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Pioneer Energy Services

CEMENT BOND LOG WITH GAMMA RAY

Comp. ANADARKO PETROLEUM CORP.
Well OSMUN EUNICE M GU #1
Field WATTENBERG
Co. WELD
State COLORADO

Company **ANADARKO PETROLEUM CORP.**
Well **OSMUN EUNICE M GU #1**
Field **WATTENBERG**
County **WELD** State **COLORADO**

Location: **SW NE** API #: 05-123-07647
1650' FNL & 1650' FEL
LAT: 40.19870 LONG: -104.77880
SEC 28 TWP 3N RGE 66W
Permanent Datum GL
Log Measured From GL 0 Elevation 4963'
Drilling Measured From KB Above Perm. Datum
SQZ
Elevation
K.B. 4973'
D.F.
G.L. 4963'

Date of Service	2019/12/16		
Run Number	ONE		
Depth Driller or PBTD	8015		
Depth Logger	690'		
Bottom Log Interval	690'		
Top Log Interval	SURFACE		
Open Hole Size	7-7/8"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	8.4		
Max. Recorded Temperature	N/A		
Max. Wellhead Pressure	ZERO		
Wellhead Connection	PACK OFF		
Estimated Cement Top			
Unit Number	P-133		
Wireline Size	9/32"		
Location	FORT MORGAN CO.		
Recorded By	P LOPEZ		
Witnessed By	MR. JEREMY DUTY		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	8.63	24	SURFACE 584'
Production Casing	4.50	11.6	SURFACE 8013'
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.
ALL WIRELINE DEPTH
TOOL ZEROED AT GROUND LEVEL
RBT TANKED CALIBRATED ON 6/1/2019

THANK YOU FOR USING PIONEER ENERGY SERVICES!

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

Log Variables

DatabaseC:\ProgramData\Warrior\Data\anadarko_osmun eunice m gu #1_0512307647_20190
Dataset field/well/run1/pass8.1/_vars_

Top - Bottom

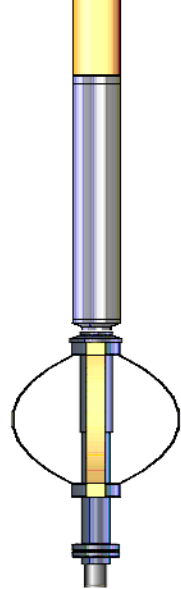
BOREID in 7.875	BOTTEMP degF 150	CASEOD in 4.5	CASETHCK in 0.25	CASEWGHT lb/ft 11.5	MAXAMPL mV 81.2	MINAMPL mV 0.7
MINATTN db/ft 0.8	PERFS 0	PPT usec 249	SRFTEMP degF 50	TDEPTH ft 0		


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) Probe 2 3/4" Radii Bond-Corrosion Package	48.75	2.75	100.00
WVFS8	14.75					
WVFS7	14.75					
WVFS6	14.75					
WVFS5	14.75					
WVFS4	14.75					
WVFS3	14.75					
WVFS2	14.75					
WVFS1	14.75					
WVFCAL	14.75					
WV3FT	14.75					
WV5FT	13.75					
			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 (1104.54 2 3/4" Gamma with CCL-Analog	1104.54	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_osmun eunice m gu #1_0512307647_20190612_scbl.db: field/well/run1/pass8.1 Total length: 23.22 ft Total weight: 208.00 lb O.D.: 2.75 in						



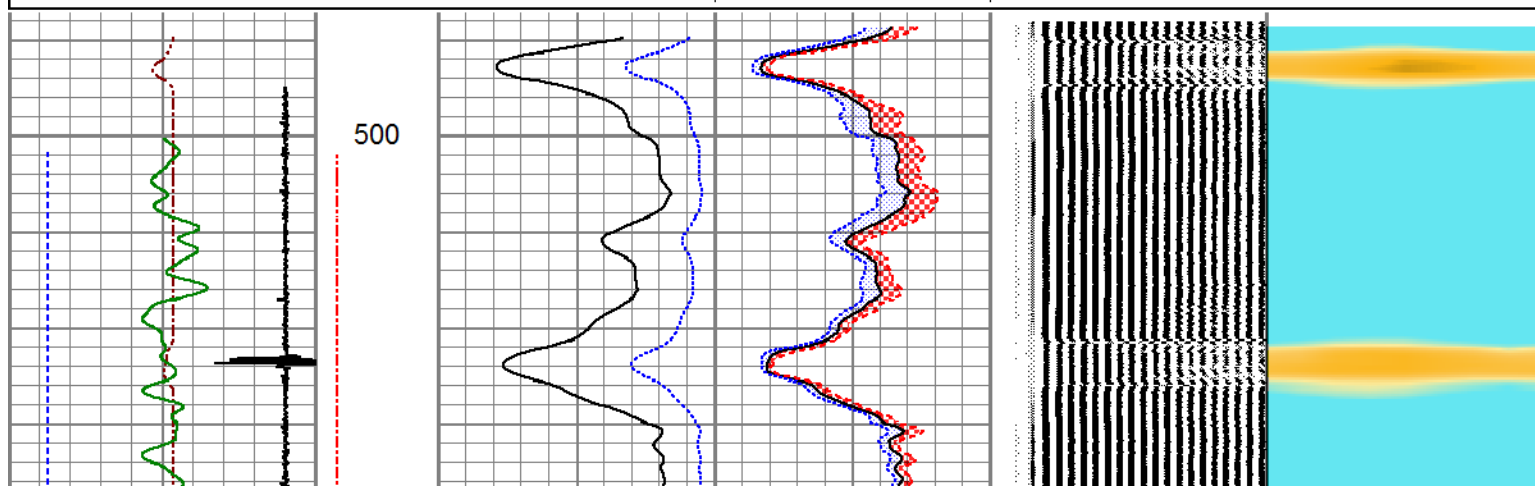
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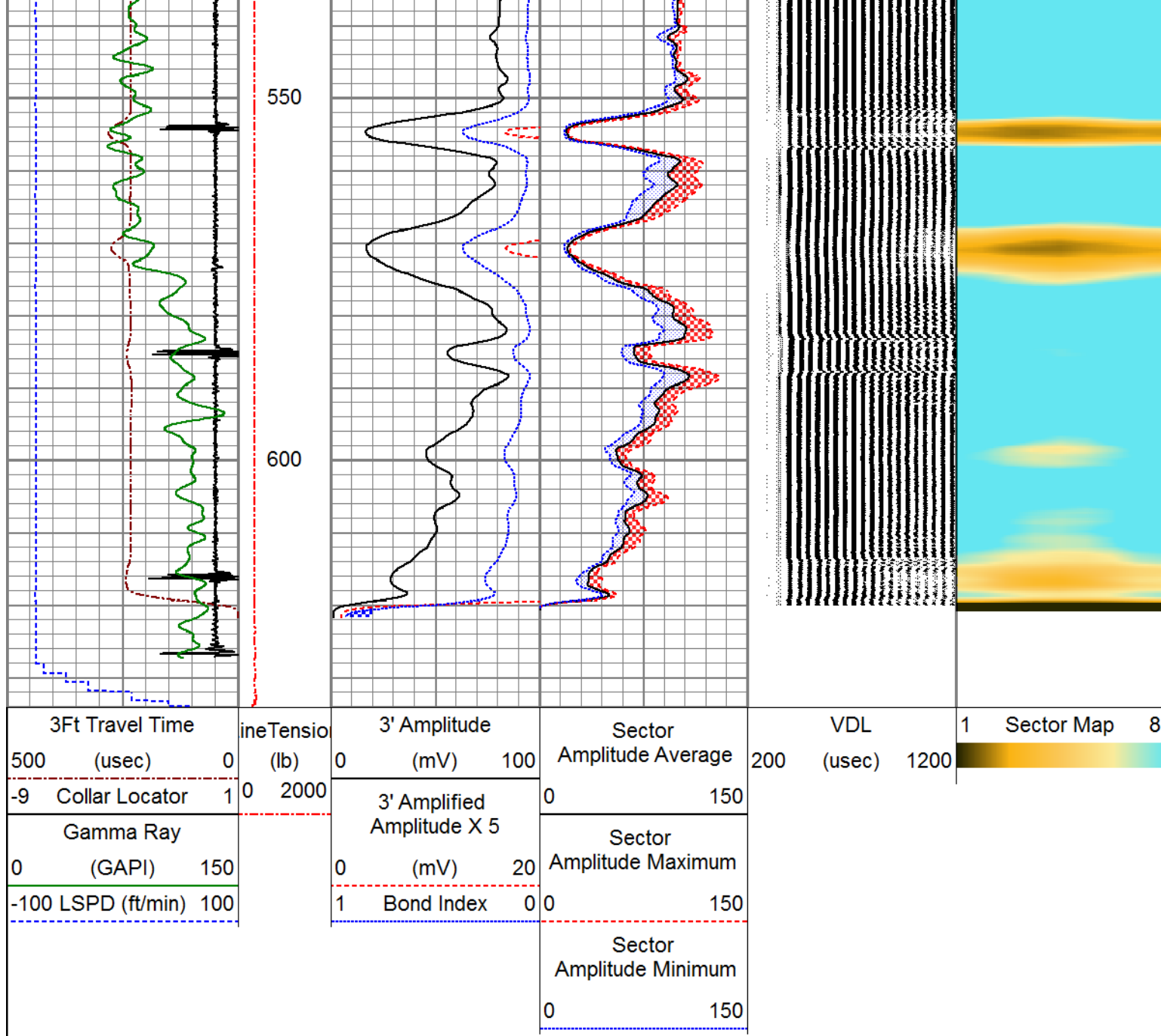
FREE PIPE SECTION


ZERO PSI APPLIED AT SURFACE

Database File		anadarko_osmun eunice m gu #1_0512307647_20190612_scbl.db					
Dataset Pathname		pass4					
Presentation Format		pinr_scbl					
Dataset Creation		Wed Jun 12 10:40:59 2019					
Charted by		Depth in Feet scaled 1:240					

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





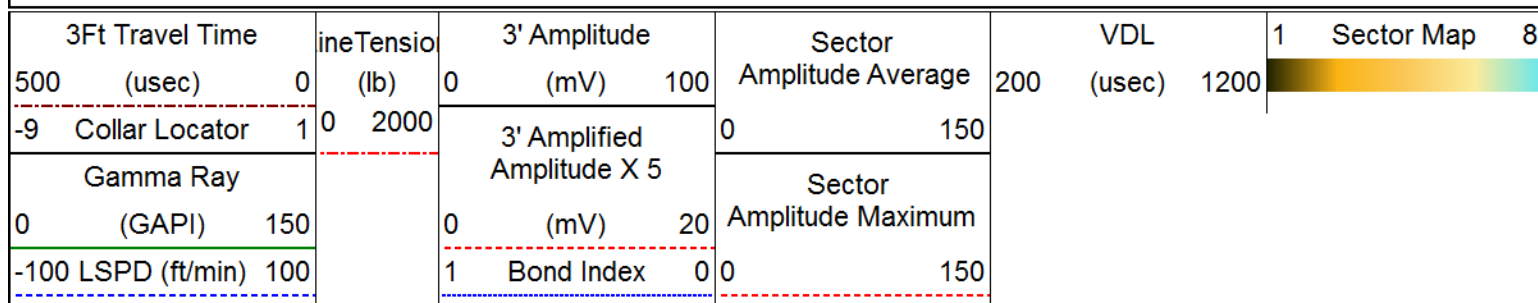


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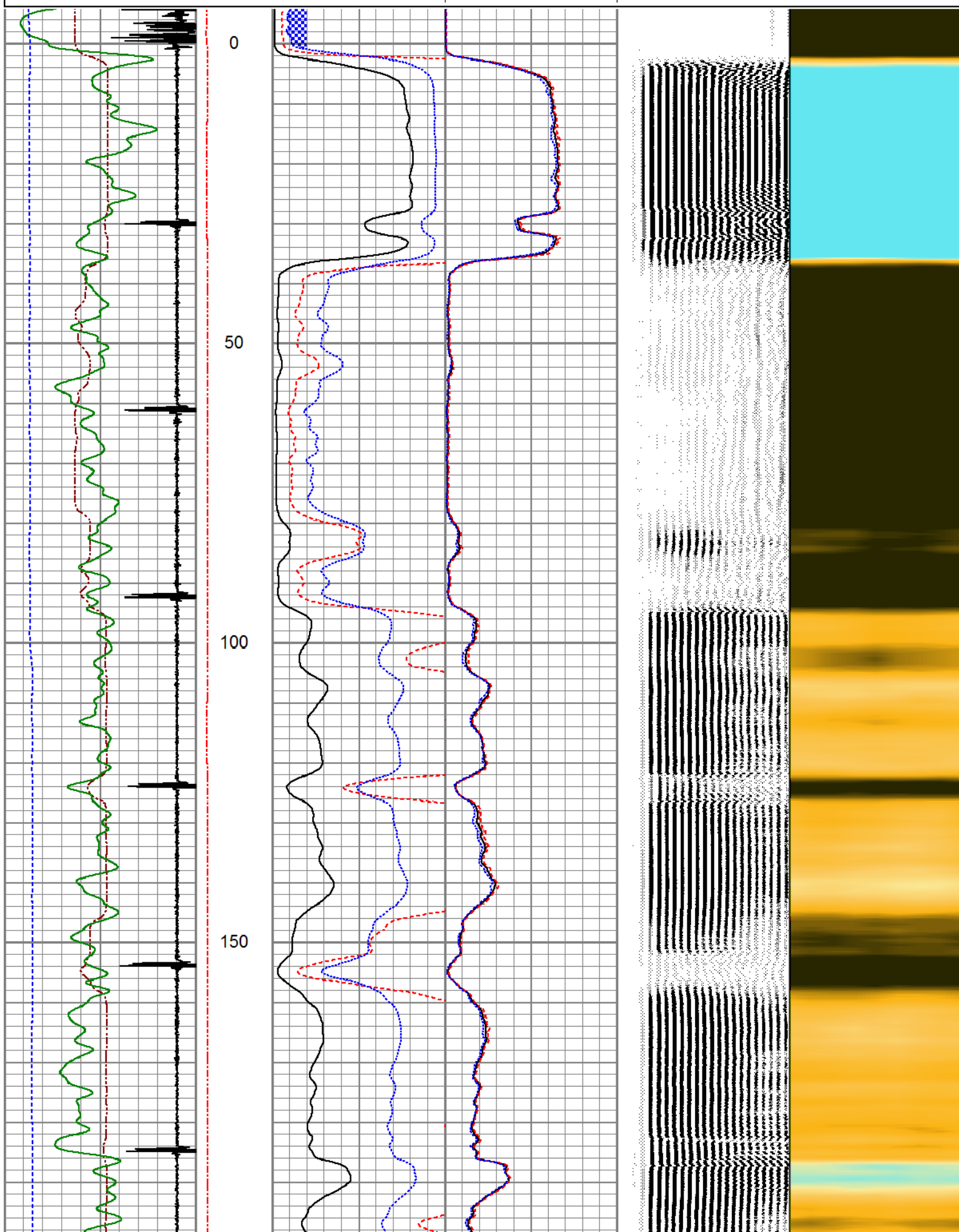
MAIN LOG

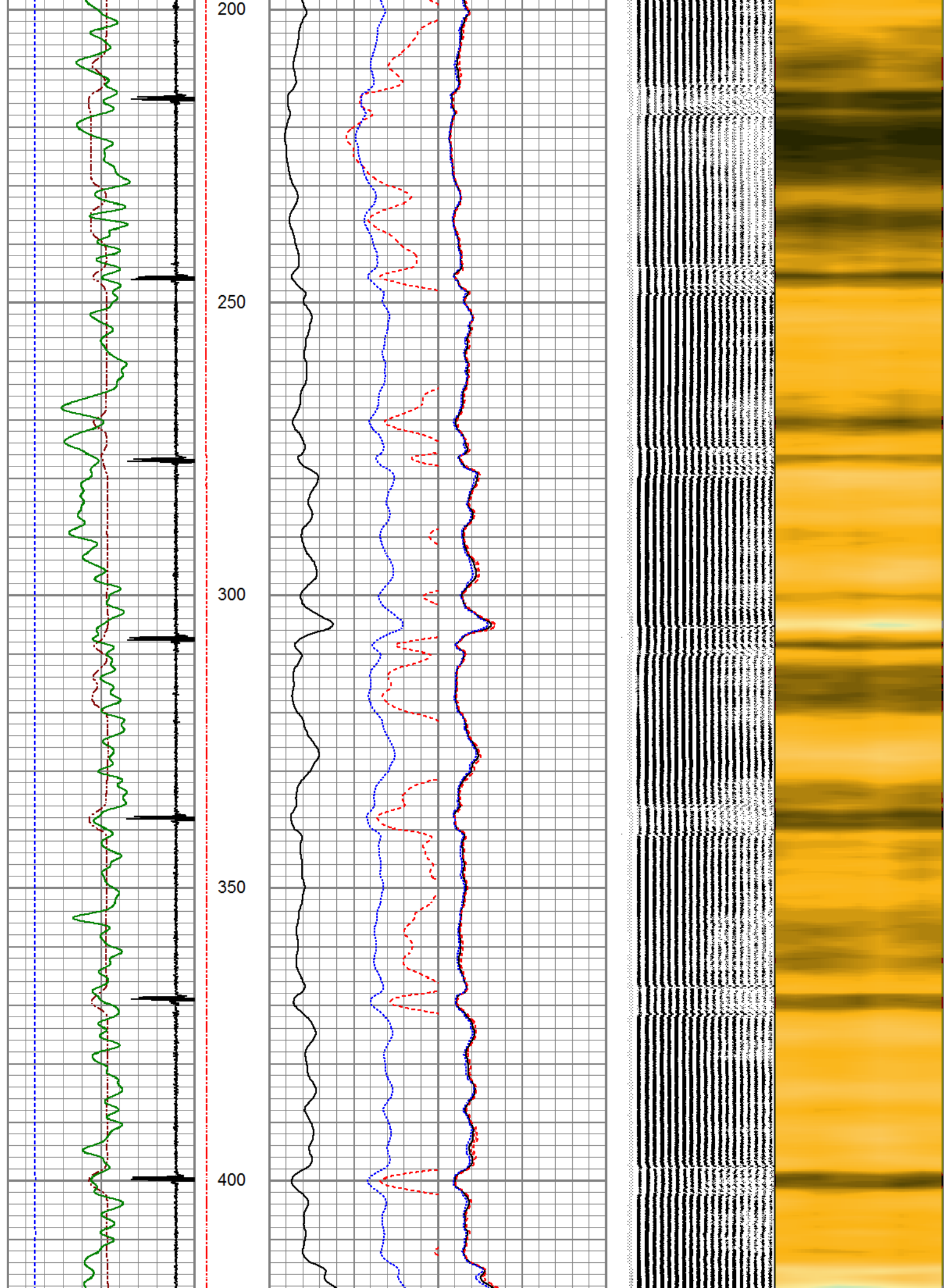
ZERO PSI APPLIED AT SURFACE

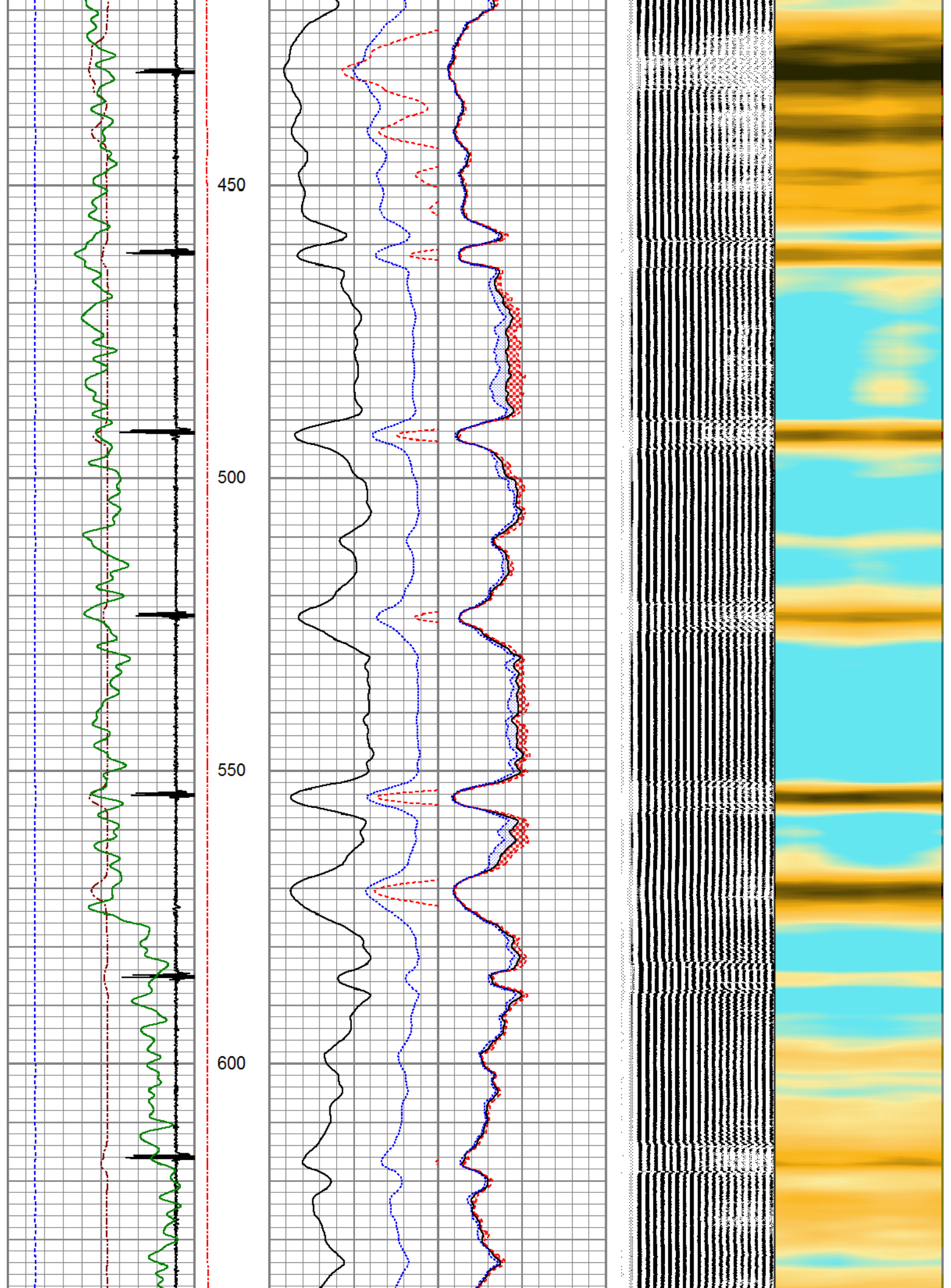
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Dataset Pathname	pass8.1
Presentation Format	pinr_scbl
Dataset Creation	Wed Jun 12 11:10:01 2019
Charted by	Depth in Feet scaled 1:240

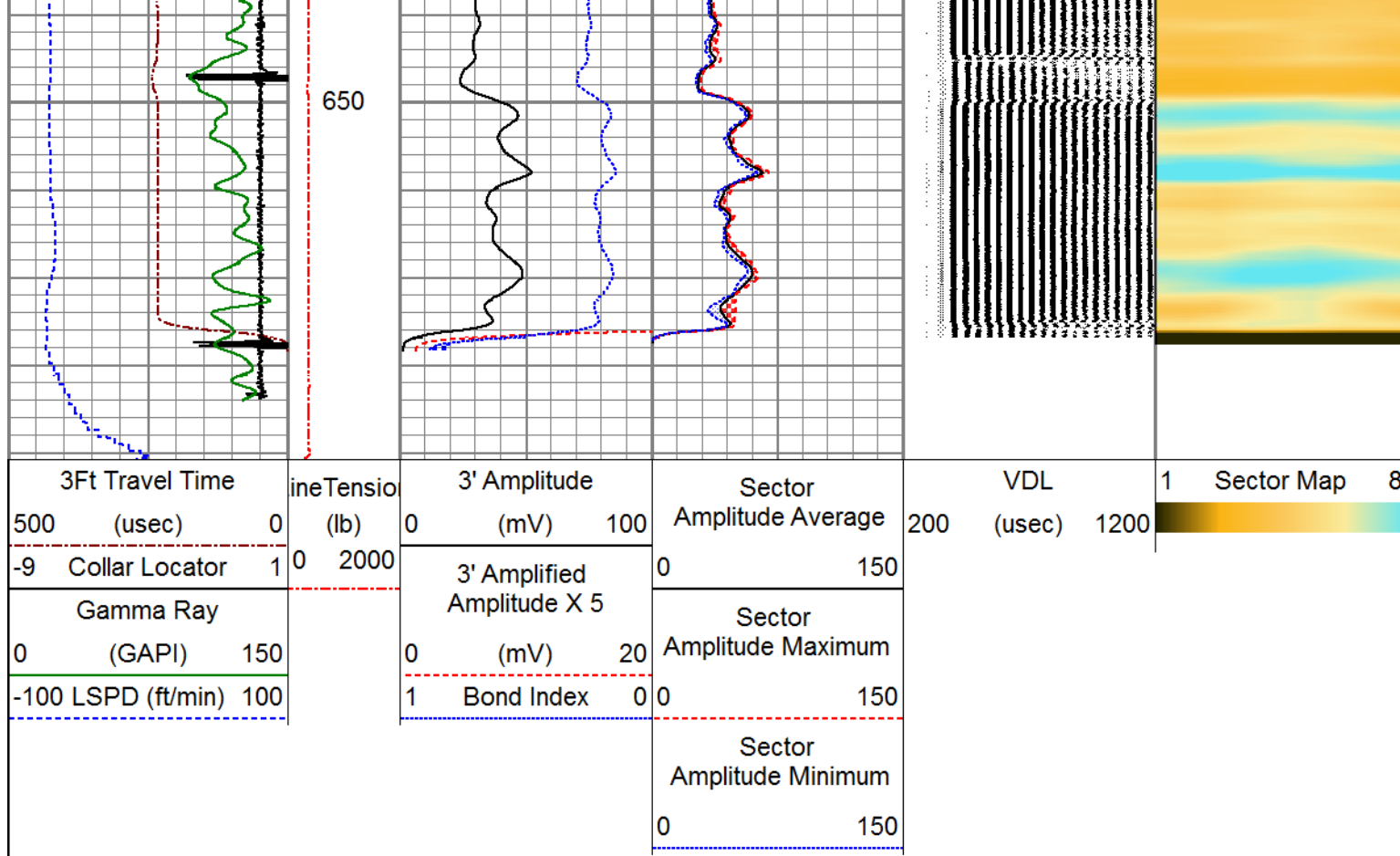



Sector
Amplitude Minimum
0 150









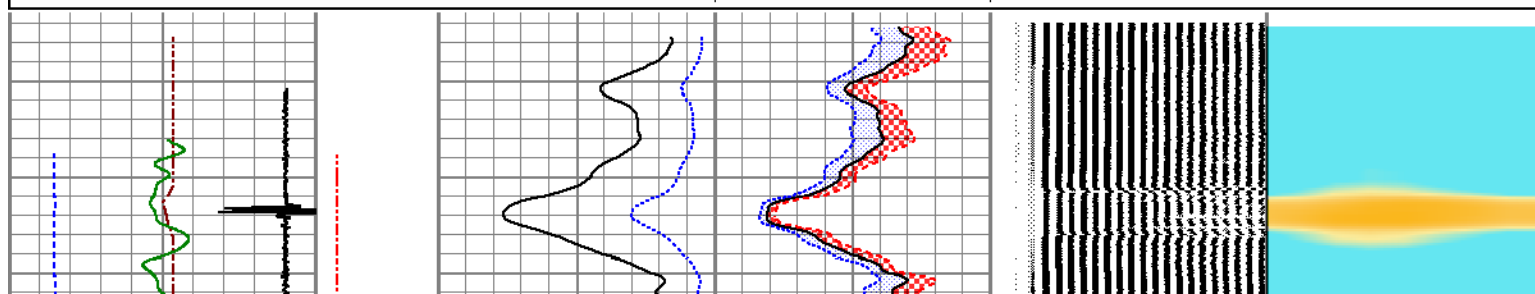
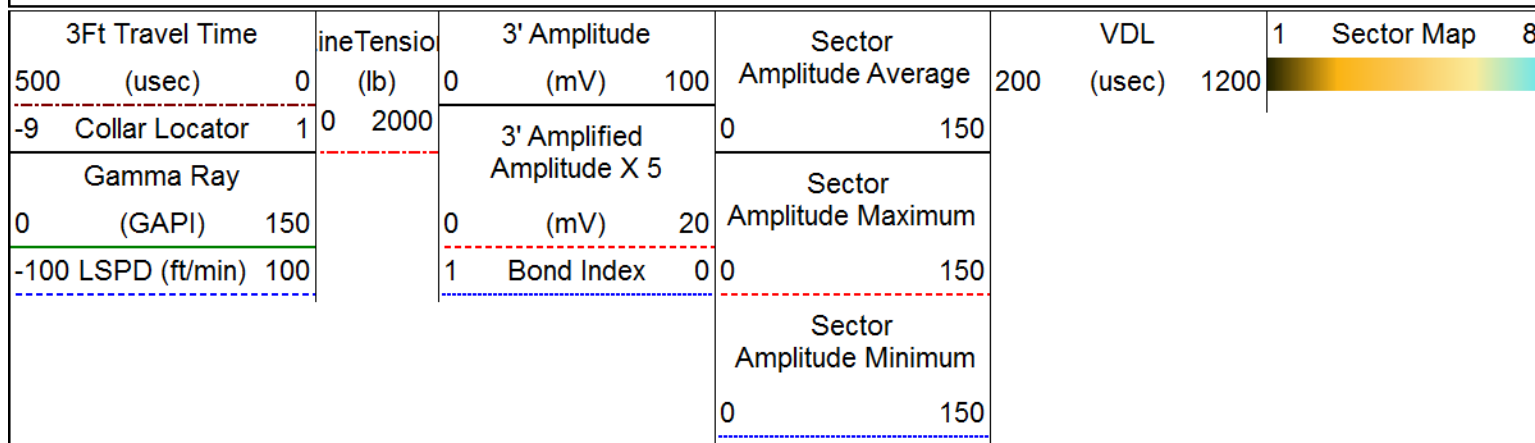


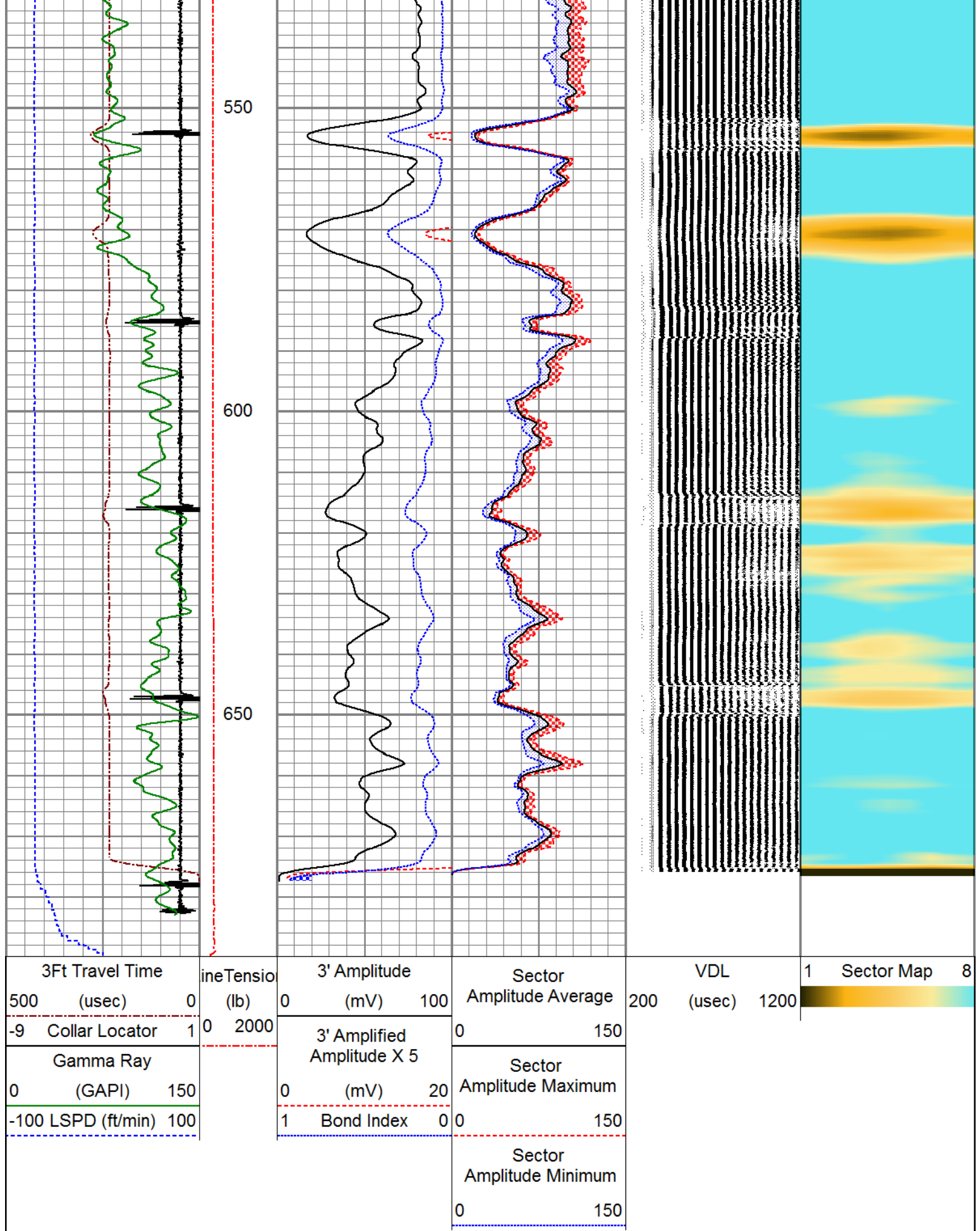
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REPEAT SECTION

ZERO PSI APPLIED AT SURFACE

Database File	anadarko_osmun eunice m gu #1_0512307647_20190612_scb1.db
Dataset Pathname	pass6
Presentation Format	pinr_scb1
Dataset Creation	Wed Jun 12 10:44:43 2019
Charted by	Depth in Feet scaled 1:240





Calibration Report

Database File anadarko_osmun eunice m gu #1_0512307647_20190612_scbl.db
 Dataset Pathname pass8.1

Gamma Ray Calibration Report

Serial Number:	110246	
Tool Model:	GR/CCL-A	
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:	FW1401-41-T	
Tool Model:	RBL-DC	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	561.292	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.004	1.230	1.000	81.196	65.011	1.235
CAL	0.000	1.501				
5'	0.000	1.146	1.000	81.196	69.978	0.999
SUM						
S1	0.000	1.236	0.000	100.000	80.901	-0.004
S2	0.000	1.267	0.000	100.000	78.959	-0.004
S3	0.000	1.299	0.000	100.000	76.985	-0.004
S4	-0.001	1.326	0.000	100.000	75.362	0.095
S5	0.000	1.337	0.000	100.000	74.816	-0.005
S6	-0.004	1.288	0.000	100.000	77.364	0.317
S7	-0.000	1.228	0.000	100.000	81.448	0.016
S8	0.000	1.217	0.000	100.000	82.203	-0.004

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





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Well

OSMUN EUNICE M GU #1

Field

WATTENBERG

County

WELD

State

COLORADO