BAKER HUGHES

EOLIPS

FILE NO:

API NO: 15-025-21570

COMPANY CORAL COAST PETROLEUM

WELL HARDEN 1-17

FIELD MORRISON

COUNTY CLARK STATE KANSAS

Ver. 3.87

LOCATION:

1470' FSL & 660' FEL

SEC 17 TWP 32S RGE 21W

OTHER SERVICES

HDIL/GR
DAL/GR
ZDL/CN/GR
ML/GR

PERMANENT DATUM GL ELEVATION 2133 FT

LOG MEASURED FROM KB 10 FT ABOVE P.D.

DRILL. MEAS. FROM KB

ELEVATIONS:

KB 2143 FT
DF 2142 FT
GL 2133 FT

DATE		15-Jan-2014			
RUN	TRIP	1	1		
SERVICE ORDER		631543			
DEPTH DRILLER		6570 FT			
DEPTH LOGGER		6572 FT			
BOTTOM LOGGED INTERVAL		6572 FT			
TOP LOGGED INTERVAL		562 FT			
CASING DRILLER		8.625 IN @ 612 FT		@	
CASING LOGGER		562 FT			
BIT SIZE		7.875 IN			
TYPE OF FLUID IN HOLE		CHEMICAL			
DENSITY	VISCOSITY	8.5 LB/G	35 CP		
PH	FLUID LOSS	9	12.8 C3		
SOURCE OF SAMPLE		FLOWLINE			
RM AT MEAS. TEMP.		0.51 OHMM @ 75 DEGF		@	
RMF AT MEAS. TEMP.		0.38 OHMM @ 75 DEGF		@	
RMC AT MEAS. TEMP.		0.64 OHMM @ 75 DEGF		@	
SOURCE OF RMF	RMC	CALCULATED	CALCULATED		
RM AT BHT		0.32 OHMM @ 122 DEGF		@	
TIME SINCE CIRCULATION		5.5 HRS			
MAX. RECORDED TEMP.		123 DEGF			
EQUIP. NO.	LOCATION	HL-6680	WOODWARD		
RECORDED BY		L.OHANDLEY			
WITNESSED BY		MR. ADAM NIGHSWONGER			

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

BOREHOLE RECORD

BIT SIZE	FROM	TO

REMARKS

RUN 1 TRIP 1:

Z-DENSITY LOG AND COMPENSATED NEUTRON RECORDED ON LIMESTONE MATRIX
CNC BOREHOLE AND SALINITY CORRECTED
RHO MATRIX = 2.71
REPEAT 2 MATRIX 2.83

BVOL = TOTAL BOREHOLE VOLUME
CVOL = TOTAL BOREHOLE VOLUME MINUS 5.5" CASING

ACOUSTIC POROSITY RUN ON LIMESTONE MATRIX
DT FLUID = 189.6 US/FT DT MATRIX = 47.6 US/FT

RIG: MAVERICK 106
CREW: J.GIBSON, D.BARNARD, D.SCHWARZ
BAKER HUGHES APPRECIATES CORAL'S WORK !!!

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTRM	3981 XA	10045153	FREE
1	1	COMREM	3514 XB	116620	FREE
1	1	DGR	1329 XA	179184	FREE
1	1	CN	2446 XA	173079	DECENTRALIZED
1	1	ZDL	2234 MA	179939	PAD DEVICE
1	1	DBLKNL	3939 XA	10238696	FREE
1	1	CENT	4341 XA	180450	CENTRALIZED
1	1	ACCOM	1667 EA	172951	CENTRALIZED
1	1	DAL	1680 MA	151555	CENTRALIZED
1	1	CENT	4341 XA	151270	CENTRALIZED
1	1	HDIL	1515 EA/MA	183372/183381	1.5" STANDOFFS
1	1	SLMAD	3516 XA	180173	FREE
1	1	ML	3104 XA	078144	PAD DEVICE

MAIN LOG

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Patches: 3

Plotted: Wed Jan 15 15:04:51 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CORAL_HARDEN1_17/n777g~02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 470.000 ft BOTTOM DEPTH: 6580.247 ft

SYMMETRIC FILTER

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

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft) TOP	BOTTOM
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.100	0.01 degF/ft	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE		"	"
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) TOP	BOTTOM
HDIL TEMPERATURE CORRECTION	TEMP CORR SOURCE	USE RXTEMP		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

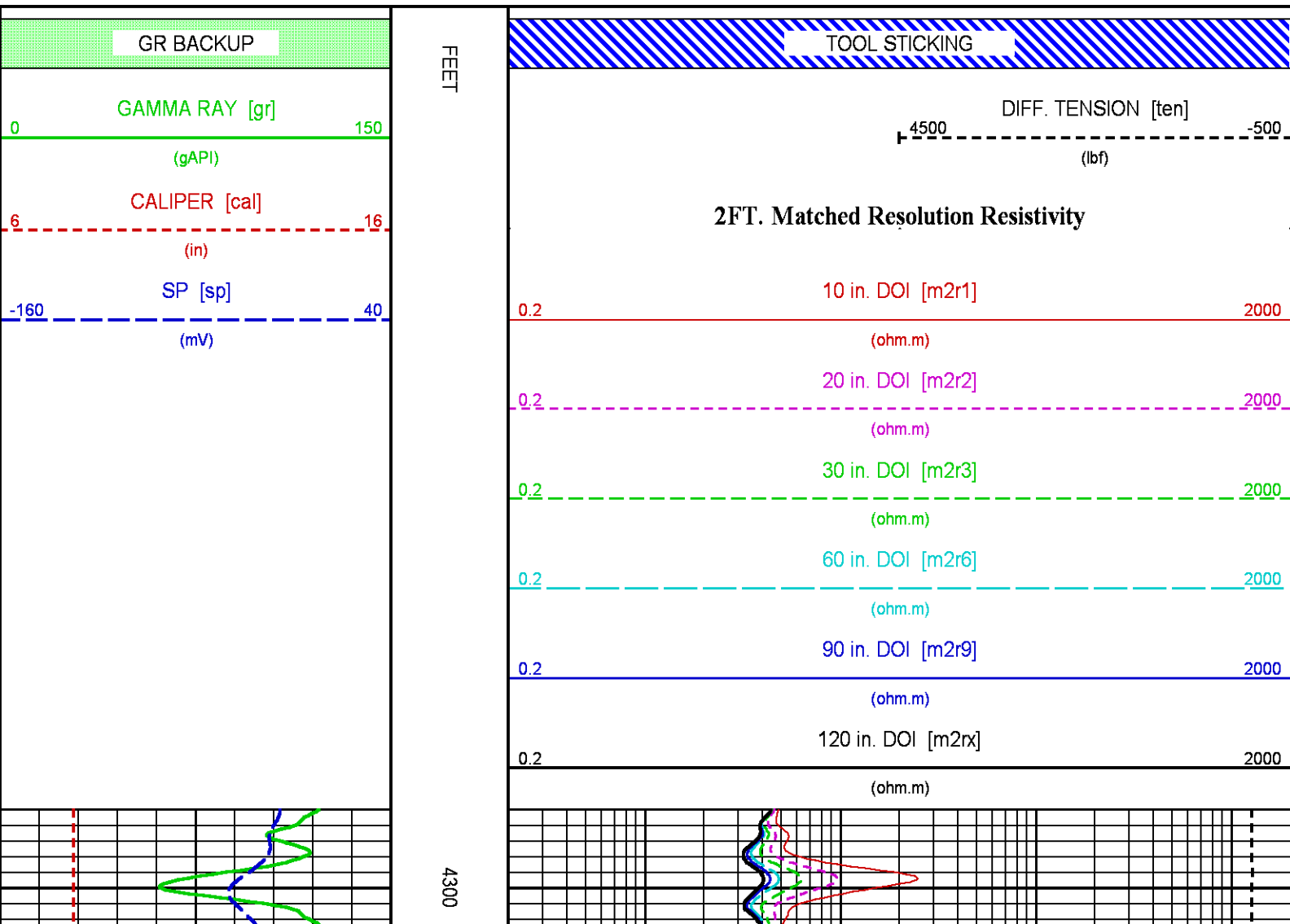
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CAL	Jan 15 12:03:10 2014	CALIPER
F1:GR	Jan 15 12:03:10 2014	GAMMA RAY
F1:M2R1	Jan 15 12:03:10 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Jan 15 12:03:10 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Jan 15 12:03:10 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Jan 15 12:03:10 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Jan 15 12:03:10 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:M2RX	Jan 15 12:03:10 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 120-INCH DOI
F1:SP	Jan 15 12:03:10 2014	SPONTANEOUS POTENTIAL
F1:TEN	Jan 15 12:03:10 2014	DIFFERENTIAL TENSION

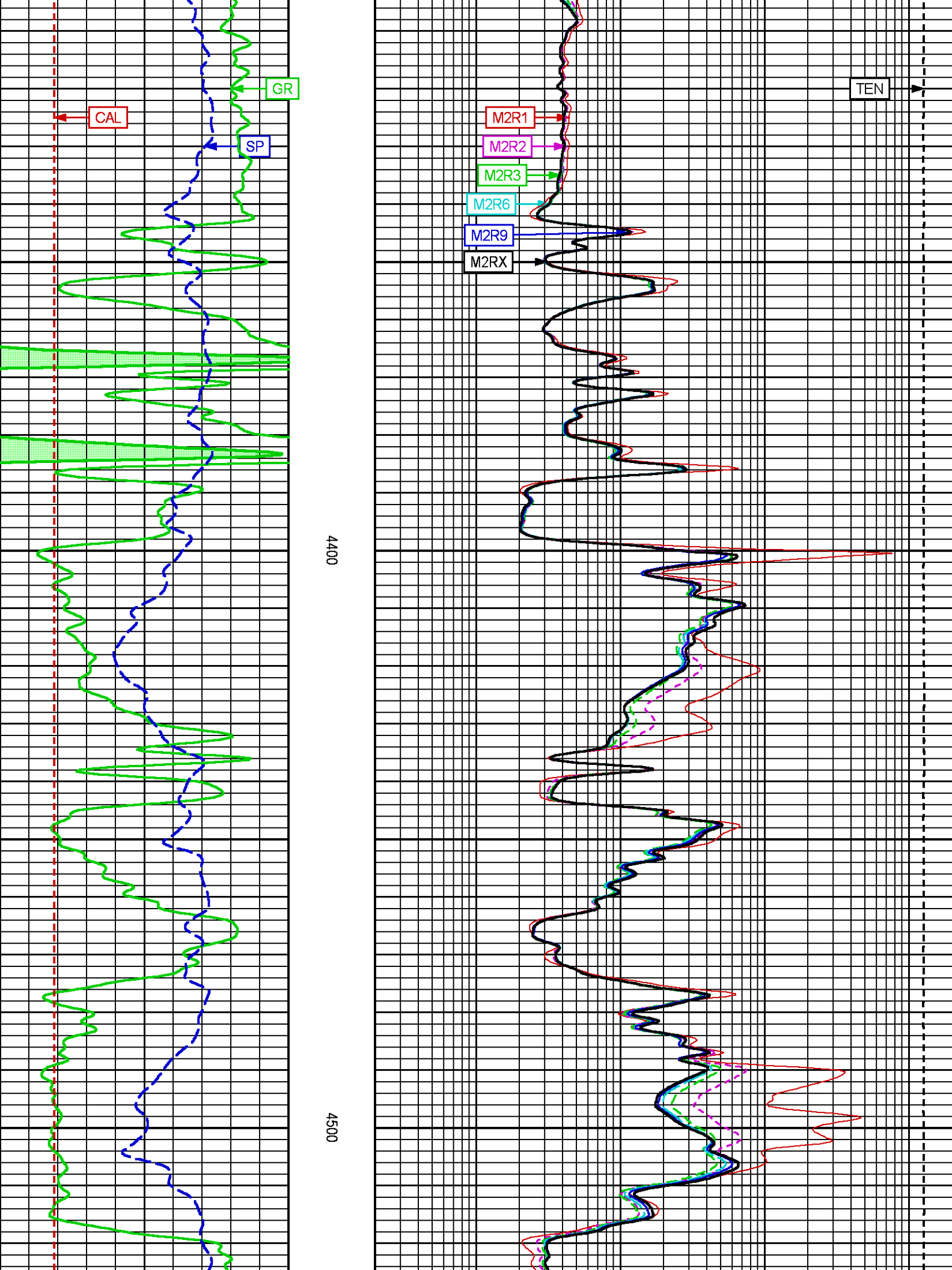
CURVE MEASURE POINT OFFSET

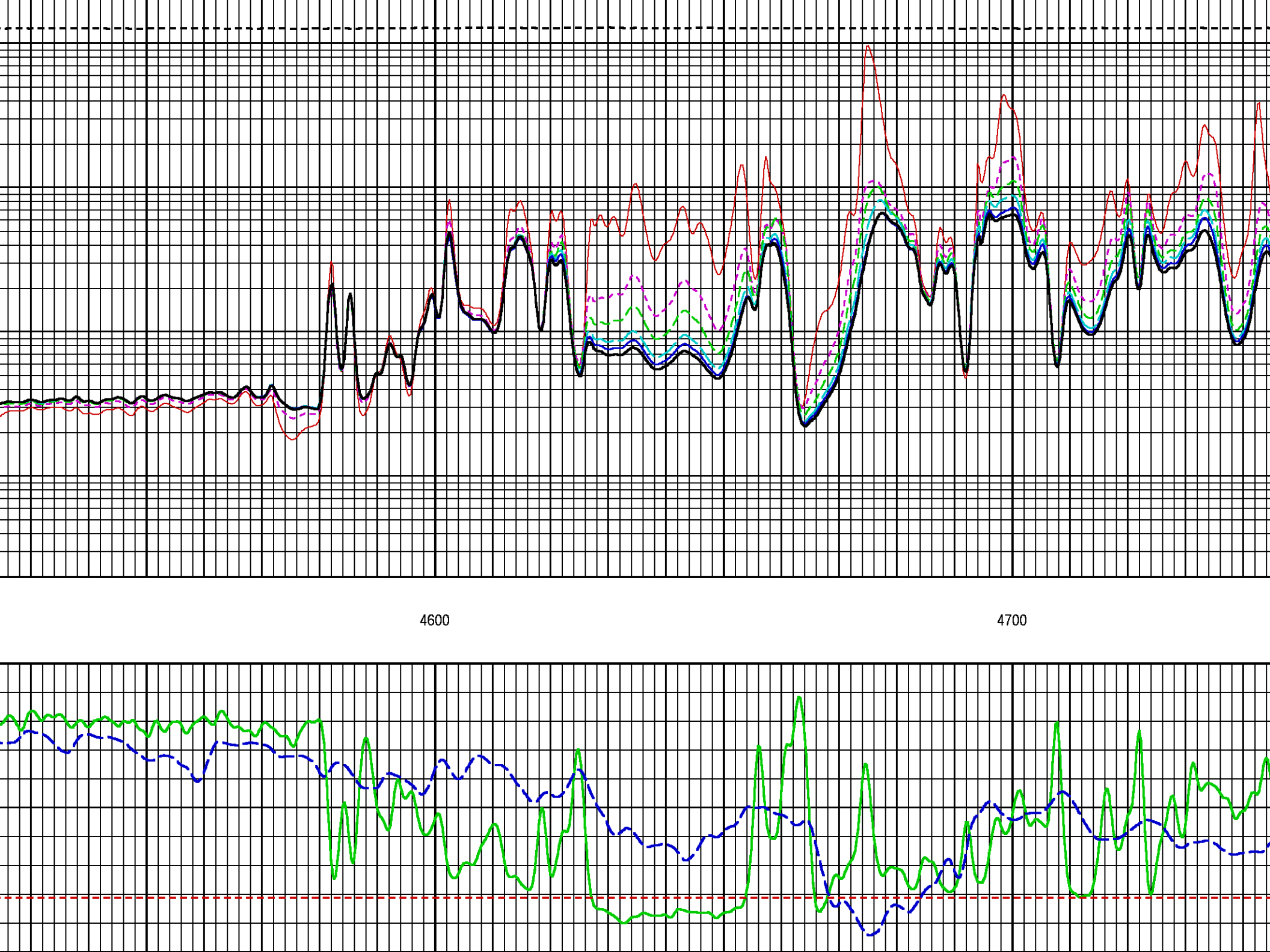
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CAL	63.25	M2R2	8.00	M2R9	8.00	TEN	0.00
GR	57.50	M2R3	8.00	M2RX	8.00		
M2R1	8.00	M2R6	8.00	SP	14.00		

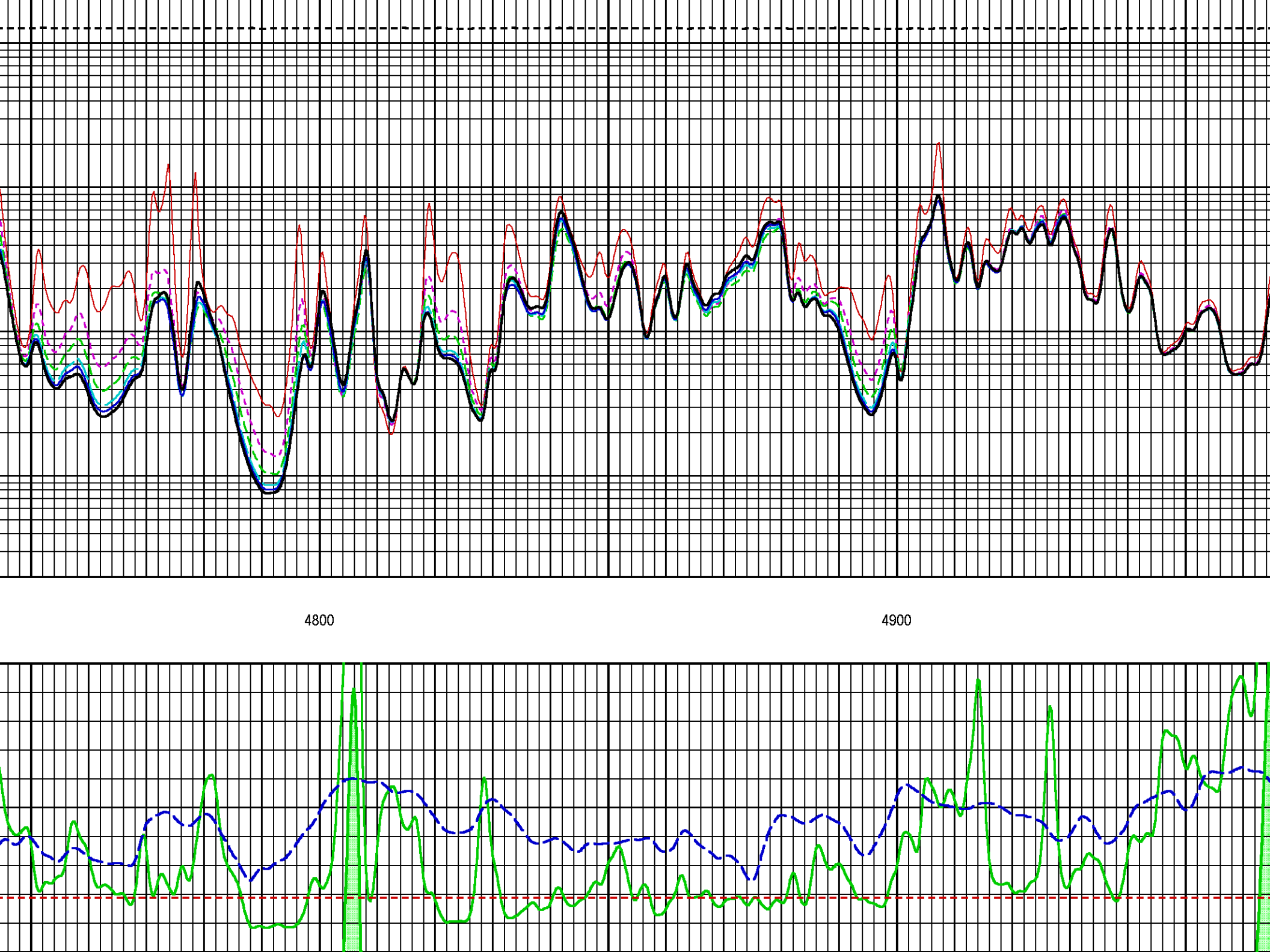
Presentation : wwdsys91:/dat1a/CORAL_HARDEN1_17/hdil_res2+01-MAIN-MAINHD-5.fvpdf [5"/100' Scale]
Plot Interval : 4290 - 6578 Feet

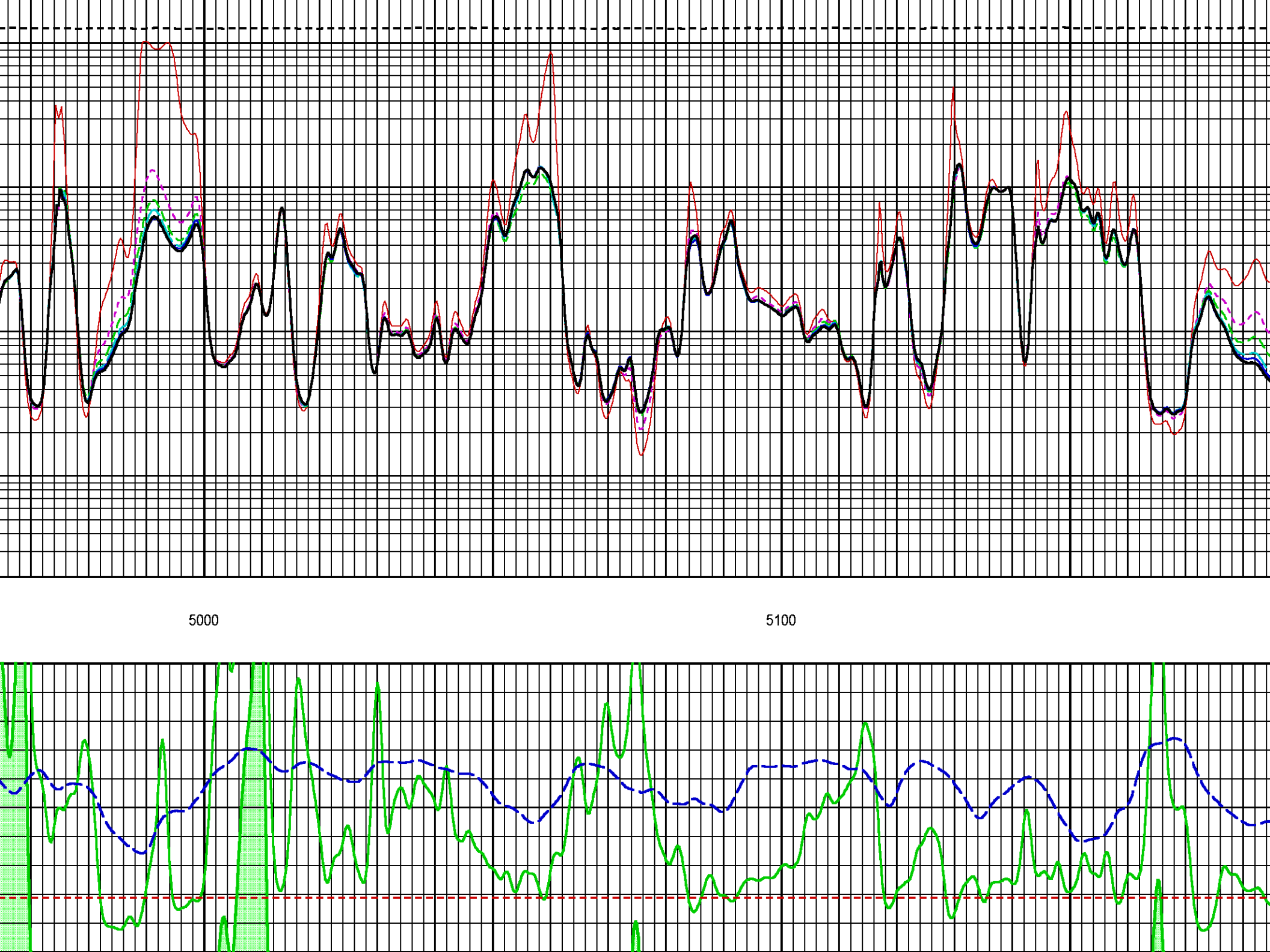
Data File 1 : F1 : wwdsys91:/dat1a/CORAL_HARDEN1_17/MAINHD.xtf
Created On : Jan 15 12:03:10 2014
Company : CORAL COAST PETROLEUM
Well : HARDEN 1-17
Field : MORRISON
File Interval : 400 - 6578 Feet
OCT : n777g~

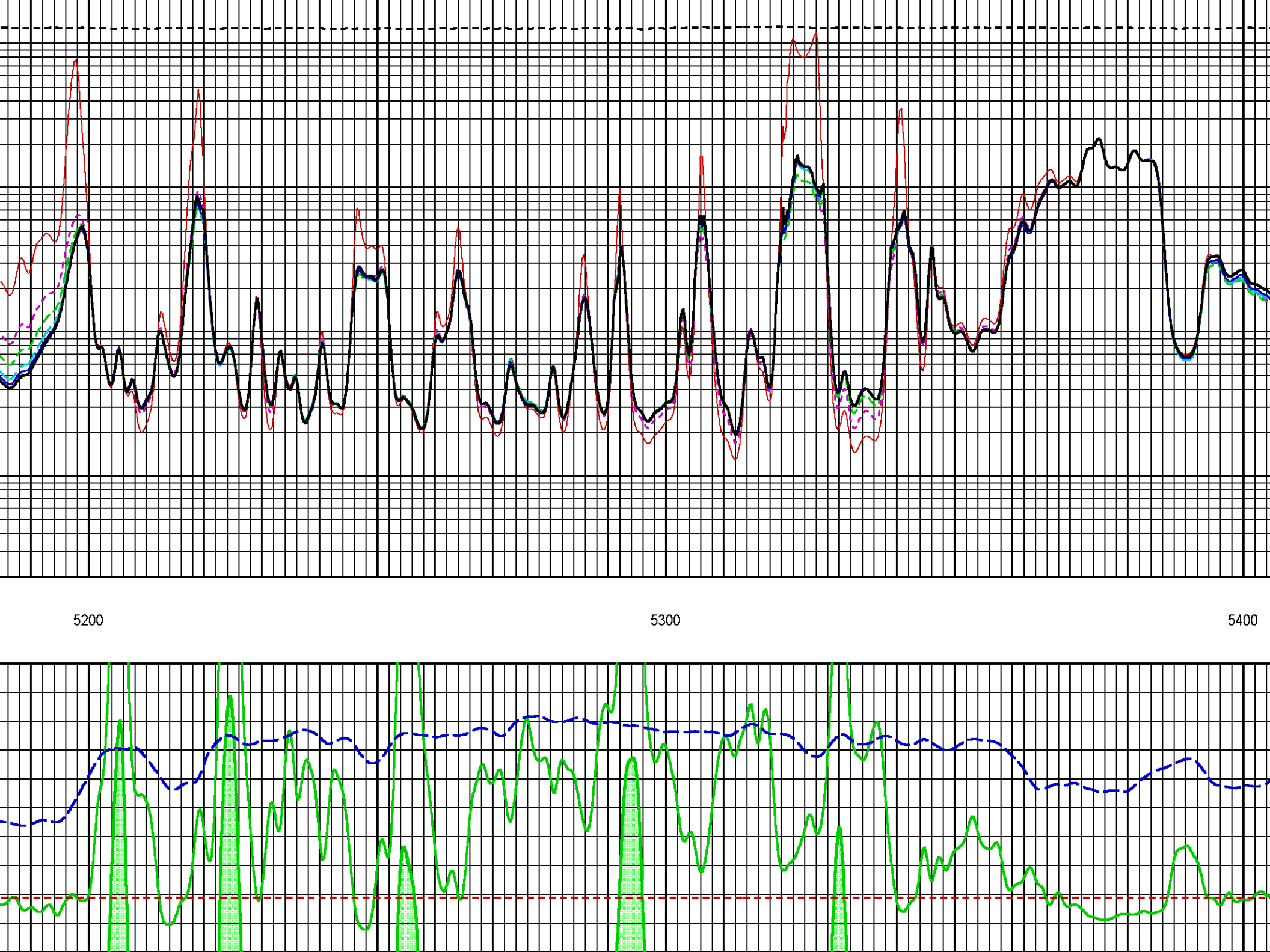


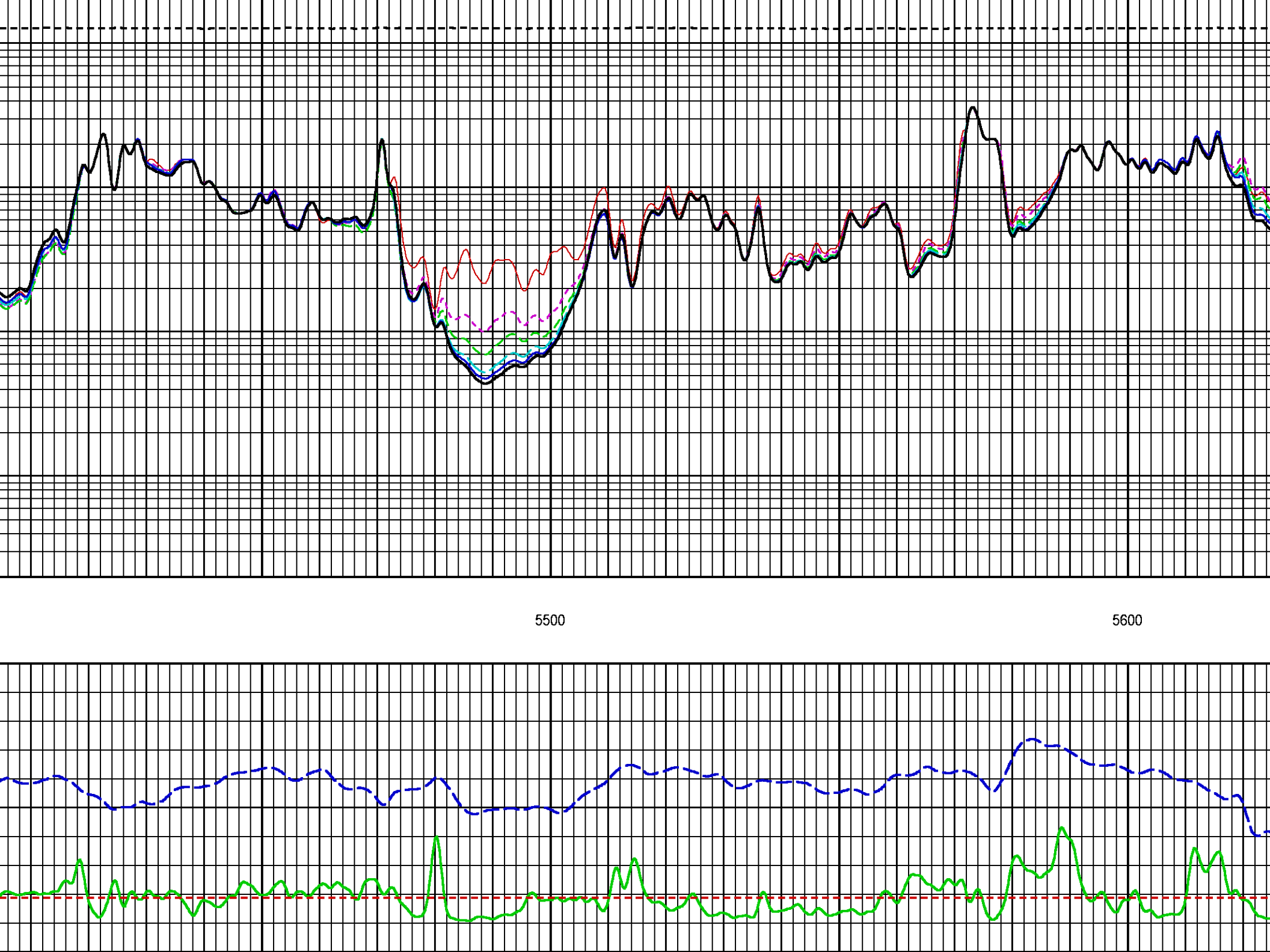

GR
CAL
SP
M2R1
M2R2
M2R3
M2R6
M2R9
M2RX
TEN
4400
4500

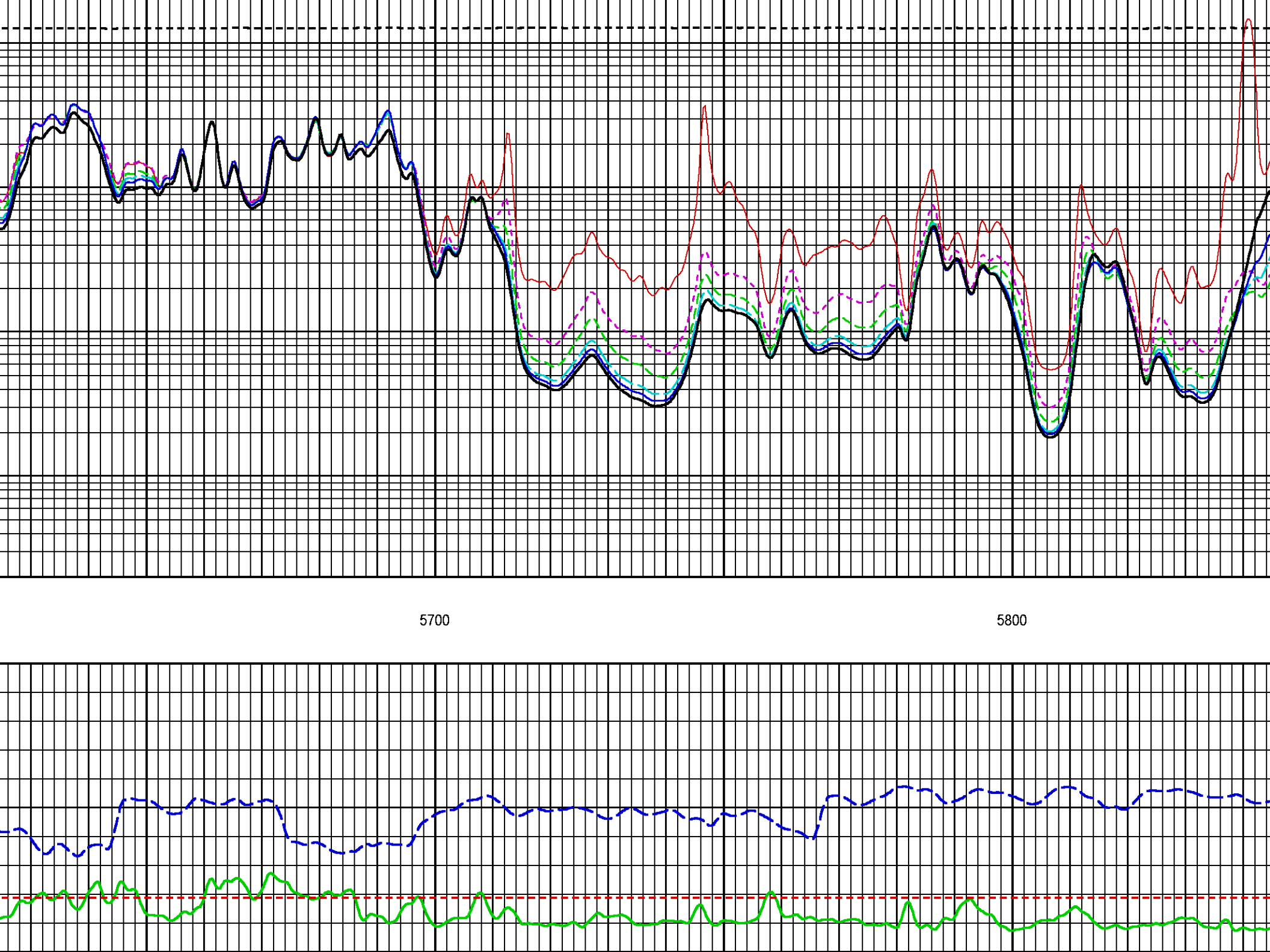

4600
4700

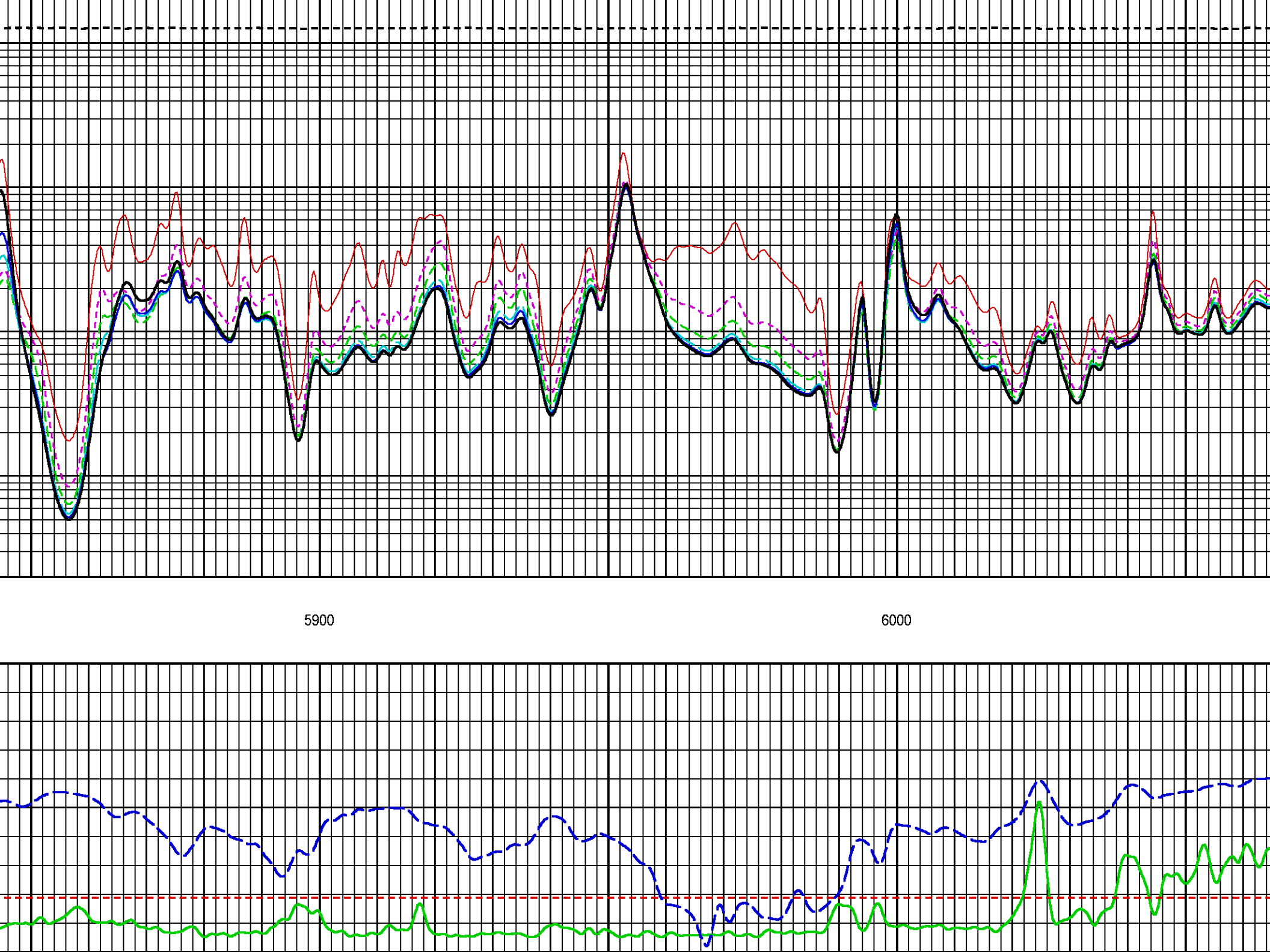

4800
4900

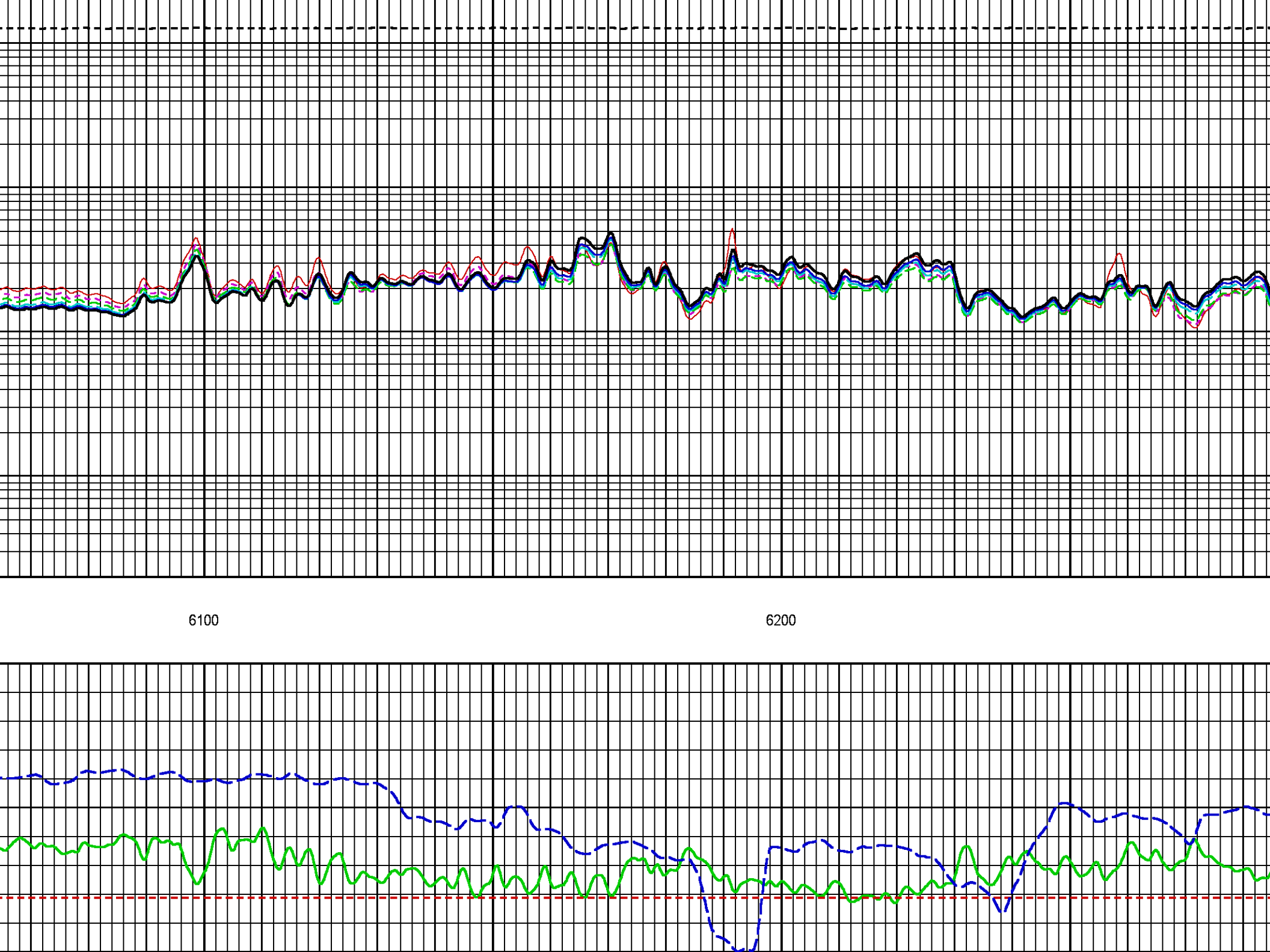

5000
5100

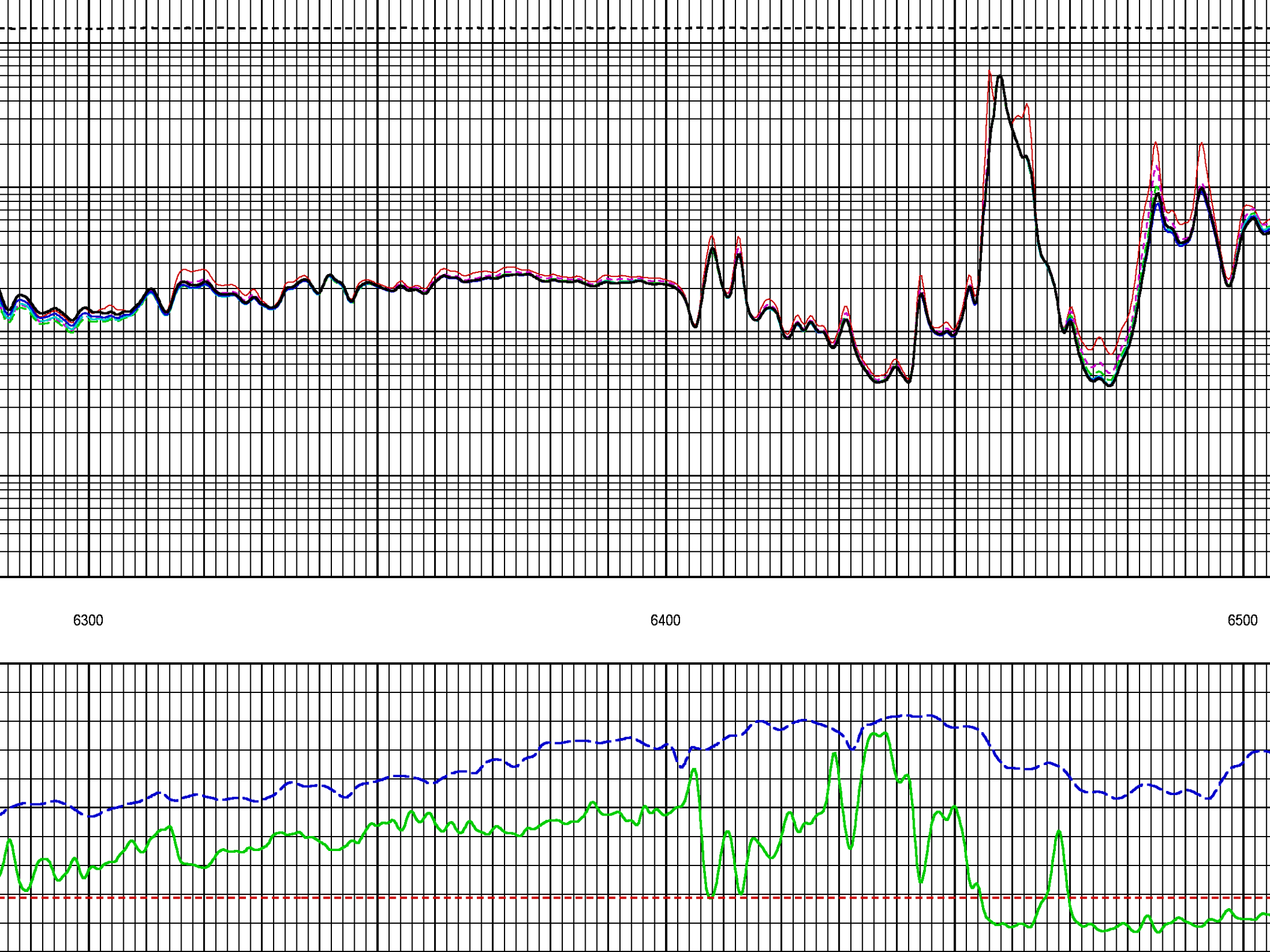

5200
5300
5400

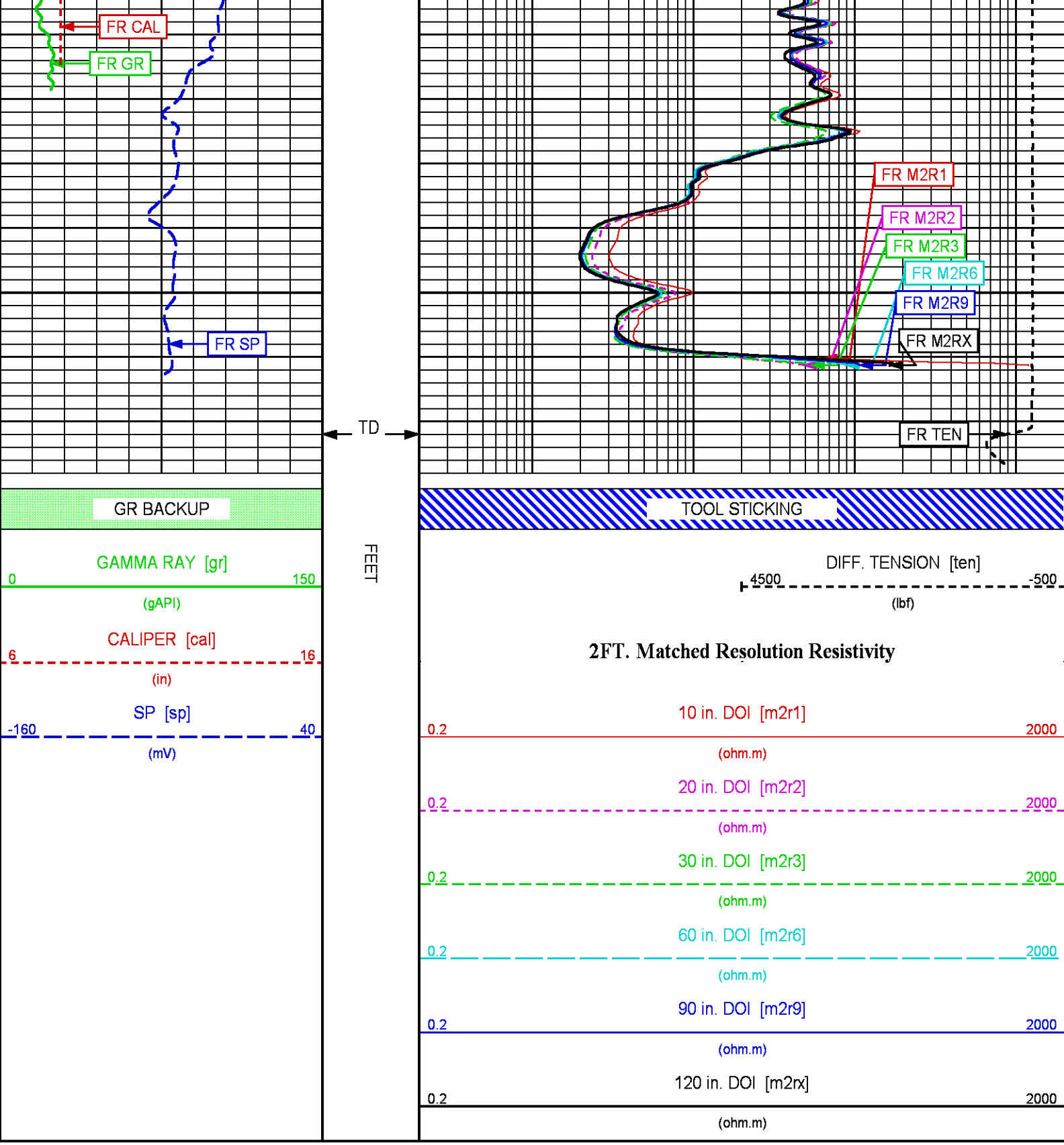

5500
5600


5700
5800


5900
6000


6100
6200


6300
6400
6500


FR CAL
FR GR
FR SP
FR M2R1
FR M2R2
FR M2R3
FR M2R6
FR M2R9
FR M2RX
FR TEN
TD
GR BACKUP
TOOL STICKING
GAMMA RAY [gr]
0
150
(gAPI)
CALIPER [cal]
6
16
(in)
SP [sp]
-160
40
(mV)
FEET
DIFF. TENSION [ten]
4500
-500
(lbf)
2FT. Matched Resolution Resistivity
10 in. DOI [m2r1]
0.2
2000
(ohm.m)
20 in. DOI [m2r2]
0.2
2000
(ohm.m)
30 in. DOI [m2r3]
0.2
2000
(ohm.m)
60 in. DOI [m2r6]
0.2
2000
(ohm.m)
90 in. DOI [m2r9]
0.2
2000
(ohm.m)
120 in. DOI [m2rx]
0.2
2000
(ohm.m)

MAIN LOG

Plotted: Wed Jan 15 15:06:53 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/CORAL_HARDEN1_17/n777g~02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 470.000 ft BOTTOM DEPTH: 6580.247 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TENSION	FILTER ()	medium (1)		TOP	BOTTOM
GR	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
DT24	FILTER ()	light (2)		"	"
SP-SPDH	FILTER ()	heavy (3)		"	"
	FILTER (.h)	heavy (3)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM

ACOUSTIC POROSITY

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACOUSTIC POROSITY	POROSITY TYPE	WYLLIE		TOP	BOTTOM
	DTmatrix	47.60	us/ft	"	"
	DTfluid	189.00	us/ft	"	"
	DTshale	100.00	us/ft	"	"
	MOD. WYLLIE PARM	2.25		"	"
	MOD. R-H-G PARM	2.00		"	"
DELTA T CURVE SELECTION	DT24 SOURCE	AVAN DT24		"	"

ACOUSTIC AVAN CORRELATON

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
MONOPOLE DELTA T	FORMATION TYPE	FAST		TOP	BOTTOM
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	40	us/ft	"	"
	TAPER - RIGHT END	140	us/ft	"	"
	FLOOR (UNIV. OPTION)	0.050		"	"

ACOUSTIC WAVEFORM FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
WAVEFORM FILTER - DELTA T	SURFACE WAVE FILTER	ON		TOP	BOTTOM
	LOW FREQ CUTOFF	4000	Hz	"	"
	HIGH FREQ CUTOFF	40000	Hz	"	"

ACOUSTIC TCC CONTROL PARAMETERS

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GENERAL TCC PARAMETERS	AGC	OFF		TOP	BOTTOM
	SUBCYCLE LENGTH	50		"	"
	STACK LEVEL	1		"	"
	SUBSET	2		"	"
DELTA T TCC PARAMETERS	ACG WINDOW	1000	us	"	"
	MOVEOUT	16	us/ft	"	"
	SAMPLE PERIOD	8		"	"
	RX DELAY	216	us	TOP	1109.500
		400	us	1109.500	1581.750
		264	us	1581.750	BOTTOM

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CAL	Jan 15 12:03:10 2014	CALIPER
F1:DT24	Jan 15 12:03:10 2014	SLOWNESS OVER 24-INCH INTERVAL
F1:GR	Jan 15 12:03:10 2014	GAMMA RAY

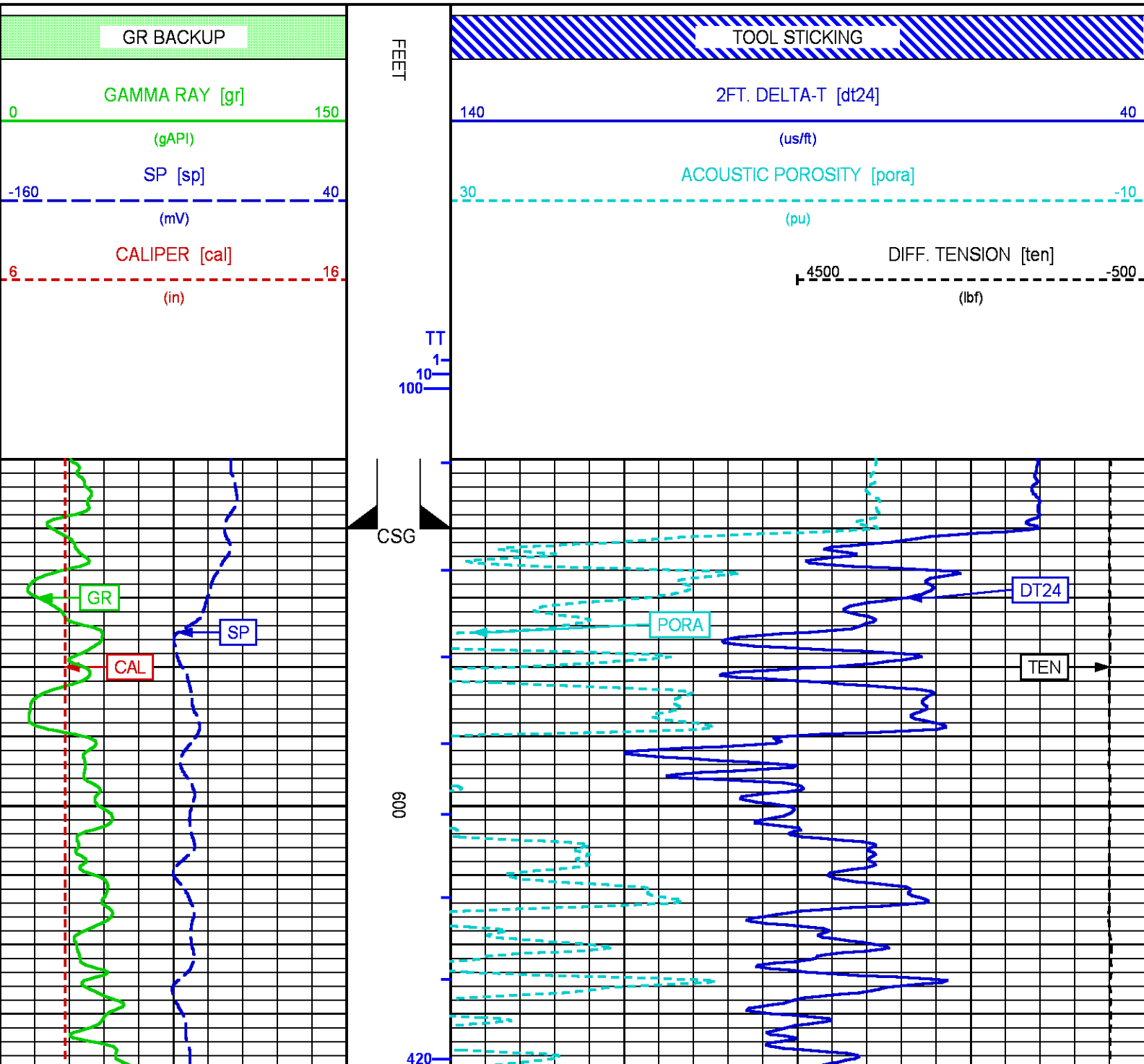
F1:PORA	Jan 15 12:03:10 2014	ACOUSTIC POROSITY
F1:SP	Jan 15 12:03:10 2014	SPONTANEOUS POTENTIAL
F1:TEN	Jan 15 12:03:10 2014	DIFFERENTIAL TENSION
F1:TT	Jan 15 12:03:10 2014	INTEGRATED TRAVELTIME FROM ACOUSTIC SLOWNESS

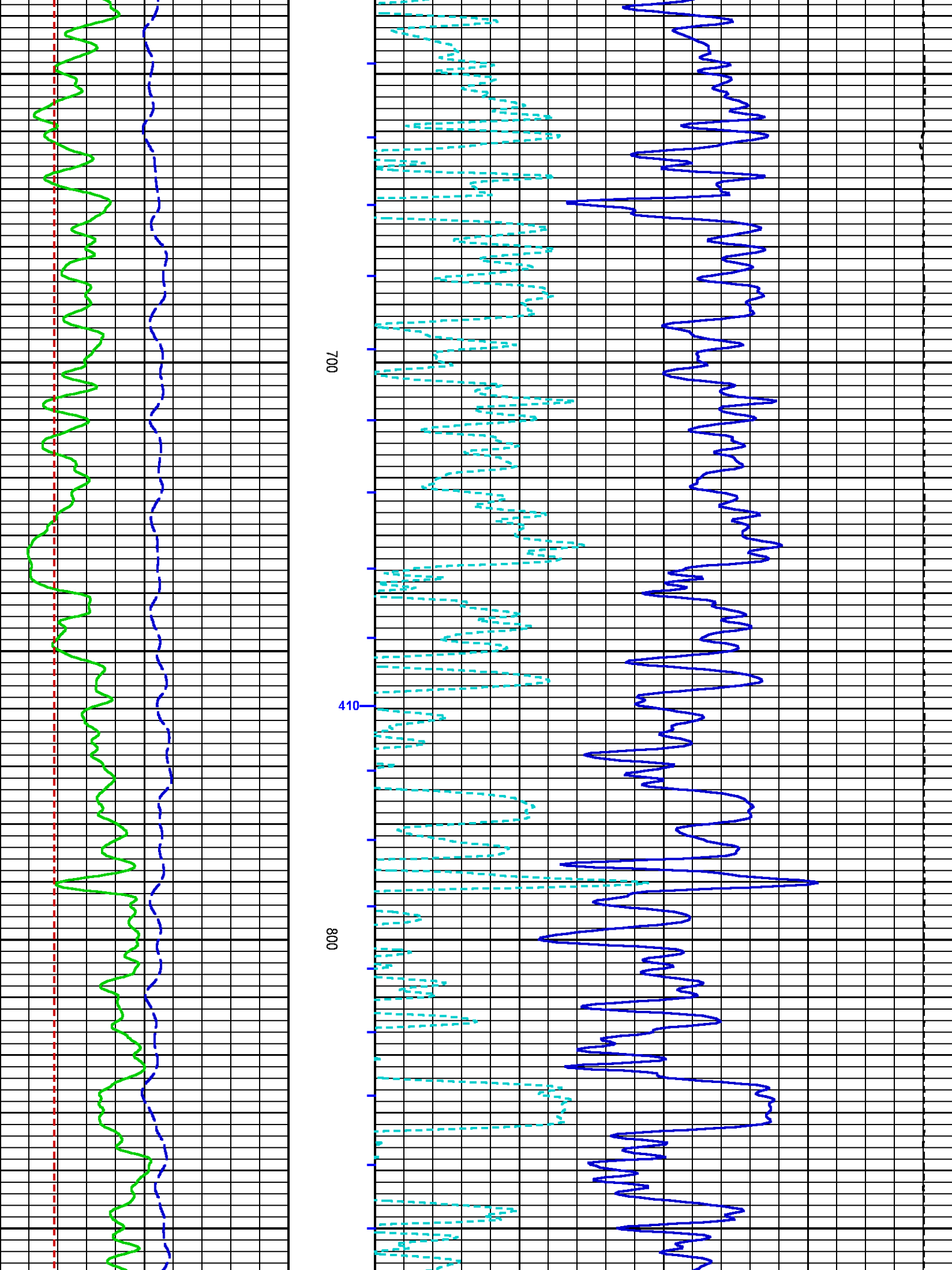
CURVE MEASURE POINT OFFSET

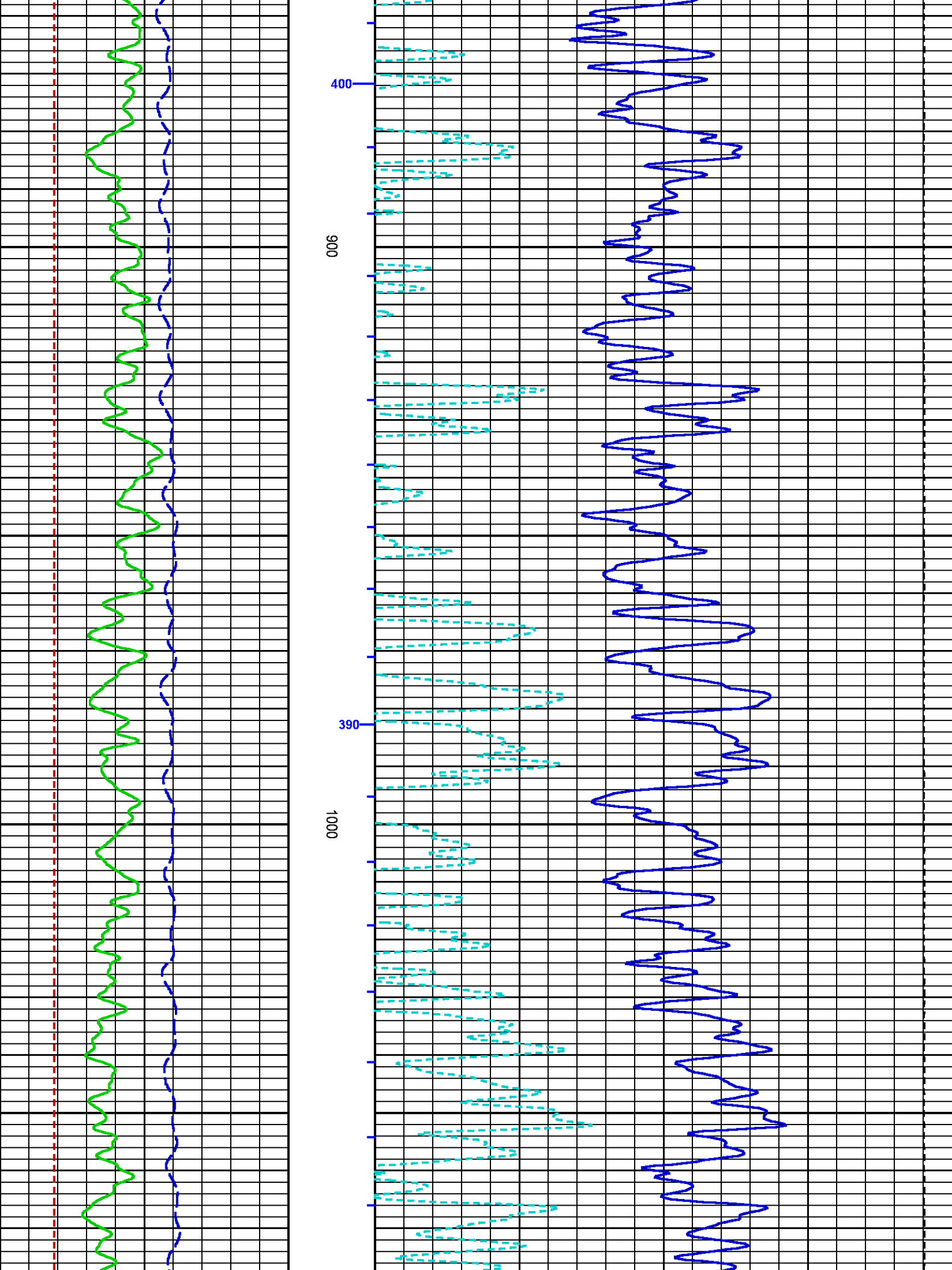
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CAL	63.25	GR	57.50	SP	14.00		
DT24	33.50	PORA	33.50	TEN	0.00		

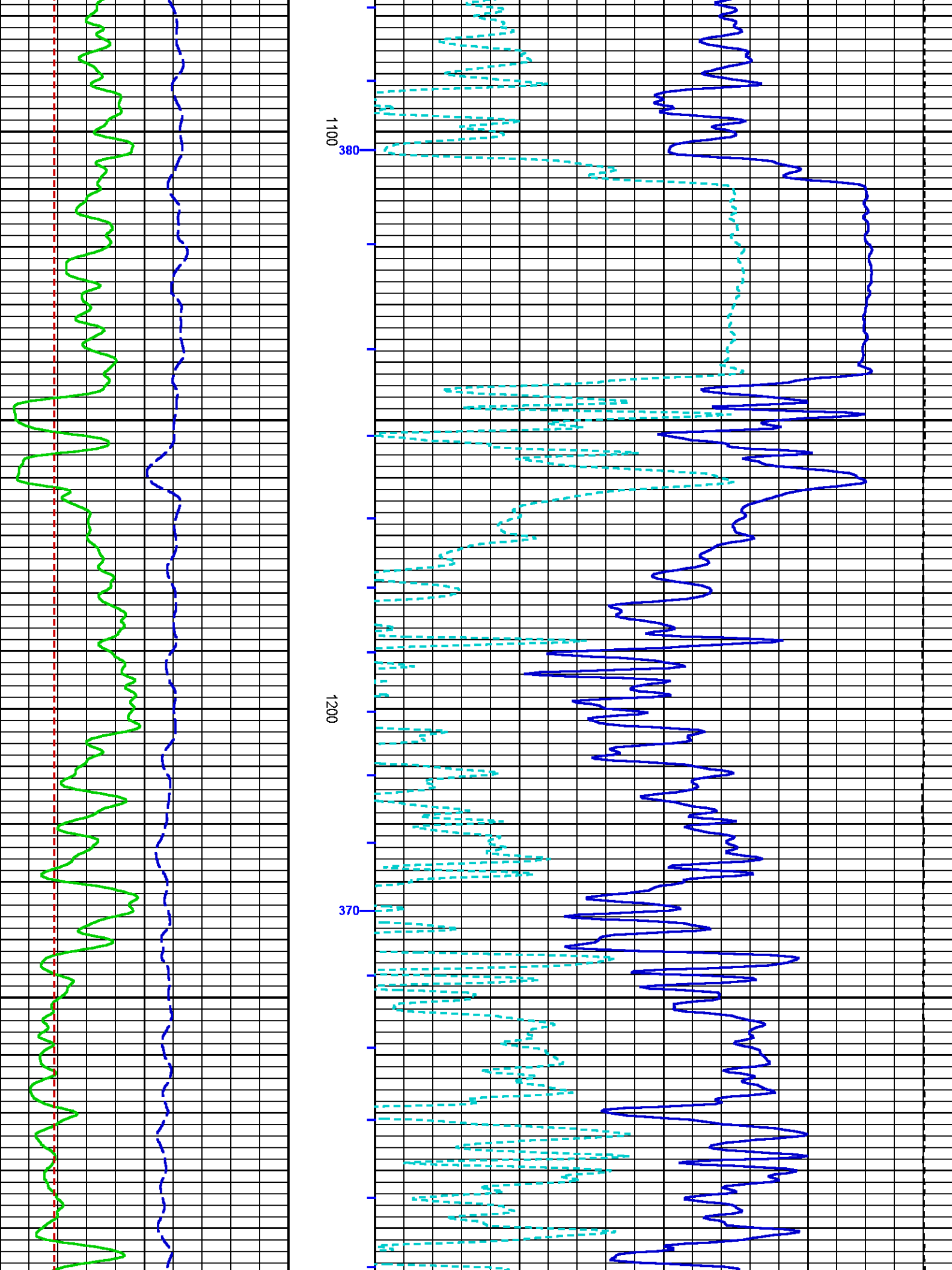
Presentation : wwdsys91:/dat1a/CORAL_HARDEN1_17/dal0_2+01-MAIN-MAINHD-5.fvpdf [5"/100' Scale]
Plot Interval : 550 - 6576.75 Feet

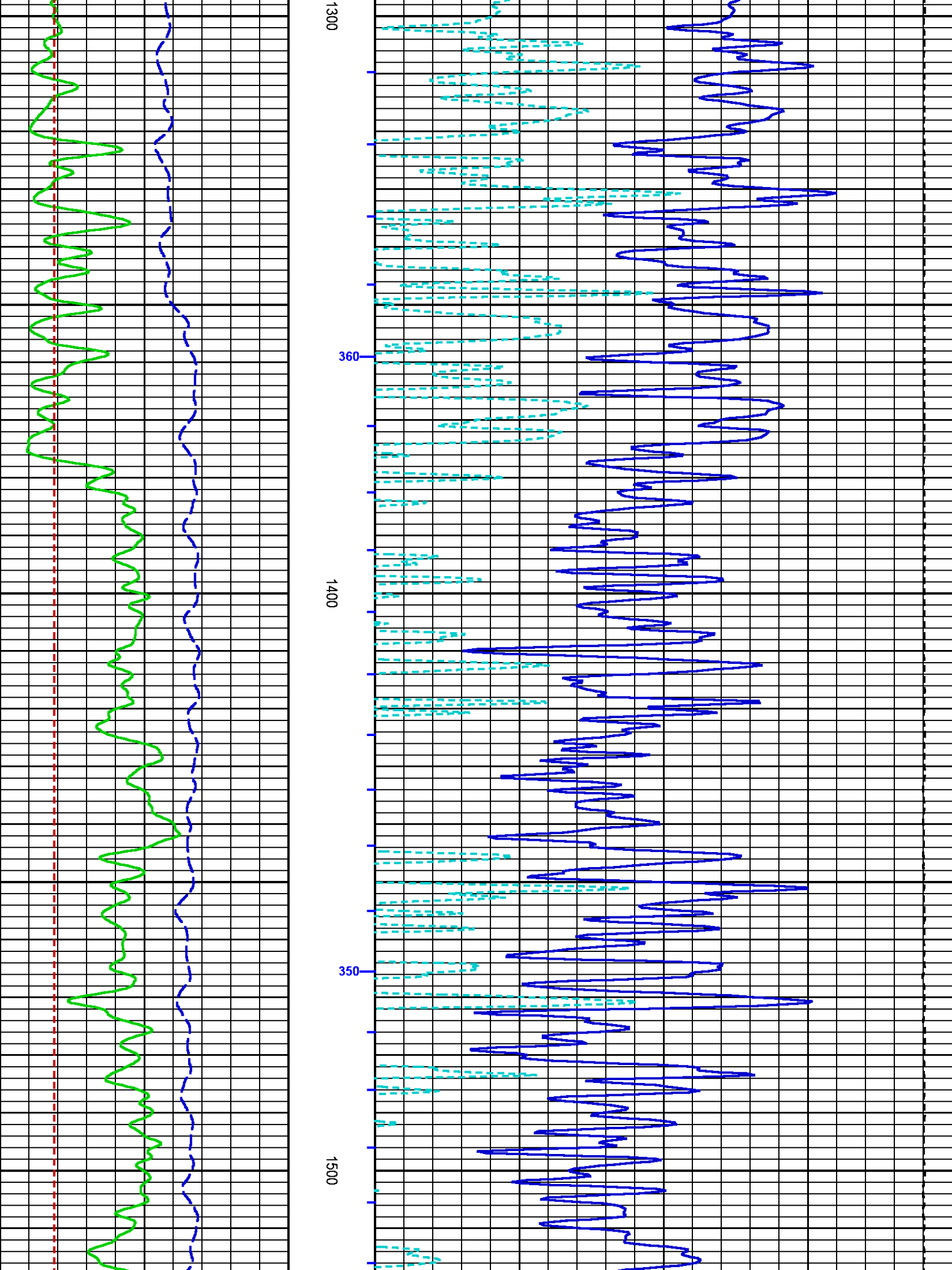
Data File 1 : F1 : wwdsys91:/dat1a/CORAL_HARDEN1_17/MAINHD.xtf
Created On : Jan 15 12:03:10 2014
Company : CORAL COAST PETROLEUM
Well : HARDEN 1-17
Field : MORRISON
File Interval : 400 - 6578 Feet
OCT : n777g~

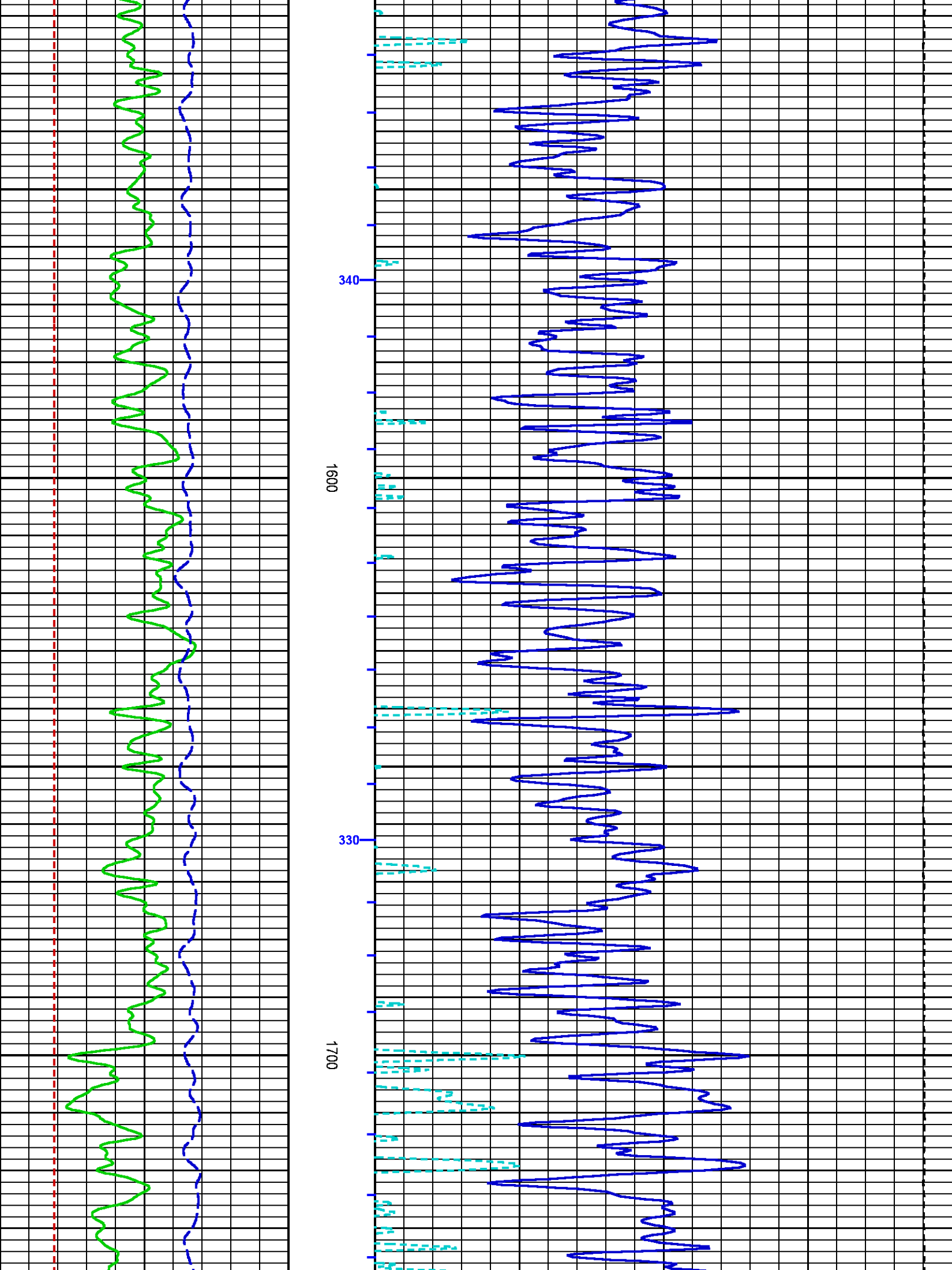


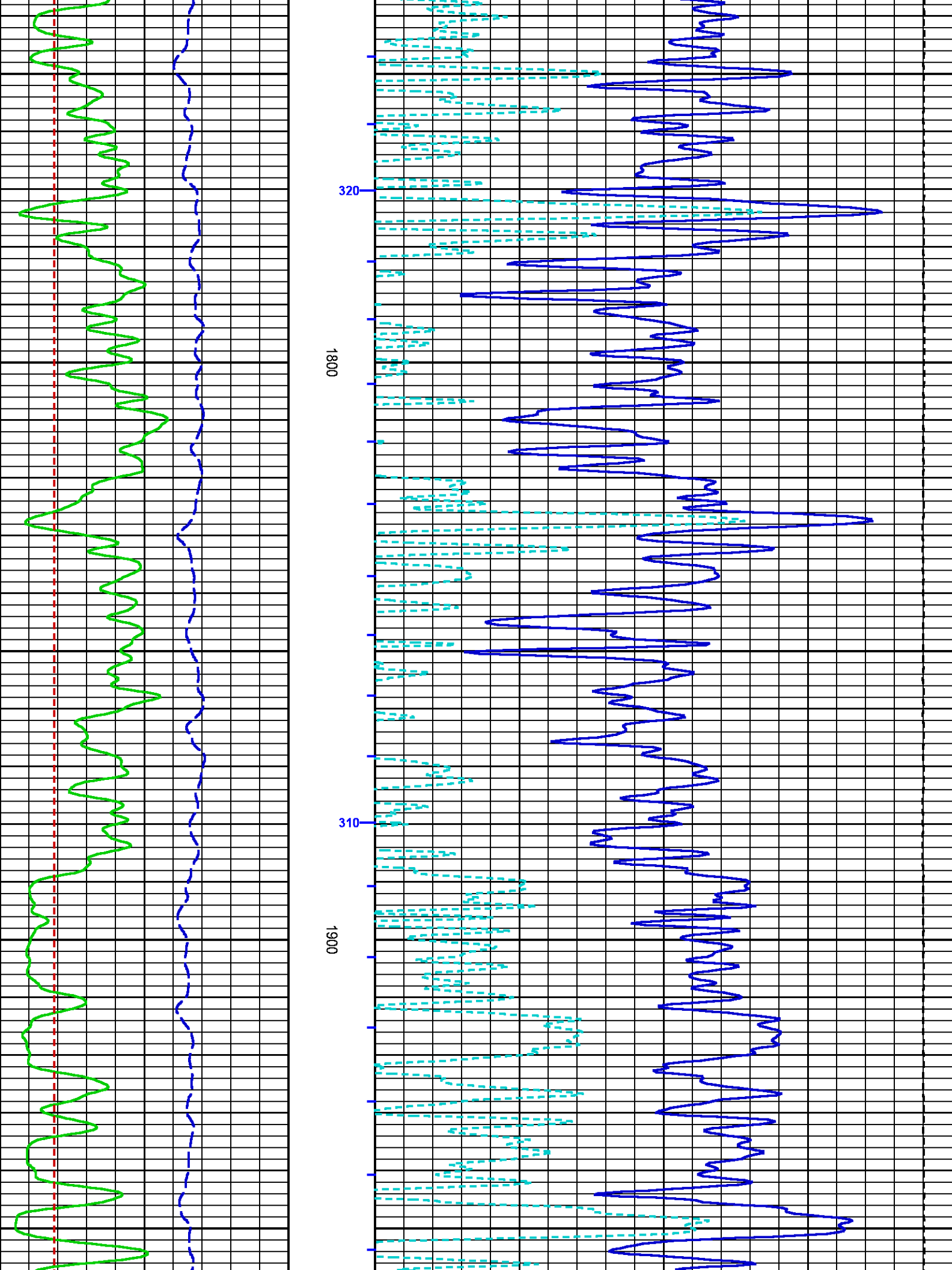

700
410
800

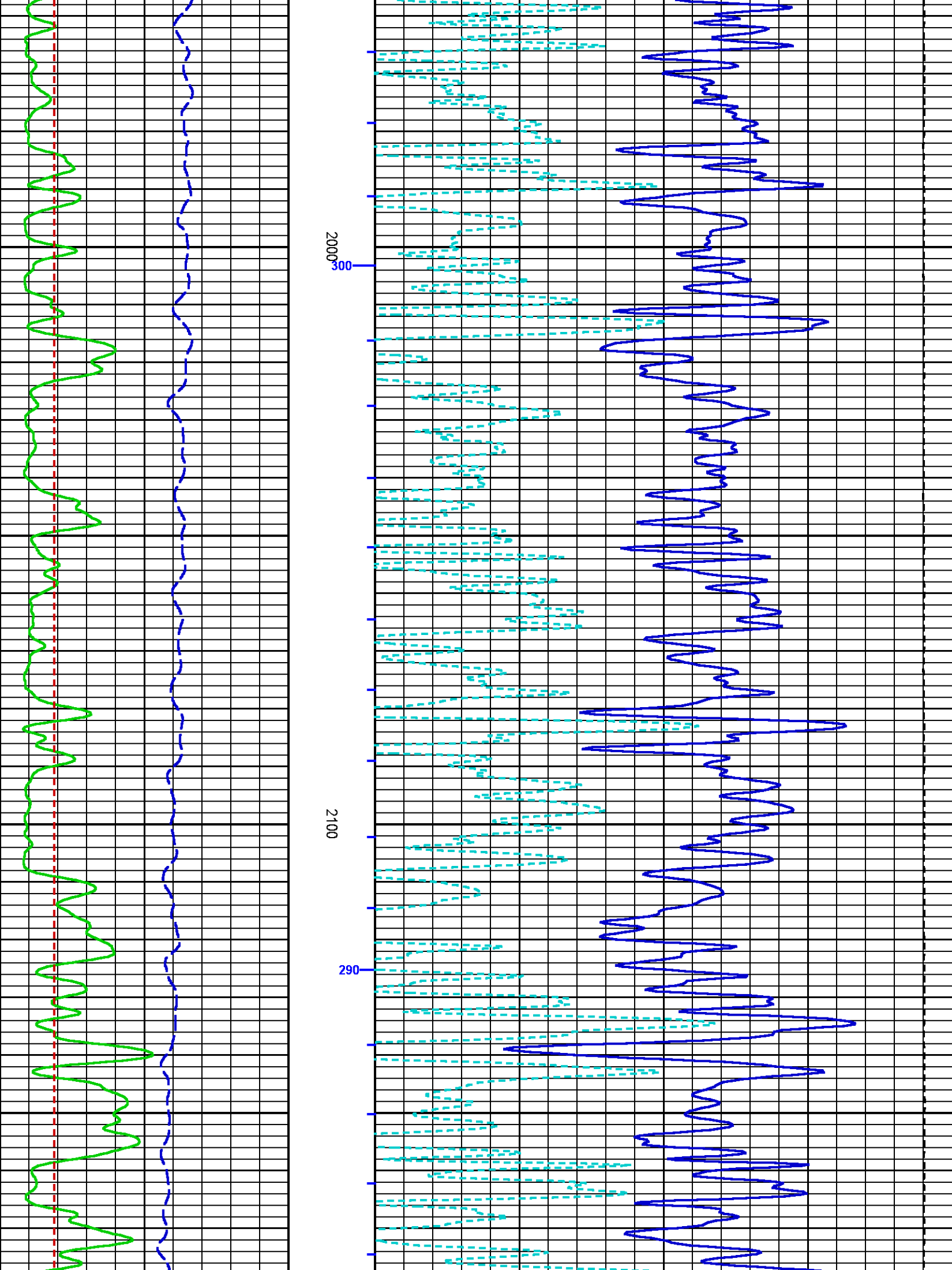

400
900
390
1000

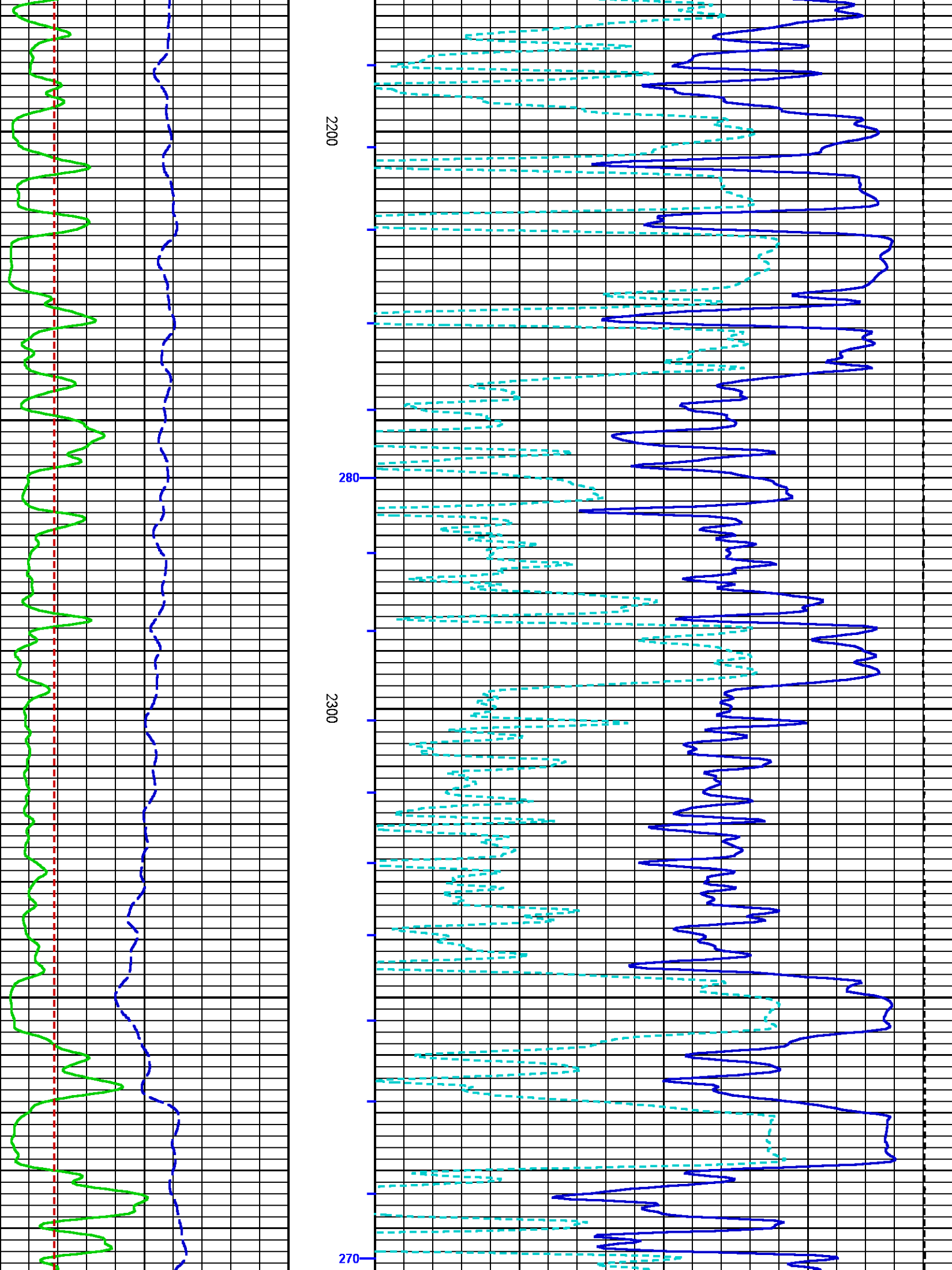

1100
380
1200
370

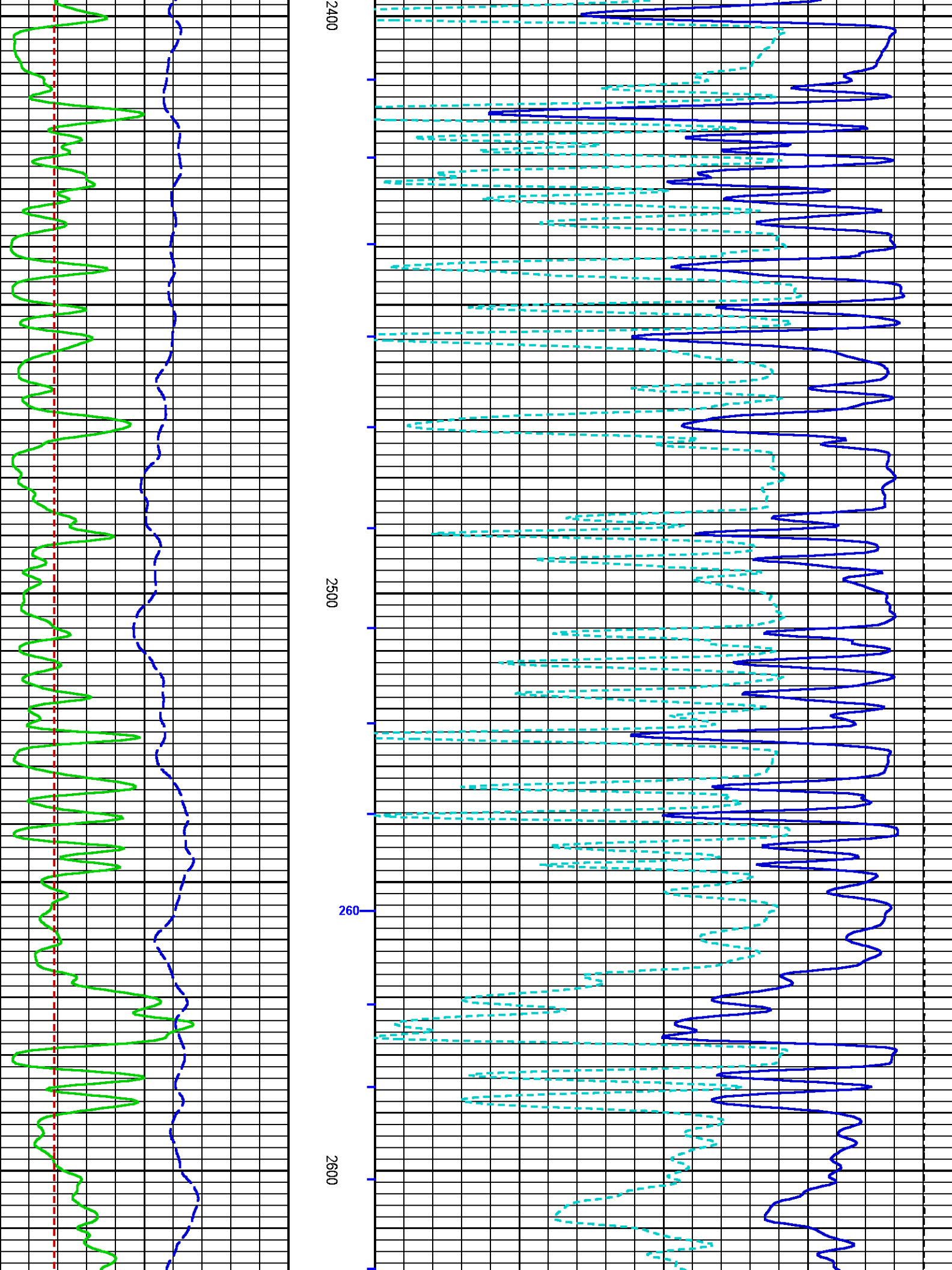

1300
360
1400
350
1500

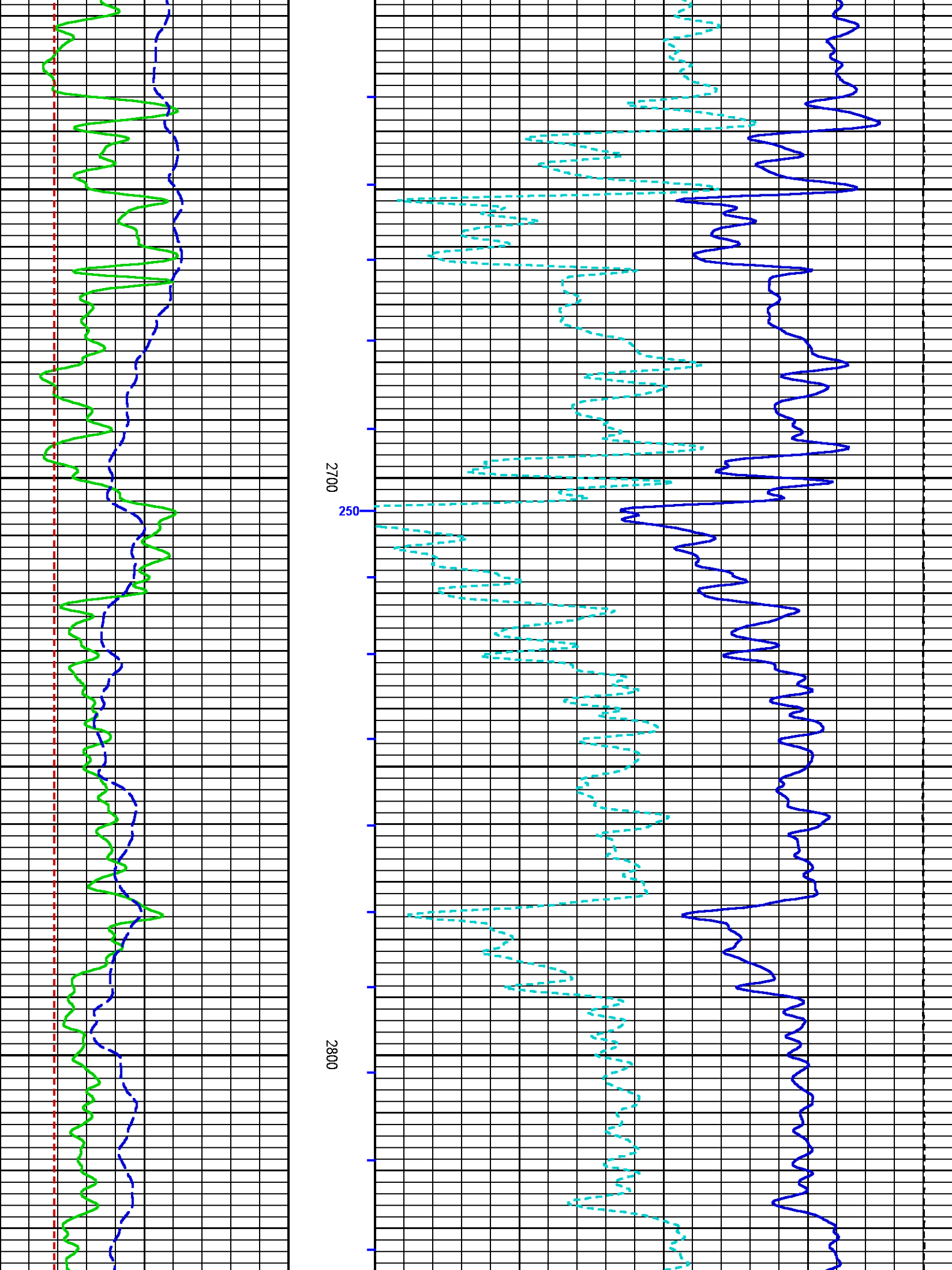

340
330
1600
1700

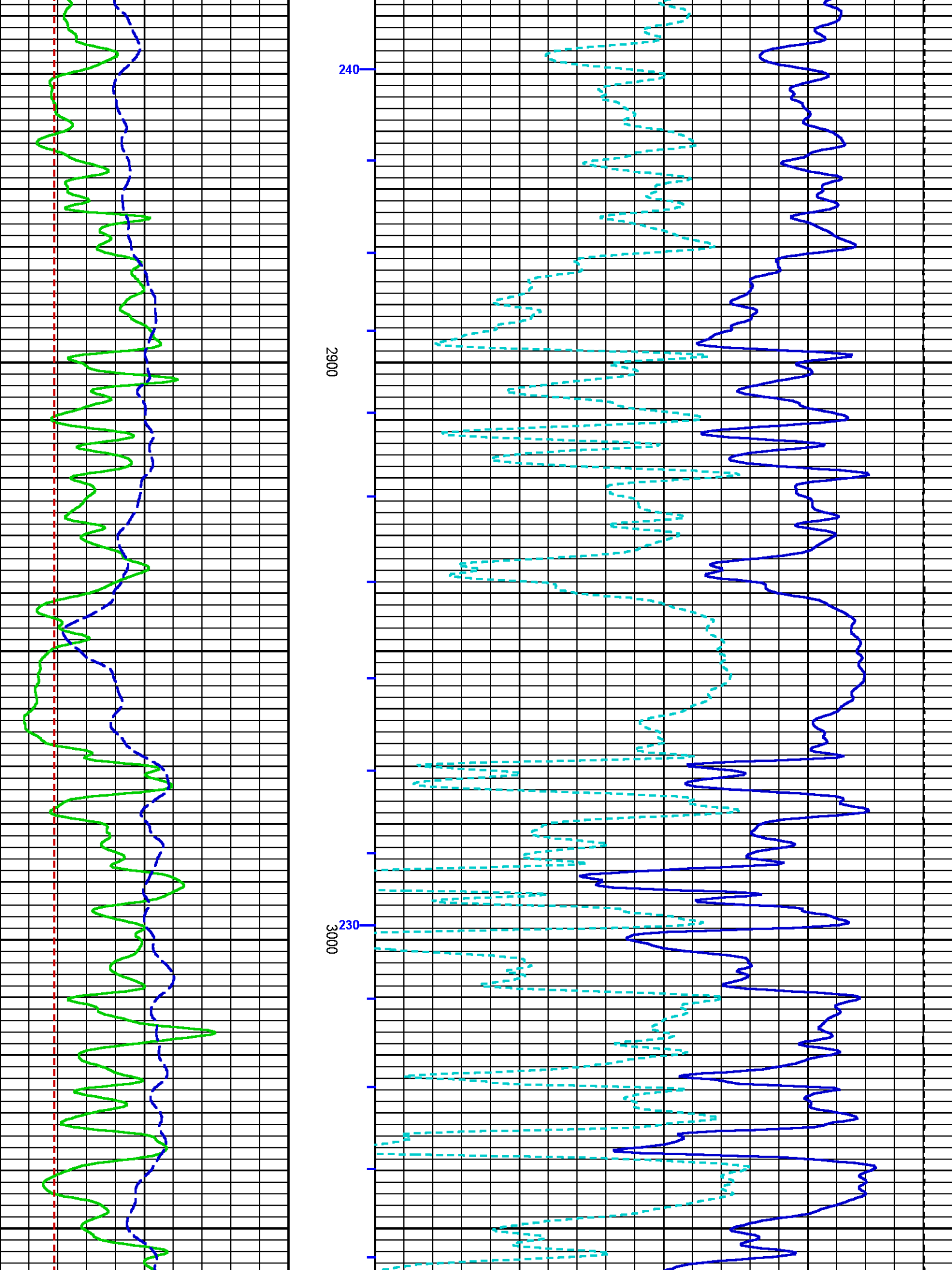

320
1800
310
1900

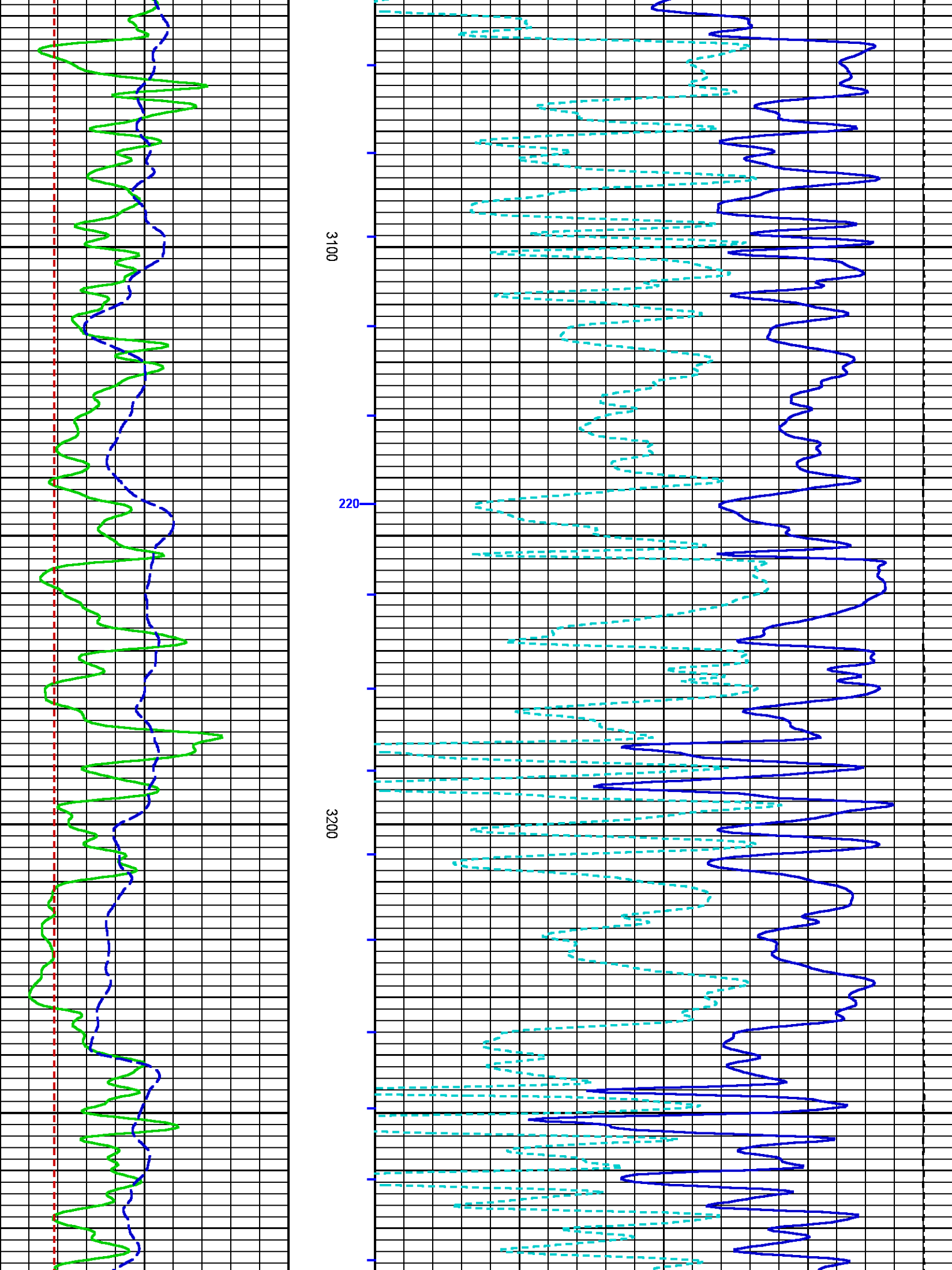

2000
300
2100
290

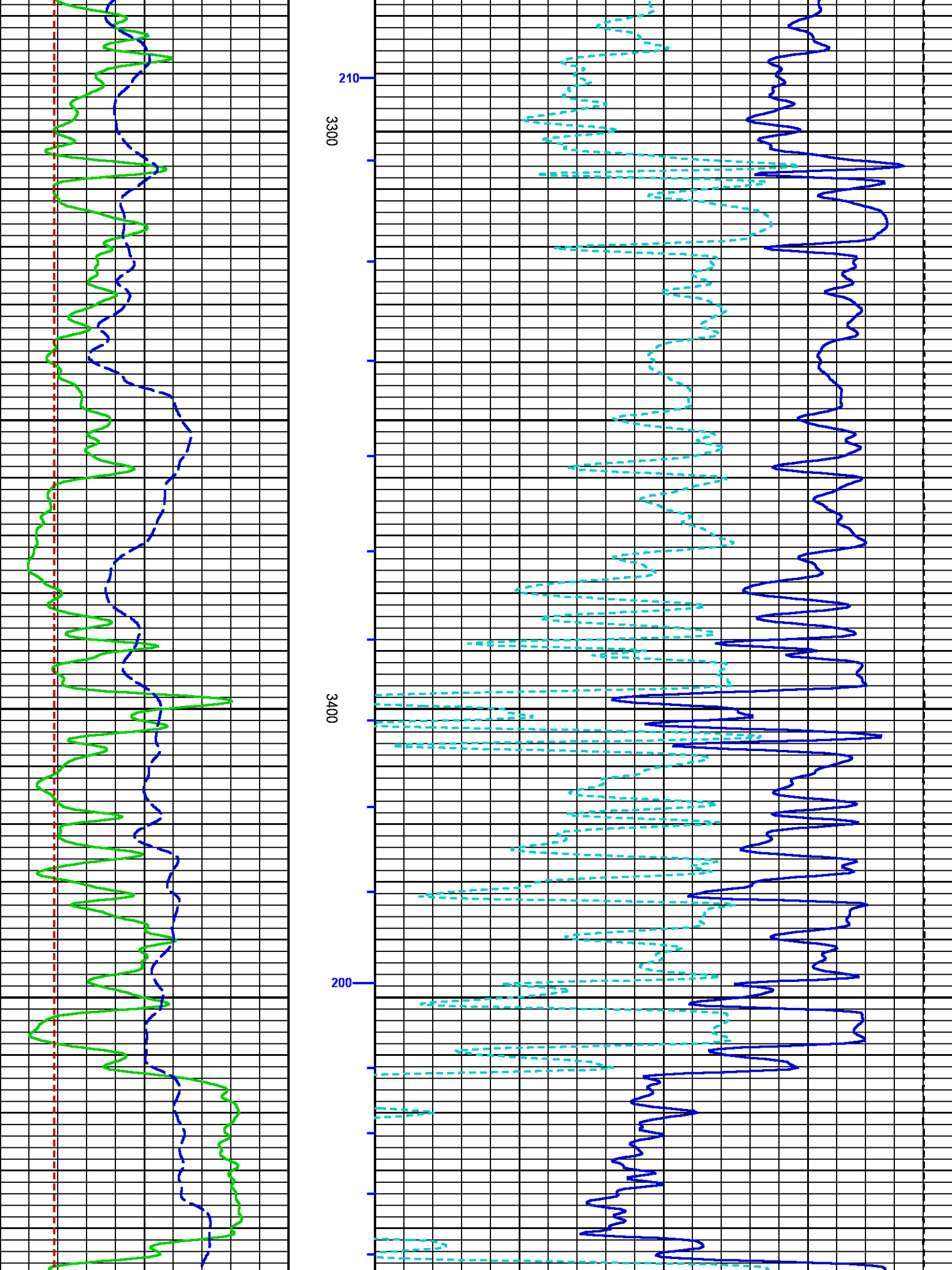

2200
280
2300
270

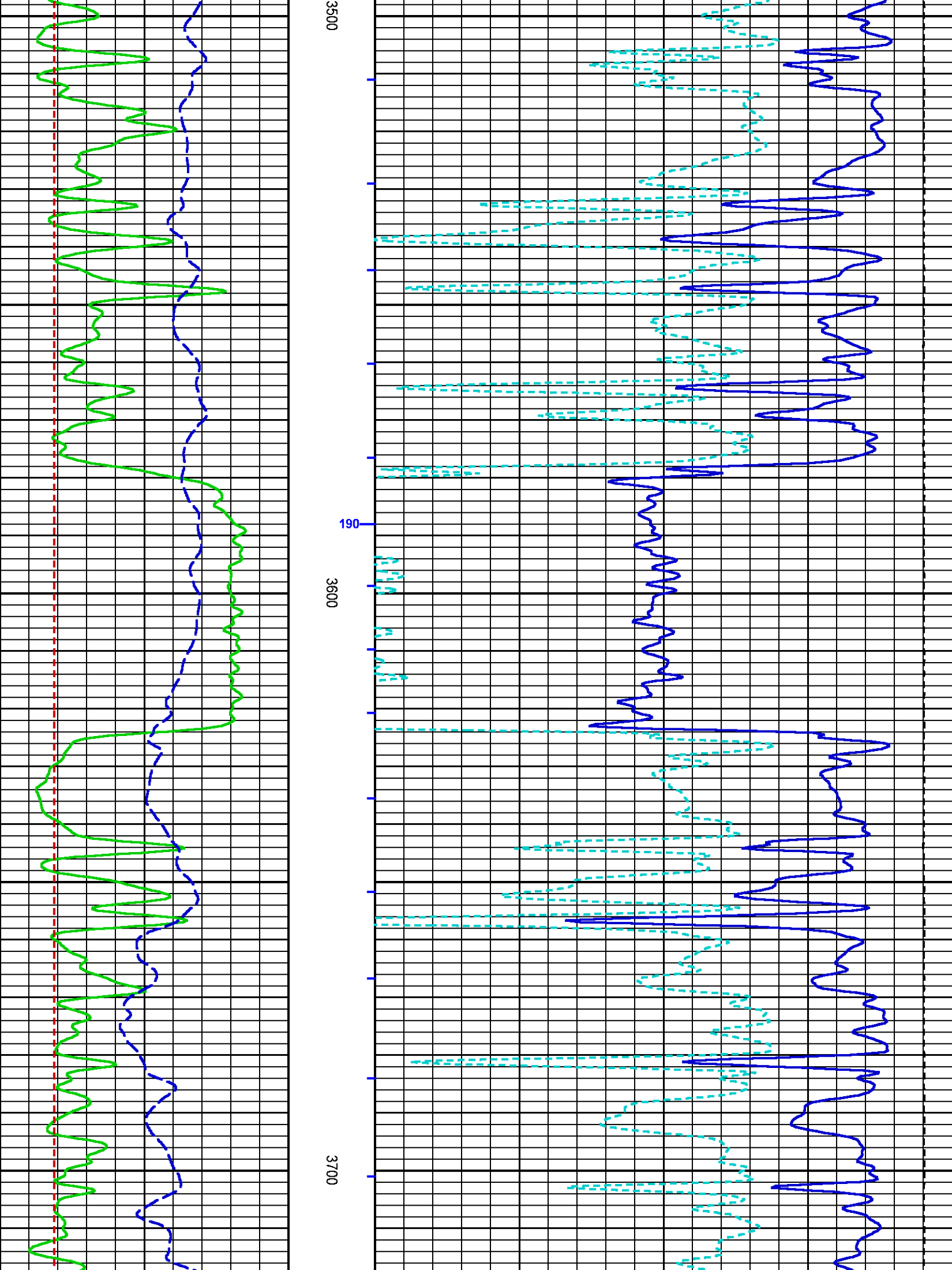

2400
2500
260
2600

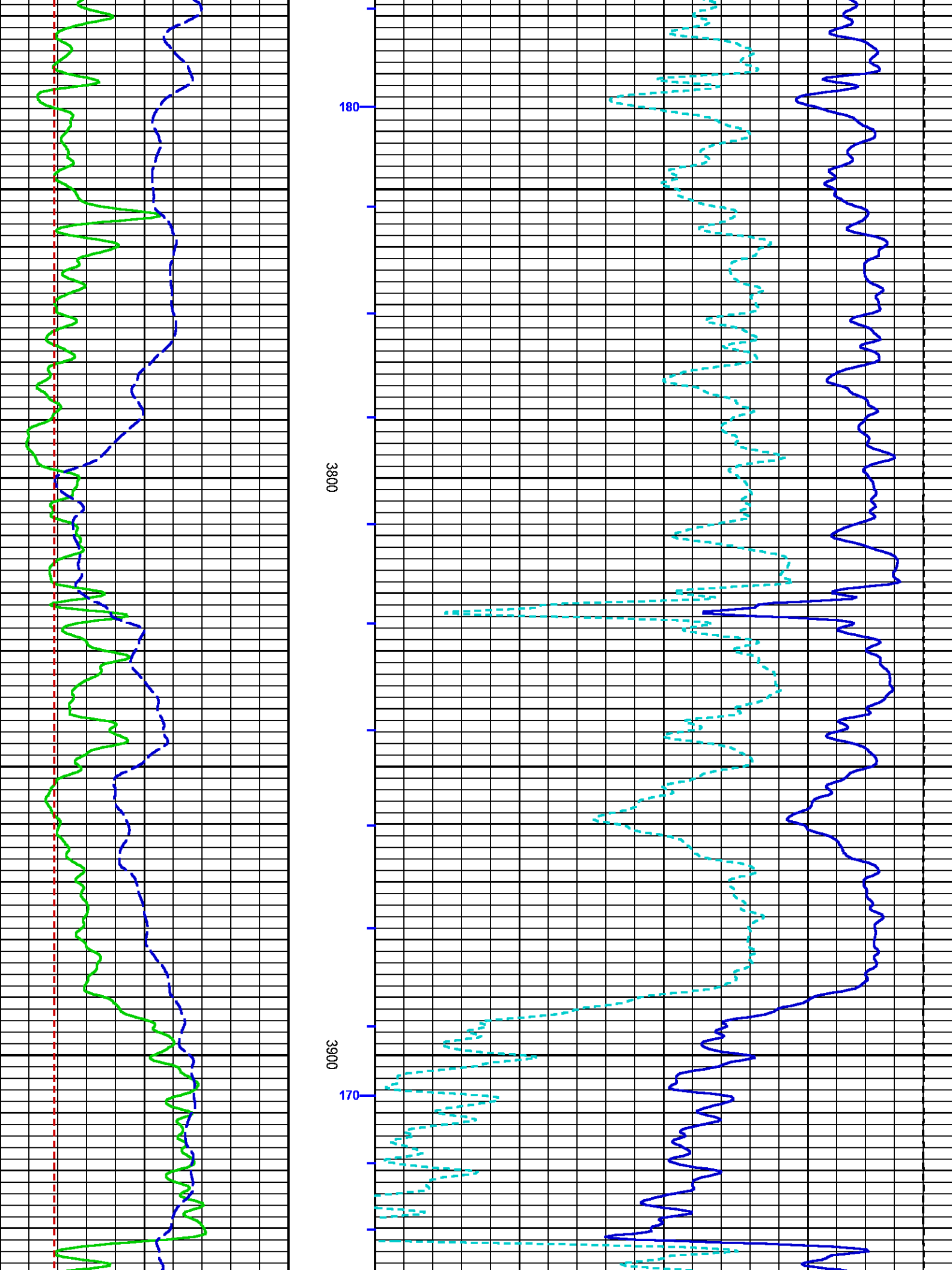

2700
250
2800

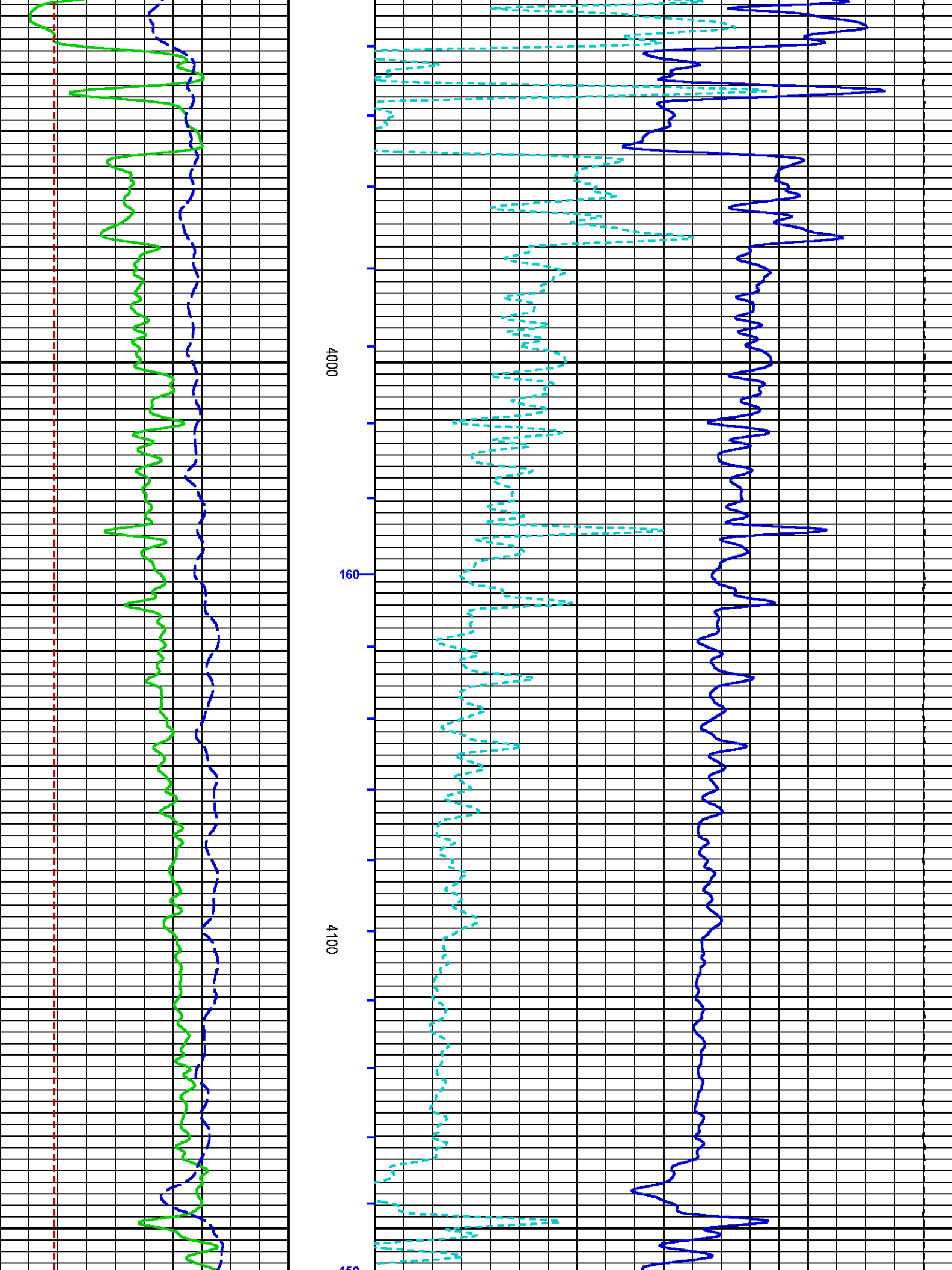

240
2900
230
3000

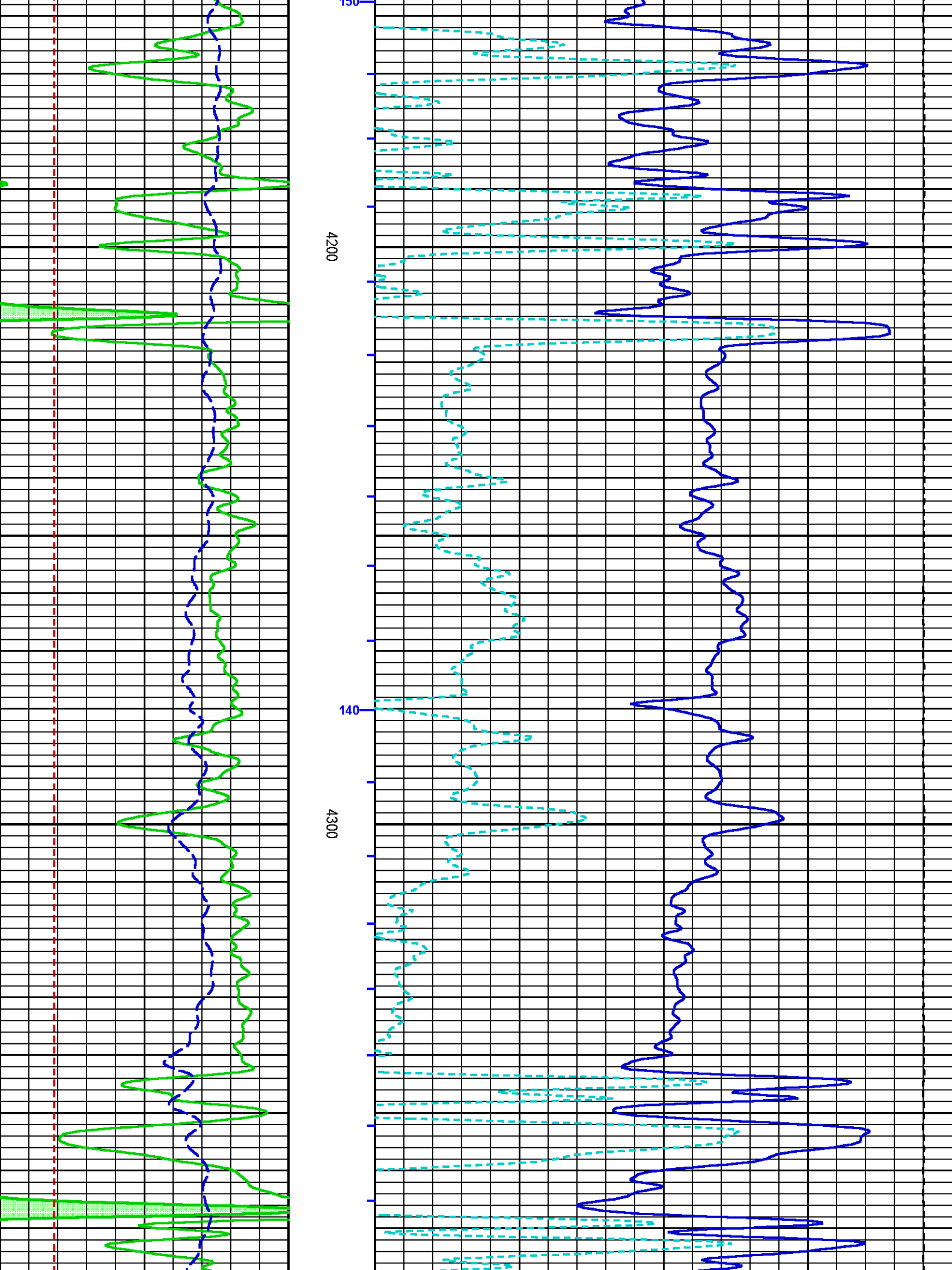

3100
220
3200

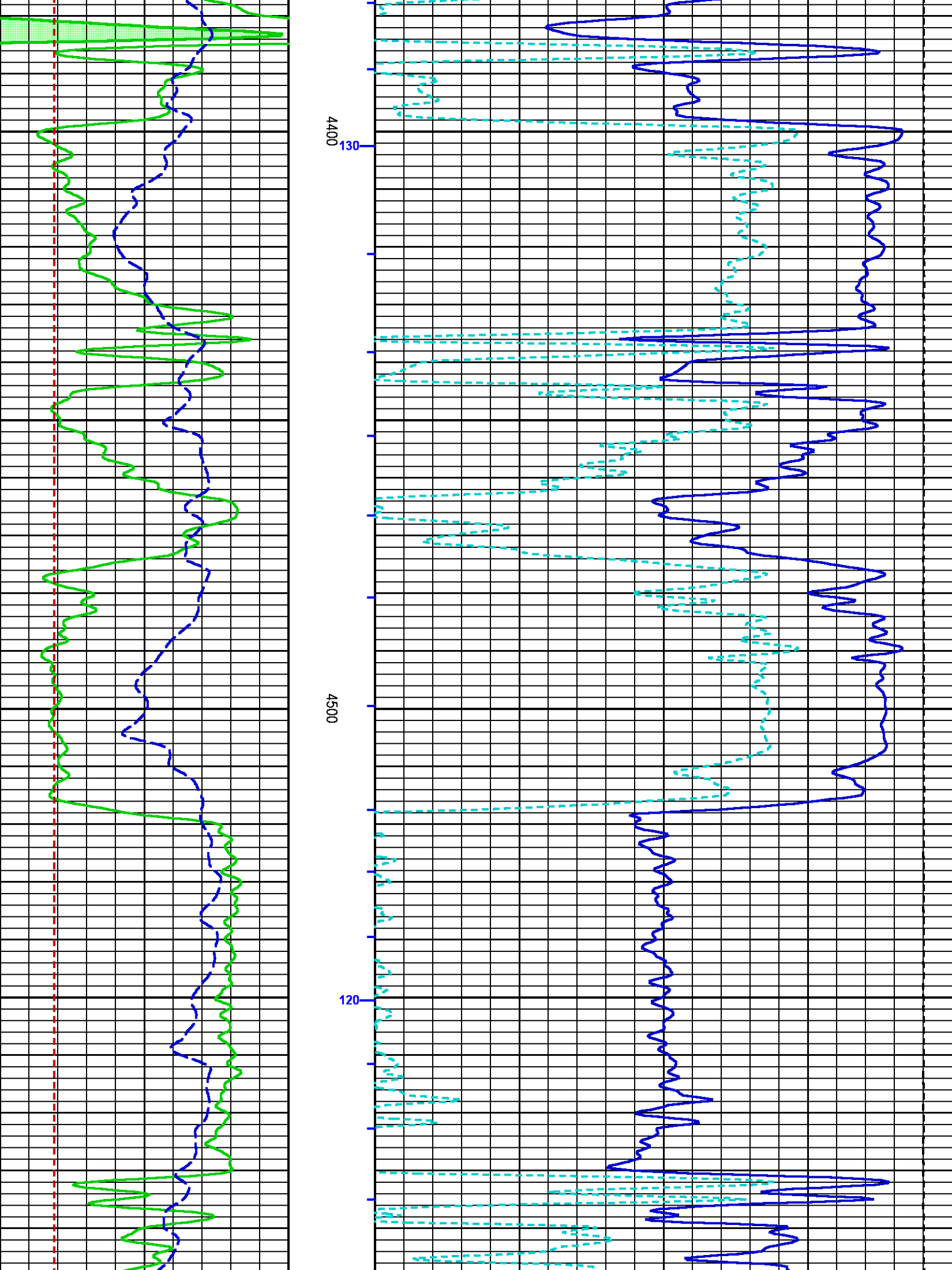

210
3300
3400
200

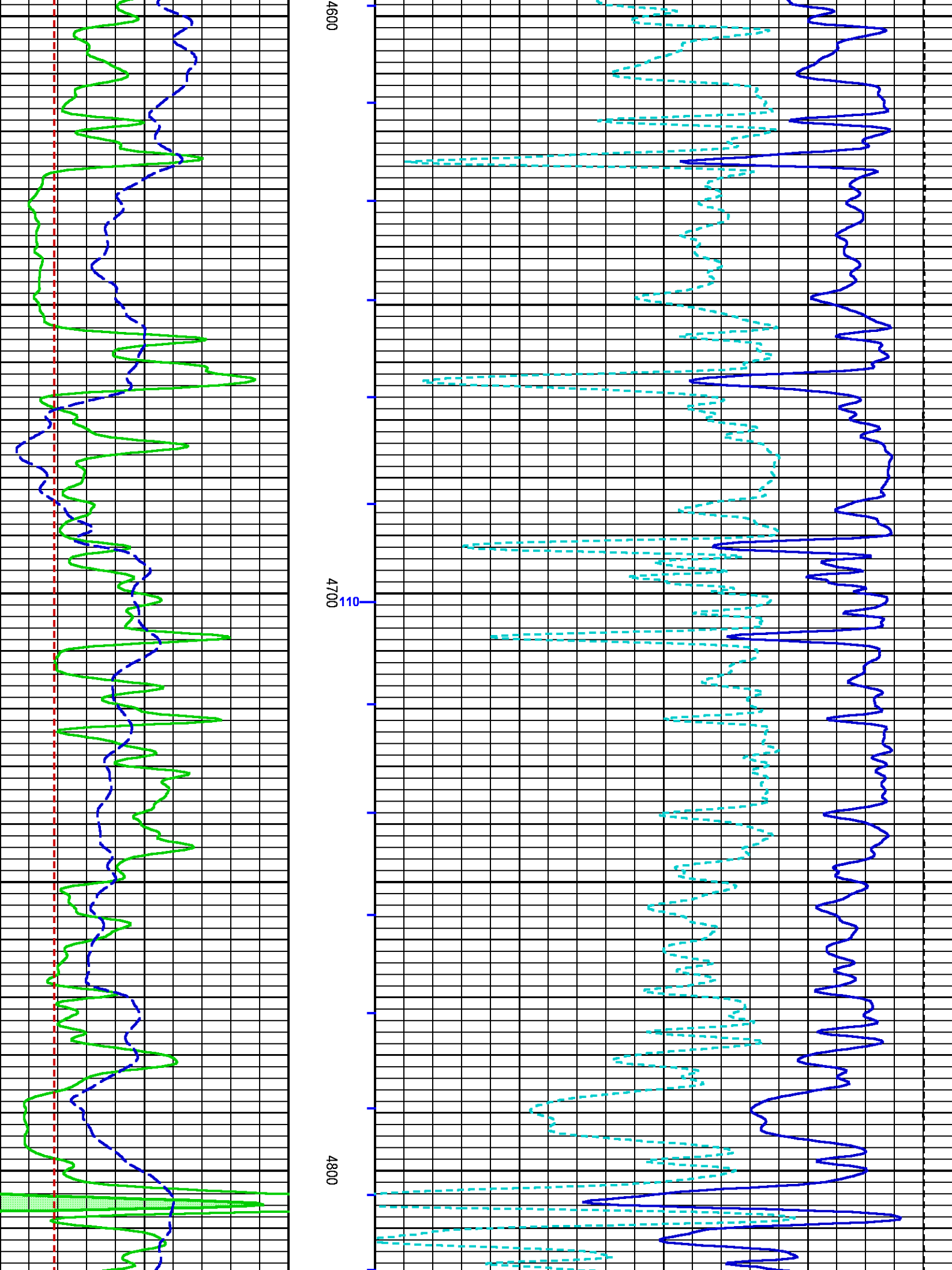

3500
190
3600
3700

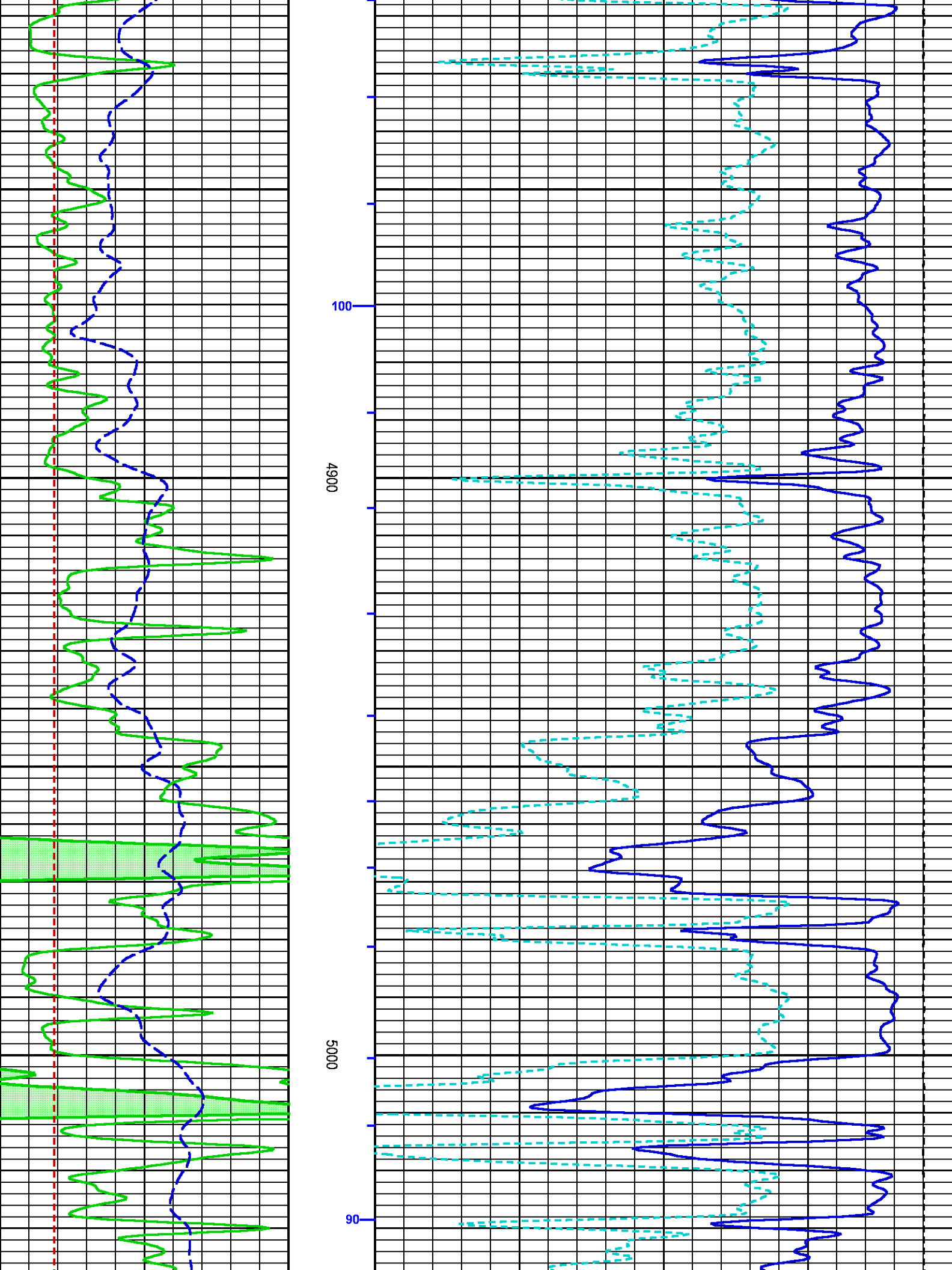

180
3800
3900
170

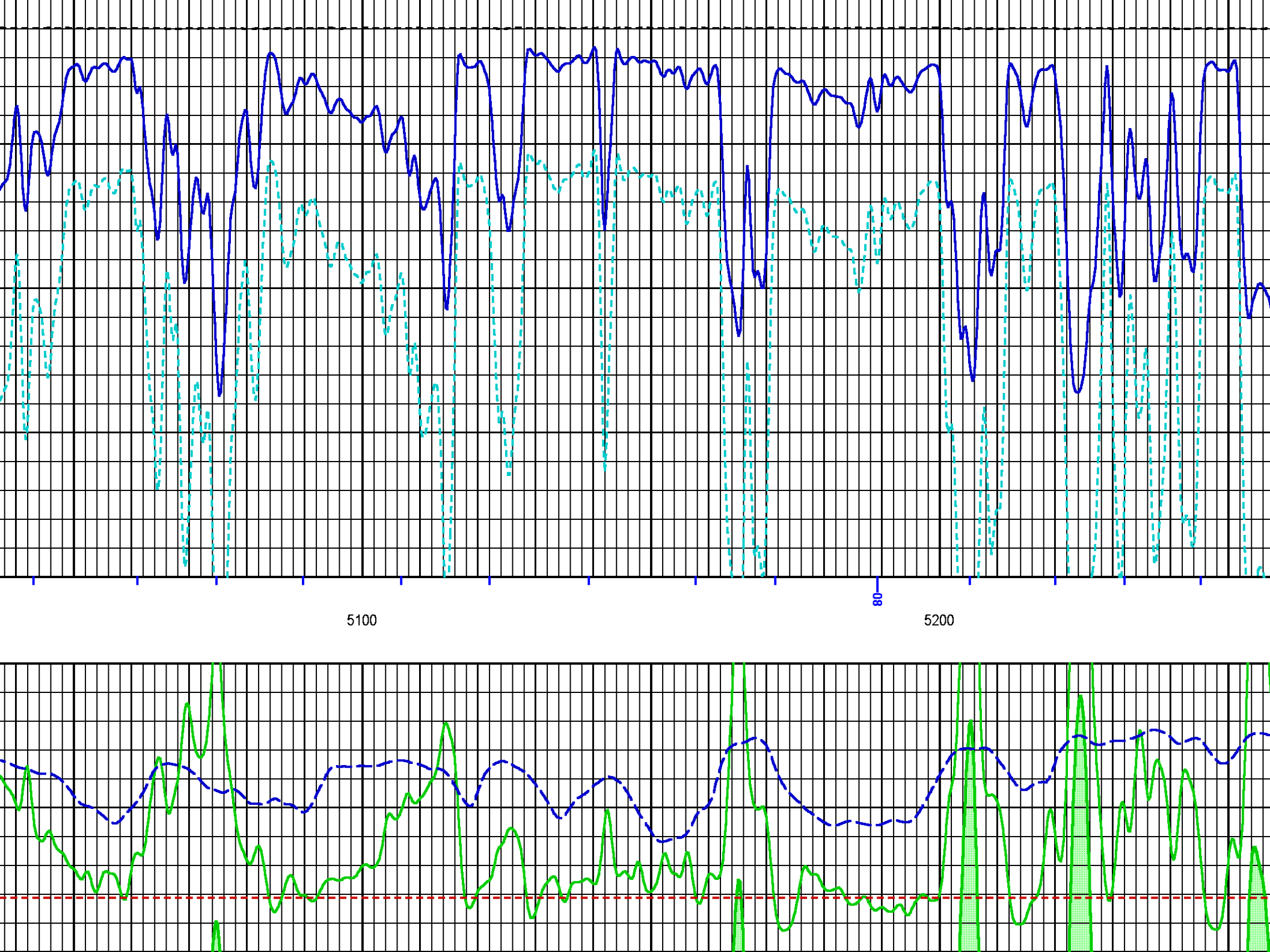

4000
160
4100

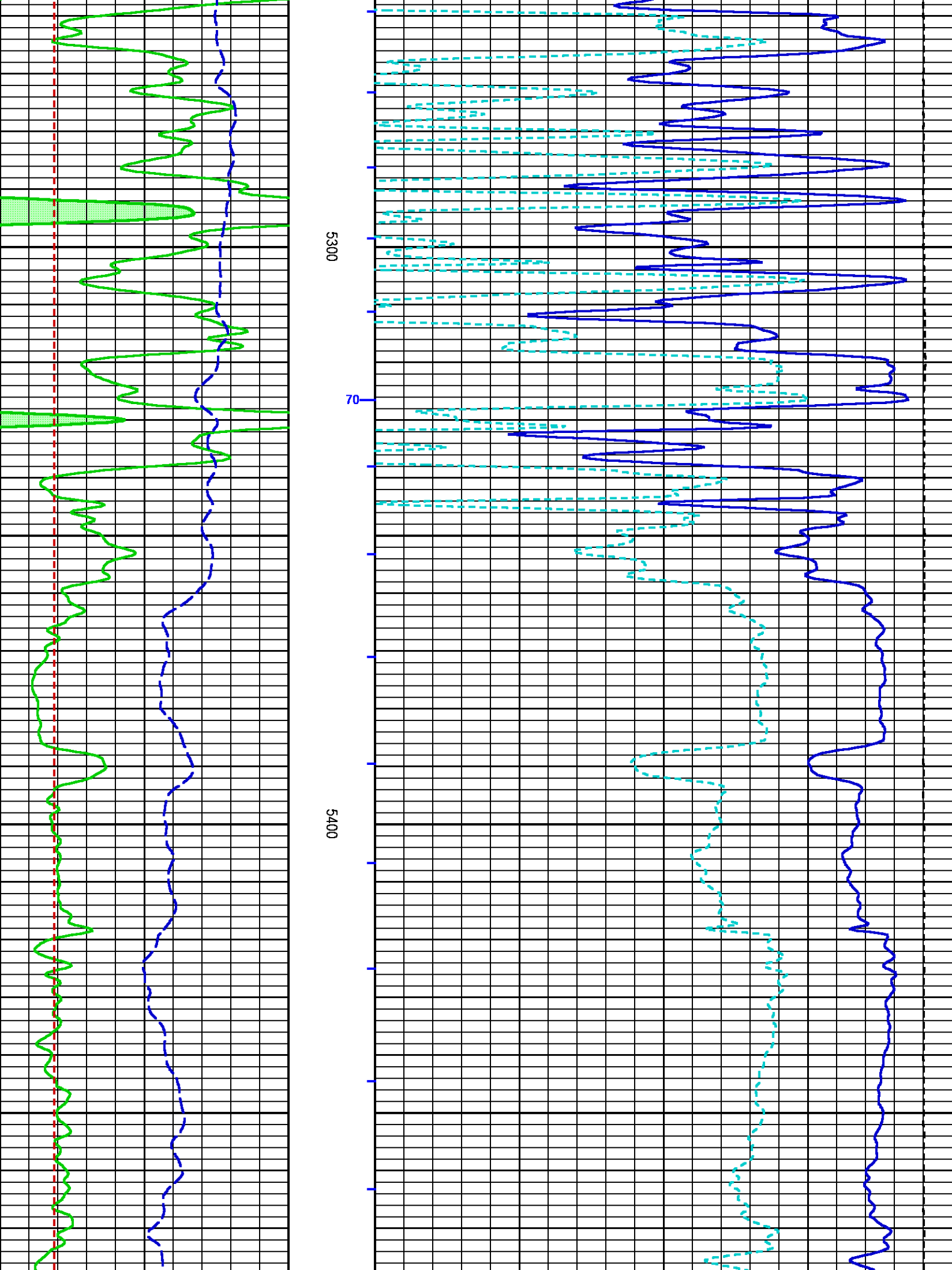

150
4200
140
4300

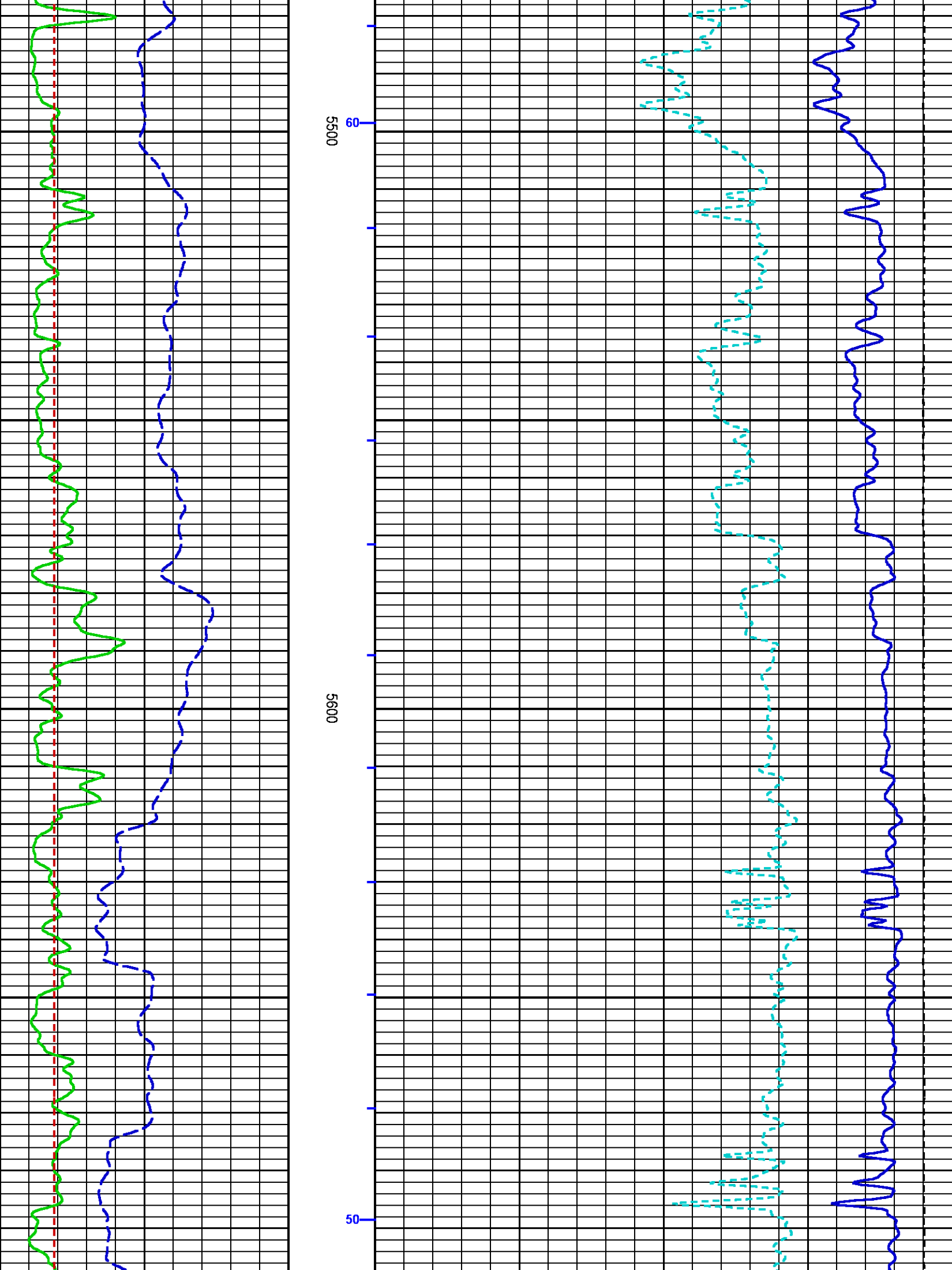

4400
130
4500
120

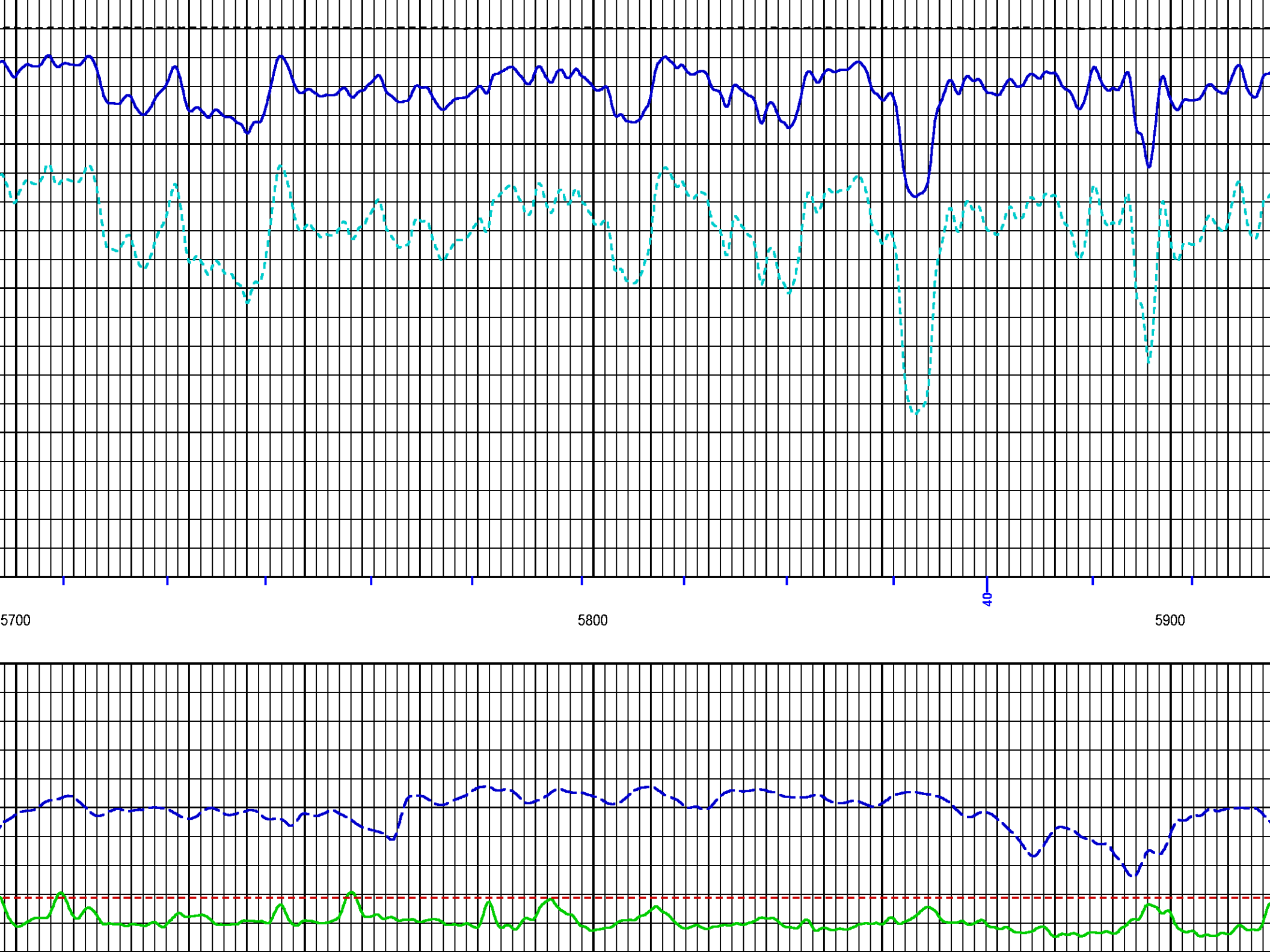

4600
4700
110
4800

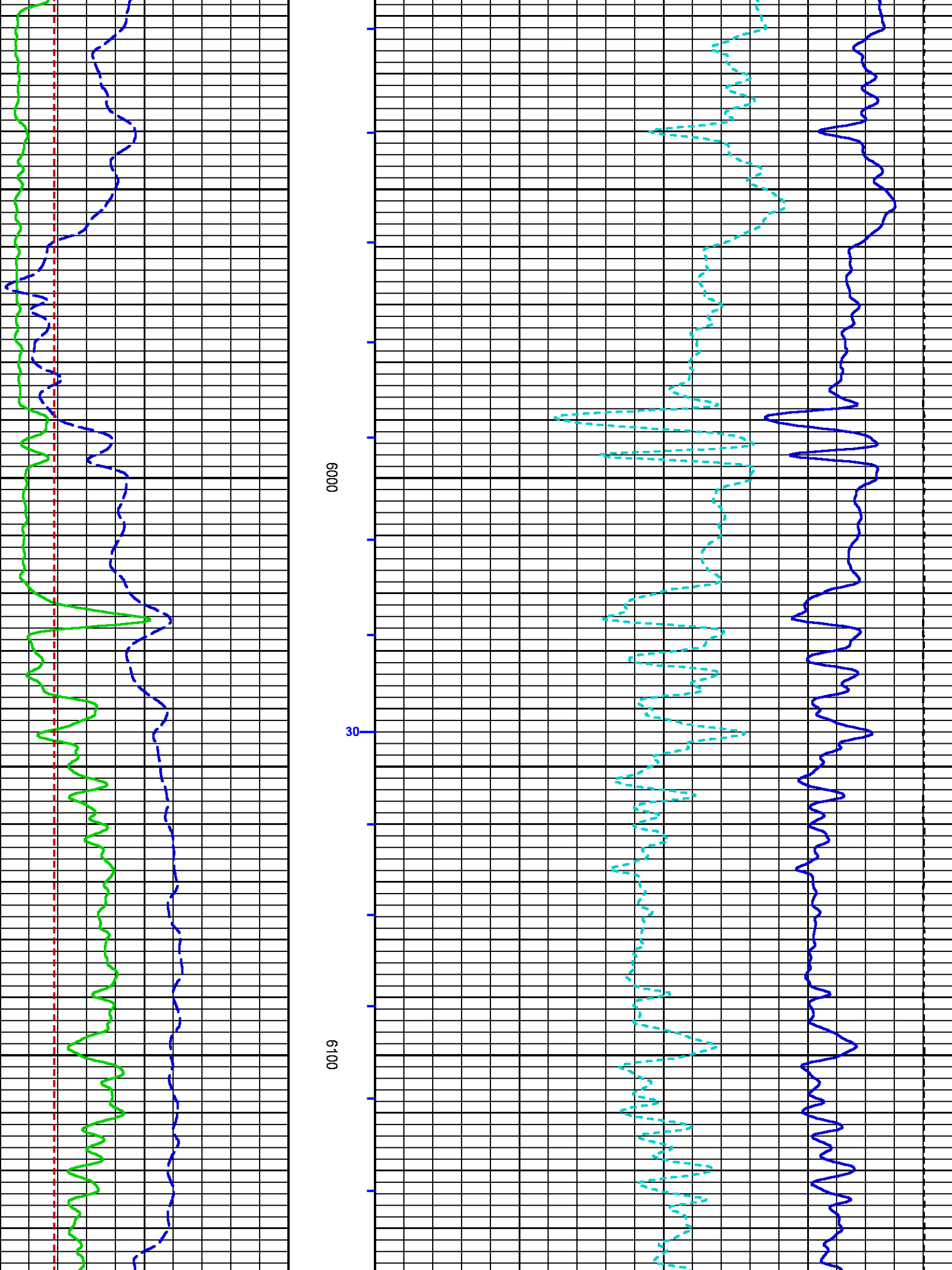

100
4900
5000
90

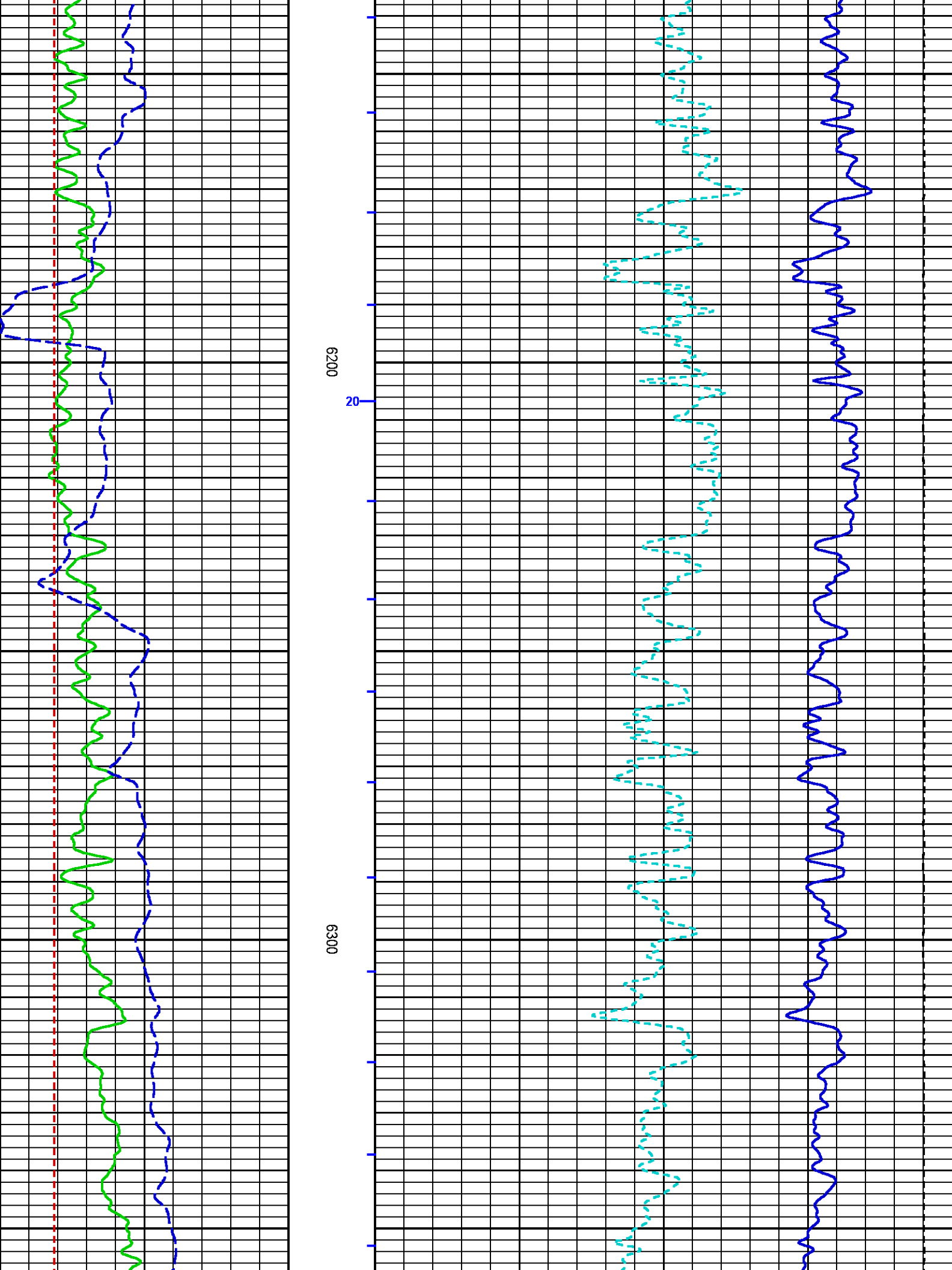

80
5100
5200

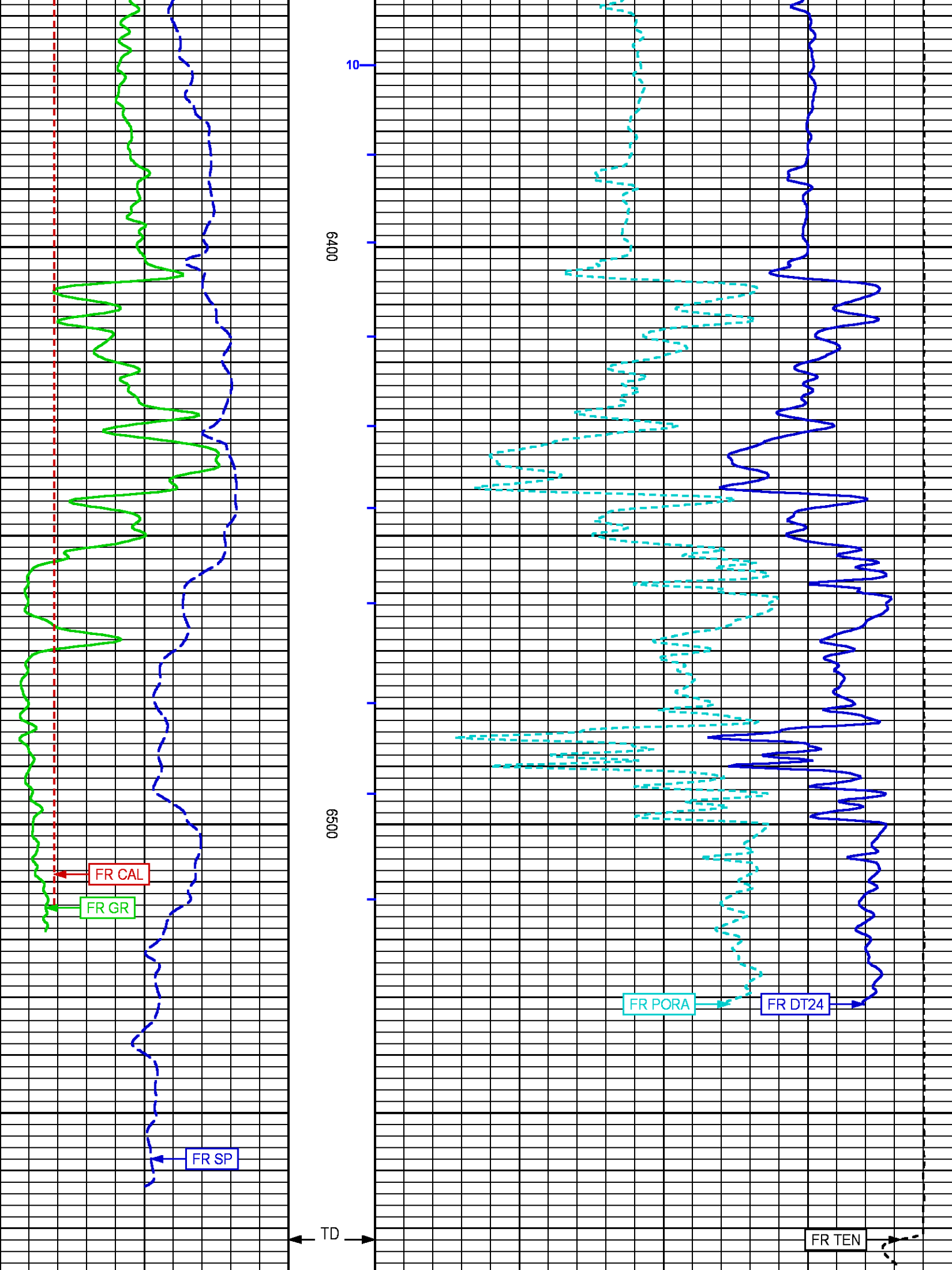

5300
70
5400

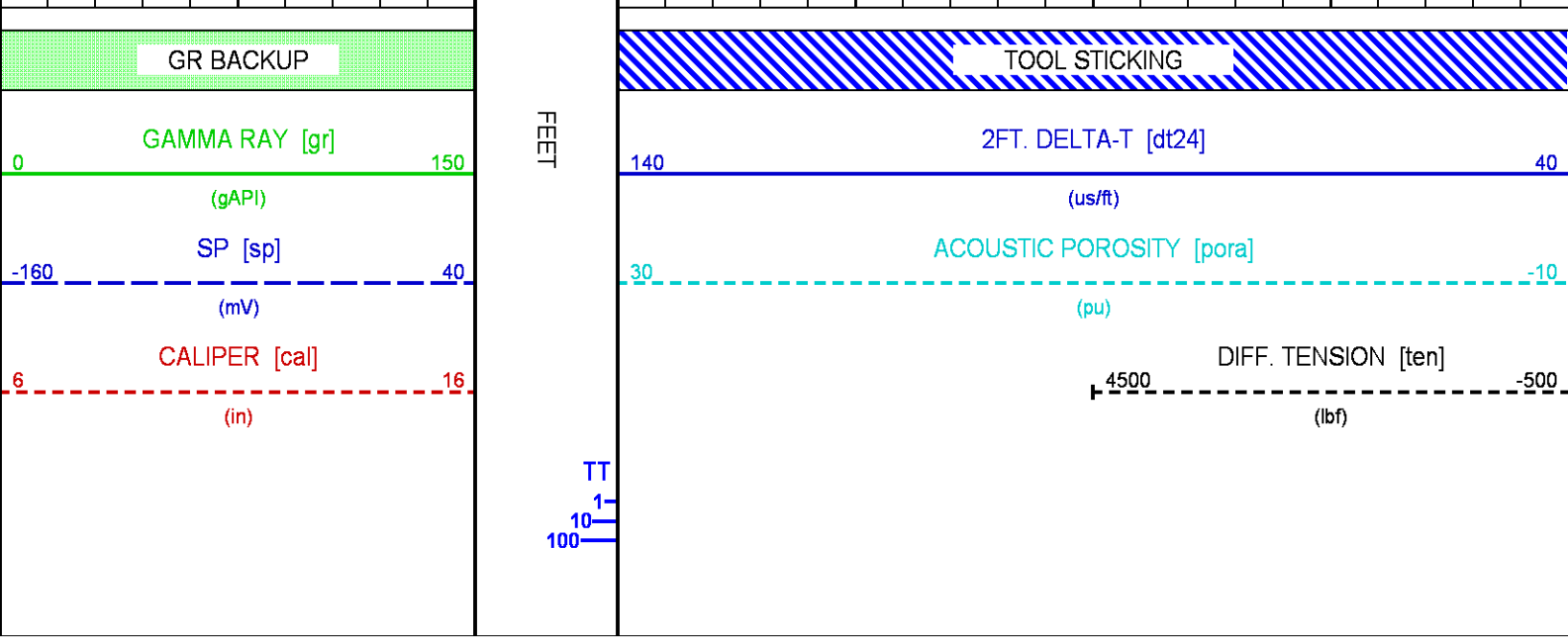

5500
60
5600
50


40
5700
5800
5900


6000
30
6100


6200
20
6300


10
6400
6500
FR CAL
FR GR
FR SP
FR PORA
FR DT24
TD
FR TEN


GR BACKUP
GAMMA RAY [gr]
0
150
(gAPI)
SP [sp]
-160
40
(mV)
CALIPER [cal]
6
16
(in)
FEET
TT
1
10
100
TOOL STICKING
2FT. DELTA-T [dt24]
140
40
(us/ft)
ACOUSTIC POROSITY [pora]
30
-10
(pu)
DIFF. TENSION [ten]
4500
-500
(lbf)