PEAK WIRELINE SERVICES, INC.

RADIAL CEMENT BOND LOG

Company	NIGHTHAWK PRODUCTION, LLC.
Well	SNOW KING 13-33
Field	WILDCAT
County	LINCOLN
State	COLORADO

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Well SNOW KING 13-33
Field WILDCAT
County LINCOLN State COLORADO

Location 312' FSL & 737' FWL
SW SW
SEC 33 TWP 6S RGE 54W

Other Services

			Elevation
Permanent Datum	GROUND LEVEL	Elevation 5315	K.B. 5330
Log Measured From	KELLY BUSHING 15' AGL		D.F. 5329
Drilling Measured From	KELLY BUSHING		G.L. 5315

Date	4-1-2014
Run Number	ONE
Depth Driller	8398
Depth Logger	8302
Bottom Logged Interval	8297
Top Log Interval	30
Casing Size	5 1/2"
Type Fluid	WATER
Density / Viscosity	
Max. Recorded Temp.	210
Estimated Cement Top	95
Time Well Ready	
Time Logger on Bottom	
Equipment Number	TR-7
Location	CHEYENNE WELLS, CO
Recorded By	HENDERSON
Witnessed By	DAN CARROLL

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12 1/4"	0	365				
TWO	7 7/8"	365	8398				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8"	24#	0	365
Prot. String				
Production String	5 1/2"	17#	0	8372
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.

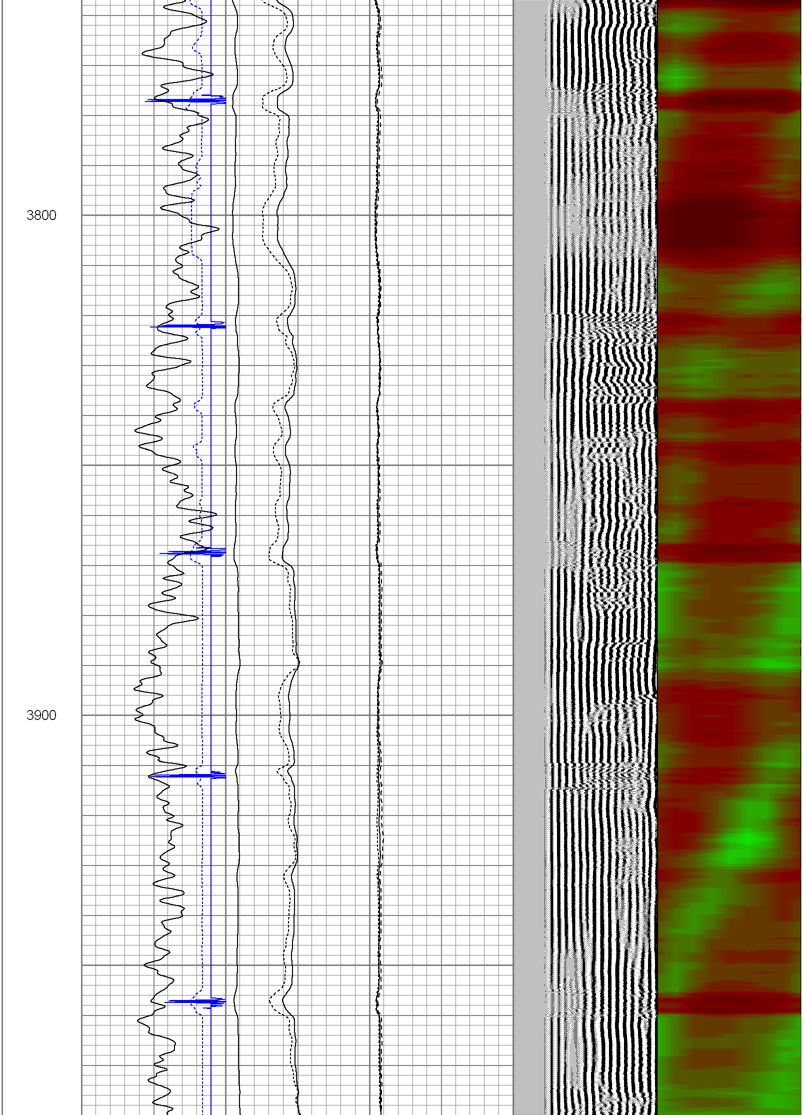
Comments

PEAK WIRELINE SERVICES, INC.

MAIN PASS

Database File: snowking.db
Dataset Pathname: 13-33/run1/pass2.1
Presentation Format: scbl02
Dataset Creation: Tue Apr 01 16:13:01 2014
Charted by: Depth in Feet scaled 1:240

800 TT (usec) 200	0 AMP (mV) 100	-2 AMPAVG 200	200 VDL 1200 / 1 Cement Map 8
-9 CCL 1	0 AMPx5 (mV) 20	-2 AMPMIN 200	
0 GR (GAPI) 150	1 Bond Index 0	-2 AMPMAX 200	
150 GR (GAPI) 300			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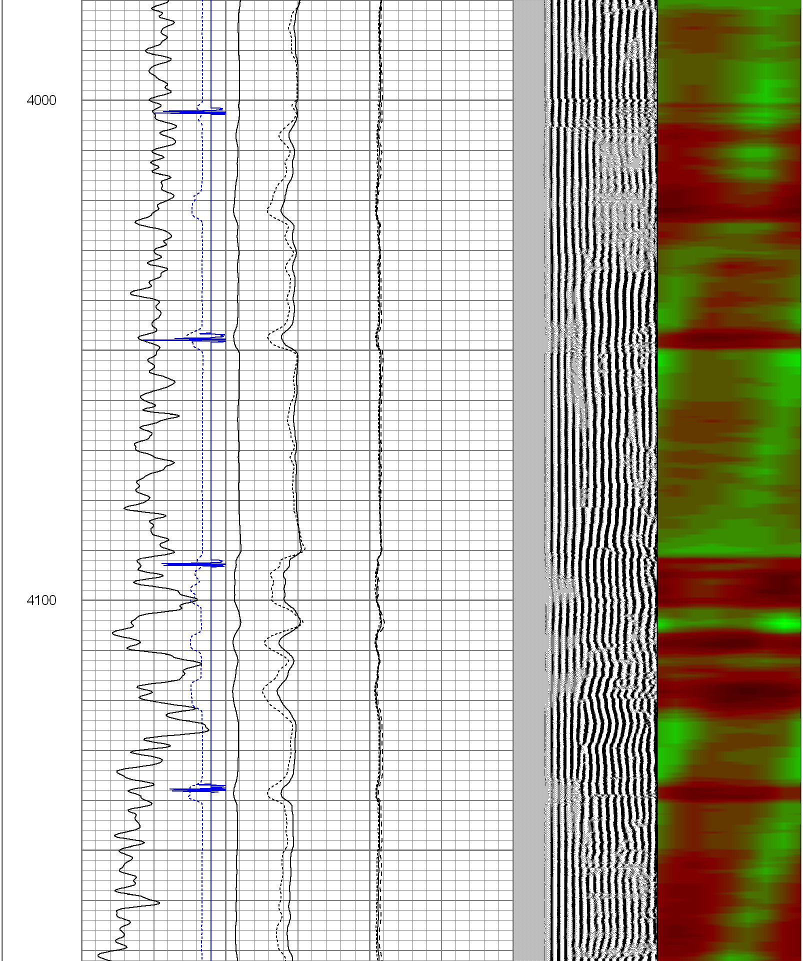
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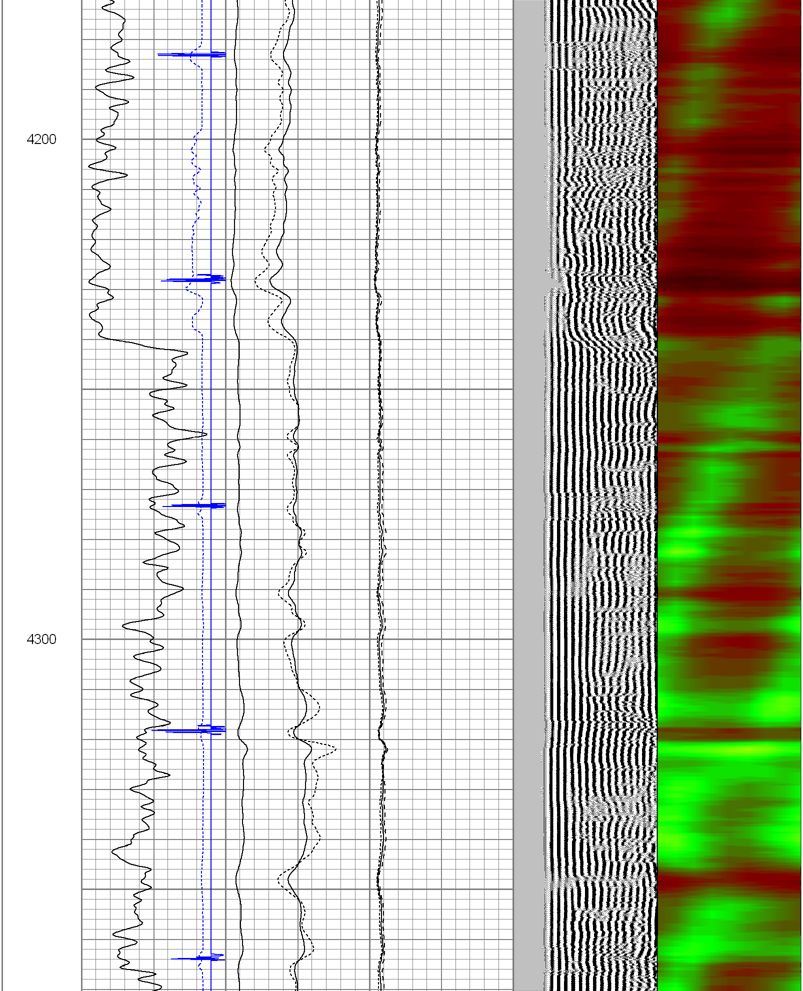
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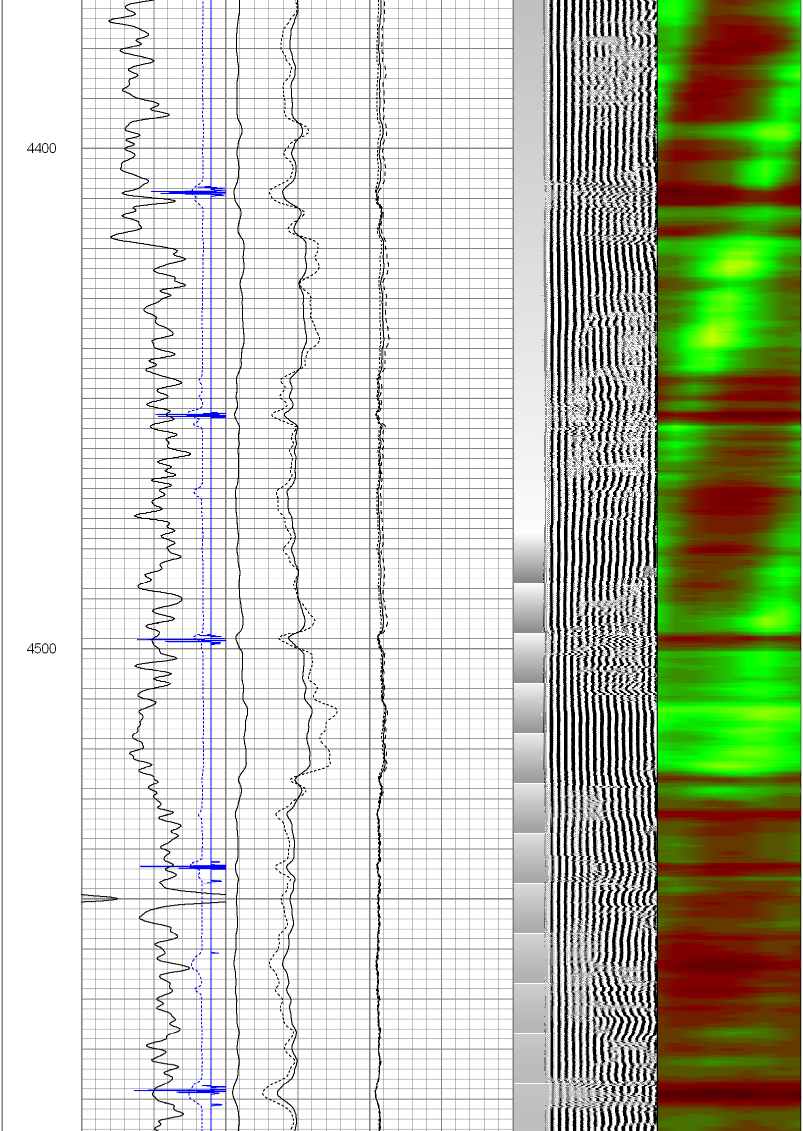
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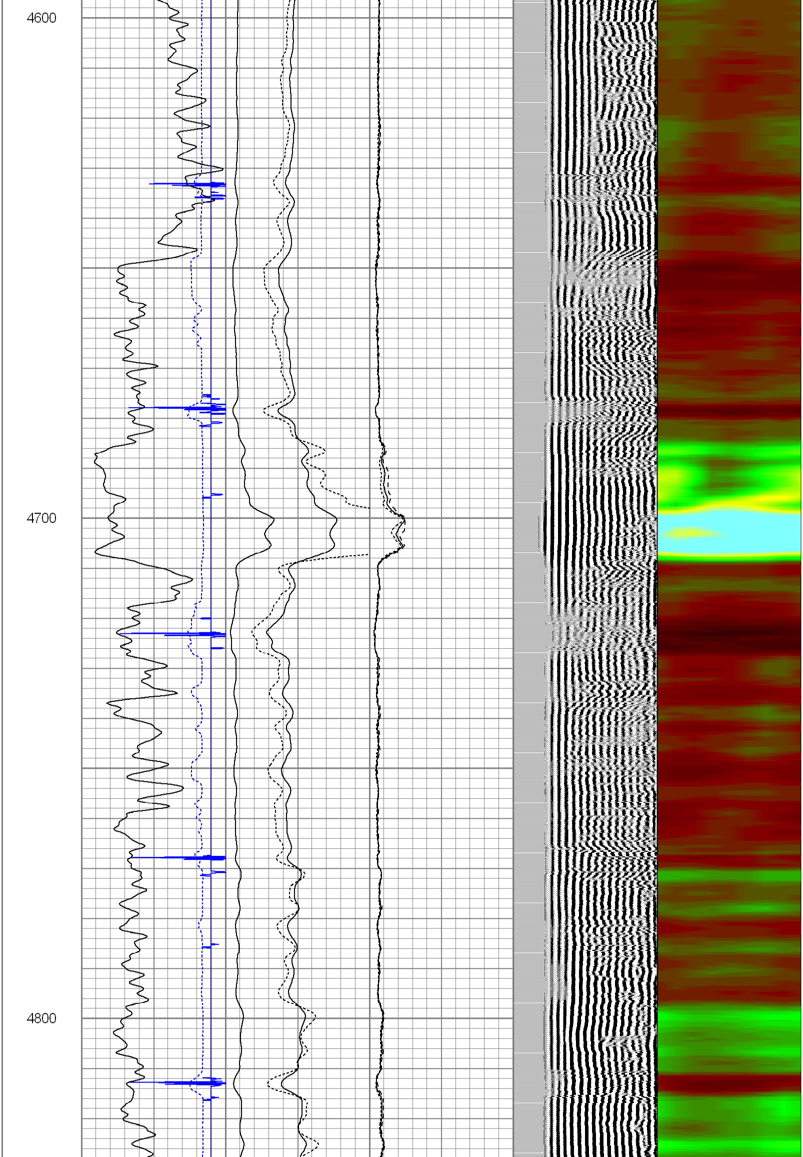
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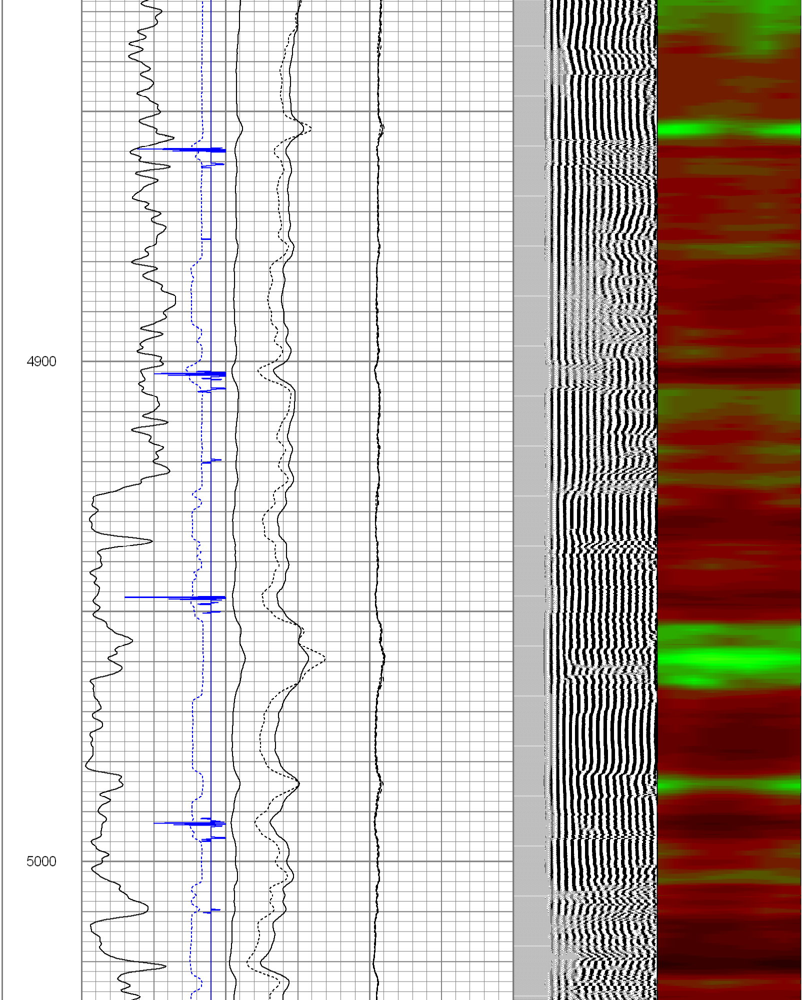
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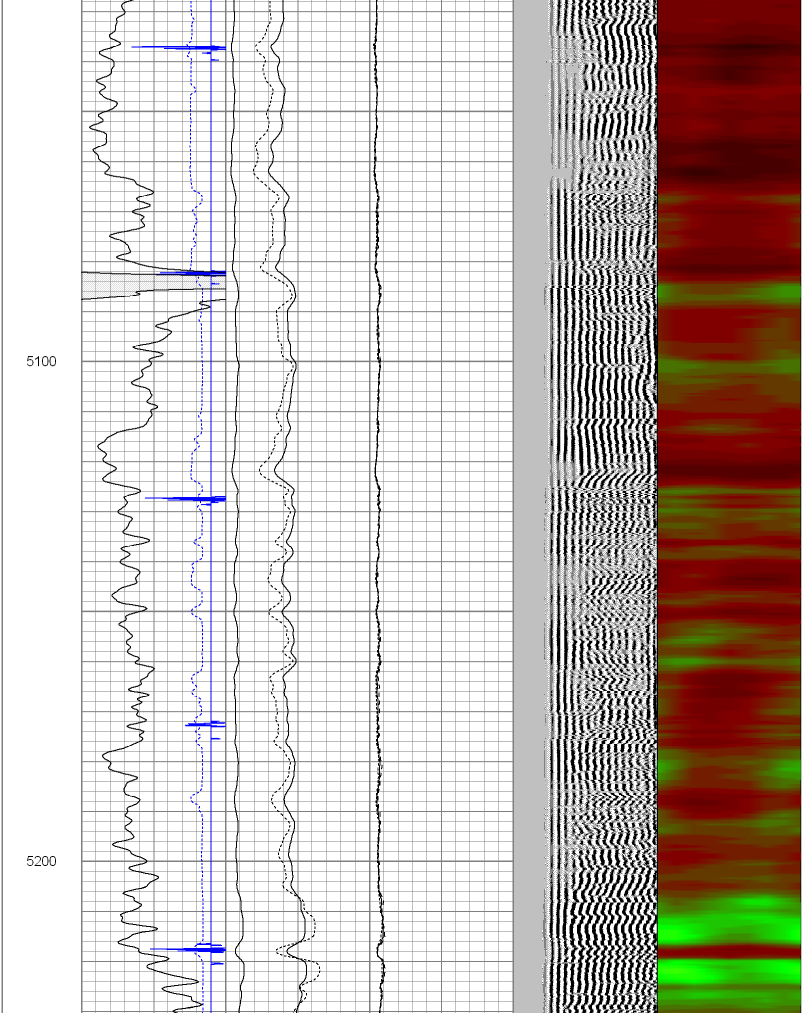
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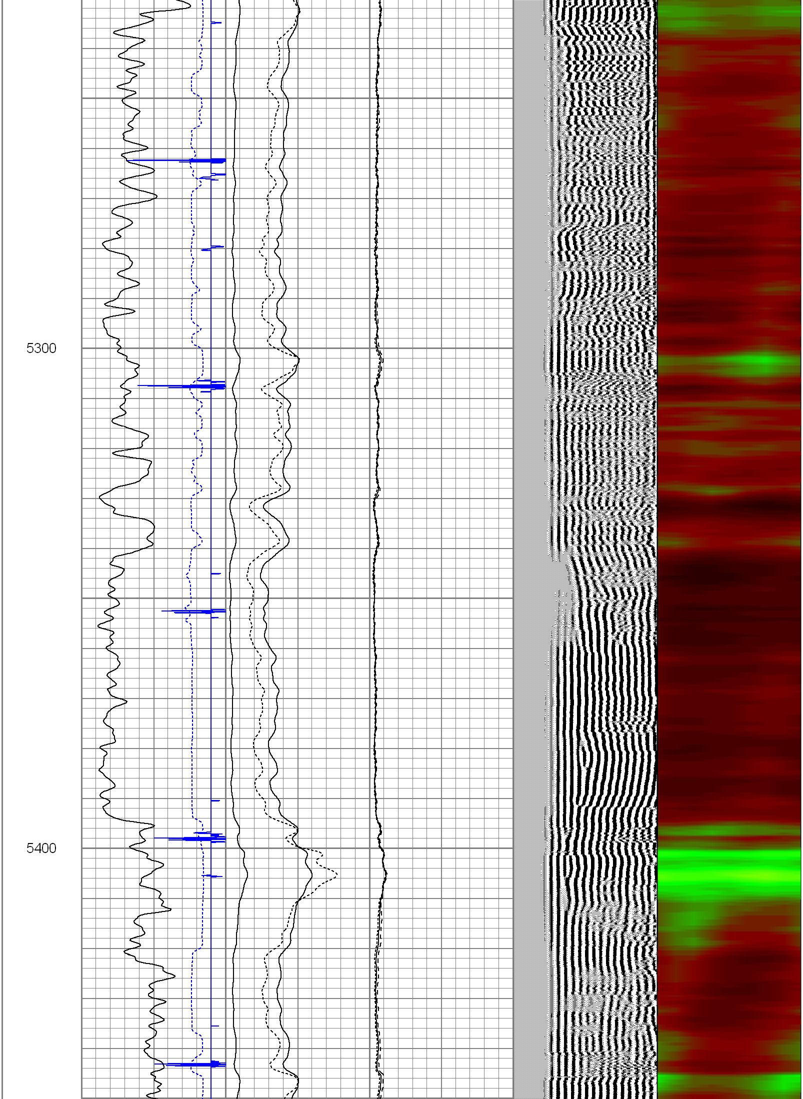
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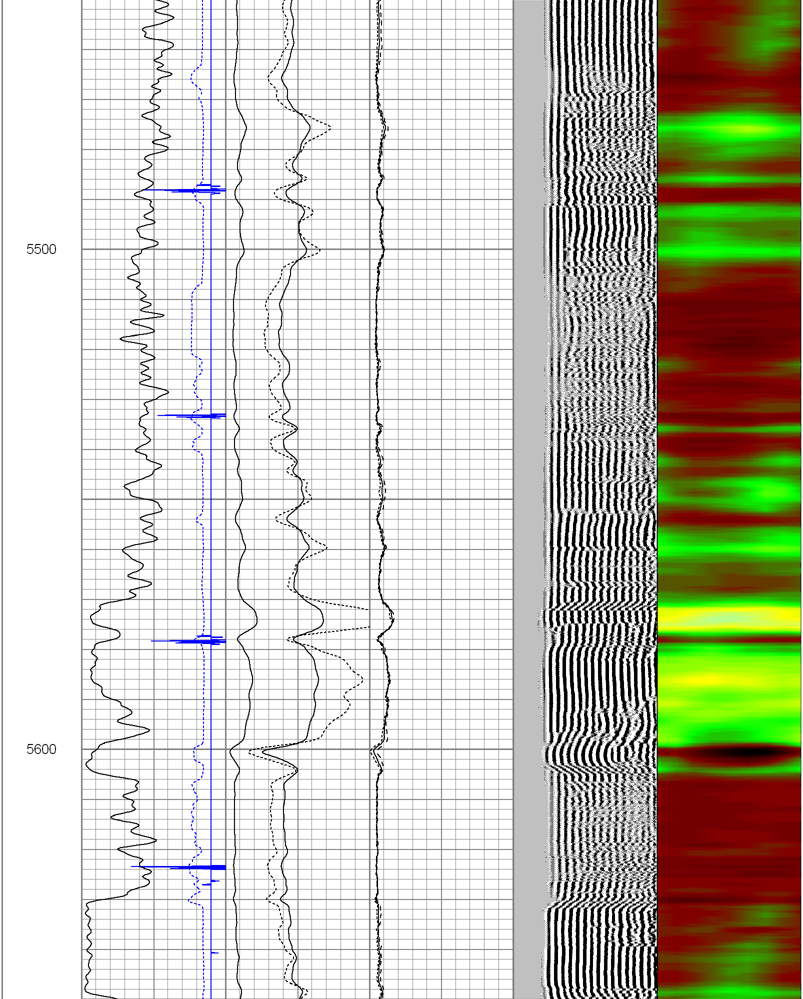
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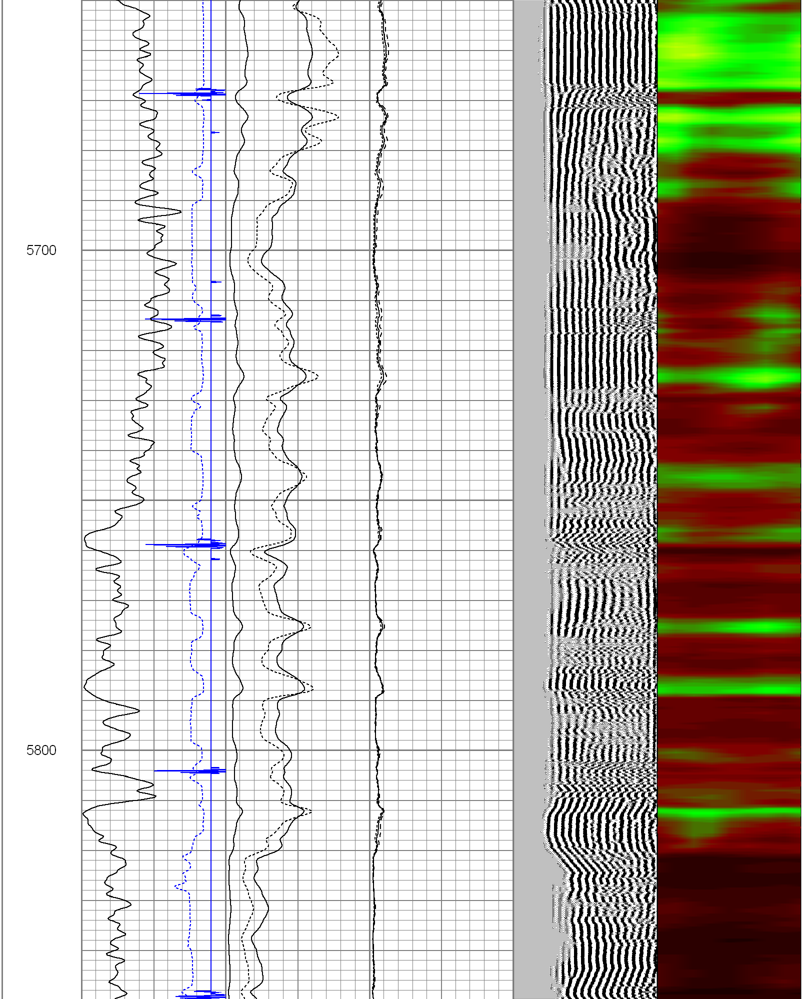
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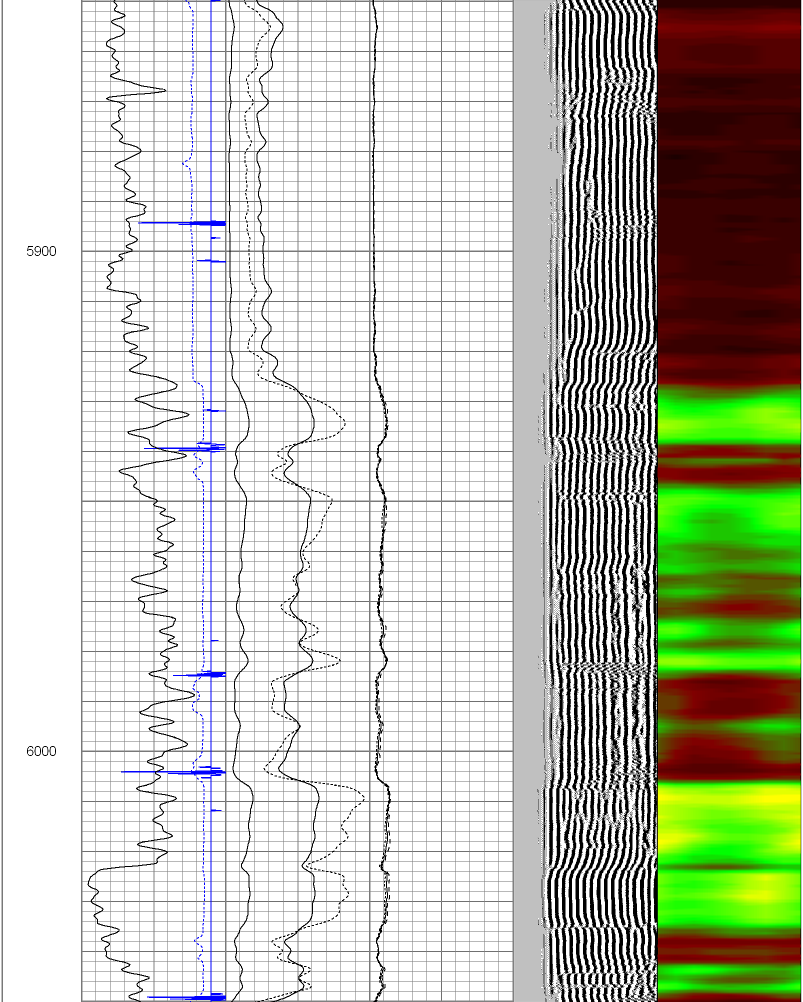
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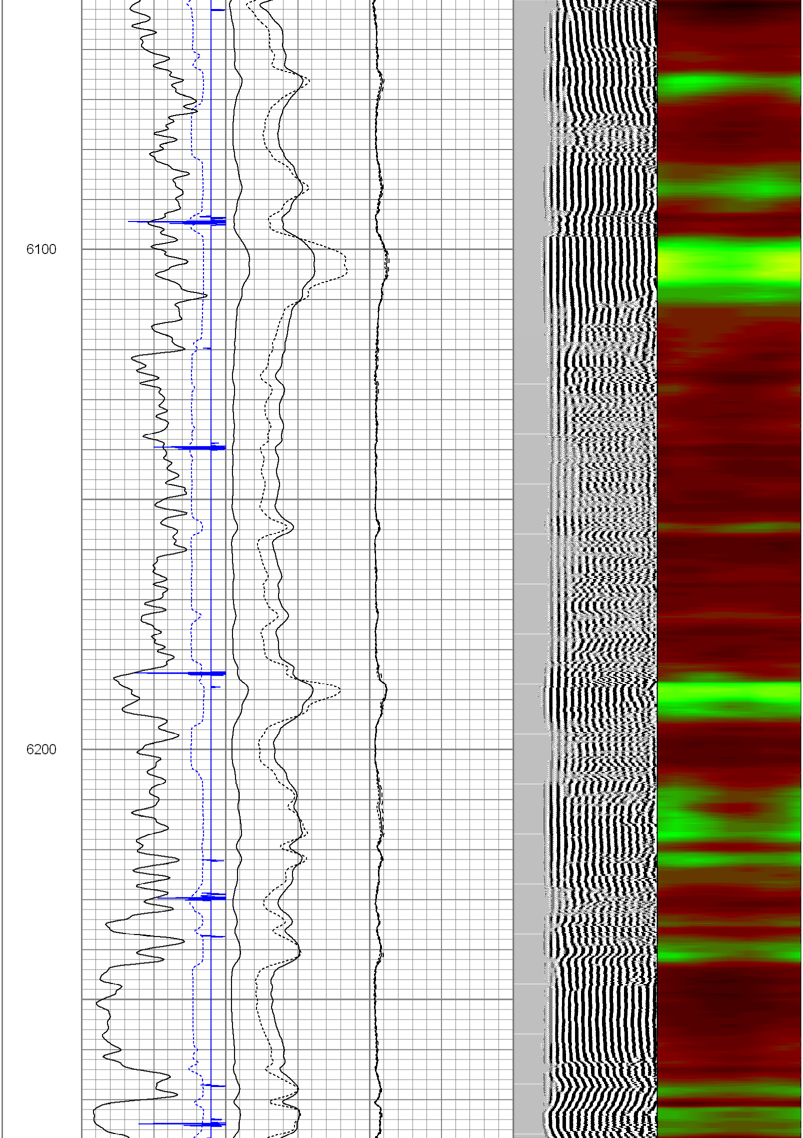
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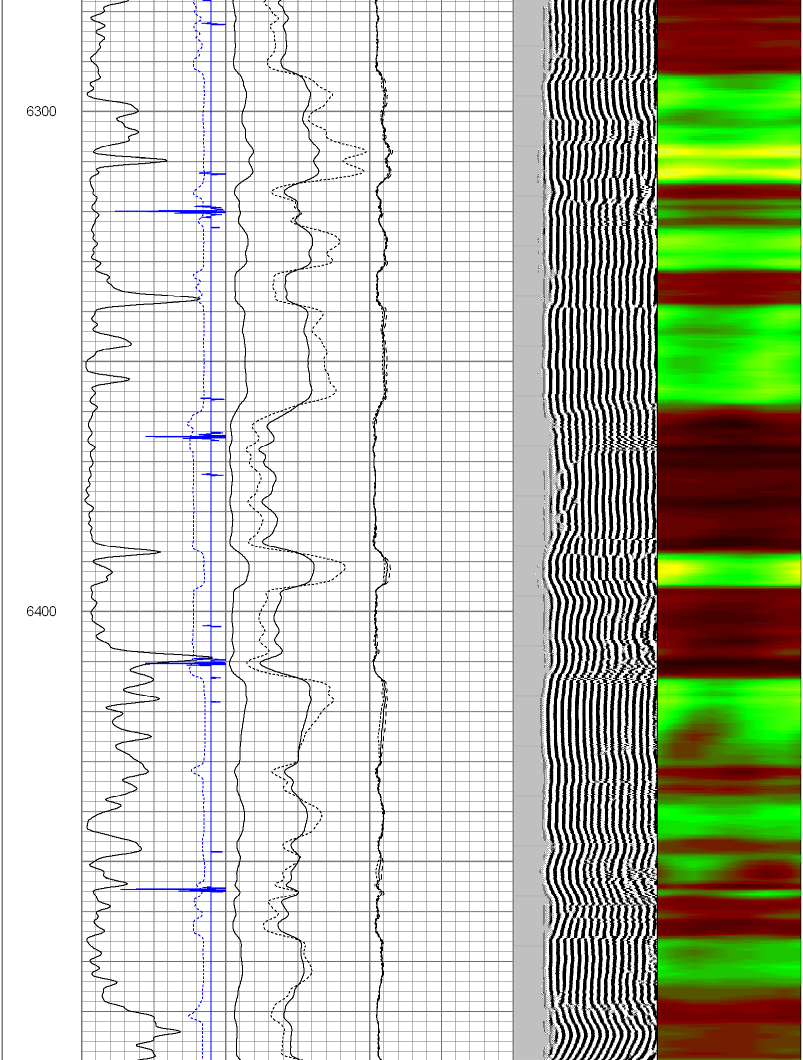
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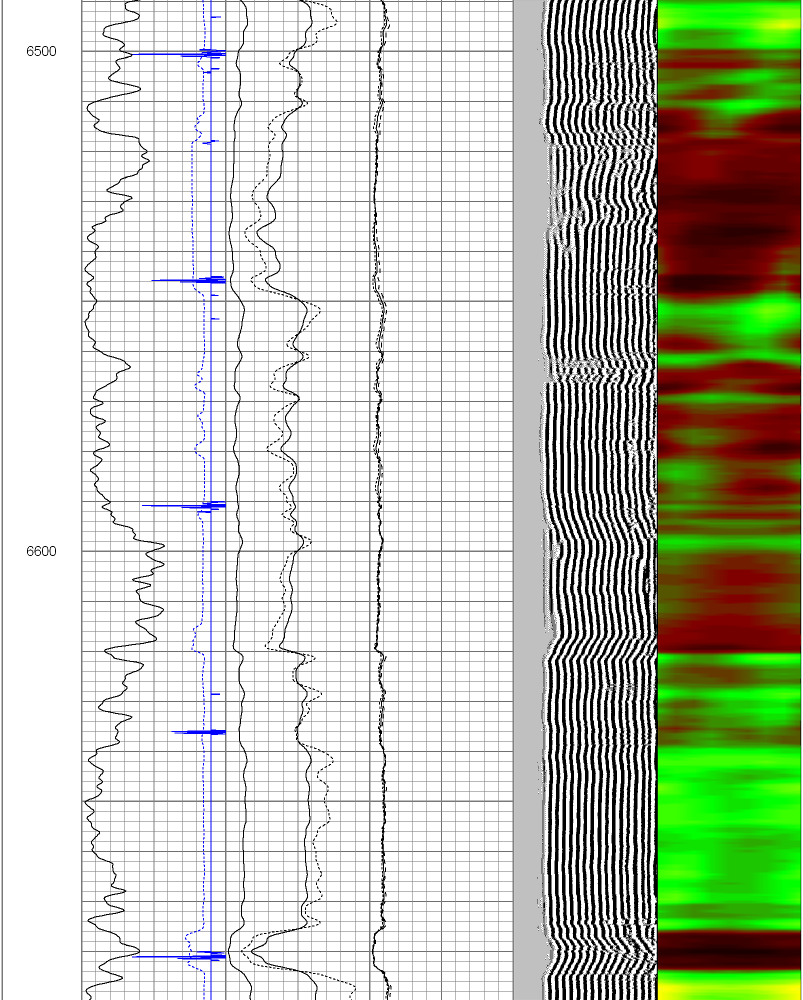
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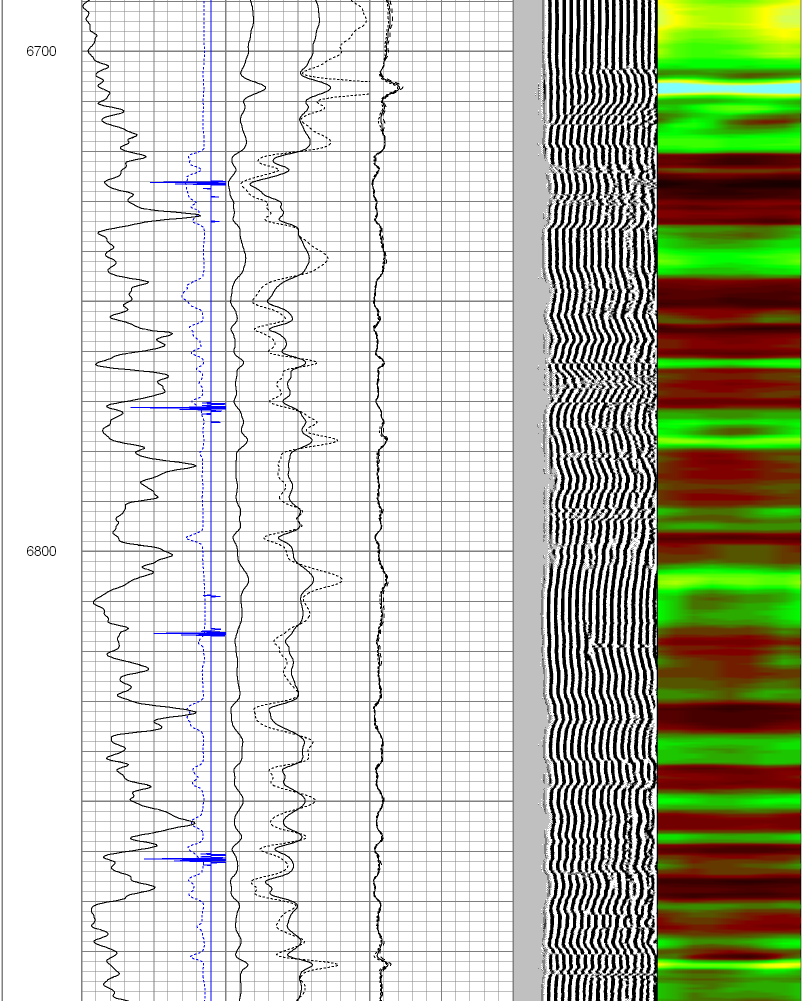
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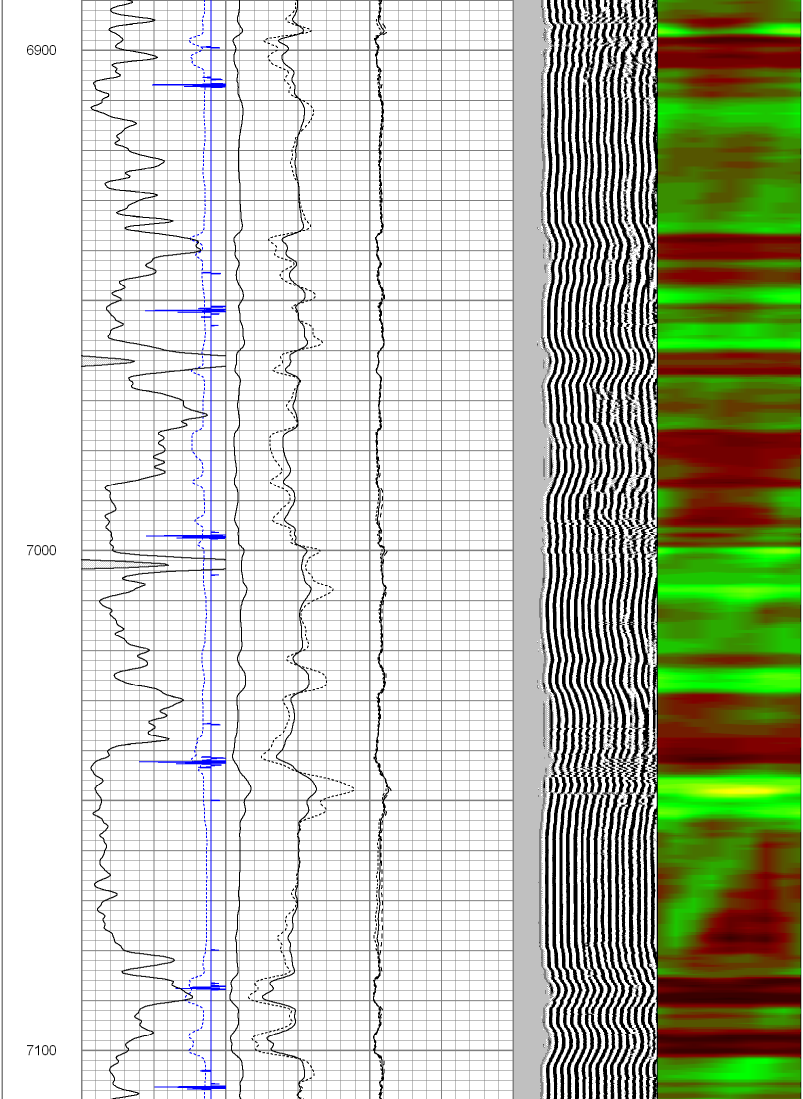
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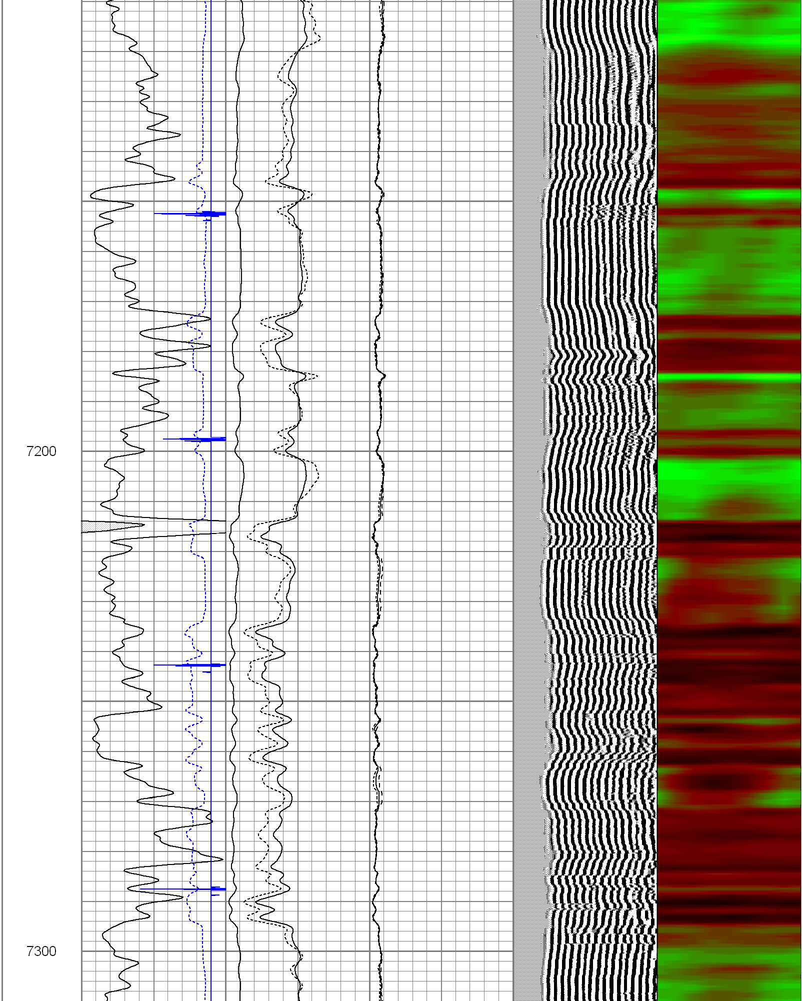
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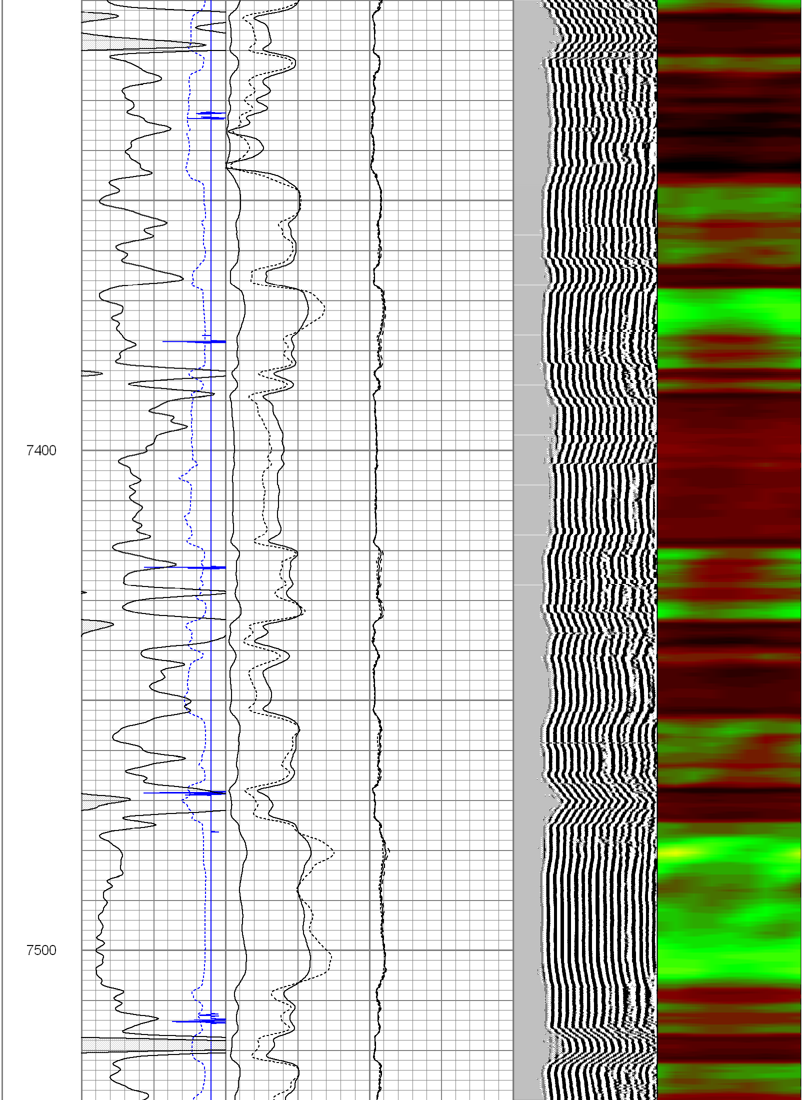
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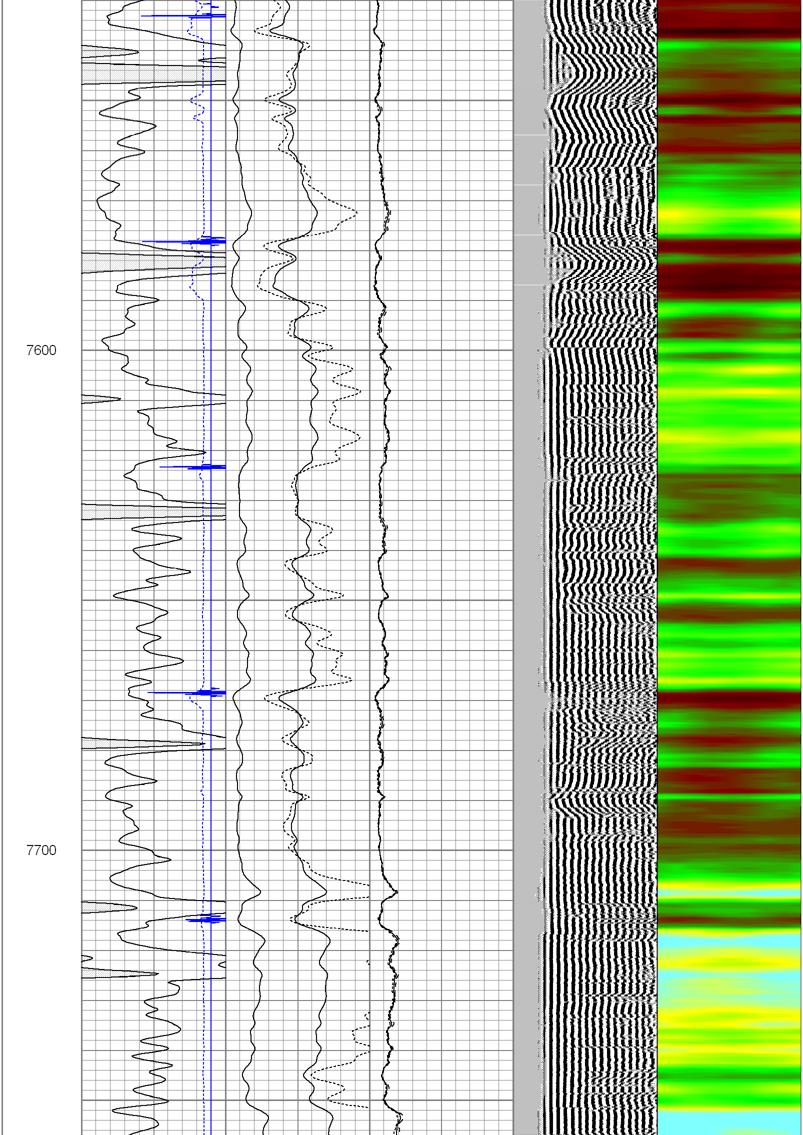
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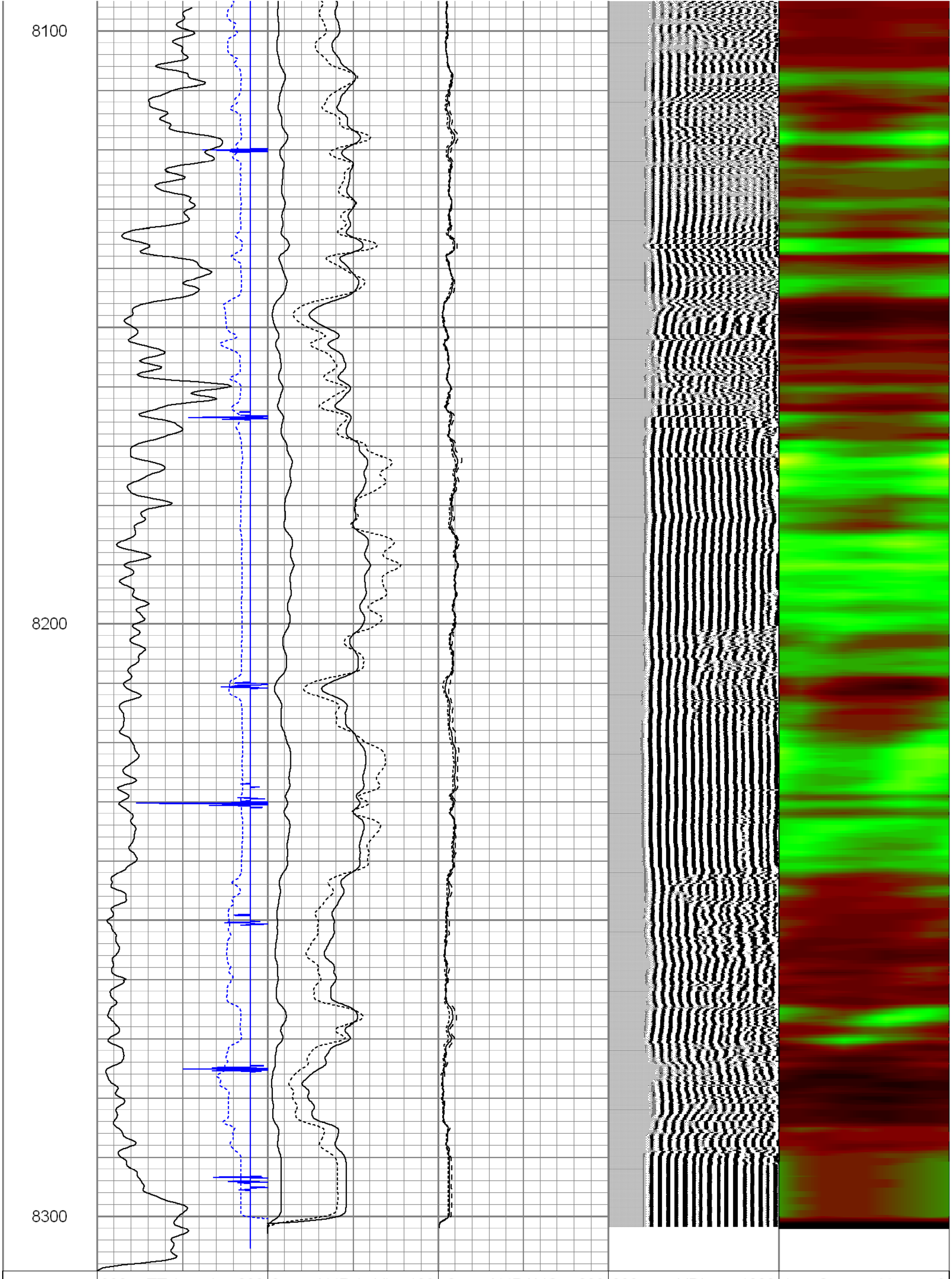
800 TT (usec) 200	0 AMP (mV) 100	-2 AMPAVG 200	200 VDL 1200	1 Cement Map 8
-9 CCL 1	0 AMPx5 (mV) 20	-2 AMPMIN 200		
0 GR (GAPI) 150	1 Bond Index 0	-2 AMPMAX 200		
150 GR (GAPI) 300				

PEAK WIRELINE SERVICES, INC.

REPEAT SECTION

Database File:	snowking.db
Dataset Pathname:	13-33/run1/pass1
Presentation Format:	scbl02
Dataset Creation:	Tue Apr 01 14:27:05 2014 by Log Std Casedhole 07081
Charted by:	Depth in Feet scaled 1:240

800 TT (usec) 200	0 AMP (mV) 100	-2 AMPAVG 200	200 VDL 1200	1 Cement Map 8
-9 CCL 1	0 AMPx5 (mV) 20	-2 AMPMIN 200		
0 GR (GAPI) 150	1 Bond Index 0	-2 AMPMAX 200		
150 GR (GAPI) 300				



800 TT (usec) 200	0 AMP (mV) 100	-2 AMPAVG 200	200 VDL 1200	1 Cement Map 8
-9 CCL 1	0 AMPx5 (mV) 20	-2 AMPMIN 200		
0 GR (GAPI) 150	1 Bond Index 0	-2 AMPMAX 200		
150 GR (GAPI) 300				

Calibration Report

Database File: snowking.db
Dataset Pathname: 13-33/run1/pass1
Dataset Creation: Tue Apr 01 14:27:05 2014 by Log Std Casedhole 07081

Gamma Ray Calibration Report

Serial Number:	061120GR	
Tool Model:	PROBE	
Performed:	Tue Apr 01 14:28:05 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.2000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	4.5040904	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	22.300	ft

Master Calibration, performed Tue Apr 01 14:10:25 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	1.732	0.000	71.921	41.614	-0.161
CAL	2.083	2.118				
5'	0.004	1.822	0.000	71.921	39.560	-0.174
SUM						
S1	0.001	1.748	0.000	100.000	57.267	-0.085
S2	0.003	1.772	0.000	100.000	56.520	-0.156
S3	0.004	1.781	0.000	100.000	56.278	-0.215
S4	0.003	1.786	0.000	100.000	56.093	-0.184
S5	0.003	1.763	0.000	100.000	56.839	-0.191
S6	0.004	1.703	0.000	100.000	58.887	-0.256
S7	0.003	1.661	0.000	100.000	60.324	-0.170
S8	0.003	1.697	0.000	100.000	59.026	-0.191

Internal Reference Calibration, performed Wed Nov 30 12:15:10 2011:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	2.083	2.118	1.000	0.000

Air Zero Calibration, performed Tue Apr 01 14:10:06 2014:

	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