



**RADIAL
BOND
LOG**

Company ANTERO
Well FRALEY 2H
Field SOUTH CANTON
County DODDRIDGE
State WEST VIRGINIA

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Well FRALEY 2H
Field SOUTH CANTON
County DODDRIDGE
State WEST VIRGINIA

Location: API #: 47017068970000
Other Services

SEC TWP RGE Elevation 30'
Permanent Datum GL
Log Measured From KB
Drilling Measured From KB

Date	05-MAR-2021						
Run Number	ONE						
Depth Driller	15,868'						
Depth Logger	7235'						
Bottom Logged Interval	7224'						
Top Log Interval	SURFACE						
Open Hole Size	N/A						
Type Fluid	BRINE						
Density / Viscosity	8.6#						
Max. Recorded Temp.	152°F						
Estimated Cement Top	4494'						
Time Well Ready	13:05						
Time Logger on Bottom	13:50						
Equipment Number	TK-127						
Location	CHARLEROI, PA						
Recorded By	D. JOSEPHIK						
Witnessed By	BOB REED						
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Surface String	Size	Wgt/Ft	Top	Bottom		
Prot. String							
Production String	5.5		20#	SURFACE	15,868'		
Liner							

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

LOG CORRELATED TO MARKER JOINT PER OSR

MARKER JOINT@ 5898'-5907'

RECEIVED
Office of Oil and Gas
AUG 30 2021
WV Department of
Environmental Protection

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-Titan Titan 1 7/16" GO Cablehead	1.00	1.44	5.00

			CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75	35.00
HeadVolt	16.97					
Temp	14.12					
WVFS8	11.89		RBT-Probe275T (FW1312-32) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	90.00
WVFS7	11.89					
WVFS6	11.89					
WVFS5	11.89					
WVFS4	11.89					
WVFS3	11.89					
WVFS2	11.89					
WVFS1	11.89					
WVF3FT	11.89					
WVF5FT	10.89					
WVFCAL	7.64					
HEADVOLT	7.64					
			CENT-Titn275Adj Titan 2 3/4" Adjustable Centralizer	2.86	2.75	35.00
CCL	3.88					
GR	2.54		GR-Probe (FW1211-86) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00

Dataset: antero_fraley2h_cbl_mar_5_2021.db: field/well/run1/MAIN
 Total length: 20.89 ft
 Total weight: 222.00 lb
 O.D.: 2.75 in

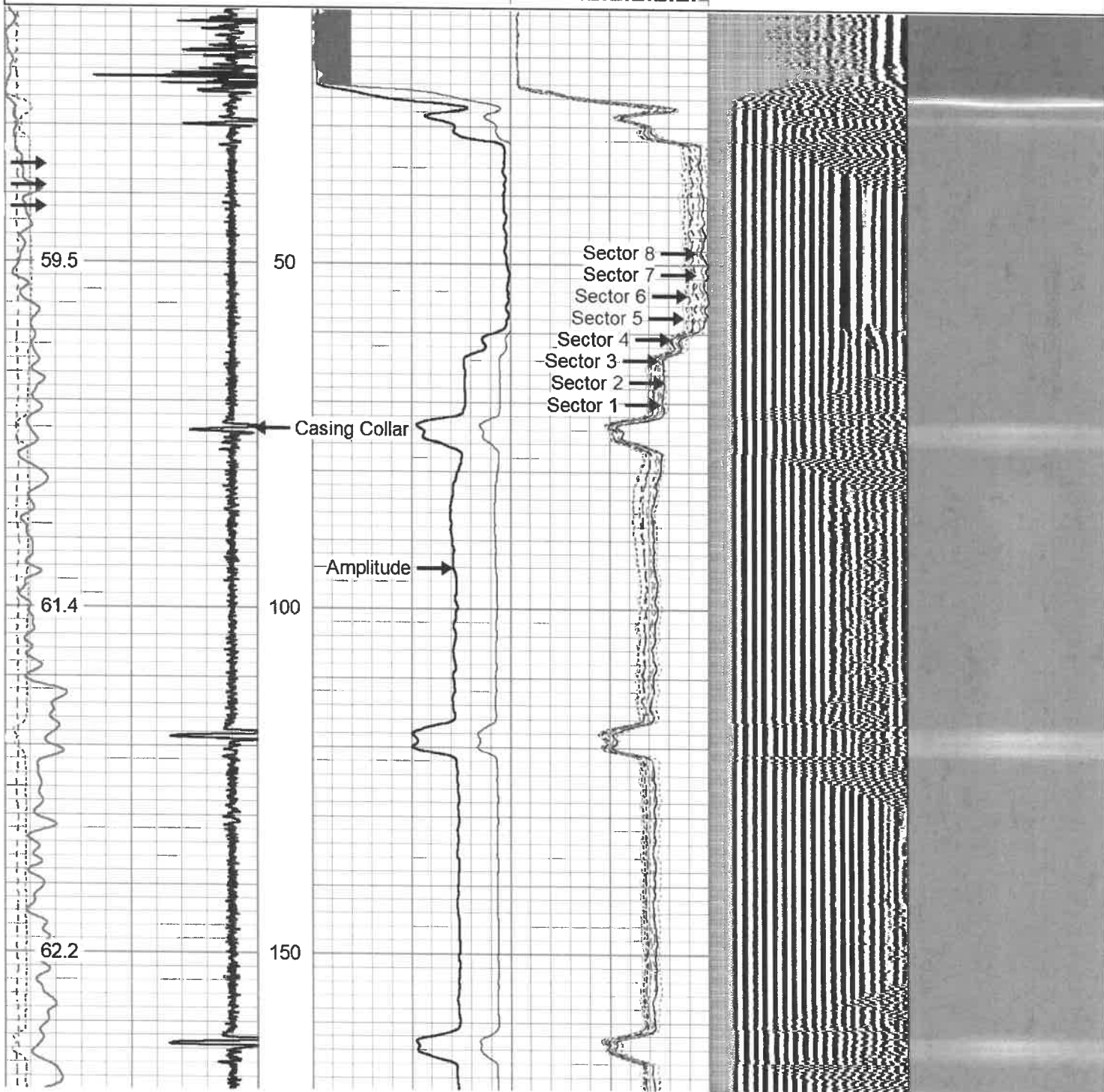


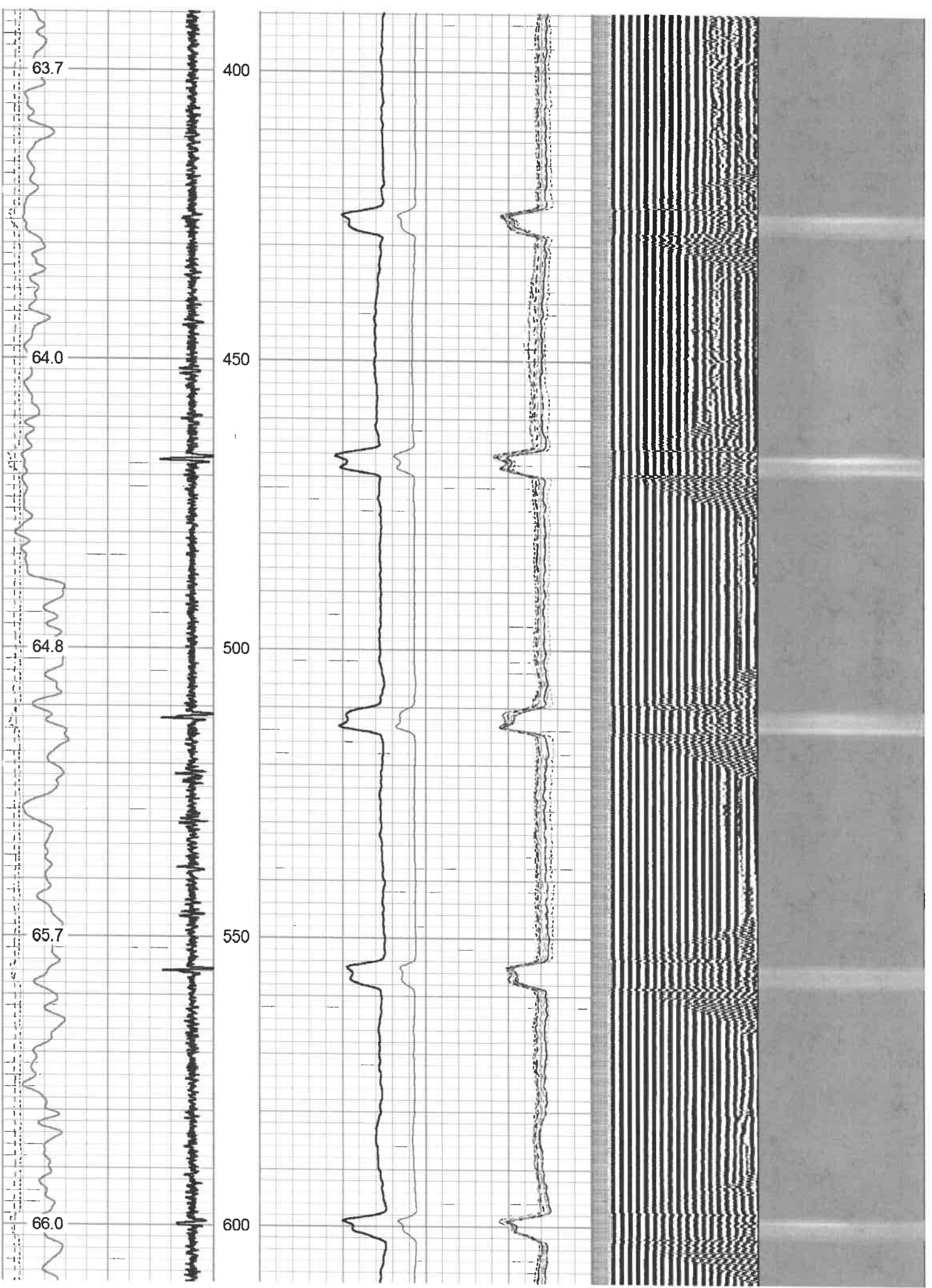
MAIN LOG

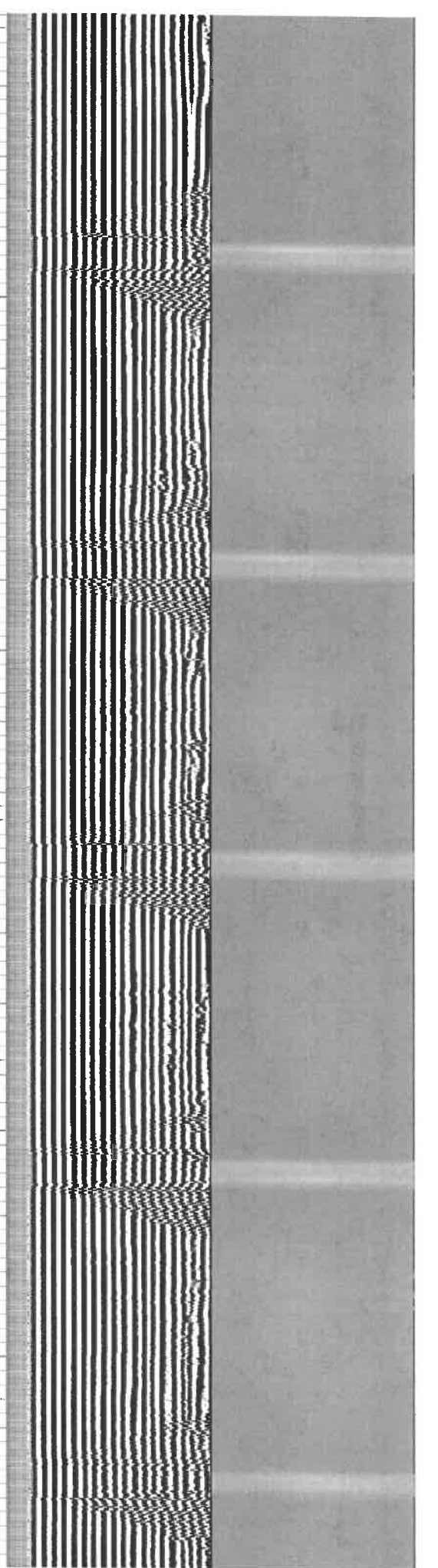
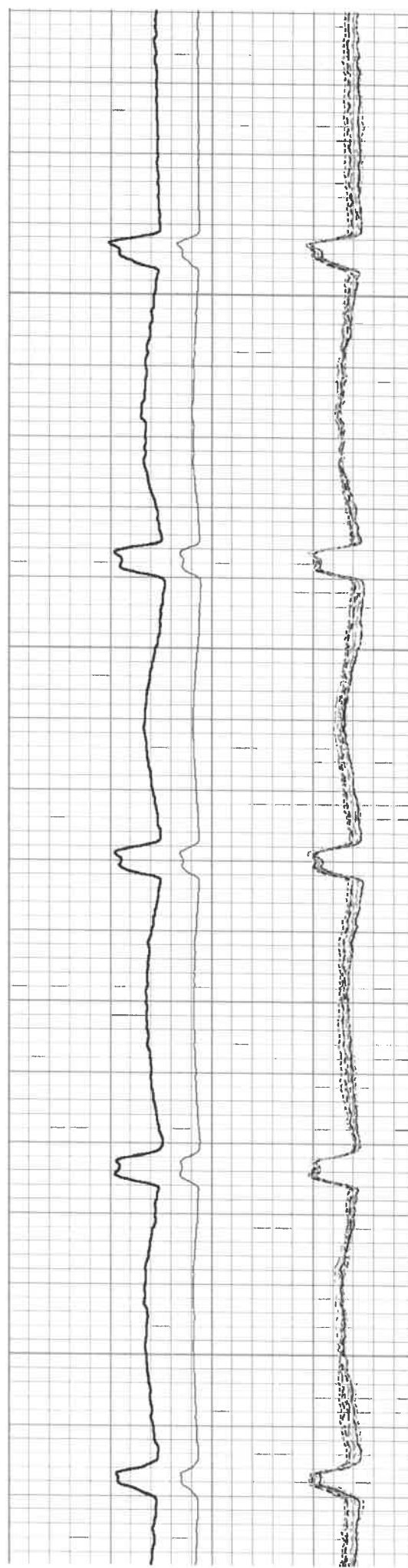
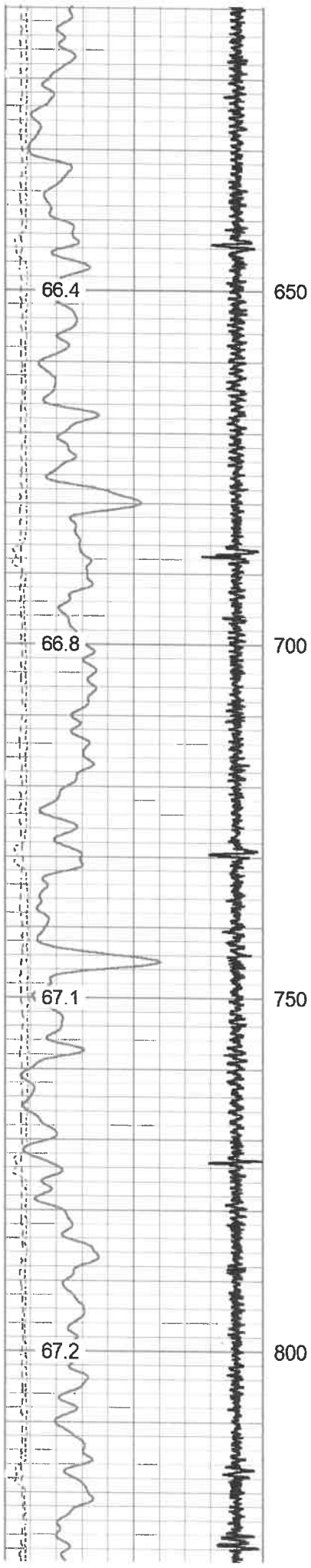
1500 PSI

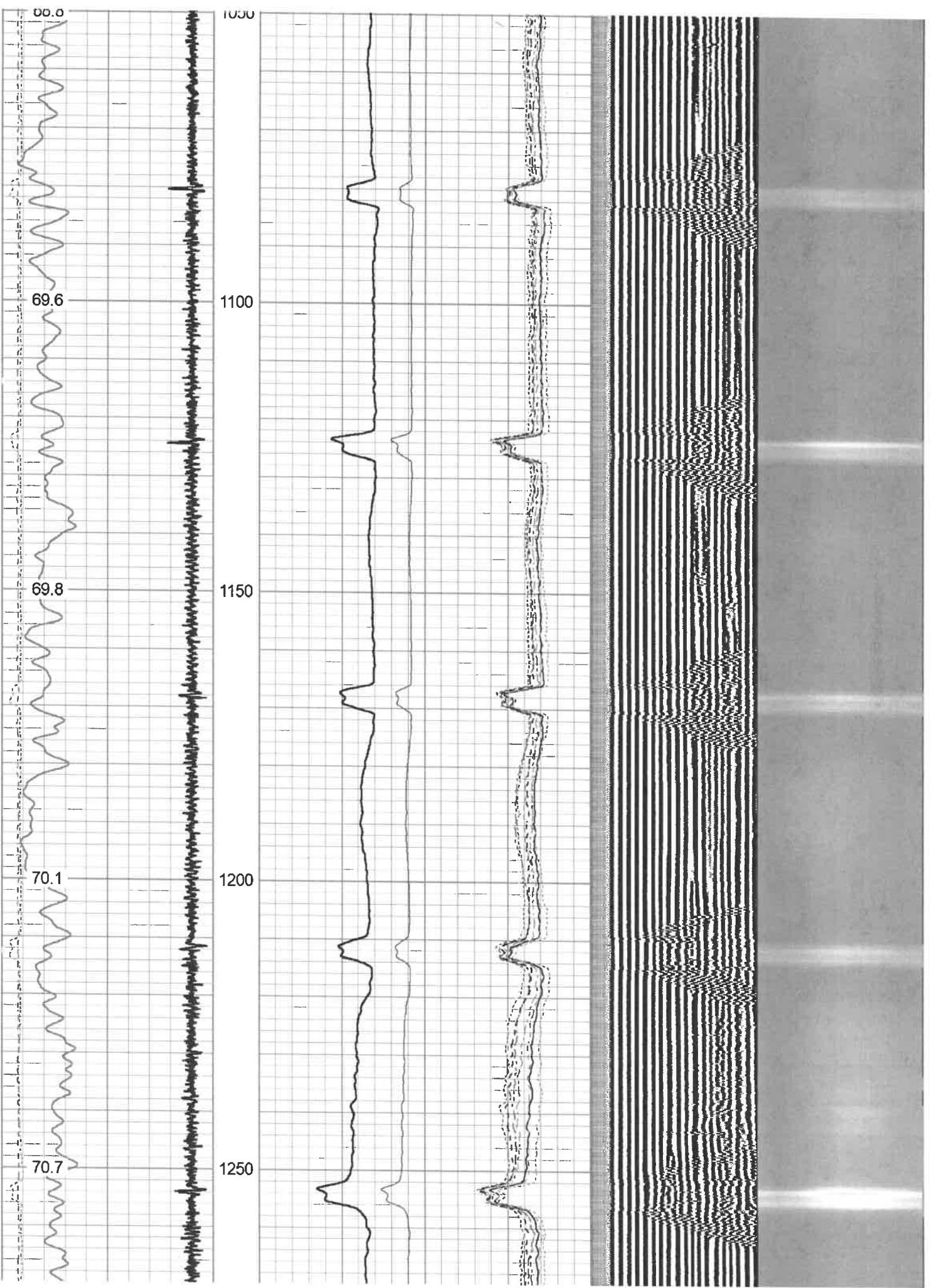
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 Dataset Pathname MAIN
 Presentation Format 9rcbl
 Dataset Creation Fri Mar 05 13:58:32 2021
 Charted by Depth in Feet scaled 1:240

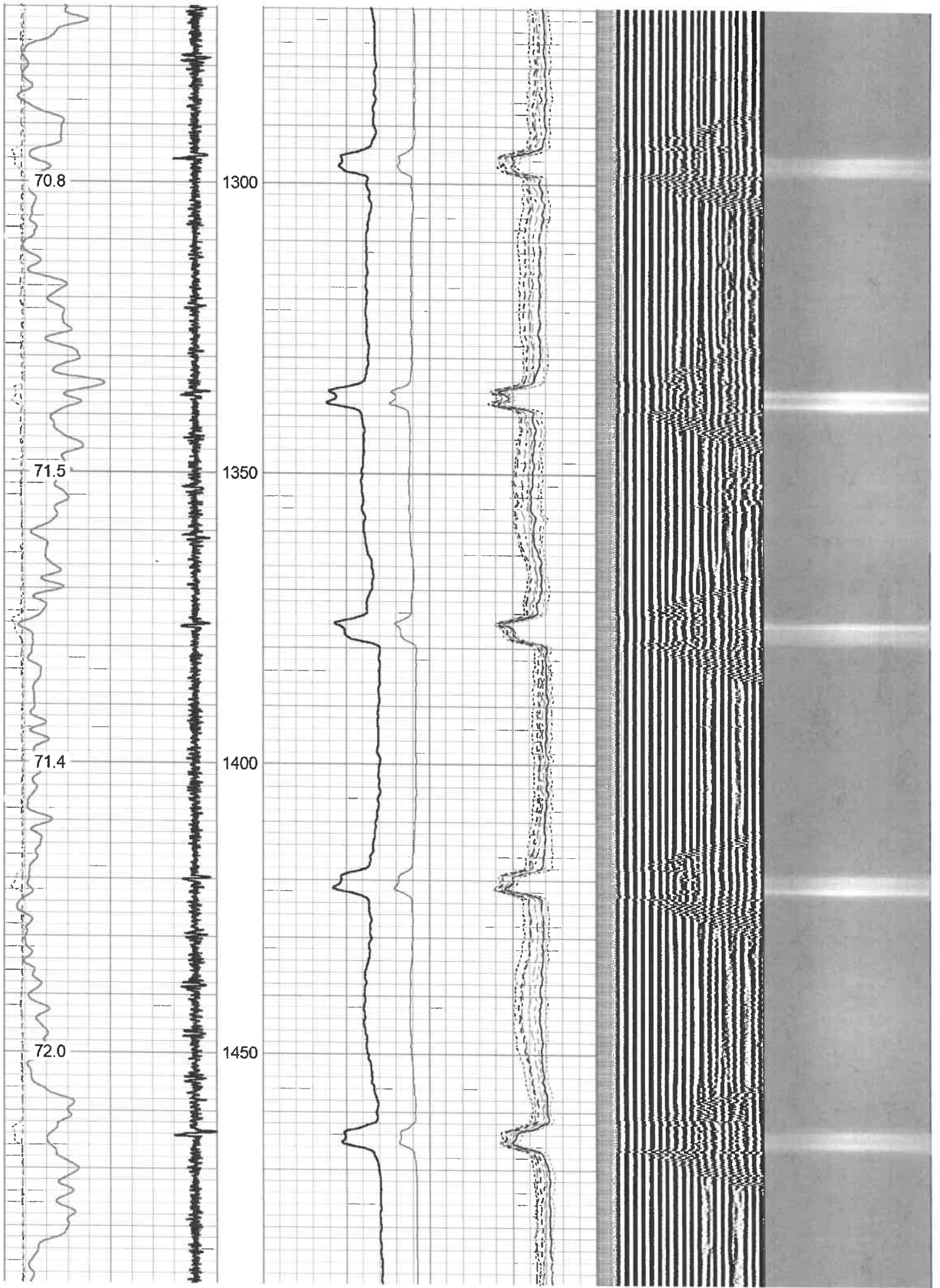
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9	Casing Collar	-1	1	BONDIX	0	-5	Sector 2	150	200 (usec)	1200		
0	Gamma Ray (GAPI)	150				-5	Sector 3	150				
0	Line Tension (lb)	5000				-5	Sector 4	150				
	TEMP (degF)					-5	Sector 5	150				
						-5	Sector 6	150				
						-5	Sector 7	150				
						-5	Sector 8	150				

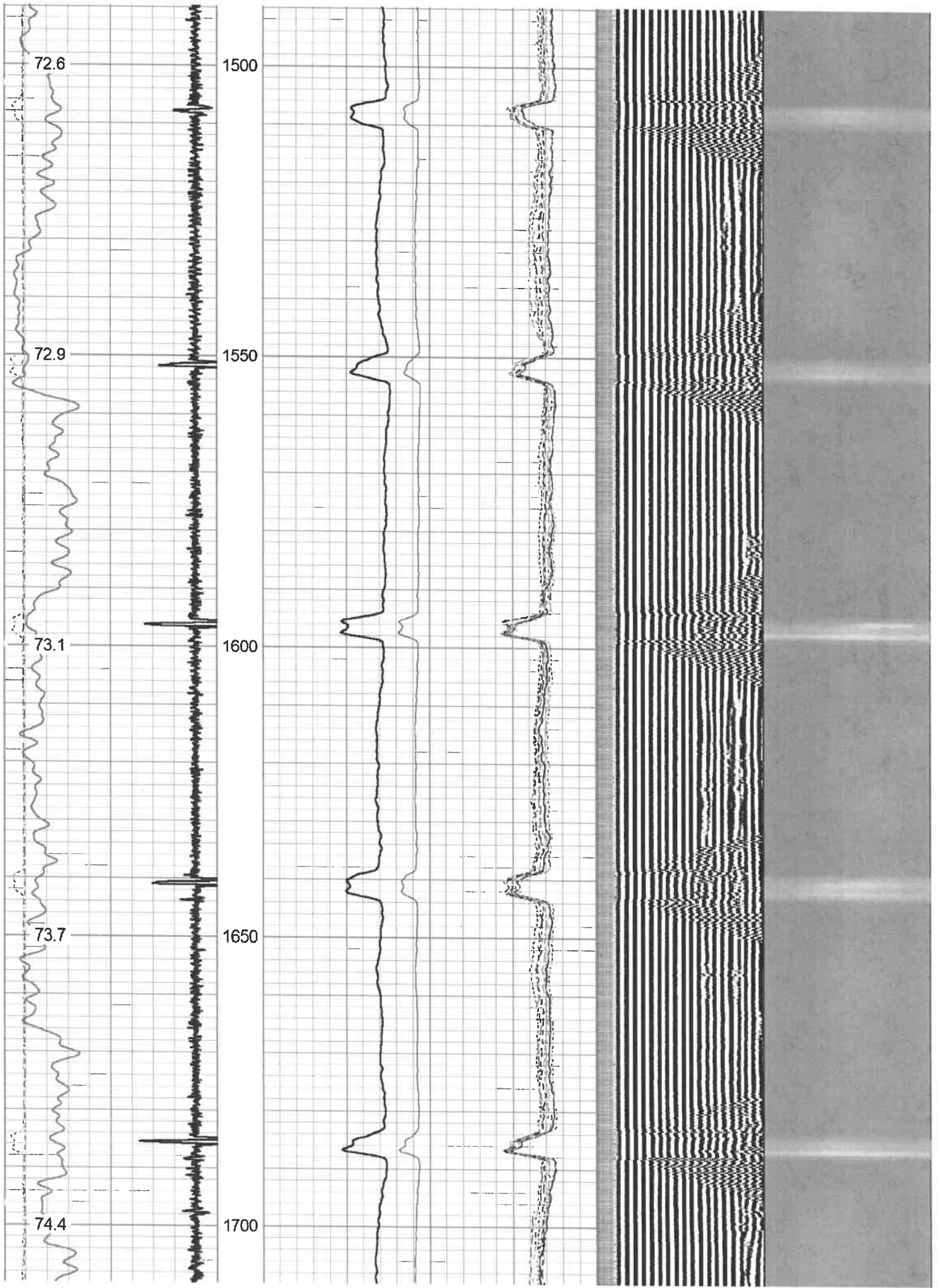


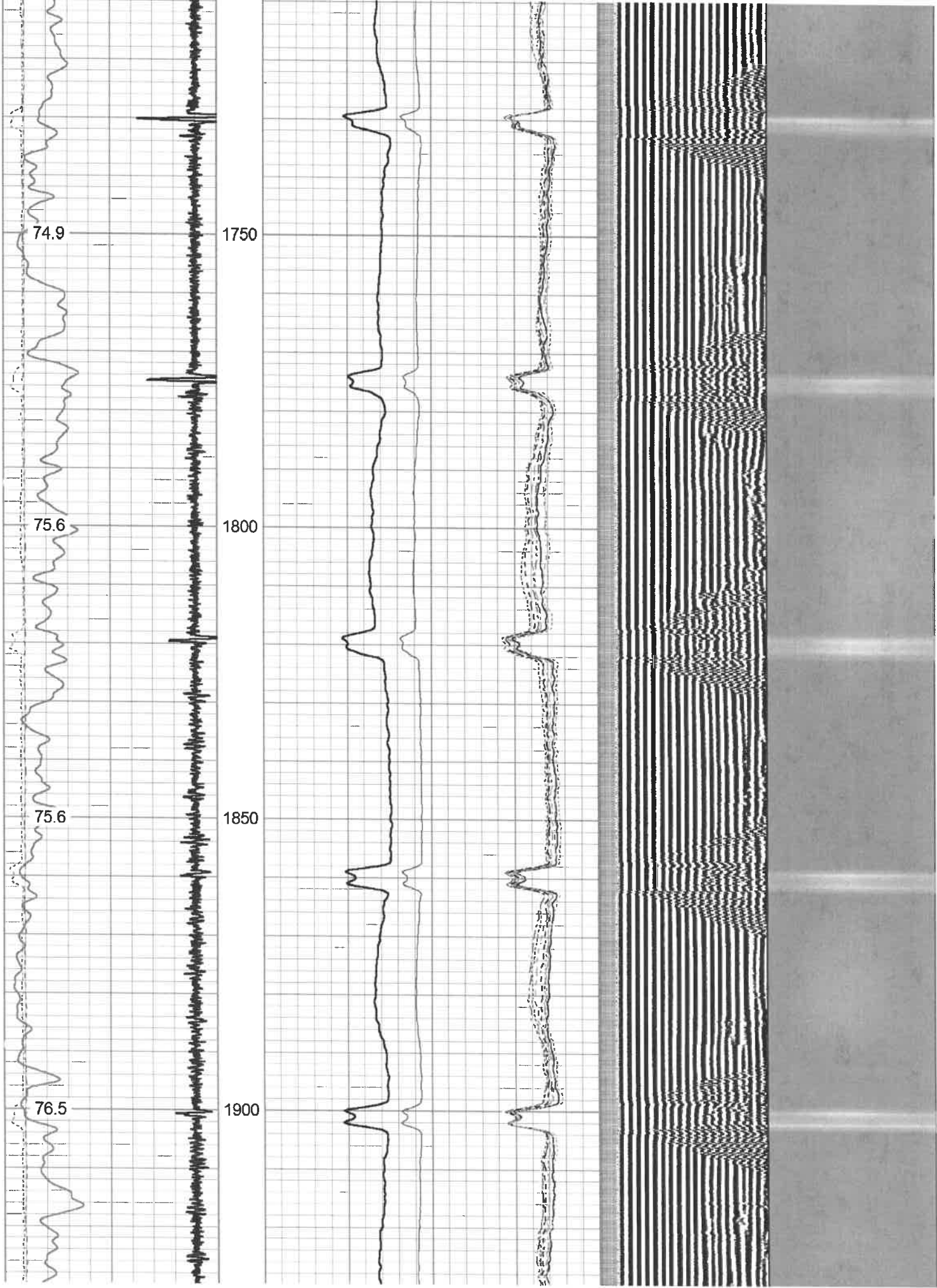


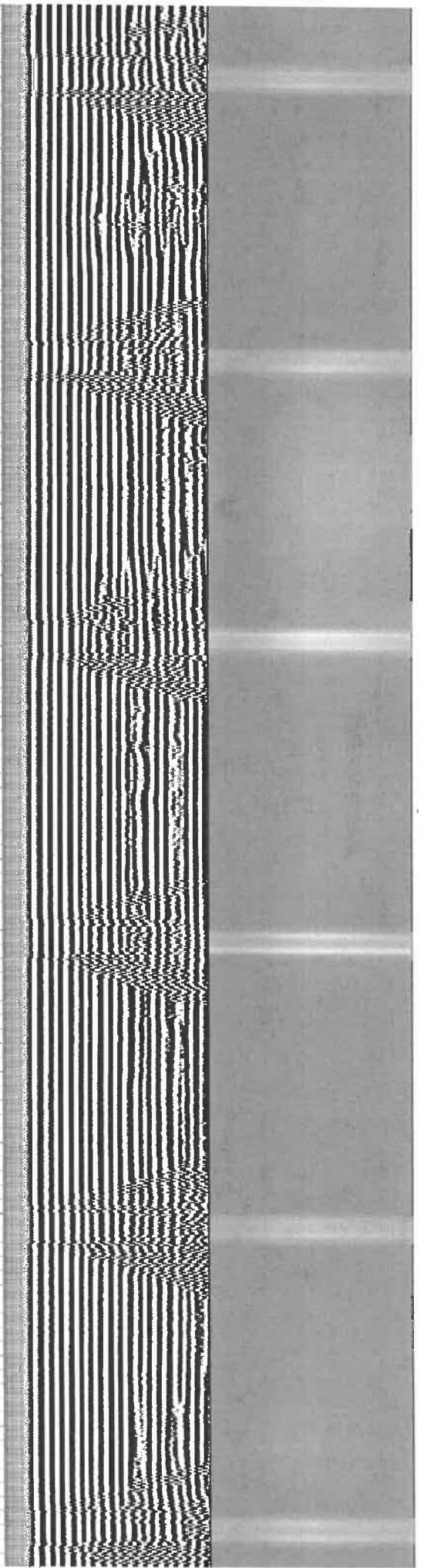
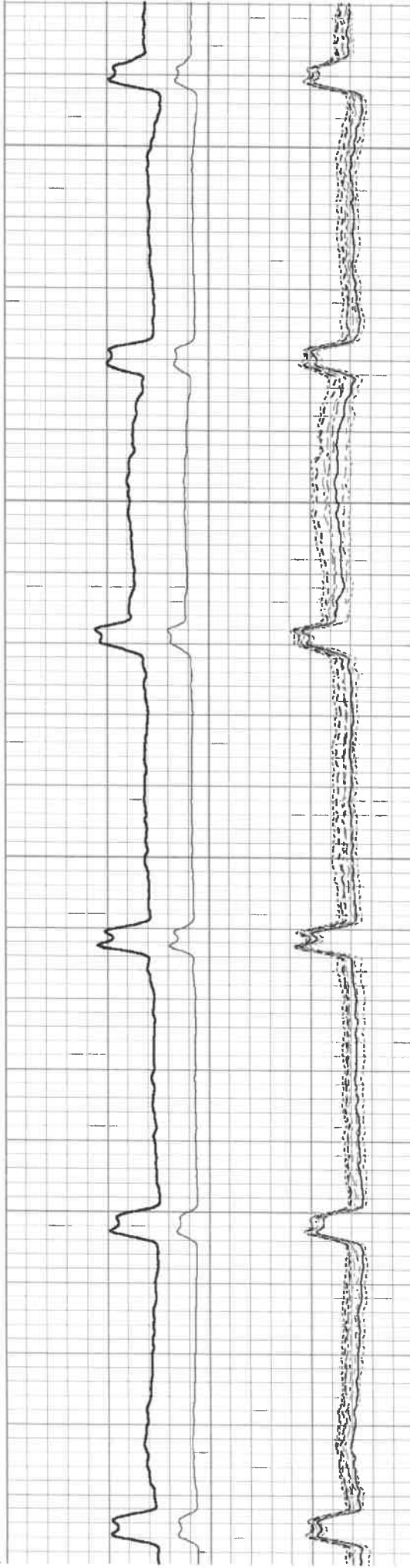
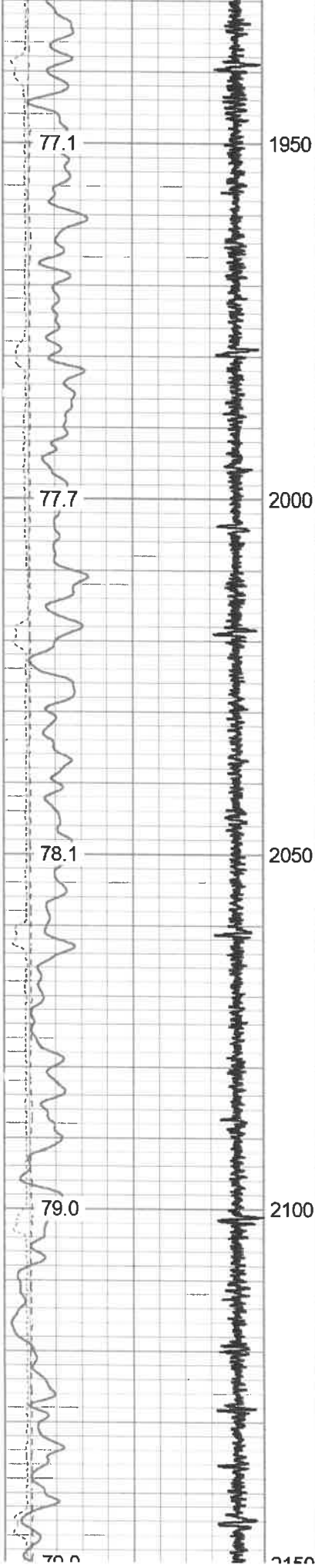


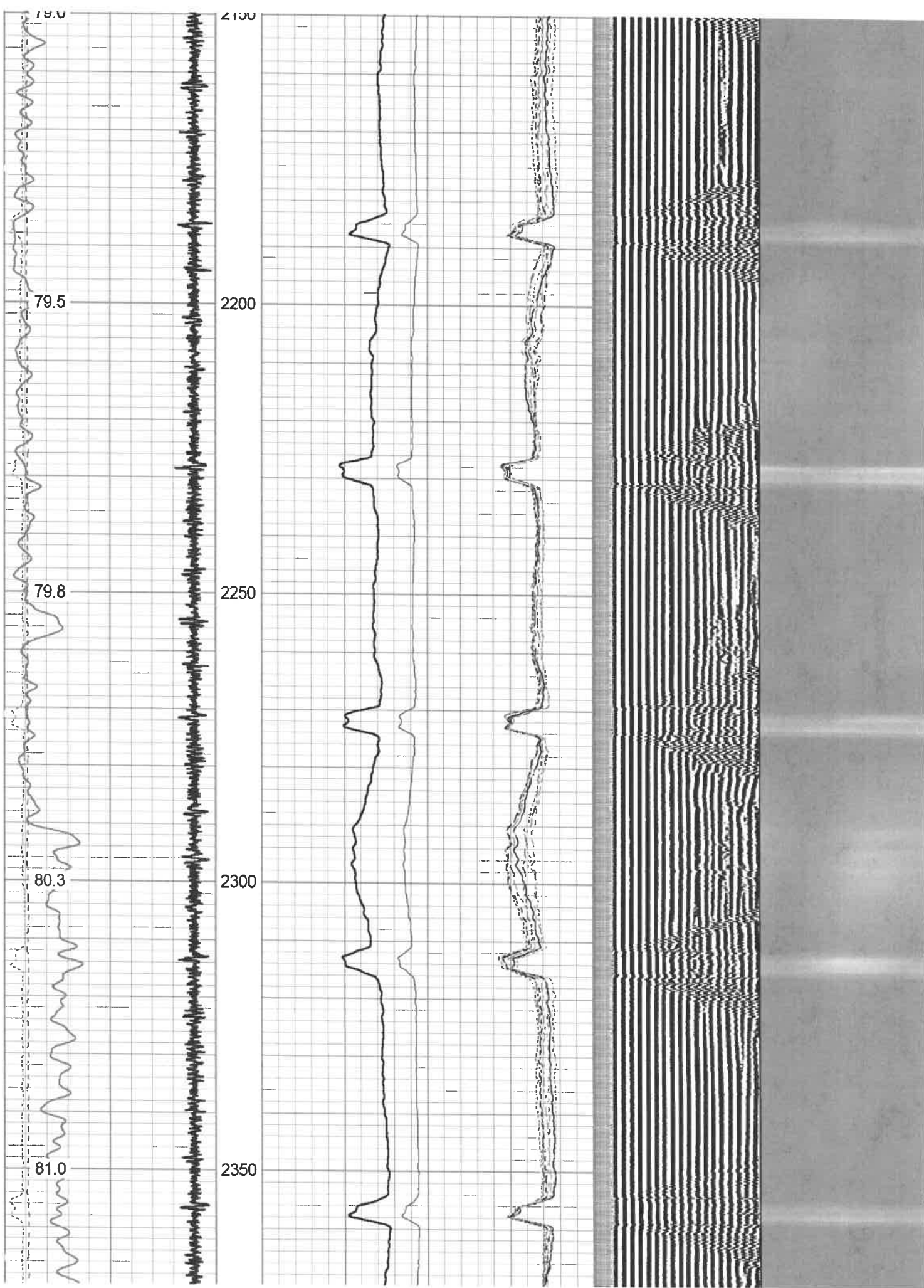




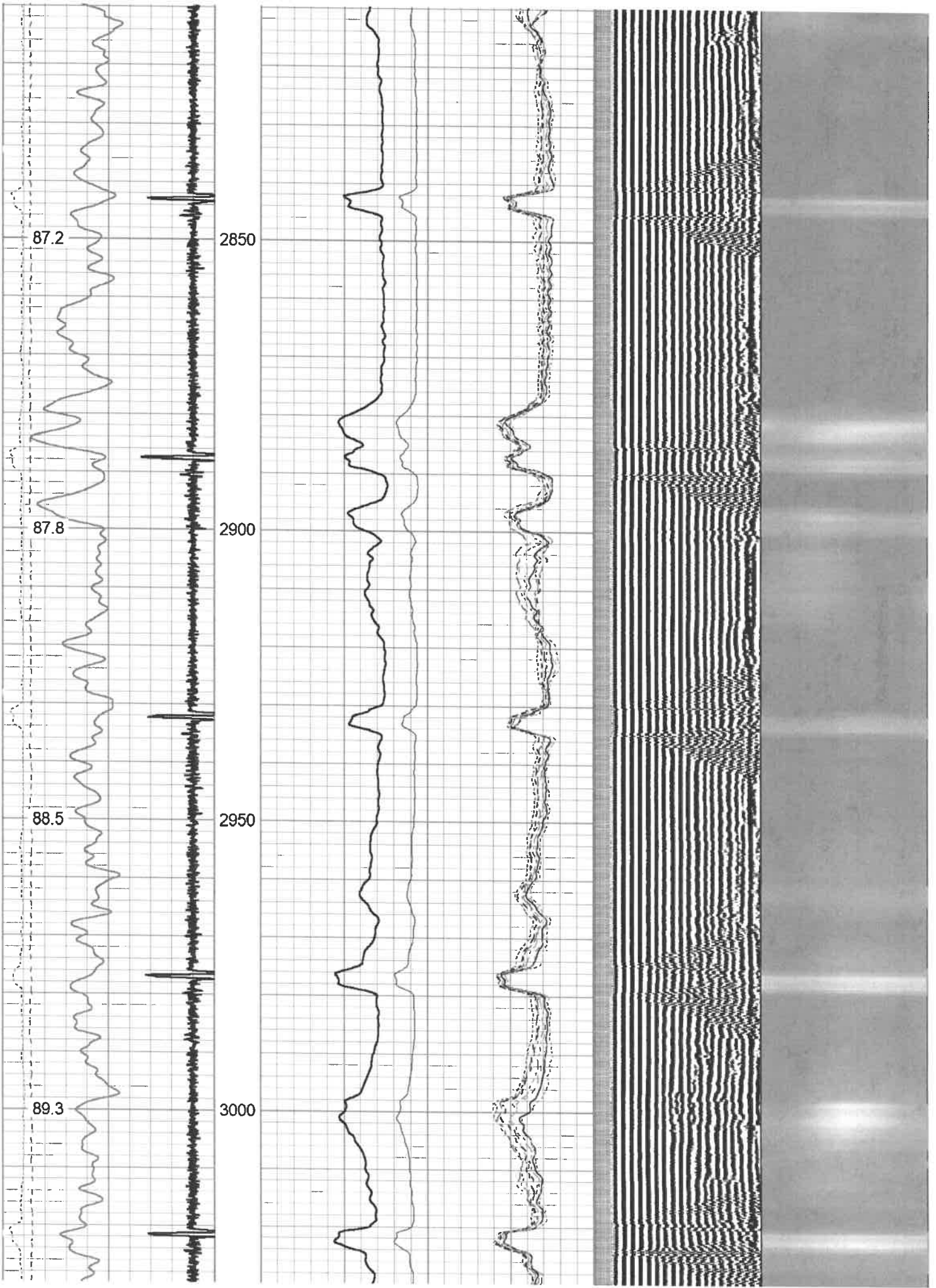


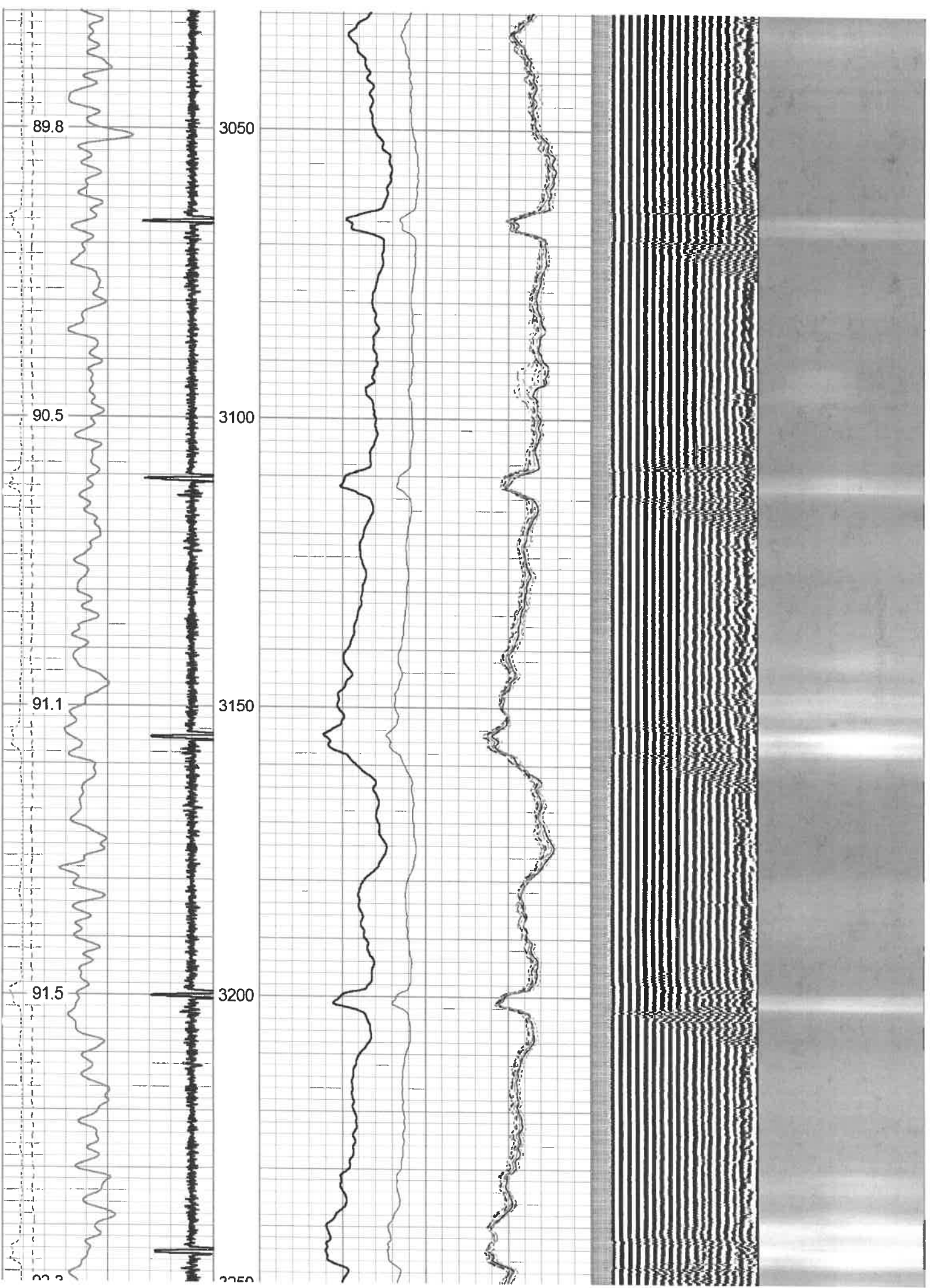


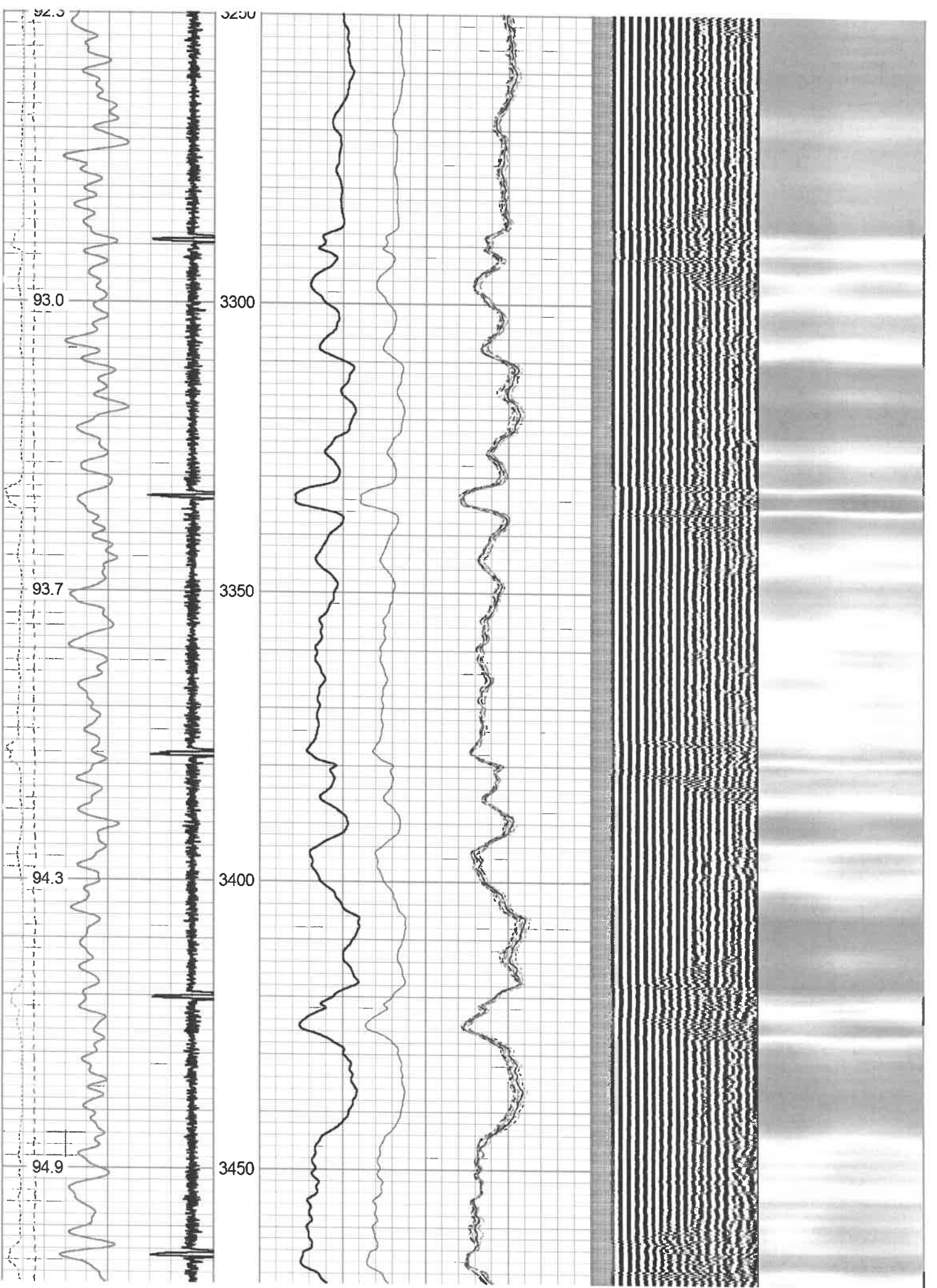


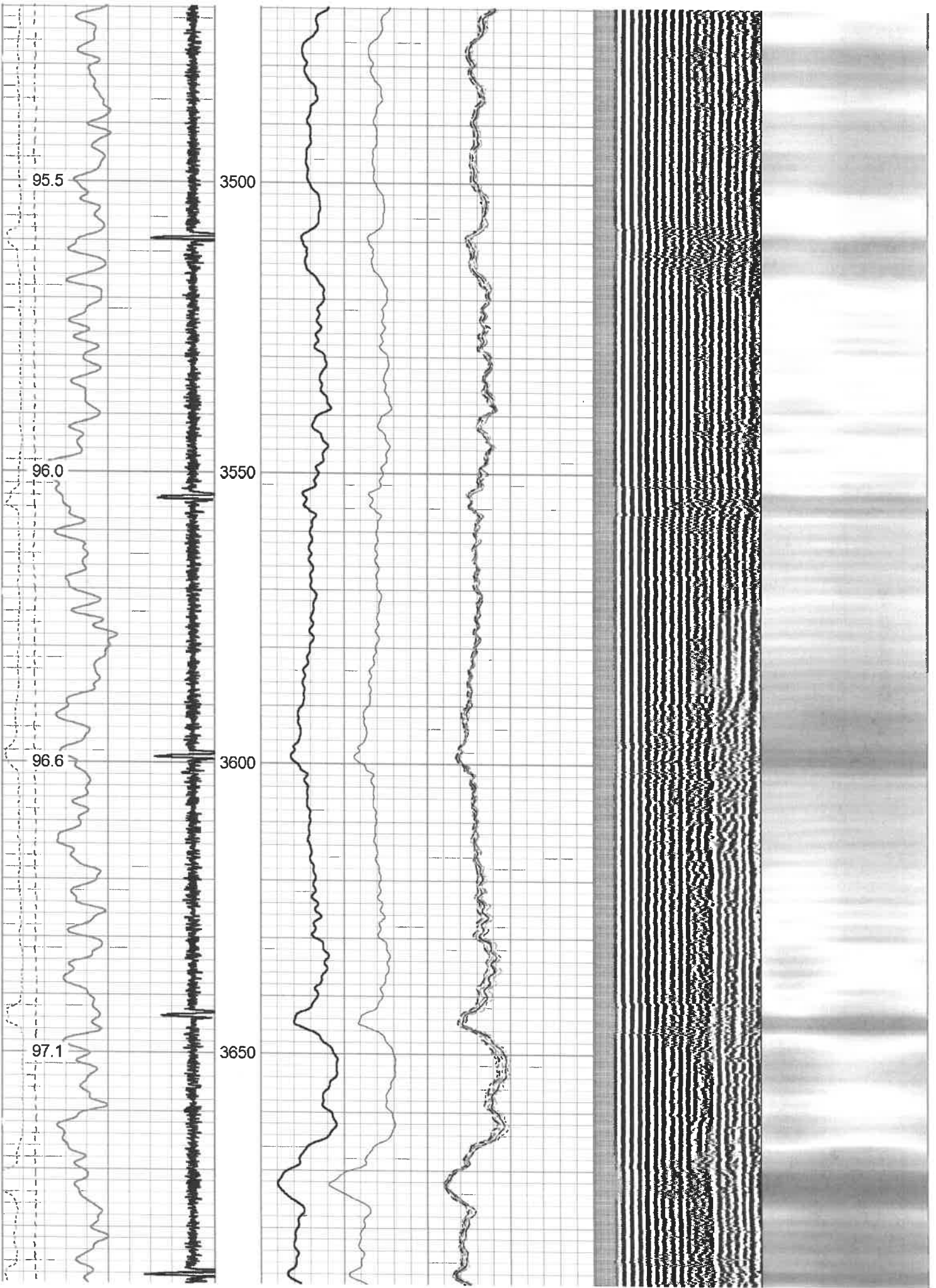


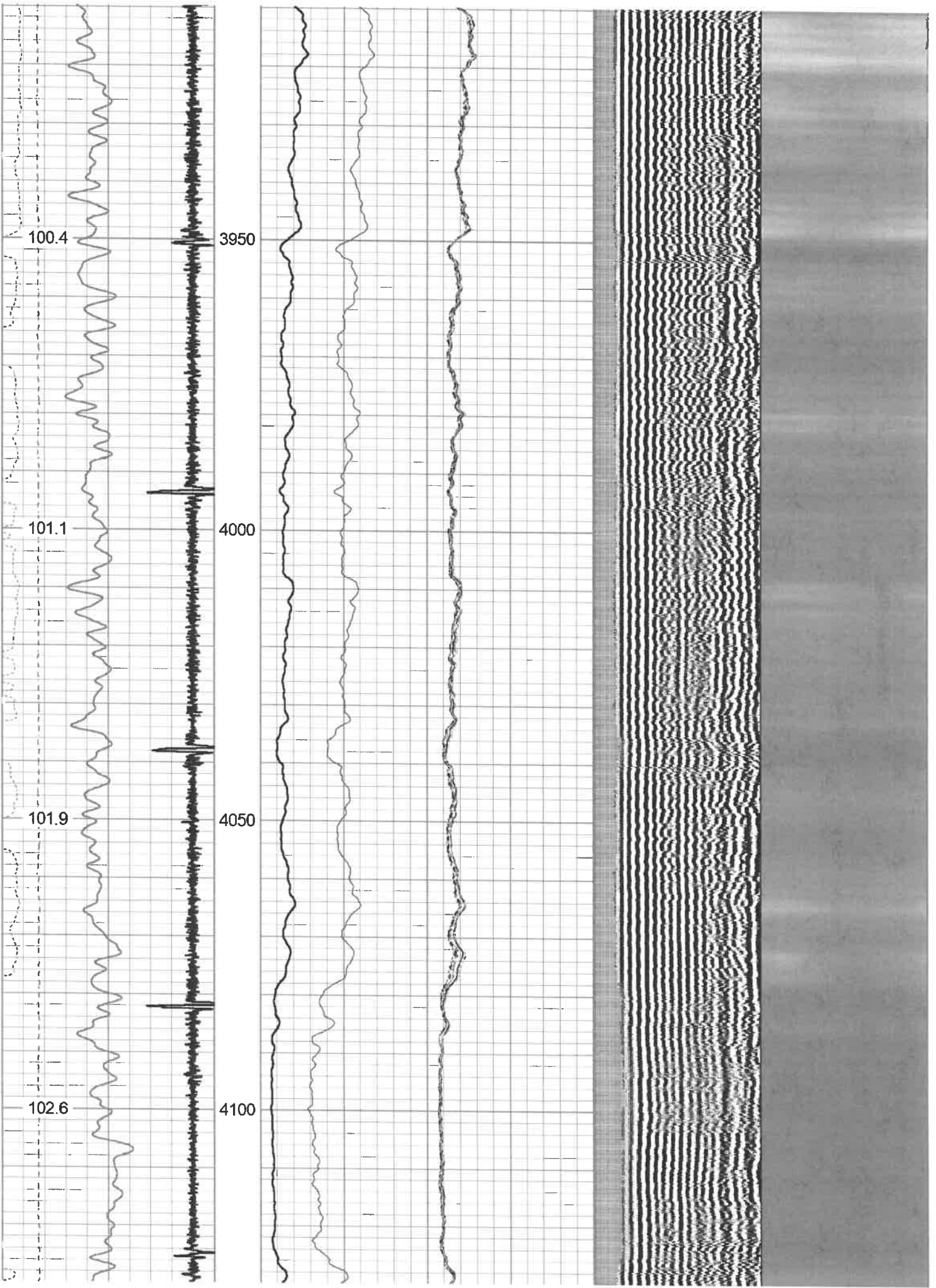


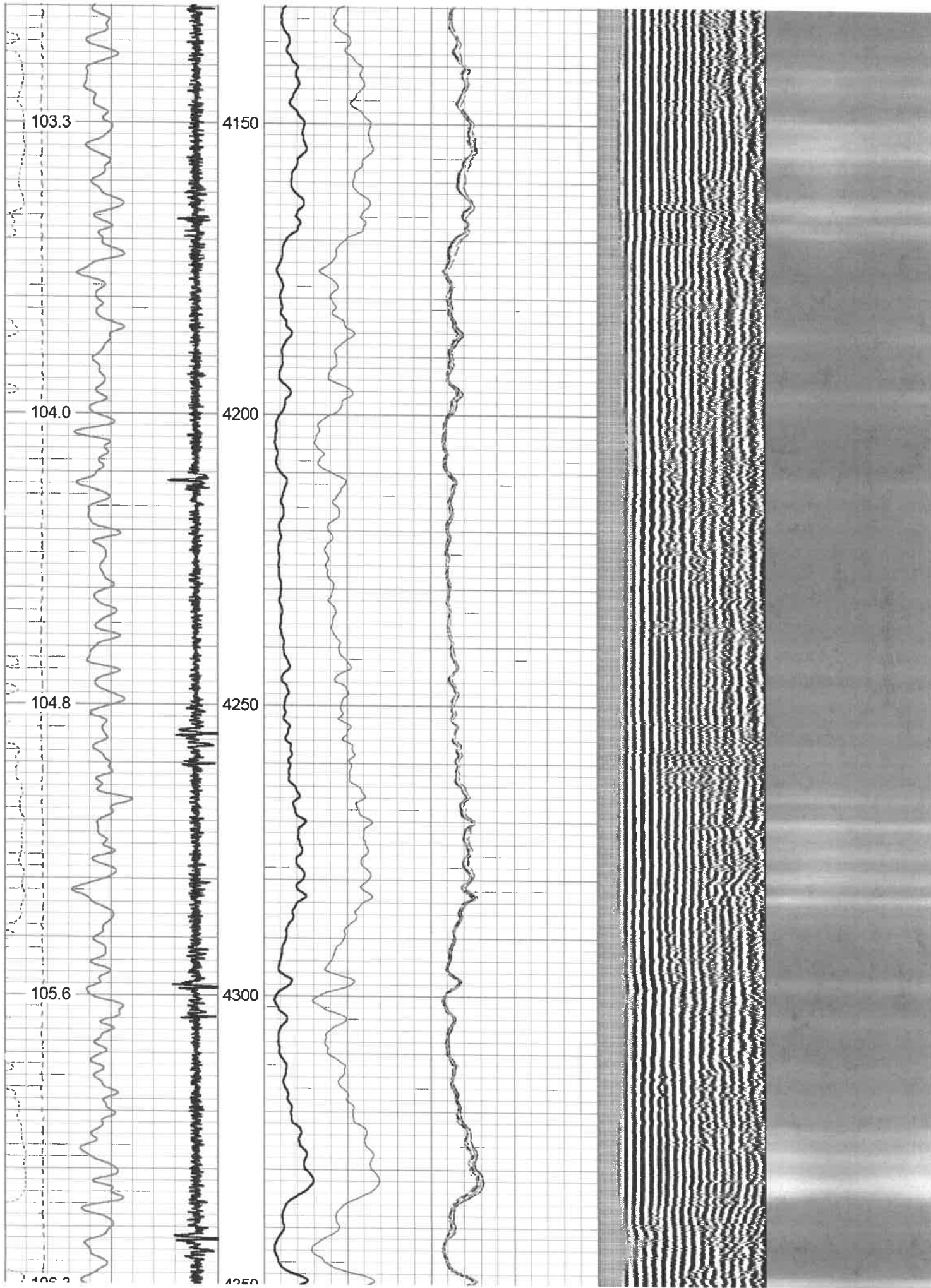


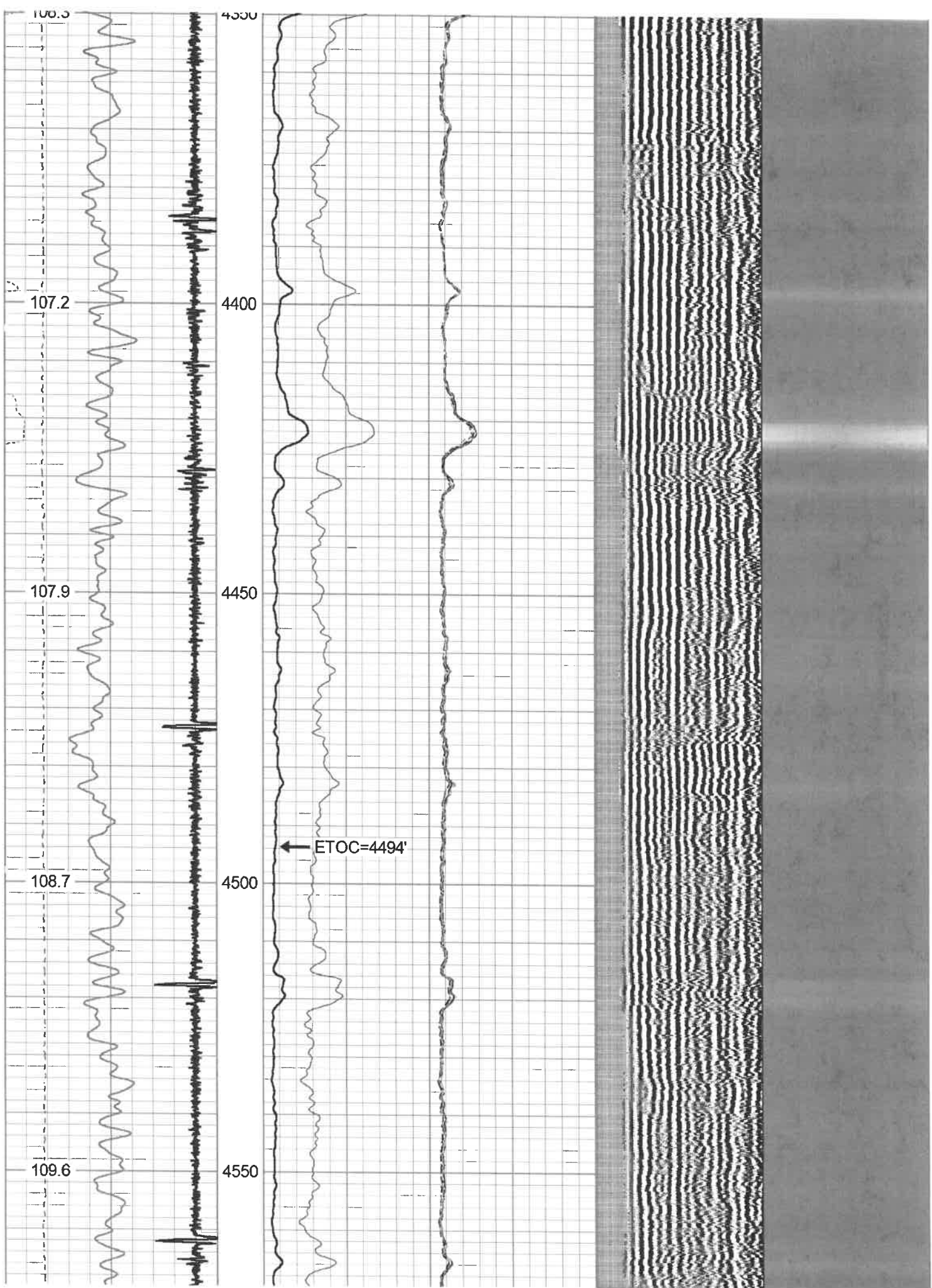


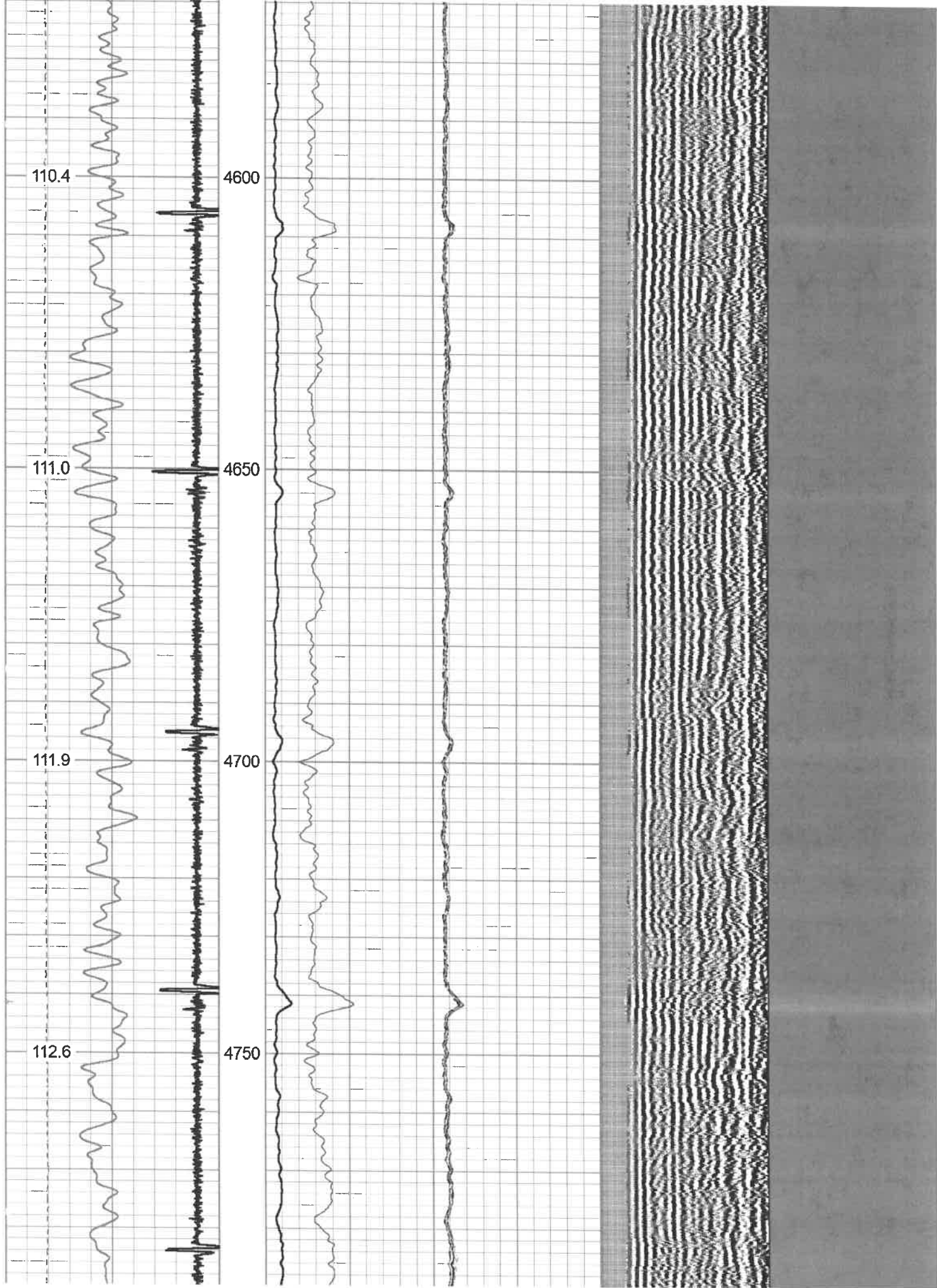


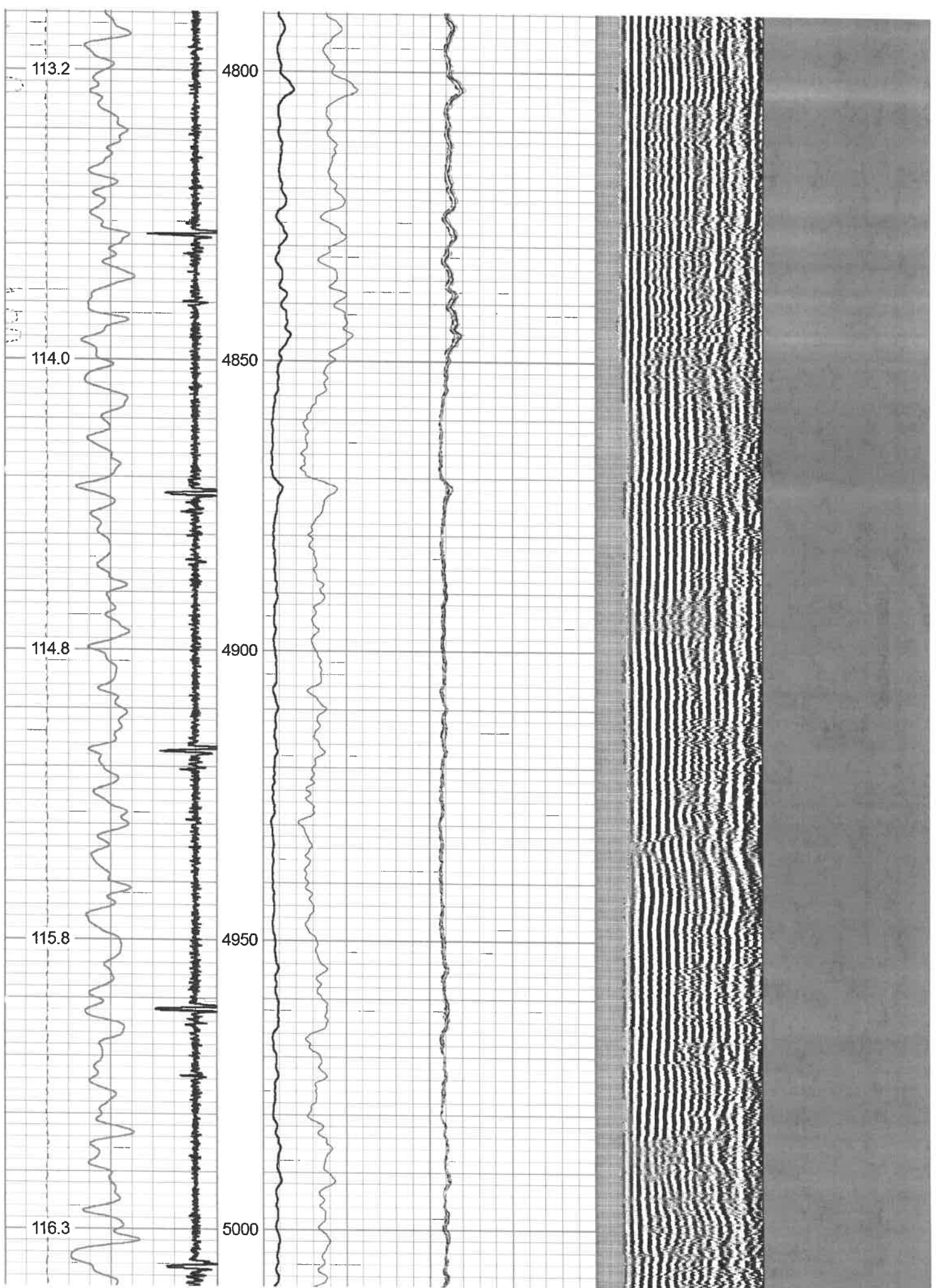


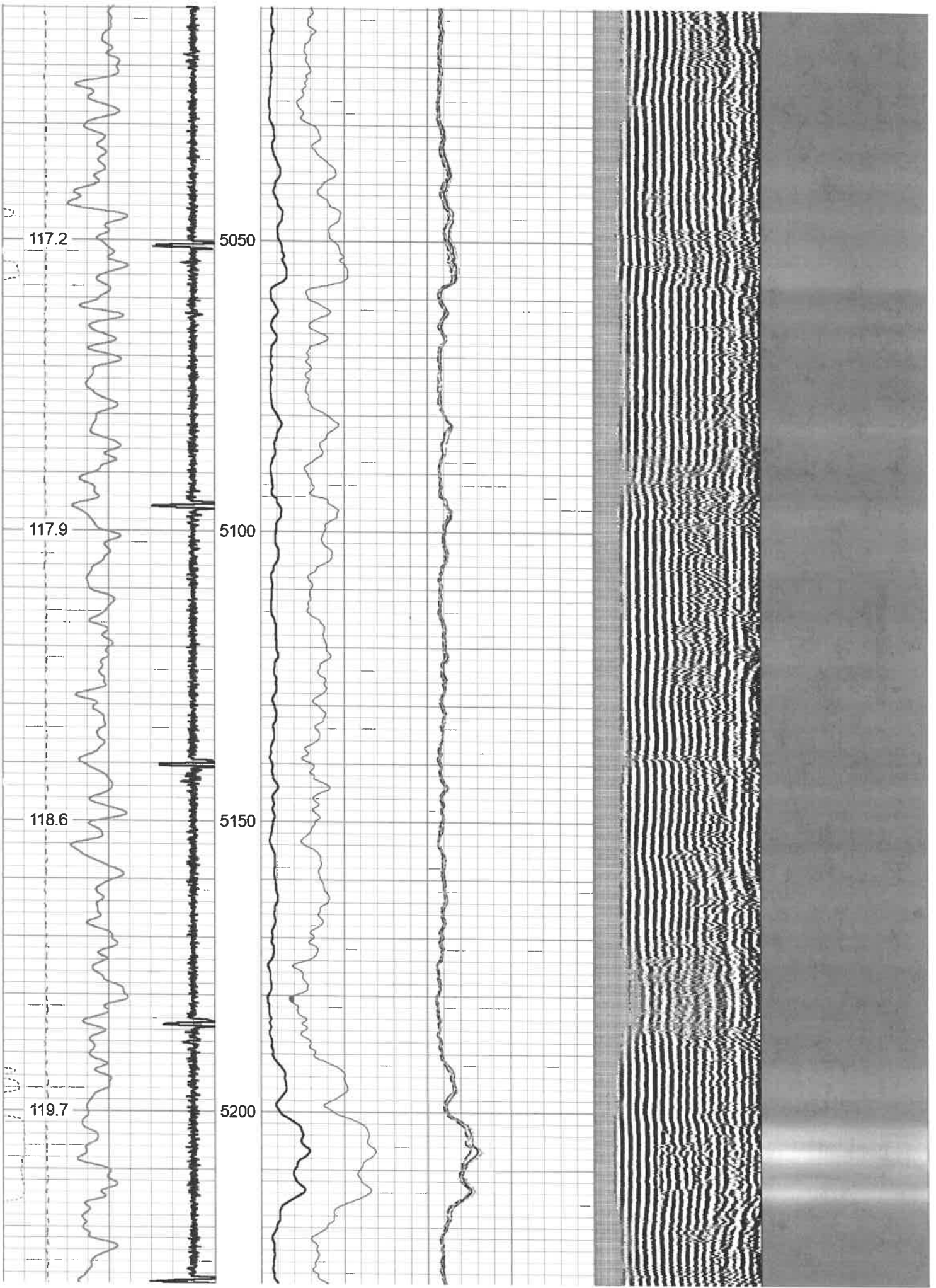


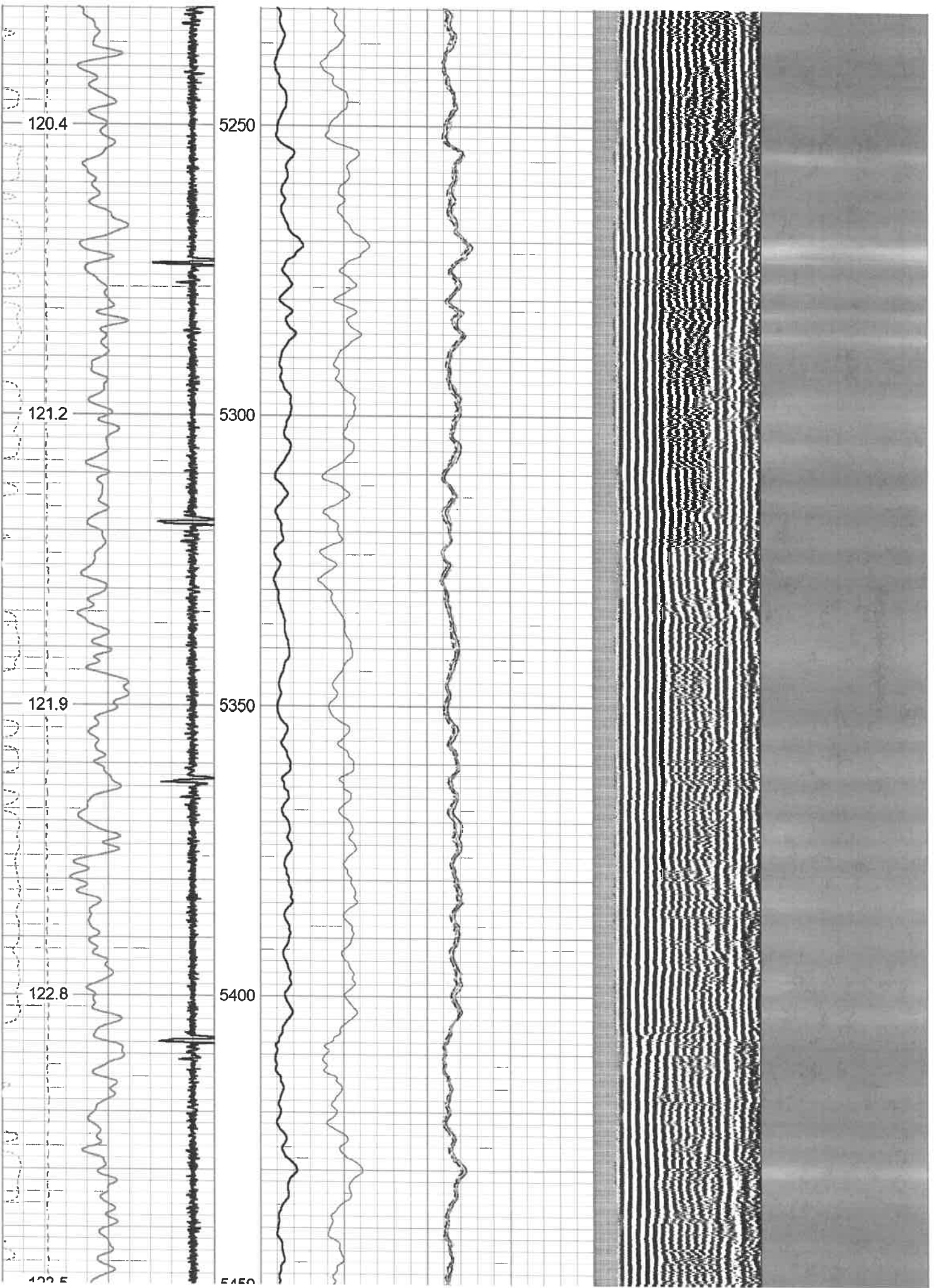


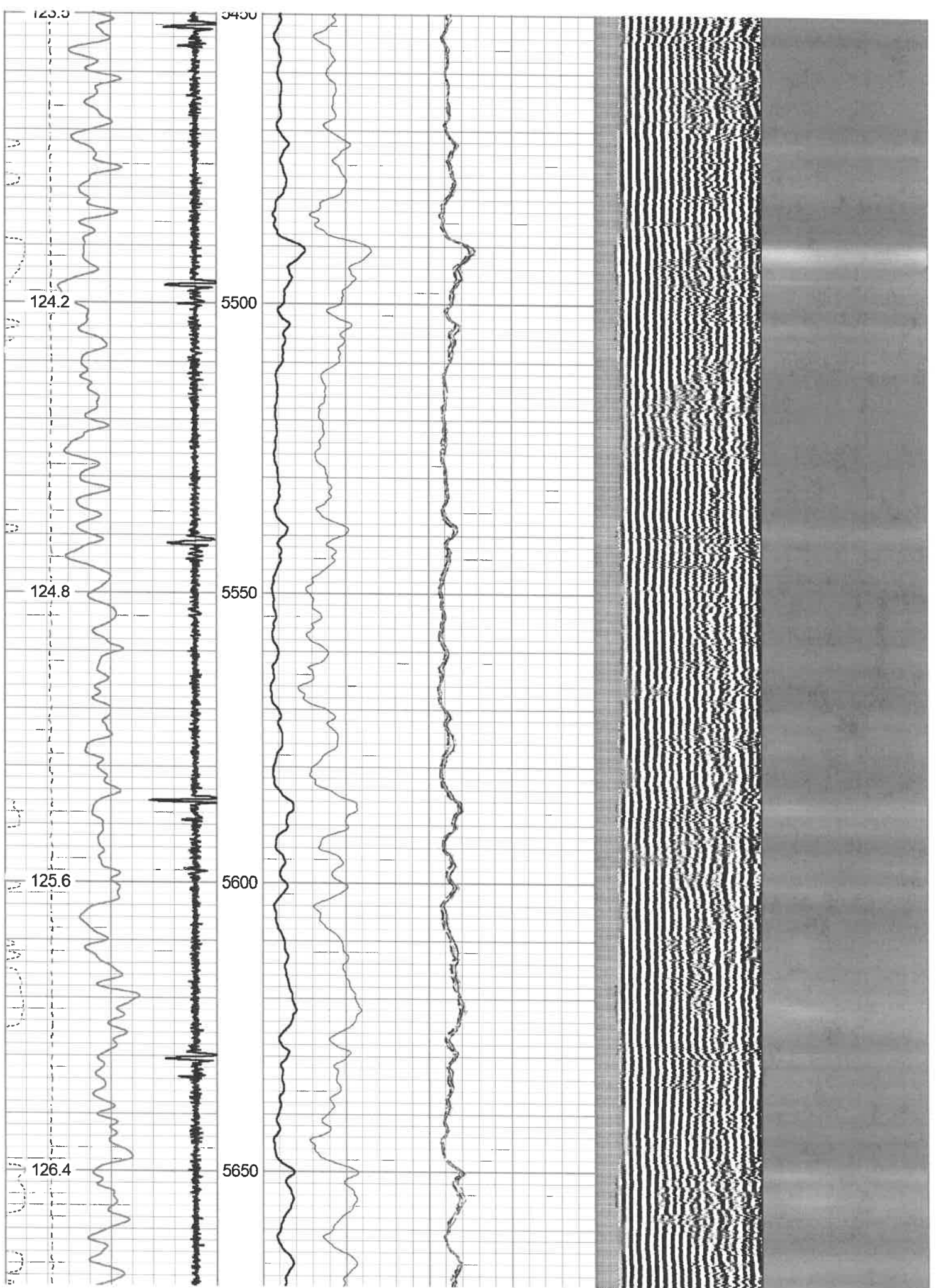


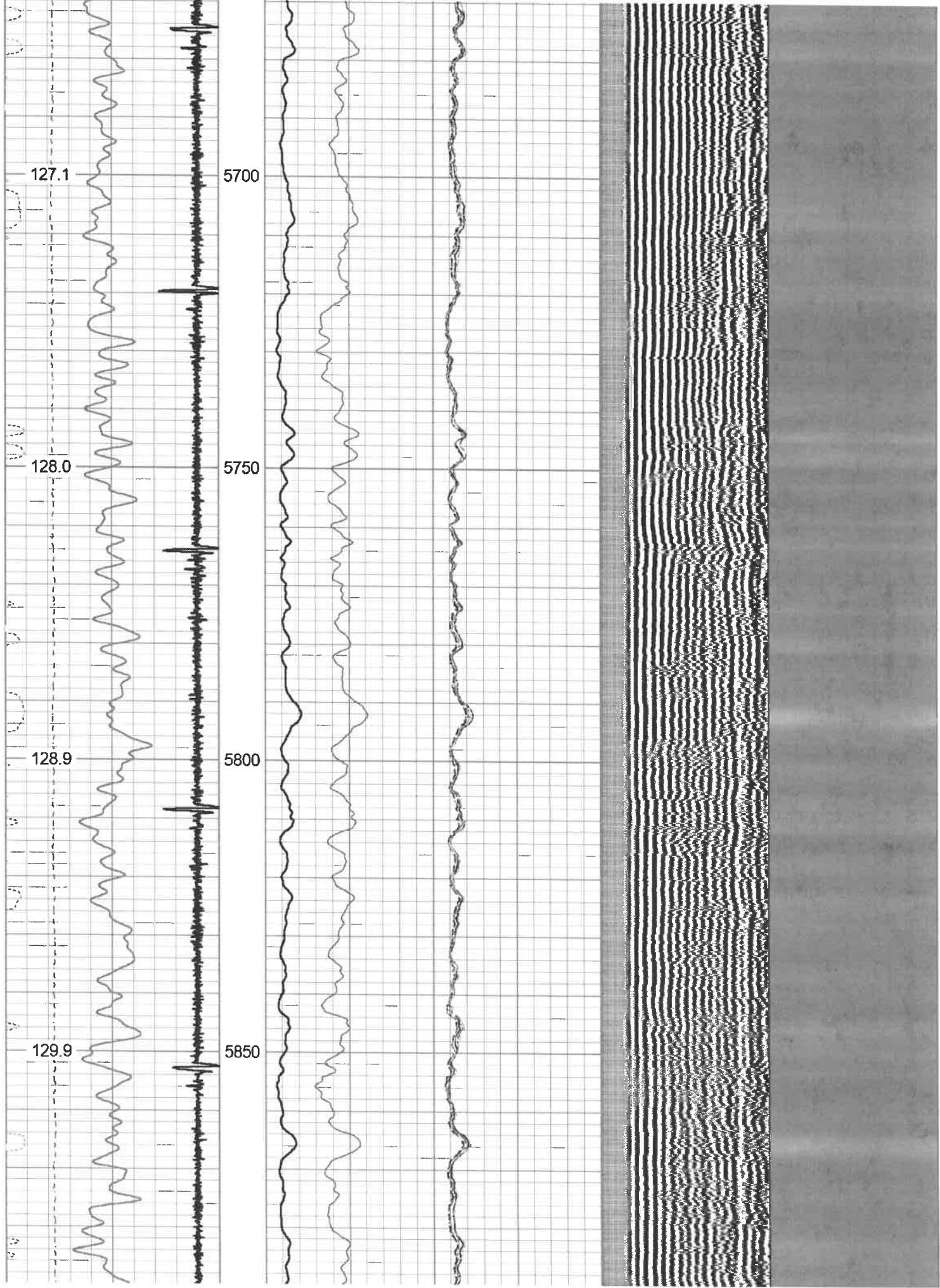


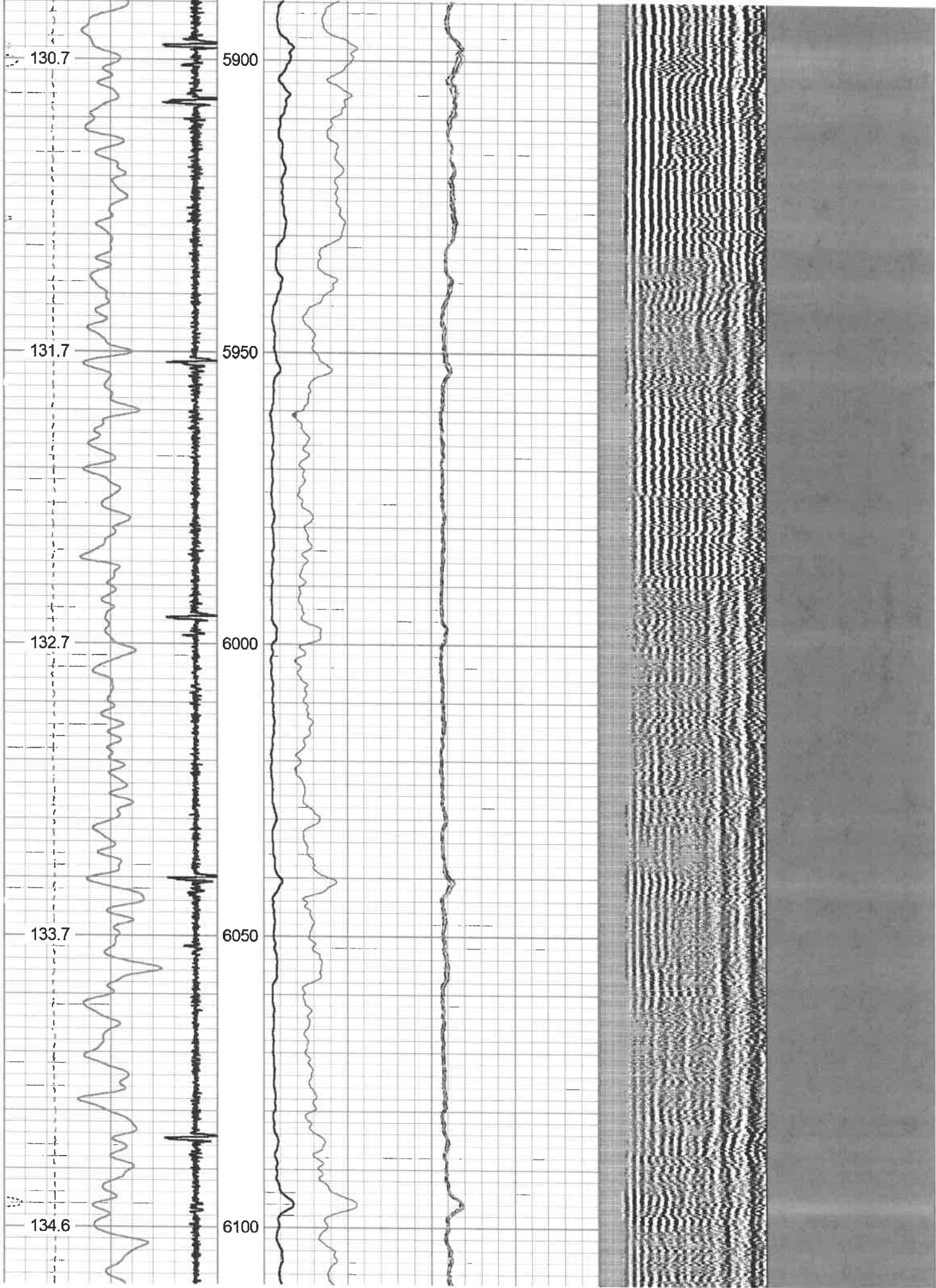


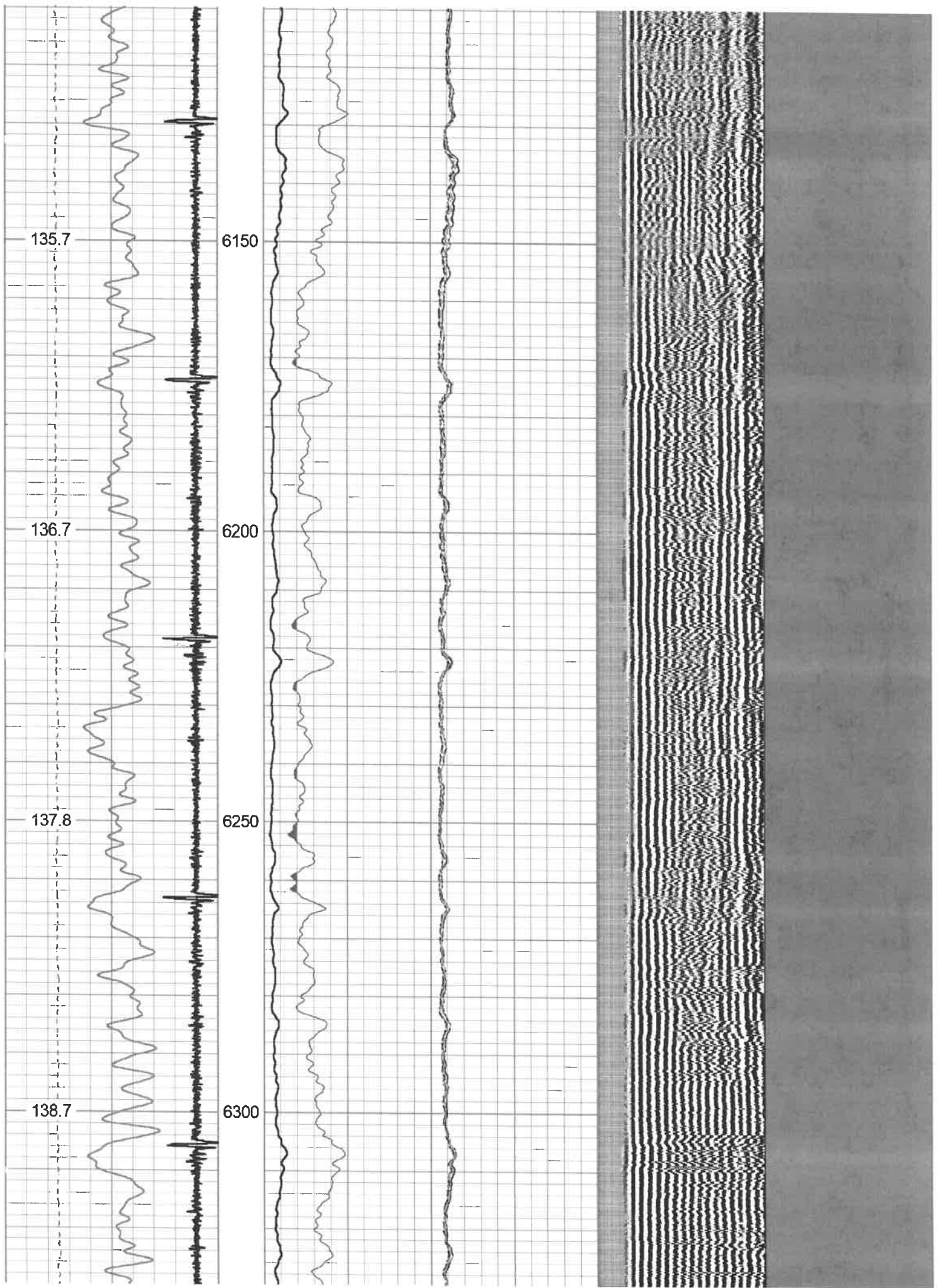


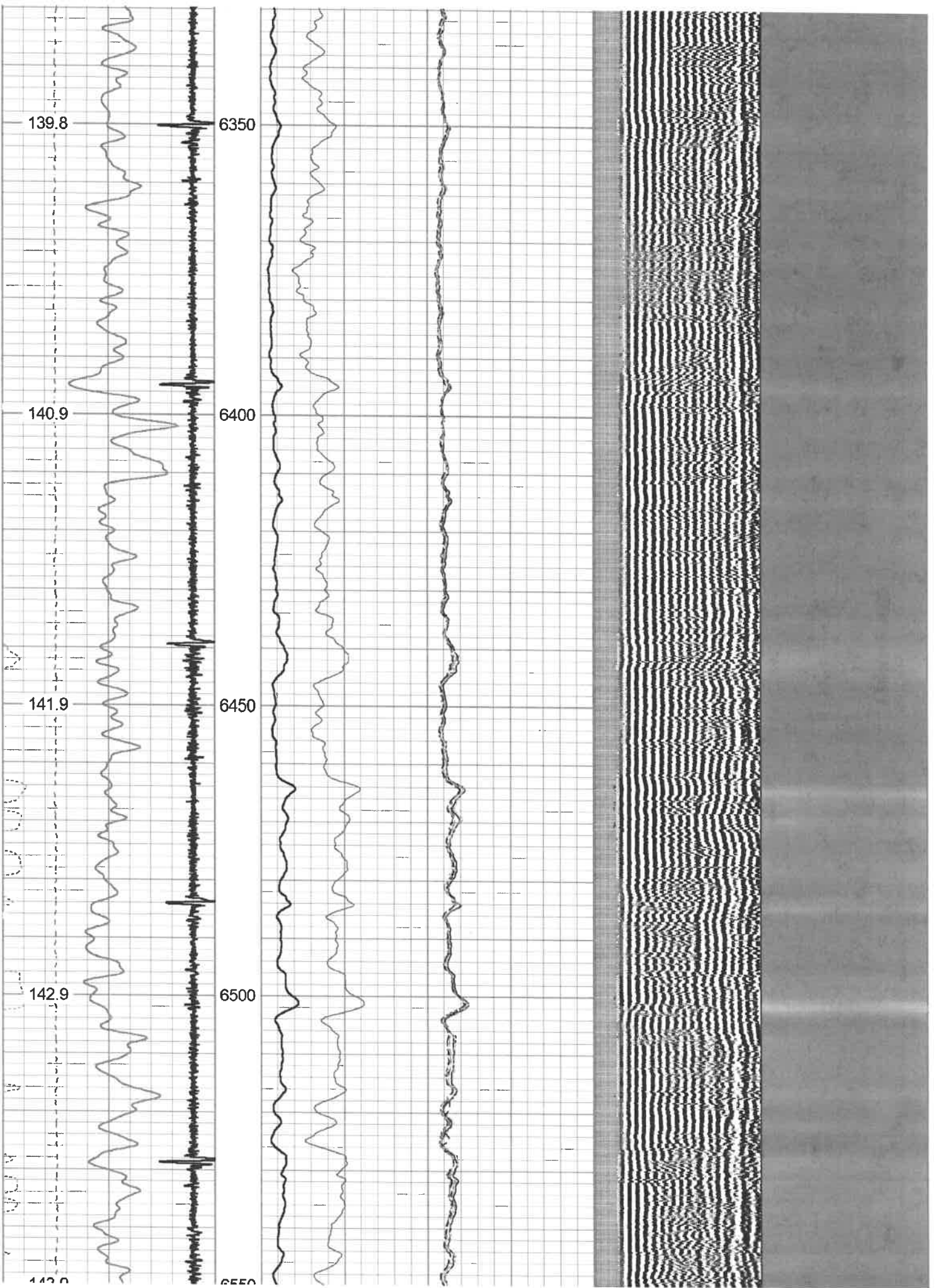


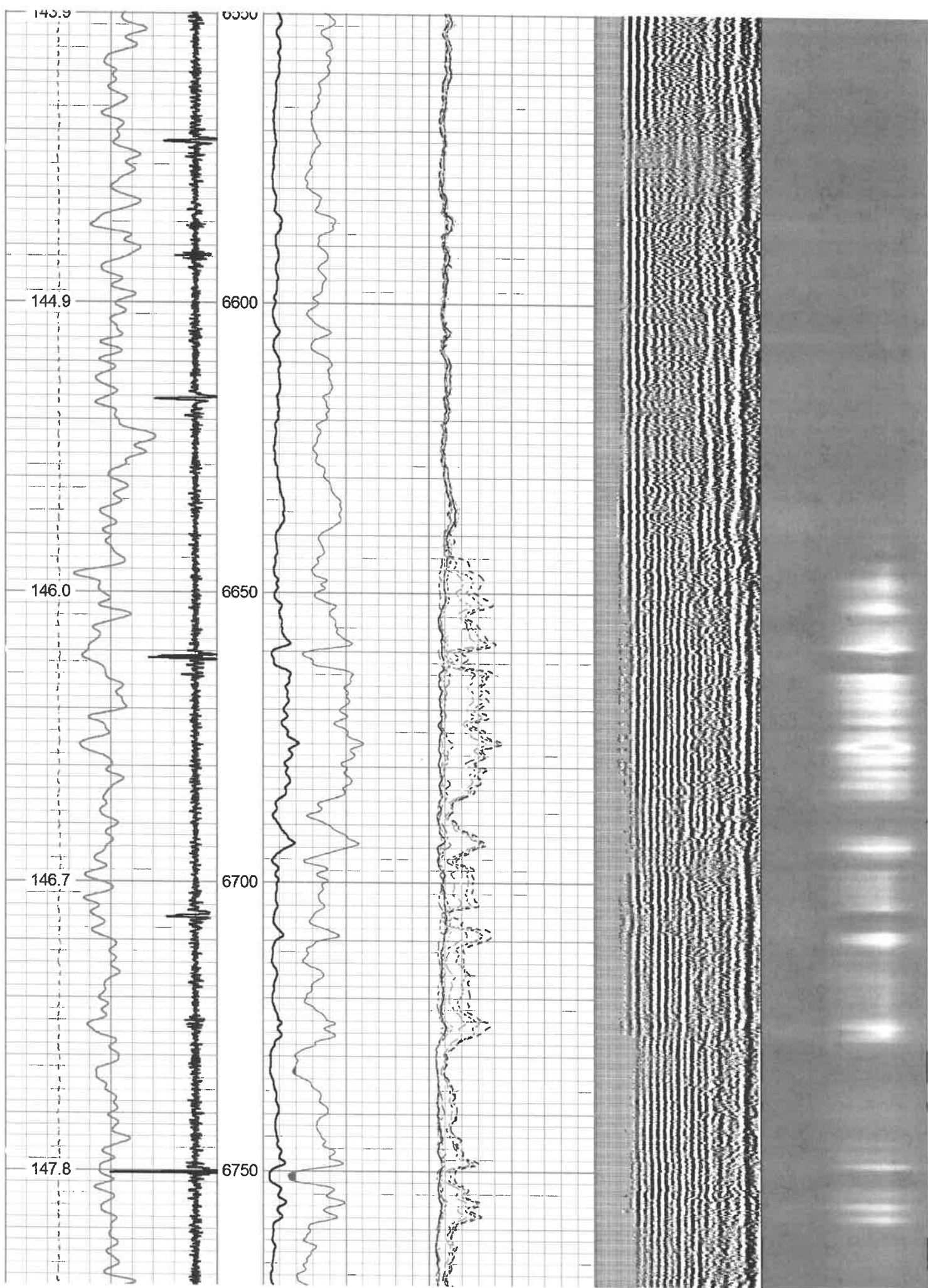


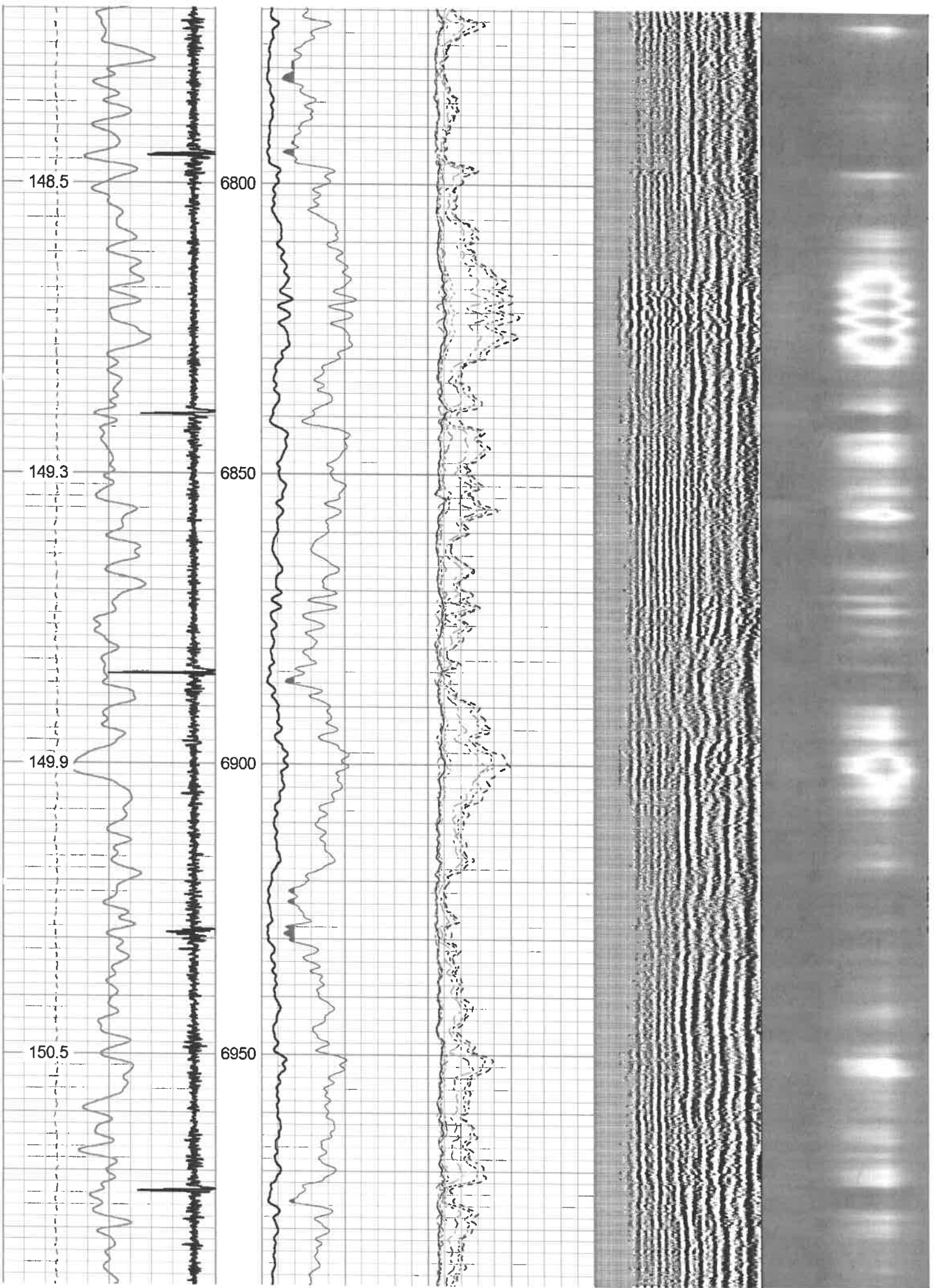


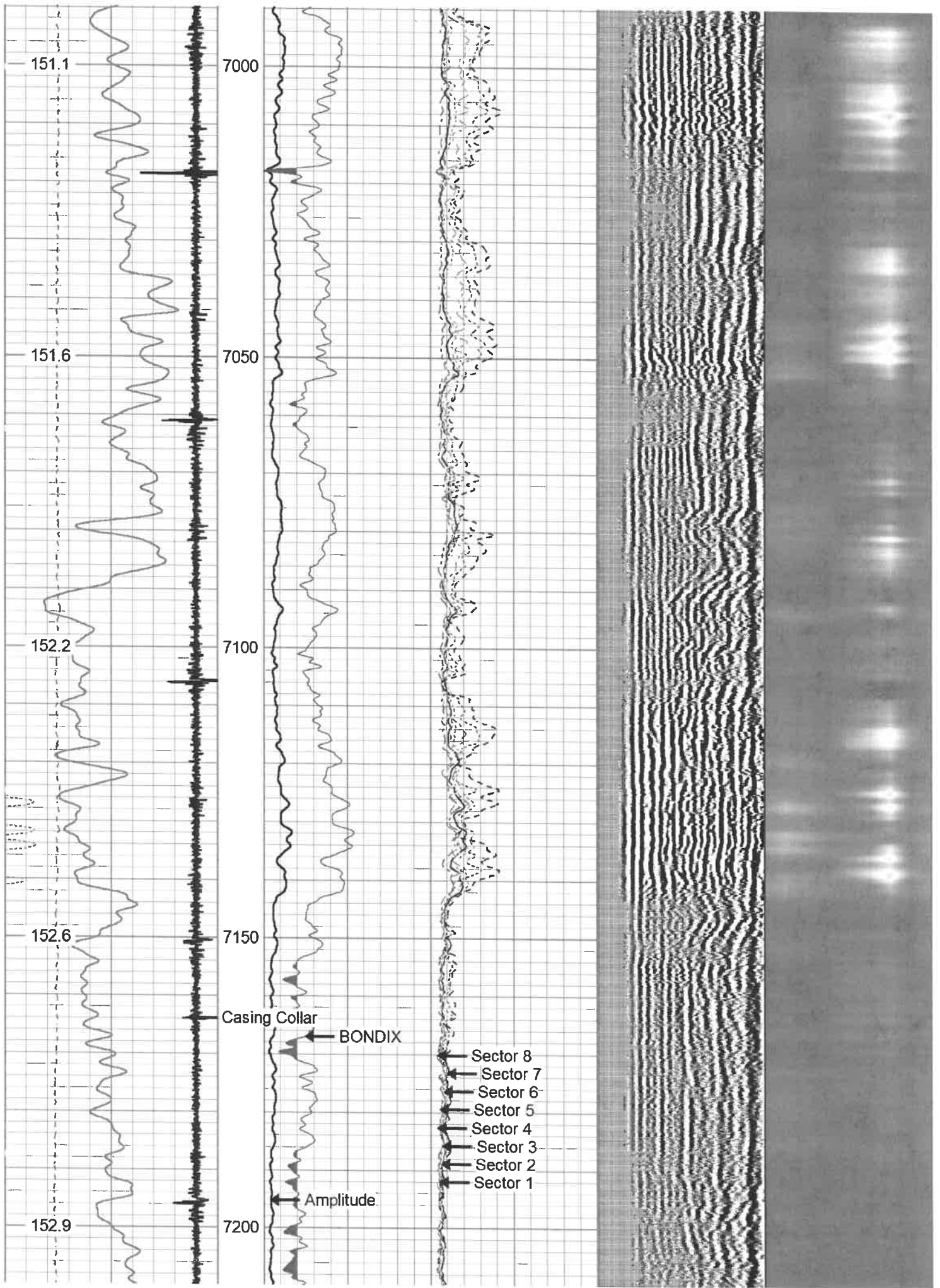


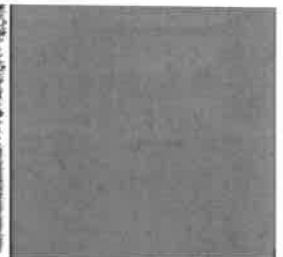
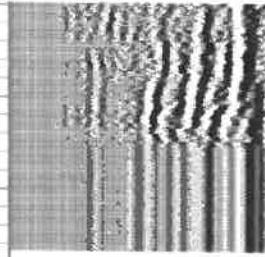
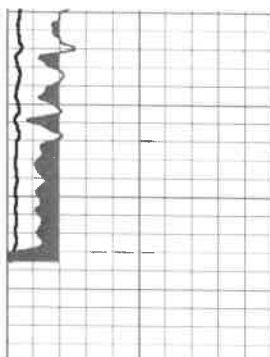
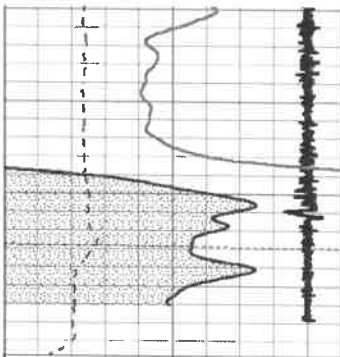












263	Travel Time (usec)	163
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000

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

Variable Density	1	Cement Map	8
200 (usec)	1200		

TEMP
(degF)



REPEAT LOG

1500 PSI

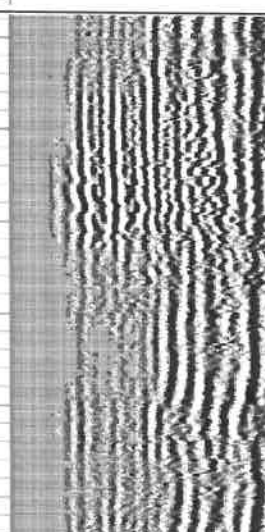
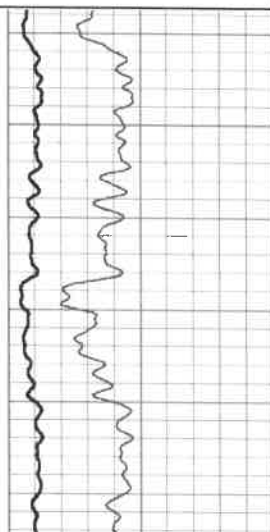
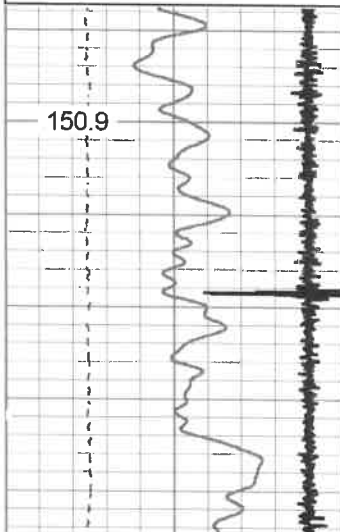
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 Presentation Format 9rcbl
 Dataset Creation Fri Mar 05 13:52:55 2021
 Charted by Depth in Feet scaled 1:240

263	Travel Time (usec)	163
9	Casing Collar	-1
0	Gamma Ray (GAPI)	150
0	Line Tension (lb)	5000

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

Variable Density	1	Cement Map	8
200 (usec)	1200		

TEMP
(degF)



Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 100	CASEOD in 5.5	CASETHCK in 0	CASEWGHT lb/ft 20	MAXAMPL mV 71.9	MINAMPL mV 2.2
MINATTN db/ft 0.8	PERFS No	PPT usec 261	SRFTEMP degF 0	TDEPTH ft 0			

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector	MINAMPL : Minimum Amplitude
BOREID : Borehole I.D.	MINATTN : Minimum Attenuation
BOTTEMP : Bottom Hole Temperature	PERFS : Perforation Flag
CASEOD : Casing O.D.	PPT : Predicted Pipe Time
CASETHCK : Casing Thickness	SRFTEMP : Surface Temperature
CASEWGHT : Casing Weight	TDEPTH : Total Depth
MAXAMPL : Maximum Amplitude	

Calibration Report

Database File antero_fraley2h_cbl_mar_5_2021.db
 Dataset Pathname MAIN
 Dataset Creation Fri Mar 05 13:58:32 2021

Gamma Ray Calibration Report

Serial Number:	FW1211-86	
Tool Model:	Probe	
Performed:	Thu Dec 19 22:27:19 2019	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1312-32	
Tool Model:	Probe275T	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	497.925	ft

Master Calibration, performed Fri Mar 05 13:12:50 2021:


	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	1.087	2.200	71.921	64.668	1.612
CAL	0.009	1.408				
5'	0.009	0.992	2.200	71.921	70.943	1.560
SUM						
S1	0.009	1.075	0.000	100.000	93.789	-0.822
S2	0.009	1.105	0.000	100.000	91.252	-0.806
S3	0.009	1.157	0.000	100.000	87.104	-0.786
S4	0.009	1.162	0.000	100.000	86.699	-0.774
S5	0.009	1.131	0.000	100.000	89.105	-0.791
S6	0.009	1.044	0.000	100.000	96.621	-0.873
S7	0.009	0.990	0.000	100.000	101.949	-0.904
S8	0.009	1.004	0.000	100.000	100.518	-0.871

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.009	1.408	1.000	0.000

Air Zero Calibration, performed Fri Mar 05 07:01:49 2021:

	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
	Well	FRALEY 2H
	Field	SOUTH CANTON
	County	DODDRIDGE
	State	WEST VIRGINIA

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WV Department of
Environmental Protection