



**RADIAL
BOND
LOG**

Company ANTERO RESOURCES

Well VISHNU 2H

Field RABBIT EARS

County TYLER

State WV

Location: API #:

Other Services
GR
CCL

SEC TWP RGE Elevation 25'

Permanent Datum GL
Log Measured From KB
Drilling Measured From KB
Elevation
K.B. N/A
D.F. N/A
G.L. N/A

Company ANTERO RESOURCES
Well VISHNU 2H
Field RABBIT EARS
County TYLER
State WV

Date 9-MAY-2021

Run Number ONE

Depth Driller 23325'

Depth Logger 7092'

Bottom Logged Interval 7078'

Top Log Interval SURFACE

Open Hole Size 8 5/8"

Type Fluid FRESH WATER

Density / Viscosity 8.3#

Max. Recorded Temp. 142°F

Estimated Cement Top 4299'

Time Well Ready 14:55

Time Logger on Bottom 15:40

Equipment Number TK-111

Location CHARLEROI, PA

Recorded By D. JOSEPHIK

Witnessed By DANIEL MARTINEZ

Run Number

Bit From To Size Weight From To

Borehole Record

Size Wgt/Ft Top Bottom

Casing Record

Surface String

Prot. String

Production String 5 1/2" 23# SURFACE 23325'

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

LOG ZEROED @ GROUND LEVEL

MARKER JOINT @ 6042'-6053'


FREE PIPE= 71.9mv
BONDED PIPE= 2.2mv

ETOC @ 4299'

RECEIVED
Office of Oil and Gas

FEB 10 2022

WV Department of
Environmental Protection

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

24

HeadVolt	19.83		CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75	35.00
Temp	16.98		RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS8	14.75					
WVFS7	14.75					
WVFS6	14.75					
WVFS5	14.75					
WVFS4	14.75					
WVFS3	14.75					
WVFS2	14.75					
WVFS1	14.75					
WVF3FT	14.75					
WVF5FT	13.75					
WVFCAL	10.50					
HEADVOLT	10.50					
				CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75
CCL	6.73					
GR	5.40		GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
			CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75	35.00

Dataset: antero_tapeats_3h_may_9_2021_rcbl.db: field/well/run1/MAIN
 Total length: 23.77 ft
 Total weight: 253.00 lb
 O.D.: 2.75 in

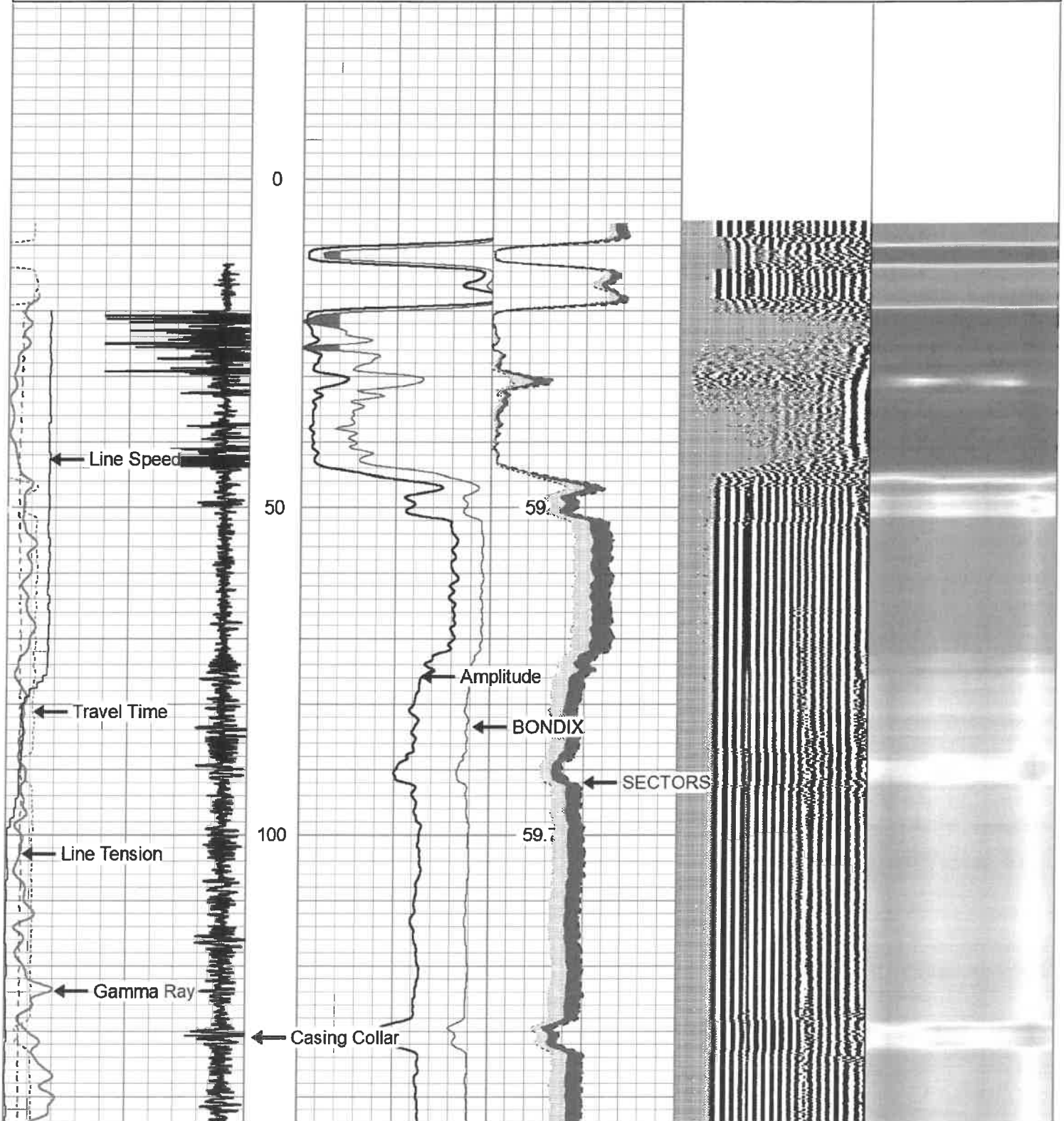


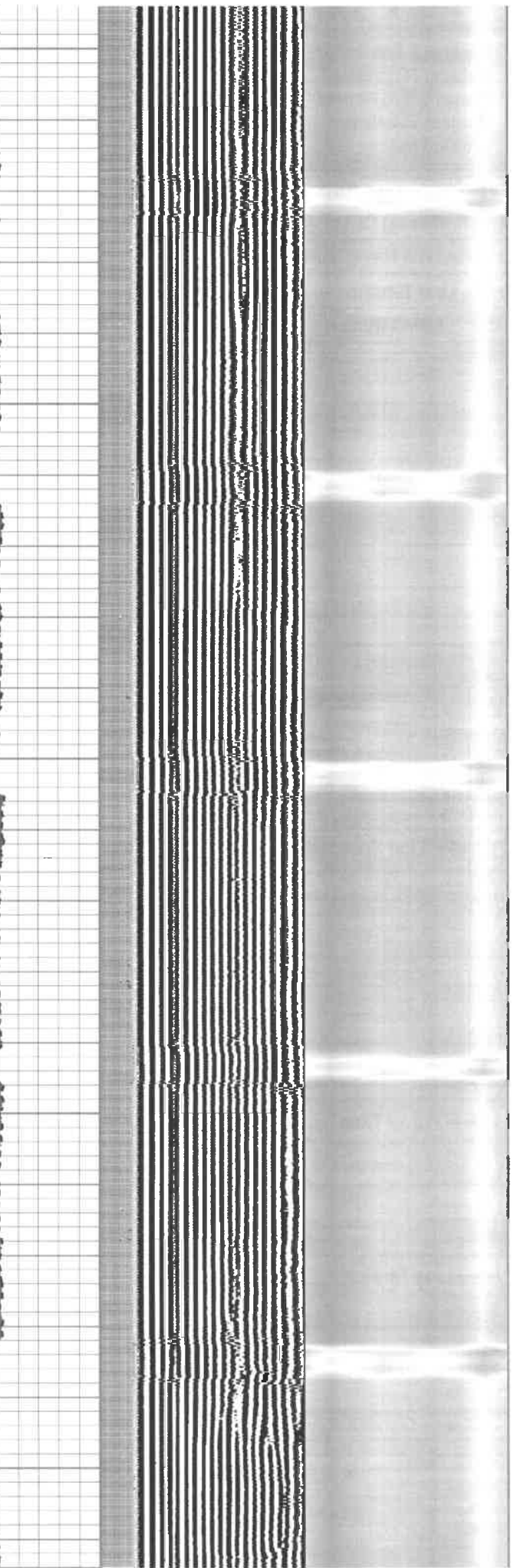
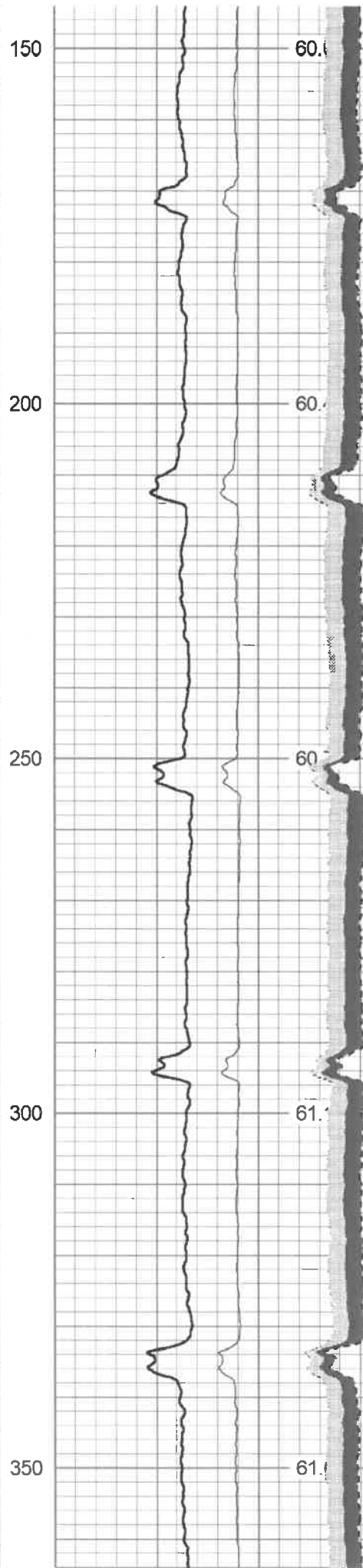
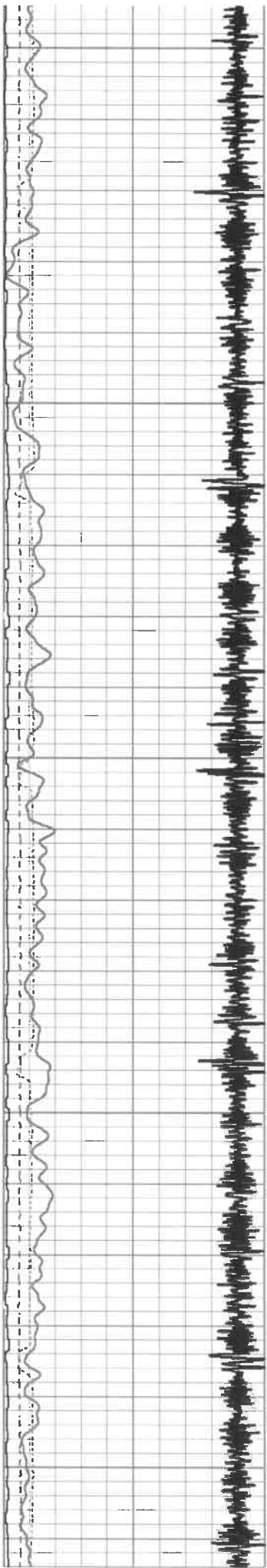
MAIN LOG

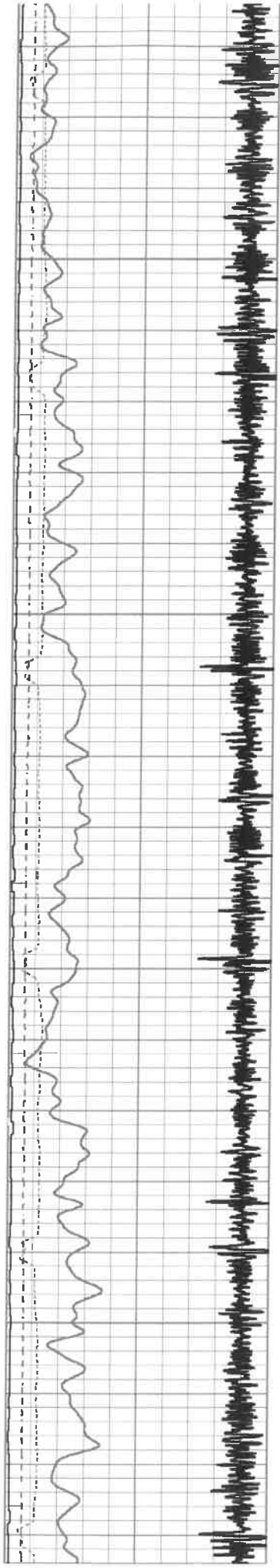
APPLIED 1500 PSI

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 Dataset Pathname MAIN
 Presentation Format scbl03
 Dataset Creation Sun May 09 15:52:19 2021
 Charted by Depth in Feet scaled 1:240

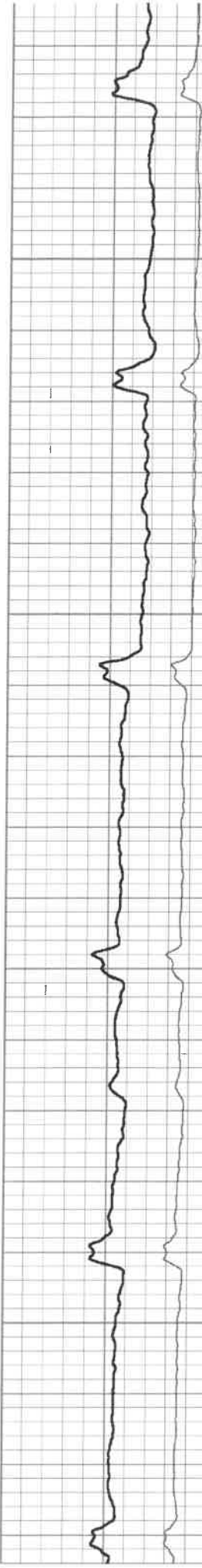
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9	Casing Collar	-1	1	BONDIX	0	0	AMPMAX	150	200 (usec)	1200		
0	Gamma Ray (GAPI)	150	0	AMPAVG	150							
0	Line Tension (lb)	5000		TEMP								
-100	LSPD (ft/min)	100		(degF)								



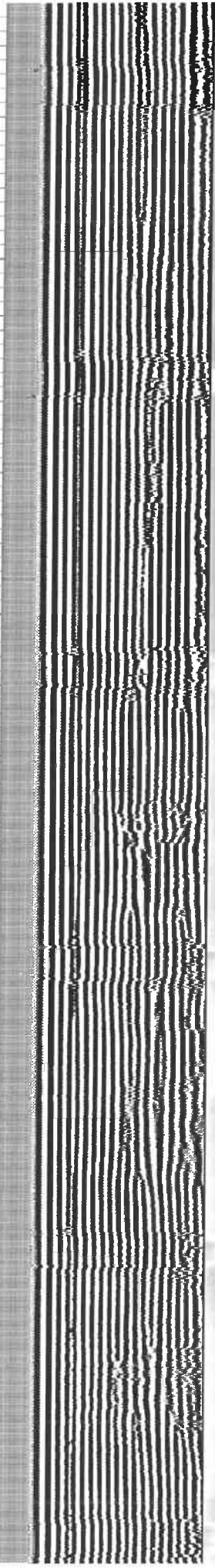
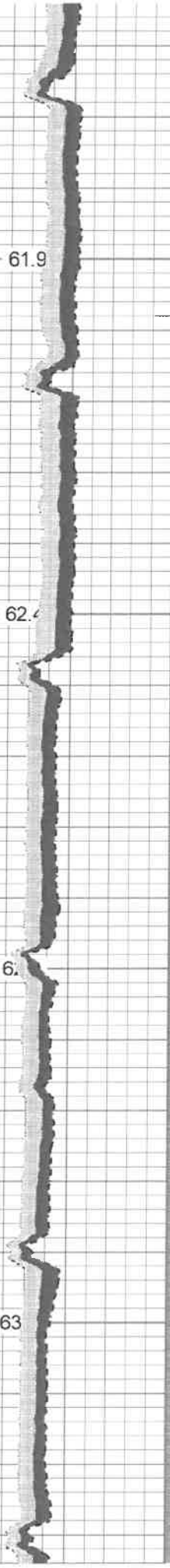




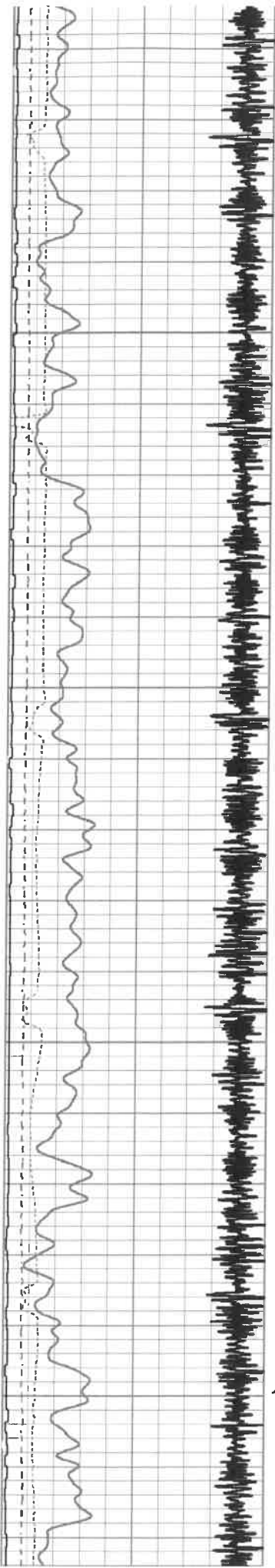
400
450
500
550



61.9
62.4
6.
63





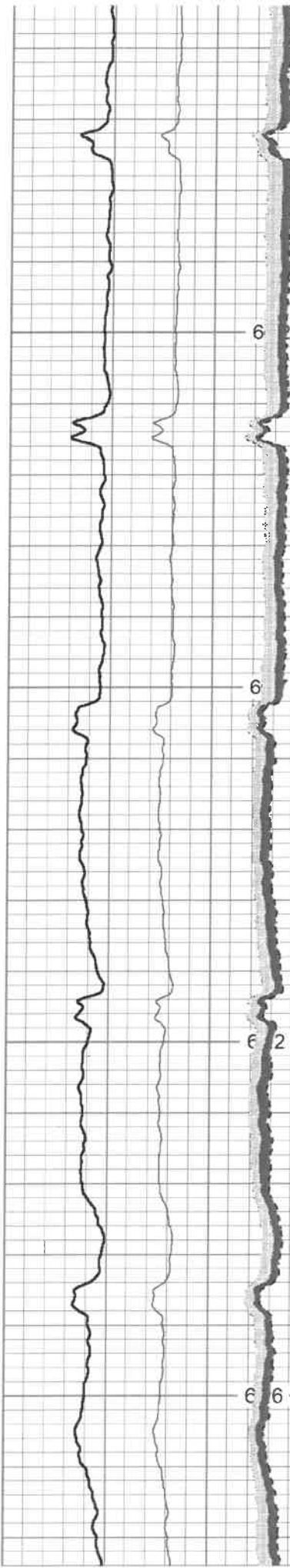


850

900

950

1000

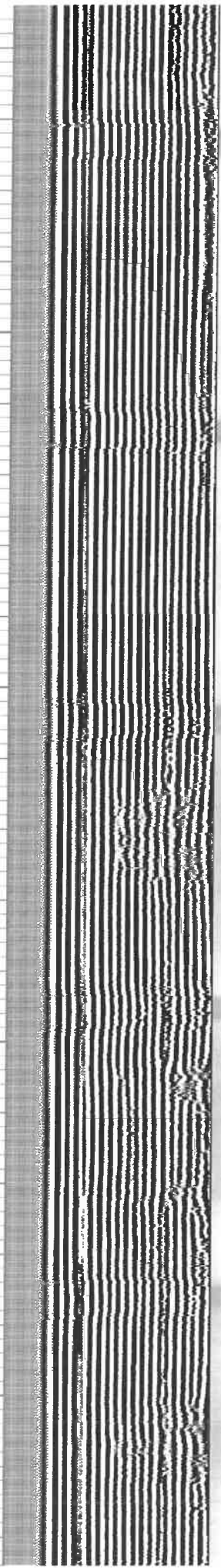


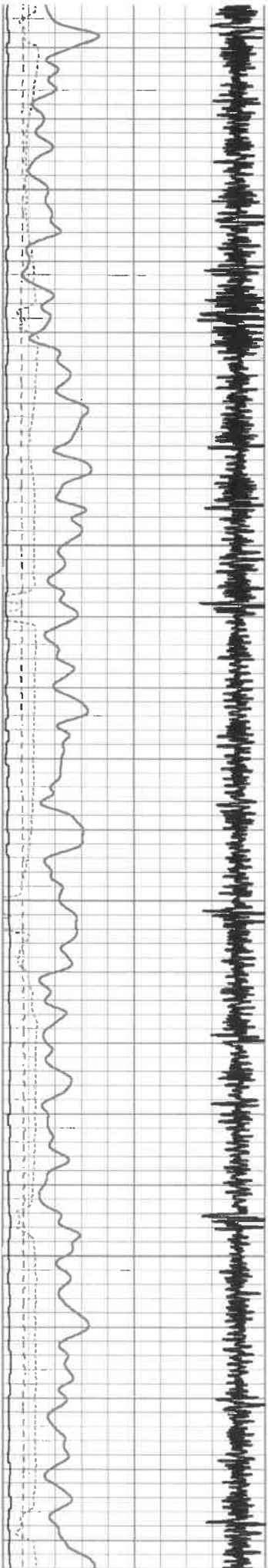
6

6

6 2

6 6



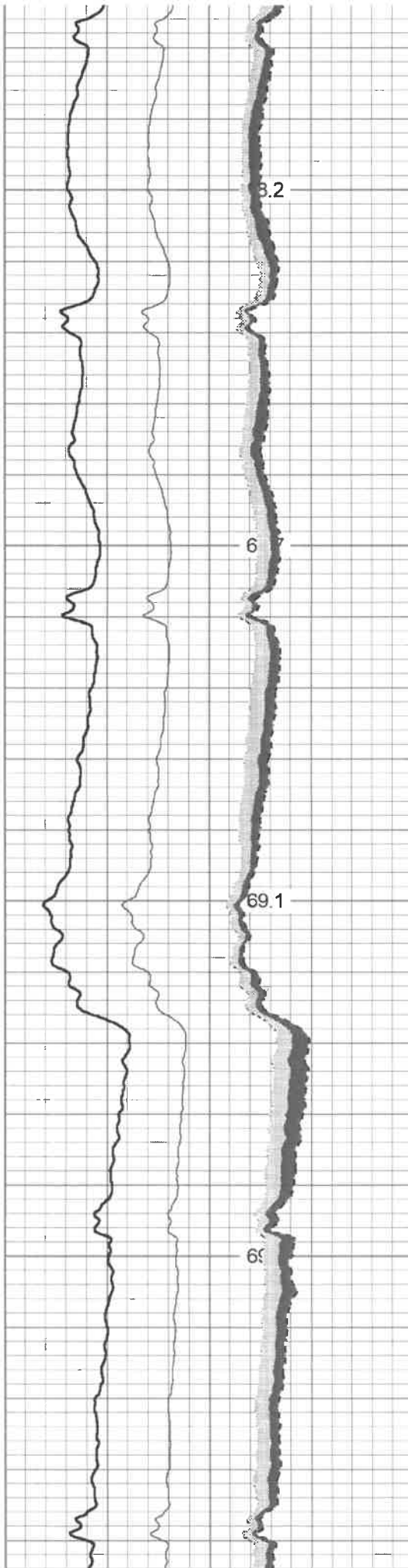


1050

1100

1150

1200

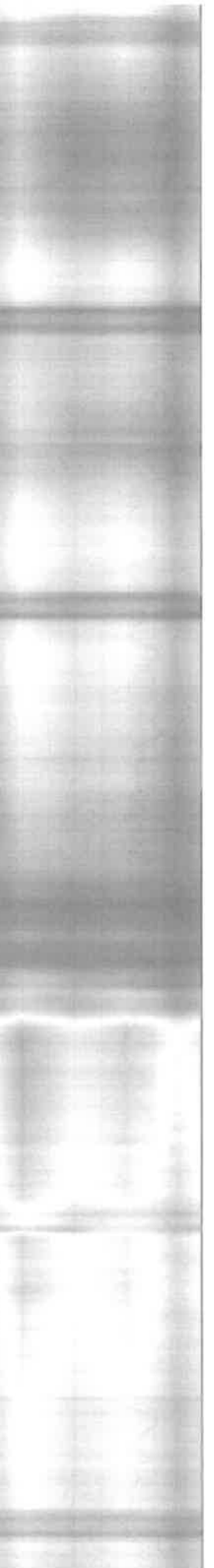
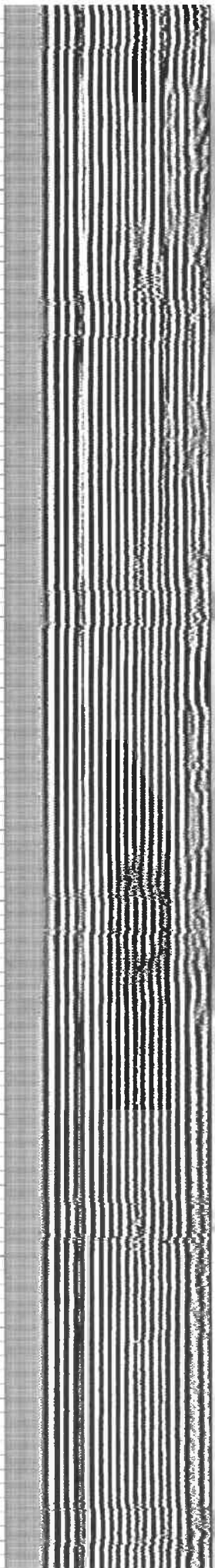


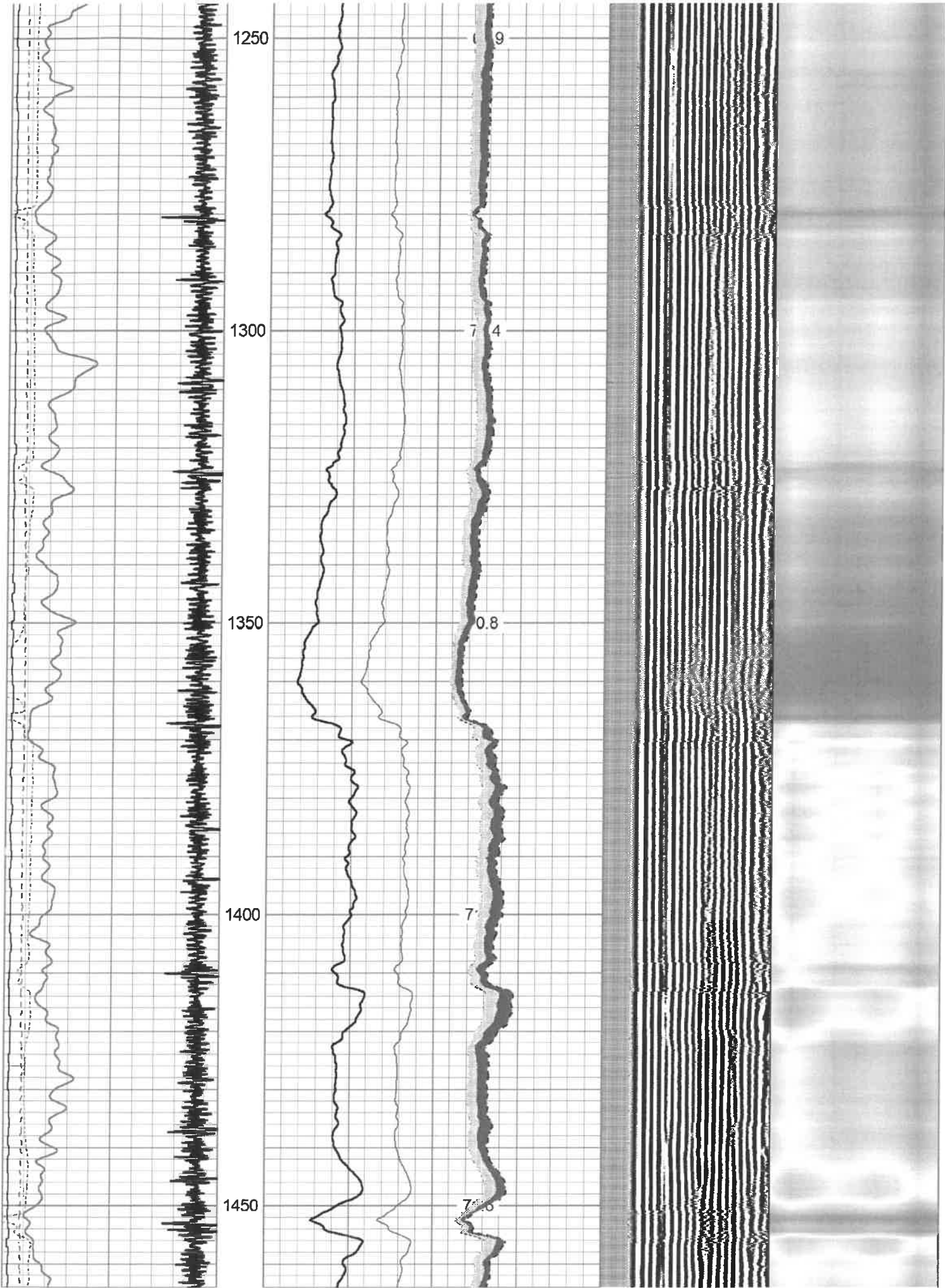
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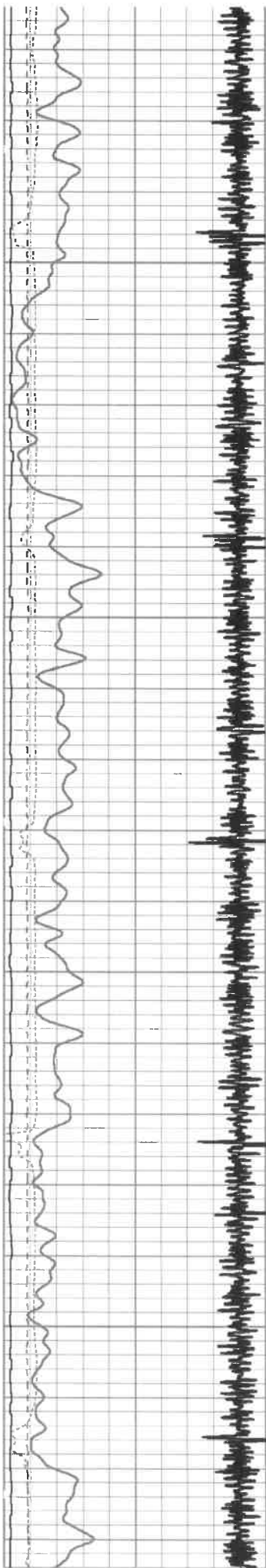
6

69.1

69





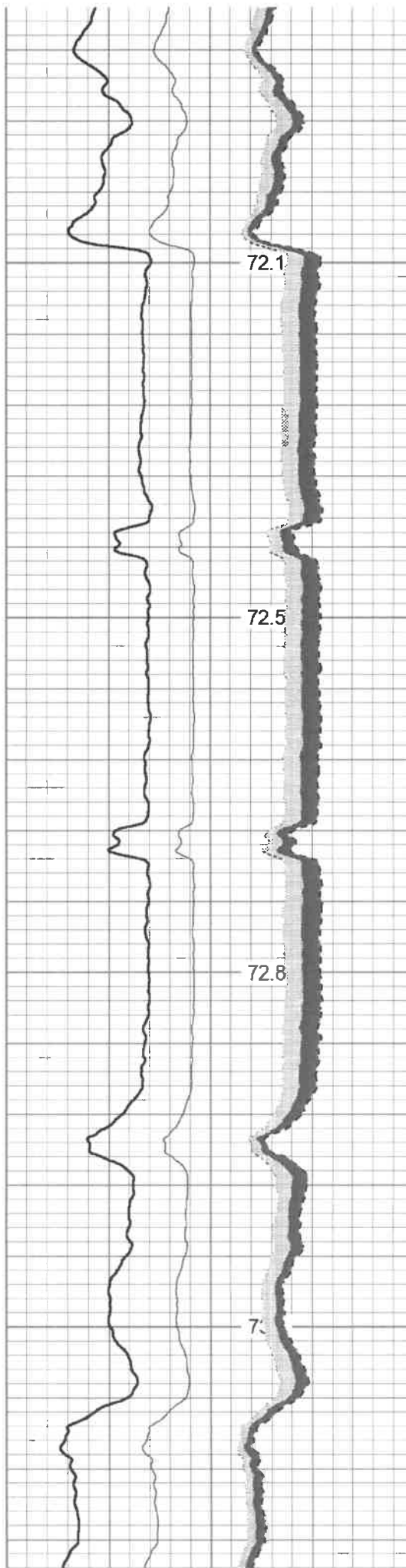


1500

1550

1600

1650

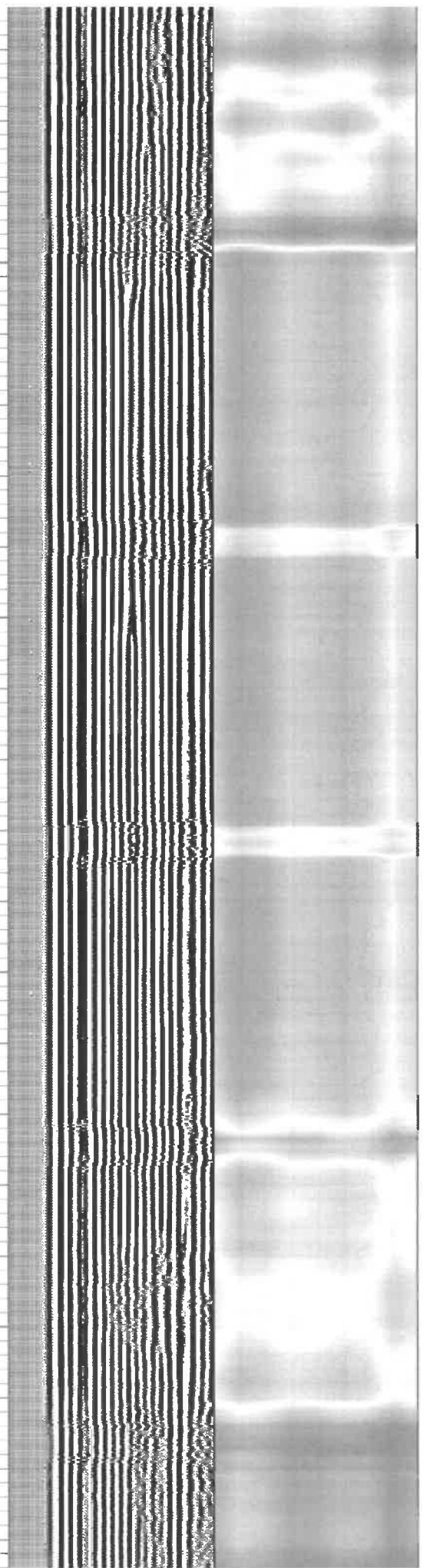


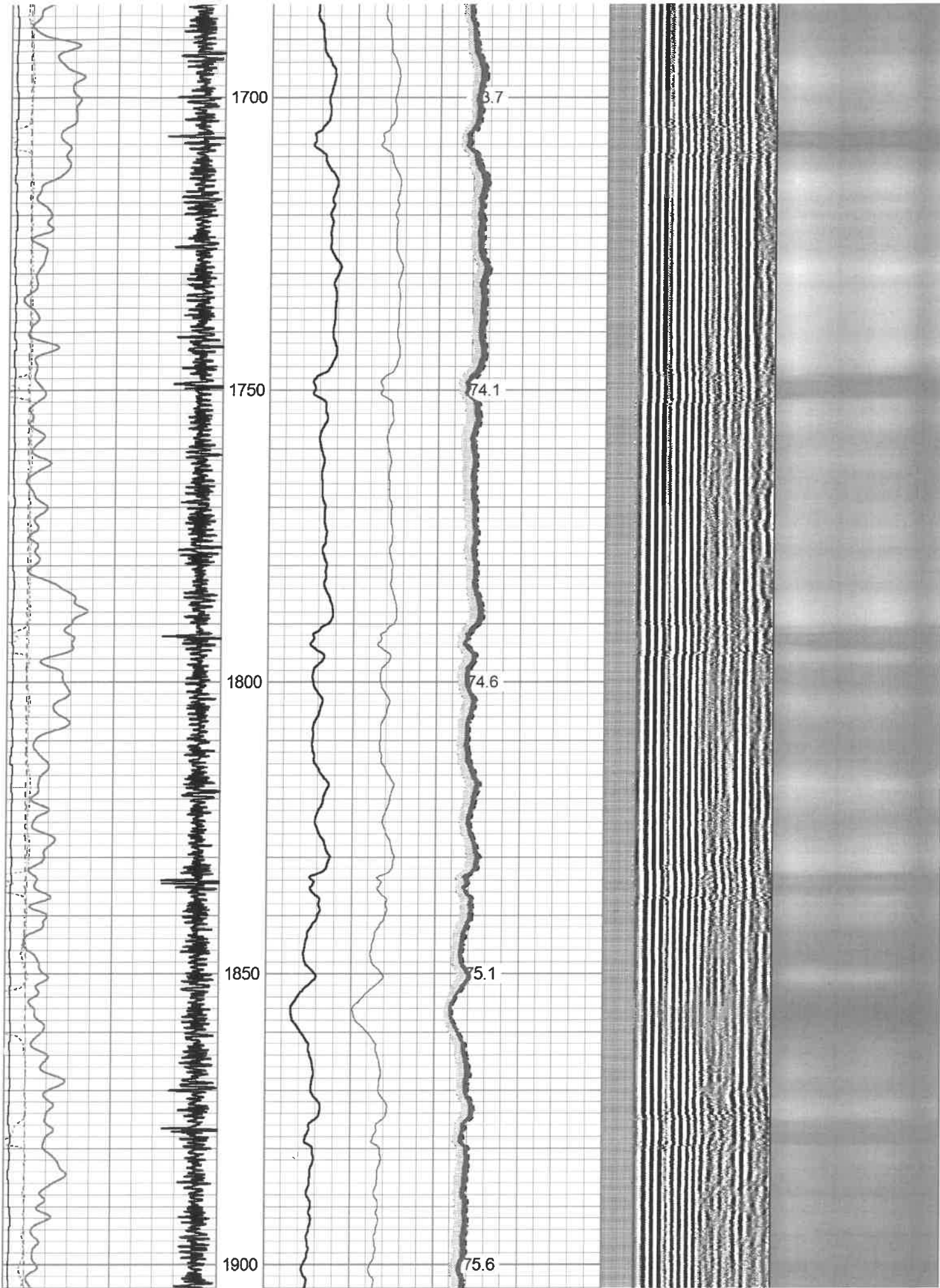
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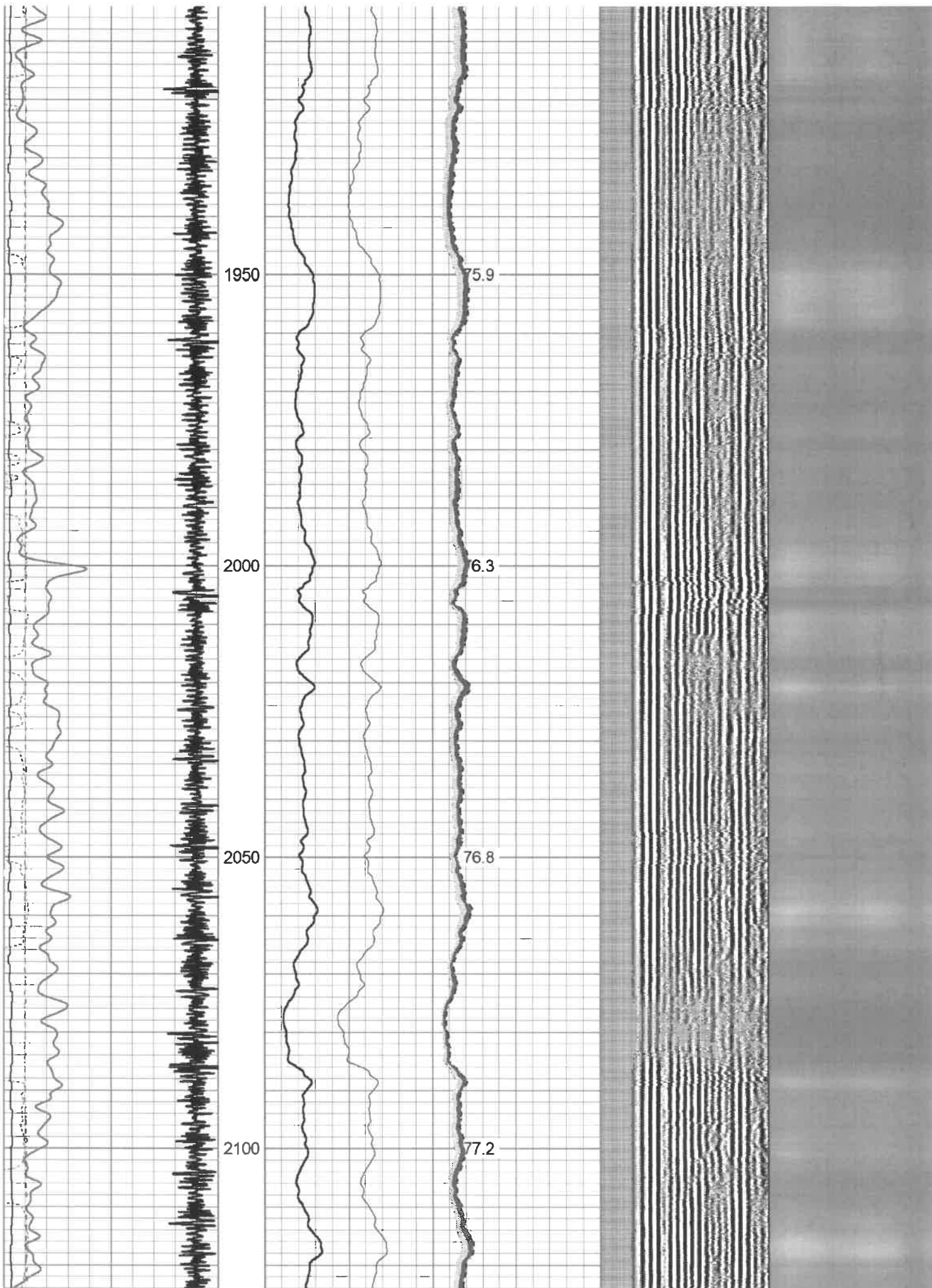
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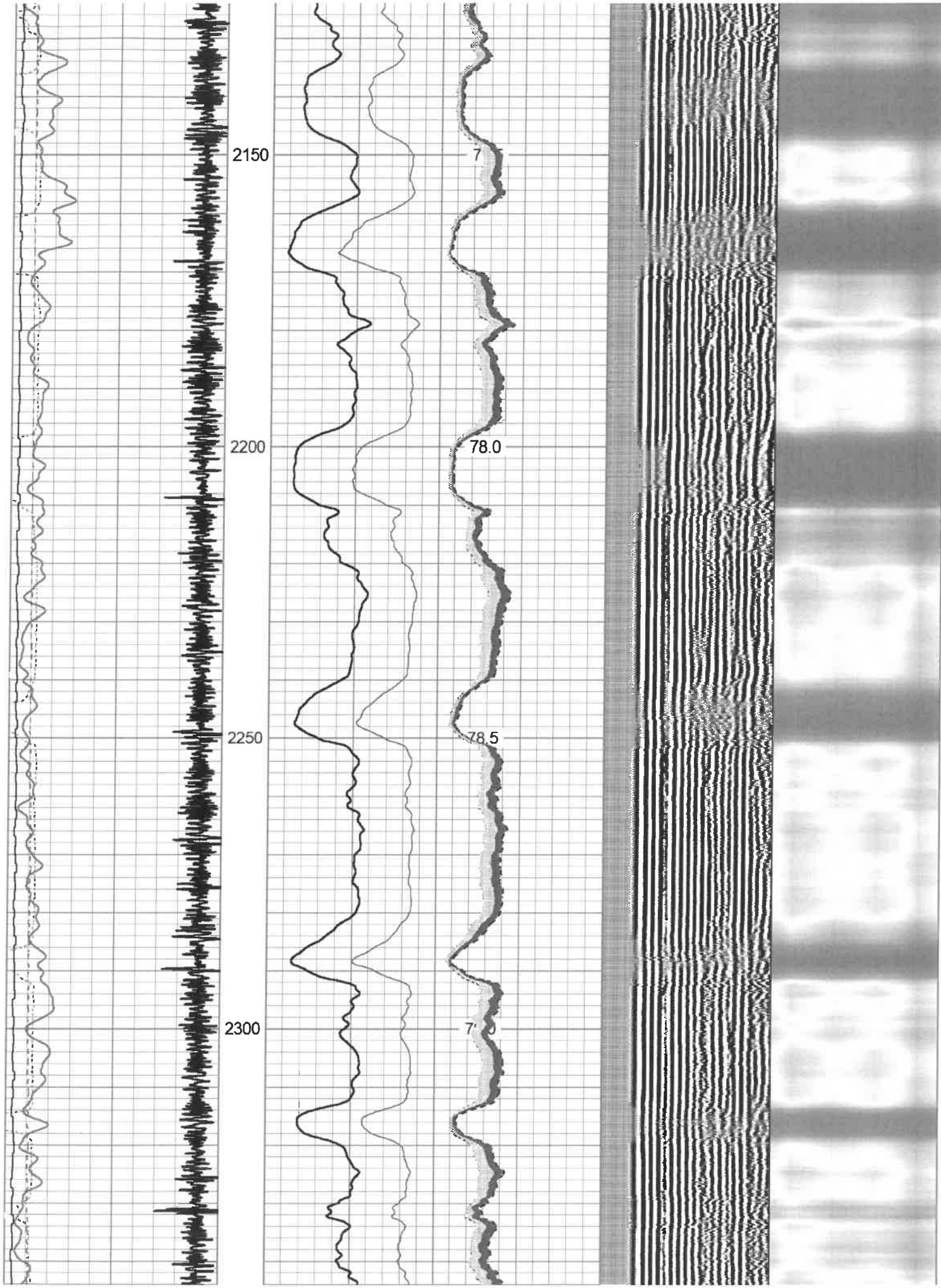
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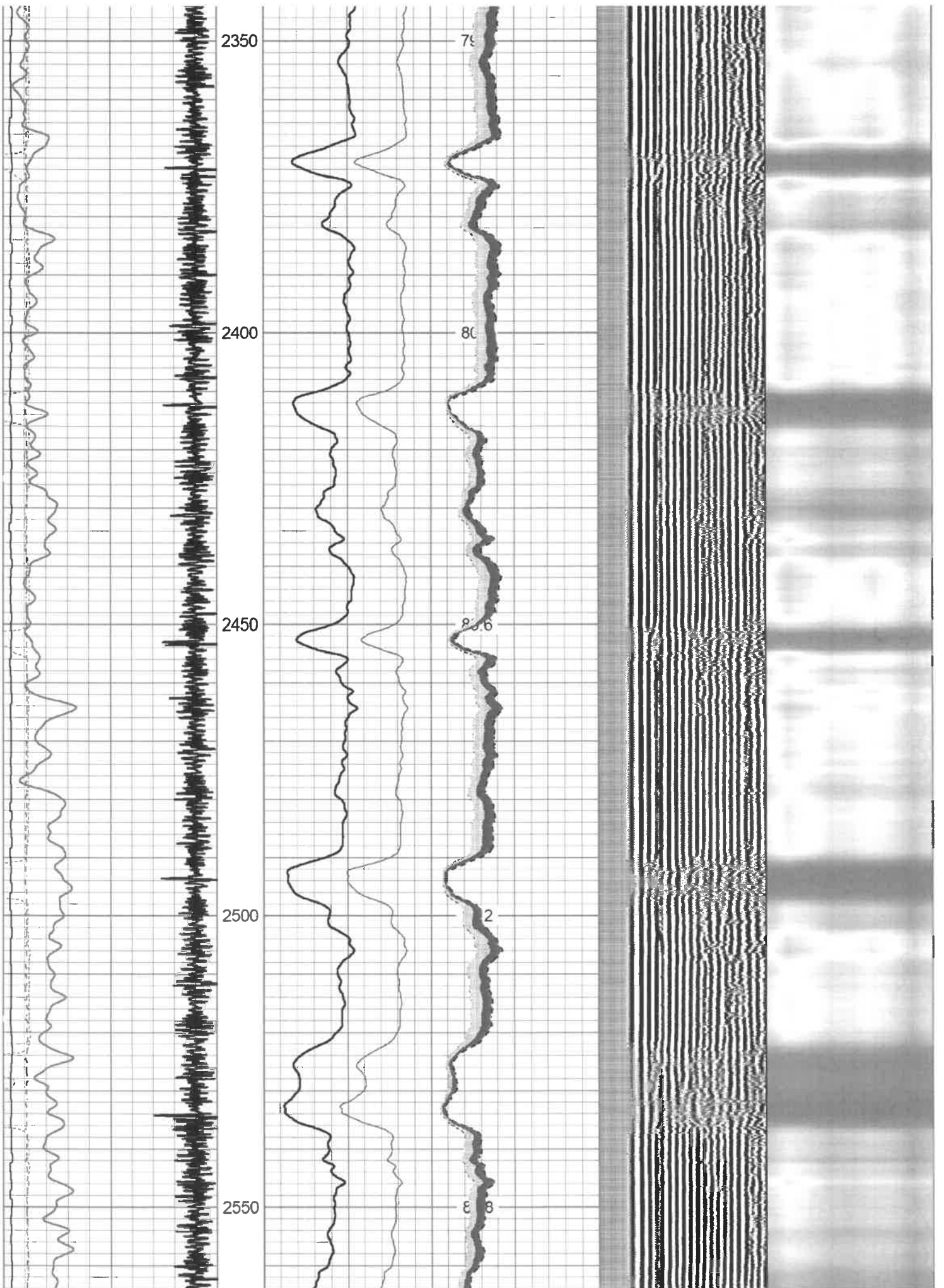
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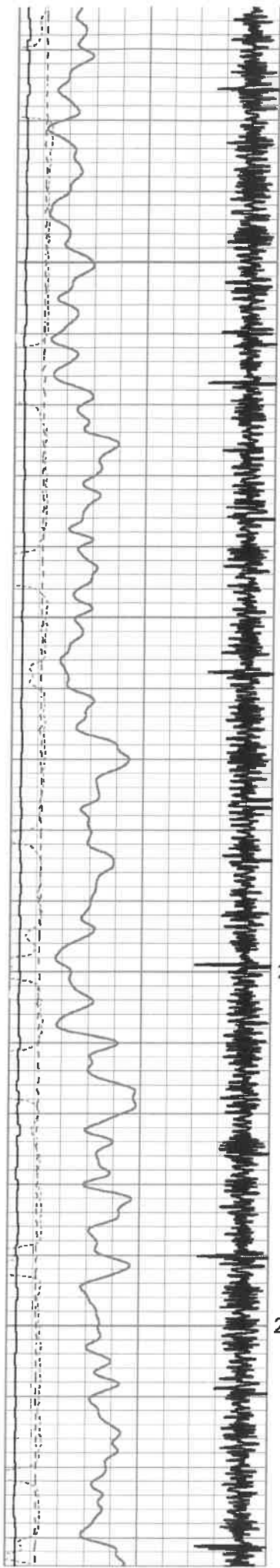




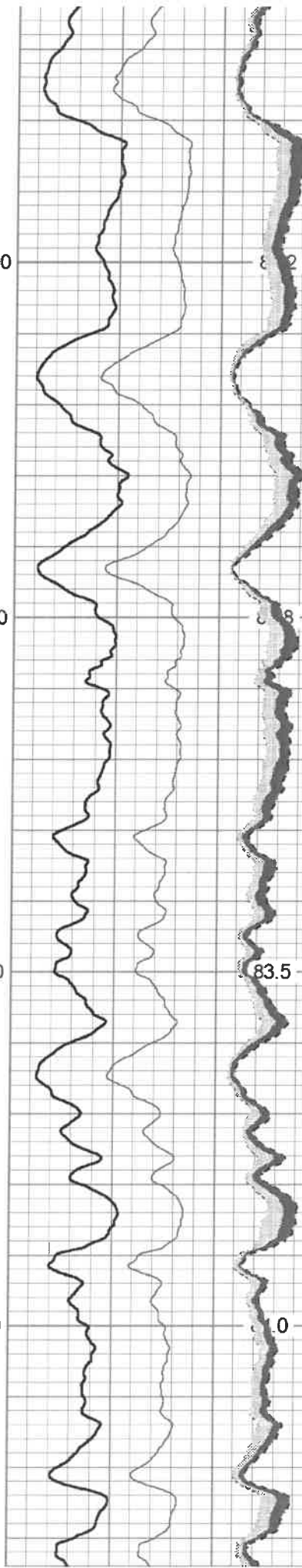




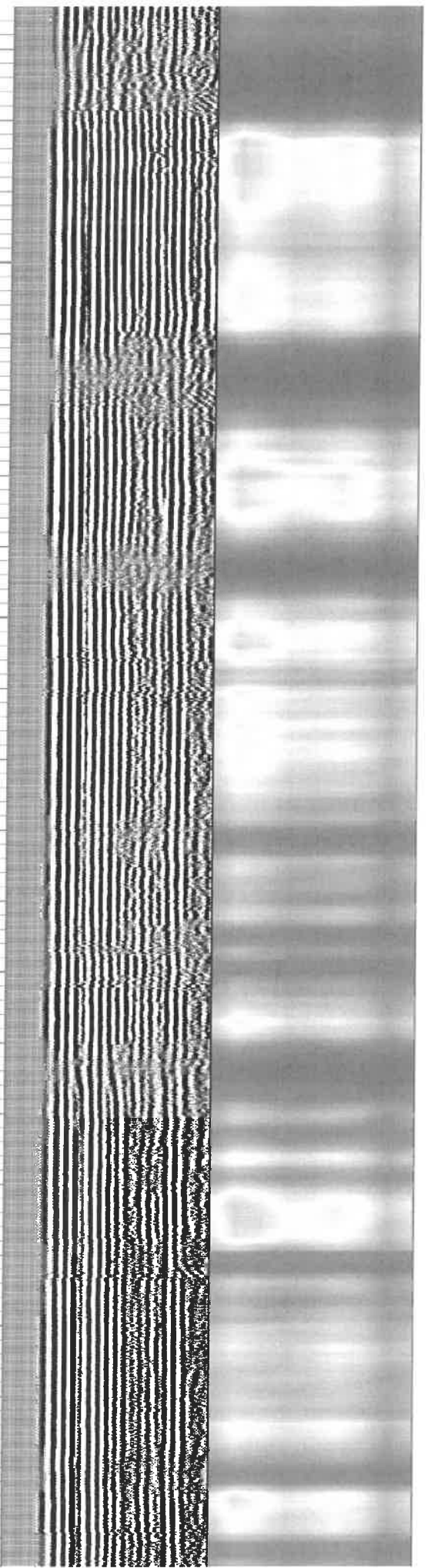


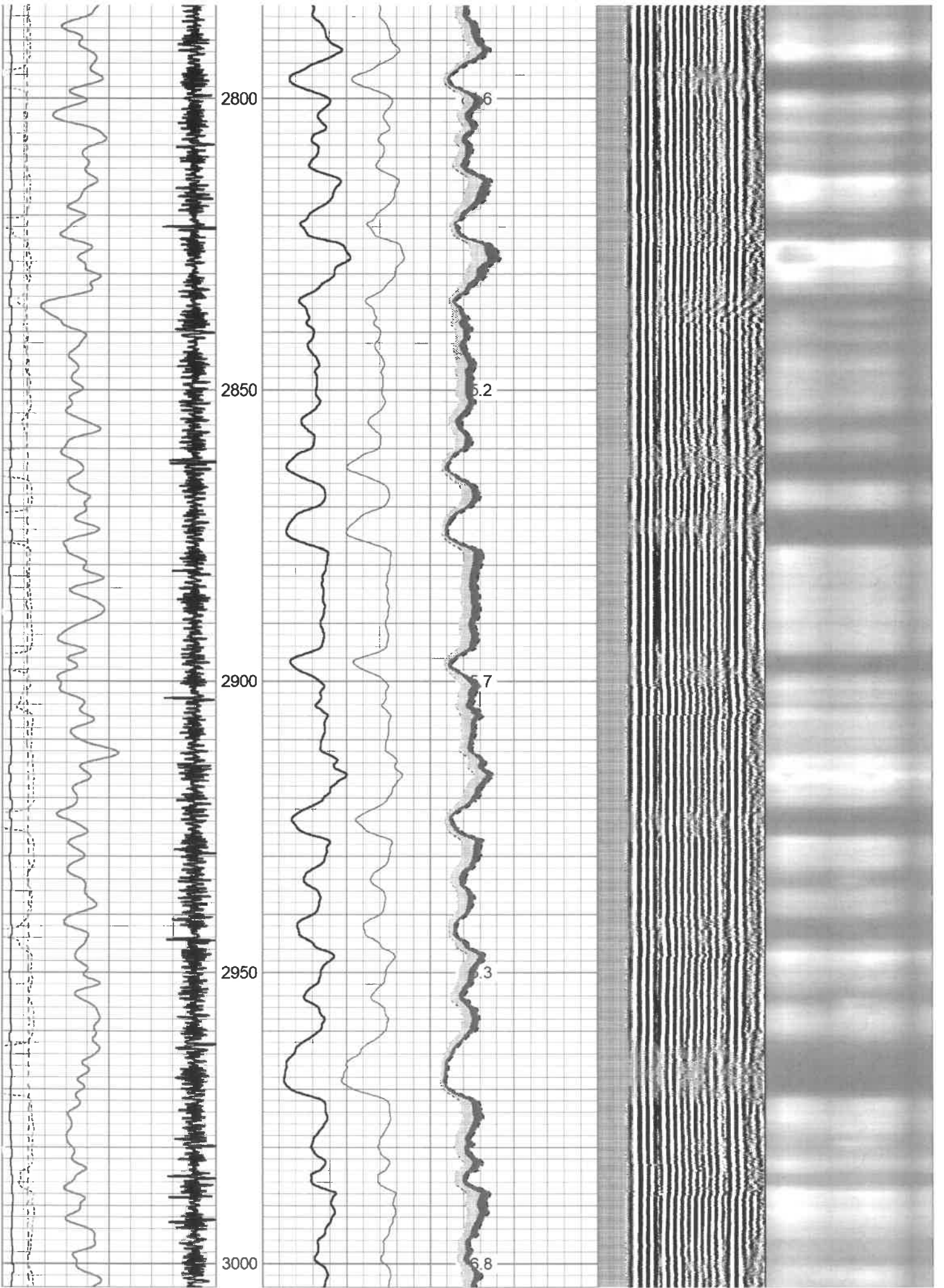


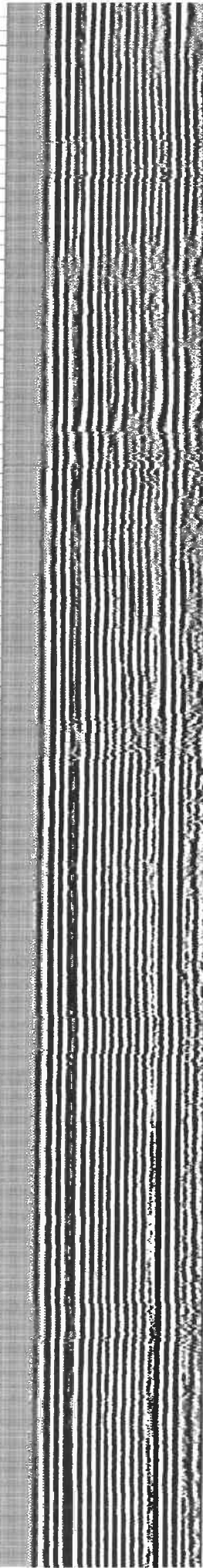
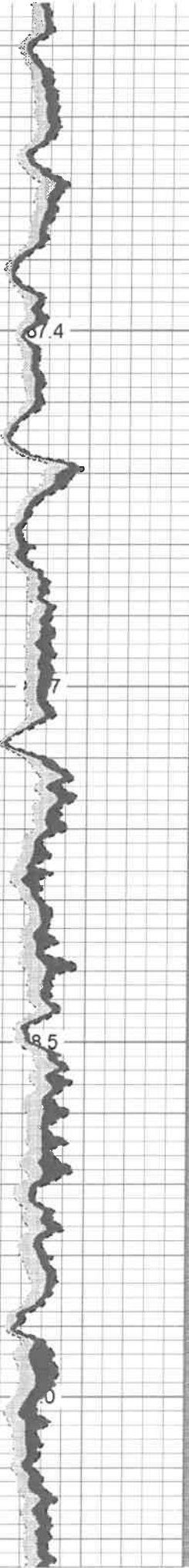
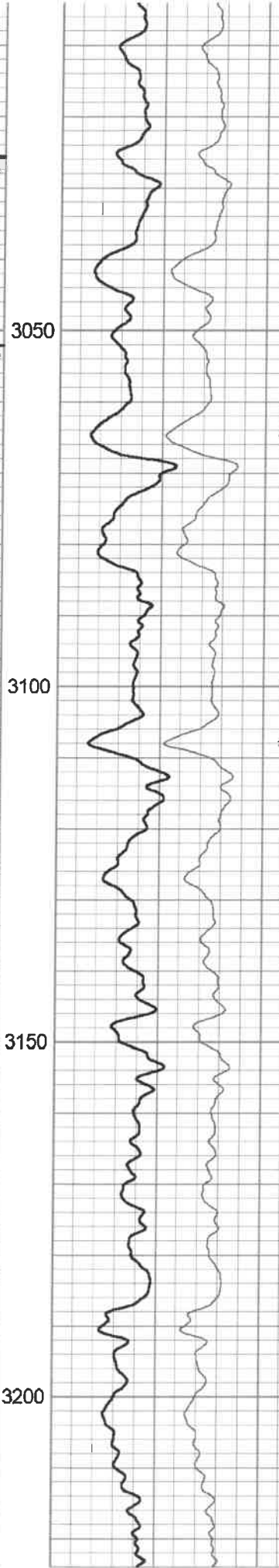
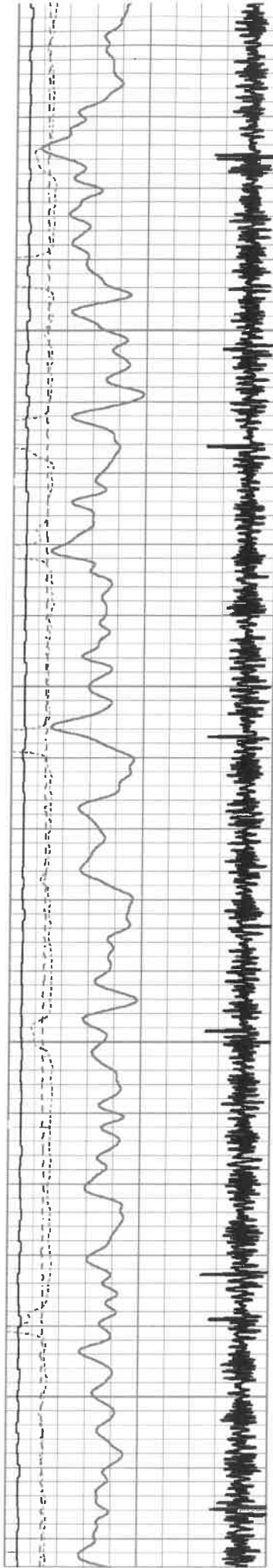
2600
2650
2700
2750

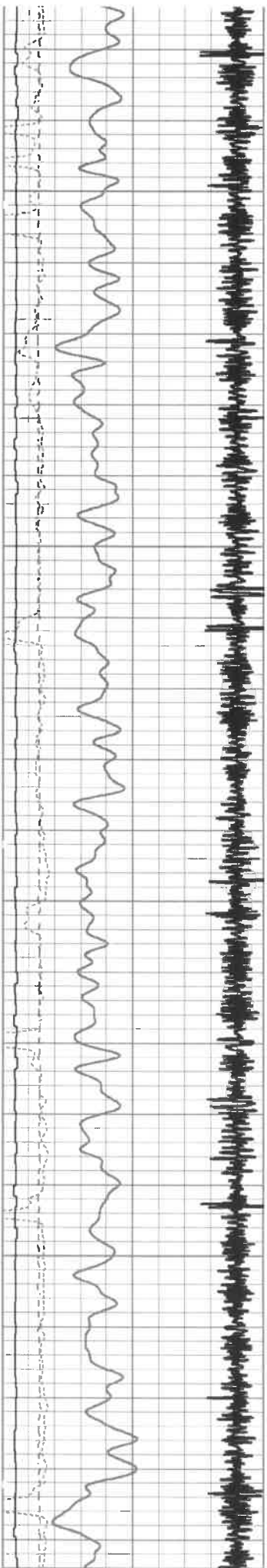


8.2
8.8
83.5
0







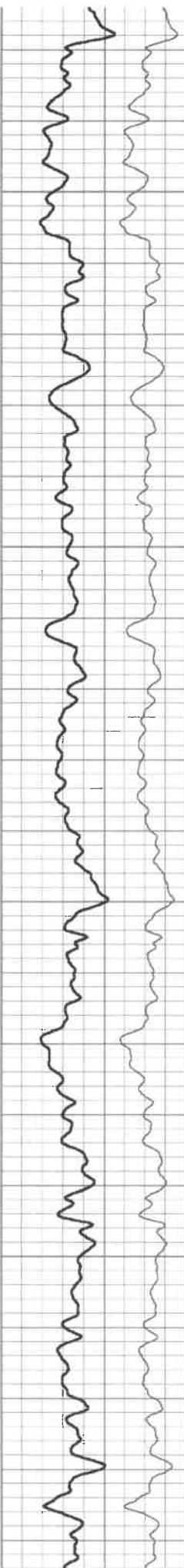


3250

3300

3350

3400

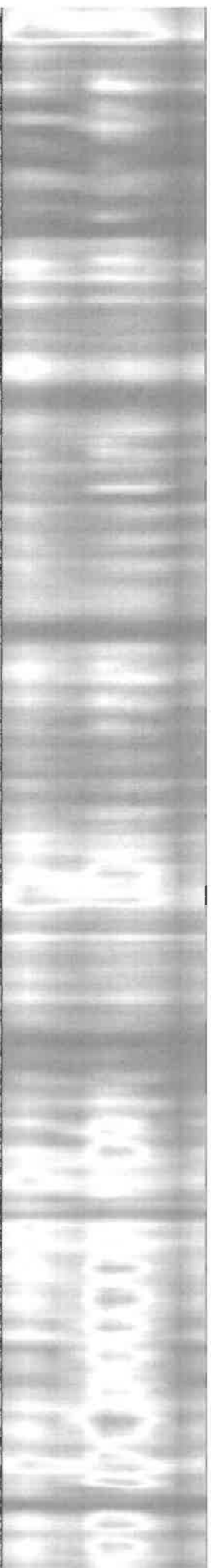
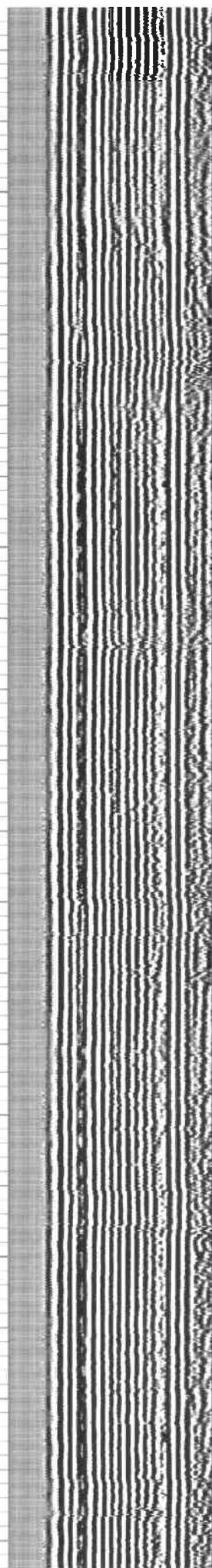
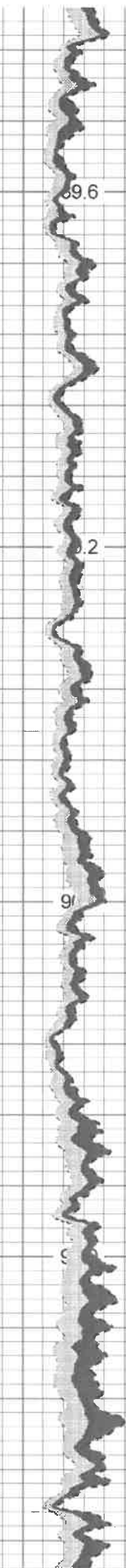


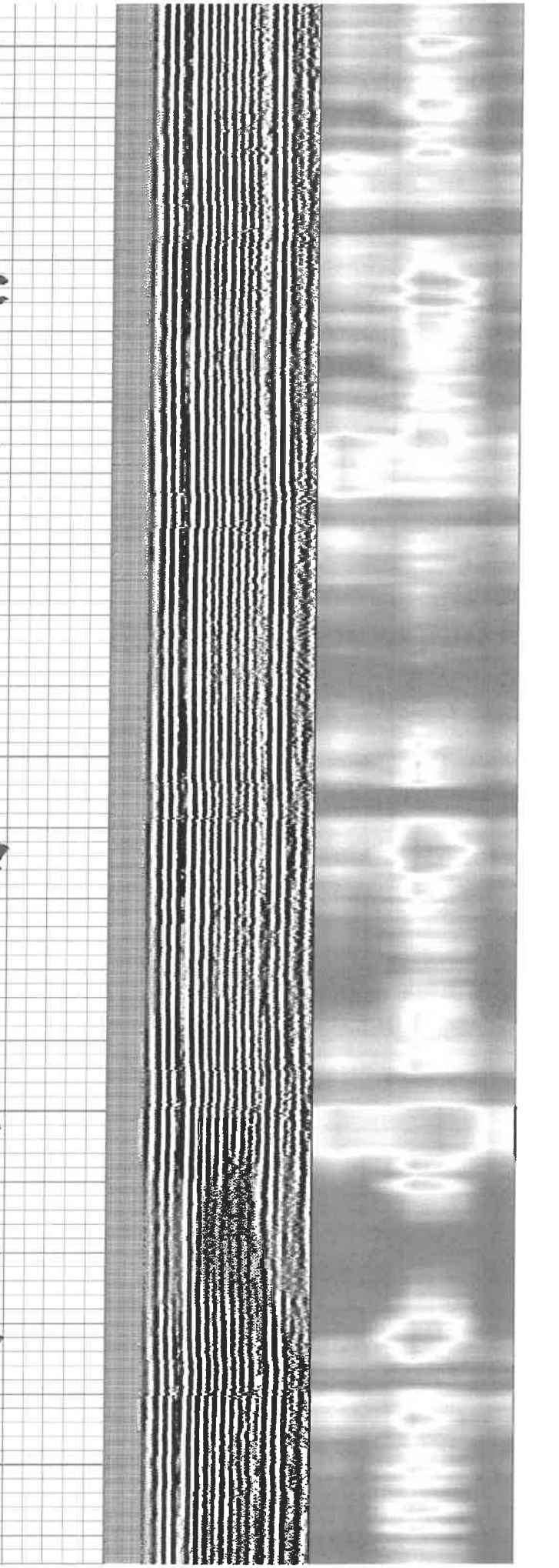
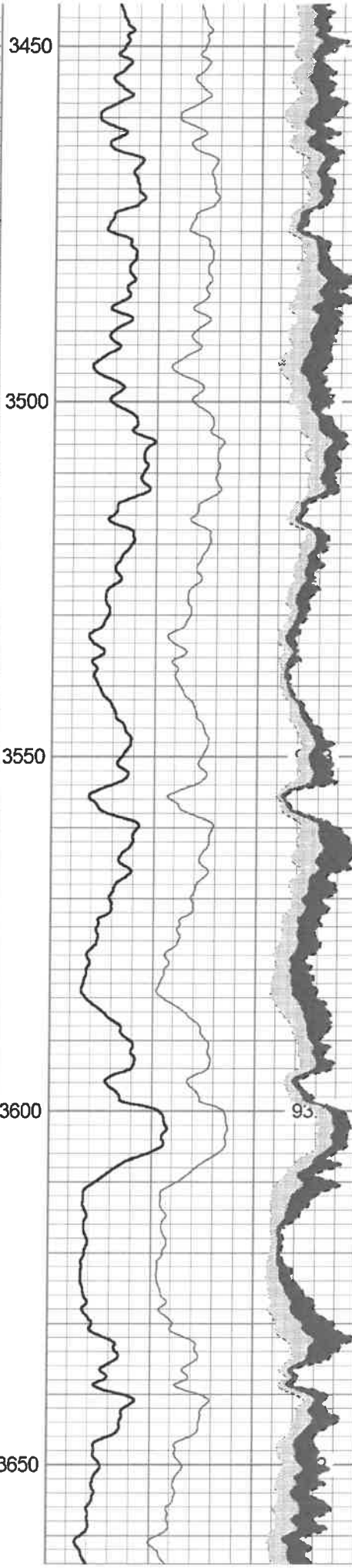
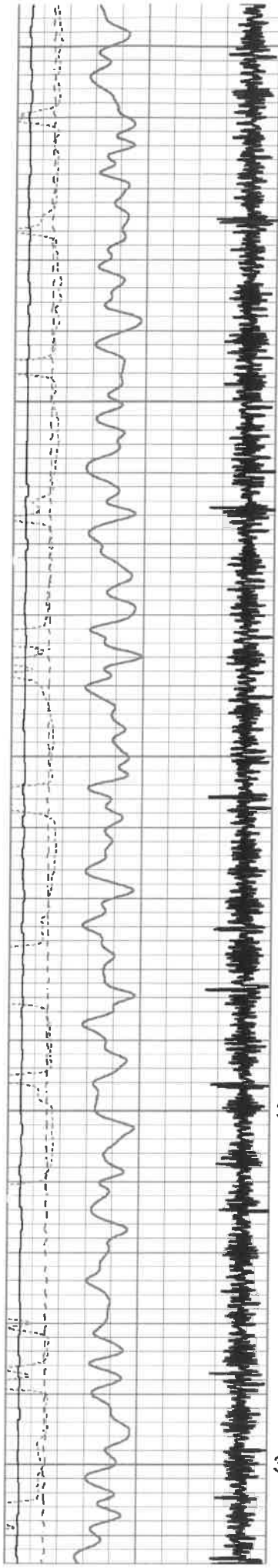
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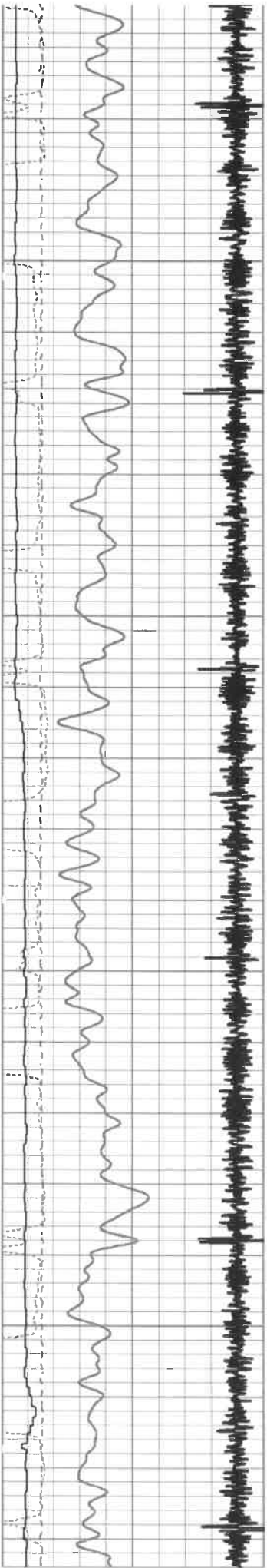
99.2

99.0

98.6





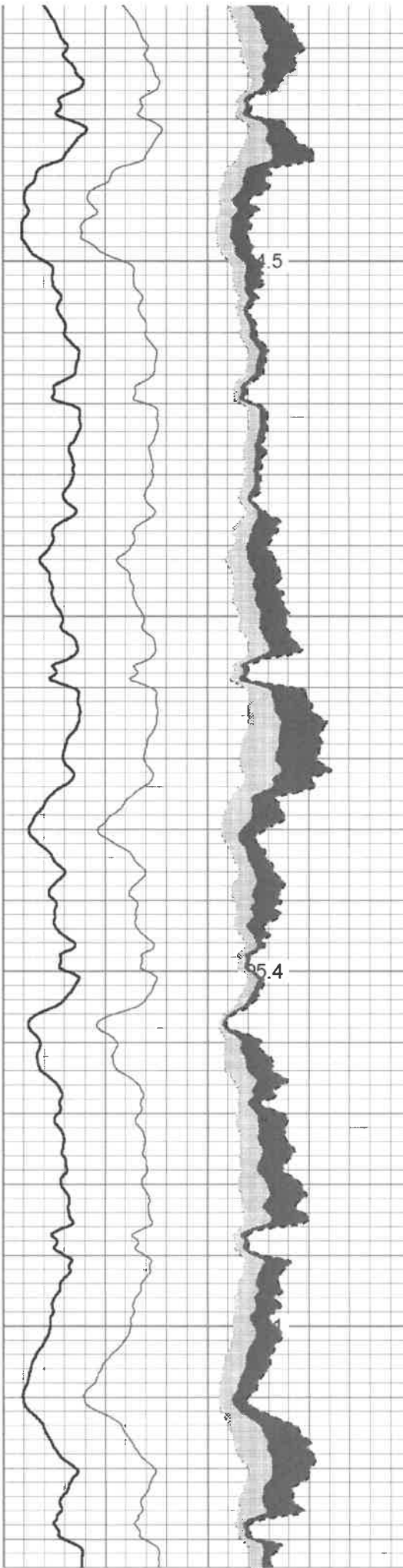


3700

3750

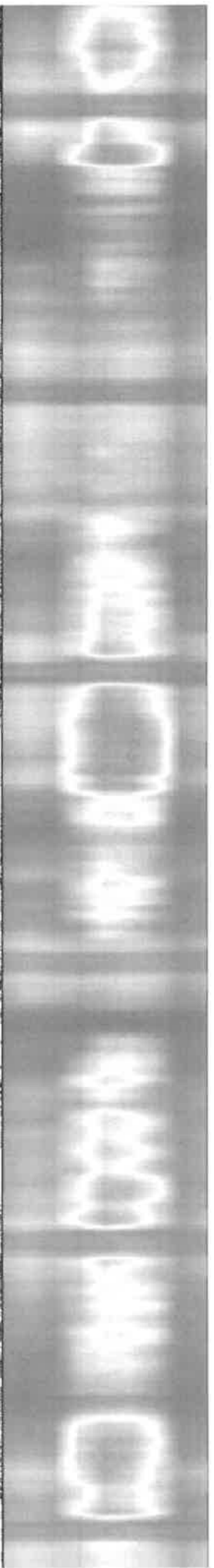
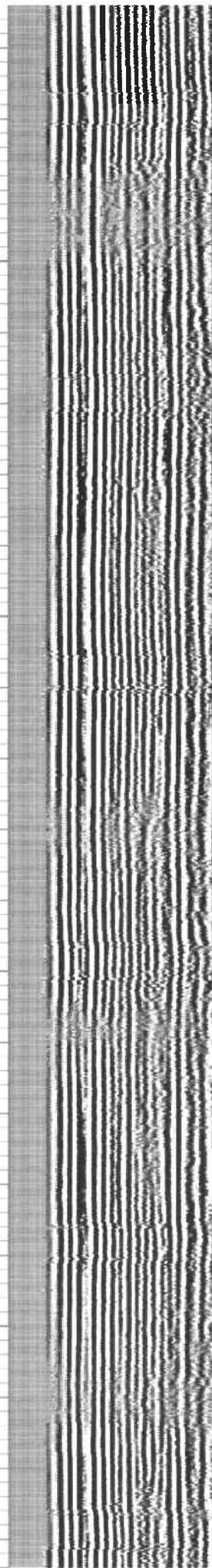
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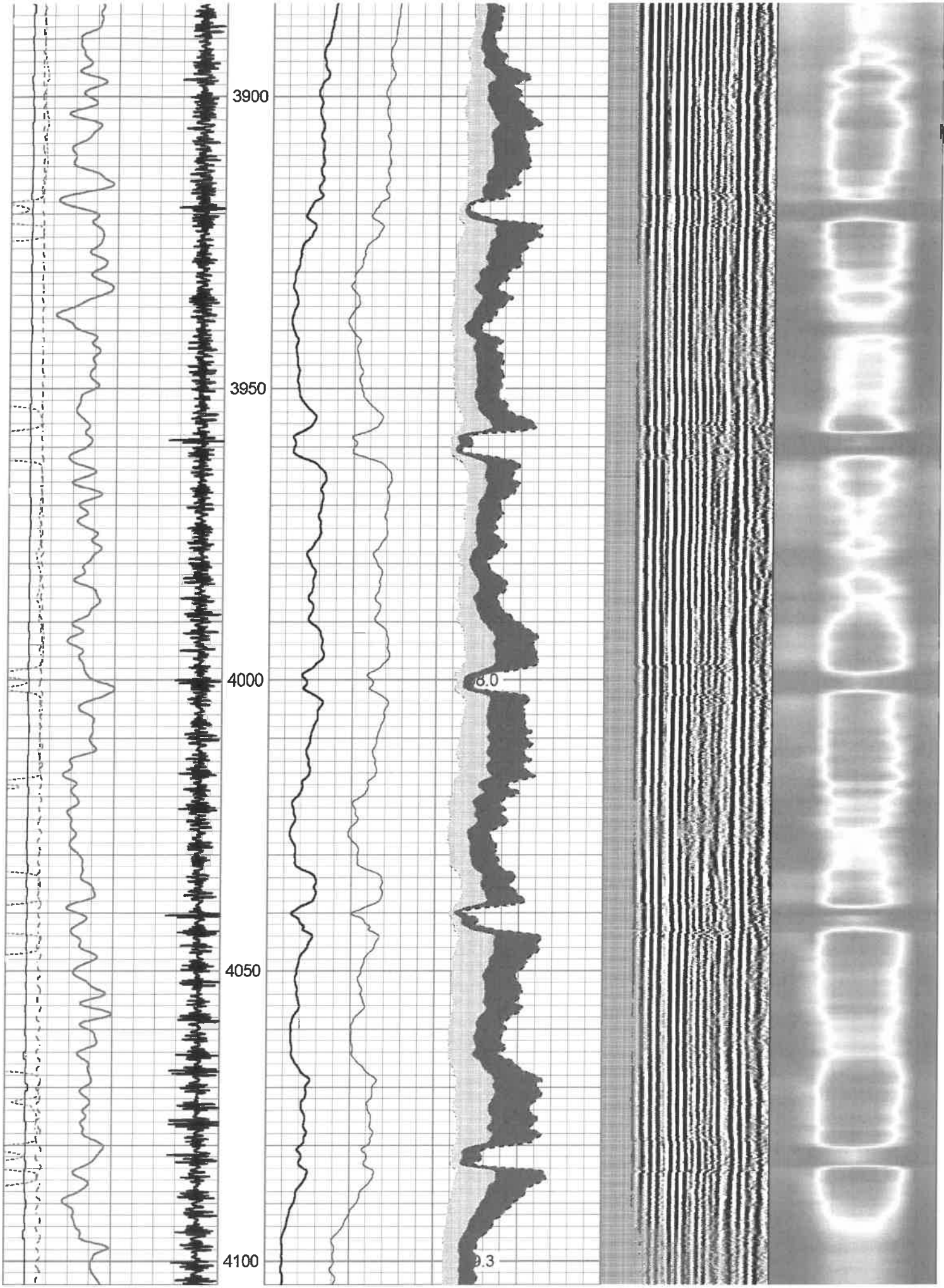
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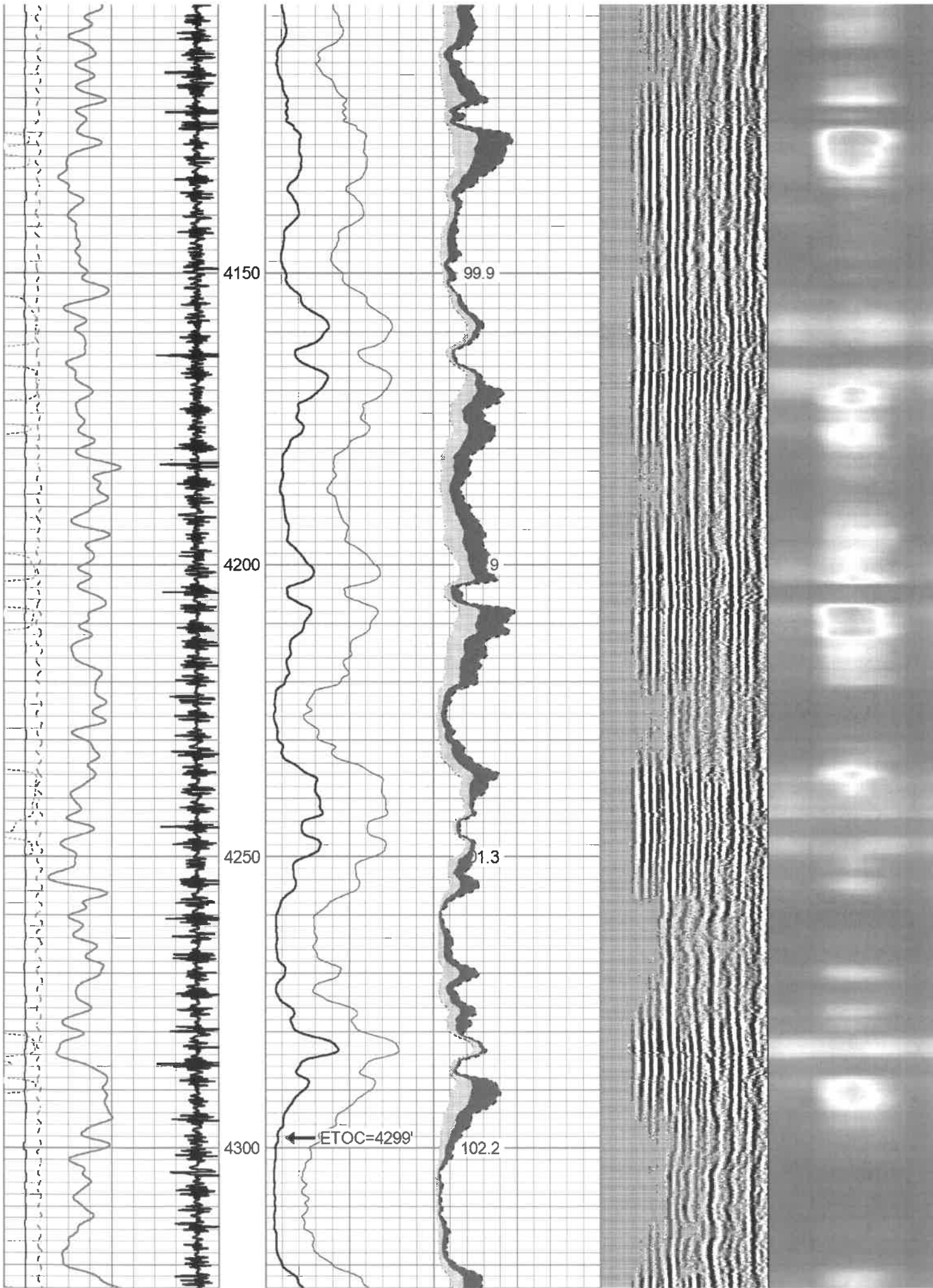


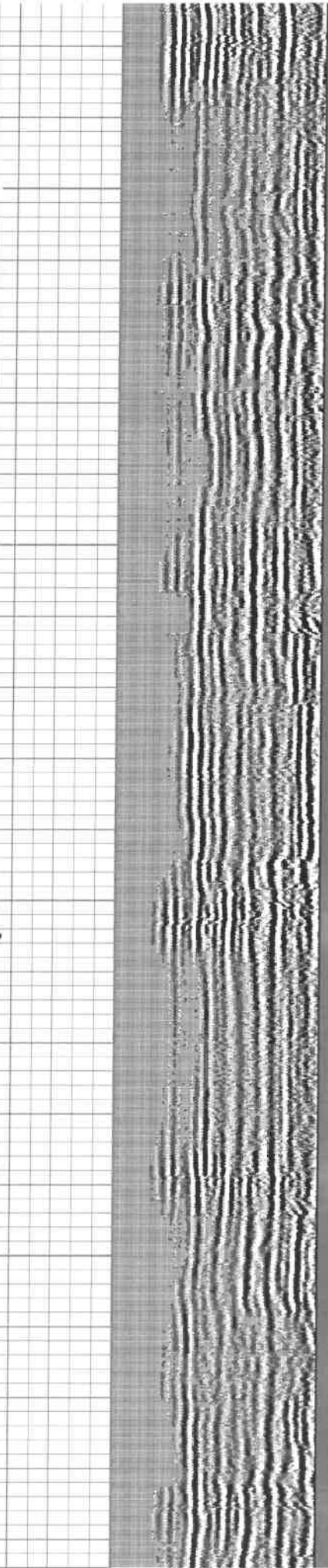
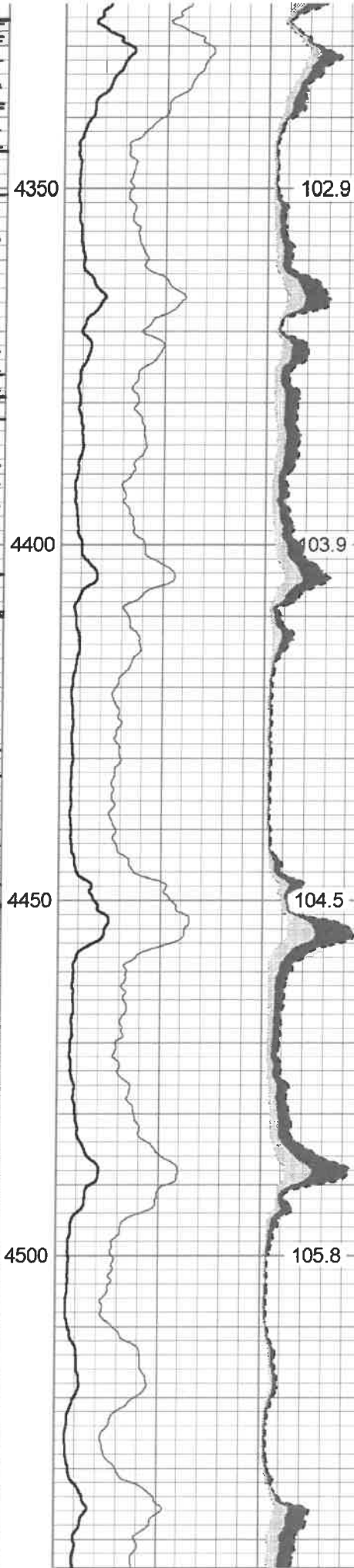
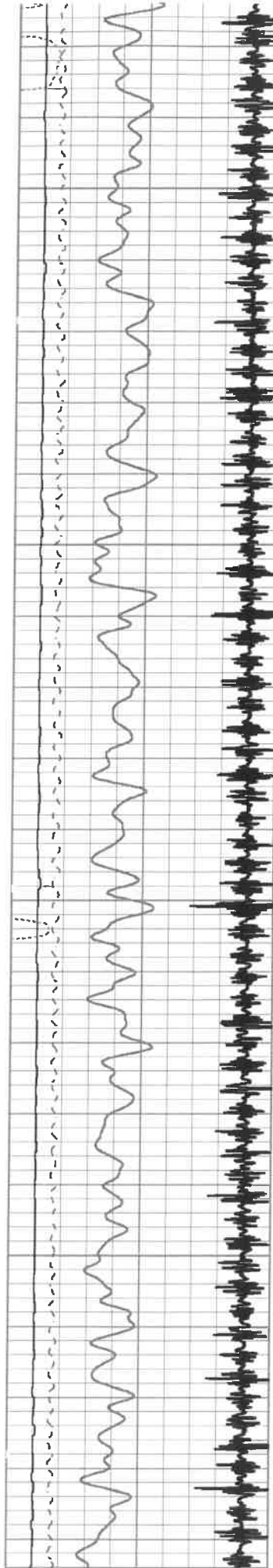
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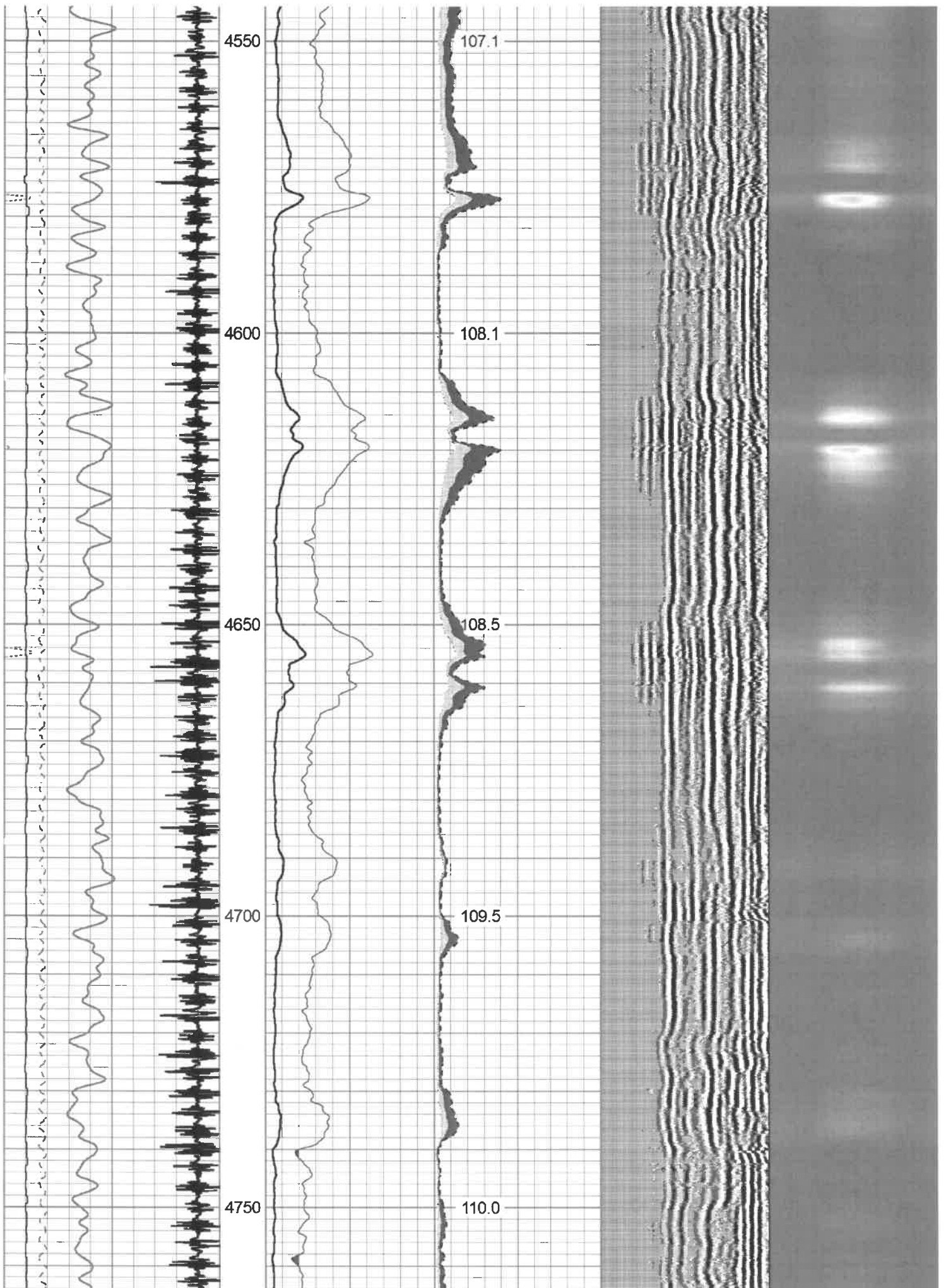
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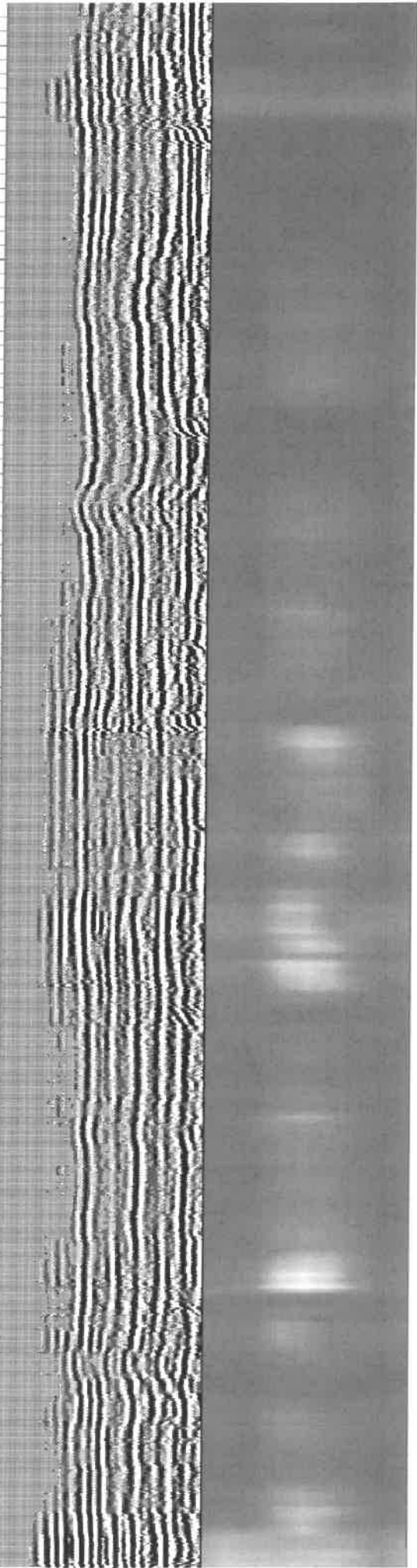
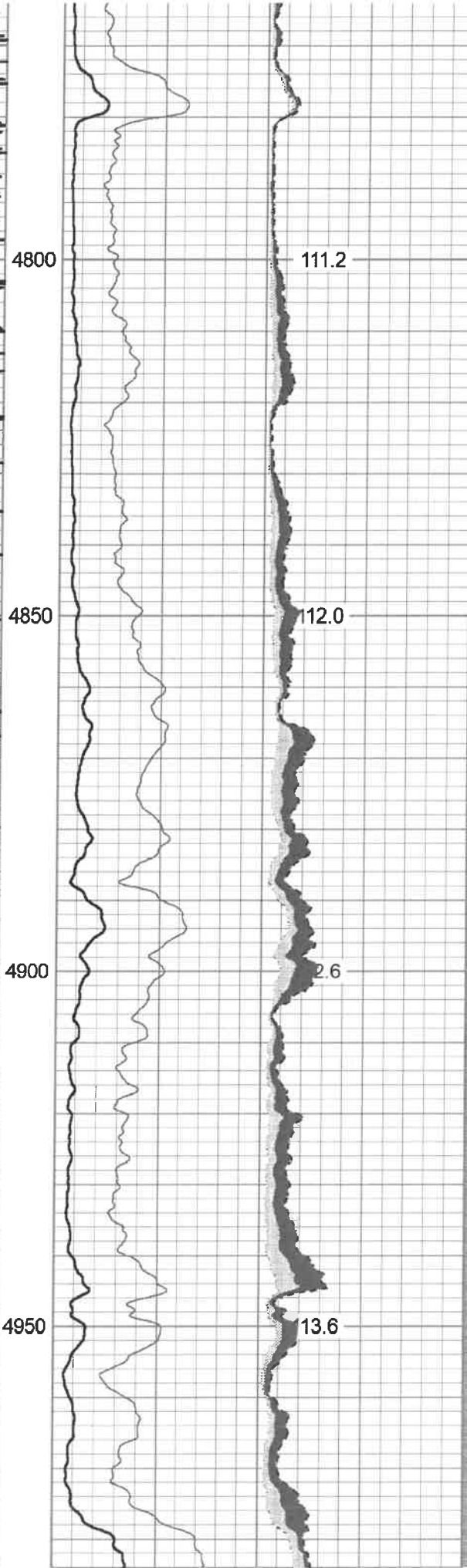
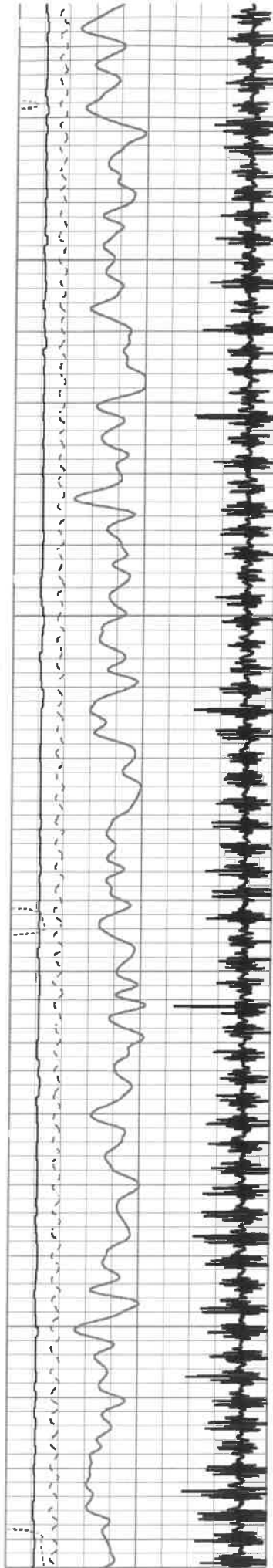


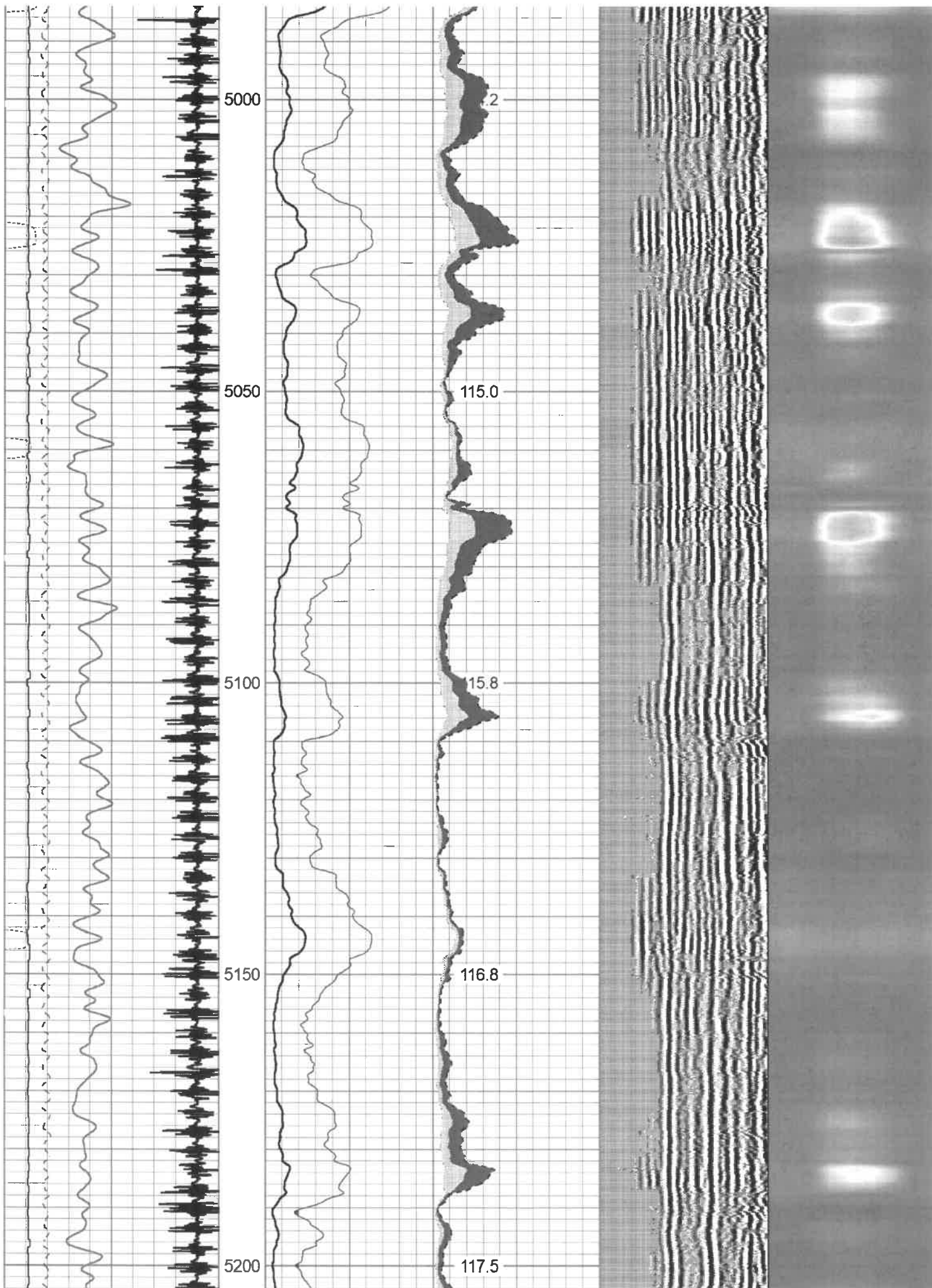


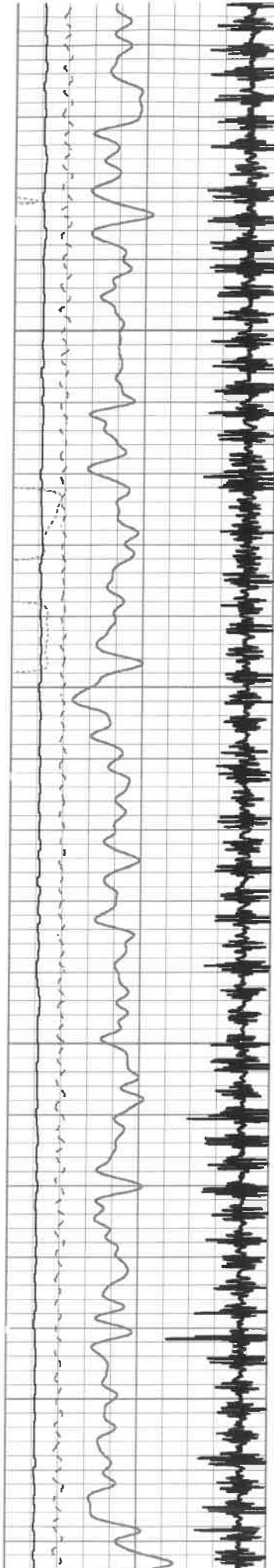










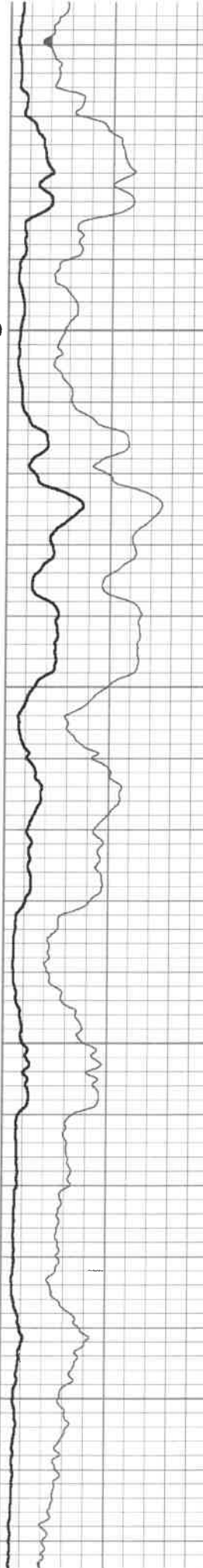


5250

5300

5350

5400

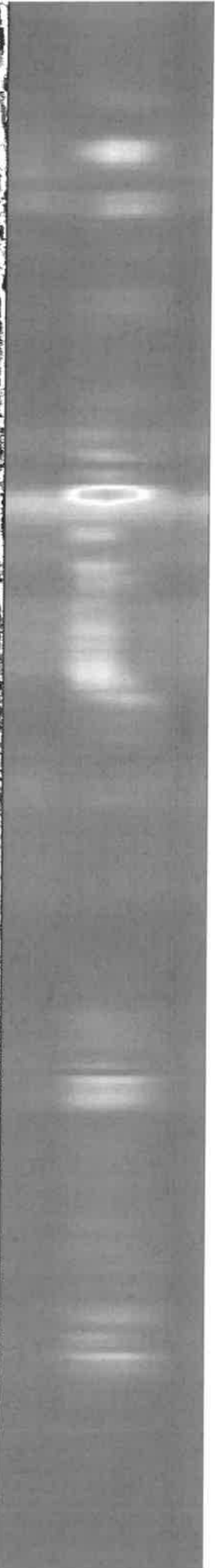
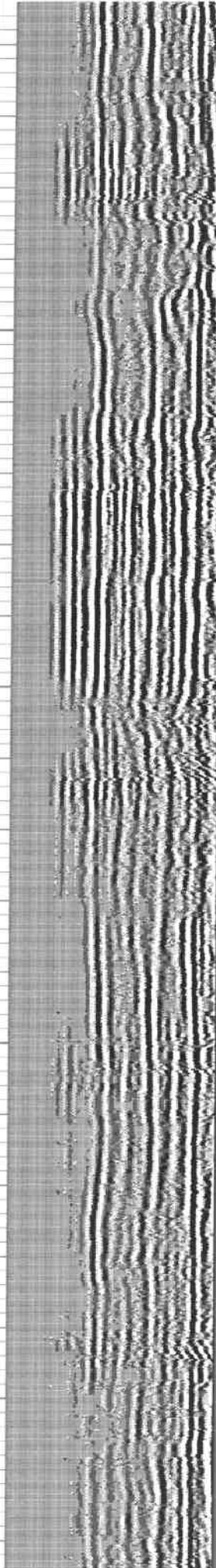
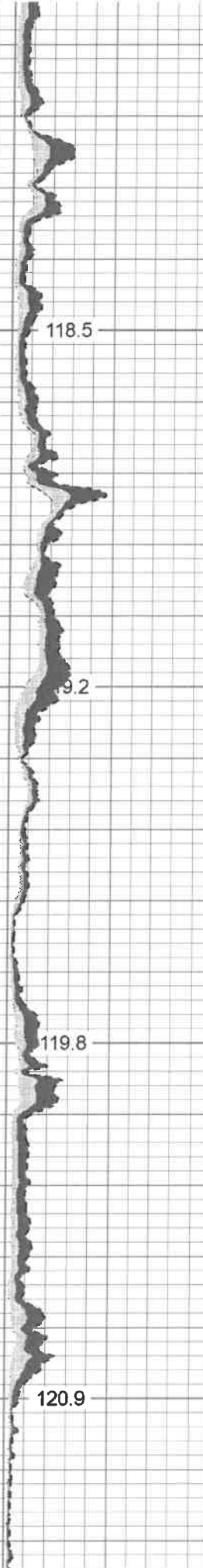


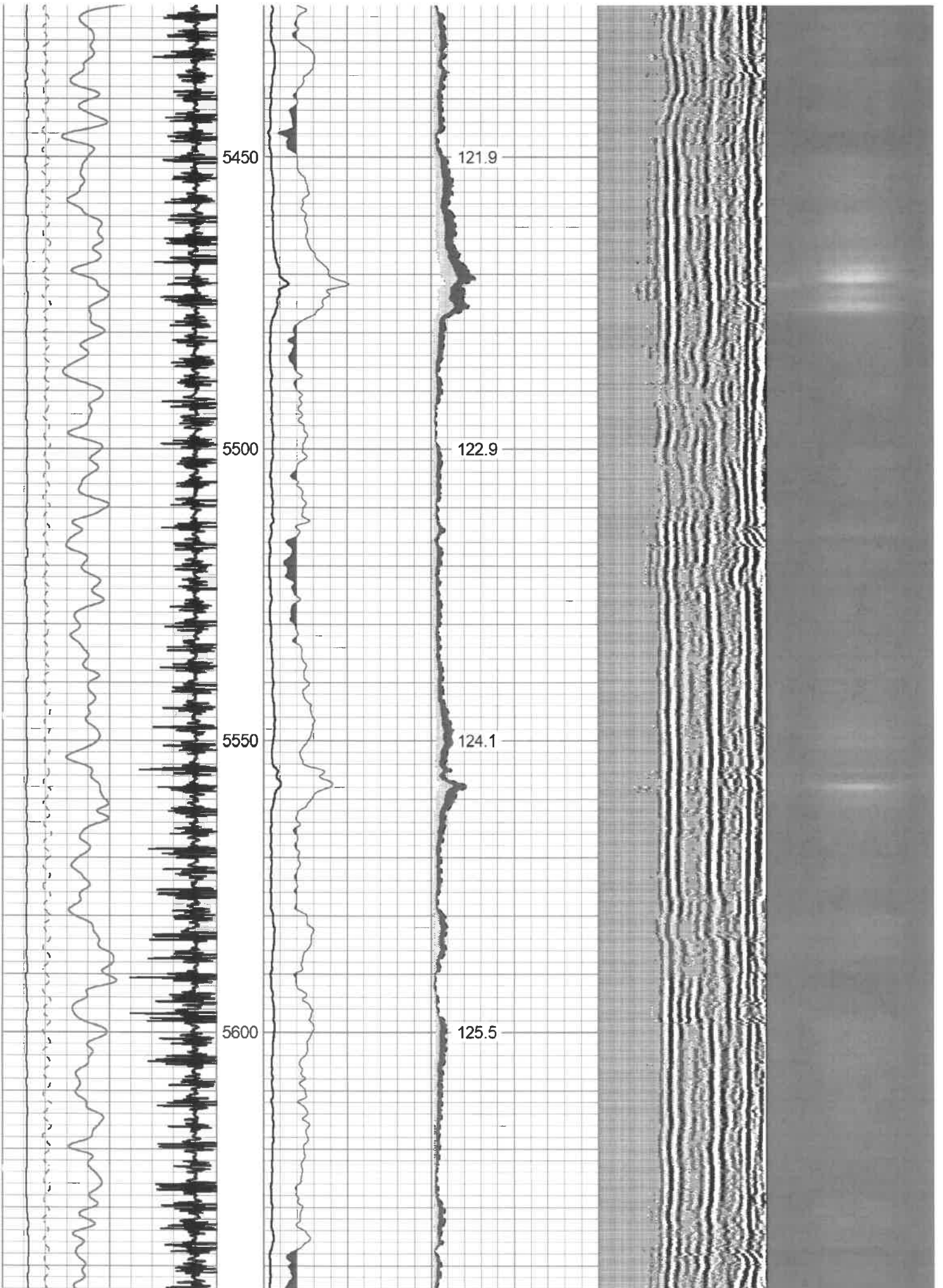
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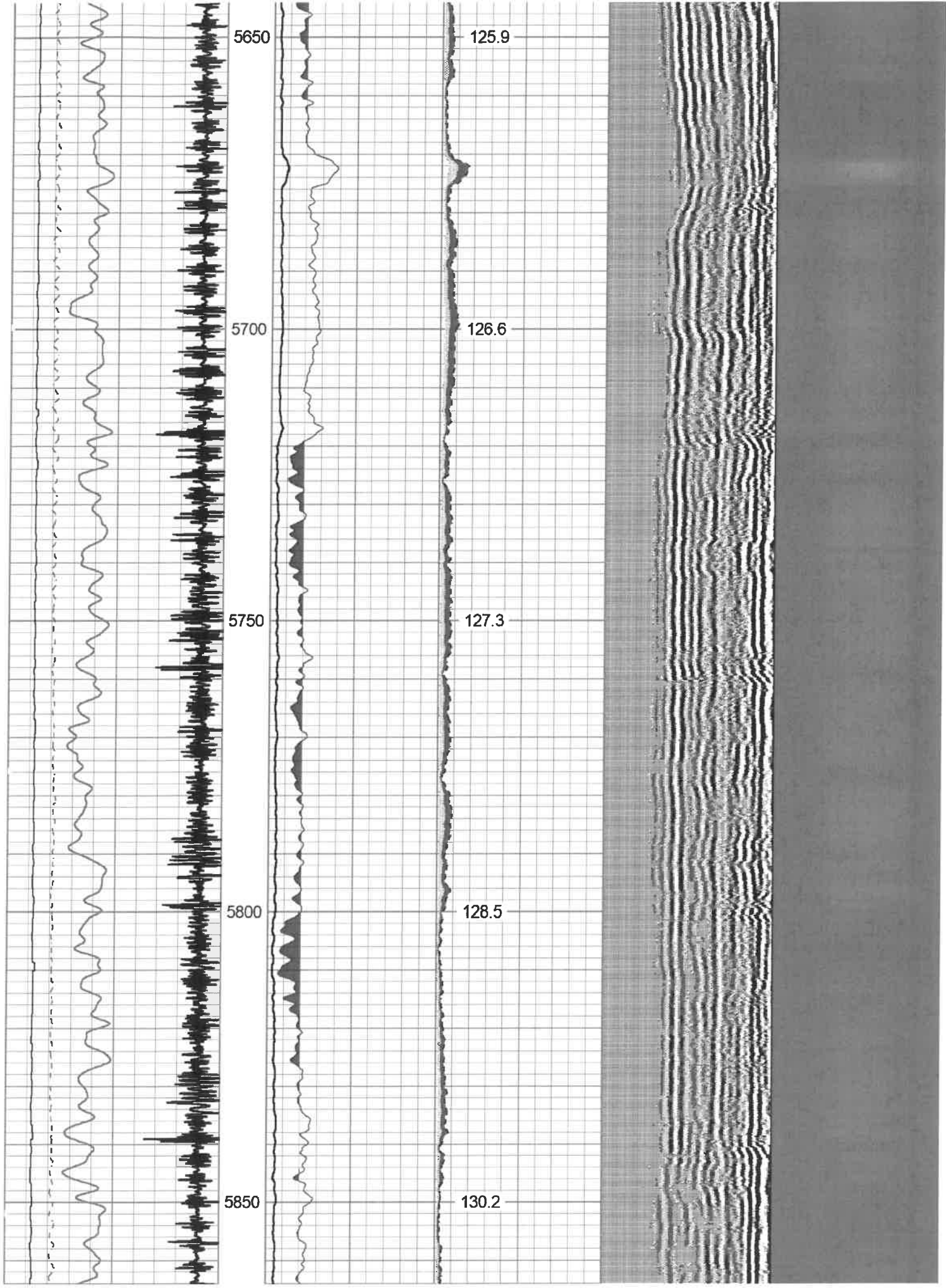
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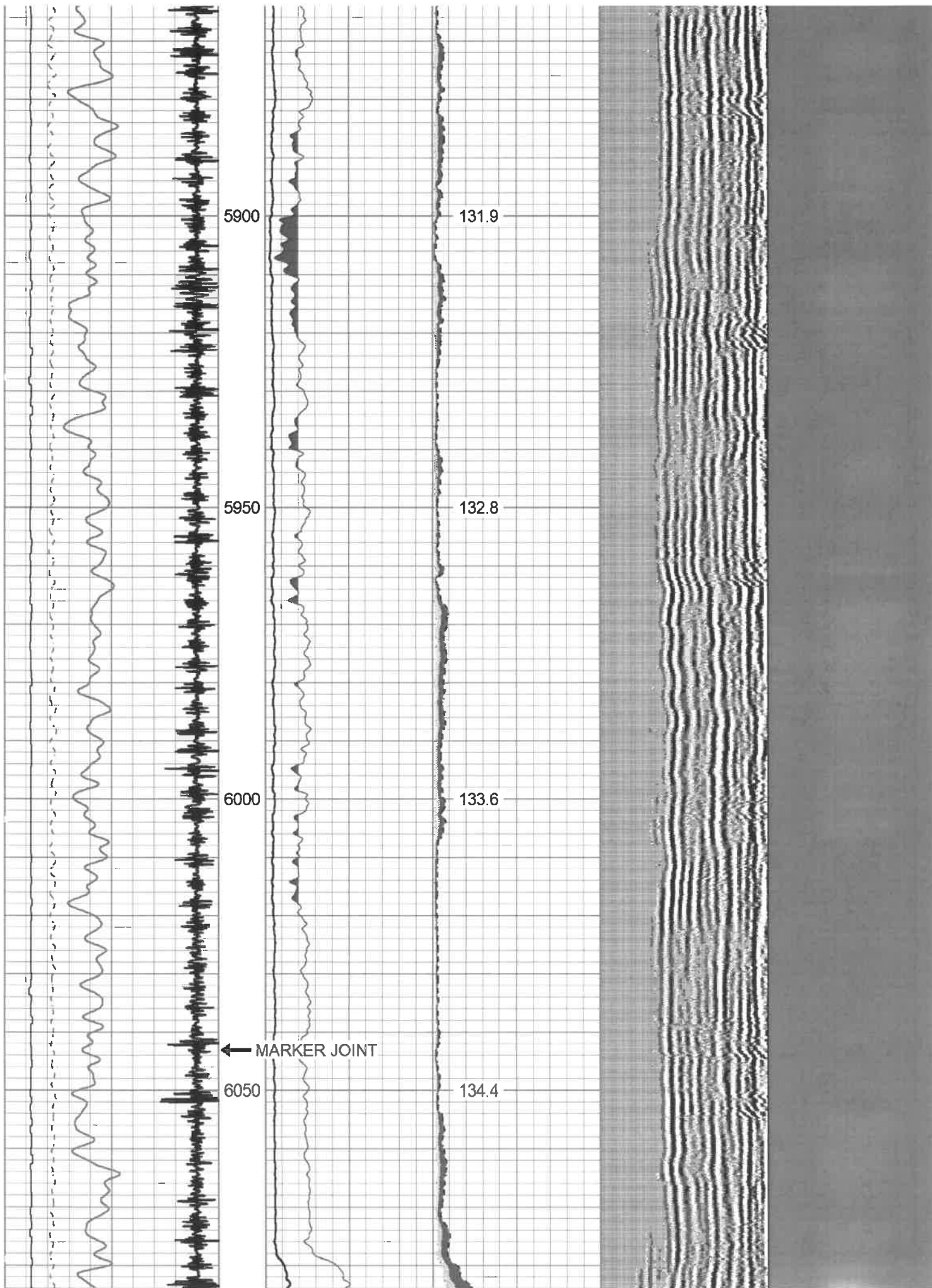
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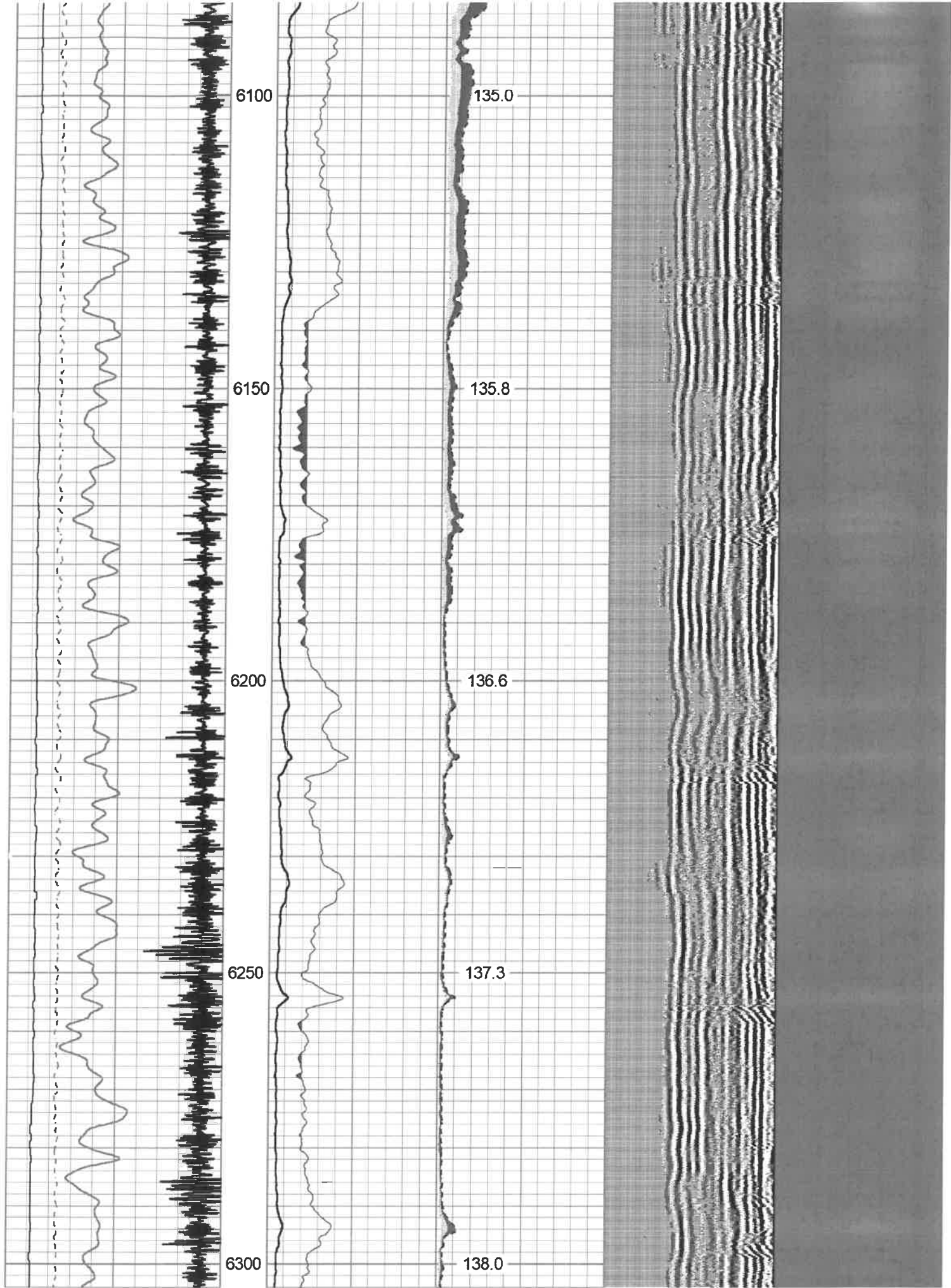
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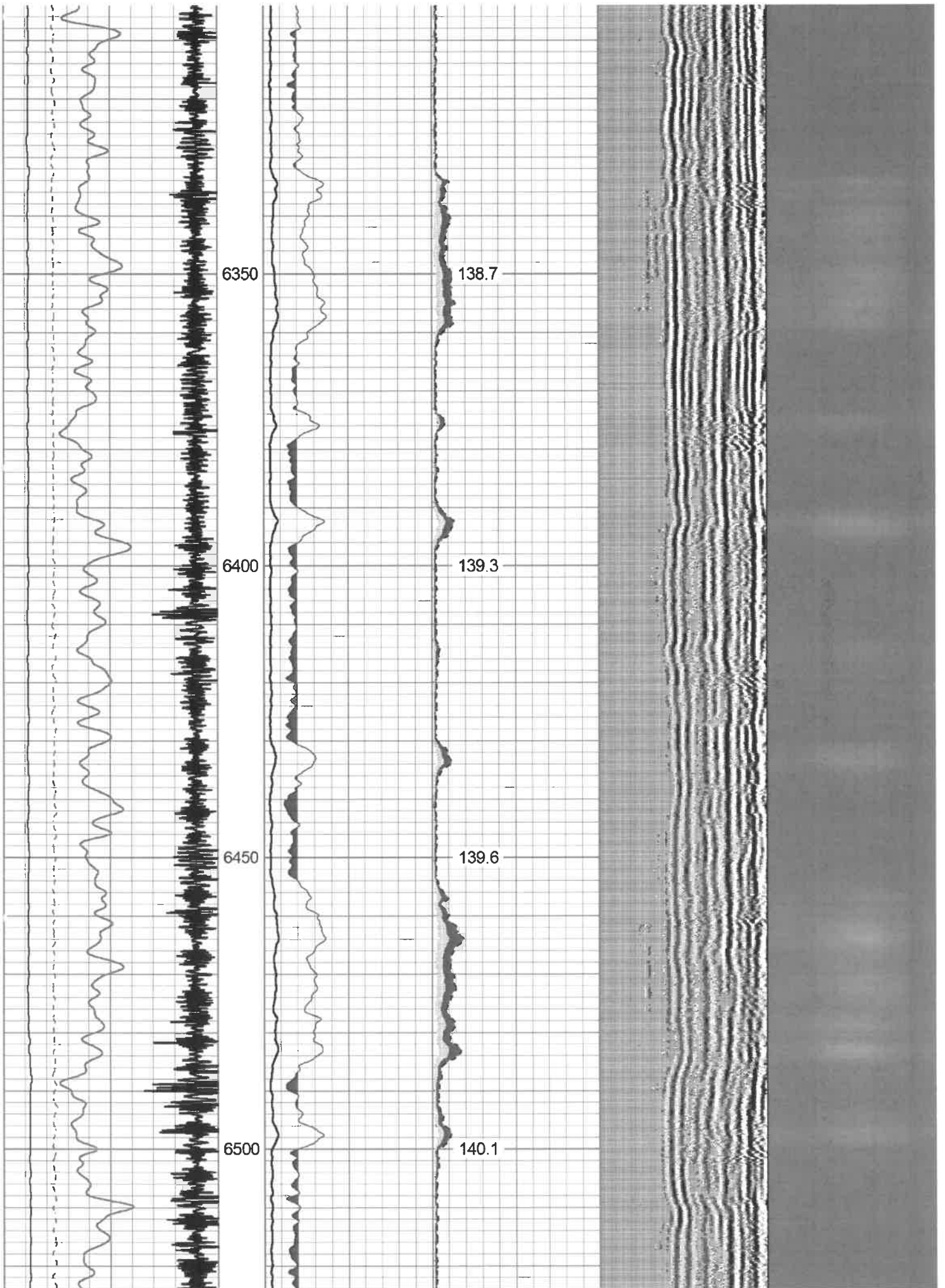


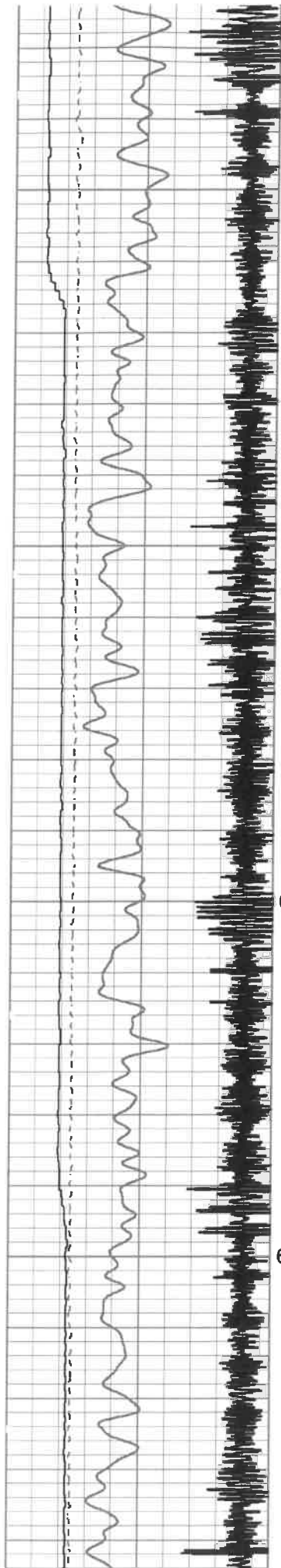










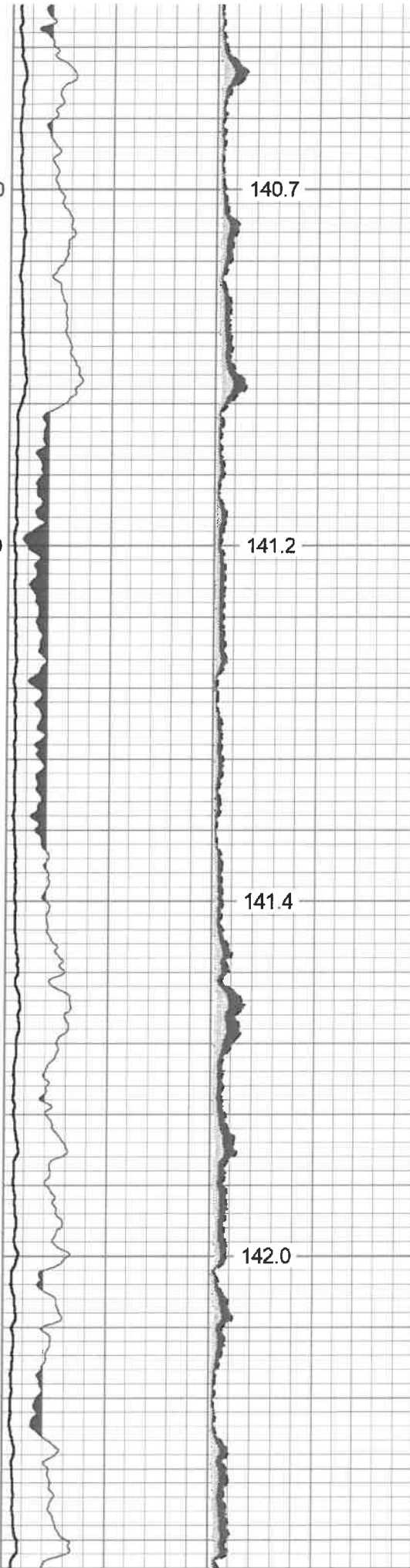


6550

6600

6650

6700

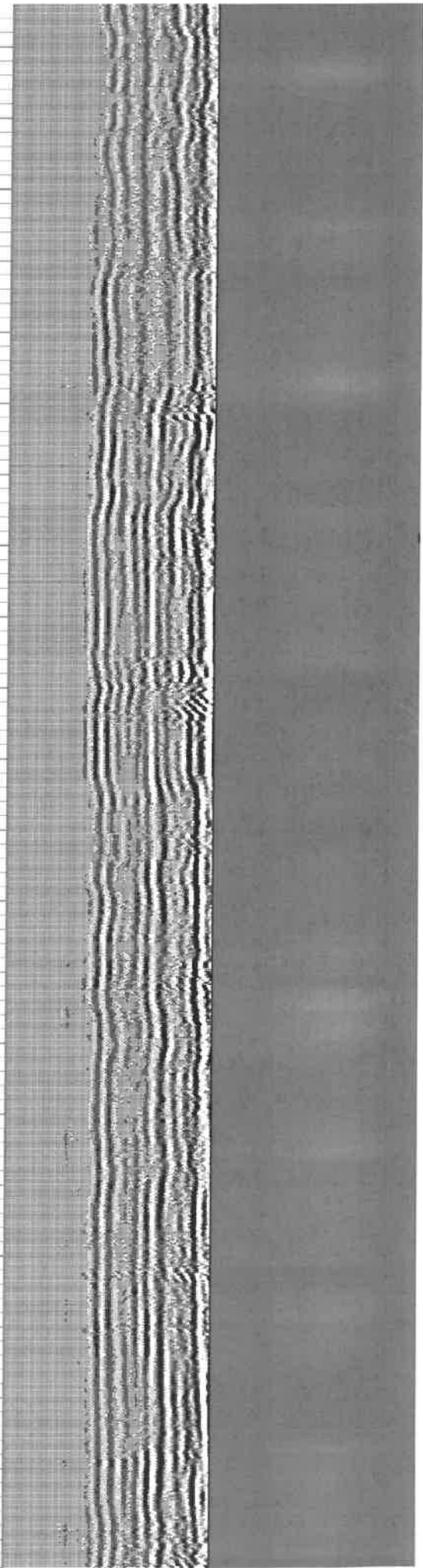


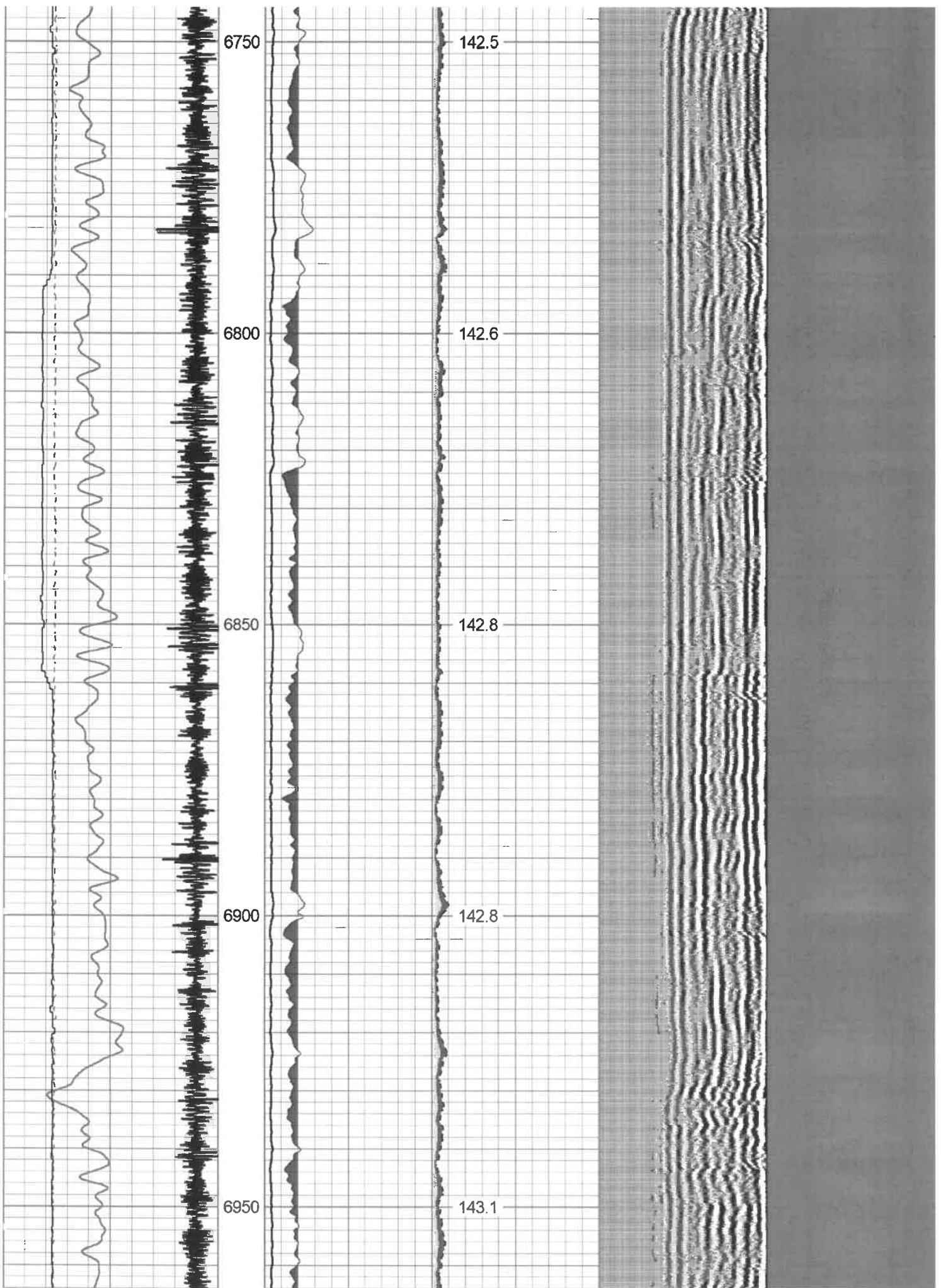
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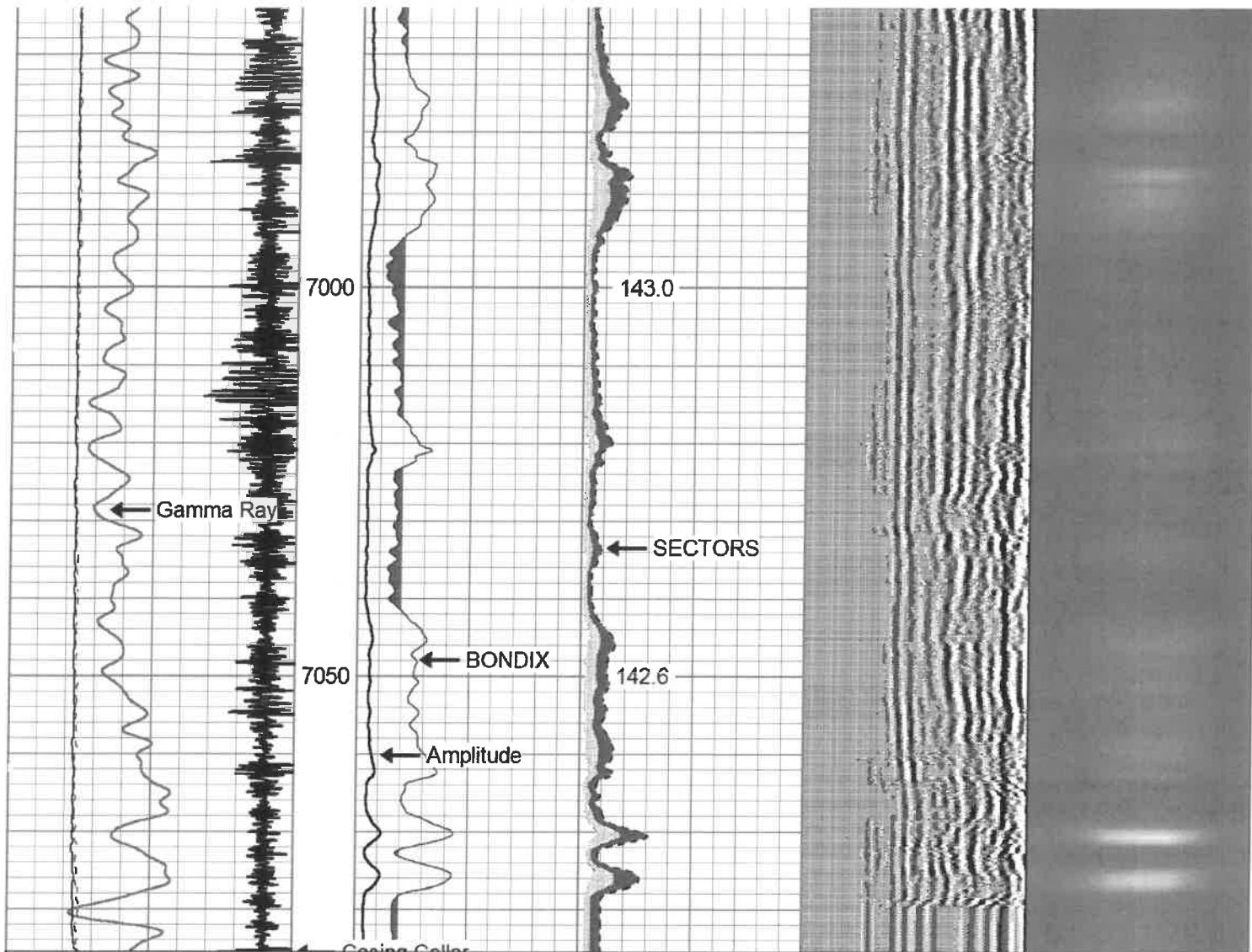
141.2

141.4


142.0







291	Travel Time (usec)	191	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	0	AMPAVG	150				
0	Line Tension (lb)	5000	TEMP									
-100	LSPD (ft/min)	100	(degF)									

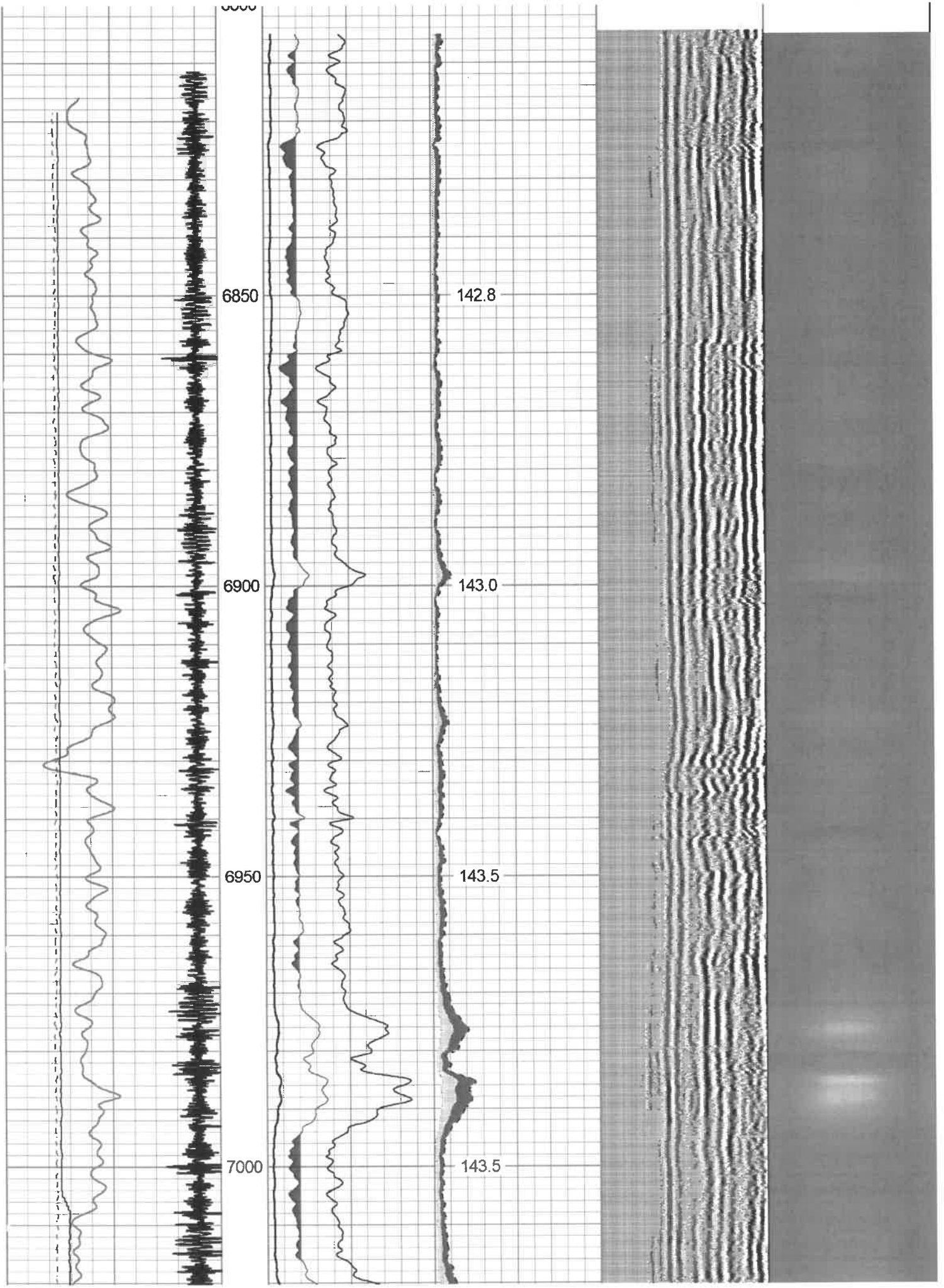


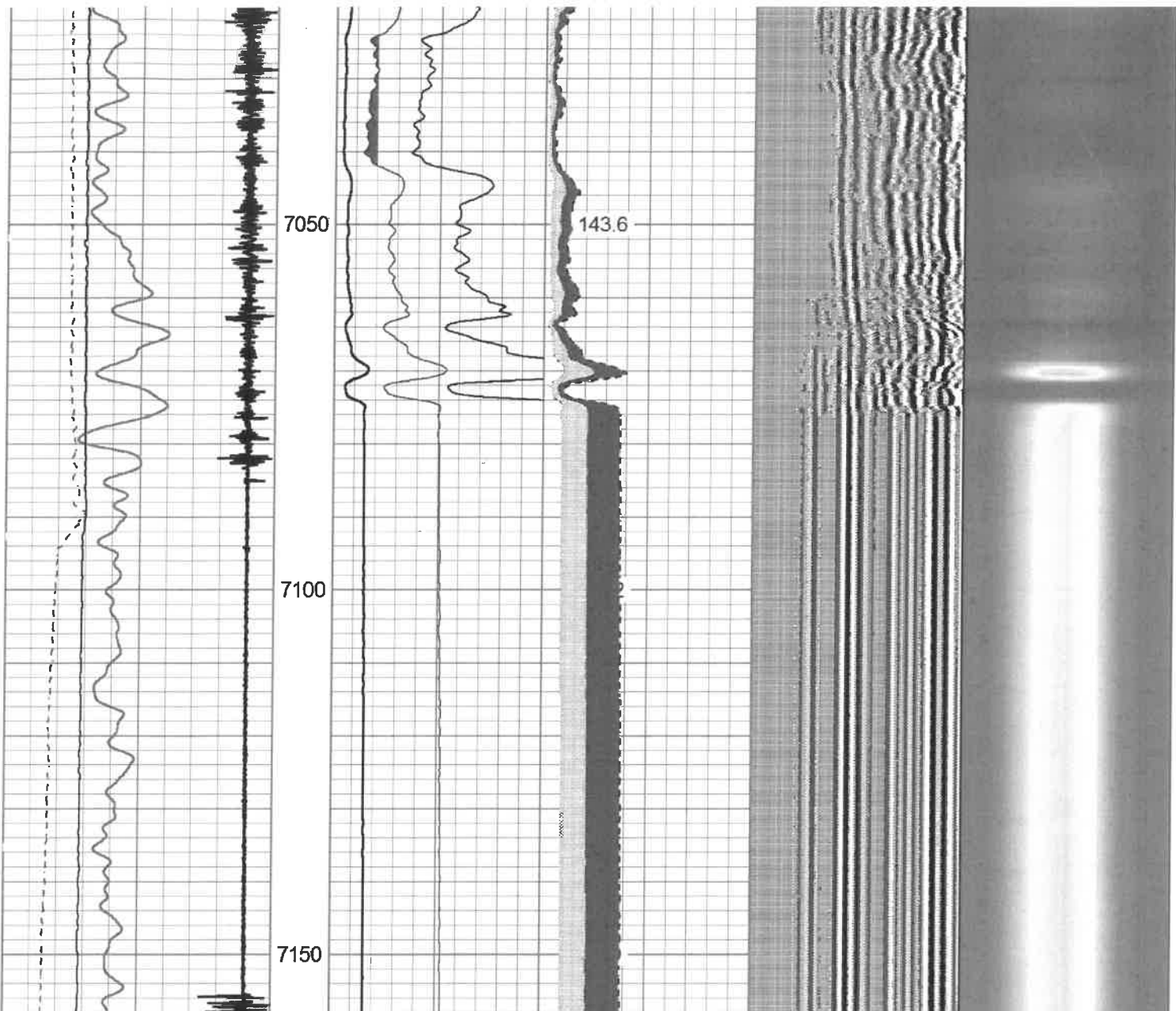
REPEAT LOG

APPLIED 1500 PSI

Database File: antero_tapeats_3h_may_9_2021_rcbl.db
 Dataset Pathname: pass6
 Presentation Format: scbl03
 Dataset Creation: Sun May 09 15:41:35 2021
 Charted by: Depth in Feet scaled 1:240

291	Travel Time (usec)	191	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	AMPX5			0	AMPAVG	150				
0	Line Tension (lb)	5000	TEMP									
-100	LSPD (ft/min)	100	0	(mV)	10		(degF)					





291	Travel Time (usec)	191	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		AMPX5		0	AMPAVG	150				
0	Line Tension (lb)	5000		TEMP								
-100	LSPD (ft/min)	100	0	(mV)	10		(degF)					

RECEIVED
Office of Oil and Gas
FEB 10 2022
WV Department of
Environmental Protection

Log Variables

Database: C:\ProgramData\Warrior\Data\antero_tapeats_3h_may_9_2021_rcbl.db
Dataset: field/well/run1/MAIN/_vars_

Top - Bottom

BHTEMP_Src	BOREID	BOTTEMP	CASEOD	CASETHCK	CASEWGHT	MAXAMPL	MINAMPL
TEMP	in 7.875	degF 100	in 5.5	in 0	lb/ft 20	mV 71.9	mV 2.2
MINATTN	PERFS	PPT	SRFTEMP	TDEPTH			
db/ft 0.8	No	usec 261	degF 0	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 antero_tapeats_3h_may_9_2021_rcbl.db
 Dataset Pathname MAIN
 Dataset Creation Sun May 09 15:52:19 2021

Gamma Ray Calibration Report

Serial Number: FW1211-86
 Tool Model: Probe
 Performed: Thu Oct 15 06:46:53 2020
 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: 5.500 in
 Calibration Depth: 311.617 ft

Master Calibration, performed Sun May 09 15:07:21 2021:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.908	2.200	71.921	76.880	2.151
CAL	0.001	0.754				
5'	0.001	0.914	2.200	71.921	76.322	2.130
SUM						
S1	0.001	1.474	0.000	71.921	48.844	-0.061
S2	0.001	1.124	0.000	71.921	64.046	-0.065
S3	0.001	0.936	0.000	71.921	76.876	-0.042
S4	0.001	1.000	0.000	71.921	72.016	-0.062
S5	0.001	1.011	0.000	71.921	71.239	-0.082
S6	0.001	0.929	0.000	71.921	77.479	-0.054
S7	0.001	0.943	0.000	71.921	76.339	-0.076
S8	0.001	1.303	0.000	71.921	55.213	-0.034


Internal Reference Calibration, performed Sat Apr 04 17:44:51 2020:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.001	0.754	1.000	0.000

Air Zero Calibration, performed Sun May 09 11:29:49 2021:

Raw (v) Calibrated (v) Results

	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

	Company	ANTERO RESOURCES
	Well	VISHNU 2H
	Field	RABBIT EARS
	County	TYLER
	State	WV

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