KLX Energy Services

GAMMA RAY CCL
CEMENT BOND VDL

Company GREATWESTERN OIL & GAS COMP
Well MARCUS LD 11-378HNX
Field WATTENBERG
County WELD
State COLO
Country USA

Company	GREATWESTERN OIL & GAS COMP
Well	MARCUS LD 11-378HNX
Field	WATTENBERG
County	WELD
State	COLO
Country	USA

Location: API # : 05-123-45387

SURFACE LOCATION
LAT:40.002656
LONG:-104.868581
SEC 34 TWP 1N RGE 67W

Other Services

Permanent Datum	GL	Elevation	5042
Log Measured From	KB 20'		
Drilling Measured From	KB		

Elevation
K.B. 5062
D.F. 5062
G.L. 5042

Date	JAN-5-2018		
Run Number	ONE		
Depth Driller	16242		
Depth Logger	8070		
Bottom Logged Interval	8070		
Top Log Interval	SURFACE		
Open Hole Size	NA		
Type Fluid	WATER		
Density / Viscosity	8.34PPG		
Max. Recorded Temp.	NA		
Estimated Cement Top	670		
Time Well Ready	12:30		
Time Logger on Bottom	1:15		
Equipment Number	2.75 PROBE		
Location	STERLING		
Recorded By	KYLE GIRDLER		
Witnessed By	DAVE POZAS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8	36	SURFACE	1737.8
Prot. String				
Production String	5.5	17	SURFACE	16242
Liner				

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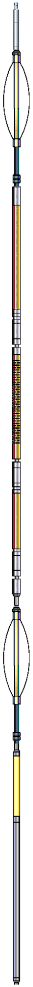
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

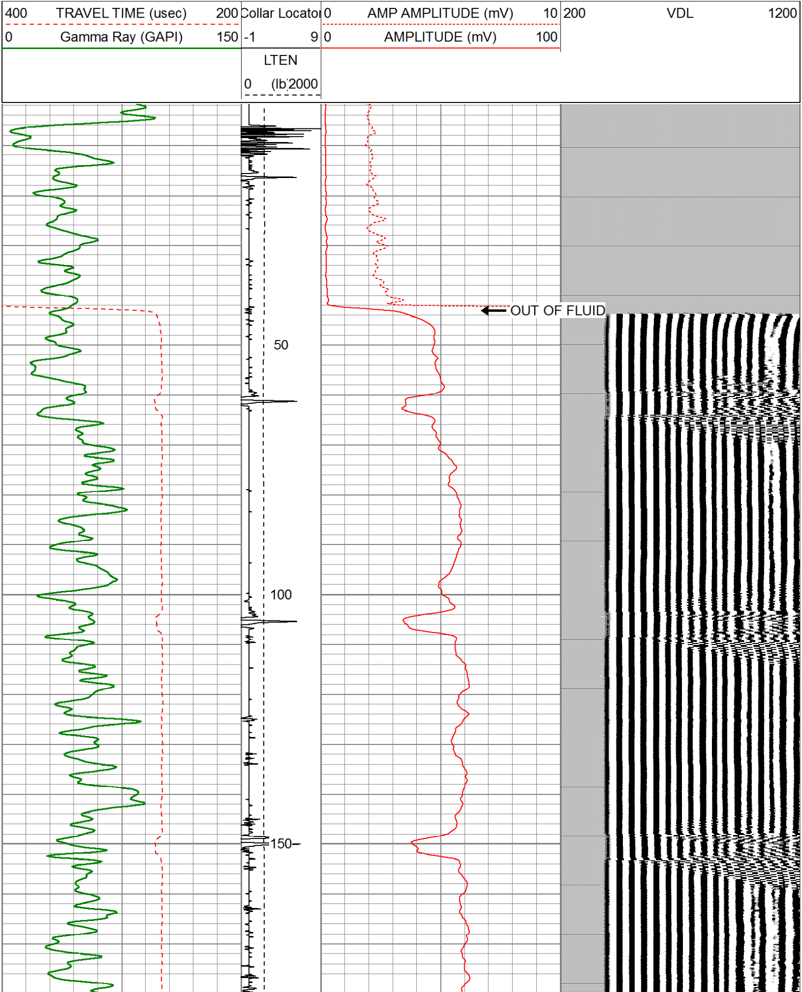
Comments

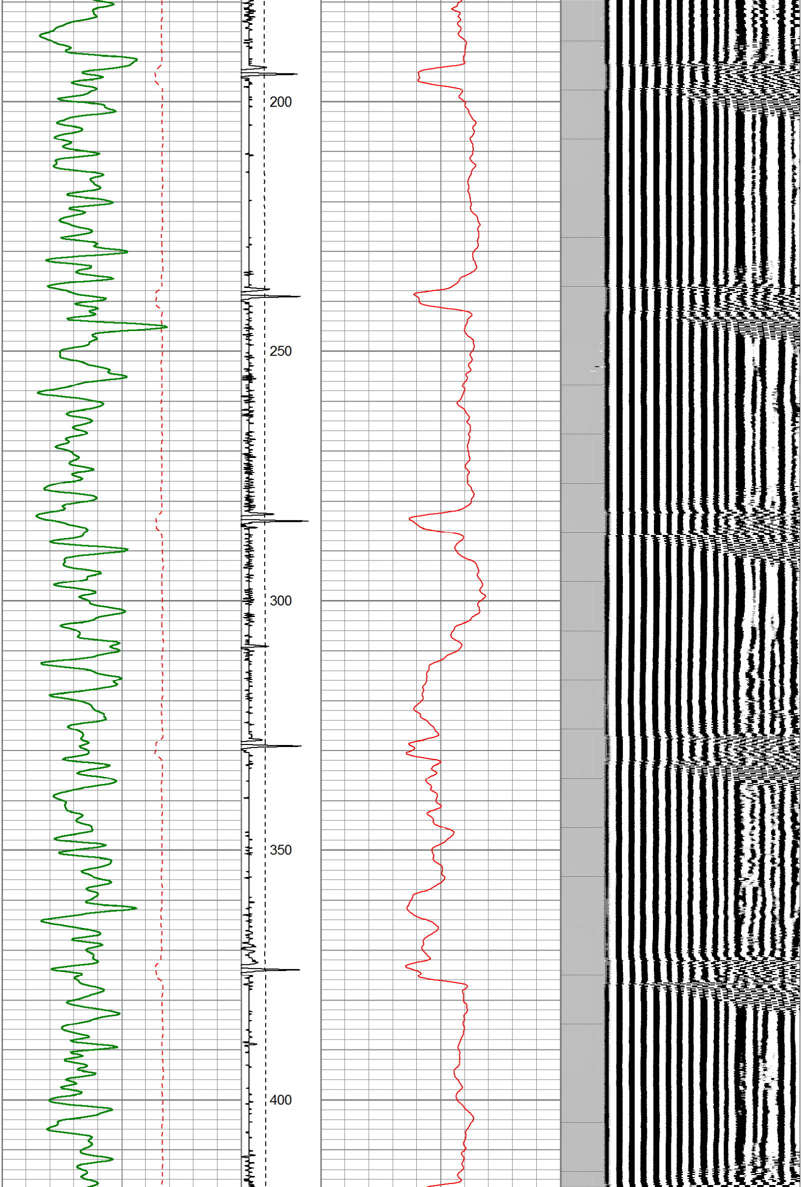
THANK YOU FOR USING KLX ENERGY

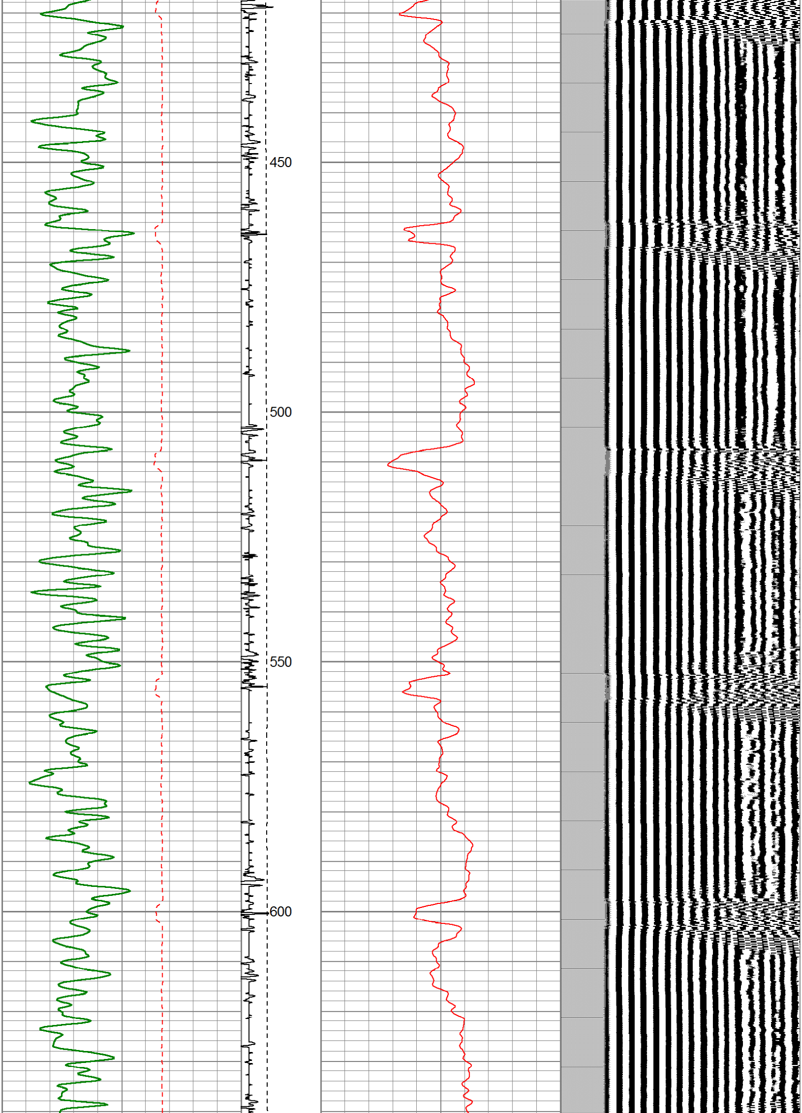
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.69	3.00
			PTS275	2.83	2.75	
WVF3FT	12.08		RBT-Probe LT Radii (1307-48) RADII LT	8.75	2.75	106.50
WVFCAL	12.08					
WVFS1	12.08					
WVFS2	12.08					
WVFS3	12.08					
WVFS4	12.08					
WVFS5	12.08					
WVFS6	12.08					
WVFS7	12.08					
WVFS8	12.08					
WVF5FT	11.08					
			PTS275	2.83	2.75	
CCL	4.17					
GR	2.50		GR-Probe275dig (080221) Probe 2.75 High Temperature	5.00	2.75	57.00

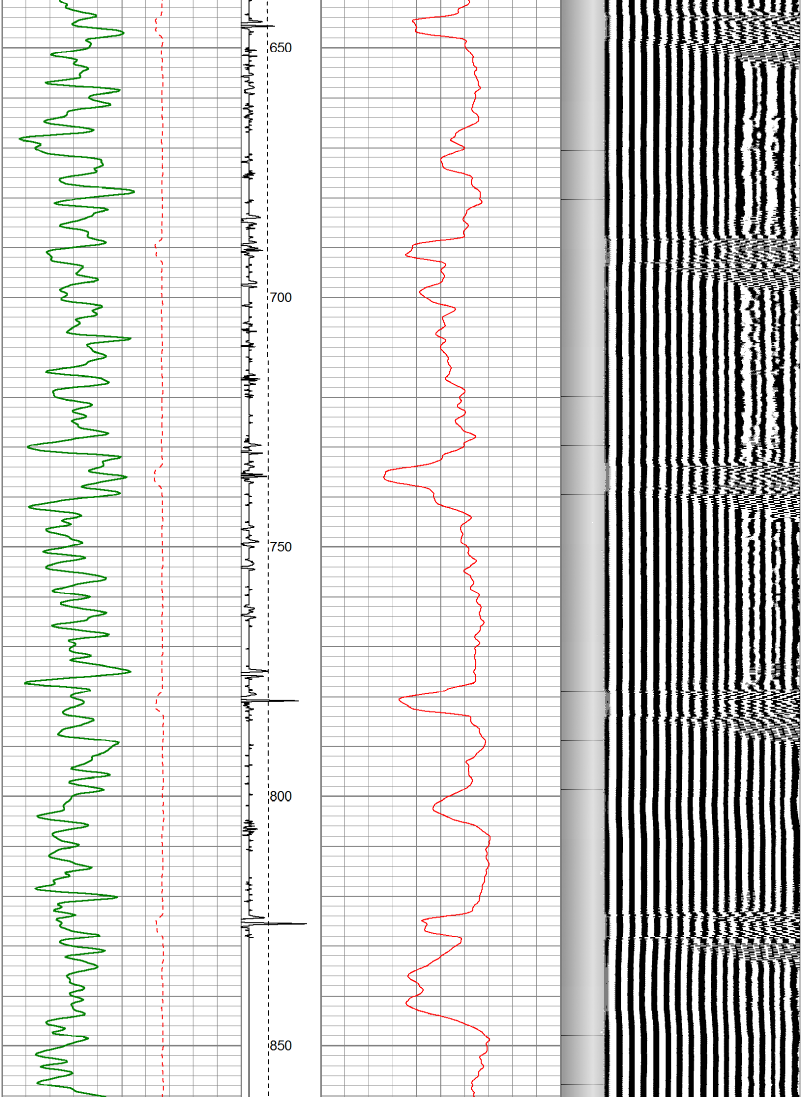
Dataset:	marcus ld 11-378hnx.db: field/well/run1/pass9
Total Length:	20.42 ft
Total Weight:	166.50 lb
O.D.	2.75 in

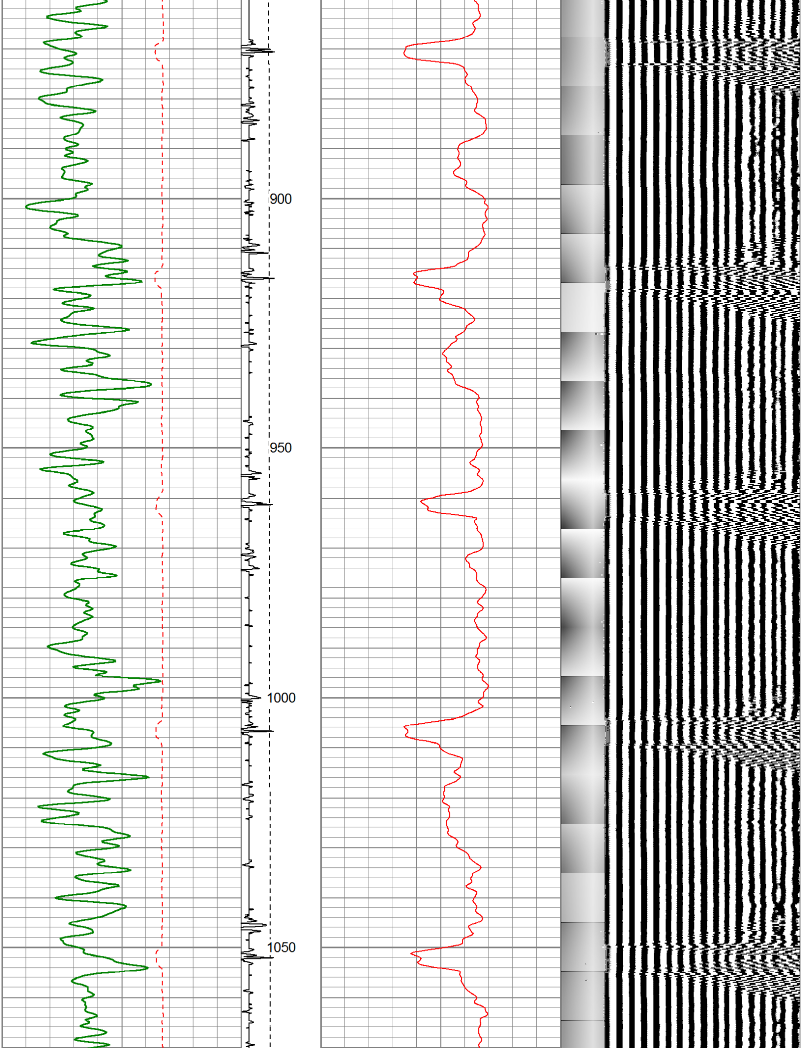
Database File: marcus ld 11-378hnx.db
Dataset Pathname: pass9
Presentation Format: cbl_drs
Dataset Creation: Fri Jan 05 14:50:28 2018 by Log Std Casedhole 10081
Charted by: Depth in Feet scaled 1:240

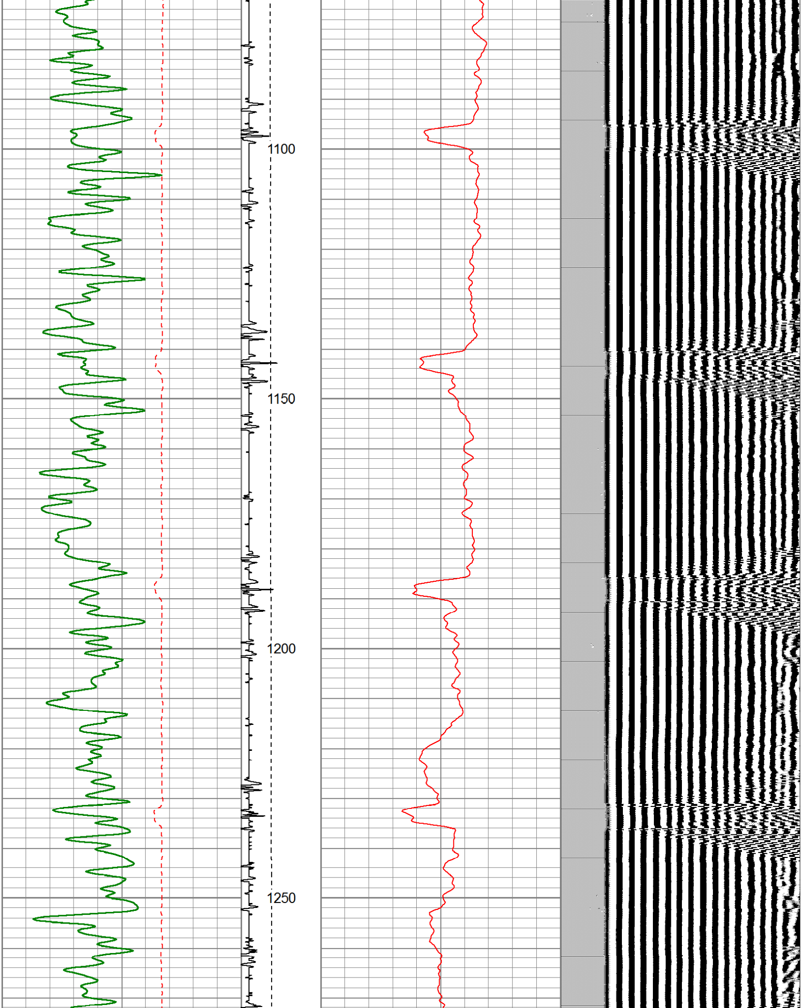


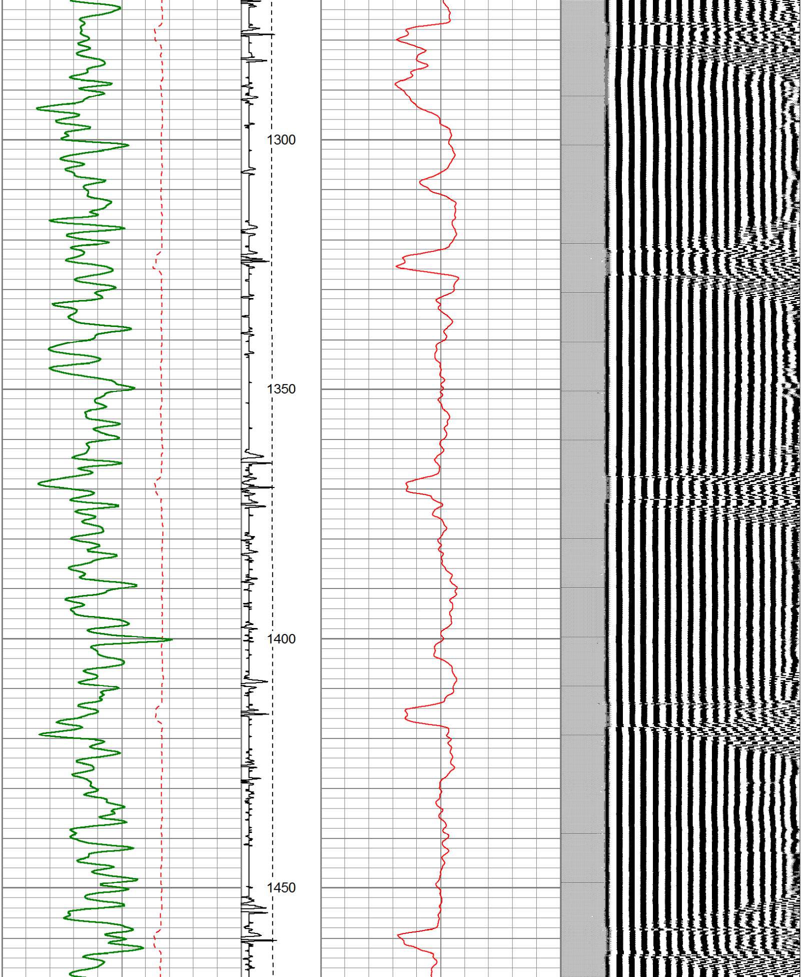


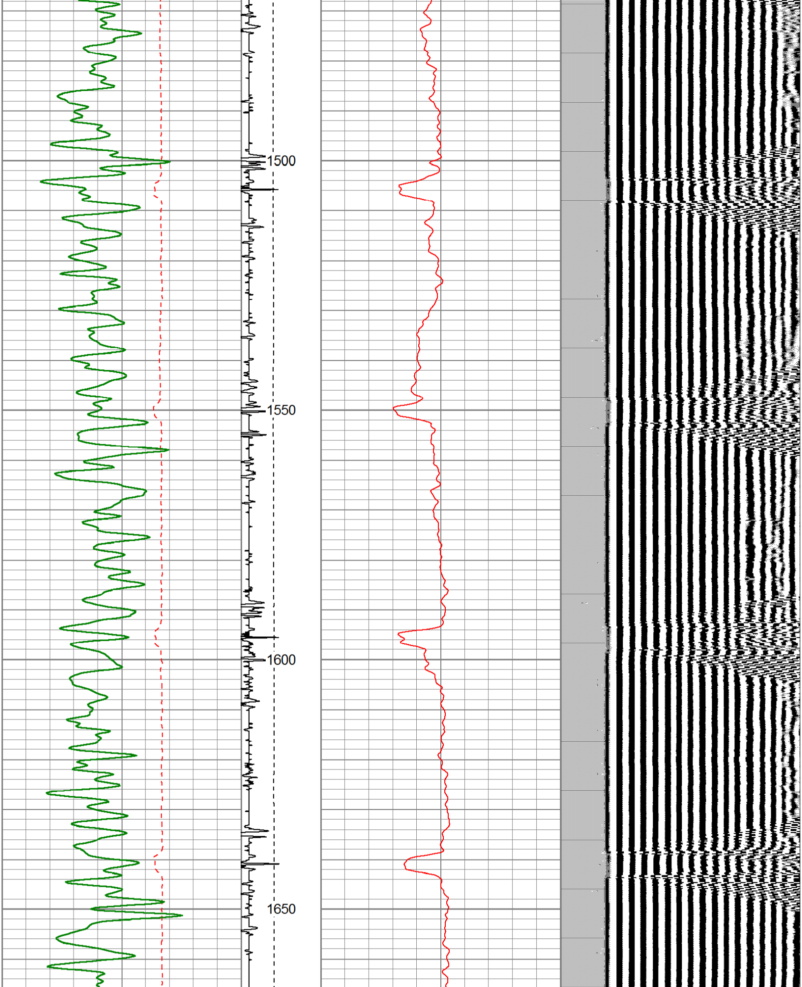


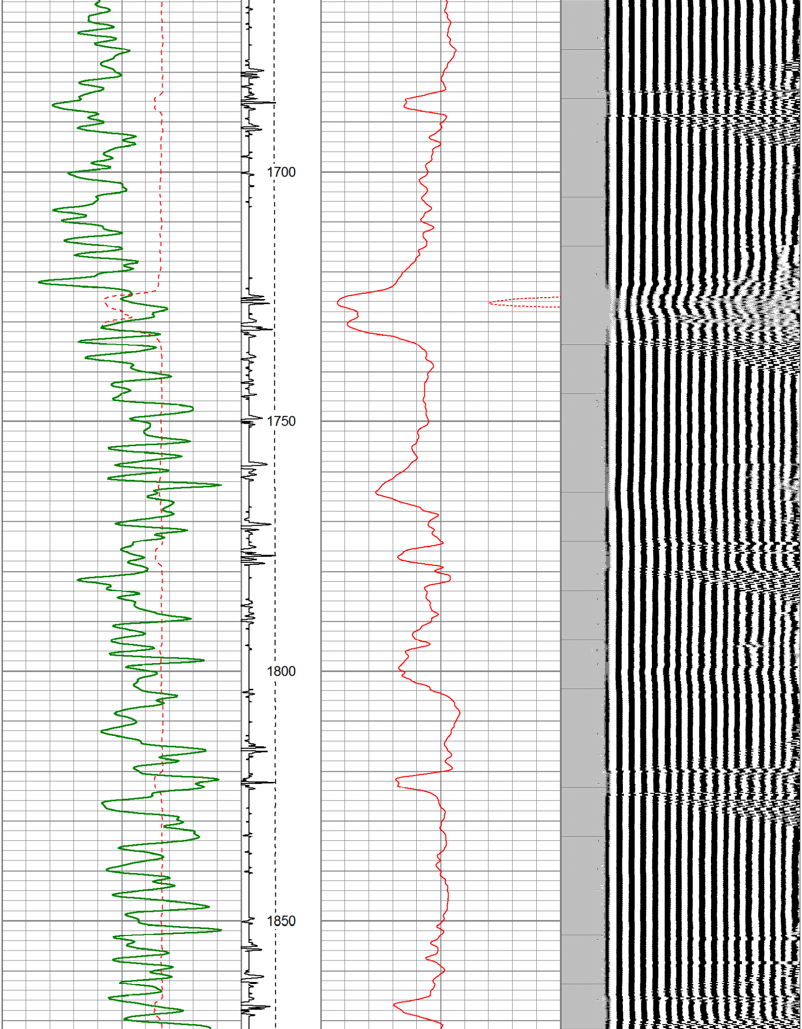


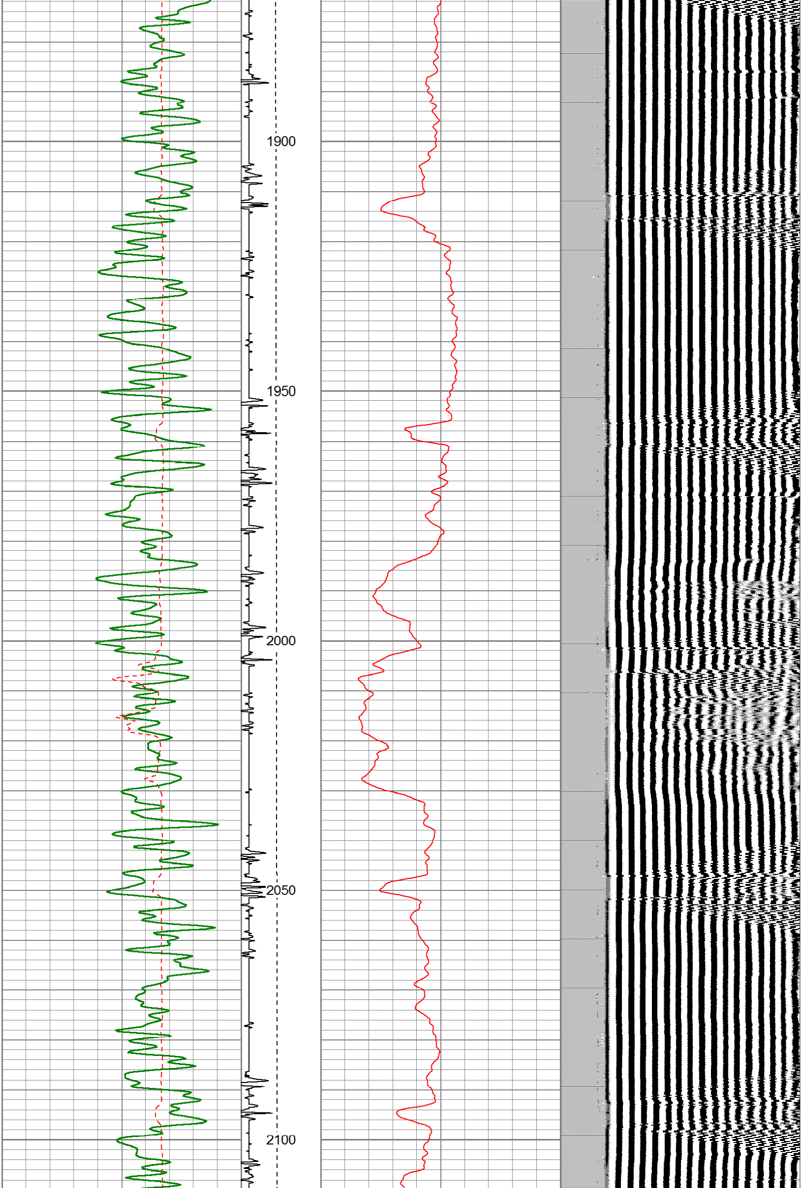


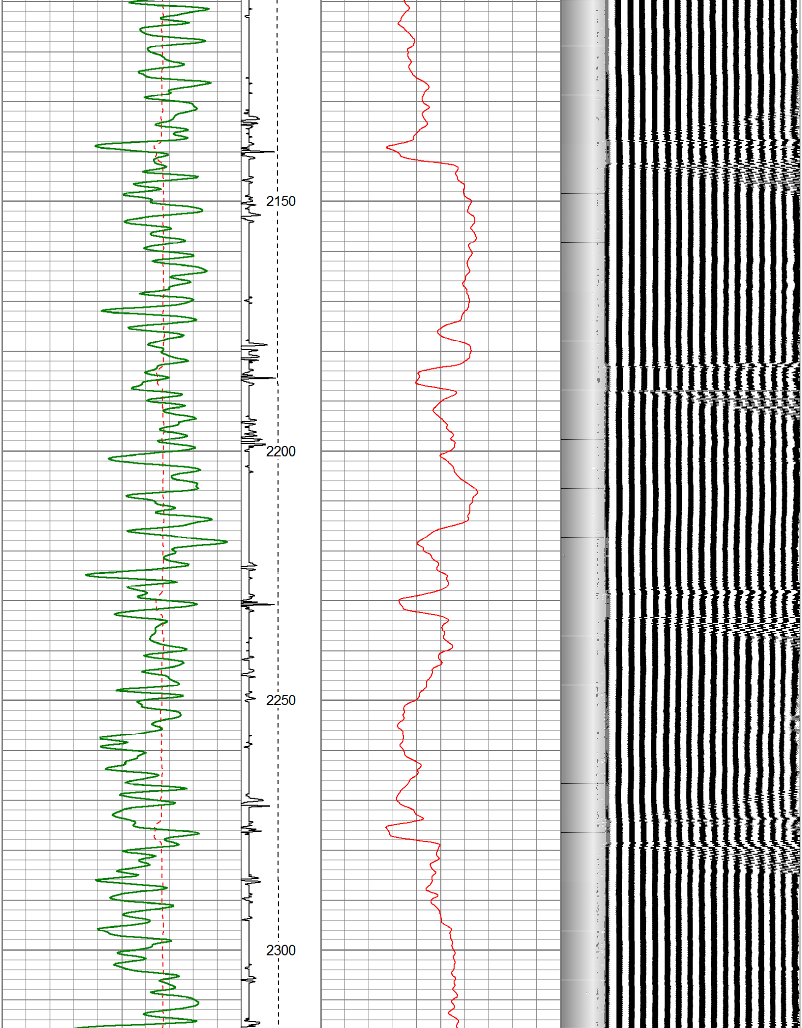


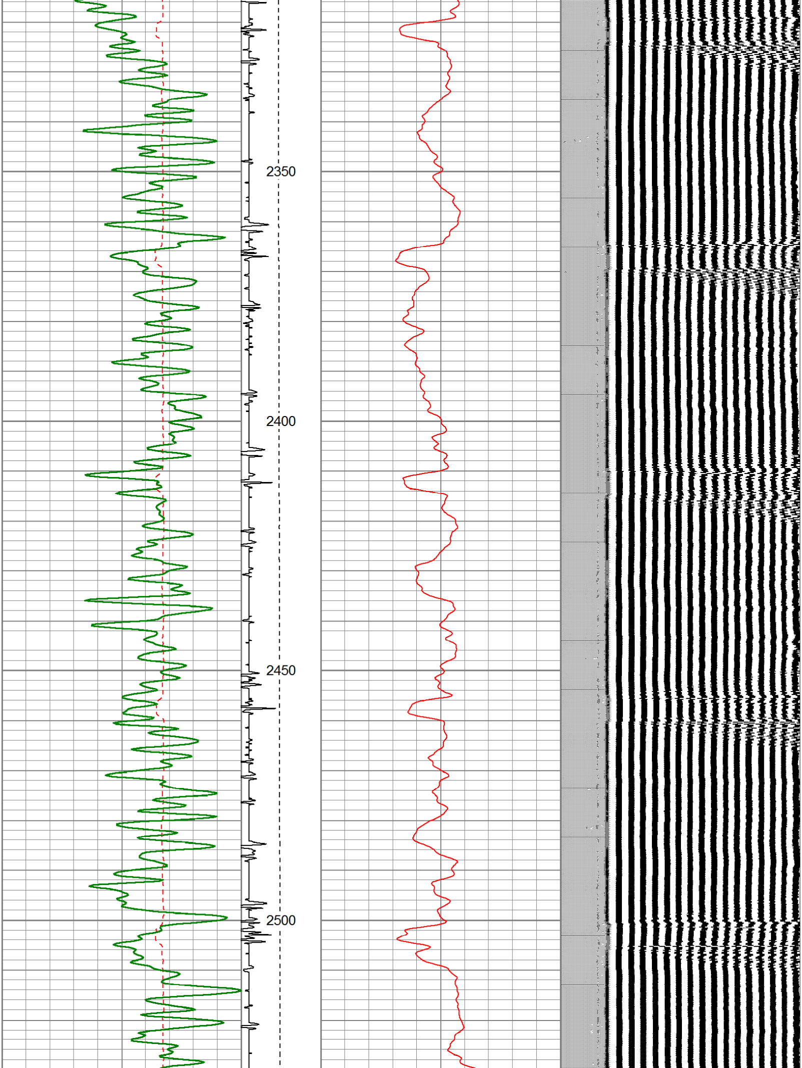


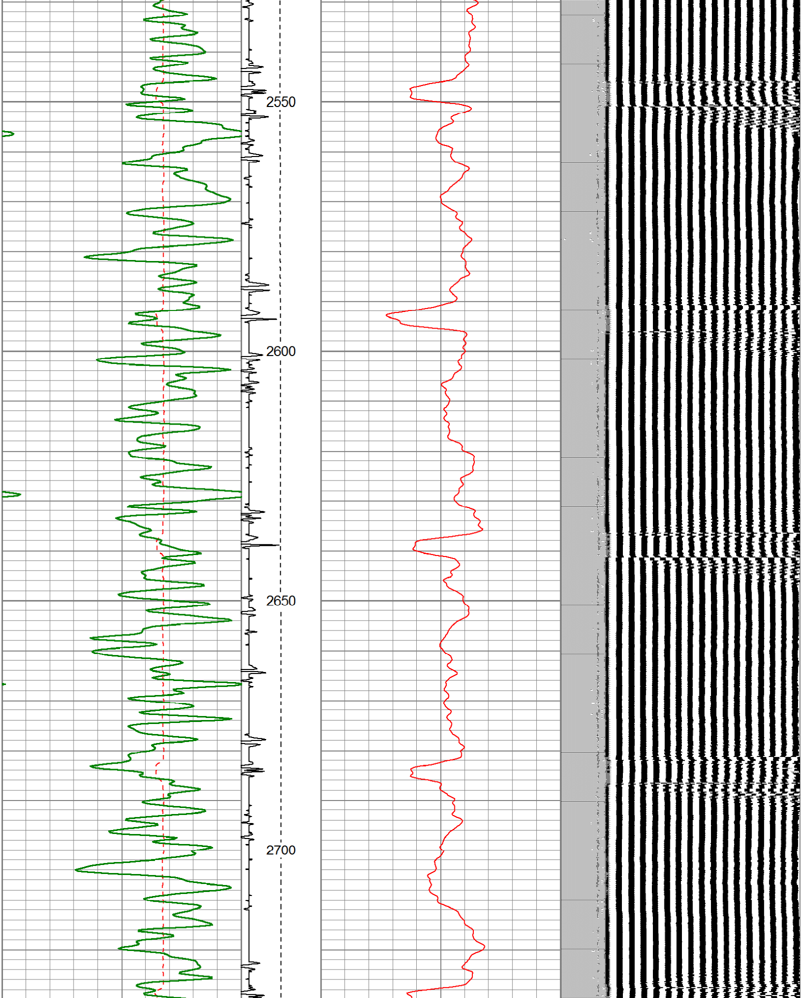


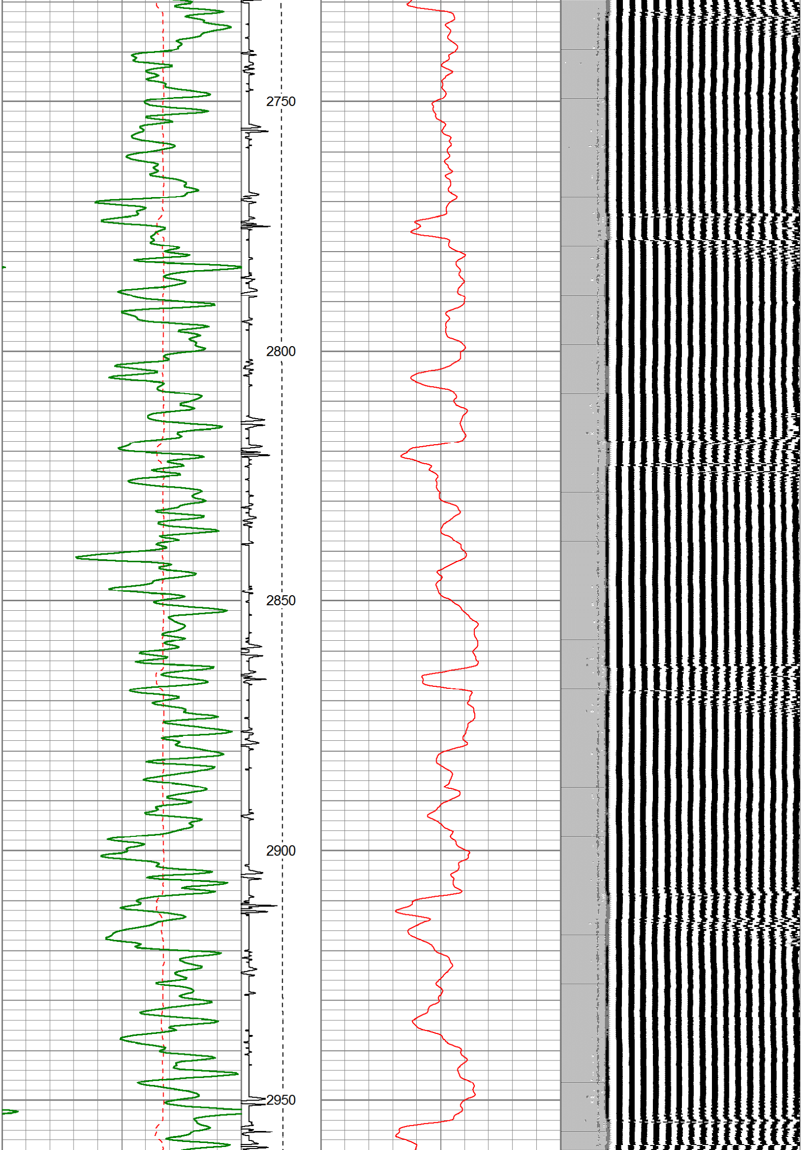


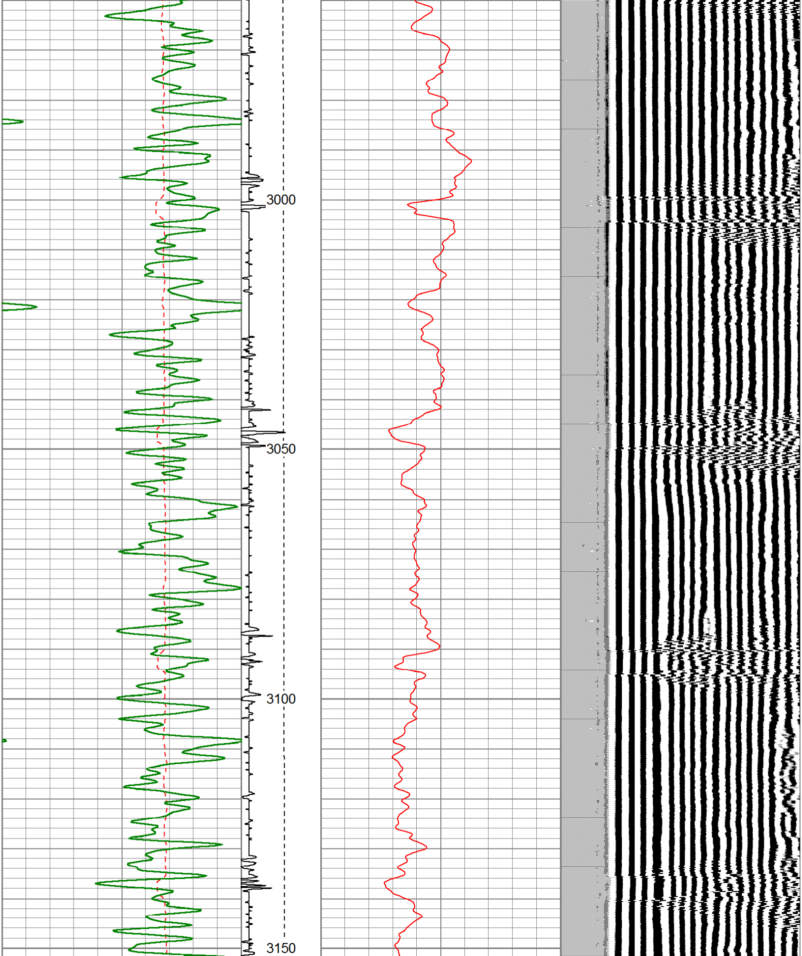


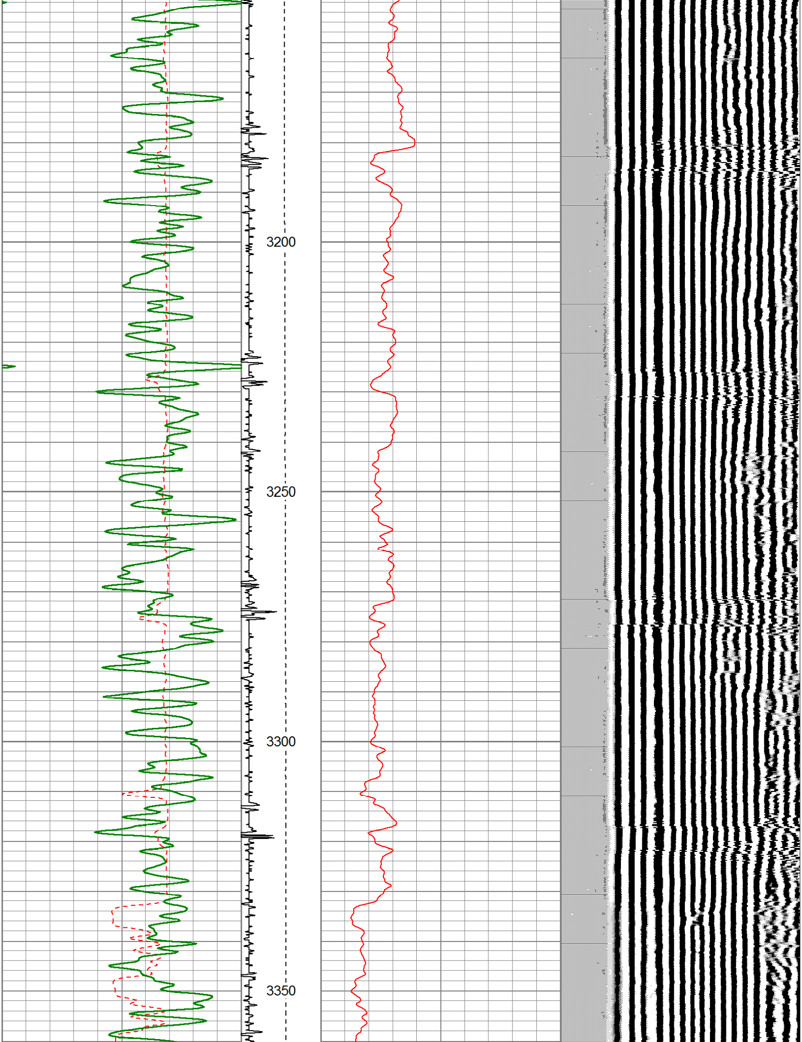


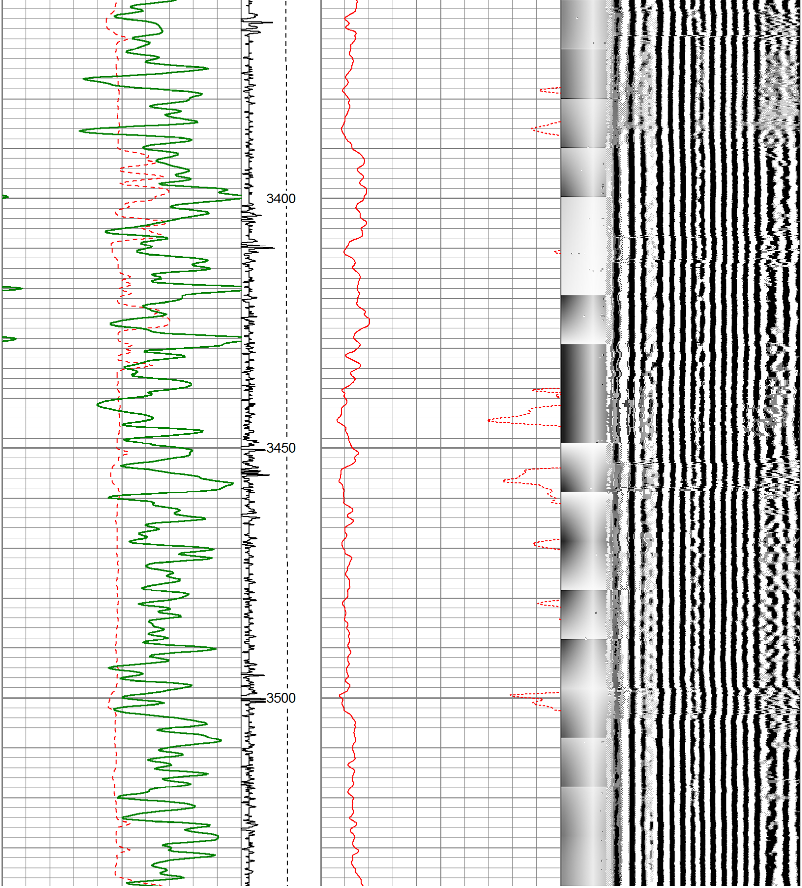


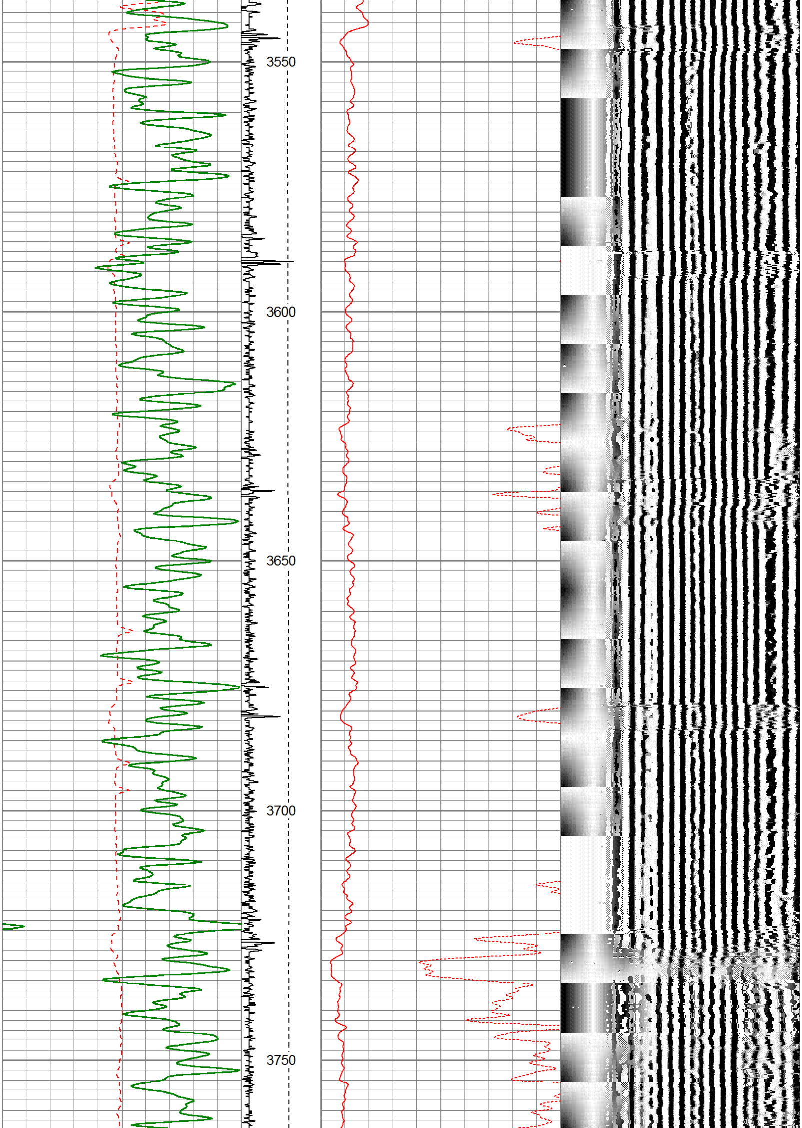








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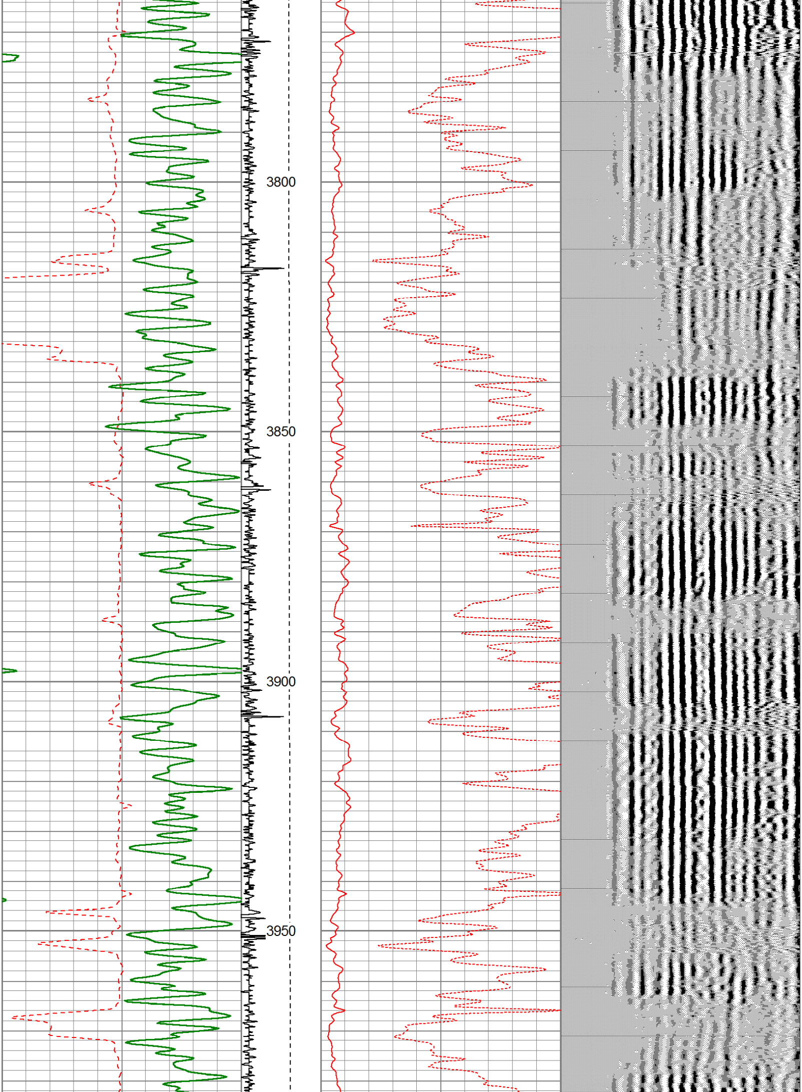
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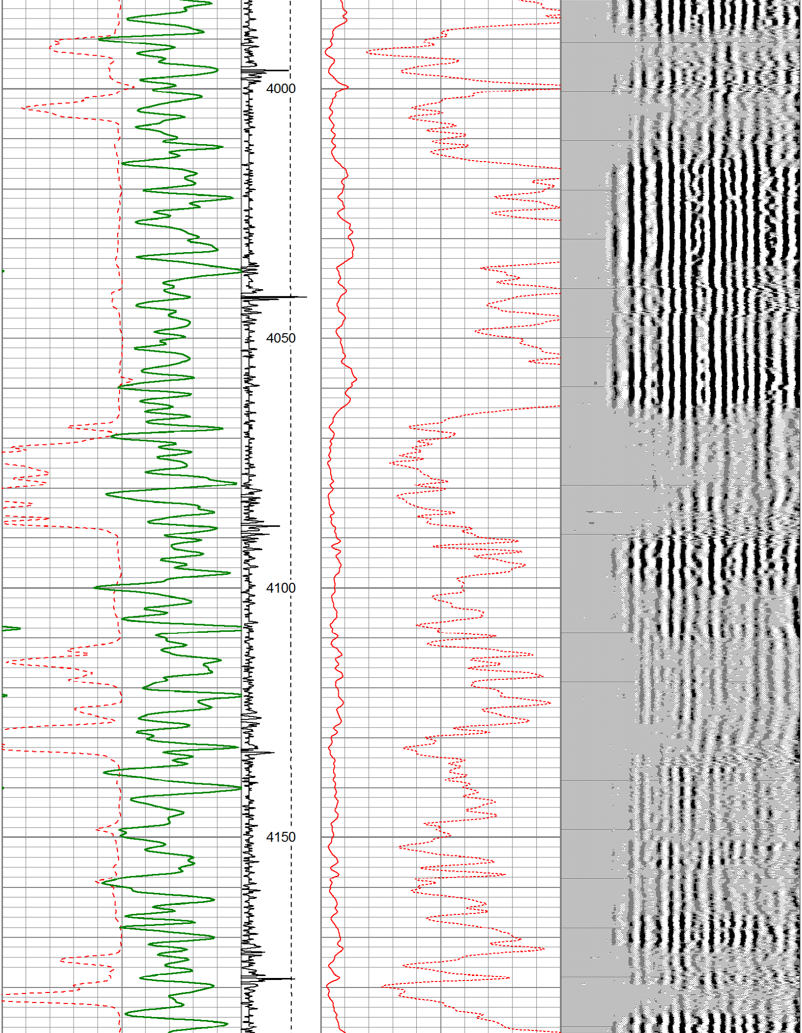
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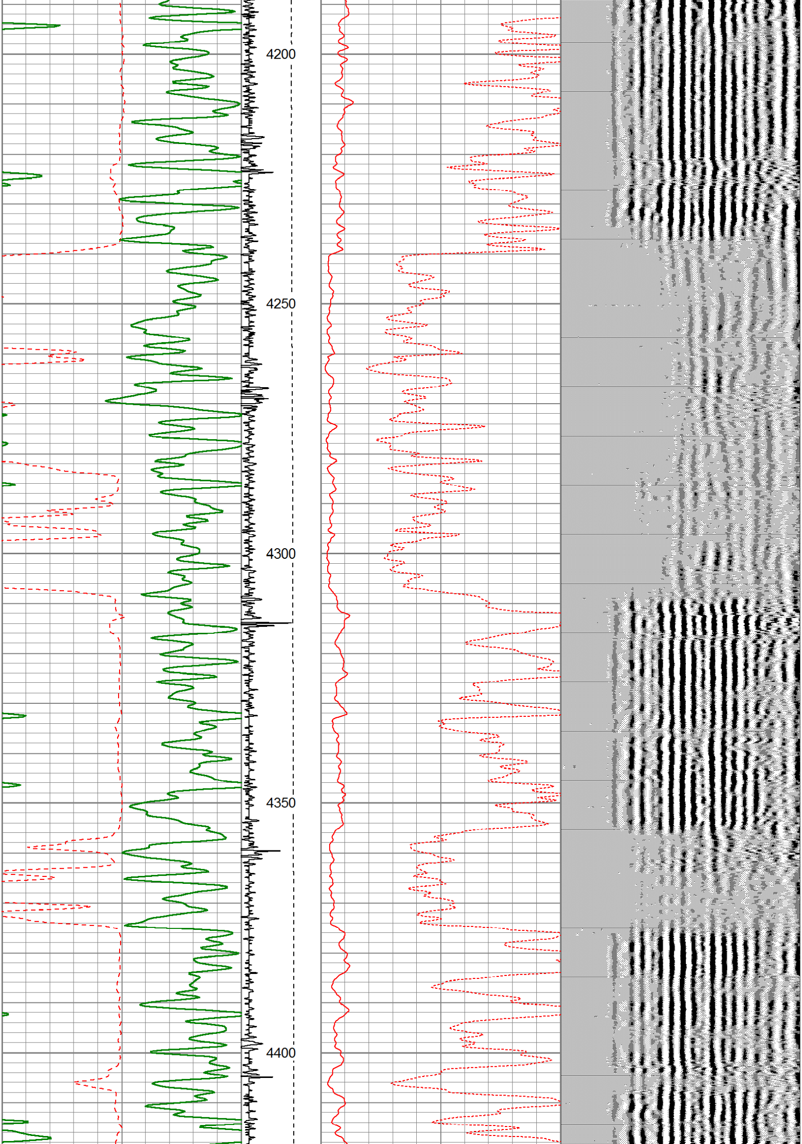
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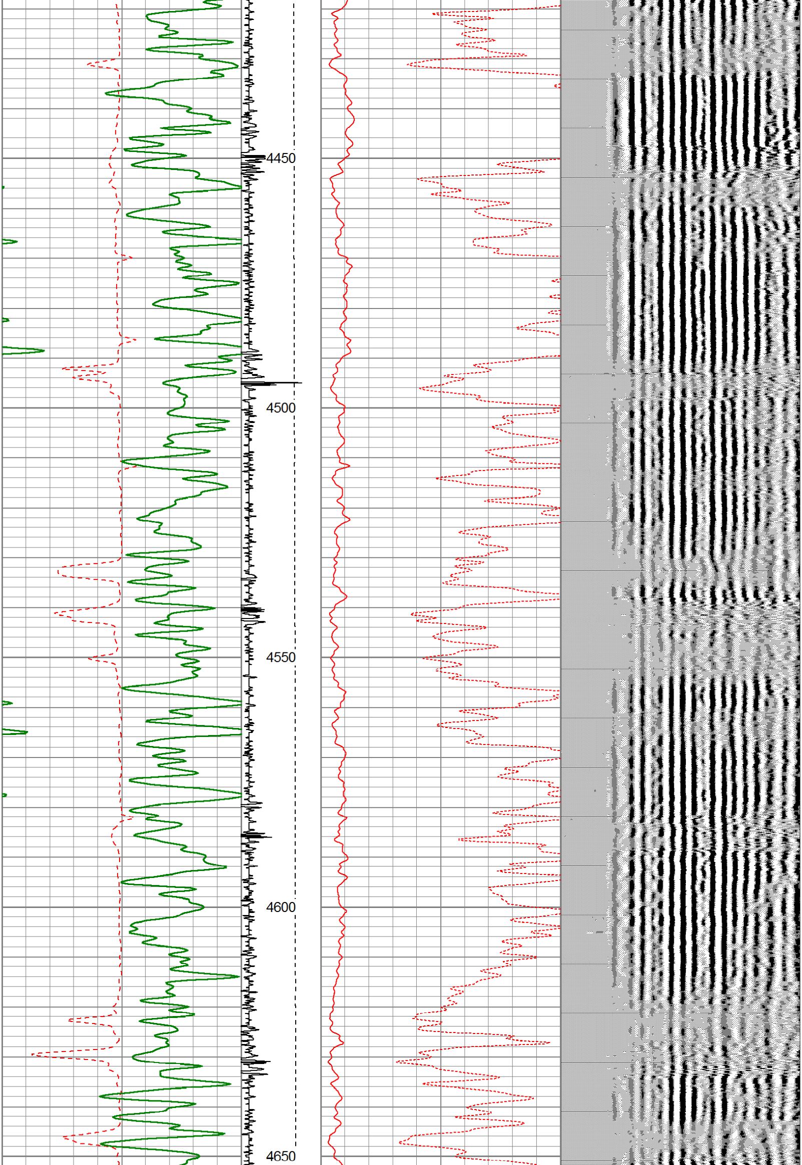
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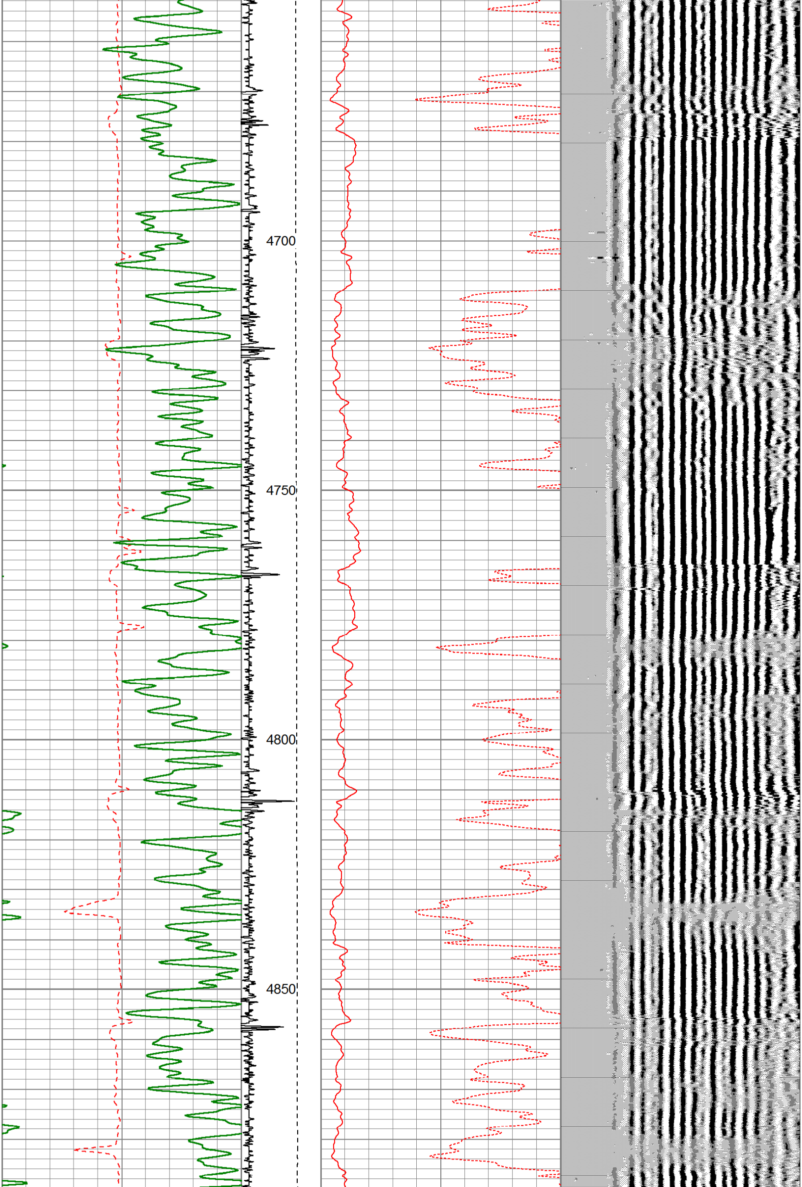
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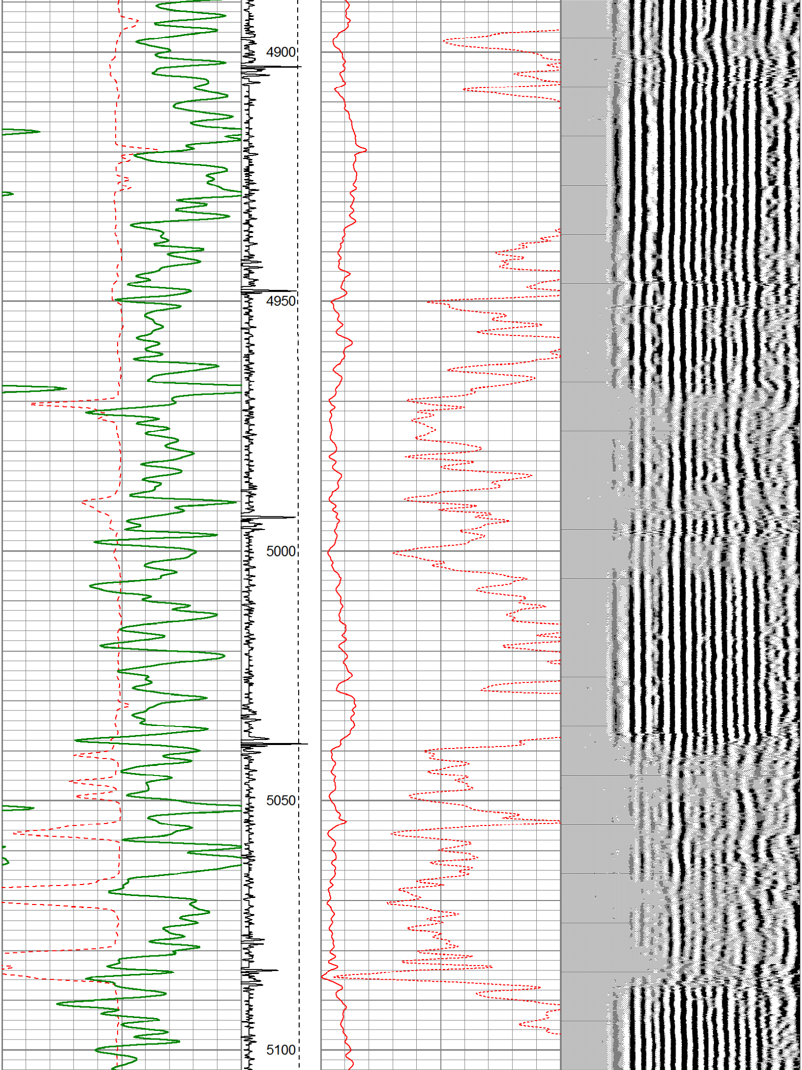
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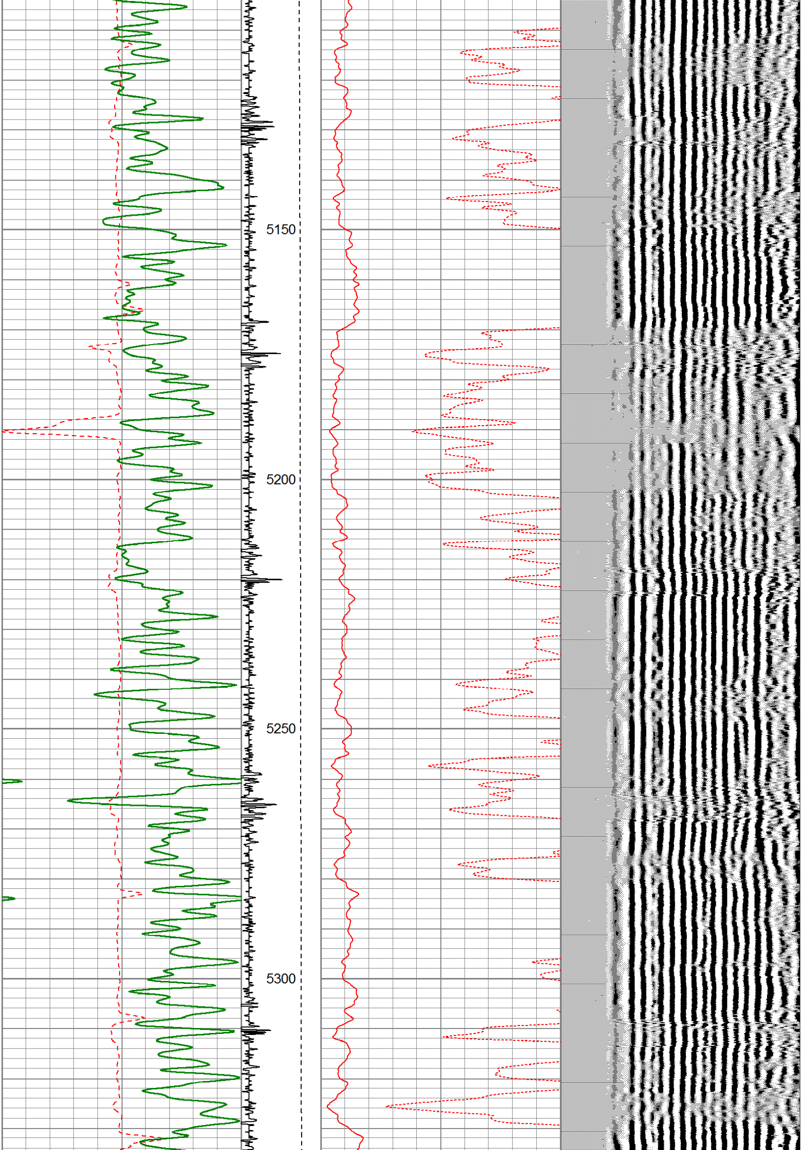
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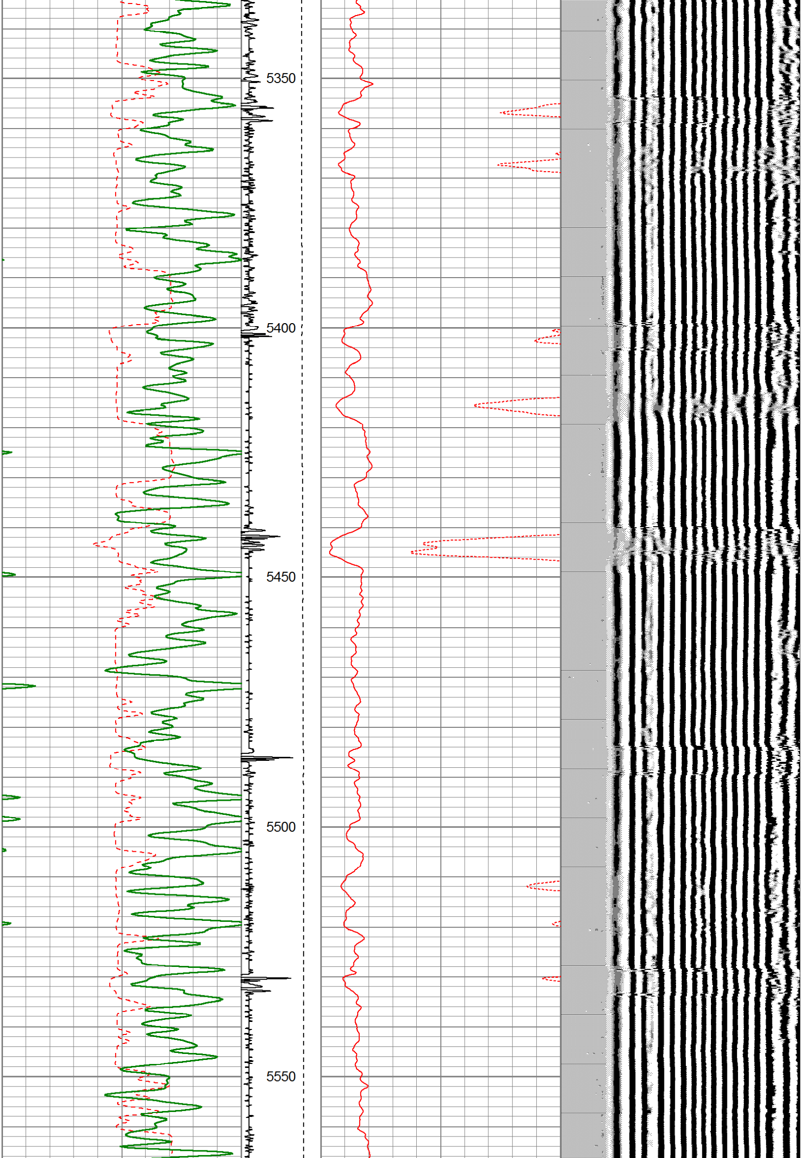
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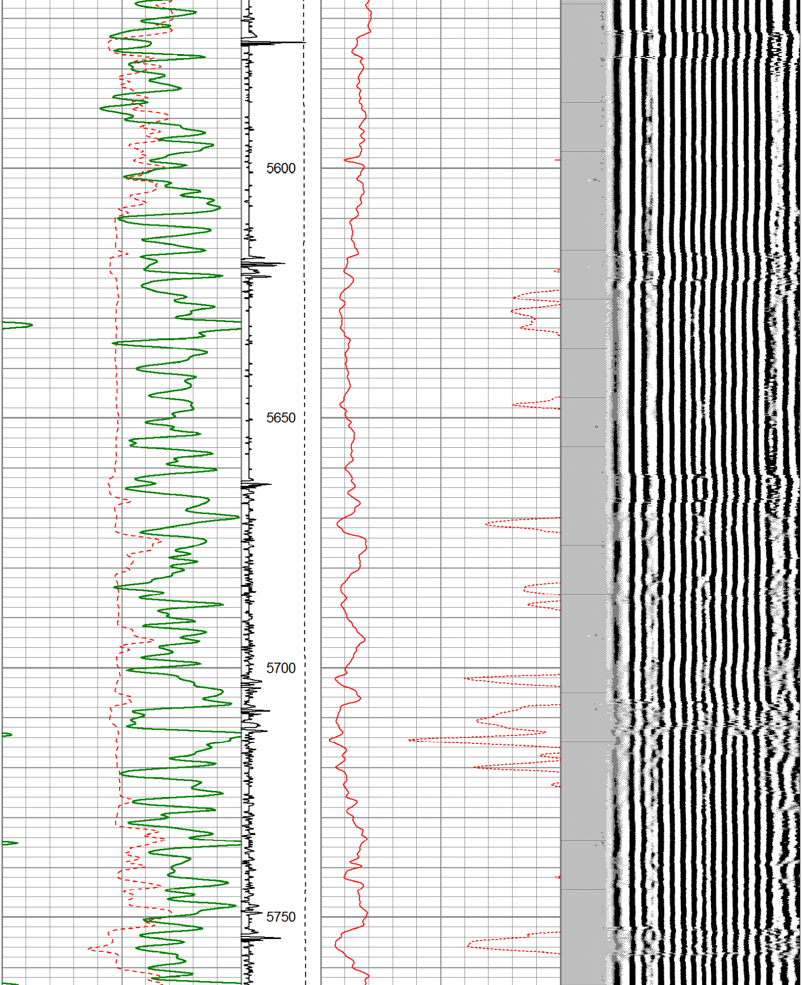
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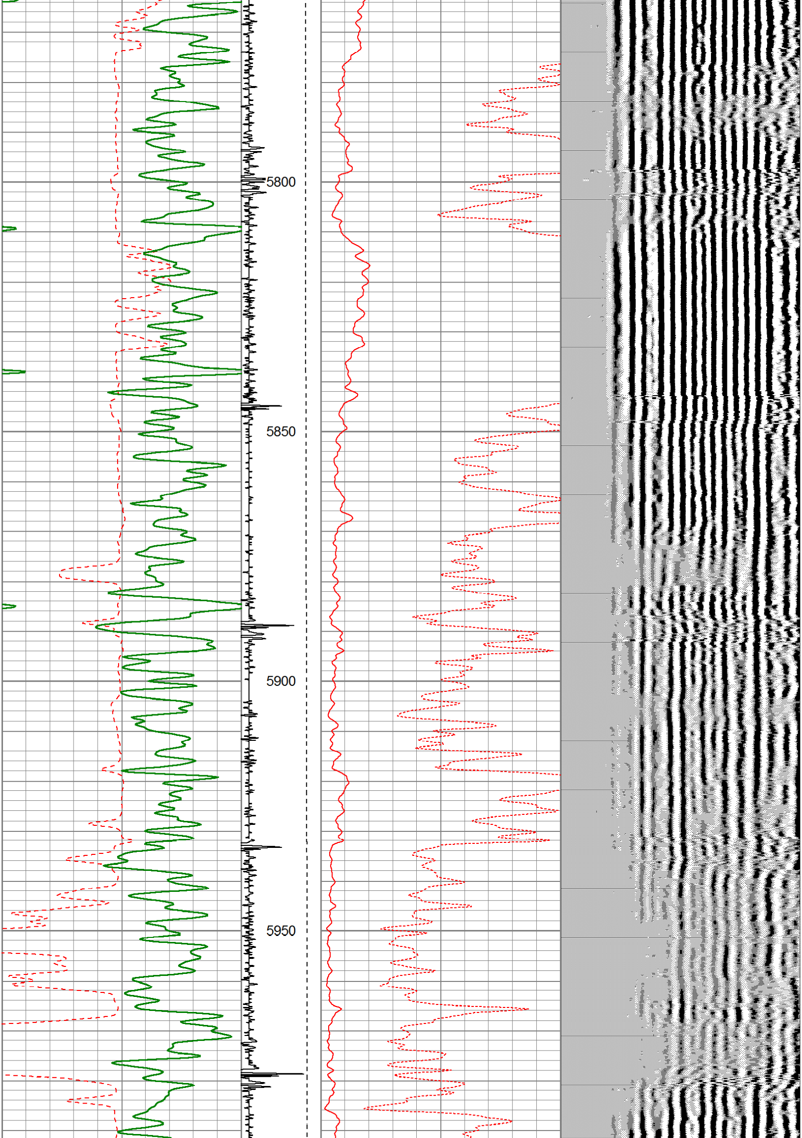
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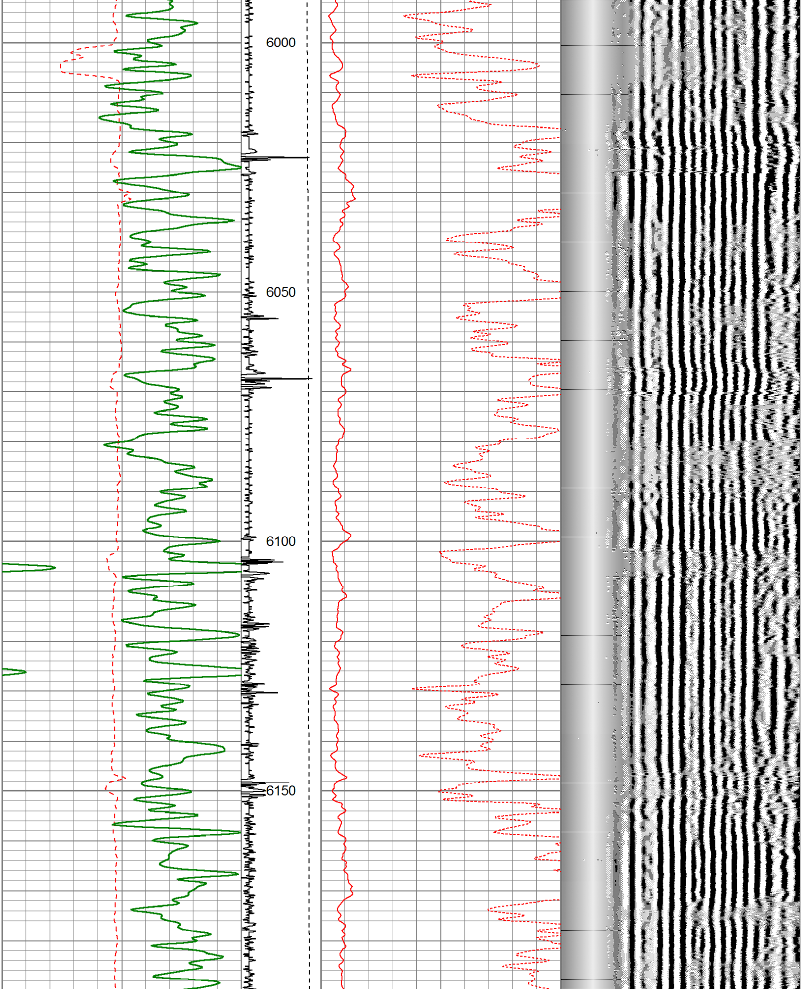
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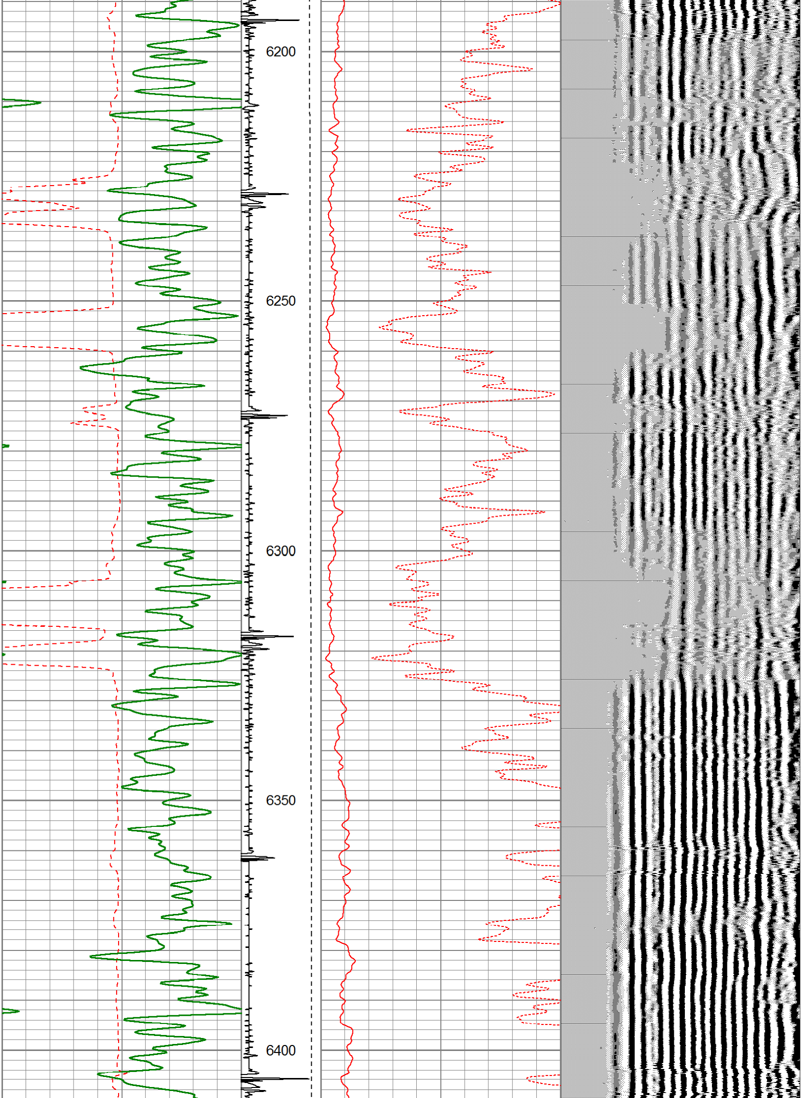
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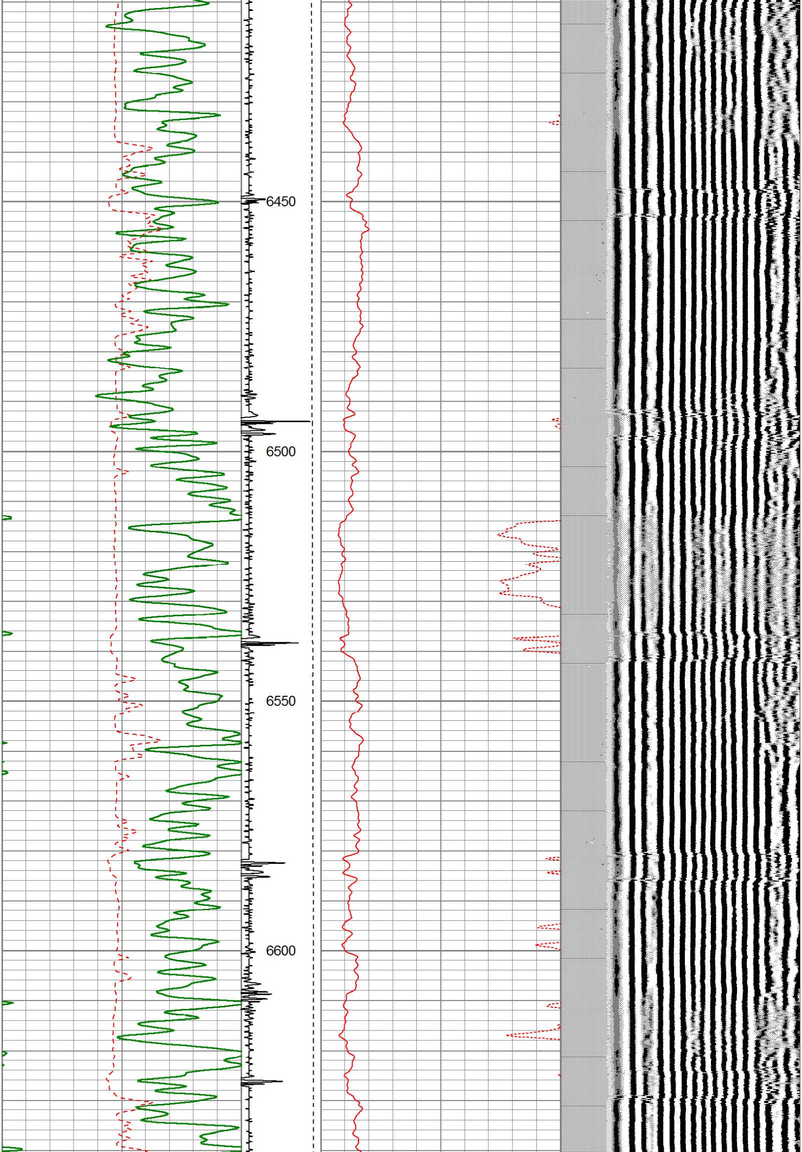
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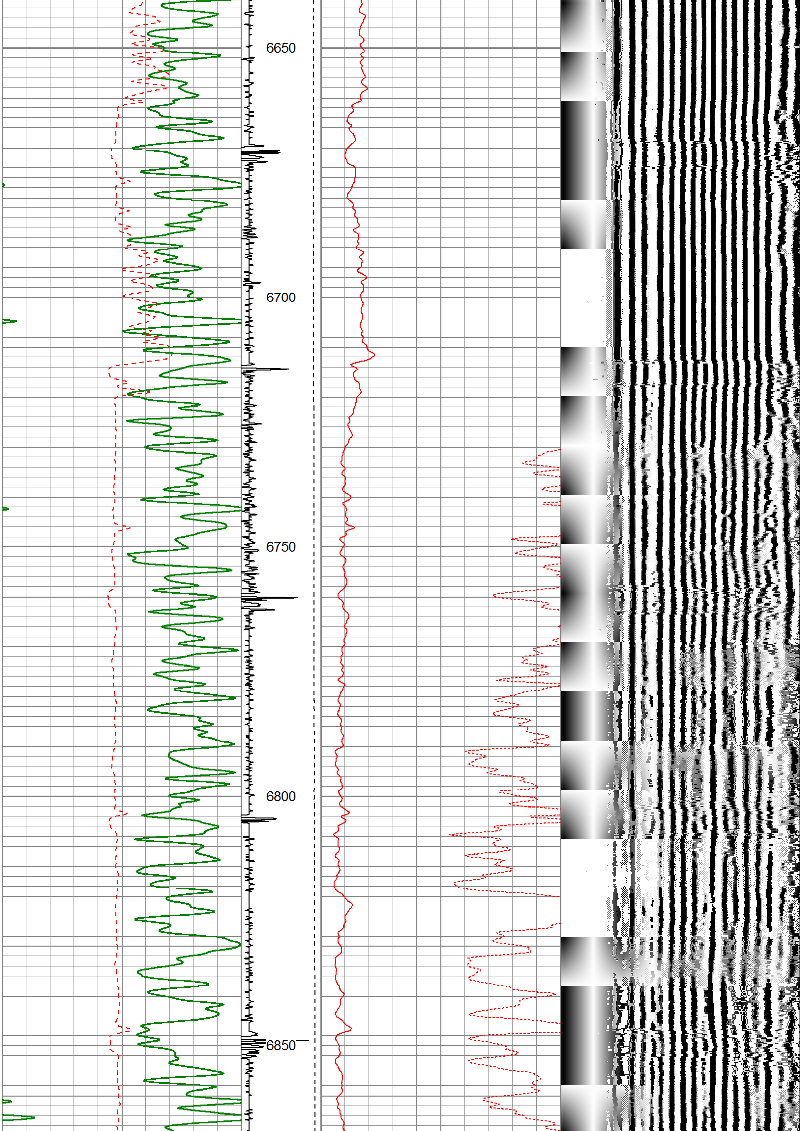
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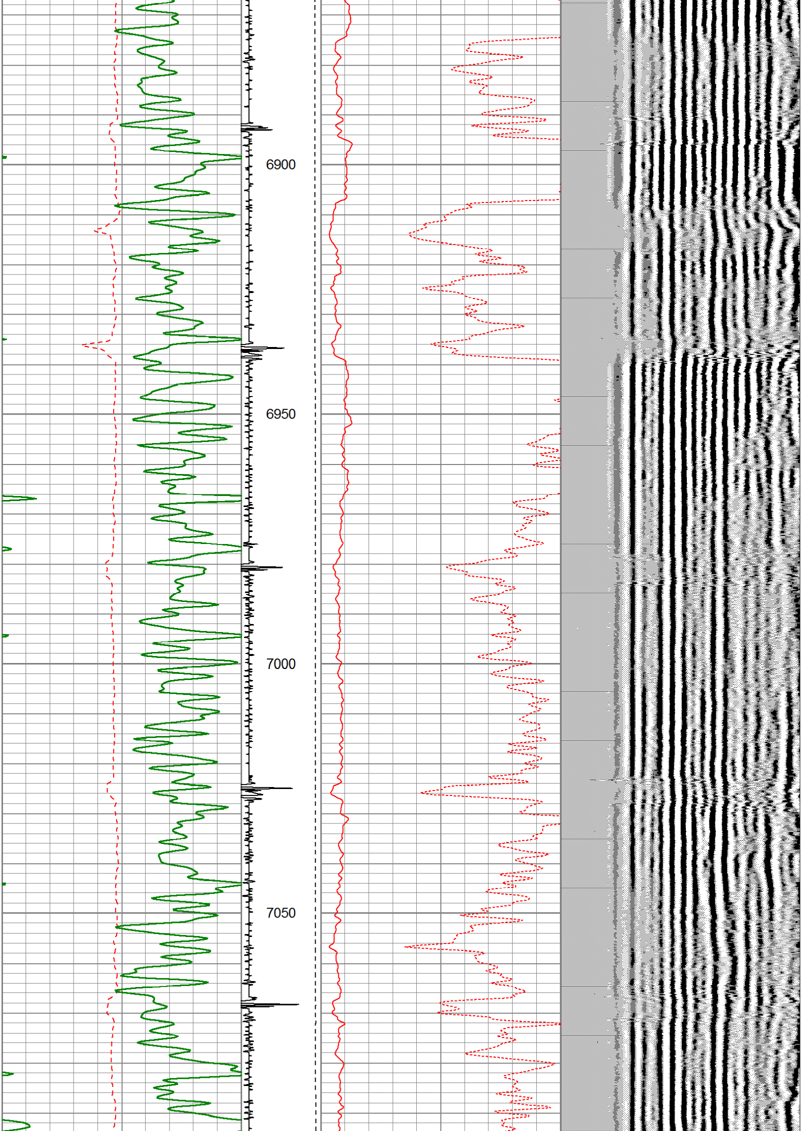
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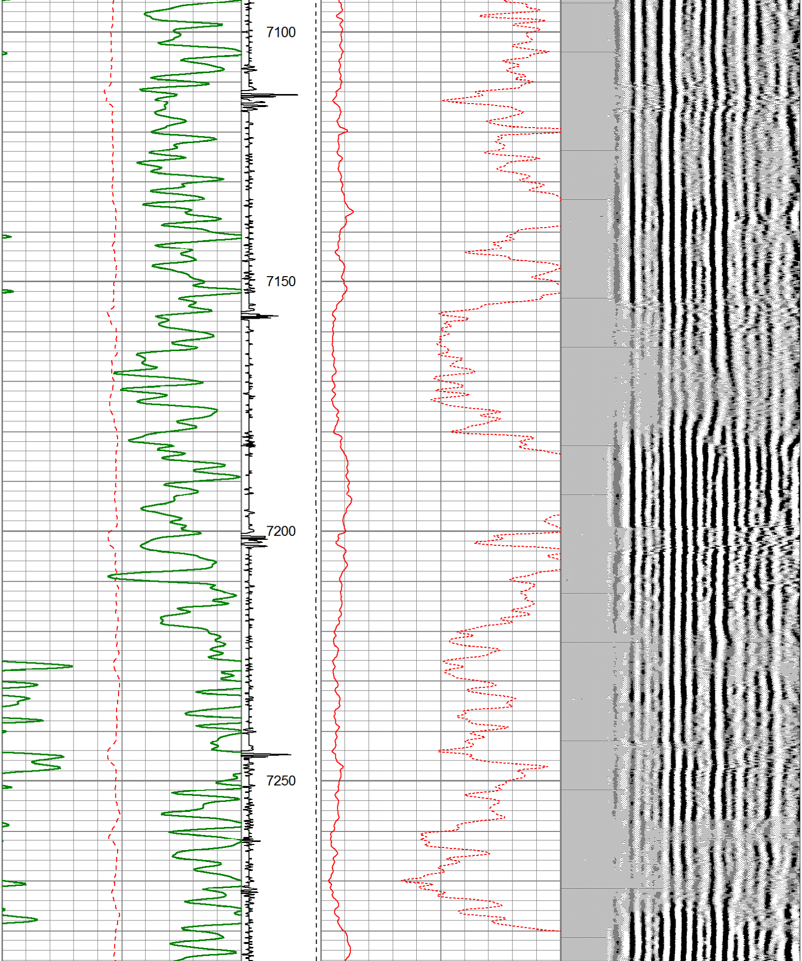
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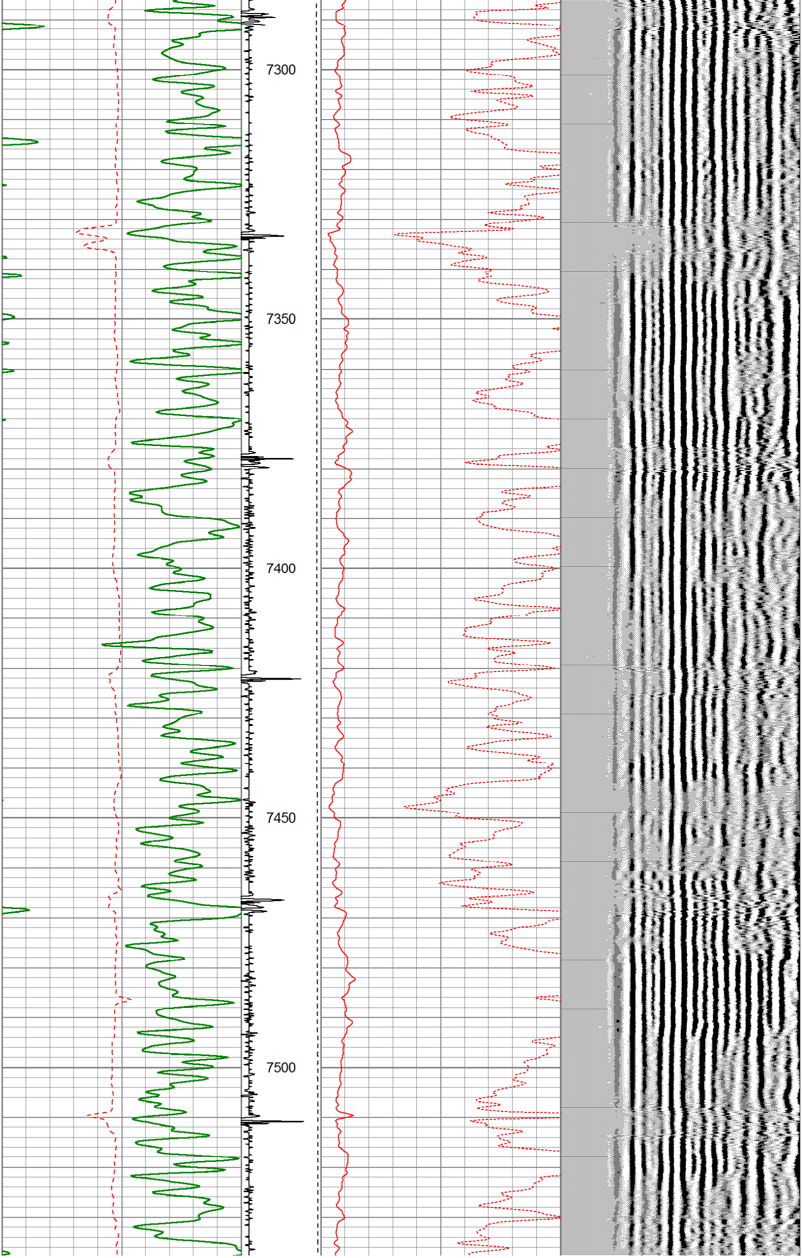
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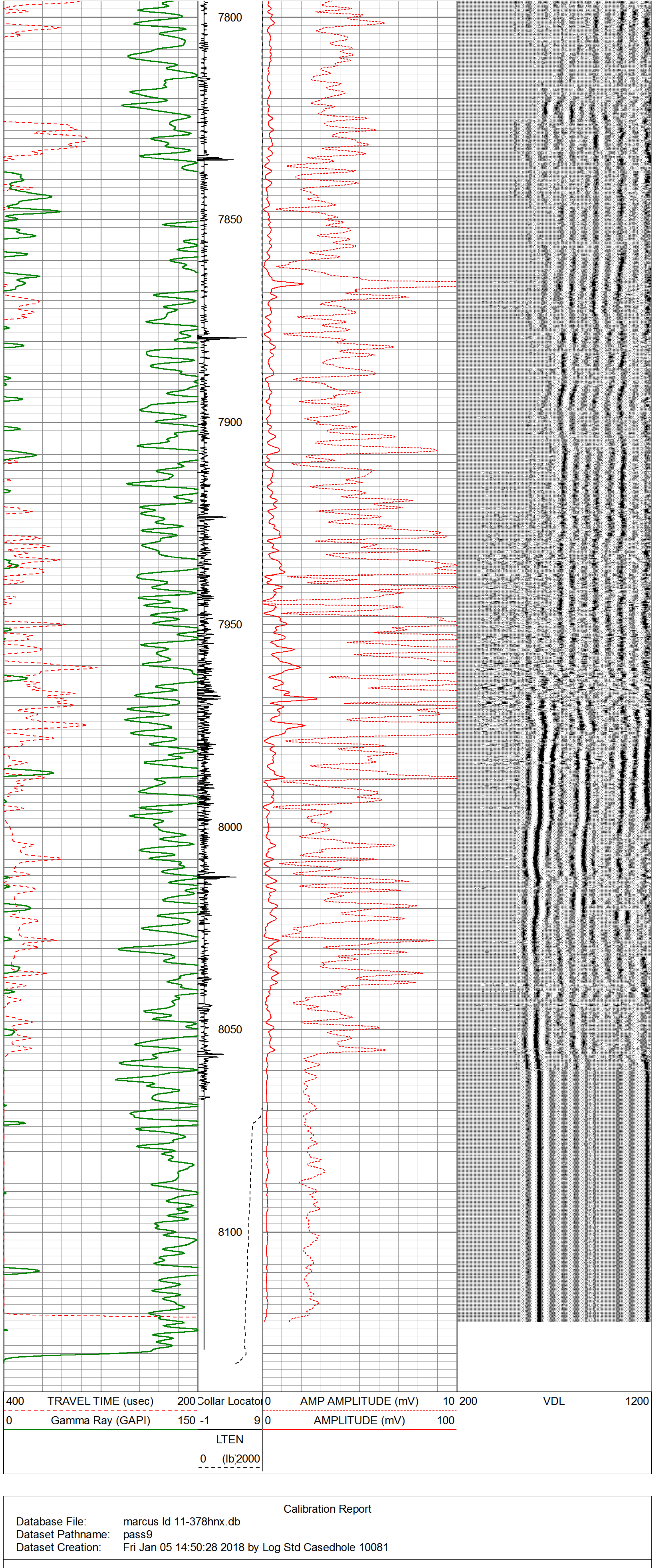
KLX Energy Services

REPEAT SECTION

Database File:	marcus ld 11-378hnx.db
Dataset Pathname:	pass7
Presentation Format:	cbl_drs
Dataset Creation:	Fri Jan 05 14:45:32 2018 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240



Calibration Report

Database File:	marcus ld 11-378hnx.db
Dataset Pathname:	pass9
Dataset Creation:	Fri Jan 05 14:50:28 2018 by Log Std Casedhole 10081

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 080221

SHOP CALIBRATION Thu Sep 08 10:58:32 2016

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		1.0000			GAPI/cps

PRIMARY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

BEFORE SURVEY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

AFTER SURVEY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number:	1307-48	
Tool Model:	Probe LT Radii	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	323.897	ft

Master Calibration, performed Fri Jan 05 14:22:18 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.002	1.369	1.500	71.921	51.517	1.406
CAL	0.001	1.380				
5'	0.002	1.032	1.500	71.921	68.327	1.382
SUM						
S1	0.002	1.368	2.000	71.200	50.666	1.913
S2	0.002	1.274	2.000	71.200	54.408	1.889
S3	0.002	1.222	2.000	71.200	56.733	1.891
S4	0.002	1.331	2.000	71.200	52.076	1.902
S5	0.002	1.220	2.000	71.200	56.802	1.893
S6	0.002	1.260	2.000	71.200	55.019	1.899
S7	0.002	1.309	2.000	71.200	52.928	1.902
S8	0.002	1.210	2.000	71.200	57.250	1.911

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.001	1.380	1.000	0.000

Air Zero Calibration, performed Fri Dec 15 11:11:21 2017:

	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