



RADIAL BOND LOG WITH GAMMA RAY

Pioneer Energy Services

Comp. RUSSELL OIL, INC.
Well RUMBACK 'A' # 16-1
Field RUMBACK (EXTENSION)
Co. LOGAN
State KANSAS

Company **RUSSELL OIL, INC.**
Well **RUMBACK 'A' # 16-1**
Field **RUMBACK (EXTENSION)**
County **LOGAN** State **KANSAS**

Location: API # : 15-109-21474-00-00
909' FSL & 2188' FEL
SEC 16 TWP 11S RGE 32W
PERFORATE
Permanent Datum GROUND LEVEL Elevation 3020'
Log Measured From KB 5' Above Perm. Datum
Drilling Measured From KELLY BUSHING
K.B. 3025'
D.F. N/A
G.L. 3020'

Date of Service	10/04/2016		
Run Number	ONE		
Depth Driller or PBTD	4700'		
Depth Logger	4675'		
Bottom Log Interval	4673'		
Top Log Interval	3250'		
Open Hole Size	7.875"		
Type Fluid	WATER		
Fluid Level	410'		
Fluid Density	N/A		
Max. Recorded Temperature	123		
Max. Wellhead Pressure	0 PSI		
Wellhead Connection	N/A		
Estimated Cement Top	3450'		
Unit Number	06		
Wireline Size	5/16"		
Location	COLBY, KS		
Recorded By	D.WALKER		
Witnessed By	TODD BROWN		
	Size	Wt/Ft	Top
Tubing Record			Bottom
Surface Casing	8.625"	23LBS	0' 317'
Production Casing	5.5"	15.5LBS	0' TD
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.
OAKLEY, KANSAS
HWY 83 AND OLD 40,
2 1/4 SOUTH, WEST AND NORTH INTO

THANK YOU FOR USING PIONEER ENERGY SERVICES!

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: D.WALKER Operator: CRAIG SCHOENROGGE Operator: Operator:	R-6-1	100056

DatabaseC:\ProgramData\Warrior\Data\russell_oil_rumback_a_16-1_sgrcbl.db
Dataset field/well/run1/pass4/ vars_

PPT usec 0	CASEWGHT lb/ft 15.5	MAXAMPL mV 0	MINAMPL mV 1	MINATTN db/ft 0.8	SRFTEMP degF 60	CASETHCK in 0	CASEOD in 5.5
PERFS 0	TDEPTH ft 4700	BOTTEMP degF 123	BOREID in 7.875				

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
WVFS8	11.63		RBT-Probe (4.5040904) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	107.00
WVFS7	11.63					
WVFS6	11.63					
WVFS5	11.63					
WVFS4	11.63					
WVFS3	11.63					
WVFS2	11.63					
WVFS1	11.63					
WVFCAL	11.63					
WVF3FT	11.63					
WVF5FT	10.63					
			CENT-Probe Probe Centralizer	2.83	2.75	20.00
CCL	3.63					

GR	2.30		GR_CCL-Probe0004 (Probe04)	4.54	2.75	50.00
Dataset: russell_oil_rumback_a_16-1_sgrcbl.db: field/well/run1/pass4 Total length: 16.13 ft Total weight: 177.00 lb O.D.: 2.75 in						

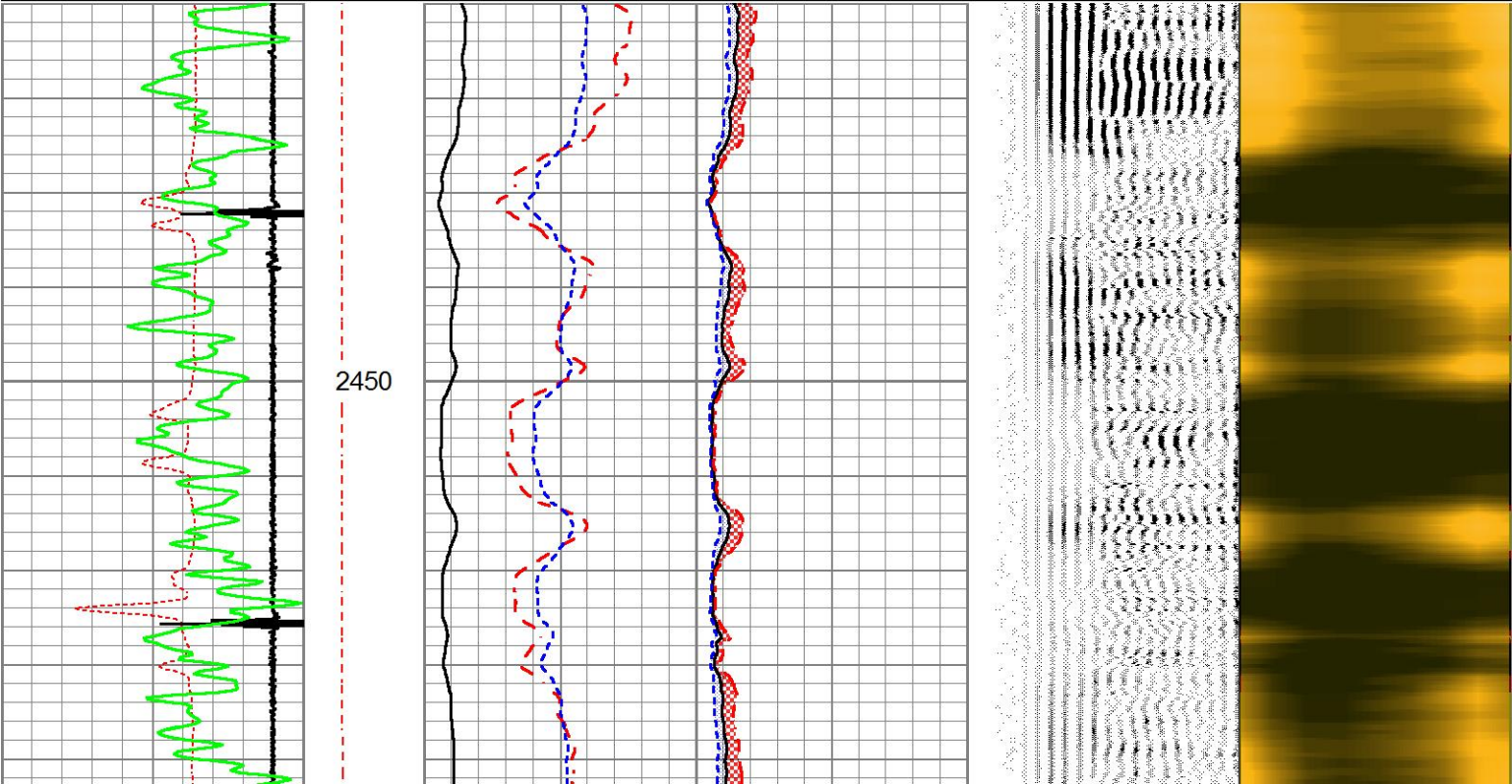


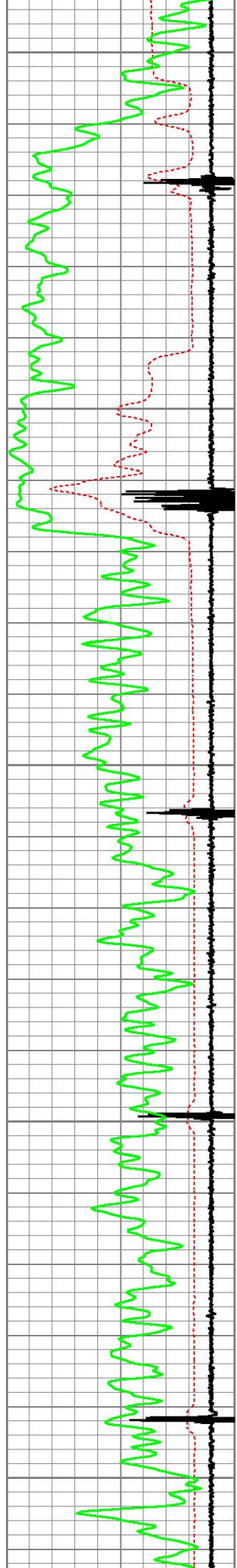
DV TOOL @ 2562

0 PSI SURFACE PRESSURE

Database File	russell_oil_rumback_a_16-1_sgrcbl.db
Dataset Pathname	pass4
Presentation Format	pinr_scbl
Dataset Creation	Tue Oct 04 10:49:53 2016
Charted by	Depth in Feet scaled 1:240

3' Travel Time			Line Tension	3' Amplitude		Sector Amplitude Average	200	VDL	1200	1	Sector Map	8	
				0	(mV)								100
500	(usec)	235	0 (I2000	3' Amplified Amplitude X 5		0							150
-9	Collar Locator	1				Sector Amplitude Maximum							
0	Gamma Ray	150		0 (mV)		20							
				1 Bond Index		0							
				Sector Amplitude Minimum									
						0	150						





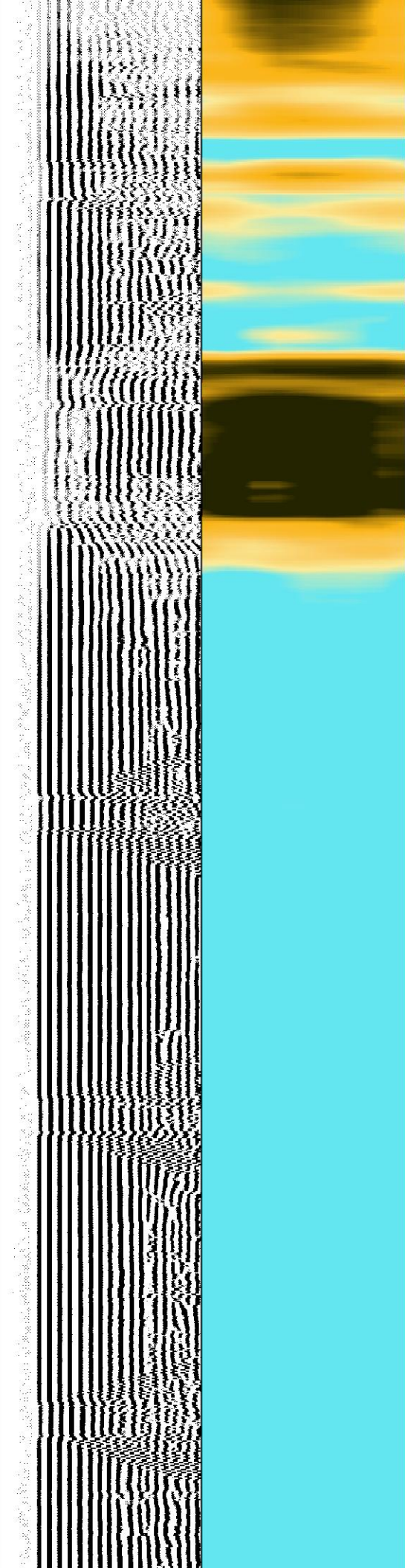
2500

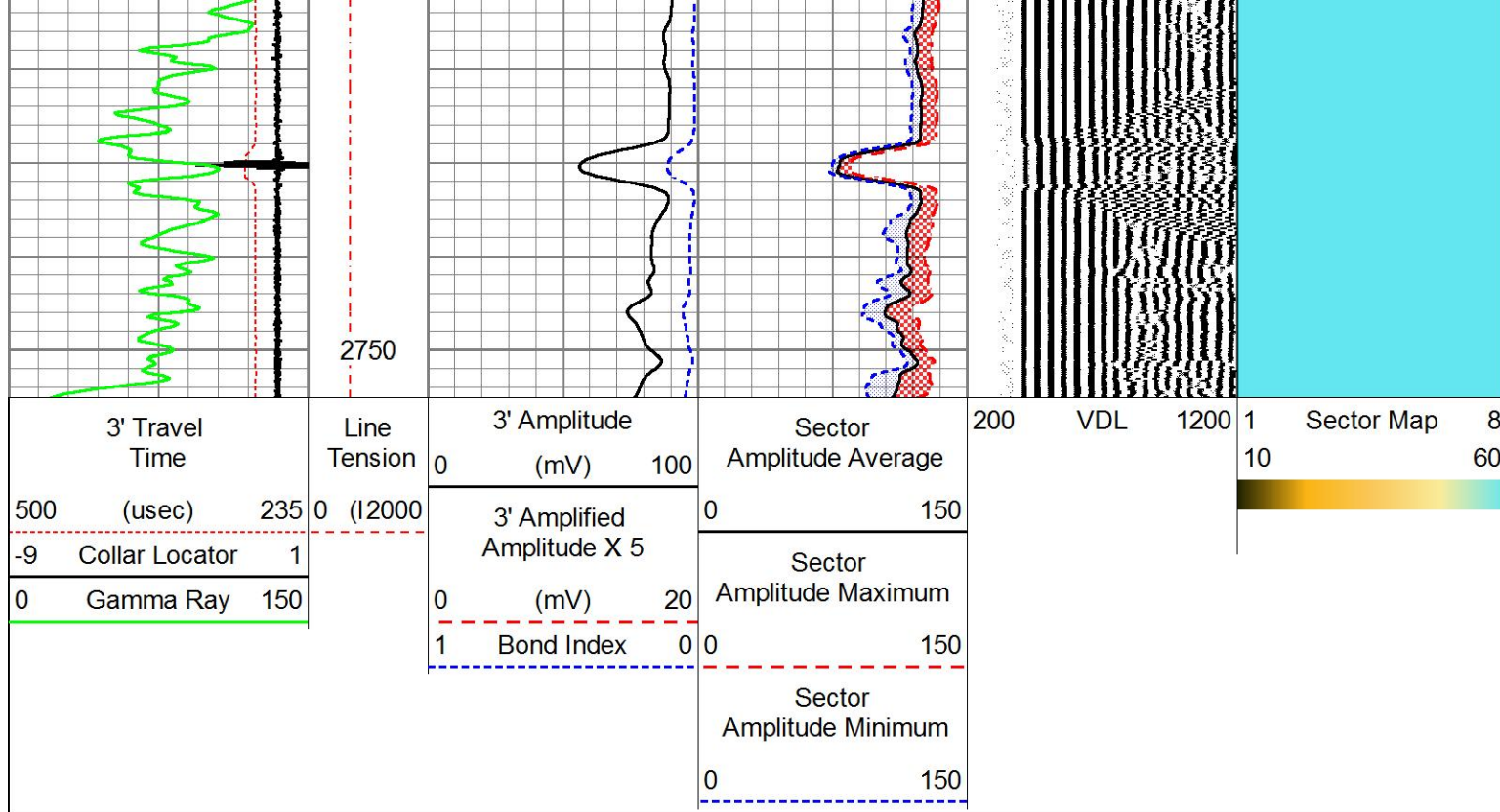
2550

2600

2650

2700



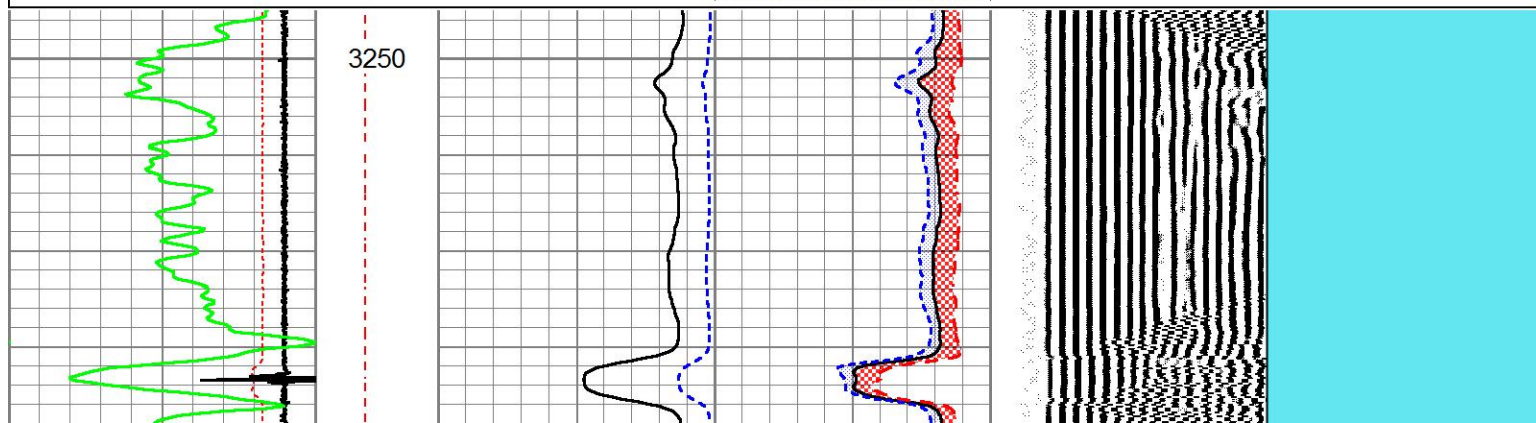
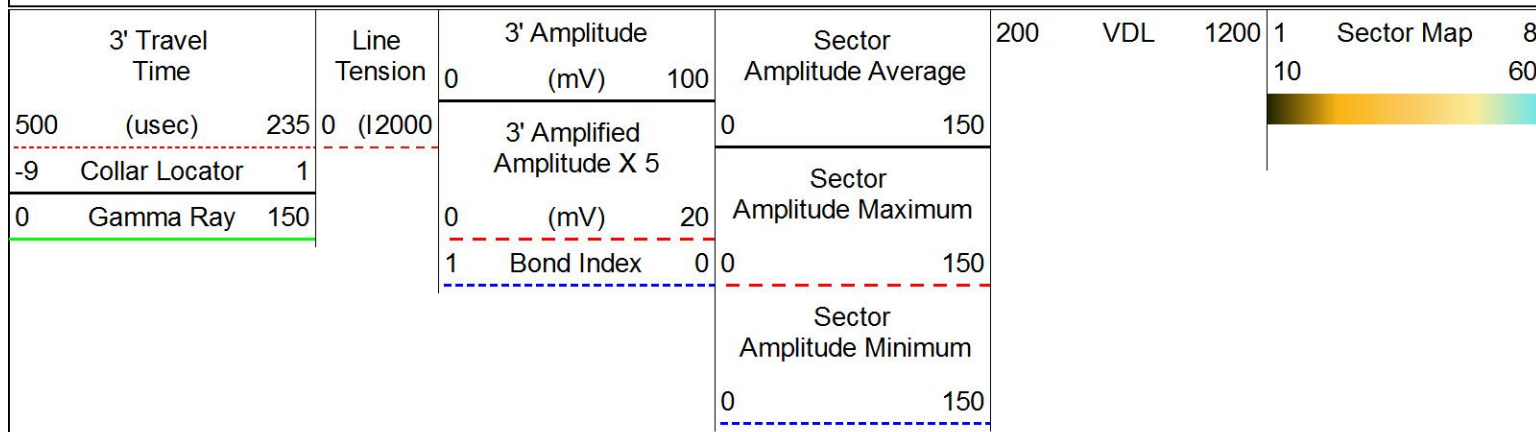


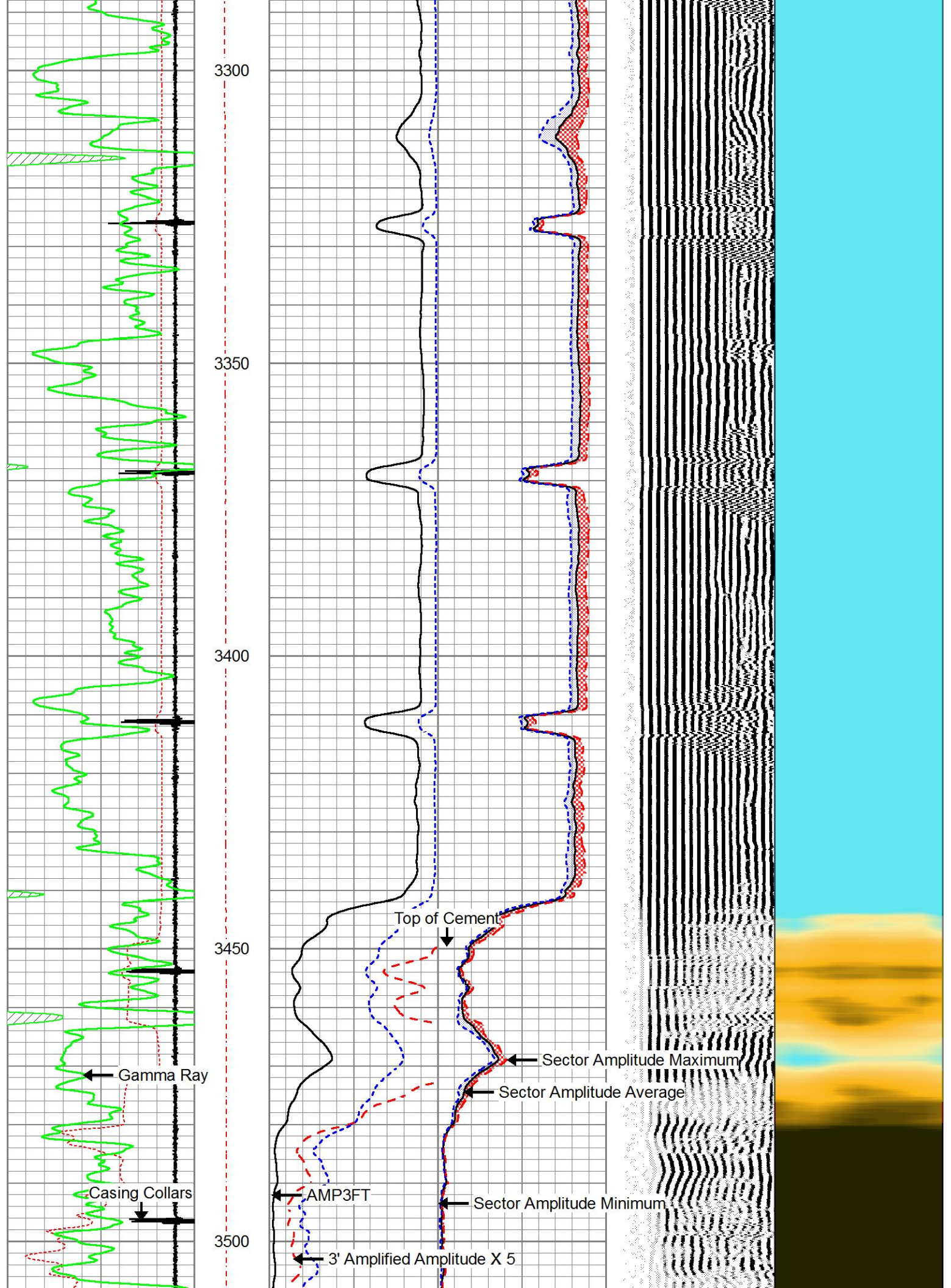
Pioneer Energy Services

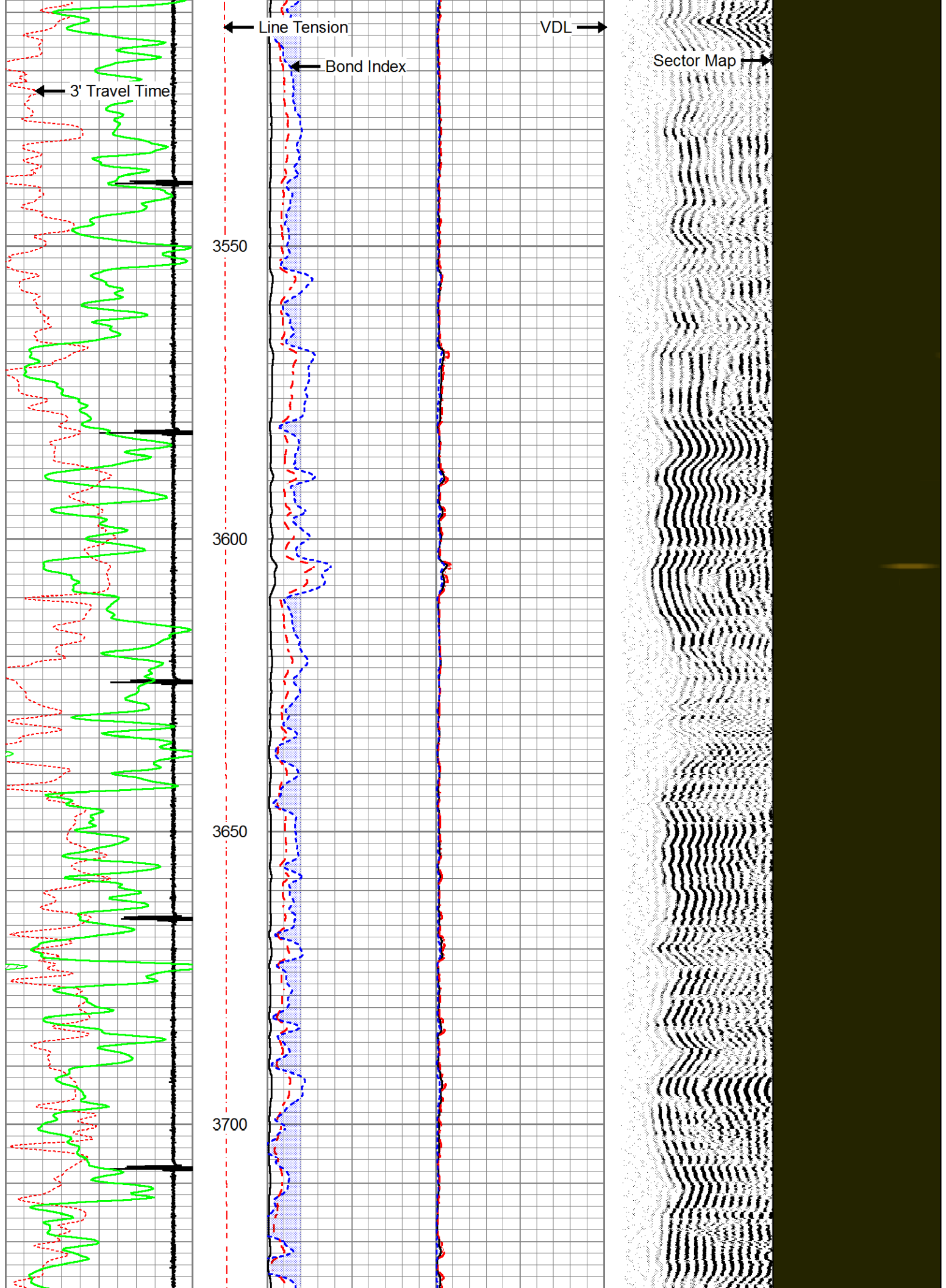
MAIN PASS

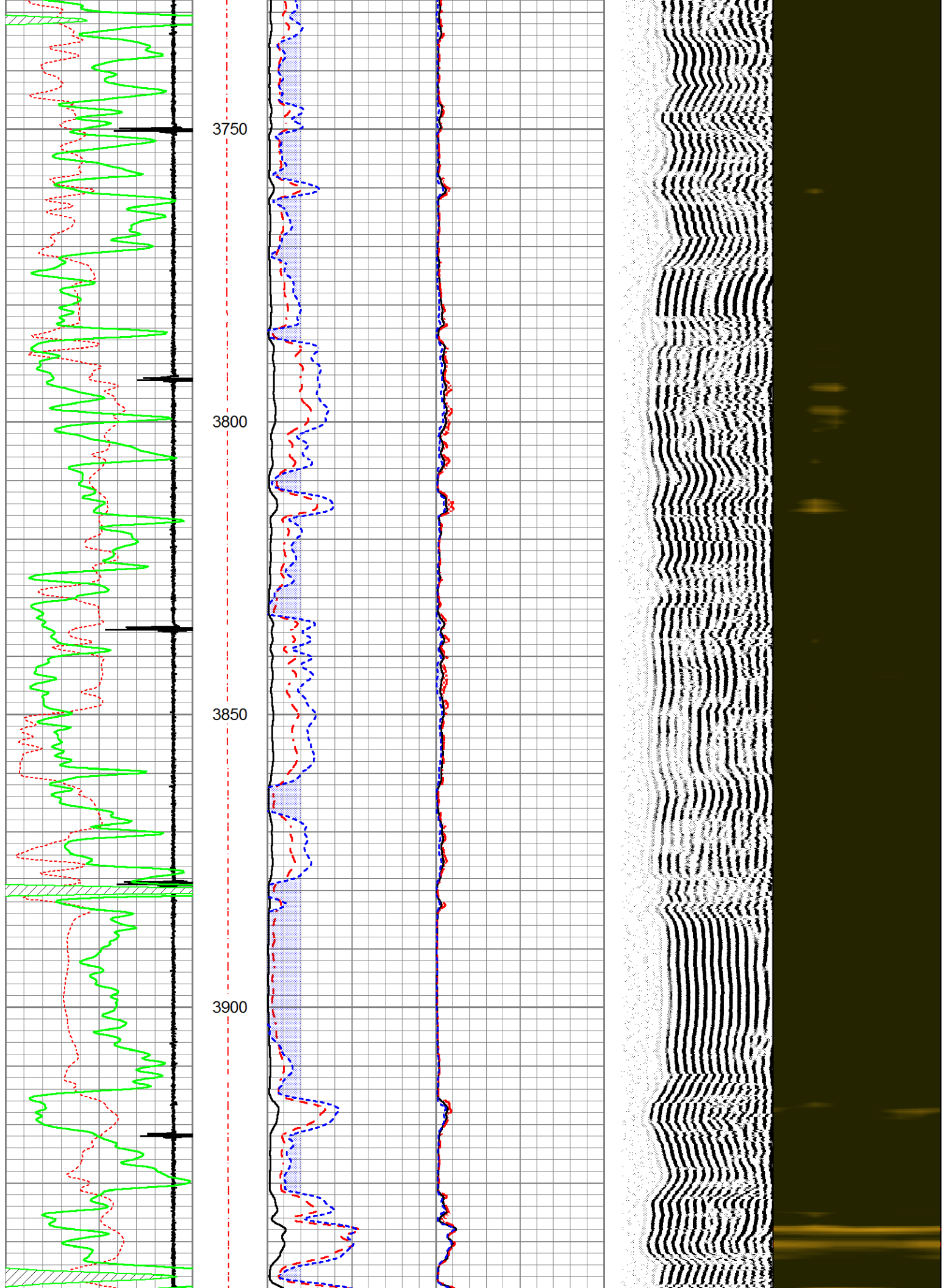
0 PSI SURFACE PRESSURE

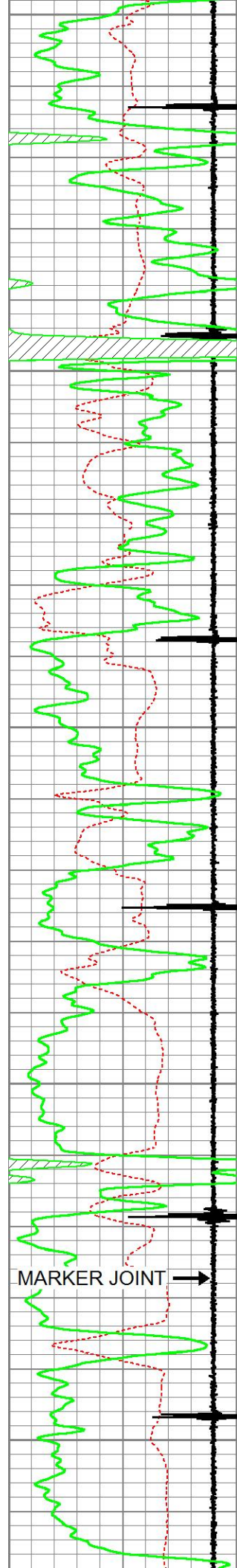
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 Dataset Pathname pass3
 Presentation Format pinr_scbl
 Dataset Creation Tue Oct 04 10:13:24 2016
 Charted by Depth in Feet scaled 1:240



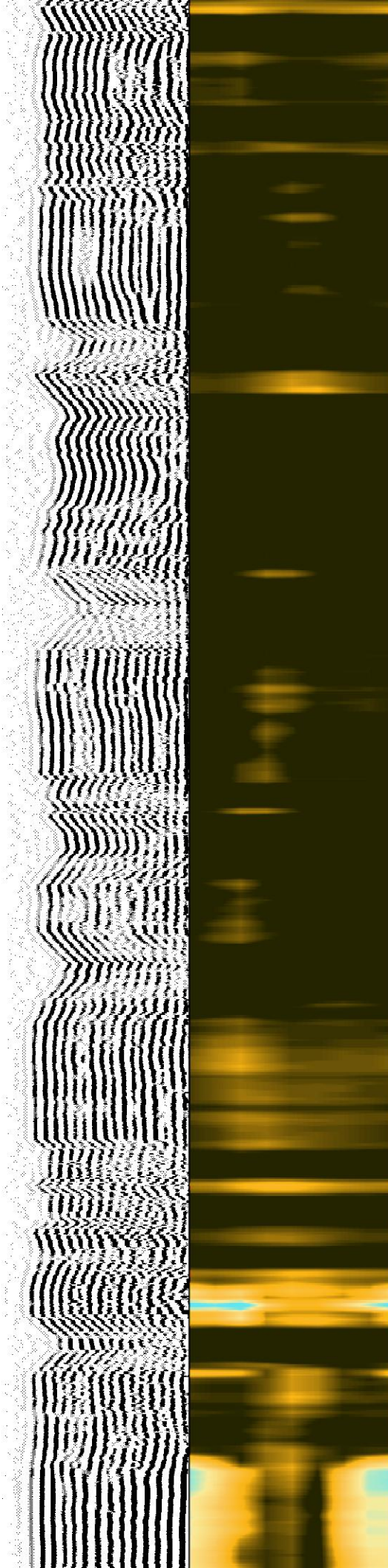
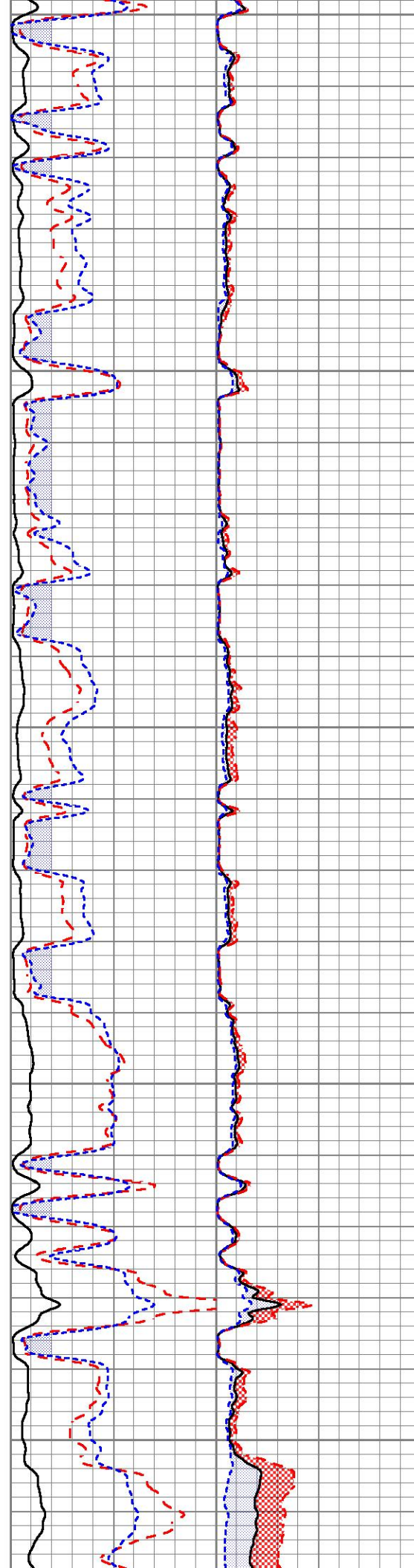


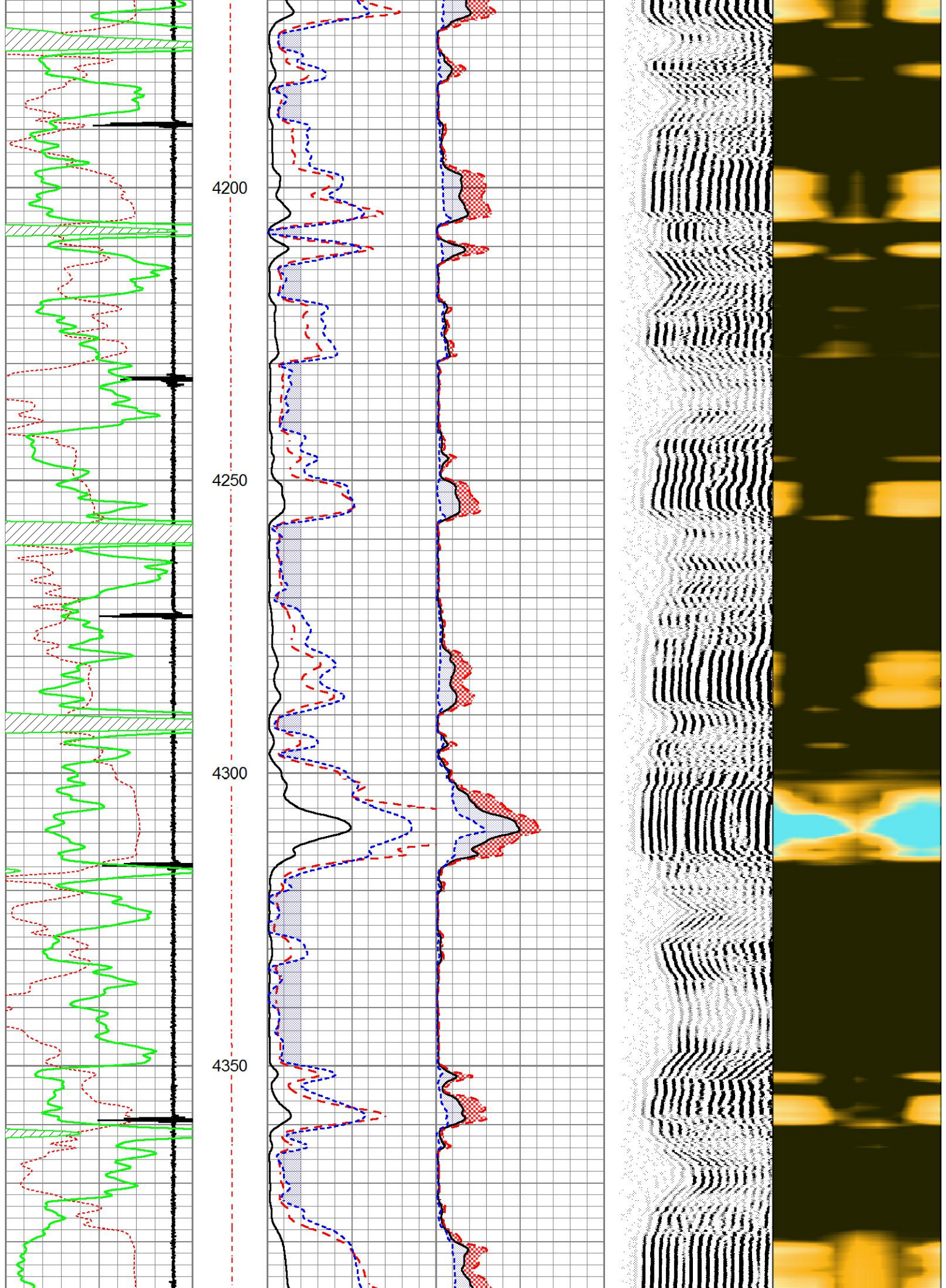


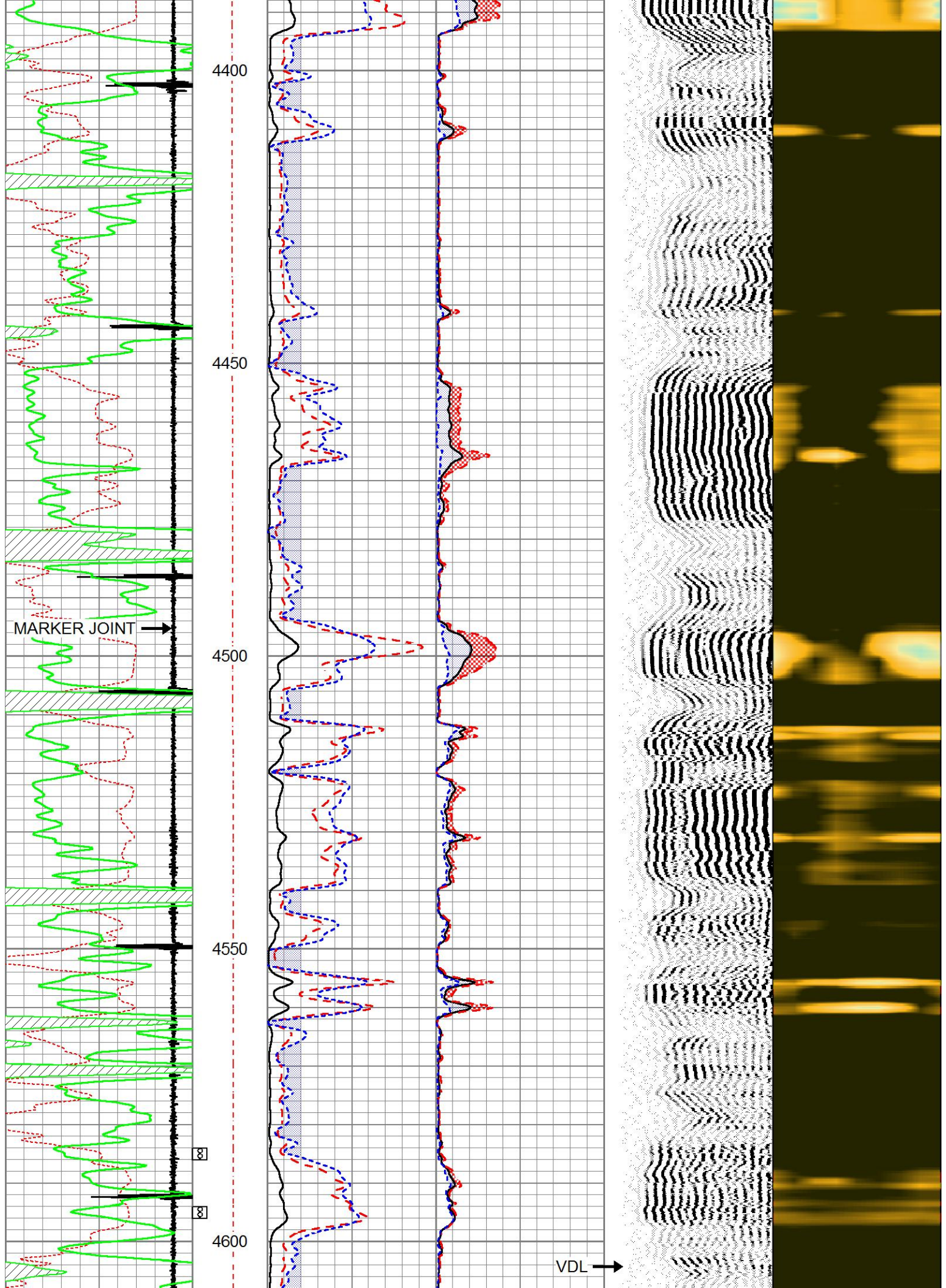


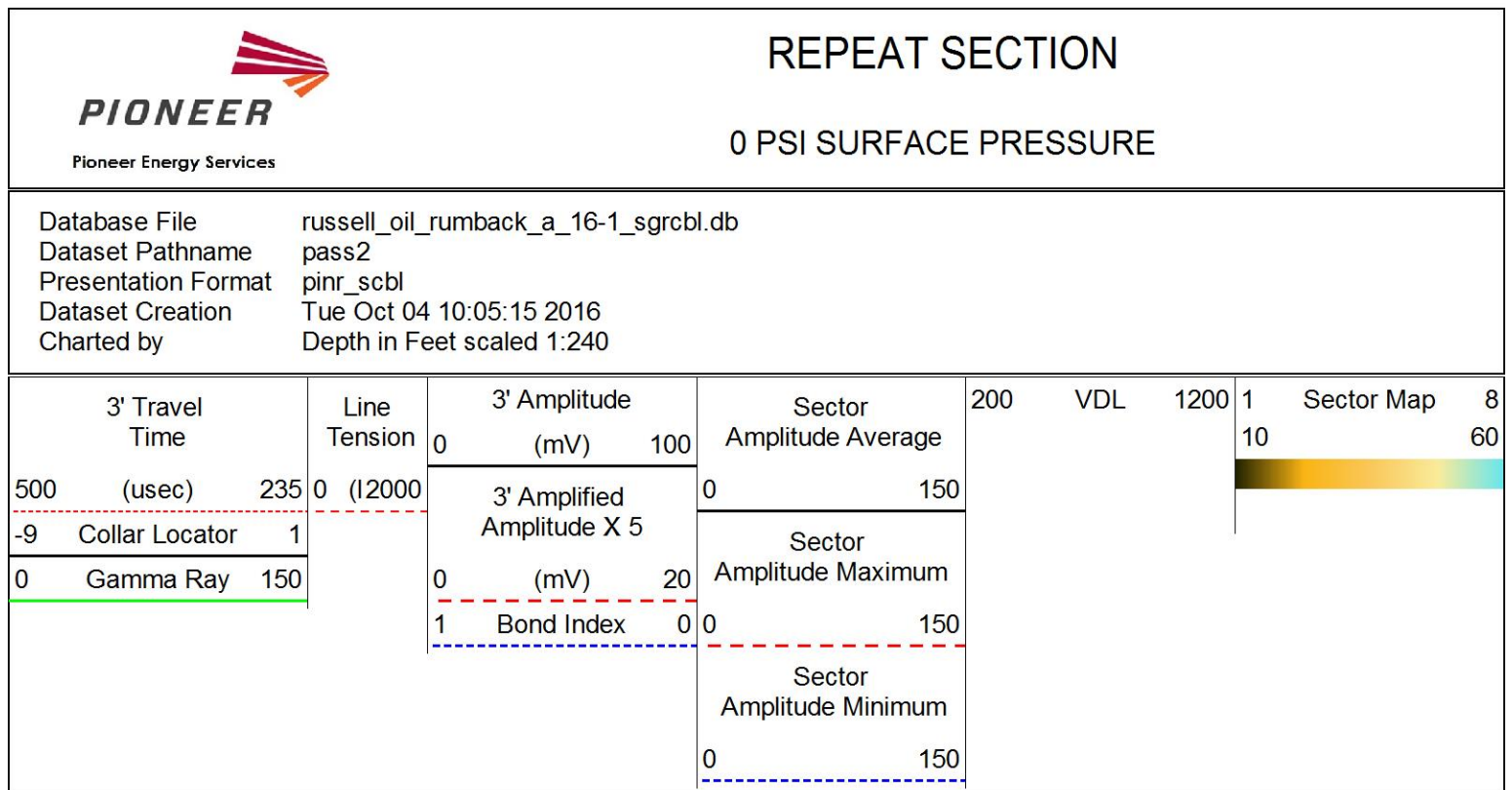
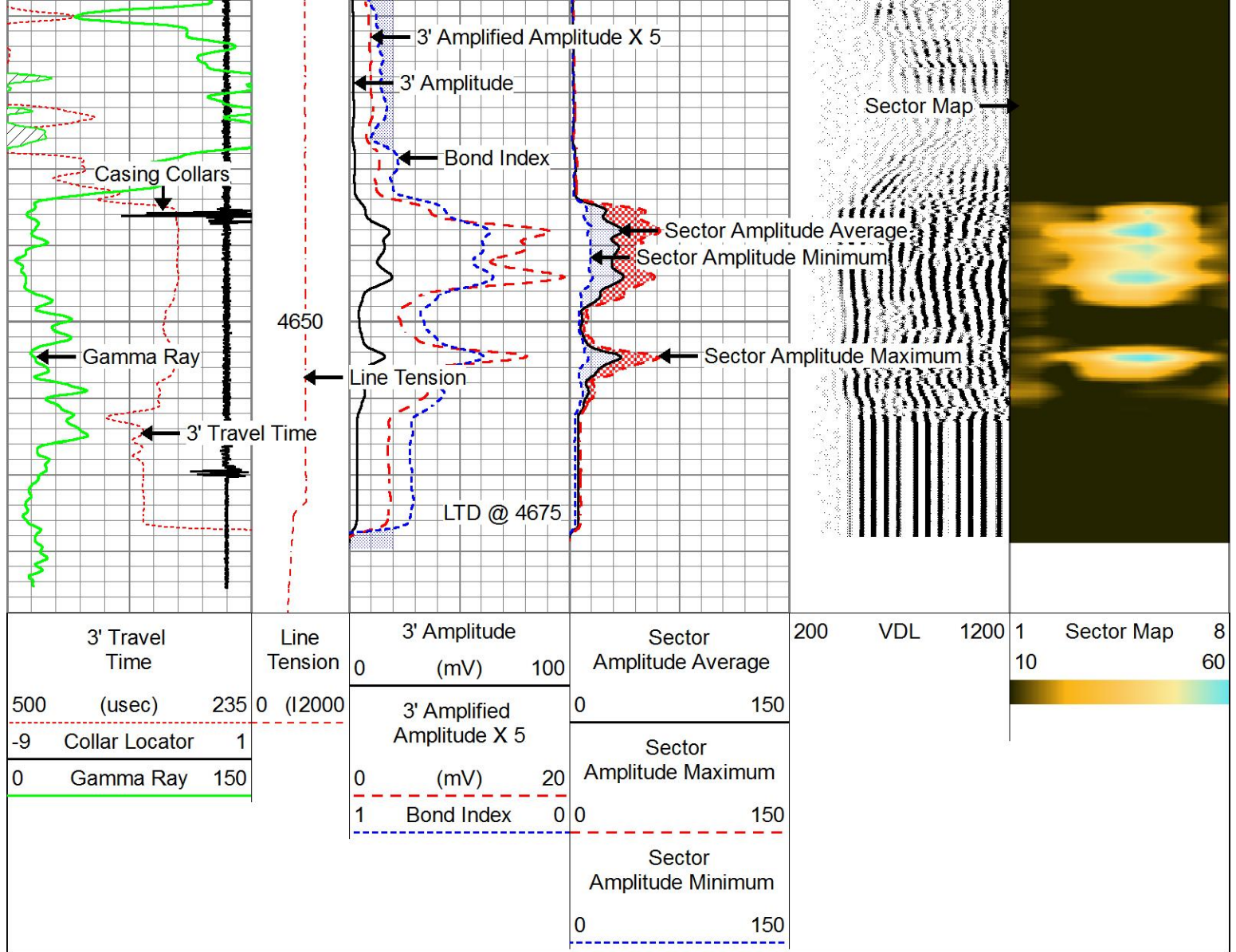


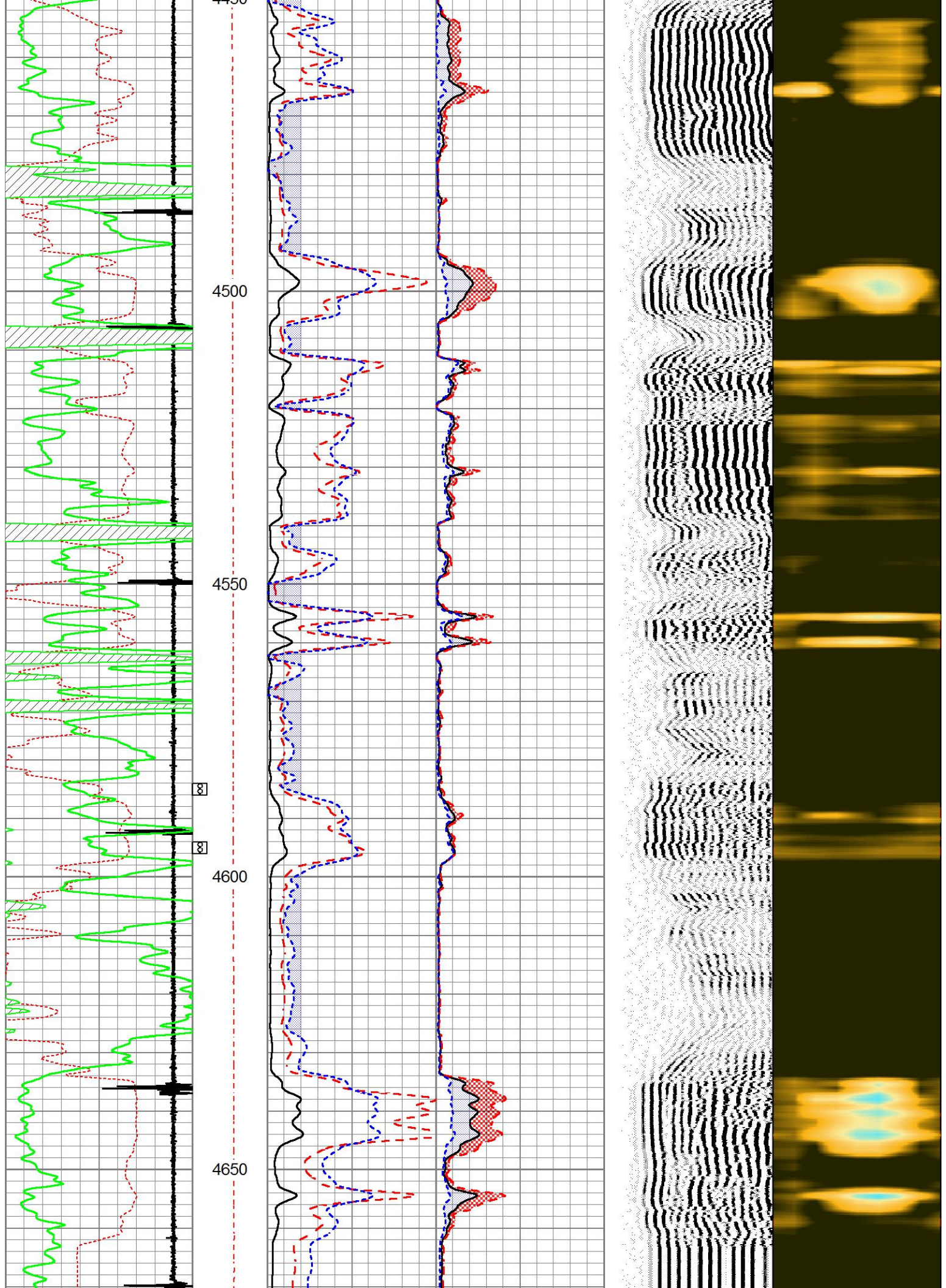
3950
4000
4050
4100
4150

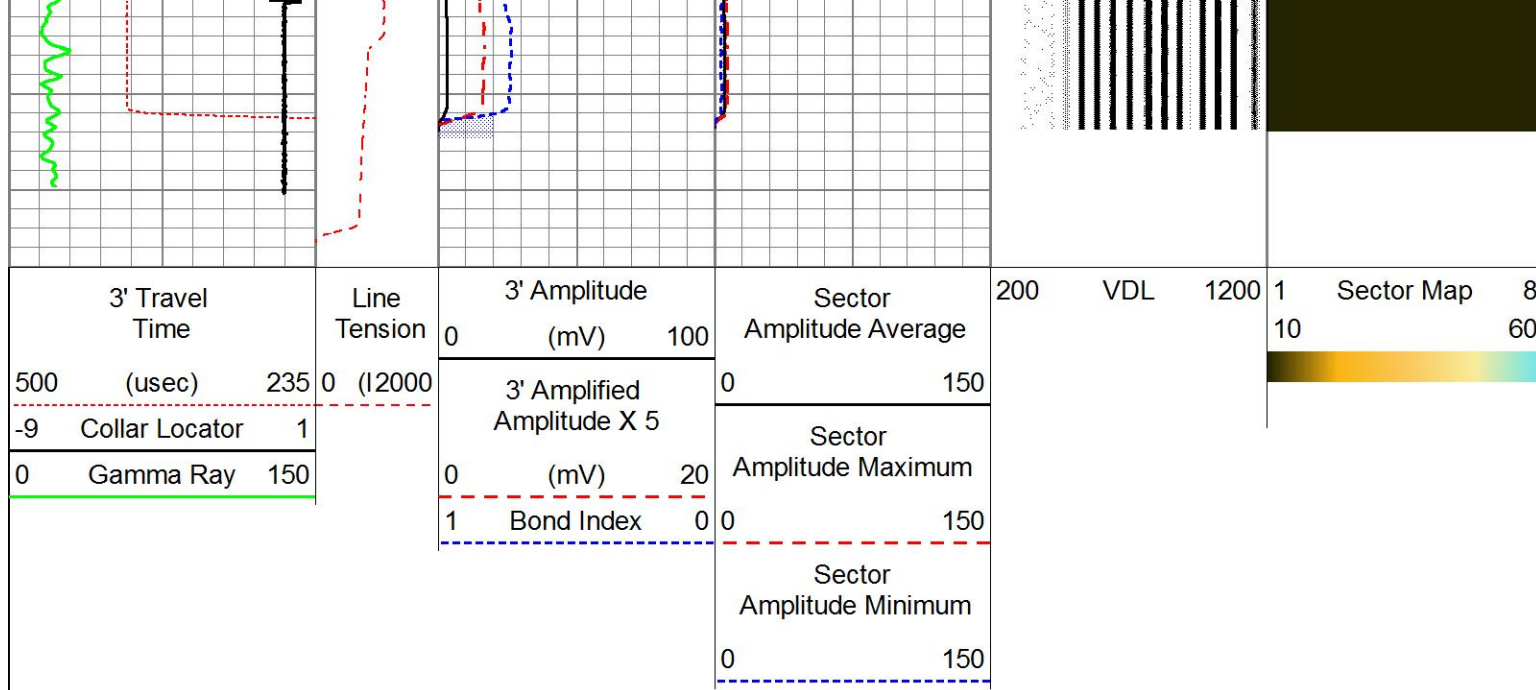












Calibration Report		
Database File	russell_oil_rumback_a_16-1_sgrcbl.db	
Dataset Pathname	pass4	
Dataset Creation	Tue Oct 04 10:49:53 2016	

Gamma Ray Calibration Report		
Serial Number:	Probe04	
Tool Model:	Probe0004	
Performed:	Thu Jul 09 08:56:50 2015	
Calibrator Value:	1.0	
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.1000	/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	4.5040904	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	2103.400	ft

Master Calibration, performed Tue Aug 02 08:34:00 2016:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	1.734	0.000	80.000	46.357	-0.400
CAL	0.008	1.848				
5'	0.009	1.833	0.000	80.000	43.851	-0.379
SUM						
S1	0.008	1.704	0.000	110.000	64.878	-0.535
S2	0.008	1.666	0.000	110.000	66.352	-0.561
S3	0.008	1.631	0.000	110.000	67.774	-0.571
S4	0.008	1.700	0.000	110.000	65.014	-0.544
S5	0.009	1.780	0.000	110.000	62.108	-0.531
S6	0.008	1.824	0.000	110.000	60.581	-0.502
S7	0.009	1.792	0.000	110.000	61.701	-0.550

S8	0.008	1.748	0.000	110.000	63.209	-0.514
Air Zero Calibration, performed Tue Jun 30 10:42:02 2009:						
	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	