Radial Cement Bond Log
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Chevron TR 23-23-597
Field	Trail Ridge
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Chevron TR 23-23-597
Field Trail Ridge
County Garfield State Colorado

Location: API # : 05-045-23461
SEC 23 TWP 5S RGE 97W

Other Services
PDN

Permanent Datum	Ground Level	Elevation	8545'
Log Measured From	Kelly Bushing	24 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 8569'
D.F. 8568'
G.L. 8545'

Date	25-AUG-2017		
Run Number	One		
Depth Driller	10359 FT		
Depth Logger	10265 FT		
Bottom Logged Interval	10255 FT		
Top Log Interval	Surface		
Open Hole Size	8.750"		
Type Fluid	Fresh Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	268°F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	22:42		
Equipment Number	HD-0359		
Location	Grand Junction		
Recorded By	Z.Fisher		
Witnessed By	-----		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9 5/8	32.3	H-40	Surface	3009 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10339 FT
Intermediate #2					
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

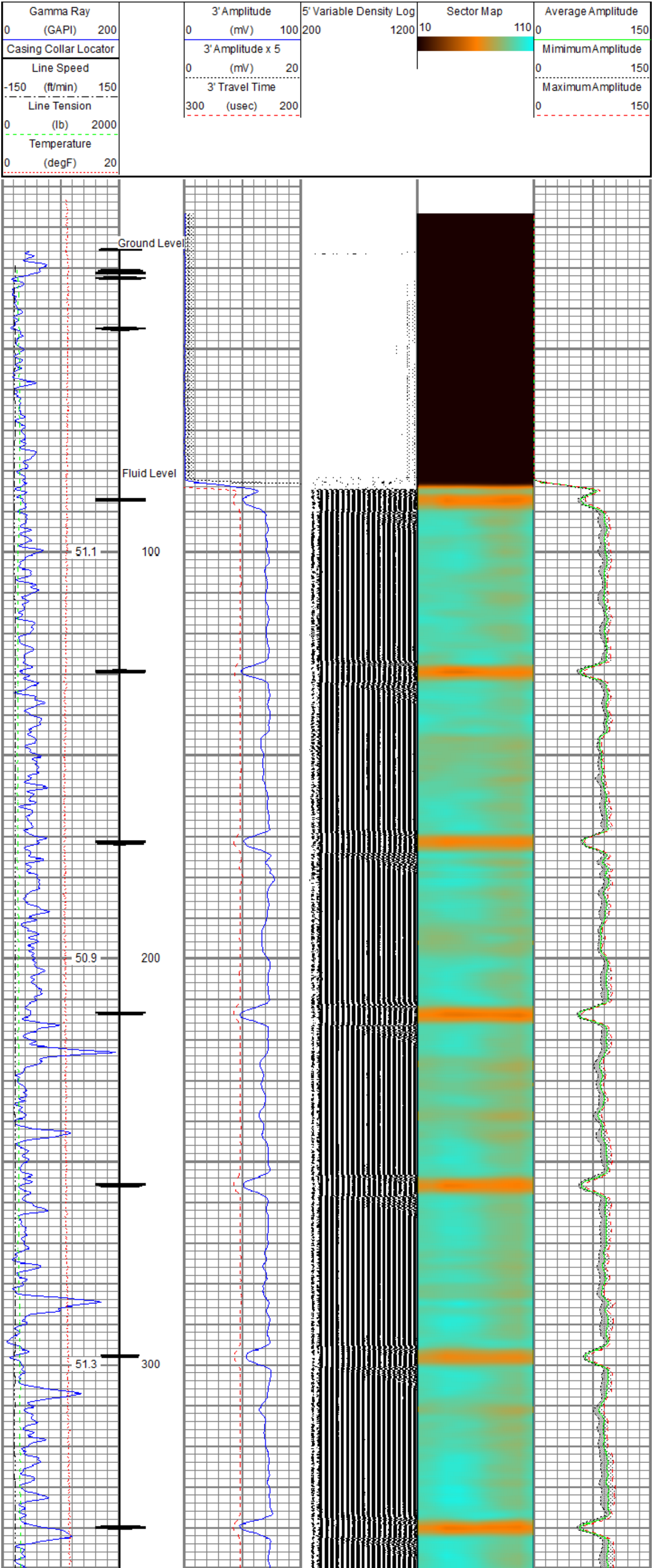
Log ran per customer request
Depth referenced to Kelly Bushing at 24 FT
Ground Level 1 FT below cut pipe
Marker joint from 6599 FT to 6621 FT
Log ran from 10265 FT to Surface
Recorded with 0 PSI Surface Induced Pressure

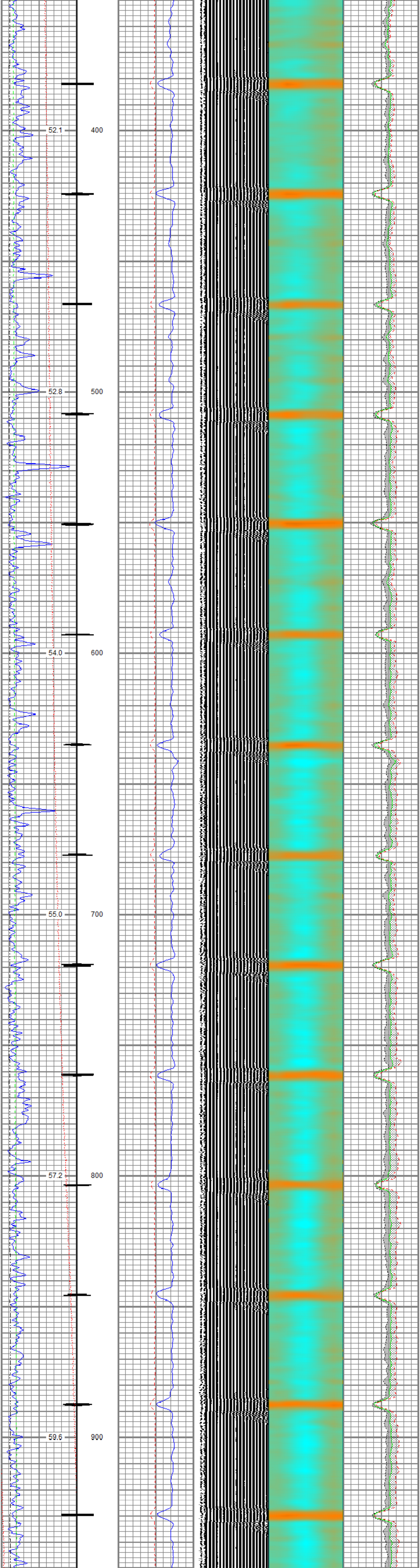
Thank you for choosing Reliance Oilfield Services, LLC!!

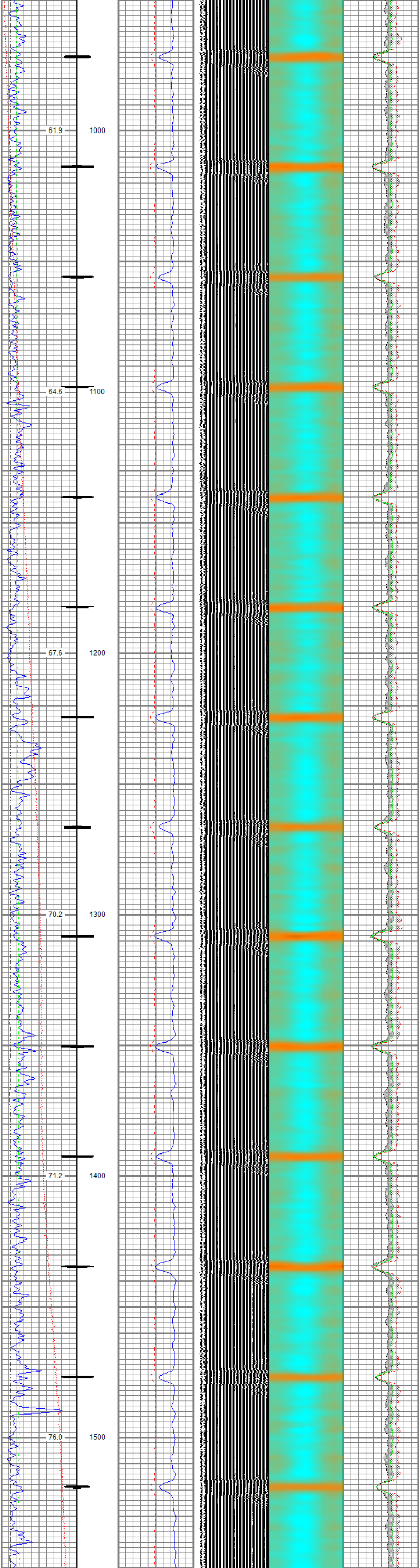
Main Pass

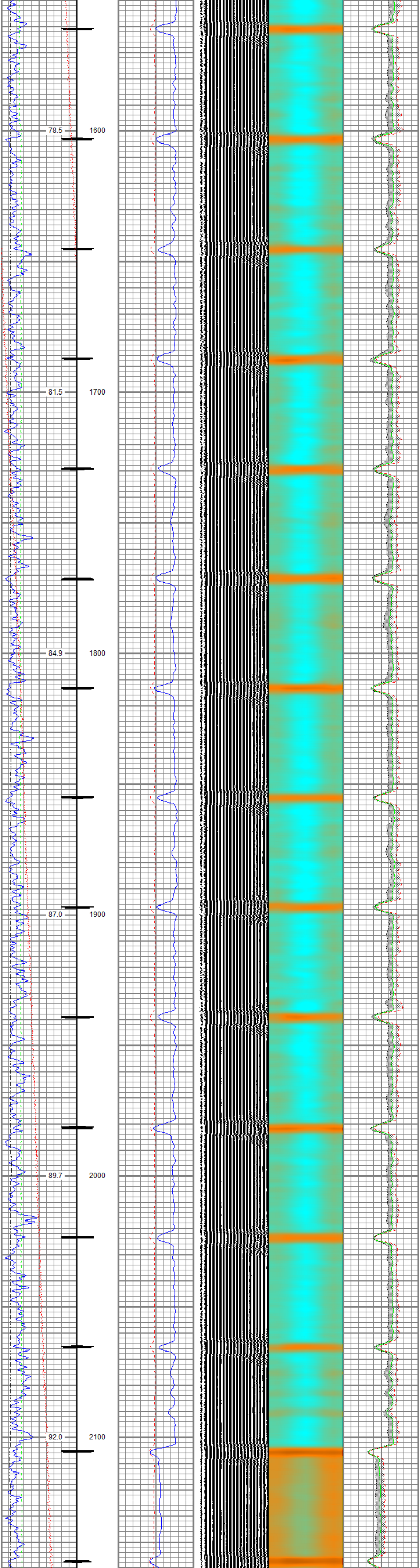
Recorded with 0 PSI Surface Induced Pressure.

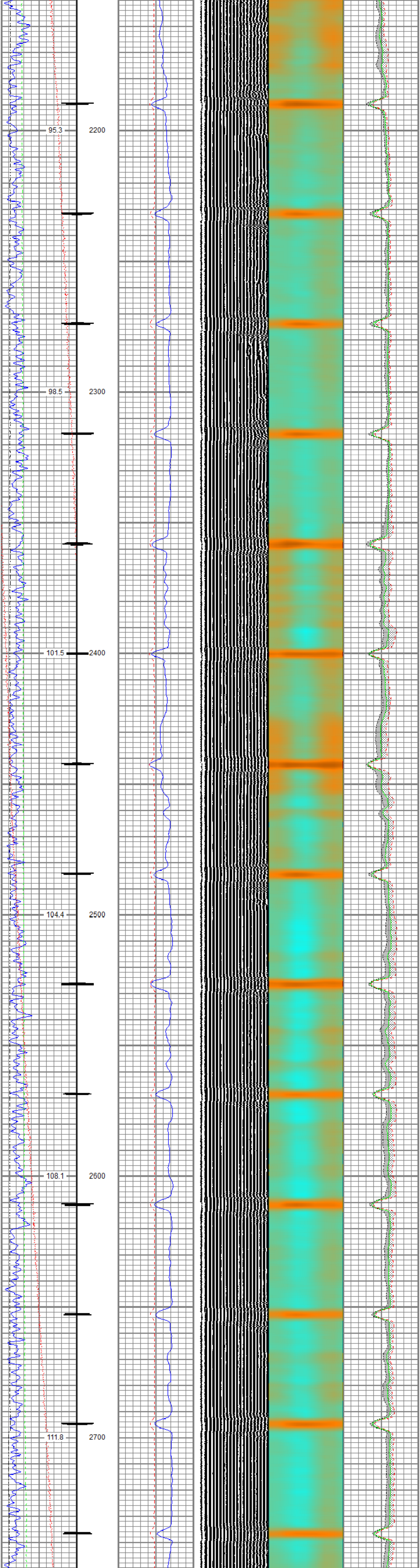
Database File	tep_chevron tr 23-23-597_rbl_08-25-17\processed_tep_chevron tr 23-23-597_rbl_08-25-17.db
Dataset Pathname	main
Presentation Format	ros_rbt004_tep
Dataset Creation	Fri Aug 25 22:42:10 2017
Charted by	Depth in Feet scaled 1:240

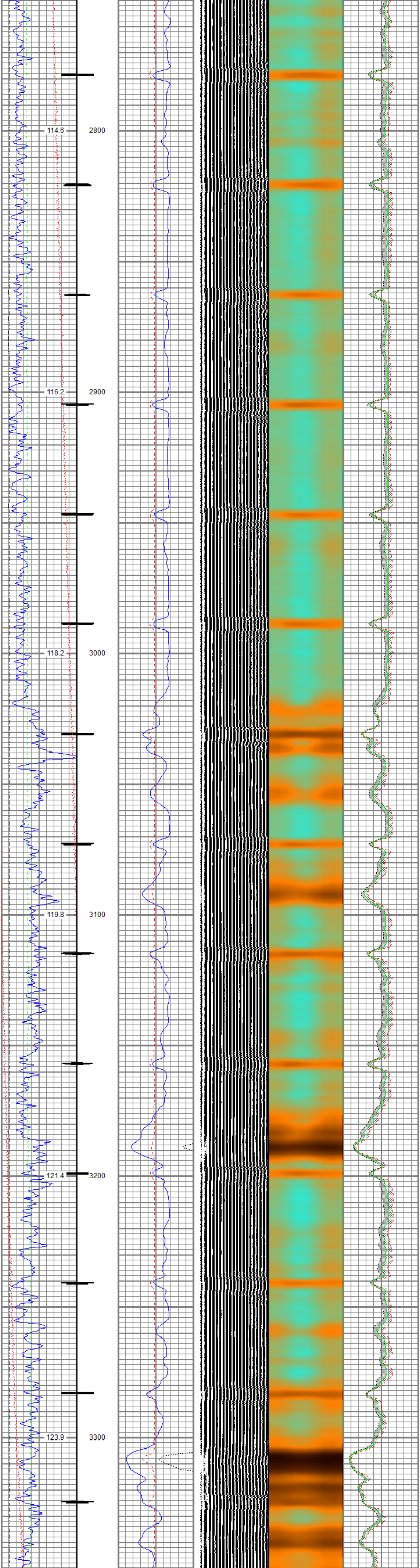


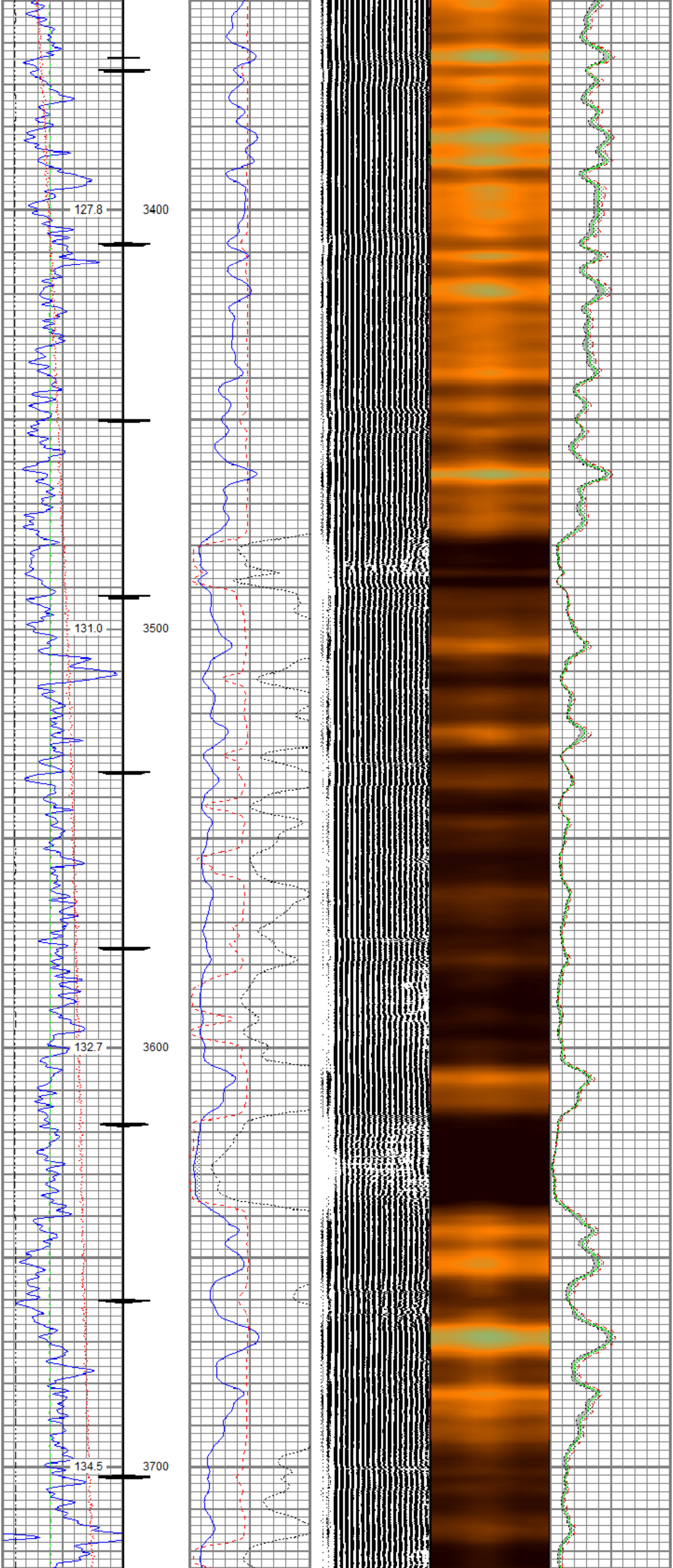


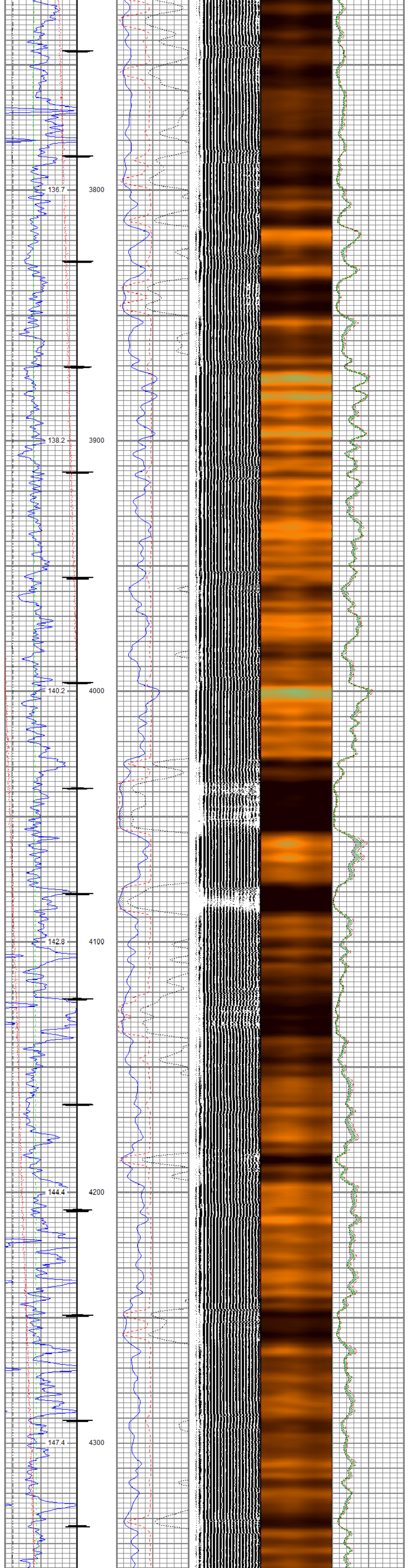








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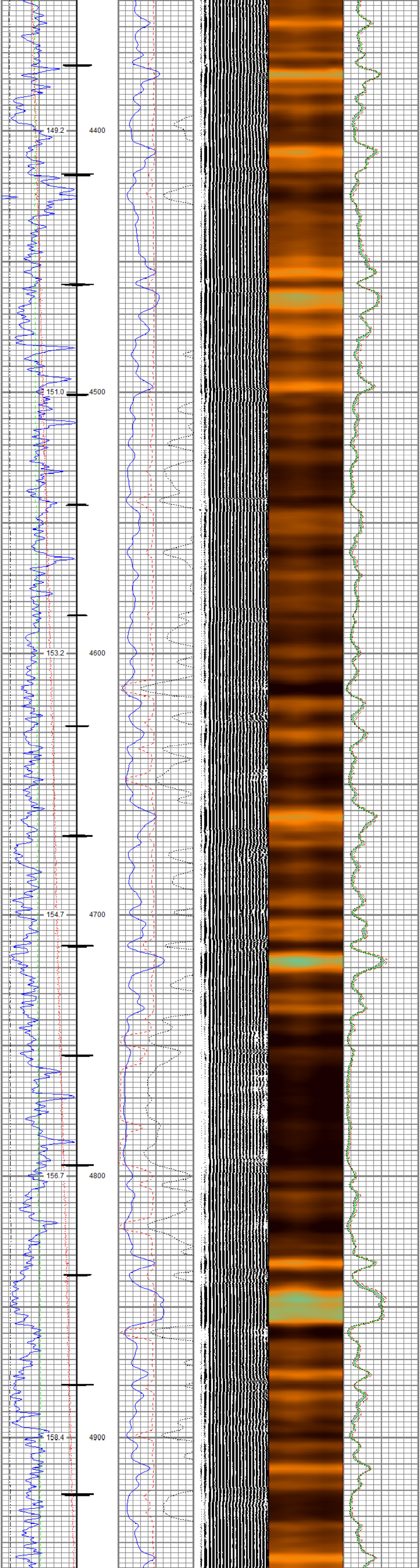
4200
147.4
4300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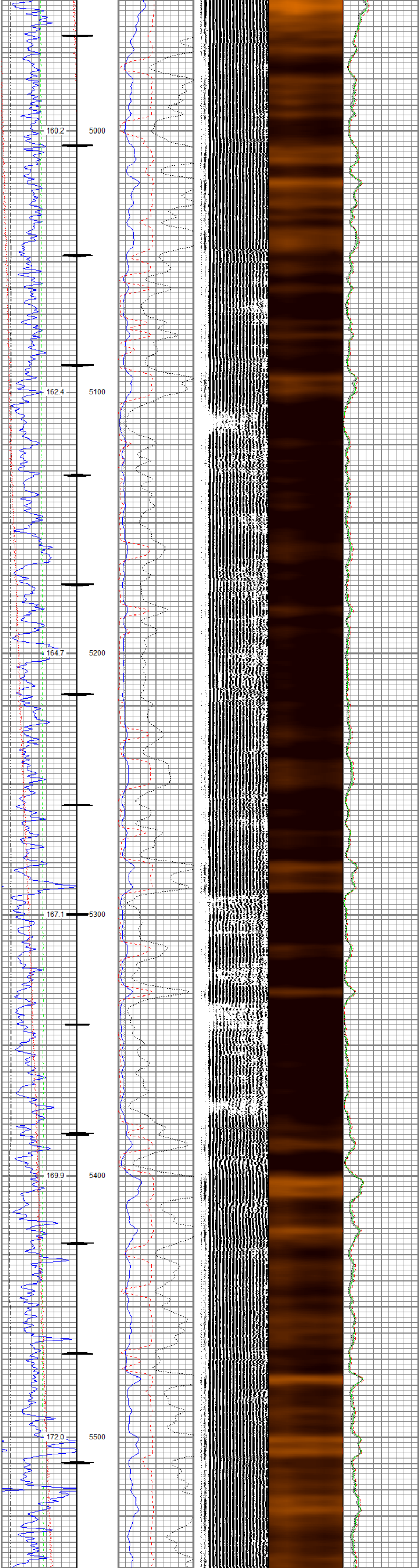
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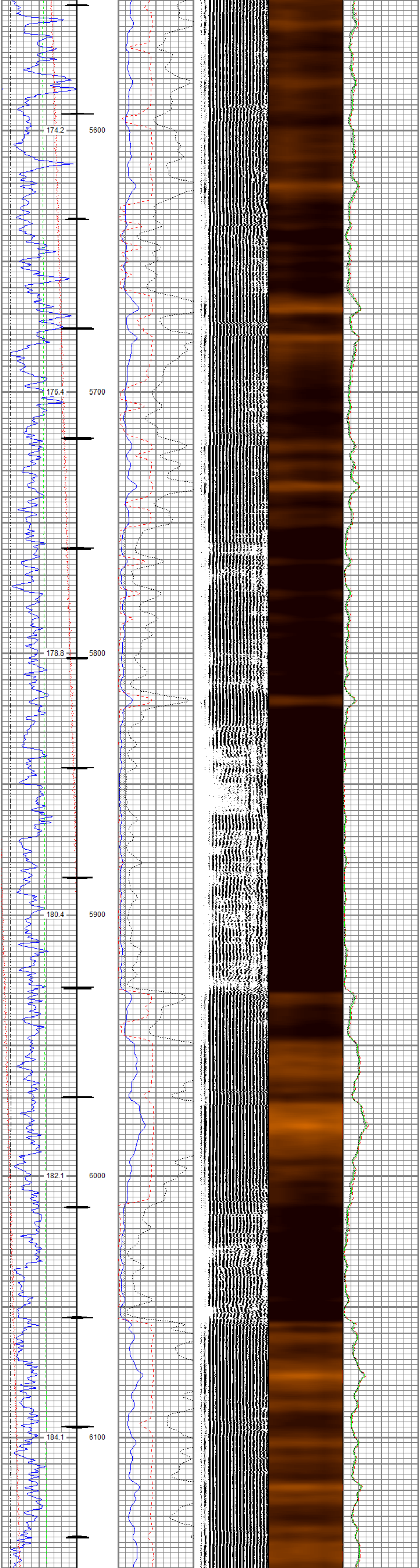
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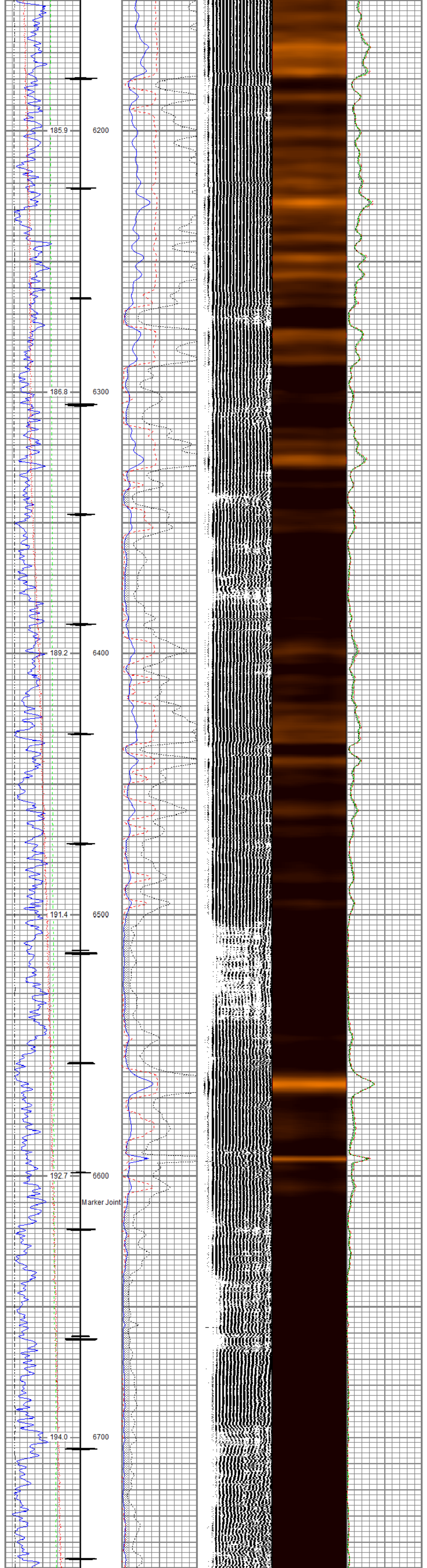
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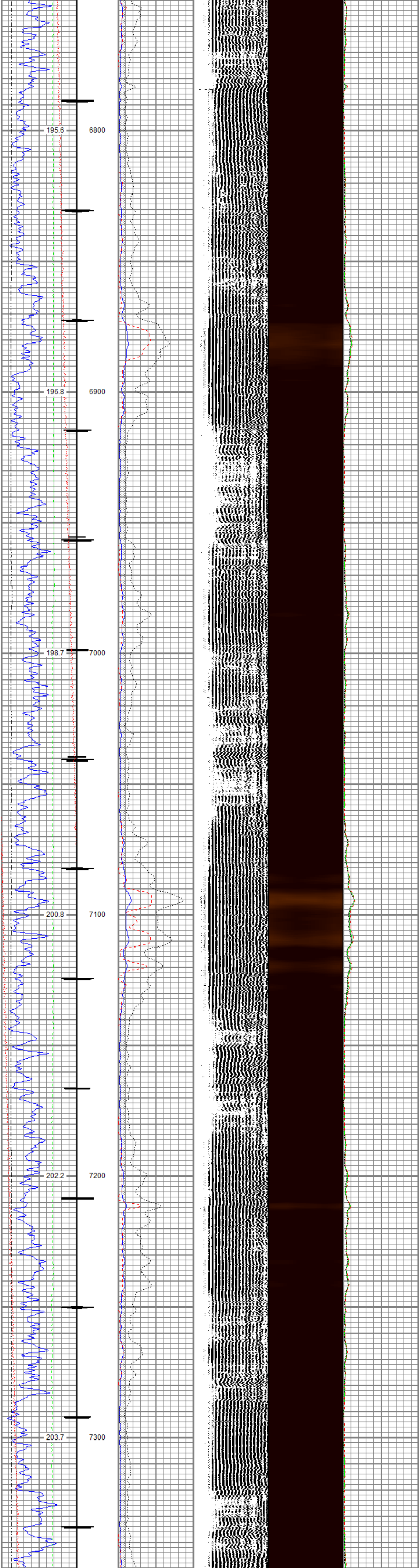
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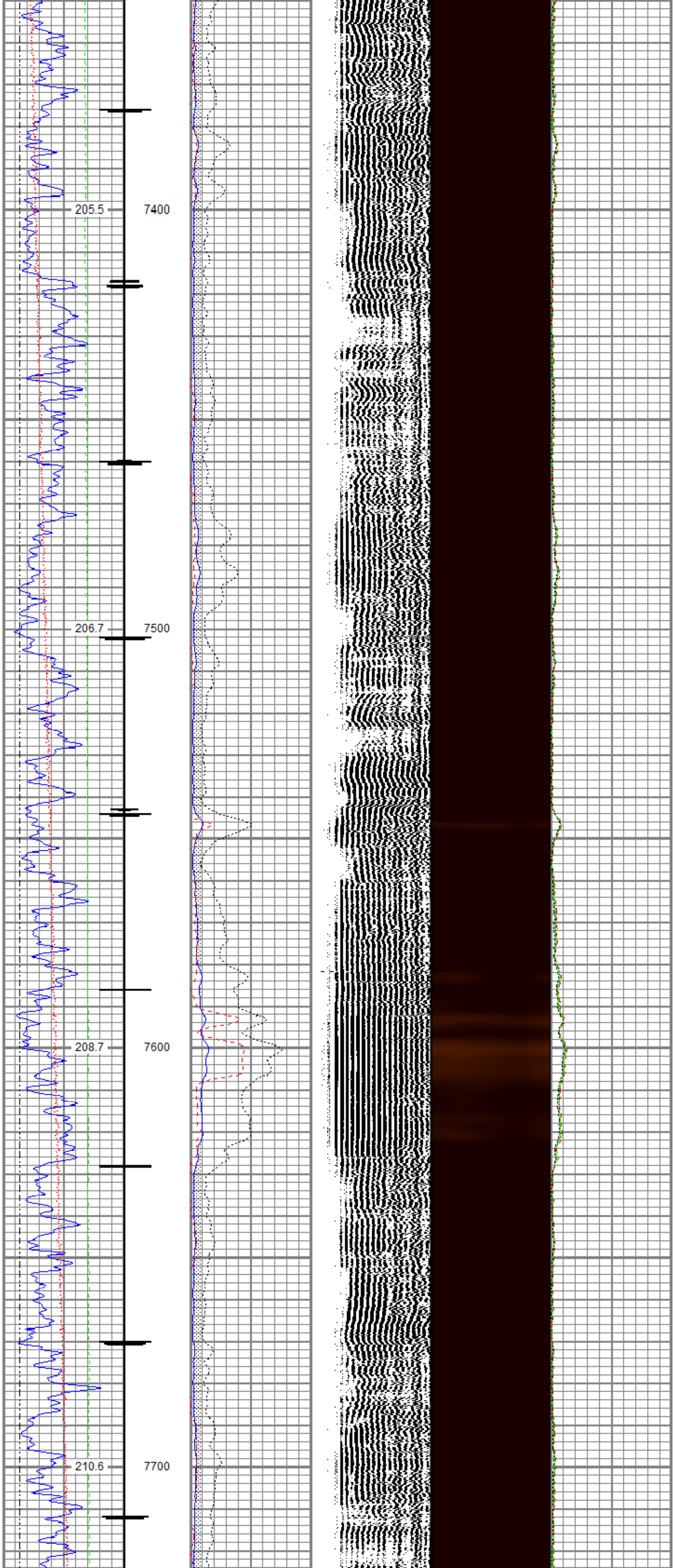
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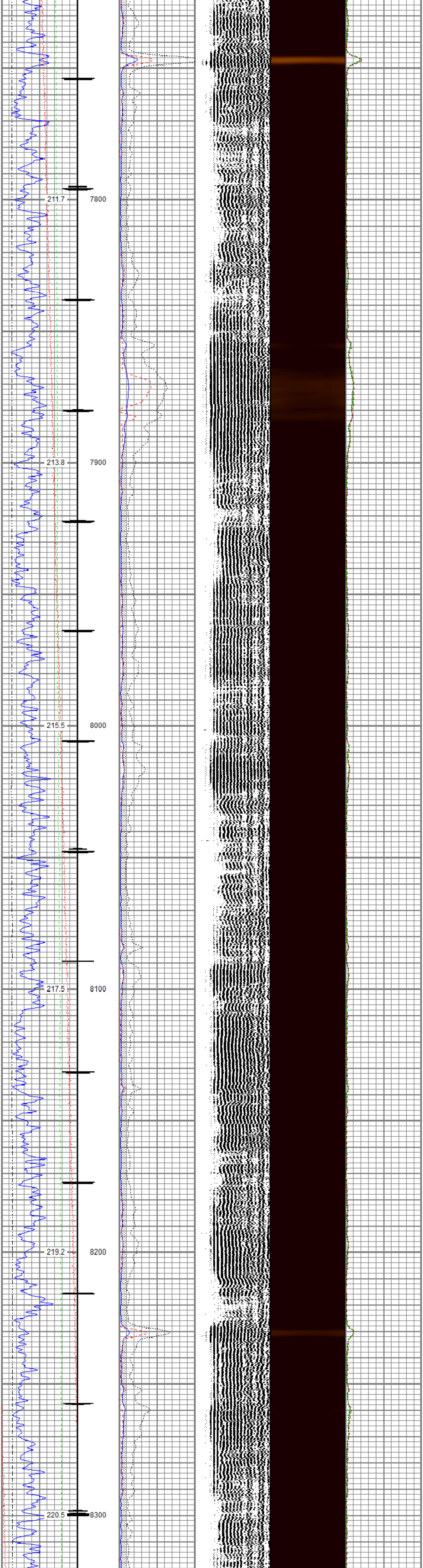
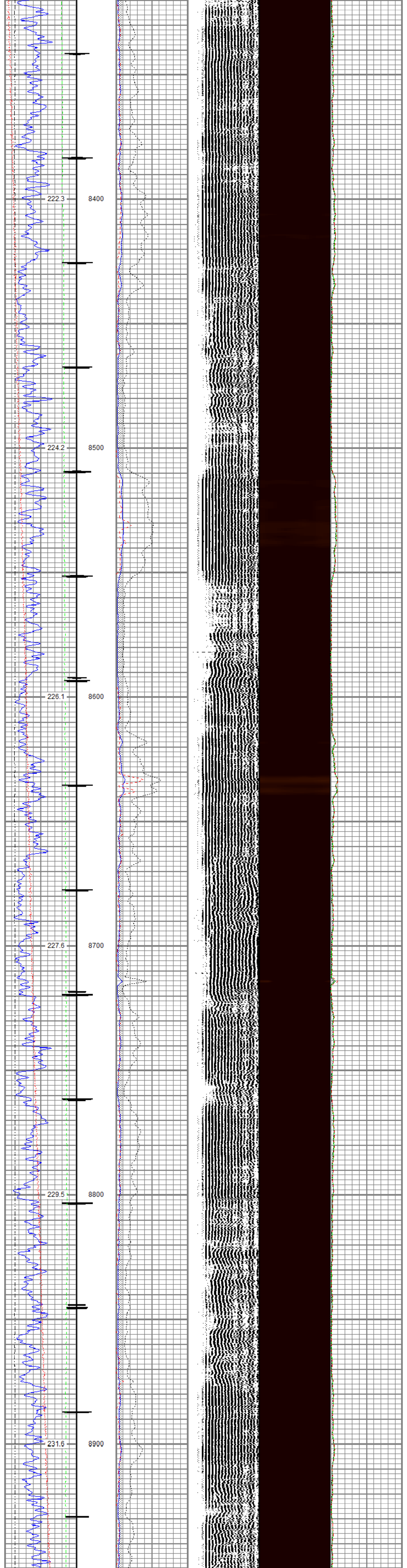
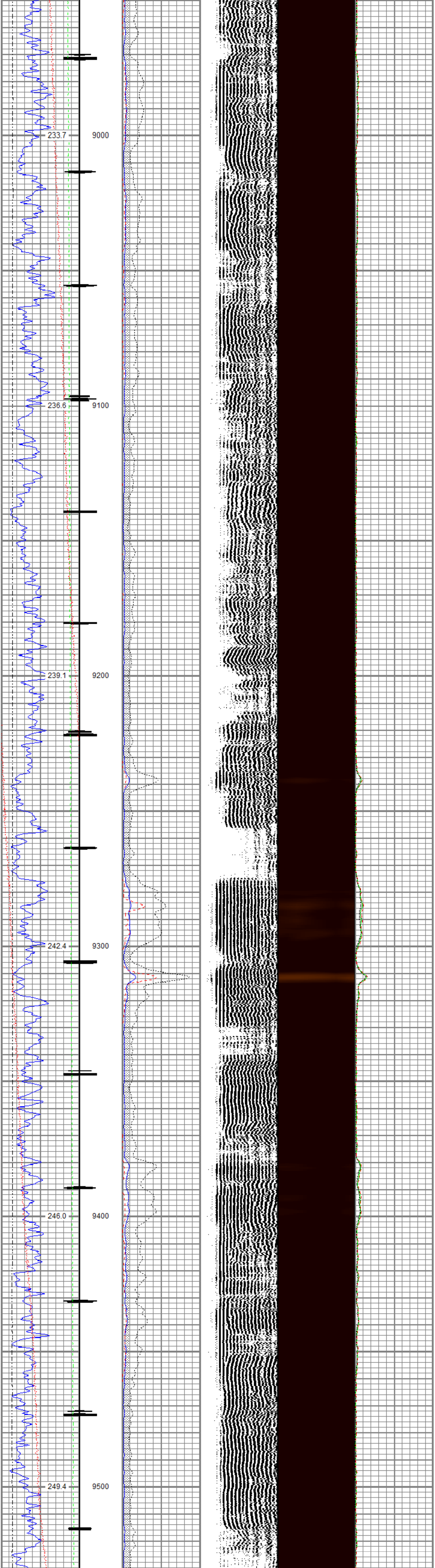
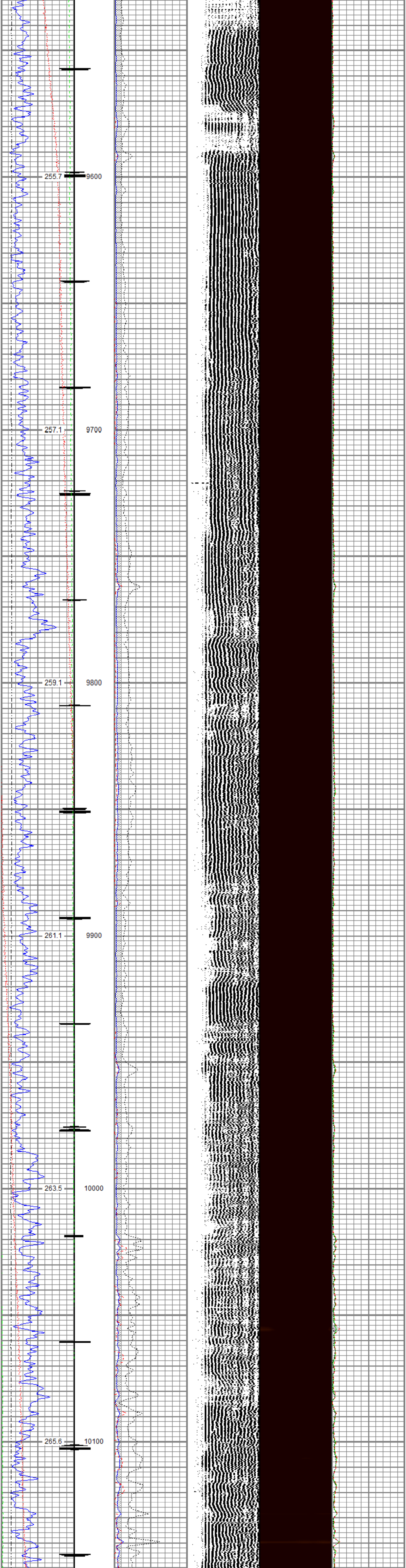
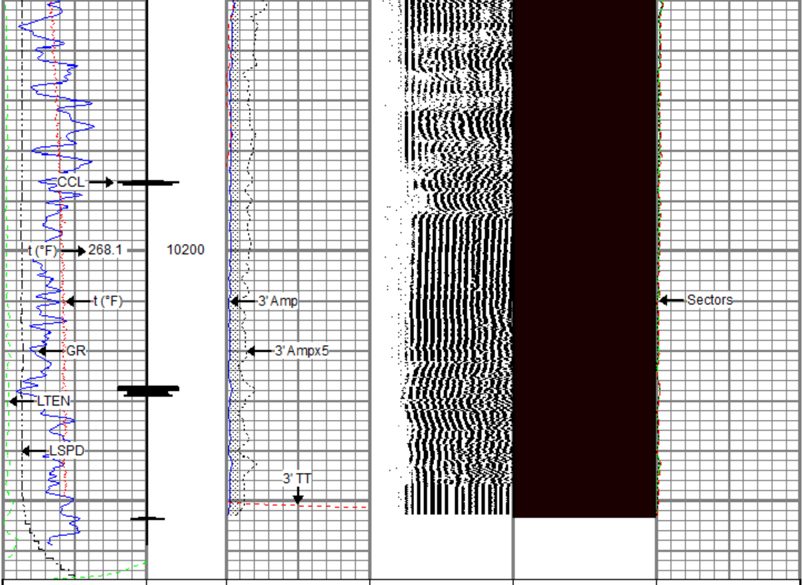










Gamma Ray 0 (GAPI) 200 Casing Collar Locator Line Speed -150 (ft/min) 150 Line Tension 0 (lb) 2000 Temperature 0 (degF) 20	3' Amplitude 0 (mV) 100 3' Amplitude x 5 0 (mV) 20 3' Travel Time 300 (usec) 200	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150 Mimimum Amplitude 0 150 Maximum Amplitude 0 150

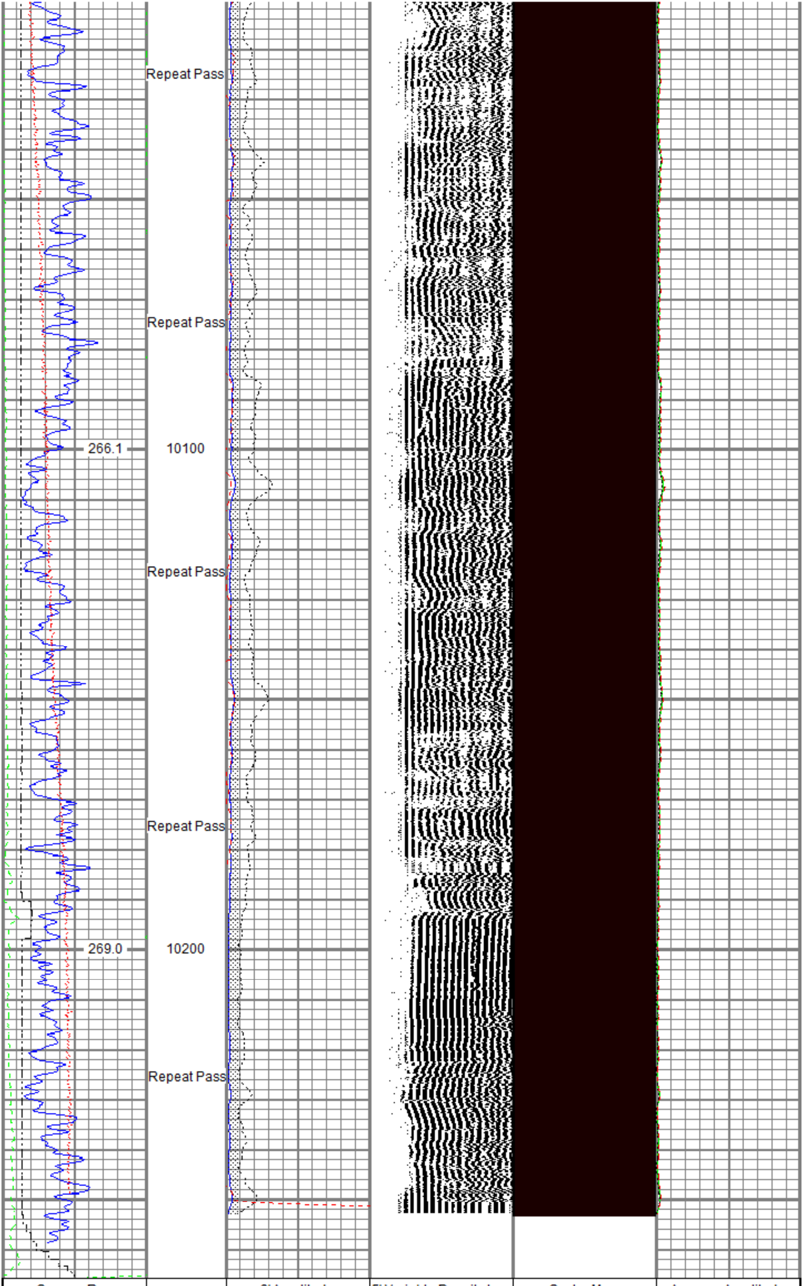
RELIANCE OILFIELD SERVICES

Repeat Pass

Recorded with 0 PSI Surface Induced Pressure.

Database File	tep_chevron tr 23-23-597_rbl_08-25-17\processed_tep_chevron tr 23-23-597_rbl_08-25-17.db
Dataset Pathname	repeat
Presentation Format	ros_rbt004_tep
Dataset Creation	Fri Aug 25 22:38:07 2017
Charted by	Depth in Feet scaled 1:240

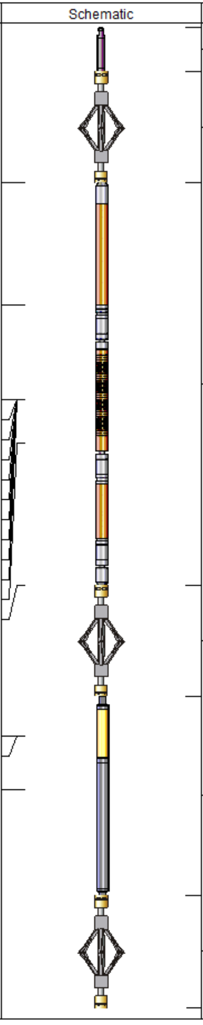
Gamma Ray 0 (GAPI) 200 Line Speed -150 (ft/min) 150 Line Tension 0 (lb) 2000 Temperature 0 (degF) 20	3' Amplitude 0 (mV) 100 3' Amplitude x 5 0 (mV) 20 3' Travel Time 300 (usec) 200	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150 Mimimum Amplitude 0 150 Maximum Amplitude 0 150



Gamma Ray 0 (GAPI) 200 Line Speed -150 (ft/min) 150 Line Tension 0 (lb) 2000 Temperature 0 (degF) 20	3' Amplitude 0 (mV) 100 3' Amplitude x 5 0 (mV) 20 3' Travel Time 300 (usec) 200	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150 Mimimum Amplitude 0 150 Maximum Amplitude 0 150

Sensor	Offset (ft)
HeadVolt	18.84
Temp	16.05
WVFS8	13.88
WVFS7	13.88
WVFS6	13.88
WVFS5	13.88
WVFS4	13.88
WVFS3	13.88
WVFS2	13.88
WVFS1	13.88
WVFCAL	13.88
WVF3FT	13.88
WVF5FT	12.88
HEADVOLT	9.63
DCCL	6.18
CCL	6.18
GR	4.96

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb)
Titan_Electric_Cable_Heads-Titan_1-1 Electric Cable Head with 1" Fishing Neck	1/11.03	1.69	5.40
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
Probe_RADII-C-P_RBT_2750 (FW1305 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	-099.19	2.75	105.00
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
Probe_GR_CCL-P_CGR_2750_S (FW1 Probe 2-3/4" Digital CCL / Gamma Ray Combined	214.541)	2.75	55.00
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00

Dataset:	PROCESSED_TEP_Chevron TR 23-23-597_RBL_08-25-17.db: field/well/run1/main
Total length:	22.40 ft
Total weight:	261.40 lb
O.D.:	2.75 in

Calibration Report

Database File	C:\ProgramData\Warrior\Data\TEP_Chevron TR 23-23-597_RBL_08-25-17\PROCESSED_TEP_Chevron TR
Dataset Pathname	main
Dataset Creation	Fri Aug 25 22:42:10 2017

Gamma Ray Calibration Report

Serial Number:	FW1211-081	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:31:52 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1305-098	
Tool Model:	P_RBT_2750	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	29.498	ft

Master Calibration, performed Fri Aug 25 22:01:39 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.006	0.741	0.800	81.196	107.679	1.427
CAL	0.766	0.765				
5'	-0.002	0.631	0.800	81.196	126.997	1.110
SUM						
S1	-0.009	0.691	0.000	100.000	142.812	1.292
S2	-0.005	0.709	0.000	100.000	140.041	0.737
S3	-0.006	0.723	0.000	100.000	137.109	0.803
S4	-0.005	0.737	0.000	100.000	134.726	0.725
S5	-0.006	0.739	0.000	100.000	134.310	0.784
S6	-0.005	0.735	0.000	100.000	135.112	0.706
S7	-0.006	0.728	0.000	100.000	136.340	0.791
S8	-0.005	0.724	0.000	100.000	137.130	0.753

Internal Reference Calibration, performed Fri May 05 10:29:14 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.766	0.765	1.000	0.000

Air Zero Calibration, performed Fri Aug 25 22:01:58 2017:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	-0.006	0.000	0.000
5'	-0.002	0.000	-0.000
SUM			
S1	-0.009	0.000	-0.000
S2	-0.005	0.000	0.000
S3	-0.006	0.000	-0.000
S4	-0.005	0.000	-0.000
S5	-0.006	0.000	-0.000
S6	-0.006	0.000	0.001
S7	-0.006	0.000	0.000
S8	-0.006	0.000	0.000

RELIANCE
OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Chevron TR 23-23-597
Field	Trail Ridge
County	Garfield
State	Colorado