

HALLIBURTON

CEMENT BOND LOG (CBL-M)

Company

Well

Field

County

BILL BARRETT CORPORATION  
ANSCHUTZ EQUUS FARMS 4-62-16-0857CH  
WATTENBERG  
WELD State CO

Company

Well

Field

County

State

BILL BARRETT CORPORATION  
ANSCHUTZ EQUUS FARMS 4-62-16-0857CH  
WATTENBERG  
WELD CO

API No.:

Location:

Other Services

05123390870000  
SURFACE HOLE LOCATION:  
250' FNL & 1018' FEL. NE/NE  
BOTTOM HOLE LOCATION:  
500' FSL & 500' FEL, NE/NE  
CAST-M

Sec: 16

Twp: 4N

Rge: 62W

Permanent Datum

Log Measured From

Drilling Measured From

G.L.  
K.B.  
K.B.

Elevation

23 Ft. above perm. datum

4525  
G.L.  
4525

Date @ Time Logged

Run No.

Depth - Driller

Depth - Logger

Bottom - Logged Interval

Top - Log Interval

Max. Recorded Temp.

12/21/14  
ONE  
5726  
5725  
5694  
SURFACE  
183 F

Type Fluid in Hole

Density of Fluid

Fluid Level

Cement Top Est. Logged

Equipment / Location

Recorded by

Witnessed by

FRESH WATER  
8.33  
SURFACE  
11072147 / BRIGHTON  
J. SCHMIDT  
C. CUMBERLAND

CEMENTING DATA

Surface String

Protection String

Production String

Liner

Date / Time Cemented

Primary / Squeeze

Expected Compressive Strength

Cement Volume

Cement Type / Weight

Formulation

Mud Type / Mud Wgt.

psi@ hrs

psi@ hrs

psi@ hrs

psi@ hrs

psi@ hrs

psi@ hrs

psi@ hrs

Borehole Record

Run Number

Bit

From

To

Size

Weight

From

To

ONE

24

0

60

16

65

0

60

13.5

60

822

9.625

36

0

822

8.75

822

6582

26

0

6582

6.125

6582

10800

4.5

11.6

5240

10800

&lt;&lt;&lt; Fold Here &gt;&gt;&gt;

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 WHICH 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

TOOLS WERE RAN IN 7.0" 26# CASING

CAST-M RAN IN CIM 72 SHOTS 4 SPF

LOG CORRELATED TO LINER TOP AT CUSTOMER REQUEST

YOUR CREW: E. FRIEDLAND, R. MEROLA, M. MEYER

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES

Service Ticket No.

901938015

API No.

05123390870000

PGM Ver

8.0

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

GAMMA

CBL

CAST

Run No.

ONE

Run No.

ONE

Run No.

ONE

Run No.

Serial No.

14878

Serial No.

12091451

Serial No.

11488892

Serial No.

Model No.

TTTCU-002

Model No.

CBL-M

Model No.

CAST-M

Model No.

Diameter

1.69"

Diameter

2.75"

Diameter

3.125"

Diameter

LOGGING DATA

General Data

Pass

No

Depths

From

To

Well Head

Pressure

Speed

Ft/Min

Logging Run Comments

No.	FROM	TO	Pressure	Flow				
MAIN	LT	SURFACE	0	40 FPM				
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
MAIN	0	150	60	0				
DIRECTIONAL INFORMATION								
Maximum Deviation			deg. @		KOP			

Log Variables

DatabaseC:\ProgramData\Warrior\Data\anschut\_4-62-16-0857ch.db  
Dataset field/well/run1/CAST\_CBL\_MAIN\_FINAL1/\_vars\_

Top - 28.00 ft

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE in	BORSAL kppm	BOTTEMP degF	CASED?	CASEOD in
0	0	TEMP	0	0	0	No	0
CASETHCK in	CASEWGHT lb/ft	LTH	MSGGN	MudWgt lb/gal	PERFS	POROS1	POROS2
0	0	Limestone	0	0	0	0	0
RHOCF	SO in	SRFTEMP degF	TDEPTH ft	UHSGC	USERFTT usec/ft	ZREF MRayl	
0	0	0	0	NONE	0	0	

28.00 ft - 4055.63 ft

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE in	BORSAL kppm	BOTTEMP degF	CASED?	CASEOD in
1	0	TEMP	8.75	150	200	Yes	7
CASETHCK in	CASEWGHT lb/ft	LTH	MSGGN	MudWgt lb/gal	PERFS	POROS1	POROS2
0.362	26	Limestone	1	8.3	0	1	0
RHOCF	SO in	SRFTEMP degF	TDEPTH ft	UHSGC	USERFTT usec/ft	ZREF MRayl	
0.25	0	35	5529	NONE	0	1.7	

4055.63 ft - 5716.00 ft

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE in	BORSAL kppm	BOTTEMP degF	CASED?	CASEOD in
1	0	TEMP	8.75	150	200	Yes	7
CASETHCK in	CASEWGHT lb/ft	LTH	MSGGN	MudWgt lb/gal	PERFS	POROS1	POROS2
0.362	26	Limestone	1	8.3	0	1	0
RHOCF	SO in	SRFTEMP degF	TDEPTH ft	UHSGC	USERFTT usec/ft	ZREF MRayl	
0.25	0	35	5529	NONE	0	1.7	

5716.00 ft - Bottom

BHSAL1	BHSAL2	BHTEMP_Src	BITSIZE in	BORSAL kppm	BOTTEMP degF	CASED?	CASEOD in
0	0	TEMP	0	0	0	No	0
CASETHCK in	CASEWGHT lb/ft	LTH	MSGGN	MudWgt lb/gal	PERFS	POROS1	POROS2
0	0	Limestone	0	0	0	0	0
RHOCF	SO	SRFTEMP	TDEPTH	UHSGC	USERFTT	ZREF	



RHOCP	SO	SRF TEMP	DEPTH	UHS GC	USERFT T	ZREF
0	in	degF	ft	NONE	usec/ft	MRayl
0	0	0	0		0	0

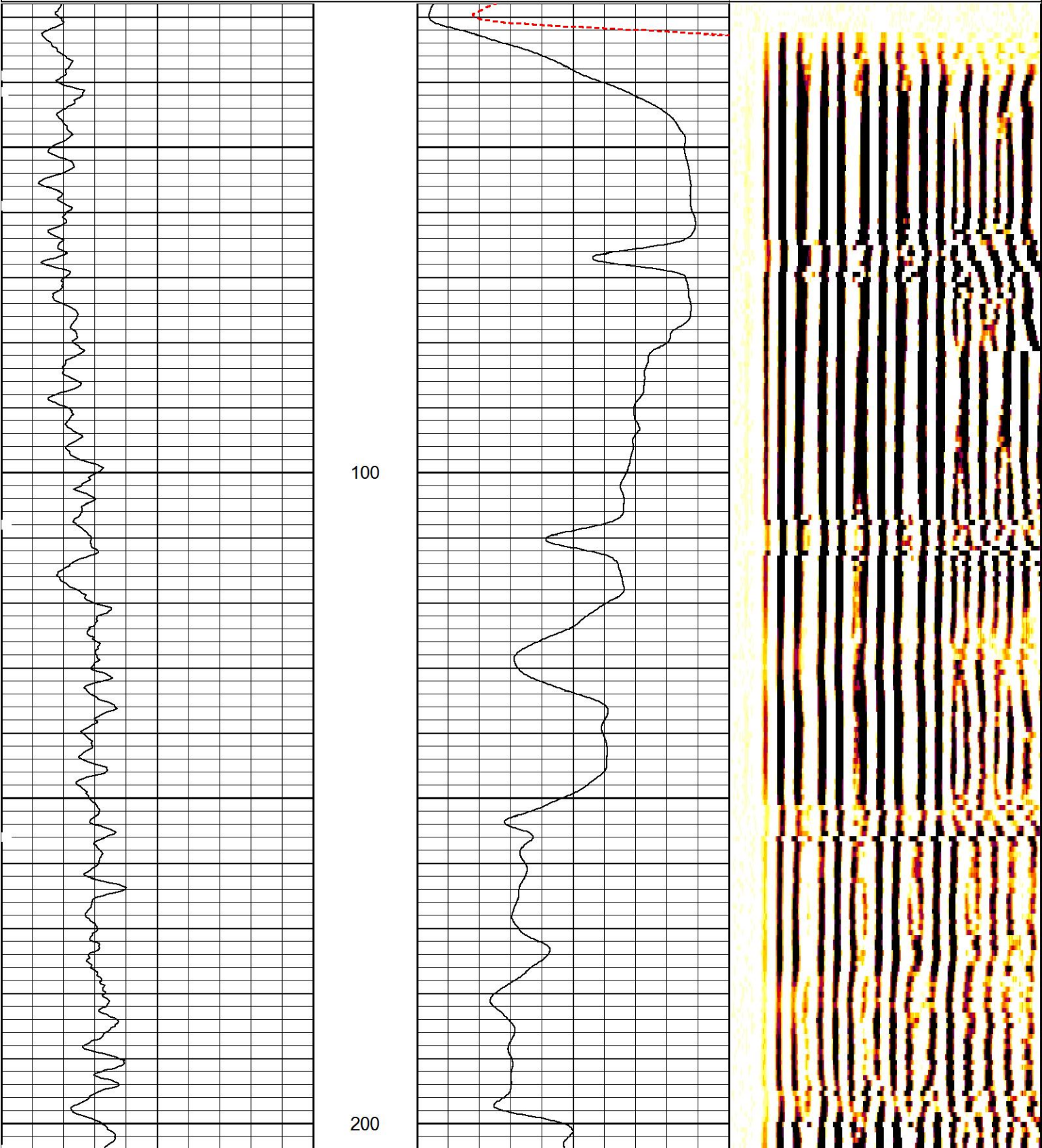
MAIN PASS

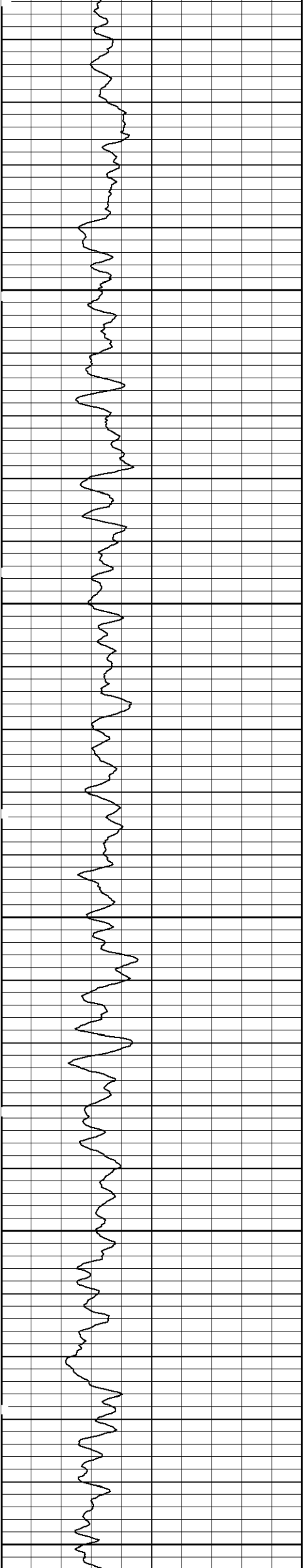
HALLIBURTON

5" = 100'

Database File	anschutz_4-62-16-0857ch.db
Dataset Pathname	CAST_CBL_MAIN_FINAL1
Presentation Format	hcbl
Dataset Creation	Mon Dec 22 04:07:41 2014
Charted by	Depth in Feet scaled 1:240

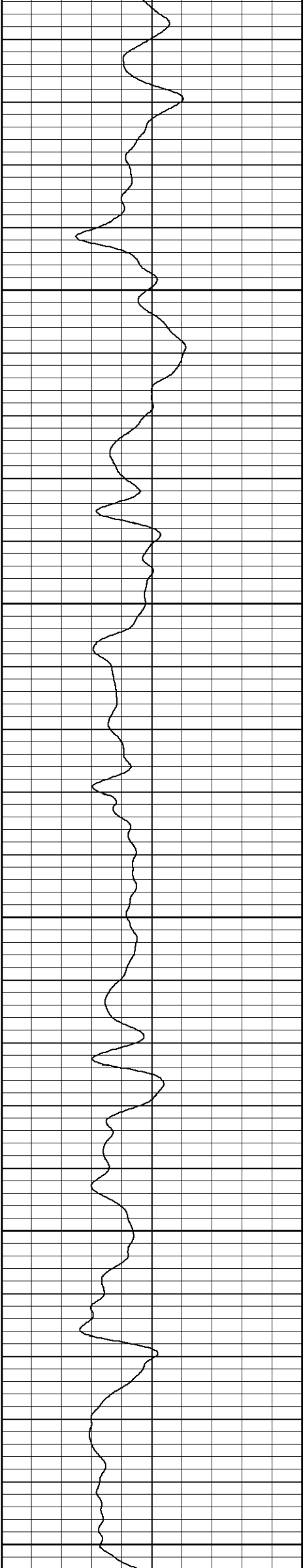
3' Travel Time	LTEN	0	3' Amplitude (mV)	100	200	MSG	1160
200	CCL	39500	0	(lb 2000)	0	3' Amplitude X5 (mV)	20
0	Gamma Ray (GAPI)	100					

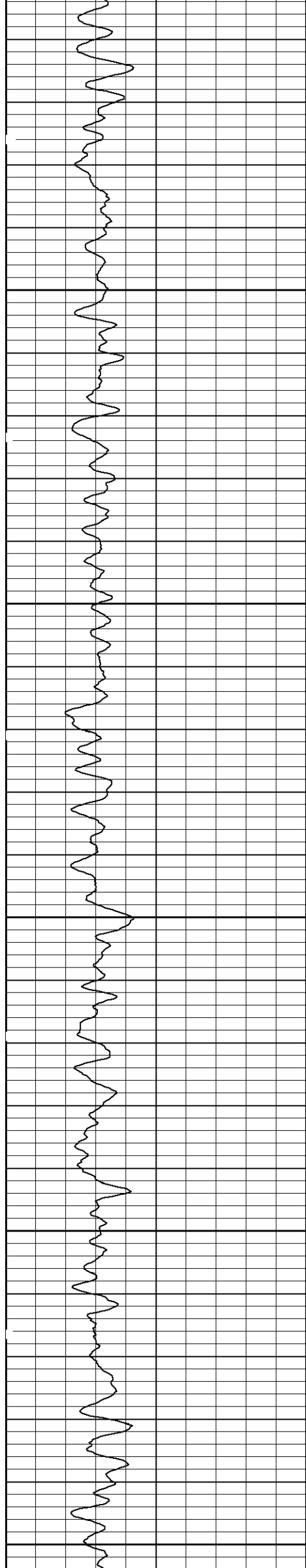




300

400

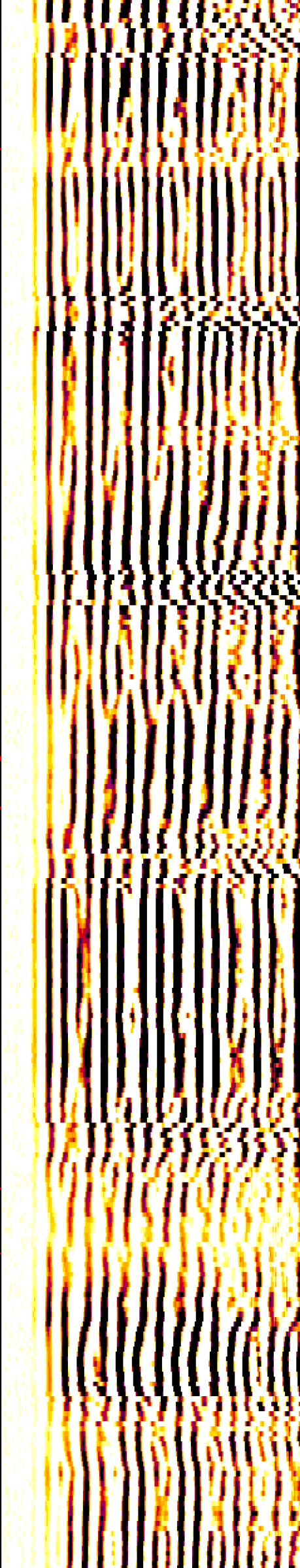
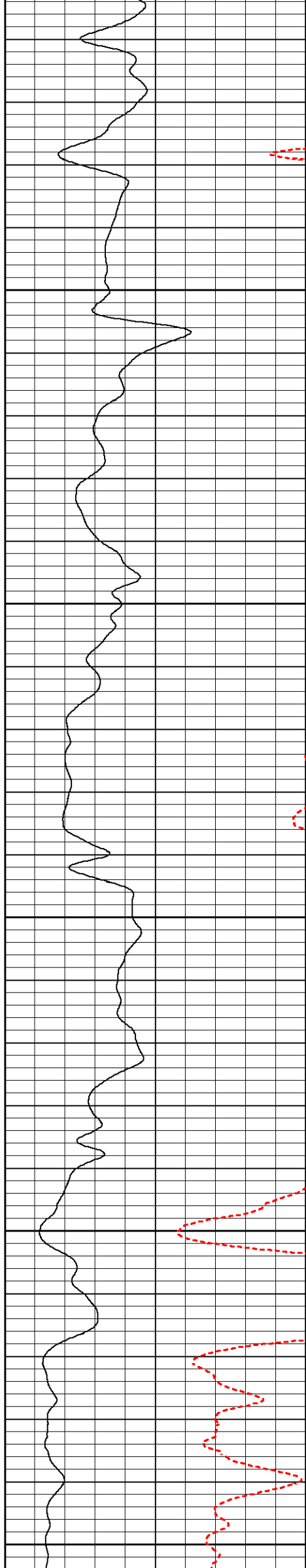


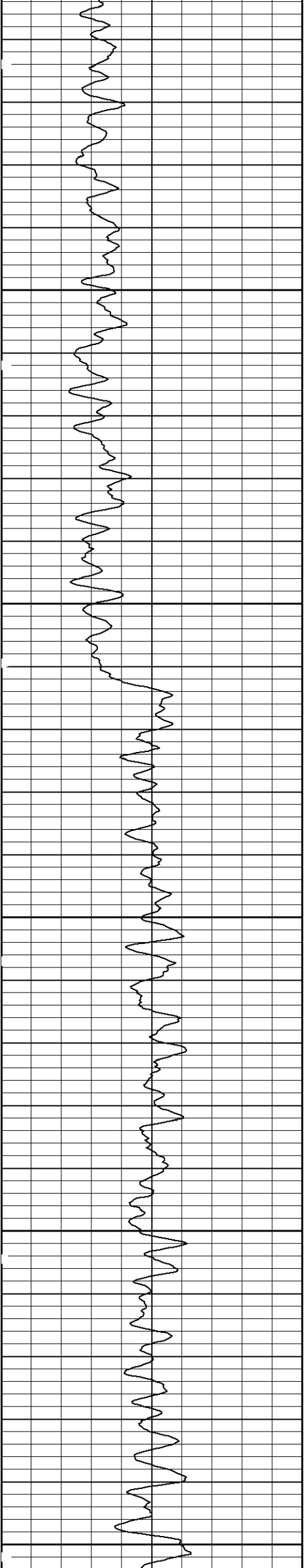


500

600

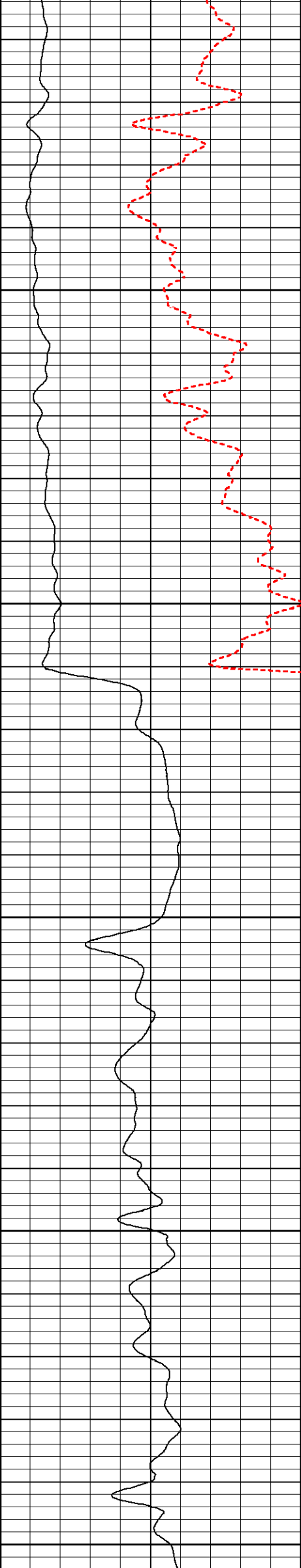
700

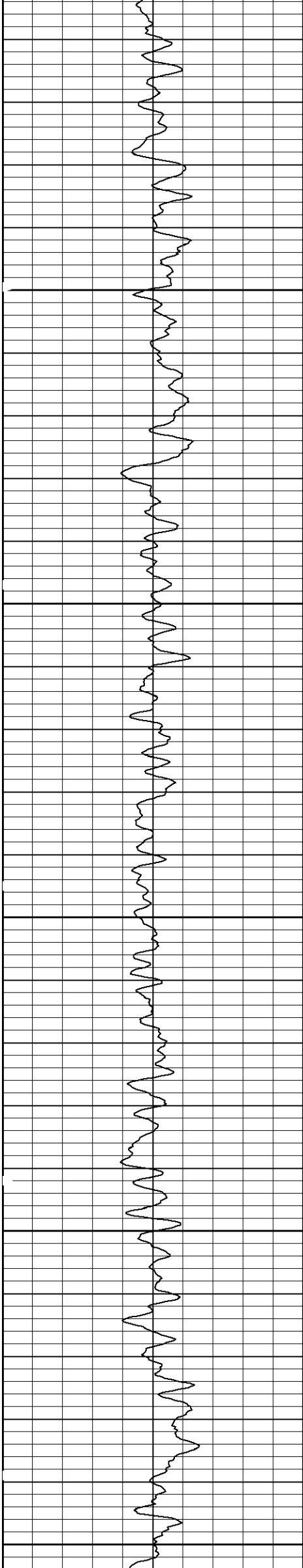




800

900

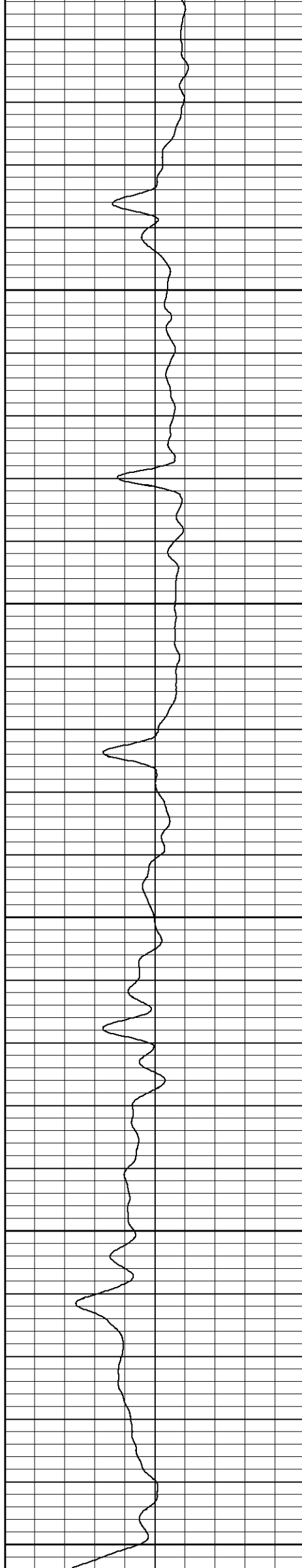




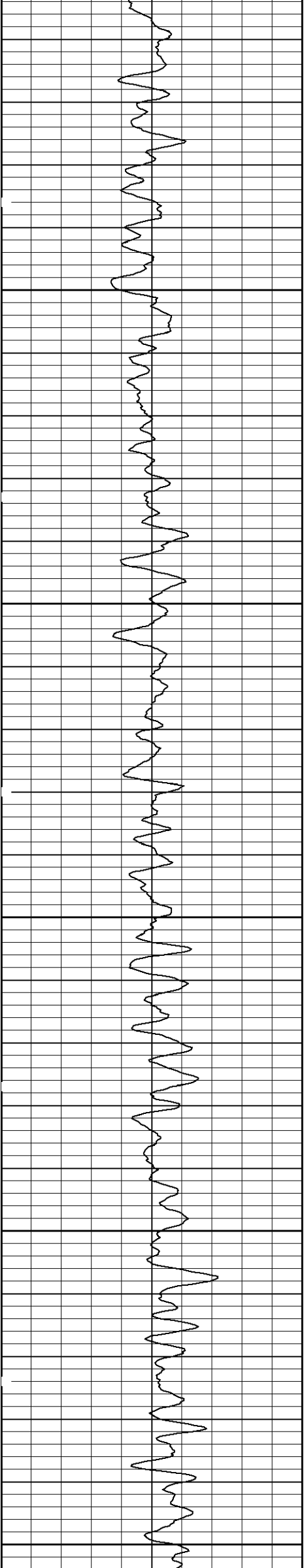
1000

1100

1200

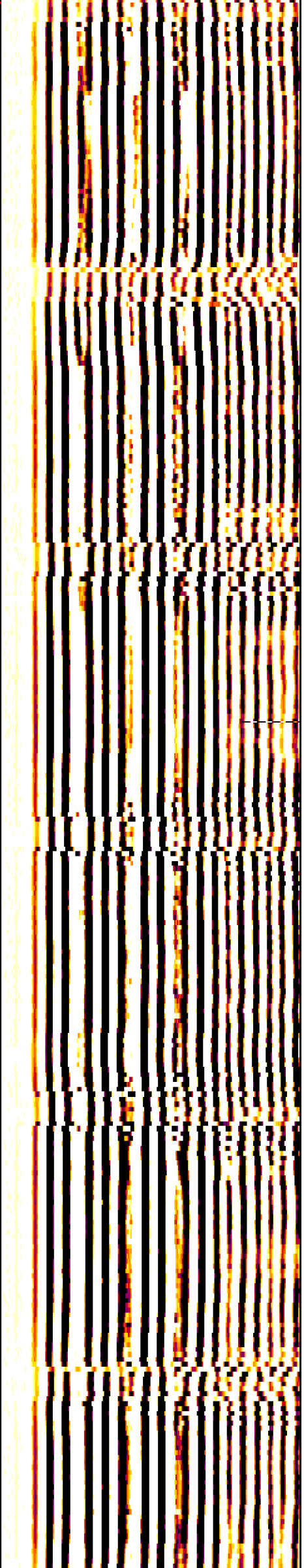
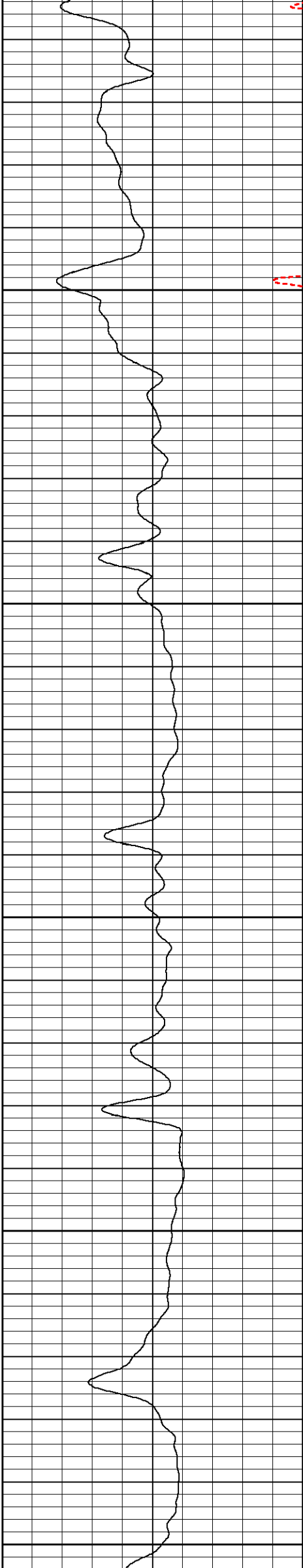




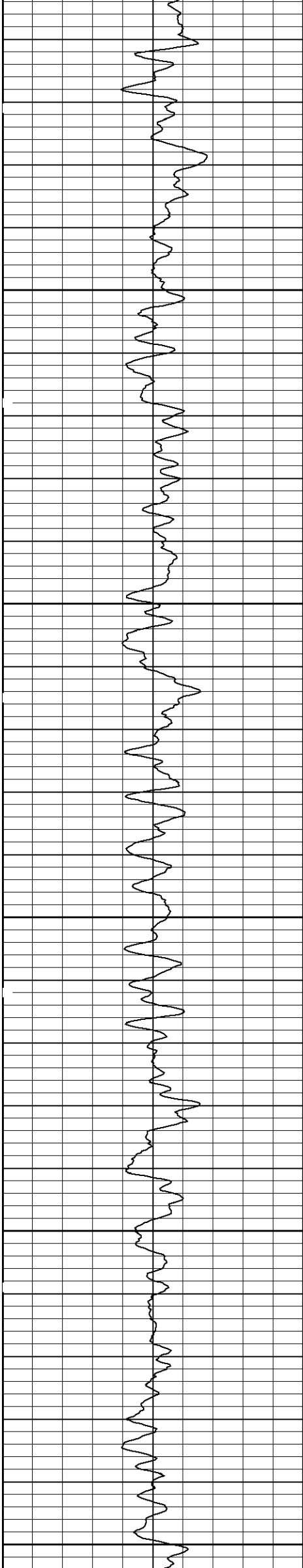


1300

1400



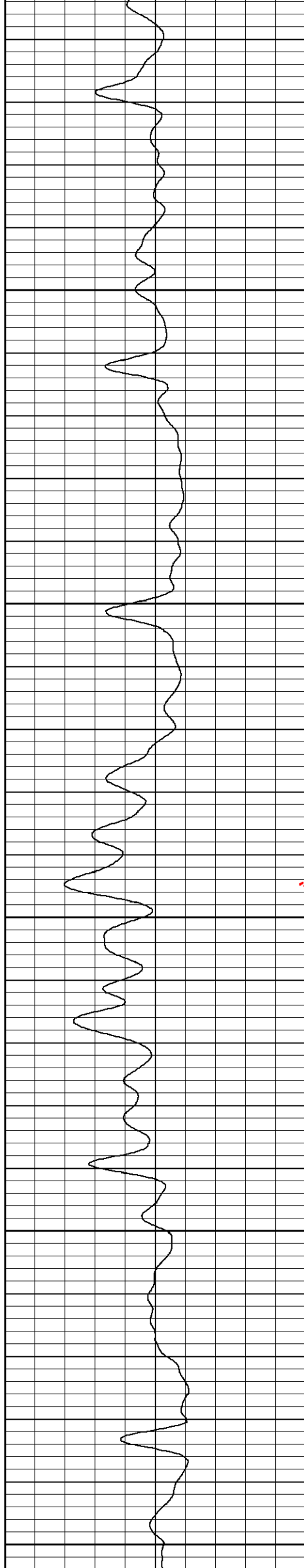


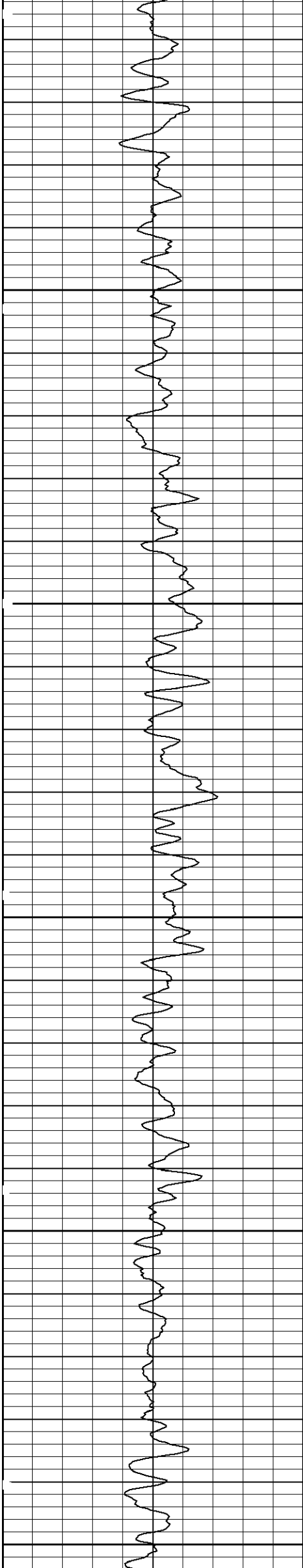


1500

1600

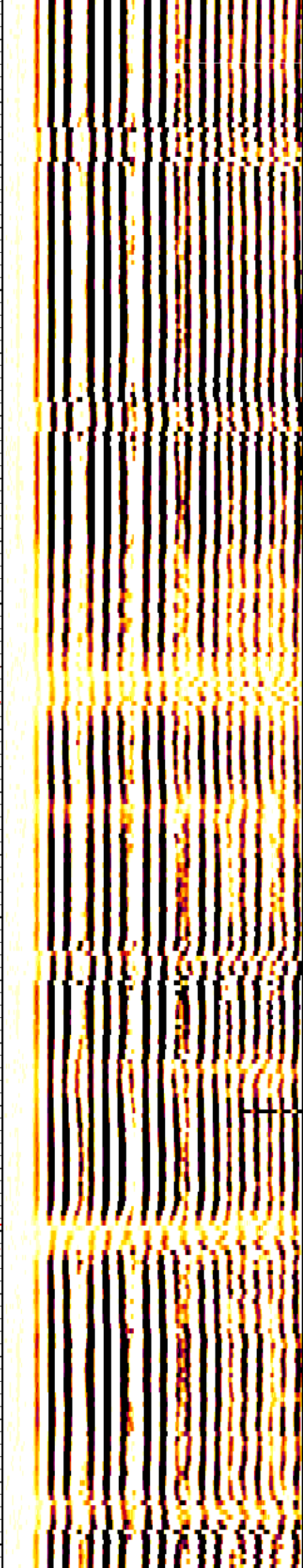
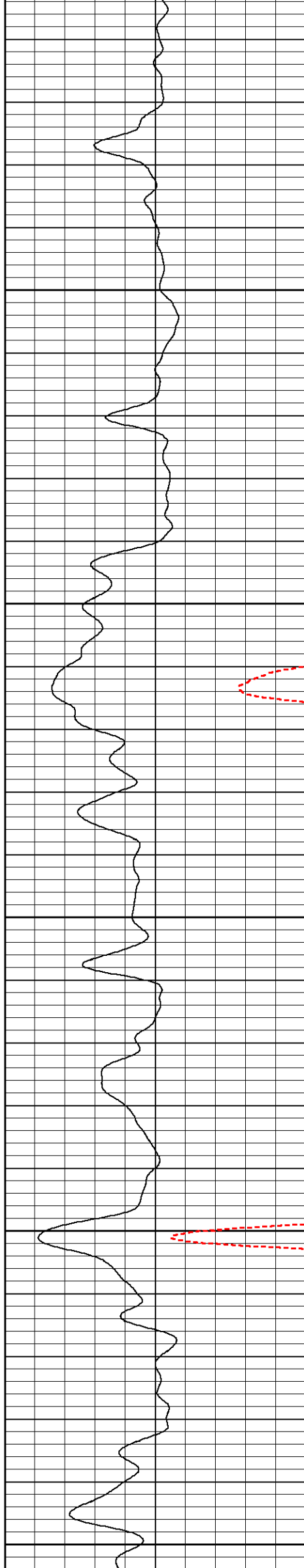
1700

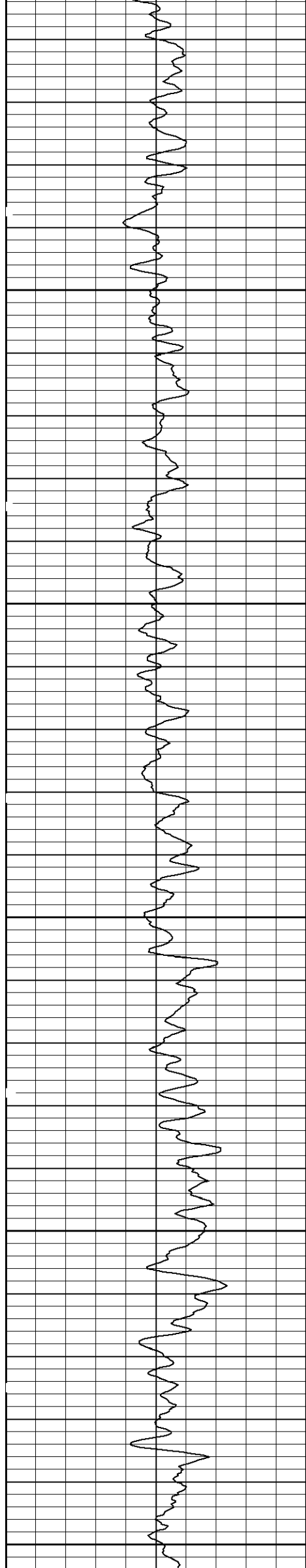




1800

1900

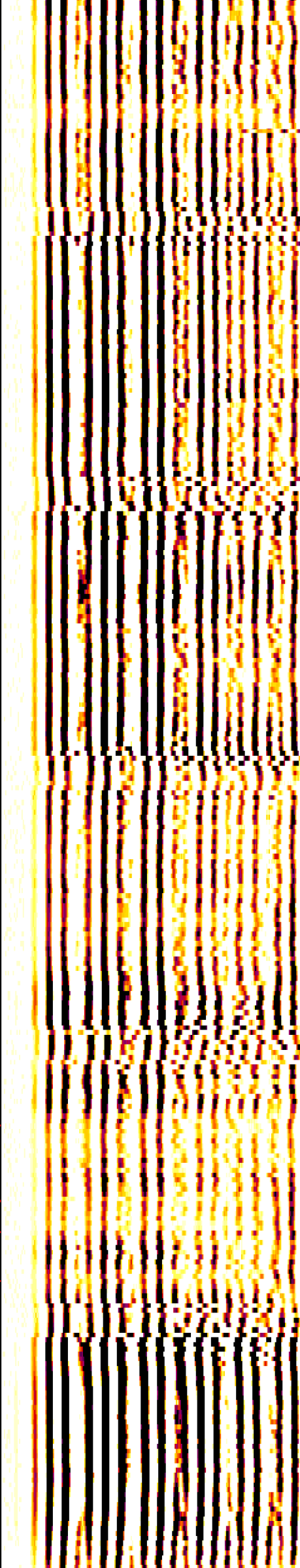
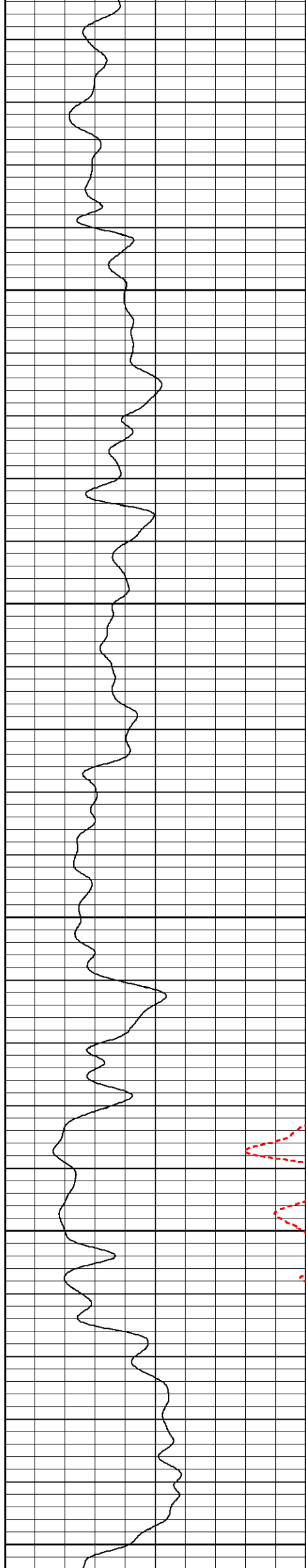


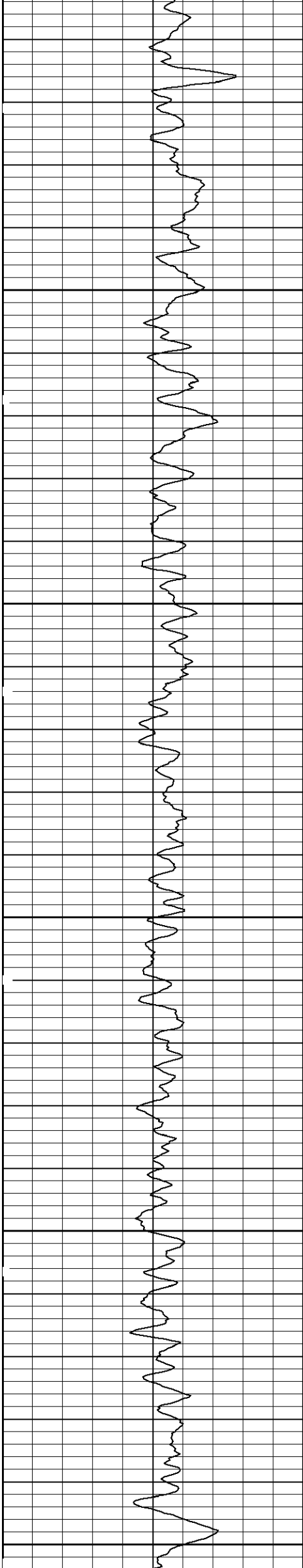


2000

2100

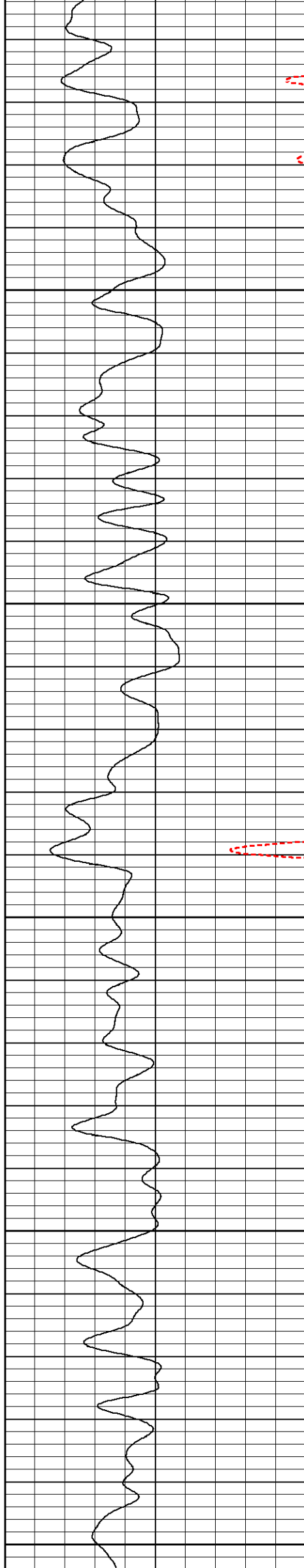
2200



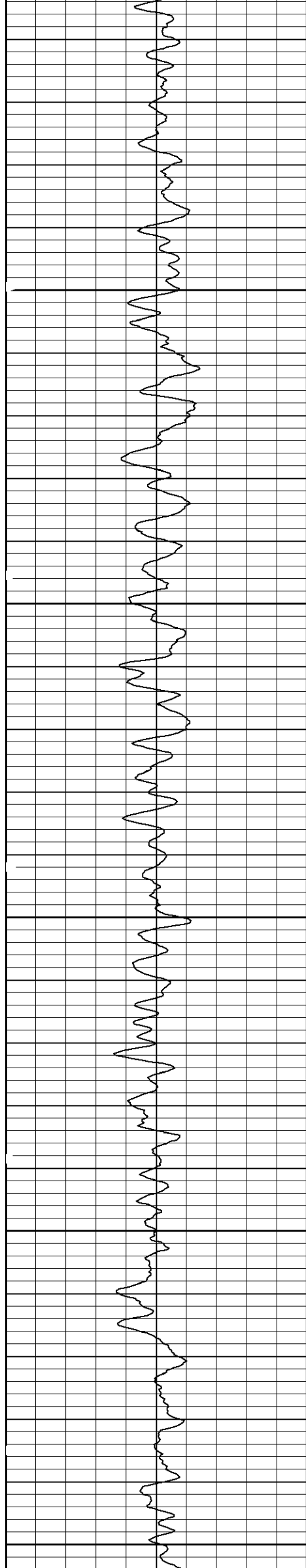


2300

2400



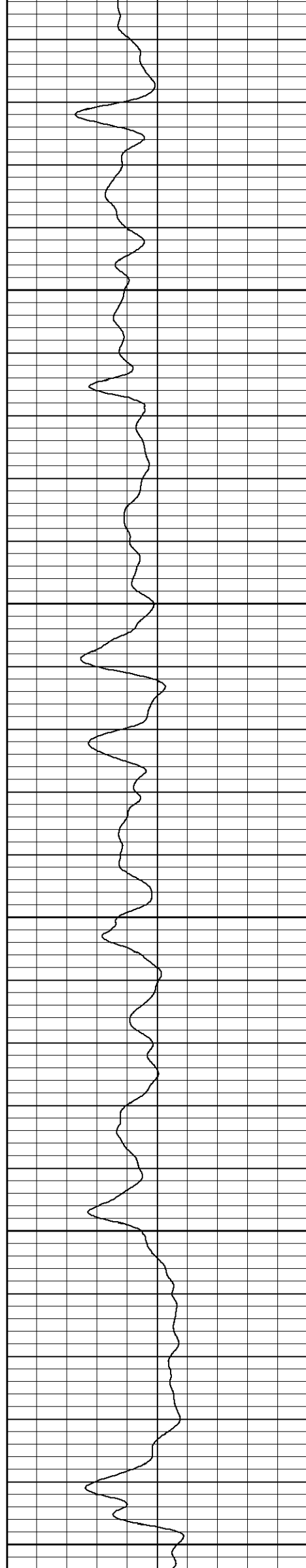


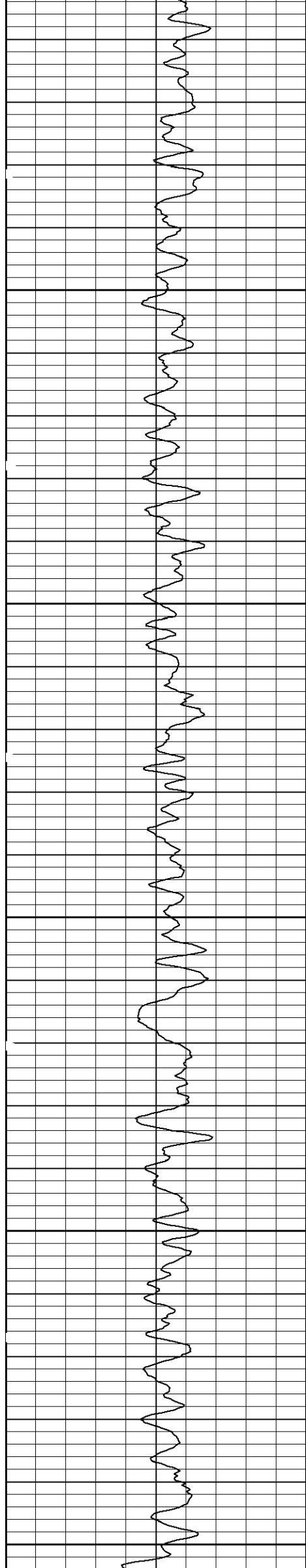


2500

2600

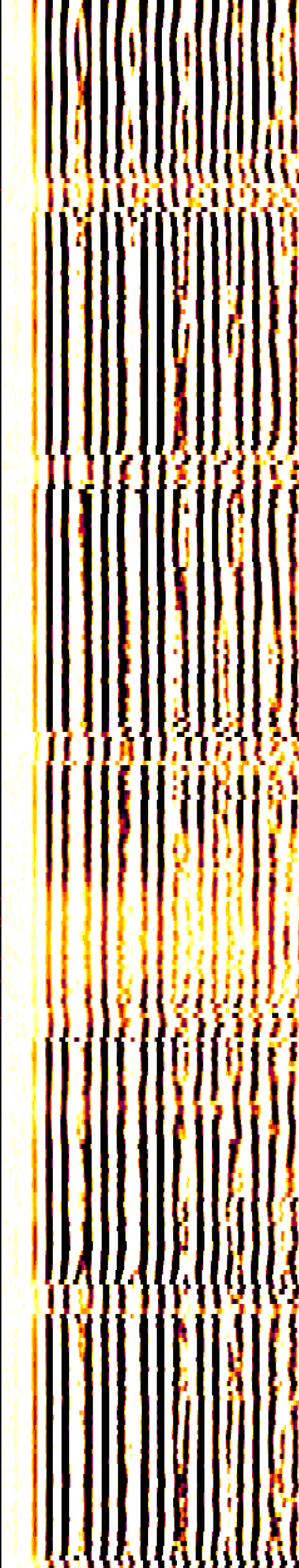
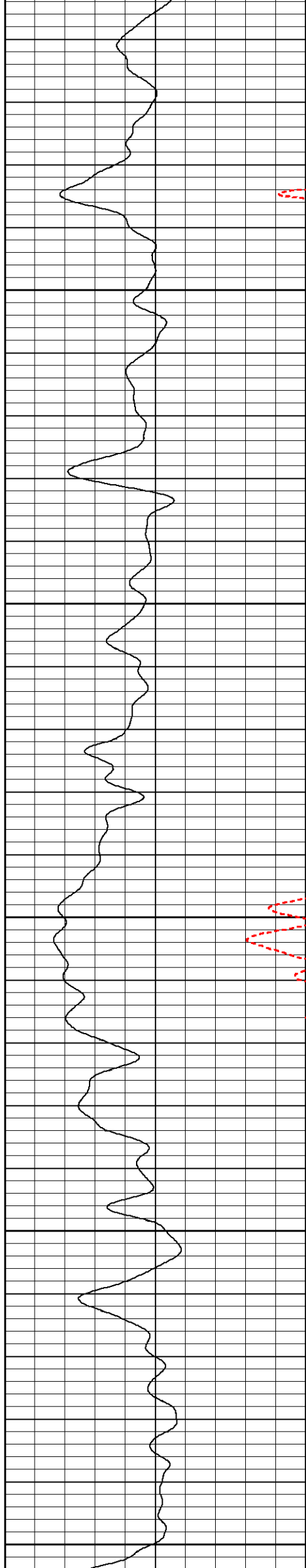
2700

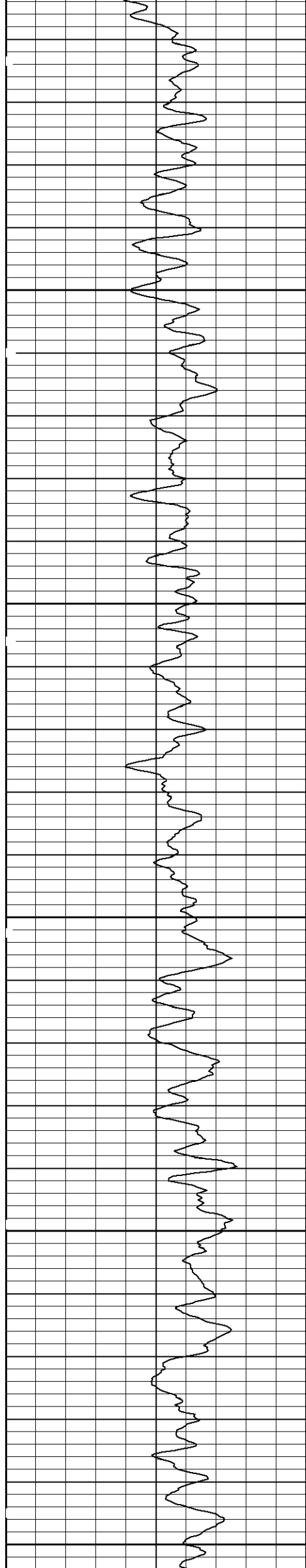




2800

2900

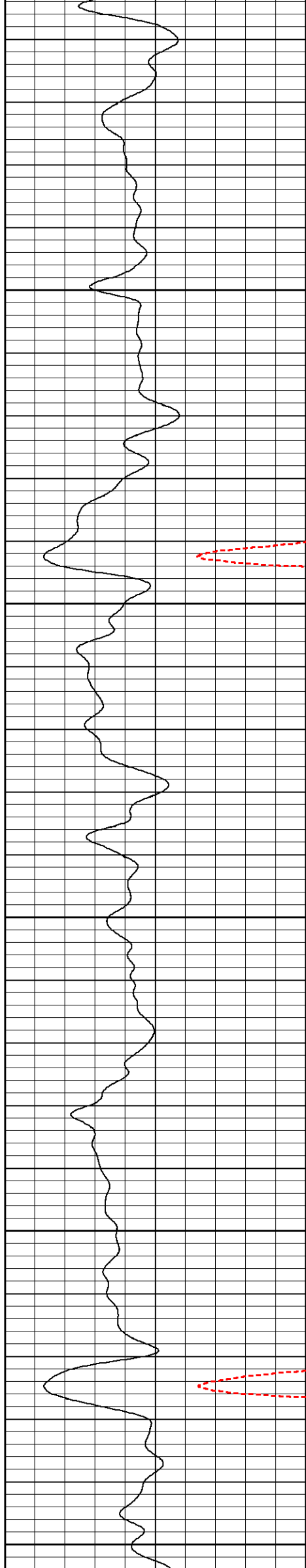


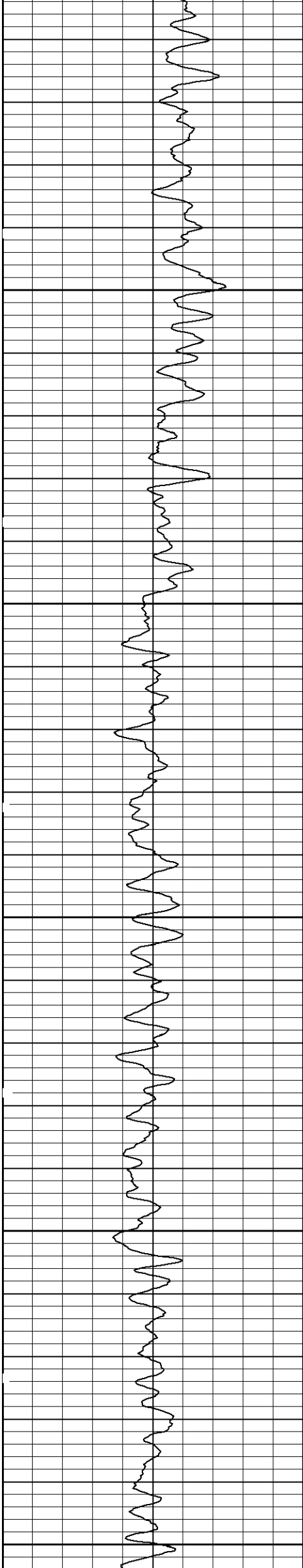


3000

3100

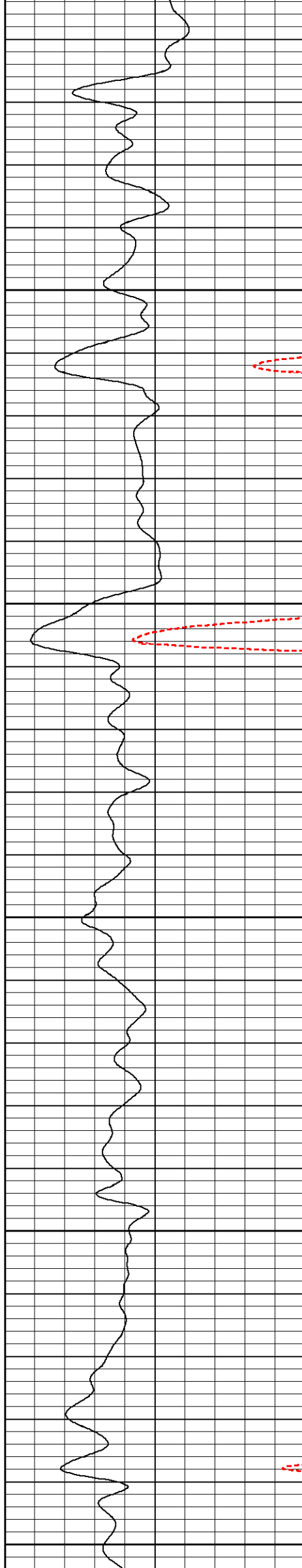
3200



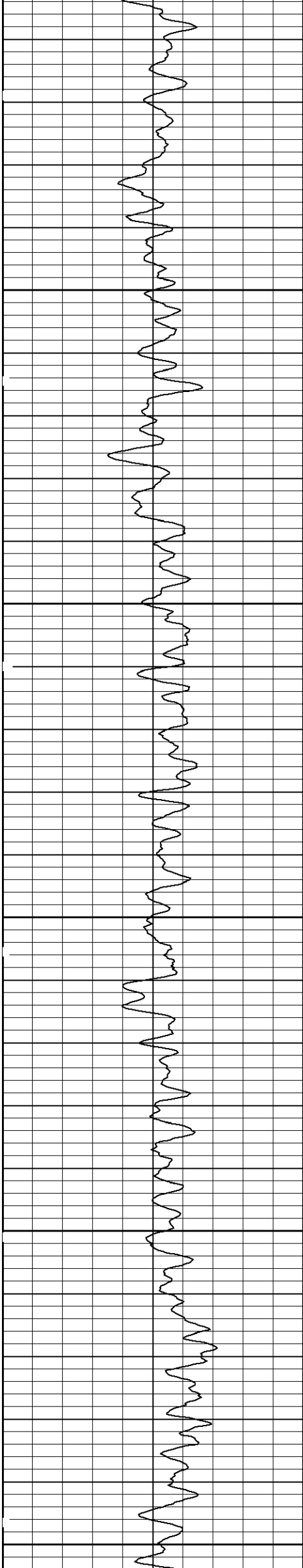


3300

3400



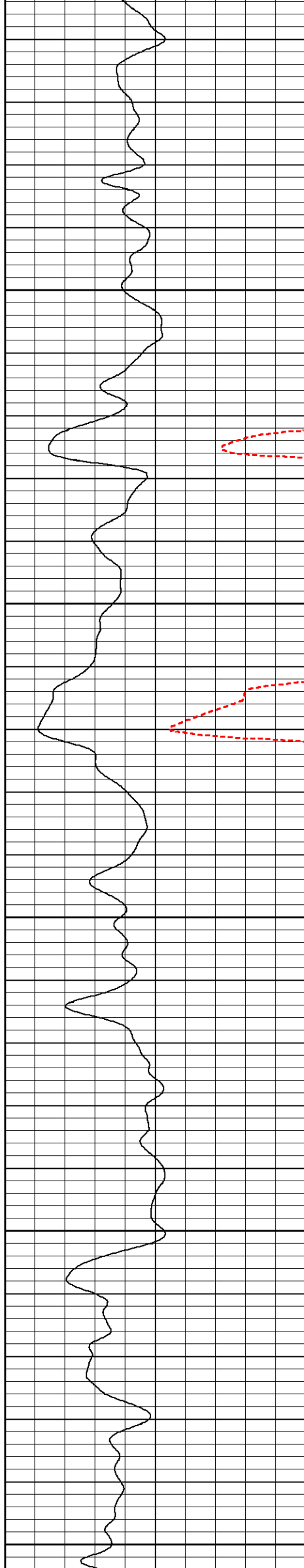


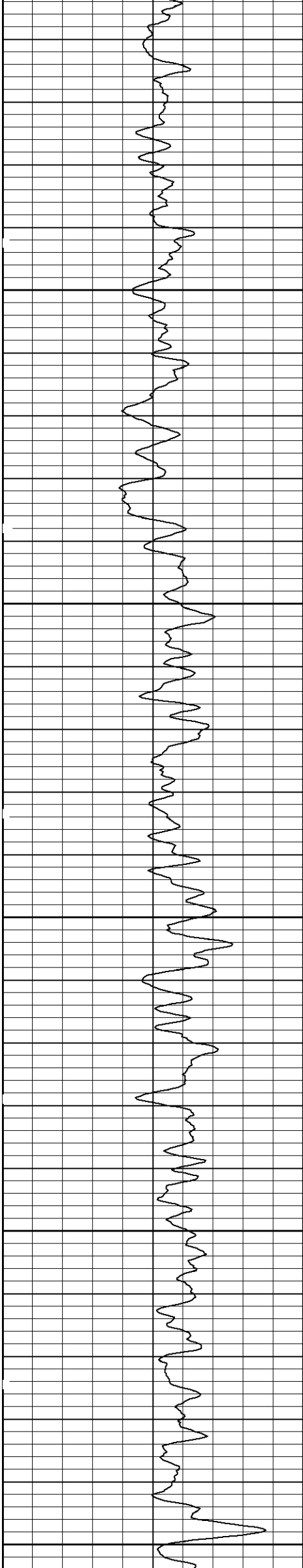


3500

3600

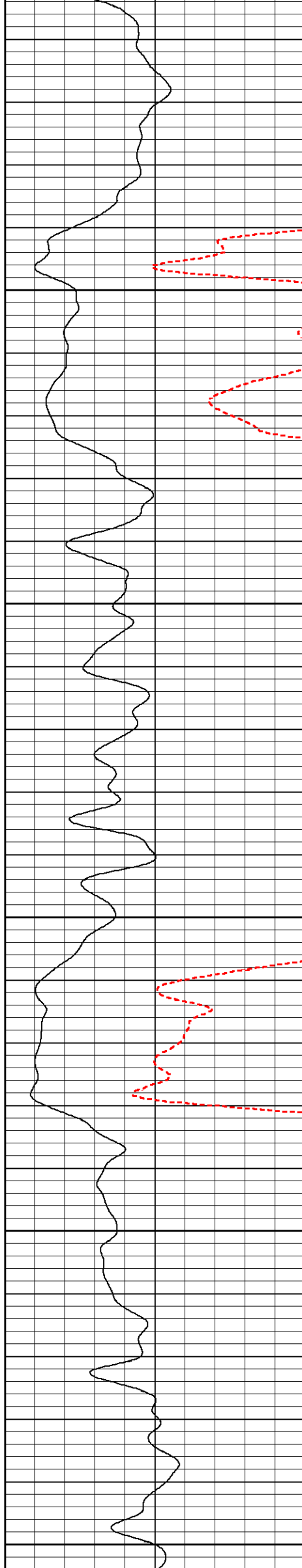
3700

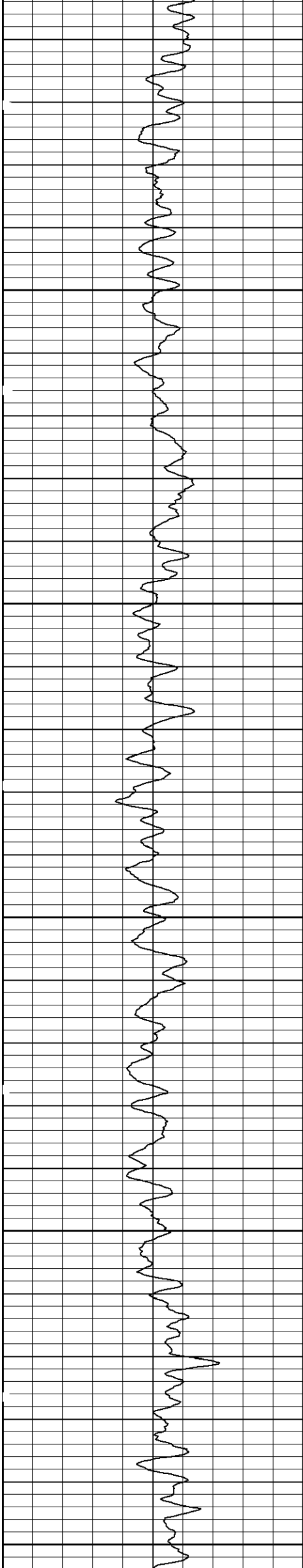




3800

3900

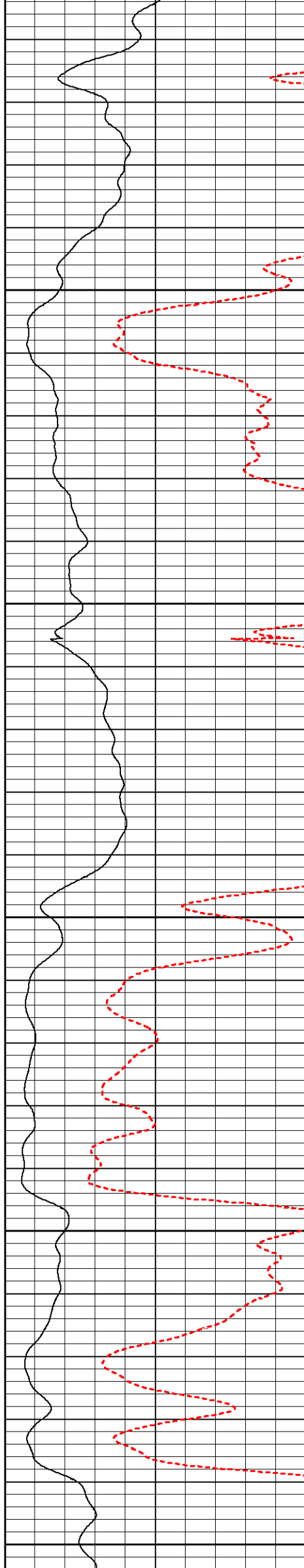


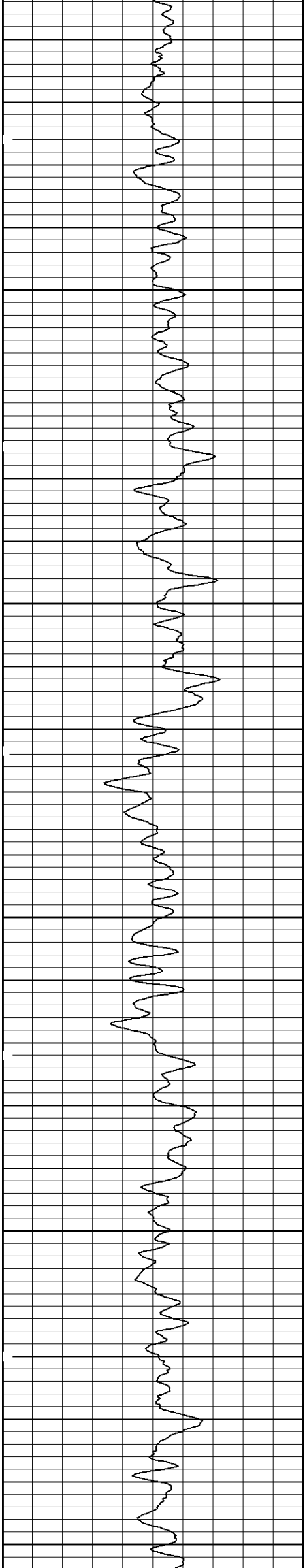


4000

4100

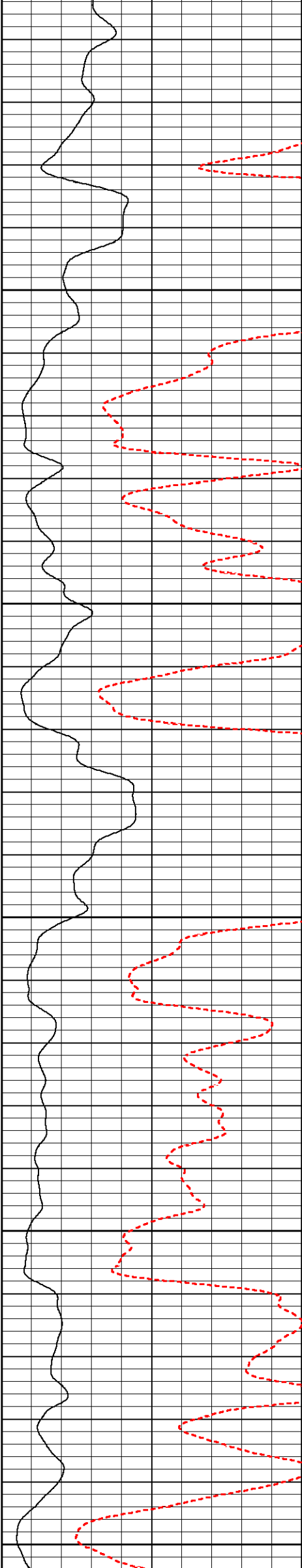
4200



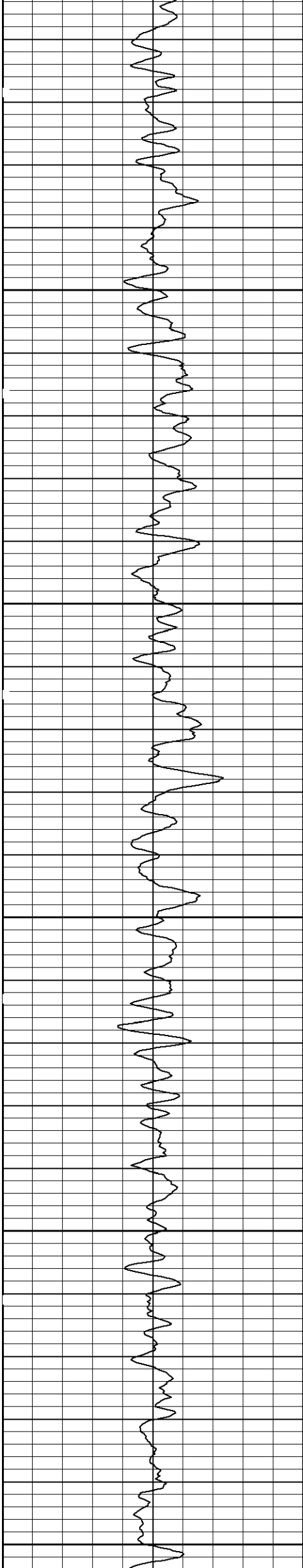


4300

4400



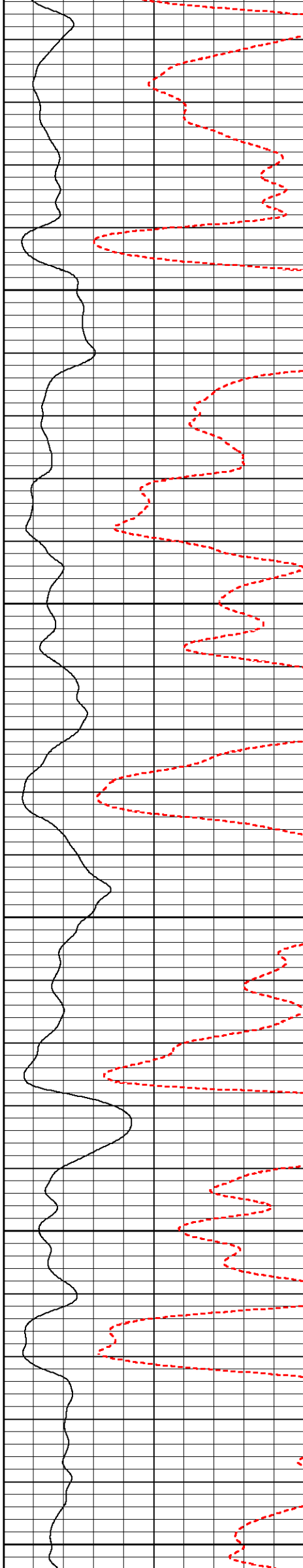


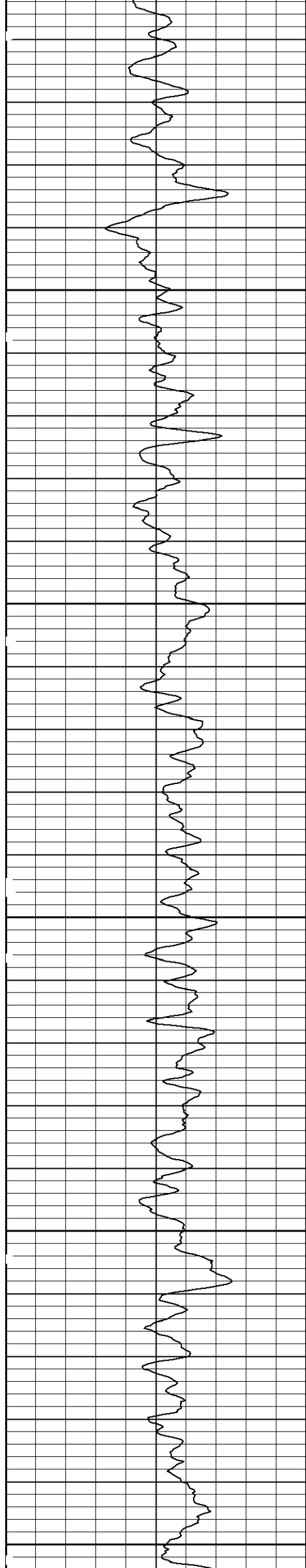


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4600

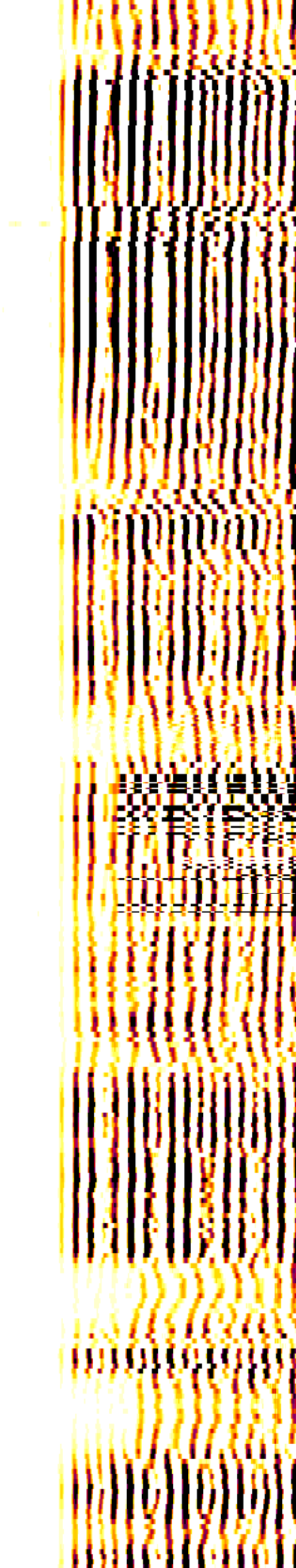
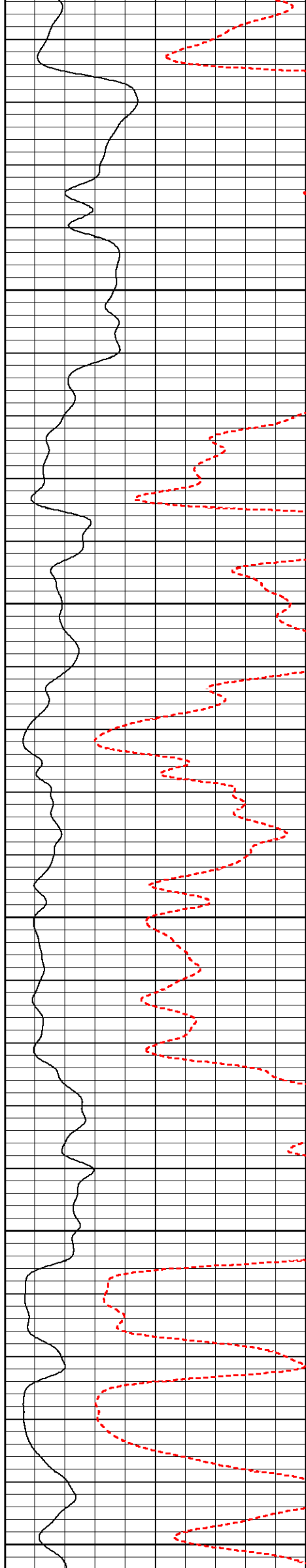
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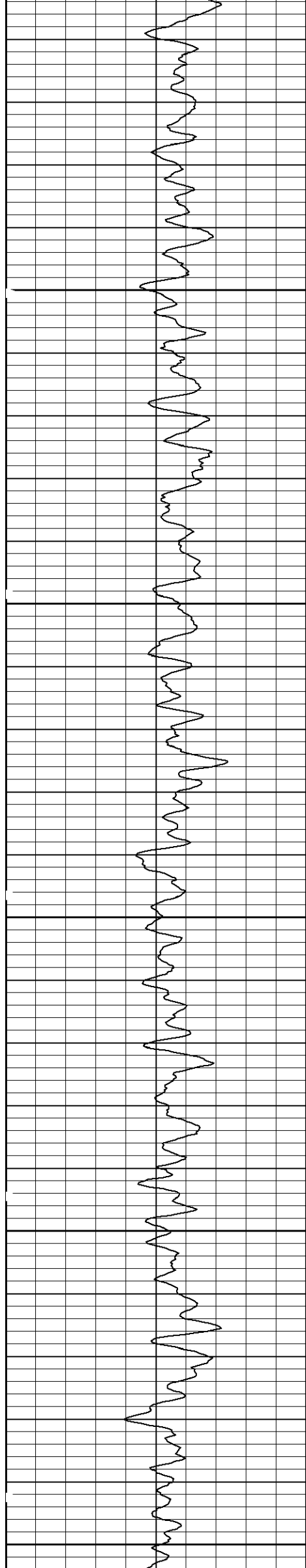




4800

4900

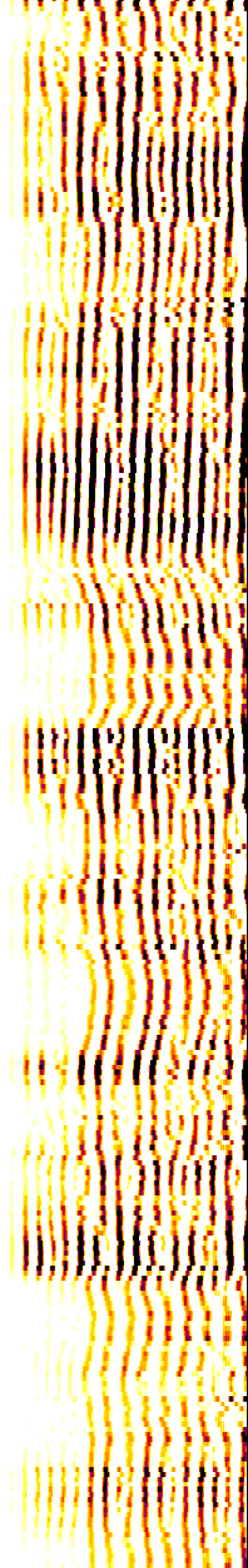
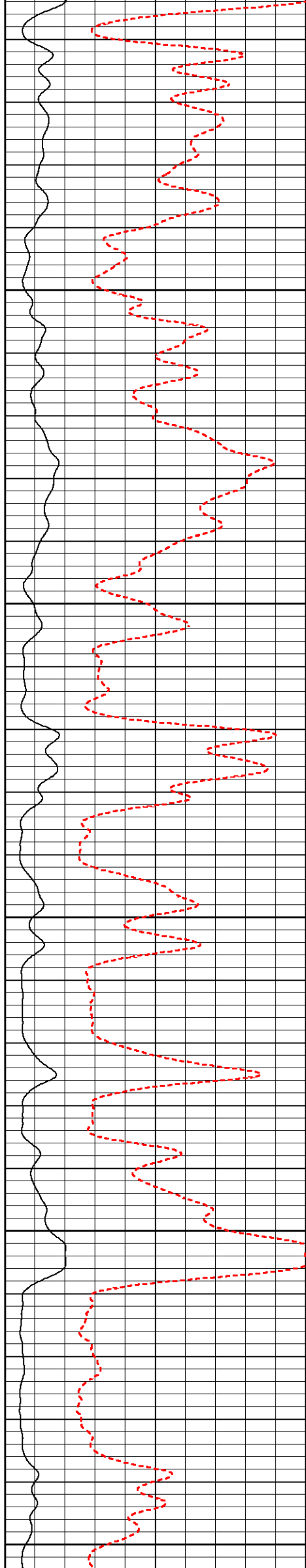


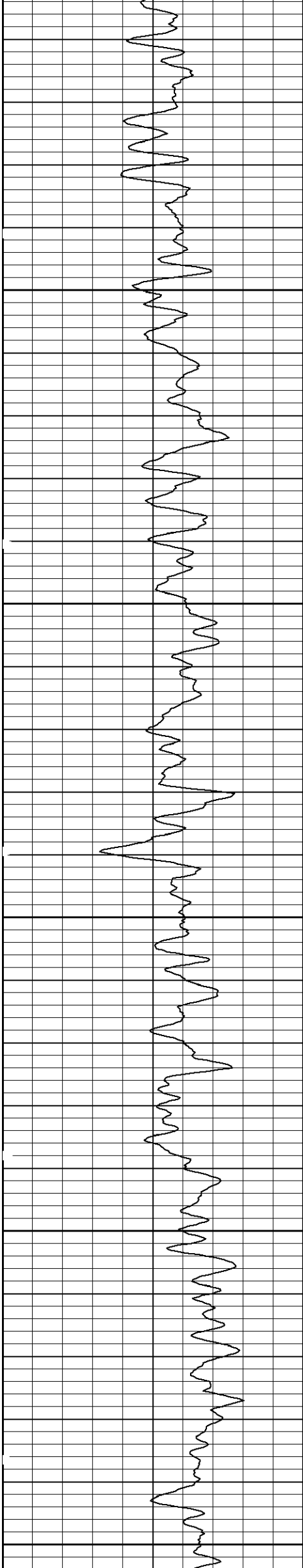


5000

5100

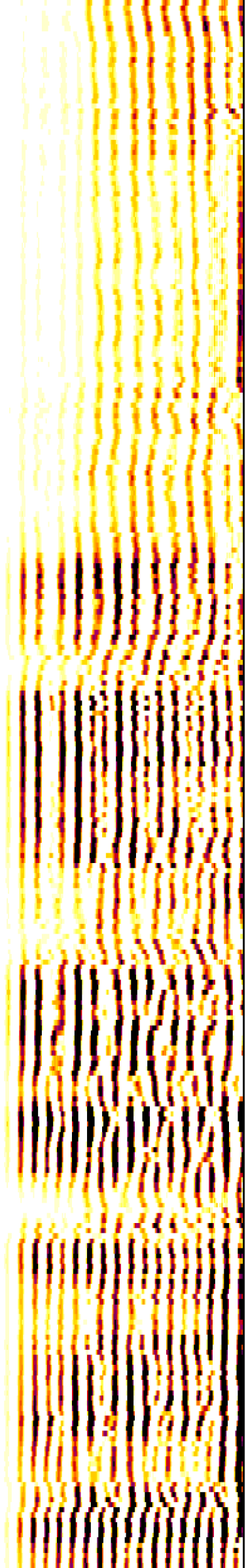
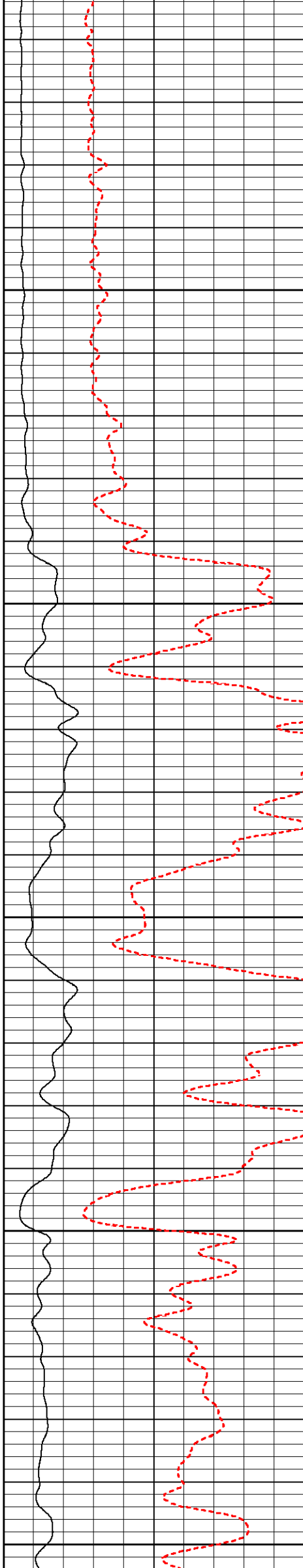
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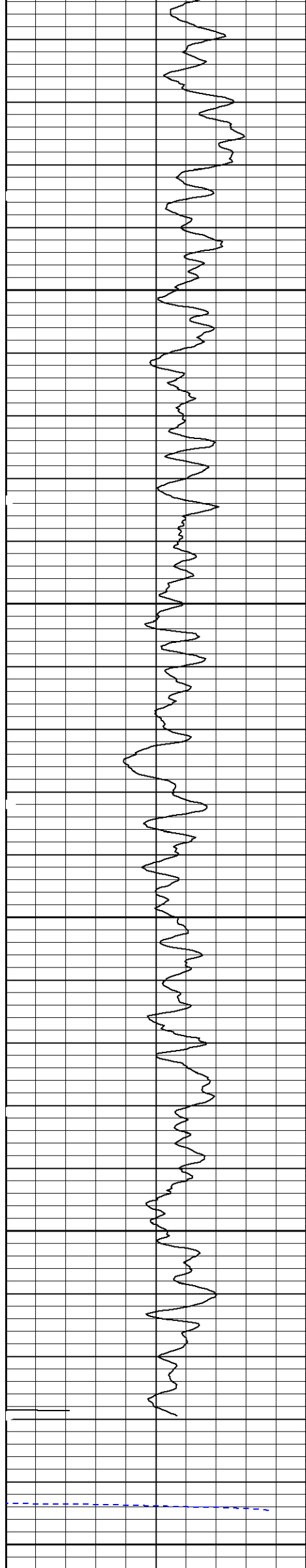


5300

5400



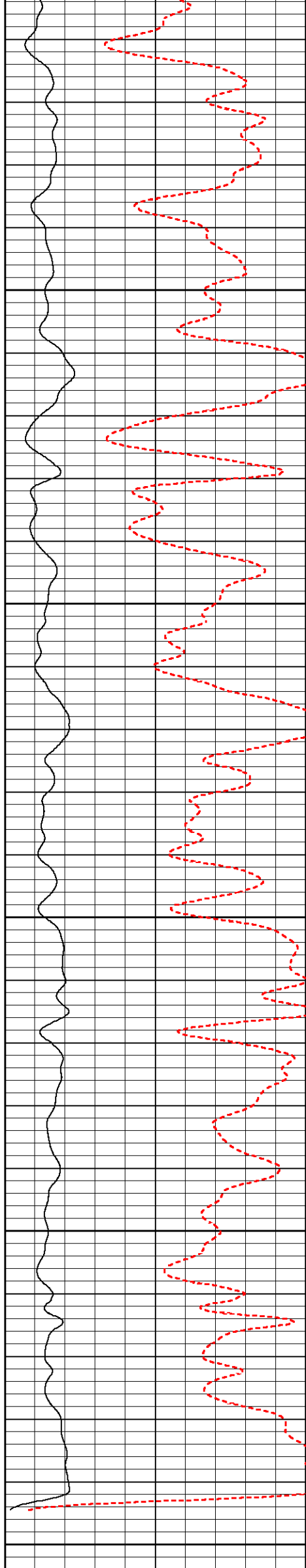




5500

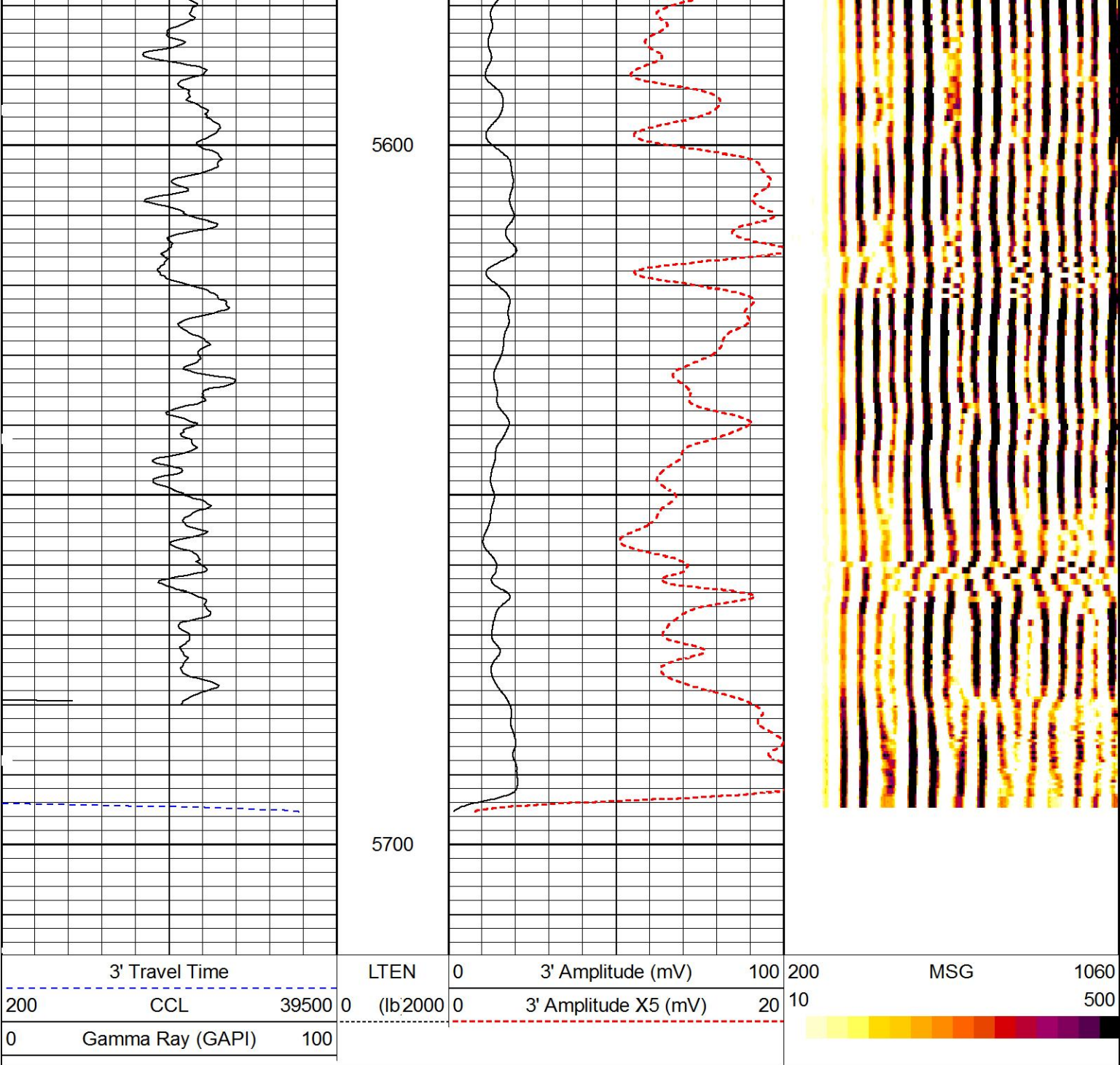
5600

5700









REPEAT PASS

5" = 100'

Calibration Report

Database File anschutz\_4-62-16-0857ch.db  
Dataset Pathname CAST\_CBL\_MAIN\_FINAL1  
Dataset Creation Mon Dec 22 04:07:41 2014

Circumferential Acoustic Scanning Tool Shop Calibration Report

Serial-Model: 11488892-4 3/8 SCAN  
Calibration Performed: Wed Dec 17 18:07:23 2014

Mudcell Transducer


Main Transducer

	Measured	Expected	Measured	Expected	Units
W/O Calibrator	51.47	44.00	N/A	N/A	usec
W Calibrator	42.84	35.00	54.25	50.00	usec

Calibrated Offsets

Name	Value	Units
TCAL	4.2458	usec

MCAL		8.3384		usec		
XY Accelerometers Calibration Report						
Performed:		(Not Performed)				
		Low Read.	High Read.		Low Ref.	High Ref.
X Accelerometer		0.000	1.000	gee	0.000	1.000 gee
Y Accelerometer		0.000	1.000	gee	0.000	1.000 gee
Cement Bond Log Shop Calibration Report						
Serial-Model:		11794522-A				
Calibration Performed:		Thu Dec 18 19:37:21 2014				
Free Pipe Calibration						
TT	Measured	Units				
Amplitude	295.0	usec				
Log Base Line	489.5	mV				
	-12.1	mV				
Calibration References and Gain						
Name	Value	Units				
Pipe O.D.	7.000	in				
Pipe Weight	26.0	lb/ft				
Pipe Ref. Amp.	62.2	mV				
Amp. Gain	0.124					
Gamma Ray Calibration Report						
Type / Serial:		002 / 10002463				
SHOP CALIBRATION		Wed Dec 17 18:08:46 2014				
	Counts/Sec.	Gain	Offset	Jig	Units	
Background	50.5				cps	
Calibrator	226.2				cps	
		1.2517			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	

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	36.23		STNDCH-1_11_16_CH 1.6875 IN CABLE HEAD	1.50	1.44	1.00

GR	33.97		TTTCU-002 (10002463) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
			XHU-003 (12146425) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Temp	24.25					
TT3FT	22.00		HCBLM-A (11794522) Halliburton HCBLM Tool	9.38	2.75	116.00
AMP3FT	22.00					
			CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
			HAL-CAST-M-ELECT-CAST-M-Elect (11487.571) CAST M ELECTRONIC		2.75	30.00
AccY2	0.00					
AccX2	0.00		HAL-CAST-M-4 3/8 SCAN (11488892) 4 3/8 SCAN CASTM	7.78	4.38	276.00
AccY1	0.00					
AccX1	0.00					
SCAN	0.00					
LOCTIM	0.00					
UTCTIM	0.00					
Dataset: anschutz_4-62-16-0857ch.db: field/well/run1/CAST_CBL_MAIN_FINAL1 Total length: 39.79 ft Total weight: 580.00 lb O.D.: 4.38 in						

Company	BILL BARRETT				
Well	ANSCHUTZ EQUUS FARMS 4-62-16-0857CH				
Field	WILDCAT				
County	WELD	State	CO		



HALLIBURTON	CEMENT BOND LOG (CBL-M)
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