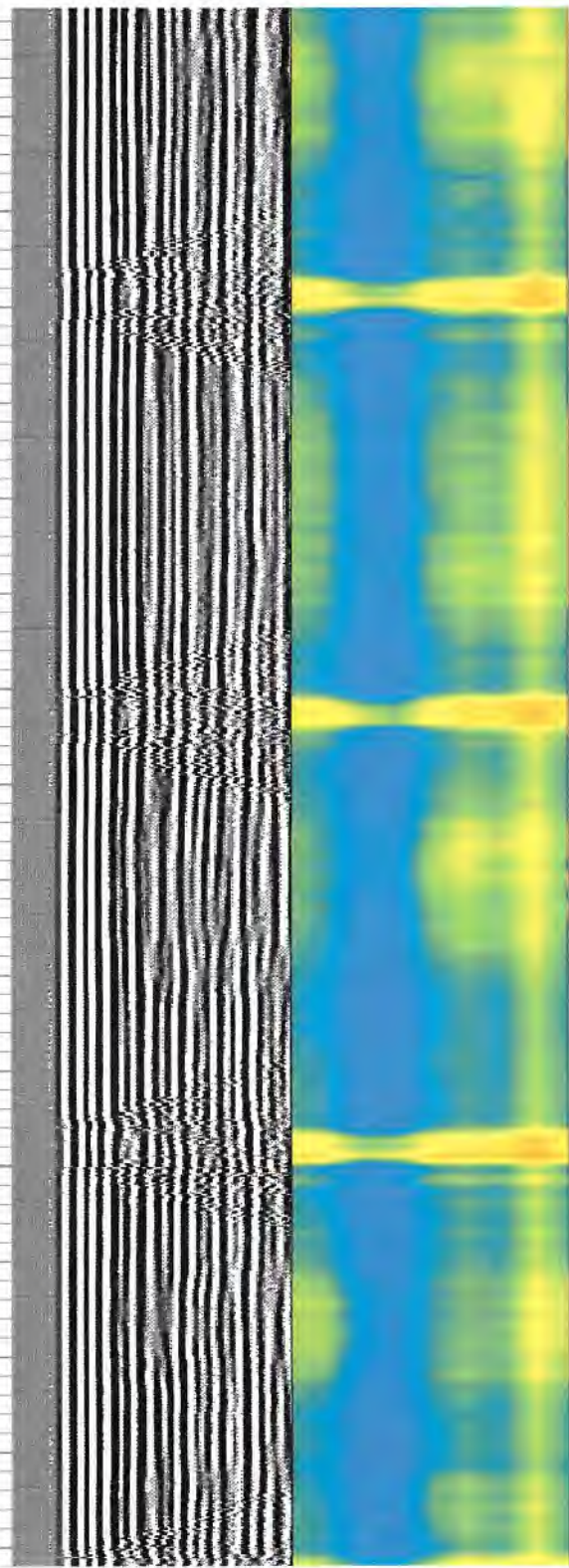
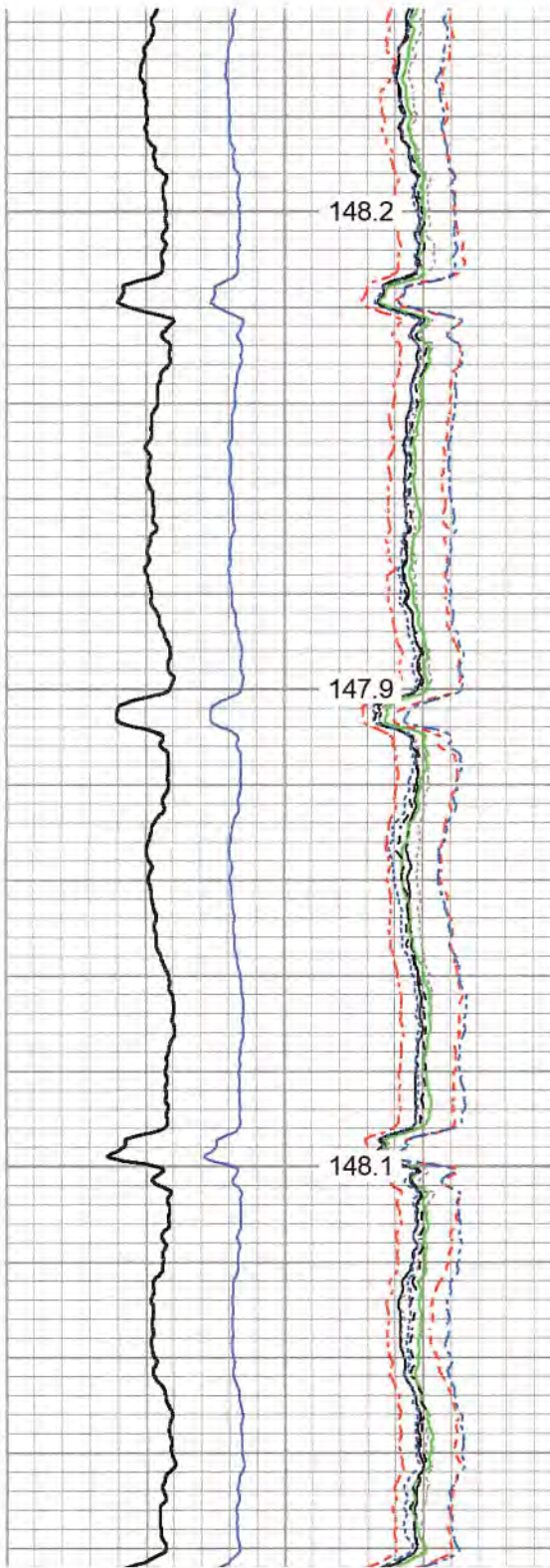
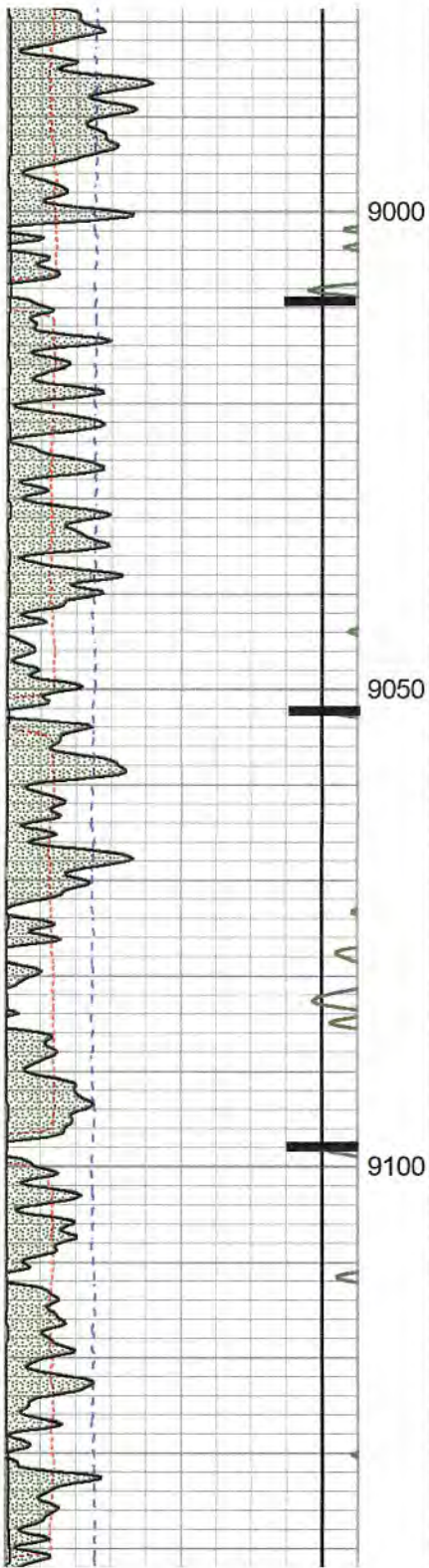


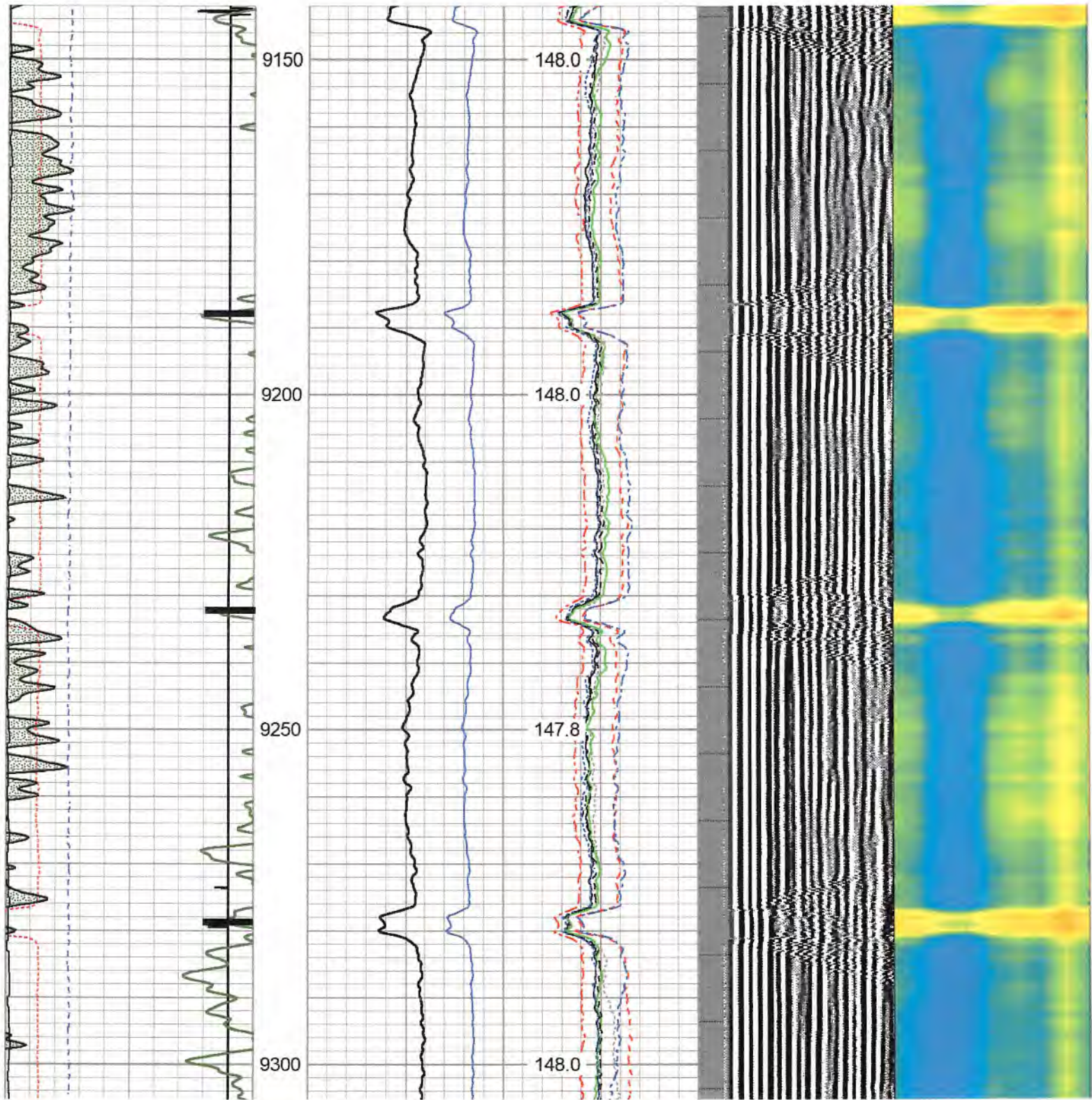


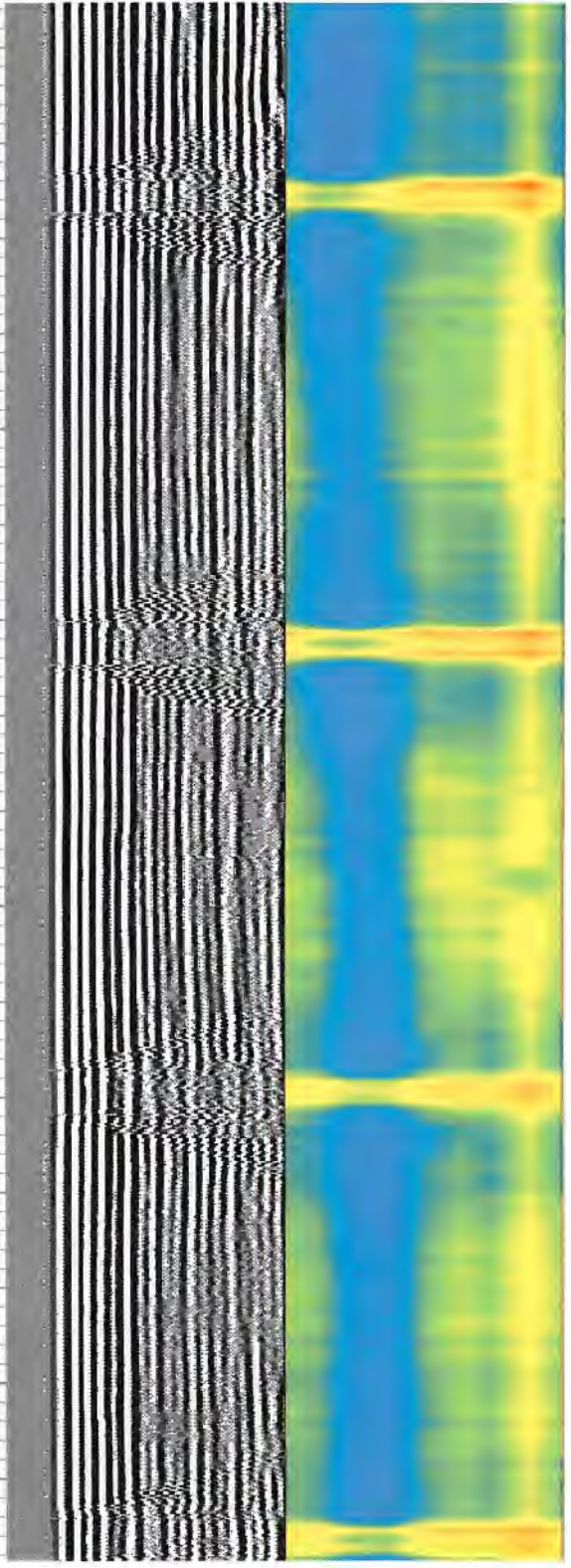
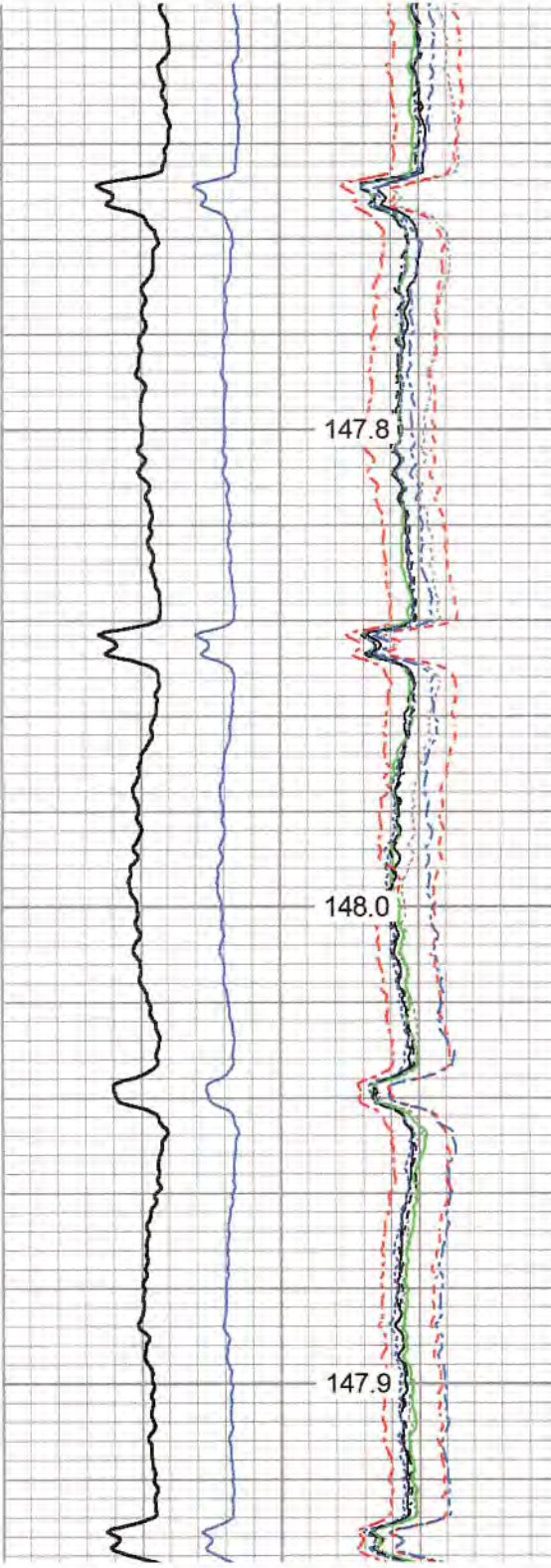
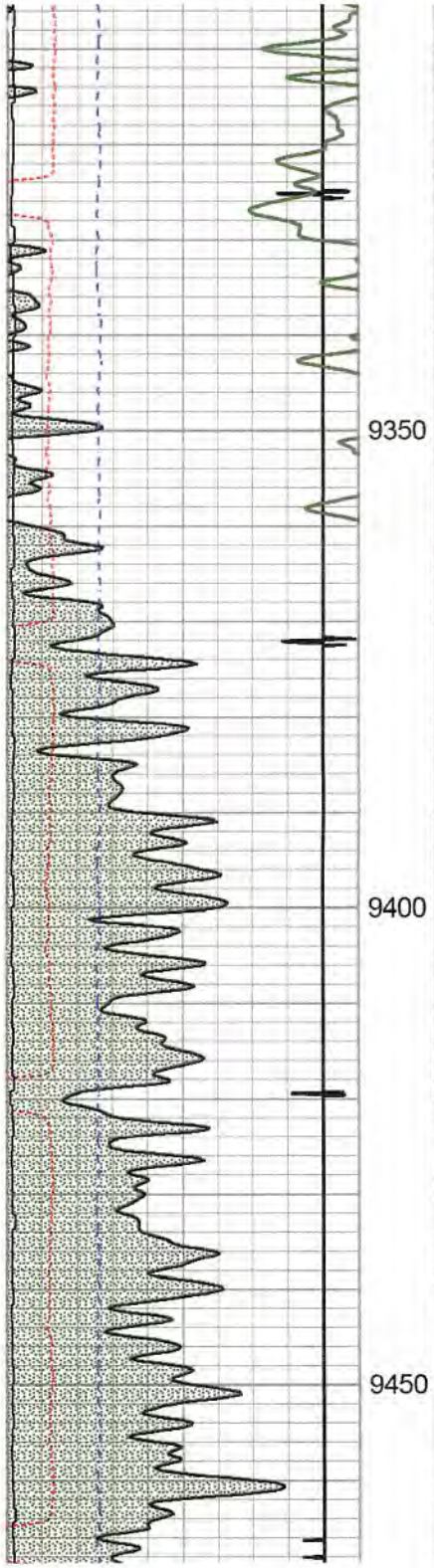


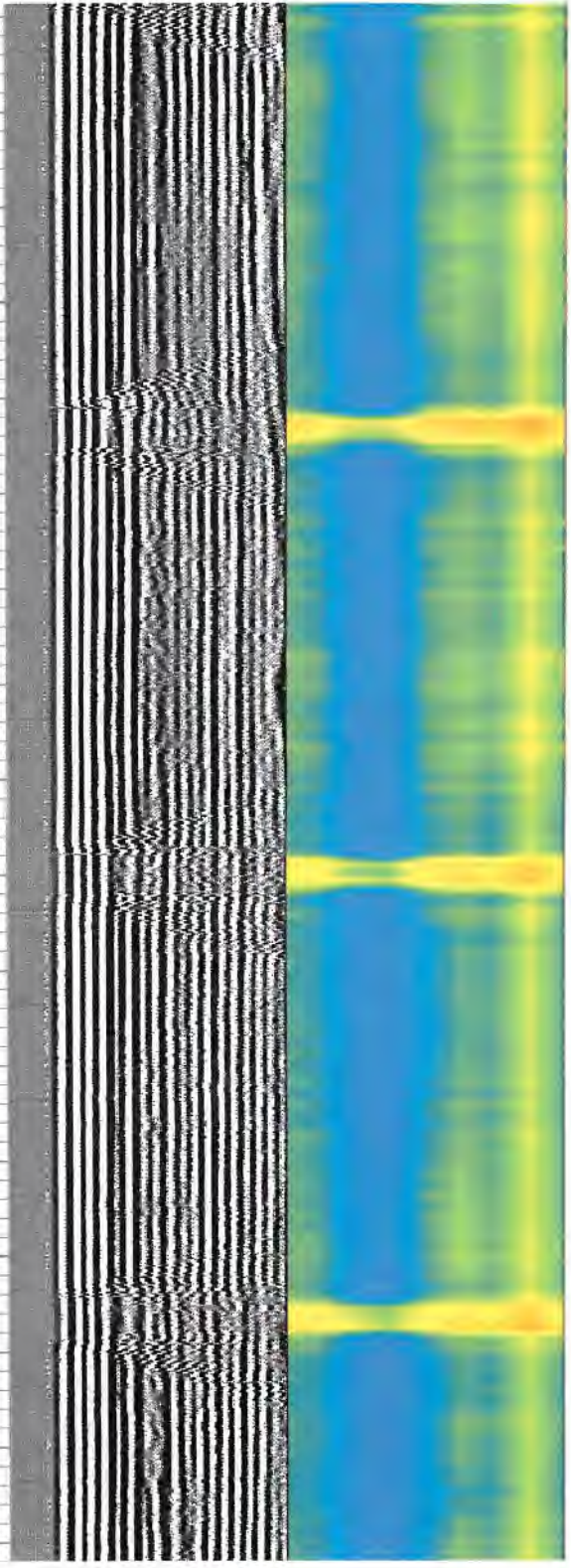
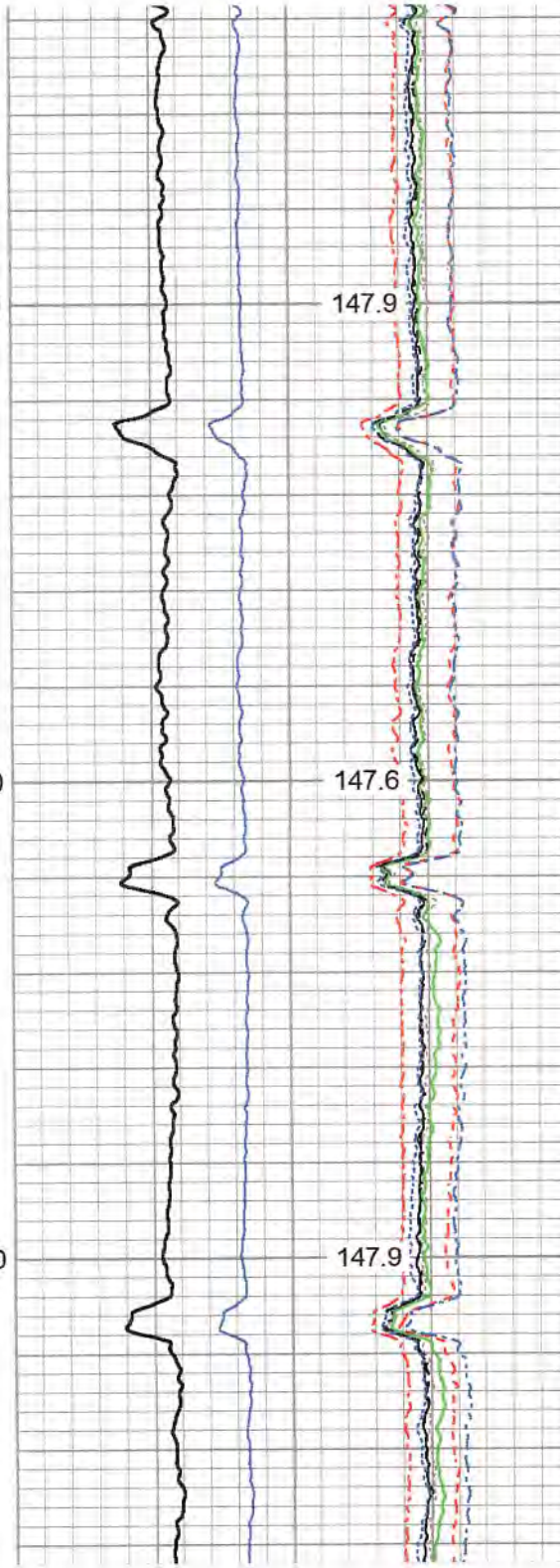
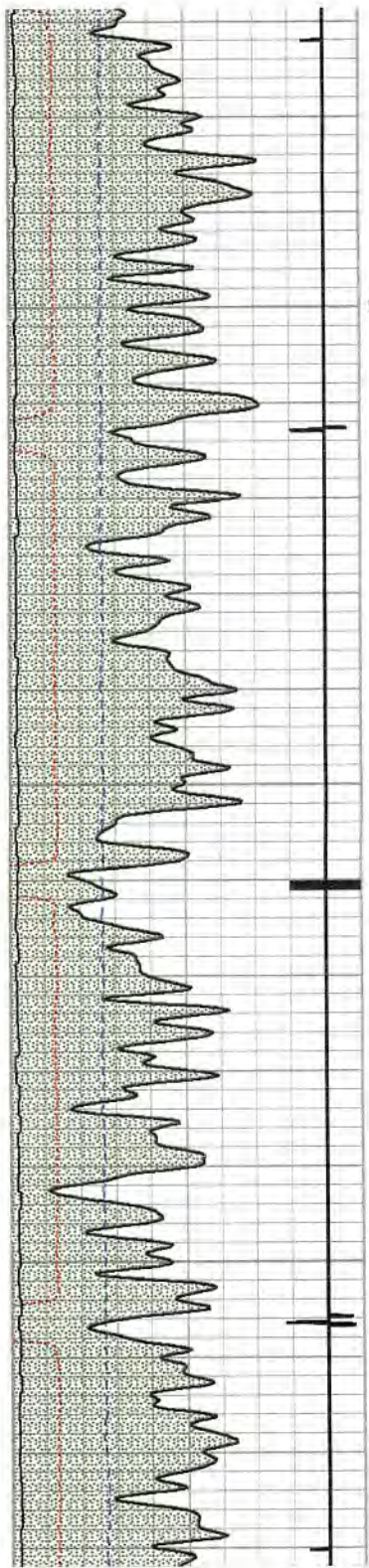


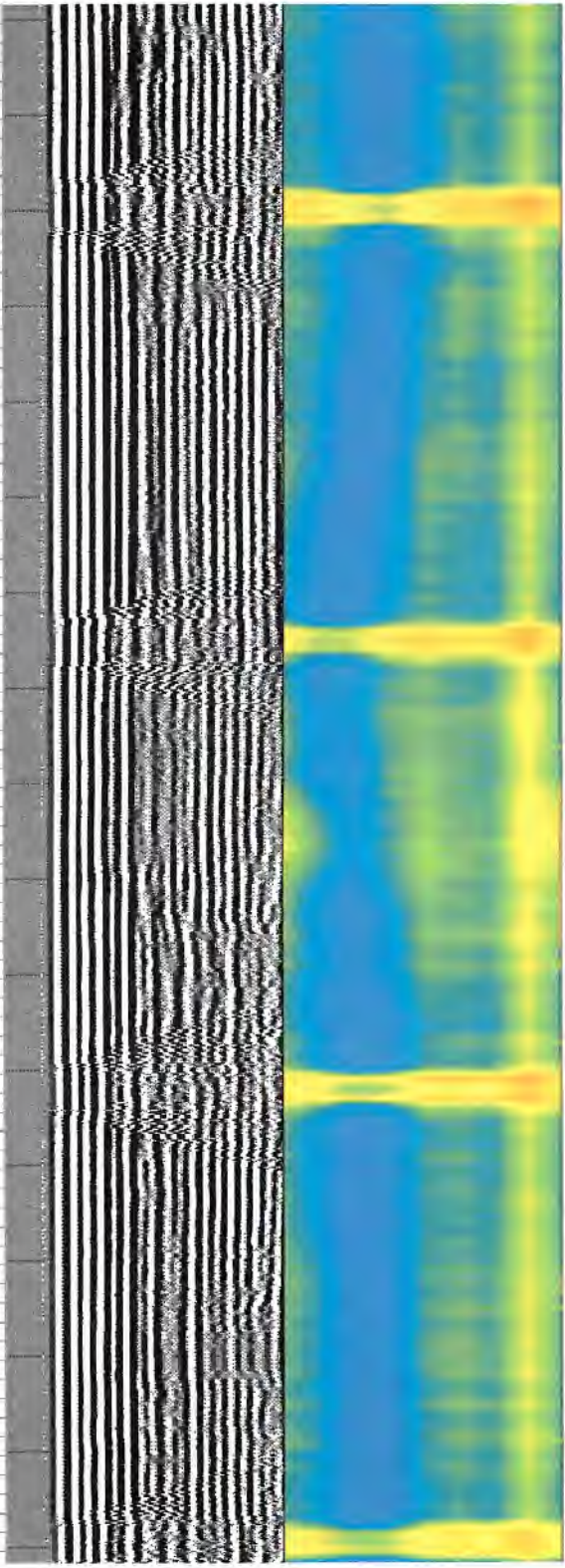
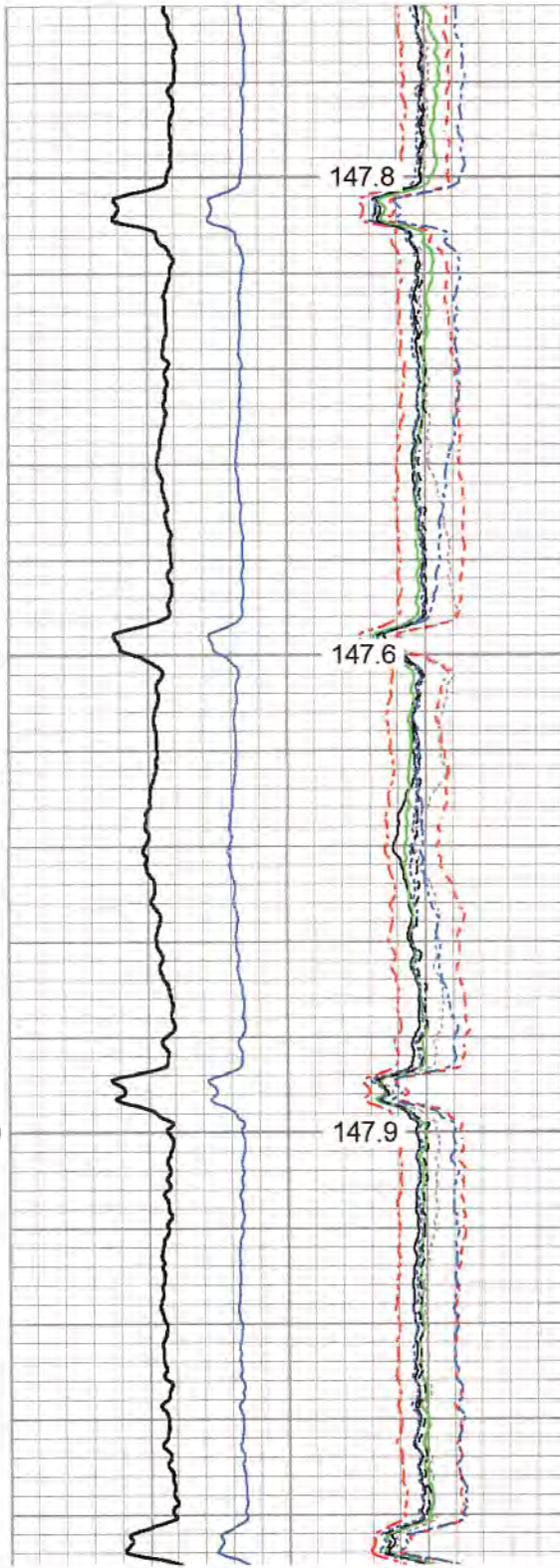
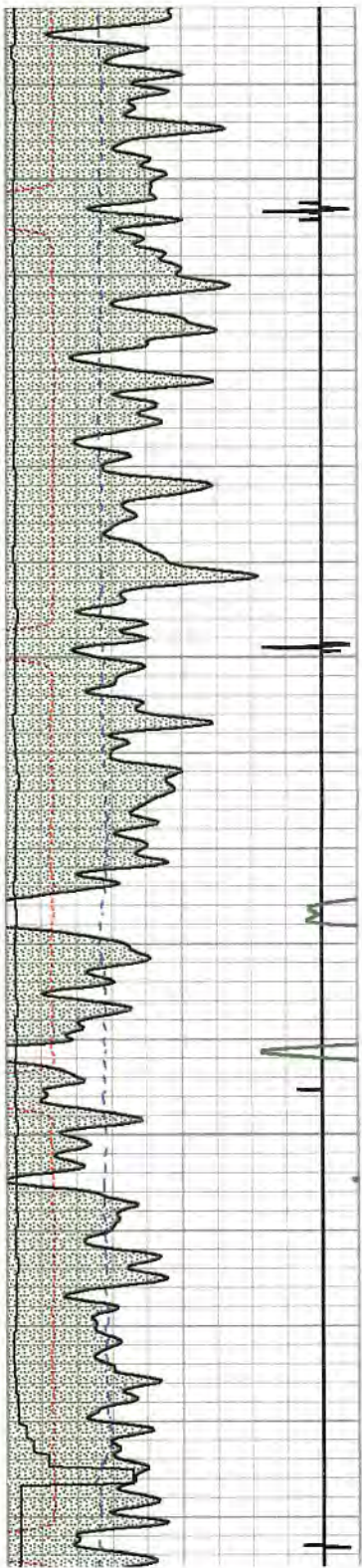


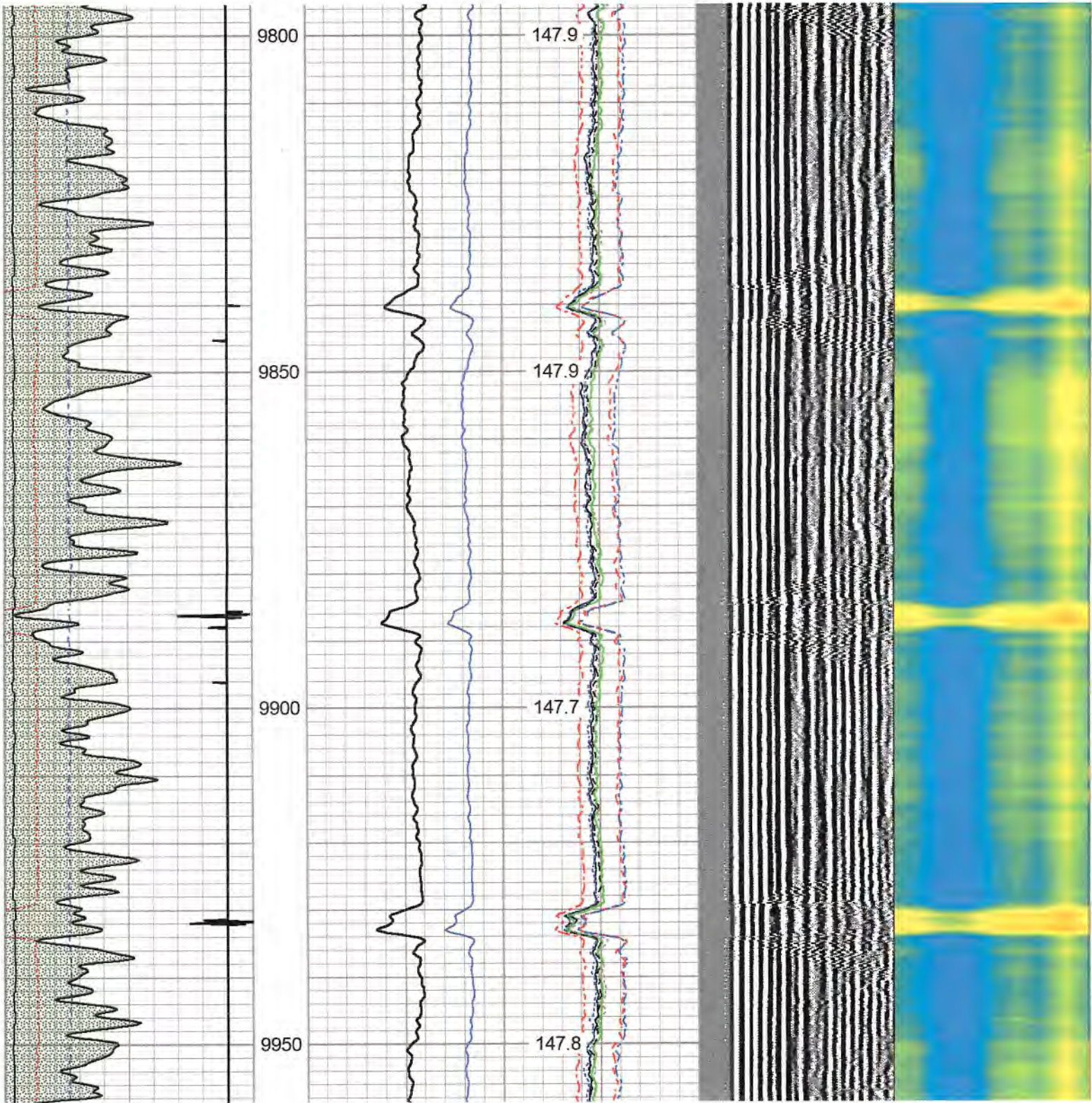


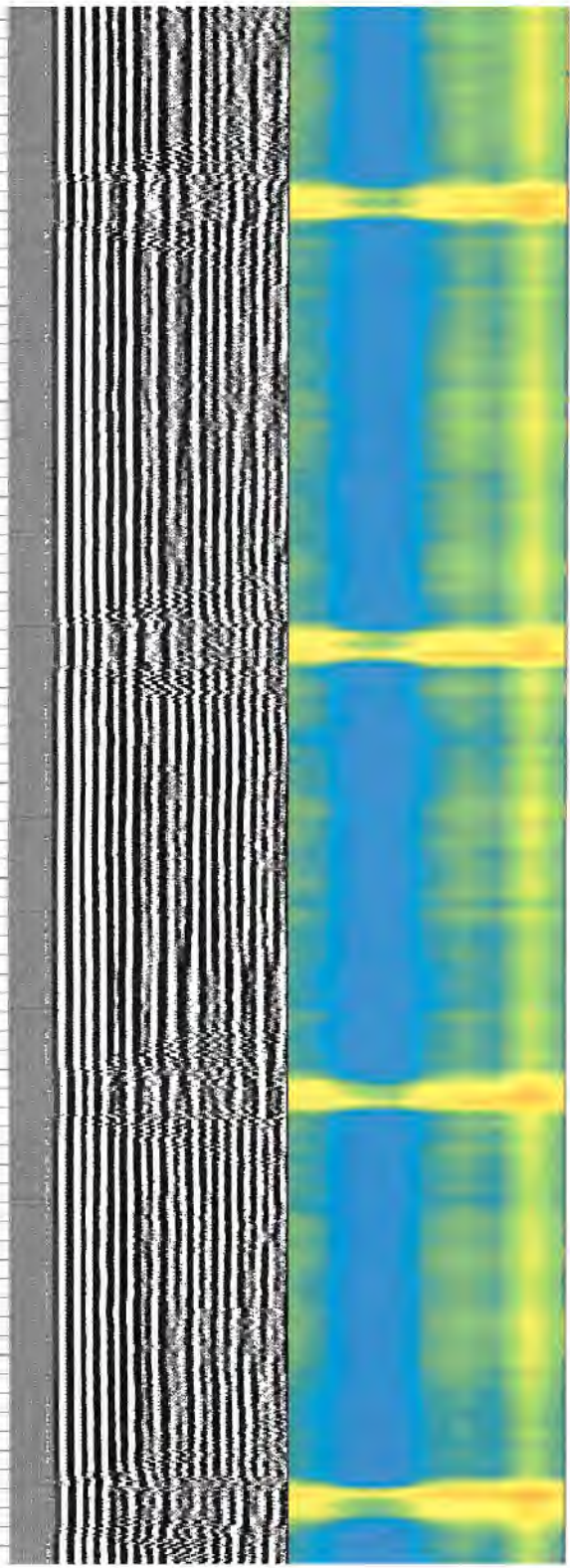
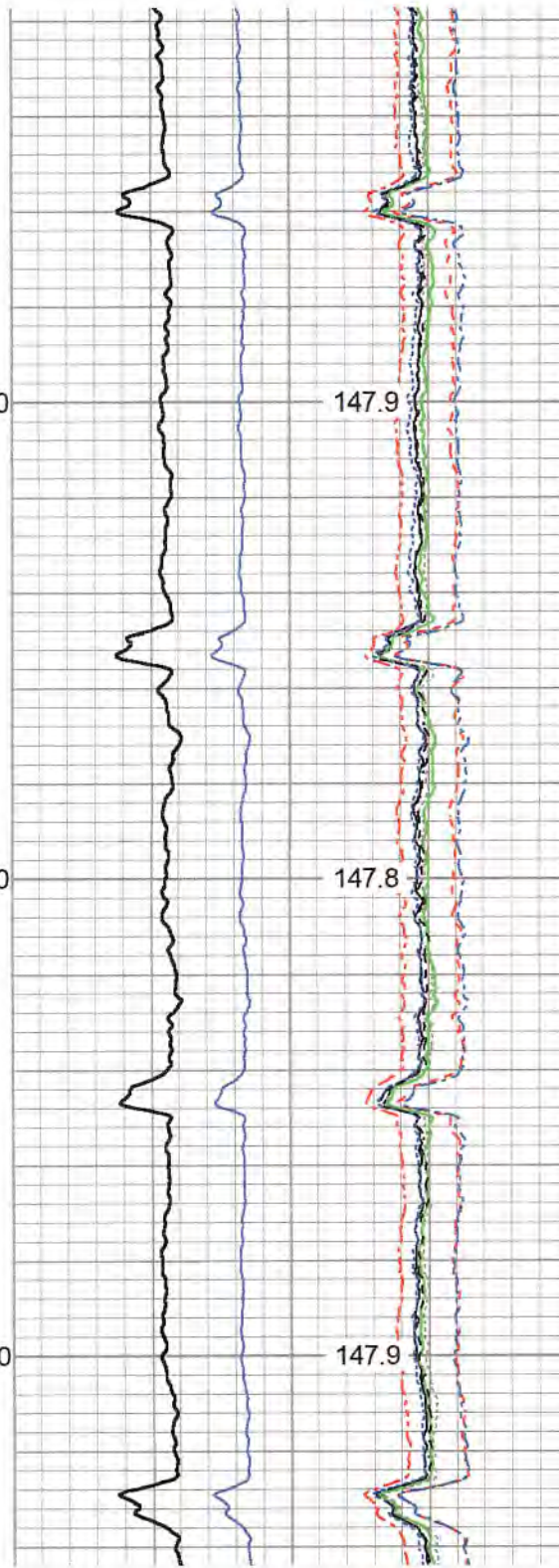
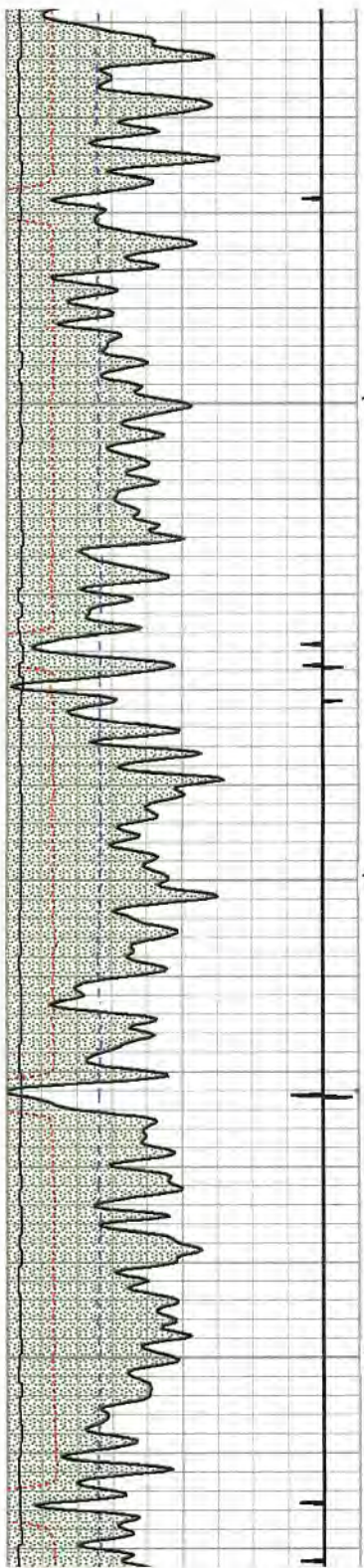


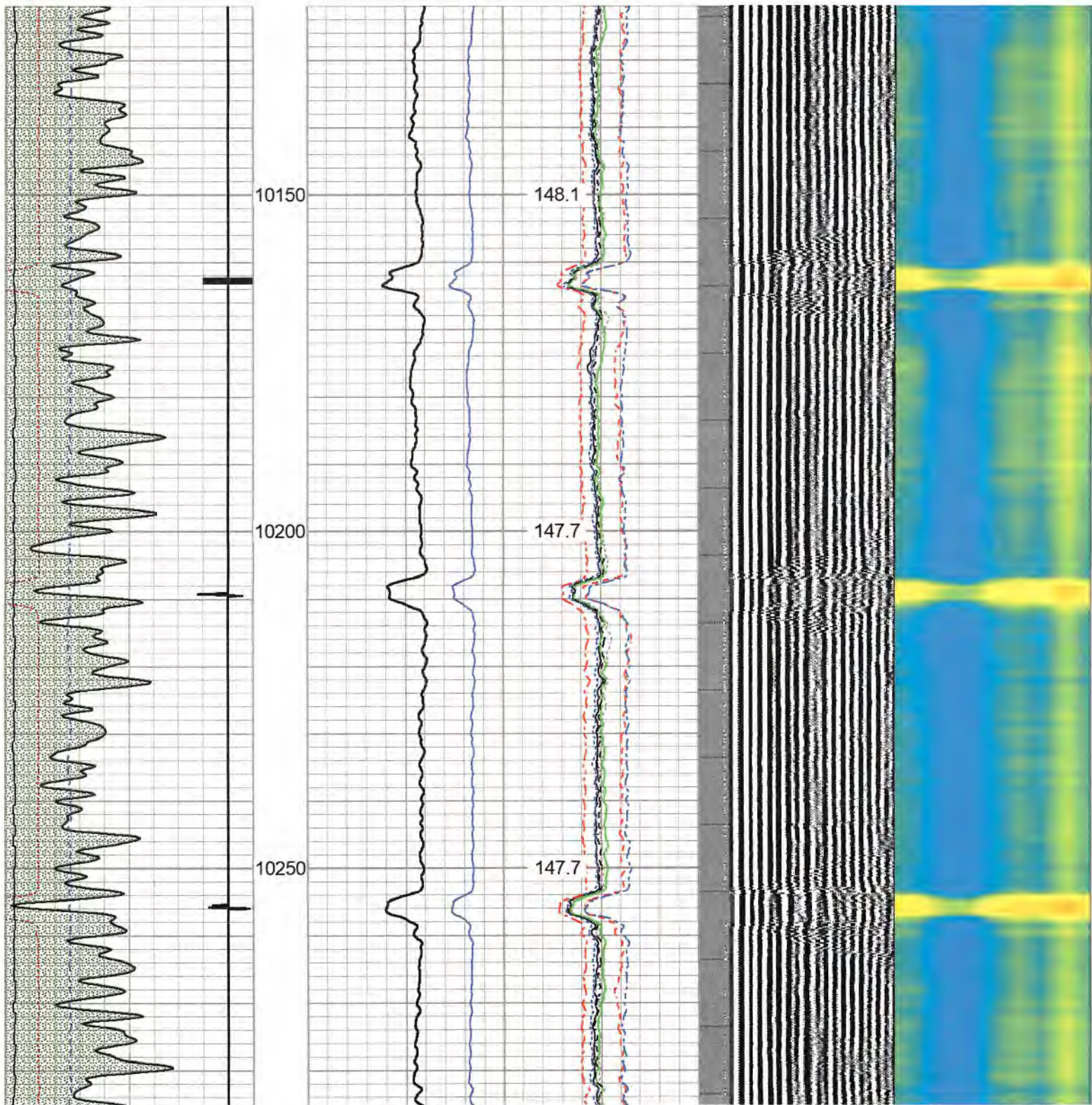


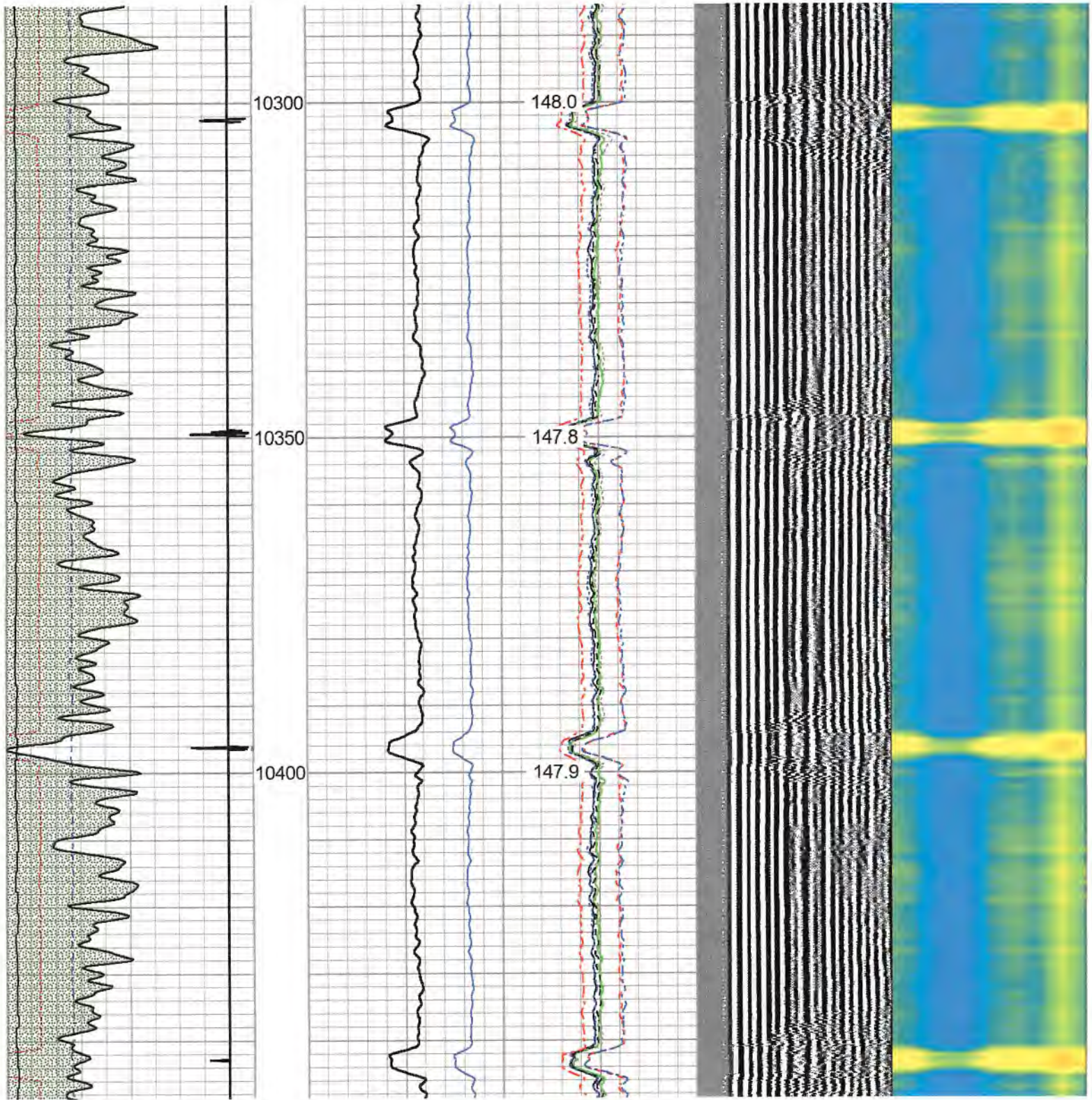


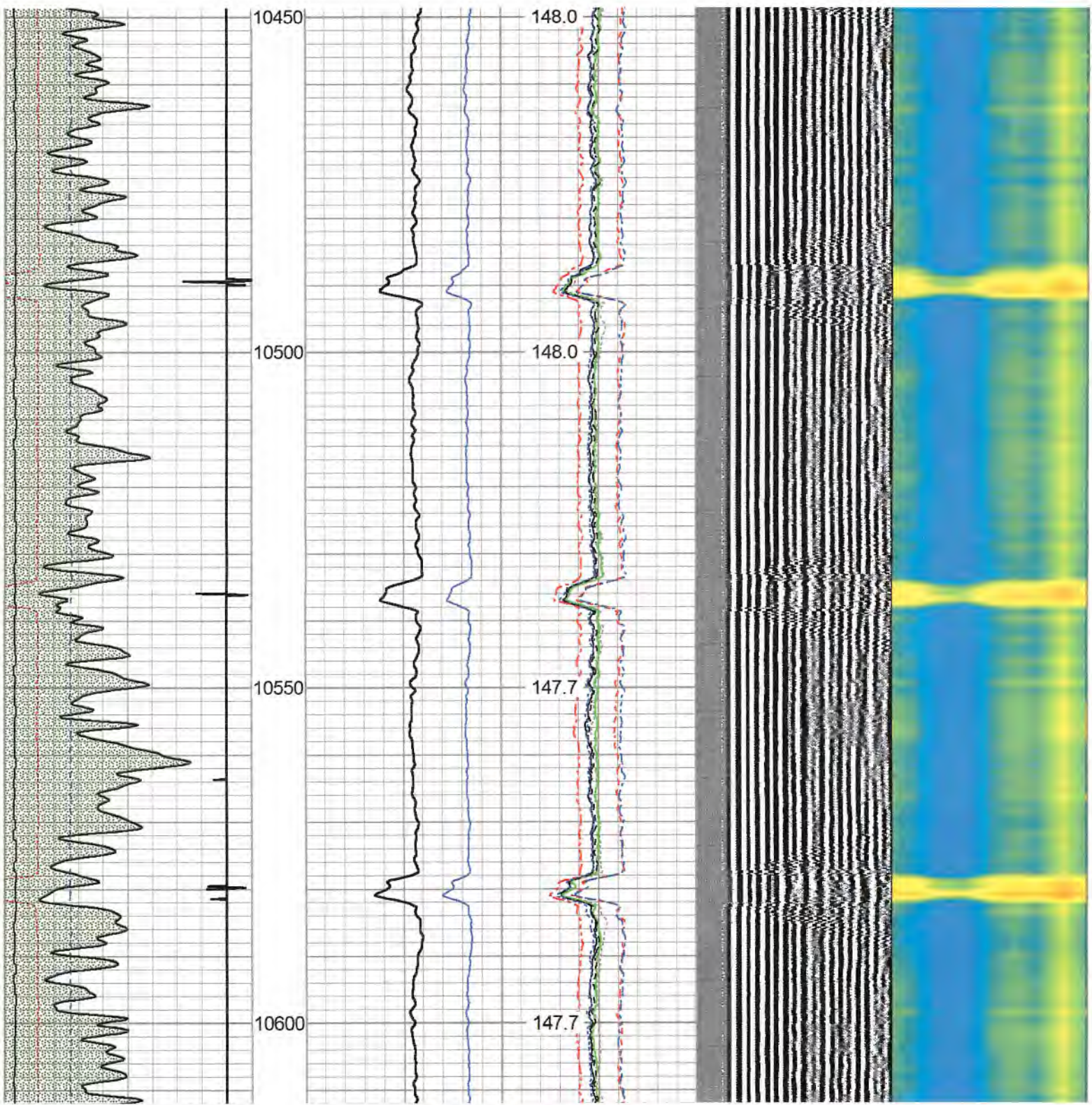


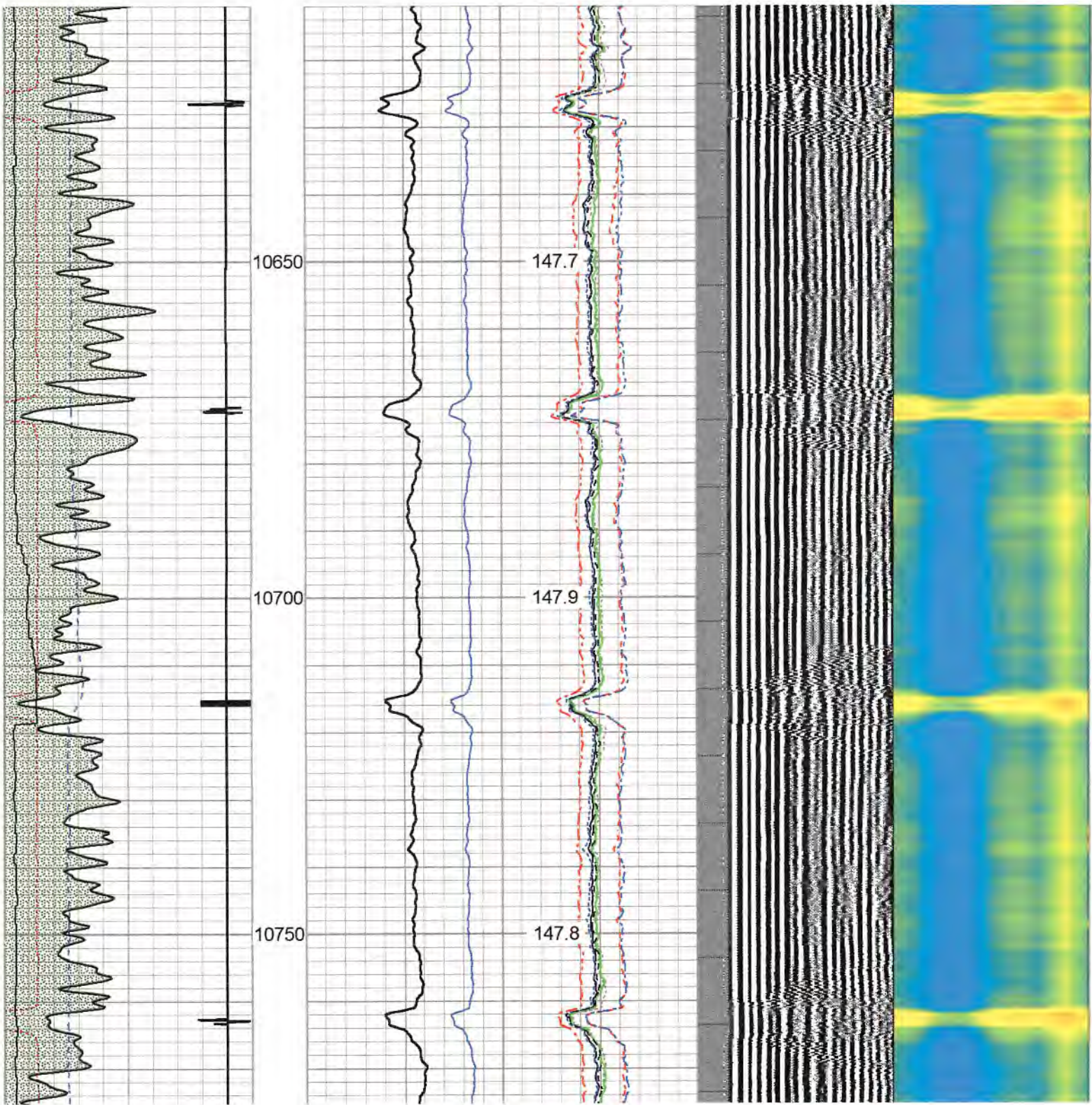


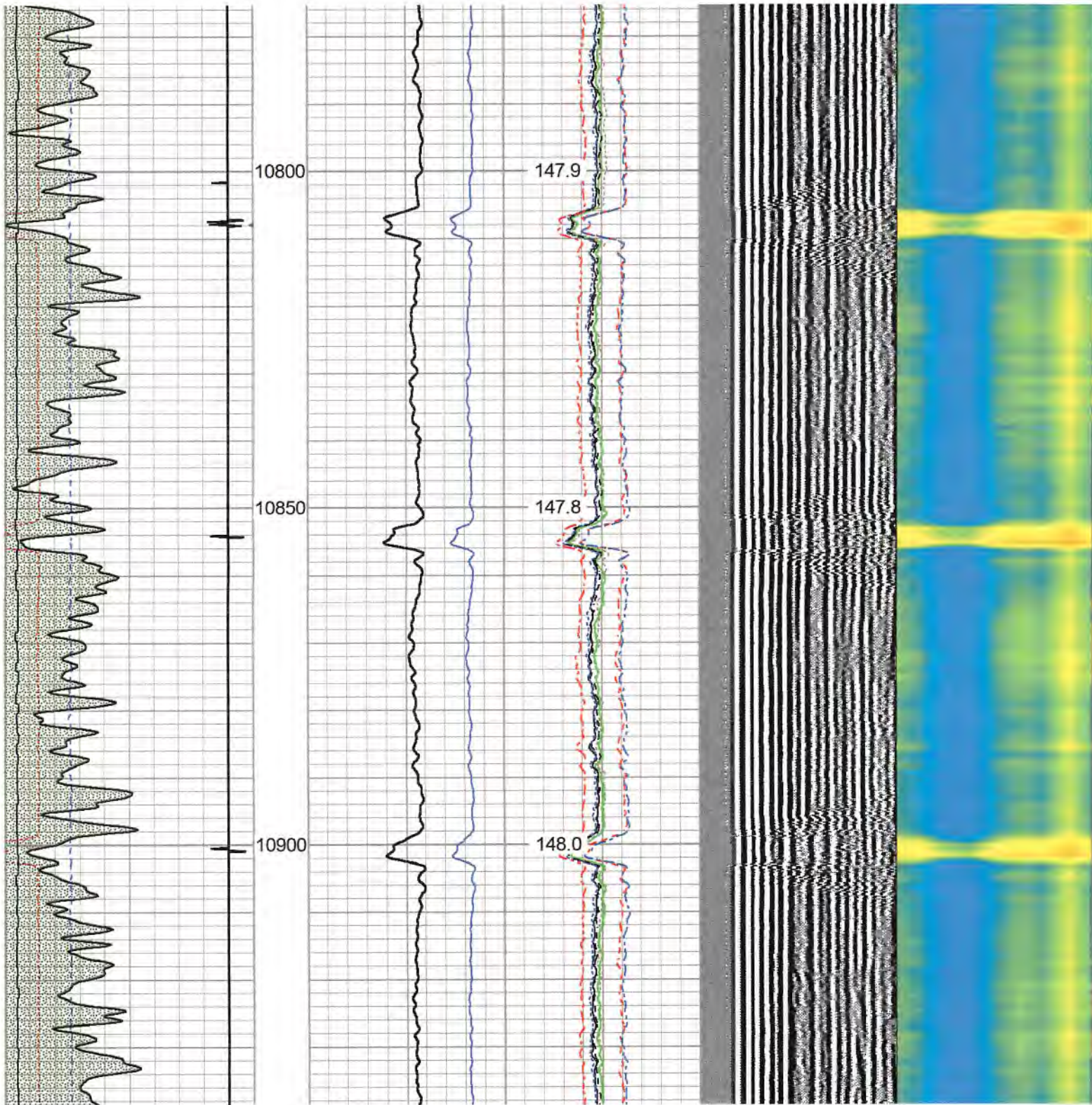


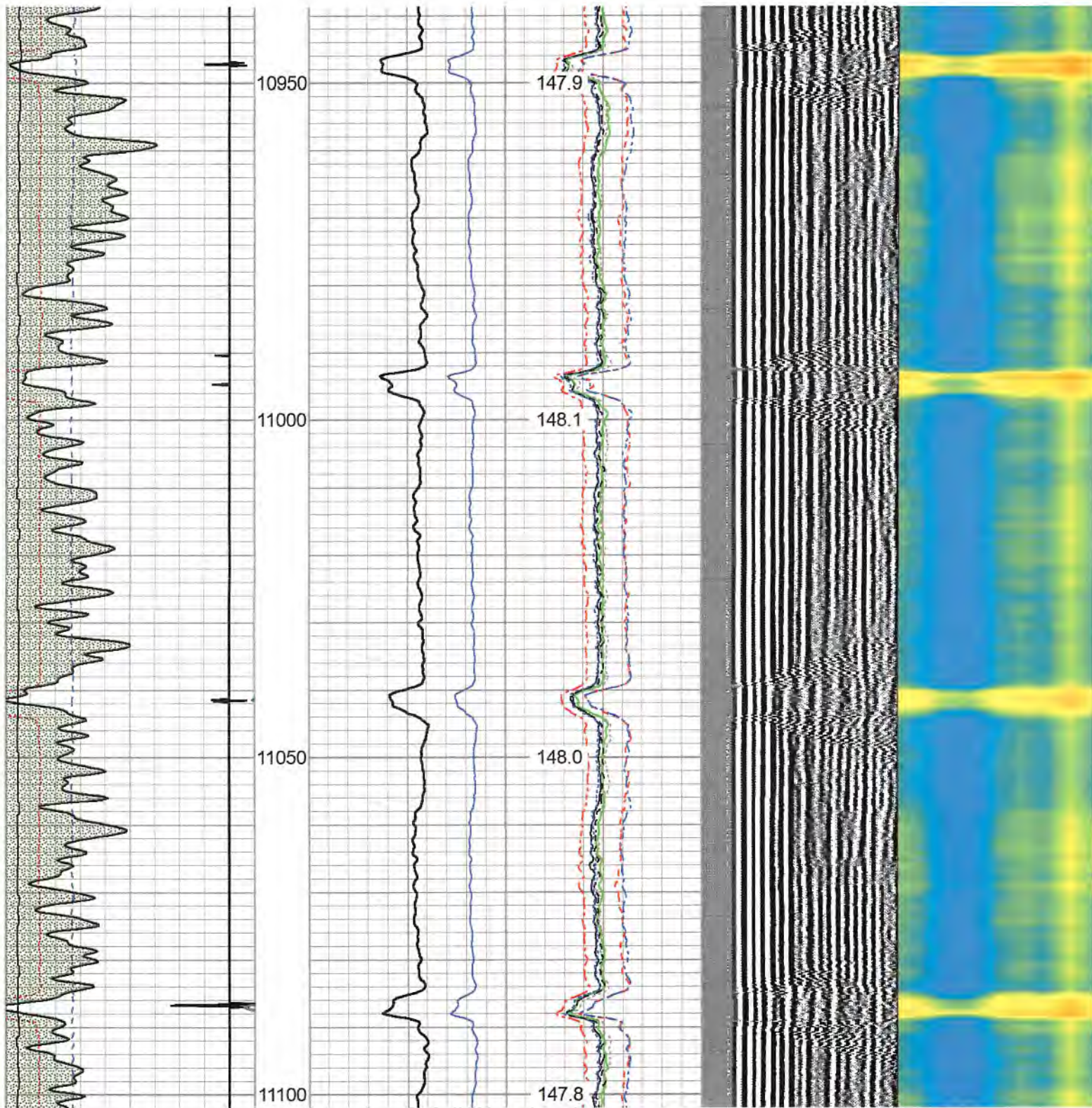


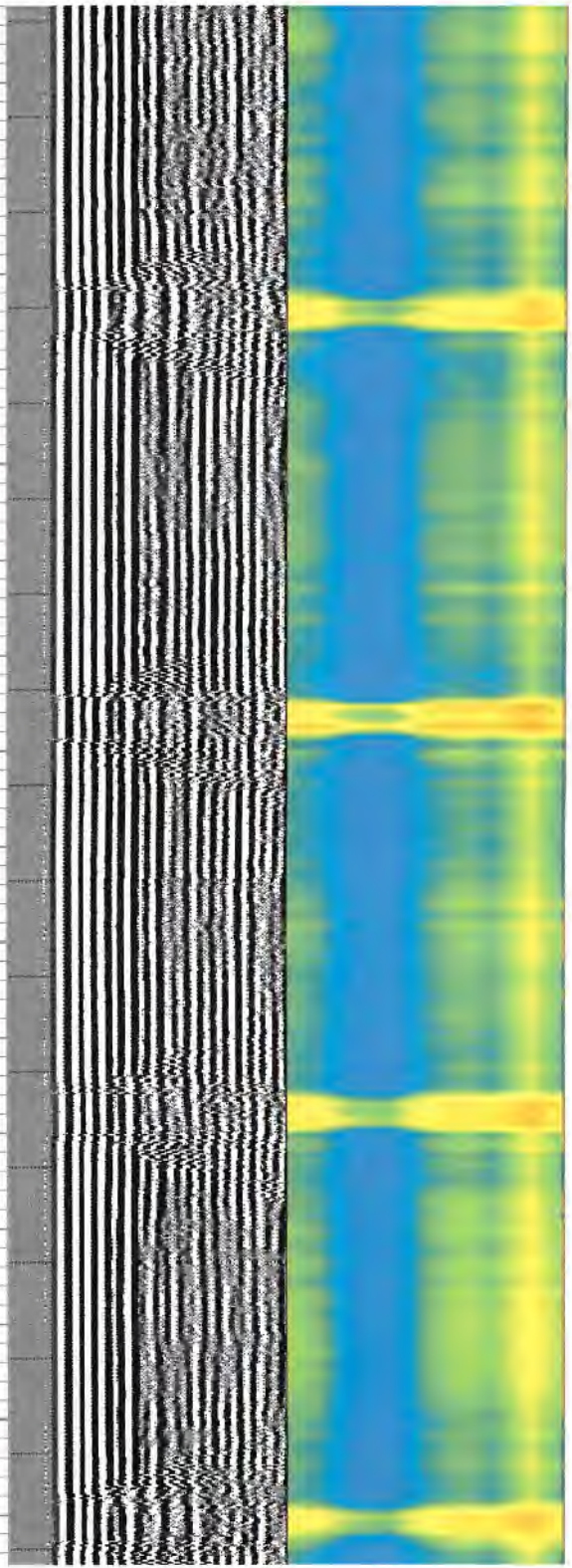
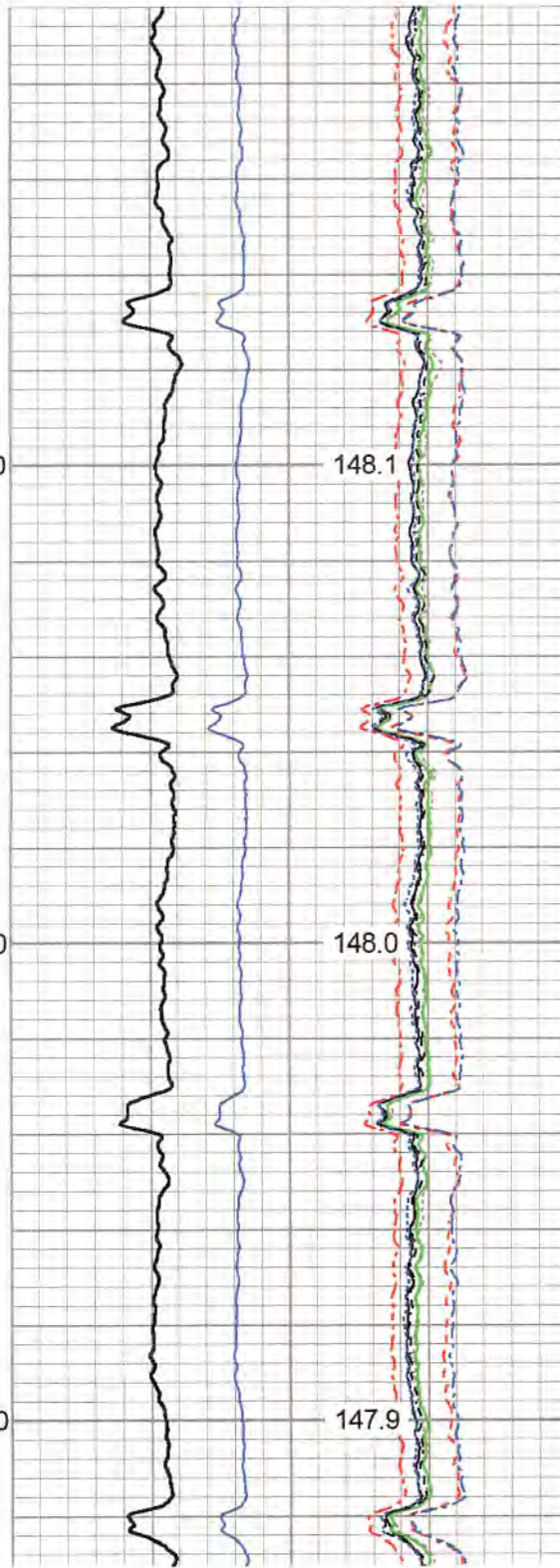
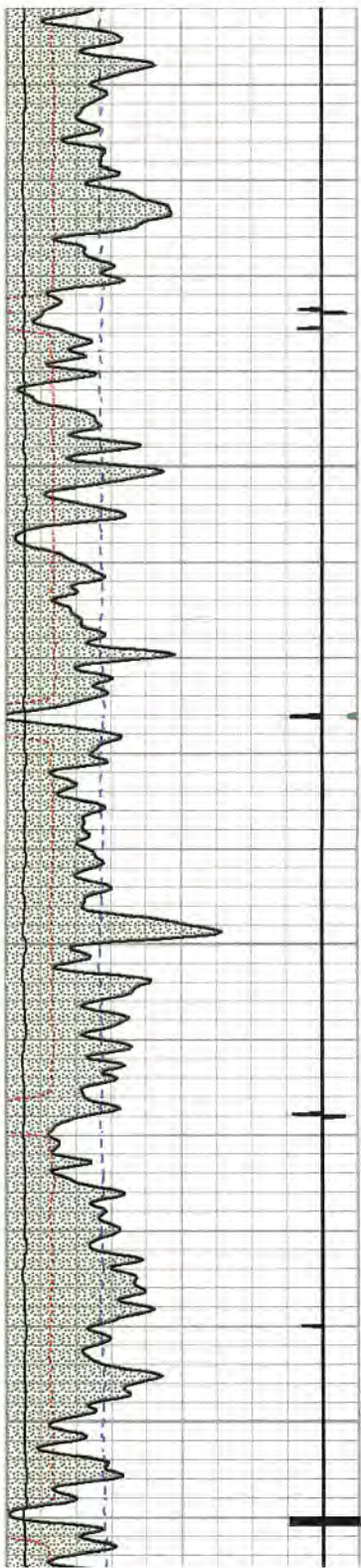


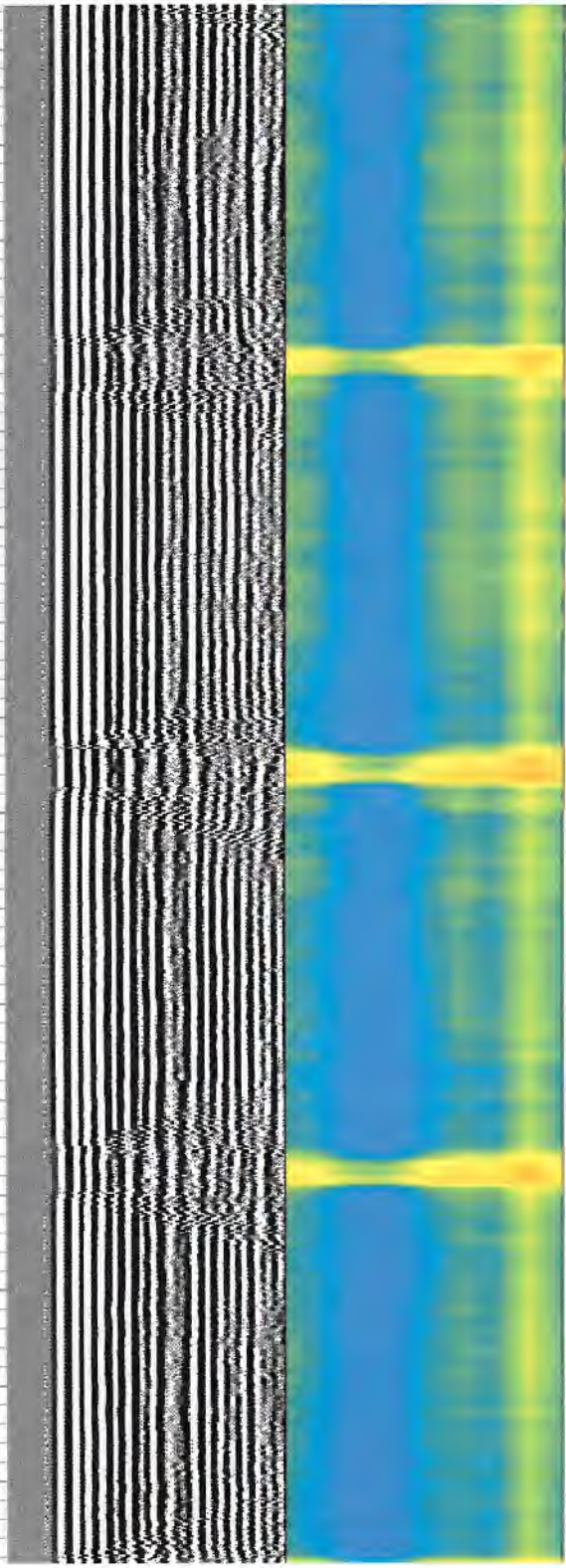
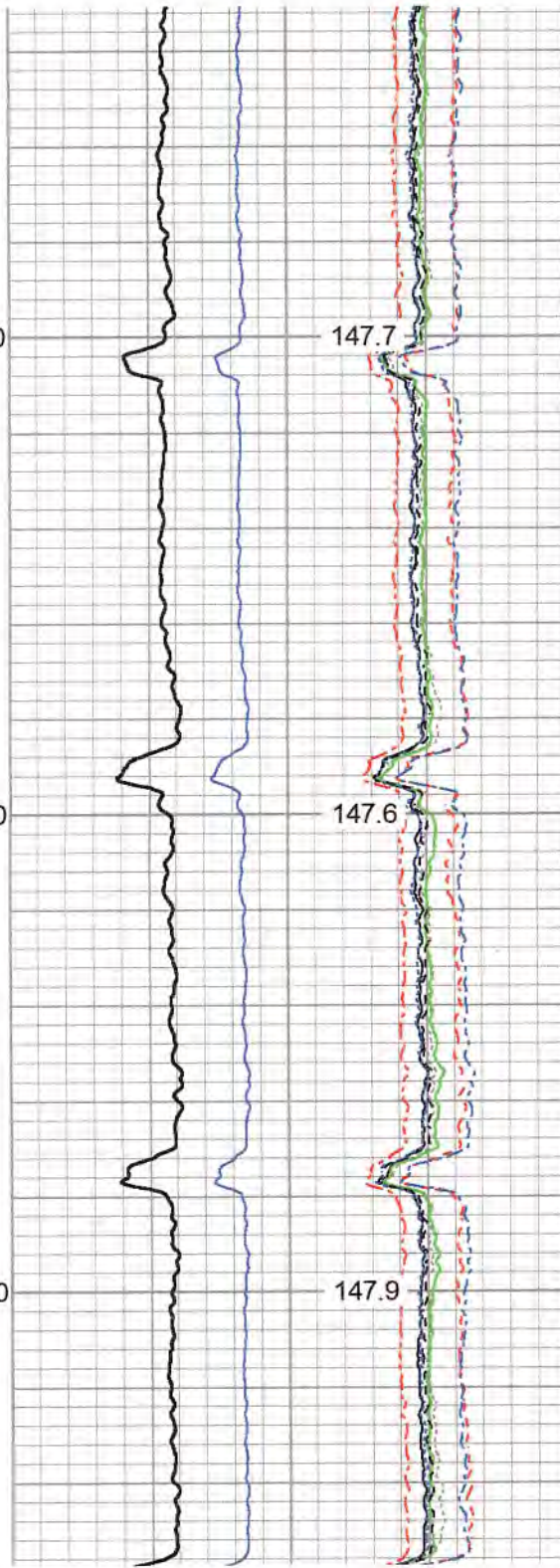
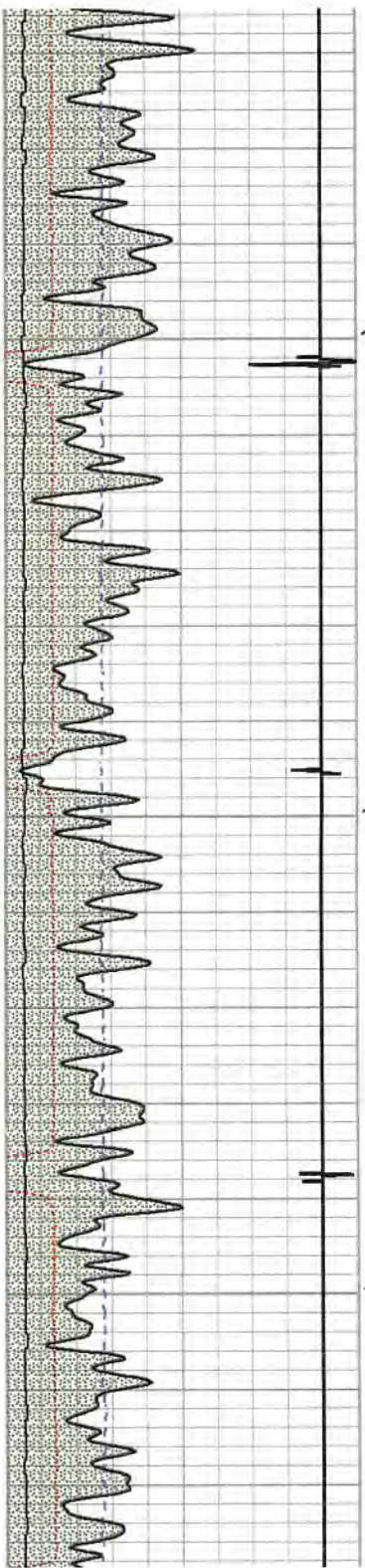


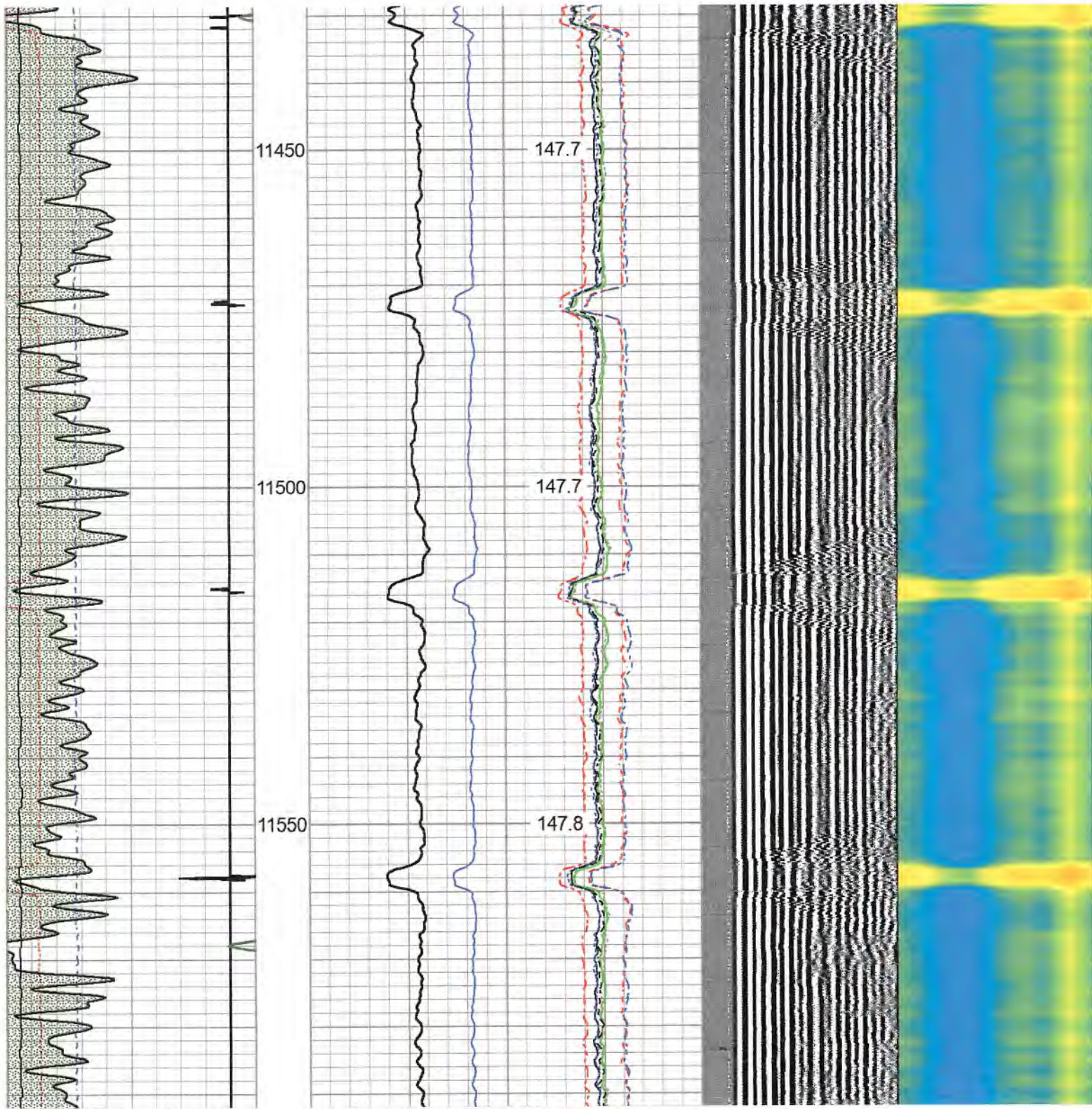


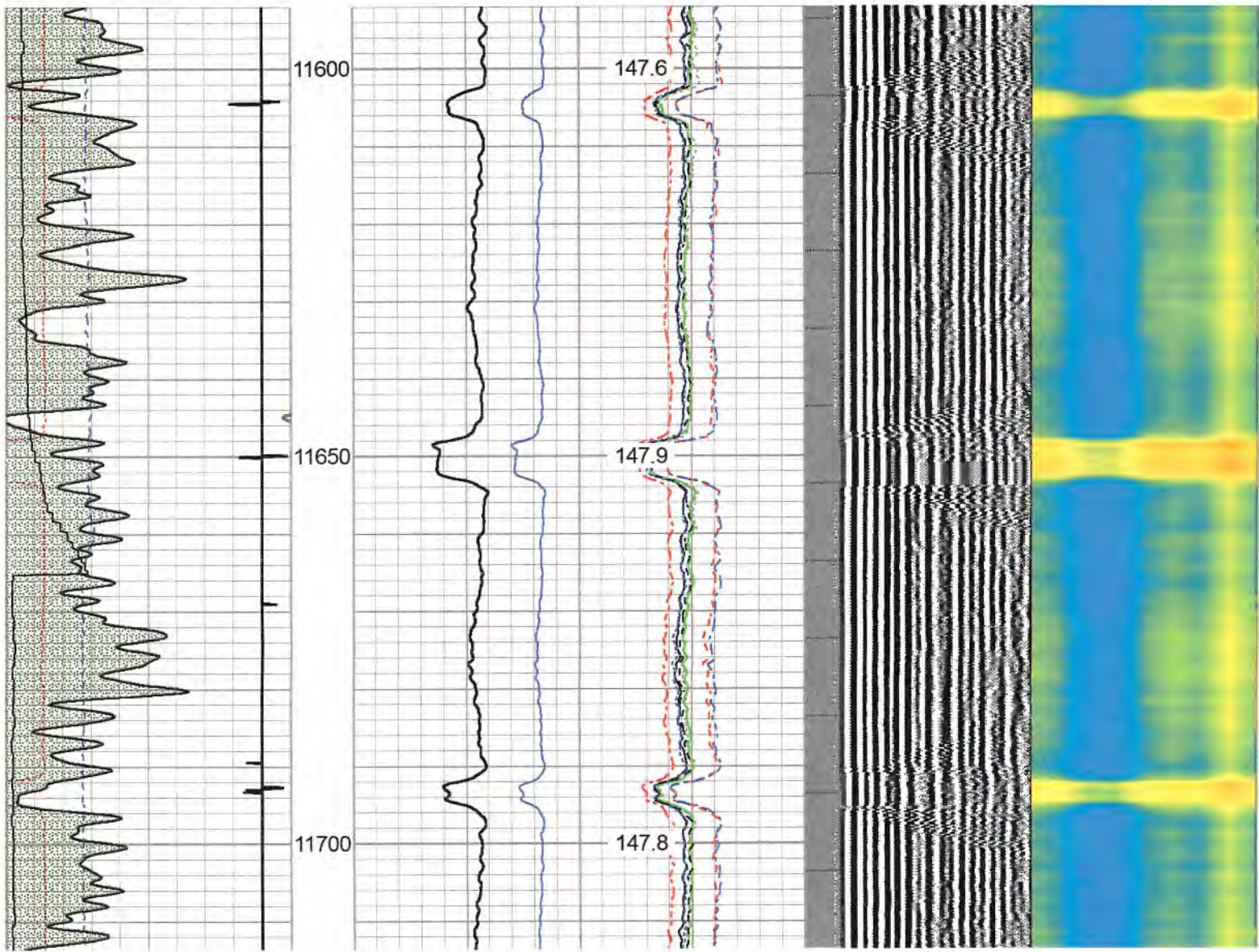


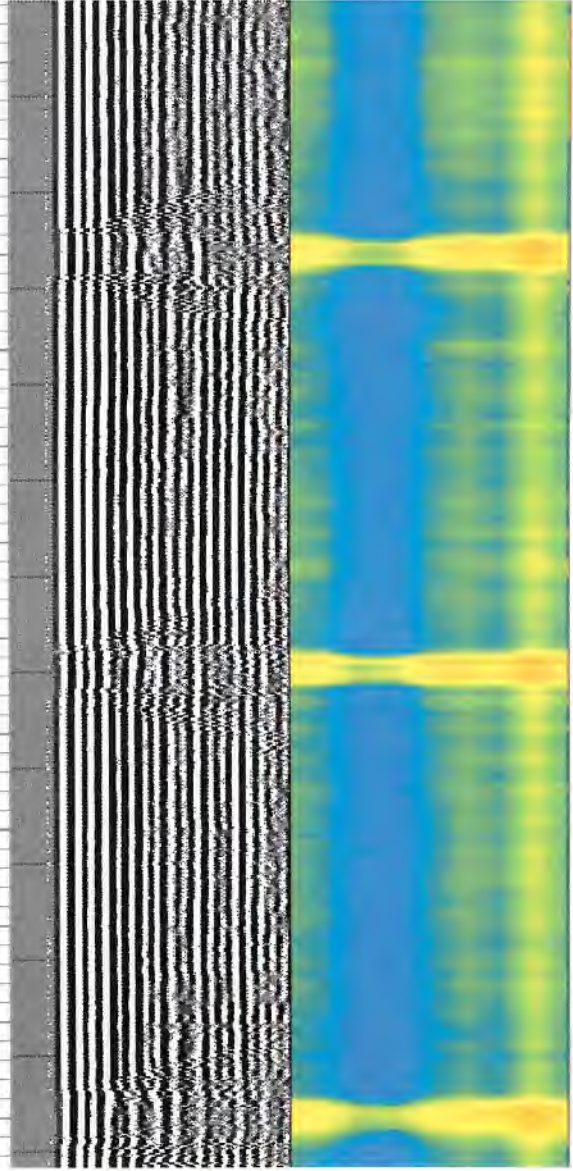
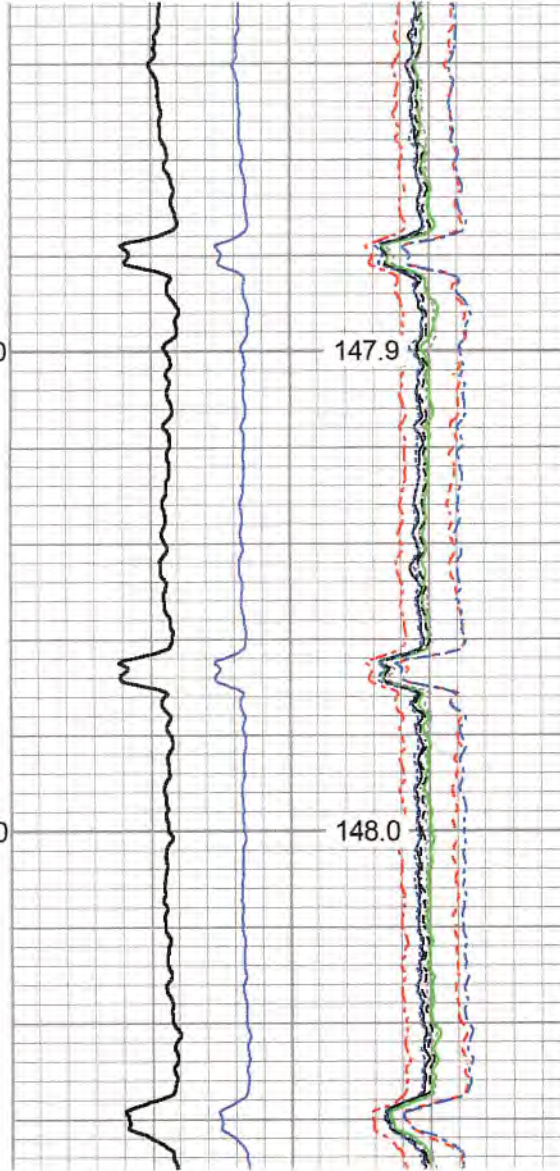
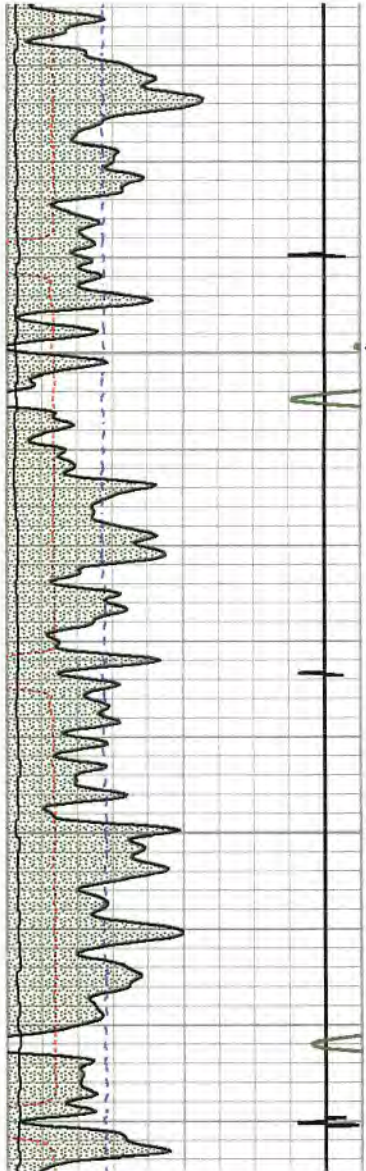


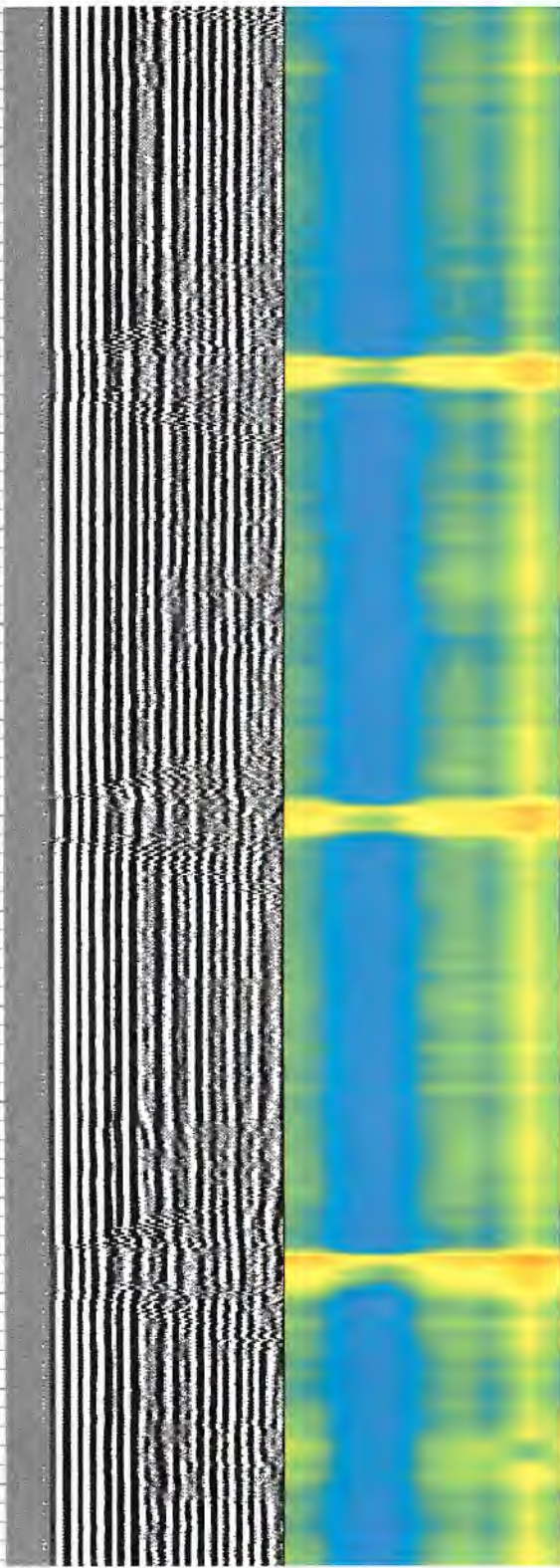
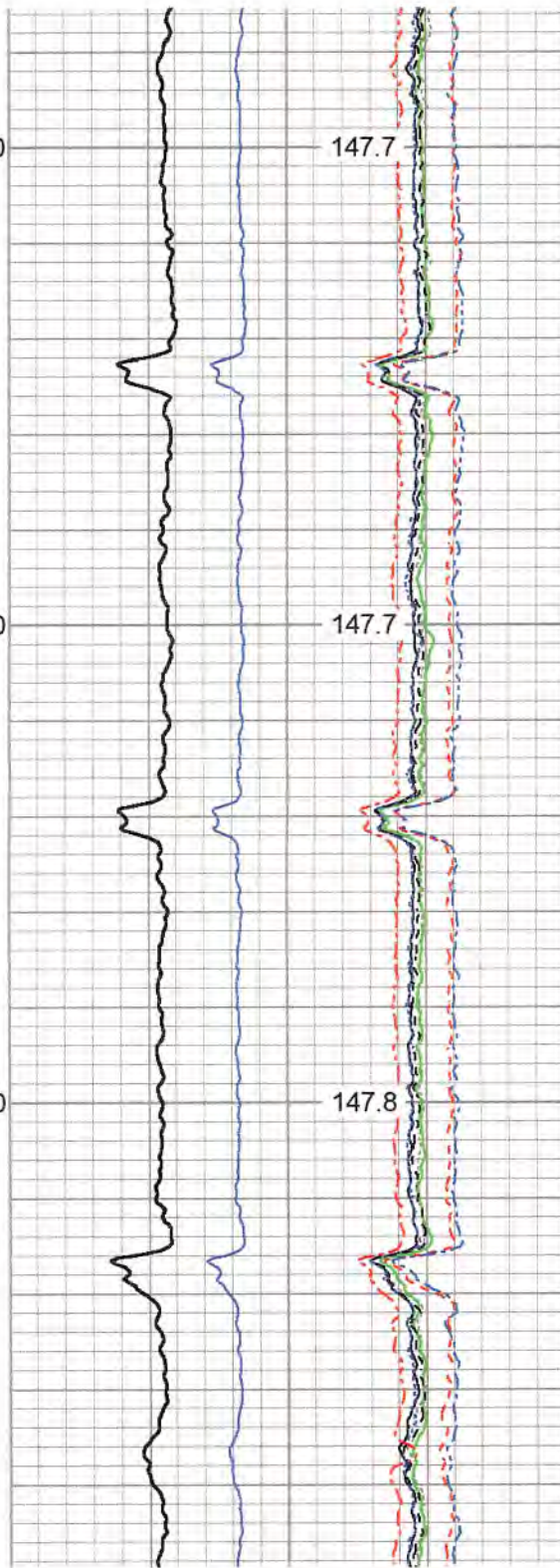
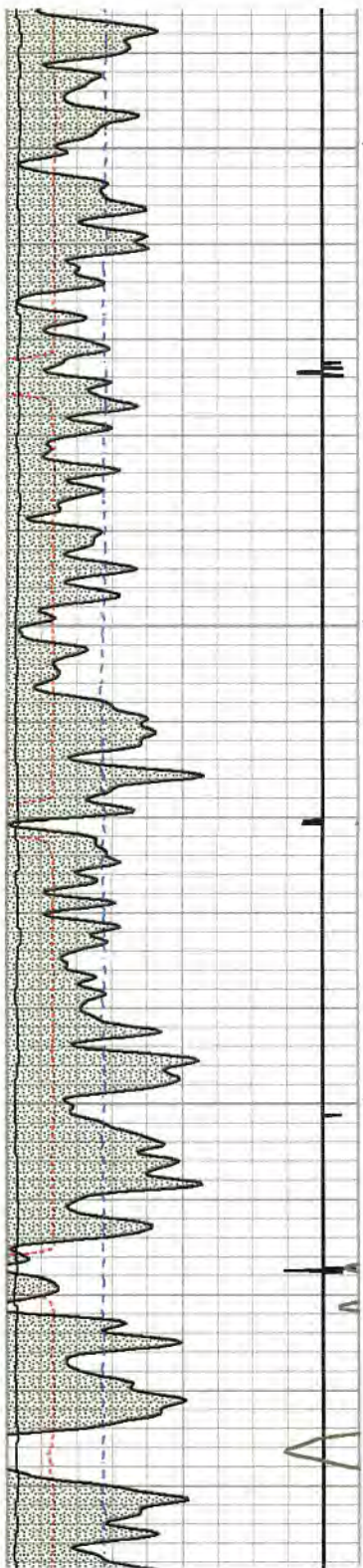


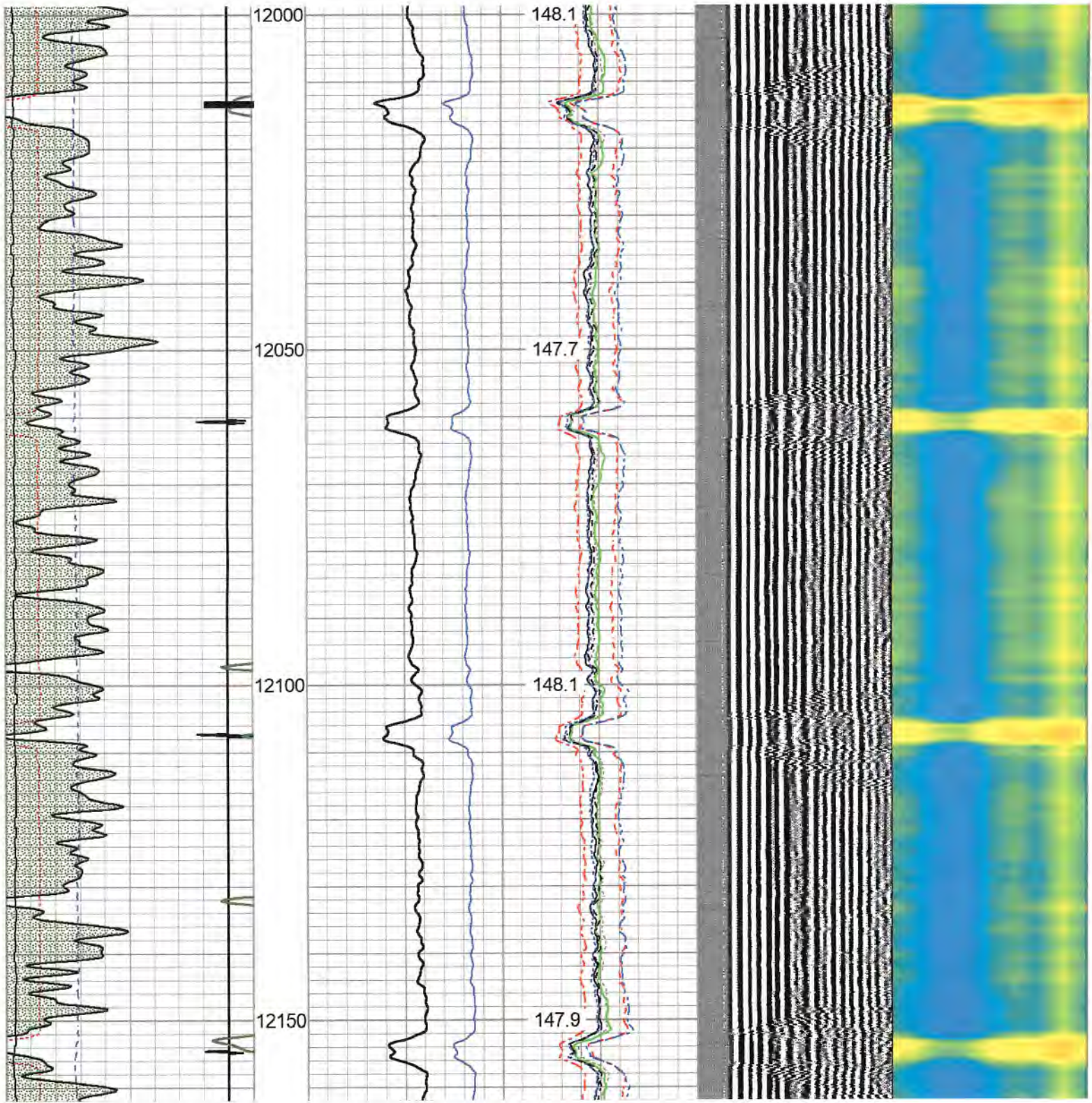


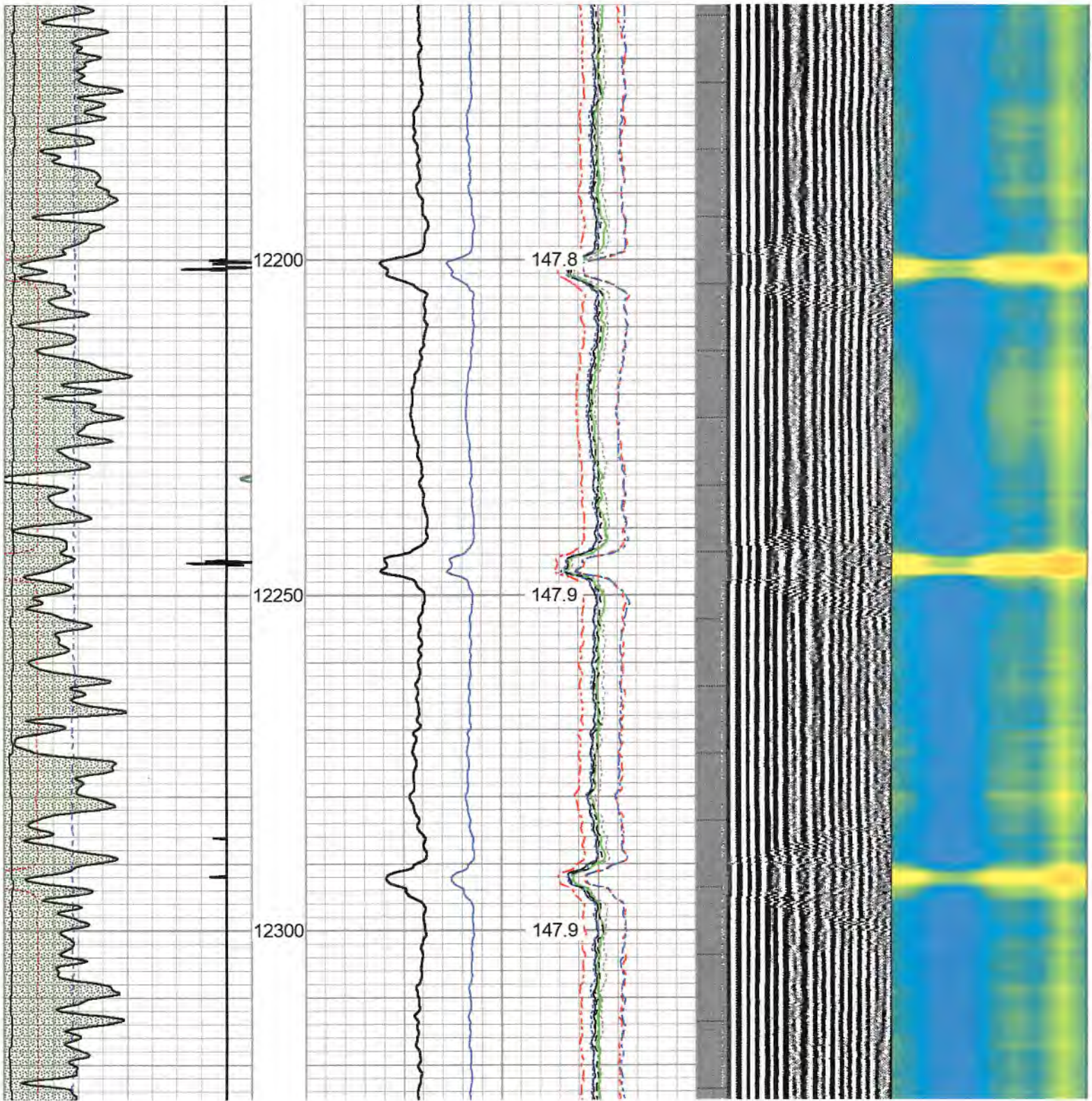


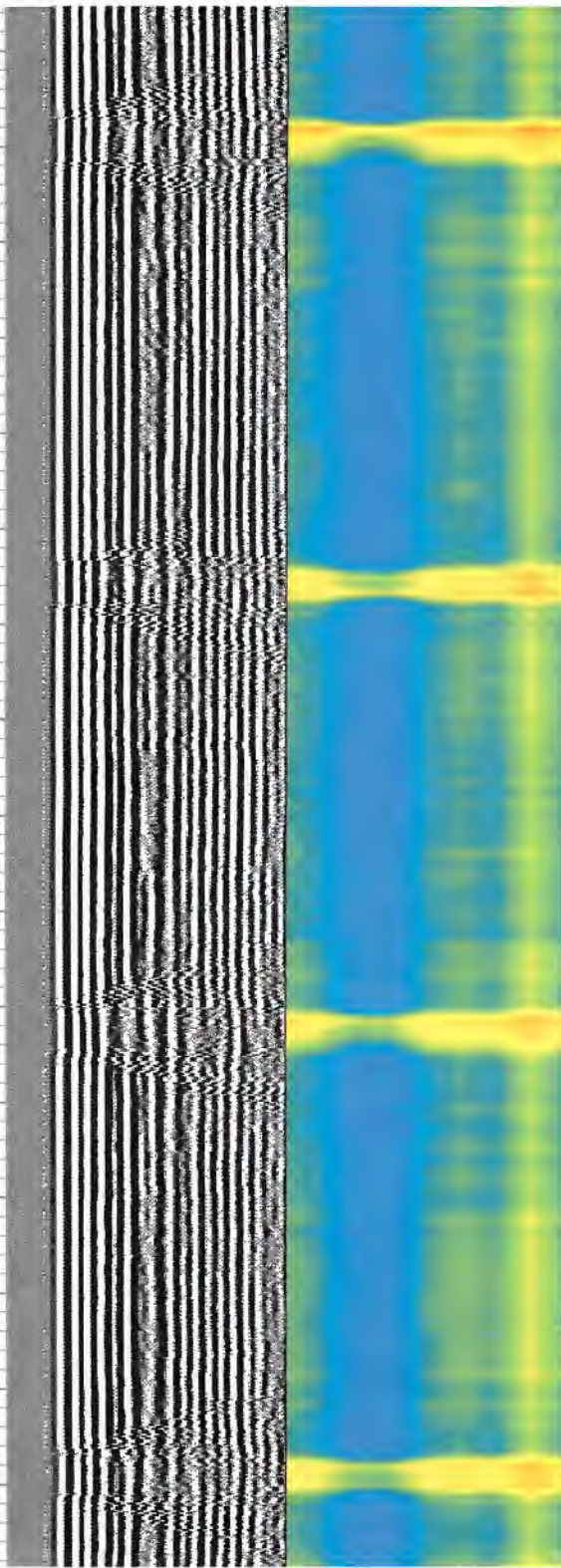
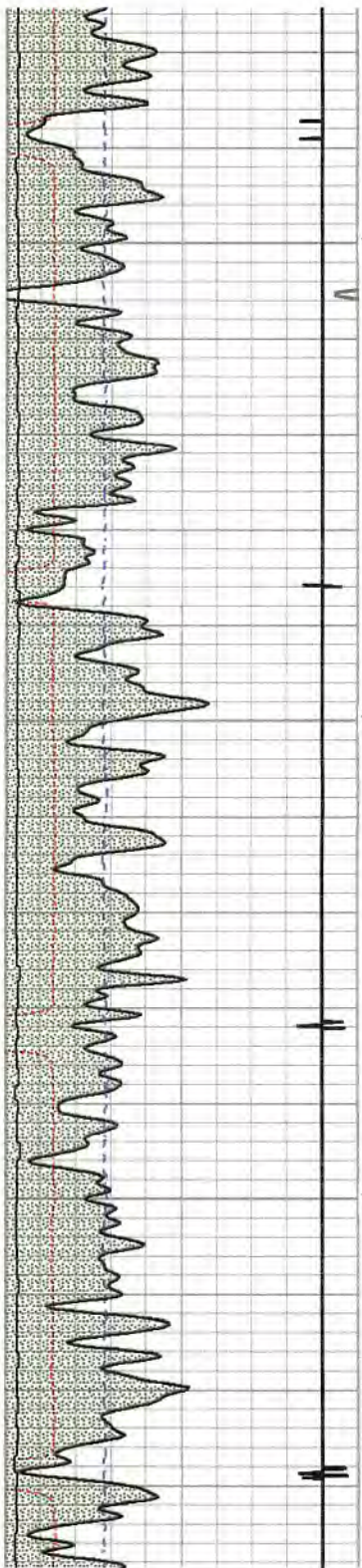


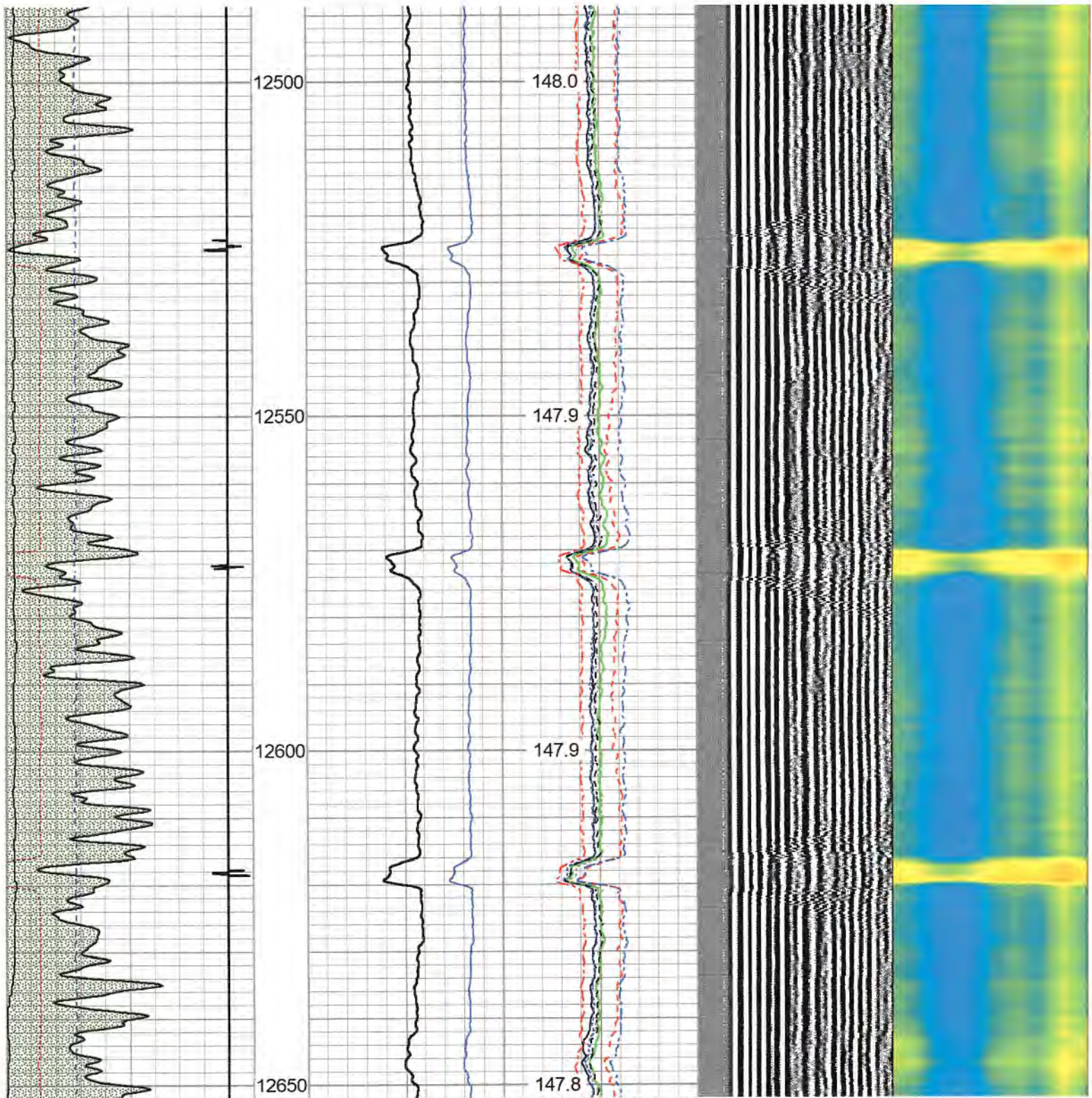


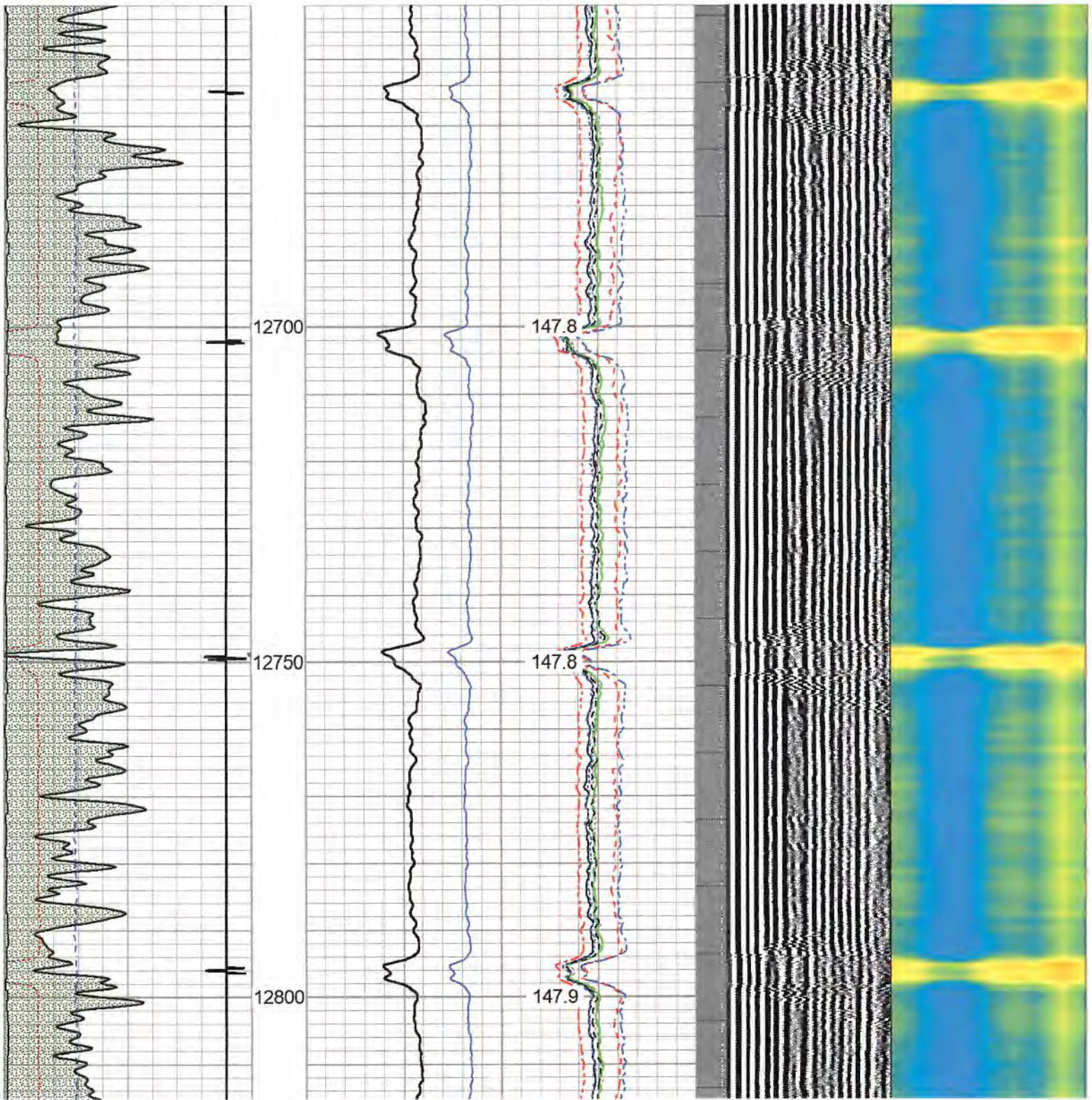


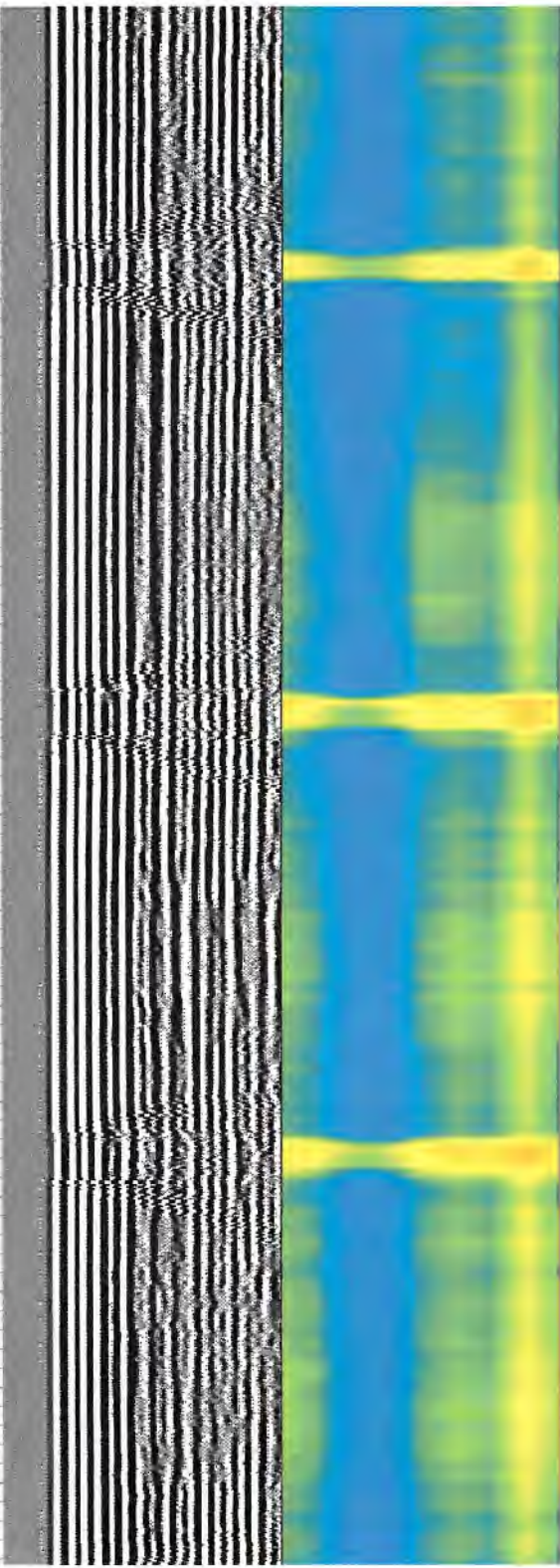
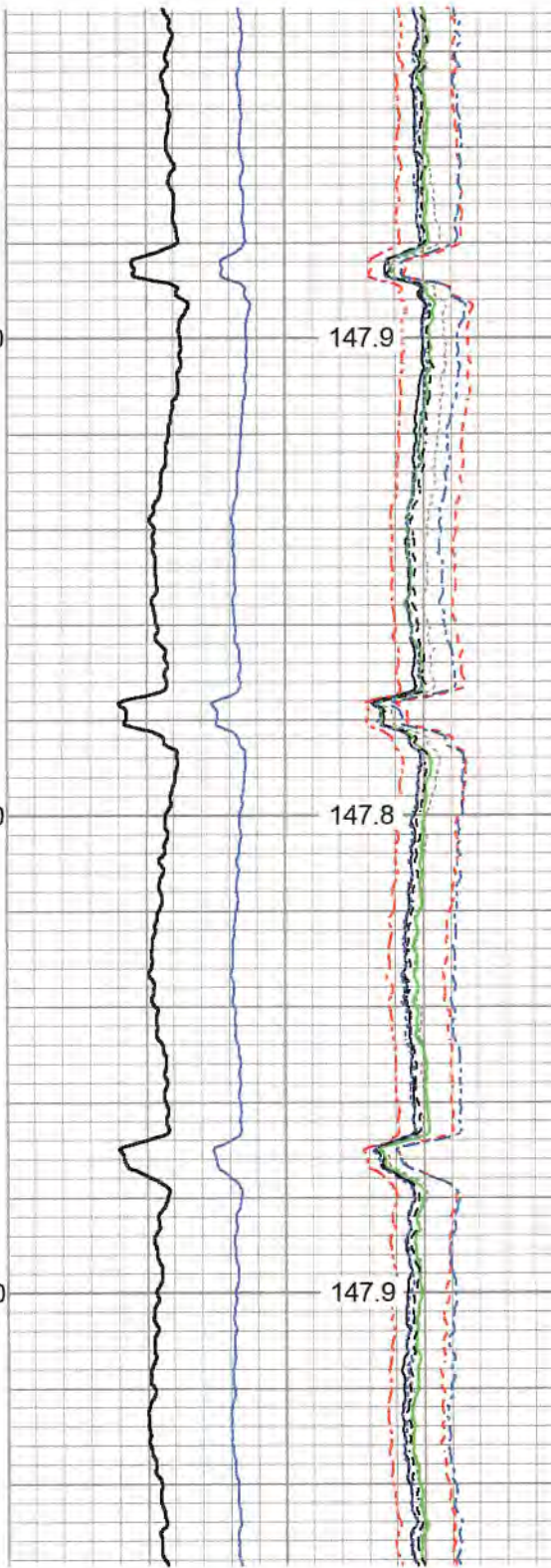
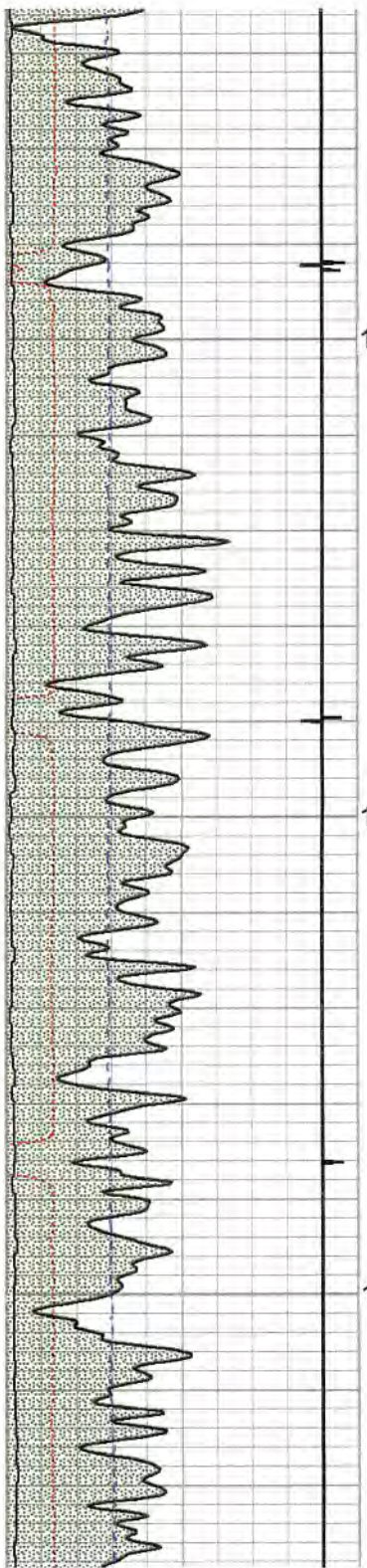


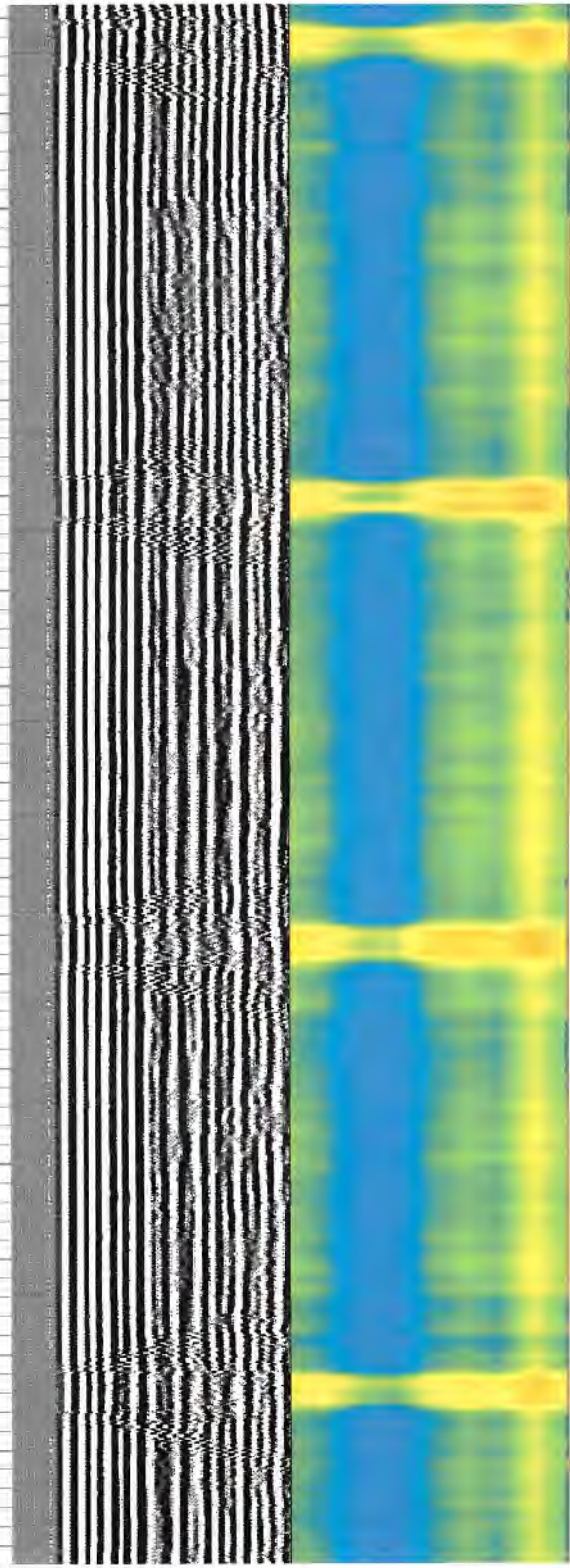
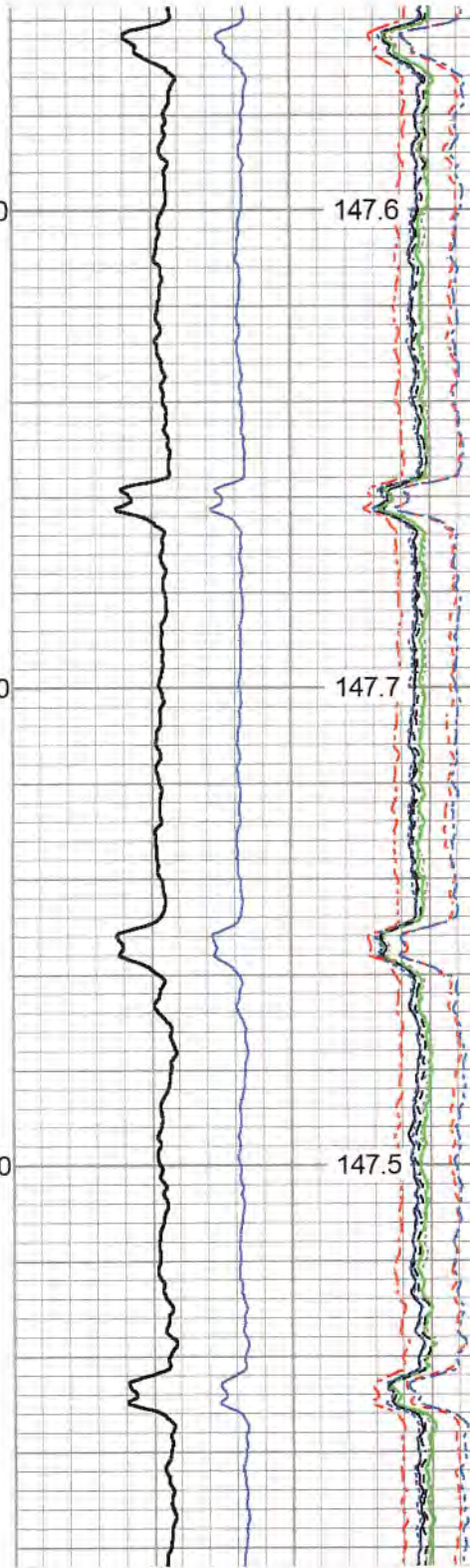
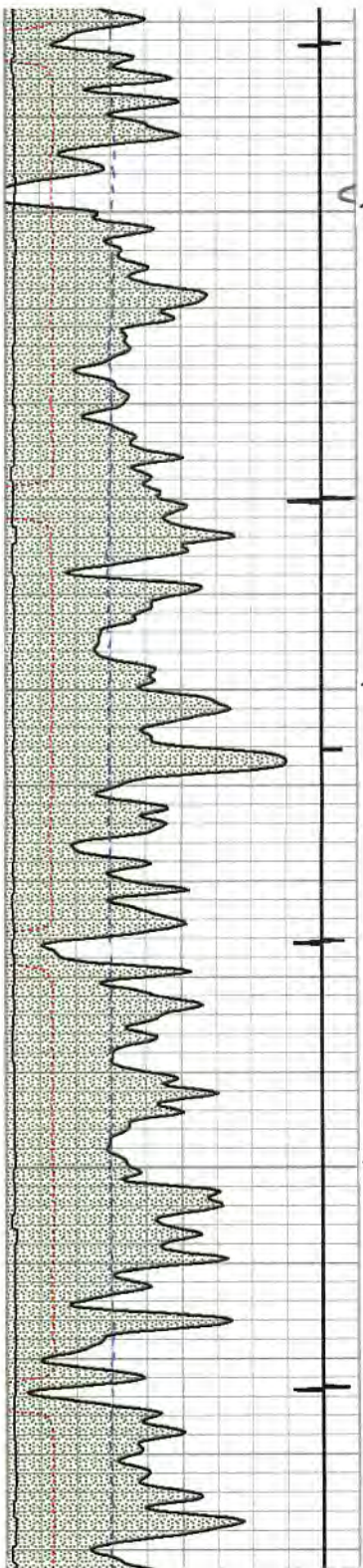


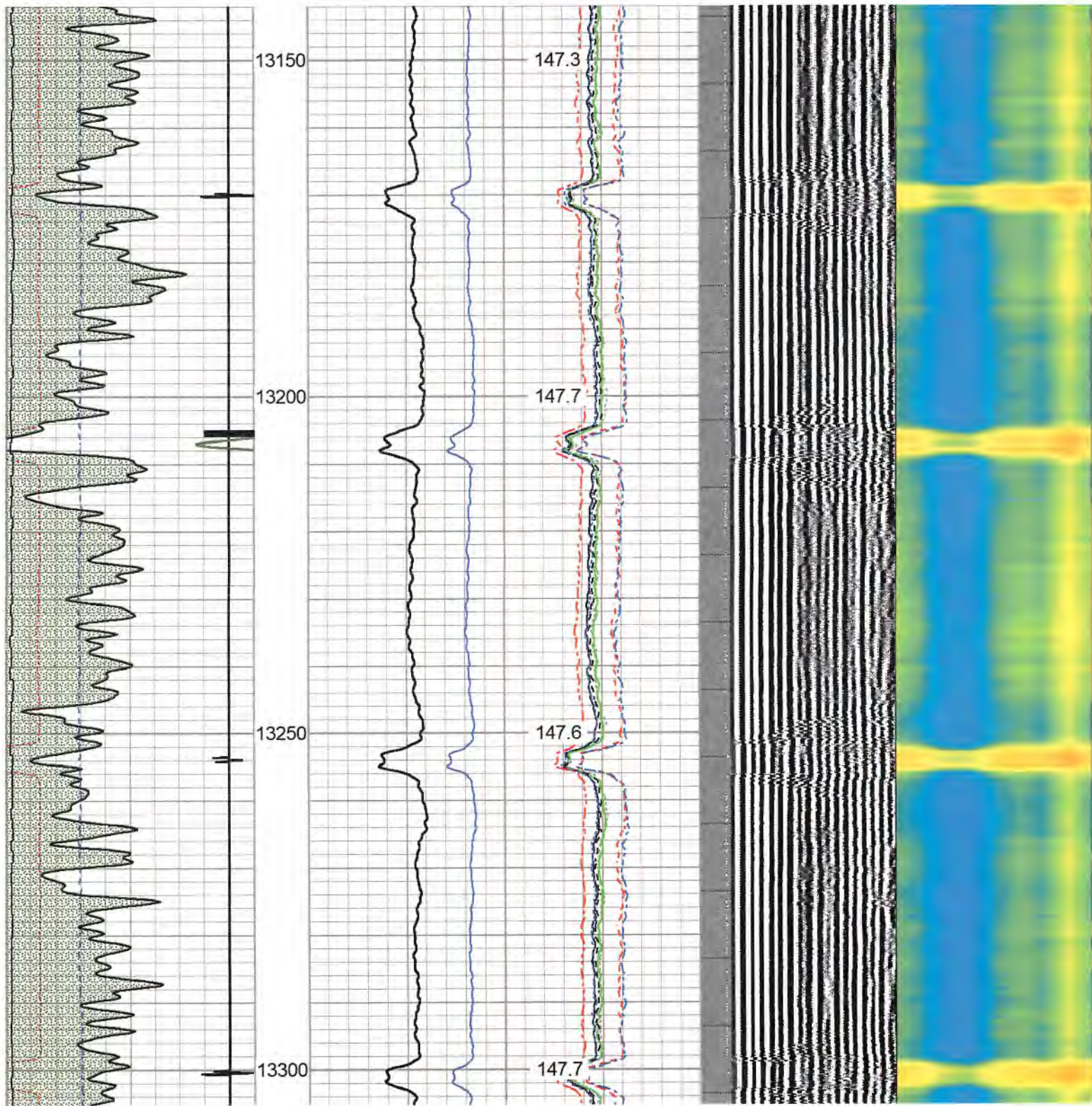


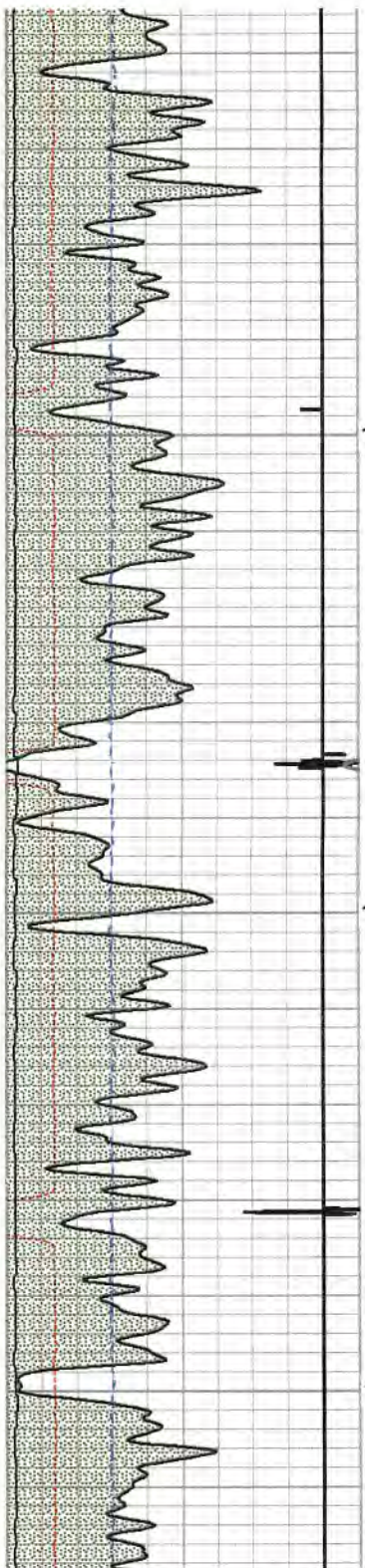








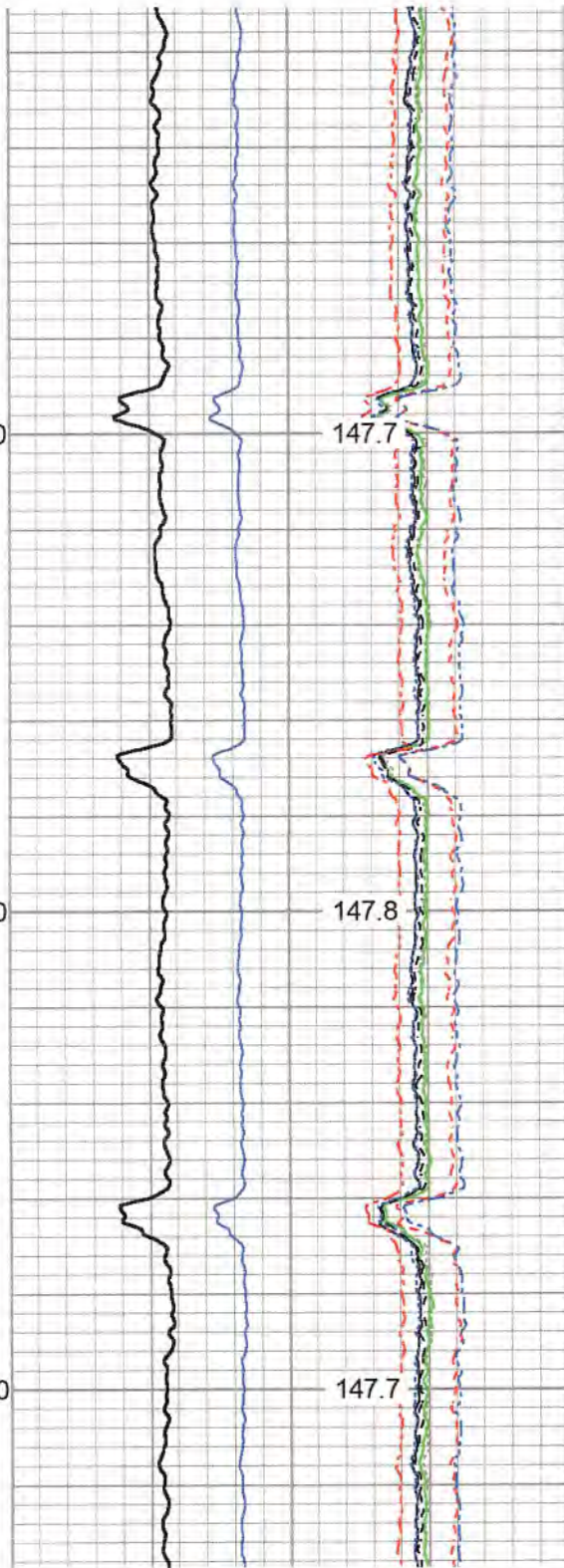




13350

13400

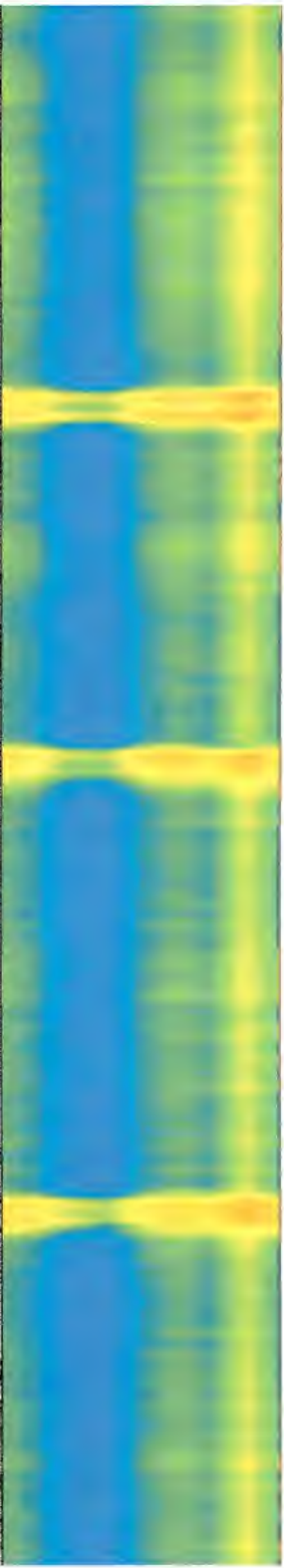
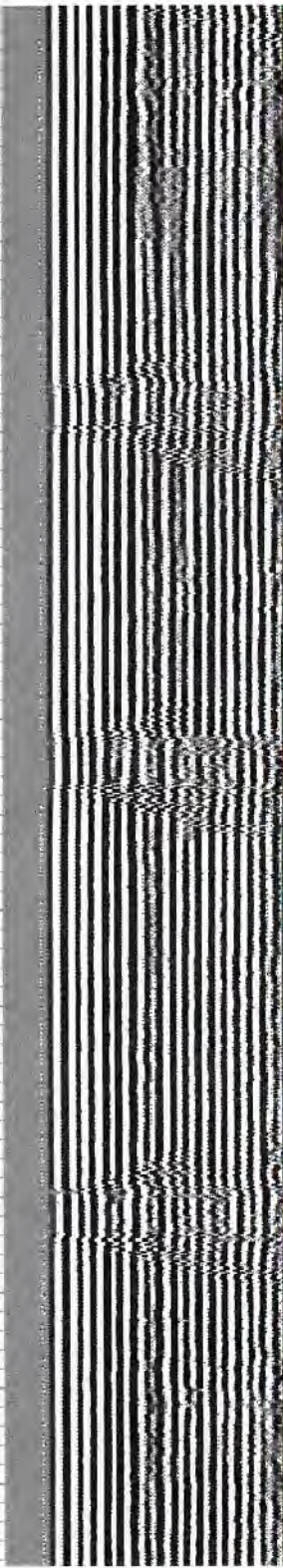
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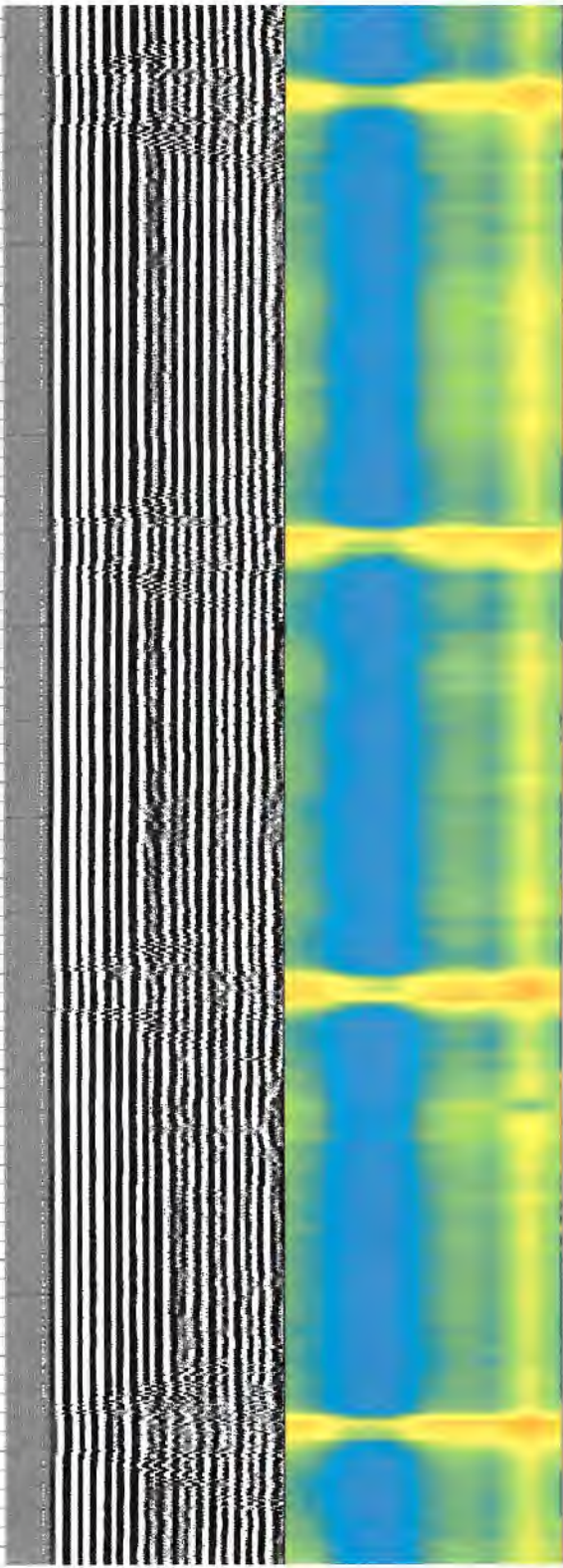
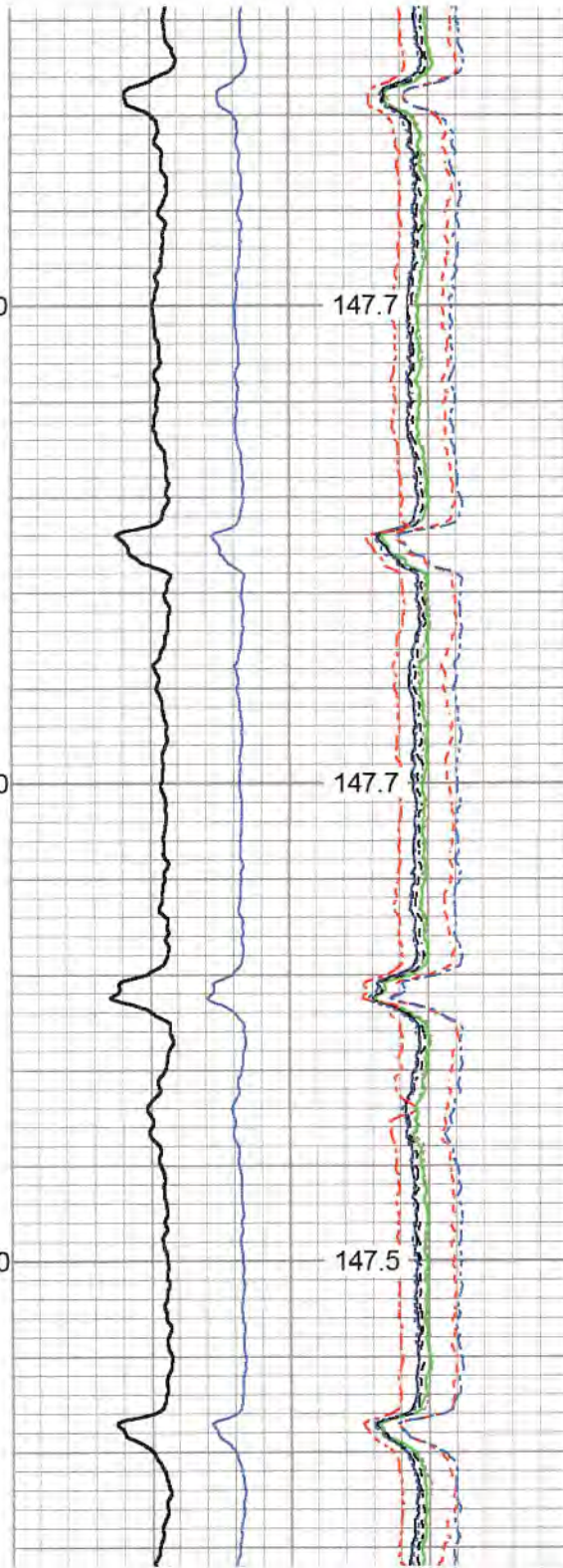
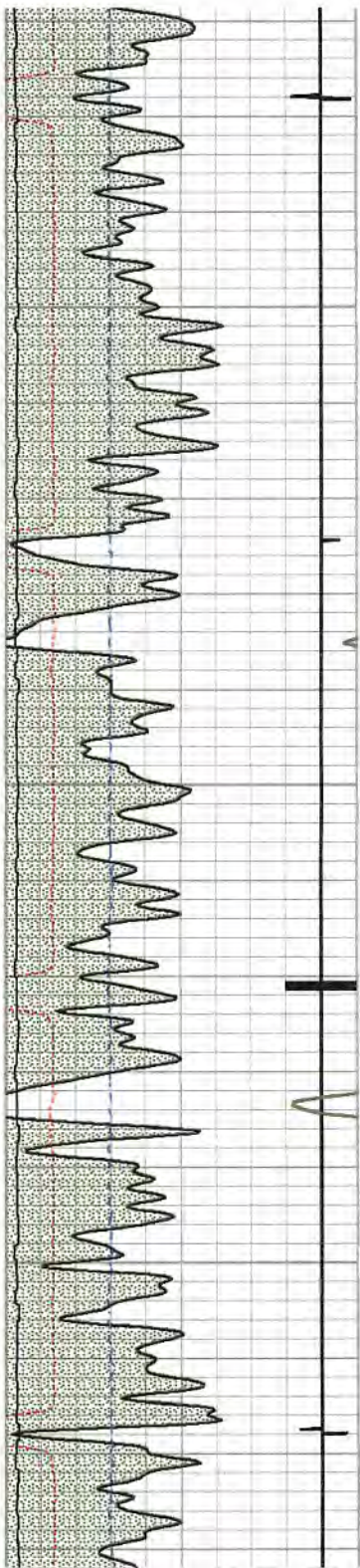


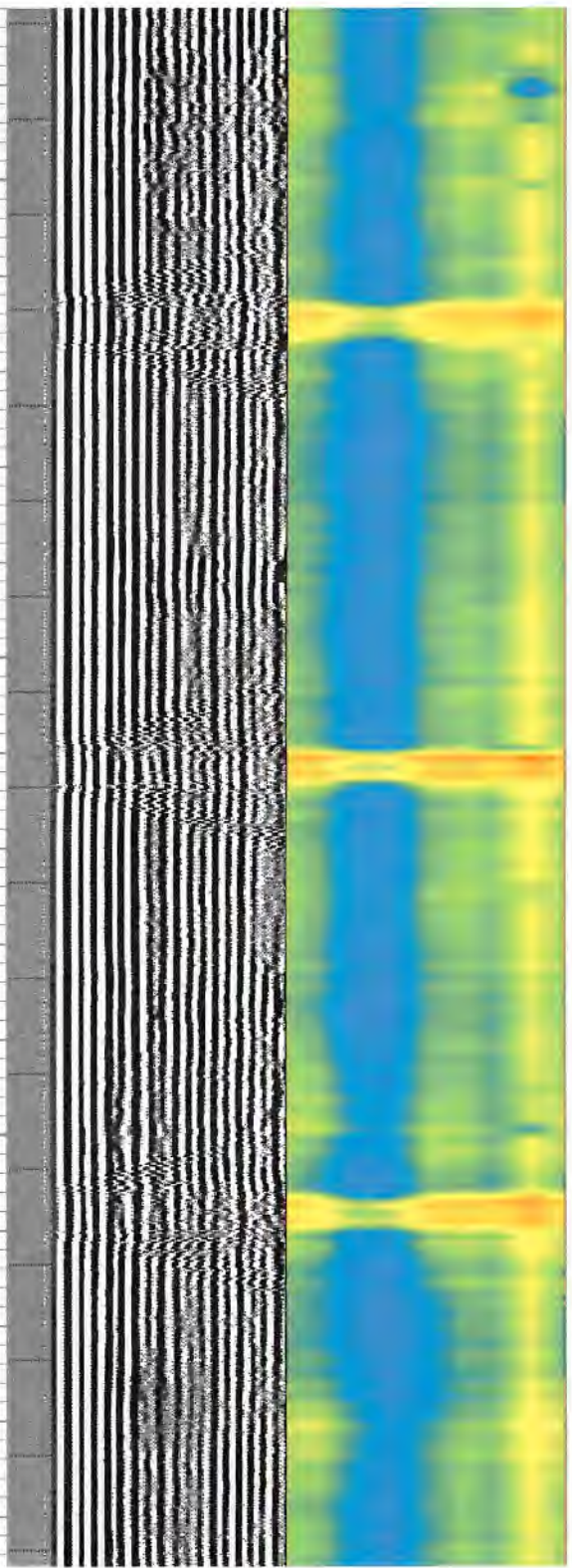
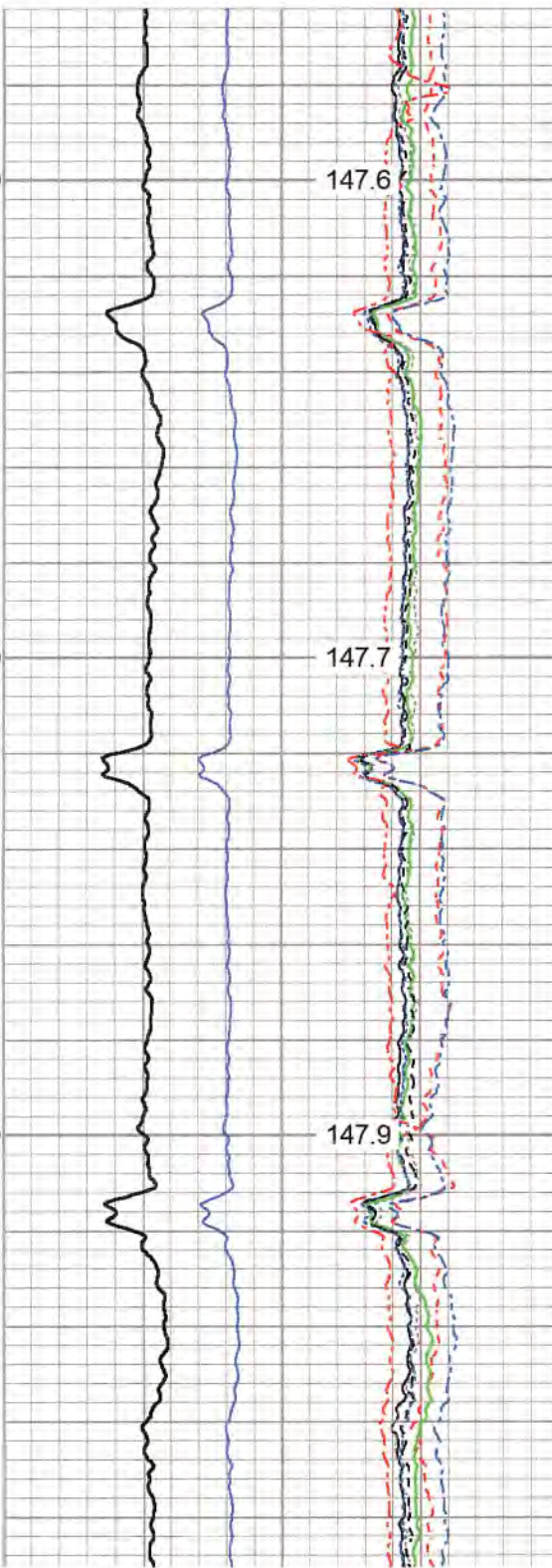
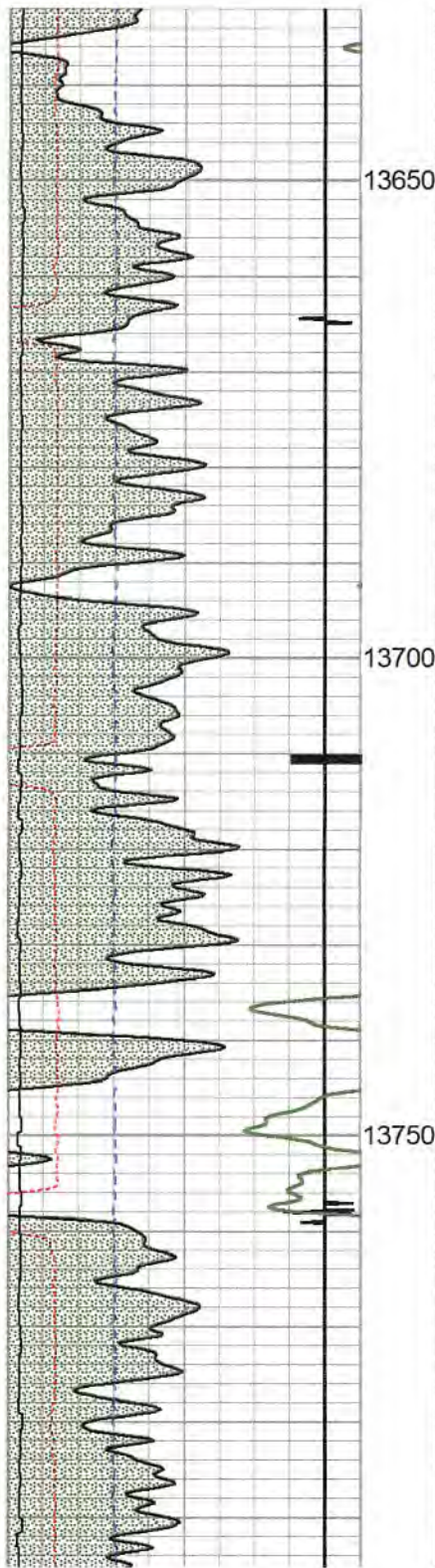
147.7

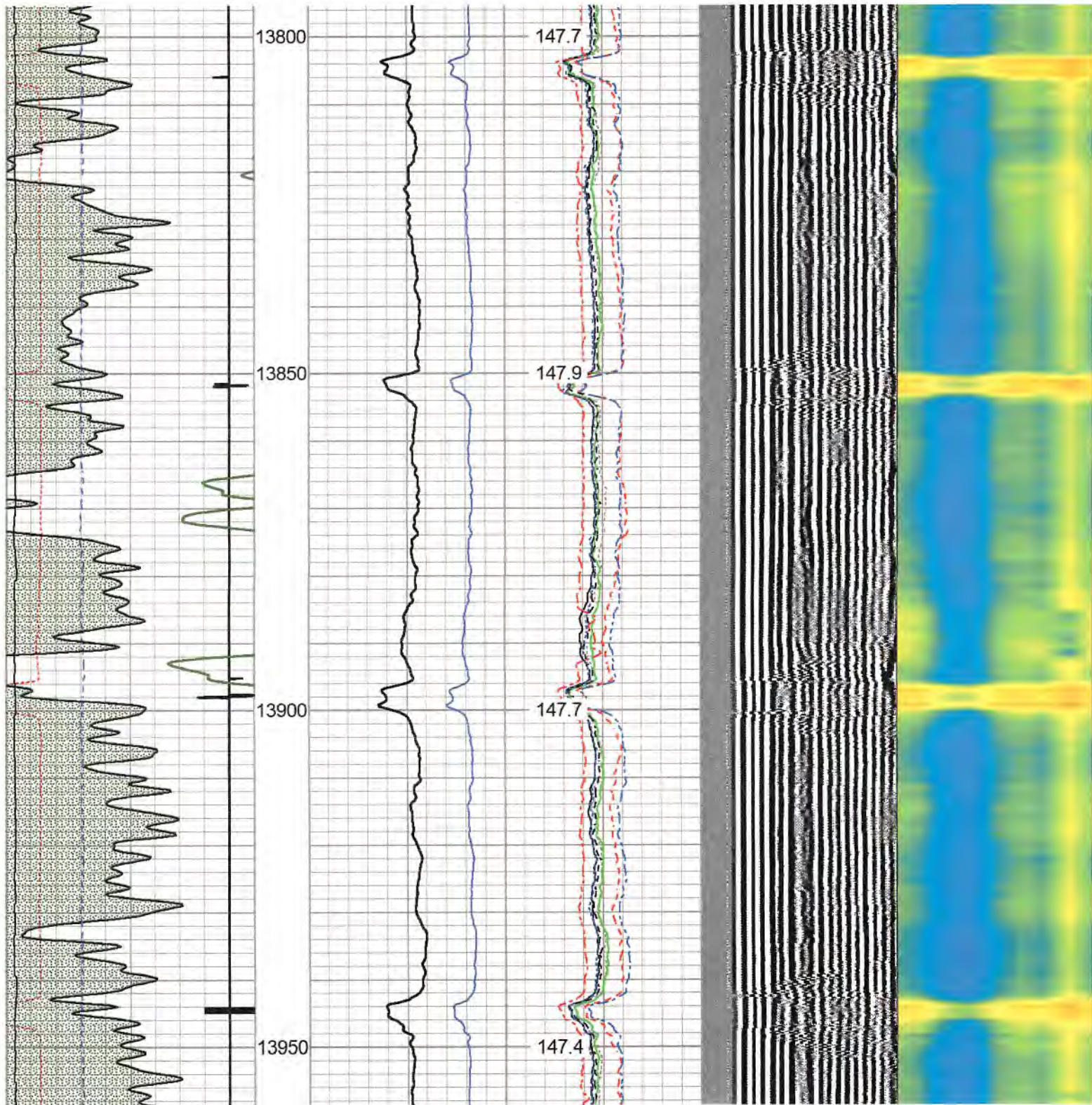
147.8

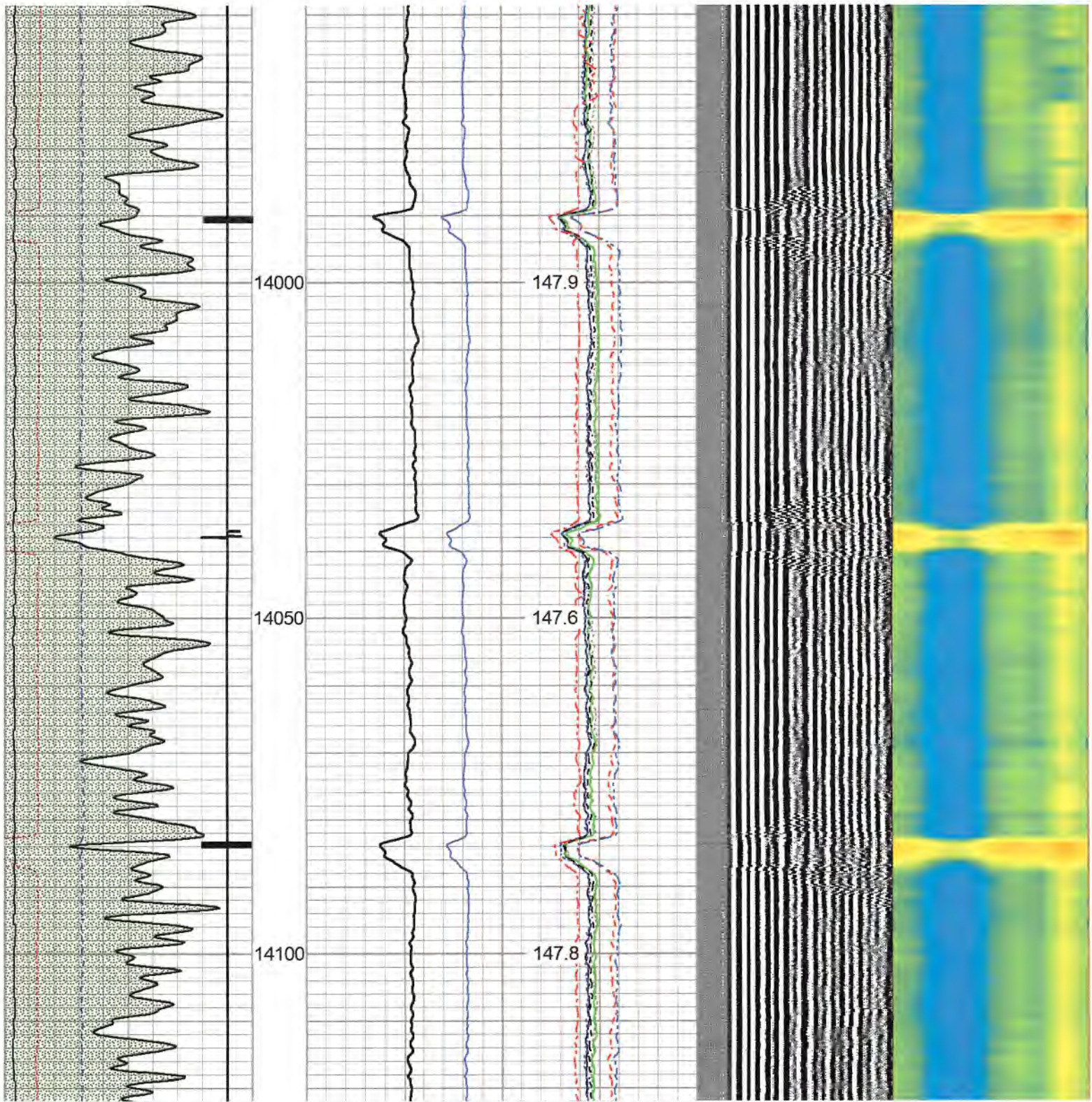
147.7

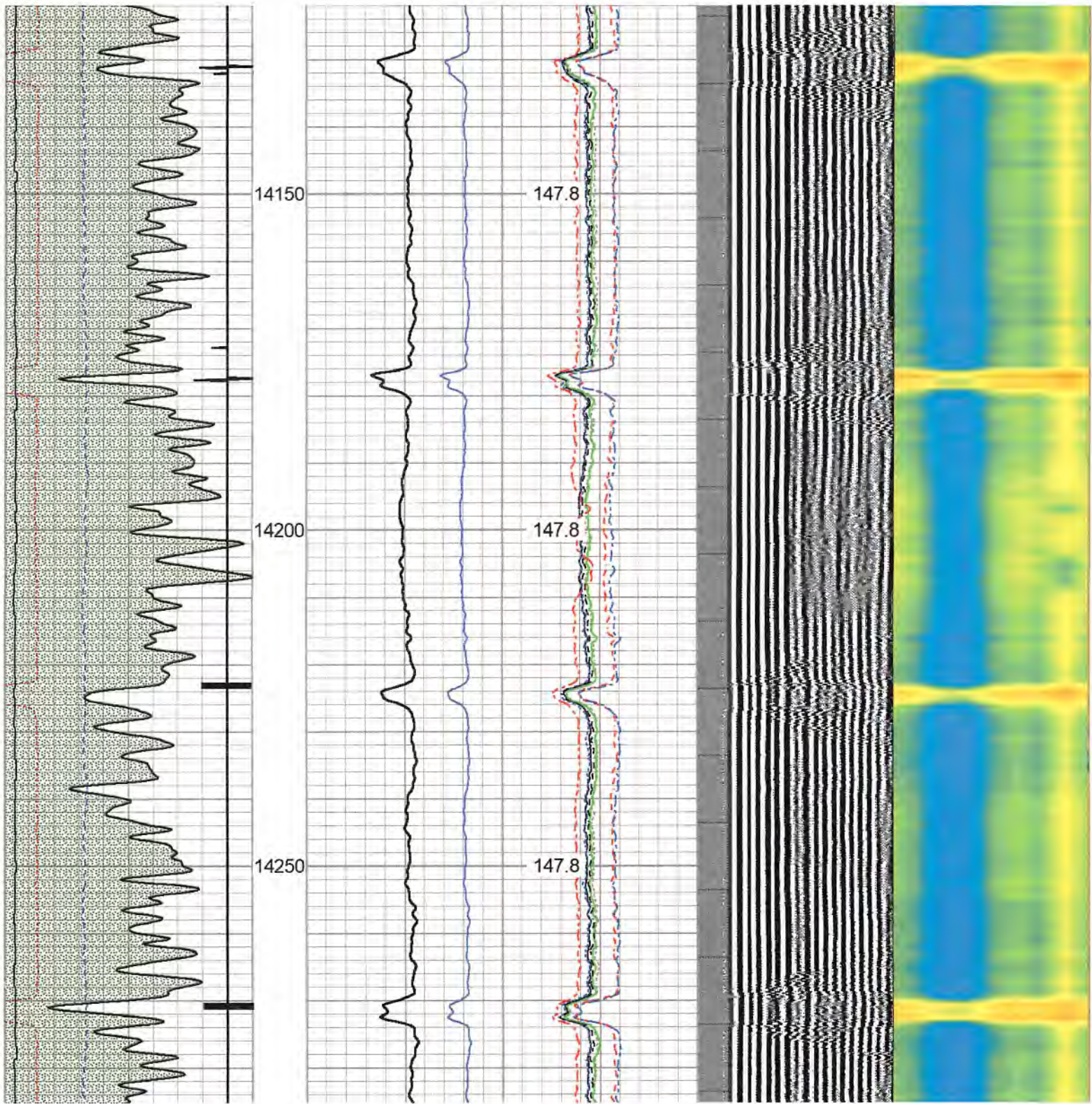


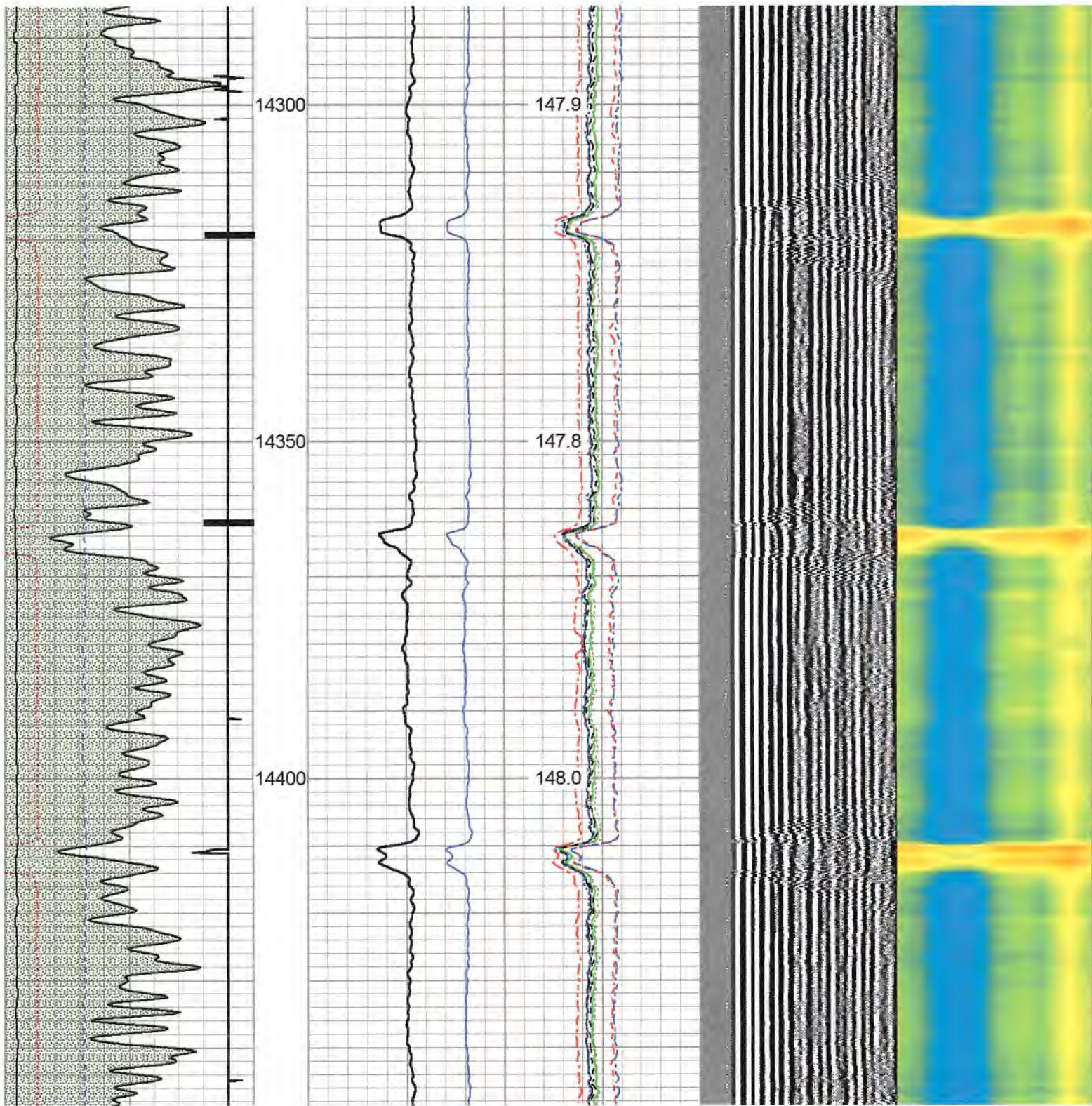


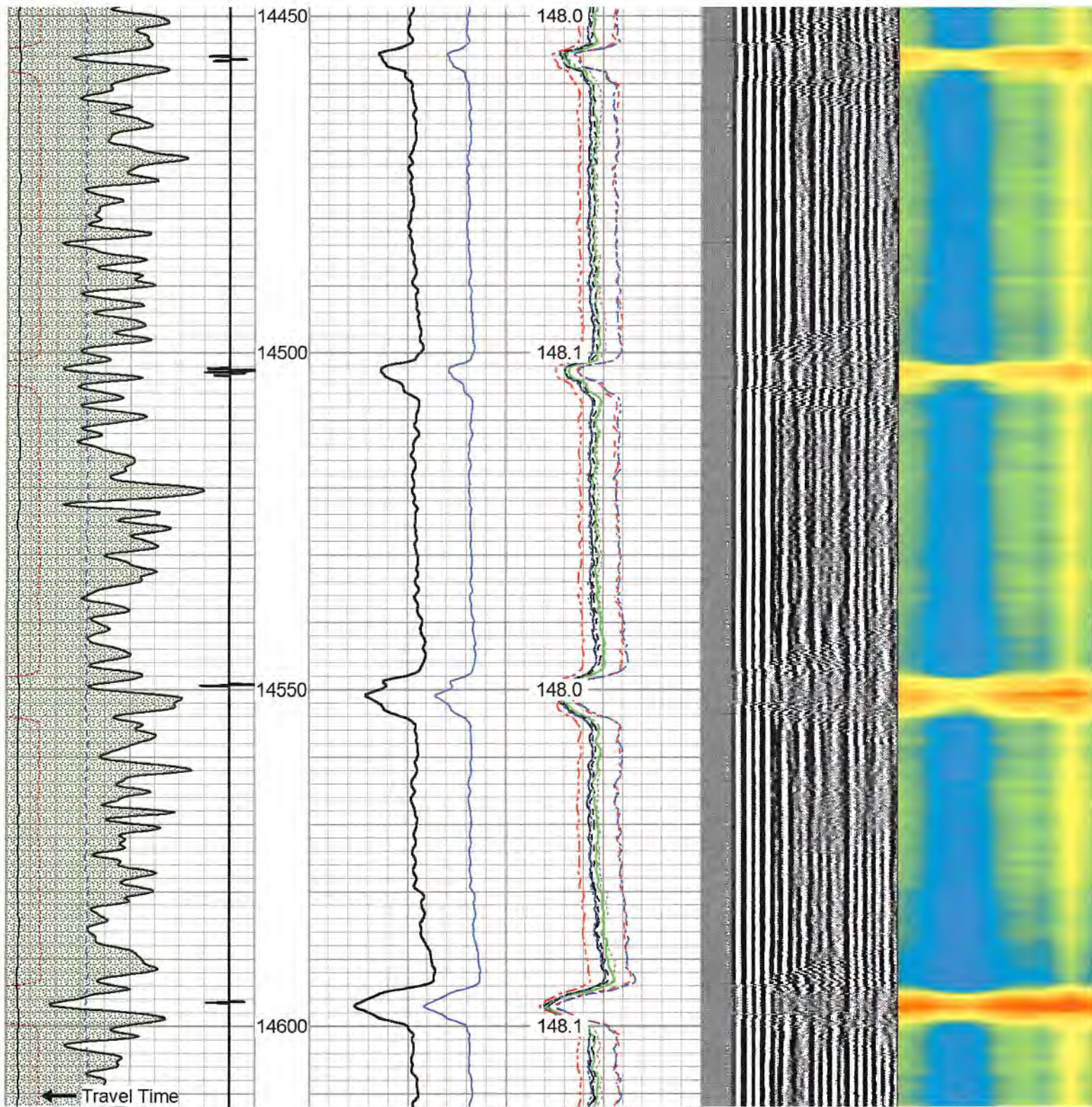


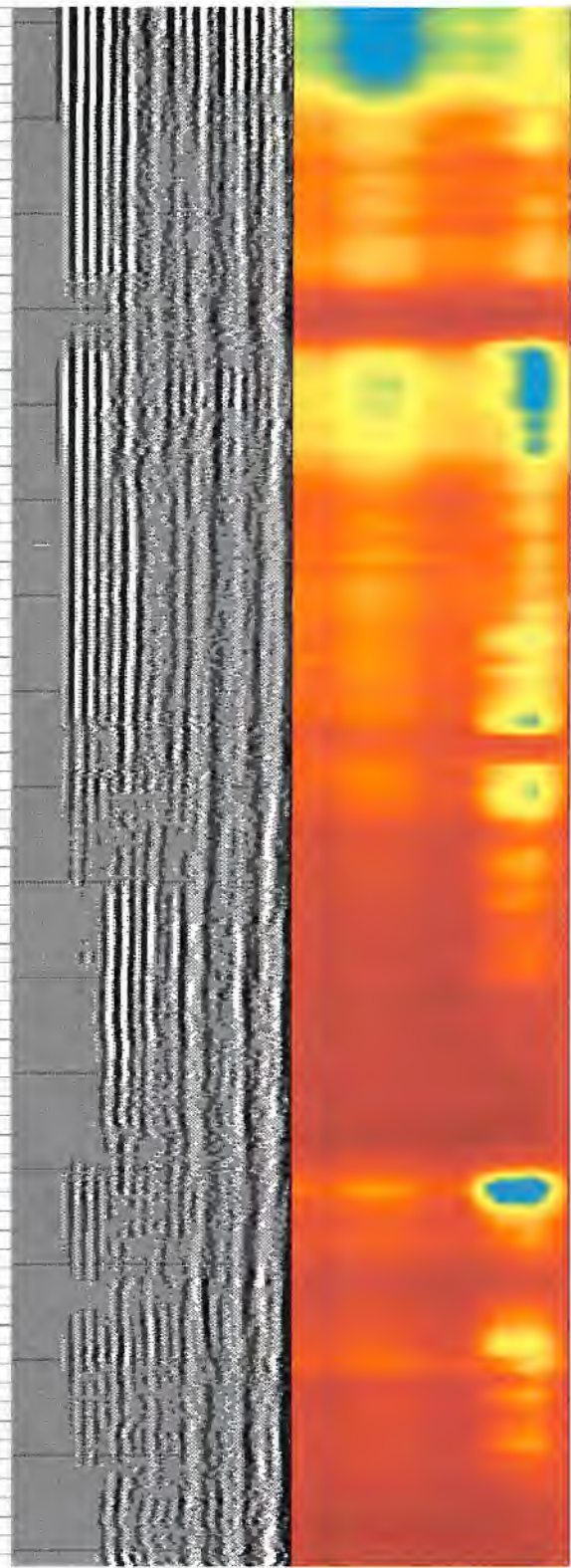
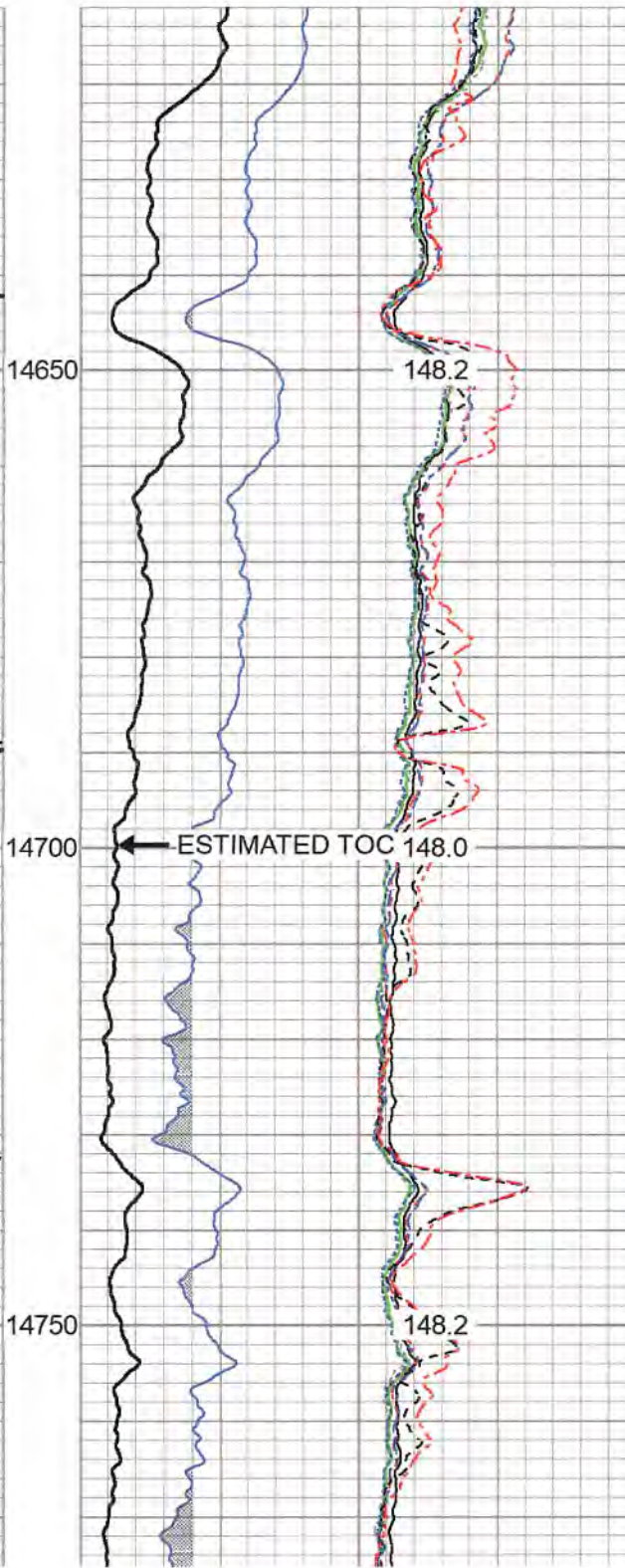
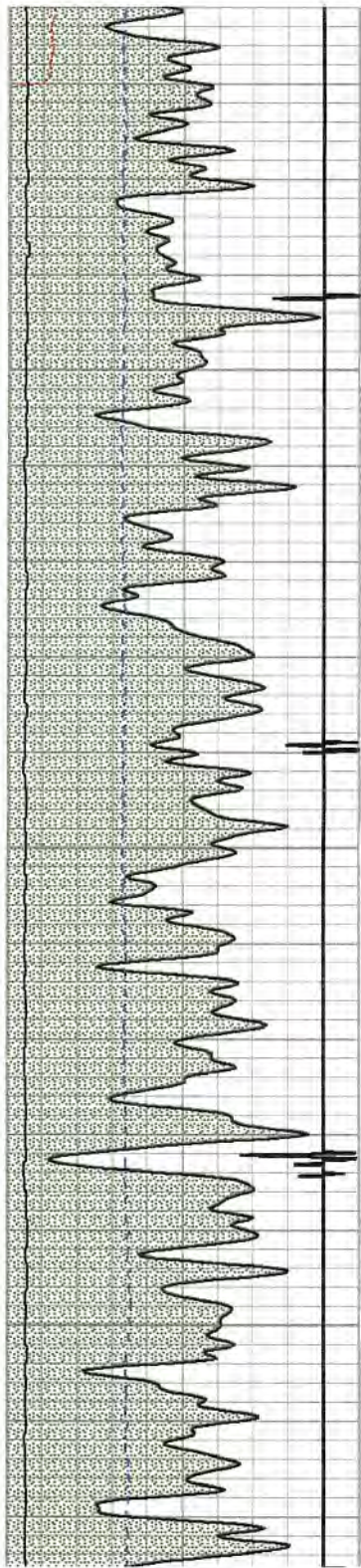


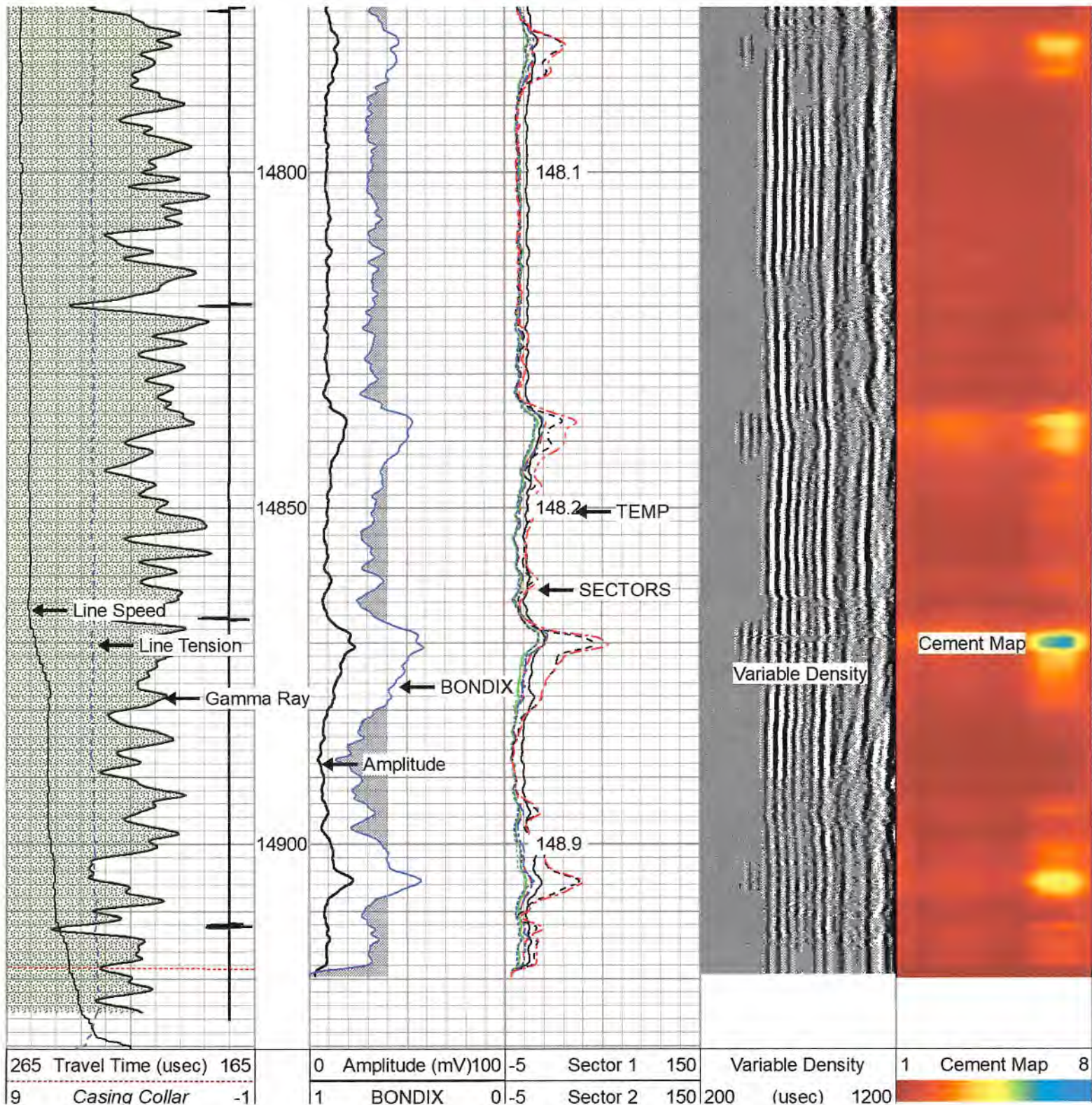












265 Travel Time (usec) 165
 9 Casina Collar -1

0 Amplitude (mV) 100 -5 Sector 1 150
 1 BONDIX 01-5 Sector 2 150

Variable Density
 200 (usec) 1200

1 Cement Map 8

0	Gamma Ray (GAPI)	200
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

-5	Sector 3	150
-5	Sector 4	150
-5	Sector 5	150
-5	Sector 6	150
-5	Sector 7	150
-5	Sector 8	150
TEMP (degF)		



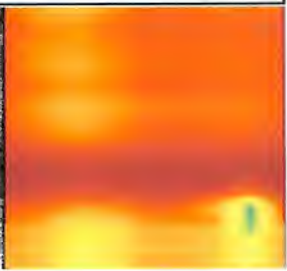
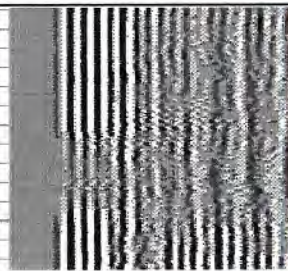
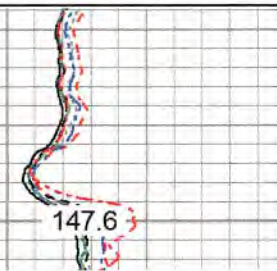
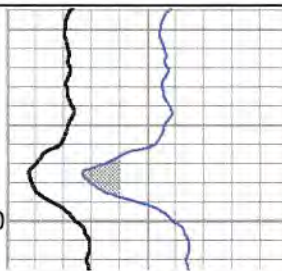
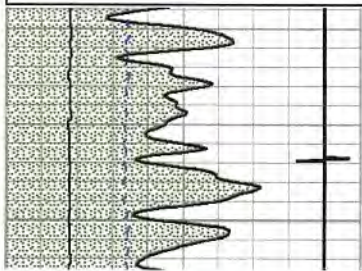
REPEAT PASS- 0 PSI

Database File july24-22 antero-calhoun 1h.db
 Dataset Pathname calhoun_1h/rcbl/pass10
 Presentation Format rcbl-bond index for antero 1020
 Dataset Creation Sun Jul 24 14:48:46 2022
 Charted by Depth in Feet scaled 1:240

265	Travel Time (usec)	165
9	Casing Collar	-1
0	Gamma Ray (GAPI)	200
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

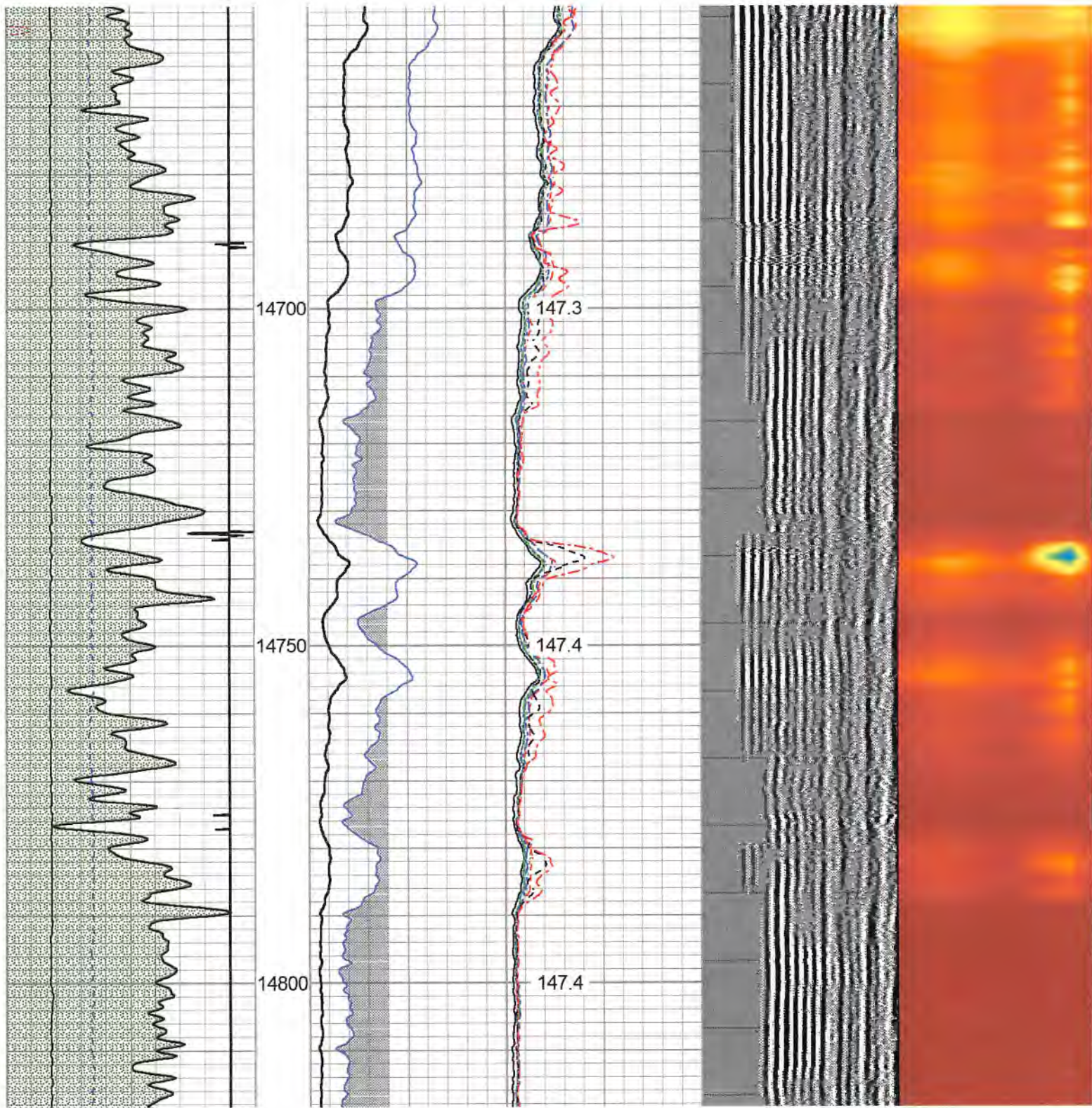
0	Amplitude (mV)	100	-5	Sector 1	150
1	BONDIX	0	-5	Sector 2	150
-5			-5	Sector 3	150
-5			-5	Sector 4	150
-5			-5	Sector 5	150
-5			-5	Sector 6	150
-5			-5	Sector 7	150
-5			-5	Sector 8	150
TEMP (degF)					

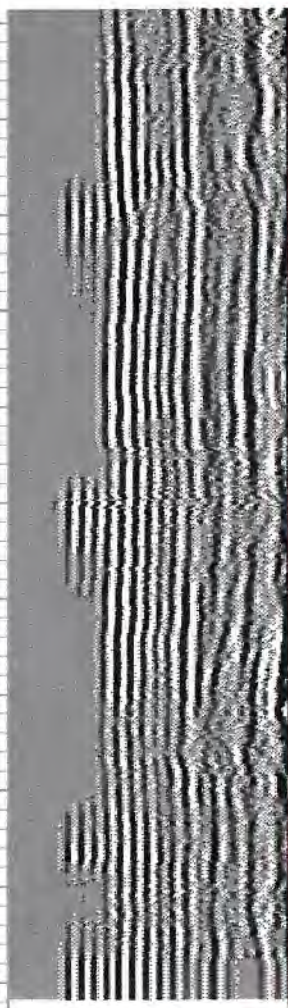
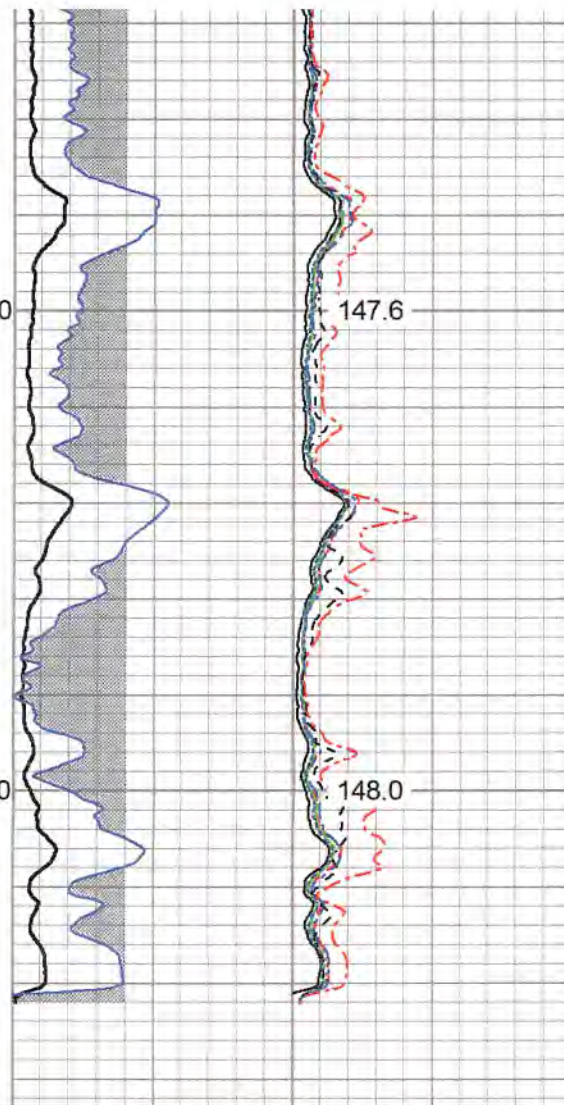
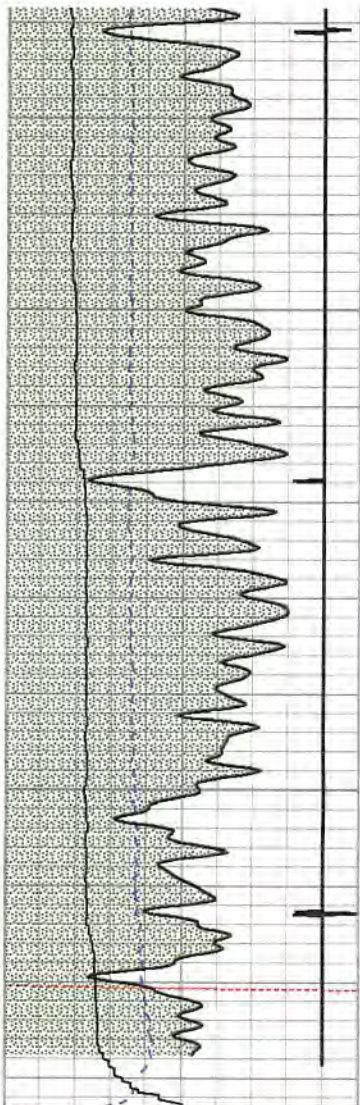
Variable Density 1 Cement Map 8
 200 (usec) 1200



14650

147.6





265	Travel Time (usec)	165
9	Casing Collar	-1
0	Gamma Ray (GAPI)	200
0	Line Tension (lb)	5000
-100	LSPD (ft/min)	100

0	Amplitude (mV)	100	-5	Sector 1	150
1	BONDIX	0	-5	Sector 2	150
			-5	Sector 3	150
			-5	Sector 4	150
			-5	Sector 5	150
			-5	Sector 6	150
			-5	Sector 7	150
			-5	Sector 8	150

TEMP
(degF)

Variable Density
200 (usec) 1200

1 Cement Map 8



Log Variables

DatabaseC:\ProgramData\Warrior\Data\july24-22 antero-calhoun 1h.db
Dataset field/calhoun_1h/rcbl/pass13.1/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 150	CASEOD in 5	CASETHCK in 0.362	CASEWGHT lb/ft 18	MAXAMPL mV 77	MINAMPL mV 3
MINATTN db/ft 0.8	PERFS No	PPT usec 0	SRFTEMP degF 0	TDEPTH ft 0			

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude

MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

Calibration Report

Database File july24-22 antero-calhoun 1h.db
Dataset Pathname calhoun_1h/rcbl/pass13.1
Dataset Creation Sun Jul 24 18:28:55 2022

Gamma Ray Calibration Report

Serial Number: FW1211-86
Tool Model: Probe
Performed: Sun Aug 29 01:22:07 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: FW1312-32
Tool Model: Probe275T

Calibration Casing Diameter:	5.000	in
Calibration Depth:	30.000	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.541	3.000	76.186	135.173	2.999
CAL	1.010	0.999				
5'	-0.009	0.479	3.000	76.186	150.089	4.365
SUM						
S1	0.000	0.694	0.000	100.000	144.096	-0.001
S2	-0.004	0.586	0.000	100.000	169.447	0.645
S3	0.000	0.603	0.000	100.000	165.904	-0.001
S4	0.000	0.577	0.000	100.000	173.206	-0.001
S5	-0.003	0.579	0.000	100.000	171.848	0.449
S6	0.000	0.582	0.000	100.000	171.957	-0.000
S7	0.000	0.572	0.000	100.000	174.879	-0.002
S8	0.000	0.721	0.000	100.000	138.606	-0.002


Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.010	0.999	1.000	0.000

Air Zero Calibration, performed Sat Jul 23 07:46:19 2022:

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-Titan Standard 1 7/16" Cable Head	1.02	1.44	1.00
			W3.125-SOLID tractor	40.00	3.13	640.00

Temp	14.39					
WVFS8	12.16		Centralizer-2.75_Overbody	1.67	3.12	5.00
WVFS7	12.16					
WVFS6	12.16					
WVFS5	12.16		RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS4	12.16					
WVFS3	12.16					
WVFS2	12.16					
WVFS1	12.16					
WV3FT	12.16		CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75	35.00
WV5FT	11.16					
HeadVolt	7.91					
WVFCAL	7.91		GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
CCL	4.14					
GR	2.81	Bull_Plug-1_7/16_GO Titan 1 7/16" Female Bull Plug	0.27	1.44	1.00	

Dataset: july24-22 antero-calhoun 1h.db: field/calhoun_1h/rcbl/pass13.1
 Total length: 58.32 ft
 Total weight: 829.00 lb
 O.D.: 3.13 in

	Company	ANTERO RESOURCES
	Well	GASPAR-CALHOUN UNIT 1H
	Field	SOUTH CANTON
	County	DODDRIDGE
	State	WEST VIRGINIA