



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

Company	ANTERO RESOURCES CORPORATION		
Well	STERLING 3H		
Field	TYLER		
County	TYLER		
State	W.V.		
Location:	AF# A06614	API # : 47-095-02530-0000	Other Services
Well	STERLING 3H		
Field	TYLER		
County	TYLER	State	W.V.
Permanent Datum	SEC	TWP	RGE
Log Measured From	G.L.	Elevation	827'
Drilling Measured From	K.B. OF 30'	K.B. 1084'	D.F. 1084'
	K.B.	G.L. 1114'	

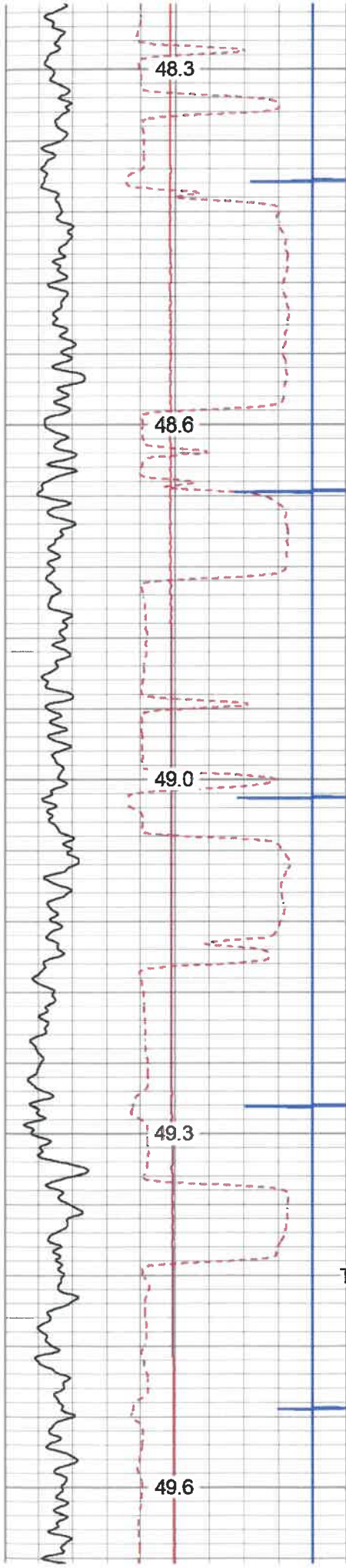
Date	5/4/19		
Run Number	ONE		
Depth Driller	16821'		
Depth Logger	6787'		
Bottom Logged Interval	6787'		
Top Log Interval	SURFACE		
Open Hole Size	8.5"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Max. Recorded Temp.	141.5 DEG		
Estimated Cement Top	370'		
Time Well Ready	N/A		
Time Logger on Bottom	N/A		
Equipment Number	624874		
Location	BRIDGEPORT W.V.		
Recorded By	P DAVIDSON		
Witnessed By	J.BURKS		
Borehole Record		Casing Record	
Run Number	Bit	From	To
		Size	Weight
		5.5"	23
		9.625"	2636'
		13.375"	804'
			SURFACE

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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.

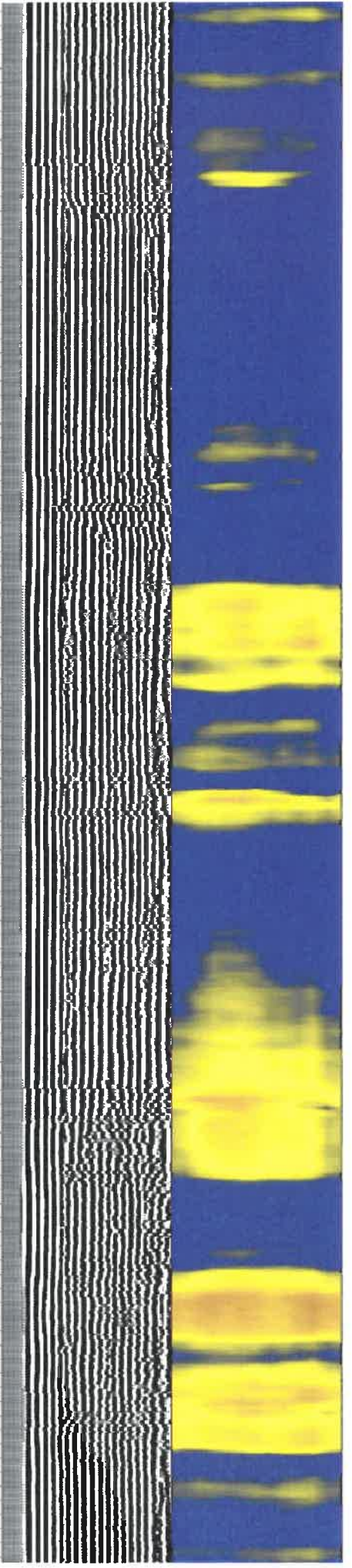
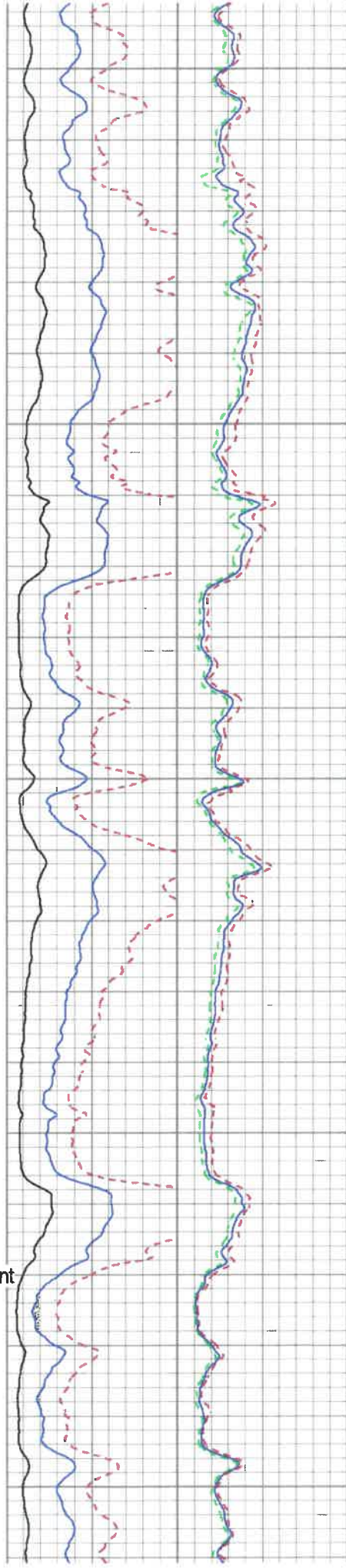
Comments

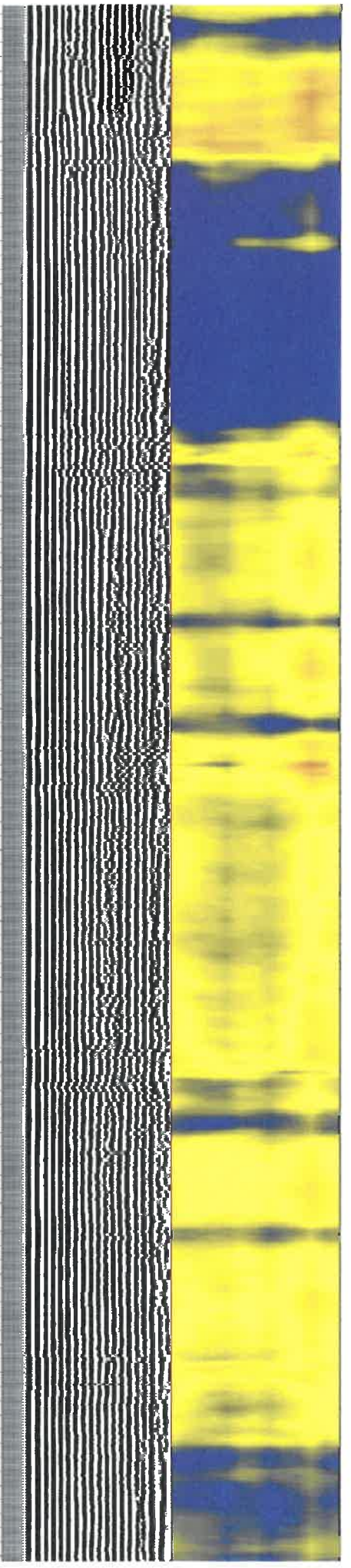
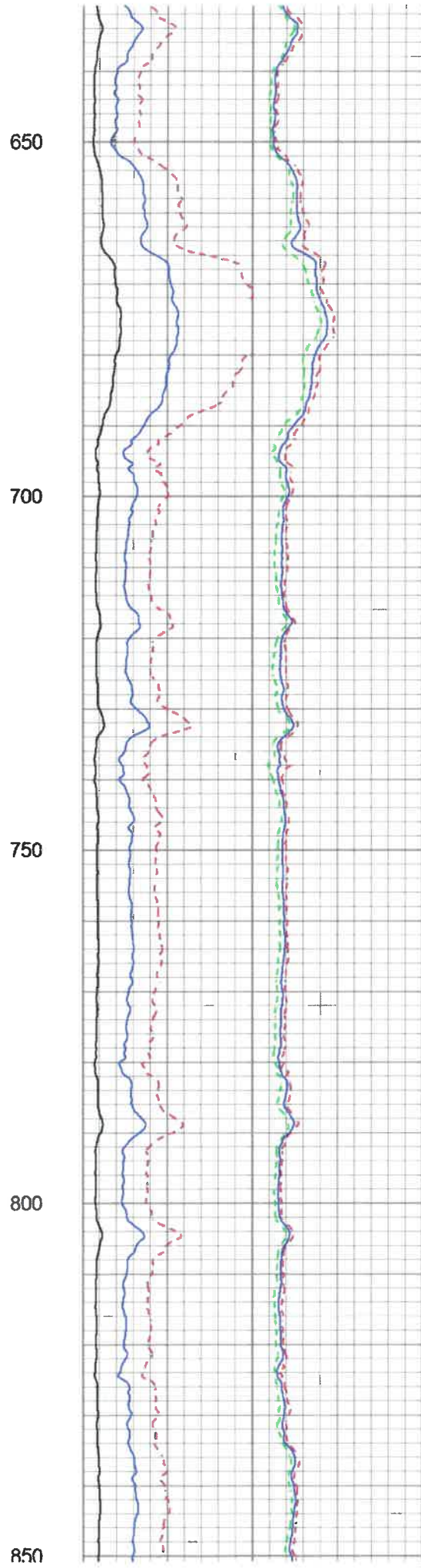
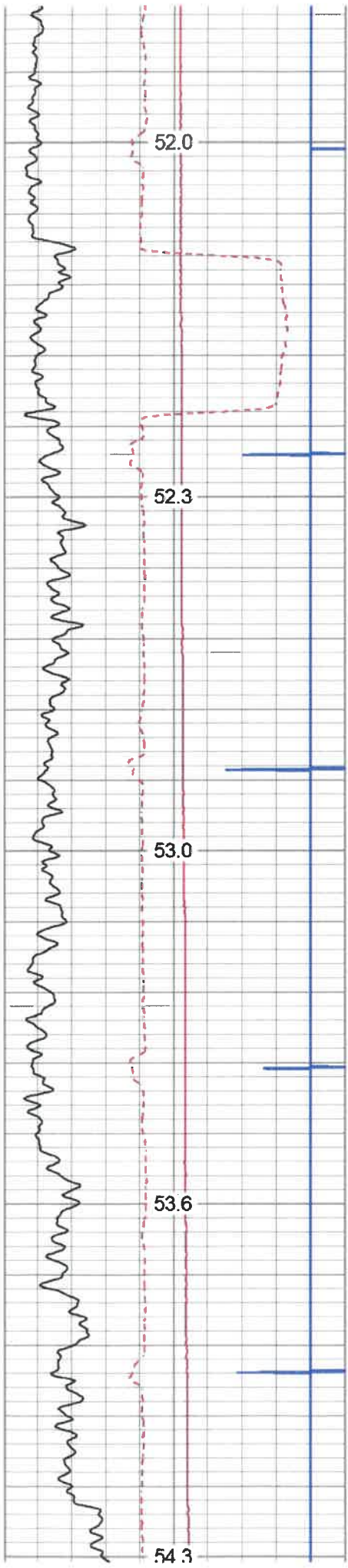
THANK YOU FOR USING KLX ENERGY SERVICES
 LOG WAS RAN ON 5.5 CASING WITH 1500PSI ON WELL
 ZERO AT K.B. OF 30 FT
 MARKER JOINT @5734'-5744'
 LOG WAS SHIFTED UP 10'

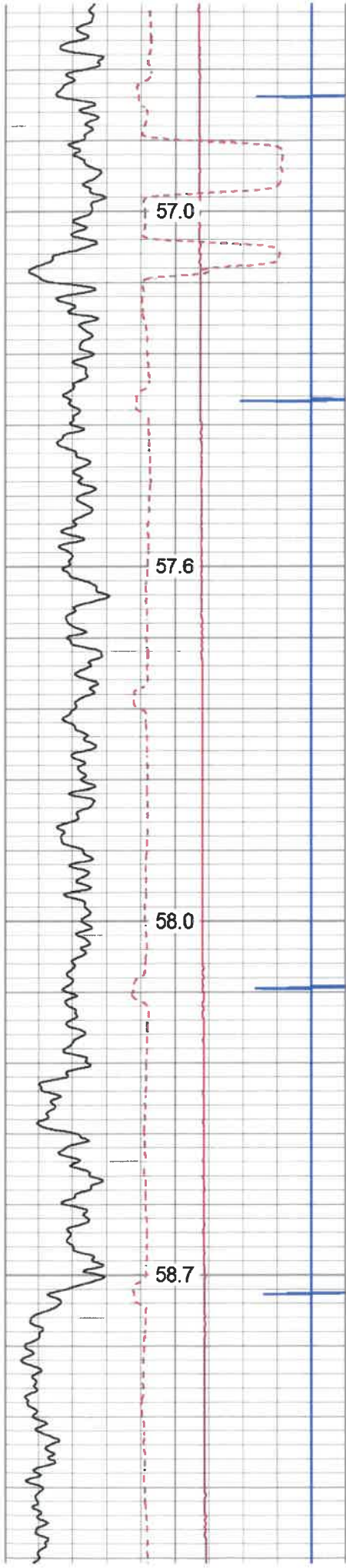


200
250
300
350
400

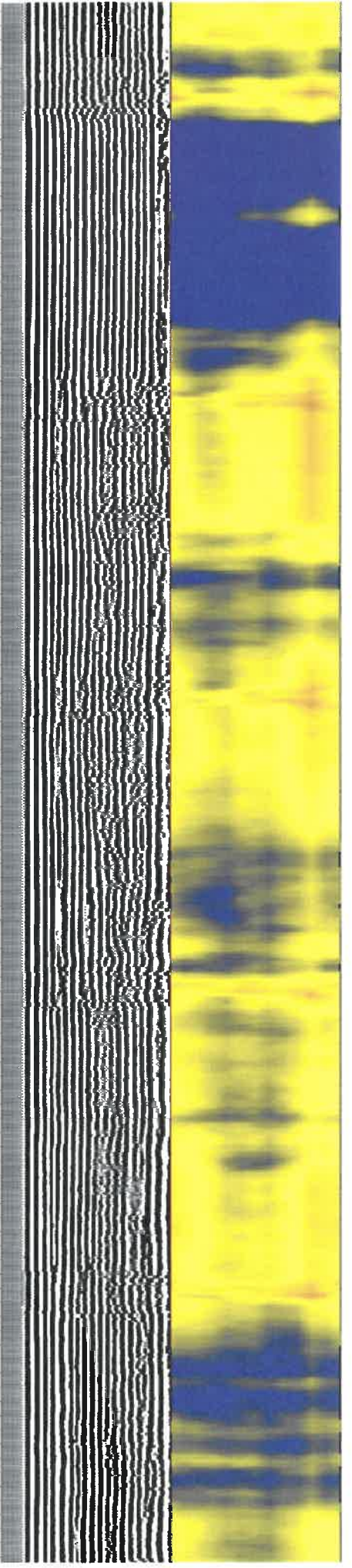
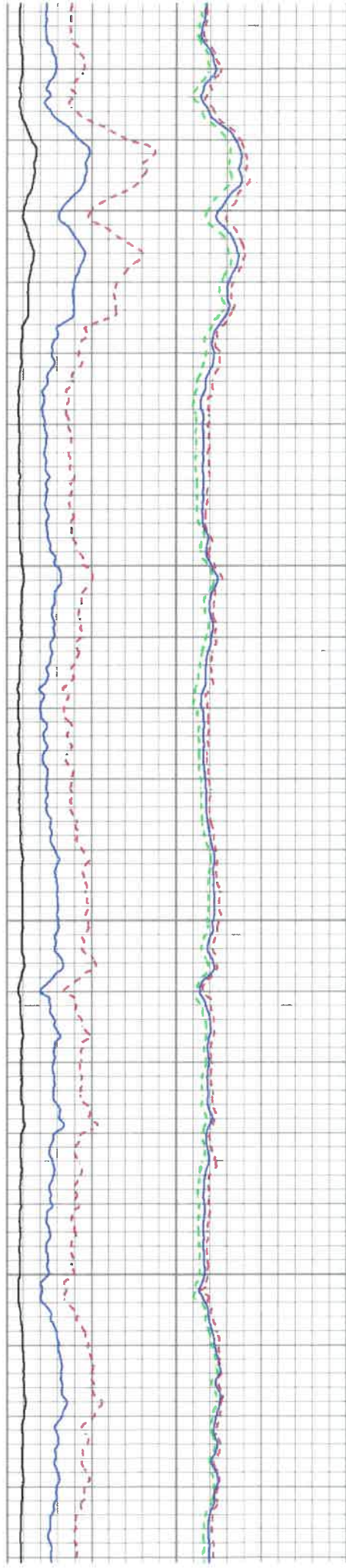
Top of Cement

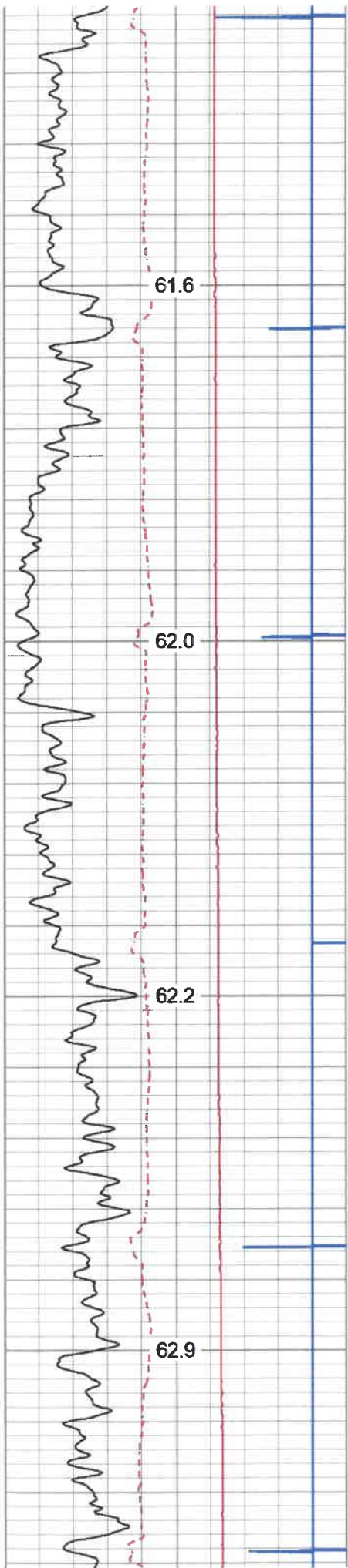






1100
1150
1200
1250



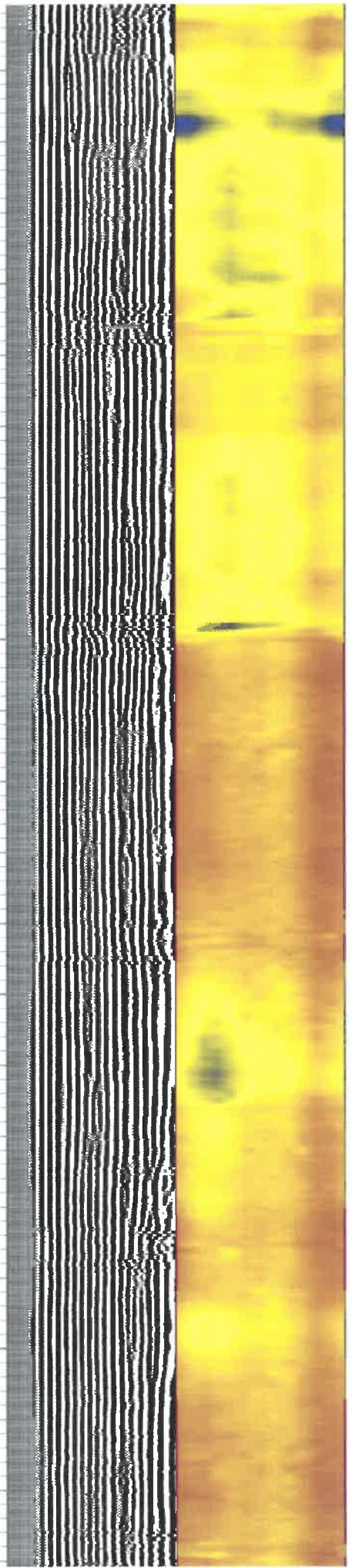
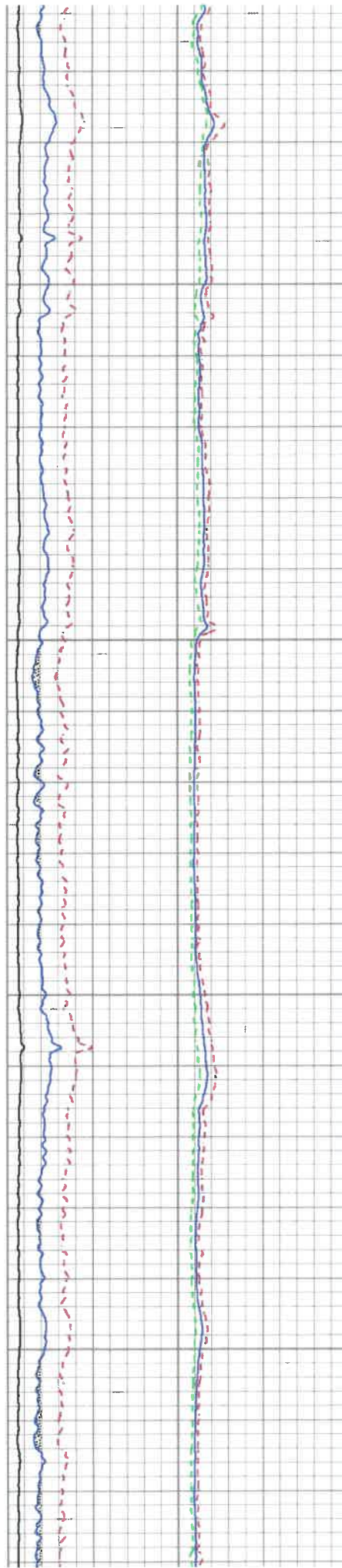


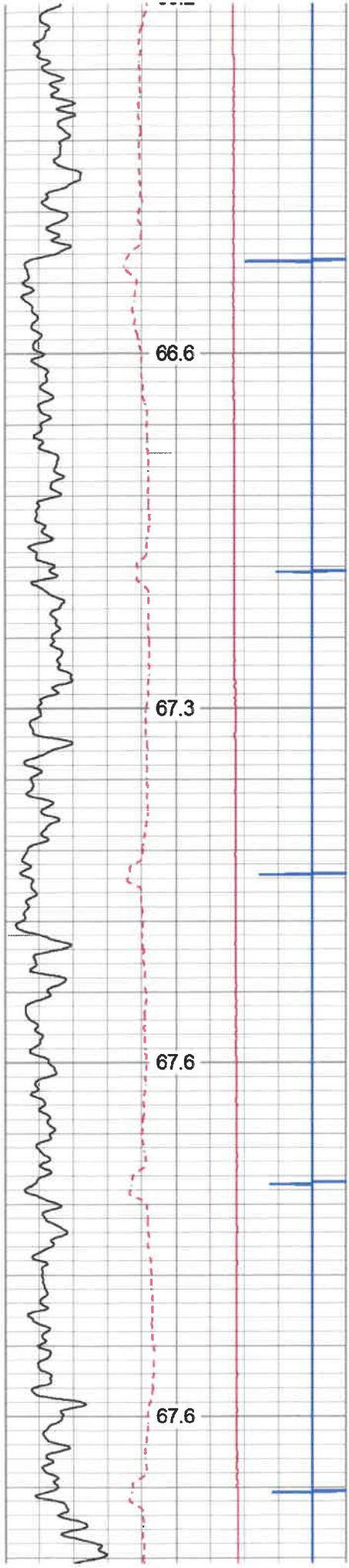
1550

1600

1650

1700



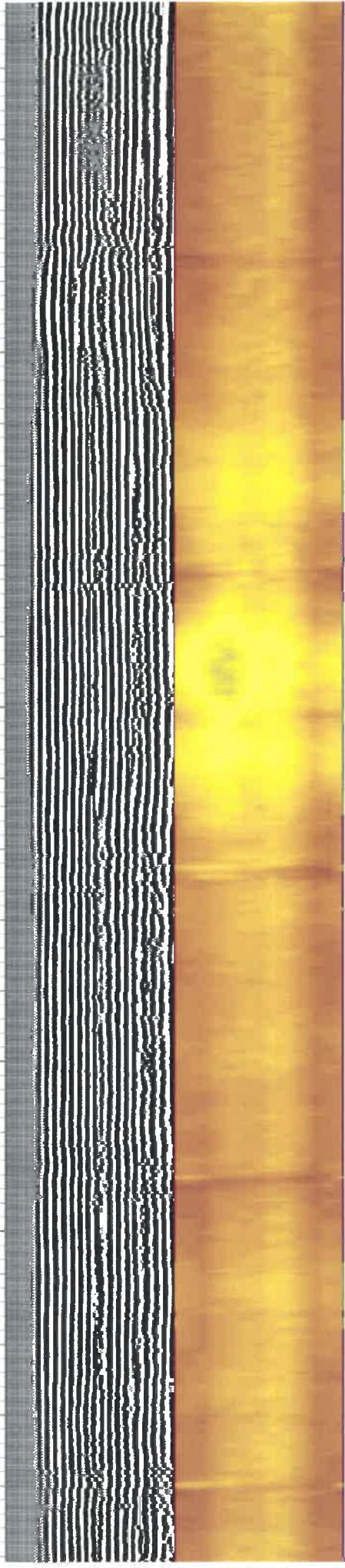
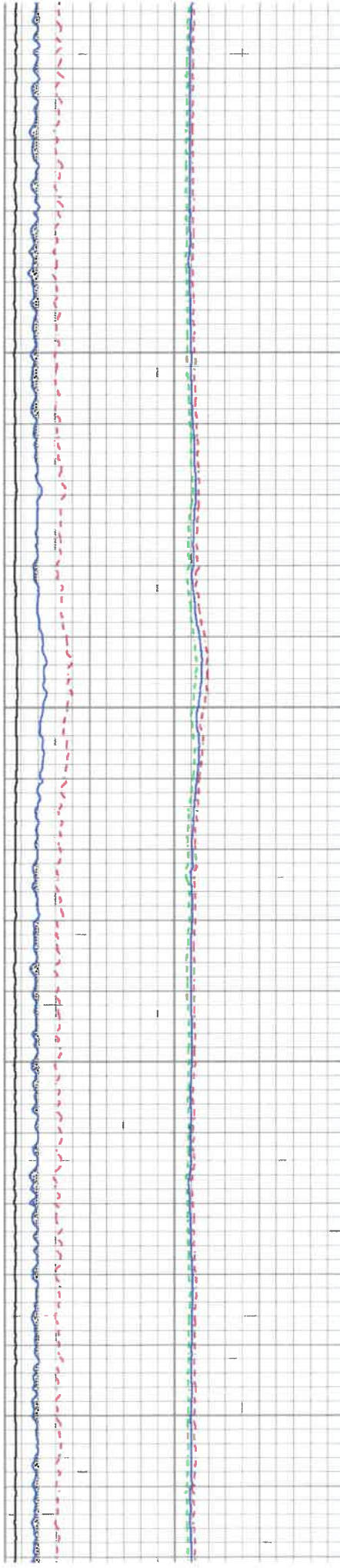


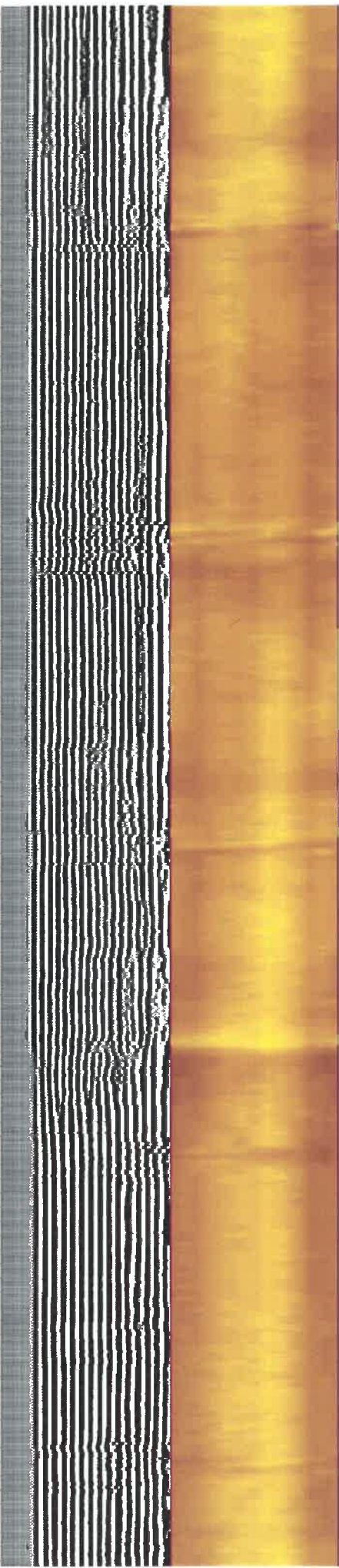
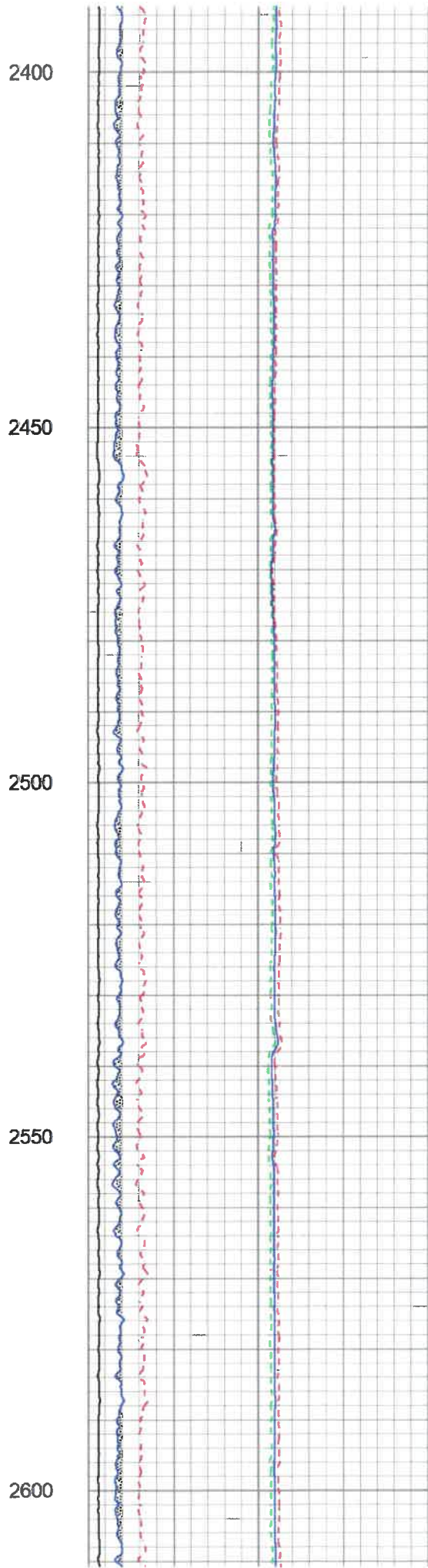
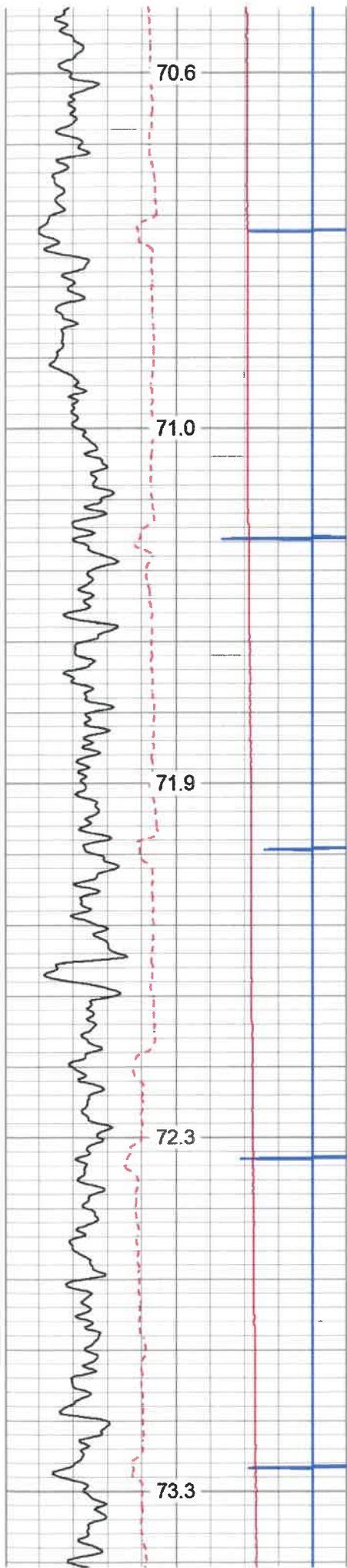
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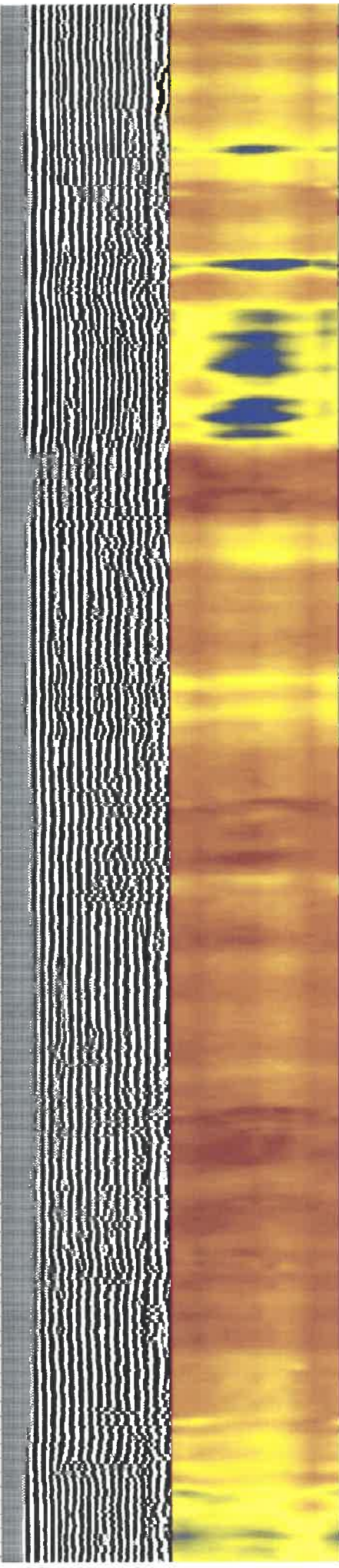
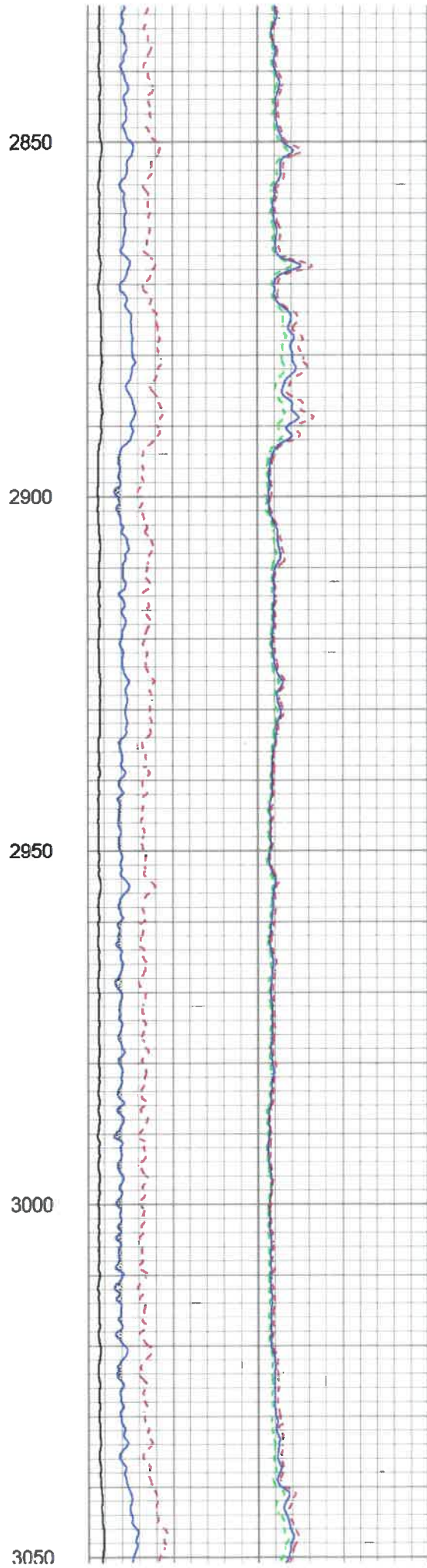
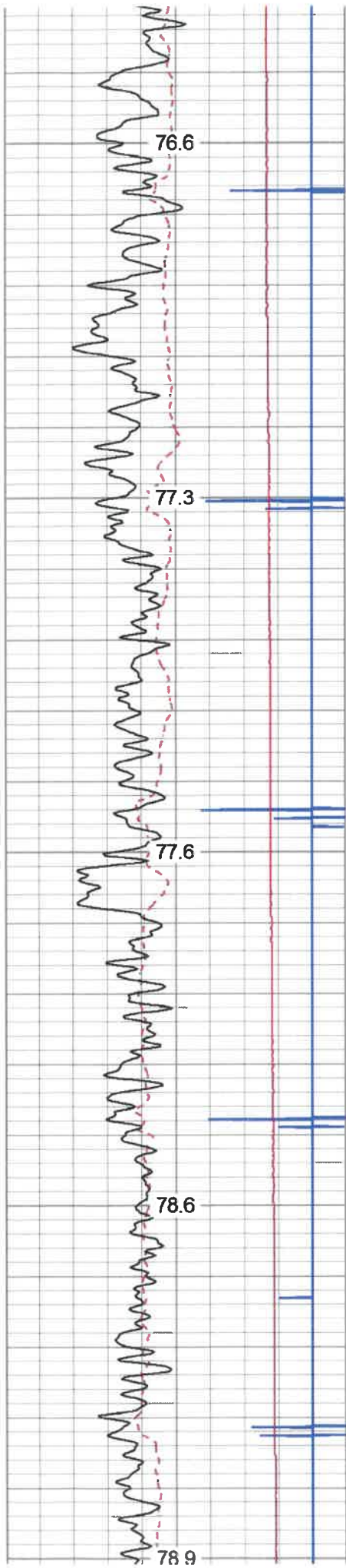
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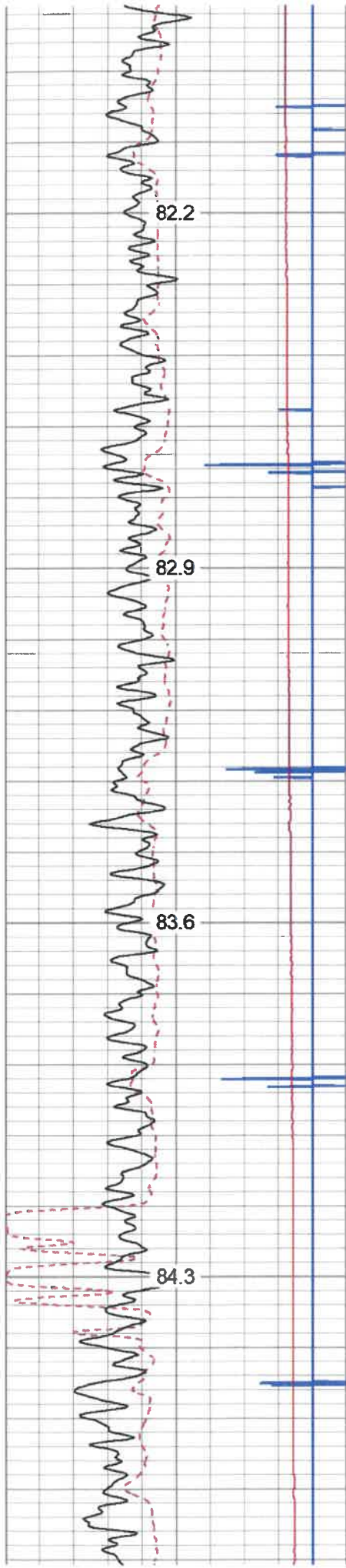
2100

2150

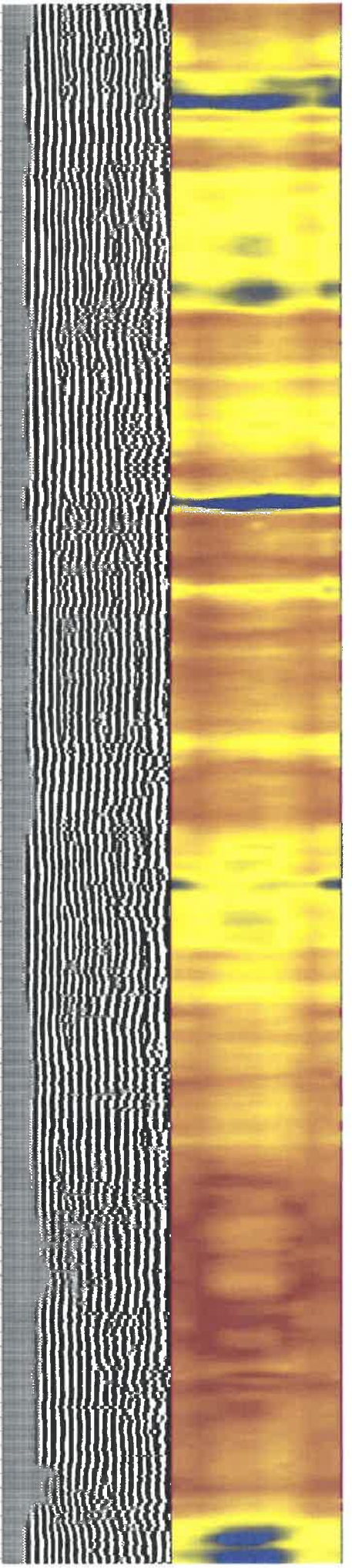
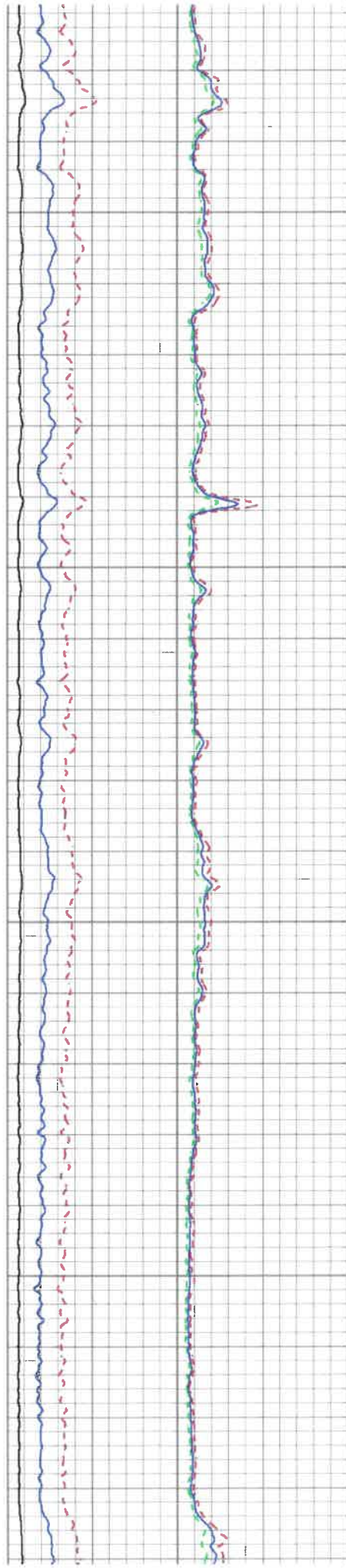


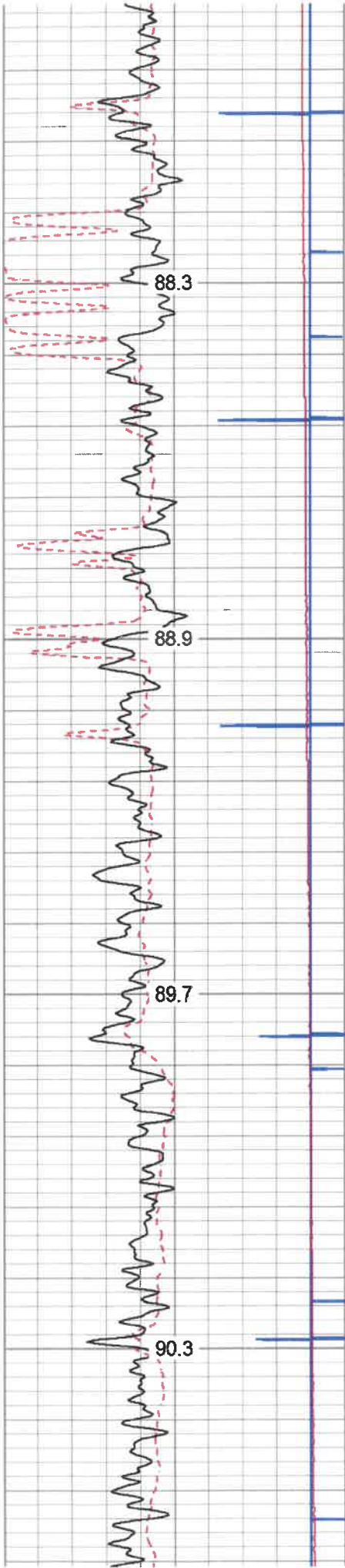






3300
3350
3400
3450



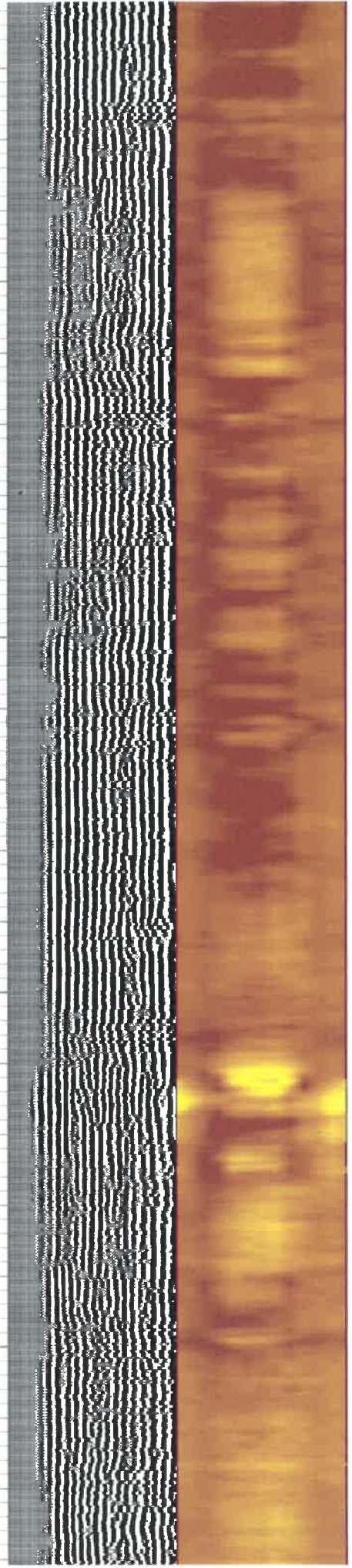
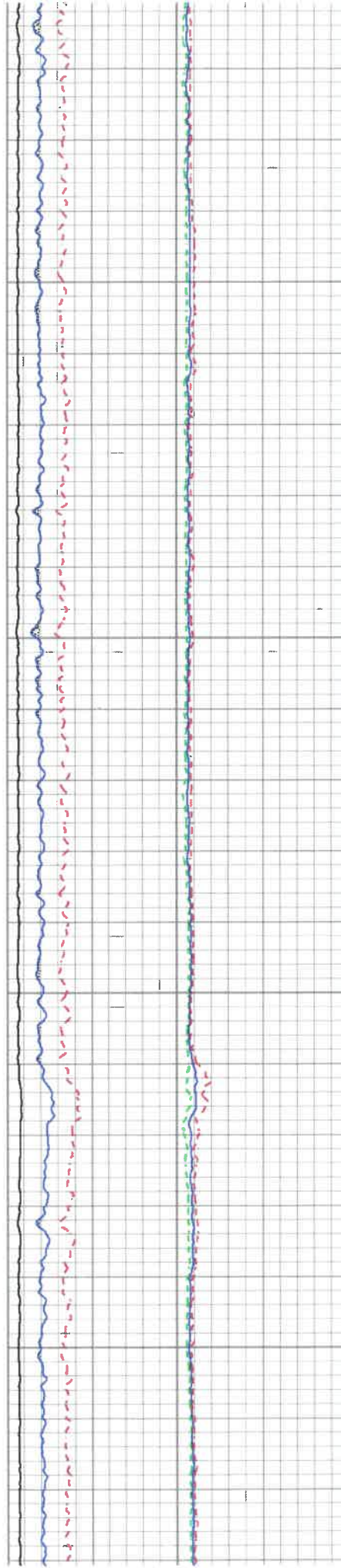


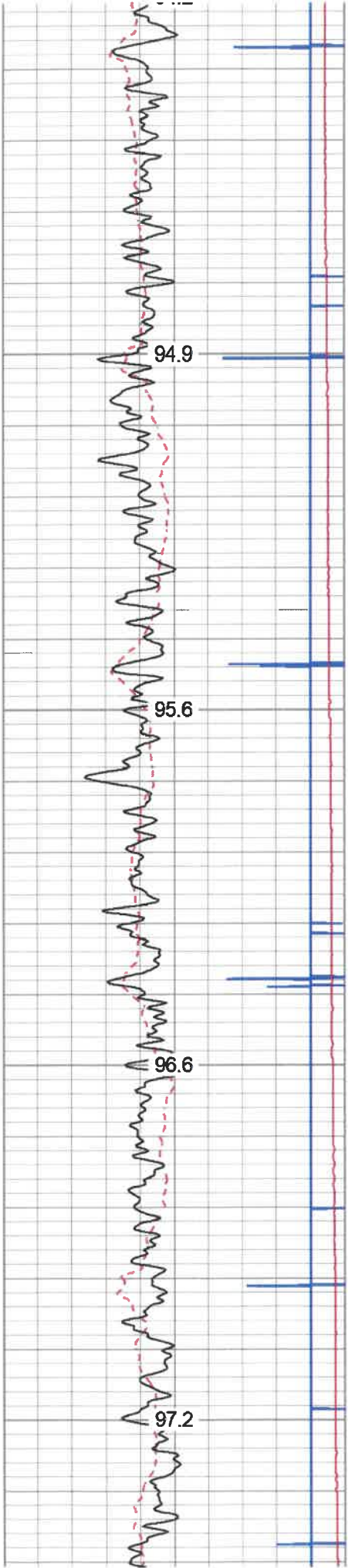
3750

3800

3850

3900



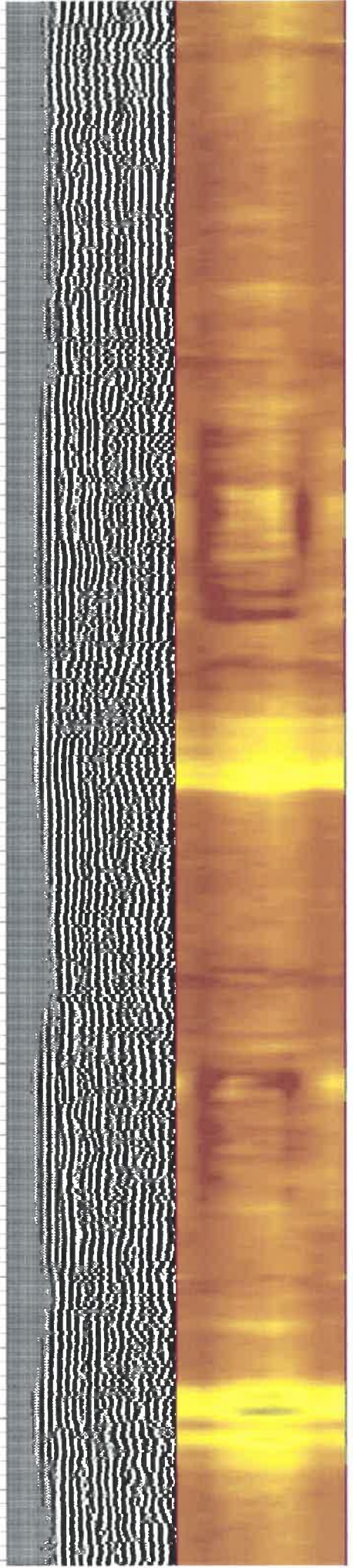
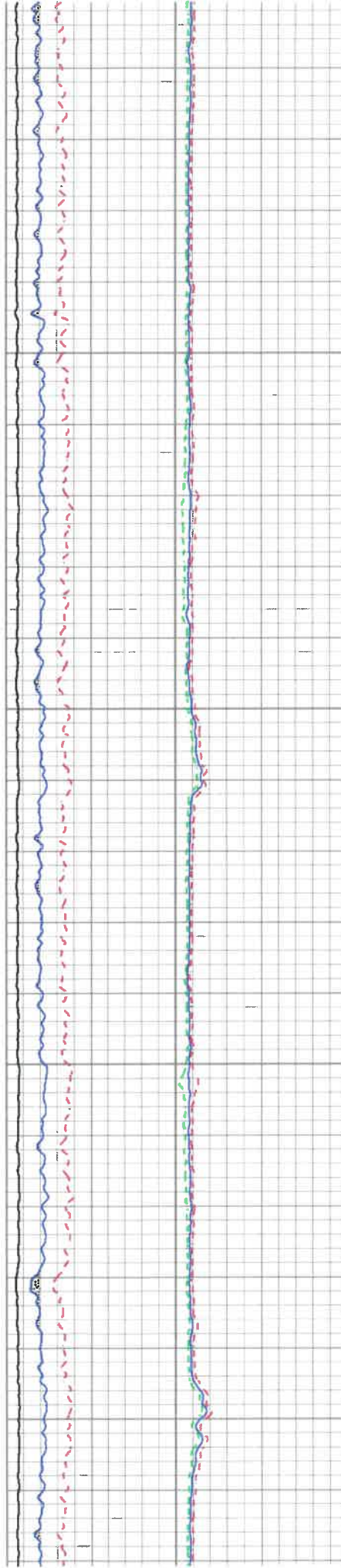


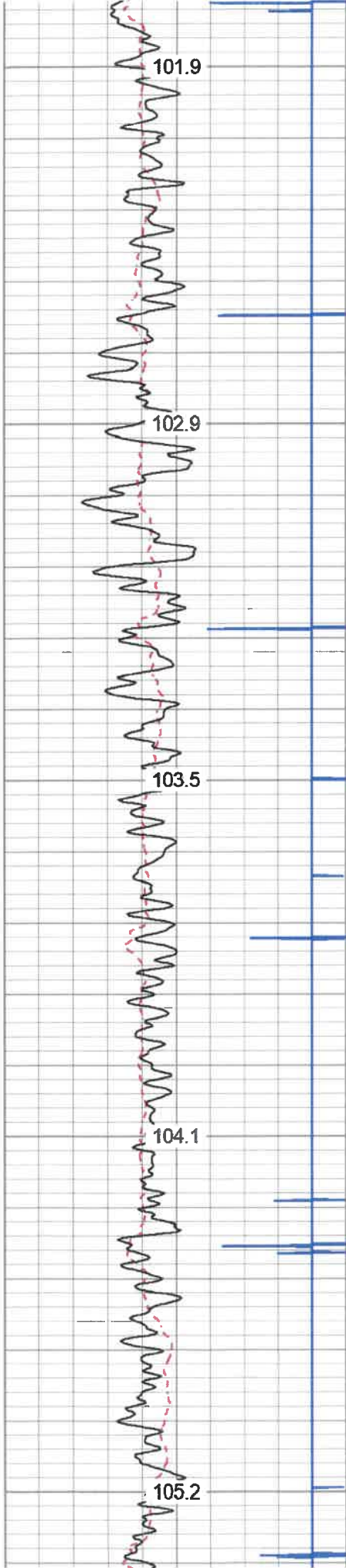
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4250

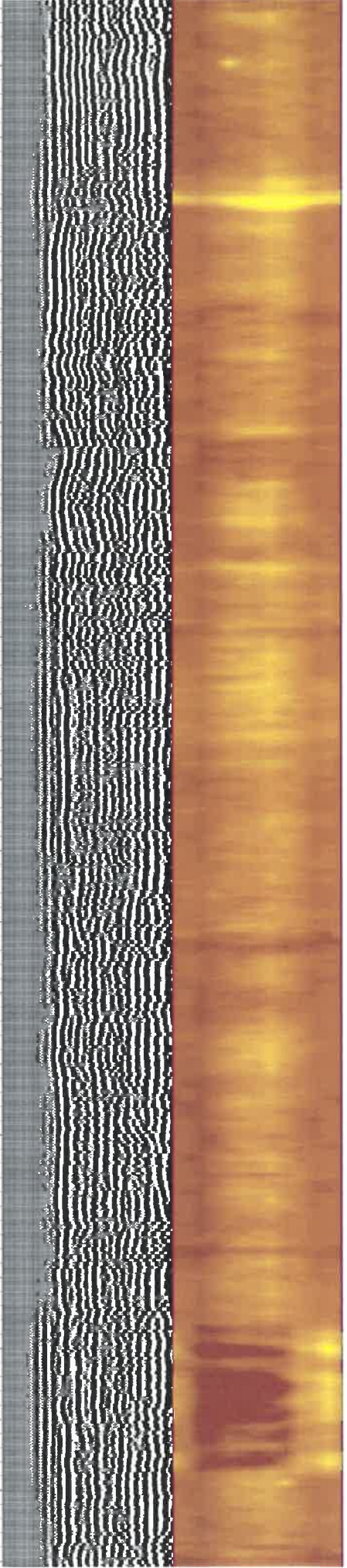
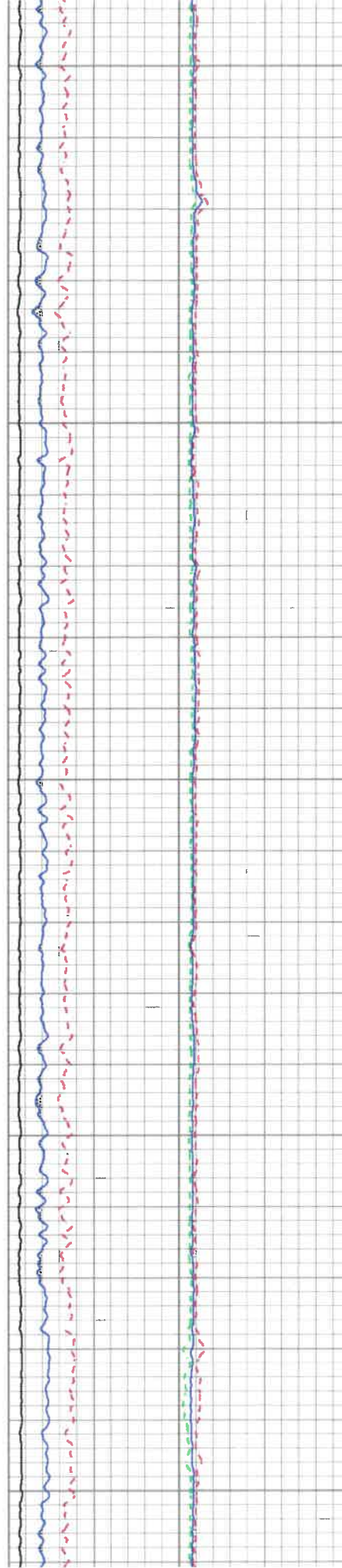
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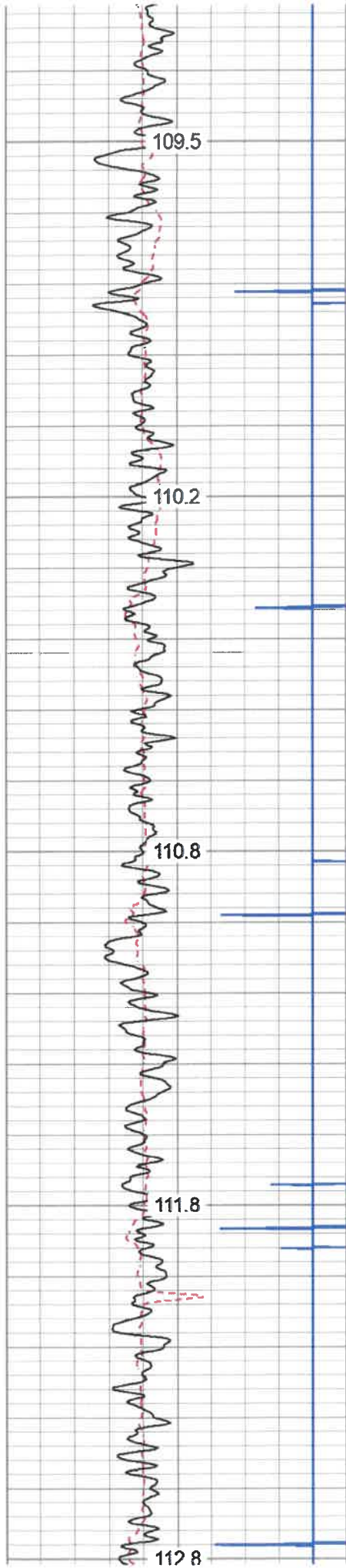
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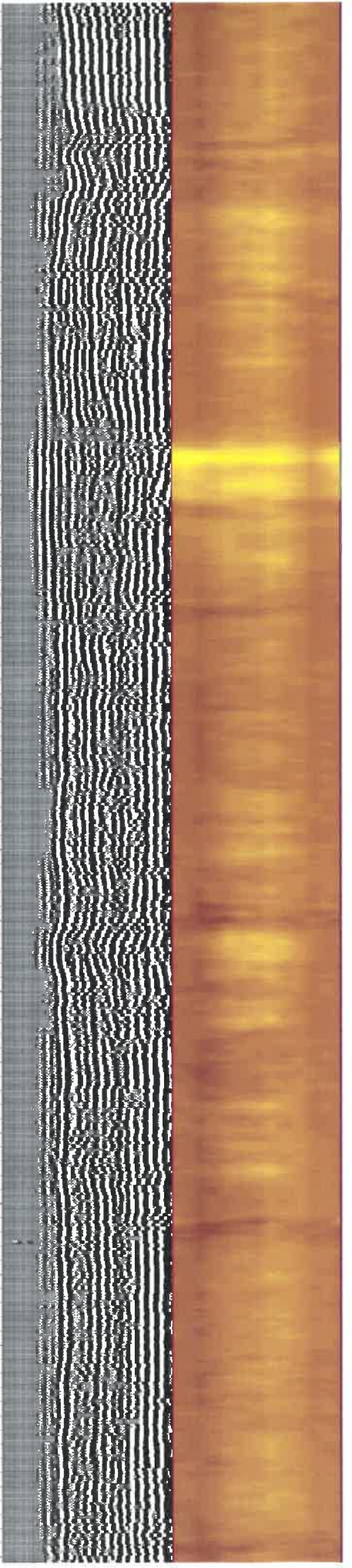
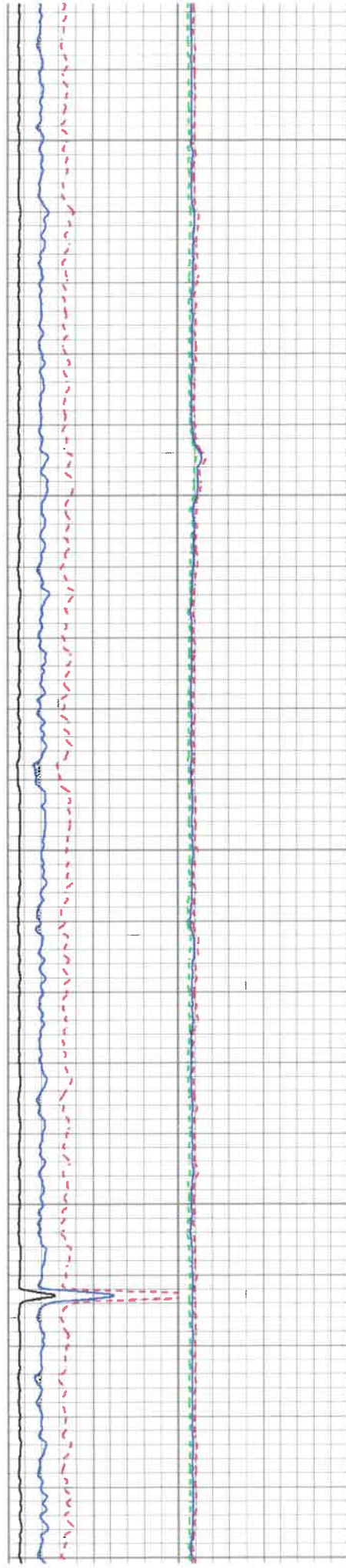


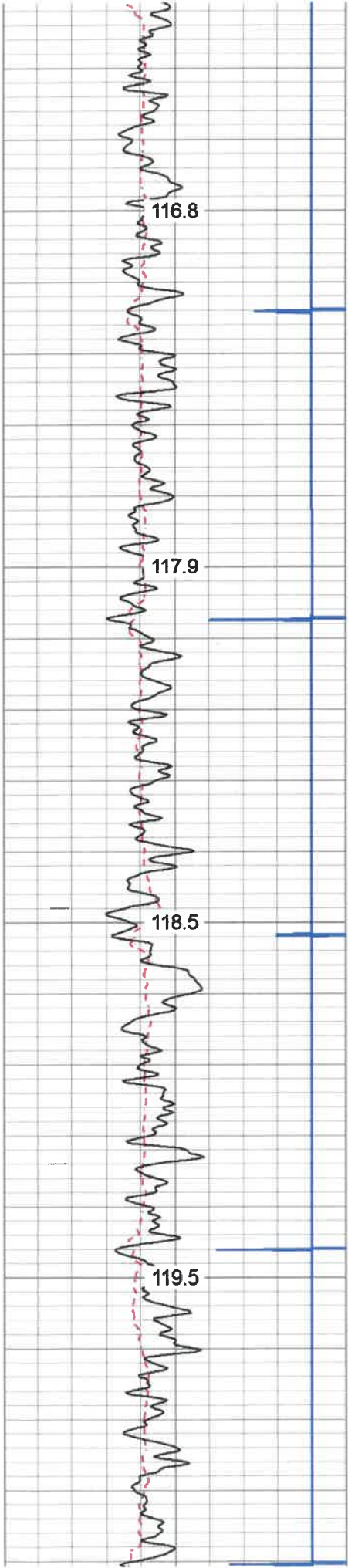
4600
4650
4700
4750
4800





5050
5100
5150
5200
5250



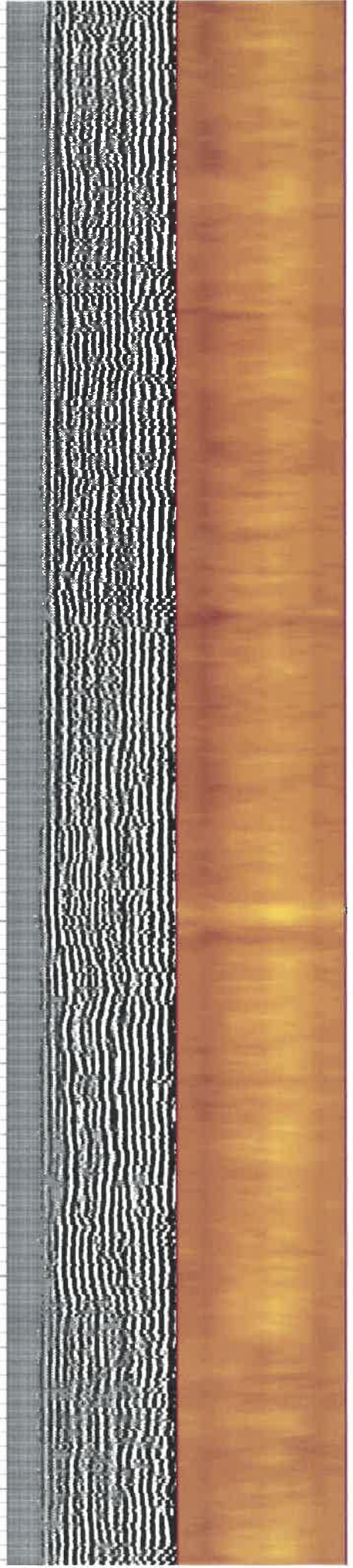
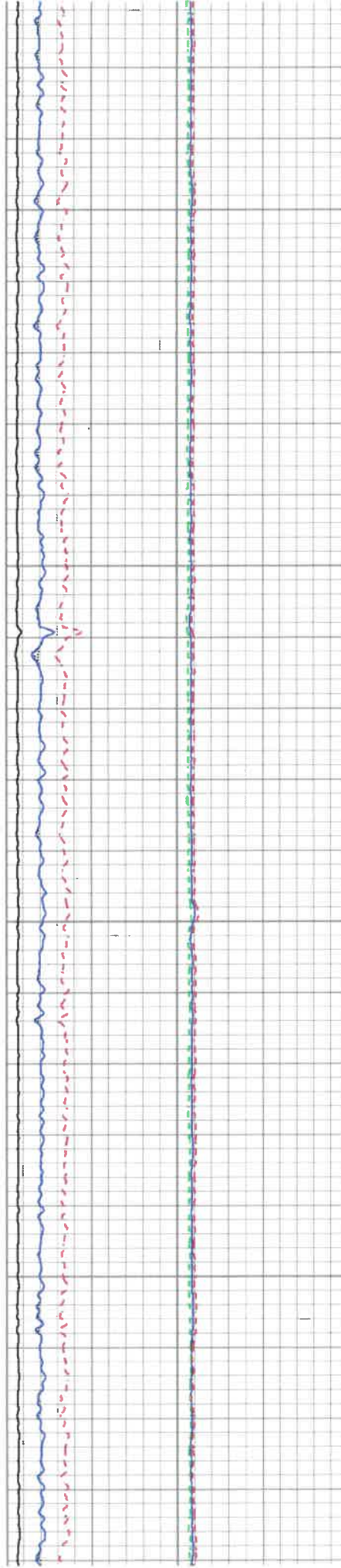


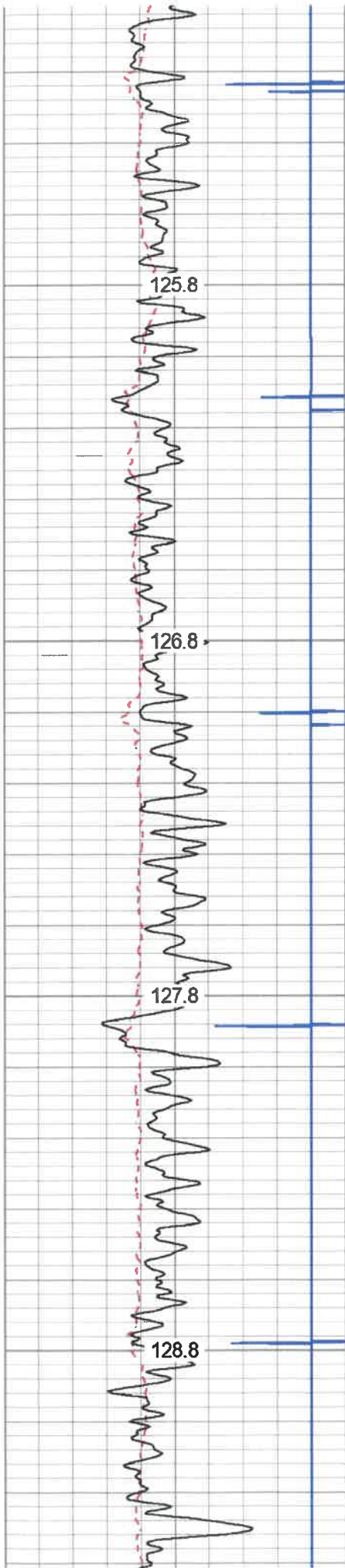
5500

5550

5600

5650



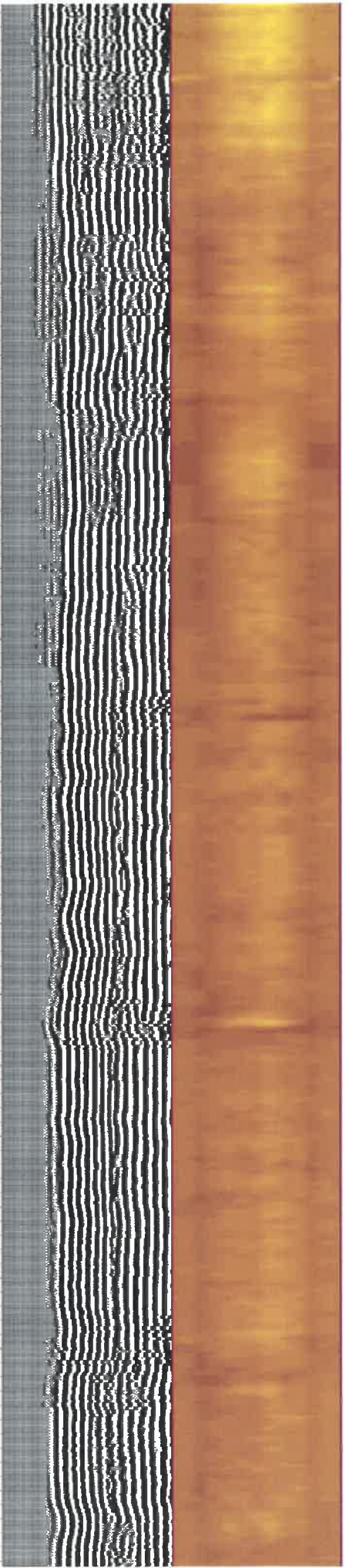
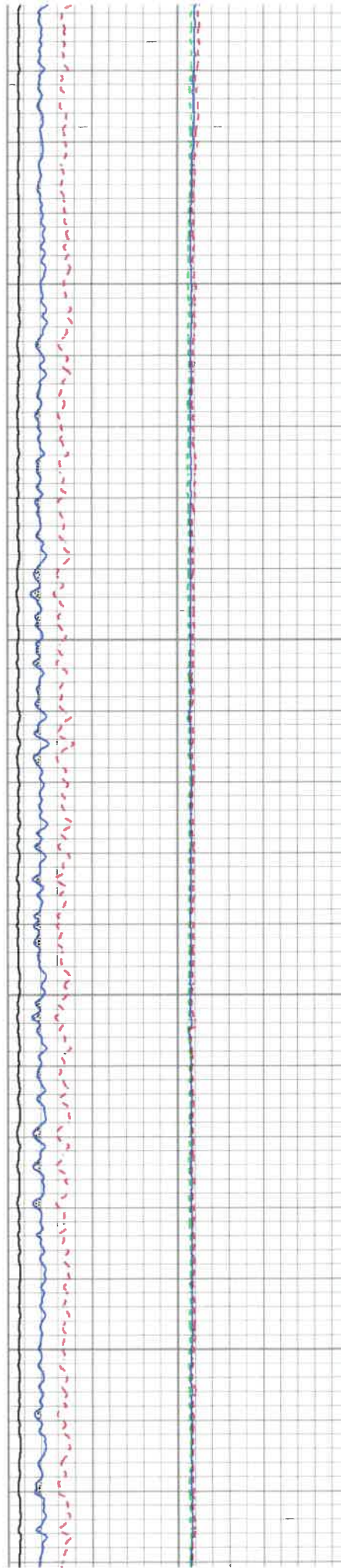


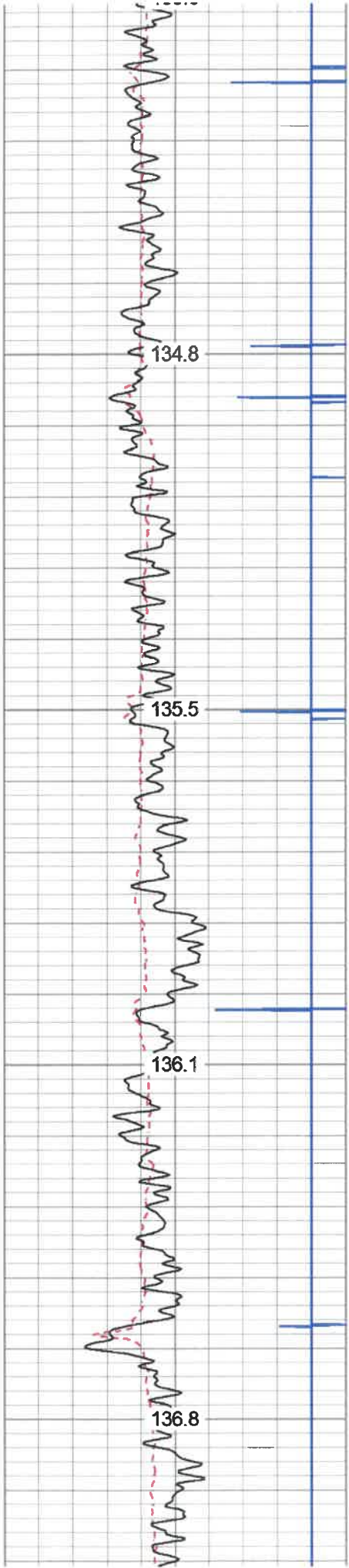
5950

6000

6050

6100



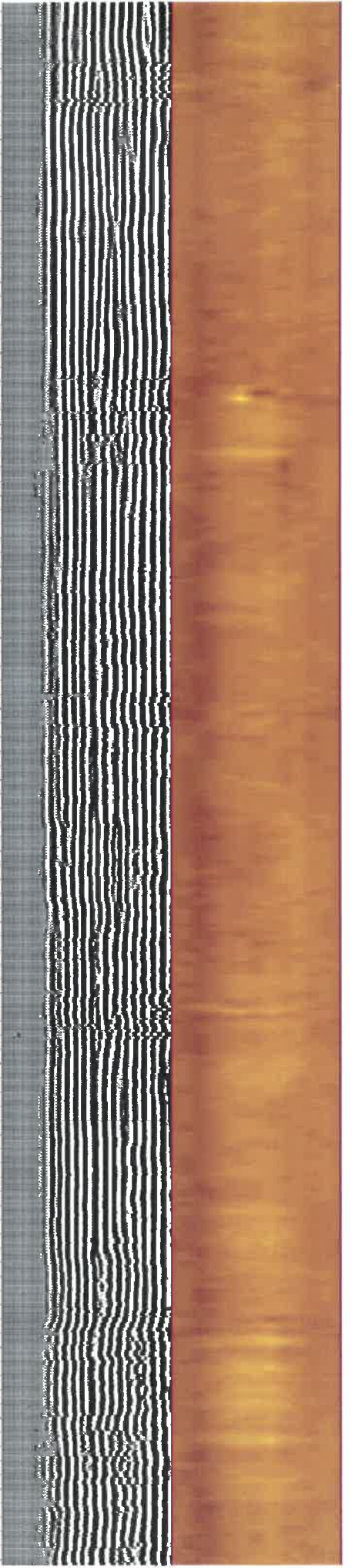
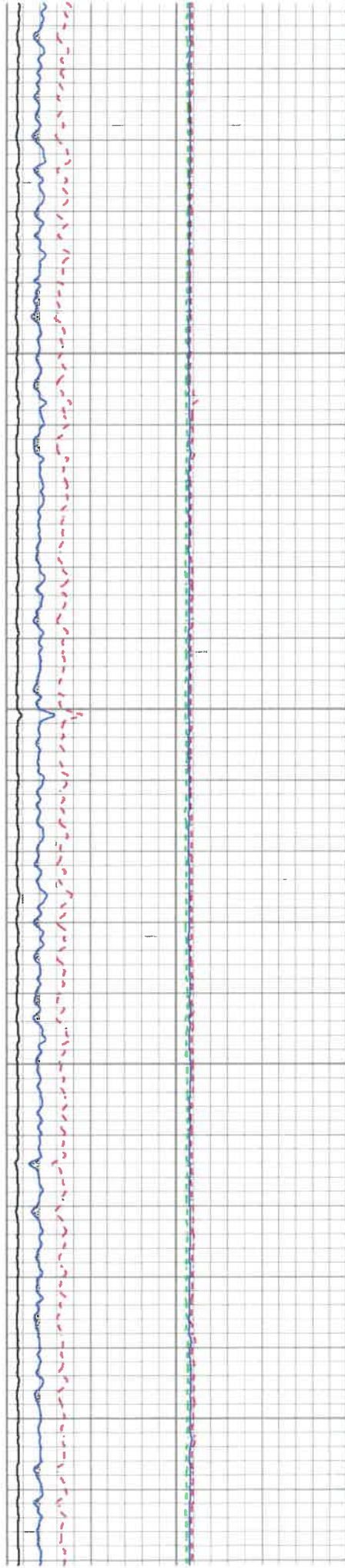


6400

6450

6500

6550



9	Casing Collar	-1
0	Gamma Ray (GAPI)	180
0	TEMP (degF)	100
180	GR (GAPI)	360
TEMP (degF)		

0	(mV)	100
Amp X5		
0	(mV)	20
1	BONDIX	0

Sector Amp MAX	200	(usec)	1200
Sector Amp MIN			



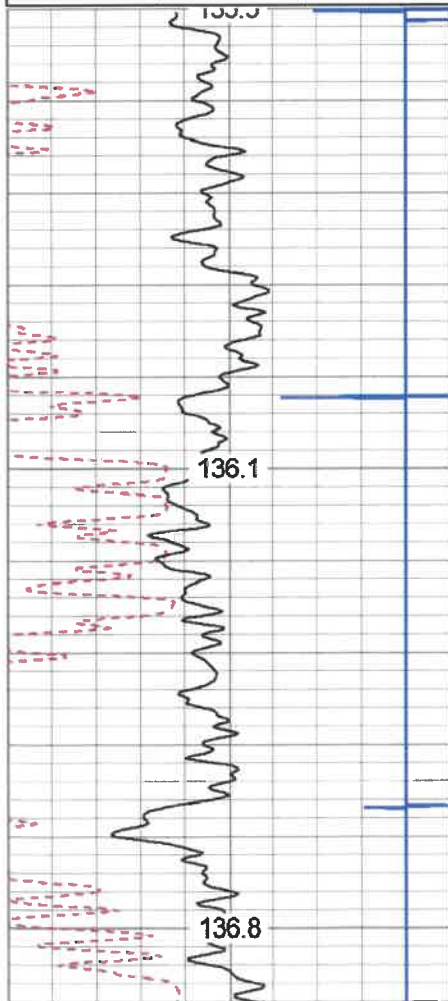
REPEAT PASS

Database File: sterling3h.db
 Dataset Pathname: REPEAT.4
 Presentation Format: antero
 Dataset Creation: Fri May 17 11:11:27 2019
 Charted by: Depth in Feet scaled 1:240

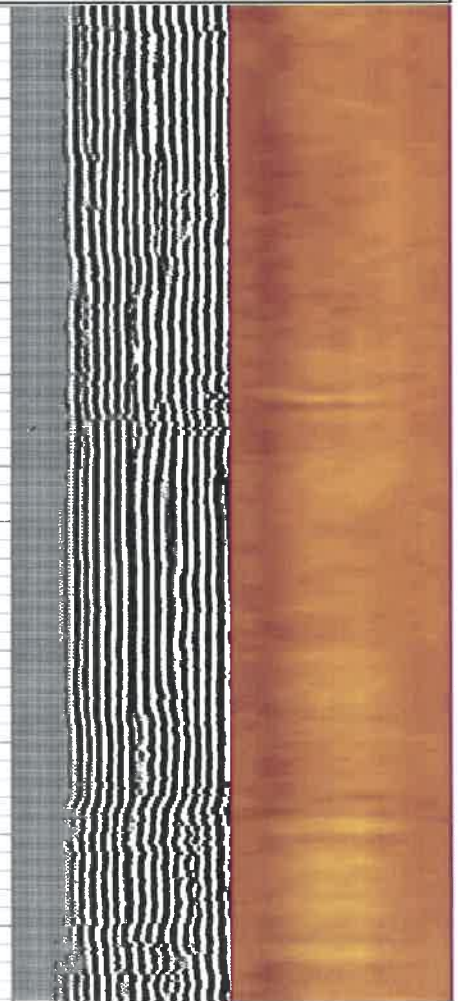
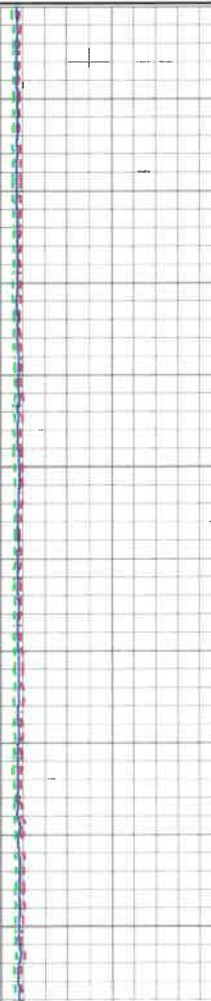
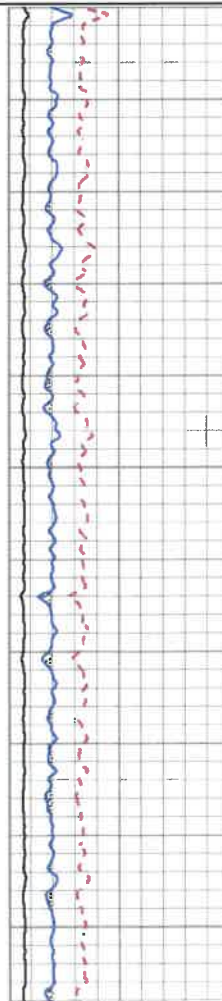
280	Travel Time (usec)	180
9	Casing Collar	-1
0	Gamma Ray (GAPI)	180
0	TEMP (degF)	100
180	GR (GAPI)	360
TEMP (degF)		

Amplitude		
0	(mV)	100
Amp X5		
0	(mV)	20
1	BONDIX	0

Sector Amp AVG	VDL	1	Sector Map	12
Sector Amp MAX		200	(usec)	1200
Sector Amp MIN				



6400
6500
6550



280	Travel Time (usec)	180	Amplitude	Sector Amp AVG	VDL	1	Sector Map 12
9	Casing Collar	-1	0 (mV) 100	Sector Amp MAX	200 (usec) 1200		
0	Gamma Ray (GAPI)	180	Amp X5	Sector Amp MIN			
0	TEMP (degF)	100	0 (mV) 20				
180	GR (GAPI)	360	1 BONDIX 0				
	TEMP (degF)						

Calibration Report

Database File sterling3h.db
Dataset Pathname pass2.7
Dataset Creation Fri May 17 10:55:52 2019

Gamma Ray Calibration Report

Serial Number: 0111
Tool Model: Tek-Co 2 3/4
Performed: Thu May 02 12:24:19 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: T12_01
Tool Model: Tek12

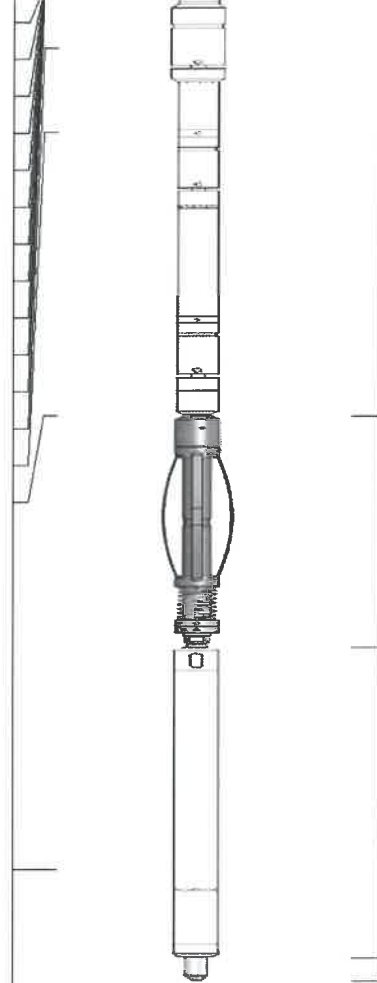
Calibration Casing Diameter: 5.500 in
Calibration Depth: 292.917 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.810	3.500	71.921	84.442	2.996
CAL	0.000	0.545				
5'	-0.025	0.366	3.500	71.921	175.290	7.840
SUM						
S1	0.000	0.954	0.000	100.000	104.817	-0.001
S2	0.000	0.876	0.000	100.000	114.172	-0.001
S3	0.000	0.821	0.000	100.000	121.764	-0.001
S4	0.000	0.700	0.000	100.000	142.897	-0.001
S5	0.000	0.633	0.000	100.000	158.001	-0.001
S6	0.000	0.603	0.000	100.000	165.890	-0.001
S7	0.000	0.584	0.000	100.000	171.353	-0.001
S8	0.000	0.532	0.000	100.000	187.845	-0.001
S9	0.000	0.535	0.000	100.000	186.963	-0.001
S10	0.000	0.650	0.000	100.000	153.809	-0.001
S11	0.000	0.817	0.000	100.000	122.442	-0.001
S12	0.000	0.909	0.000	100.000	109.981	-0.001

Temperature Calibration Report

Serial Number: T12_01

WVFS11	11.75		SCBL-Tek12 (T12_01) Tekco 400 Deg F 12 Sector RIB with Temp	9.13	3.25	135.00
WVFS10	11.75					
WVFS9	11.75					
WVFS8	11.75					
WVFS7	11.75					
WVFS6	11.75					
WVFS5	11.75					
WVFS4	11.75					
WVFS3	11.75					
WVFS2	11.75					
WVFS1	11.75					
WVF3FT	11.00					
WVF5FT	10.00					
WVFTEMP	6.67					
GR	1.31		Tek-2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
			GR-Tek-Co 2 3/4 (0111) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray	3.67	2.75	40.00
			Titan-1.4375_Cap Titan 1 7/16" Cap	0.27	1.44	1.00

Dataset: sterling3h.db: field/well/run1/pass2.7
 Total length: 21.37 ft
 Total weight: 256.00 lb
 O.D.: 3.25 in



Company	ANTERO RESOURCES CORPORATION	
Well	STERLING 3H	
Field	TYLER	
County	TYLER	
State	W.V.	Country