Company	GREAT WESTERN OPERATING
Well	RAINDANCE FC 26-369HC
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA

KLX Energy Services

V.D.L. C.C.L. GAMMA RAY CEMENT BOND LOG

Company GREAT WESTERN OPERATING COMPANY LLC
Well RAINDANCE FC 26-369HC
Field WATTENBERG
County WELD
State COLORADO Country USA

Location: API #: 05-123-45007
929' FNL X 316' FEL
SEC 29 TWP 6N RGE 67W

Other Services
N/A

Permanent Datum	GL	Elevation	4784'
Log Measured From	KB	20'	
Drilling Measured From	KB		

Elevation
K.B. 4804'
D.F. 4804'
G.L. 4784'

Date	27-OCTOBER-17
Run Number	ONE
Depth Driller	20,538'
Depth Logger	8286'
Bottom Logged Interval	8274'
Top Log Interval	SURFACE
Open Hole Size	8.5"
Type Fluid	WATER
Density / Viscosity	8.34 PPG
Max. Recorded Temp.	N/A
Estimated Cement Top	635'
Time Well Ready	ROA
Time Logger on Bottom	11:45
Equipment Number	411468
Location	PLATTEVILLE CO
Recorded By	R. AZEVEDO
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	9.625"	36#	SURFACE	1500'
Prot. String				
Production String	5.5"	17#	SURFACE	20,538'
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

LOG RAN AS PER CUSTOMER REQUEST
DEPTH REFERENCE TO 20' KB
LOG RAN FROM AS DEEP AS POSSIBLE TO SURFACE
LOG RAN WITH 0 PSI SURFACE INDUCED PRESSURE

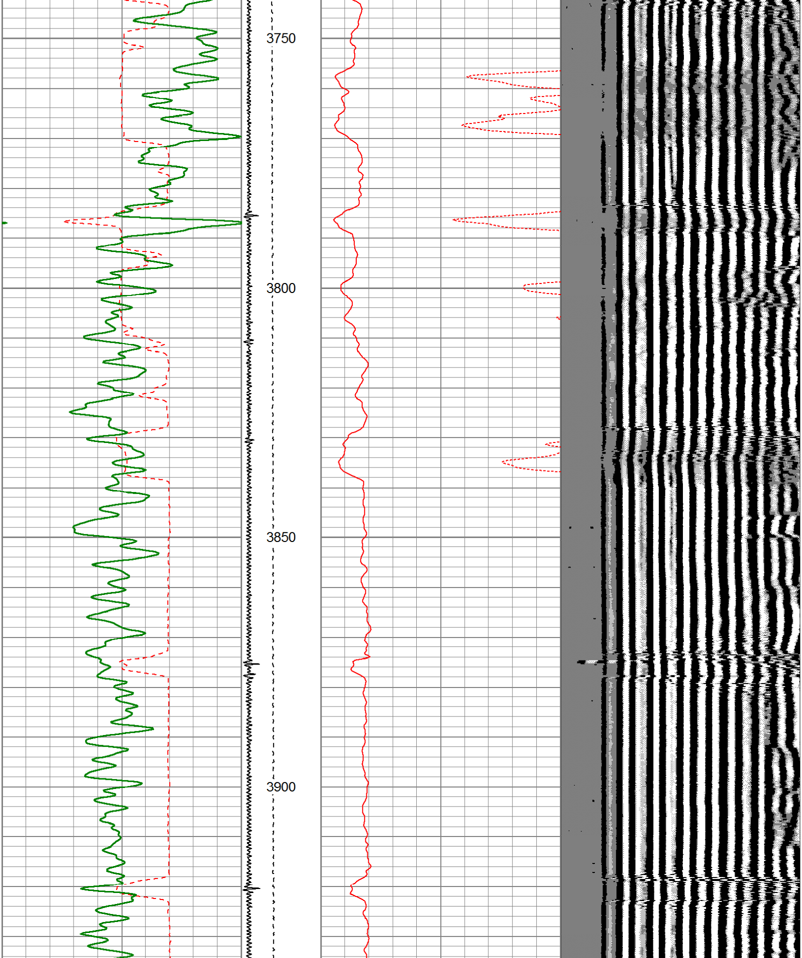
THANK YOU FOR CHOOSING KLX ENERGY SERVICES

KLX Energy Services

5.5" MAIN PASS

LOG RAN WITH 0 PSI SURFACE INDUCED PRESSURE

Database File:	raindance fc 26-369hc cbl.db
Dataset Pathname:	well1/pass2
Presentation Format:	cbl_drs
Dataset Creation:	Fri Oct 27 11:42:39 2017 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240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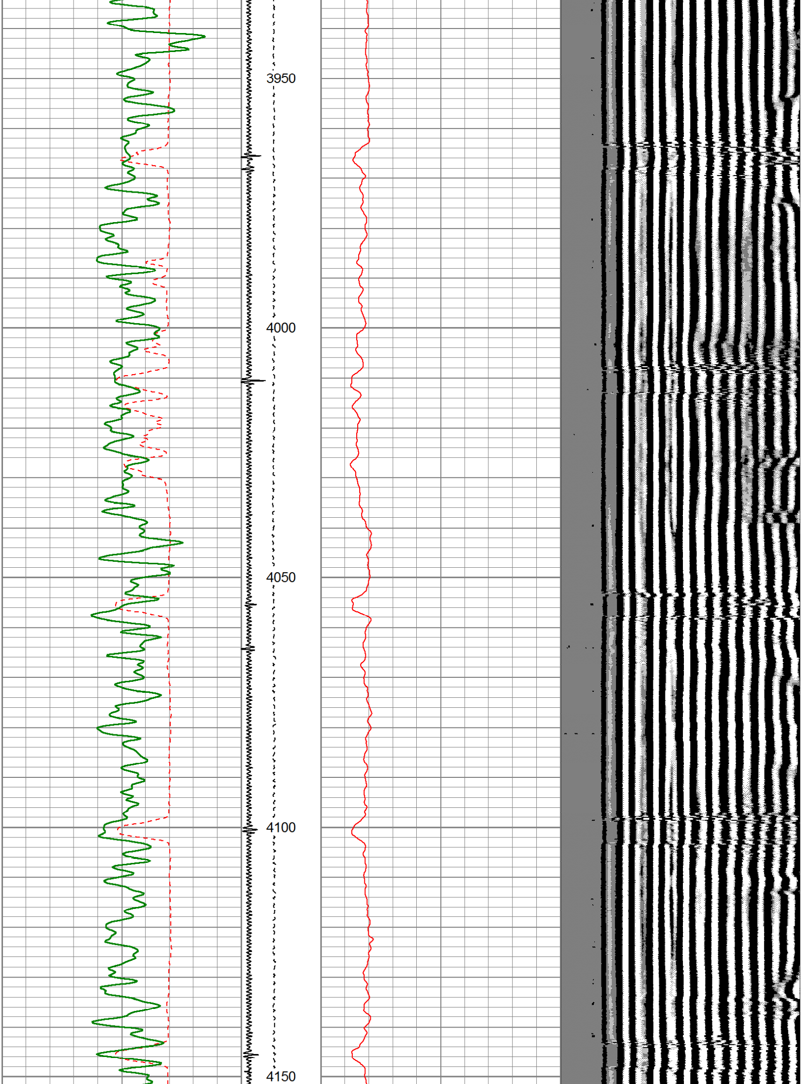
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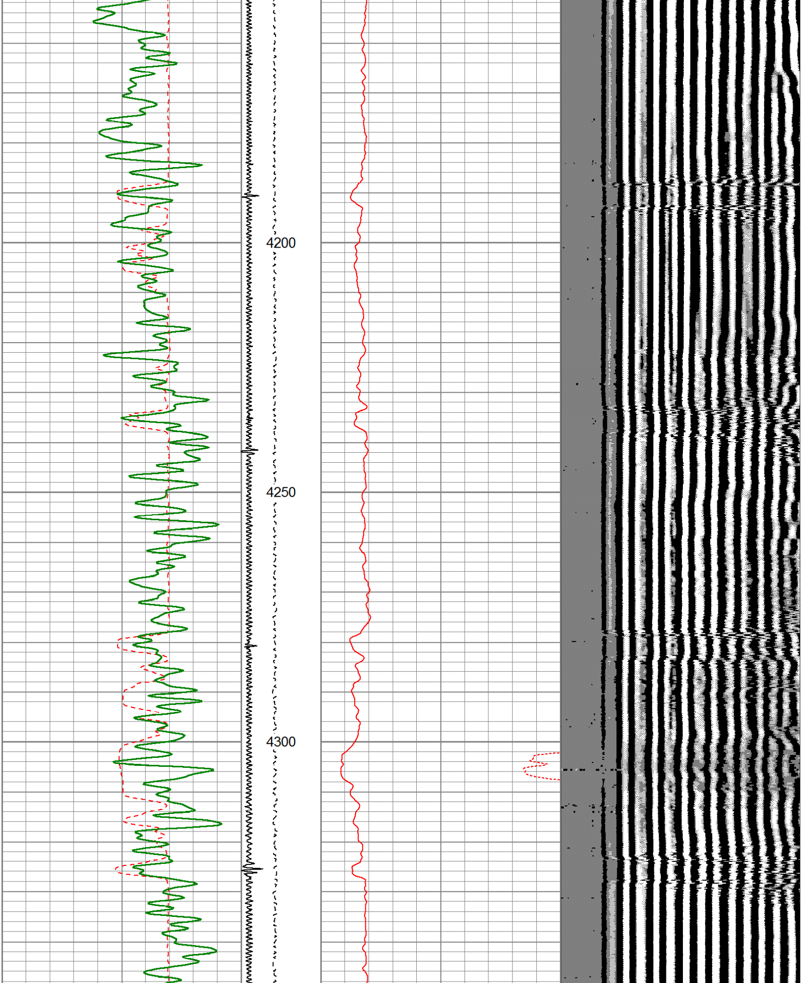
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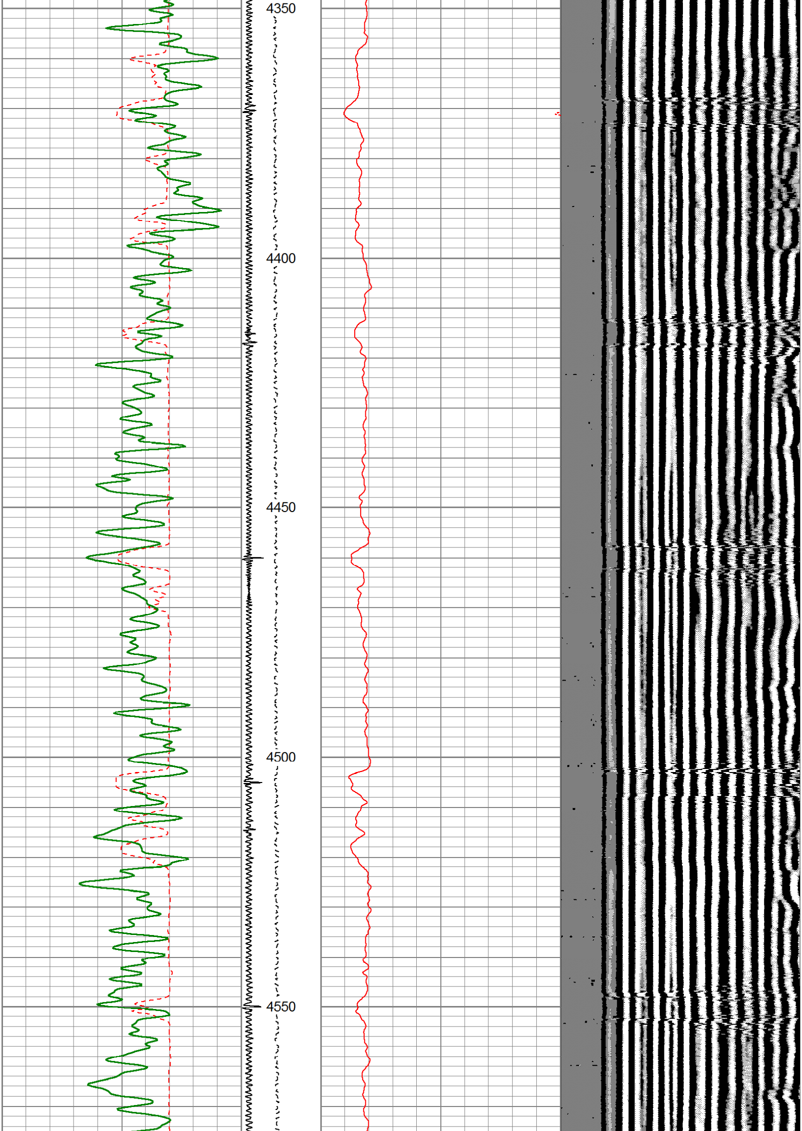
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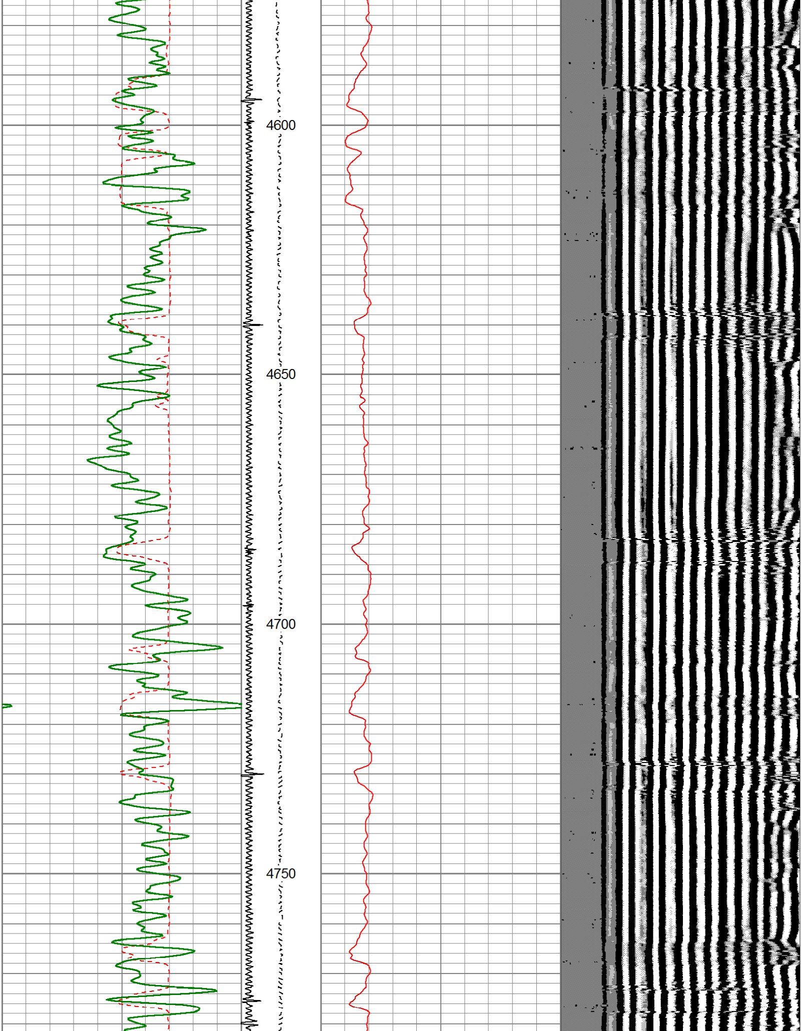
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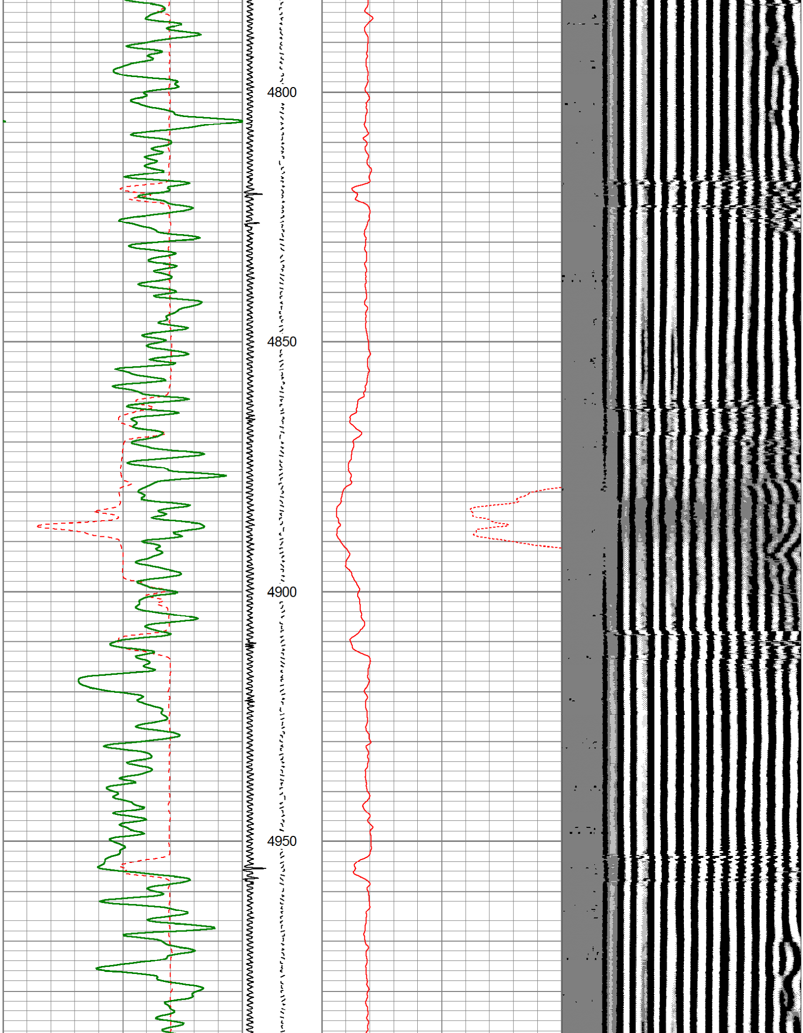
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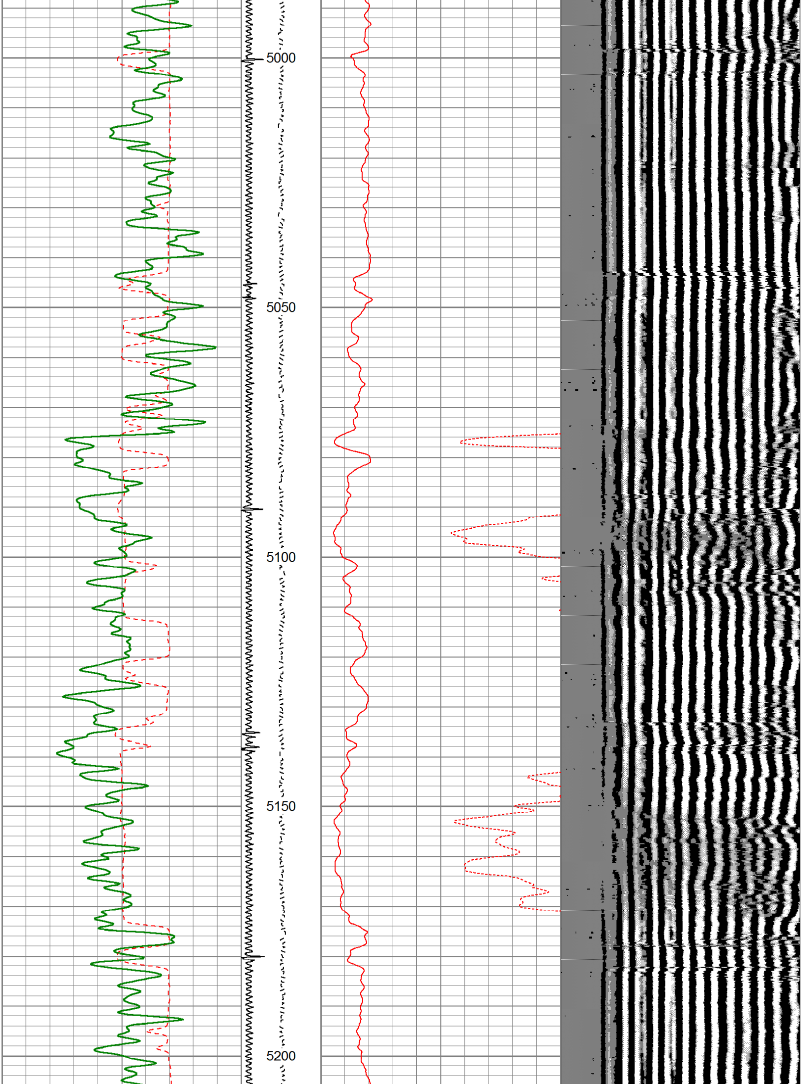
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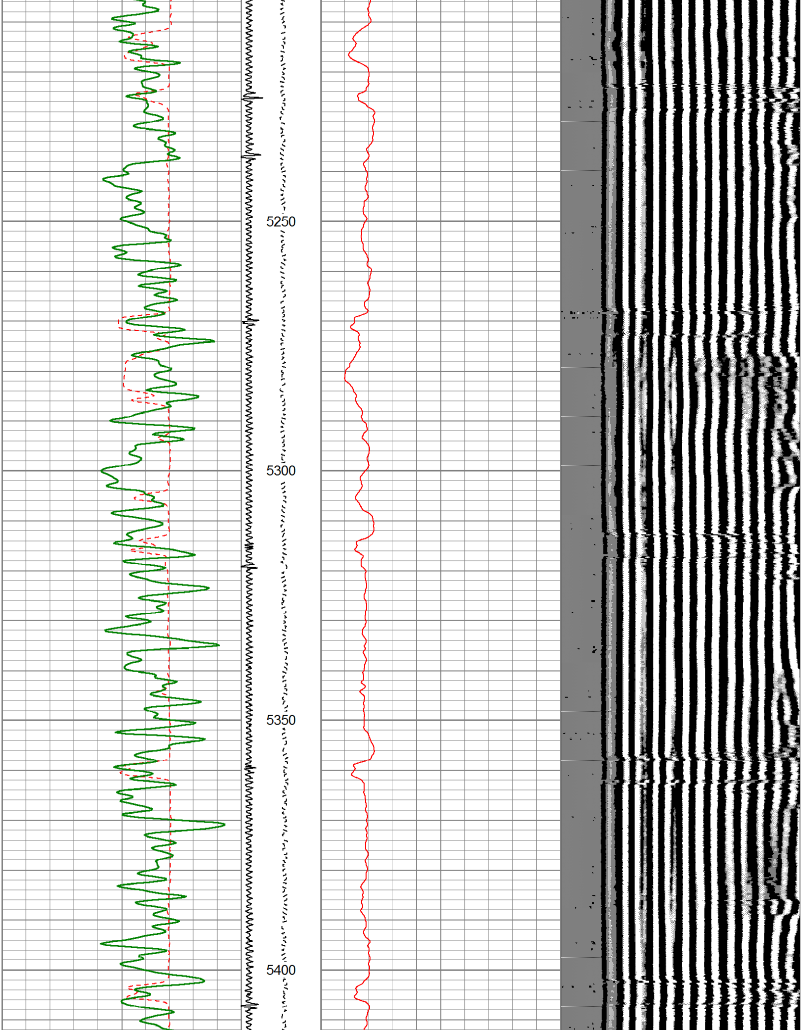
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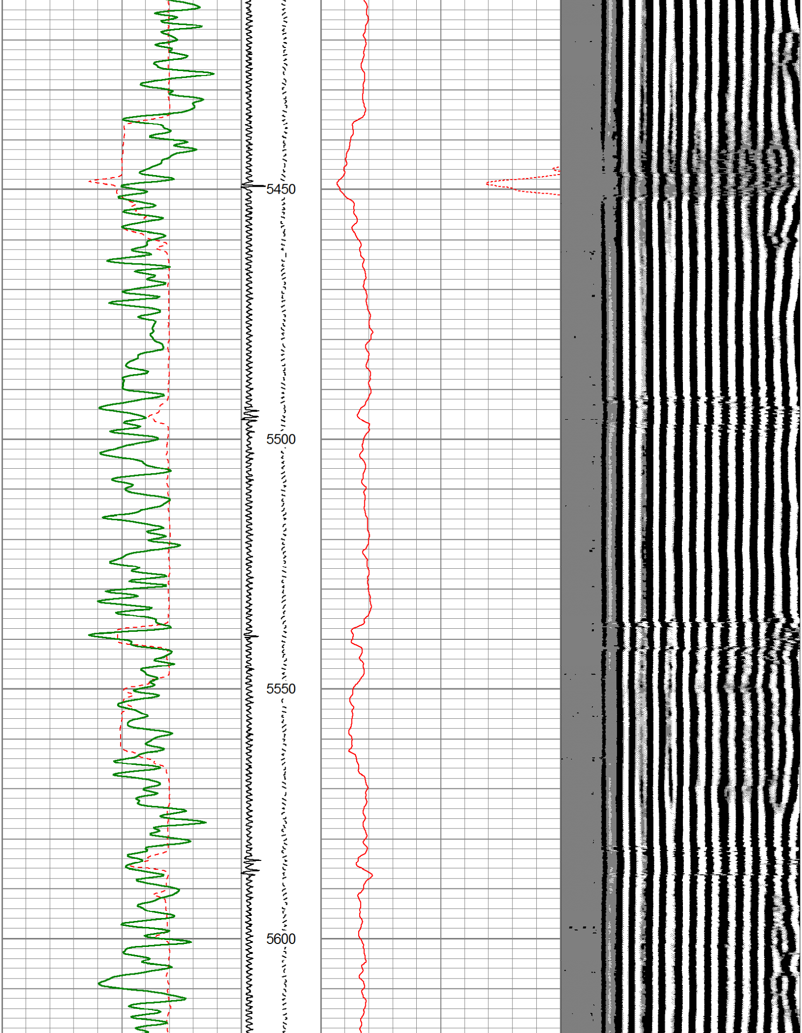
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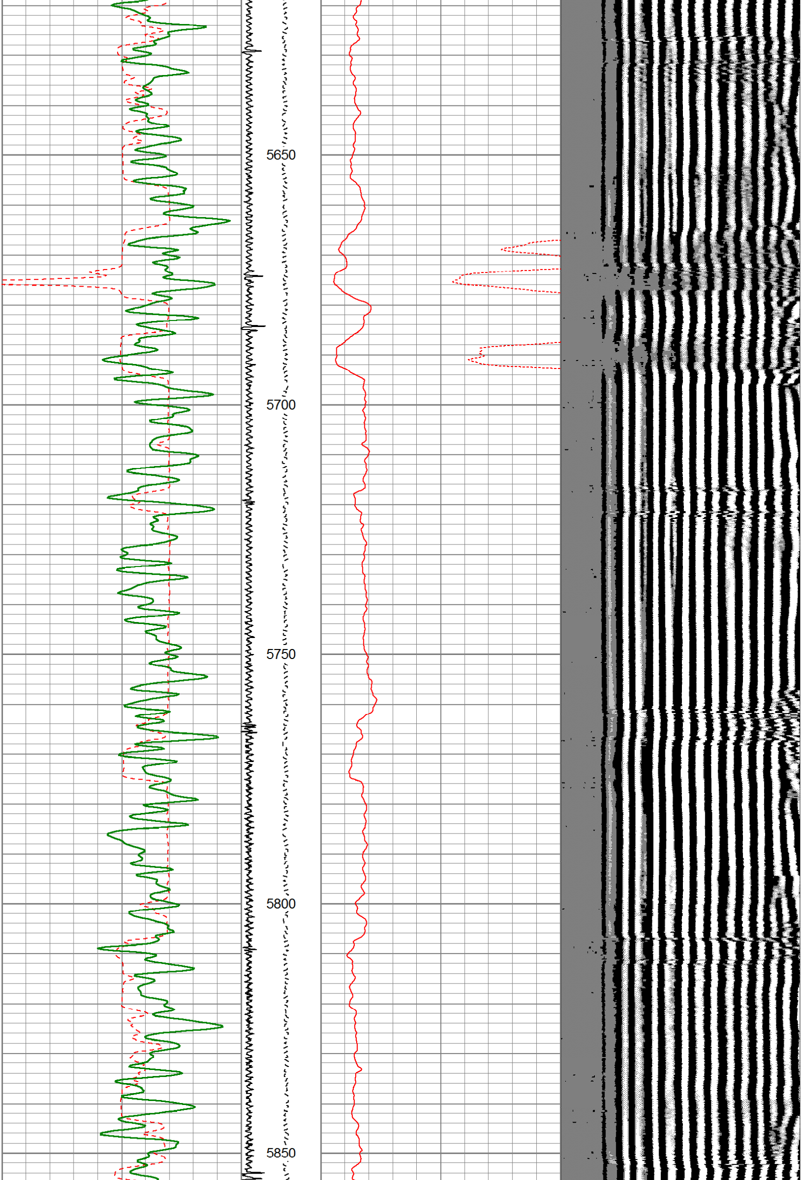
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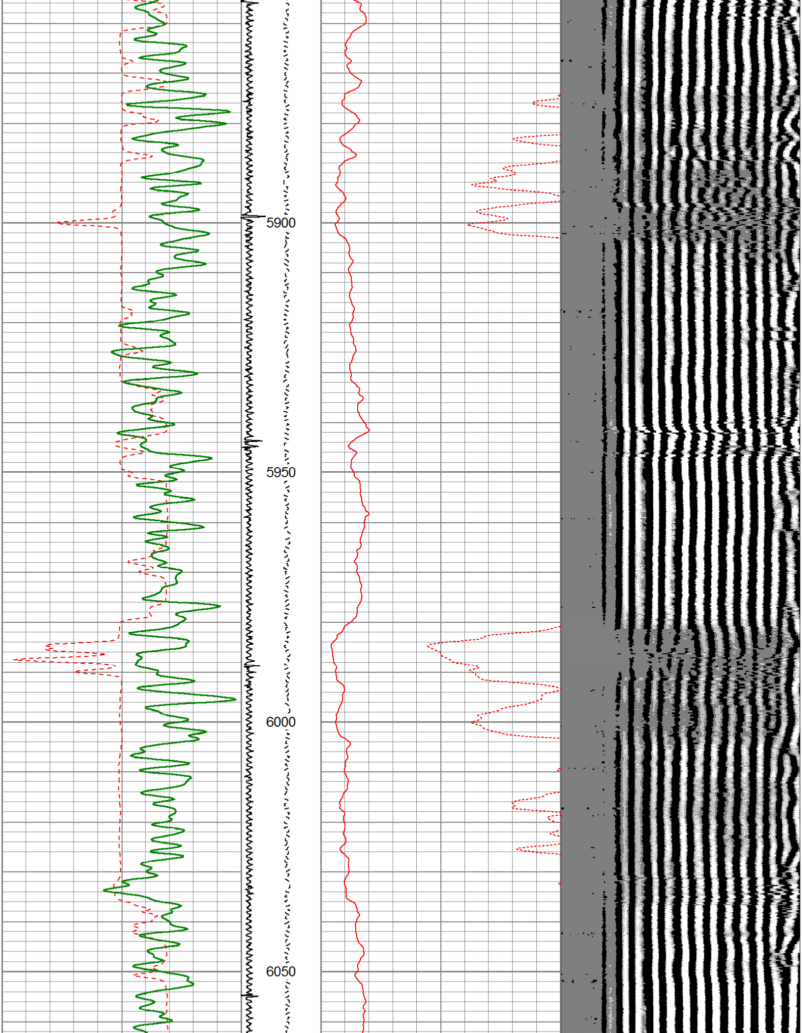
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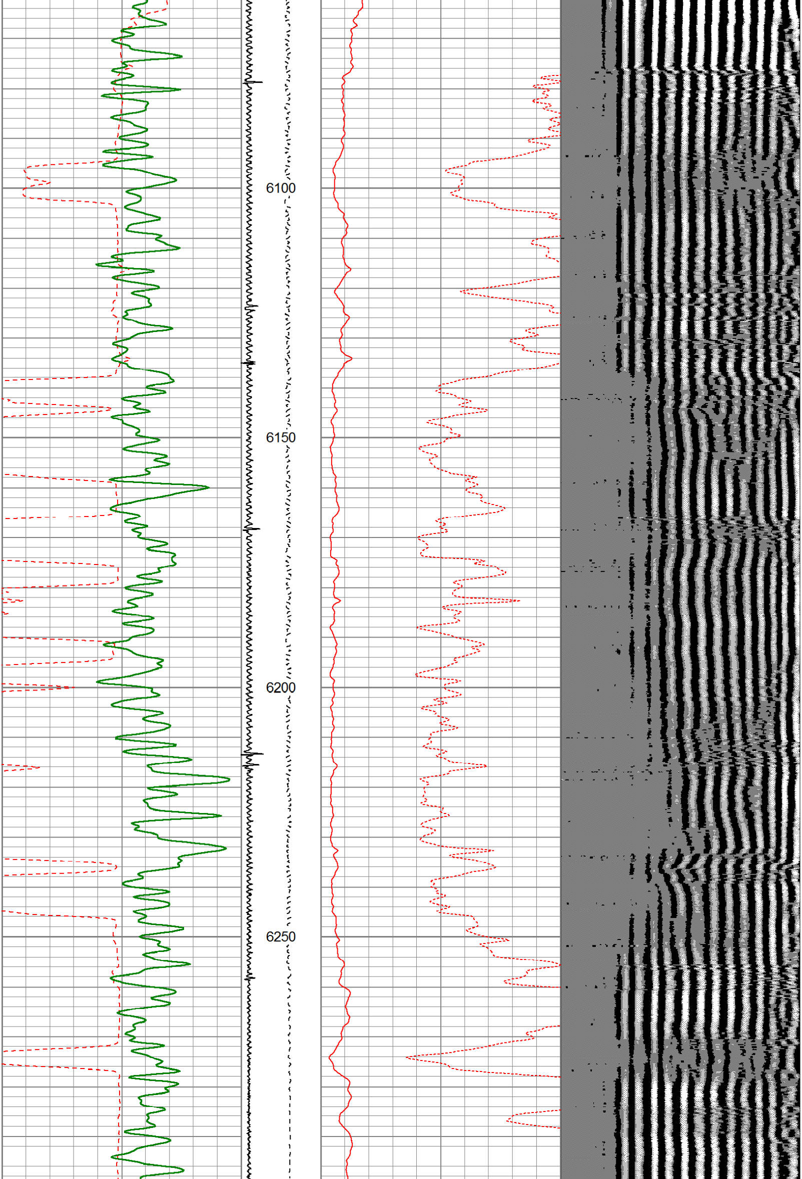
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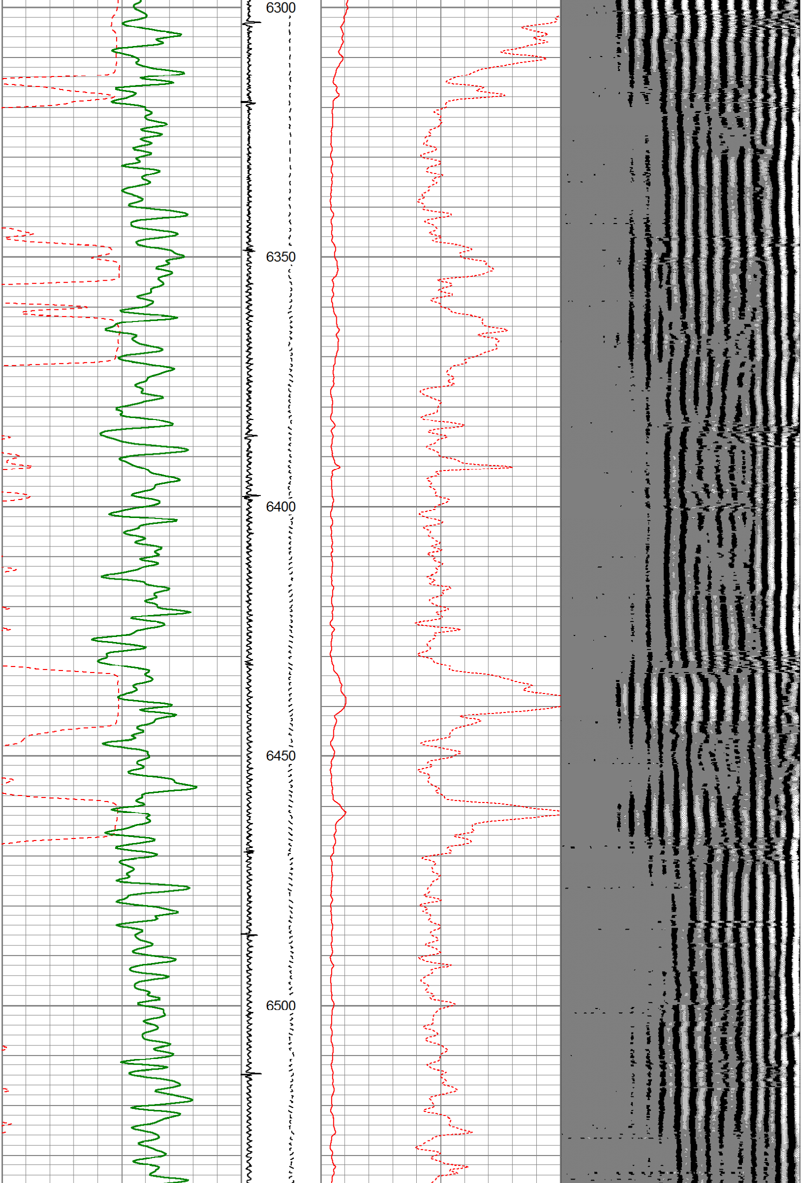
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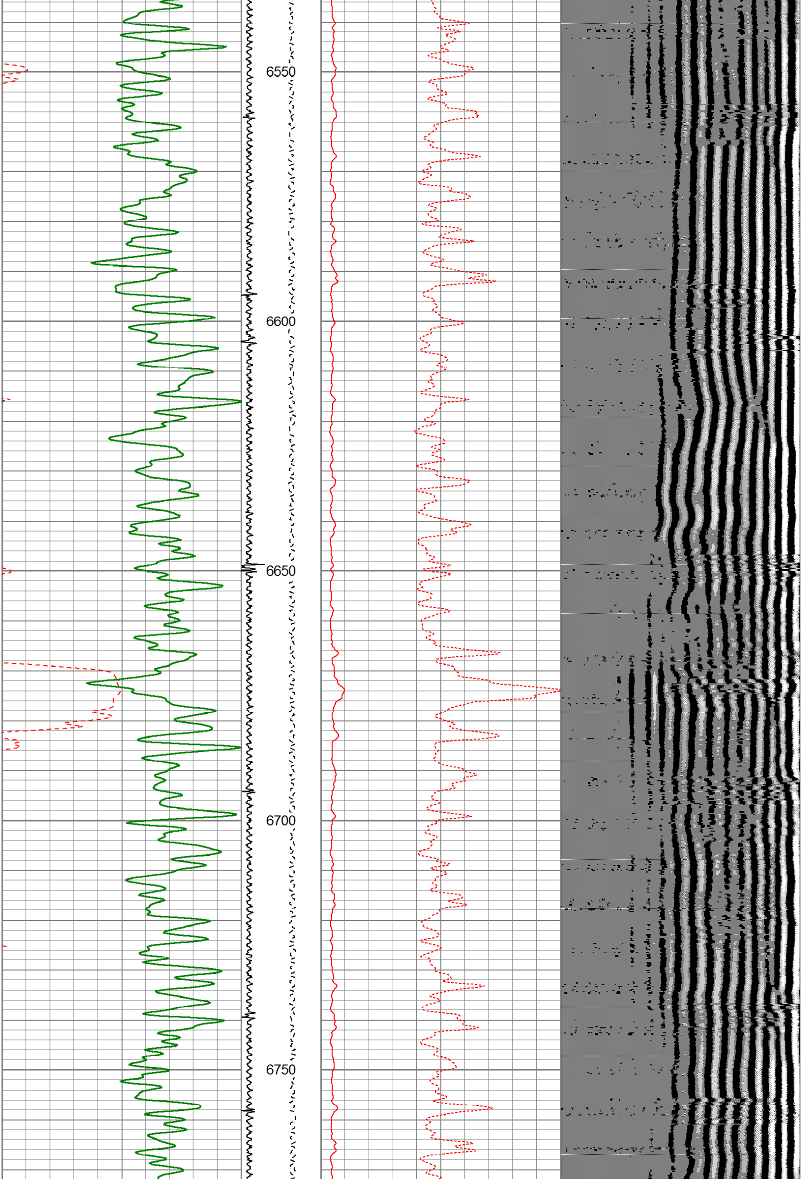
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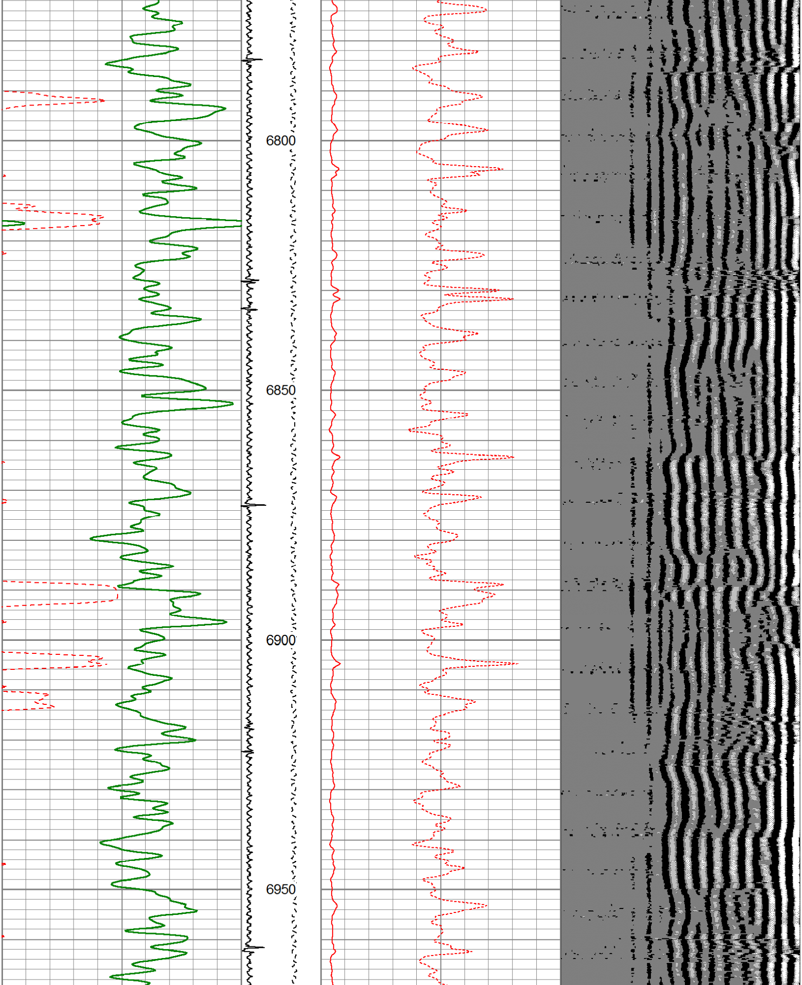
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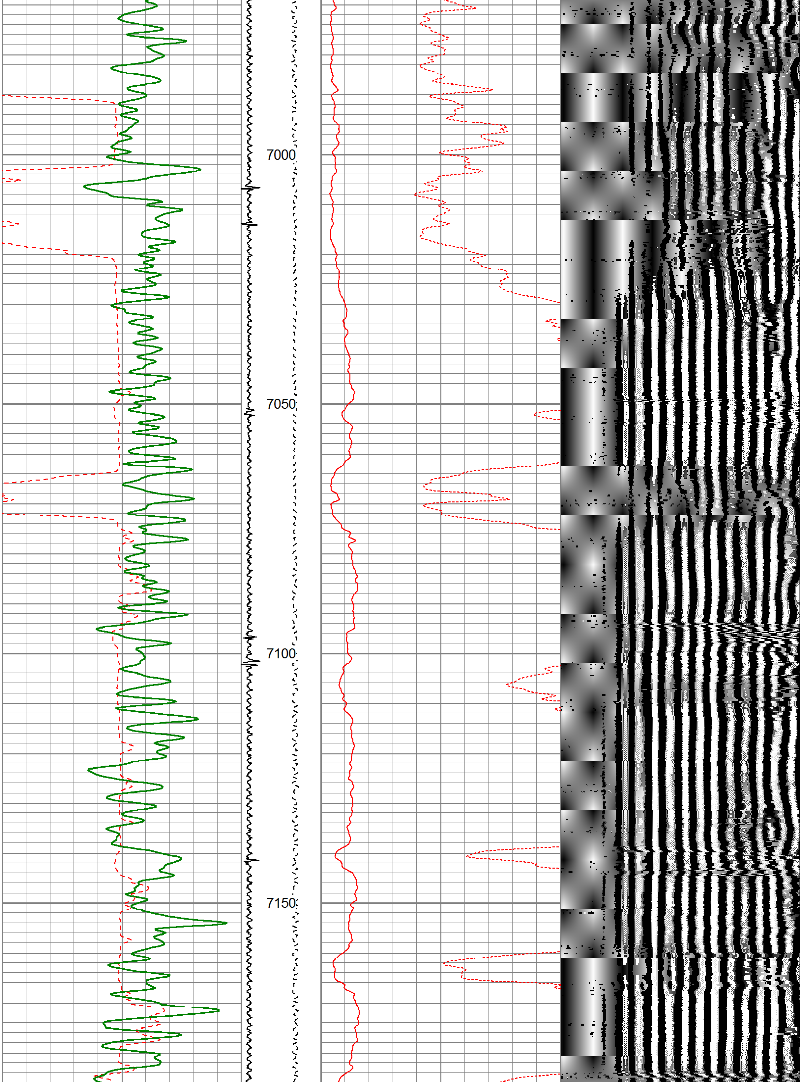
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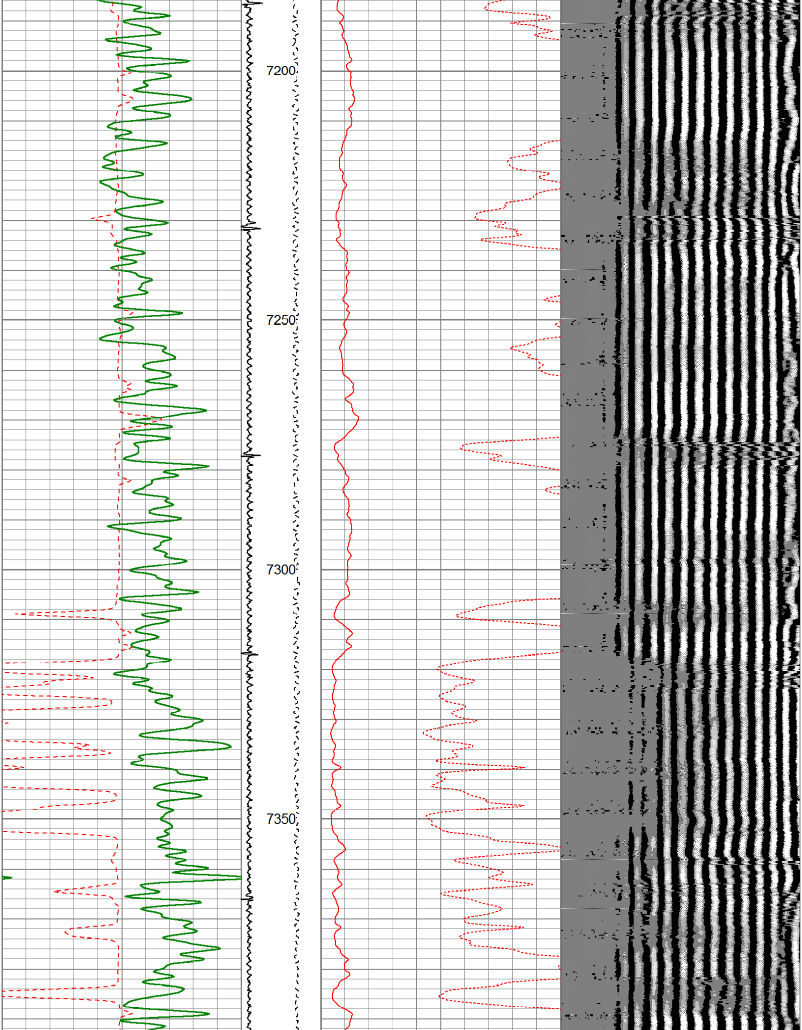
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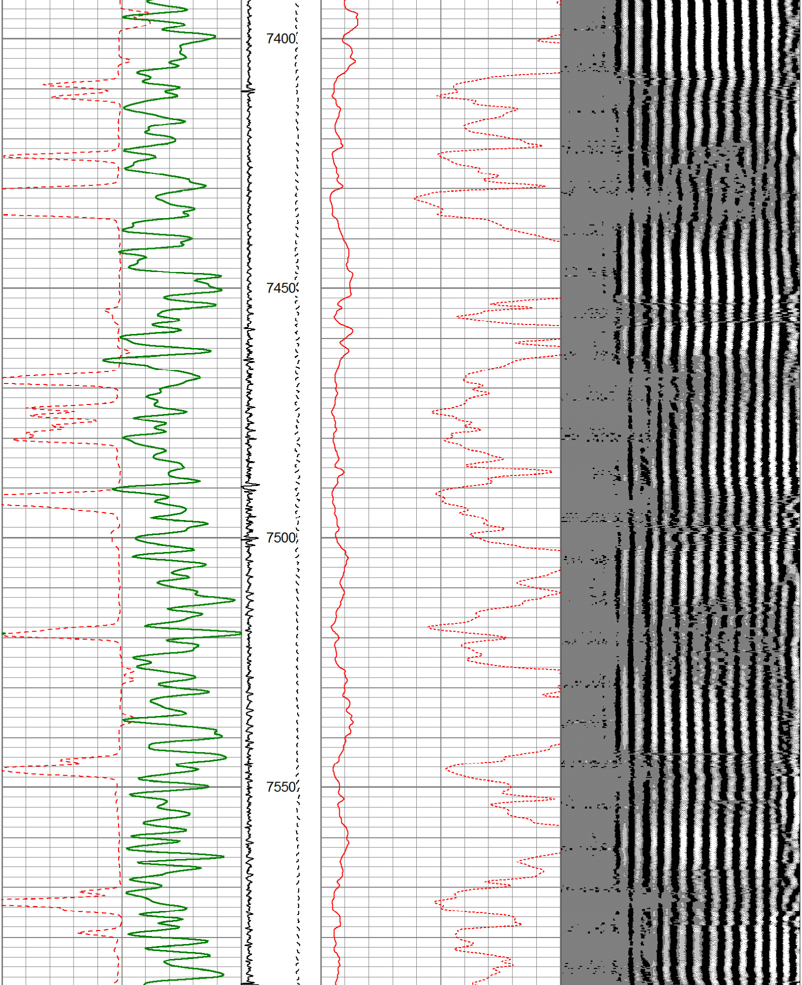
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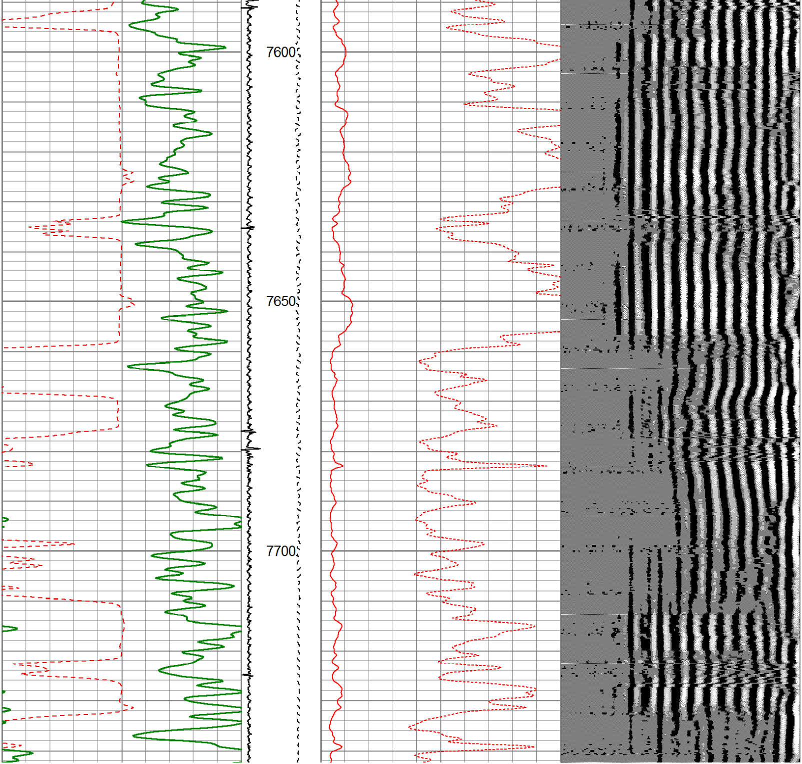
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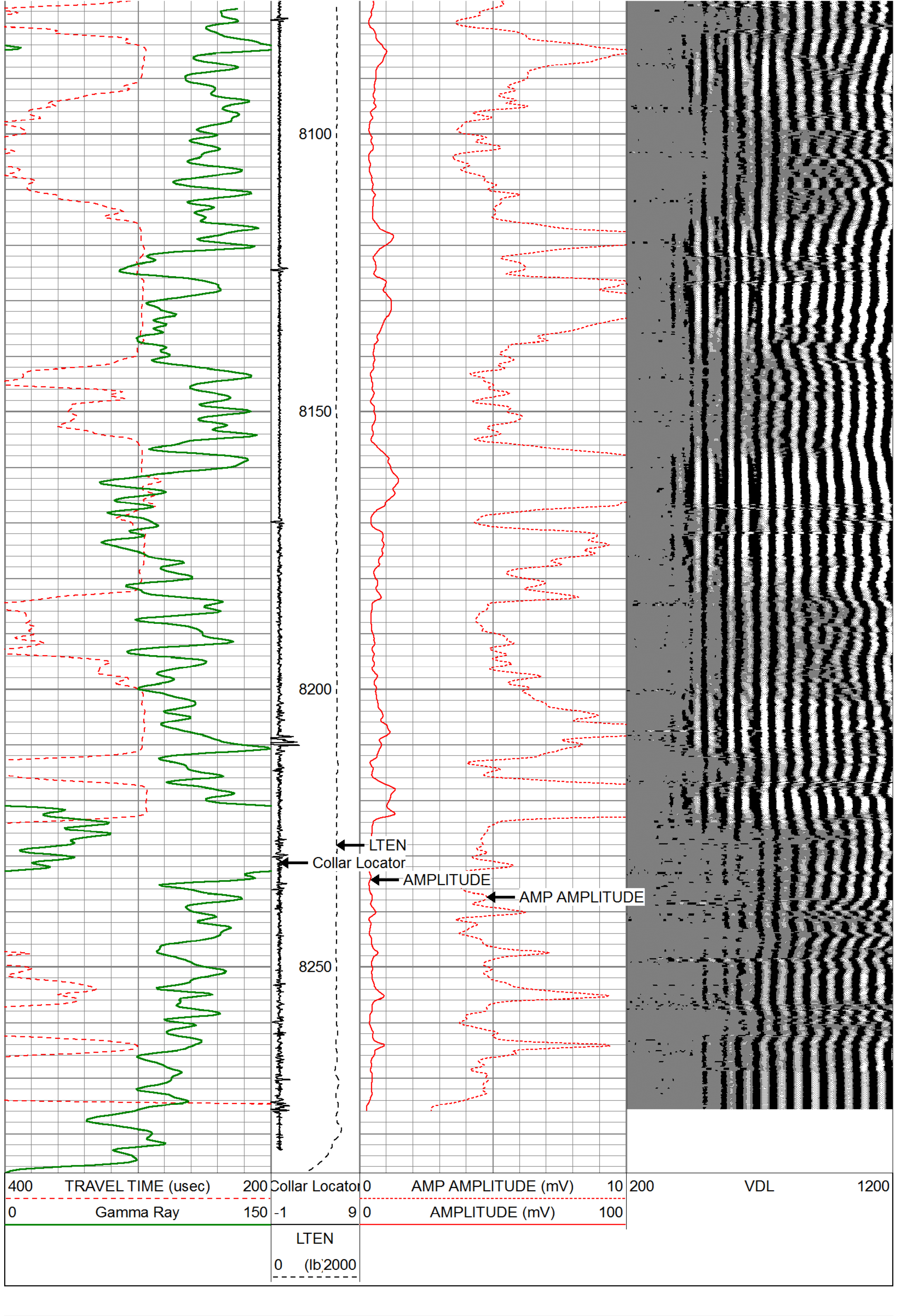
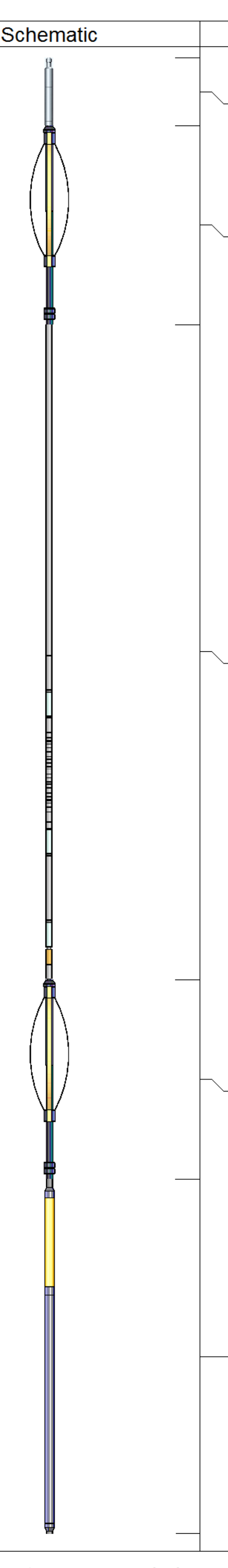
KLX Energy Services

5.5" REPEAT PASS

LOG RAN WITH 0 PSI SURFACE INDUCED PRESSURE

Database File:	raindance fc 26-369hc cbl.db
Dataset Pathname:	well1/pass1
Presentation Format:	cbl_drs
Dataset Creation:	Fri Oct 27 11:37:53 2017 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240





Sensor	Offset (ft)
HEADVOLT	17.03
WVF3FT	12.45
WVFCAL	12.45
WVFS1	12.45
WVFS2	12.45
WVFS3	12.45
WVFS4	12.45
WVFS5	12.45
WVFS6	12.45
WVFS7	12.45
WVFS8	12.45
WVF5FT	11.37
CCL	4.00
GR	1.00

Description	Len (ft)	OD (in)	Wt (lb)
STNDRD Standard Cable Head	1.00	1.69	3.00
PT16875 1 11/16 Cemtralizer	2.92	1.69	5.00
RBT-PTS170 (FW1705-069) PROBE 1-11/16" RADII BOND TOOL	9.62	1.70	55.00
PT16875 1 11/16 Cemtralizer	2.92	1.69	5.00
GR_CCL-SDS (FW1703-011)	5.20	1.70	35.00

Dataset:	raindance fc 26-369hc cbl.db: field/well/well1/pass2
Total Length:	21.65 ft
Total Weight:	103.00 lb
O.D.:	1.70 in

Calibration Report

Database File:	raindance fc 26-369hc cbl.db
Dataset Pathname:	well1/pass2
Dataset Creation:	Fri Oct 27 11:42:39 2017 by Log Std Casedhole 10081

Gamma Ray Calibration Report

Serial Number:	FW1703-011	
Tool Model:	SDS	
Performed:	Tue Jul 11 16:35:19 2017	
Calibrator Value:	1.0	
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1705-069	
Tool Model:	PTS170	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	221.773	ft

Master Calibration, performed Thu Oct 26 15:06:32 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.029	0.999	0.700	71.921	69.302	2.698
CAL	0.032	0.997				
5'	0.019	1.102	0.700	71.921	65.779	-0.549
SUM						
S1	0.056	1.006	0.000	100.000	105.213	-5.896
S2	0.008	0.978	0.000	100.000	103.149	-0.839
S3	0.026	0.970	0.000	100.000	105.851	-2.713
S4	0.023	0.989	0.000	100.000	103.477	-2.371
S5	0.033	1.003	0.000	100.000	103.084	-3.413
S6	0.010	1.001	0.000	100.000	100.958	-1.032
S7	0.046	1.016	0.000	100.000	103.131	-4.759
S8	0.049	1.004	0.000	100.000	104.797	-5.170

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	0.032	0.997	1.000	0.000

Air Zero Calibration, performed Wed Dec 31 17:00:00 1969:

	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

KLX Energy Services

Company	GREAT WESTERN OPERATING COMPANY LLC
Well	RAINDANCE FC 26-369HC
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA