SUPERIOR WELL SERVICES

CEMENT BOND LOG
GAMMA RAY C C L
V D L

Company	Noble Energy INC.
Well	STROHAUER F 32-22D
Field	Wattenberg
County	Weld
State	Colorado

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Field	Wattenberg		
County	Weld	State	Colorado

Location: API # : 051233138100

SHL: 1294 ' FSL & 1392' FEL SW SE
BHL: 2548' FNL & 1332' FEL SW NE

SEC 32 TWP 5N RGE 65W

Other Services

Permanent Datum	GL	Elevation	4668
Log Measured From	KB 15'		
Drilling Measured From	KB		

Elevation
K.B. 4683
D.F. 4683
G.L. 4668

Date	December 5, 2010		
Run Number	One		
Depth Driller	7465		
Depth Logger	7394		
Bottom Logged Interval	7393		
Top Log Interval	1480		
Casing Size	4 1/2"		
Type Fluid	Water		
Max. Recorded Temp.	253 deg F		
Estimated Cement Top	2250		
Time Well Ready	Mast Truck		
Time Logger On Bottom	AM		
Unit Number	3344		
Tool Size / ID Number	2.75 SCBL 101020		
Location	Platteville, CO		
Recorded By	K. Monaghan		
Witnessed By	M. Trimble		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8"	24 lb/ft J-55	Surface	575.1
Prot. String				
Production String	4 1/2"	11.6 lb/ft M-80	Surface	7450
Liner				

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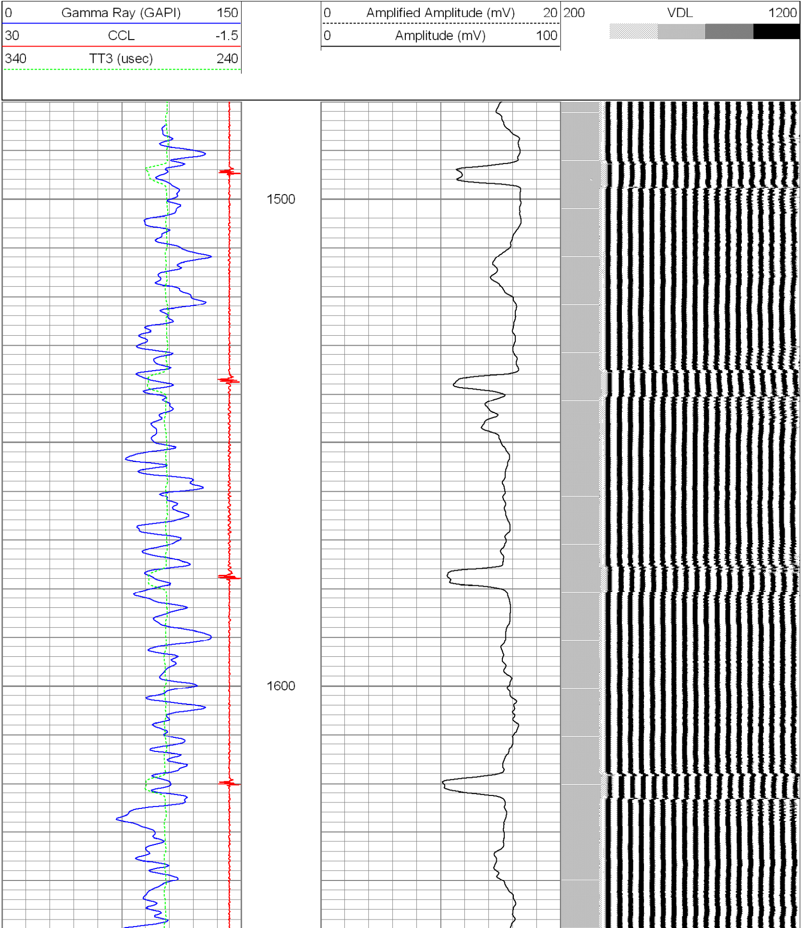
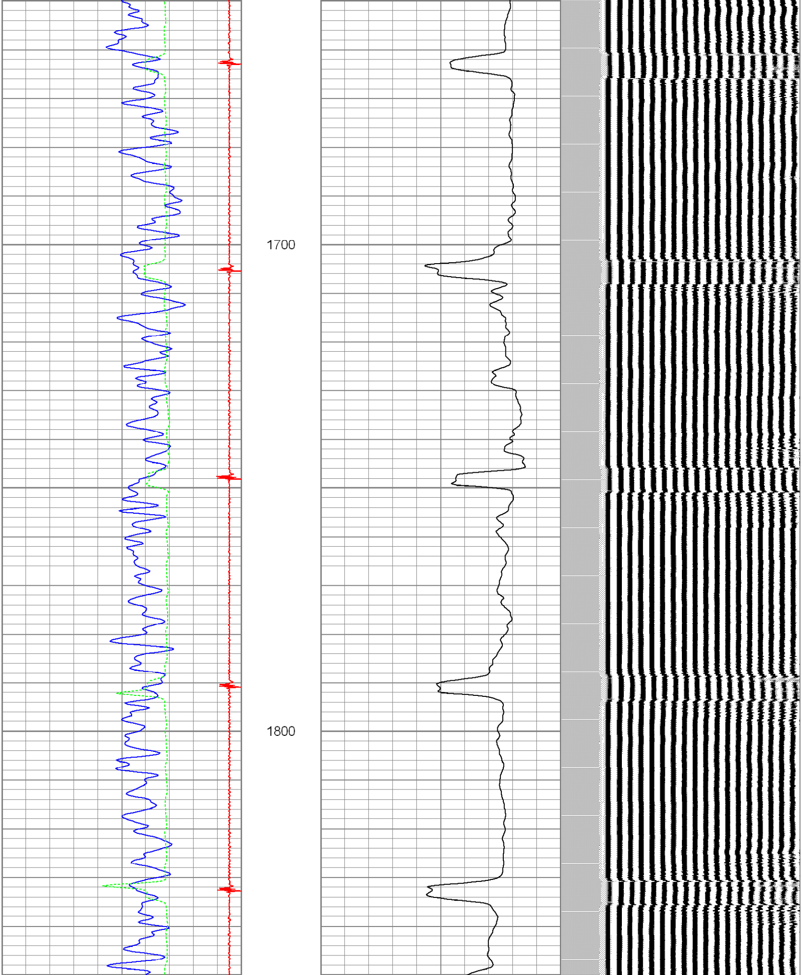
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

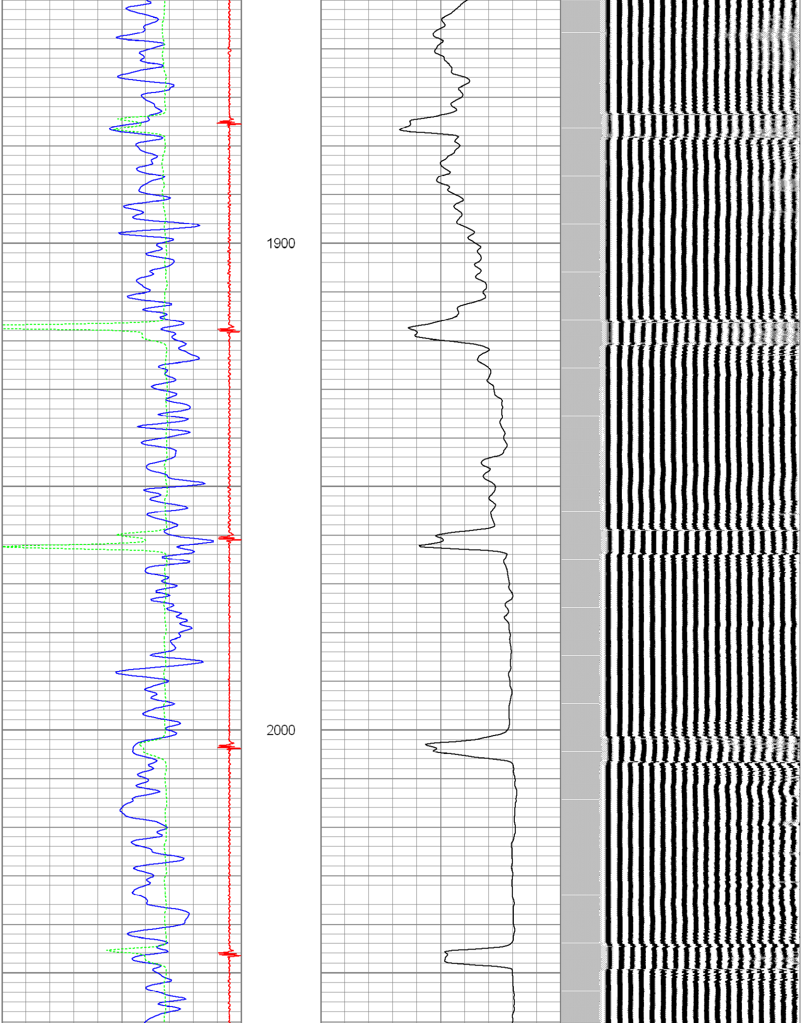
Comments

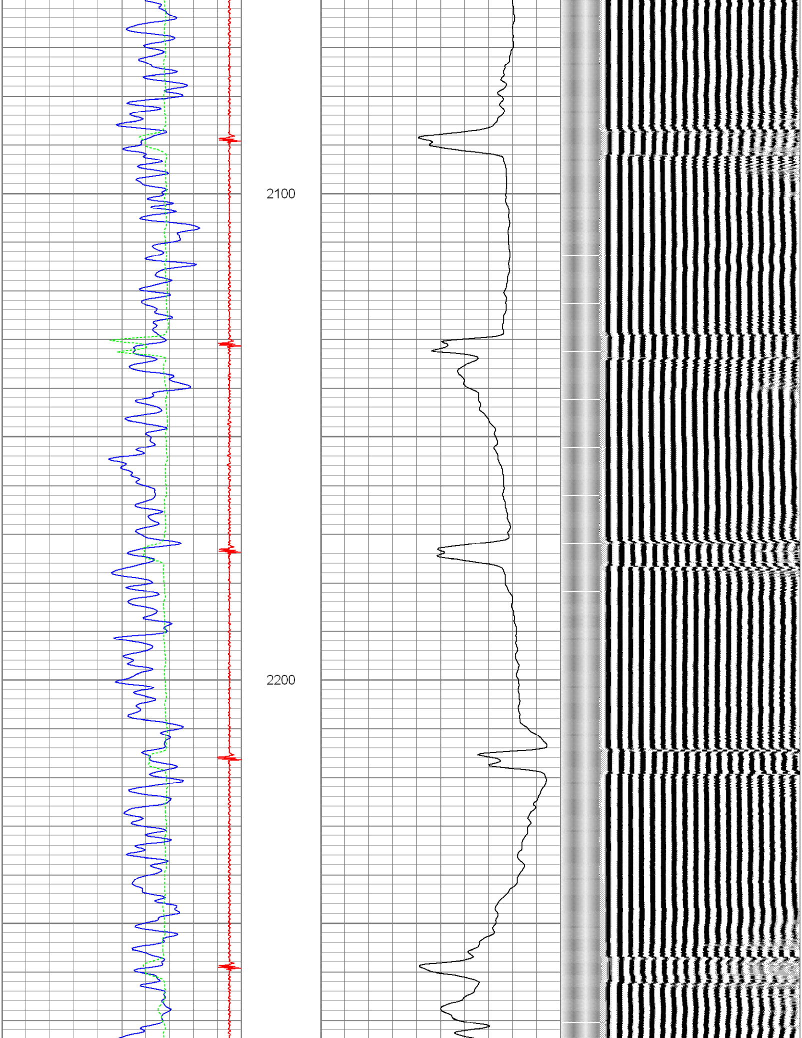
Thanks You For Choosing Superior Well Services!!!
API# 05-123-31381-00
Correlated to P.S.I's
Compensated Density / Compensated Neutron / Gamma Ray Microlog
Dated: December 5, 2010
Directions: 41 & 50, N 2/10, W 100', N 1/10, NW 2/10, S 200' INTO
(Northern most well of 2 well pad)

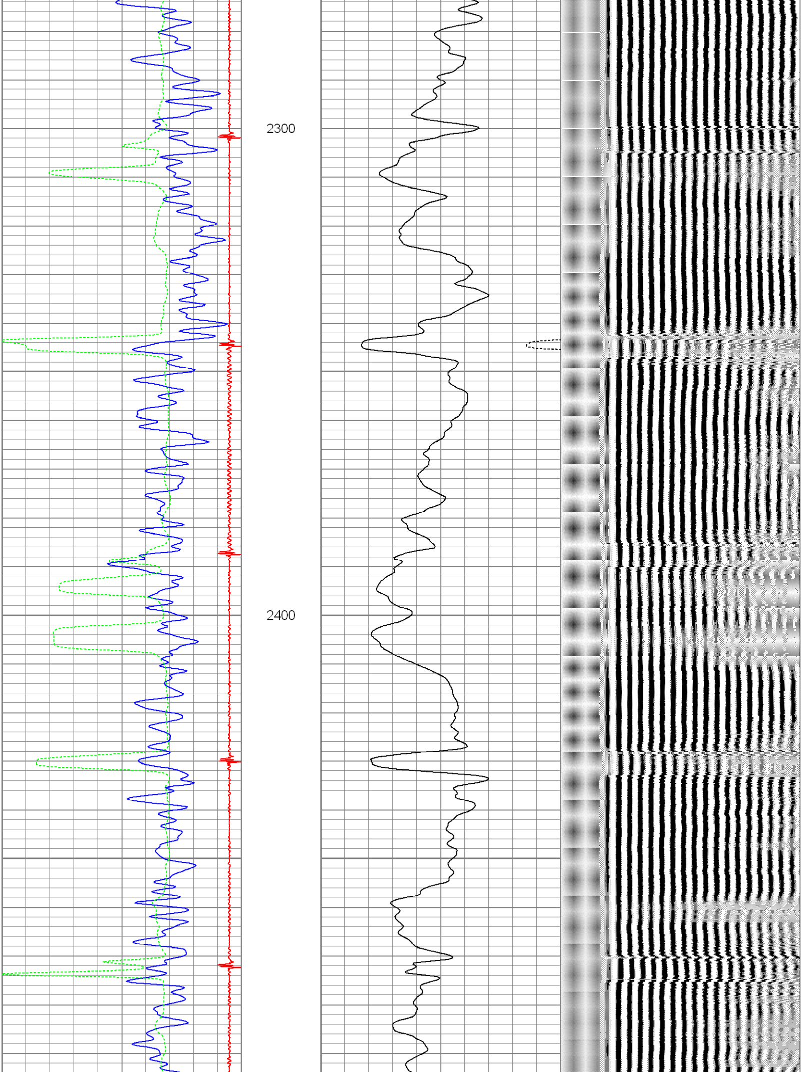
Database File:	scblstrohauer f32-22d.db
Dataset Pathname:	pass3
Presentation Format:	nuexbond
Dataset Creation:	Fri Dec 17 09:04:00 2010 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240

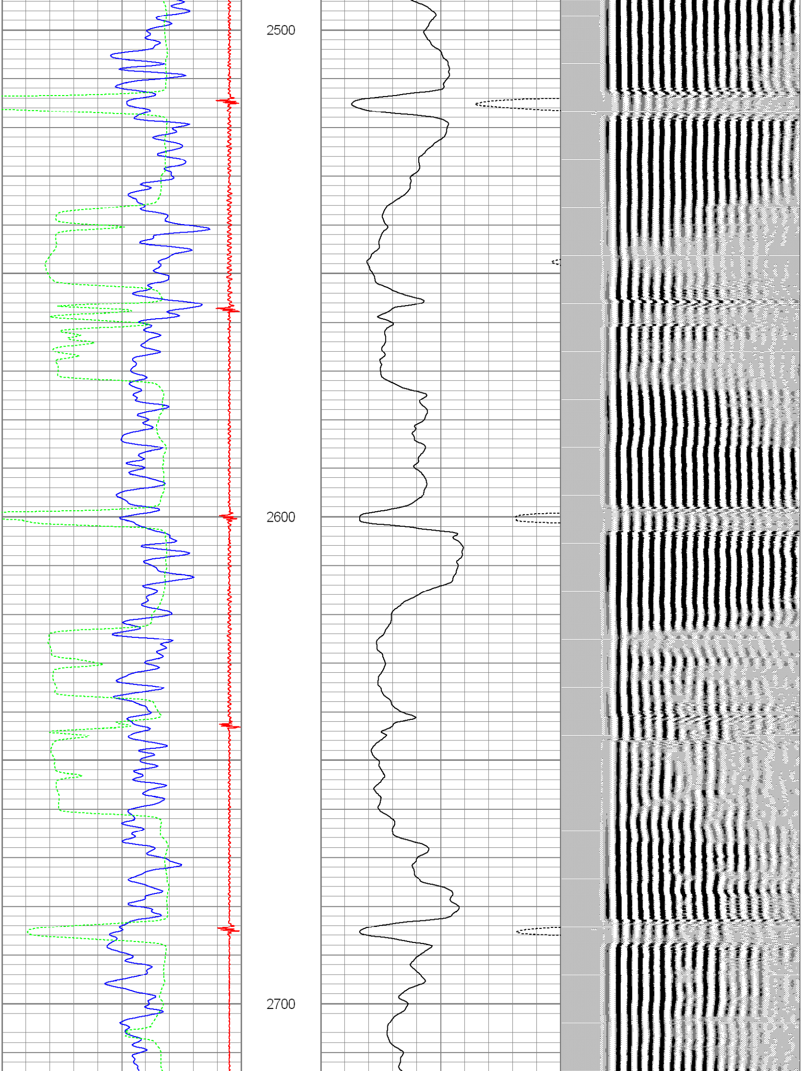


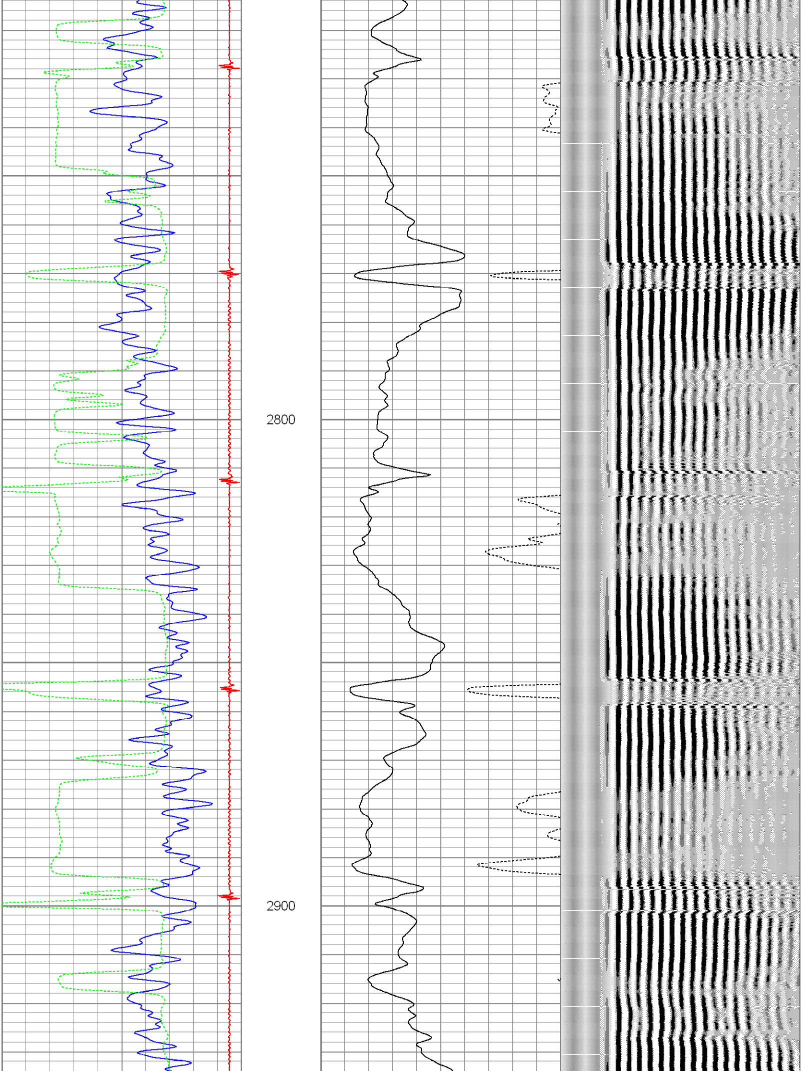


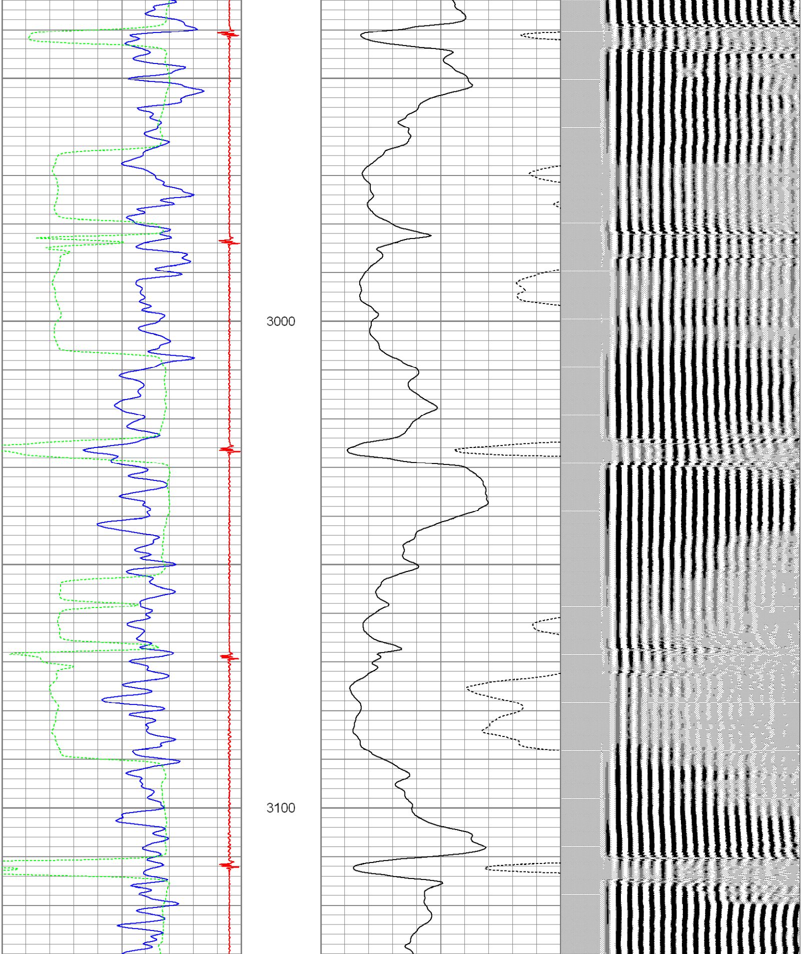


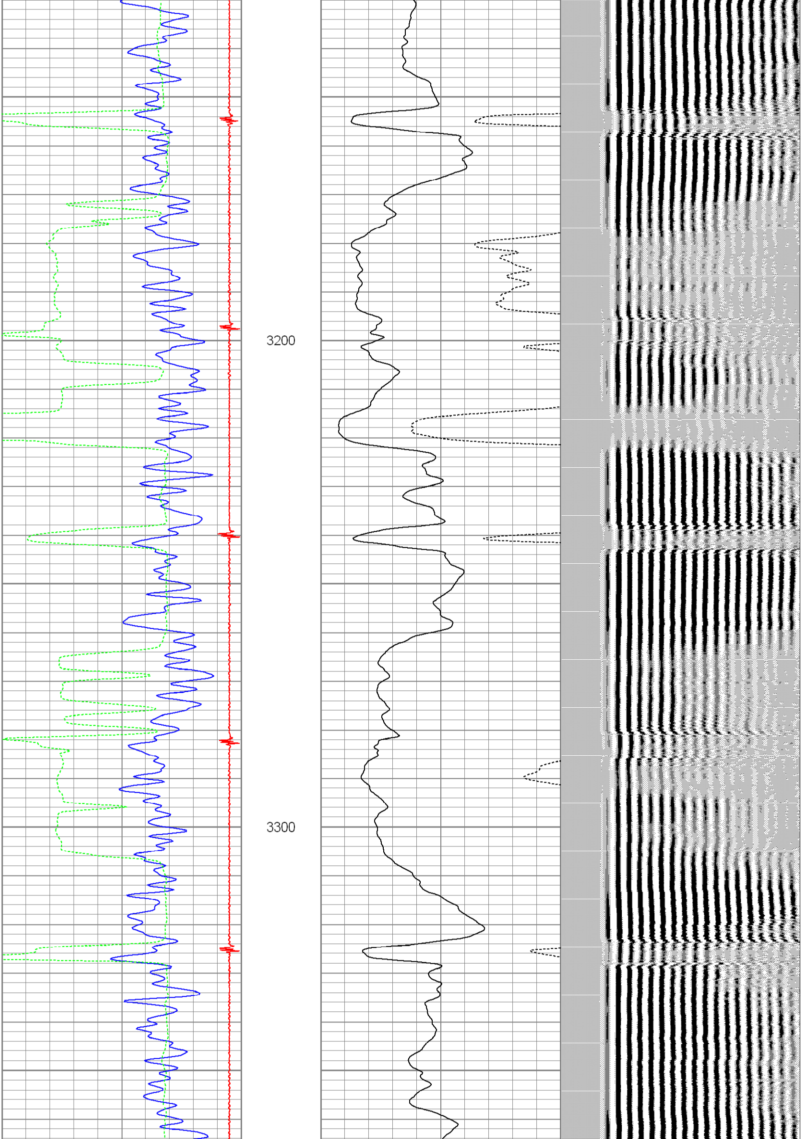


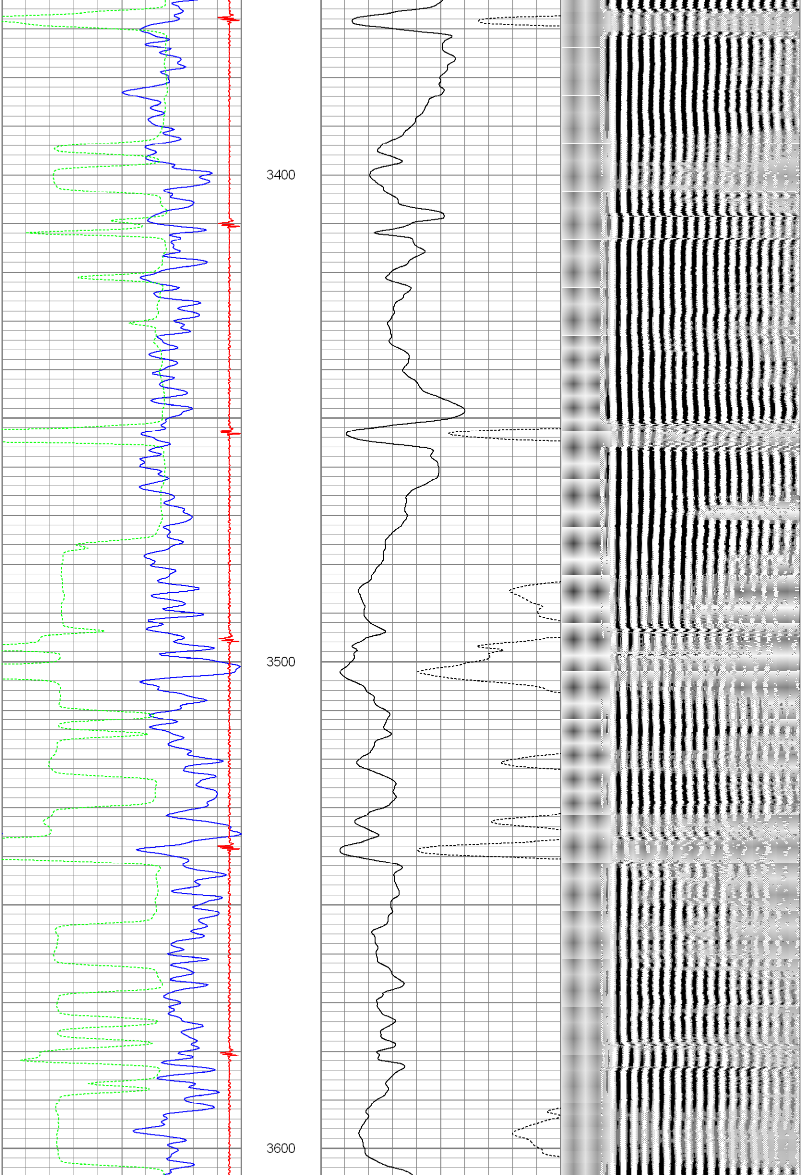


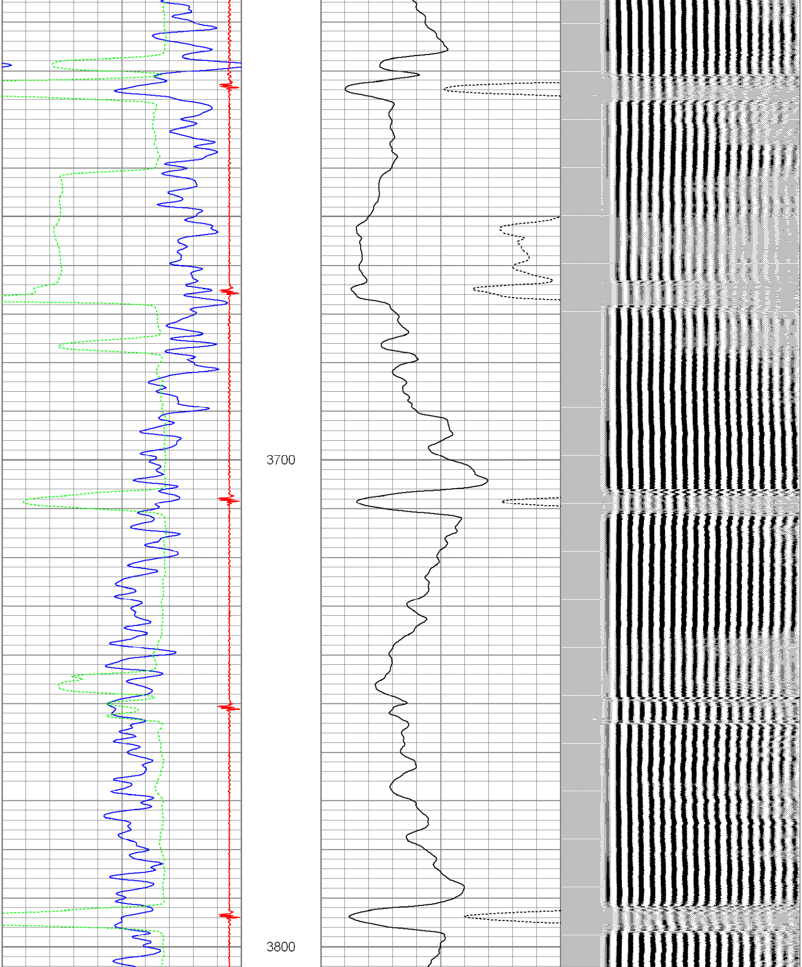


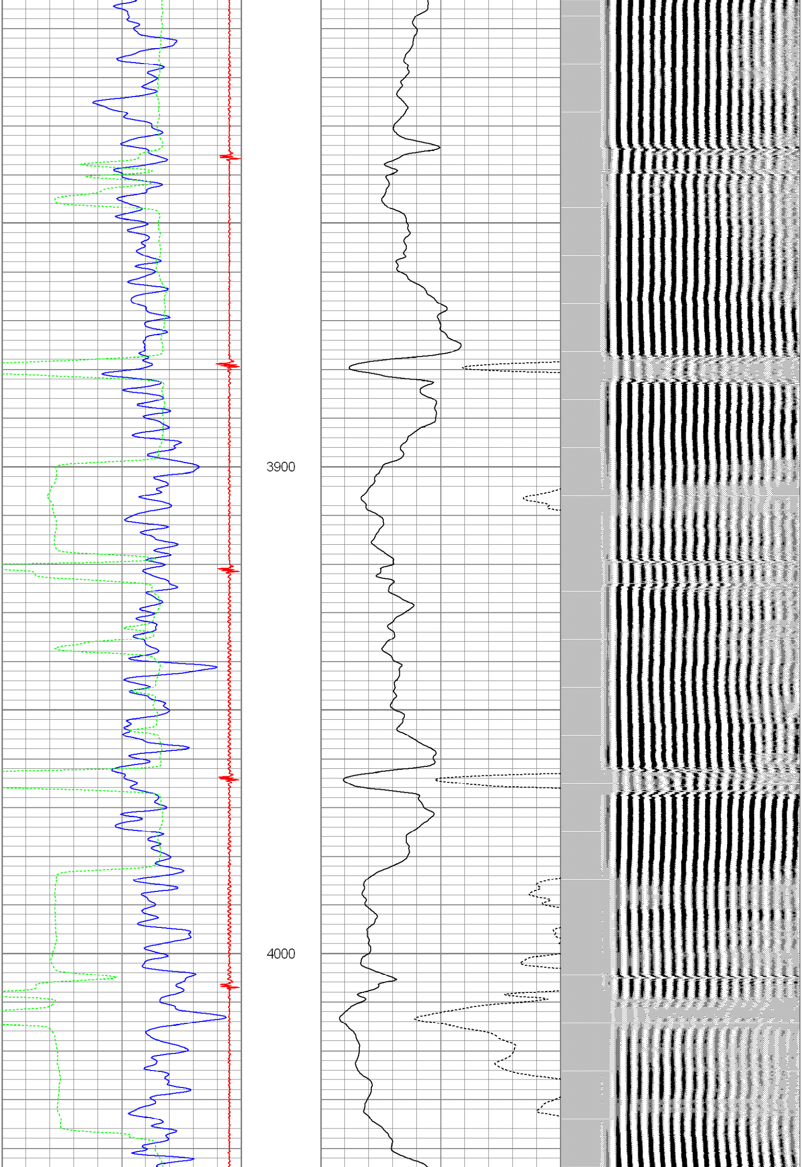


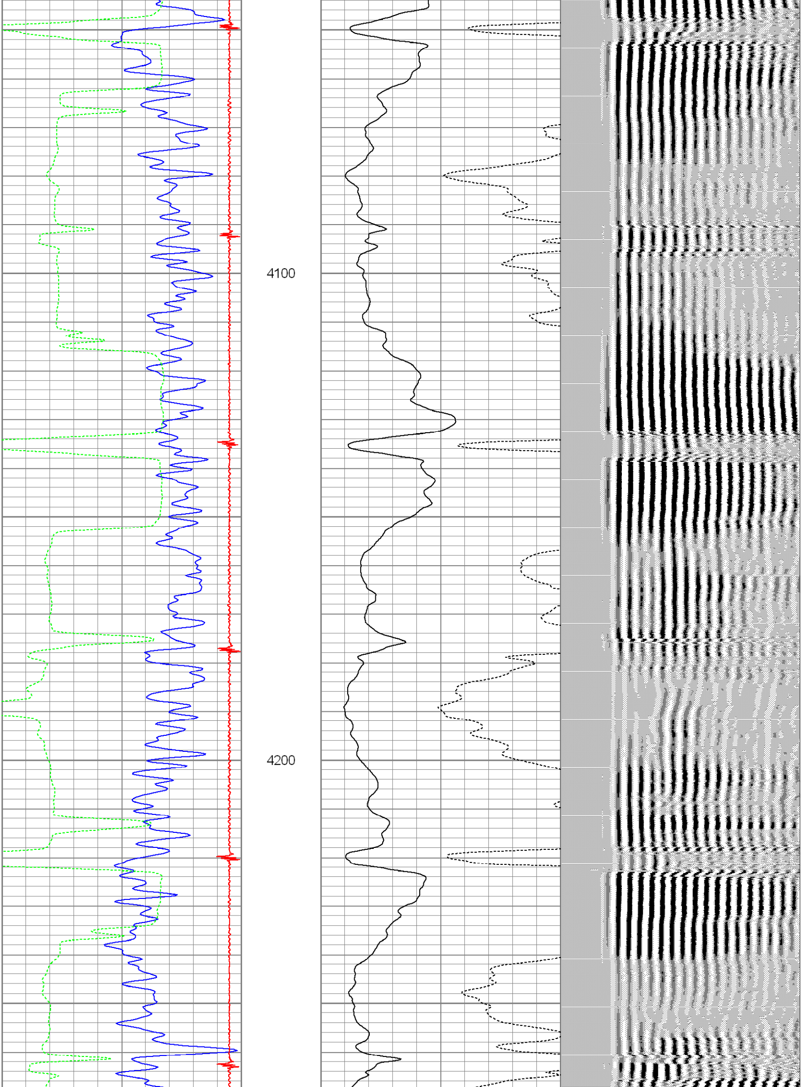


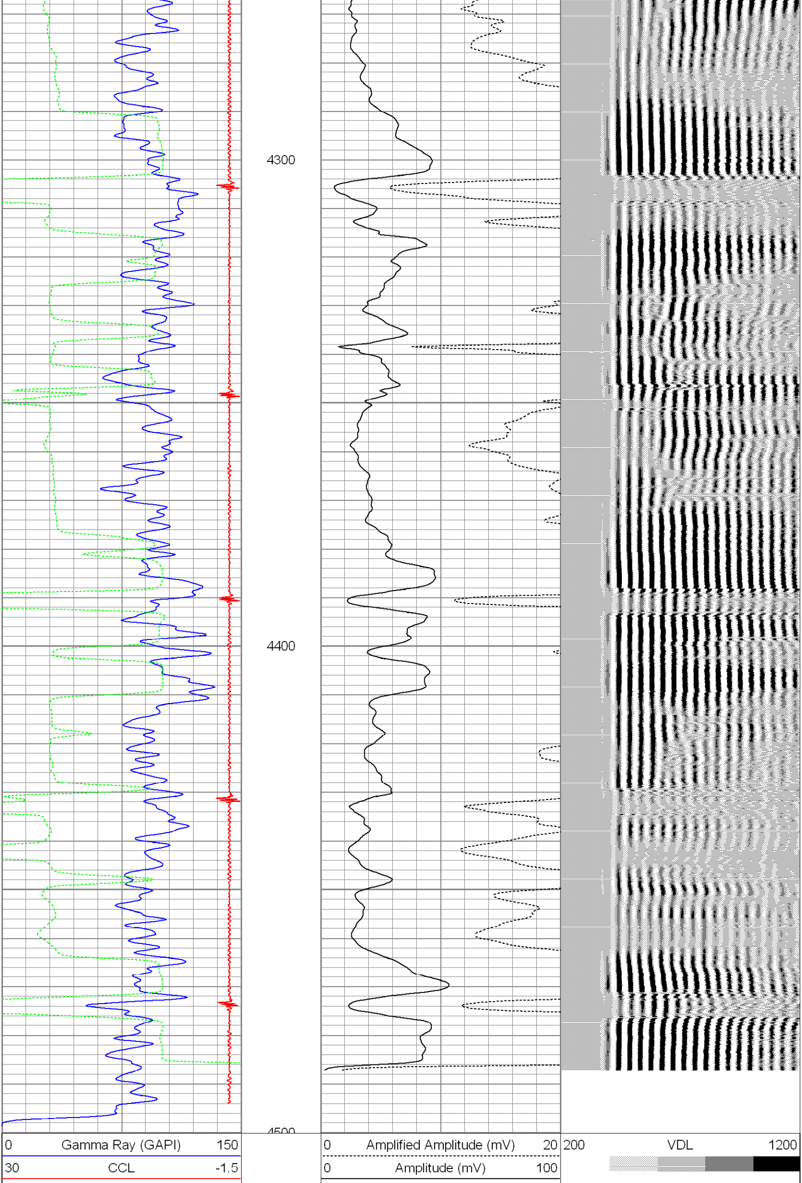












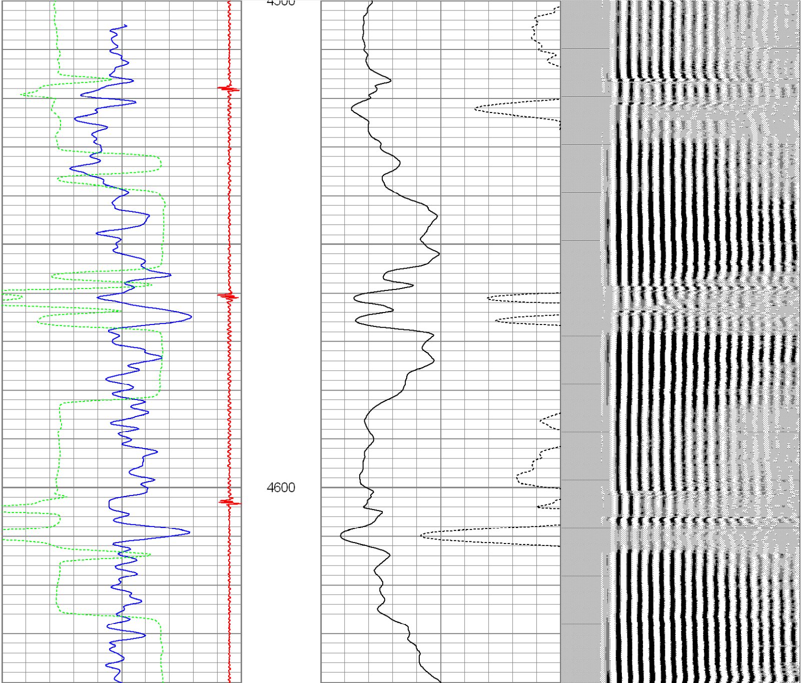
340 TT3 (usec) 240

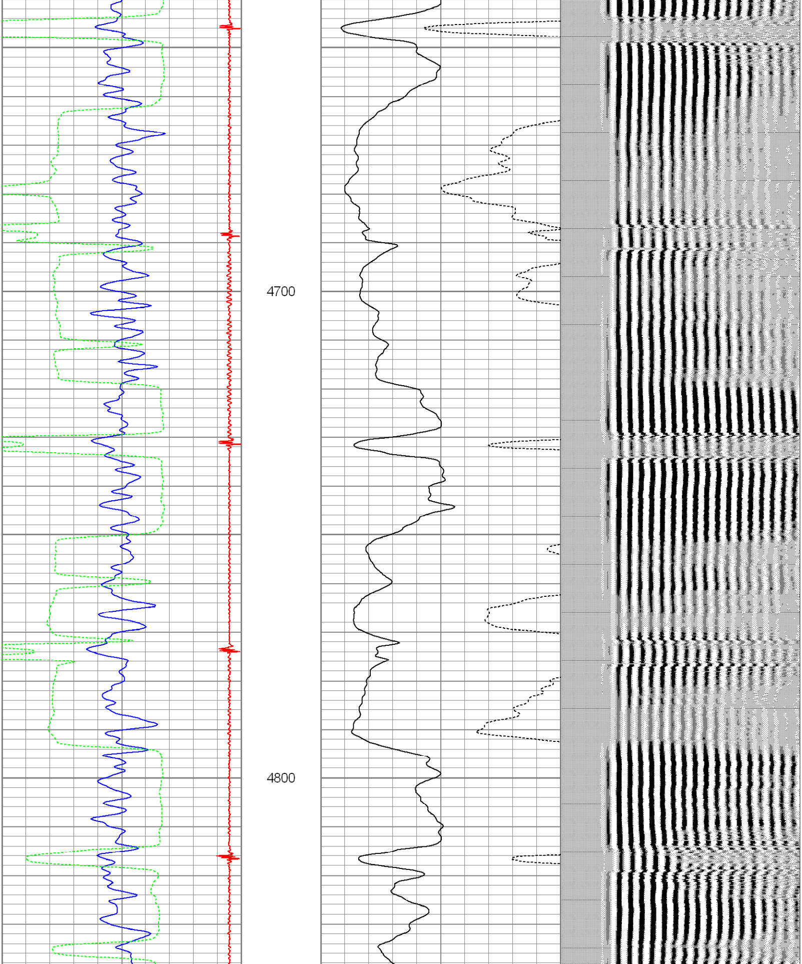
Database File: scblstrohauer f32-22d.db
Dataset Pathname: pass2
Presentation Format: nuexbond
Dataset Creation: Fri Dec 17 08:36:41 2010 by Log Std Casedhole 10081
Charted by: Depth in Feet scaled 1:240

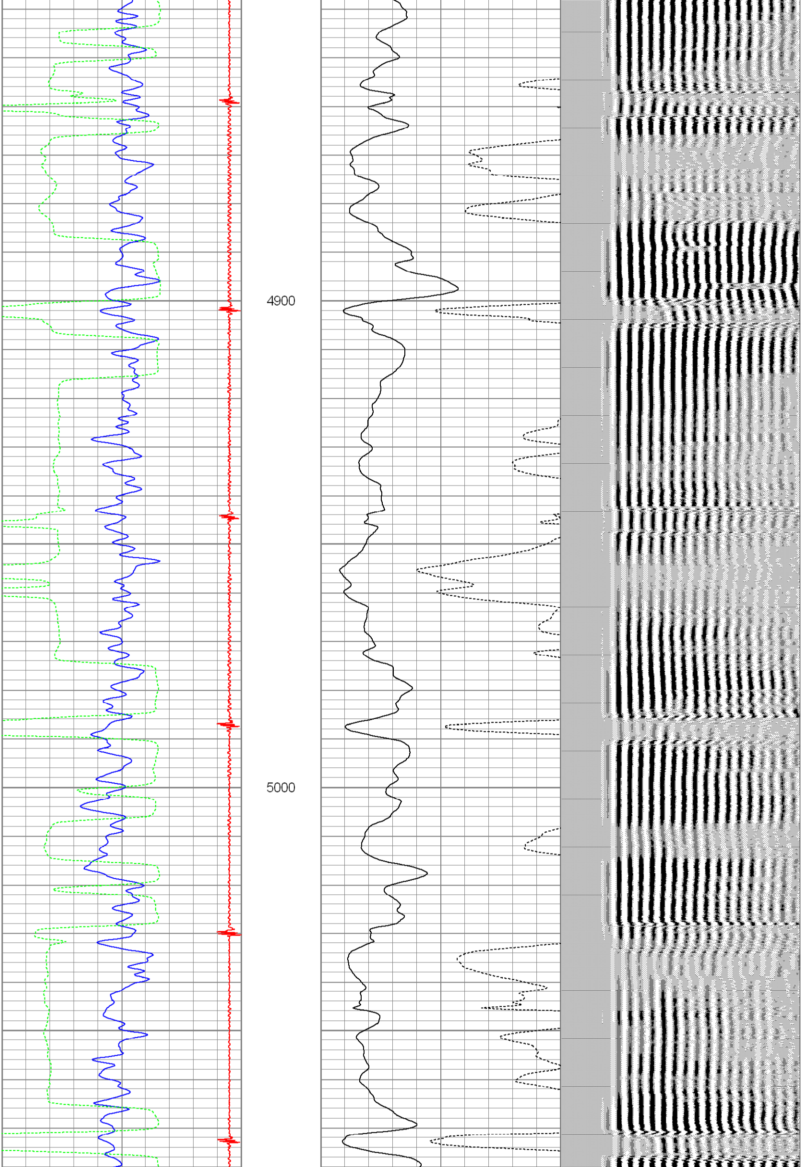
0 Gamma Ray (GAPI) 200
30 CCL -1.5
340 TT3 (usec) 240

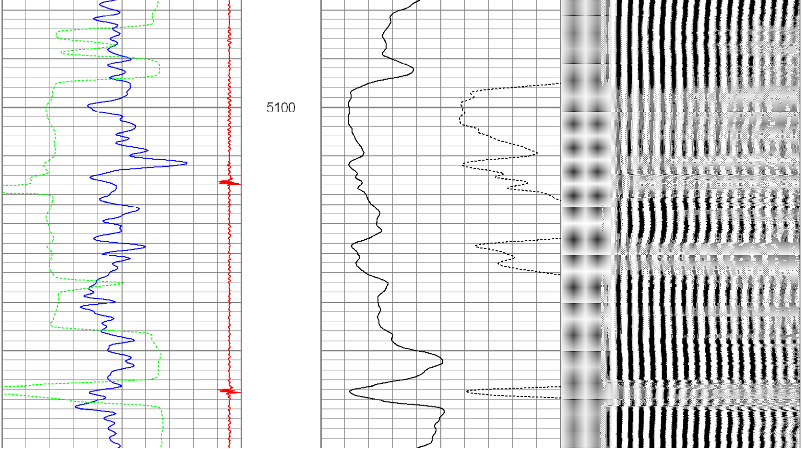
0 Amplified Amplitude (mV) 20
0 Amplitude (mV) 100

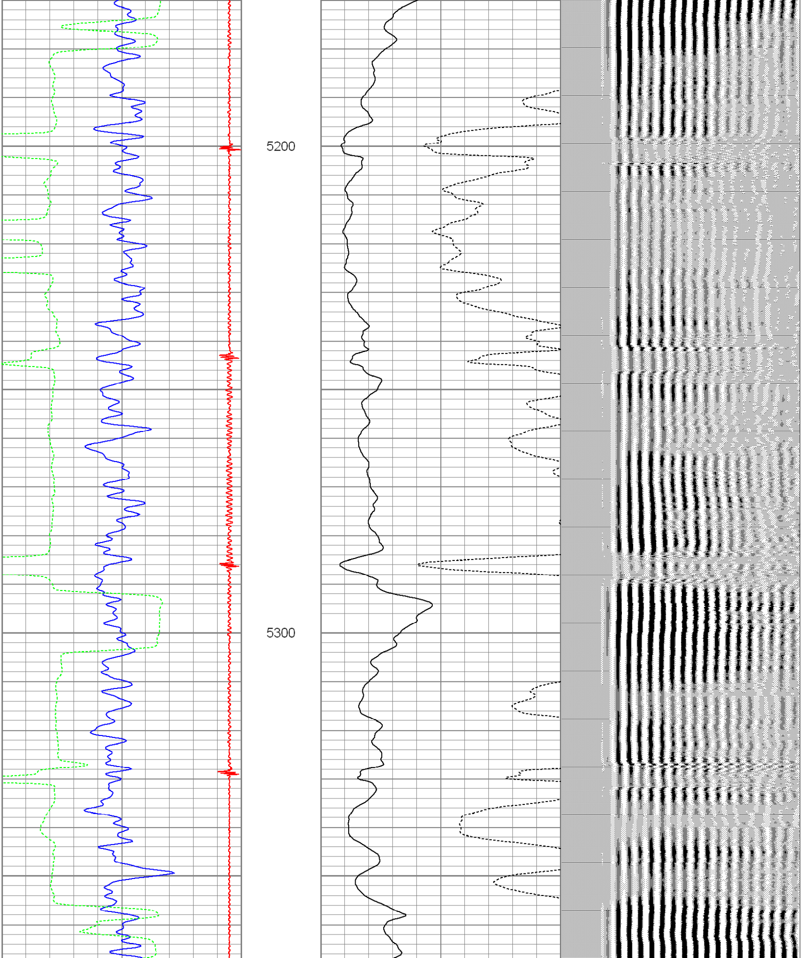
200 VDL 1200

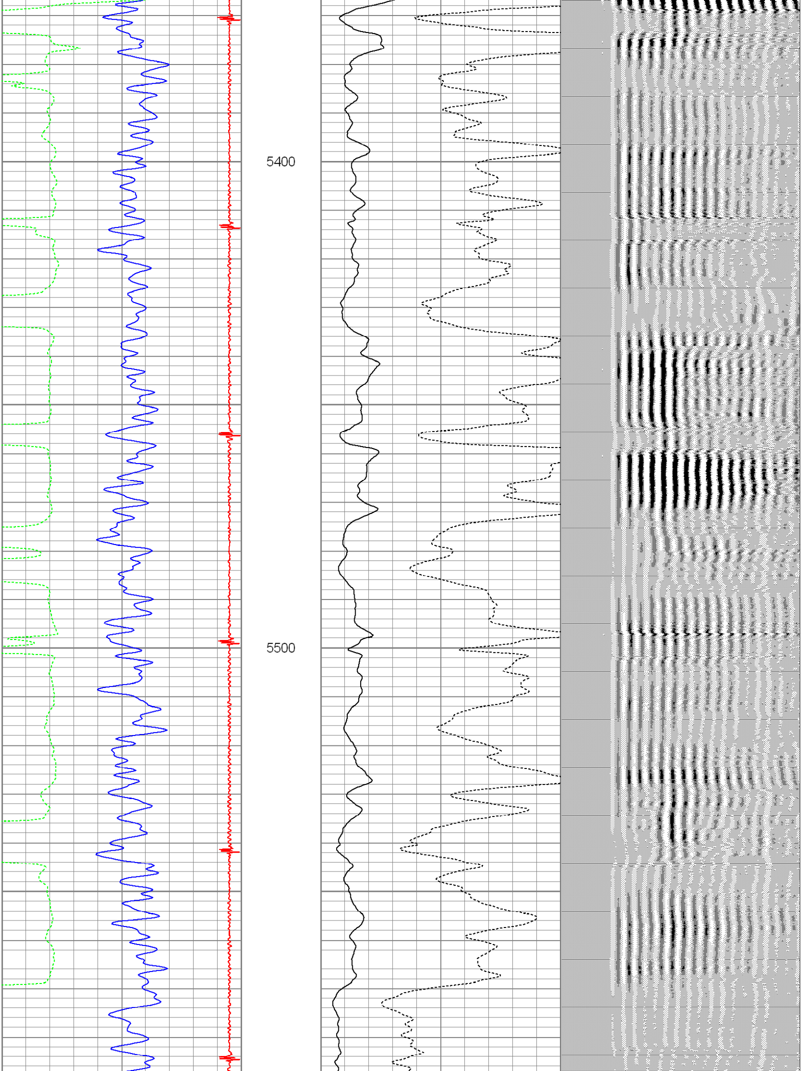


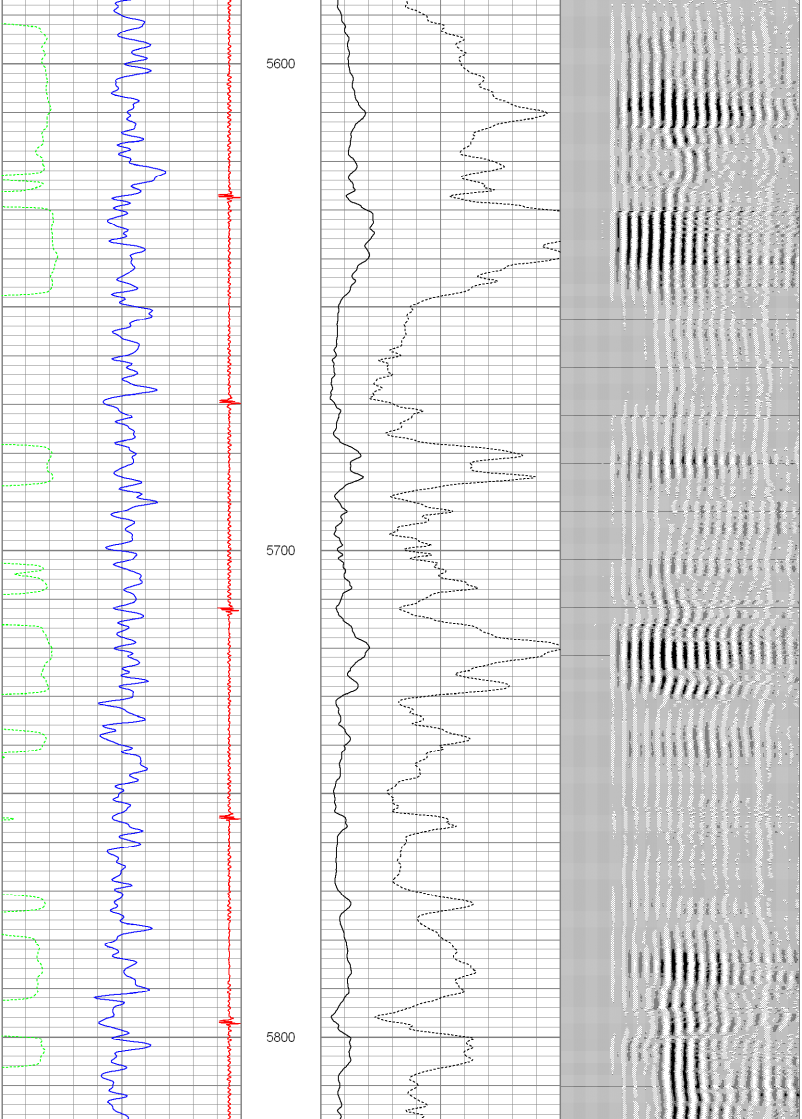


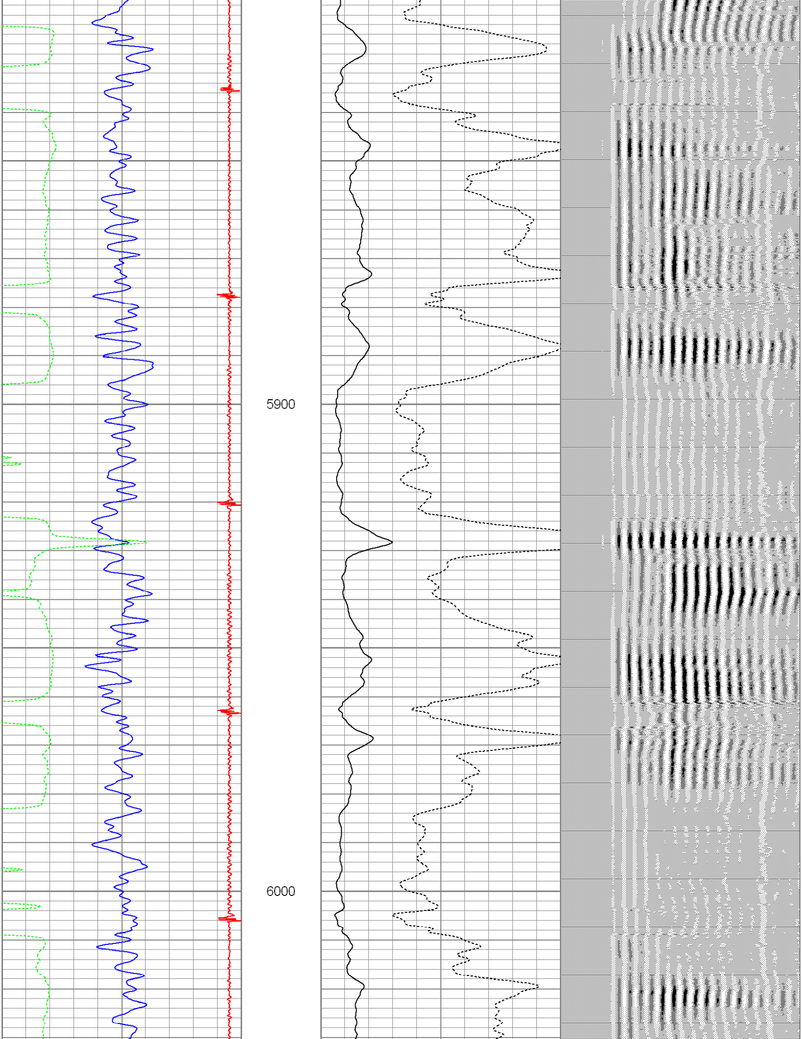


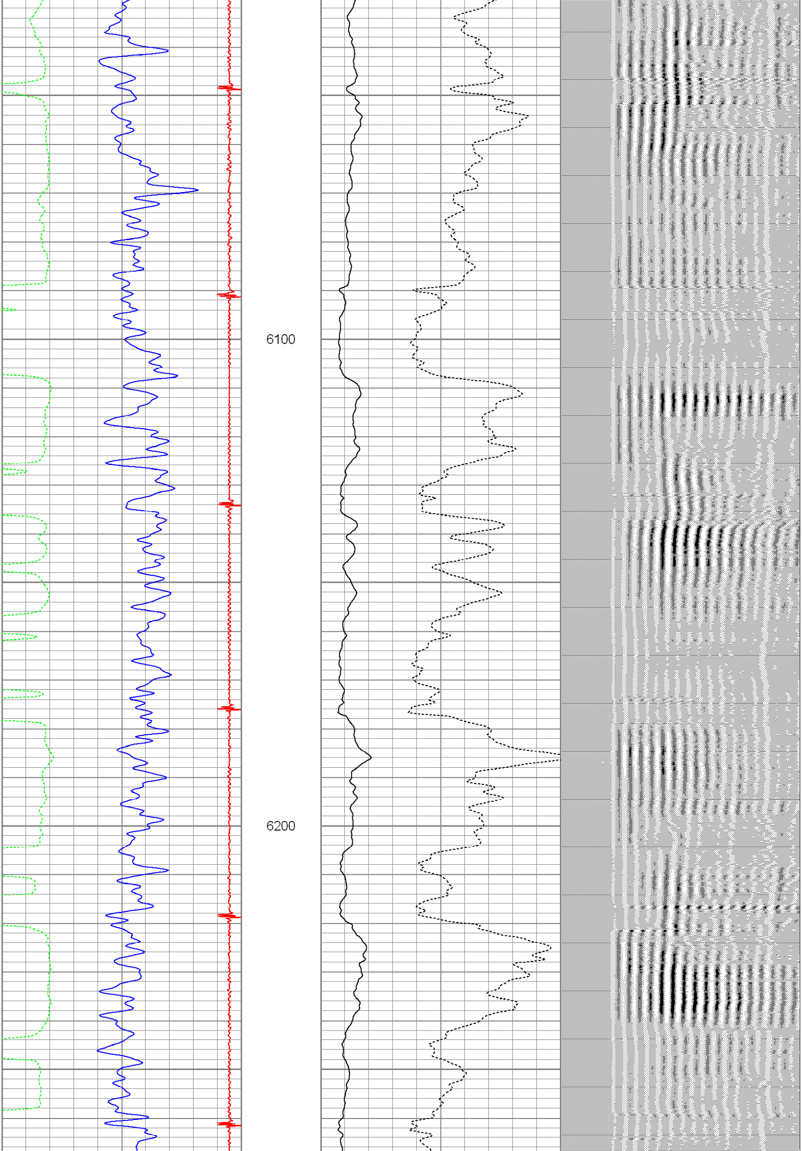


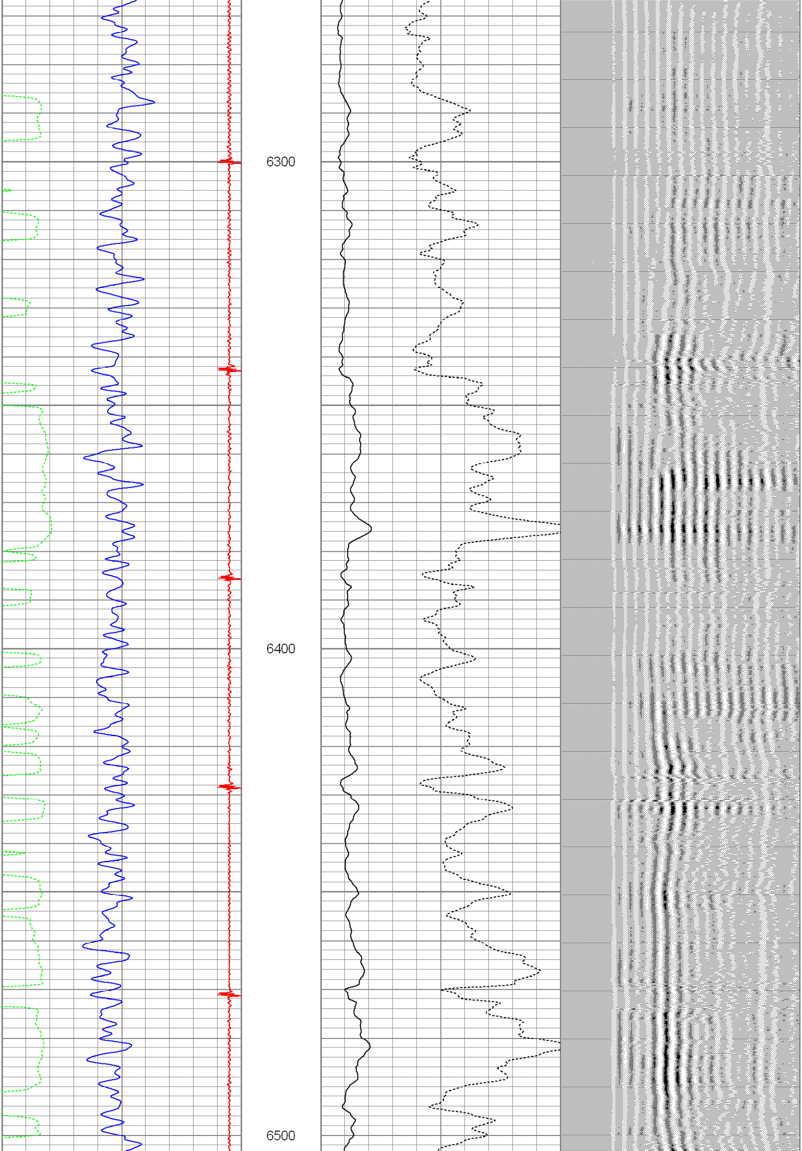


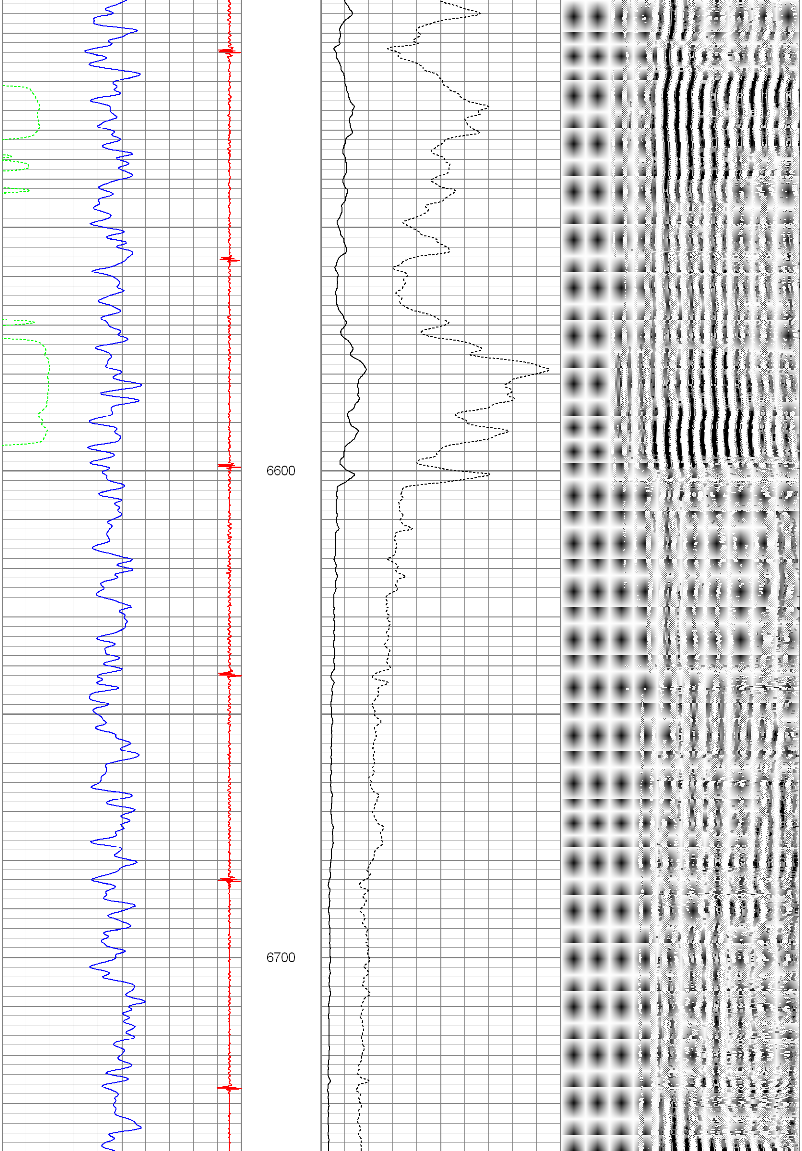


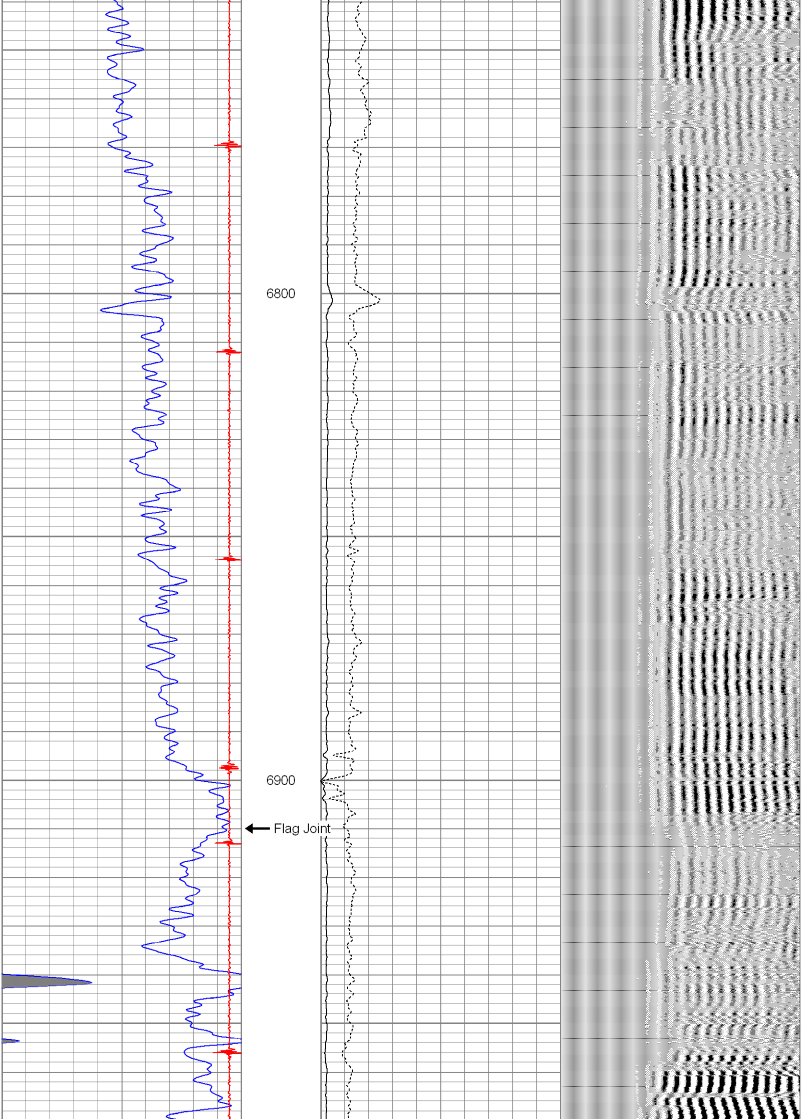


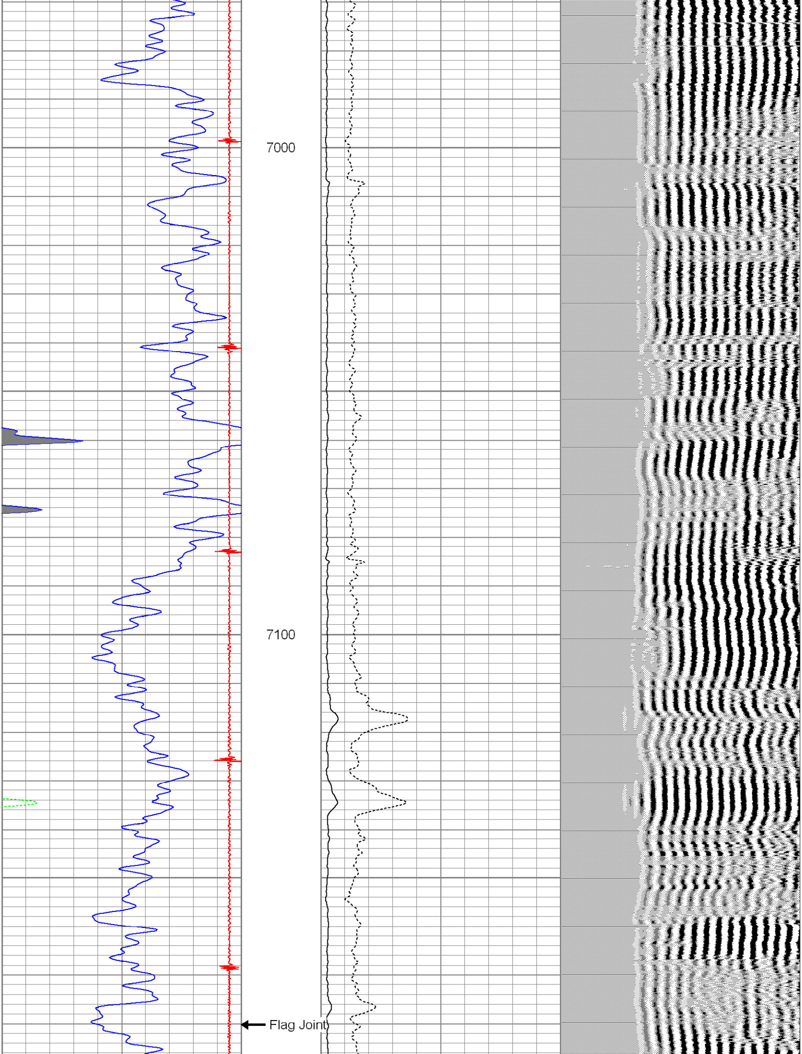


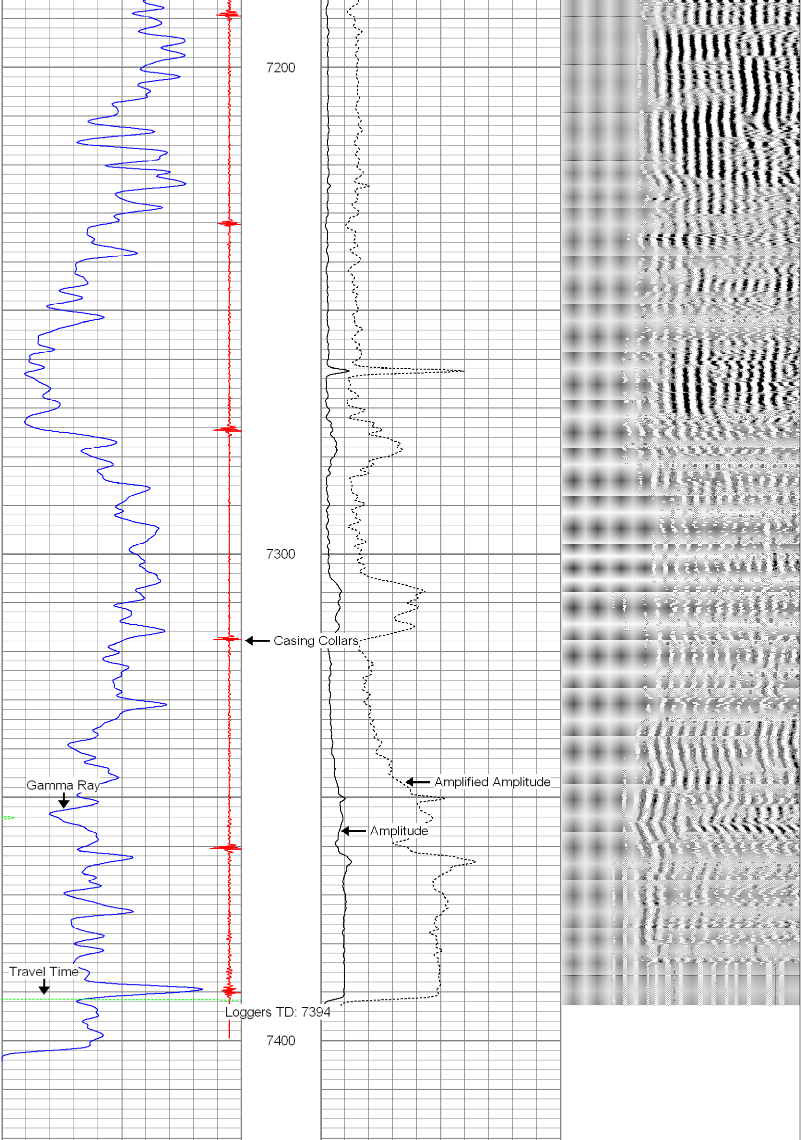












0	Gamma Ray (GAPI)	200
30	CCL	-1.5
340	TT3 (usec)	240

0	Amplified Amplitude (mV)	20
0	Amplitude (mV)	100

200	VDL	1200

Calibration Report

Database File: scblstrohauer f32-22d.db
Dataset Pathname: pass3
Dataset Creation: Fri Dec 17 09:04:00 2010 by Log Std Casedhole 10081

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101011

SHOP CALIBRATION	Tue Nov 02 09:38:40 2010				
	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.8000			GAPI/cps
PRIMARY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number: 101020
Tool Model: Probe

Calibration Casing Diameter: 4.500 in
Calibration Depth: 458.925 ft

Master Calibration, performed Fri Dec 17 08:16:19 2010:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.011	1.046	0.900	81.196	75.950	1.705
CAL	-0.010	1.246				
5'	-0.011	1.080	0.900	81.196	73.626	1.696
SUM						
S1	-0.009	1.162	0.000	81.196	69.300	0.648
S2	-0.010	1.183	0.000	81.196	68.048	0.693
S3	-0.011	1.132	0.000	81.196	71.084	0.758
S4	-0.011	1.010	0.000	81.196	79.529	0.856
S5	-0.011	0.905	0.000	81.196	88.709	0.945
S6	-0.010	0.882	0.000	81.196	91.009	0.942
S7	-0.011	0.975	0.000	81.196	82.373	0.890
S8	-0.011	1.091	0.000	81.196	73.673	0.788

Internal Reference Calibration, performed Fri Dec 17 08:14:09 2010:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	-0.010	1.246	-0.010	1.246	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