



FILE NO:	COMPANY	LARAMIE ENERGY
API NO:	WELL	BRUTON 30-04W
05077104570000	FIELD	VEGA
	COUNTY	MESA
		STATE COLORADO
Ver. 4.06	LOCATION:	OTHER SERVICES
	LAT: 39.252566 N	HDIL/ZDL/CN/GR
	LONG: 107.814245 W	
	SEC 30	TWP 9S
		RGE 93W
PERMANENT DATUM	GL	ELEVATION 7512 FT
LOG MEASURED FROM	KB	30 FT ABOVE P.D.
DRILL. MEAS. FROM	KB	
		ELEVATIONS:
		KB 7542 FT
		DF
		GL 7512 FT

DATE	09-SEP-2017
RUN	1
TRIP	1
SERVICE ORDER	US127172
DEPTH DRILLER	8396 FT
DEPTH LOGGER	8396 FT
BOTTOM LOGGED INTERVAL	8396 FT
TOP LOGGED INTERVAL	1551 FT
CASING DRILLER	8.625 IN @ 1554 FT
CASING LOGGER	1551 FT
BIT SIZE	7.875 IN
TYPE OF FLUID IN HOLE	LSND
DENSITY	9.8 LB/G
VISCOSITY	70 CP
PH	9.4
FLUID LOSS	7.8 C3
SOURCE OF SAMPLE	WELLBORE
RM AT MEAS. TEMP.	2.697 OHMM @ 100.7 DEGF
RMF AT MEAS. TEMP.	2.449 OHMM @ 100.7 DEGF
RMC AT MEAS. TEMP.	2.182 OHMM @ 100.7 DEGF
SOURCE OF RMF	RMC
RM AT BHT	1.398 OHMM @ 198.2 DEGF
TIME SINCE CIRCULATION	7.5 HOURS
MAX. RECORDED TEMP.	198.2 DEGF
EQUIP. NO.	HL-6670
LOCATION	WOODWARD
RECORDED BY	L. SINICKI
WITNESSED BY	MR. SHANE HEARD

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.

REMARKS

RUN 1 TRIP 1: *TWO OPERATIONS IN WELL*

OPERATION 1: HDIL/ZDL/CN/GR RUN IN COMBINATION
BRIDGED OFF AT 6746' AND LOGGED OUT

OPERATION 2: HDIL/ZDL/CN/GR RUN IN COMBINATION
LOGGED FROM TD TO 6746'

LOGS SPLICED TOGETHER AT 6675'

MATRIX = SANDSTONE
RHO MATRIX = 2.68 G/CC

BVOL AND CVOL ARE PRESENTED IN CUBIC FEET
CVOL CALCULATED USING A FUTURE CASING SIZE OF 4.5"

STICK AND PULL IN THE LOWER SECTION OF THE HOLE MAY HAVE AFFECTED DATA QUALITY.

RIG: H&P 522
CREW: J. PENNA, K. REED

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTRM	3981 XB	10045153	FREE
1	1	WTS	3514 XB	10226222	FREE
1	1	DSL	1329 XA	179184	FREE
1	1	CN	2446 XA	173079	DECENTRALIZED
1	1	ZDL	2234 XA	179939	PAD DEVICE
1	1	DKJT	3939 XA	167196	FREE
1	1	HDIL	1515 EA/MA	179495/183381	FREE

BOREHOLE PROFILE LOG

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

Updates: 1 Patches: 9

Plotted: Sun Sep 10 18:52:59 2017

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/LARAMIE_BRUTON_30_04W/HZ02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 24.500 ft BOTTOM DEPTH: 6759.500 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)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
BIT SIZE	BIT SIZE	7.875	in	"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 10 18:35:26 2017	BIT SIZE
F1:BVOL	Sep 10 18:35:26 2017	BOREHOLE VOLUME
F1:CAL	Sep 10 18:35:26 2017	CALIPER
F1:CVOL	Sep 10 18:35:27 2017	CEMENT VOLUME
F1:GR	Sep 10 18:35:28 2017	GAMMA RAY
F1:TEN	Sep 10 18:35:39 2017	DIFFERENTIAL TENSION

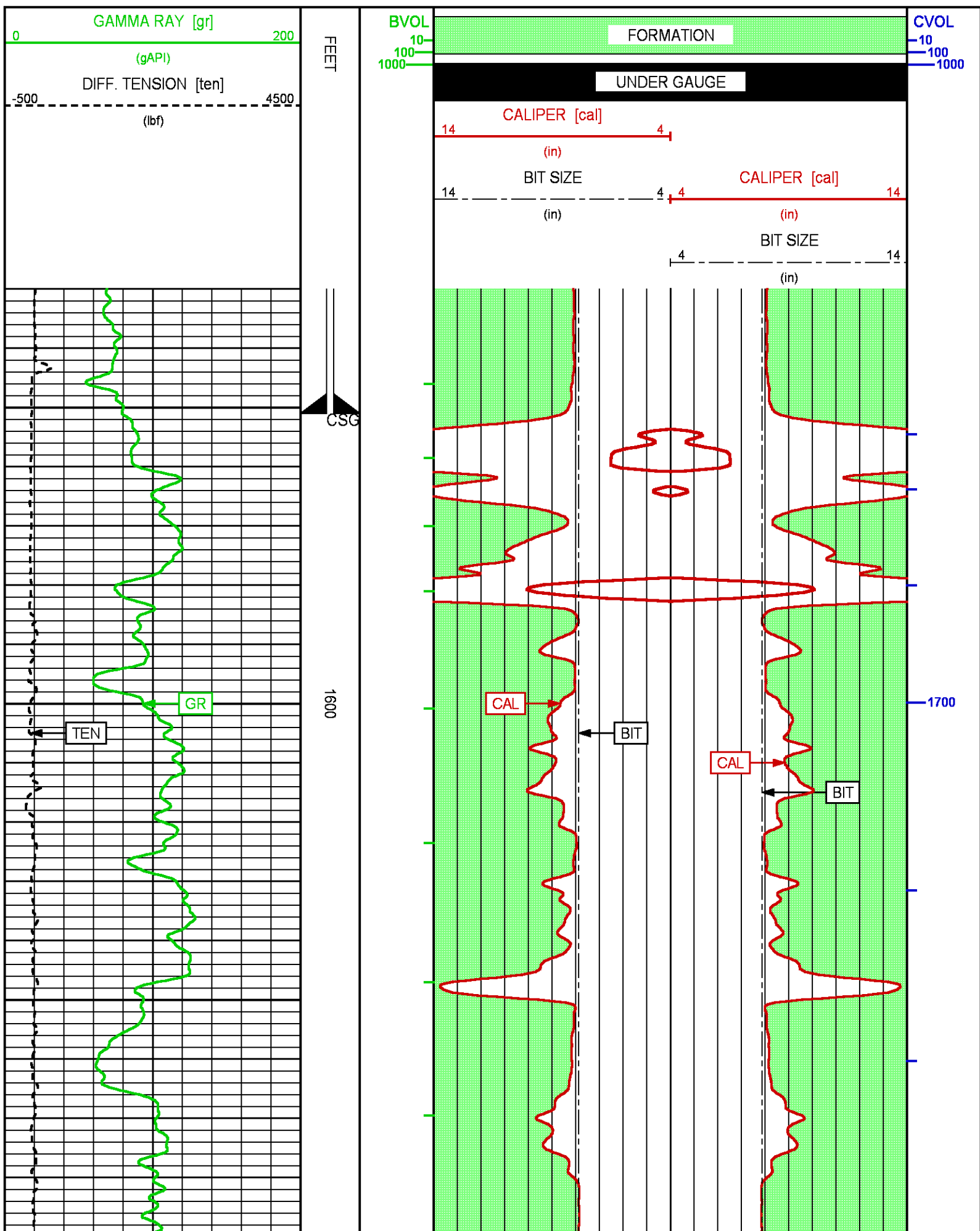
CURVE MEASURE POINT OFFSET

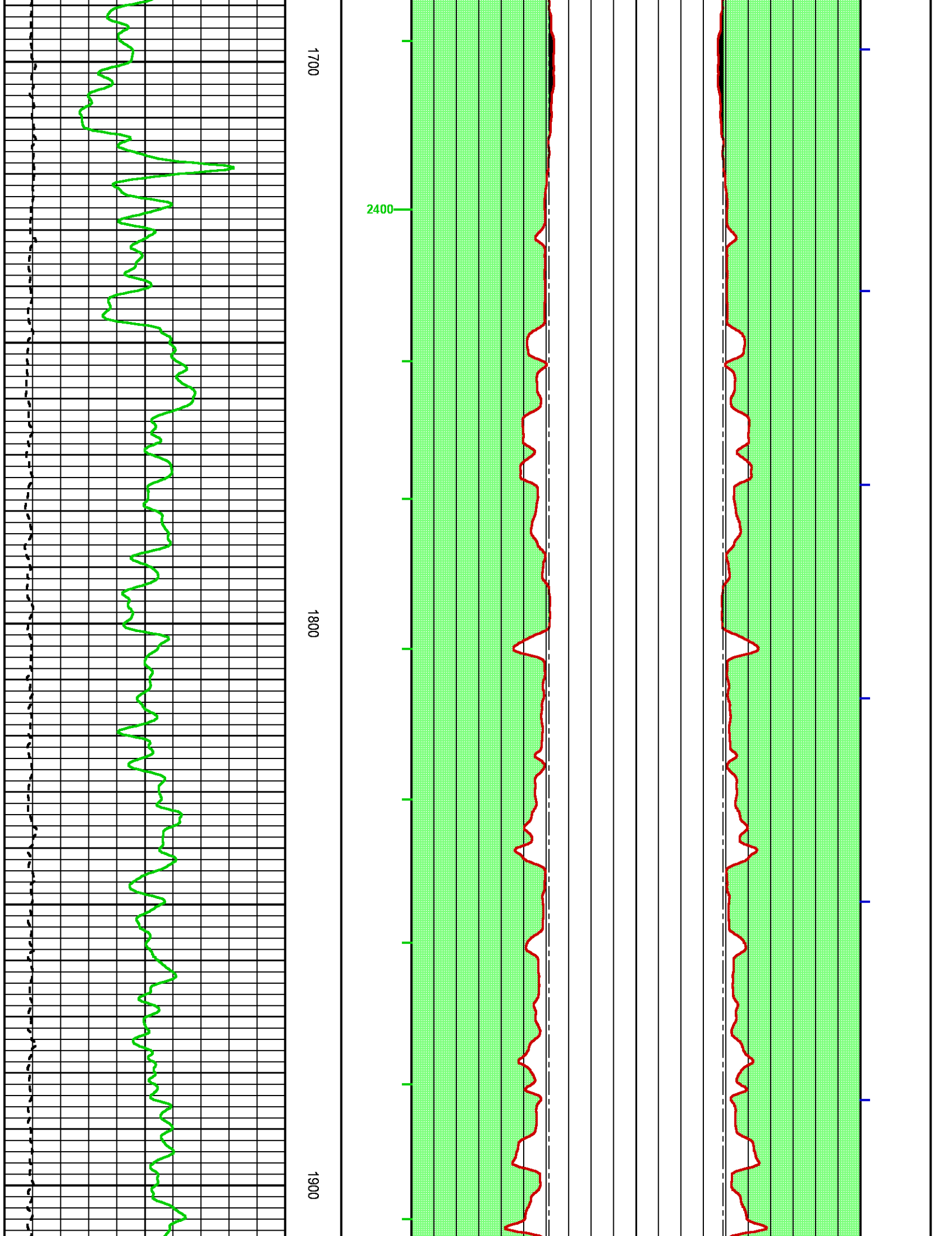
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	CAL	35.00	GR	52.25	TEN	0.00

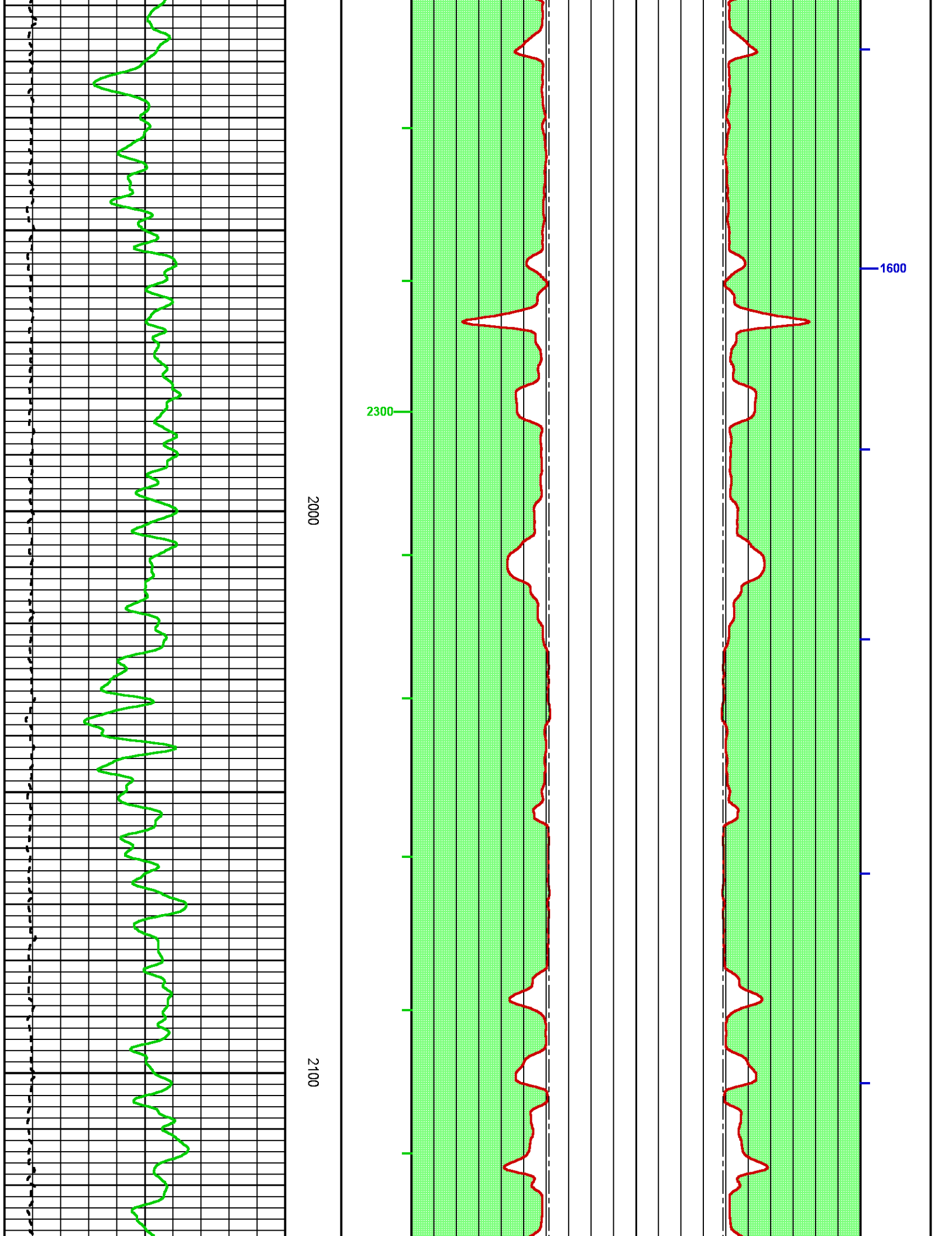
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 Plot Interval : 1530 - 8425.75 Feet

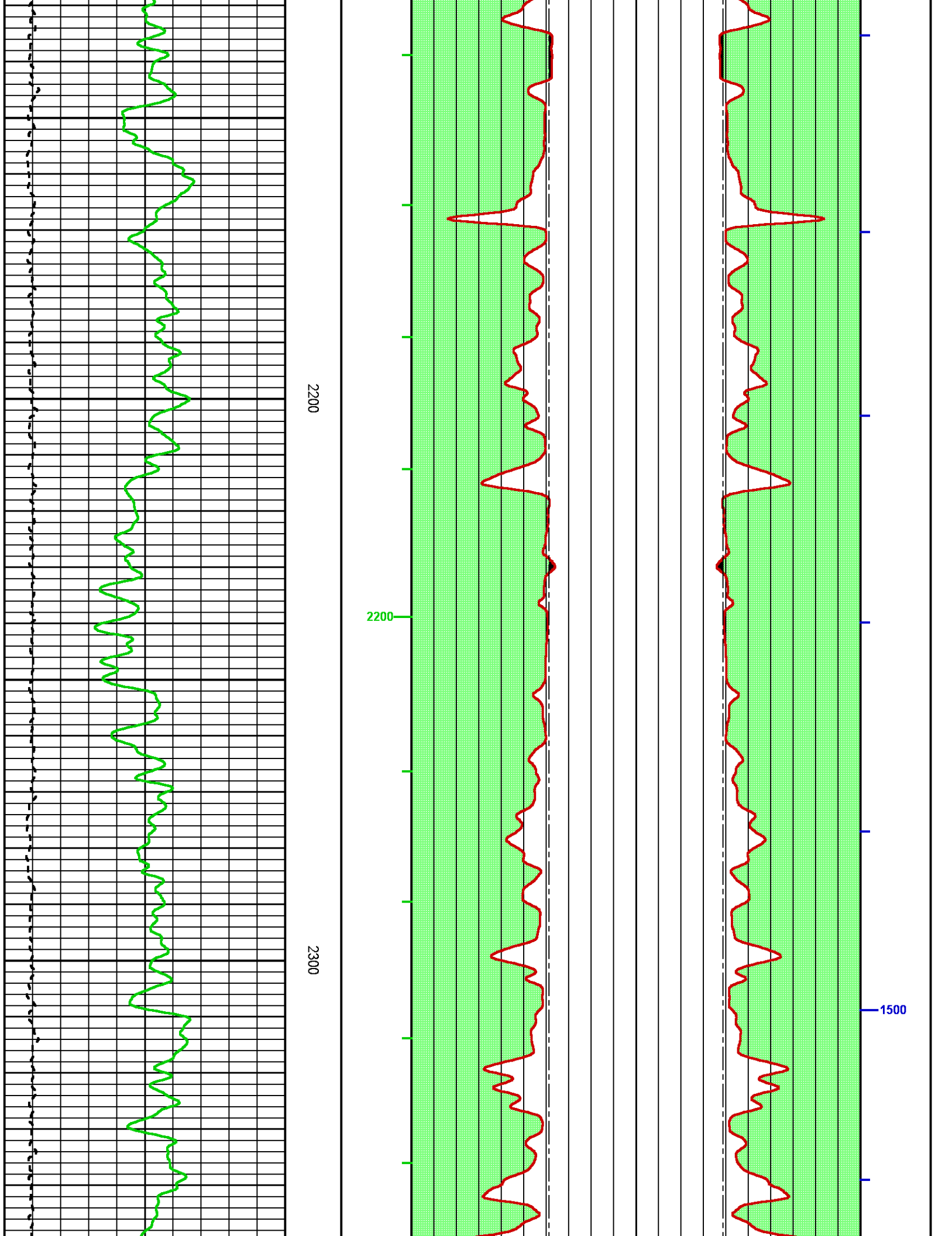
Data File 1 : F1 : cpu100:/dat1a/LARAMIE_BRUTON_30_04W/MAIN.xtf
 Created On : Sep 10 18:35:26 2017
 Company : LARAMIE ENERGY
 Well : BRUTON_30_04W

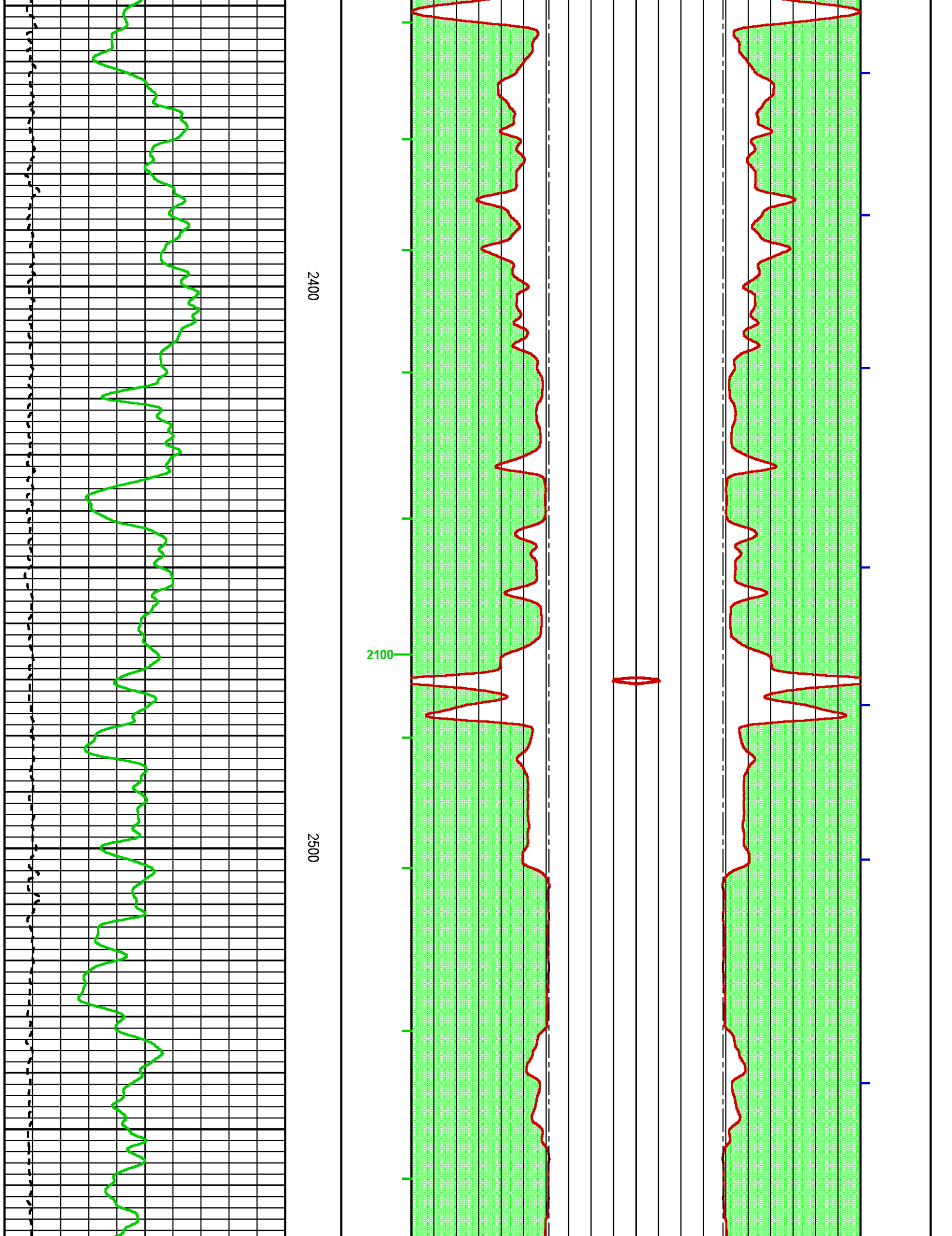
Well : BRUTON 50-04W
Field : VEGA
File Interval : -27.75 - 8425.75 Feet
OCT : HZ

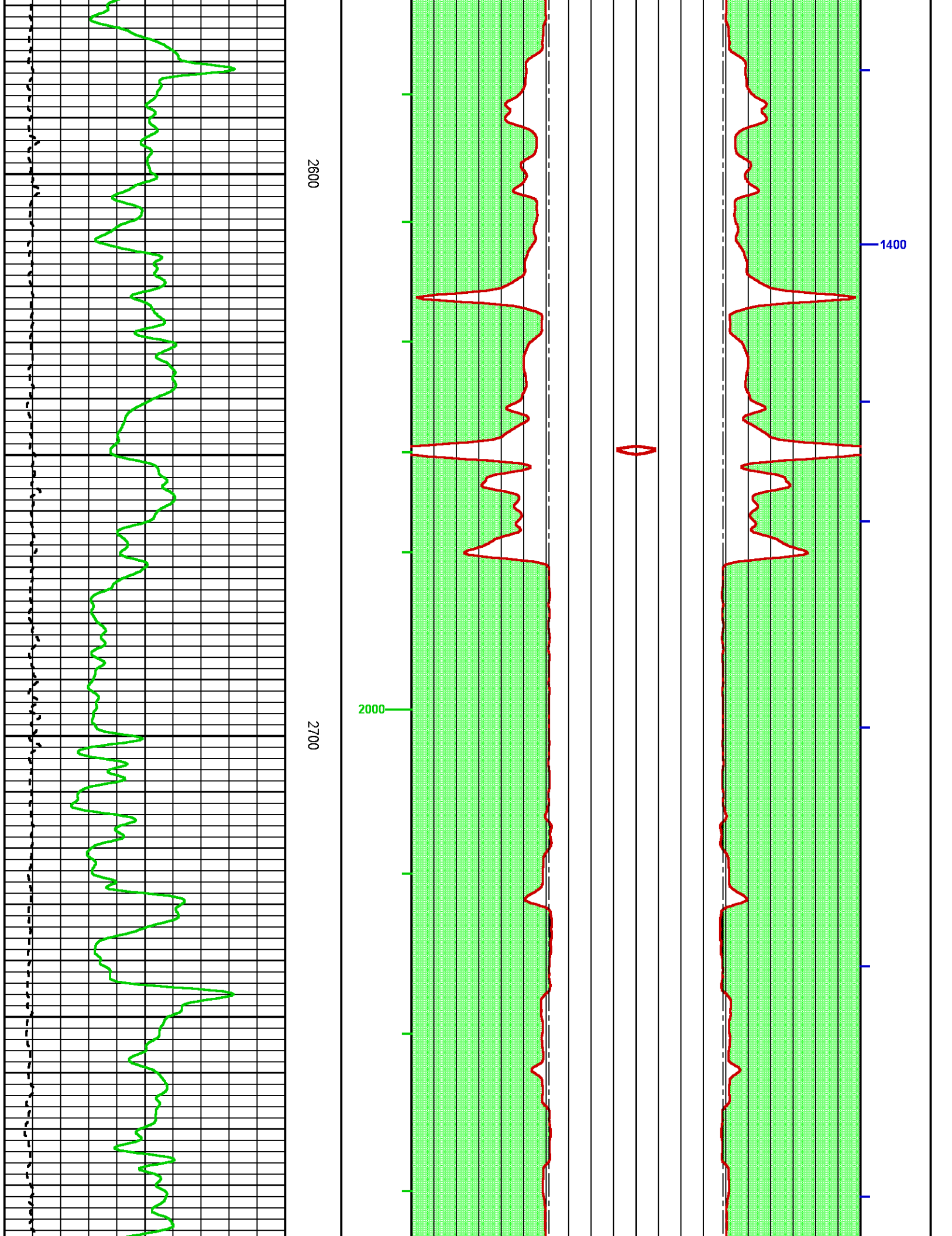


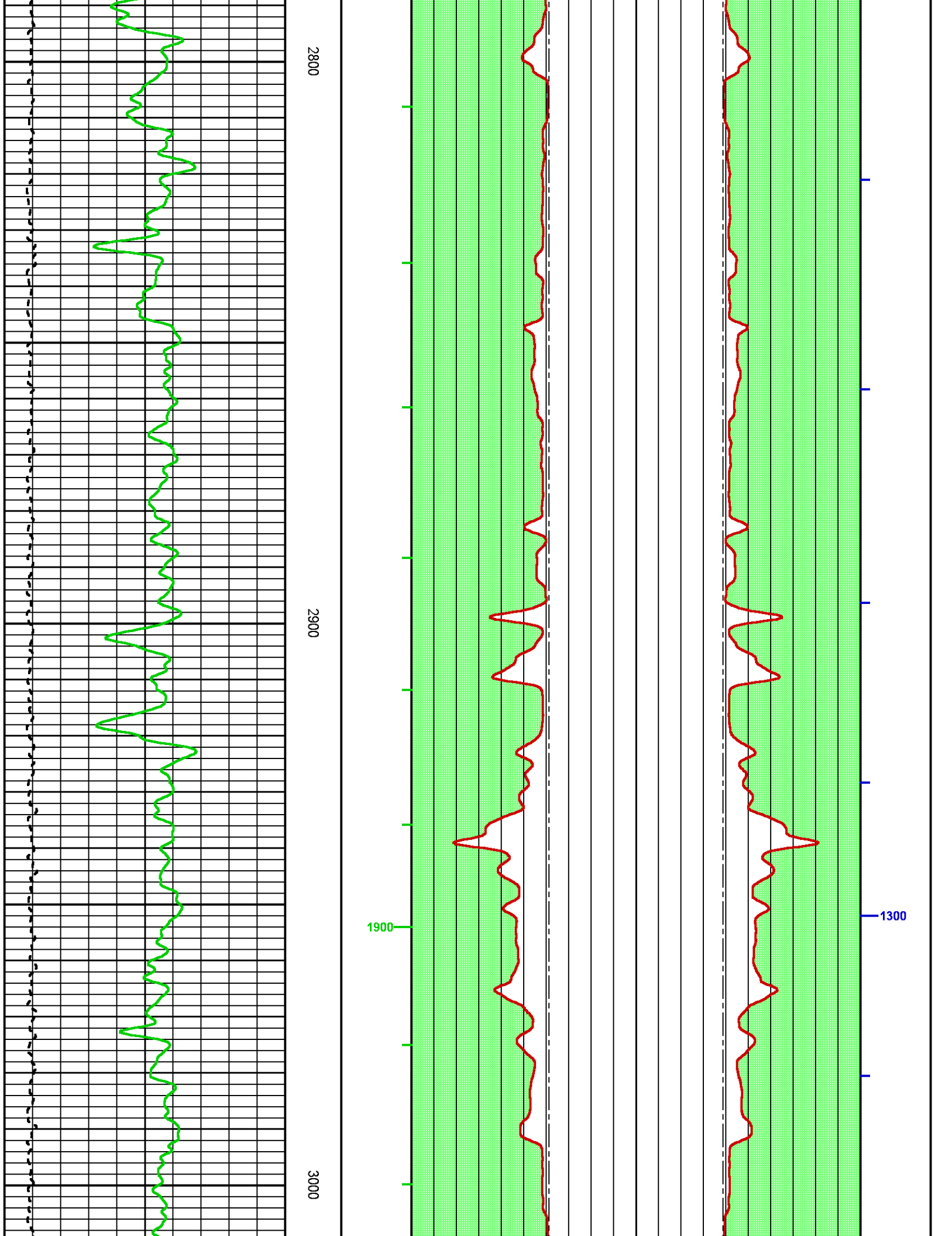


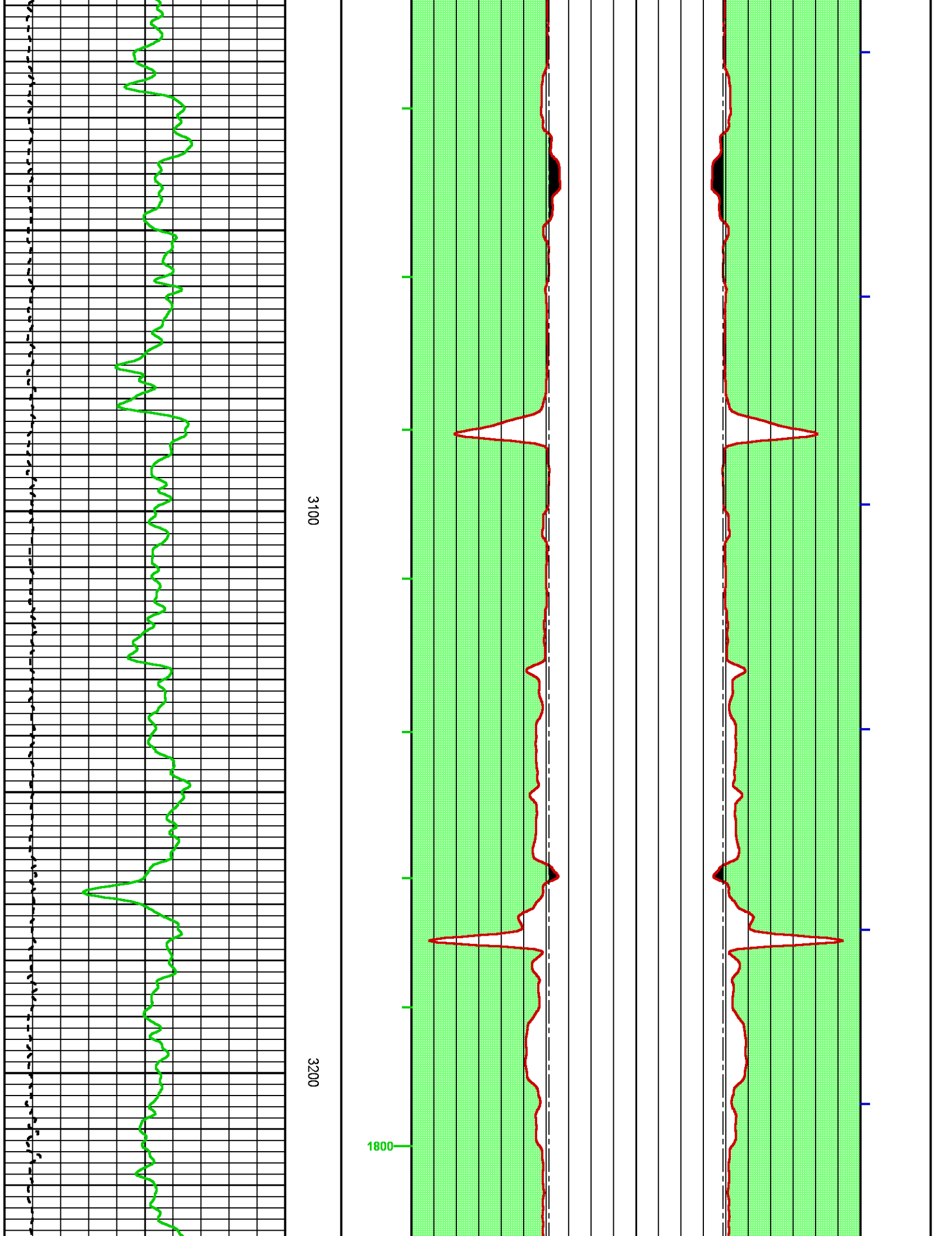


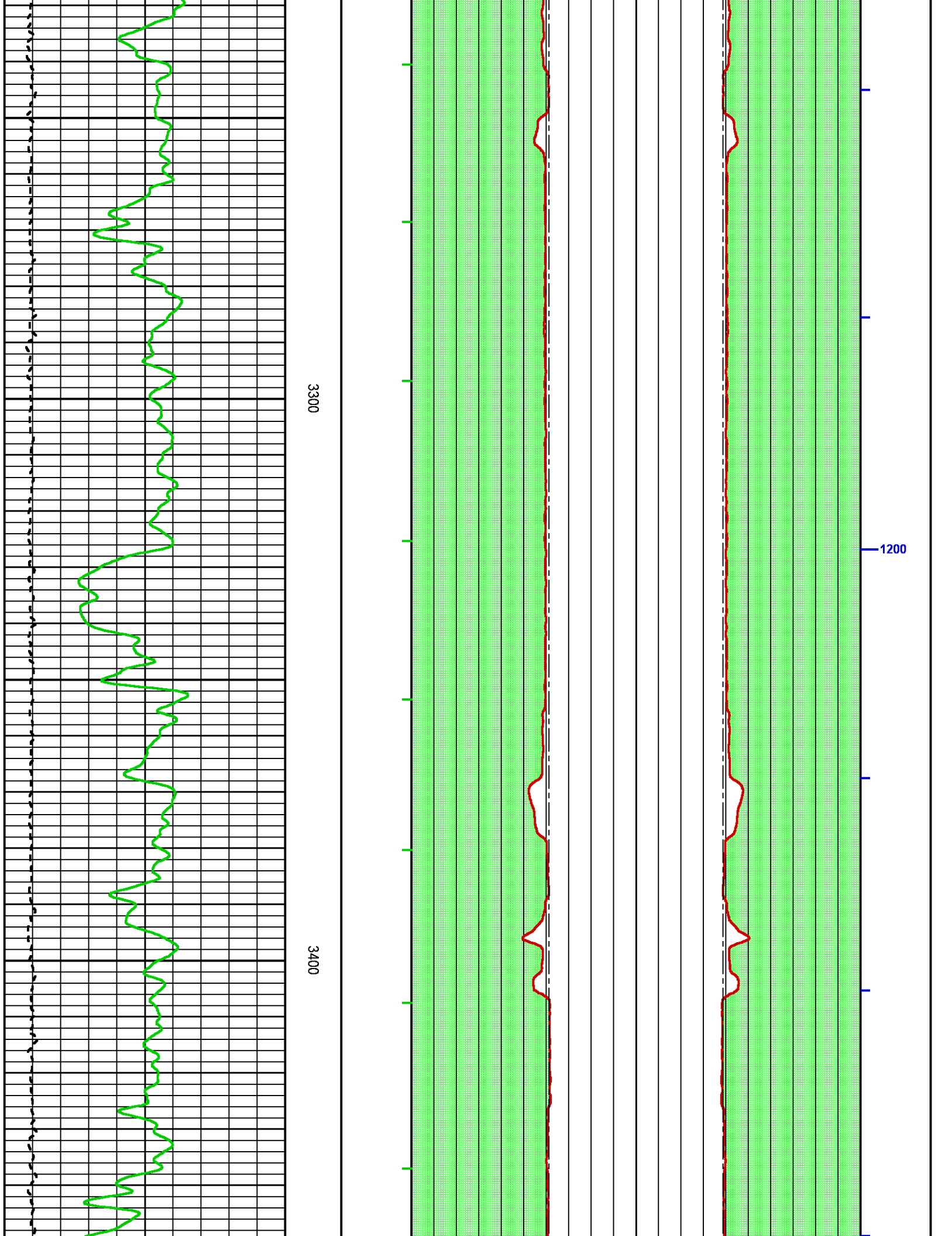


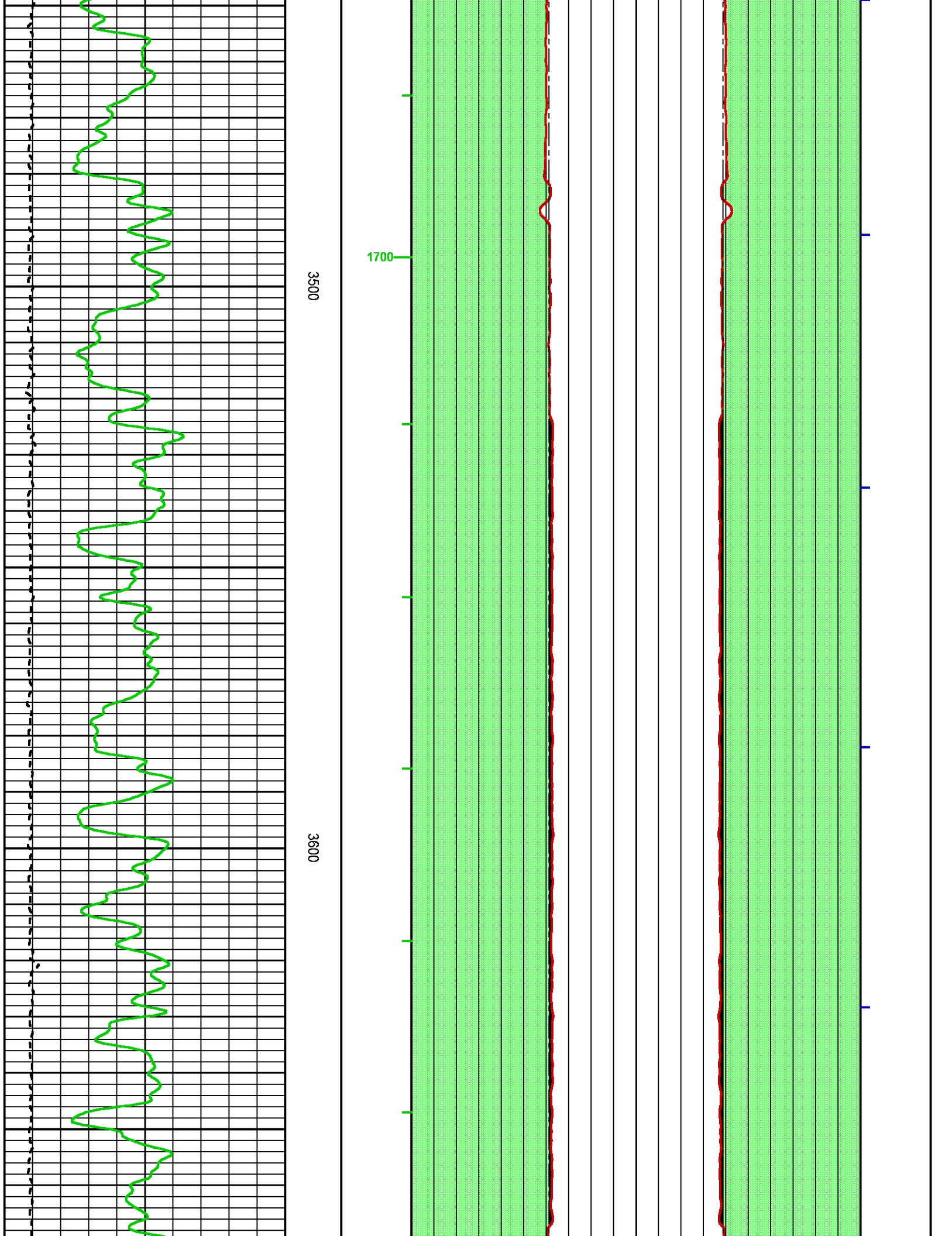


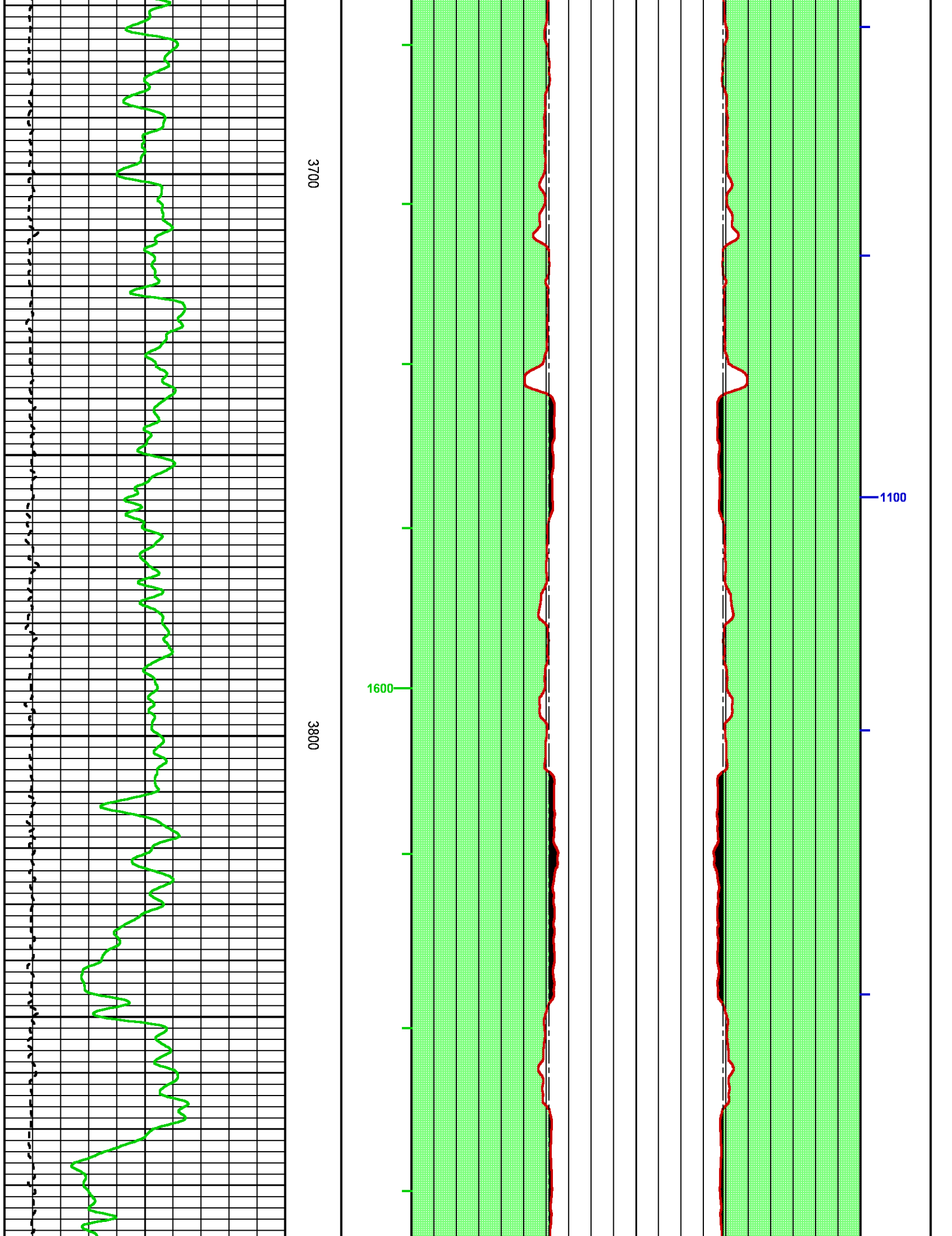


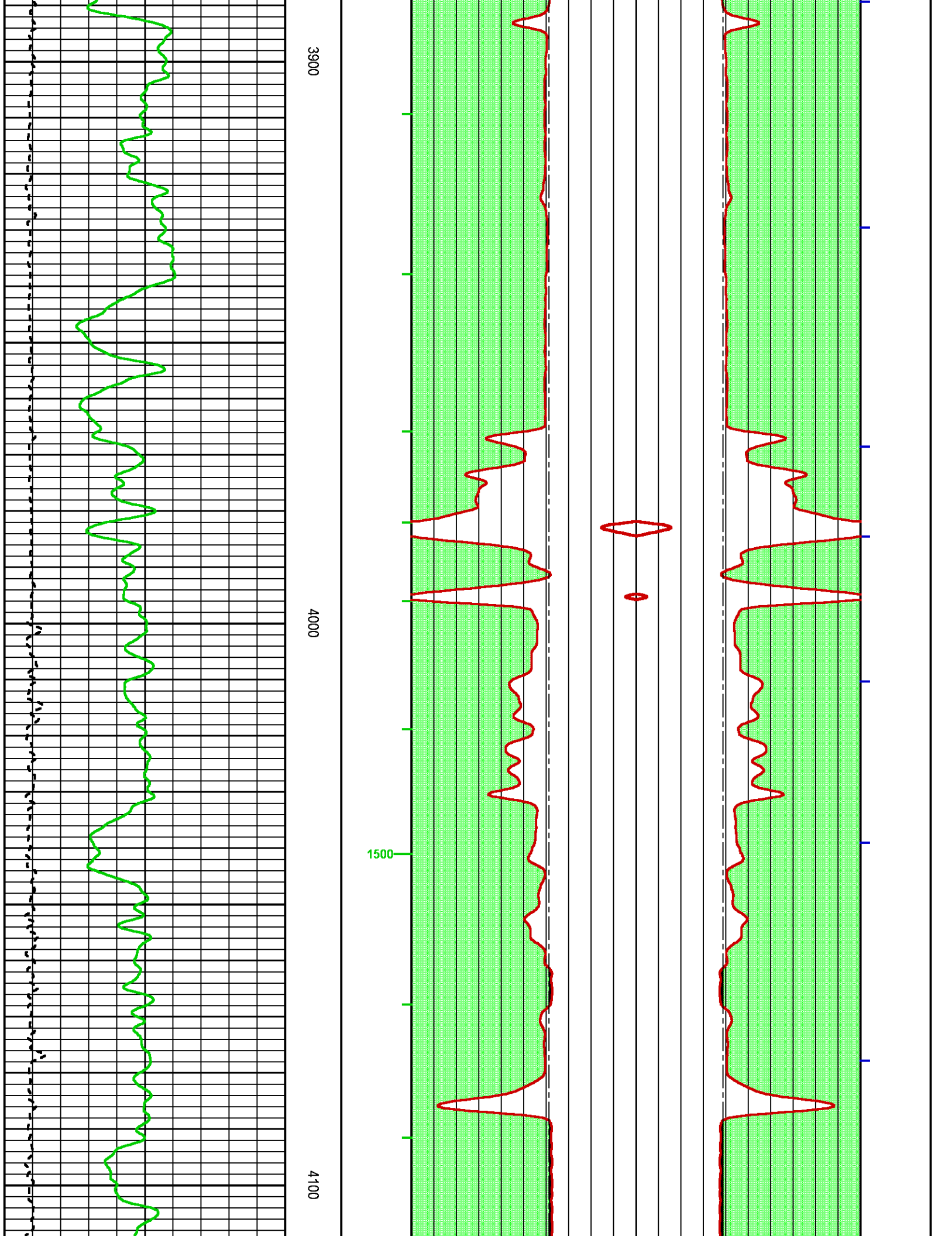




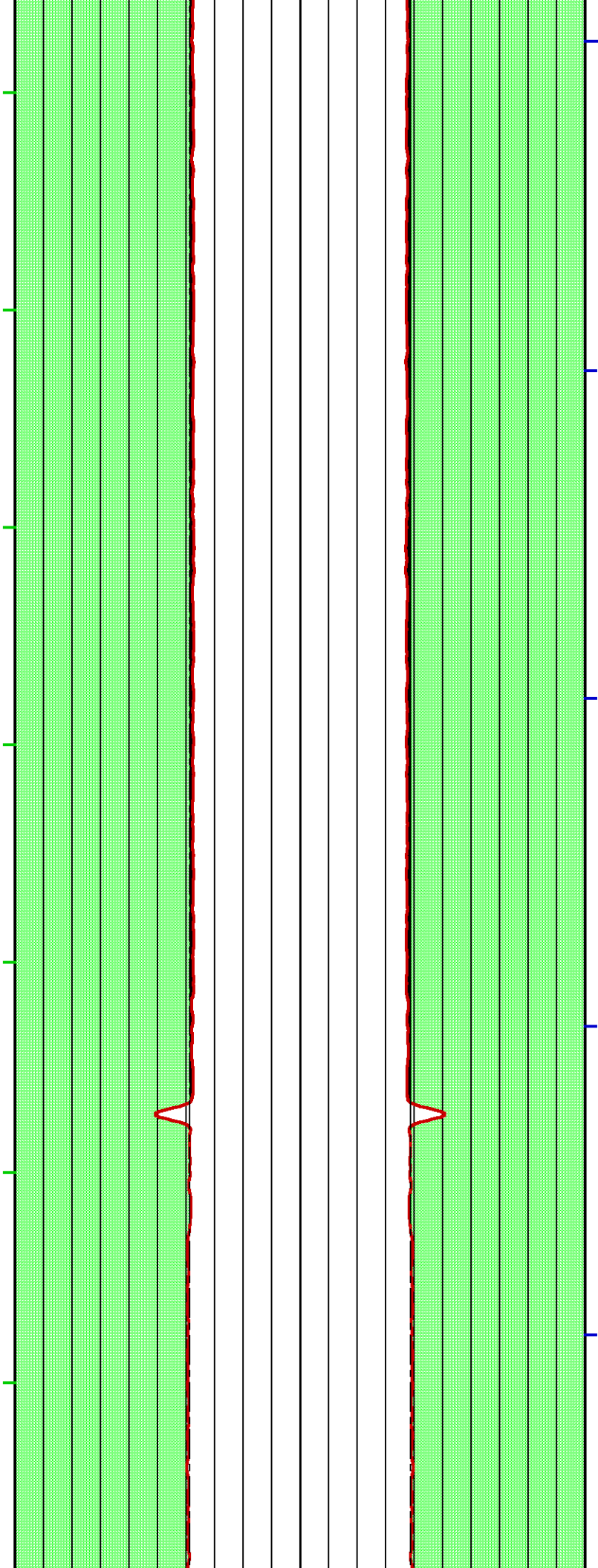






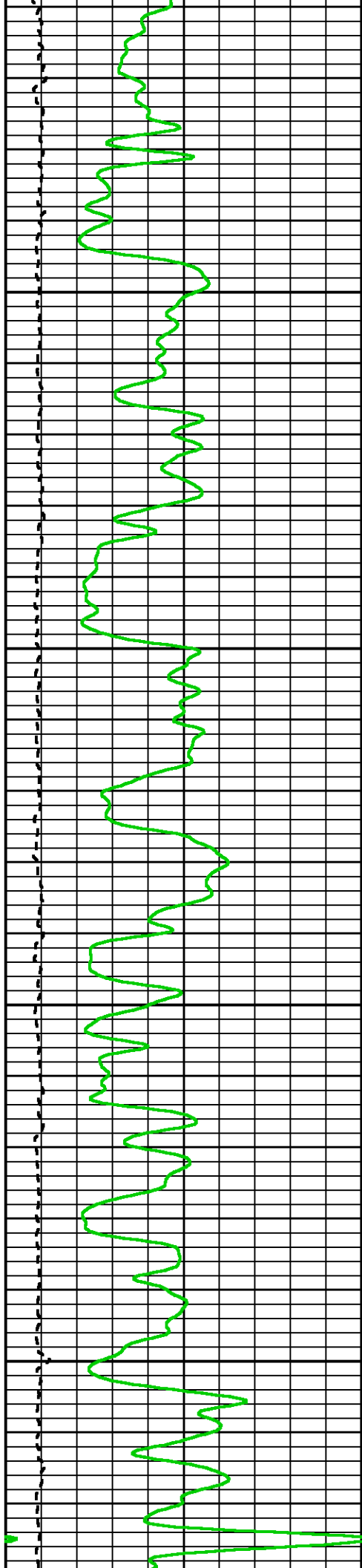


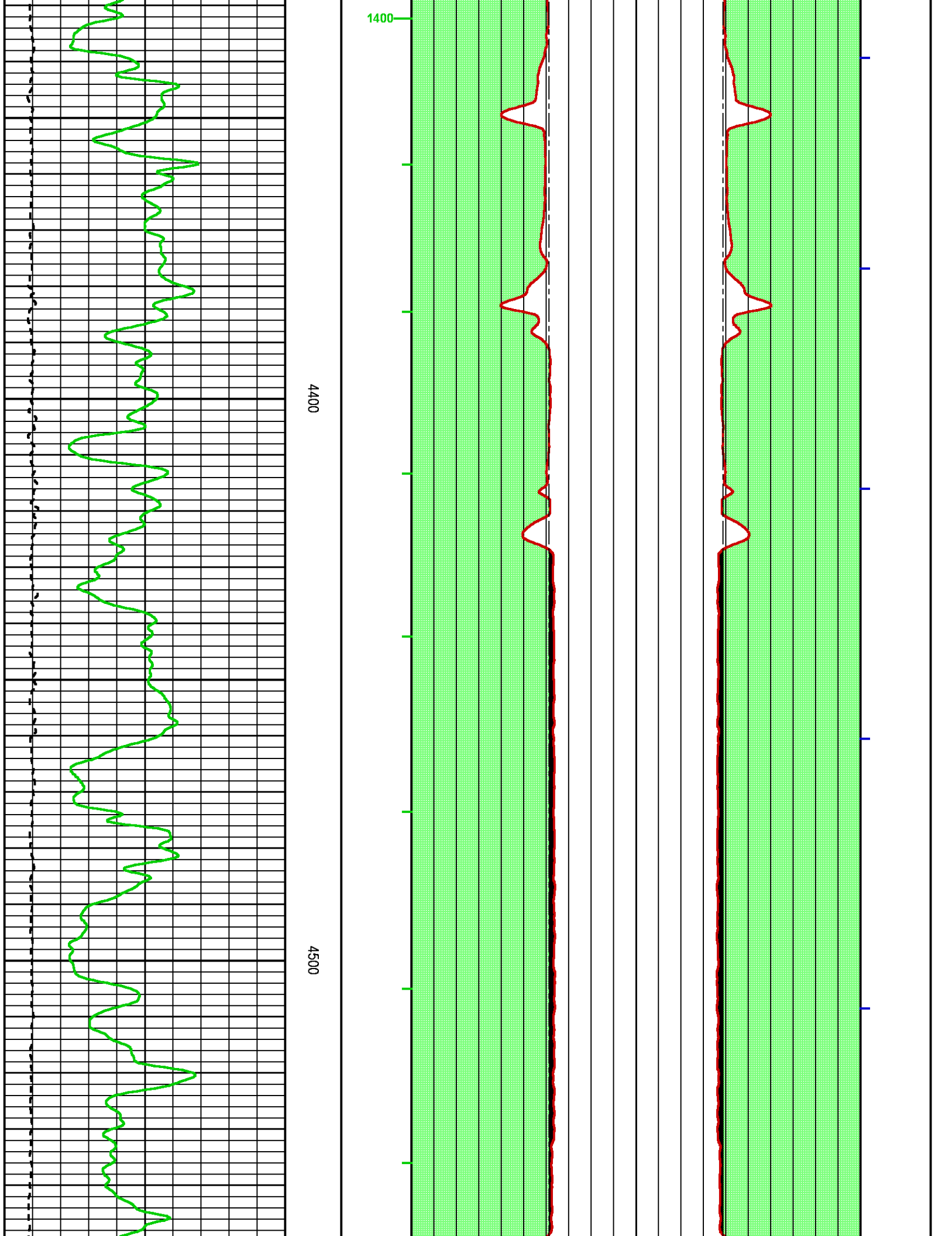
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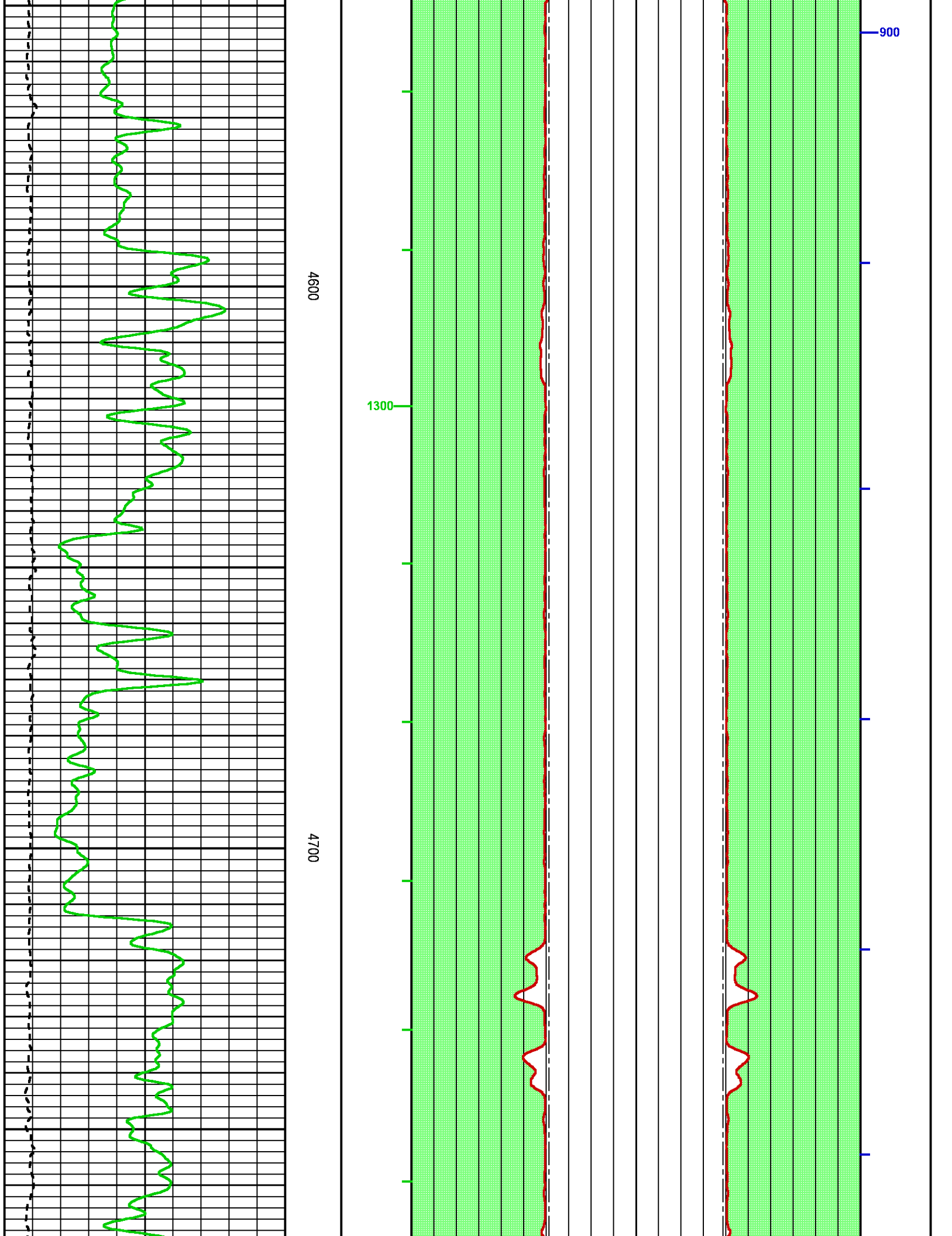


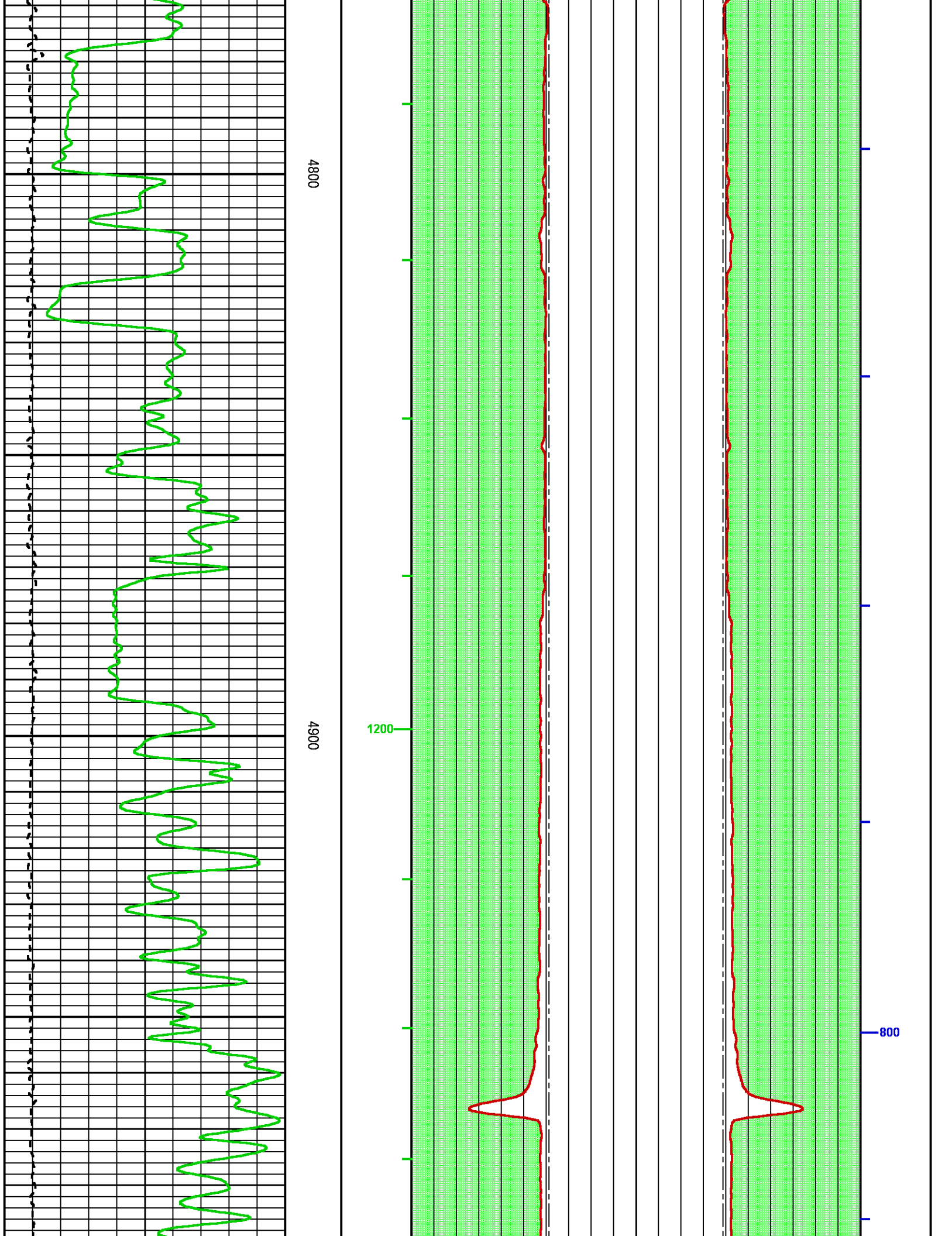
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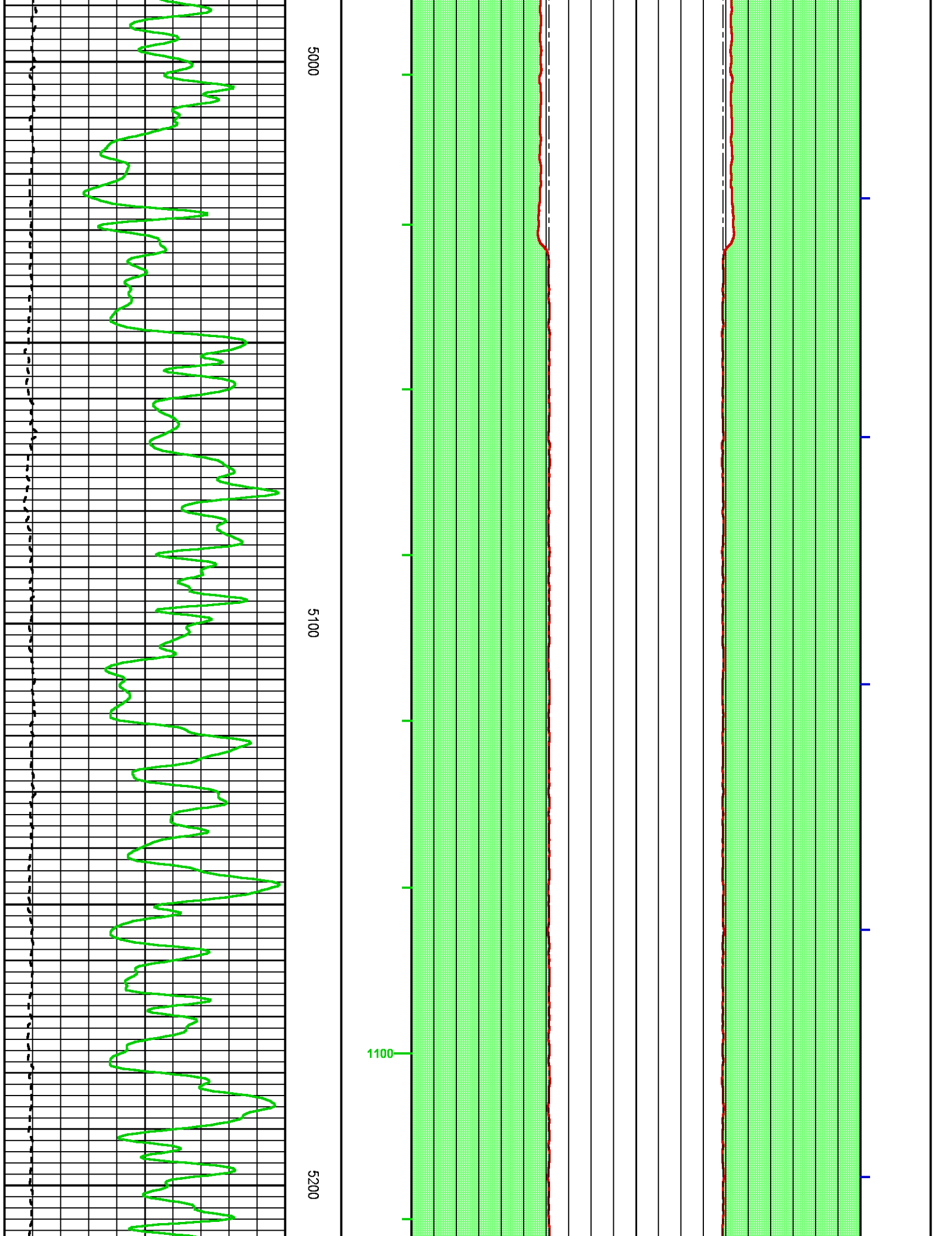
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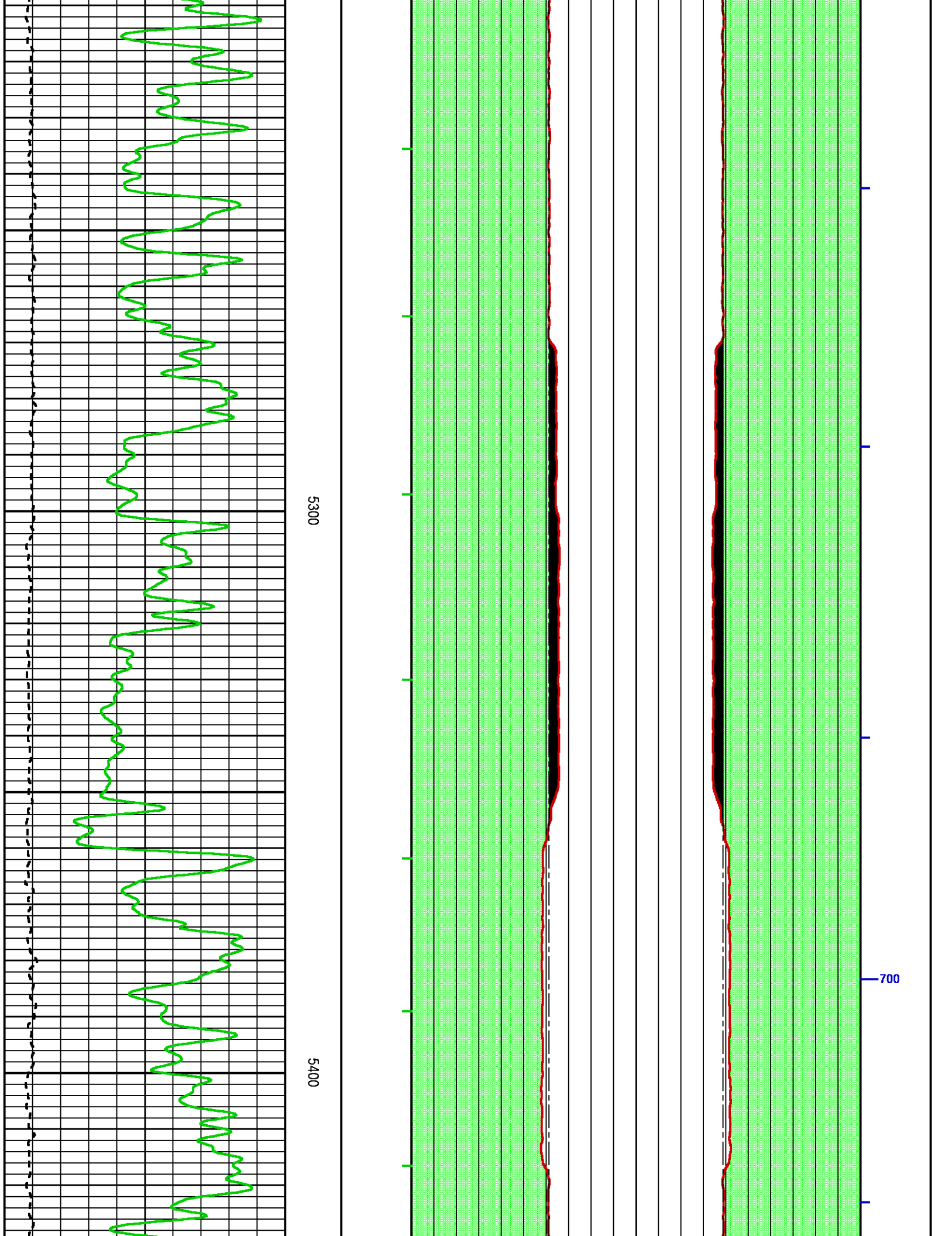


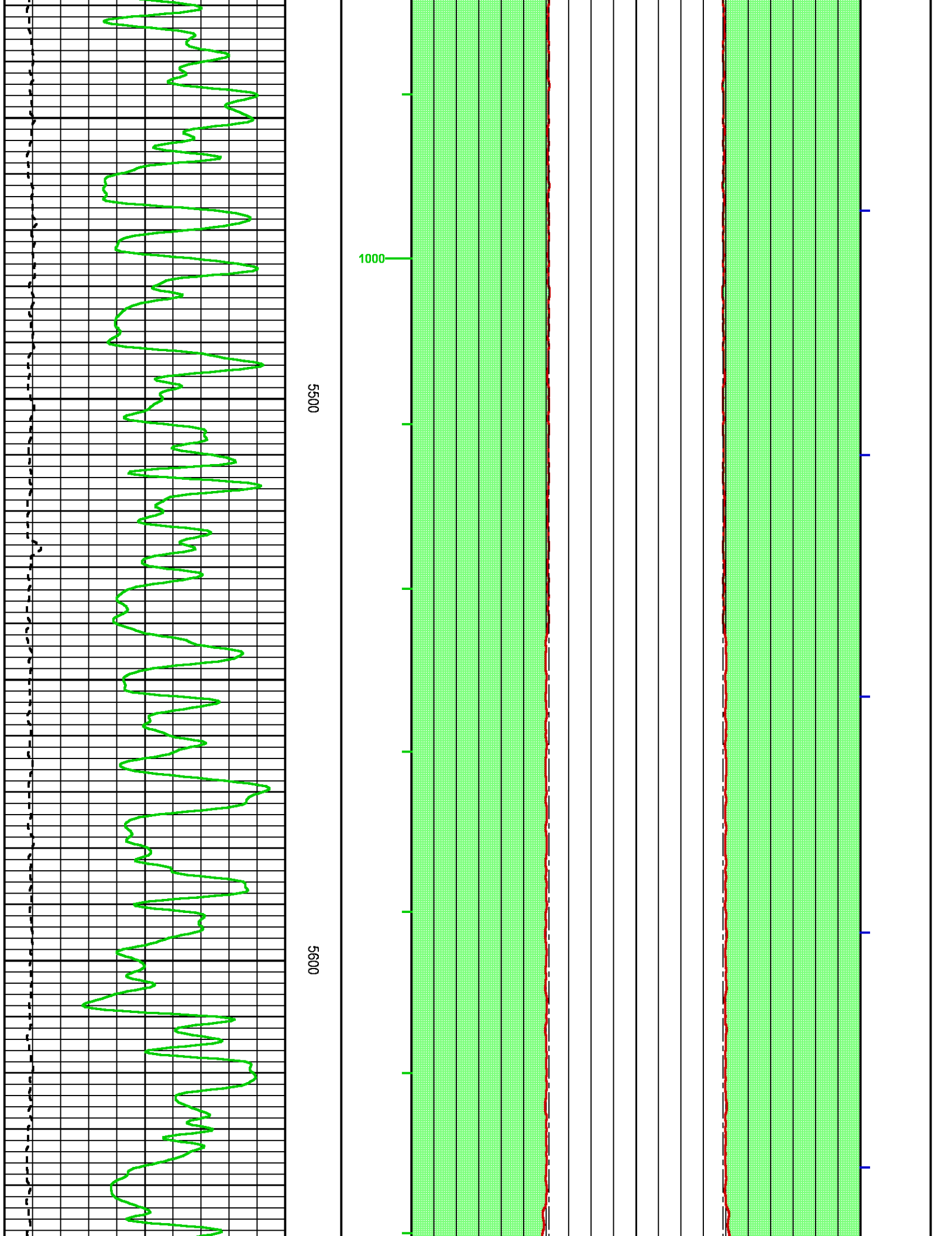


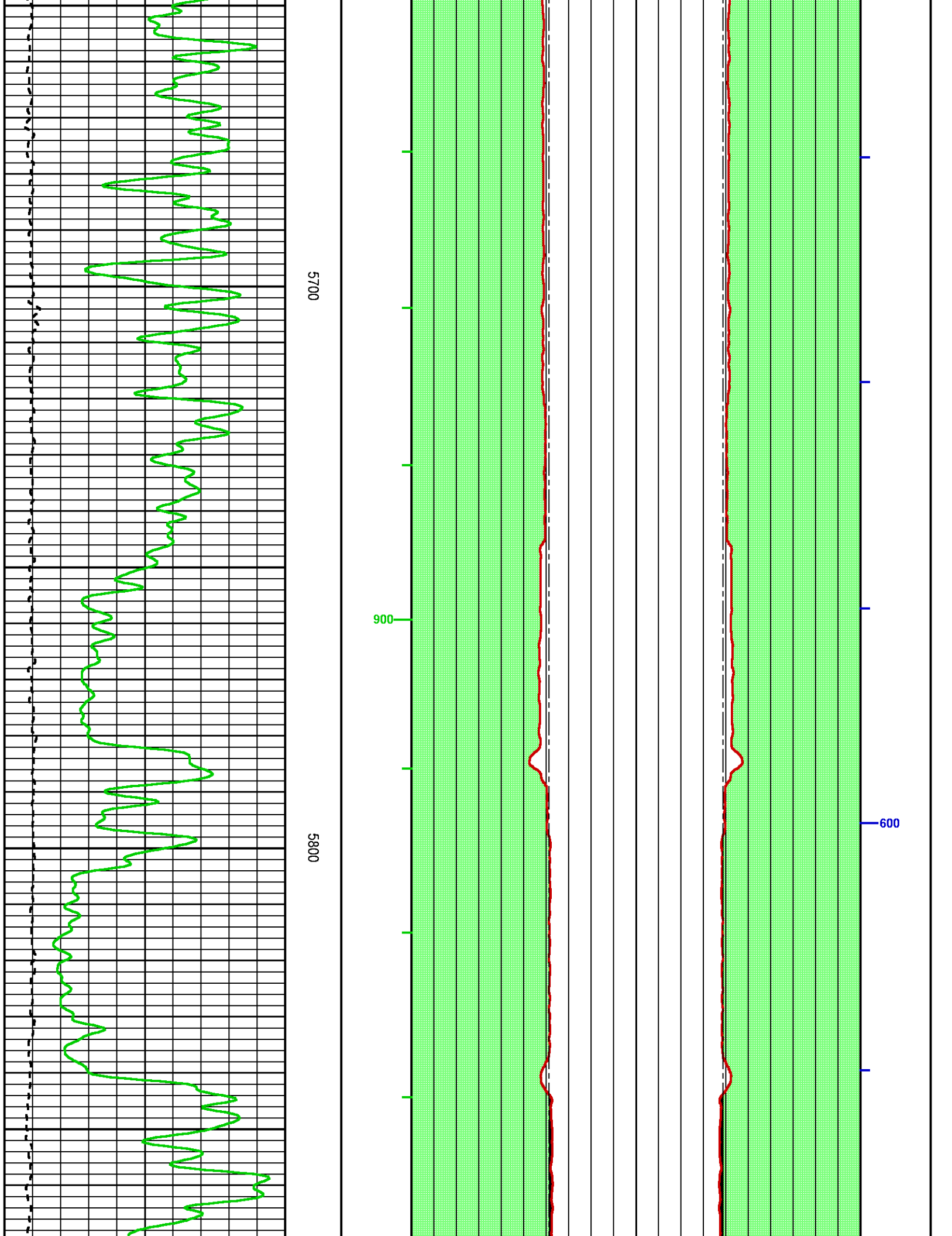


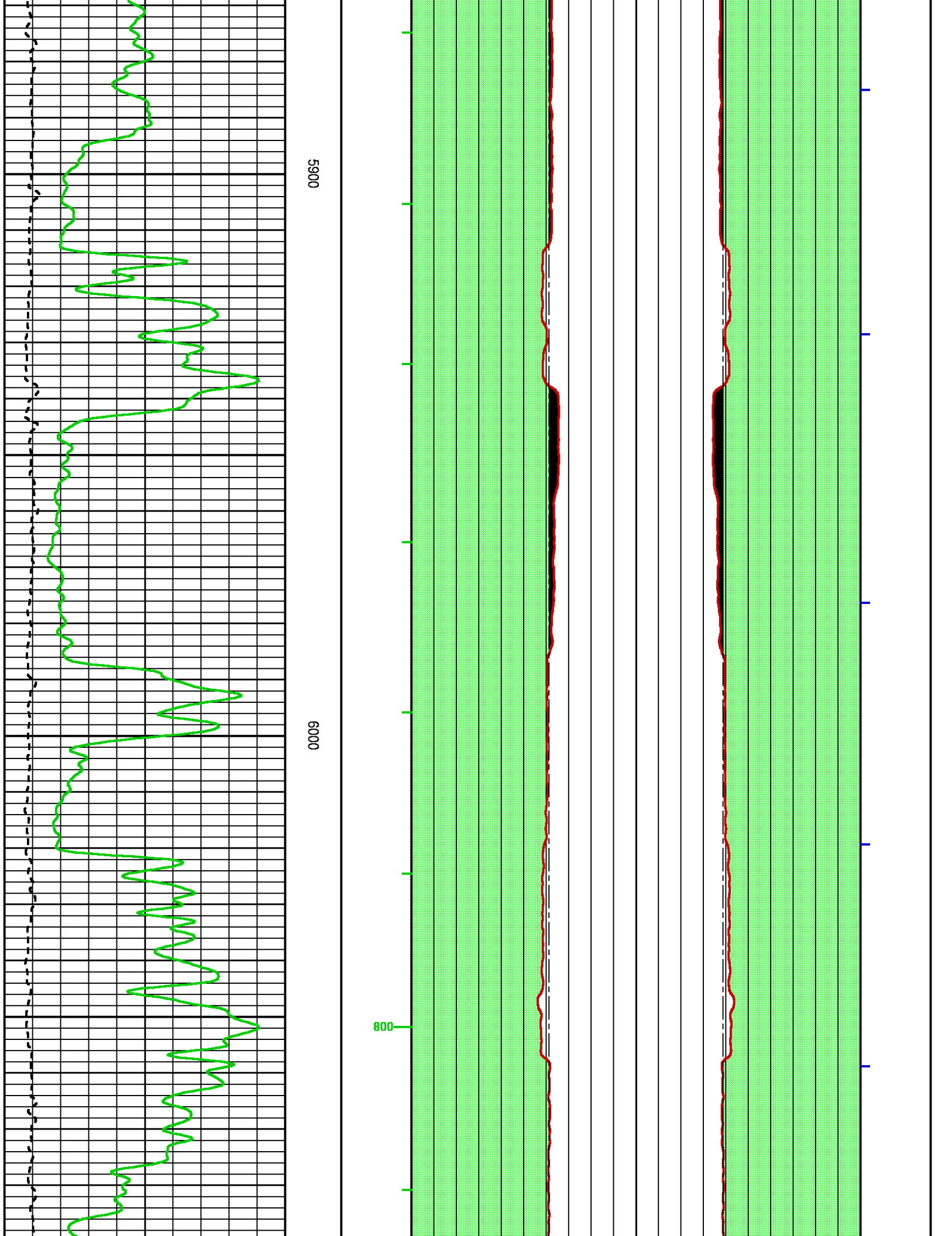


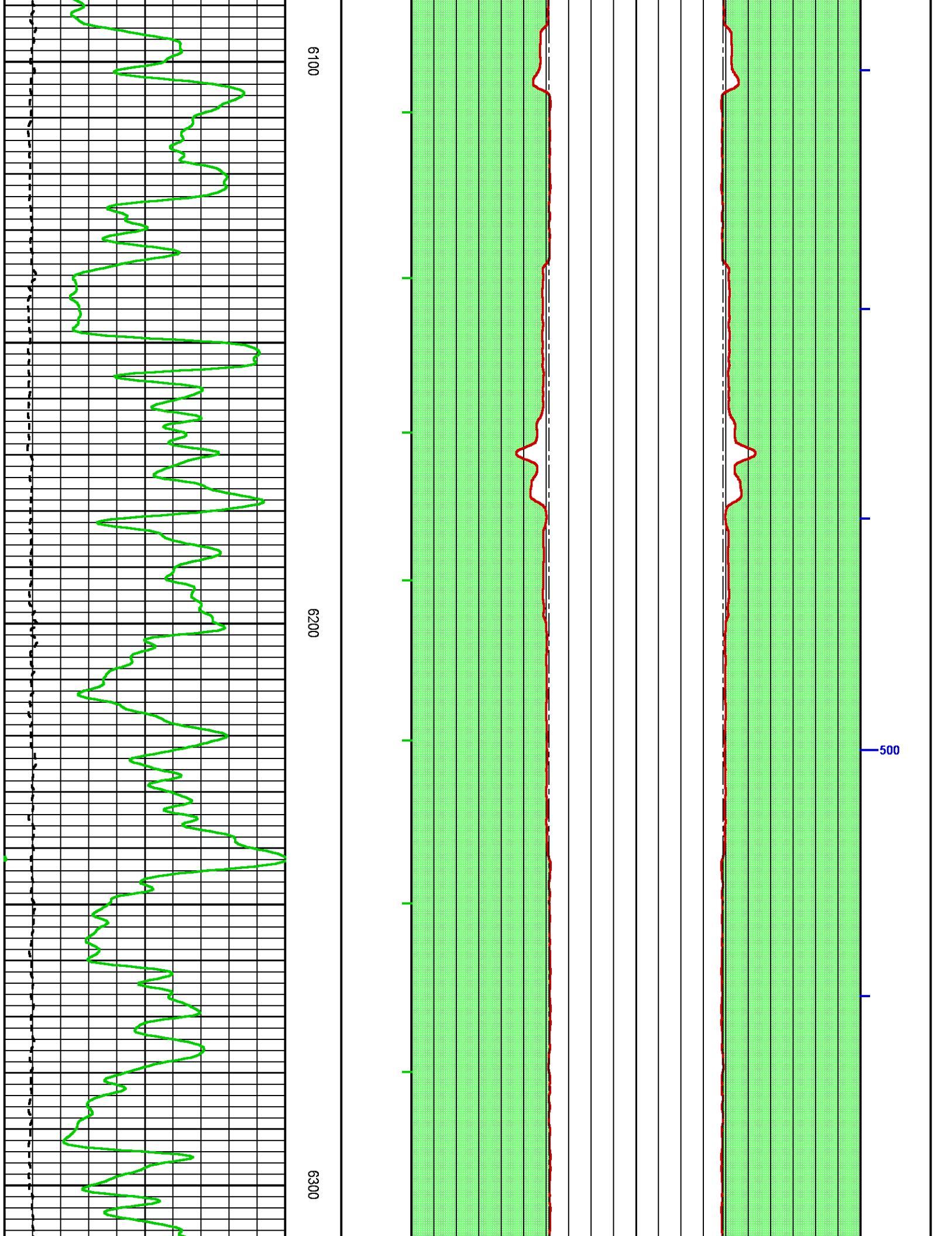


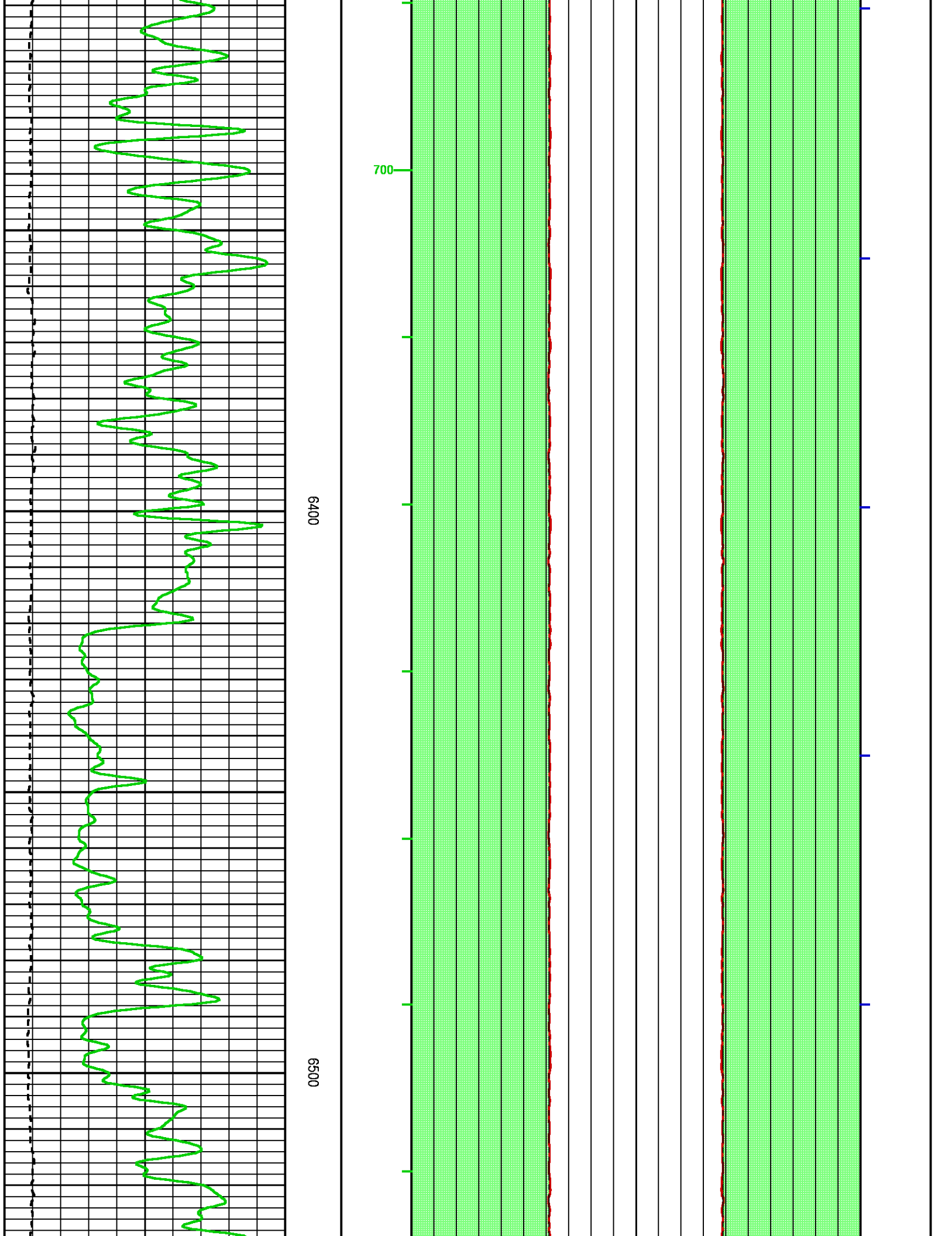


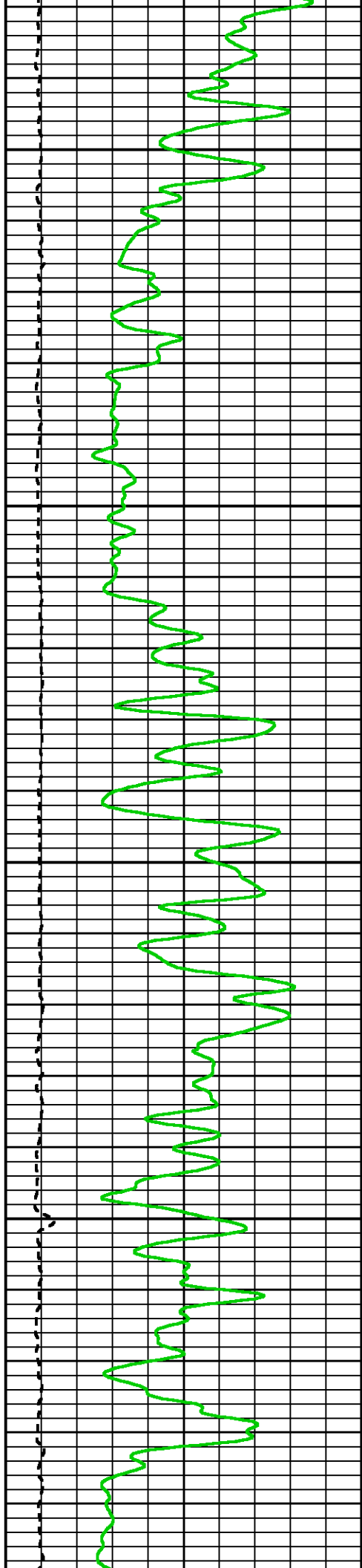










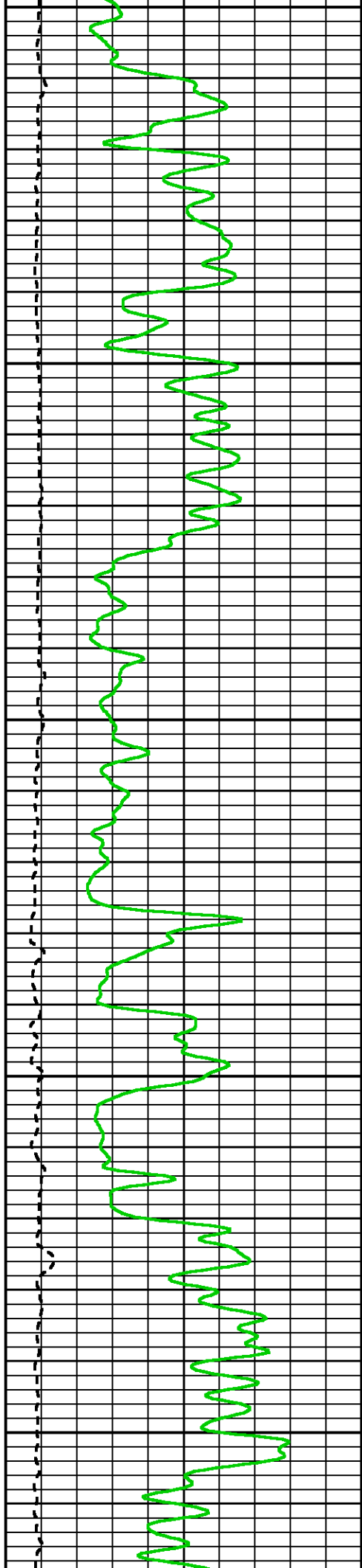


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6700

600

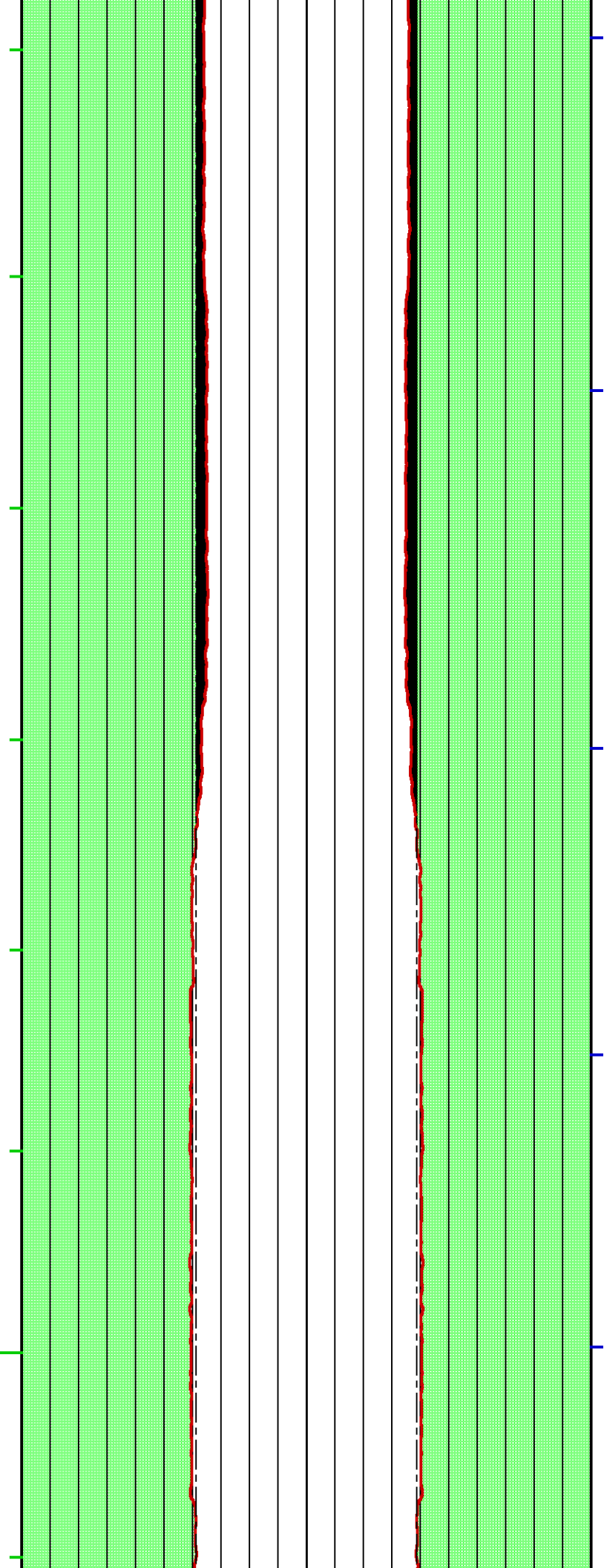
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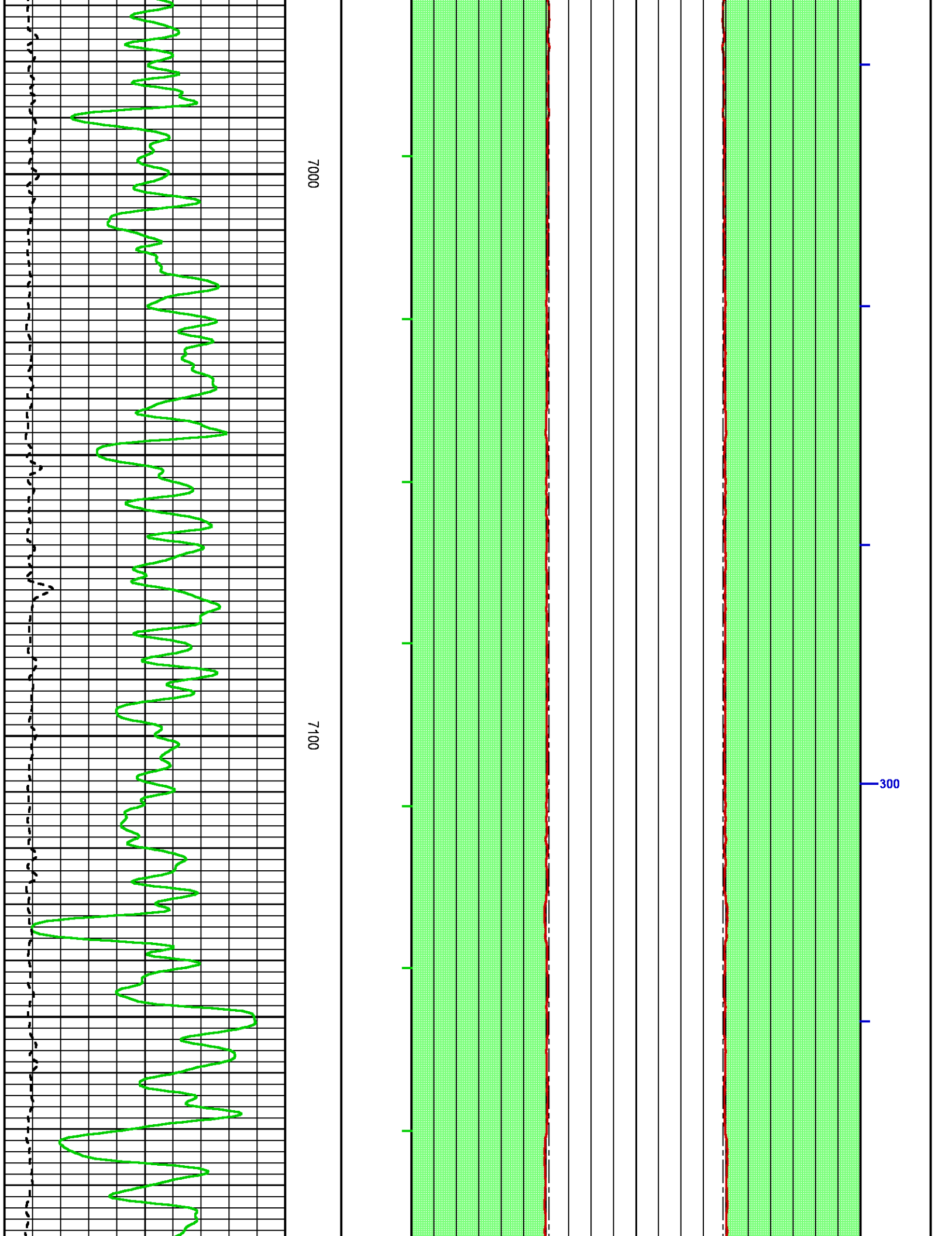


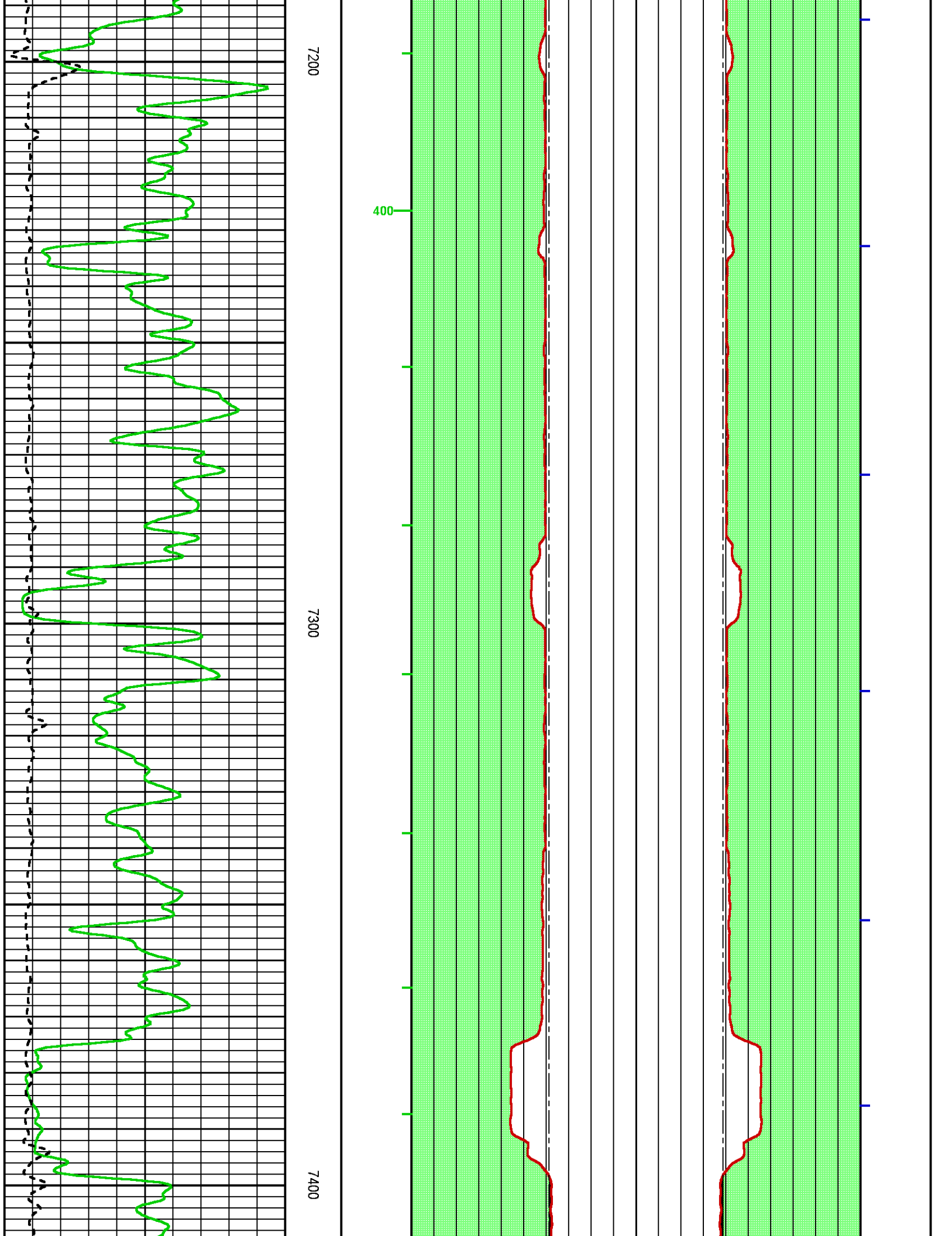
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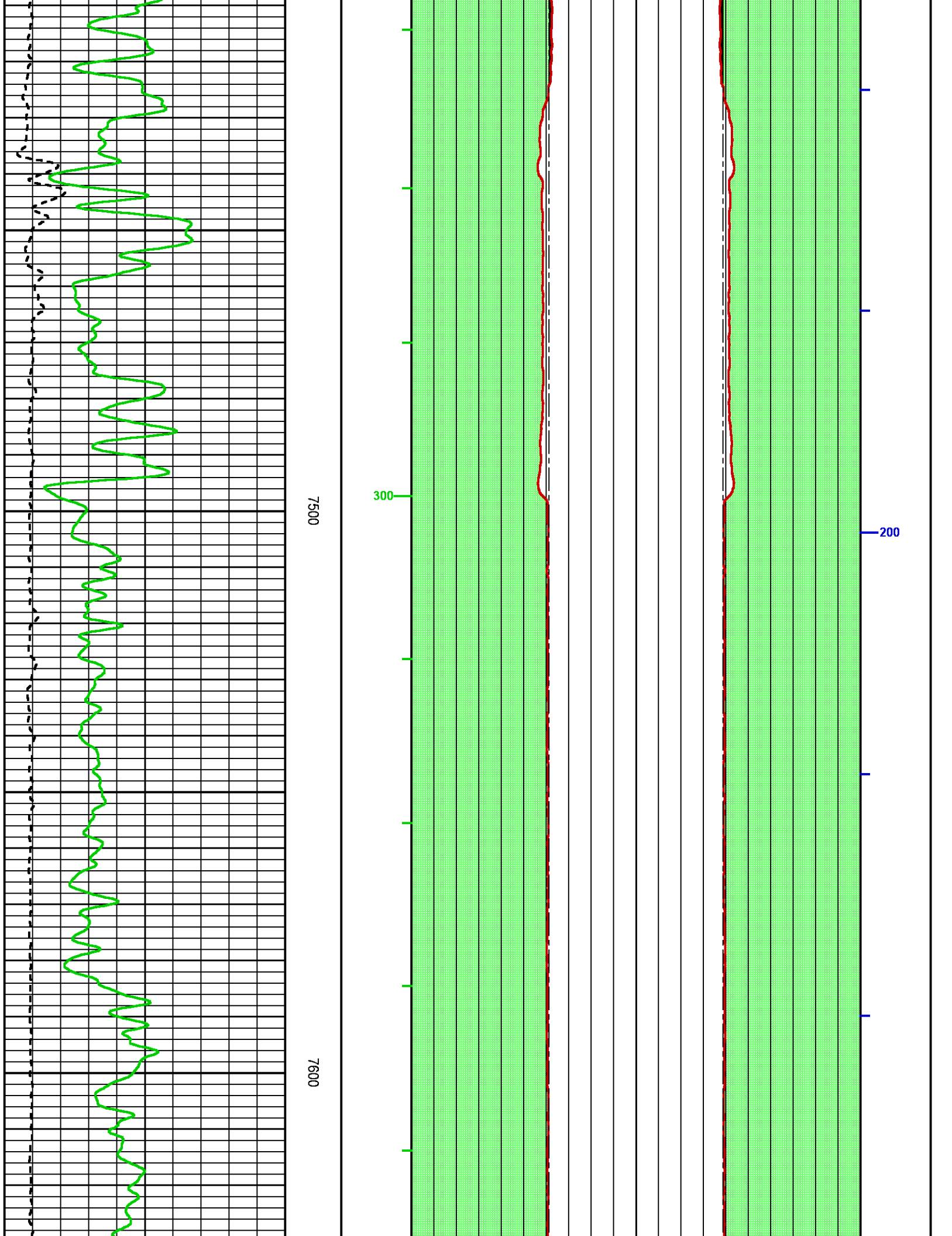
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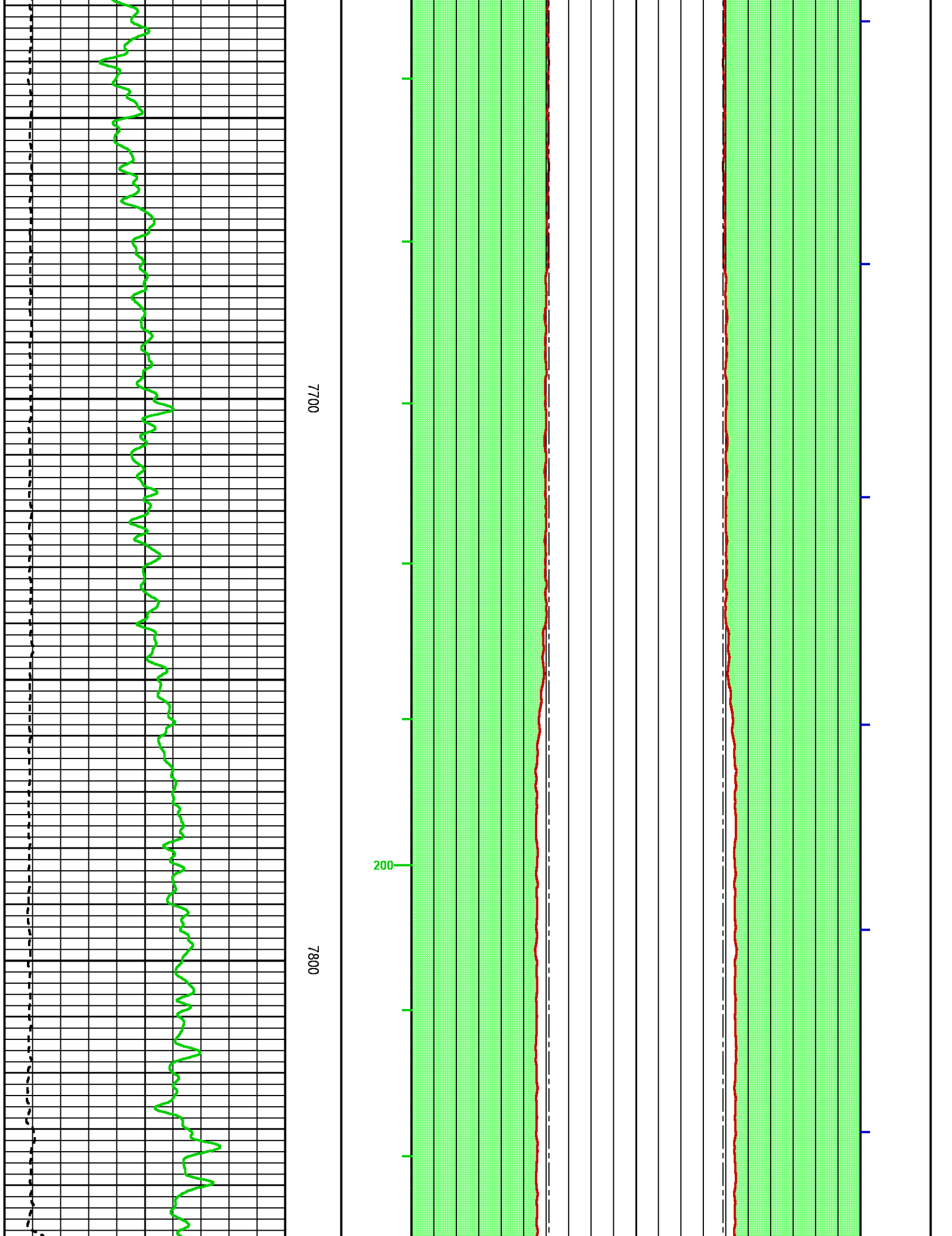
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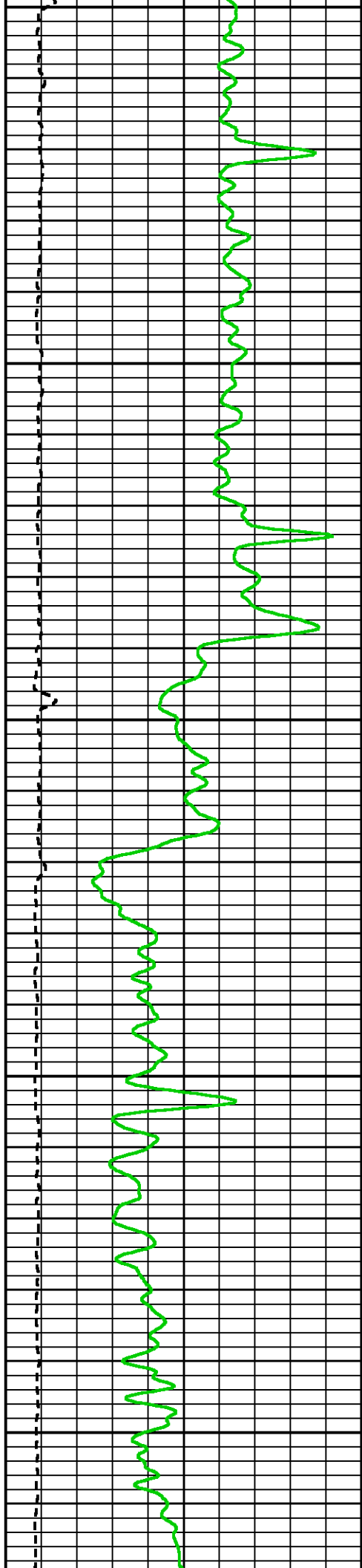










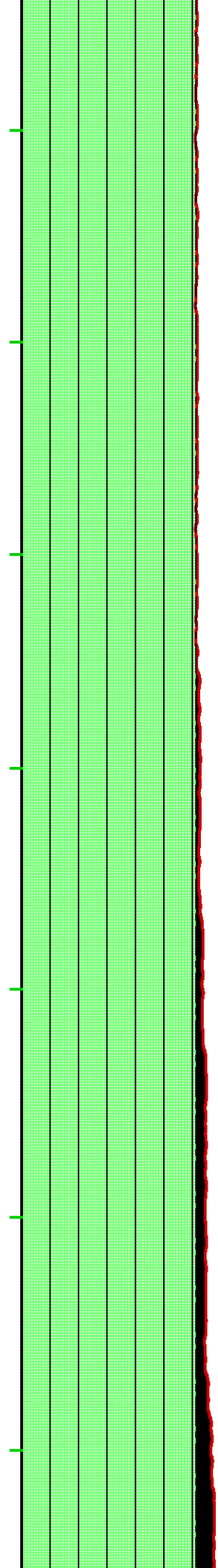
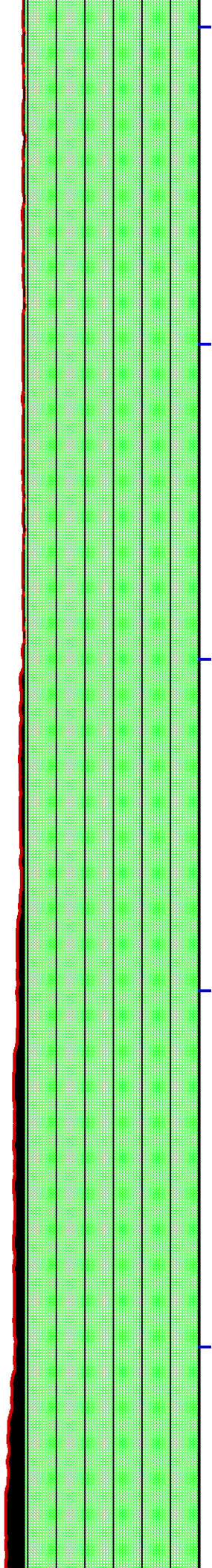


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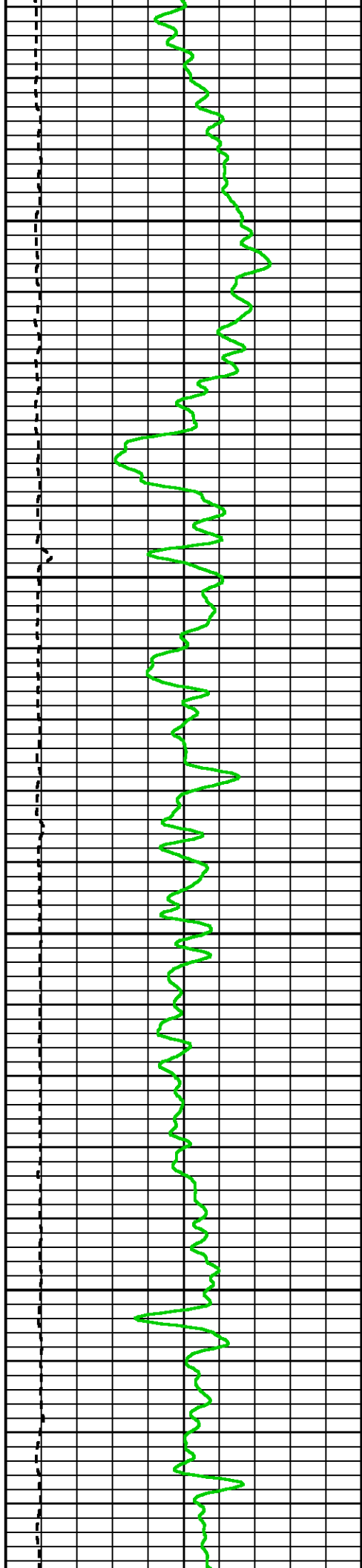
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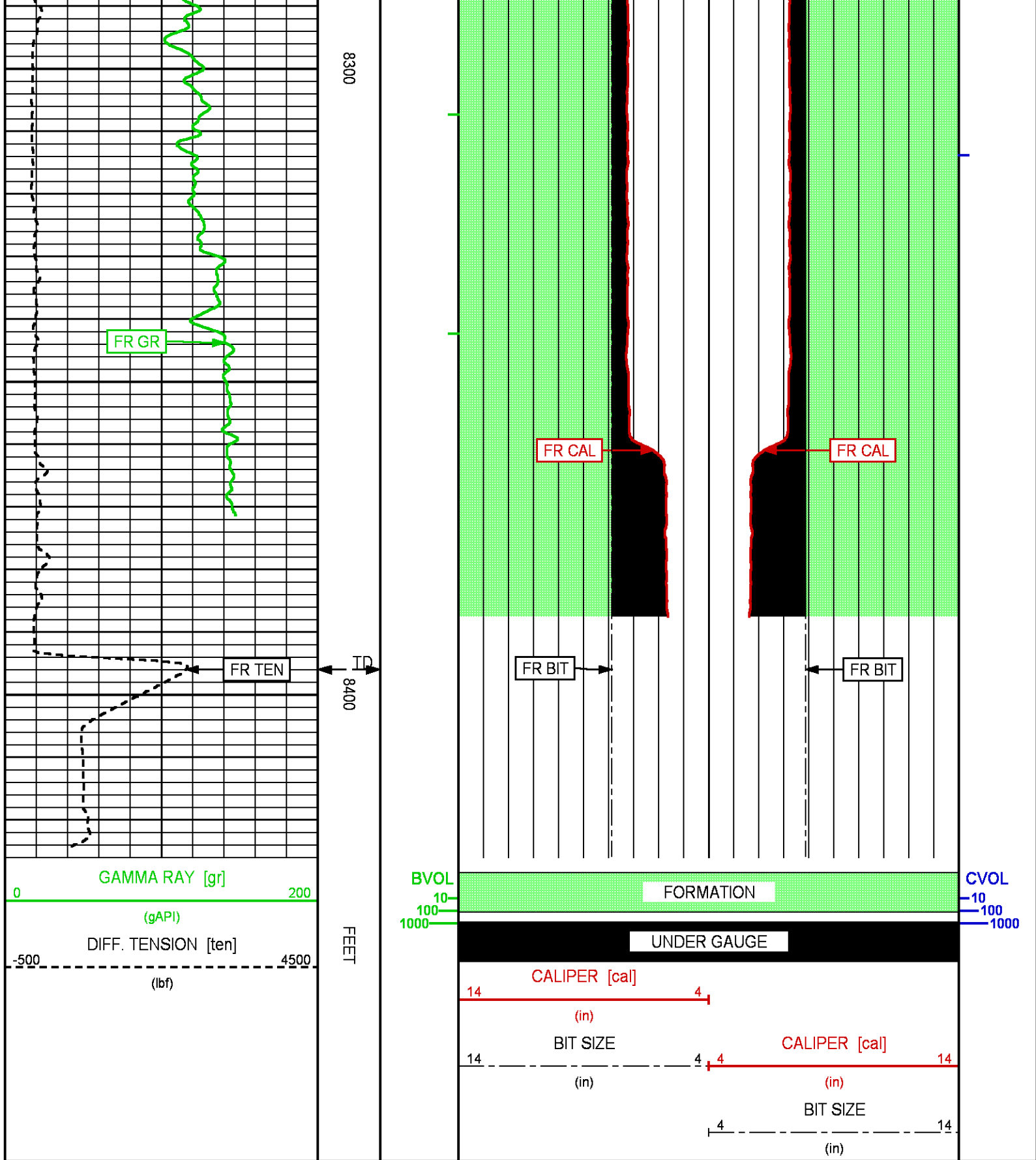
100



8100

8200





CALIBRATION / VERIFICATION SUMMARY

CHT PRIMARY CALIBRATION SUMMARY

TOOL #: 3981XA 10045153

DATE/TIME PERFORMED: Thu Jul 27 22:12:51 2017

UNIT #: 3882TD HL6741

	Signal Low (raw)	Signal High (raw)	Scale Mult	Scale Add	Engr Low (lbf)	Engr High (lbf)
CHT	24.93	774.79	3.33	-183.12	-100.00	2400.00

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 179184

DATE/TIME PERFORMED: Wed Jul 26 14:09:42 2017

UNIT #: 3882TD HL6741

CALB JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	166.89	1096.27	929.4	0.161	26.94	176.94	150
			830.0 960.0				

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 179184

DATE/TIME PERFORMED: Wed Jul 26 14:34:22 2017

UNIT #: 3882TD HL6741

VERI JIG #: 4702NK DA_228

	BACKGROUND (cts/s)	CALBRTR ON (cts/s)	MULT	BACKGROUND (gAPI)	CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	170.53	1085.69	0.161	27.52	175.23	147.70
						140.00 160.00

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 179939

DATE/TIME PERFORMED: Mon Jul 31 14:26:01 2017

UNIT #: 3882TD HL6741

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING (in)	LARGE RING (in)
CALIPER	1604.8	2438.4	0.00855	-5.84165	7.875	15.000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 179939

DATE/TIME PERFORMED: Sat Sep 9 21:37:05 2017

DAYS SINCE CAL: 40

UNIT #: 3880TA HL6670

	I.D.	MULT	ADD	I.D. (in)
CALIPER	1787.6	0.00855	-7.18209	8.097

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 179939

DATE/TIME PERFORMED: Sun Sep 10 18:47:13 2017

DAYS SINCE CAL: 41

UNIT #: 3880TA HL6670

	I.D.	MULT	ADD	I.D. (in)
CALIPER	1796.8	0.00855	-7.18209	8.176
				7.597 8.597

INSTRUMENT CONFIGURATION

Source File: /dat1a/LARAMIE_BRUTON_30_04W/TOOL-tdg

CABLEHEAD

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

73.88'
CABLEHEAD TOP 71.13'

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

TEMP MP 65.93'
RM MP 65.68'

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 52.48'

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 45.92'
SSN MP 45.52'

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 — 35.26'
LSD MP — 34.54'
SSD MP — 34.14'

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


SP MP — 14.19'

XMTR MP — 7.72'

BULL PLUG 3 3/8

0.00'

TOTAL LENGTH: 73.88'
TOTAL WEIGHT: 1374 lbs
MAX DIAMETER: 0'4.88"

	COMPANY	LARAMIE ENERGY		FILE NO:
	WELL	BRUTON 30-04W		
	FIELD	VEGA		API NO:
	COUNTY	MESA	STATE	COLORADO
	LOCATION:		ELEVATIONS:	
	LAT: 39.252566 N LONG: 107.814245 W		KB 7542 FT DF GL 7512 FT	
	SEC 30	TWP 9S	RGE 93W	DATE 09-SEP-2017