

HALLIBURTON

ACOUSTIC CEMENT
BOND LOG

Company		WILLIAMS PRODUCTION RMT CO						
Well		CTR 323-25-597						
Field		GRAND VALLEY						
County		GARFIELD		State	CO			
Company		WILLIAMS PRODUCTION RMT CO						
Well		CTR 323-25-597						
Field		GRAND VALLEY						
County		GARFIELD		State	CO			
API No.:		05045163110000		Serv #:	6435188			
Location:		SURFACE HOLE:		Other Services				
X: 1231038.10		Y: 648736.70						
BOTTOM HOLE:				RMTE				
X : 1229676.50		Y: 649152.70						
Sec: 25		Twp: 5S		Rge: 97W				
Permanent Datum		GROUND LEVEL		Elevation	8430'			
Log Measured From		K.B. , 27 Ft. above perm. datum		K.B.	8457'			
Drilling Measured From		K.B.		D.F.	8456'			
				G.L.	8430'			
Date @ Time Logged		16 JAN 2009 @ 08:00		Type Fluid in Hole	WATER			
Run No.		ONE		Density of Fluid	8.34#			
Depth - Driller		9794'		Fluid Level	FULL			
Depth - Logger		9752'		Cement Top Est. Logged	LOGGED			
Bottom - Logged Interval		9748'		Equipment / Location	10678538 / G.J.			
Top - Log Interval		SURFACE		Recorded by	JARRASCUE			
Max. Recorded Temp.		255 DGF		Witnessed by	N/A			
CEMENTING DATA		Surface		Protection	Liner			
Date / Time Cemented		String		Production				
Primary / Squeeze				String				
Expected								
Compressive Strength		psi@ hrs		psi@ hrs	psi@ hrs			
Cement Volume								
Cement Type / Weight		/		/	/			
Formulation								
Mud Type / Mud Wgt.		/		/	/			
Borehole Record		Casing & Tubing Record						
Run Number		Bit	From	To	Size	Weight	From	To
ONE		14.75"	SURFACE	2893'	9.625"	32.3#	SURFACE	2893'
TWO		7.875"	2893'	9794'	4.5"	11.6#	SURFACE	9793'

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HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHCIH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

H.E.S. ACOUSTIC CEMENT BOND LOG DATED 16 JAN 2009
PRIMARY LOG FOR THIS WELL

SHORT JOINT: 6650' - 6687'

TODAY'S CREW: R. COSSEY & D. KNOB

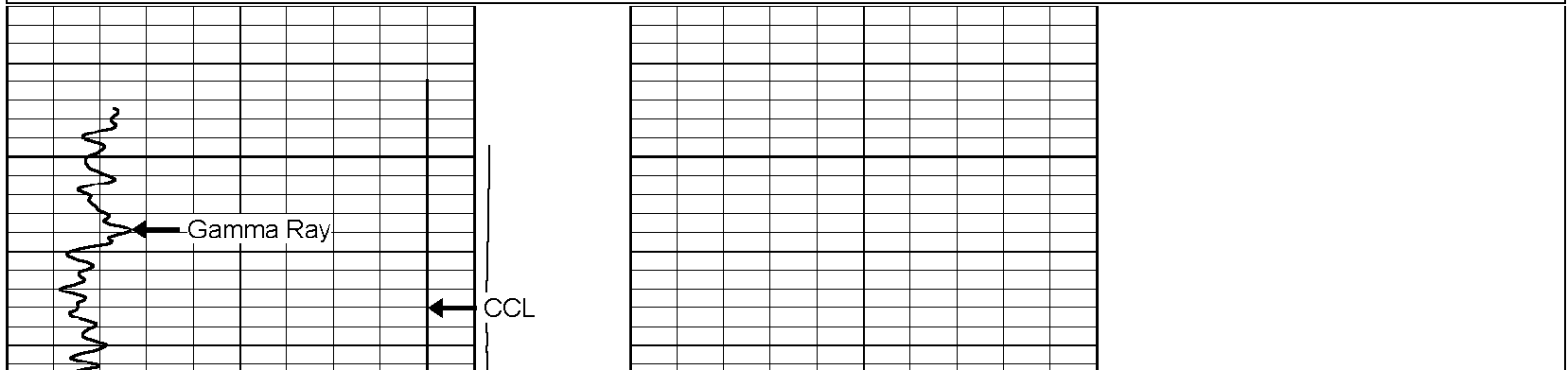
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES - GRAND JUNCTION, CO

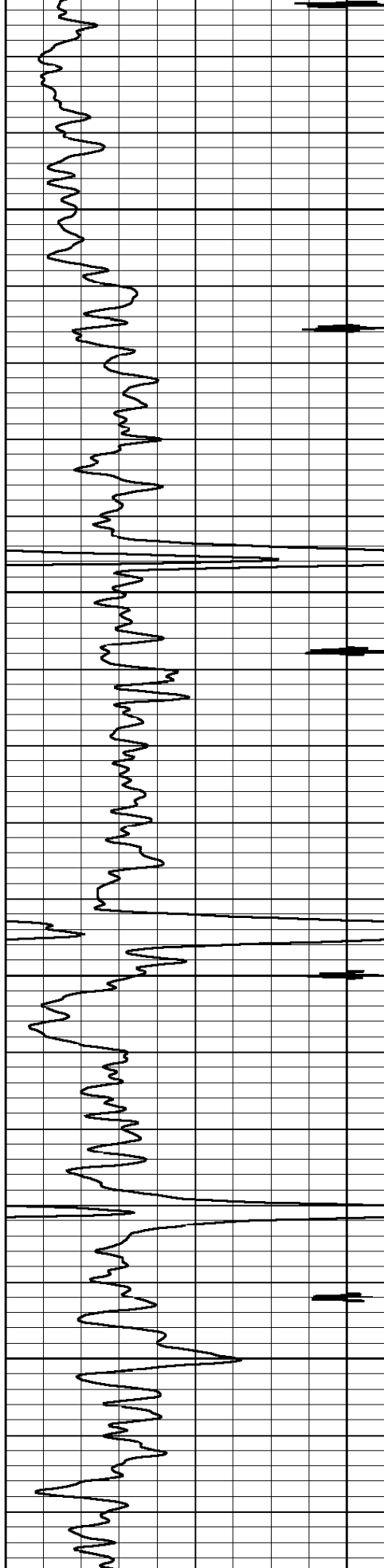
Service Ticket No.		6435188		API No.		05045163110000		PGM Ver		WARRIOR 7.0	
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client											
EQUIPMENT DATA											
GR			CCL			CBL					
Run No.	ONE		Run No.	ONE		Run No.	ONE		Run No.		
Serial No.	081015		Serial No.	081015		Serial No.	080544		Serial No.		
Model No.	GR-PROBE		Model No.	CCL-PROBE		Model No.	CBL-PROBE		Model No.		
Diameter	2.75"		Diameter	2.75"		Diameter	2.75"		Diameter		
LOGGING DATA											
General Data											
Pass	Depths			Well Head		Speed		Logging Run Comments			
No.	From	To	Pressure		Ft/Min						
ONE	9752'	9500'	0 PSI		65		REPEAT LOG SECTION				
TWO	9752'	SURFACE	0 PSI		65		MAIN LOG SECTION				
	GR		CCL		AMP		MSG				
Pass	Scale		Scale		Scale		Scale				
No.	L	R	L	R	L	R	L	L			
ONE	0	200	-9	1	0	100	200	1200			
DIRECTIONAL INFORMATION											
Maximum Deviation			deg. @			KOP					

HALLIBURTON	ACOUSTIC CEMENT BOND LOG
	MAIN LOG SECTION
	5"=100'

Database File:	tr_323_25_597_cbl.db
Dataset Pathname:	GRAND_VAL/TR_323_25/run1/MAIN_CBL
Presentation Format:	CBL_PR~1
Dataset Creation:	Sat Jan 17 09:14:24 2009
Charted by:	Depth in Feet scaled 1:240

430	TRAVEL TIME (usec)	230	LTEN	0	AMP AMPLITUDE (mV)	10	200	MSG	1200
-9	Collar Locator	1	0	(lb)1500	0	AMPLITUDE (mV)	100		
0	Gamma Ray (GAPI)	200							

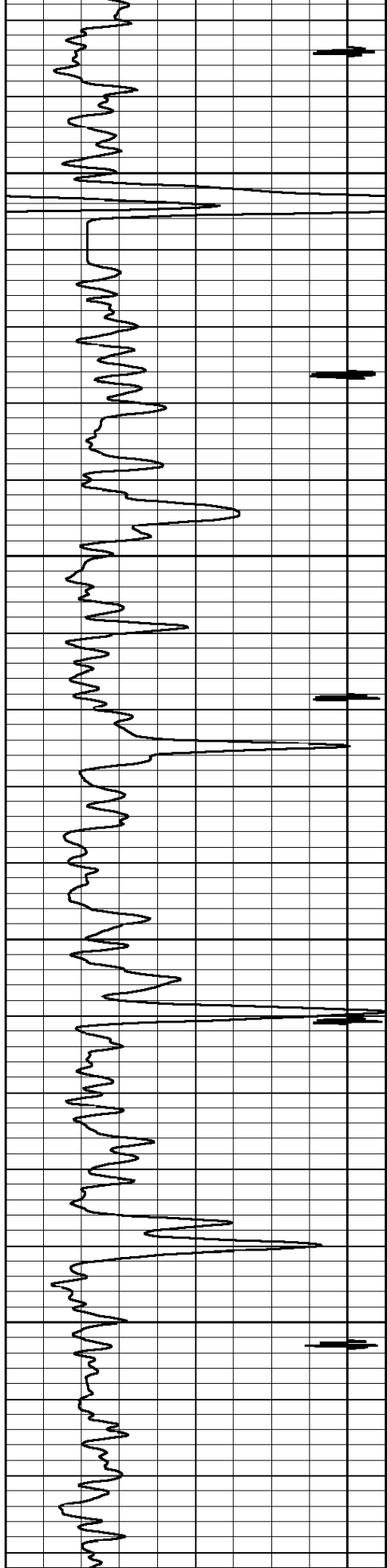




← LTEN

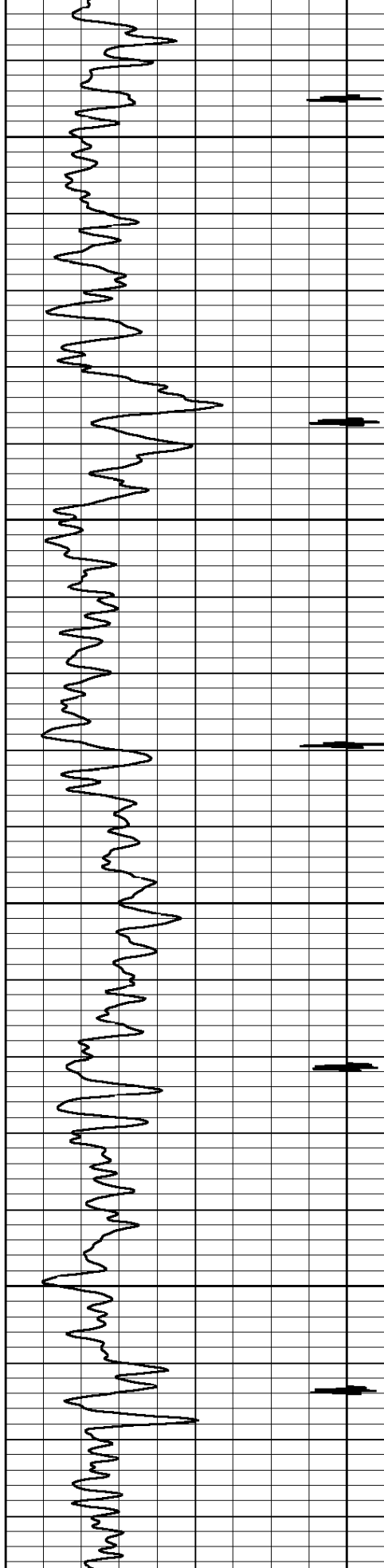
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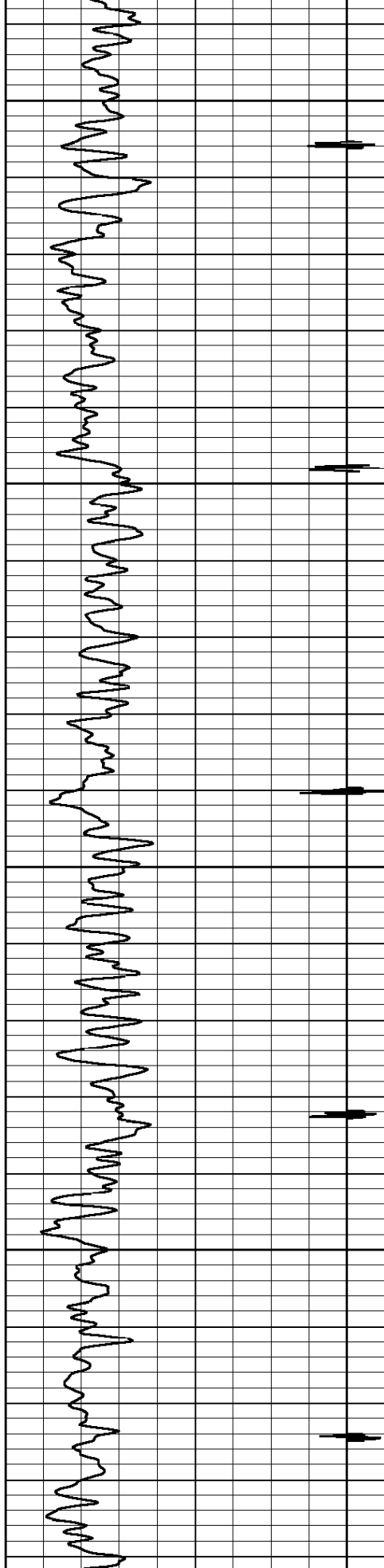
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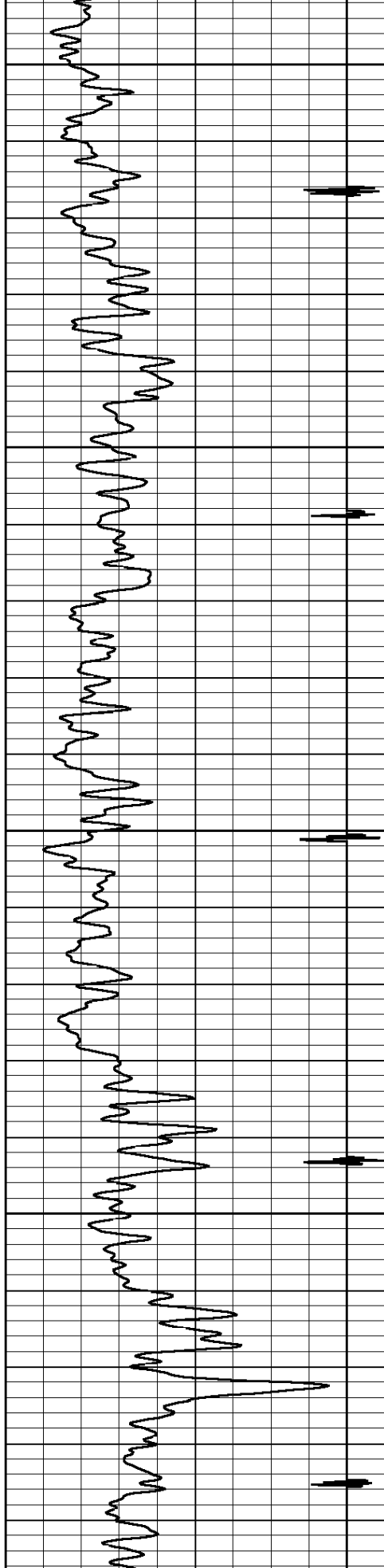
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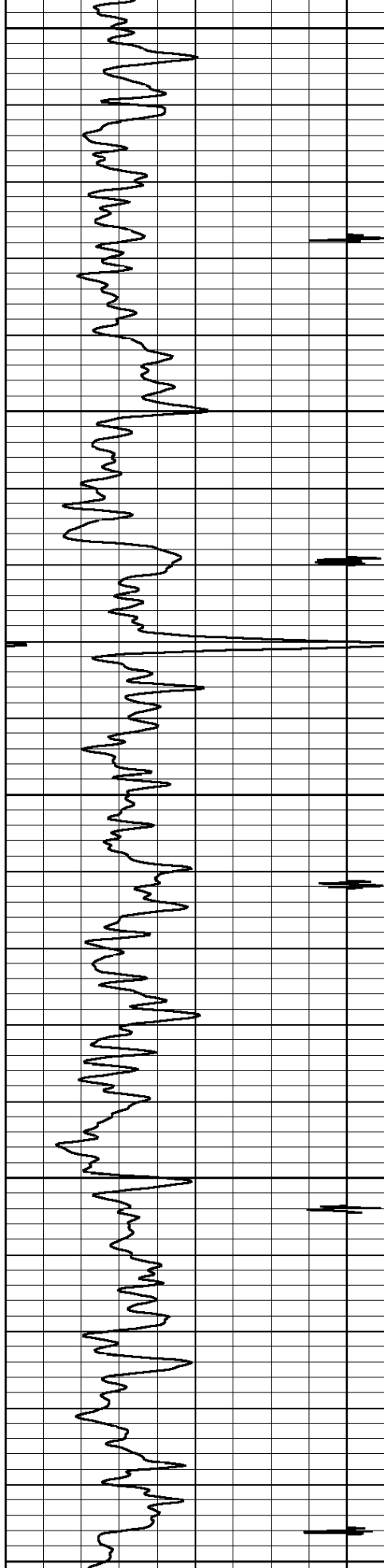
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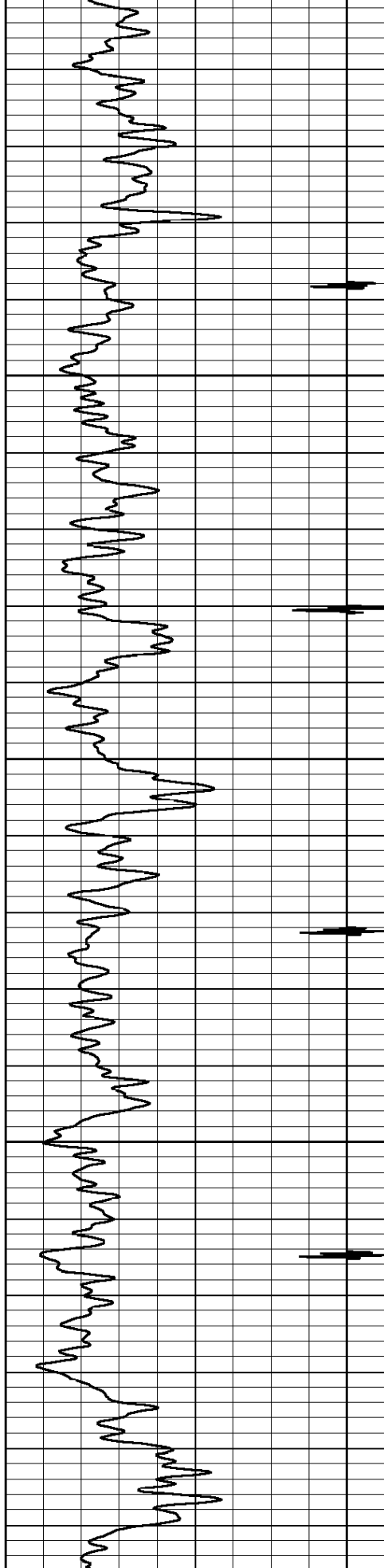
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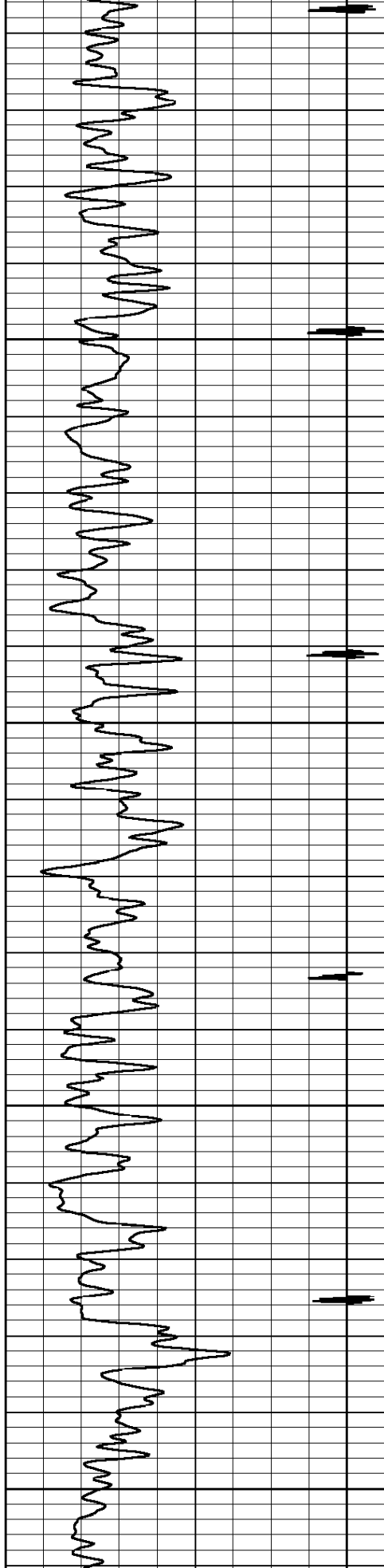
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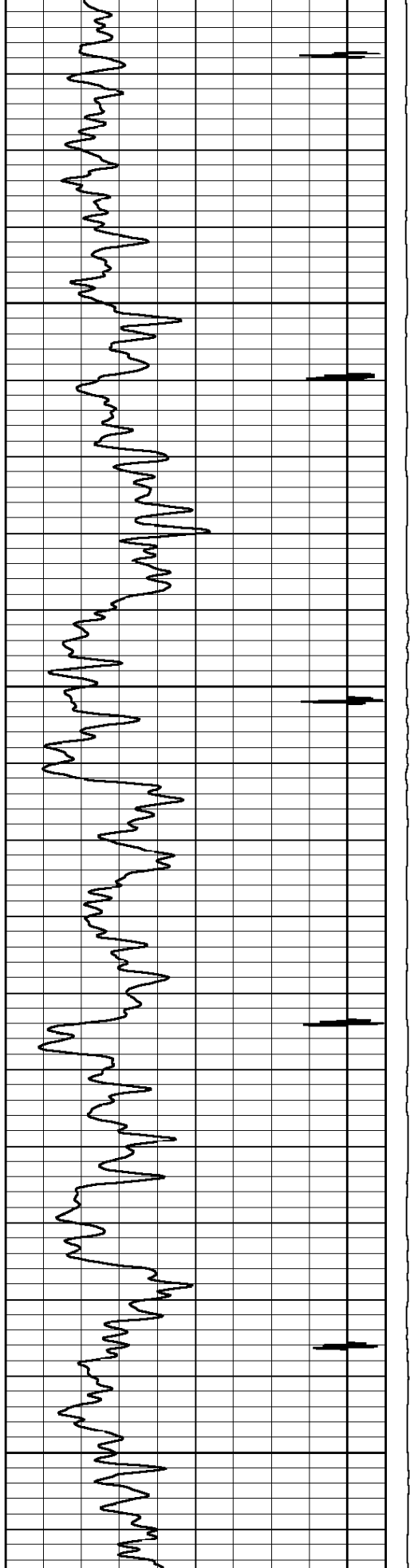
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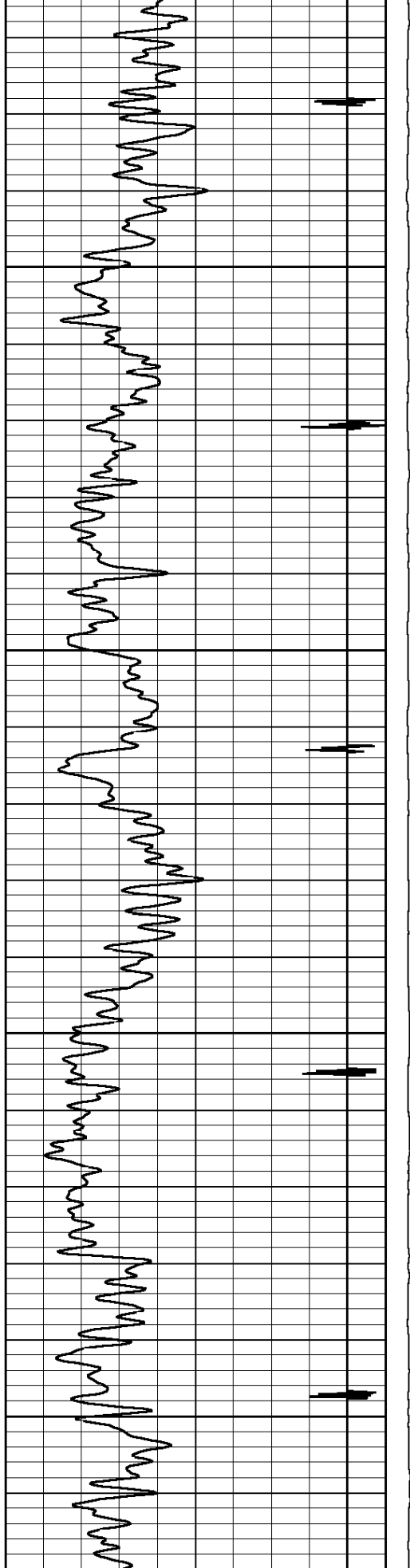
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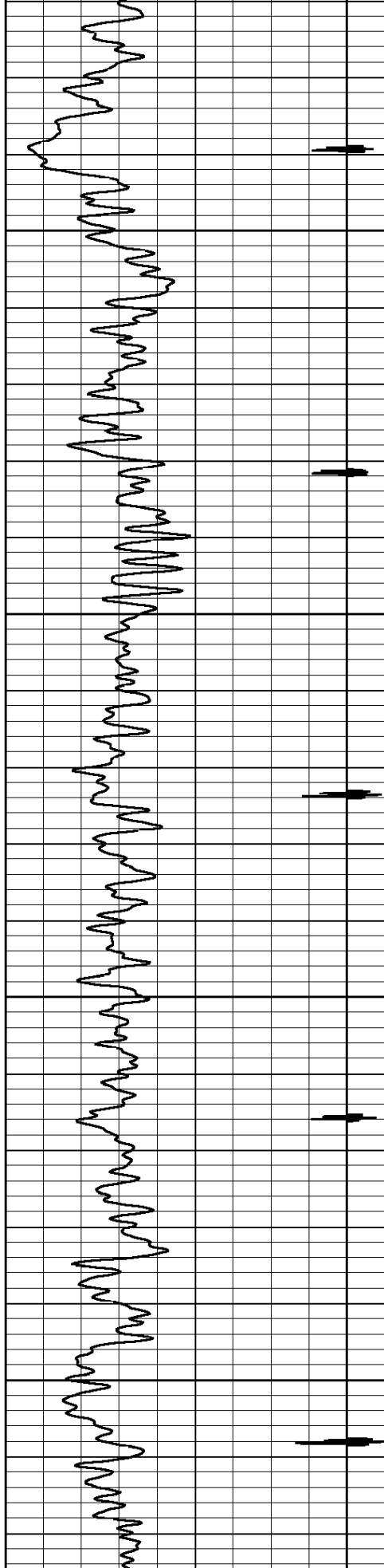
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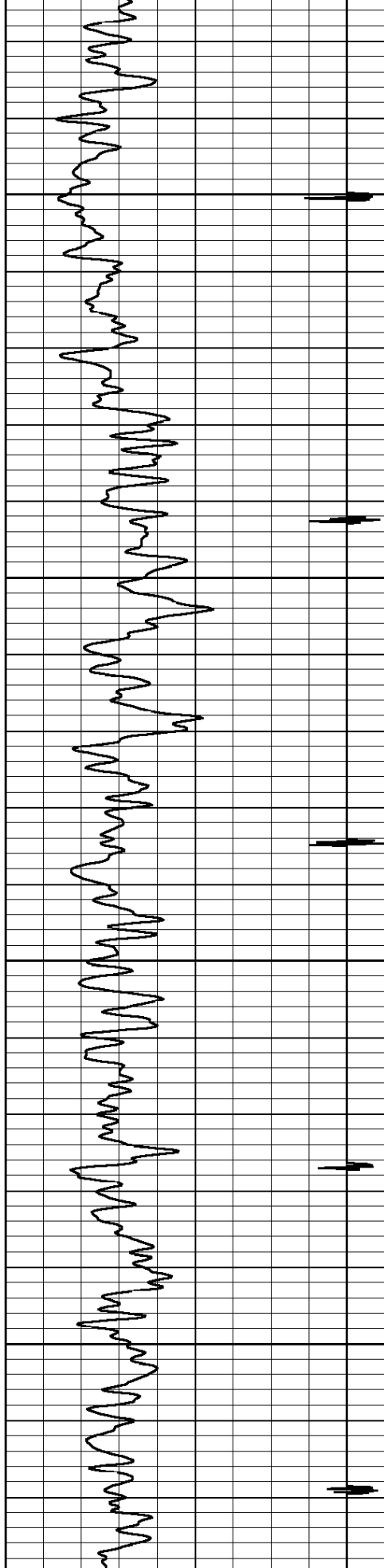
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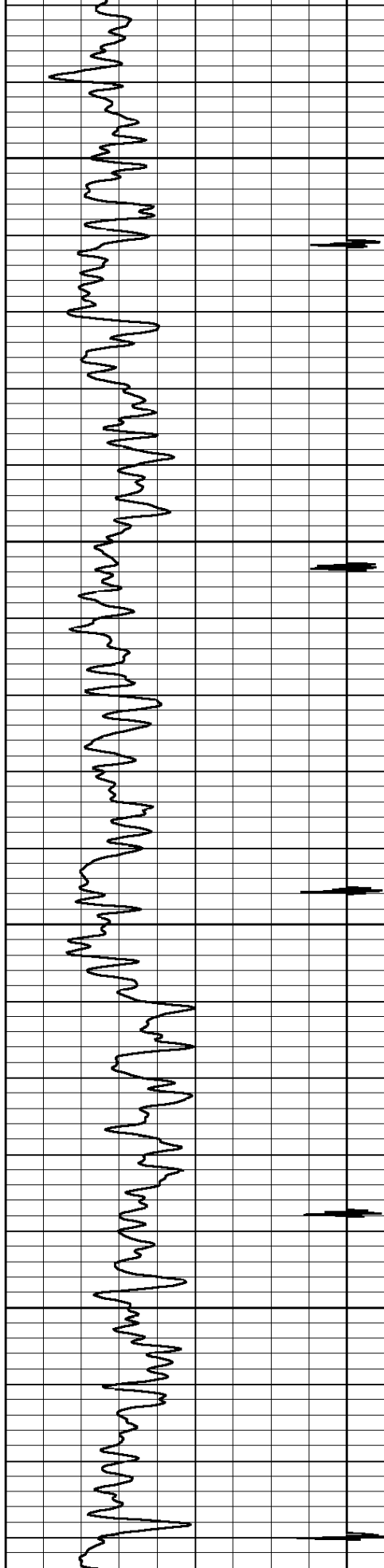
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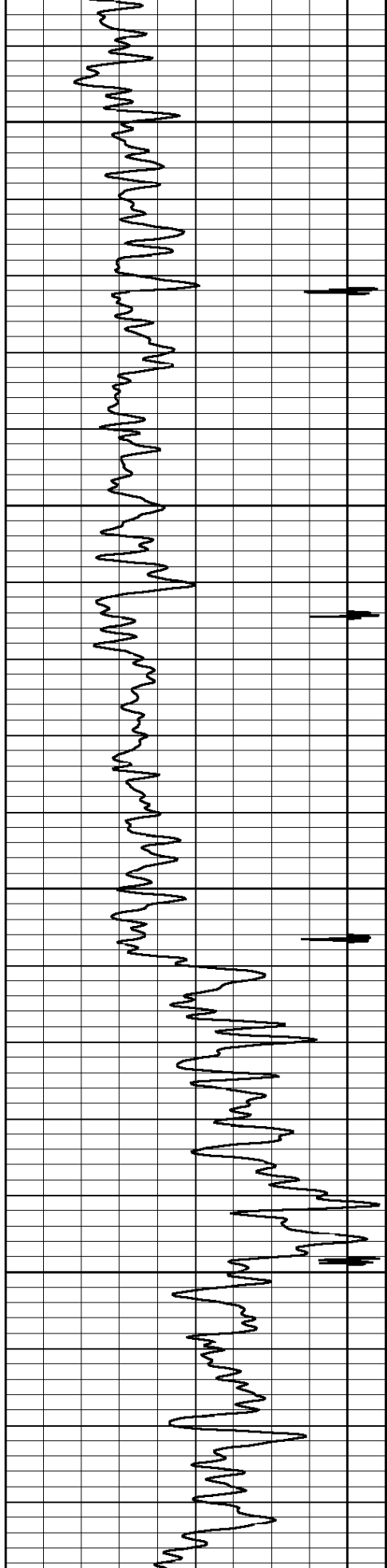
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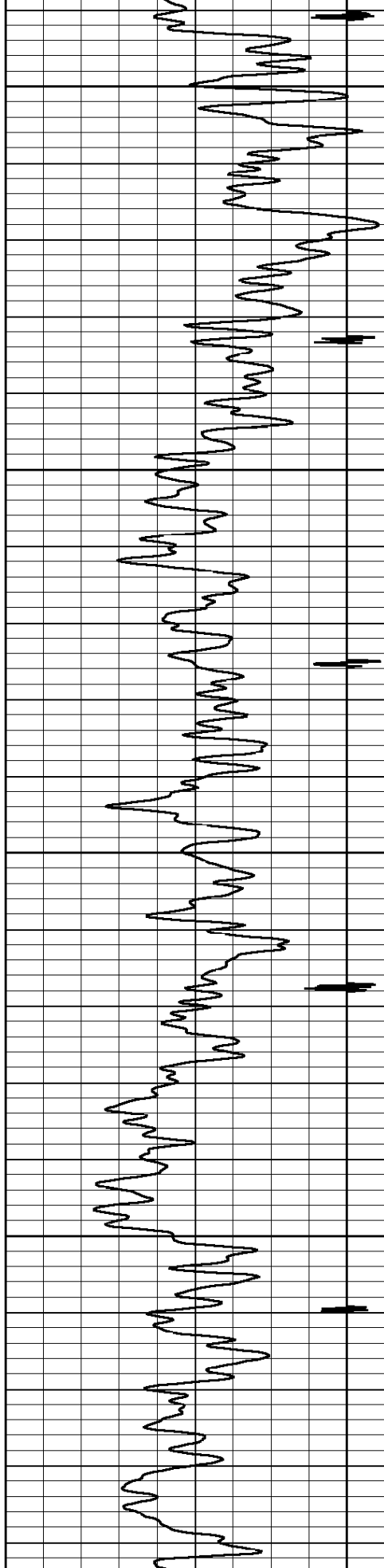
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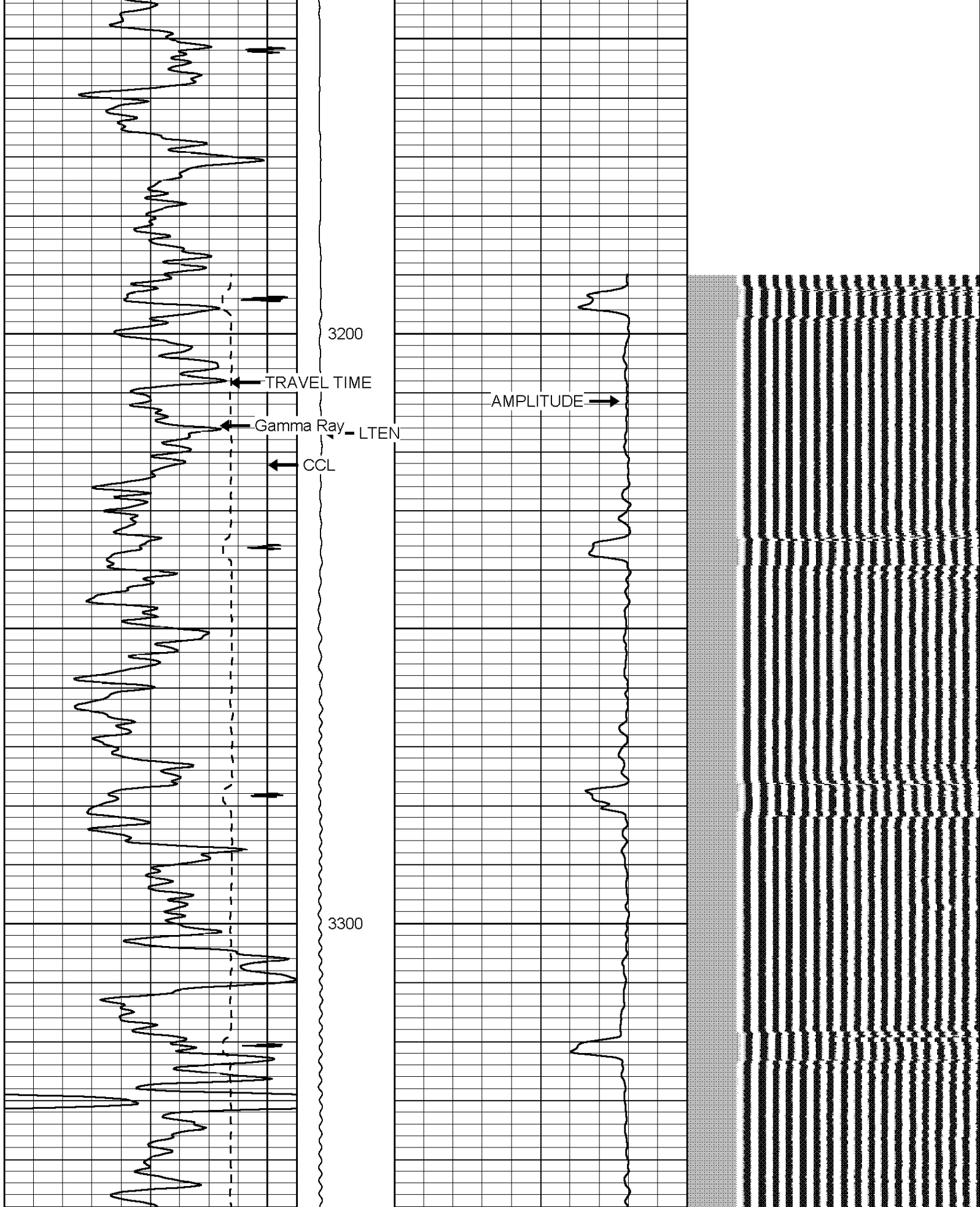
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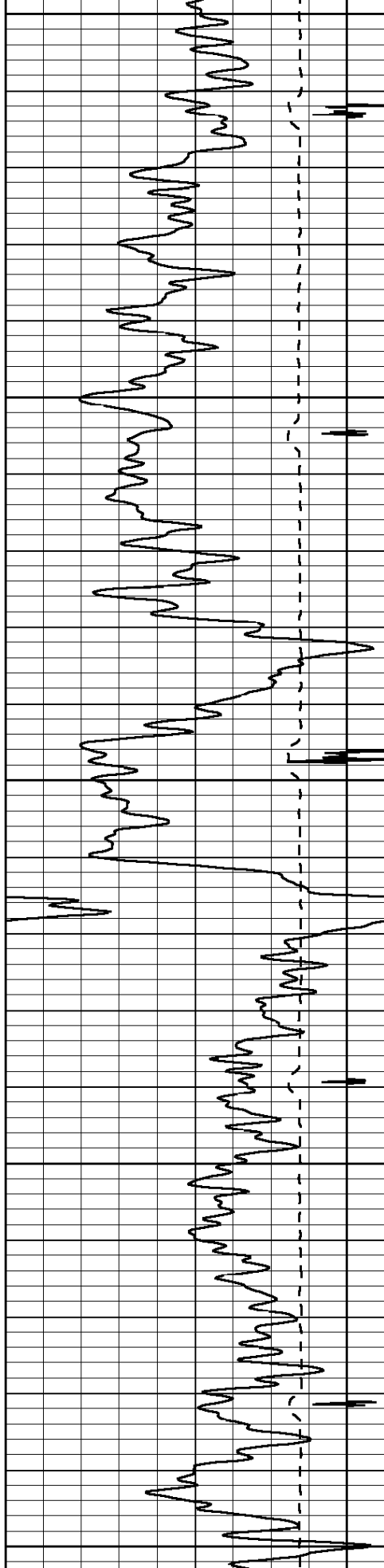
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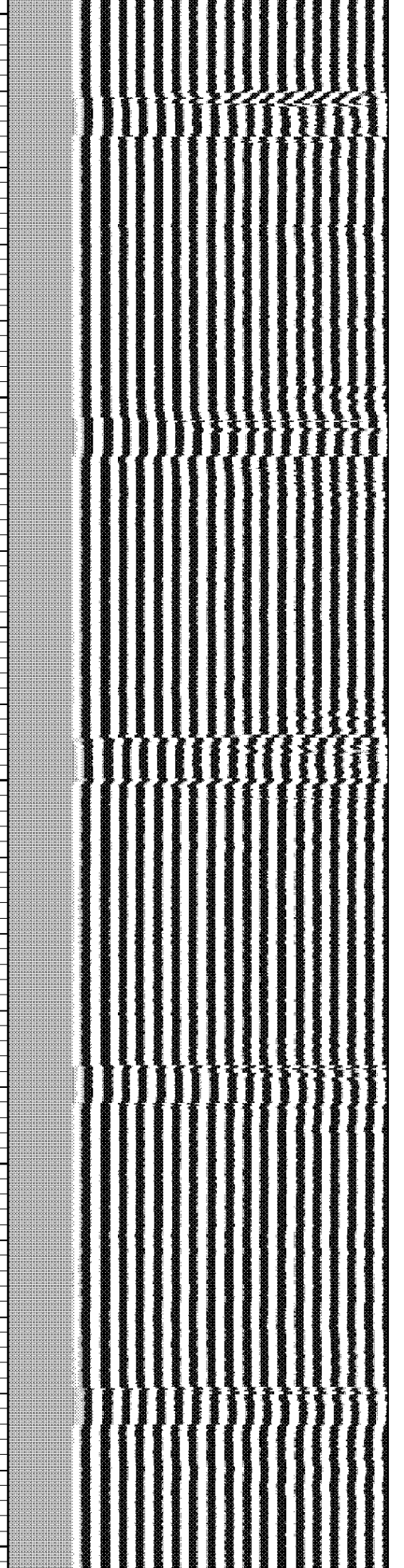
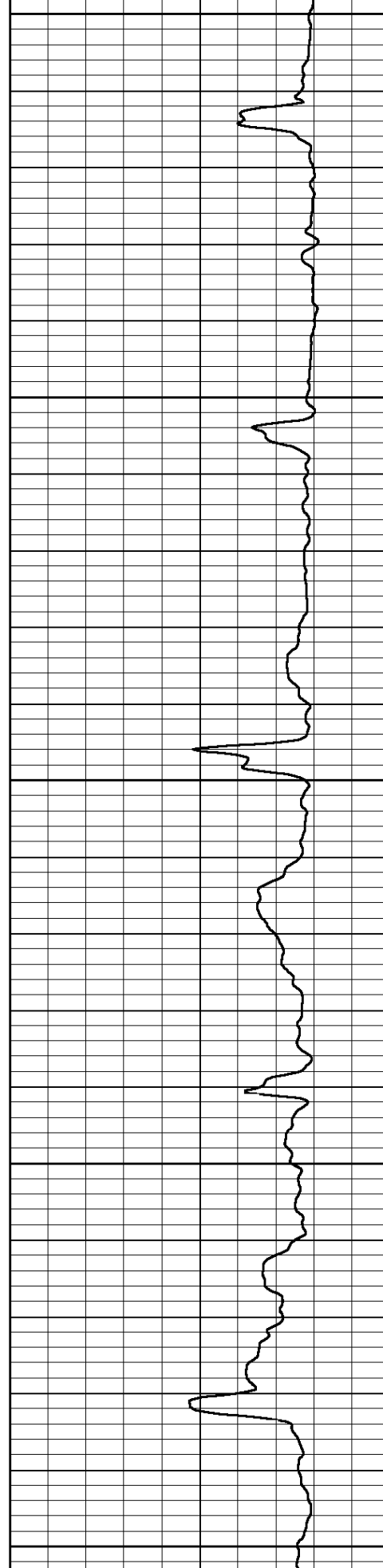
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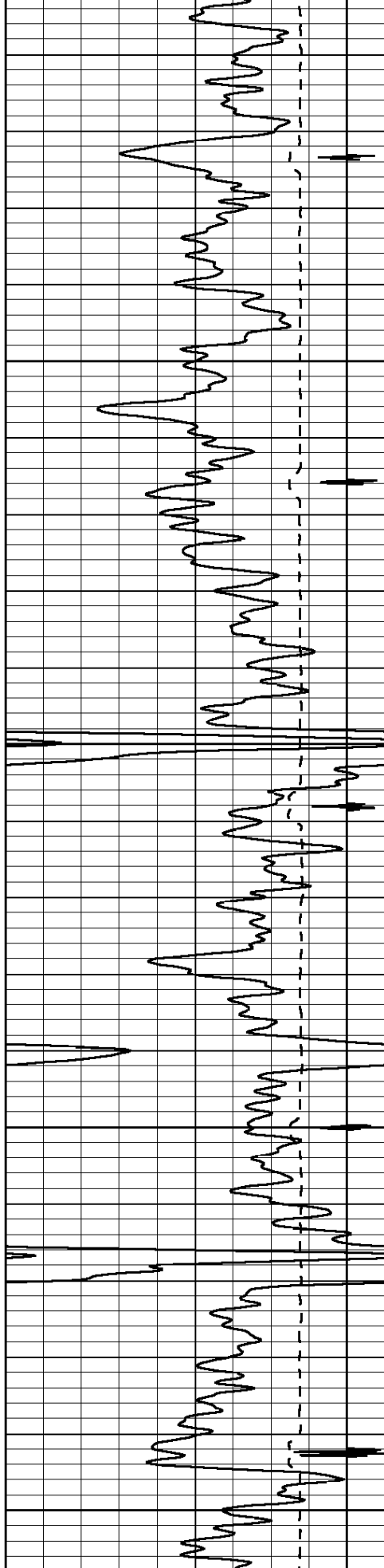




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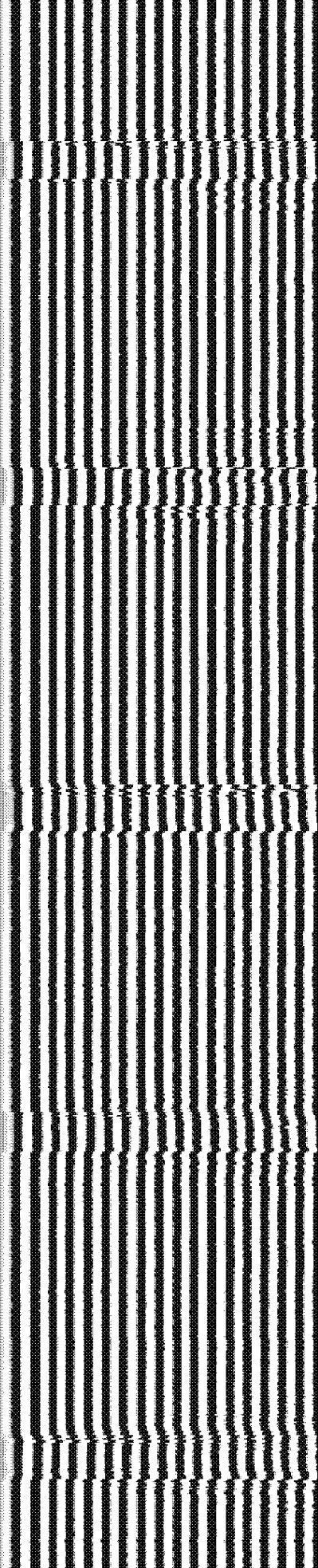
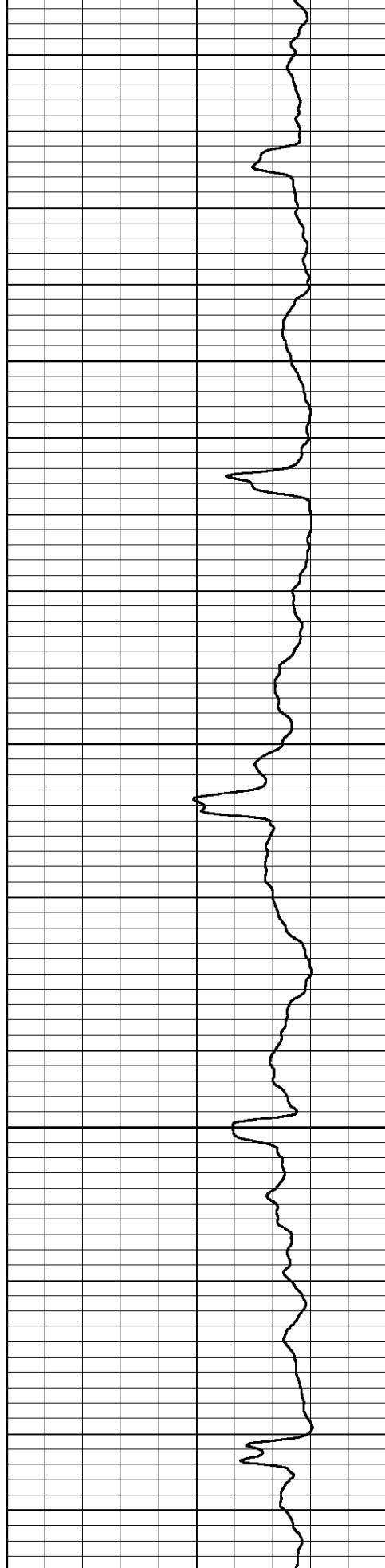
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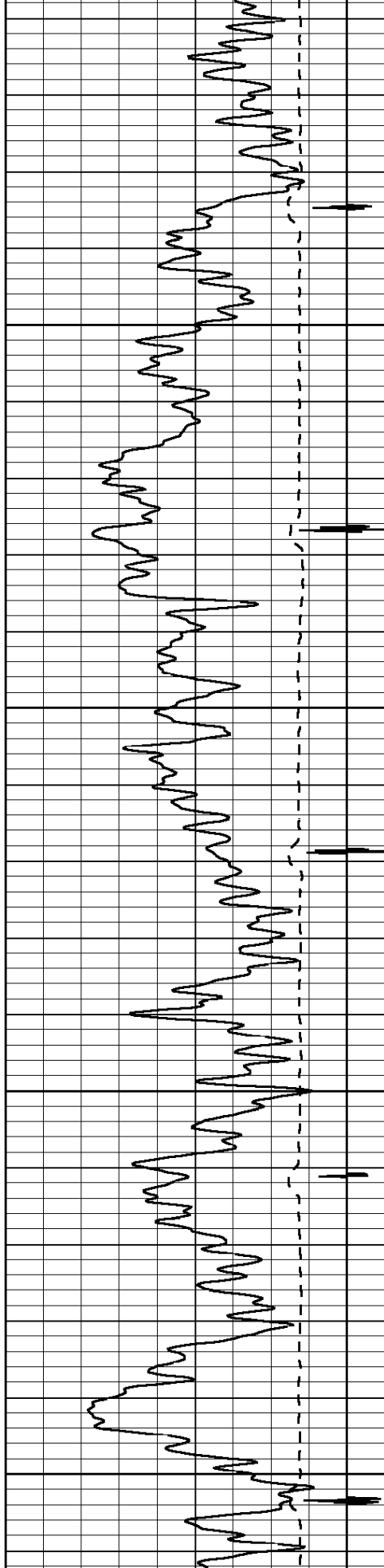




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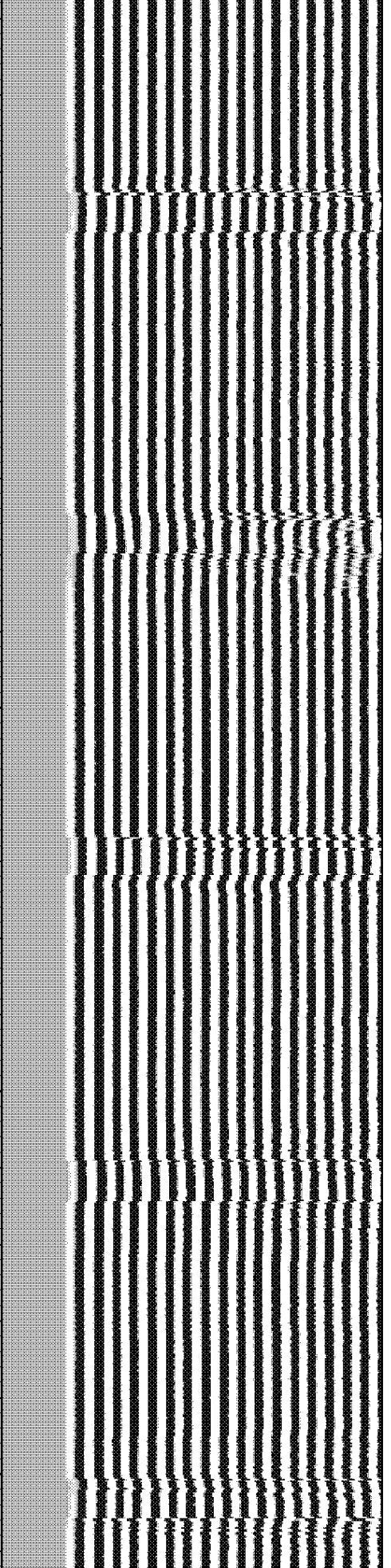
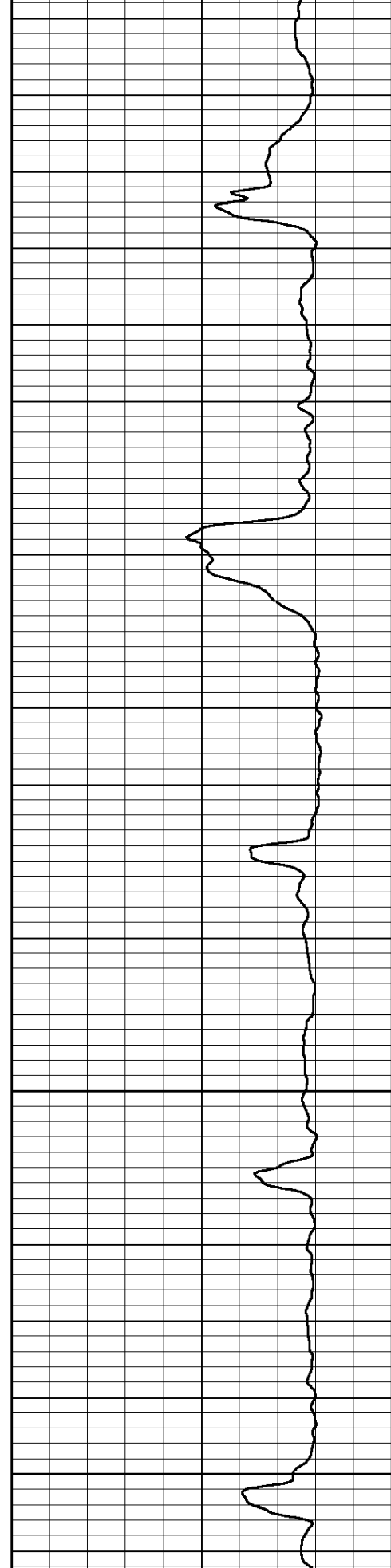
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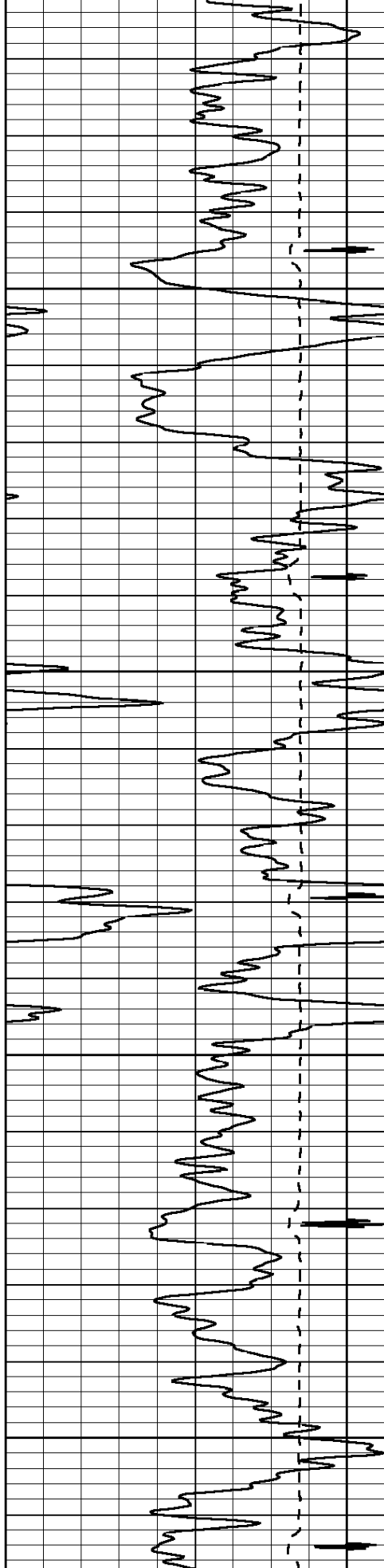




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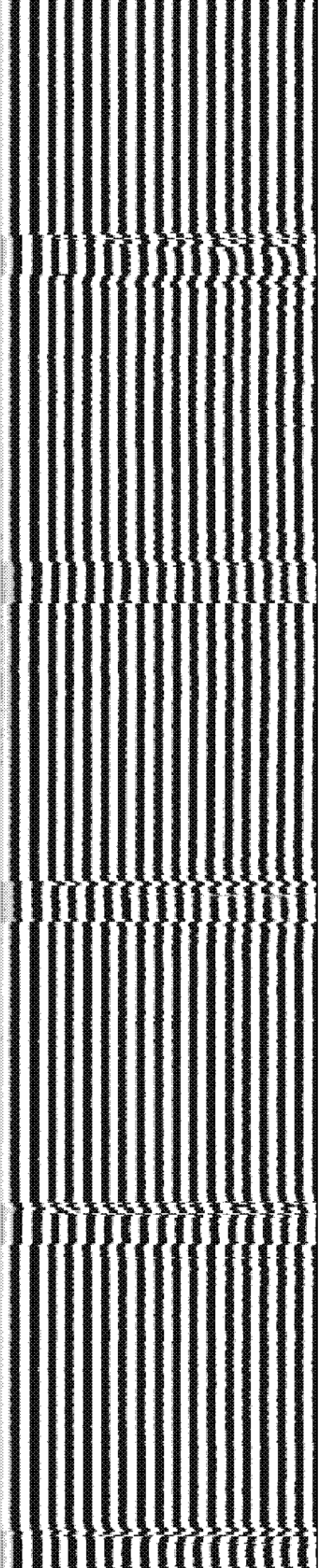
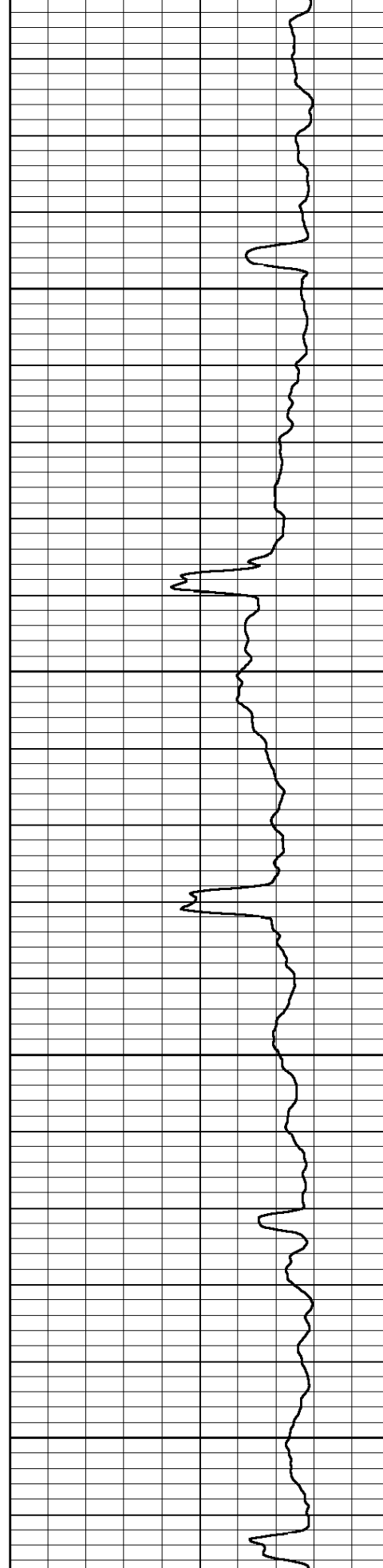
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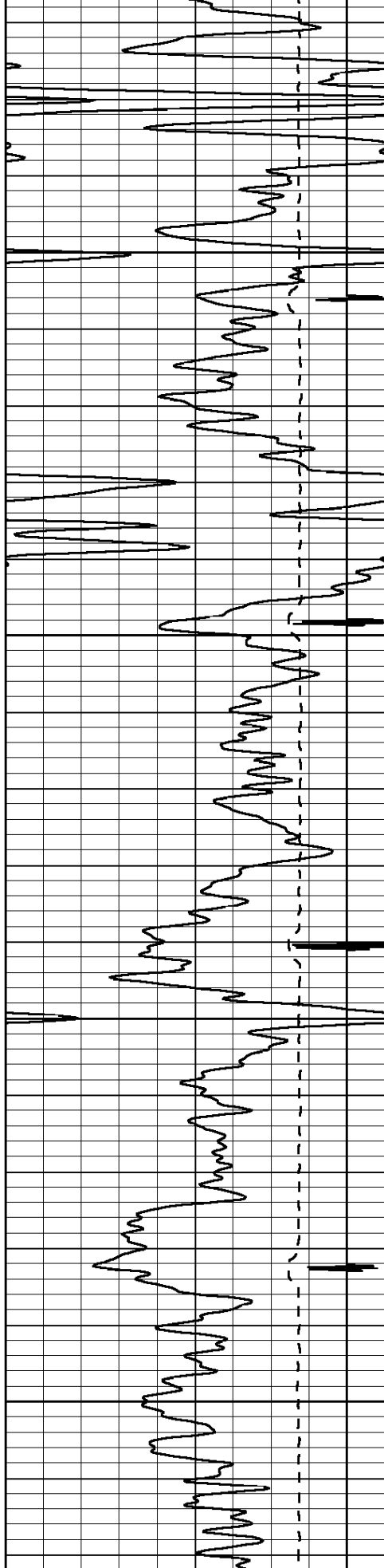




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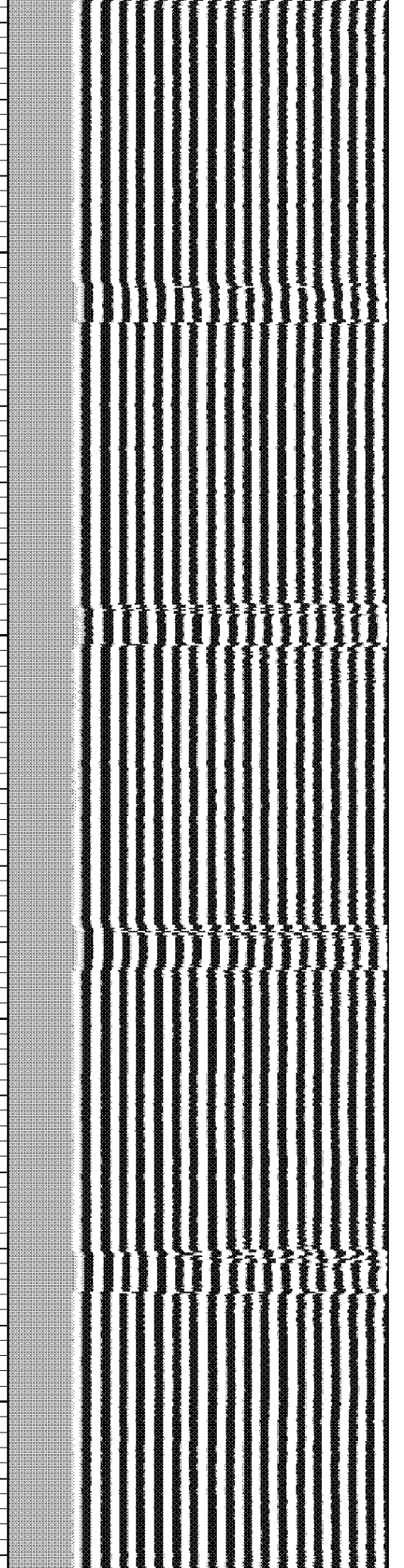
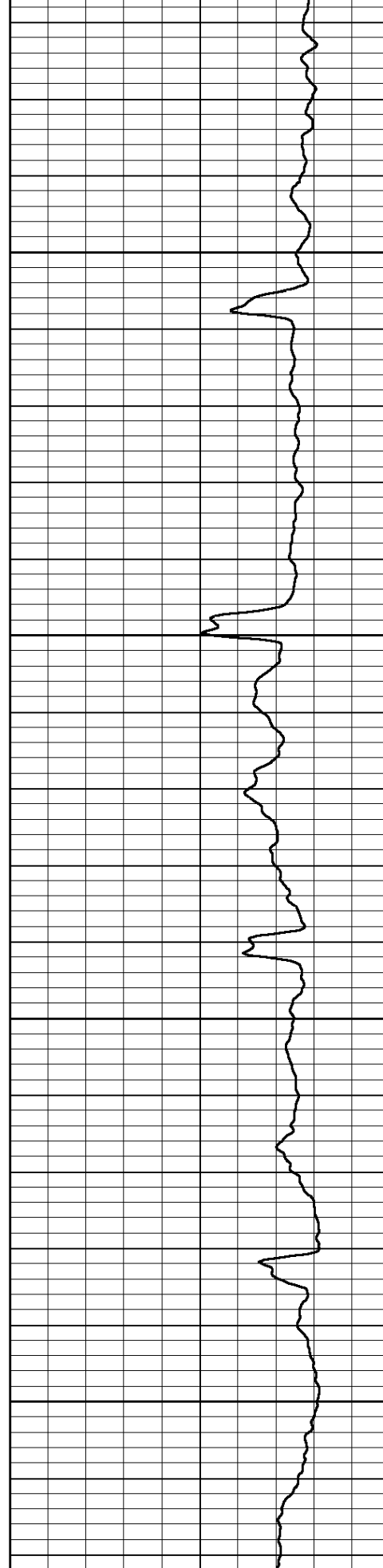
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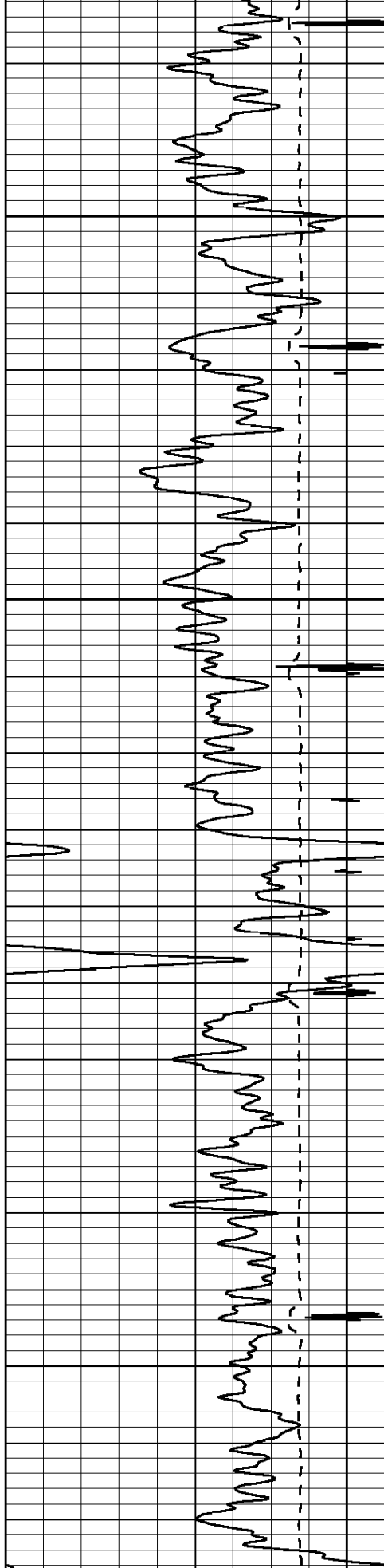




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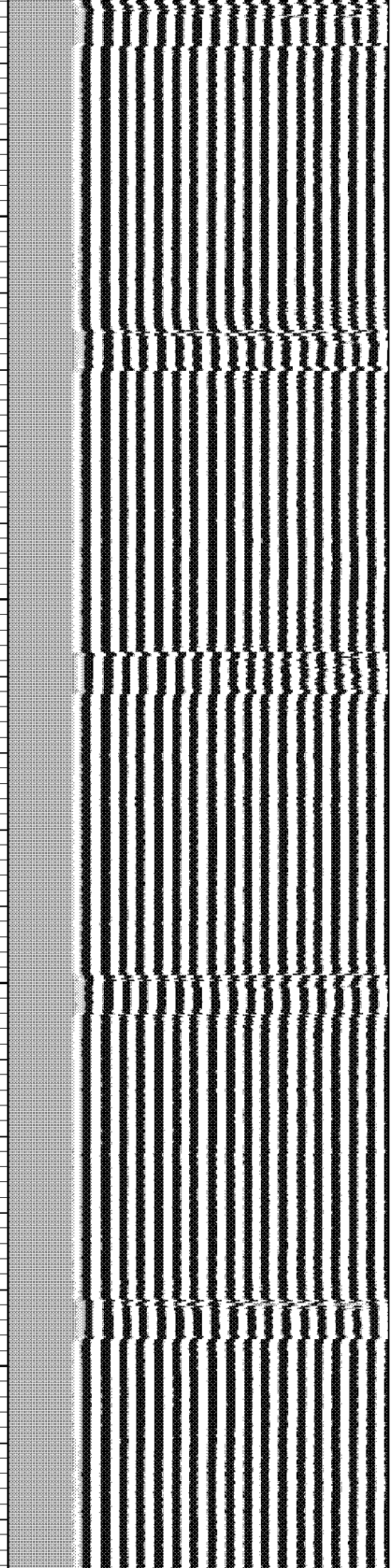
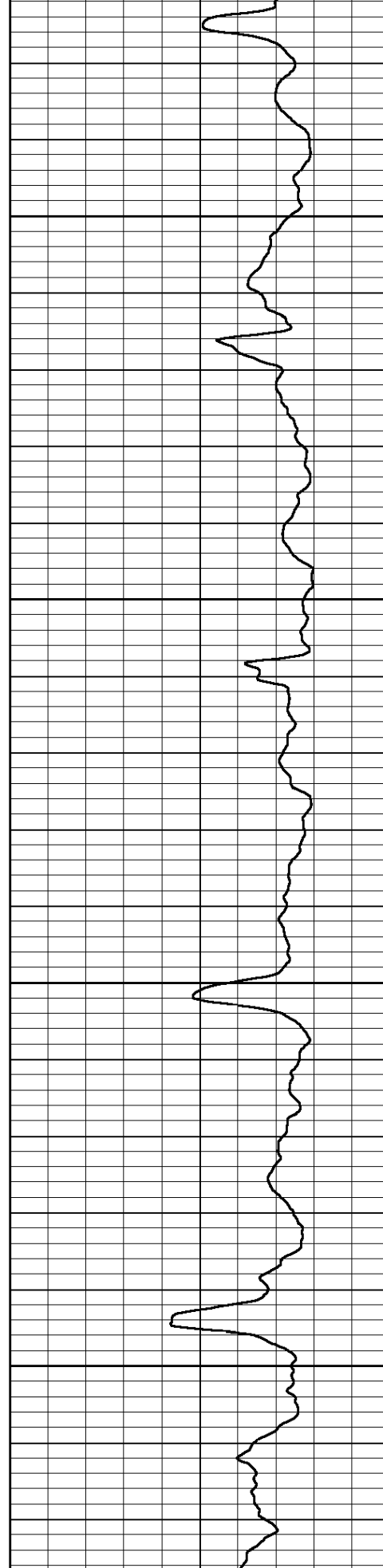
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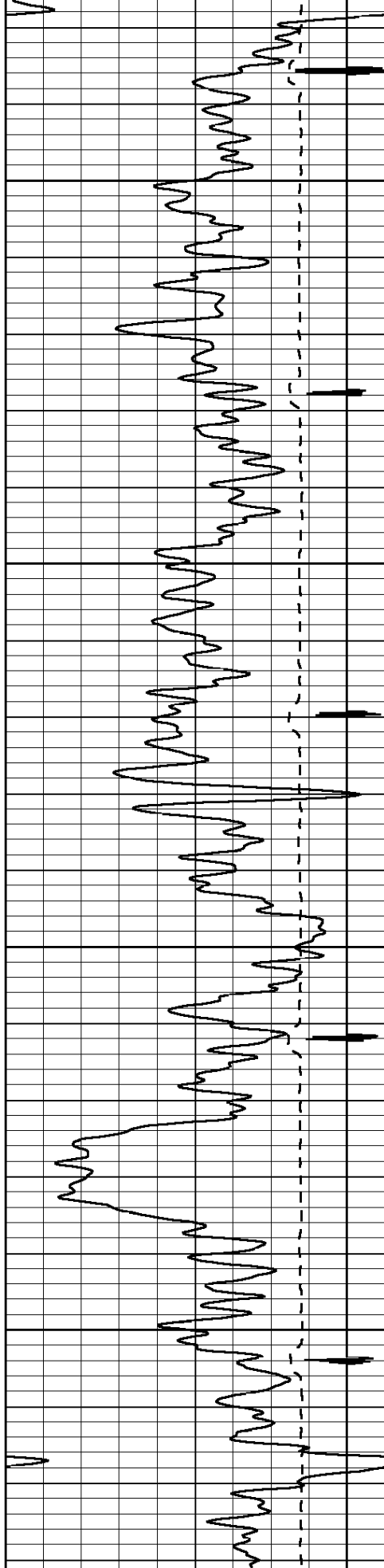




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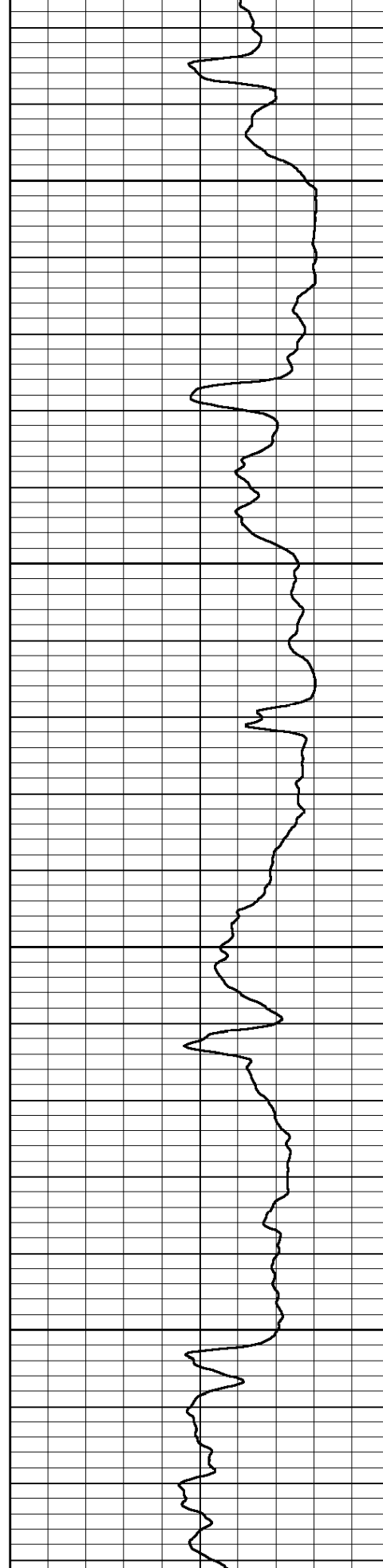
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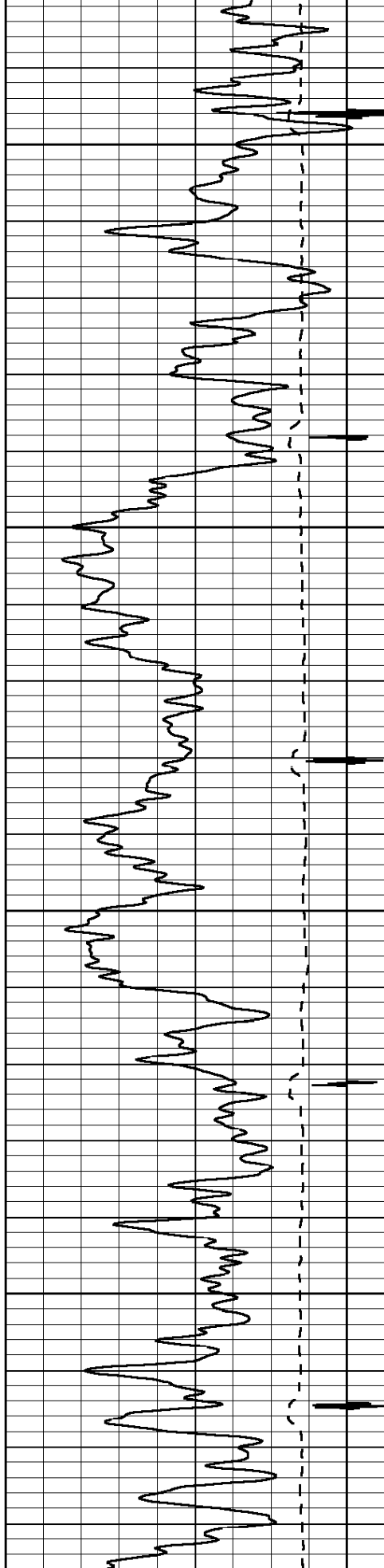




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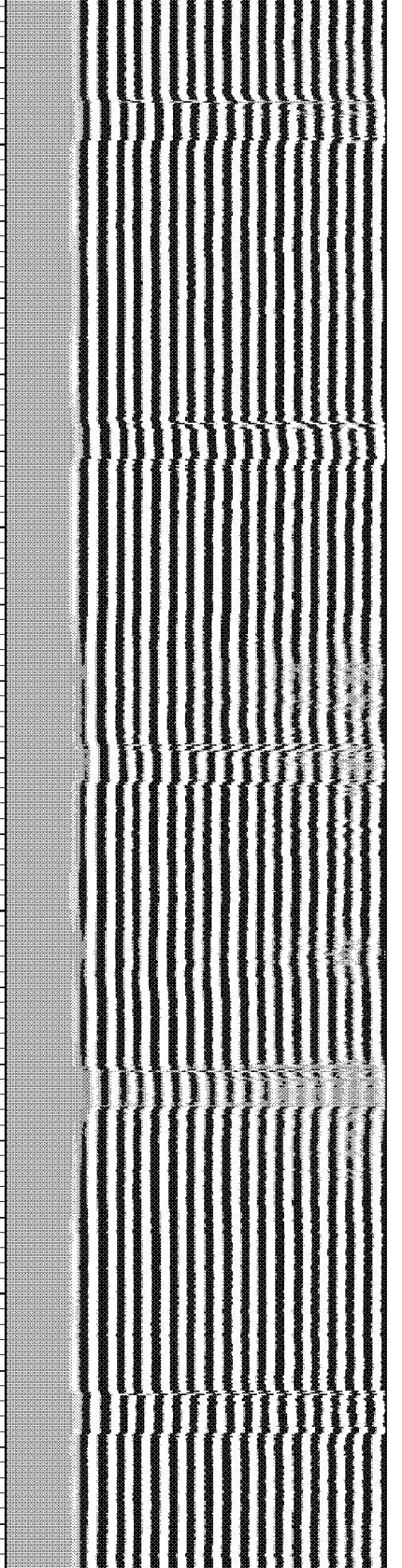
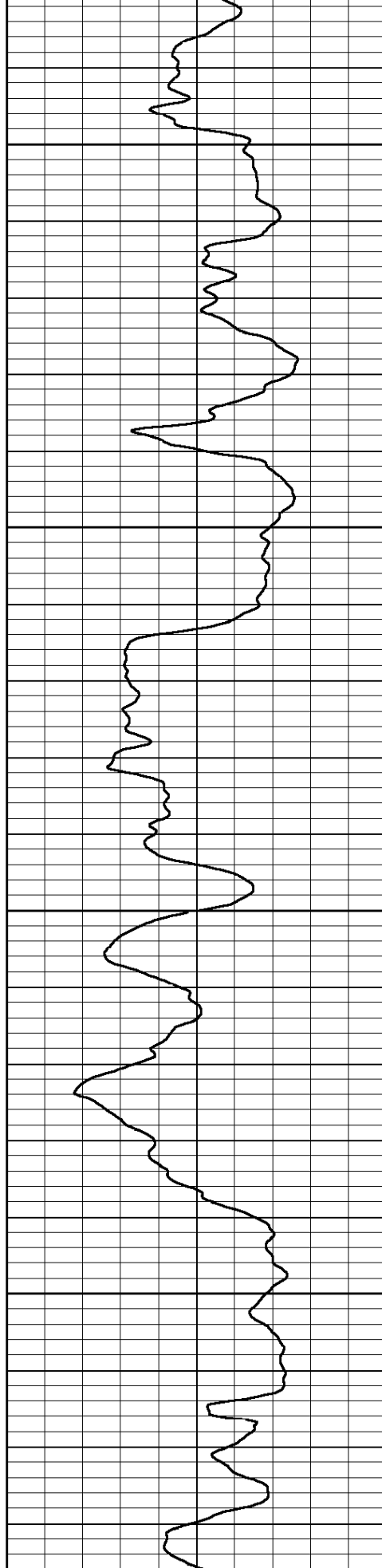
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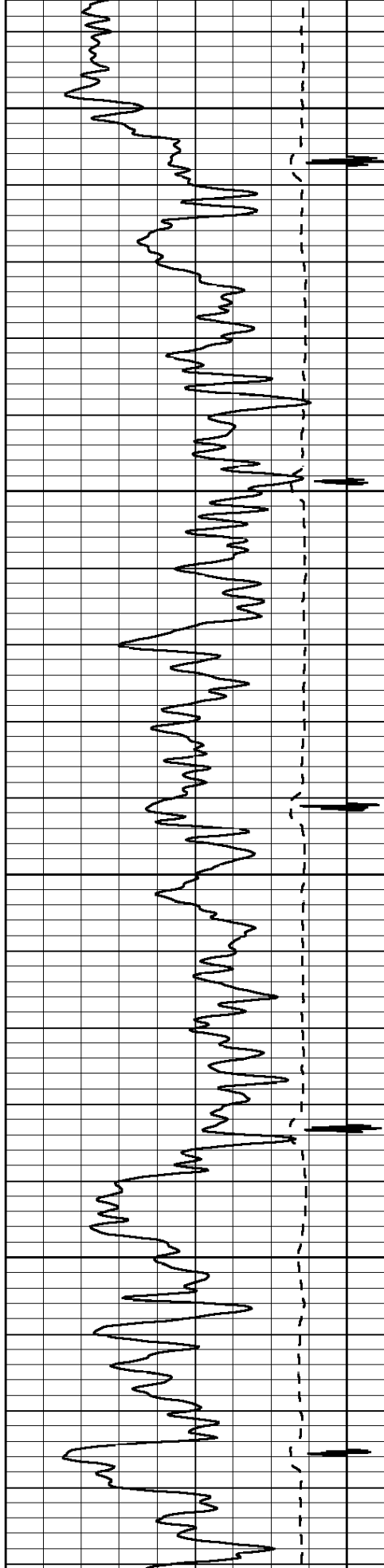




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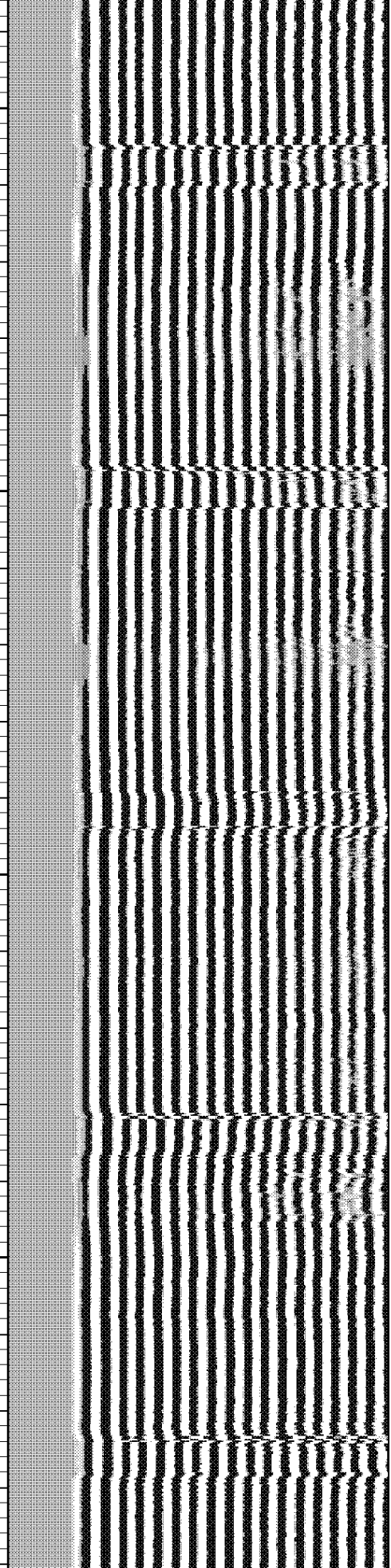
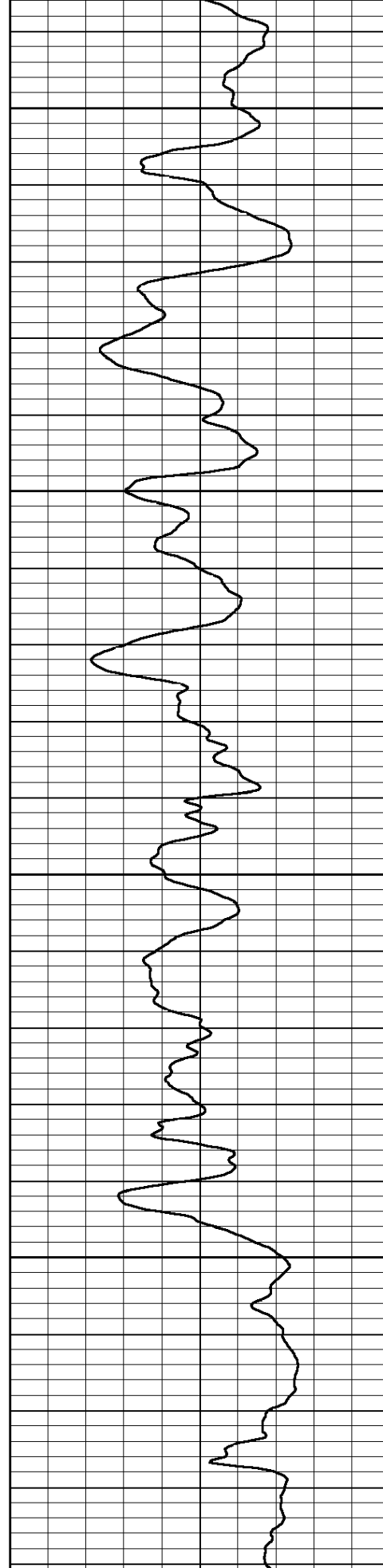
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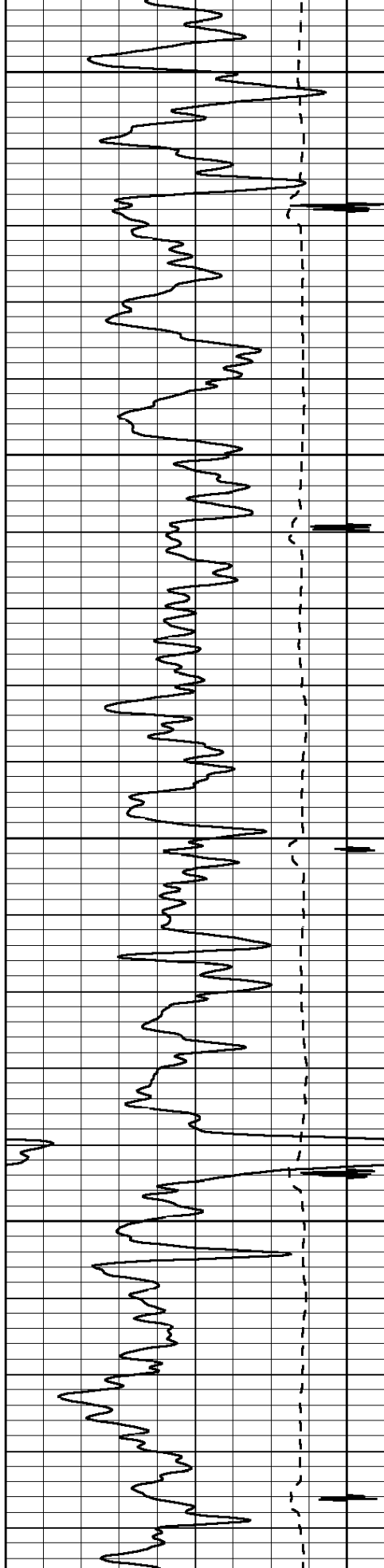




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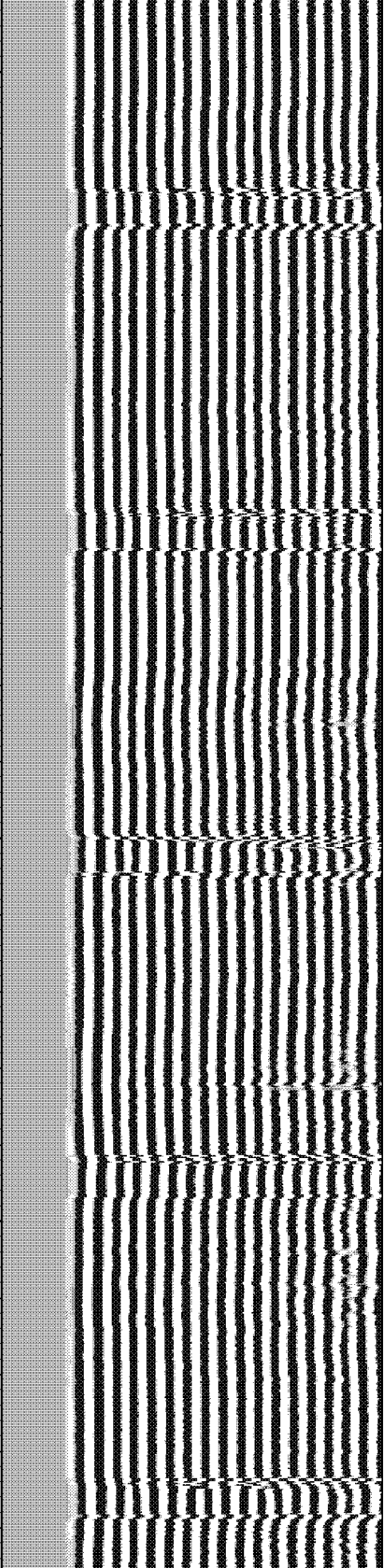
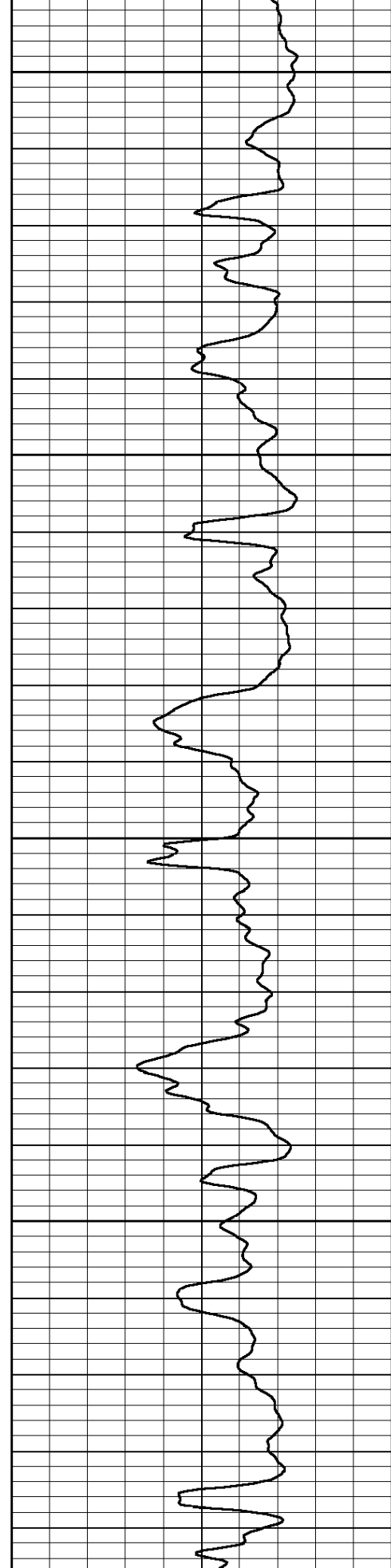
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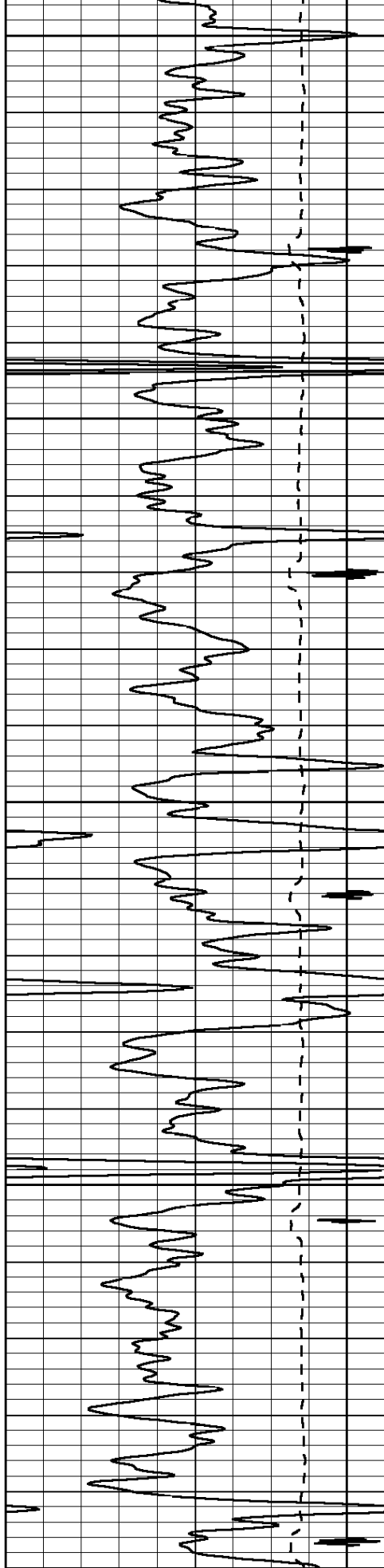




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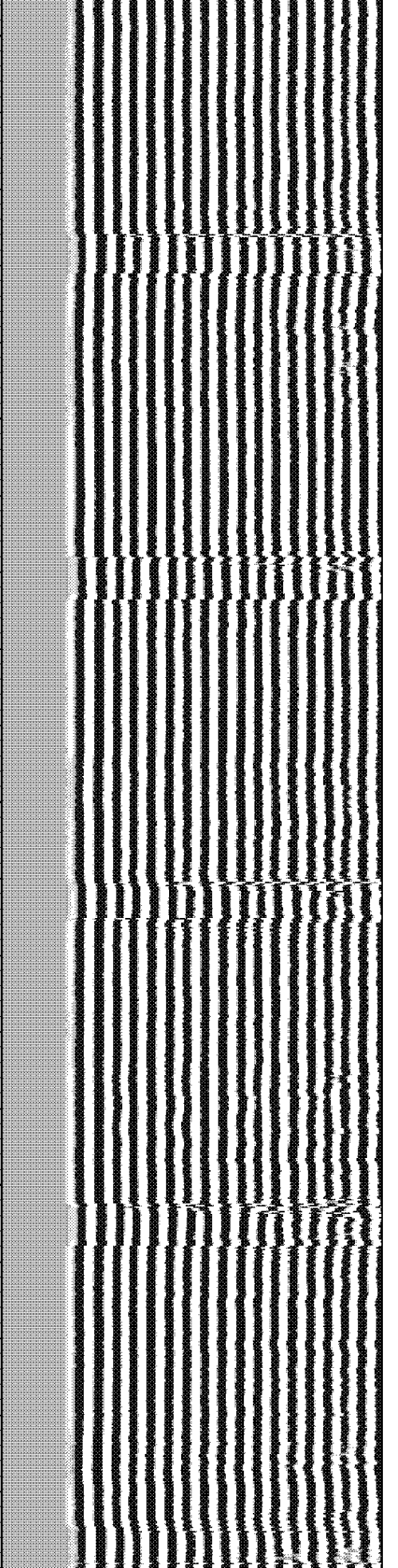
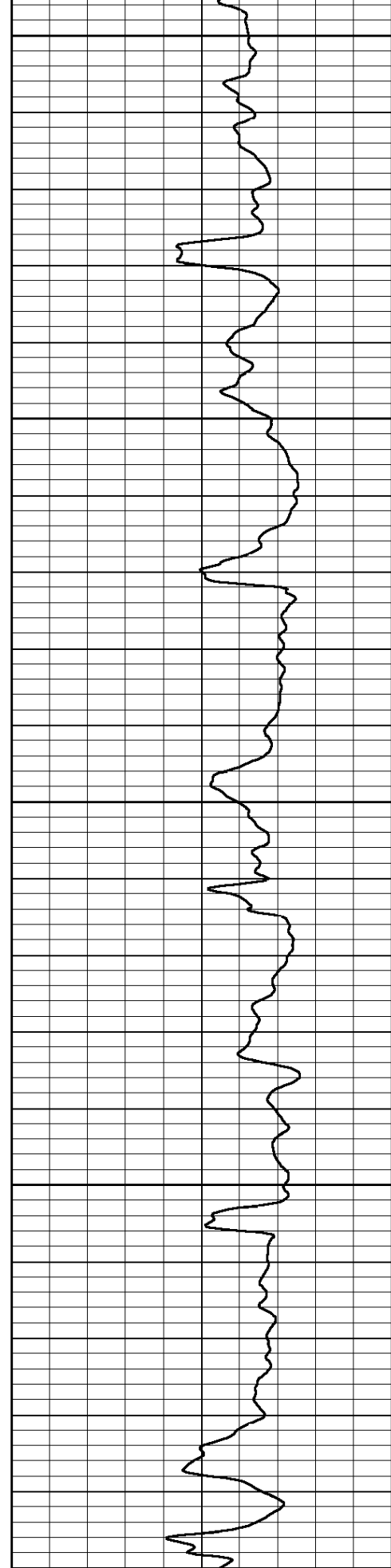


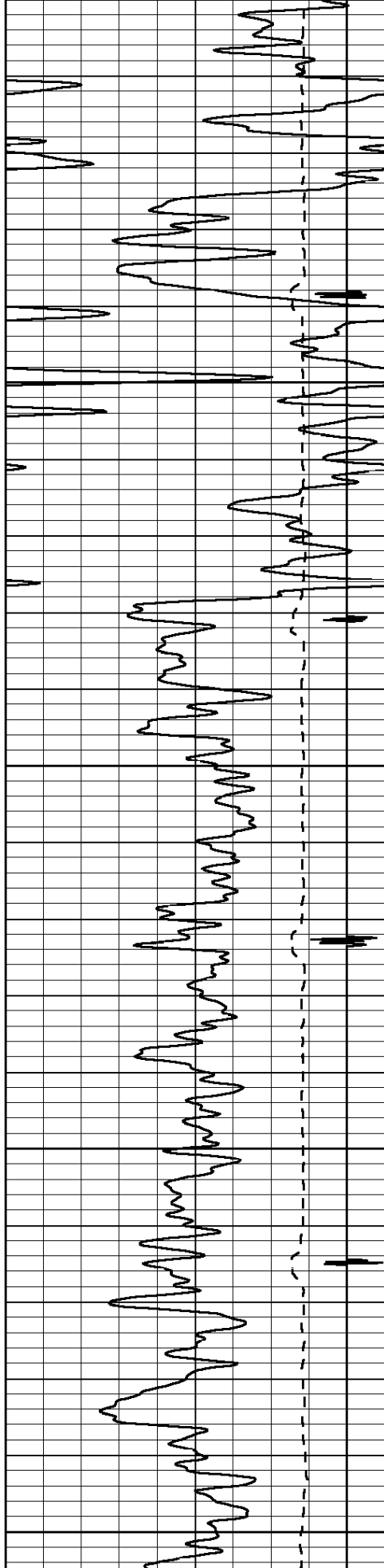


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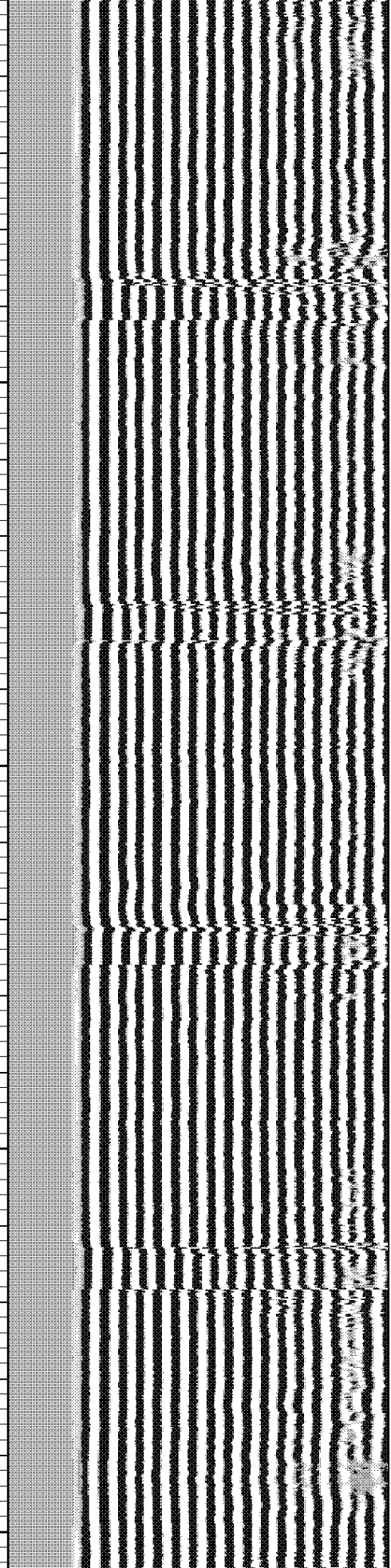
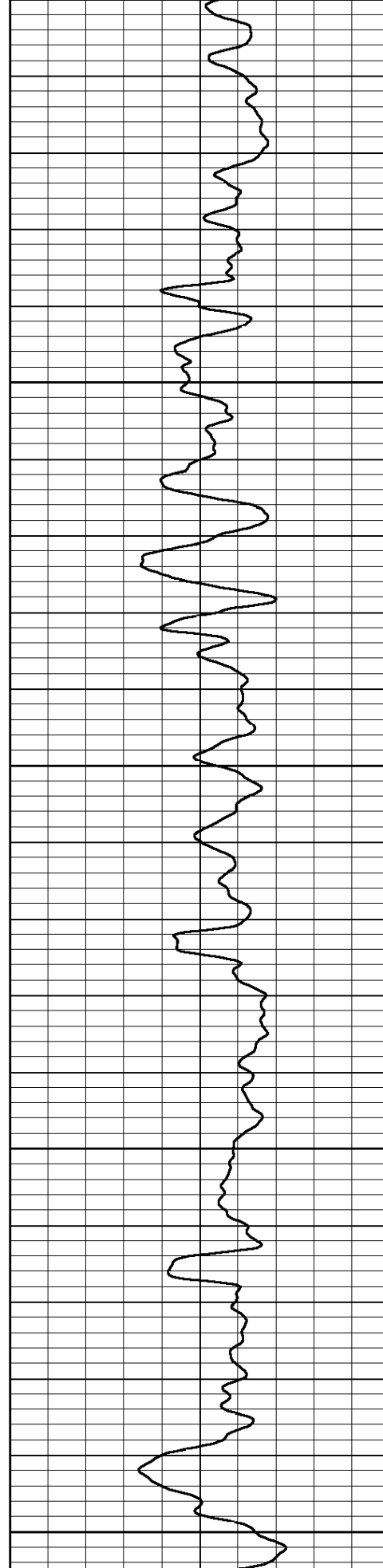


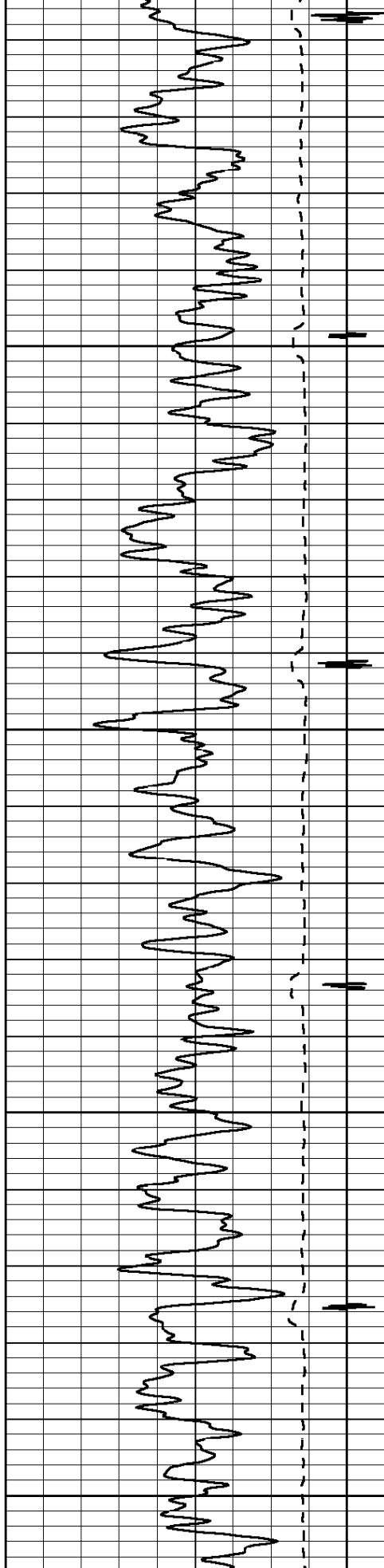


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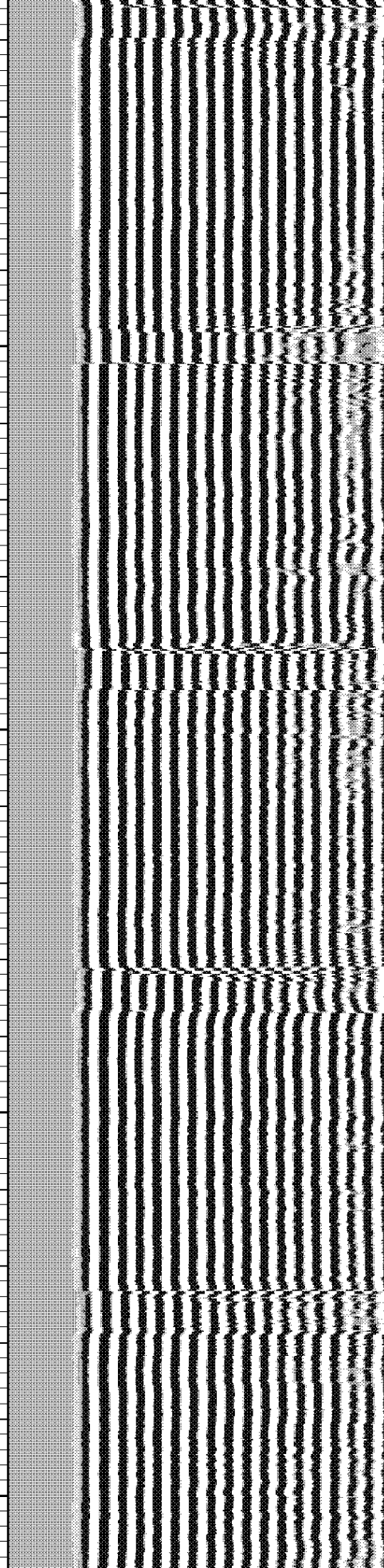
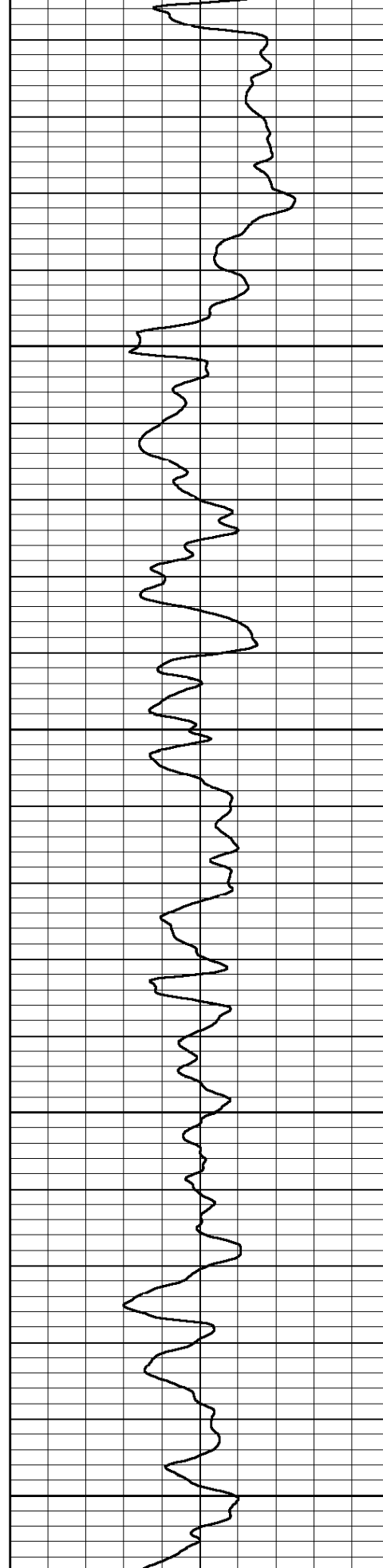
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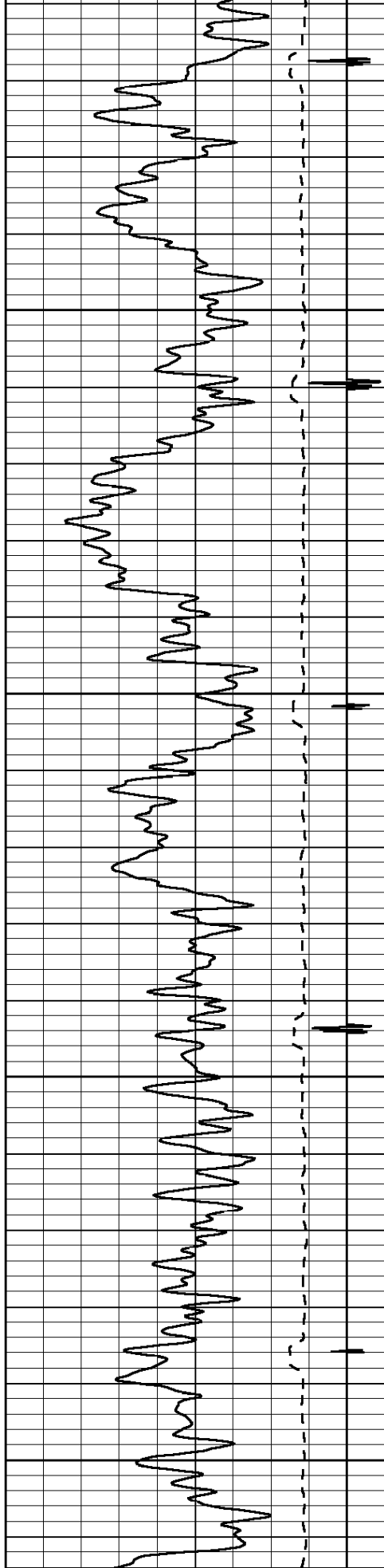




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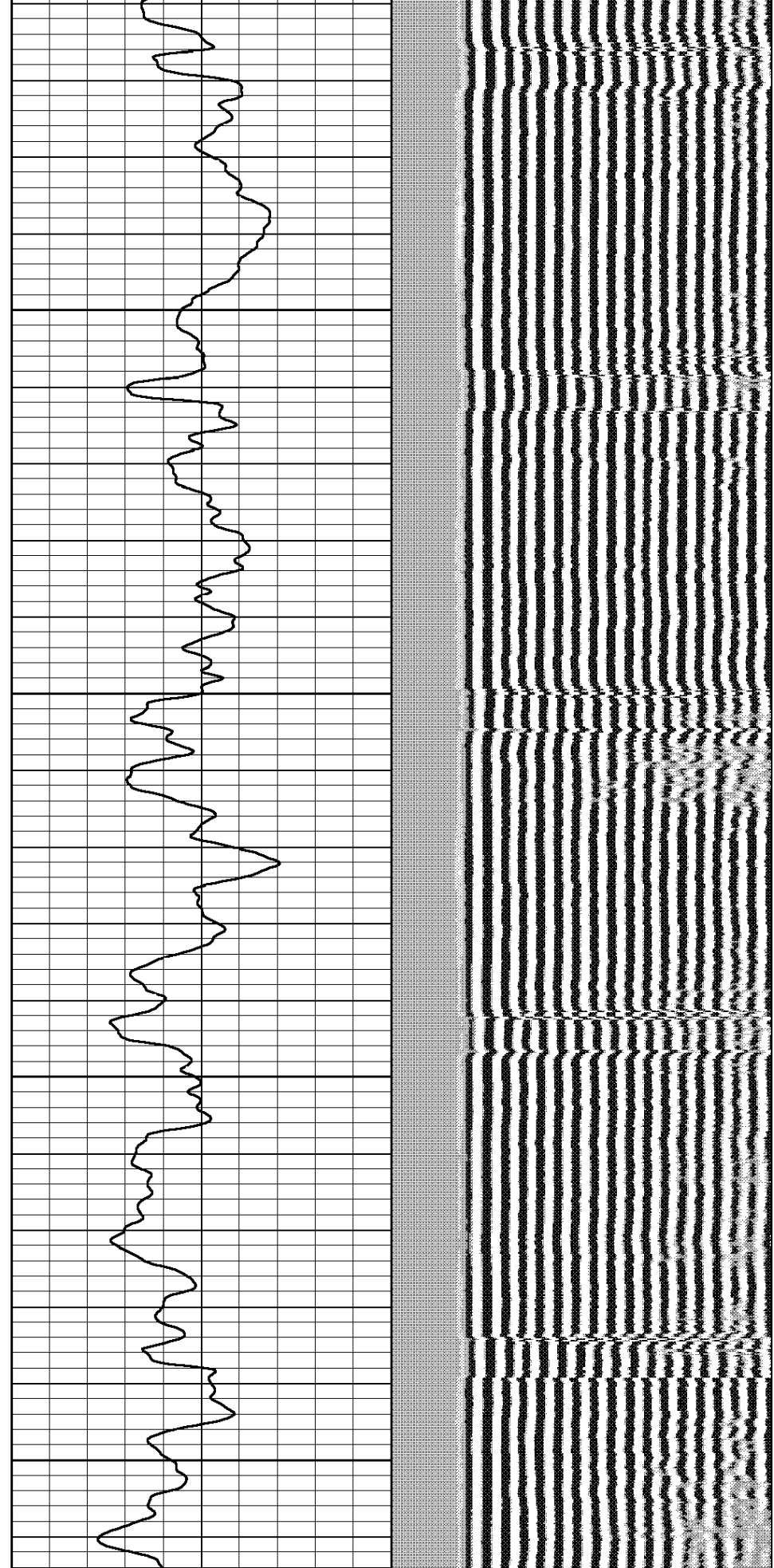
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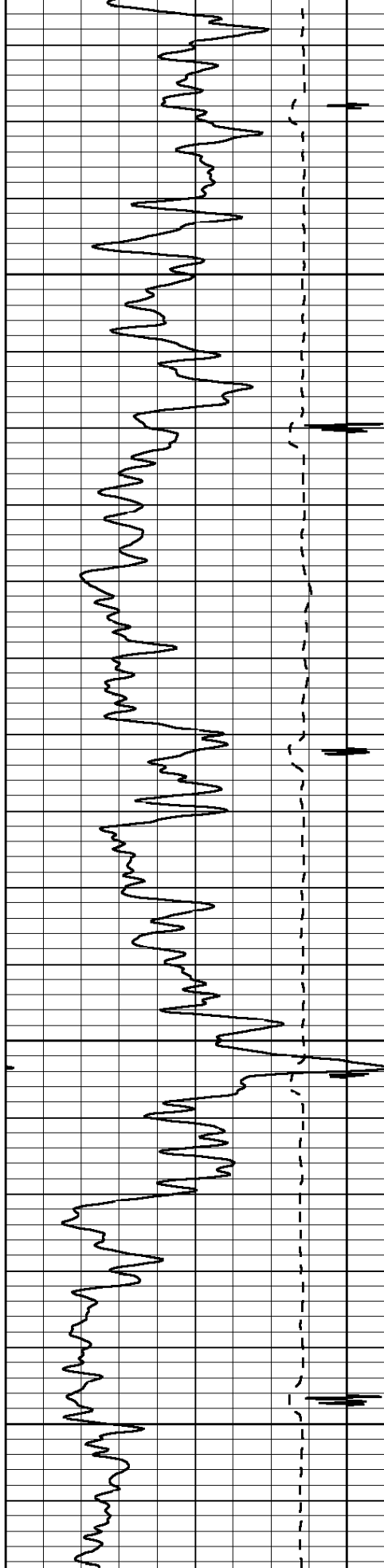




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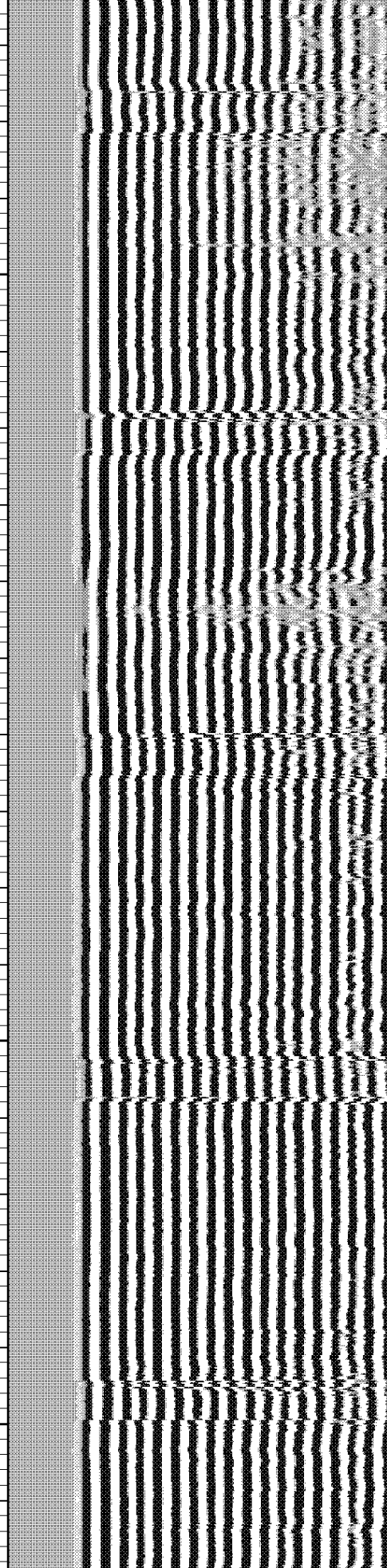
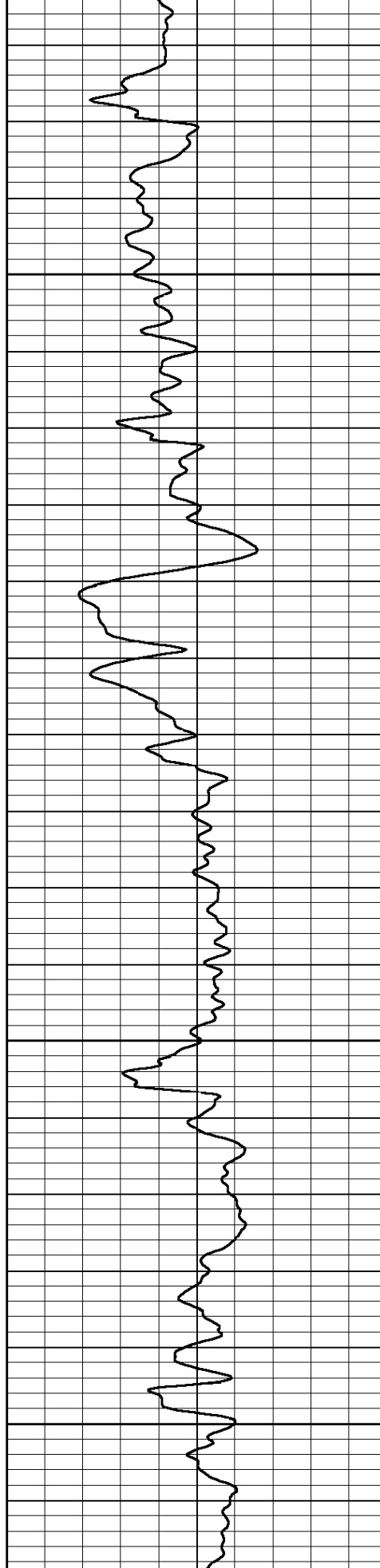
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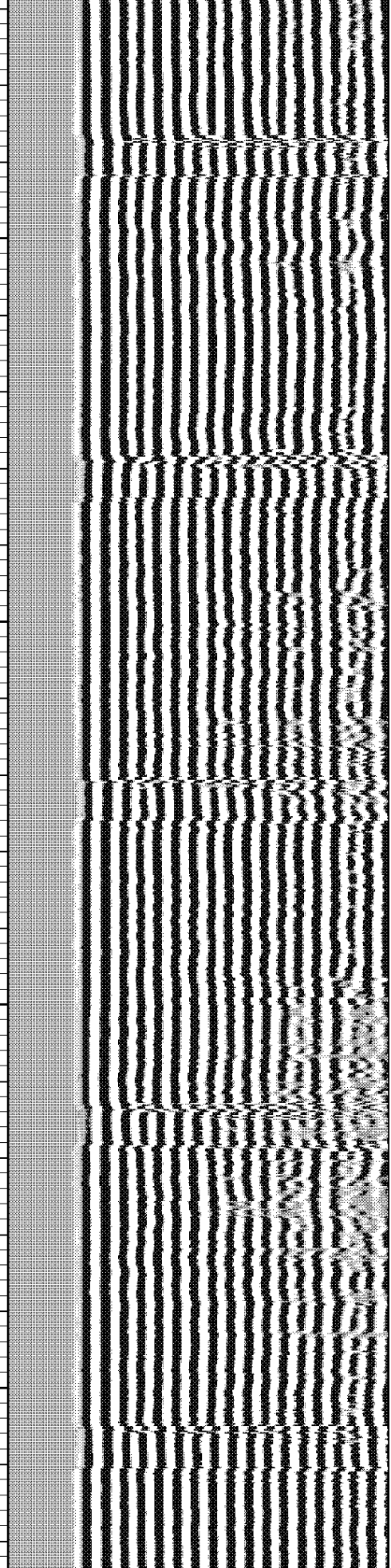
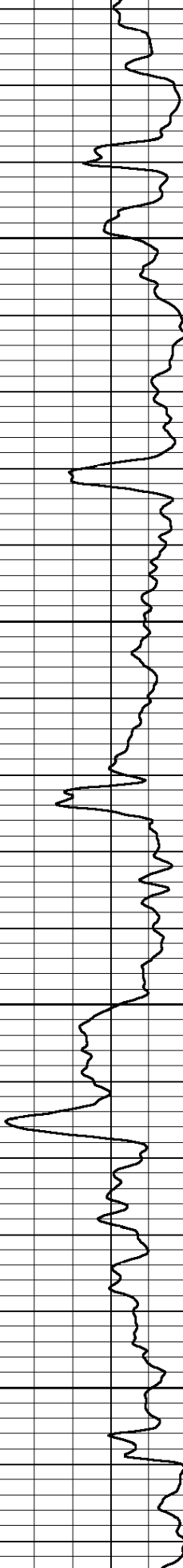
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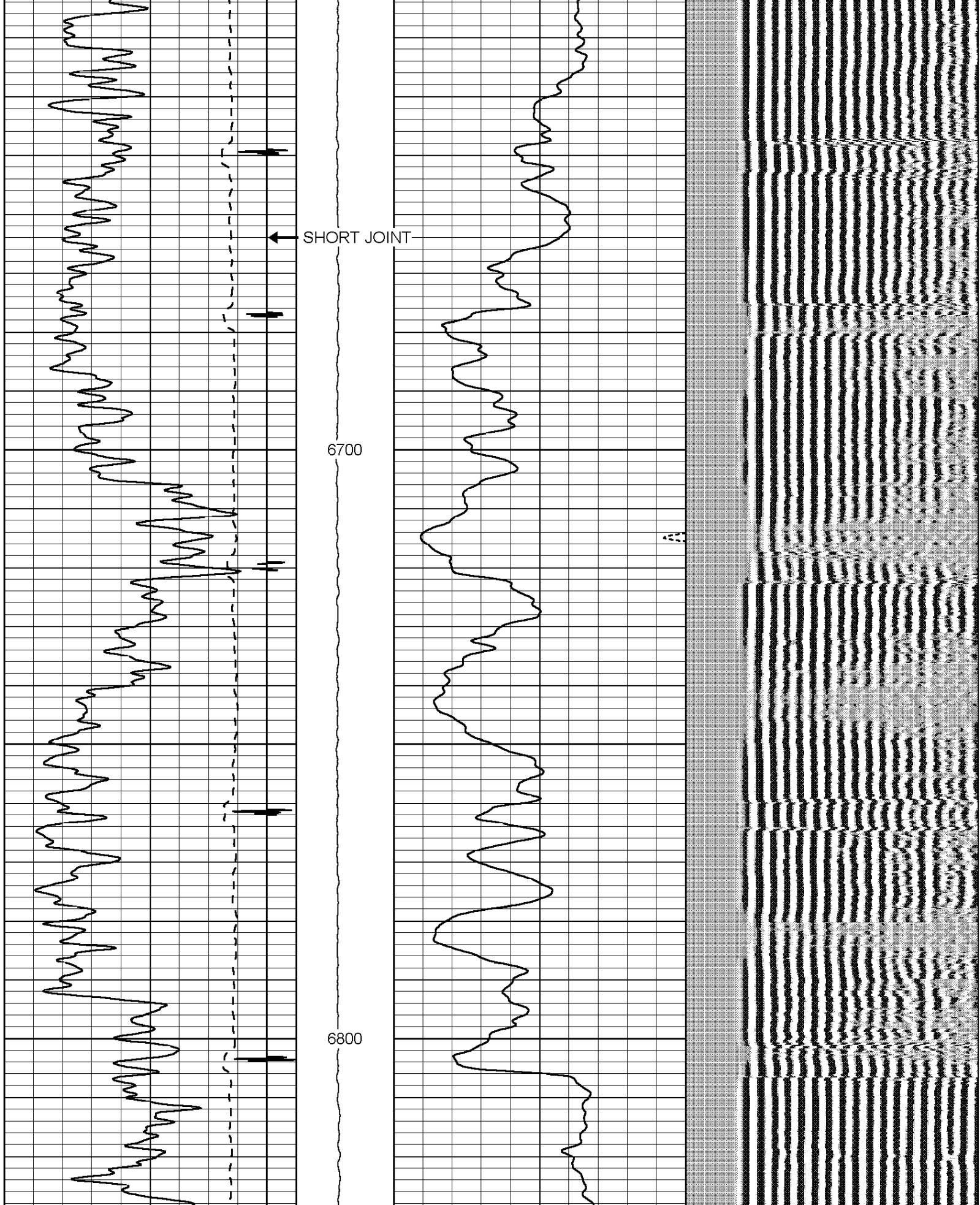


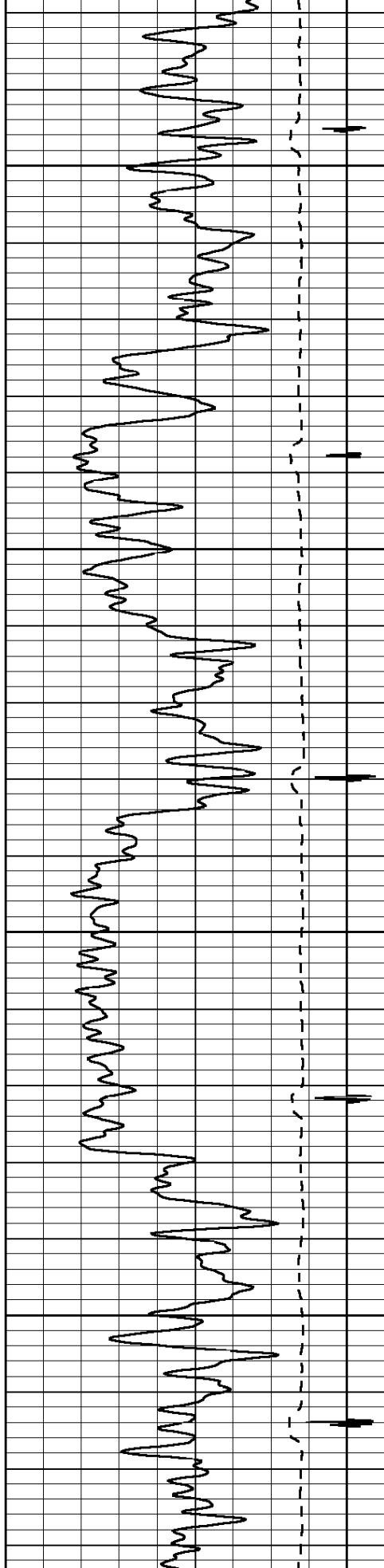


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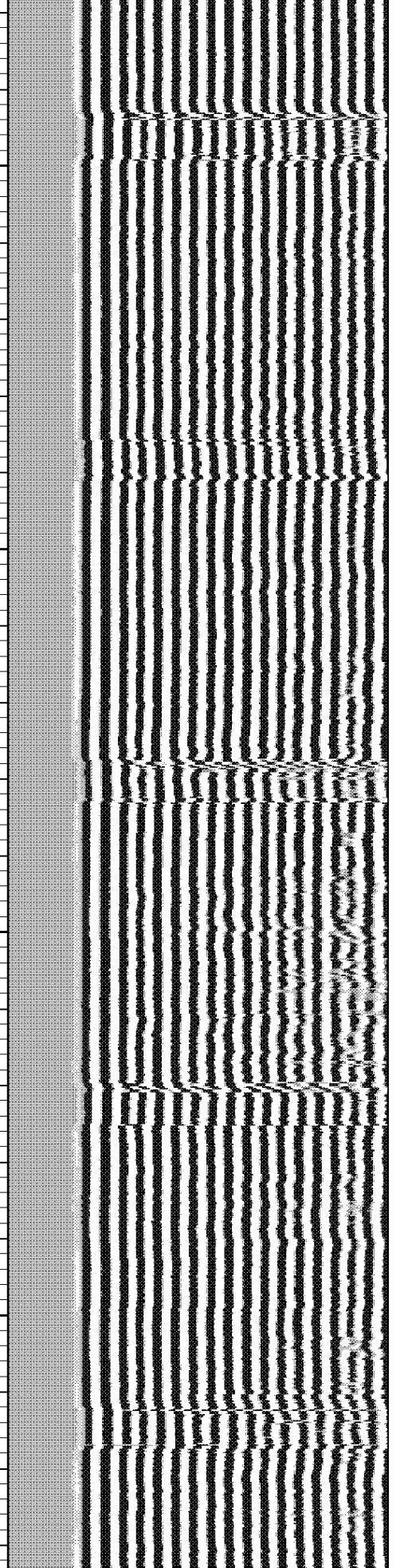
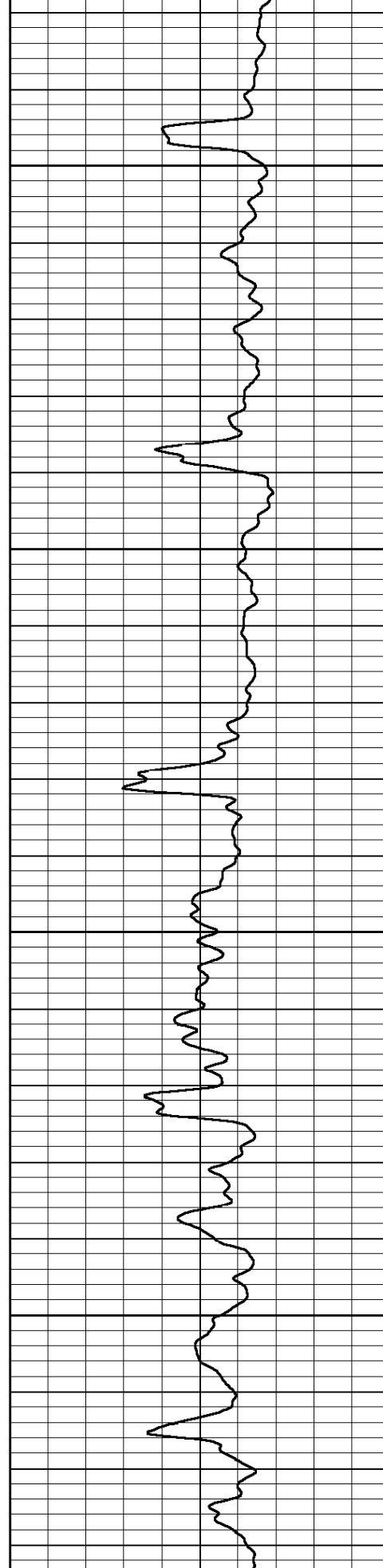


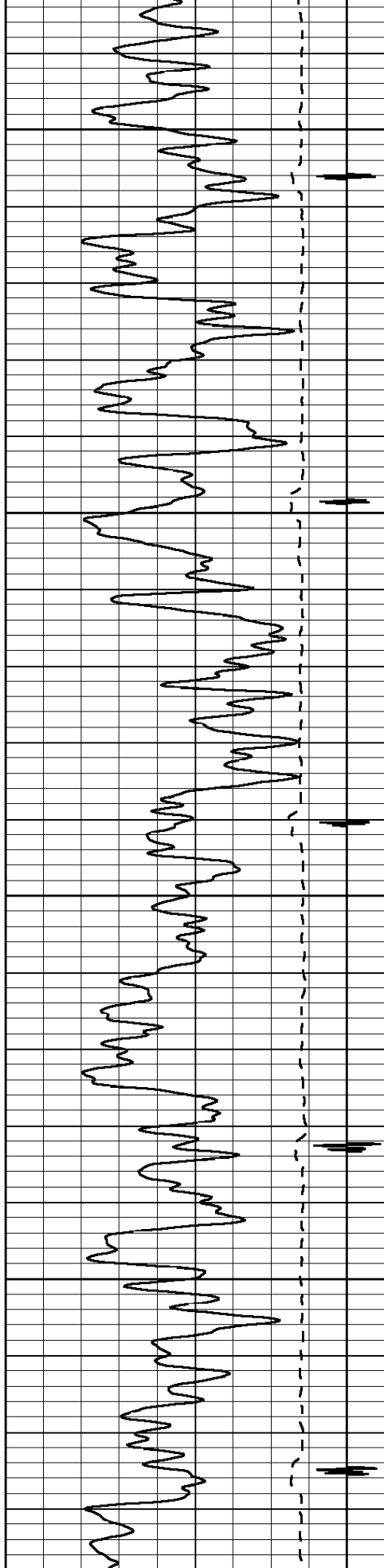




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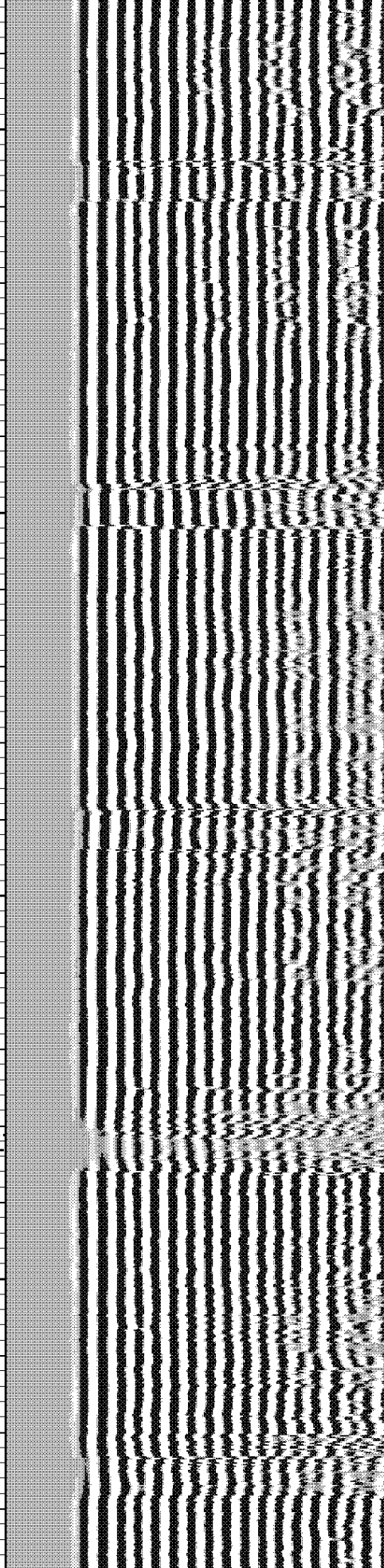
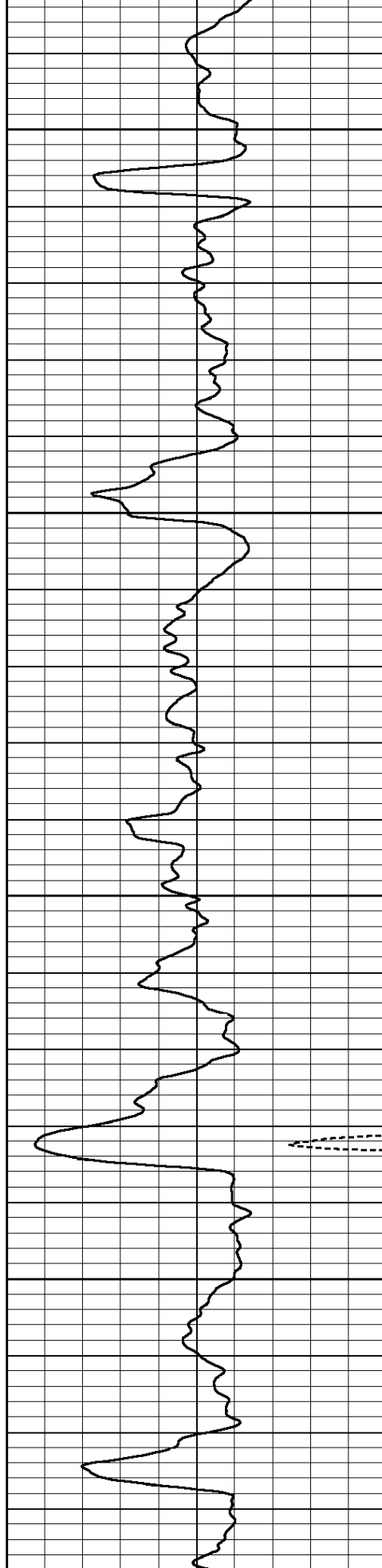
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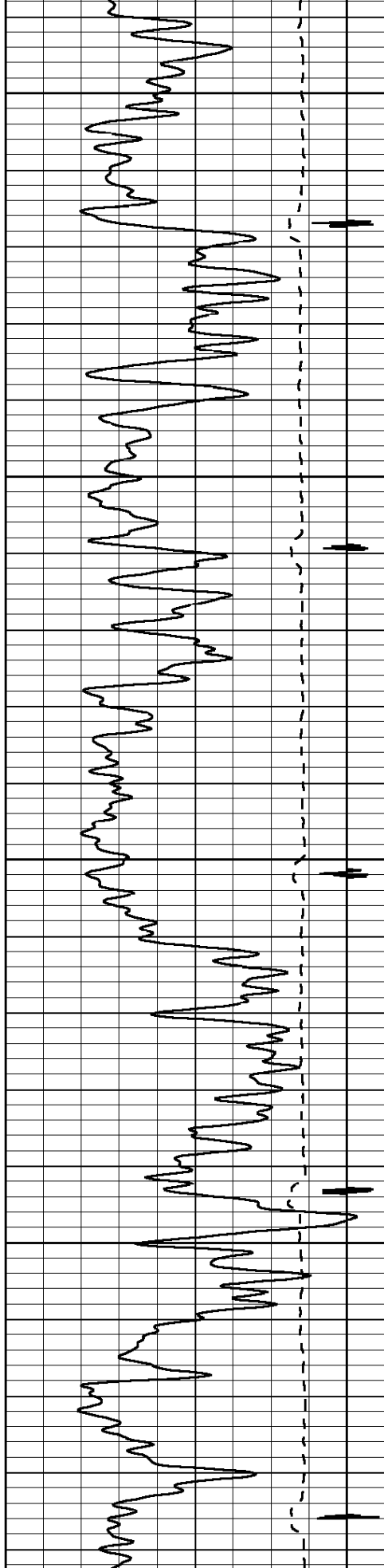




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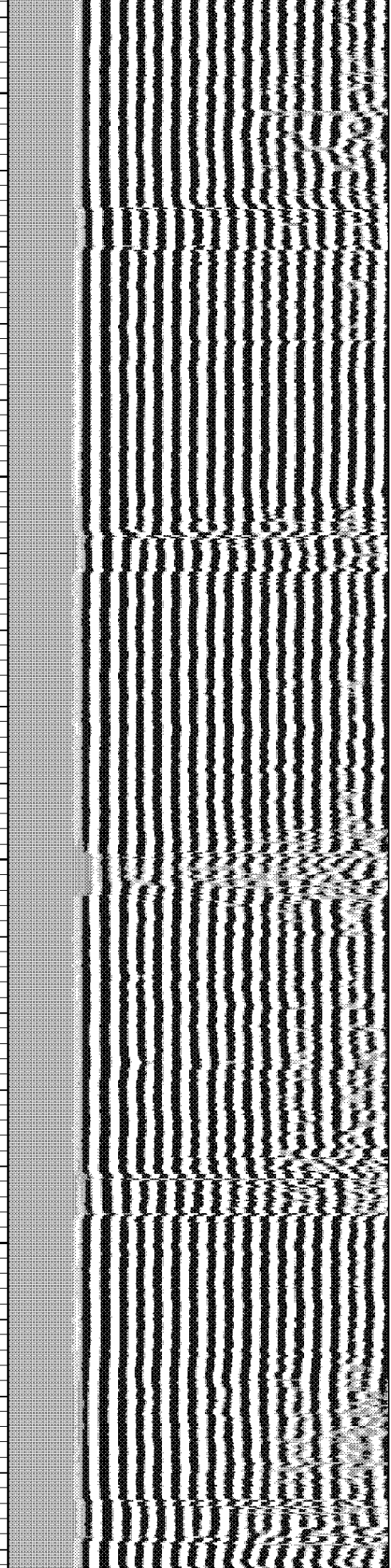
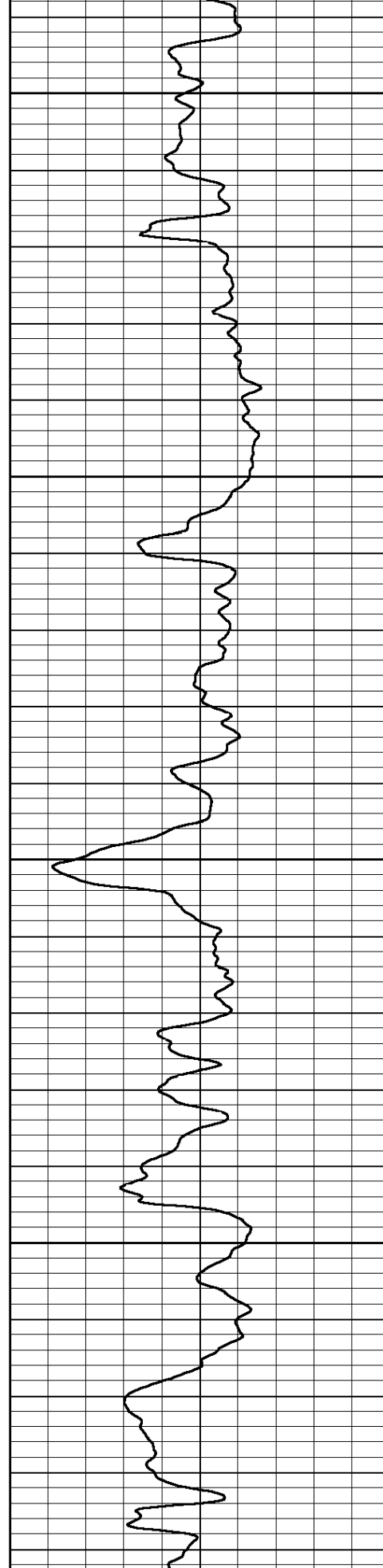
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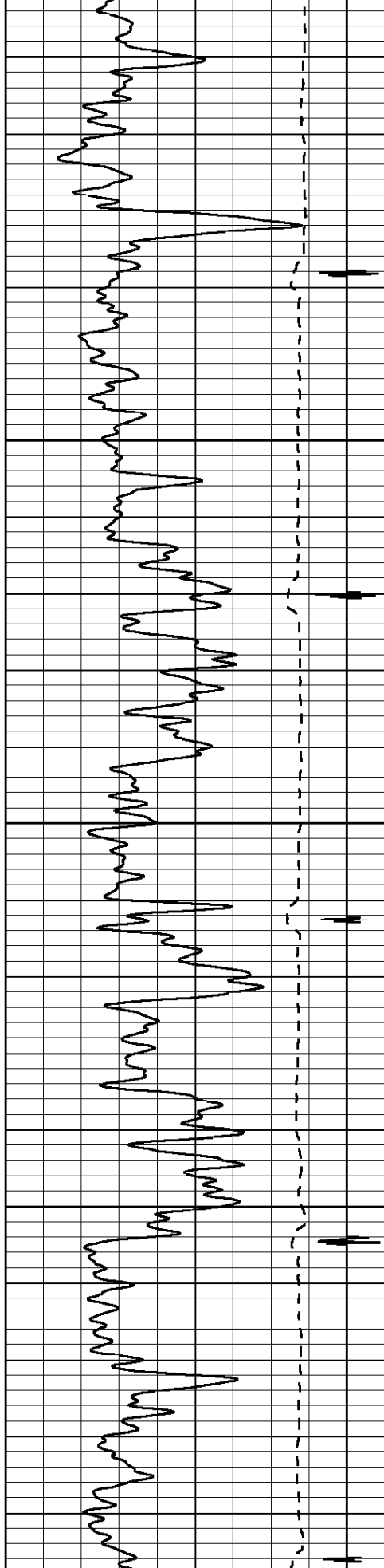




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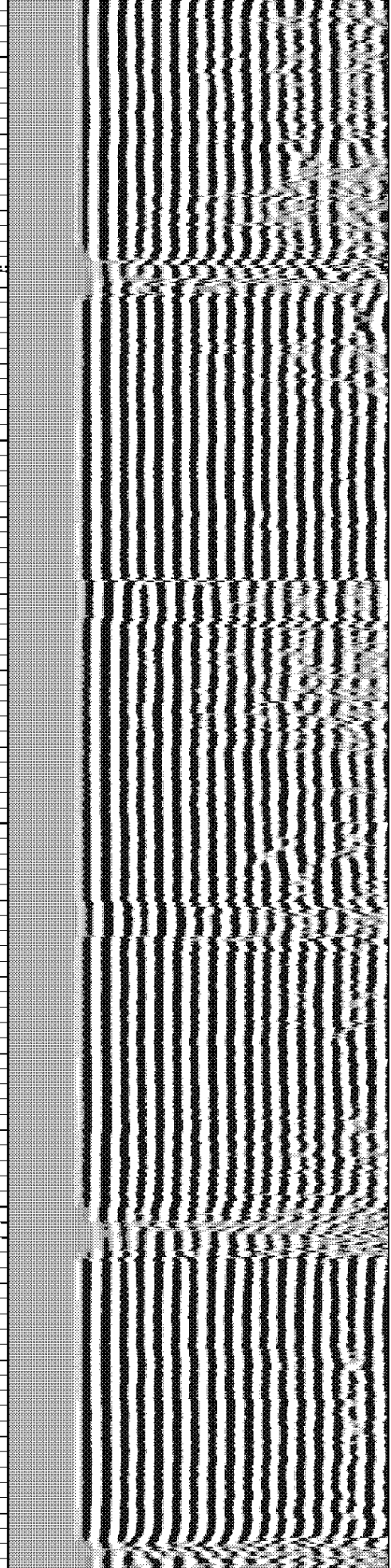
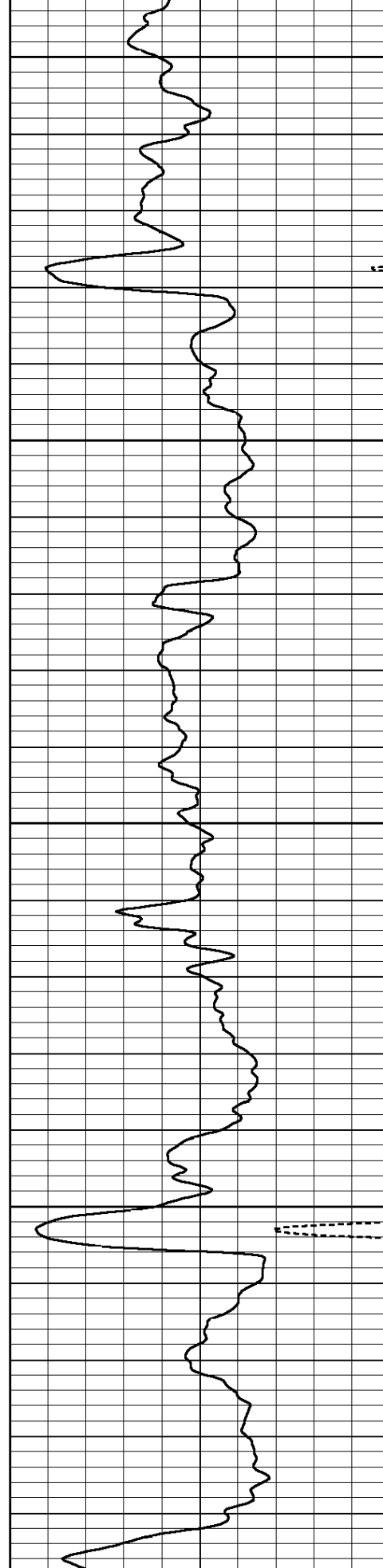
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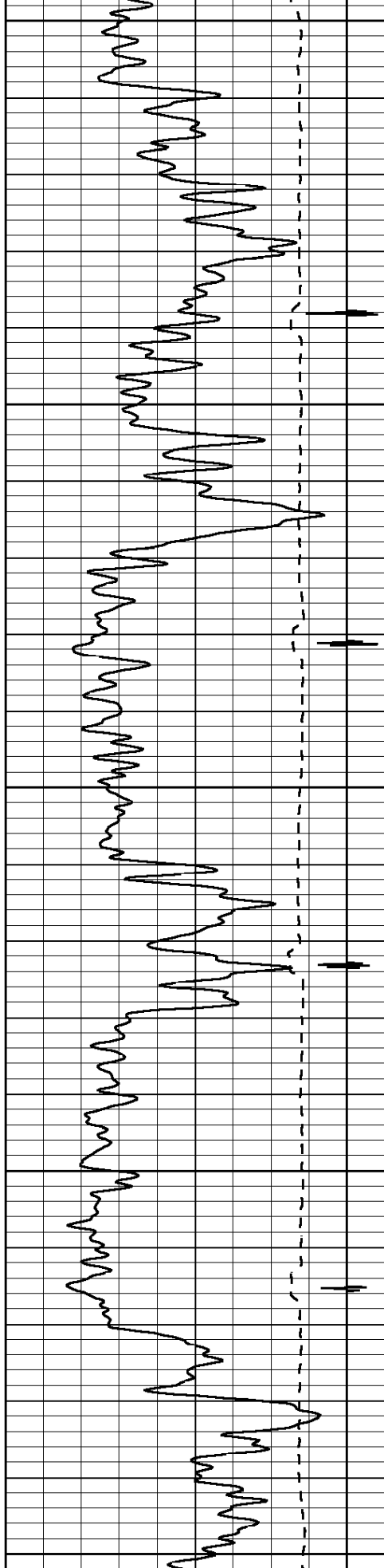




7500

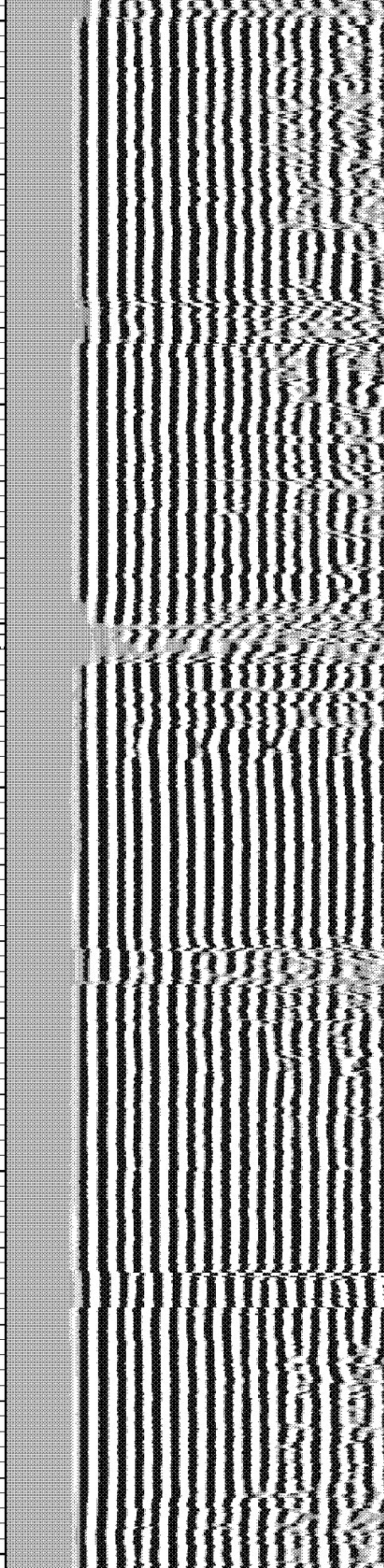
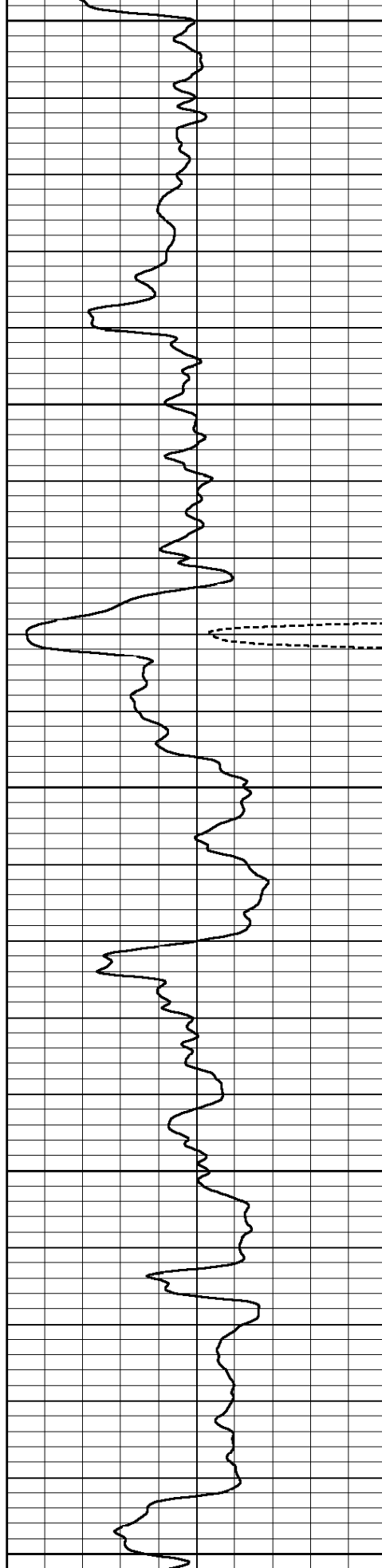
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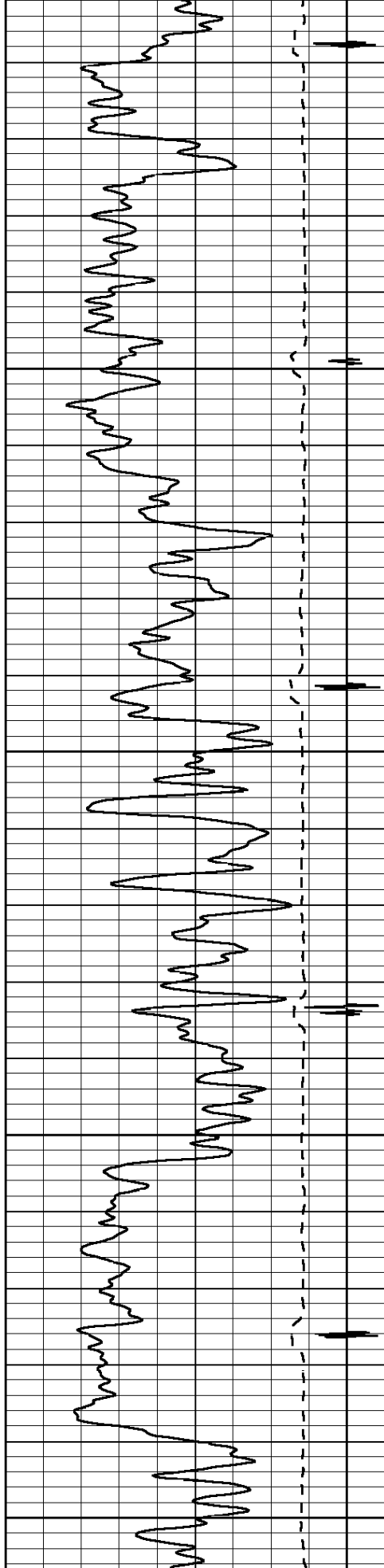




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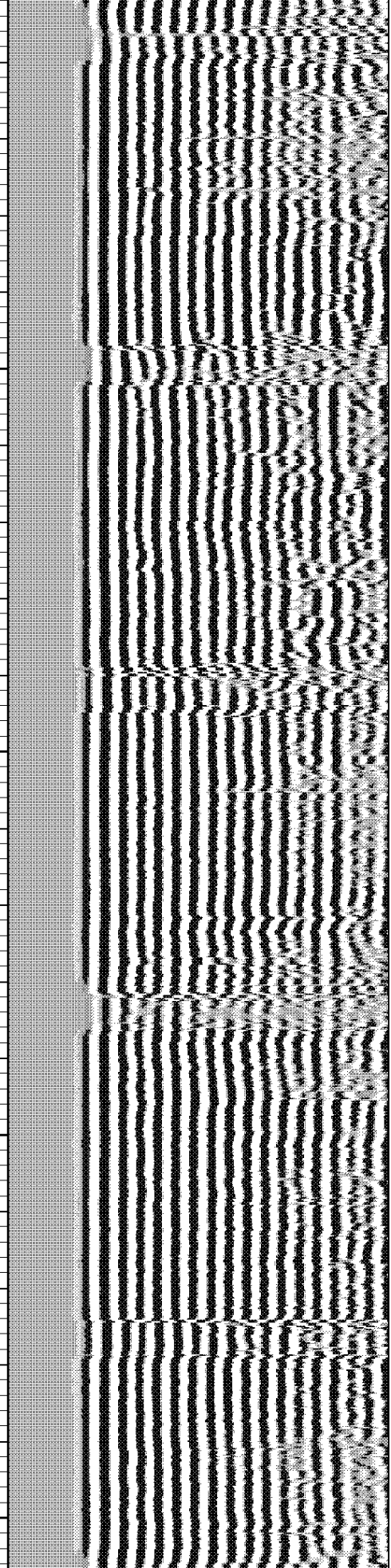
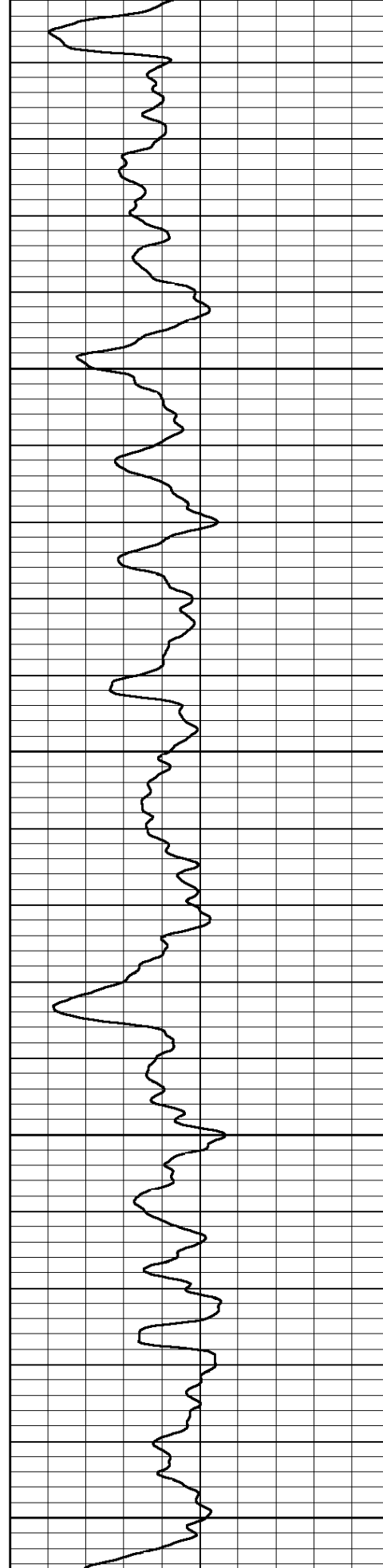
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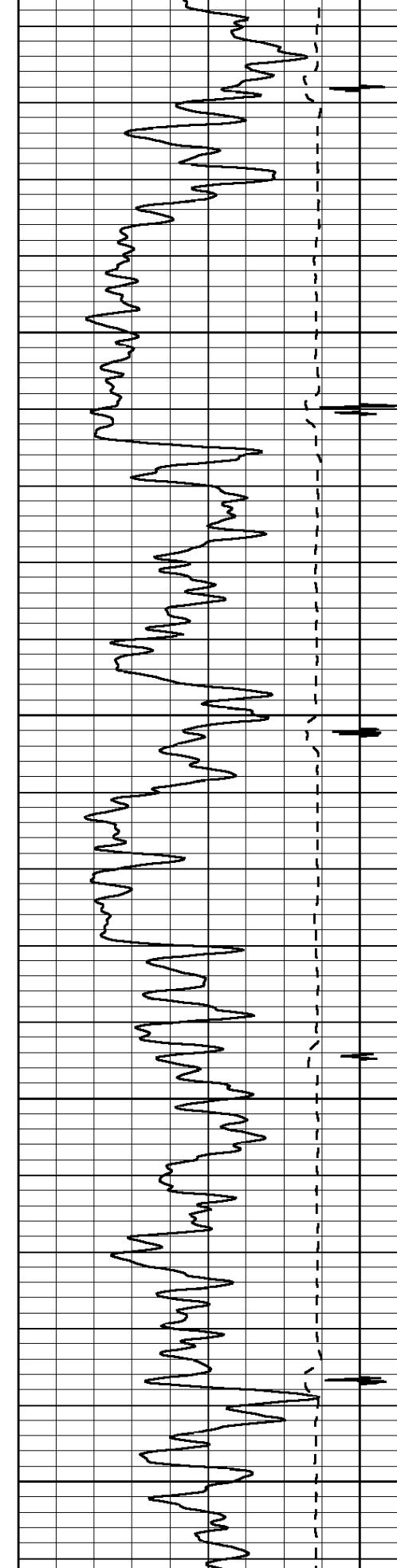




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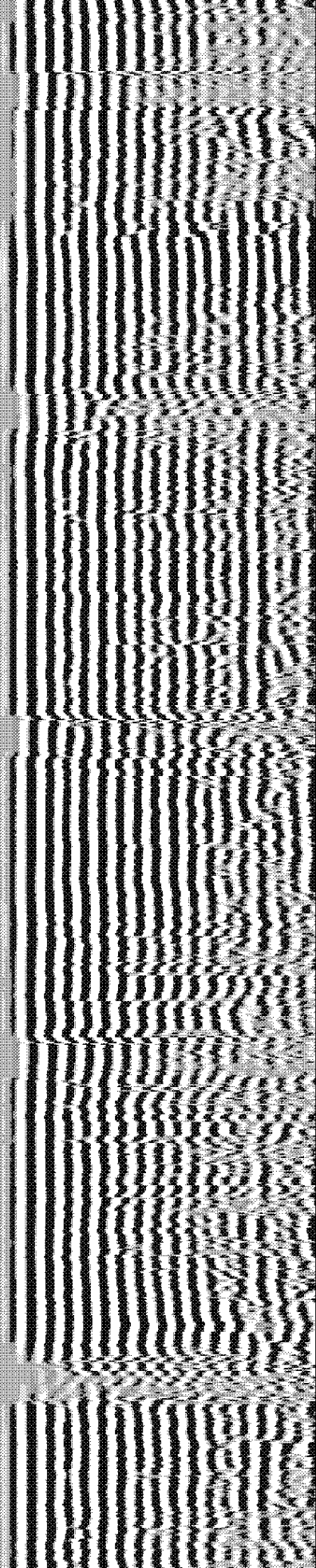
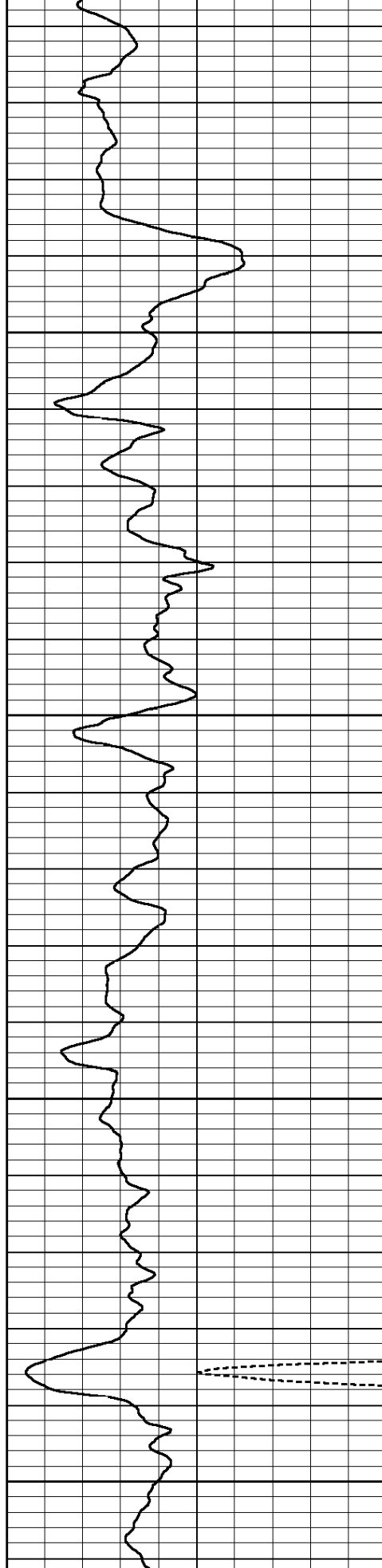
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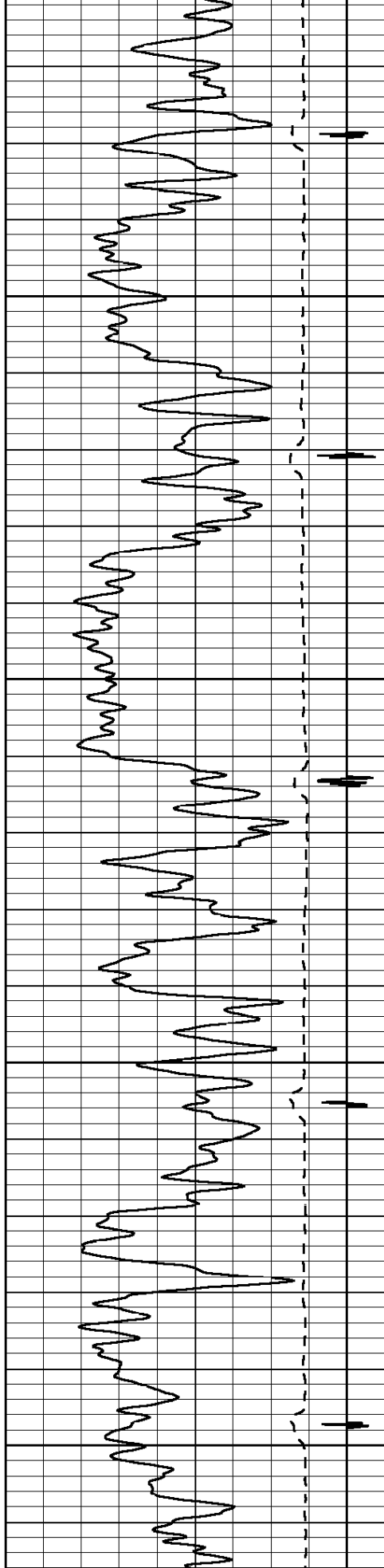




8100

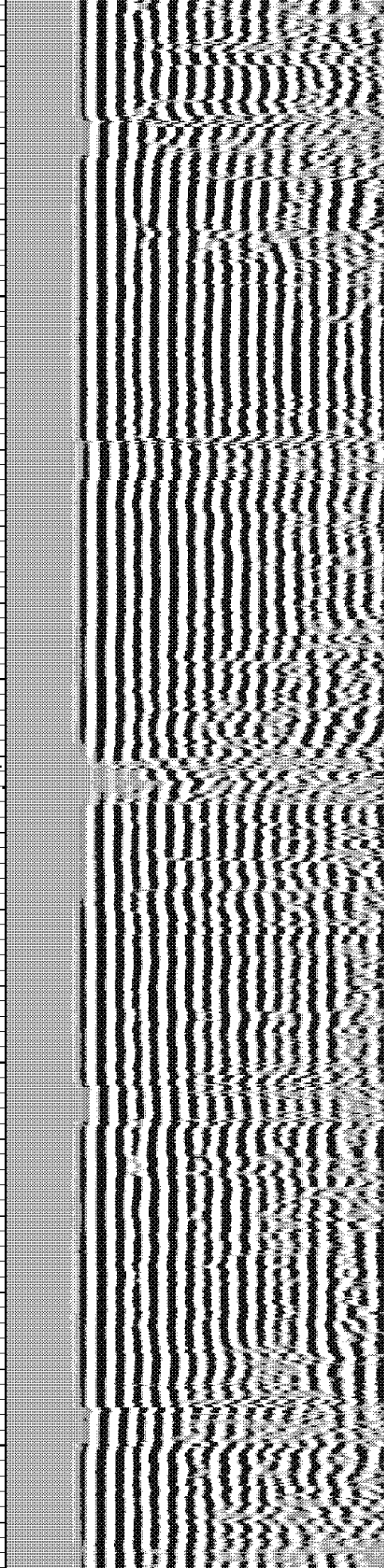
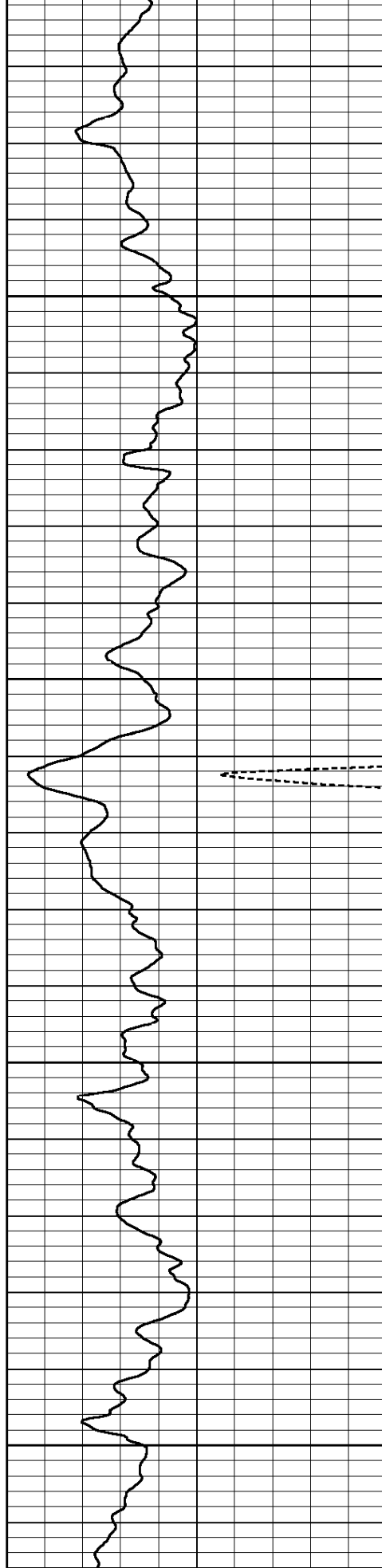
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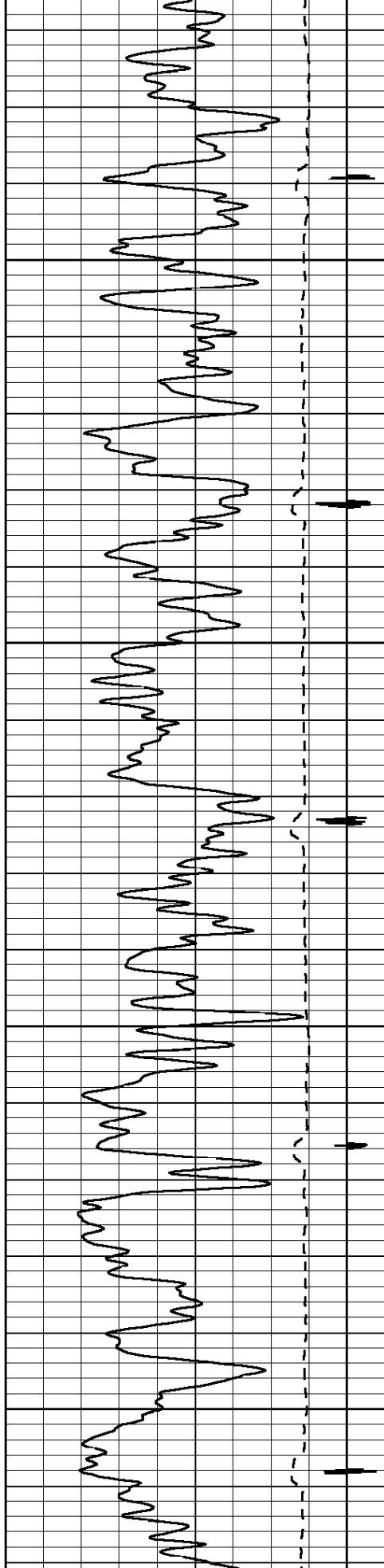




8300

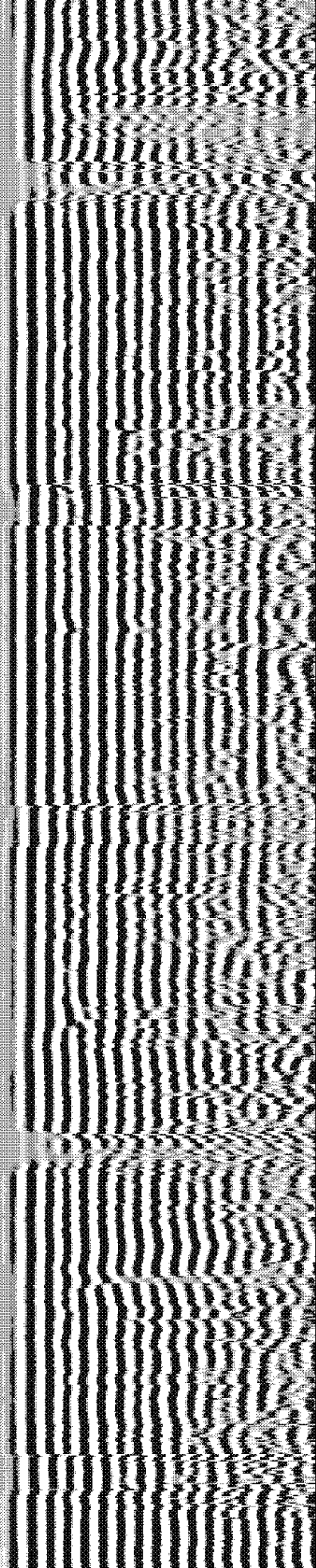
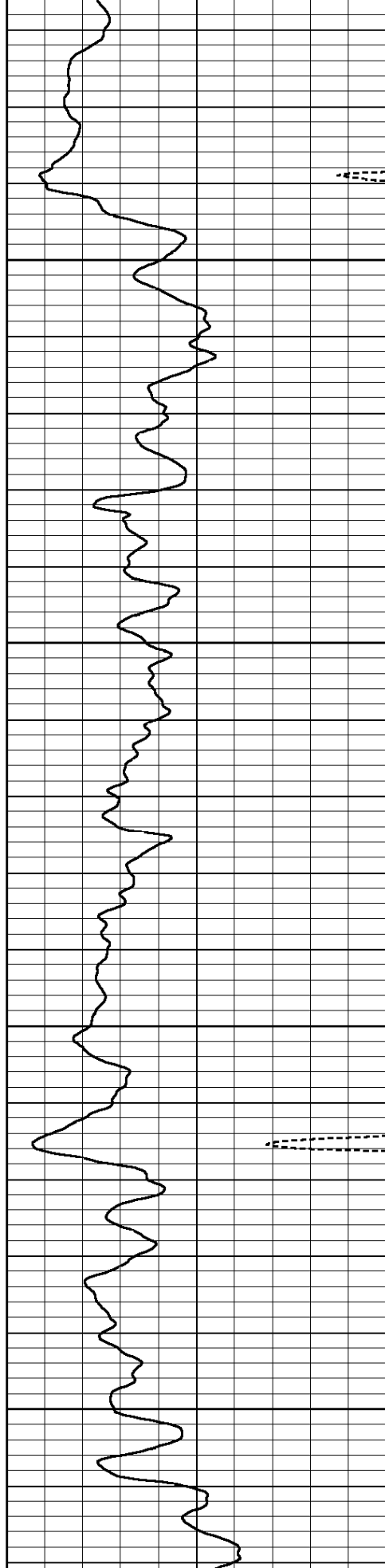
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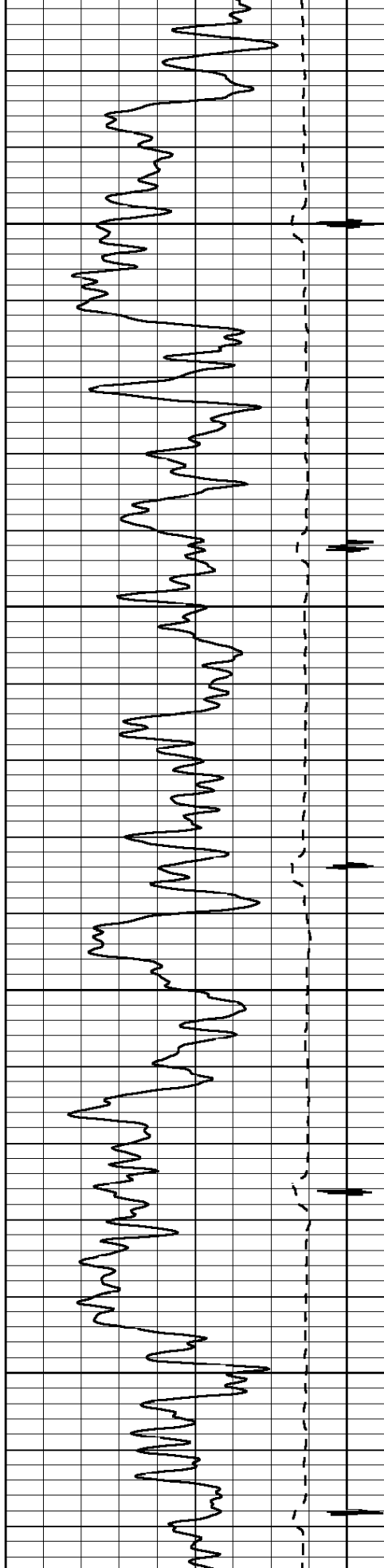




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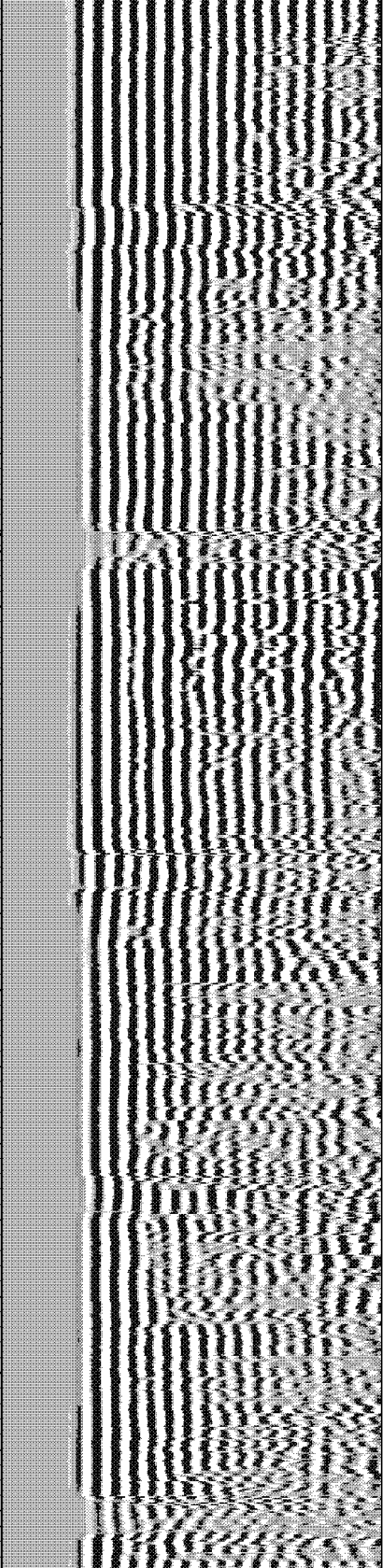
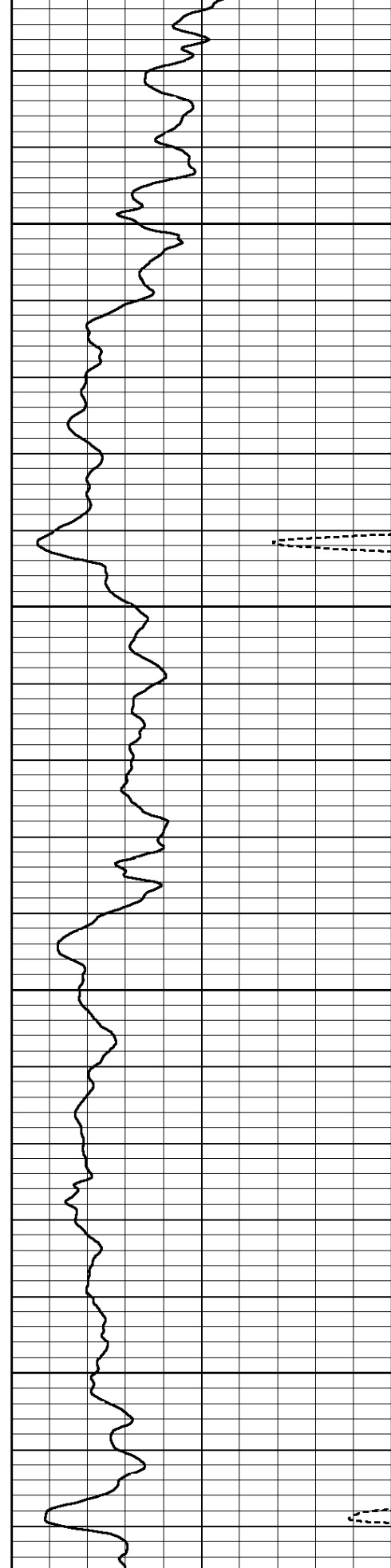
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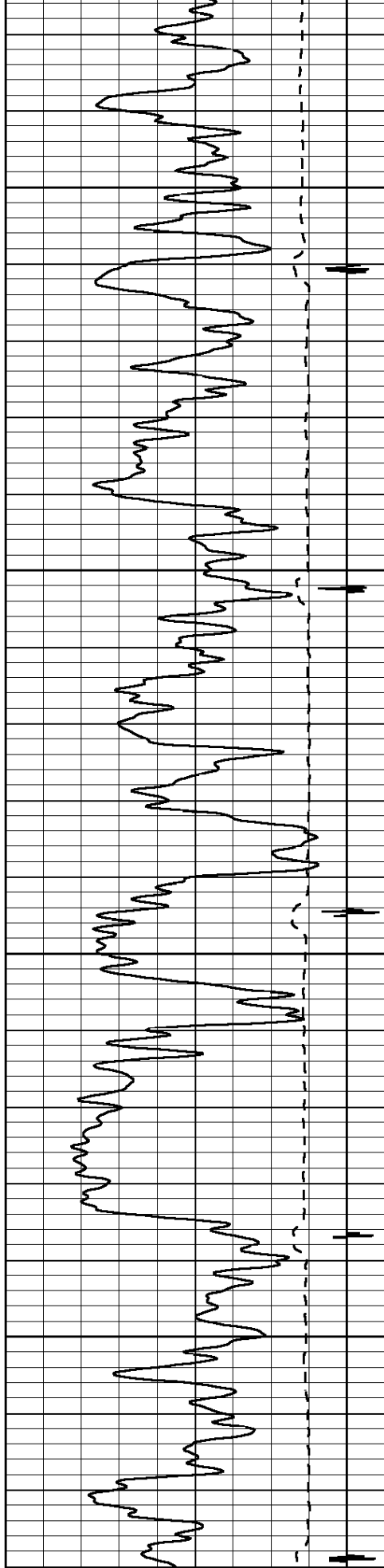




8700

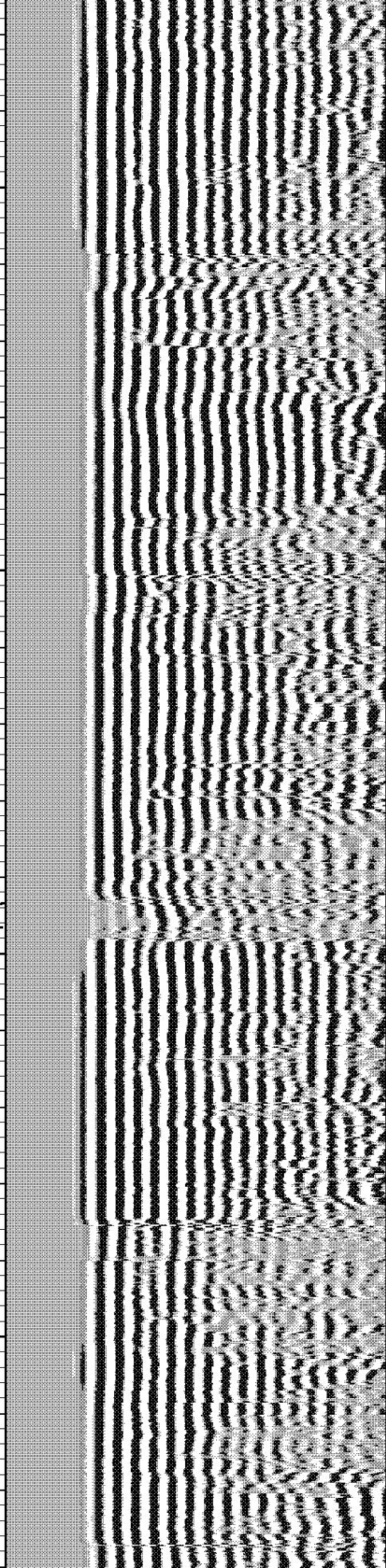
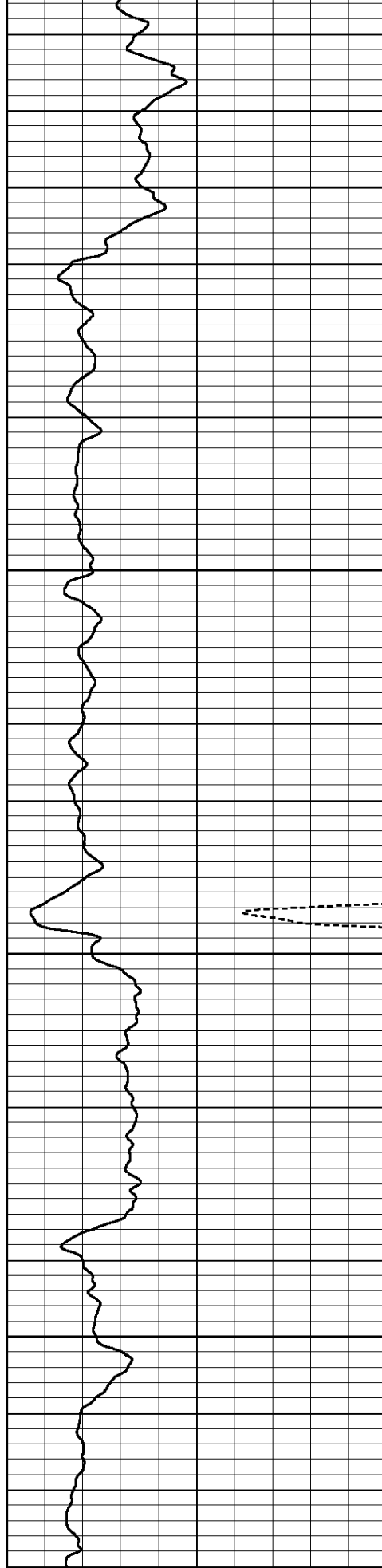
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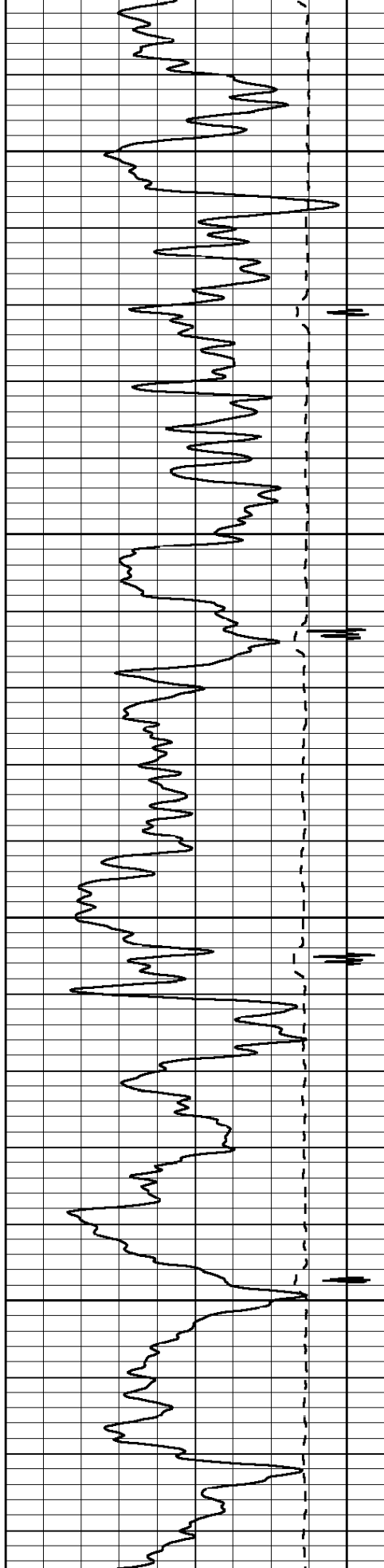




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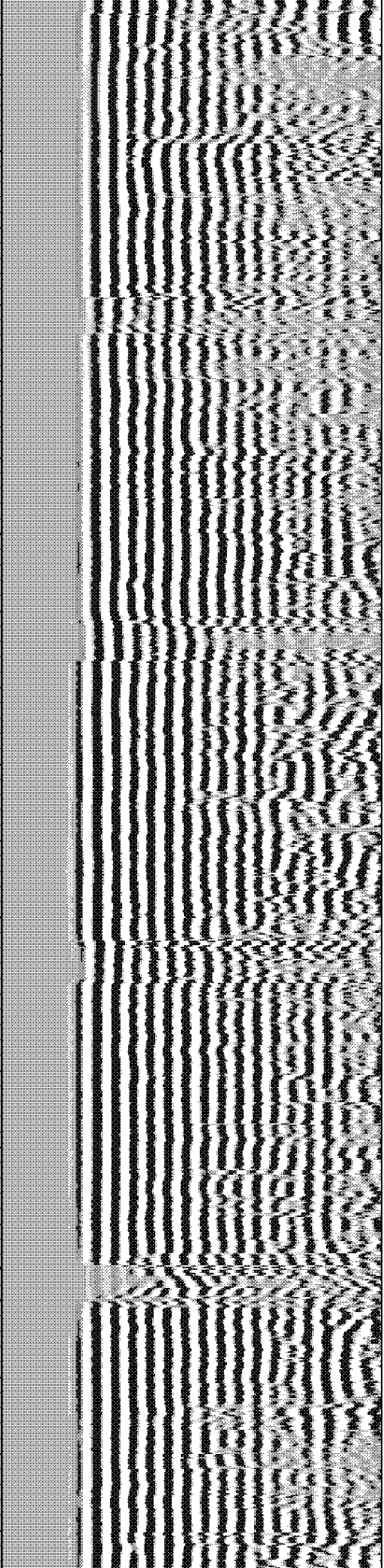
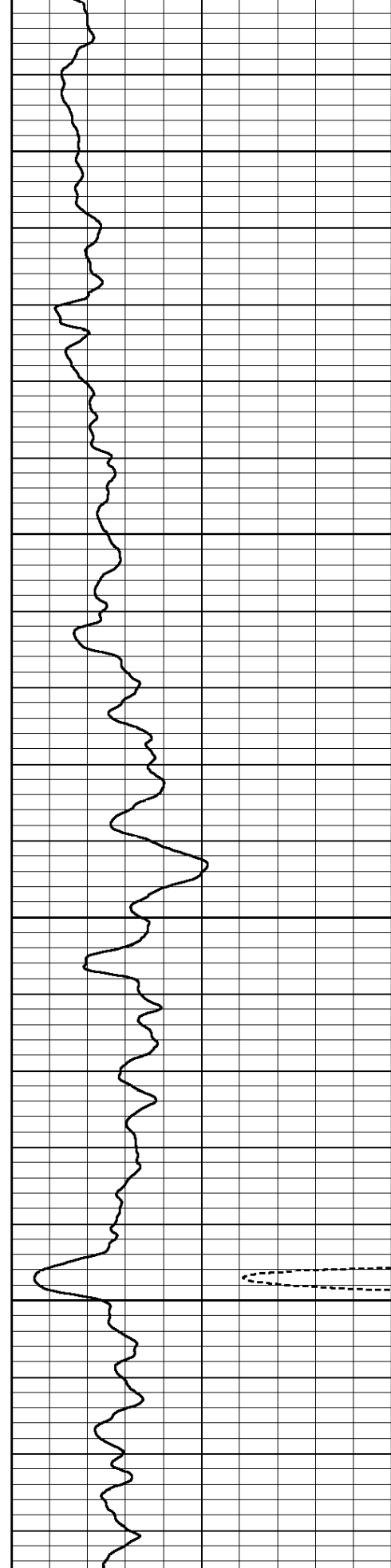
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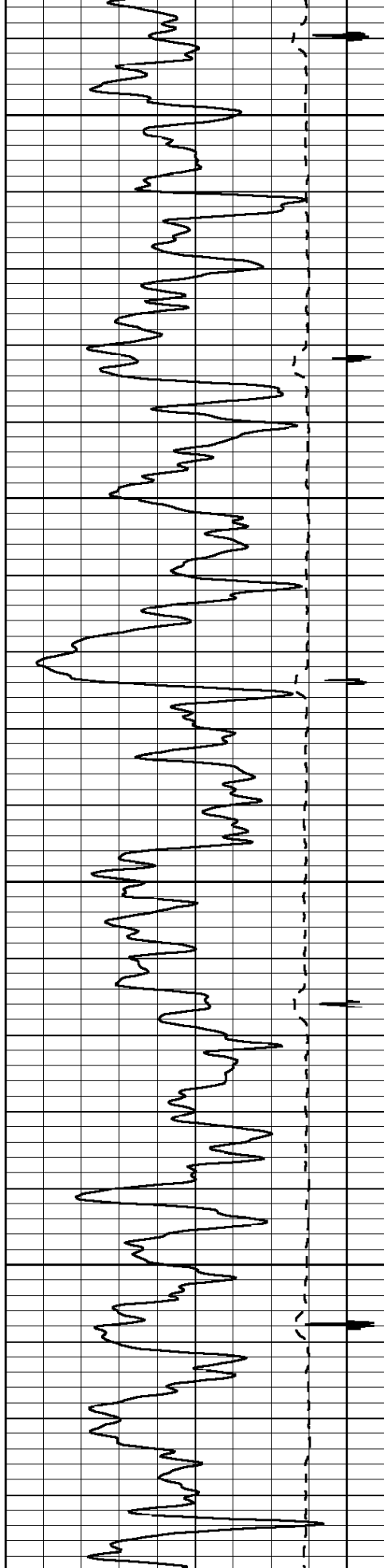




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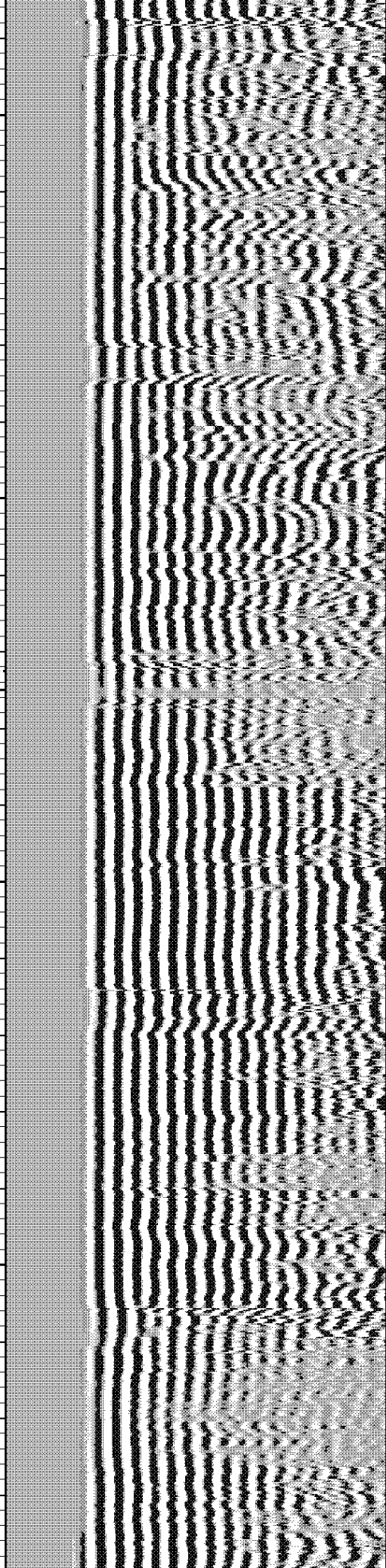
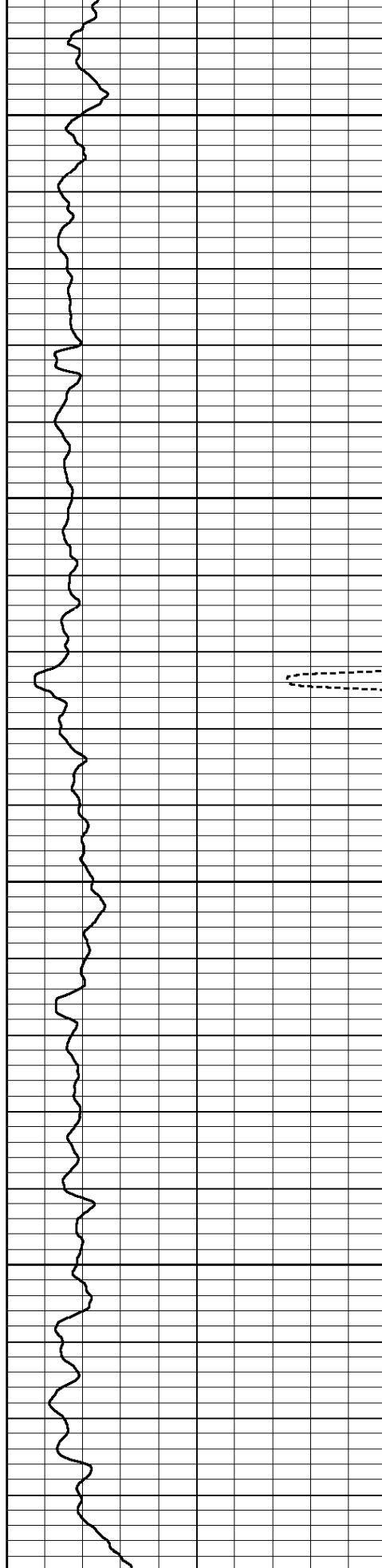
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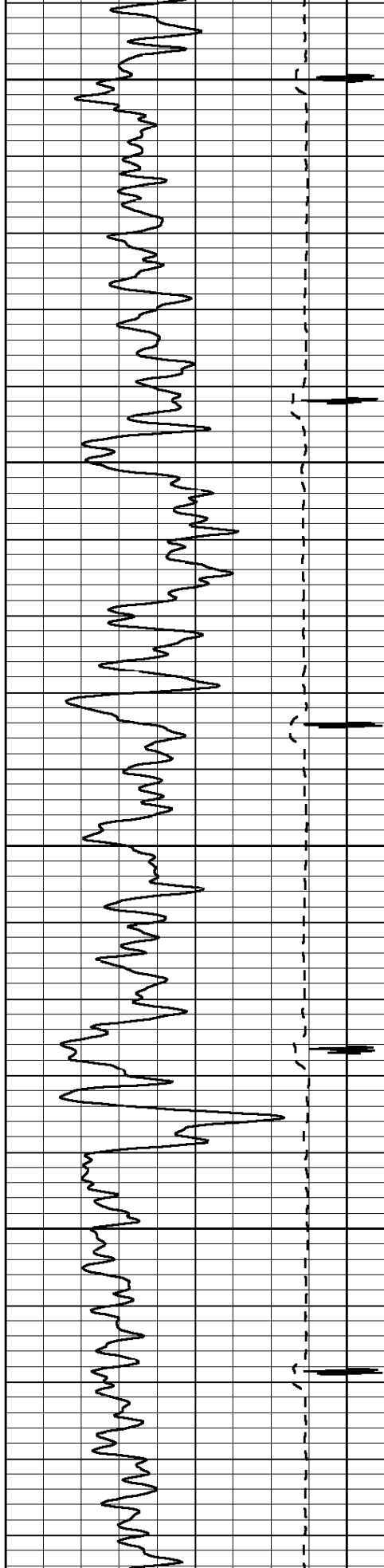




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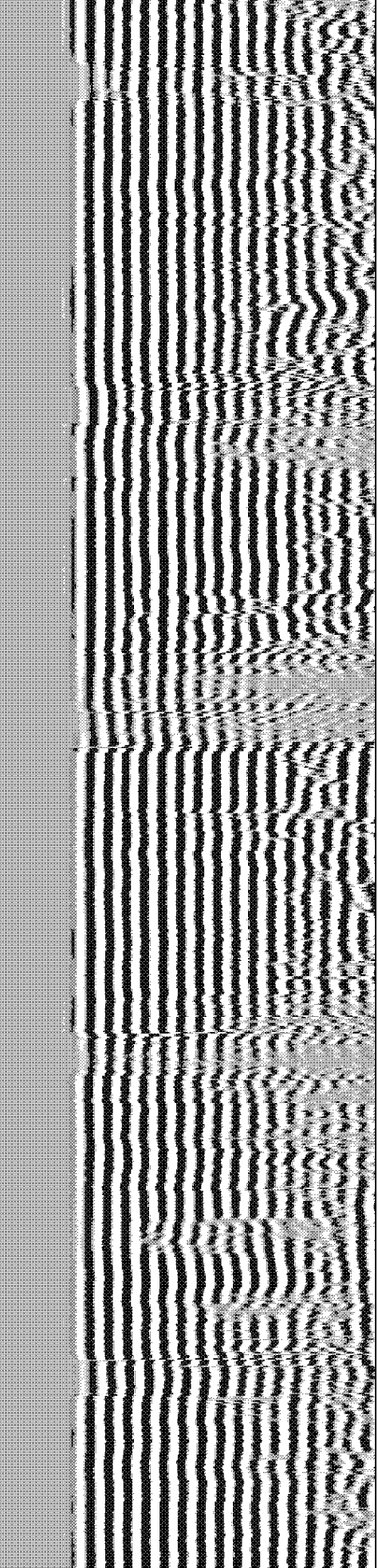
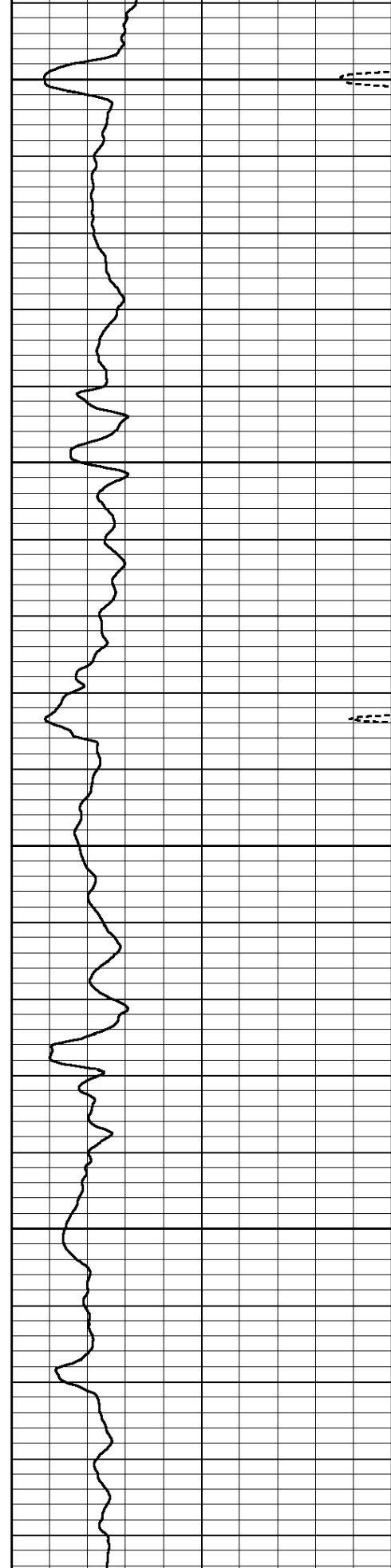
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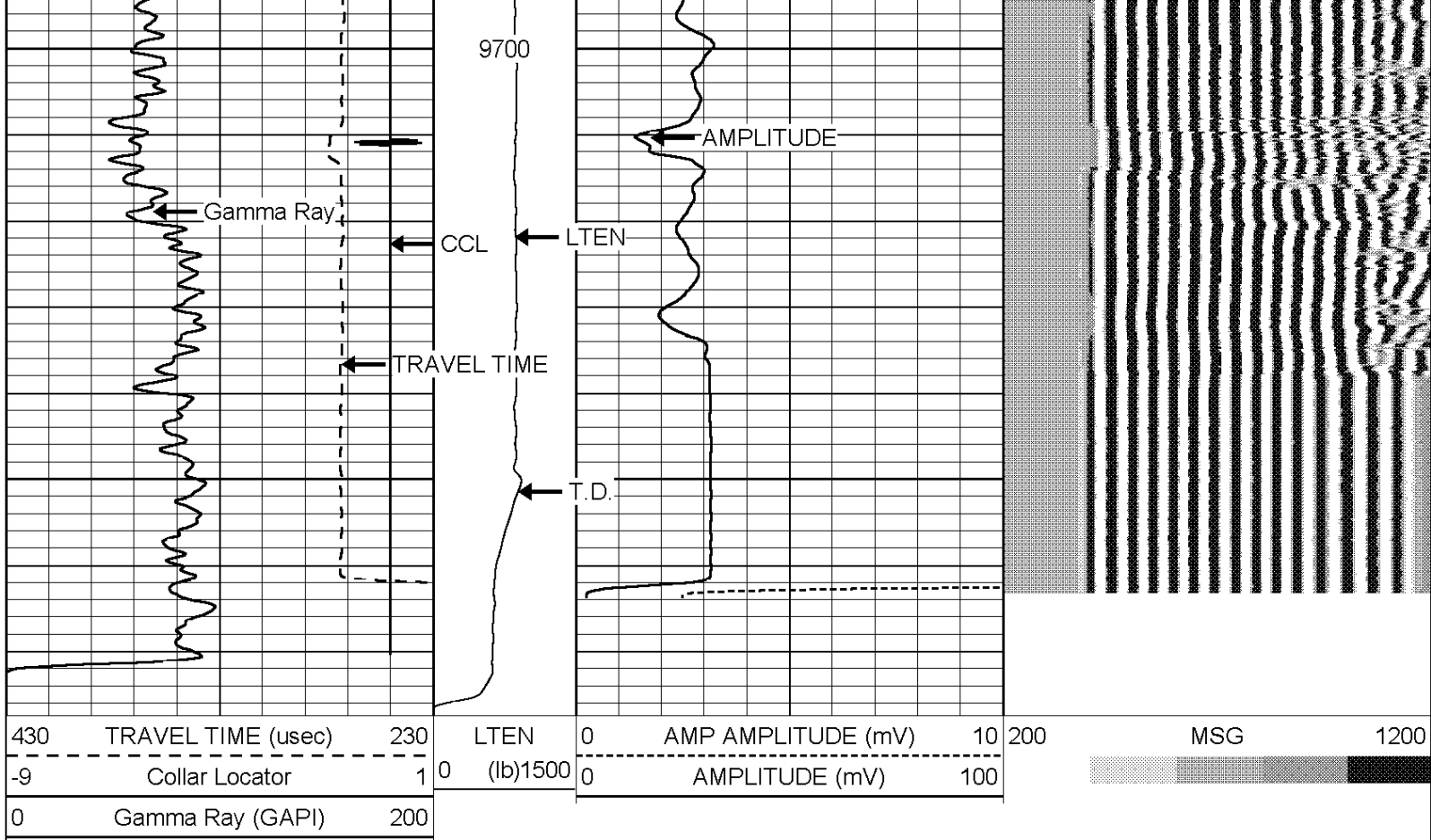




9500

9600





HALLIBURTON

ACOUSTIC CEMENT BOND LOG

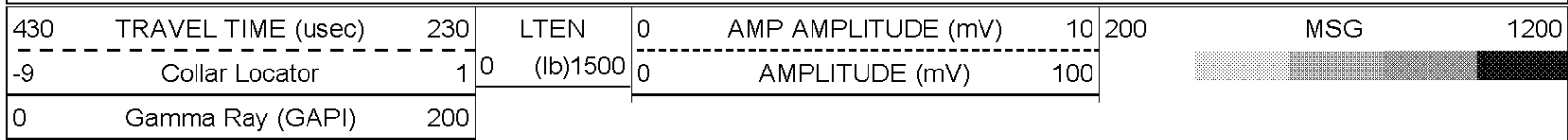
MAIN LOG SECTION
5"=100'

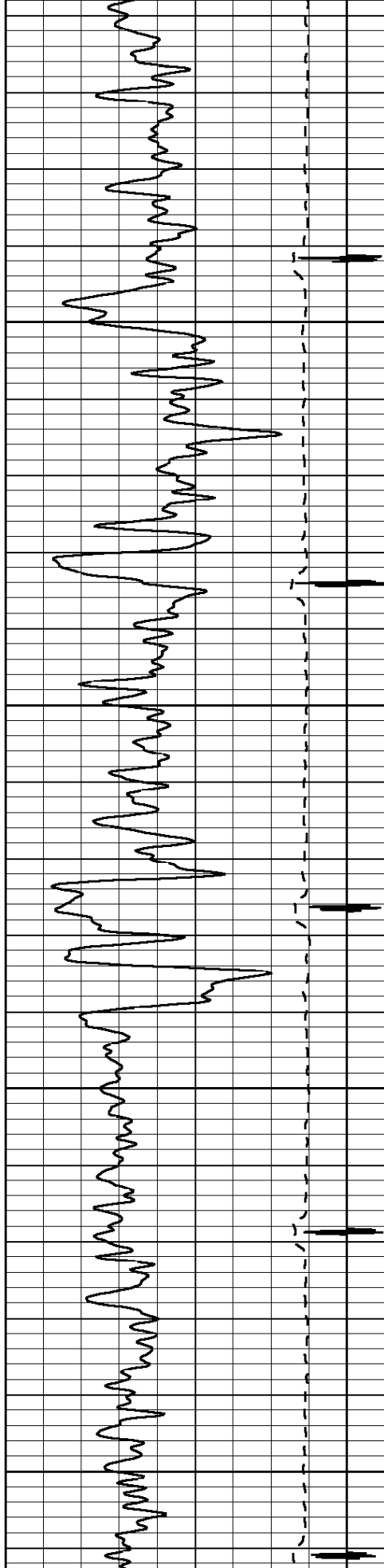
HALLIBURTON

ACOUSTIC CEMENT BOND LOG

REPEAT LOG SECTION
5"=100'

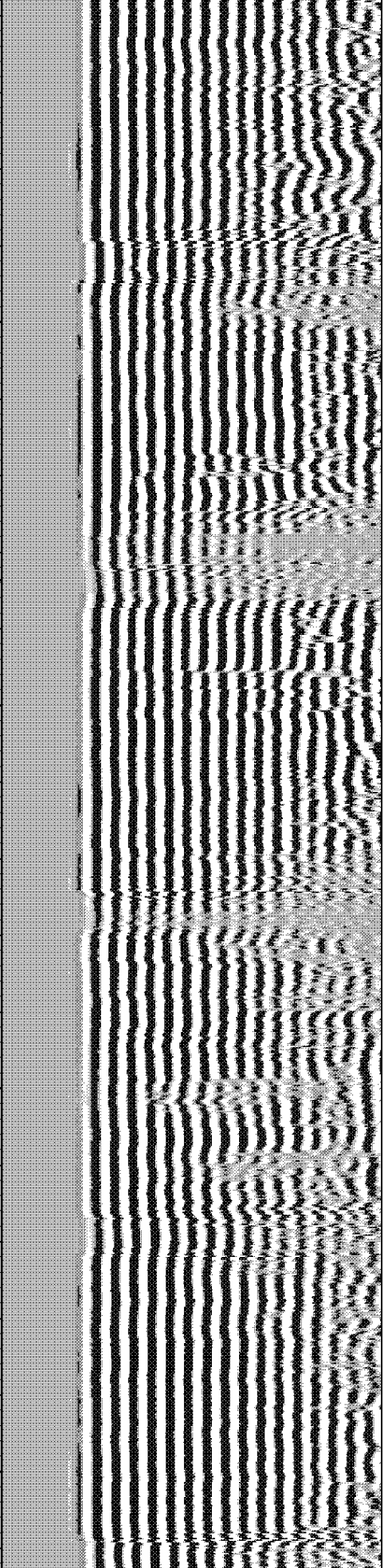
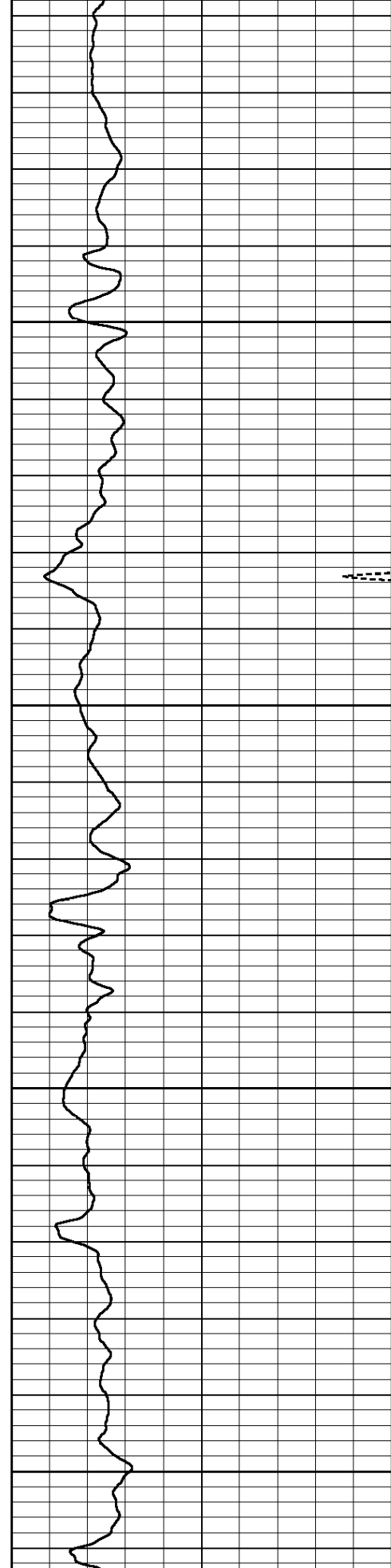
Database File: tr_323_25_597_cbl.db
Dataset Pathname: GRAND_VAL/TR_323_25/run1/REPEAT1
Presentation Format: CBL_PR~1
Dataset Creation: Fri Jan 16 08:48:58 2009 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

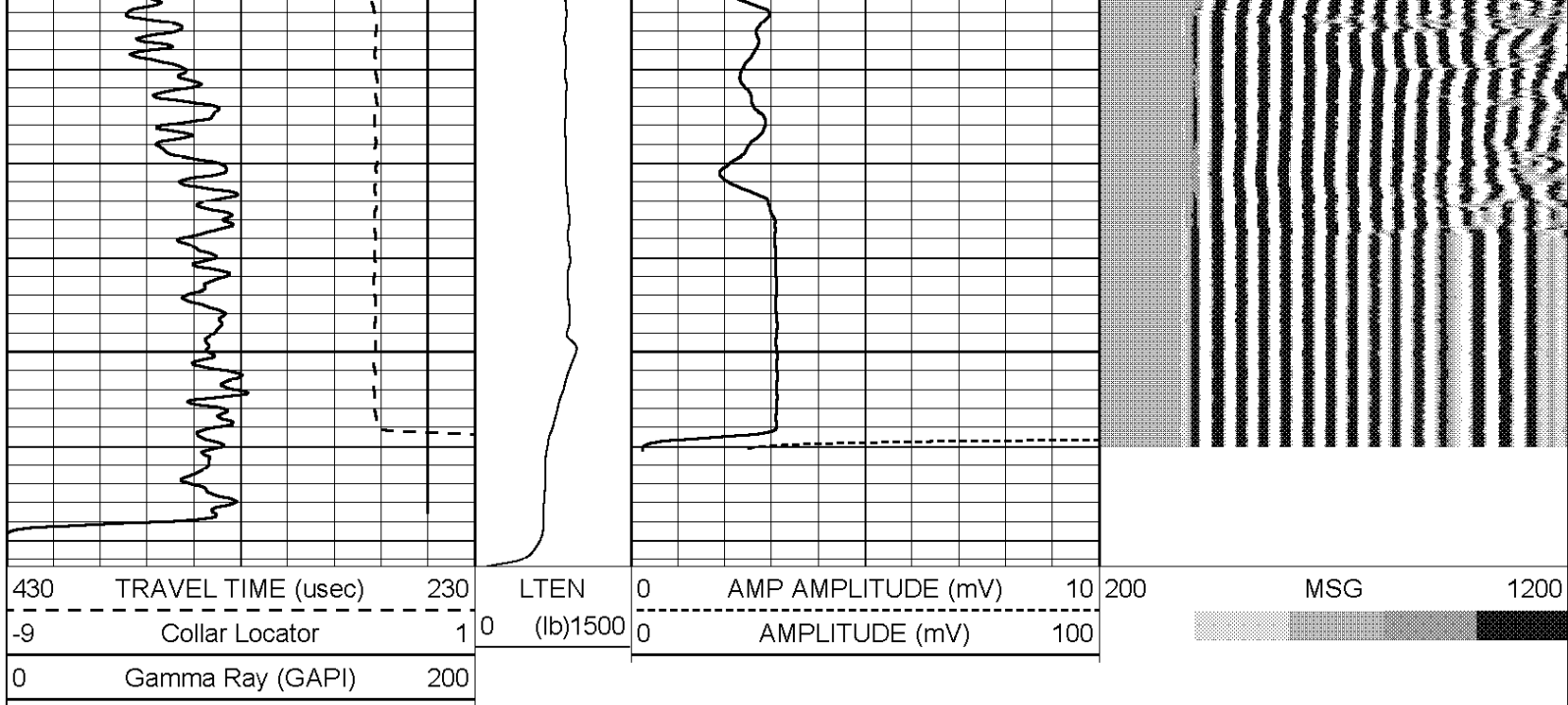




9600

9700

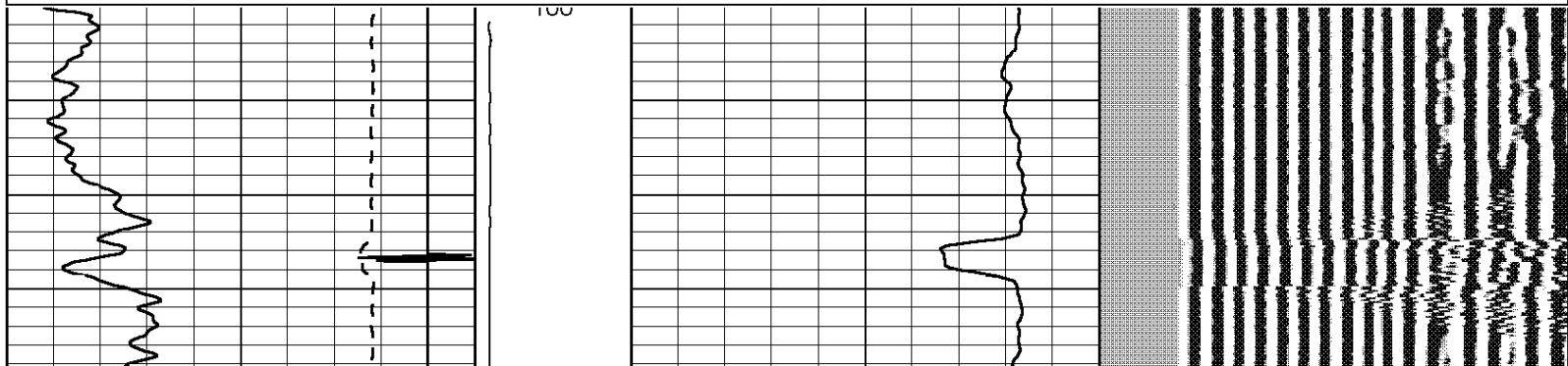
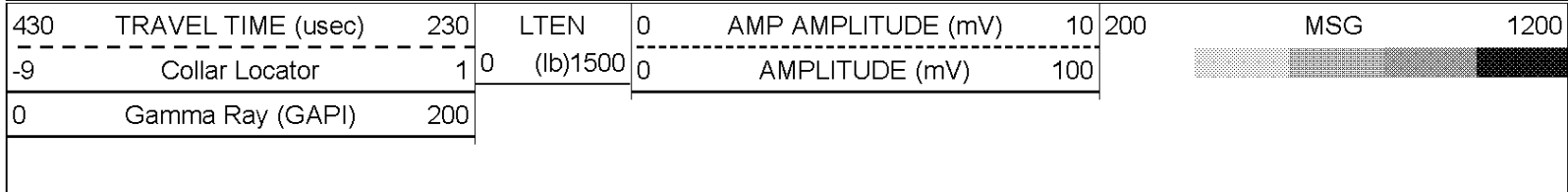


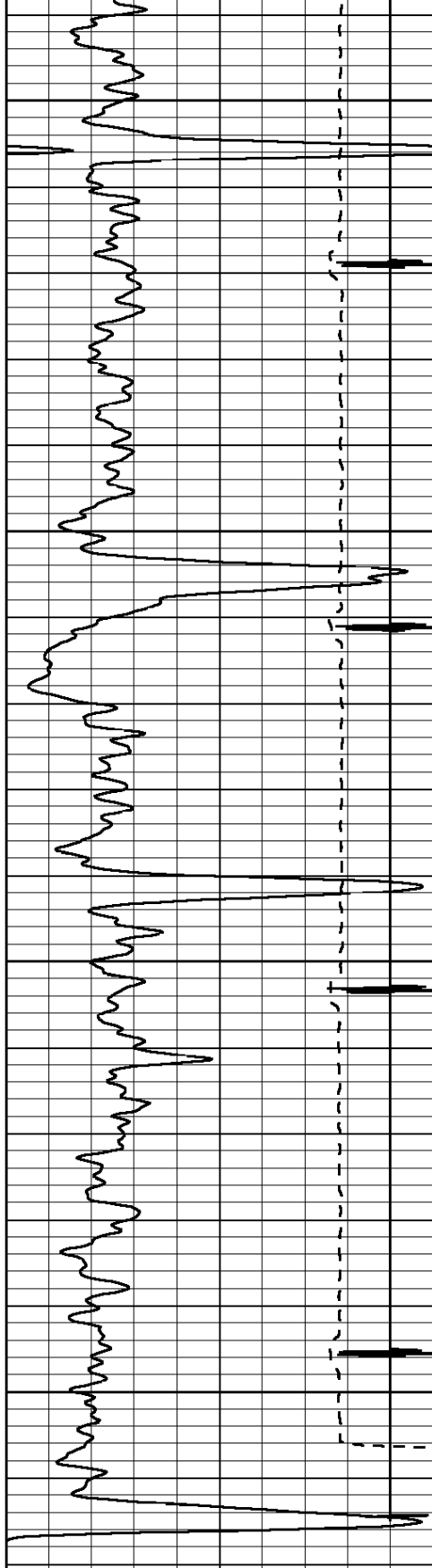


HALLIBURTON	ACOUSTIC CEMENT BOND LOG
	REPEAT LOG SECTION
	5"=100'

HALLIBURTON	ACOUSTIC CEMENT BOND LOG
	FREE PIPE LOG SECTION
	5"=100'

Database File:	tr_323_25_597_cbl.db
Dataset Pathname:	GRAND_VAL/TR_323_25/run1/F_P_1
Presentation Format:	CBL_PR~1
Dataset Creation:	Fri Jan 16 07:59:15 2009 by Log Halliburton Casedho
Charted by:	Depth in Feet scaled 1:240



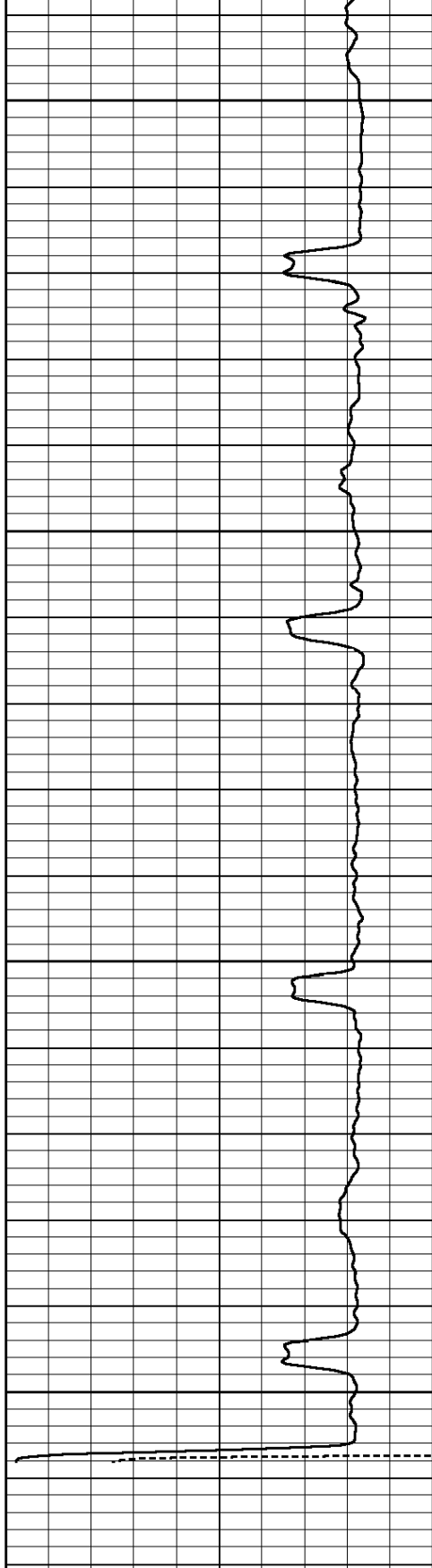


200

300

430	TRAVEL TIME (usec)	230
-9	Collar Locator	1
0	Gamma Ray (GAPI)	200

LTEN
(lb)1500

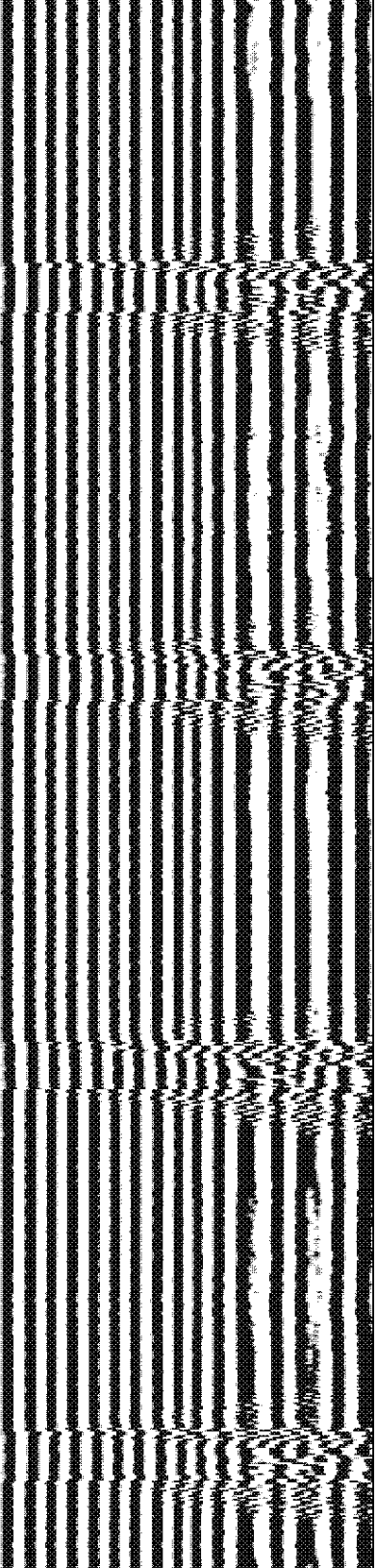


0	AMP AMPLITUDE (mV)	10
0	AMPLITUDE (mV)	100

200

MSG

1200



Calibration Report

Database File: tr_323_25_597_cbl.db
 Dataset Pathname: GRAND_VAL/TR_323_25/run1/MAIN_CBL
 Dataset Creation: Sat Jan 17 09:14:24 2009

Temperature Calibration Report

Serial Number: 0001
 Tool Model: 1.375TEMP
 Performed: Fri Jul 05 03:18:21 1996

	Reference	Reading
Low Reference:	0.00 degF	0.00 cps
High Reference:	1.00 degF	1.00 cps

Gain: 0.10
 Offset: 0.00
 Delta Spacing 1

Gamma Ray Calibration Report

Type / Serial: Probe / 081015

SHOP CALIBRATION

Thu Jan 15 19:28:16 2009

	Counts/Sec.	Gain	Offset	Jig	Units
Background	49.3				cps
Calibrator	268.0				cps
		1.0788			GAPI/cps

PRIMARY VERIFICATION

Thu Jan 15 19:31:47 2009

Background	51.9				cps
Calibrator	289.6				cps
Difference				237.7	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


Cement Bond Log Calibration Report

Serial Number: 080544
 Tool Model: Probe
 Performed: Fri Jan 16 07:56:54 2009

Depth: 100.592 ft
 Casing Diameter: 4.5 in

Casing Diameter:	4.0	in	
	3' Spacing	5' Spacing	
Signal Zero:	2	2	mV
Calibrated Amplitude:	82	82	mV
Reading at Signal Zero:	-0.00891113	-0.00817871	V
Reading in Free Pipe:	1.47275	1.28523	V
Gain:	53.9933	61.8521	
Offset:	2.48114	2.50587	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
WVF3			STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
			CENT-Probe (PT_MONO2)	2.88	2.75	35.00
			CBL-Probe (080544) Probe 2.75" Dual Receiver Bond	8.92	2.75	60.00
			CENT-Probe (PT_MONO2)	2.88	2.75	35.00
WVF5	12.57					

CCL	5.52		GR-Probe (081015) Probe 2.75" 4 Channel Pulse	4.90	2.75	30.00				
GR	4.14									
TEMP	0.58						TEMP-1.375TEMP (0001) Temperature Tool	1.60	1.38	30.00
LLMTEN	0.00									
Dataset: tr_323_25_597_cbl.db: GRAND_VAL/TR_323_25/run1/MAIN_CBL Total Length: 22.68 ft Total Weight: 191.00 lb O.D. 2.75 in										

Company	WILLIAMS PRODUCTION RMT CO				
Well	CTR 323-25-597				
Field	GRAND VALLEY				
County	GARFIELD			State	CO
HALLIBURTON			ACOUSTIC CEMENT BOND LOG		