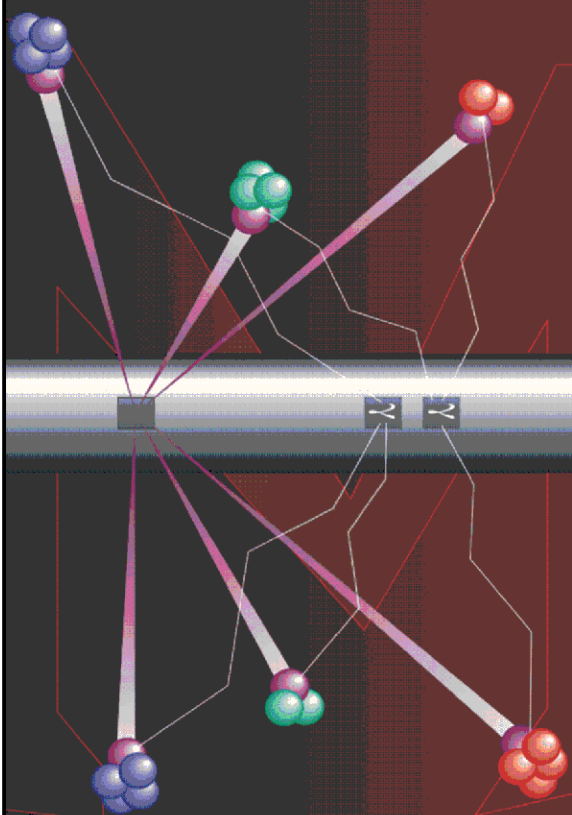


# Pulsed Neutron Formation Evaluation



## NEO Neutron Emulated Openhole

COMPANY LARAMIE ENERGY II LLC

WELL CC 0697-03-12W

FIELD GRAND VALLEY

COUNTY GARFIELD STATE COLORADO

LOCATION:

SEE REMARKS SECTION

SEC 3 TWP 6S RGE 97W

ELEVATIONS:

KB 8468 FT DF GL 8438 FT

DATE 29-Jun-2018 ECC CALGARY GEOSCIENCE

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.

### COMPUTATION PARAMETERS

COMPUTATION	LOGS USED: <u>RPM-C</u>		PROGRAM: <u>NEO</u>	
	CENTER: <u>CALGARY GEOSCIENCE</u>	LOG ANALYST: <u>A. KOTOV</u>		DATE: <u>27-Aug-2018</u>
FIELD DATA	LOCATION: <u>GRAND JUNCTION</u>		ENGINEER: <u>T.NEWELL/US138182</u>	DATE: <u>29-Jun-2018</u>
FROM	TO			
<u>4419 FT</u>	<u>9528 FT</u>			

### REMARKS

LOCATION:  
SHL 2826' FNL & 1321' FWL  
BHL 2826' FNL & 1321' FWL

TRAINING WELL: CC 0697-03-17W  
TNPH - NEUTRON POROSITY  
TBIT90 - DEEP RESISTIVITY  
NNZDEN - BULK DENSITY EMULATED USING GUNDERSON 0994-13-06W AS  
TRAINING WELL.

ANY ERRORS IN THE TRAINING WELL OPEN HOLE DATA CAN PERPETUATE TROUGH AS AN  
ERROR IN THE EMULATED RESULTS

## NEO RESULTS FOR 0697-03-12W (G-SAND)

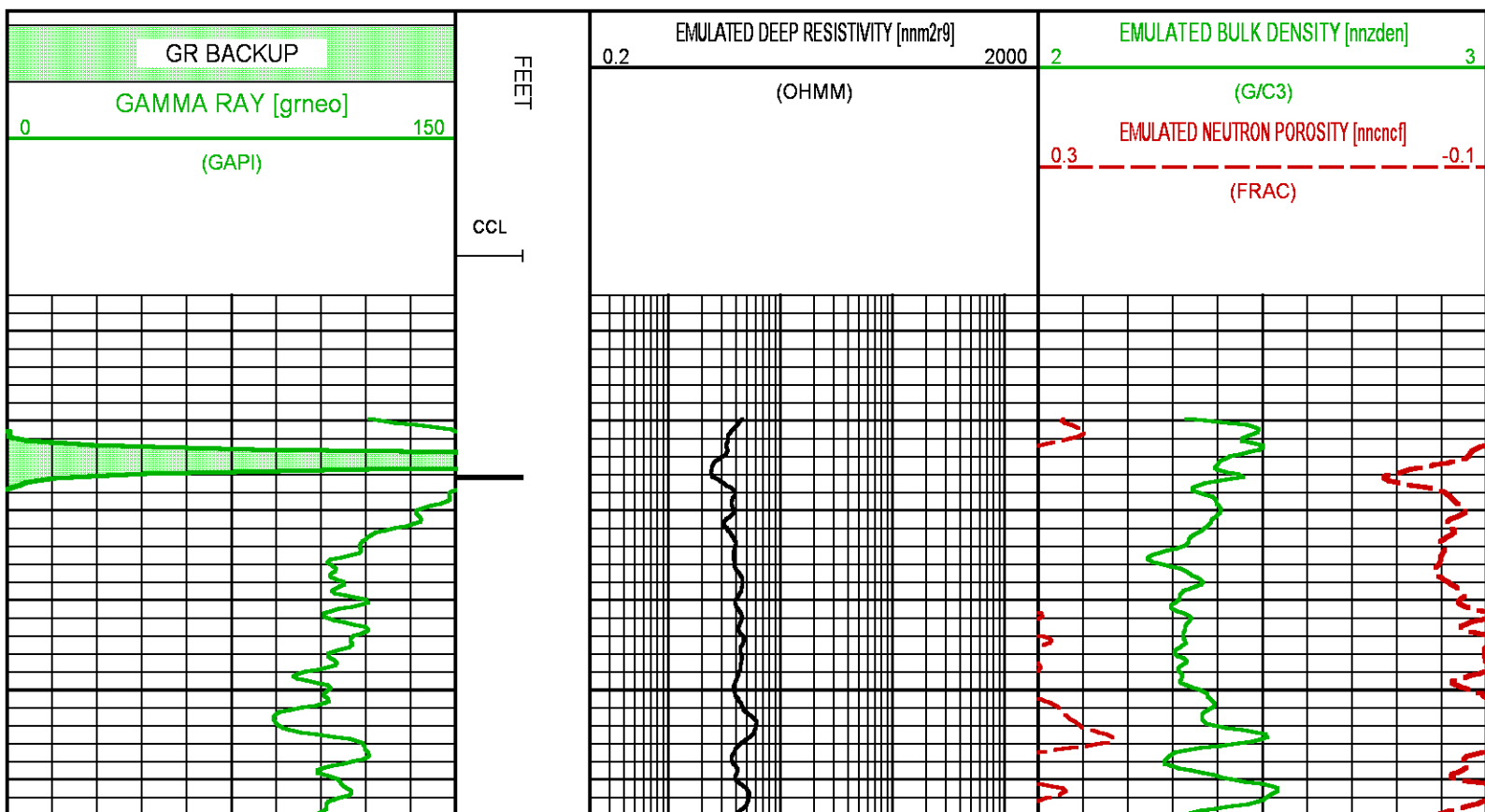
ECLIPS ECPLLOT from ECLIPS 7.0 WFM 6.0.7905.1 Wed 08/23/2017 09:02:35.01

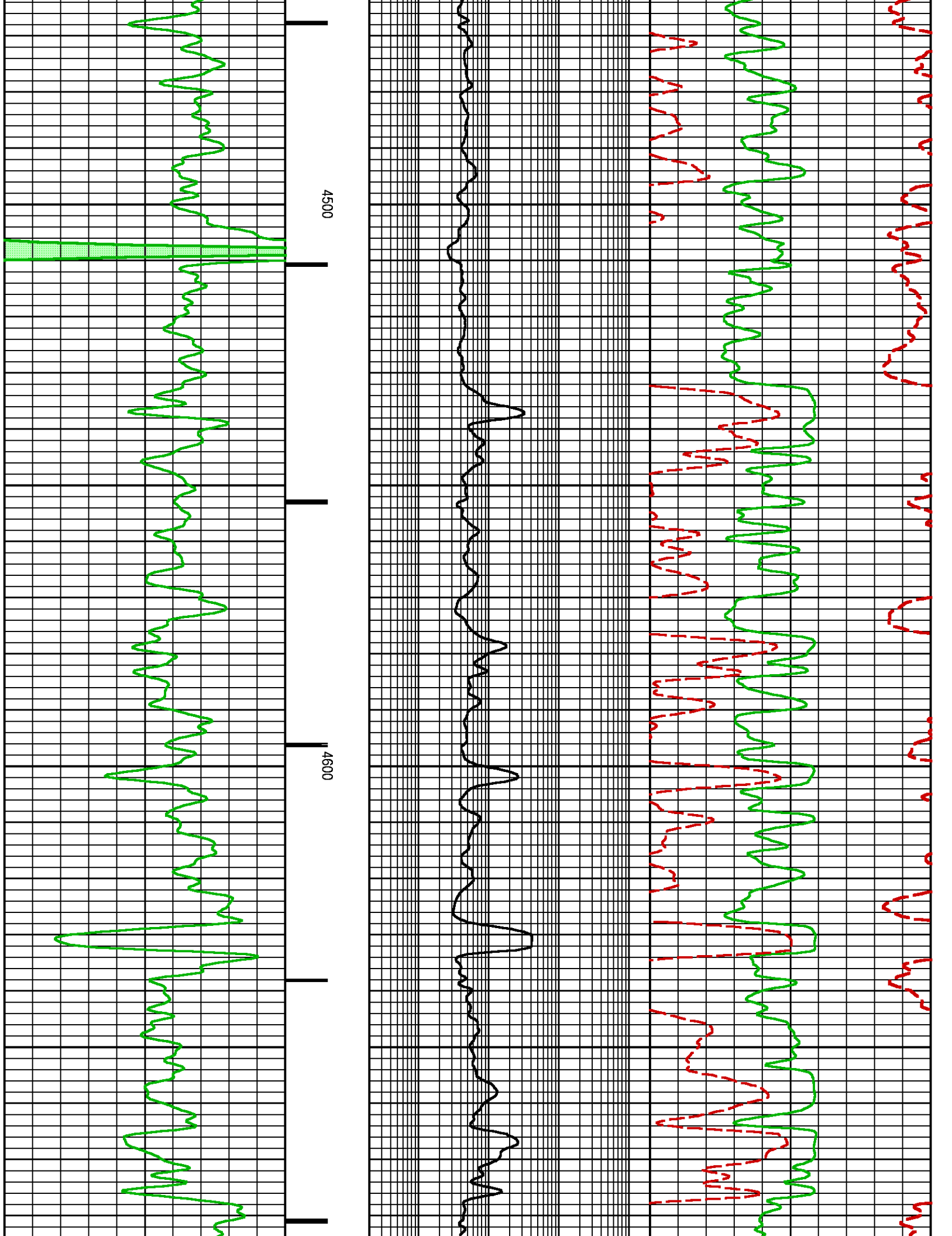
Plotted: Mon Aug 27 15:10:41 2018

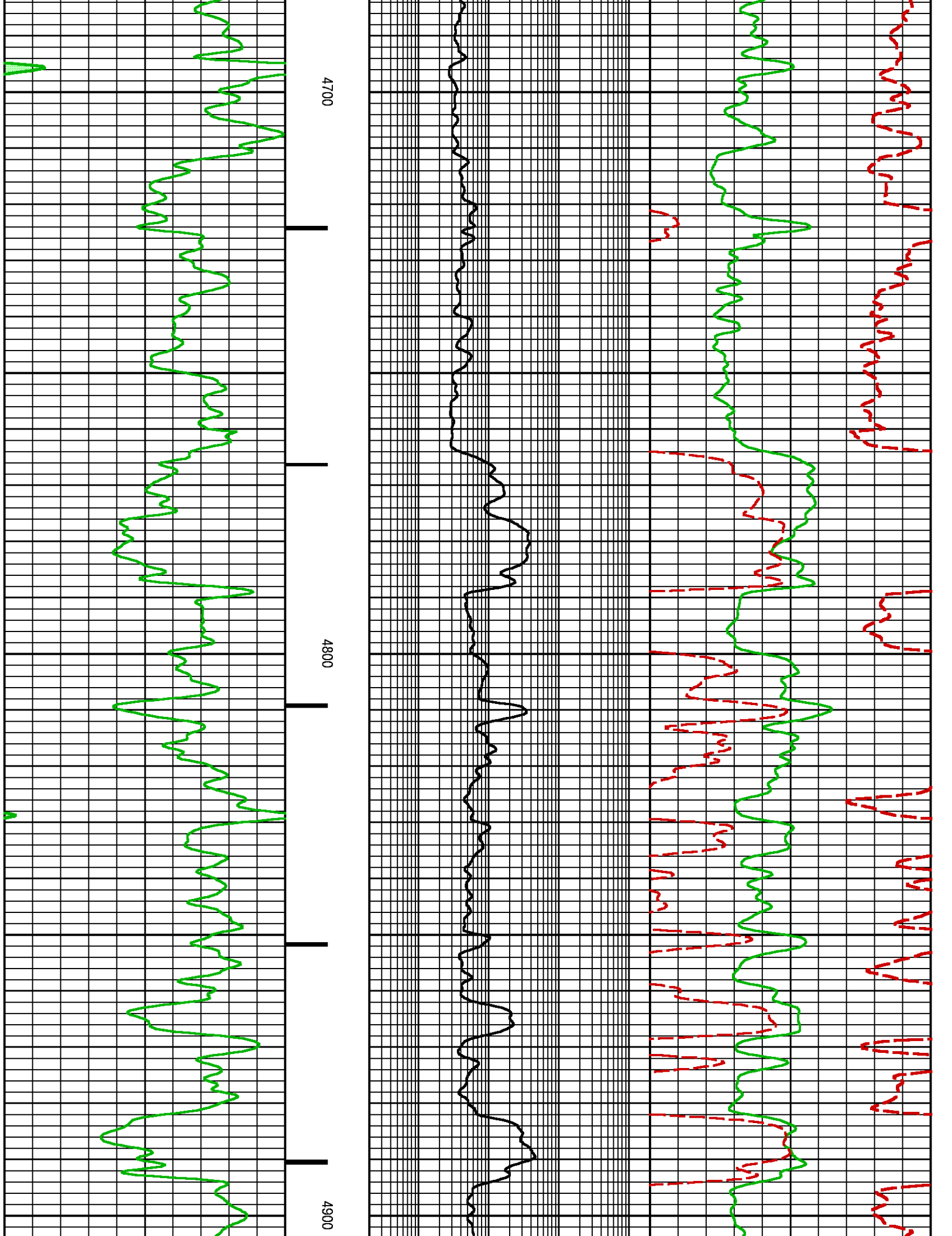
### CURVE MEASURE POINT OFFSET

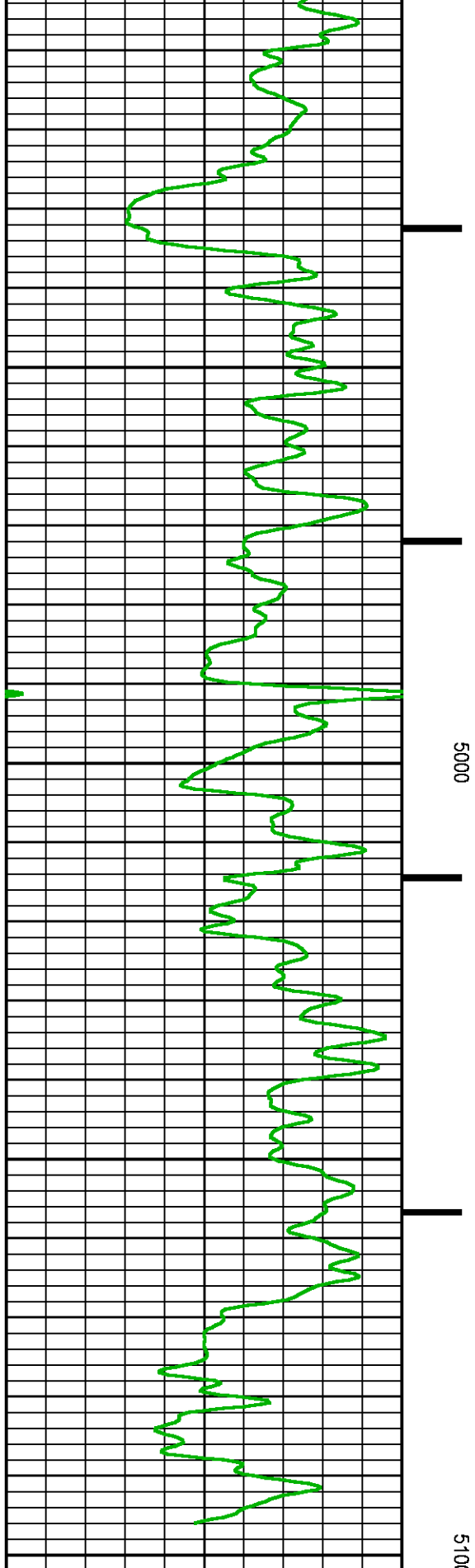
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	0.00	NNCNC	0.00	NNZDEN	0.00		
GRNEO	0.00	NNM2R9	0.00				

Project : NA  
User : kotoale  
Presentation : BHI1F65XZ1:d:\Ape\_Projects\LARAMIE\_CC\_0697\_03\_12W\_NEO\NEO\_PRESENTATION\_LARAMIE\_G-Sand.pdf [5"/100' Scale]  
Plot Interval : 4406 - 5102 Feet  
Data File 1 : F1 : BHI1F65XZ1:D:\Ape\_Projects\LARAMIE\_CC\_0697\_03\_12W\_NEO\Merged\_Set\_Final.xtf  
Created On : N/A  
Company : LARAMIE ENERGY LLC  
Well : CC 0697-03-12W  
Field : GRAND VALLEY  
File Interval : 4419.75 - 9528.75 Feet  
OCT : NA

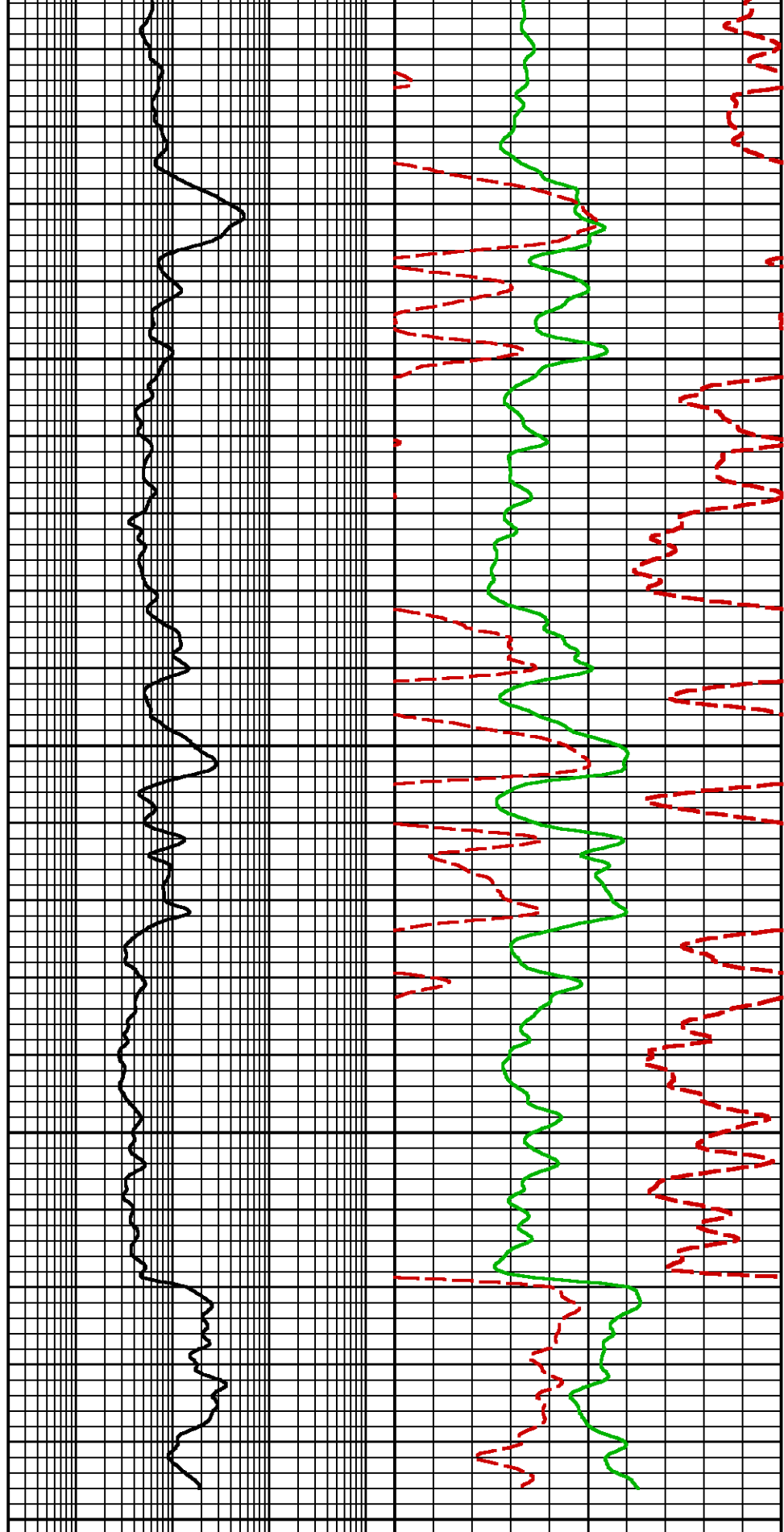








GR BACKUP  
GAMMA RAY [grneo]  
(GAPI)



EMULATED DEEP RESISTIVITY [nm2r9]  
(OHMM)  
EMULATED BULK DENSITY [nnzden]  
(G/C3)  
EMULATED NEUTRON POROSITY [nnncf]  
(FRAC)

CCL

## NEO RESULTS FOR 0697-03-12W(MAIN)

ECLIPS ECLOT from ECLIPS 7.0 WFM 6.0.7905.1 Wed 08/23/2017 09:02:35.01

Plotted: Mon Aug 27 15:10:20 2018

## CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	0.00	NNCNC	0.00	NNZDEN	0.00		
GRNEO	0.00	NNM2R9	0.00				

Project : NA  
 User : kotoale  
 Presentation : BHI1F65XZ1:d:\Ape\_Projects\LARAMIE\_CC\_0697\_03\_12W\_NEO\NEO\_PRESENTATION\_LARAMIE\_MAIN.pdf [5"/100" Scale]  
 Plot Interval : 6263 - 9534 Feet  
 Data File 1 : F1 : BHI1F65XZ1:D:\Ape\_Projects\LARAMIE\_CC\_0697\_03\_12W\_NEO\Merged\_Set\_Final.xtf  
 Created On : N/A  
 Company : LARAMIE ENERGY LLC  
 Well : CC 0697-03-12W  
 Field : GRAND VALLEY  
 File Interval : 4419.75 - 9528.75 Feet  
 OCT : NA

GR BACKUP

GAMMA RAY [grneo]

(GAPI)

FEET

CCL

6300

EMULATED DEEP RESISTIVITY [nm2r9]

0.2

2000

(OHMM)

EMULATED BULK DENSITY [nnzden]

2

3

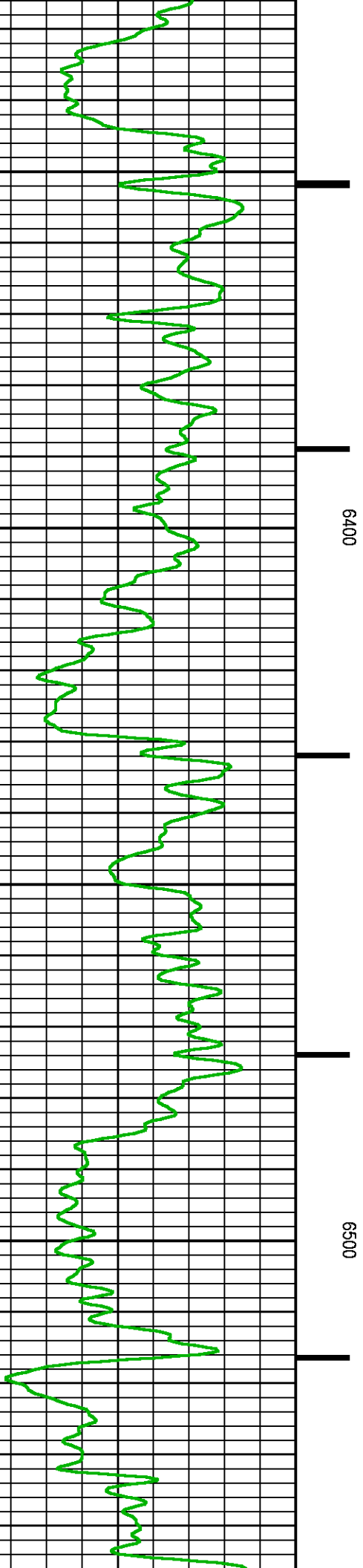
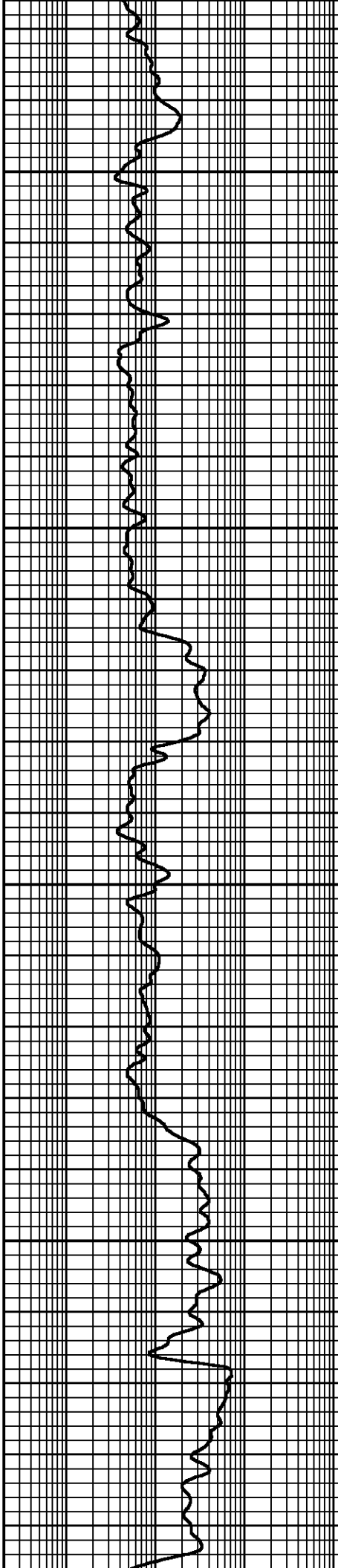
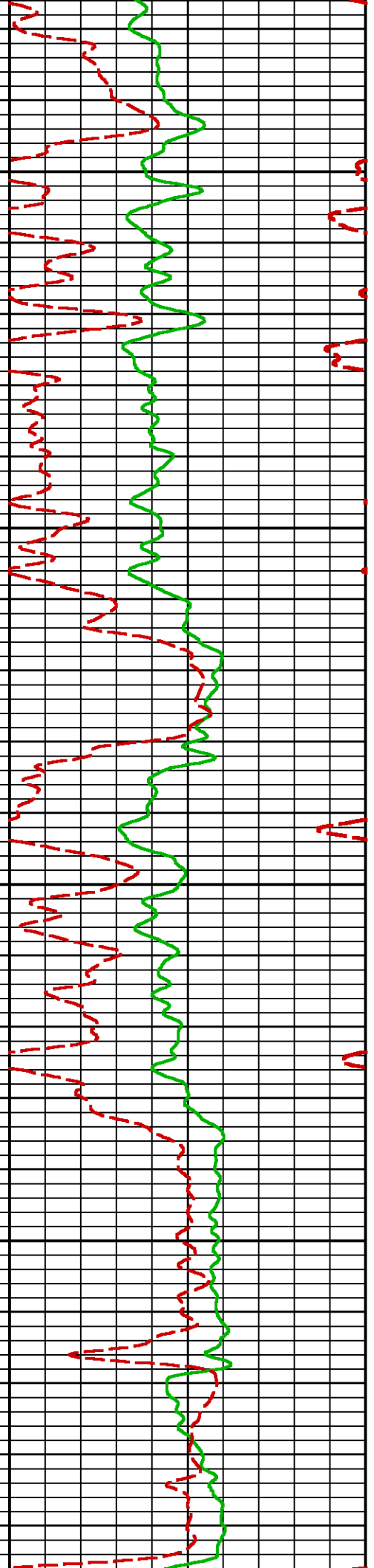
(G/C3)

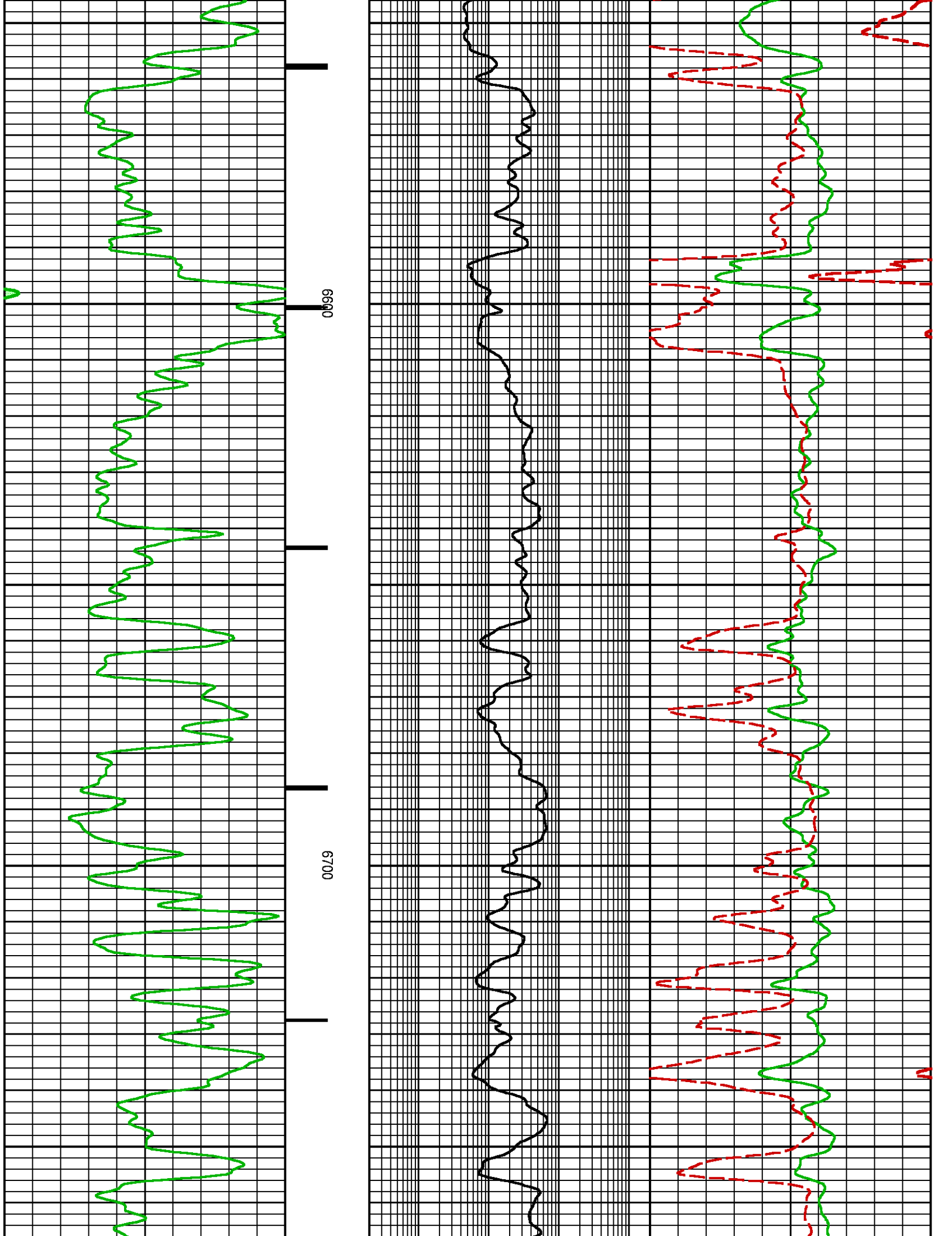
EMULATED NEUTRON POROSITY [nnncf]

0.3

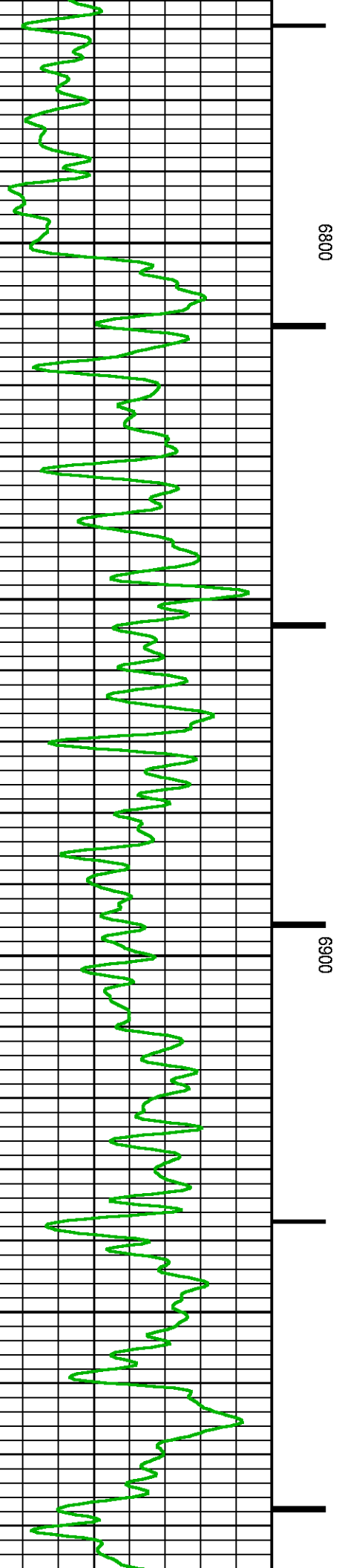
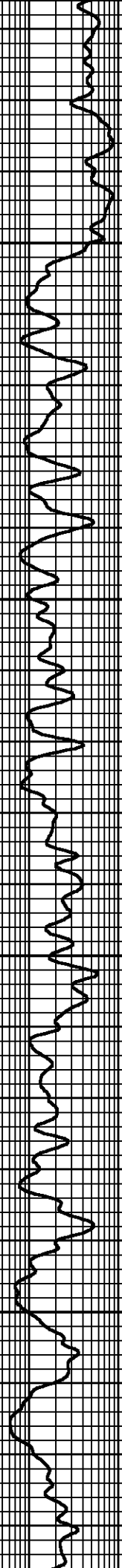
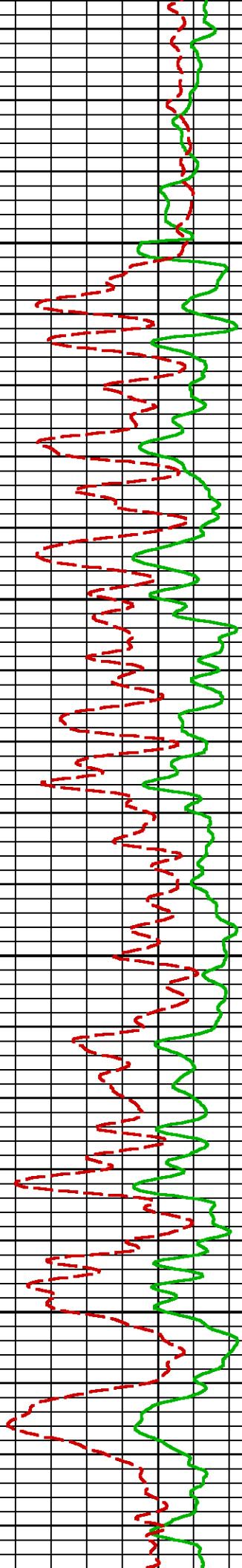
-0.1

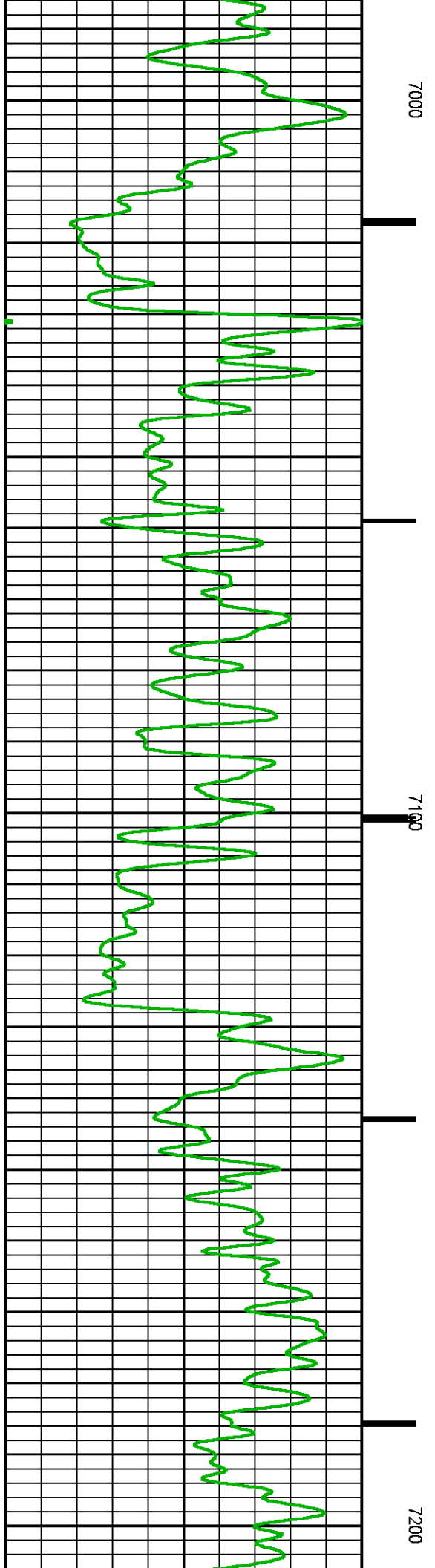
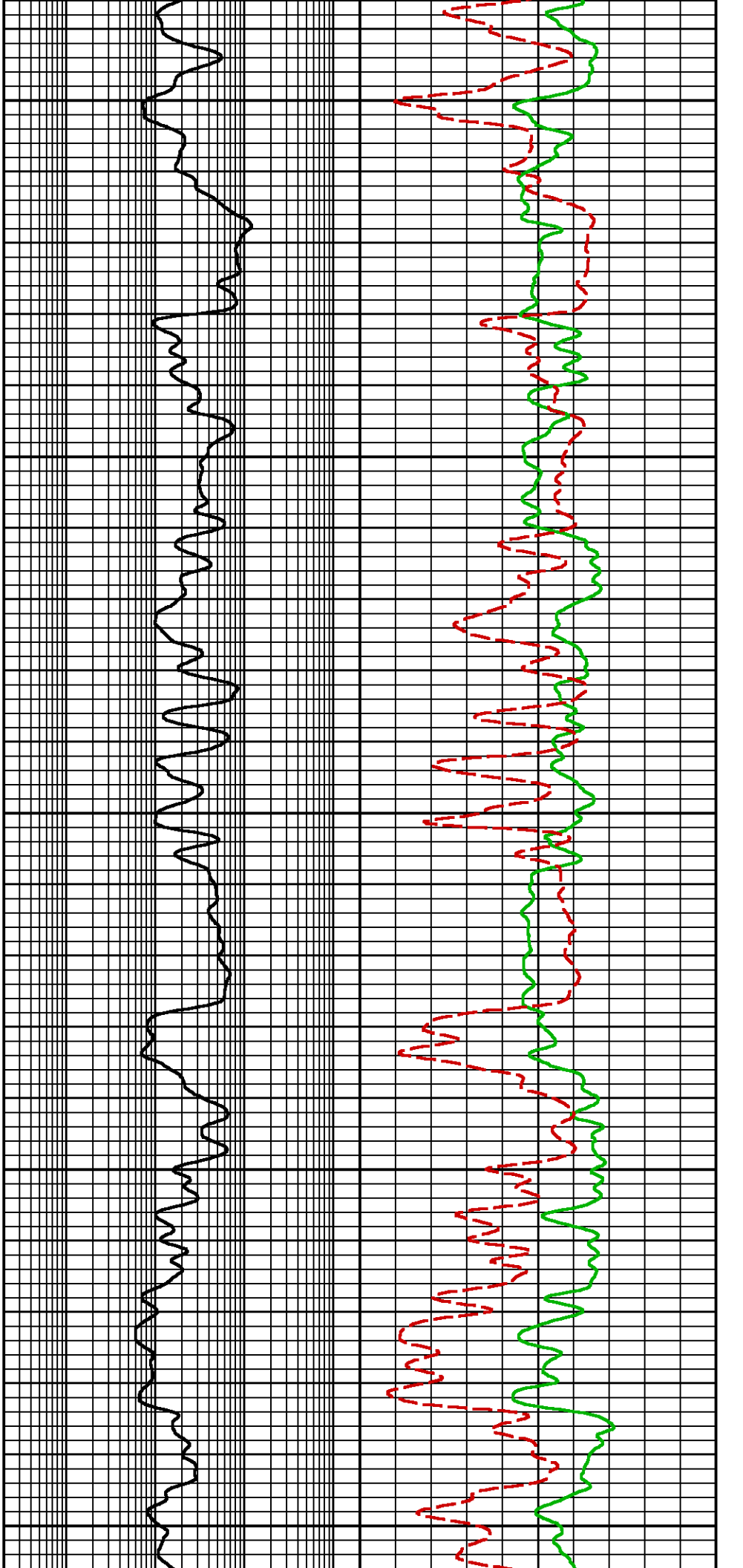
(FRAC)

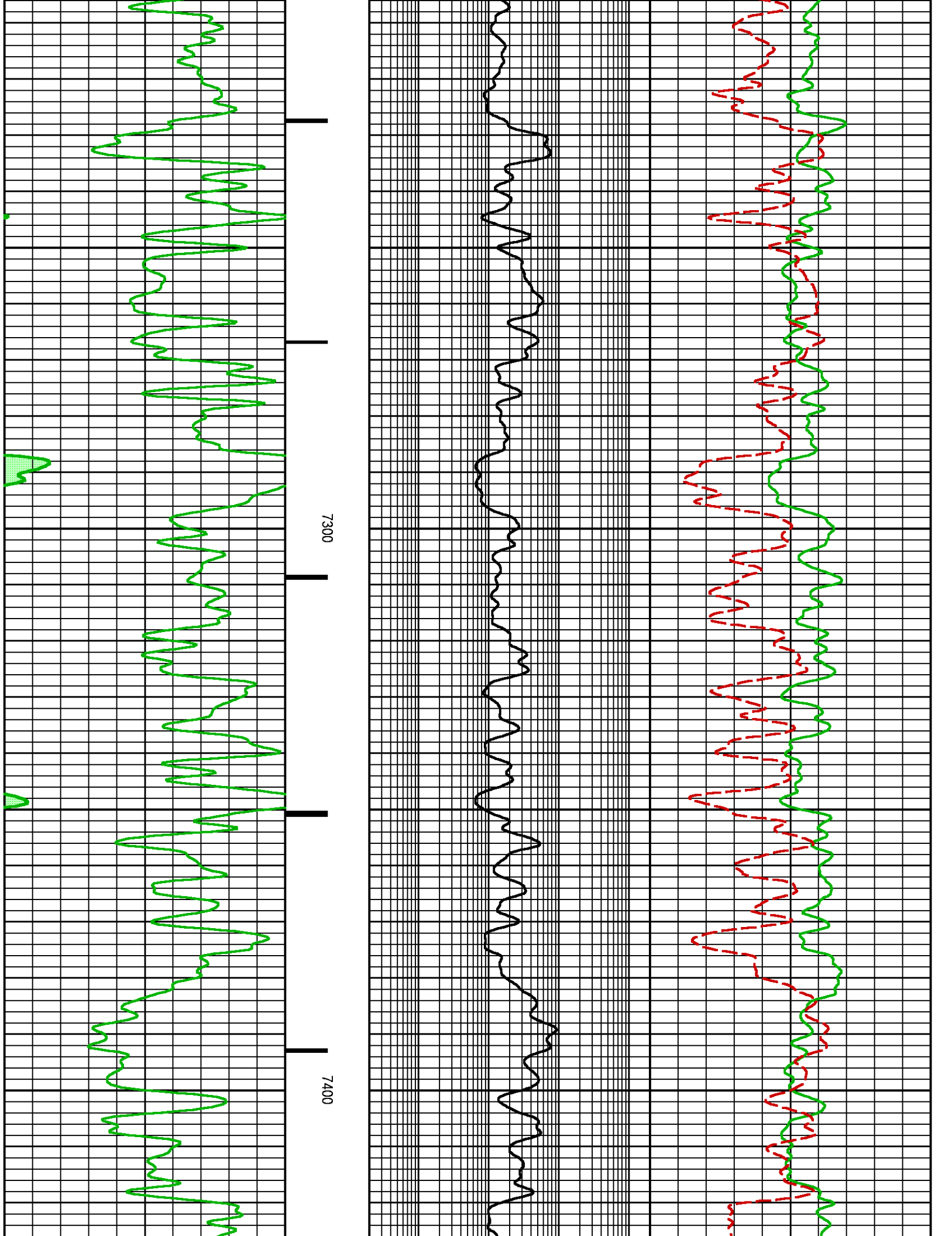


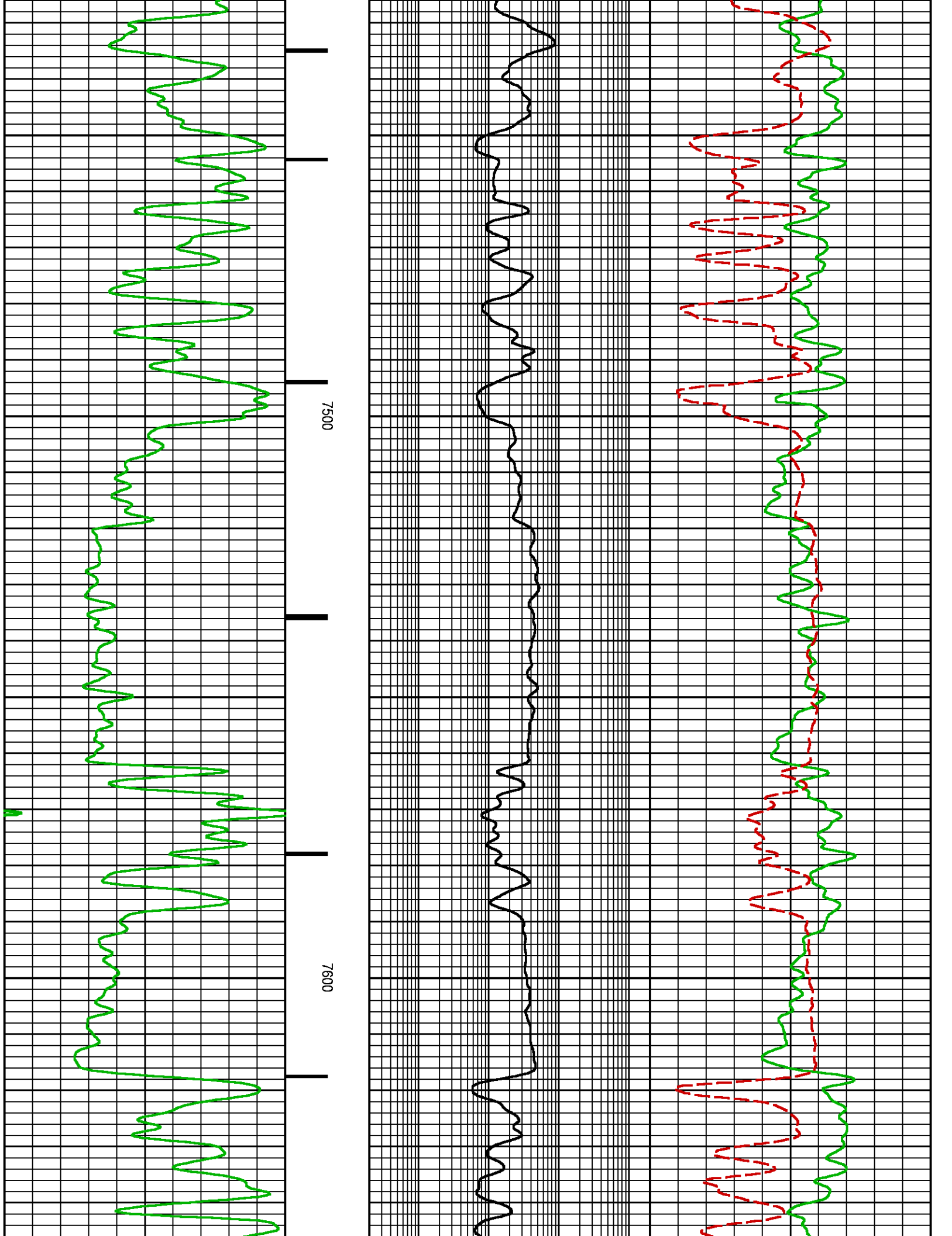


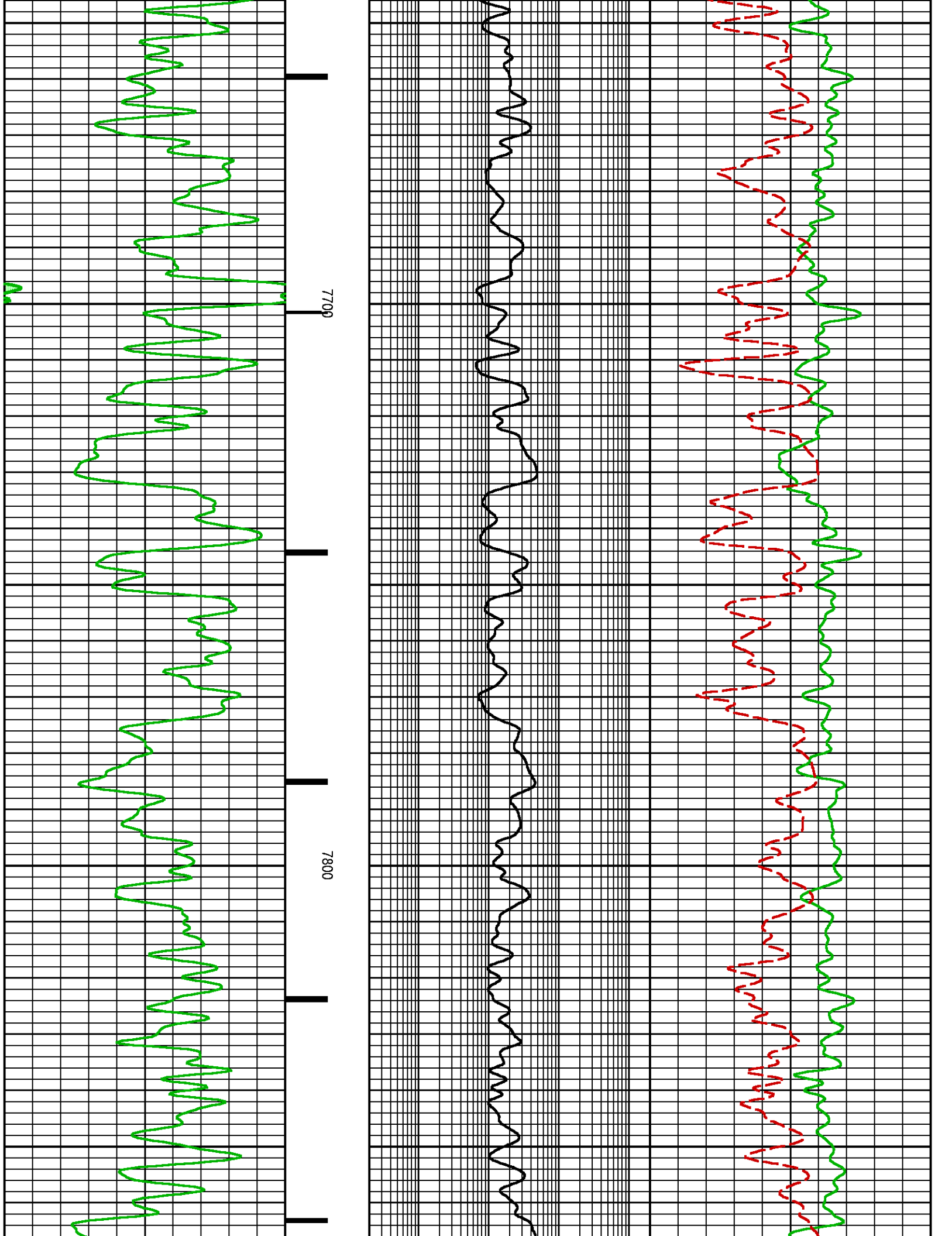


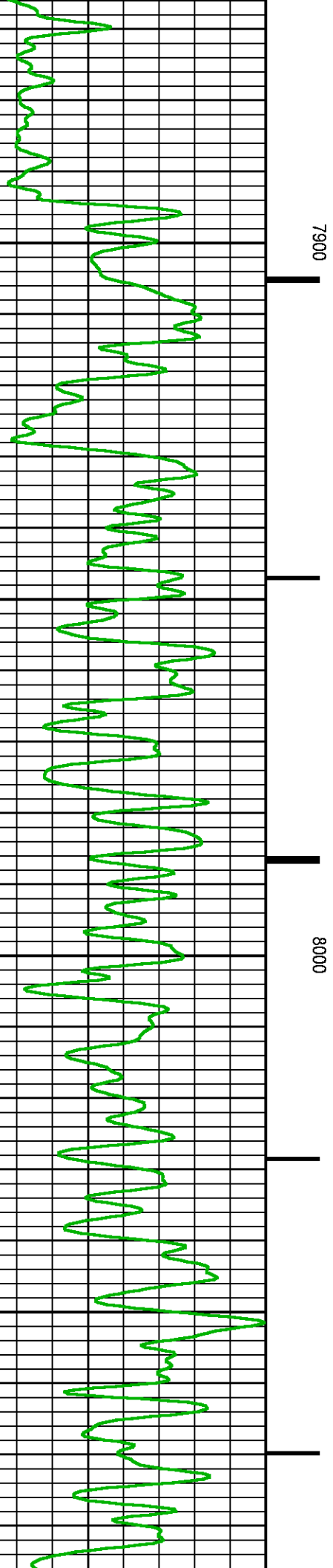
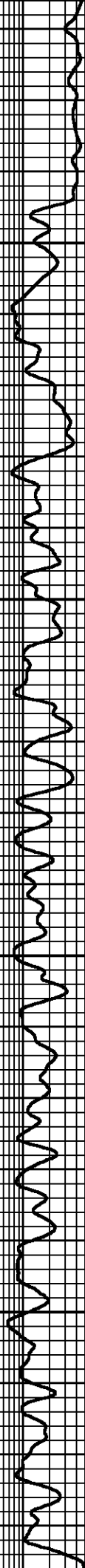
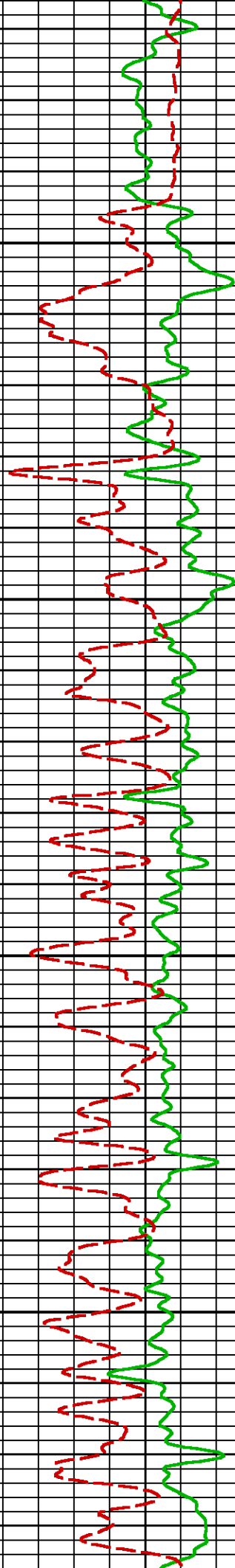


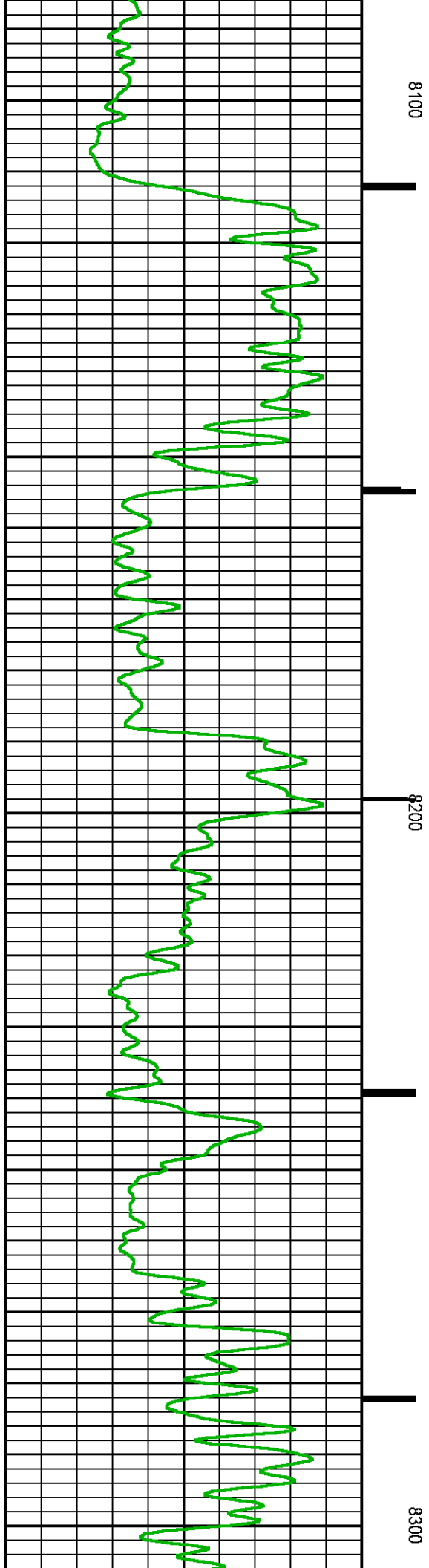
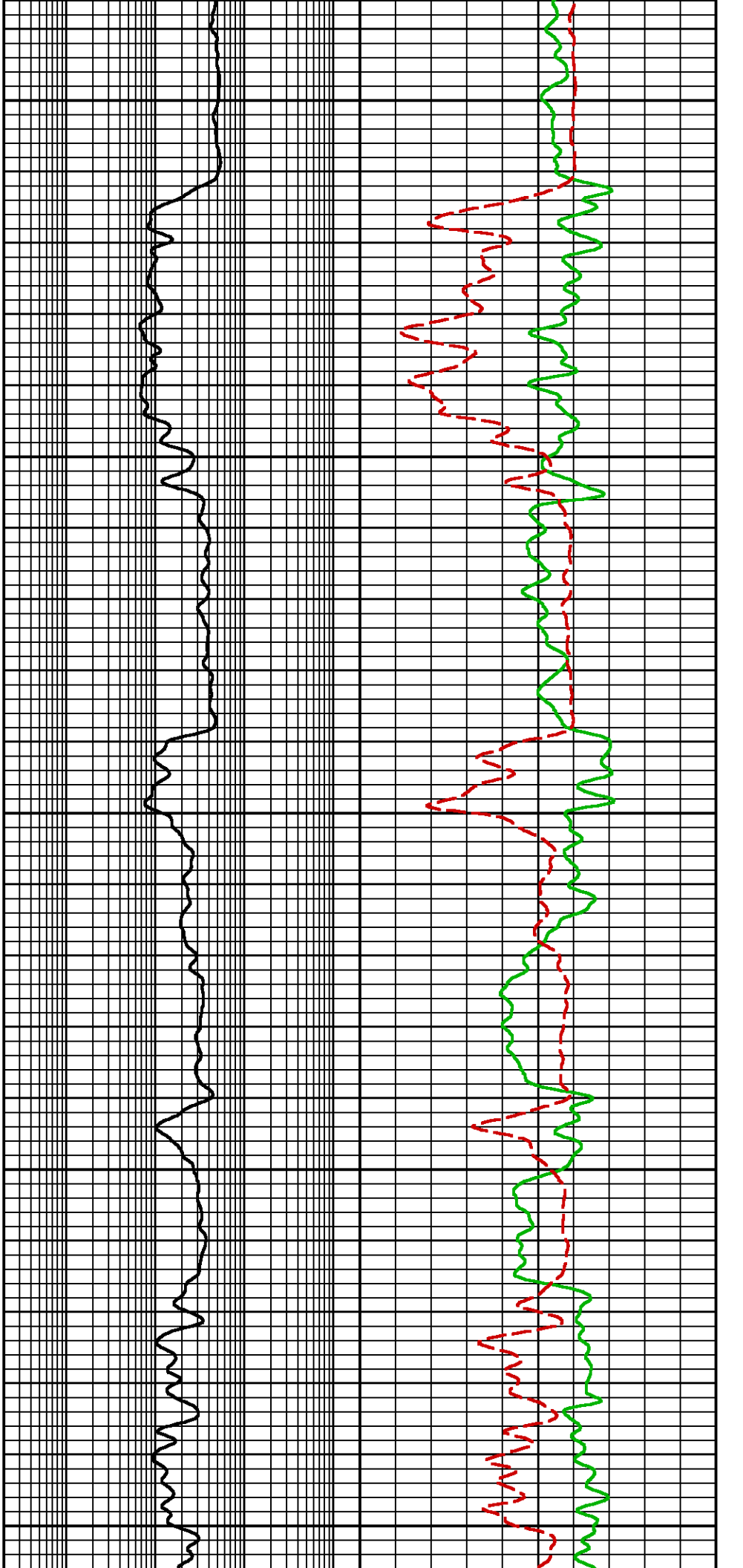


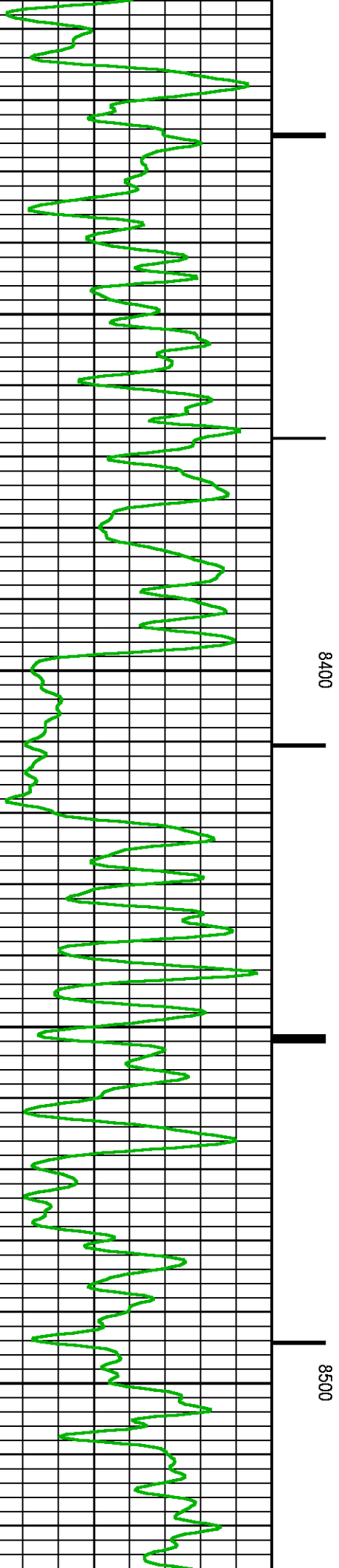
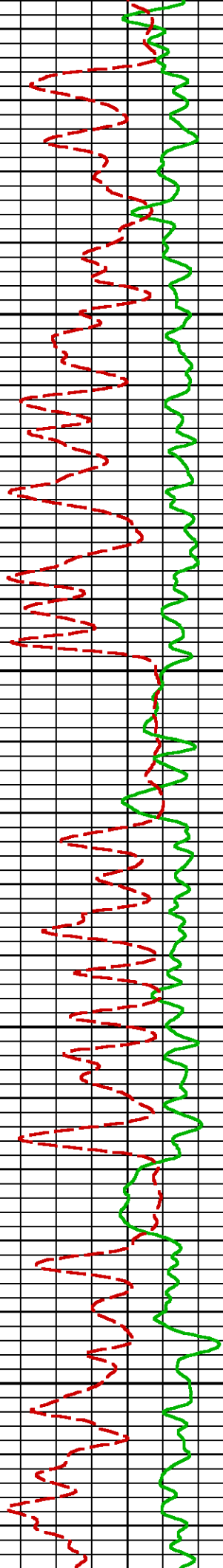




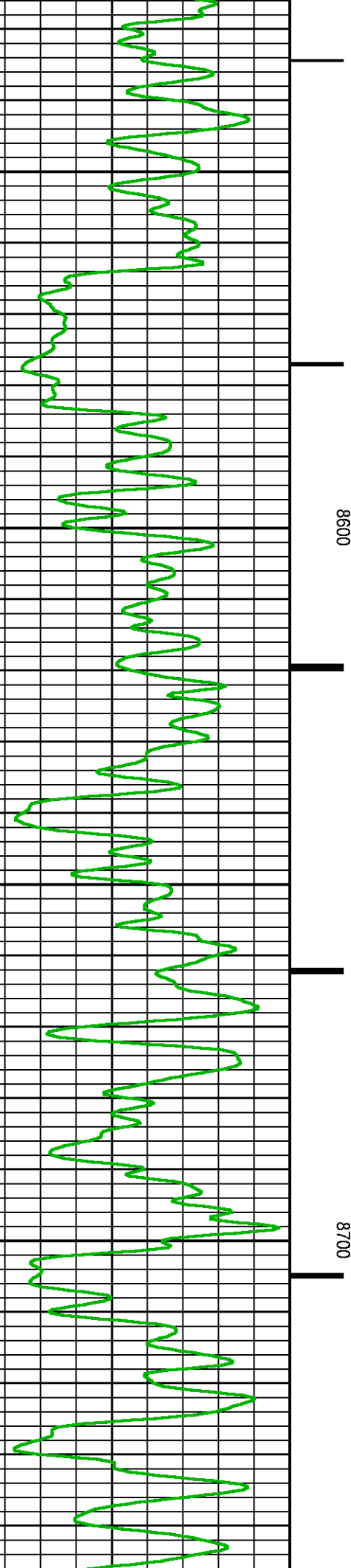
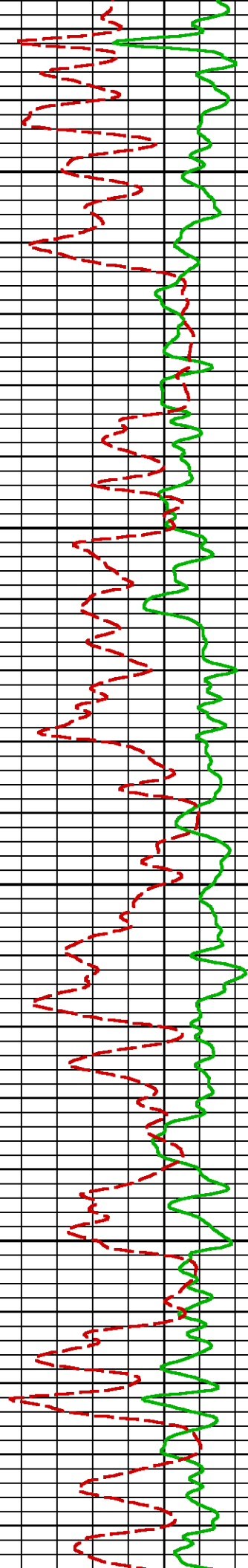


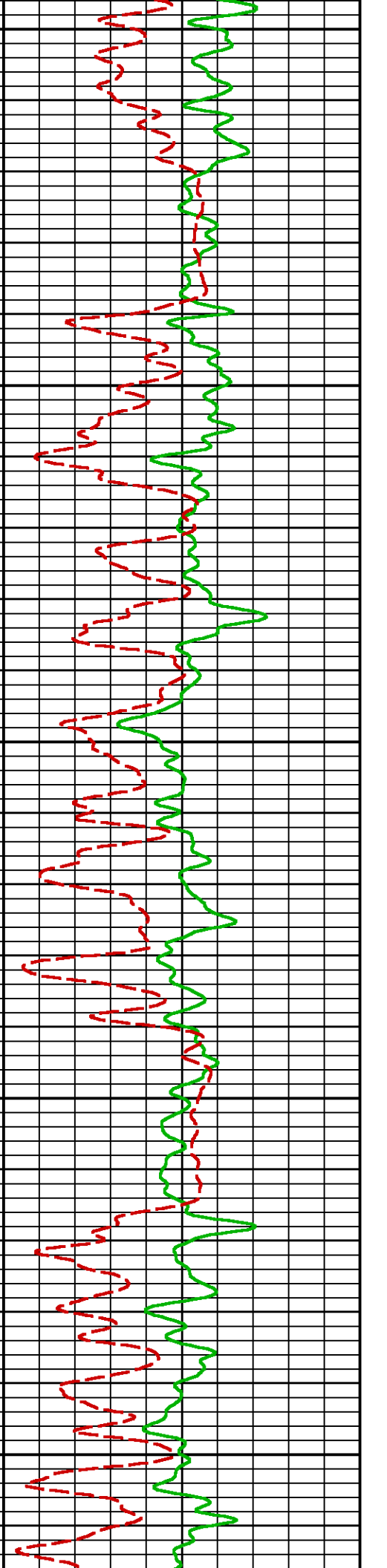
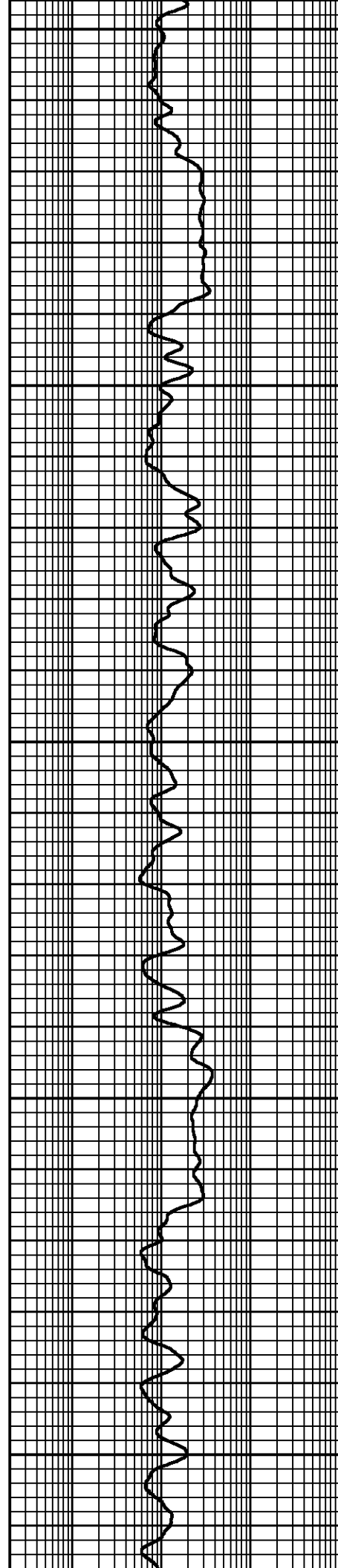
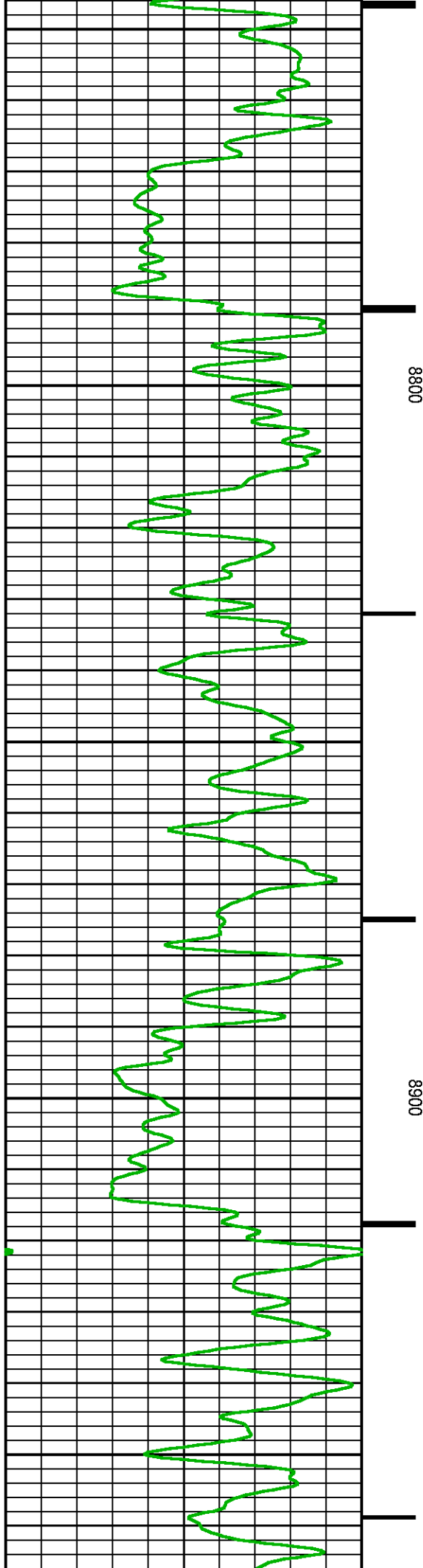


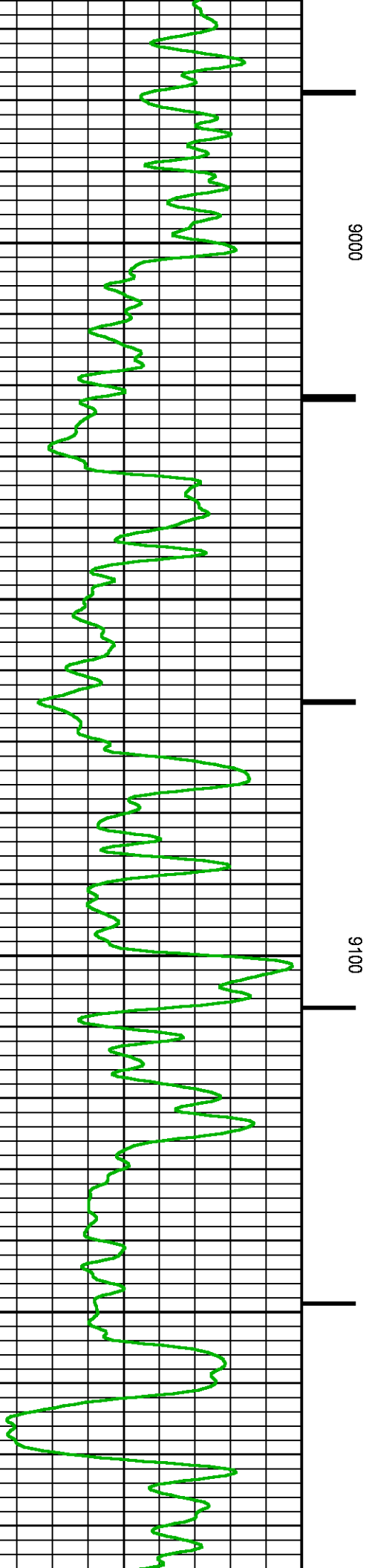
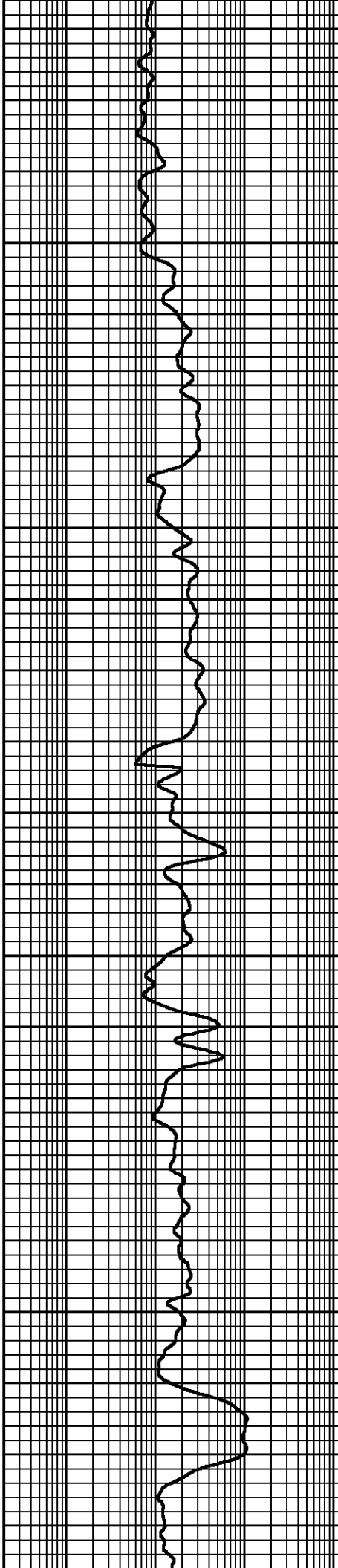
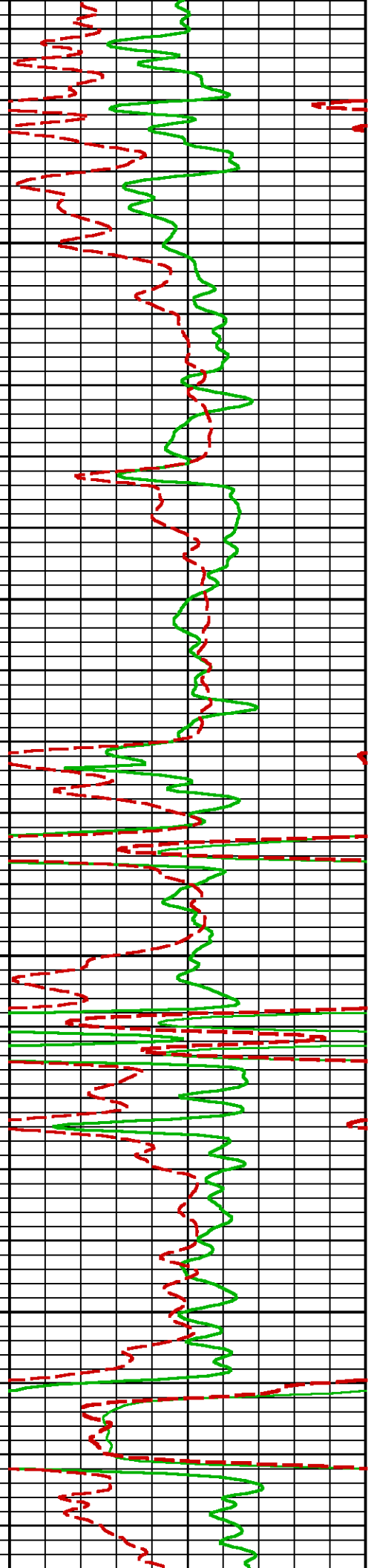


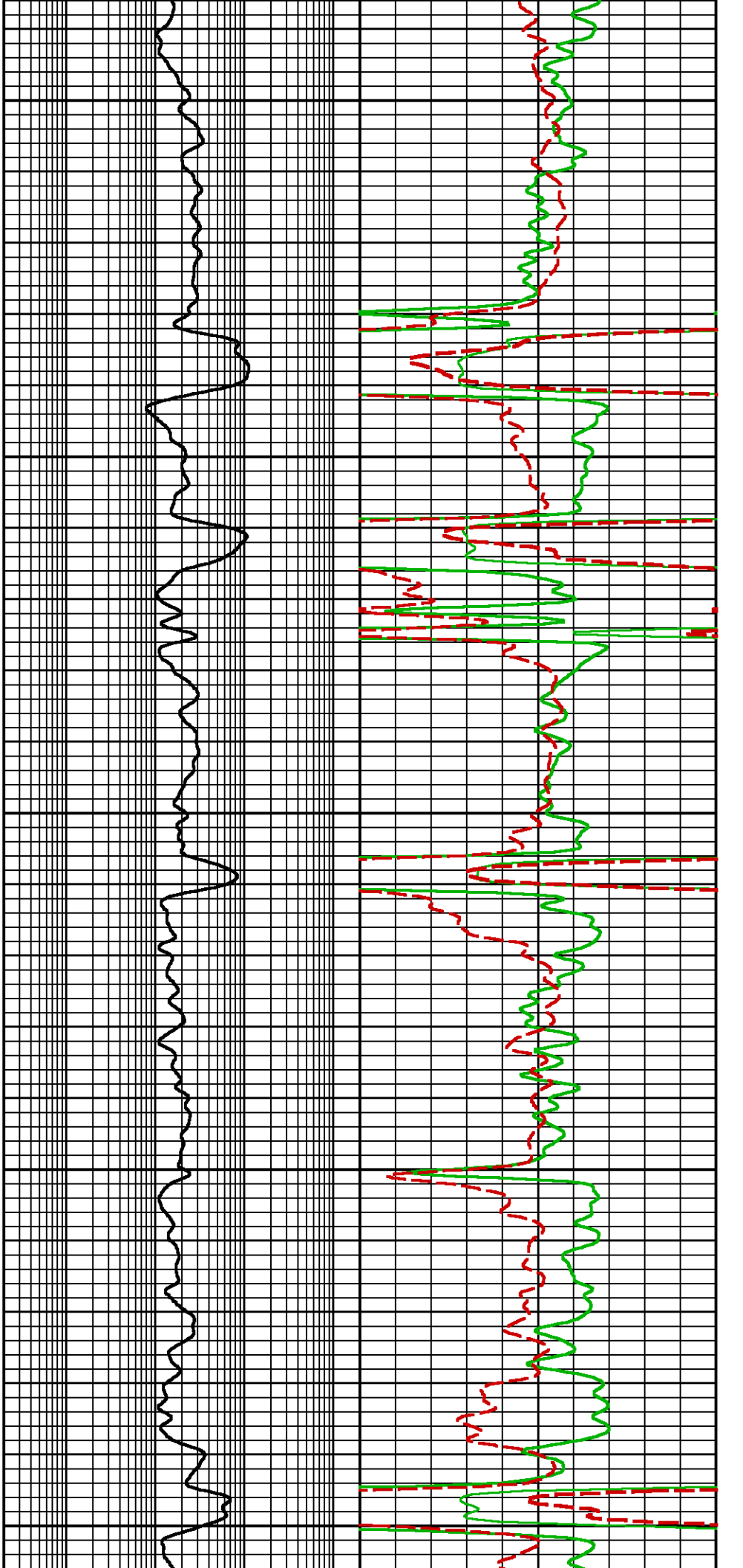








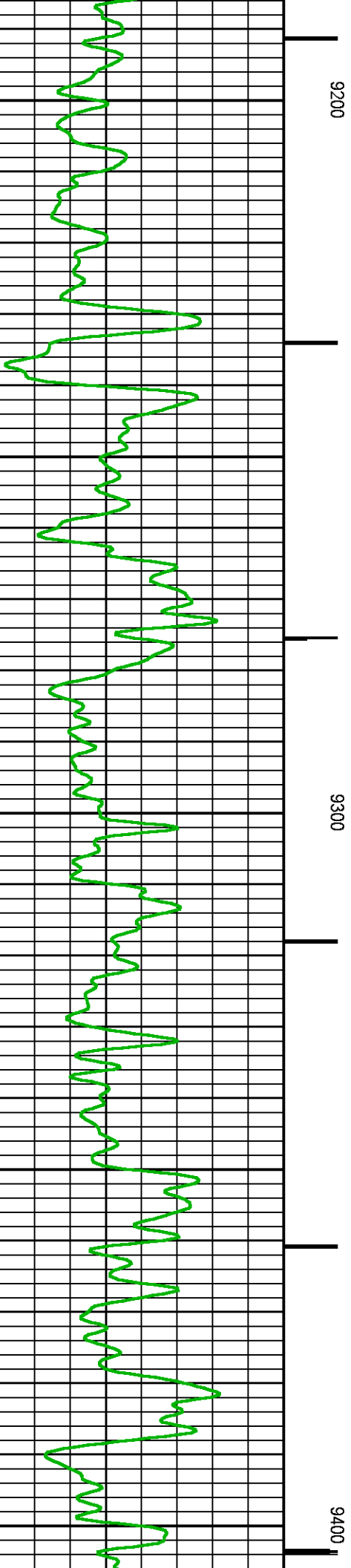


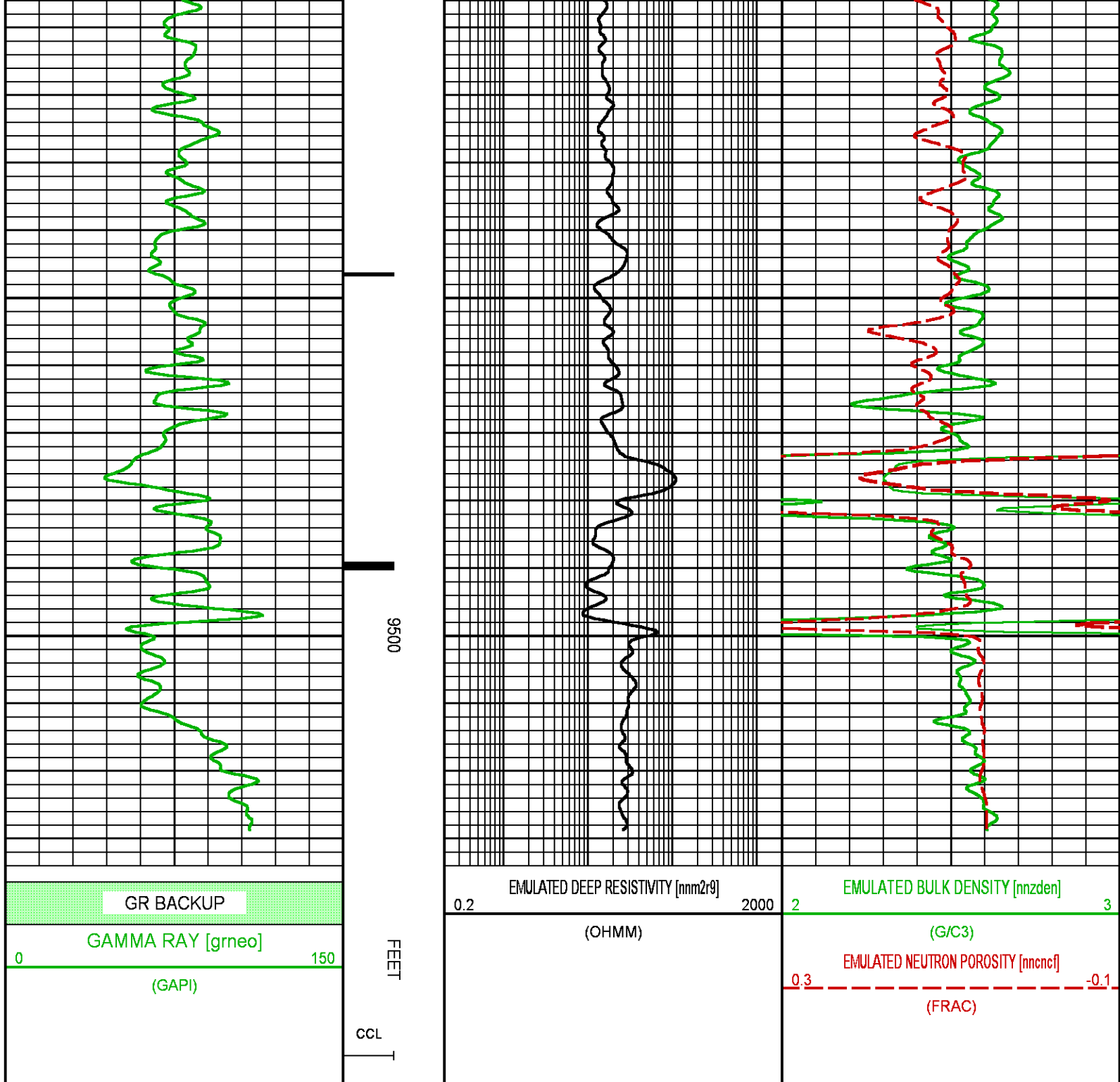


9200

9300

9400





**BAKER  
HUGHES**  
a GE company



**COMPANY**  
**WELL**  
**FIELD**  
**COUNTY**

**LARAMIE ENERGY II LLC**  
**CC 0697-03-12W**  
**GRAND VALLEY**  
**GARFIELD**

**STATE** **COLORADO**

**FILE NO:**

**API NO:**

05045237960000

**LOCATION:**

SEE REMARKS SECTION

**ELEVATIONS:**

KB 8468 FT

DF

GL 8438 FT

SEC 3 TWP 6S RGE 97W

DATE 29-Jun-2018

Pulsed Neutron  
Formation Evaluation

