



HIGH DEFINITION INDUCTION LOGSM
COMPENSATED Z-DENS LOGSM
GAMMA RAY LOG
CALIPER LOG

FILE NO: US090505J	COMPANY WPX ENERGY INC	
API NO: 05103119960000	WELL FEDERAL BCU 542-30-198	
	FIELD SULPHUR CREEK	
	COUNTY RIO BLANCO	
	STATE COLORADO	
Ver. 3.87 SEC 30 T1N R98W RIG: CYCLONE 29 BCU 33-30-198	LOCATION: SHL: 2063' FSL 2135' FEL BHL: 2411' FSL 650' FEL SEC 30 TWP 1N RGE 98W	OTHER SERVICES XMAC
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL ELEVATION 6738 FT KB 21 FT ABOVE P.D. KB	ELEVATIONS: KB 6759 FT DF GL 6738 FT

DATE	09-SEP-2014	
RUN	TRIP	1
SERVICE ORDER	US090505J	
DEPTH DRILLER	10973 FT	
DEPTH LOGGER	10794 FT	
BOTTOM LOGGED INTERVAL	10698 FT	
TOP LOGGED INTERVAL	0 FT	
CASING DRILLER	9.625 IN	@ 3333 FT
CASING LOGGER	3330 FT	
BIT SIZE	8.75 / 7.875	
TYPE OF FLUID IN HOLE	LSND	
DENSITY	9.45 LB/G	73 S
PH	9.3	4.2 CS
SOURCE OF SAMPLE	FLOWLINE	
RM AT MEAS. TEMP.	0.77 OHMM	@ 78 DEGF
RMF AT MEAS. TEMP.	0.75 OHMM	@ 78 DEGF
RMC AT MEAS. TEMP.	0.9625 OHMM	@ 78 DEGF
SOURCE OF RMF	RMC	CALCULATED
RM AT BHT	0.31 OHMM	@ 225 DEGF
TIME SINCE CIRCULATION	13 HOURS	
MAX. RECORDED TEMP.	225 DEGF	
EQUIP. NO.	LOCATION	6685
RECORDED BY	W. QUIGLEY	
WITNESSED BY	MR. RICK MORTIMER	

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE THE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

BOREHOLE RECORD		
BIT SIZE	FROM	TO
8.75 IN	0 FT	8800 FT
7.875 IN	8800 FT	10794 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	36 LB/F		0 FT	3330 FT

REMARKS

RUN 1 TRIP 1: HDIL XMAC ZDL CN RAN IN COMBINATION

BVOL CVOL CALCULATED IN CUBIC FT
CVOL CALCULATED USING PROPOSED 4.5" CASING
CALIPER VERIFIED INSIDE CASING

RHO MATRIX: 2.68 G/CC
RHO FLUID: 1.00 G/CC

CN MATRIX: SANDSTONE
CN RAN DECENTRALIZED

HDIL RAN WITH 1.5" STANDOFFS

ABC TO CALCULATE STANDOFF

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: HOLLAR/COATE/QUIGLEY
RIG: CYCLONE 29

DENSITY NOT PRESENTED ABOVE 6000' DUE TO TOOL MALFUNCTION

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWIVEL	3944XD	10195796	FREE
1	1	TTRM	3981XA	10516527	FREE
1	1	TELEMETRY	3514XA	10197691	FREE
1	1	GAMMA RAY	1329XA	10203001	DECENTRALIZED
1	1	NEUTRON	2246XA	10202034	DECENTRALIZED
1	1	DENSITY	2234XA	10211833	DECENTRALIZED
1	1	KNUCKLE	3939XA	10185406	FREE
1	1	CENTRALIZER	4341XA	10202020	CENTRALIZED
1	1	ORIENTATION	4401XB	186393	CENTRALIZED
1	1	ACOUSTIC EA	1677EA	10076613	CENTRALIZED
1	1	XMAC REC	1678MC	10084081	CENTRALIZED
1	1	XMAC ISO	1678PB	166436	CENTRALIZED
1	1	XMAC XMIT	1678BA	10070639	CENTRALIZED
1	1	XMIT EA	1678FA	10083715	CENTRALIZED
1	1	CENTRALIZER	4341XA	10239054	CENTRALIZED
1	1	HDIL EA	1515EA	10049592	FREE
1	1	HDIL	1515MA	10037719	STOOD OFF

MAIN LOG 2"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 2

Plotted: Tue Sep 9 22:29:36 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/090505J/n777q02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5330.750 ft BOTTOM DEPTH: 10807.125 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TTRM	FILTER ()	medium (1)		TOP	BOTTOM
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
Y AXIS CALIPER TENSION GR CALIPER	FILTER ()	medium (1)		"	"
	FILTER ()	medium (1)		"	"
	FILTER ()	medium (1)		"	"
	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
SP-SPDH	FILTER (.i)	medium (1)		"	"
	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	78.0	degF	"	"
	MUD SAMPLE RES	0.770	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	78.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	at BH REF DEPTH	1.000	ft	"	"

BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER			
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in		
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED			

HDIL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	STANDOFF		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

PARAMETER AND FILTER SUMMARY REPORT					
FILE:	/dat1a/090505J/n777q03.prm				
LOGGING MODE:	DEPTH	DIRECTION:	UP		
TOP DEPTH:	3246.250 ft	BOTTOM DEPTH:	6033.250 ft		

SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TTRM	FILTER ()	medium (1)		TOP	BOTTOM
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
Y AXIS CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER ()	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	78.0	degF	"	"
	MUD SAMPLE RES	0.770	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	78.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"
				"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"

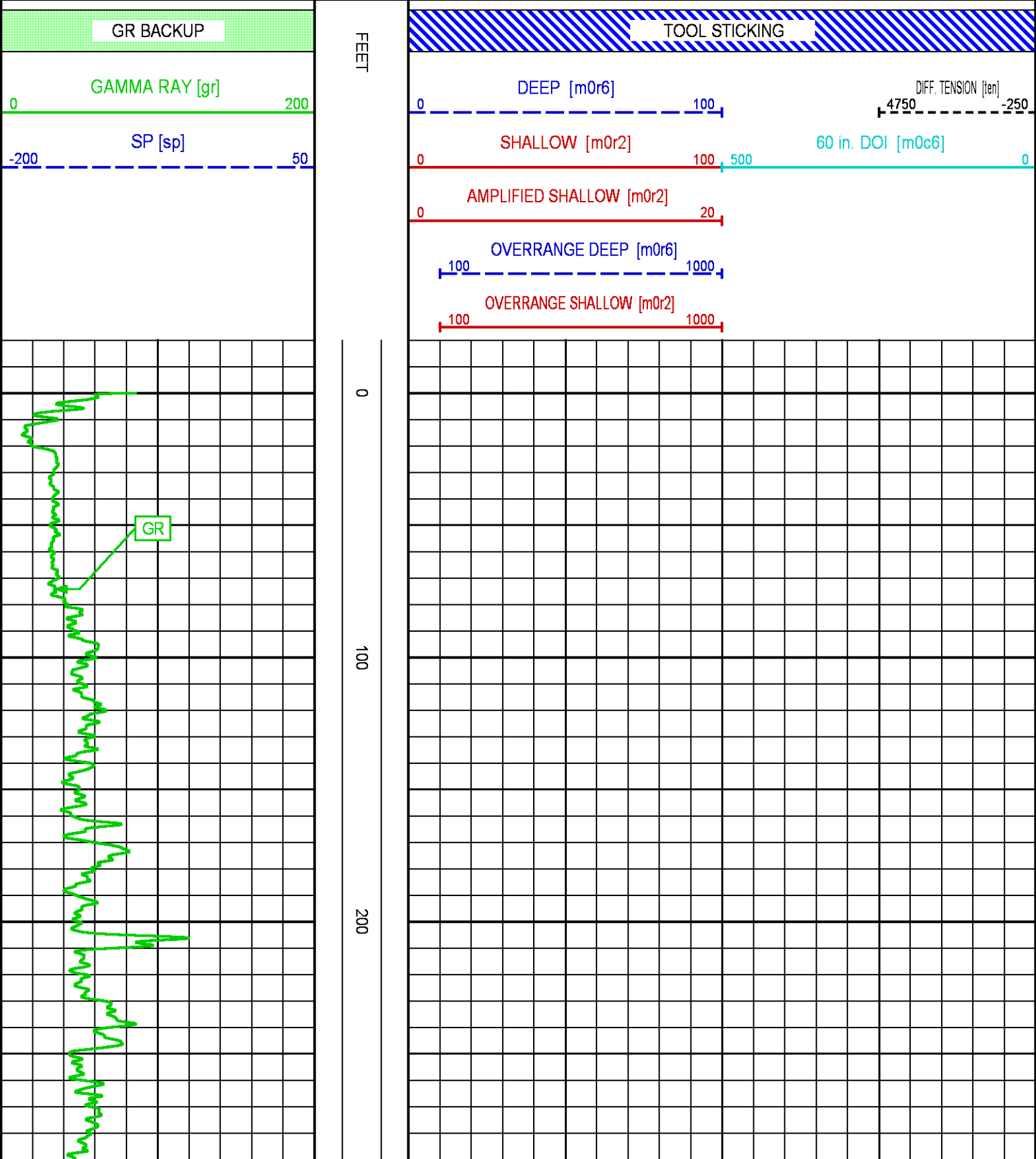
HDIL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	STANDOFF		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

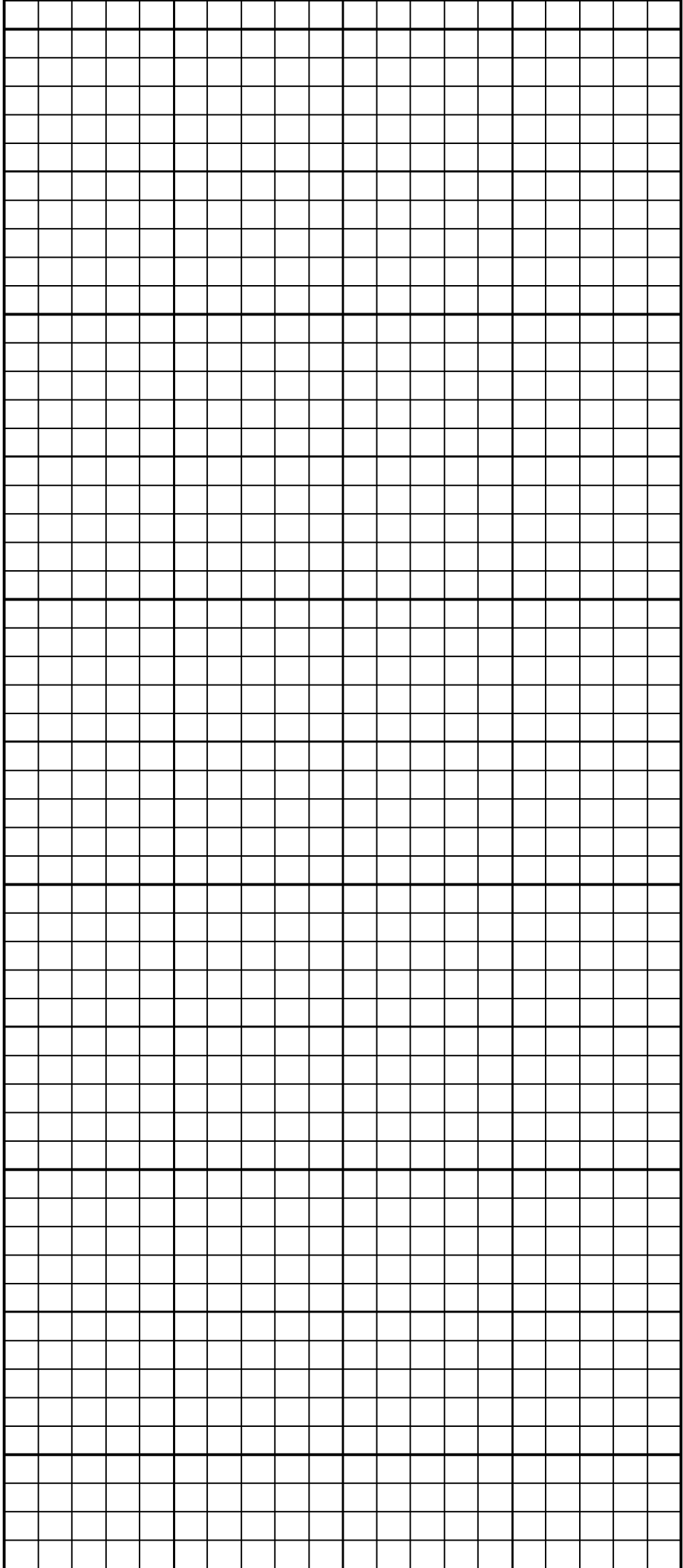
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:GR	Sep 9 19:31:15 2014	GAMMA RAY
F1:M0C6	Sep 9 19:31:15 2014	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	Sep 9 19:31:15 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	Sep 9 19:31:15 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Sep 9 19:31:15 2014	SPONTANEOUS POTENTIAL
F1:TEN	Sep 9 19:31:15 2014	DIFFERENTIAL TENSION

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (#)	CURVE	OFFSET (#)	CURVE	OFFSET (#)	CURVE	OFFSET (#)

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
GR	107.25	MOR2	8.00	SP	14.00		
MOC6	8.00	MOR6	8.00	TEN	0.00		

Presentation	: cas6685:/dat1a/090505J/WPX_2IN.fvpdf [2"/100' Scale]
Plot Interval	: -15.75 - 10807 Feet
Data File 1	: F1 : cas6685:/dat1a/090505J/n777qsMAIN.xtf
Created On	: Sep 9 15:55:16 2014
Company	: WPX ENERGY INC
Well	: FEDERAL BCU 542-30-198
Field	: SULPHUR CREEK
File Interval	: -15.75 - 10807 Feet
OCT	: n777q





300

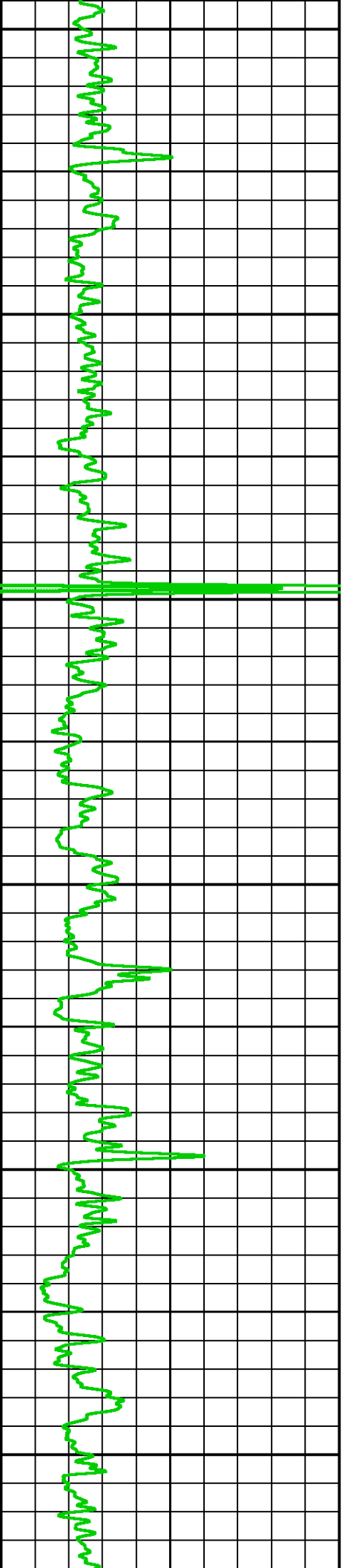
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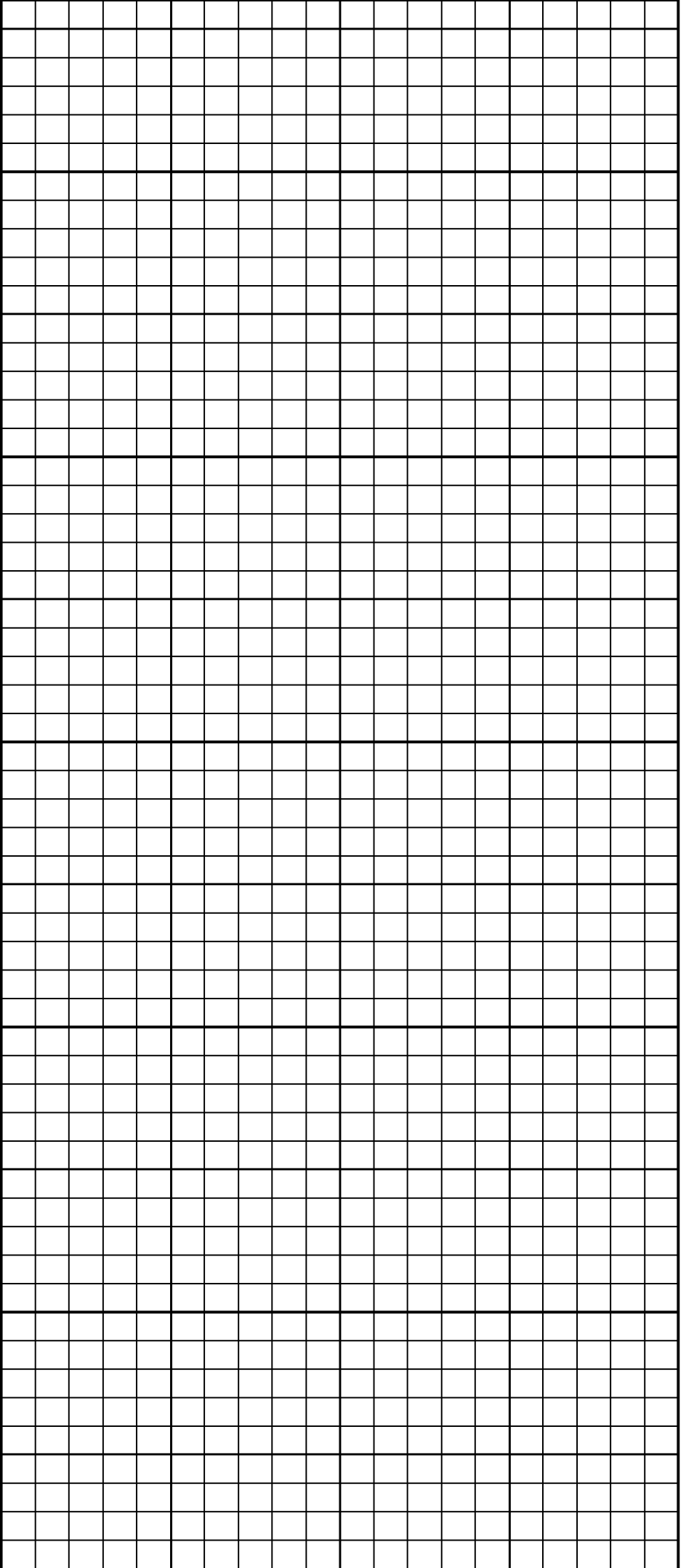
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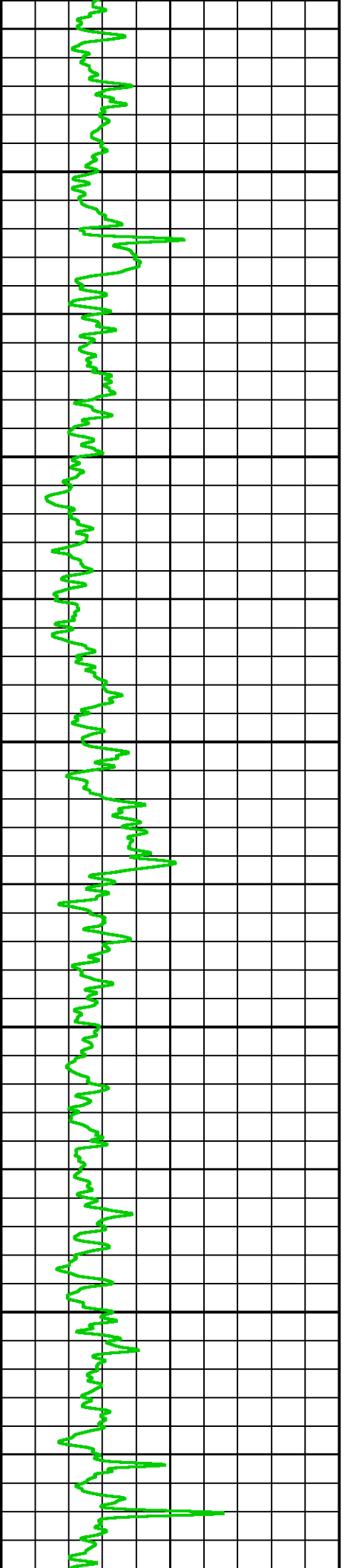
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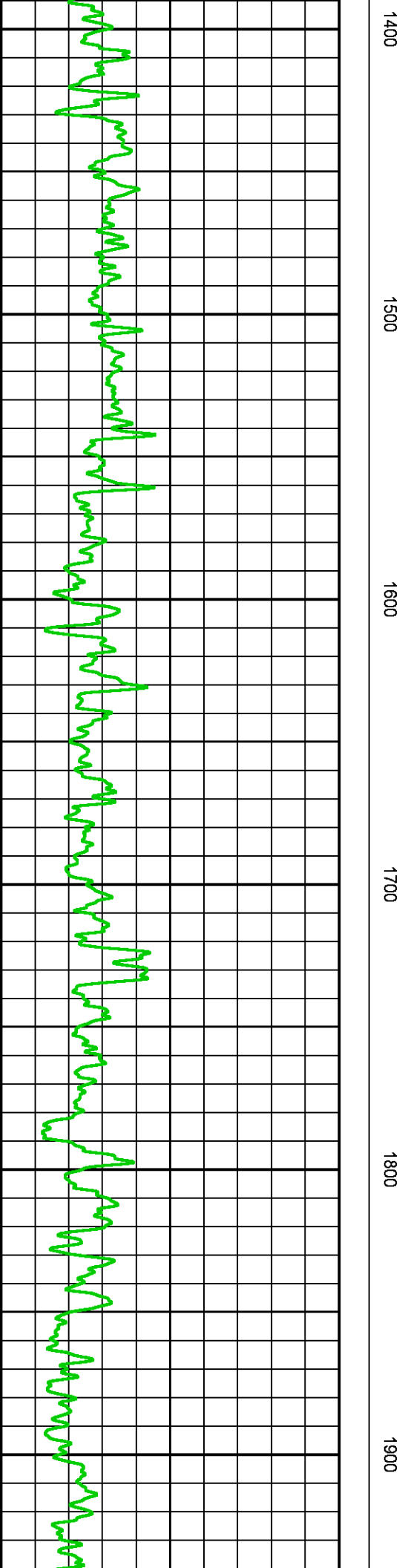
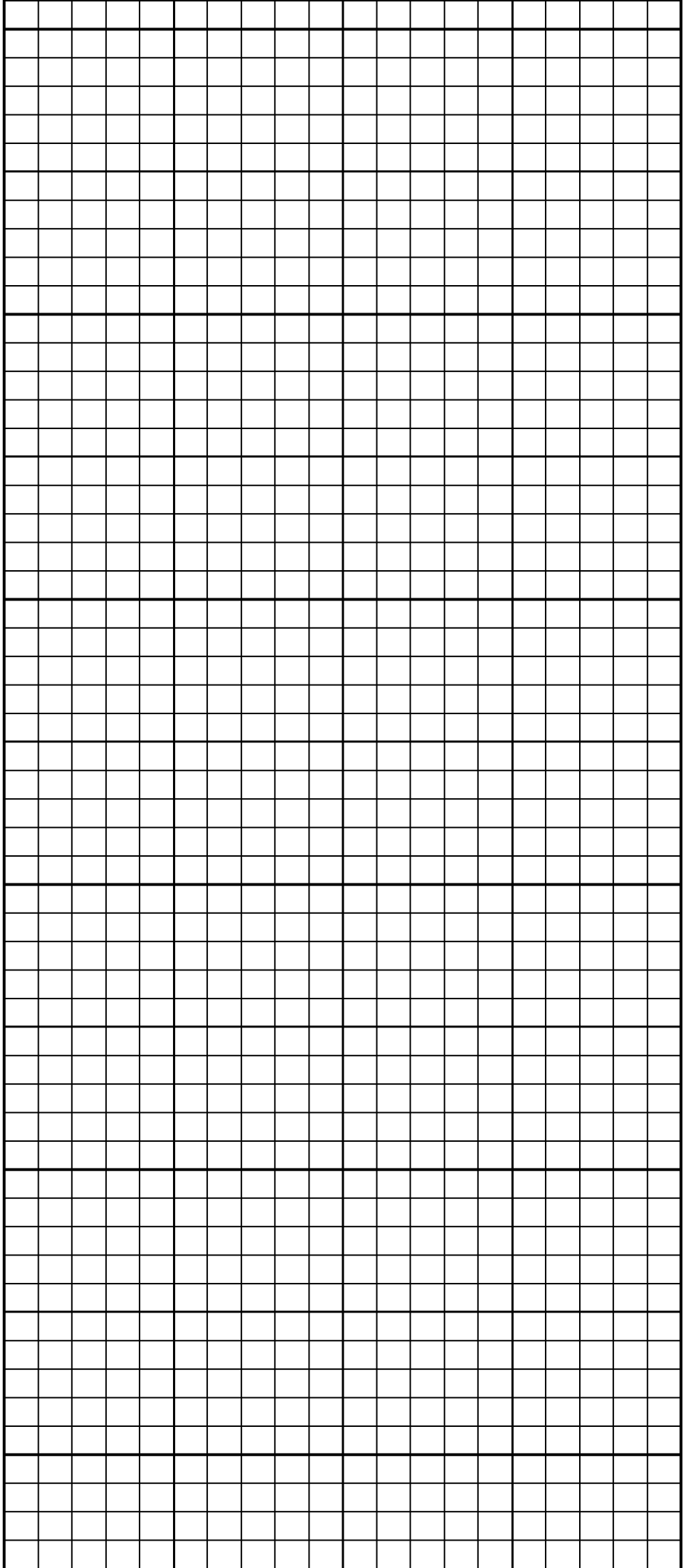
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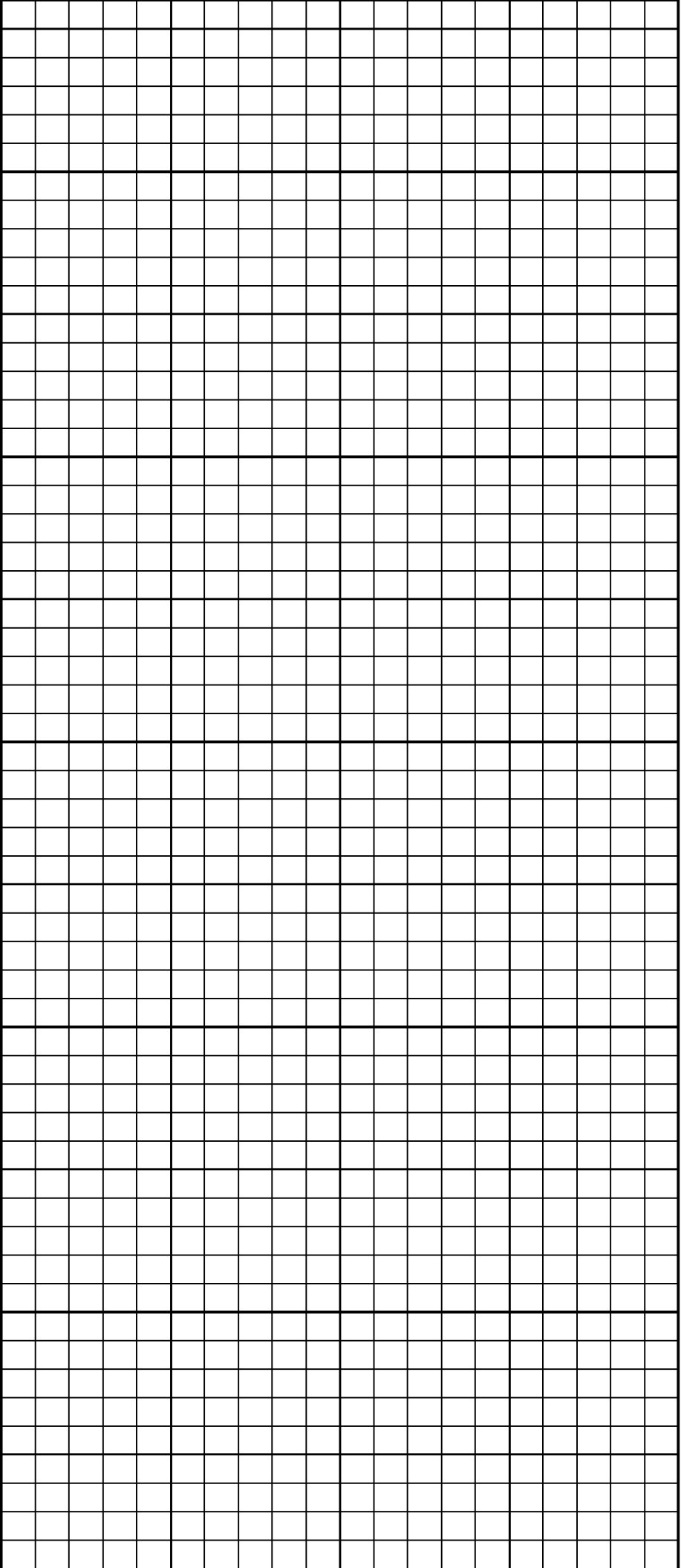
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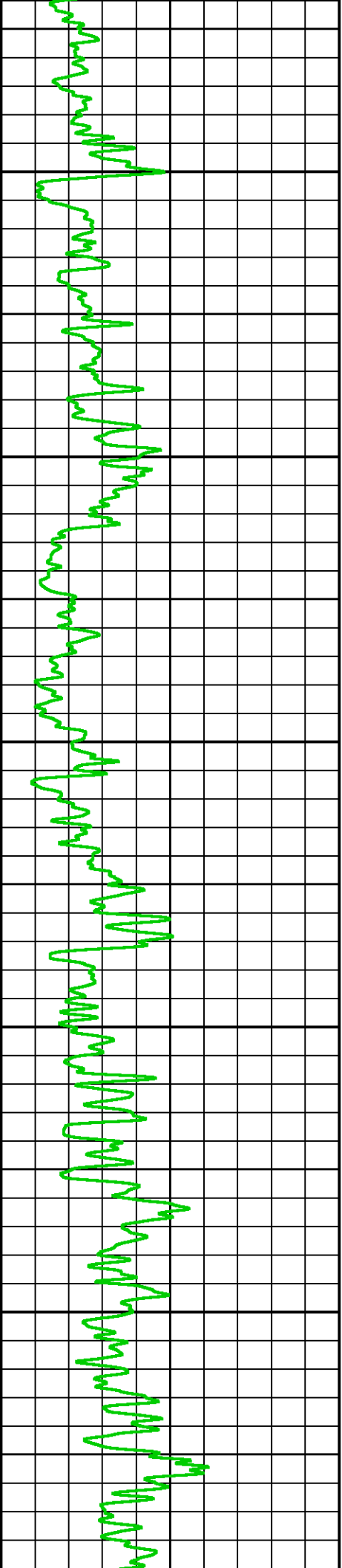
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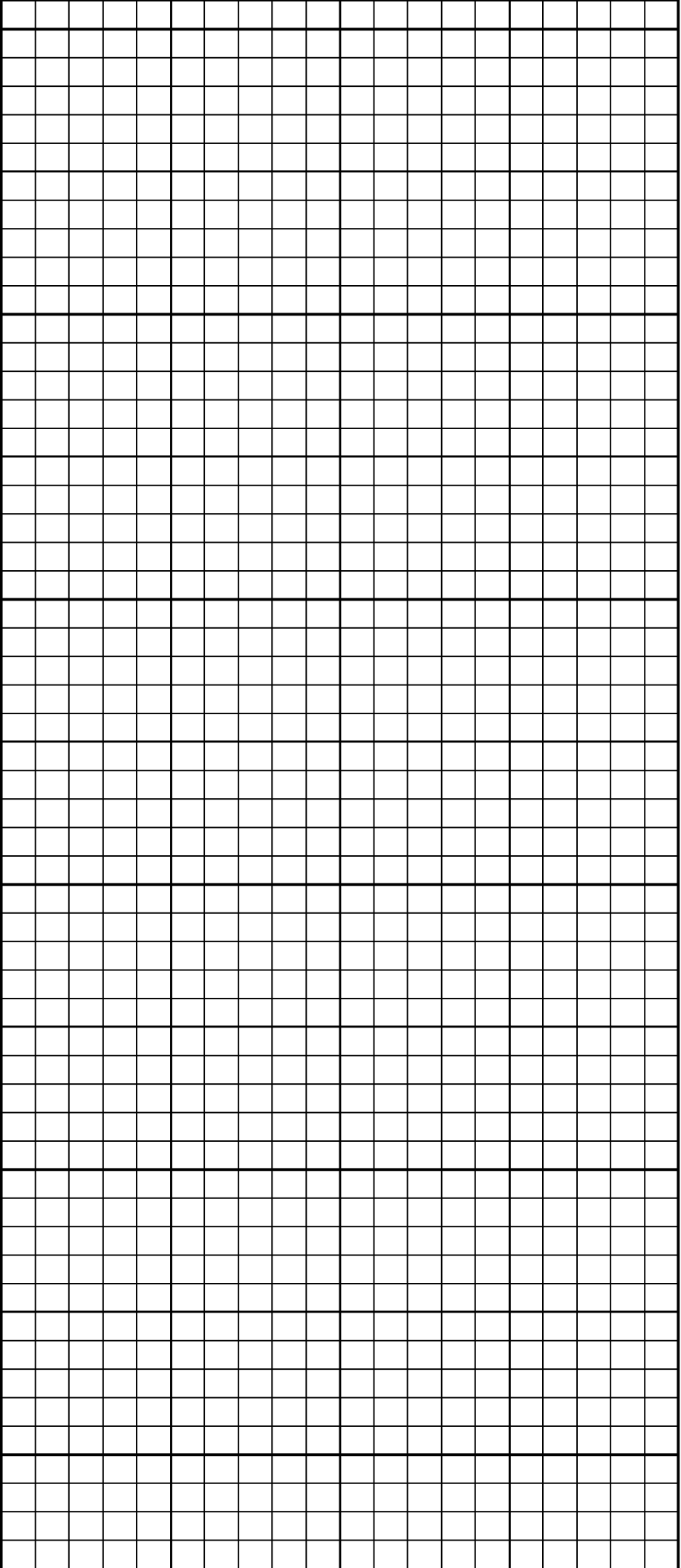
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2400





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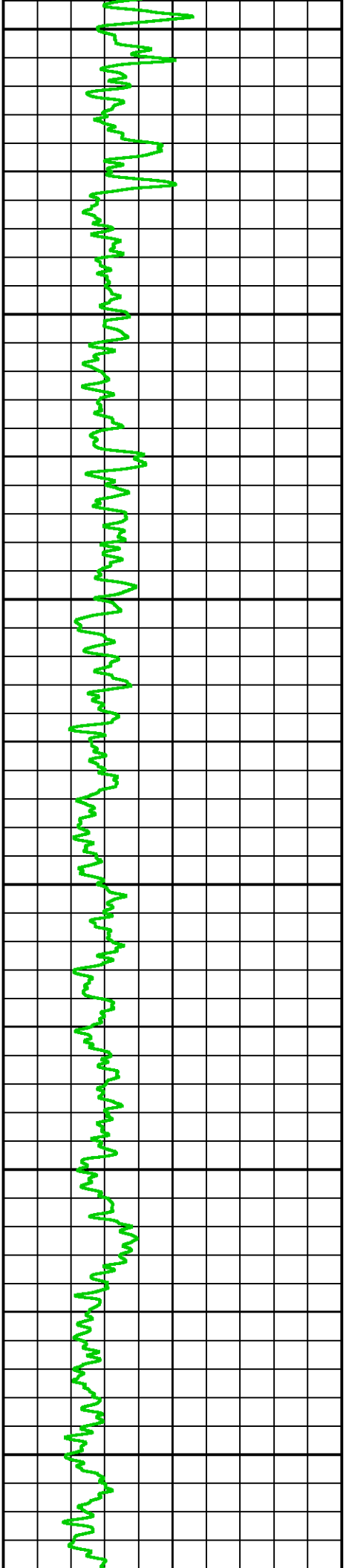
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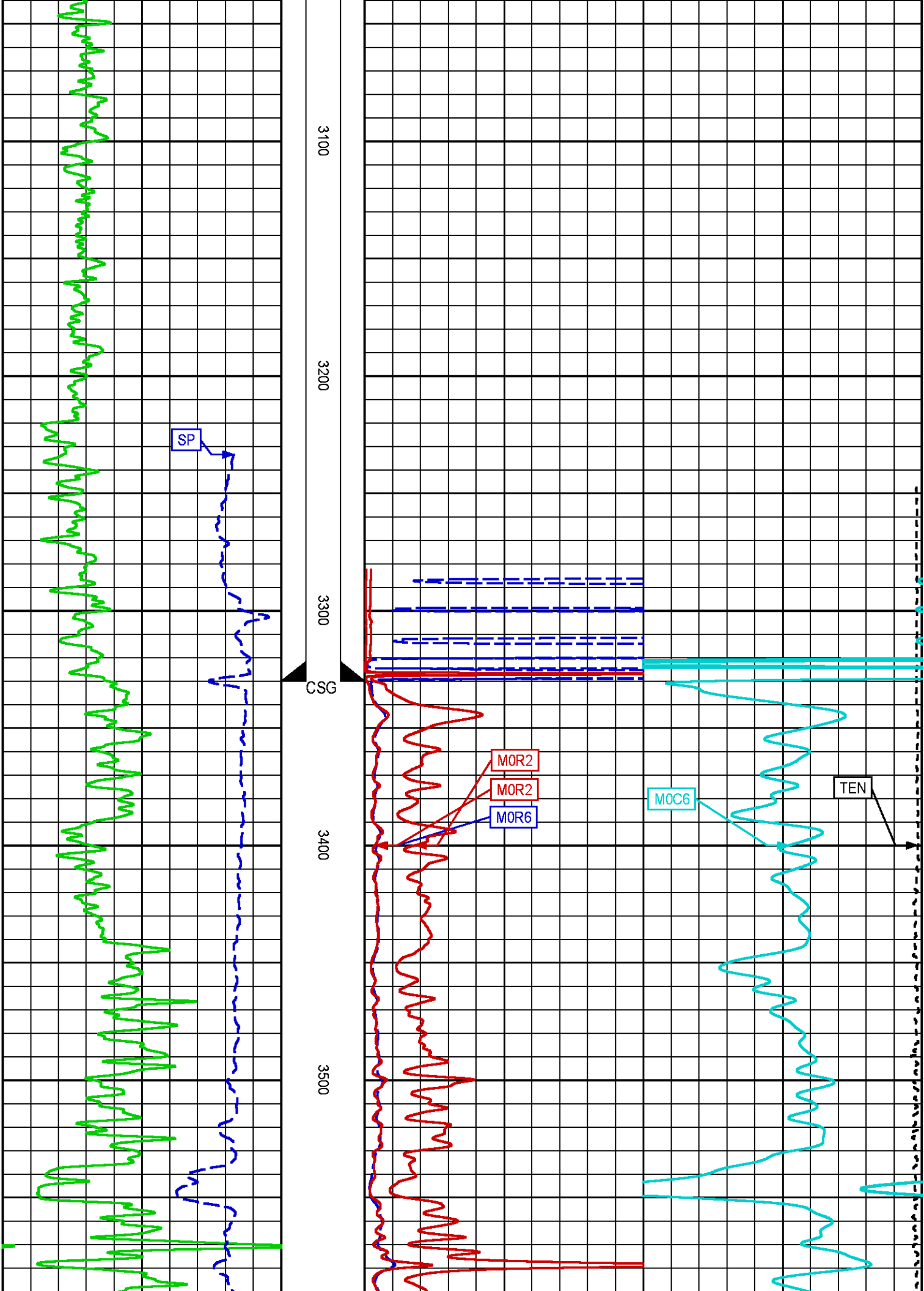
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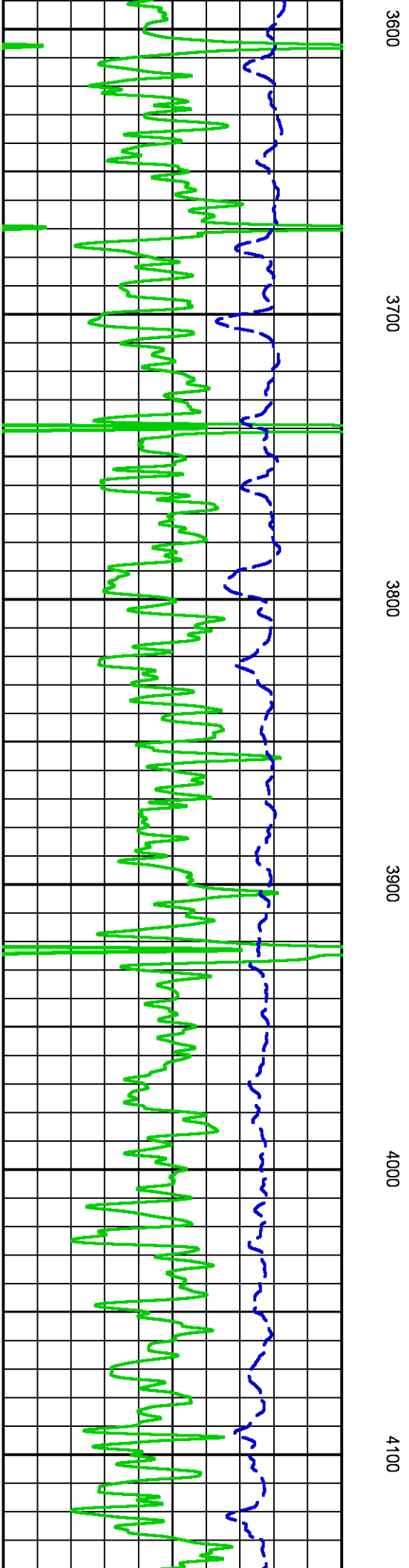
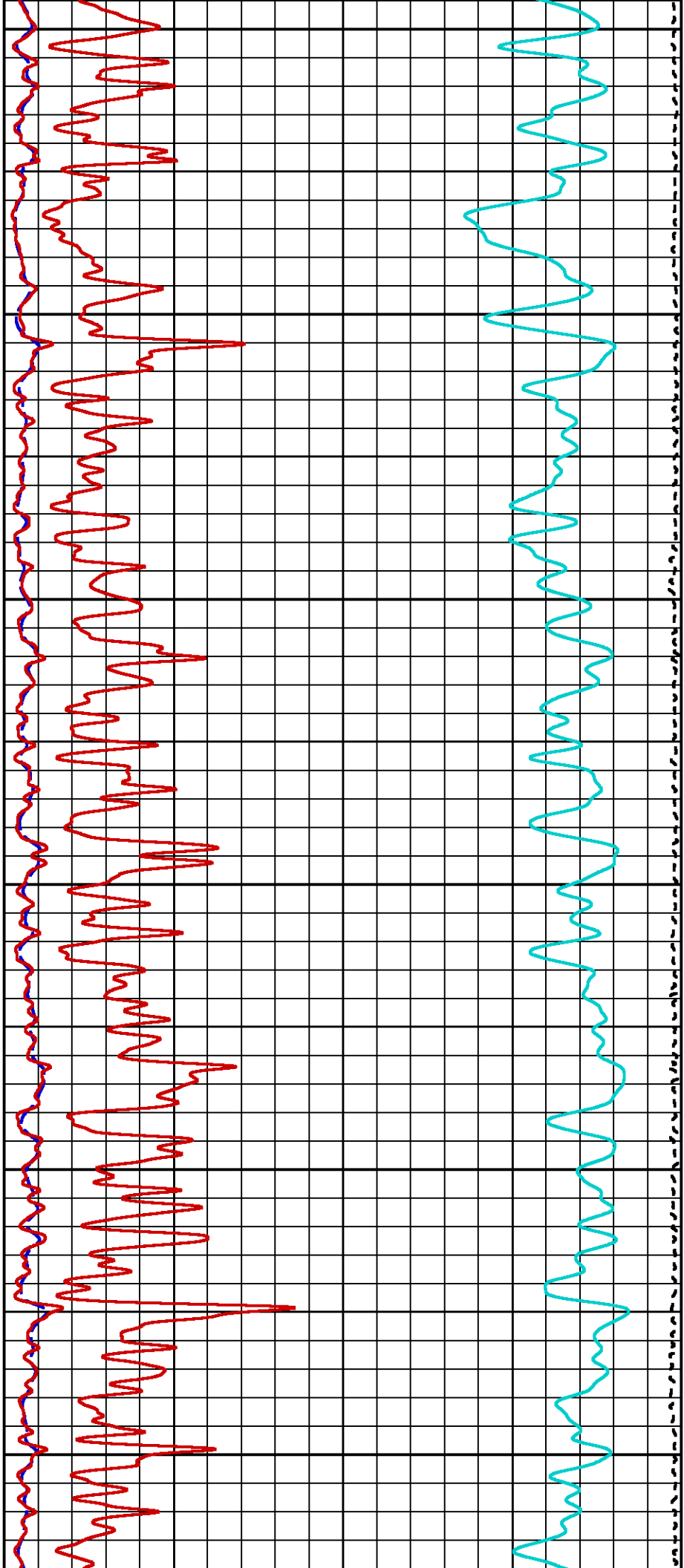
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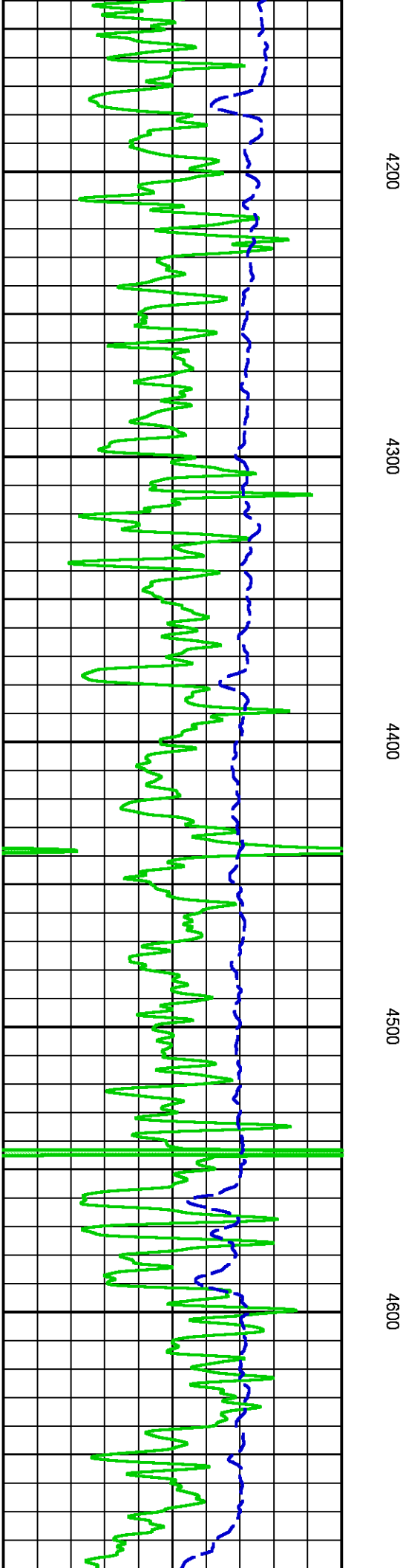
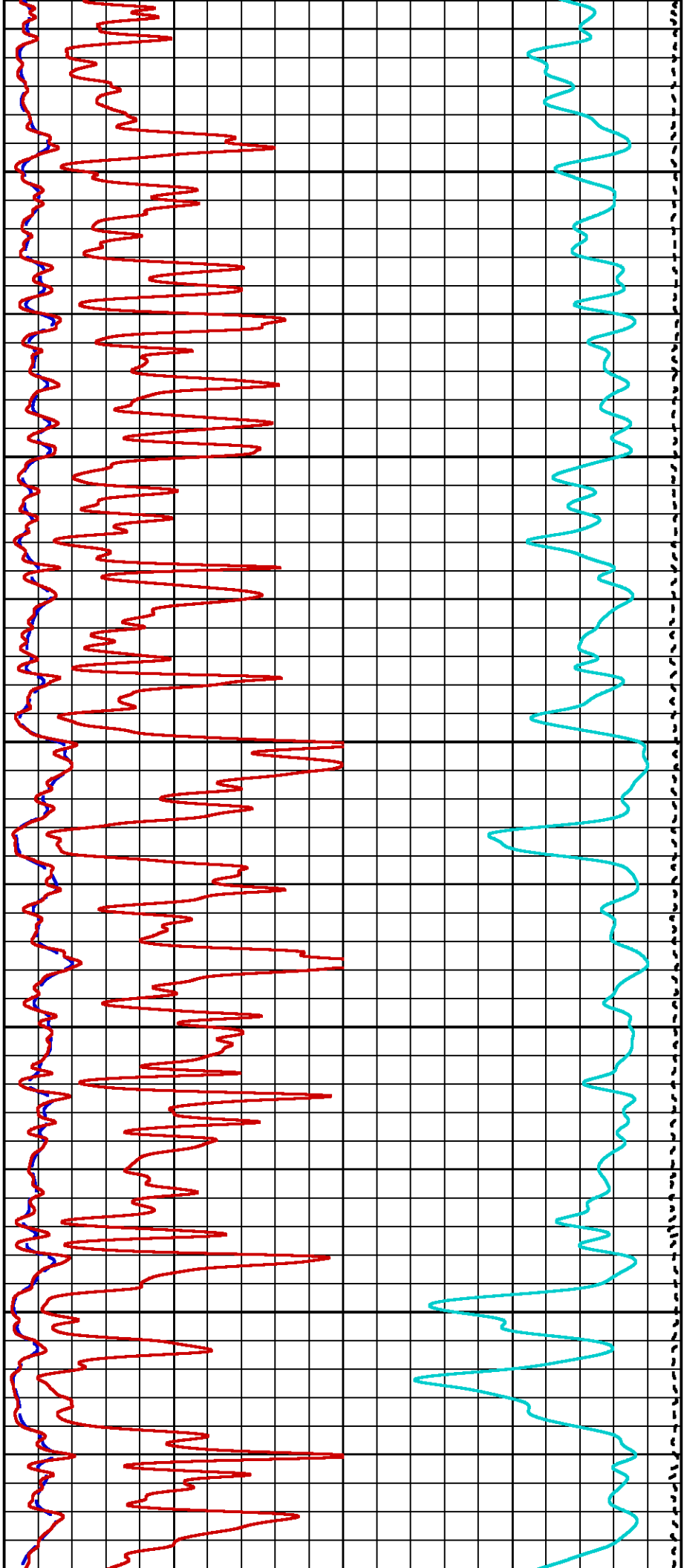
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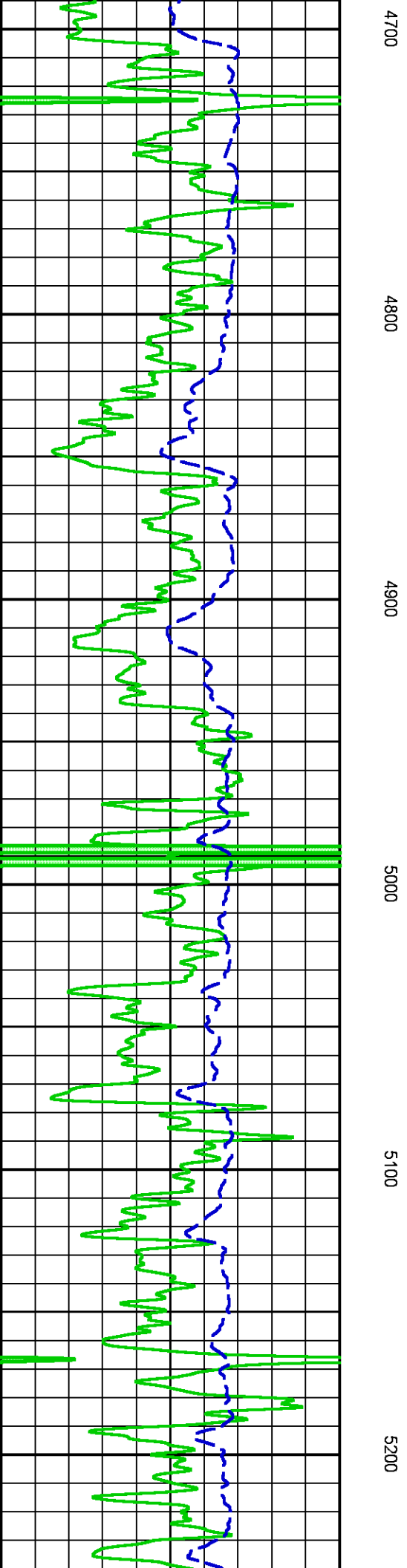
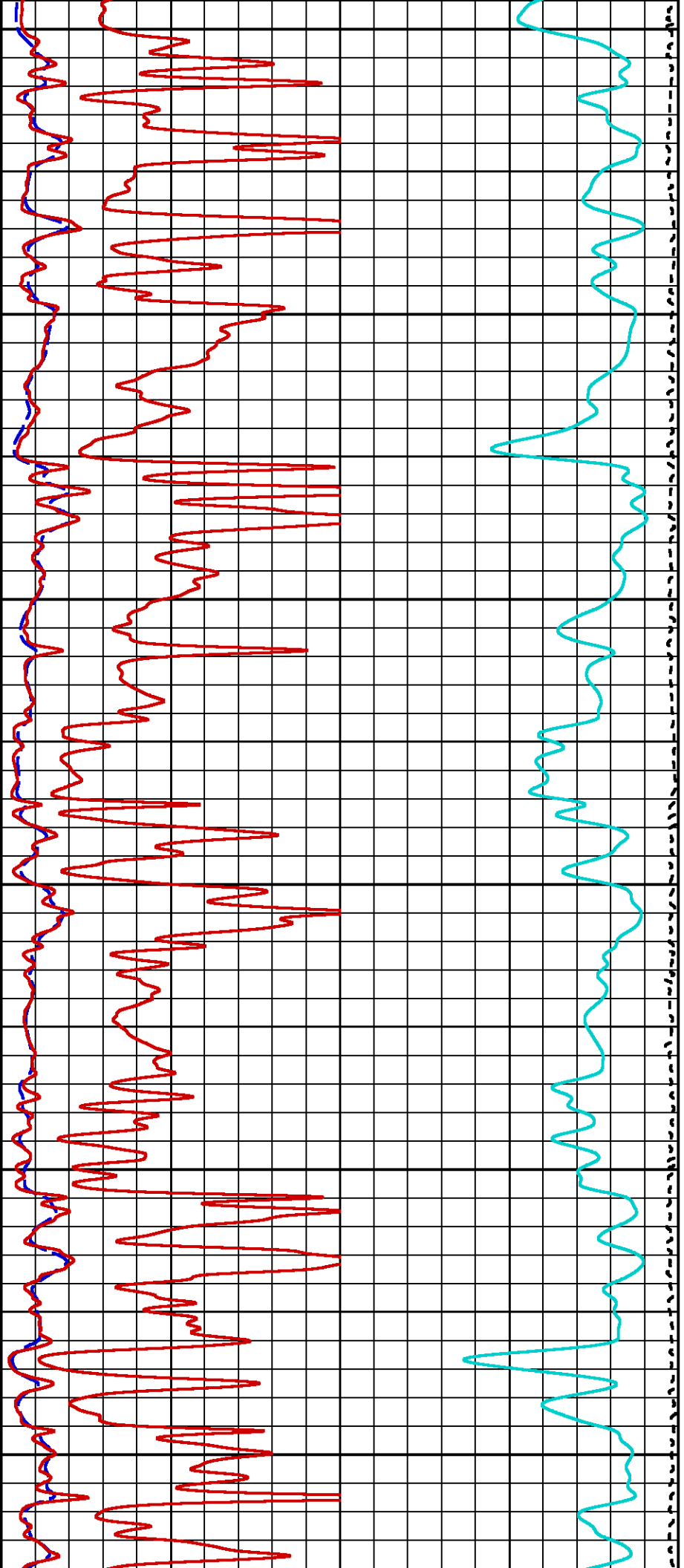
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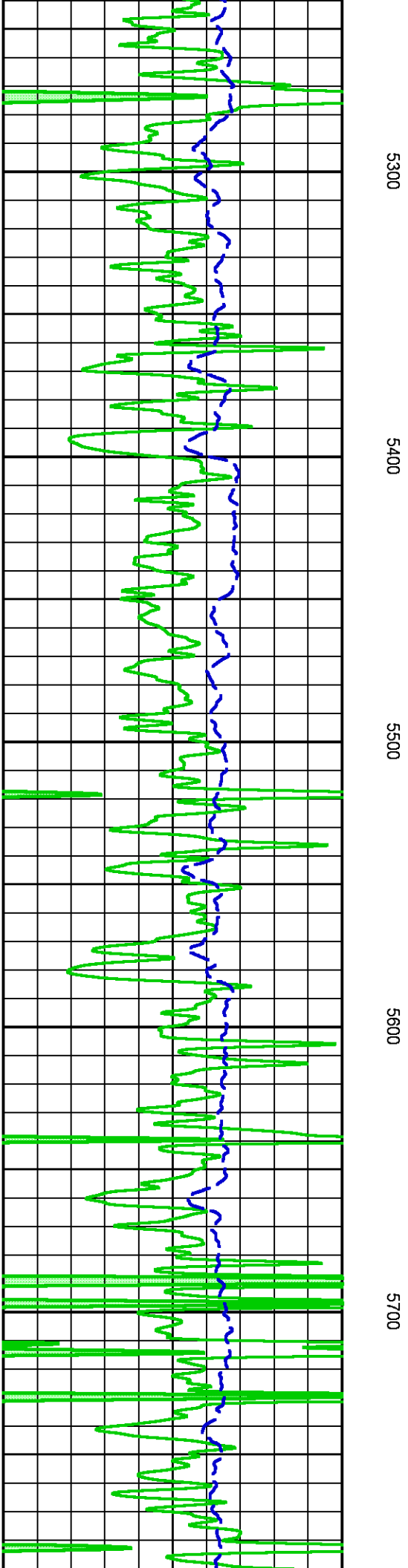
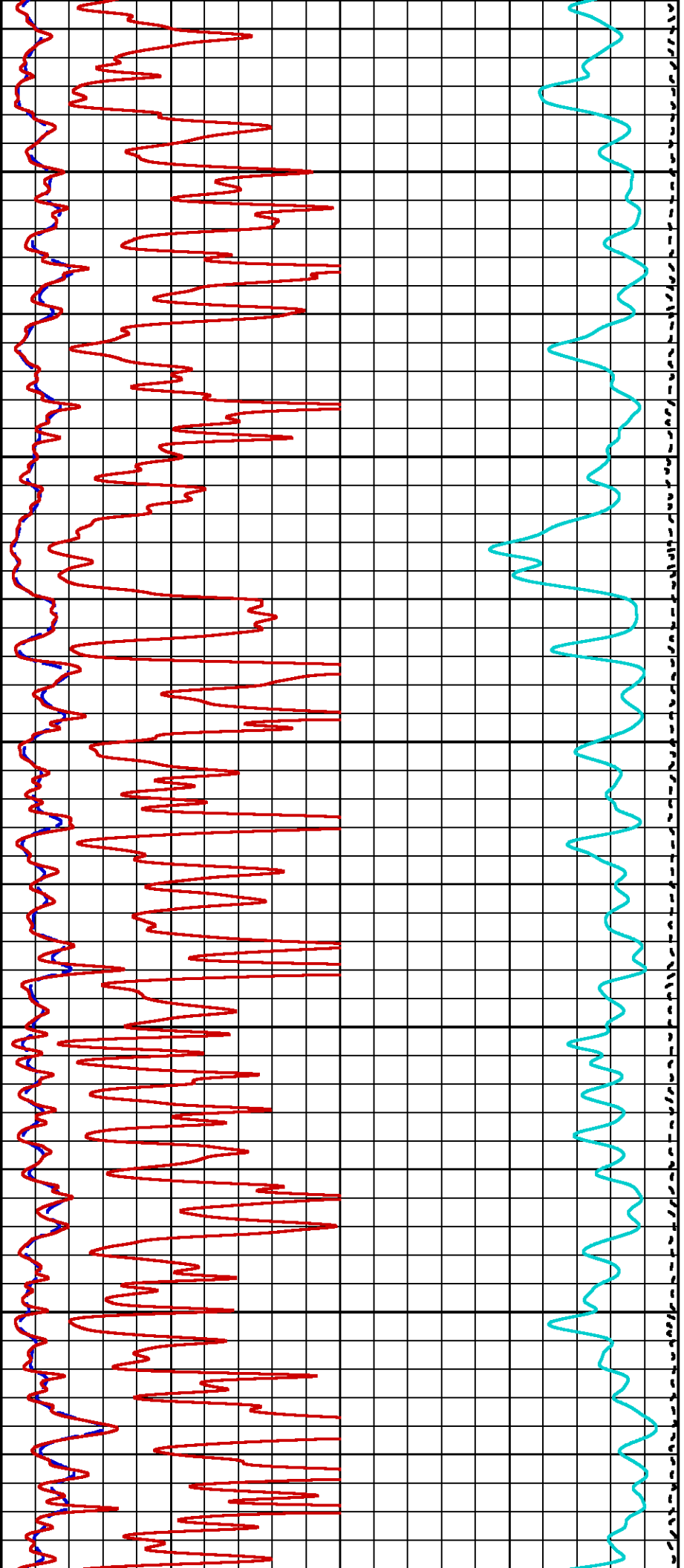


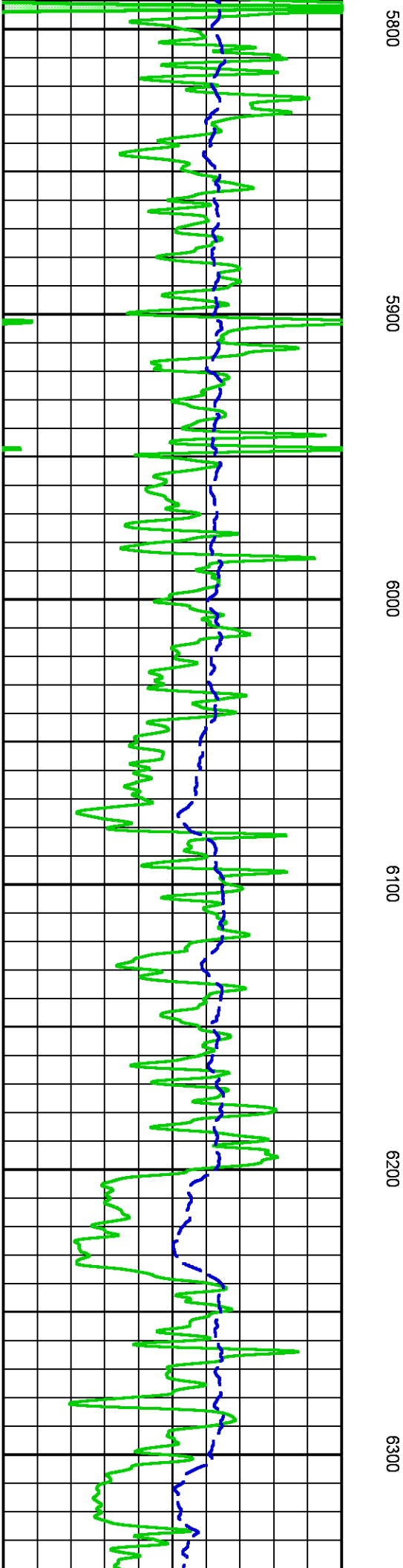
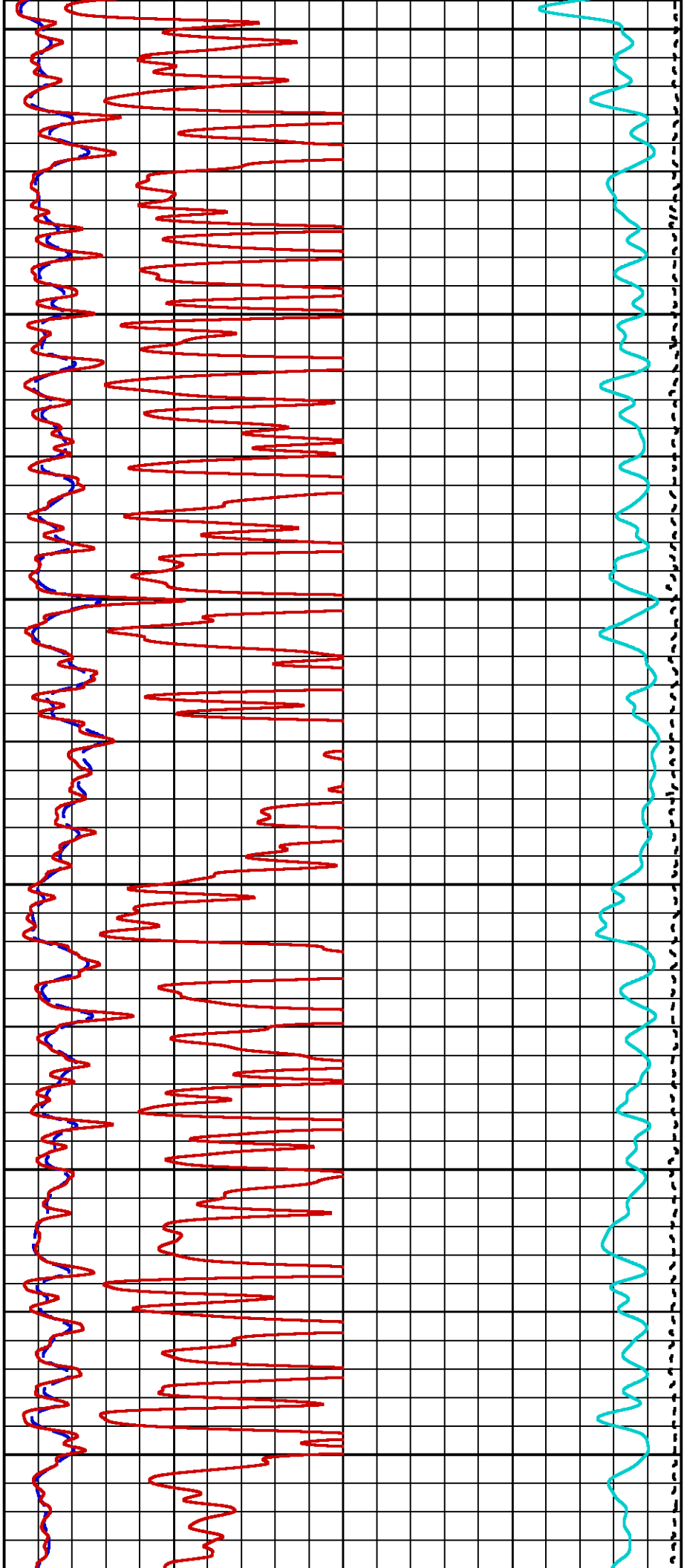


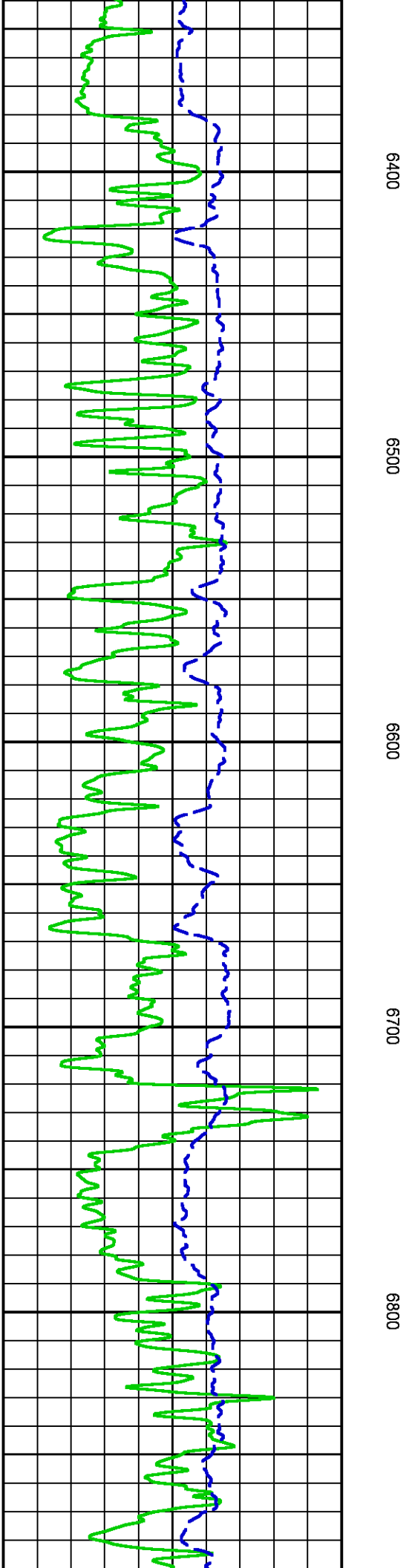
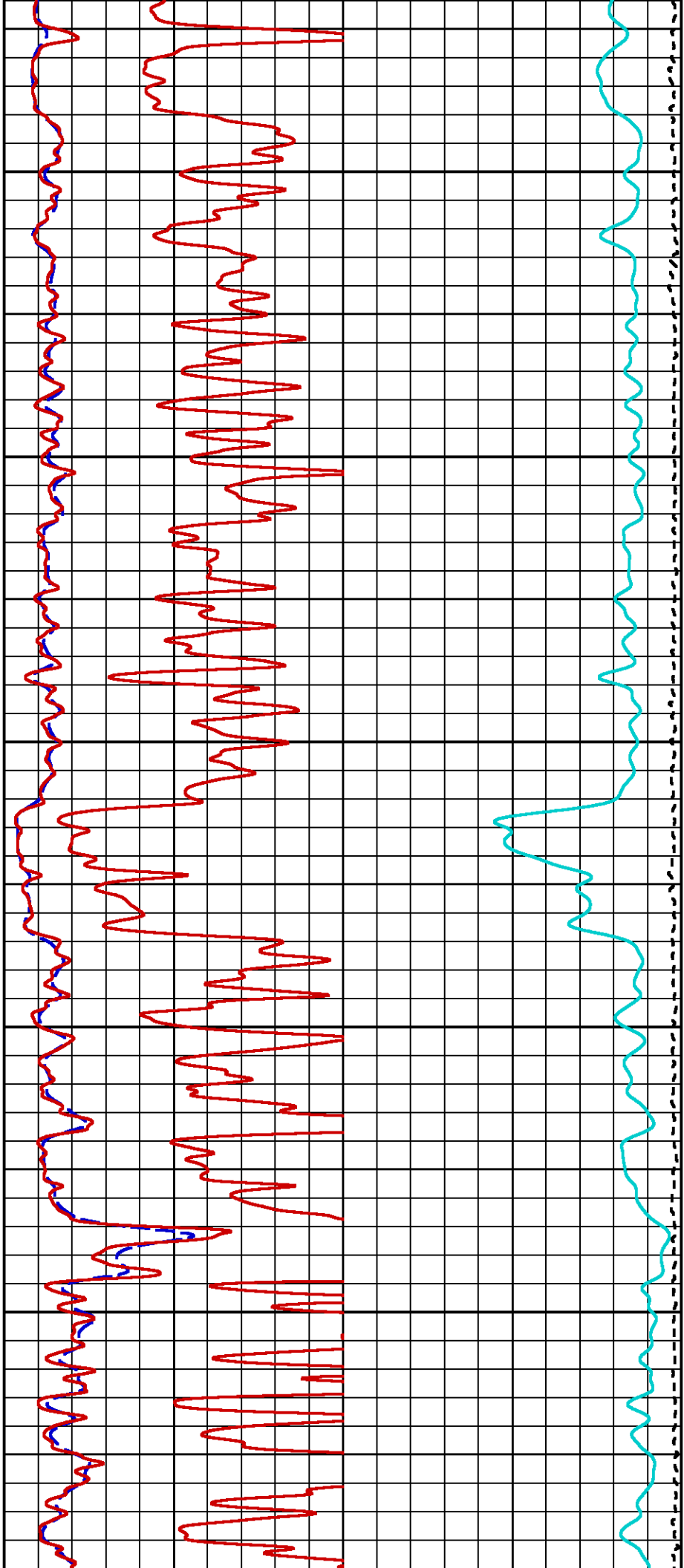


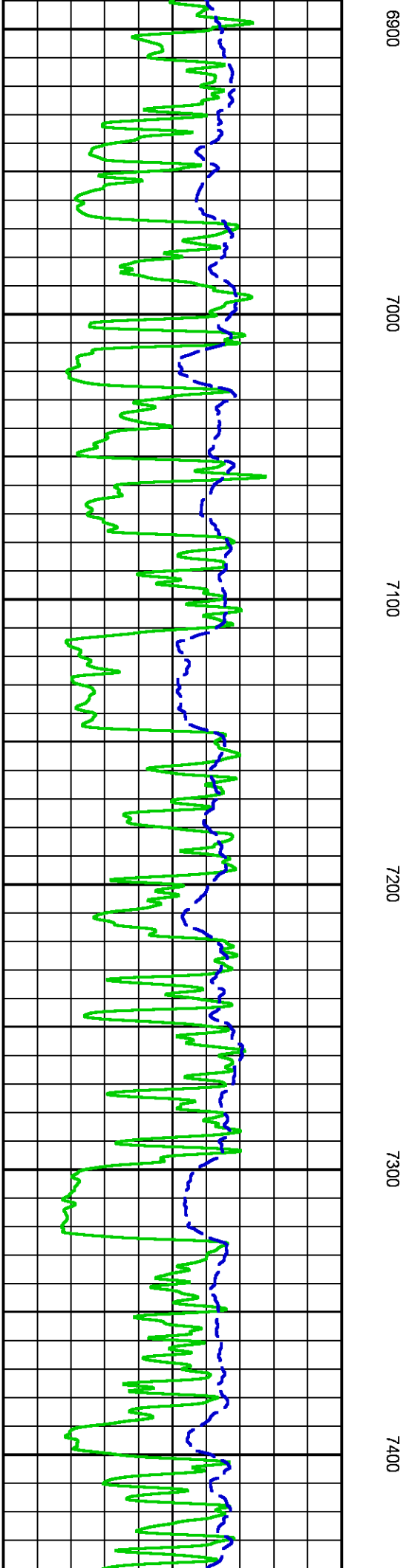
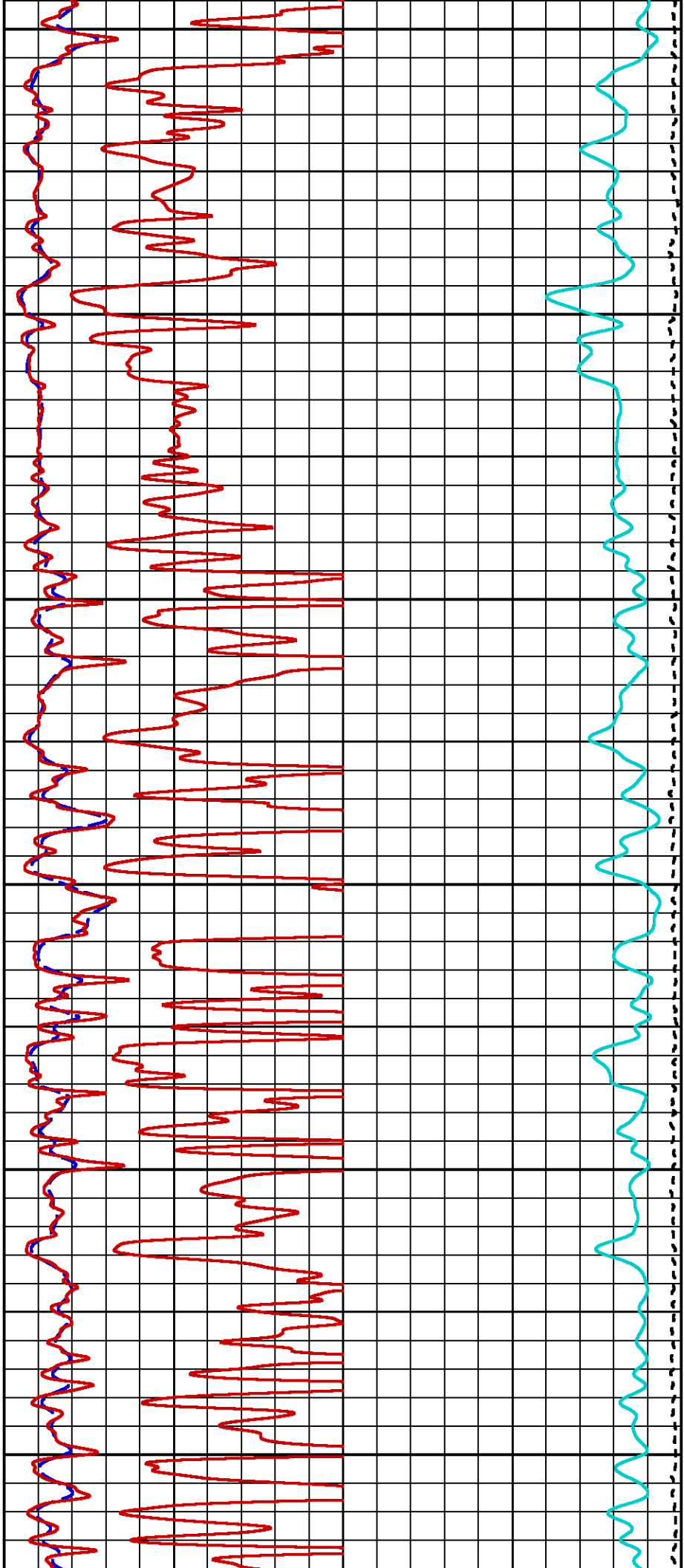


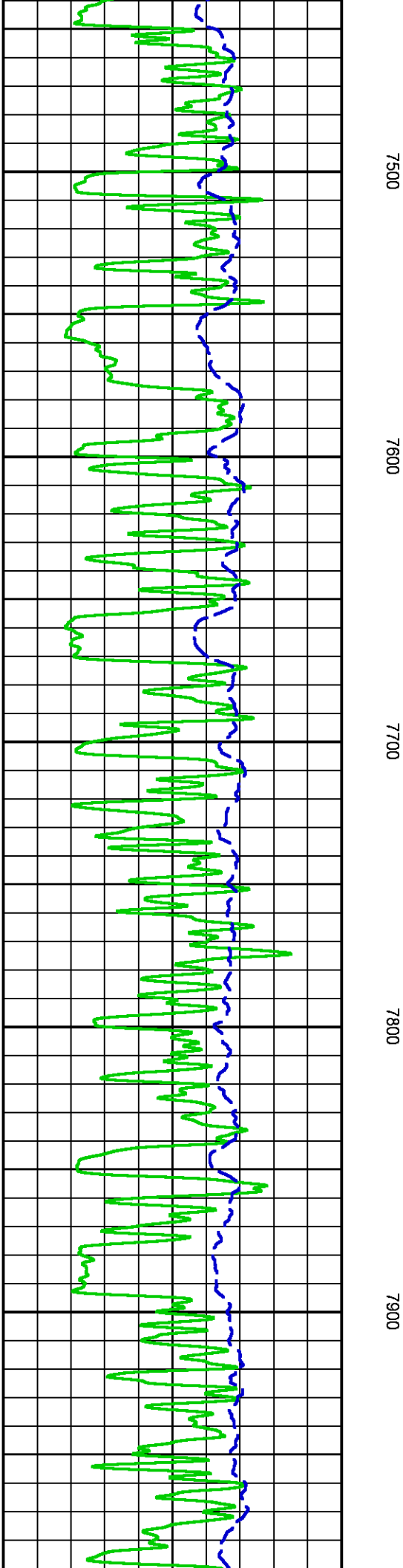
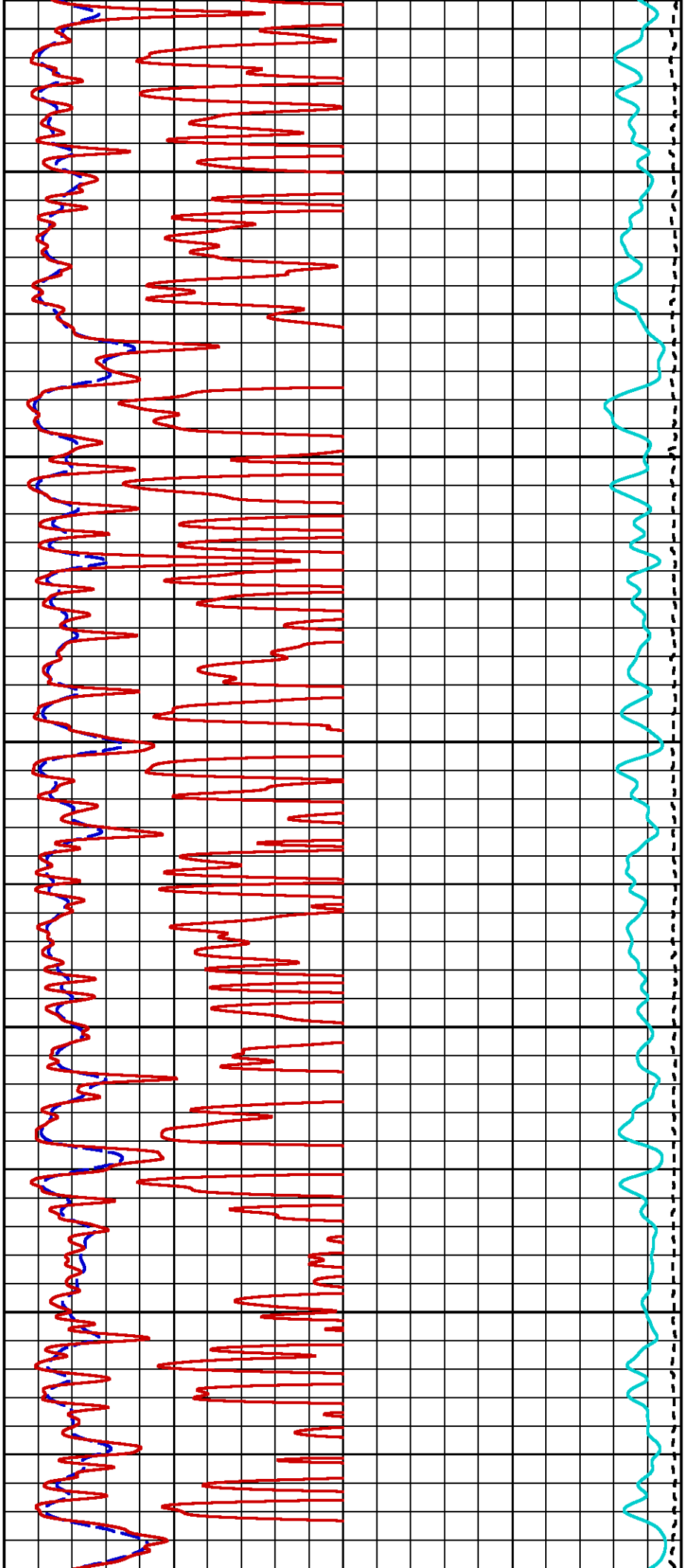


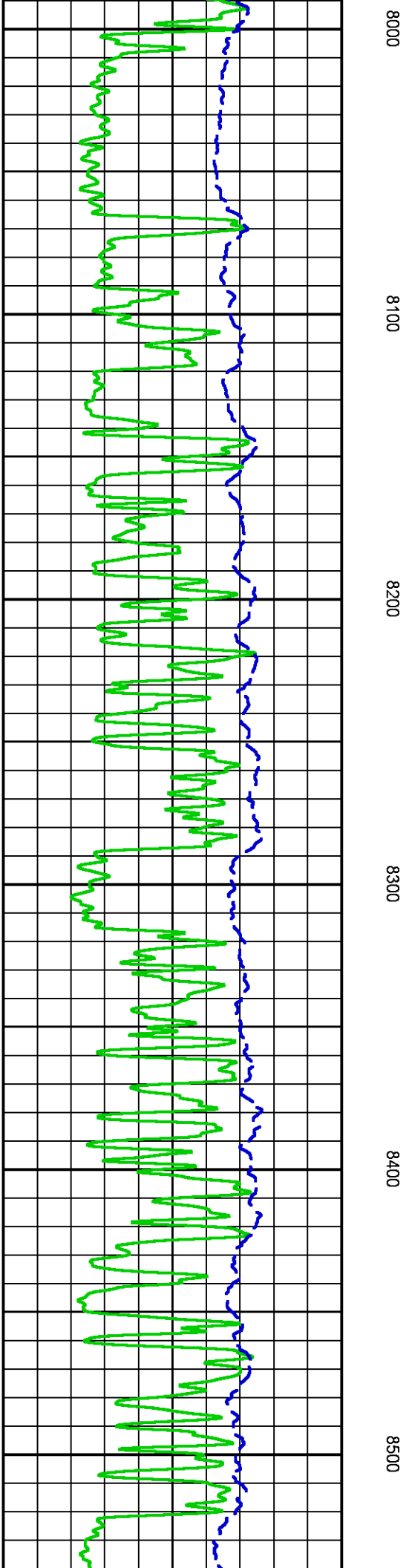
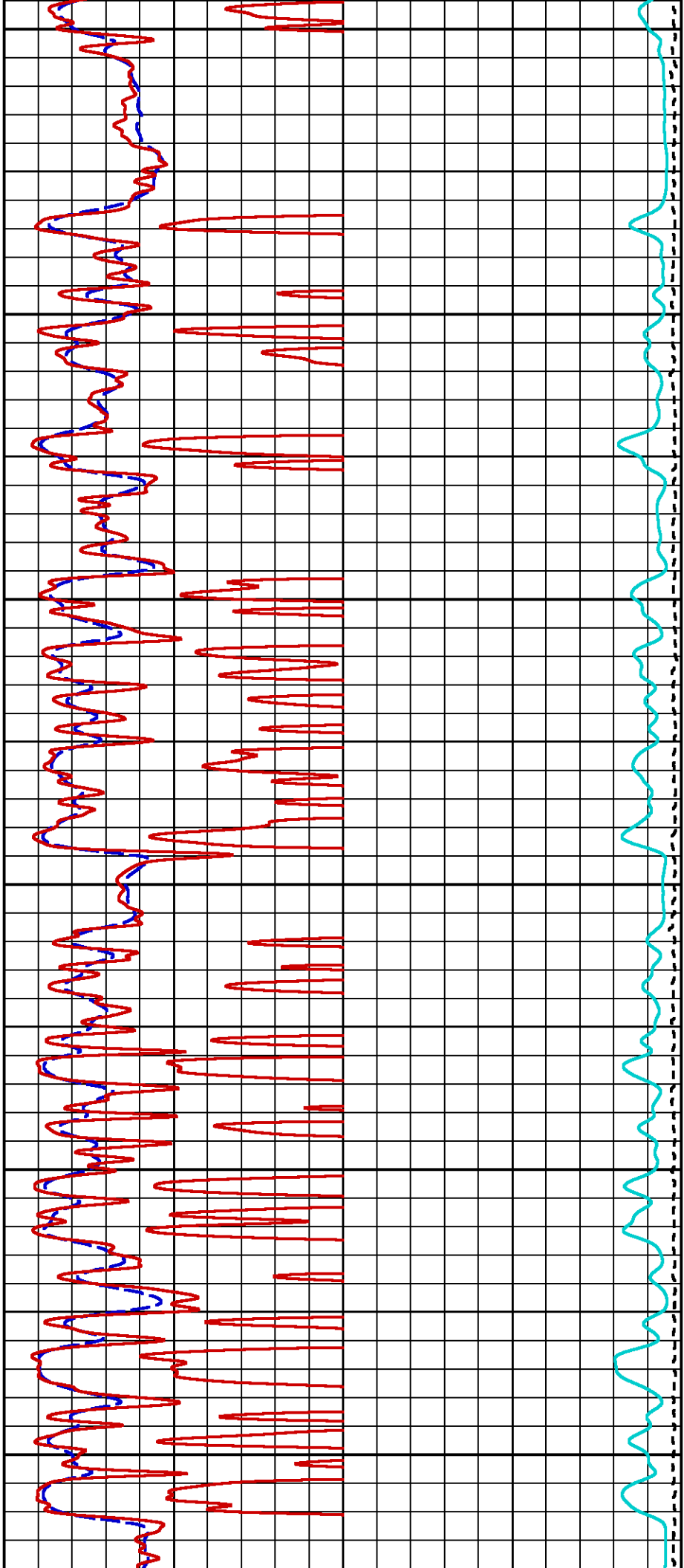


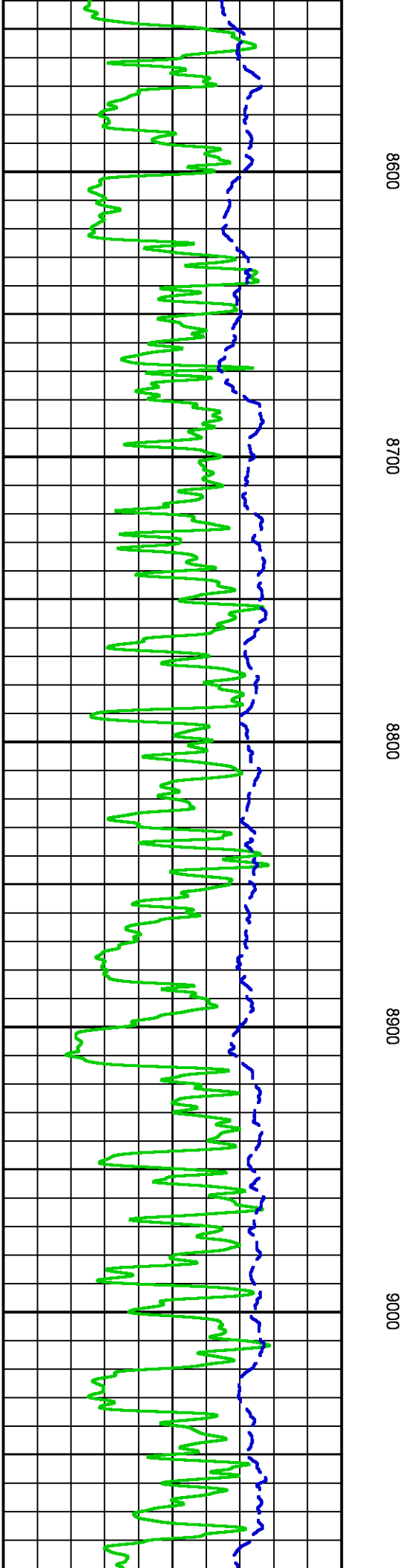
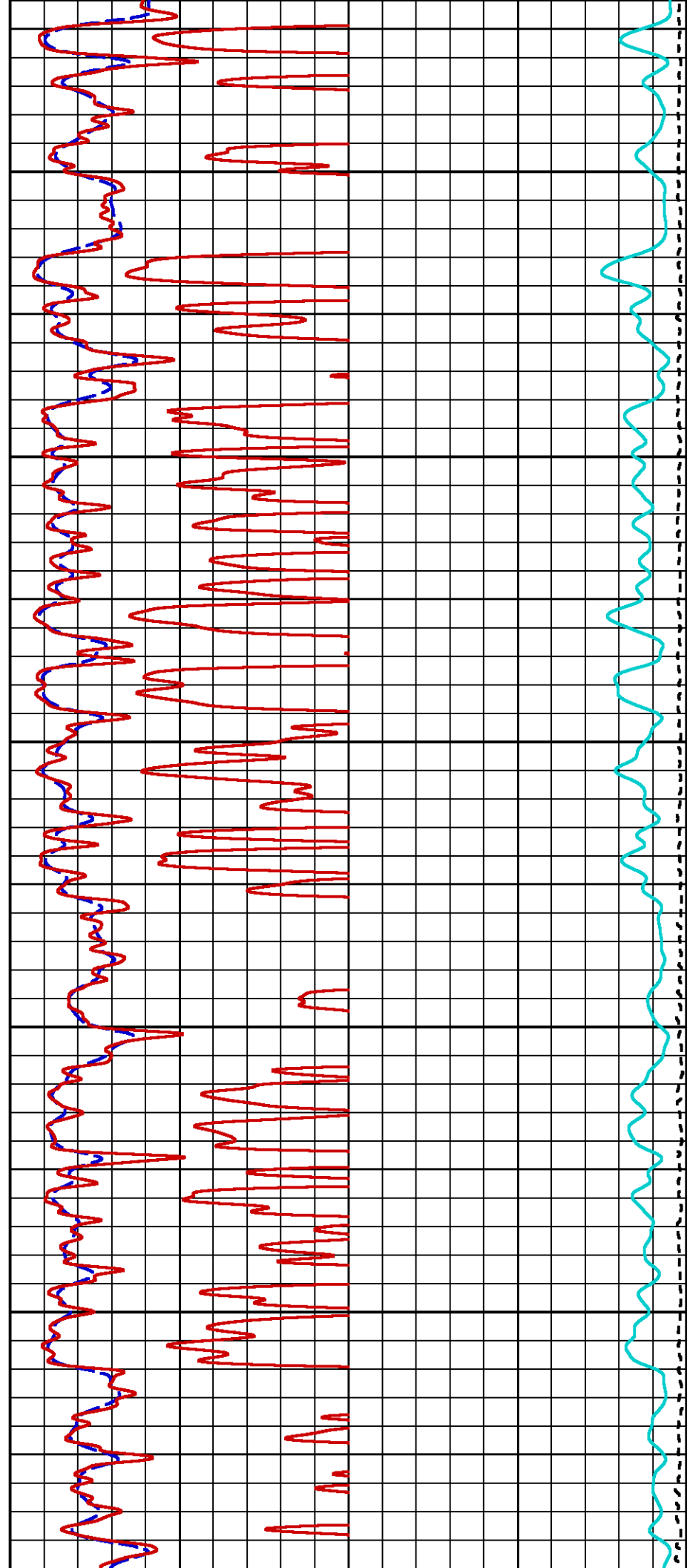


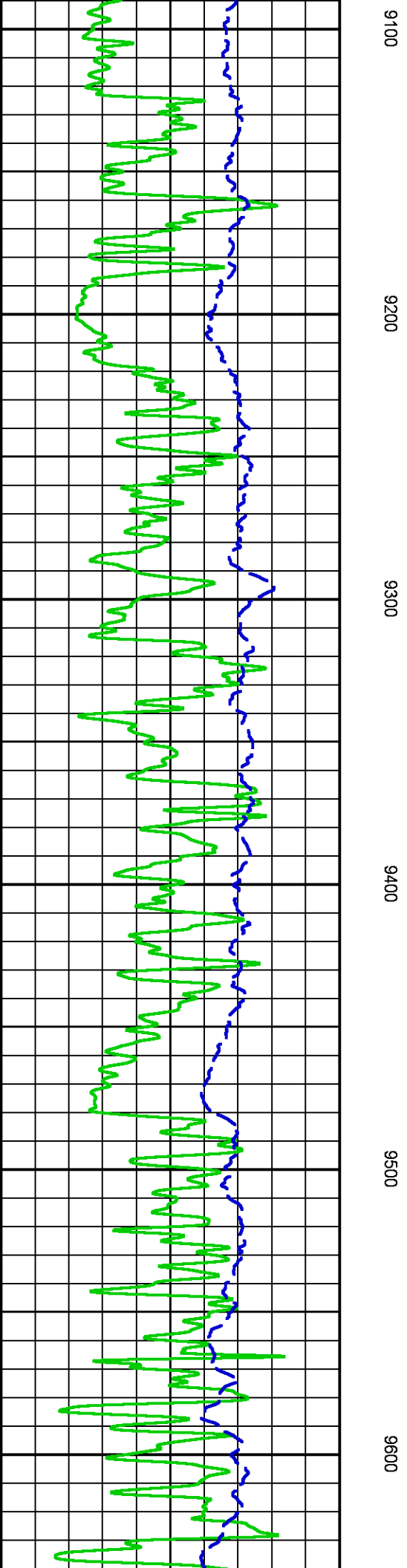
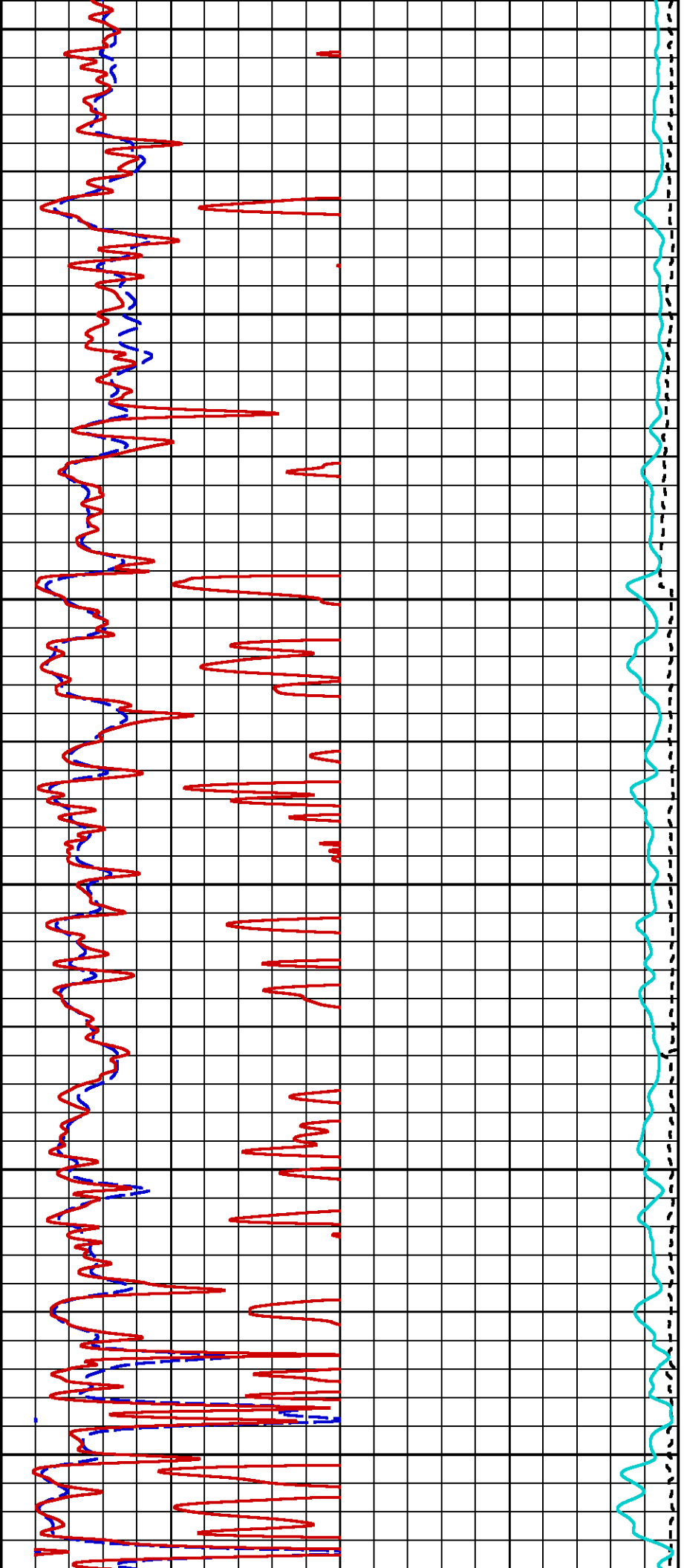


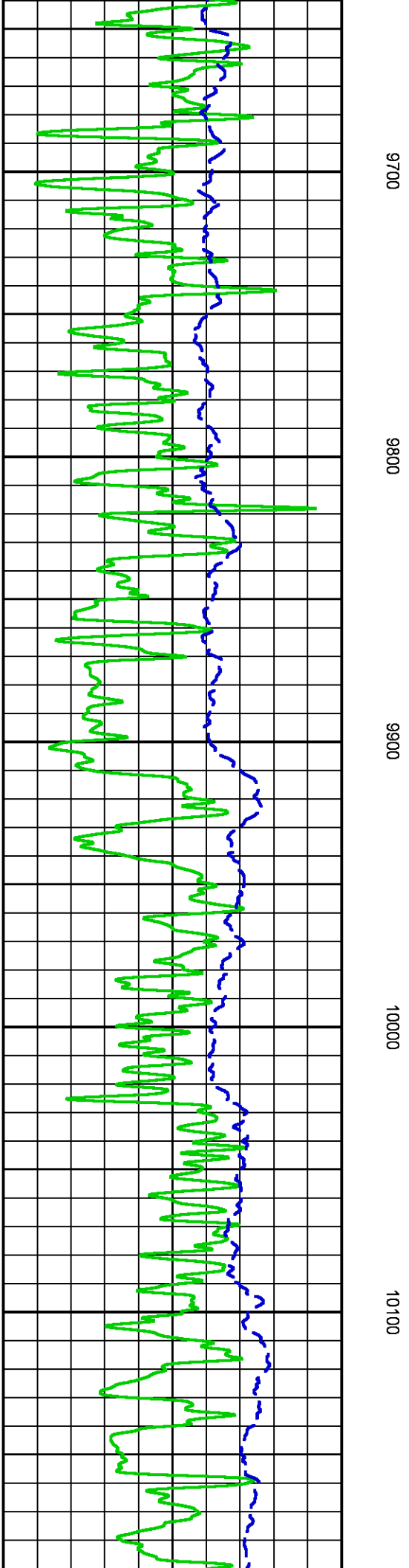
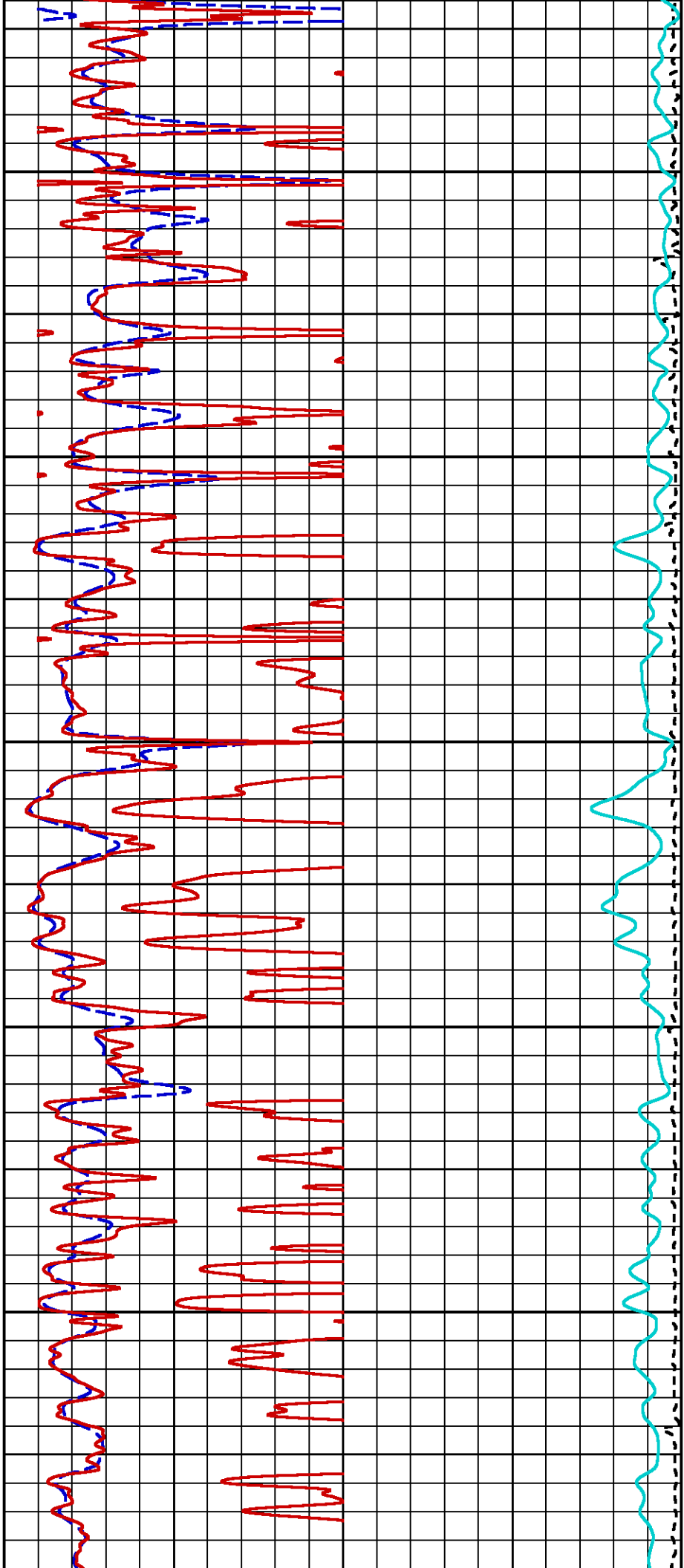


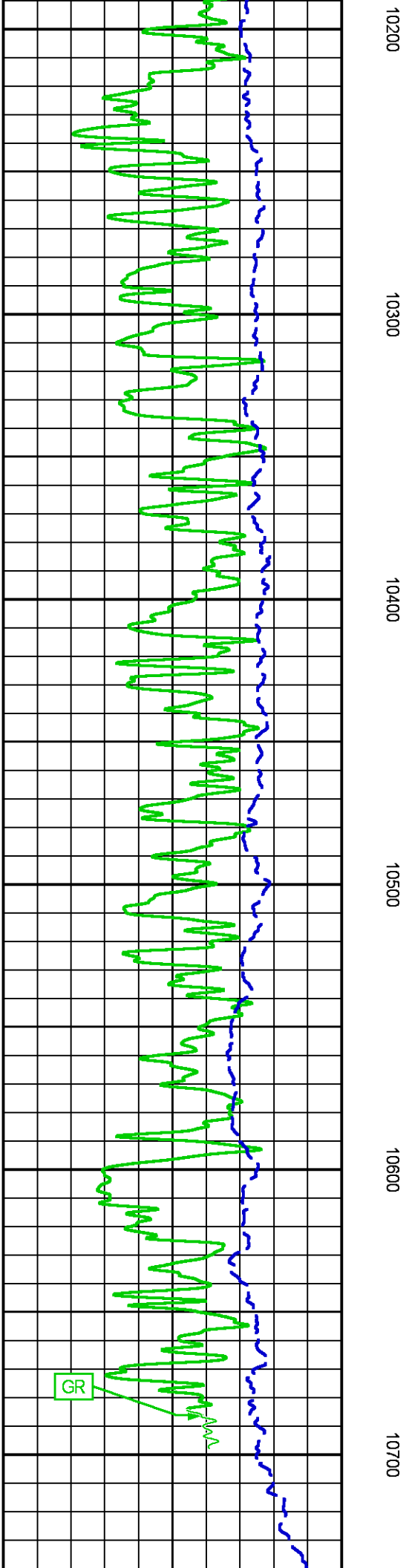
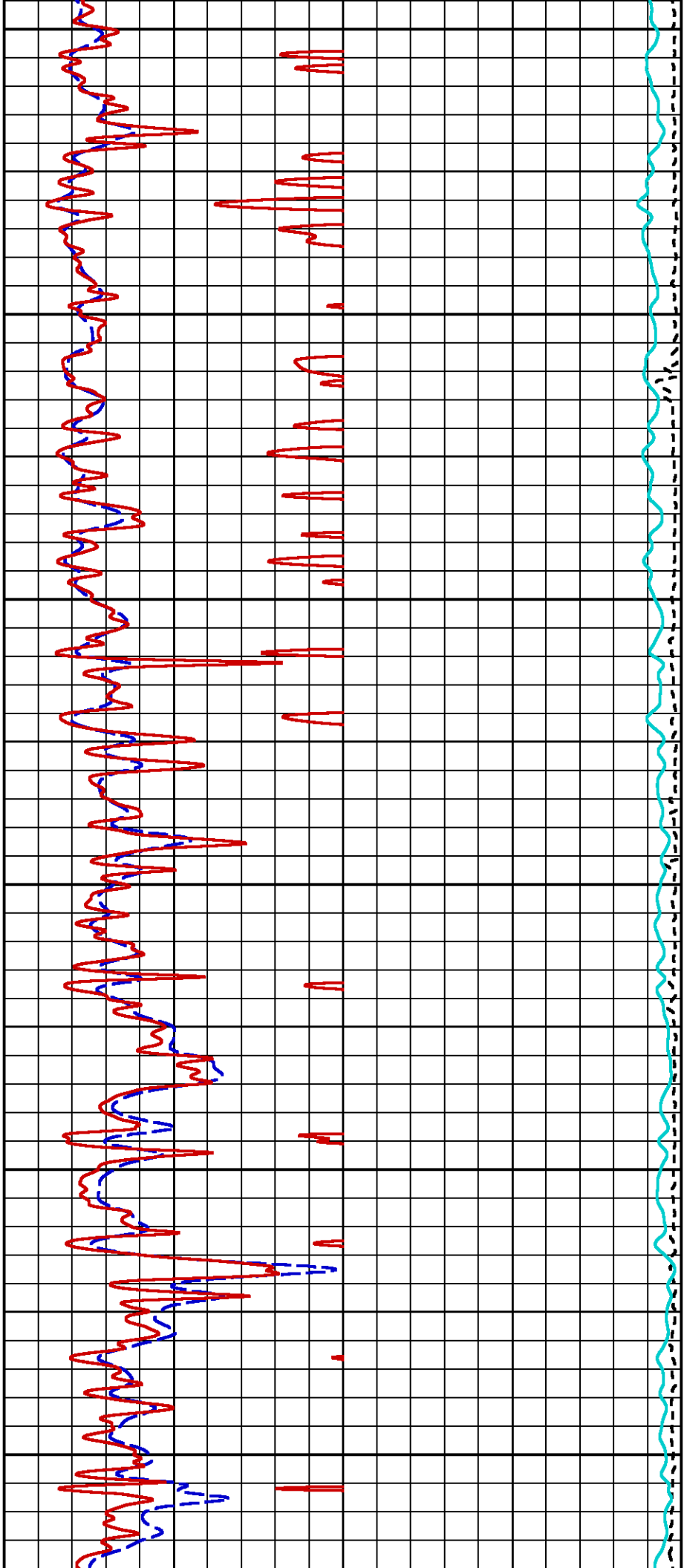


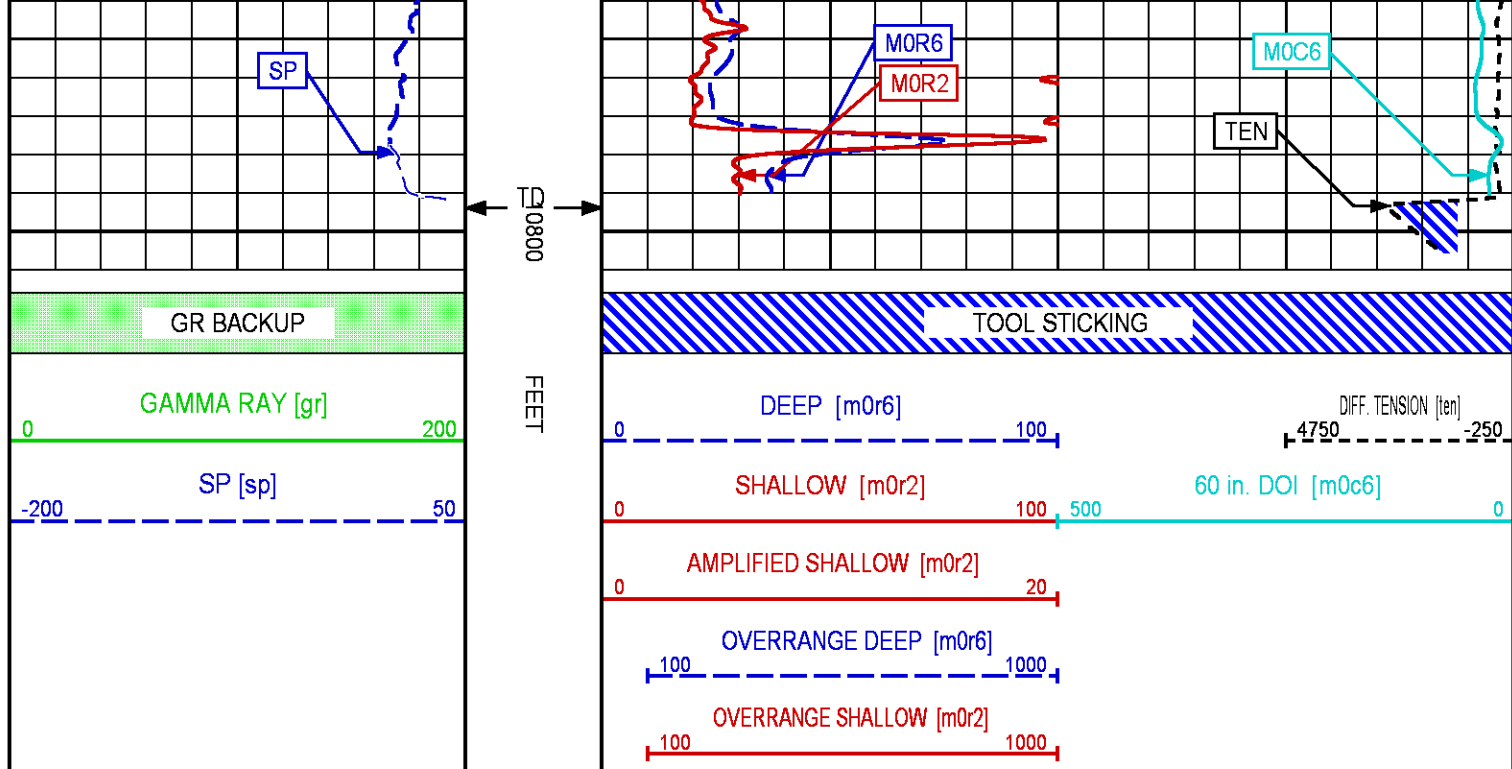












MAIN LOG 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 2

Plotted: Tue Sep 9 20:54:58 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/090505J/n777q02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 5330.750 ft BOTTOM DEPTH: 10807.125 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TTRM	FILTER ()	medium (1)		TOP	BOTTOM
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
Y AXIS CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER ()	medium (1)		"	"
CN	FILTER ()	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
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CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	78.0	degF	"	"
	MUD SAMPLE RES	0.770	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	78.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"

CN PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	1600	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.680	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
ZDL	DENX TRACKING	ON		"	"
TRACKING TIME	Logging Spd for Gain	Over 10 ft/min		"	"

HDIL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	STANDOFF		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

PARAMETER AND FILTER SUMMARY REPORT					
FILE:	/dat1a/090505J/n777q03.prm				
LOGGING MODE:	DEPTH	DIRECTION:	UP		
TOP DEPTH:	3246.250 ft	BOTTOM DEPTH:	6033.250 ft		

SYMMETRIC FILTER					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TTRM	FILTER ()	medium (1)		TOP	BOTTOM
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
Y AXIS CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER ()	medium (1)		"	"
CN	FILTER ()	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	

CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	78.0	degF	"	"
	MUD SAMPLE RES	0.770	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	78.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	1600	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.680	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
ZDL	DENX TRACKING	ON		"	"
TRACKING TIME	Logging Spd for Gain	Over 10 ft/min		"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	STANDOFF		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 9 19:31:15 2014	BIT SIZE
F1:BVOL	Sep 9 19:31:15 2014	BOREHOLE VOLUME
F1:CAL	Sep 9 19:31:15 2014	CALIPER
F1:CNCF	Sep 9 19:31:15 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Sep 9 19:31:15 2014	CEMENT VOLUME
F1:GR	Sep 9 19:31:15 2014	GAMMA RAY
F1:M2R1	Sep 9 19:31:15 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Sep 9 19:31:15 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Sep 9 19:31:15 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Sep 9 19:31:15 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Sep 9 19:31:15 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	Sep 9 19:31:15 2014	SPONTANEOUS POTENTIAL
F1:TEN	Sep 9 19:31:15 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 9 19:31:15 2014	DENSITY CORRECTION

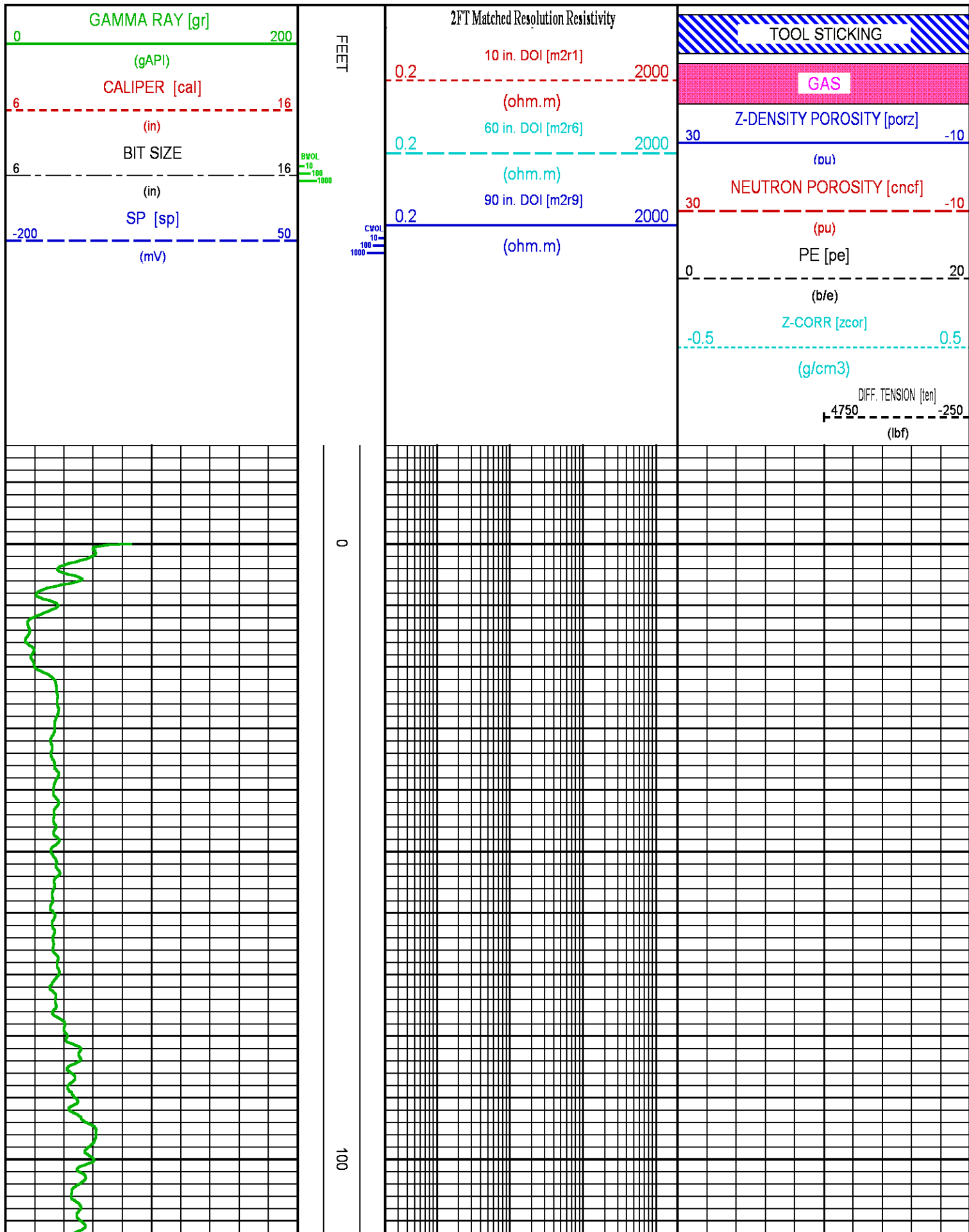
CURVE MEASURE POINT OFFSET

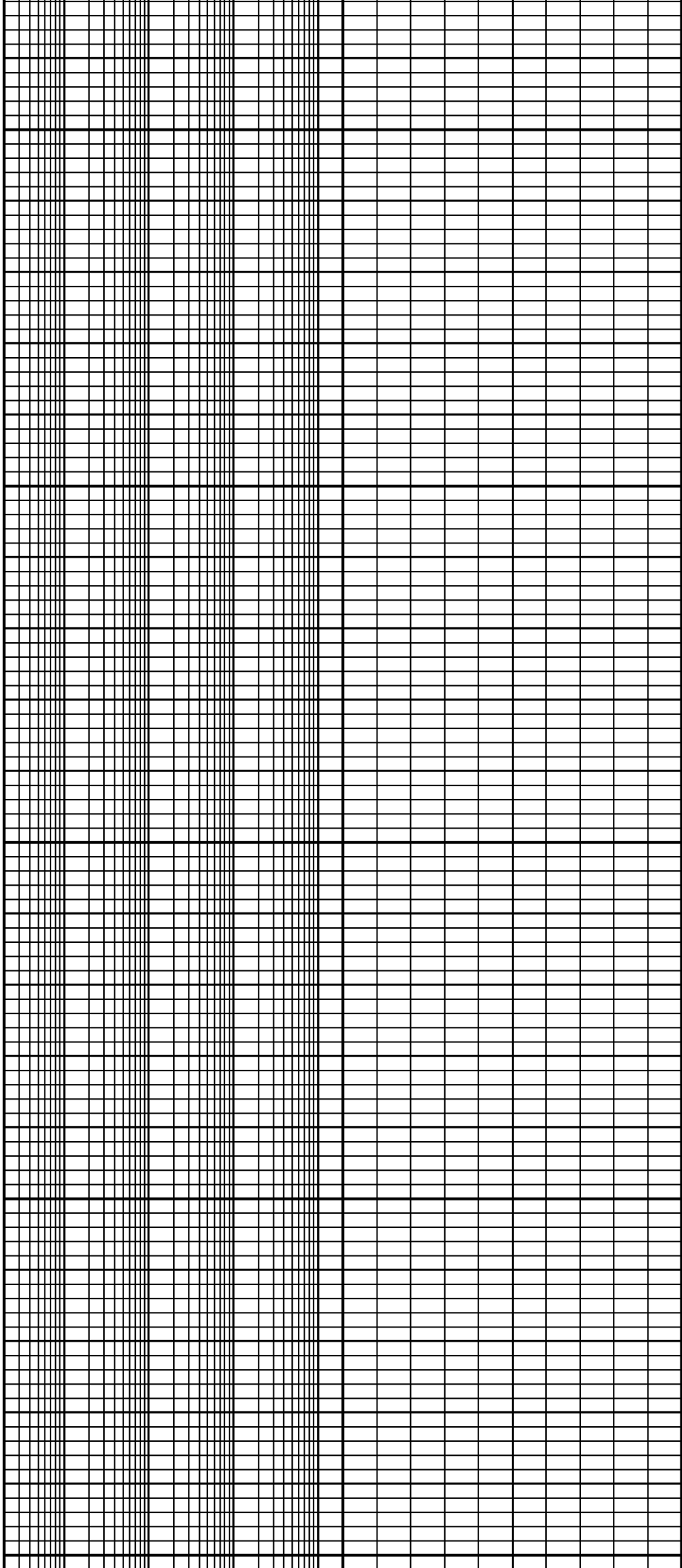
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	107.25	M2R9	8.00	SP	14.00
CAL	90.00	M2R1	8.00	PE	89.25	TEN	0.00
CNCF	100.25	M2R6	8.00	PORZ	89.25	ZCOR	89.25

Presentation : cas6685:/dat1a/090505J\WPX_MAIN.fvpdf [5"/100' Scale]
Plot Interval : 3126.75 - 10807 Feet

Data File 1 : F1 : cas6685:/dat1a/090505J\777qsMAIN.xtf

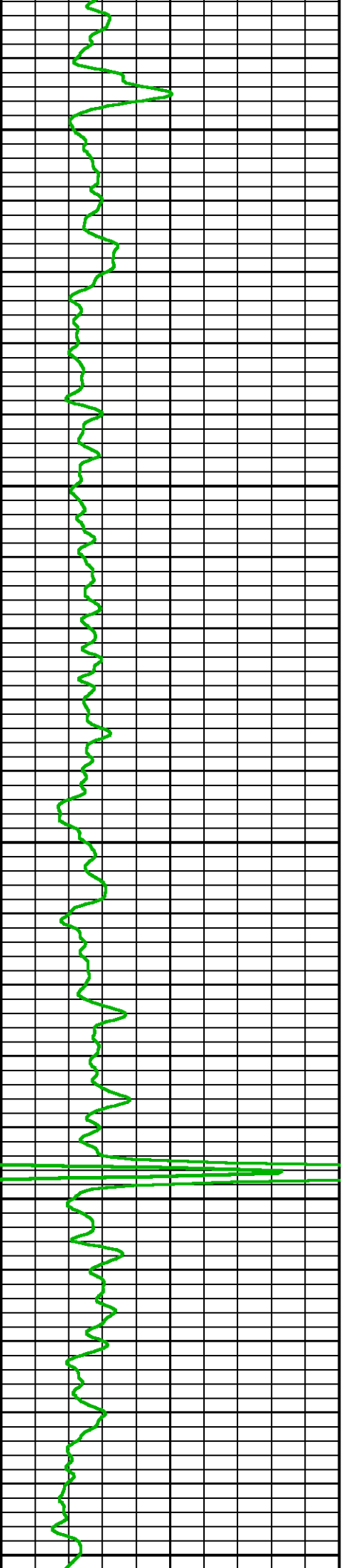
Created On : Sep 9 15:55:16 2014
Company : WPX ENERGY INC
Well : FEDERAL BCU 542-30-198
Field : SULPHUR CREEK
File Interval : 3126.5 - 10807 Feet
OCT : n777q





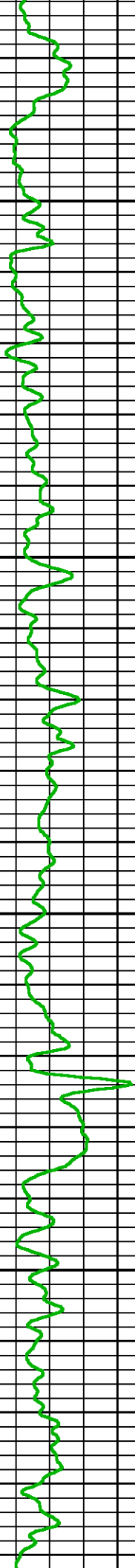
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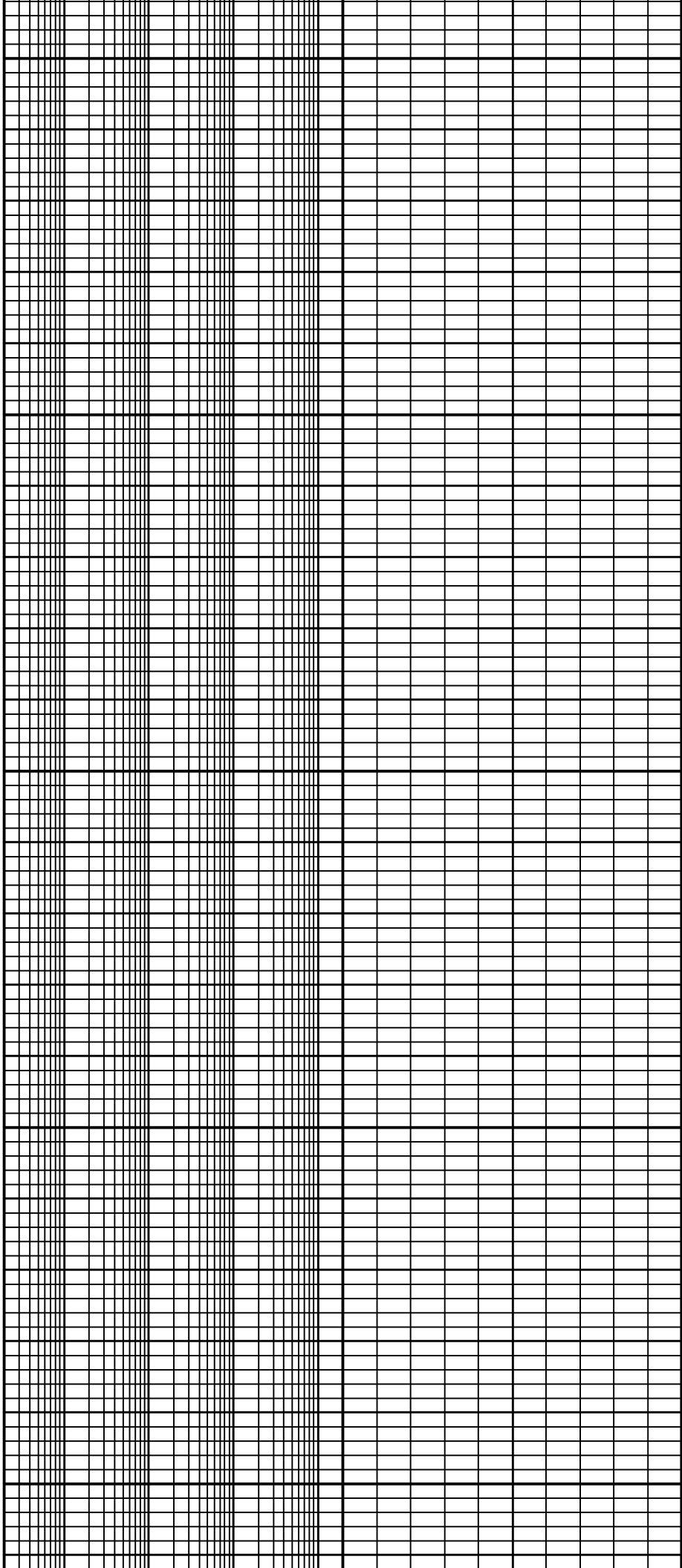
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800

900

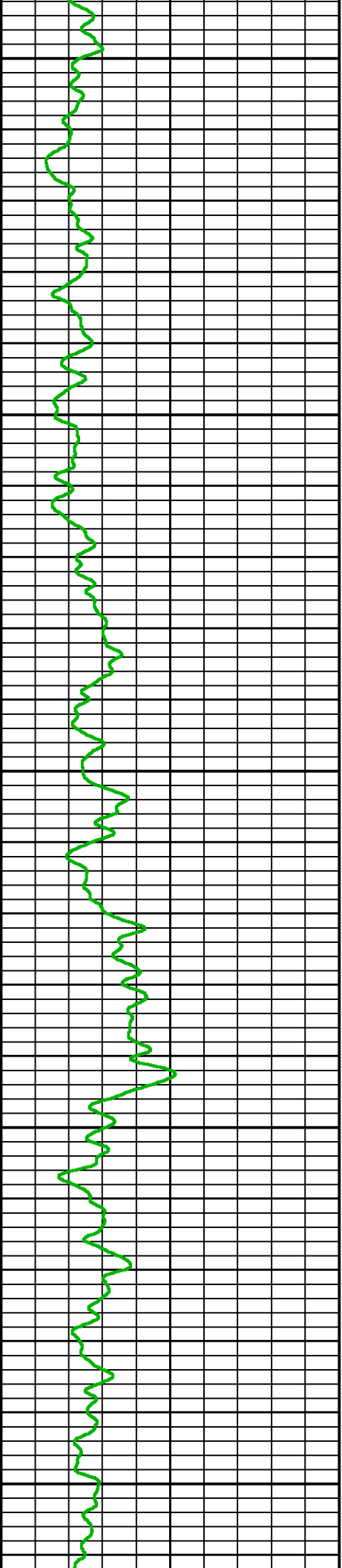


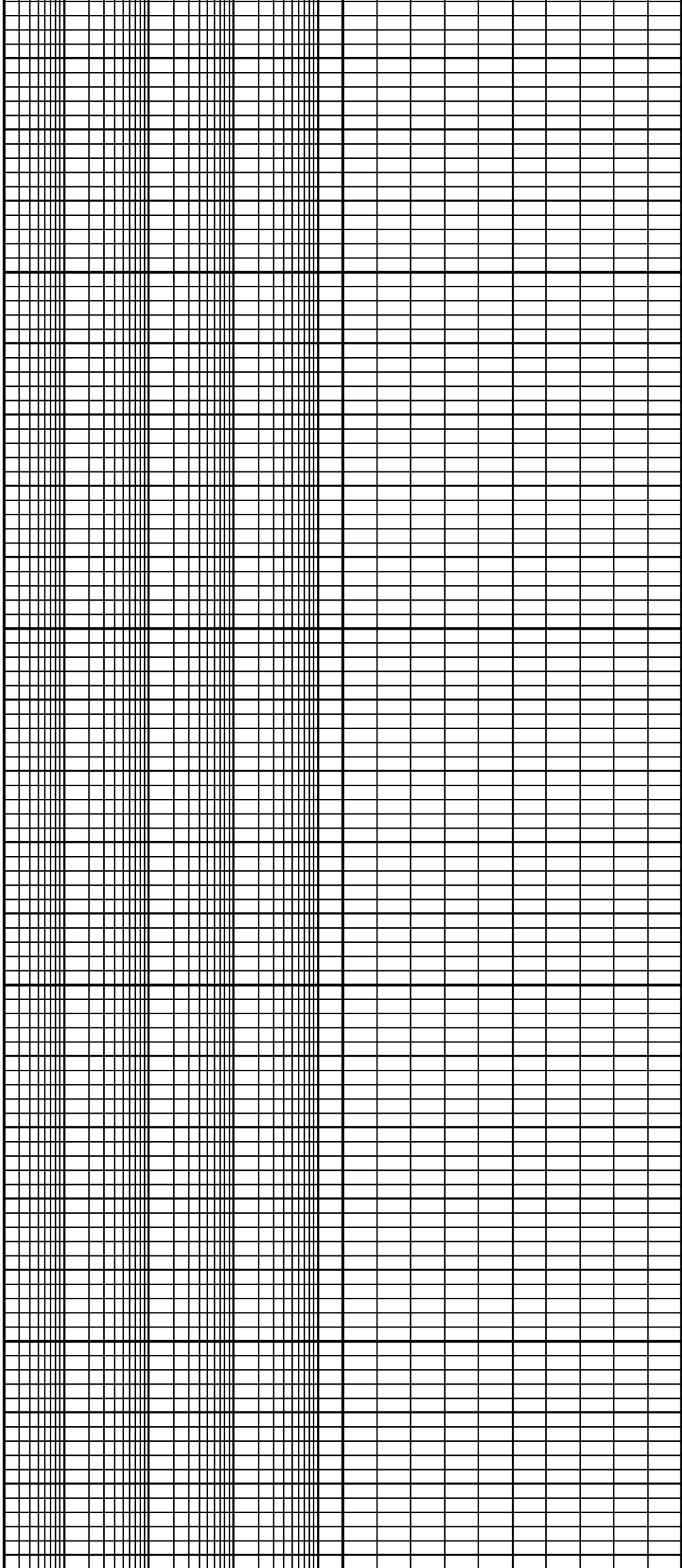


1000

1100

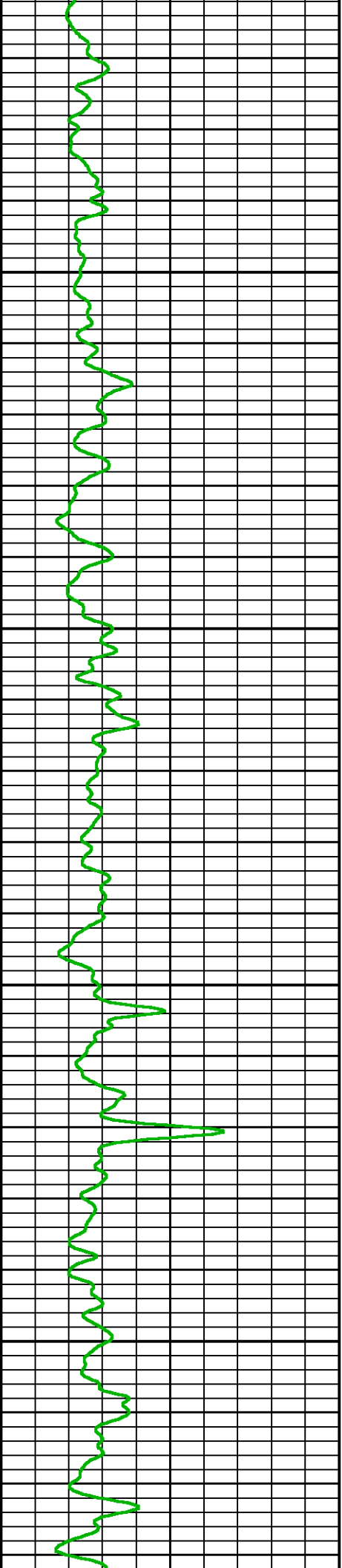
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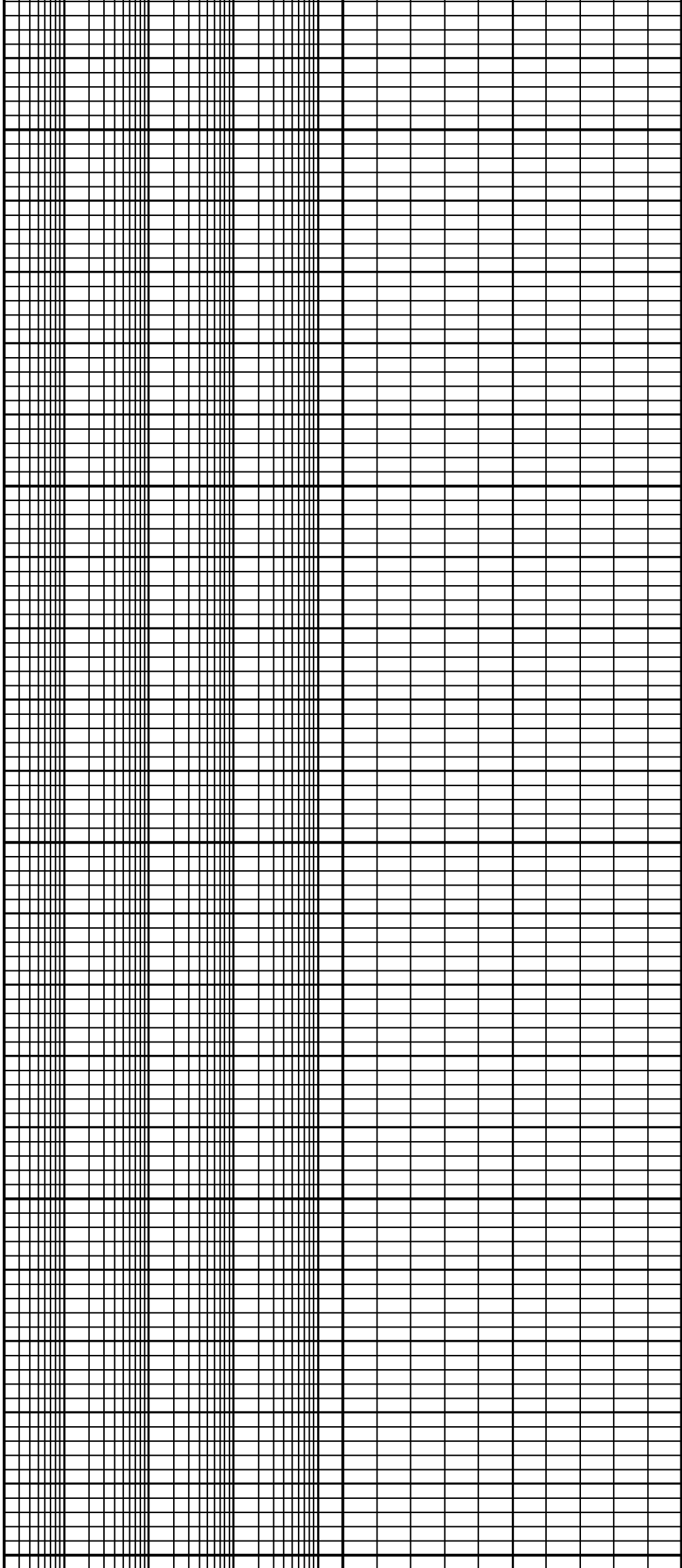




1300

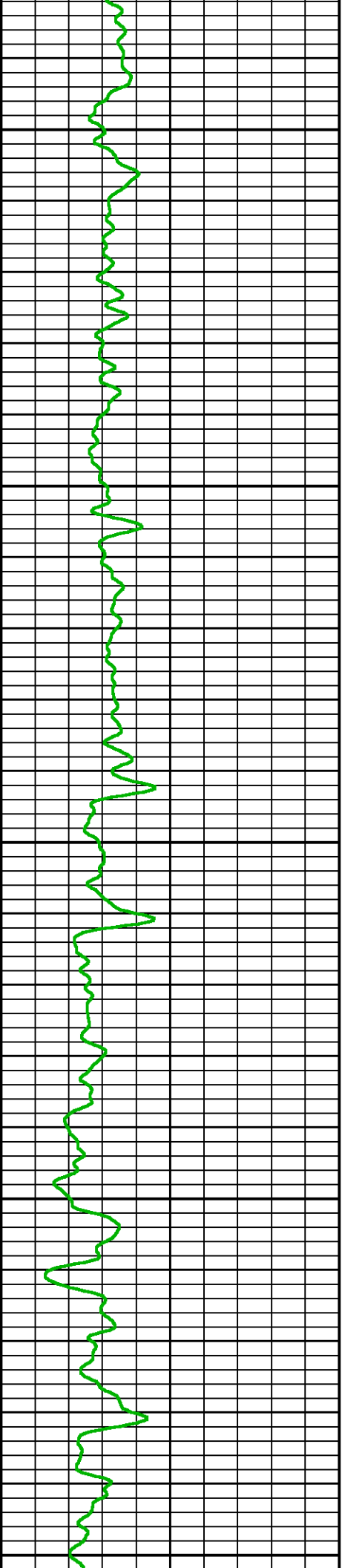
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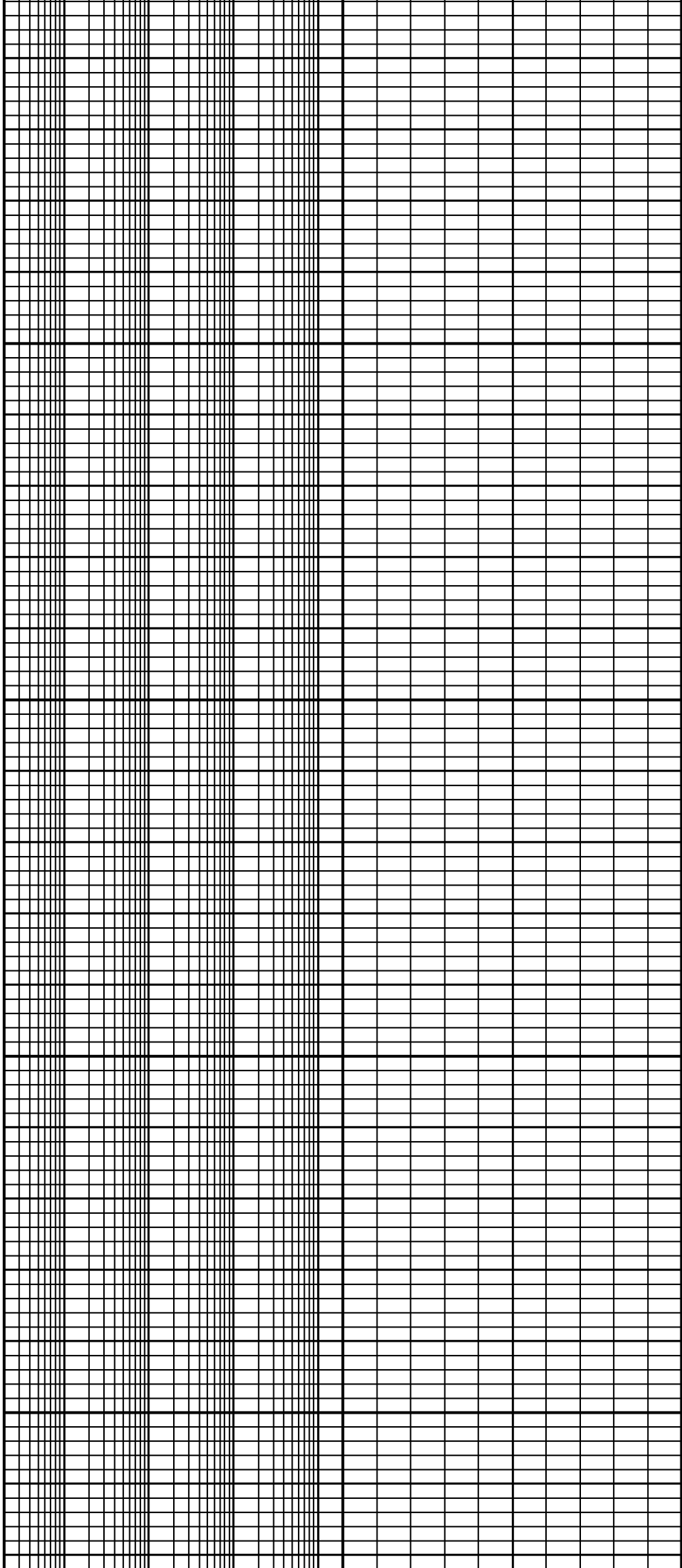




1500

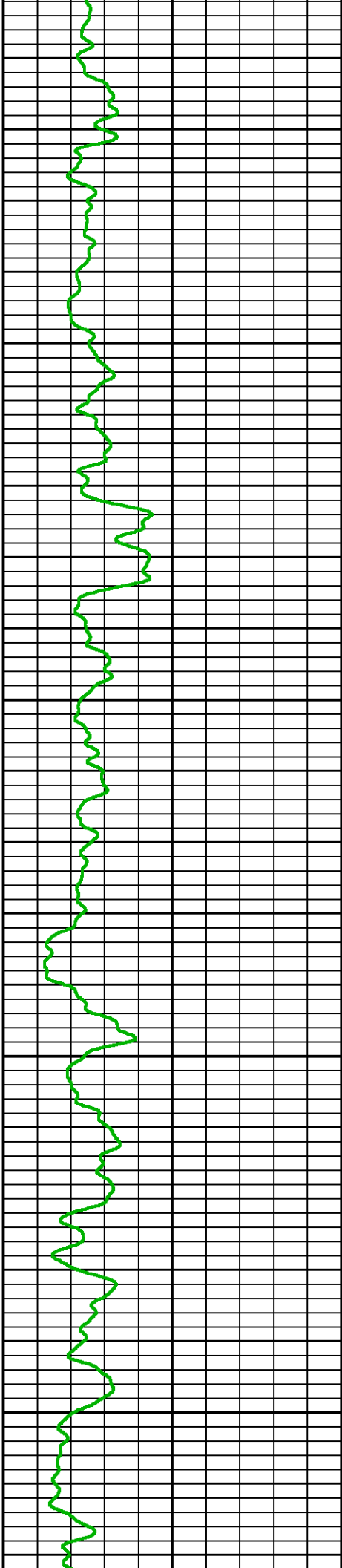
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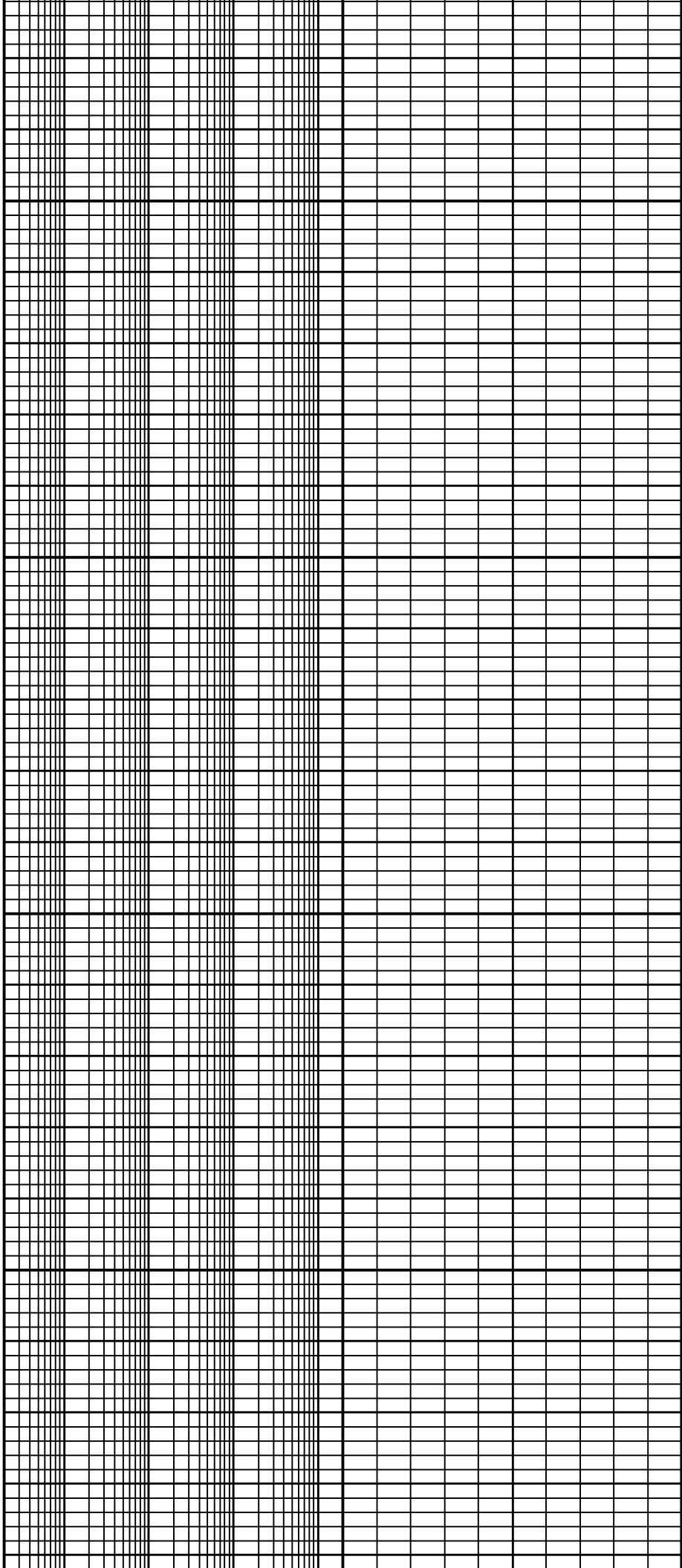




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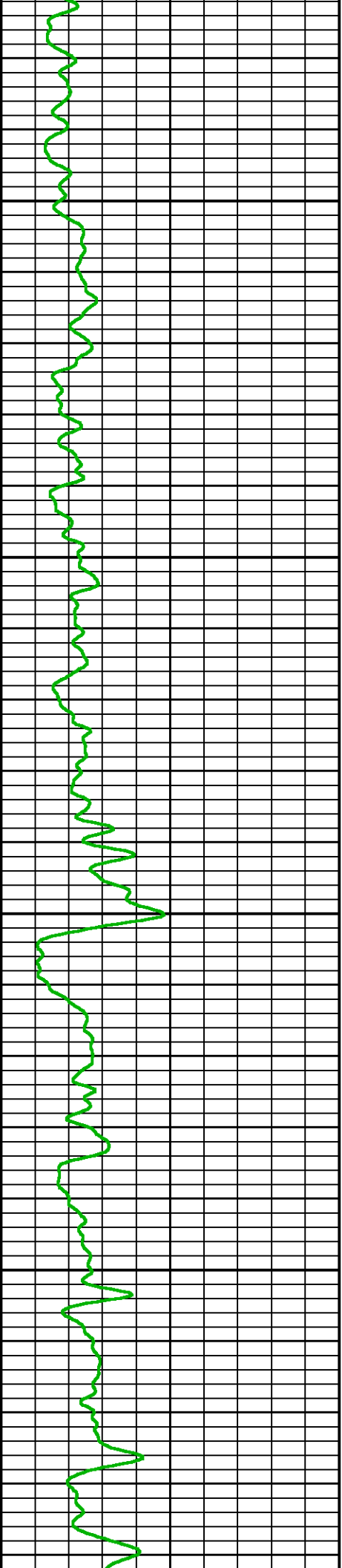
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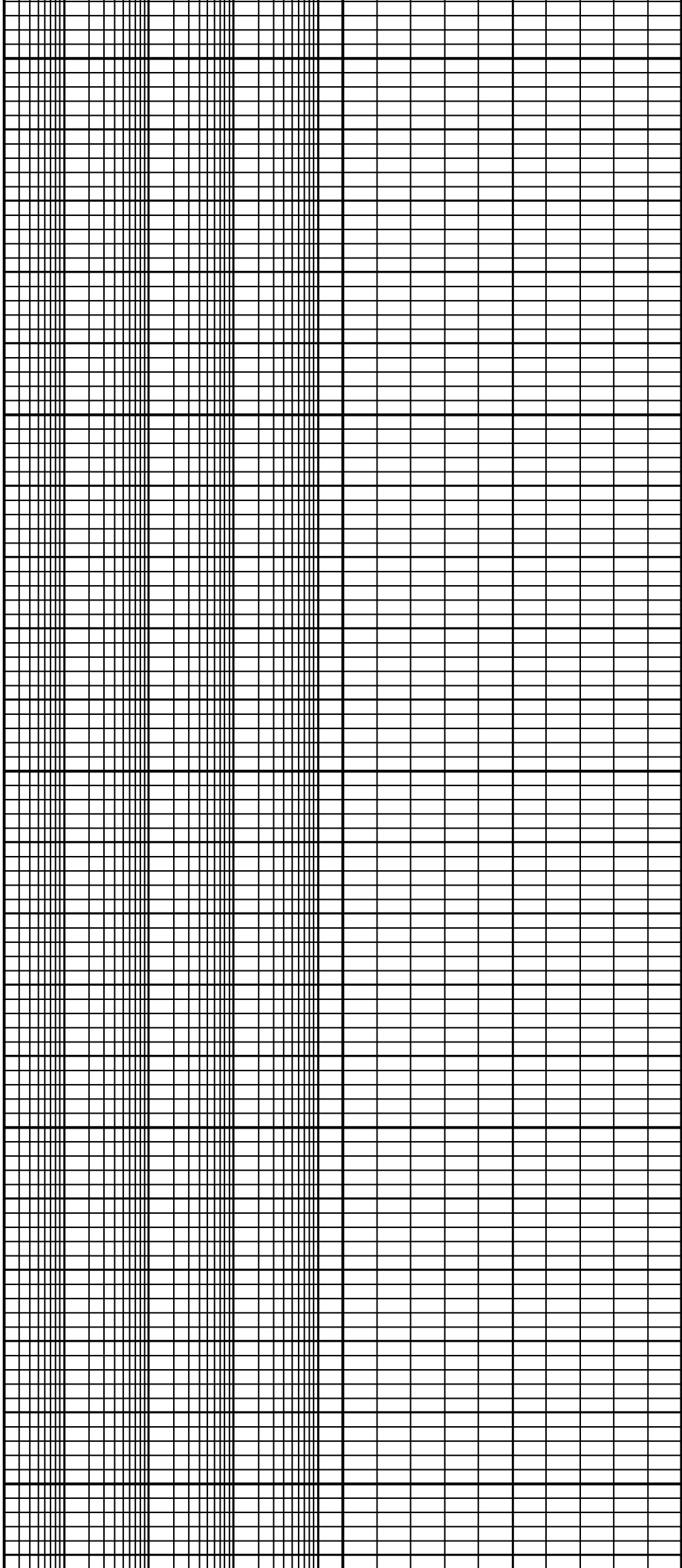




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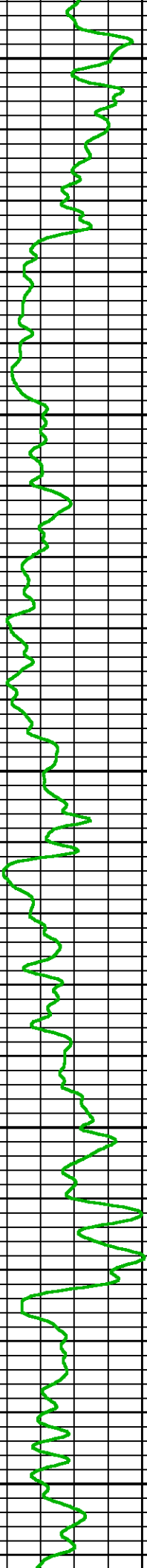


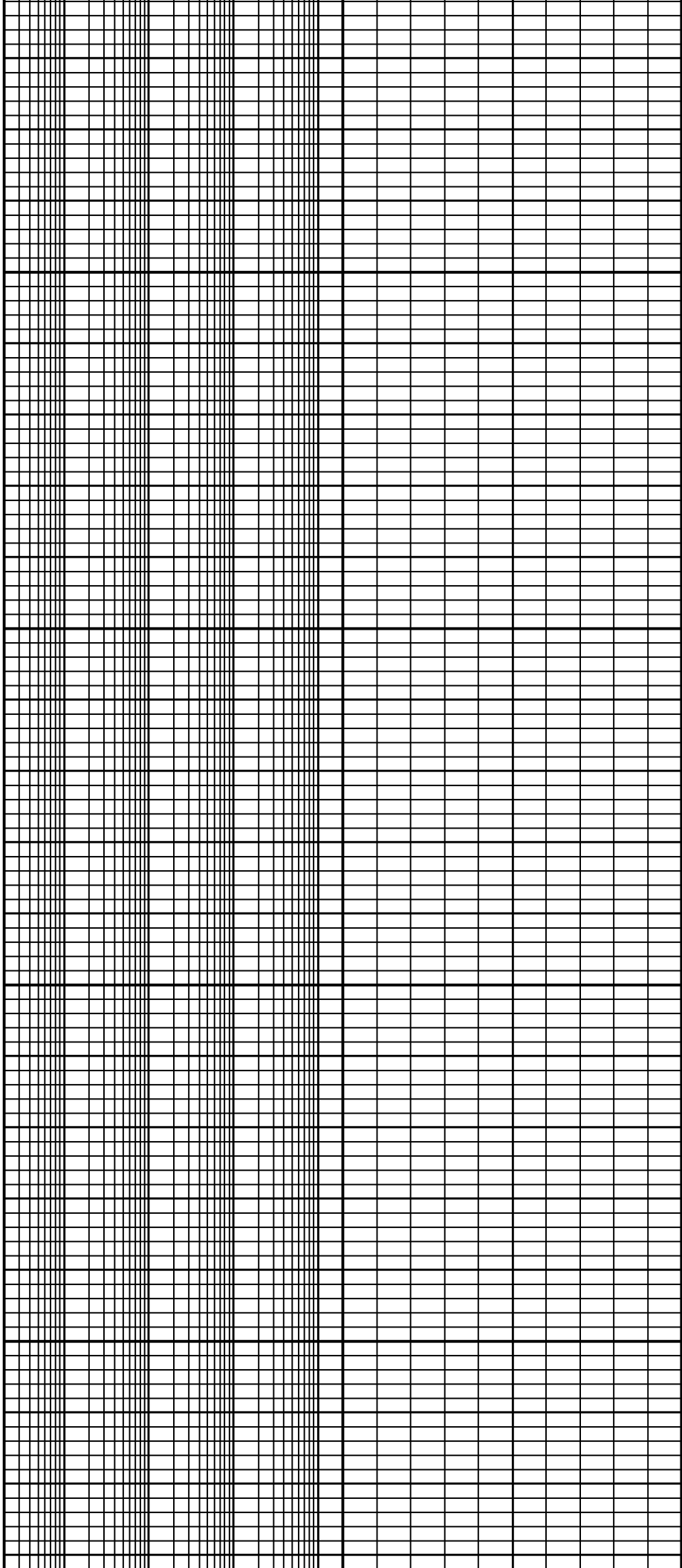


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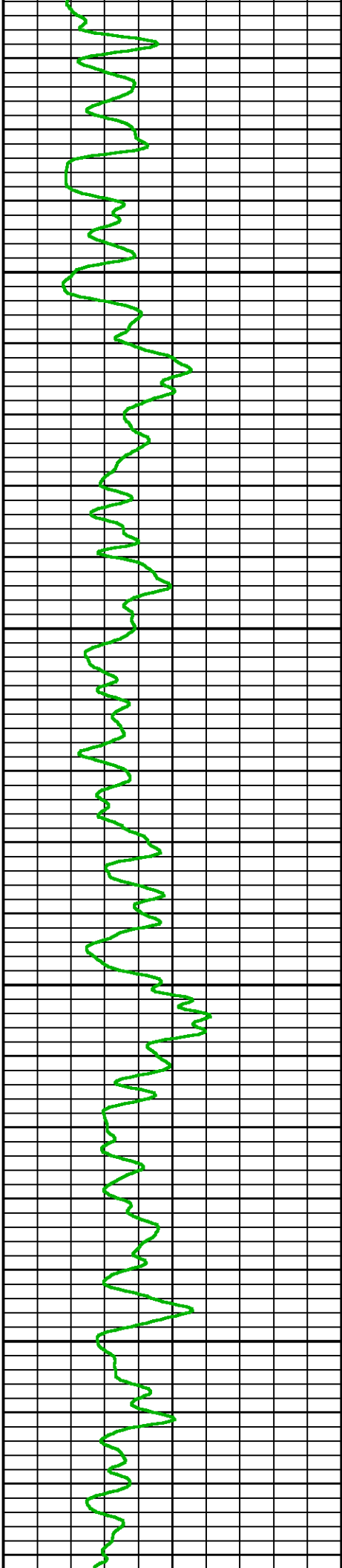
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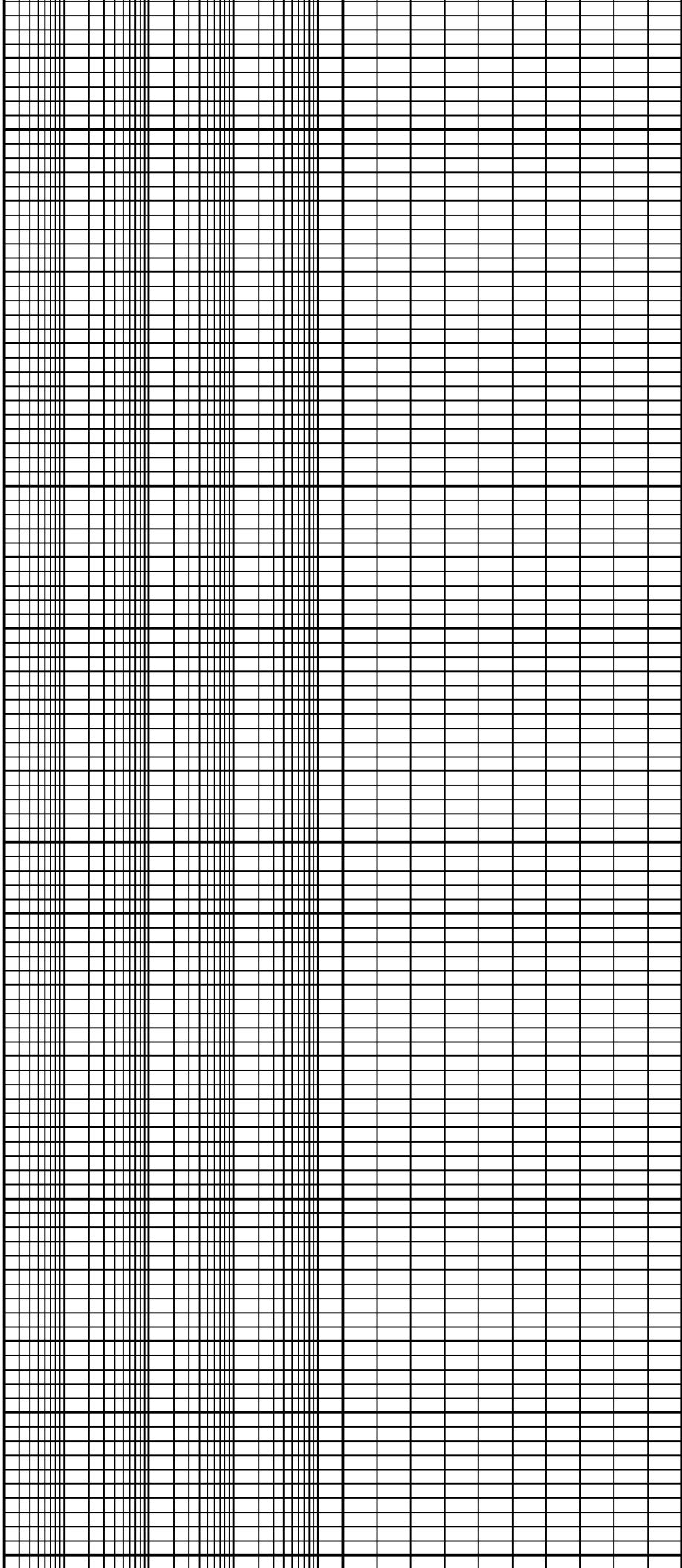




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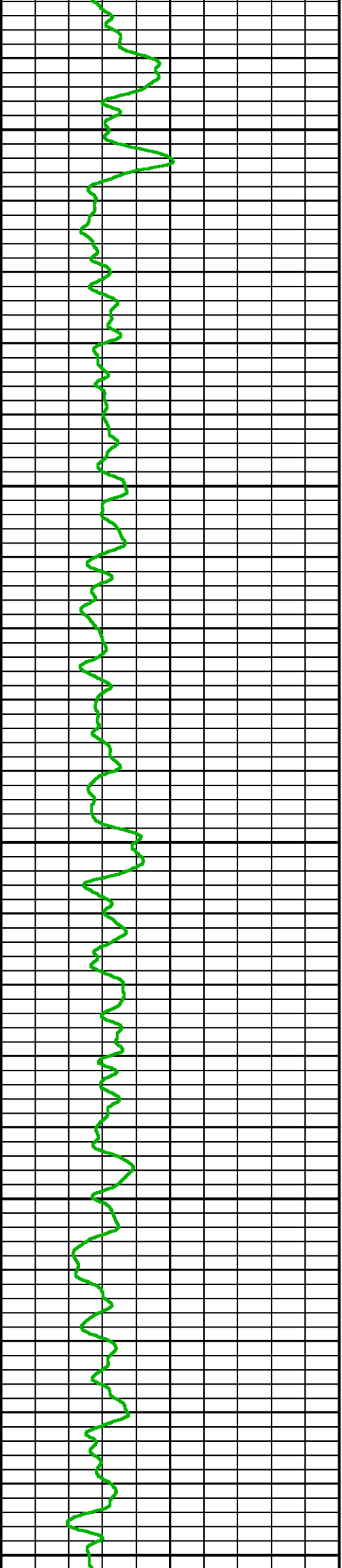
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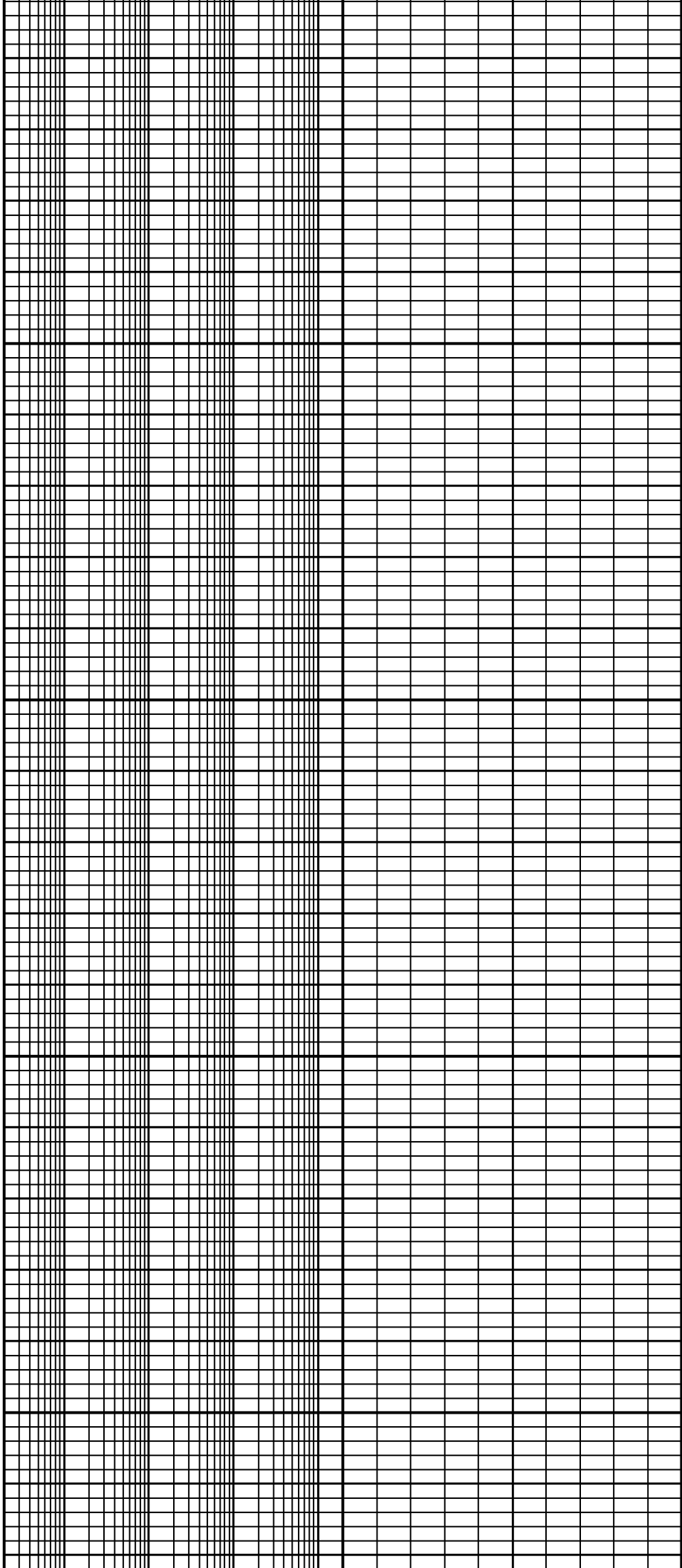




2600

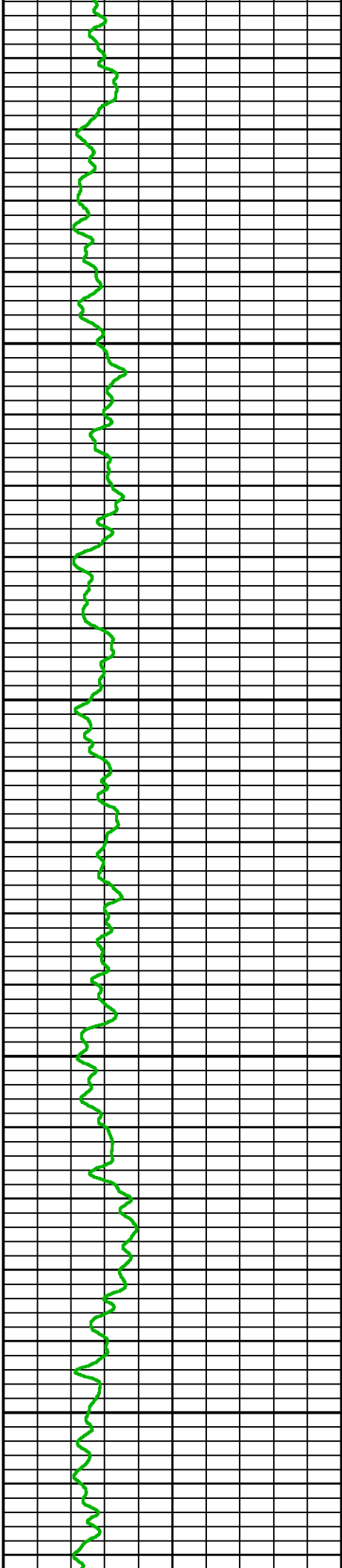
2700



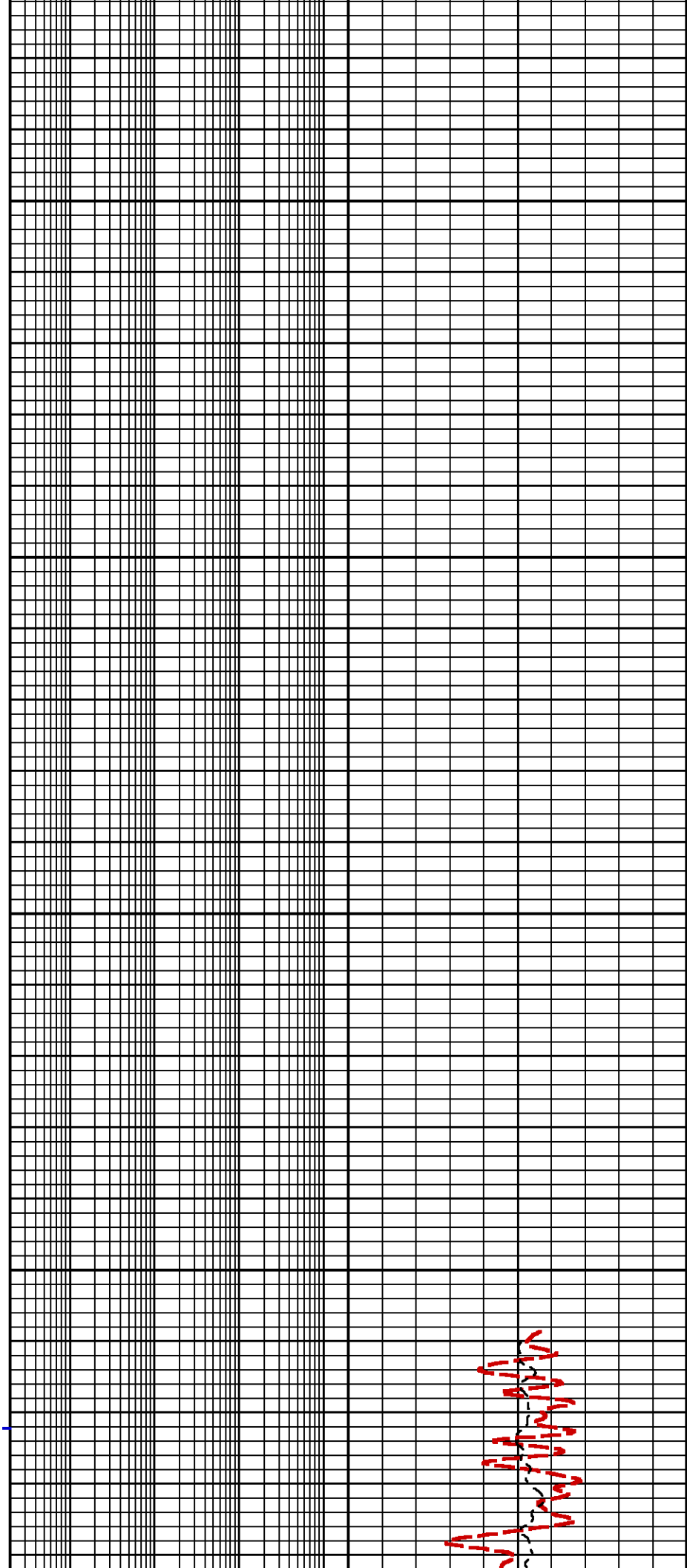


2800

2900

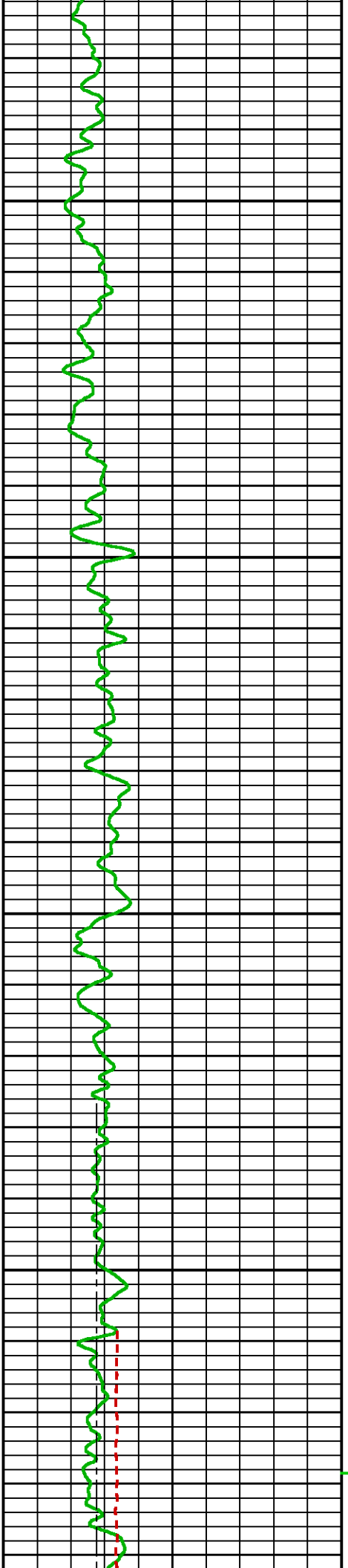


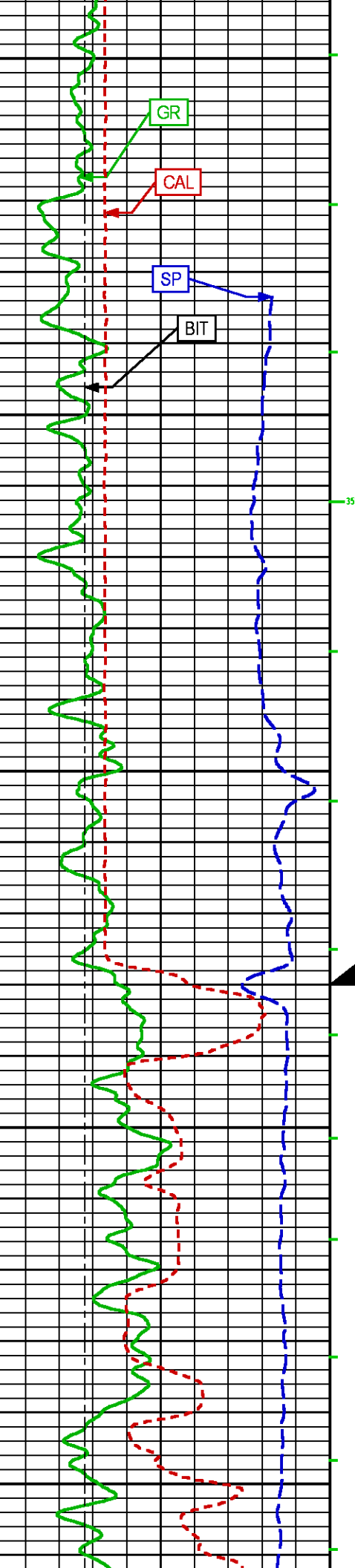
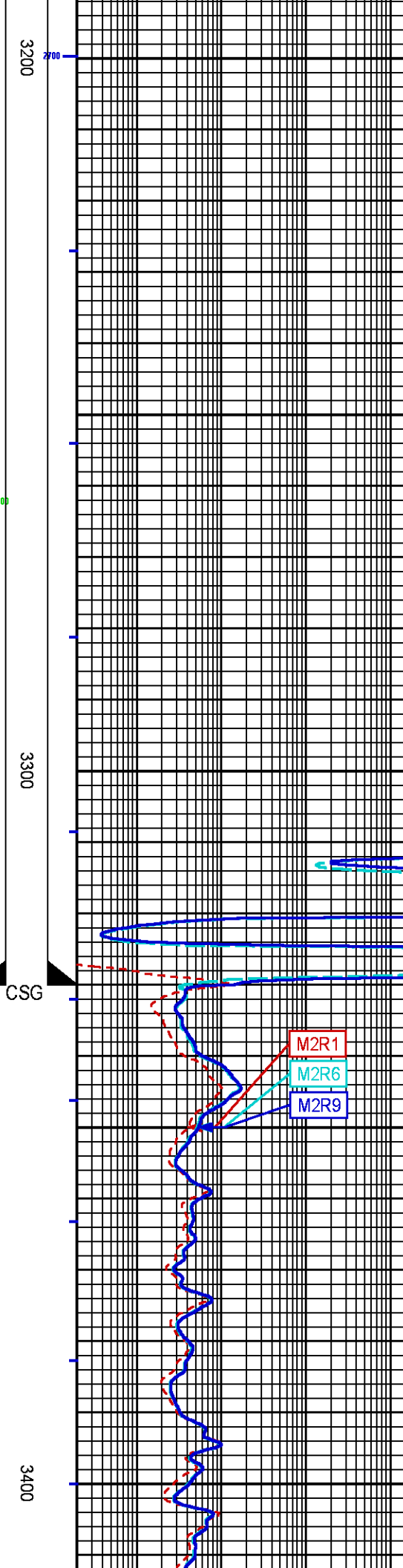
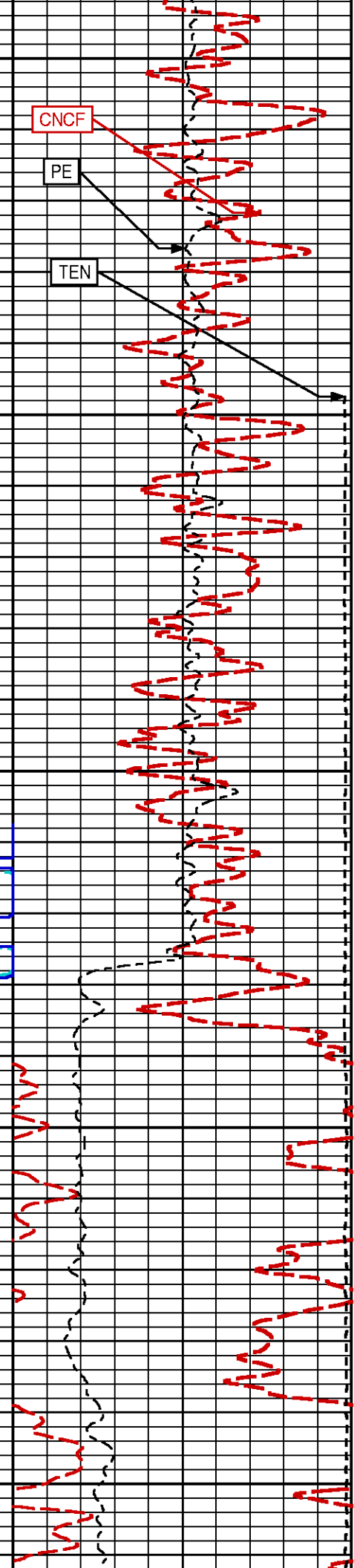
4/11/11

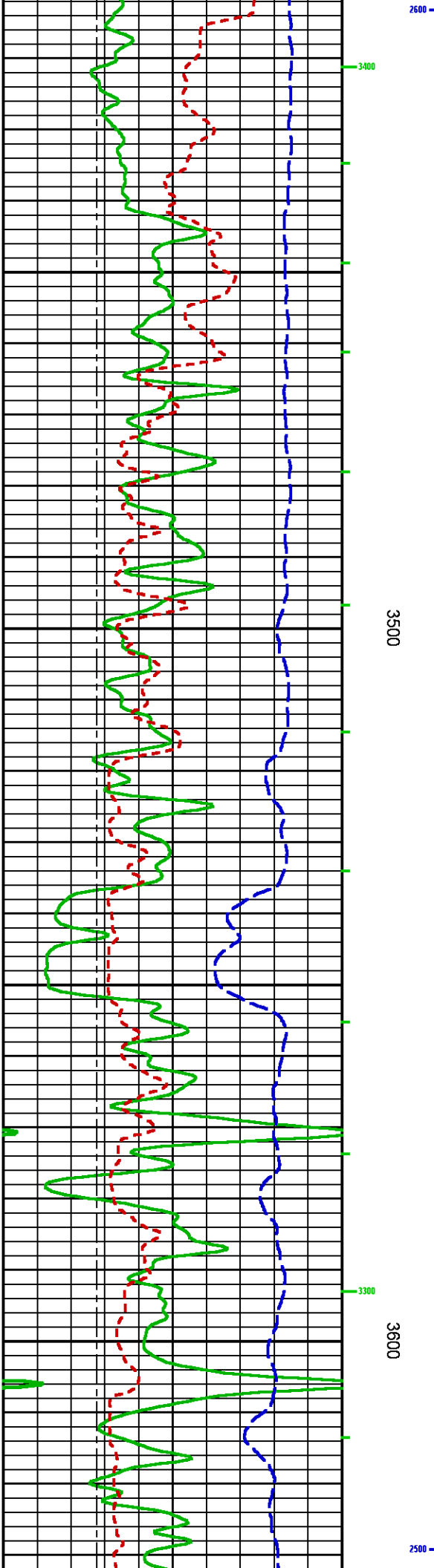
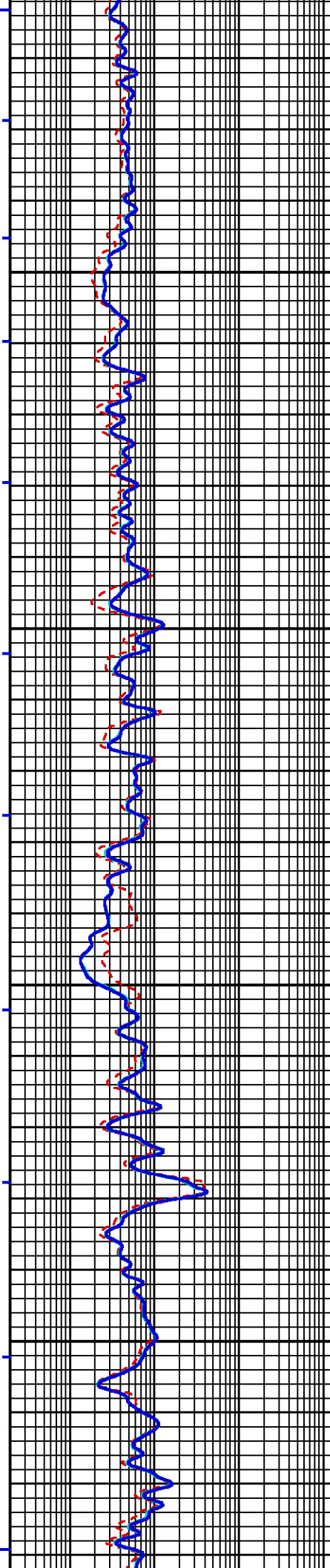
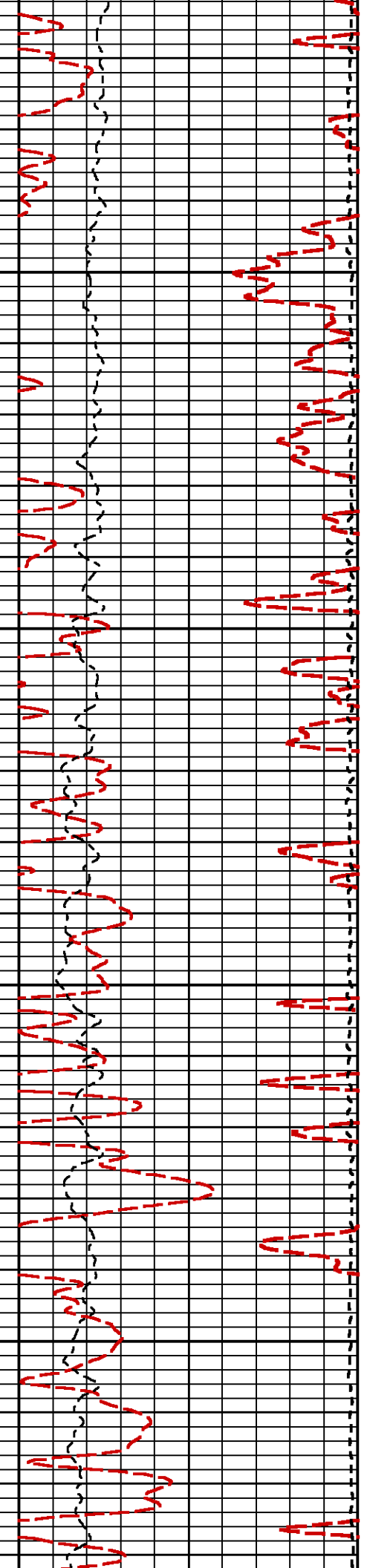


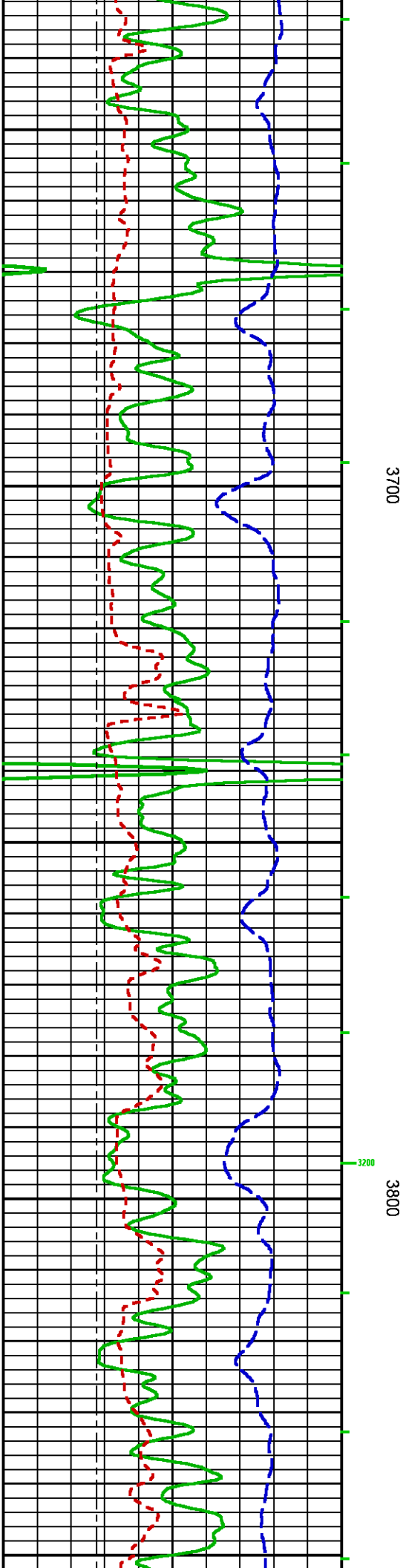
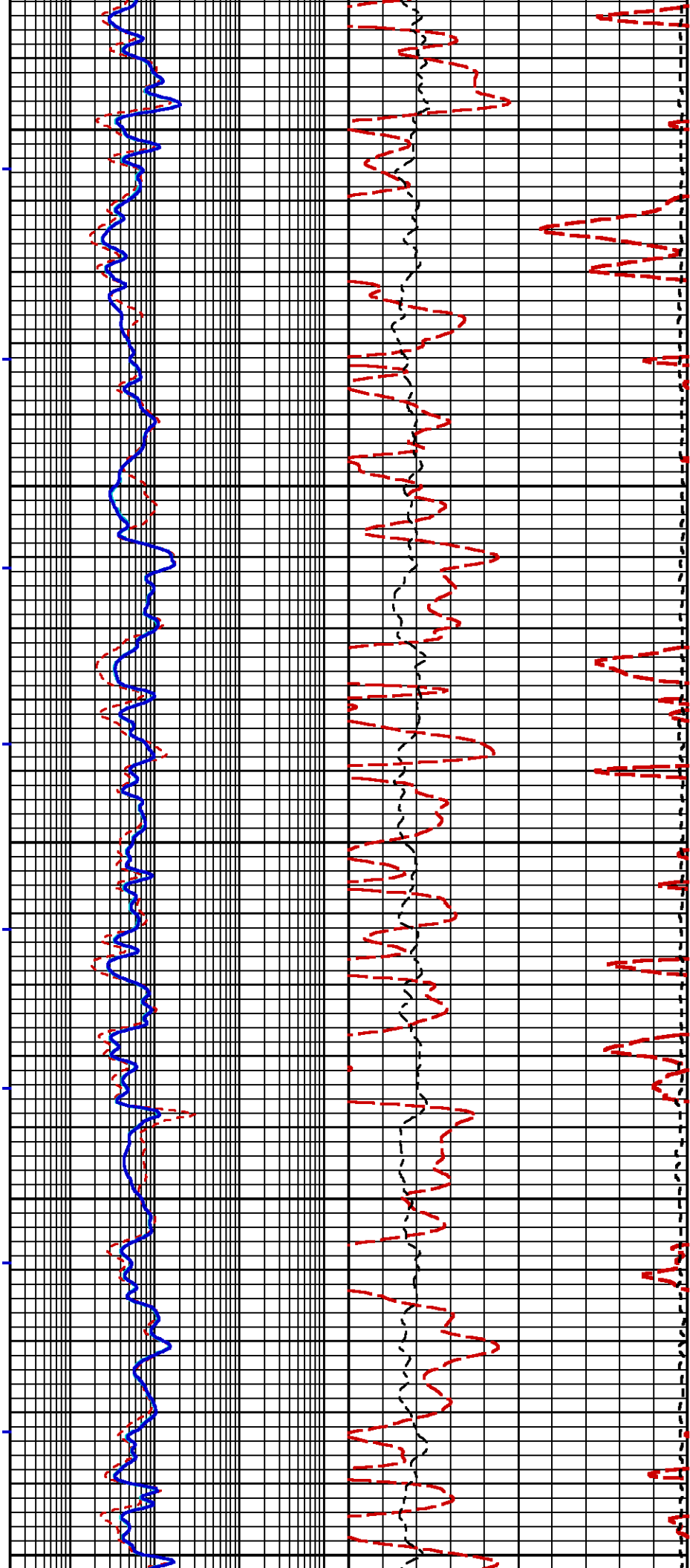
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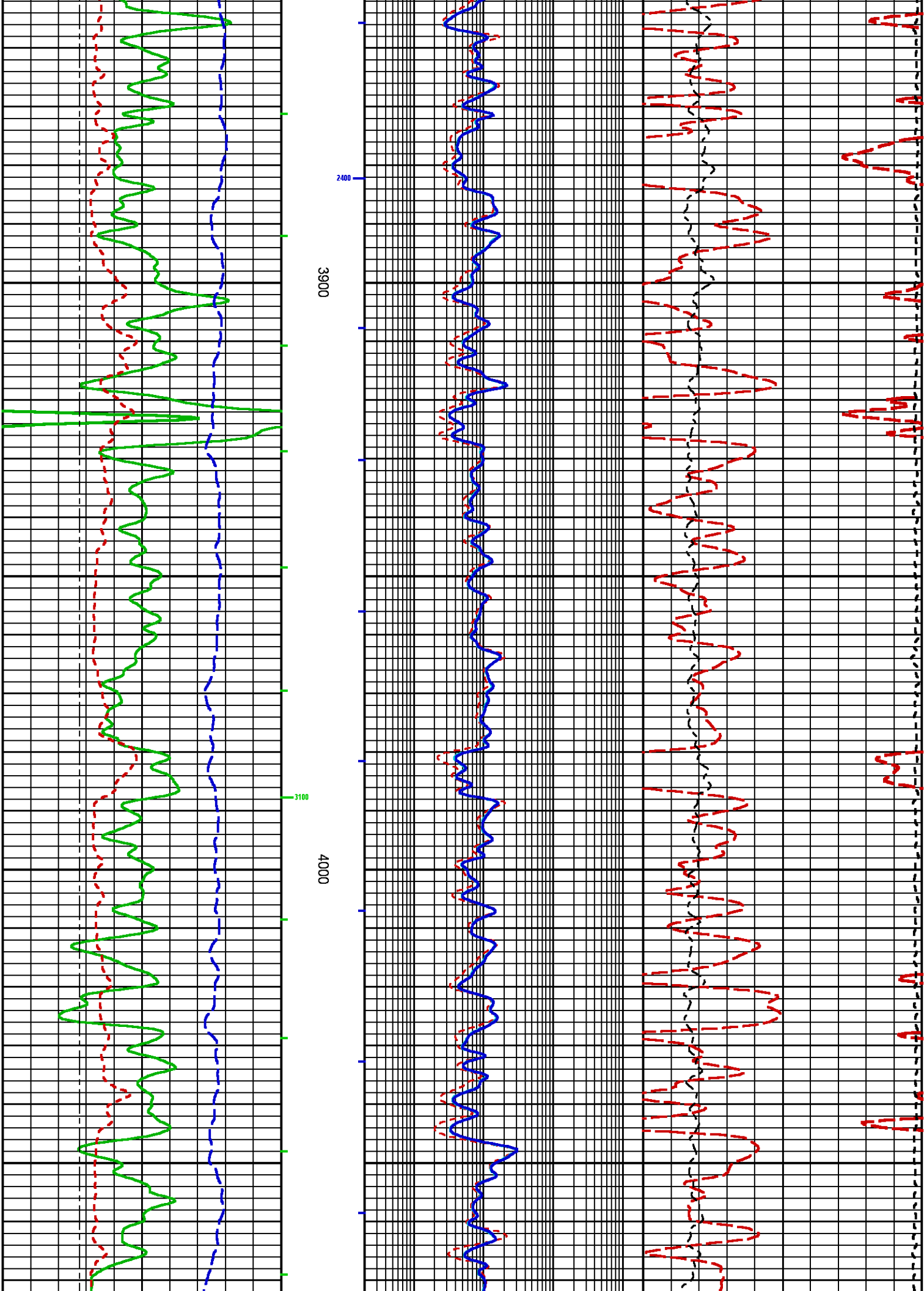
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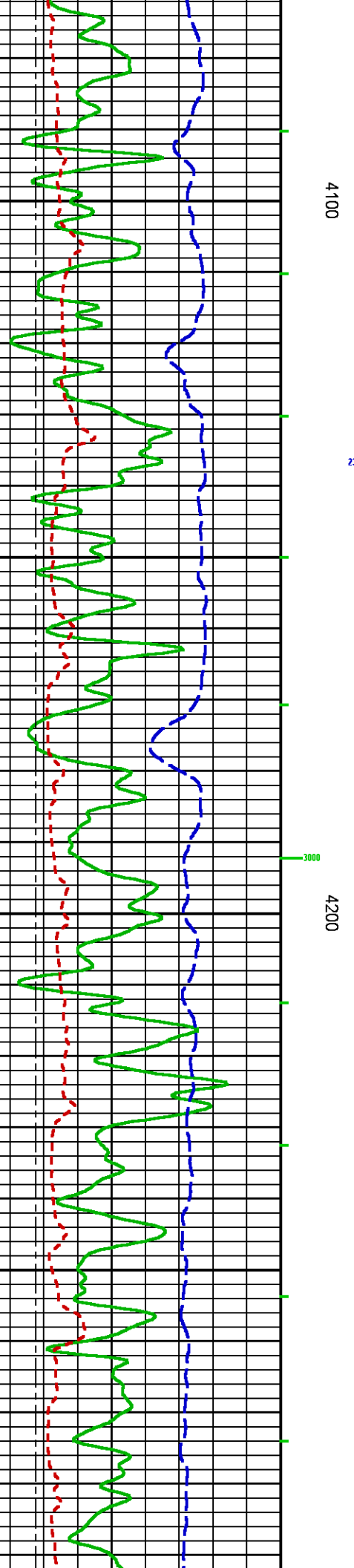
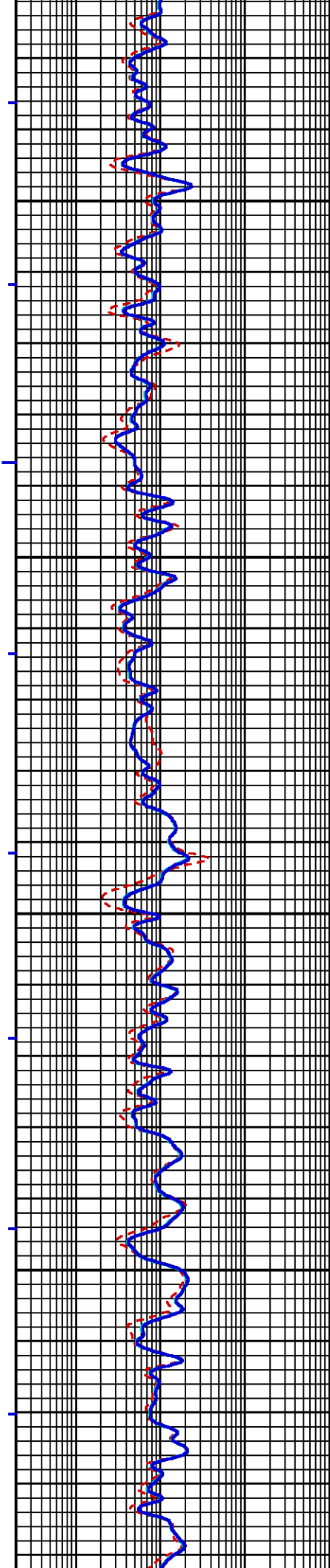
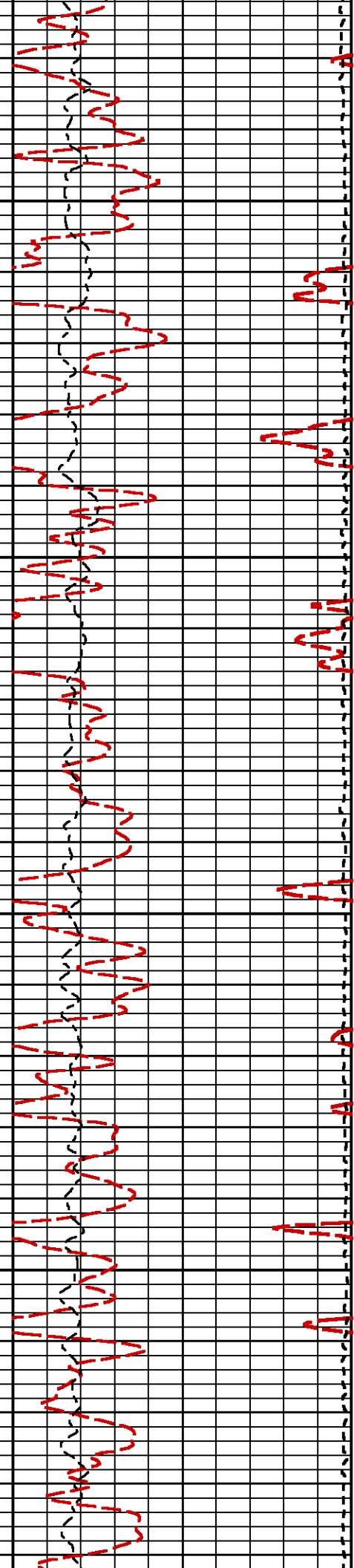


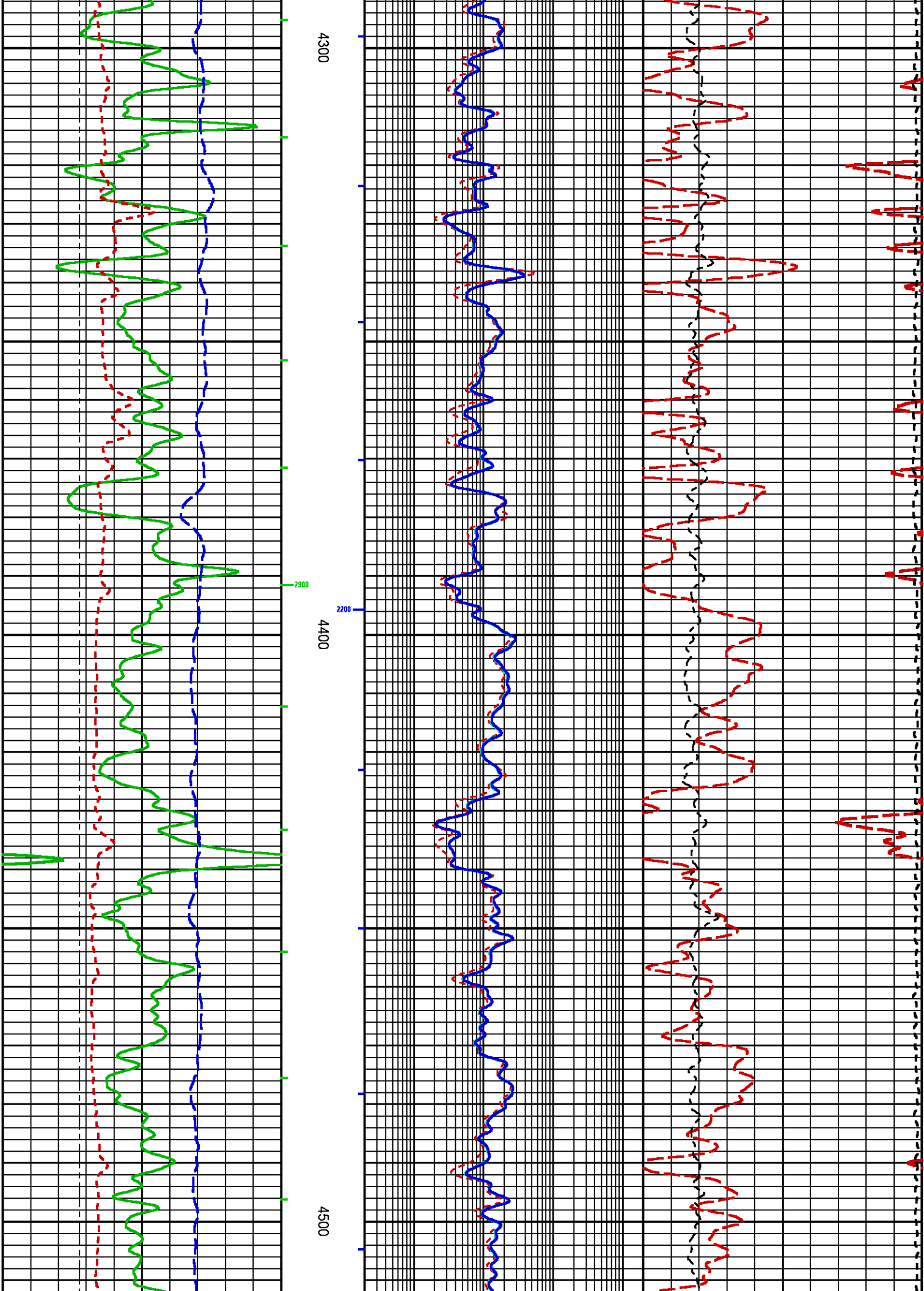


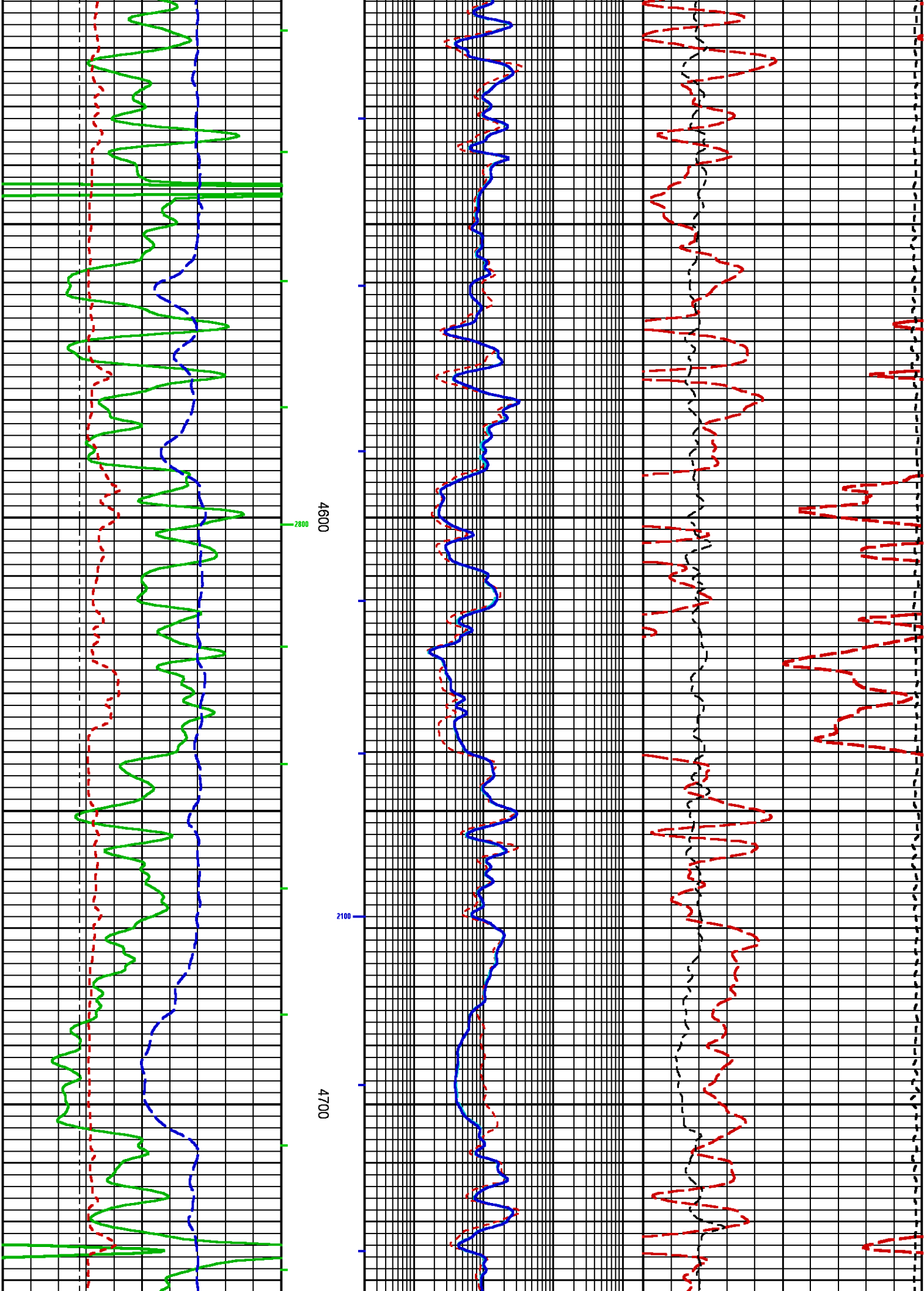


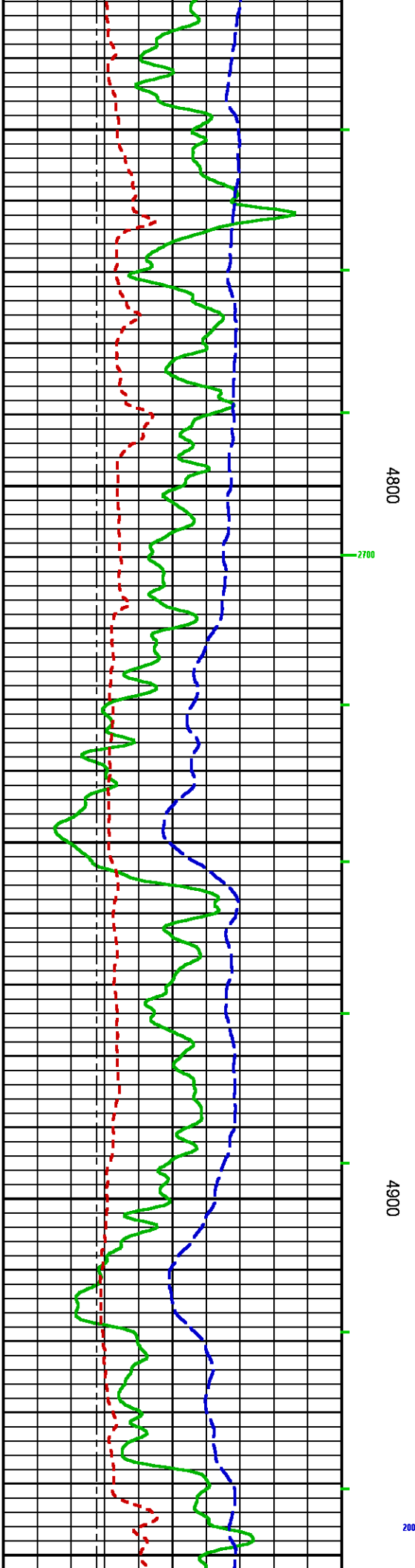
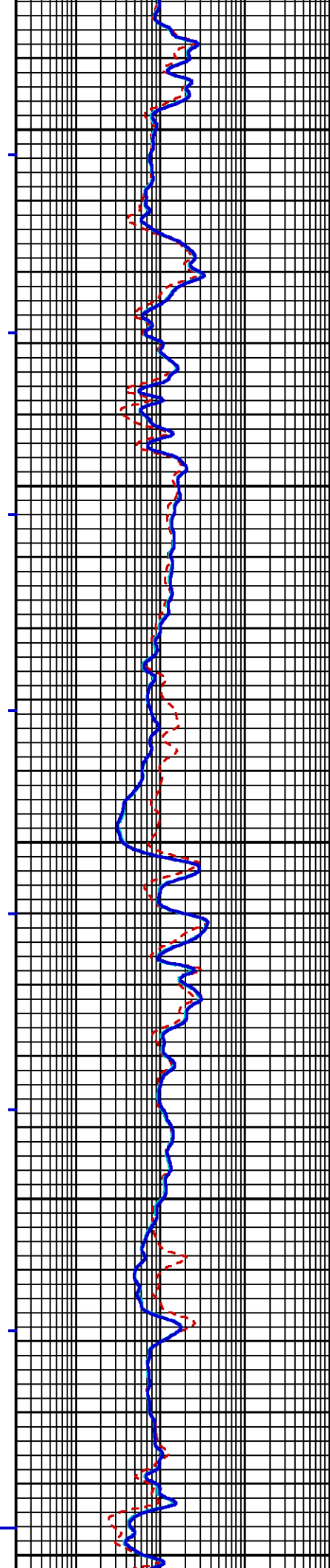
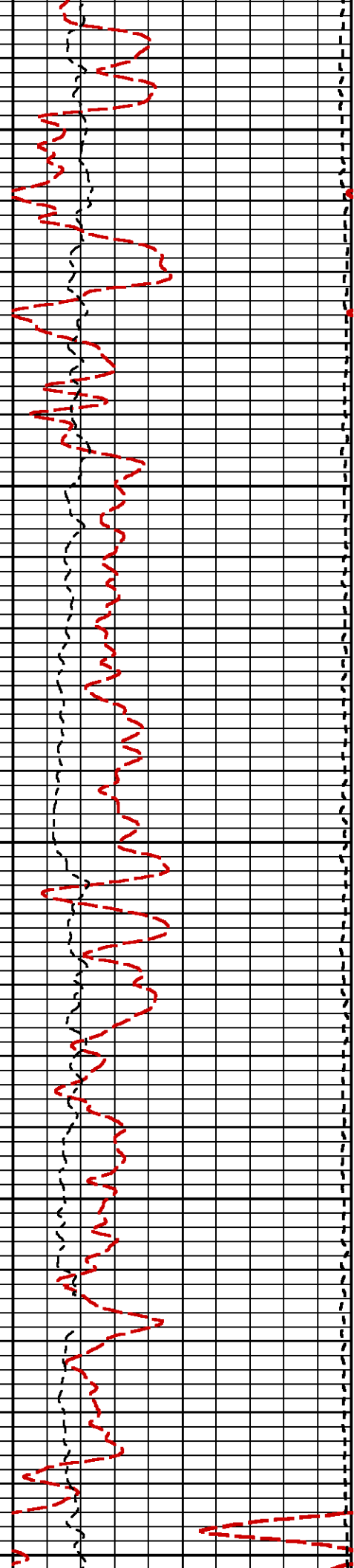


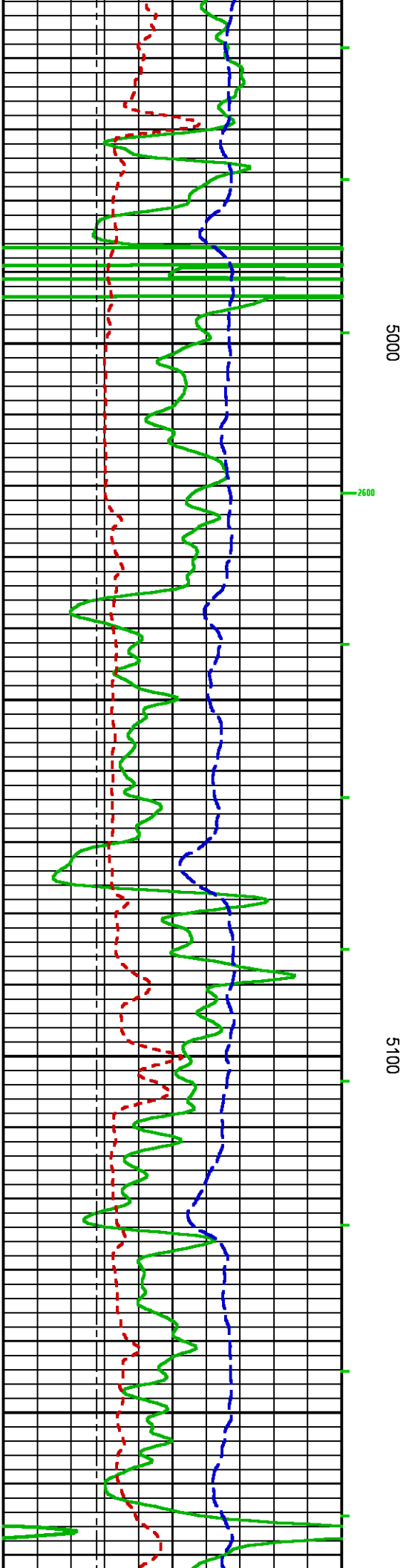
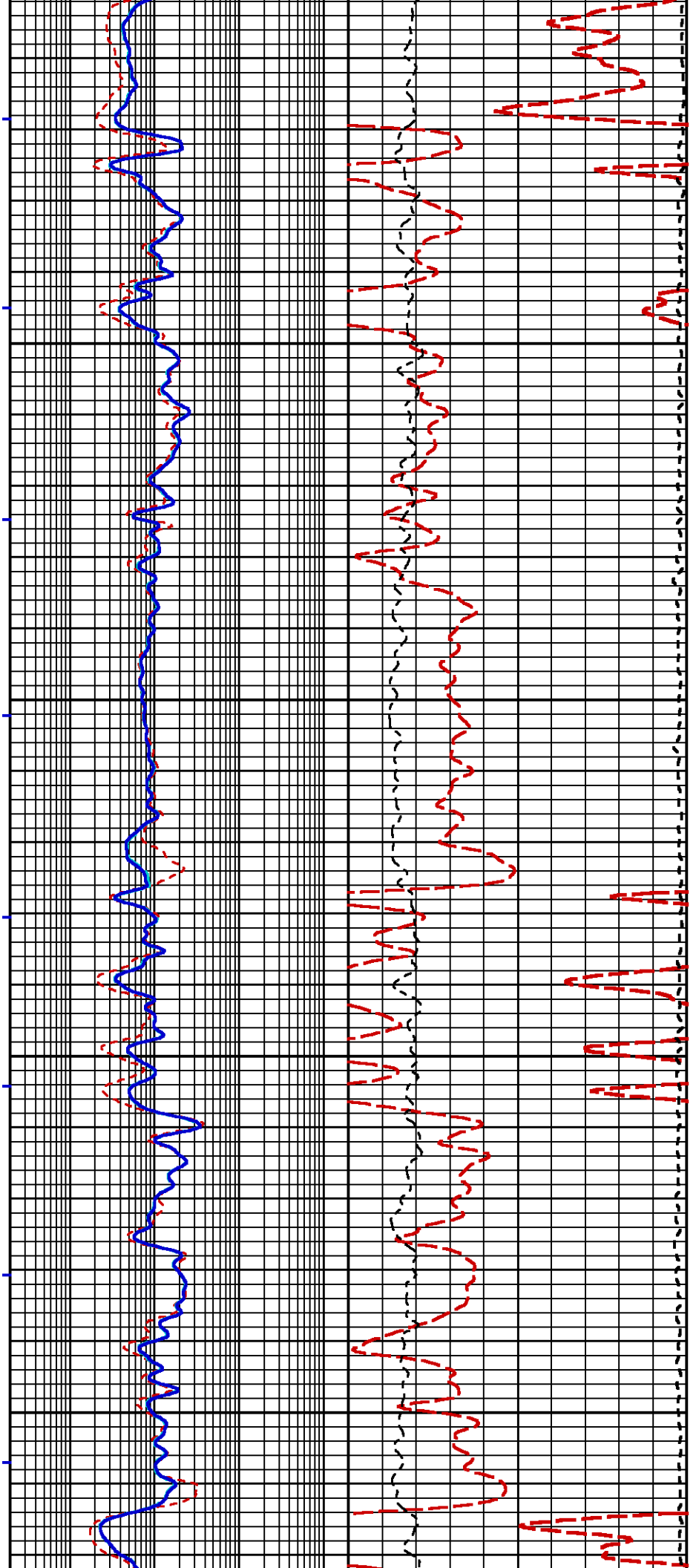


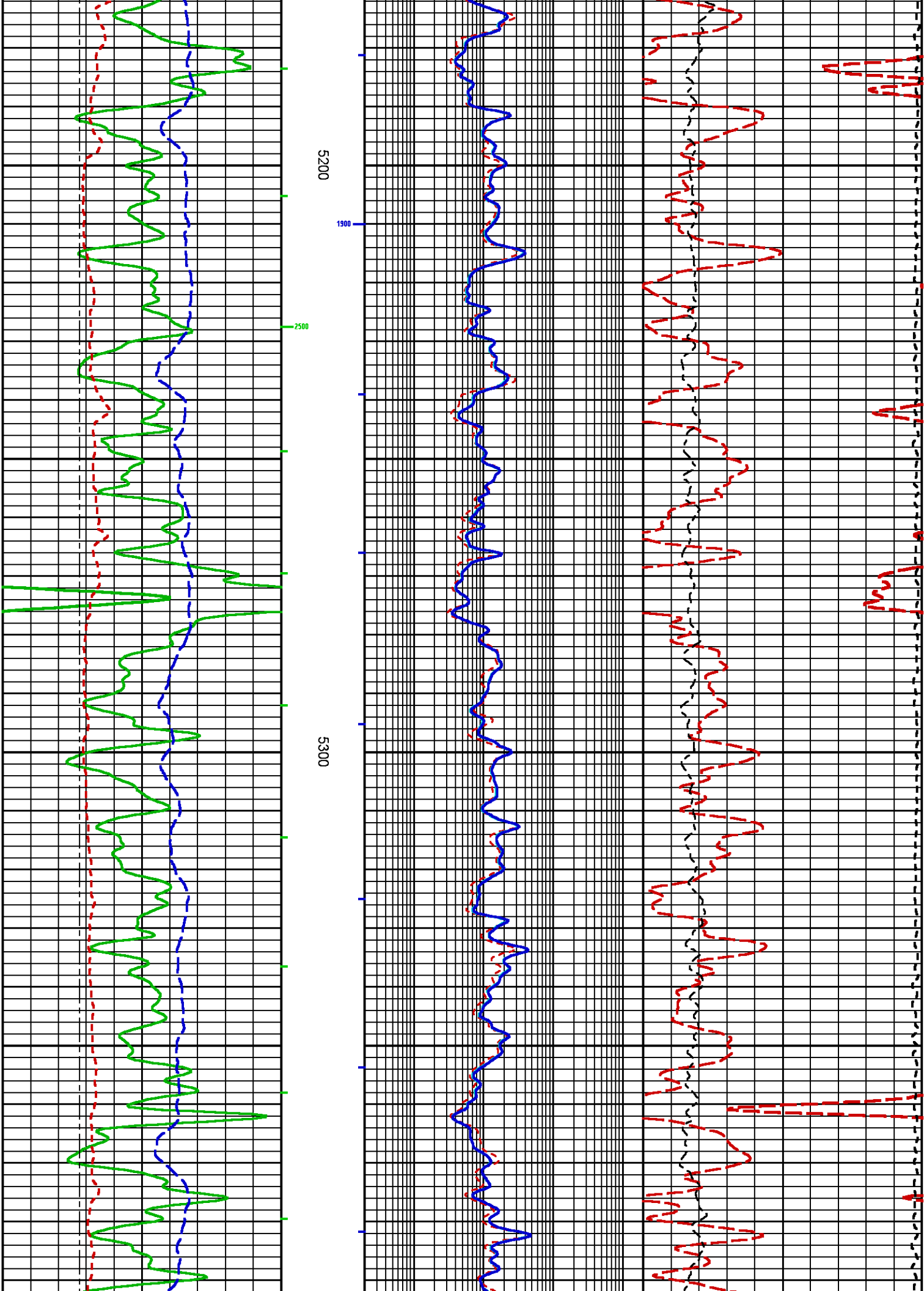


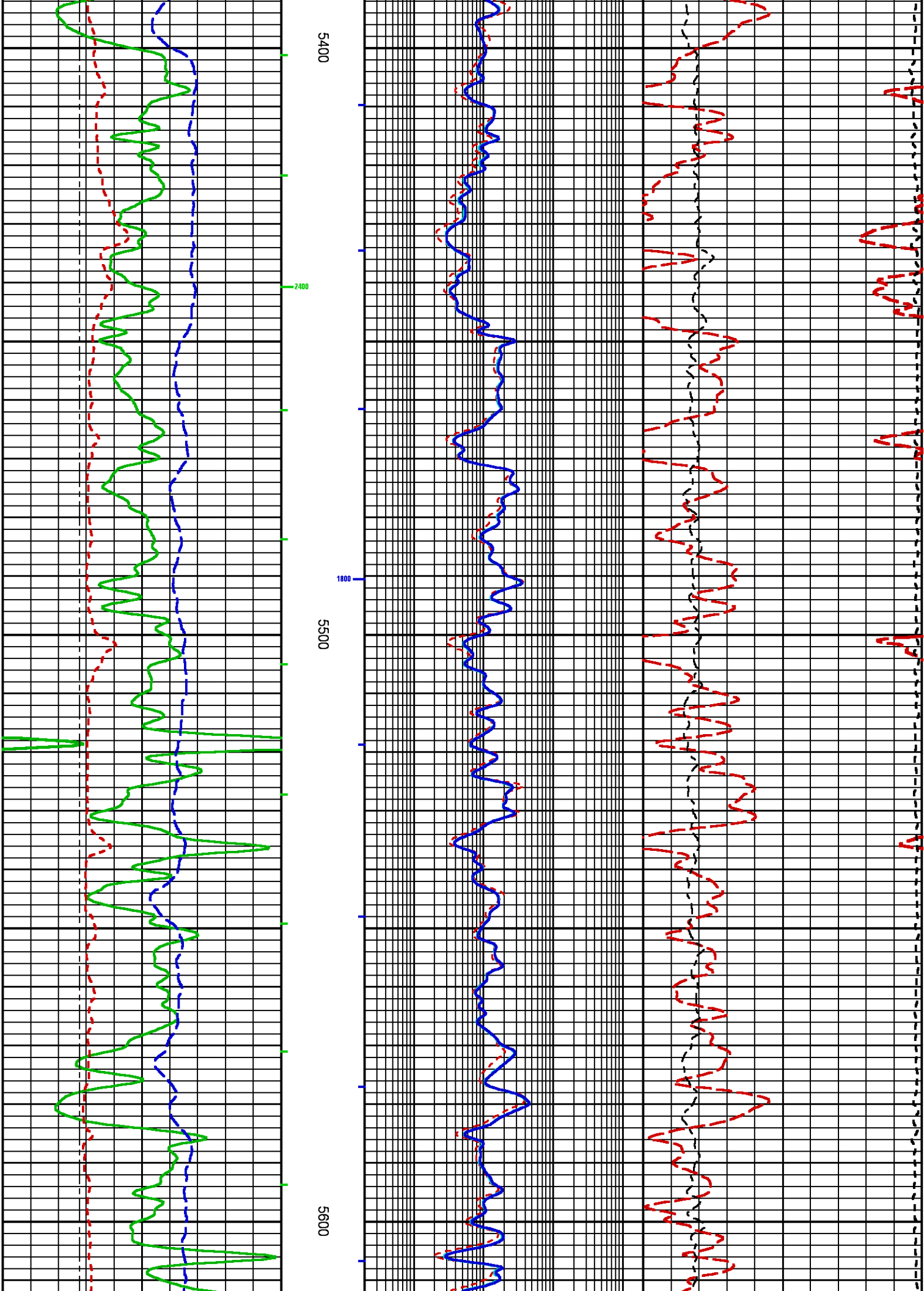


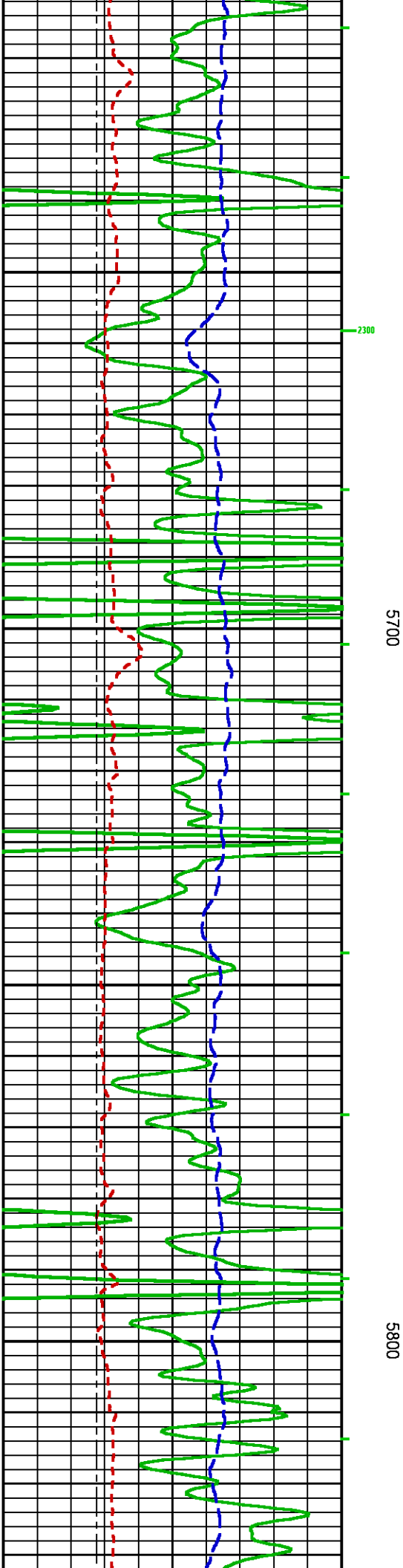
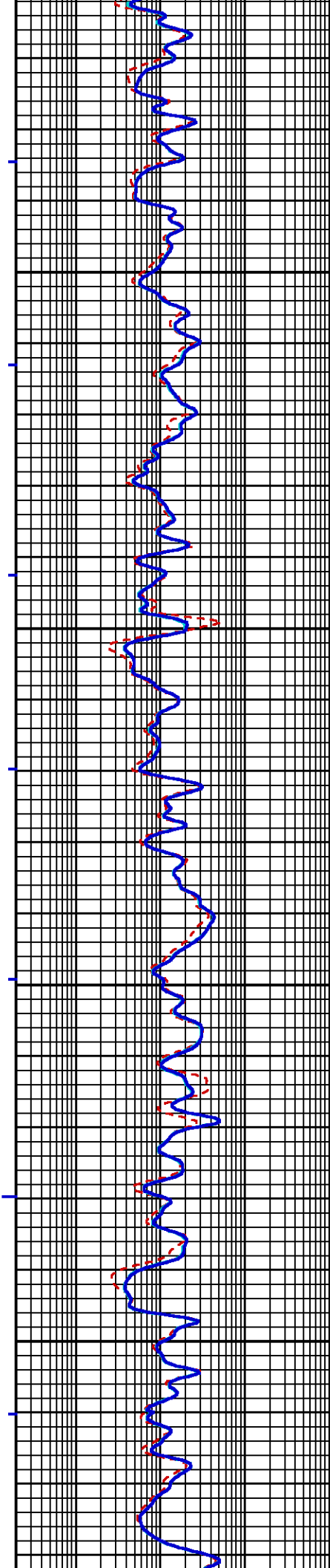
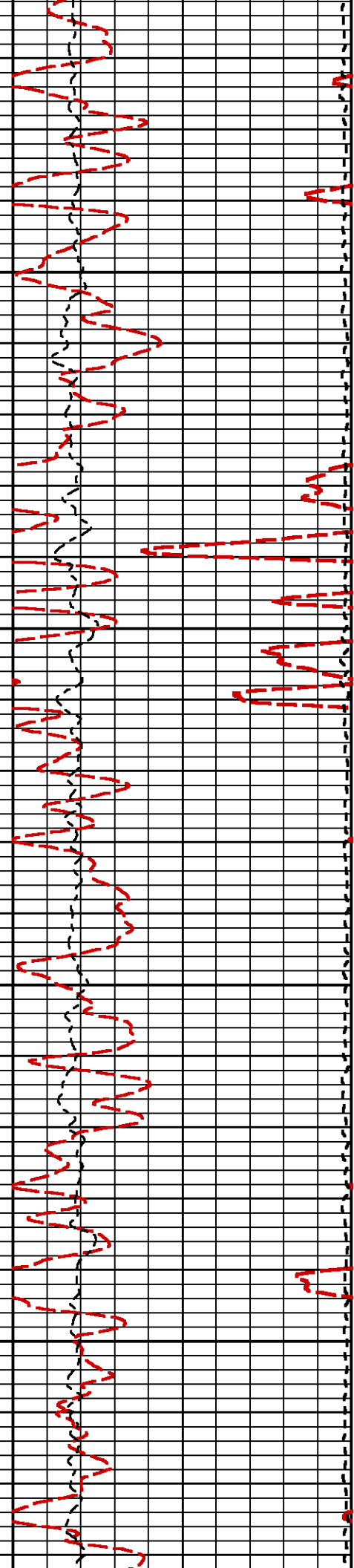


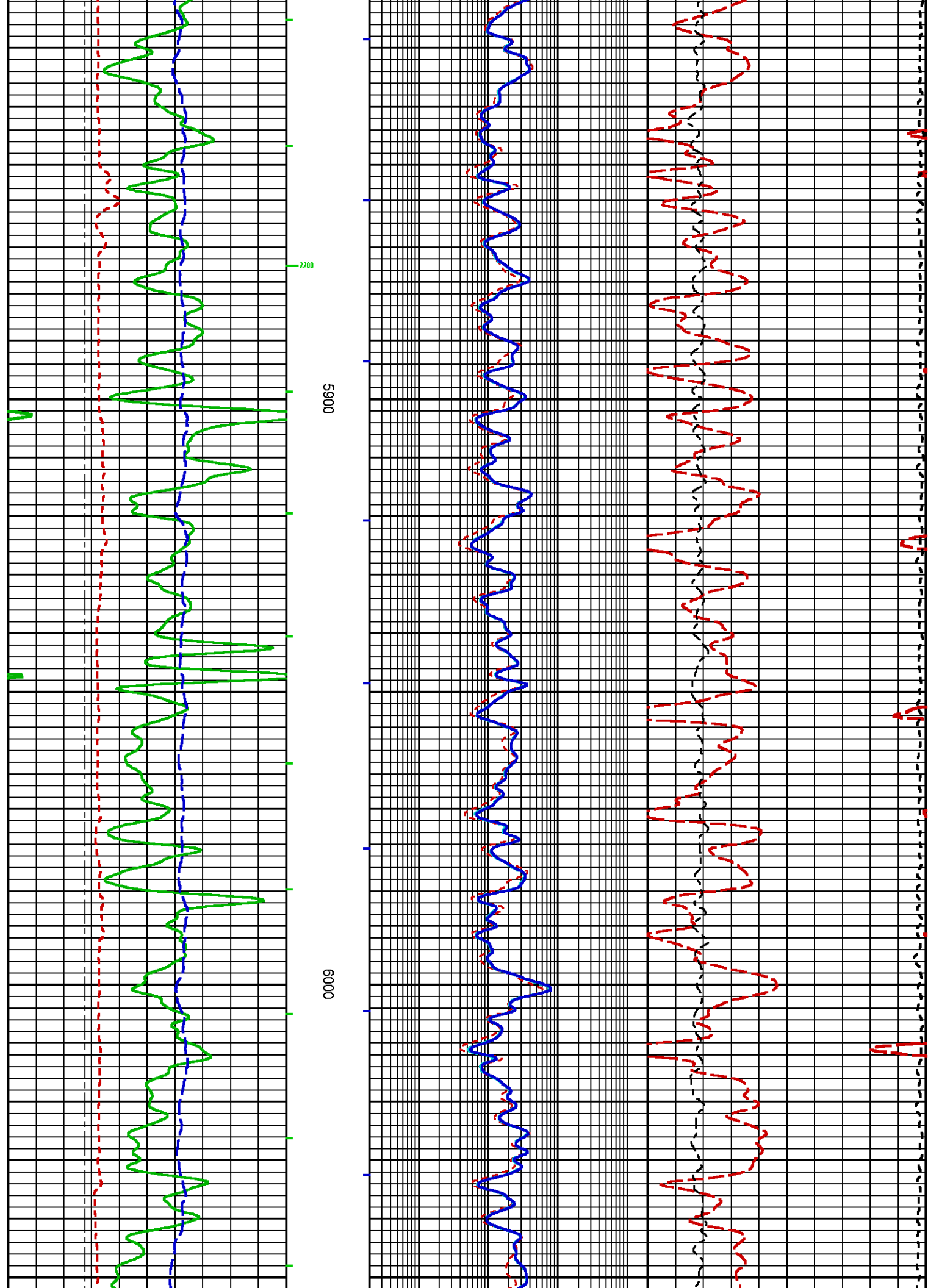


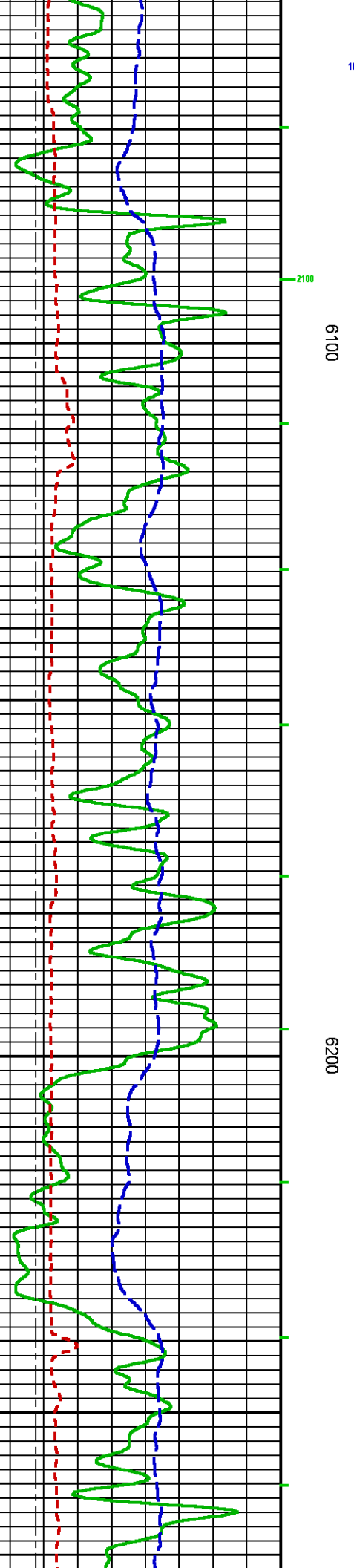
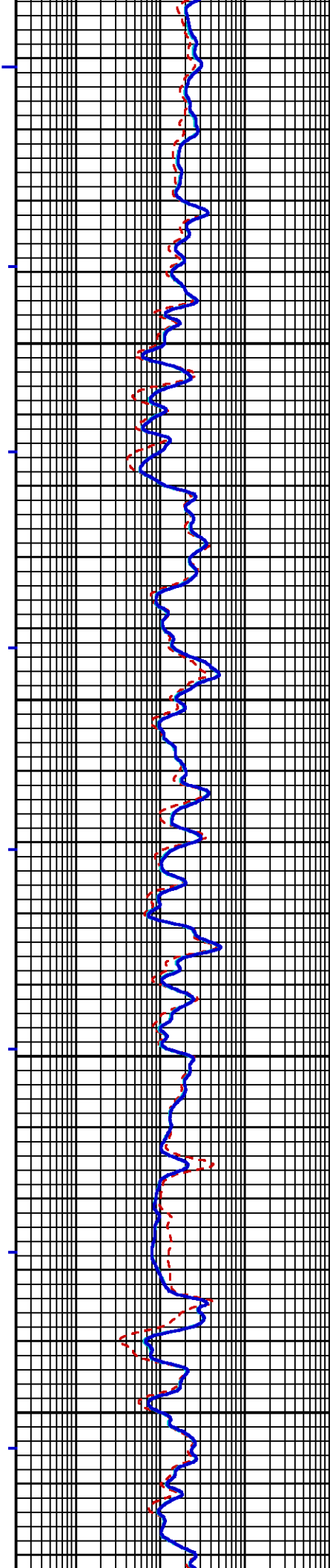
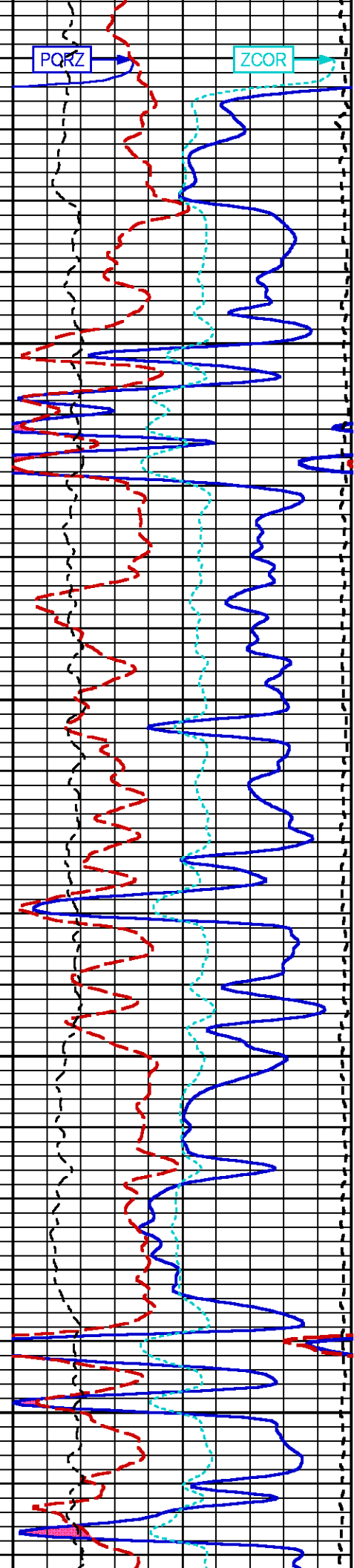


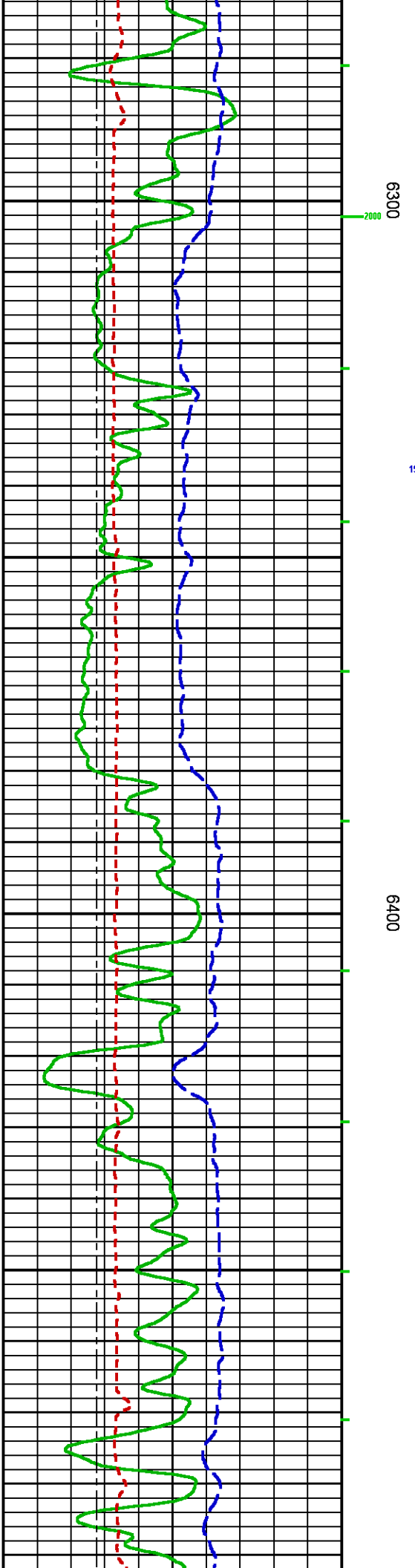
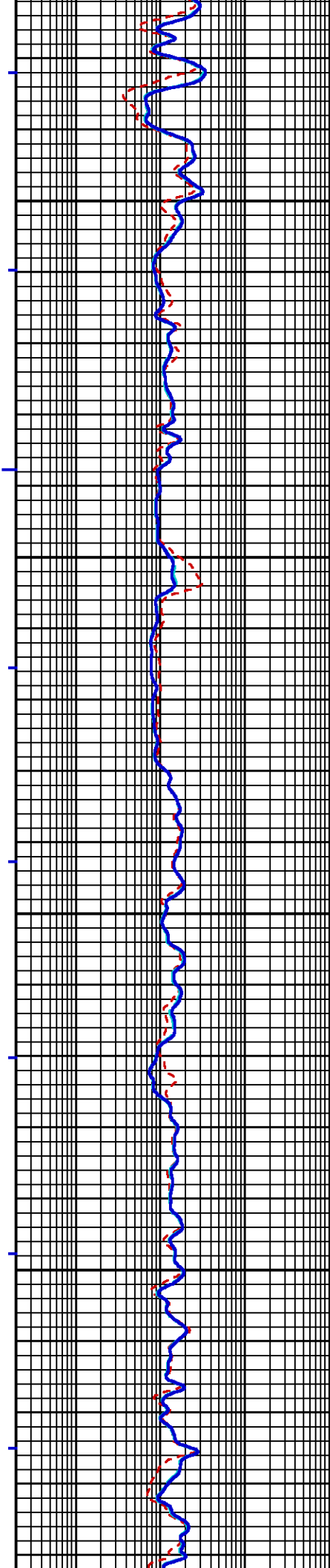
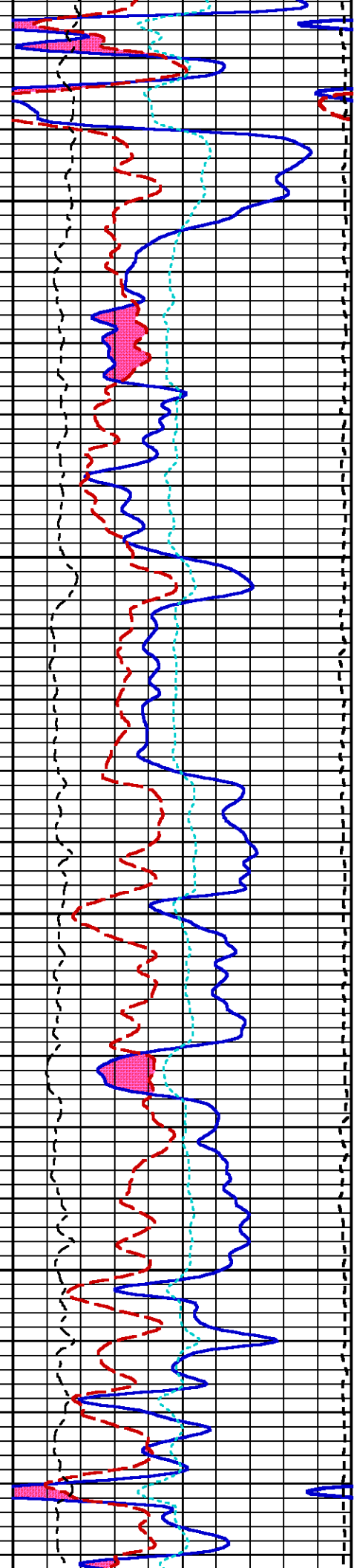


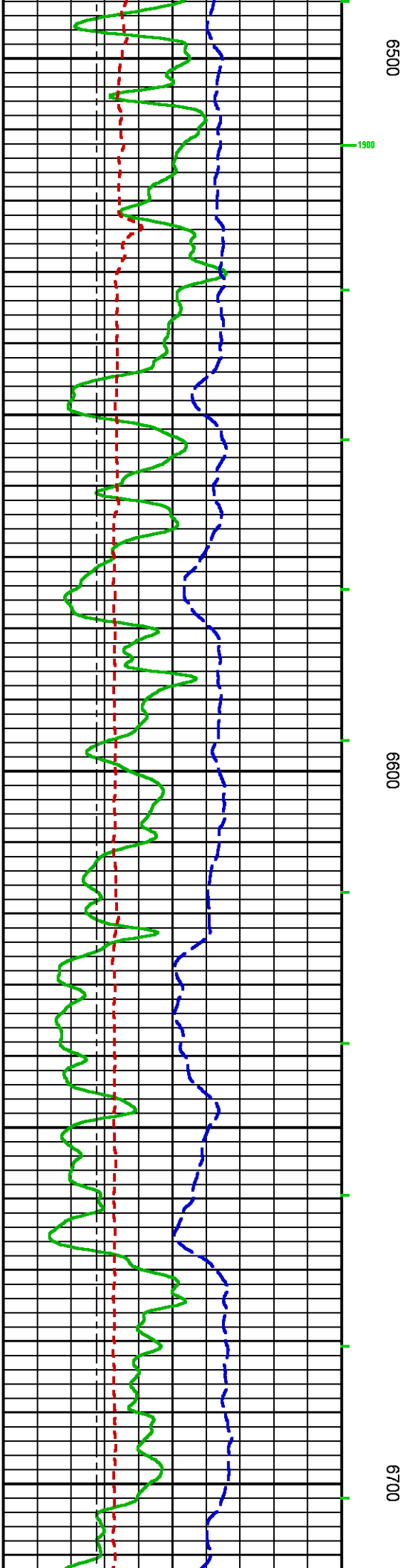
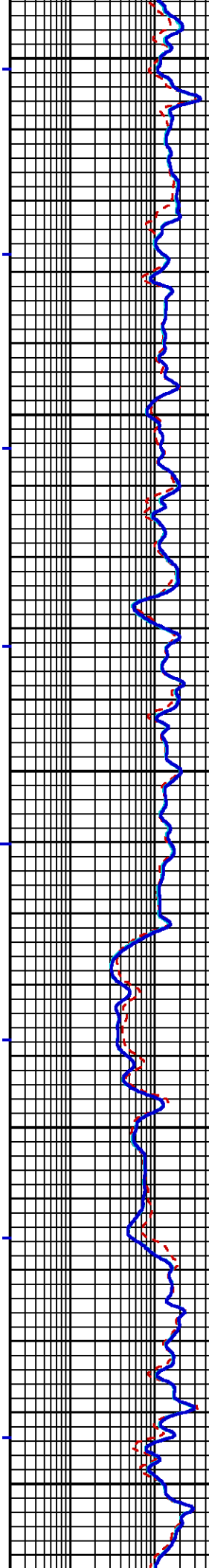
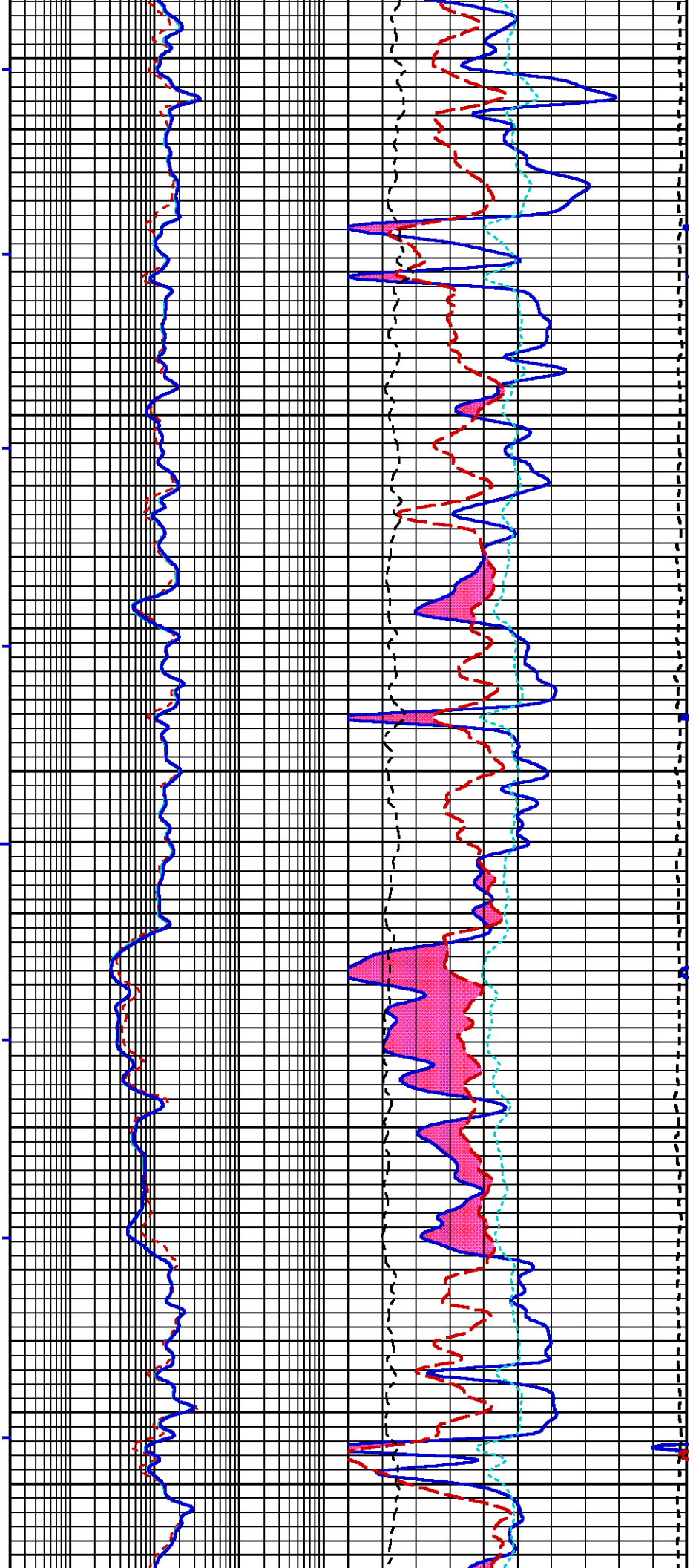


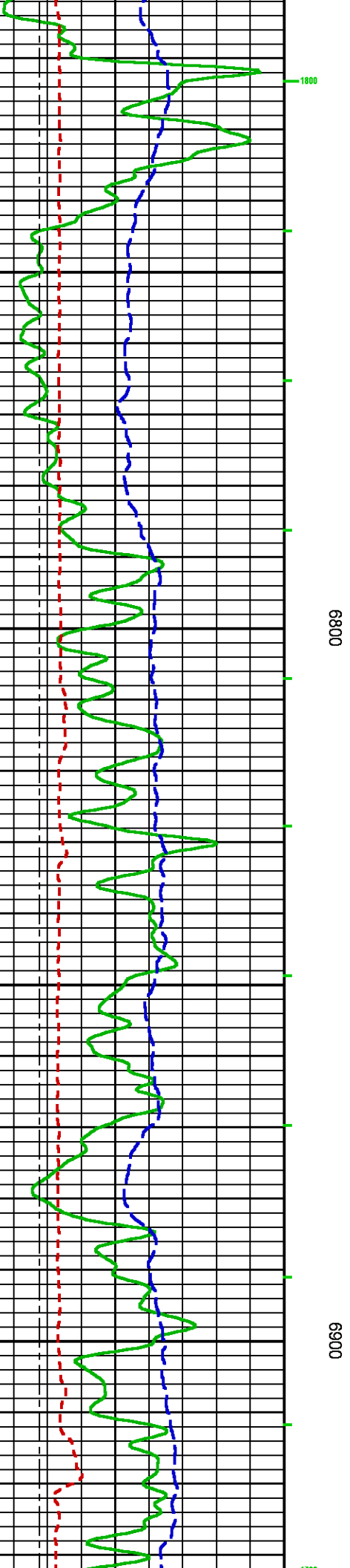
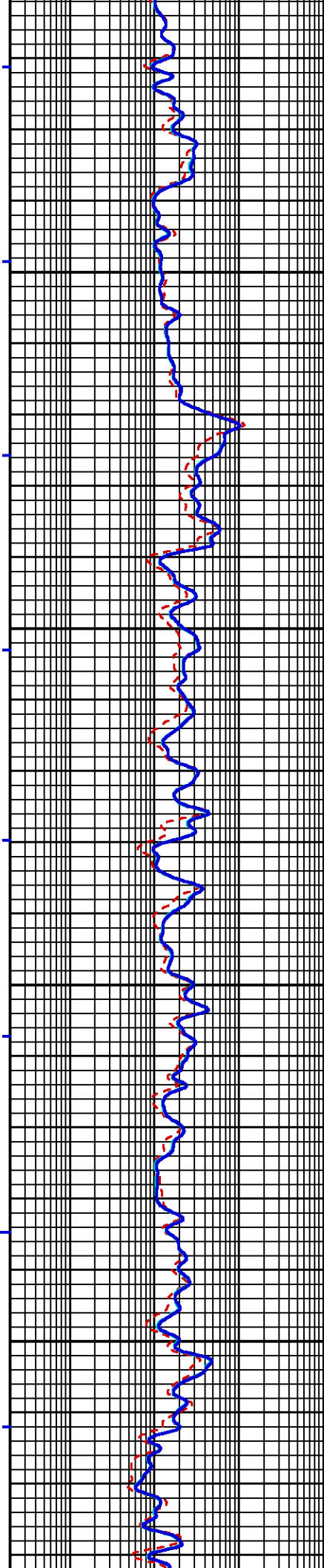
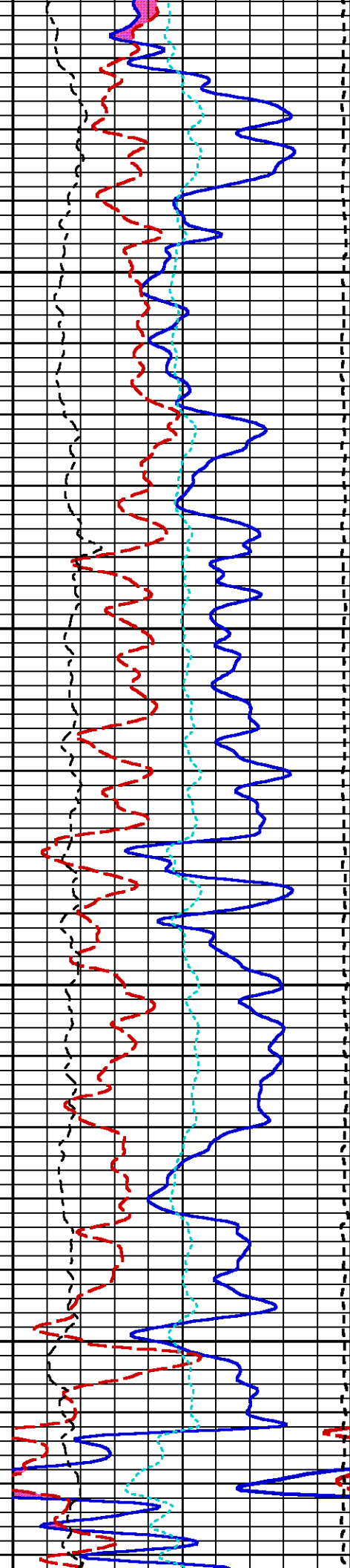


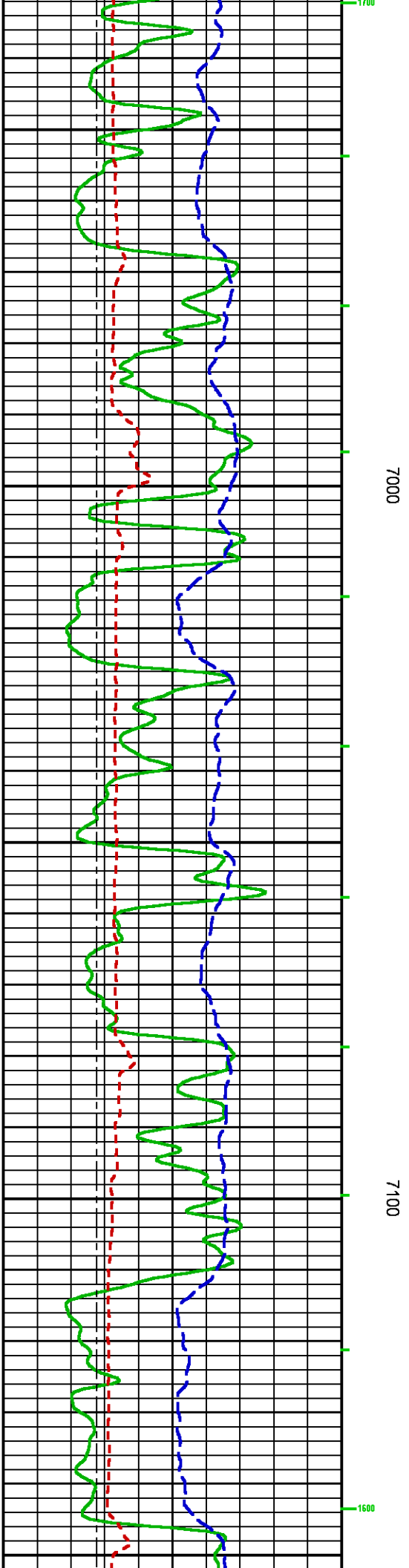
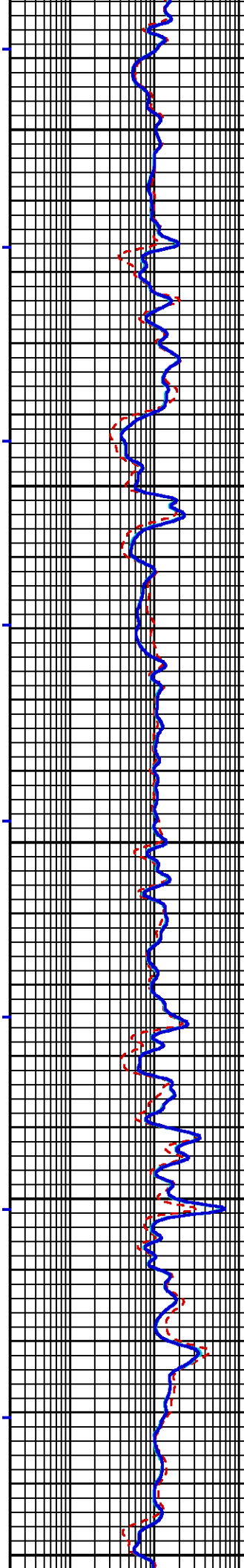
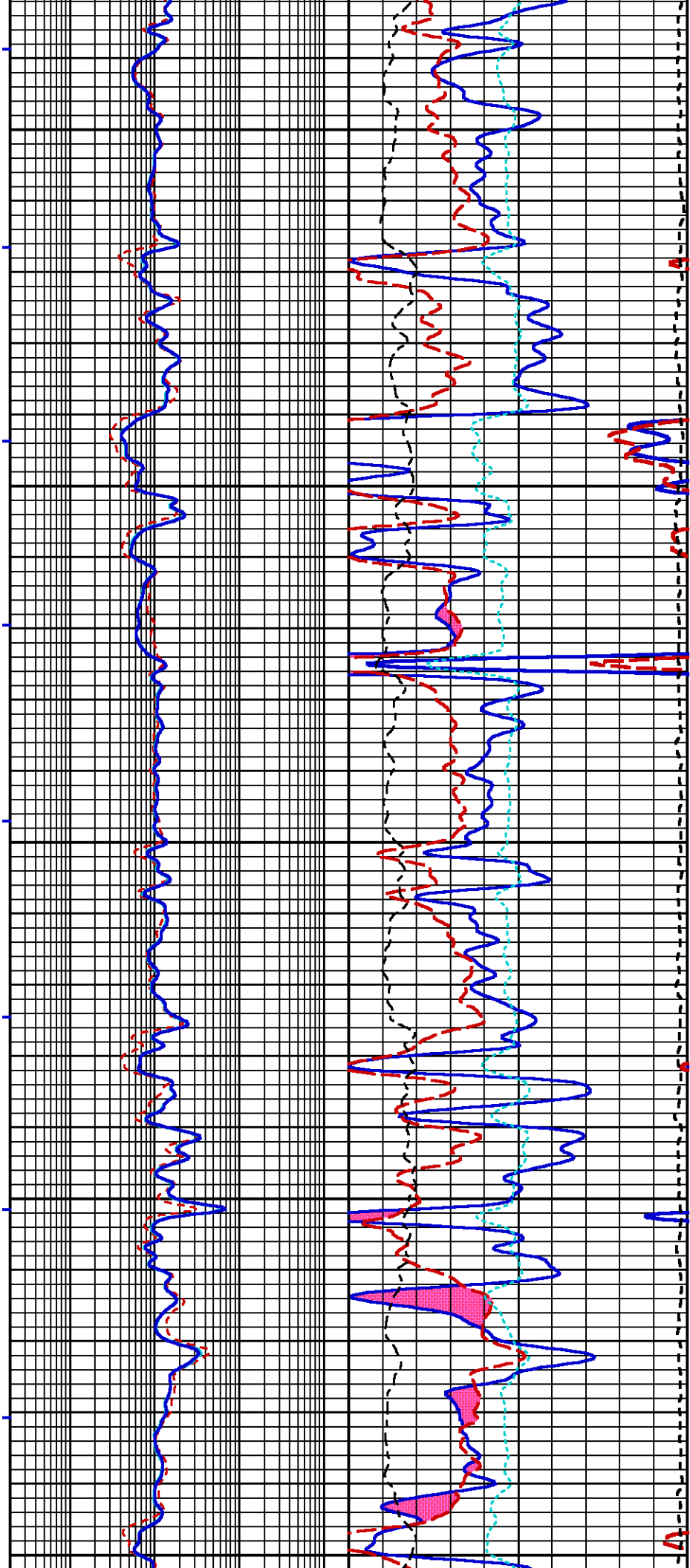


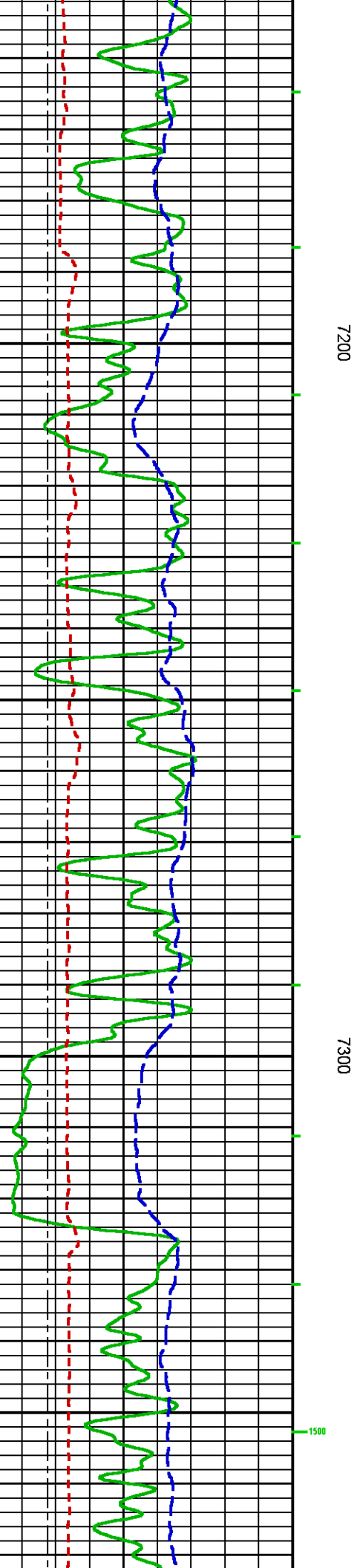
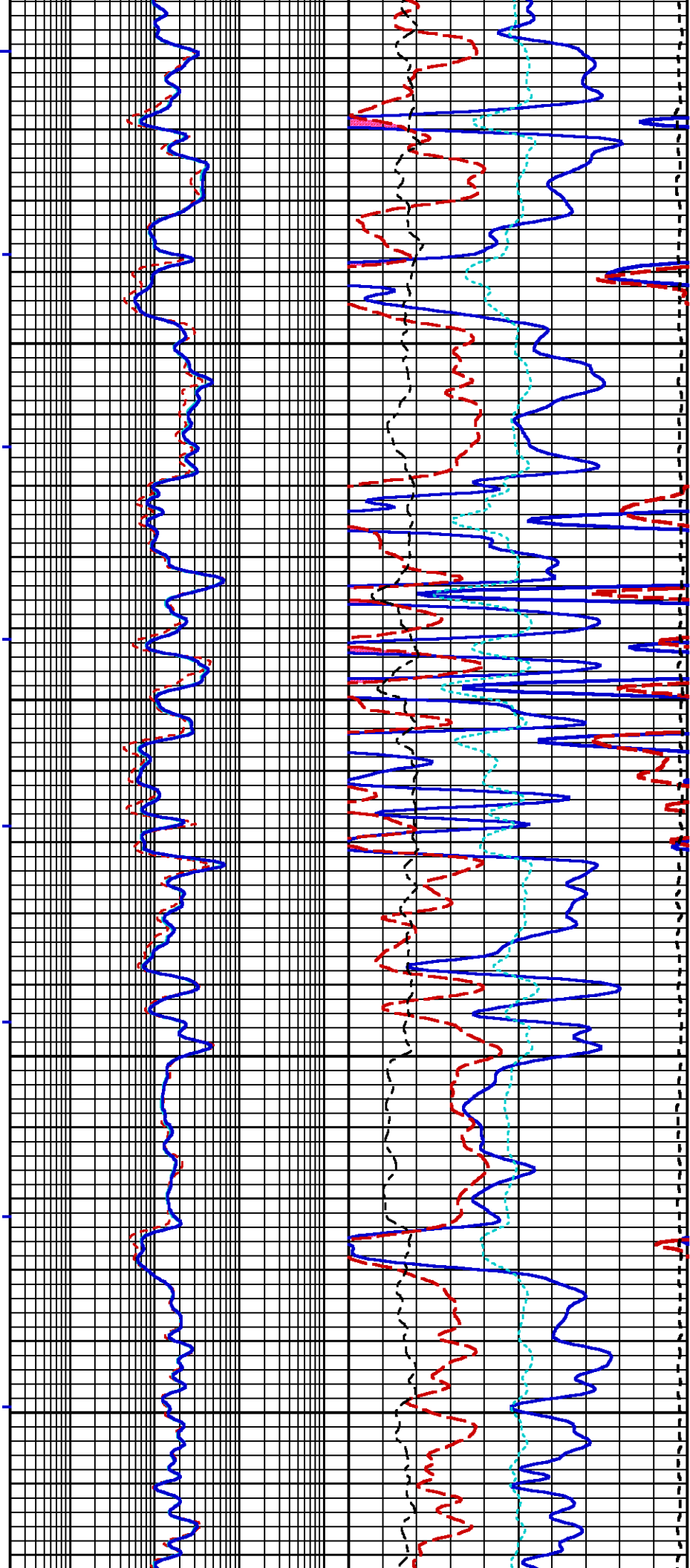


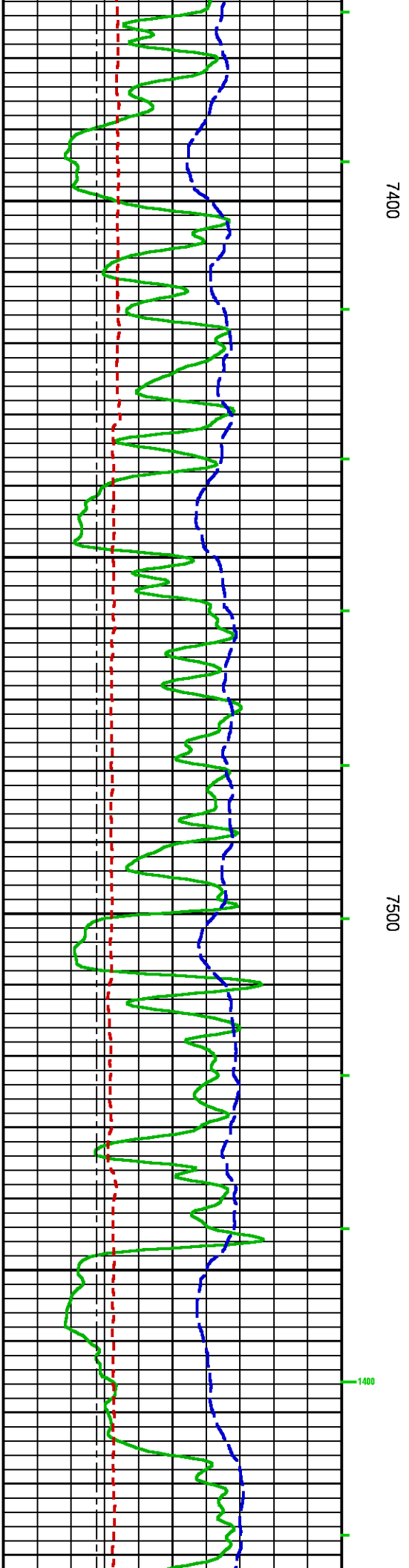
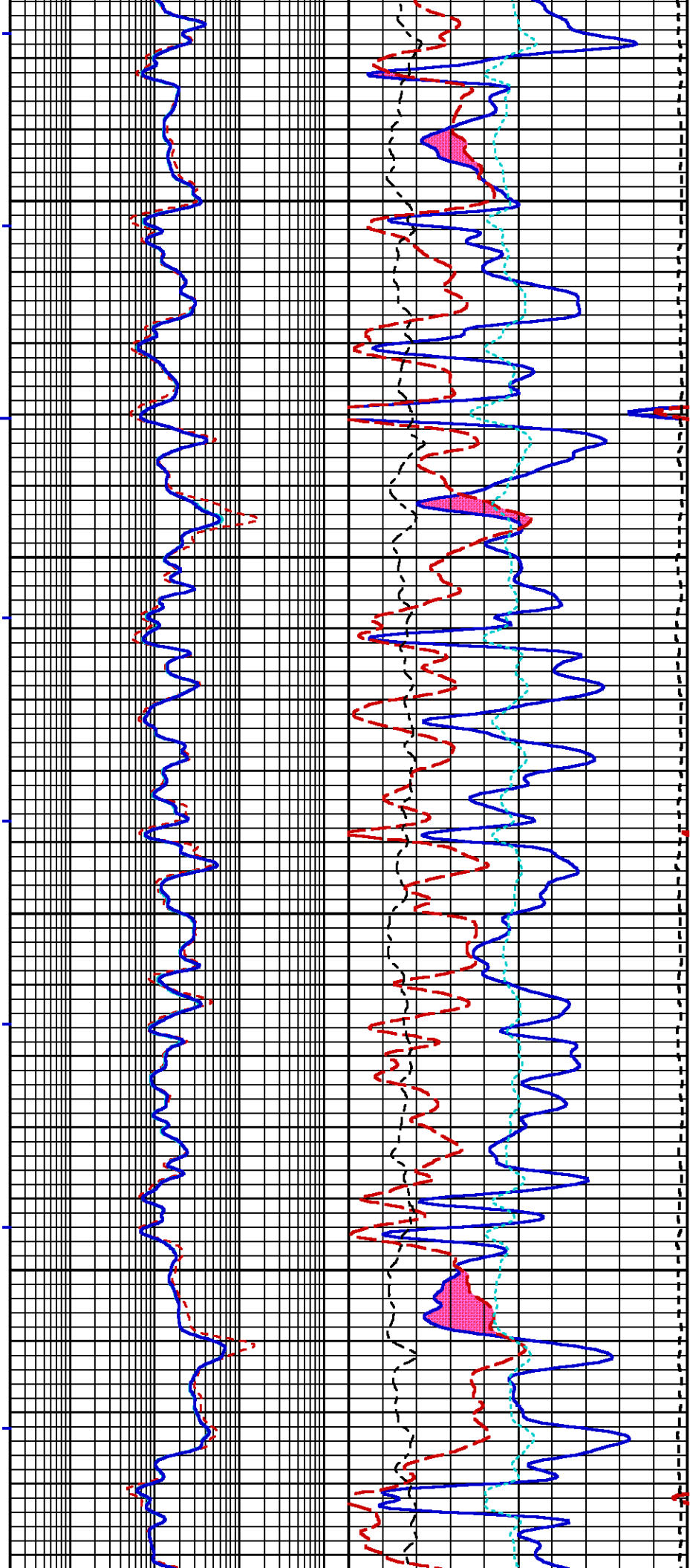


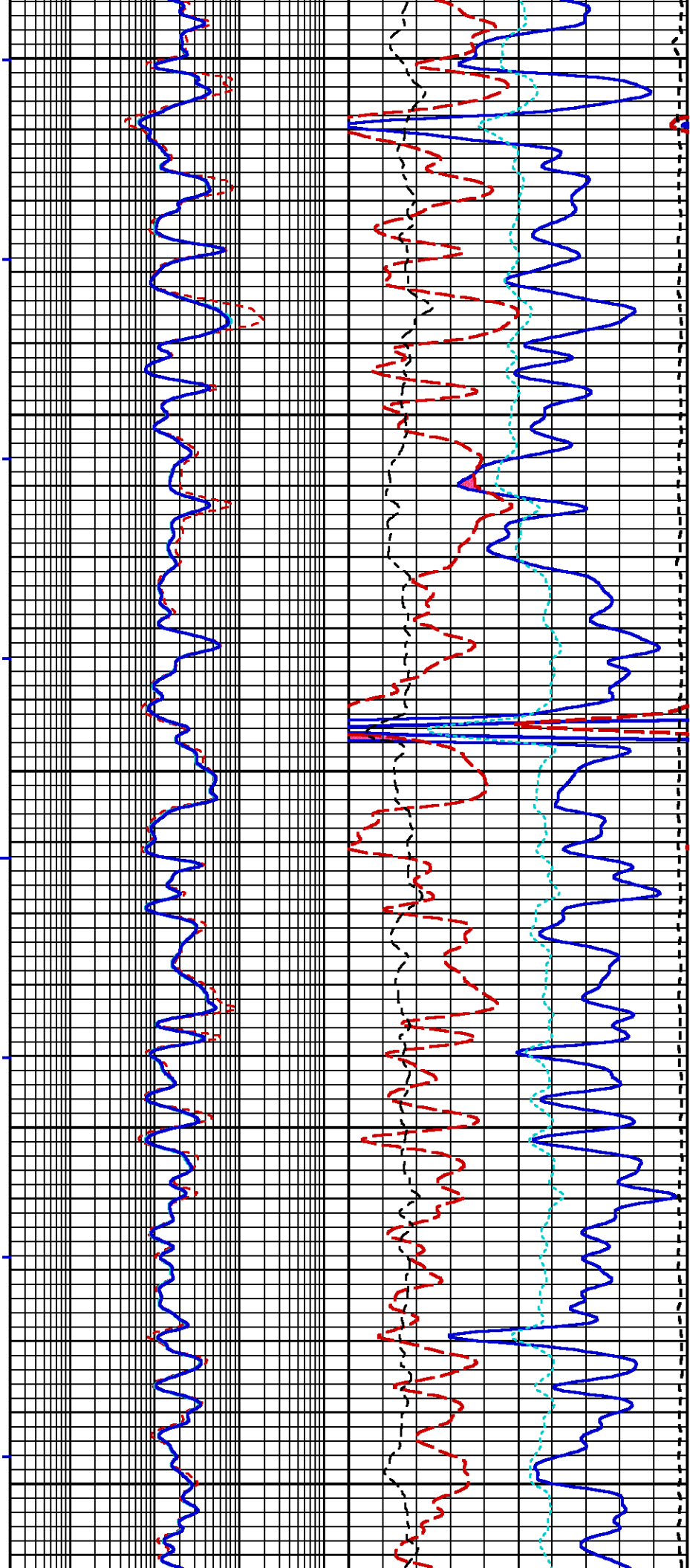












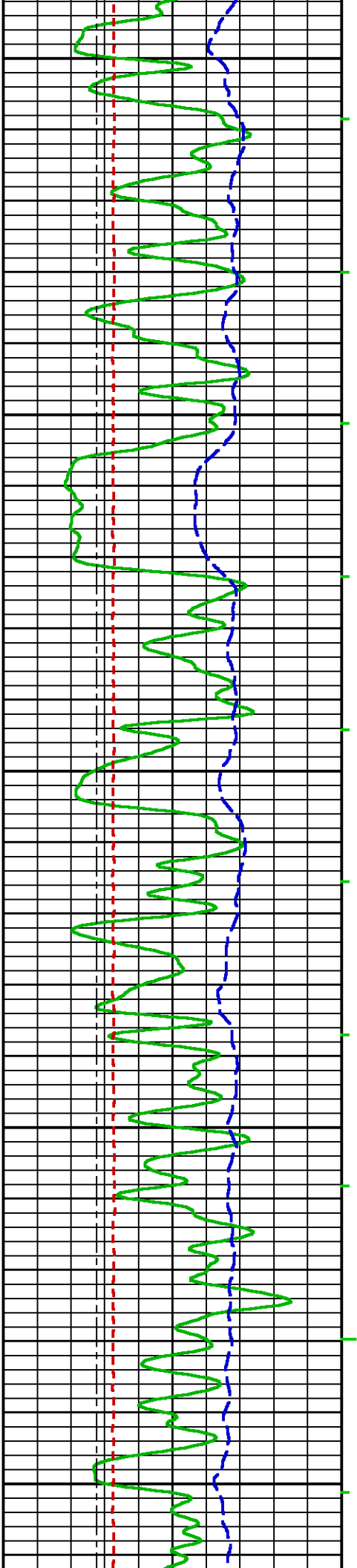
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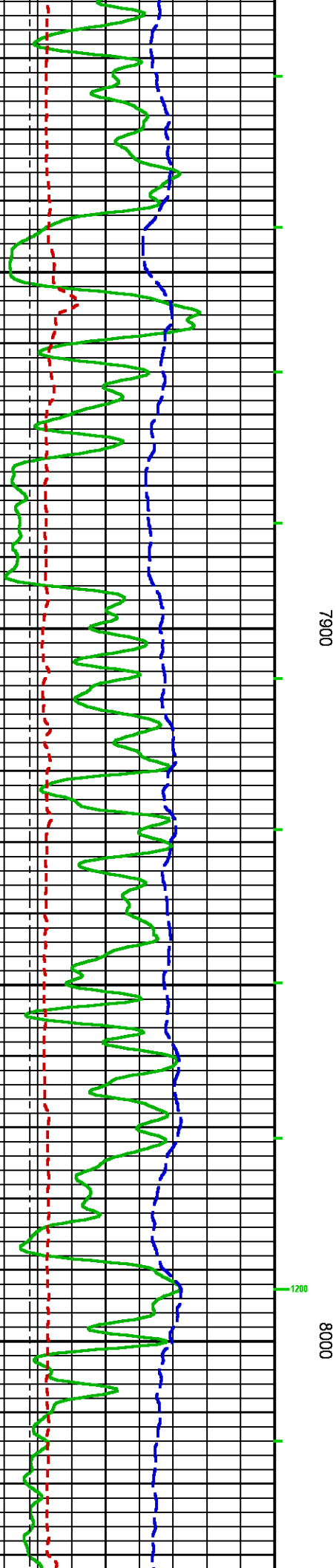
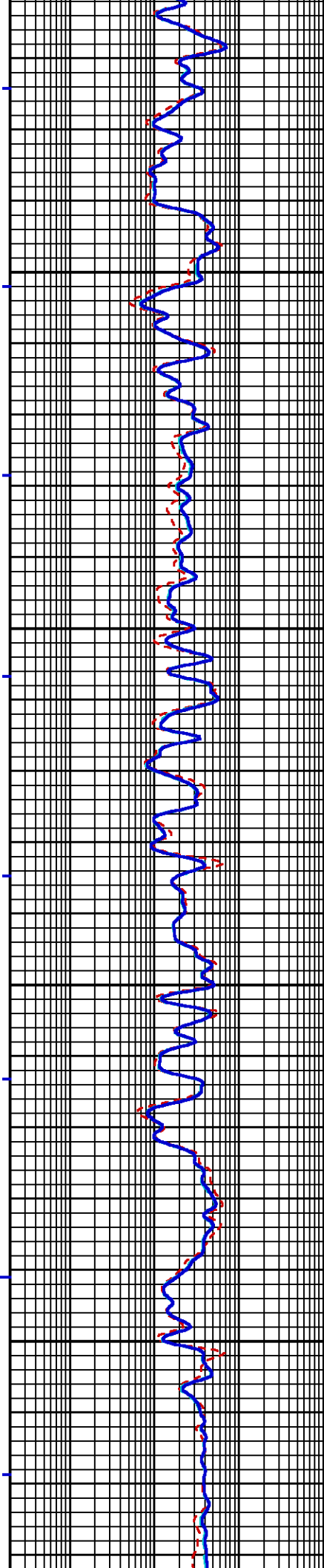
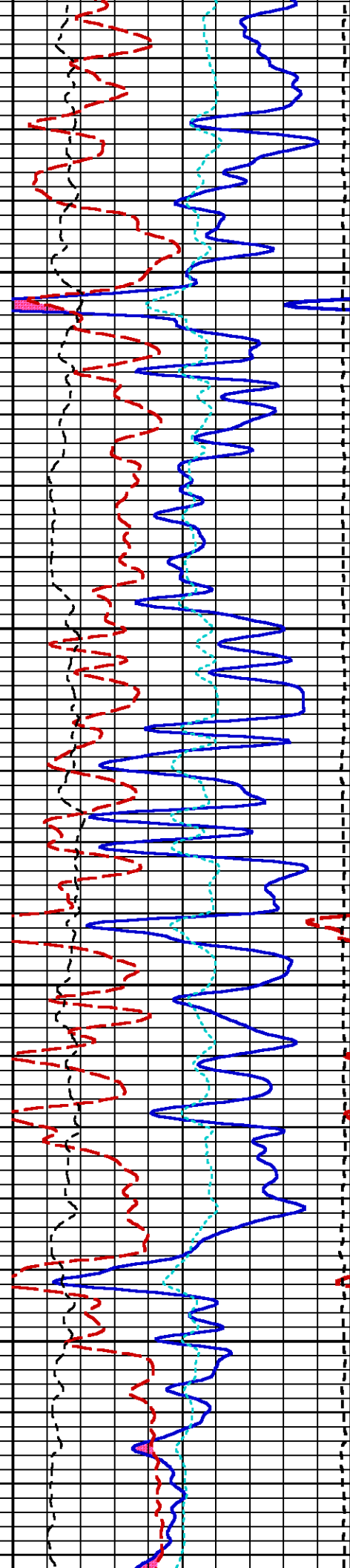
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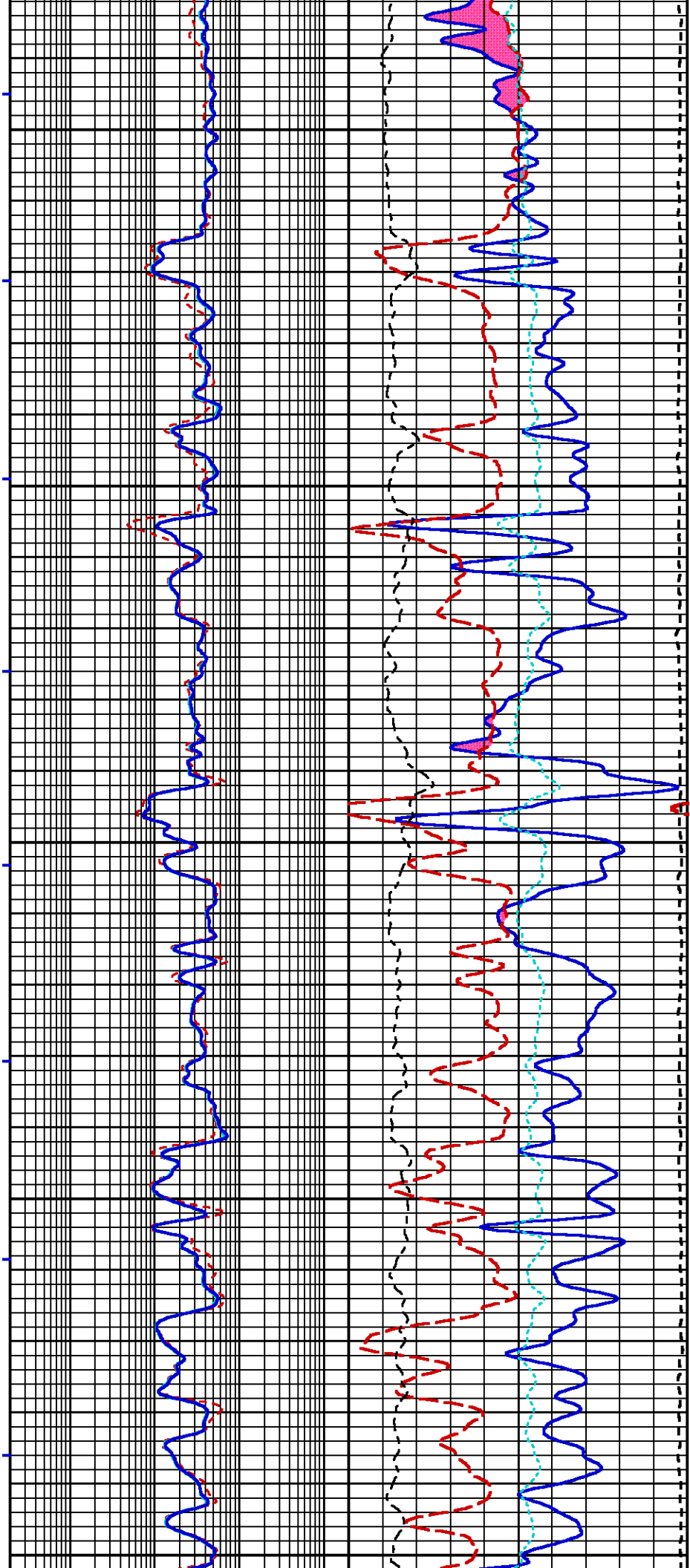
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1300

7800



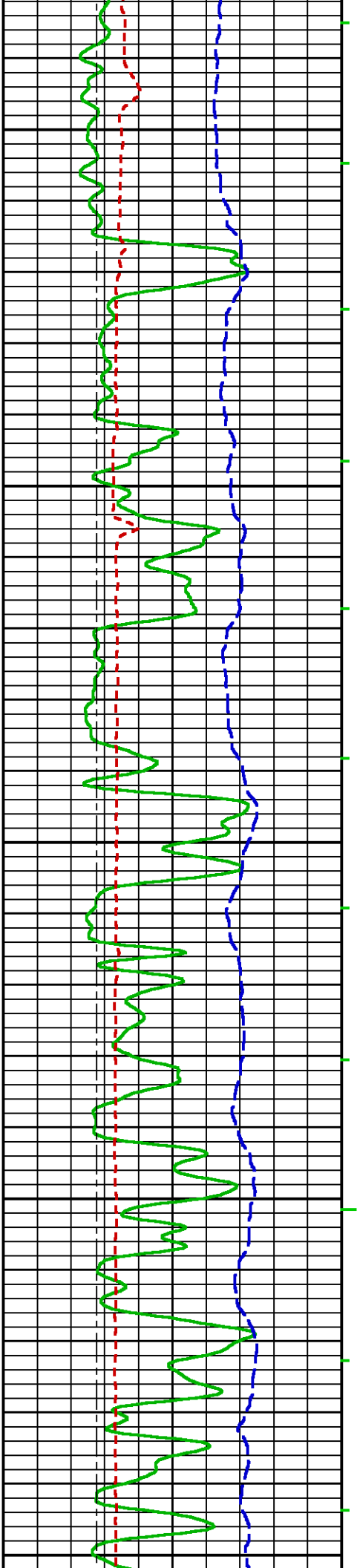


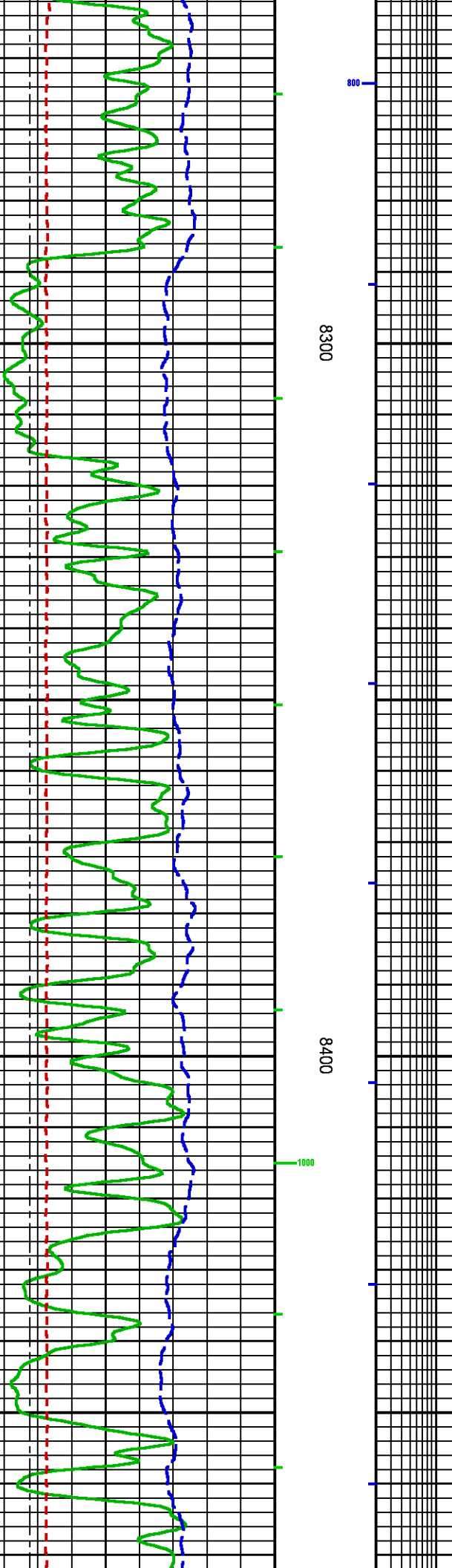
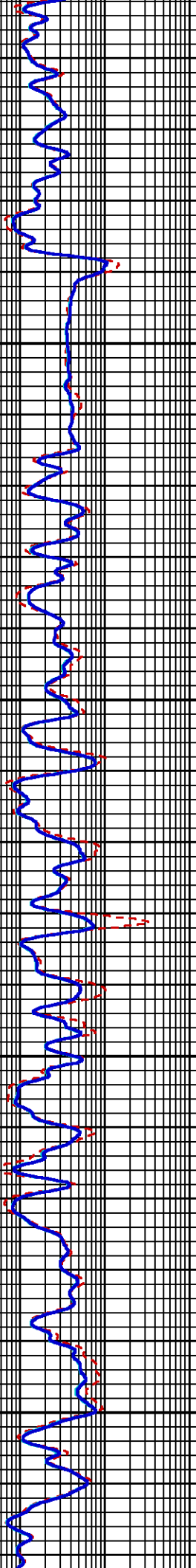
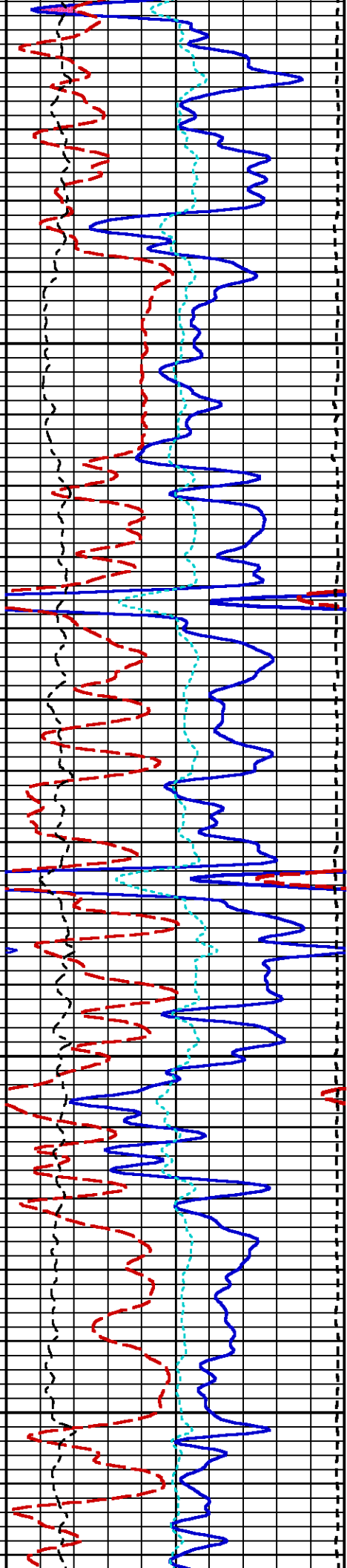


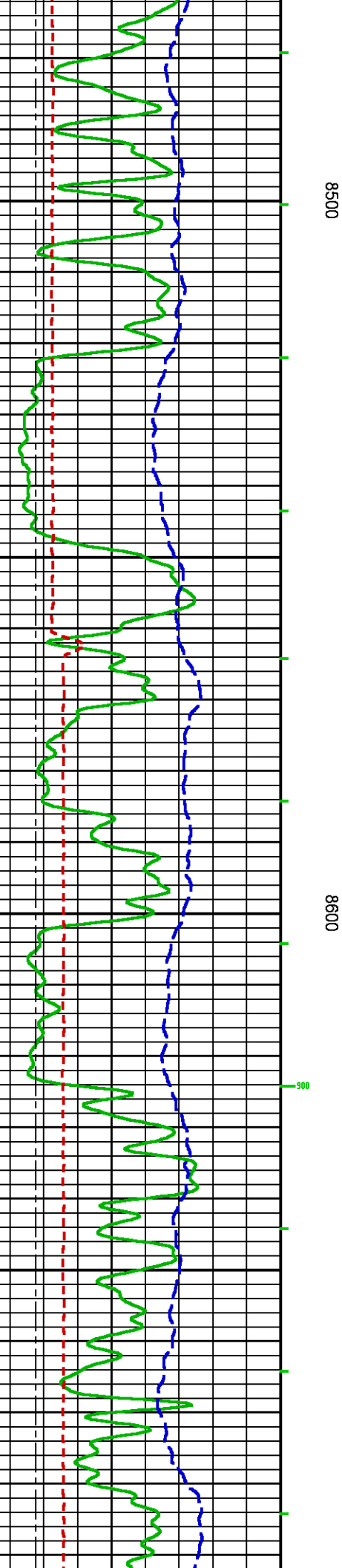
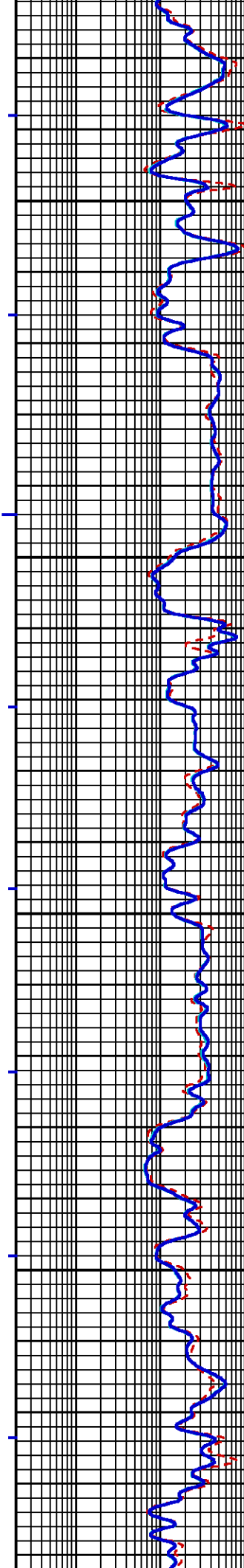
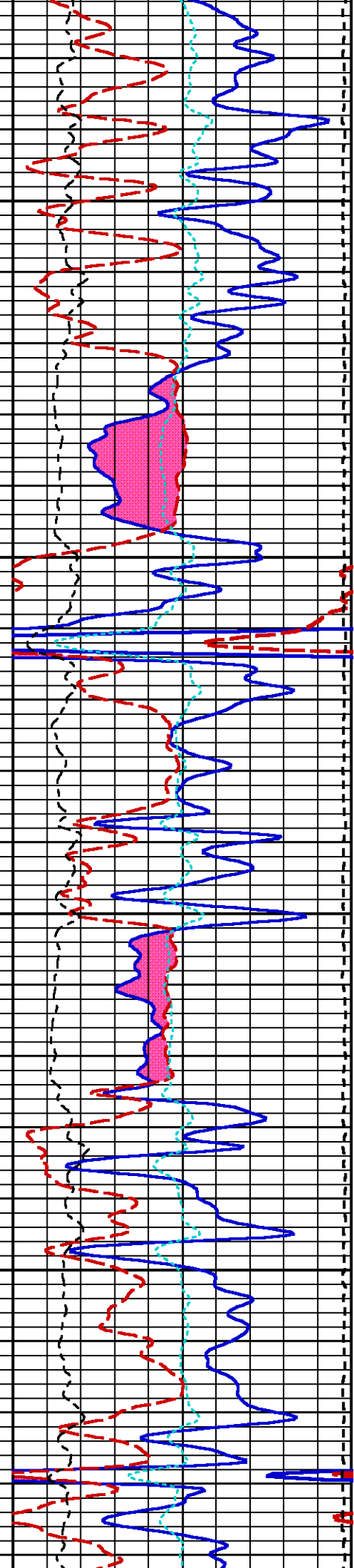
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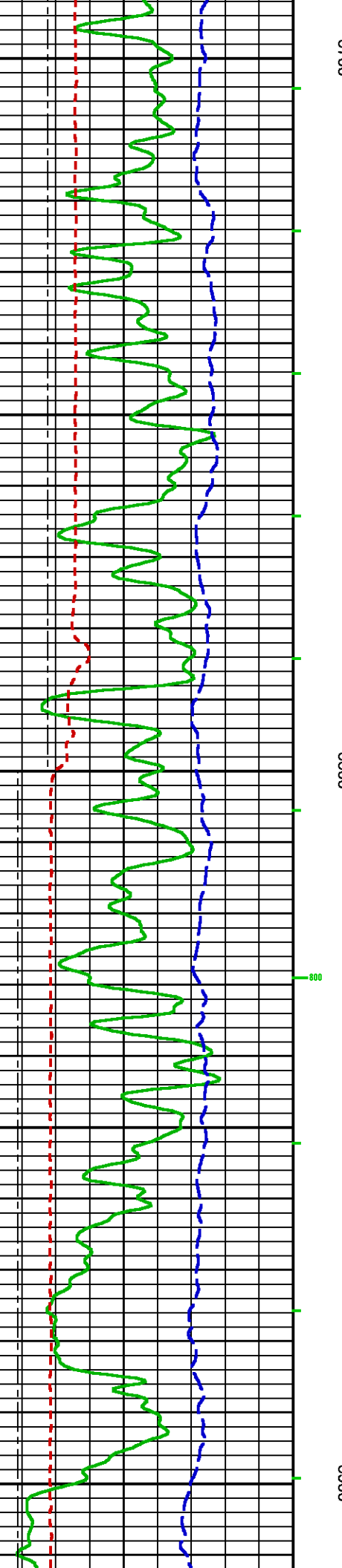
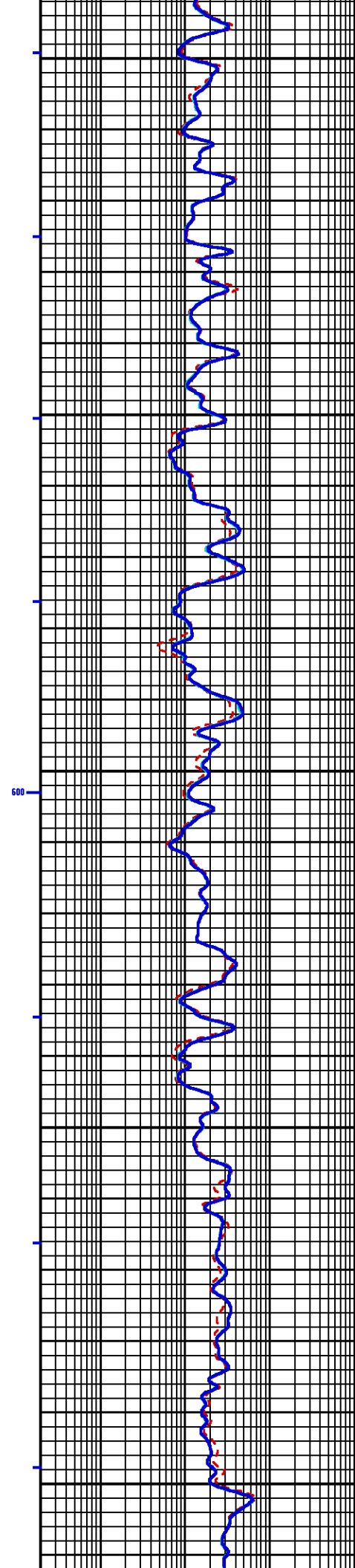
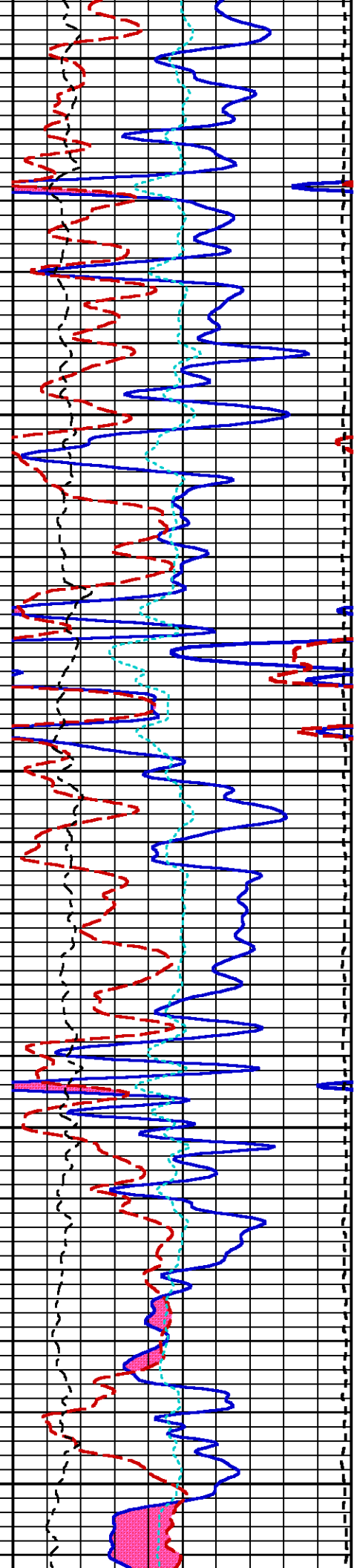
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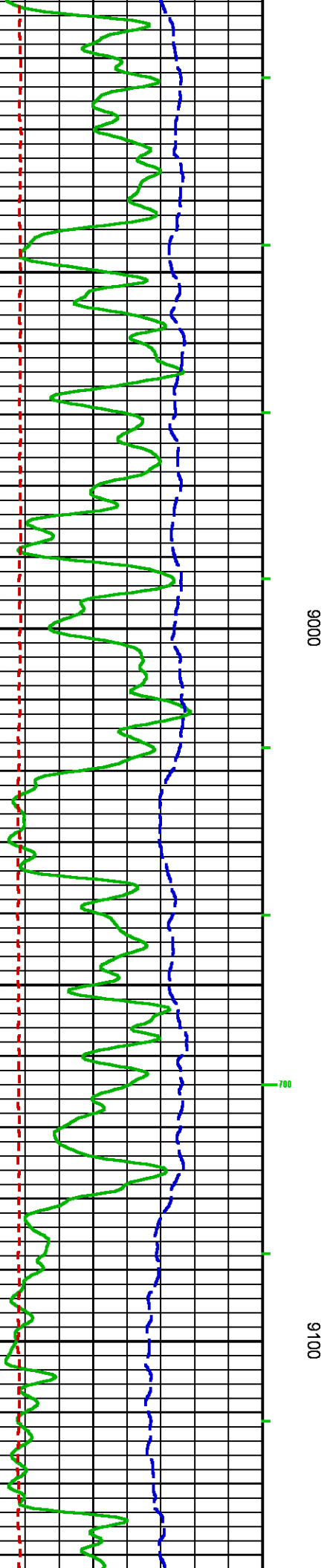
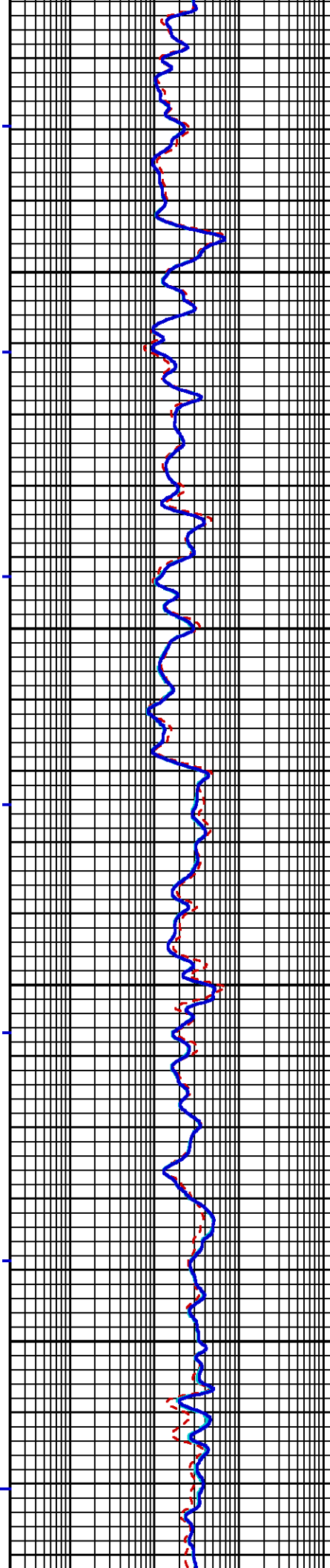
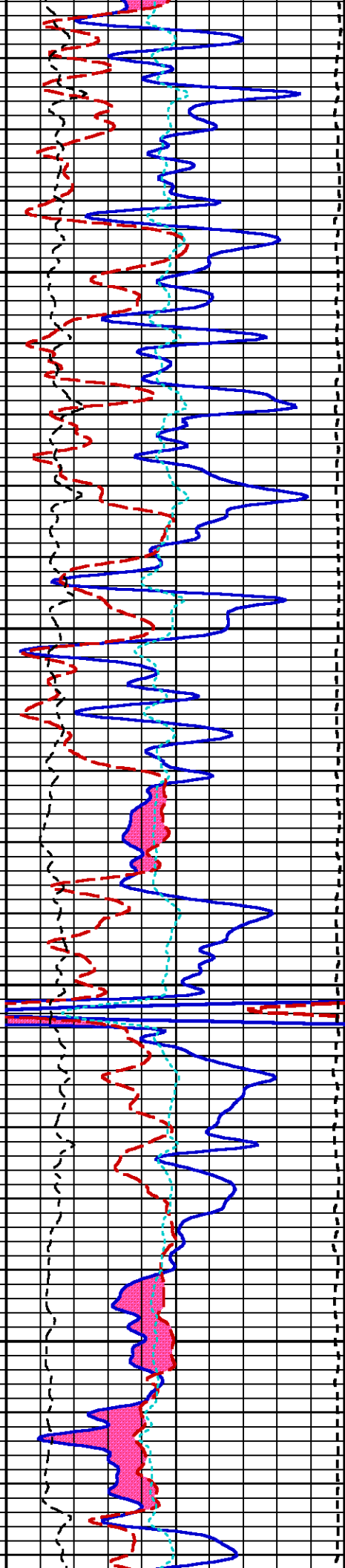
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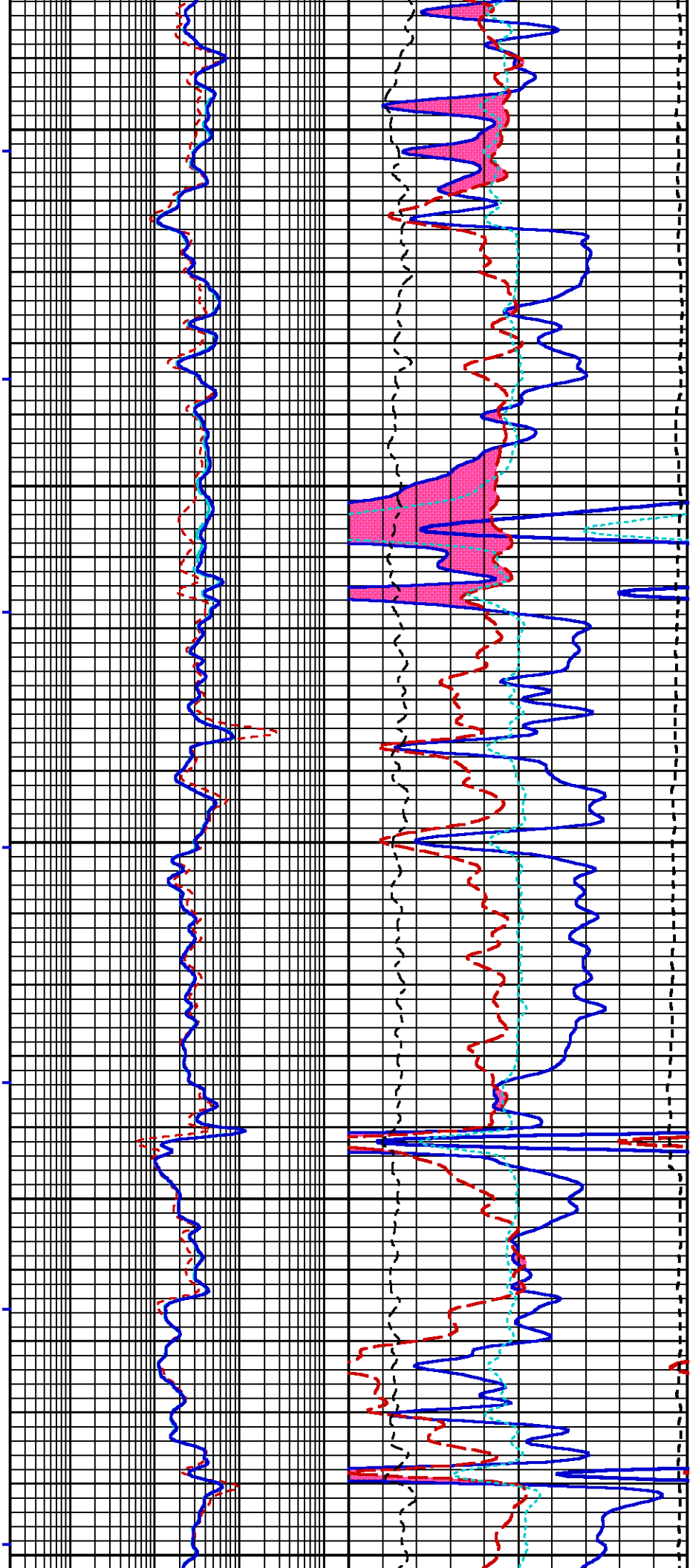








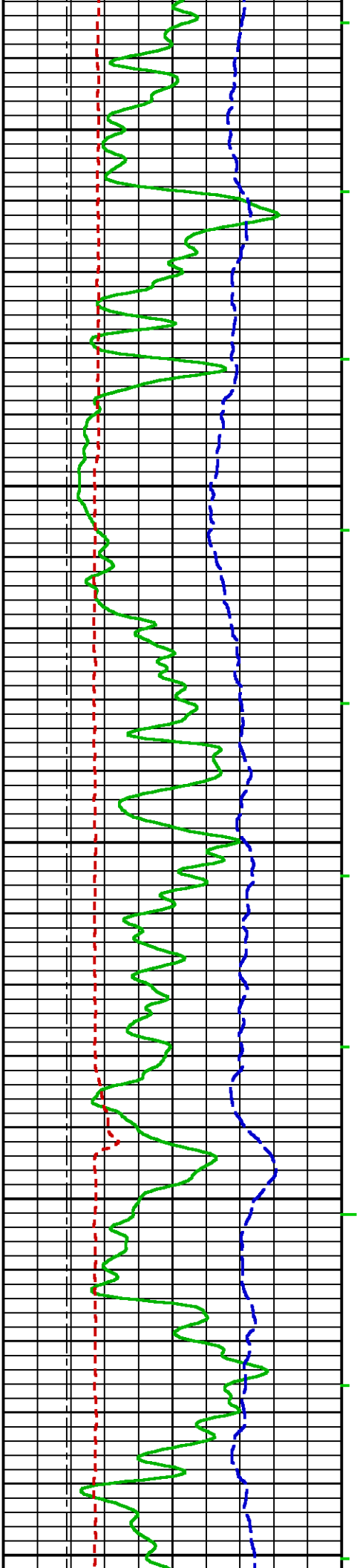


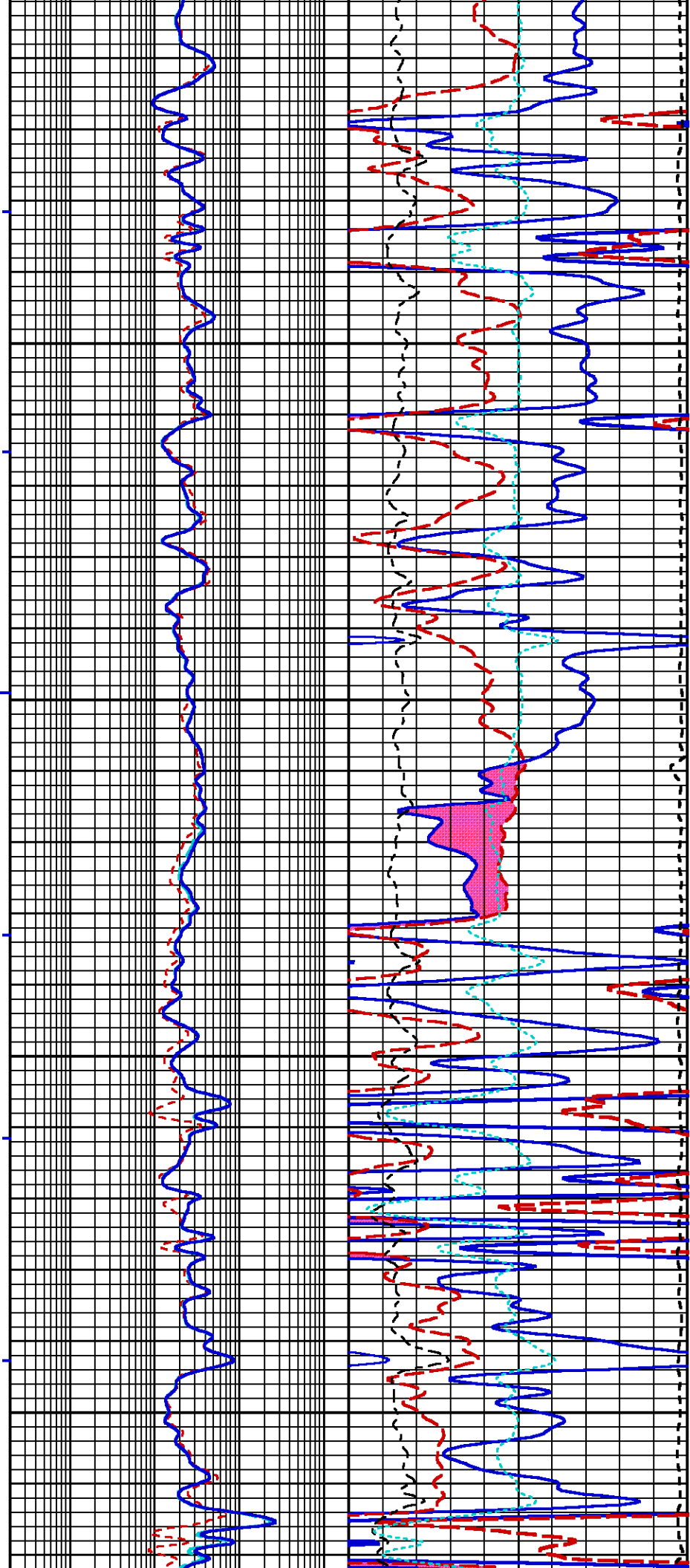


9200

9300

600



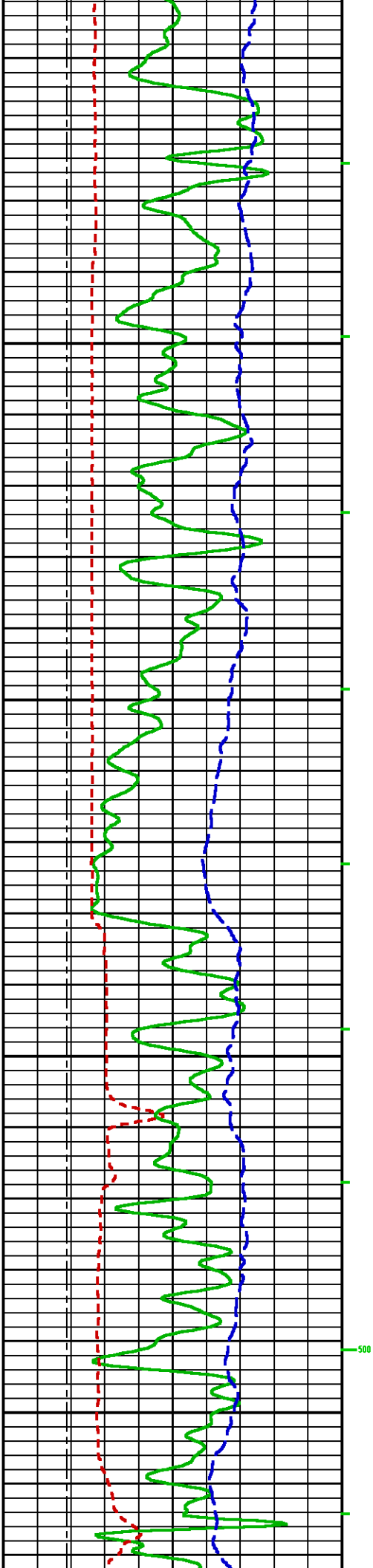


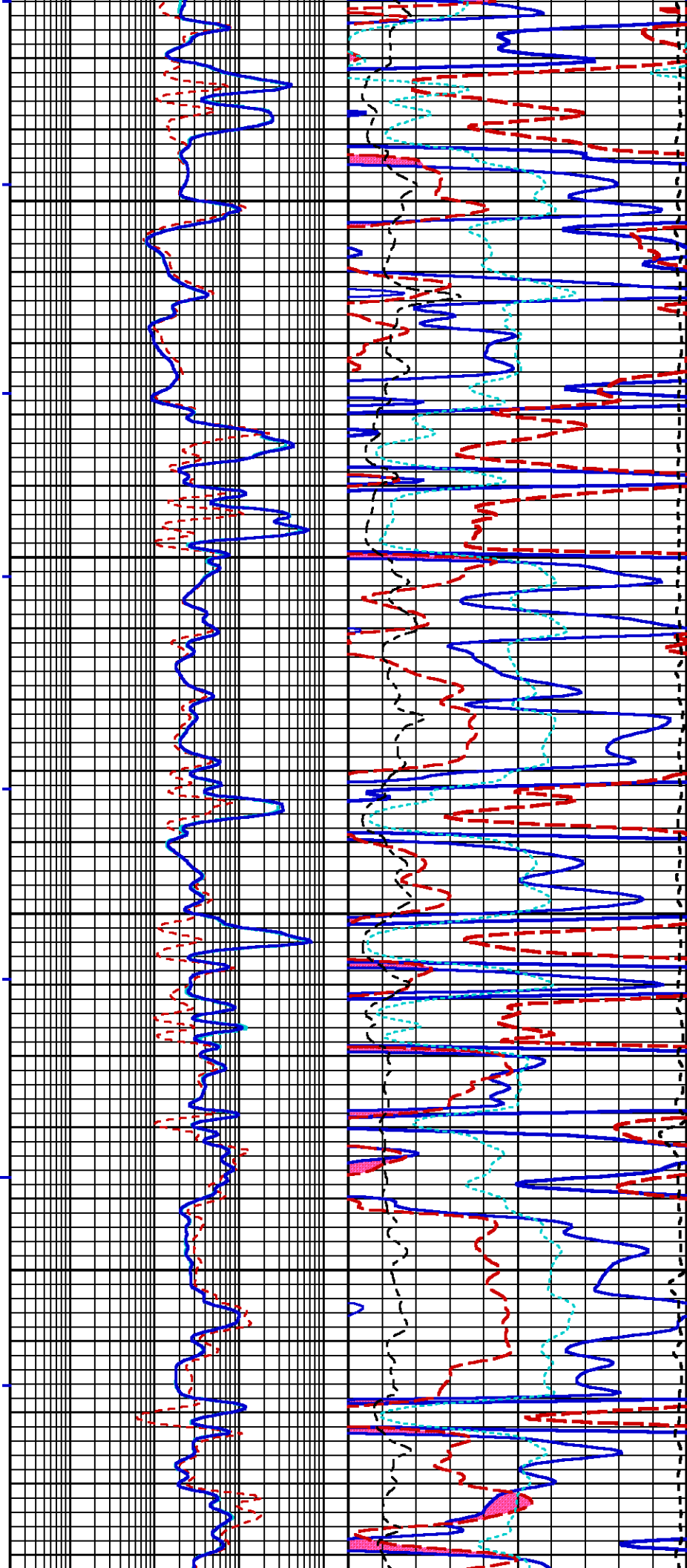
9400

400

9500

500



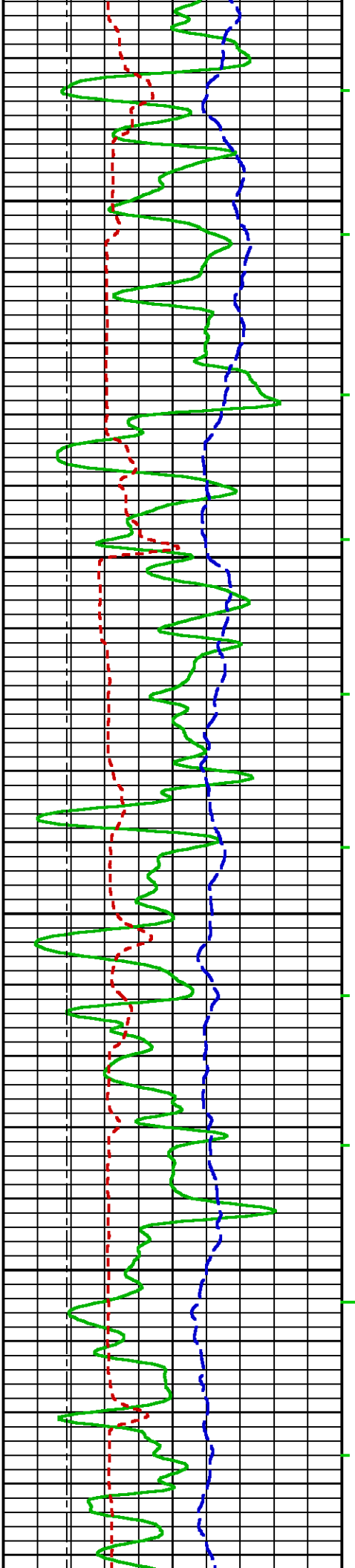


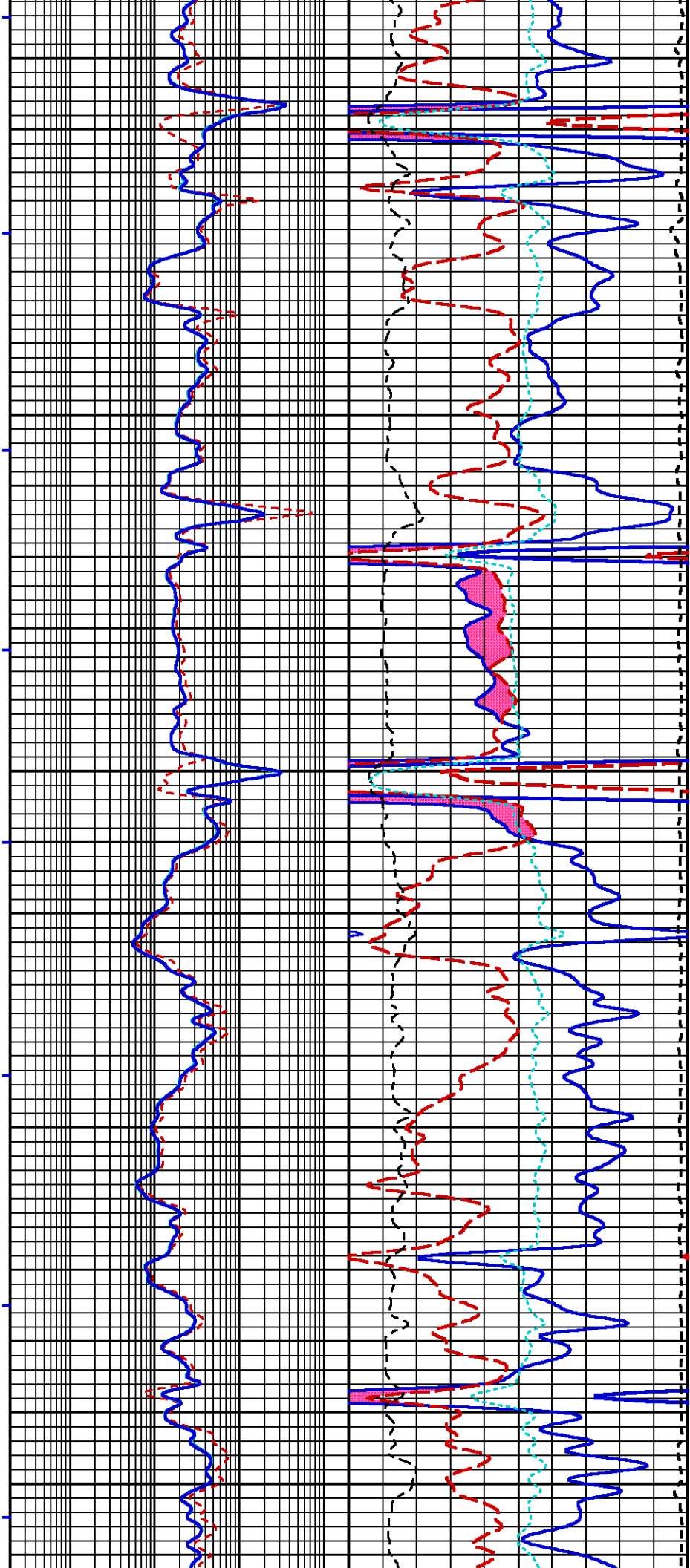
9600

9700

300

400



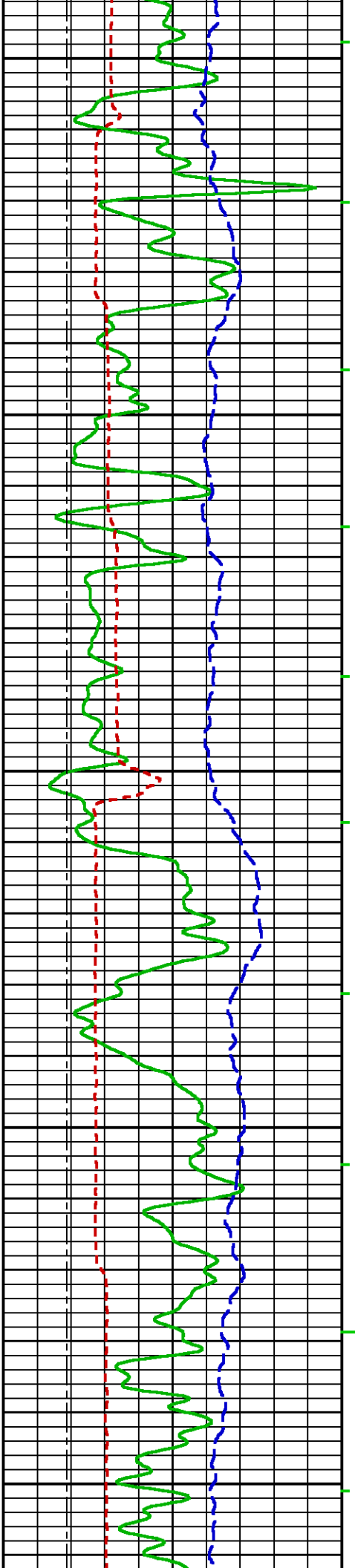


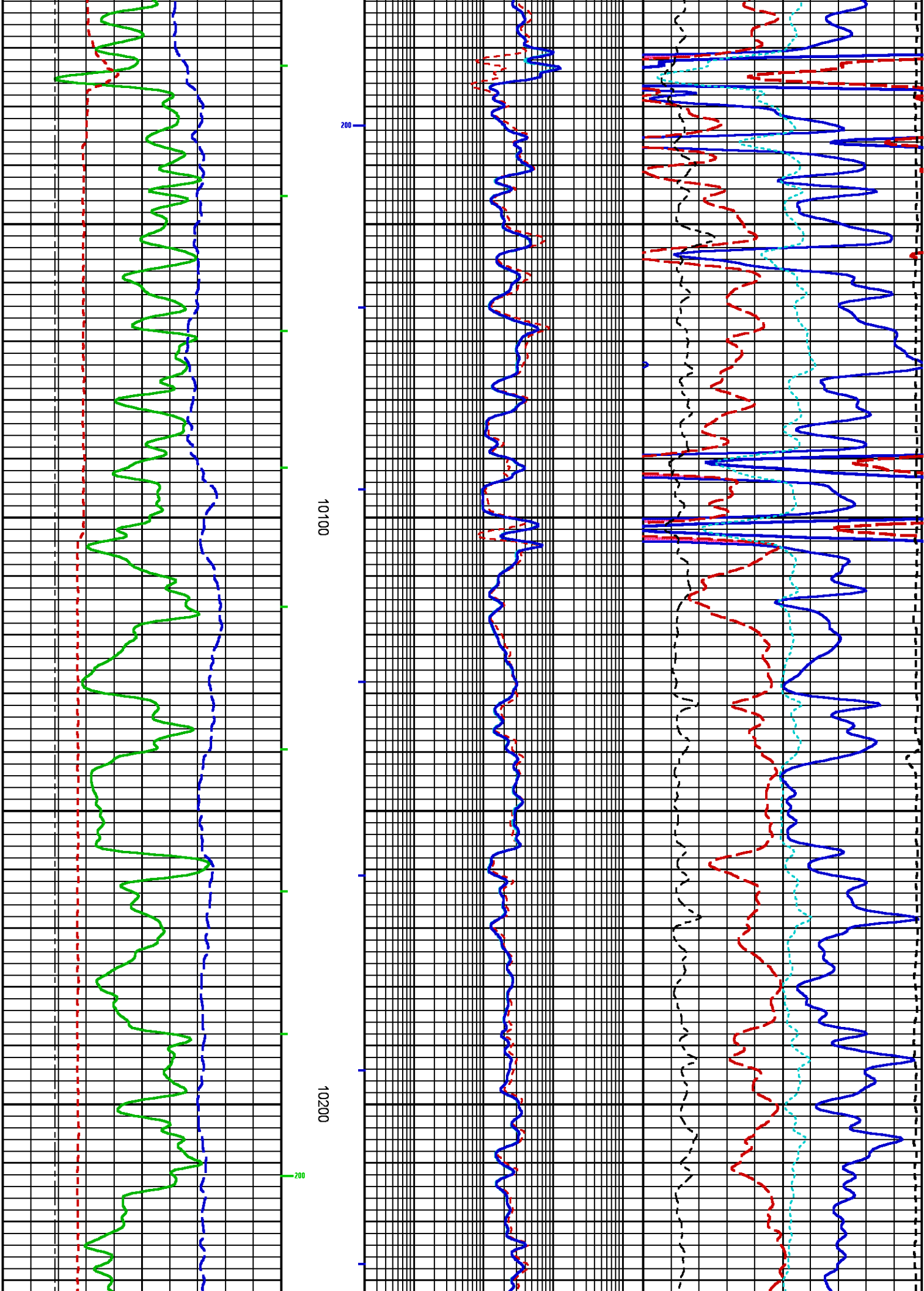
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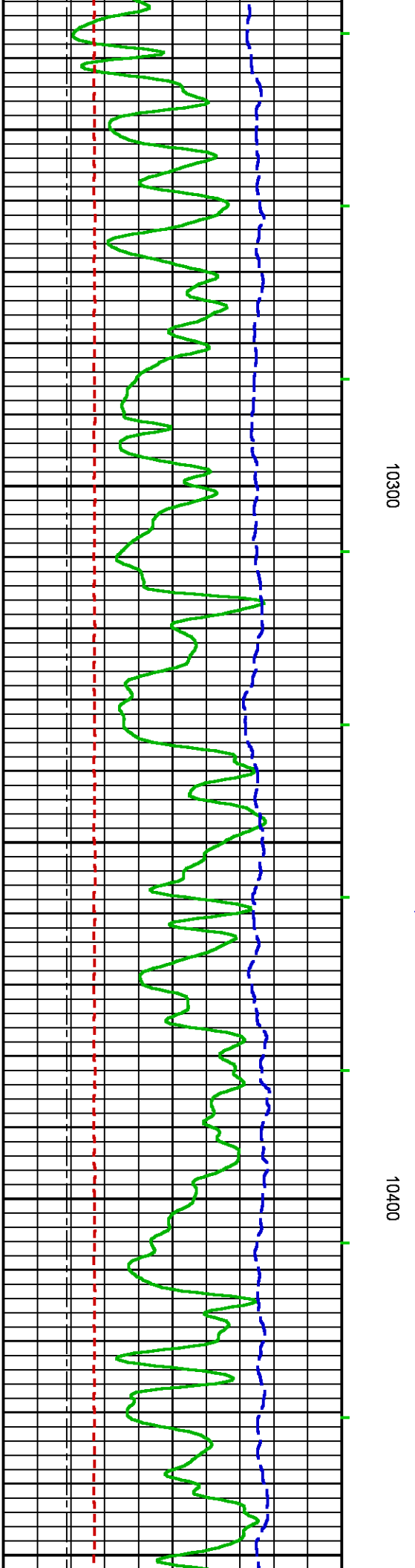
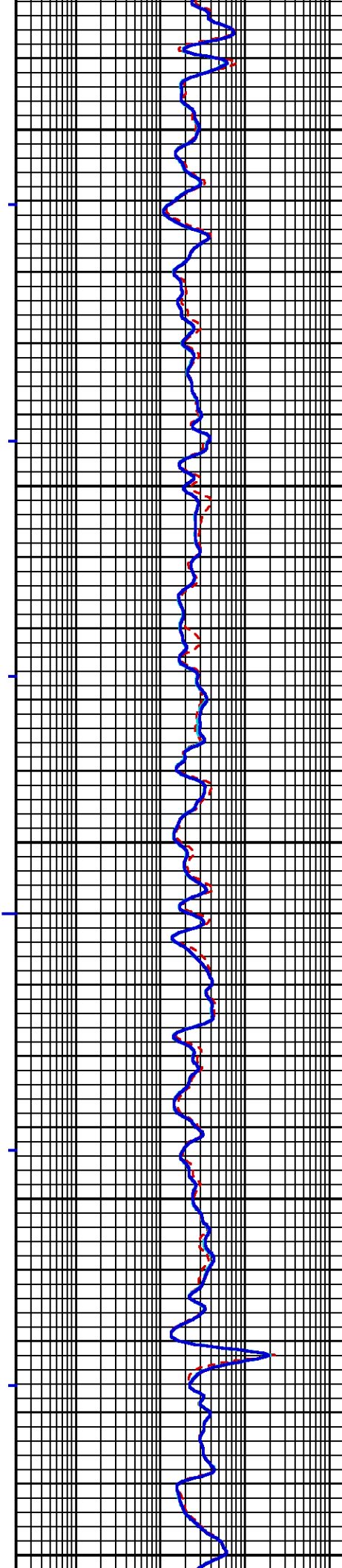
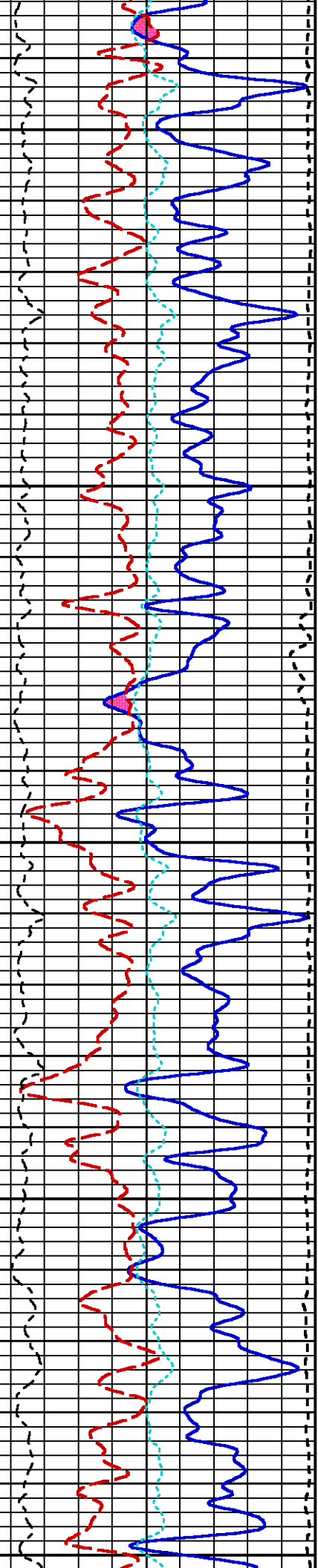
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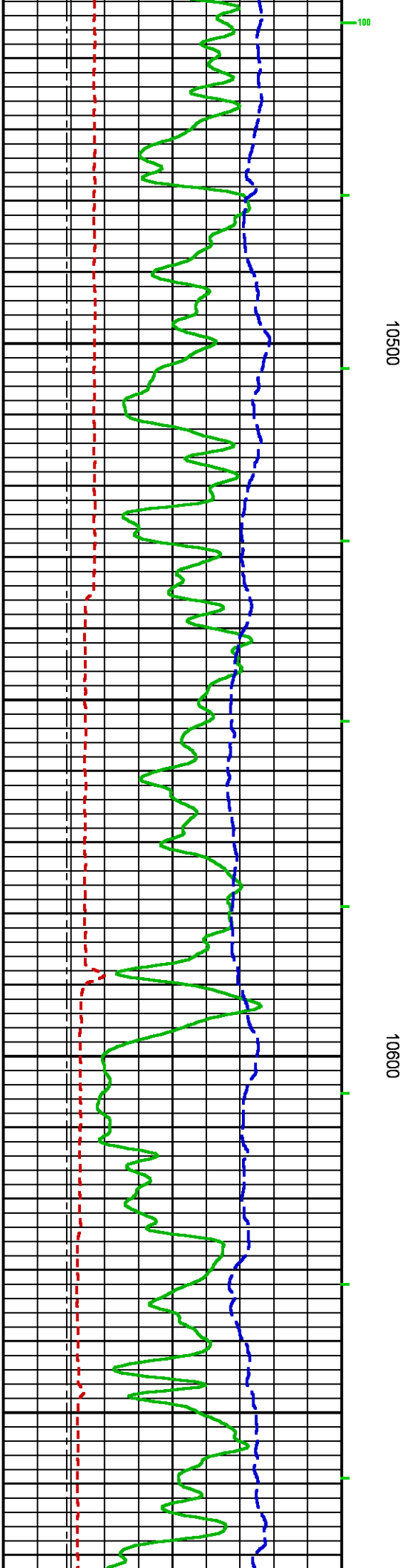
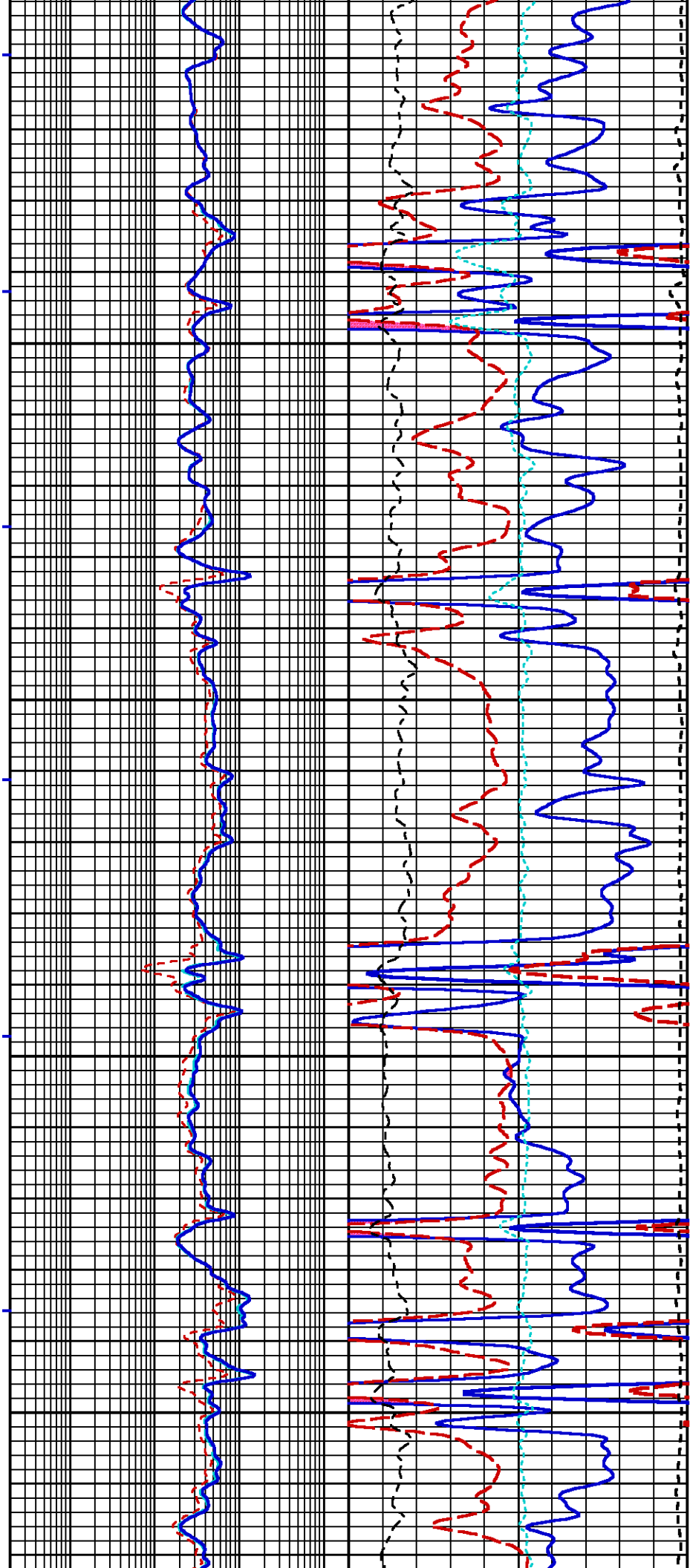
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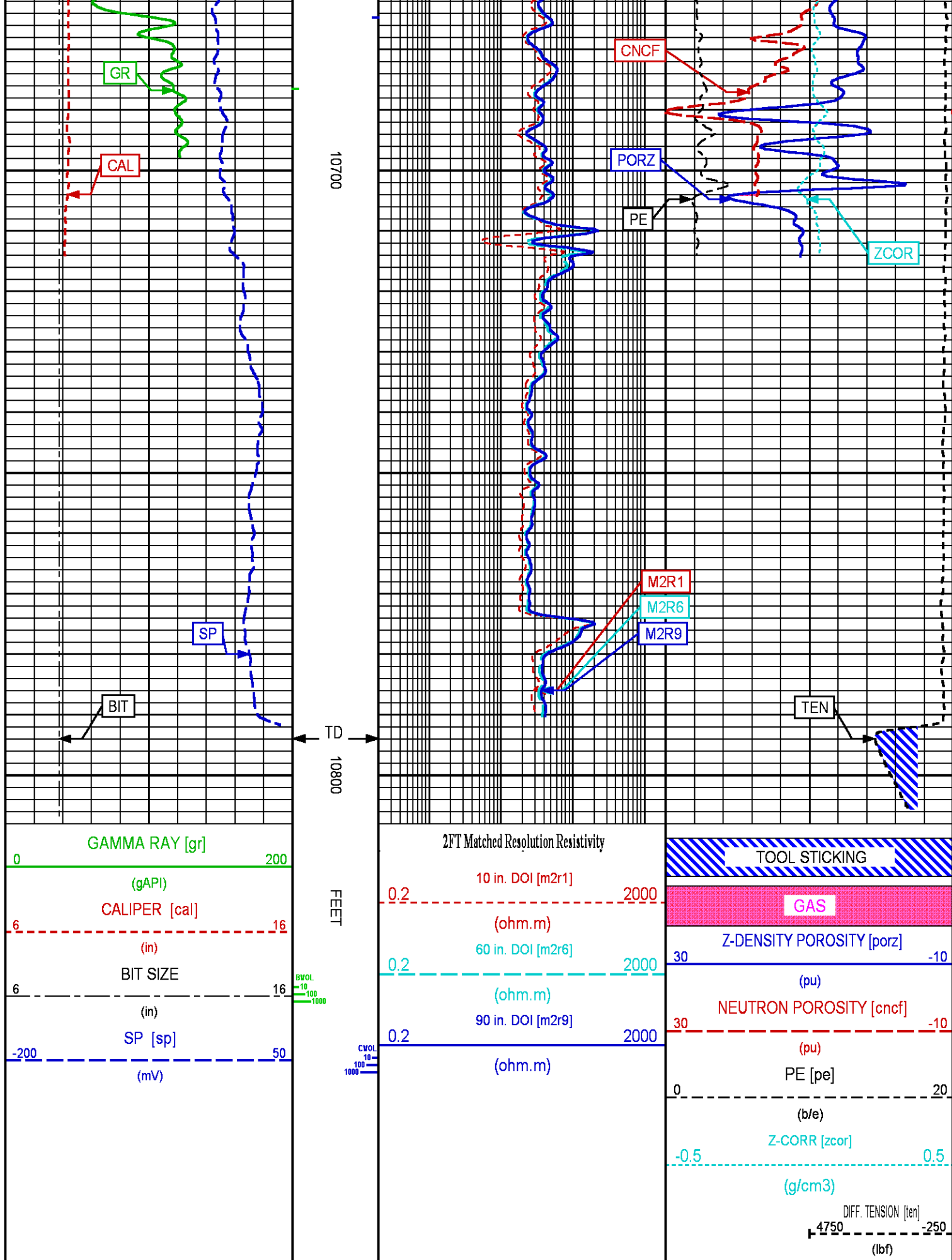
300











REPEAT LOG 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 2

Plotted: Tue Sep 9 22:31:45 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /data/090505J/n777q01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 3265.750 ft BOTTOM DEPTH: 3595.116 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TTRM	FILTER (A)	medium (1)		TOP	BOTTOM
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
Y AXIS CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER ()	medium (1)		"	"
CN	FILTER ()	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	78.0	degF	"	"
	MUD SAMPLE RES	0.770	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	78.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	1600	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.680	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
ZDL	DENSITY TRACKING	CN		"	"

ZDL	DENX TRACKING	ON	"	"
TRACKING TIME	Logging Spd for Gain	Over 10 ft/min	"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USF RXTMP		TOP
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"
	ABC to CALCULATE	STANDOFF		"
	STANDOFF	1.50	in	"
	TOOL POSITION	ECCENTERED		"
	Rmud MULTIPLIER	1.000		"

CURVE DESCRIPTION REPORT

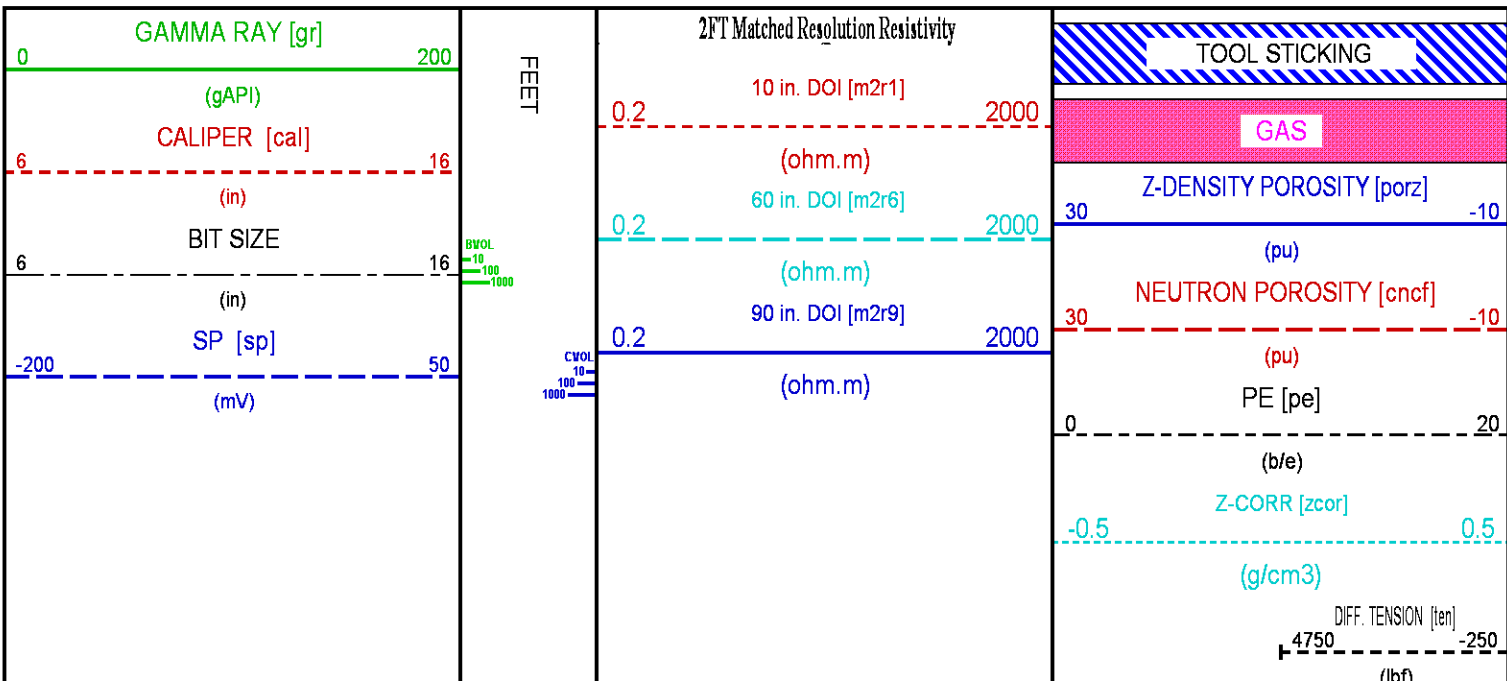
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 9 14:49:27 2014	BIT SIZE
F1:BVOL	Sep 9 14:49:27 2014	BOREHOLE VOLUME
F1:CAL	Sep 9 14:49:27 2014	CALIPER
F1:CNCF	Sep 9 14:49:27 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Sep 9 14:49:27 2014	CEMENT VOLUME
F1:GR	Sep 9 14:49:27 2014	GAMMA RAY
F1:M2R1	Sep 9 14:49:27 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Sep 9 14:49:27 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Sep 9 14:49:27 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Sep 9 14:49:27 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Sep 9 14:49:27 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	Sep 9 14:49:27 2014	SPONTANEOUS POTENTIAL
F1:TEN	Sep 9 14:49:27 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 9 14:49:27 2014	DENSITY CORRECTION

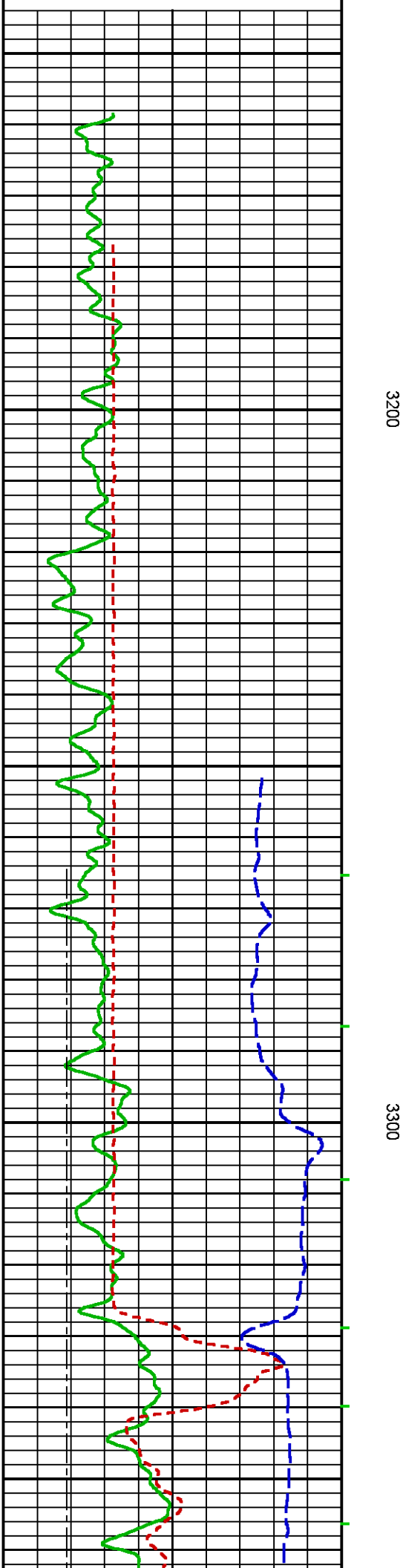
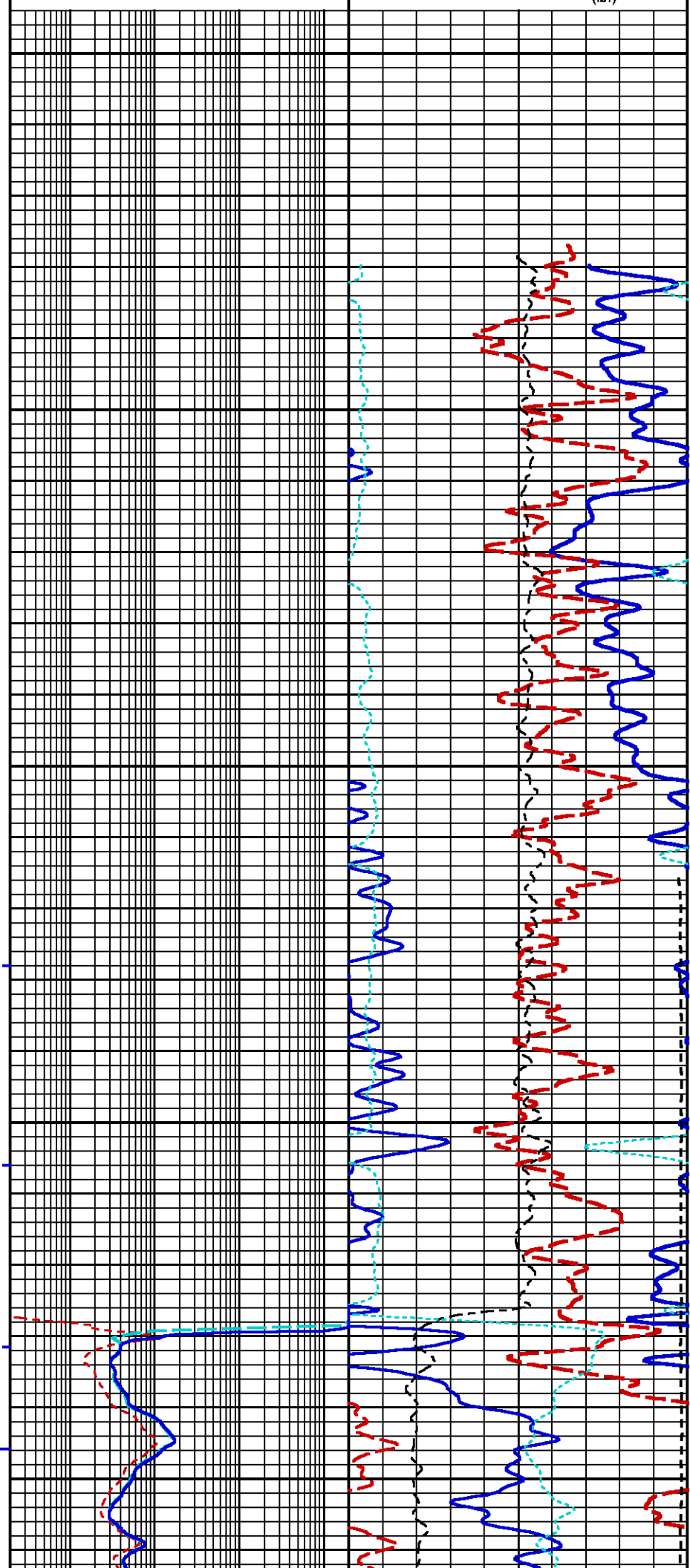
CURVE MEASURE POINT OFFSET

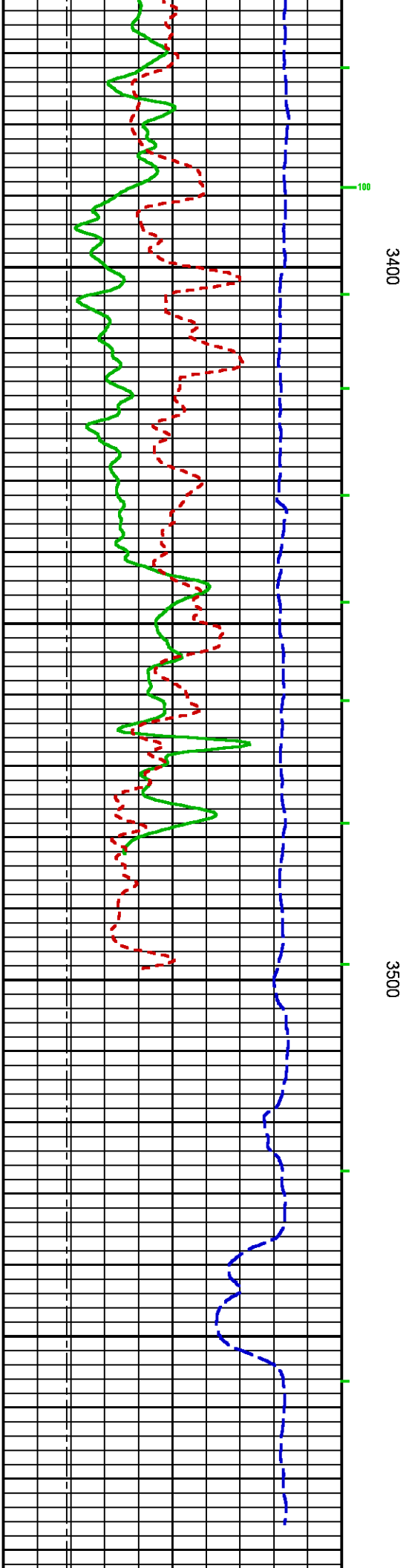
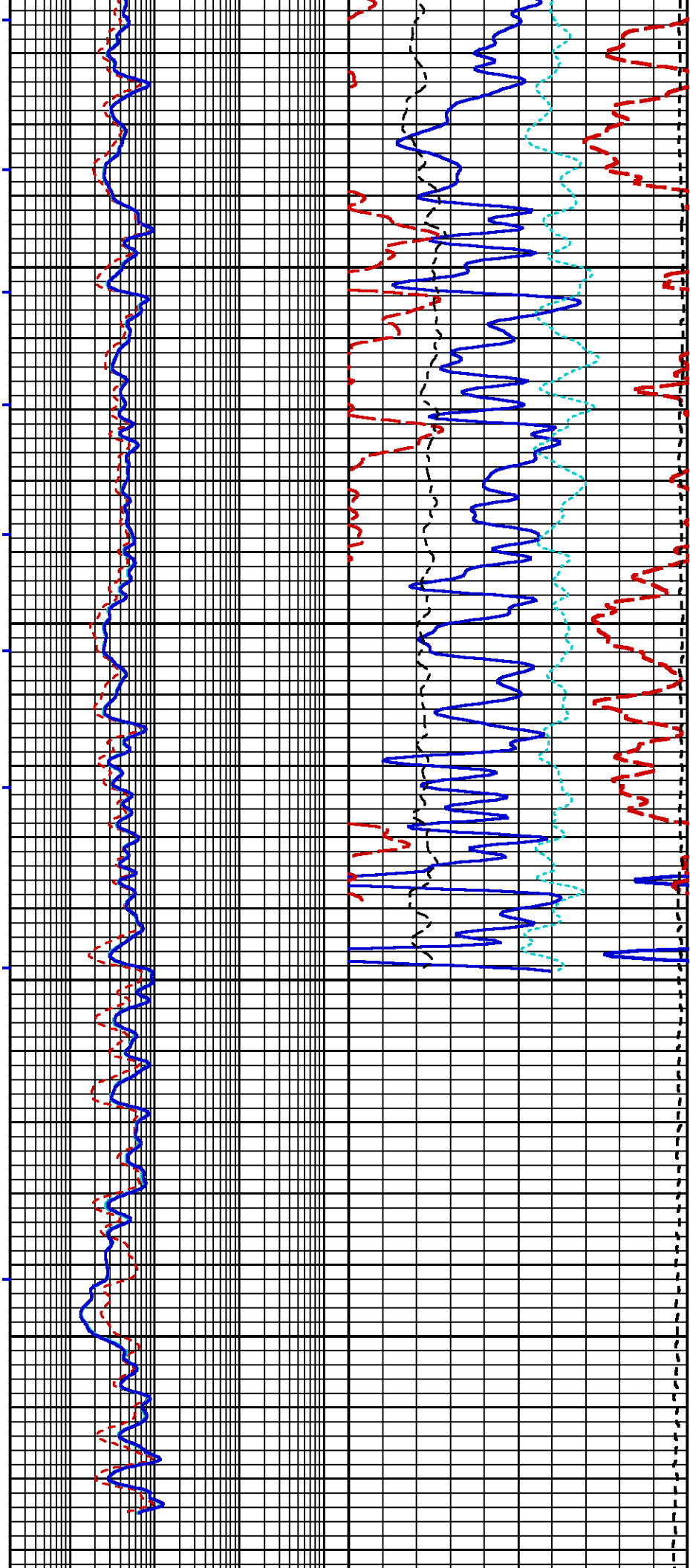
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	107.25	M2R9	8.00	SP	14.00
CAL	90.00	M2R1	8.00	PE	89.25	TEN	0.00
CNCF	100.25	M2R6	8.00	PORZ	89.25	ZCOR	89.25

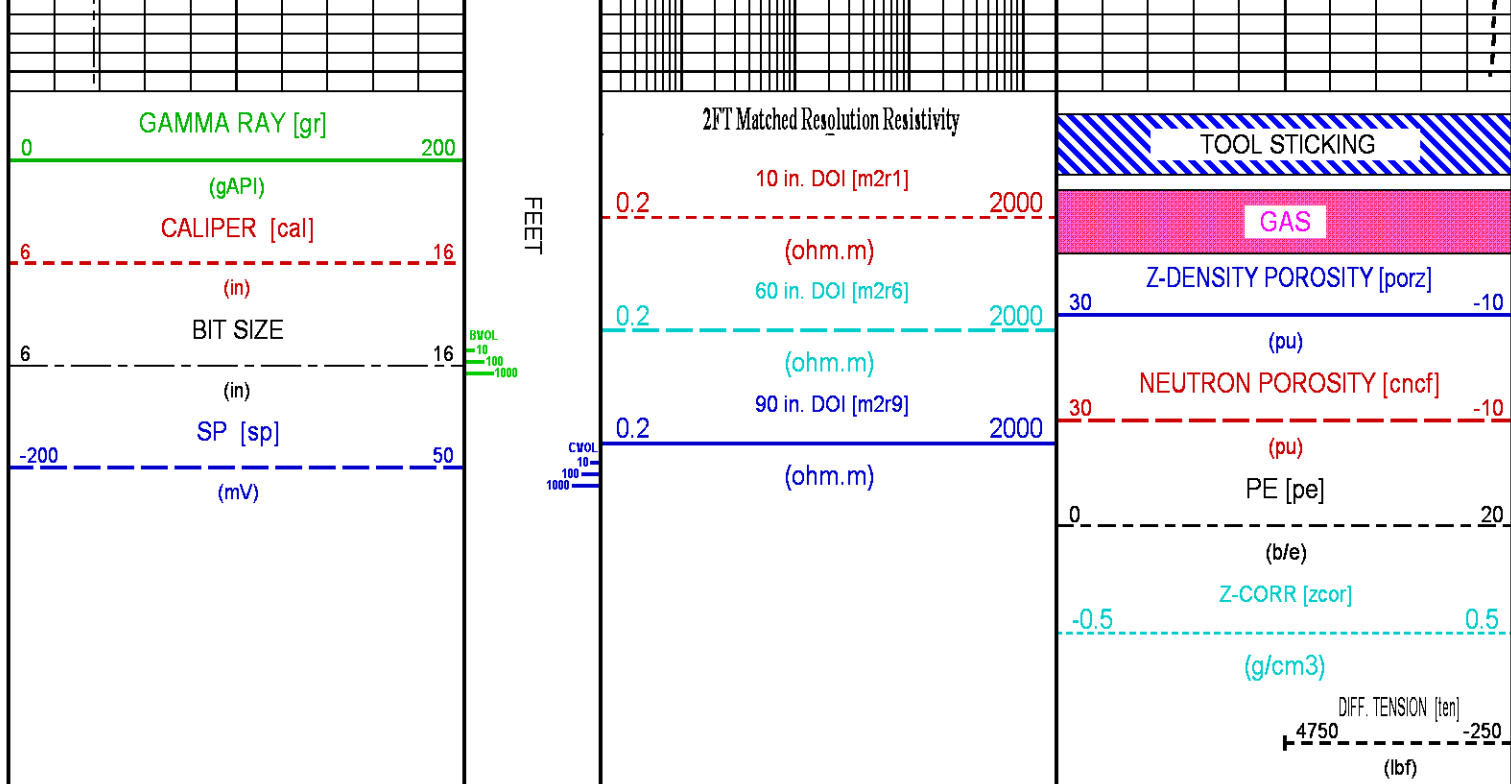
Presentation : cas6685:/dat1a/090505J/WPX_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 3145 - 3591.5 Feet

Data File 1 : F1 : cas6685:/dat1a/090505J/n777q01_REPEAT.xtf
Created On : Sep 9 14:49:27 2014
Company : WPX ENERGY INC
Well : FEDERAL BCU 542-30-198
Field : SULPHUR CREEK
File Interval : 3145 - 3591.5 Feet
OCT : n777q









CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/090505JJ/n777q.tp1

CHT PRIMARY CALIBRATION SUMMARY

TOOL #: 3981XA 10516527

DATE/TIME PERFORMED: Thu Sep 4 20:16:16 2014

UNIT #: 3885TC 6685

	Signal Low (raw)	Signal High (raw)	Scale Mult	Scale Add	Engr Low (lbf)	Engr High (lbf)
CHT	-65.93	131.51	3.84	167.44	-86.00	673.00

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 10203001

DATE/TIME PERFORMED: Tue Sep 9 14:16:24 2014

UNIT #: 3885TC 6685

CALB JIG #: 4702NK VBA-905

	BACKGROUND CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	190.62	1089.16	0.167	31.82	181.82

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 1329XA 10203001 DATE/TIME PERFORMED: Tue Sep 9 21:30:56 2014 DAYS SINCE CAL: 0

UNIT #: 3885TC 6685 VERI JIG #: 4702NK VBA-905

	BACKGROUND CALBTR ON (cts/s)	MULT	BACKGROUND CALBTR ON (gAPI)	DIFF. (gAPI)
GR	88.20	0.167	14.72	155.20
				140.00 160.00

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2446XA 10202034 DATE/TIME PERFORMED: Sat Aug 23 12:54:04 2014

UNIT #: 3880TA HL6670 CALIBRATOR #: 2437XB 112674 SOURCE #: 4717XS N-1026

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	NOMINAL SSN/LSN	CORRECTION FACTOR	POROSITY (pu)
LSN	623.84	633.32				
SSN	1654.96	1711.61				
RATIO			2.70259	2.75100	1.01791	
					0.97000 1.07000	
CN						21.358

CN PRIMARY VERIFICATION SUMMARY

TOOL #: 2446XA 10202034 DATE/TIME PERFORMED: Sat Aug 23 13:01:30 2014

UNIT #: 3880TA HL6670 ICE BLOCK #: 4717ND VD-147

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	1595.36	1658.93				
SSN	3673.83	3965.26				
RATIO			2.39025	1.01791	2.43513	
CN						16.994

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2446XA 10202034 DATE/TIME PERFORMED: Tue Sep 9 14:21:36 2014 DAYS SINCE CAL: 17

UNIT #: 3885TC 6685 ICE BLOCK #: 4717ND VD-147

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	1548.06	1607.83				
SSN	3638.56	3924.19				
RATIO			2.44068	1.01791	2.48593	
CN						17.670 14.994 18.994

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2446XA 10202034 DATE/TIME PERFORMED: Tue Sep 9 21:26:50 2014 DAYS SINCE CAL: 17

UNIT #: 3885TC 6685 ICE BLOCK #: 4717ND VD-147

	MEASURED CPS	DEADTM CORR CPS	DTC SSN/LSN	CORRECTION FACTOR	DTC CORR SSN/LSN	POROSITY (pu)
LSN	1550.61	1610.58				
SSN	3658.91	3947.88				
RATIO			2.45123	1.01791	2.49644	
CN						17.810 15.670 19.670

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 10211833 DATE/TIME PERFORMED: Tue Aug 5 14:20:31 2014

UNIT #: 3885TC 6685

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING (in)	LARGE RING (in)
CALIPER	1805.2	2318.8	0.00779	-7.05919	7.000	11.000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10211833 DATE/TIME PERFORMED: Tue Sep 9 14:43:11 2014 DAYS SINCE CAL: 35

UNIT #: 3885TC 6685

	I.D.	MULT	ADD	I.D.
	(in)			
CALIPER	2080.8	0.00779	-7.28461	8.921

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10211833 DATE/TIME PERFORMED: Tue Sep 9 20:31:18 2014 DAYS SINCE CAL: 35

UNIT #: 3885TC 6685

	I.D.	MULT	ADD	I.D.
	(in)			
CALIPER	2134.4	0.00779	-7.28461	9.338
	8.421	9.421		

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2234XA 10211833 DATE/TIME PERFORMED: Tue Aug 5 14:48:51 2014

UNIT: 3885TC 6685 CALB BLKS: 2225XA 094292 CS SRC: 4703NT 34631B

	SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)		
	223.9	223.0	1326.3	1635.5		
	220.0 230.0	220.0 230.0				
	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	23797.5	12879.1	0.595	1.697	0.002	2.300
			0.565 0.665			
AL	13867.6	1287.3		2.717	-0.004	
AL + SHIM	19136.3	2256.6		2.629	0.157	
MG + SHIM (HI PE)	11407.8	5964.0	0.231			8.730
			0.210 0.270			
RATIO AL + SHIM/AL	1.38	1.75				
	1.32 1.42	1.64 1.84				
RATIO MG/AL	1.72	10.00				
	1.65 1.78	9.40 10.20				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10211833 DATE/TIME PERFORMED: Tue Sep 9 14:21:04 2014 DAYS SINCE CAL: 34

UNIT #: 3885TC 6685

TOTAL	CSPK	HV
(cps)	(Channel)	(V)

LS	1605.2		223.9		1186.4	
	1535.5	1735.5	220.0	230.0	1100.0	1550.0
SS	1311.0		223.5		1282.0	
	1226.3	1426.3	220.0	230.0	1100.0	1550.0
LV			PAD CURRENT			
(V)			(mA)			
5.0			66.8			
4.8		5.2	50.0		120.0	

XMACE_OR PRIMARY CALIBRATION SUMMARY

TOOL #: 1678MC 10084081

DATE/TIME PERFORMED: Tue Sep 9 08:04:54 2014

UNIT #: 3885TC 6685

ORIENTATION #: 4401XB 186393

	DEV (deg)	QA (mG)	MEAS RB (deg)	RB OFFSET (deg)	ROTATED RB (deg)
ORIT TBM CHECK	89.5	1001.2	1.0		
		990.0 1010.0	357.5 2.5		
XMACE-F1 ORIENT			334.0	334.0	0.0

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1515MA 10037719

DATE/TIME PERFORMED: Mon Jan 20 14:47:06 2014

UNIT #: 3880TA HL6670

GRCOND ID & DATE: 126 083096

ZERO DATA(mv) 10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 R	0.002	0.002	0.002	0.000	-0.001	0.001	-0.000	-0.001
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 0 Q	0.007	0.009	0.002	0.003	0.004	0.002	-0.000	-0.000
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 R	-0.004	-0.002	0.000	0.005	0.004	0.001	-0.001	-0.002
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 Q	-0.008	-0.009	-0.006	-0.002	0.000	0.003	0.003	0.001
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 R	0.004	0.006	0.006	0.004	0.004	0.006	0.009	0.010
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 Q	-0.002	0.001	0.000	-0.000	-0.004	-0.004	-0.004	-0.002
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 R	0.006	0.007	0.008	0.006	0.006	0.003	0.004	0.002
	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 Q	-0.008	-0.004	0.002	0.002	-0.001	0.001	-0.002	-0.001
	-0.500 0.500	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 4 R	-0.004	-0.003	0.000	-0.000	0.005	0.006	0.005	0.007
	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 4 Q	-0.008	-0.001	-0.001	0.000	-0.007	-0.004	-0.003	0.000

	-1.000	1.000	-0.400	0.400	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200
Coil 5 R	0.005	0.003	0.009	0.009	-0.002	0.004	0.005	0.004						
	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400
Coil 5 Q	-0.005	0.002	0.006	0.008	0.003	0.012	-0.000	-0.005						
	-2.000	2.000	-0.800	0.800	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400
Coil 6 R	-0.013	0.016	-0.019	-0.002	-0.008	0.002	0.001	0.032						
	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000
Coil 6 Q	0.010	-0.003	0.006	-0.003	-0.005	-0.017	-0.012	-0.005						
	-5.000	5.000	-2.000	2.000	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000

ELEC. GAINS	10 KHz		30 KHz		50 KHz		70 KHz		90 KHz		110 KHz		130 KHz		150 KHz	
Coil 0 M	125.56		124.07		121.17		116.96		111.53		105.14		97.64		89.46	
	100.00	150.00	100.00	150.00	98.00	150.00	96.00	140.00	92.00	140.00	87.00	130.00	82.00	120.00	76.00	110.00
Coil 0 P	7.720		24.297		40.614		56.846		73.005		89.211		105.261		121.397	
	6.000	9.000	19.000	28.000	32.000	47.000	44.000	66.000	57.000	85.000	70.000	100.000	82.000	120.000	95.000	140.000
Coil 1 M	217.91		215.29		210.30		202.98		193.60		182.50		169.46		155.27	
	180.00	270.00	180.00	270.00	170.00	260.00	170.00	250.00	160.00	250.00	160.00	230.00	150.00	220.00	140.00	200.00
Coil 1 P	7.696		24.246		40.521		56.735		72.881		89.012		105.062		121.231	
	6.000	9.000	19.000	28.000	32.000	48.000	45.000	67.000	57.000	86.000	70.000	110.000	83.000	120.000	96.000	140.000
Coil 2 M	436.05		430.98		421.26		407.00		388.43		366.45		340.70		312.16	
	360.00	540.00	360.00	540.00	350.00	530.00	340.00	510.00	330.00	500.00	310.00	470.00	300.00	440.00	270.00	410.00
Coil 2 P	7.883		24.793		41.460		58.064		74.574		91.207		107.653		124.246	
	6.000	9.000	19.000	29.000	32.000	48.000	45.000	67.000	58.000	87.000	71.000	110.000	84.000	130.000	96.000	140.000
Coil 3 M	707.25		698.26		681.02		655.98		624.05		586.83		544.23		498.72	
	590.00	880.00	580.00	870.00	570.00	850.00	550.00	830.00	530.00	800.00	500.00	780.00	470.00	710.00	440.00	650.00
Coil 3 P	7.849		24.750		41.335		57.794		74.101		90.378		106.417		122.488	
	6.000	10.000	20.000	29.000	33.000	49.000	46.000	69.000	59.000	89.000	72.000	110.000	85.000	130.000	98.000	150.000
Coil 4 M	1138.1		1121.1		1089.1		1043.5		986.7		922.7		851.5		777.1	
	900.0	1400.0	900.0	1300.0	900.0	1300.0	850.0	1300.0	800.0	1200.0	800.0	1200.0	750.0	1100.0	700.0	1000.0
Coil 4 P	8.082		25.375		42.288		59.012		75.437		91.687		107.650		123.478	
	6.000	10.000	20.000	30.000	33.000	50.000	46.000	70.000	60.000	90.000	73.000	110.000	86.000	130.000	99.000	150.000
Coil 5 M	2364.9		2334.3		2275.3		2190.0		2080.7		1953.9		1808.5		1653.5	
	1900.0	2800.0	1800.0	2800.0	1800.0	2700.0	1800.0	2600.0	1700.0	2500.0	1600.0	2400.0	1500.0	2200.0	1400.0	2100.0
Coil 5 P	8.215		25.787		43.065		60.223		77.222		94.151		110.852		127.528	
	6.000	10.000	20.000	31.000	34.000	51.000	48.000	72.000	62.000	93.000	76.000	110.000	89.000	130.000	100.000	150.000
Coil 6 M	6019.4		5941.0		5788.5		5570.2		5290.0		4963.2		4587.5		4184.2	
	4700.0	7100.0	4700.0	7000.0	4600.0	6900.0	4400.0	6600.0	4200.0	6400.0	4000.0	6000.0	3700.0	5600.0	3400.0	5100.0
Coil 6 P	8.163		25.893		43.275		60.549		77.668		94.722		111.567		128.365	
	7.000	10.000	22.000	32.000	36.000	54.000	51.000	76.000	65.000	98.000	80.000	120.000	94.000	140.000	110.000	160.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	483	-87	-144	-156	-157	-155	-153	-150
	-200 800	-500 200	-600 100	-600 50	-500 20	-500 20	-500 20	-500 20
Coil 0 Q	2334	826	459	286	182	109	53	7
	-3000 6000	-1000 2000	-1000 1200	-500 900	-400 700	-400 600	-400 500	-400 400
Coil 1 R	568	87	22	1	-10	-16	-20	-23
	450 650	20 130	-30 60	-50 40	-55 30	-60 20	-60 10	-60 10
Coil 1 Q	1327	526	327	236	184	146	121	100
	0 2500	0 900	0 600	0 450	0 350	0 300	0 250	0 250
Coil 2 R	186.9	27.5	7.0	0.6	-2.9	-4.5	-5.8	-6.8
	140.0 230.0	0.0 51.0	-10.0 25.0	-15.0 15.0	-16.0 10.0	-16.0 7.0	-16.0 5.0	-16.0 3.0
Coil 2 Q	442.6	177.0	113.2	85.0	69.9	60.3	53.5	49.4
	-200.0 1000.0	0.0 350.0	0.0 220.0	0.0 160.0	0.0 130.0	0.0 110.0	0.0 100.0	0.0 90.0
Coil 3 R	49.6	7.2	2.0	0.5	-0.4	-0.9	-1.5	-2.1
	23.0 63.0	0.0 12.0	2.0 6.0	1.0 1.0	5.0 2.0	5.0 1.0	6.0 1.0	6.0 1.0

	<div>37.062.00012.0</div> <div>83.437.126.823.122.022.122.623.4</div> <div>-140.0280.0-40.0100.0-20.070.0-10.060.0-10.050.0-10.050.0-10.050.0</div>
Coil 3 Q	
Coil 4 R	<div>11.611.33-0.19-0.74-1.01-1.24-1.43-1.41</div> <div>2.0018.00-3.006.00-3.503.00-3.902.00-4.202.00-4.502.00-4.702.00-5.002.00</div>
Coil 4 Q	<div>21.8412.4211.7712.7914.3516.3018.3120.31</div> <div>-100.00100.00-30.0050.00-20.0040.00-10.0040.00-10.0040.00-10.0045.00-10.0050.00-10.0060.00</div>
Coil 5 R	<div>2.570.12-0.24-0.30-0.36-0.62-0.48-0.50</div> <div>-2.005.80-3.202.40-4.503.10-4.703.20-4.803.20-5.003.30-5.203.40-5.403.50</div>
Coil 5 Q	<div>16.748.879.1310.5212.2614.3816.3318.50</div> <div>-60.0070.00-20.0030.00-20.0030.00-20.0035.00-20.0045.00-20.0050.00-20.0060.00-30.0070.00</div>
Coil 6 R	<div>-2.45-0.38-0.16-0.16-0.21-0.22-0.30-0.34</div> <div>-4.801.00-5.703.80-6.504.90-6.905.40-7.305.80-7.506.00-7.706.10-7.906.30</div>
Coil 6 Q	<div>2.553.415.617.9810.2312.5414.7317.02</div> <div>-30.0030.00-20.0025.00-20.0035.00-30.0050.00-35.0060.00-40.0070.00-50.0080.00-60.00100.00</div>

MM Factor 10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 M	<div>1.0051.0000.9940.9930.9910.9900.9900.990</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 0 P	<div>0.3400.4770.5180.4440.3810.3010.2500.214</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>
Coil 1 M	<div>0.9860.9830.9780.9770.9750.9740.9730.973</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 1 P	<div>0.1880.3590.4310.4470.4160.3440.2980.280</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>
Coil 2 M	<div>1.0101.0071.0061.0051.0041.0031.0031.001</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 2 P	<div>0.0910.1010.1550.1930.1750.2020.1700.202</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>
Coil 3 M	<div>1.0000.9990.9980.9970.9960.9950.9960.998</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 3 P	<div>0.0780.1170.1930.2200.2200.2010.1520.217</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>
Coil 4 M	<div>1.0091.0081.0081.0071.0061.0051.0041.003</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 4 P	<div>0.0820.1270.1590.2440.2480.2550.2560.221</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>
Coil 5 M	<div>1.0181.0181.0181.0171.0151.0161.0141.013</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 5 P	<div>0.0720.0100.0890.1150.0740.0270.0320.025</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>
Coil 6 M	<div>1.0111.0131.0121.0111.0101.0161.0151.013</div> <div>0.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.1000.9001.100</div>
Coil 6 P	<div>0.0040.0870.0370.1320.034-0.055-0.066-0.194</div> <div>-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000-2.0002.000</div>

PARMS TCID 0 TCID 1 Cal Temp T Factor

(degF)

IDs

1.617

0.832

61.0

1.04

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1515MA 10037719

DATE/TIME PERFORMED: Tue Sep 9 09:11:27 2014

DAYS SINCE CAL: 231

ZERO DATA(mv) 10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 R	0.002	0.003	0.003	0.001	-0.002	0.000	0.000	-0.001
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 0 Q	0.007	0.010	0.004	0.003	0.004	0.001	-0.001	-0.001
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 R	-0.002	-0.002	-0.002	-0.001	-0.003	-0.005	-0.008	-0.009
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 1 Q	-0.005	-0.006	-0.002	0.001	0.003	0.003	0.002	-0.002
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 R	0.005	0.006	0.004	0.003	0.005	0.007	0.009	0.010
	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 2 Q	-0.003	-0.000	-0.000	-0.002	-0.004	-0.005	-0.004	-0.001
	-1.000 1.000	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 R	0.005	0.006	0.006	0.008	0.006	0.005	0.003	0.004
	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 3 Q	-0.008	-0.009	0.001	-0.000	-0.001	0.001	0.001	-0.001
	-0.500 0.500	-0.200 0.200	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100	-0.100 0.100
Coil 4 R	-0.005	-0.007	-0.003	-0.004	-0.001	-0.005	0.001	0.003
	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 4 Q	-0.004	0.000	-0.002	-0.001	-0.002	-0.003	-0.003	-0.001
	-1.000 1.000	-0.400 0.400	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200	-0.200 0.200
Coil 5 R	0.005	-0.000	0.010	0.004	0.007	-0.005	-0.003	-0.001
	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400
Coil 5 Q	-0.003	-0.004	0.007	-0.001	-0.001	0.010	0.004	0.003
	-2.000 2.000	-0.800 0.800	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400	-0.400 0.400
Coil 6 R	0.016	-0.002	0.006	-0.012	-0.020	0.008	0.014	0.004
	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000
Coil 6 Q	-0.002	0.009	-0.005	-0.015	-0.027	-0.025	0.007	-0.005
	-5.000 5.000	-2.000 2.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000	-1.000 1.000

ELEC. GAINS 10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 M	125.58	124.06	121.17	116.75	111.33	104.64	97.19	88.65
	100.00 150.00	100.00 150.00	98.00 150.00	96.00 140.00	92.00 140.00	87.00 130.00	82.00 120.00	76.00 110.00
Coil 0 P	7.742	24.384	40.761	57.073	73.267	89.537	105.539	121.802
	6.000 9.000	19.000 28.000	32.000 47.000	44.000 66.000	57.000 85.000	70.000 100.000	82.000 120.000	95.000 140.000
Coil 1 M	217.66	215.05	210.00	202.38	193.00	181.36	168.46	153.80
	180.00 270.00	180.00 270.00	170.00 260.00	170.00 250.00	160.00 250.00	160.00 230.00	150.00 220.00	140.00 200.00
Coil 1 P	7.721	24.340	40.678	56.993	73.138	89.358	105.397	121.619
	6.000 9.000	19.000 28.000	32.000 48.000	45.000 67.000	57.000 86.000	70.000 110.000	83.000 120.000	96.000 140.000
Coil 2 M	436.36	431.15	421.32	406.49	387.86	364.90	339.19	309.91
	360.00 540.00	360.00 540.00	350.00 530.00	340.00 510.00	330.00 500.00	310.00 470.00	300.00 440.00	270.00 410.00
Coil 2 P	7.914	24.893	41.608	58.292	74.851	91.541	107.925	124.627
	6.000 9.000	19.000 29.000	32.000 48.000	45.000 67.000	58.000 87.000	71.000 110.000	84.000 130.000	96.000 140.000
Coil 3 M	708.02	698.81	681.50	655.20	623.16	584.35	541.72	494.60
	590.00 880.00	580.00 870.00	570.00 850.00	550.00 830.00	530.00 800.00	500.00 780.00	470.00 710.00	440.00 650.00
Coil 3 P	7.891	24.868	41.523	58.083	74.425	90.802	106.802	122.958
	6.000 10.000	20.000 29.000	33.000 49.000	46.000 69.000	59.000 89.000	72.000 110.000	85.000 130.000	98.000 150.000
Coil 4 M	1140.3	1122.6	1090.3	1042.7	985.6	918.8	847.8	771.0
	900.0 1400.0	900.0 1300.0	900.0 1300.0	850.0 1300.0	800.0 1200.0	800.0 1200.0	750.0 1100.0	700.0 1000.0
Coil 4 P	8.131	25.512	42.495	59.307	75.771	92.118	108.031	123.977
	6.000 10.000	20.000 30.000	33.000 50.000	46.000 70.000	60.000 90.000	73.000 110.000	86.000 130.000	99.000 150.000
Coil 5 M	6222.7	6222.2	6237.2	6187.2	6237.2	4845.5	4822.7	4812.4
	5000.0 7500.0	5000.0 7500.0	5000.0 7500.0	5000.0 7500.0	5000.0 7500.0	4000.0 7500.0	4000.0 7500.0	4000.0 7500.0

Coil 2 M

438.38	433.23	423.49	408.26	389.70	366.30	340.36	310.69
427.63	445.09	422.53	439.78	412.89	429.75	398.36	414.62
380.10	395.61	357.61	372.20	332.40	345.97	303.72	316.11

Coil 2 P

7.921	24.979	41.792	58.555	75.212	91.972	108.468	125.216
4.914	10.914	21.893	27.893	38.608	44.608	55.292	61.292
71.851	77.851	88.541	94.541	104.925	110.925	121.627	127.627

Coil 3 M

710.90	701.77	684.59	657.83	625.75	586.26	543.29	495.26
693.86	722.18	684.84	712.79	667.87	695.13	642.09	668.30
610.70	635.62	572.66	596.04	530.88	552.55	484.71	504.49

Coil 3 P

7.918	24.971	41.716	58.377	74.831	91.290	107.392	123.607
4.891	10.891	21.868	27.868	38.523	44.523	55.083	61.083
71.425	77.425	87.802	93.802	103.802	109.802	119.958	125.958

Coil 4 M

1144.3	1126.9	1094.7	1046.4	989.5	921.4	850.1	772.4
1117.5	1163.1	1100.2	1145.1	1068.5	1112.1	1021.8	1063.5
965.9	1005.3	900.4	937.2	830.9	864.8	755.6	786.4

Coil 4 P

8.149	25.608	42.691	59.598	76.163	92.598	108.597	124.617
5.131	11.131	22.512	28.512	39.495	45.495	56.307	62.307
72.771	78.771	89.118	95.118	105.031	111.031	120.977	126.977

Coil 5 M

2378.2	2347.5	2289.1	2198.4	2089.0	1954.2	1808.8	1646.9
2321.4	2416.1	2290.1	2383.6	2231.7	2322.8	2143.8	2231.3
2036.3	2119.4	1906.6	1984.5	1764.7	1836.7	1607.6	1673.2

Coil 5 P

8.261	25.976	43.406	60.750	77.873	94.980	111.744	128.616
5.265	11.265	22.916	28.916	40.268	46.268	57.512	63.512
74.532	80.532	91.552	97.552	108.222	114.222	124.999	130.999

Coil 6 M

6019.7	5938.8	5788.2	5555.7	5277.0	4932.7	4559.9	4146.1
5890.7	6131.2	5808.4	6045.5	5658.2	5889.2	5432.2	5653.9
5157.3	5367.8	4823.6	5020.5	4461.3	4643.3	4057.1	4222.7

Coil 6 P

8.227	26.112	43.656	61.105	78.333	95.564	112.452	129.412
5.240	11.240	23.052	29.052	40.502	46.502	57.858	63.858
75.008	81.008	92.123	98.123	108.916	114.916	125.849	131.849

INSTRUMENT CONFIGURATION

Source File: /dat1a/090505J/n777qG-tdg

CABLEHEAD

Diameter : 3.38"
 Length : 5.50'
 Weight : 24 lbs
 Series : CABL338
 Mnemonic : CBLH
 Measure Point: 2.75': CABLEHEAD TOP

SWIVEL

Diameter : 3.38"
 Length : 3.50'
 Weight : 68 lbs
 Series : 3944XD
 Mnemonic : SWVL

TTRM SUB

Diameter : 3.63"
 Length : 3.83'
 Weight : 62 lbs
 Series : 3981XA
 Mnemonic : TTRM
 Measure Point: 1.38': TEMP MP
 Measure Point: 1.13': RM MP

132.38'

CABLEHEAD TOP 129.63'

TEMP MP 120.93'
 RM MP 120.68'

WTS COMMON REMOTE

Diameter : 3.63"
Length : 6.36'
Weight : 126 lbs
Series : 3514XB
Mnemonic : WTS

DIGITAL SPECTRALOG

Diameter : 3.63"
Length : 7.31'
Weight : 130 lbs
Series : 1329XA
Mnemonic : DSL
Measure Point: 1.60': GR MP

GR MP — 107.47'

COMPENSATED NEUTRON

Diameter : 3.63"
Length : 7.59'
Weight : 150 lbs
Series : 2446XA
Mnemonic : CN
Measure Point: 2.63': LSN MP
Measure Point: 2.24': SSN MP

LSN MP — 100.92'
SSN MP — 100.52'

Z-DENSILOG

Diameter : 4.88"
Length : 11.22'
Weight : 360 lbs
Series : 2234XA
Mnemonic : ZDL
Measure Point: 3.19': CAL MP
Measure Point: 2.47': LSD MP
Measure Point: 2.07': SSD MP

CAL MP — 90.26'
LSD MP — 89.54'
SSD MP — 89.14'

KNUCKLE JOINT (DOUBLE)

Diameter : 3.38"
Length : 4.65'
Weight : 90 lbs
Series : 3939XA
Mnemonic : KNJT

4 ARM BOW SPRING CENTRALIZER
Diameter : 3.38"
Length : 4.12'
Weight : 72 lbs
Series : 4341XA
Mnemonic : CENT

DIGITAL ORIENTATION

Diameter : 3.38"
Length : 10.81'
Weight : 110 lbs
Series : 4401XB
Mnemonic : ORIT
Measure Point: 0.00': ORIENT MP

ORIENT MP — 67.49'

ARRAY ACOUSTILOG ELECTRONICS, 8 CHANNEL

Diameter : 3.38"
Length : 7.82'
Weight : 102 lbs
Series : 1677EA
Mnemonic : XMAC

CROSS MULTIPOLE ARRAY ACOUSTILOG

Diameter : 3.75"
Length : 10.91'
Weight : 224 lbs
Series : 1678MC
Mnemonic : XMF1
Measure Point: 5.50': R8
Measure Point: 5.00': R7
Measure Point: 4.50': R6
Measure Point: 4.00': R5
Measure Point: 3.50': R4
Measure Point: 3.00': R3
Measure Point: 2.50': R2
Measure Point: 2.00': R1

R8 — 54.26'
R7 — 53.76'
R6 — 53.26'
R5 — 52.76'
R4 — 52.26'
R3 — 51.76'
R2 — 51.26'
R1 — 50.76'

SHEAR WAVE ACOUSTILOG

Diameter : 3.63"
Length : 5.00'
Weight : 135 lbs
Series : 1678PB
Mnemonic : XMAC

MULTI-POLE ARRAY ACOUSTIC

Diameter : 3.88"
Length : 7.92'
Weight : 170 lbs
Series : 1678BA
Mnemonic : XMAC
Measure Point: 6.42': QUADRUPOLE T5
Measure Point: 6.42': MONOPOLE T2
Measure Point: 4.67': Y-DIPOLE T4
Measure Point: 4.67': X-DIPOLE T3
Measure Point: 2.92': MONOPOLE T1

MULTI-POLE ARRAY ACOUSTIC

Diameter : 3.38"
Length : 4.32'
Weight : 58 lbs
Series : 1678FA
Mnemonic : MAC

4 ARM BOW SPRING CENTRALIZER

Diameter : 3.38"
Length : 4.12'
Weight : 72 lbs
Series : 4341XA
Mnemonic : CENT

HIGH DEFINITION INDUCTION TOOL

Diameter : 3.62"
Length : 27.13'
Weight : 415 lbs
Series : 1515XA
Mnemonic : HDIL
Measure Point: 13.91': SP MP
Measure Point: 7.44': XMTR MP

MONOPOLE T2 42.26'
QUADRUPOLE T5 42.26'

X-DIPOLE T3 40.51'
Y-DIPOLE T4 40.51'

MONOPOLE T1 38.76'


SP MP 14.19'

XMTR MP 7.73'

BULL PLUG 3 3/8

TOTAL LENGTH: 132.38'
TOTAL WEIGHT: 2396 lbs
MAX DIAMETER: 0'4.88"

0.00'

	COMPANY	WPX ENERGY INC		FILE NO:	US090505J
	WELL	FEDERAL BCU 542-30-198		API NO:	05103119960000
	FIELD	SULPHUR CREEK			
	COUNTY	RIO BLANCO	STATE	COLORADO	
	LOCATION:	SHL: 2063' FSL 2135' FEL BHL: 2411' FSL 650' FEL		ELEVATIONS:	SEC 30 T1N R98W RIG: CYCLONE 29 BCU 33-30-198
	SEC 30	TWP 1N	RGE 98W	KB 6759 FT DF GL 6738 FT	
				DATE	09-SEP-2014