CEMENT BOND LOG

Company	Extraction Oil and Gas
Well	Interchange B N35-20-2C
Field	Wattenberg
County	Broomfield
State	CO

Company Extraction Oil and Gas
Well Interchange B N35-20-2C
Field Wattenberg
County Broomfield **State** CO

API # : 05-014-20846
Location: 2479' FSL & 1567' FWL
Lat: 39.978930
Long: -104.991593

SEC: 10 TWP: 1S RGE: 68W

Other Services

Elevation
K.B. 5232'
D.F. -----
G.L. 5213'

Permanent Datum: Ground Level Elevation: 5213'
Log Measured From: Kelly Bushing , 29 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	14 Jun 2019		
Run Number	One		
Plug Back T.D. Driller	-----		
Plug Back T.D. Logger	-----		
Bottom Logged Interval	8838'		
Top Log Interval	Surface		
Type Fluid	-----		
Density / Viscosity	-----		
Max. Recorded Temp.	249°F		
Time Logger on Bottom	08:30		
Equipment Number	GD 114		
Location	Casper, WY		
Recorded By	J. Baker		
Witnessed By			

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8"	36#	Surface	1500'				
5 1/2"	20#	Surface	18,662'				

<<< 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.

Ticket # : RM0619PCBW436
Your Crew Today: Z. Fabre, T. Lev
Log Correlated to: Surface

Cement Data

Date Cemented	-----
Primary / Squeeze	Primary
Type / Weight	-----
Main Pass Press.	0 psi
Repeat Pass Press.	0 psi

Bond Index

Index %	Est Top Depth
20 % Bond	386'
40 % Bond	2280'
60 % Bond	2527'
80 % Bond	2529'
100 % Bond	-----

Comments

Estimated Cement top at 386'
(20% Bond)

Marker Joint located at 7,968'

Thank you for using Gyrodata

Eric Regnier: Rocky Mountain Wireline Manager EricR@Gyrodata.com

---

Log Variables

Database c:\programdata\warrior\data\2019_06_14_extraction_interchange_b_n35_20_2c_cbl\2019
Dataset field/well/run1/MAINPASS/_vars_

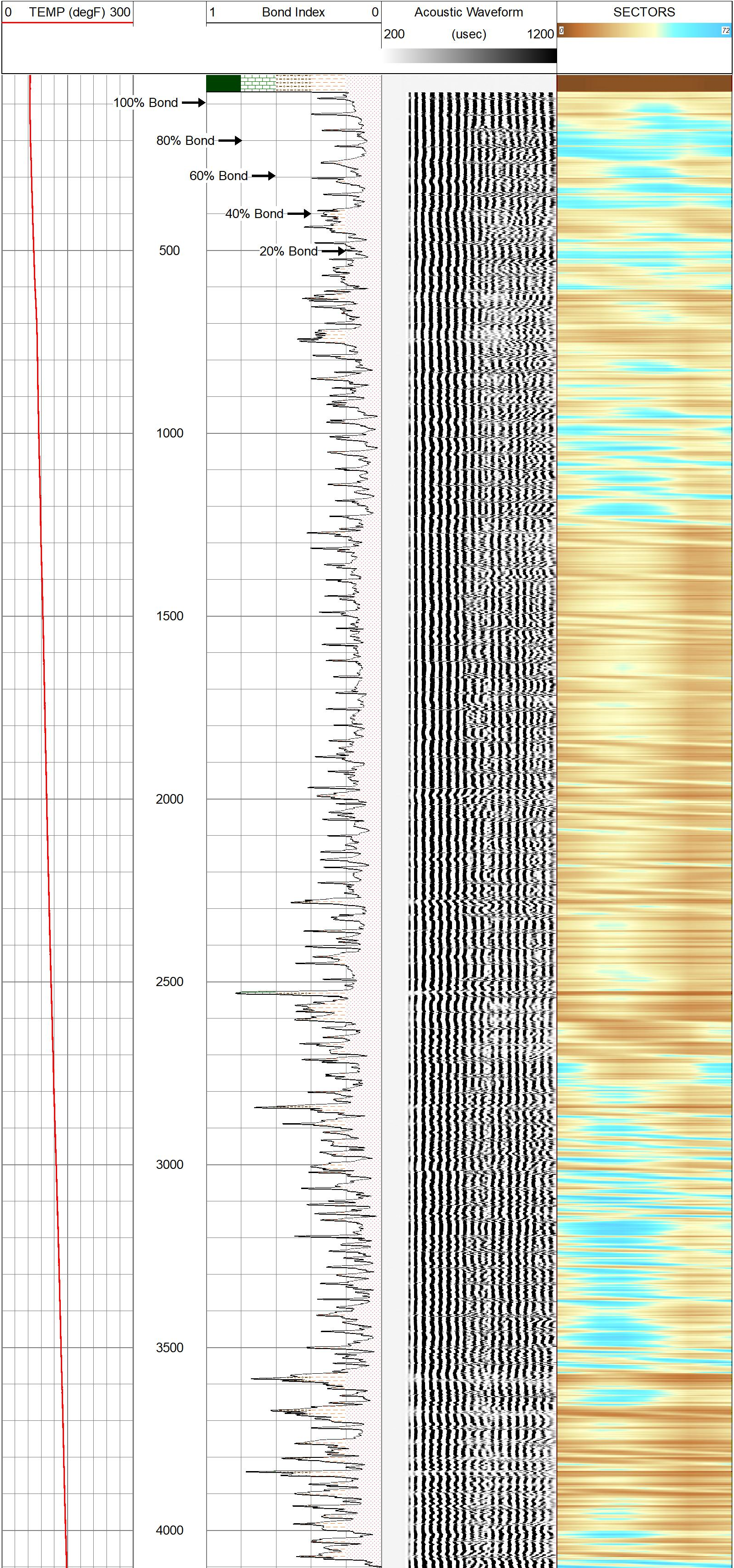
Top - Bottom

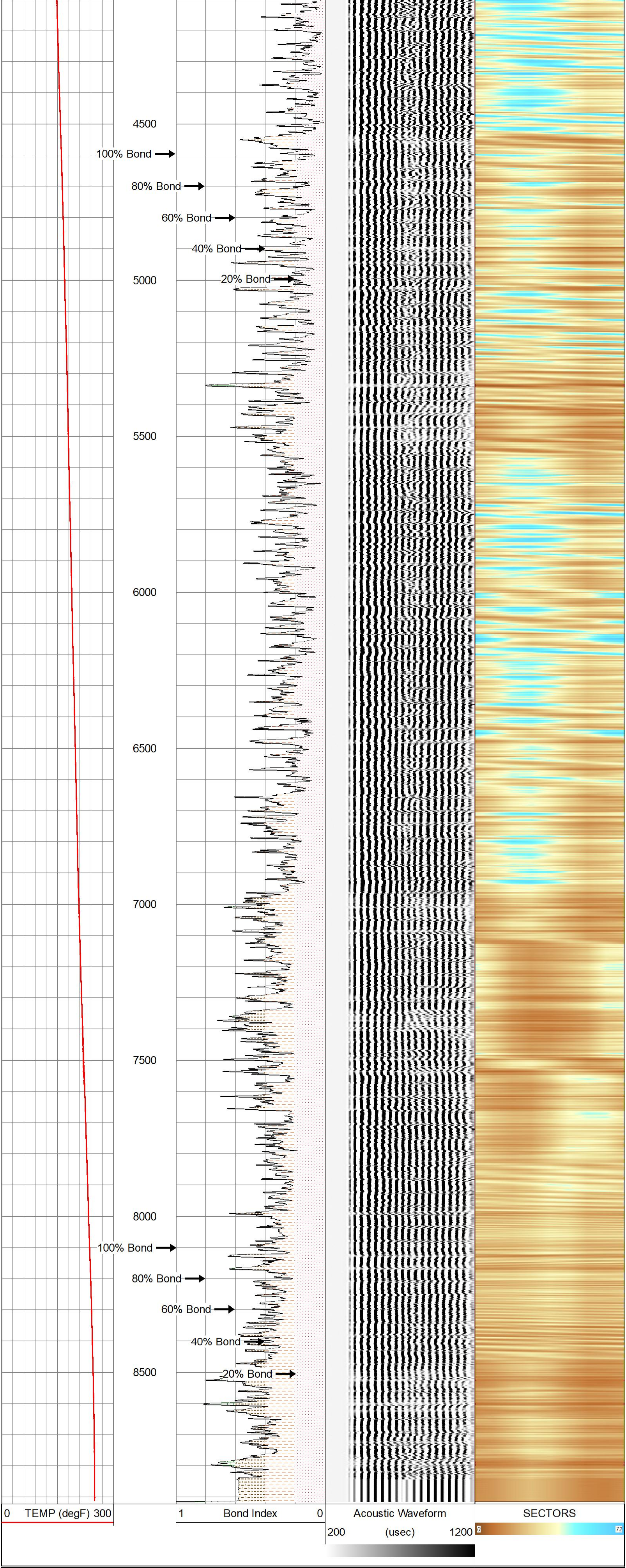
BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in
TEMP	8.5	249	5.5	0.361	20	71.9	4.923

MINAMPL mV	MinAPIID in	MINATTN db/ft	PPT usec	TDEPTH ft
2.1	4.751	0	241	0

BOND INDEX

Database File	2019_06_14_extraction_interchange_b_n35_20_2c_cbl\2019_06_14_extraction_interchange_b_n35_20_2
Dataset Pathname	BOND
Presentation Format	bndindx_msg-sec
Dataset Creation	Fri Jun 14 11:18:37 2019
Charted by	Depth in Feet scaled 1:3000



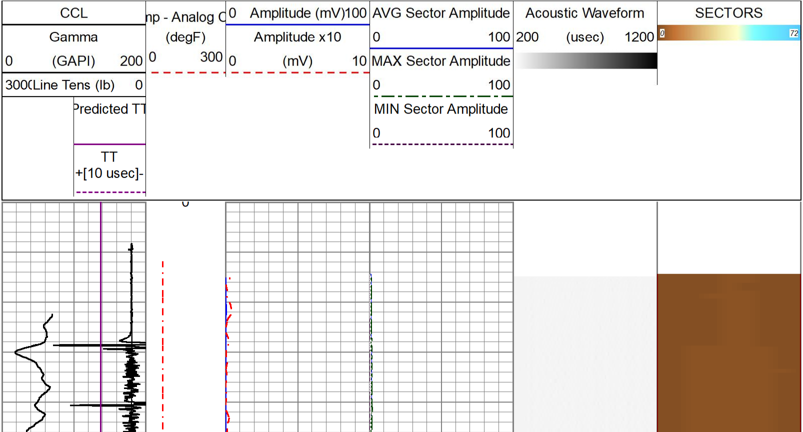


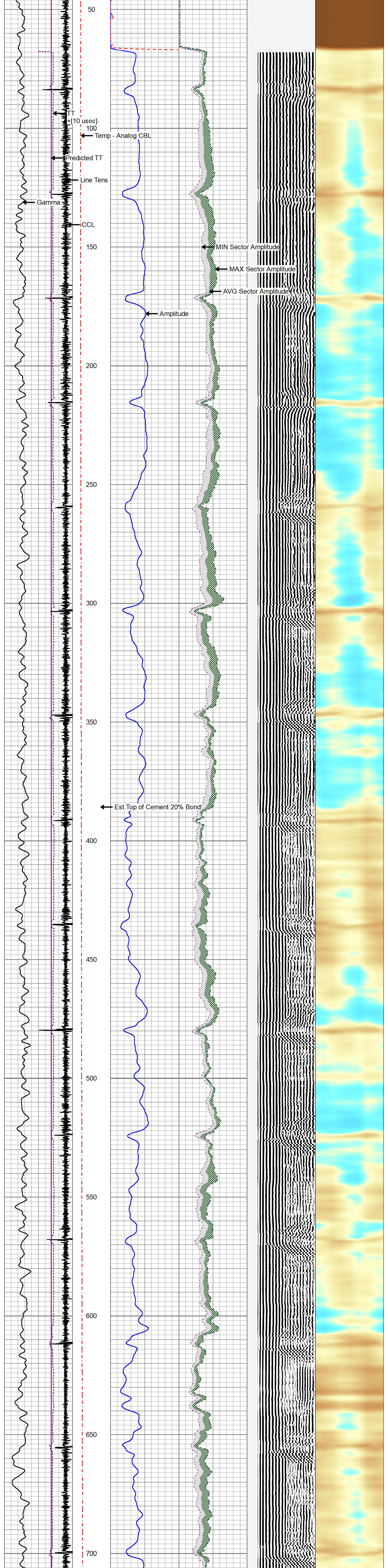
BOND INDEX

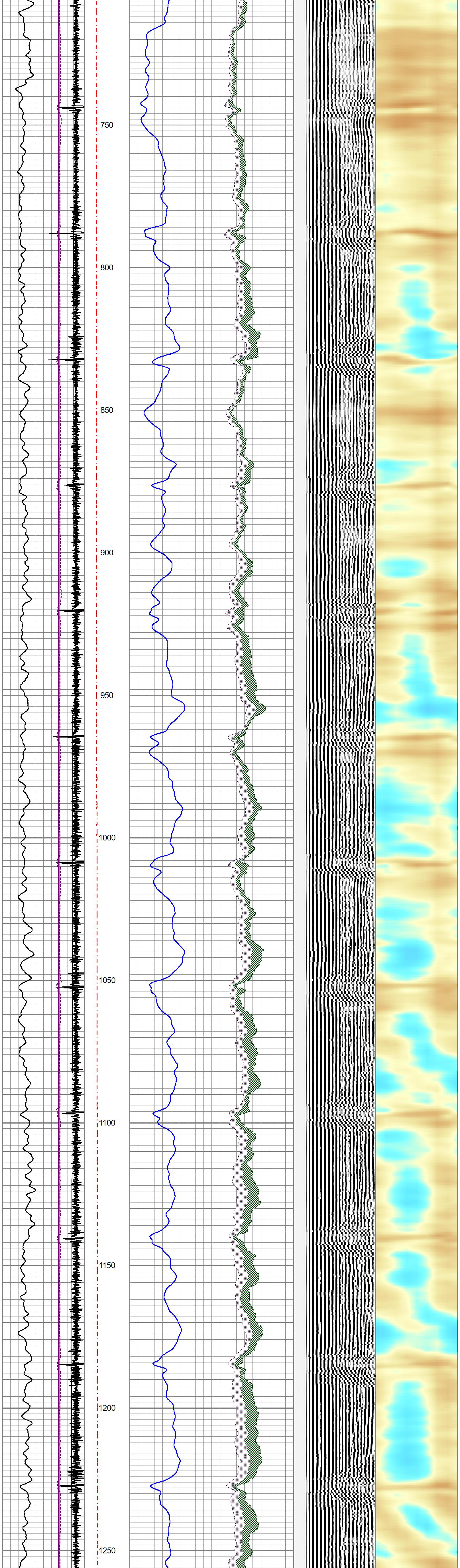
MAIN PASS - Ran with 0 PSI

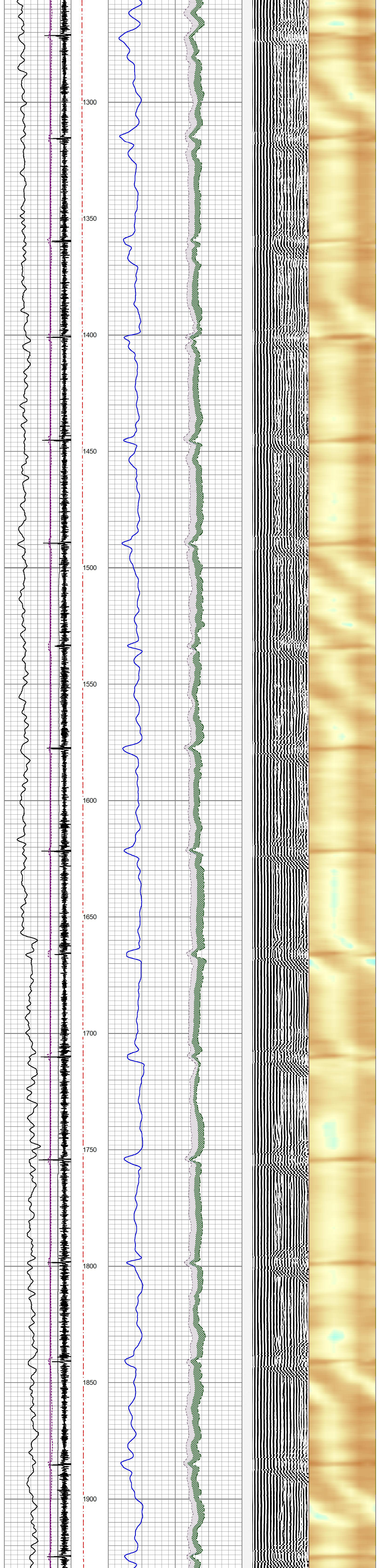
5 in / 100 ft

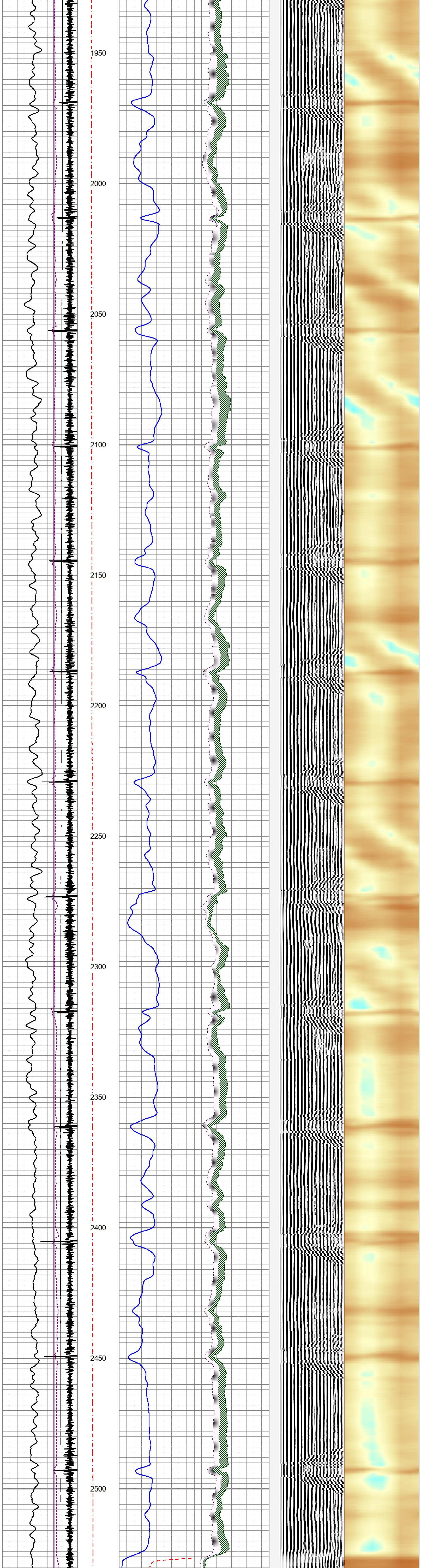
Database File	2019_06_14_extraction_interchange_b_n35_20_2c_cbl\2019_06_14_extraction_interchange_b_n35_20_2
Dataset Pathname	MAINPASS
Presentation Format	rcbl_8s
Dataset Creation	Fri Jun 14 11:14:38 2019
Charted by	Depth in Feet scaled 1:240

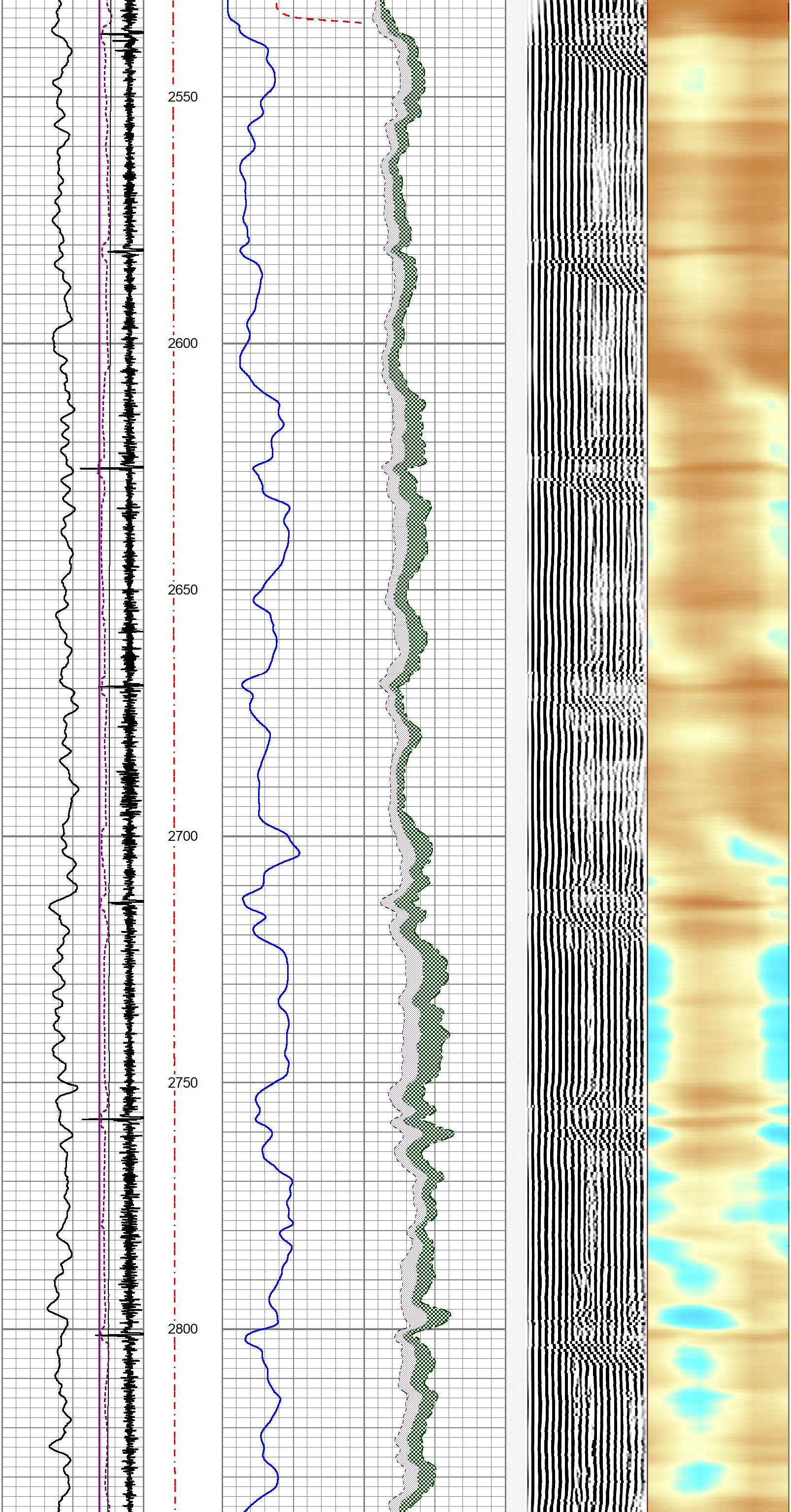


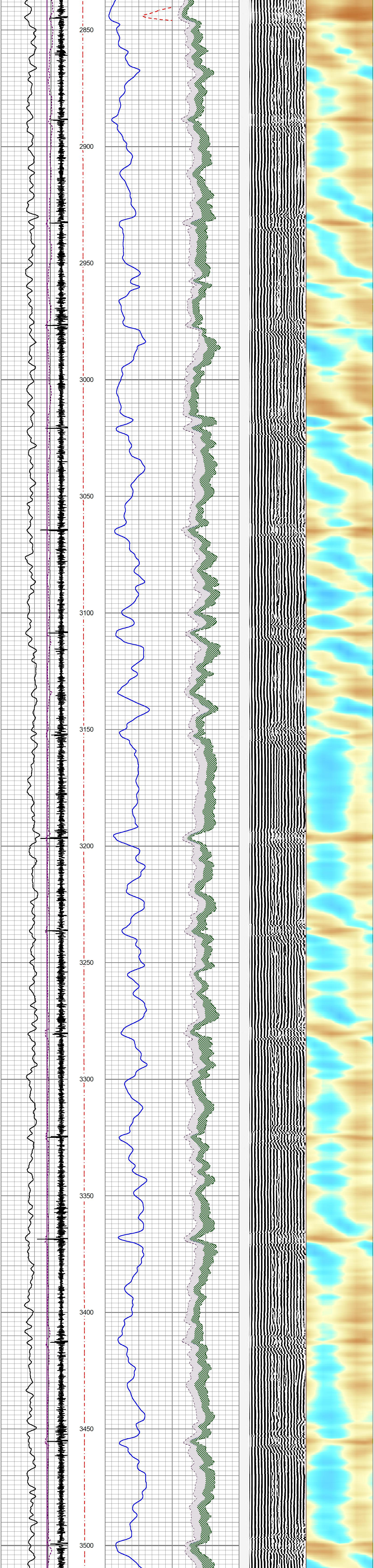




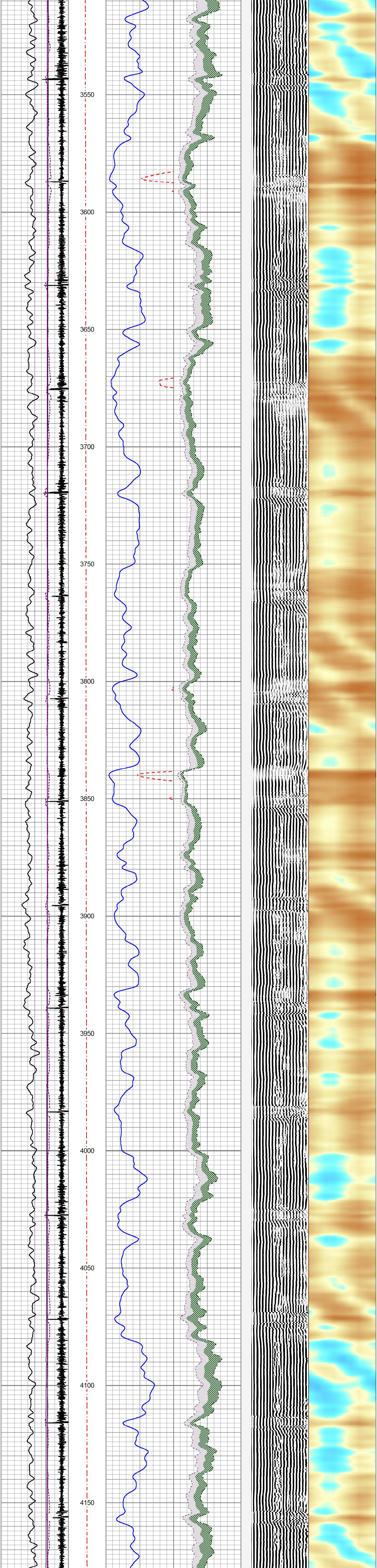


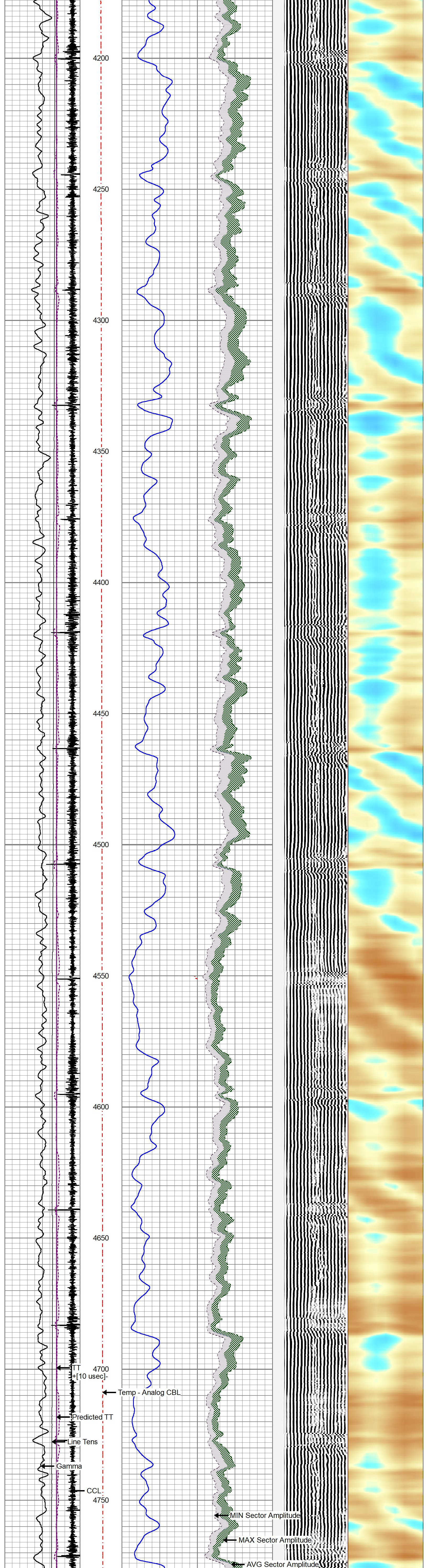


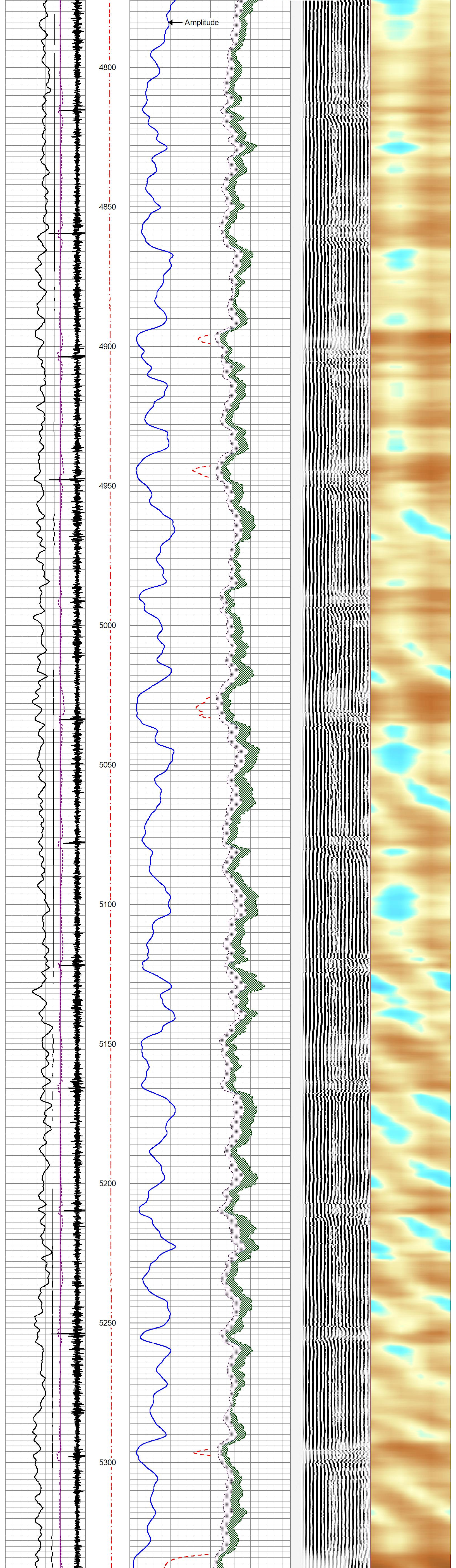


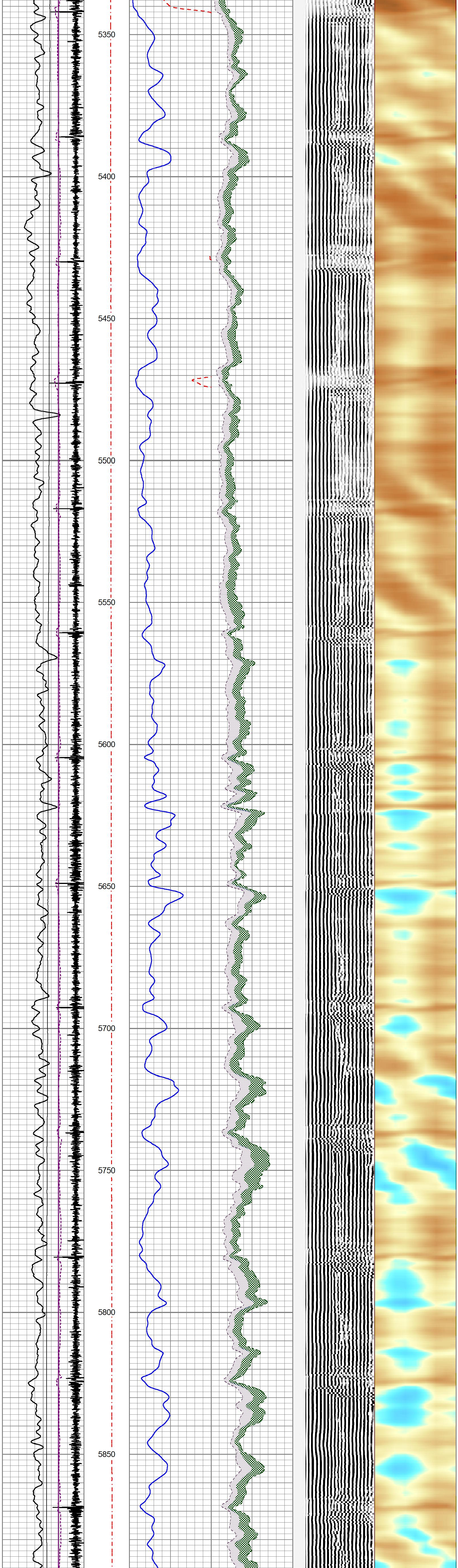


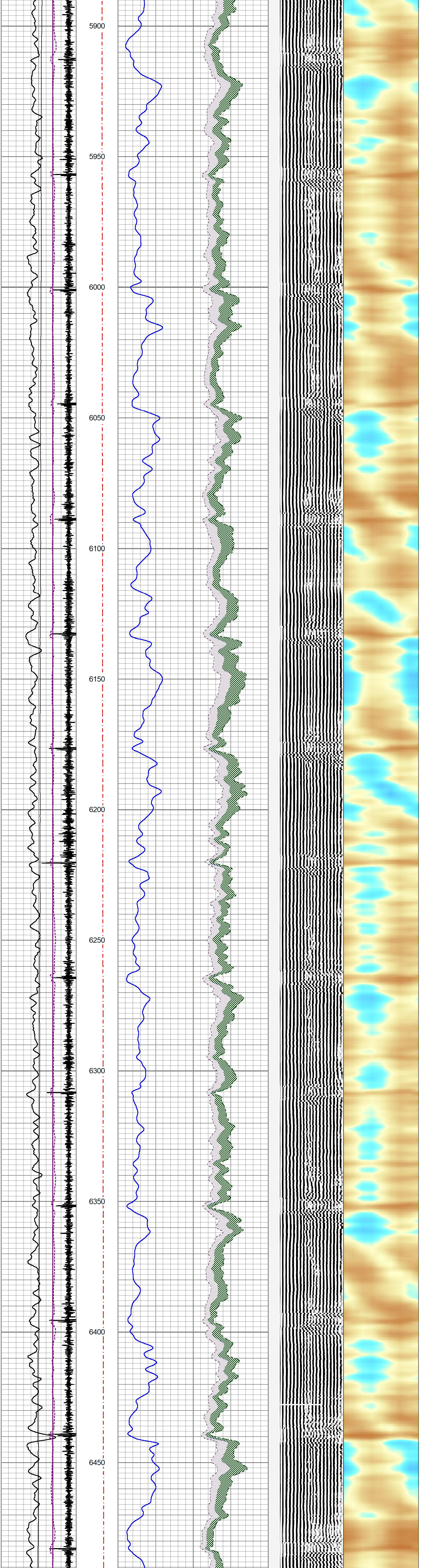
2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400
3450
3500

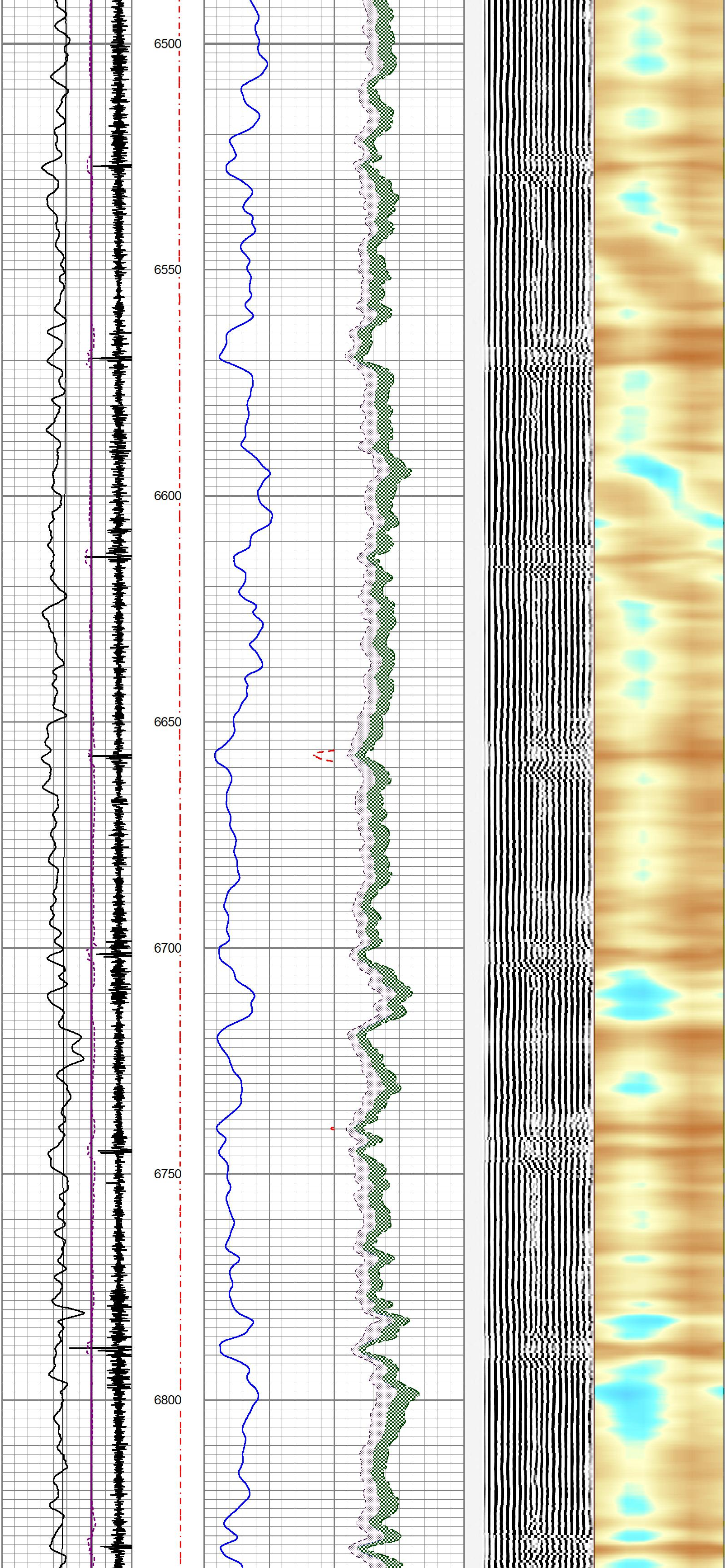

3550
3600
3650
3700
3750
3800
3850
3900
3950
4000
4050
4100
4150

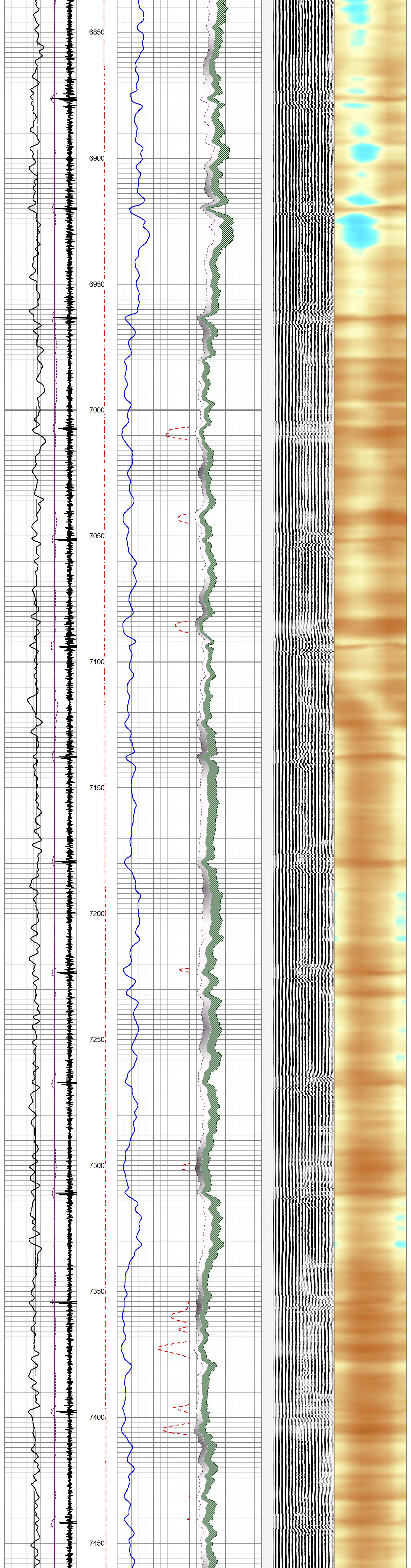

4200
4250
4300
4350
4400
4450
4500
4550
4600
4650
4700
TT
+[10 usec]-
Temp - Analog CBL
Predicted TT
Line Tens
Gamma
CCL
4750
MIN Sector Amplitude
MAX Sector Amplitude
AVG Sector Amplitude

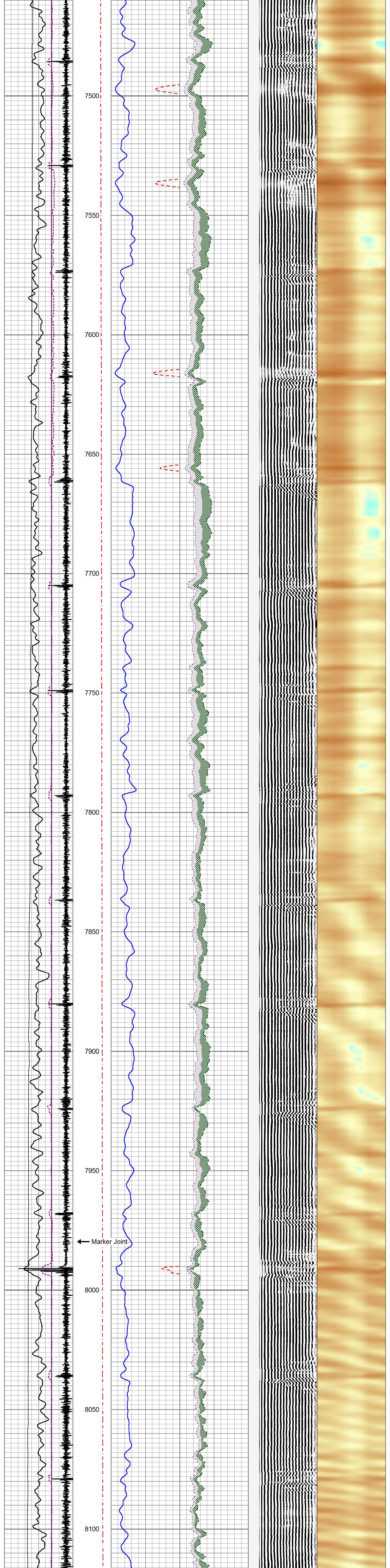

Amplitude
4800
4850
4900
4950
5000
5050
5100
5150
5200
5250
5300

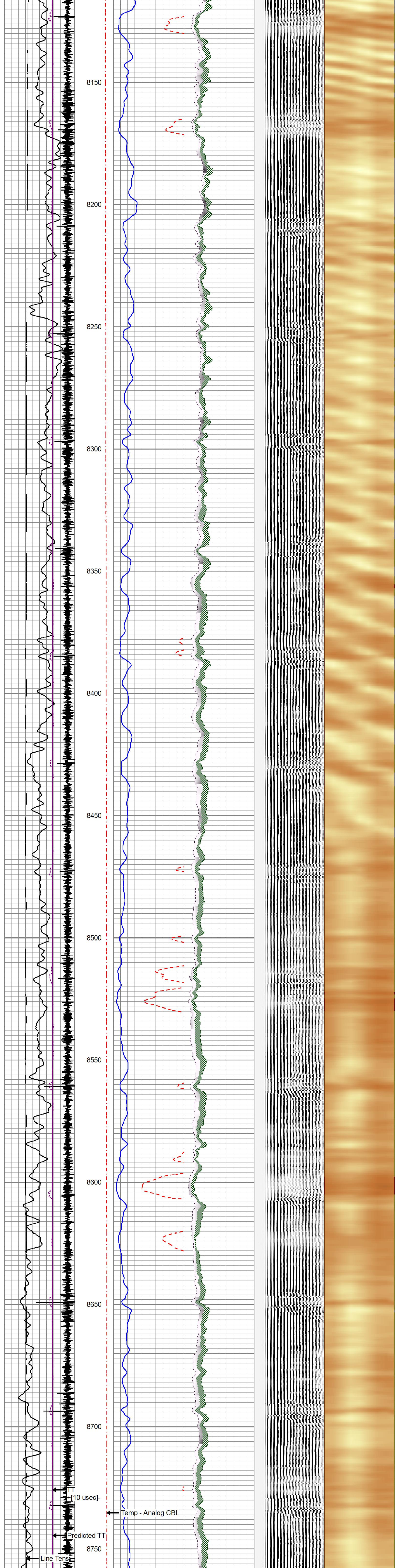

5350
5400
5450
5500
5550
5600
5650
5700
5750
5800
5850

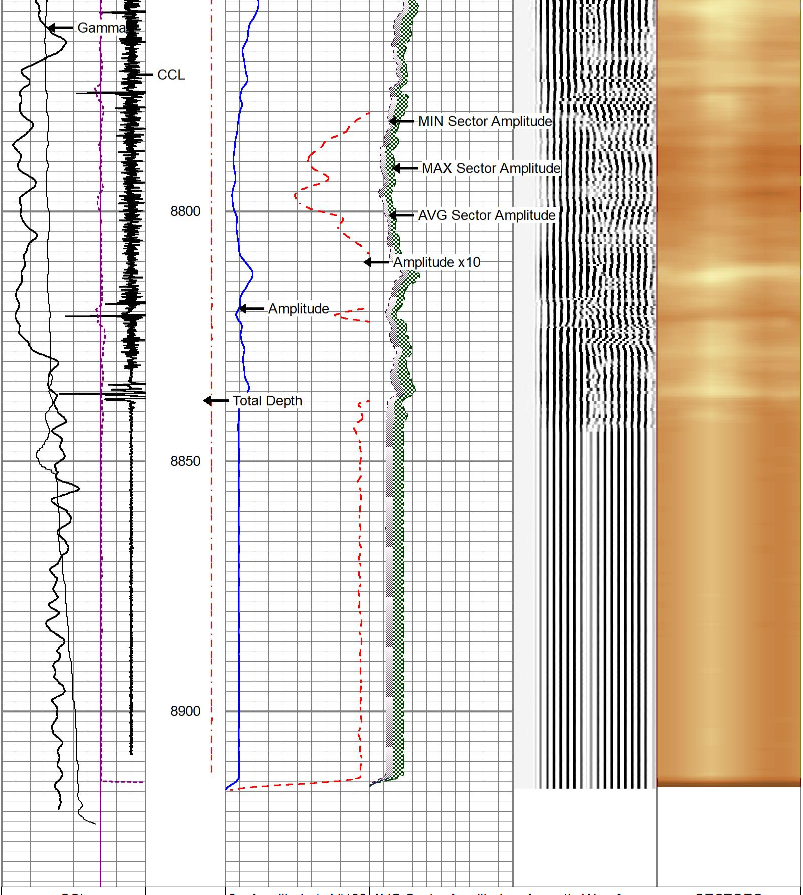

5900
5950
6000
6050
6100
6150
6200
6250
6300
6350
6400
6450


6500
6550
6600
6650
6700
6750
6800









CCL	np - Analog C	Amplitude (mV) 0 100	AVG Sector Amplitude 0 100	Acoustic Waveform	SECTORS
Gamma 0 (GAPI) 200	(degF) 0 300	Amplitude x10 0 (mV) 10	MAX Sector Amplitude 0 100	200 (usec) 1200	
300(Line Tens (lb) 0			MIN Sector Amplitude 0 100		
Predicted TT					
TT +[10 usec]-					

gyrodata

MAIN PASS - Ran with 0 PSI

5 in / 100 ft

---

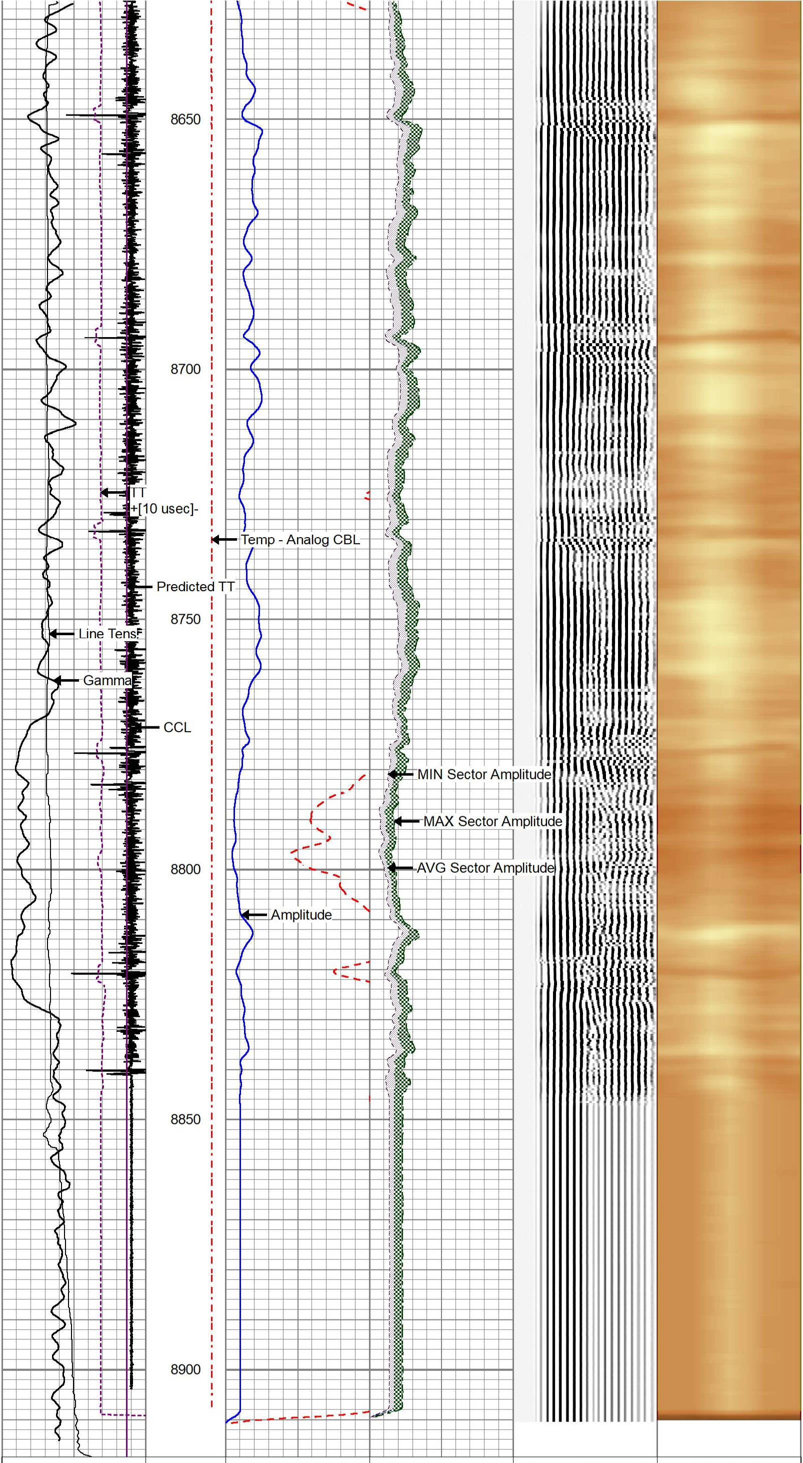
gyrodata

REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	2019_06_14_extraction_interchange_b_n35_20_2c_cbl\2019_06_14_extraction_interchange_b_n35_20_2
Dataset Pathname	REPEATPASS
Presentation Format	rcbl_8s
Dataset Creation	Fri Jun 14 11:19:02 2019
Charted by	Depth in Feet scaled 1:240

CCL	np - Analog C	Amplitude (mV) 0 100	AVG Sector Amplitude 0 100	Acoustic Waveform	SECTORS
Gamma 0 (GAPI) 200	(degF) 0 300	Amplitude x10 0 (mV) 10	MAX Sector Amplitude 0 100	200 (usec) 1200	
300(Line Tens (lb) 0			MIN Sector Amplitude 0 100		
Predicted TT					
TT +[10 usec]-					



CCL	np - Analog C	Amplitude (mV) 0 100	AVG Sector Amplitude 0 100	Acoustic Waveform	SECTORS
Gamma 0 (GAPI) 200	(degF) 0 300	Amplitude x10 0 (mV) 10	MAX Sector Amplitude 0 100	200 (usec) 1200	
300(Line Tens (lb) 0			MIN Sector Amplitude 0 100		
Predicted TT					
TT +[10 usec]-					

gyrodata

REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Calibration Report

Database File	C:\ProgramData\Warrior\Data\2019_06_14_extraction_interchange_b_n35_20_2c_cbl\2019_06_14_extracti
Dataset Pathname	pass4
Dataset Creation	Fri Jun 14 09:46:33 2019

Gamma Ray Calibration Report

Serial Number:	ISHV2-03	
Tool Model:	2 3/4" TekCo	
Performed:	Thu Apr 25 08:34:21 2019	
Calibrator Value:	194.0	GAPI
Background Reading:	61.7	cps
Calibrator Reading:	373.2	cps
Sensitivity:	0.6226	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	IT4B1-01	
Tool Model:	2 3/4" RIB Analog	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	2260.280	ft

Master Calibration, performed Fri Jun 14 08:19:16 2019:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.003	0.574	0.500	71.921	123.659	0.926
CAL	-0.004	0.624				
5'	-0.004	0.979	0.500	71.921	72.686	0.756
SUM						
S1	-0.003	0.942	0.000	100.000	105.789	0.363
S2	-0.003	0.746	0.000	100.000	133.433	0.458
S3	-0.004	0.575	0.000	100.000	172.823	0.608
S4	-0.003	0.513	0.000	100.000	193.449	0.673
S5	-0.003	0.527	0.000	100.000	188.565	0.645
S6	-0.003	0.561	0.000	100.000	177.278	0.593
S7	-0.003	0.763	0.000	100.000	130.438	0.444
S8	-0.003	0.942	0.000	100.000	105.737	0.368

Internal Reference Calibration, performed Fri Aug 25 15:20:58 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.004	0.624	1.000	0.000

Air Zero Calibration, performed Fri Aug 25 15:20:58 2017:

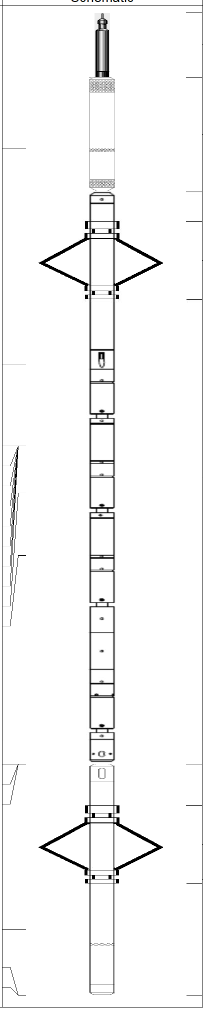
	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Temperature Calibration Report

Serial Number:	IT4B1-01	
Tool Model:	2 3/4" RIB Analog	
Performed:	Fri Aug 26 10:07:15 2016	

	Reference		Reading	
Low Reference:	0.00	degF	0.00	usec
High Reference:	1.00	degF	1.00	usec

Gain:	0.33
Offset:	0.00
Delta Spacing	1



Sensor	Offset (ft)
CCL	13.50
TEMP	10.05
WVFS8	8.76
WVFS7	8.76
WVFS6	8.76
WVFS5	8.76
WVFS4	8.76
WVFS3	8.76
WVFS2	8.76
WVFS1	8.76
WVF3FT	8.01
WVF5FT	7.01
WVFSYNC	3.68
WVFTEMP	3.68
WVFCAL	3.68
GR	1.04
LOCTIM	0.00
UTCTIM	0.00

Description	Length (ft)	O.D. (in)	Weight (lb
CableHead-TitanConeType2	1.03	1.44	3.60
CCL_Log-2 3/4" TekCo (IS2T1-08)	1.83	2.75	33.00
Antelope-Overbody	1.25	2.75	
RBTA-2 3/4" RIB Analog (IT4B1-01)	9.13	2.75	102.00
Antelope-Overbody	1.25	2.75	
GR_Log-2 3/4" TekCo (ISHV2-03)	3.68	2.75	47.00

Dataset:	2019_06_14_extraction_interchange_b_n35_20_2c_cbl.db: field/well/run1/MAINPASS
Total length:	15.67 ft
Total weight:	185.60 lb
O.D.:	2.75 in

gyrodata

Company	**Extraction Oil and Gas**
Well	**Interchange B N35-20-2C**
Field	**Wattenberg**
County	**Broomfield**
State	**CO**
Country	**U.S.A.**