PEAK WIRELINE SERVICES, INC.

Cement Bond Log

Company	Pronghorn Operating
Well	Harley #4
Field	Cheyenne wells
County	cheyenne
State	colorado

Country Cheyenne

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Location: API # : 05-017-07746

620' FSL & 1943' FWL

SEC 5 TWP 14s RGE 44w

Other Services

Permanent Datum GL Elevation 4293

Log Measured From KB 17 Ft

Drilling Measured From KB

Elevation

K.B. 4310

D.F. 4309

G.L. 4293

Date	6/11/13		
Run Number	One		
Depth Driller	5570'		
Depth Logger	5560		
Bottom Logged Interval	5558		
Top Log Interval	1345		
Open Hole Size	7.875		
Type Fluid	water		
Density / Viscosity	8.8/48		
Max. Recorded Temp.	///		
Estimated Cement Top	1495		
Time Well Ready	R.O.A		
Time Logger on Bottom	0900		
Equipment Number	278		
Location	Cheyenne wells		
Recorded By	Tyler Patterson		
Witnessed By	jake		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	5 1/2			
Liner				

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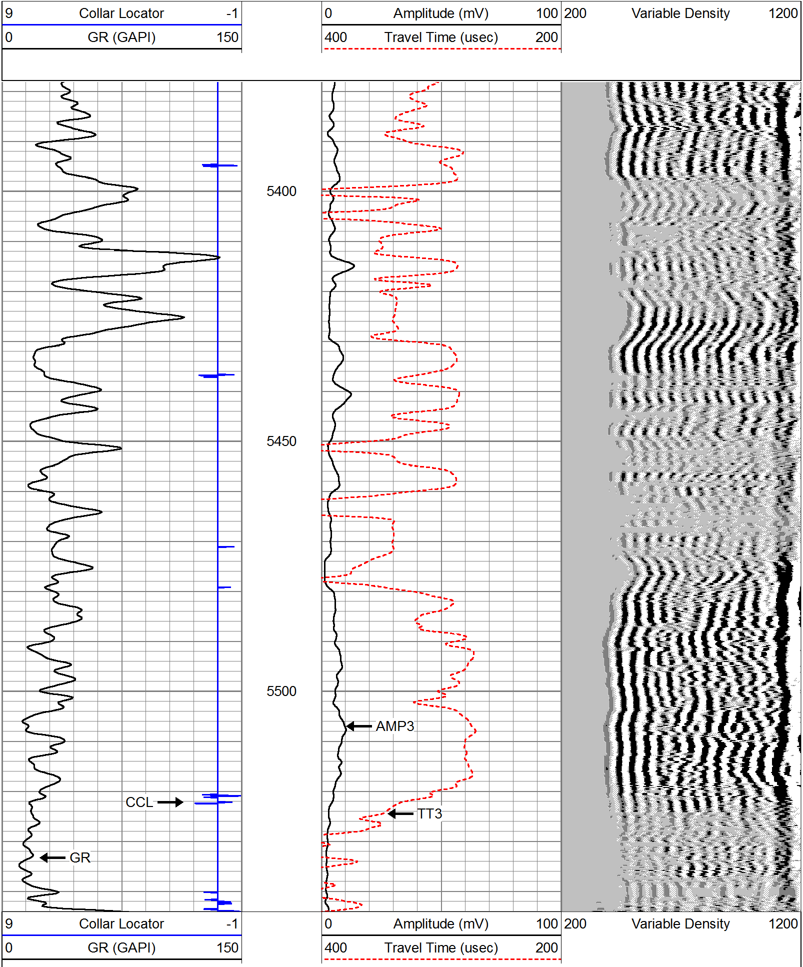
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

Repeat Pass

Database File:	harley#4.db
Dataset Pathname:	pass1
Presentation Format:	cbldig
Dataset Creation:	Thu Jul 11 09:18:52 2013 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240



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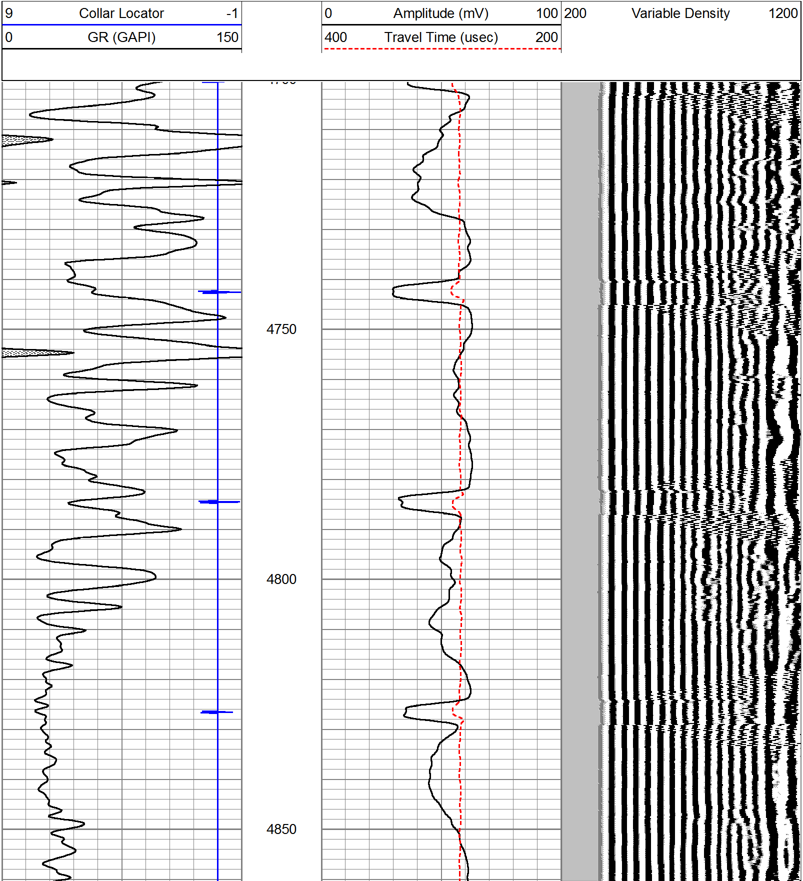
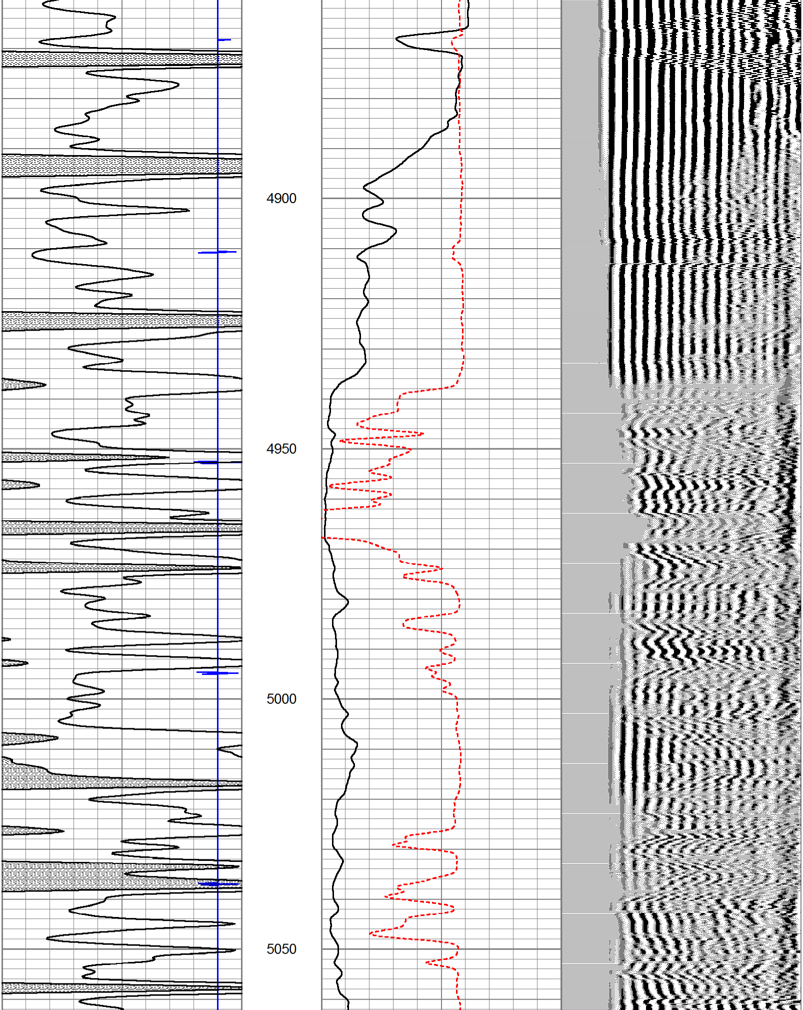
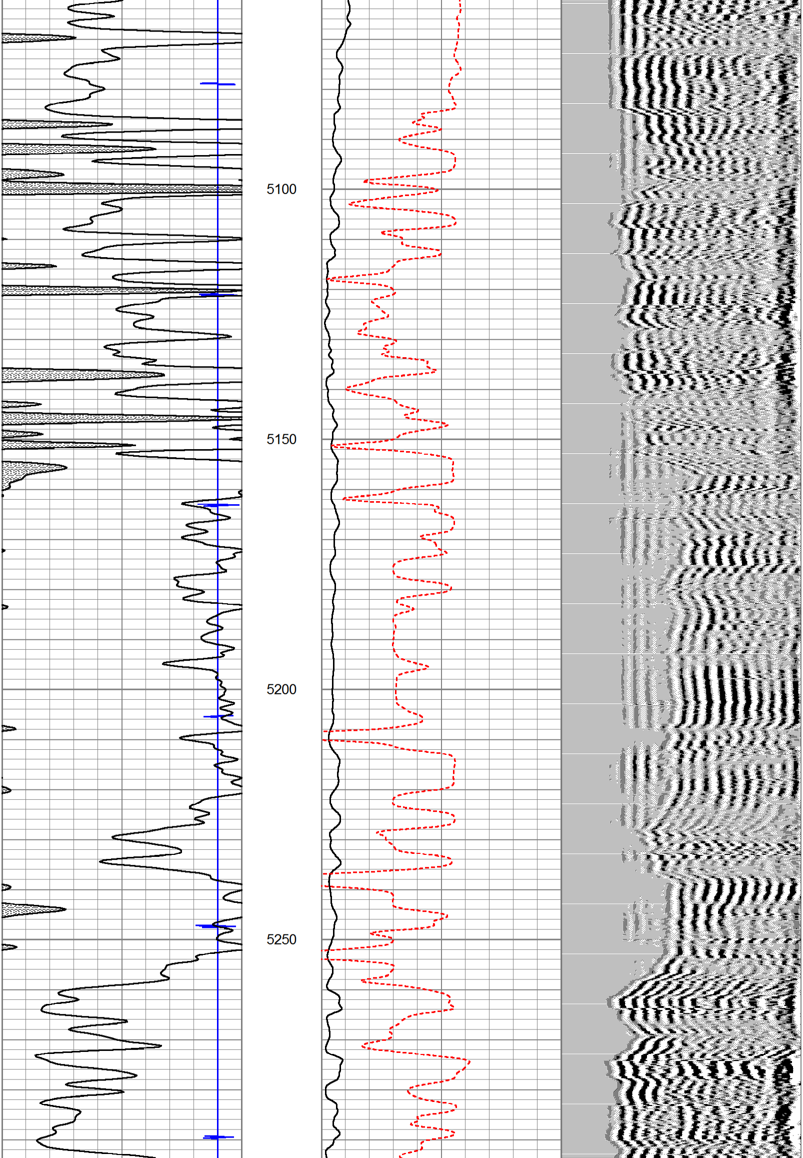
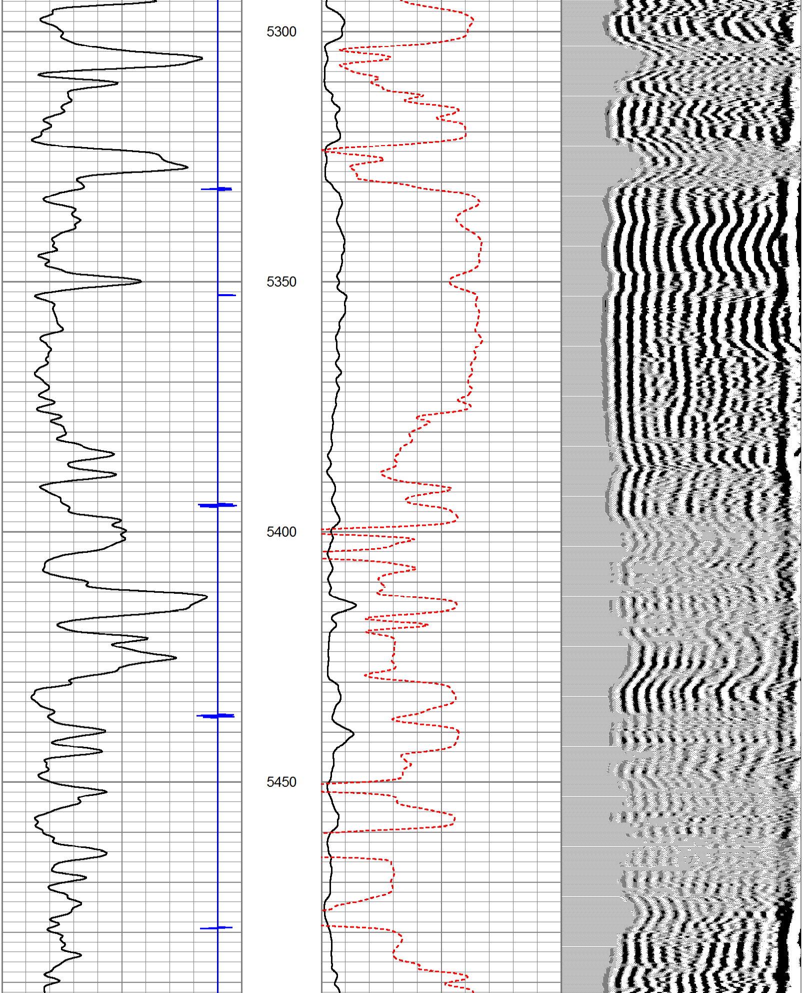
Main Pass

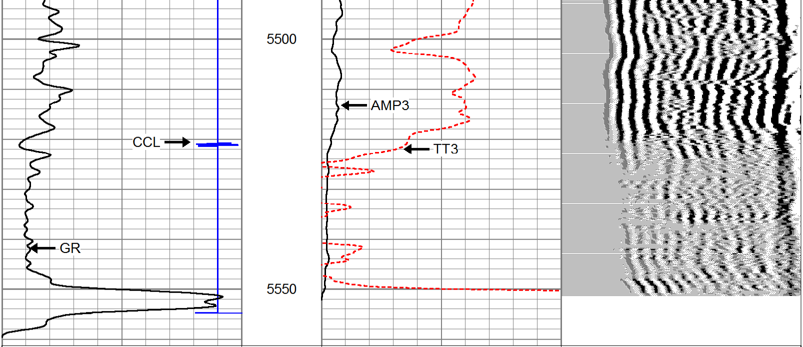
Database File:	harley#4.db
Dataset Pathname:	pass2
Presentation Format:	cbldig
Dataset Creation:	Thu Jul 11 09:33:17 2013 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240











9	Collar Locator	-1	0	Amplitude (mV)	100	200	Variable Density	1200
0	GR (GAPI)	150	400	Travel Time (usec)	200			

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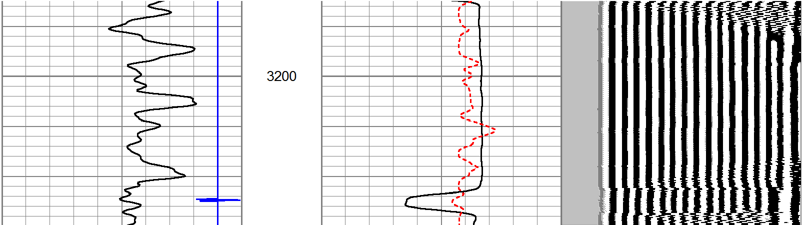
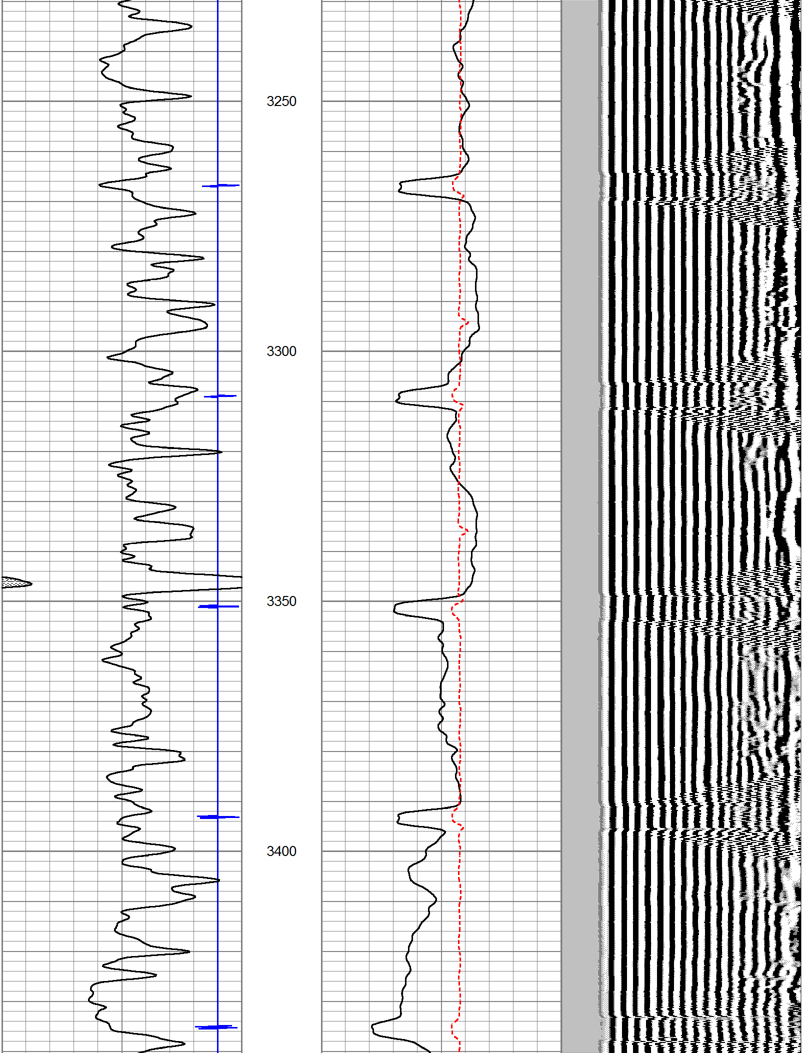
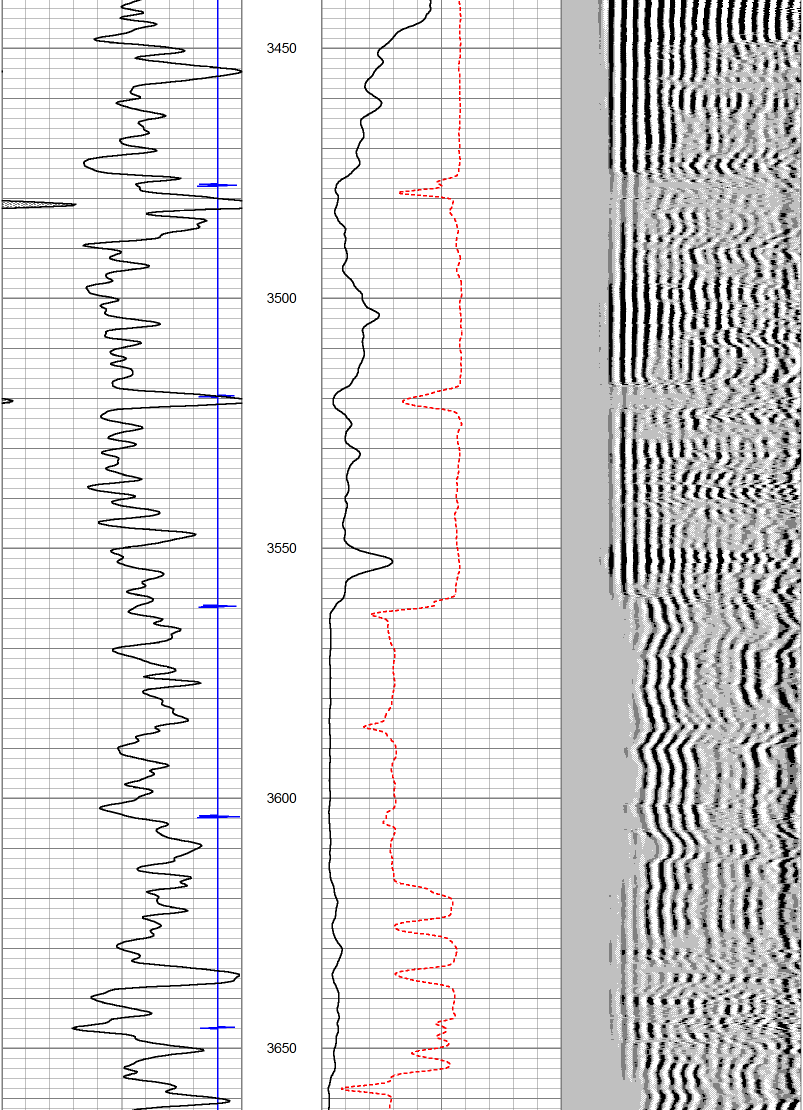
Port Collar Pass

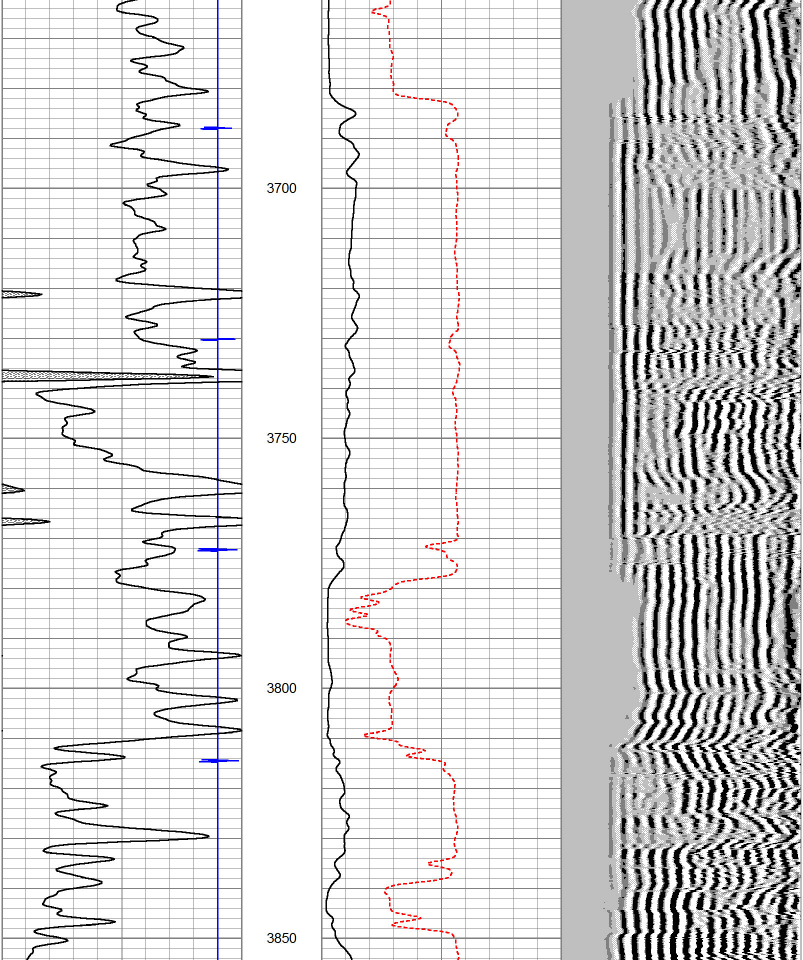
Database File:	harley#4.db
Dataset Pathname:	pass3
Presentation Format:	cbldig
Dataset Creation:	Thu Jul 11 09:54:29 2013 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

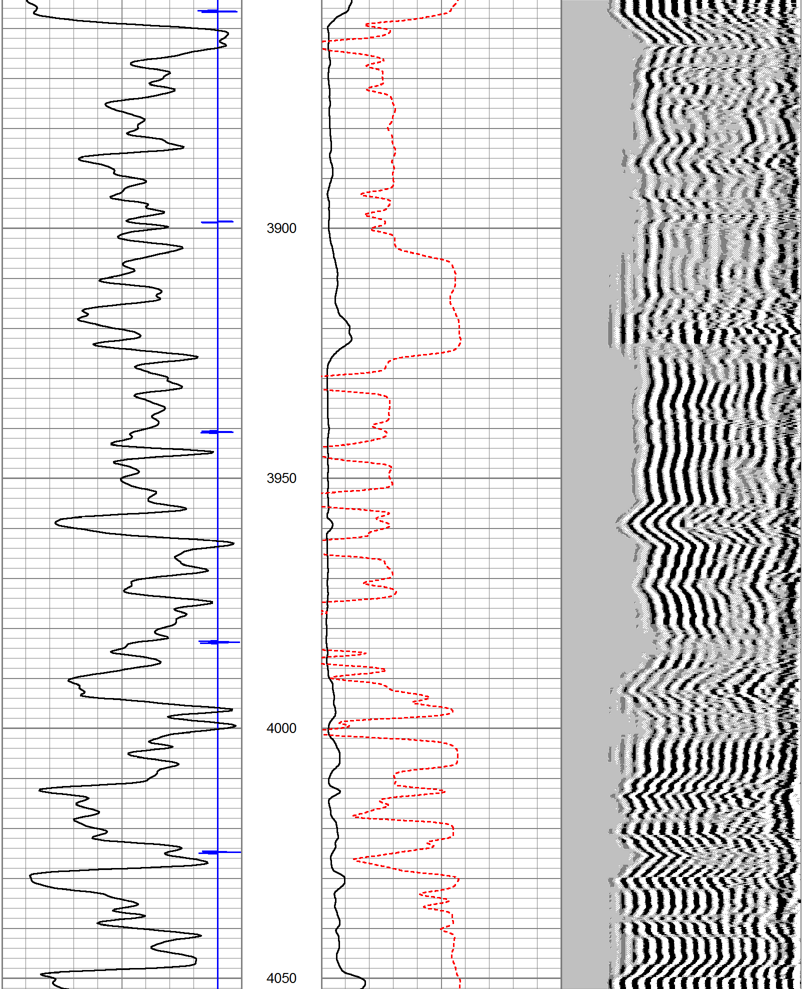
9	Collar Locator	-1	0	Amplitude (mV)	100	200	Variable Density	1200
0	GR (GAPI)	150	400	Travel Time (usec)	200			

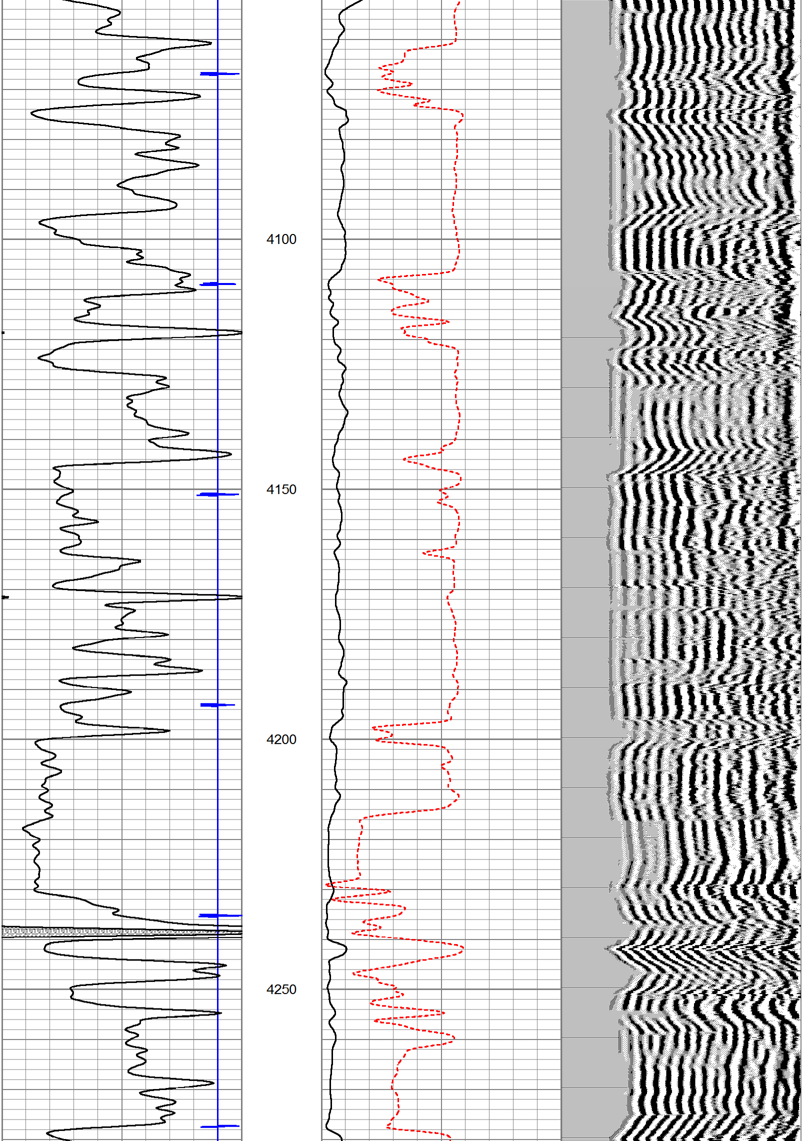


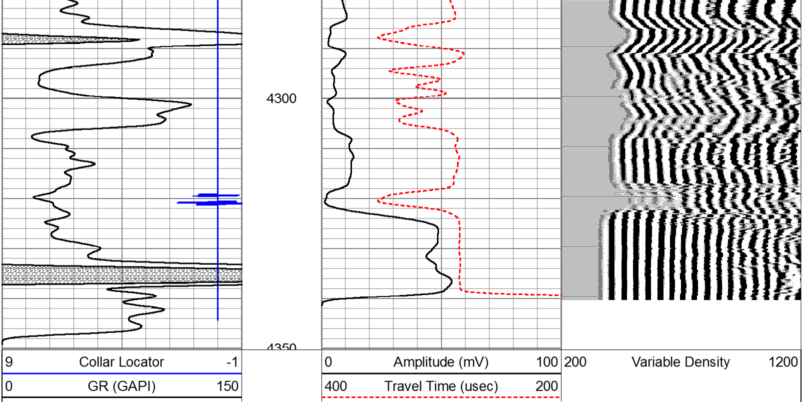












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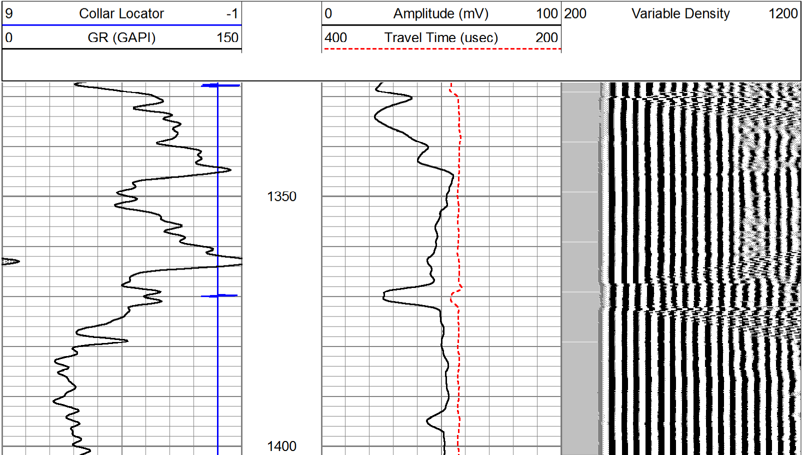
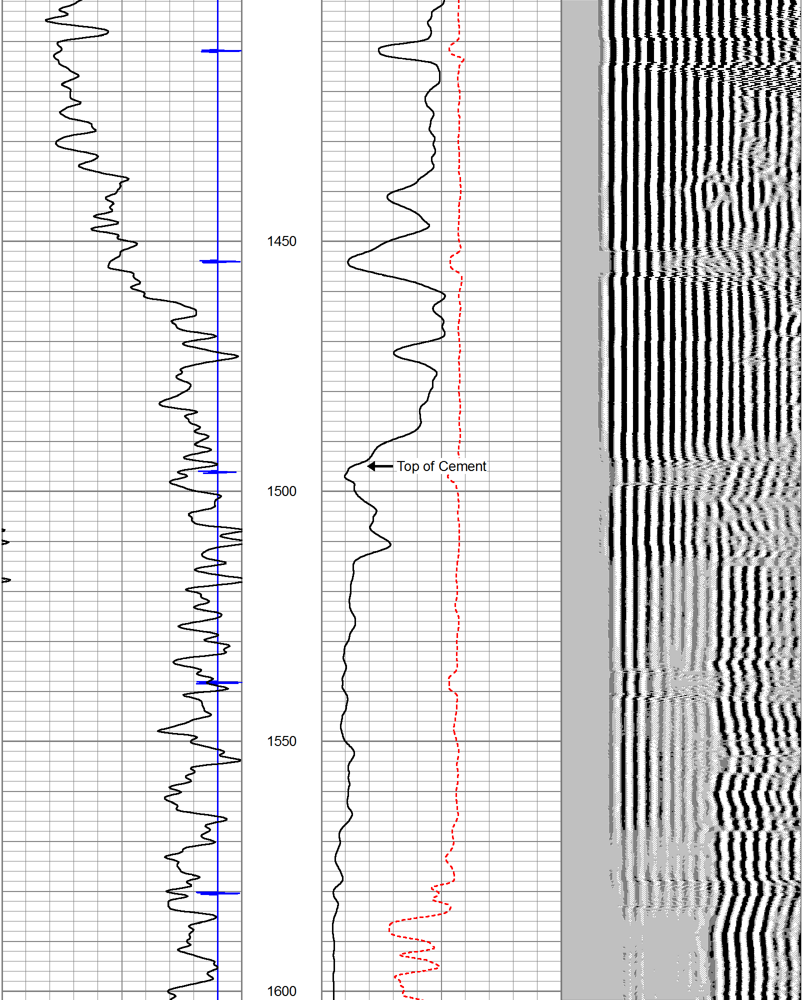
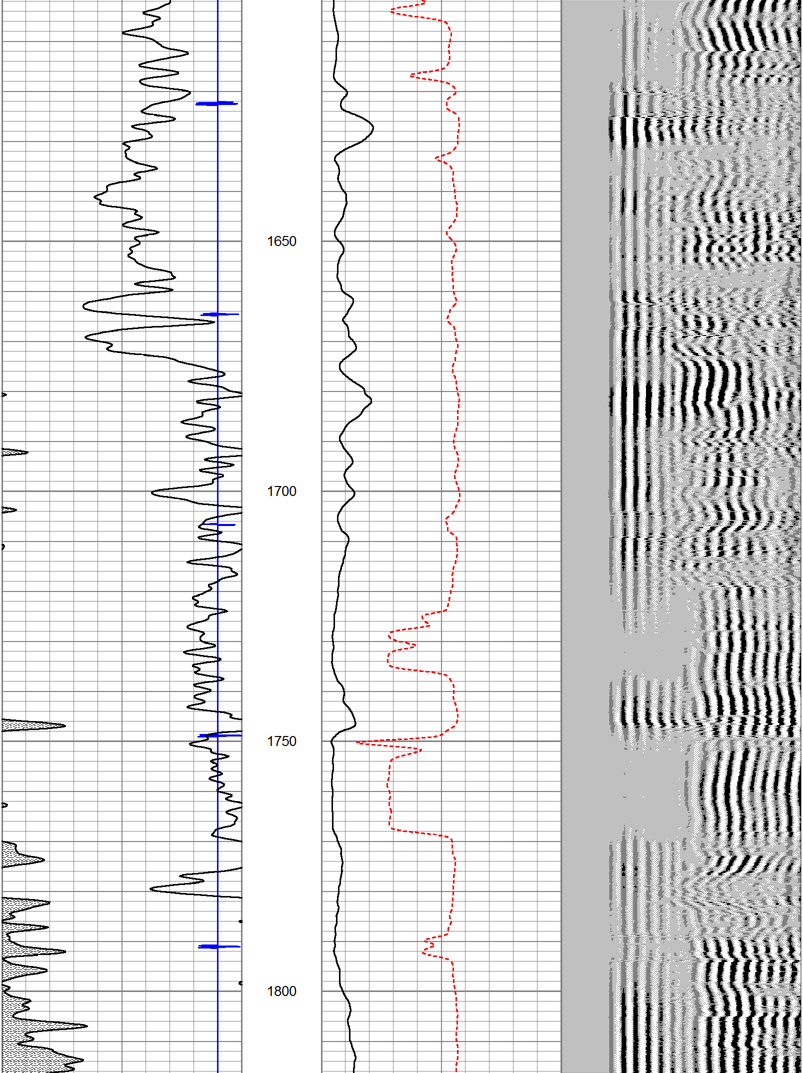
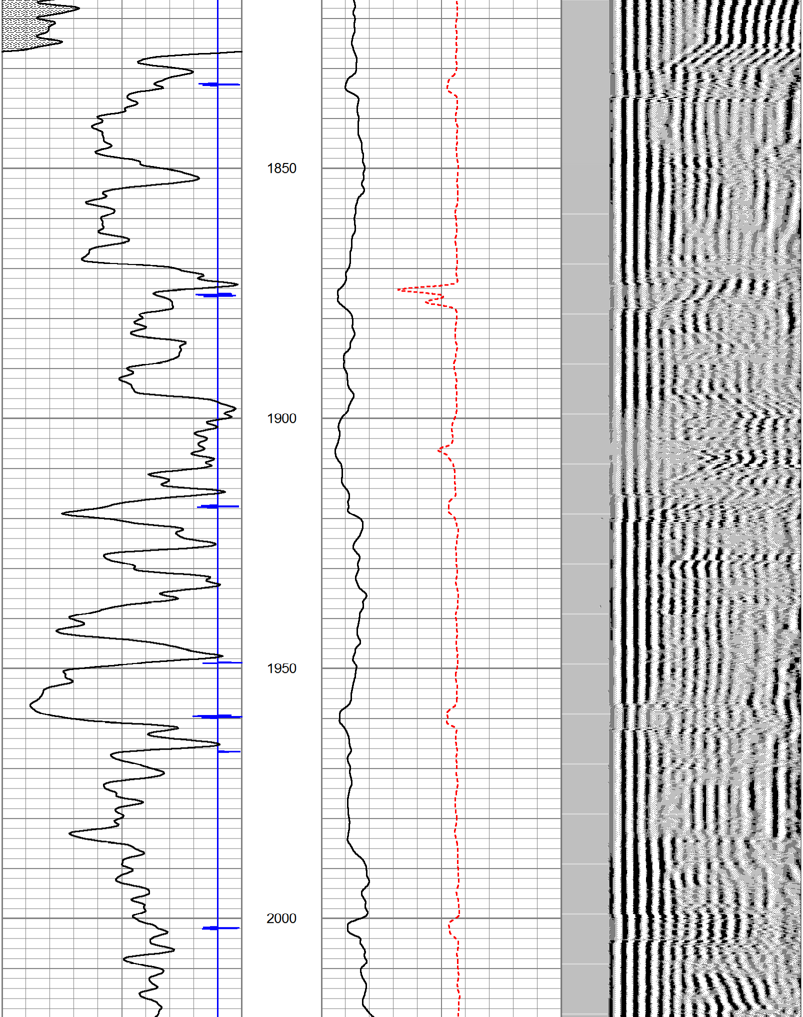
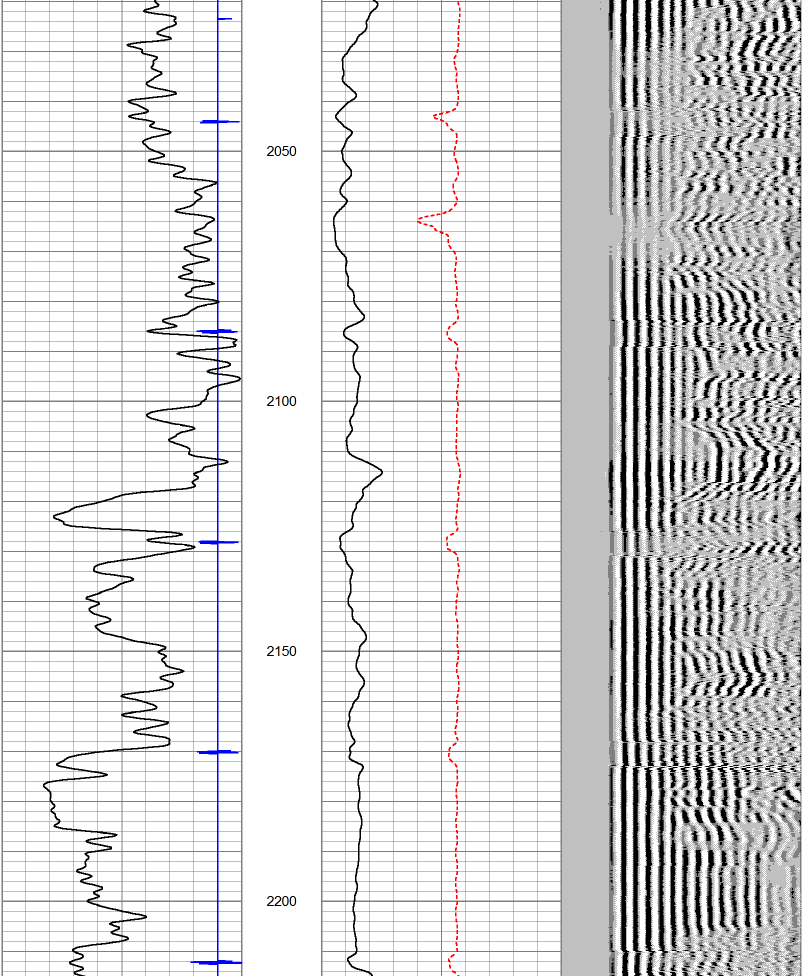
Dataset Pathname: pass4
Presentation Format: cbldig
Dataset Creation: Thu Jul 11 10:17:55 2013 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

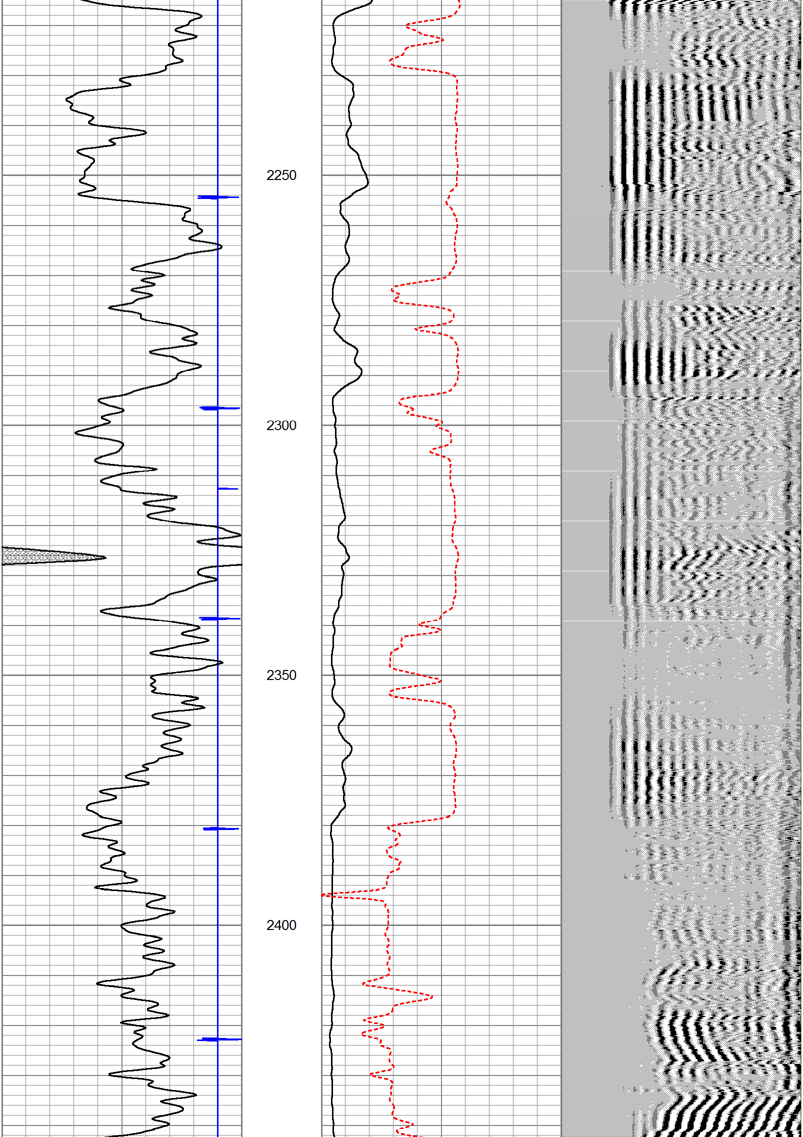


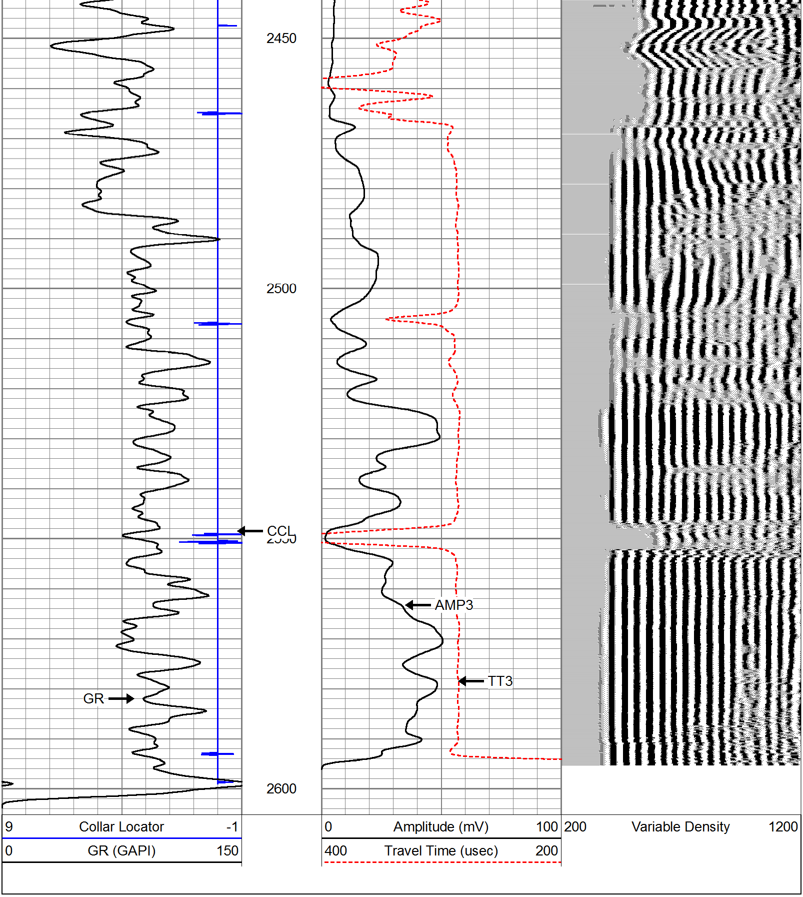












Calibration Report

Database File: harley#4.db
Dataset Pathname: pass1
Dataset Creation: Thu Jul 11 09:18:52 2013 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 061120GR
Tool Model: PROBE
Performed: Tue Jul 09 12:56:40 2013

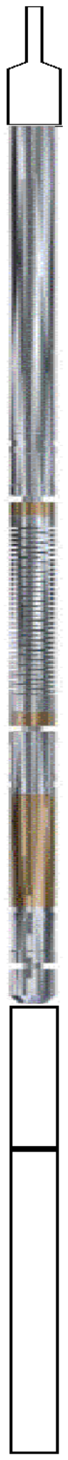
Calibrator Value: 1.0 GAPI

Background Reading:	0.0	cps
Calibrator Reading:	85.8	cps
Sensitivity:	1.0000	GAPI/cps

Cement Bond Log Calibration Report

Serial Number:	5.5dig040201	
Tool Model:	Probe275Digital	
Performed:	Mon Jul 08 13:59:53 2013	
Depth:	2762.31	ft
Casing Diameter:	5.5	in

	3' Spacing	5' Spacing	
Signal Zero:	0.25	0	mV
Calibrated Amplitude:	71.921	71.921	mV
Reading at Signal Zero:	0.00175781	0.00598145	V
Reading in Free Pipe:	2.26162	2.15364	V
Gain:	31.7148	33.4881	
Offset:	0.194251	-0.200307	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CENT-TITAN (1) SHORT CENTRALIZER	2.17	1.88	0.50
			CHD-None (1)	1.20	1.38	5.00
WVF3 WVF5	10.88 9.88		CBL-Probe275Digital (5.5dig040201) Digital 3' 5' CBL Move voltage to +/- 150 for cal mode	8.75	2.75	92.00
CCL	5.79		CCL-PROBE (CCL061120) PROBECCL	1.42	2.75	5.00
GR	3.06		GR-PROBE (061120GR) 2 3/4"gamma ray probe	3.04	2.75	10.00
			CENT-TITAN (SHORT) SHORT CENTRALIZER	2.17	1.88	0.50

Dataset:	harley#4.db: field/well/run1/pass1
Total Length:	18.74 ft
Total Weight:	113.00 lb
O.D.	2.75 in