J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company	NOBLE ENERGY INC.		
Well	NCLP PC AA 04-19		
Field	WATTENBERG		
County	WELD	State	COLORADO

Location: API #: 05-123-29481-00
1289' FNL & 1318' FWL
NW NW
SEC. 4 TWP 6 N RGE. 63 W

SEC TWP RGE

Other Services
NONE

Permanent Datum	GROUND LEVEL	Elevation	4710
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4724
D.F. 4723
G.L. 4710

Company	NOBLE ENERGY INC.
Well	NCLP PC AA 04-19
Field	WATTENBERG
County	WELD
State	COLORADO

Date	17-JANUARY-2011		
Run Number	ONE		
Depth Driller	7062		
Depth Logger	6977		
Bottom Logged Interval	6970		
Top Log Interval	1900		
Open Hole Size	7 7/8		
Type Fluid	WATER		
Density / Viscosity	--		
Max. Recorded Temp.	240		
Estimated Cement Top	2030		
Time Well Ready	--		
Time Logger on Bottom	--		
Equipment Number	2405/YELLOW		
Location	BRIGHTON		
Recorded By	HAYES		
Witnessed By	MR. MITCH 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#	SURFACE	705
Prot. String				
Production String	4.5	11.6#	SURFACE	7061
Liner				

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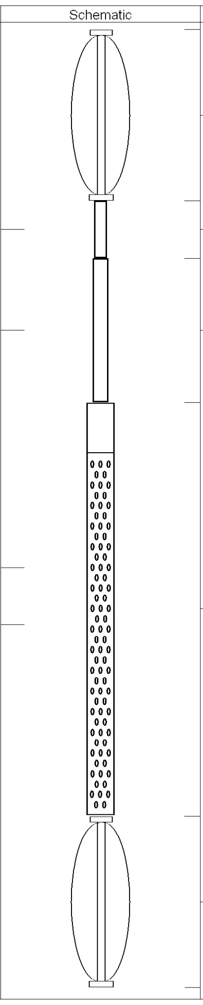
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

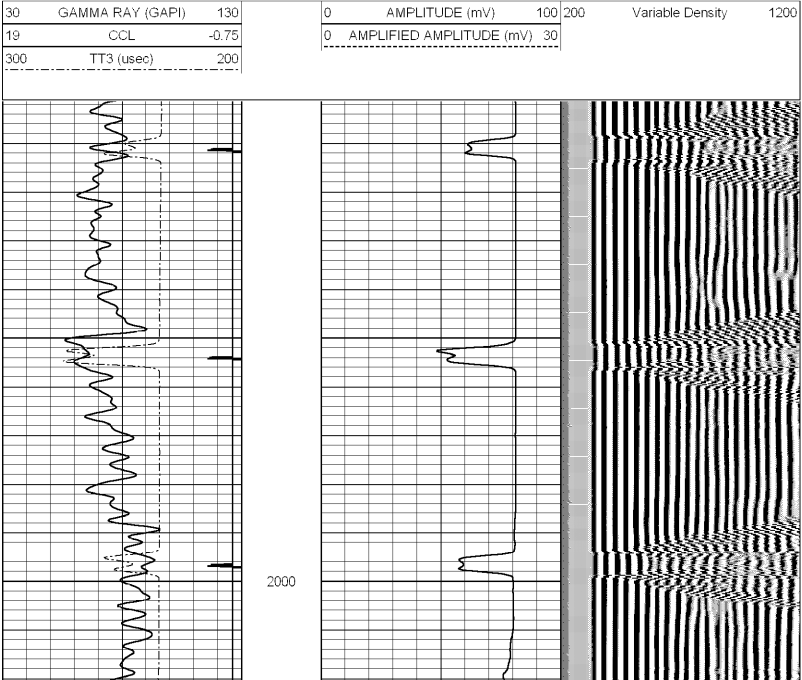
LOG CORRELATED TO CD, CN, ML LOG
DATED 26-DECEMBER-2010

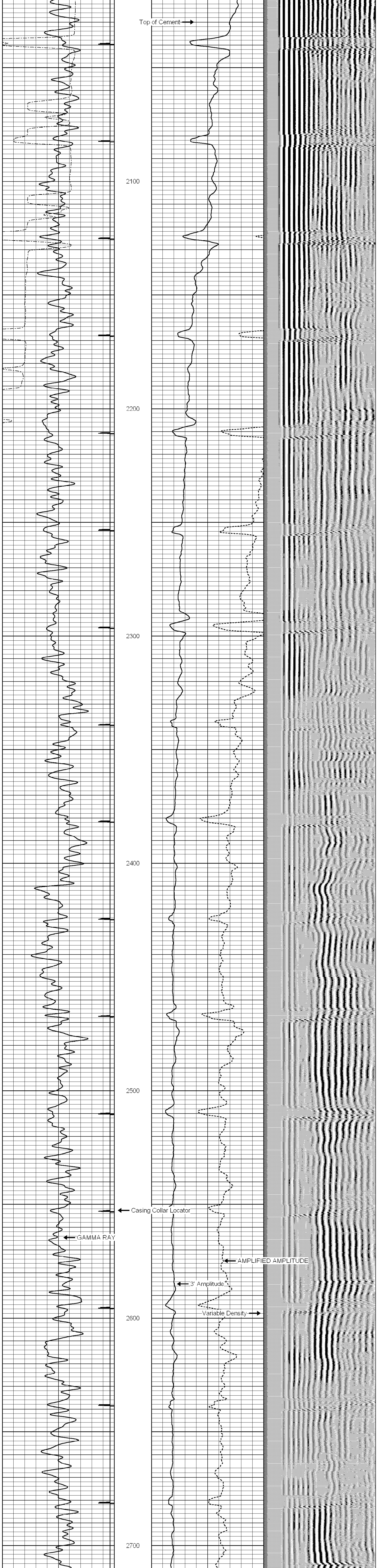
LOG SPLIT FOR CORRELATION PURPOSES

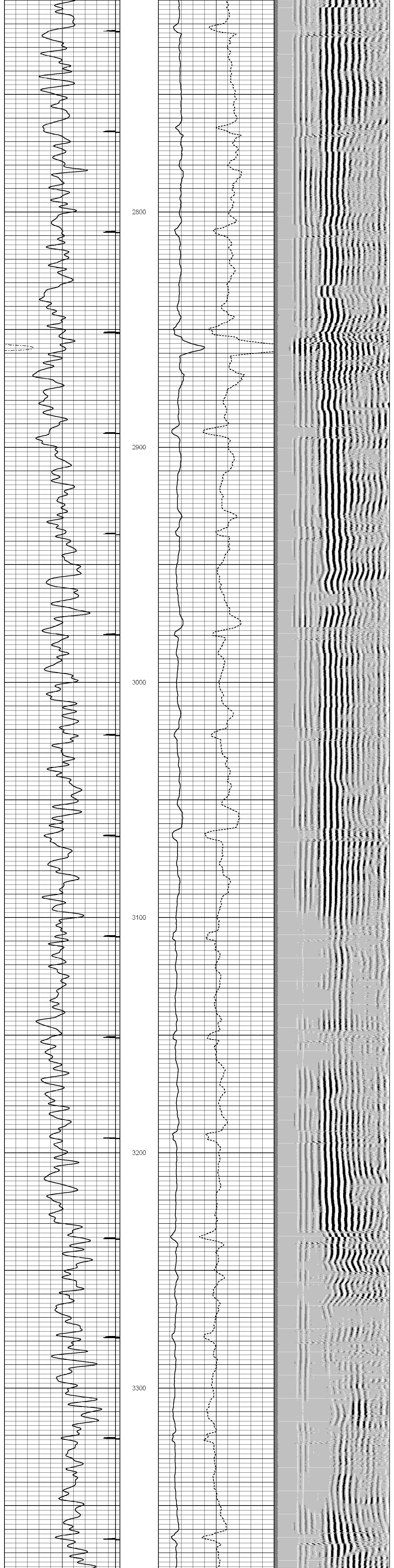
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CENT-A (1)	3.00	1.69	10.00
CCL	13.25		CCL-GR_1_3/8 (001) 1 3/8 titan ccl	1.00	1.38	11.00
GR	11.49		GR-s_t001 (t001)	2.52	1.69	30.00
WVF5	7.34		CBL-3_5 (001)	7.23	2.44	127.00
WVF3	6.34					
			CENT-B (2)	3.00	1.69	10.00

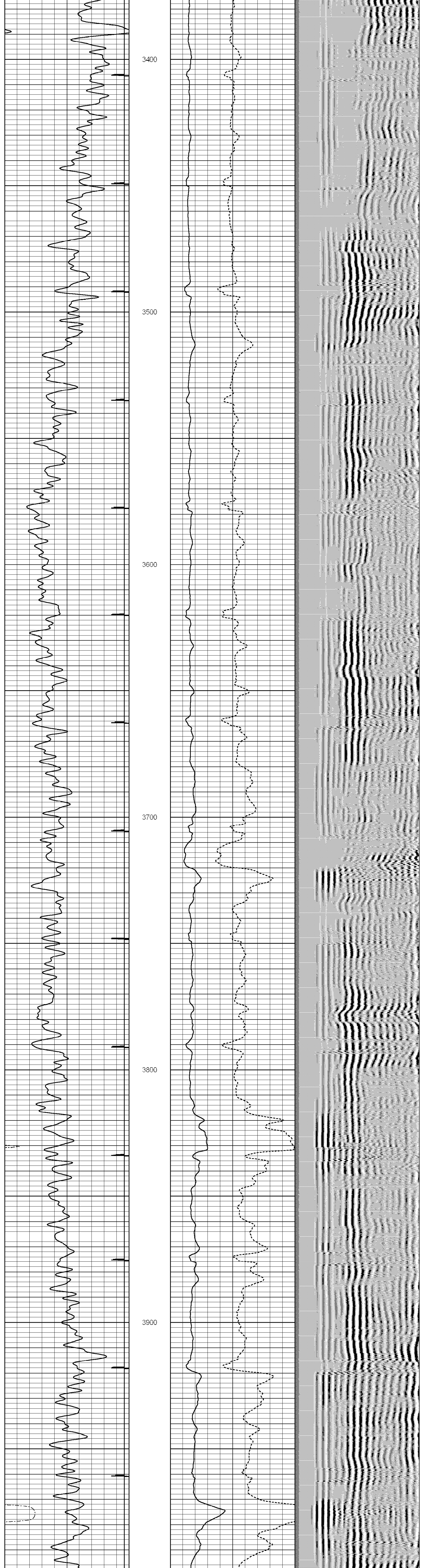
Dataset: nclp pc aa 04-19.db: field/well/run1/pass2
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

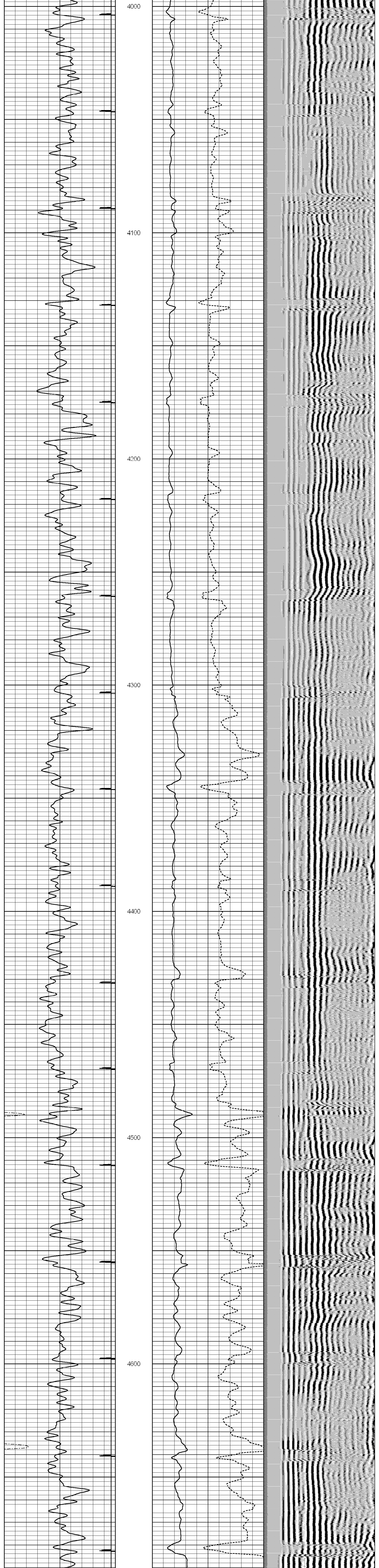
Database File: nclp pc aa 04-19.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Mon Jan 17 11:18:44 2011 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

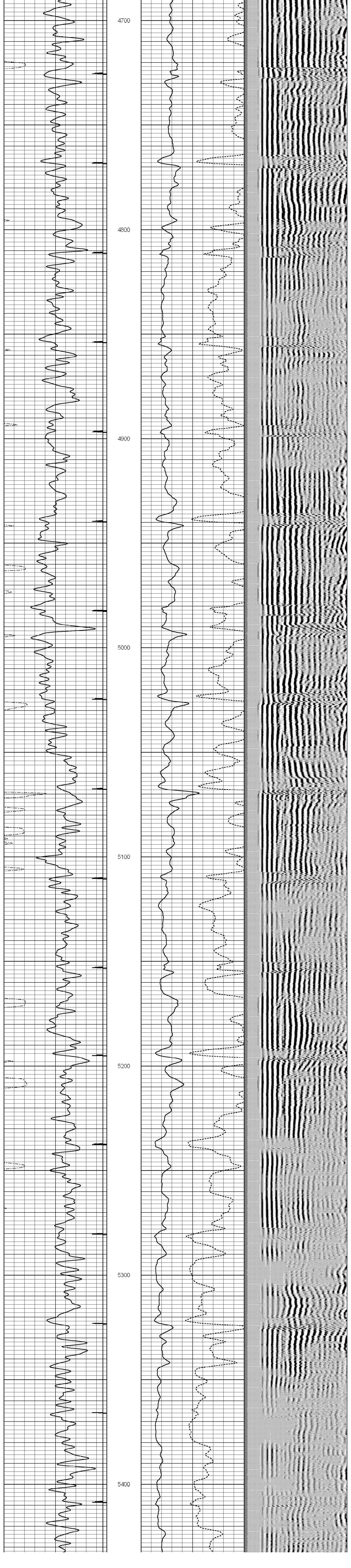


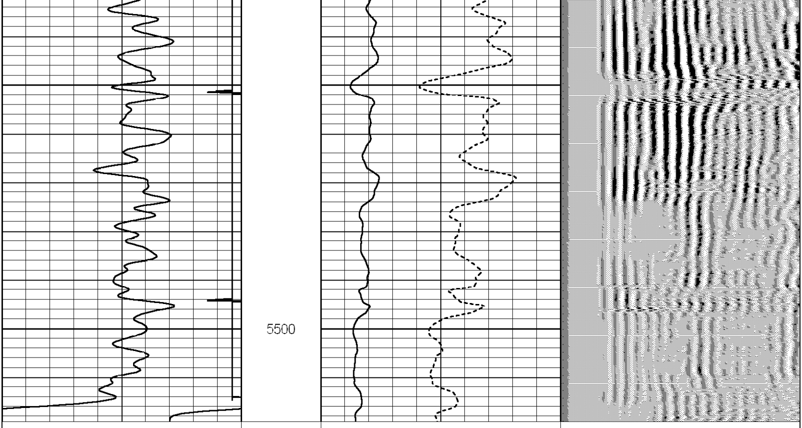








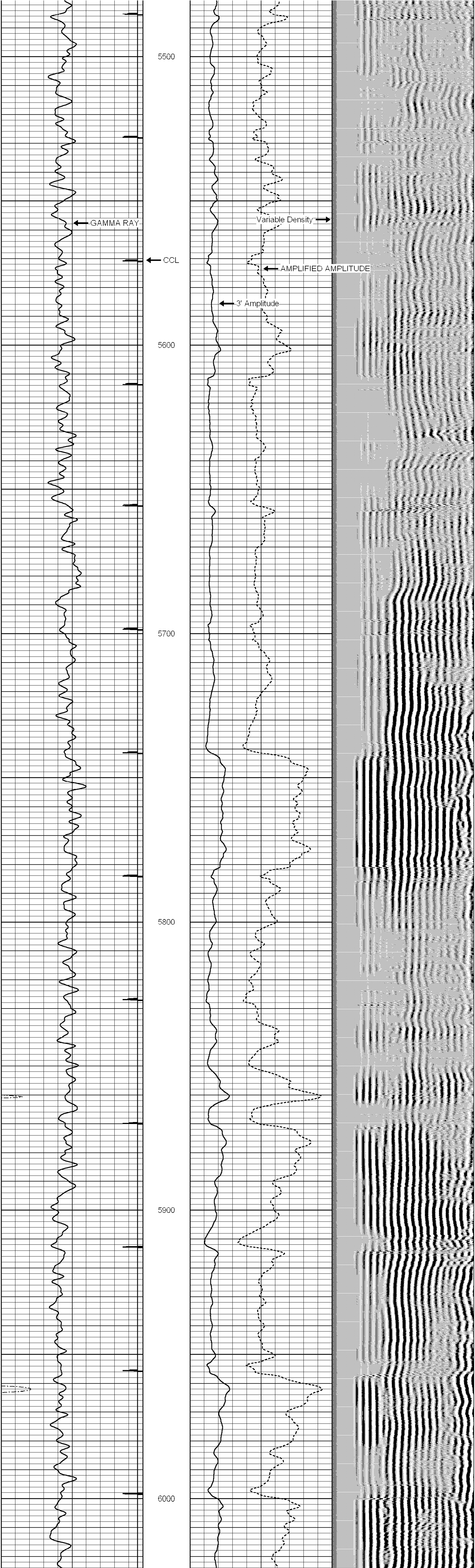


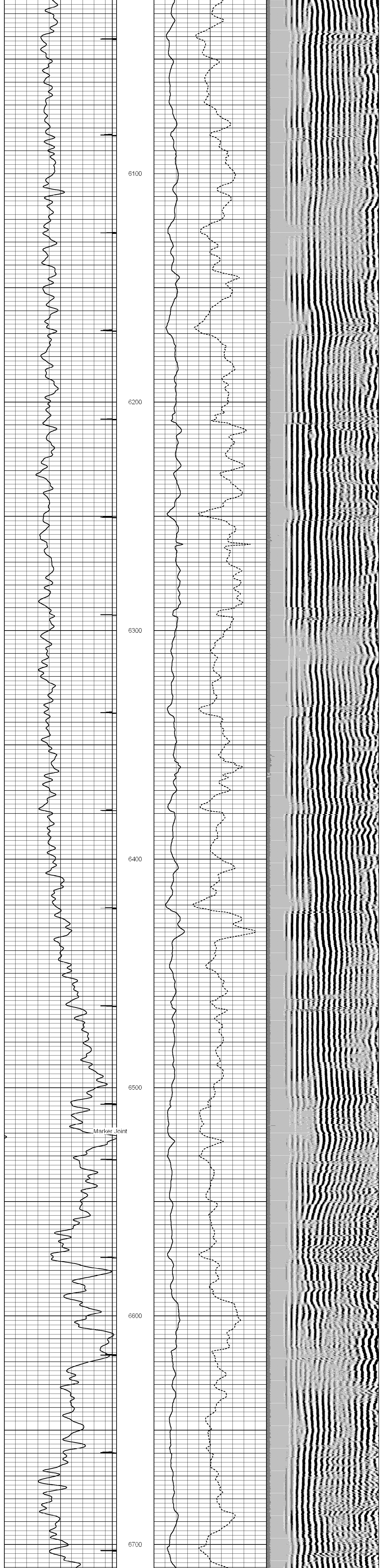


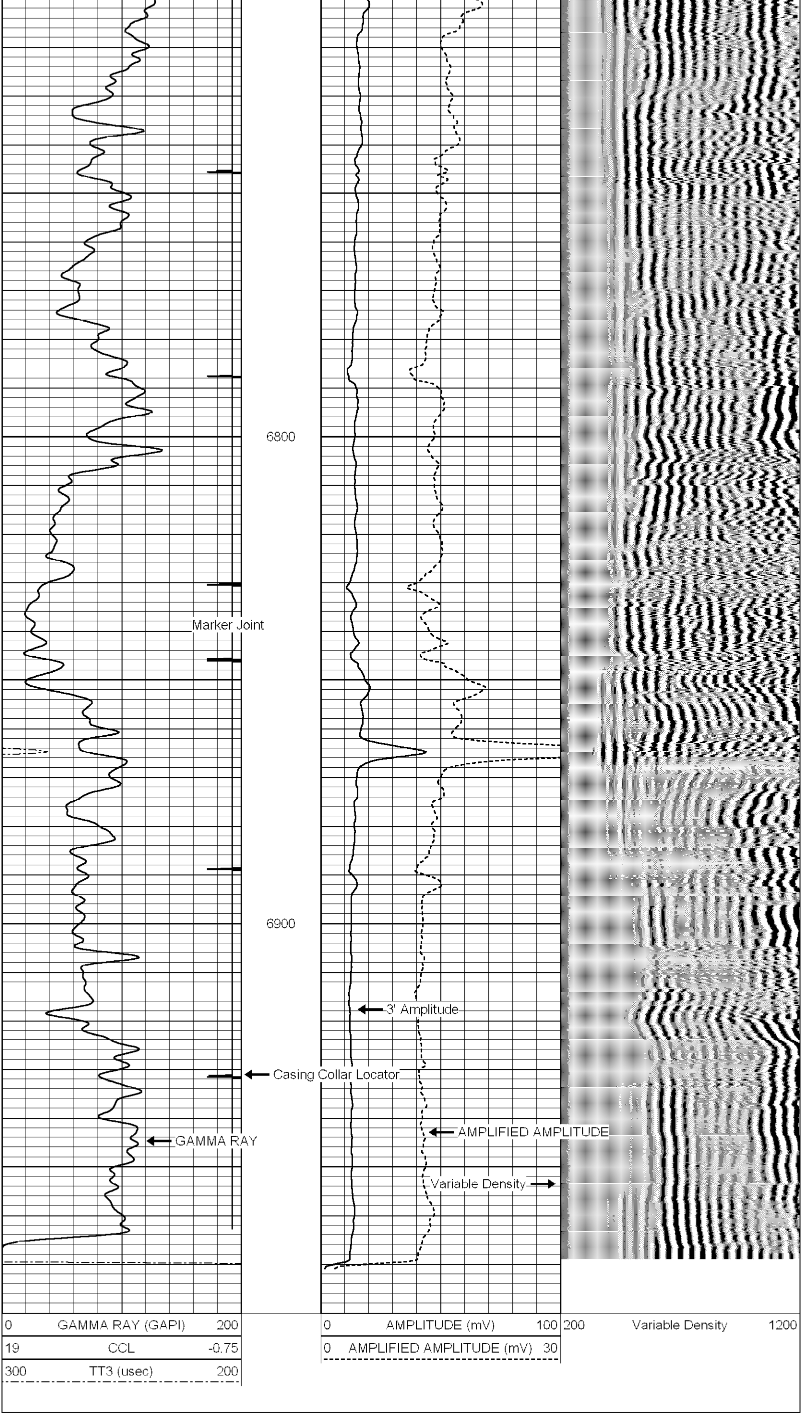
30	GAMMA RAY (GAPI)	130	0	AMPLITUDE (mV)	100	200	Variable Density 1200
19	CCL	-0.75	0	AMPLIFIED AMPLITUDE (mV)	30		
300	TT3 (usec)	200					

Database File:	nclp pc aa 04-19.db
Dataset Pathname:	pass1
Presentation Format:	cblx
Dataset Creation:	Mon Jan 17 10:57:51 2011 by Log Std Casedhole 08121
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	200	0	AMPLITUDE (mV)	100	200	Variable Density 1200
19	CCL	-0.75	0	AMPLIFIED AMPLITUDE (mV)	30		
300	TT3 (usec)	200					







Calibration Report

Database File:	nclp pc aa 04-19.db
Dataset Pathname:	pass2
Dataset Creation:	Mon Jan 17 11:18:44 2011 by Log Std Casedhole 08121

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Mon Jan 17 10:42:48 2011		
Depth:	1496.38	ft	
Casing Diameter:	4.5	in	
	3' Spacing	5' Spacing	
Signal Zero:	3	3	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	0.04	0	V
Reading in Free Pipe:	2.5	2.02014	V
Gain:	31.787	38.7082	
Offset:	1.72852	3	

Gamma Ray Calibration Report

Serial Number:	t001	
Tool Model:	s_t001	
Performed:	Sun Jun 13 13:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps