BAKER HUGHES

HIGH DEFINITION INDUCTION LOG SM
COMPENSATED Z-DENSILOG SM
CALIPER LOG
COMPENSATED NEUTRON LOG
GAMMA RAY LOG

FILE NO: 0H092481	COMPANY: WPX ENERGY ROCKY MTN LLC
API NO: 05103121390000	WELL: FEDERAL RGU 444-23-198
	FIELD: SULPHUR CREEK
	COUNTY: RIO BLANCO STATE: C0

Ver. 4.01
RIG: AZTEC 1000
PAD:
RGU 43-23-198
S23 T1S R98W

LOCATION:
SHL: 1028' FSL 645' FEL
BHL: 477' FSL 631' FEL
SEC 23 TWP 1S RGE 98W

OTHER SERVICES
NONE

PERMANENT DATUM GL ELEVATION 6567 FT
LOG MEASURED FROM KB ABOVE P.D.
DRILL. MEAS. FROM KB

ELEVATIONS:
KB 6592 FT
DF
GL 6567 FT

DATE		21-Nov-2014			
RUN	TRIP	1	1		
SERVICE ORDER		OH092481			
DEPTH DRILLER		12662 FT			
DEPTH LOGGER		11122 FT			
BOTTOM LOGGED INTERVAL		11114 FT			
TOP LOGGED INTERVAL		3941 FT			
CASING DRILLER		9.625 IN @ 3947 FT		@	
CASING LOGGER		3941 FT			
BIT SIZE		8.75/8.50/7.875			
TYPE OF FLUID IN HOLE		LSND			
DENSITY	VISCOSITY	9.4 LB/G	80 CP		
PH	FLUID LOSS	8.9	4.4 C3		
SOURCE OF SAMPLE		FLOWLINE			
RM AT MEAS. TEMP.		.74 OHMM @ 66 DEGF		@	
RMF AT MEAS. TEMP.		.56 OHMM @ 61 DEGF		@	
RMC AT MEAS. TEMP.		.925 OHMM @ 61 DEGF		@	
SOURCE OF RMF	RMC	CALCULATED	CALCULATED		
RM AT BHT		.56 OHMM @ 225 DEGF		@	
TIME SINCE CIRCULATION		12 HR			
MAX. RECORDED TEMP.		226 DEGF			
EQUIP. NO.	LOCATION	6670	GRAND JCT		
RECORDED BY		D SMITH			
WITNESSED BY		F MOORE			

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.

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	36 LB/F		0 FT	3947 FT

BOREHOLE RECORD

BIT SIZE	FROM	TO
8.75 IN	3947 FT	8810 FT
8.50 IN	8810 FT	10930 FT
7.875 IN	10930 FT	12663 FT

REMARKS

RUN 1 TRIP 1: BVOL CVOL CALCULATED IN CUBIC FT
CVOL CALCULATED USING PROPOSED 4.5" CASING
CALIPER VERIFIED INSIDE CASING

BIT SIZE: CASING DEPTH TO 8810' = 8.75
BIT SIZE: 8810' TO 10,930' = 8.50
BIT SIZE: 10,930 TO TD = 7.875

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 STAND OFF

HIT SEVERAL BRIDGES GOING IN WELL
BRIDGED AT 11,058'/ STUCK IN WELL AT 11,058'.
PULLED 70% MAX TENSION TO GET FREE AS INSTRUCTED BY COMPANT REPRESENTATIVE
BRIDGED AGAIN AT 11,122'/ LOGGED OUT AS INSTRUCTED BY COMPANY REPRESENTATIVE

STUCK TOOL AT 6647'/CLOSED CALIPER AND WENT DOWN HOLE TO FREE TOOL/SPLICED LOG
NOTE: LARGE WASHOUTS THROUGHOUT THIS PORTION OF WELL

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES

CREW: OLSON/SMITH/SANTUCCI

RIG: AZTEC 1000

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWIVEL	3944XD	10125796	FREE
1	1	TTRM	3981XA	10516527	FREE
1	1	TELEMETRY	3514XA	10197691	FREE
1	1	GAMMA RAY	1329XA	10196895	FREE
1	1	NEUTRON	2446XA	10202048	DECENTRALIZED
1	1	DENSITY	2234XA	153015	DECENTRALIZED
1	1	KNUCKLE	3939XA	10399278	FREE
1	1	HDIL EA	1515EA	10318637	STOOD OFF
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: 5

Plotted: Sat Nov 22 00:58:51 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/OH092481/n777q03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3833.750 ft BOTTOM DEPTH: 6768.534 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
Y AXIS CALIPER	FILTER ()	medium (1)		TOP	BOTTOM
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER ()	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
SP-SPDH	FILTER ()	heavy (3)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	8.750	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	66.0	degF	"	"
	MUD SAMPLE RES	0.740	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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)	MUD SAMP DERIVED		"	"

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

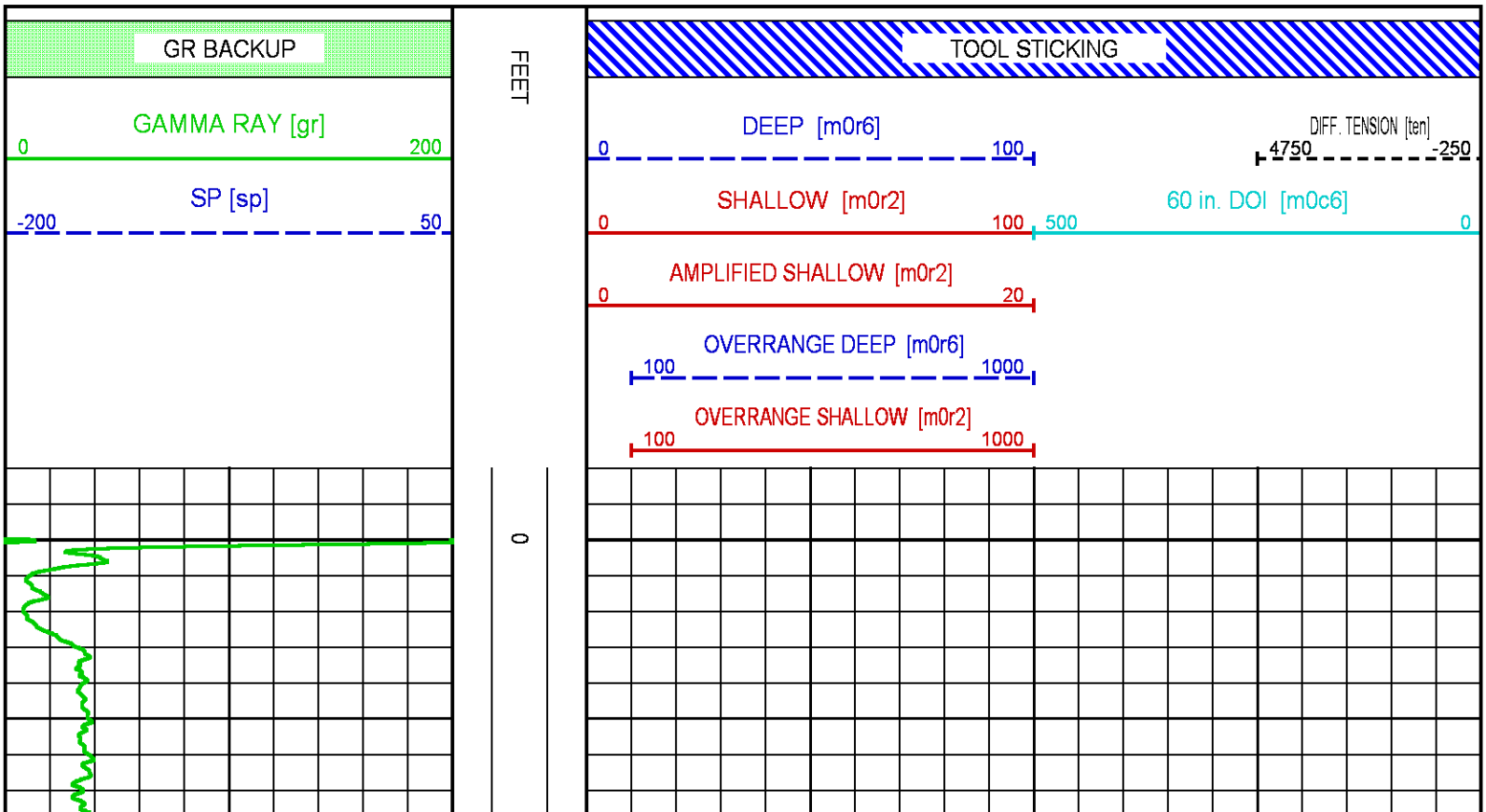
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:GR	Nov 21 21:49:14 2014	GAMMA RAY
F1:M0C6	Nov 21 21:49:14 2014	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	Nov 21 21:49:14 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	Nov 21 21:49:14 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Nov 21 21:49:14 2014	SPONTANEOUS POTENTIAL
F1:TEN	Nov 21 21:49:14 2014	DIFFERENTIAL TENSION

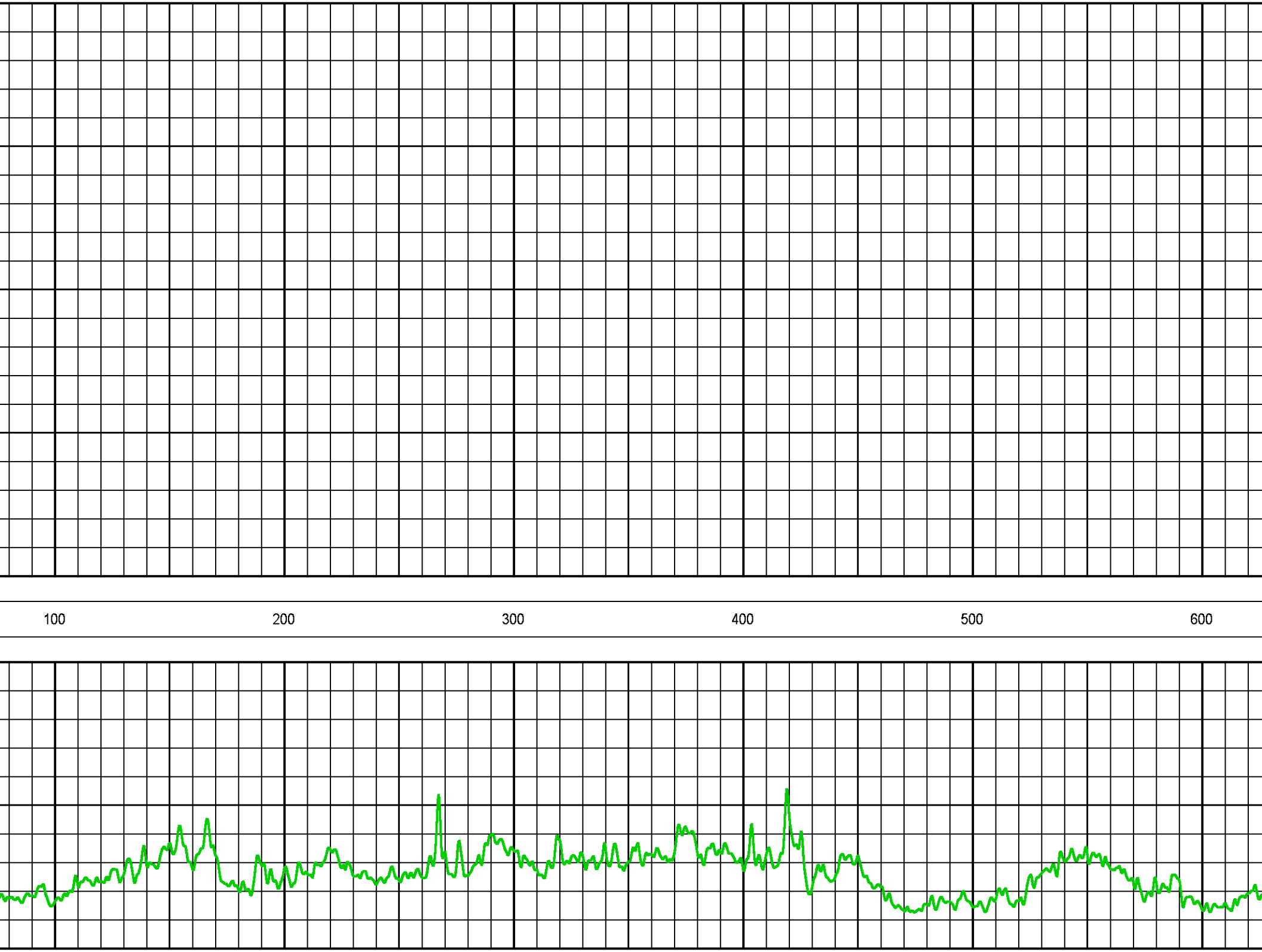
CURVE MEASURE POINT OFFSET

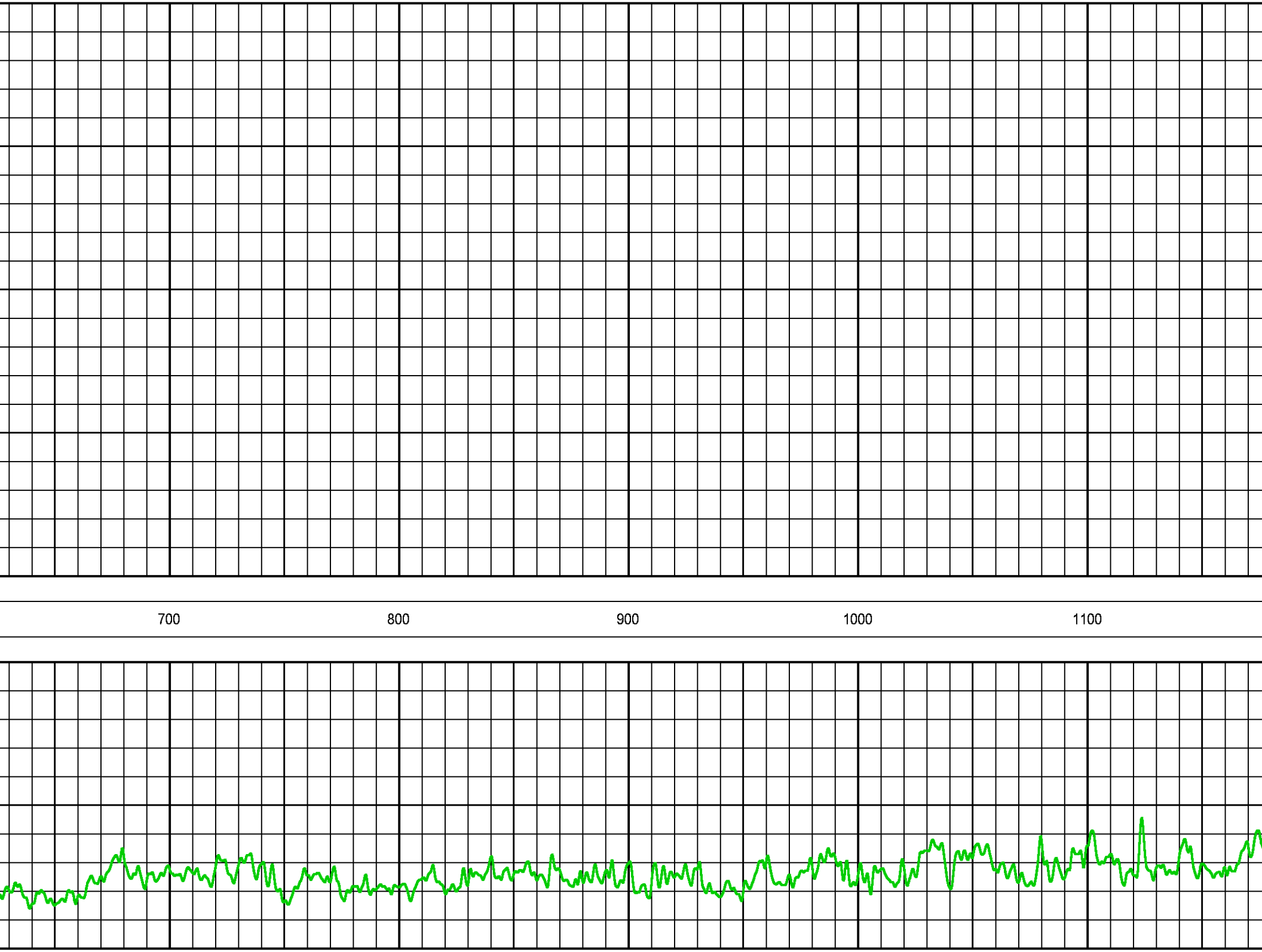
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
GR	52.25	M0R2	8.00	SP	14.00		
M0C6	8.00	M0R6	8.00	TEN	0.00		

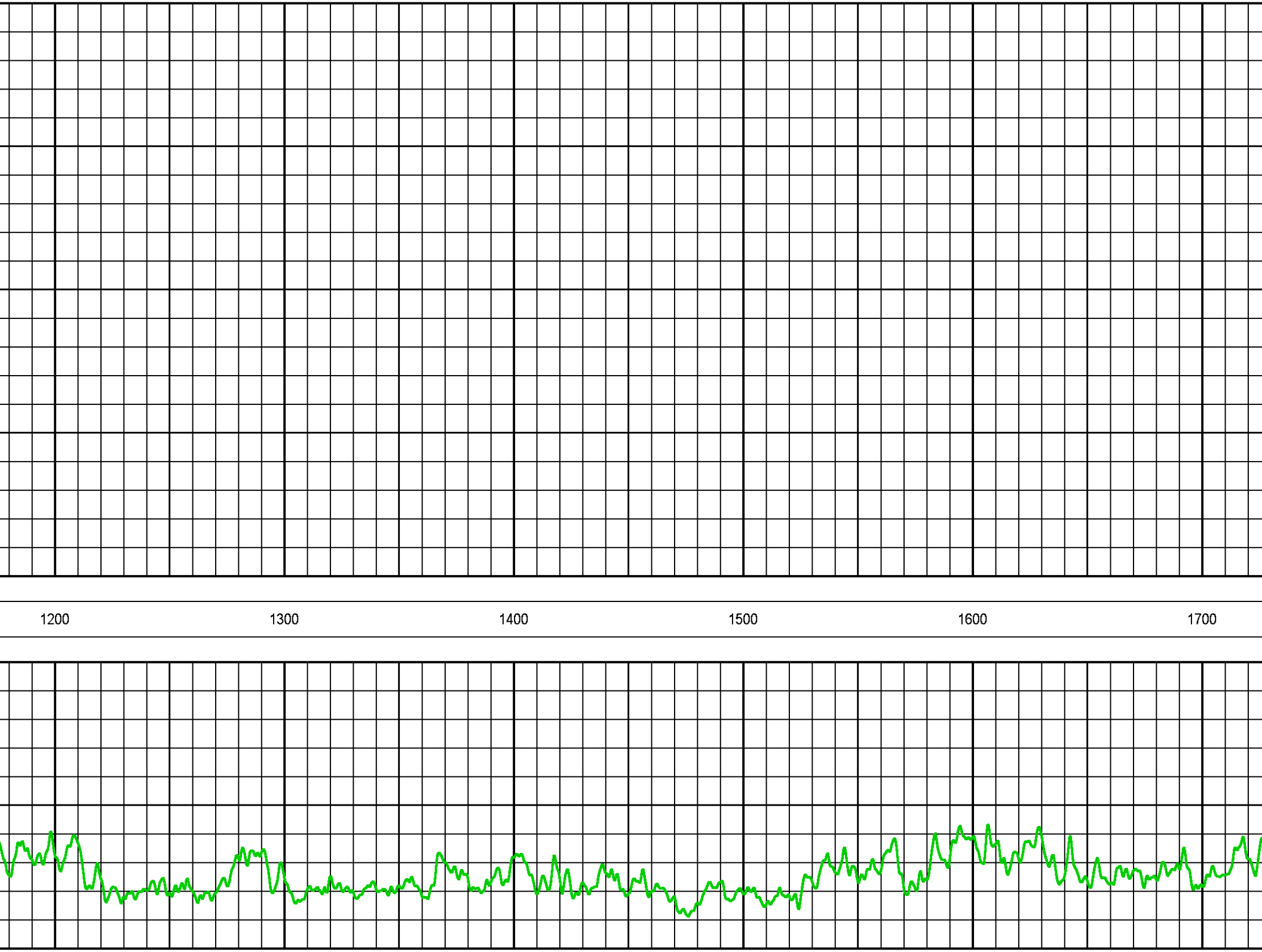
Presentation : cas6685:WPX_2IN.fvpdf [2"/100' Scale]
Plot Interval : -12.5 - 11131.8 Feet

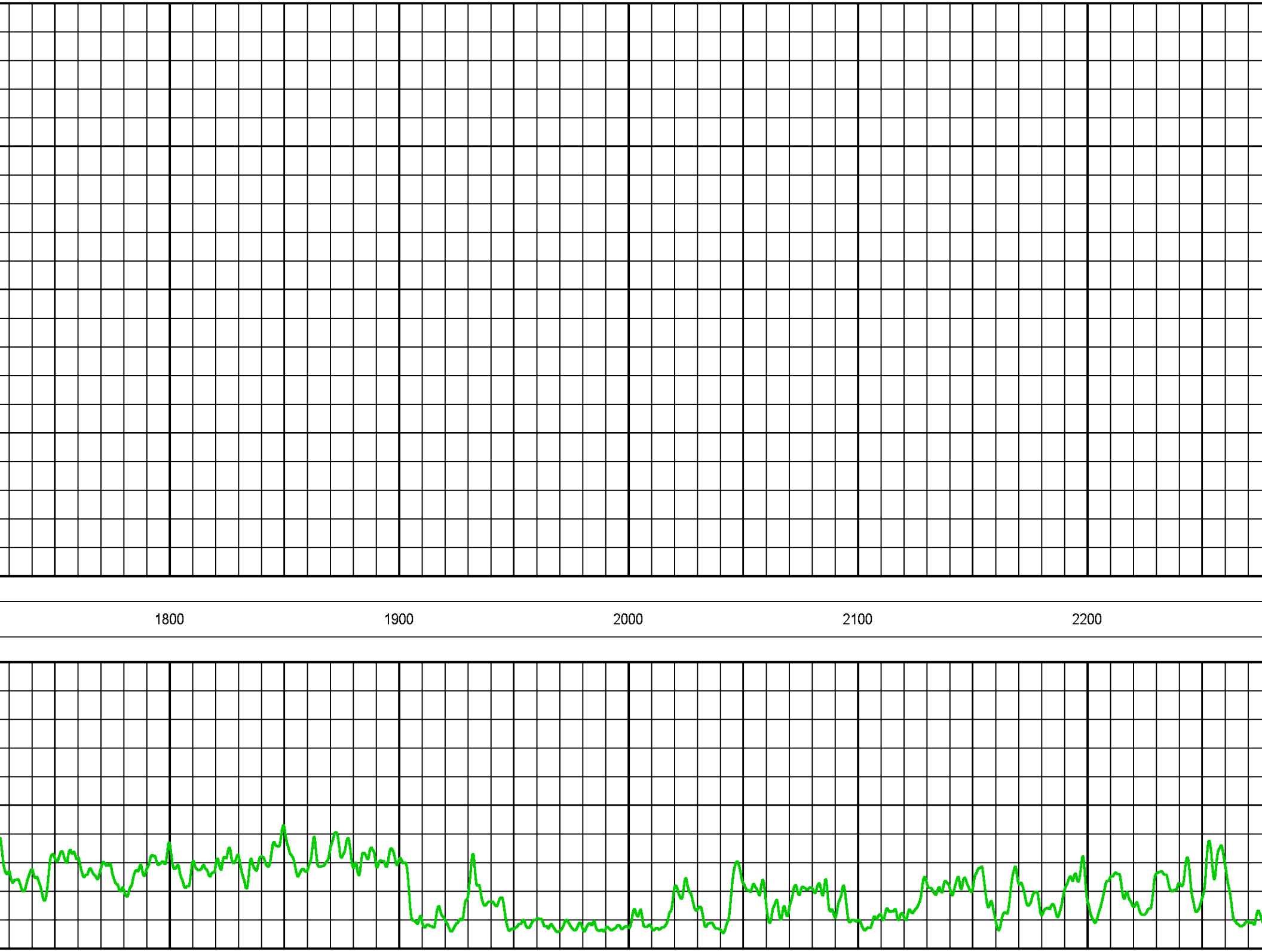
Data File 1 : F1 : cas6685:/dat1a/OH092481/n777qs.xtf
Created On : Nov 21 21:49:14 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL RGU 444-23-198
Field : SULPHUR CREEK
File Interval : -12.5 - 11131.8 Feet
OCT : n777q

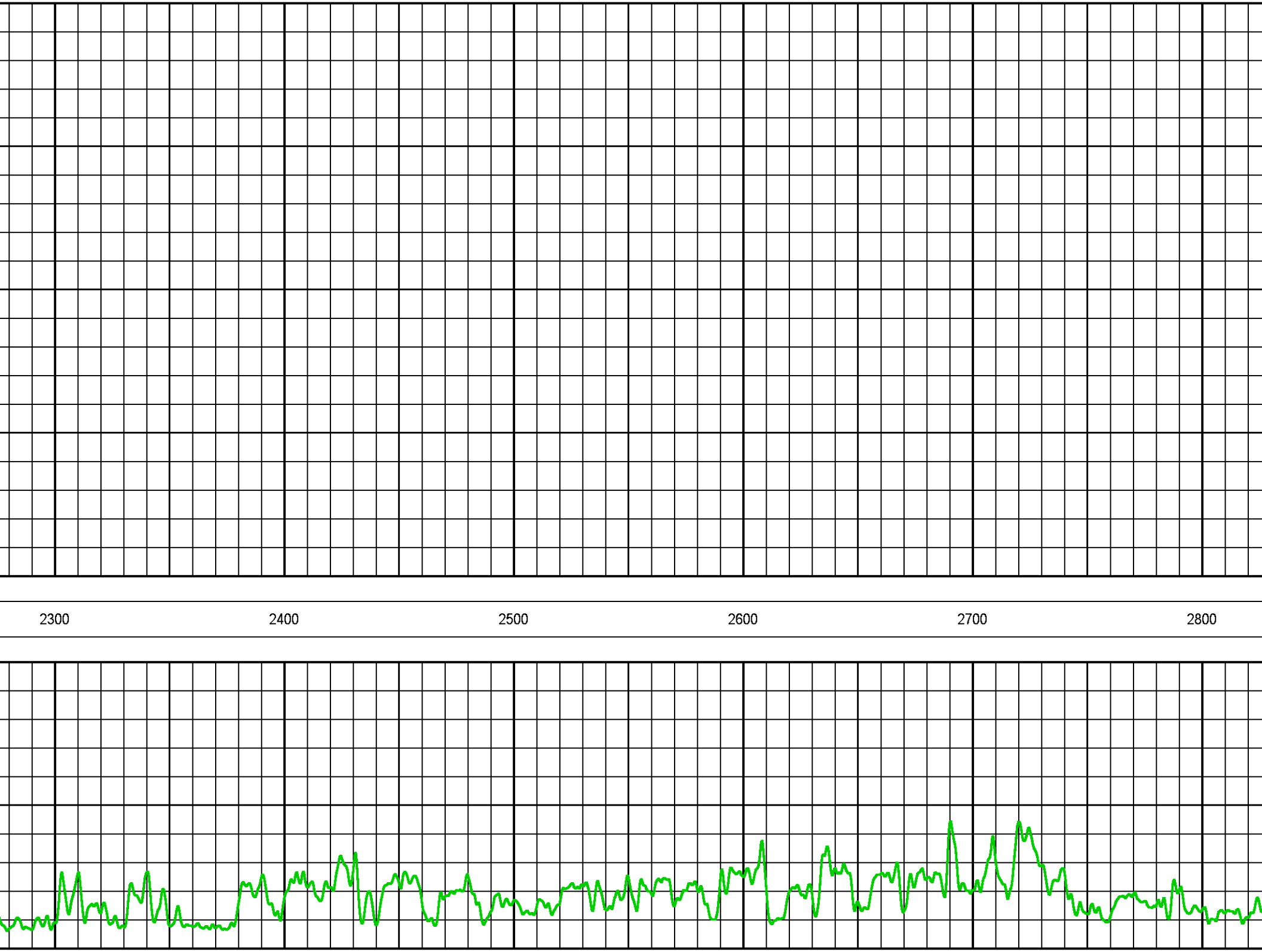


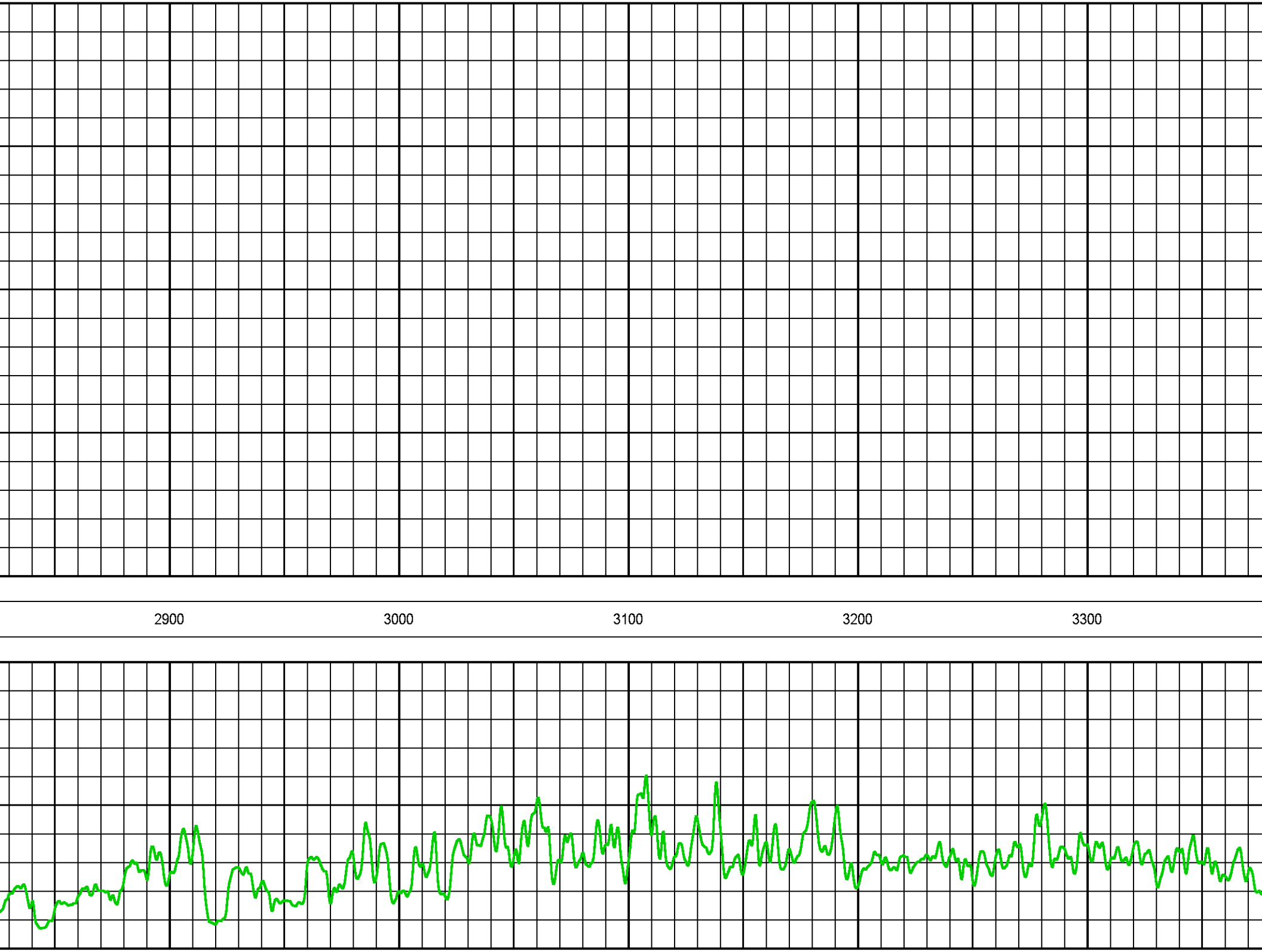

100
200
300
400
500
600

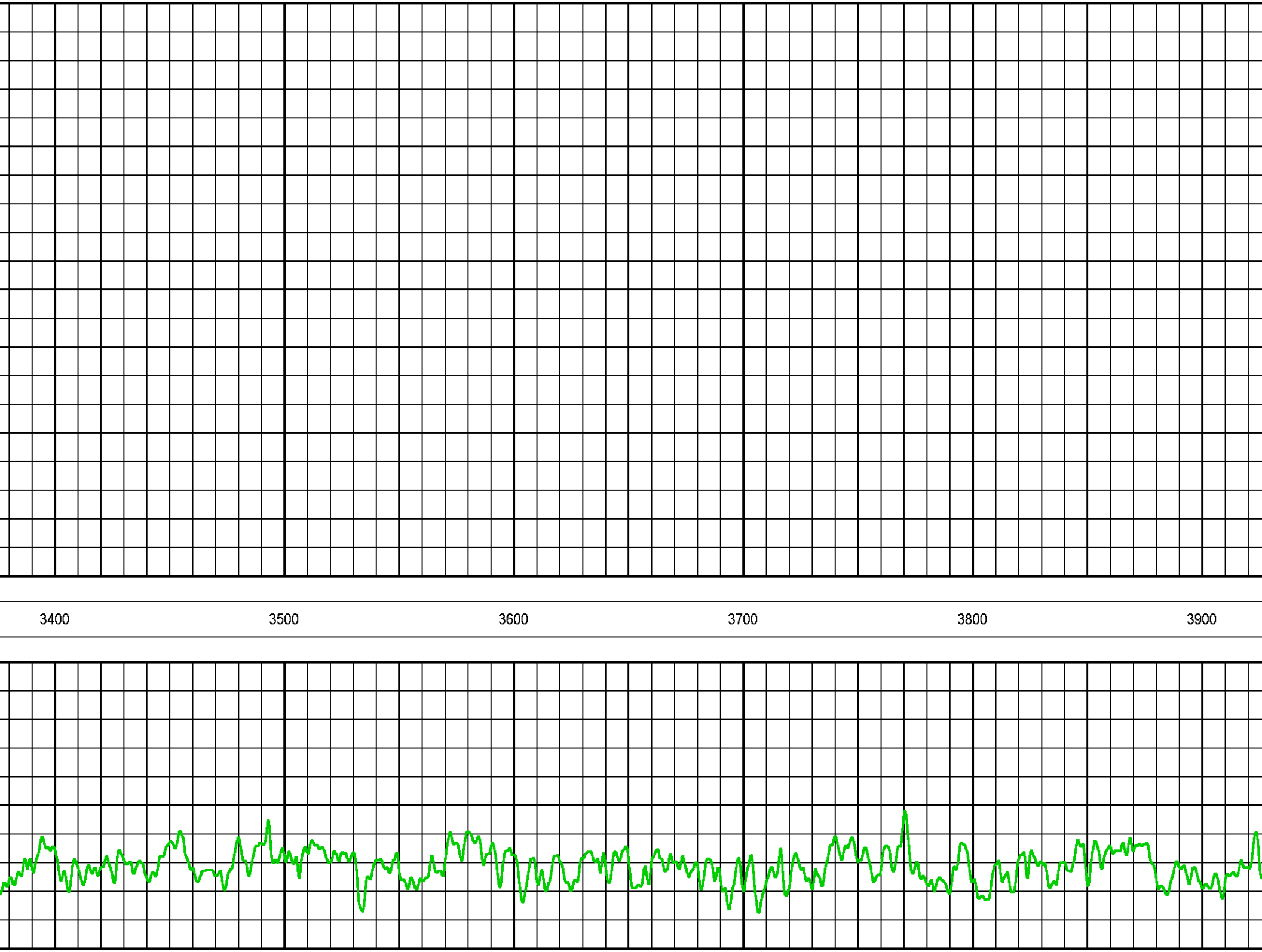

700
800
900
1000
1100

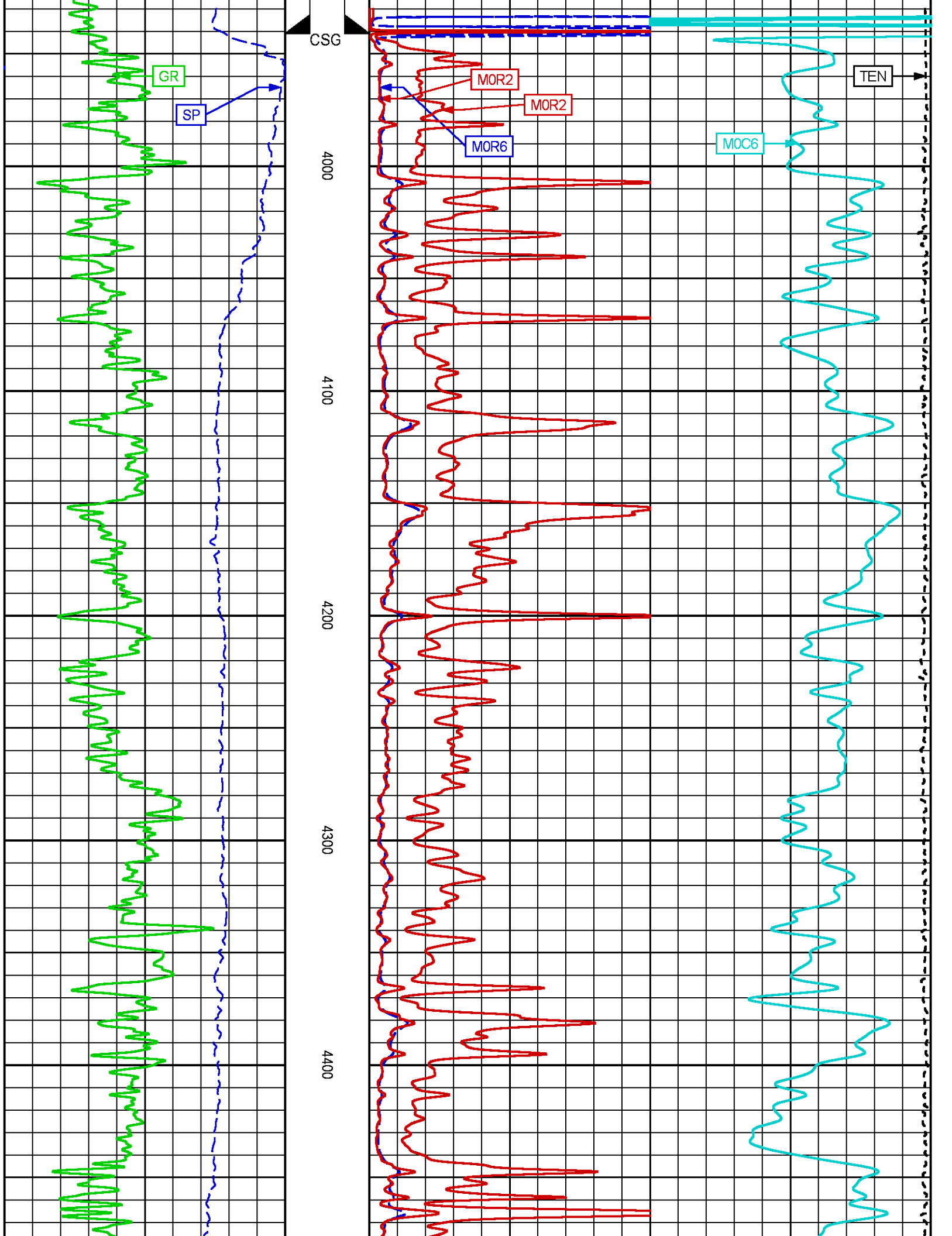

1200
1300
1400
1500
1600
1700

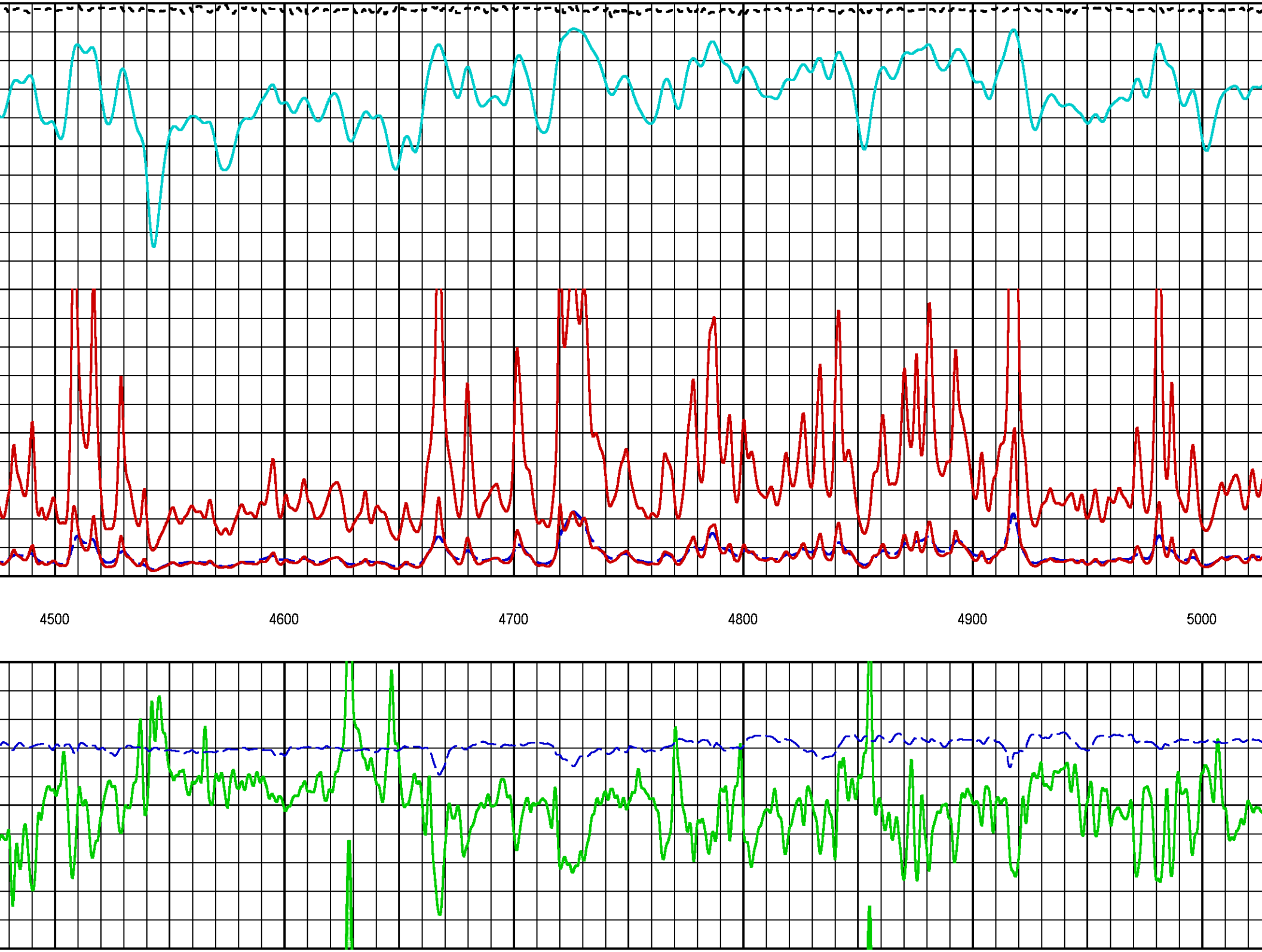

1800
1900
2000
2100
2200

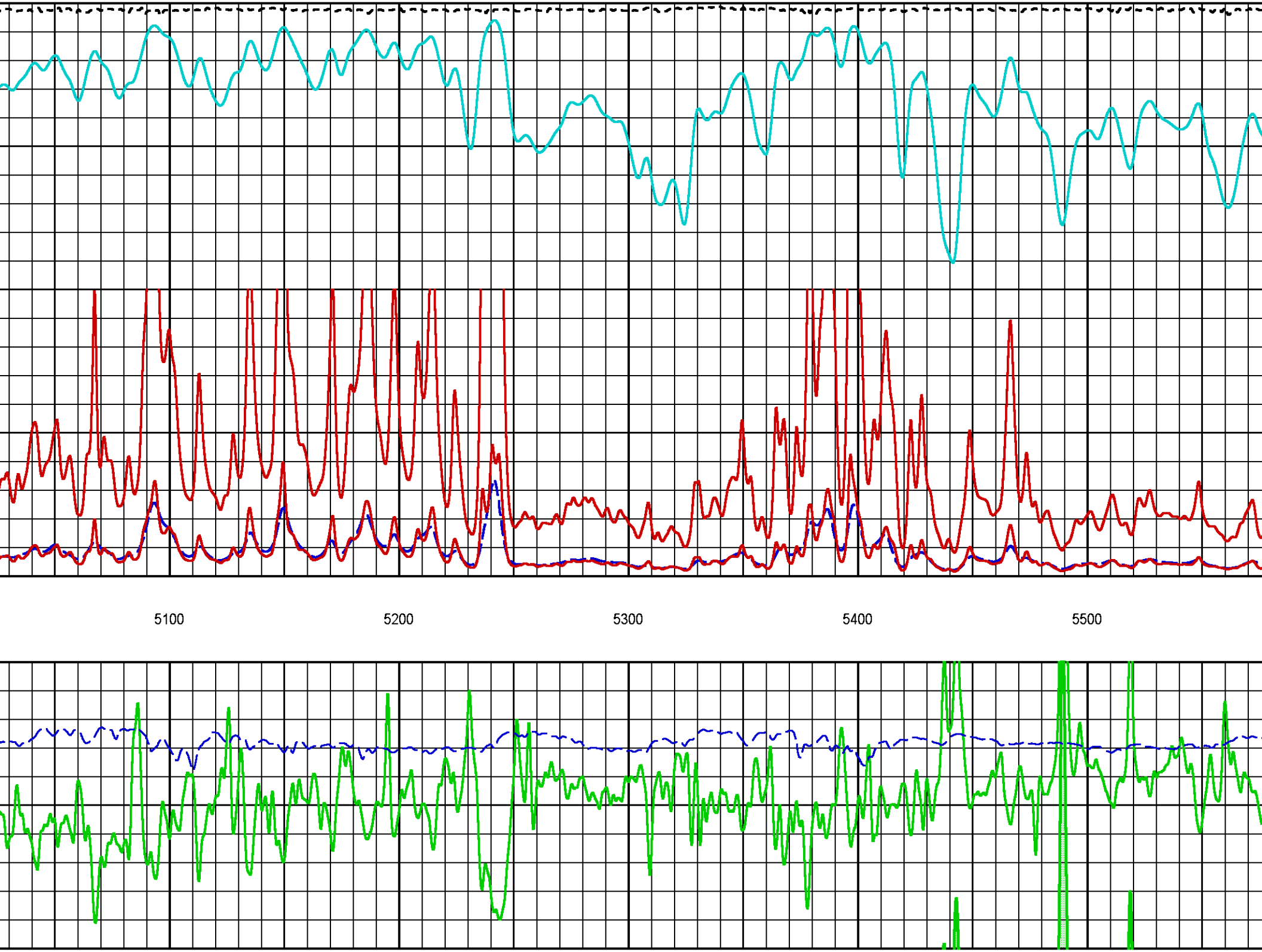

2300
2400
2500
2600
2700
2800


2900
3000
3100
3200
3300


3400
3500
3600
3700
3800
3900


CSG
GR
SP
M0R2
M0R2
M0R6
TEN
M0C6
4000
4100
4200
4300
4400

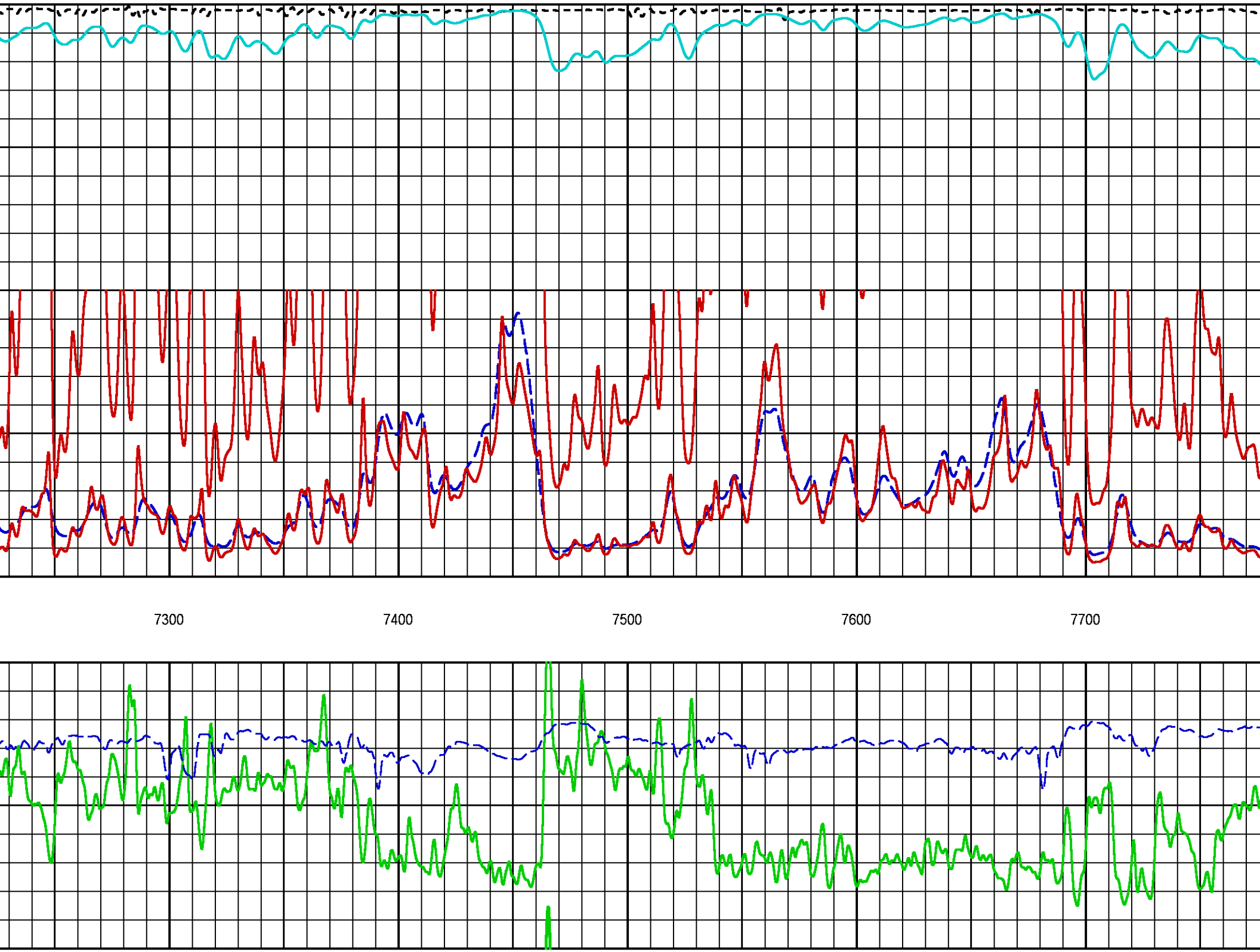

4500
4600
4700
4800
4900
5000

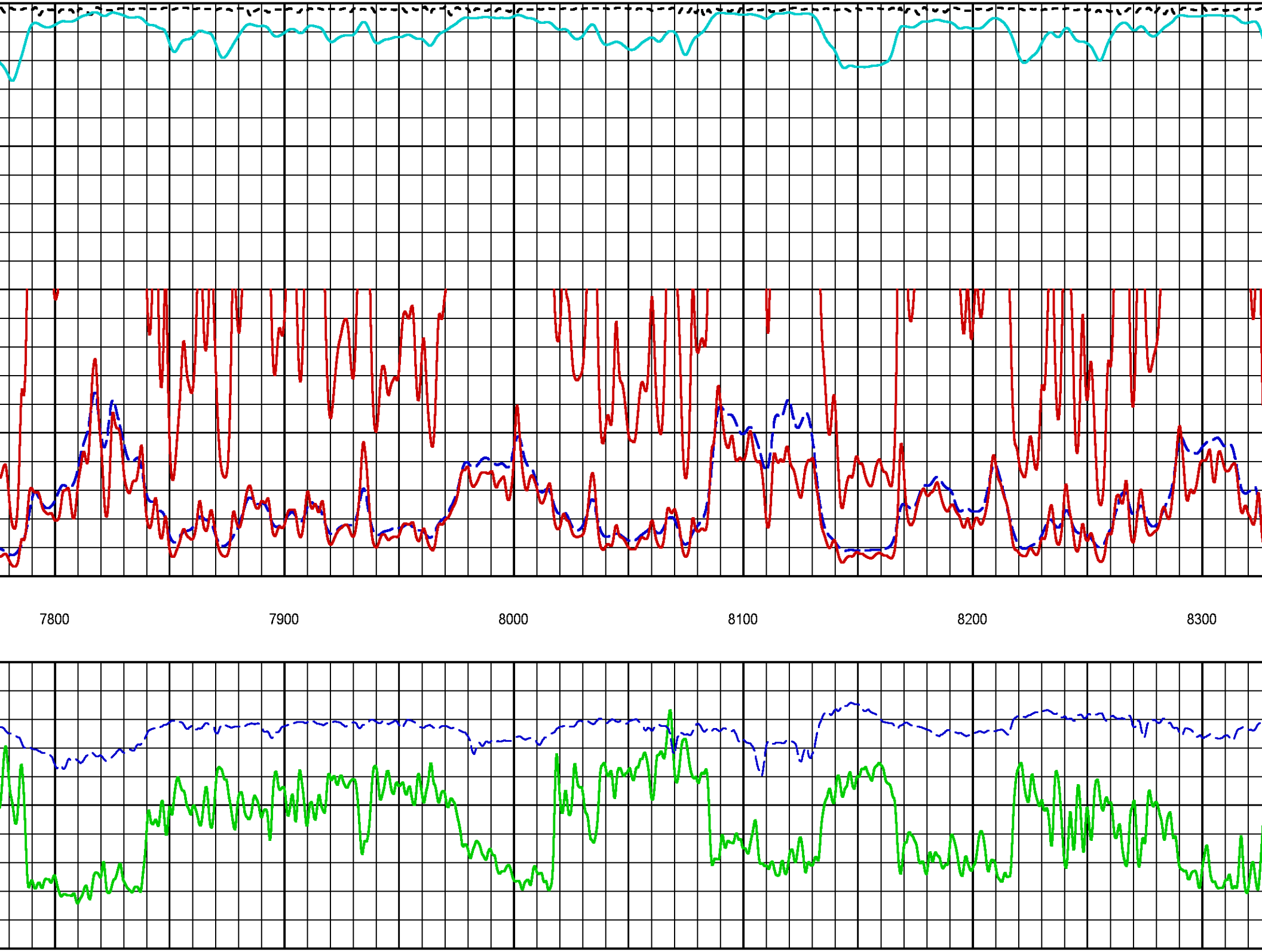

5100
5200
5300
5400
5500

5600
5700
5800
5900
6000
6100

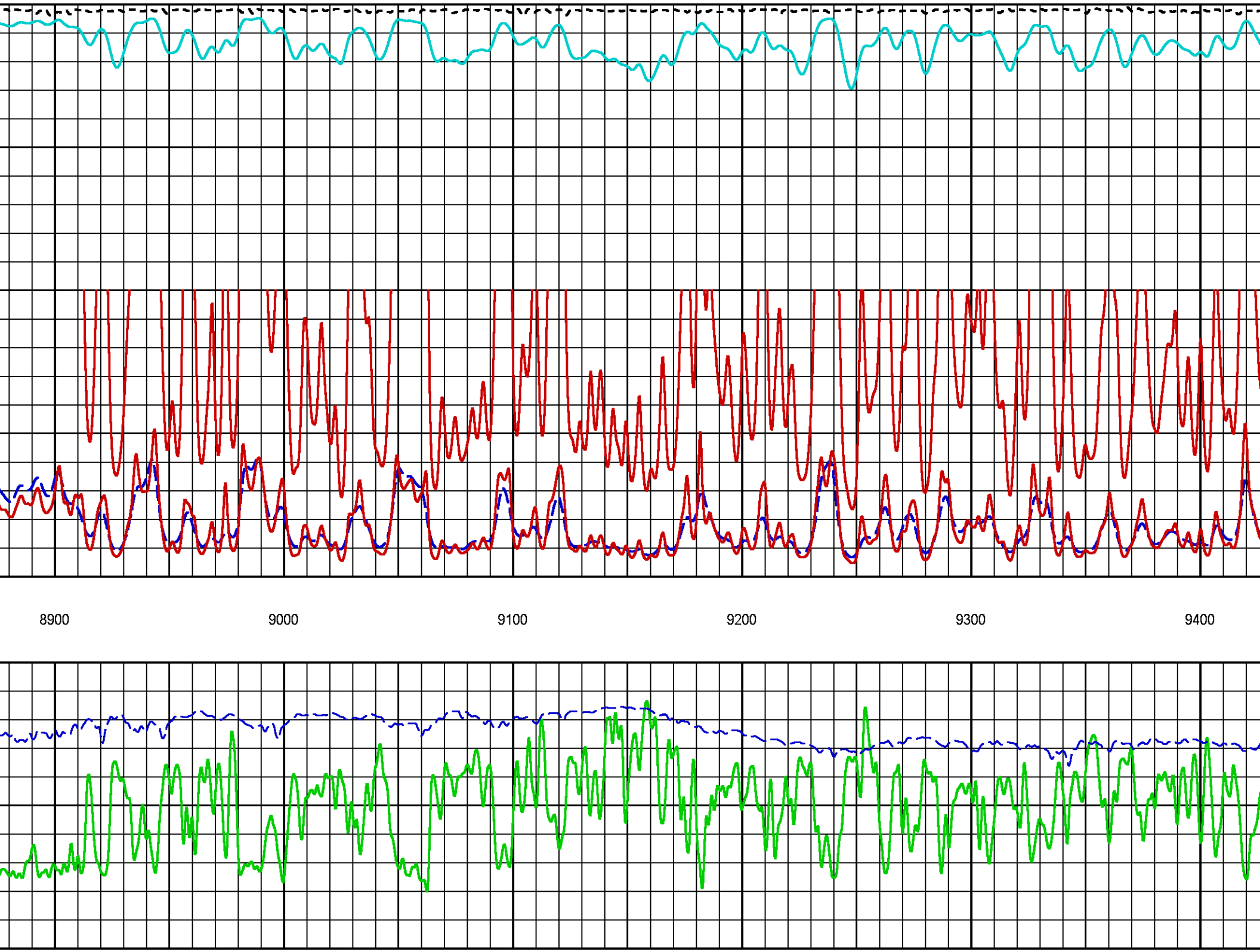
6200
6300
6400
6500
6600

6700
6800
6900
7000
7100
7200

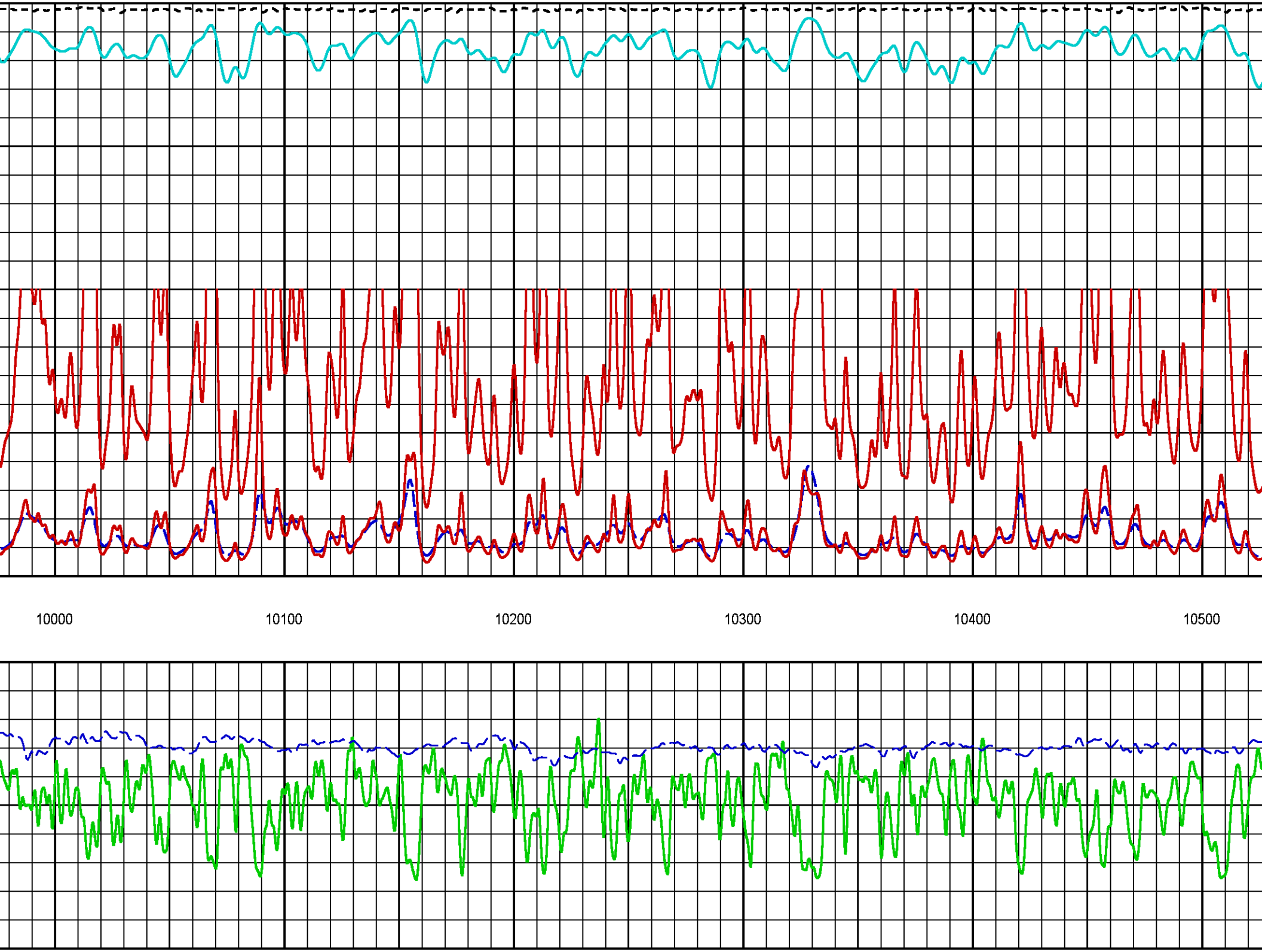

7300
7400
7500
7600
7700

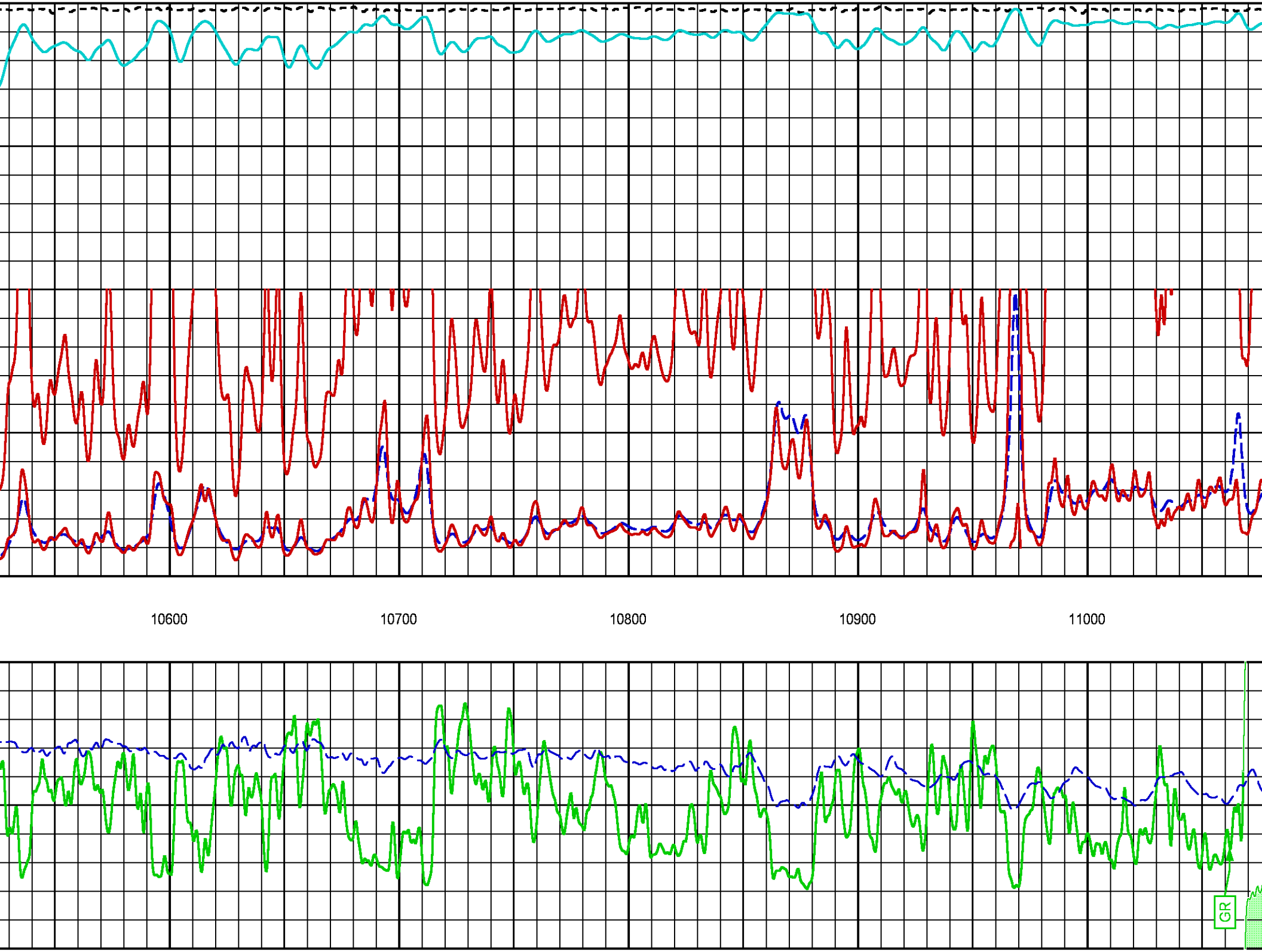

7800
7900
8000
8100
8200
8300

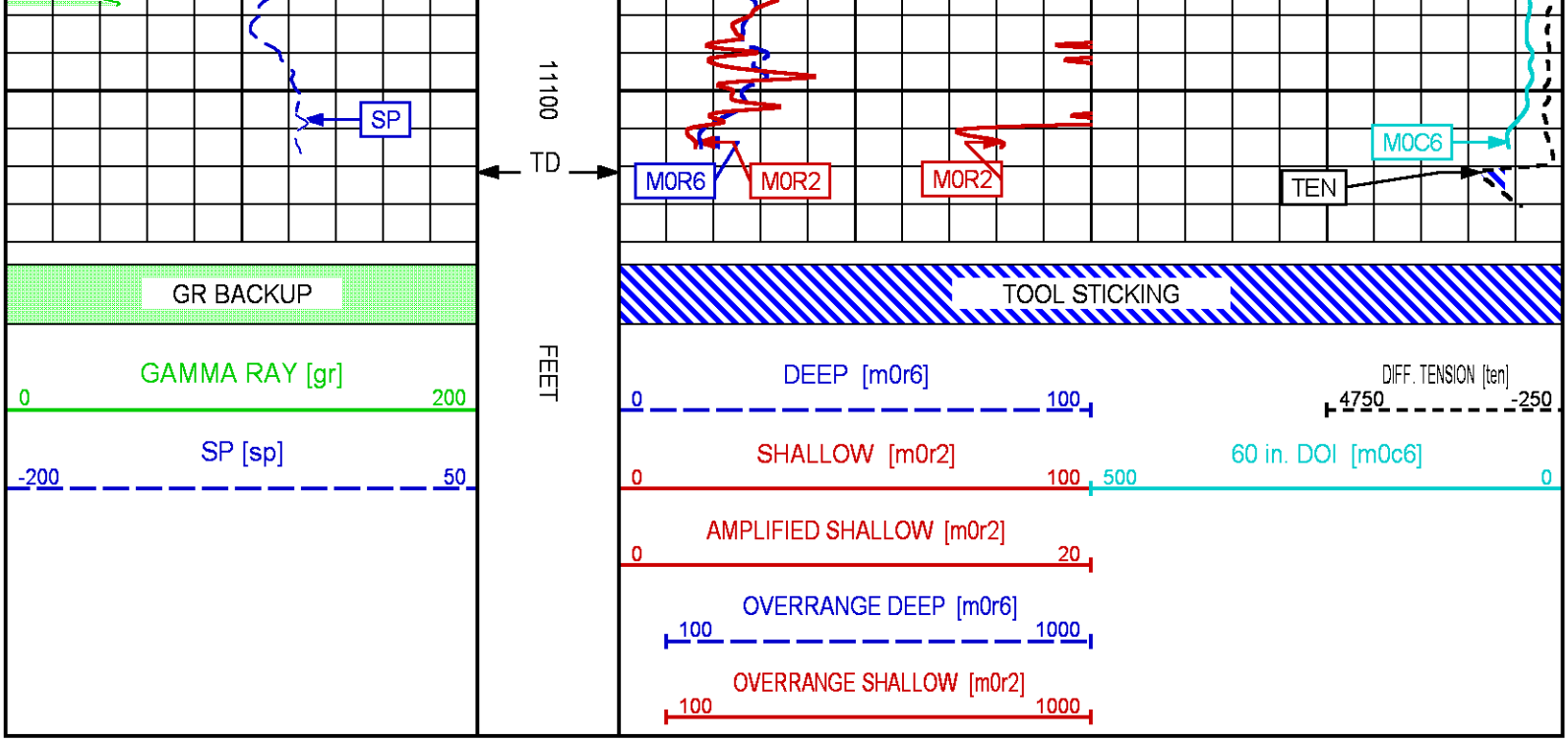
8400
8500
8600
8700
8800


8900
9000
9100
9200
9300
9400

9500
9600
9700
9800
9900


10000
10100
10200
10300
10400
10500


10600
10700
10800
10900
11000
GR



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: 5

Plotted: Sat Nov 22 00:56:31 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/OH092481/n777q03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3833.750 ft BOTTOM DEPTH: 6768.534 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
Y AXIS CALIPER	FILTER ()	medium (1)		TOP	BOTTOM
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 ()	heavy (3)		"	"

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	8.750	in	"	"

MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	66.0	degF	"	"
	MUD SAMPLE RES	0.740	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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)	MUD SAMP DERIVED		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	2220	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	13.250	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	Nov 21 21:49:14 2014	BIT SIZE
F1:BVOL	Nov 21 21:49:14 2014	BOREHOLE VOLUME
F1:CAL	Nov 21 21:49:14 2014	CALIPER
F1:CNCF	Nov 21 21:49:14 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Nov 21 21:49:14 2014	CEMENT VOLUME
F1:GR	Nov 21 21:49:14 2014	GAMMA RAY
F1:M2R1	Nov 21 21:49:14 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Nov 21 21:49:14 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Nov 21 21:49:14 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Nov 21 21:49:14 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Nov 21 21:49:14 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	Nov 21 21:49:14 2014	SPONTANEOUS POTENTIAL
F1:TEN	Nov 21 21:49:14 2014	DIFFERENTIAL TENSION
F1:ZCOR	Nov 21 21:49:14 2014	DENSITY CORRECTION

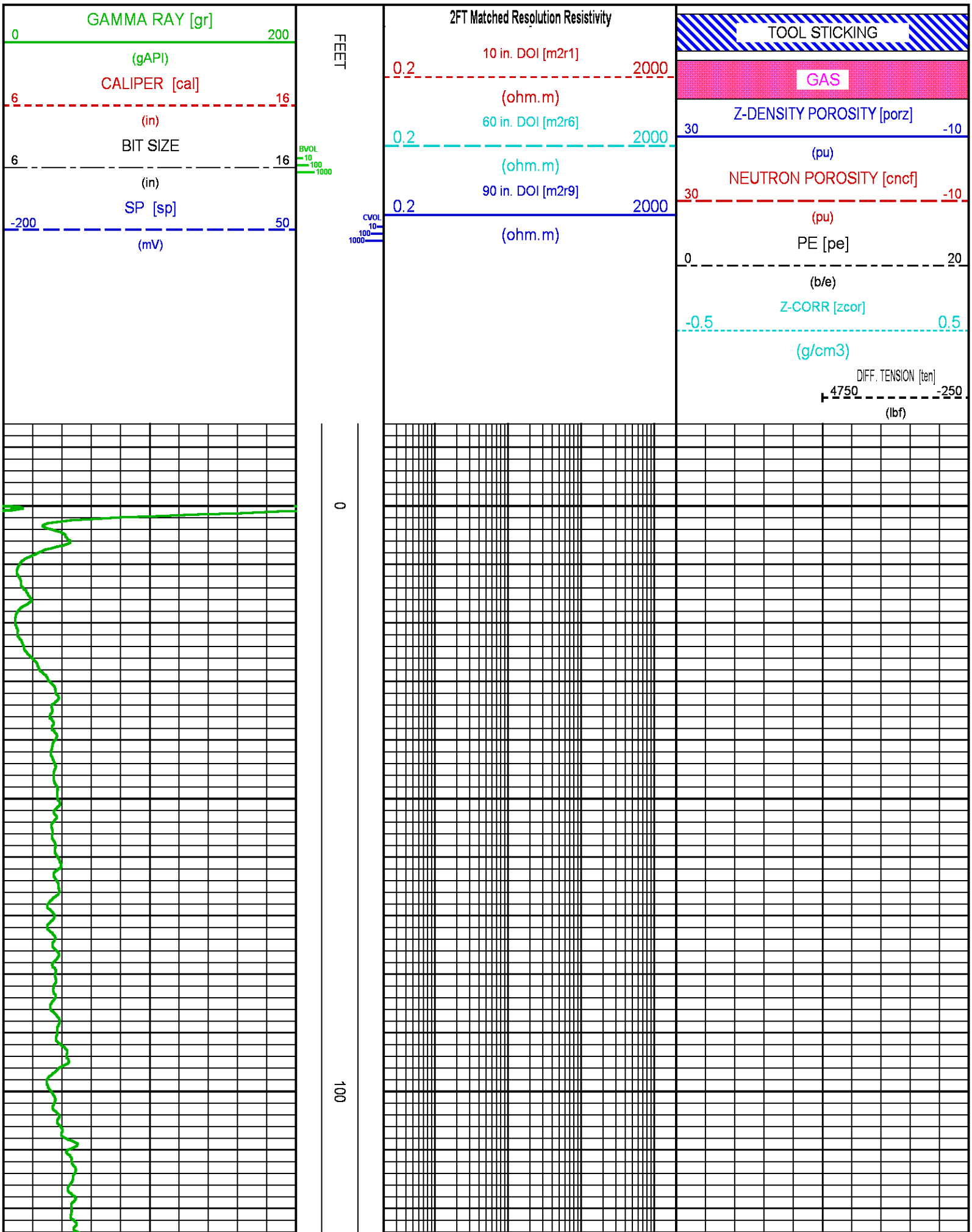
CURVE MEASURE POINT OFFSET

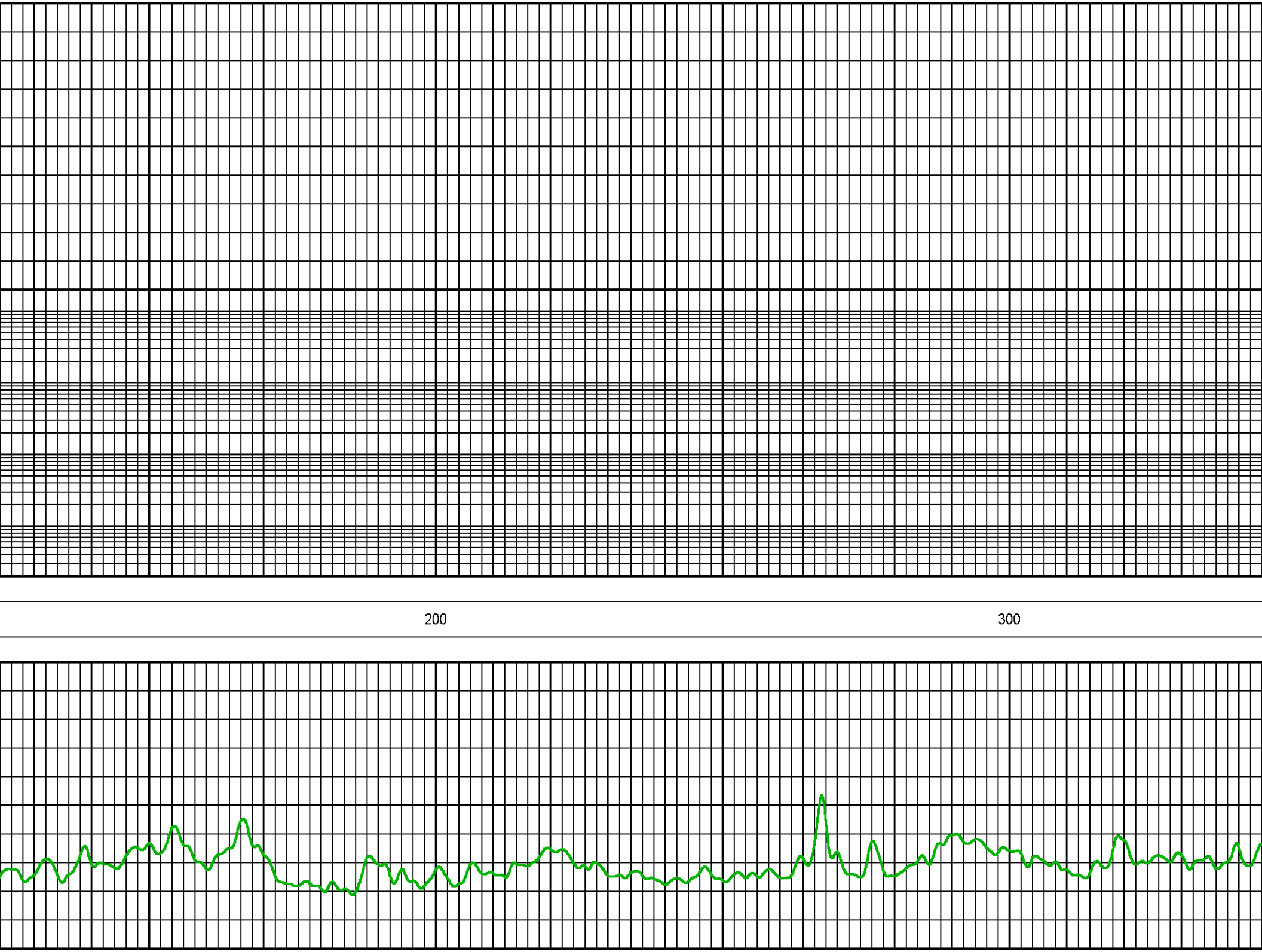
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	52.25	M2R9	8.00	SP	14.00
CAL	35.00	M2R1	8.00	PE	34.25	TEN	0.00
CNCF	45.25	M2R6	8.00	PORZ	34.25	ZCOR	34.25

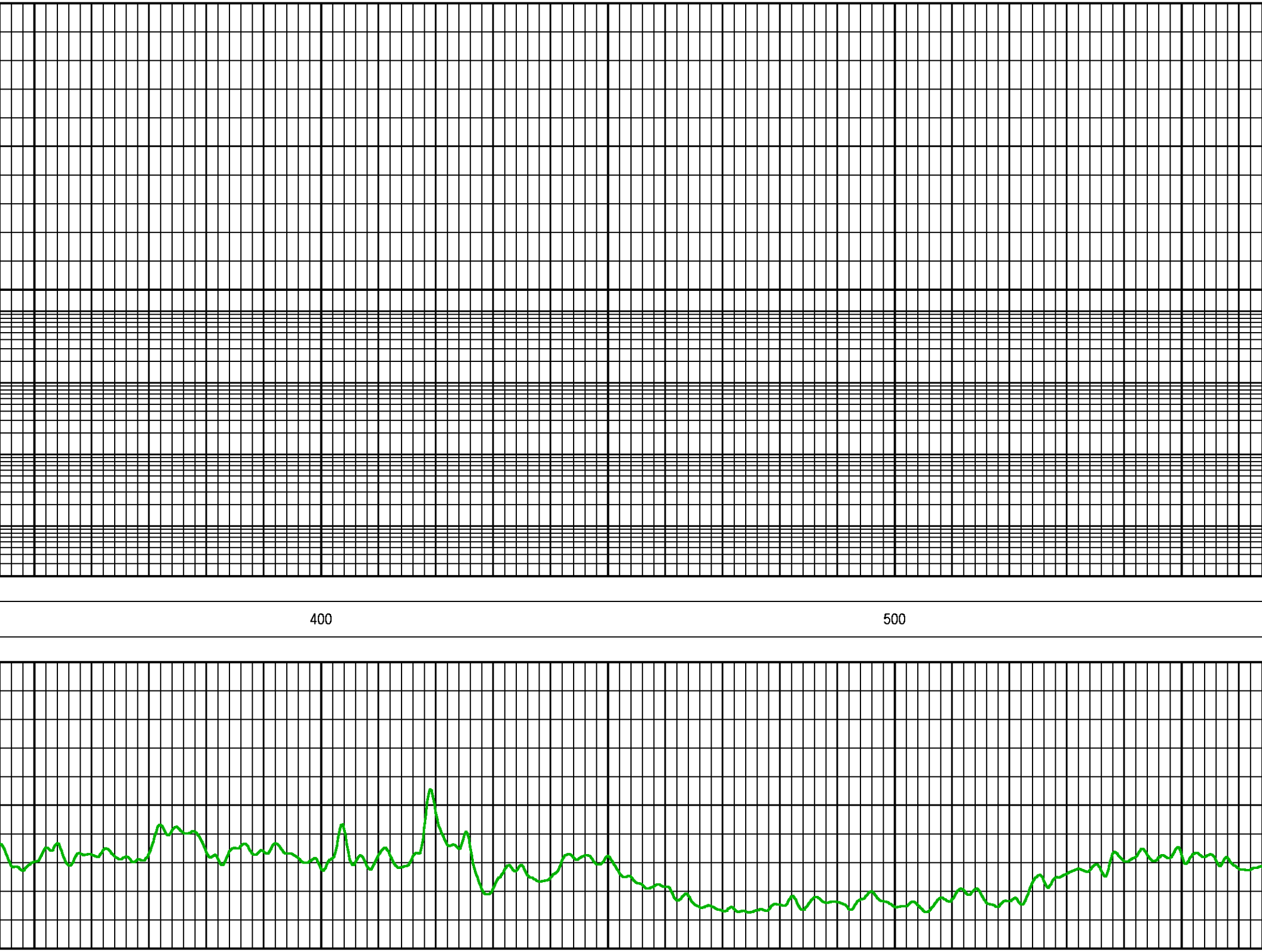
Presentation : cas6685:WPX_MAIN.fvpdf [5"/100' Scale]
Plot Interval : -12.5 - 11131.8 Feet

Data File 1 : F1 : cas6685:/dat1a/OH092481/n777qs.xtf
Created On : Nov 21 21:49:14 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL RGU 444-23-198
Field : SULPHUR CREEK

Field : SULPHUR CREEK
File Interval : -12.5 - 11131.8 Feet
OCT : n777q

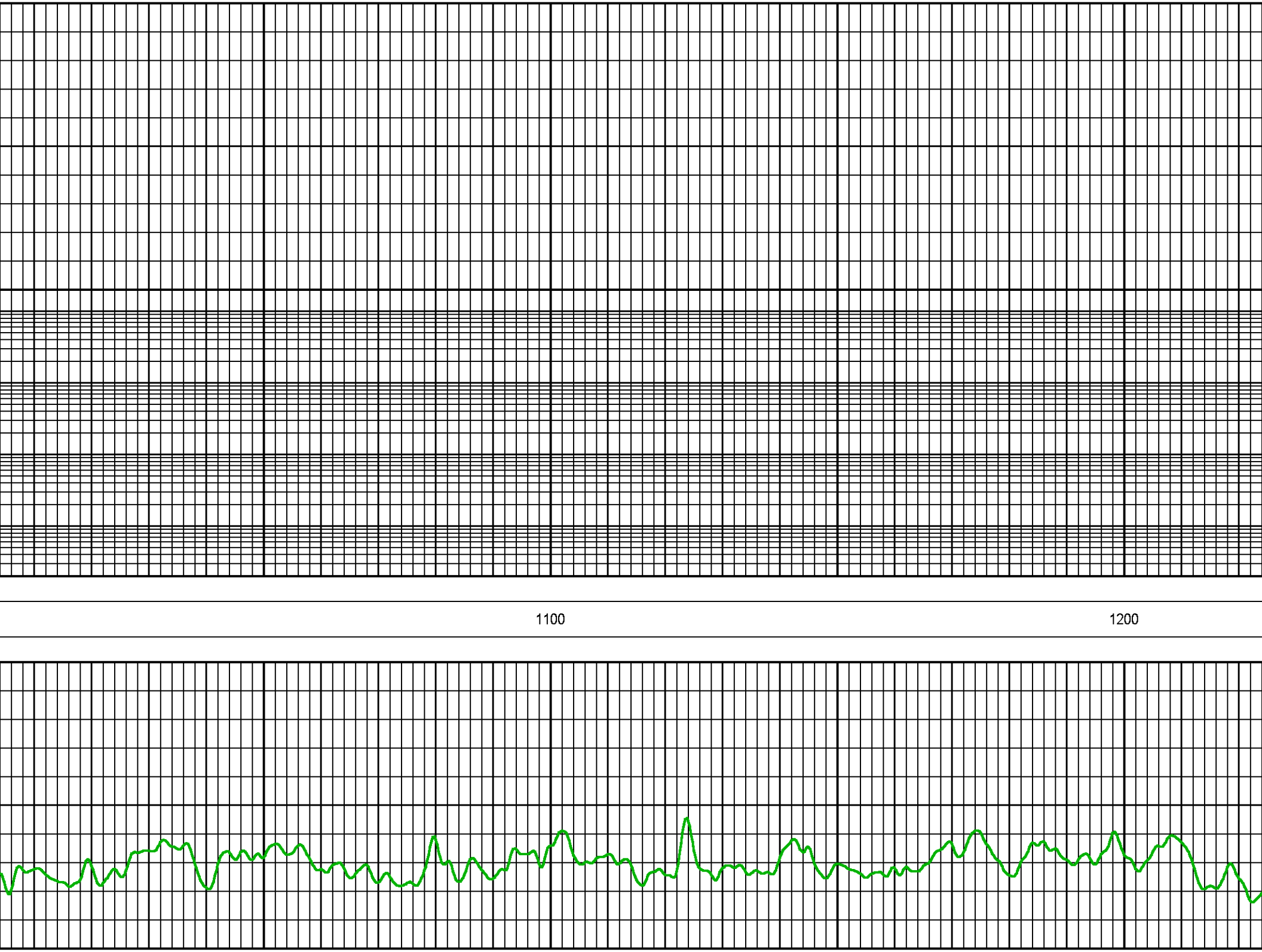


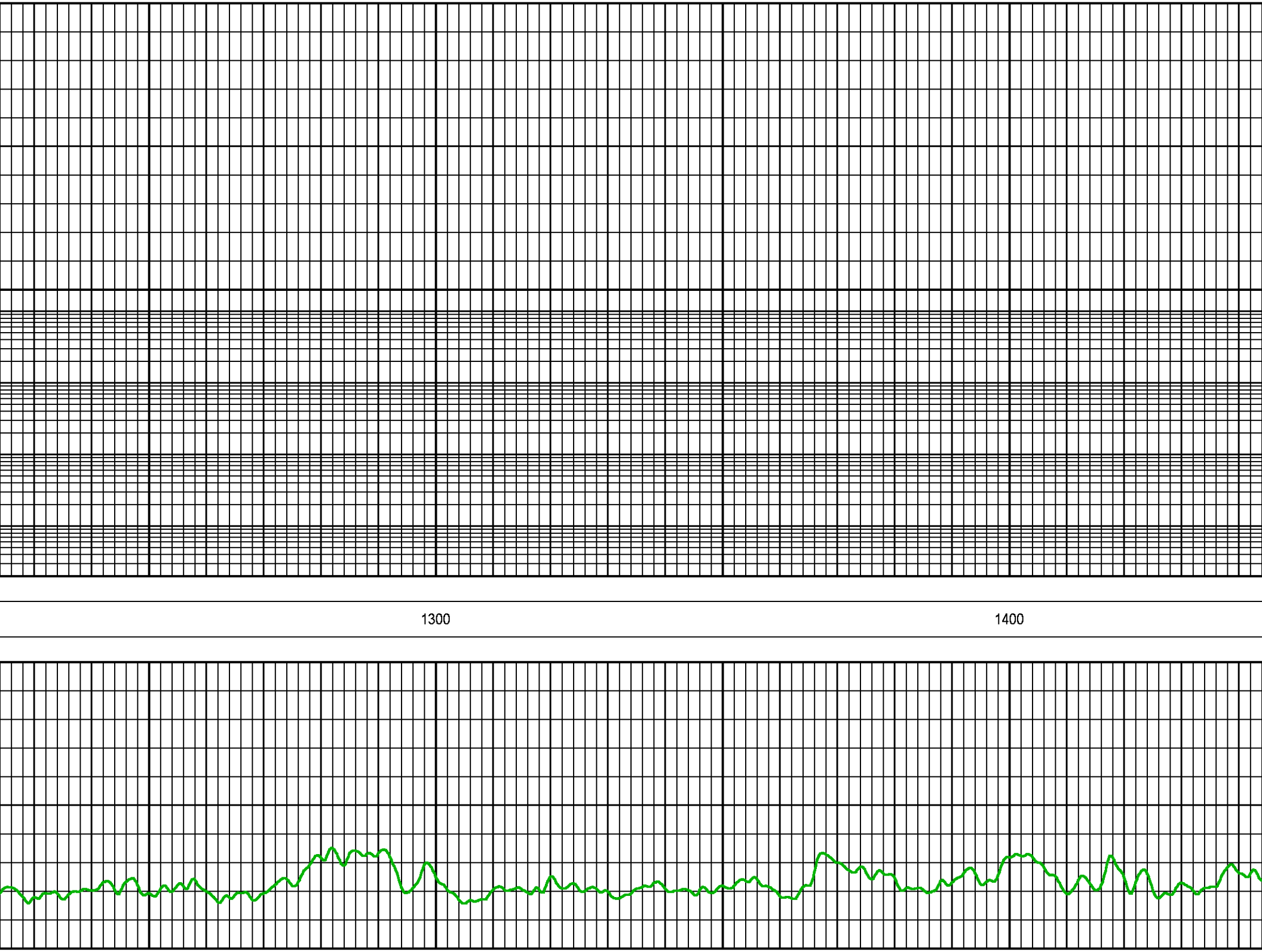

200
300

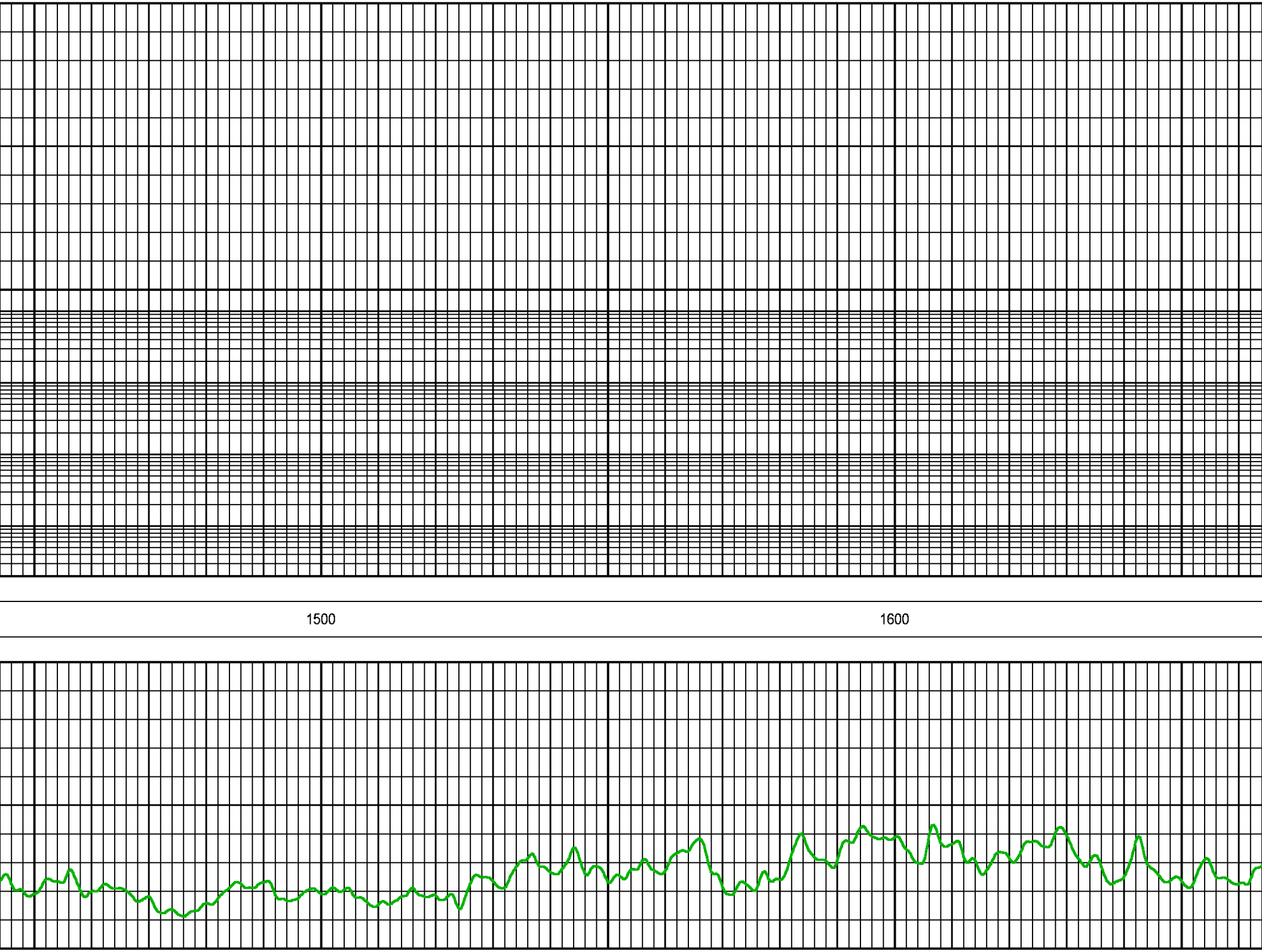

400
500

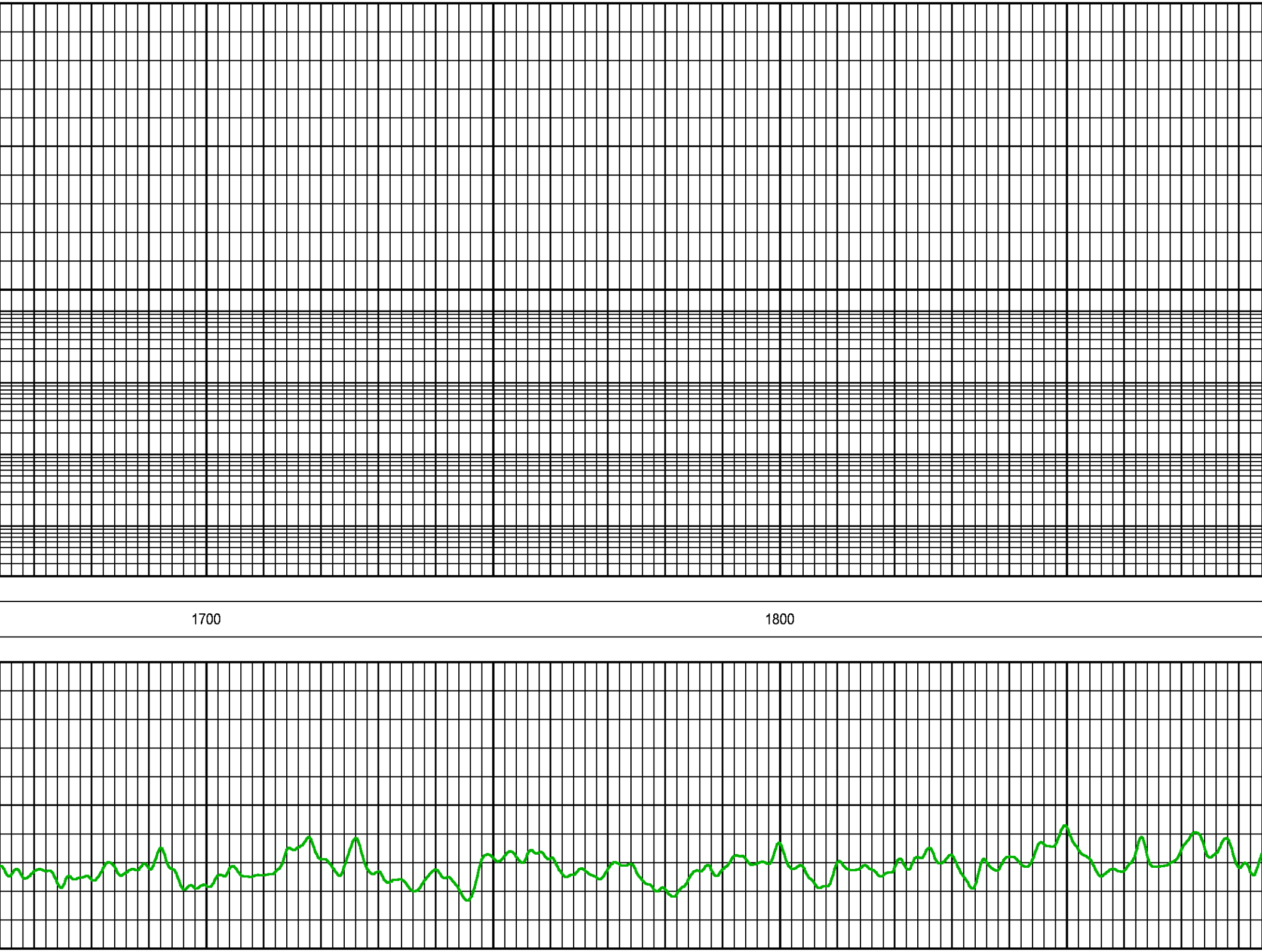
600
700

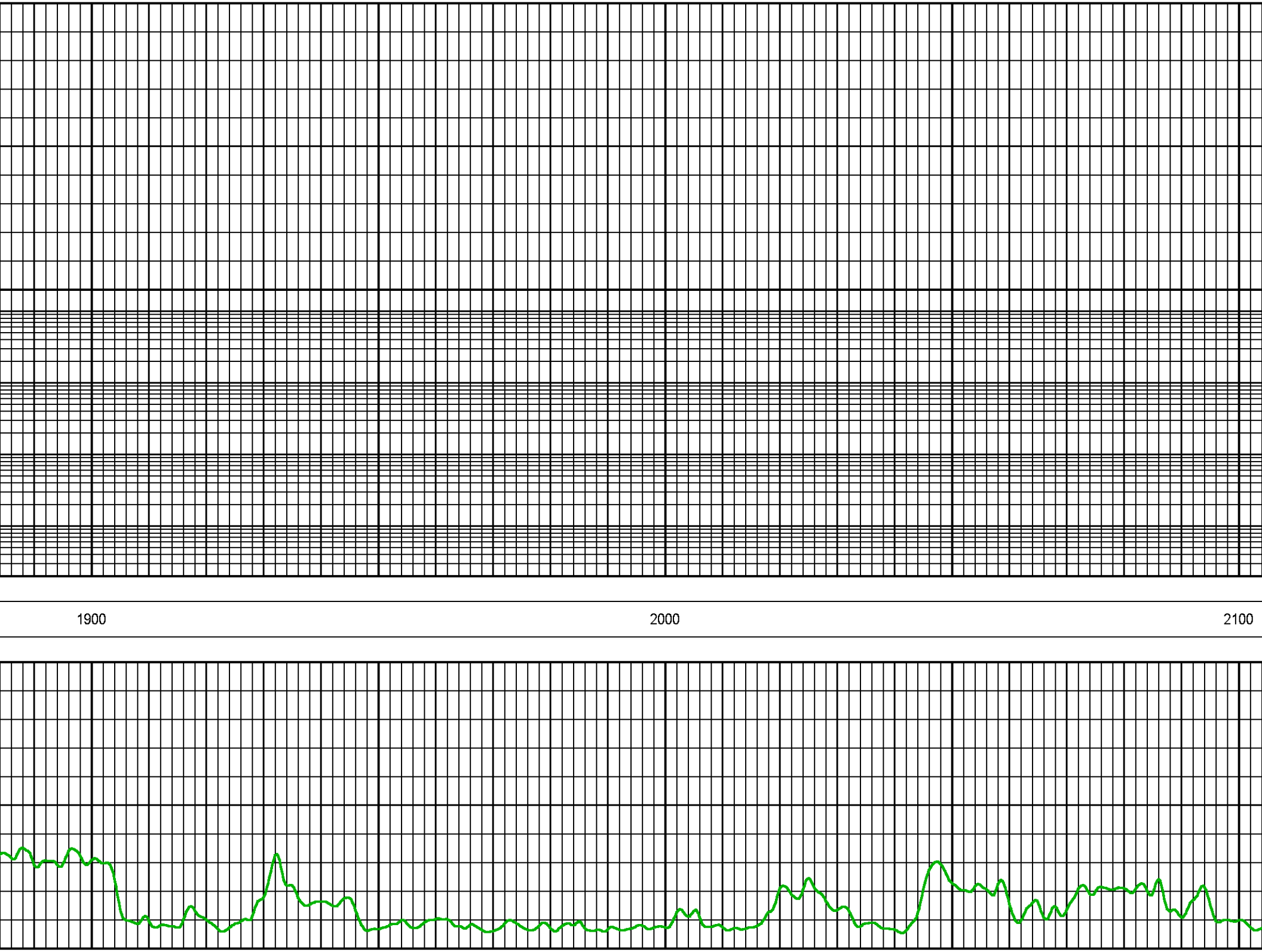
800
900
1000

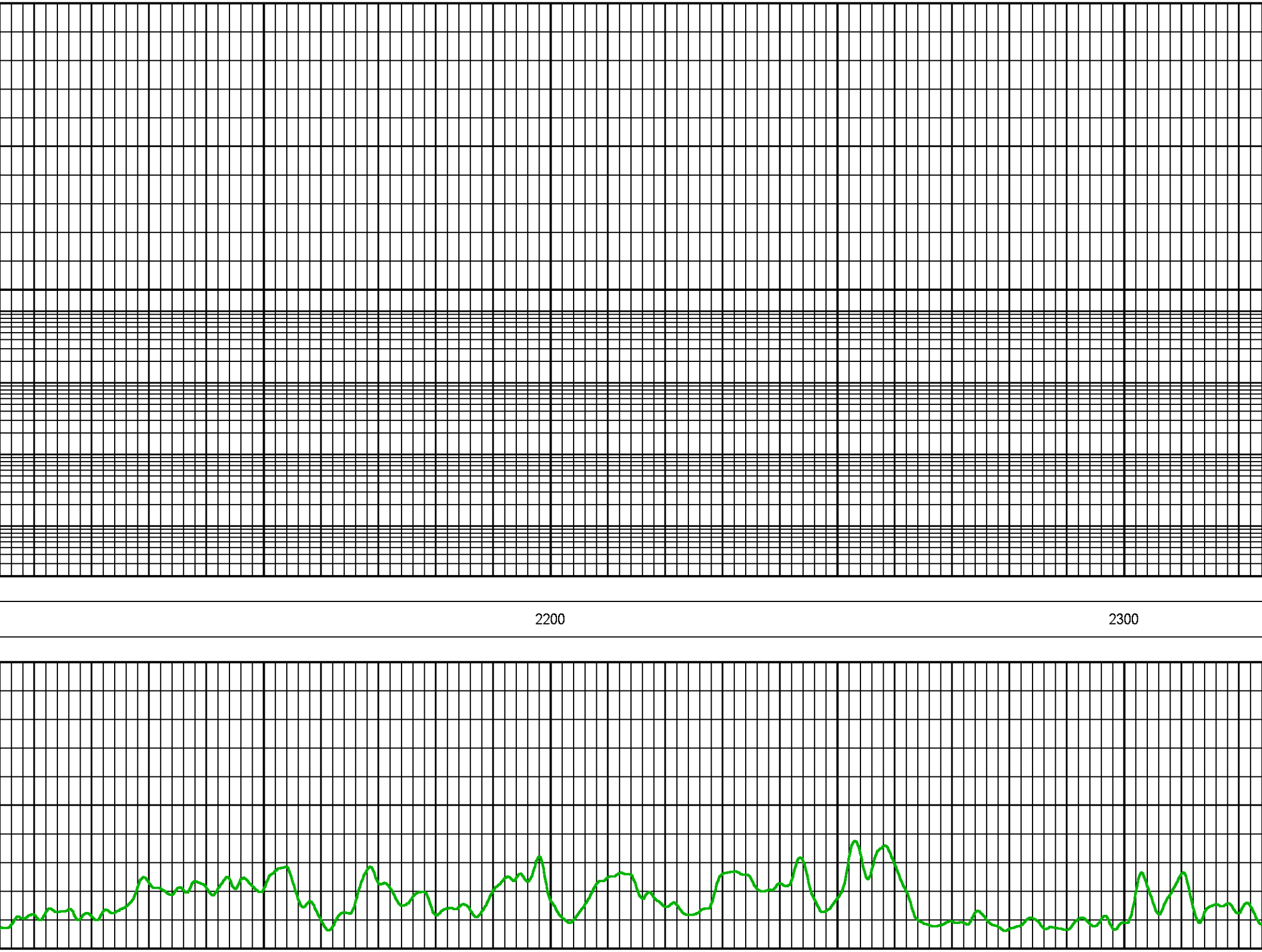

1100
1200

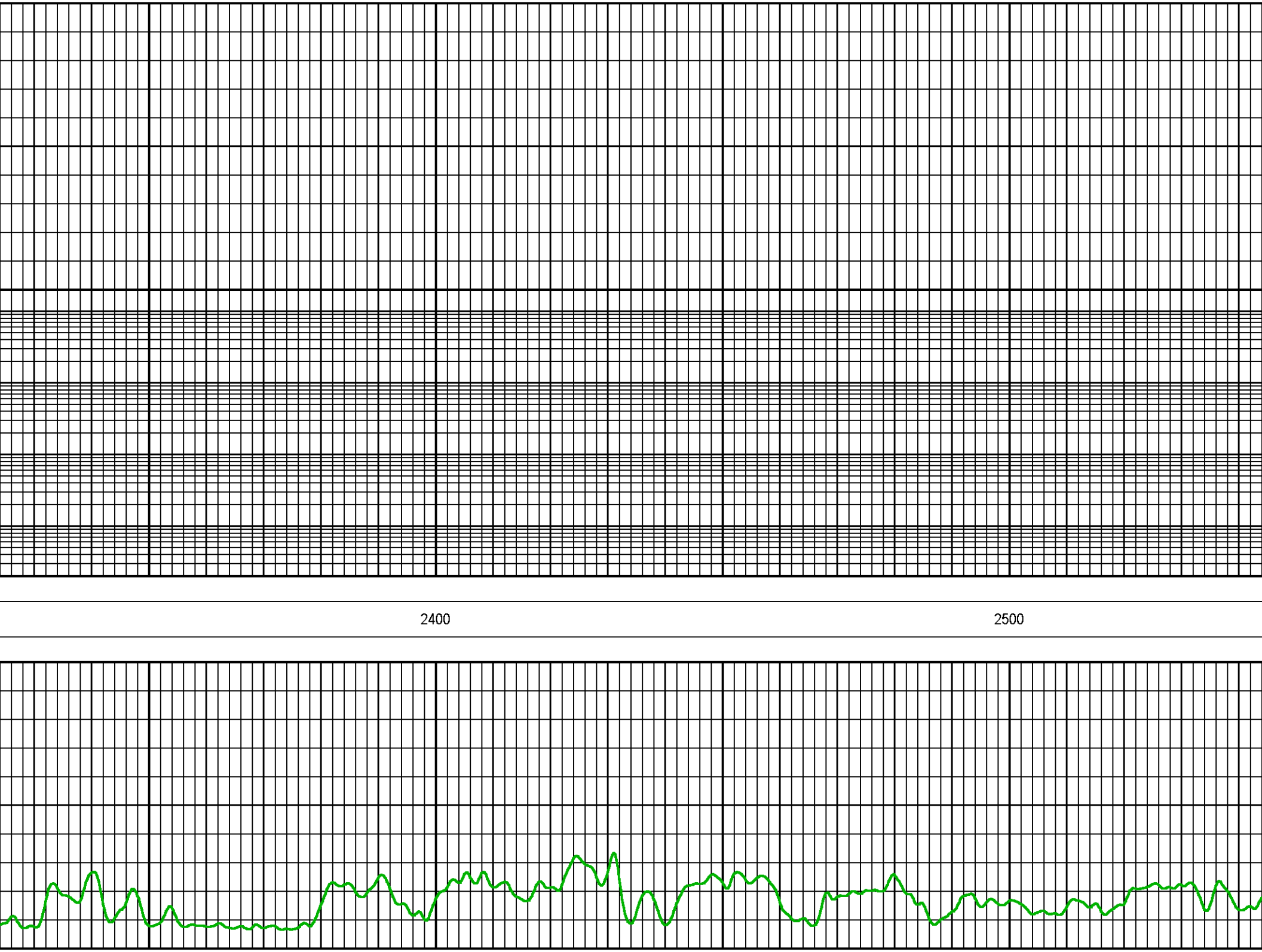

1300
1400

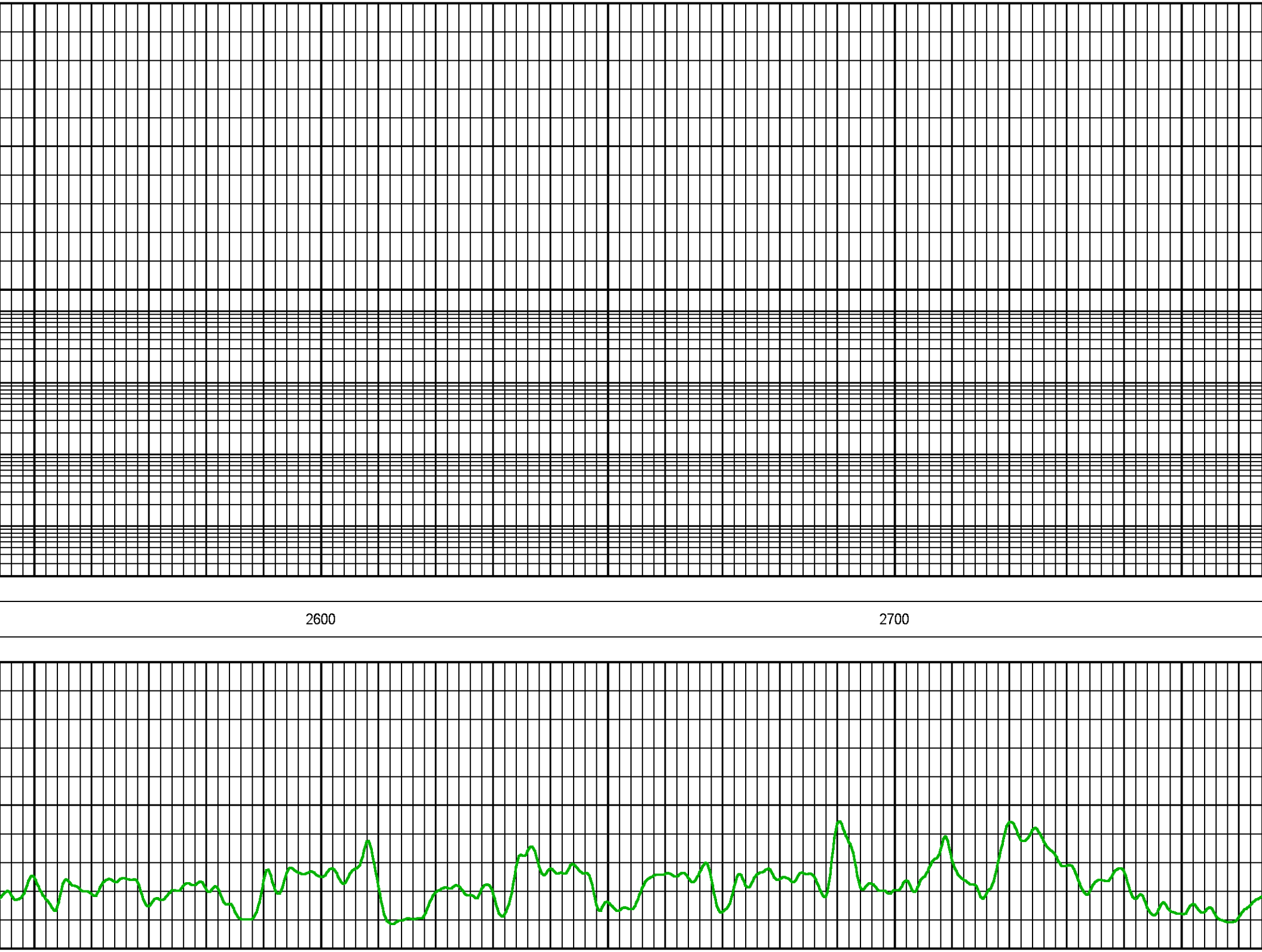

1500
1600

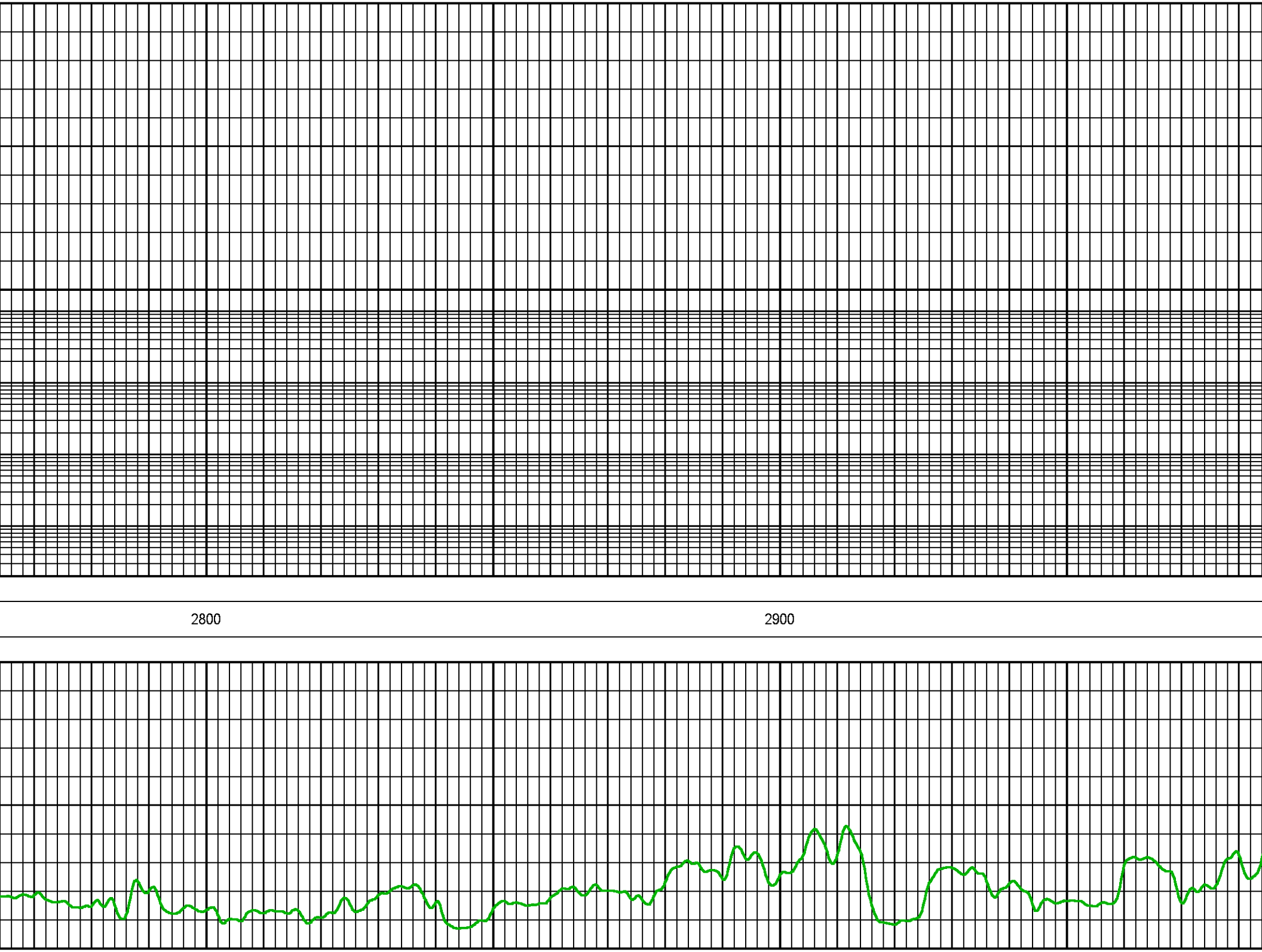

1700
1800

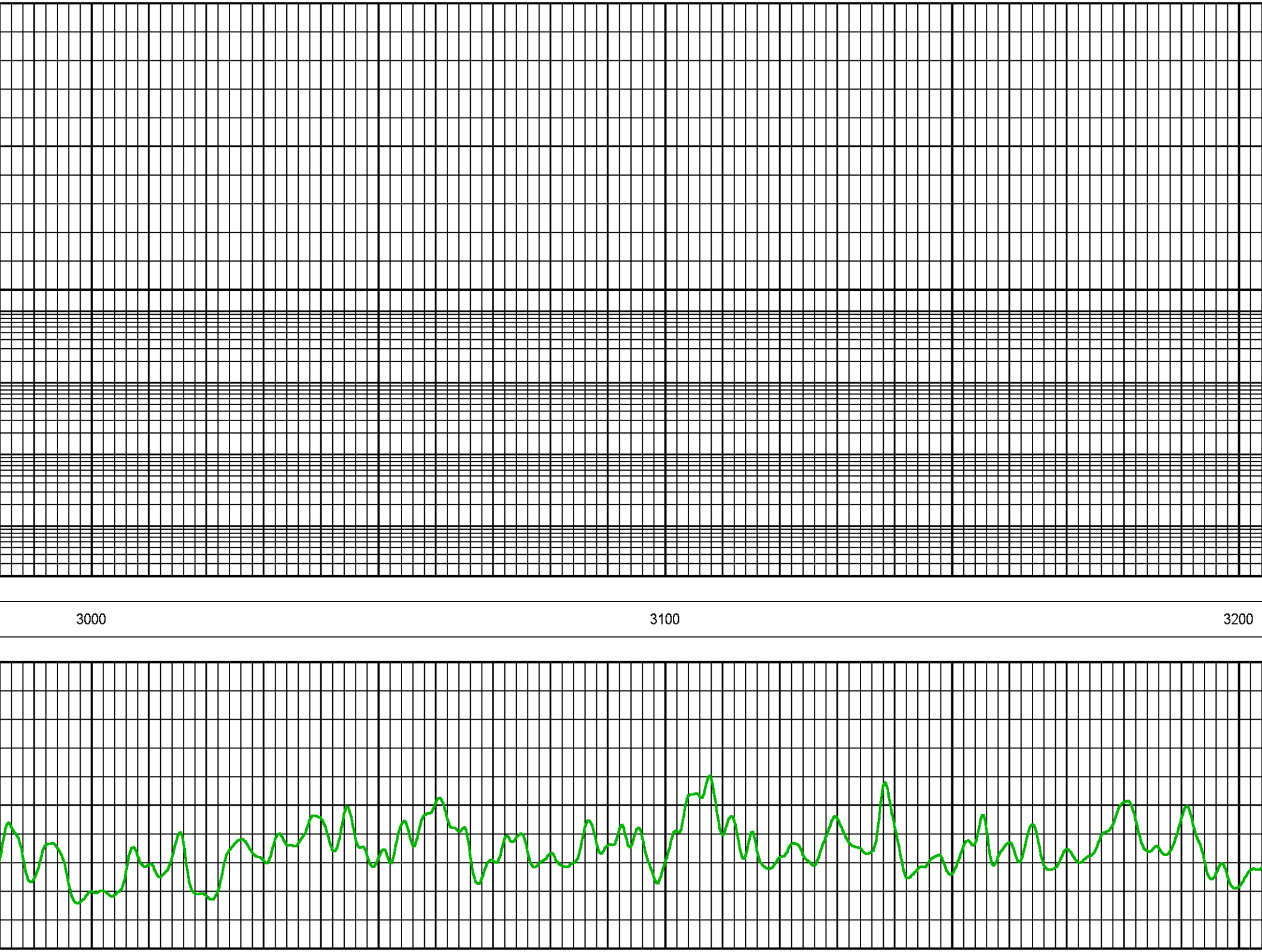

1900
2000
2100

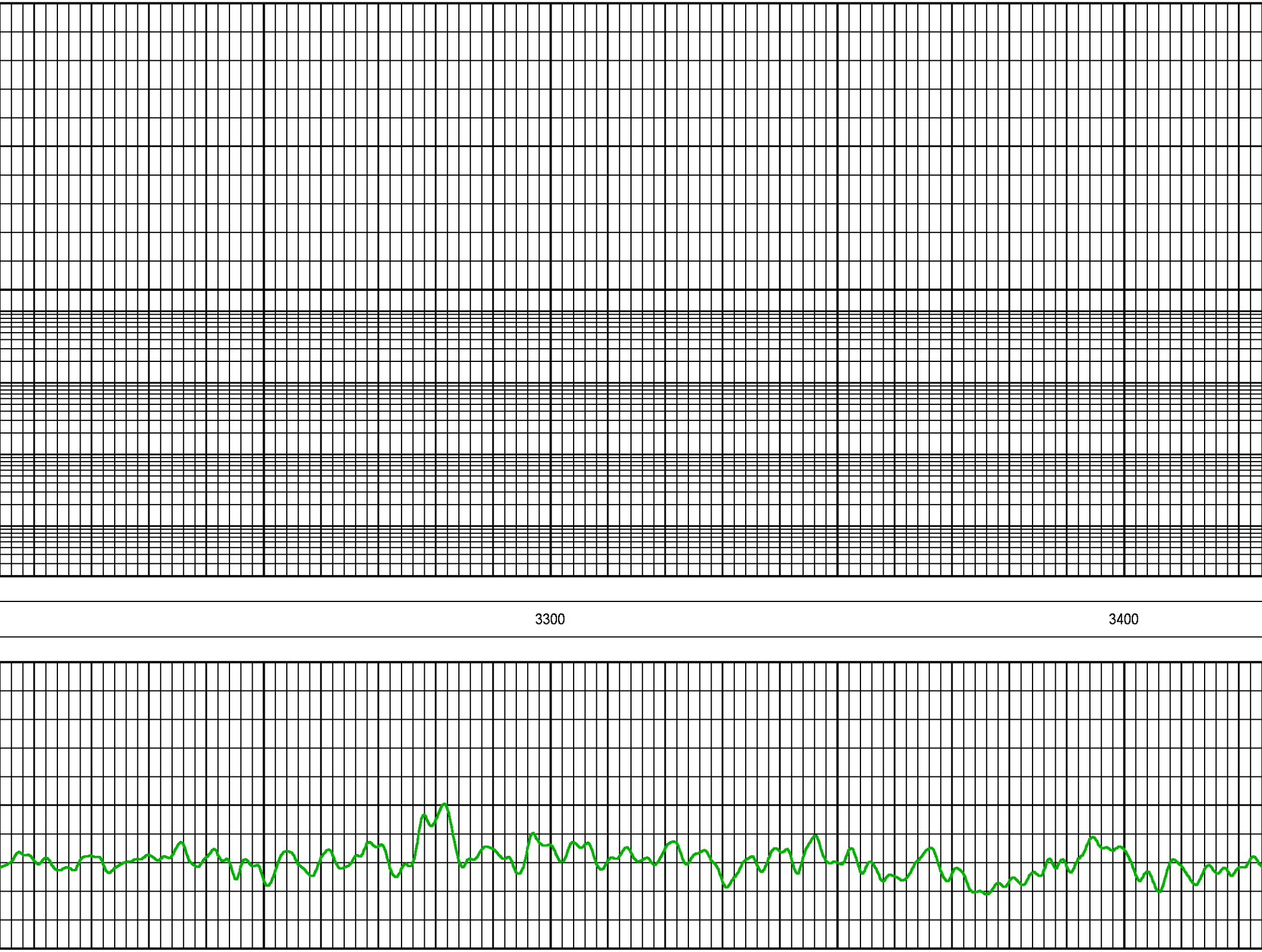

2200
2300

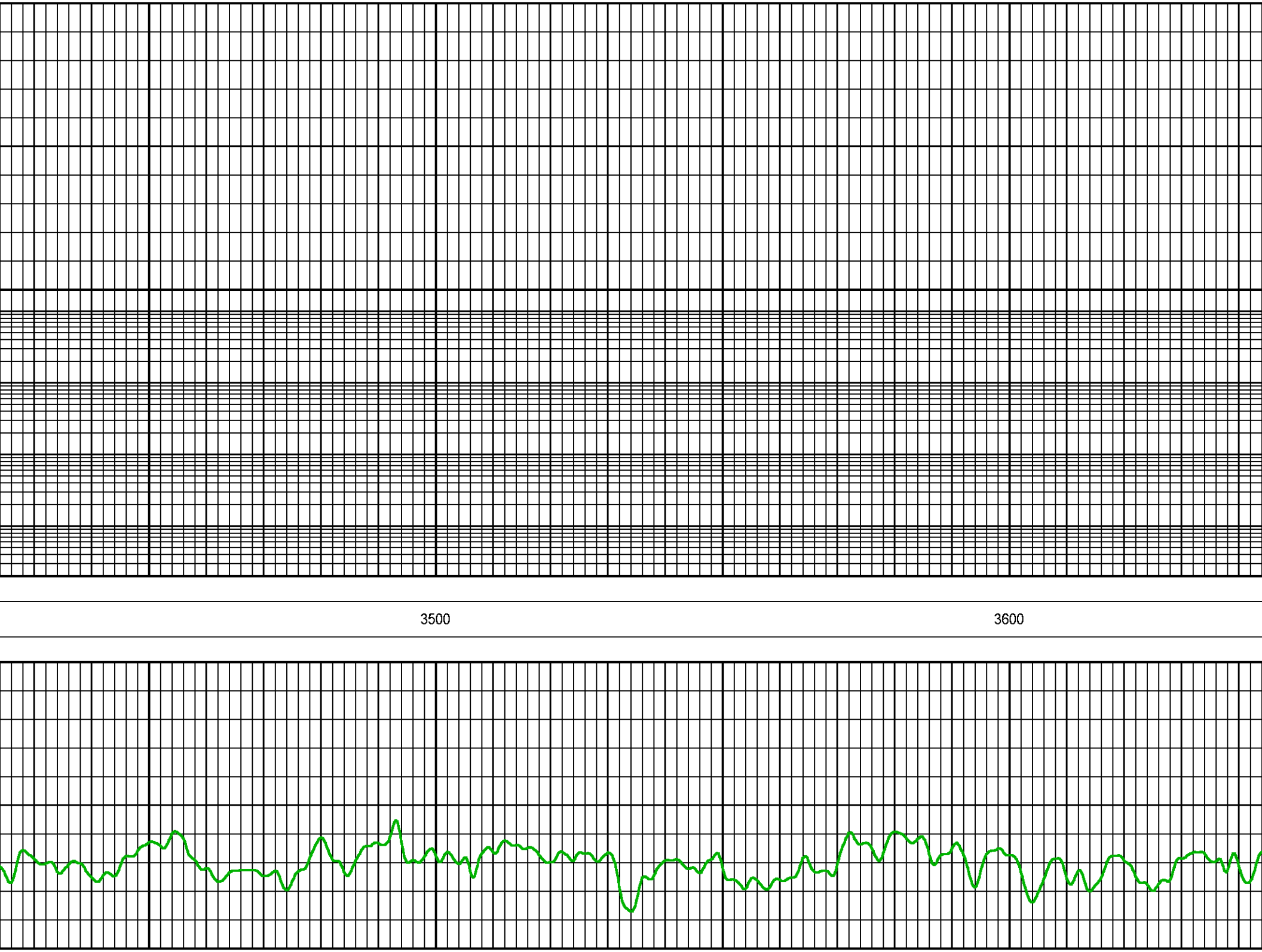

2400
2500

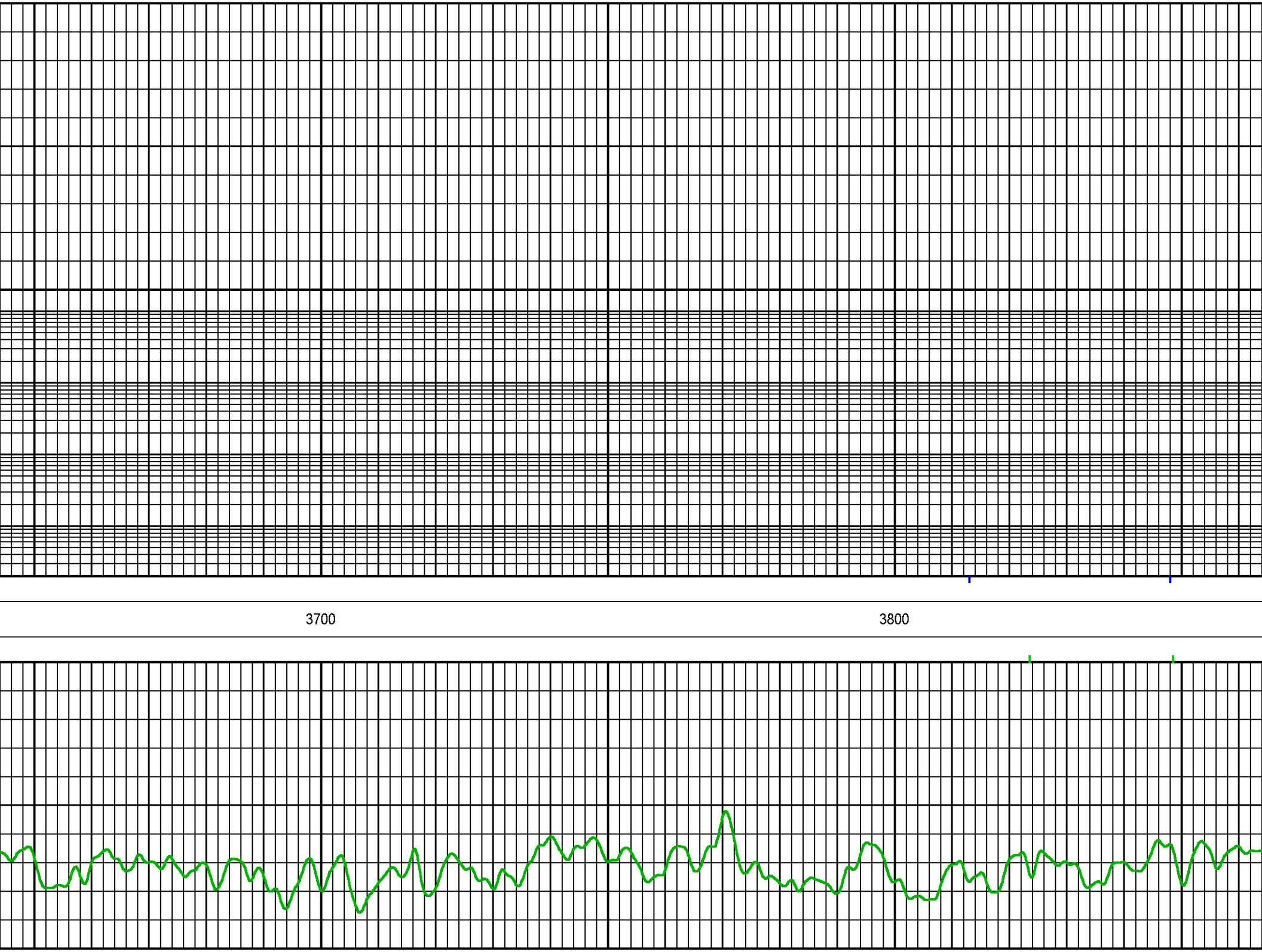

2600
2700

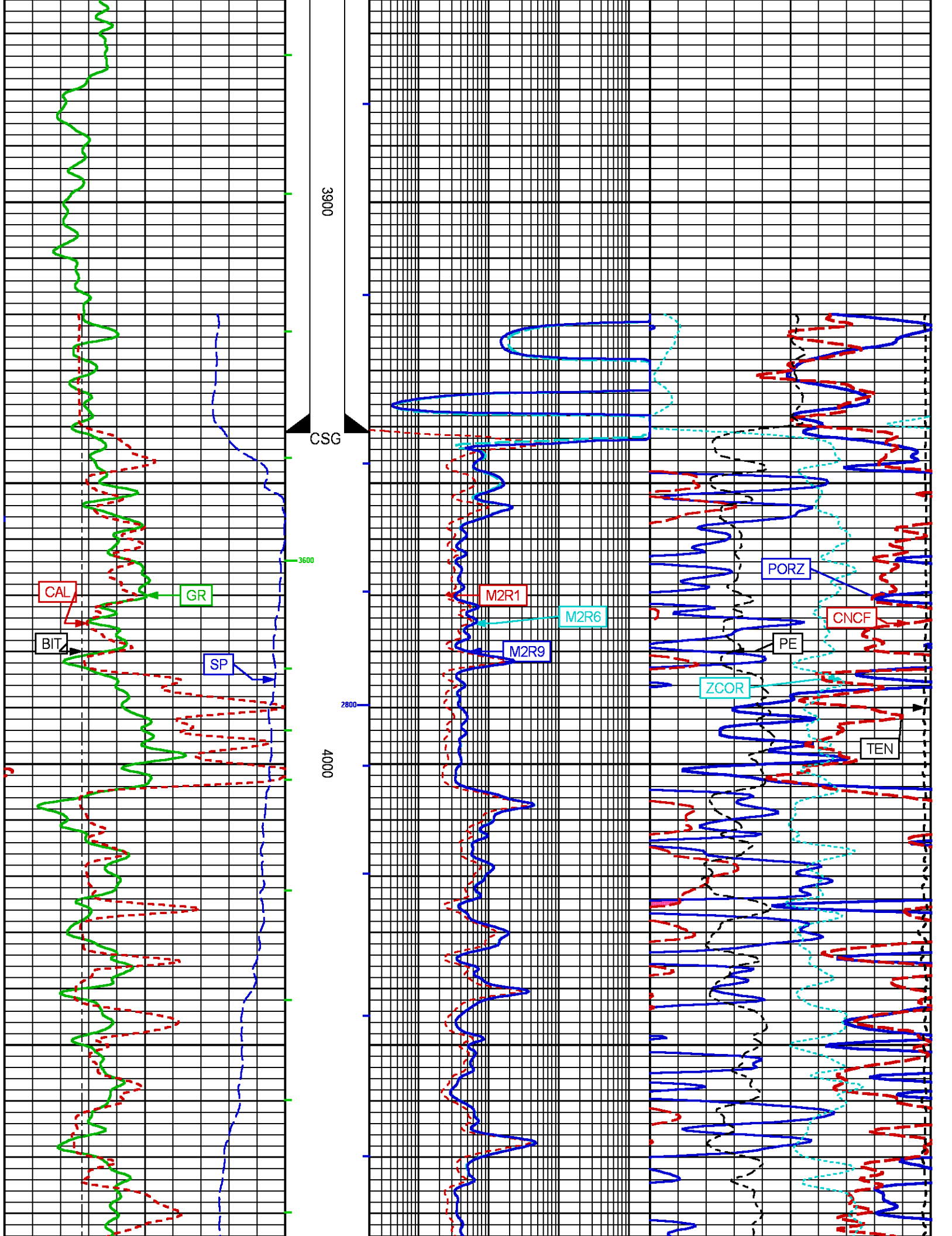

2800
2900

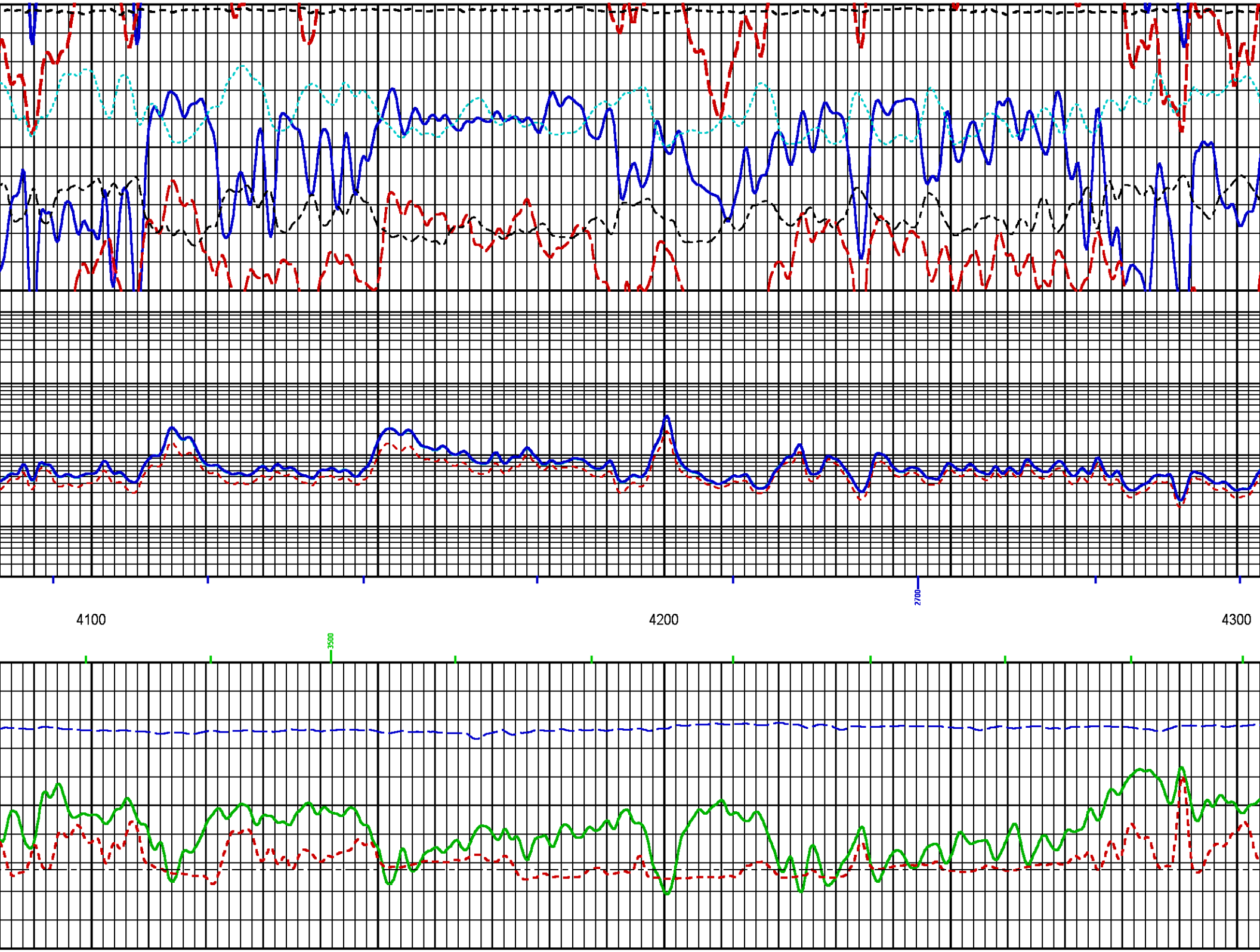

3000
3100
3200

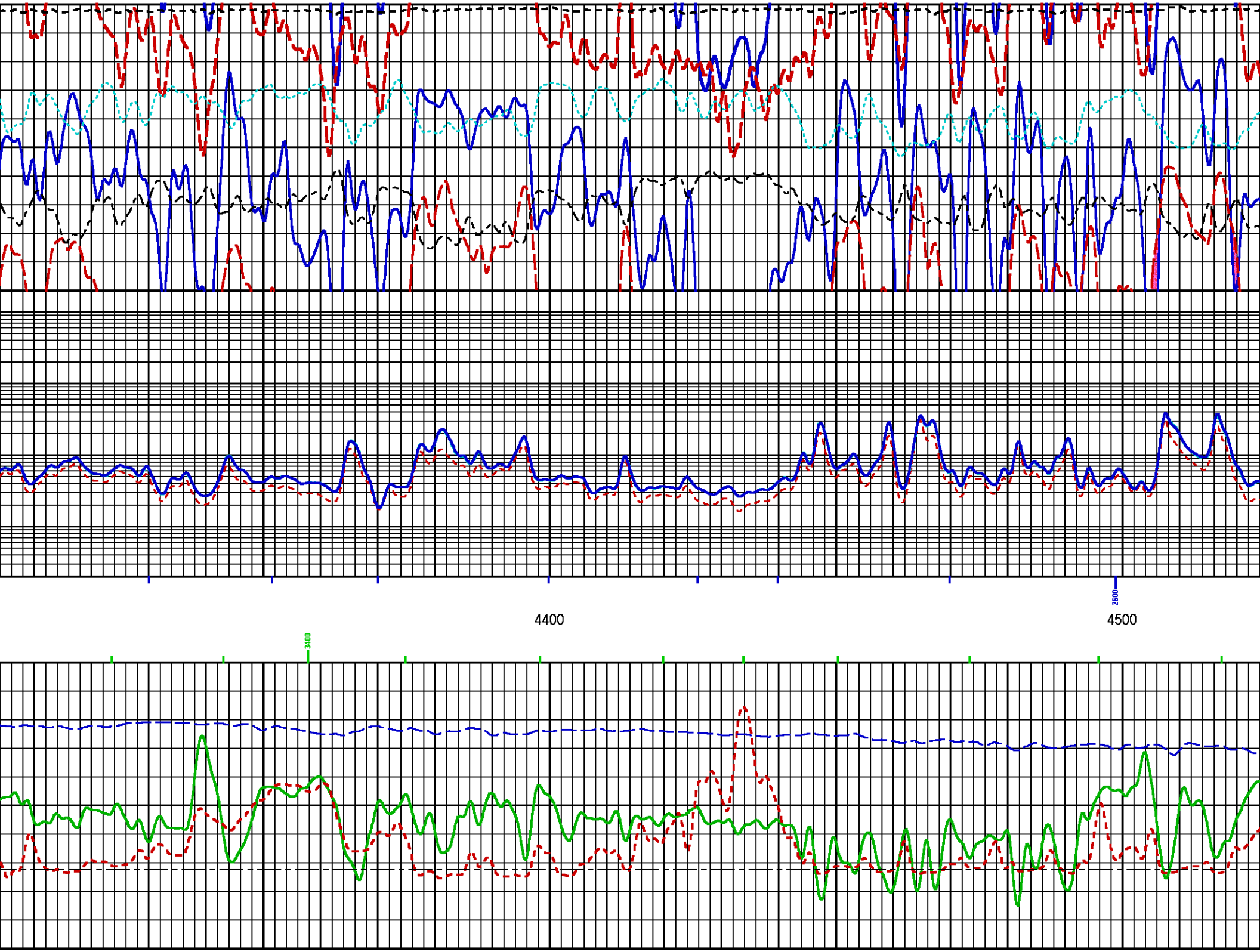

3300
3400

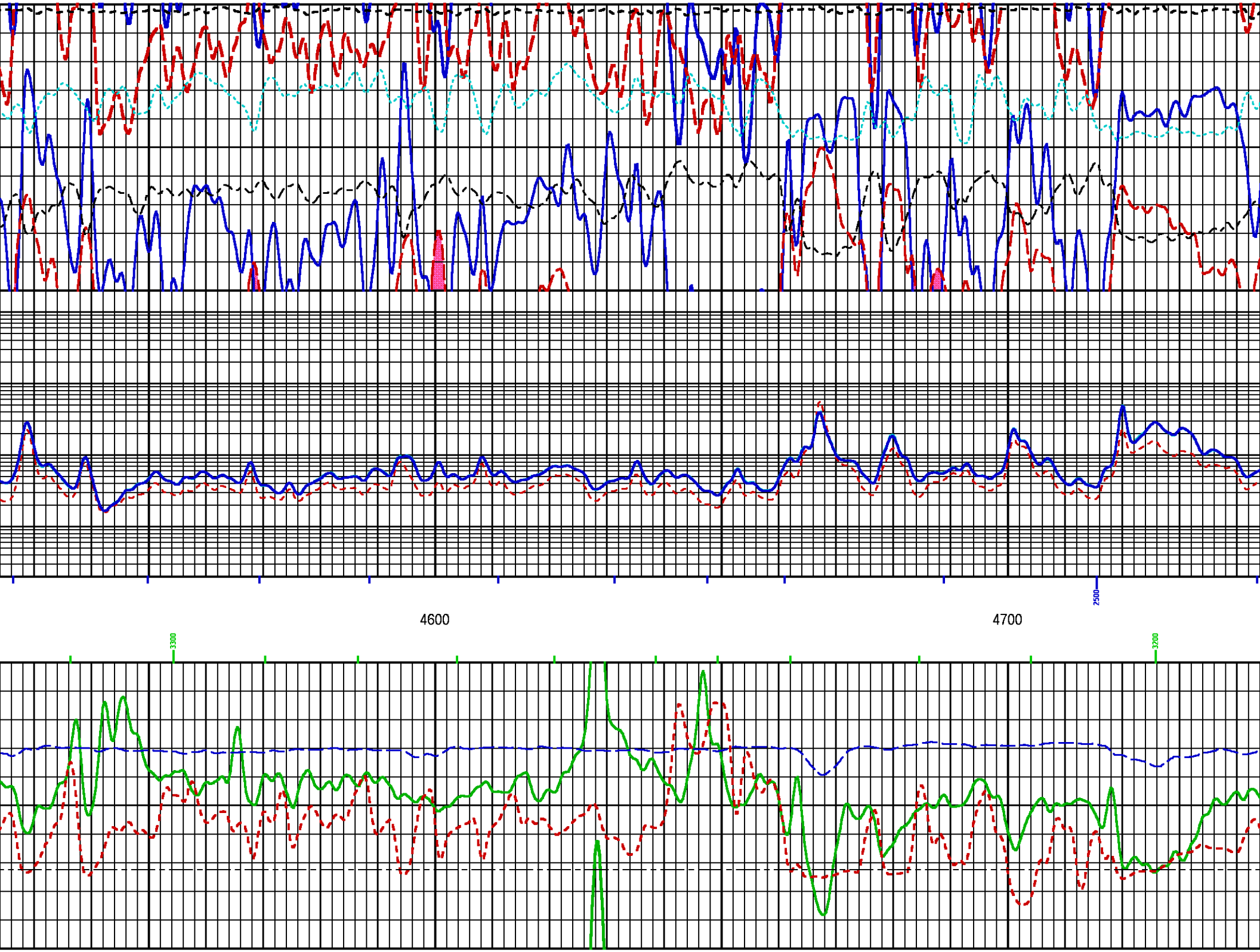

3500
3600

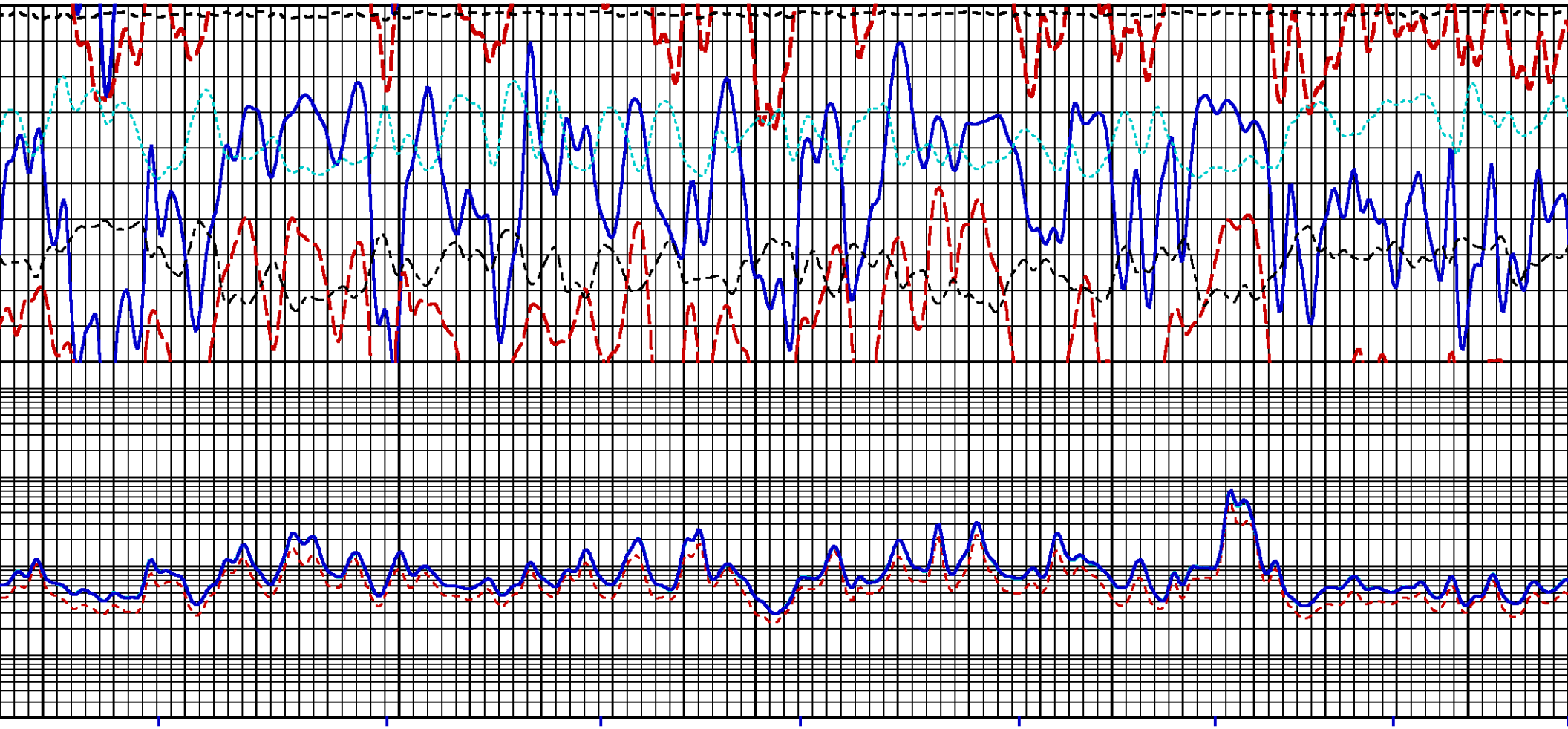

3700
3800


3900
CSG
3600
CAL
GR
BIT
SP
M2R1
M2R6
M2R9
2800
4000
PORZ
CNCF
PE
ZCOR
TEN


2700
4100
4200
4300
3500

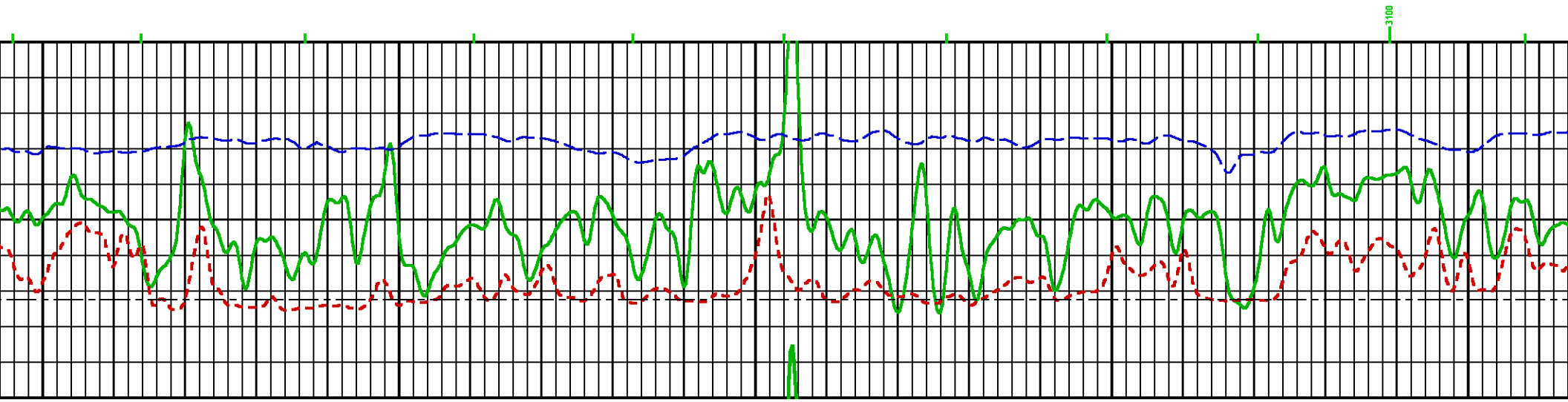

2600
4400
4500
3400

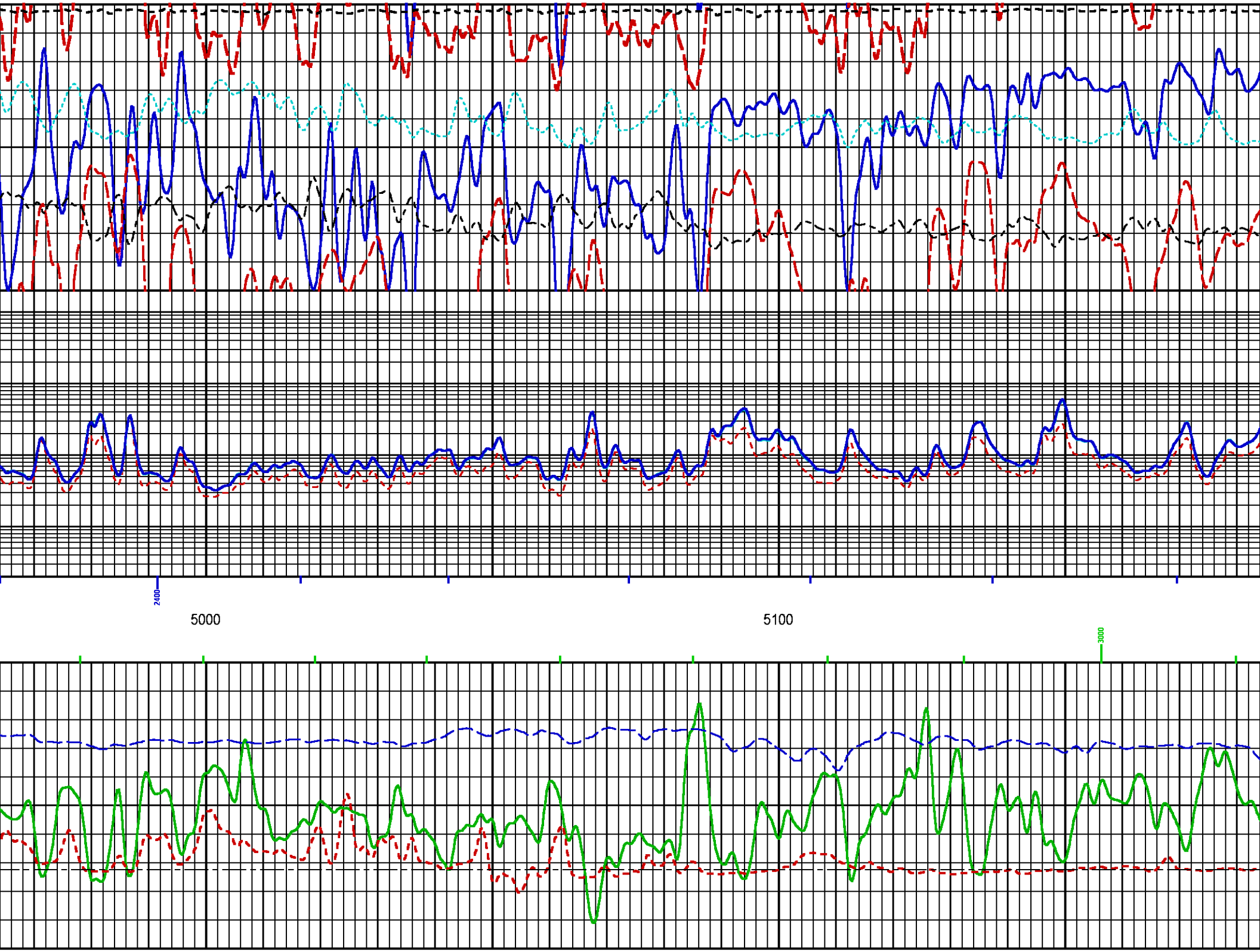

2500
4600
4700
3300
3200

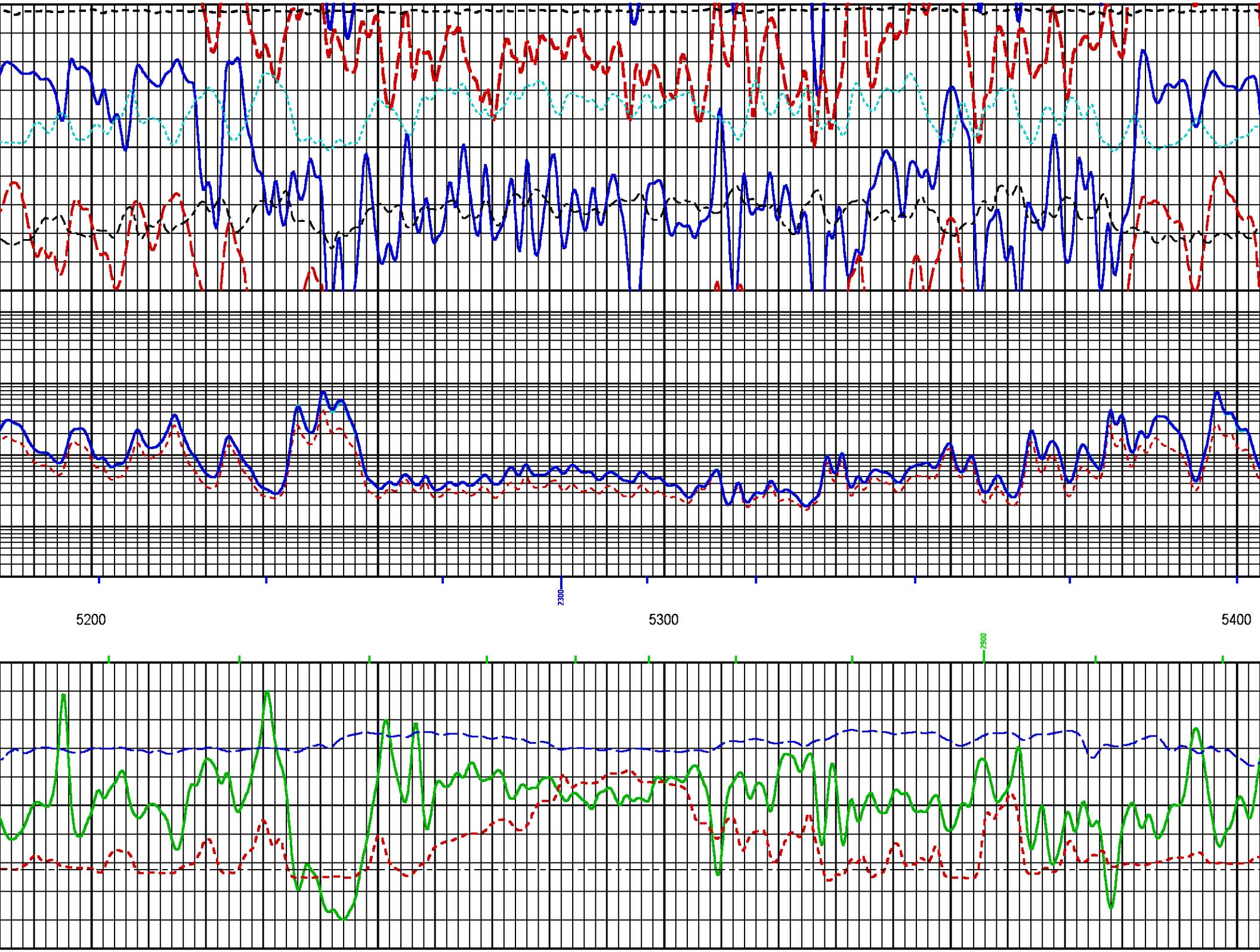


4800

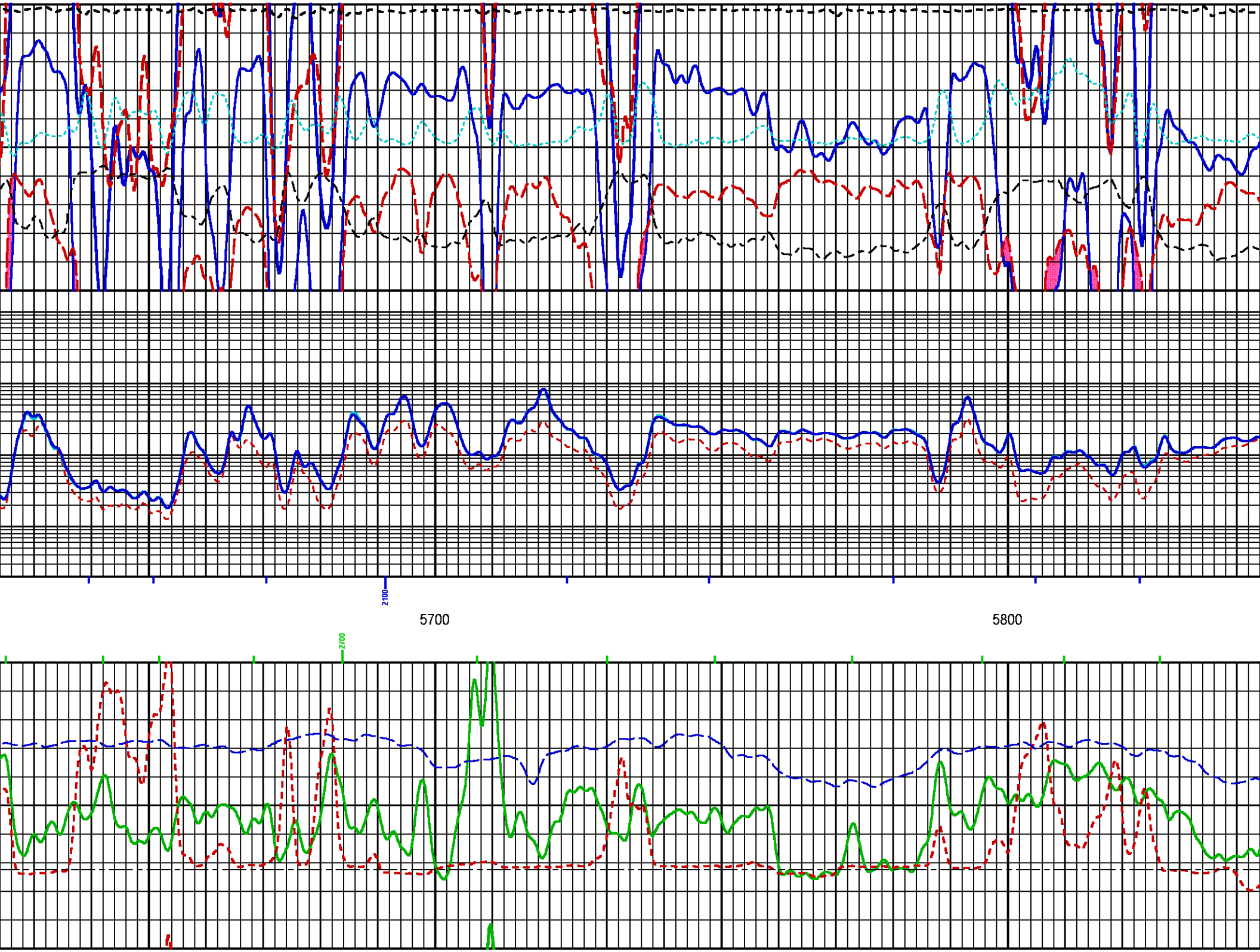
4900



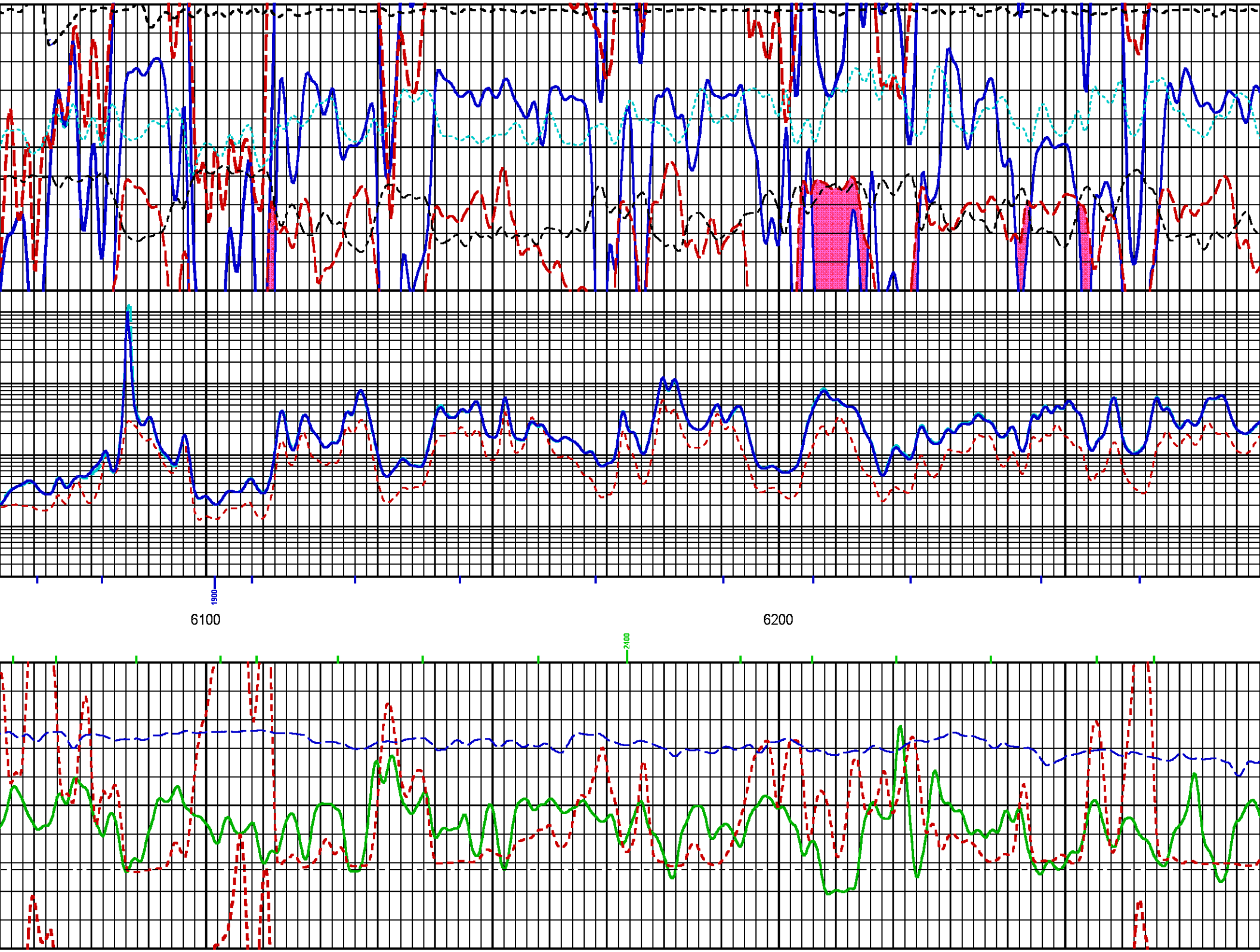

2400
5000
5100
3000


2300
5200
5300
5400
2900

5500
2200
2800
5600

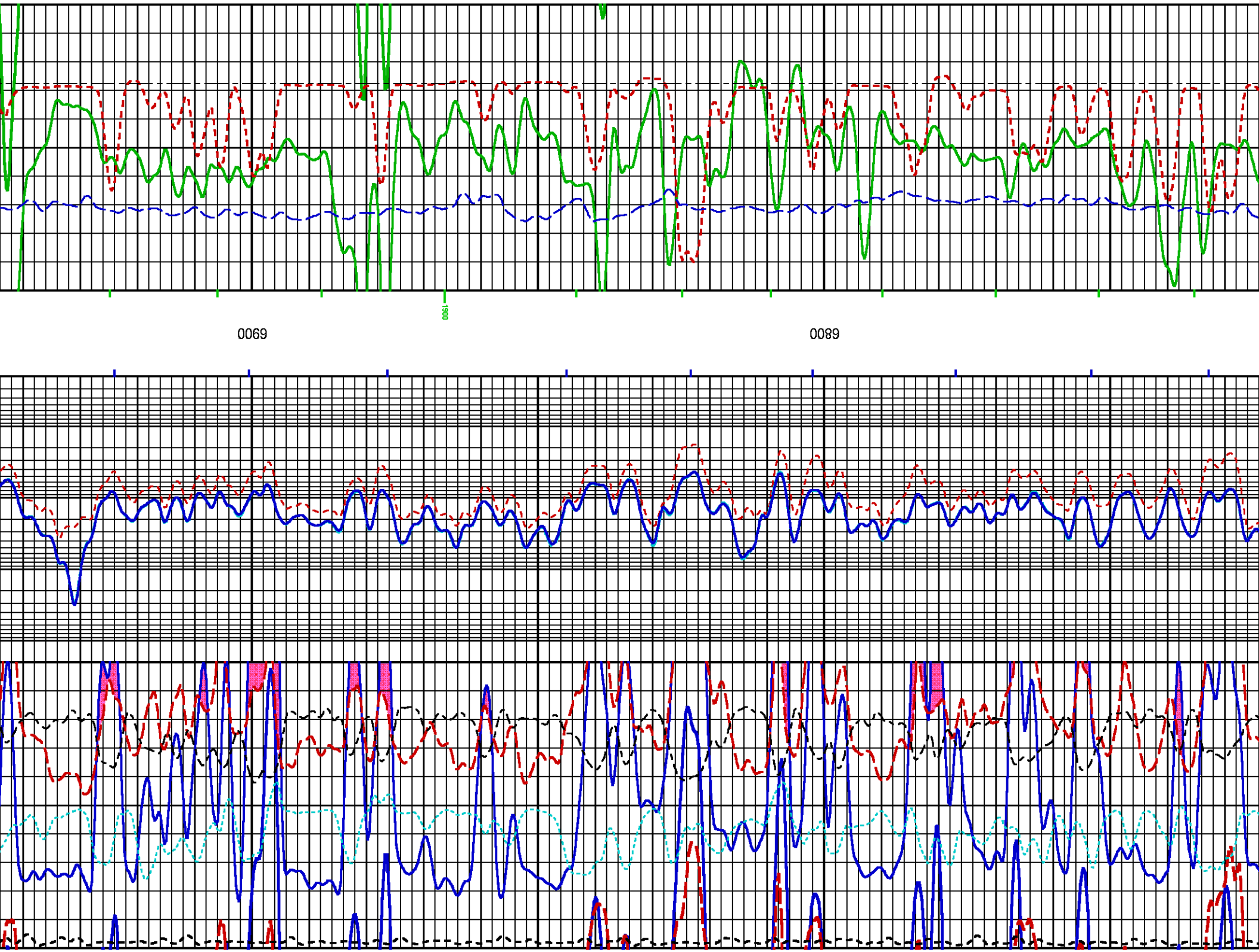

2100
5700
5800
2700

2600
5900
2000
6000
2500


1900
6100
6200
2400

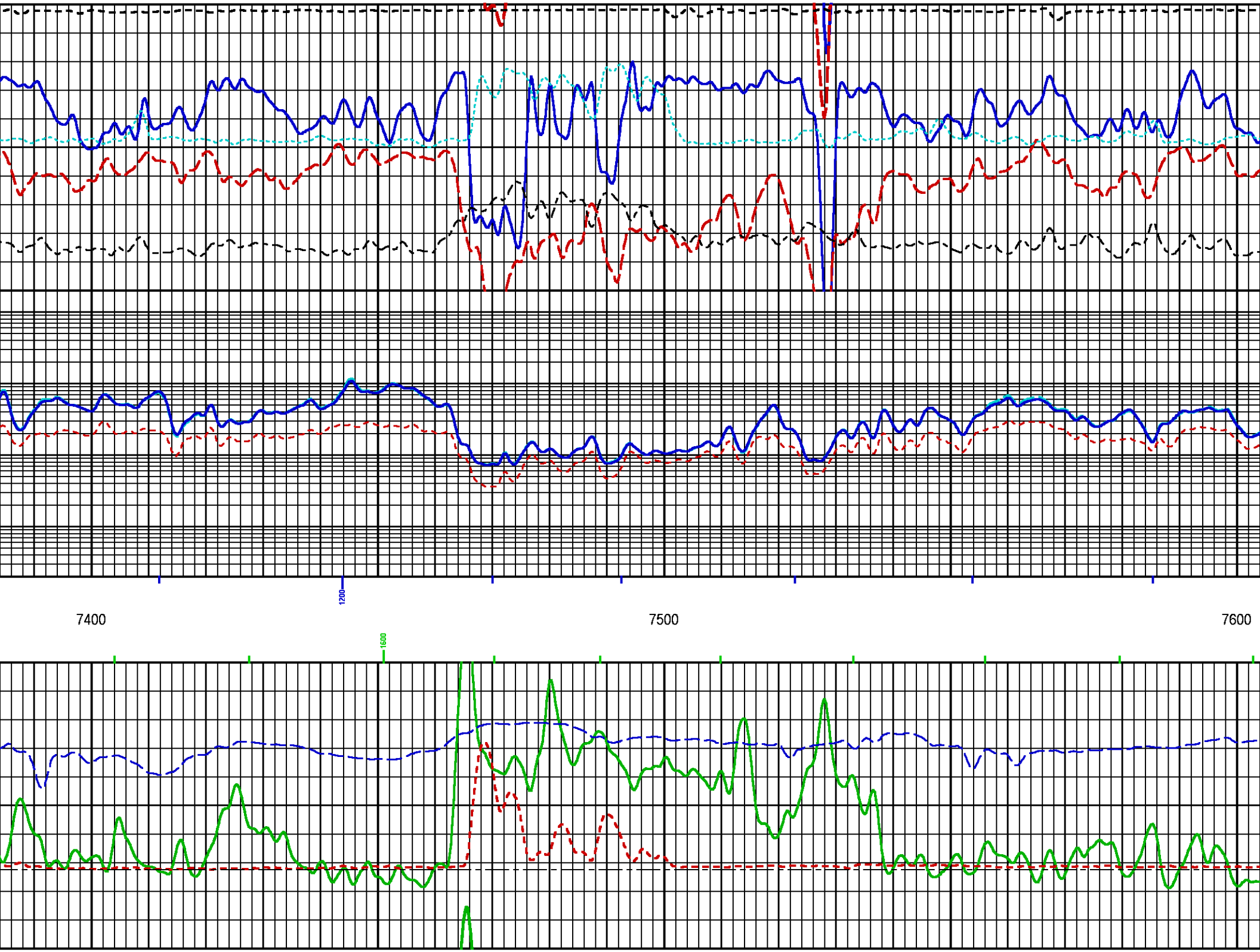
6300
6400
6500
2300
2200
1800
1700

2100
2000
1600
1500
6600
6700


1960
0069
0089

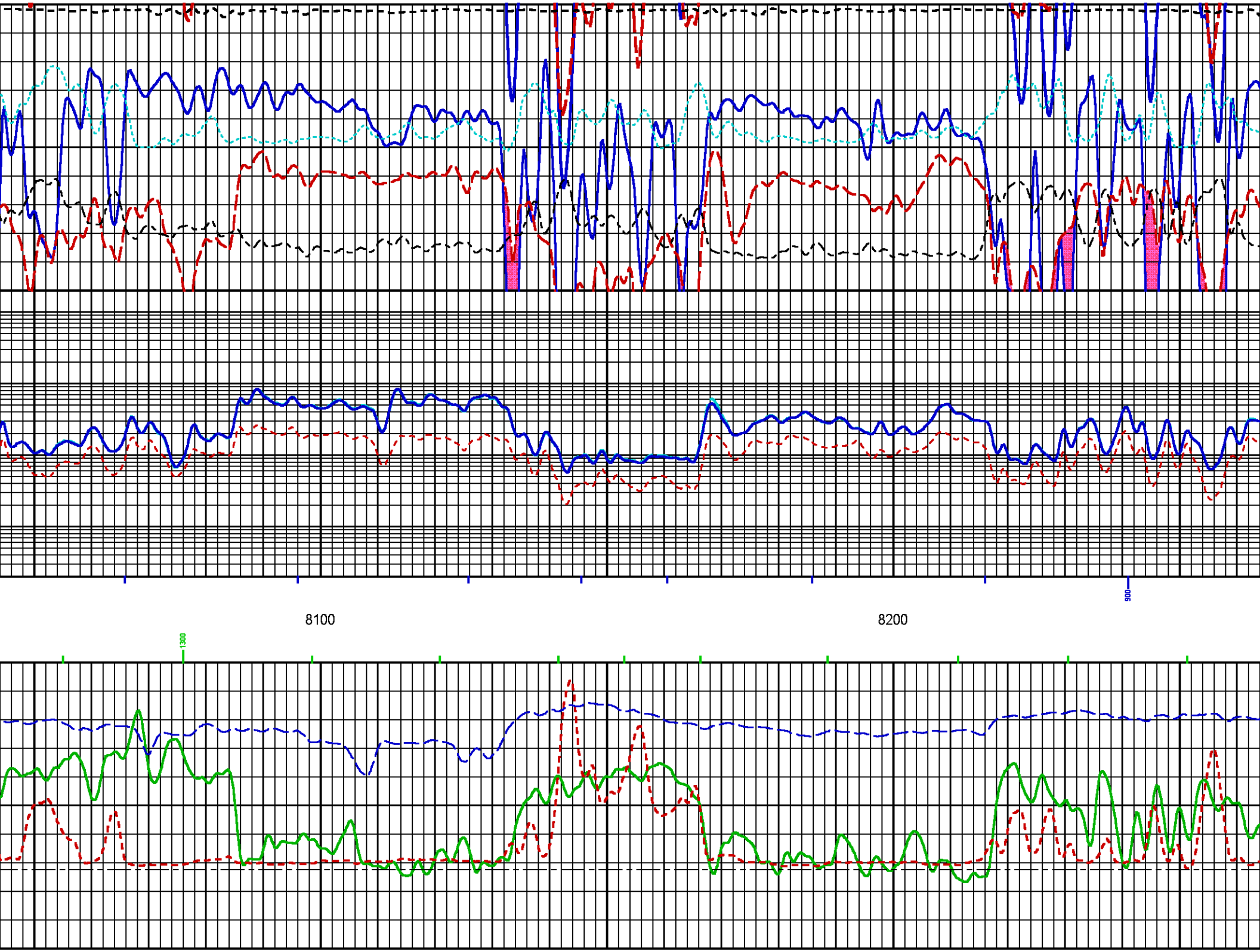
1400
7000
1800
7100

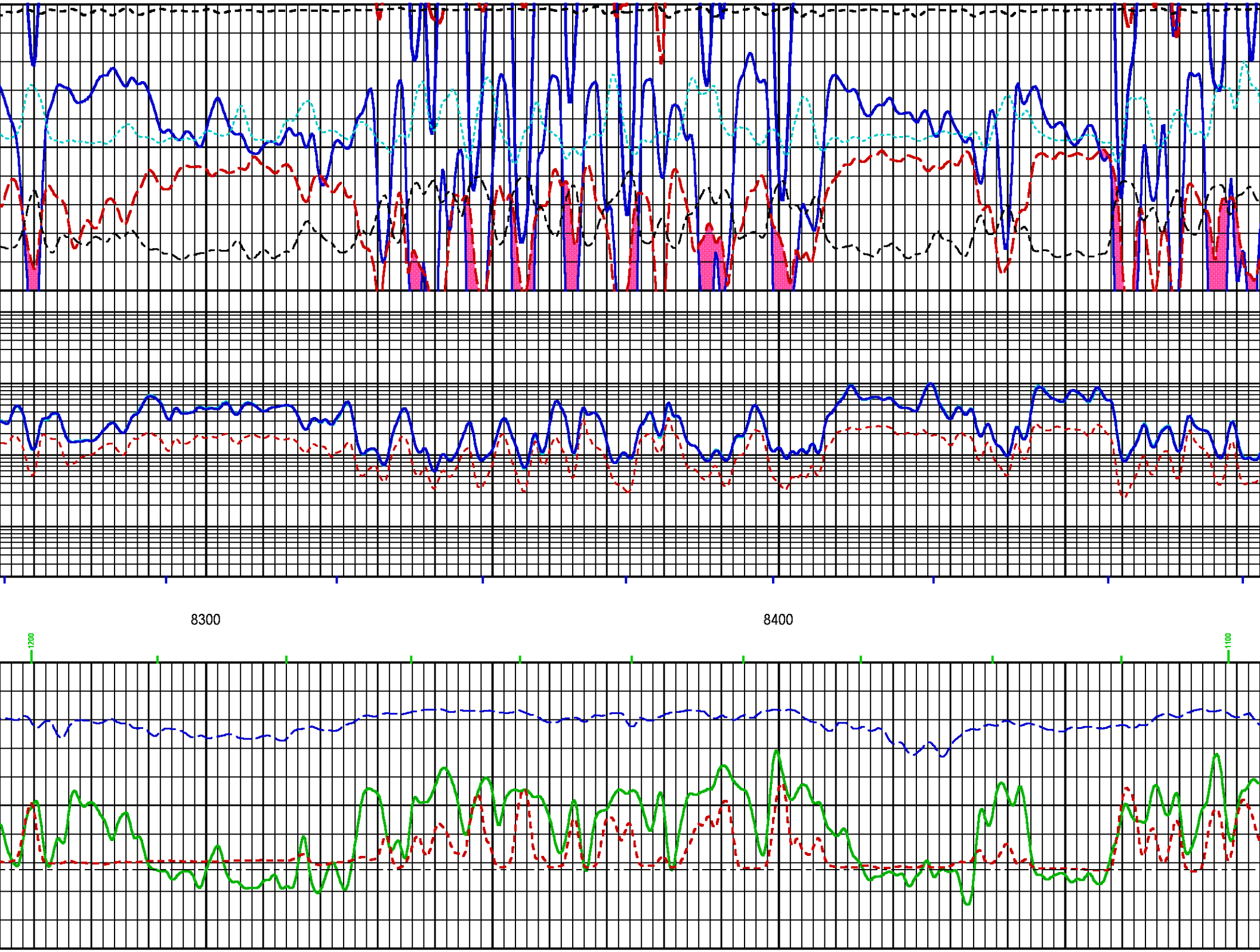
1300
7200
7300
1700


1200
7400
7500
7600
1600

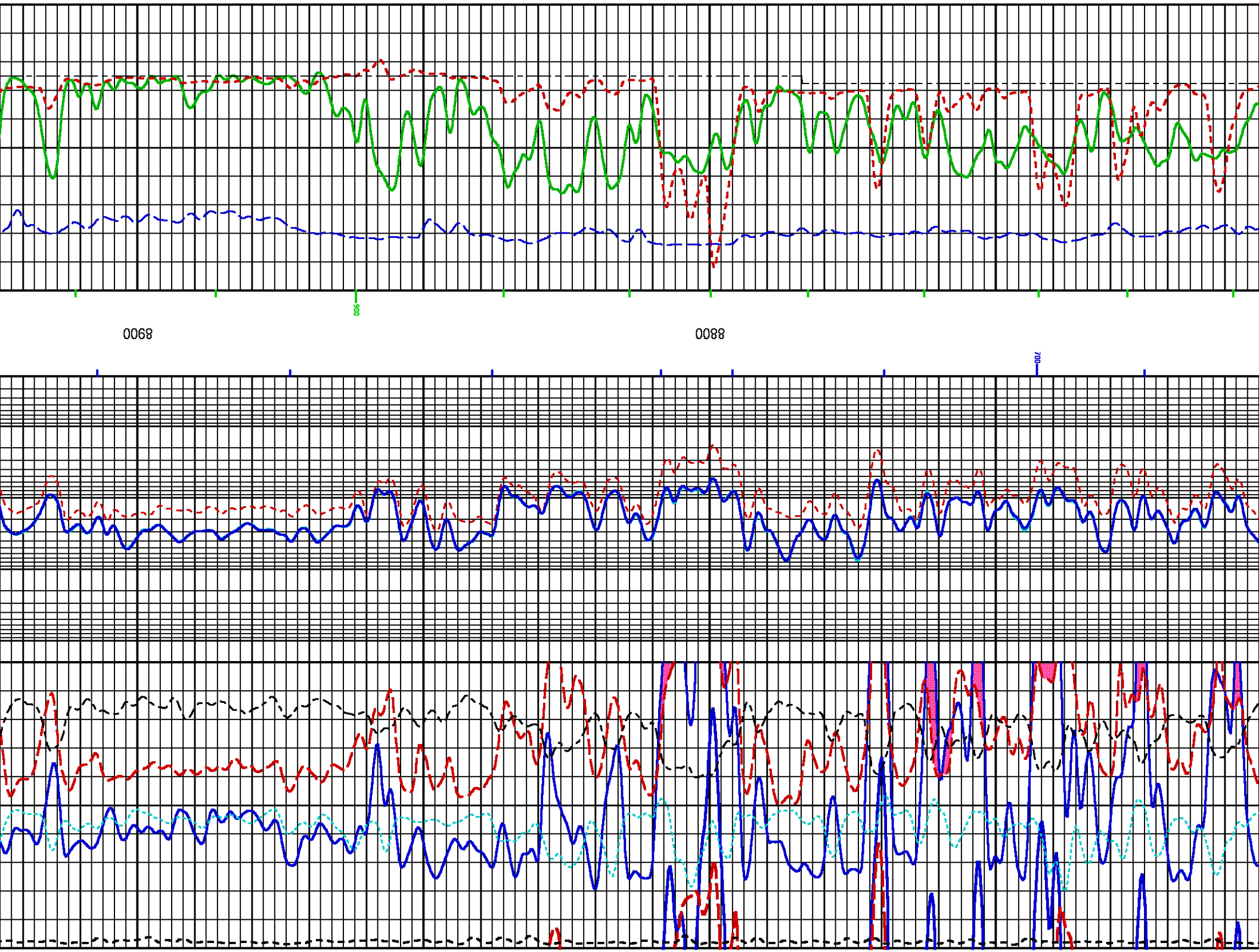
1500
7700
1100
7800

1400
7900
1000
8000

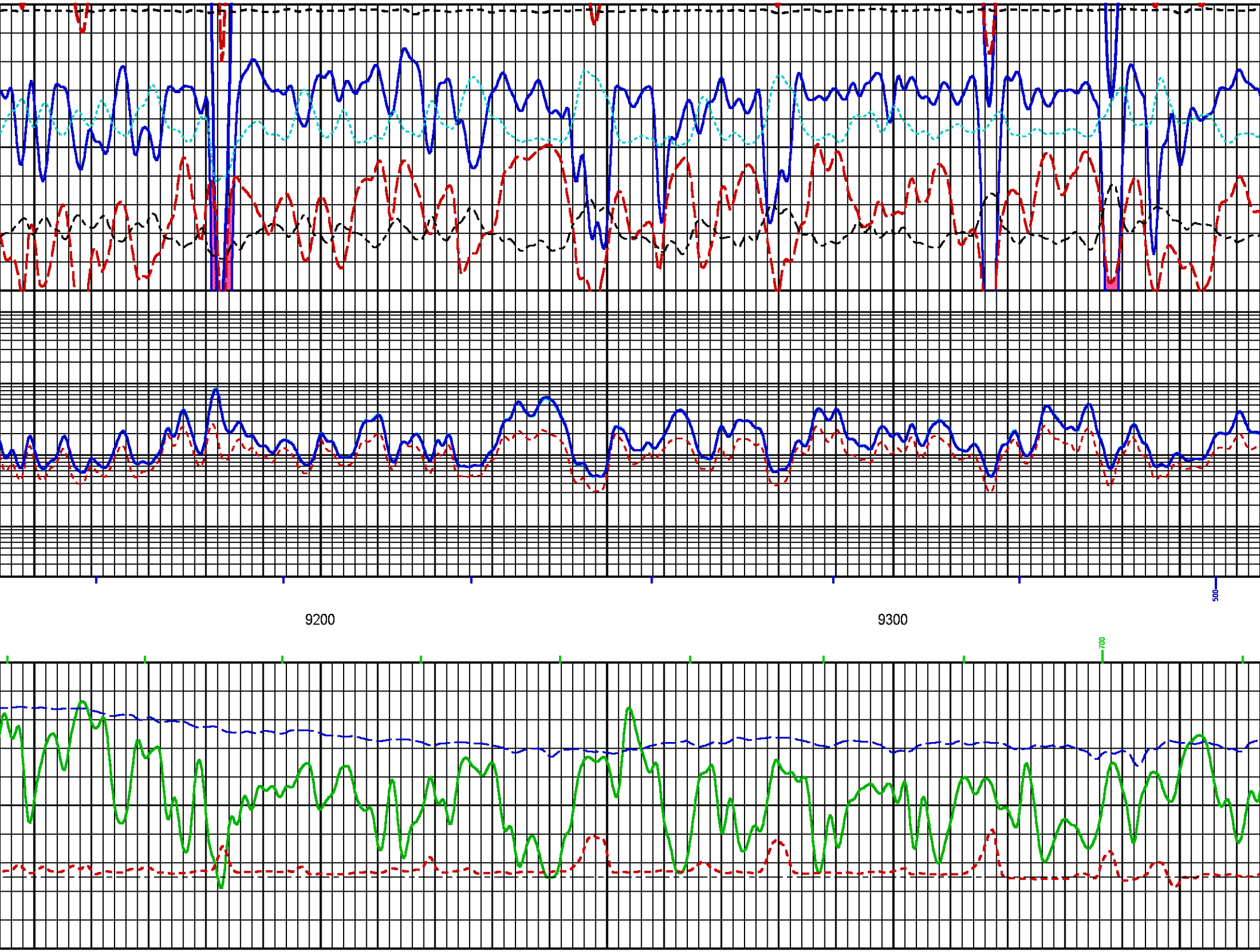

900
8100
8200
1300


8300
8400
1200
1100

8500
800
8600
1000
8700


900
8900
8800
700

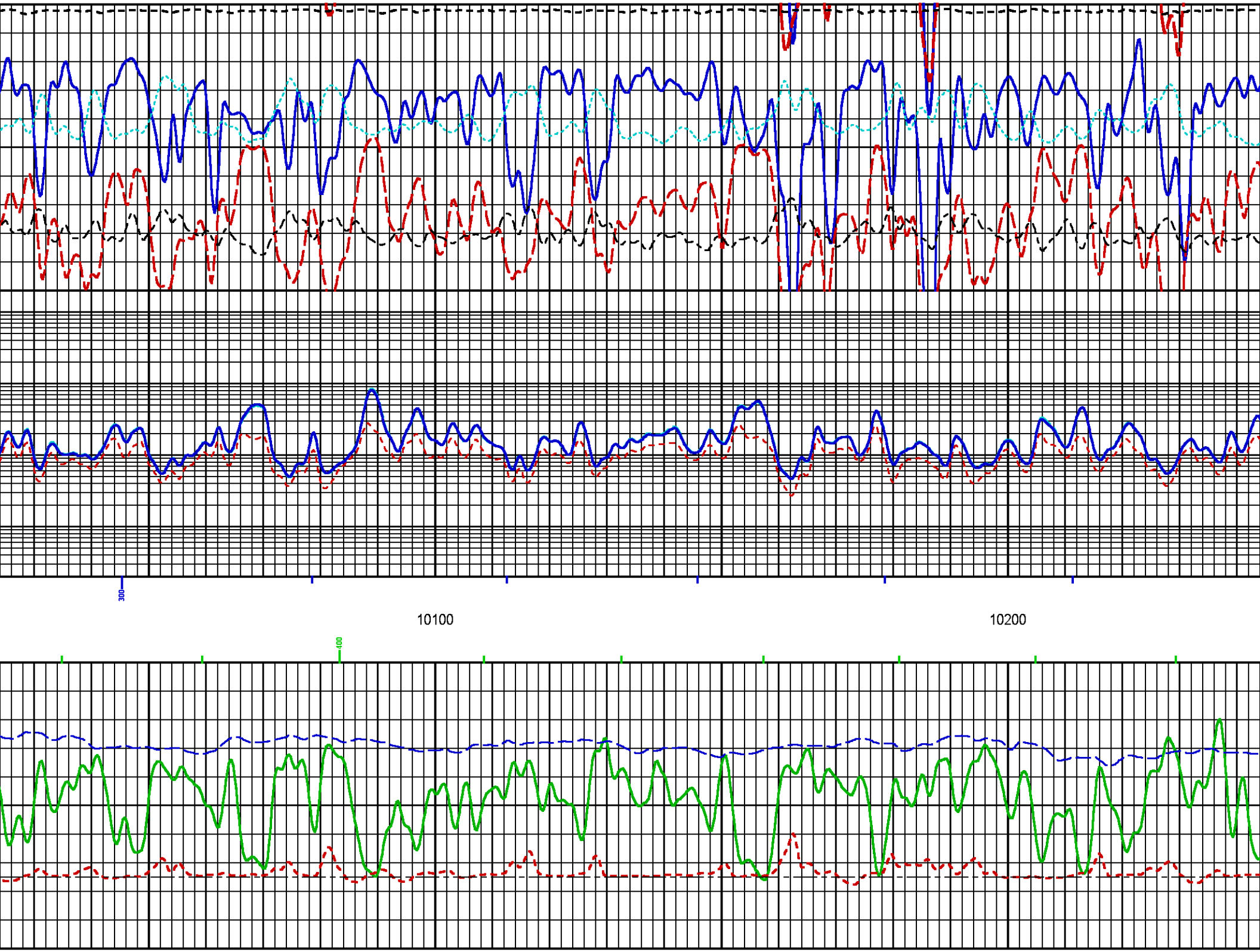
9000
9100
600
800

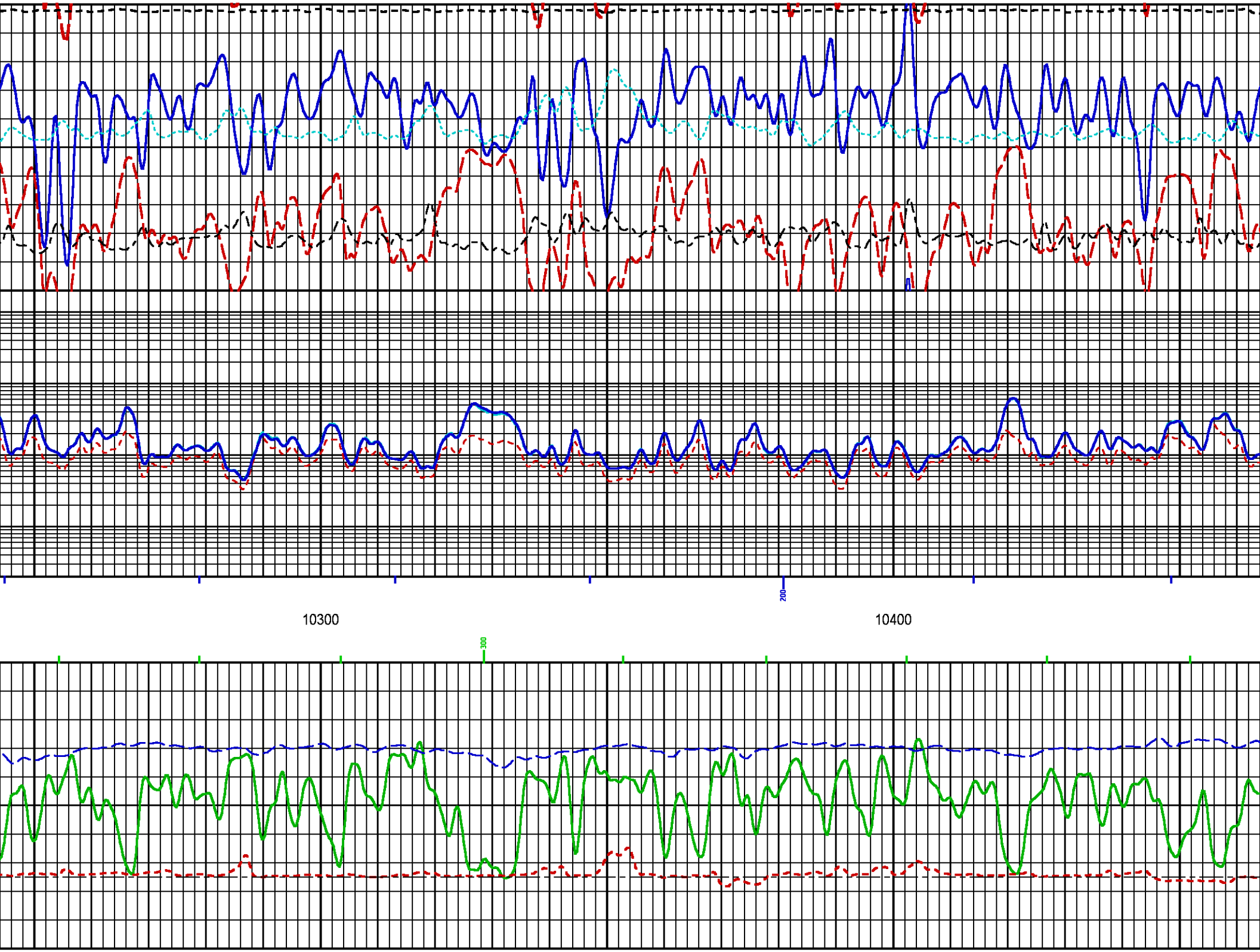

500
9200
9300
700

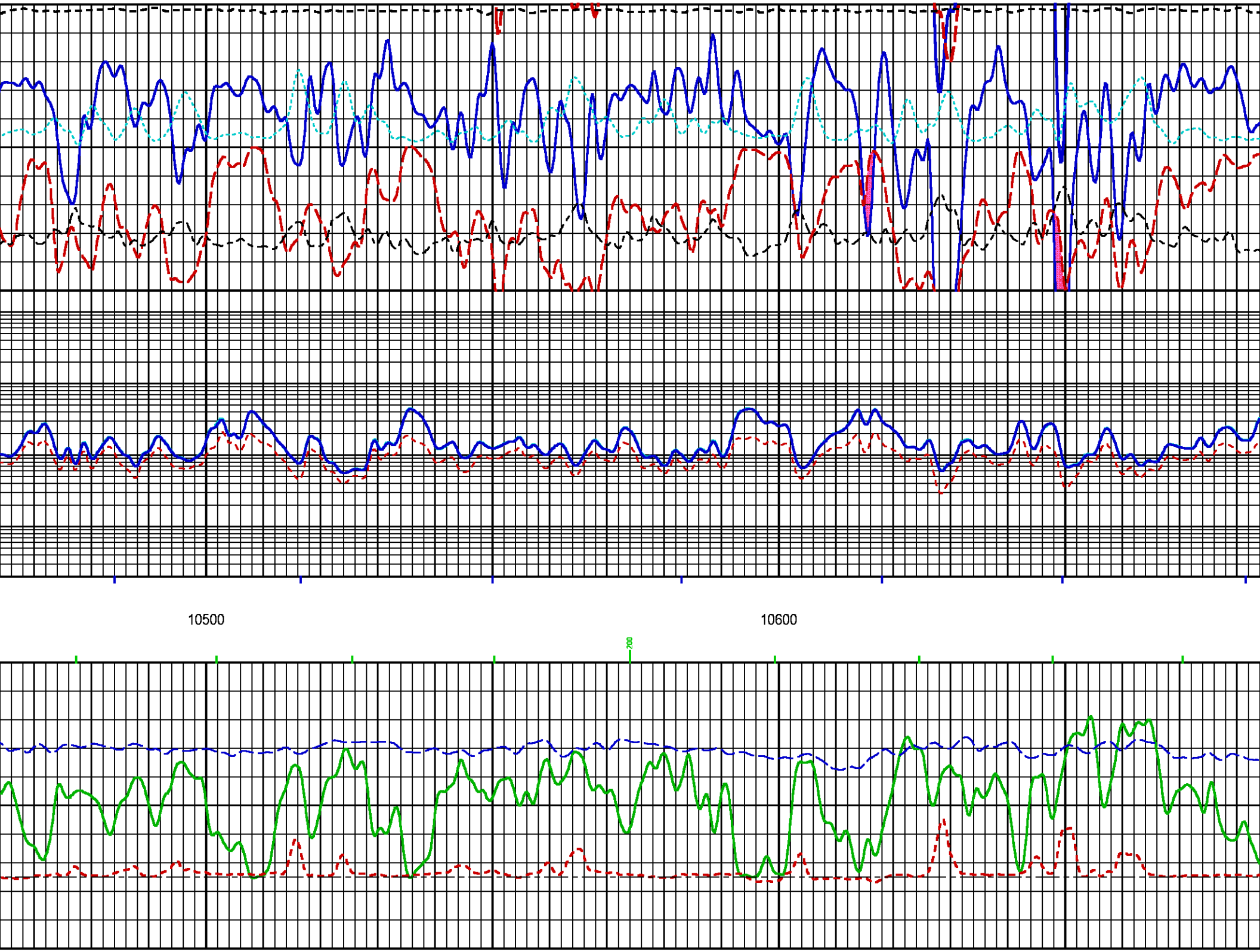
9400
9500

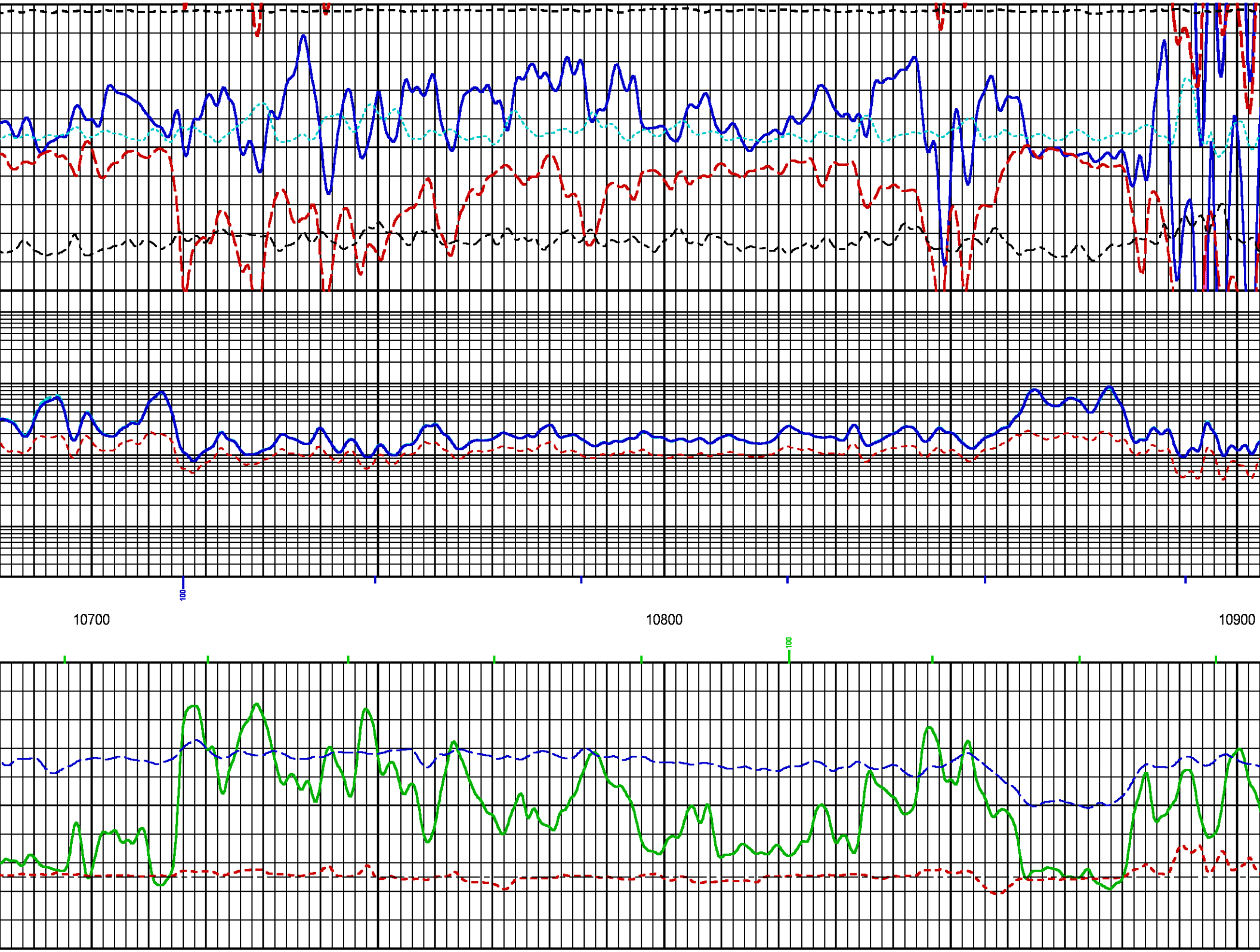
600
400
9600
9700
9800

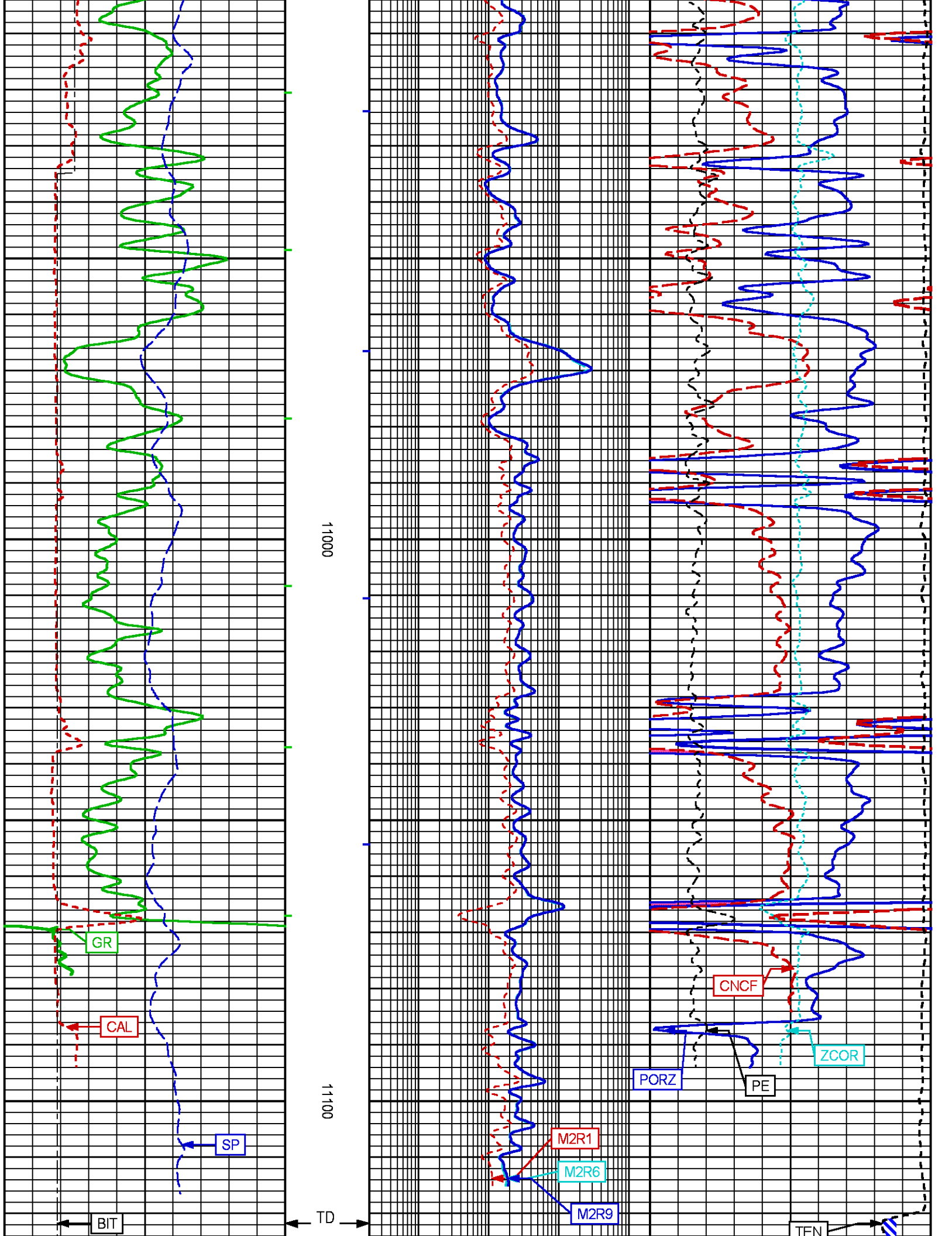
500
9900
10000

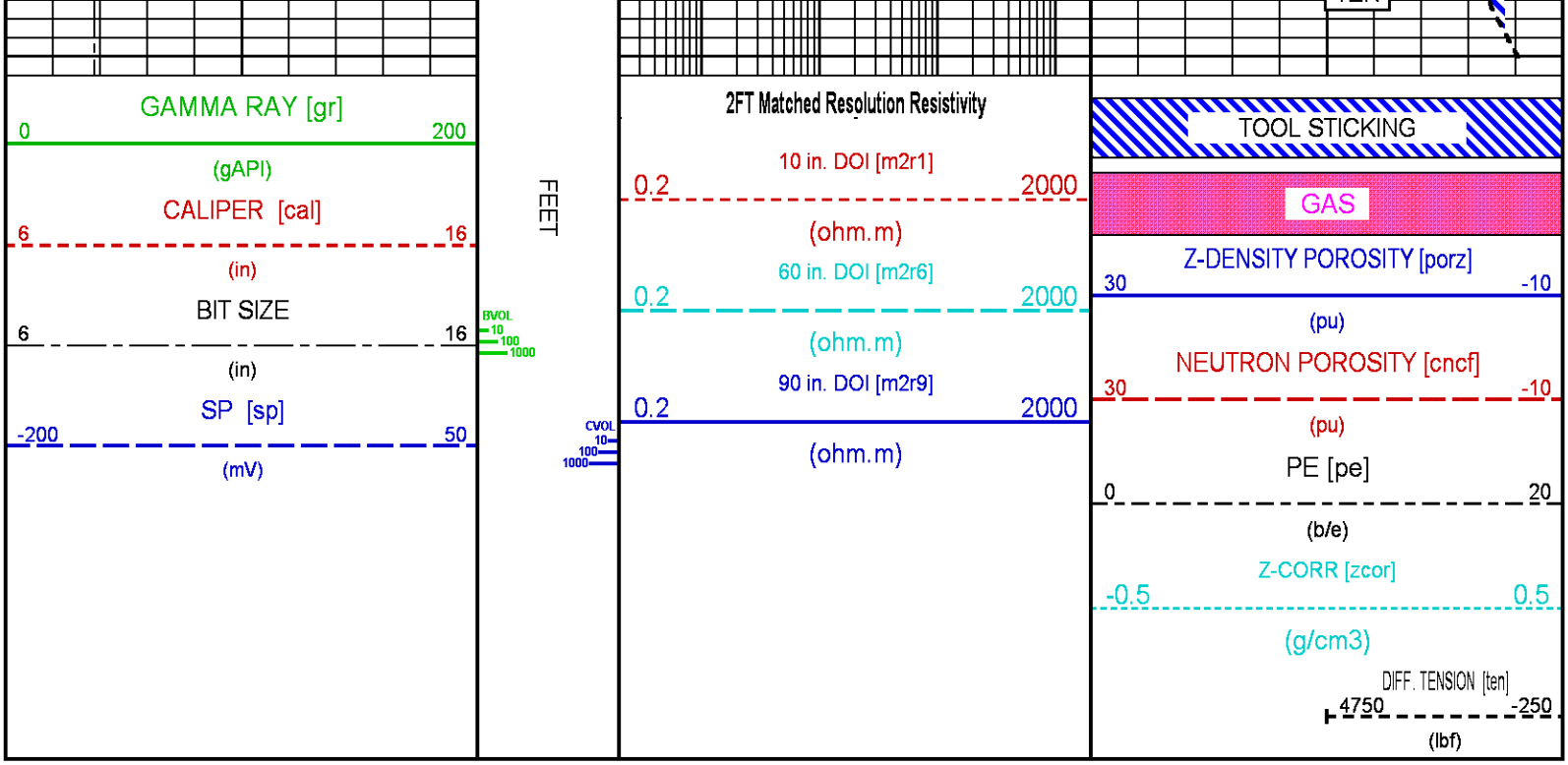

300
10100
10200
400


200
10300
10400
300


10500
10600
200


100
10700
10800
10900
100


GR
CAL
SP
BIT
11000
11100
TD
M2R1
M2R6
M2R9
CNCF
ZCOR
PORZ
PE
TEN



REPEAT LOG

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 5

Plotted: Fri Nov 21 15:33:11 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH092481/n777q01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 3858.122 ft BOTTOM DEPTH: 4251.287 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
Y AXIS CALIPER	FILTER ()	medium (1)		TOP	BOTTOM
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 ()	heavy (3)		"	"

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		7.875	in	"	"

BIT SIZE	BIT SIZE	7.875	in		
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	61.0	degF	"	"
	MUD SAMPLE RES	0.740	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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)	MUD SAMP DERIVED		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	SANDSTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY	2220	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	13.250	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	Nov 21 15:10:04 2014	BIT SIZE
F1:BVOL	Nov 21 15:10:04 2014	BOREHOLE VOLUME
F1:CAL	Nov 21 15:10:04 2014	CALIPER
F1:CNCF	Nov 21 15:10:04 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Nov 21 15:10:04 2014	CEMENT VOLUME
F1:GR	Nov 21 15:10:04 2014	GAMMA RAY
F1:M2R1	Nov 21 15:10:04 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Nov 21 15:10:04 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Nov 21 15:10:04 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Nov 21 15:10:04 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Nov 21 15:10:04 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	Nov 21 15:10:04 2014	SPONTANEOUS POTENTIAL
F1:TEN	Nov 21 15:10:04 2014	DIFFERENTIAL TENSION
F1:ZCOR	Nov 21 15:10:04 2014	DENSITY CORRECTION

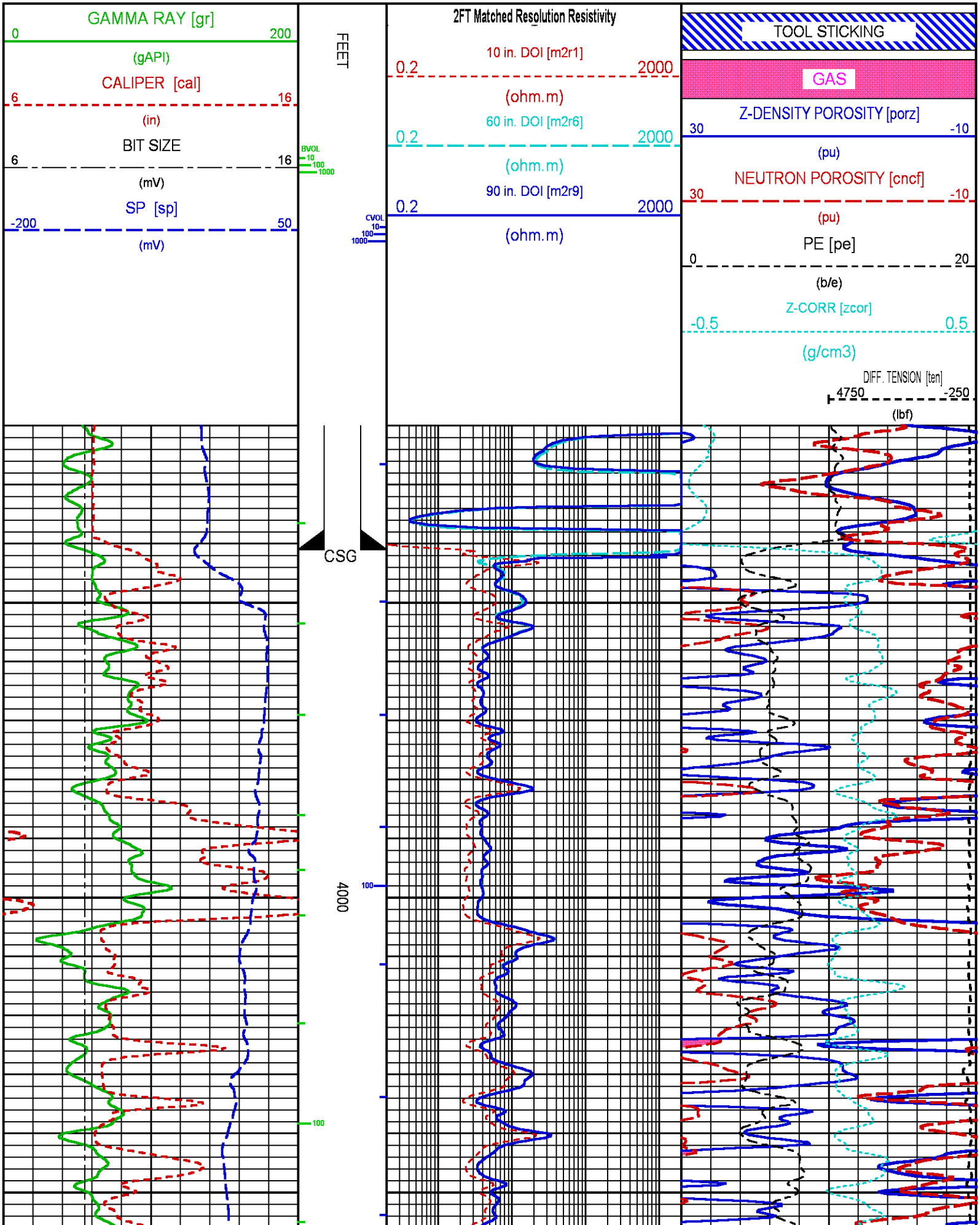
CURVE MEASURE POINT OFFSET

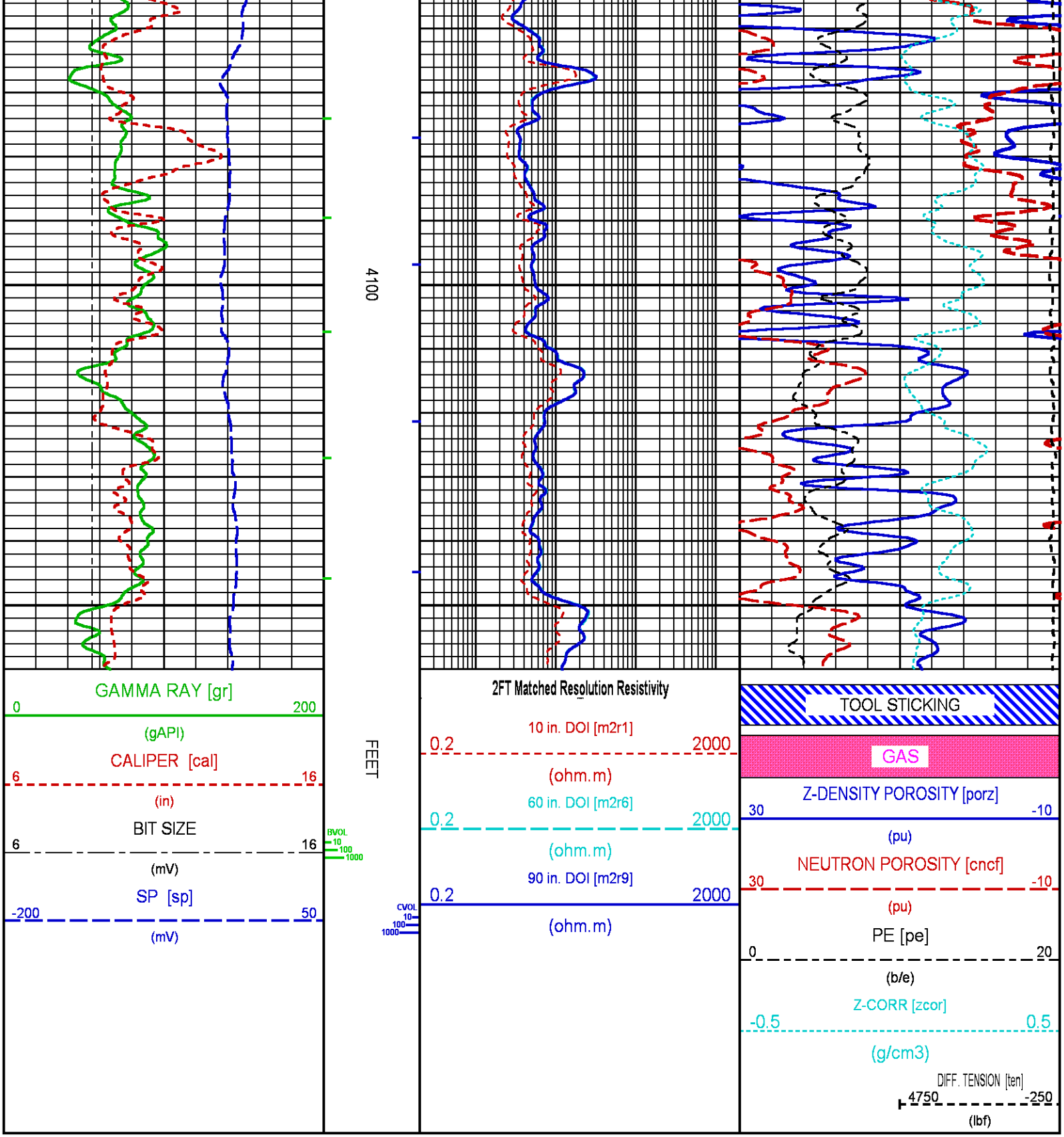
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	52.25	M2R9	8.00	SP	14.00
CAL	35.00	M2R1	8.00	PE	34.25	TEN	0.00
CNCF	45.25	M2R6	8.00	PORZ	34.25	ZCOR	34.25

Presentation : cas6685:WPX_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 3920 - 4160 Feet

Data File 1 : F1 : cas6685:/dat1a/OH092481/REPEAT.xtf
Created On : Nov 21 15:10:04 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL RGU 444-23-198

Field : SULPHUR CREEK
File Interval : 3791.75 - 4246.75 Feet
OCT : n777q





CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/OH092481/FINAL.tp1

CHT PRIMARY CALIBRATION SUMMARY

TOOL #: 2001XA-18516587 DATE/TIME PERFORMED: Thu Sep 4 09:19:19 2014

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 10196895 DATE/TIME PERFORMED: Thu Oct 23 11:01:04 2014

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

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	729.36	1587.31	858.0 (830.0 – 960.0)	0.175	127.52	277.52	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 10196895 DATE/TIME PERFORMED: Thu Oct 23 11:03:19 2014

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

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	688.42	1580.36	0.175	120.36	276.30	155.94 (140.00 – 160.00)

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1329XA 10196895 DATE/TIME PERFORMED: Fri Nov 21 14:36:38 2014 DAYS SINCE CAL: 29

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

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	40.09	959.09	0.175	7.01	167.68	160.67 (145.94 – 165.94)

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2446XA 10202048 DATE/TIME PERFORMED: Sat Aug 23 12:21:26 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	609.89	618.95				
SSN	1611.70	1665.38				
RATIO			2.69067	2.75100	1.02242 (0.97000 – 1.07000)	
CN						21.358

CN PRIMARY VERIFICATION SUMMARY

TOOL #: 2446XA 10202048 DATE/TIME PERFORMED: Sat Aug 23 12:30:10 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	1540.18	1599.34				
SSN	3647.50	3934.61				

RATIO			2.46015	1.02242	2.51681
CN					18.088

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2446XA 10202048 DATE/TIME PERFORMED: Fri Nov 21 14:39:46 2014 DAYS SINCE CAL: 90

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	1501.91	1558.12				
SSN	3620.66	3903.38				
RATIO			2.50519	1.02242	2.56343	
CN						18.726 (16.088 – 20.088)

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2446XA 10202048 DATE/TIME PERFORMED: Sat Nov 22 00:13:24 2014 DAYS SINCE CAL: 90

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	1479.89	1534.43				
SSN	3583.13	3859.78				
RATIO			2.51546	1.02242	2.57369	
CN						18.865 (16.726 – 20.726)

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 153015 DATE/TIME PERFORMED: Mon Nov 3 13:10:17 2014

UNIT #: 3885TC 6685

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING (in)	LARGE RING (in)
CALIPER	1464.8	1969.6	0.00792	-4.60698	7.000	11.000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 153015 DATE/TIME PERFORMED: Fri Nov 21 14:58:12 2014 DAYS SINCE CAL: 18

UNIT #: 3885TC 6685

	I.D.	MULT	ADD	I.D. (in)
CALIPER	1725.2	0.00792	-4.74937	8.921

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 153015 DATE/TIME PERFORMED: Fri Nov 21 22:58:31 2014 DAYS SINCE CAL: 18

UNIT #: 3885TC 6685

	I.D.	MULT	ADD	I.D. (in)
CALIPER	1742.4	0.00792	-4.74937	9.057

8.421 9.421

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2234XA 153015 DATE/TIME PERFORMED: Mon Nov 3 13:43:56 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)
224.5 (220.0 – 230.0)	226.1 (220.0 – 230.0)	1192.3	1525.9

	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	22177.4	11477.9	0.599 (0.565 – 0.665)	1.697	0.002	2.300
AL	12849.2	1155.6		2.717	-0.004	
AL + SHIM	17762.9	2004.8		2.629	0.157	
MG + SHIM (HI PE)	10631.3	5402.9	0.237 (0.210 – 0.270)			8.730
RATIO AL + SHIM/AL	1.38 (1.32 – 1.42)	1.73 (1.64 – 1.84)				
RATIO MG/AL	1.73 (1.65 – 1.78)	9.93 (9.40 – 10.20)				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 153015 DATE/TIME PERFORMED: Fri Nov 21 14:34:03 2014 DAYS SINCE CAL: 18

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1531.5 (1425.9 – 1625.9)	229.2 (220.0 – 230.0)	1158.8 (1100.0 – 1550.0)
SS	1201.5 (1092.3 – 1292.3)	225.2 (220.0 – 230.0)	1266.0 (1100.0 – 1550.0)

LV (V)	PAD CURRENT (mA)
5.0 (4.8 – 5.2)	74.1 (50.0 – 120.0)

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 153015 DATE/TIME PERFORMED: Sat Nov 22 00:09:50 2014 DAYS SINCE CAL: 18

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	1516.2 (1425.9 – 1625.9)	220.6 (220.0 – 230.0)	1162.0 (1100.0 – 1550.0)
SS	1185.7 (1092.3 – 1292.3)	223.5 (220.0 – 230.0)	1269.3 (1100.0 – 1550.0)

LV (V)	PAD CURRENT (mA)
5.0 (4.8 – 5.2)	68.6 (50.0 – 120.0)

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1515MA 10037719 DATE/TIME PERFORMED: Thu Nov 13 09:50:32 2014

UNIT #: 3885TC 6685 GRCOND ID & DATE: 86 082996

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

Coil 0 R	-0.014	-0.007	-0.004	-0.005	-0.007	-0.004	-0.005	-0.007
	-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	0.003	0.000	0.003	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	0.003	0.001	0.001	0.005	0.005	0.000	-0.001	-0.003
	-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	-0.005	-0.004	0.000	0.002	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	-0.003	0.004	0.004	0.001	-0.001	0.001	0.005	0.008
	-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	0.000	0.003	0.002	-0.001	-0.003	-0.005	-0.008	-0.007
	-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	0.008	0.003	0.001	0.000	0.002	-0.003	-0.001	0.003
	-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	-0.010	-0.001	0.001	-0.001	-0.002	0.001	-0.002
	-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	-0.018	-0.002	-0.003	0.002	0.000	0.003	0.004	0.004
	-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	-0.005	0.000	-0.001	-0.002	-0.002	-0.005	-0.006	-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	0.006	0.006	0.010	0.004	0.007	0.003	-0.004	0.000
	-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	0.002	0.008	0.005	0.006	0.003	0.007	-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	-0.009	0.025	-0.004	-0.010	-0.010	0.007	0.018	0.024
	-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	-0.007	-0.009	-0.005	-0.003	-0.009	-0.016	-0.025	-0.019
	-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	126.10	124.58	121.66	117.42	111.99	105.53	98.07	89.86
	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	7.576	23.866	39.857	55.806	71.652	87.561	103.363	119.210
	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	218.74	216.13	211.04	203.71	194.40	183.22	170.23	155.86
	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	7.672	24.163	40.380	56.559	72.622	88.727	104.795	120.846
	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	439.55	434.39	424.49	410.17	391.82	369.24	343.63	314.98
	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	7.854	24.676	41.254	57.796	74.247	90.778	107.177	123.719
	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	710.73	701.78	684.38	659.19	627.14	589.70	546.74	500.83
	590.00 880.00	580.00 870.00	570.00 850.00	550.00 830.00	530.00 800.00	500.00 760.00	470.00 710.00	440.00 650.00
Coil 3 P	7.709	24.300	40.580	56.766	72.756	88.773	104.523	120.284
	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	1137.4	1120.8	1088.4	1043.0	986.8	922.5	852.2	778.2
	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	7.954	25.036	41.688	58.181	74.361	90.417	106.102	121.746
	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	2337.5	2315.9	2272.5	2207.0	2118.8	2007.2	1872.5	1719.7
	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	8.016	25.325	42.420	59.616	76.841	94.241	111.617	129.106
	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	6073.4	5992.9	5836.8	5615.4	5335.5	5003.9	4628.6	4222.2
	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	8.222	26.238	43.841	61.368	78.701	96.015	113.161	130.345
	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	479	-87	-145	-157	-158	-157	-155	-153
	-200 800	-500 200	-600 100	-600 50	-500 20	-500 20	-500 20	-500 20
Coil 0 Q	2068	739	408	251	154	87	34	-10
	-3000 6000	-1000 2000	-1000 1200	-500 900	-400 700	-400 600	-400 500	-400 400
Coil 1 R	566	85	22	0	-10	-17	-20	-22
	450 650	20 130	-30 60	-50 40	-55 30	-60 20	-60 10	-60 10
Coil 1 Q	1229	492	308	222	170	137	112	94
	0 2500	0 900	0 600	0 450	0 350	0 300	0 250	0 250
Coil 2 R	186.8	27.0	6.6	-0.1	-3.5	-5.8	-6.1	-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	417.2	167.9	108.0	81.1	66.3	57.4	51.3	47.7
	-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	48.6	6.6	1.7	0.0	-0.6	-1.3	-1.7	-2.3
	37.0 62.0	0.0 12.0	-3.0 6.0	-4.0 4.0	-5.0 2.0	-5.0 1.0	-6.0 1.0	-6.0 1.0
Coil 3 Q	72.4	33.3	24.4	21.4	20.5	20.6	21.5	22.0
	-140.0 280.0	-40.0 100.0	-20.0 70.0	-10.0 60.0	-10.0 50.0	-10.0 50.0	-10.0 50.0	-10.0 50.0
Coil 4 R	11.46	0.58	-0.61	-1.21	-1.41	-1.53	-1.52	-1.62

	2.00 18.00	-3.00 6.00	-3.50 3.00	-3.90 2.00	-4.20 2.00	-4.50 2.00	-4.70 2.00	-5.00 2.00
Coil 4 Q	19.94	11.58	11.05	12.40	13.96	15.97	17.82	20.00
	-100.00 100.00	-30.00 50.00	-20.00 40.00	-10.00 40.00	-10.00 40.00	-10.00 45.00	-10.00 50.00	-10.00 60.00
Coil 5 R	2.25	-0.29	-0.58	-0.65	-0.70	-0.79	-0.81	-0.82
	-2.00 5.80	-3.20 2.40	-4.50 3.10	-4.70 3.20	-4.80 3.20	-5.00 3.30	-5.20 3.40	-5.40 3.50
Coil 5 Q	15.39	8.27	8.73	10.20	12.04	13.94	16.04	18.20
	-60.00 70.00	-20.00 30.00	-20.00 30.00	-20.00 35.00	-20.00 45.00	-20.00 50.00	-20.00 60.00	-30.00 70.00
Coil 6 R	-2.45	-1.06	-0.64	-0.51	-0.45	-0.41	-0.48	-0.50
	-4.80 1.00	-5.70 3.80	-6.50 4.90	-6.90 5.40	-7.30 5.80	-7.50 6.00	-7.70 6.10	-7.90 6.30
Coil 6 Q	2.63	3.11	5.13	7.39	9.61	11.87	14.01	16.32
	-30.00 30.00	-20.00 25.00	-20.00 35.00	-30.00 50.00	-35.00 60.00	-40.00 70.00	-50.00 80.00	-60.00 100.00

MM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	0.999	0.996	0.992	0.991	0.990	0.989	0.989	0.990
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 0 P	0.132	0.245	0.318	0.274	0.226	0.171	0.131	0.084
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 1 M	0.982	0.980	0.976	0.975	0.973	0.972	0.971	0.970
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 1 P	0.133	0.273	0.361	0.365	0.362	0.306	0.306	0.245
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 2 M	1.009	1.006	1.005	1.004	1.003	1.002	1.003	1.001
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 2 P	0.111	0.082	0.123	0.150	0.179	0.157	0.142	0.198
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 3 M	1.013	1.012	1.011	1.009	1.008	1.007	1.008	1.009
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 3 P	0.048	0.110	0.182	0.212	0.185	0.162	0.101	0.150
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 4 M	1.024	1.023	1.023	1.022	1.021	1.020	1.020	1.019
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 4 P	0.096	0.143	0.156	0.206	0.233	0.259	0.209	0.224
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 5 M	1.029	1.028	1.028	1.026	1.024	1.024	1.022	1.021
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 5 P	0.057	0.041	0.110	0.135	0.114	0.048	0.061	0.025
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000
Coil 6 M	1.029	1.030	1.029	1.026	1.025	1.030	1.030	1.027
	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100	0.900 1.100
Coil 6 P	0.051	0.196	0.173	0.301	0.215	0.140	0.156	0.059
	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000	-2.000 2.000

PARMS	TCID 0	TCID 1	Cal Temp (degF)	T Factor
IDs	1.617	0.832	48.8	1.04

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1515MA 10037719 DATE/TIME PERFORMED: Fri Nov 21 15:35:54 2014 DAYS SINCE CAL: 8

UNIT #: 3885TC 6685

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-0.011	-0.005	-0.002	-0.005	-0.006	-0.003	-0.004	-0.006
	-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	0.011	0.003	0.000	0.003	-0.000	-0.001	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	0.001	0.001	0.002	0.000	-0.003	-0.004	-0.005
	-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	-0.006	-0.003	-0.004	0.001	0.002	0.002	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	-0.005	0.003	0.004	0.000	0.002	0.003	0.007	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 2 Q	-0.002	-0.001	0.001	-0.001	-0.005	-0.006	-0.005	-0.005
	-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	0.009	0.002	-0.003	0.003	0.004	0.003	-0.000	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	-0.011	-0.011	-0.002	0.003	-0.002	0.000	0.001	-0.000
	-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	-0.021	-0.005	-0.006	-0.004	-0.005	0.000	0.002	-0.001
	-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	0.006	-0.003	-0.004	-0.002	-0.006	-0.005	-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	-0.000	-0.002	0.007	0.001	-0.001	-0.007	-0.010	-0.003
	-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	0.000	0.012	-0.005	-0.001	0.000	0.001	0.003	-0.002

	-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	0.000	0.003	0.008	-0.017	-0.007	0.001	-0.003	0.016
	-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	-0.035	0.019	0.007	0.005	-0.007	-0.014	0.008	-0.003
	-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	126.05	124.54	121.65	117.43	112.12	105.72	98.32	90.06
	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	7.580	23.912	39.932	55.941	71.806	87.802	103.639	119.687
	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	217.99	215.37	210.37	203.12	193.95	182.84	170.14	155.86
	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	7.685	24.236	40.504	56.744	72.839	89.076	105.174	121.464
	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	440.76	435.59	425.84	411.54	393.35	371.06	345.57	316.82
	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	7.863	24.742	41.366	57.961	74.452	91.099	107.574	124.294
	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	713.04	704.04	686.82	661.65	629.87	592.70	550.03	503.90
	590.00 880.00	580.00 870.00	570.00 850.00	550.00 830.00	530.00 800.00	500.00 760.00	470.00 710.00	440.00 650.00
Coil 3 P	7.733	24.380	40.707	56.970	73.021	89.140	104.979	120.915
	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	1143.5	1126.7	1094.6	1049.2	993.3	929.3	859.2	784.7
	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	7.974	25.111	41.813	58.377	74.599	90.773	106.550	122.376
	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	2343.6	2321.7	2278.5	2212.9	2125.2	2014.1	1880.8	1726.9
	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	8.042	25.410	42.562	59.822	77.083	94.596	112.035	129.703
	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	6062.0	5981.8	5830.0	5611.5	5335.5	5008.8	4639.5	4236.7
	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	8.233	26.275	43.902	61.474	78.819	96.242	113.441	130.813
	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

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1515MA 10037719 DATE/TIME PERFORMED: Fri Nov 21 23:00:26 2014 DAYS SINCE CAL: 8

UNIT #: 3885TC 6685

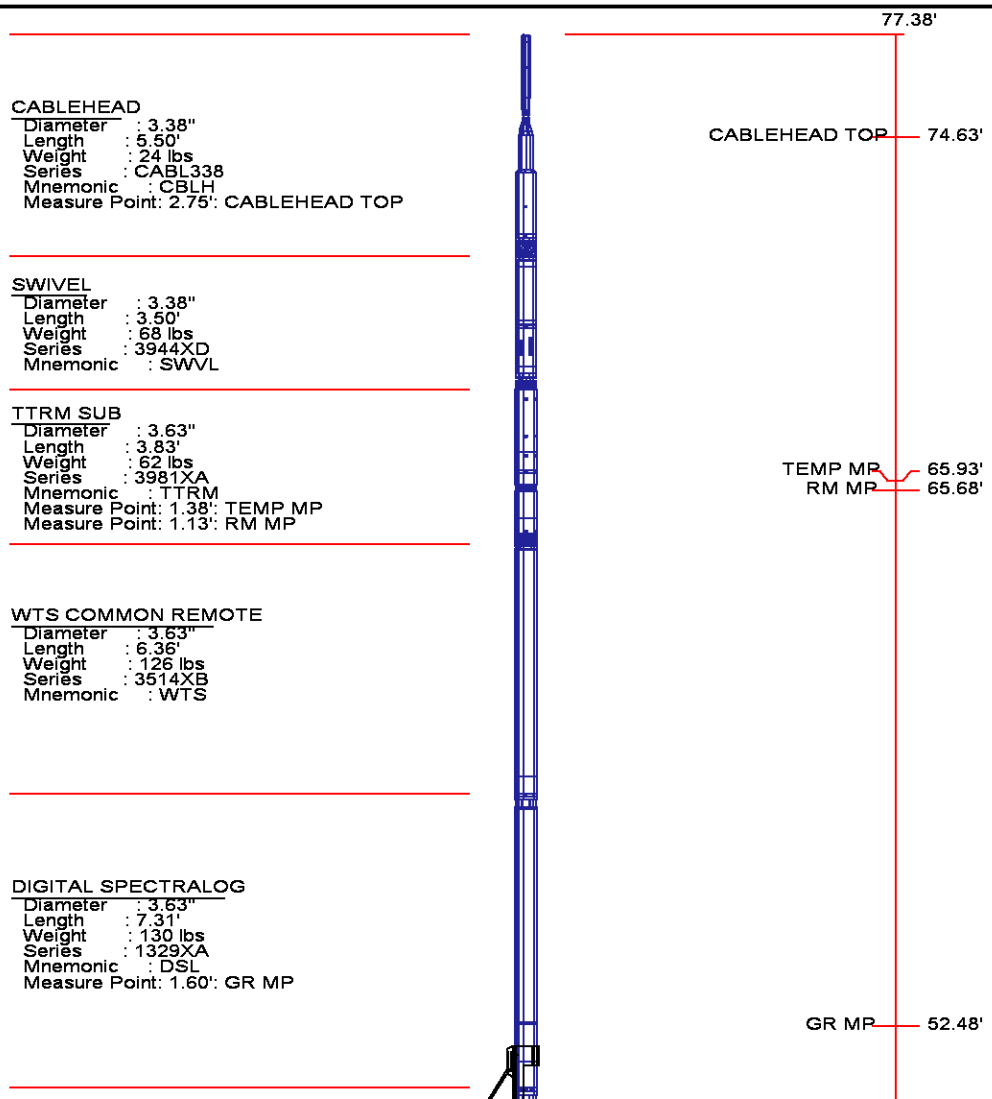
ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-0.008	-0.002	-0.001	-0.005	-0.009	-0.006	-0.007	-0.007
	-0.091 0.069	-0.065 0.055	-0.032 0.028	-0.035 0.025	-0.036 0.024	-0.033 0.027	-0.034 0.026	-0.036 0.024
Coil 0 Q	0.006	0.012	0.004	0.003	0.004	0.002	-0.002	-0.001
	-0.033 0.047	-0.109 0.131	-0.027 0.033	-0.030 0.030	-0.027 0.033	-0.030 0.030	-0.031 0.029	-0.030 0.030
Coil 1 R	0.005	0.002	0.003	0.004	0.001	-0.003	-0.003	-0.006
	-0.076 0.084	-0.049 0.051	-0.029 0.031	-0.028 0.032	-0.030 0.030	-0.033 0.027	-0.034 0.026	-0.035 0.025
Coil 1 Q	-0.005	-0.003	-0.001	0.003	0.005	0.004	0.003	-0.001
	-0.406 0.394	-0.103 0.097	-0.034 0.026	-0.029 0.031	-0.028 0.032	-0.028 0.032	-0.027 0.033	-0.029 0.031
Coil 2 R	-0.000	0.005	0.009	0.005	0.007	0.010	0.012	0.014
	-0.075 0.065	-0.027 0.033	-0.026 0.034	-0.030 0.030	-0.028 0.032	-0.027 0.033	-0.023 0.037	-0.021 0.039
Coil 2 Q	0.003	-0.001	0.004	-0.003	-0.005	-0.005	-0.006	-0.002
	-0.352 0.348	-0.101 0.099	-0.029 0.031	-0.031 0.029	-0.035 0.025	-0.036 0.024	-0.035 0.025	-0.035 0.025
Coil 3 R	0.011	0.007	0.002	0.009	0.011	0.007	0.006	0.008
	-0.031 0.049	-0.038 0.042	-0.043 0.037	-0.037 0.043	-0.036 0.044	-0.037 0.043	-0.040 0.040	-0.038 0.042
Coil 3 Q	-0.011	-0.011	-0.009	0.000	-0.003	0.001	0.002	0.001
	-0.211 0.189	-0.091 0.069	-0.042 0.038	-0.037 0.043	-0.042 0.038	-0.040 0.040	-0.039 0.041	-0.040 0.040
Coil 4 R	-0.009	-0.005	0.003	-0.006	-0.002	0.001	0.004	0.002
	-0.081 0.039	-0.065 0.055	-0.066 0.054	-0.064 0.056	-0.065 0.055	-0.060 0.060	-0.058 0.062	-0.061 0.059
Coil 4 Q	0.002	0.002	0.004	-0.005	-0.002	-0.006	-0.004	-0.002
	-0.296 0.304	-0.094 0.106	-0.063 0.057	-0.064 0.056	-0.062 0.058	-0.066 0.054	-0.065 0.055	-0.061 0.059
Coil 5 R	0.001	0.004	0.010	0.009	0.003	0.009	0.000	-0.000
	-0.120 0.120	-0.122 0.118	-0.113 0.127	-0.119 0.121	-0.121 0.119	-0.127 0.113	-0.130 0.110	-0.123 0.117
Coil 5 Q	0.010	-0.007	-0.001	0.006	0.009	0.005	0.006	0.002
	-0.600 0.600	-0.238 0.262	-0.125 0.115	-0.121 0.119	-0.120 0.120	-0.119 0.121	-0.117 0.123	-0.122 0.118
Coil 6 R	0.009	-0.016	-0.014	0.001	0.002	0.015	-0.007	0.009
	-0.300 0.300	-0.297 0.303	-0.292 0.308	-0.317 0.283	-0.307 0.293	-0.299 0.301	-0.303 0.297	-0.284 0.316
Coil 6 Q	0.020	-0.023	-0.001	-0.009	0.005	-0.001	0.000	-0.007
	-1.535 1.465	-0.581 0.619	-0.293 0.307	-0.295 0.305	-0.307 0.293	-0.314 0.286	-0.292 0.308	-0.303 0.297

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	126.16	124.64	121.78	117.35	111.97	105.21	97.73	89.15
	123.53 128.57	122.05 127.03	119.22 124.09	115.08 119.78	109.88 114.36	103.61 107.84	96.35 100.29	88.25 91.86
Coil 0 P	7.618	24.045	40.193	56.308	72.262	88.352	104.179	120.270

	4.580 10.580	20.912 26.912	36.932 42.932	52.941 58.941	68.806 74.806	84.802 90.802	100.639 106.639	116.687 122.687
Coil 1 M	217.95	215.30	210.37	202.71	193.45	181.73	168.96	154.06
	213.63 222.35	211.07 219.68	206.16 214.58	199.05 207.18	190.08 197.83	179.18 186.49	166.73 173.54	152.75 158.98
Coil 1 P	7.720	24.363	40.751	57.095	73.269	89.587	105.692	122.005
	4.685 10.685	21.236 27.236	37.504 43.504	53.744 59.744	69.839 75.839	86.076 92.076	102.174 108.174	118.464 124.464
Coil 2 M	441.01	435.78	426.19	411.05	392.58	369.15	343.37	313.58
	431.95 449.58	426.88 444.30	417.33 434.36	403.31 419.77	385.48 401.21	363.64 378.48	338.66 352.48	310.49 323.16
Coil 2 P	7.892	24.857	41.591	58.286	74.846	91.561	108.032	124.786
	4.863 10.863	21.742 27.742	38.366 44.366	54.961 60.961	71.452 77.452	88.099 94.099	104.574 110.574	121.294 127.294
Coil 3 M	713.49	704.41	687.34	660.90	628.86	589.63	546.63	498.62
	698.78 727.30	689.96 718.12	673.09 700.56	648.41 674.88	617.27 642.46	580.84 604.55	539.03 561.03	493.82 513.98
Coil 3 P	7.768	24.501	40.936	57.305	73.455	89.611	105.470	121.441
	4.733 10.733	21.380 27.380	37.707 43.707	53.970 59.970	70.021 76.021	86.140 92.140	101.979 107.979	117.915 123.915
Coil 4 M	1144.2	1127.3	1095.5	1048.0	991.7	924.5	853.8	776.7
	1120.6 1166.4	1104.2 1149.2	1072.7 1116.5	1028.2 1070.2	973.5 1013.2	910.7 947.9	842.0 876.4	769.0 800.4
Coil 4 P	8.008	25.230	42.047	58.715	75.027	91.251	107.042	122.883
	4.974 10.974	22.111 28.111	38.813 44.813	55.377 61.377	71.599 77.599	87.773 93.773	103.550 109.550	119.376 125.376
Coil 5 M	2343.9	2321.9	2279.3	2209.4	2120.5	2002.6	1867.9	1707.6
	2296.7 2390.5	2275.2 2368.1	2233.0 2324.1	2168.7 2257.2	2082.7 2167.7	1973.8 2054.4	1843.2 1918.4	1692.3 1761.4
Coil 5 P	8.074	25.522	42.782	60.142	77.481	95.034	112.471	130.160
	5.042 11.042	22.410 28.410	39.562 45.562	56.822 62.822	74.083 80.083	91.596 97.596	109.035 115.035	126.703 132.703
Coil 6 M	6062.6	5982.4	5832.2	5602.5	5324.6	4981.3	4609.3	4188.5
	5940.7 6183.2	5862.2 6101.5	5713.4 5946.6	5499.3 5723.8	5228.8 5442.2	4908.6 5109.0	4546.7 4732.3	4151.9 4321.4
Coil 6 P	8.266	26.380	44.123	61.774	79.209	96.680	113.911	131.259
	5.233 11.233	23.275 29.275	40.902 46.902	58.474 64.474	75.819 81.819	93.242 99.242	110.441 116.441	127.813 133.813

INSTRUMENT CONFIGURATION

Source File: /dat1a/OH092481/FINAL_MINI_SLAM-tdg



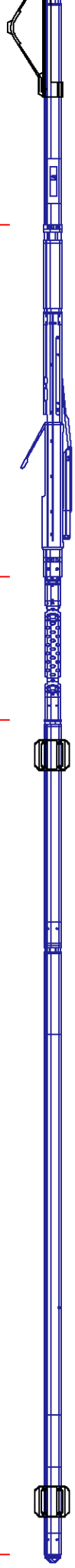
COMPENSATED NEUTRON
Diameter : 3.63"
Length : 7.59'
Weight : 150 lbs
Series : 2446XA
Mnemonic : CN
Measure Point: 2.63': LSN MP
Measure Point: 2.24': SSN MP

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

KNUCKLE JOINT (DOUBLE)
Diameter : 3.38"
Length : 4.65'
Weight : 90 lbs
Series : 3939XA
Mnemonic : KNJT

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

BULL PLUG 3 3/8



LSN MP — 45.92'
SSN MP — 45.52'
CAL MP — 35.26'
LSD MP — 34.54'
SSD MP — 34.14'
SP MP — 14.19'
XMTR MP — 7.72'
0.00'

TOTAL LENGTH: 77.38'
TOTAL WEIGHT: 1446 lbs
MAX DIAMETER: 0'4.88"

MAX DIAMETER: 04.88

BAKER HUGHES EQUIPS	COMPANY	WPX ENERGY ROCKY MTN LLC	FILE NO: 0H092481
	WELL	FEDERAL RGU 444-23-198	API NO: 05103121390000
	FIELD	SULPHUR CREEK	
	COUNTY	RIO BLANCO STATE C0	
	LOCATION: SHL: 1028' FSL 645' FEL BHL: 477' FSL 631' FEL	ELEVATIONS: KB 6592 FT DF GL 6567 FT	RIG: AZTEC 1000 PAD: RGU 43-23-198 S23 T1S R98W
	SEC 23 TWP 1S RGE 98W	DATE 21-Nov-2014	