PEAK WIRELINE SERVICES, INC.

RADIAL CEMENT BOND LOG

Company NIGHTHAWK PRODUCTION LLC
Well SILVERTON #16-10
Field
County LINCOLN
State COLORADO

Company	NIGHTHAWK PRODUCTION, LLC.
Well	SILVERTON #16-10
Field	
County	LINCOLN
State	COLORADO
Location	1183' FSL & 922' FEL SE SE SEC 10 TWP 6S RGE 54W
Other Services	
Permanent Datum	GROUND LEVEL
Elevation	5227
Log Measured From	KELLY BUSHING 15' AGL
Drilling Measured From	KELLY BUSHING
Elevation	K.B. 5242 D.F. G.L. 5227

Date	6-17-2013		
Run Number	ONE		
Depth Driller	8450		
Depth Logger	8317		
Bottom Logged Interval	8313		
Top Log Interval	2000		
Casing Size	5 1/2"		
Type Fluid	WATER		
Density / Viscosity			
Max. Recorded Temp.			
Estimated Cement Top	2140		
Time Well Ready			
Time Logger on Bottom			
Equipment Number			
Location	CHEYENNE WELLS, CO.		
Recorded By	HENDERSON		
Witnessed By	BILL MCKNAB		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12 1/4"	0	334				
TWO	7 7/8"	334	8450				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8"	24#	0	334
Prot. String				
Production String	5 1/2"	17#	0	8450
Liner				

<<< Fold Here >>>

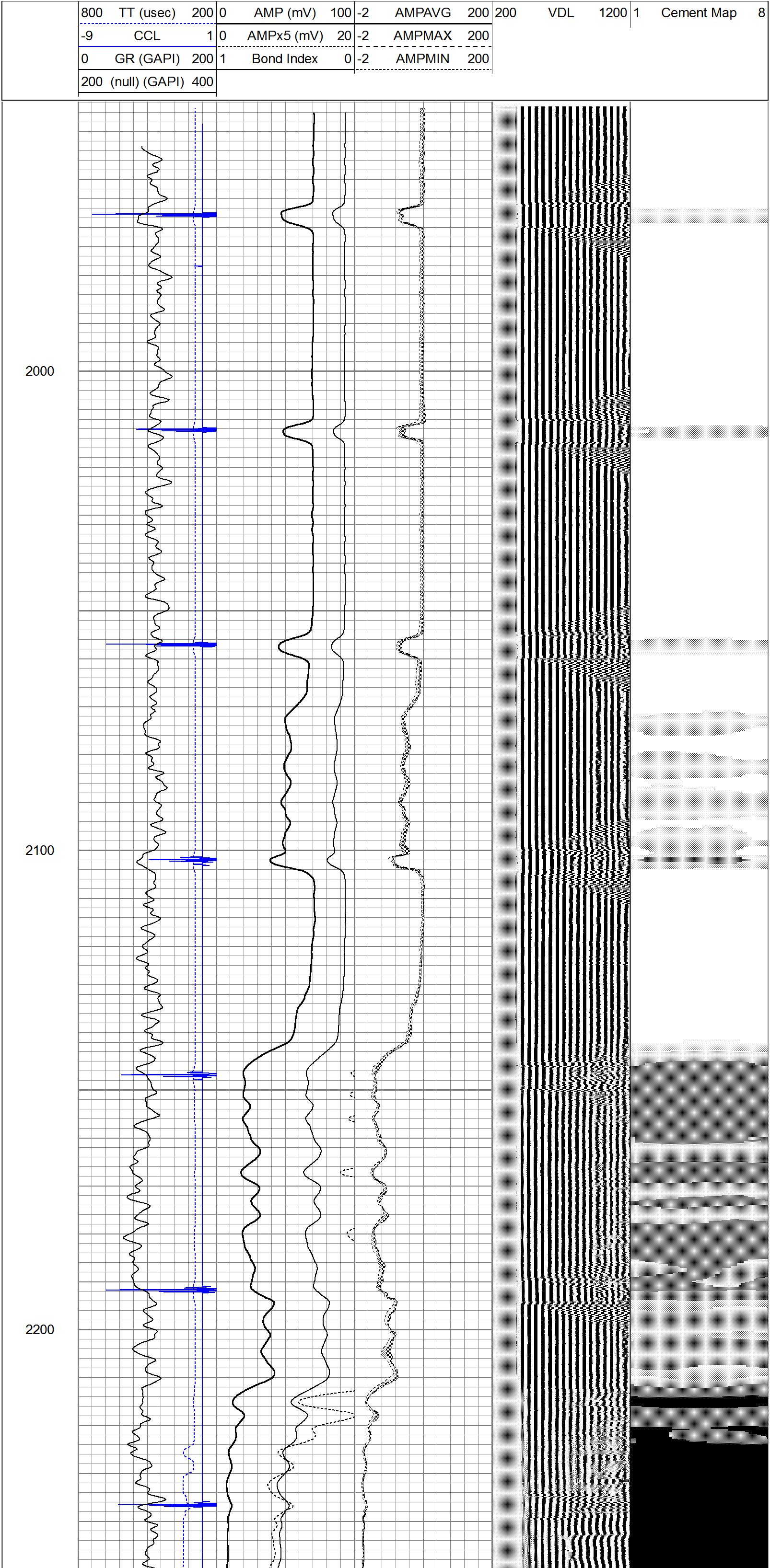
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

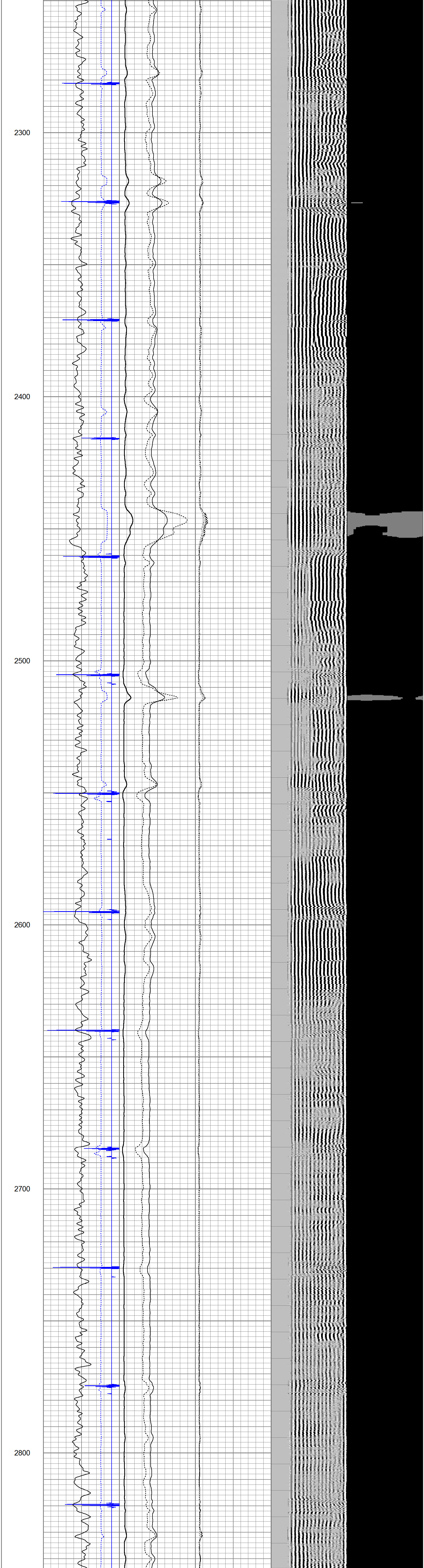
Comments

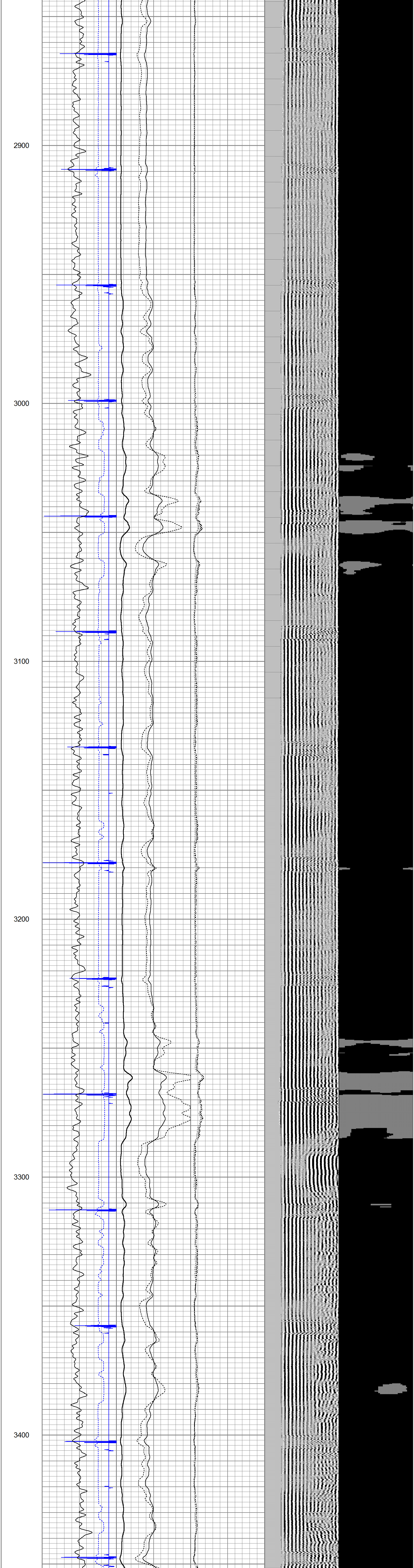
PEAK WIRELINE SERVICES, INC.

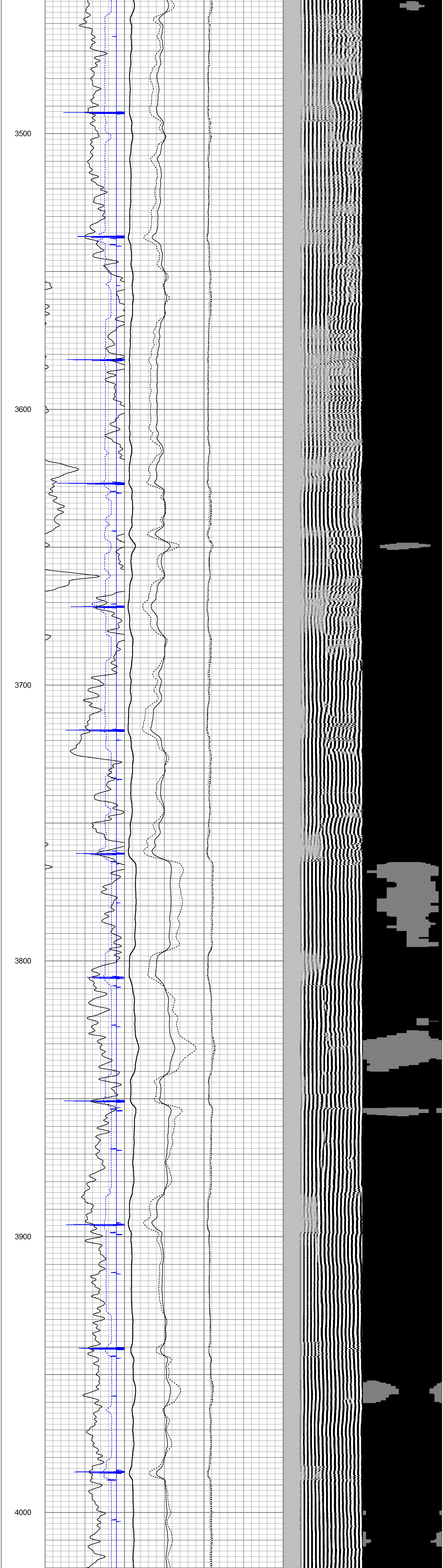
MAIN PASS

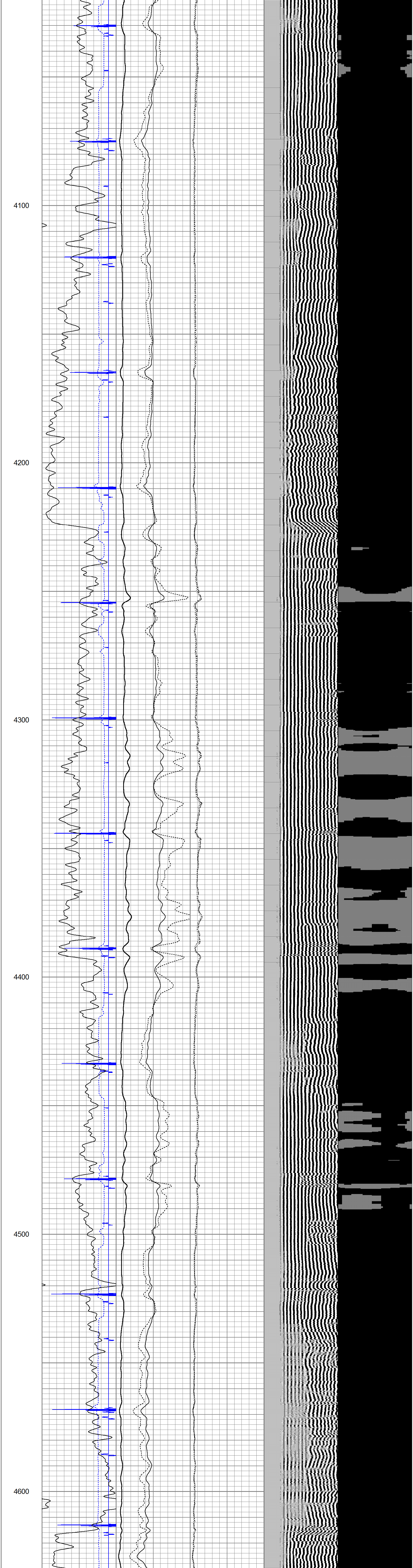
Database File: silverton.db
Dataset Pathname: 16-10/run1/pass2.1
Presentation Format: scbl02
Dataset Creation: Mon Jun 17 21:04:29 2013
Charted by: Depth in Feet scaled 1:240

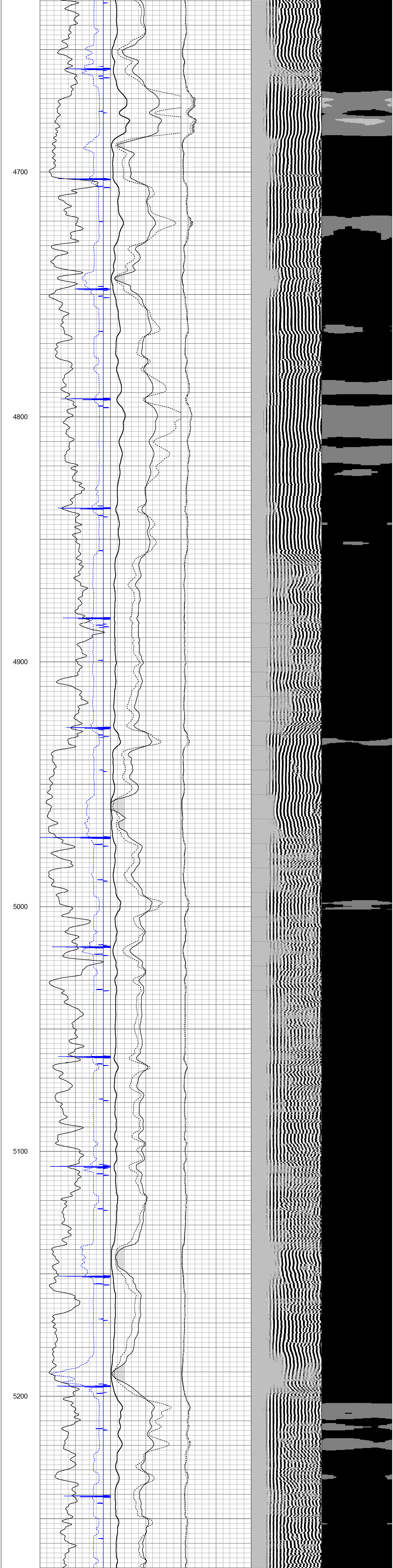


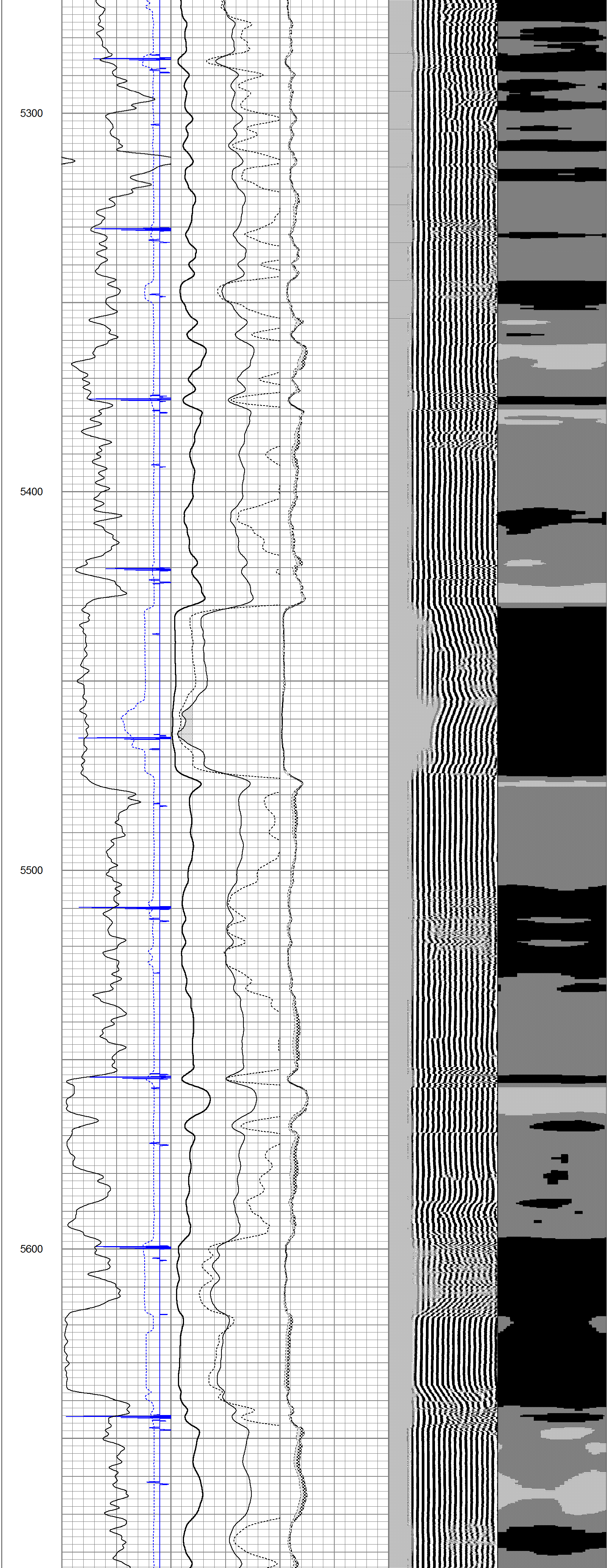


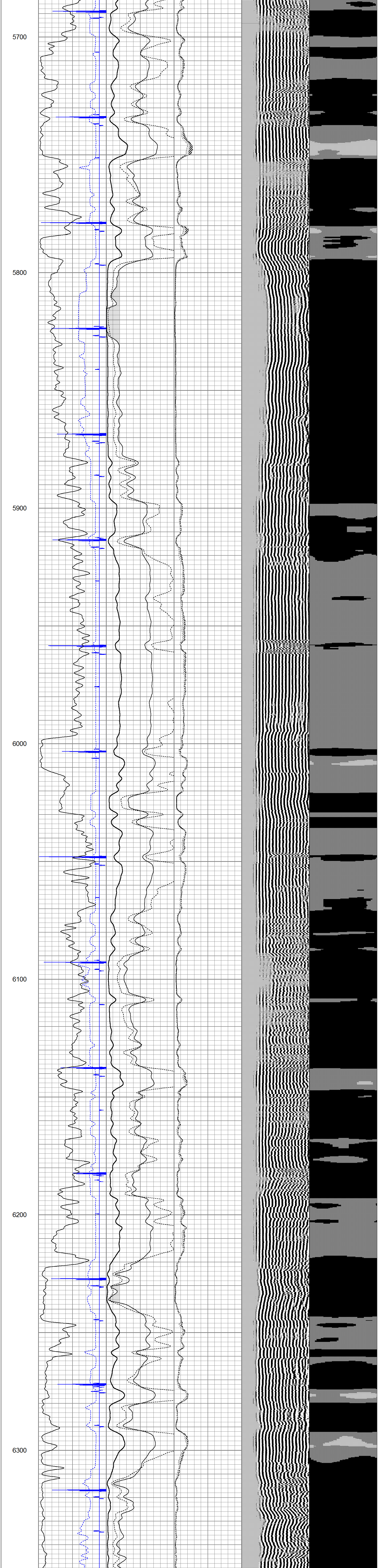


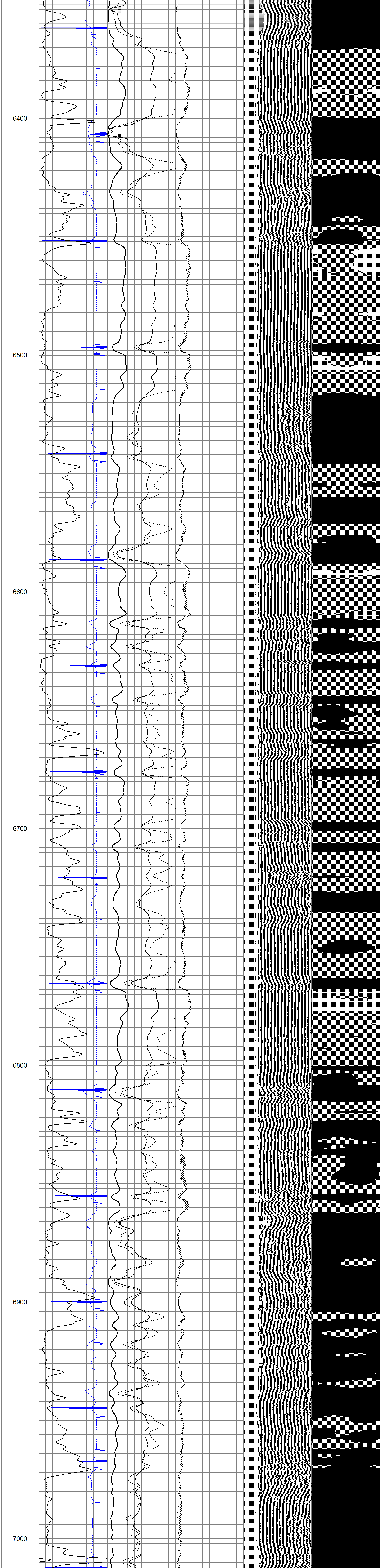


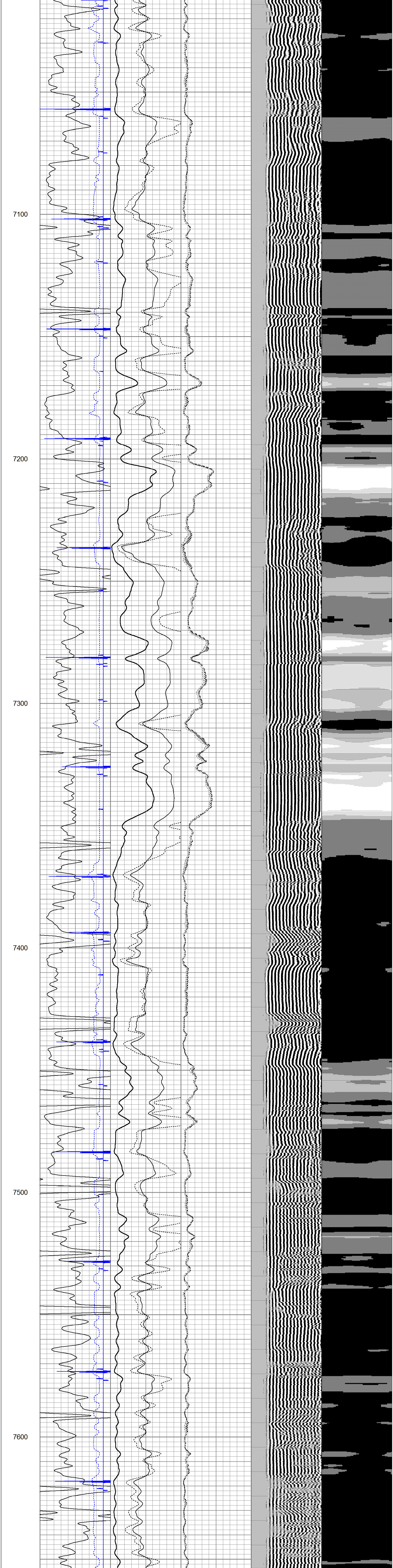


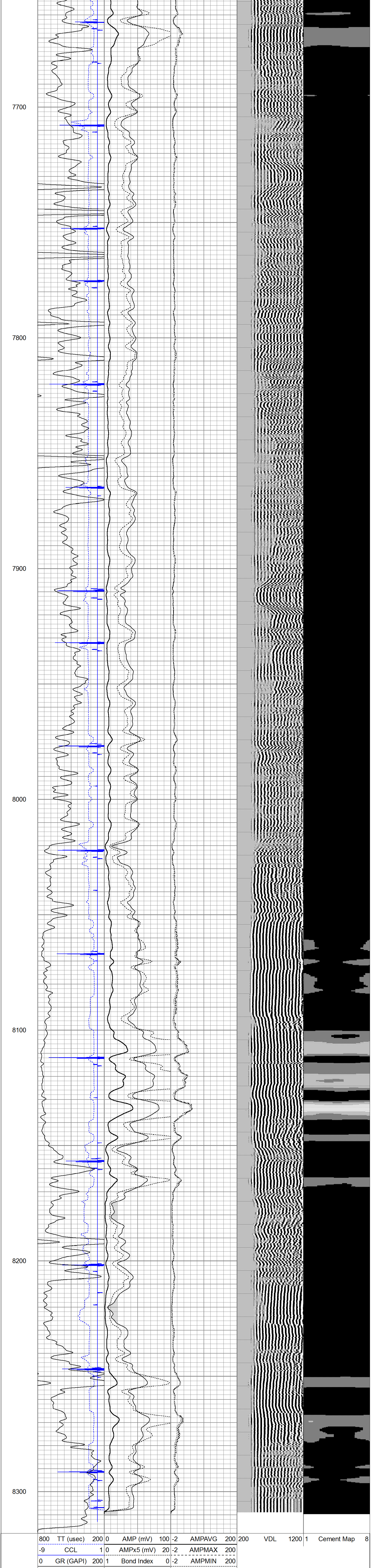








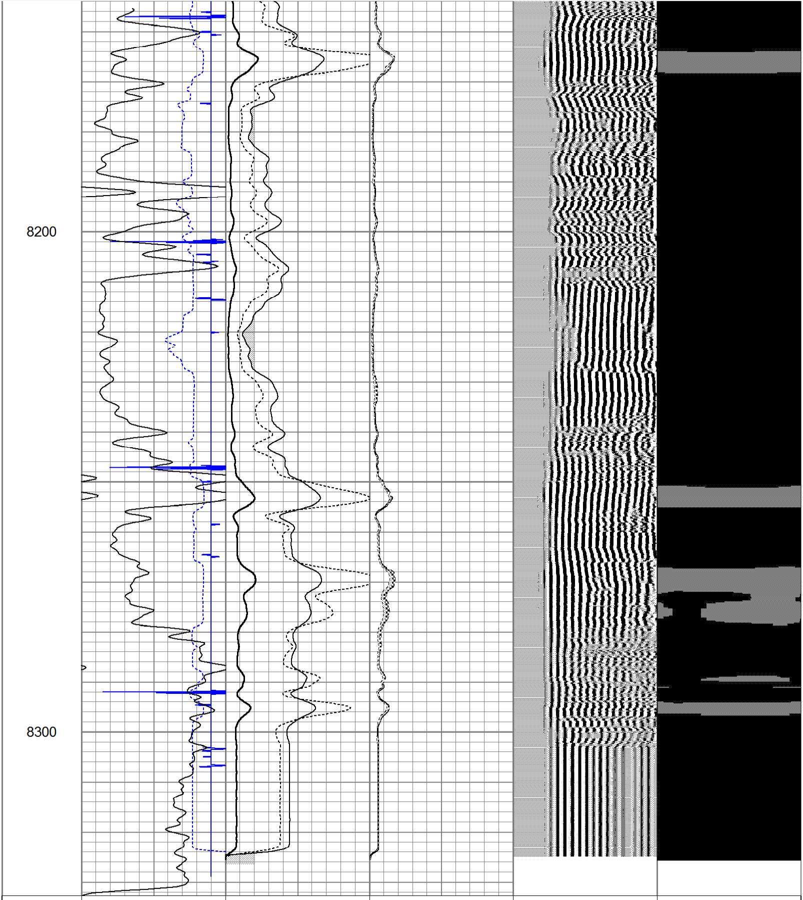




200 (null) (GAPI) 400

Database File: silverton.db
Dataset Pathname: 16-10/run1/pass1
Presentation Format: scbl02
Dataset Creation: Mon Jun 17 18:55:05 2013 by Log Std Casedhole 10071
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 AMPMAX 200		
0 GR (GAPI) 200	1 Bond Index 0	-2 AMPMIN 200		
200 GR (GAPI) 400				



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 AMPMAX 200		
0 GR (GAPI) 200	1 Bond Index 0	-2 AMPMIN 200		
200 GR (GAPI) 400				

Calibration Report

Database File: silverton.db
Dataset Pathname: 16-10/run1/pass2.1
Dataset Creation: Mon Jun 17 21:04:29 2013

Gamma Ray Calibration Report

Serial Number:	061120GR	
Tool Model:	PROBE	
Performed:	Tue Jun 11 07:13:44 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	85.8	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	4.5040904	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	12.117	ft

Master Calibration, performed Mon Jun 17 18:36:06 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.014	1.514	0.250	71.921	47.811	-0.440
CAL	1.766	1.732				
5'	0.015	1.434	0.250	71.921	50.515	-0.499
SUM						
S1	0.012	1.504	0.250	100.000	66.880	-0.574
S2	0.014	1.472	0.250	100.000	68.426	-0.717
S3	0.014	1.486	0.250	100.000	67.763	-0.727
S4	0.015	1.508	0.250	100.000	66.789	-0.719
S5	0.014	1.513	0.250	100.000	66.565	-0.690
S6	0.014	1.513	0.250	100.000	66.525	-0.668
S7	0.014	1.529	0.250	100.000	65.831	-0.685
S8	0.015	1.523	0.250	100.000	66.145	-0.709

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	1.766	1.732	1.000	0.000

Air Zero Calibration, performed Mon Jun 17 18:35:27 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