Company TEP Rocky Mountain LLC
Well Chevron TR 43-27-597
Field Trail Ridge
County Garfield
State Colorado

RELIANCE
OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Collar Locator Log

Company TEP Rocky Mountain LLC
Well Chevron TR 43-27-597
Field Trail Ridge
County Garfield State Colorado

Location: API # : 05-045-23330
228' FSL 221' FEL SESE
SEC 27 TWP 5S RGE 97W

Other Services
PDN

Permanent Datum Ground Level Elevation 8452'
Log Measured From Kelly Bushing 24 FT
Drilling Measured From Kelly Bushing

Elevation
K.B. 8476'
D.F. 8475'
G.L. 8452'

Date	10-MAY-2017		
Run Number	One		
Depth Driller	10300 FT		
Depth Logger	10200 FT		
Bottom Logged Interval	10200 FT		
Top Log Interval	Surface		
Open Hole Size	8.750"		
Type Fluid	Fresh Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	261 °F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	09:35		
Equipment Number	HD 359		
Location	Grand Junction		
Recorded By	A. Ellsworth		
Witnessed By	D. Welsh		

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	36	J-55	Surface	3043 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10300 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 as per customer request
Depth referenced to Kelly Bushing at 24 FT
Ground Level 1 FT below the top of cut pipe
Marker Joint logged at 6466 FT - 6487 FT
Log ran from 10200 FT to surface
Recorded with 0 PSI surface induced pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

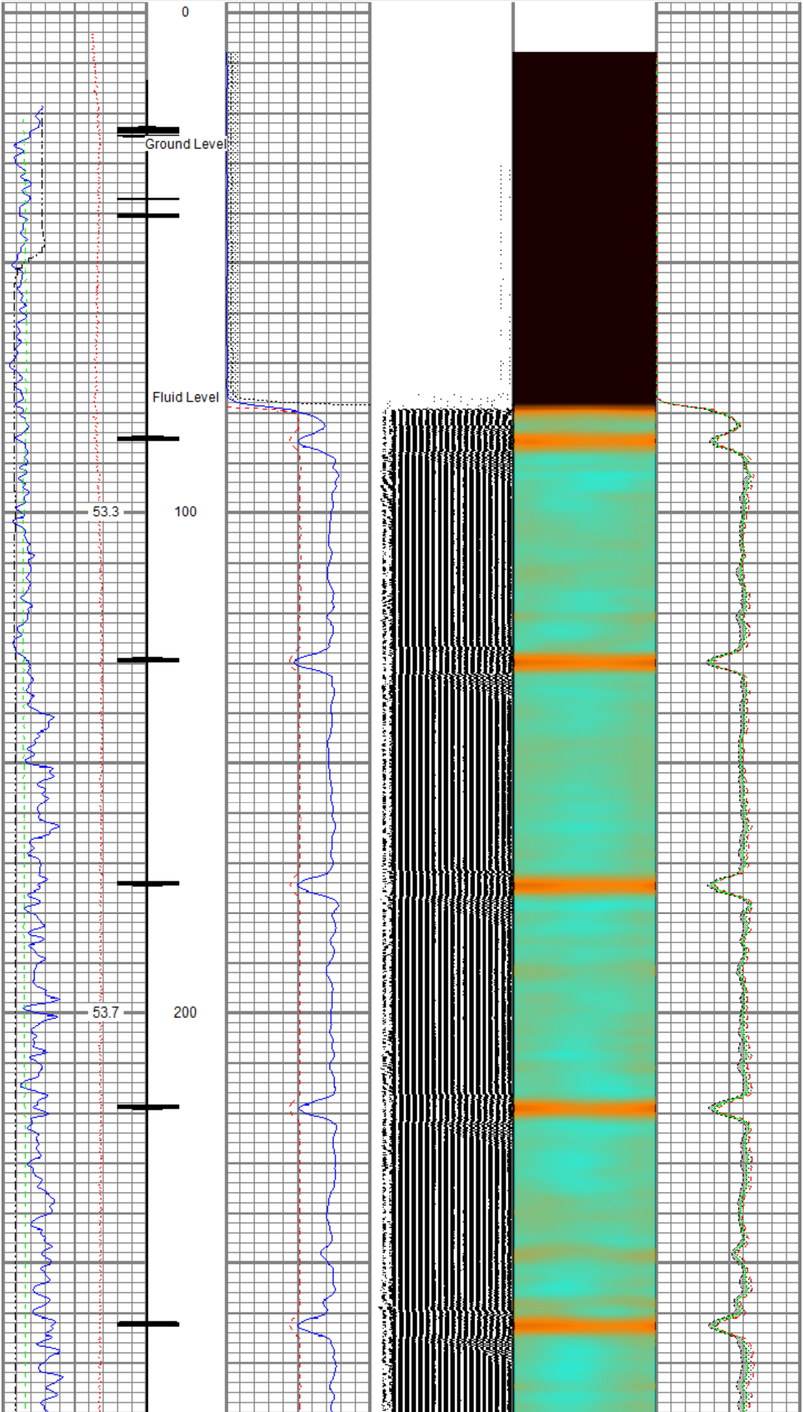
RELIANCE
OILFIELD SERVICES

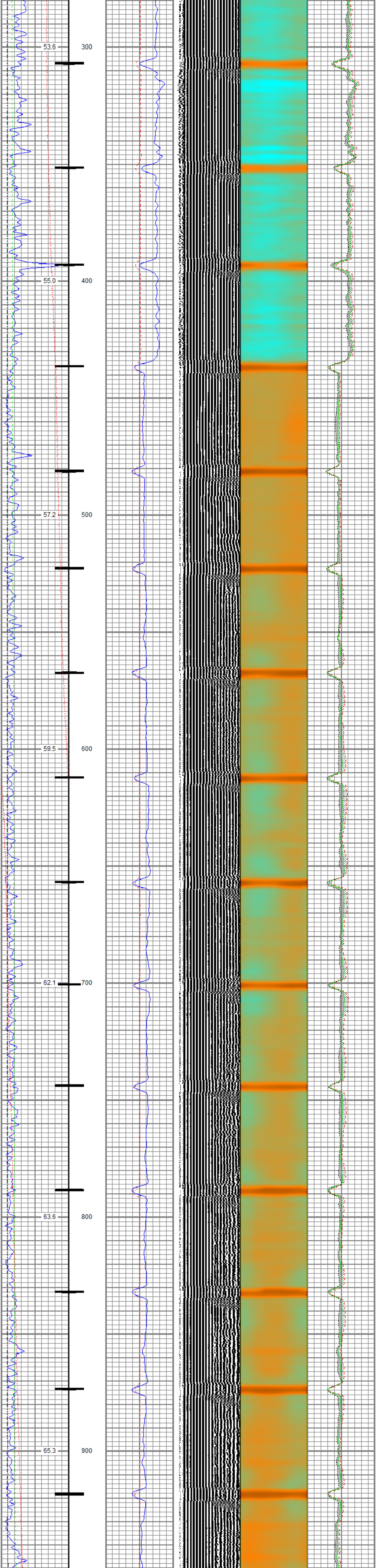
Main Pass

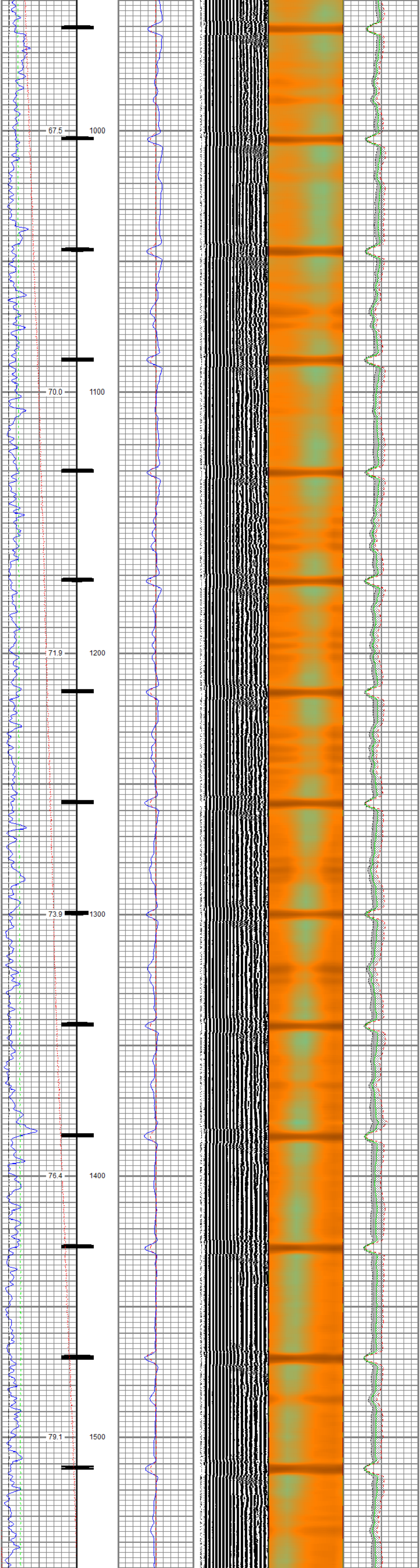
Recorded With 0 PSI Surface Induced Pressure

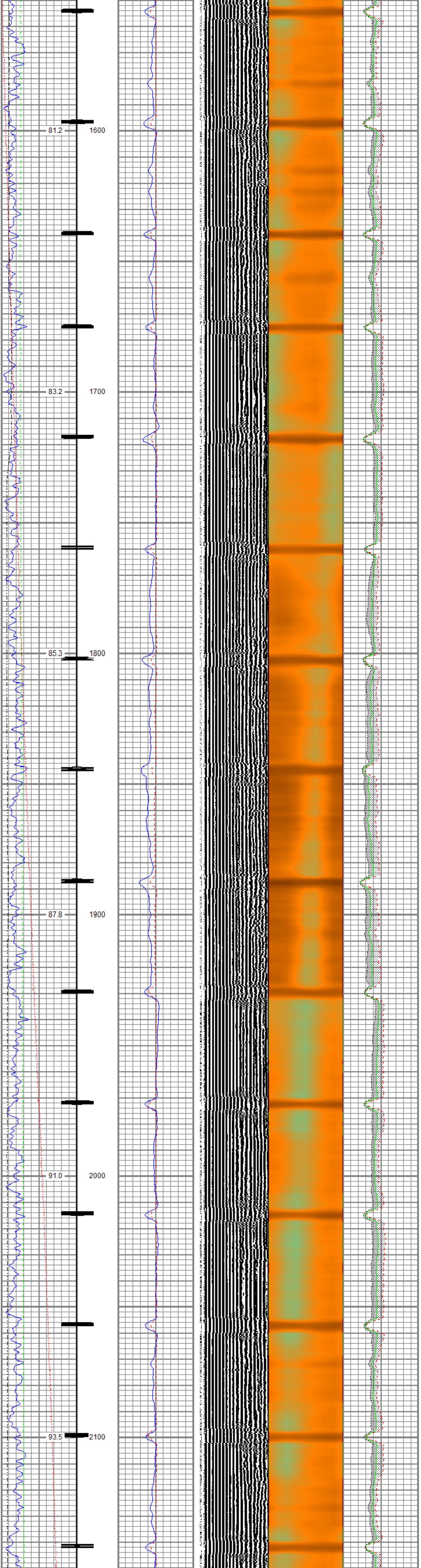
Database File	chevron tr-43-27-597\tep_chevron tr-43-27-597_05-10-17_rbl.db
Dataset Pathname	pass5
Presentation Format	ros_rbt004_tep
Dataset Creation	Wed May 10 09:31:25 2017
Charted by	Depth in Feet scaled 1:240

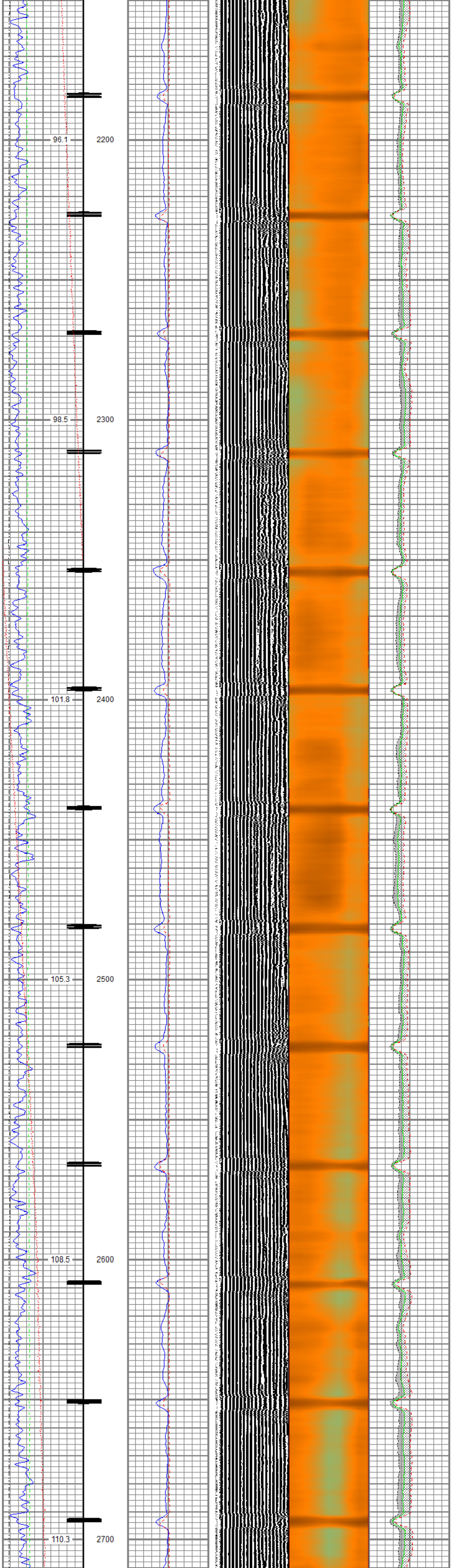
Track 1	Depth	Track 2	Track 3	Track 4	Track 5
Gamma Ray 0 (GAPI) 200		3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150
Casing Collar Locator		3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 0 150
Line Speed -150 (ft/min) 150		3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Line Tension 0 (lb) 2000					
Temperature 0 (degF) 20					

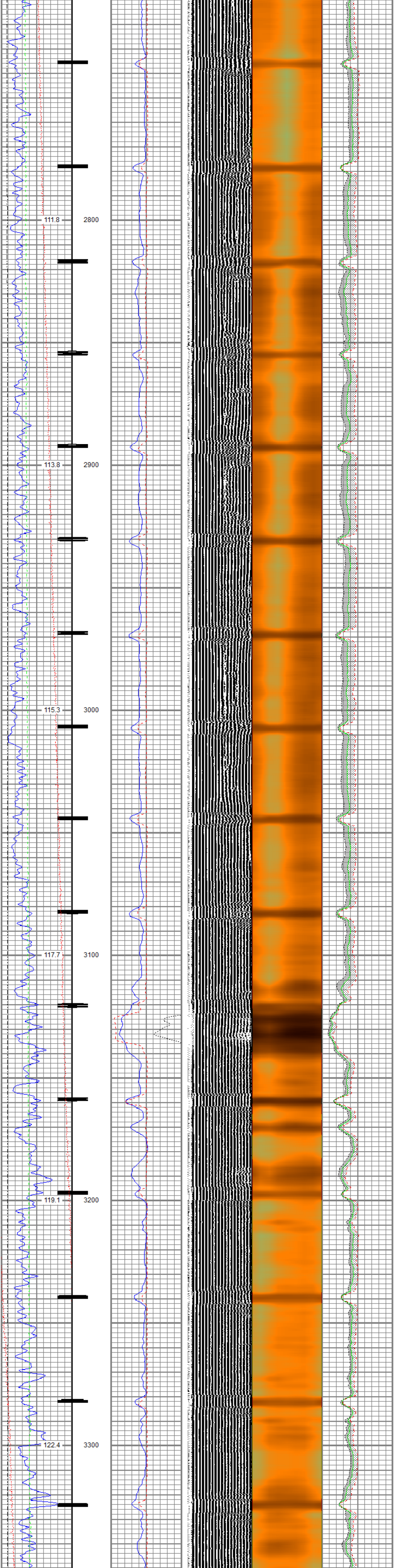


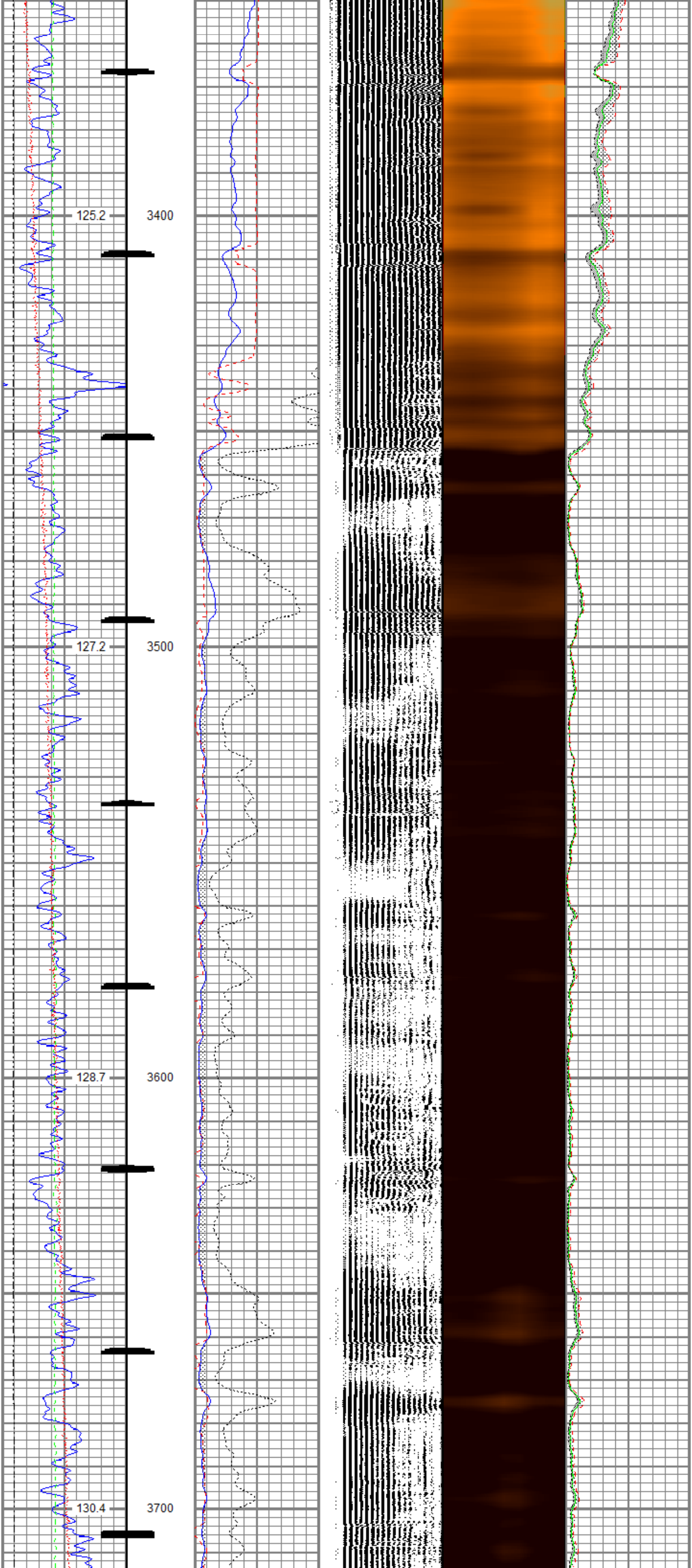


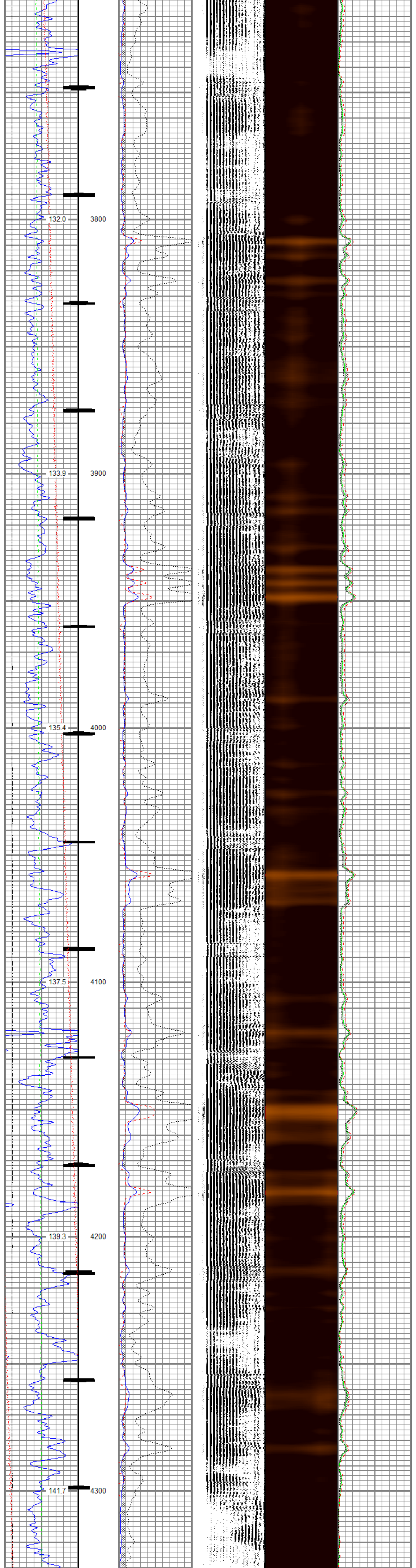








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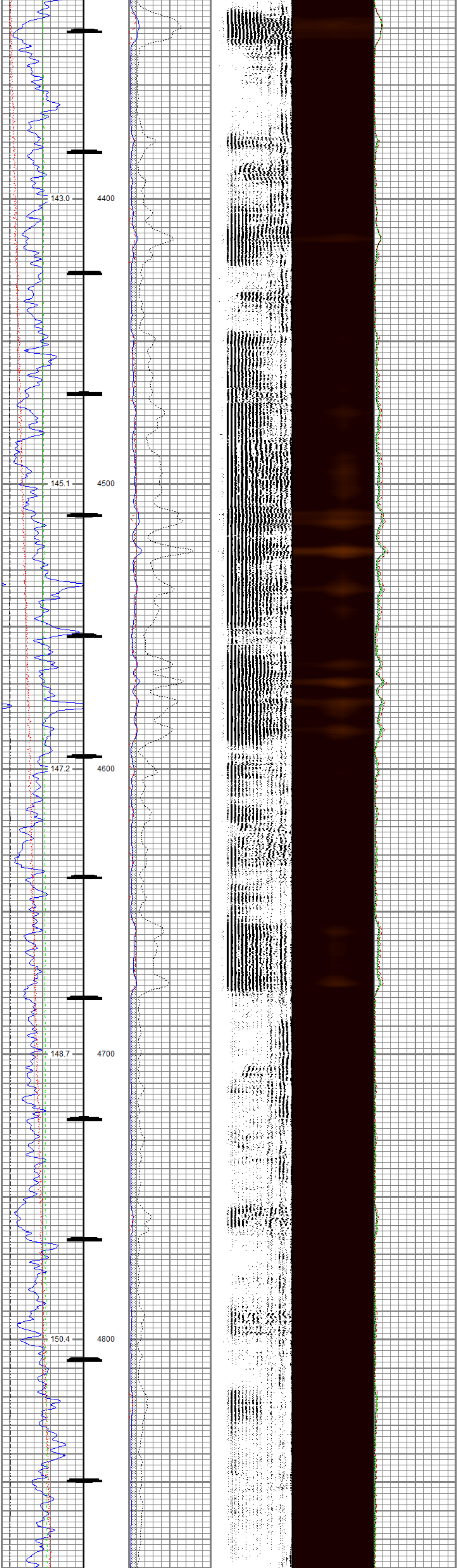
133.9
3900
135.4
4000
137.5
4100
139.3
4200
141.7
4300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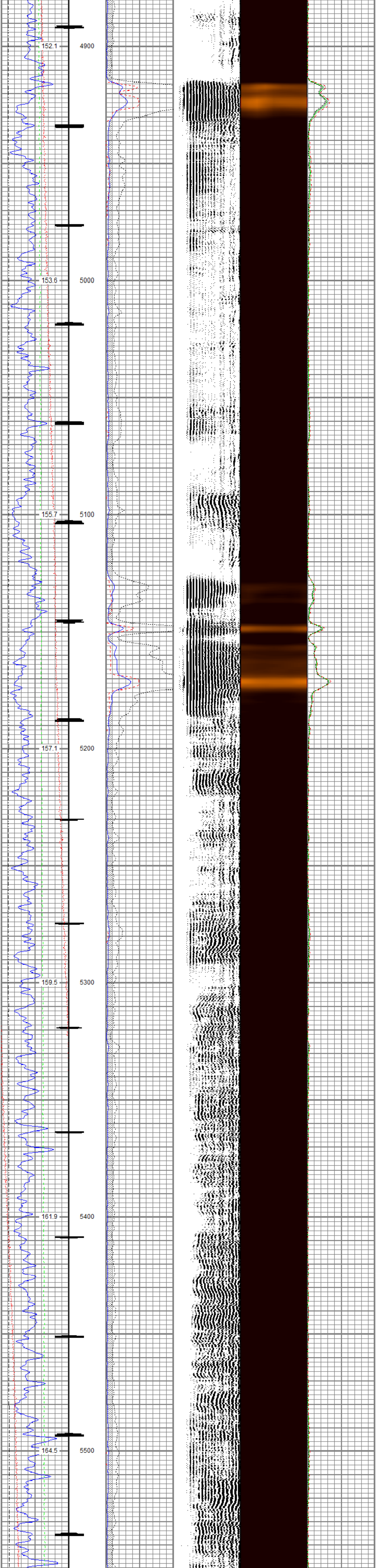
4400
145.1
4500
147.2
4600
148.7
4700
150.4
4800



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157.1
5200
159.5
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161.9
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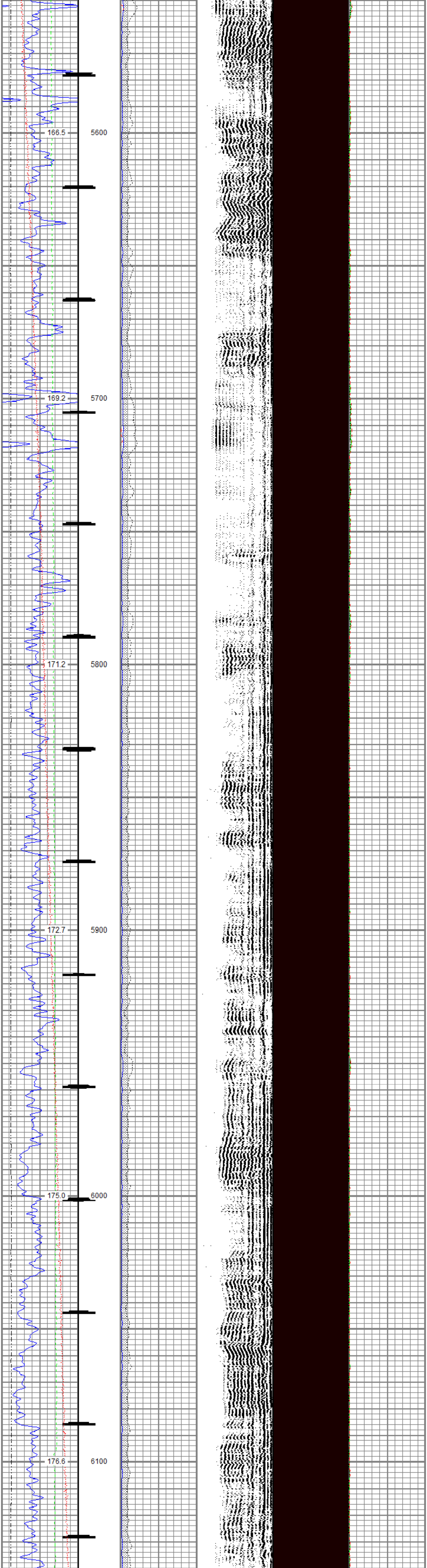
5500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5700
171.2
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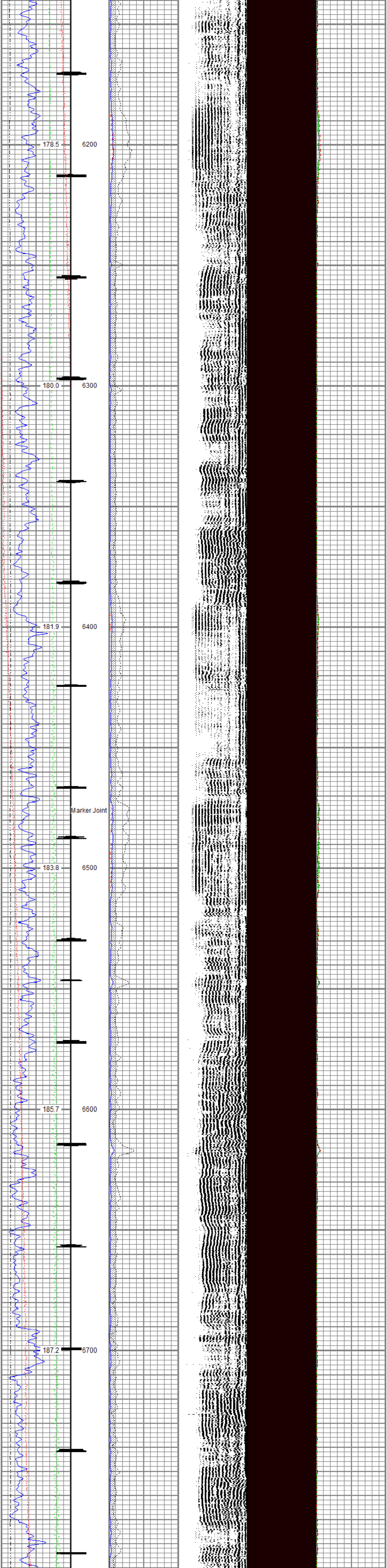
5900
175.0
6000
176.6
6100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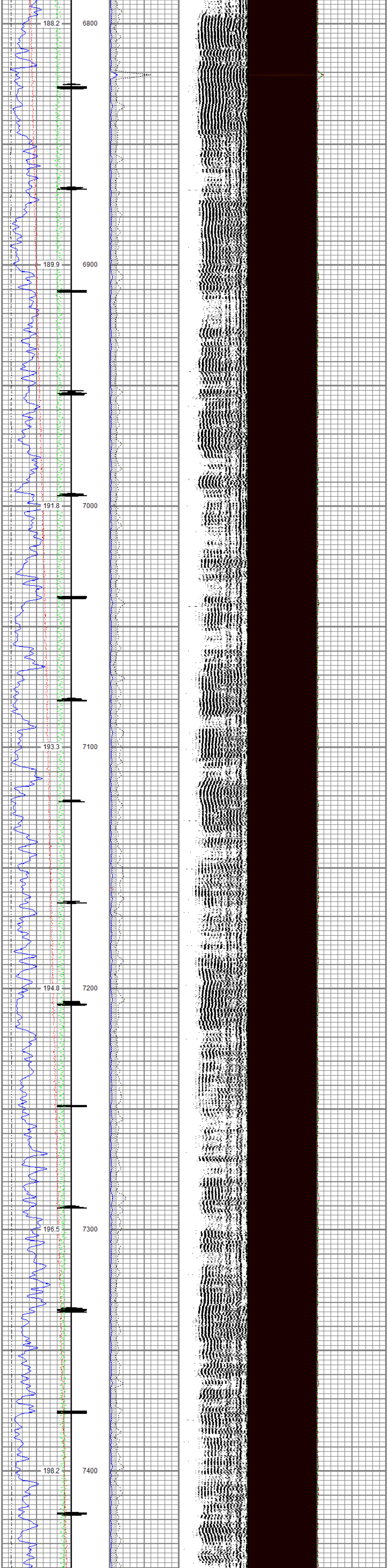
6400
Marker Joint
183.8
6500
185.7
6600
187.2
6700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196.5
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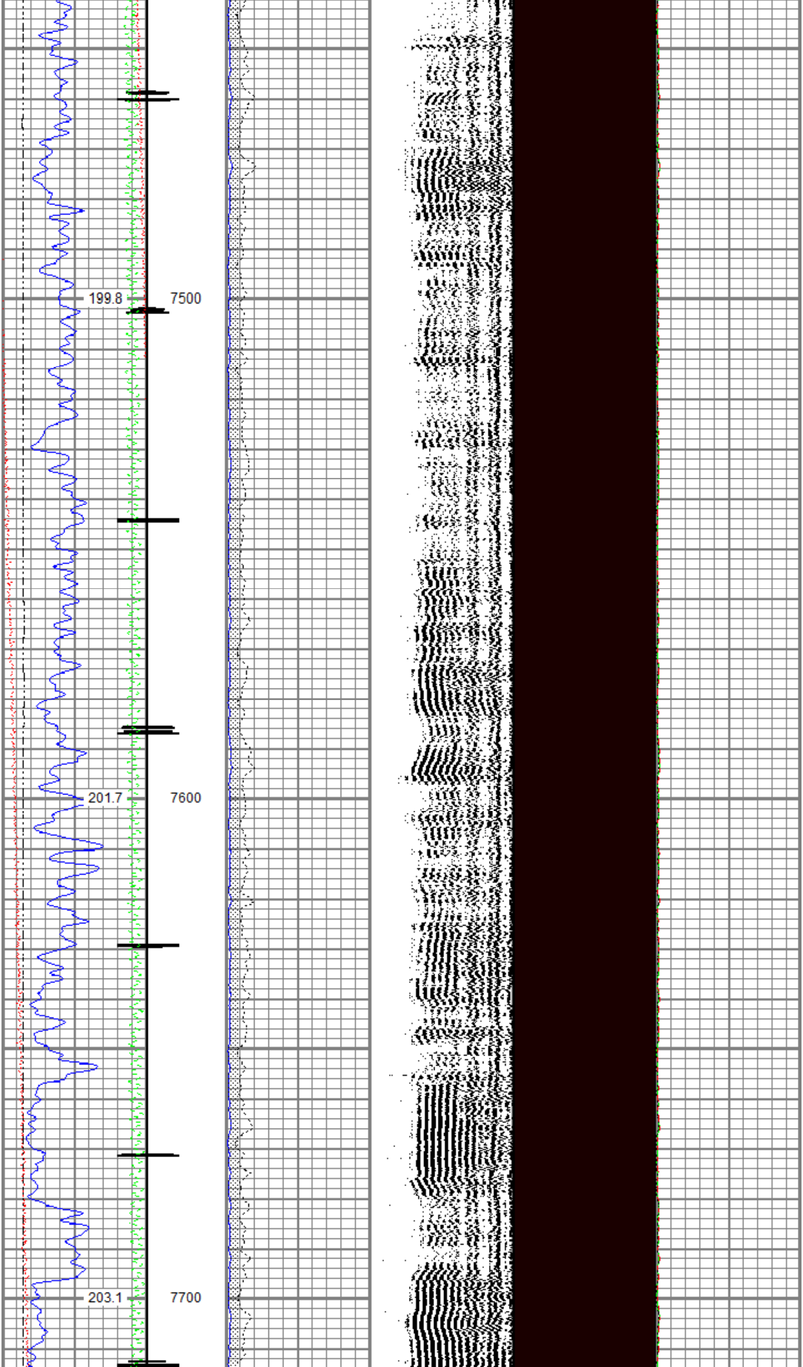
7400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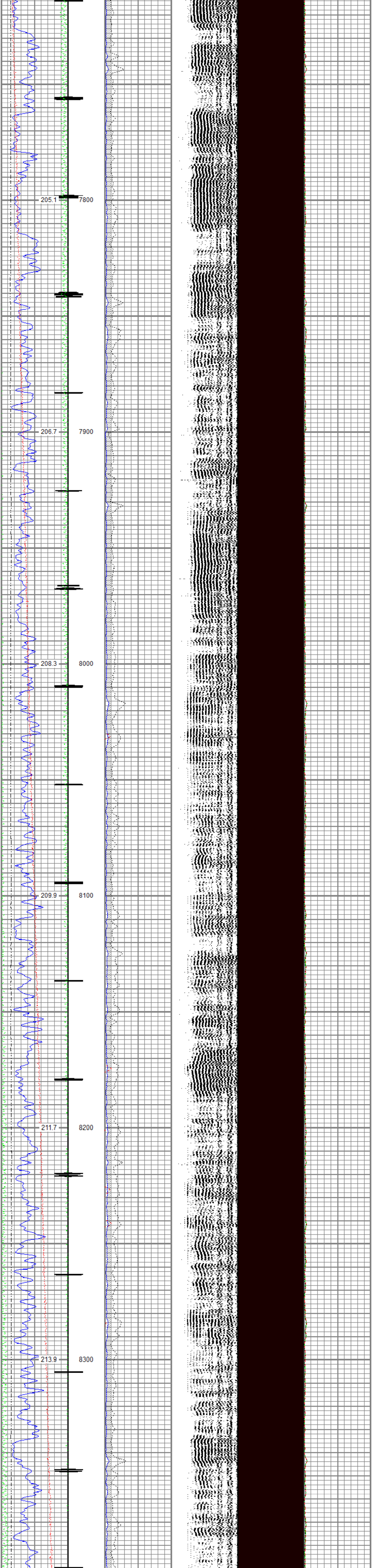
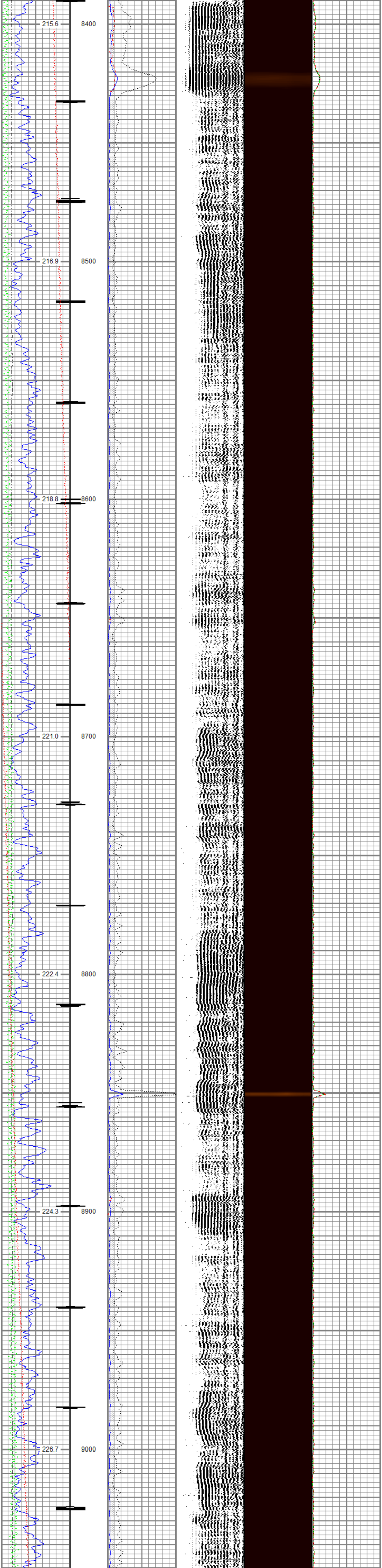
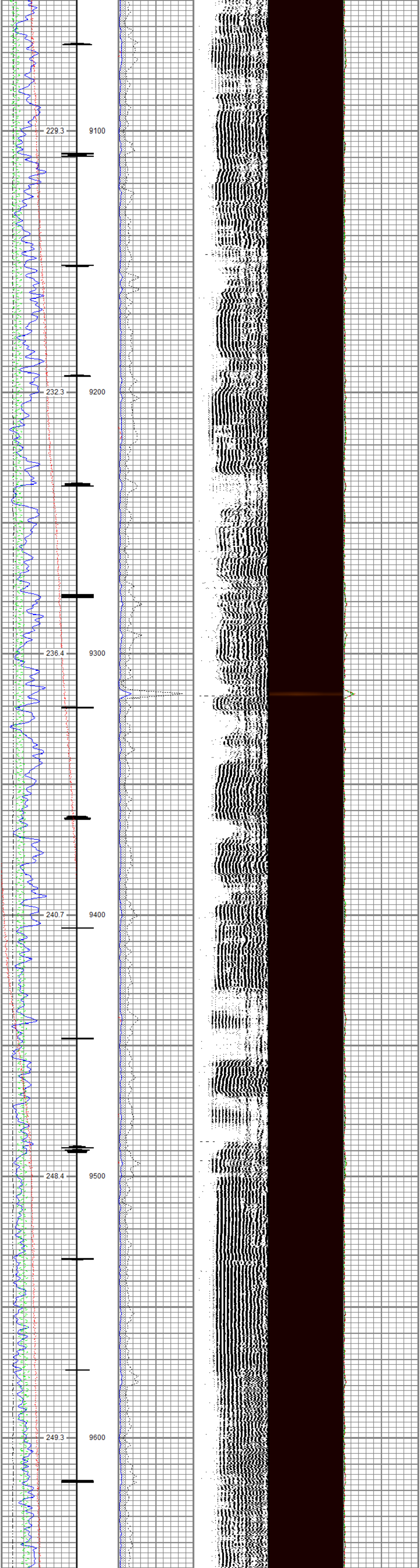
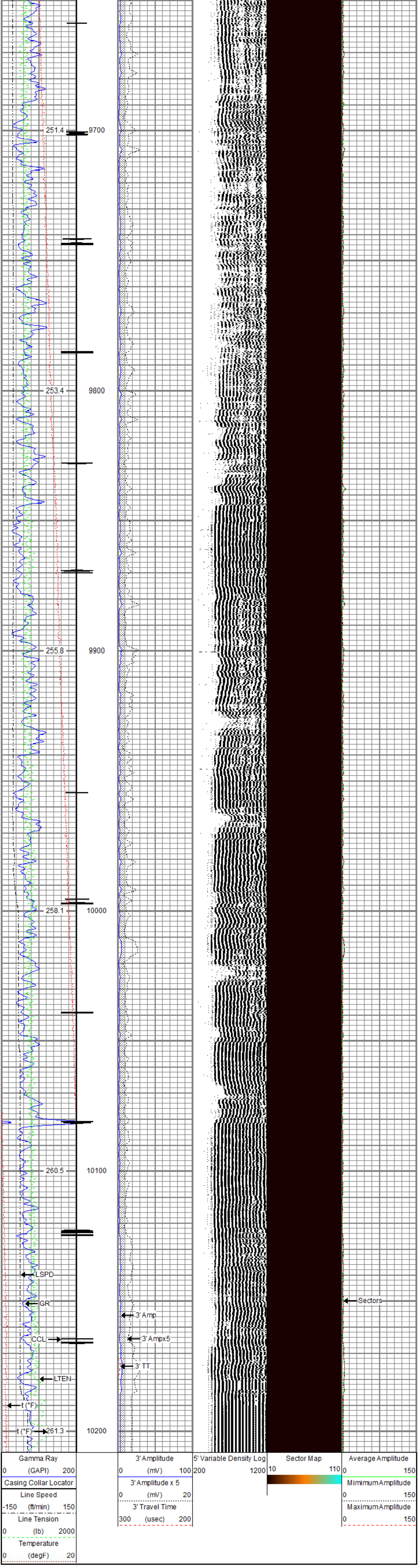






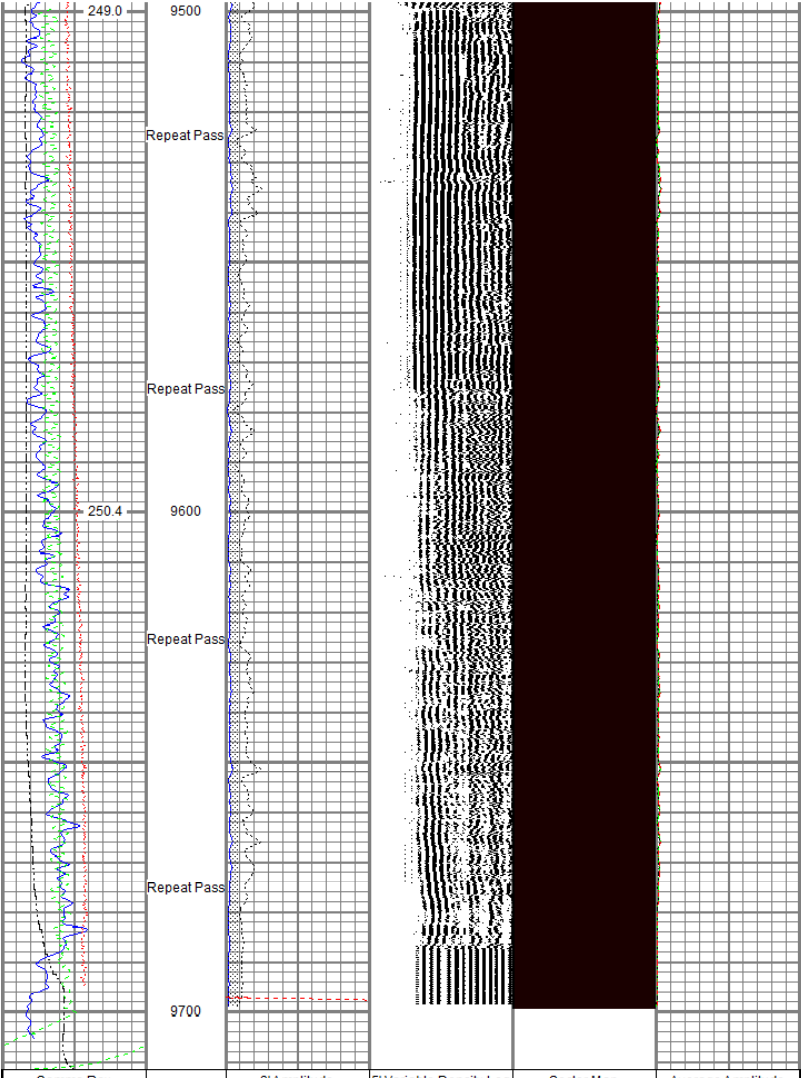


Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

Database File	chevron tr-43-27-597\tep_chevron tr-43-27-597_05-10-17_rbl.db
Dataset Pathname	pass3
Presentation Format	ros_rbt004_tep
Dataset Creation	Wed May 10 09:22:01 2017
Charted by	Depth in Feet scaled 1:240

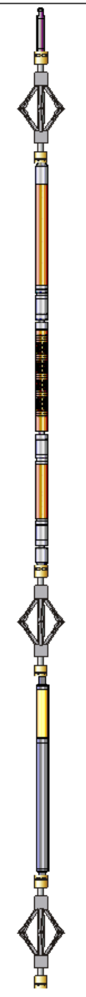
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200		0 (mV) 100	200 1200	10 110	0 150
Line Speed		3' Amplitude x 5			Mimimum Amplitude
-150 (ft/min) 150		0 (mV) 20			0 150
Line Tension		3' Travel Time			Maximum Amplitude
0 (lb) 2000		300 (usec) 200			0 150
Temperature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



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

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	3.44

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb)
Titan_Electric_Cable_Heads-Titan_1-1/1 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 (FW1 Probe 2-3/4" Digital CCL / Gamma Ray Combined	214.546)	2.75	55.00
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00

Dataset:	TEP_Chevron TR-43-27-597_05-10-17_RBL.db: field/well/run1/pass5
Total length:	22.40 ft
Total weight:	261.40 lb
O.D.:	2.75 in

Calibration Report

Database File	C:\ProgramData\Warrior\Data\Chevron TR-43-27-597\TEP_Chevron TR-43-27-597_05-10-17_RBL.db
Dataset Pathname	pass5
Dataset Creation	Wed May 10 09:31:25 2017

Gamma Ray Calibration Report

Serial Number:	FW1211-026	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:14:28 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:	17.788	ft

Master Calibration, performed Wed May 10 08:43:27 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.006	0.554	0.800	81.196	143.409	1.677
CAL	-0.006	0.570				
5'	-0.004	0.512	0.800	81.196	155.702	1.412
SUM						
S1	-0.008	0.556	0.000	100.000	177.216	1.482
S2	-0.006	0.552	0.000	100.000	179.272	1.044
S3	-0.006	0.554	0.000	100.000	178.549	1.007
S4	-0.005	0.557	0.000	100.000	177.963	0.956
S5	-0.005	0.556	0.000	100.000	178.141	0.898
S6	-0.006	0.556	0.000	100.000	178.041	0.993
S7	-0.005	0.552	0.000	100.000	179.661	0.809
S8	-0.005	0.555	0.000	100.000	178.526	0.859

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	-0.006	0.570	1.000	0.000

Air Zero Calibration, performed Wed May 10 08:43:58 2017:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	-0.006	0.000	-0.000
5'	-0.004	0.000	0.000
SUM			
S1	-0.008	0.000	-0.000
S2	-0.006	0.000	-0.000
S3	-0.006	0.000	-0.000
S4	-0.005	0.000	-0.000
S5	-0.005	0.000	0.000
S6	-0.006	0.000	0.000
S7	-0.005	0.000	0.000
S8	-0.005	0.000	-0.000

Company	TEP Rocky Mountain LLC
Well	Chevron TR 43-27-597
Field	Trail Ridge
County	Garfield
State	Colorado