PIONEER
Pioneer Energy Services

RADIAL CEMENT BONG LOG WITH GAMMA RAY/CCL/VDL AND CEMENT MAP

Company	ANADARKO PETROLEUM CORPORATION
Well	BUTTERBALL 29C-15HZ
Field	WATTENBERG
County	WELD
State	CO

Company ANADARKO PETROLEUM CORPORATION
Well BUTTERBALL 29C-15HZ
Field WATTENBERG
County WELD State CO
API # : 05-123-37908
Location:
SEC 10 TWP 2N RGE 67W
Other Services

			Elevation
Permanent Datum	GROUD LEVEL	Elevation	K.B. 4951
Log Measured From	KELLY BUSHING		D.F. 4951
Drilling Measured From	KB=16		G.L. 4935

Date	8 DEC 13		
Run Number	TWO		
Depth Driller	16715'		
Depth Logger	7567'		
Bottom Logged Interval	7558'		
Top Log Interval	SURFACE		
Open Hole Size	8.75"		
Type Fluid	WATER		
Density / Viscosity	8.34		
Max. Recorded Temp.	225 DEG. FHT.		
Estimated Cement Top	138'		
Time Well Ready	11:15		
Time Logger on Bottom	11:45		
Equipment Number	59		
Location	FT. MORGAN		
Recorded By	A BELGUM		
Witnessed By	KENT EVERS		

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	1033'
Prot. String				
Production String	7	26	SURFACE	7938'
Liner	4.5"	11.6	6823'	16680'

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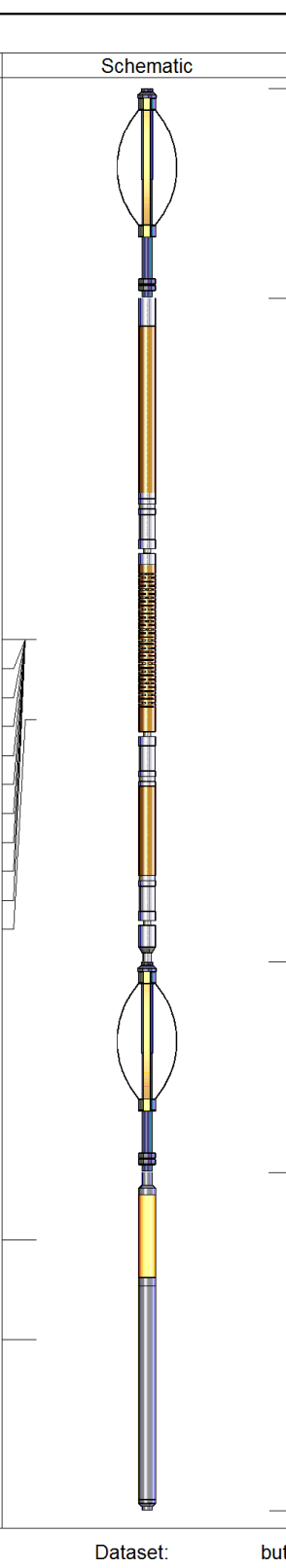
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			PTS275	2.83	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	11.71 11.71 11.71 11.71 11.71 11.71 11.71 11.71 11.71 11.71 10.63		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
			PTS275	2.83	2.75	
CCL	3.63					
GR	2.30		GR_CCL-Probe (111211) Probe Gamma CCL	4.54	2.75	100.00

Dataset:	butterball_29c-15hz.db: field/well/run3/pass3
Total Length:	19.13 ft
Total Weight:	190.00 lb
O.D.	2.75 in

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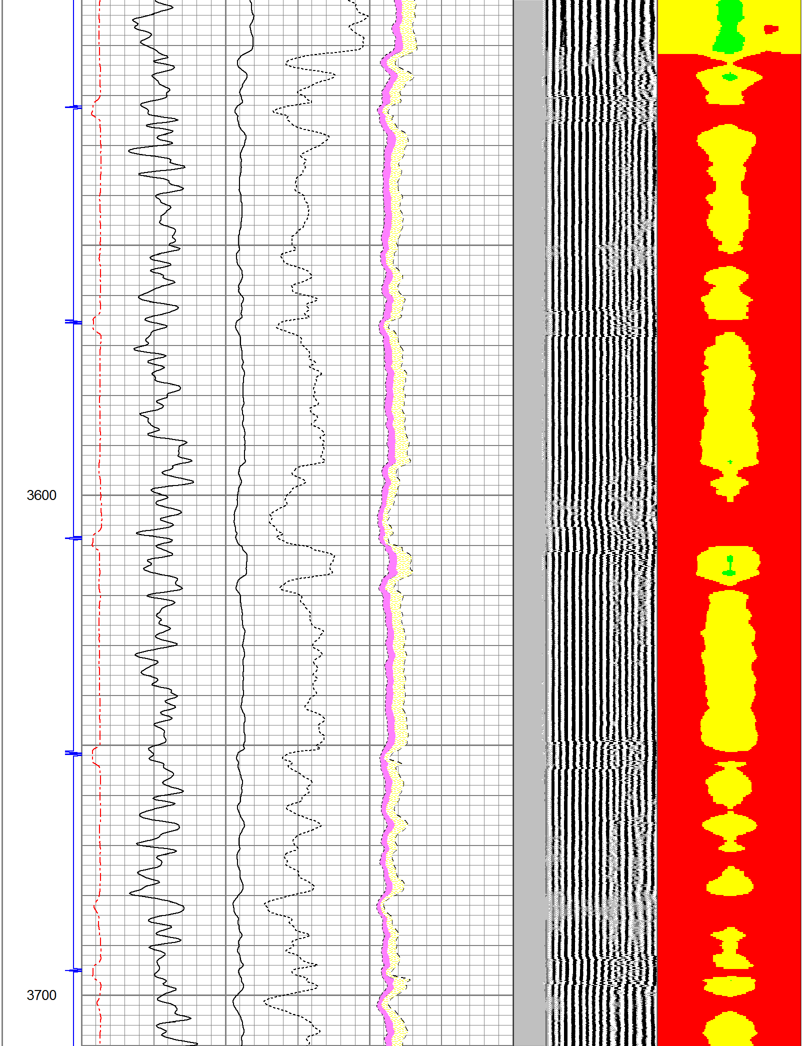
MAIN PASS

LOGGED WITH 2800 PSI APPLIED AT SURFACE

Database File:	butterball_29c-15hz.db
Dataset Pathname:	run3/pass3
Presentation Format:	scbl02
Dataset Creation:	Mon Dec 09 11:50:49 2013 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240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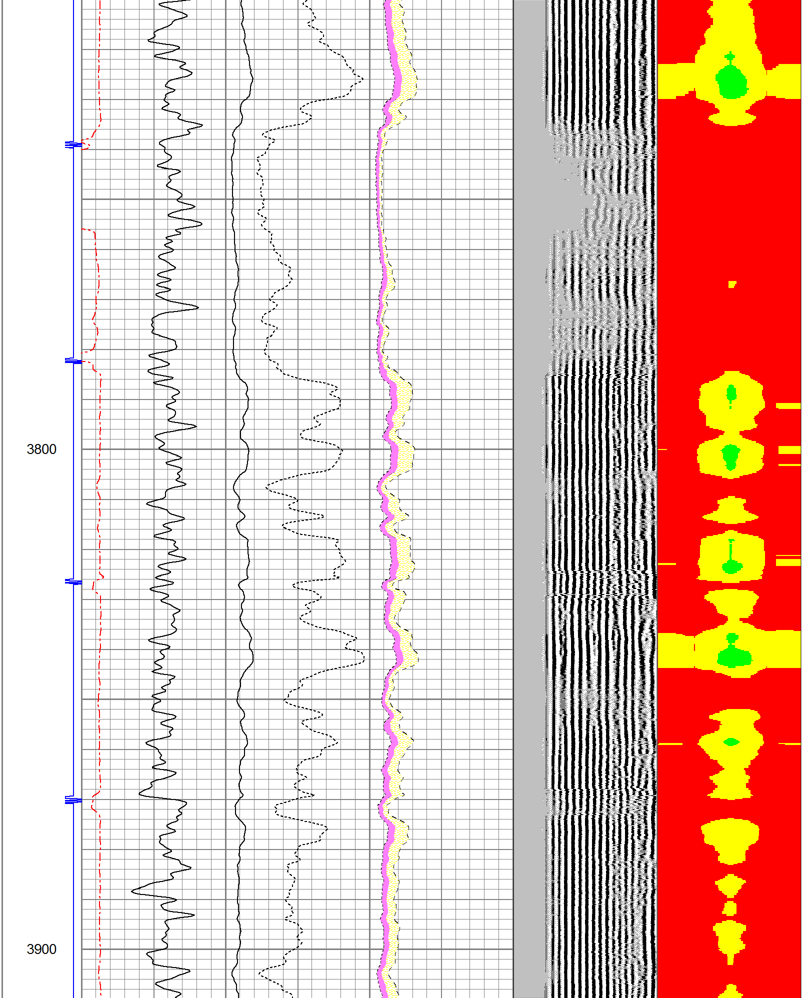
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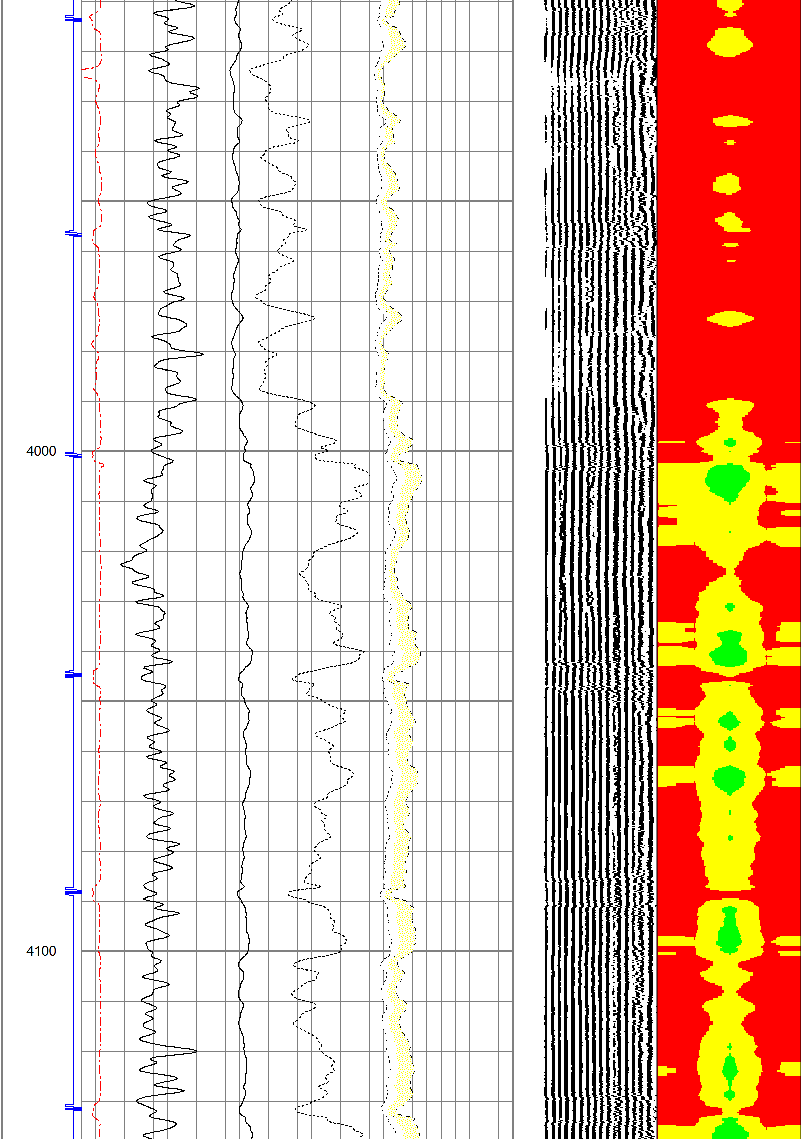
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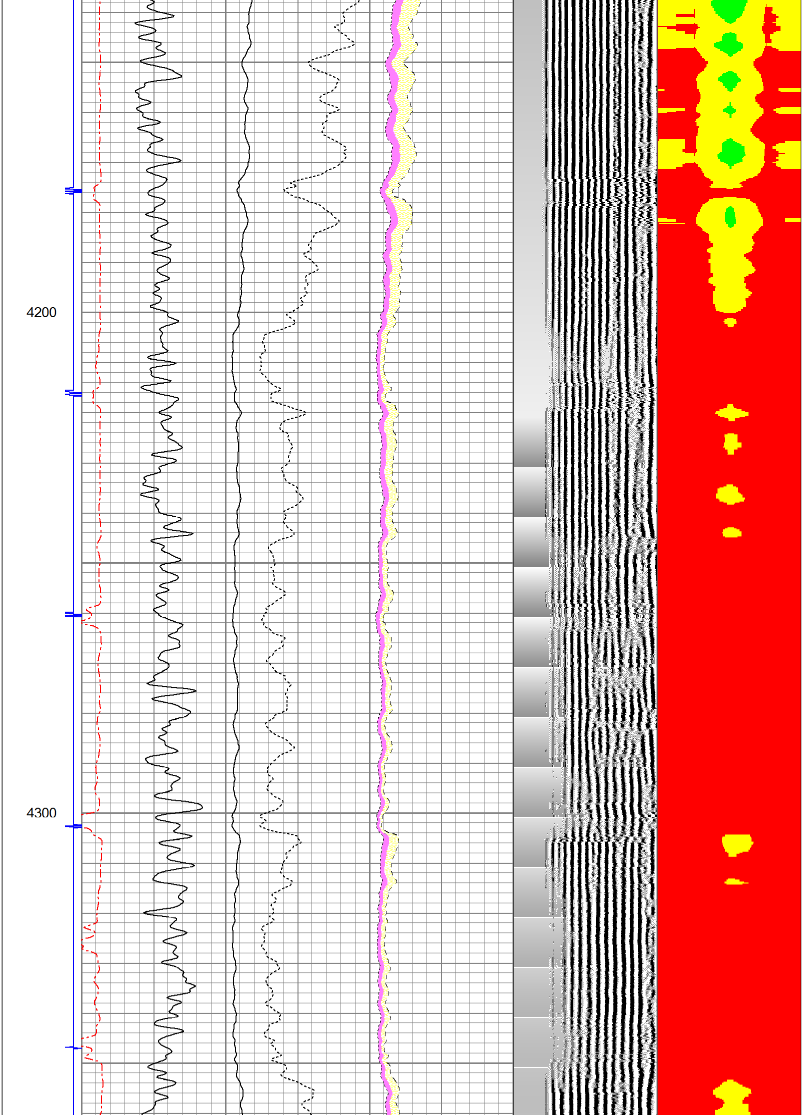
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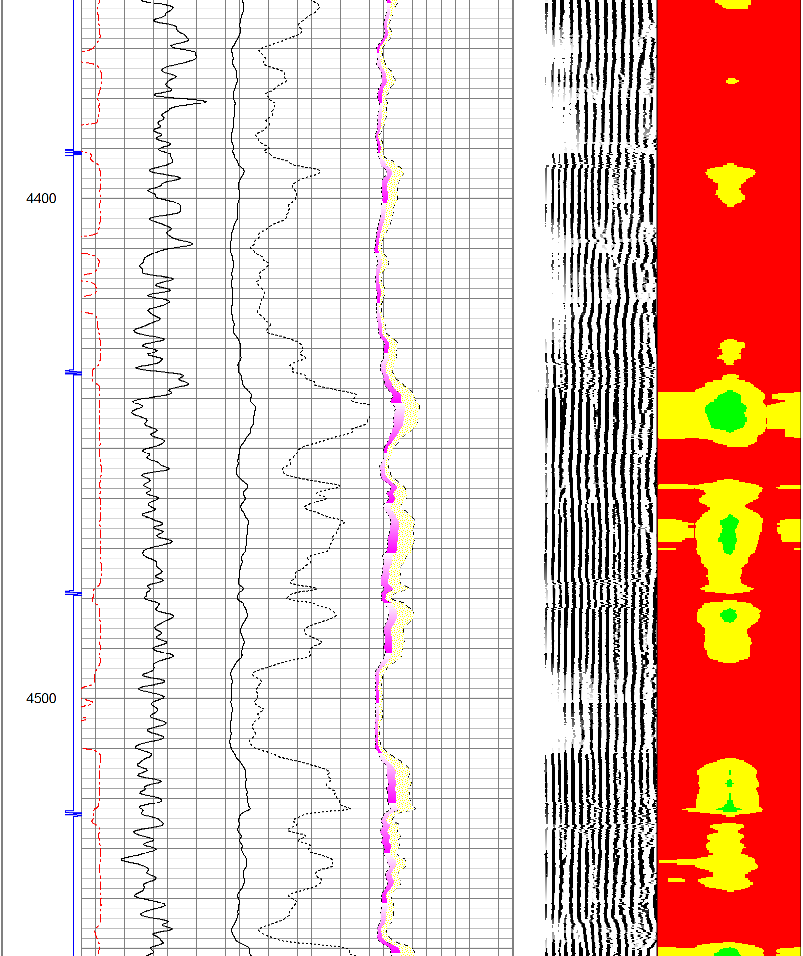
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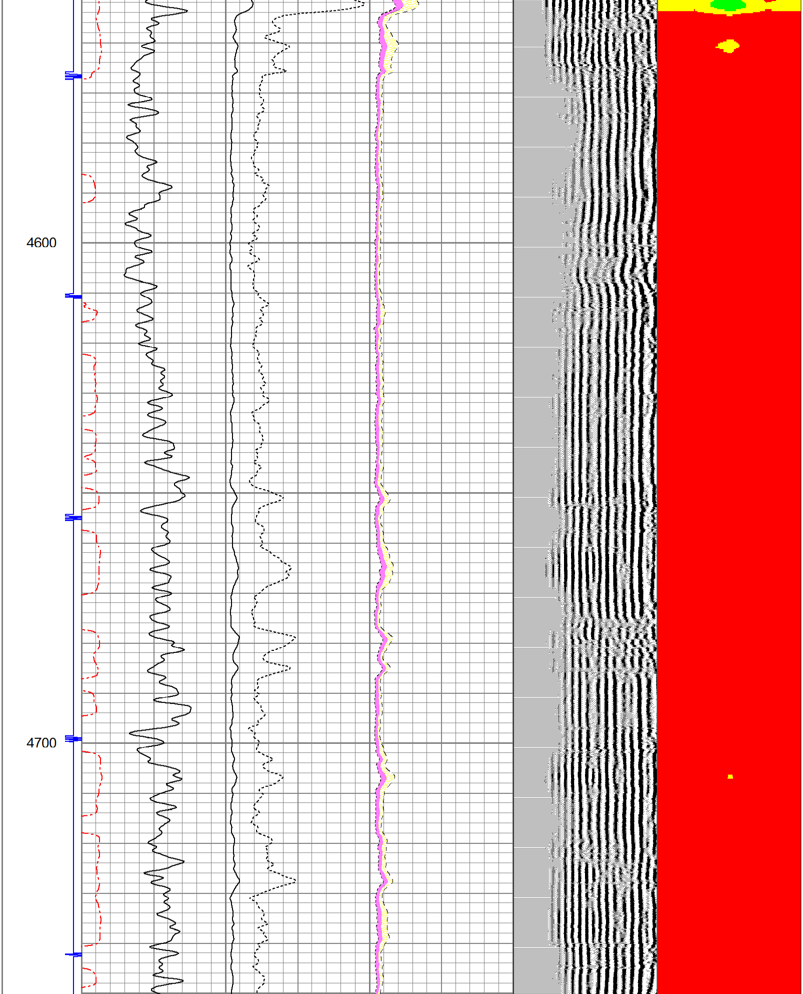
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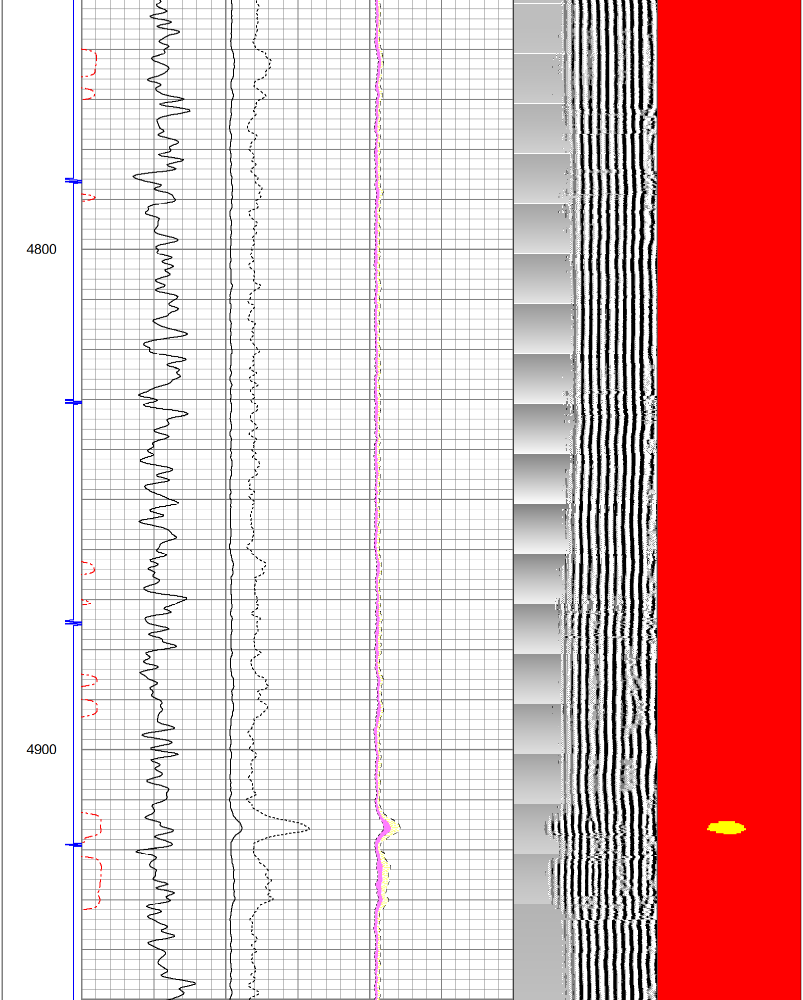
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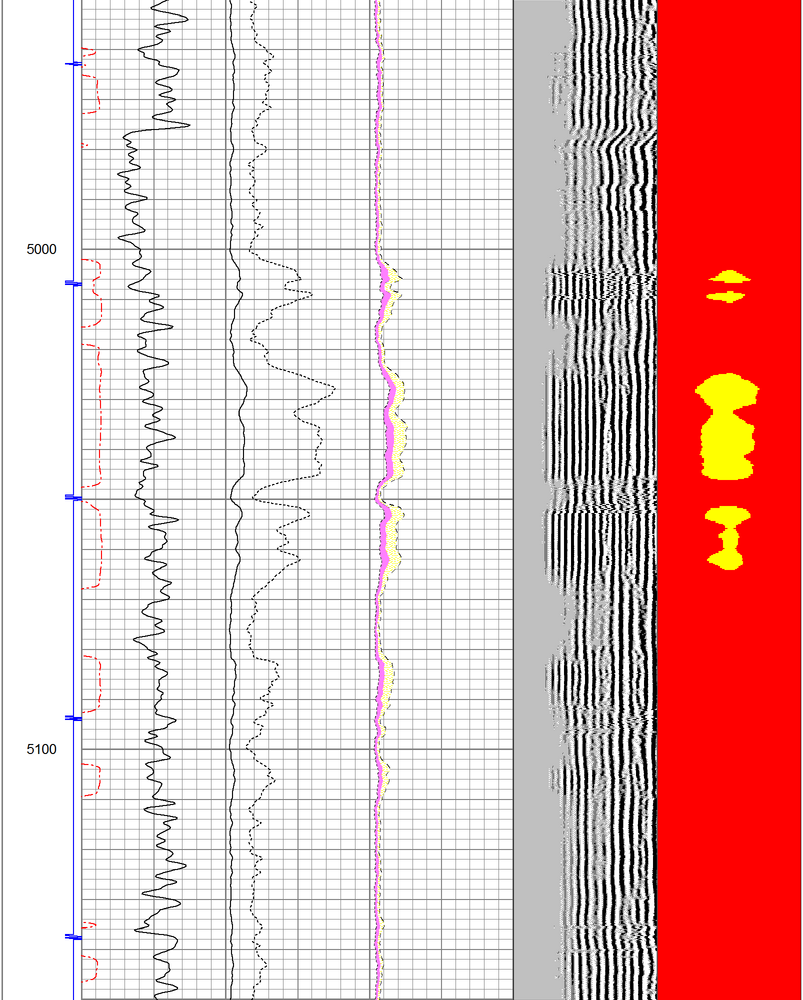
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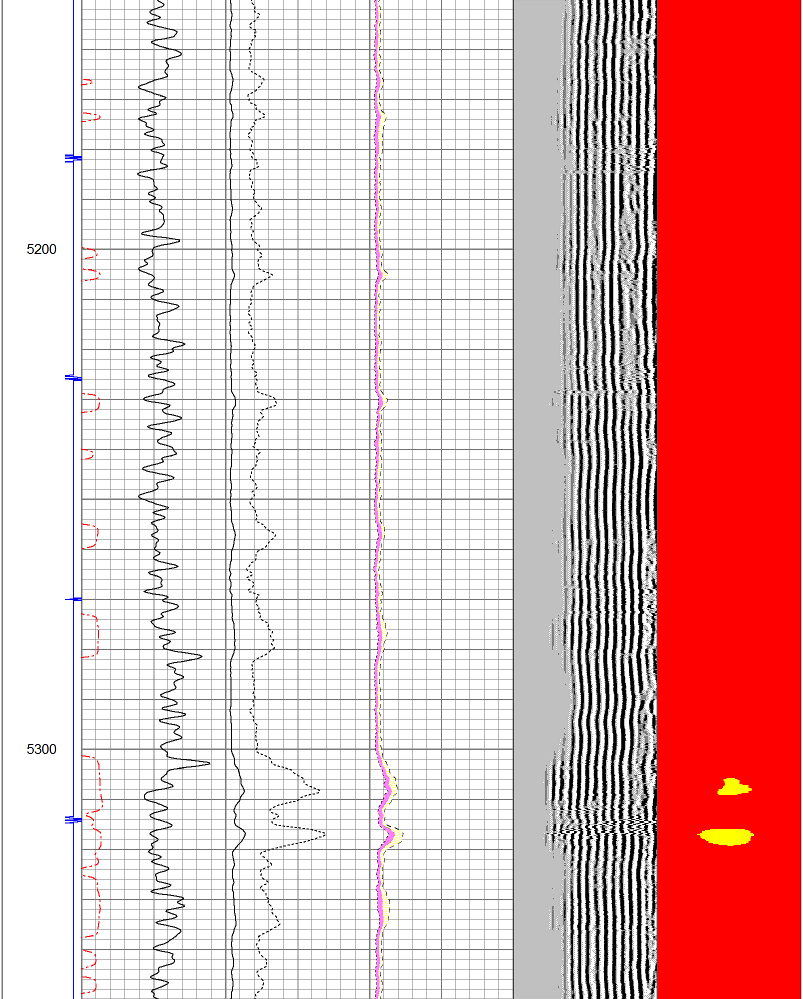
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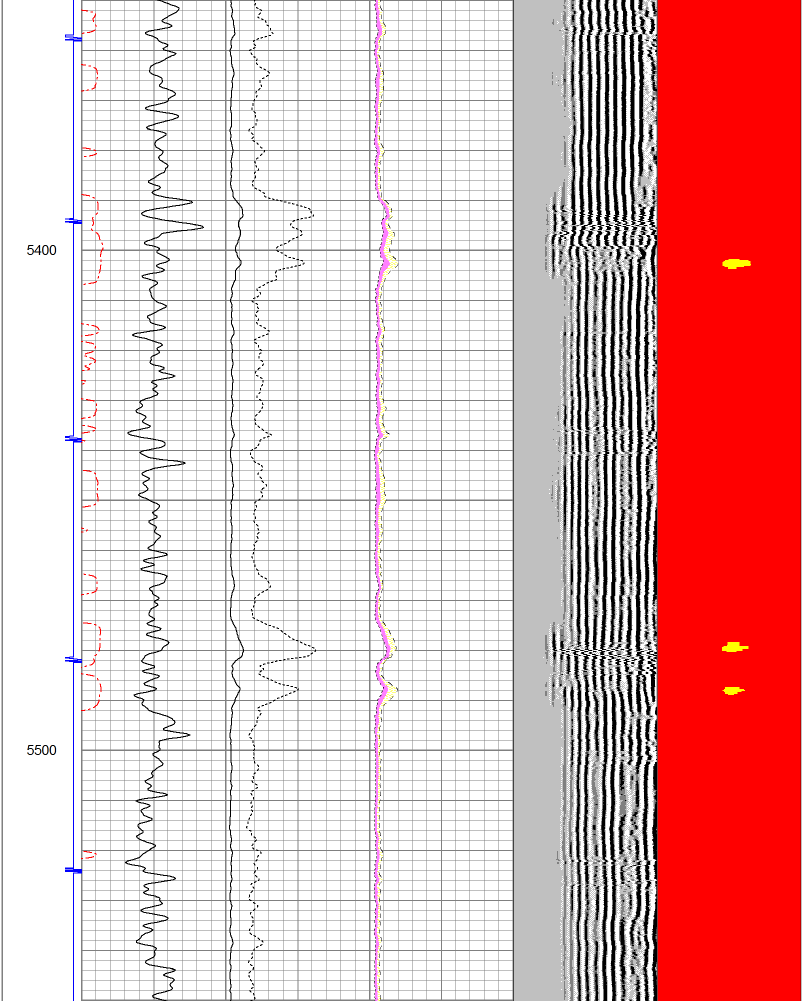
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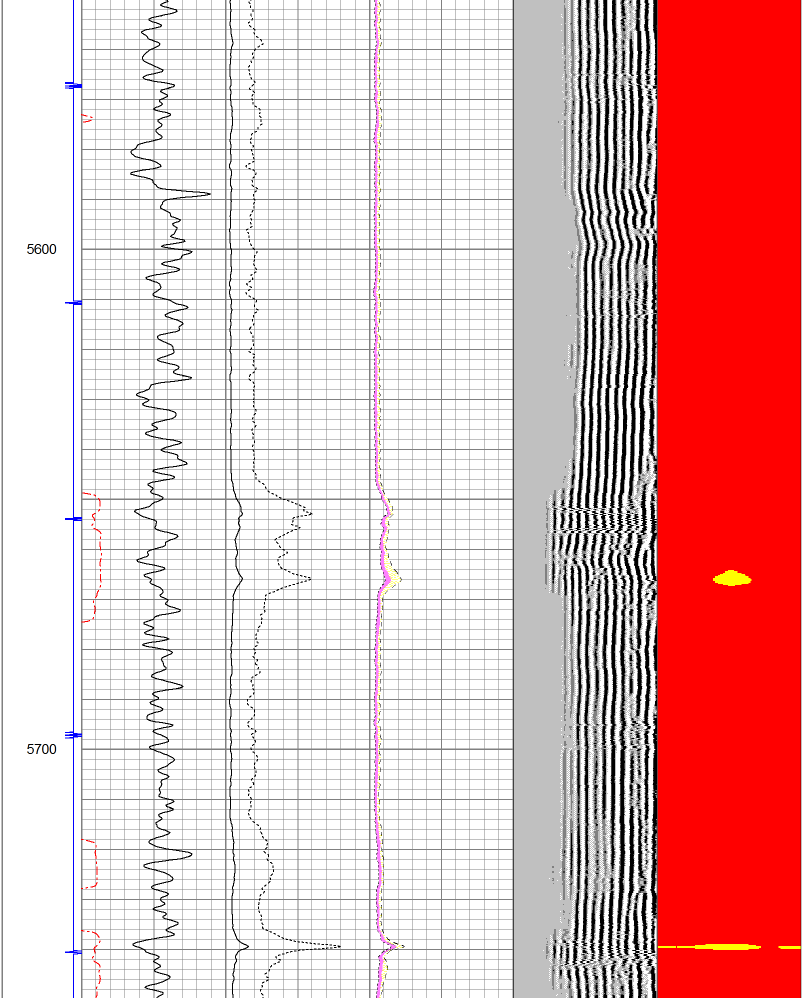
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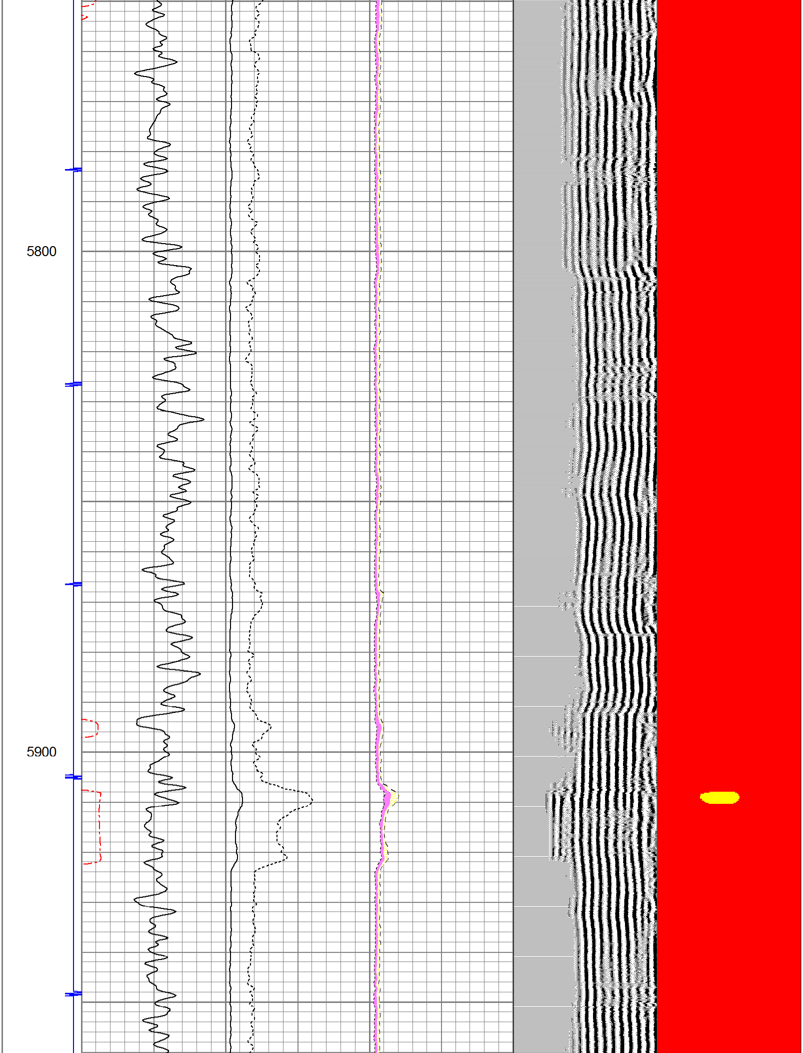
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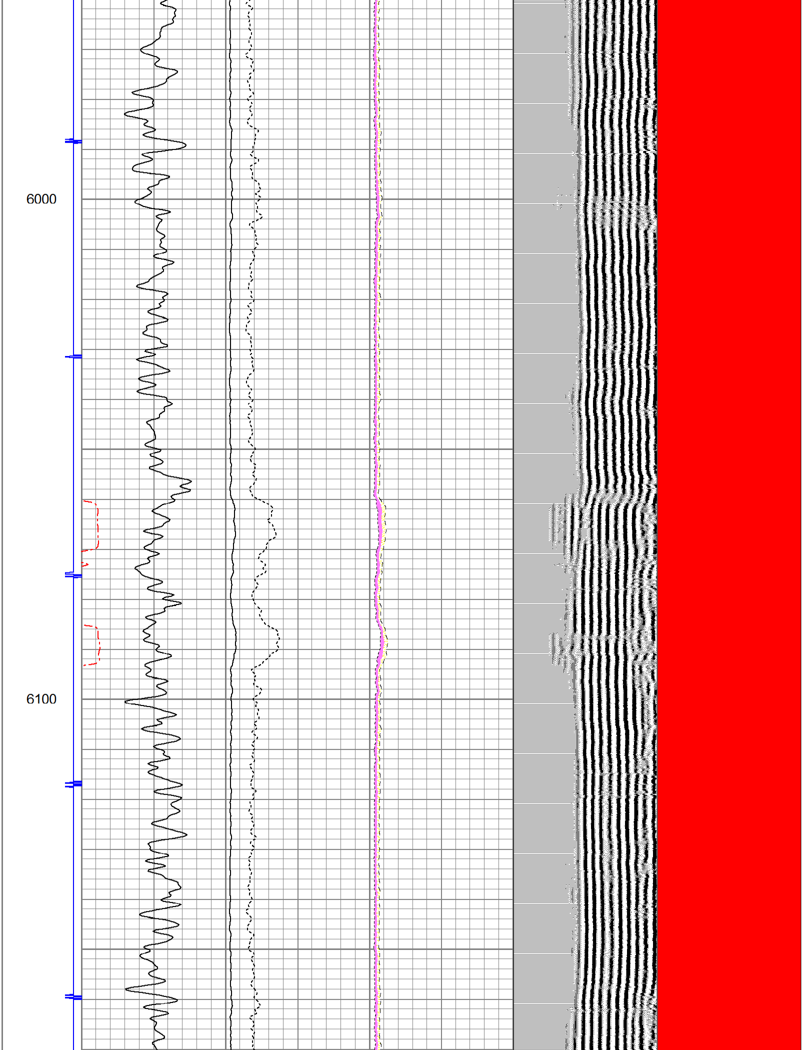
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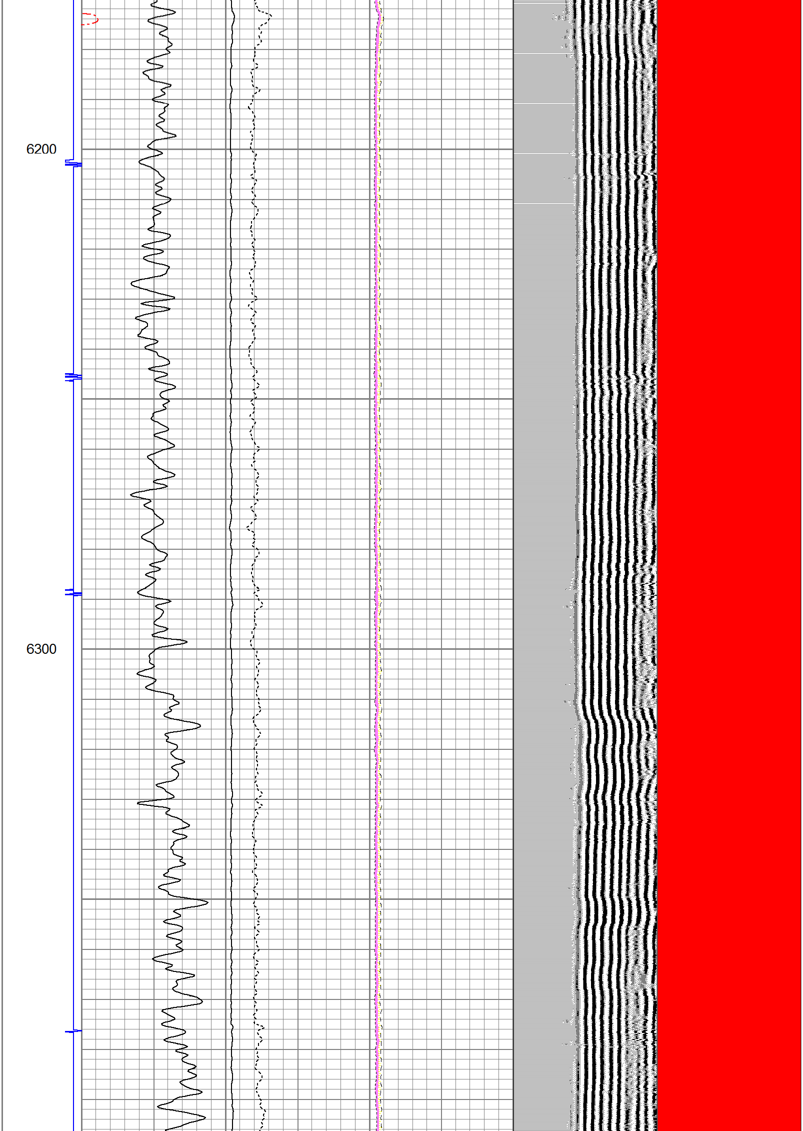
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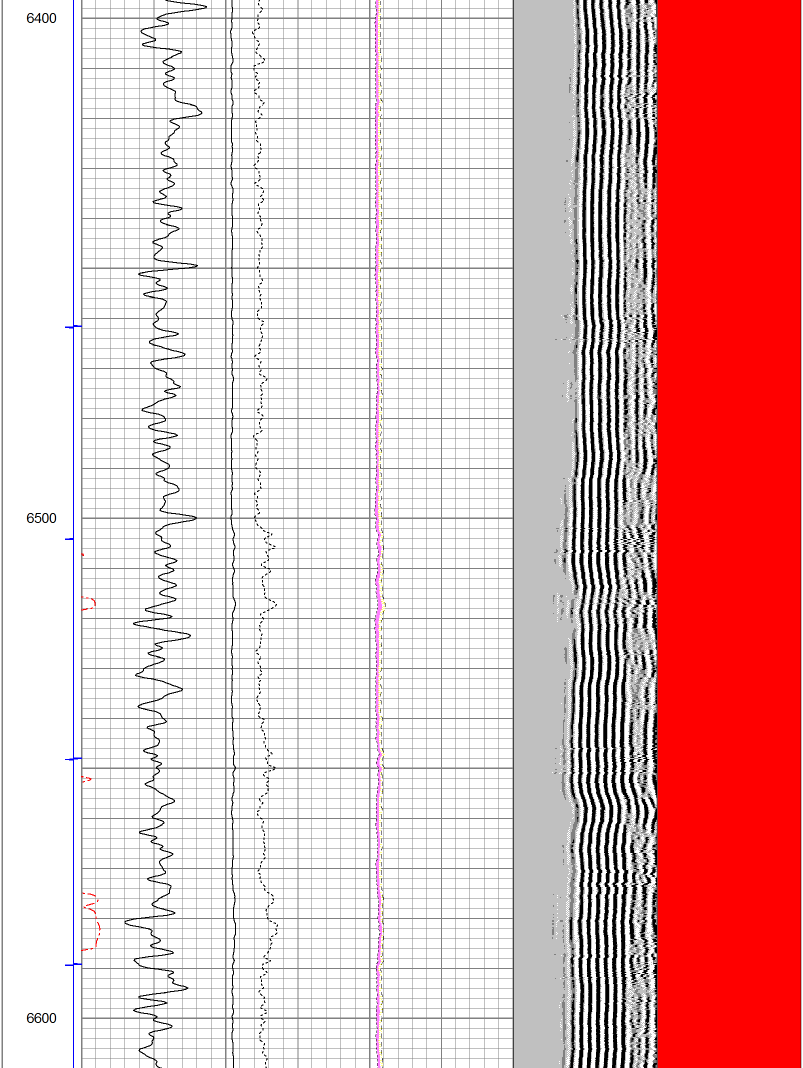
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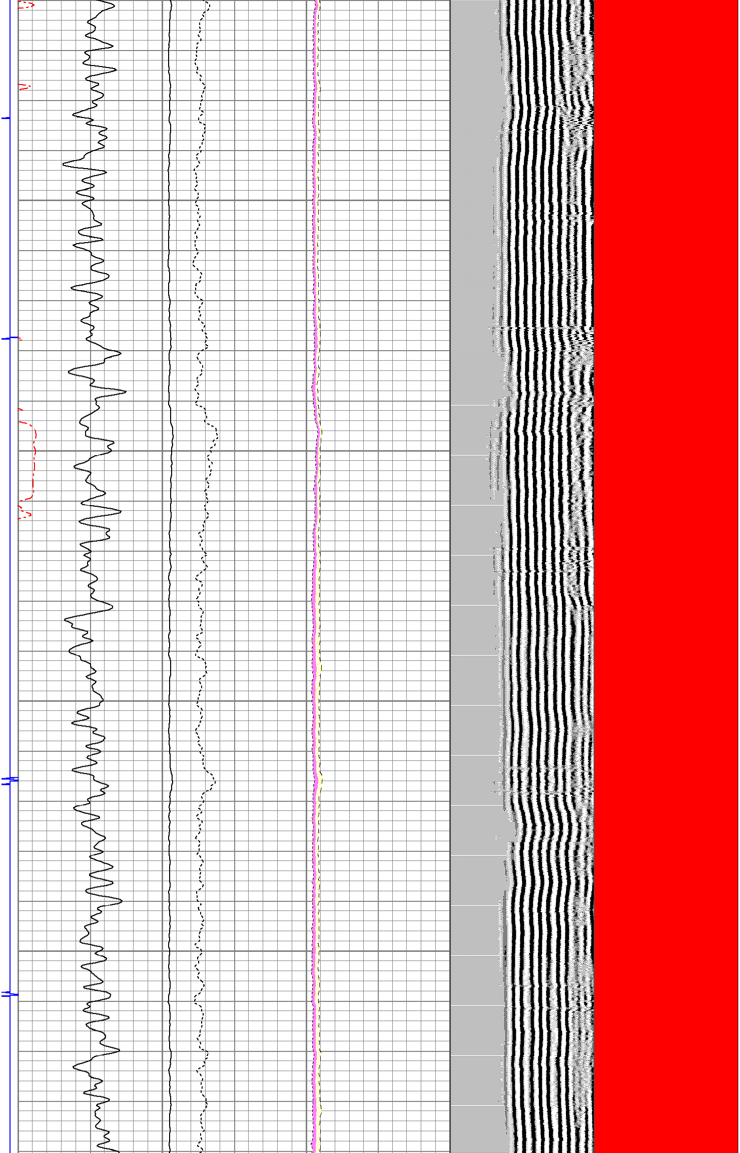

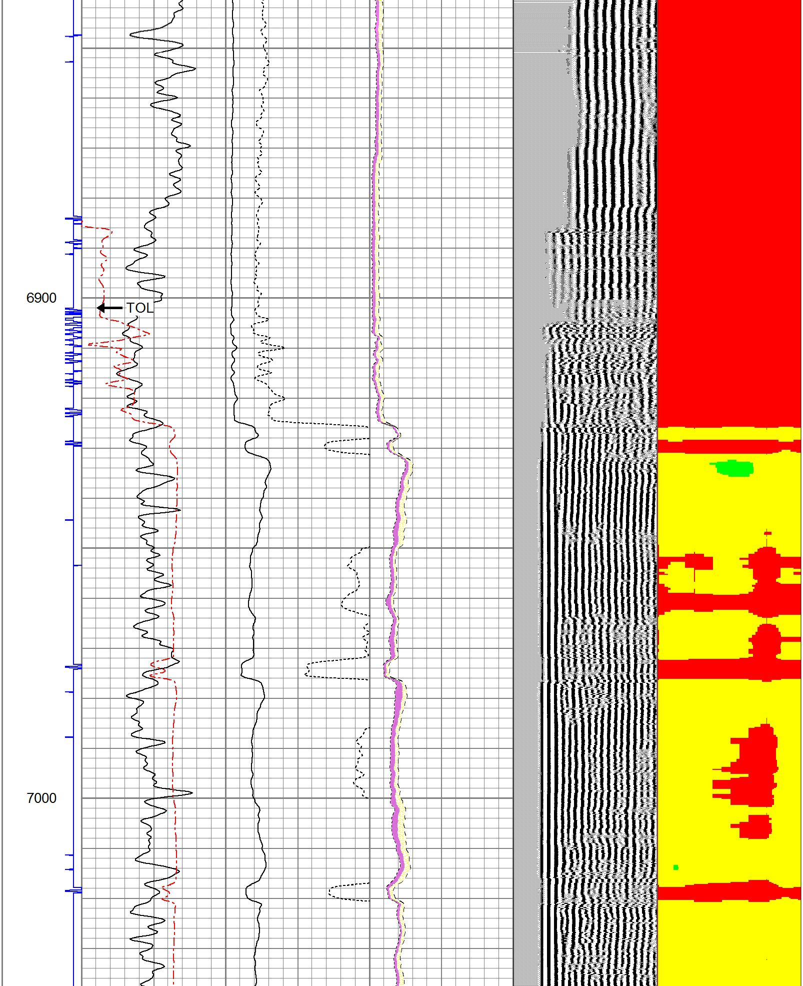
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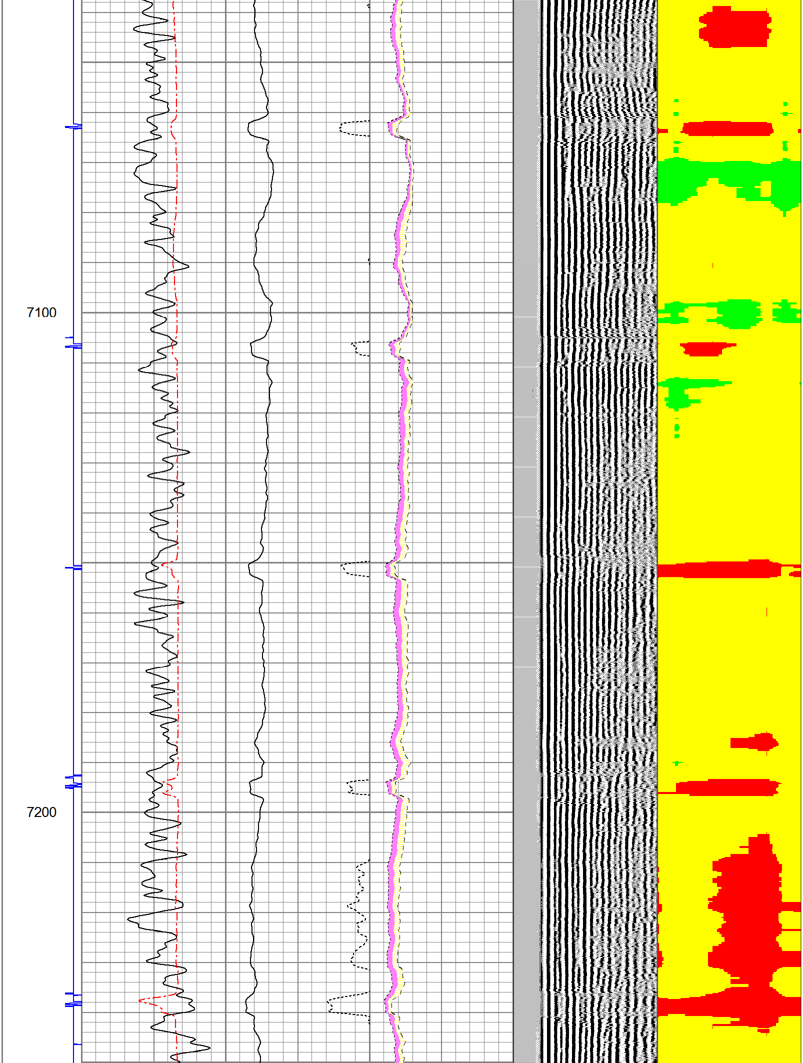
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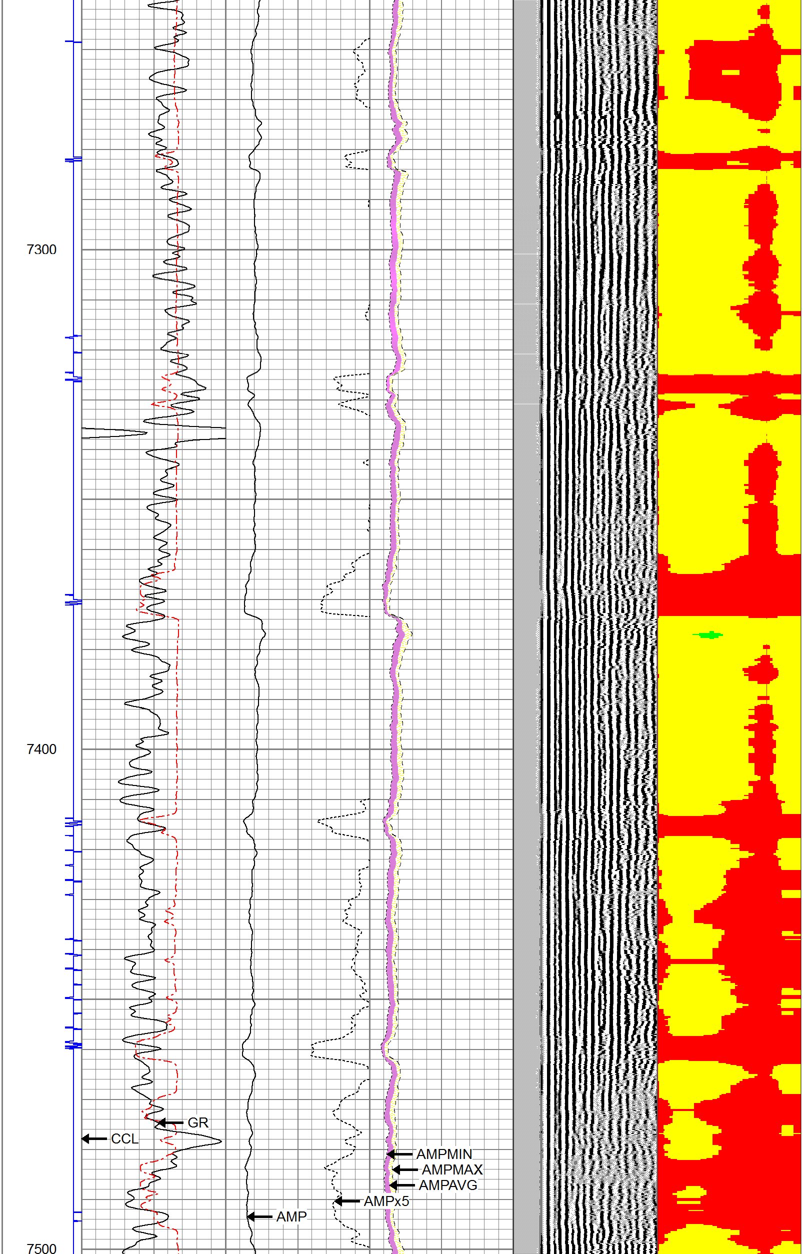
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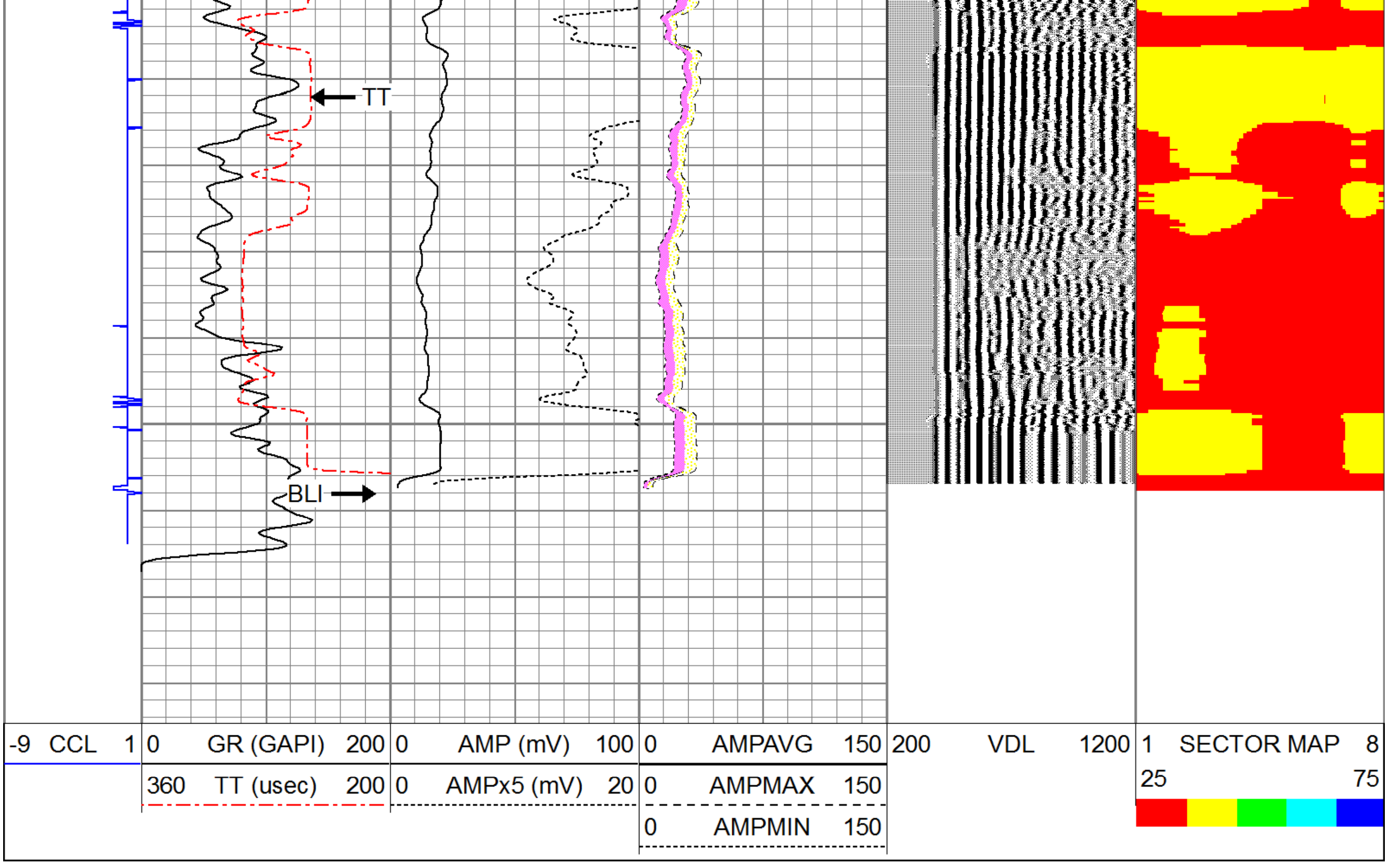

Calibration Report

Database File: butterball_29c-15hz.db
Dataset Pathname: run3/pass3
Dataset Creation: Mon Dec 09 11:50:49 2013 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	111211	
Tool Model:	Probe	
Performed:	Fri Nov 08 12:58:35 2013	
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:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	575.967	ft

Master Calibration, performed Mon Dec 09 12:05:57 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.014	0.676	2.000	62.000	86.907	3.224
CAL	1.000	0.970				
5'	0.164	0.752	2.000	62.000	102.100	-14.783
SUM						
S1	-0.068	0.640	0.000	95.000	134.228	9.068
S2	-0.077	0.671	0.000	95.000	127.049	9.726
S3	-0.042	0.708	0.000	95.000	126.623	5.315
S4	-0.030	0.736	0.000	95.000	124.059	3.699
S5	-0.043	0.731	0.000	95.000	122.749	5.306
S6	-0.047	0.706	0.000	95.000	126.162	5.881
S7	-0.030	0.670	0.000	95.000	135.792	4.047
S8	-0.077	0.633	0.000	95.000	133.730	10.335

Internal Reference Calibration, performed Wed Aug 21 11:08:58 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	1.000	0.930	1.000	0.000

Air Zero Calibration, performed Sat Nov 09 07:23:33 2013:

	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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Company	ANADARKO PETROLEUM CORPORAT
Well	BUTTERBALL 29C-15HZ
Field	WATTENBERG
County	WELD
State	CO