



**RADIAL BOND LOG
WITH GAMMA RAY**

Pioneer Energy Services

Comp. ANADARKO PETROLEUM CORP
Well PEAKS 33-2
Field WATTENBERG
Co. WELD
State COLORADO

Company **ANADARKO PETROLEUM CORP**
Well **PEAKS 33-2**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: API #: 05-123-32125 Other Services
SHL: SESW 1293' FSL & 1601' FWL
LAT: 40.076615/LONG: -104.974242
SEC 2 TWP 1N RGE 68W
CCL
Permanent Datum GL Elevation 5032
Log Measured From GL 0 Above Perm. Datum
Drilling Measured From KB

Date of Service	06-JUNE-2019		
Run Number	ONE		
Depth Driller or P8TD	8605		
Depth Logger	3500		
Bottom Log Interval	3500		
Top Log Interval	0		
Open Hole Size	7.875		
Type Fluid	WATER		
Fluid Level	FULL		
Fluid Density	8.4		
Max. Recorded Temperature	140 degF		
Max. Wellhead Pressure	500 PSI		
Wellhead Connection	TUBING HANGER		
Estimated Cement Top	N/A		
Unit Number	P-81		
Wireline Size	9/32		
Location	FORT MORGAN		
Recorded By	MAX PACE		
Witnessed By	FIDEL GONZALEZ		
	Size	WV/Ft	Top Bottom
Tubing Record			
Surface Casing	8.625	24	0 900
Production Casing	4.5	11.6	0 8605
Liner Record			

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
PROBE RBL-DCT 1411-67 CALIBRATED ON 6-1-2019
FREE PIPE PASS PERFORMED AT 540 FEET

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: Operator: Operator: Operator:		

Log Variables

DatabaseC:\ProgramData\Warrior\Data\6-6-19-1.db
 Dataset field/well/run1/pass7/_vars_

Top - Bottom

BHTEMP_Src TEMP	BOREID in 7.875	BOTTEMP degF 100	CASEOD in 4.5	CASETHCK in 0	CASEWGHT lb/ft 11.6	MAXAMPL mV 0
MINAMPL mV 1	MINATTN db/ft 0.08	PERFS 0	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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31	
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
TEMP	17.32						
WVFS8	15.03			PROBE-RBT-DIGITAL-RBL-DCT (FW1411-9.21 Probe 2 3/4" Radii Bond with Temp-Corrosion Package		2.75	105.00
WVFS7	15.03						
WVFS6	15.03						
WVFS5	15.03						
WVFS4	15.03						
WVFS3	15.03						
WVFS2	15.03						
WVFS1	15.03						
WVFCAL	15.03						
WV3FT	15.03						
WV5FT	14.03						
HEADVOLT	10.84		Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	

CCL	7.09		PROBE-GR/CCL-DIGITAL-275 Probe GCT 4.75181)	2.75	60.00
GCT_TEMP	6.29		Probe 2 3/4" Gamma Ray/Temp/CCL		
GR	5.71				
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	15.00
			Bullnose-PROBE Probe Go Pin Pressure Cap	0.33	1.00
Dataset: 6-6-19-1.db: field/well/run1/pass7 Total length: 23.94 ft Total weight: 214.31 lb O.D.: 2.75 in					

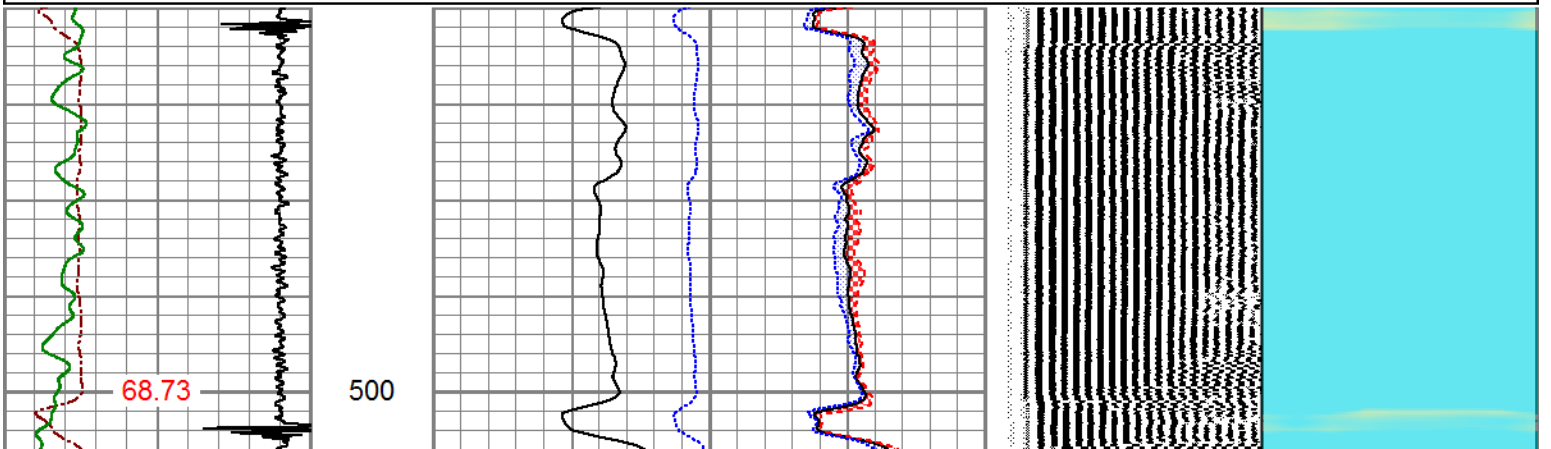
PIONEER
Pioneer Energy Services

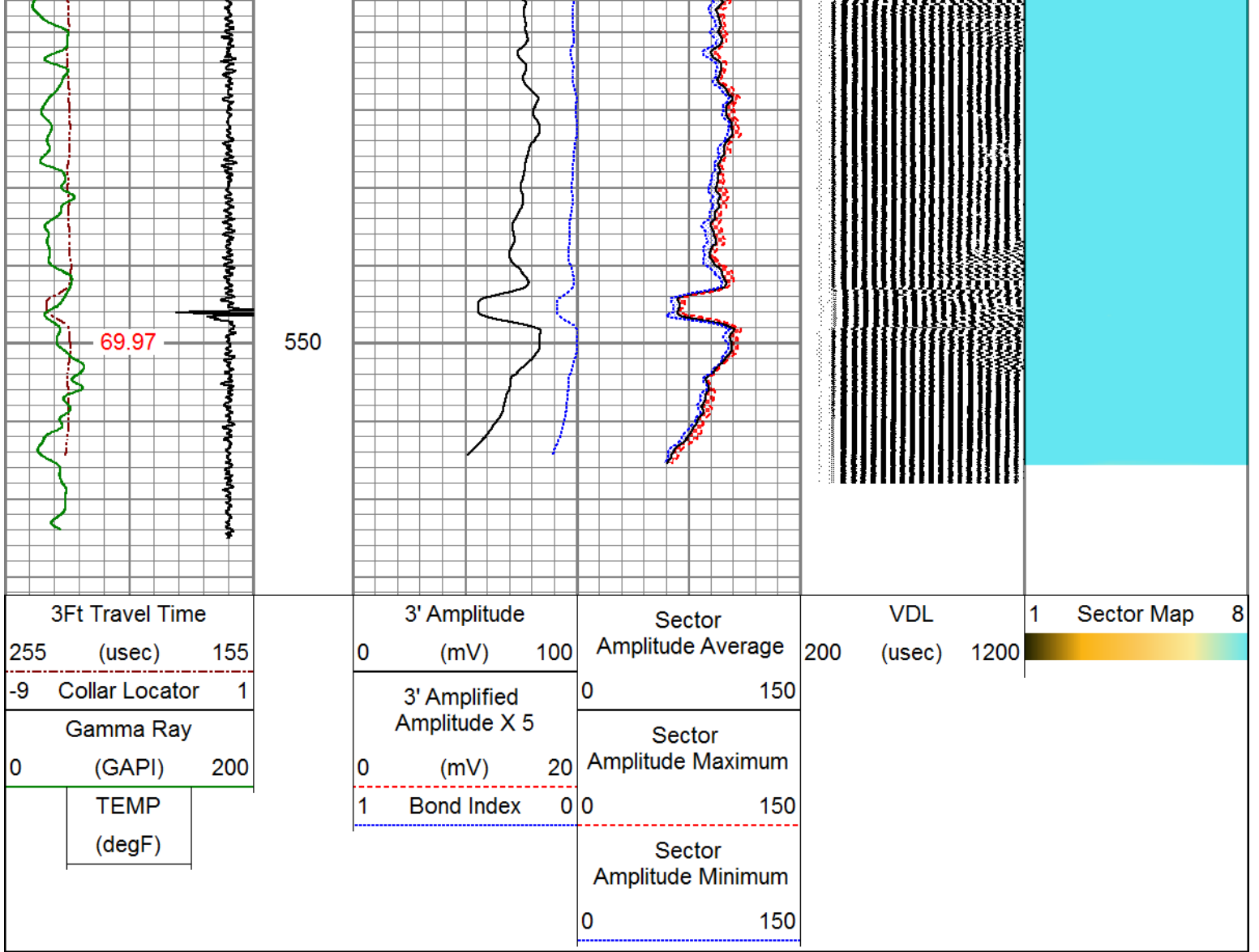
FREE PIPE SECTION


ZERO PSI APPLIED AT SURFACE

Database File	6-6-19-1.db
Dataset Pathname	pass3
Presentation Format	pinr_scb1
Dataset Creation	Thu Jun 06 07:34:15 2019
Charted by	Depth in Feet scaled 1:240

3Ft Travel Time 255 (usec) 155	3' Amplitude 0 (mV) 100	Sector Amplitude Average 0 150	VDL 200 (usec) 1200	1 Sector Map 8
-9 Collar Locator 1	3' Amplified Amplitude X 5 0 (mV) 20	Sector Amplitude Maximum 0 150		
Gamma Ray 0 (GAPI) 200	1 Bond Index 0	Sector Amplitude Minimum 0 150		
TEMP (degF)				



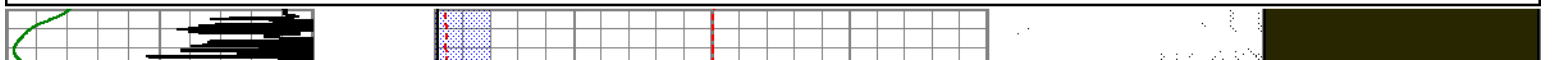
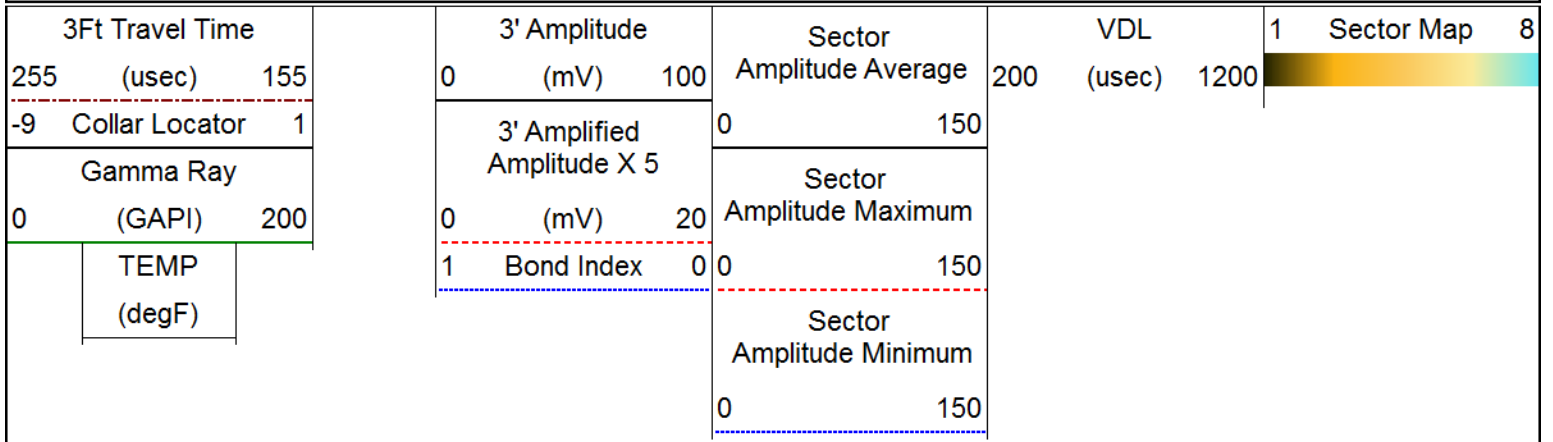


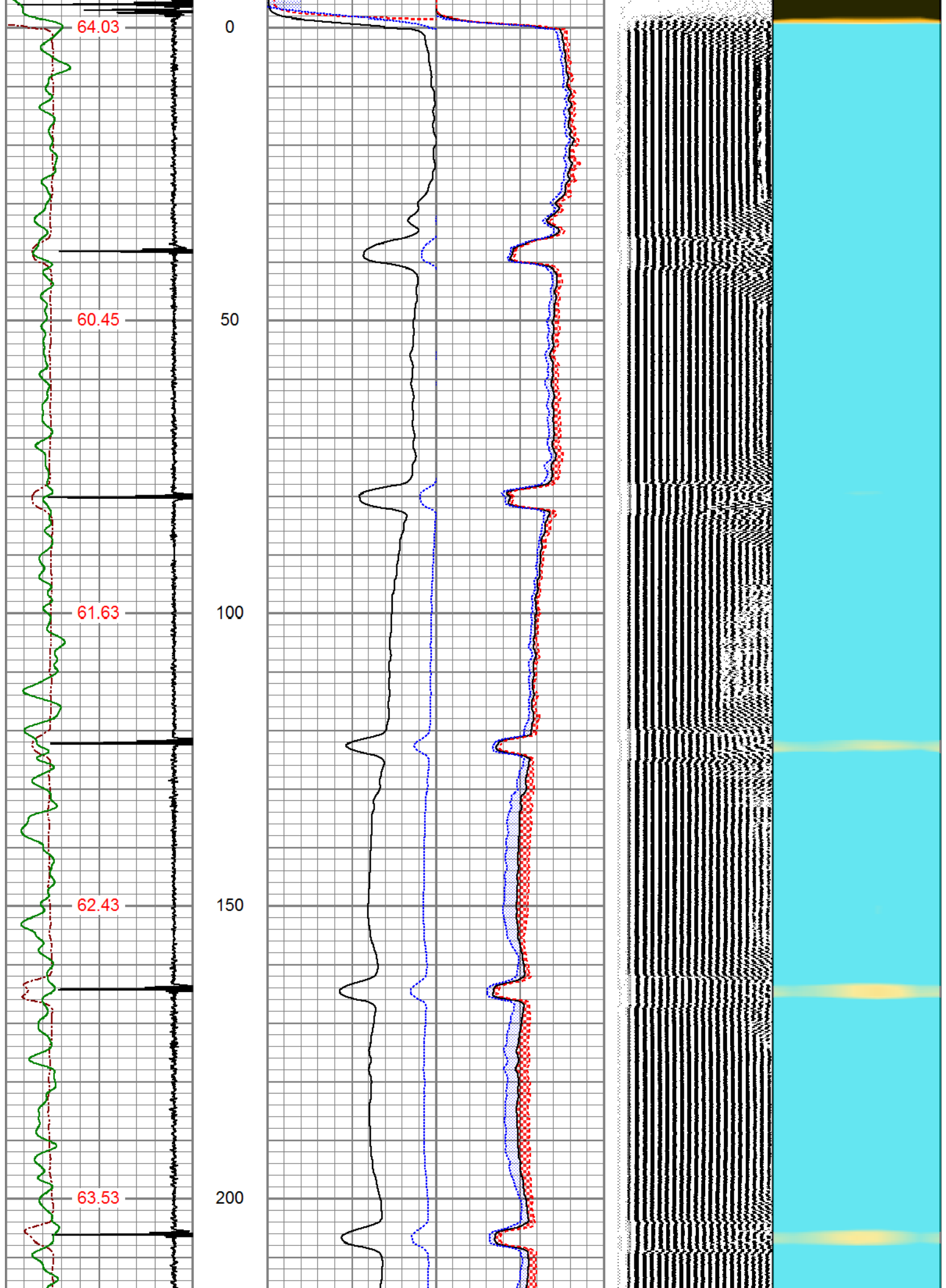


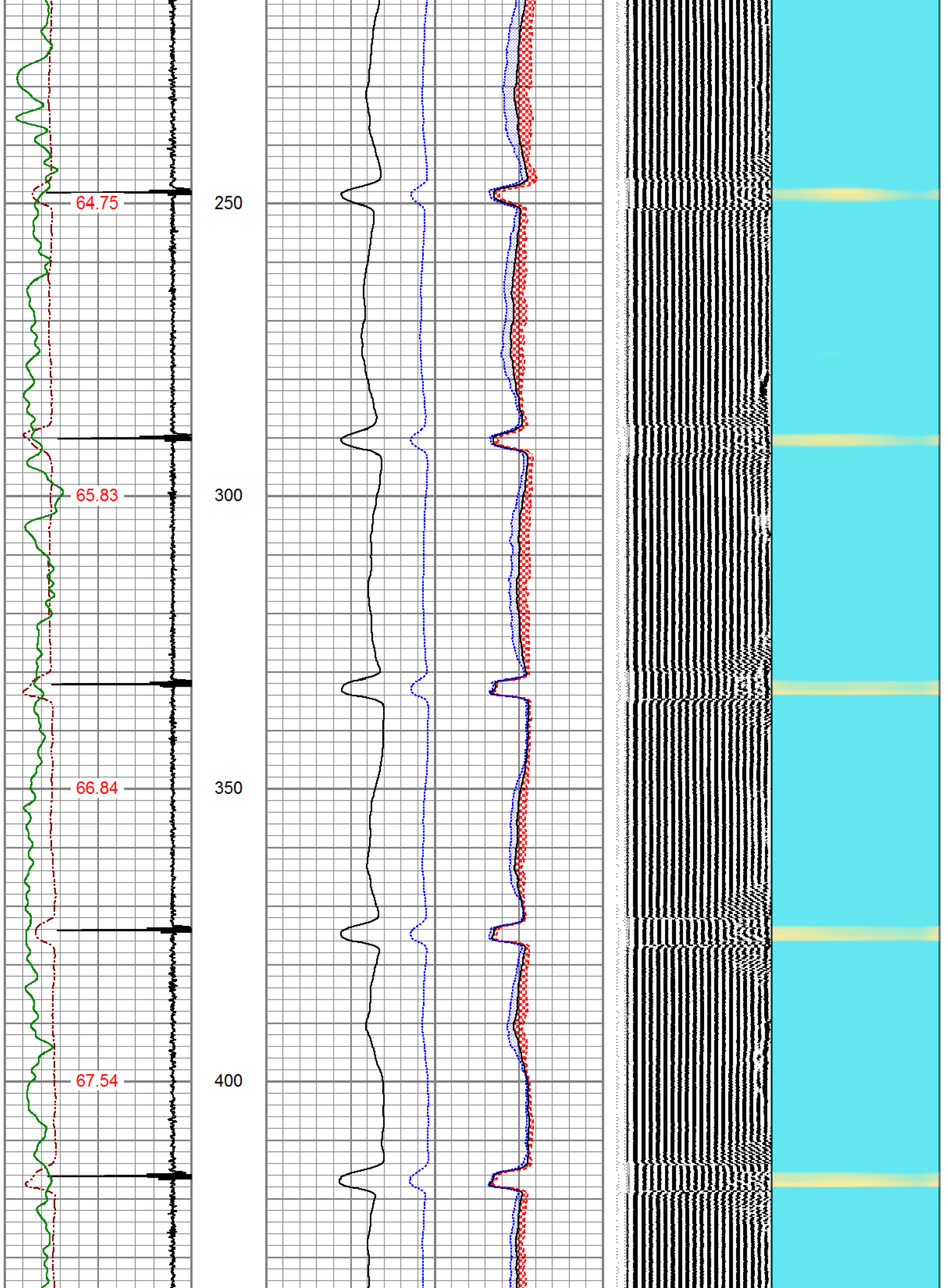
MAIN LOG

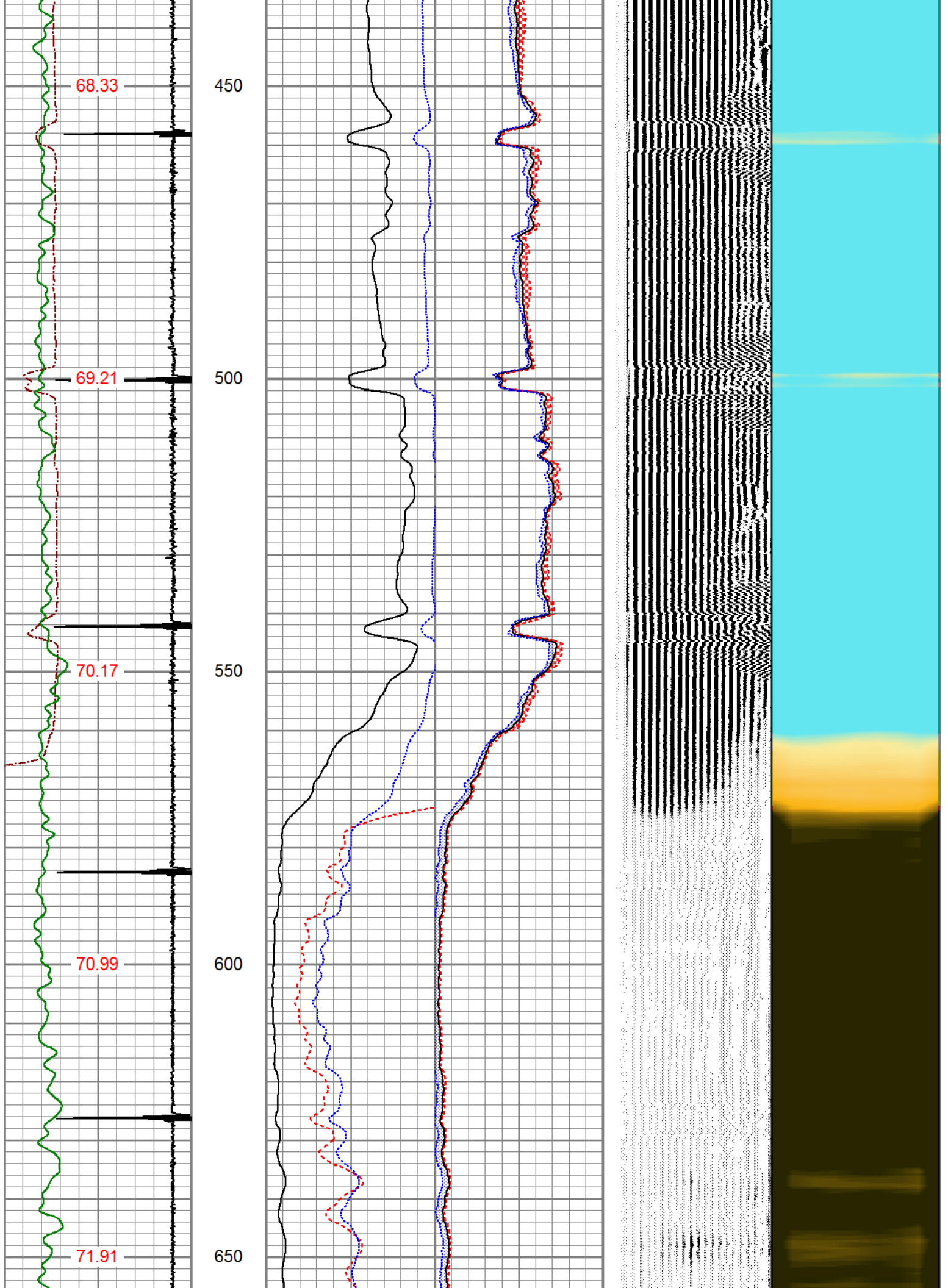
500 PSI APPLIED AT SURFACE

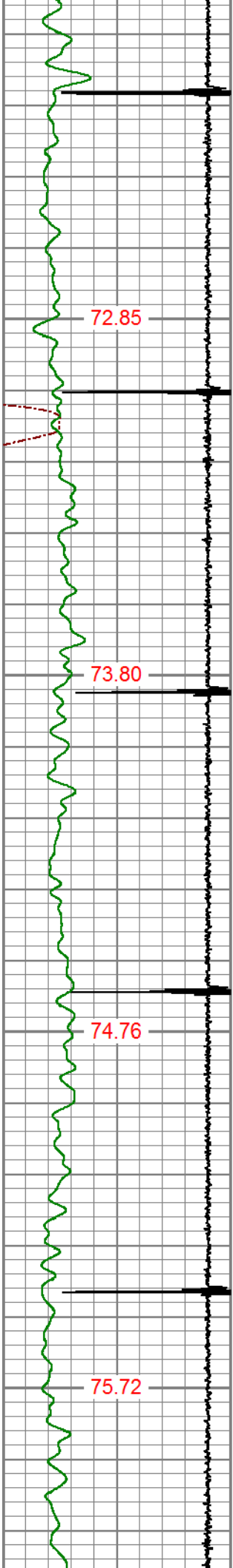
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Dataset Pathname	pass7
Presentation Format	pinr_scbl
Dataset Creation	Thu Jun 06 07:55:59 2019
Charted by	Depth in Feet scaled 1:240









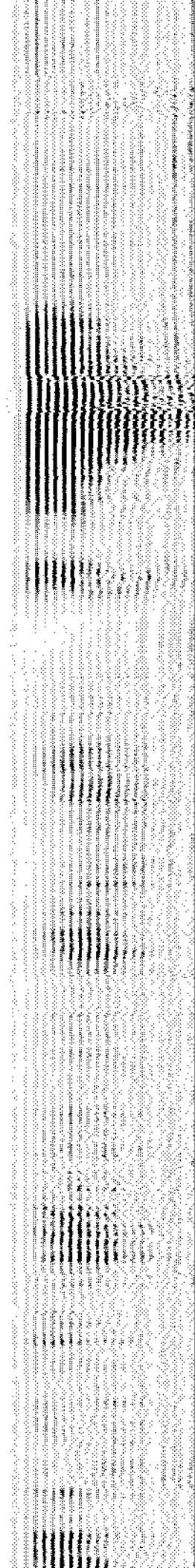
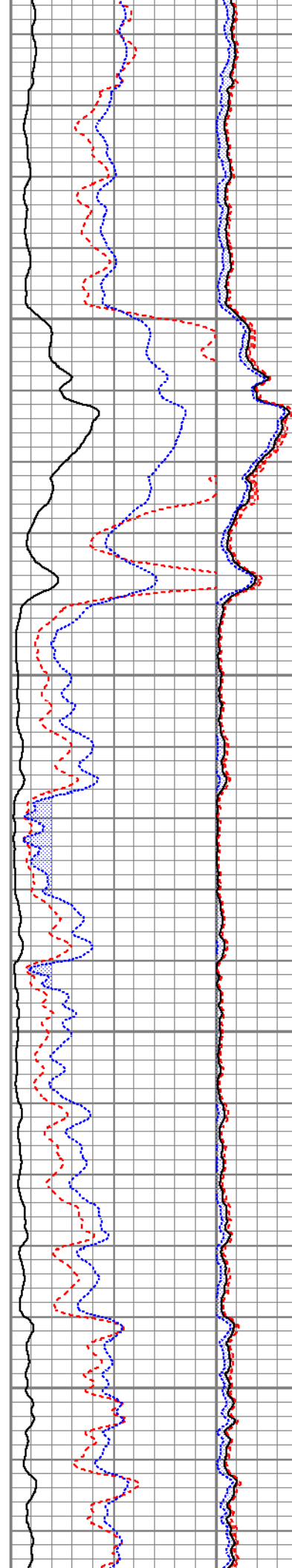


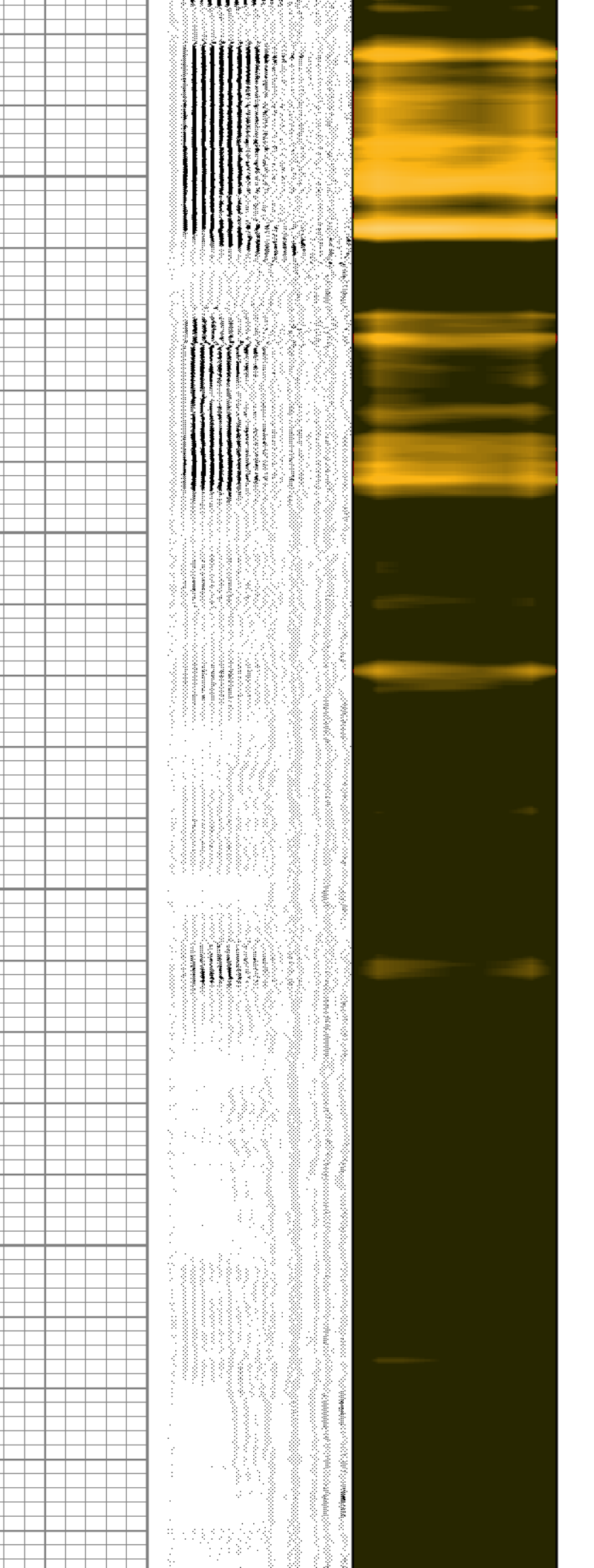
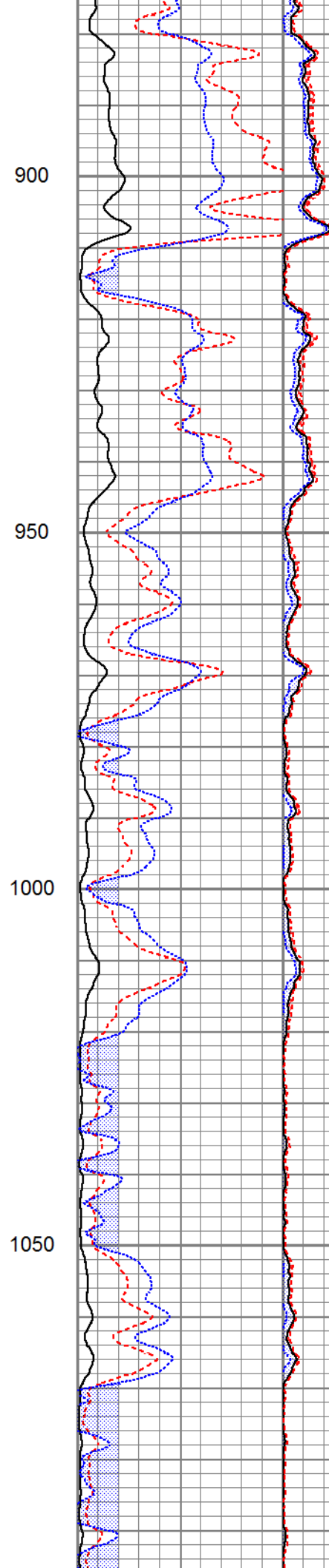
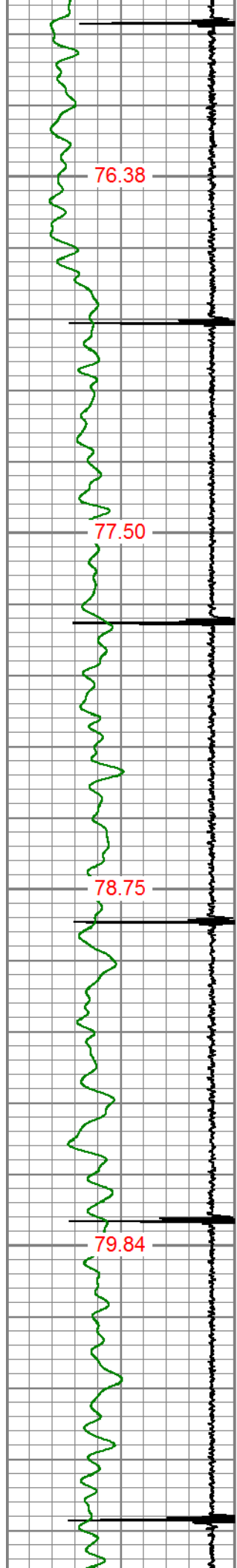
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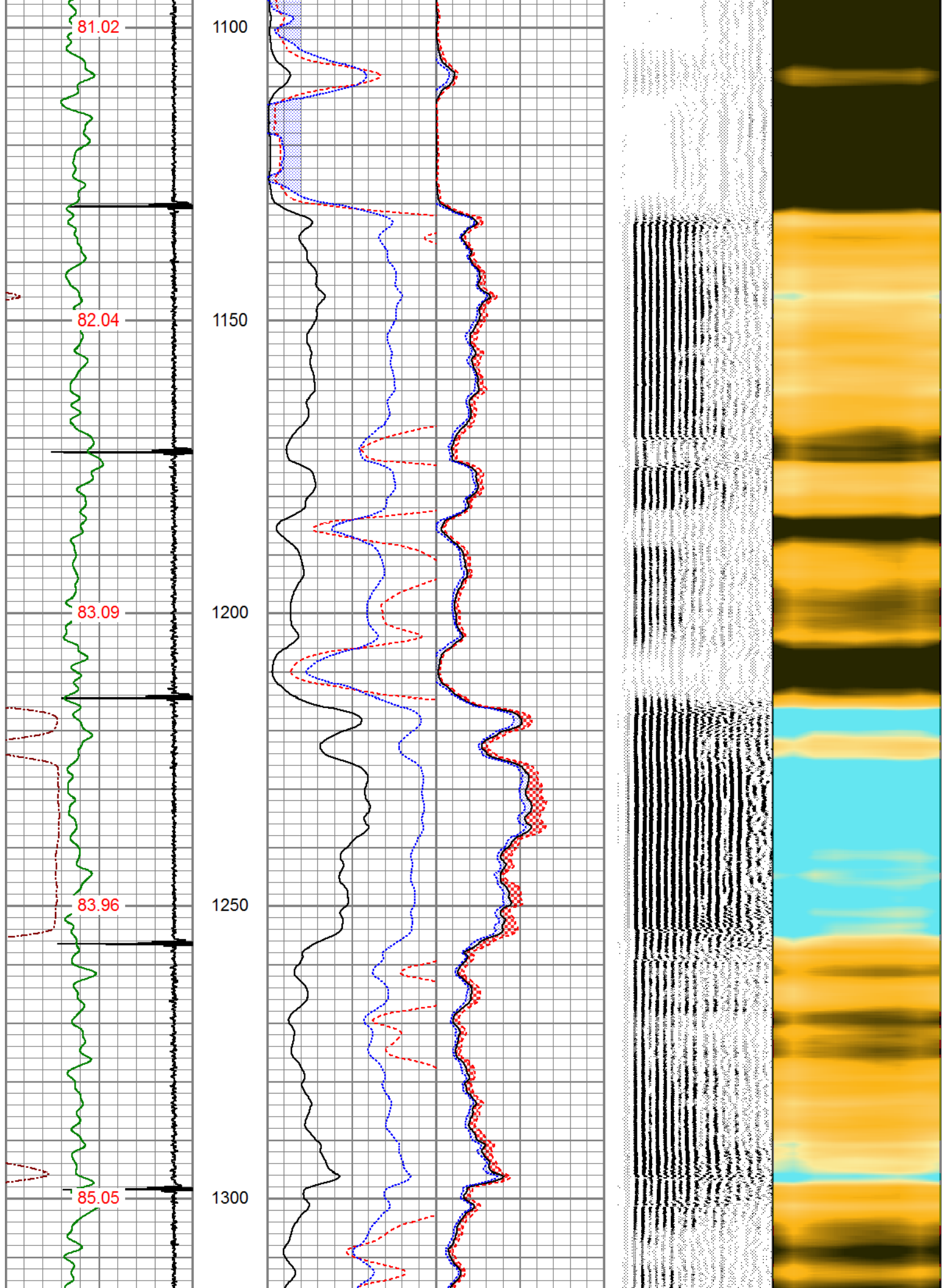
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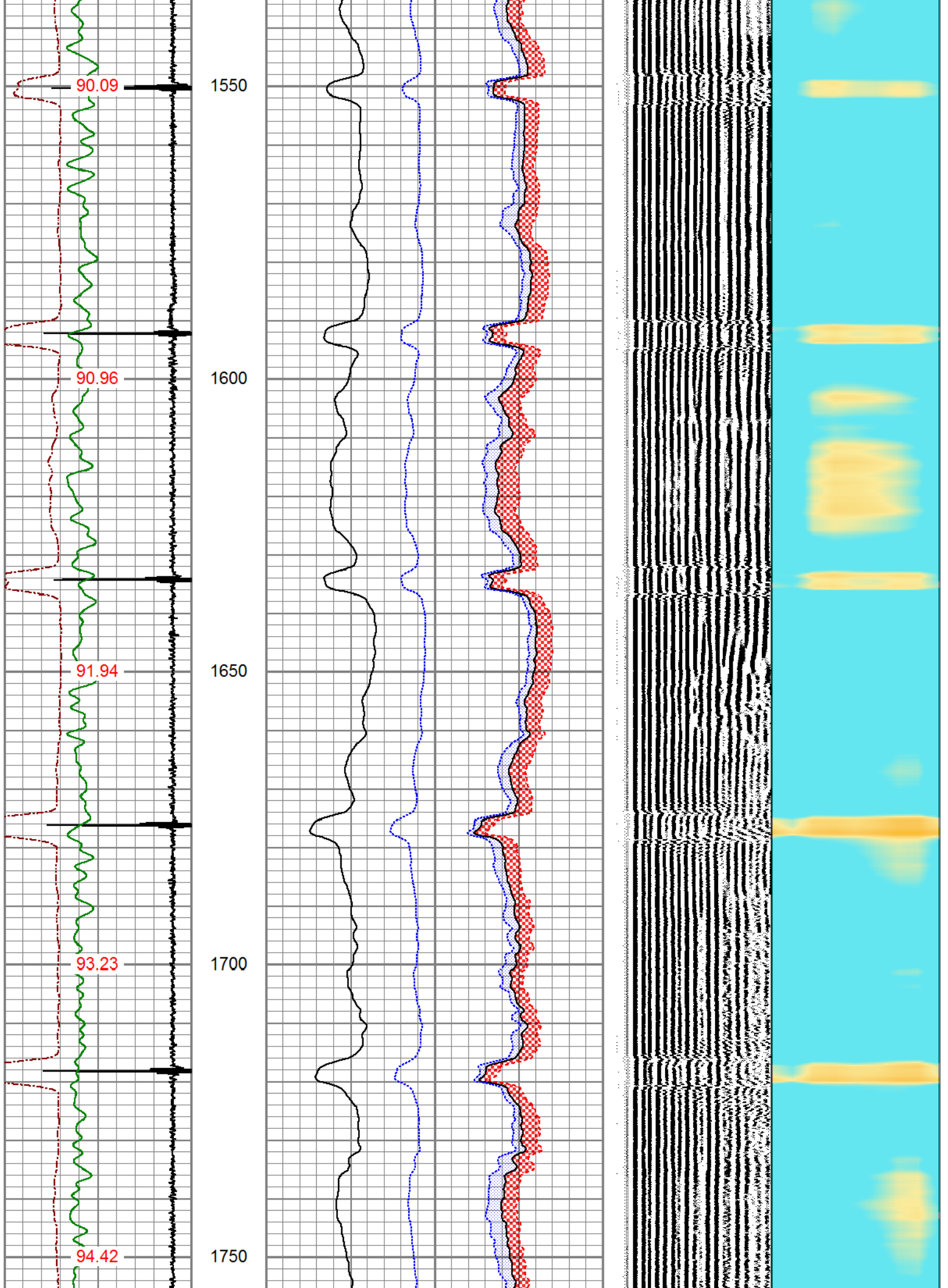
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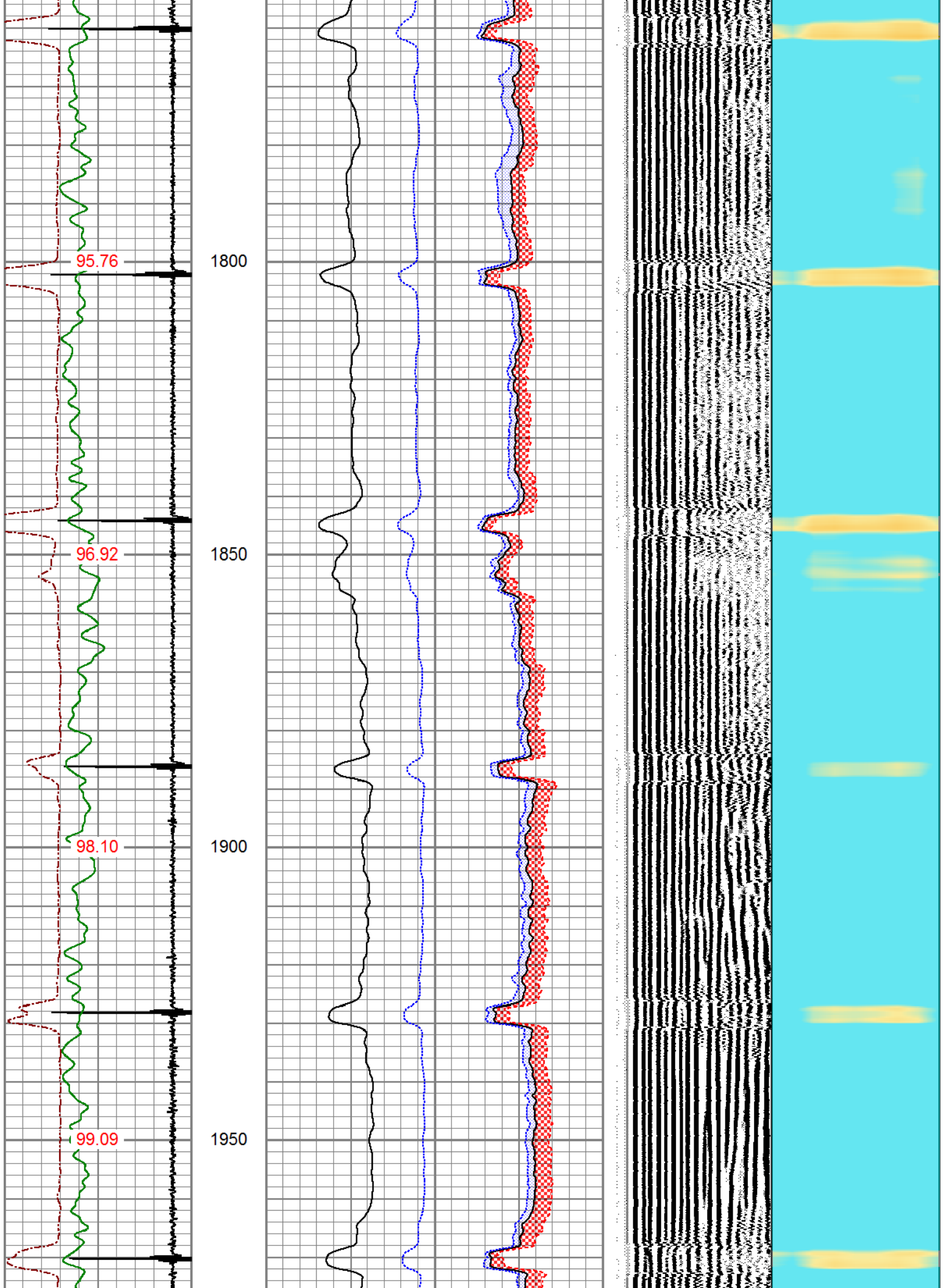
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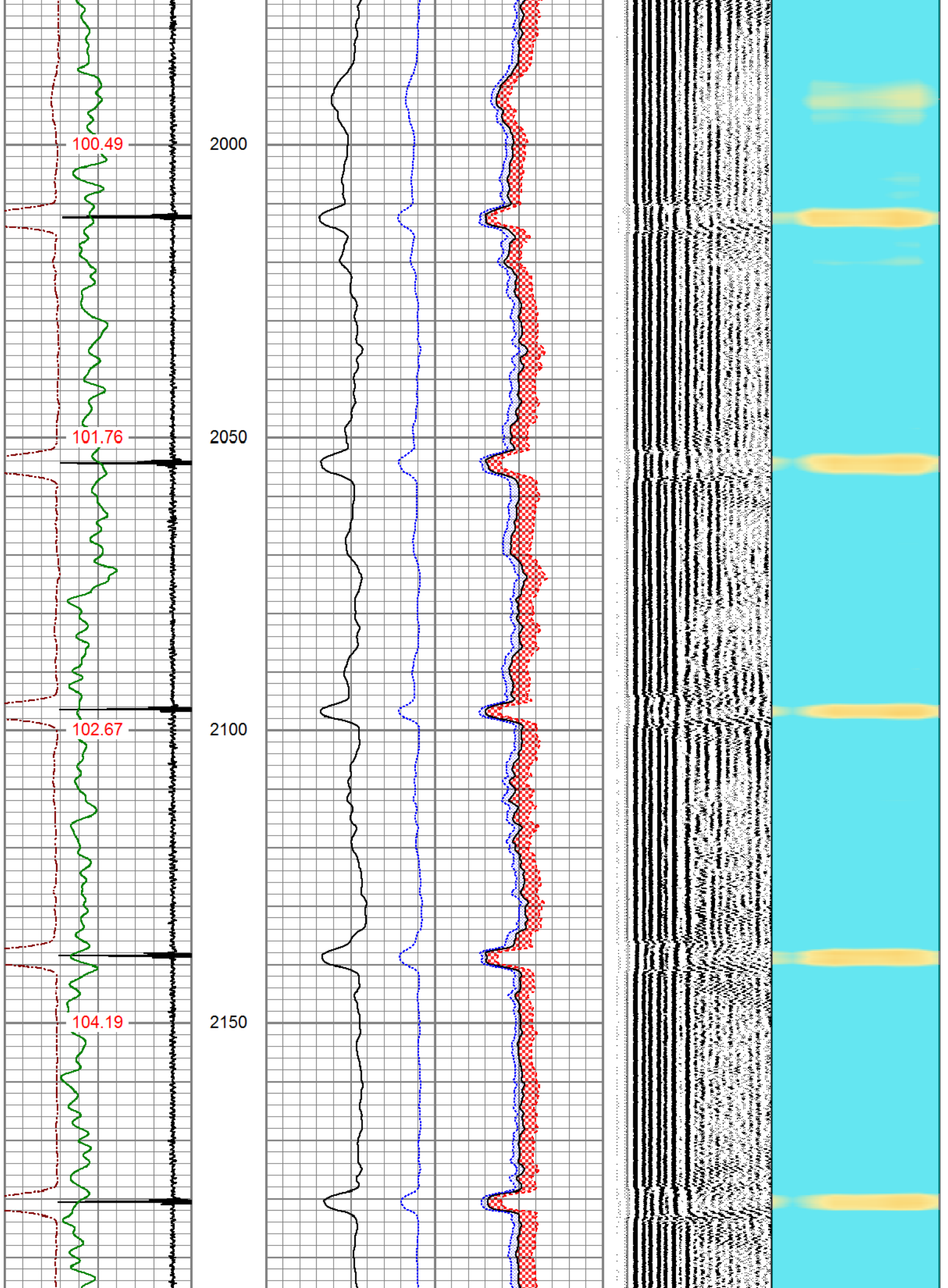


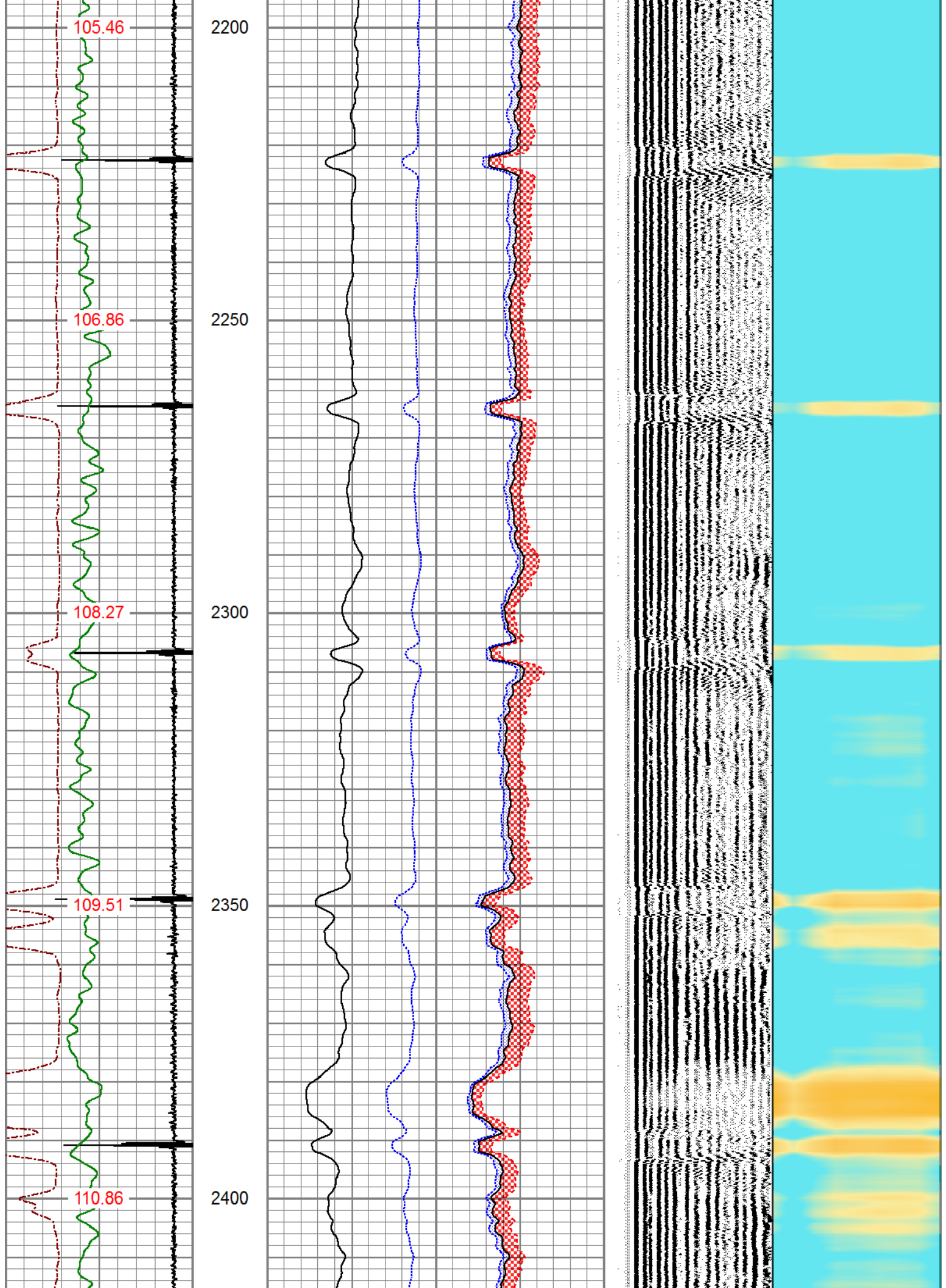


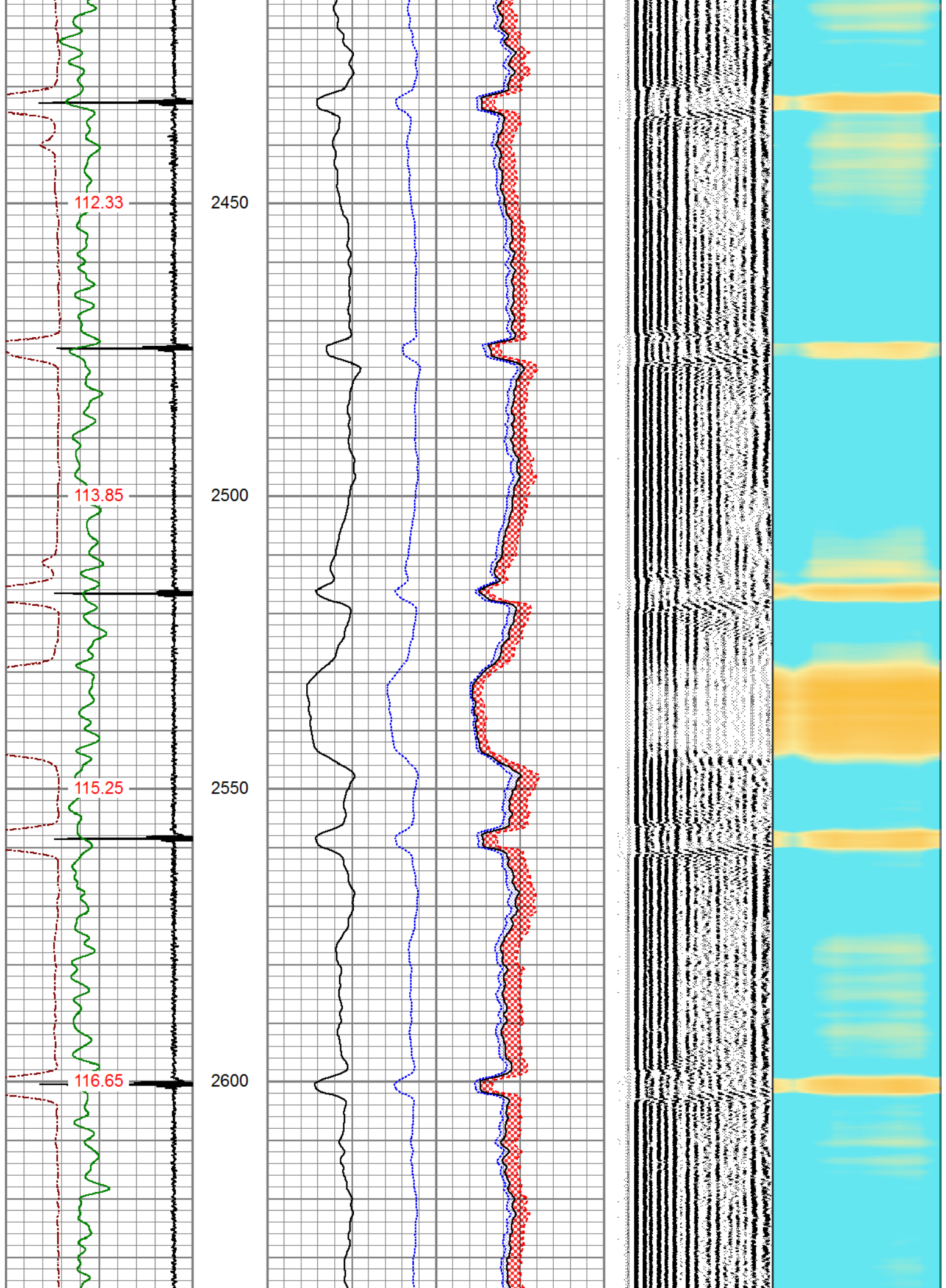


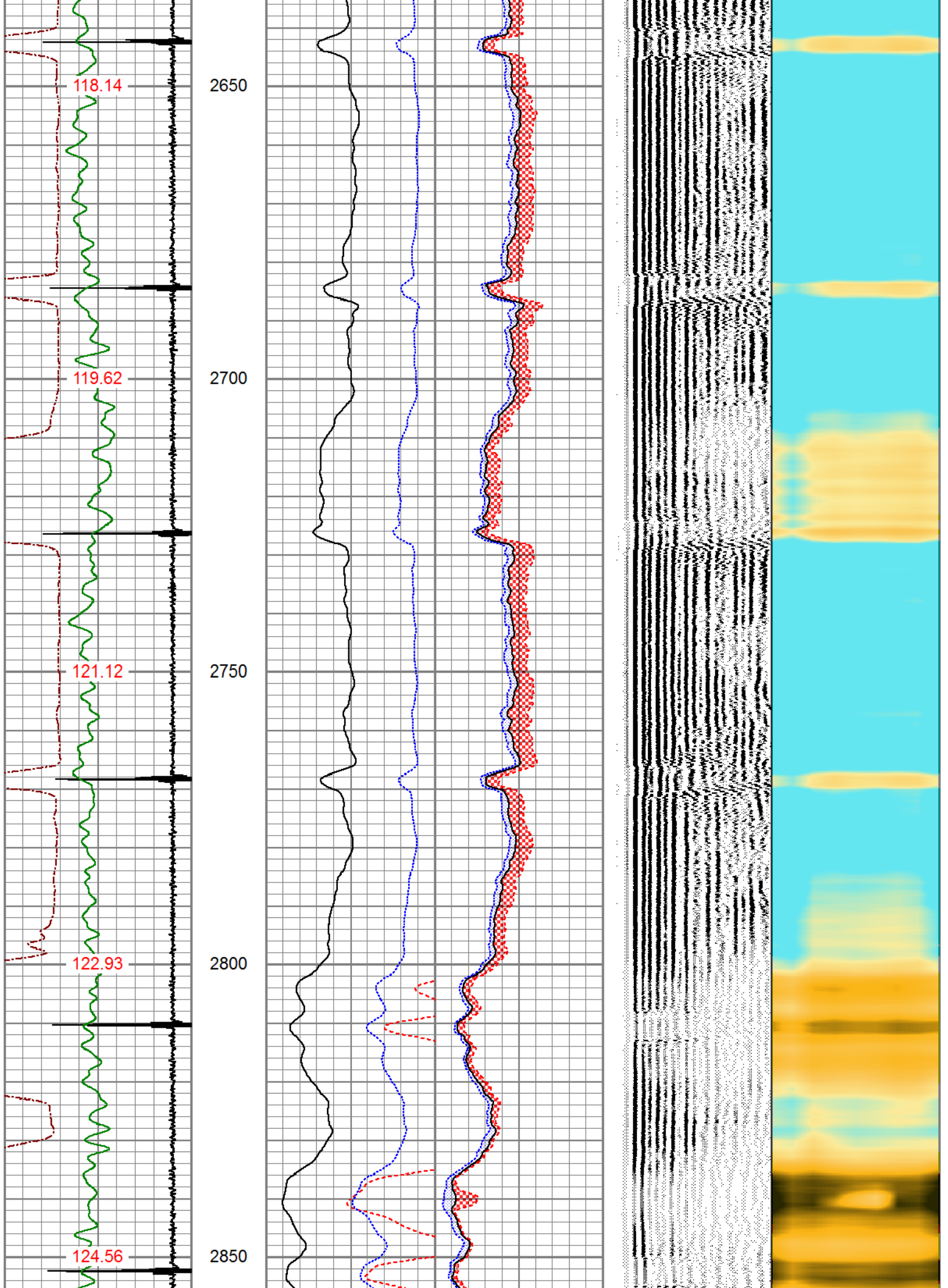


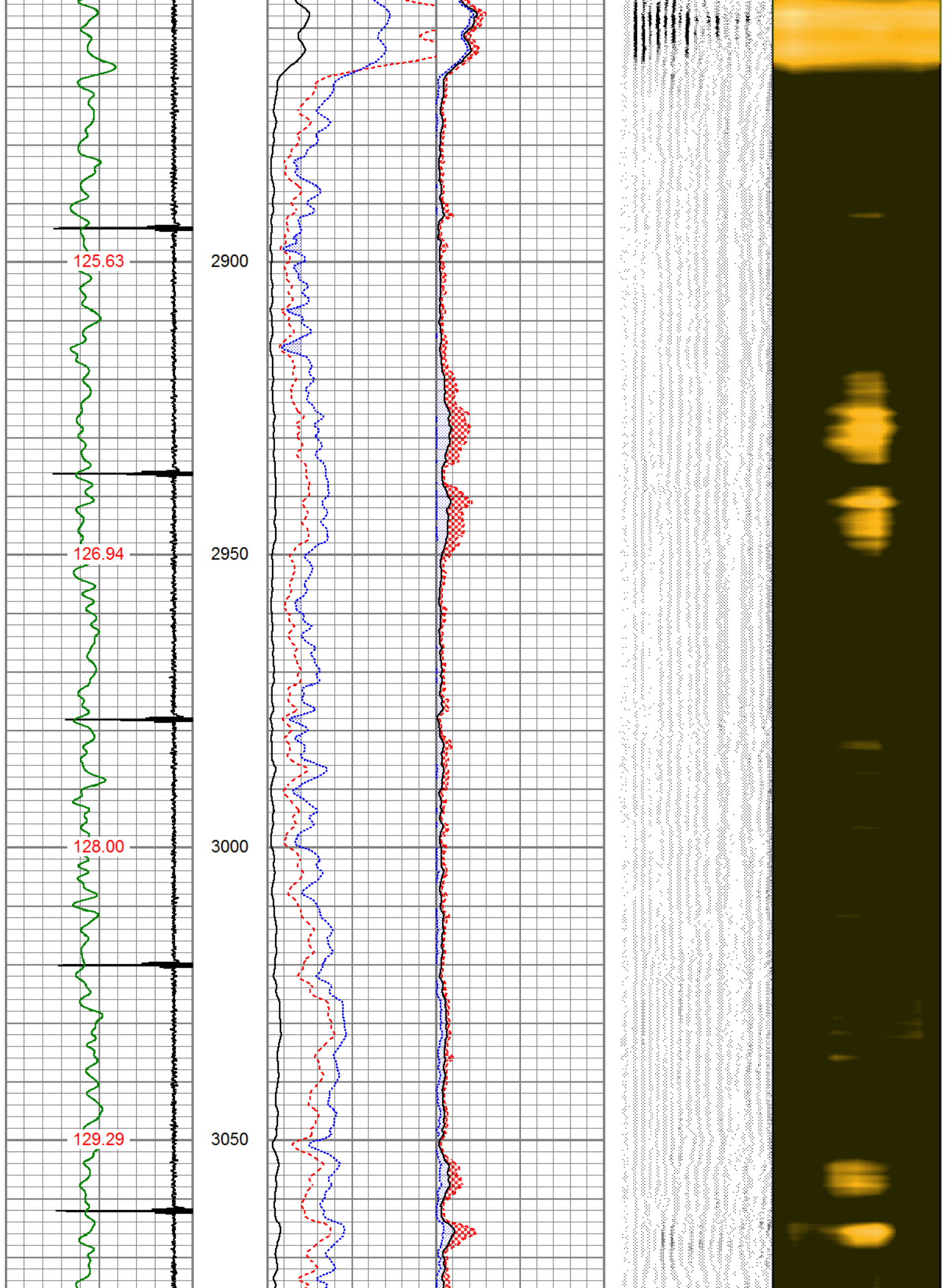


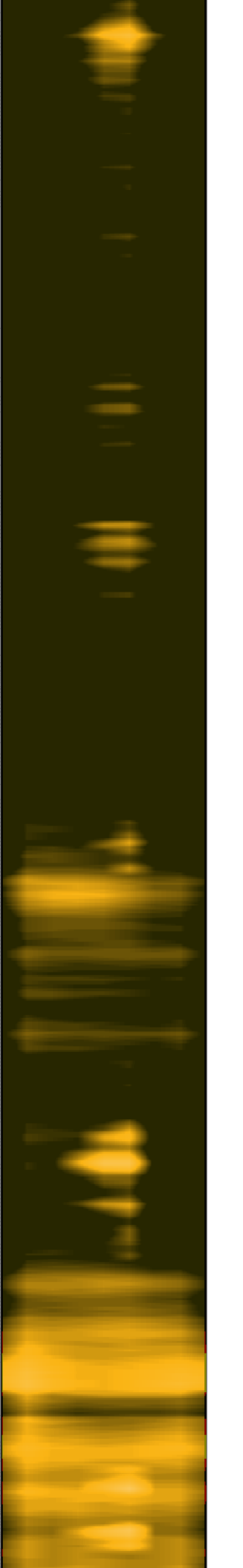
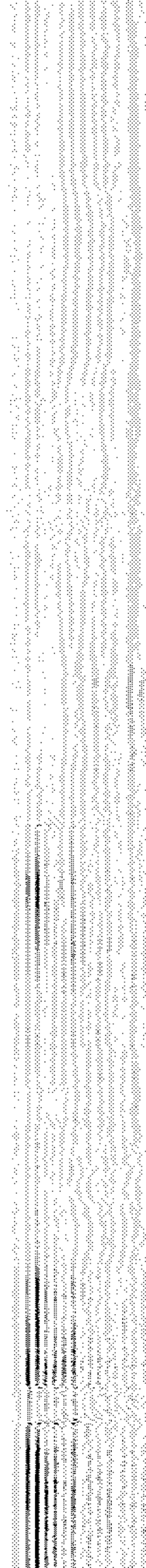
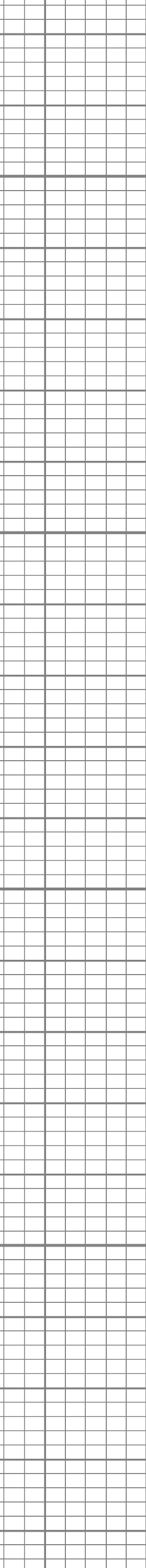
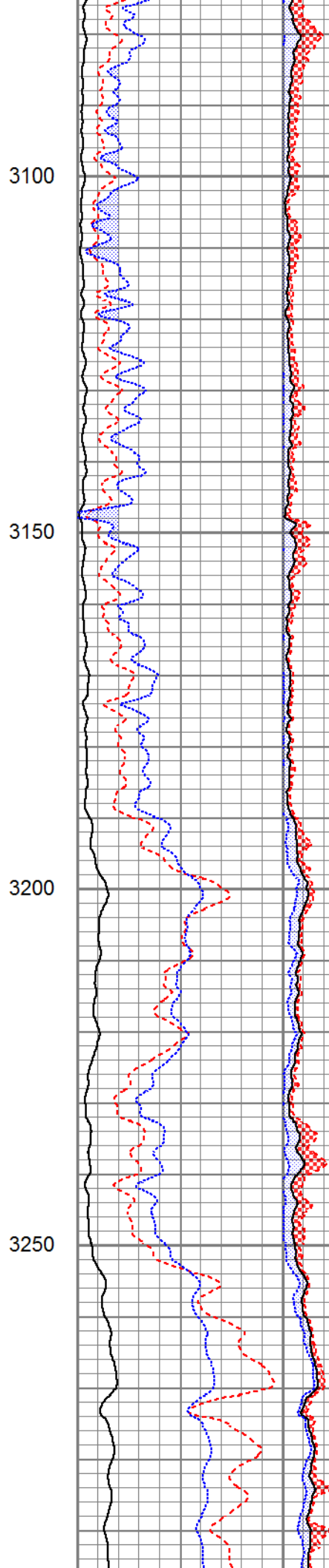
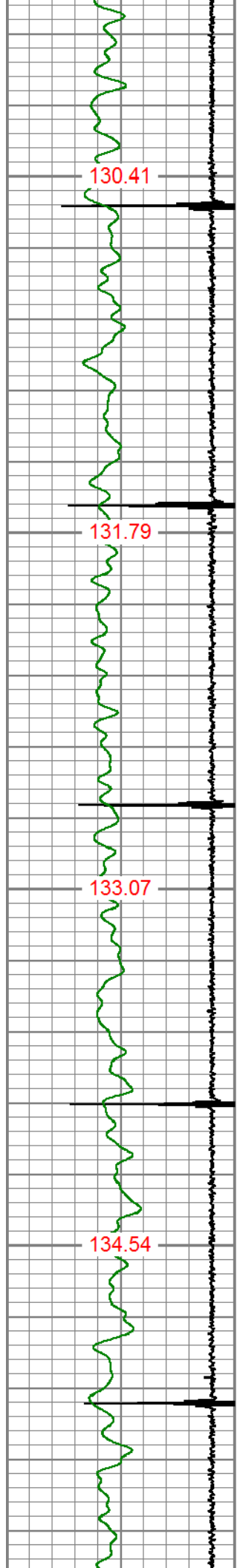


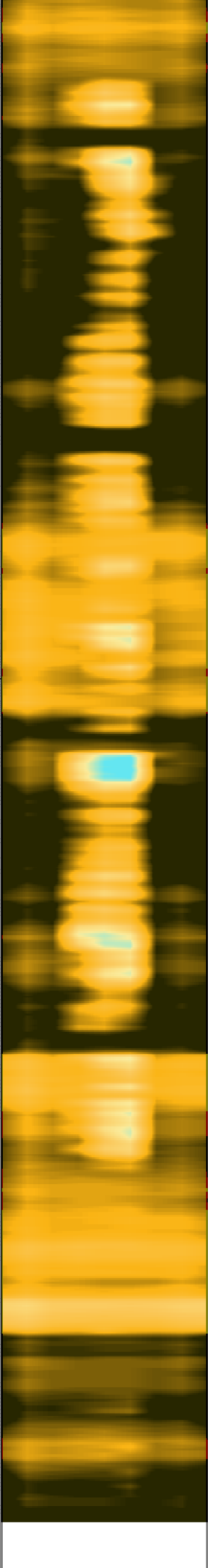
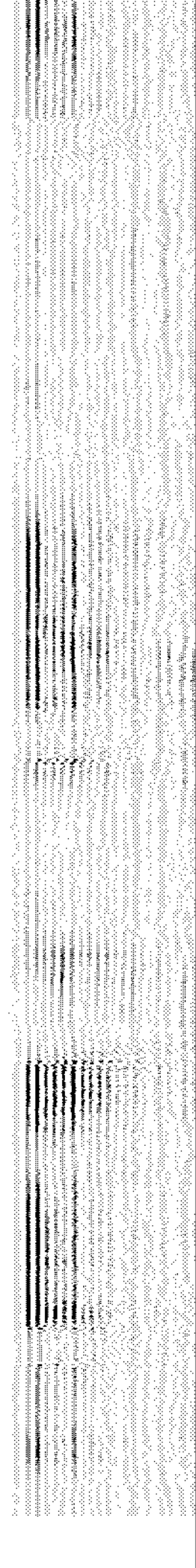
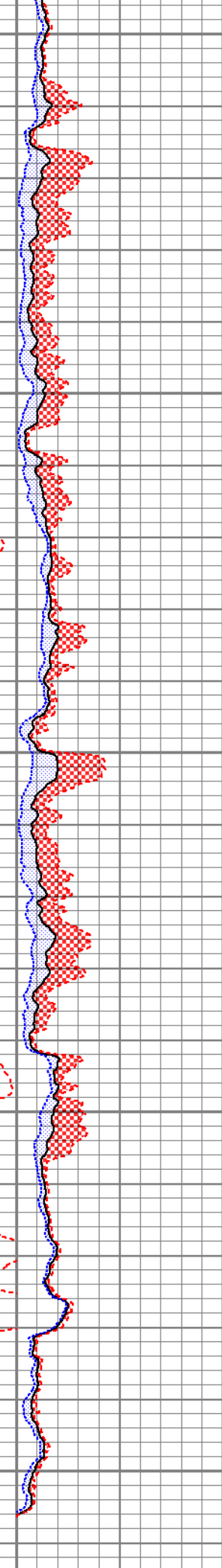
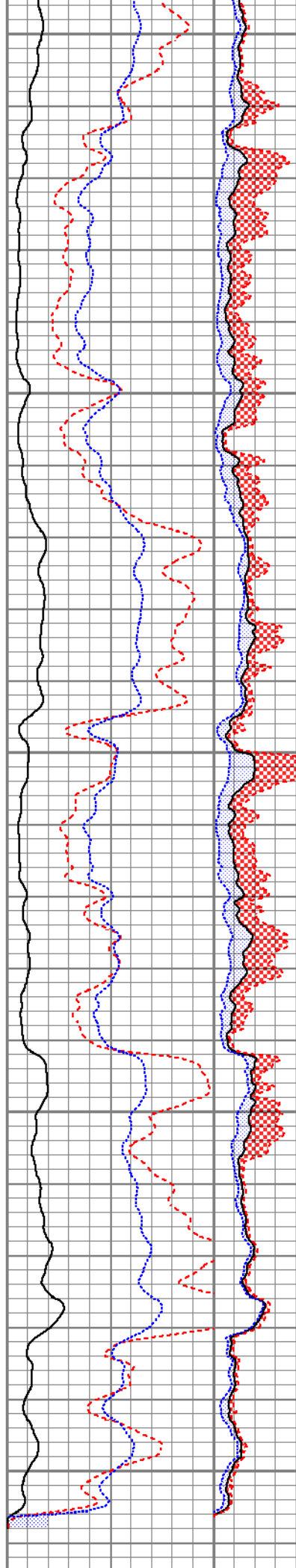
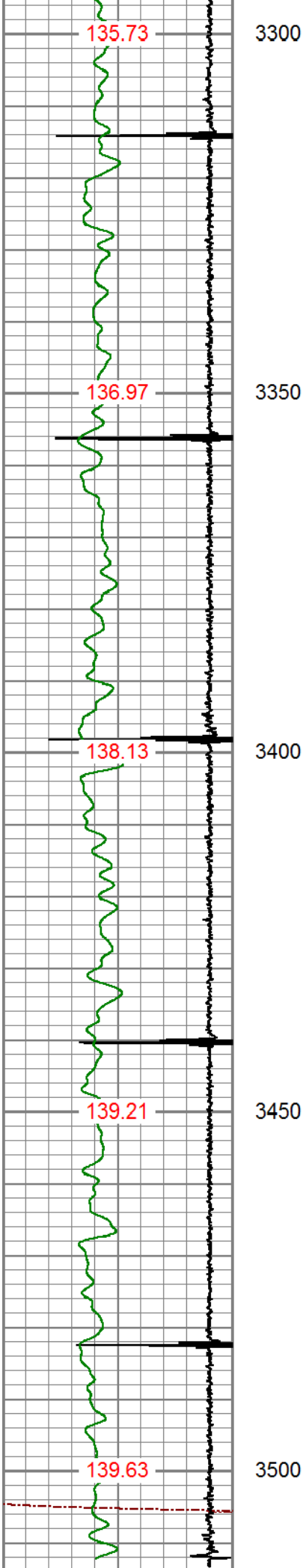












3Ft Travel Time 255 (usec) 155	3' Amplitude 0 (mV) 100	Sector Amplitude Average	VDL 200 (usec) 1200	1 Sector Map 8
-9 Collar Locator 1	3' Amplified Amplitude X 5 0 (mV) 20	0 150		
Gamma Ray 0 (GAPI) 200	1 Bond Index 0	Sector Amplitude Maximum 0 150		
TEMP (degF)		Sector Amplitude Minimum 0 150		



MAIN LOG

500 PSI APPLIED AT SURFACE

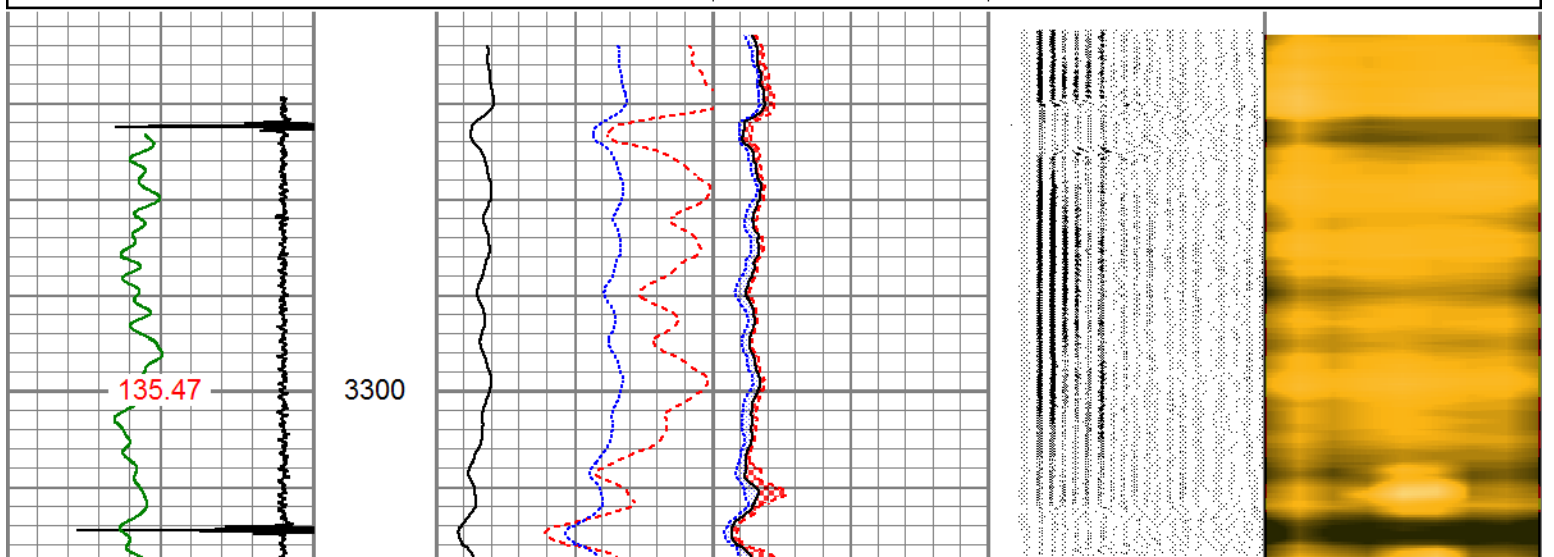


REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

Database File 6-6-19-1.db
 Dataset Pathname pass6
 Presentation Format pinr_scbl
 Dataset Creation Thu Jun 06 07:49:43 2019
 Charted by Depth in Feet scaled 1:240

3Ft Travel Time 255 (usec) 155	3' Amplitude 0 (mV) 100	Sector Amplitude Average	VDL 200 (usec) 1200	1 Sector Map 8
-9 Collar Locator 1	3' Amplified Amplitude X 5 0 (mV) 20	0 150		
Gamma Ray 0 (GAPI) 200	1 Bond Index 0	Sector Amplitude Maximum 0 150		
TEMP (degF)		Sector Amplitude Minimum 0 150		



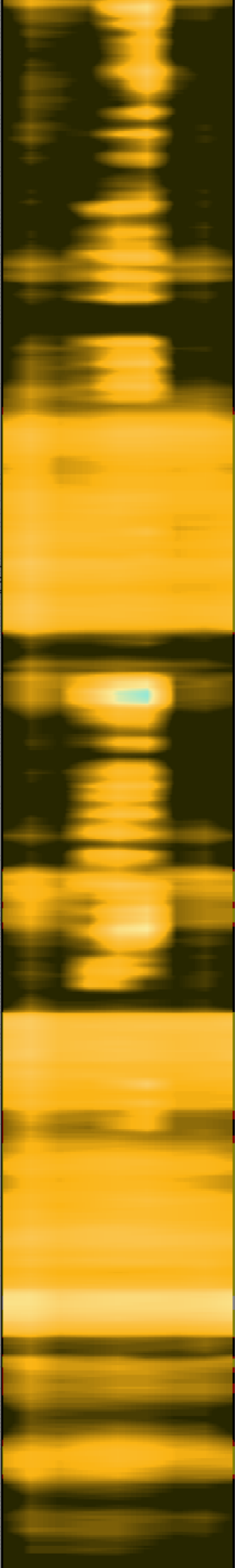
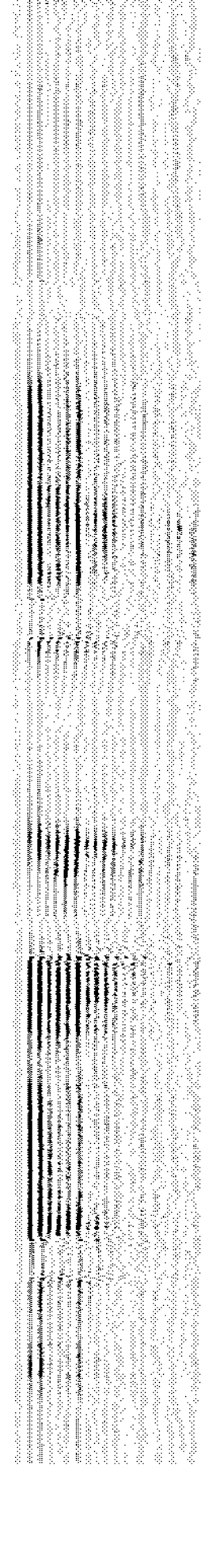
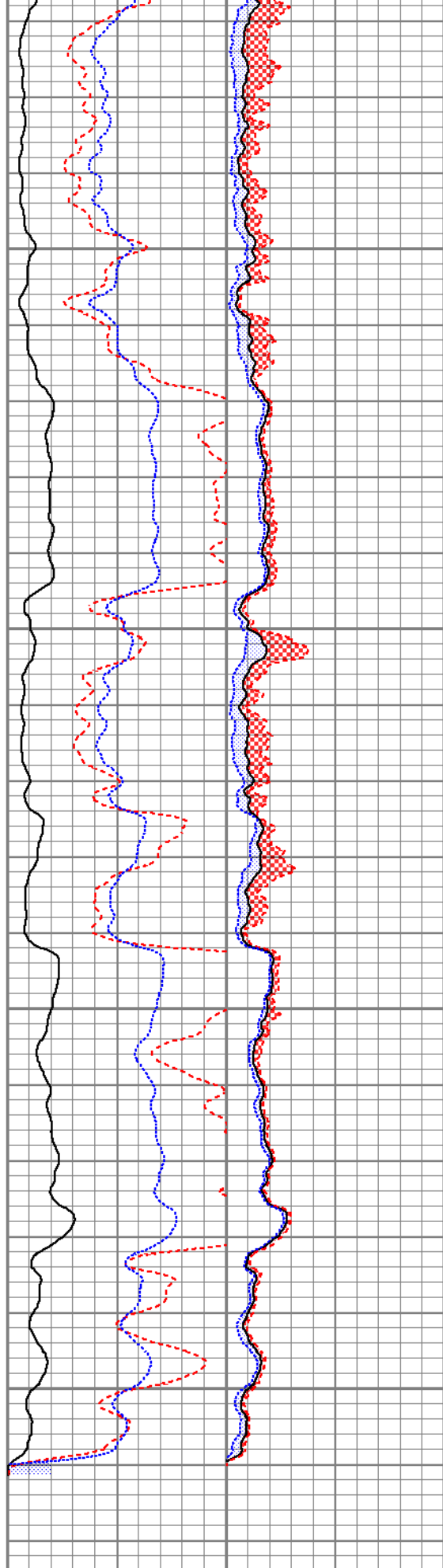


3350

3400

3450

3500



255 (usec) 155

-9 Collar Locator 1

0 100

0 150

200 1200

1 Sector Map 8

Gamma Ray (GAPI) 200		Amplitude X 5 (mV) 20	Sector Amplitude Maximum 0 150
TEMP (degF)		Bond Index 0	Sector Amplitude Minimum 0 150

Calibration Report

Database File 6-6-19-1.db
 Dataset Pathname pass6
 Dataset Creation Thu Jun 06 07:49:43 2019

Gamma Ray Calibration Report

Serial Number: 140181
 Tool Model: 275 Probe GCT
 Performed: Sun Oct 21 21:49:08 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6800 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1411-67
 Tool Model: RBL-DCT

Calibration Casing Diameter: 4.500 in
 Calibration Depth: 539.993 ft

Master Calibration, performed Thu Jun 06 07:38:07 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	0.952	0.700	81.196	85.196	0.117
CAL	1.504	1.504				
5'	0.005	1.035	0.700	81.196	78.164	0.329
SUM						
S1	0.080	1.059	0.000	100.000	102.098	-8.172
S2	0.008	1.093	0.000	100.000	92.209	-0.764
S3	0.008	0.993	0.000	100.000	101.464	-0.796
S4	0.008	0.977	0.000	100.000	103.144	-0.802
S5	0.007	1.018	0.000	100.000	98.924	-0.723
S6	0.007	1.015	0.000	100.000	99.277	-0.722
S7	0.007	1.004	0.000	100.000	100.334	-0.719
S8	0.007	1.002	0.000	100.000	100.552	-0.730

Air Zero Calibration, performed Thu Jun 06 07:20:51 2019:

	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

Temperature Calibration Report

Serial Number: FW1411-67
Tool Model: RBL-DCT
Performed: (Not Performed)

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	1.00 degF	1.00 degF
Gain:	1.00	
Offset:	0.00	
Delta Spacing	1	



PIONEER
Pioneer Energy Services

Company	ANADARKO PETROLEUM CORP
Well	PEAKS 33-2
Field	WATTENBERG
County	WELD
State	COLORADO