



**RADIAL BOND GAMMA RAY-CCL  
TEMP**

Company ANTERO RESOURCES  
Well WASHINGTON 1H  
Field WEST UNION  
County DODDRIDGE  
State WV.  
Country USA.

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Location: API #: 470170637000000 Other Services

Permanent Datum	GL 1040'	Elevation	1040'	Elevation	K.B. 1064'
Log Measured From	K.B.24'				D.F. 1063'
Drilling Measured From	K.B.24'				GL. 1040'

Date	9-27-14				
Run Number	ONE				
Depth Driller					
Depth Logger	6700'				
Bottom Logged Interval	6699'				
Top Log Interval	SURFACE				
Open Hole Size					
Type Fluid	WATER				
Density / Viscosity					
Max. Recorded Temp.	134				
Estimated Cement Top	2276'				
Time Well Ready	18:50				
Time Logger on Bottom	19:15				
Equipment Number	5982				
Location	CLARKSBURG WV.				
Recorded By	E.BUTCHER				
Witnessed By	SHANE TEEL				
Borehole Record			Tubing Record		
Run Number	Bit	From	To	Size	Weight
					From
					To
Casing Record	Size	Waffle		Office of Oil & Gas	
Surface String				Top	
Production String	5.5"	23LBS.		Bottom	
Liner				SURFACE	
				JUL 20 2015	
				15.210.6'	

^^ 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

THANK YOU FOR USING STRC WIRELINE TECHNOLOGIES  
LOG MEASURED FROM K.B.24'

Calibration Report

Database File: washington 1h.db  
Dataset Pathname: pass5  
Dataset Creation: Sat Sep 27 07:14:38 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 275  
Tool Model: Probe  
Performed: Wed Aug 27 17:14:40 2014  
  
Calibrator Value: 1.0 GAPI  
  
Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps  
  
Sensitivity: 1.0000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1404-143\_5.5INCH  
Tool Model: Probe275T  
  
Calibration Casing Diameter: 5.500 in  
Calibration Depth: 2787.000 ft

Master Calibration, performed Sat Sep 27 03:51:07 2014:

JUL 20 2015  
 RECEIVED  
 Office of Oil & Gas

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.013	0.974	1.000	71.921	73.795	0.046
CAL	0.011	0.010				
5'	0.012	0.927	1.000	71.921	77.469	0.099
SUM						
S1	0.016	1.074	0.000	100.000	94.518	-1.556
S2	0.010	1.067	0.000	100.000	94.644	-0.980
S3	0.010	0.246	0.000	100.000	423.534	-4.100
S4	0.010	1.021	0.000	100.000	98.977	-1.028
S5	0.009	1.079	0.000	100.000	93.485	-0.839
S6	0.009	1.148	0.000	100.000	87.753	-0.762
S7	0.008	1.193	0.000	100.000	84.445	-0.709
S8	0.010	1.174	0.000	100.000	85.926	-0.892

Internal Reference Calibration, performed Fri Aug 15 18:12:35 2014:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.011	0.010	1.000	0.000

Air Zero Calibration, performed Wed Aug 27 17:44:29 2014:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Gain	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

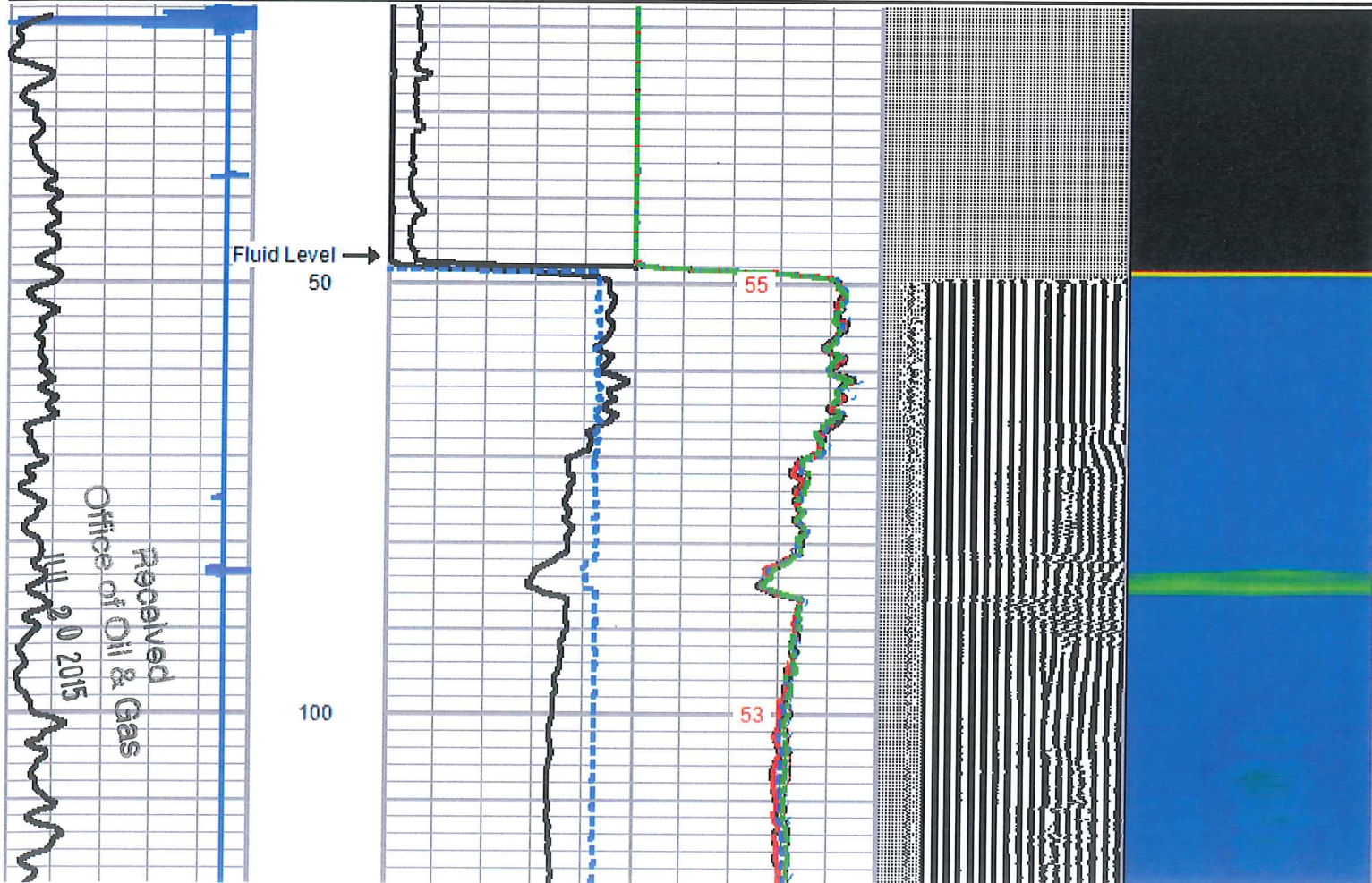
Received  
 Office of Oil & Gas  
 JUL 20 2015

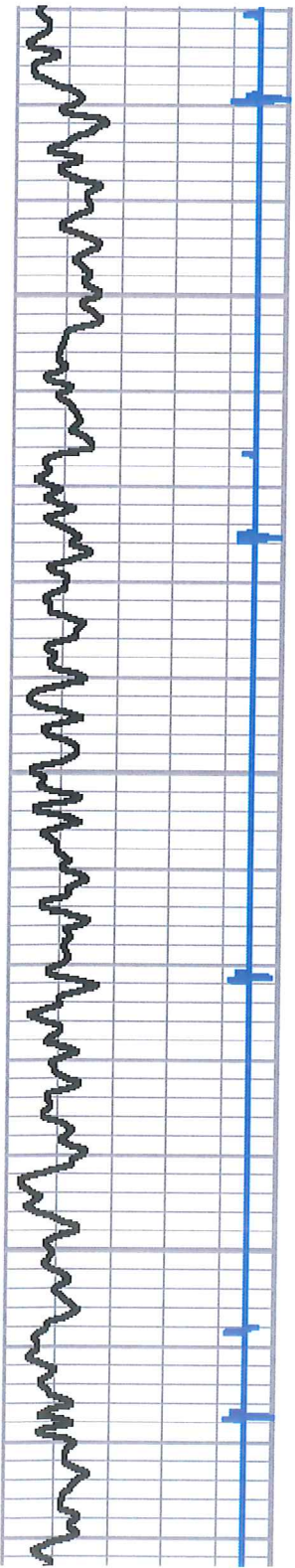


# MAIN LOG

Database File: washington 1h.db  
 Dataset Pathname: pass5  
 Presentation Format: scbl02  
 Dataset Creation: Sat Sep 27 07:14:38 2014 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

-9	CCL	1	0	AMP (mV)	100	0	AMPS1	150	200	VDL	1200	1	Cement Map	8
0	GR (GAPI)	200	0	AMPx10 (mV)	10	0	AMPS2	150				3		95
200	GR (GAPI)	400	350	TT (usec)	250	0	AMPS3	150						
						0	AMPS4	150						
						0	AMPS5	150						
						0	AMPS6	150						
						0	AMPS7	150						
						0	AMPS8	150						
							TEMP							
							(degF)							

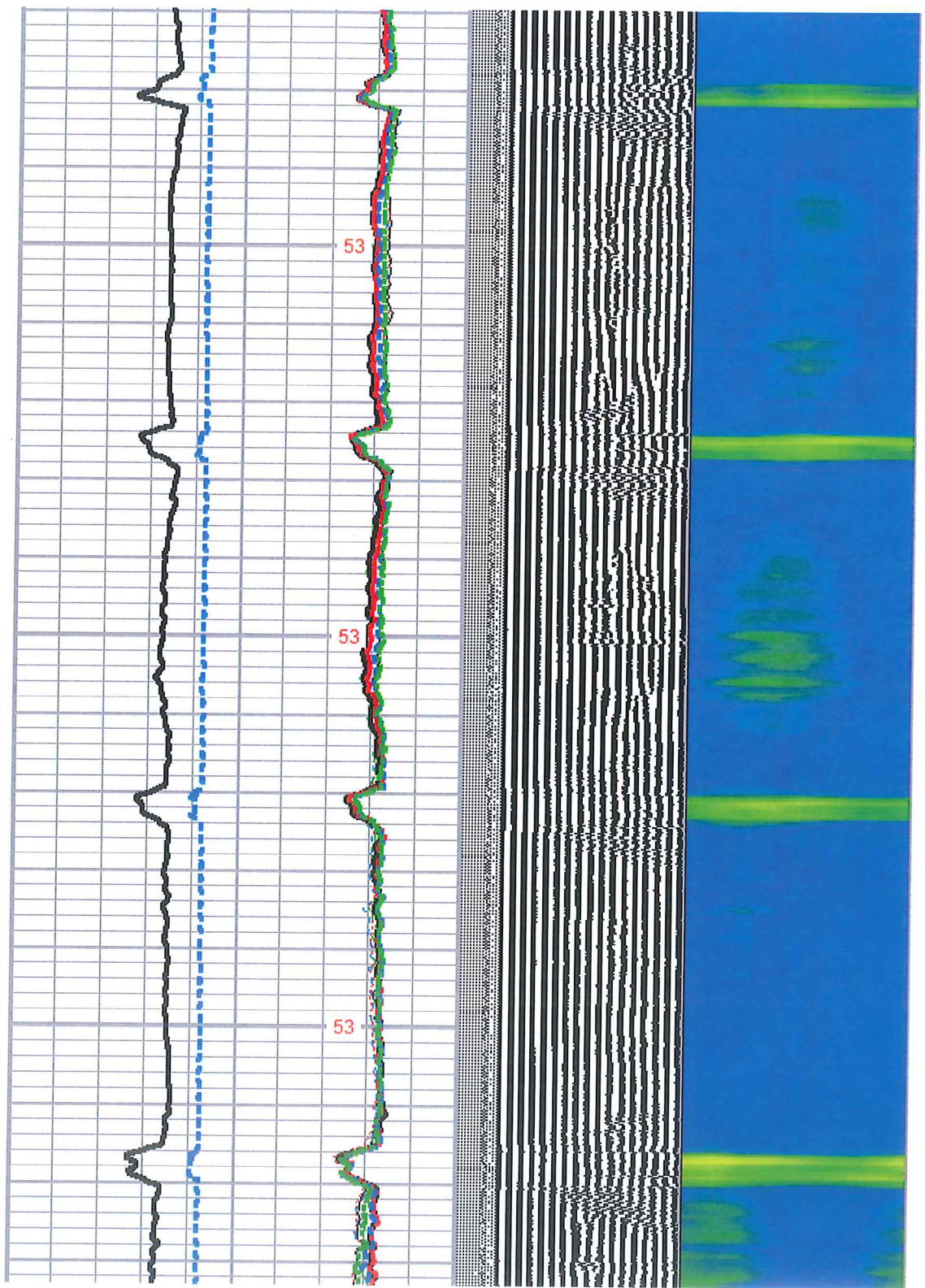




150

200

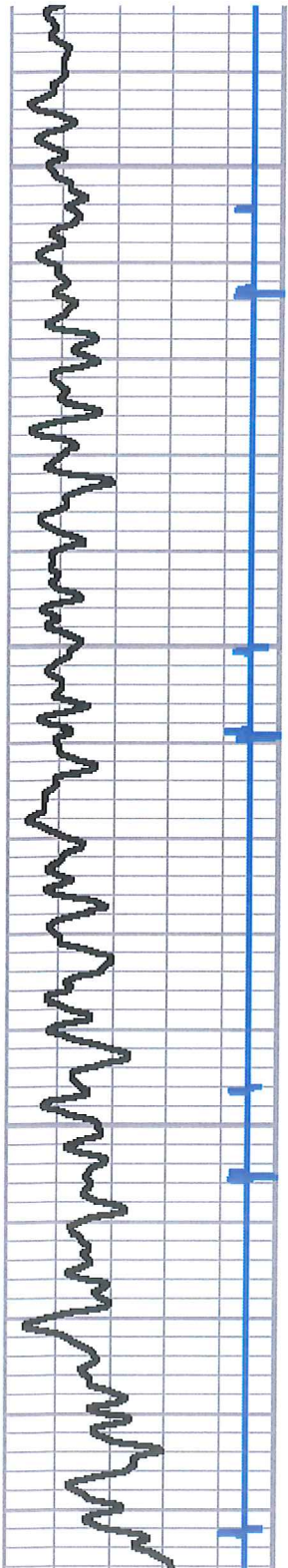
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53

53

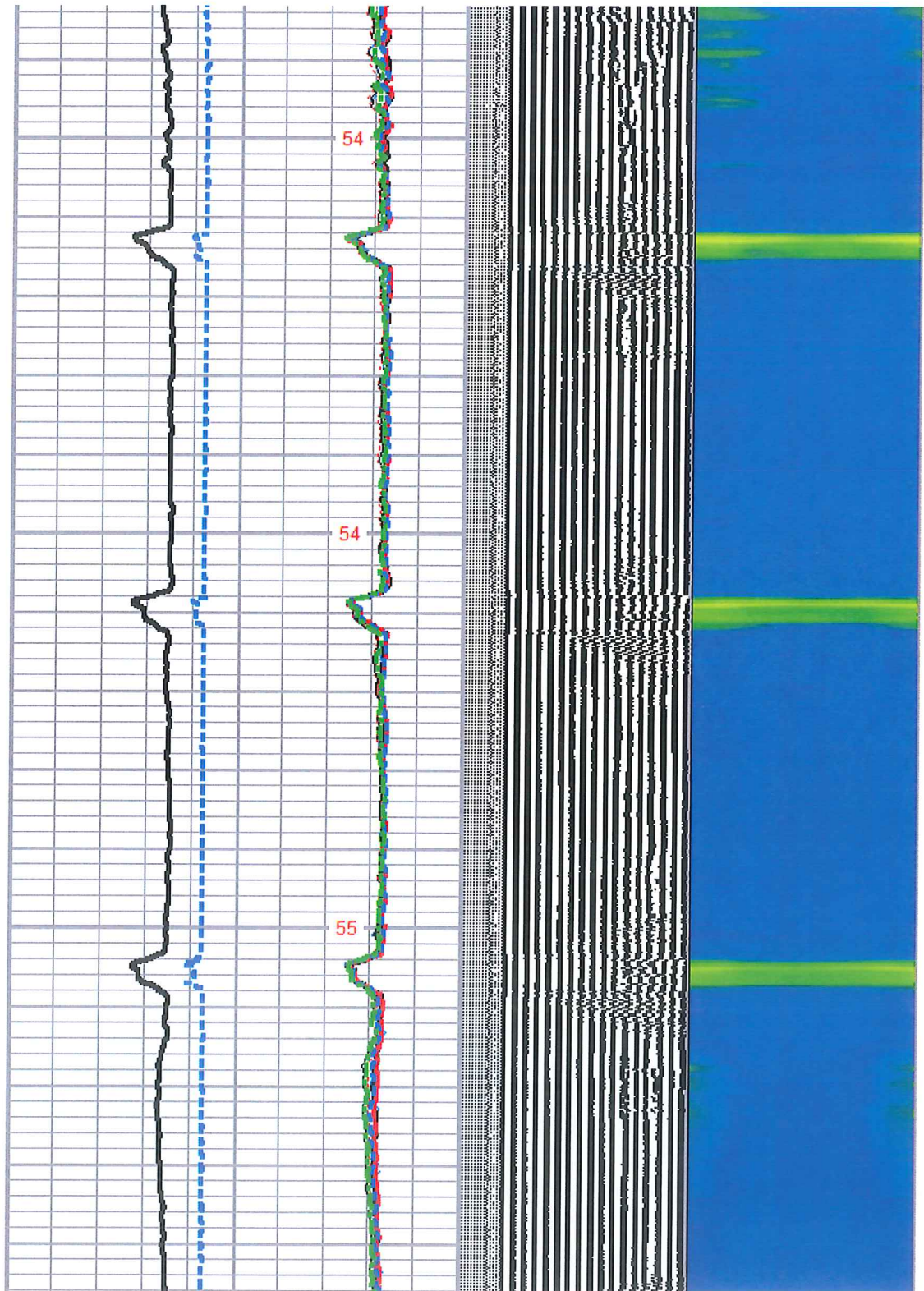
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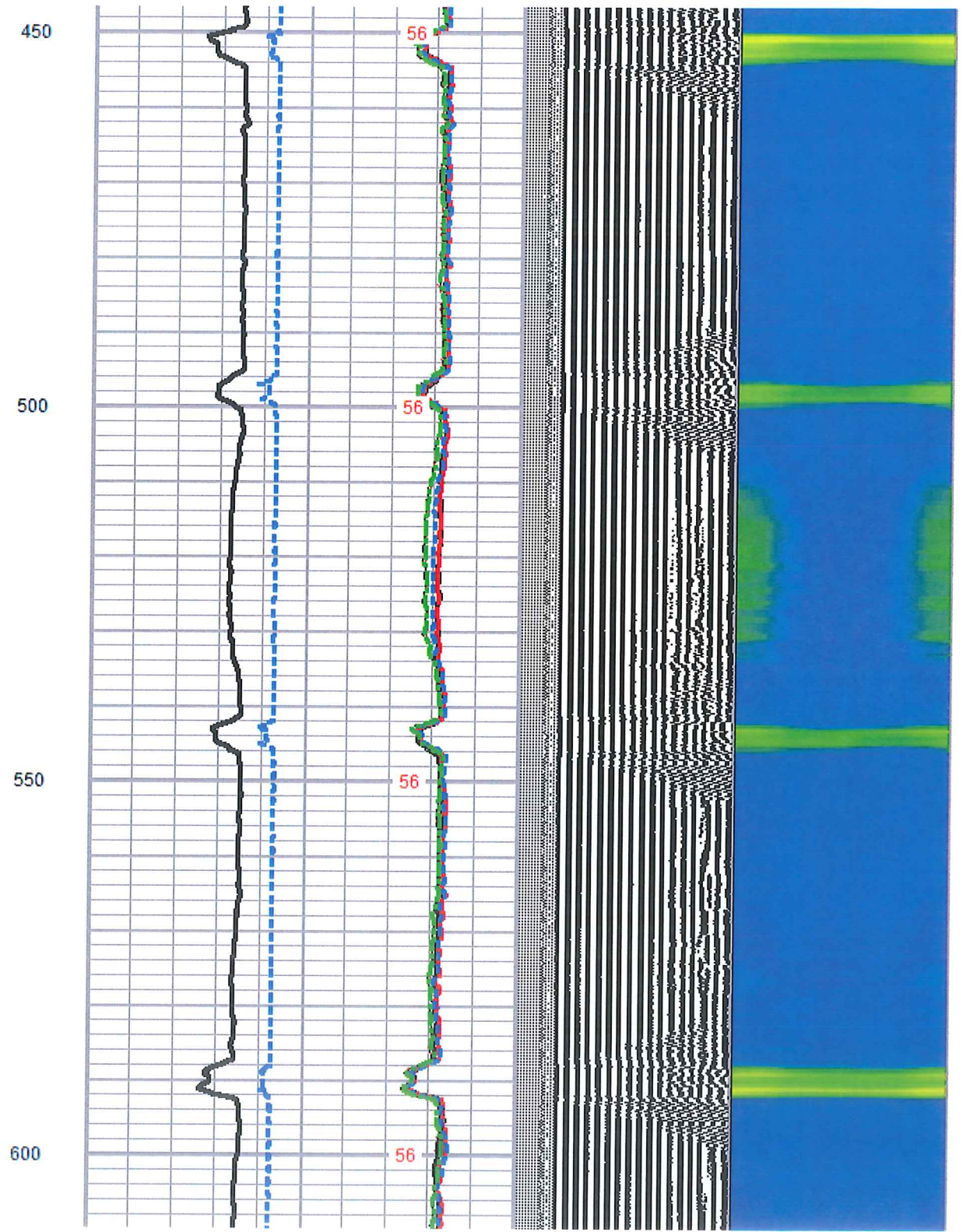
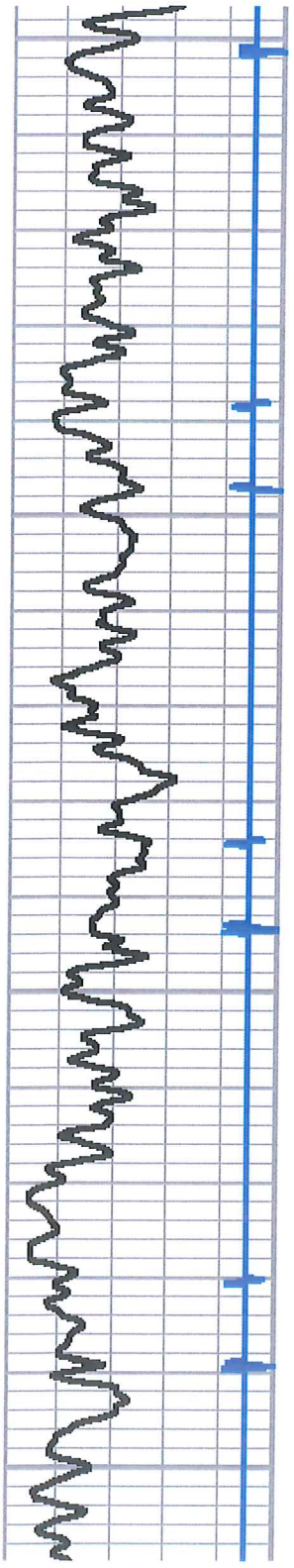


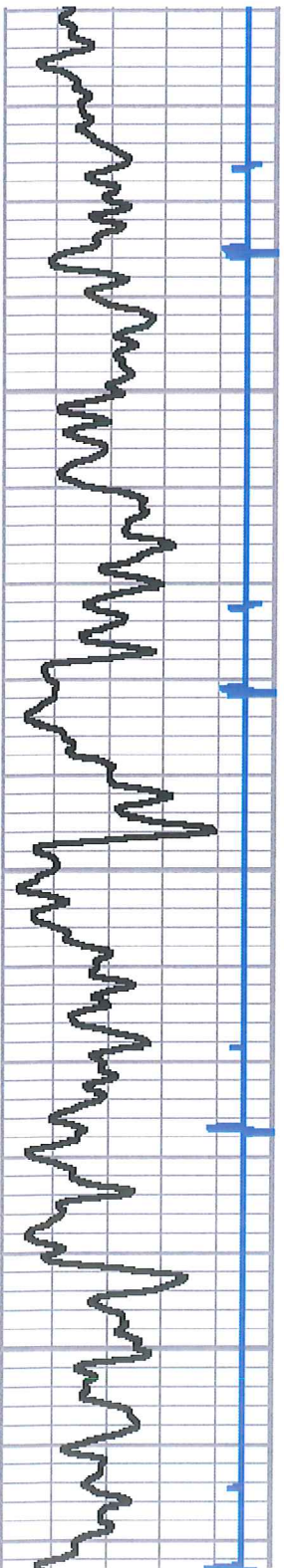
300

350

400



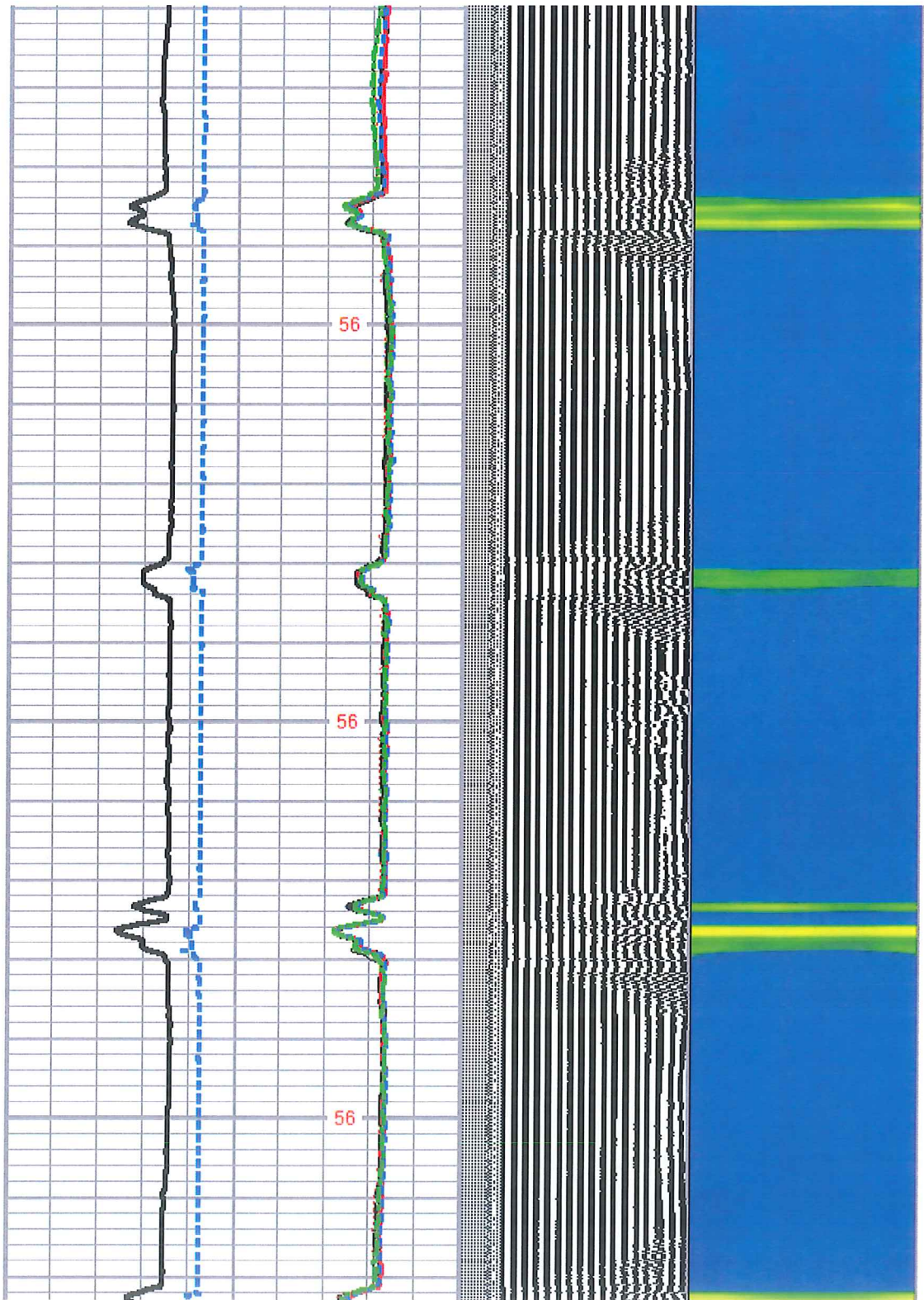




650

700

750

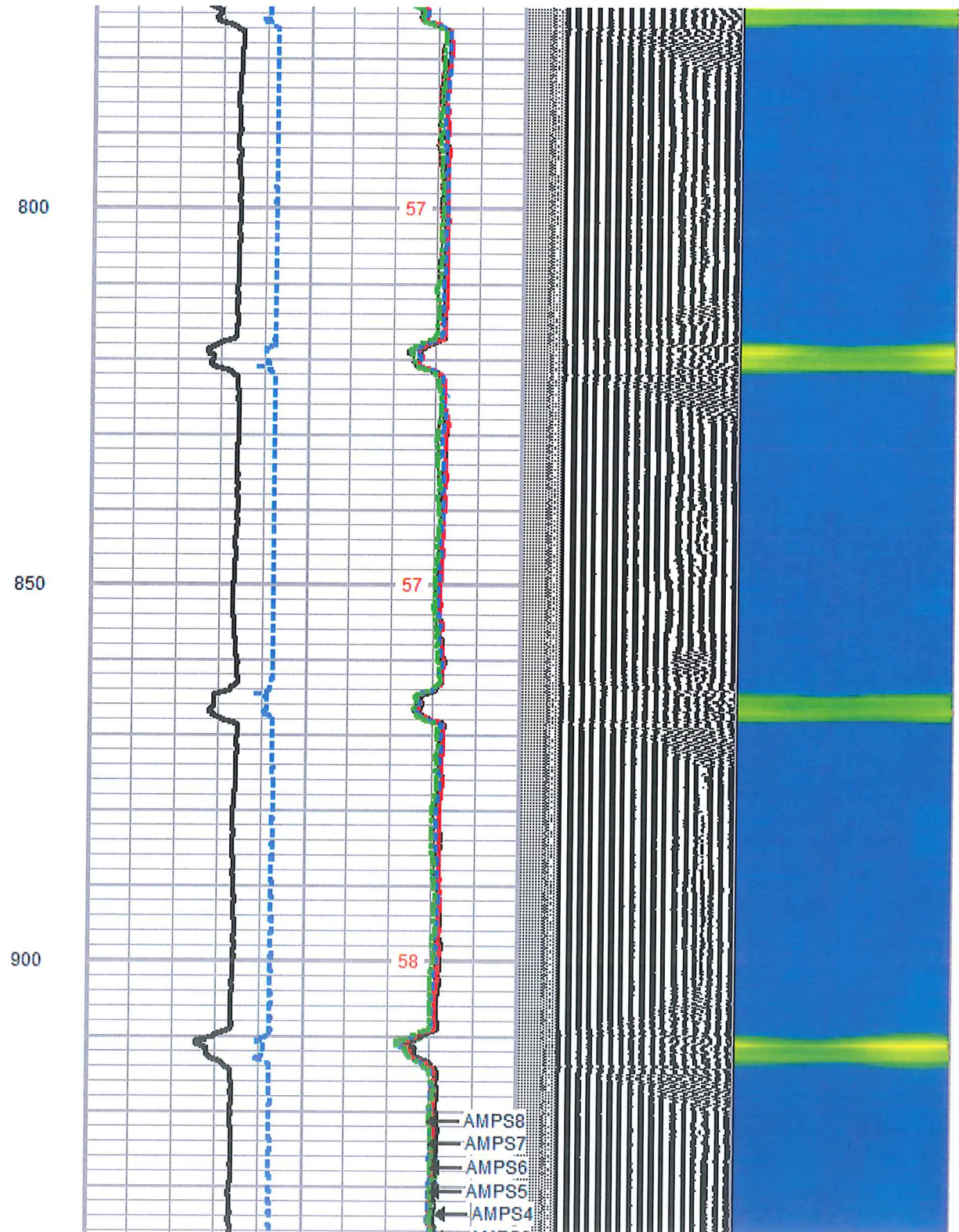
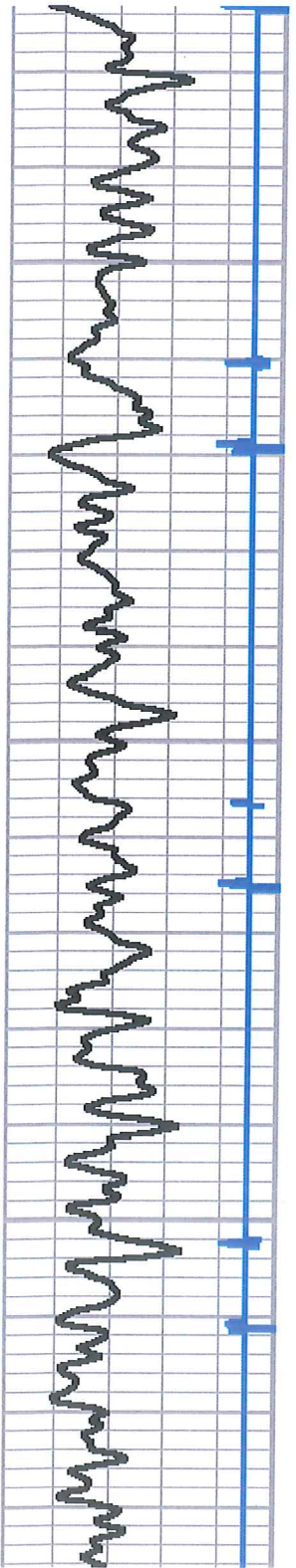


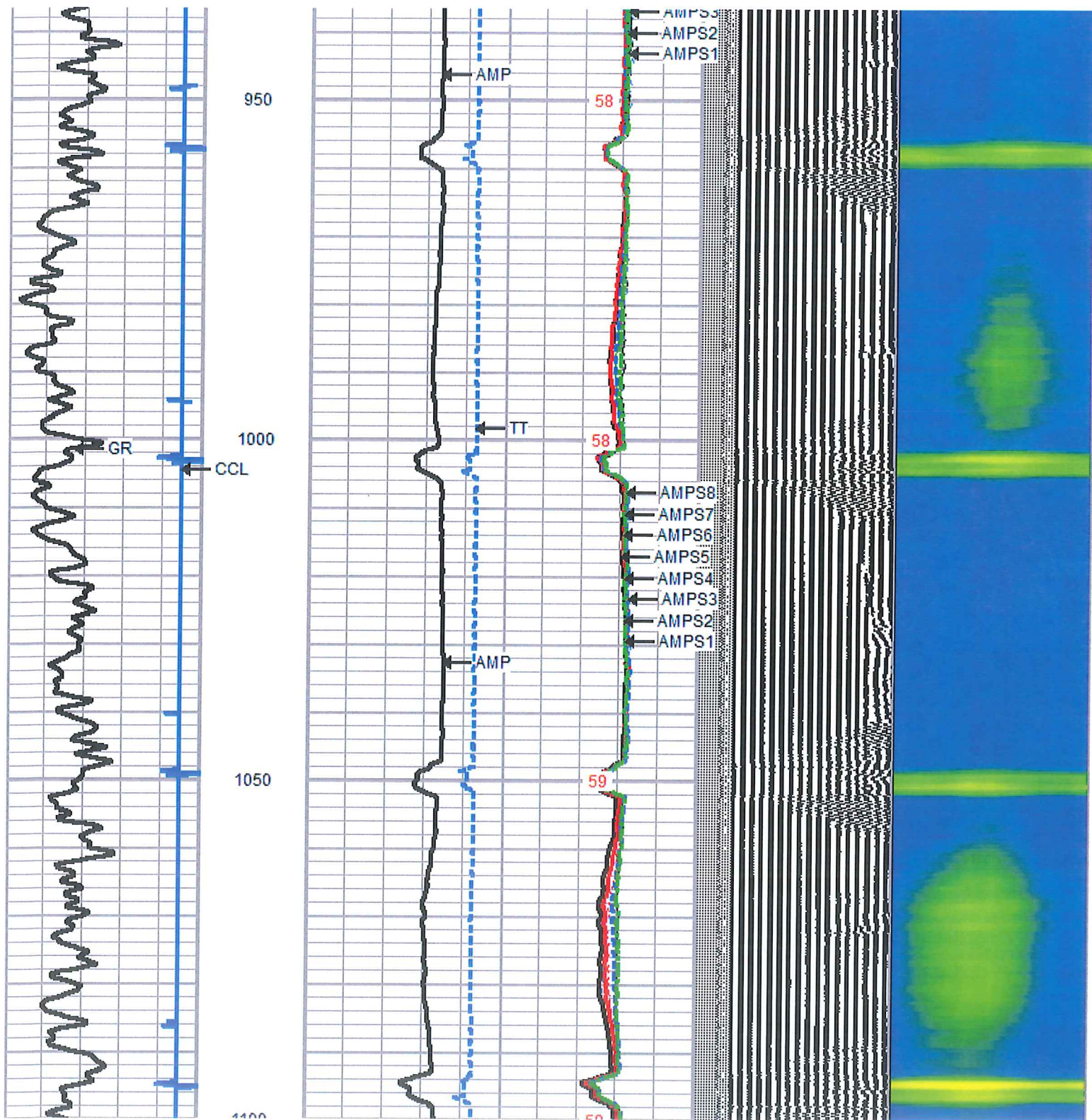
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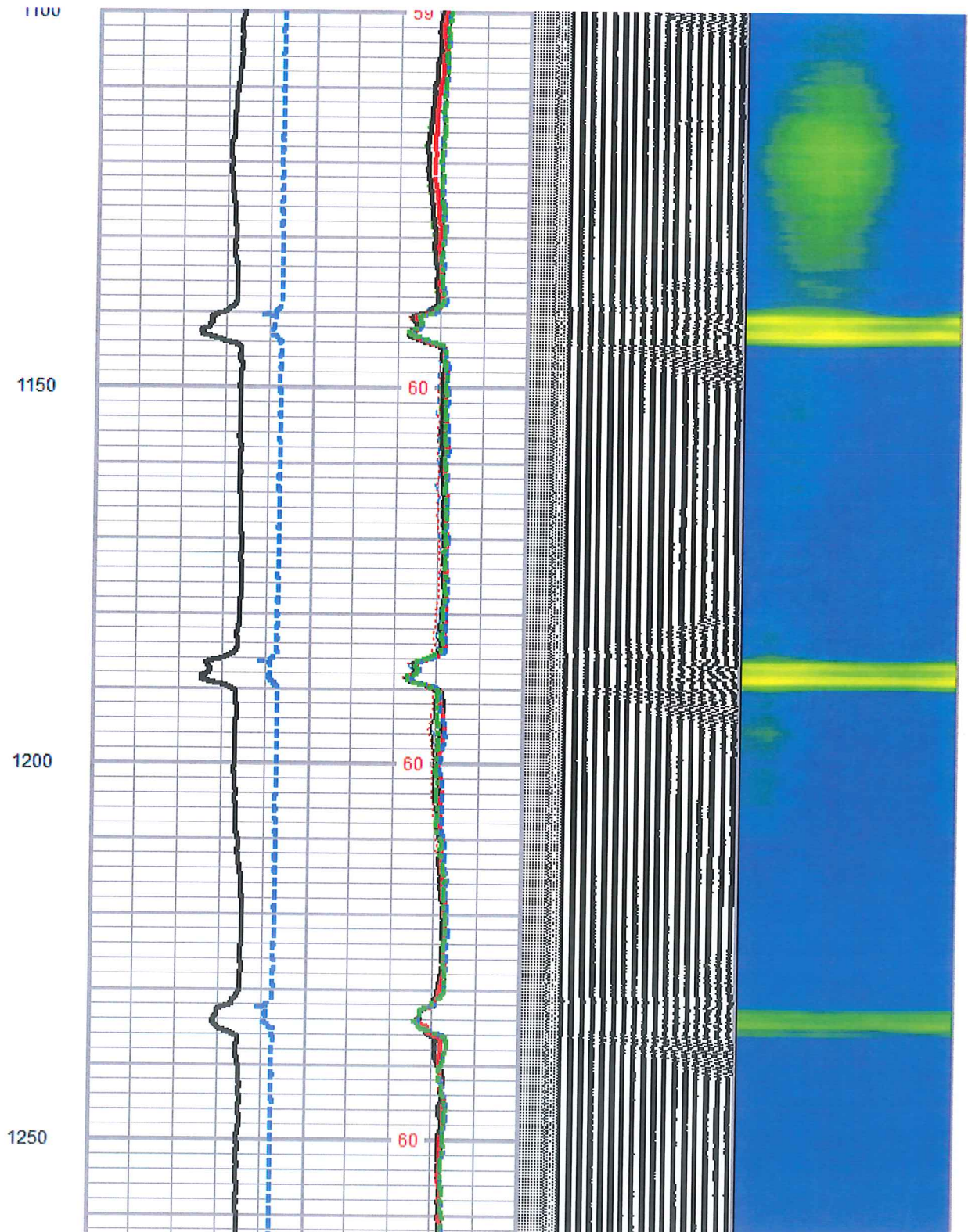
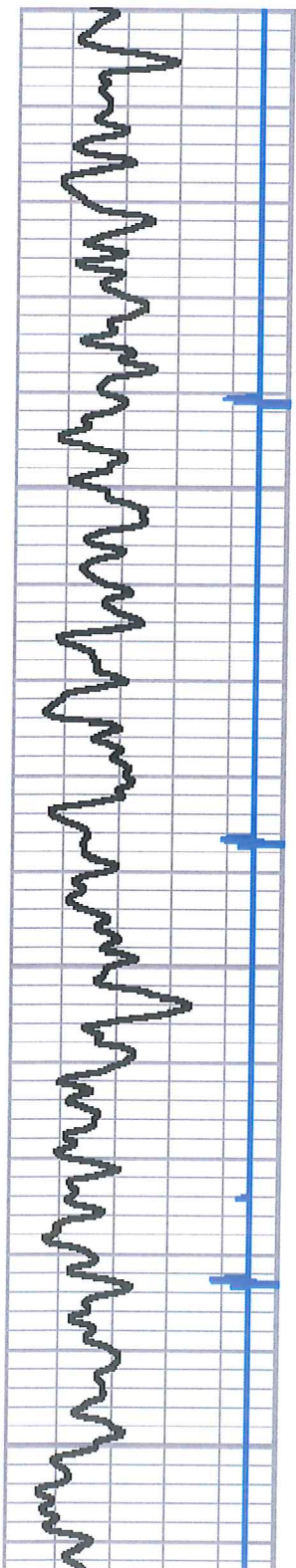
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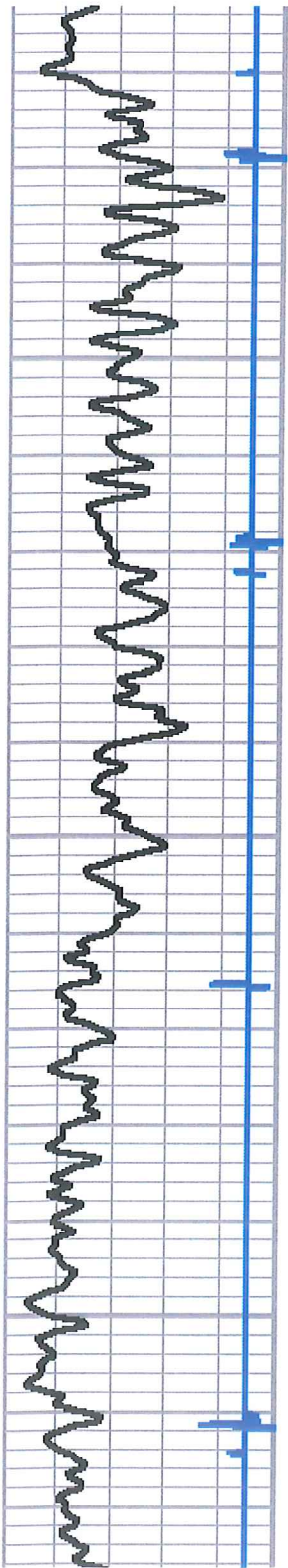
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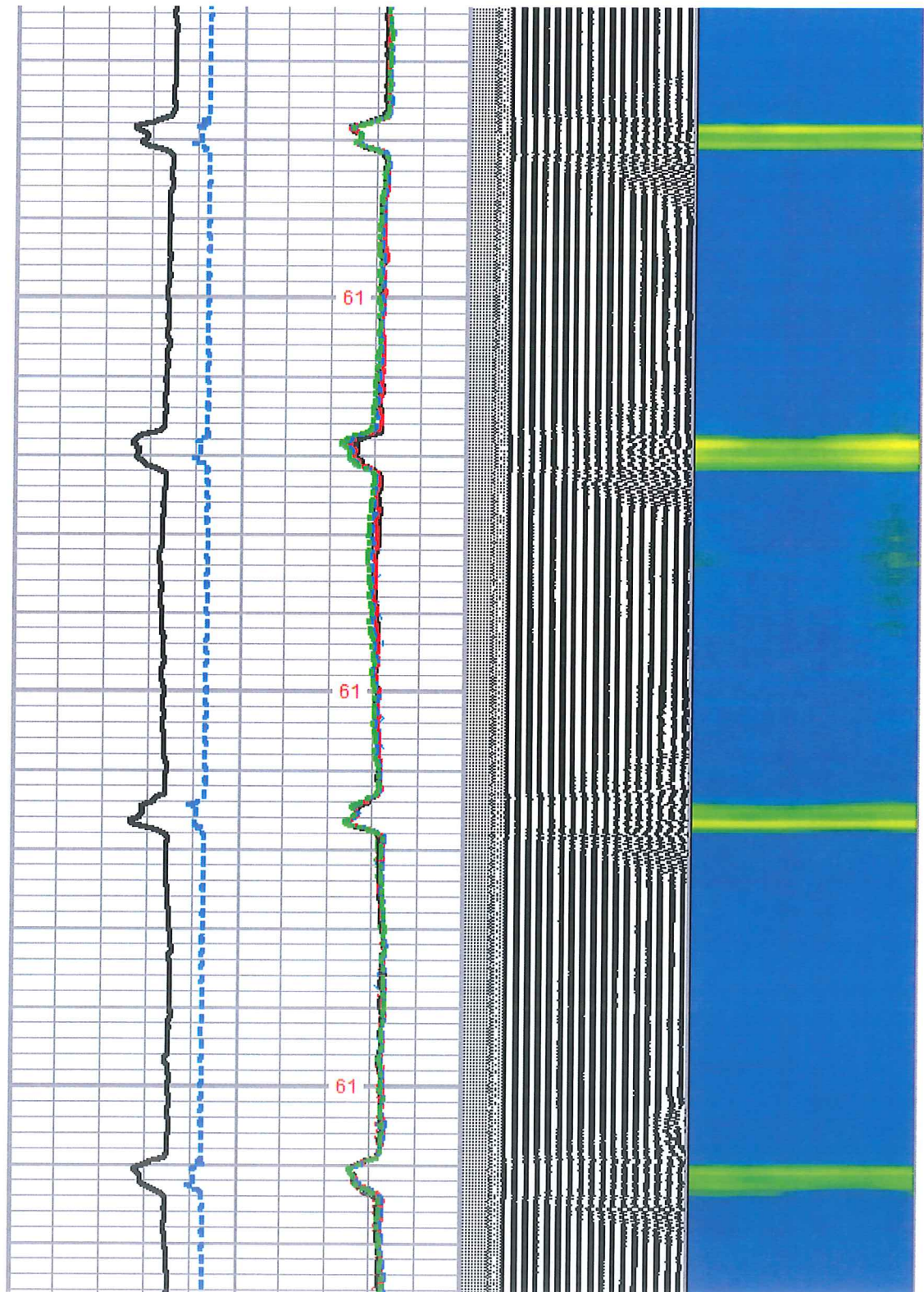




1300

1350

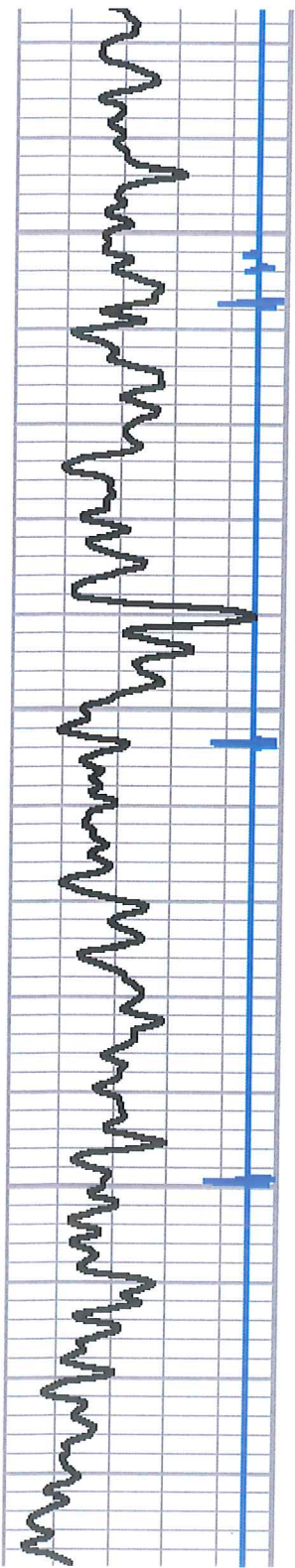
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61

61

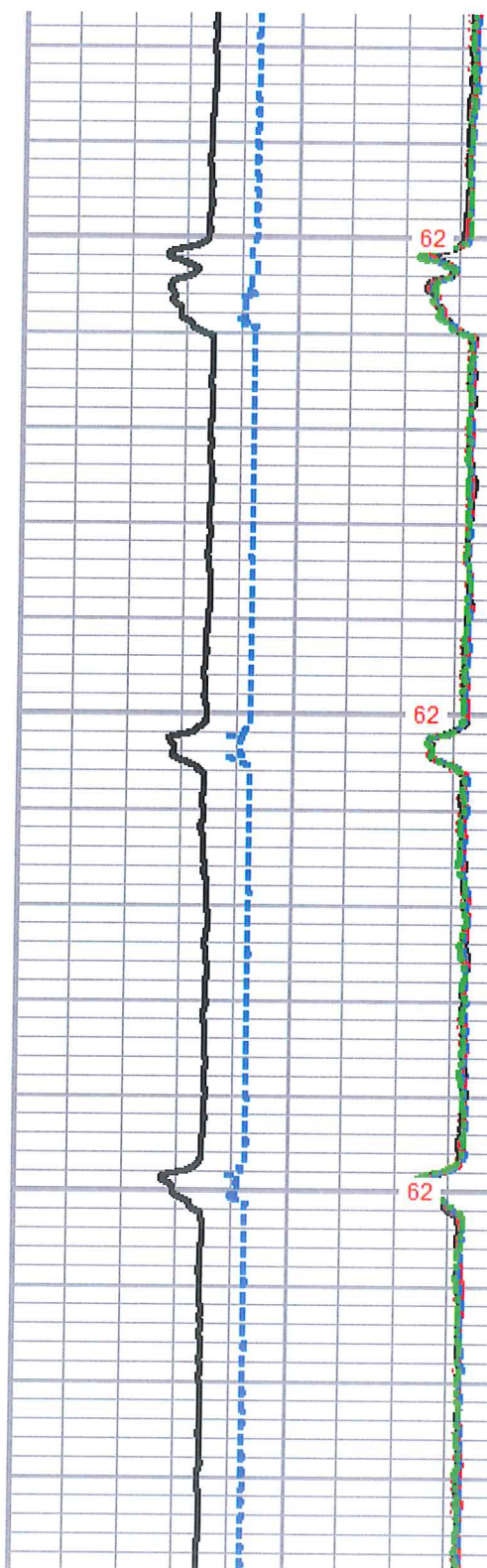
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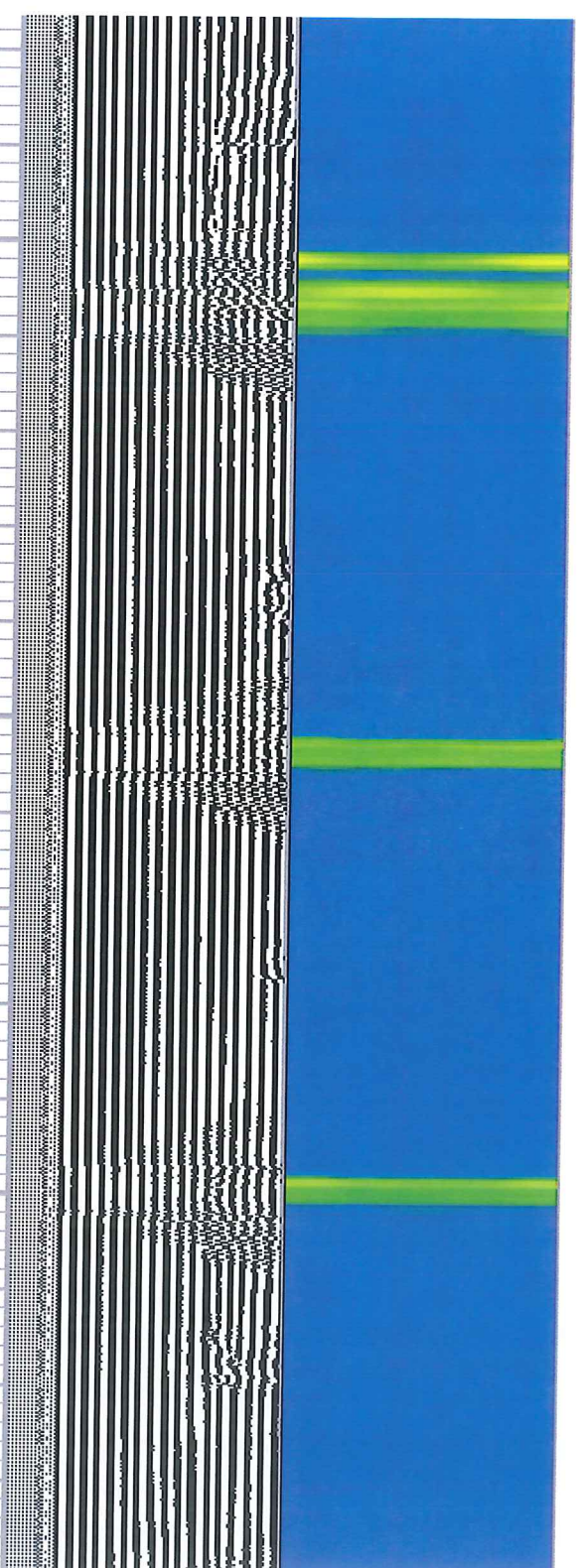
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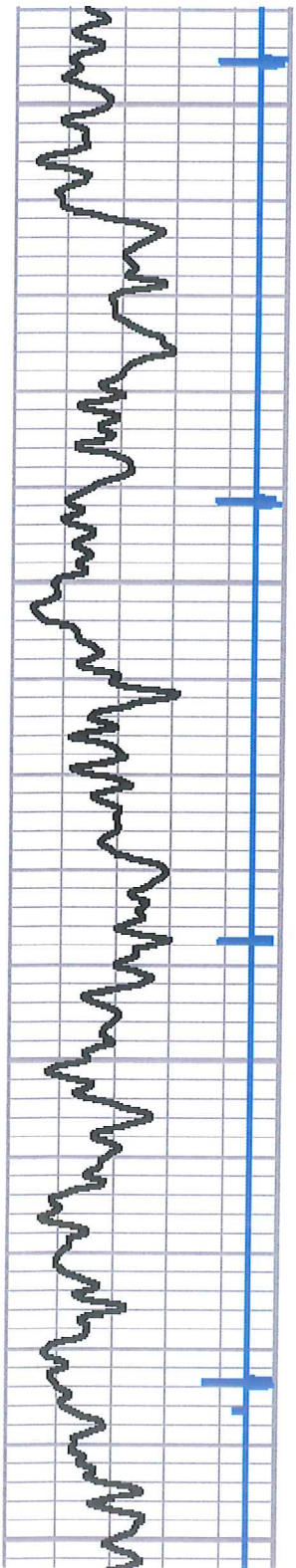


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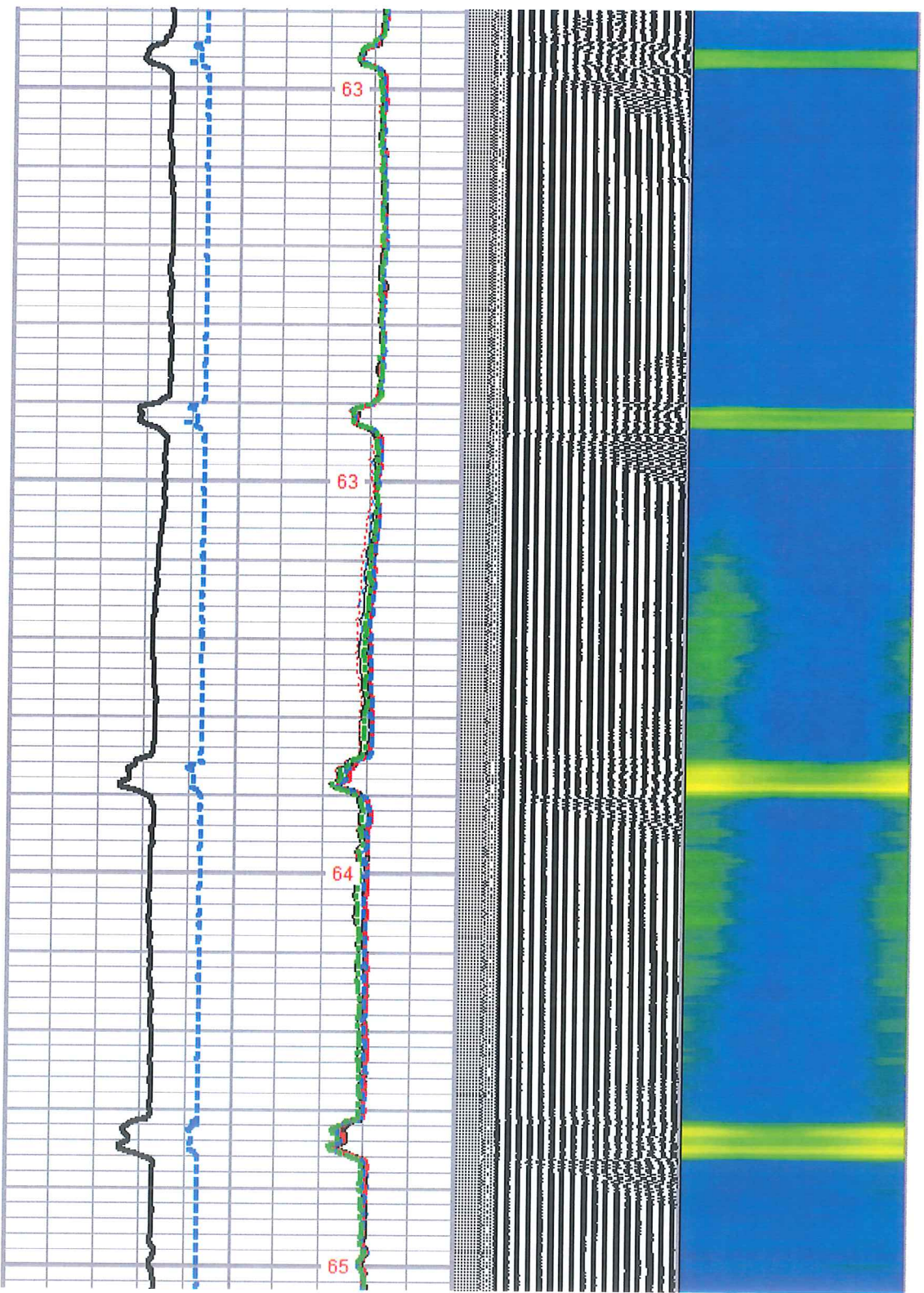
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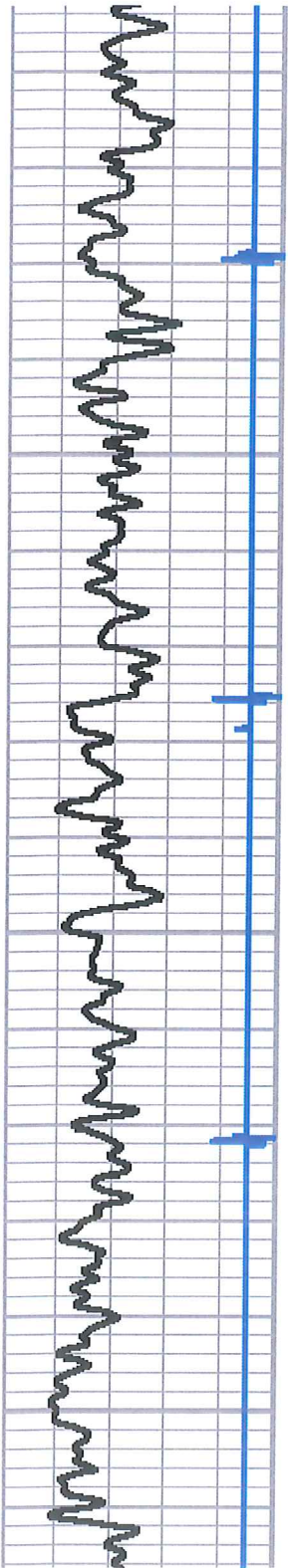
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1600  
1650  
1700  
1750

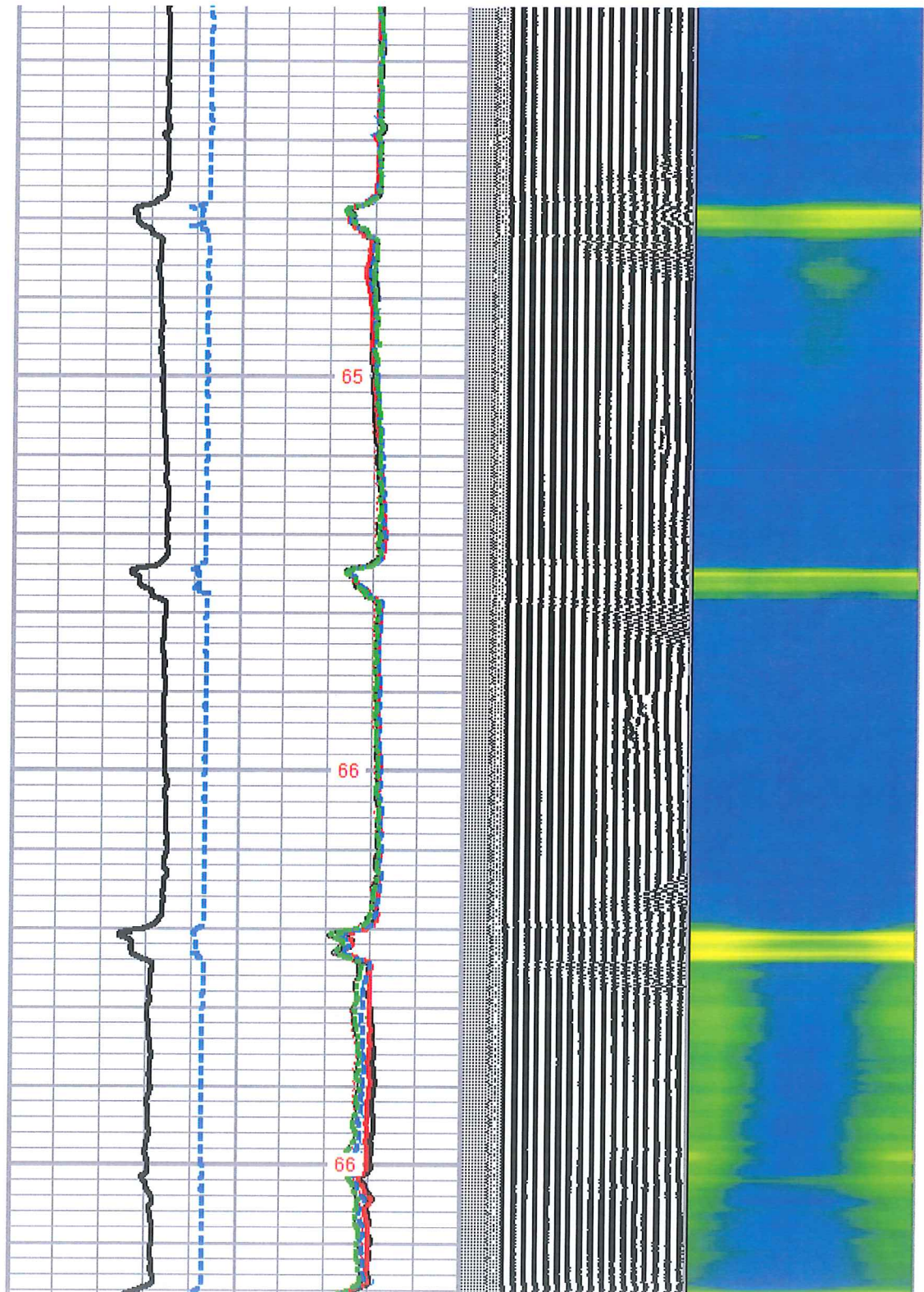


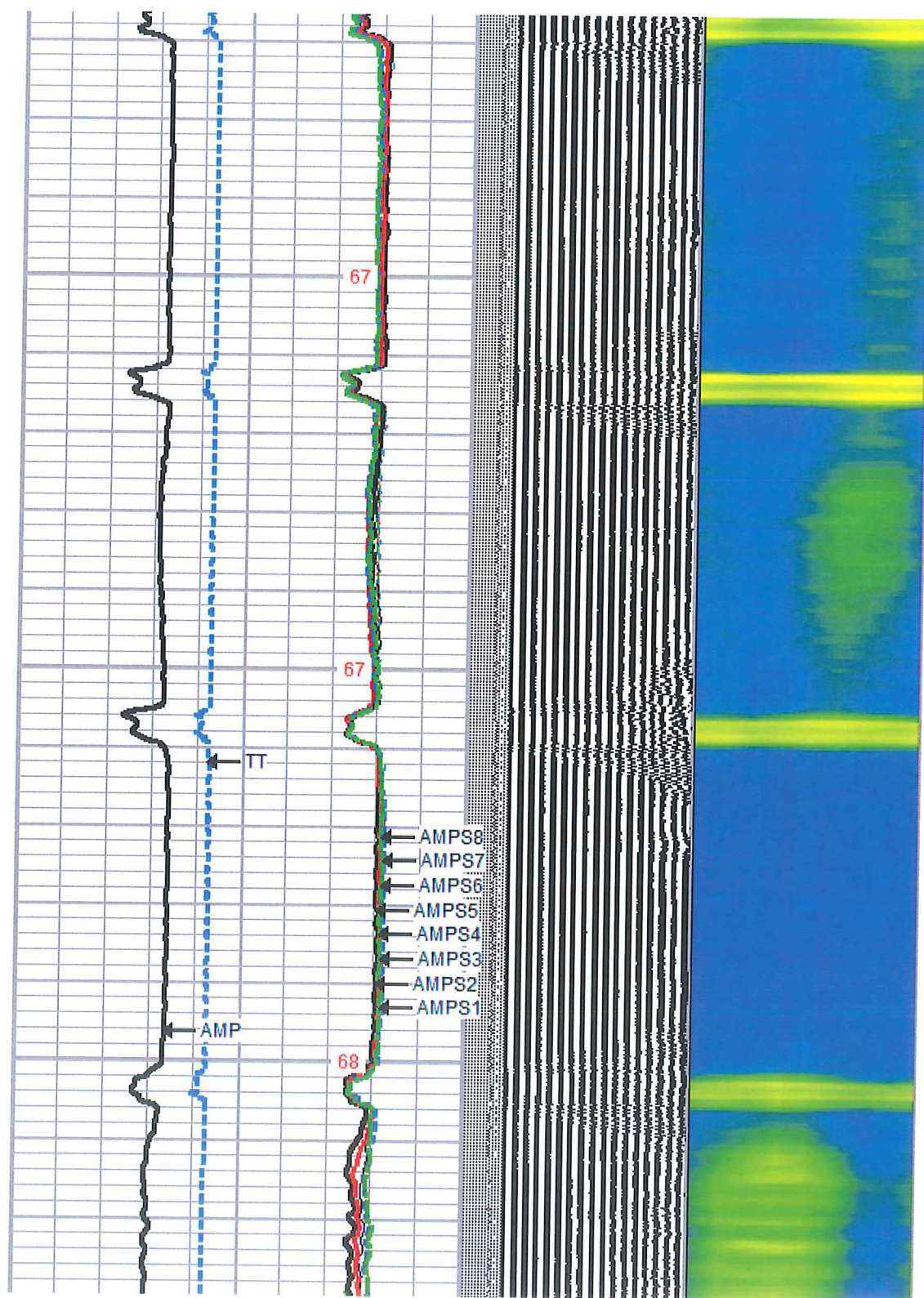
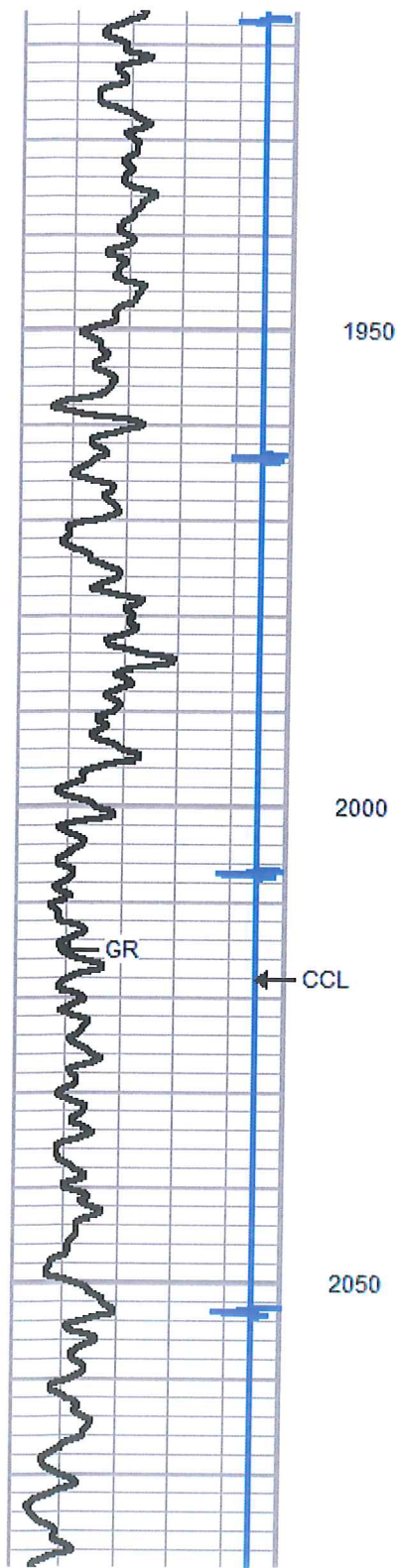


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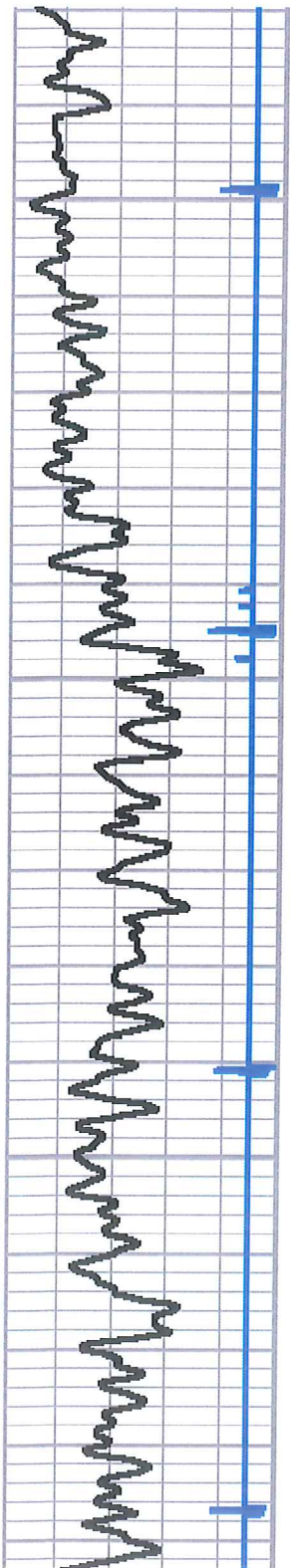
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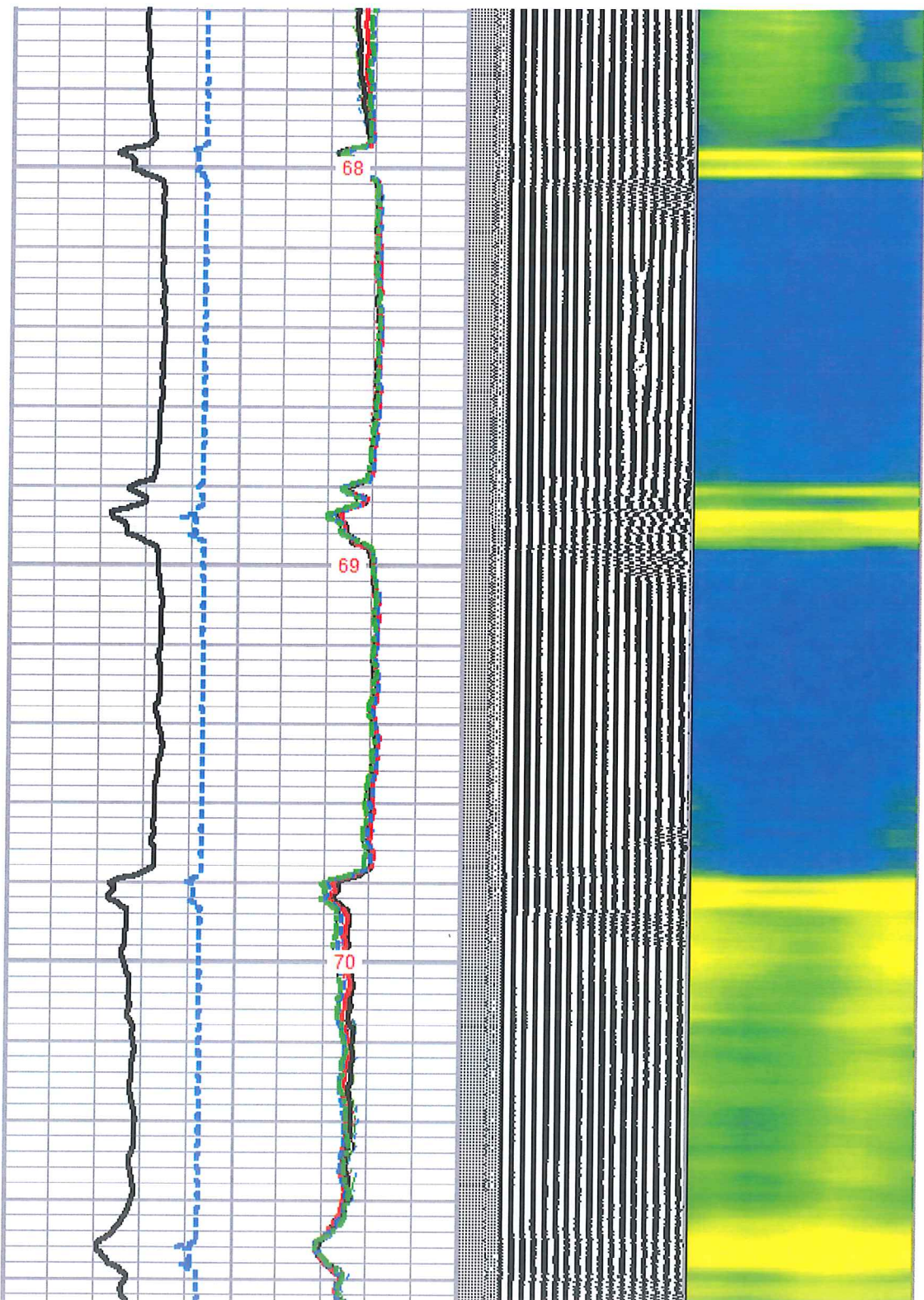




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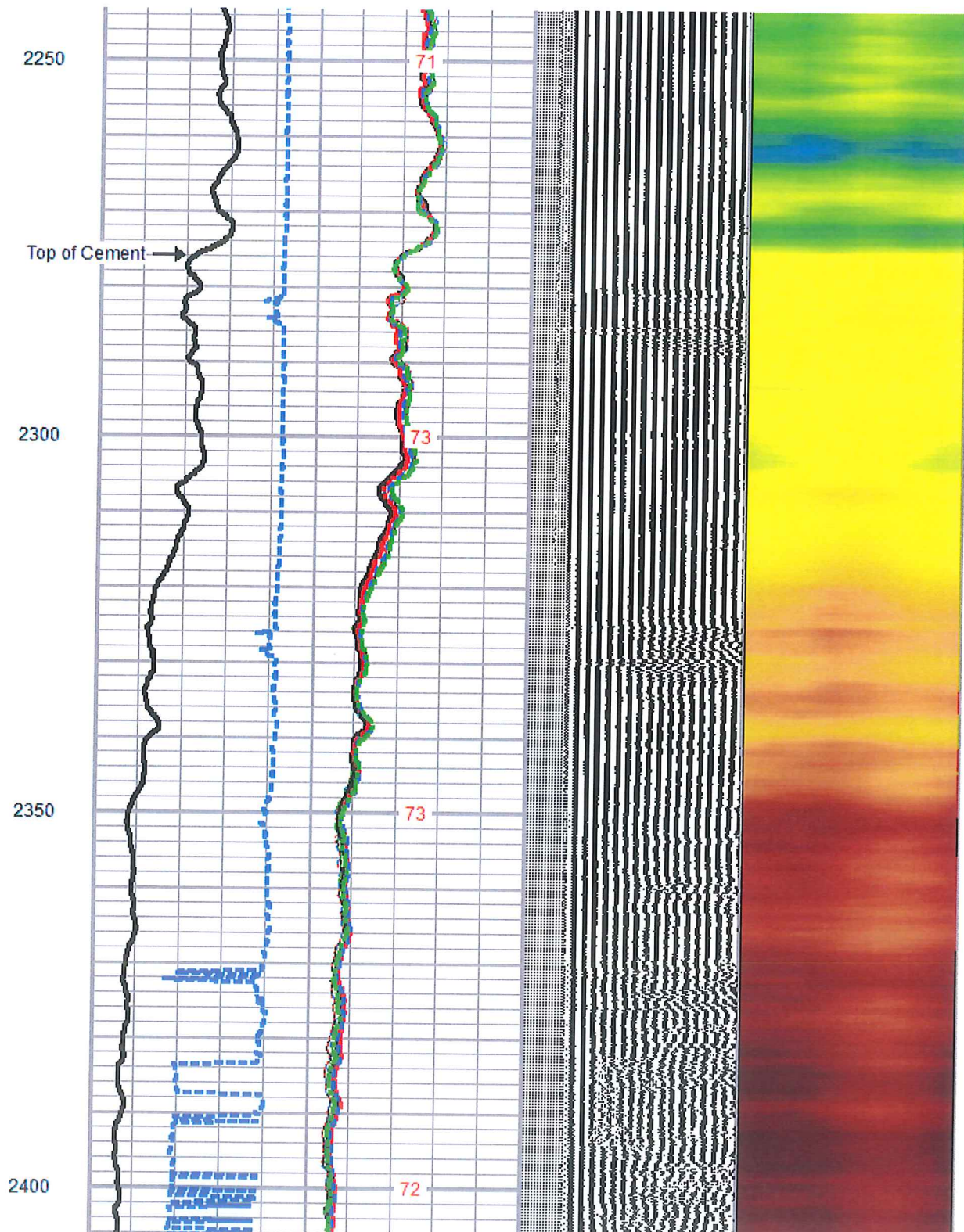
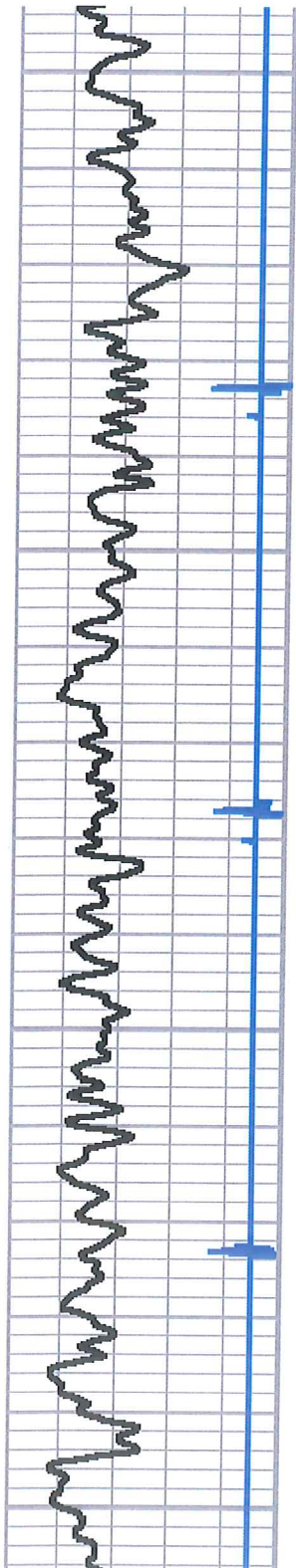
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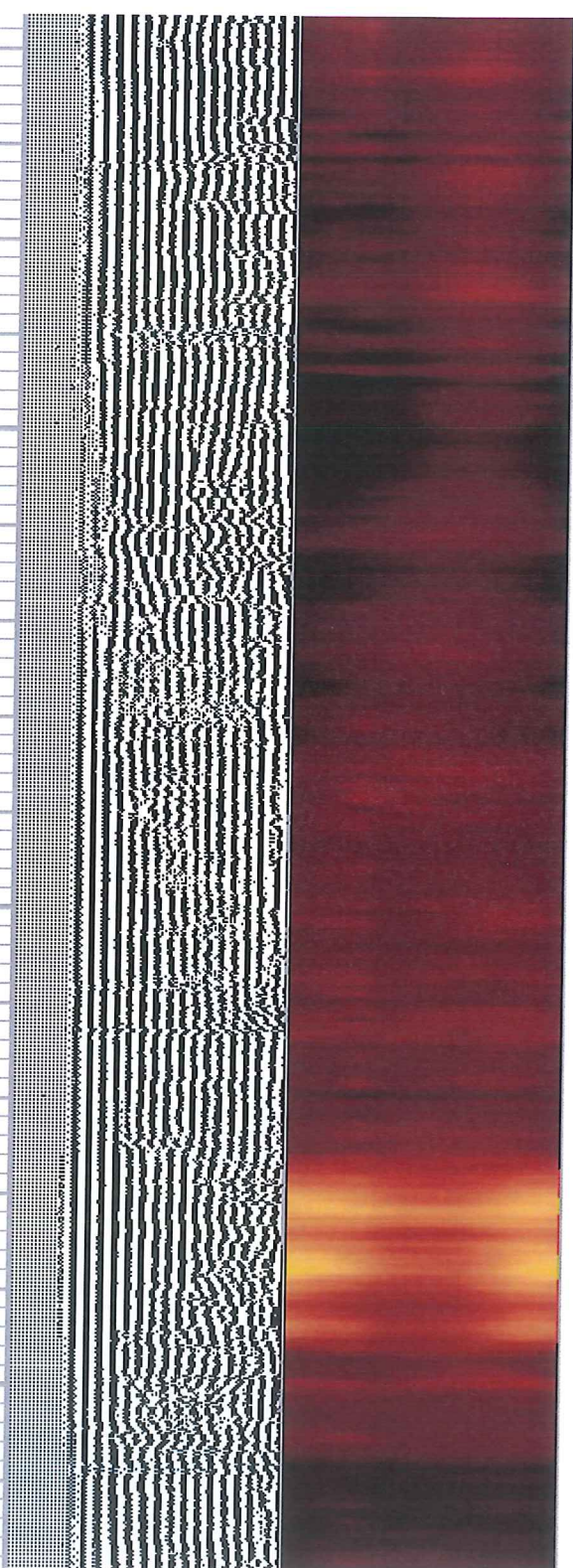
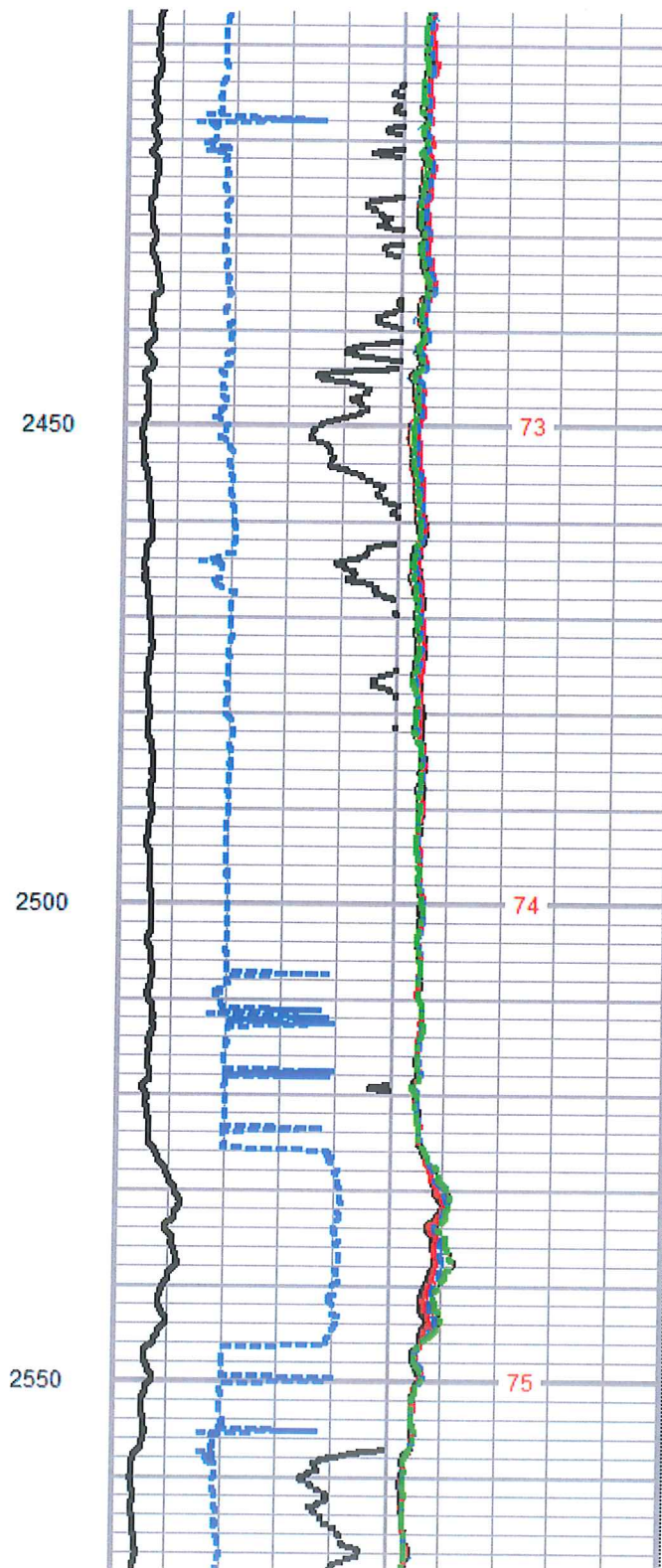
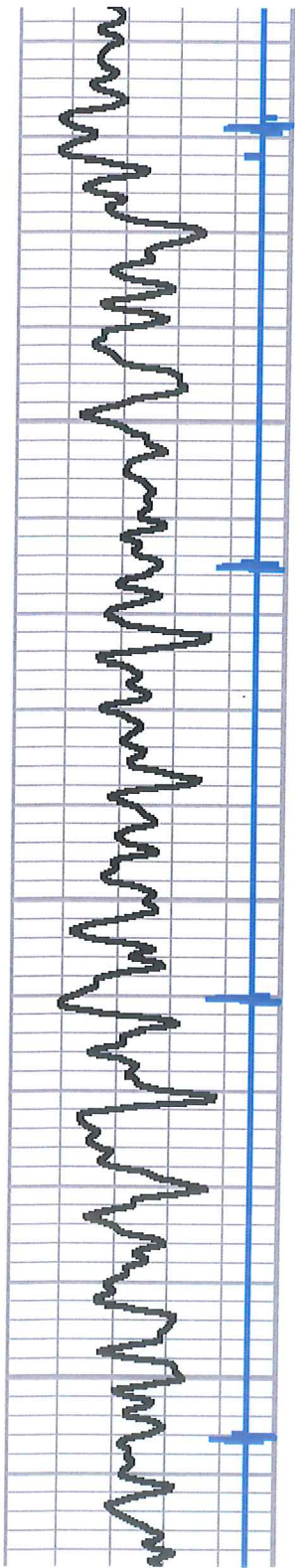


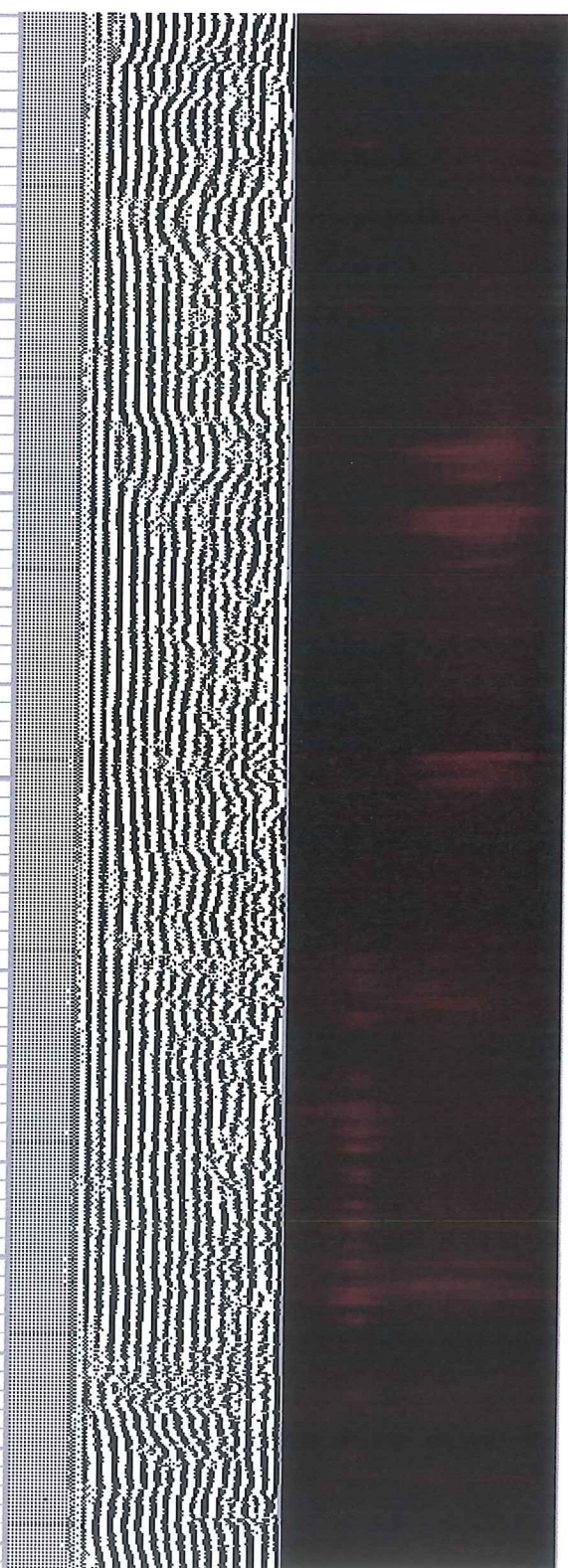
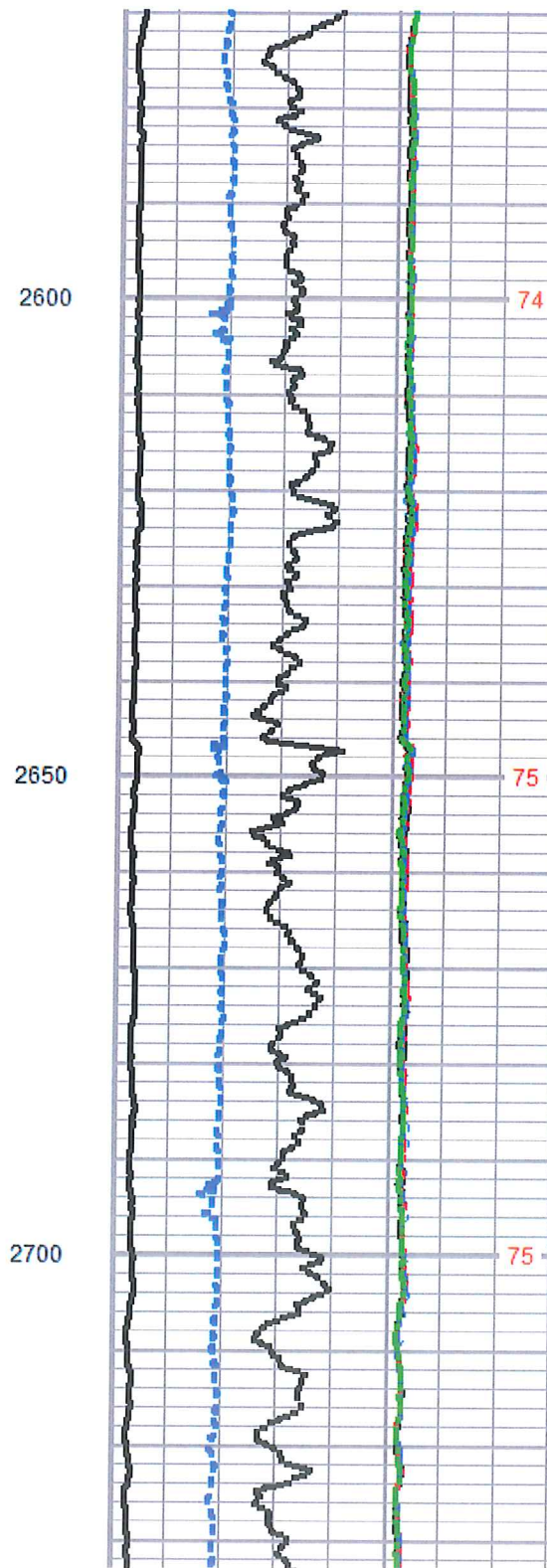
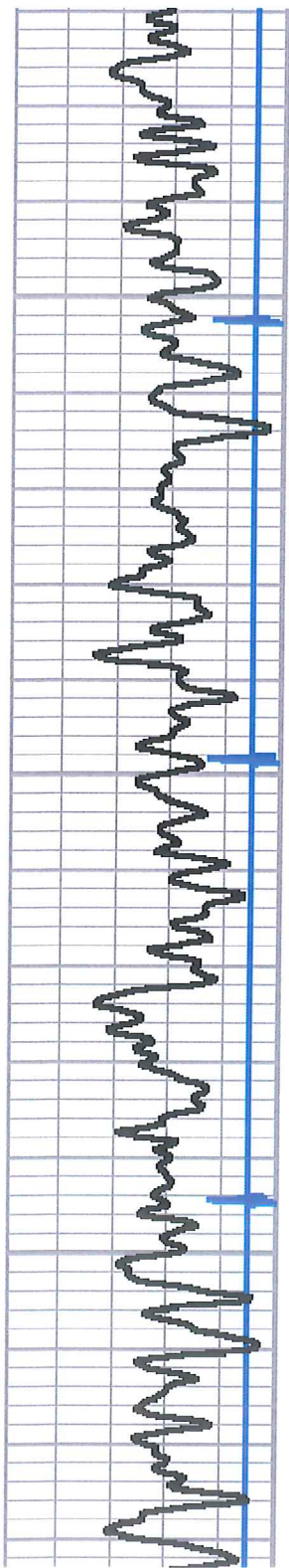
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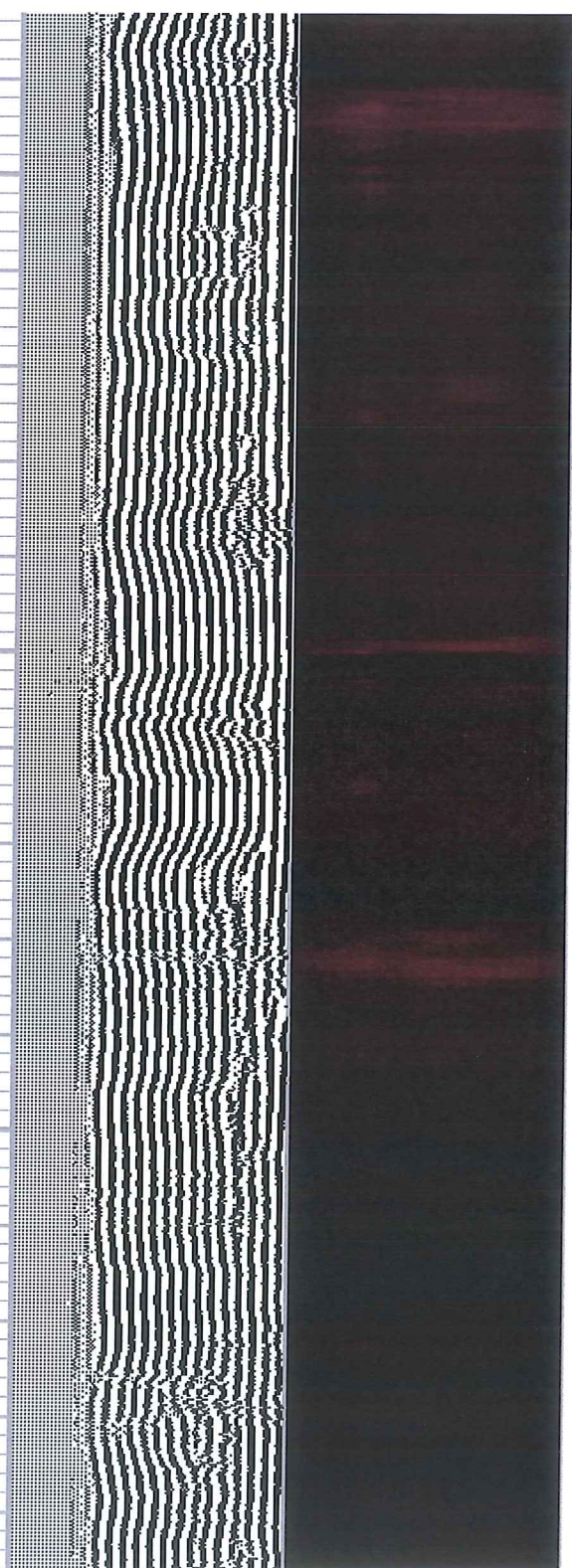
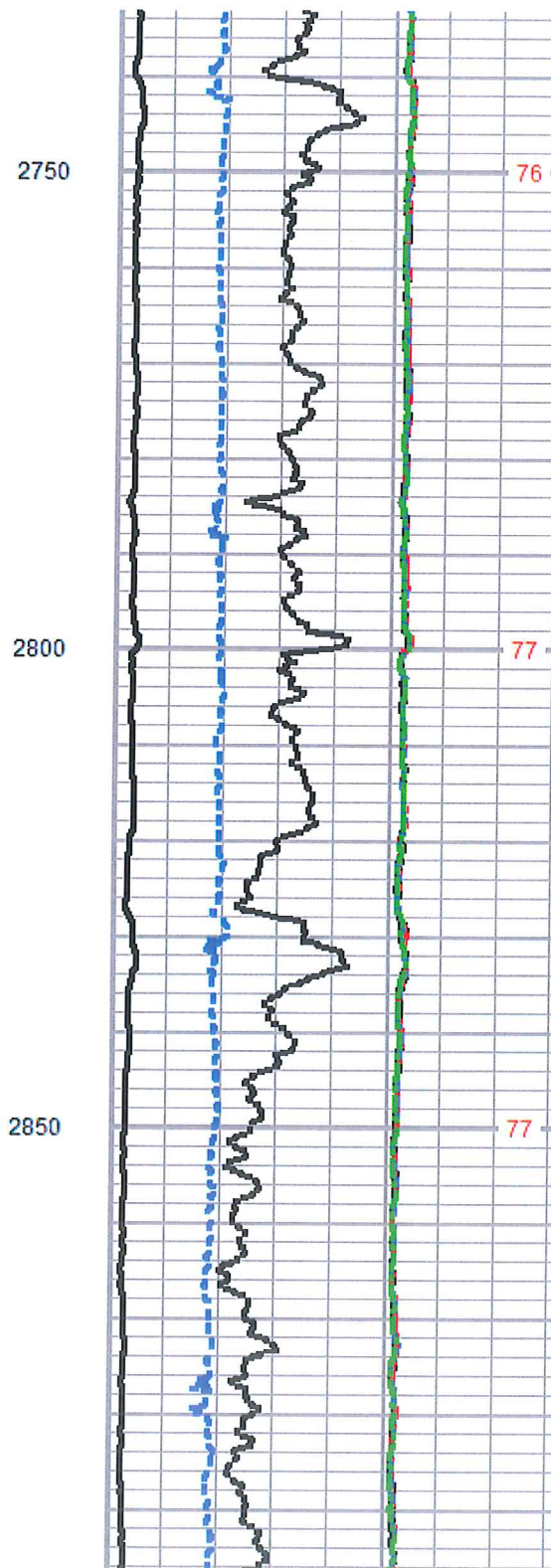
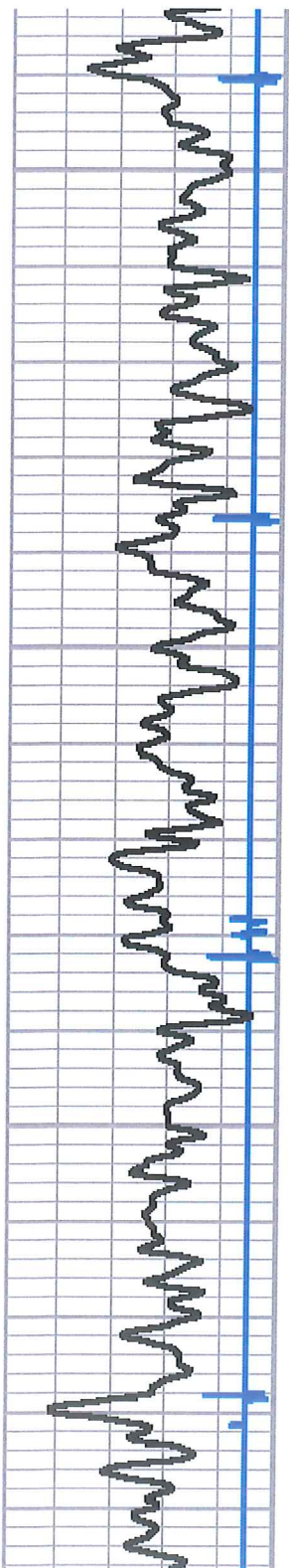
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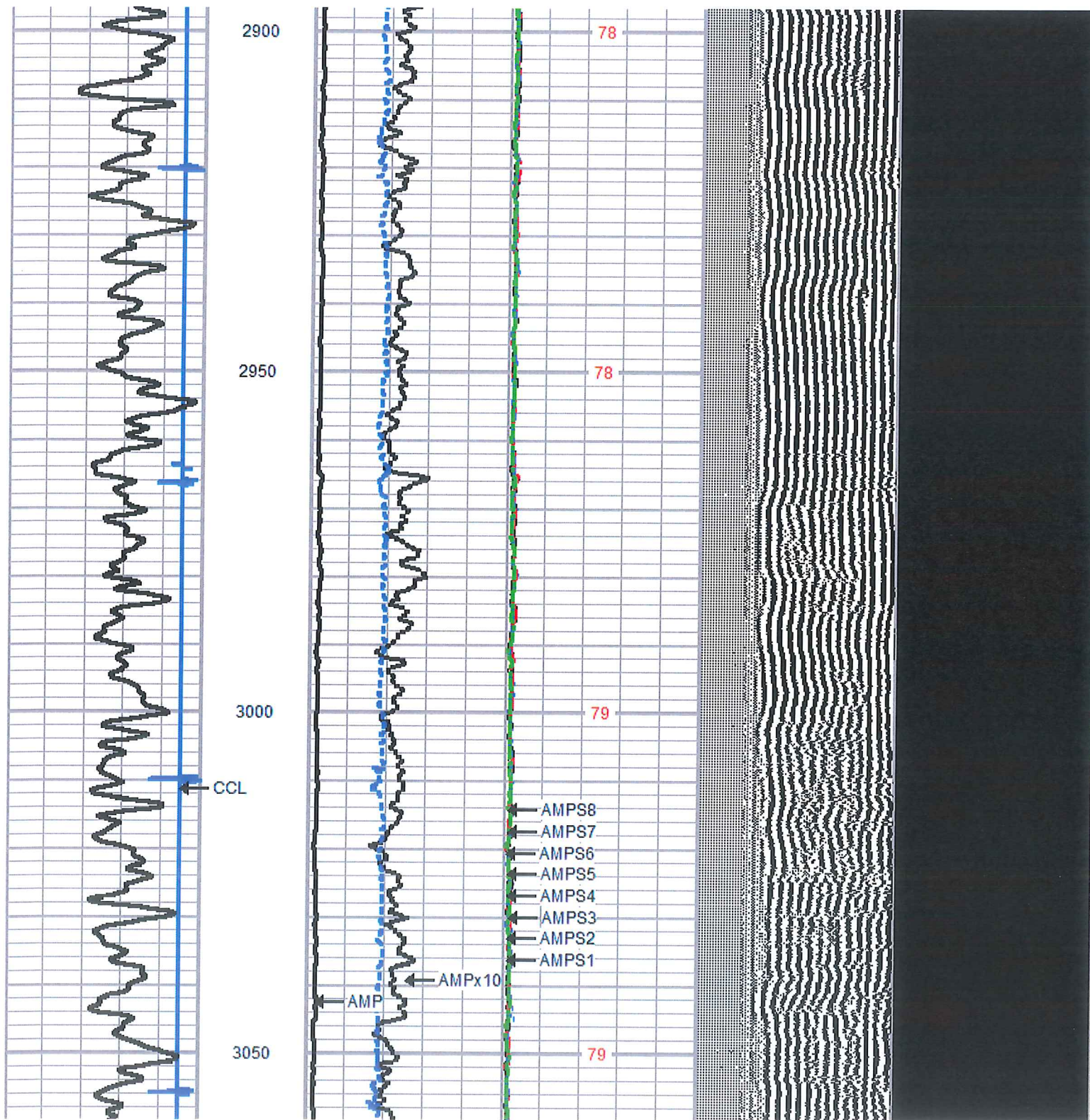
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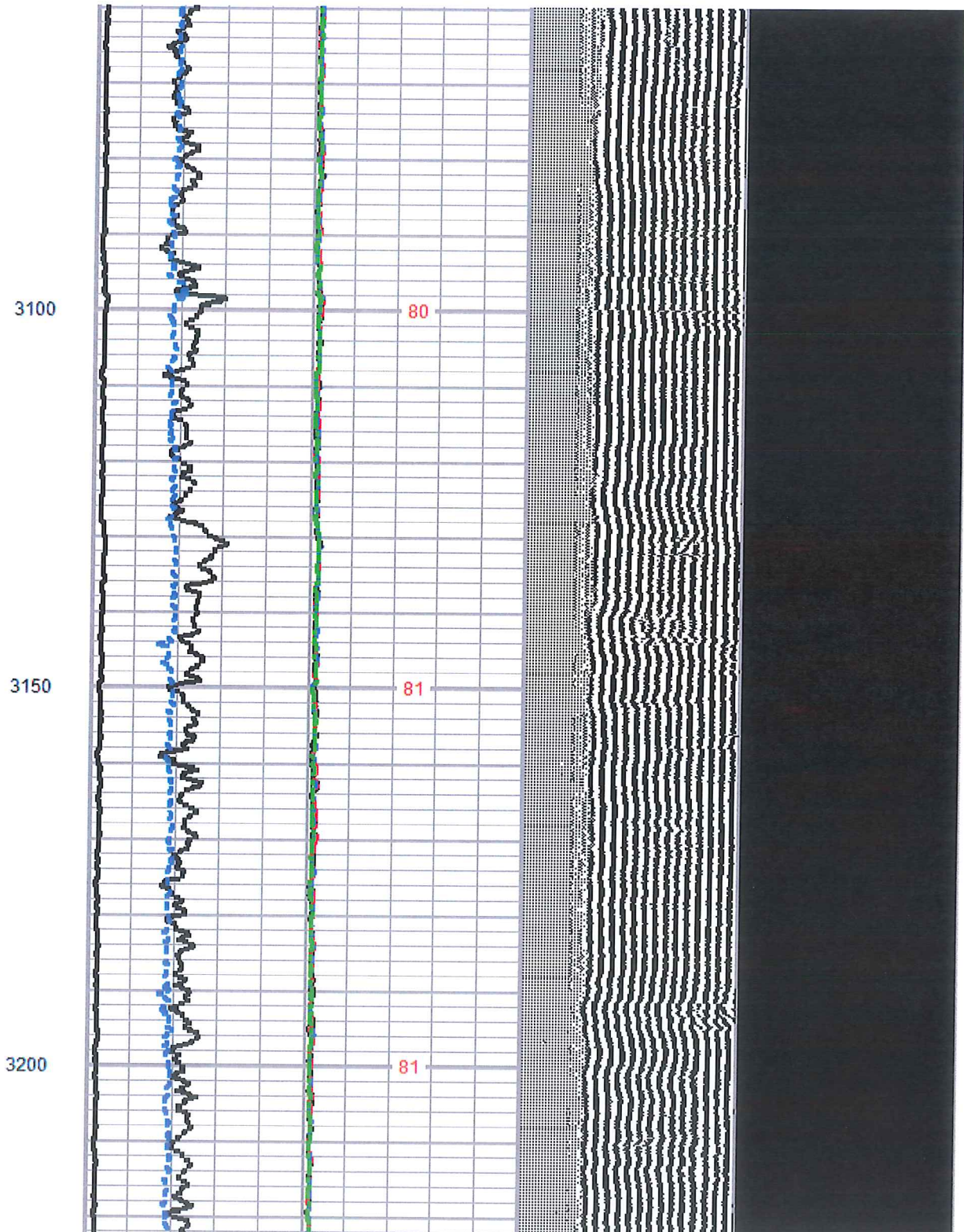
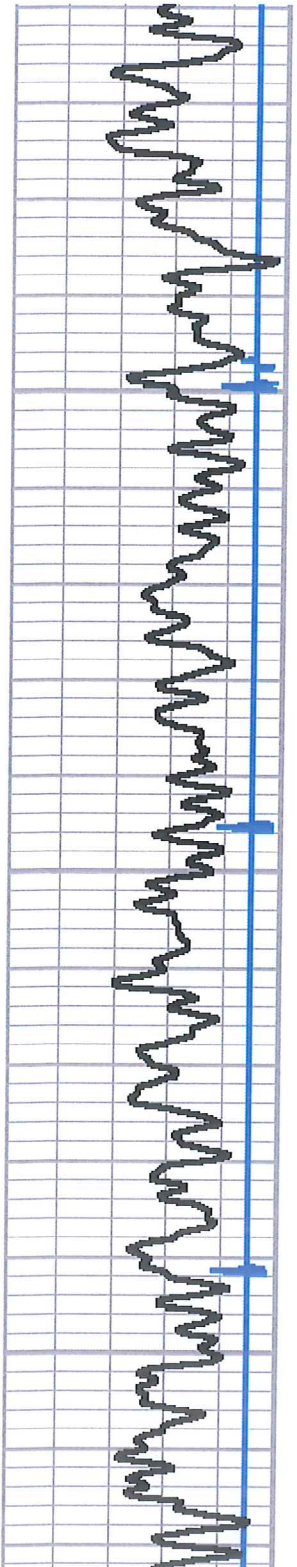


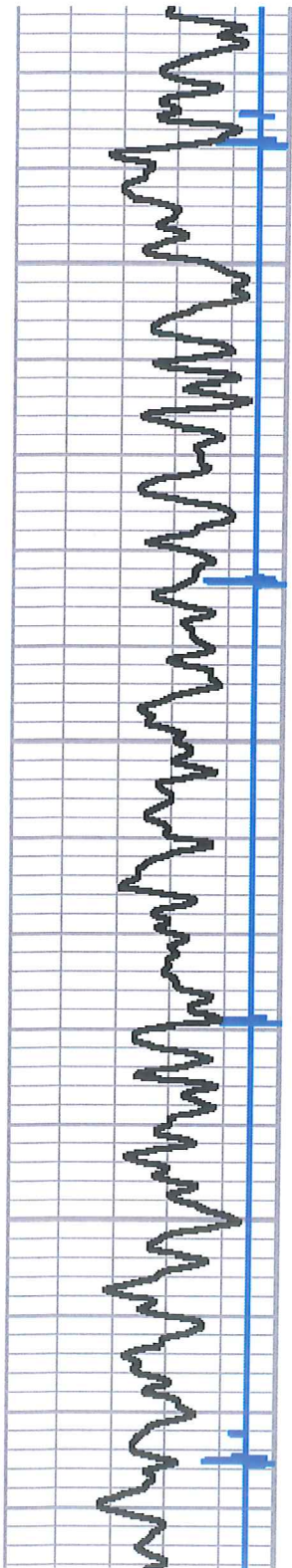








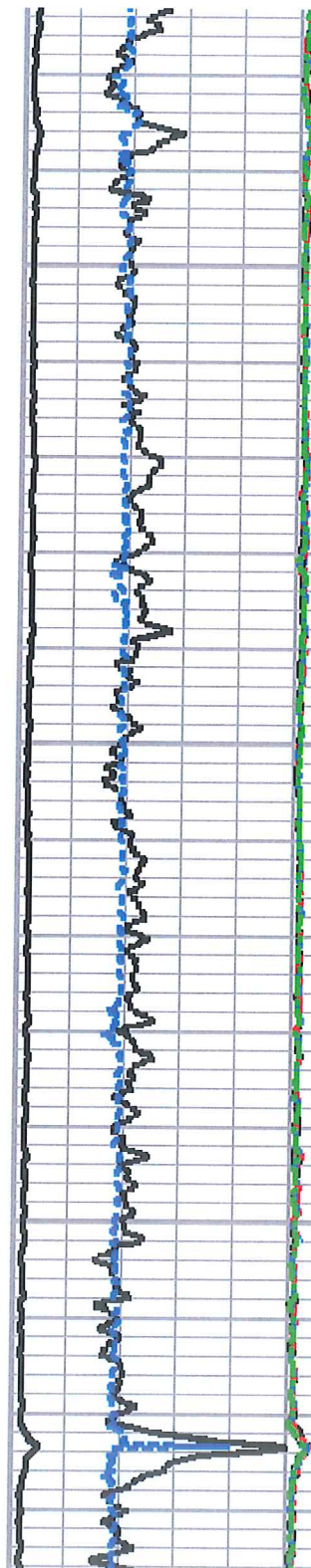




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3300

3350



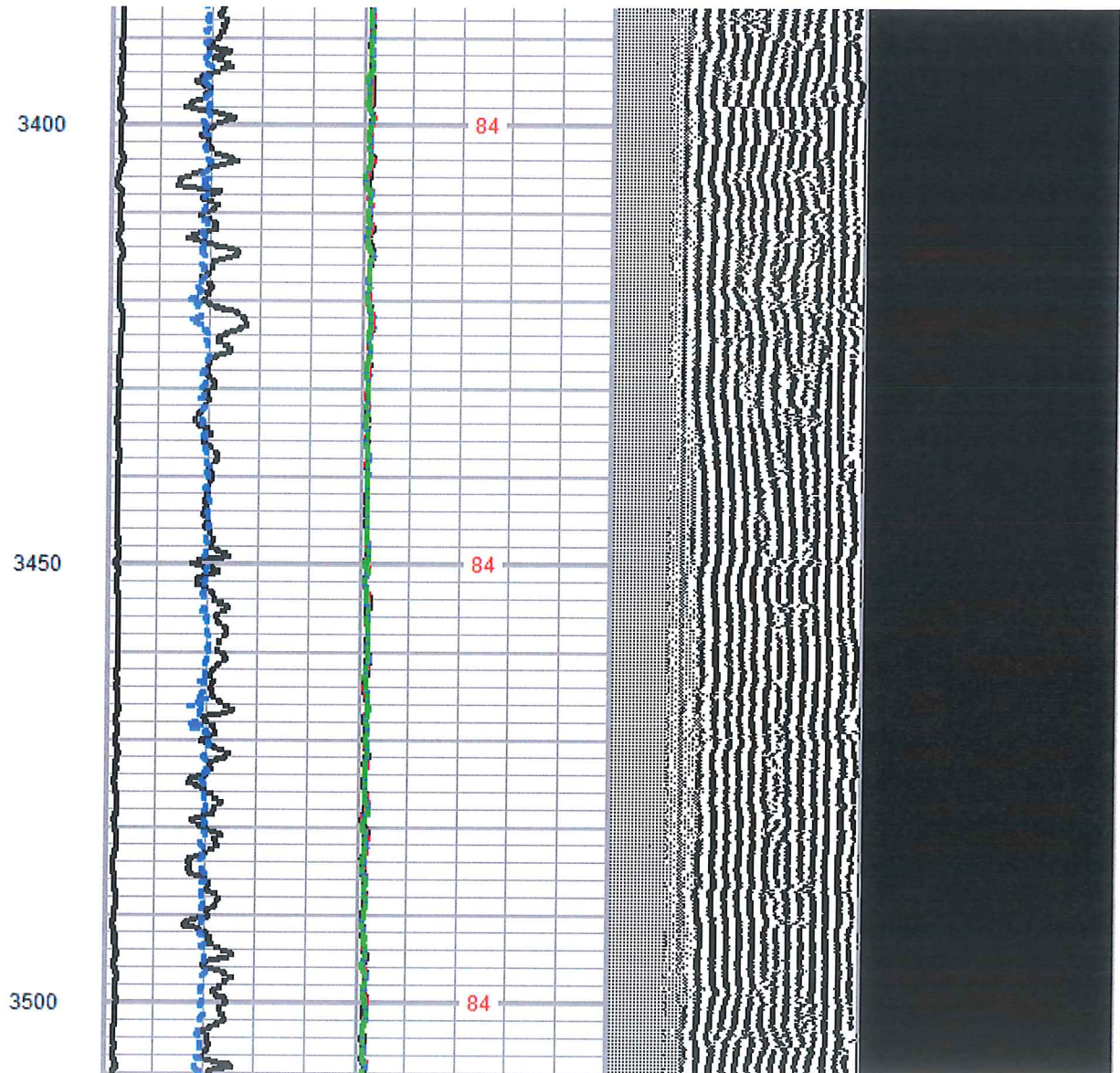
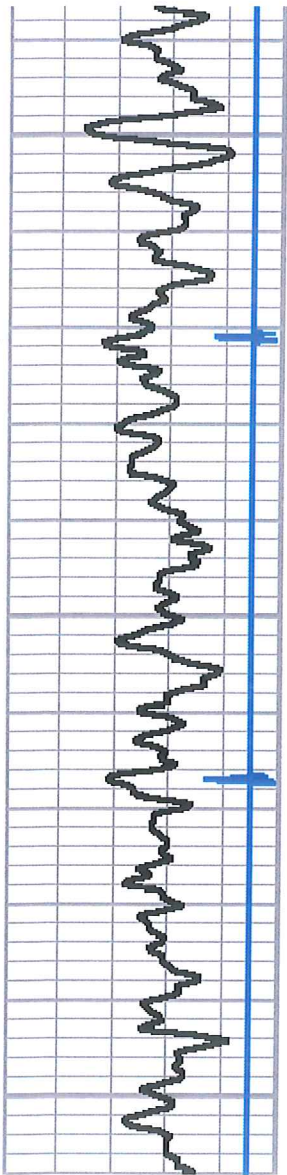
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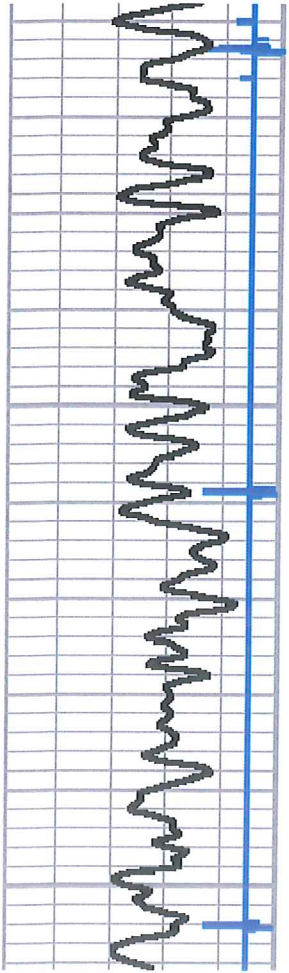
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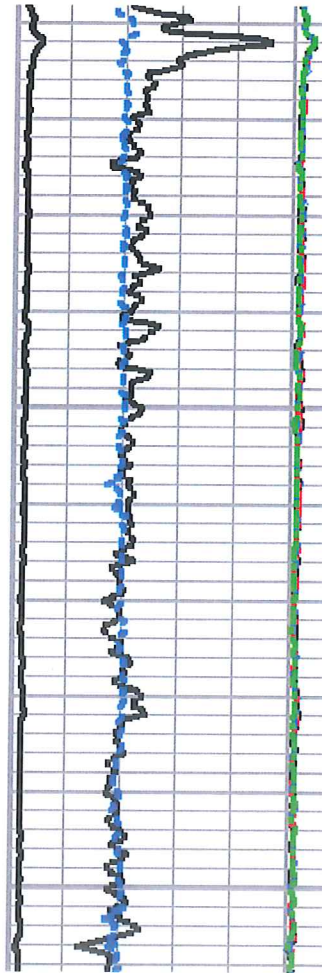






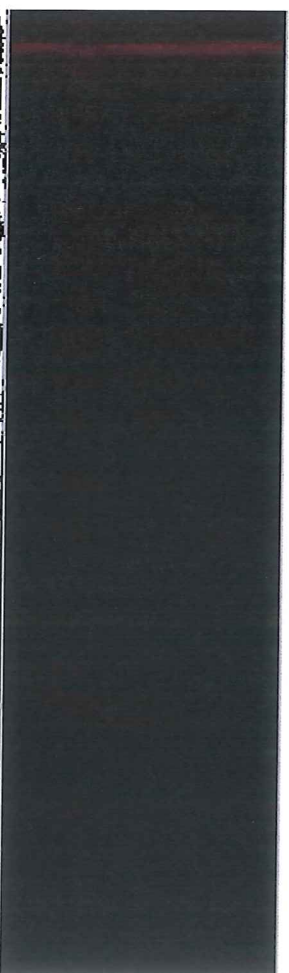
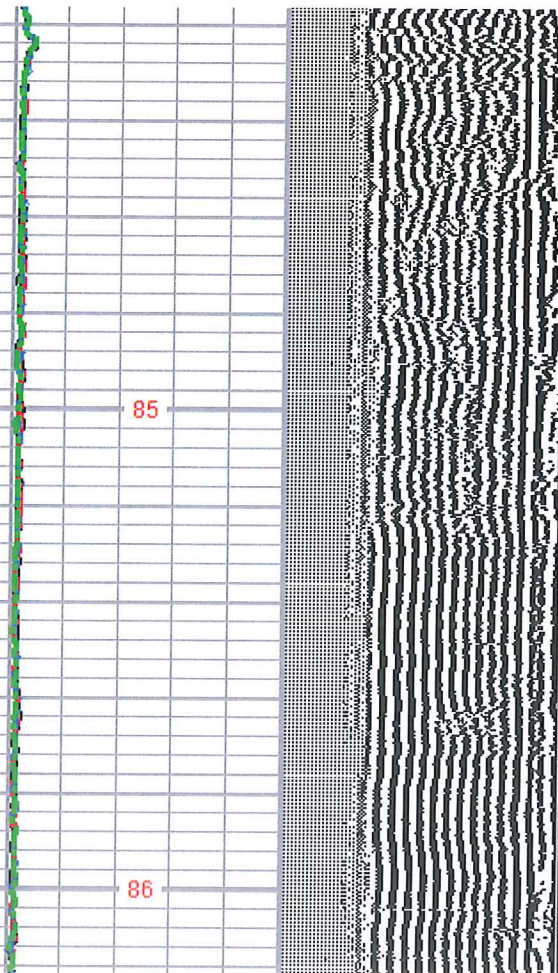
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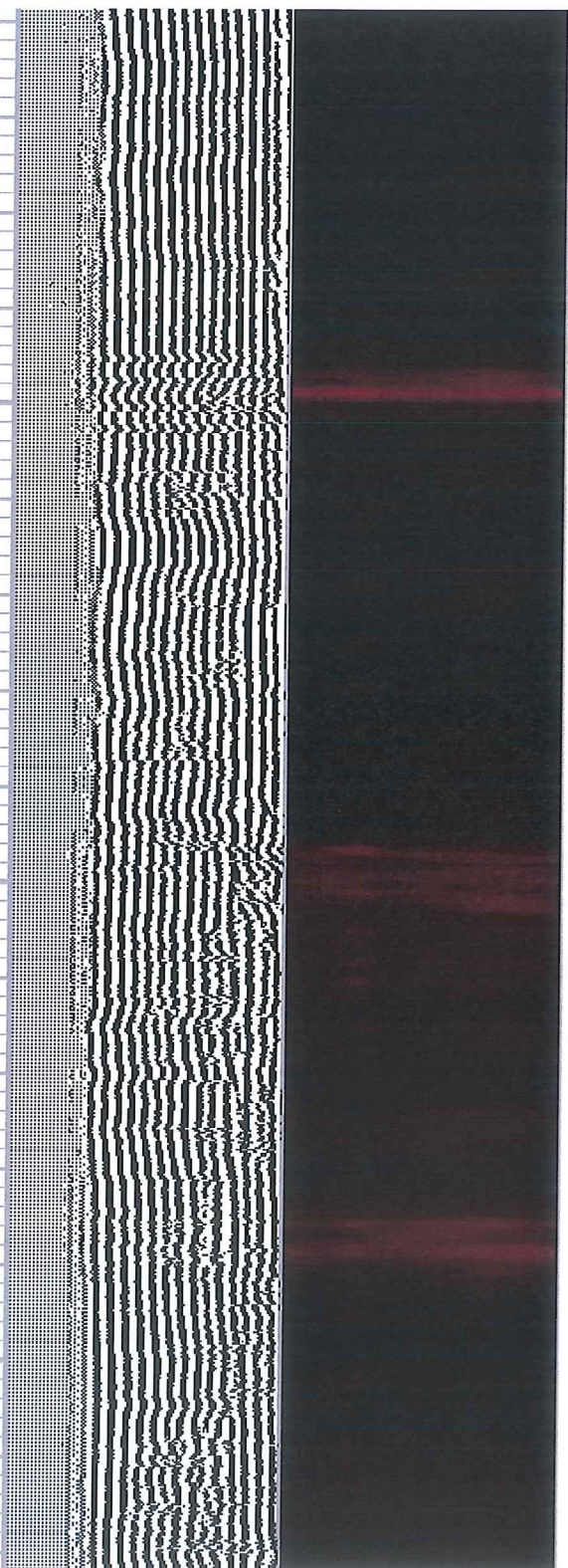
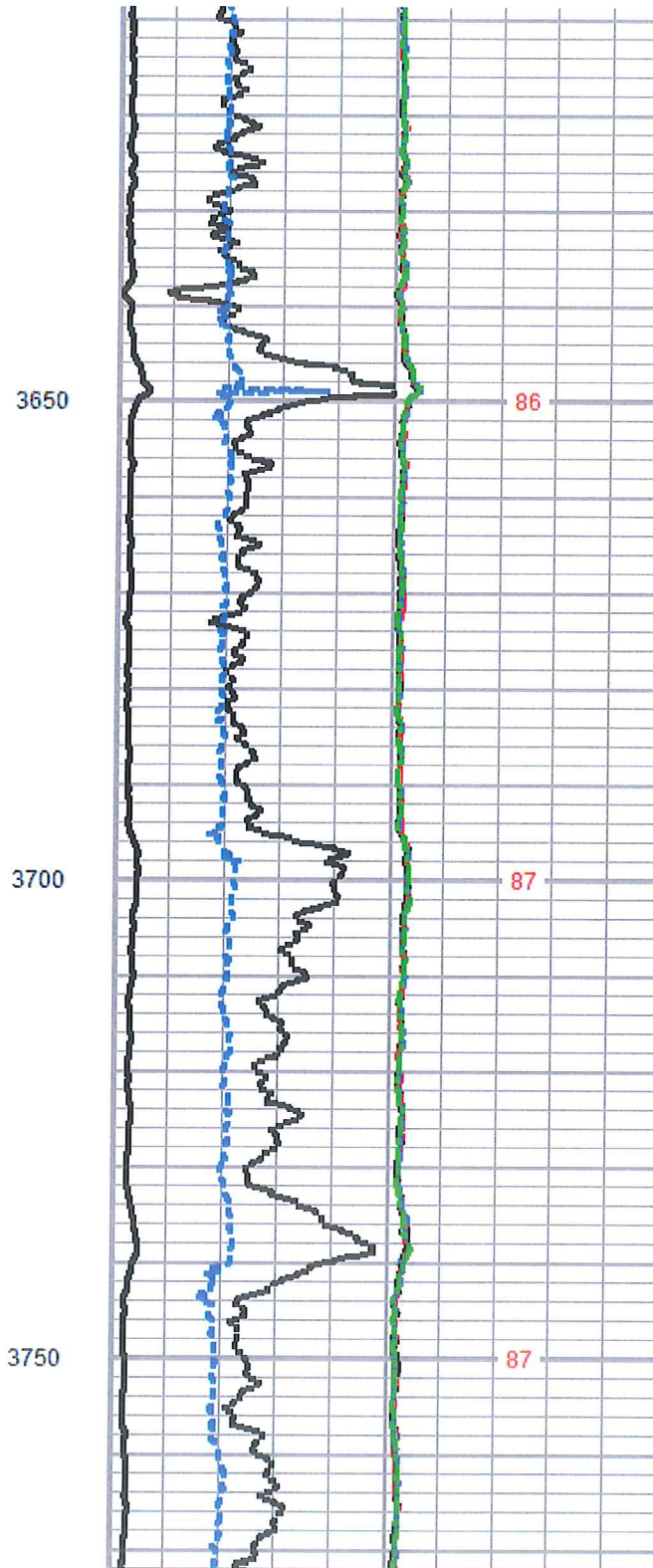
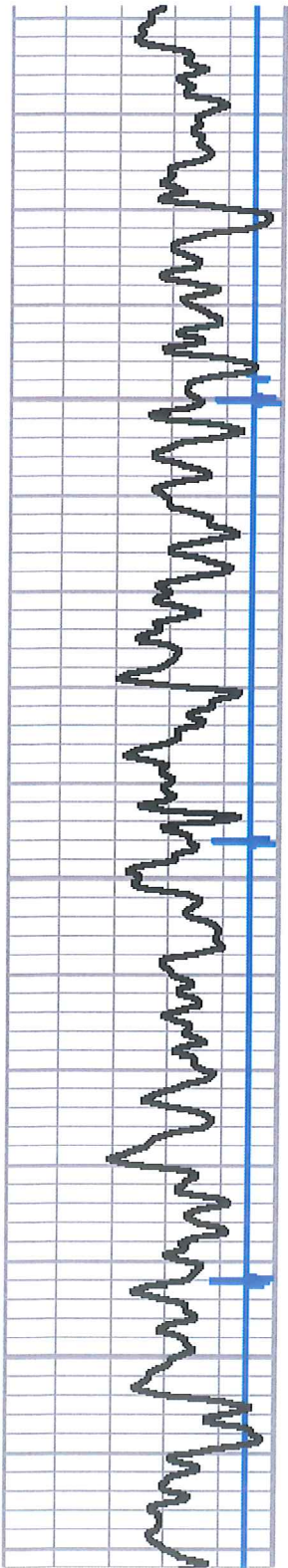
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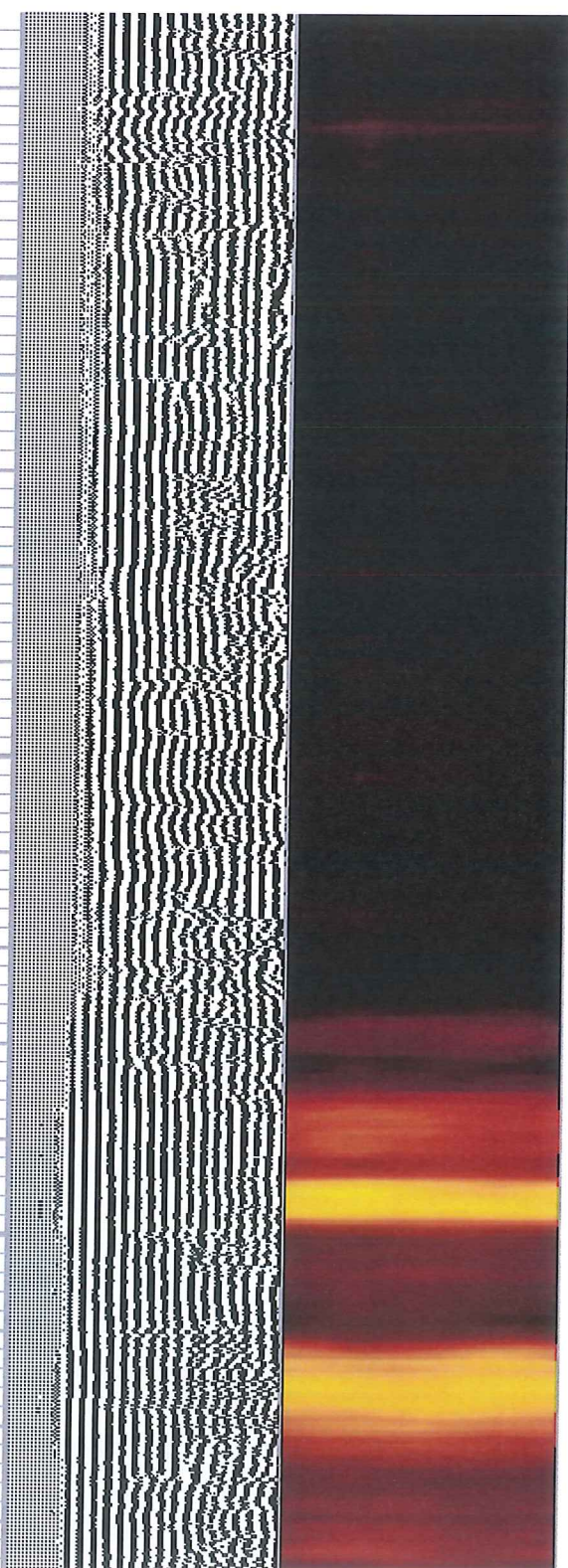
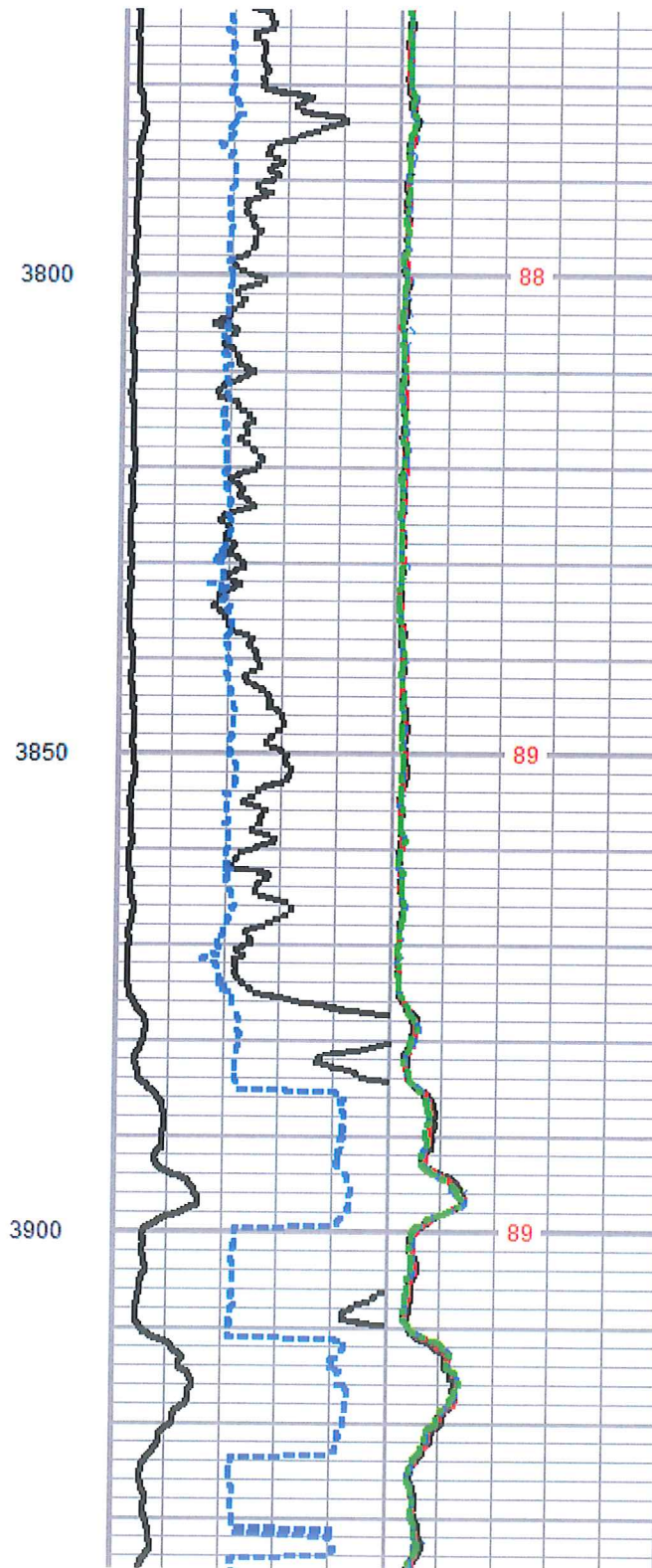
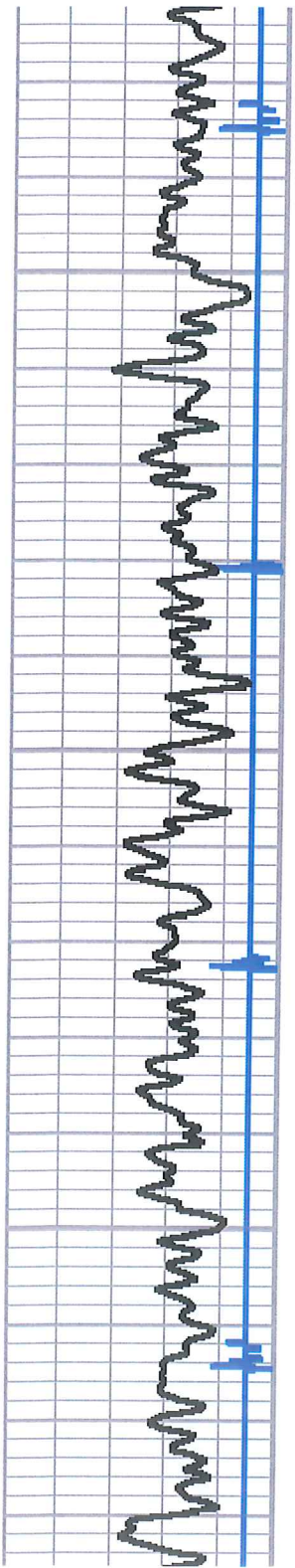


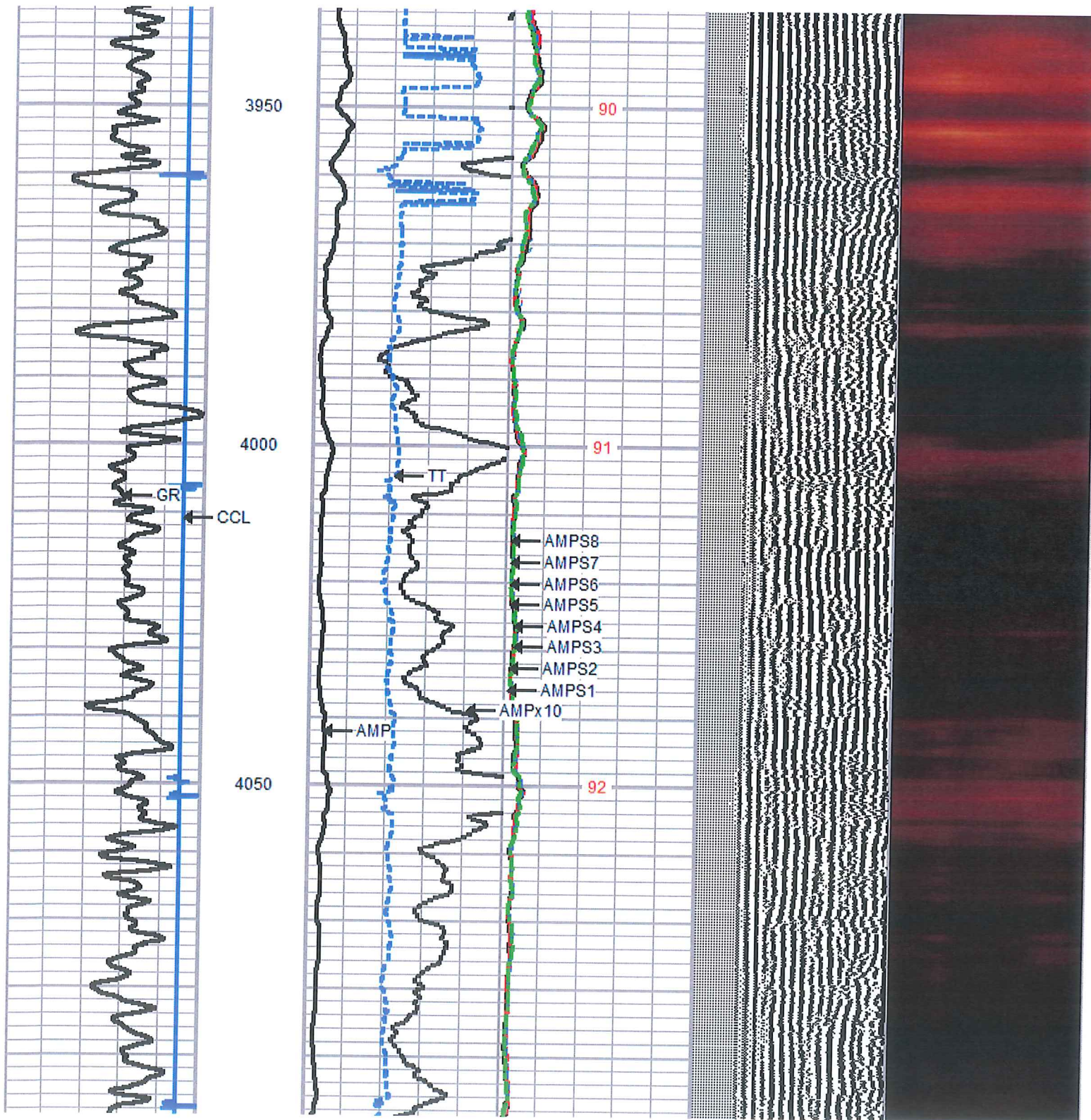
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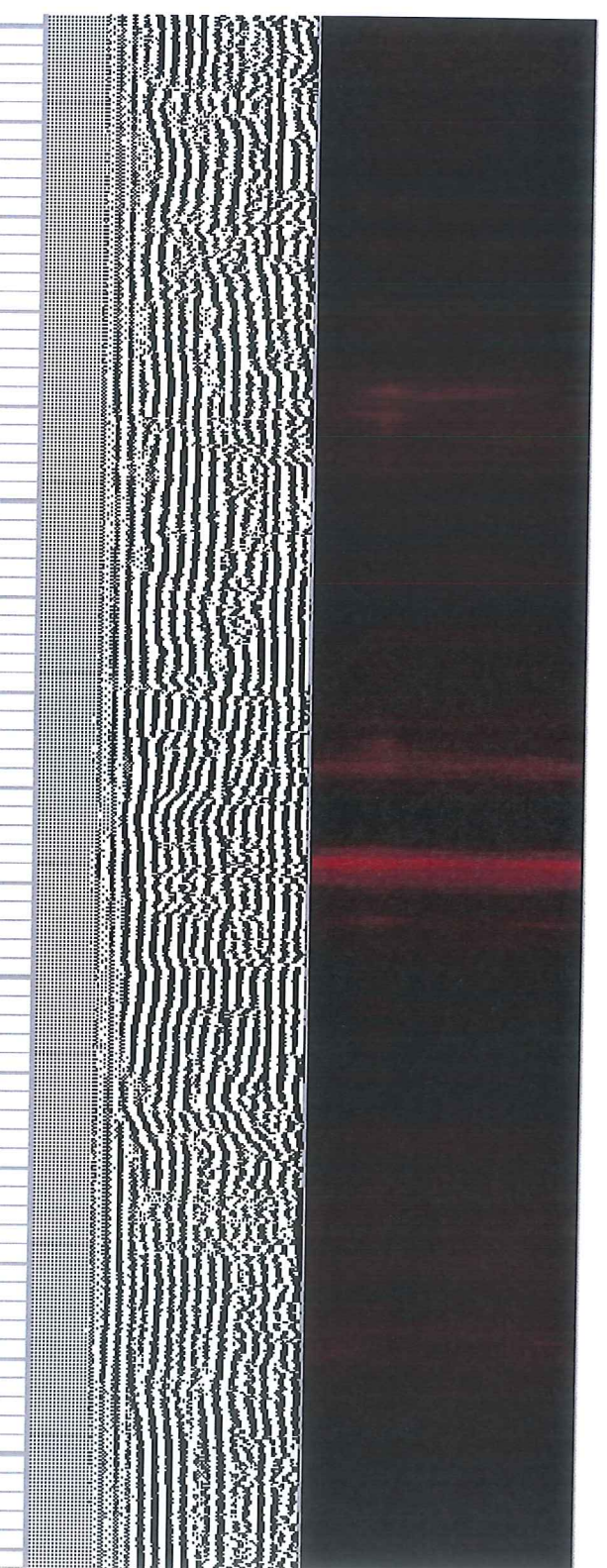
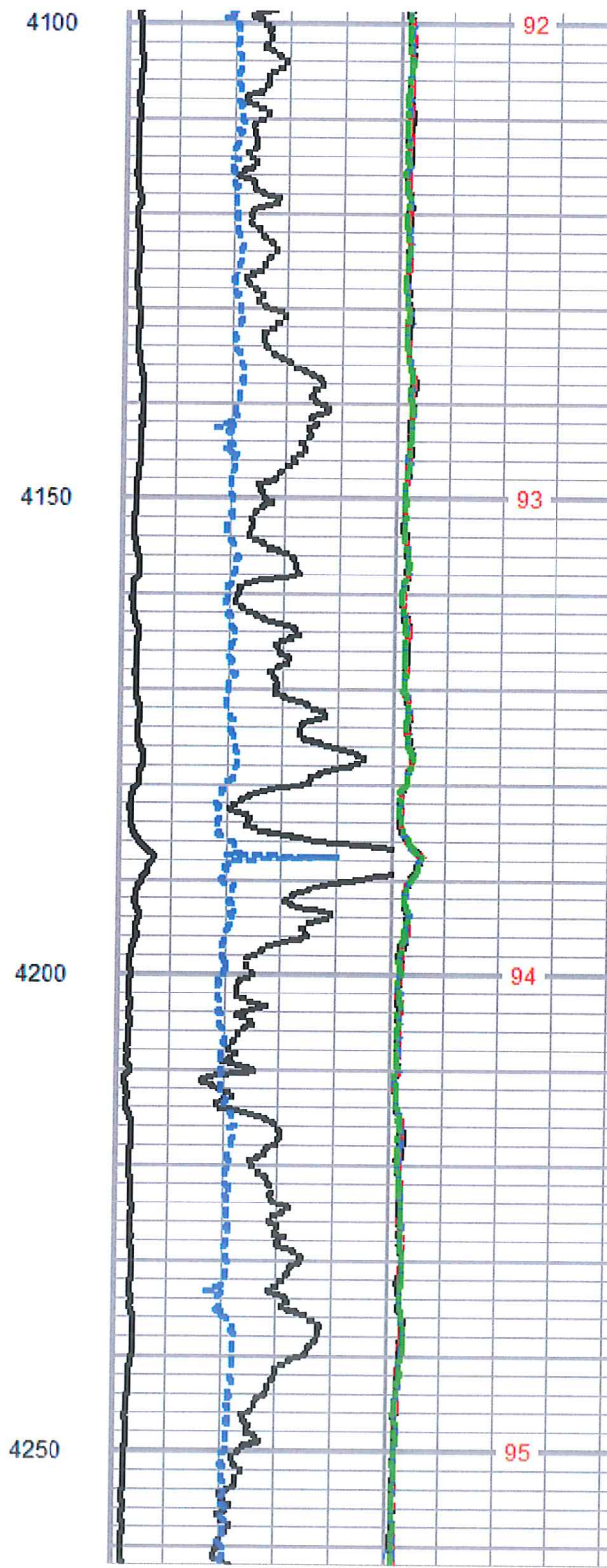
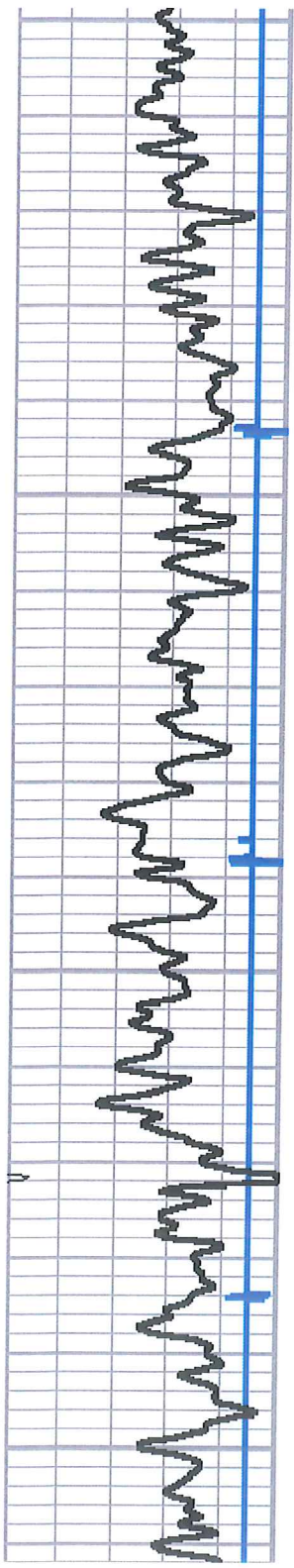
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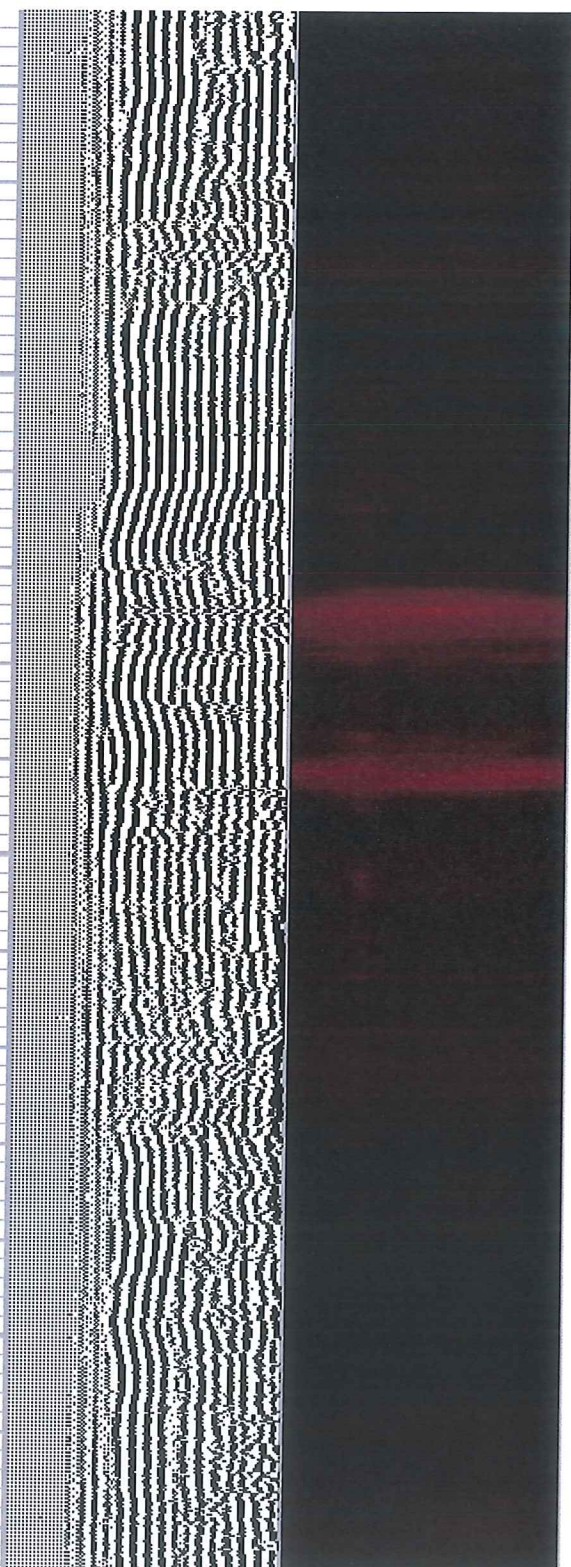
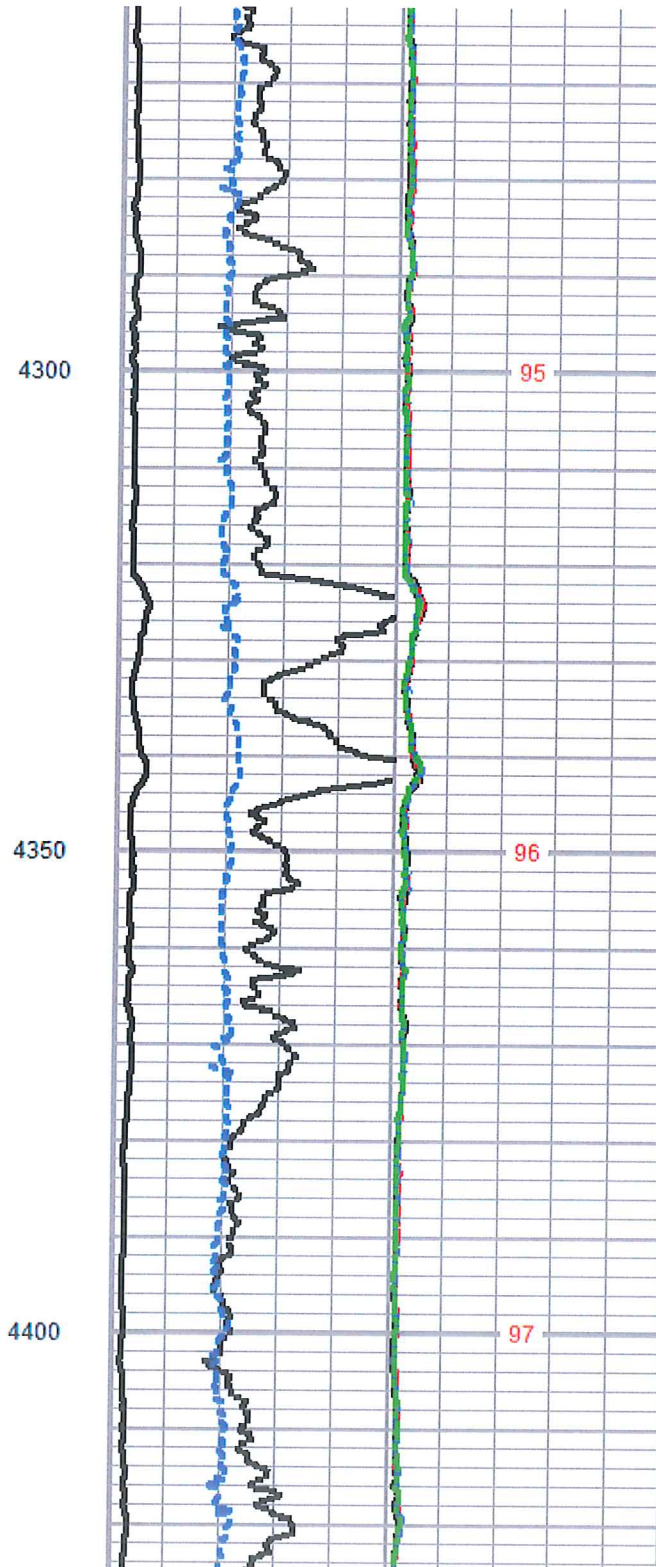
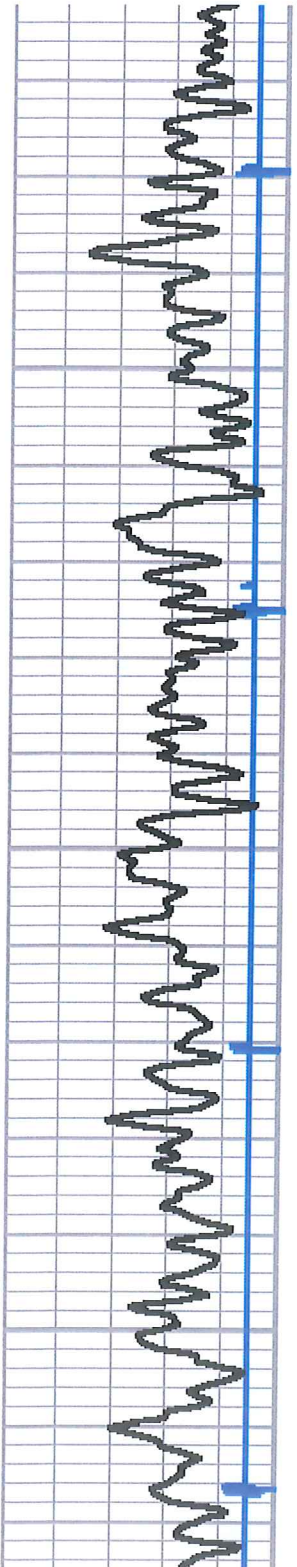


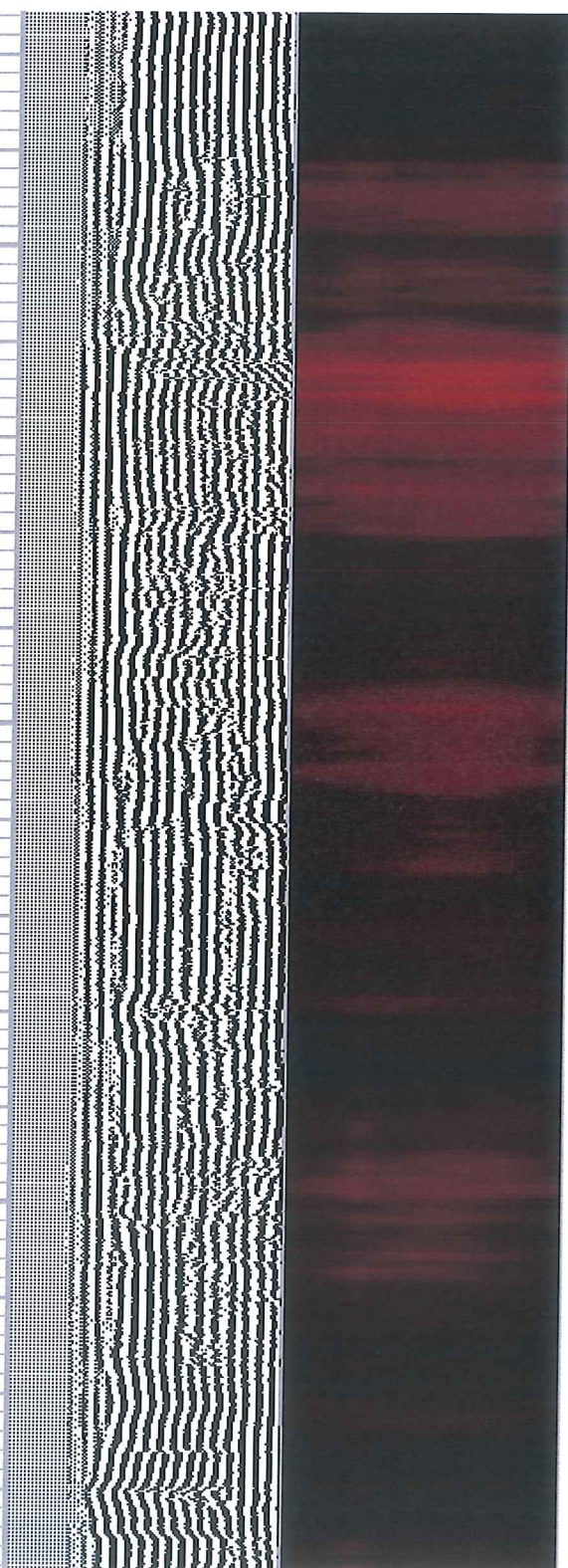
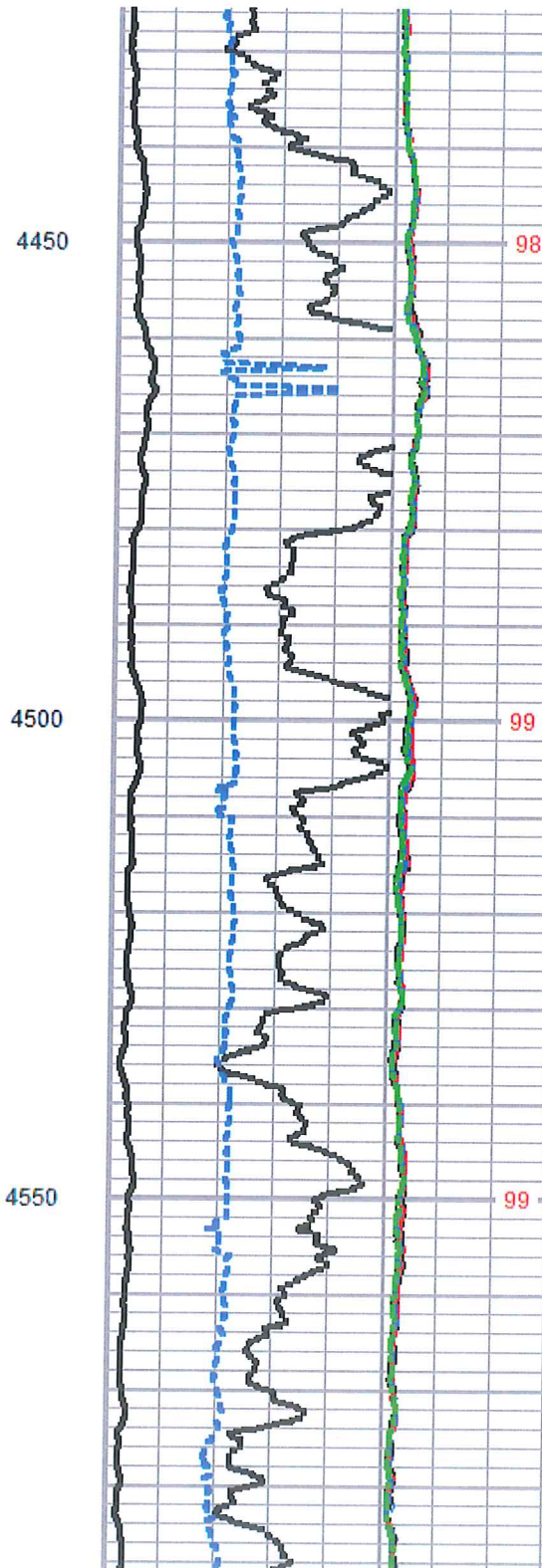
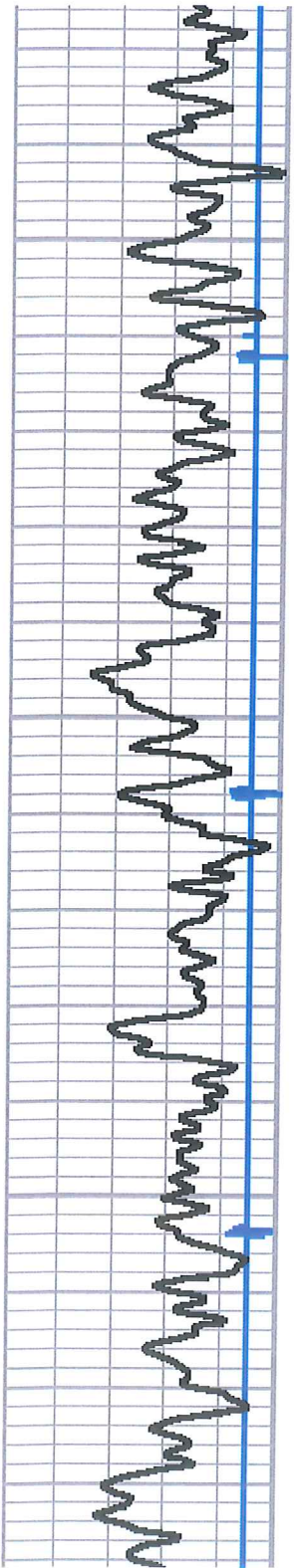




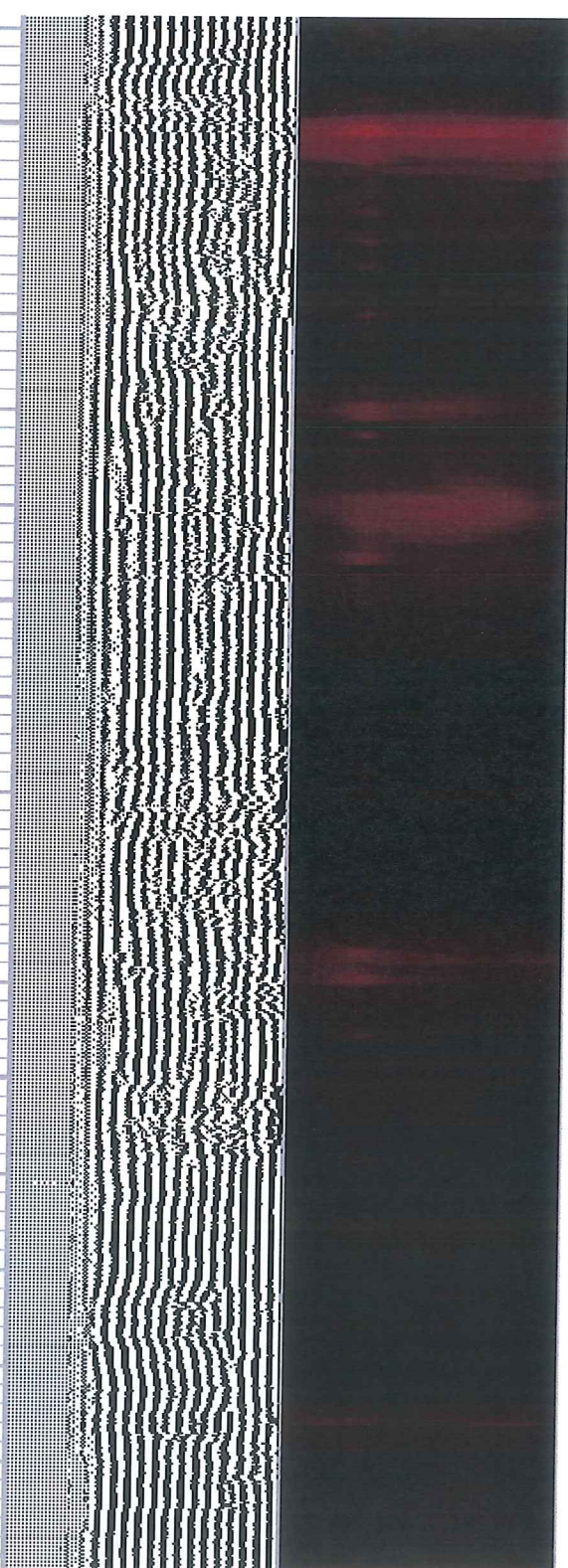
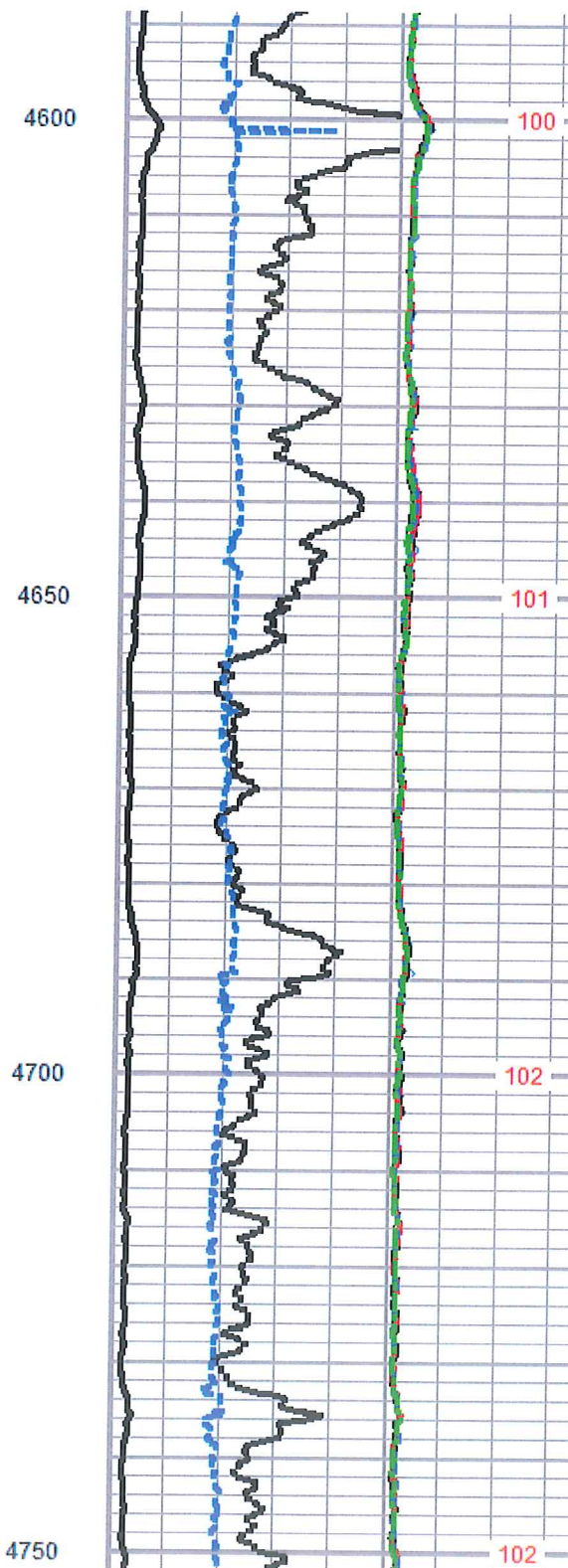
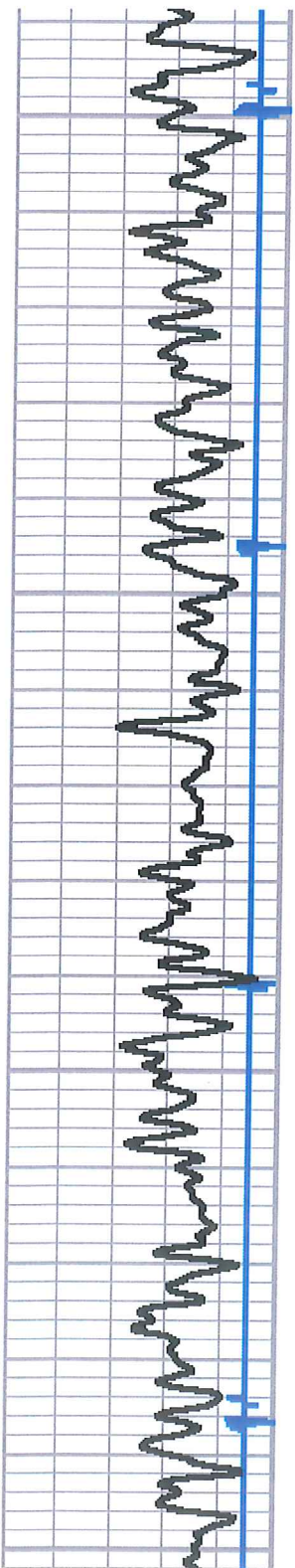


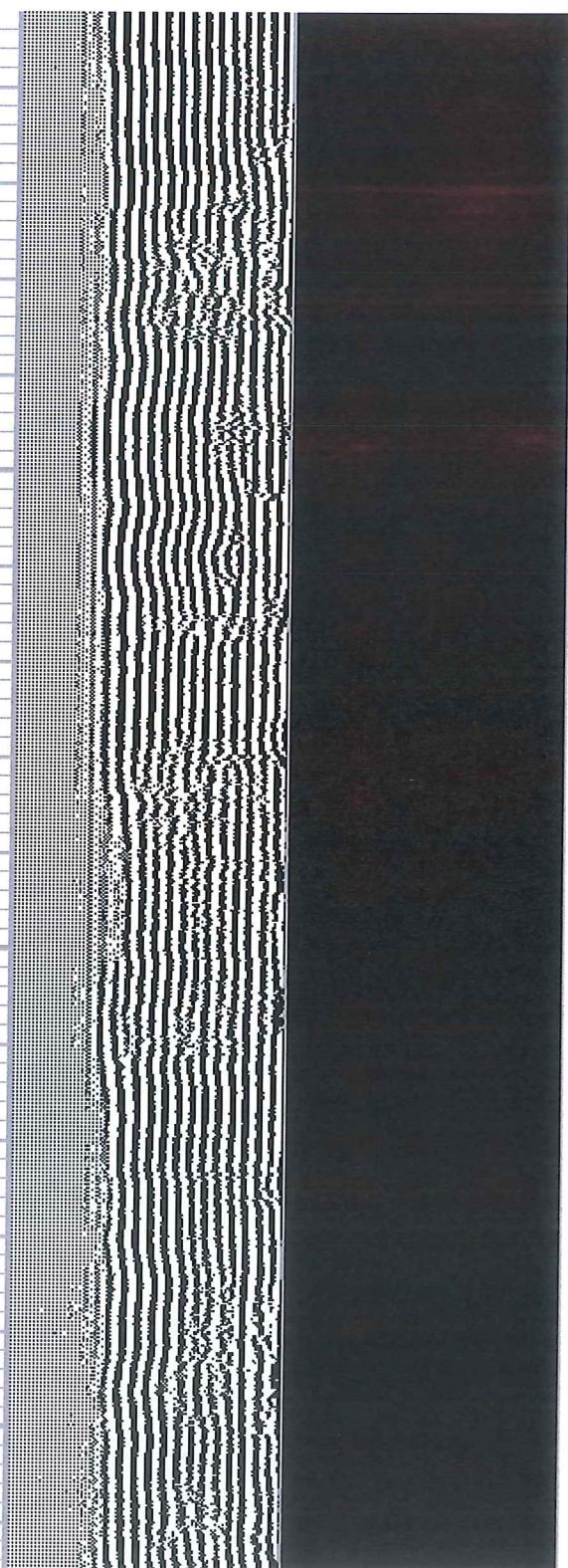
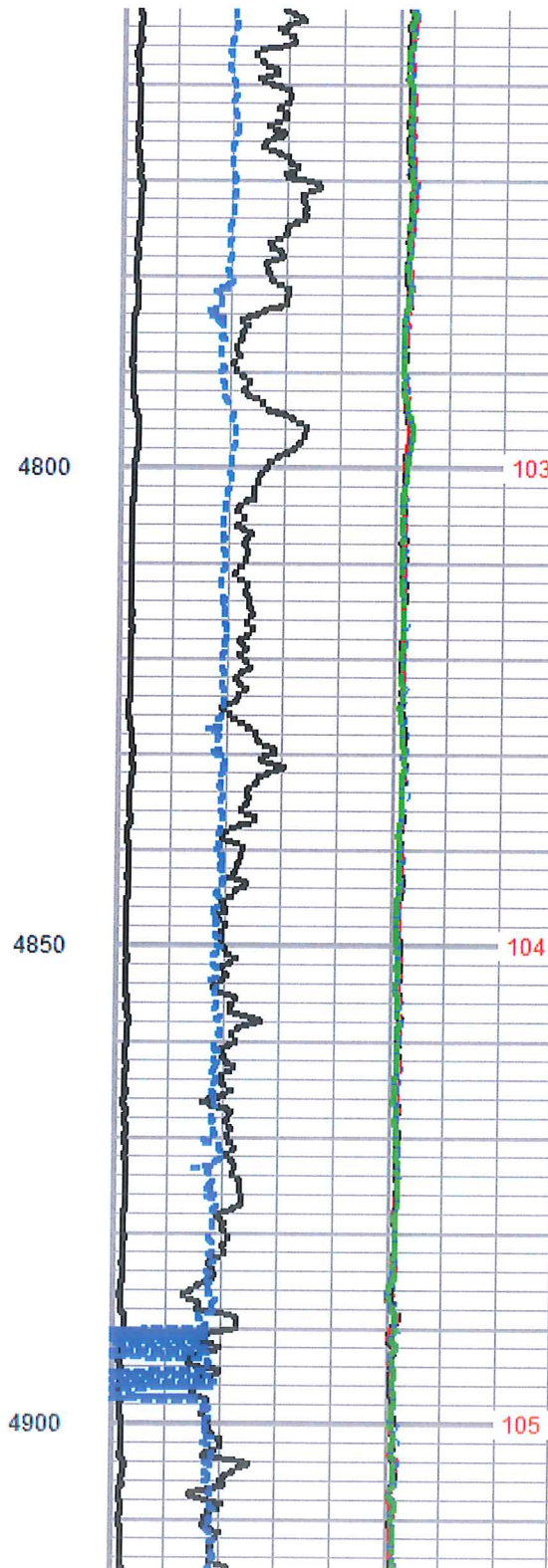
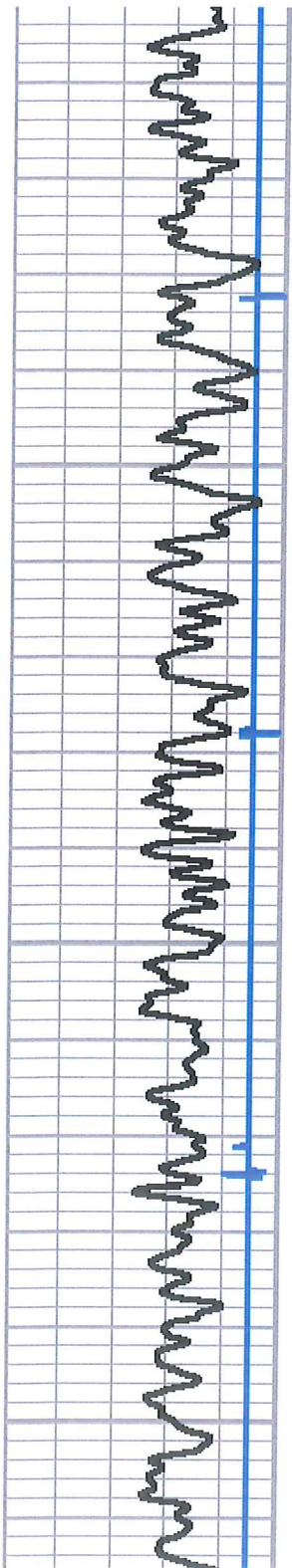


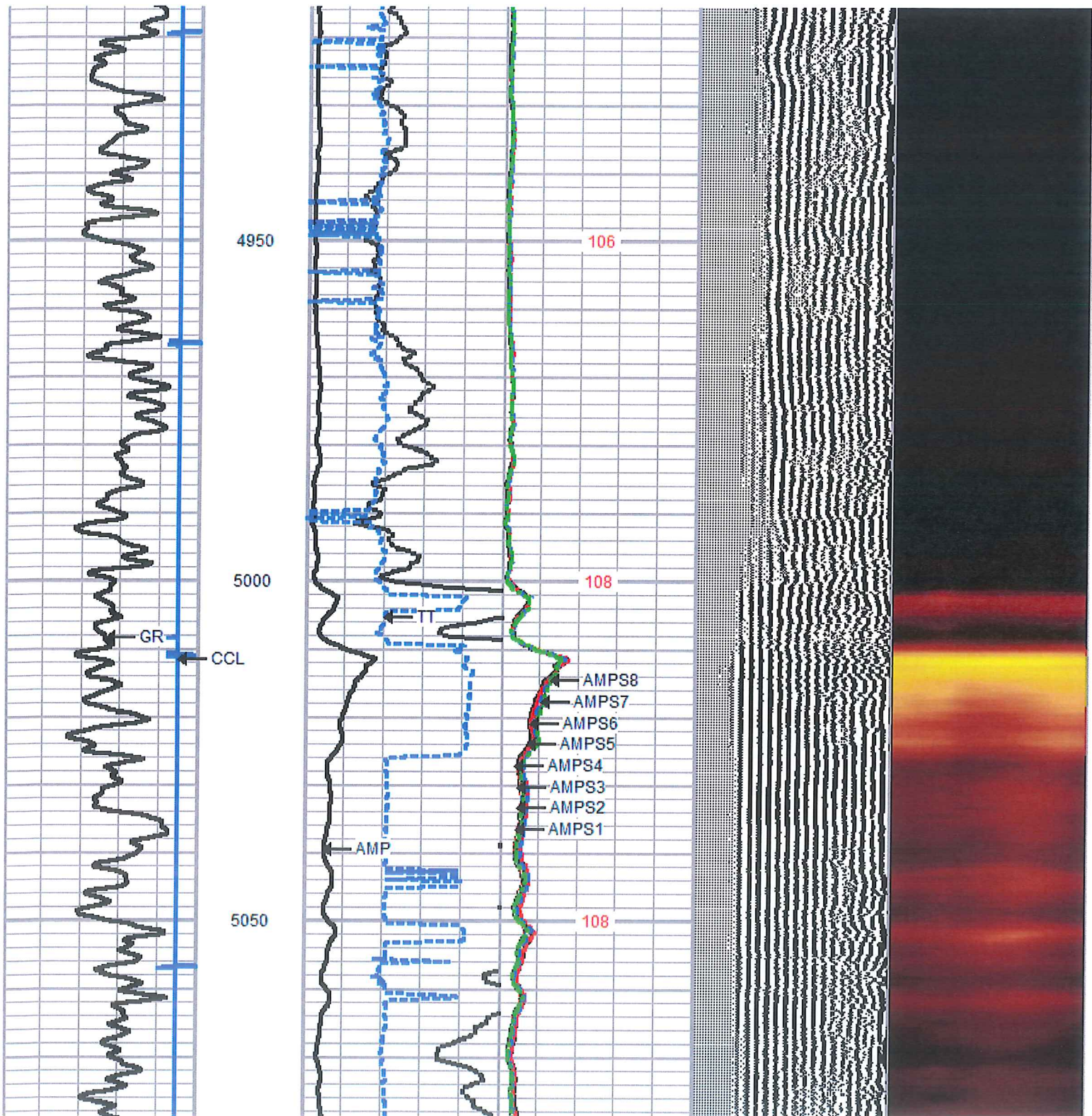


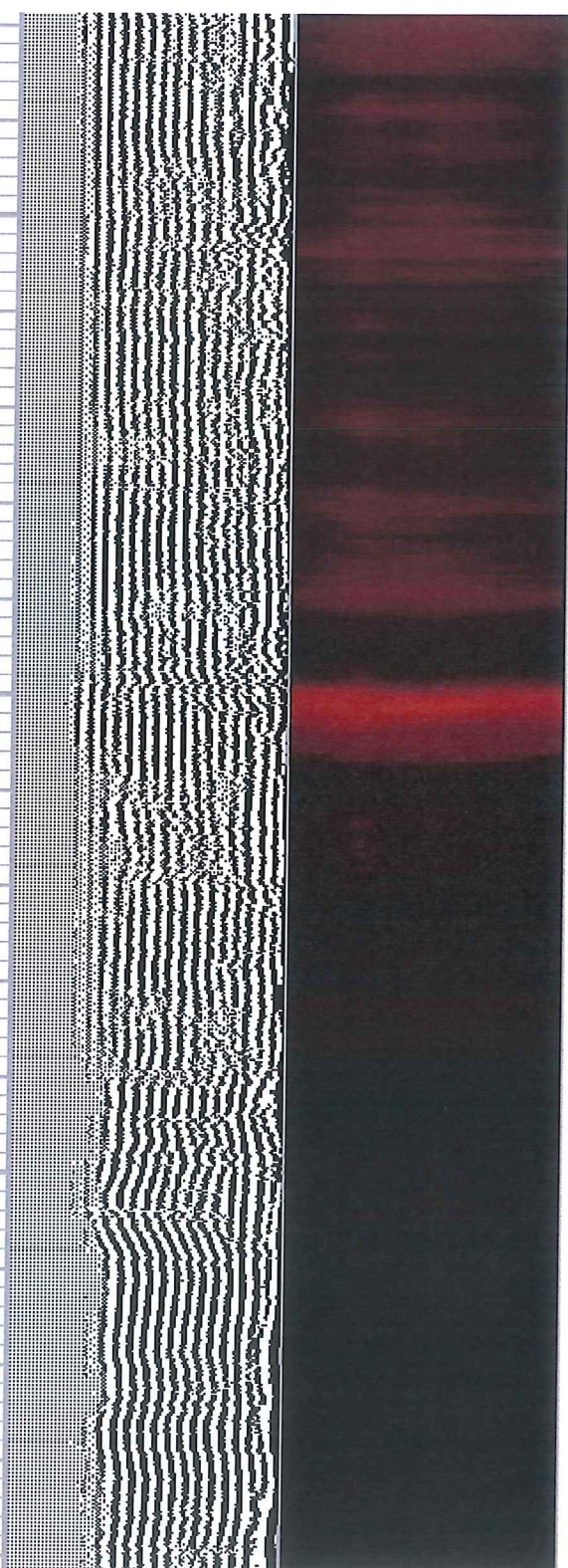
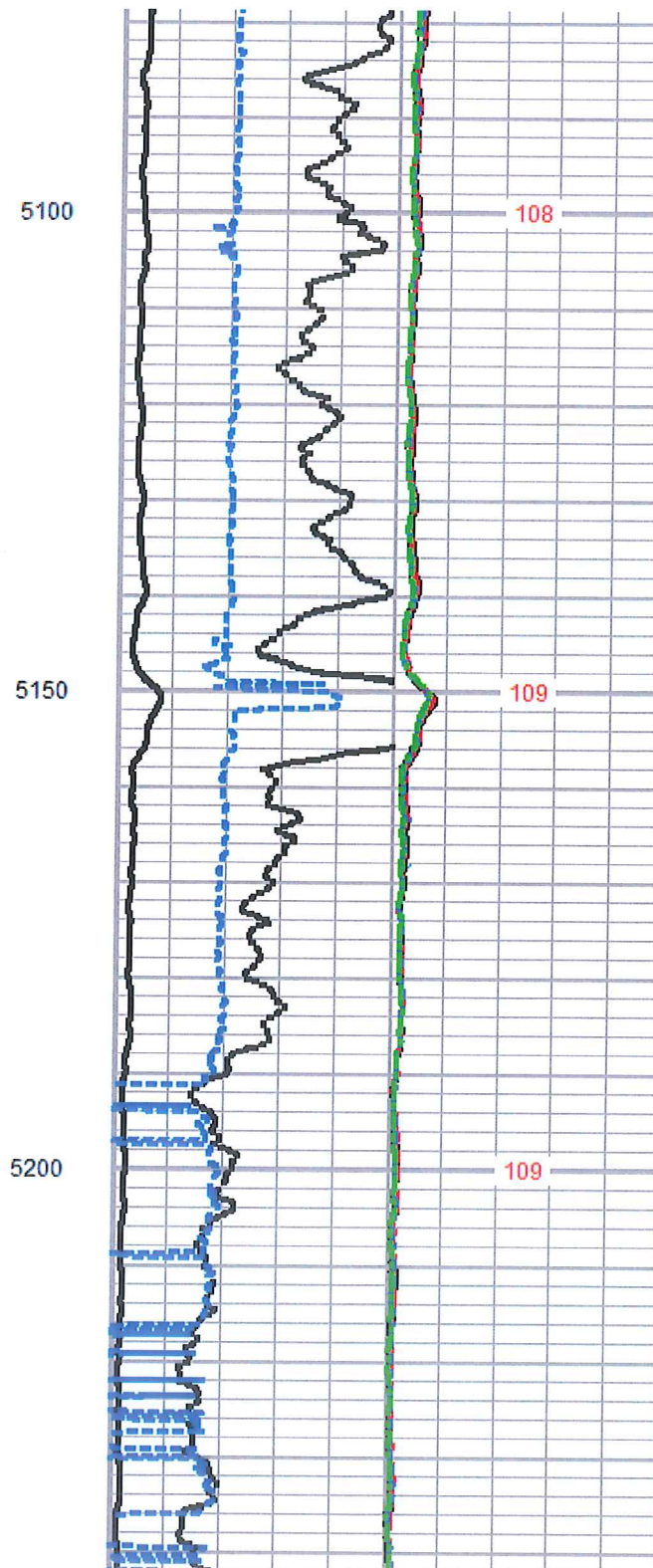
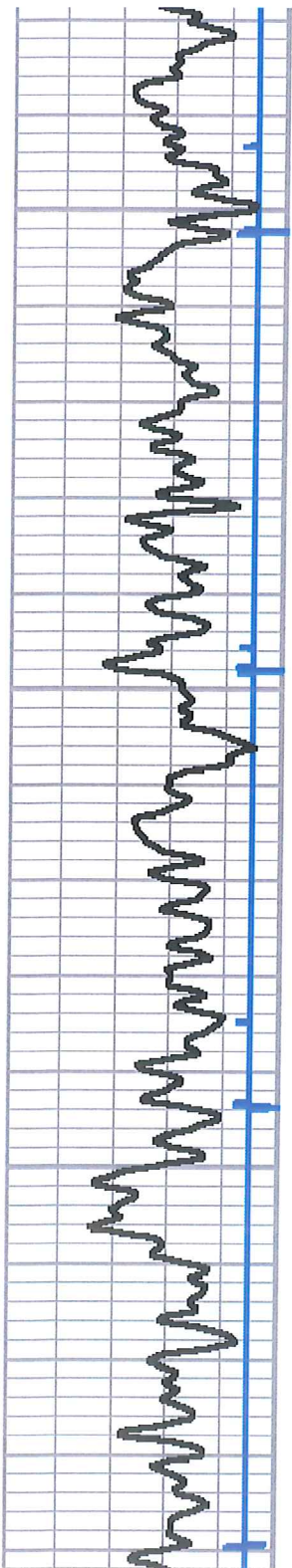


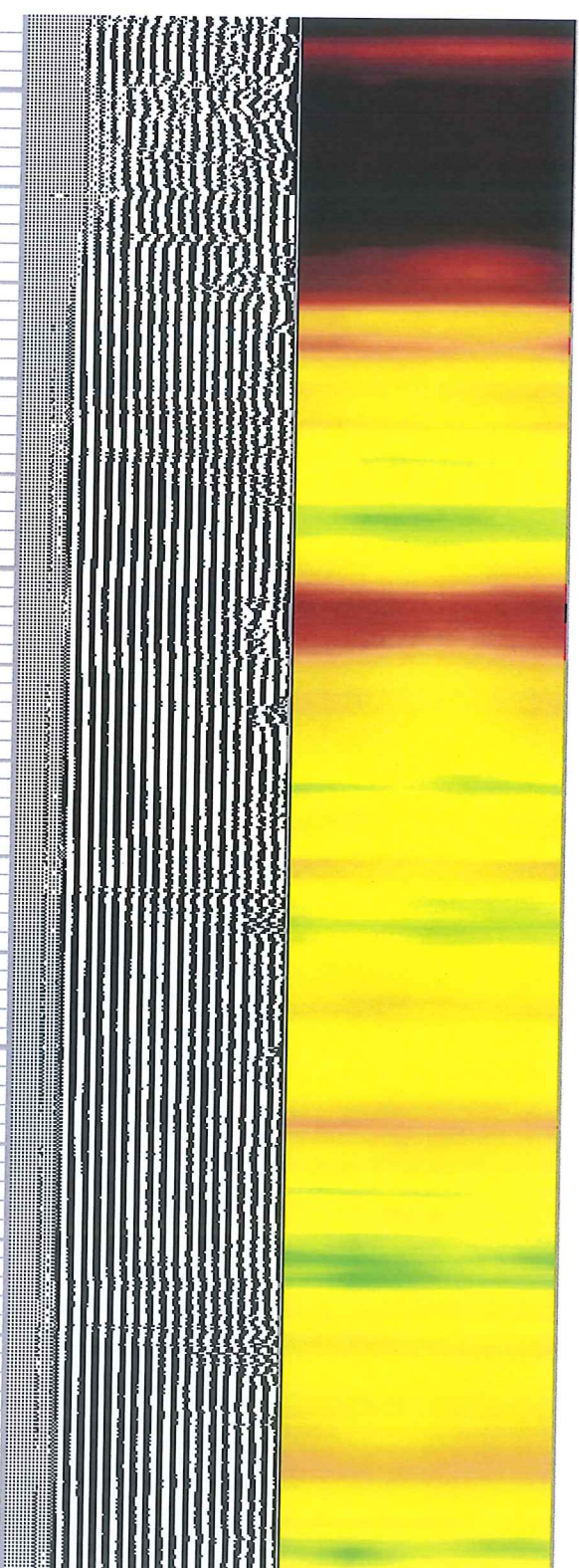
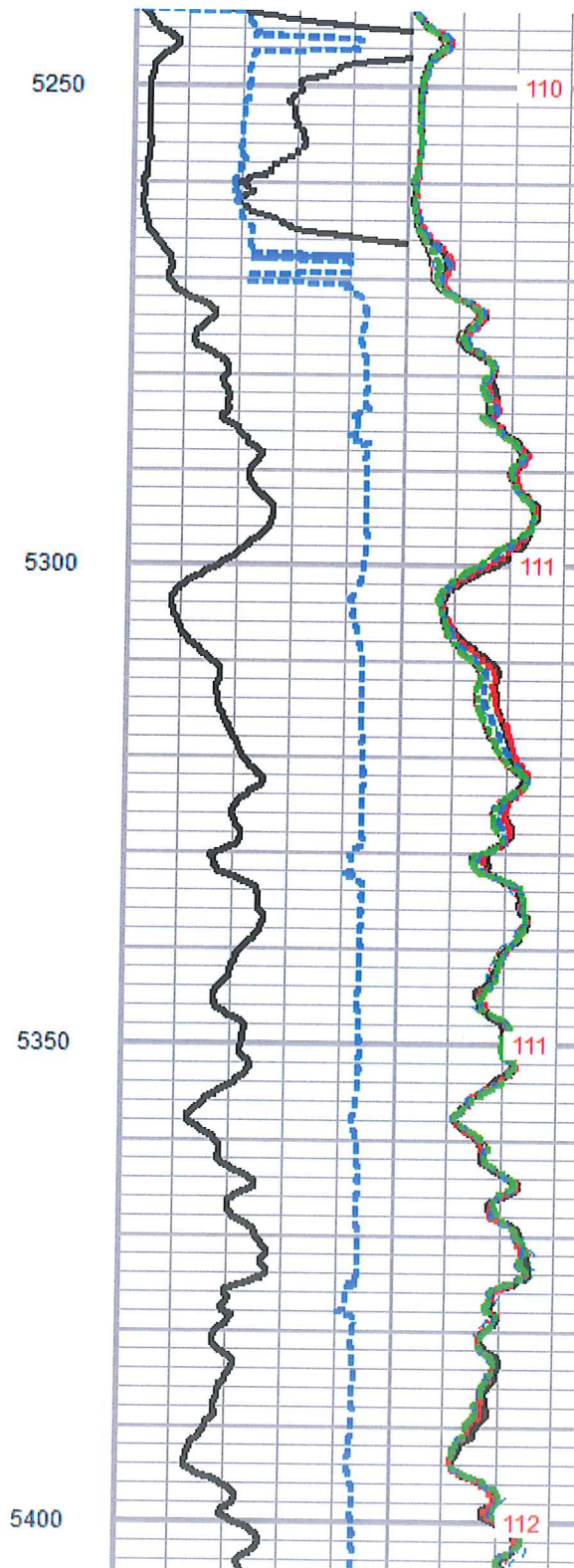
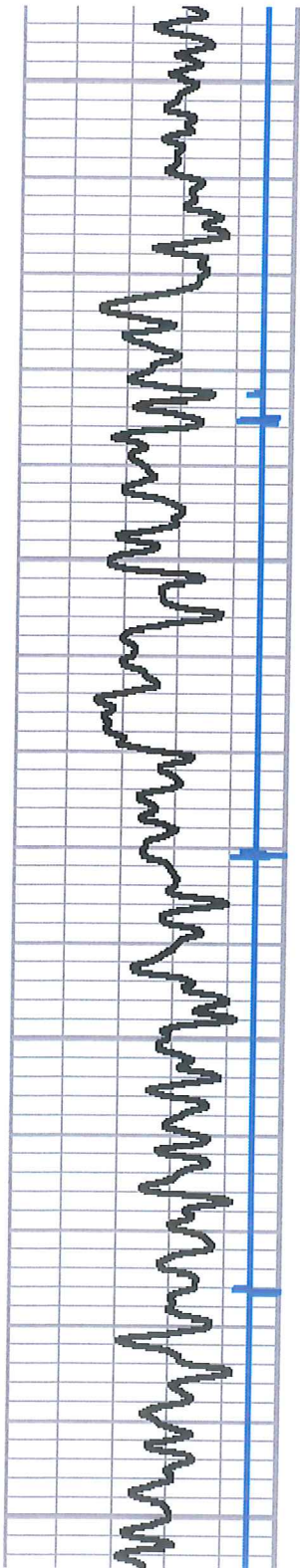


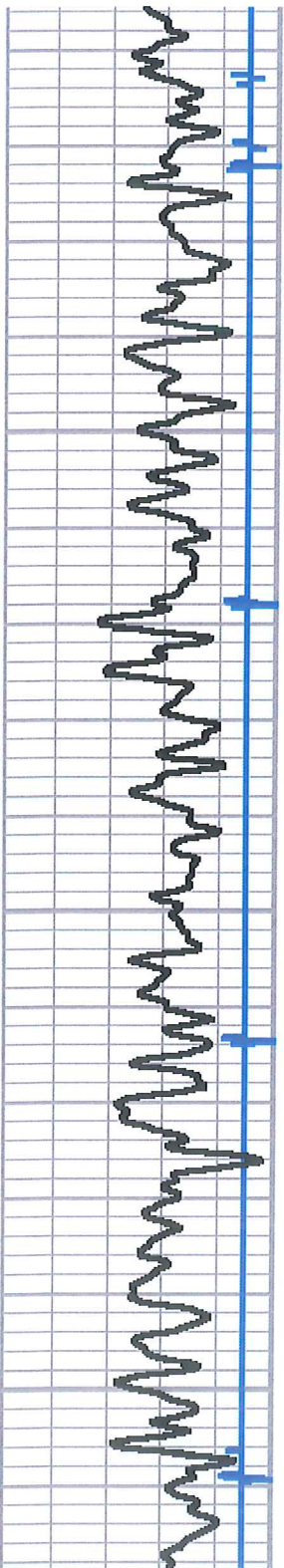








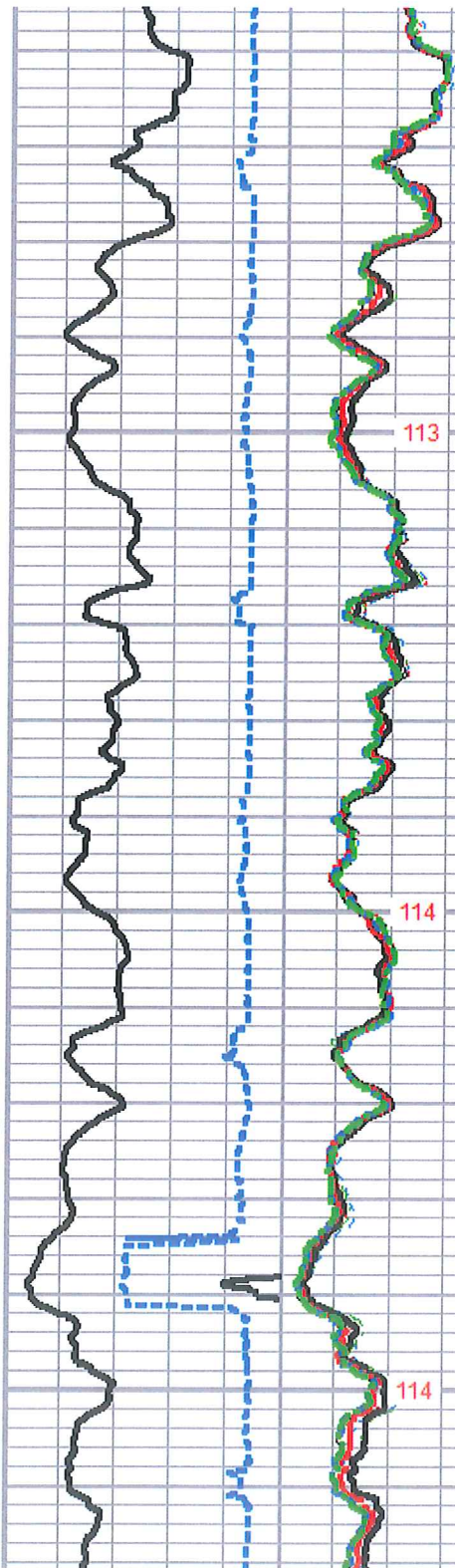




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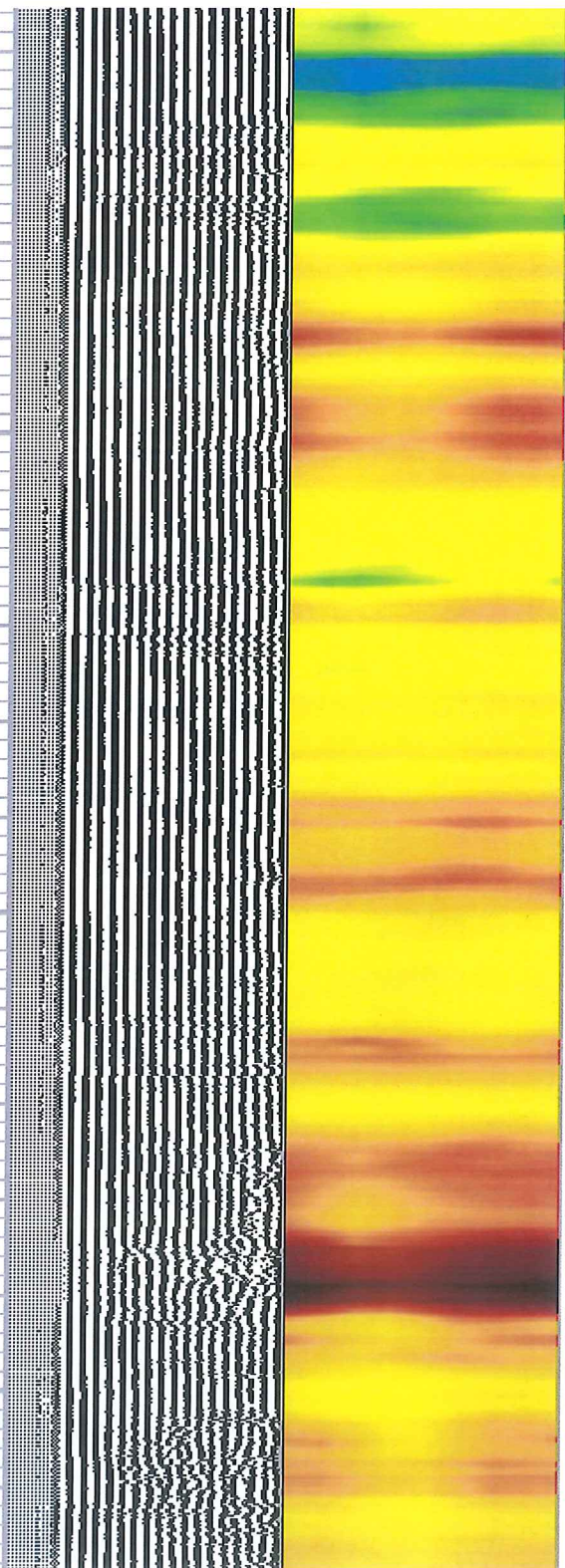
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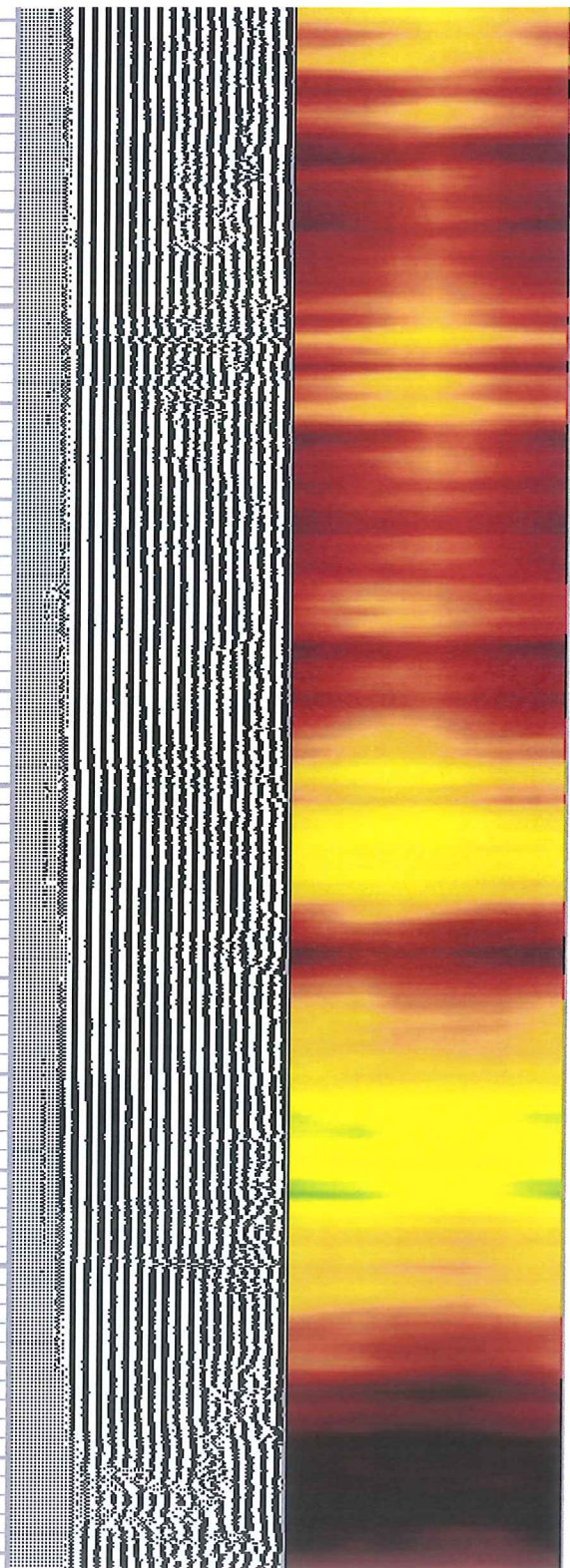
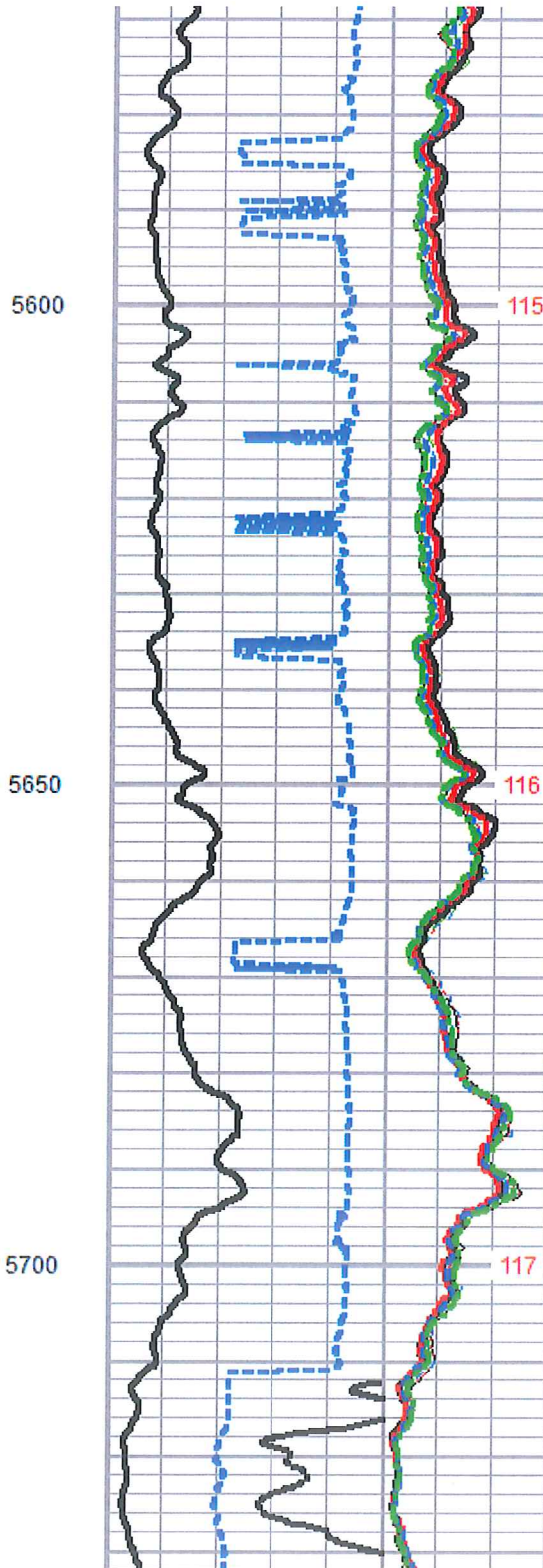
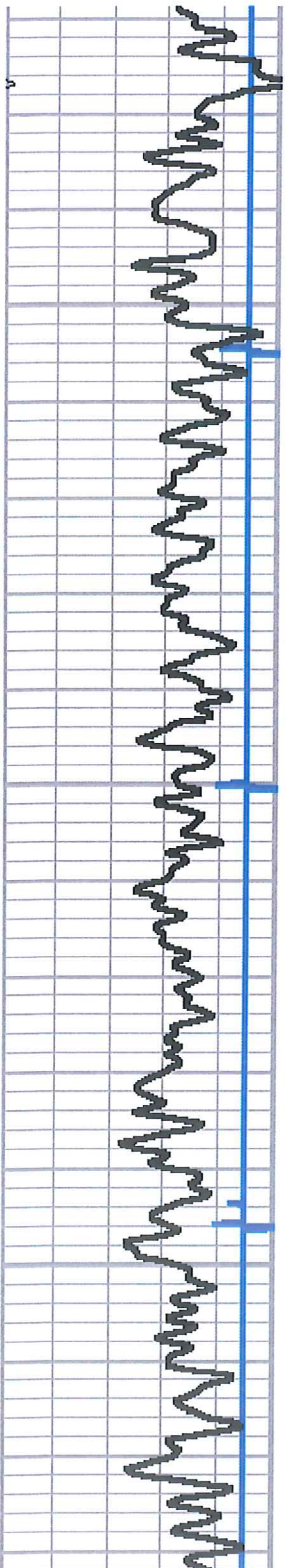


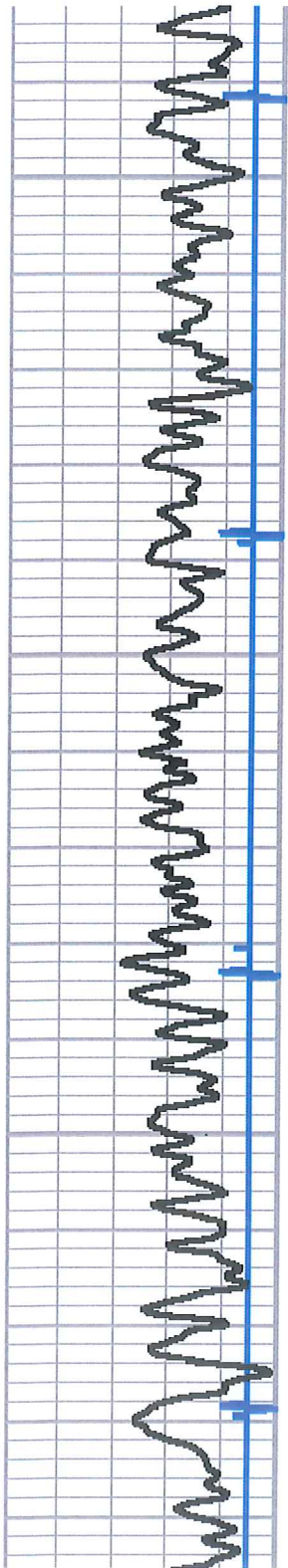
113

114

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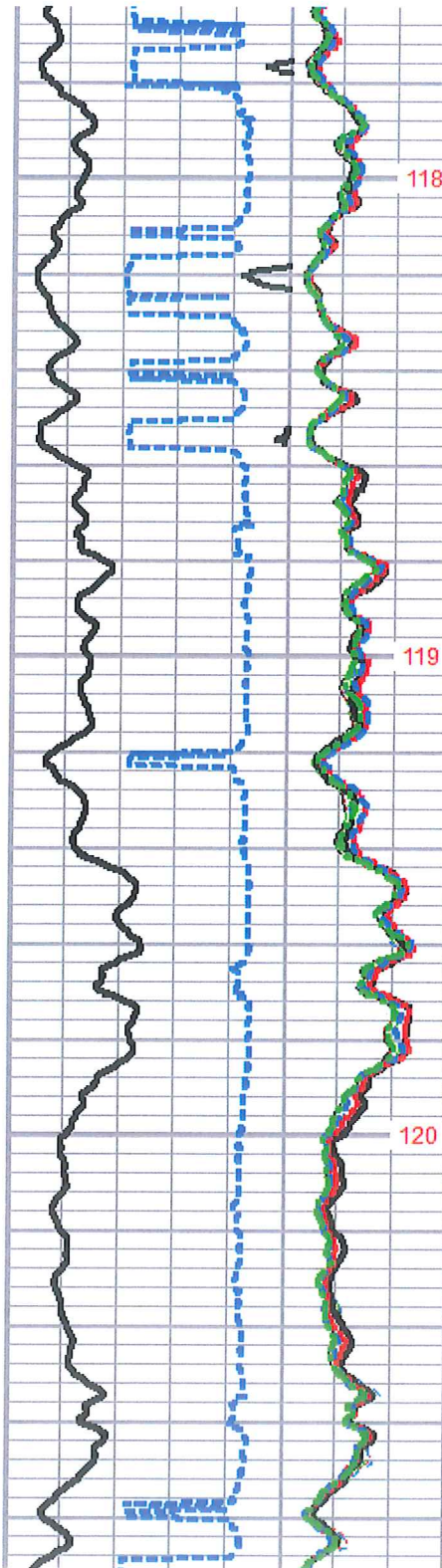




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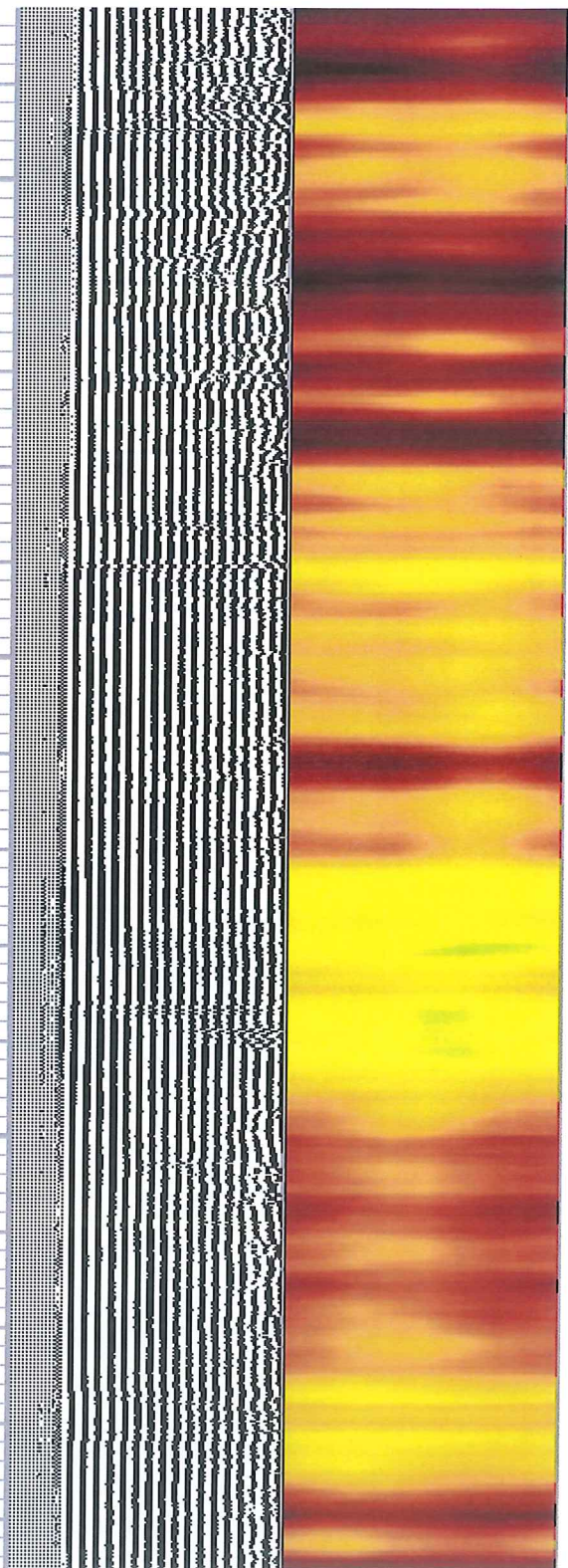
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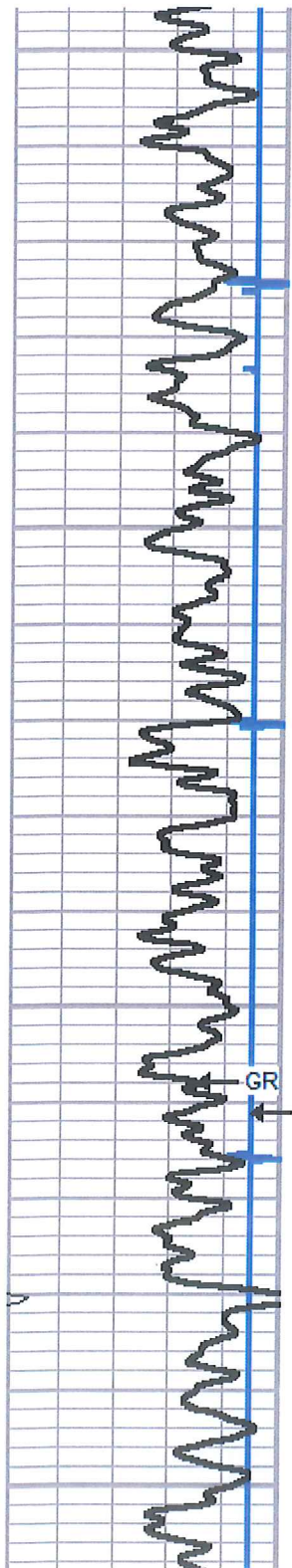
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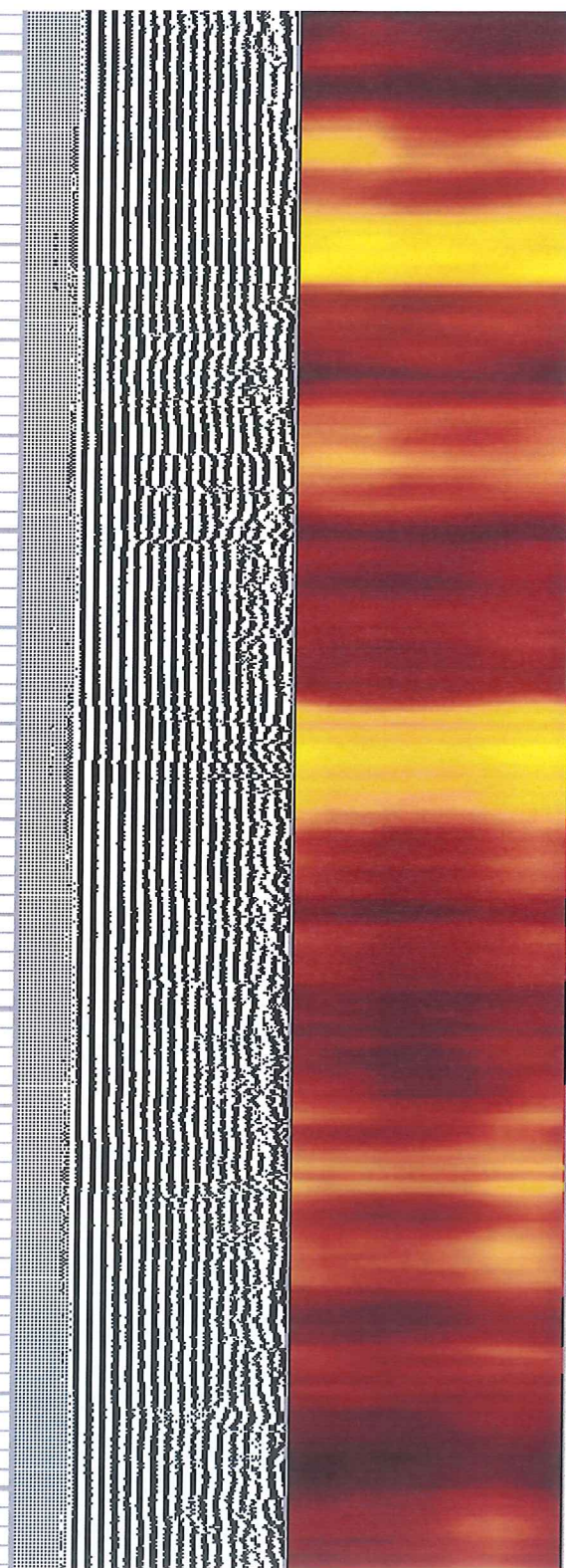
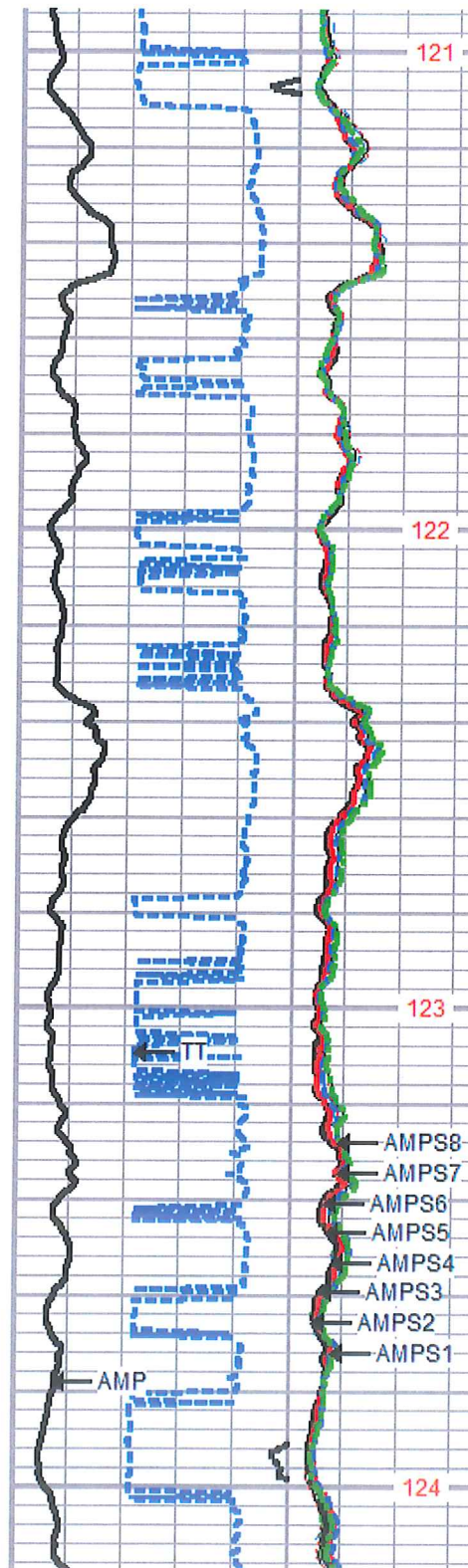
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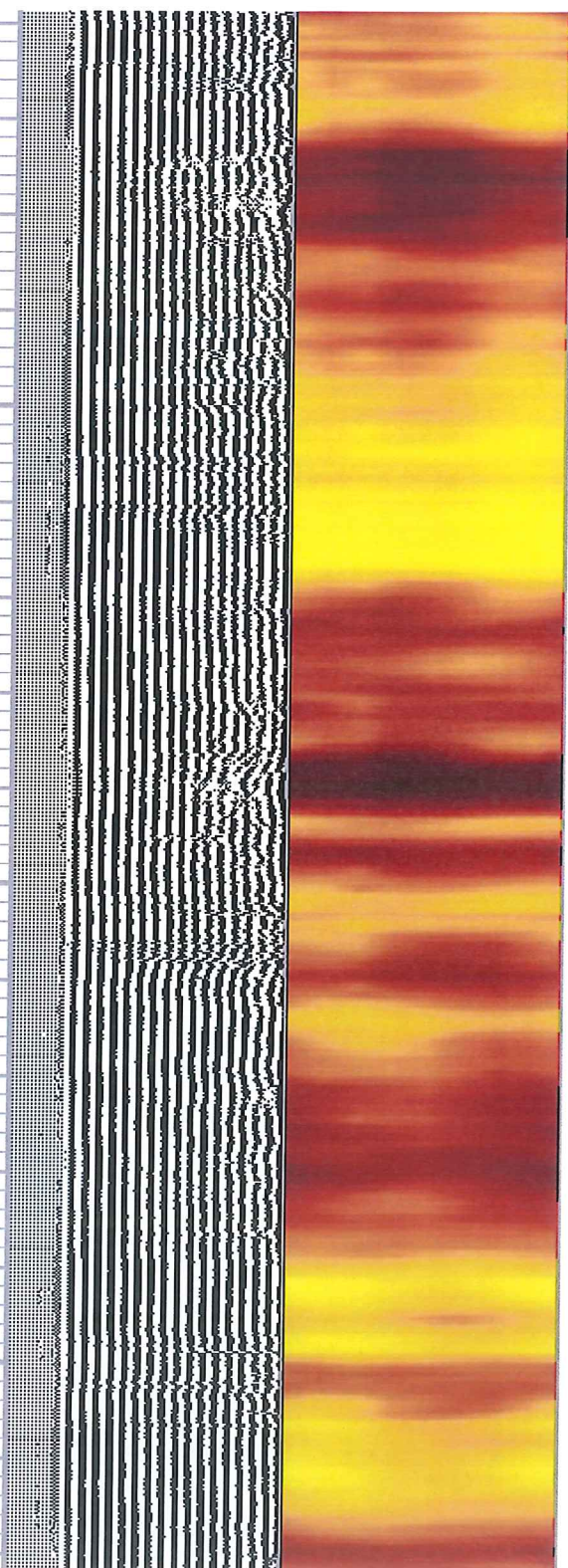
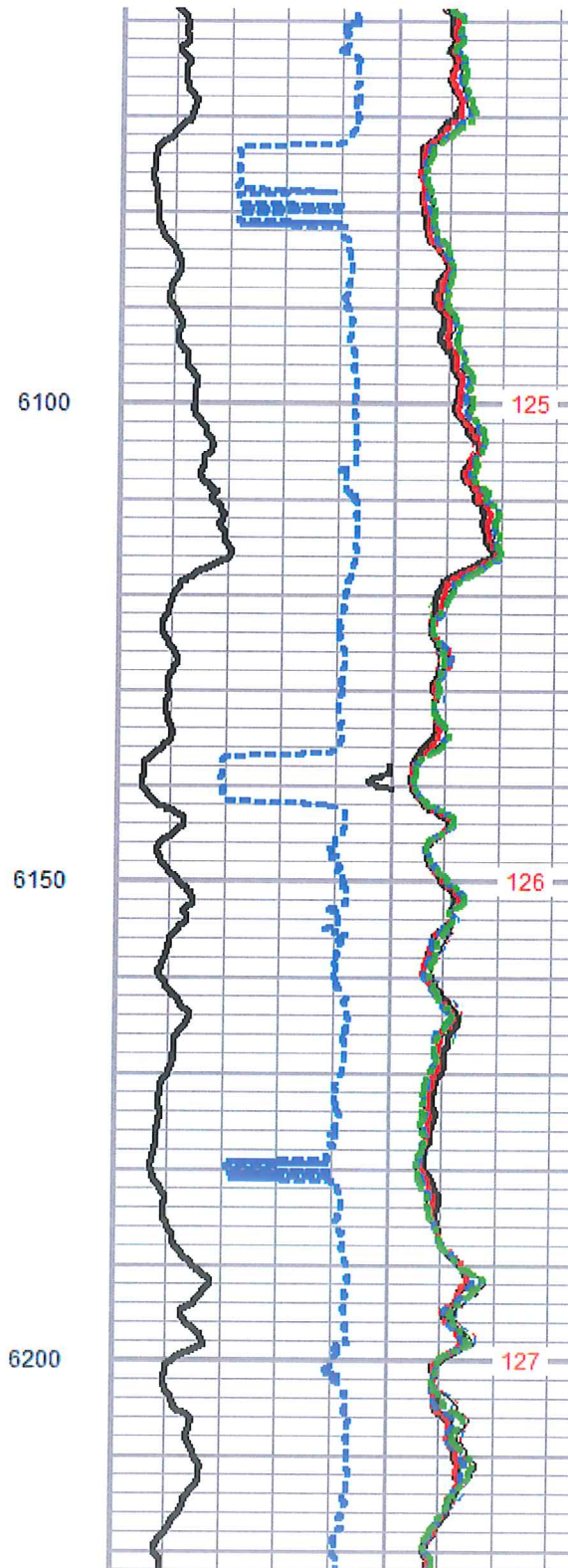
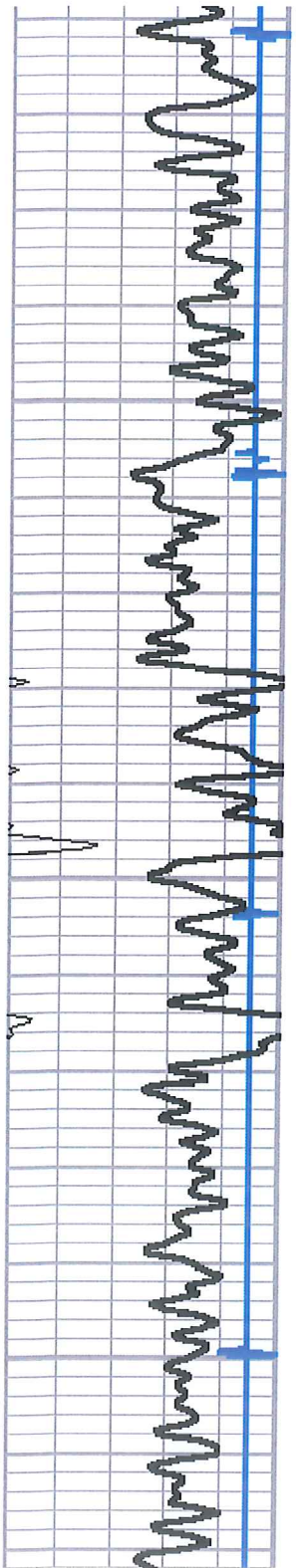


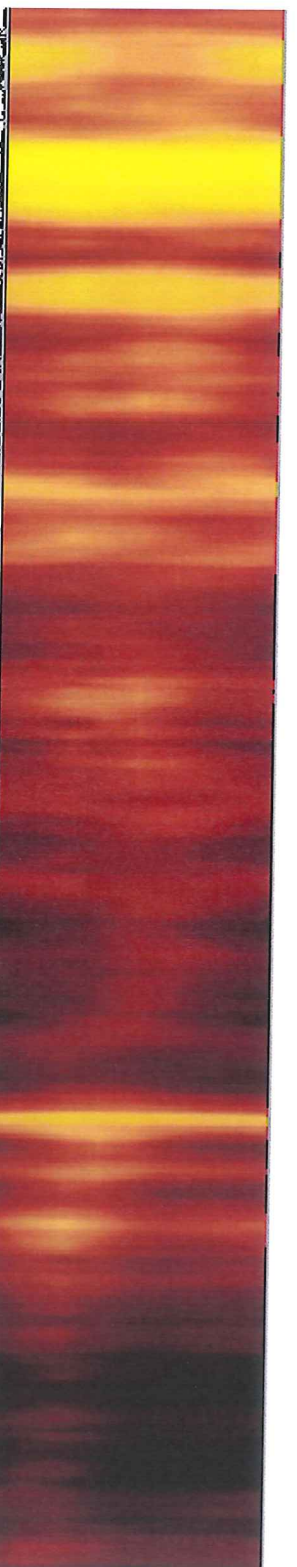
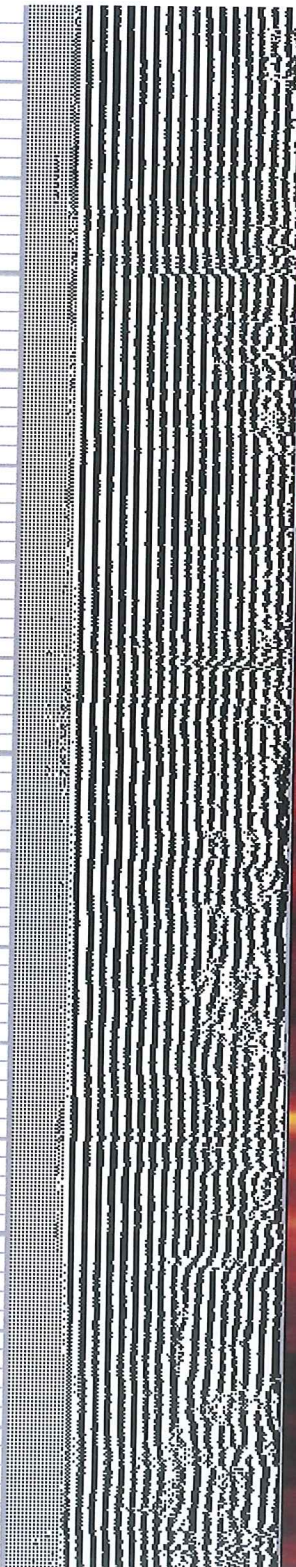
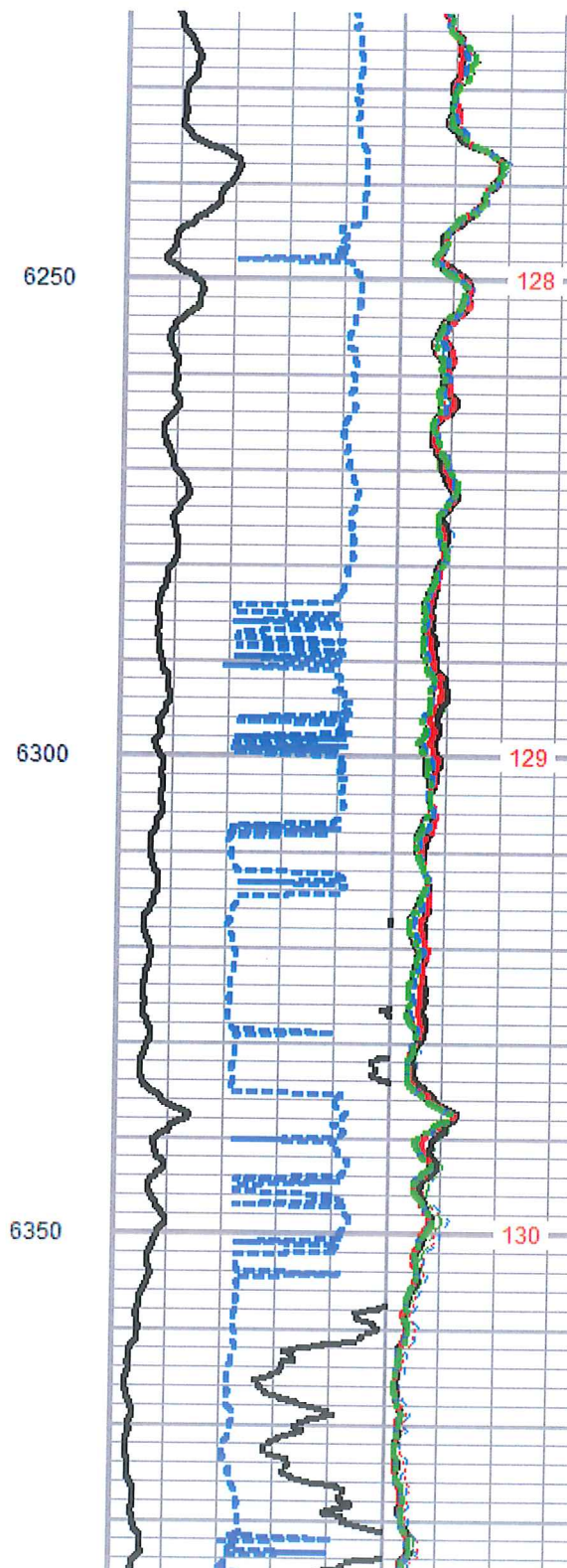
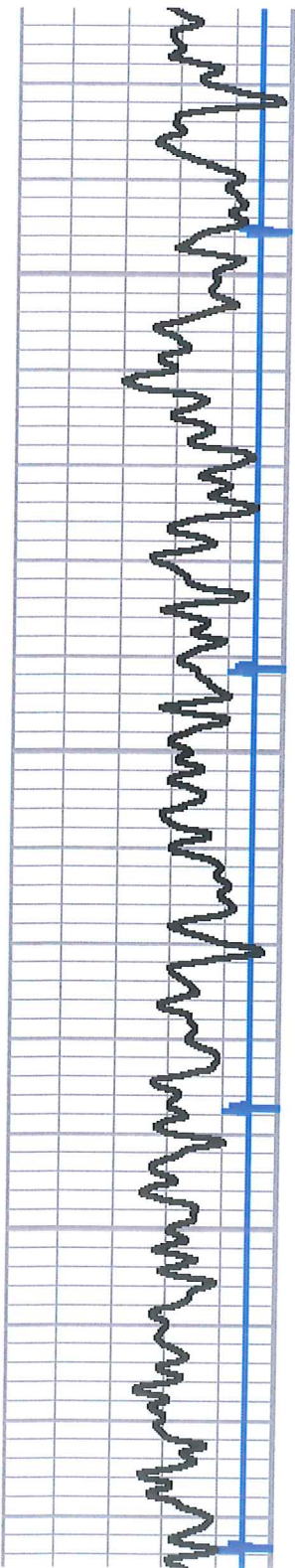


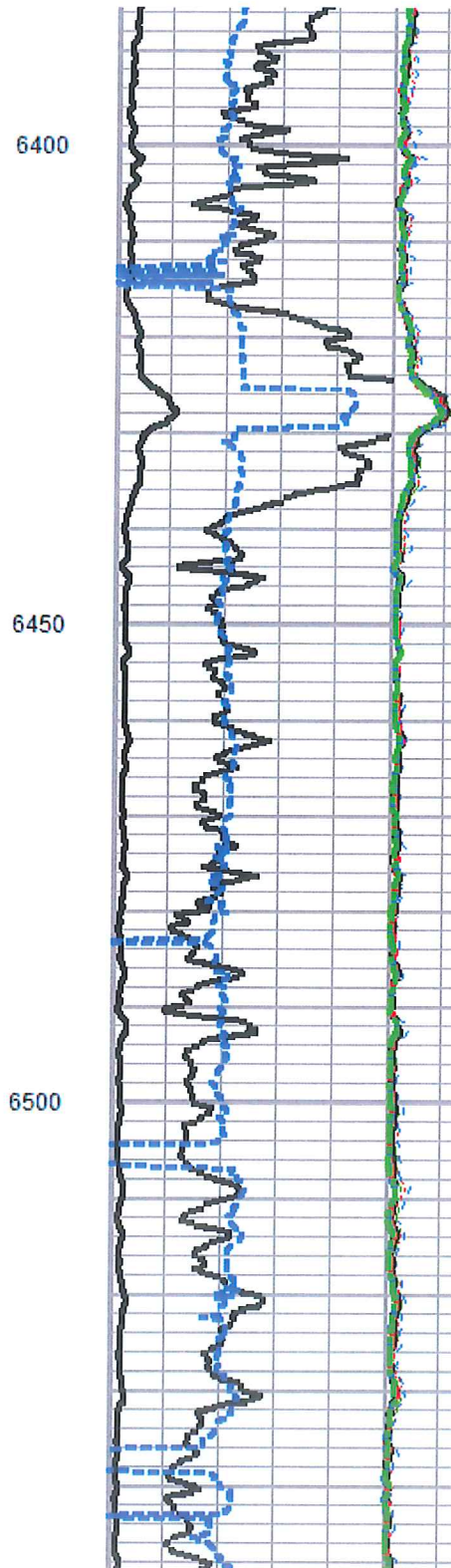
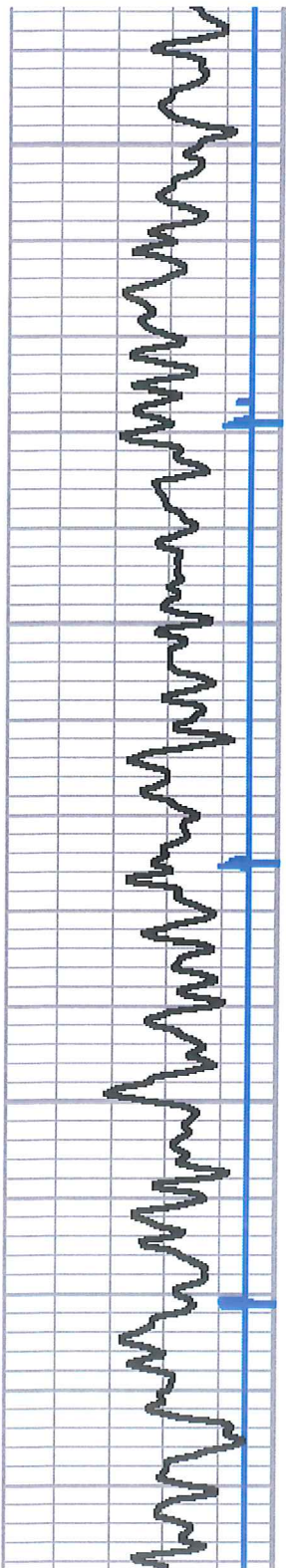


5900  
5950  
6000  
6050





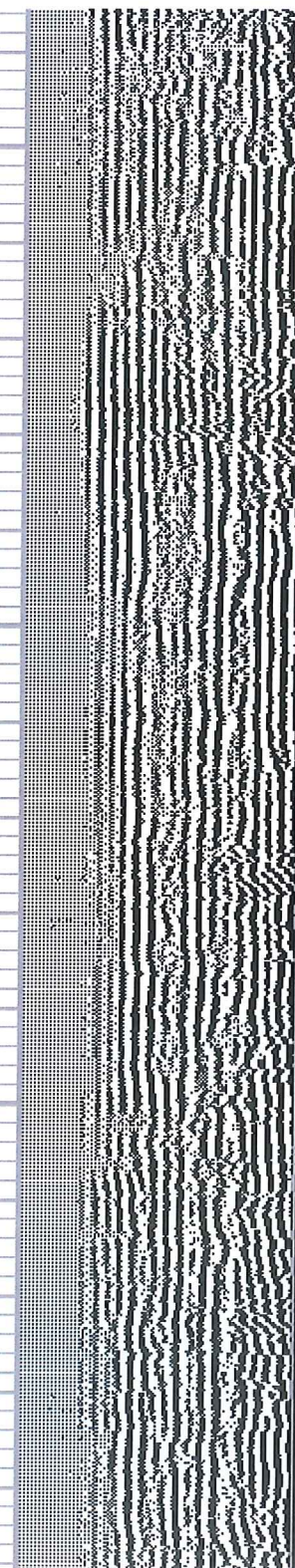


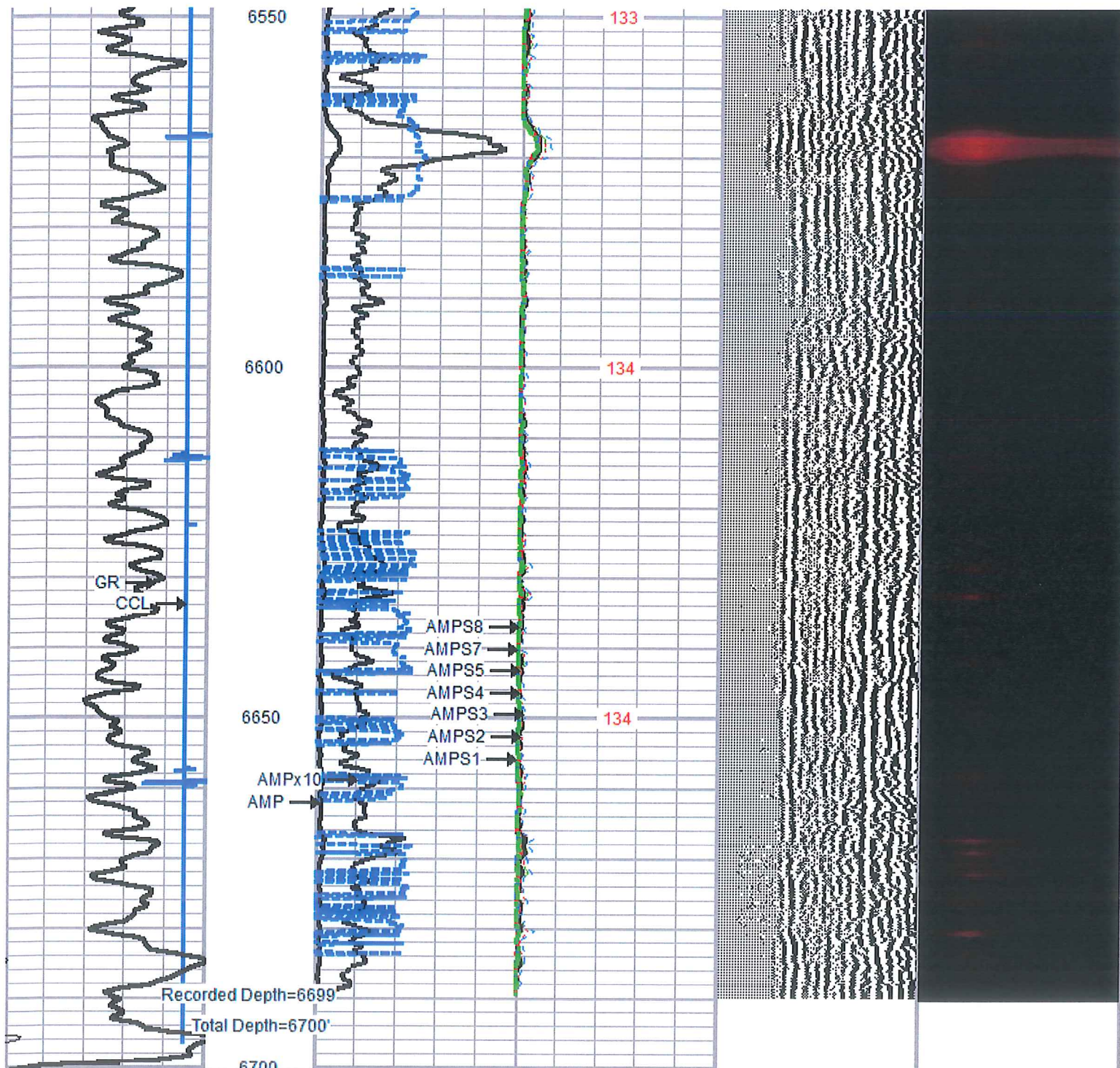


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-9	CCL	1
0	GR (GAPI)	200
200	GR (GAPI)	400

0	AMP (mV)	100	0	AMPS1	150
0	AMPx10 (mV)	10	0	AMPS2	150
350	TT (usec)	250	0	AMPS3	150

200	VDL	1200
-----	-----	------

1	Cement Map	8
3		95

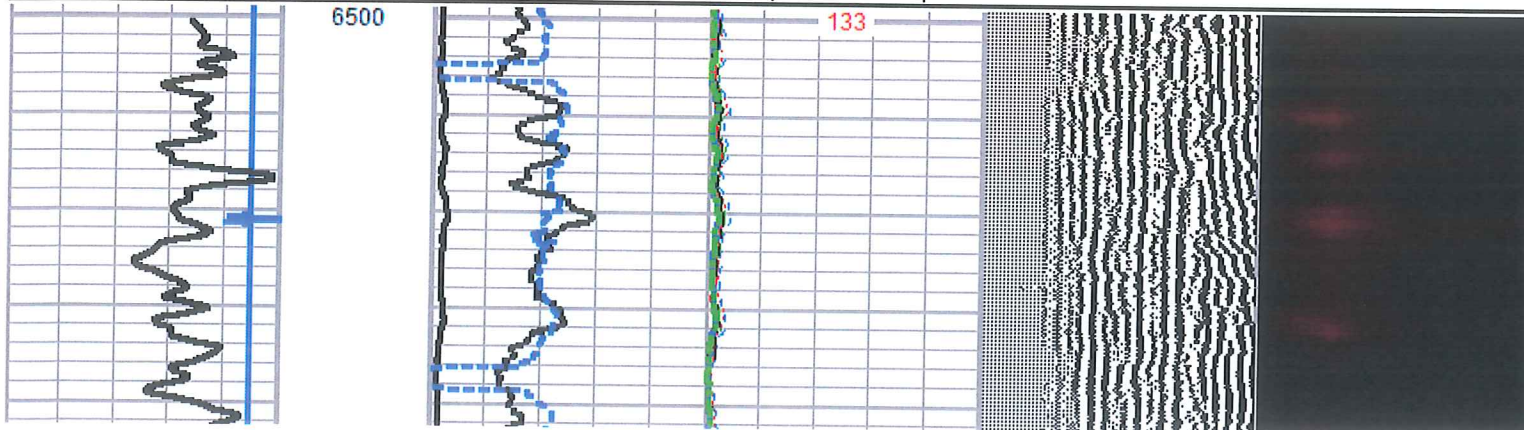
0	AMPS4	150
0	AMPS5	150
0	AMPS6	150
0	AMPS7	150
0	AMPS8	150
TEMP (degF)		

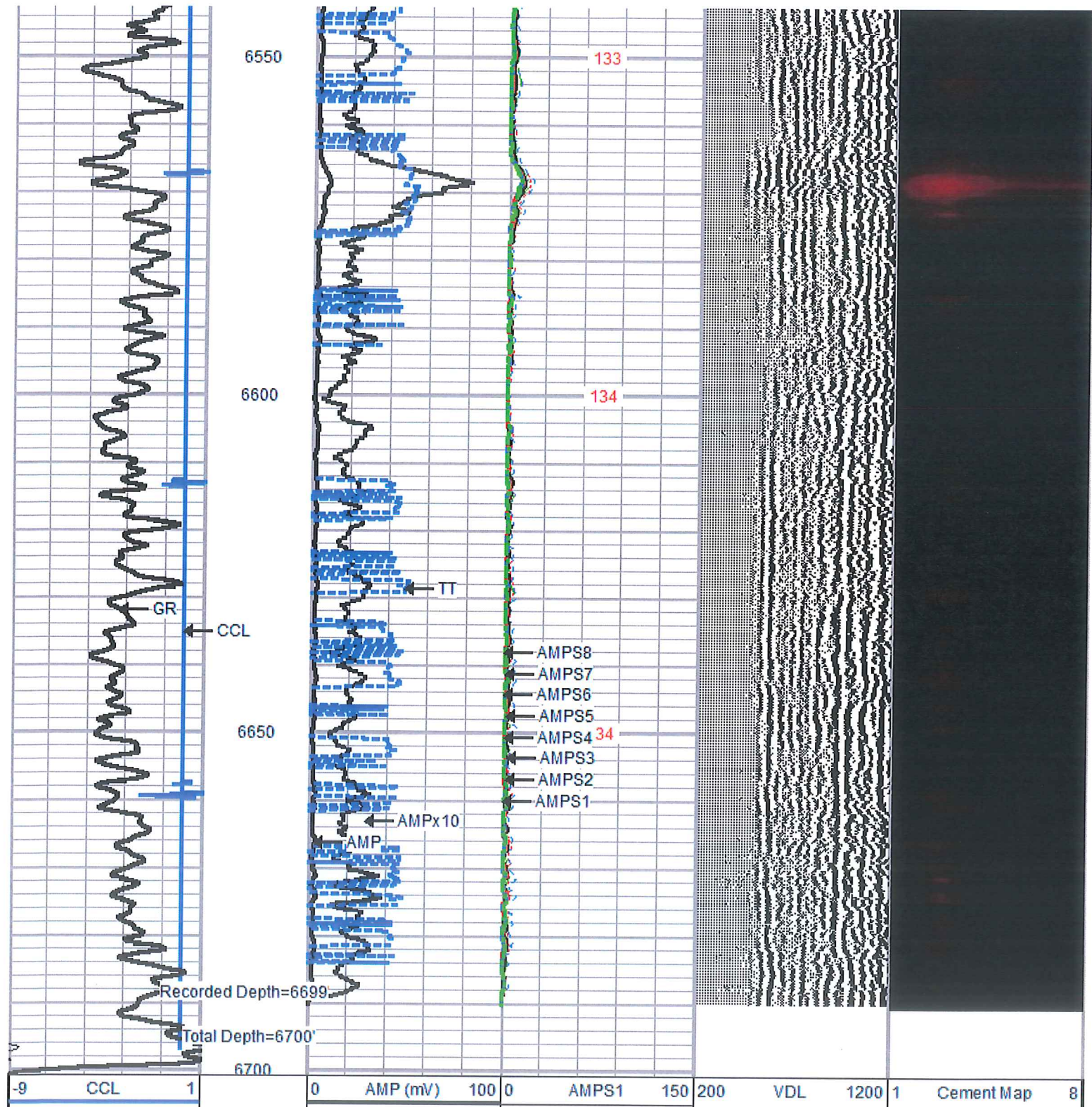


# REPEAT LOG

Database File: washington 1h.db  
 Dataset Pathname: pass4  
 Presentation Format: scbl02  
 Dataset Creation: Sat Sep 27 07:10:24 2014 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

-9	CCL	1	0	AMP (mV)	100	0	AMPS1	150	200	VDL	1200	1	Cement Map	8
0	GR (GAPI)	200	0	AMPx10 (mV)	10	0	AMPS2	150				3		95
200	GR (GAPI)	400	350	TT (usec)	250	0	AMPS3	150						
						0	AMPS4	150						
						0	AMPS5	150						
						0	AMPS6	150						
						0	AMPS7	150						
						0	AMPS8	150						
						TEMP (degF)								





0	GR (GAPI)	200
200	GR (GAPI)	400

0	AMPx10 (mV)	10	0	AMPS2	150
350	TT (usec)	250	0	AMPS3	150
			0	AMPS4	150
			0	AMPS5	150
			0	AMPS6	150
			0	AMPS7	150
			0	AMPS8	150
				TEMP	
				(degF)	



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HeadVolt	16.76		PTS275	2.88	2.75	24.00
Temp	13.91		RBT-Probe275T (FW1404-143_5.5INCH) Probe 2.75" Radial with Integral Temperature Sub	9.39	2.75	100.00
WVFS1	11.68					
WVFS2	11.68					
WVFS3	11.68					
WVFS4	11.68					
WVFS5	11.68					
WVFS6	11.68					
WVFS7	11.68					
WVFS8	11.68					



WVF5FT	10.68					
WVFCAL	7.42		PTS275	2.88	2.75	24.00
CCL	3.63		GR-Probe (275) Probe 2.75" 4 Channel Pulse	4.54	2.75	30.00
GR	0.89					
		Dataset: washington 1h.db: field/well/run1/pass5 Total Length: 19.70 ft Total Weight: 178.00 lb O.D.: 2.75 in				