



**RADIAL BOND LOG
WITH GAMMA RAY**

Comp. ANADARKO PETROLEUM CORP.
Well VONDERLAGE 40-36
Field WATTENBERG
Co. WELD
State COLORADO

Company **ANADARKO PETROLEUM CORP.**
Well **VONDERLAGE 40-36**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: API #: 05-123-26751
SW SW
535' FSL & 475' FWL
SEC 31 TWP 3N RGE 66W
Permanent Datum GL Elevation 4822'
Log Measured From KB 12' Above Perm. Datum
Drilling Measured From KB
Other Services
K.B. 4834'
D.F. N/A
G.L. 4822'

Date of Service	03 MARCH 2020			
Run Number	ONE			
Depth Driller or P8TD	2500'			
Depth Logger	2500'			
Bottom Log Interval	2500'			
Top Log Interval	SURFACE			
Open Hole Size	7.875"			
Type Fluid	WATER			
Fluid Level	SURFACE			
Fluid Density	N/A			
Max. Recorded Temperature	N/A			
Max. Wellhead Pressure	ZERO			
Wellhead Connection	OPEN			
Estimated Cement Top	750'			
Unit Number	P-133			
Wireline Size	9/32"			
Location	FORT MORGAN CO.			
Recorded By	P LOPEZ			
Witnessed By	MR. JEREMY DUTY			
Tubing Record	Size	WV/Ft	Top	Bottom
Surface Casing	8.63"	24#	SURFACE	677'
Production Casing	4.50"	11.6#	SURFACE	7861'
Liner Record				

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
DEPTH REFERENCE TO J-W WIRELINE CBL DATED APRIL-22-2013

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: P LOPEZ	RBL-DC	140141
Operator: G SOTO	GR CCL	110246
Operator: C COBAIN		
Operator:		

Log Variables

DatabaseC:\ProgramData\Warrion\Data\anadarko_vonderlage 40-36_0512326751_20200303_ Dataset field/well/run1/pass8/_vars_

Top - Bottom

BOREID in 7.875	BOTTEMP degF 180	CASEOD in 4.5	CASETHCK in 0.25	CASEWGHT lb/ft 11.6	MAXAMPL mV 81.2	MINAMPL mV 0.7
MINATTN db/ft 0.8	PERFS No	PPT usec 0	SRFTEMP degF 50	TDEPTH ft 2500		


Variable Description

BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 CASEWGHT : Casing Weight
 MAXAMPL : Maximum Amplitude

MINAMPL : Minimum Amplitude
 MINATTN : Minimum Attenuation
 PERFS : Perforation Flag
 PPT : Predicted Pipe Time
 SRFTEMP : Surface Temperature
 TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
			Cable Head-Titan_144 1 7/16" Titan Cable Head	1.03	1.44	2.00	
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	
			PROBE-RBT-DIGITAL-RBL-DC (FW1401-41-T) Probe 2 3/4" Radii Bond-Corrosion Package	8.75	2.75	100.00	
WVFS8	14.76						
WVFS7	14.76						
WVFS6	14.76						
WVFS5	14.76						
WVFS4	14.76						
WVFS3	14.76						
WVFS2	14.76						
WVFS1	14.76						
WVFCAL	14.76						
WVF3FT	14.76						
WVF5FT	13.76						
HEADVOLT	10.57						
			Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00	

CCL	6.78		PROBE-GR/CCL-ANALOG-GR/CCL-A (110246) 2 3/4" Gamma with CCL-Analog	4.54	2.75	60.00
GR	4.05		Centralizer-275 Probe 2 3/4" Probe Adjustable Spring Centralizer	2.88	2.75	15.00
			Bullnose-Titan GO Pin Pressure Cap	0.27	1.38	1.00
Dataset: anadarko_vonderlage 40-36_0512326751_20200303_scbl.db: field/well/run1/pass8 Total length: 23.23 ft Total weight: 208.00 lb O.D.: 2.75 in						



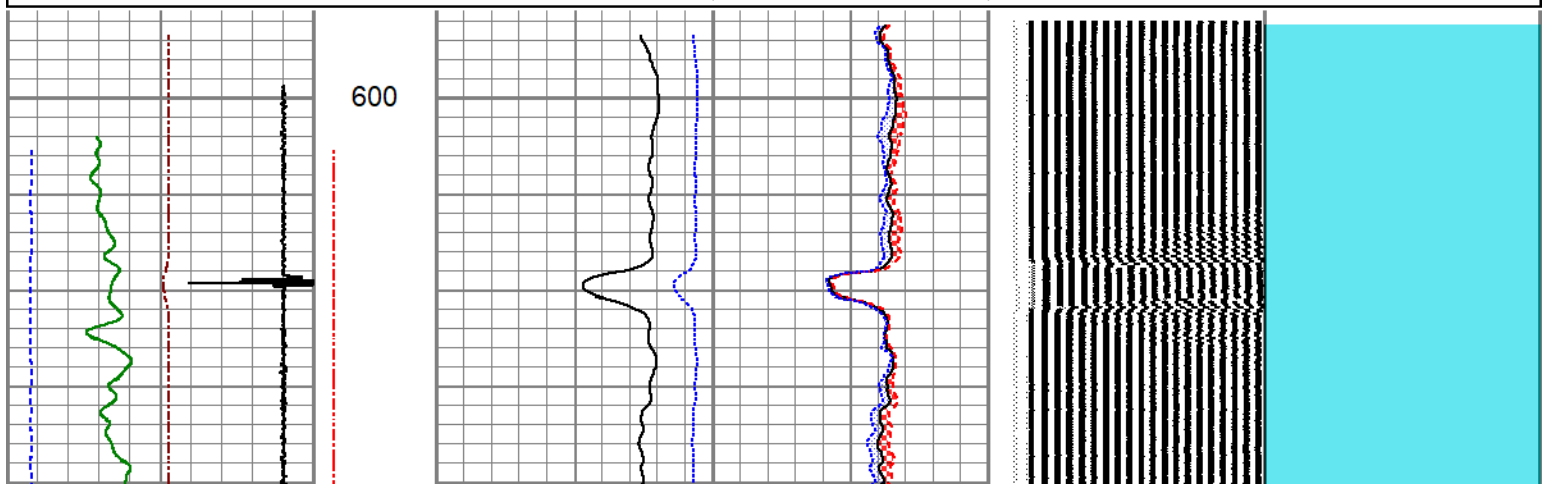
PIONEER
Pioneer Energy Services

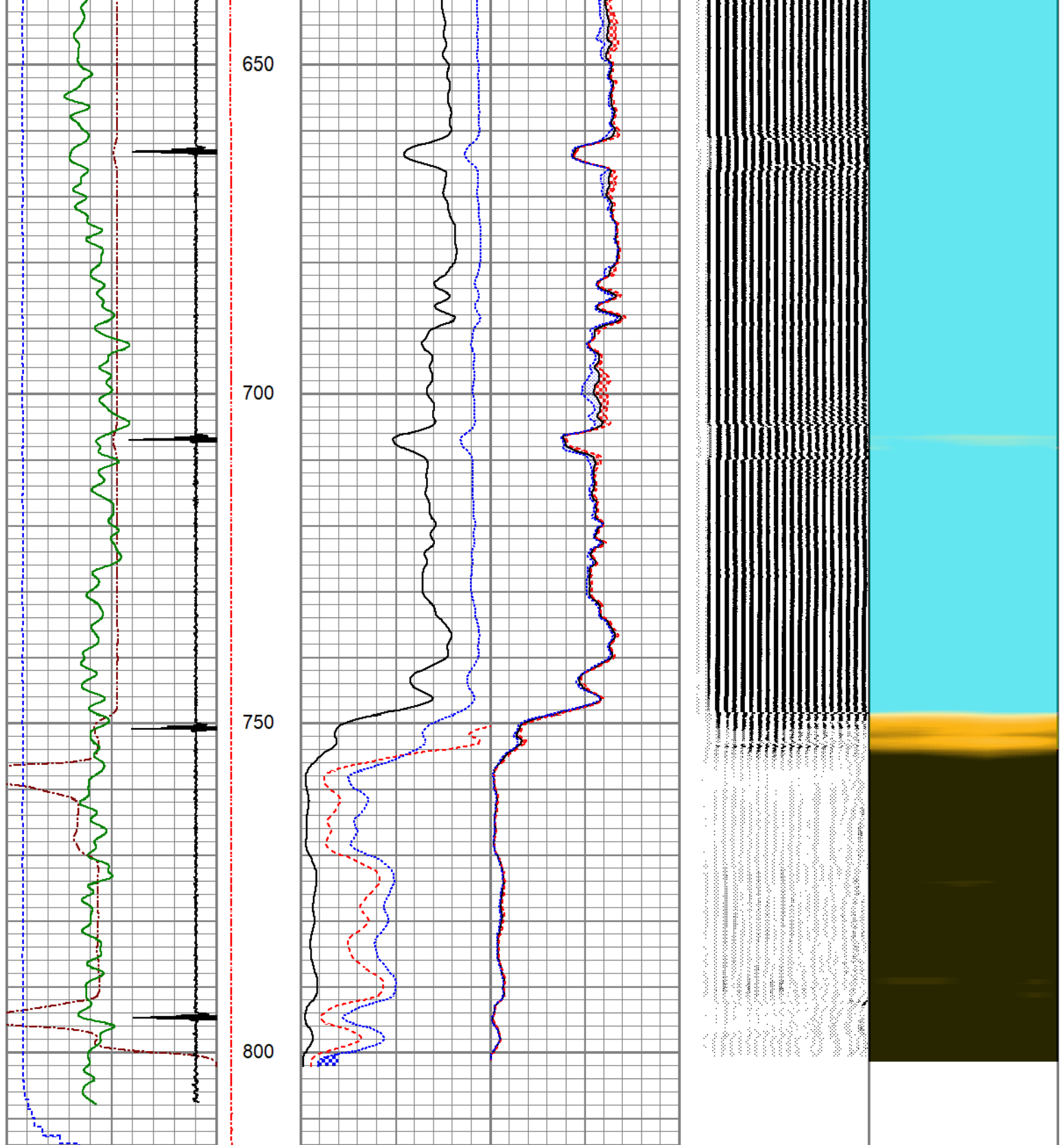
FREE PIPE SECTION

ZERO PSI APPLIED AT SURFACE

Database File	anadarko_vonderlage 40-36_0512326751_20200303_scbl.db
Dataset Pathname	pass4
Presentation Format	pinr_scbl
Dataset Creation	Tue Mar 03 09:32:09 2020
Charted by	Depth in Feet scaled 1:240

3Ft Travel Time 500 (usec)	0	ineTensio (lb)	0	3' Amplitude (mV)	100	Sector Amplitude Average	200	VDL (usec)	1200	1	Sector Map	8
-9 Collar Locator	1	0	2000	3' Amplified Amplitude X 5	0	150						
Gamma Ray 0 (GAPI)	150			0 (mV)	20	Sector Amplitude Maximum						
-100 LSPD (ft/min)	100			1 Bond Index	0	150						
						Sector Amplitude Minimum	0					
							150					





3Ft Travel Time 500 (usec)	0	ineTensio (lb)	0	3' Amplitude (mV)	100	Sector Amplitude Average	200	VDL (usec)	1200	1	Sector Map	8
-9 Collar Locator	1	0	2000	3' Amplified Amplitude X 5 (mV)	20	Sector Amplitude Maximum	0					
Gamma Ray (GAPI)	150			1 Bond Index	0	Sector Amplitude Minimum	0					
-100 LSPD (ft/min)	100						0					

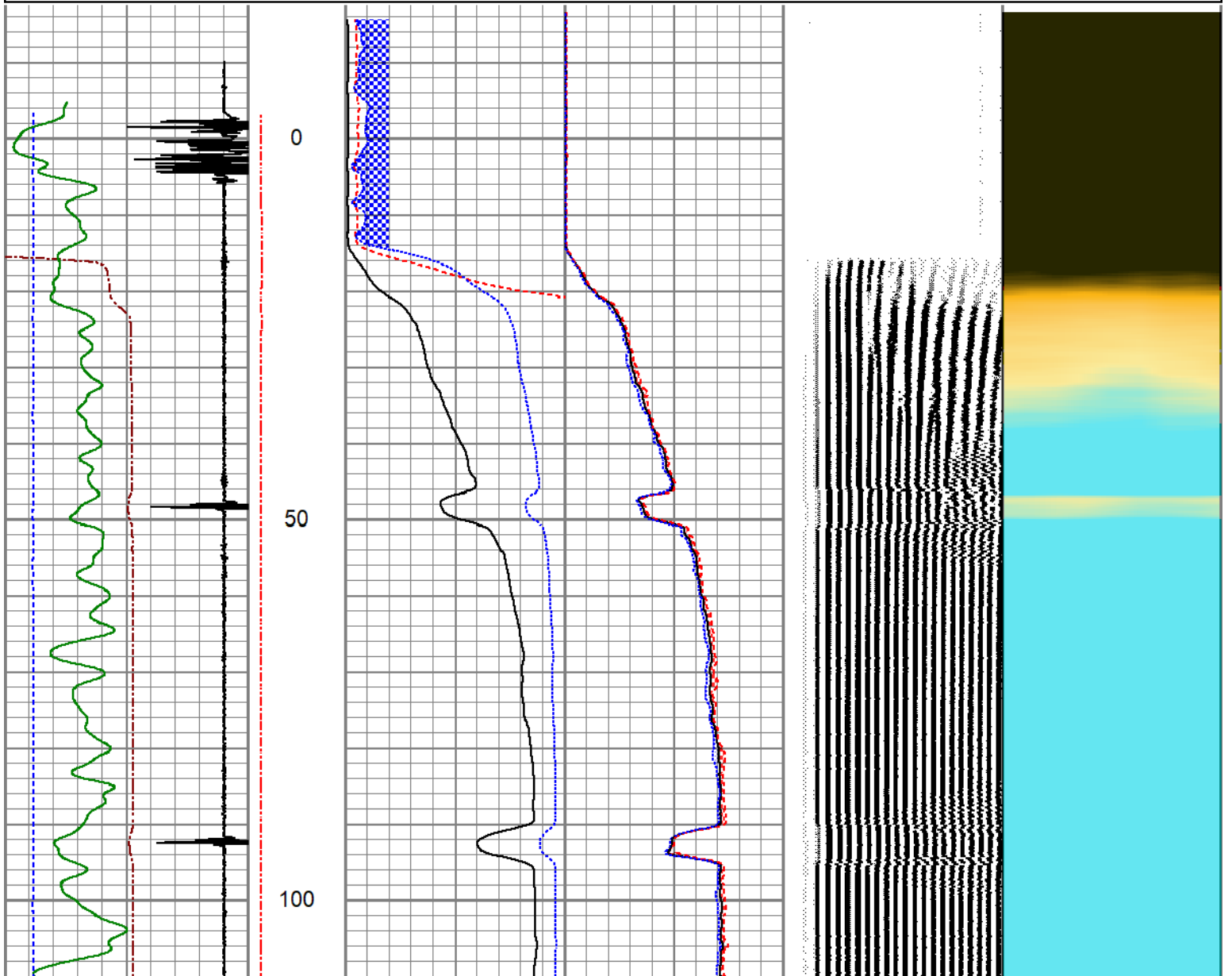


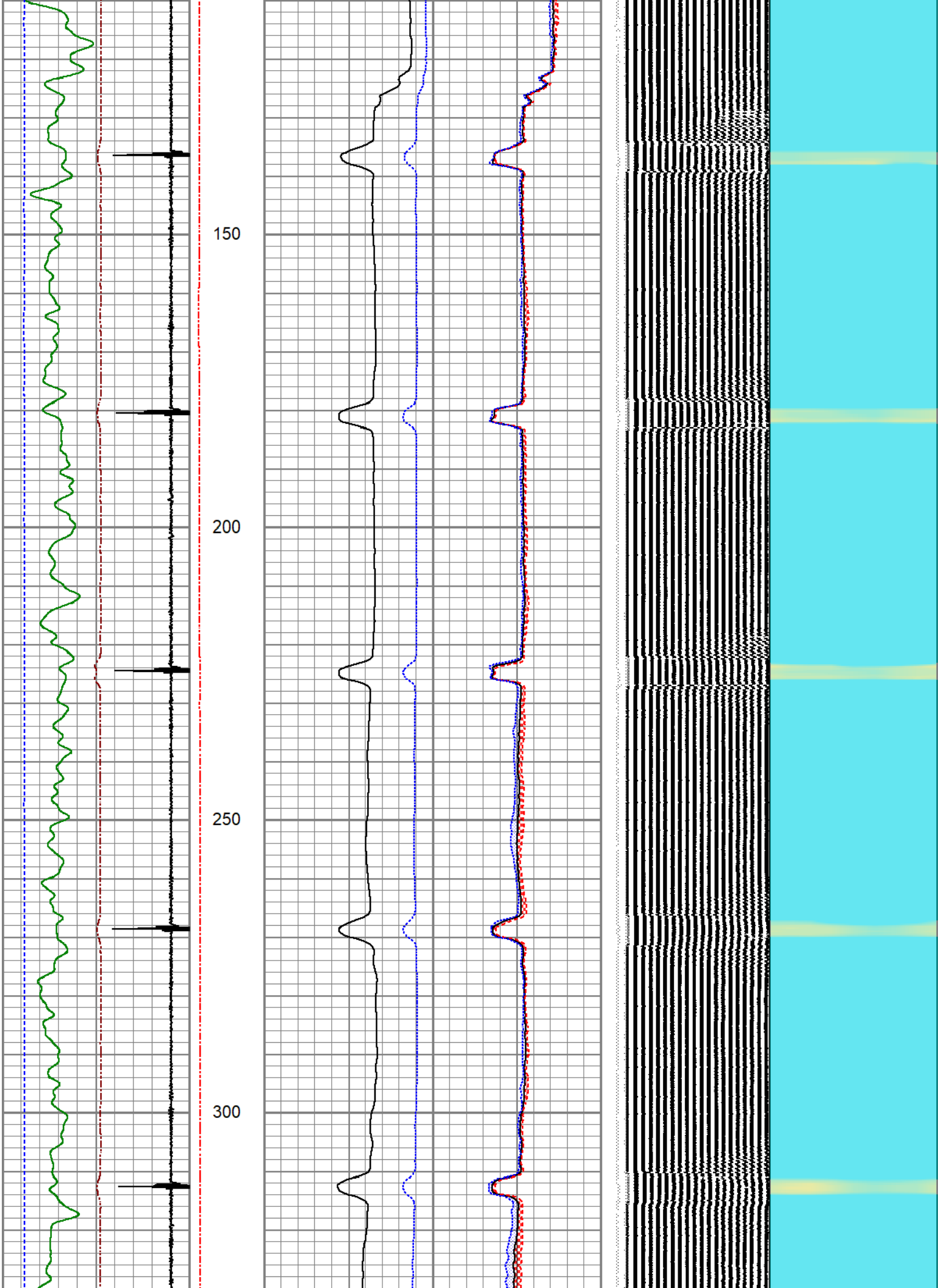
MAIN LOG

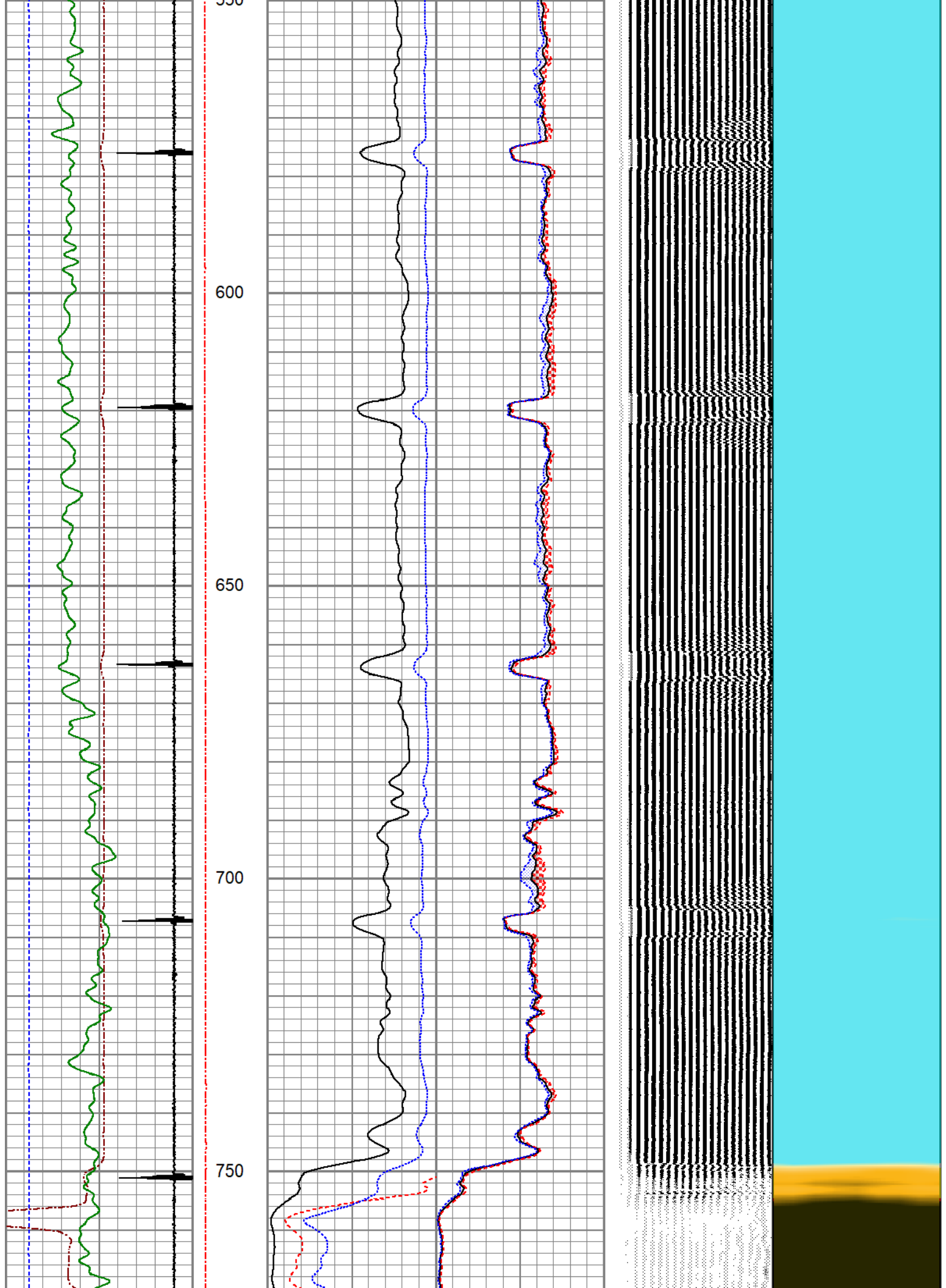
ZERO PSI APPLIED AT SURFACE

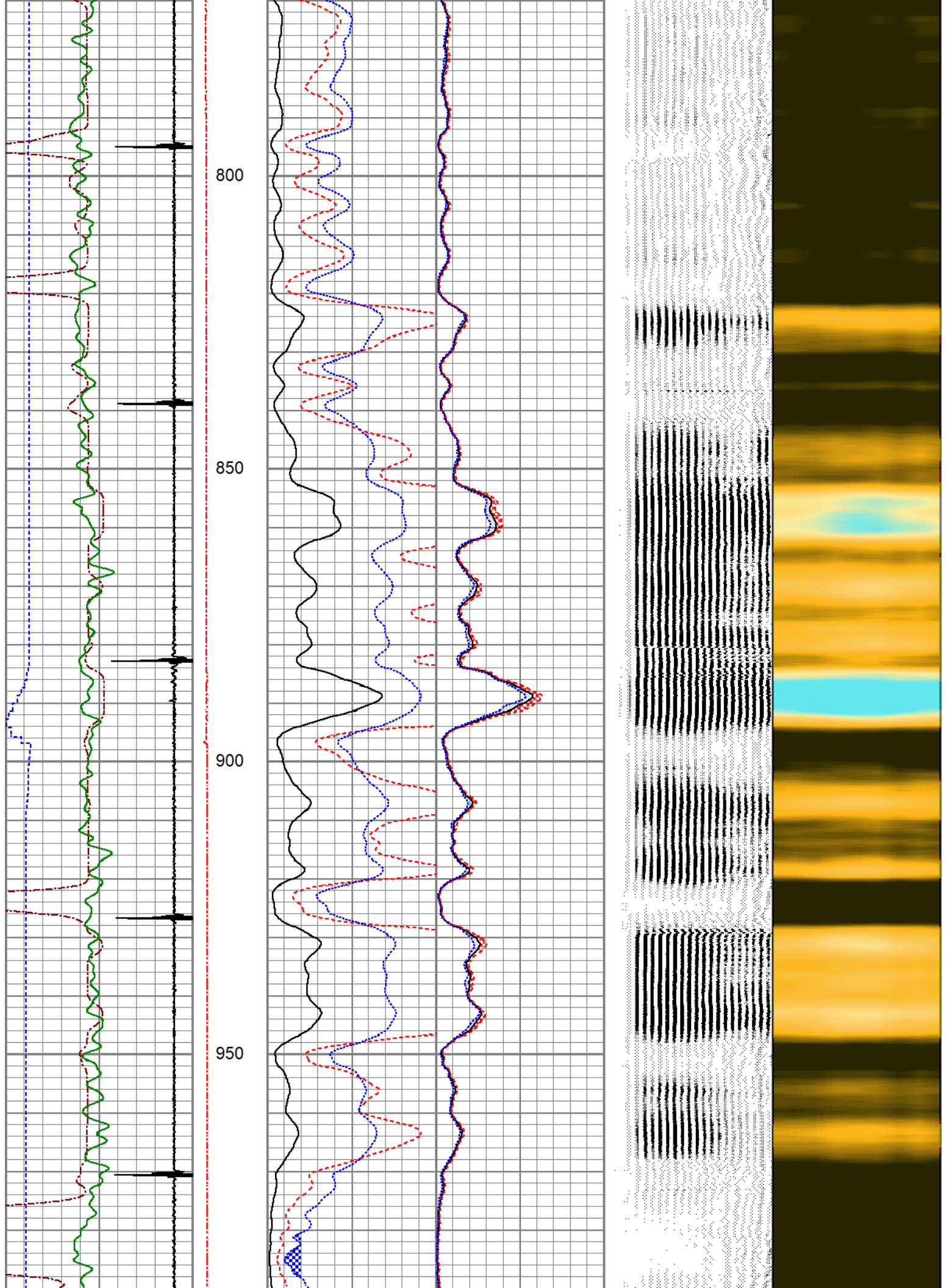
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 Dataset Pathname pass8
 Presentation Format pinr_scbl
 Dataset Creation Tue Mar 03 09:46:54 2020
 Charted by Depth in Feet scaled 1:240

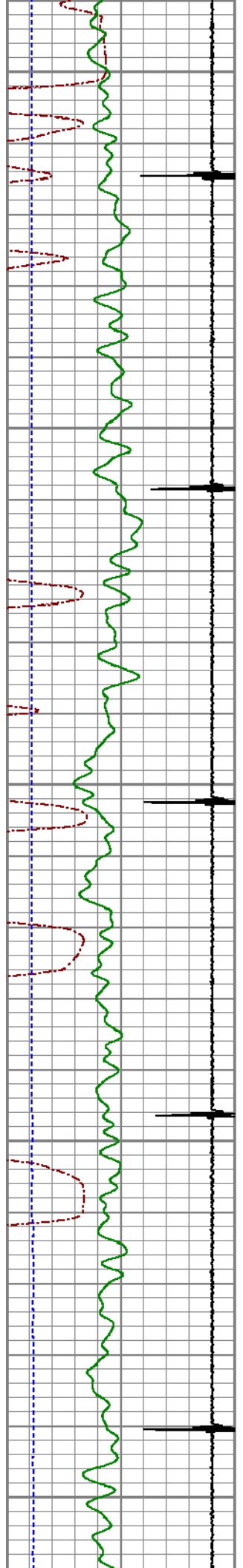
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-9 Collar Locator 1	0 2000	3' Amplified Amplitude X 5	0 150		
Gamma Ray 0 (GAPI) 150		0 (mV) 20	Sector Amplitude Maximum		
-100 LSPD (ft/min) 100		1 Bond Index 0	0 150		
			Sector Amplitude Minimum		
			0 150		



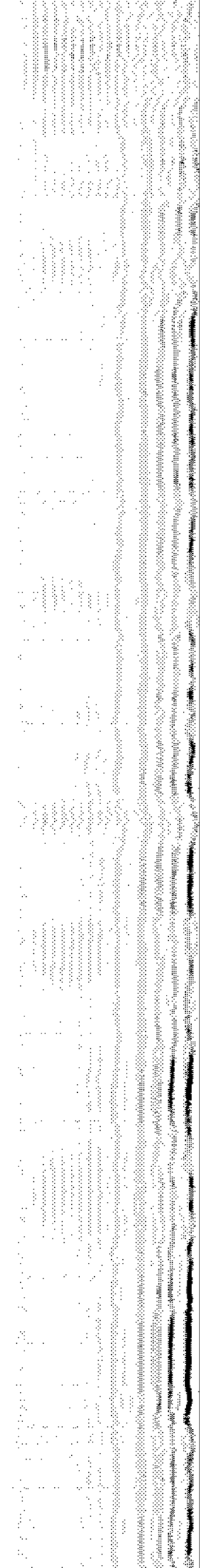
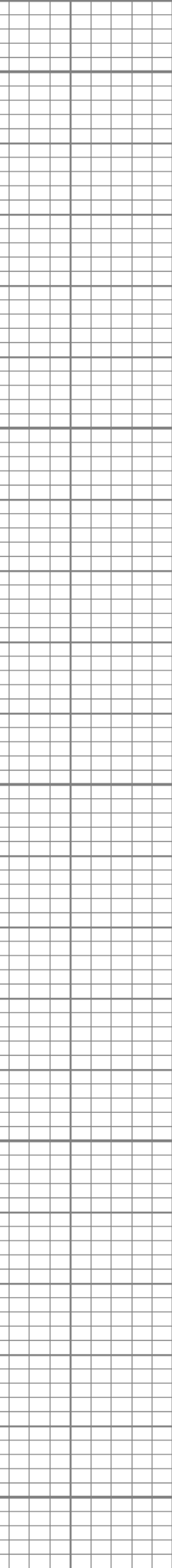
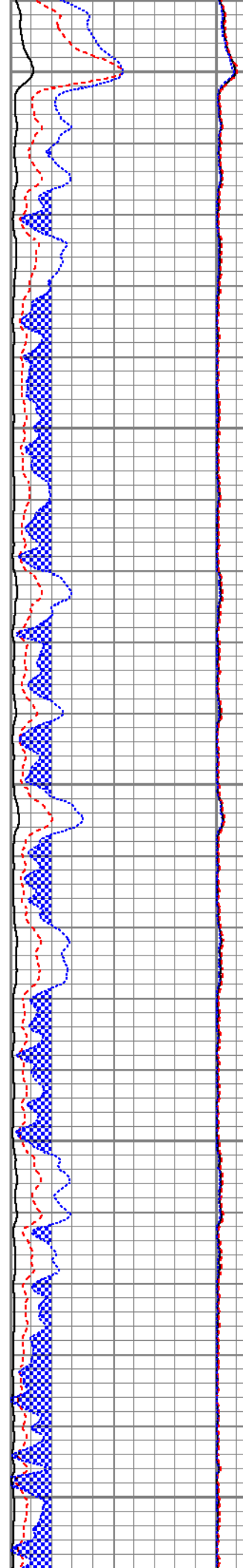


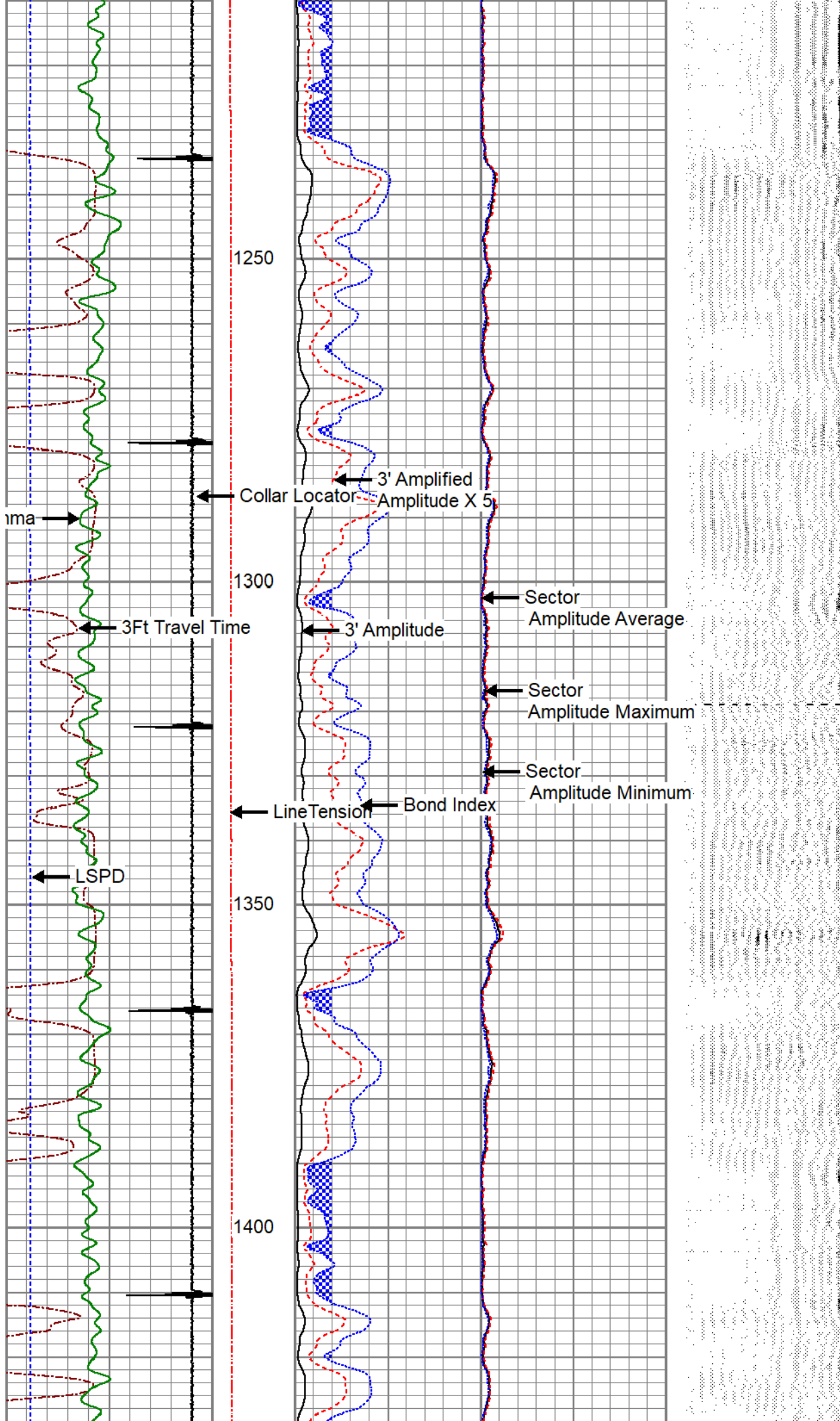


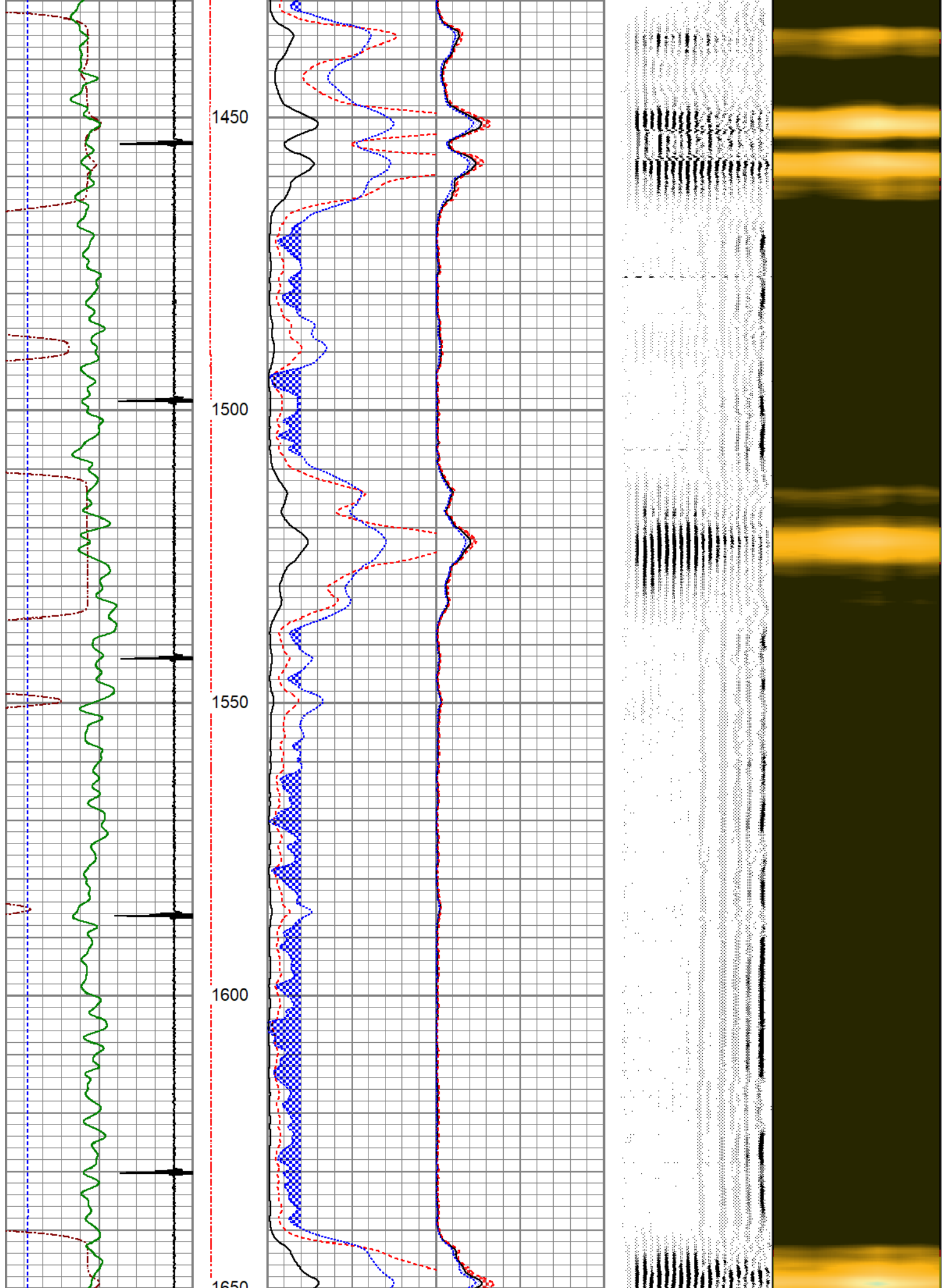


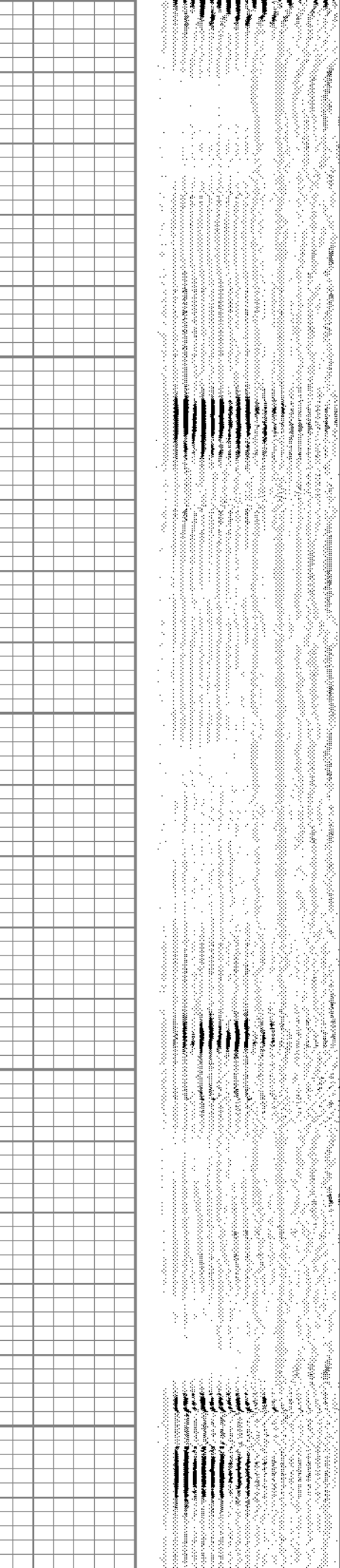
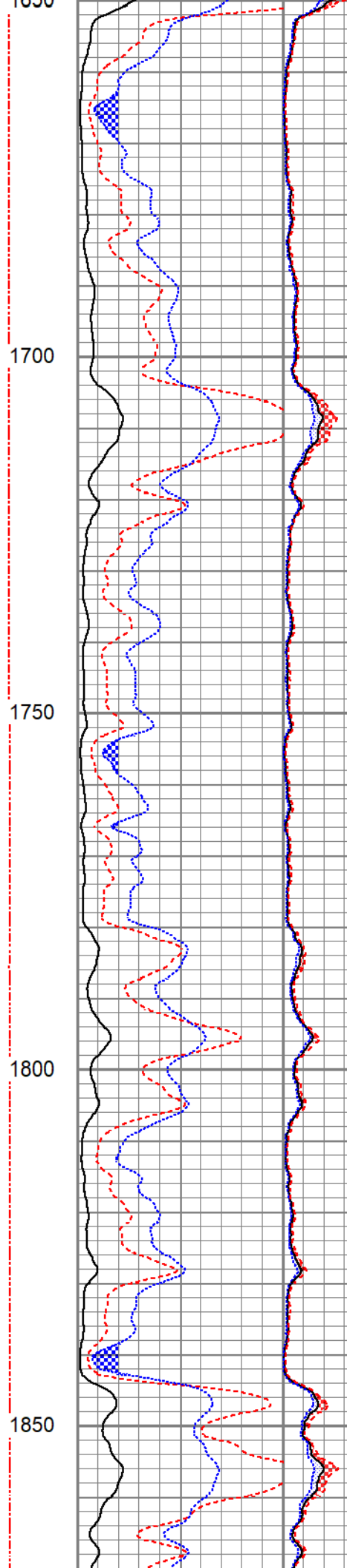
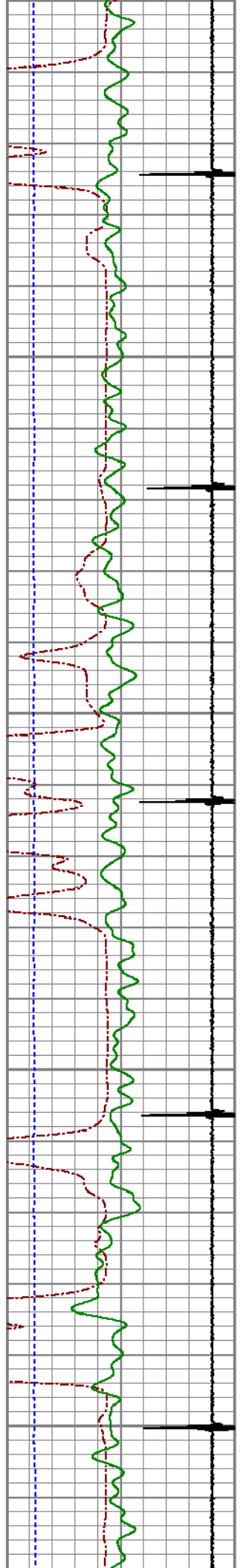


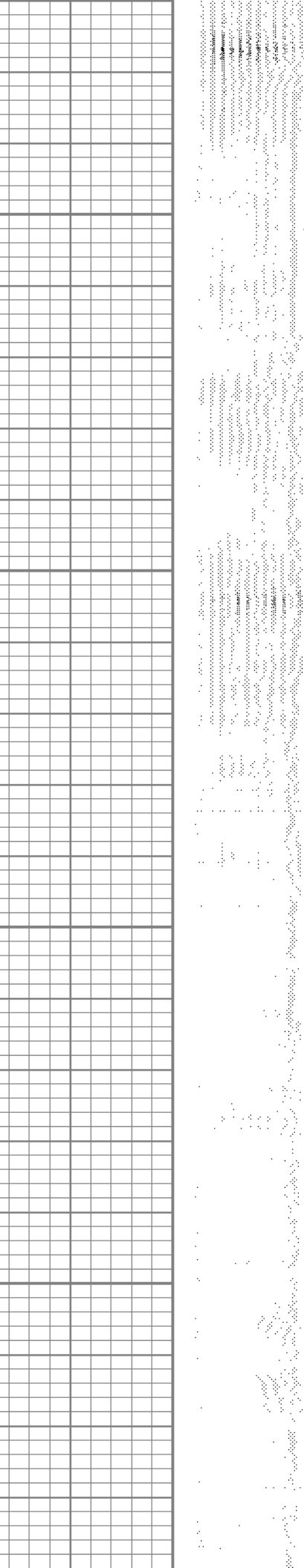
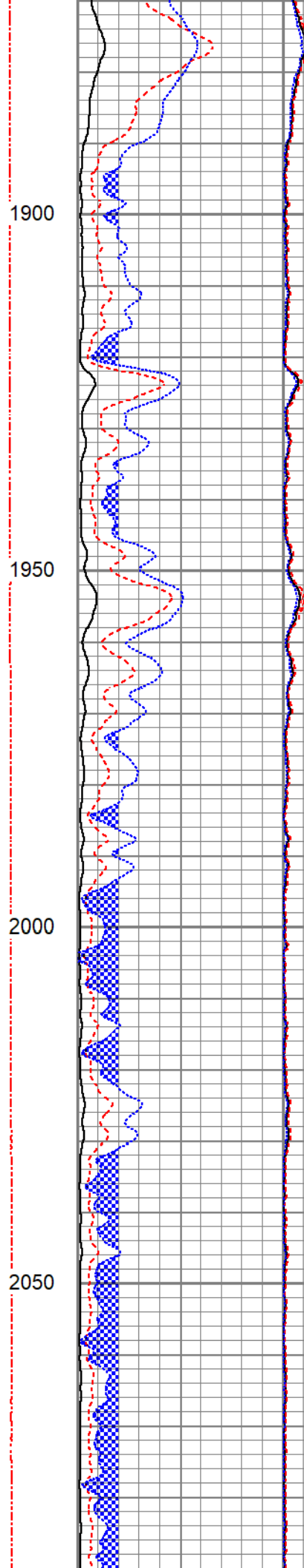
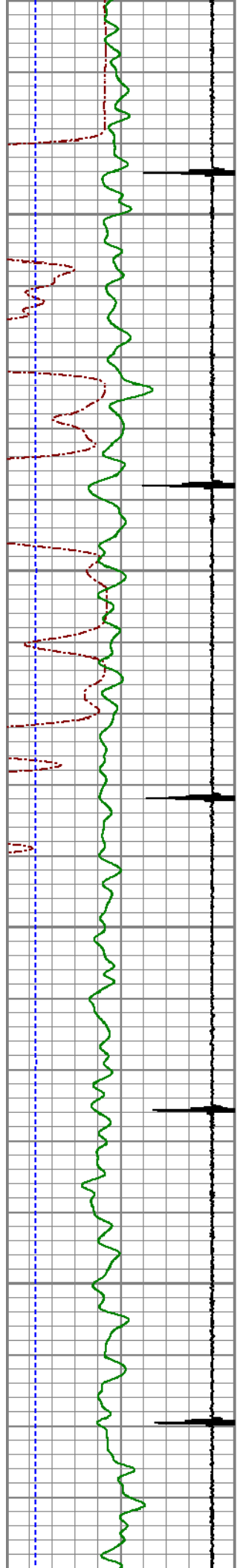
1000
1050
1100
1150
1200

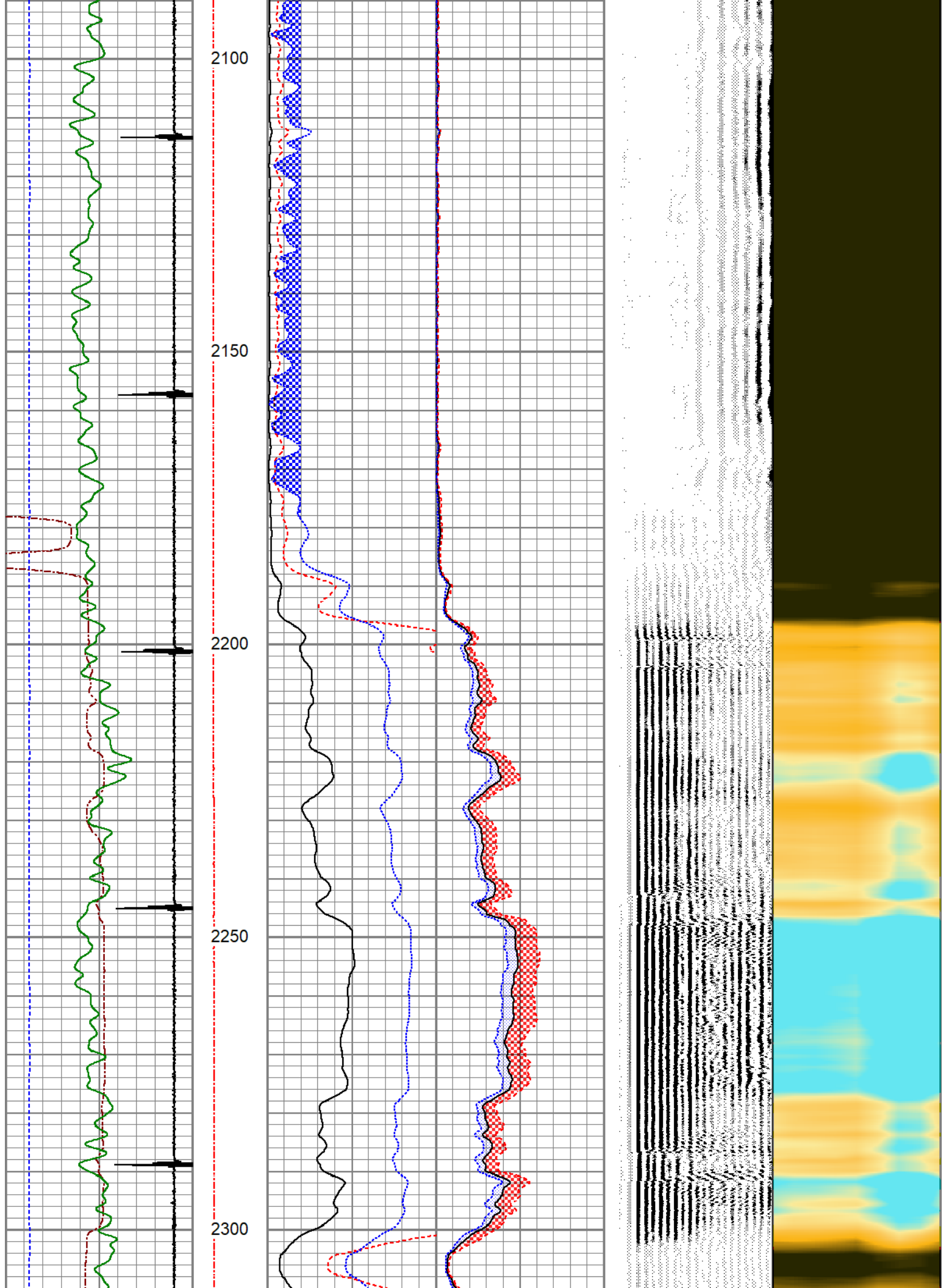


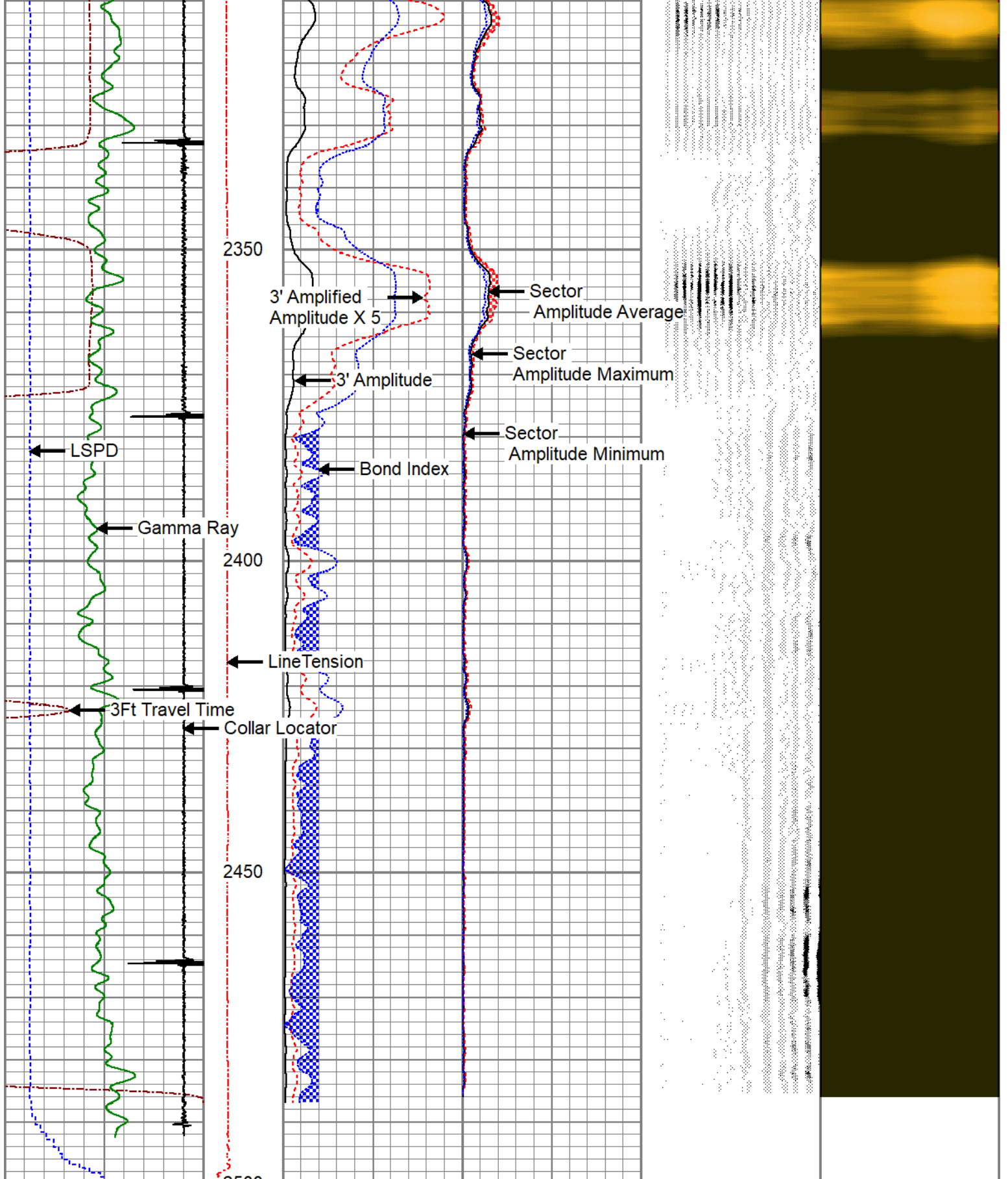












3Ft Travel Time 500 (usec)	Line Tension 0 (lb)	3' Amplitude 0 (mV)	Sector Amplitude Average 0	VDL 200 (usec)	1	Sector Map	8
-9 Collar Locator	0 2000	3' Amplified Amplitude X 5 0 (mV)	0 150	1200			
Gamma Ray 0 (GAPI)		1 Bond Index	Sector Amplitude Maximum 0				
-100 LSPD (ft/min)			0 150				

Sector
Amplitude Minimum
0 150

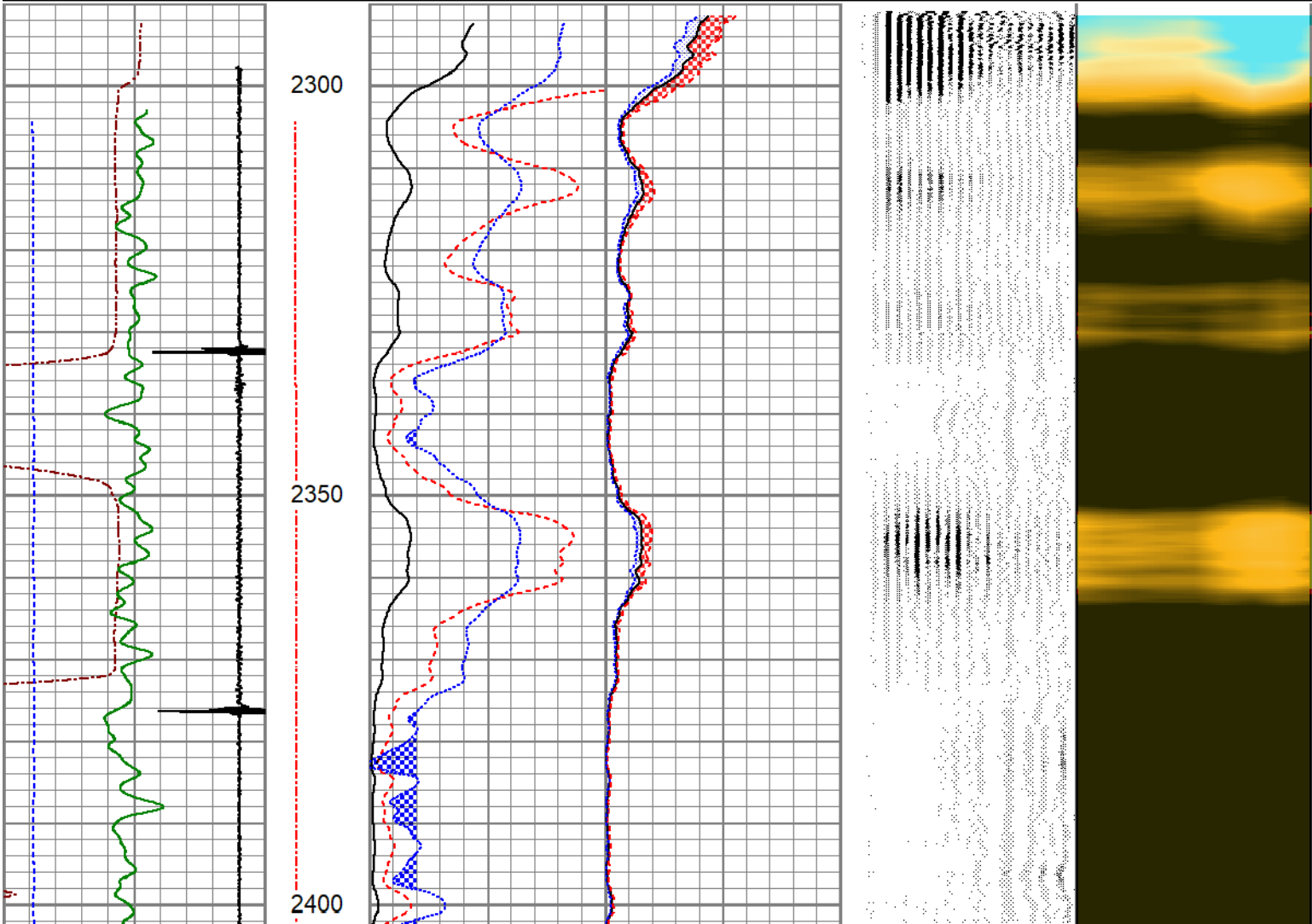


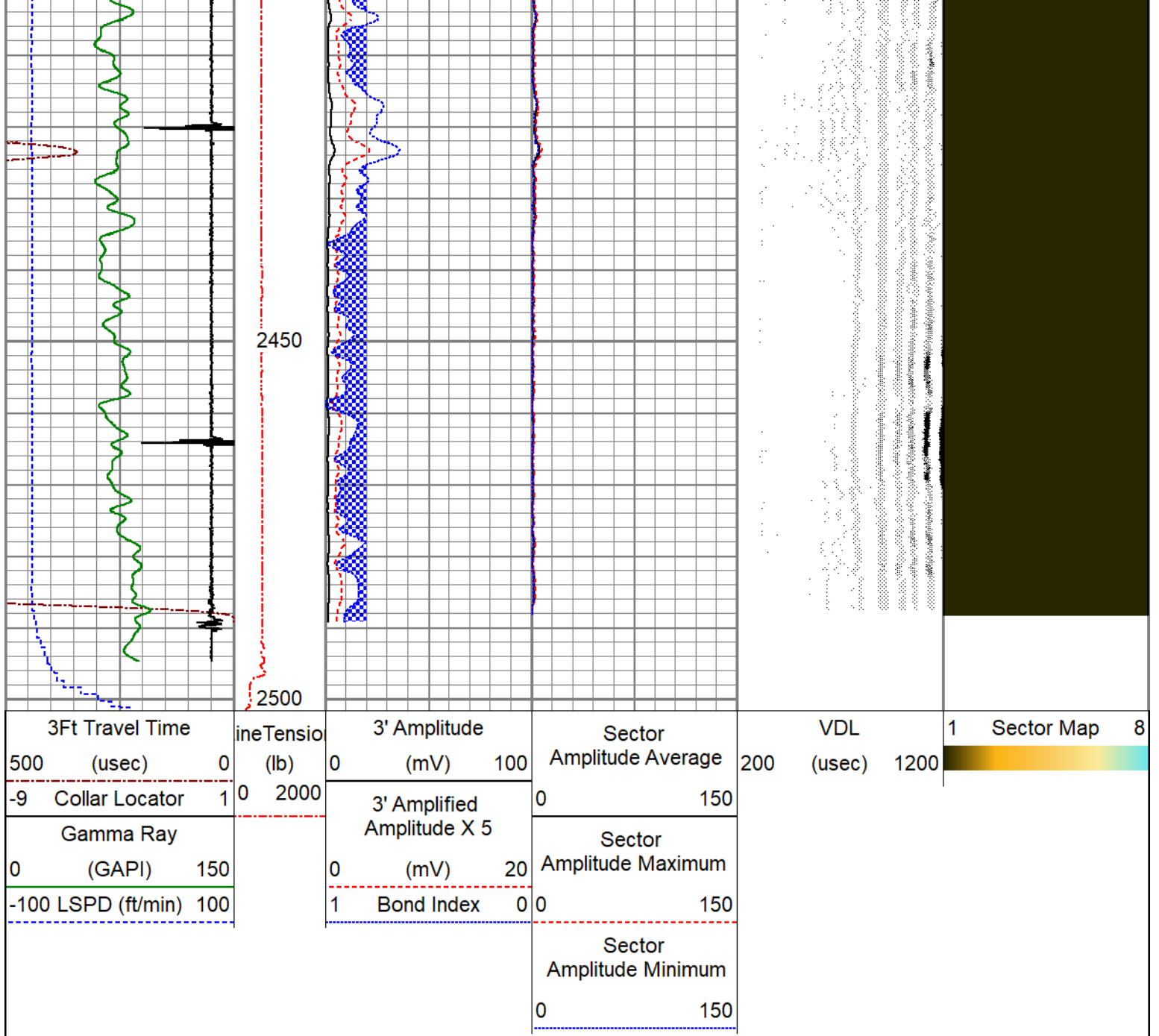
REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

Database File: anadarko_vonderlage 40-36_0512326751_20200303_scbl.db
 Dataset Pathname: pass6
 Presentation Format: pinr_scbl
 Dataset Creation: Tue Mar 03 09:43:00 2020
 Charted by: Depth in Feet scaled 1:240

3Ft Travel Time 500 (usec) 0	ineTensio (lb) 0 2000	3' Amplitude (mV) 100	Sector Amplitude Average 200	VDL (usec) 1200	1 Sector Map 8
-9 Collar Locator 1		3' Amplified Amplitude X 5	0 150		
Gamma Ray 0 (GAPI) 150		0 (mV) 20	Sector Amplitude Maximum		
-100 LSPD (ft/min) 100		1 Bond Index 0	0 150		
			Sector Amplitude Minimum		
			0 150		





Calibration Report

Database File anadarko_vonderlage 40-36_0512326751_20200303_scbl.db
 Dataset Pathname pass8
 Dataset Creation Tue Mar 03 09:46:54 2020

Gamma Ray Calibration Report

Serial Number: 110246
 Tool Model: GR/CCL-A
 Performed: Mon Sep 09 12:21:39 2019

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6660 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1401-41-T
 Tool Model: RBL-DC
 Calibration Casing Diameter: 4.500 in
 Calibration Depth: 689.751 ft

Master Calibration, performed Tue Mar 03 09:30:54 2020:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	1.141	1.000	81.196	70.213	1.099
CAL	-0.001	1.496				
5'	-0.002	1.105	1.000	81.196	72.477	1.109
SUM						
S1	-0.001	1.128	0.000	100.000	88.569	0.122
S2	-0.001	1.156	0.000	100.000	86.420	0.112
S3	-0.001	1.174	0.000	100.000	85.060	0.119
S4	-0.001	1.186	0.000	100.000	84.197	0.111
S5	-0.001	1.175	0.000	100.000	85.030	0.118
S6	-0.001	1.152	0.000	100.000	86.659	0.127
S7	-0.001	1.130	0.000	100.000	88.397	0.126
S8	-0.001	1.131	0.000	100.000	88.288	0.123

Air Zero Calibration, performed Thu Nov 29 15:24:07 2018:

	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



PIONEER
 Pioneer Energy Services

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 Well VONDERLAGE 40-36
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