J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR LOG

Company	NOBLE ENERGY INC.		
Well	CASTOR LG 10-72HN		
Field	WATTENBERG		
County	WELD	State	COLORADO

Location: API # : 05-123-33436-00
SHL: SE SE
BHL: 660' FL & 660' FEL
SEC. 10 TWP. 8 N RGE. 59W
SEC TWP RGE

Other Services
NONE

Permanent Datum	GROUND LEVEL	Elevation	4766
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4796
D.F. --
G.L. 4766

Company NOBLE ENERGY INC.
Well CASTOR LG 10-72HN
Field WATTENBERG
County WELD
State COLORADO

Date	29-OCTOBER -2012		
Run Number	ONE		
Depth Driller	10235		
Depth Logger	6213		
Bottom Logged Interval	6206		
Top Log Interval	SURFACE		
Open Hole Size	8 3/4		
Type Fluid	WATER		
Density / Viscosity	--		
Max. Recorded Temp.	195		
Estimated Cement Top	1470		
Time Well Ready	--		
Time Logger on Bottom	--		
Equipment Number	2405/GREY		
Location	BRIGHTON		
Recorded By	HAYES		
Witnessed By	MR. BILL MANSFIELD		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8	40#	SURFACE	1450
Prot. String				
Production String	4.5	11.6#	6205.5	10205
Liner	7.0	26#	SURFACE	6358.2

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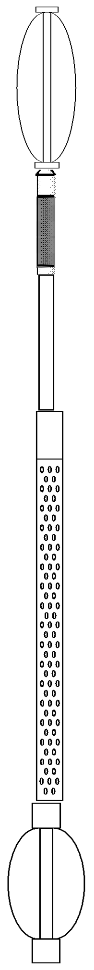
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CENT-A (1)	3.00	1.69	10.00
CCL	14.06		CCL-275tekco (2.75TEKCO) 2 3/4 TEK CCL Earth Mag	1.96	2.75	20.00
GR	11.49		GR-s_t001 (t001)	2.52	1.69	30.00
WVF5 WVF3	7.34 6.34		CBL-3_5 (001)	7.23	2.44	127.00
			CENT-B (2)	3.00	1.69	10.00

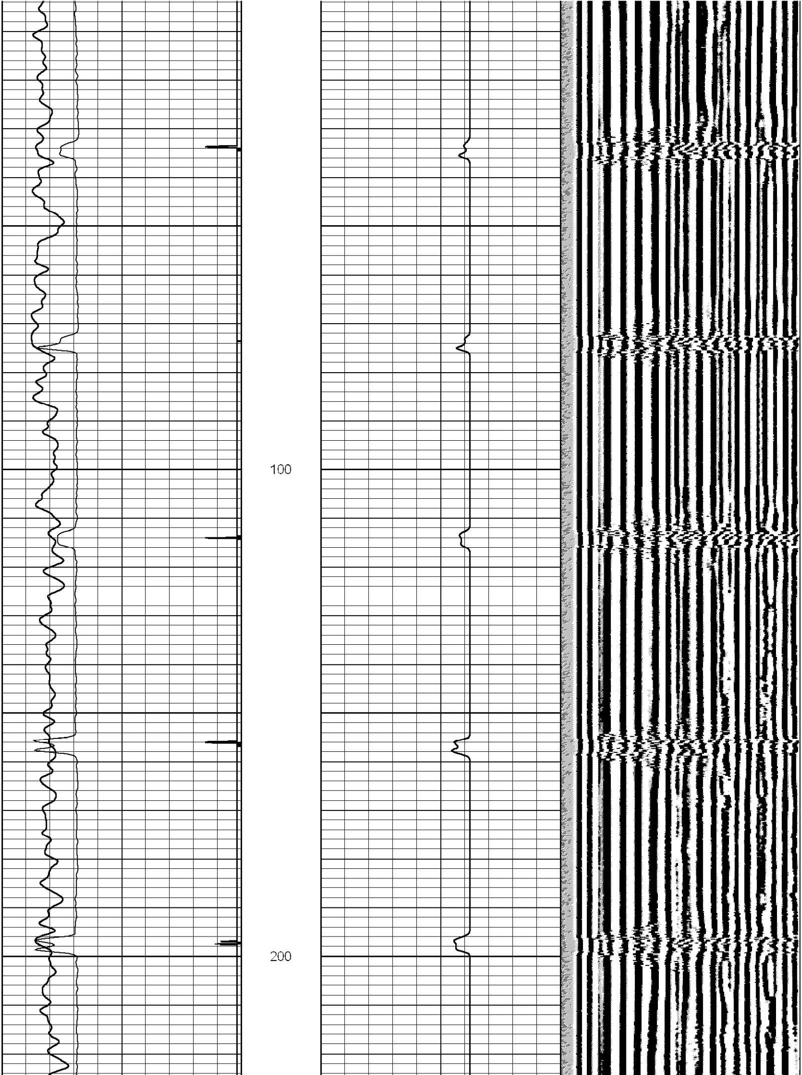
Dataset: castor lg 10-72hn.db: field/well/run1/pass3
Total Length: 17.71 ft
Total Weight: 197.00 lb
O.D. 2.75 in

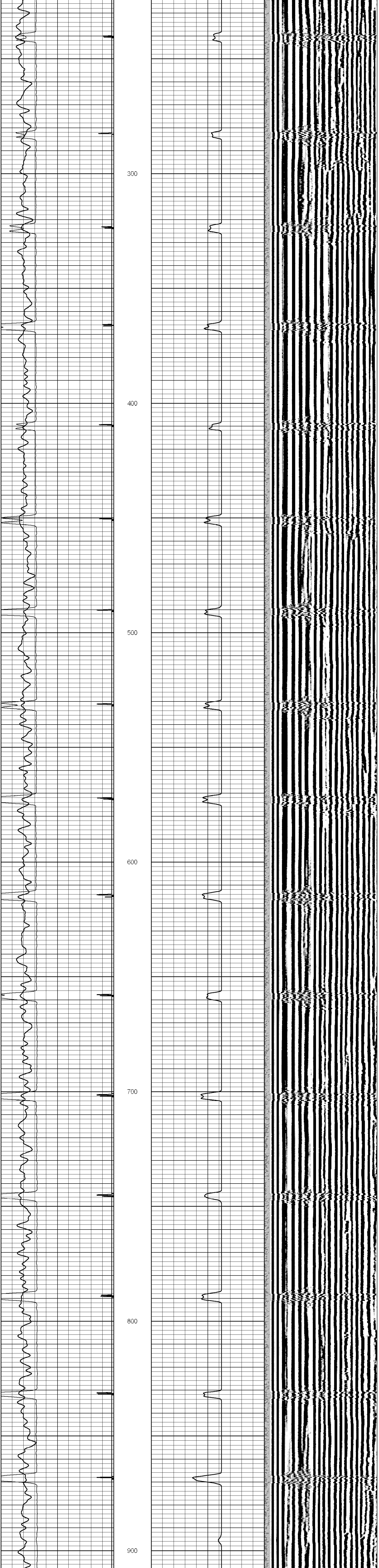
Database File: castor lg 10-72hn.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Mon Oct 29 19:39:32 2012 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

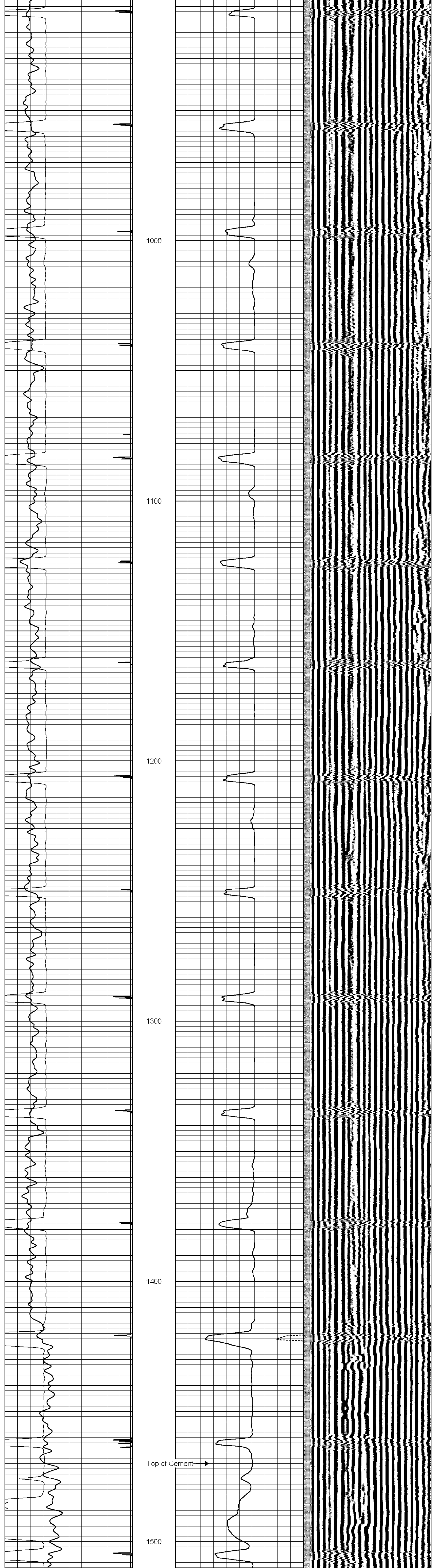
0	Gamma Ray (GAPI)	200
15	CCL	-0.25
300	TT3 (usec)	200

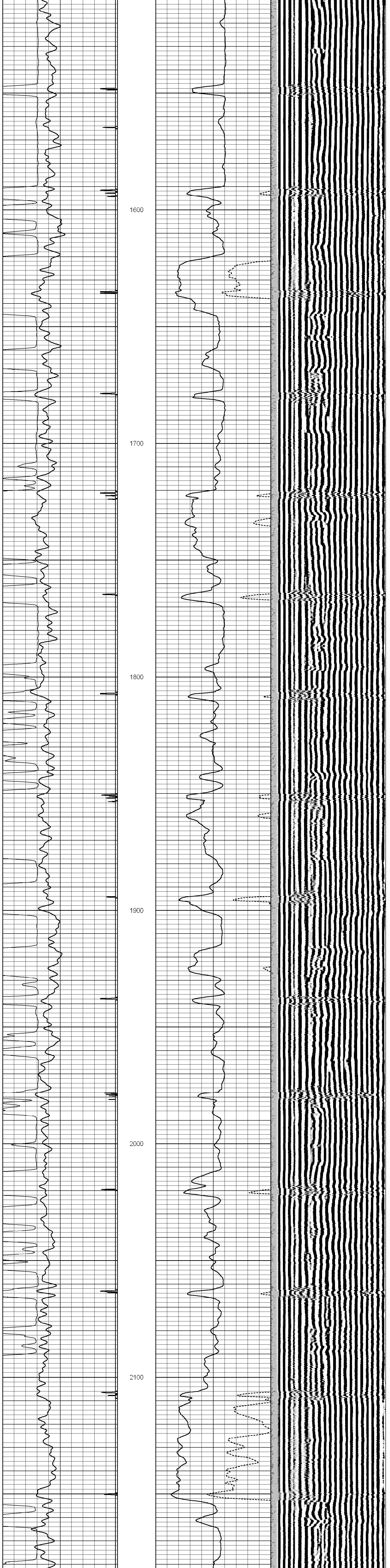
0	3' Amplitude (mV)	100
0	Amplified Amplitude (mV)	30

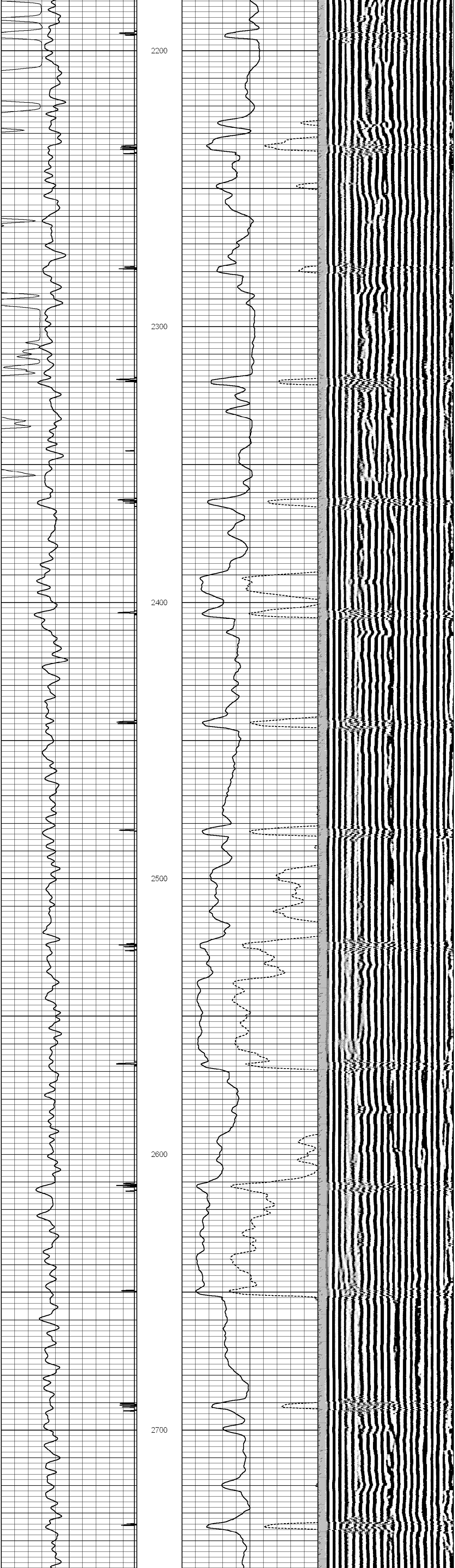
200	Variable Density	1200

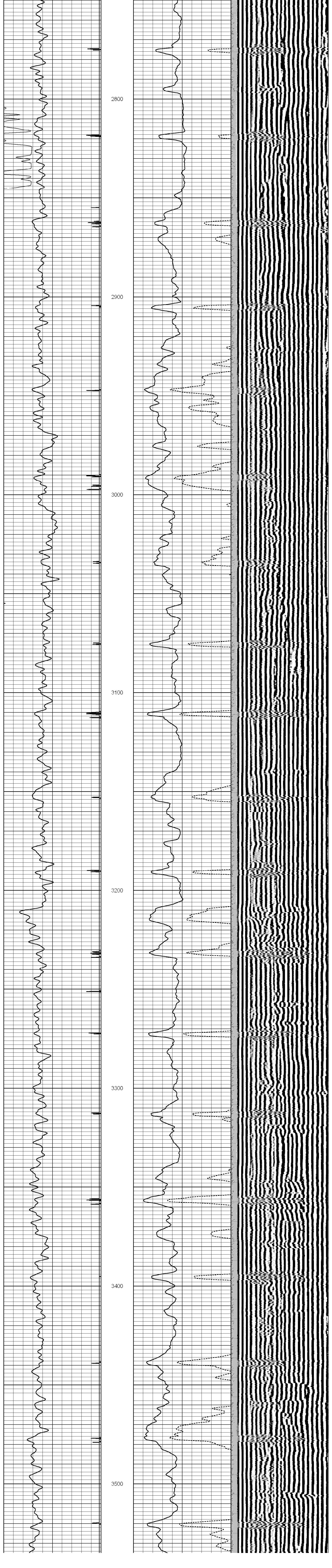


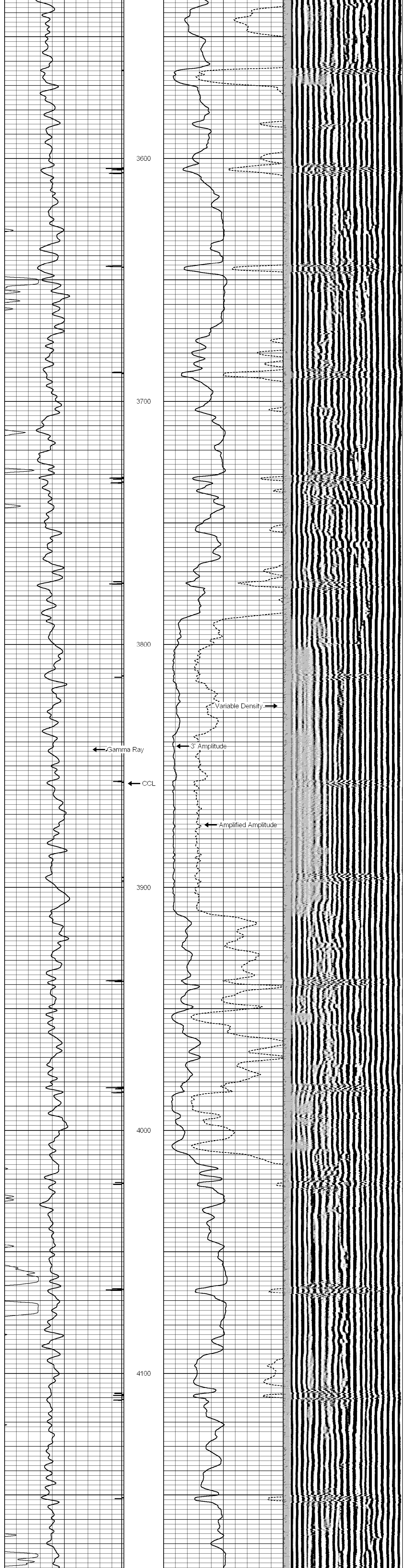


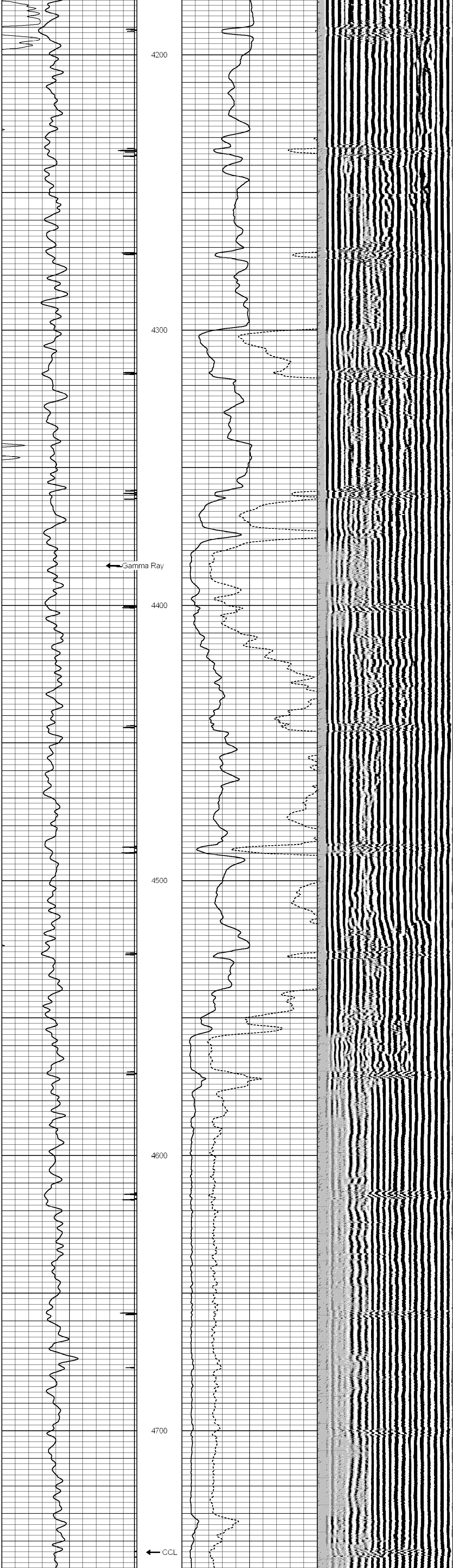


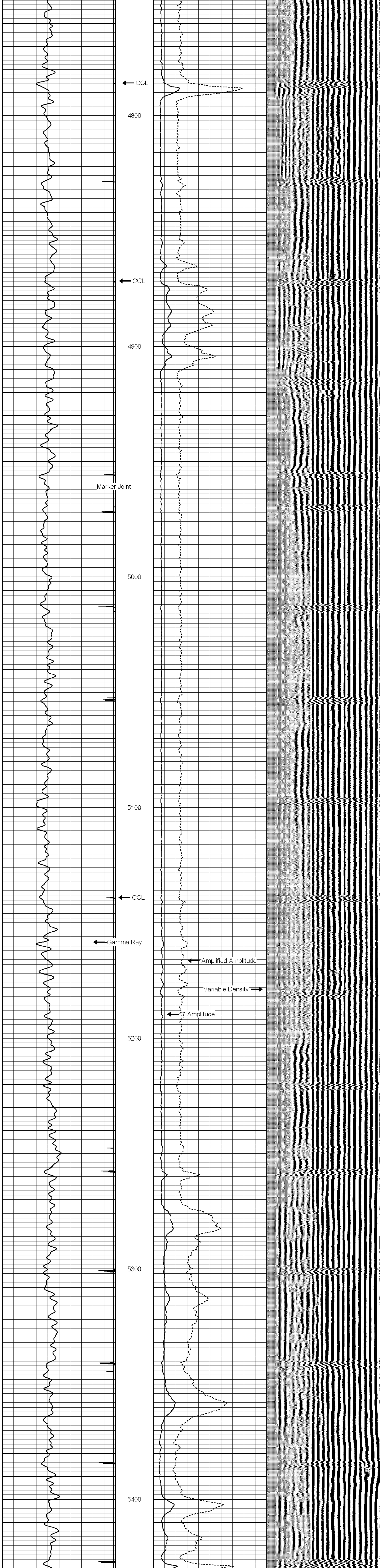


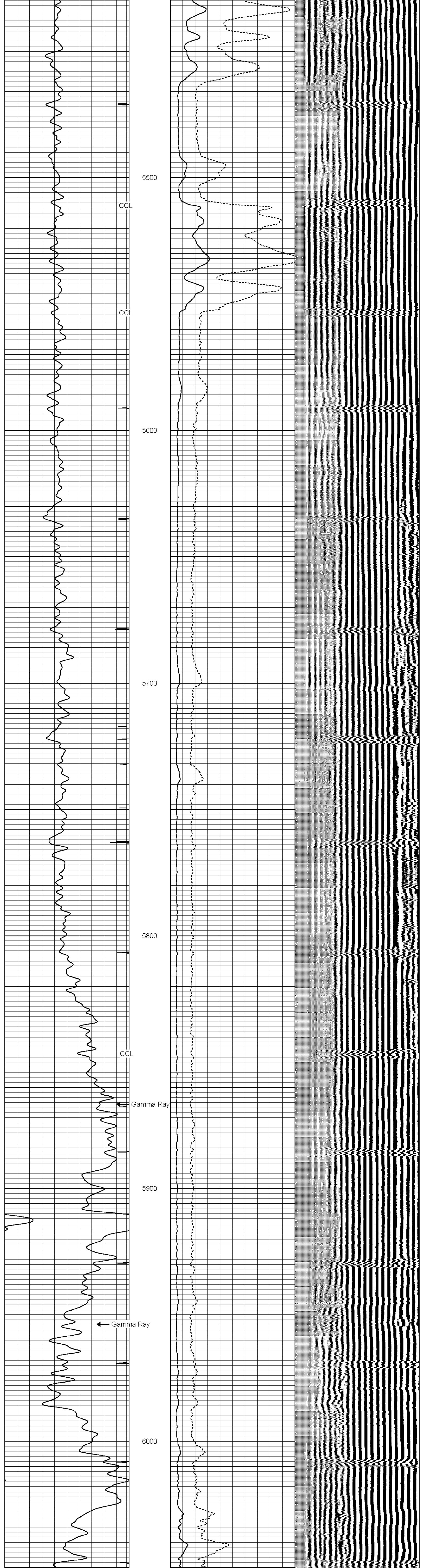


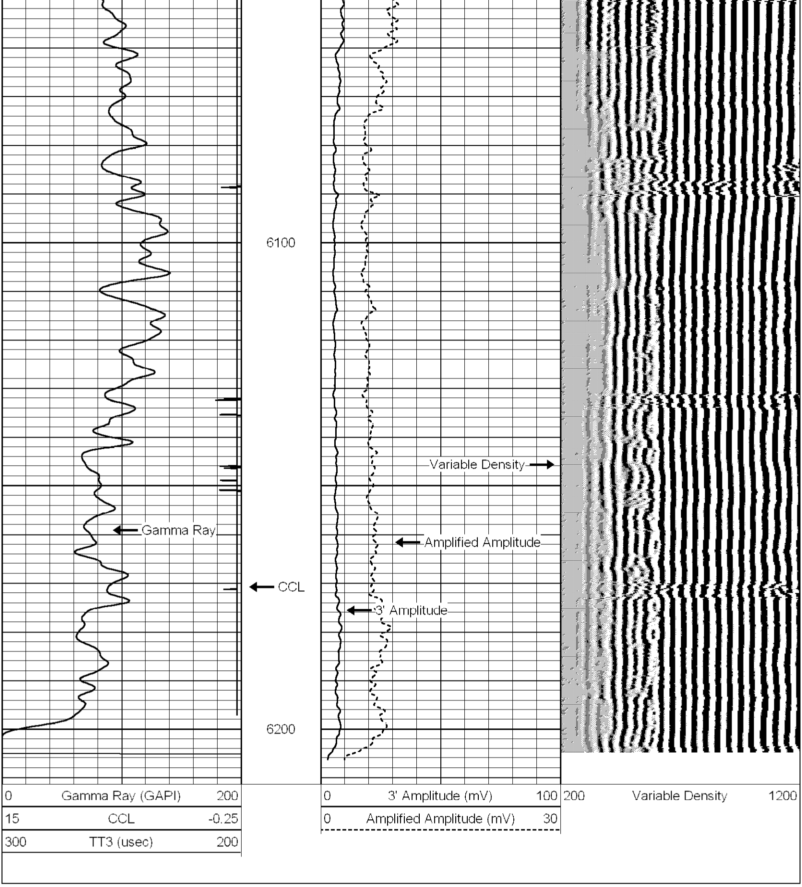












Calibration Report

Database File: castor lg 10-72hn.db
Dataset Pathname: pass3
Dataset Creation: Mon Oct 29 19:39:32 2012 by Log SCH 111116

Cement Bond Log Calibration Report

Serial Number: 001
Tool Model: 3_5
Performed: Mon Oct 29 19:19:25 2012

Depth: 433.192 ft
Casing Diameter: 7 in

	3' Spacing	5' Spacing	
Signal Zero:	3	3	mV
Calibrated Amplitude:	62.1651	62.1651	mV
Reading at Signal Zero:	0	0	V
Reading in Free Pipe:	2.5	2.44807	V
Gain:	23.666	24.168	
Offset:	3	3	

Gamma Ray Calibration Report

Serial Number: t001
Tool Model: s_t001
Performed: Sun Jun 13 14:33:21 1993

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps