PIONEER
Pioneer Energy Services

CEMENT BOND LOG WITH GAMMA RAY

Company	KERR-MCGEE OIL & GAS ONSHORE
Well	MARTIN RAYMOND GAS UNIT 1
Field	WATTENBERG
County	WELD
State	CO

Company **KERR-MCGEE OIL & GAS ONSHORE**
Well **MARTIN RAYMOND GAS UNIT 1**
Field **WATTENBERG**
County **WELD** State **CO**

Location: API # : 05123083930000
1650' FNL & 1650' FEL SWNE
LAT: 40.270886
LONG: -104.759631
SEC 34 TWP 4N RGE 66W

Other Services
Dump
Cement

Permanent Datum	GL	Elevation	4780
Log Measured From	KB		
Drilling Measured From	KB...10' ABOVE GL		

Elevation
K.B. 4790
D.F. 4789
G.L. 4780

Date of Service	FEBRUARY 20, 2015		
Run Number	1		
Depth Driller or PBTD	7890		
Depth Logger	7684		
Bottom Log Interval	7682		
Top Log Interval	SURFACE		
Open Hole Size	7+7/8"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	8.33 PPG		
Max. Recorded Temperature	NA		
Max. Wellhead Pressure	0		
Wellhead Connection	PACKOFF		
Estimated Cement Top	7114		
Unit Number	P96		
Wireline Size	1/4"		
Location	FT. MORGAN, CO		
Recorded By	SCHUMAN		
Witnessed By	MR CHRIS ROWE		

	Size	Wt/Ft	Top	Bottom
Tubing Record				
Surface Casing	8+5/8"	28#	SURFACE	279
Production Casing	4+1/2"	11.6#	SURFACE	7889
Liner Record				

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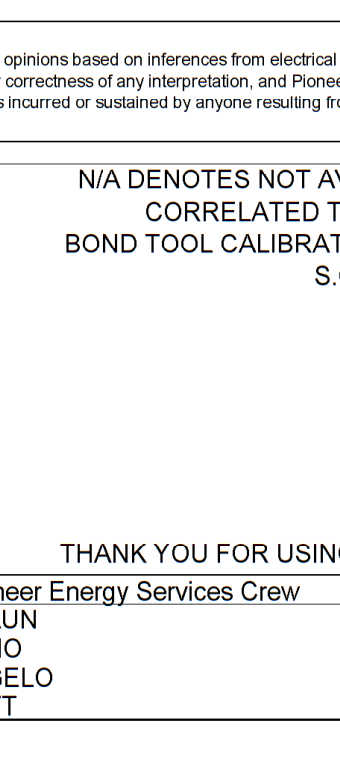
All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not be liable or responsible for any loss, costs, damages, 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.
CORRELATED TO GR LOG DATED 7-5-1975
BOND TOOL CALIBRATED AT 204' FOR 81MV FREE PIPE
S.O. # 2-280131

THANK YOU FOR USING PIONEER ENERGY SERVICES

Your Pioneer Energy Services Crew	Tool Data - Services	Serial Number
Engineer: SHAUN	CBL	141167
Operator: GENO	GR	080538
Operator: ANGELO		
Operator: MATT		

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.69	10.00
			PTS275	2.83	2.75	
IntTemp	14.88					
TEMP	13.86					
			RBT-RBT-C3 (141167_4in) Probe Radii Bond Tool with Digital Telemetry	9.40	2.75	90.00
WVF3FT	11.63					
WVFCAL	11.63					
WVFS1	11.63					
WVFS2	11.63					
WVFS3	11.63					
WVFS4	11.63					
WVFS5	11.63					
WVFS6	11.63					
WVFS7	11.63					
WVFS8	11.63					
WVF5FT	10.63					
			PTS275	2.83	2.75	
CCL	3.63					
			GR_CCL-Probe (110249) Probe Gamma CCL	4.54	2.75	100.00
GR	0.90					

Dataset:	hart b gas unit true 1_rbl.db: field/well/rbl/passrpt.a
Total Length:	20.60 ft
Total Weight:	200.00 lb
O.D.	2.75 in

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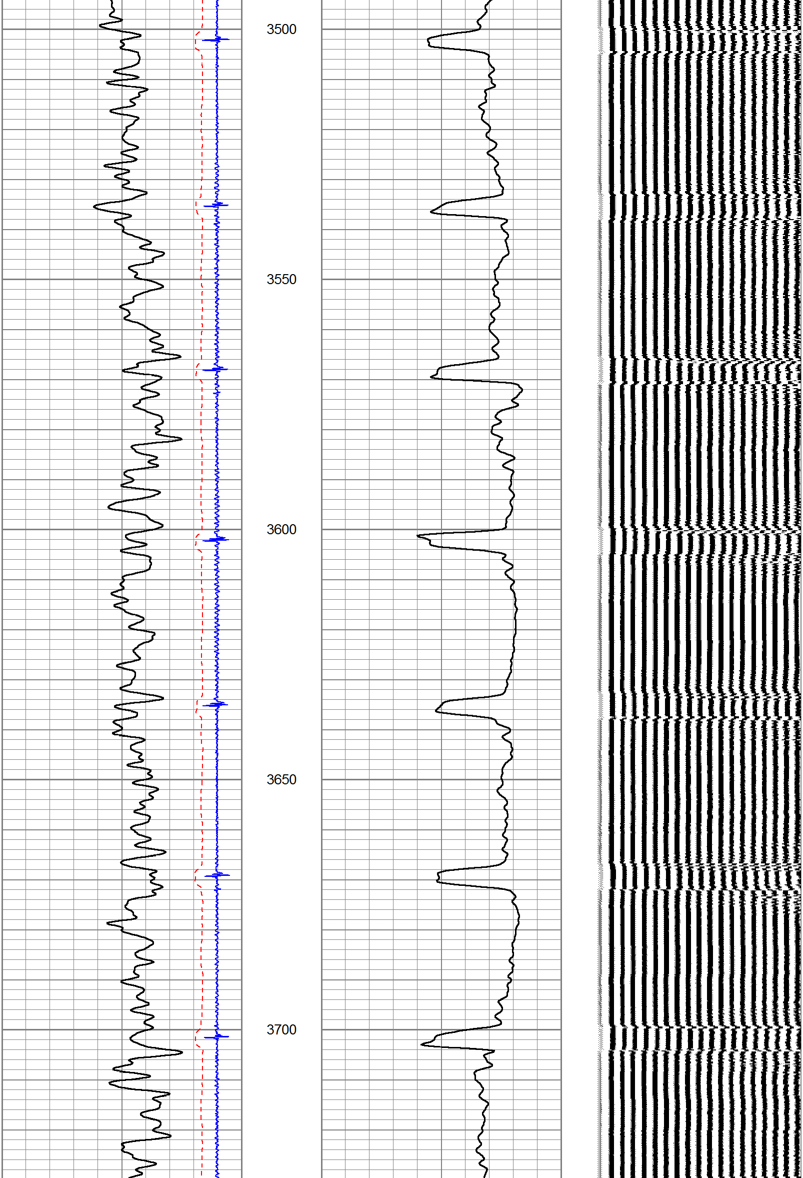
MAIN LOG

LOGGED WITH 0 PSI APPLIED AT SURFACE

Database File:	martin raymond gas unit 1.db
Dataset Pathname:	pass3.3
Presentation Format:	cbl_dr
Dataset Creation:	Fri Feb 20 12:11:08 2015 by Calc 7.0 B1
Charted by:	Depth in Feet scaled 1:240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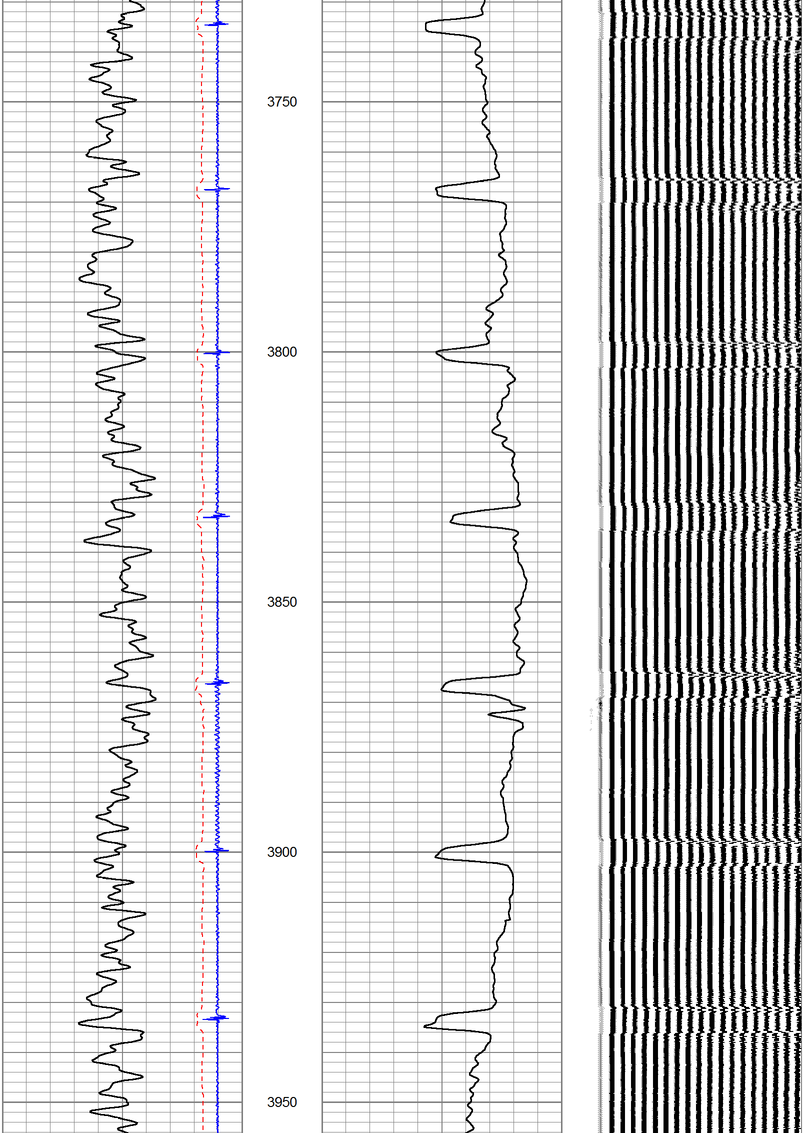
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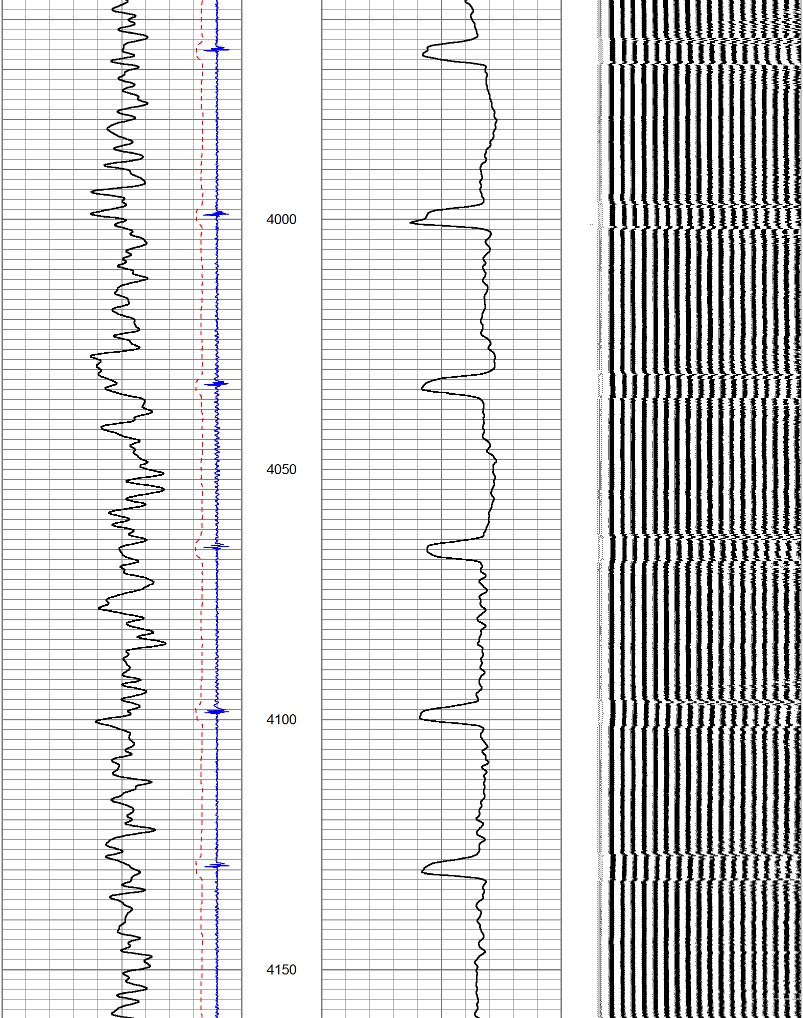
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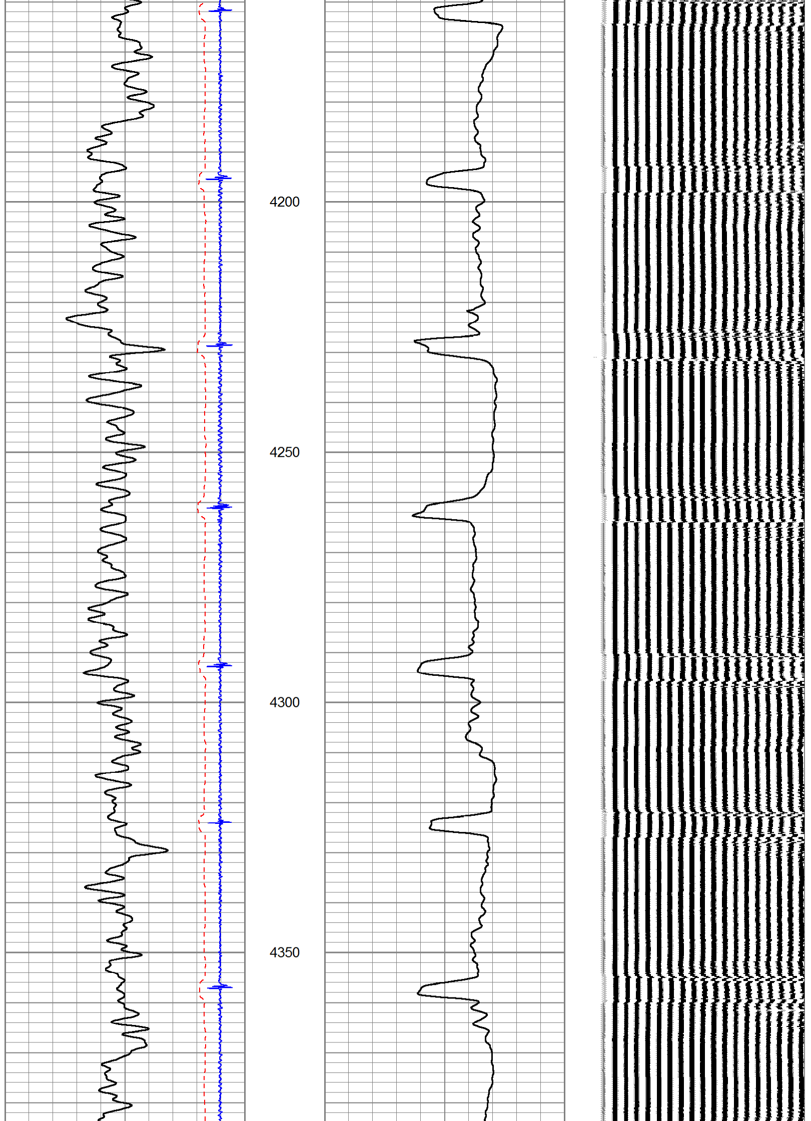
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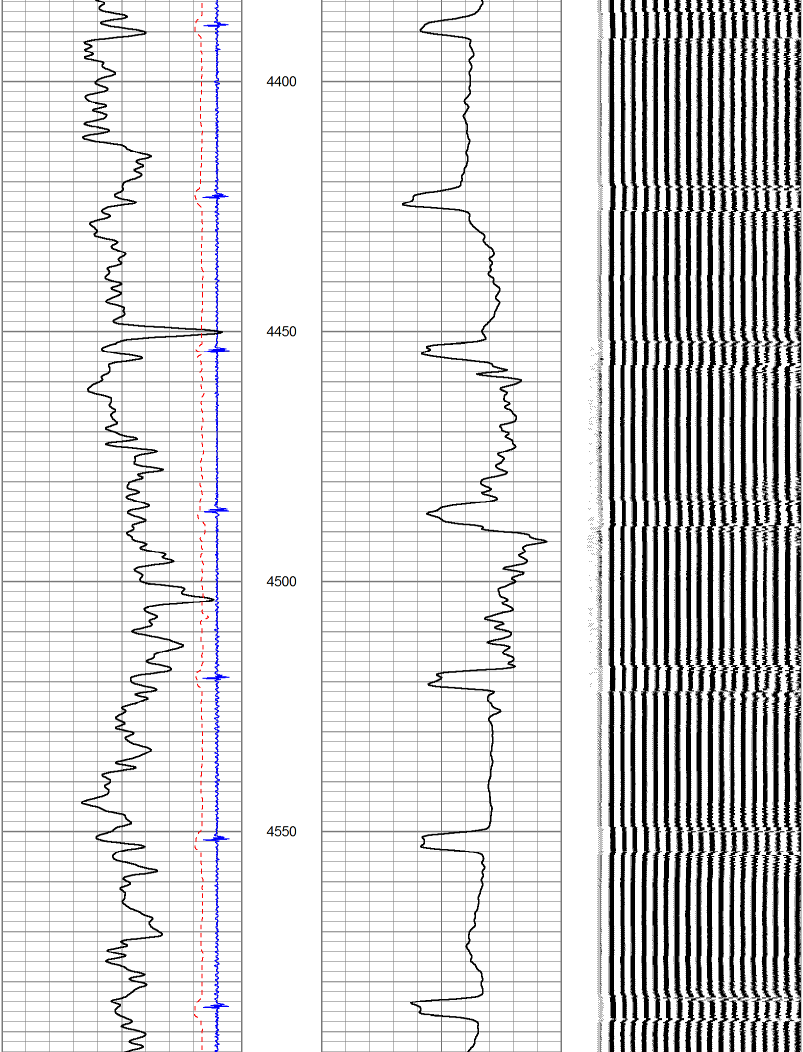
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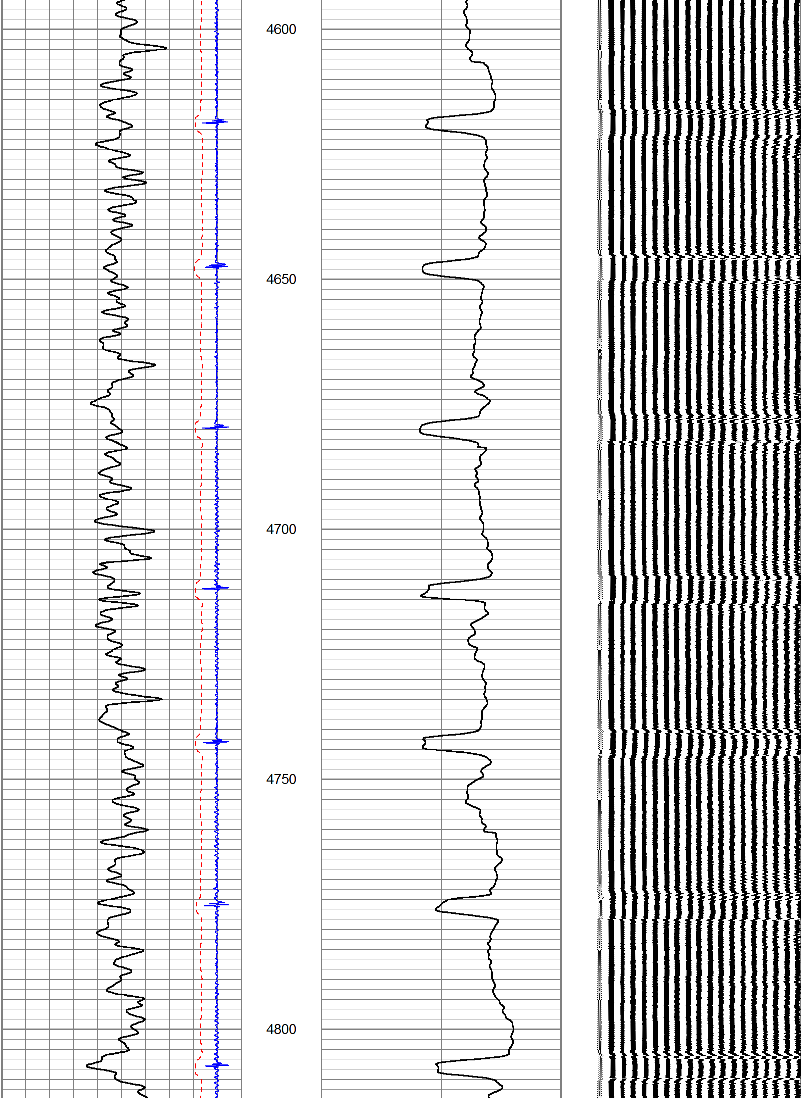
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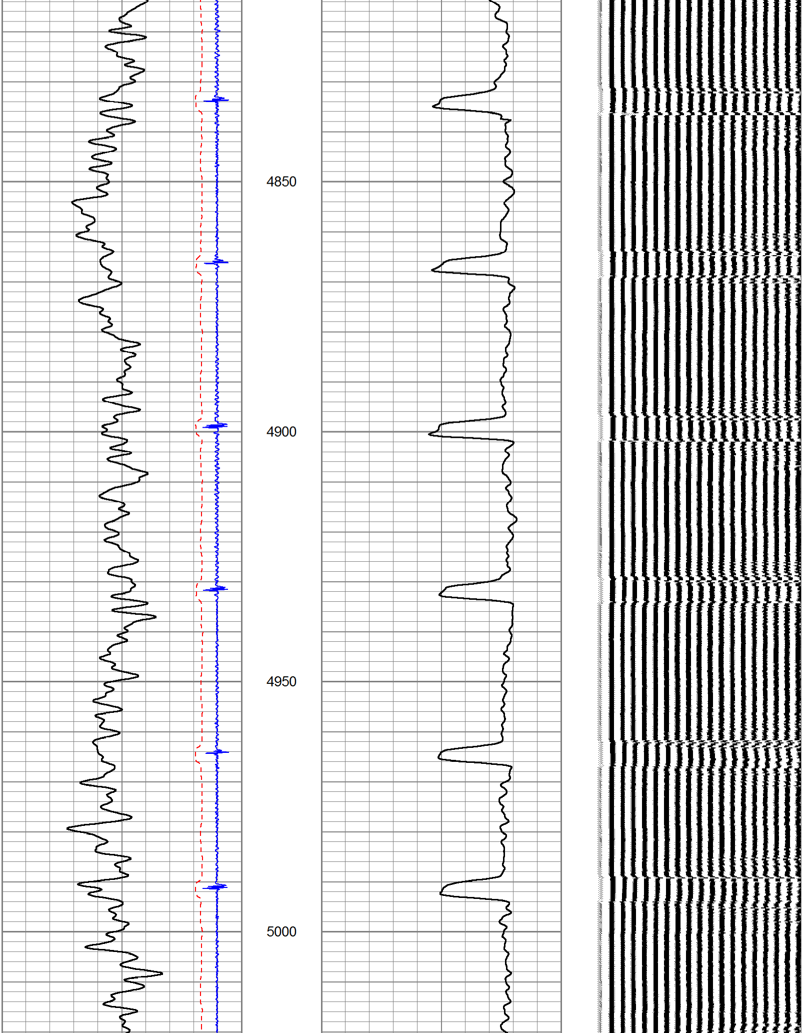
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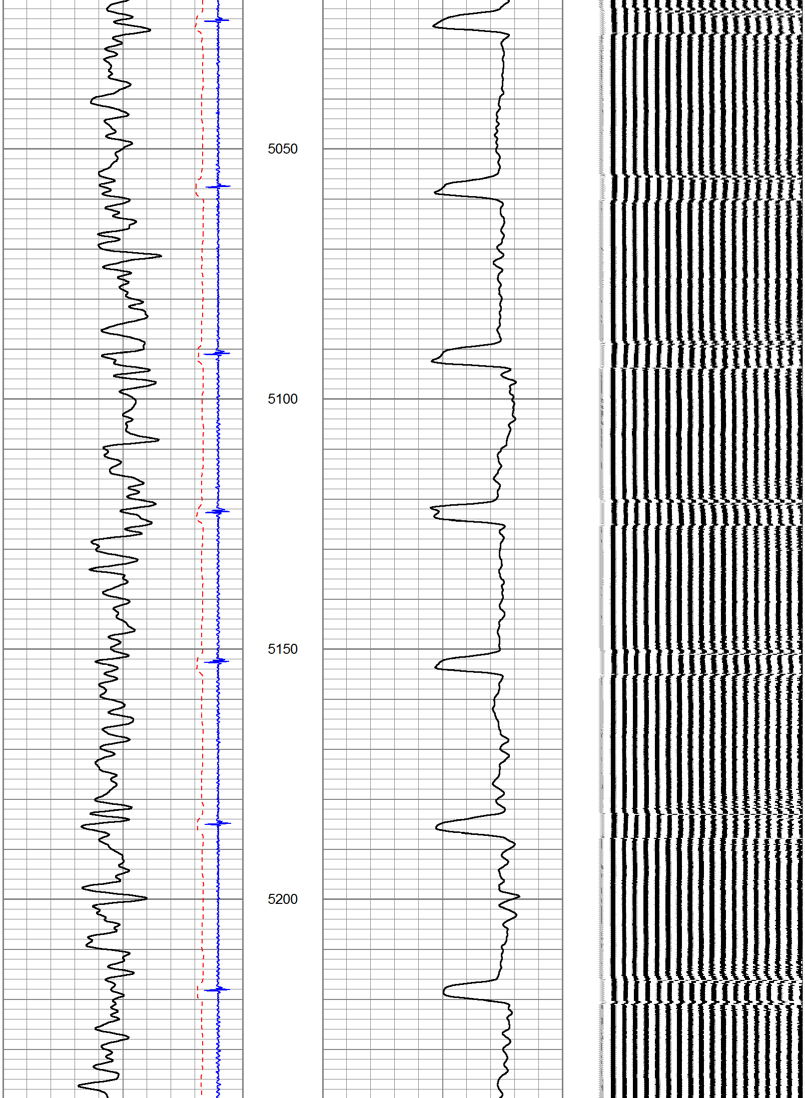
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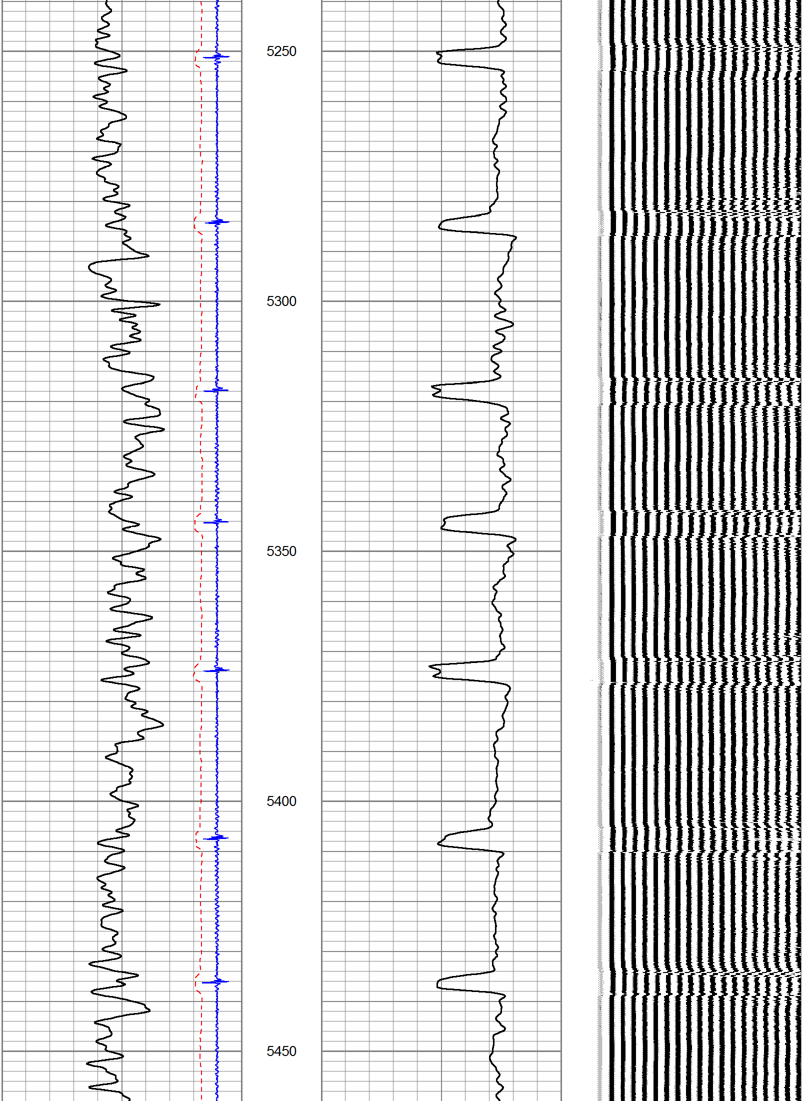
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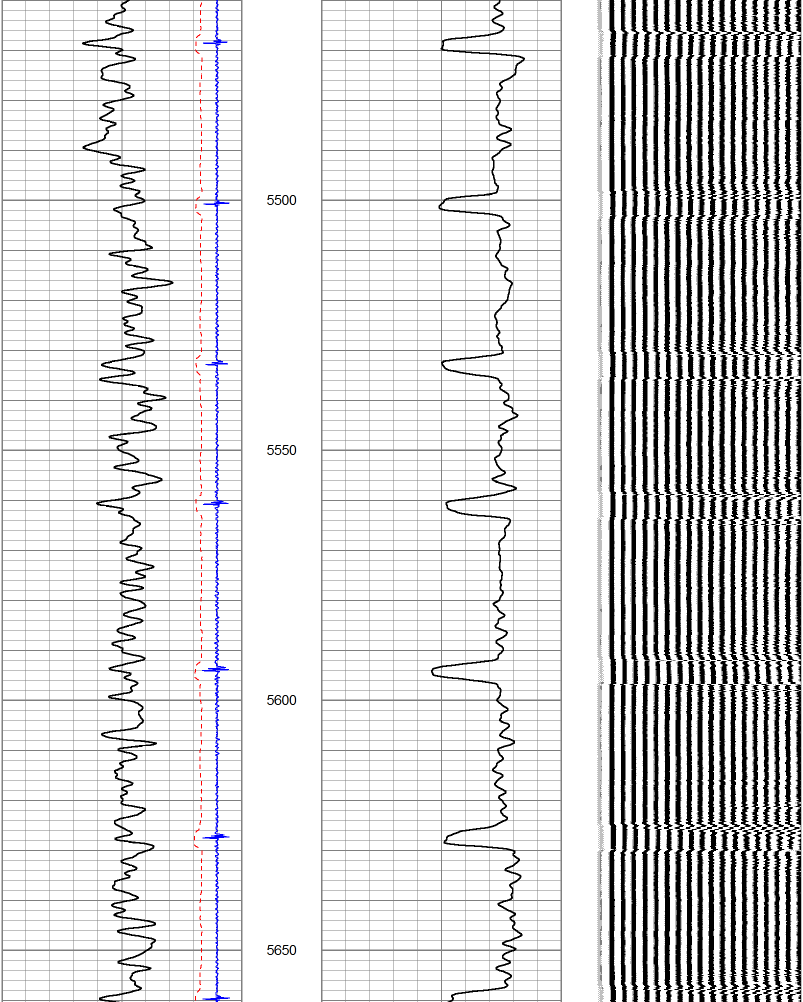
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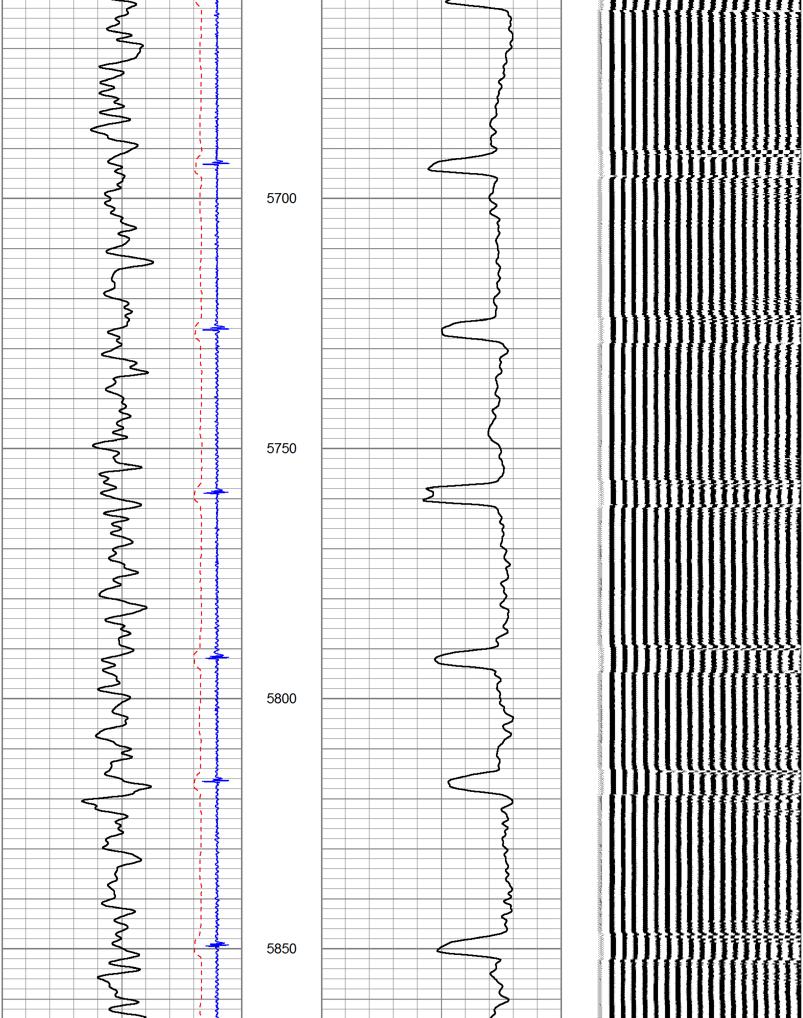
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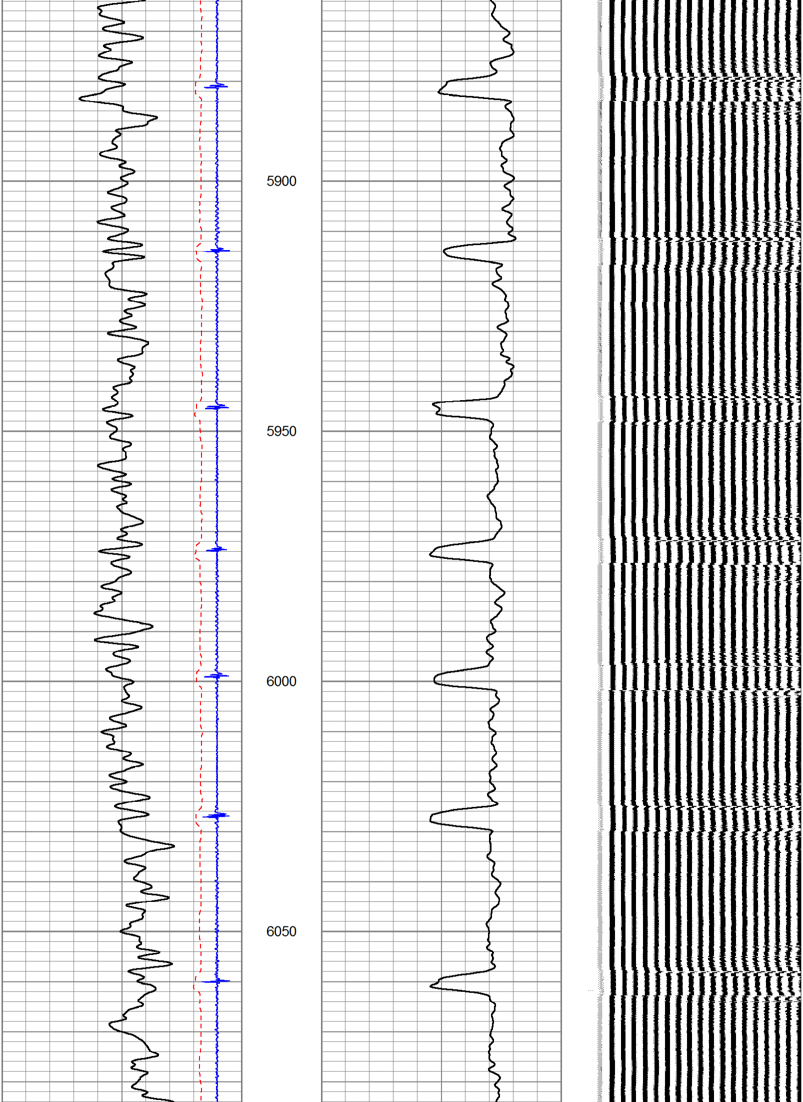
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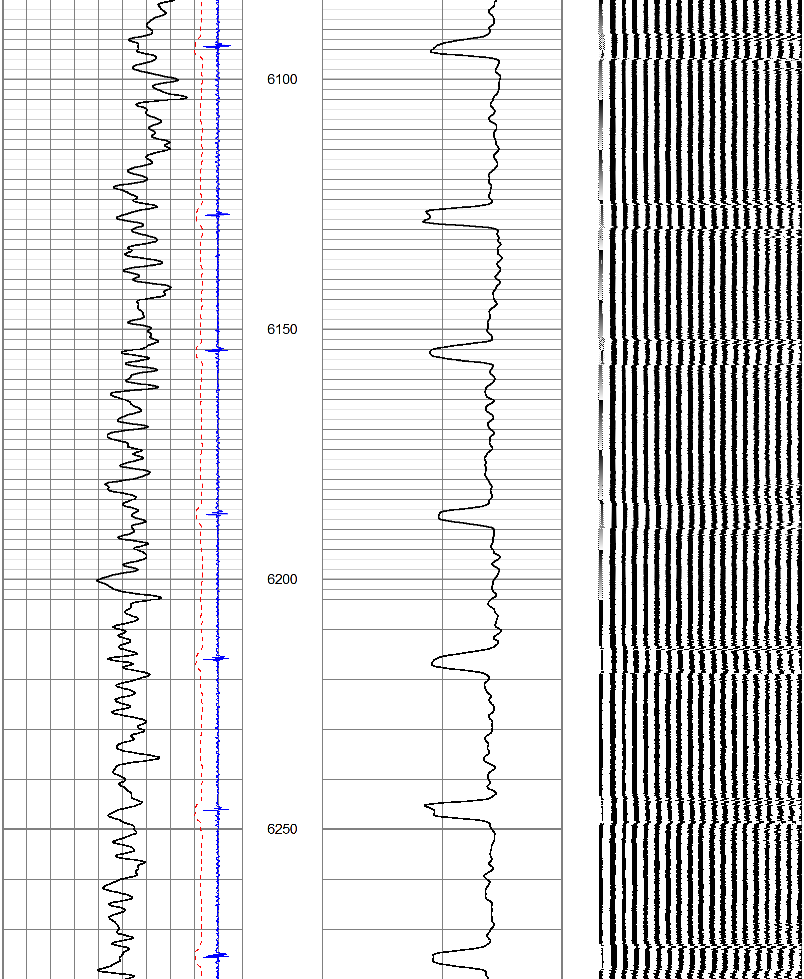
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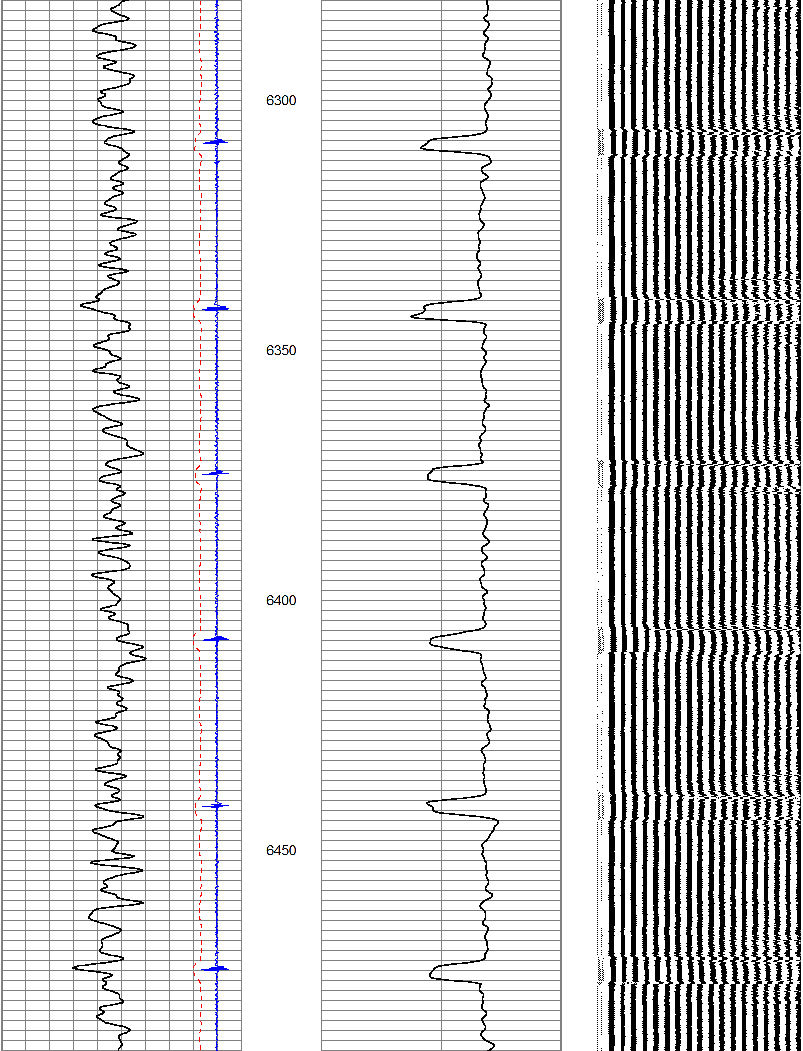
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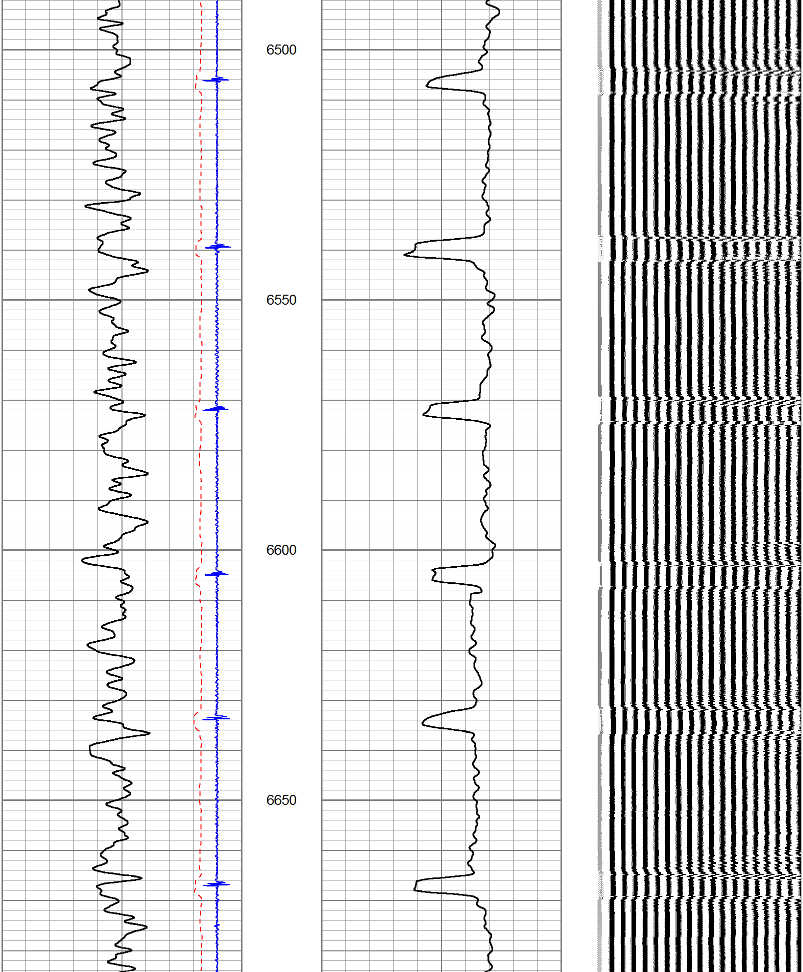
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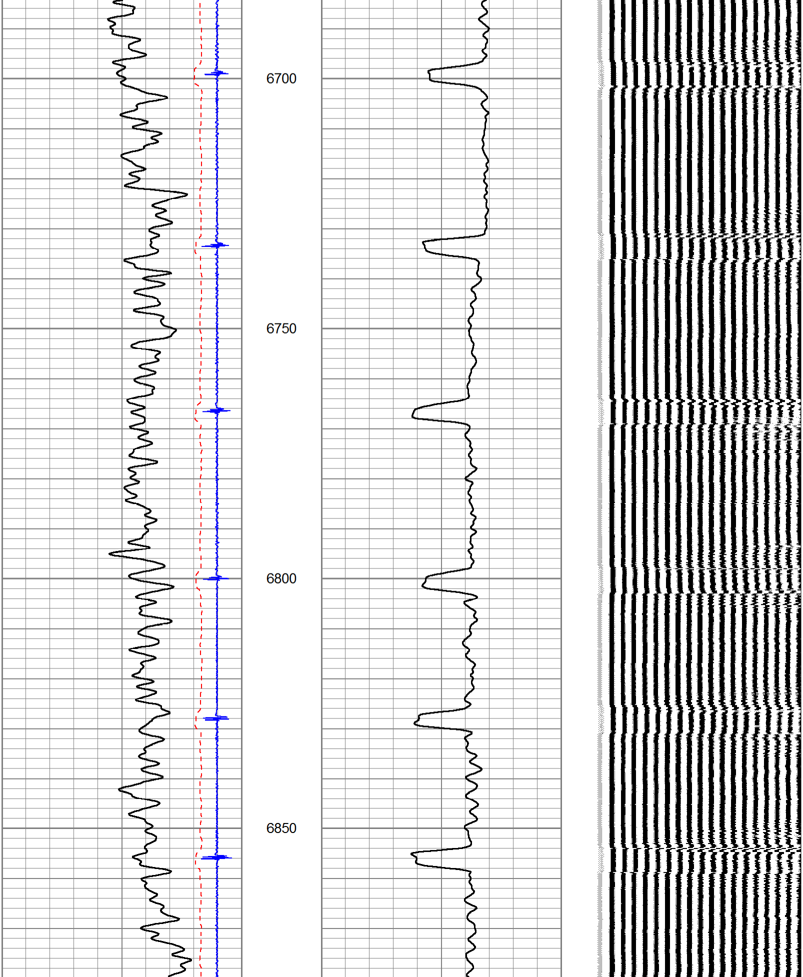
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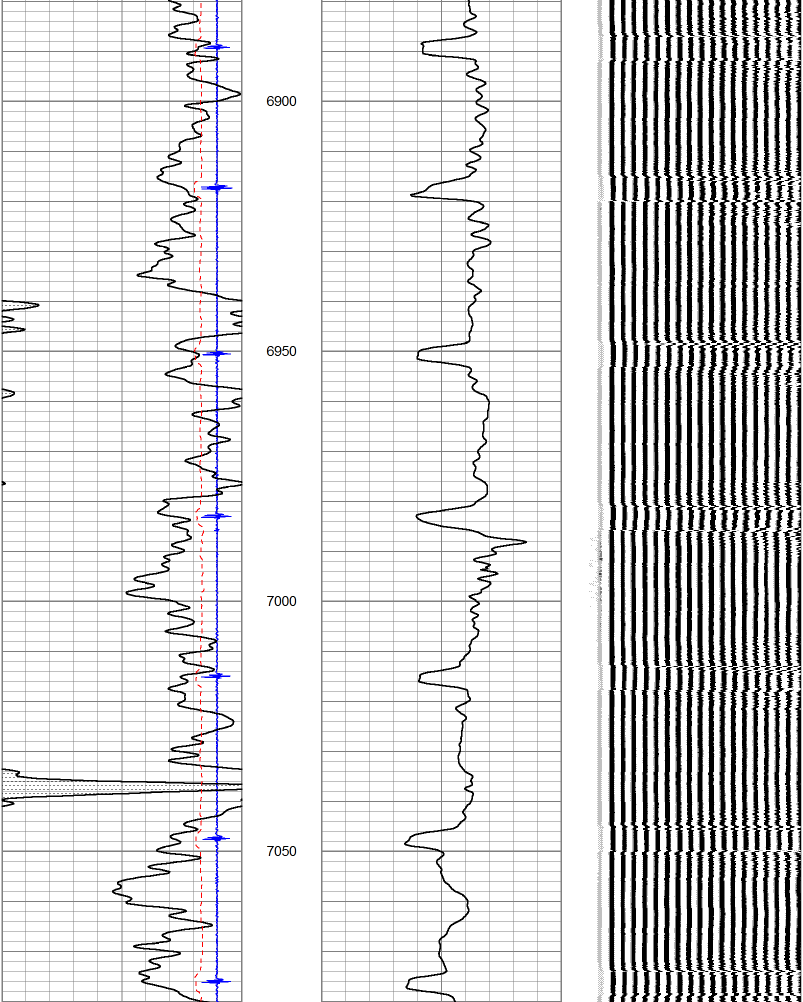
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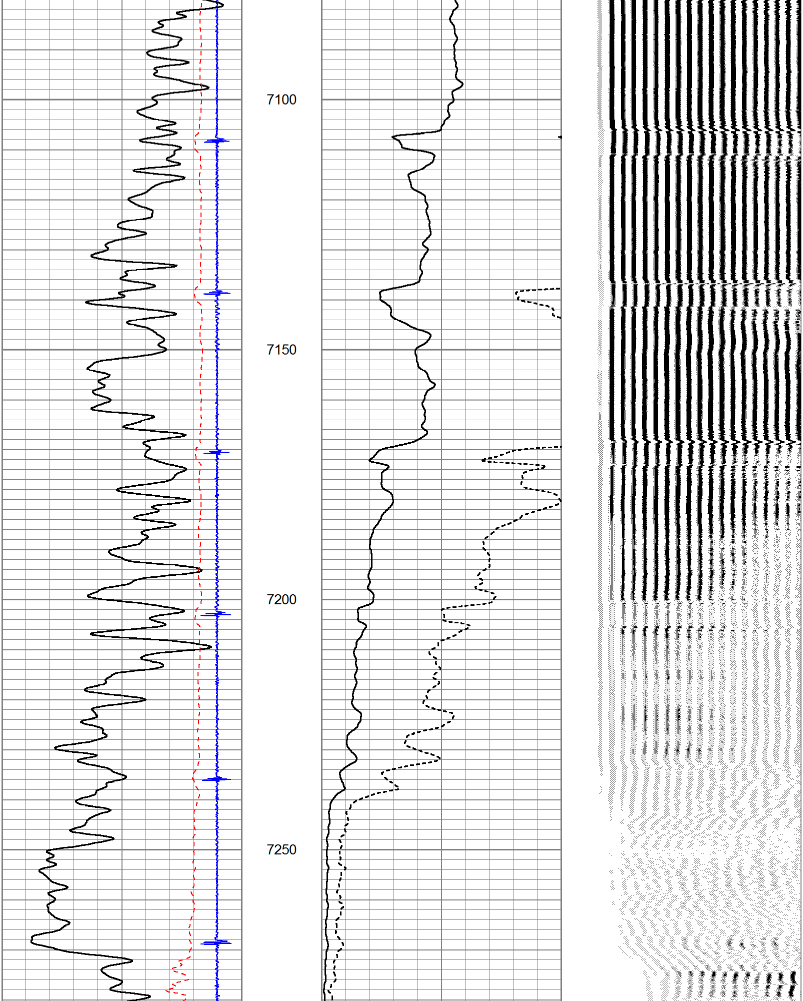
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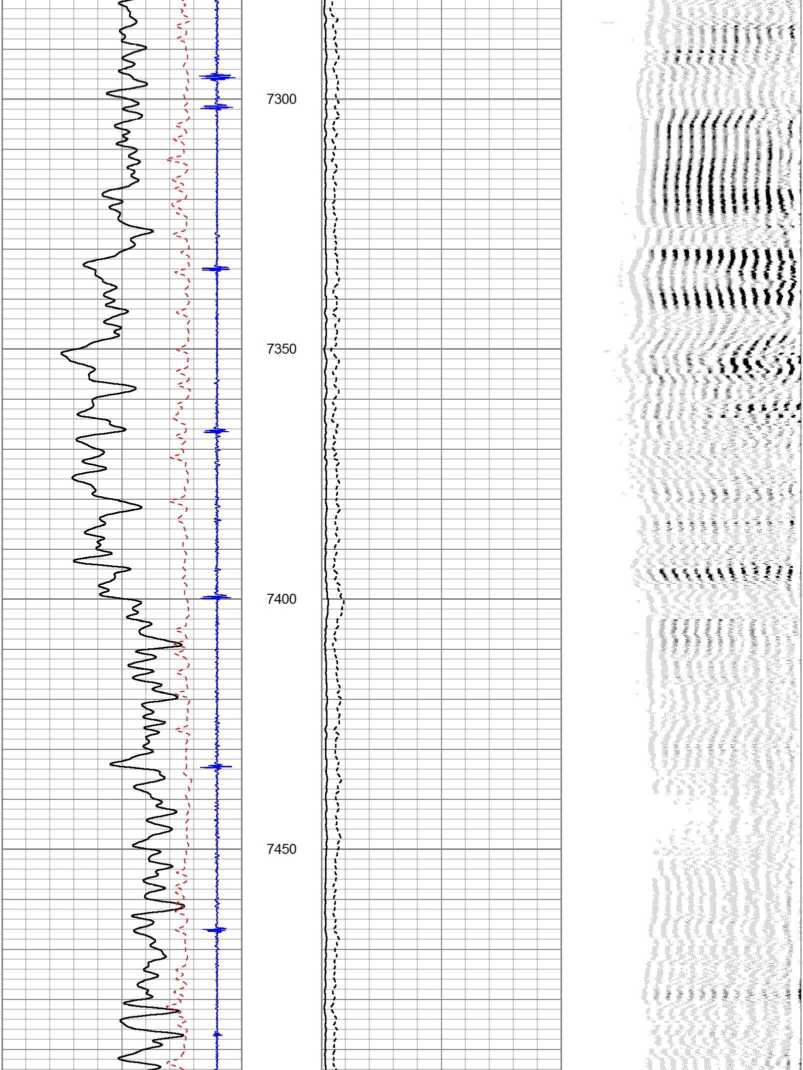
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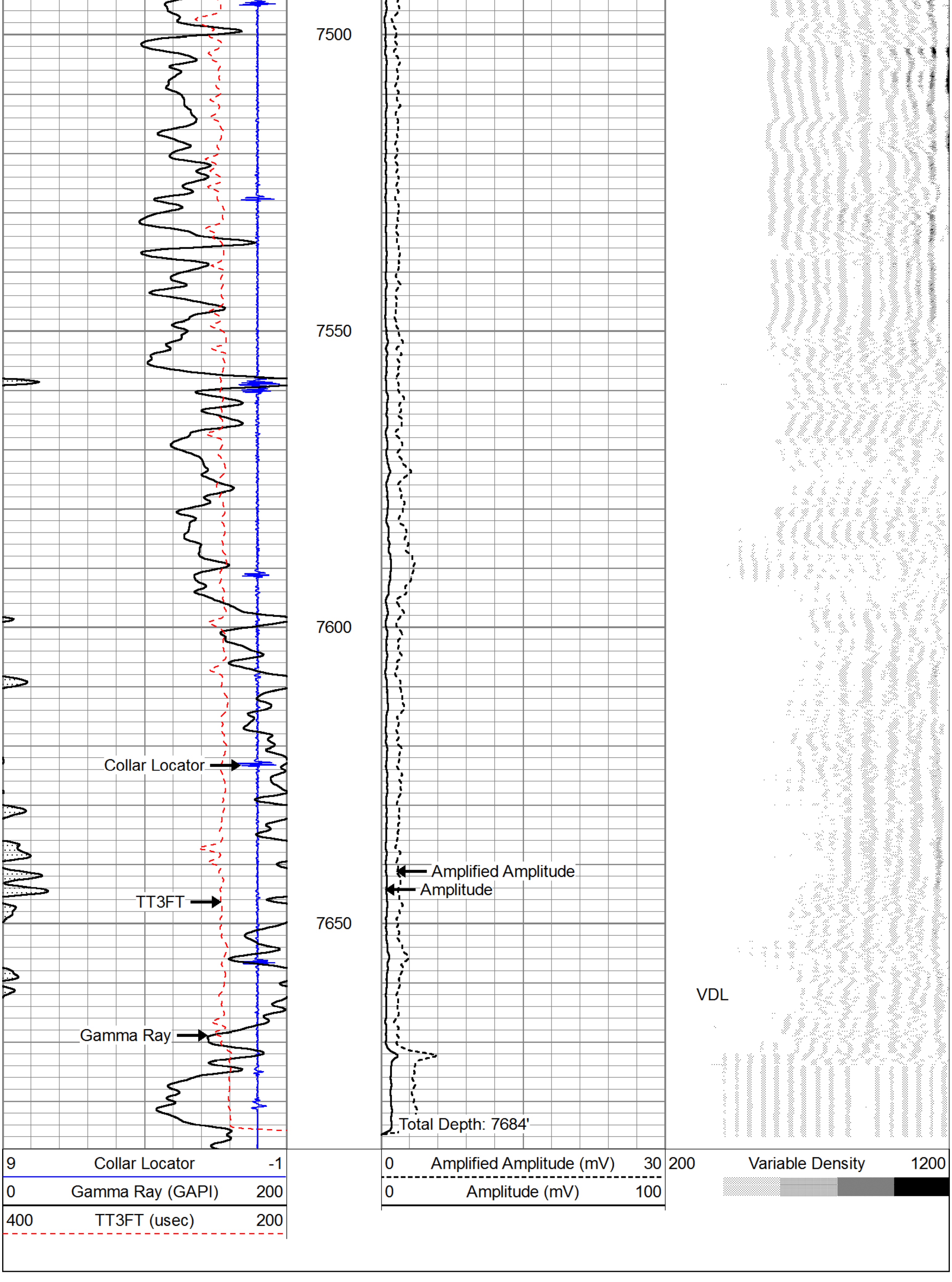

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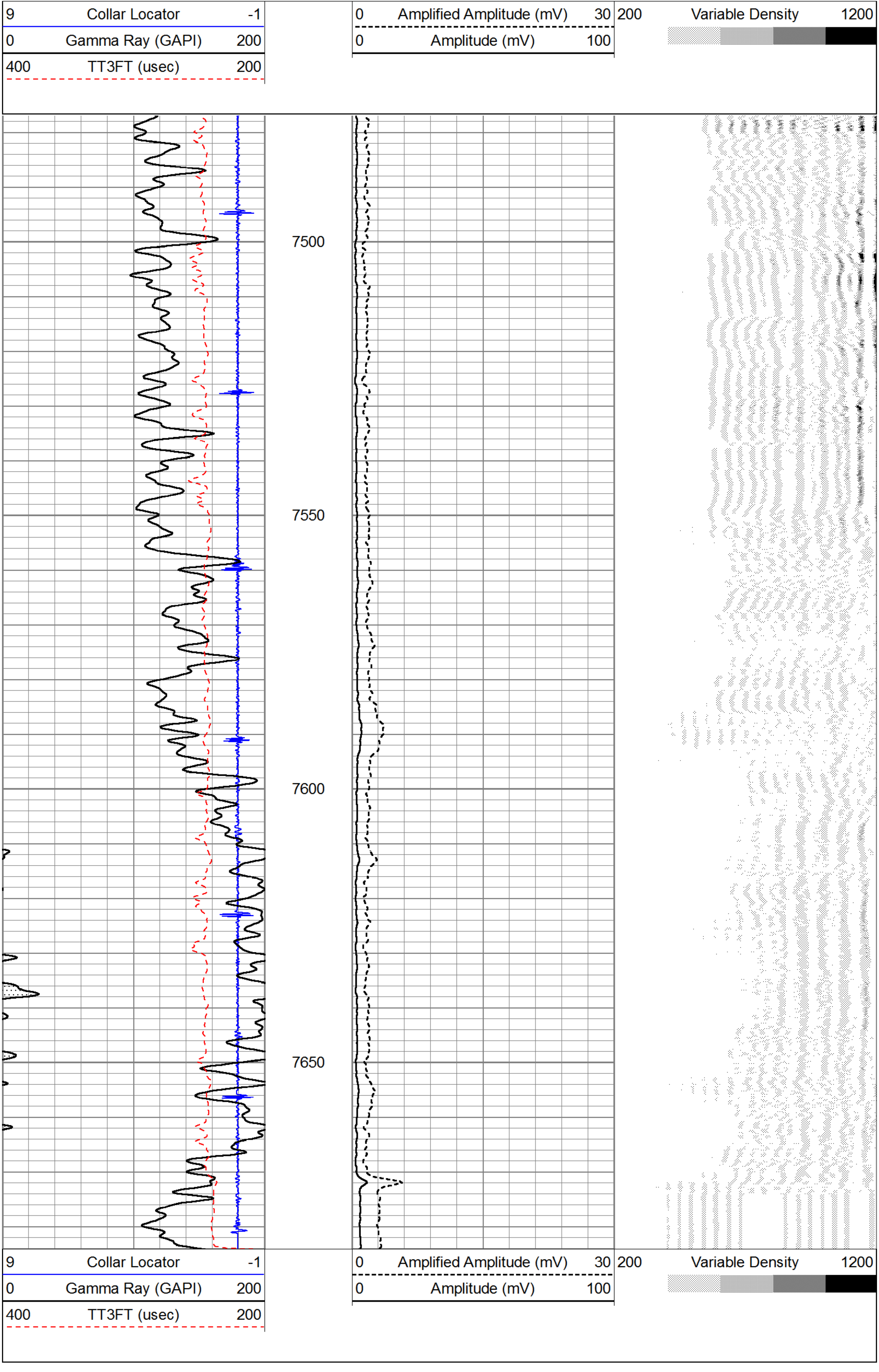
REPEAT SECTION

LOGGED WITH 0 PSI APPLIED AT SURFACE

Database File:	martin raymond gas unit 1.db
Dataset Pathname:	pass2.1
Presentation Format:	cbl_dr
Dataset Creation:	Fri Feb 20 10:47:34 2015 by Calc 7.0 B1
Charted by:	Depth in Feet scaled 1:240



Calibration Report

Database File:	martin raymond gas unit 1.db
Dataset Pathname:	pass1
Dataset Creation:	Fri Feb 20 10:13:05 2015 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	110249	
Tool Model:	Probe	
Performed:	Tue Feb 03 05:05:05 2015	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.9400	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	141167_4in	
Tool Model:	RBT-C3	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	204.365	ft

Master Calibration, performed Fri Feb 20 10:19:22 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.005	0.521	1.000	81.196	139.000	2.000
CAL	-0.005	0.719				
5'	-0.003	0.468	1.000	81.196	170.181	1.592
SUM						
S1	-0.004	0.555	0.000	100.000	178.947	0.767
S2	-0.002	0.562	0.000	100.000	177.358	0.403
S3	-0.003	0.539	0.000	100.000	184.289	0.585
S4	-0.004	0.516	0.000	100.000	192.129	0.858
S5	-0.006	0.512	0.000	100.000	193.039	1.166
S6	-0.005	0.516	0.000	100.000	191.963	1.015
S7	-0.005	0.525	0.000	100.000	188.660	0.993
S8	-0.005	0.541	0.000	100.000	183.213	0.850

Internal Reference Calibration, performed Tue Feb 10 09:11:29 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.005	0.719	1.000	0.000

Air Zero Calibration, performed Thu Feb 19 07:11:27 2015:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.017	0.000	-0.022
5'	0.023	0.000	-0.027
SUM			
S1	0.011	0.000	-0.016
S2	0.017	0.000	-0.019
S3	0.016	0.000	-0.020
S4	0.017	0.000	-0.021
S5	0.017	0.000	-0.023
S6	0.017	0.000	-0.023
S7	0.018	0.000	-0.023
S8	0.017	0.000	-0.022

Temperature Calibration Report

Serial Number:	141167_4in			
Tool Model:	RBT-C3			
Performed:	Thu Feb 12 11:54:41 2015			
	Reference		Reading	
Low Reference:	0.00	degF	0.00	degF
High Reference:	1.00	degF	1.00	degF
Gain:	0.86			
Offset:	-5.00			
Delta Spacing	1			

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Well	MARTIN RAYMOND GAS UNIT 1		
Field	WATTENBERG		
County	WELD		
State	CO	Country	USA