CEMENT BOND LOG

Company	Extraction Oil and Gas
Well	Jamaso 4-65 5-6-9
Field	Wildcat
County	Arapahoe
State	CO

Company Extraction Oil and Gas
Well Jamaso 4-65 5-6-9
Field Wildcat
County Arapahoe **State** CO

API # : 05-005-07373
Location:

2450' FNL & 1188' FWL
Lat: 39.733281
Long: -104.67481

SEC: 4 TWP: 4S RGE: 65W

Other Services

Elevation
K.B. 5616'
D.F. -----
G.L. 5591'

Permanent Datum: Ground Level Elevation: 5591'
Log Measured From: Kelly Bushing , 25 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	12 Aug 2019		
Run Number	One		
Plug Back T.D. Driller	-----		
Plug Back T.D. Logger	-----		
Bottom Logged Interval	8212'		
Top Log Interval	Surface		
Type Fluid	-----		
Density / Viscosity	-----		
Max. Recorded Temp.	239°F		
Time Logger on Bottom	12:00		
Equipment Number	GD 170		
Location	Casper, WY		
Recorded By	J. Baker		
Witnessed By	Colby		

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8"	36#	Surface	2500'				
5 1/2"	20#	Surface	17,972'				

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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.

Ticket # : RM0819PCBW563
Your Crew Today: B. Kennicker, 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

Comments

Estimated Top of Cement
(20 % Bond Index) at 2490' feet

Bond Index

Index %	Est Top Depth
20 % Bond	2490'
40 % Bond	2594'
60 % Bond	2599'
80 % Bond	3190'
100 % Bond	3195'

Thank you for using Gyrodata

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

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Log Variables

Databased:\warrior\data\2019_08_12_extraction_jamaso_4_65_5_6_9_cbl\2019_08_12_extraction_
Dataset field/well/run1/MAINPASS/_vars_

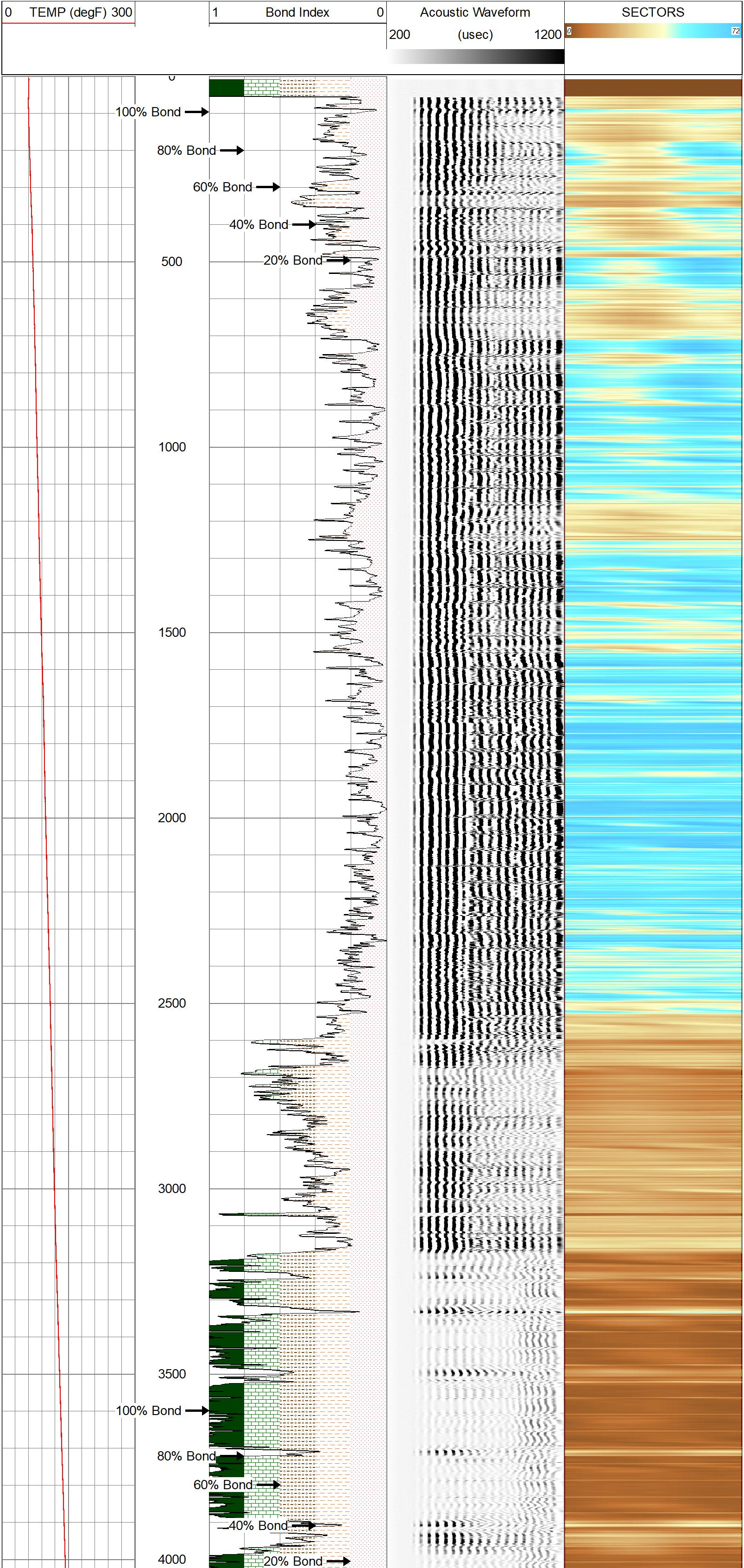
Top - Bottom

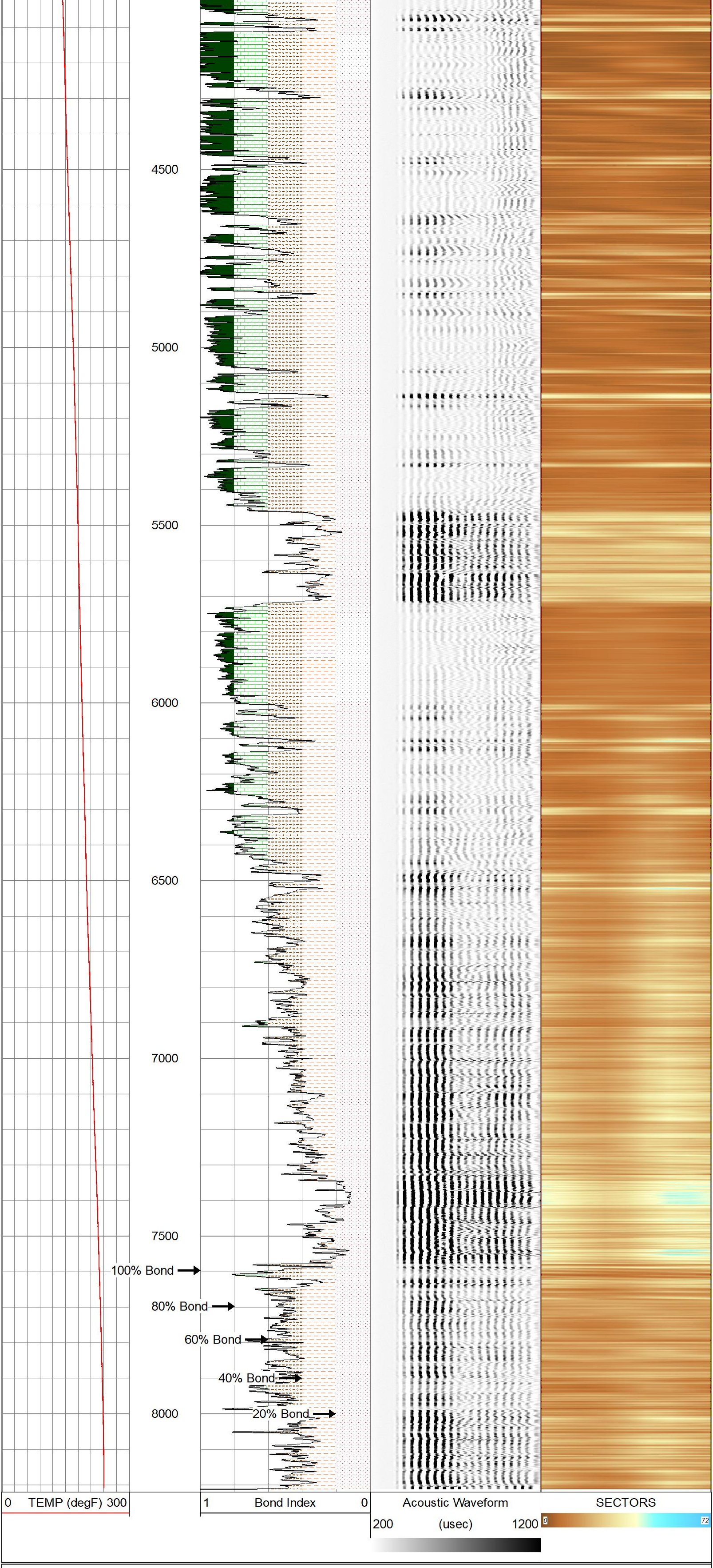
BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in
TEMP	8.5	239	5.5	0.361	20	71.9	4.923

MINAMPL mV	MinAPIID in	MINATTN db/ft	PPT usec	TDEPTH ft
2.1	4.751	0	236	0

BOND INDEX

Database File	2019_08_12_extraction_jamaso_4_65_5_6_9_cbl\2019_08_12_extraction_jamaso_4_65_5_6_9_cbl.db
Dataset Pathname	BOND
Presentation Format	bndindx_msg-sec
Dataset Creation	Mon Aug 12 13:16:03 2019
Charted by	Depth in Feet scaled 1:3000





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BOND INDEX

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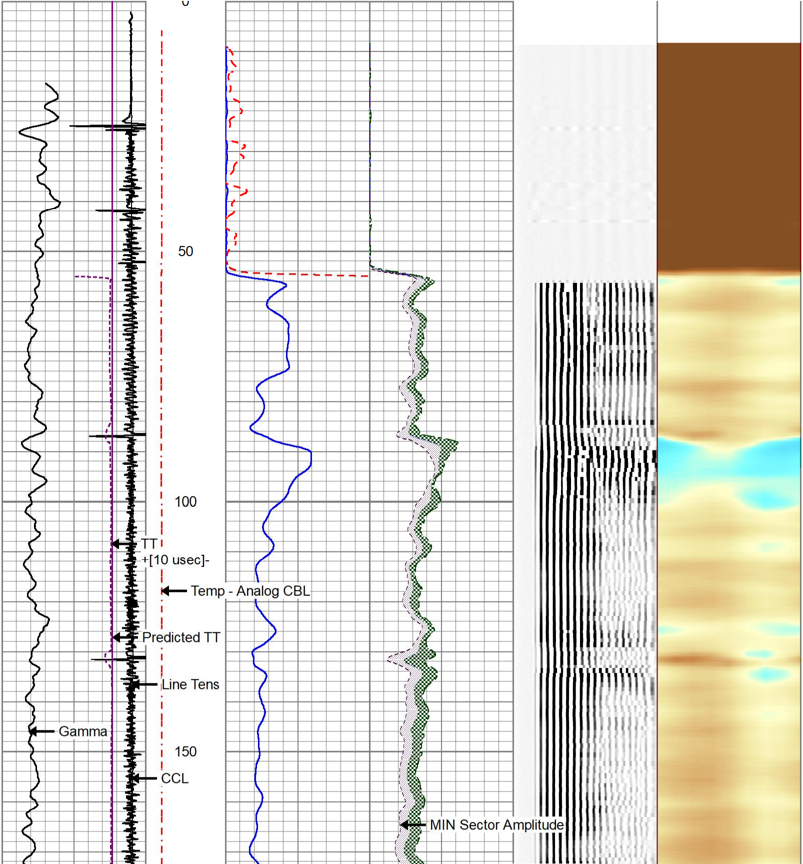
gyrodata

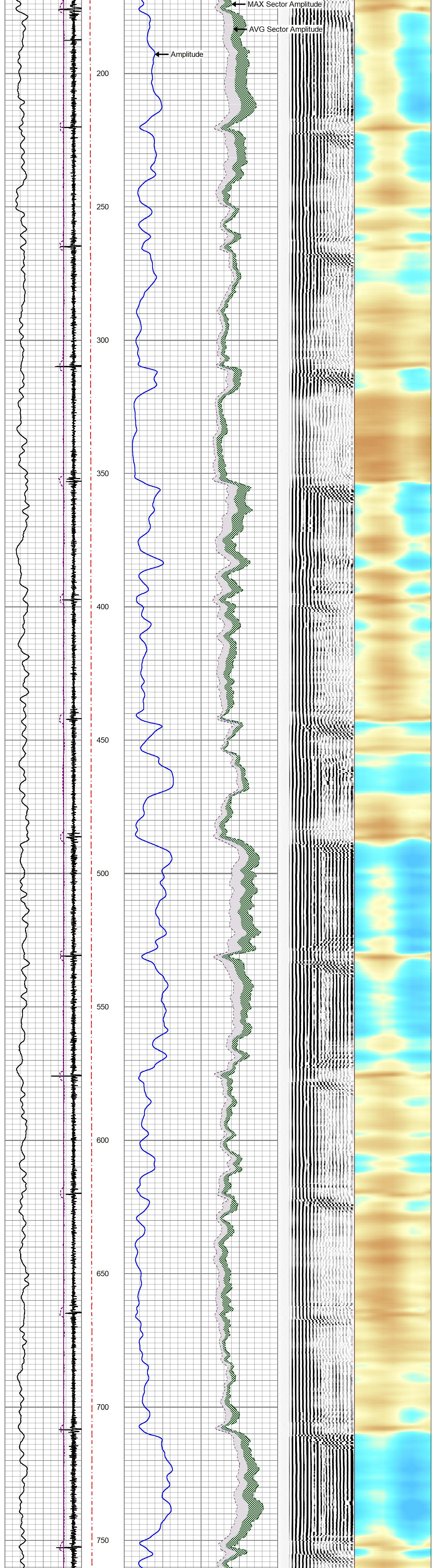
MAIN PASS - Ran with 0 PSI

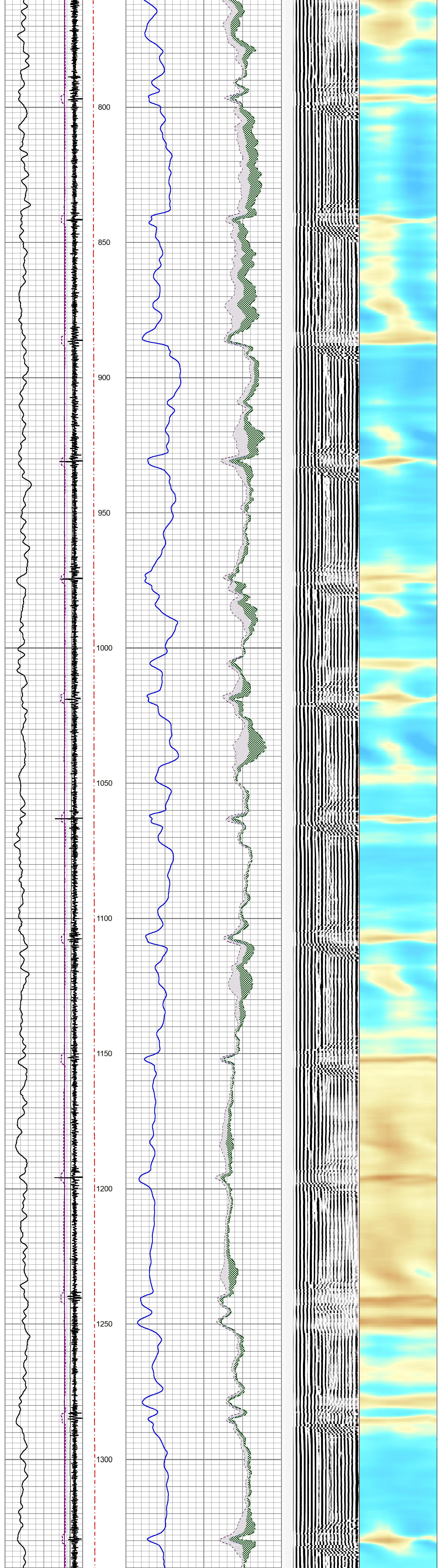
5 in / 100 ft

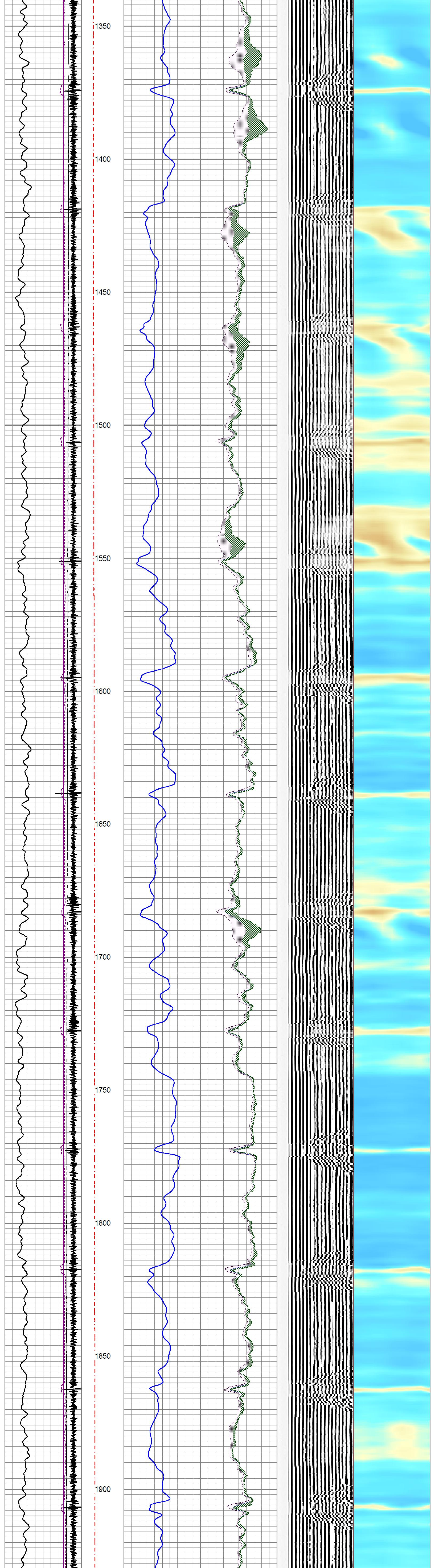
Database File	2019_08_12_extraction_jamaso_4_65_5_6_9_cbl\2019_08_12_extraction_jamaso_4_65_5_6_9_cbl.db
Dataset Pathname	MAINPASS
Presentation Format	rcbl_8s
Dataset Creation	Mon Aug 12 13:14:26 2019
Charted by	Depth in Feet scaled 1:240

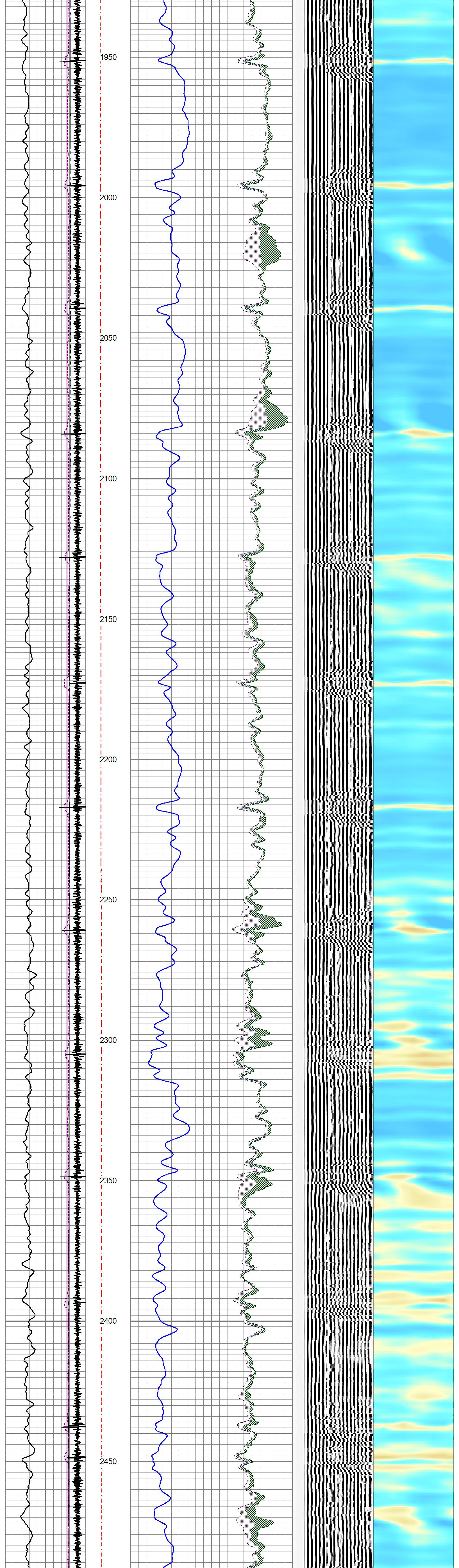
CCL	np - Analog C	0 Amplitude (mV)100	AVG Sector Amplitude	Acoustic Waveform	SECTORS
Gamma 0 (GAPI) 200	(degF) 0 300	Amplitude x10 0 (mV) 10	0 100	200 (usec) 1200	0 72
300(Line Tens (lb) 0			MAX Sector Amplitude 0 100		
Predicted TT			MIN Sector Amplitude 0 100		
TT +[10 usec]-					

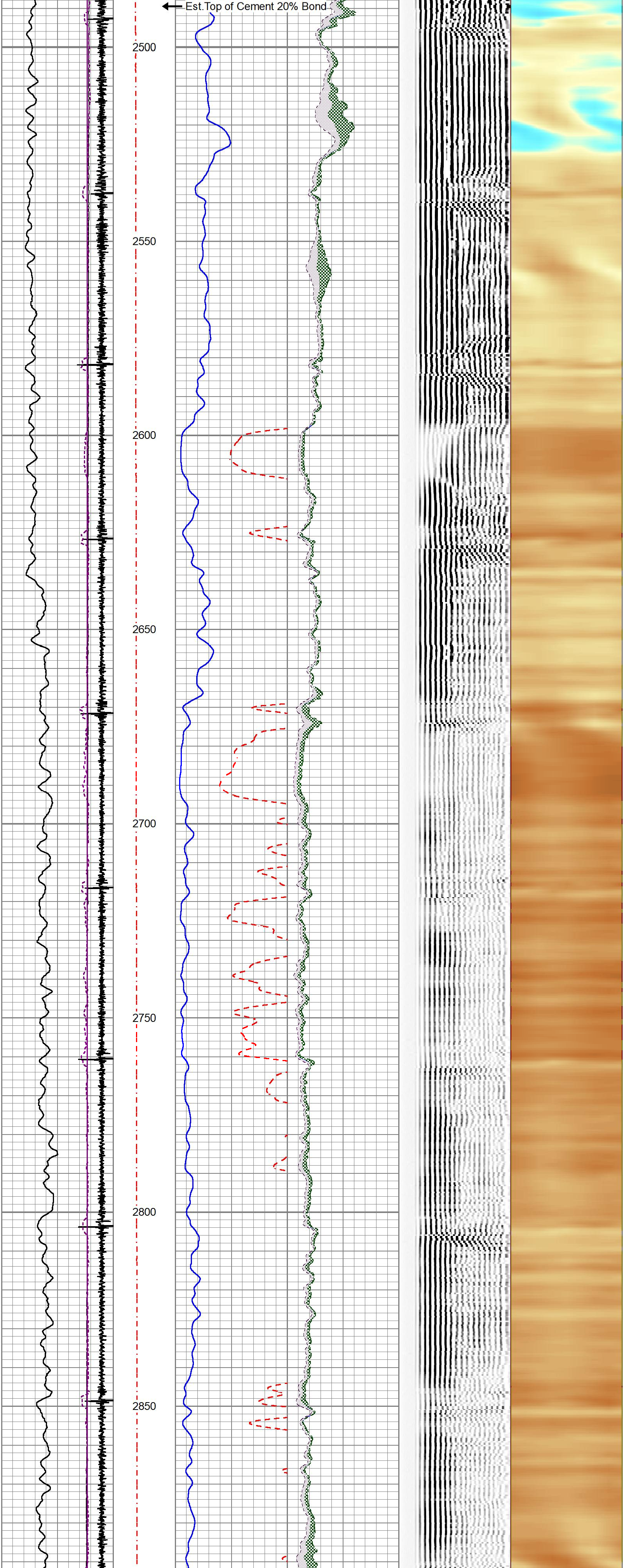


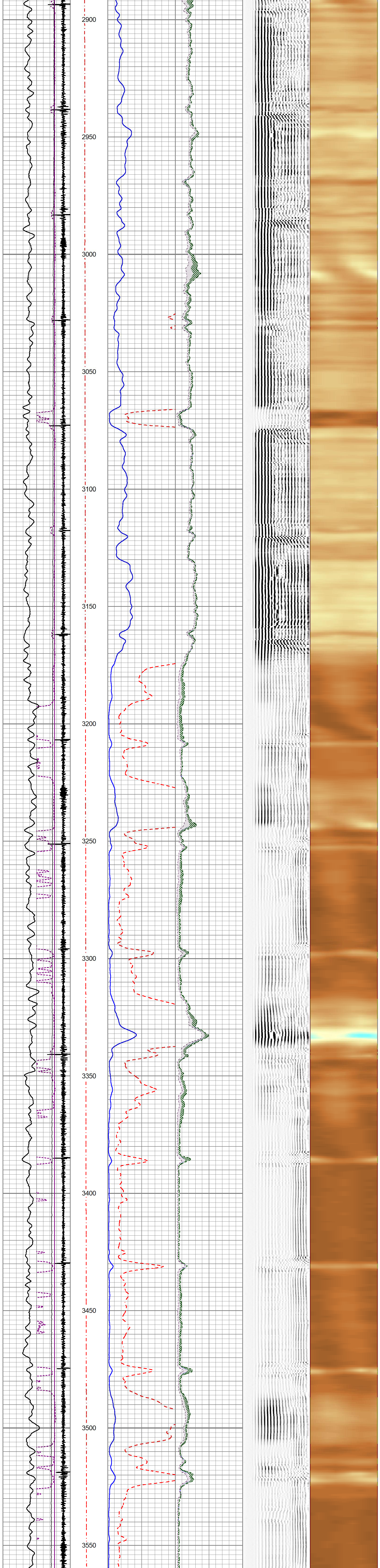








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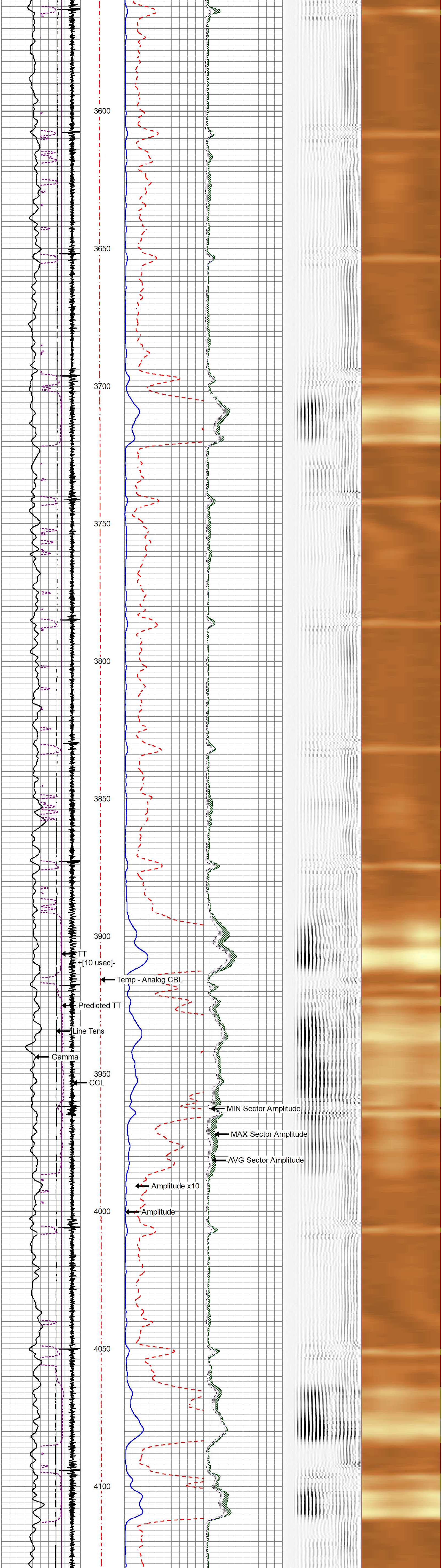
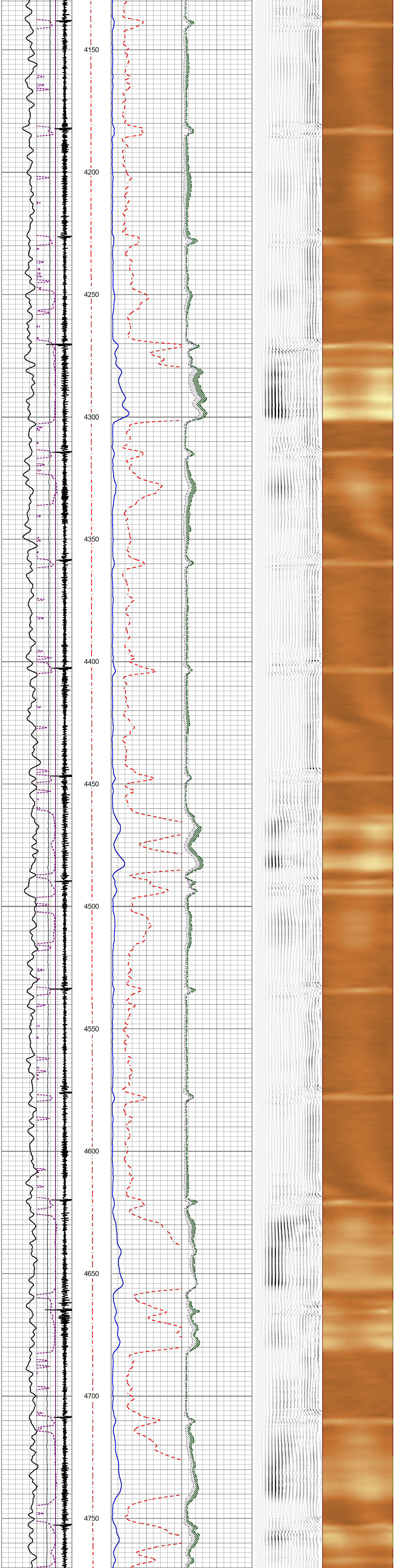
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400
3450
3500
3550


3600
3650
3700
3750
3800
3850
3900
TT
-[10 usec]-
Temp - Analog CBL
Predicted TT
Line Tens
Gamma
3950
CCL
MIN Sector Amplitude
MAX Sector Amplitude
AVG Sector Amplitude
Amplitude x10
4000
Amplitude
4050
4100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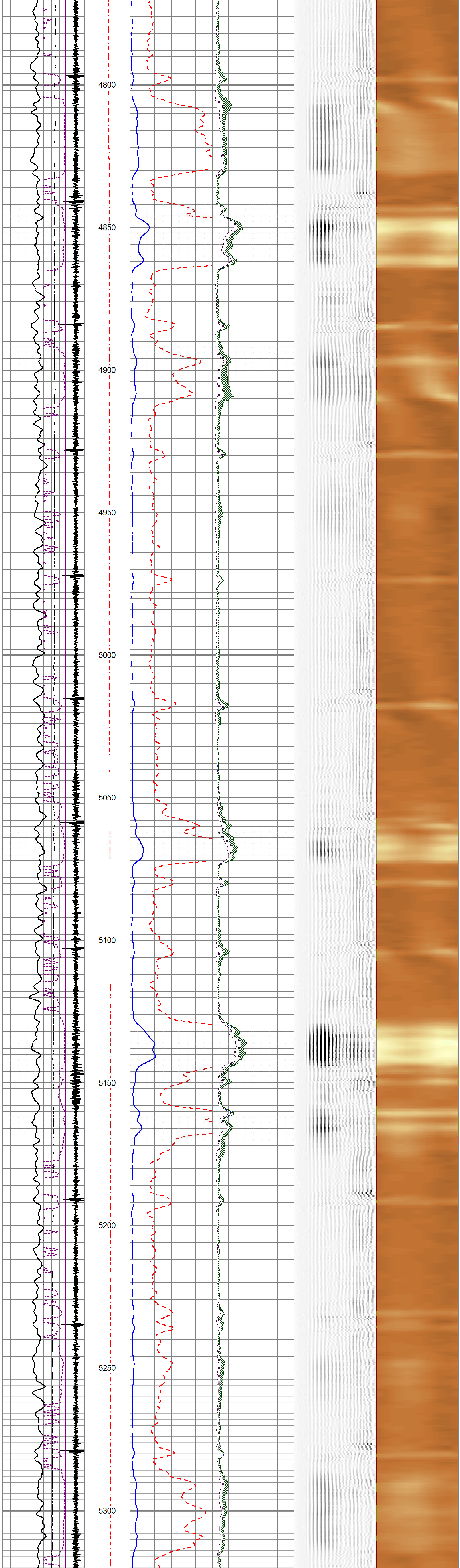
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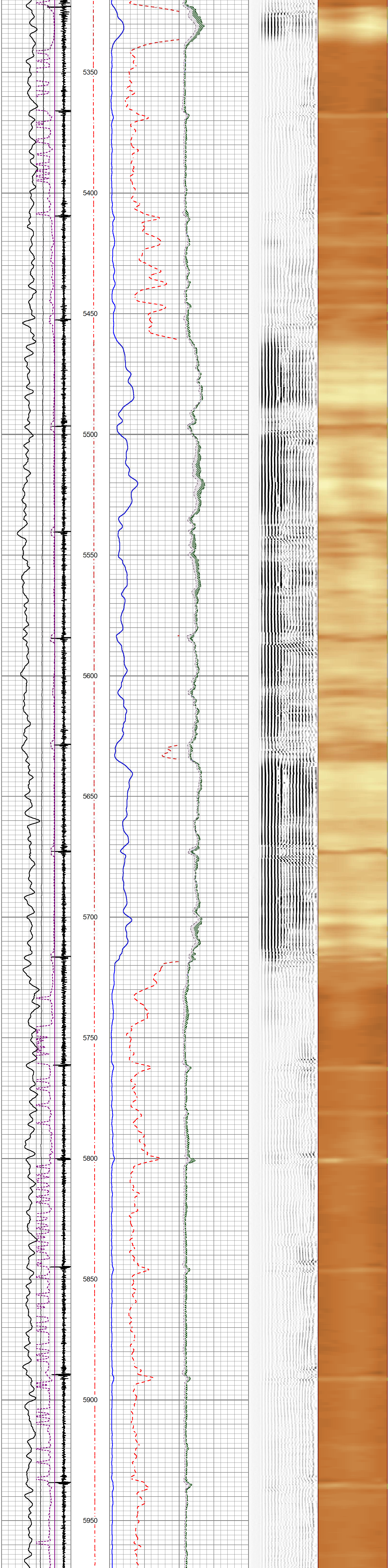
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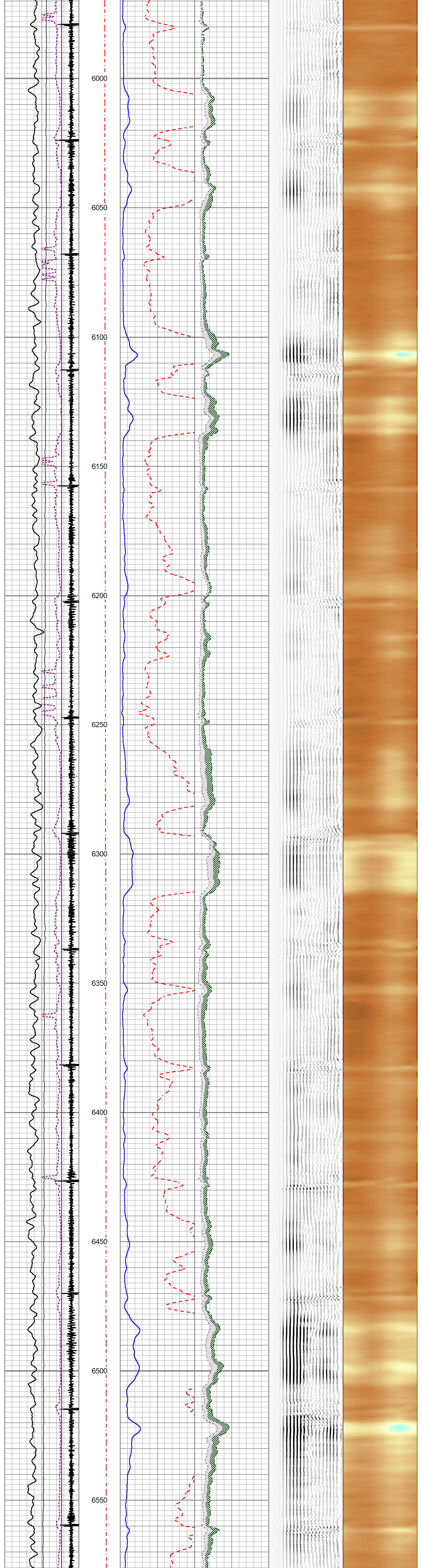
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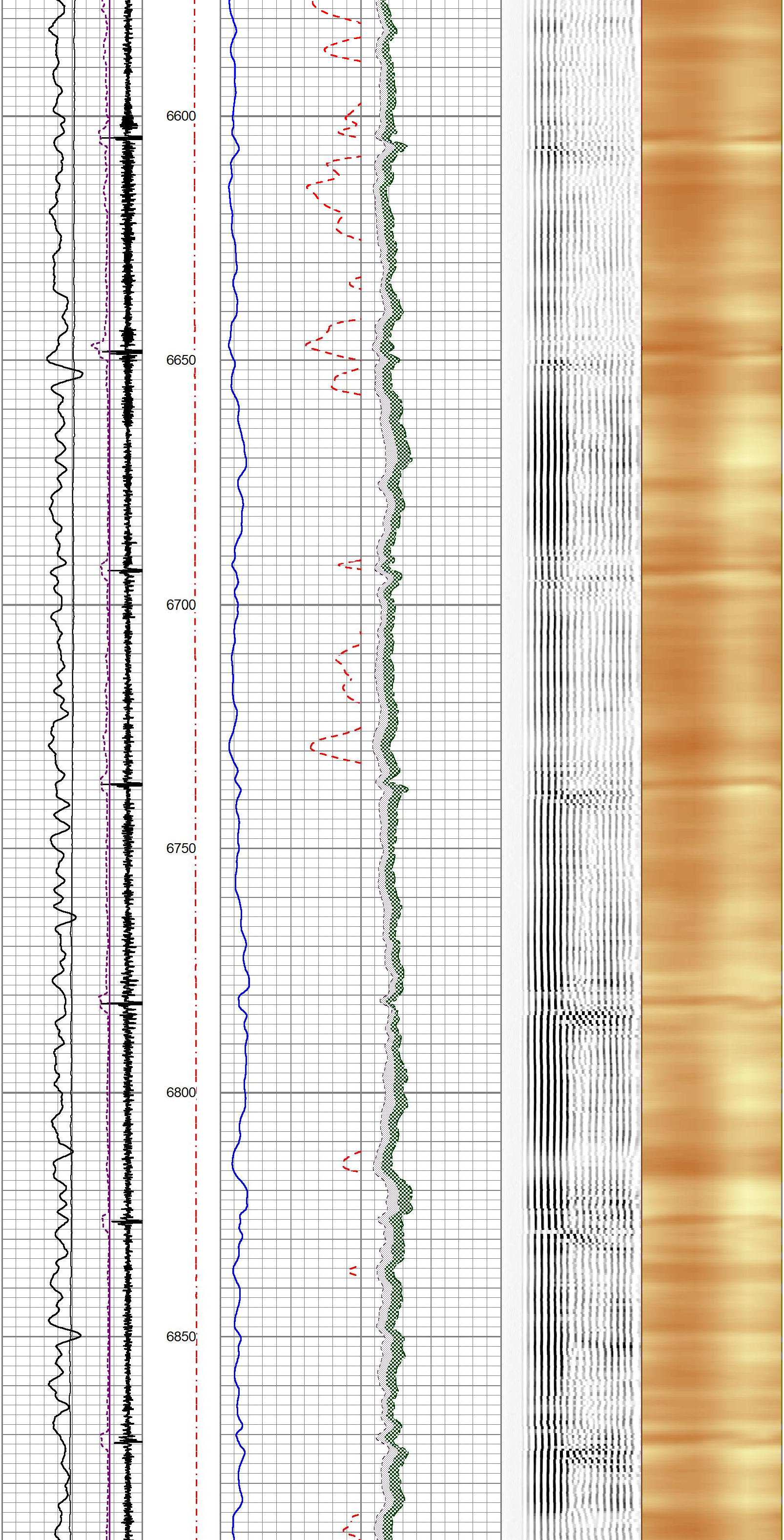
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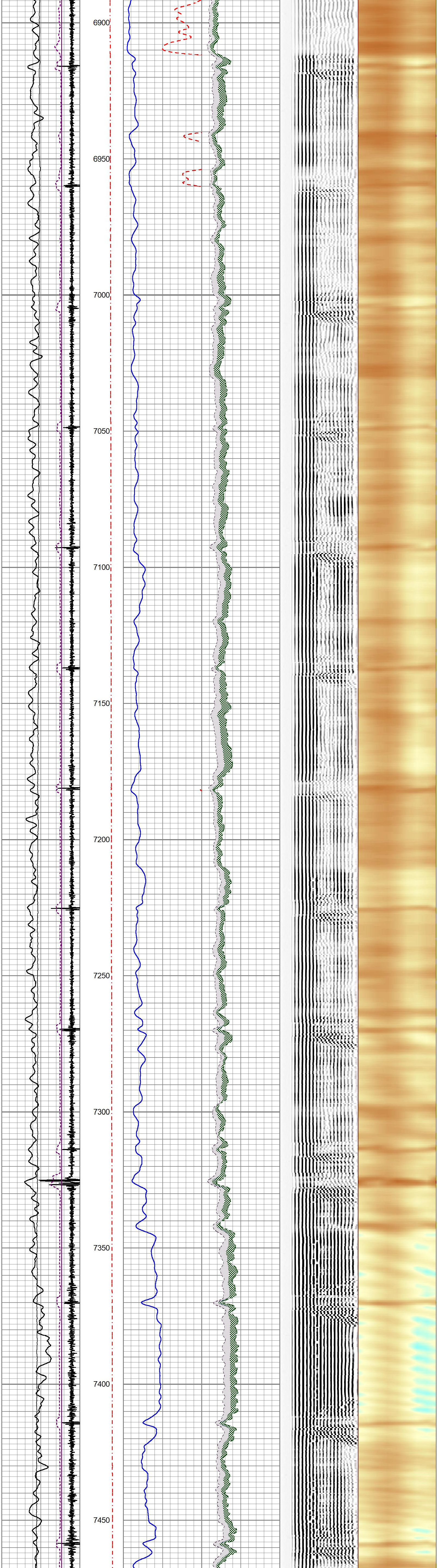
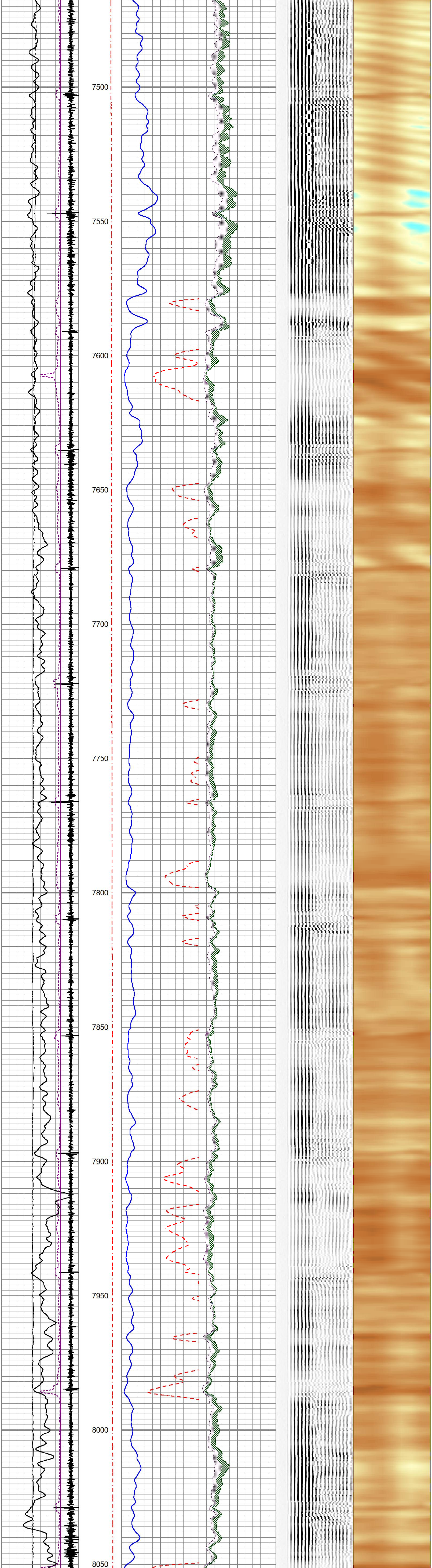
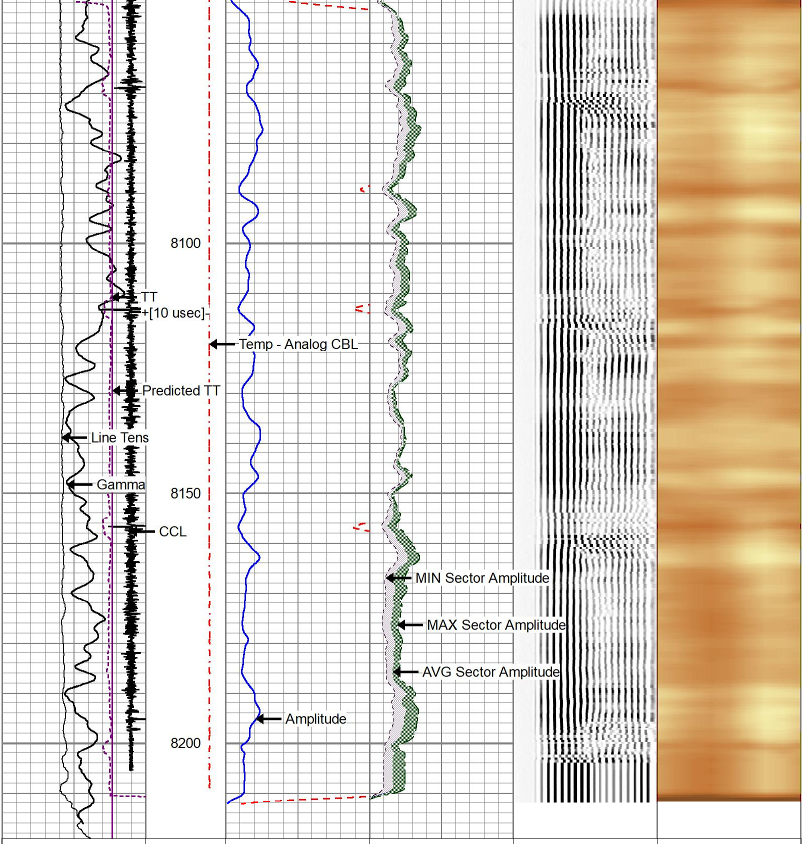






CCL	np - Analog C	0 Amplitude (mV)100	AVG Sector Amplitude	Acoustic Waveform	SECTORS
Gamma	(degF)	Amplitude x10	0 100	200 (usec) 1200	0 72
0 (GAPI) 200	0 300	0 (mV) 10	MAX Sector Amplitude		
300(Line Tens (lb) 0			0 100		
Predicted TT			MIN Sector Amplitude		
			0 100		
TT +[10 usec]-					

MAIN PASS - Ran with 0 PSI

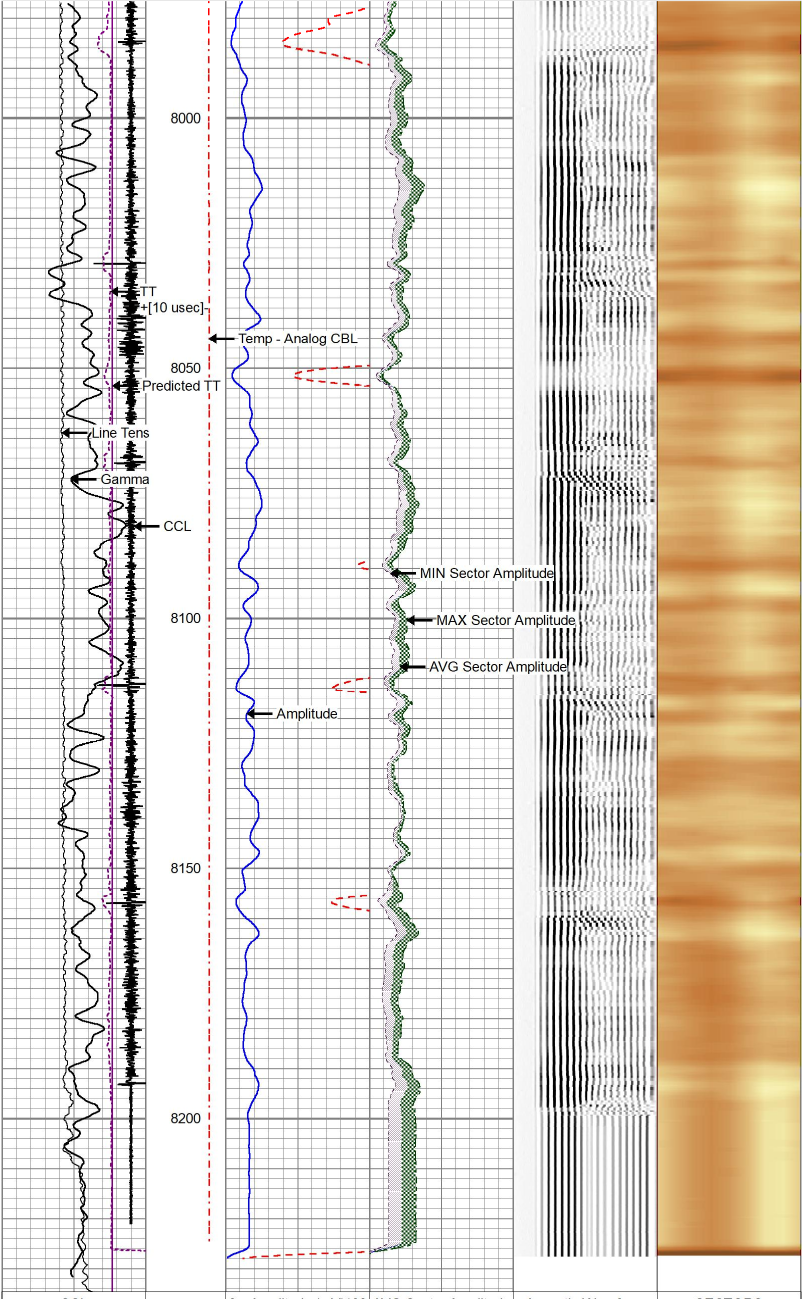
5 in / 100 ft

REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	2019_08_12_extraction_jamaso_4_65_5_6_9_cbl\2019_08_12_extraction_jamaso_4_65_5_6_9_cbl.db
Dataset Pathname	REPEATPASS
Presentation Format	rcbl_8s
Dataset Creation	Mon Aug 12 13:16:47 2019
Charted by	Depth in Feet scaled 1:240

CCL	np - Analog C	0 Amplitude (mV)100	AVG Sector Amplitude	Acoustic Waveform	SECTORS
Gamma	(degF)	Amplitude x10	0 100	200 (usec) 1200	0 72
0 (GAPI) 200	0 300	0 (mV) 10	MAX Sector Amplitude		
300(Line Tens (lb) 0			0 100		
Predicted TT			MIN Sector Amplitude		
			0 100		
TT +[10 usec]-					



CCL	np - Analog C	0 Amplitude (mV)100	AVG Sector Amplitude	Acoustic Waveform	SECTORS
Gamma	(degF)	Amplitude x10	0 100	200 (usec) 1200	0 72
0 (GAPI) 200	0 300	0 (mV) 10	MAX Sector Amplitude		
300(Line Tens (lb) 0			0 100		
Predicted TT			MIN Sector Amplitude		
			0 100		
TT +[10 usec]-					

REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Calibration Report

Database File	d:\warrior\data\2019_08_12_extraction_jamaso_4_65_5_6_9_cbl\2019_08_12_extraction_jamaso_4_65_5_
Dataset Pathname	MAINPASS
Dataset Creation	Mon Aug 12 13:14:26 2019

Gamma Ray Calibration Report

Serial Number:	IXEM9-02	
Tool Model:	2 3/4" TekCo	
Performed:	Thu Apr 25 11:11:34 2019	
Calibrator Value:	194.0	GAPI
Background Reading:	66.1	cps
Calibrator Reading:	391.4	cps
Sensitivity:	0.5963	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	IRB34-03	
Tool Model:	2 3/4" RIB Analog	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	122.740	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.011	1.012	0.000	71.921	70.325	0.756
CAL	-0.004	0.746				
5'	0.013	1.000	0.000	71.921	72.895	-0.954
SUM						
S1	0.047	1.023	0.000	72.000	73.726	-3.452
S2	0.047	1.144	0.000	72.000	65.671	-3.108
S3	0.047	1.325	0.000	72.000	56.357	-2.660
S4	0.050	1.568	0.000	72.000	47.432	-2.361
S5	0.047	1.631	0.000	72.000	45.454	-2.123
S6	0.050	1.400	0.000	72.000	53.334	-2.688
S7	0.051	1.182	0.000	72.000	63.634	-3.246
S8	0.050	1.068	0.000	72.000	70.754	-3.543

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.004	0.746	1.000	0.000

Air Zero Calibration, performed (Not Performed):

	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

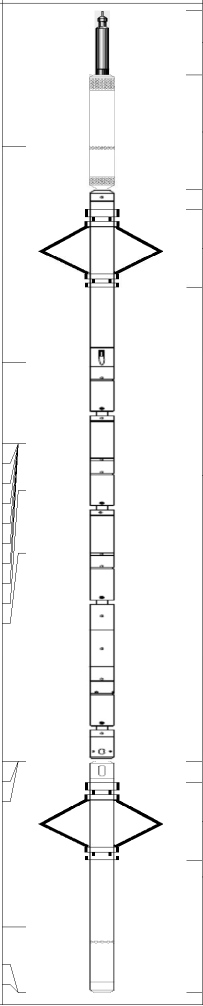
Serial Number:	IRB34-03	
Tool Model:	2 3/4" RIB Analog	
Performed:	Wed Jan 30 14:38:18 2019	

	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

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb
CableHead-TitanConeType2	1.03	1.44	3.60
CCL_Log-2 3/4" TekCo (IS2T1-09)	1.83	2.75	33.00
Antelope-Overbody	1.25	2.75	
RBTA-2 3/4" RIB Analog (IRB34-03)	9.13	2.75	102.00
Antelope-Overbody	1.25	2.75	
GR_Log-2 3/4" TekCo (IXEM9-02)	3.68	2.75	47.00

Dataset:	2019_08_12_extraction_jamaso_4_65_5_6_9_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	**Jamaso 4-65 5-6-9**
Field	**Wildcat**
County	**Arapahoe**
State	**CO**
Country	**U.S.A.**