



BOREHOLE PROFILE LOG

FILE NO:	COMPANY	LARAMIE ENERGY
API NO:	WELL	HG FED 35-01W
05077093060000	FIELD	ALKALI CREEK
	COUNTY	MESA
		STATE COLORADO
Version	LOCATION:	OTHER SERVICES
	LAT: 39.32834 N	HDL/ZDL/CN/GR
	LONG: -107.63516 W	
	SEC 26	TWP 8S
		RGE 92W
PERMANENT DATUM	GL	ELEVATION
LOG MEASURED FROM	KB	14 FT
DRILL. MEAS. FROM	KB	ABOVE P.D.
		ELEVATIONS:
		KB 7999 FT
		DF
		GL 7985 FT

DATE	26-Nov-2017
RUN	1
TRIP	1
SERVICE ORDER	US129946
DEPTH DRILLER	8688 FT
DEPTH LOGGER	8674 FT
BOTTOM LOGGED INTERVAL	8674 FT
TOP LOGGED INTERVAL	0 FT
CASING DRILLER	8.625 IN
CASING LOGGER	1025 FT
BIT SIZE	7.875 IN
TYPE OF FLUID IN HOLE	LSND
DENSITY	9.5
VISCOSITY	60 S
PH	7.5
FLUID LOSS	7.5
SOURCE OF SAMPLE	MUD PIT
RM AT MEAS. TEMP.	4.36 OHMM
RMF AT MEAS. TEMP.	4.83 OHMM
RMC AT MEAS. TEMP.	2.54 OHMM
SOURCE OF RMF	RMC
RM AT BHT	1.69 OHMM
TIME SINCE CIRCULATION	12 HOURS
MAX. RECORDED TEMP.	201.7 DEGF
EQUIP. NO.	HL-6670
LOCATION	WOODWARD
RECORDED BY	SINICKI
WITNESSED BY	SETTLES/CATES

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: ONE OPERATION IN THE WELL: HDIL/ZDL/CN/GR
HDIL WOULD NOT PASS THE BEFORE LOG VERIFICATIONS. THE VALIDITY OF THE DATA CANNOT BE GUARANTEED.
10", 20", AND 30" CURVES HAVE BEEN REMOVED FOR PRESENTATION PURPOSES AS THEY WERE THE MOST AFFECTED.
SP RESPONSE WAS ABNORMAL AND NOT PRESENTED.
INSTRUCTED BY ANDY MCCARTHY TO RUN THE TOOLS IN LIGHT OF THE TOOL ISSUES.
STICK AND PULL ALONG WITH BOREHOLE RUGOSITY HAS AFFECTED DATA QUALITY AND REPEATABILITY.
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"
RIG: AZTEC 920
CREW: COFFELT/PENA

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTRM	3981XB	10045153	FREE
1	1	WTS	3514XB	10226222	FREE
1	1	DSL	1329XA	179184	FREE
1	1	CN	2446XA	10342170	DECENTRALIZED
1	1	ZDL	2234XA	10231795	PAD DEVICE
1	1	KNJT	3939XA	167196	FREE
1	1	HDIL	1515EA/MA	177896/10326318	FREE

BOREHOLE PROFILE LOG

ECLIPS 7.0w PC-ECLIPS General Release Rel 7.0w Fri Jun 09 11:02:06 Central Daylight Time 2017
Patches: 2

Plotted: Sun Nov 26 23:22:35 2017

PARAMETER AND FILTER SUMMARY REPORT

File: C:\dat1a\LARAMIE_HG_FED_35-01\p763g03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 49.750 ft BOTTOM DEPTH: 8667.879 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
Y AXIS CALIPER	FILTER ()	medium (1)		TOP	BOTTOM
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	N/A	BIT SIZE
F1:BVOL	N/A	BOREHOLE VOLUME
F1:CAL	N/A	CALIPER
F1:CVOL	N/A	CEMENT VOLUME
F1:GR	N/A	GAMMA RAY

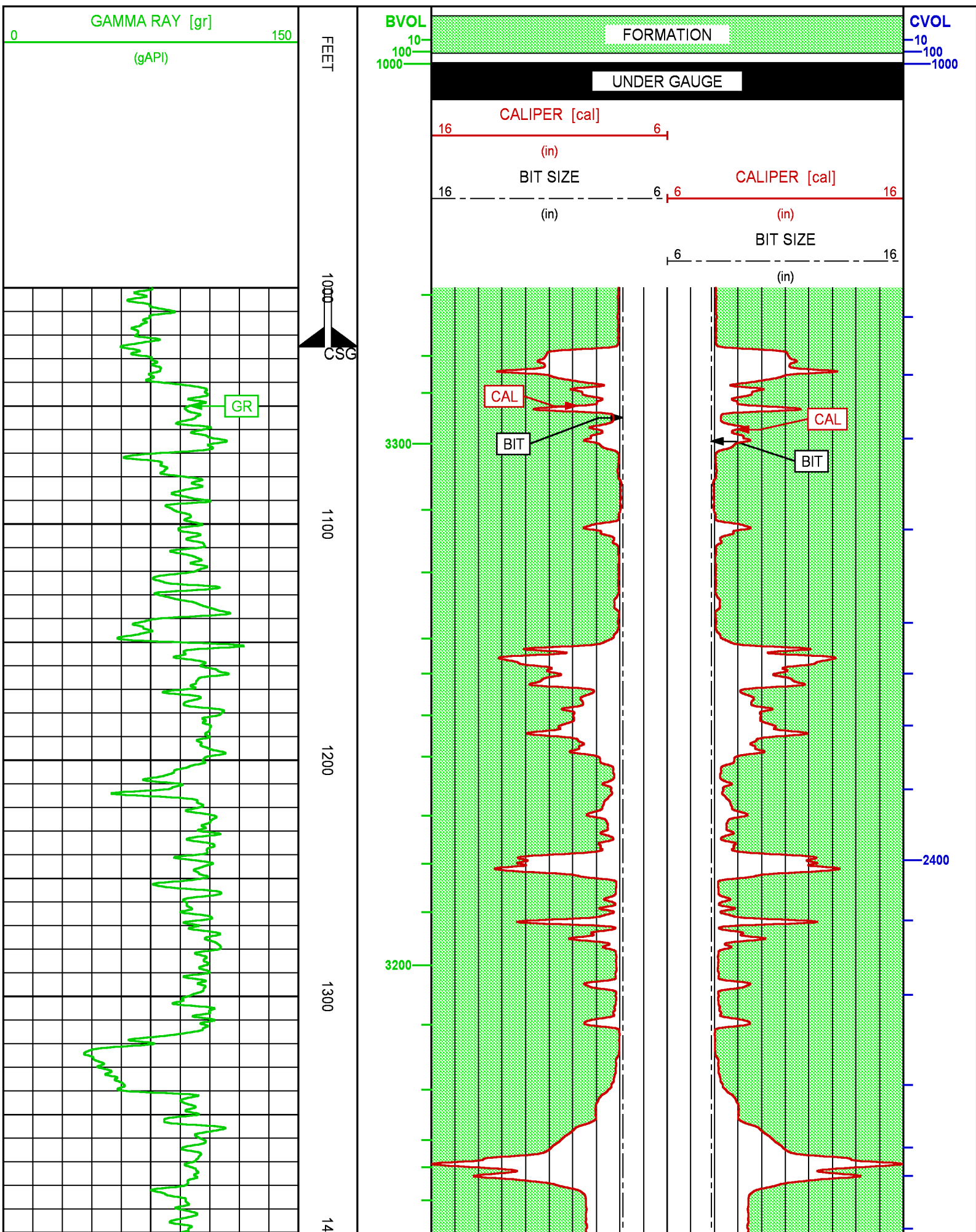
CURVE MEASURE POINT OFFSET

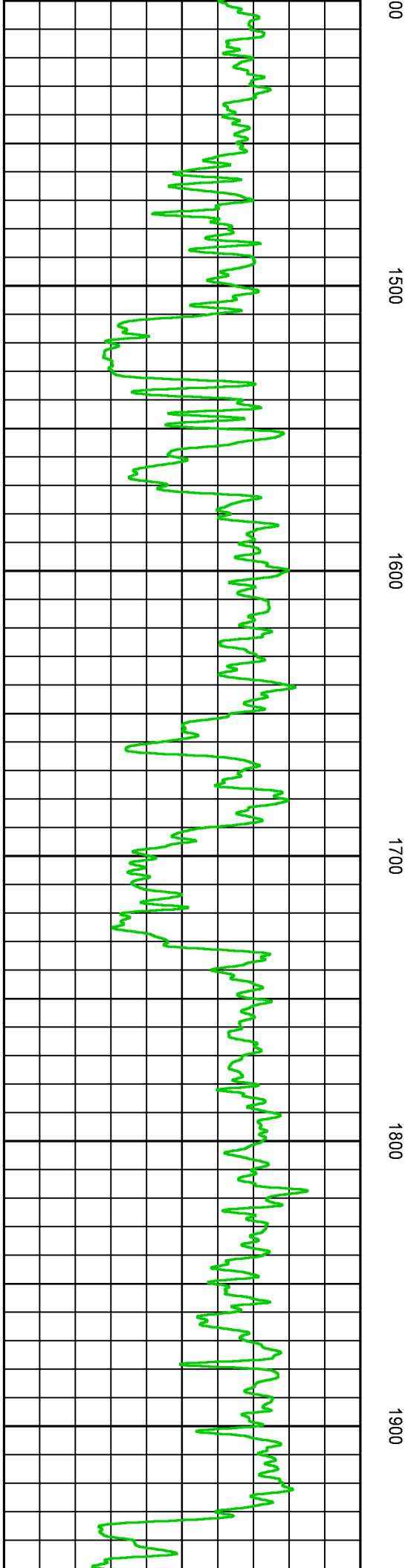
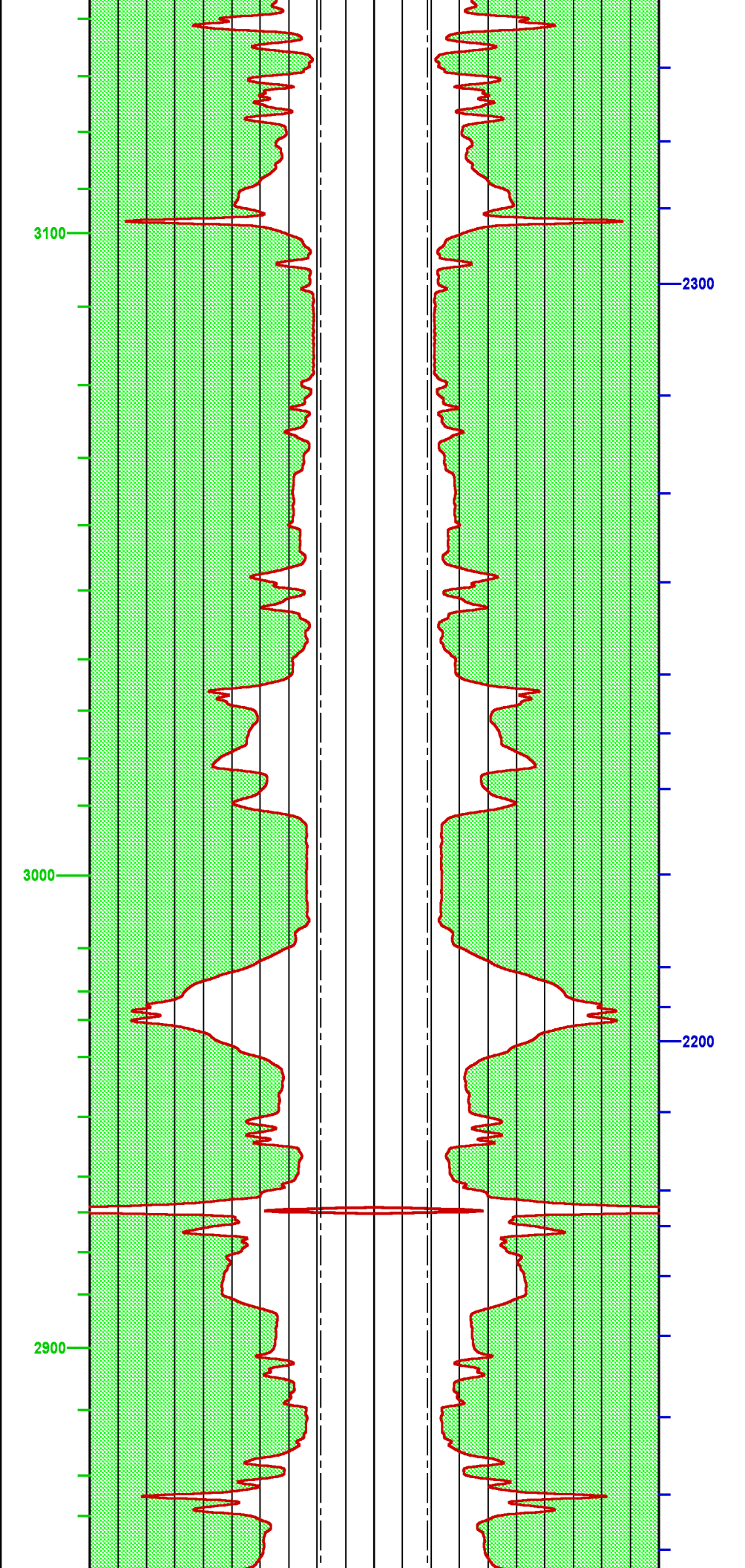
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	CAL	-35.00	GR	-52.25		

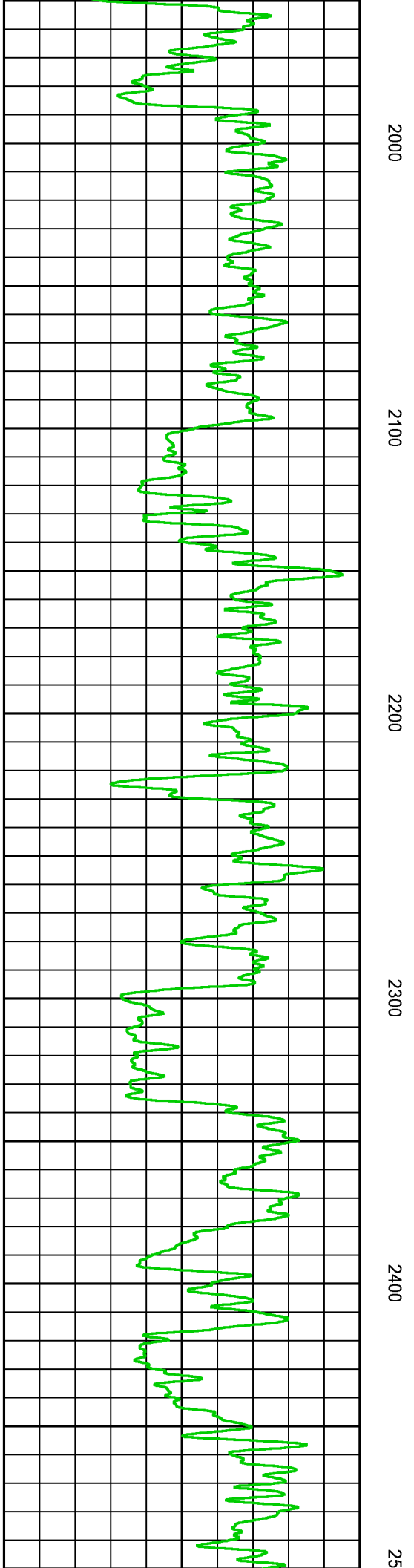
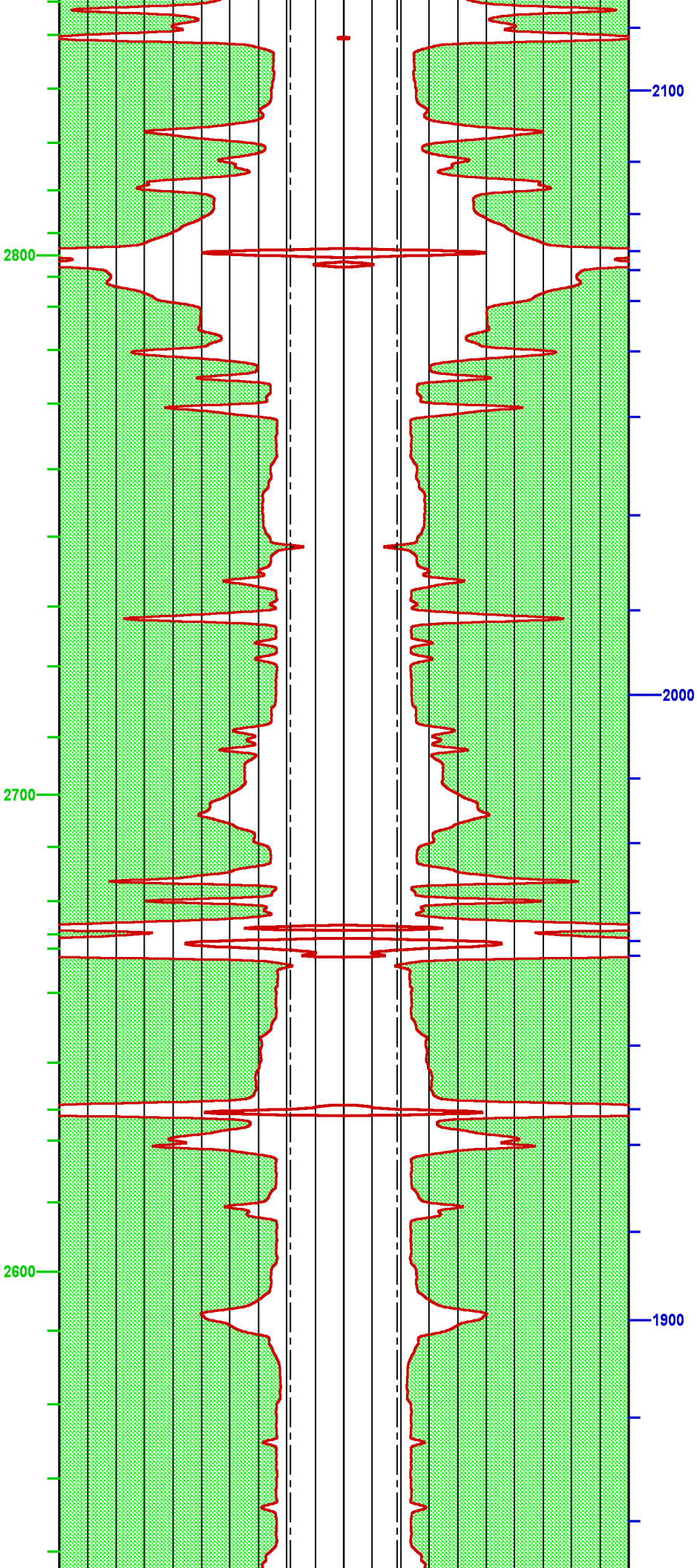
Presentation : BHI3FJQNC2:C:\dat1a\LARAMIE_HG_FED_35-01\BHP.fvpdf [2"/100' Scale]
Plot Interval : 1000 - 8680.75 Feet

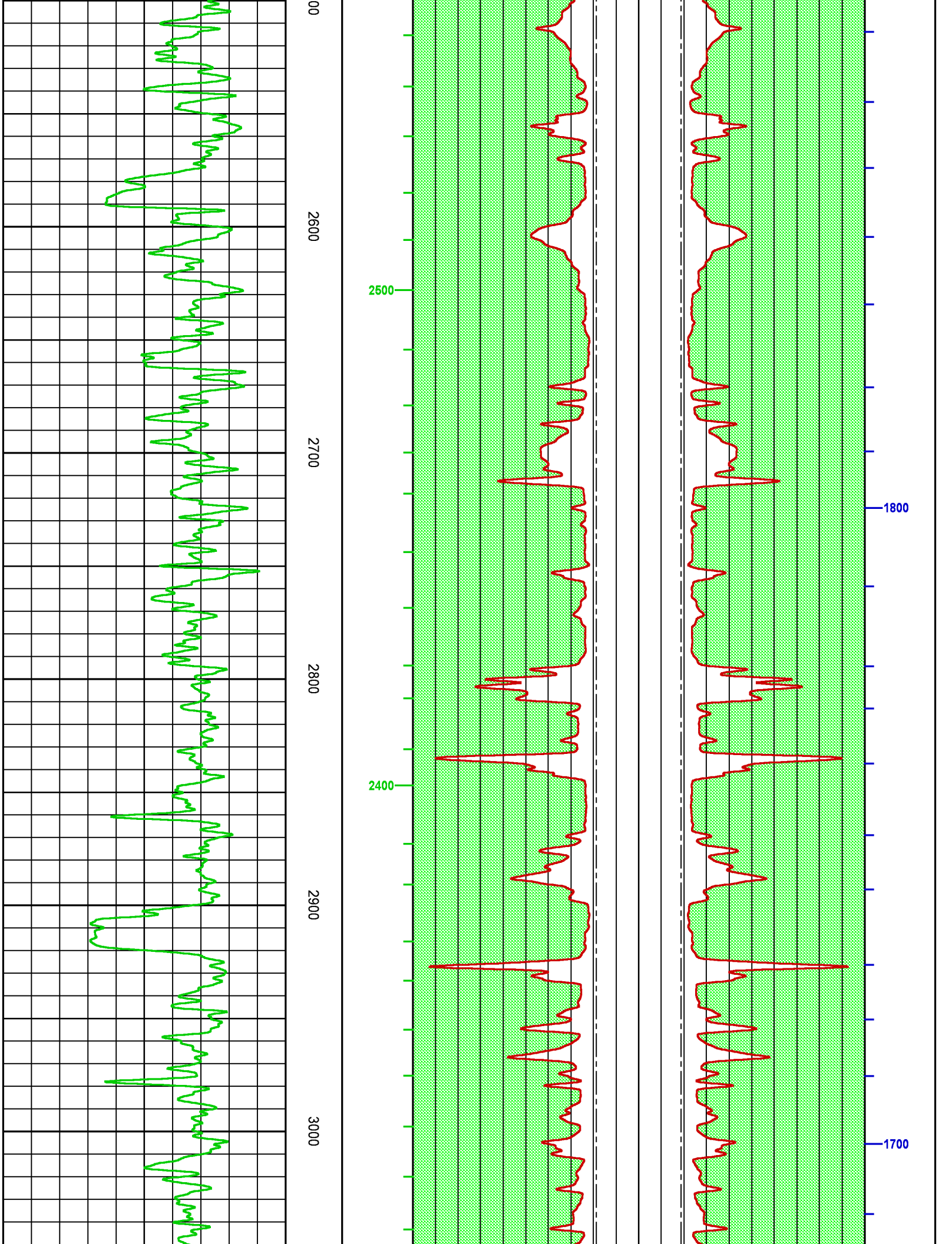
Data File 1 : F1 : BHI3FJQNC2:C:\dat1a\LARAMIE_HG_FED_35-01\p763g03_MAIN.txt
Created On : N/A
Company : LARAMIE ENERGY
Well : HG FED 35-01W

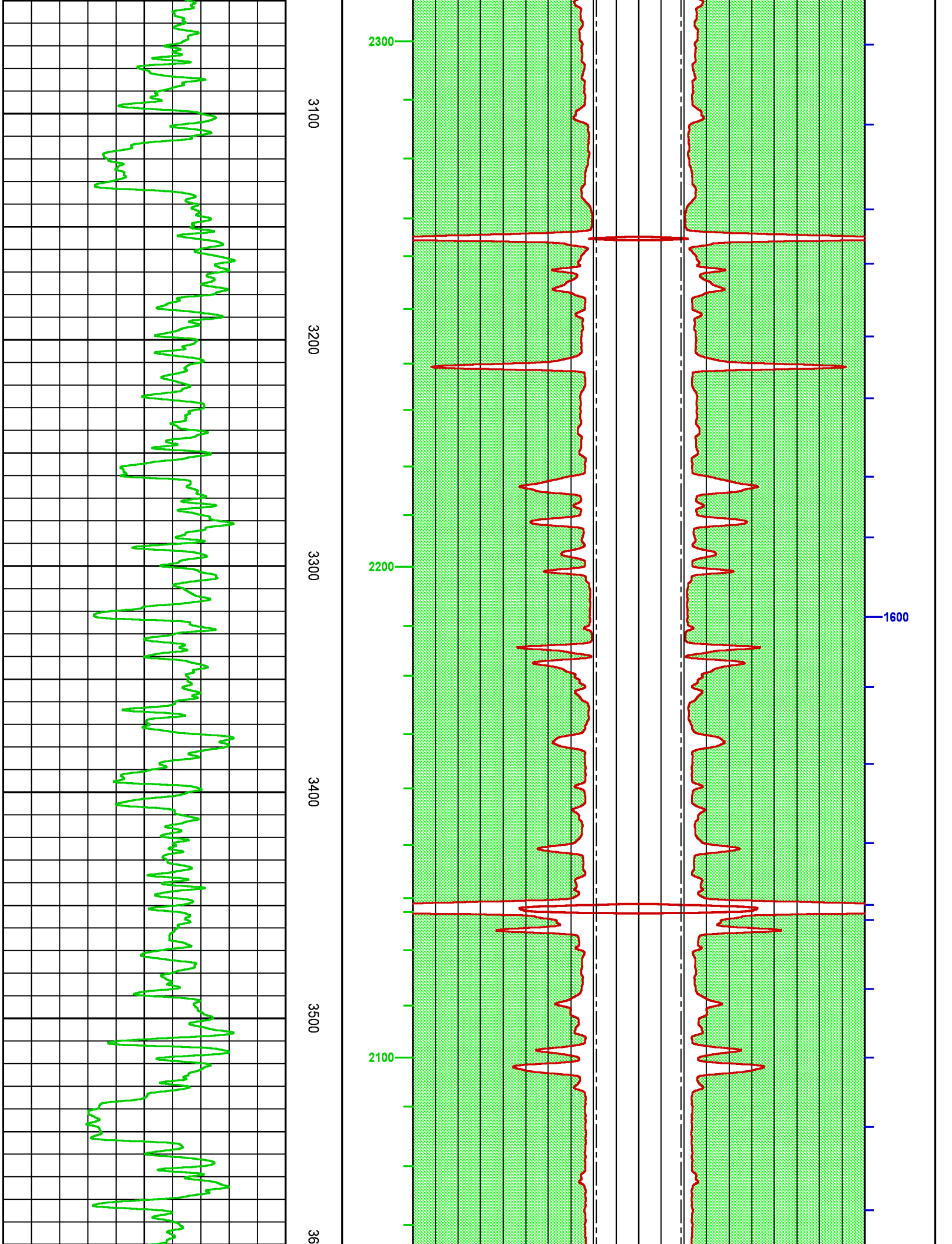
Field : ALKALI CREEK
File Interval : 3.75 - 8680.75 Feet
OCT : p763g

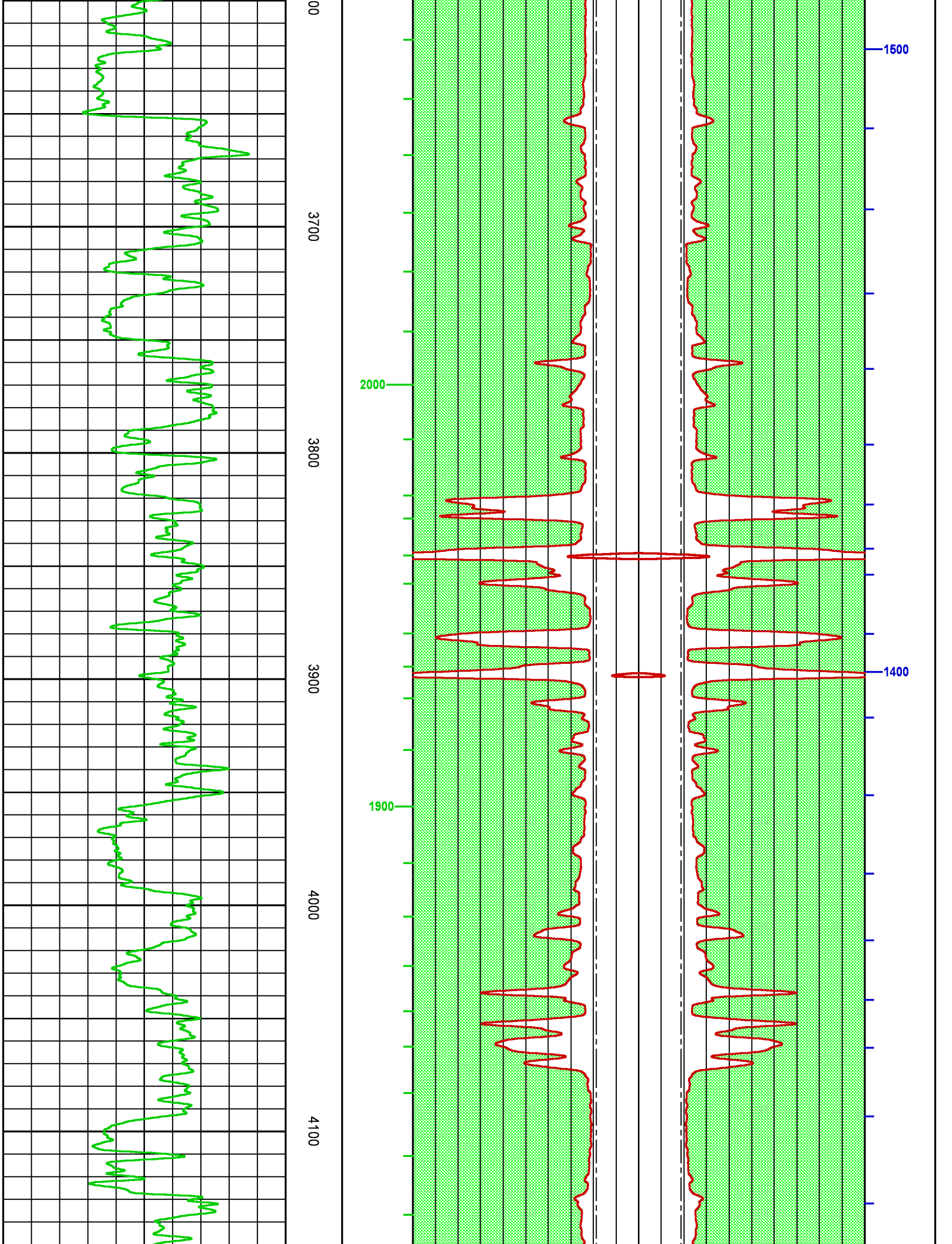


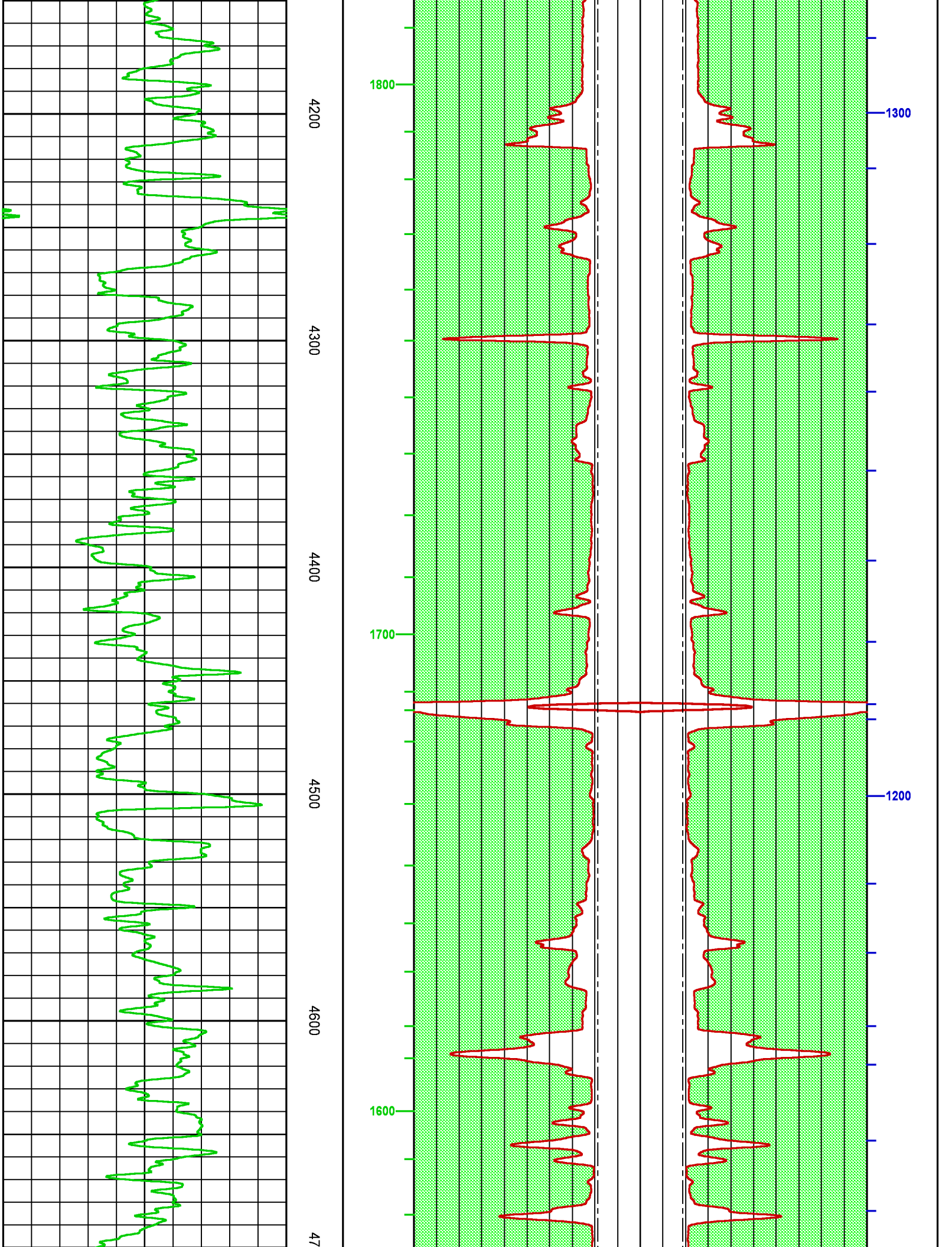


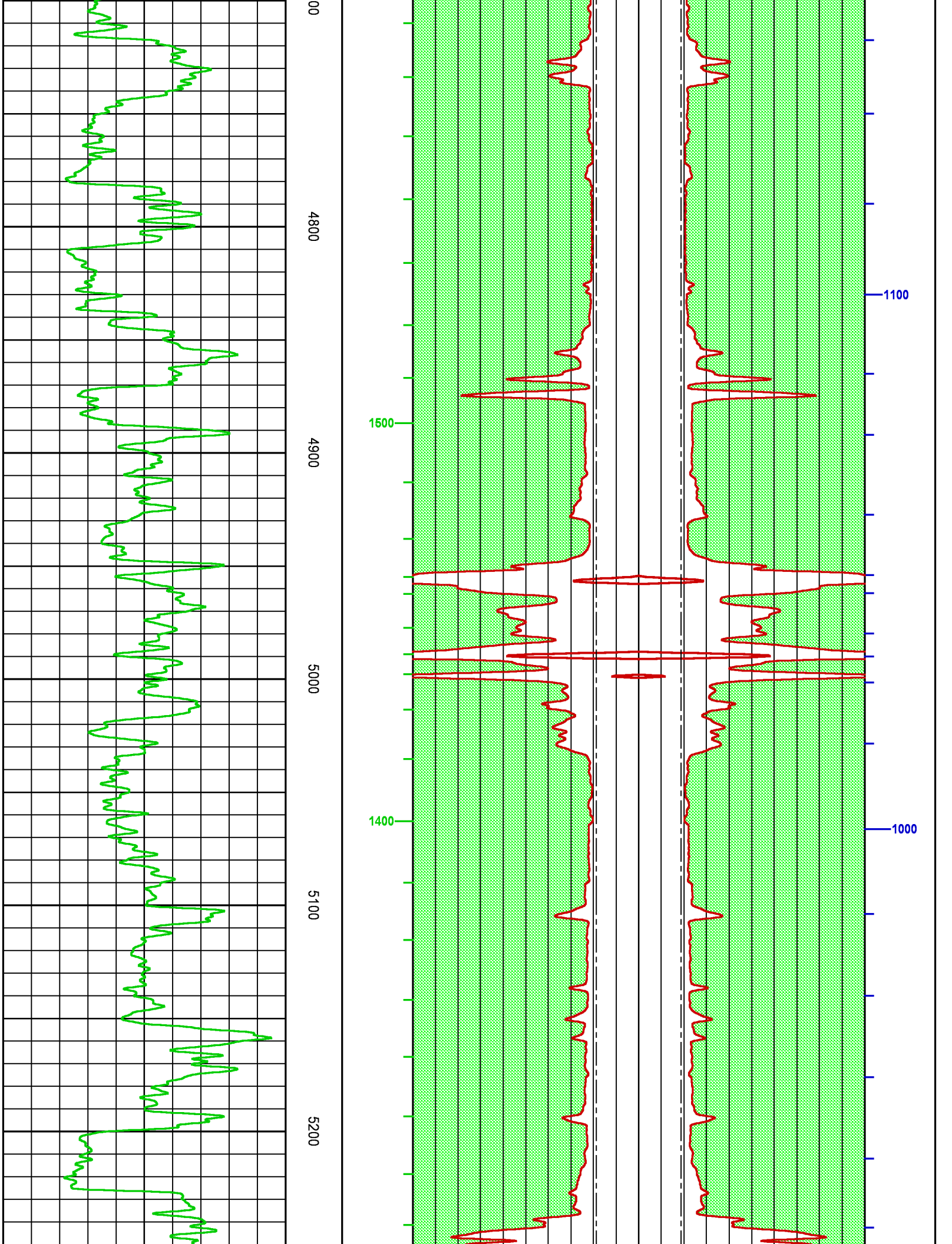


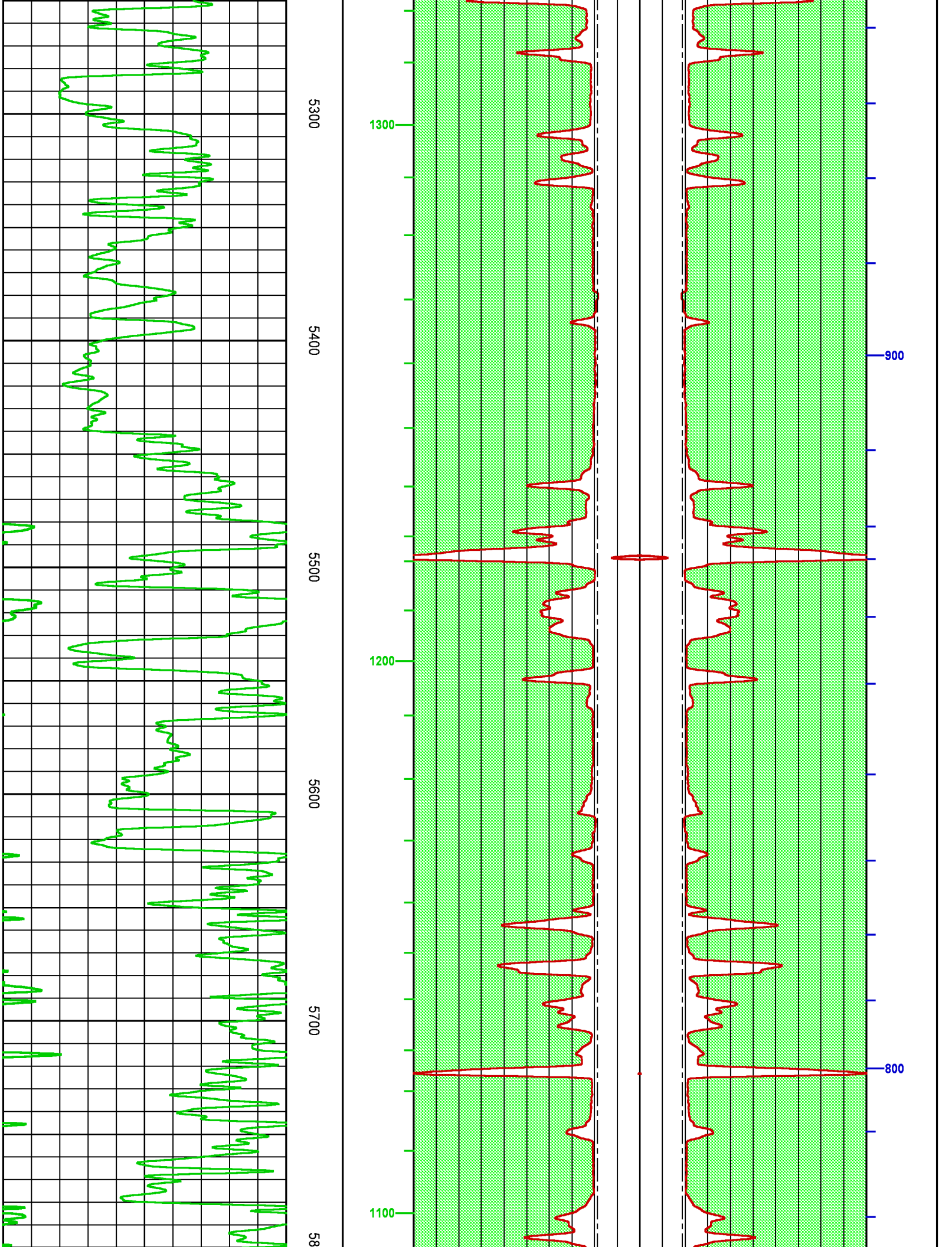


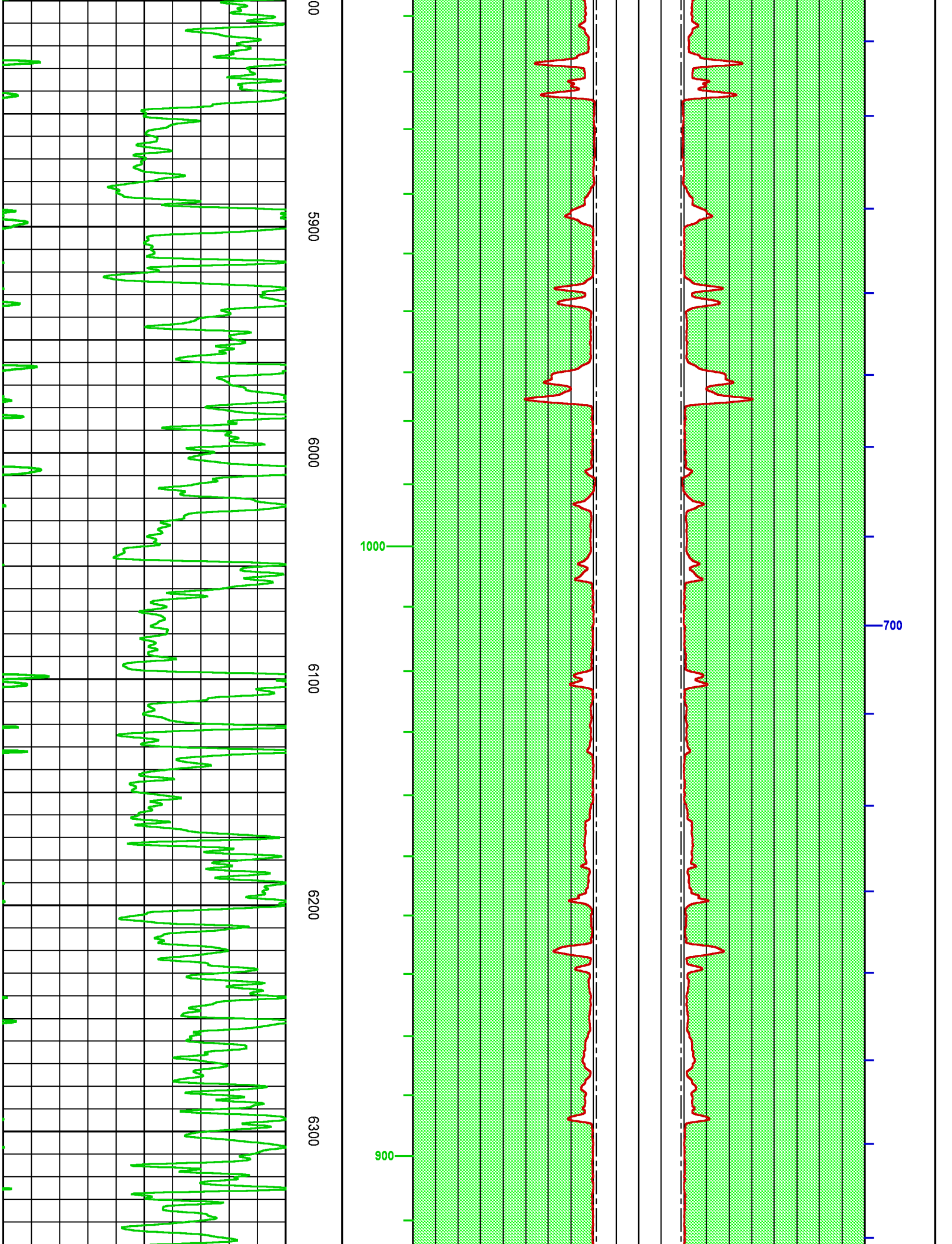


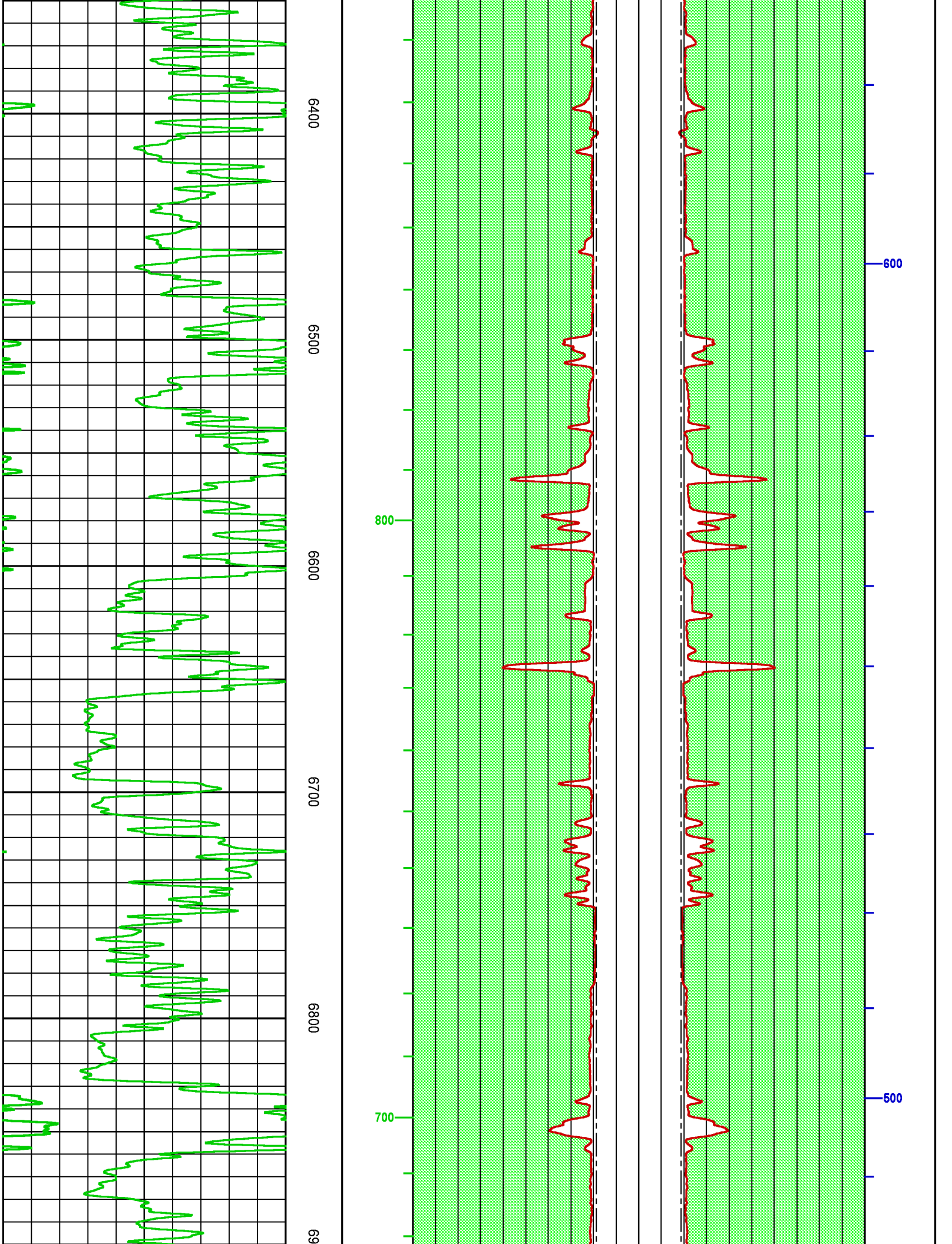


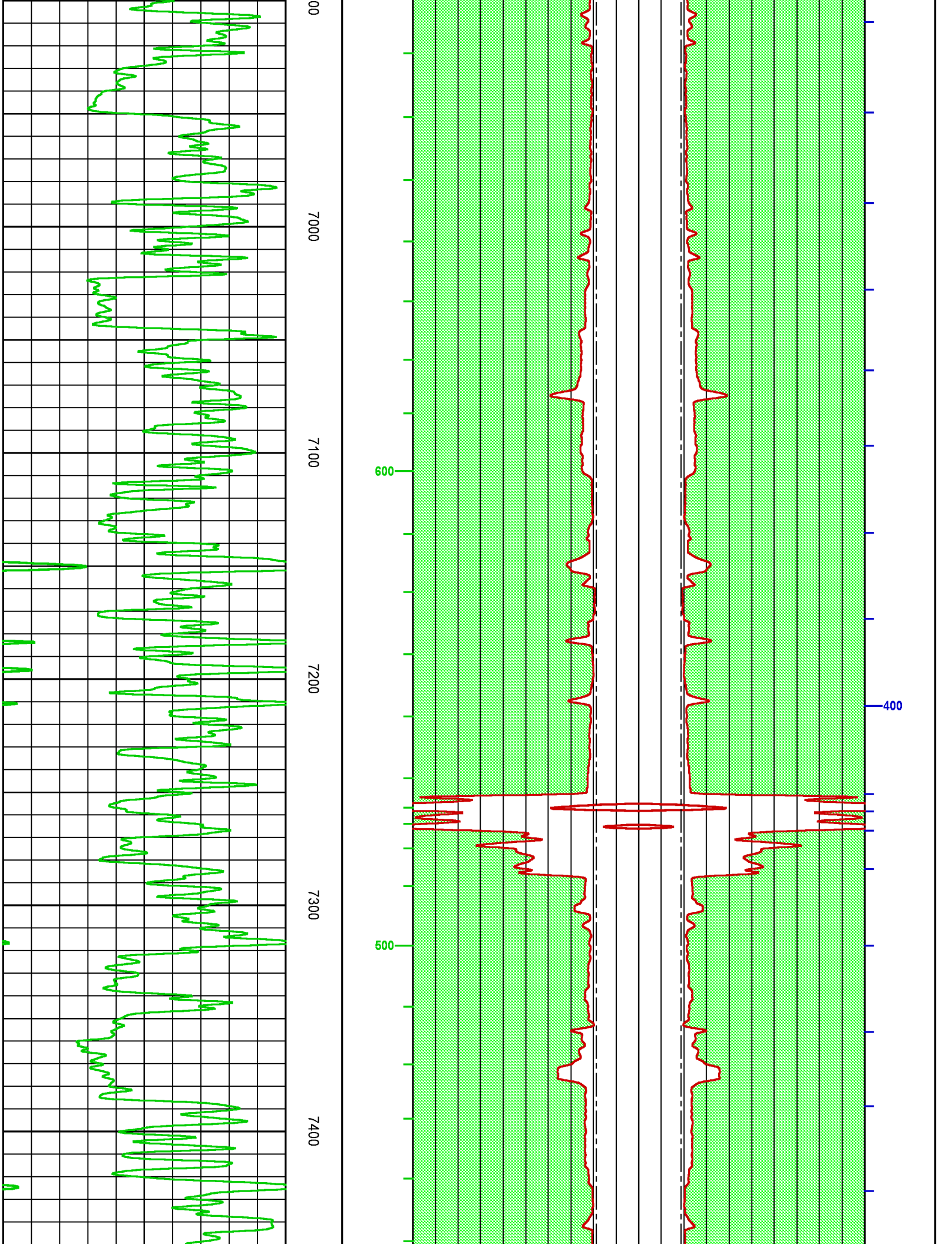


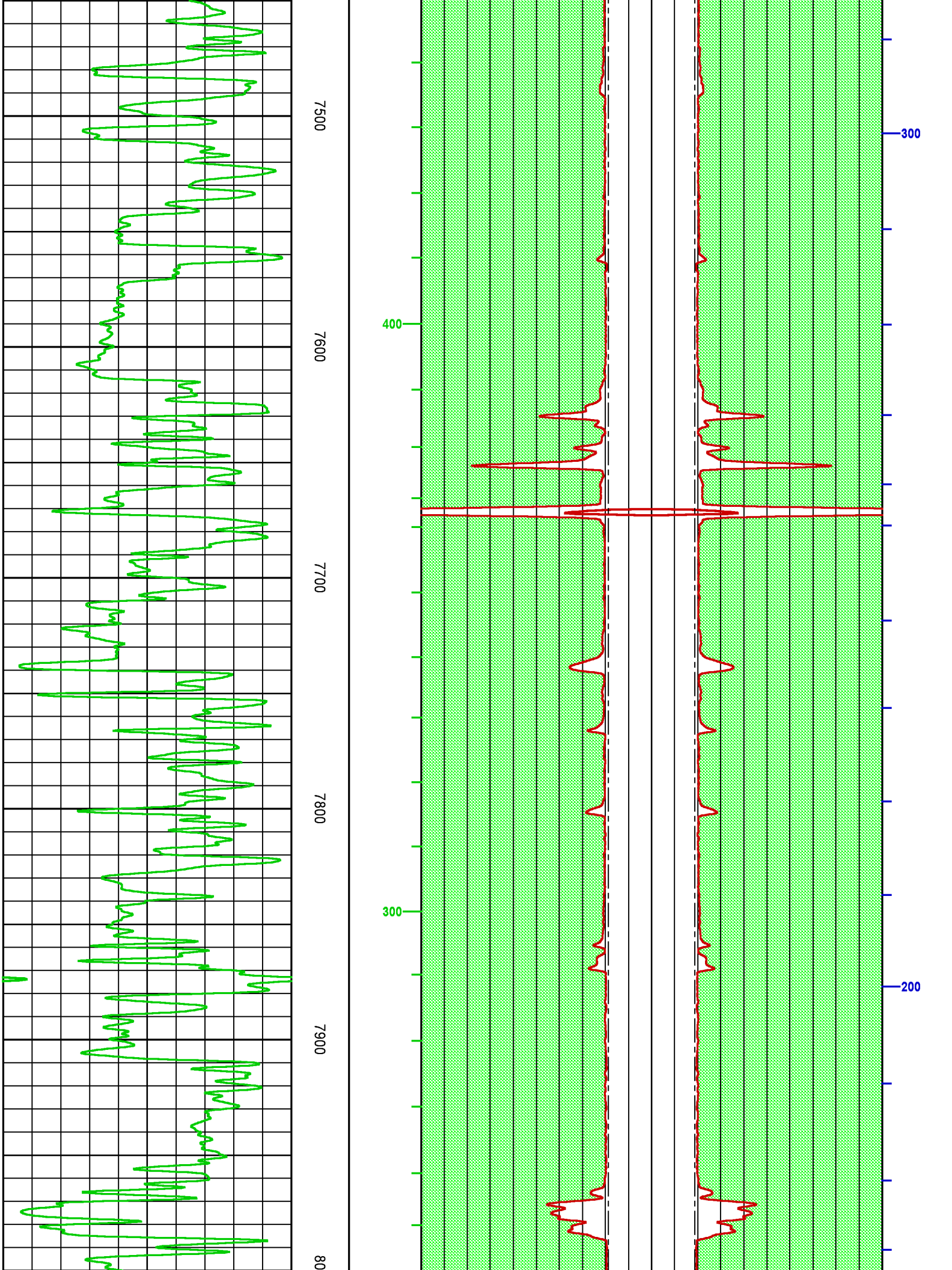


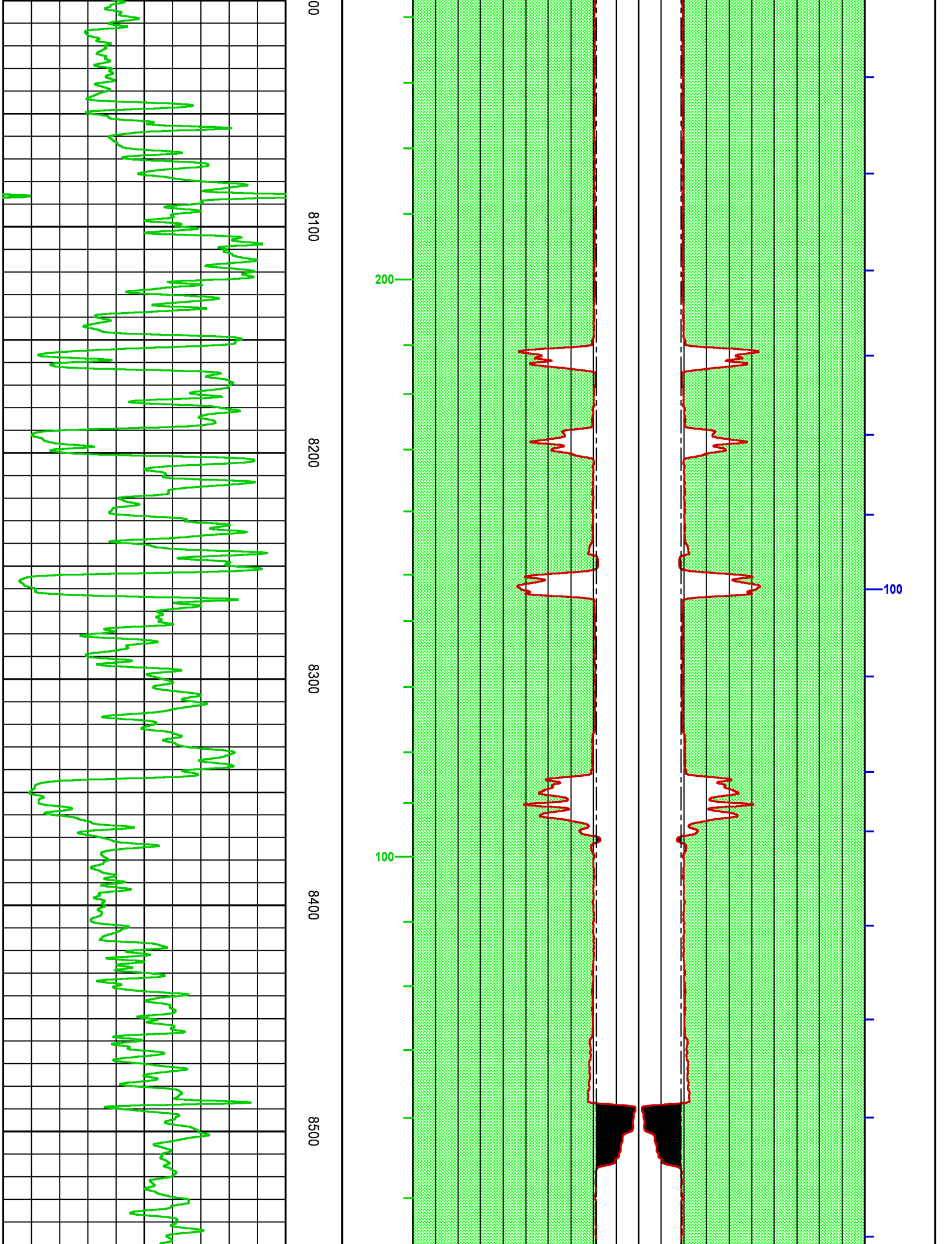


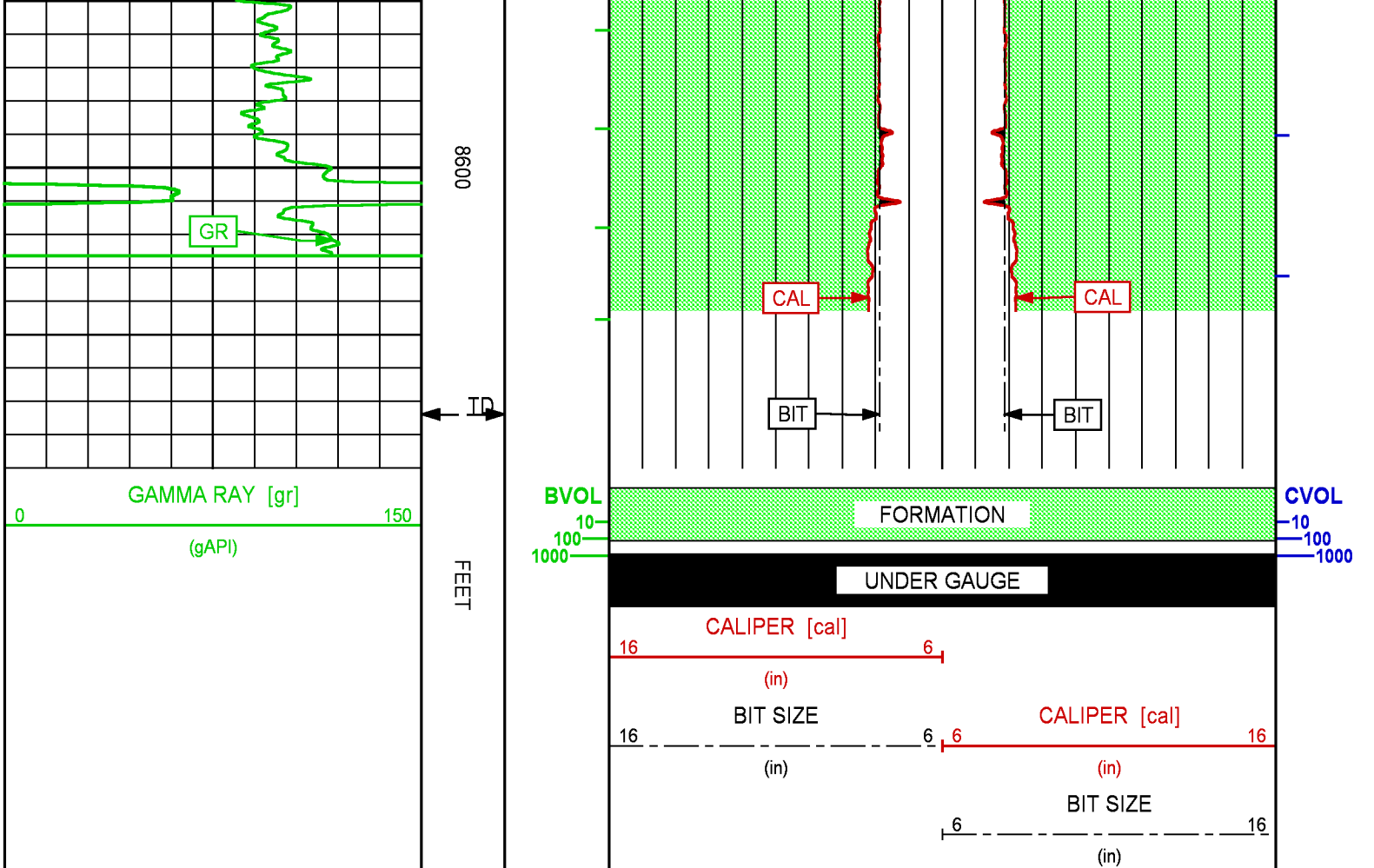












CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\LARAMIE_HG_FED_35-01\p763g.tp1

GR PRIMARY CALIBRATION SUMMARY

TOOL #: 1329XA 179184

DATE/TIME PERFORMED: Tue Nov 14 10:09:58 2017

UNIT #: 3882TD HL6728

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	153.51	1097.33	943.8 830.0 960.0	0.159	24.40	174.40	150

GR PRIMARY VERIFICATION SUMMARY

TOOL #: 1329XA 179184

DATE/TIME PERFORMED: Tue Nov 14 10:16:15 2017

UNIT #: 3882TD HL6728

VERI JIG #: 4702NK DA 228

	BACKGROUND	CALBRTR ON	MULT	BACKGROUND	CALBRTR ON	DIFF.
	(cts/s)	(cts/s)		(gAPI)	(gAPI)	(gAPI)
GR	151.36	1095.47	0.159	24.05	174.10	150.05
						140.00 160.00

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2234XA 10231795

DATE/TIME PERFORMED: Tue Nov 14 16:11:44 2017

UNIT #: 3882TD HL6728

	SMALL RING	LARGE RING	MULT	ADD	SMALL RING	LARGE RING
					(in)	(in)
CALIPER	1230.8	2125.6	0.00796	-1.92546	7.875	15.000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10231795

DATE/TIME PERFORMED: Sun Nov 26 11:53:04 2017

DAYS SINCE CAL: 11

UNIT #: HOIST 6670

	I.D.	MULT	ADD	I.D.
				(in)
CALIPER	1273.2	0.00796	-2.04107	8.097

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2234XA 10231795

DATE/TIME PERFORMED: Sun Nov 26 18:19:48 2017

DAYS SINCE CAL: 12

UNIT #: HOIST 6670

	I.D.	MULT	ADD	I.D.
				(in)
CALIPER	1264.4	0.00796	-2.04107	8.027
				7.597 8.597

INSTRUMENT CONFIGURATION

CABLEHEAD

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

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



Weight : 130 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 : 3.63"
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

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

SP MP 14.19'

XMTR MP 7.72'

0.00'



COMPANY	LARAMIE ENERGY		FILE NO:
WELL	HG FED 35-01W		
FIELD	ALKALI CREEK		API NO:
COUNTY	MESA	STATE COLORADO	05077093060000
LOCATION:		ELEVATIONS:	
LAT: 39.32834 N		KB 7999 FT	
LONG: -107.63516 W		DF	
		GL 7985 FT	
SEC 26	TWP 8S	RGE 92W	DATE 26-Nov-2017