CEMENT BOND LOG

Company	Extraction Oil and as Inc.
Well	Northwest A 520-25-11C
Field	Wattenberg
County	Broomfield
State	Colorado

Company Extraction Oil and as Inc.
Well Northwest A 520-25-11C
Field Wattenberg
County Broomfield **State** Colorado

API # : 05 014 20789
Location: NW/NW
1285 FNL
831 FWL

SEC: 9 TWP: 1S RGE: 68W

Other Services

Elevation
K.B. 5343
D.F. ----
G.L. 5314

Permanent Datum: Ground Level Elevation: 5314
Log Measured From: Kelly Bushing , 29 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	16 January 2020
Run Number	One
Plug Back T.D. Driller	----
Plug Back T.D. Logger	----
Bottom Logged Interval	9980
Top Log Interval	Surface
Type Fluid	Water
Density / Viscosity	----
Max. Recorded Temp.	242
Time Logger on Bottom	12:45
Equipment Number	GD170
Location	Casper
Recorded By	GS Yarbro
Witnessed By	Manuel Parras

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8	36	29	----				
5 1/2	20	29	----				

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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 # : RM0120PCBW112
Your Crew Today: Baker, Enloe, Obgard
Log Correlated to: Surface

Cement Data

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

Bond Index

Index %	Est Top Depth
20 % Bond	260
40 % Bond	740
60 % Bond	740
80 % Bond	3375
100 % Bond	3375

Comments

Estimated Top of Cement
(20 % Bond Index) at 260 feet

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\20200116_extraction northwest a s20-25-11c_cbl\20200116_extraction no
Dataset field/well/run1/pass3/_vars_

Top - Bottom

BHTEMP_Src	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in	MINAMPL mV	MinAPIID in
TEMP	5.5	0.361	20	71.9	4.923	2.1	4.751

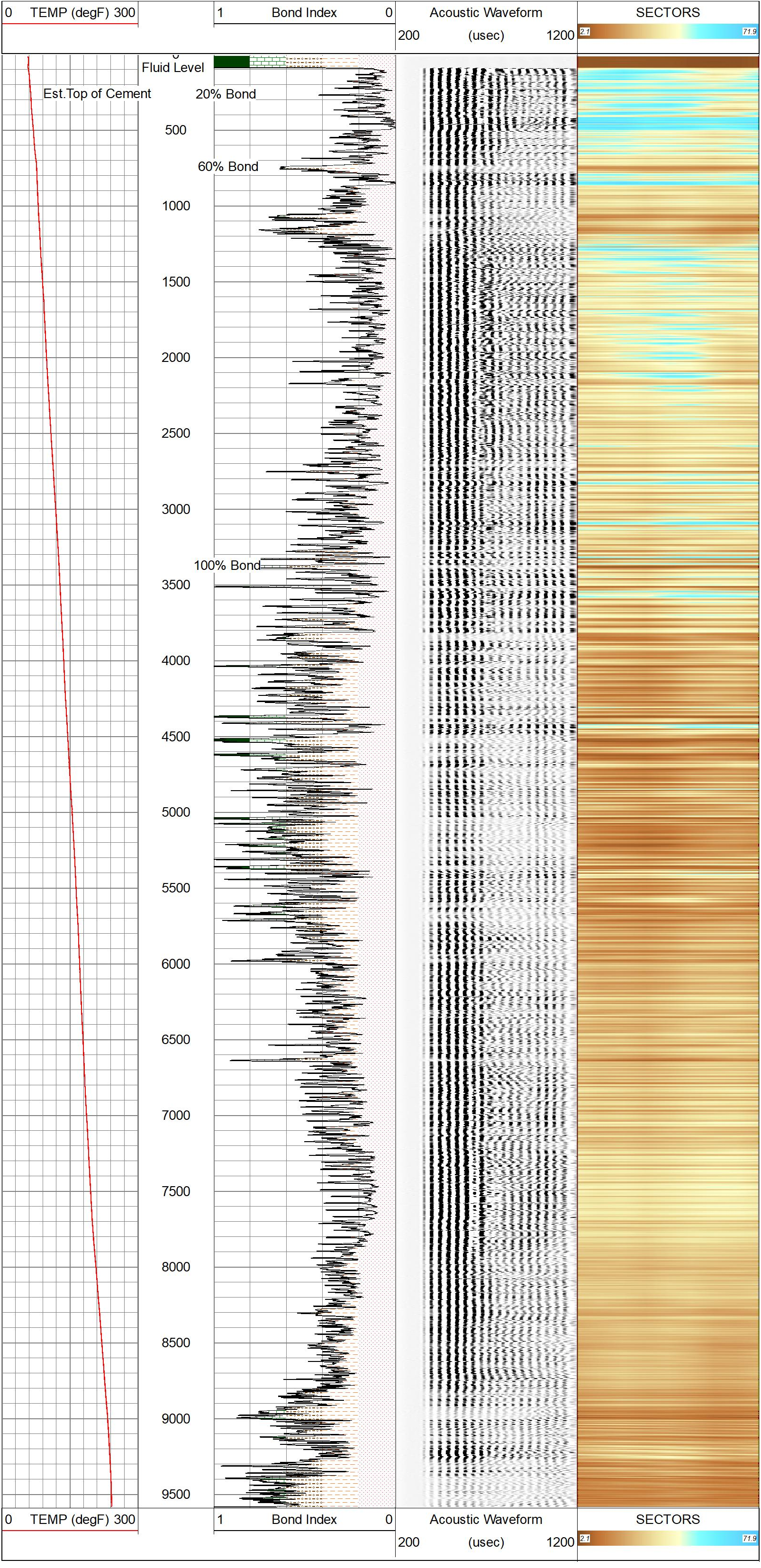
MINATTN db/ft	PPT usec	Z_NA_1	Z_NA_2	Z_NA_3
0	237	0	0	0

BOND INDEX

Calculated for 3000 PSI Compressive Strength Cement

Database File	20200116_extraction northwest a s20-25-11c_cbl\20200116_extraction northwest a s20-25-11c_cbl.db
Dataset Pathname	./././bndindx
Presentation Format	BNDIND~1
Dataset Creation	Thu Jan 16 14:28:26 2020
Charted by	Depth in Feet scaled 1:7500

0 TEMP (degF) 300 | 1 Bond Index 0 | Acoustic Waveform 200 (usec) 1200 | SECTORS 2.1 71.9

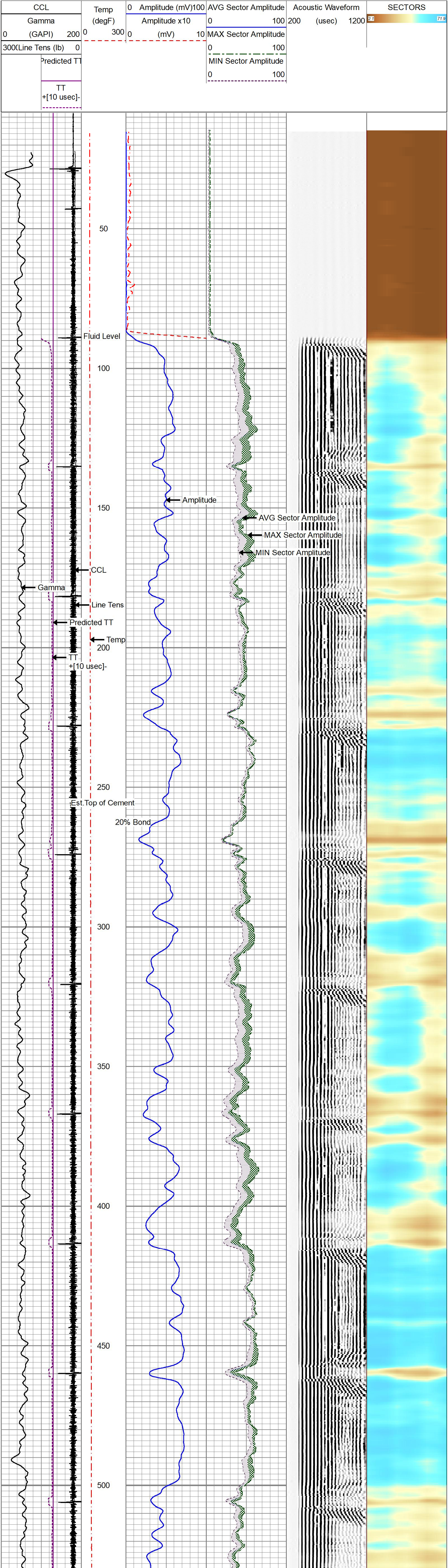


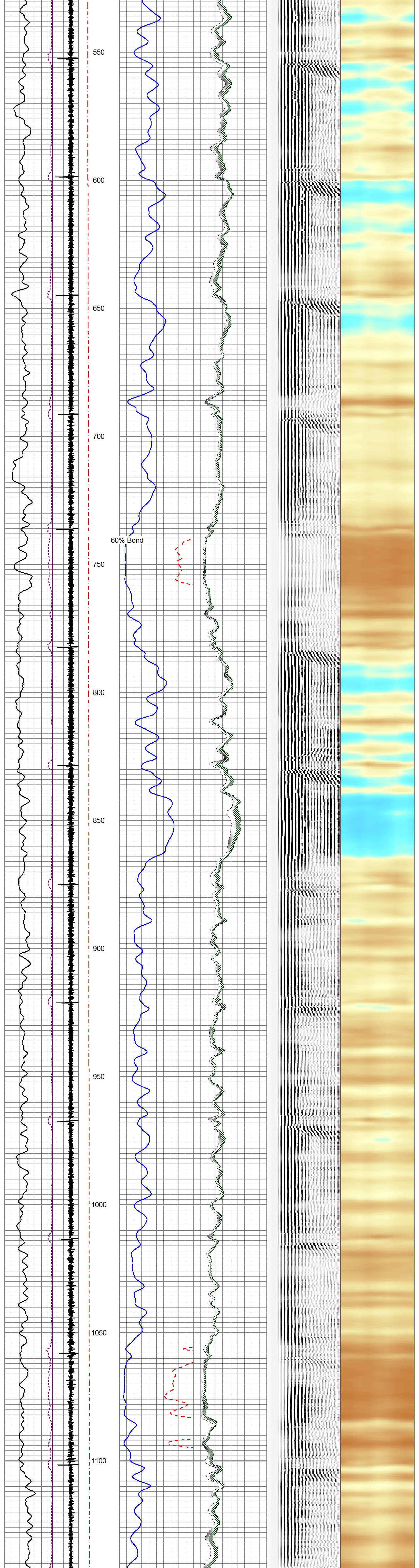
0 TEMP (degF) 300 | 1 Bond Index 0 | Acoustic Waveform 200 (usec) 1200 | SECTORS 2.1 71.9

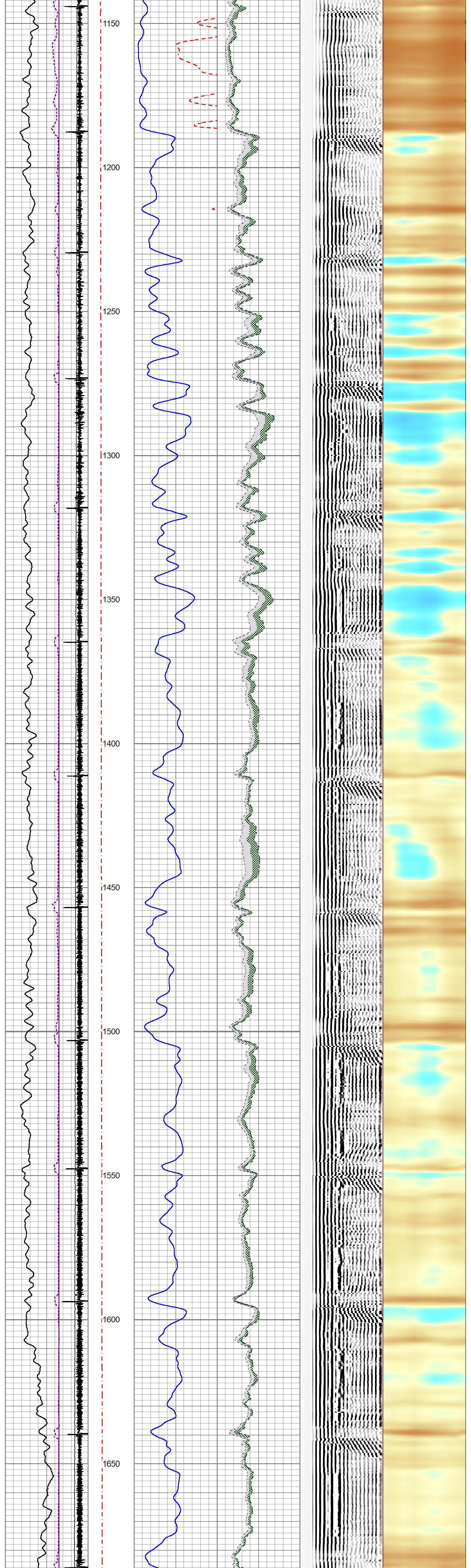
MAIN PASS - Ran with Zero PSI

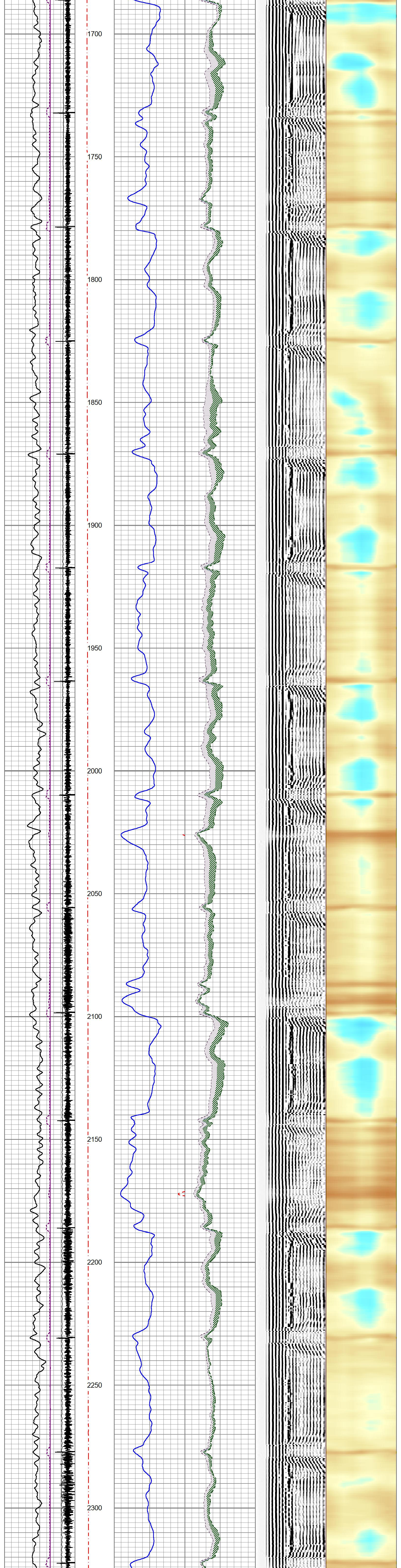
5 in / 100 ft

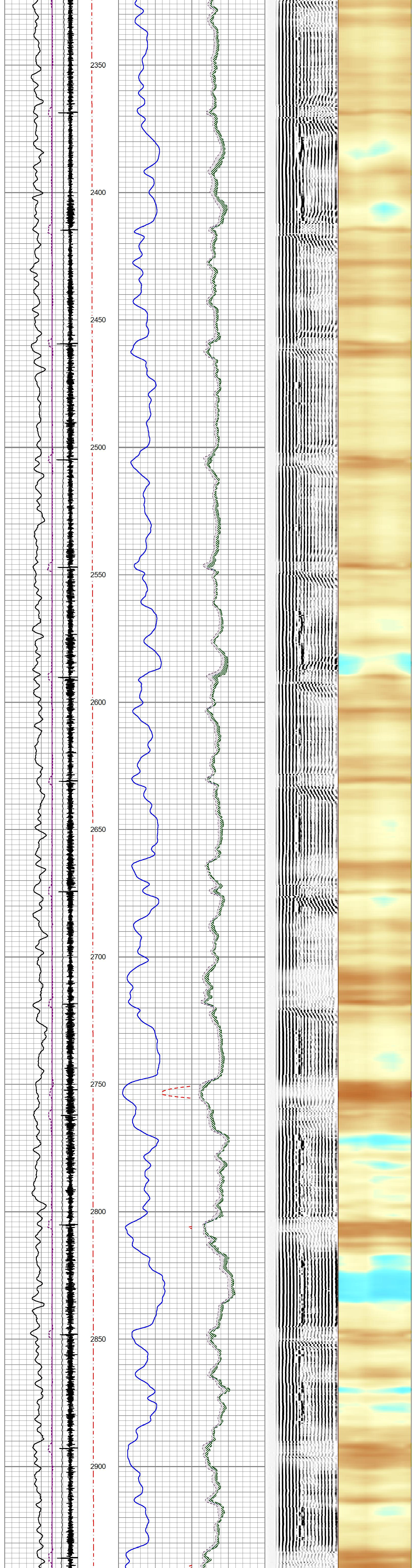
Database File	20200116_extraction northwest a s20-25-11c_cbl\20200116_extraction northwest a s20-25-11c_cbl.db
Dataset Pathname	pass3
Presentation Format	rcbl_8s
Dataset Creation	Thu Jan 16 12:50:10 2020
Charted by	Depth in Feet scaled 1:240

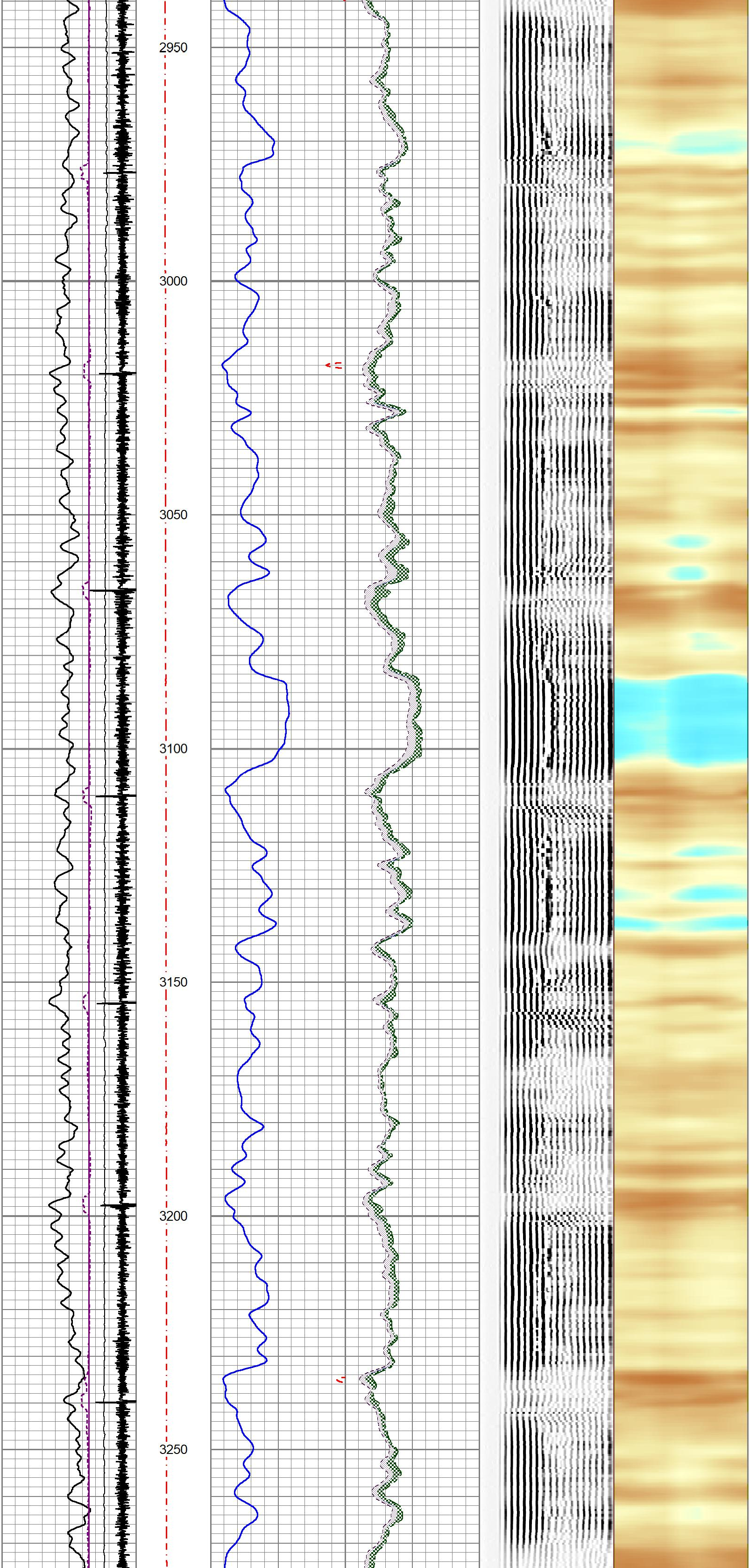


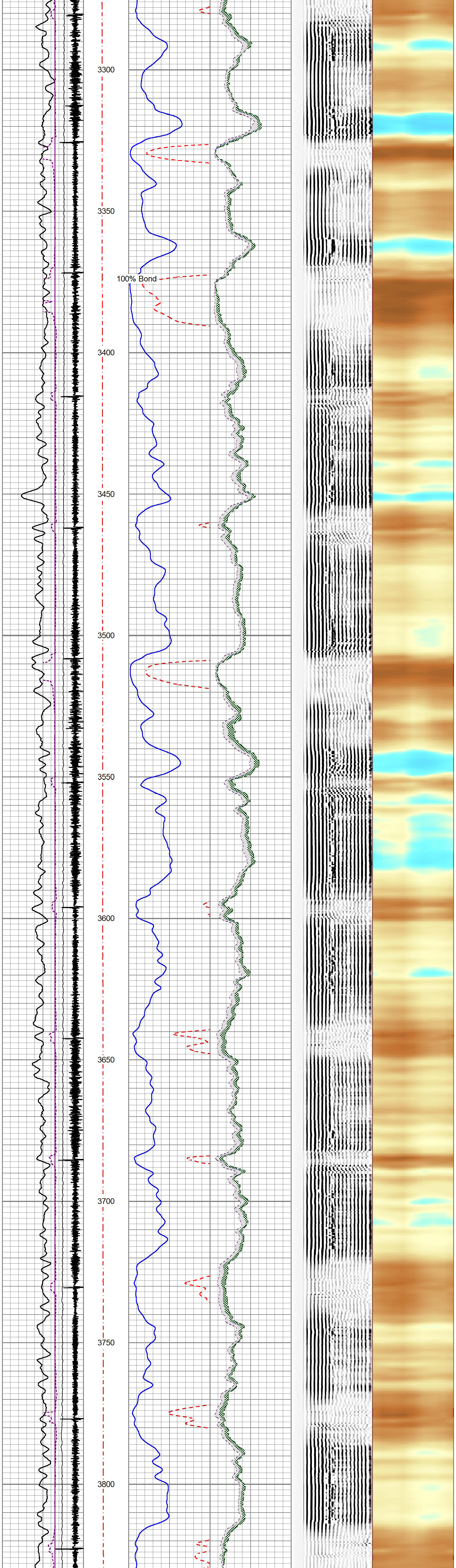


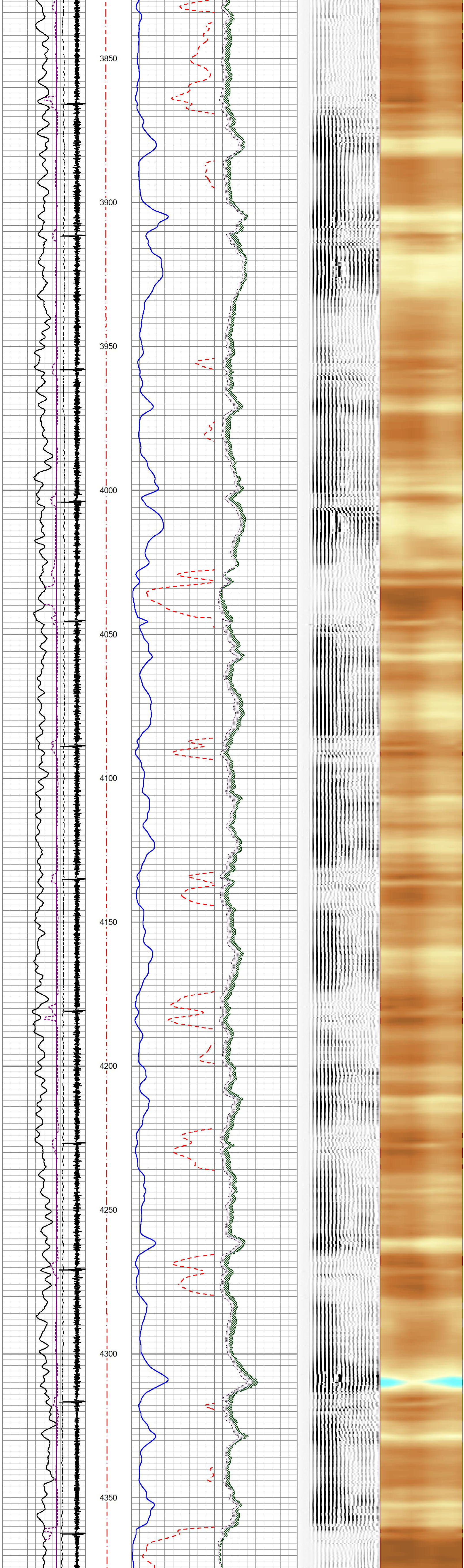









3300
3350
100% Bond
3400
3450
3500
3550
3600
3650
3700
3750
3800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3950
4000
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4100
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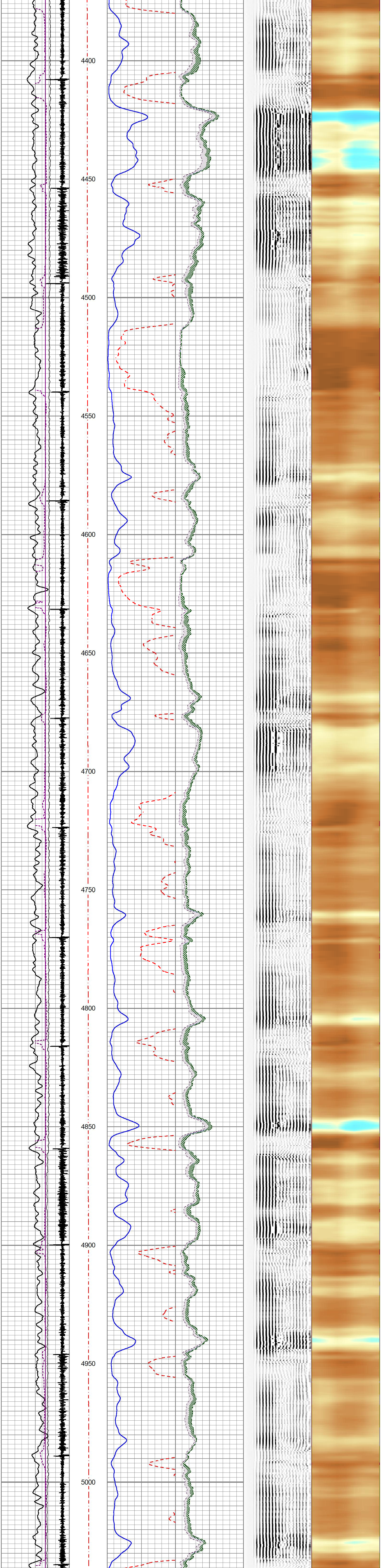
4200
4250
4300
4350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4550
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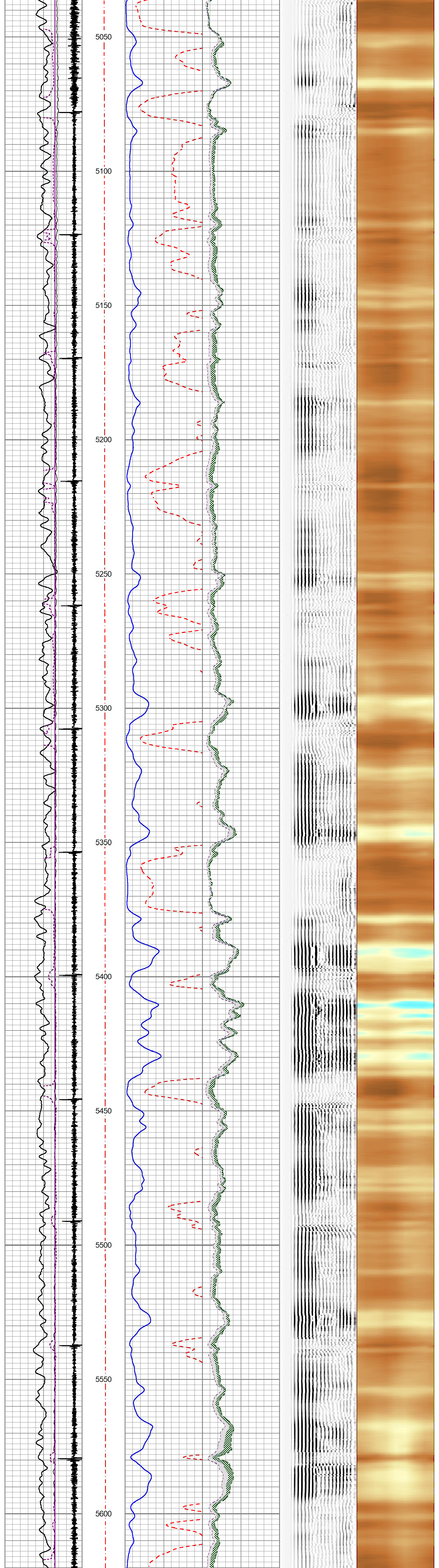
4850
4900
4950
5000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5100
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5200
5250
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5350
5400
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5500
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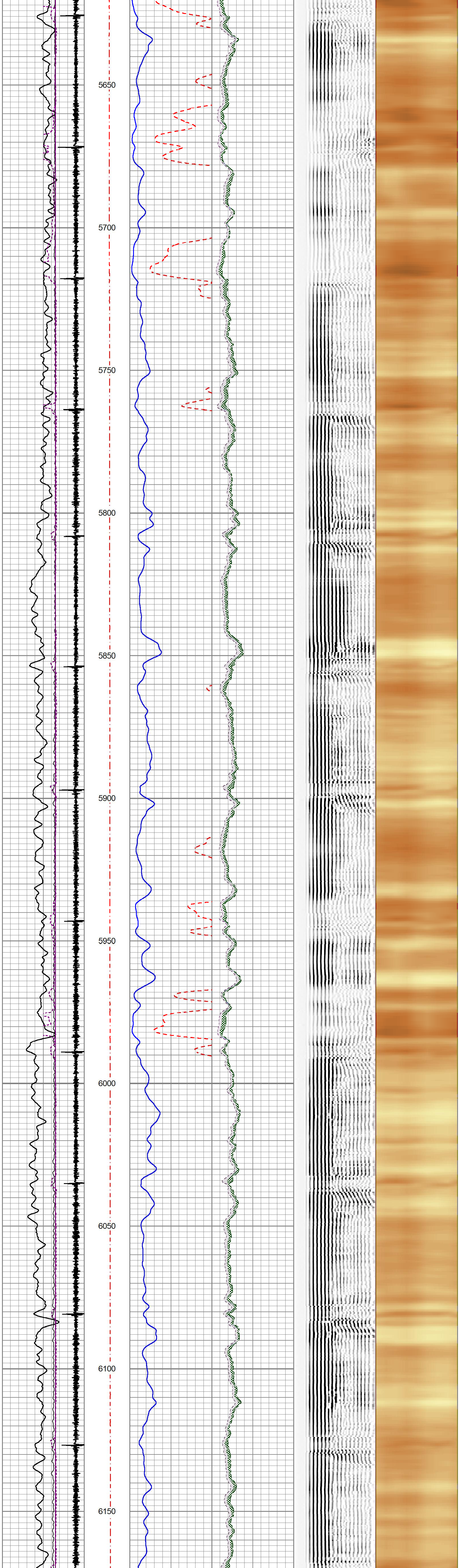
5600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6050
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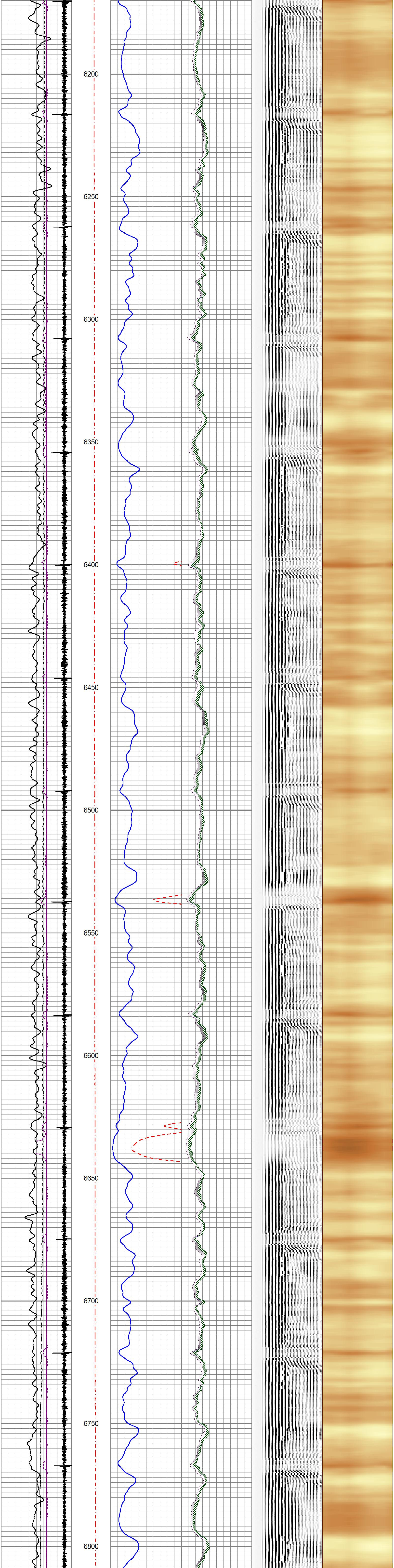
6150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6750
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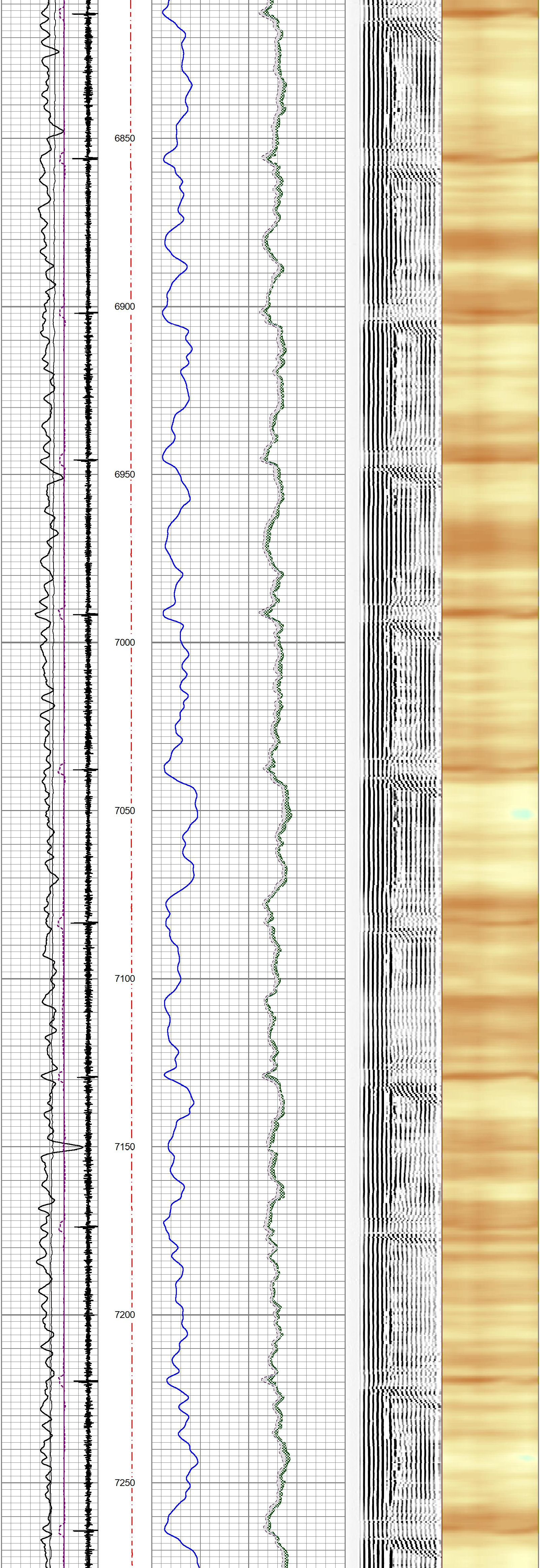
6850
6900
6950
7000
7050
7100
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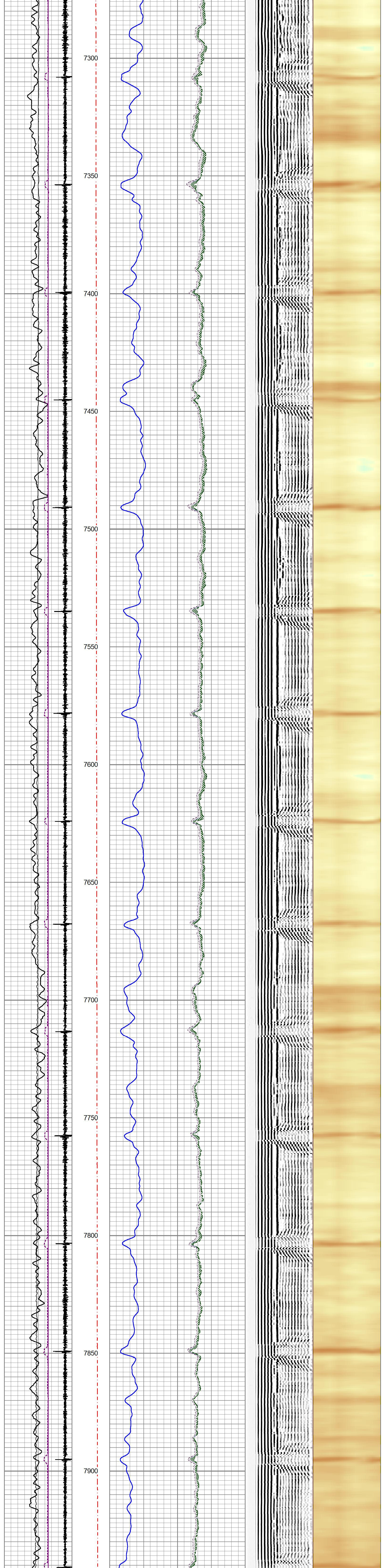
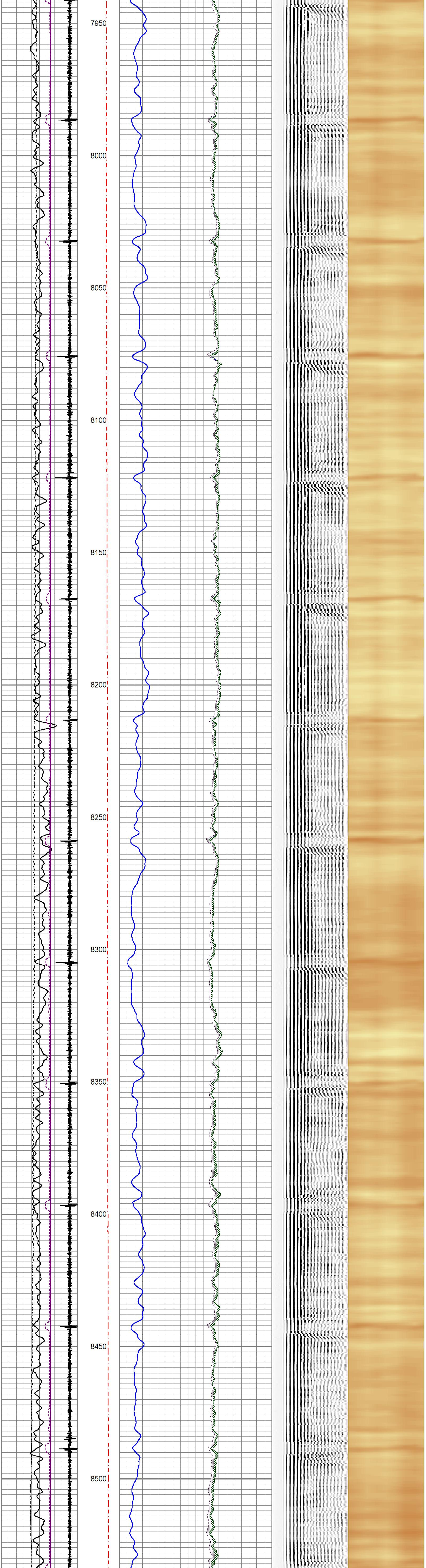
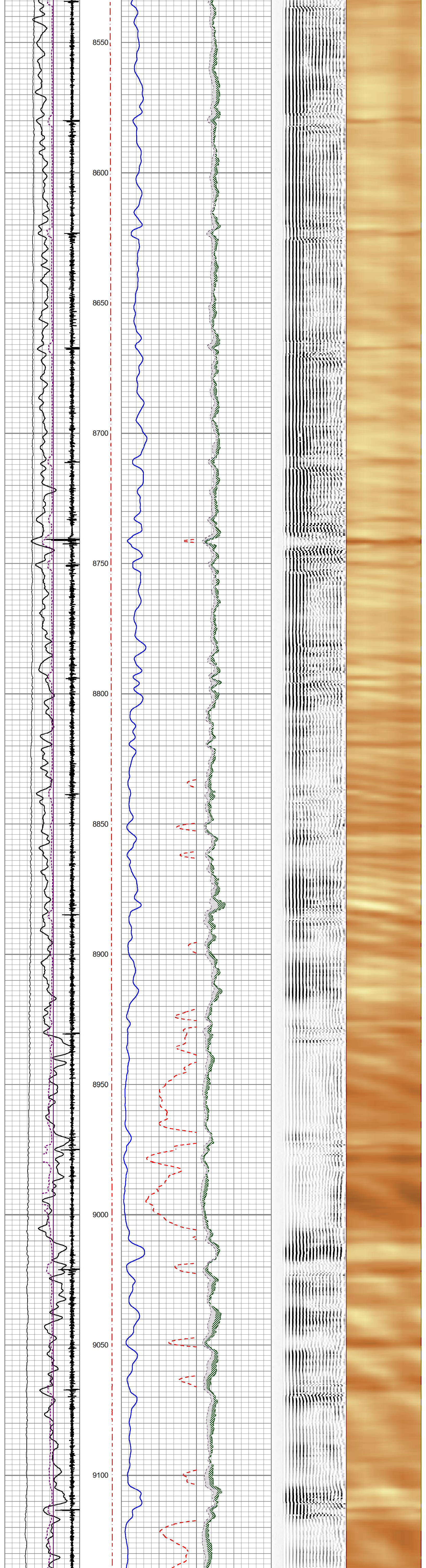
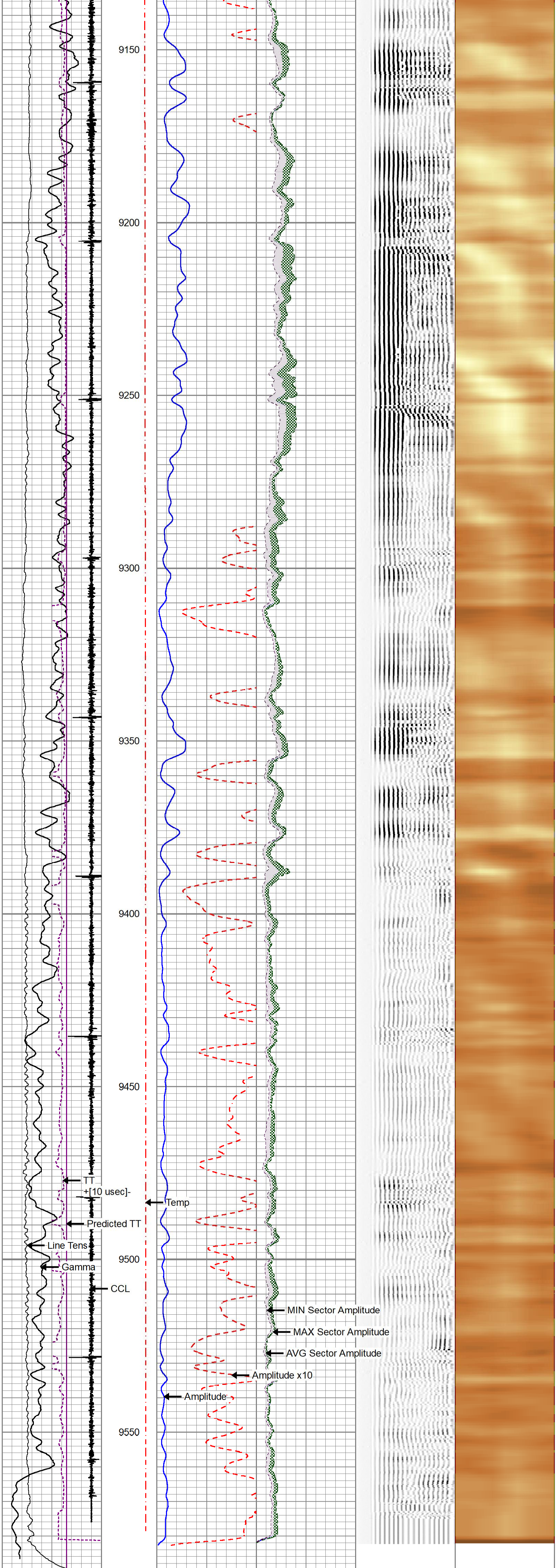
7250









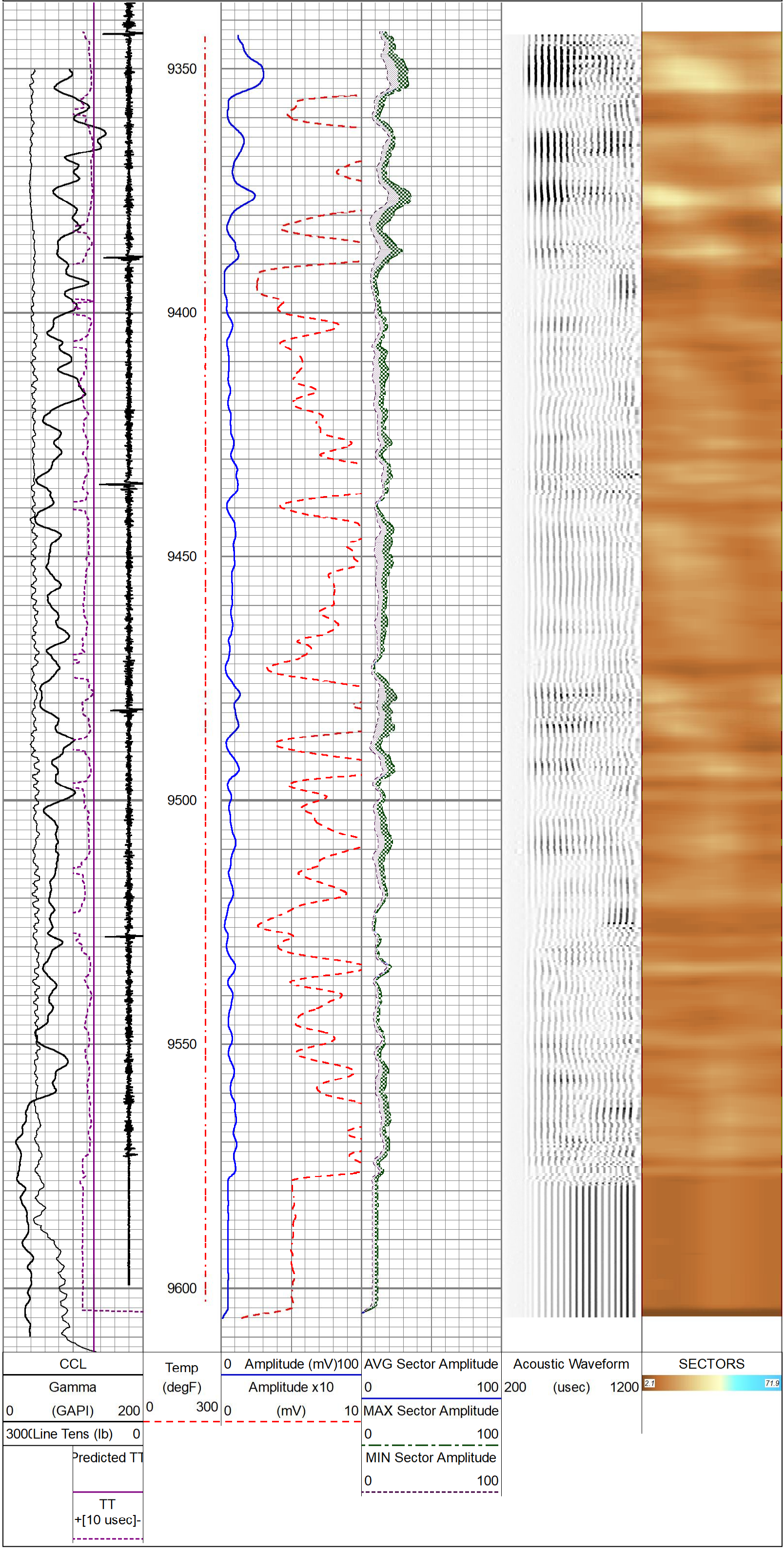
CCL Gamma 0 (GAPI) 200 300(Line Tens (lb) 0 Predicted TT TT +[10 usec]-	Temp (degF) 0 300	0 Amplitude (mV)100 Amplitude x10 0 (mV) 10	AVG Sector Amplitude 0 100 MAX Sector Amplitude 0 100 MIN Sector Amplitude 0 100	Acoustic Waveform 200 (usec) 1200	SECTORS 2.1 71.9

REPEAT PASS - Ran with Zero PSI

5 in / 100 ft

Database File	20200116_extraction northwest a s20-25-11c_cbl\20200116_extraction northwest a s20-25-11c_cbl.db
Dataset Pathname	pass2
Presentation Format	rcbl_8s
Dataset Creation	Thu Jan 16 12:45:50 2020
Charted by	Depth in Feet scaled 1:240

CCL Gamma 0 (GAPI) 200 300(Line Tens (lb) 0 Predicted TT TT +[10 usec]-	Temp (degF) 0 300	0 Amplitude (mV)100 Amplitude x10 0 (mV) 10	AVG Sector Amplitude 0 100 MAX Sector Amplitude 0 100 MIN Sector Amplitude 0 100	Acoustic Waveform 200 (usec) 1200	SECTORS 2.1 71.9



Calibration Report

Database File d:\warrior\data\20200116_extraction northwest a s20-25-11c_cbl\20200116_extraction northwest a s20-25-1
Dataset Pathname pass3
Dataset Creation Thu Jan 16 12:50:10 2020

Gamma Ray Calibration Report

Serial Number: IXEM9-01
Tool Model: 2 3/4" TekCo
Performed: Fri Sep 13 16:16:19 2019

Calibrator Value: 194.0 GAPI

Background Reading: 58.0 cps
Calibrator Reading: 330.4 cps

Sensitivity: 0.7121 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: IRB34-03
Tool Model: 2 3/4" RIB Analog

Master Calibration, performed (Derived):

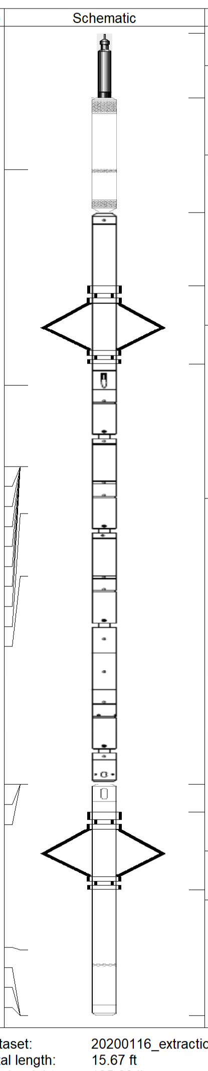
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.016	0.933	0.000	71.921	75.792	1.239
CAL	-0.004	0.746				
5'	0.001	1.030	0.000	71.921	69.881	-0.071
SUM						
S1	0.007	1.243	0.000	72.000	58.240	-0.415
S2	0.006	1.169	0.000	72.000	61.924	-0.365
S3	0.006	1.096	0.000	72.000	66.017	-0.369
S4	0.006	1.193	0.000	72.000	60.678	-0.362
S5	0.008	1.270	0.000	72.000	57.023	-0.435
S6	0.009	1.392	0.000	72.000	52.062	-0.471
S7	0.010	1.549	0.000	72.000	46.787	-0.470
S8	0.009	1.466	0.000	72.000	49.406	-0.452

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)	Schematic	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
CCL	13.50					
			Antelope-Overbody	1.25	2.75	
TEMP	10.05					
WVFS8	8.76					
WVFS7	8.76					
			RBTA-2 3/4" RIB Analog (IRB34-03)	9.13	2.75	102.00
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					
			Antelope-Overbody	1.25	2.75	
			GR_Log-2 3/4" TekCo (IXEM9-01)	3.68	2.75	47.00
GR	1.04					
LOCTIM	0.00					
UTCTIM	0.00					
PMON	0.00					

Dataset: 20200116_extraction northwest a s20-25-11c_cbl.db: field/well/run1/pass3
Total length: 15.67 ft
Total weight: 185.60 lb
O.D.: 2.75 in

gyrodata

Company Extraction Oil and as Inc.
Well Northwest A 520-25-11C
Field Wattenberg
County Broomfield
State Colorado **Country** U.S.A.