Company NOBLE ENERGY INC.
Well KOHLHOFF USX AB 17-02P
Field WATTENBERG
County WELD
State COLORADO

J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company	NOBLE ENERGY INC.
Well	KOHLHOFF USX AB 17-02P
Field	WATTENBERG
County	WELD State COLORADO

Location: API # : 05-123-31169-00
675' FNL & 2012' FEL
NW NE
SEC. 17 TWP. 7N RGE. 64W
SEC TWP RGE

Other Services
NONE

Permanent Datum	GROUND LEVEL	Elevation	4940
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4953
D.F. 4953
G.L. 4940

Date	28-JULY-2010		
Run Number	ONE		
Depth Driller	7345		
Depth Logger	7273		
Bottom Logged Interval	7266		
Top Log Interval	2300		
Open Hole Size	7 7/8		
Type Fluid	WATER		
Density / Viscosity	---		
Max. Recorded Temp.	240		
Estimated Cement Top	2460		
Time Well Ready	---		
Time Logger on Bottom	---		
Equipment Number	2405/WHITE		
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	851
Prot. String				
Production String	4.5	11.6 #	SURFACE	7336
Liner				

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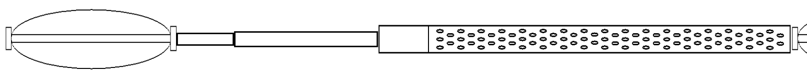
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

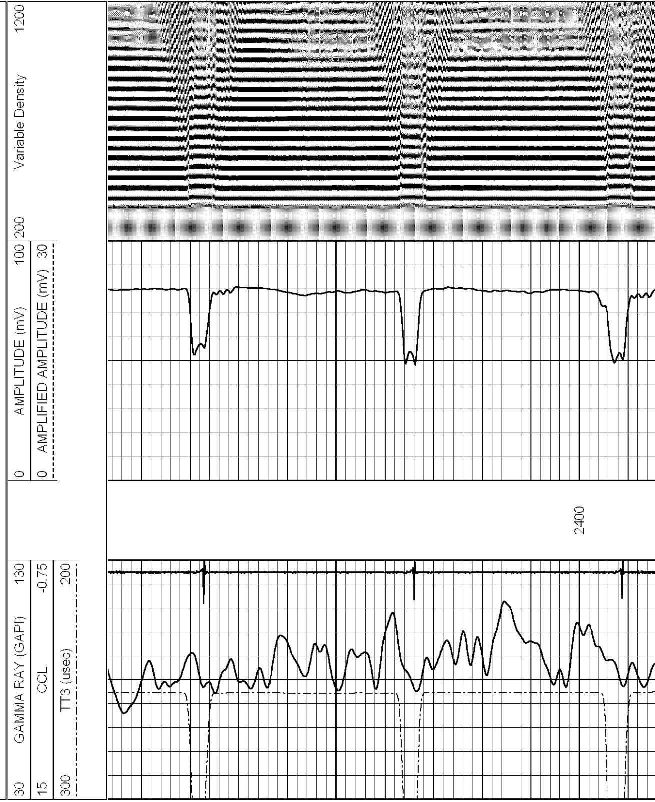
LOG CORRELATED TO CD,CN,ML LOG
DATED 09-JULY-2010

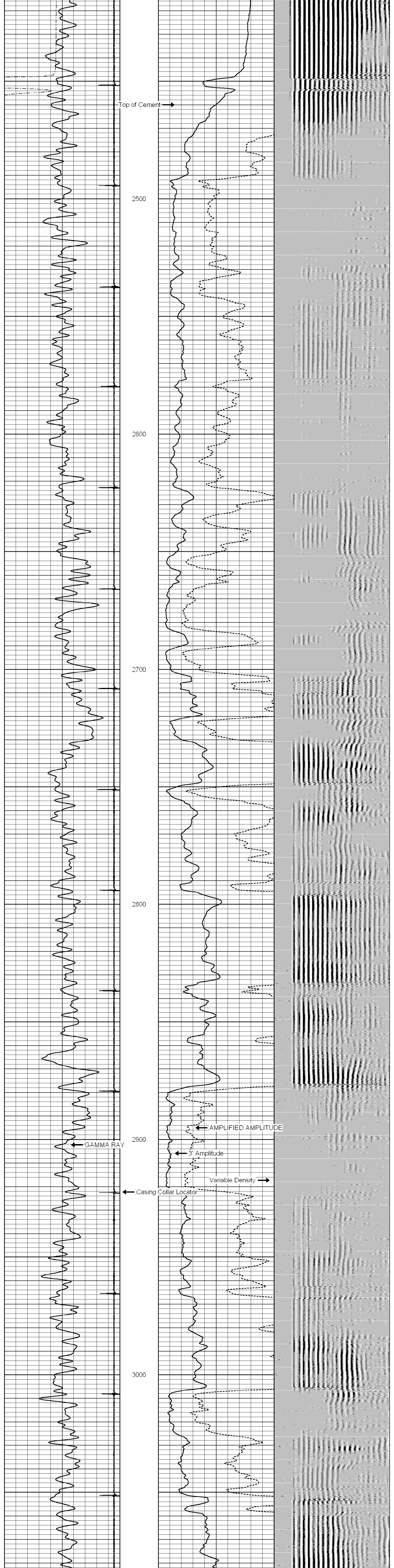
LOG SPLIT FOR CORRELATION PURPOSES

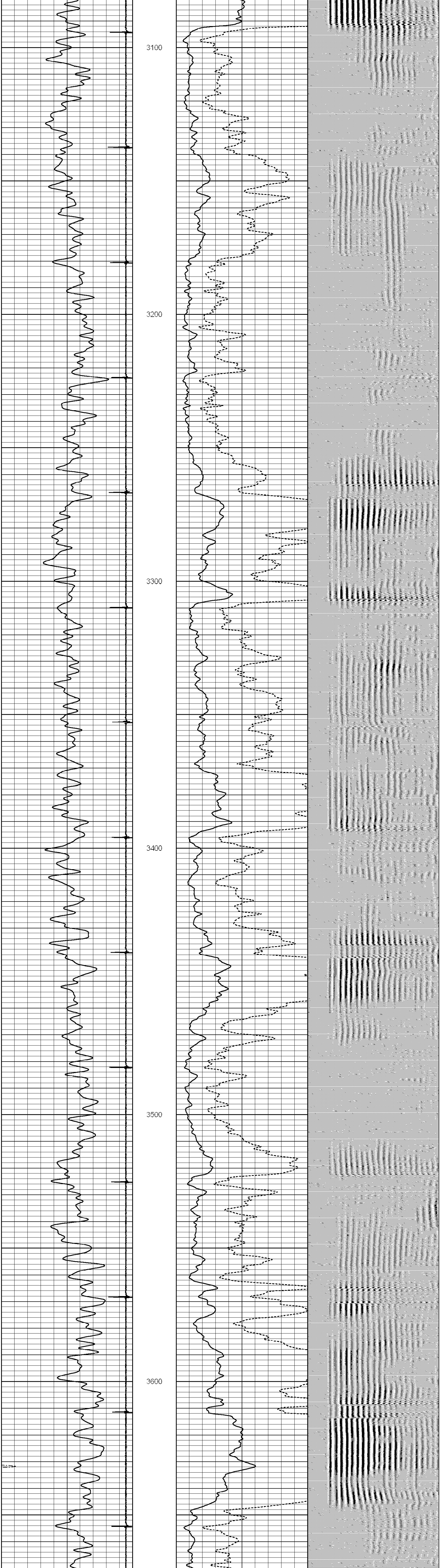
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CENT-A (1)	3.00	1.69	10.00
CCL	13.25		CCL-GR_1_3/8 (001) 1 3/8 titan ccl	1.00	1.38	11.00
GR	11.49		GR-s_t001 (t001)	2.52	1.69	30.00
WVF5 WVF3	7.34 6.34		CBL-3_5 (001)	7.23	2.44	127.00
			CENT-B (2)	3.00	1.69	10.00

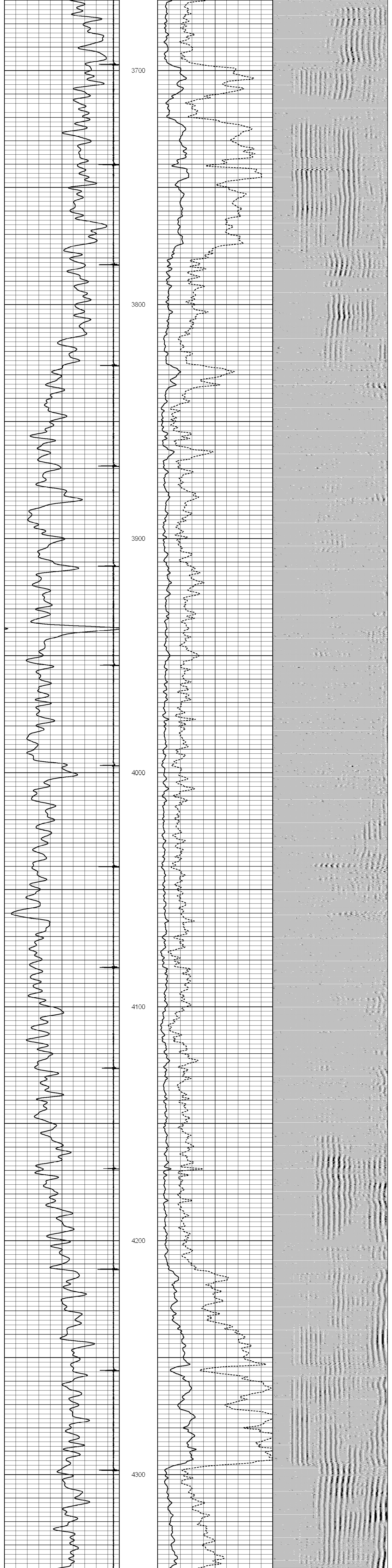
Dataset: kohlhoff usx ab 17-02p.db: field/well/run1/pass4
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

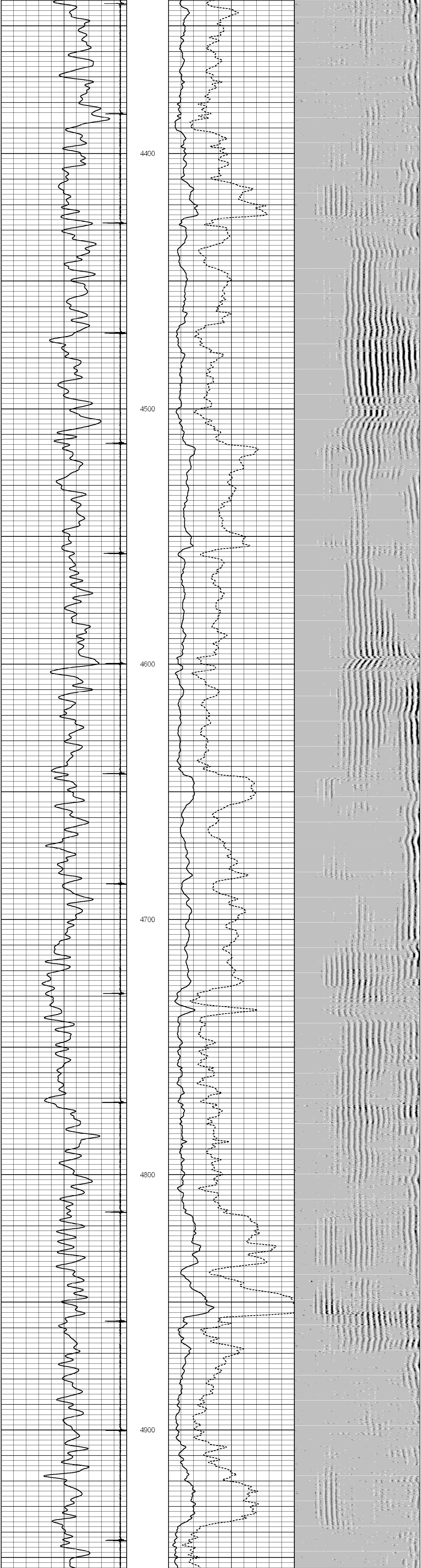
Database File: kohlhoff usx ab 17-02p.db
Dataset Pathname: pass4
Presentation Format: cblx
Dataset Creation: Wed Jul 28 09:17:59 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

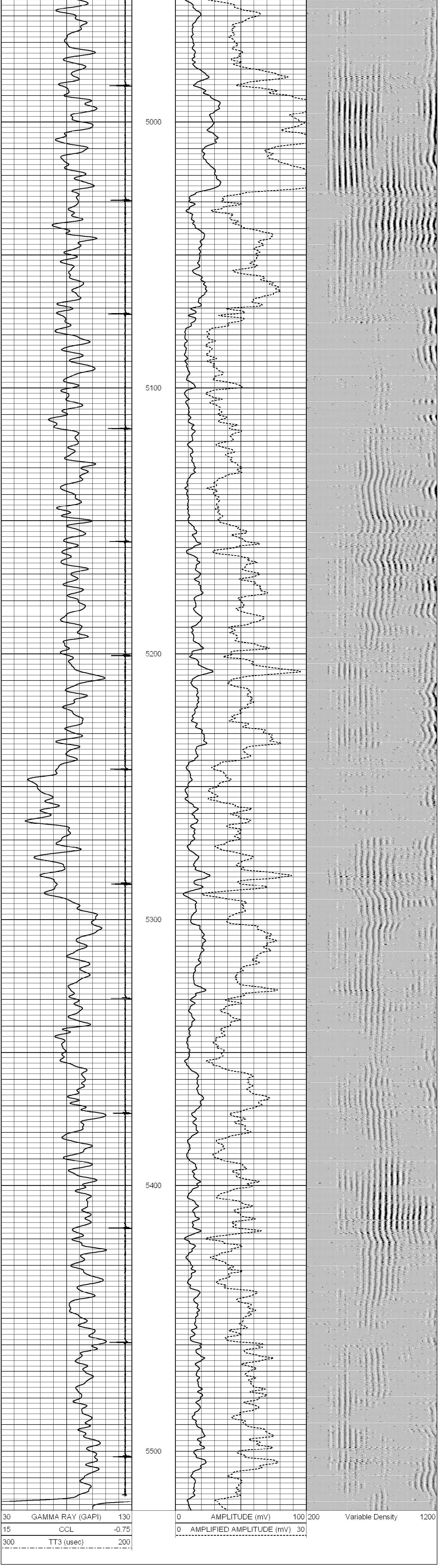




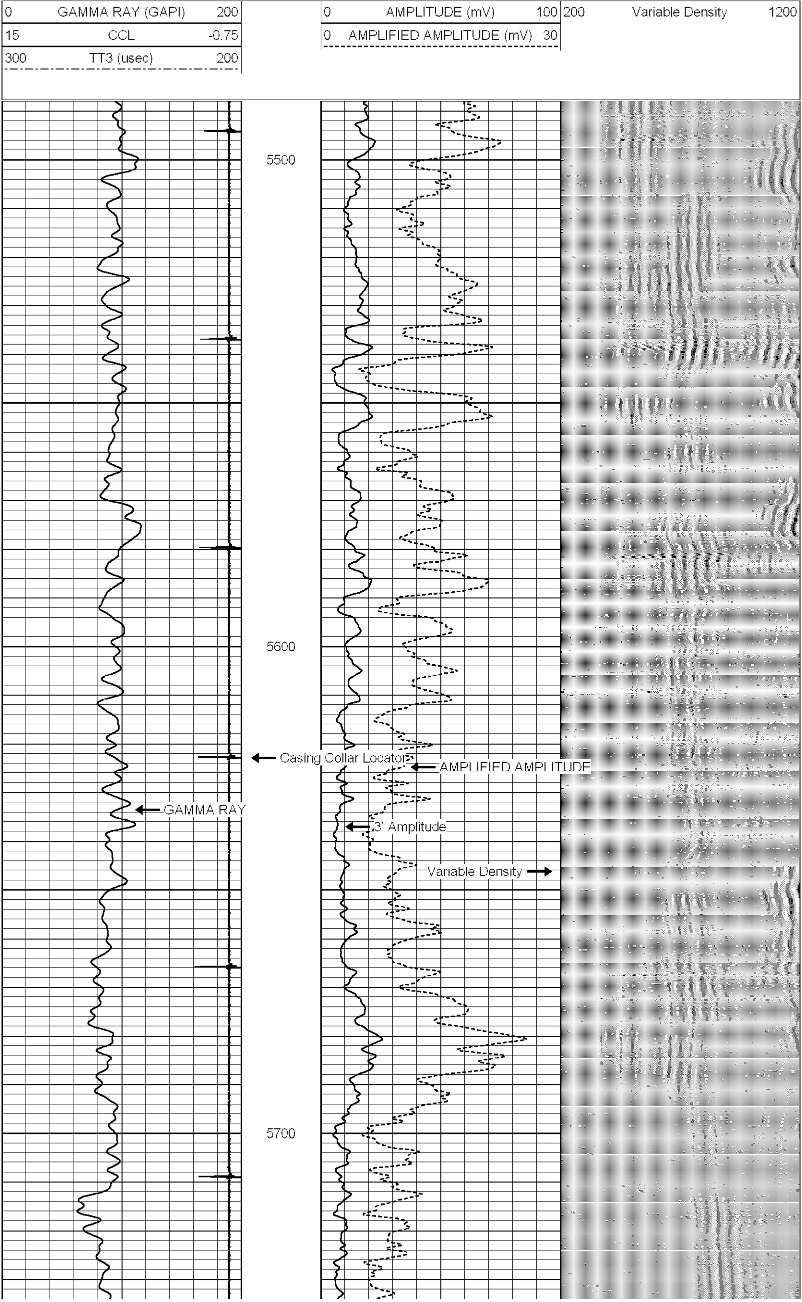


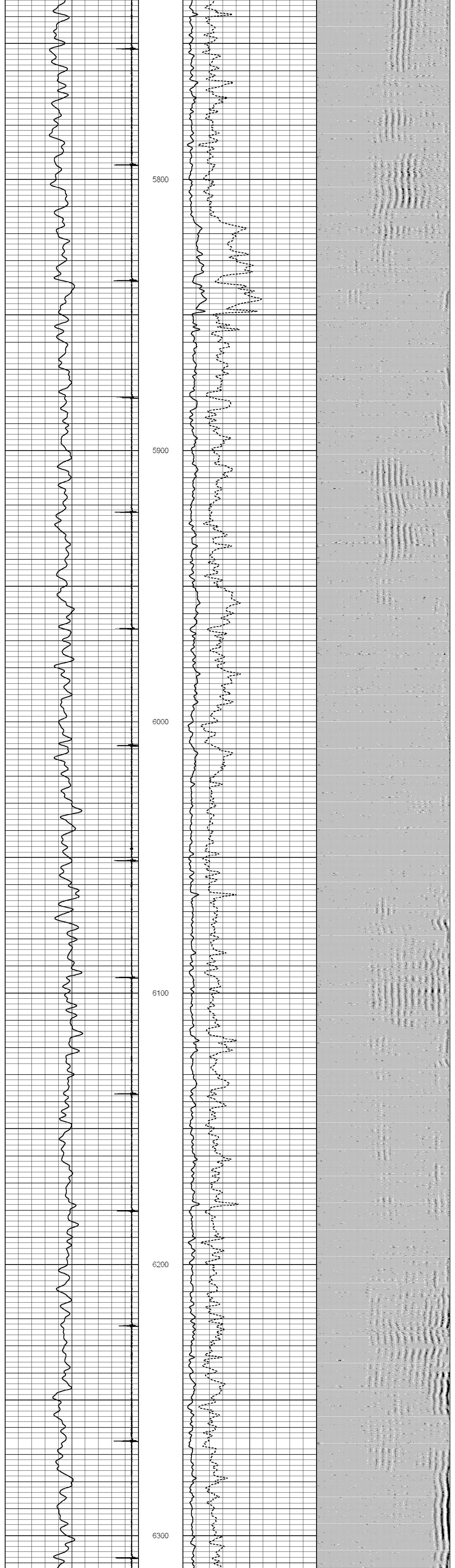


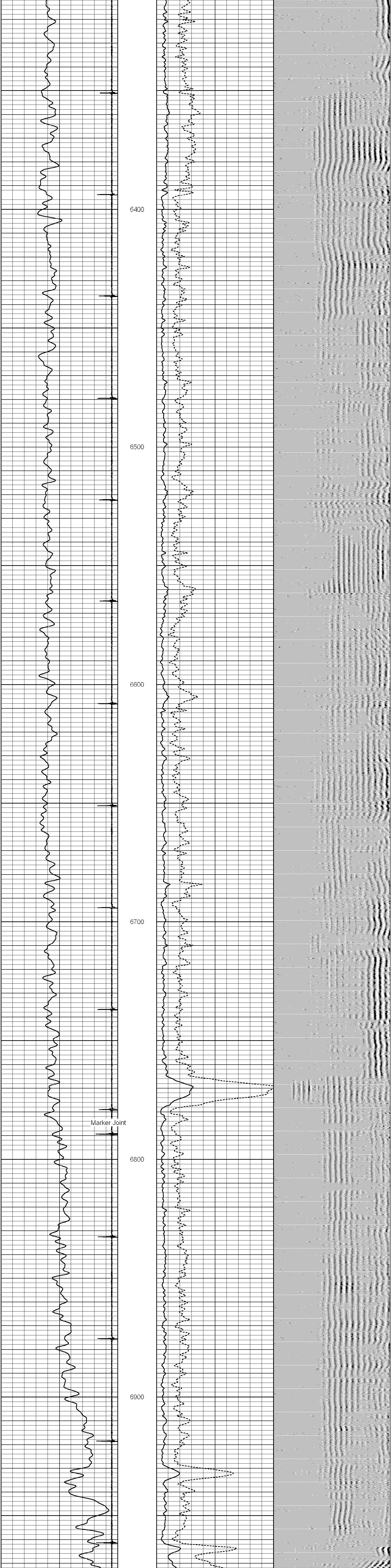


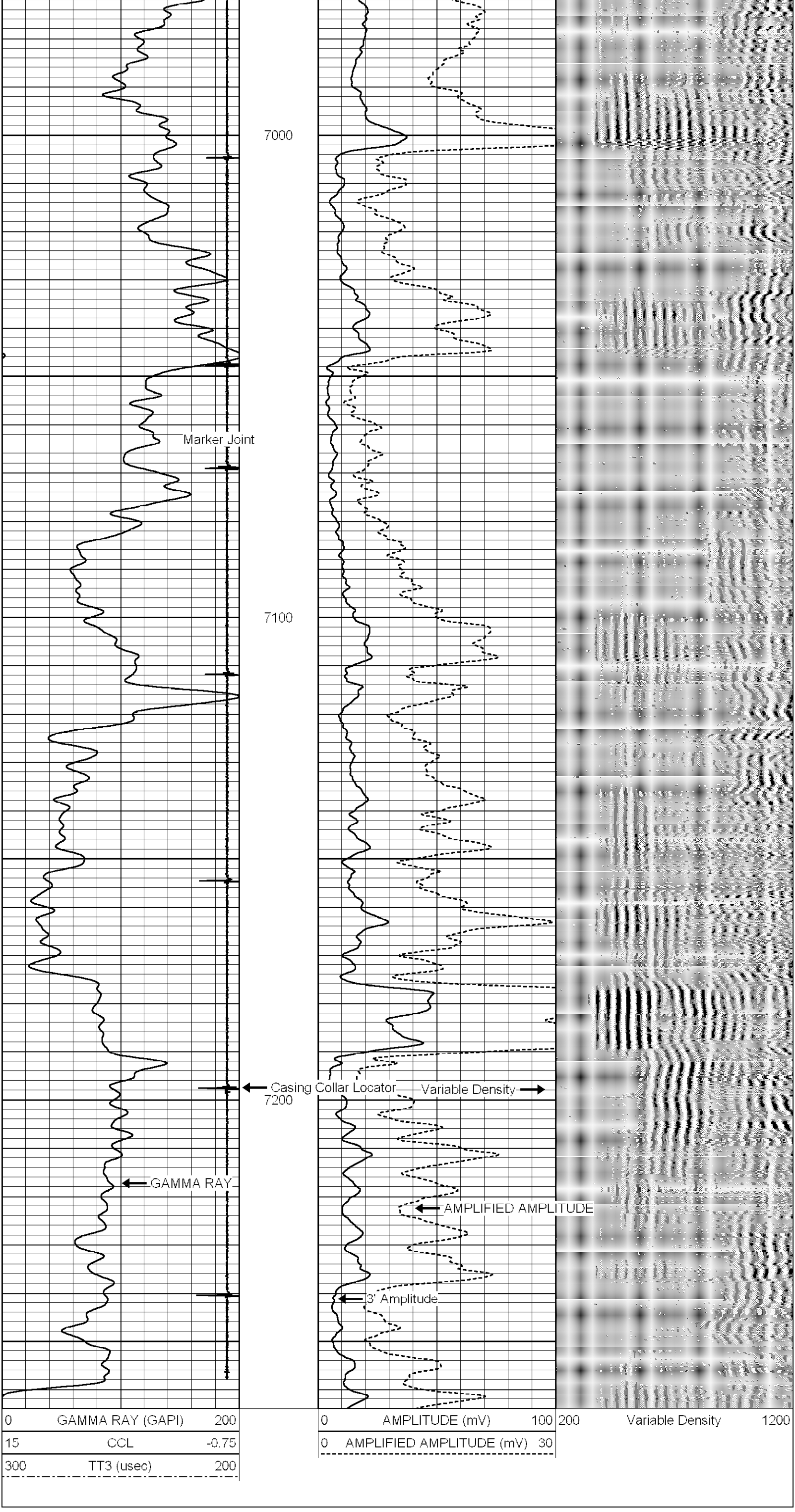


Database File:	kohlhoff usx ab 17-02p.db
Dataset Pathname:	pass3
Presentation Format:	cblx
Dataset Creation:	Wed Jul 28 08:50:31 2010 by Log Std Casedhole 08121
Charted by:	Depth in Feet scaled 1:240









Calibration Report

Database File:	kohlhoff usx ab 17-02p.db
Dataset Pathname:	pass4
Dataset Creation:	Wed Jul 28 09:17:59 2010 by Log Std Casedhole 08121

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Wed Jul 28 08:26:08 2010		
Depth:	1557.16	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:	0.05	0	V
Reading in Free Pipe:	2.4999	2.5	V
Gain:	31.9181	31.2784	
Offset:	1.4041	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