RELIANCE
OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Collar Locator Log

Company	TEP Rocky Mountain LLC
Well	Chevron TR 414-21-597
Field	Trail Ridge
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Chevron TR 414-21-597
Field Trail Ridge
County Garfield State Colorado

Location: API # : 05-045-23340
669' FSL & 1853' FWL SESW
SEC 21 TWP 5S RGE 97W

Other Services
PDN

Permanent Datum Ground Level Elevation 8292'
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 8316'
D.F. 8315'
G.L. 8292'

Date	23-APR-2017
Run Number	One
Depth Driller	9493 FT
Depth Logger	9413 FT
Bottom Logged Interval	9413 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	253° F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	16:30
Equipment Number	HD 329
Location	Grand Junction
Recorded By	M. Kochevar
Witnessed By	D. Welsh

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size (in)	Weight (lb/ft)	From	To

Casing Record	Size (in)	Wgt (lb/ft)	Grade	Top	Bottom
Surface Casing	9 5/8	36	J-55	Surface	2669 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	9493 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 5680 FT – 5698 FT
Log ran from 9413 FT to surface
Recorded with 0 PSI surface induced pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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Main Pass

Recorded With 0 PSI Surface Induced Pressure

Database File	chevron tr 414-21-597\tep_chevron tr 414-21-597_04-23-17_rbl.db
Dataset Pathname	pass4.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Mon Apr 24 03:33:43 2017
Charted by	Depth in Feet scaled 1:240

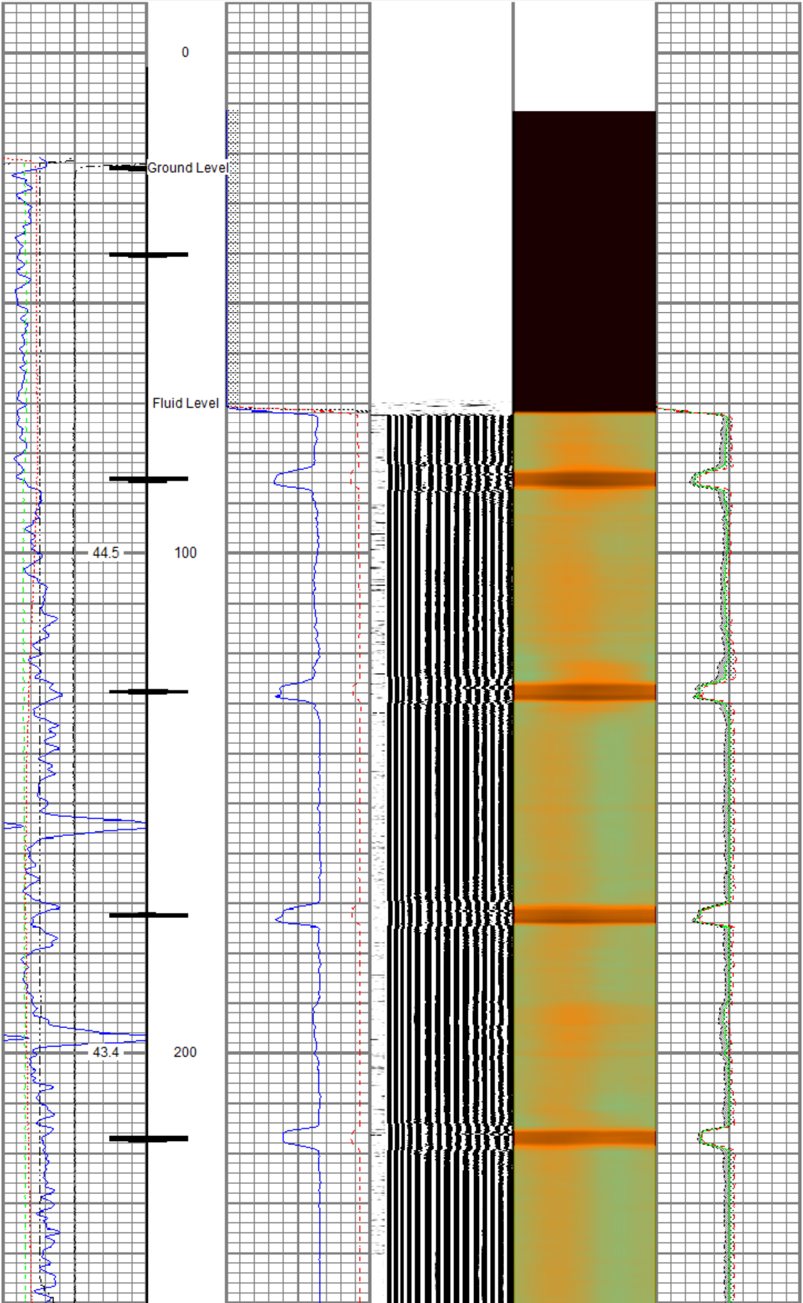
Gamma Ray
0 (GAPI) 200
Casing Collar Locator
Line Speed
-150 (ft/min) 150
Line Tension
0 (lb) 2000
Differential Temperature
-2 (degF) 2
Temperature
0 (degF) 20

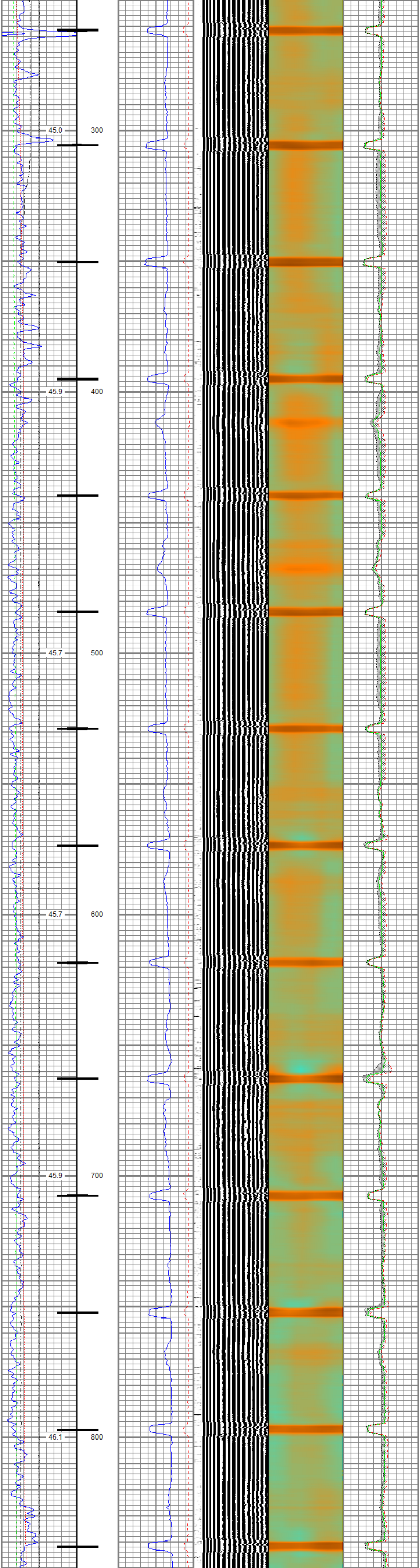
3' Amplitude
0 (mV) 100
3' Amplitude x 5
0 (mV) 20
3' Travel Time
300 (usec) 200

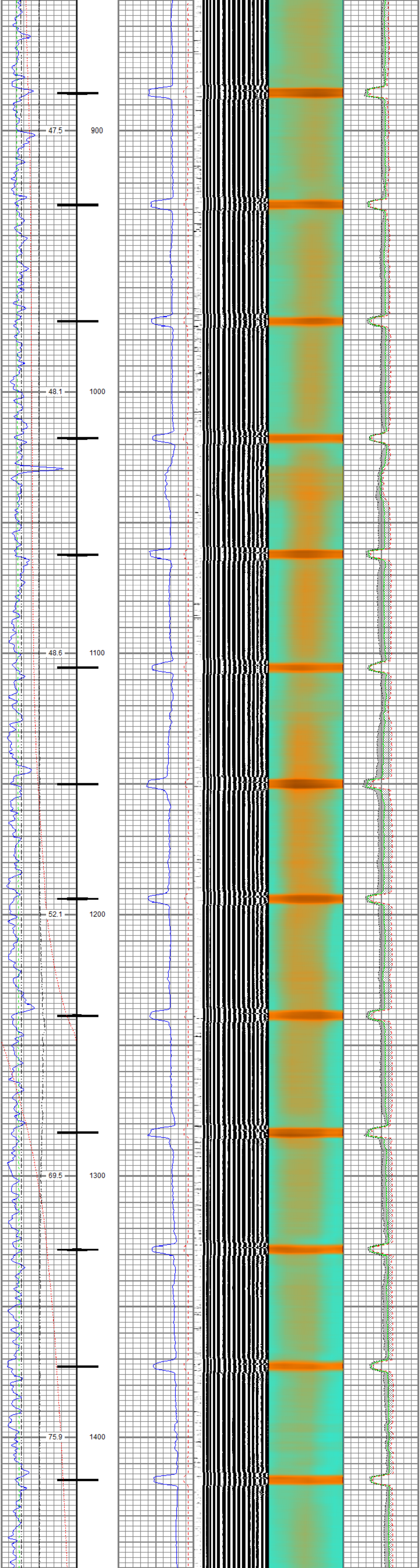
5' Variable Density Log
200 1200

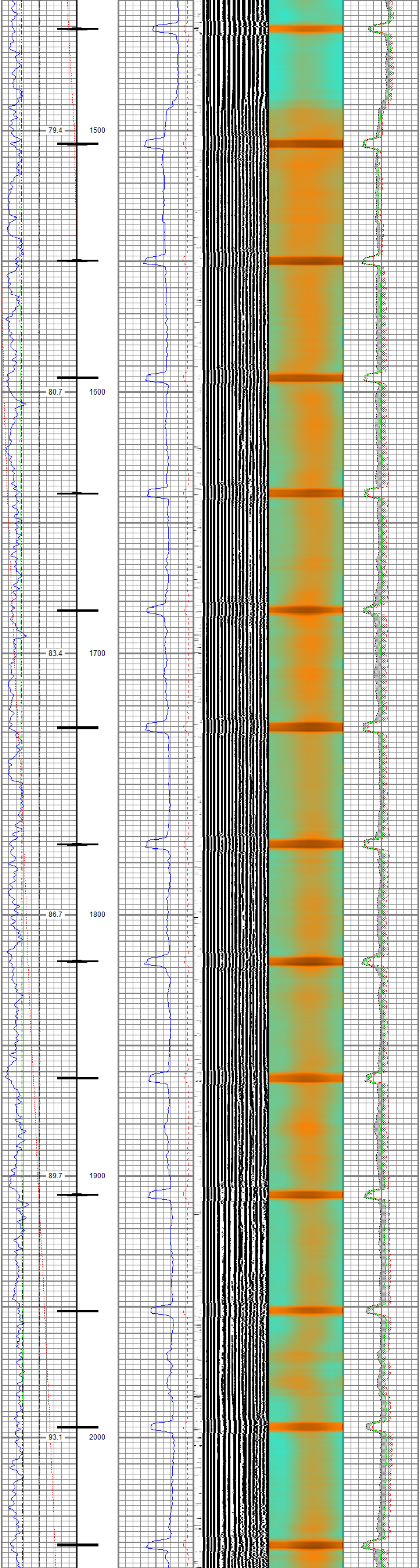
Sector Map
10 110

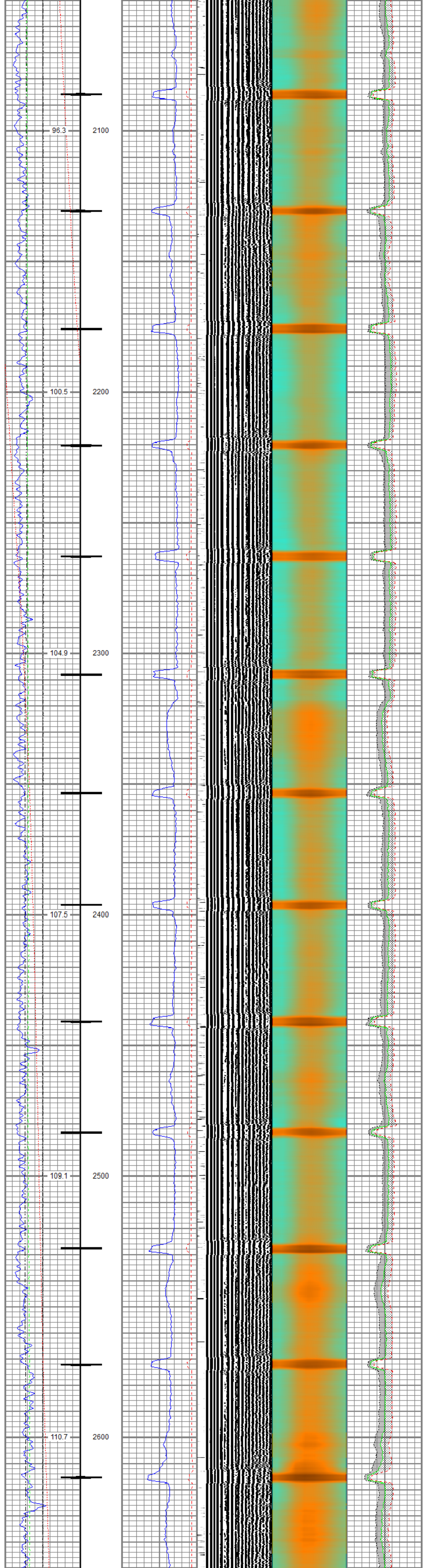
Average Amplitude
0 150
Mimimum Amplitude
0 150
Maximum Amplitude
0 150

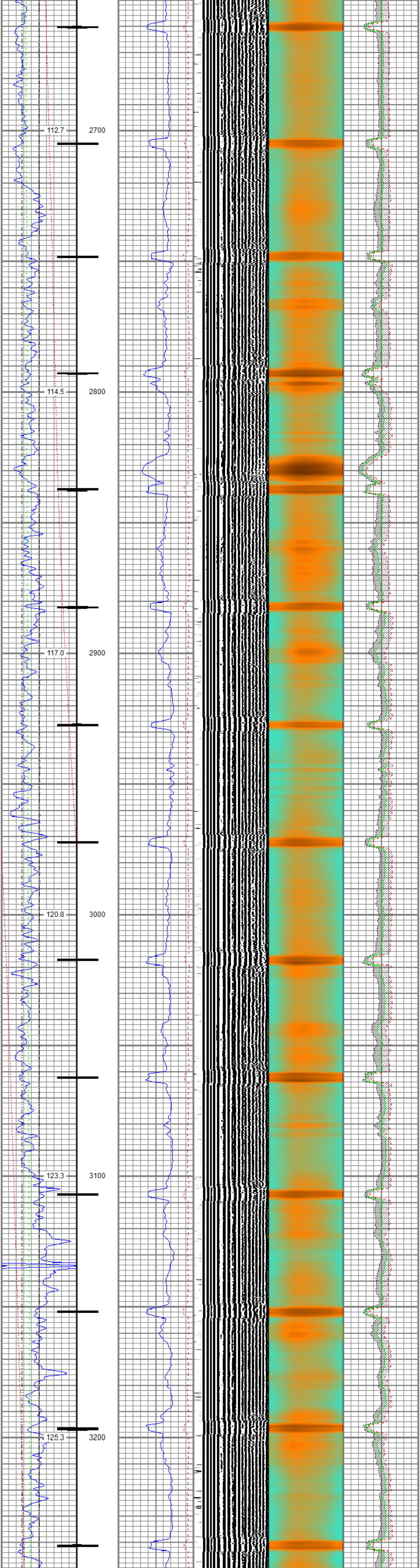


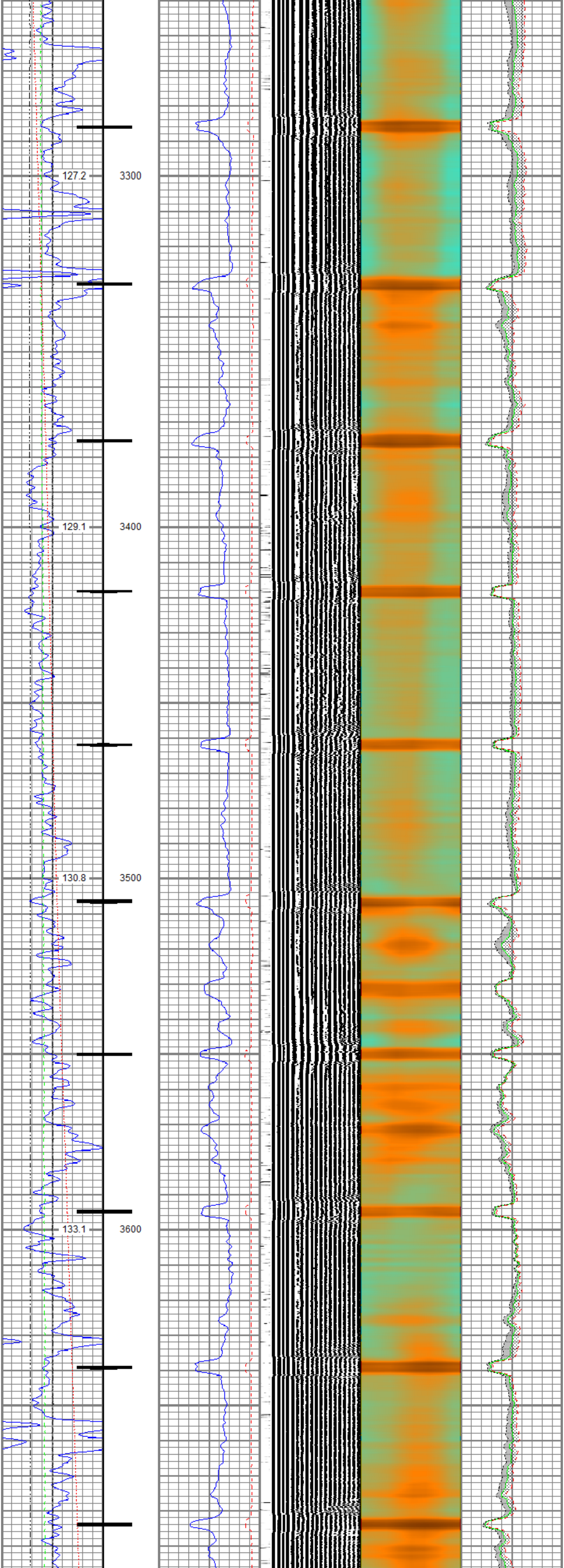


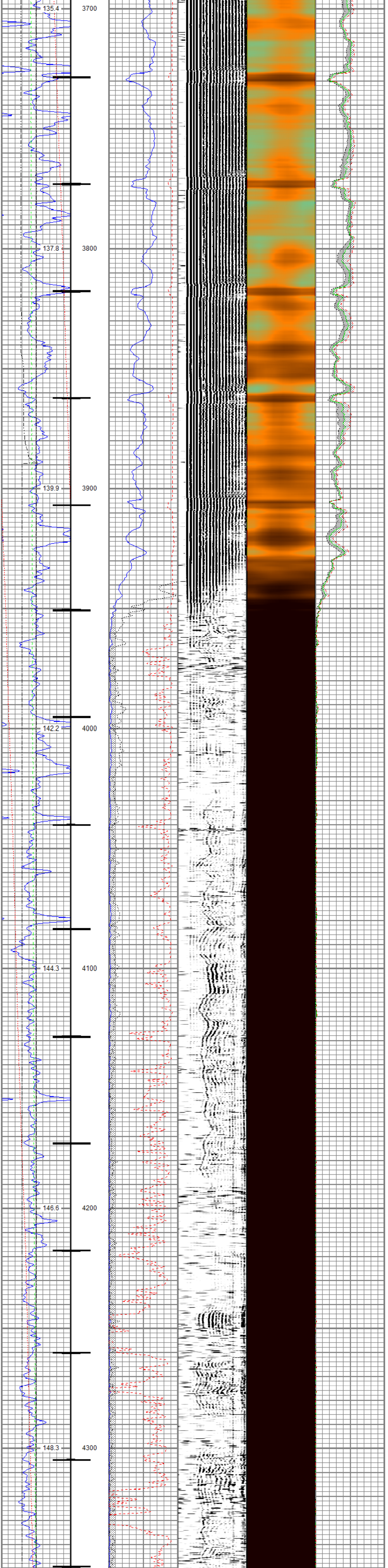








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3800
139.9
3900
142.2
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144.3
4100
146.6
4200
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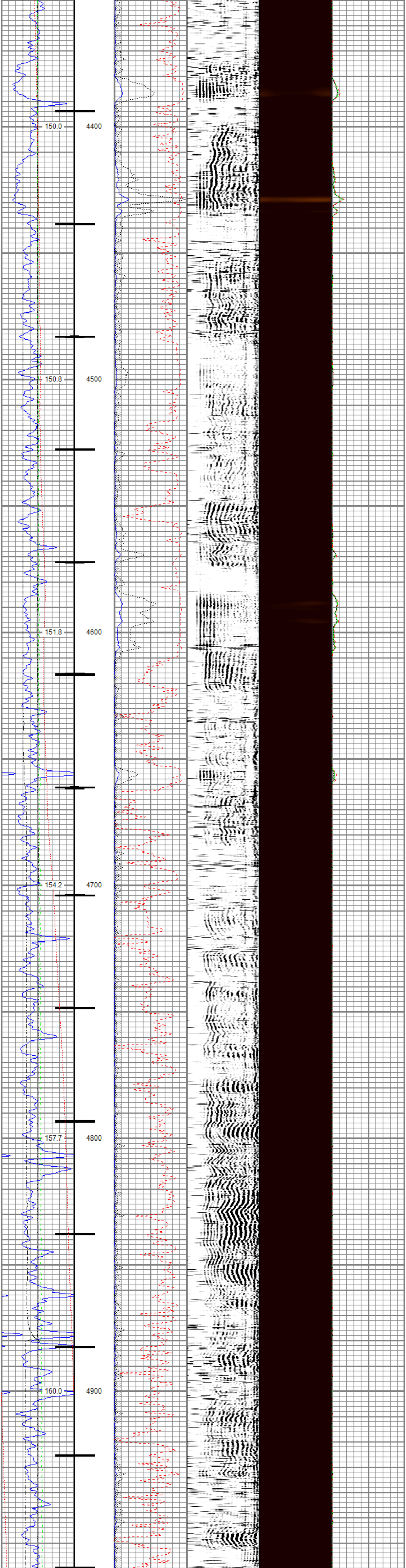
4300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157.7
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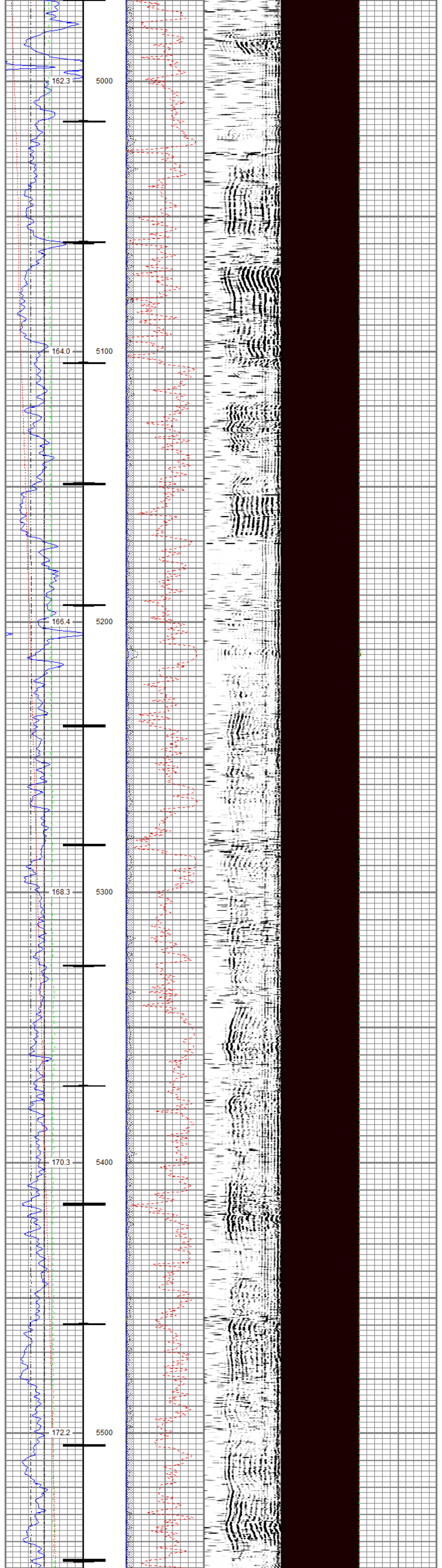
160.0
4900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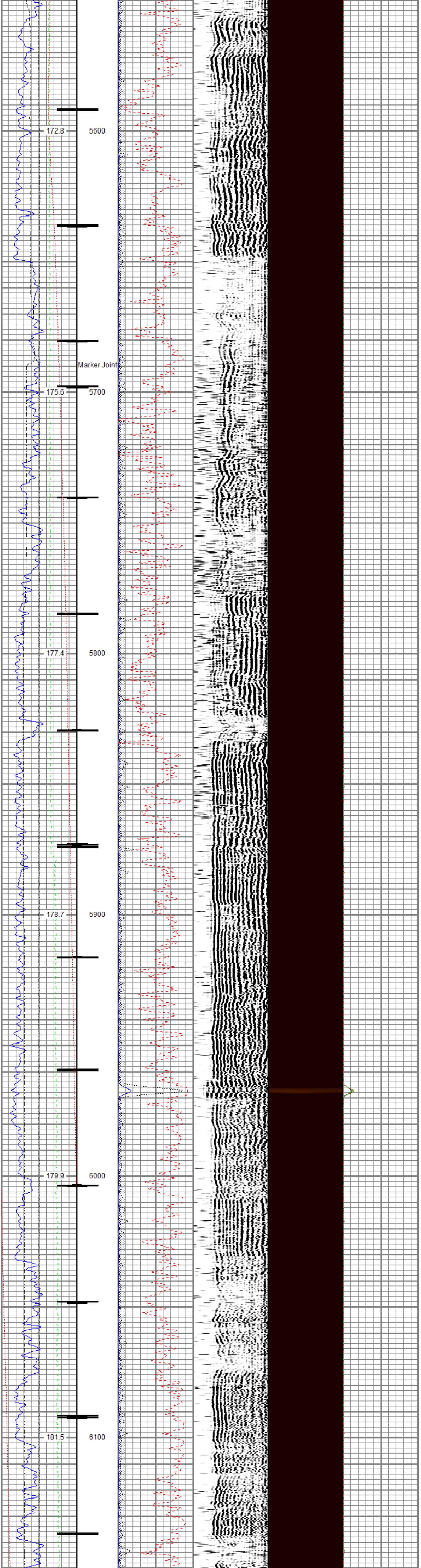
172.2
5500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Marker Joint
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6000
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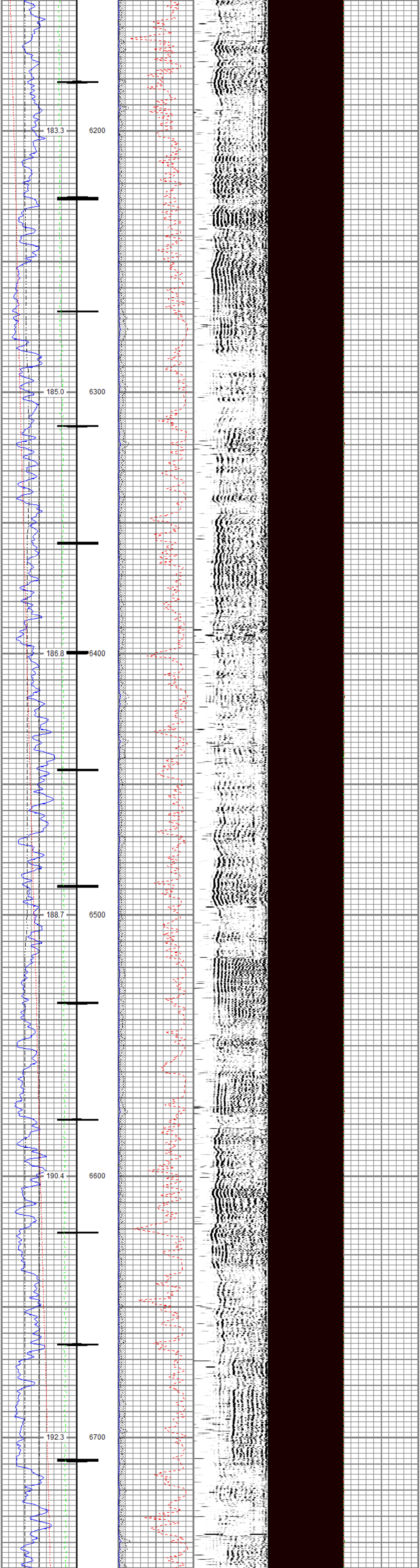
6100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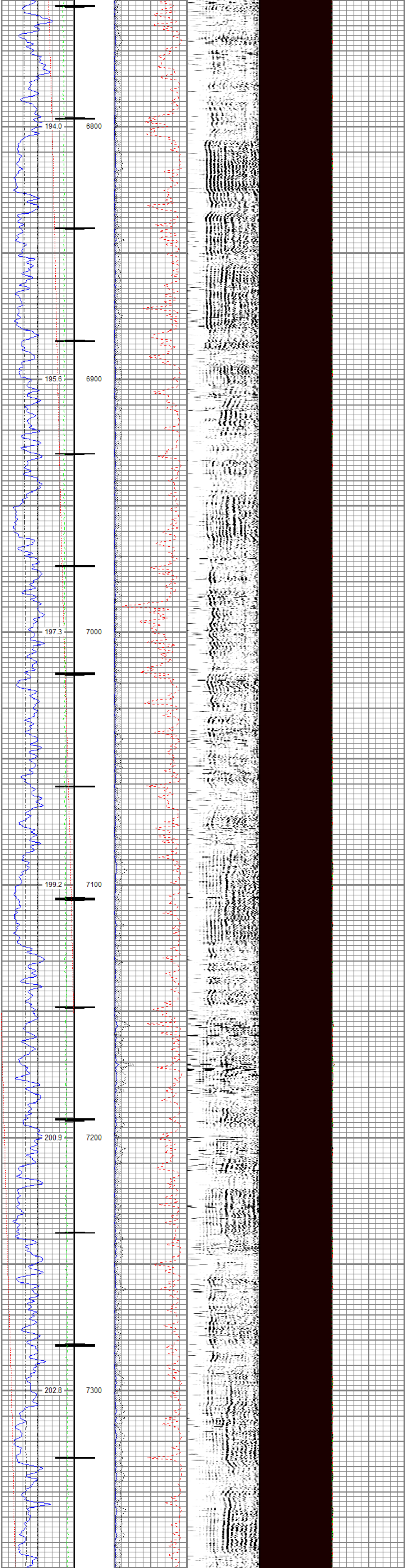
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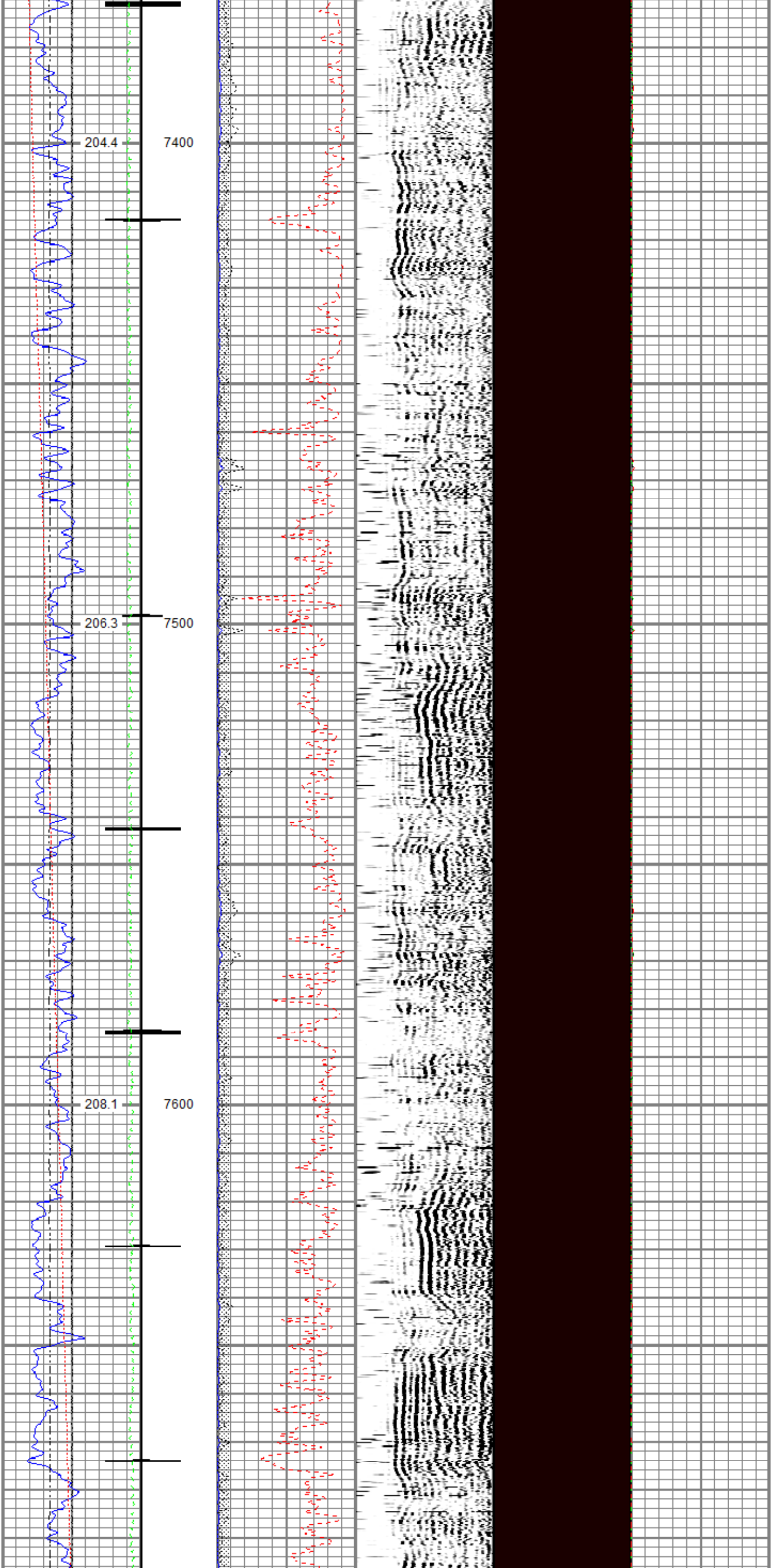
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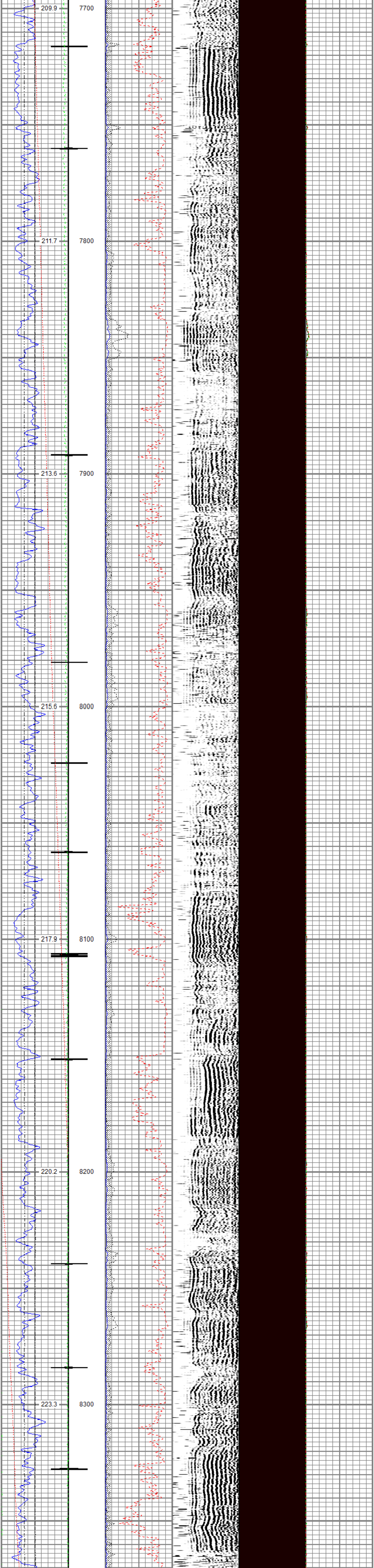

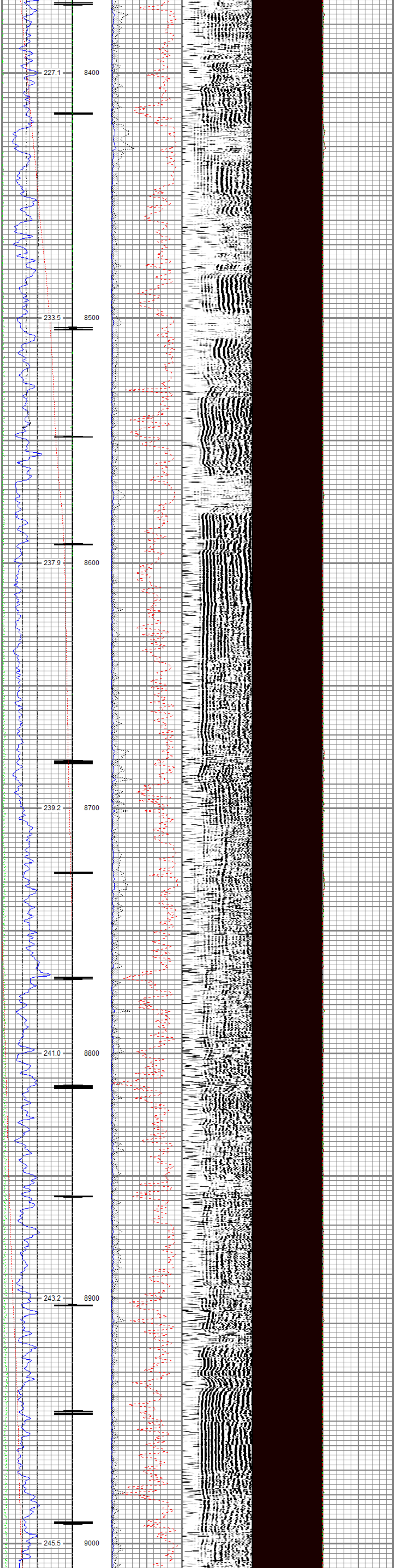

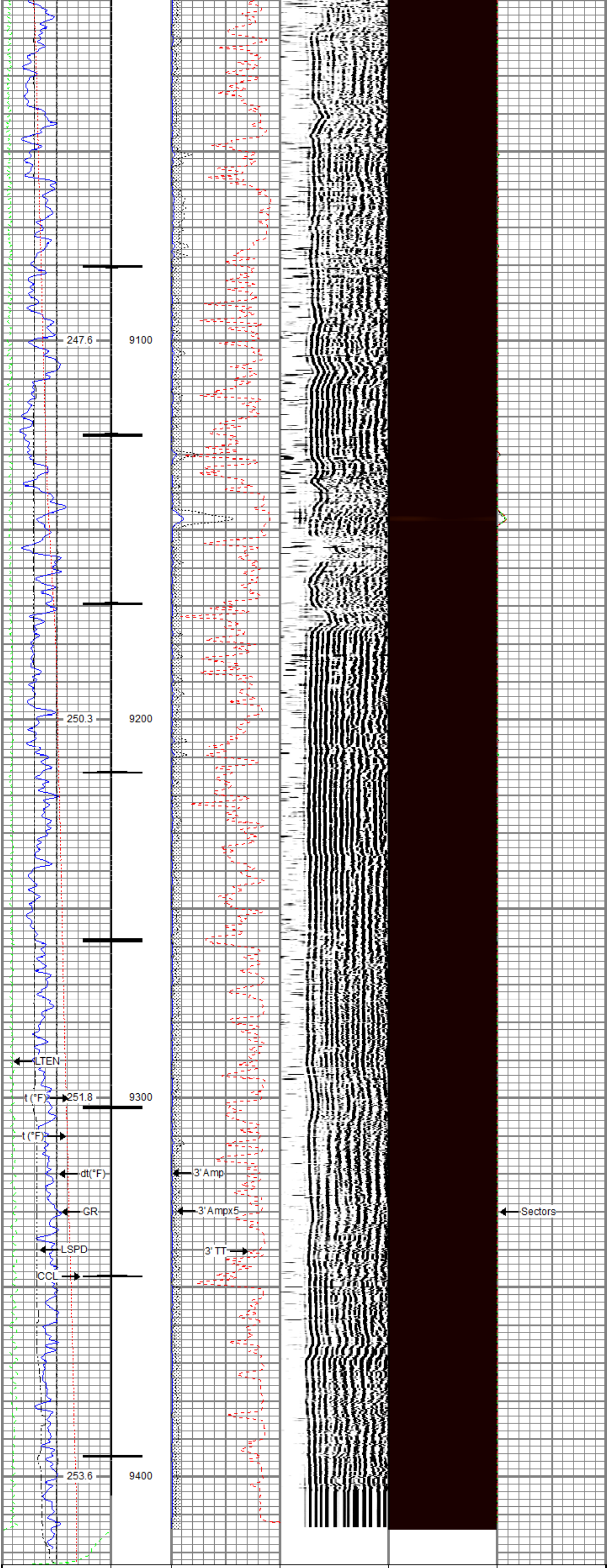

Gamma Ray 0 (GAPI) 200		3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150
Casing Collar Locator		3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 0 150
Line Speed -150 (ft/min) 150		3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Line Tension 0 (lb)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

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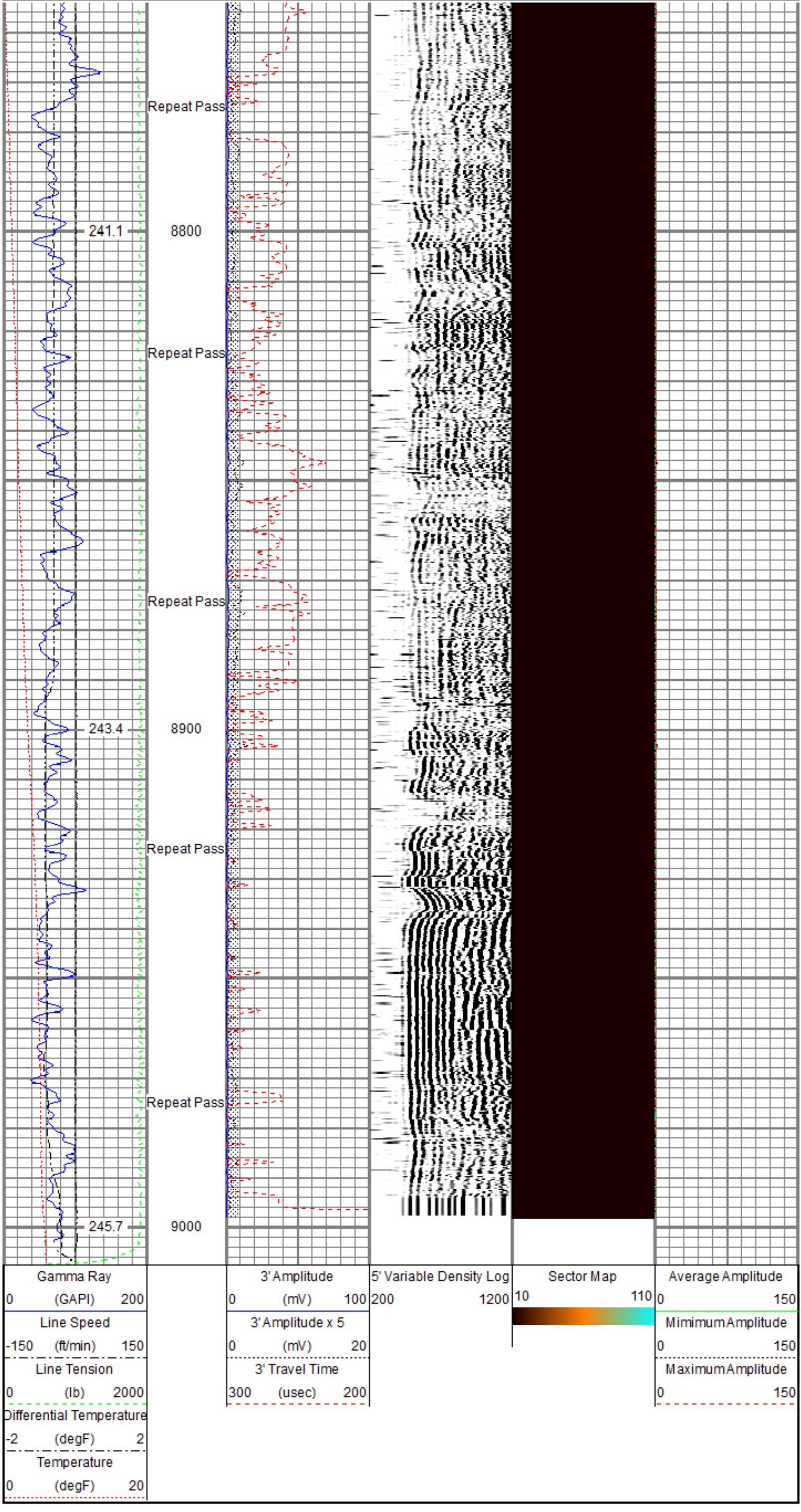
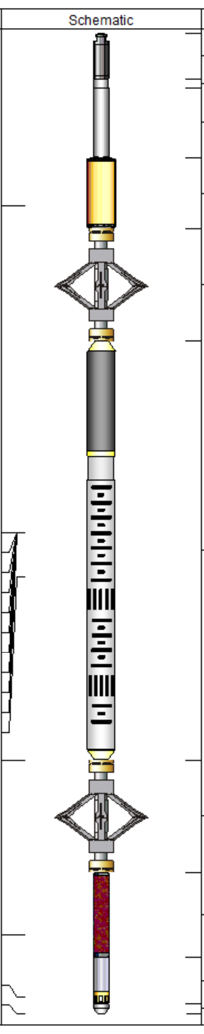
Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

Database File	chevron tr 414-21-597\tep_chevron tr 414-21-597_04-23-17_rbl.db
Dataset Pathname	pass2.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Tue Apr 25 15:46:37 2017
Charted by	Depth in Feet scaled 1:240

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





Sensor	Offset (ft)	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
		UW_AGS-UW_AGS_001 (219135) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
		UW_XTU-UW_XTU_002 (10012277) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
CCL	18.26	UW_CCL-UW_CCL_028 (10025621) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
CBLROT	10.87				
WVFS8	10.87	UW_RBT-UW_RBT_004 (10012639) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
WVFS7	10.87				
WVFS6	10.87				
WVFS5	10.87				
WVFS4	10.87				
WVFS3	10.87				
WVFS2	10.87				
WVFS1	10.87				
WVF3FT	10.87				
WVF5FT	9.87				
CBLTEMP	5.73				
		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
GR	1.76	UW_PGR-UW_PGR_020 (10019371) Production Gamma Ray	1.92	1.69	9.50
		UW_PRT-PRT_016 (10025093) Platinum Resistance Thermometer	1.04	1.69	5.20
TEMP	0.37	UW_BUL-UW_BUL_006 (10019730) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
TSTAMP	0.00				

Dataset:	TEP_Chevron TR 414-21-597_04-23-17_RBL.db: field/well/run1/pass4.1
Total length:	22.19 ft
Total weight:	268.80 lb
O.D.:	3.13 in

Calibration Report

Database File	D:\Warrior\Data\Chevron TR 414-21-597\TEP_Chevron TR 414-21-597_04-23-17_RBL.db
Dataset Pathname	pass4.1
Dataset Creation	Mon Apr 24 03:33:43 2017

Temperature Calibration Report

Serial Number:	10025093
Tool Model:	PRT_016
Performed:	Sun Oct 11 12:31:14 2015

Point #	Reading		Reference	
1	13006.00	cps	68.00	degF
2	18181.00	cps	104.00	degF
3	29634.00	cps	176.00	degF
4	41077.00	cps	248.00	degF
5	52560.00	cps	320.00	degF
6	58409.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number:	10019371	
Tool Model:	UW_PGR_020	
Performed:	(Not Performed)	
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:	10012639	
Tool Model:	UW_RBT_004	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	208.863	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.024	1.303	0.800	81.196	62.877	-0.735
5FT	0.001	1.008	0.800	81.196	79.829	0.730
S1	0.024	1.320	0.000	100.000	77.157	-1.859
S2	0.022	1.249	0.000	100.000	81.480	-1.801
S3	0.024	1.282	0.000	100.000	79.500	-1.937
S4	0.026	1.369	0.000	100.000	74.461	-1.946
S5	0.027	1.384	0.000	100.000	73.648	-1.959
S6	0.027	1.454	0.000	100.000	70.124	-1.928
S7	0.030	1.450	0.000	100.000	70.436	-2.117
S8	0.027	1.388	0.000	100.000	73.484	-2.021

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Company	TEP Rocky Mountain LLC
Well	Chevron TR 414-21-597
Field	Trail Ridge
County	Garfield
State	Colorado