Company TEP Rocky Mountain LLC
Well Chevron TR 522-23-597
Field Trail Ridge
County Garfield
State Colorado

RELIANCE OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Chevron TR 522-23-597
Field	Trail Ridge
County	Garfield State Colorado

Location: API # : 05-045-23459

2546' FNL & 1450' FEL SWNE

SEC 23 TWP 5S RGE 97W

Other Services: PDN

Permanent Datum	Ground Level	Elevation	8545.2'
Log Measured From	Kelly Bushing	24 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 8569.2'
D.F. 8568.2'
G.L. 8545.2'

Date	04-SEPT-2017		
Run Number	One		
Depth Driller	10140 FT		
Depth Logger	10085 FT		
Bottom Logged Interval	10085 FT		
Top Log Interval	Surface		
Open Hole Size	8.750"		
Type Fluid	Fresh Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	264°F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	13:45		
Equipment Number	HD-359		
Location	Grand Junction, CO		
Recorded By	A. Rivera		
Witnessed By	J. Skalla		

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	2969 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10102 FT
Intermediate #2					
Liner					

<<< 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

Log ran as per customer request
Depth referenced to Kelly Bushing at 24 FT
Marker Joint logged at 5692 FT - 5713 FT
Log ran from 10085 to Surface
Recorded with 0 PSI Surface Induced Pressure

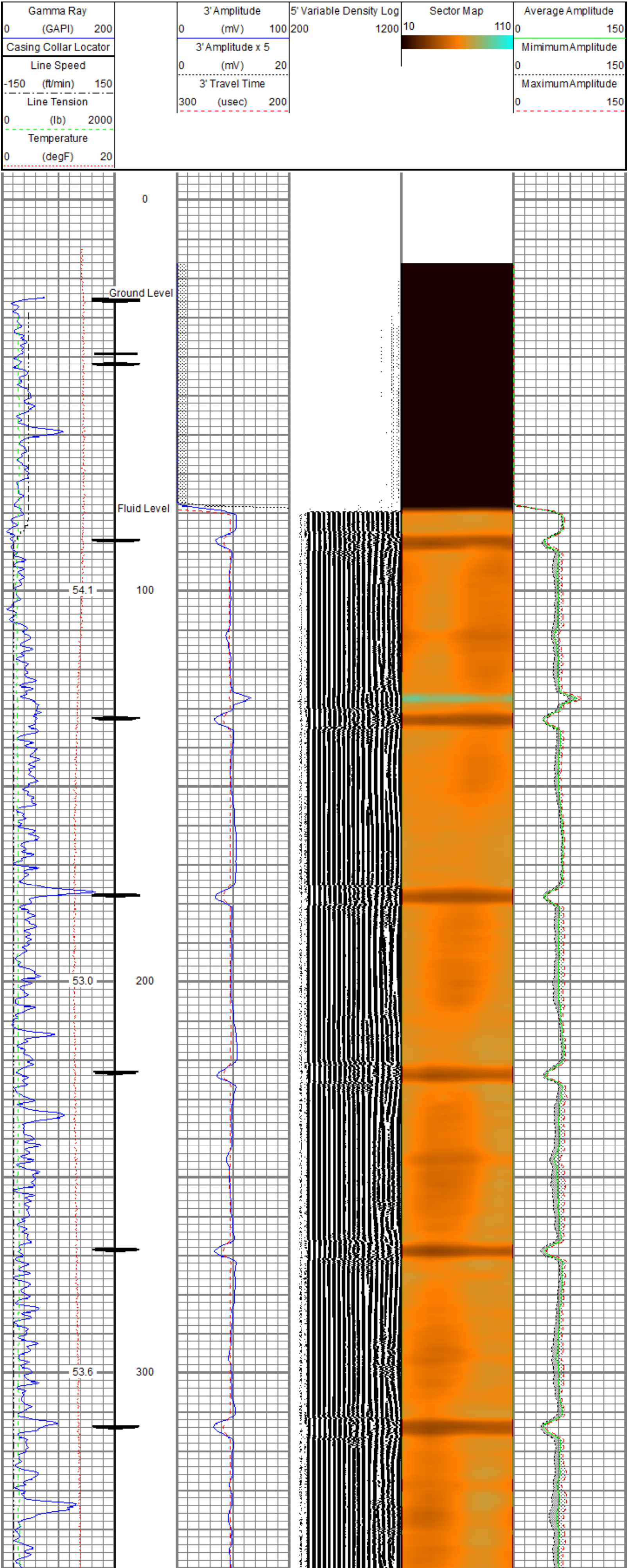
Thank you for choosing Reliance Oilfield Services, LLC!!

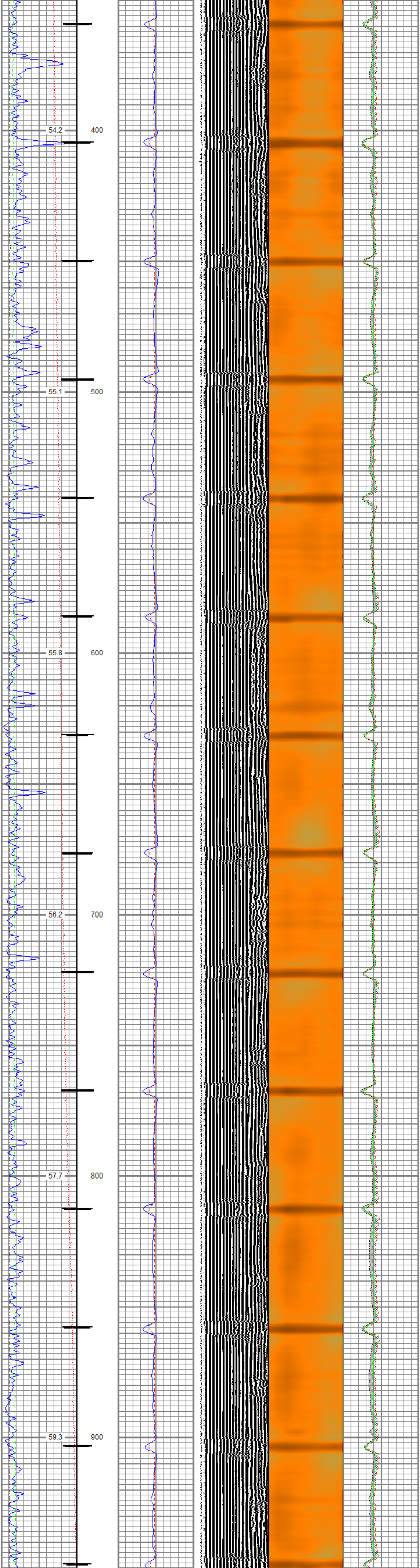
RELIANCE OILFIELD SERVICES

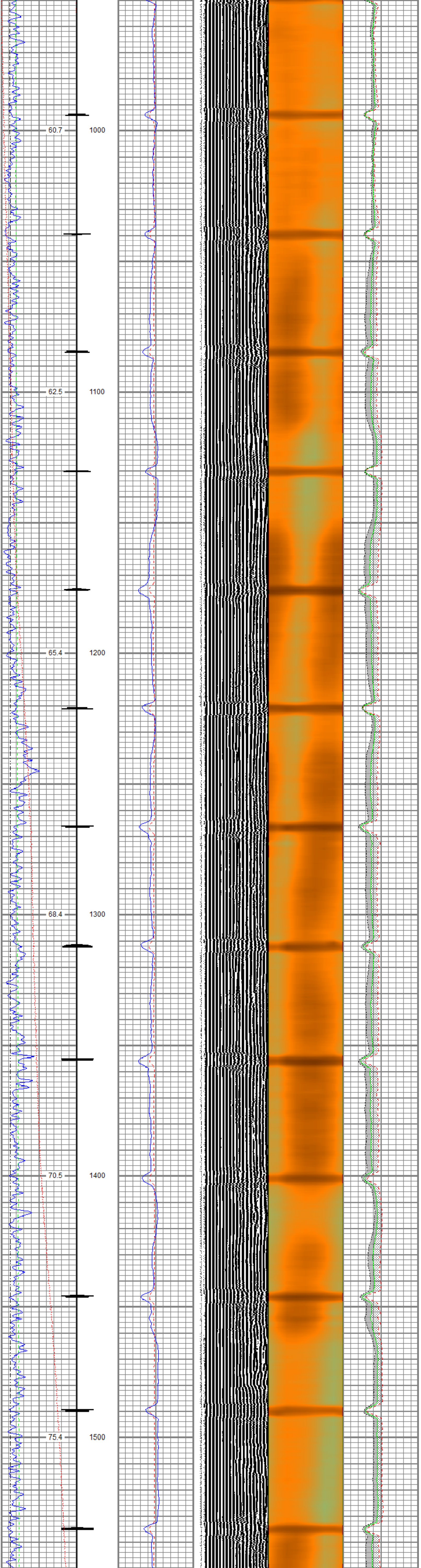
Main Pass

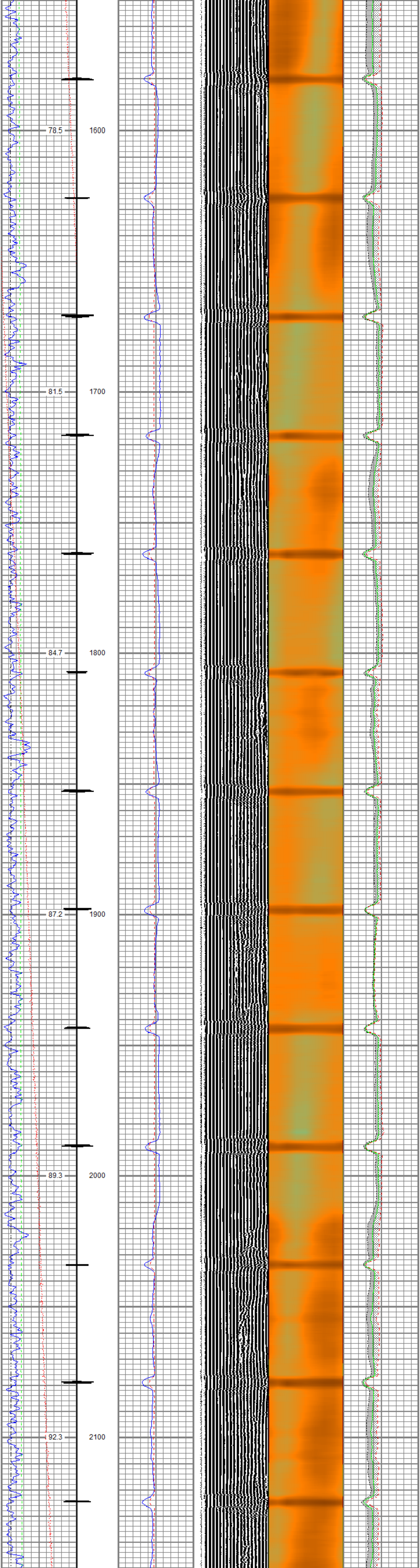
Recorded with 0 PSI Surface Induced Pressure

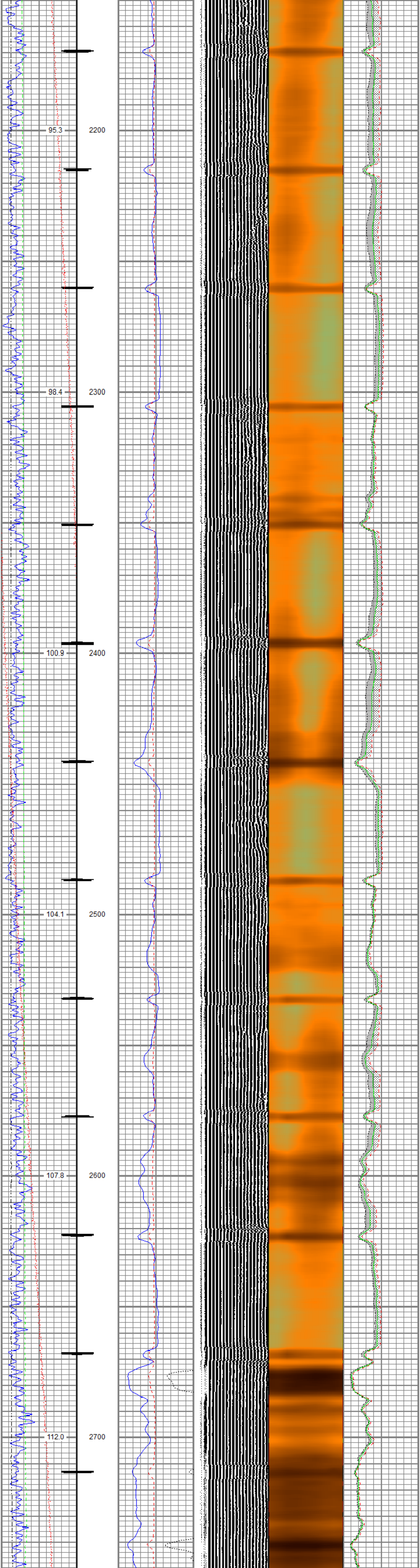
Database File	tep_chevron tr 522-23_rcbl_9-4-2017\processed_tep_chevron tr 522-23-597_rbl_09-04-17.db
Dataset Pathname	MAIN_PASS
Presentation Format	ros_rbt004_tep
Dataset Creation	Mon Sep 04 13:28:33 2017
Charted by	Depth in Feet scaled 1:240

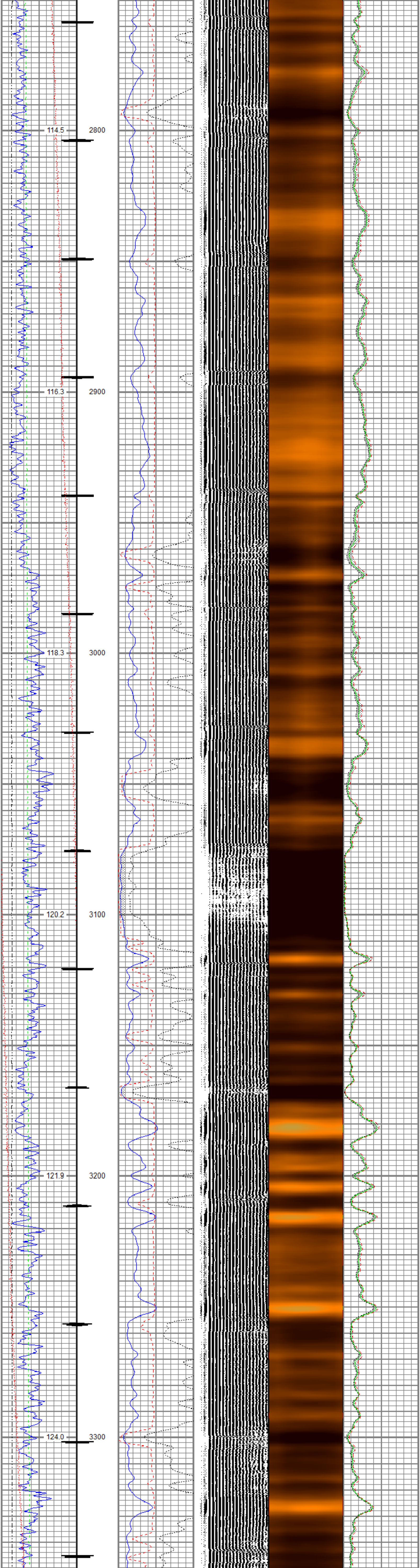


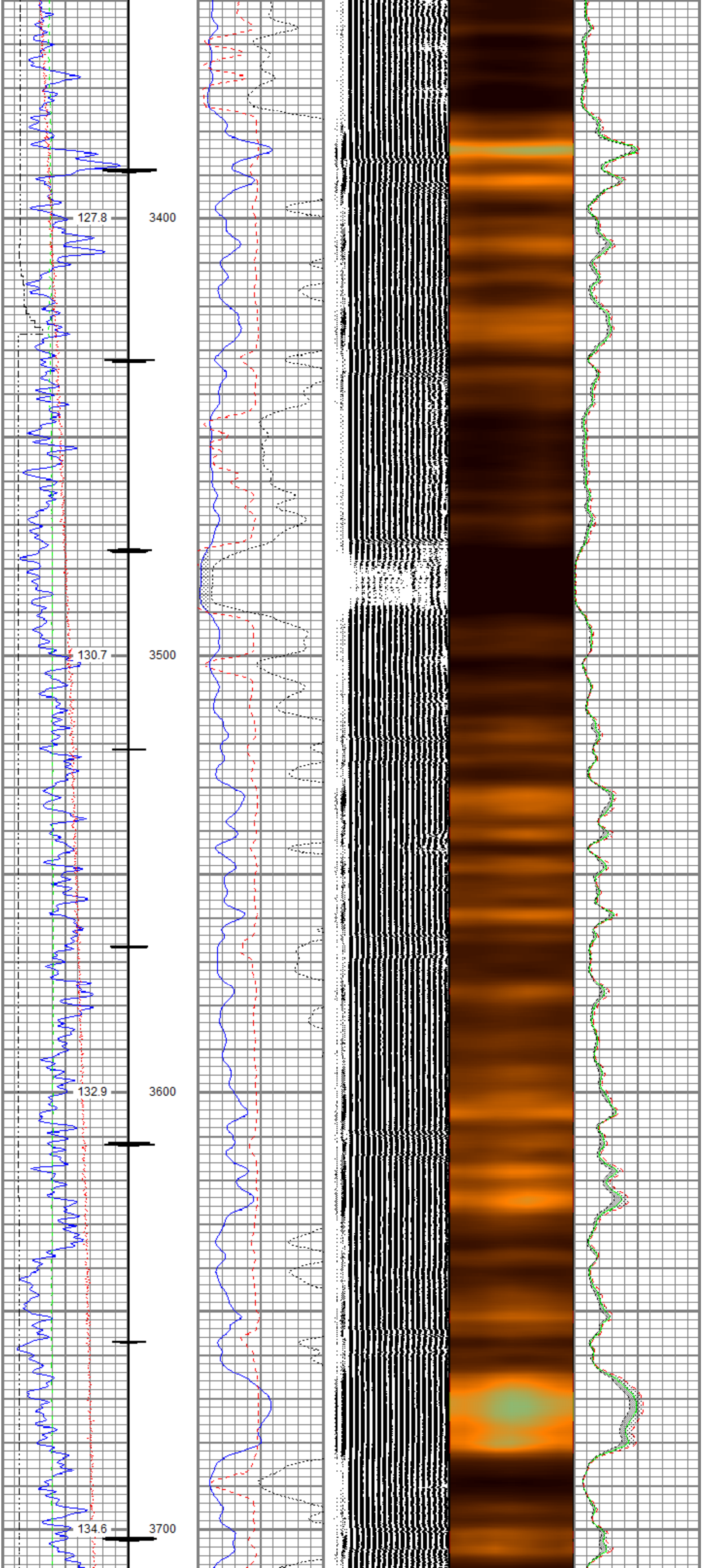


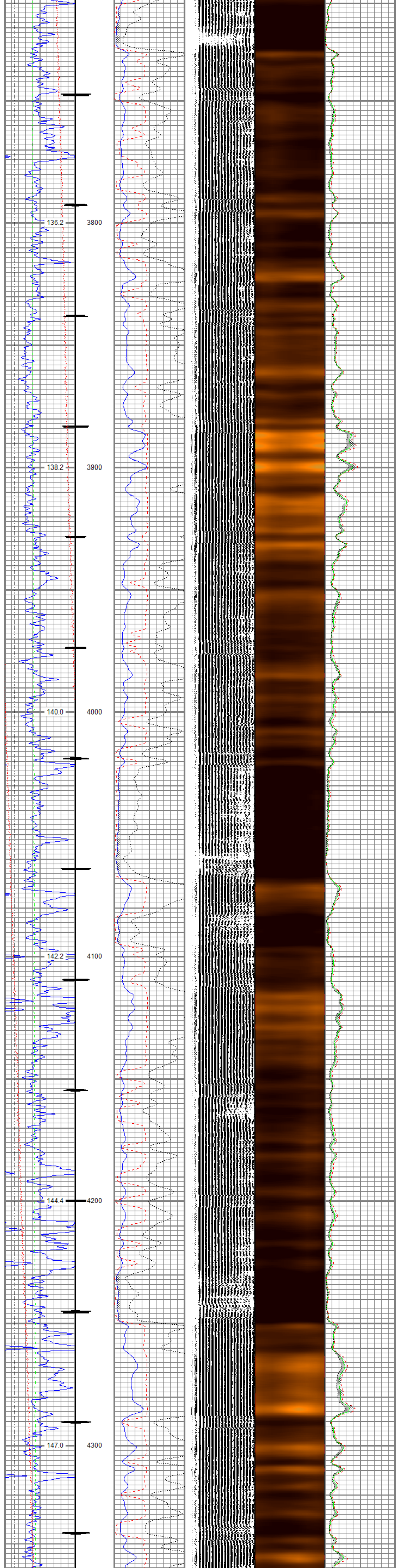


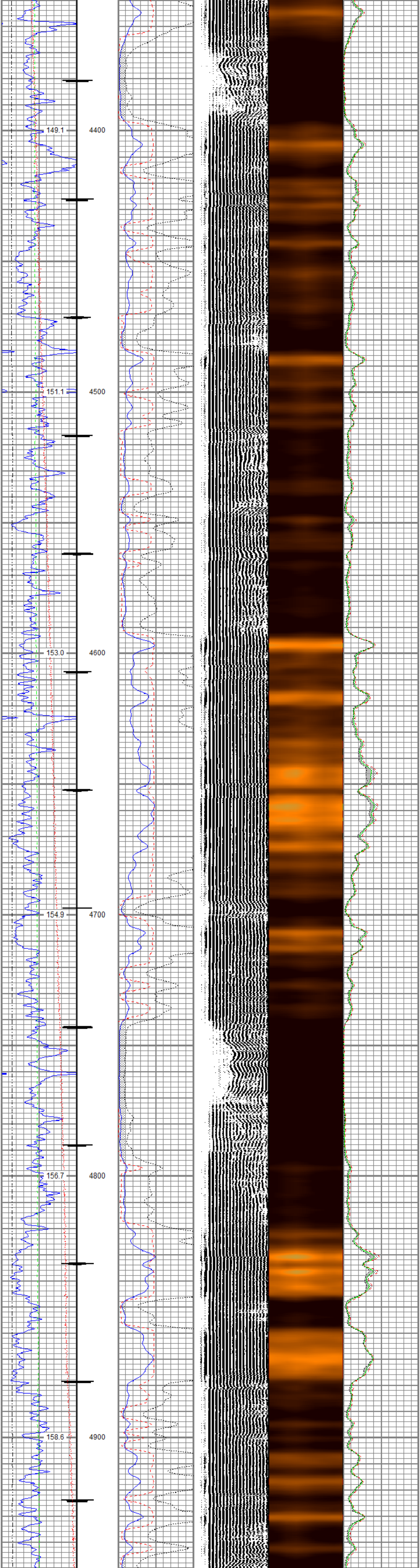


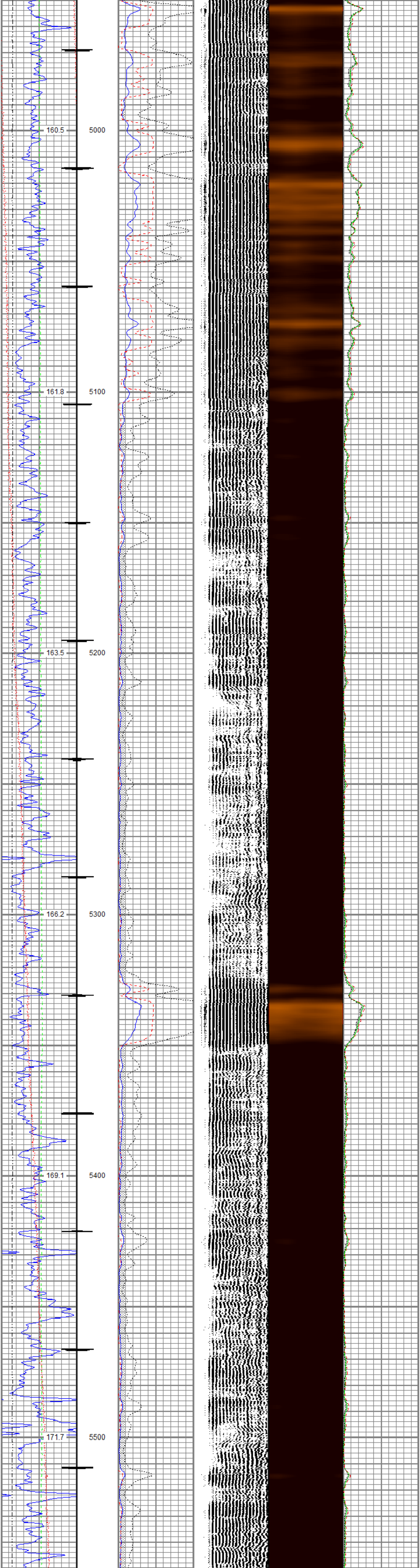


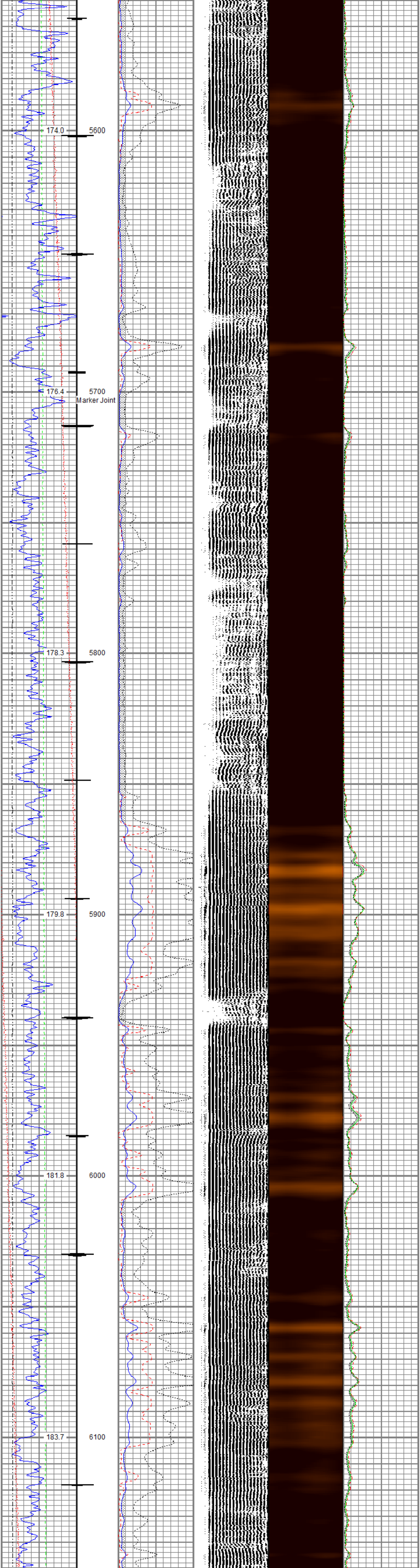


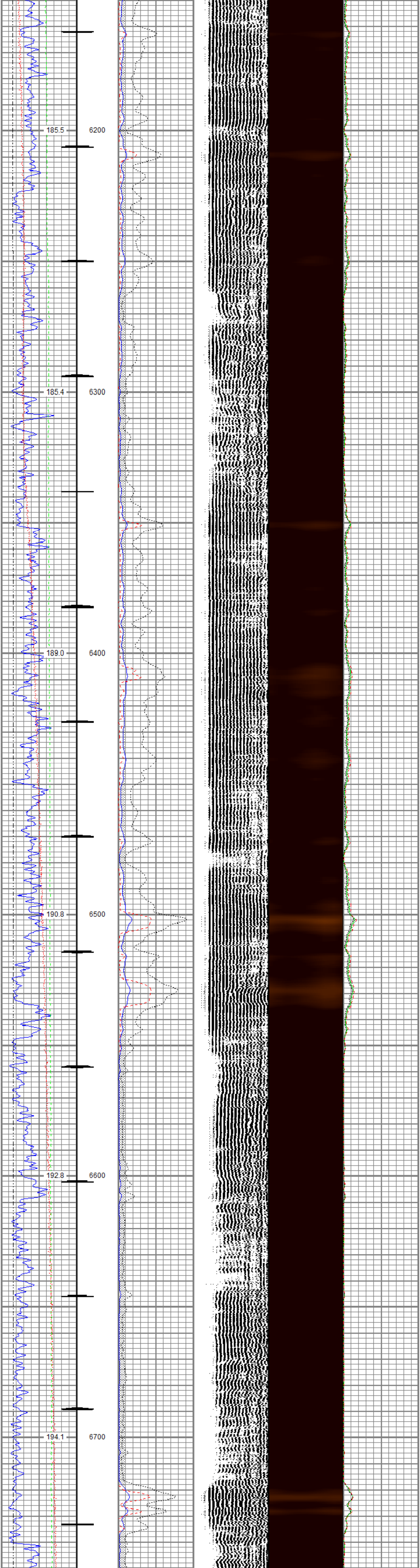


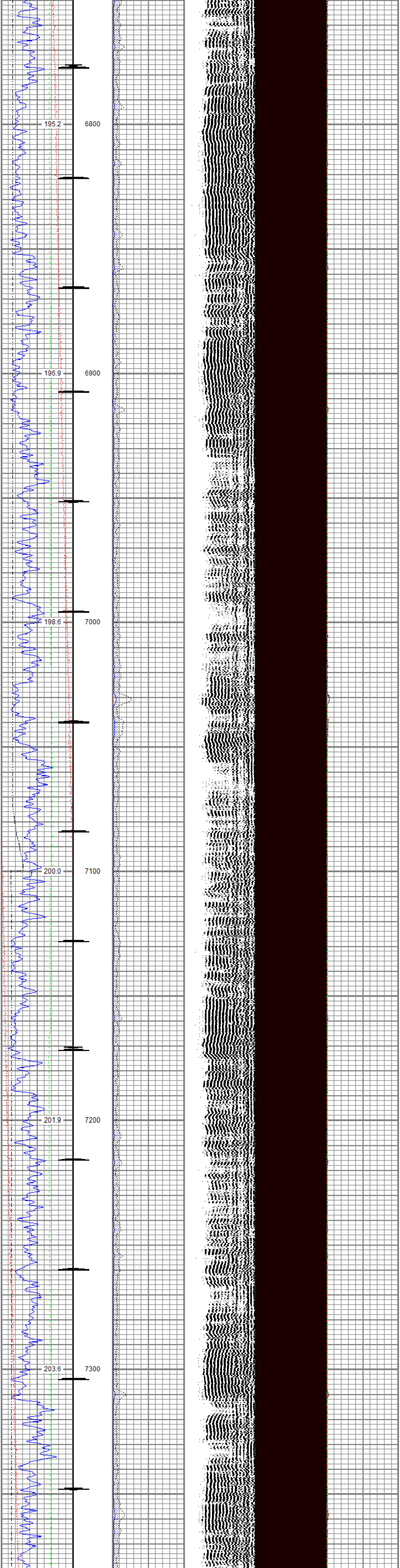

136.2
3800
138.2
3900
140.0
4000
142.2
4100
144.4
4200
147.0
4300

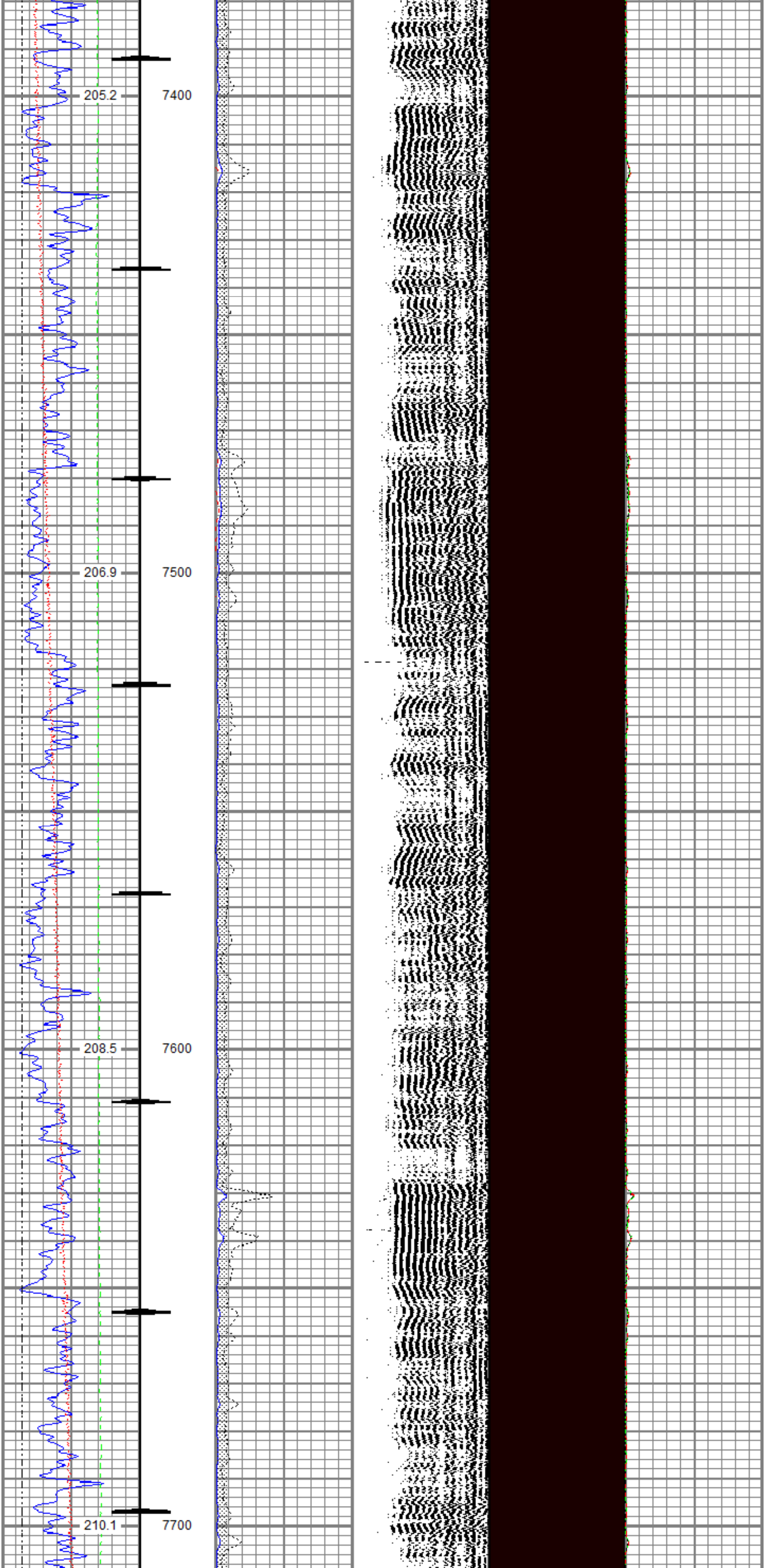

149.1
4400
151.1
4500
153.0
4600
154.9
4700
156.7
4800
158.6
4900

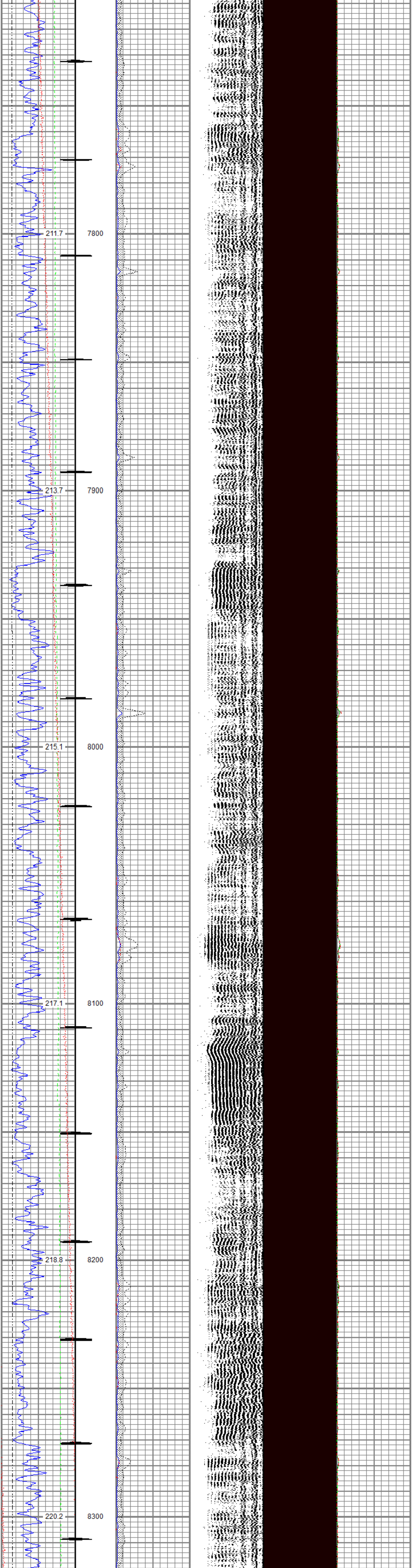

160.5
5000
161.8
5100
163.5
5200
166.2
5300
169.1
5400
171.7
5500

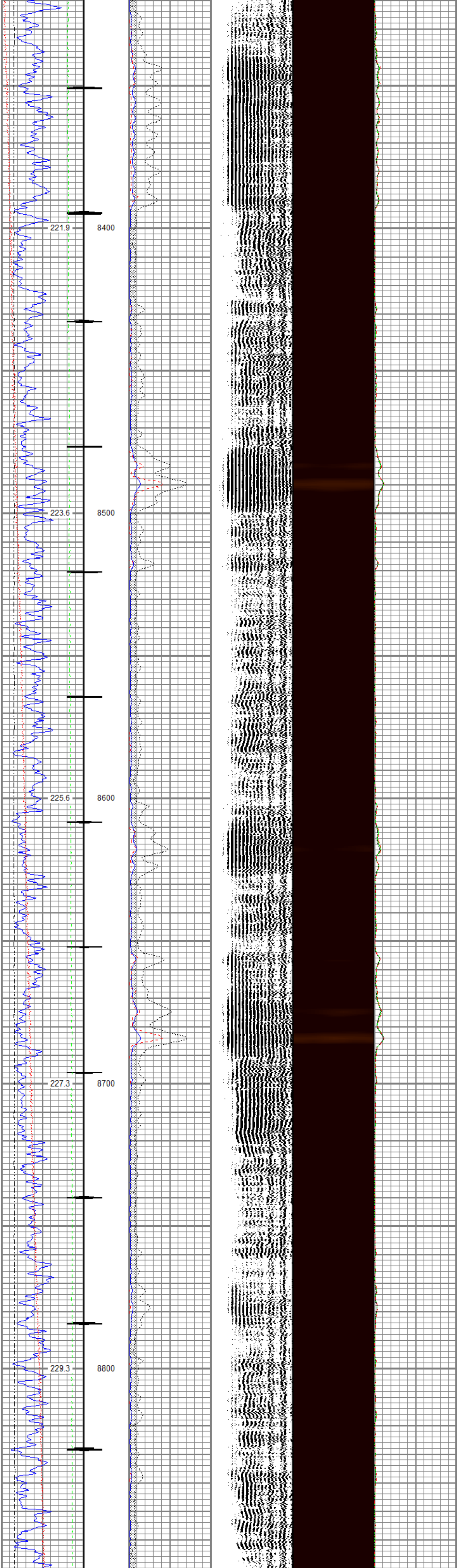

174.0
5600
176.4
5700
Marker Joint
178.3
5800
179.8
5900
181.8
6000
183.7
6100

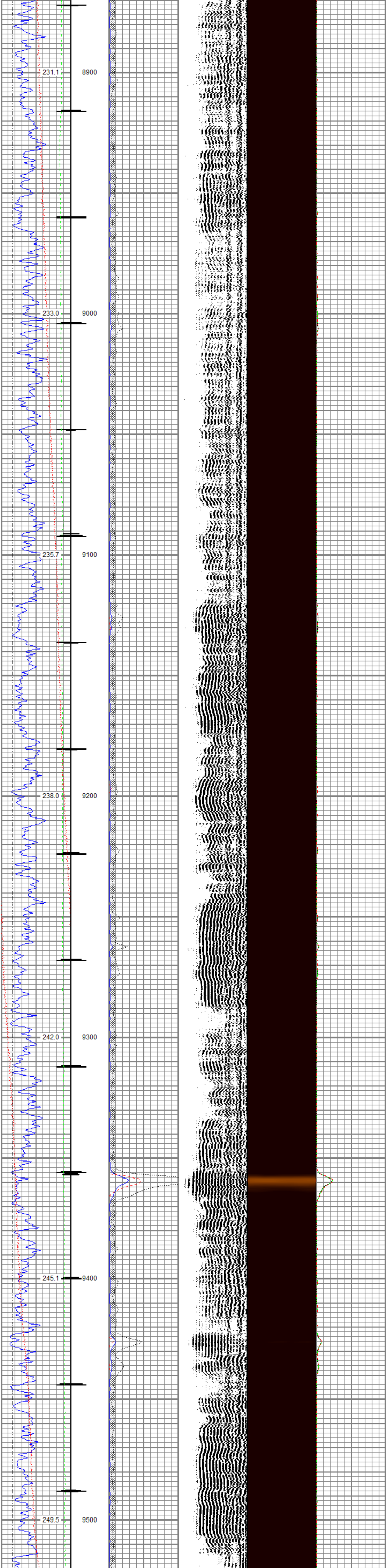

185.5
6200
185.4
6300
189.0
6400
190.8
6500
192.8
6600
194.1
6700

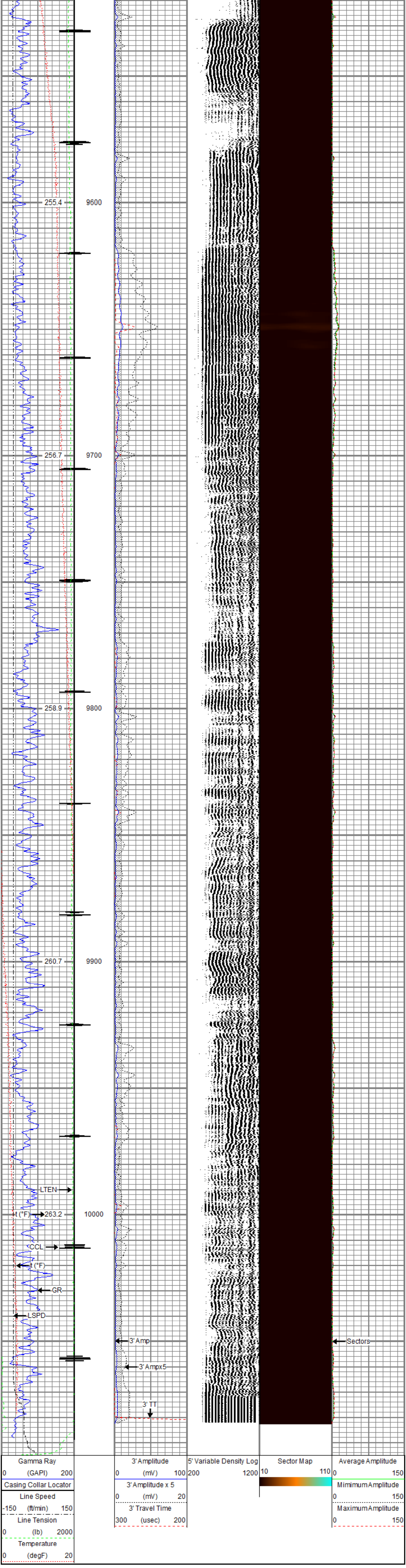

195.2
6800
196.9
6900
198.6
7000
200.0
7100
201.9
7200
203.6
7300


205.2
7400
206.9
7500
208.5
7600
210.1
7700









Repeat Pass

Recorded with 0 PSI Surface Induced Pressure

Database File	tep_chevron tr 522-23_rcbl_9-4-2017\processed_tep_chevron tr 522-23-597_rbl_09-04-17.db
Dataset Pathname	REPEAT_PASS
Presentation Format	ros_rbt004_tep
Dataset Creation	Mon Sep 04 13:21:47 2017
Charted by	Depth in Feet scaled 1:240

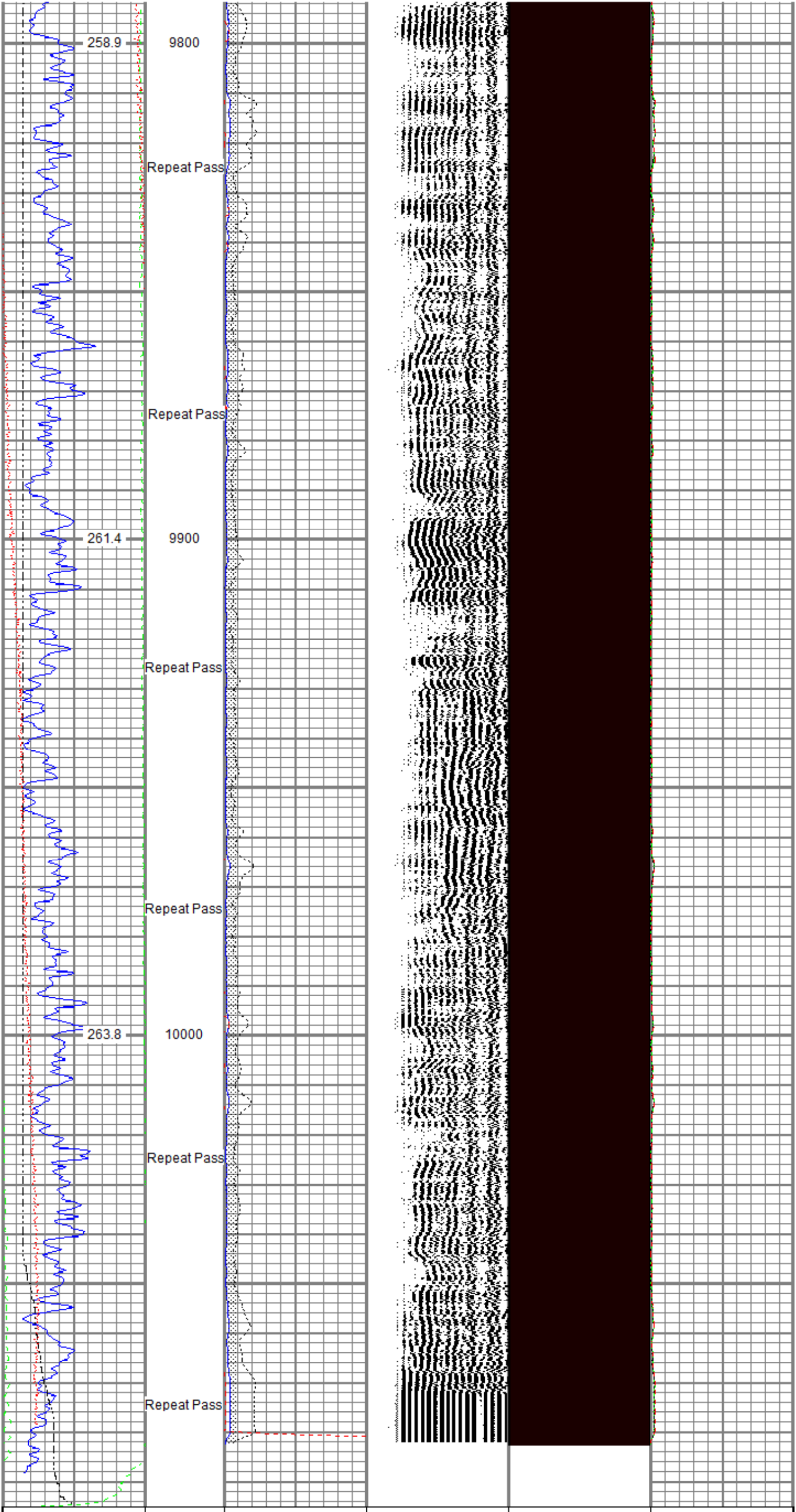
Gamma Ray: 0 (GAPI) 200
Line Speed: -150 (ft/min) 150
Line Tension: 0 (lb) 2000
Temperature: 0 (degF) 20

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

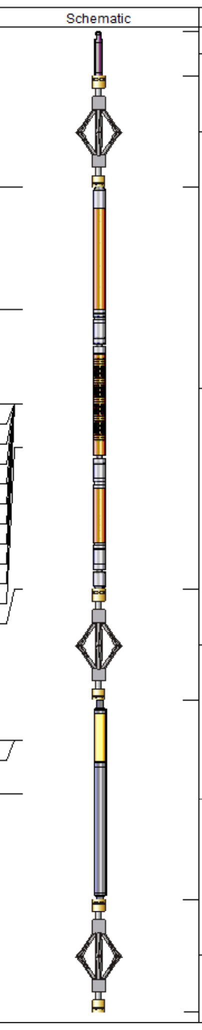
3' Amplitude: 0 (mV) 100
3' Amplitude x 5: 0 (mV) 20
3' Travel Time: 300 (usec) 200

5' Variable Density Log: 200 1200

Sector Map: 10 110

Average Amplitude: 0 150
Mimimum Amplitude: 0 150
Maximum Amplitude: 0 150

Schematic



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

Description	Length (ft)	O.D. (in)	Weight (lb
Titan_Electric_Cable_Heads-Titan_1-11/1 Electric Cable Head with 1" Fishing Neck	1.03	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 (FW1305-0 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	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 (FW121) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	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 522-23-597_RBL_09-04-17.db: field/well/run1/MAIN_PASS
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 522-23_RCBL_9-4-2017\PROCESSED_TEP_Chevron TR 5
Dataset Pathname	MAIN_PASS
Dataset Creation	Mon Sep 04 13:28:33 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:	193.874	ft

Master Calibration, performed Mon Sep 04 09:57:05 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.673	0.800	81.196	119.488	0.800
CAL	0.000	0.612				
5'	0.000	0.474	0.800	81.196	169.621	0.800
SUM						
S1	0.000	0.660	0.000	100.000	151.524	0.000
S2	0.000	0.684	0.000	100.000	146.275	0.000
S3	0.000	0.700	0.000	100.000	142.927	0.000
S4	0.000	0.694	0.000	100.000	144.093	0.000
S5	0.000	0.687	0.000	100.000	145.457	0.000
S6	0.000	0.666	0.000	100.000	150.237	0.000
S7	0.000	0.651	0.000	100.000	153.604	0.000
S8	0.000	0.646	0.000	100.000	154.788	0.000

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	0.000	0.612	1.000	0.000

Air Zero Calibration, performed Mon Sep 04 09:51:32 2017:

	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

RELIANCE
OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Chevron TR 522-23-597
Field	Trail Ridge
County	Garfield
State	Colorado