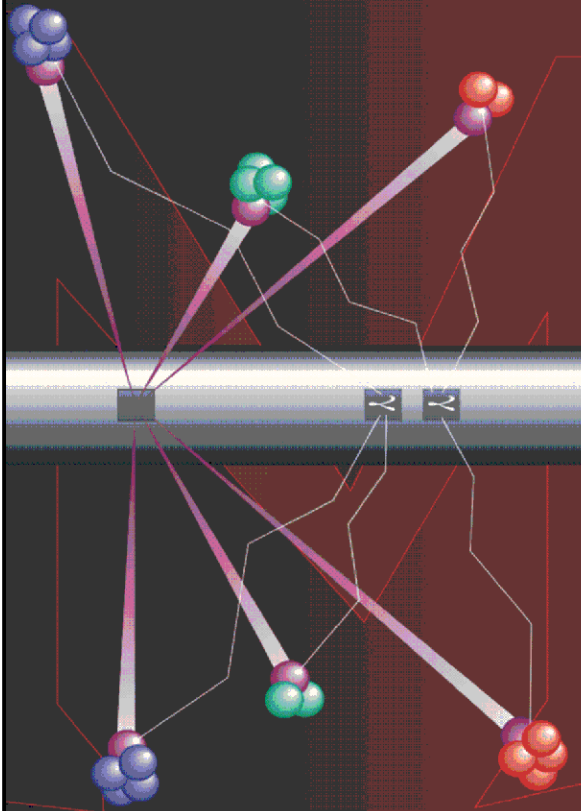


Pulsed Neutron Formation Evaluation



NEO Neutron Emulated Openhole

COMPANY LARAMIE ENERGY

WELL BRUTON 19-05W

FIELD VEGA

COUNTY MESA STATE COLORADO

LOCATION:

SEE REMARKS SECTION

SEC 19 TWP 9S RGE 93W

ELEVATIONS:

KB 7286.0 FT DF GL 7262.0 FT

DATE 25-OCT-2017 ECC 29136-01

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-OCT-2017</u>
FIELD DATA	LOCATION: <u>WOODWARD</u>	ENGINEER: <u>S.YASSA/US128847</u>	DATE: <u>25-OCT-2017</u>

FROM	TO								
<u>1964 FT</u>	<u>7579 FT</u>								

REMARKS

LOCATION:
SHL: LAT:39.262806N;LONG:107.815139W
BHL: LAT:39.266494N;LONG:107.816242W

TRAINING WELL: BRUTON 19-07W

EXTREMELY POOR BOREHOLE CONDITIONS ABOVE G-SAND ON THE TRAINING WELL PROBABLY AFFECTED QUALITY OF EMULATION ON CORRESPONDING INTERVAL OF THIS WELL.

ANY ERRORS IN THE TRAINING WELL OPEN HOLE DATA CAN PERPETUATE THROUGH AS AN

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

BOND LOG IS DEPTH REFERENCE LOG

ANALYST: ALEXANDR KOTOV

NEO RESULTS FOR BRUTON 19-05W (G-SAND)

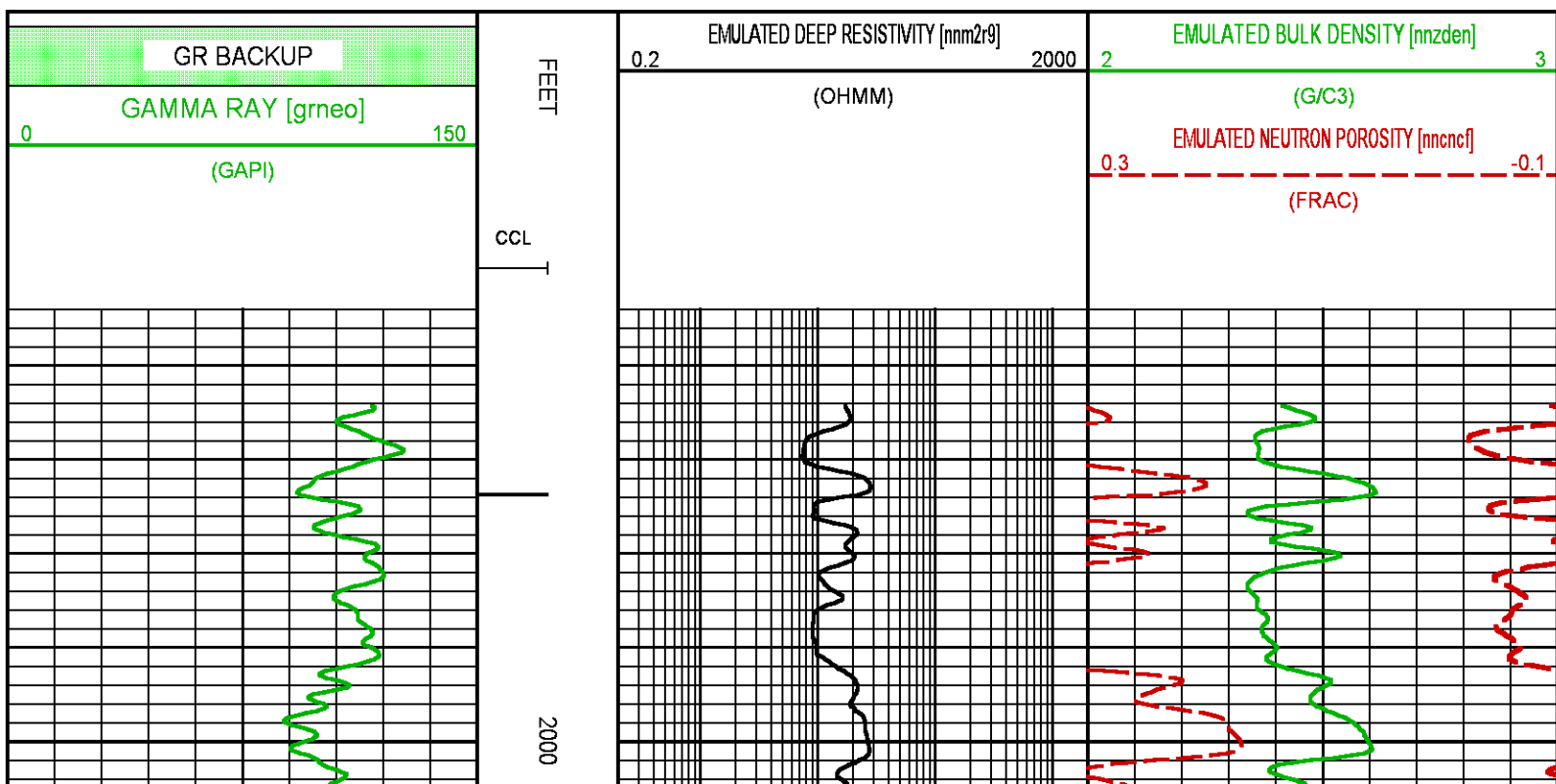
ECLIPS ECPLLOT from ECLIPS 7.0 WFM 5.0.7343.1 Sun 02/07/2016 16:48:51.73

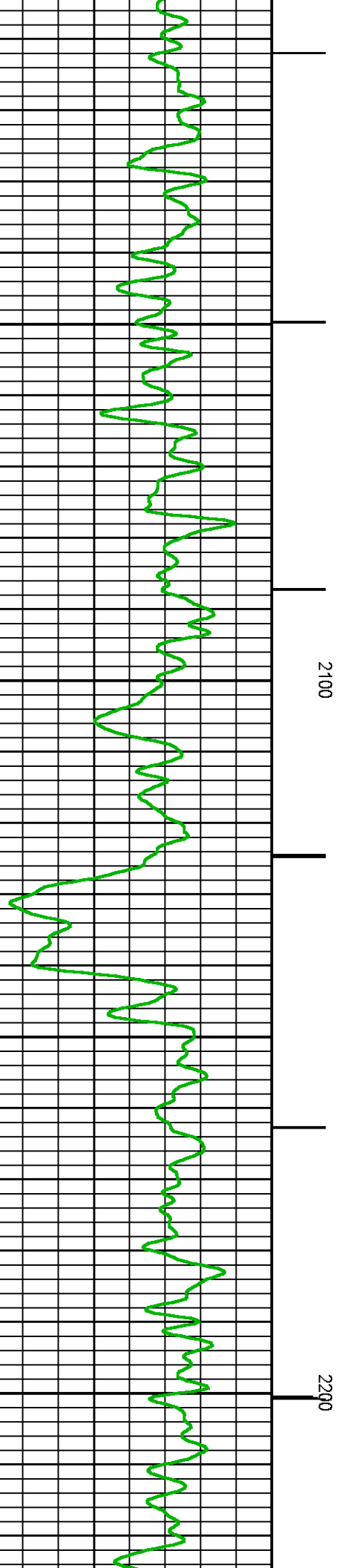
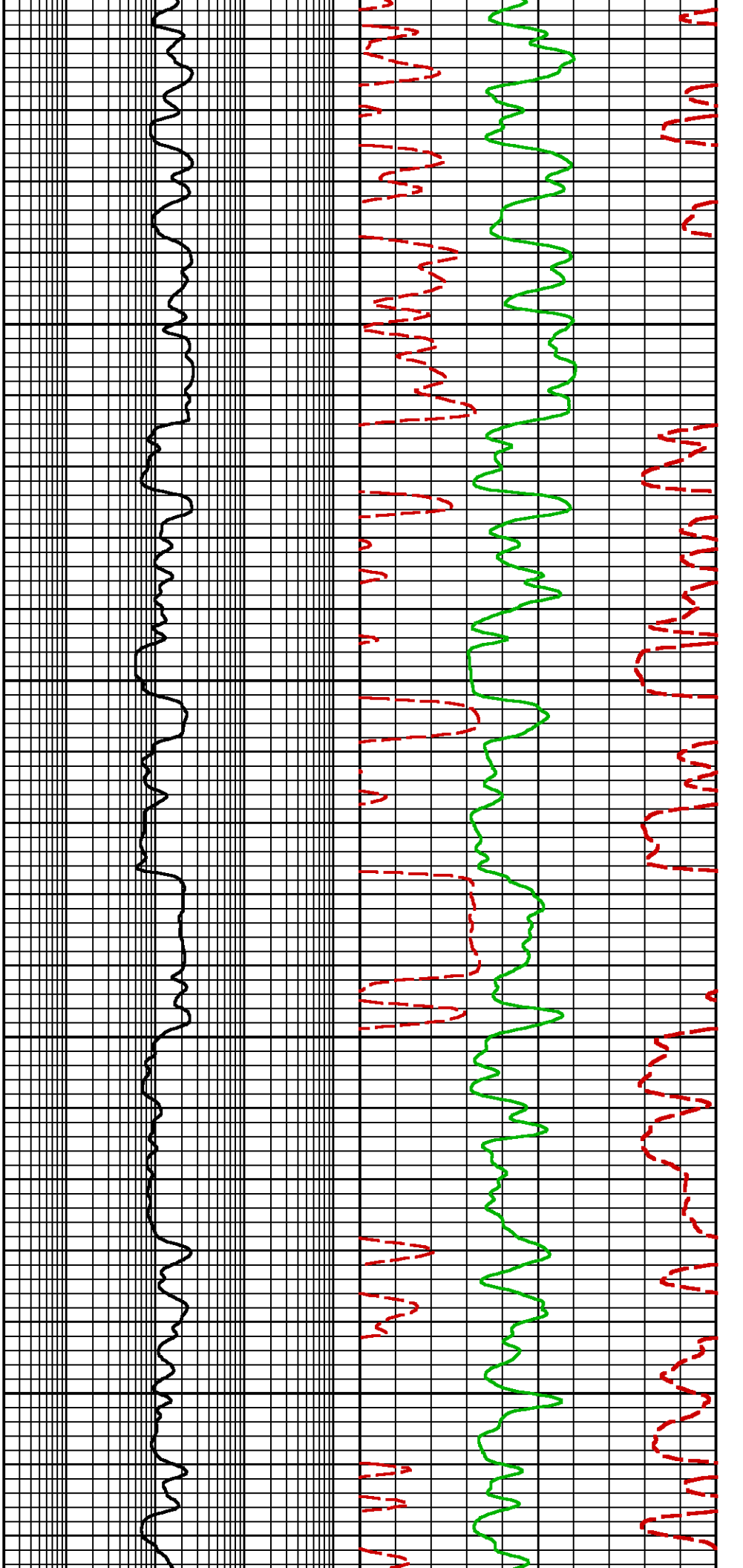
Plotted: Fri Oct 27 12:46:51 2017

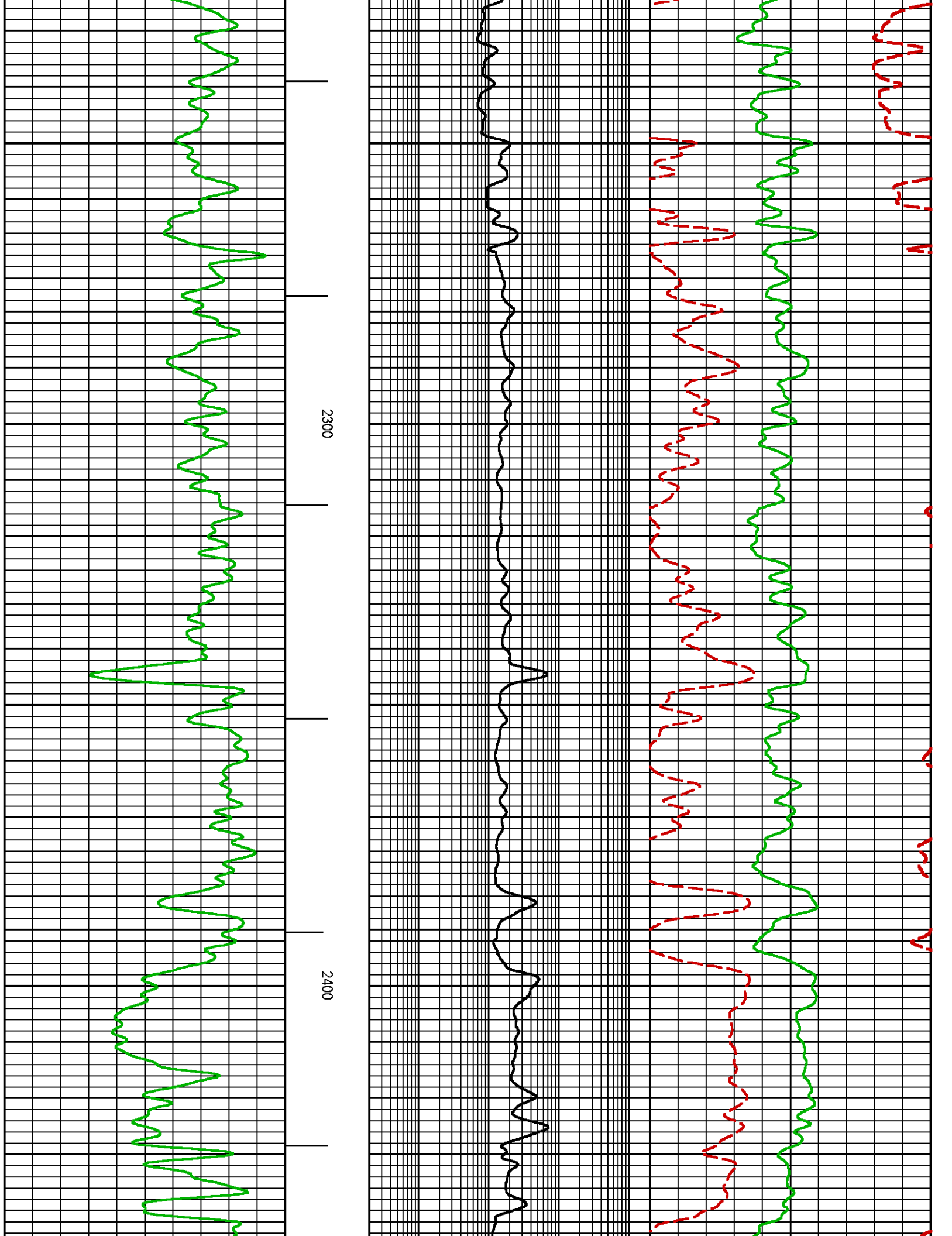
CURVE MEASURE POINT OFFSET

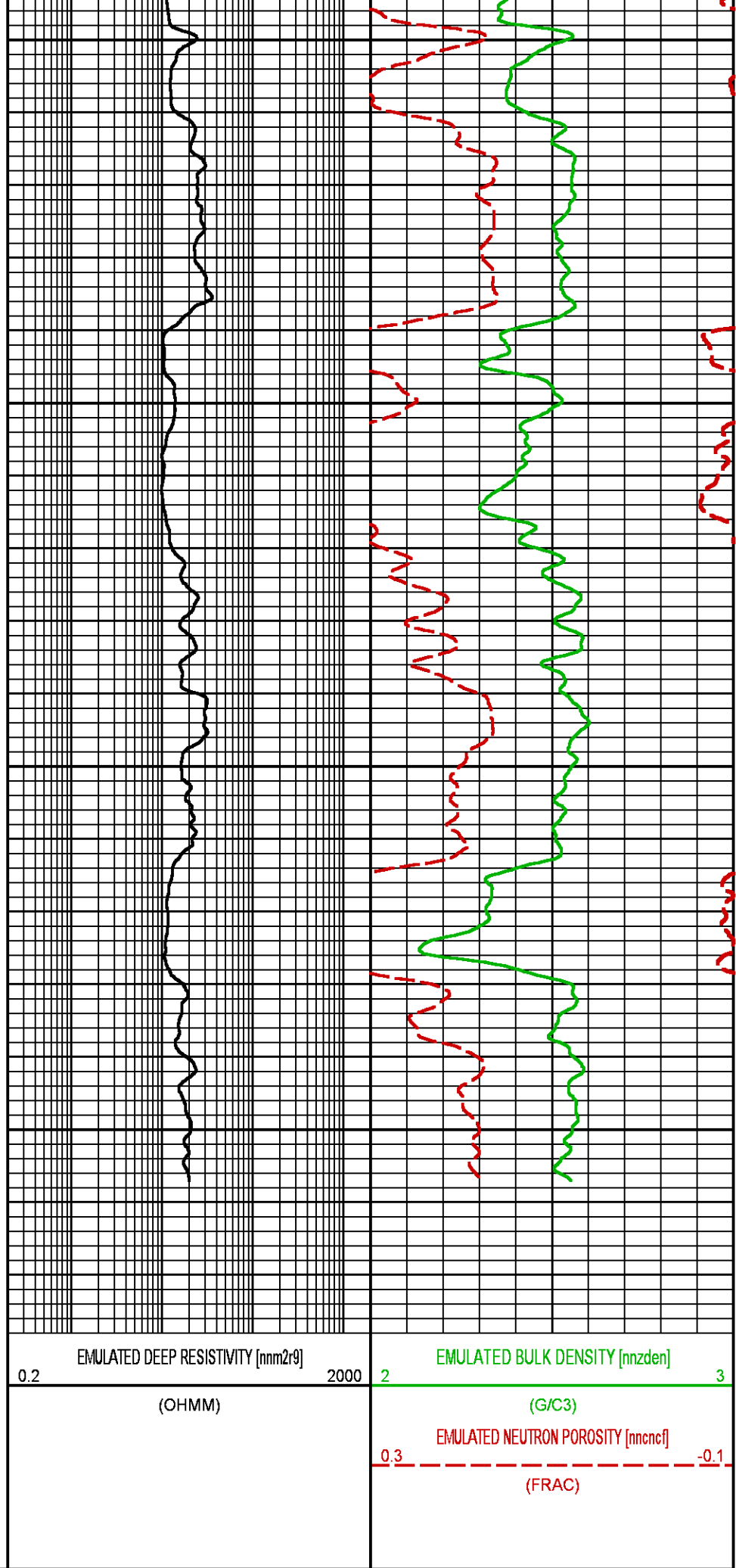
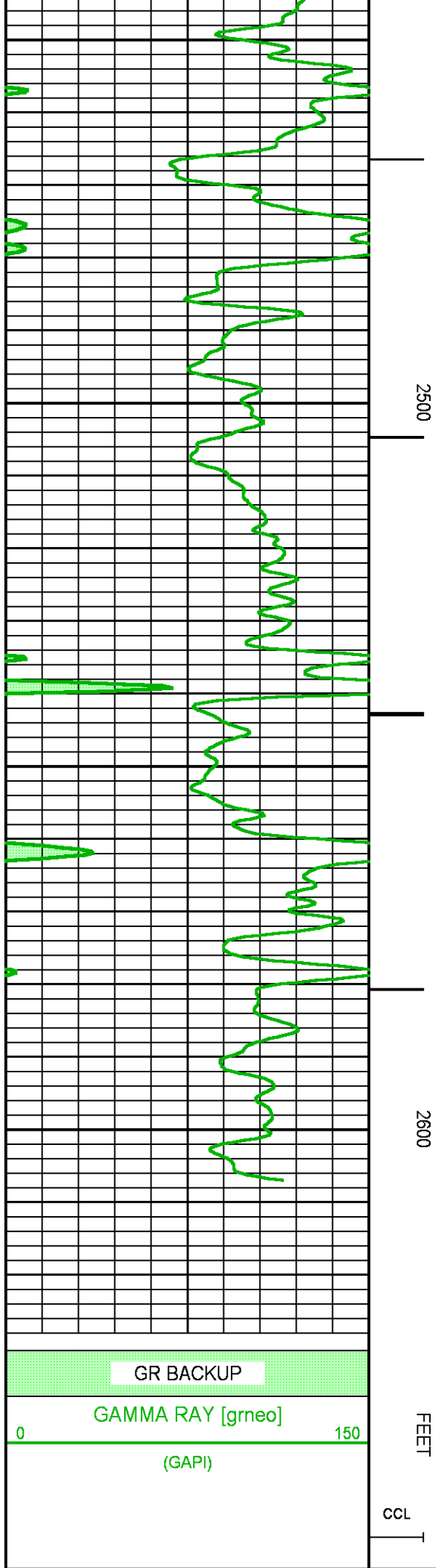
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	0.00	NNCNC	0.00	NNZDEN	0.00		
GRNEO	0.00	NNM2R9	0.00				

Project : NA
User : kotoale
Presentation : BHI1F65XZ1:D:\Ape_Projects\LARAMIE_19_05W_NEO\
NEO_PRESENTATION_LARAMIE_G-Sand.pdf [5"/100' Scale]
Plot Interval : 1954 - 2628 Feet
Data File 1 : F1 : BHI1F65XZ1:D:\Ape_Projects\LARAMIE_19_05W_NEO\Merged_Set_Final.xtf
Created On : N/A
Company : LARAMIE ENERGY
Well : BRUTON 19-05W
Field : VEGA
File Interval : 1964.25 - 7579.25 Feet
OCT : NA









NEO RESULTS FOR BRUTON 19-05W (MAIN)

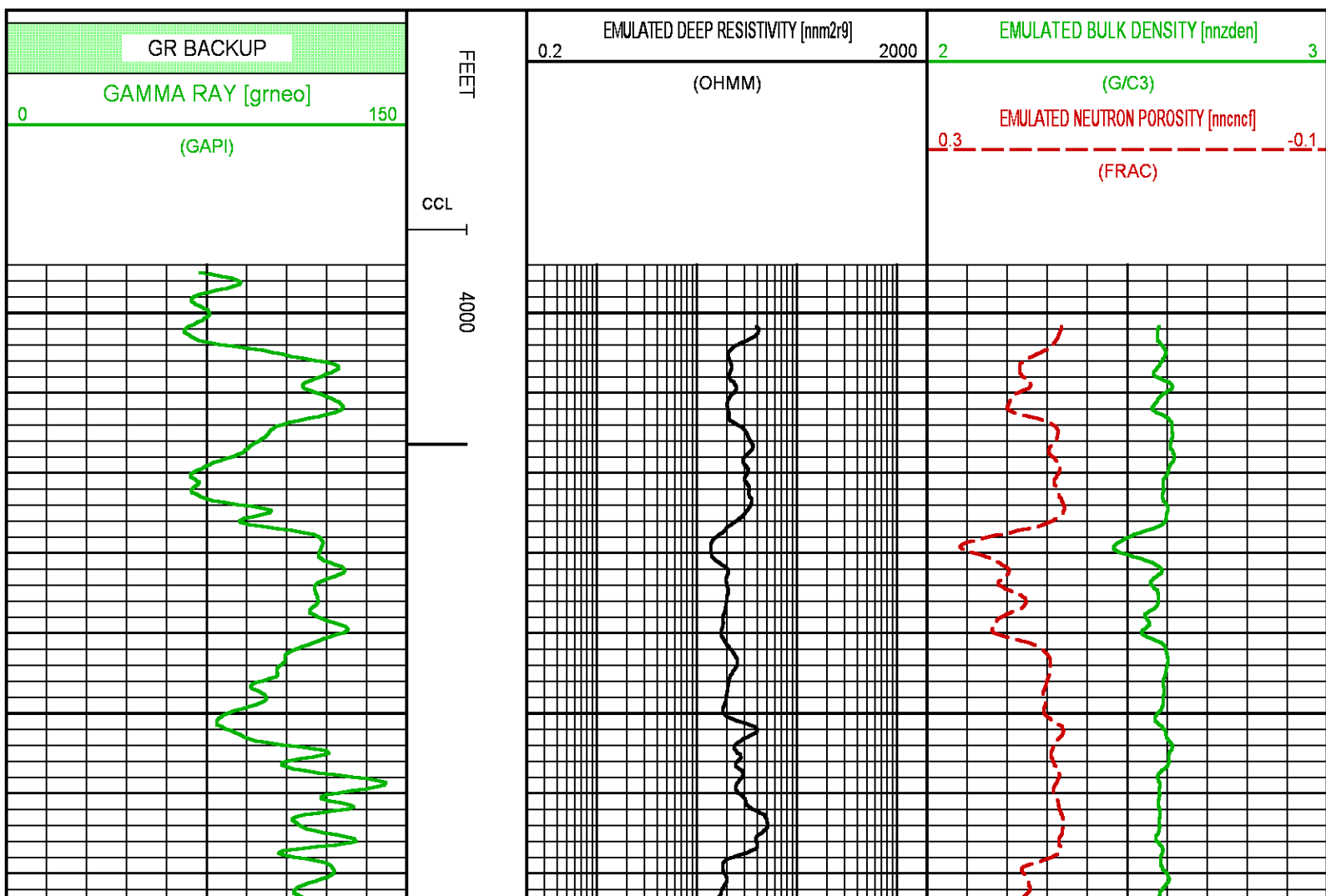
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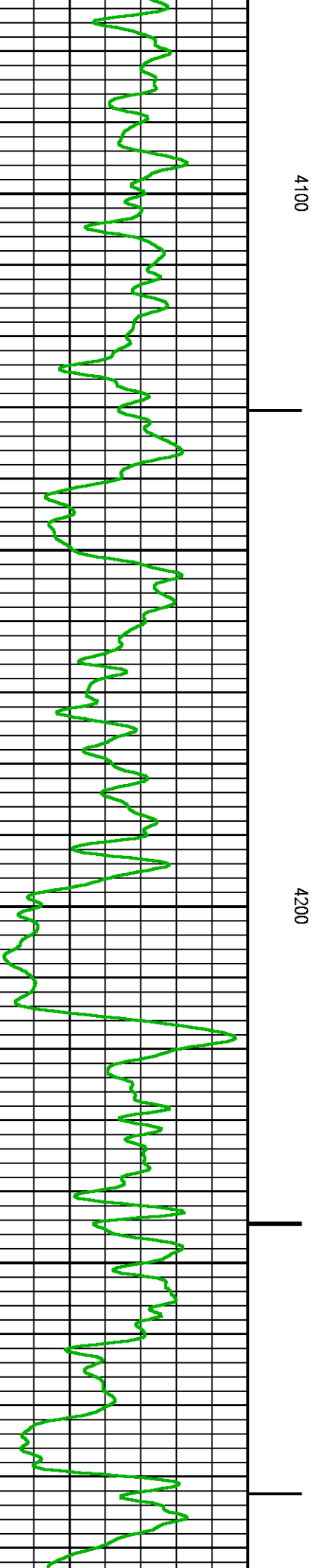
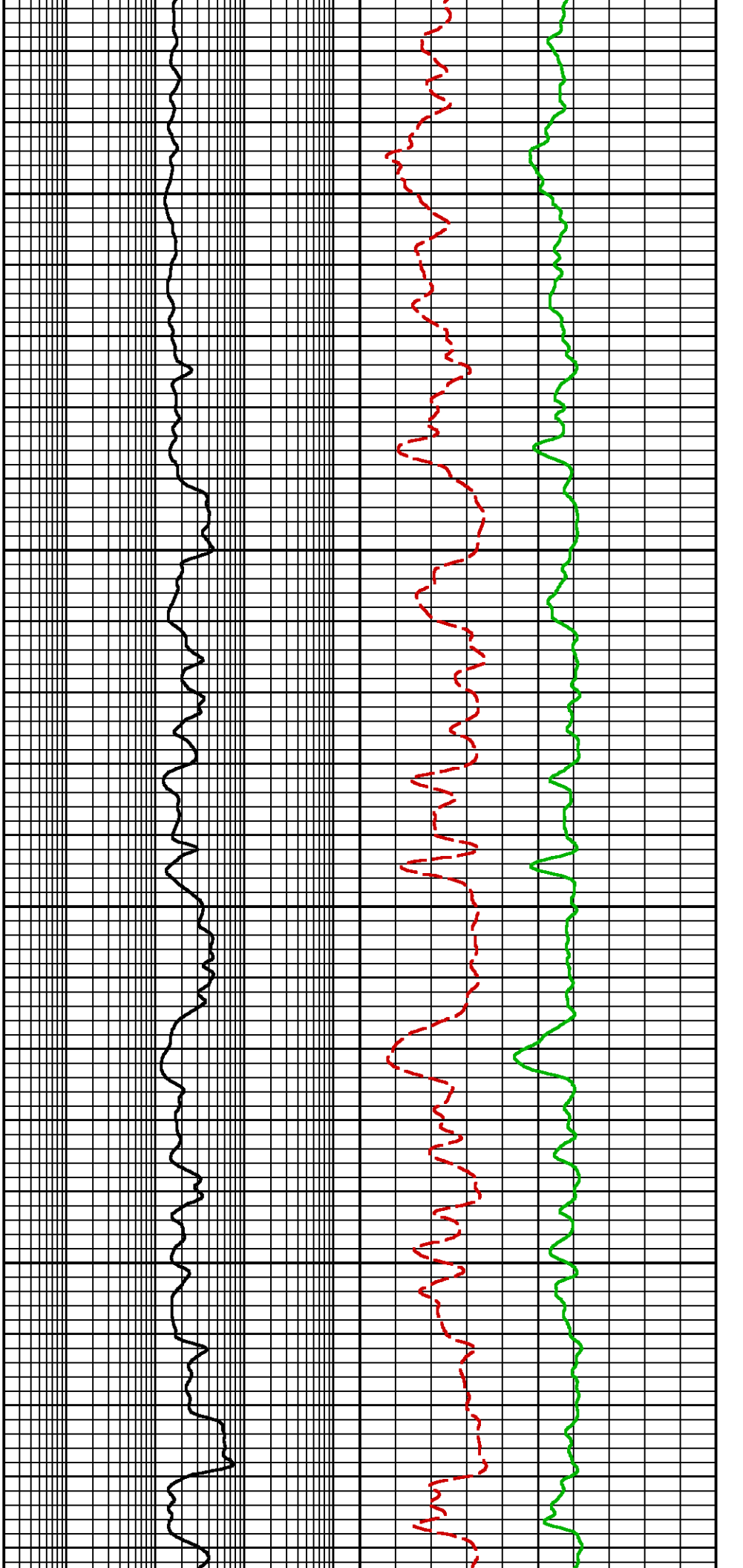
Plotted: Fri Oct 27 12:46:50 2017

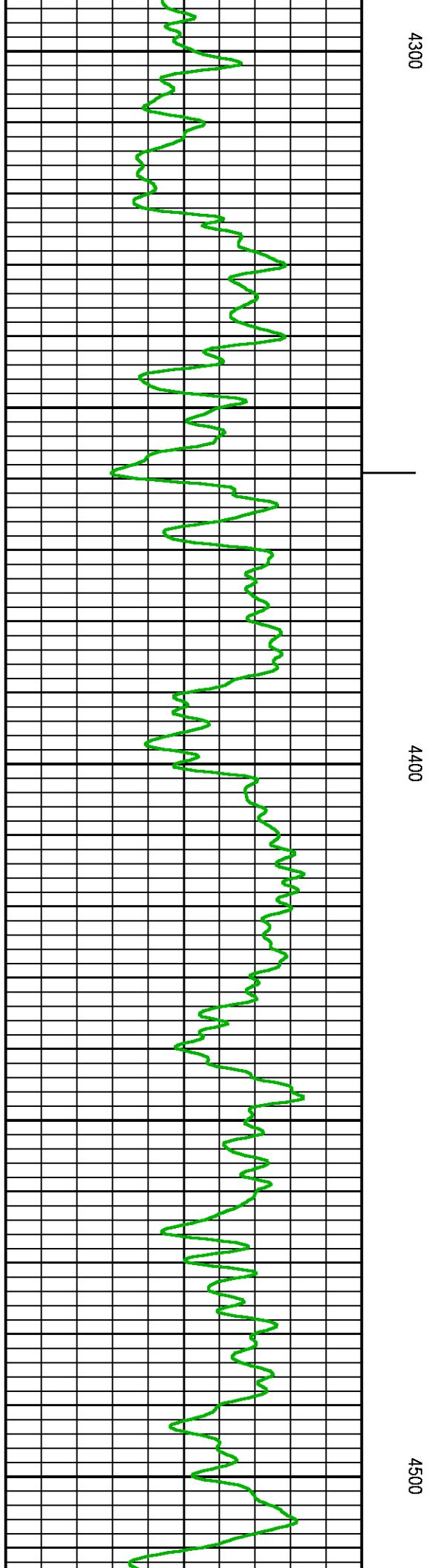
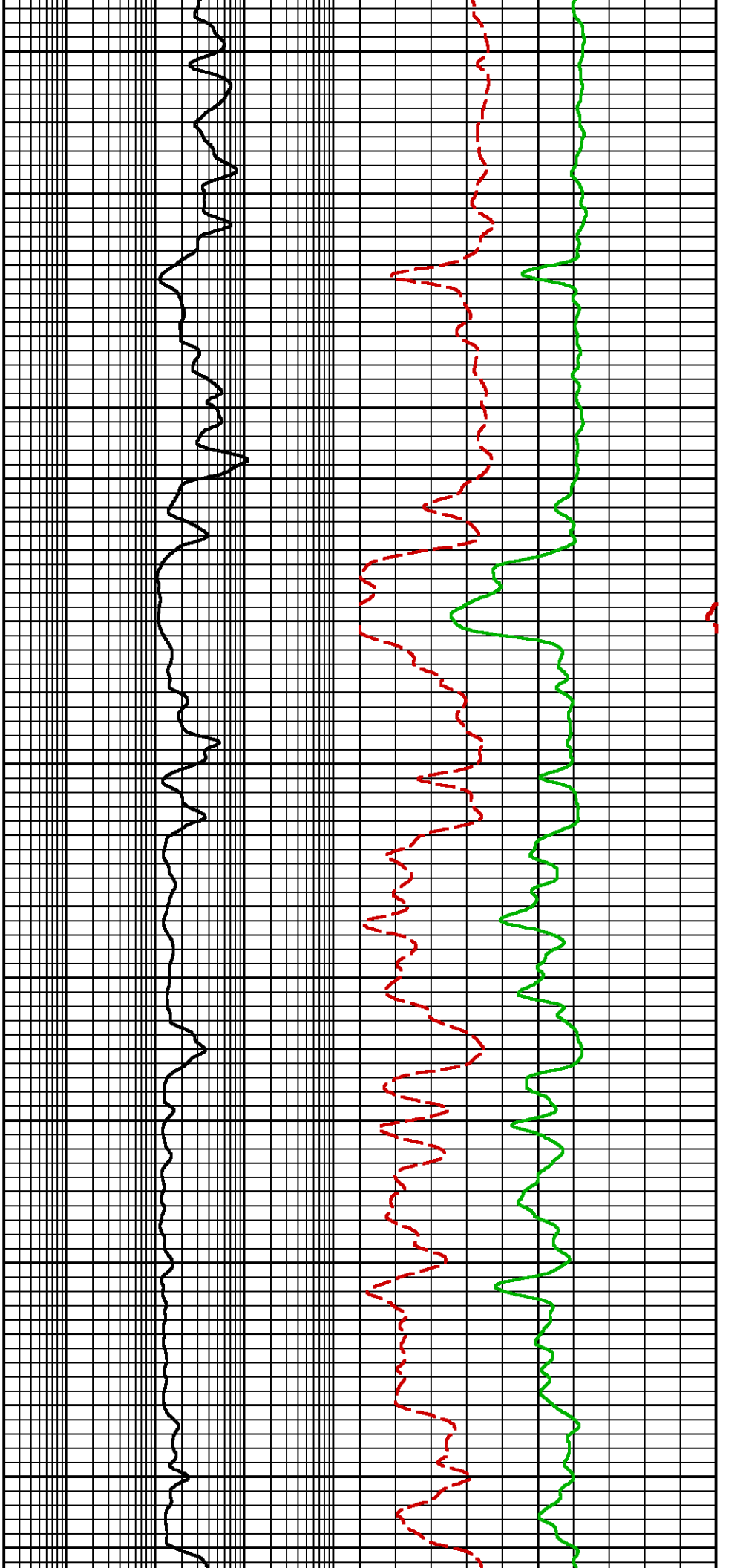
CURVE MEASURE POINT OFFSET

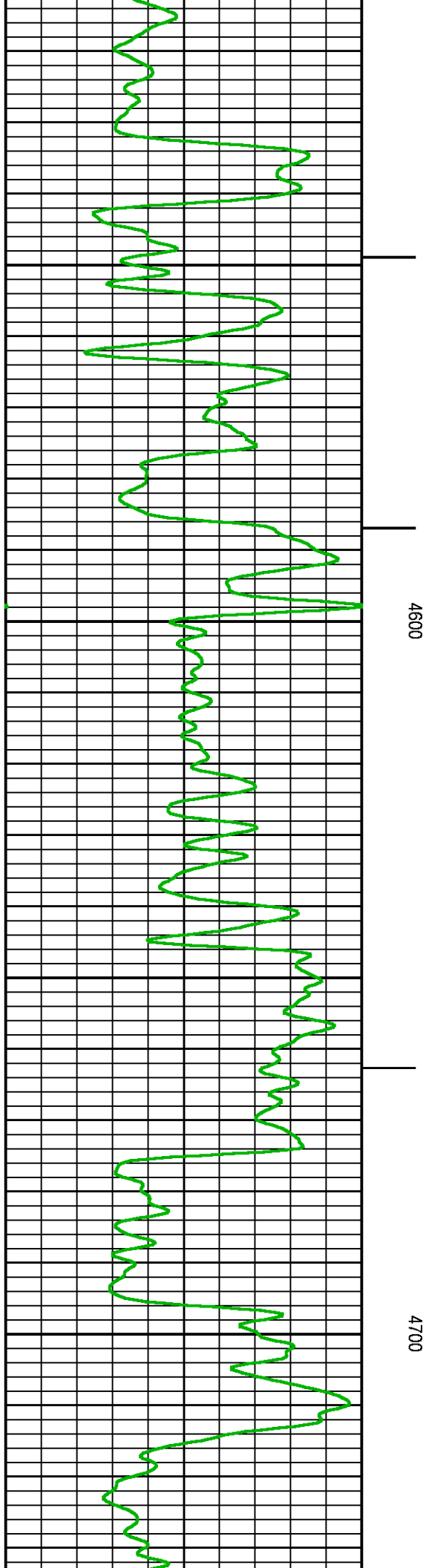
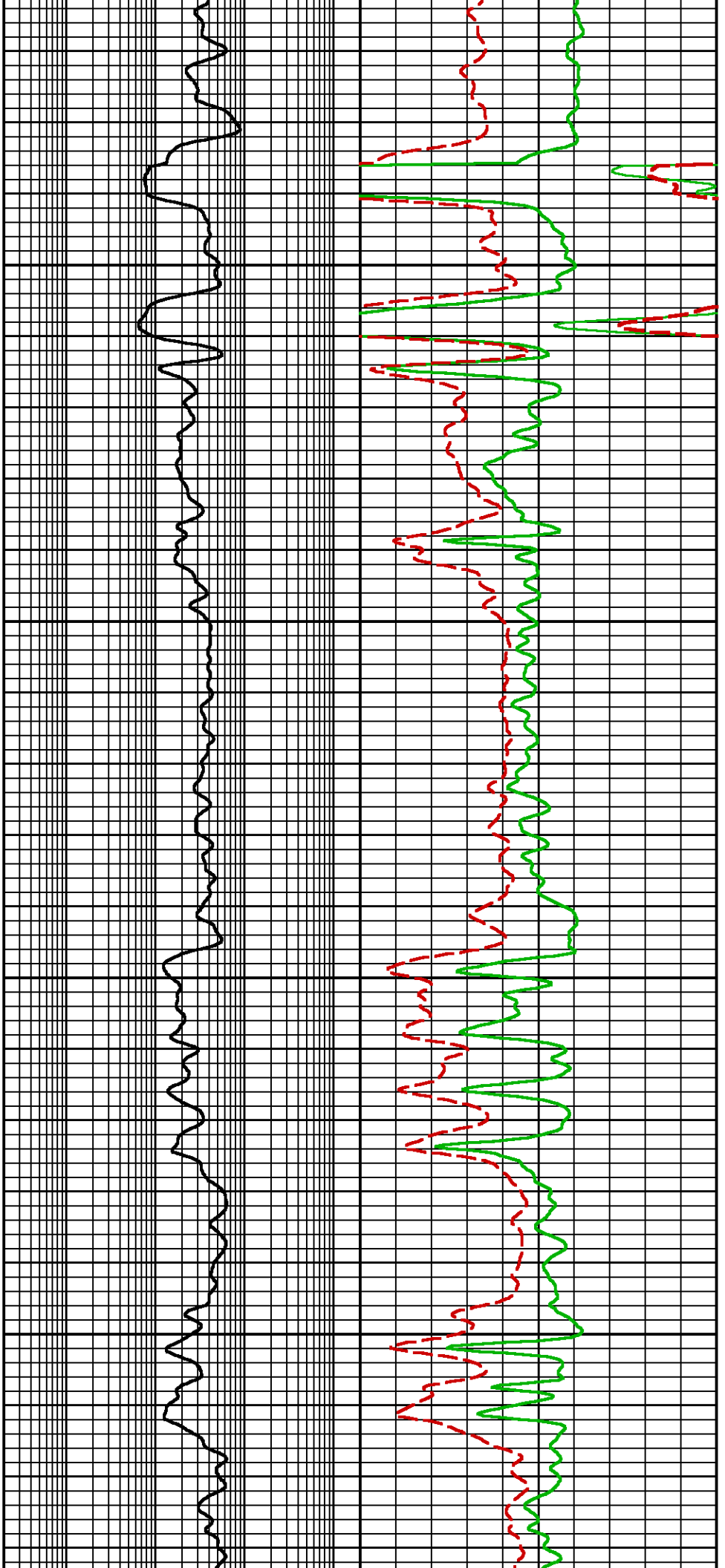
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	0.00	NNCNCf	0.00	NNZDEN	0.00		
GRNEO	0.00	NNM2R9	0.00				

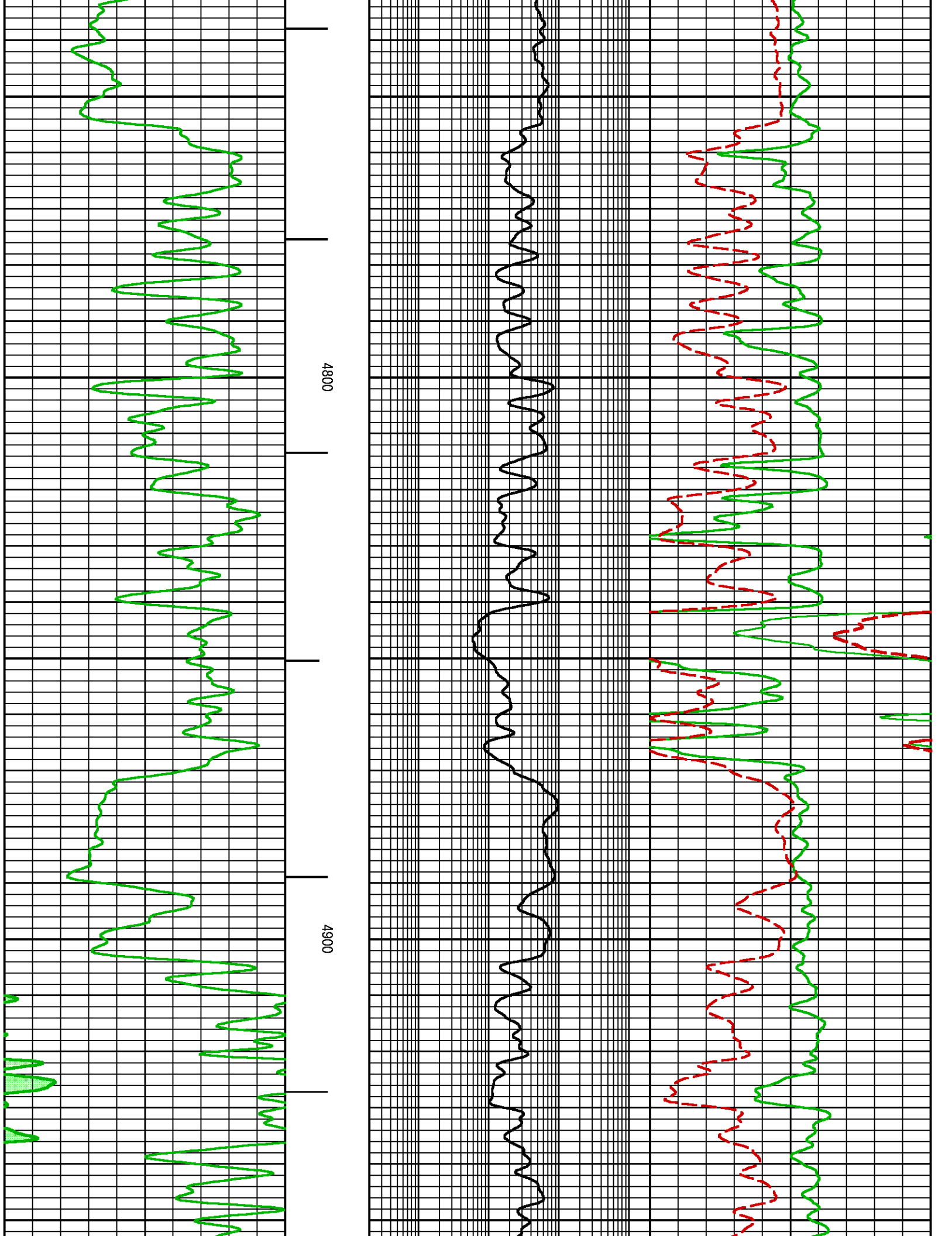
Project : NA
User : kotoale
Presentation : BHI1F65XZ1:D:\Ape_Projects\LARAMIE_19_05W_NEO\NEO_PRESENTATION_LARAMIE_MAIN.pdf [5"7/100" Scale]
Plot Interval : 3995 - 7579.25 Feet
Data File 1 : F1 : BHI1F65XZ1:D:\Ape_Projects\LARAMIE_19_05W_NEO\Merged_Set_Final.txt
Created On : N/A
Company : LARAMIE ENERGY
Well : BRUTON 19-05W
Field : VEGA
File Interval : 1964.25 - 7579.25 Feet
OCT : NA

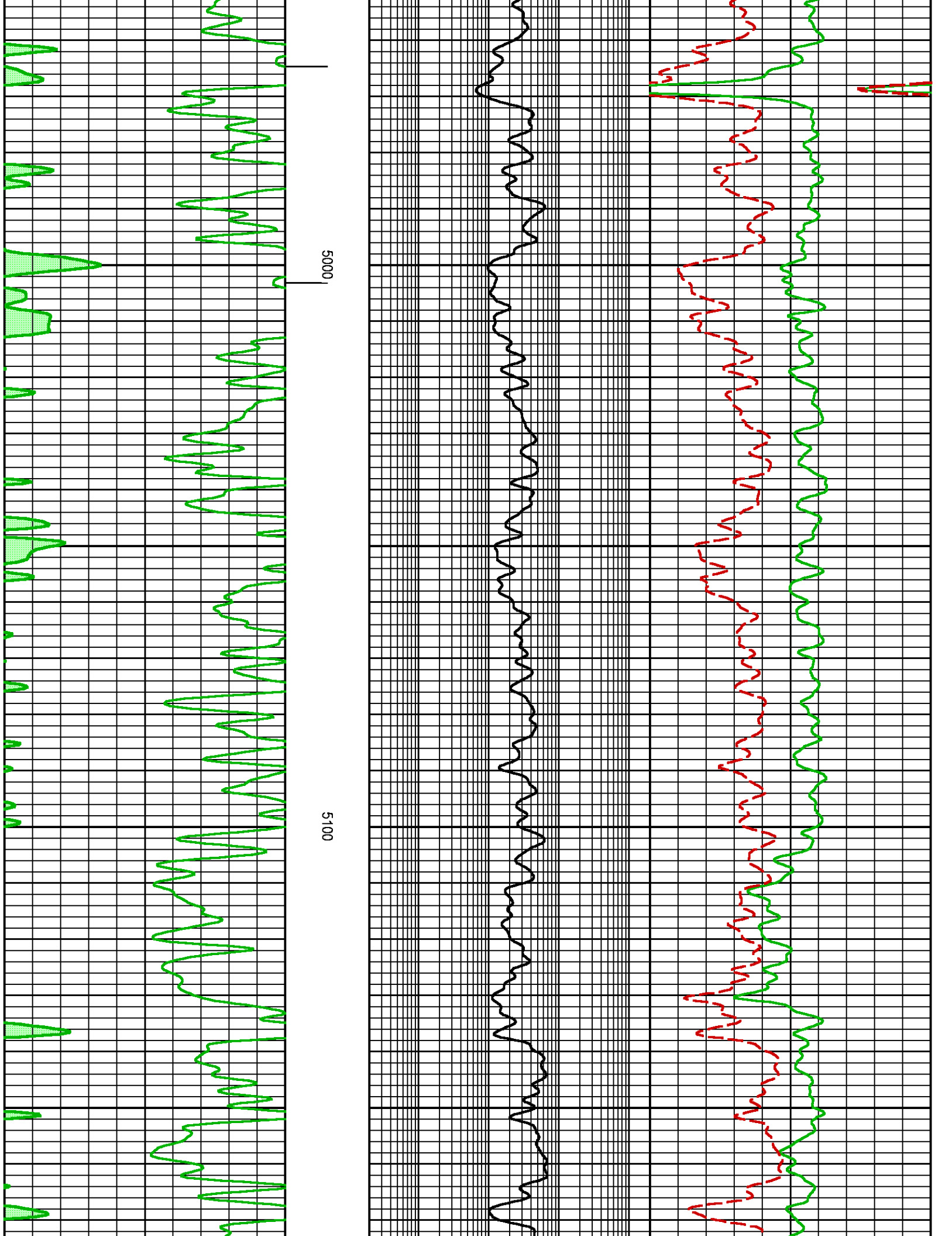


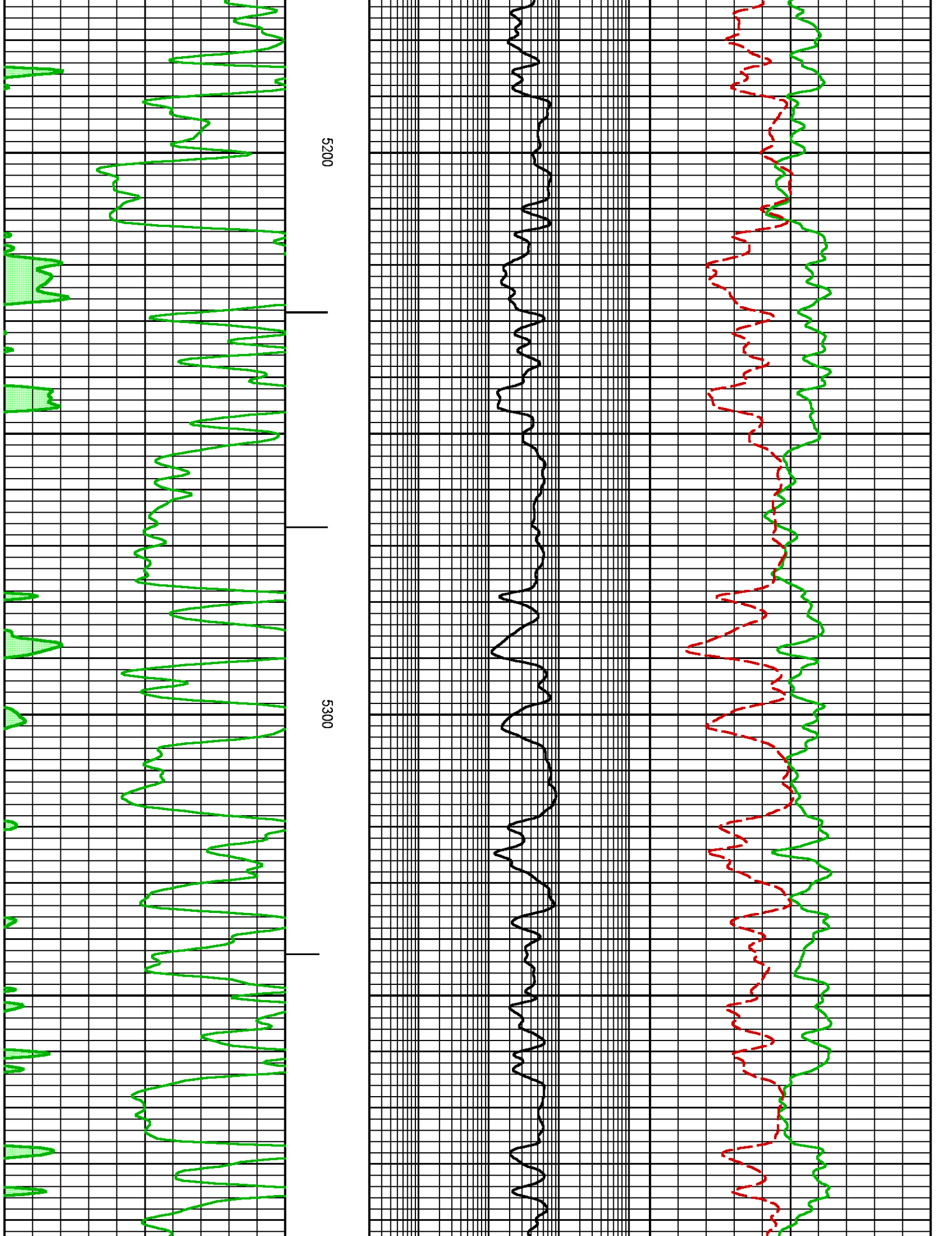


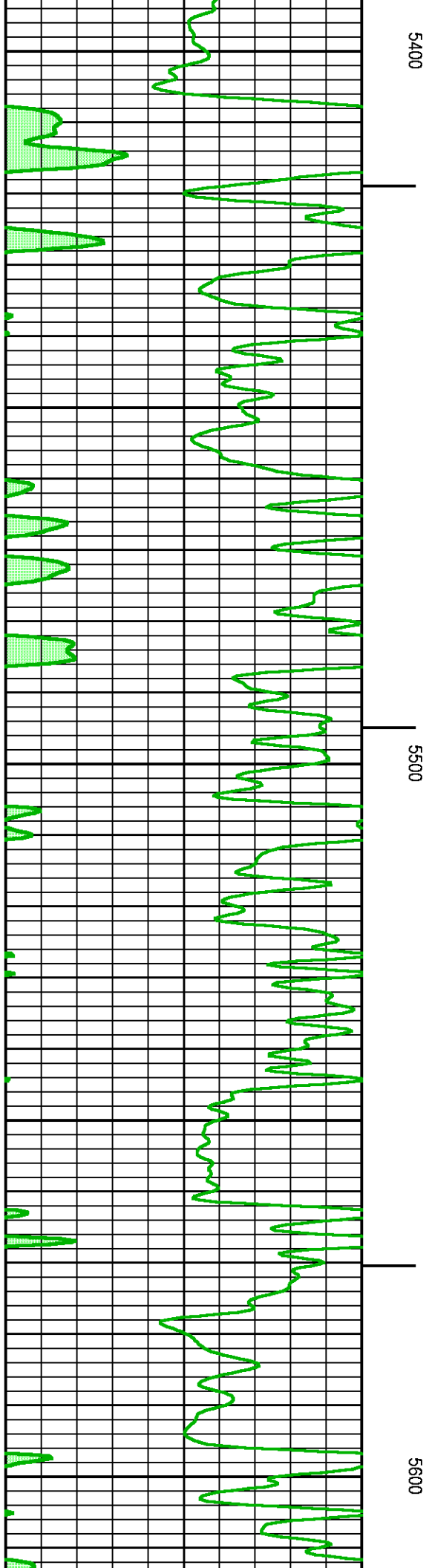
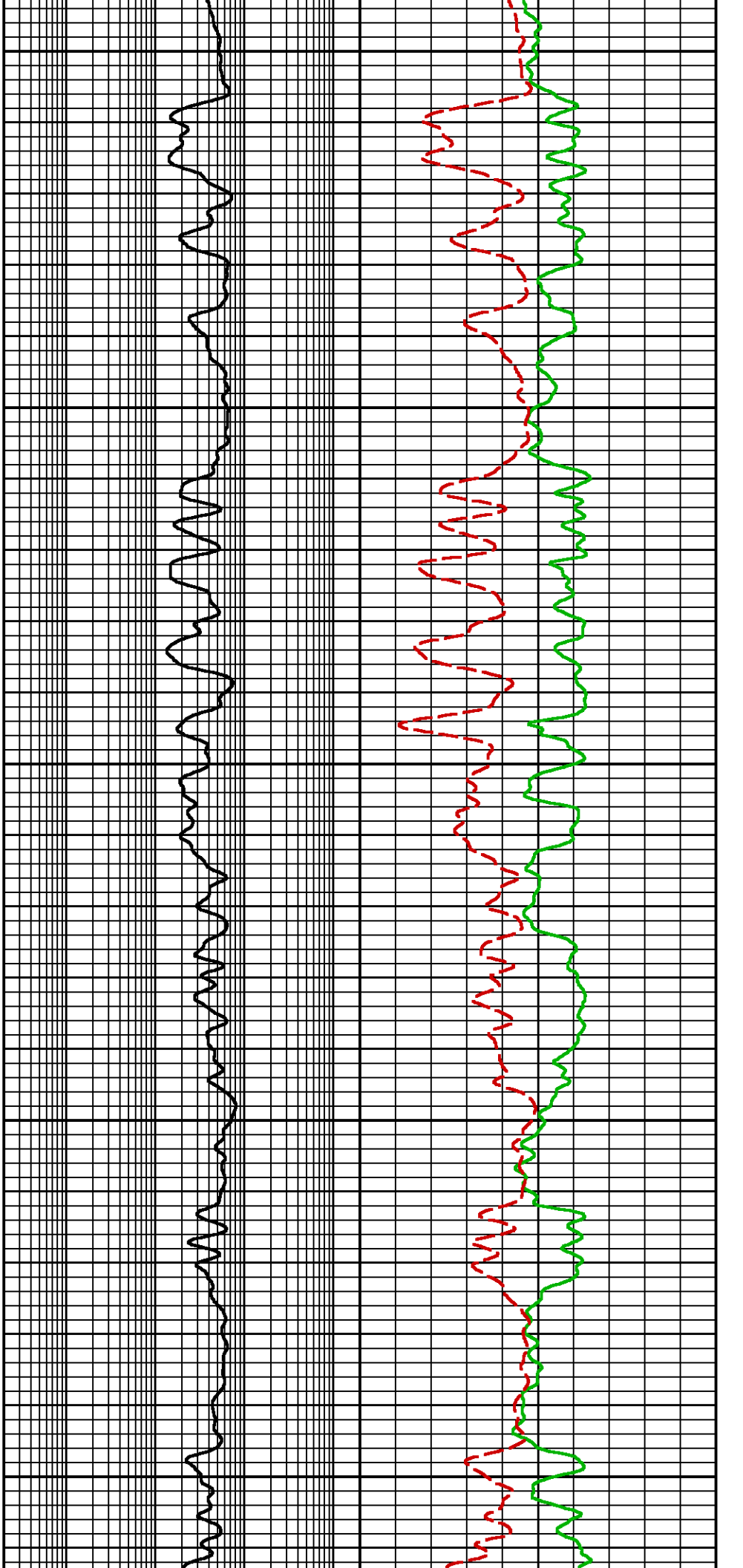


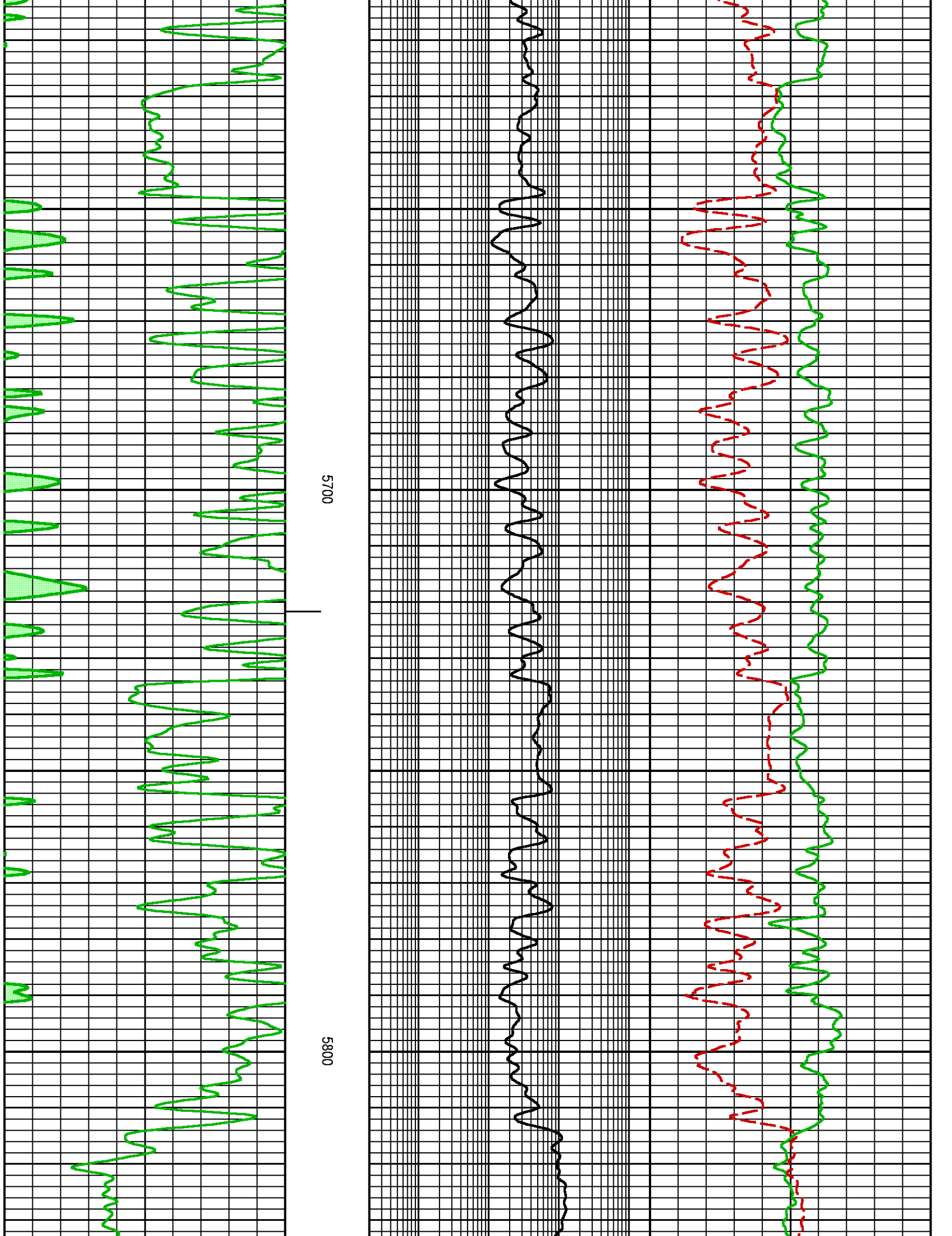


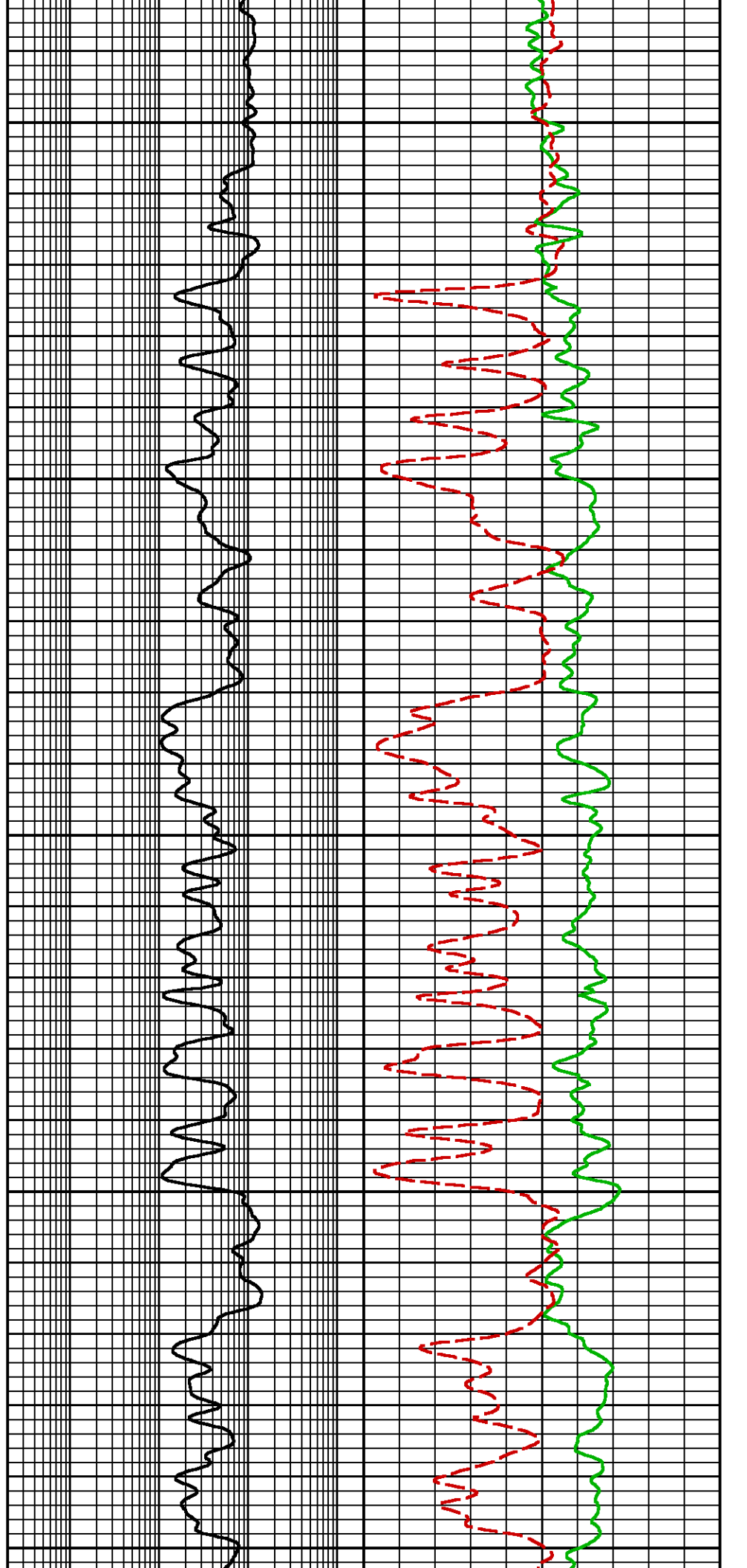
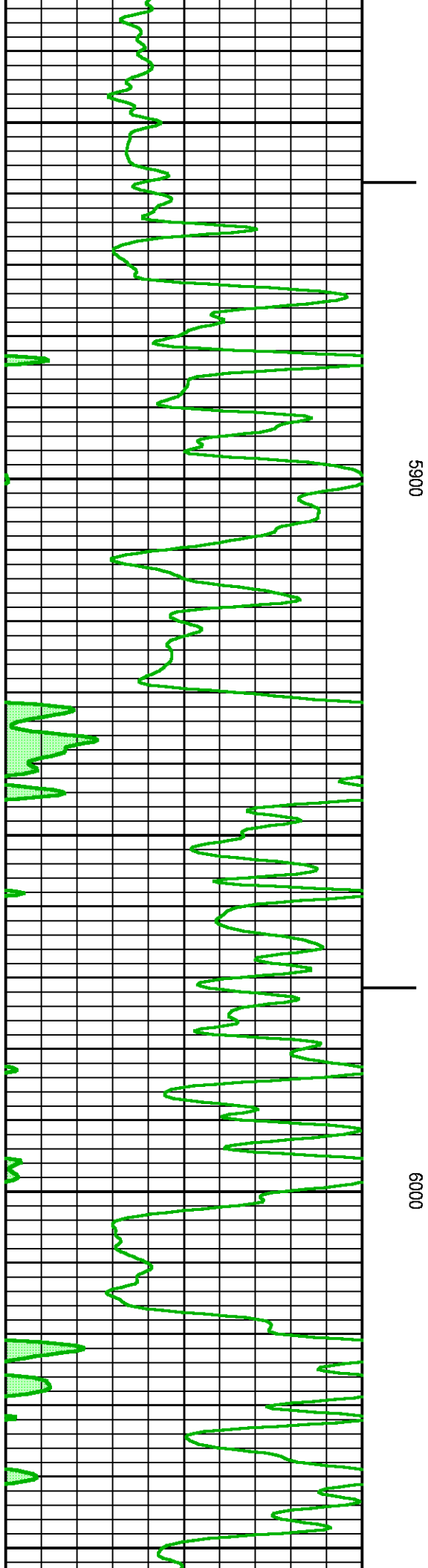


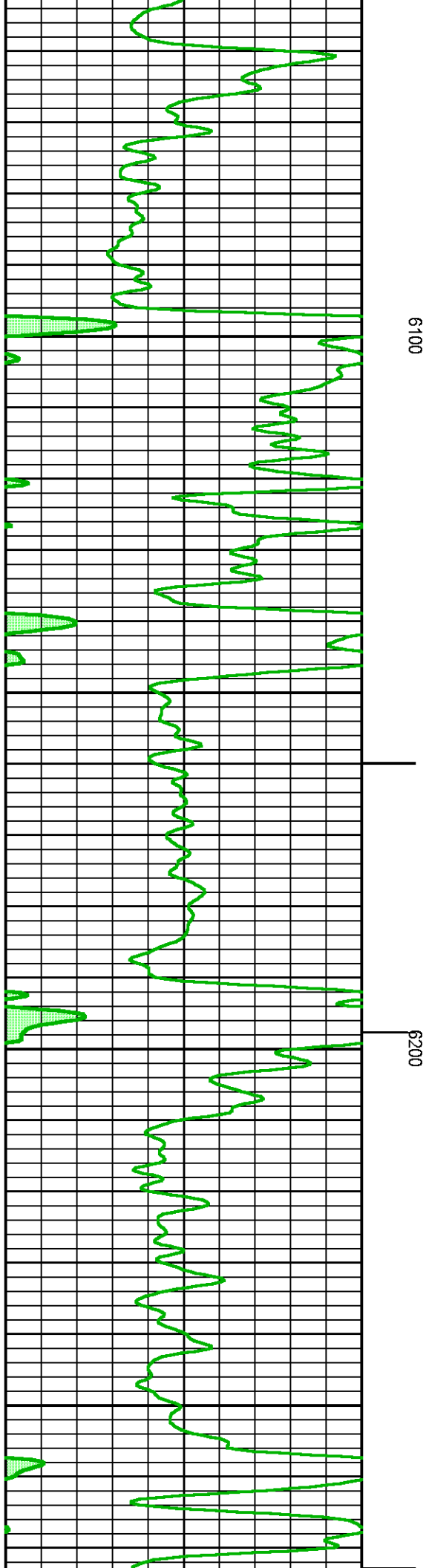
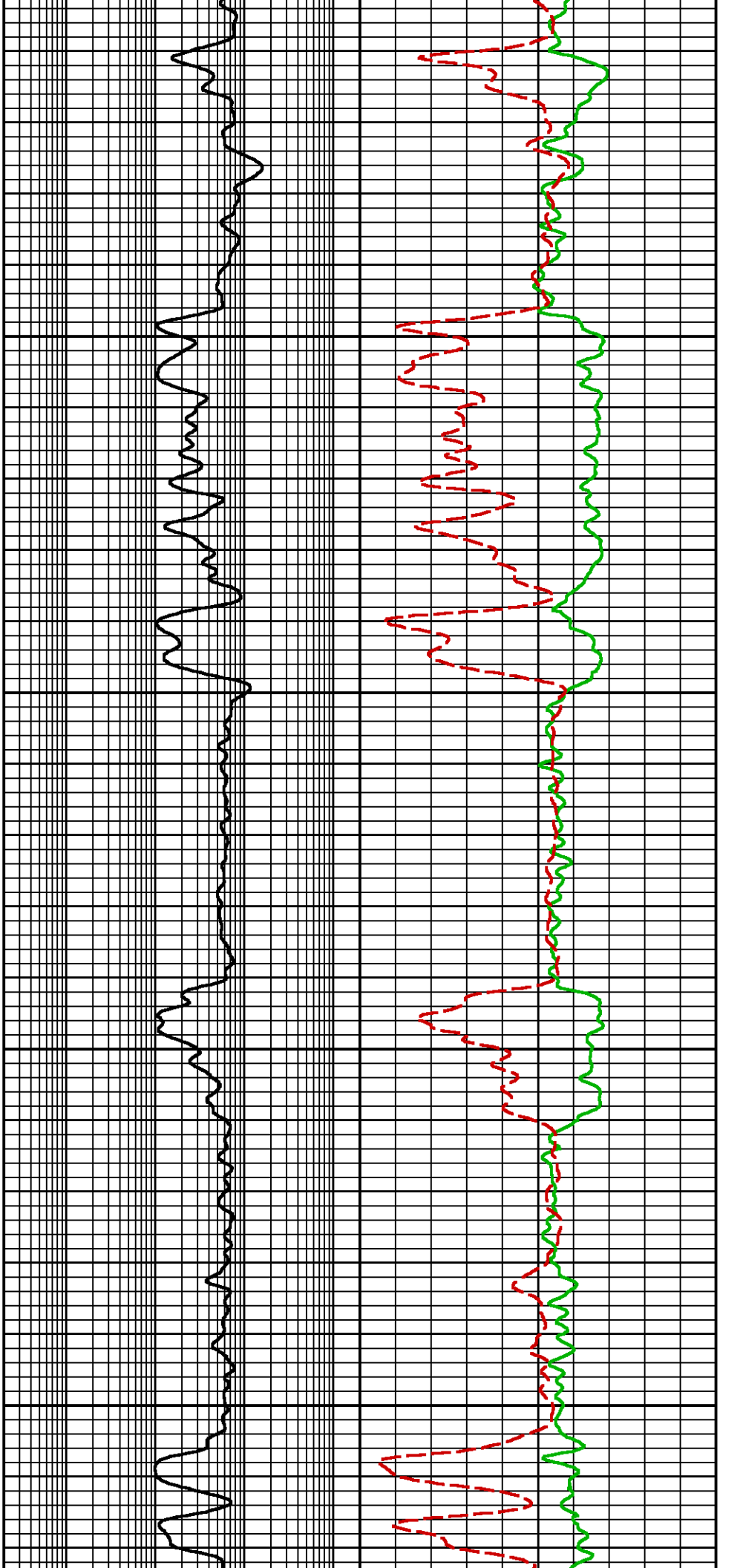


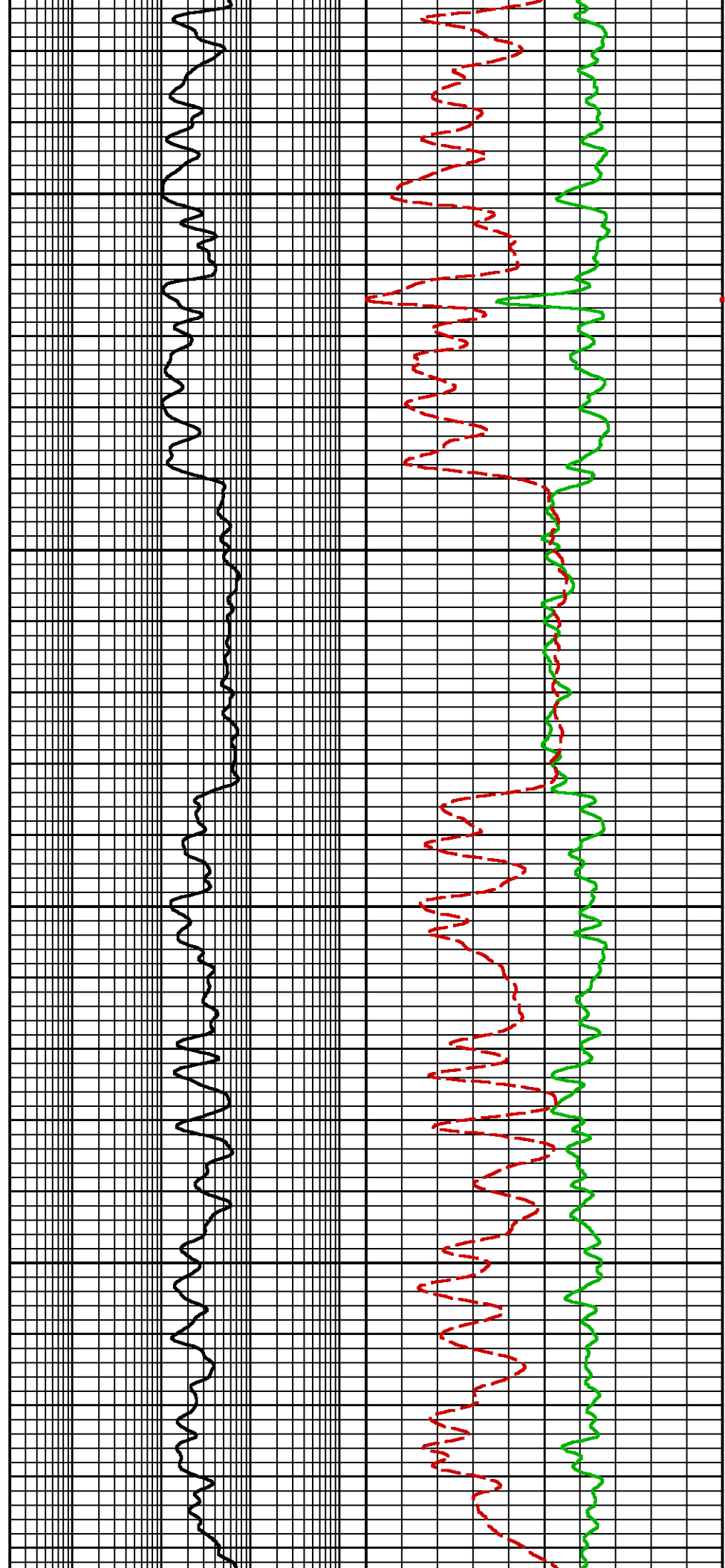
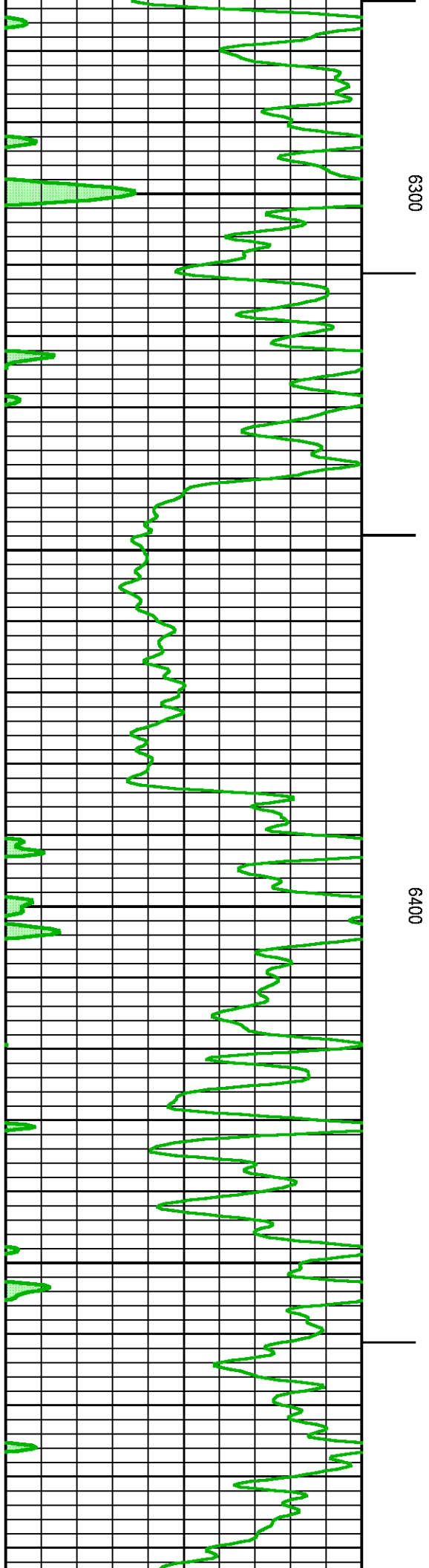


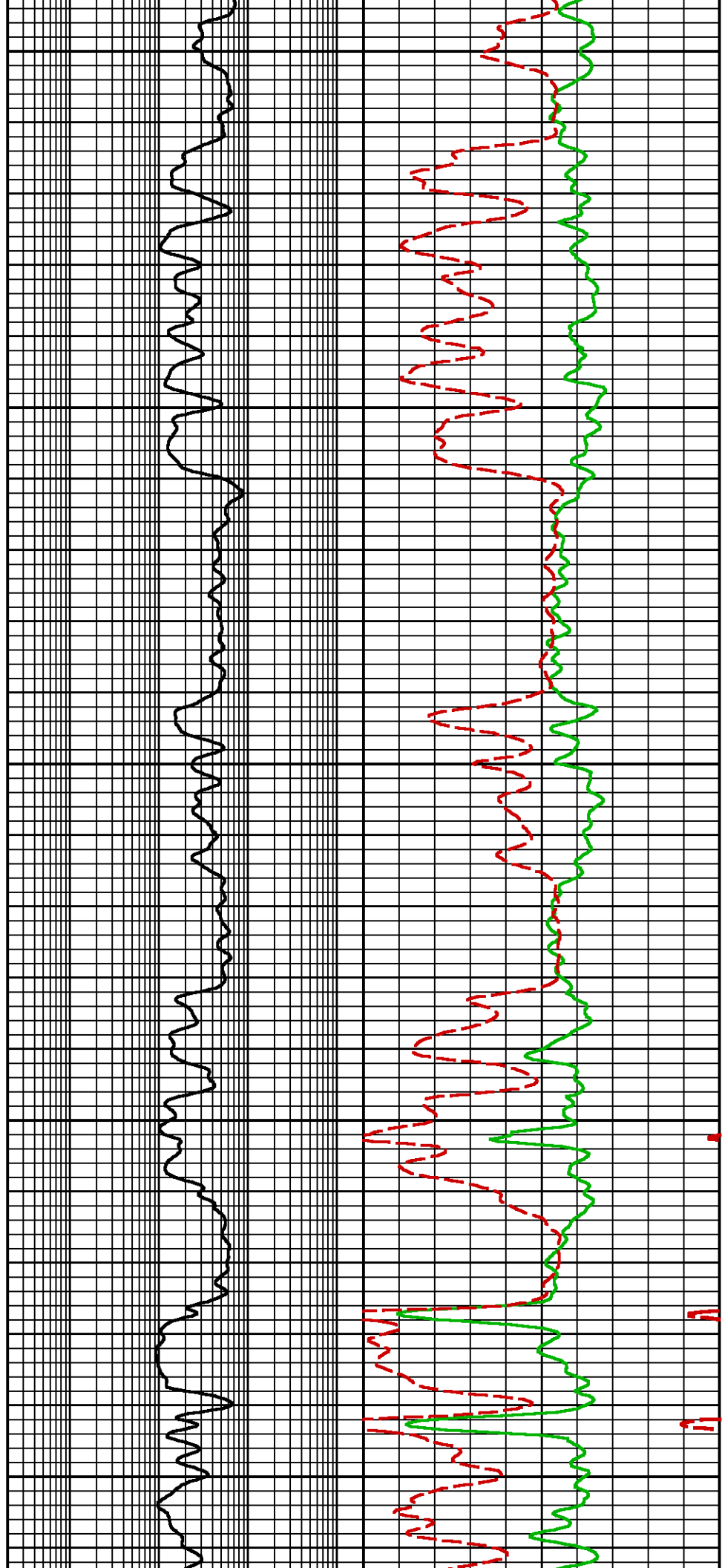
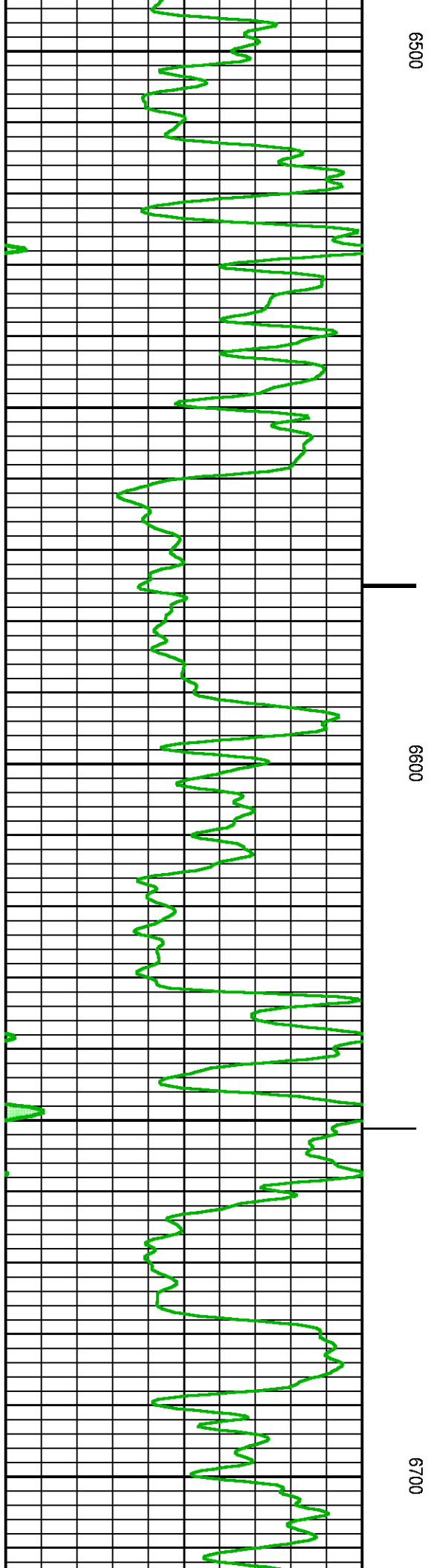


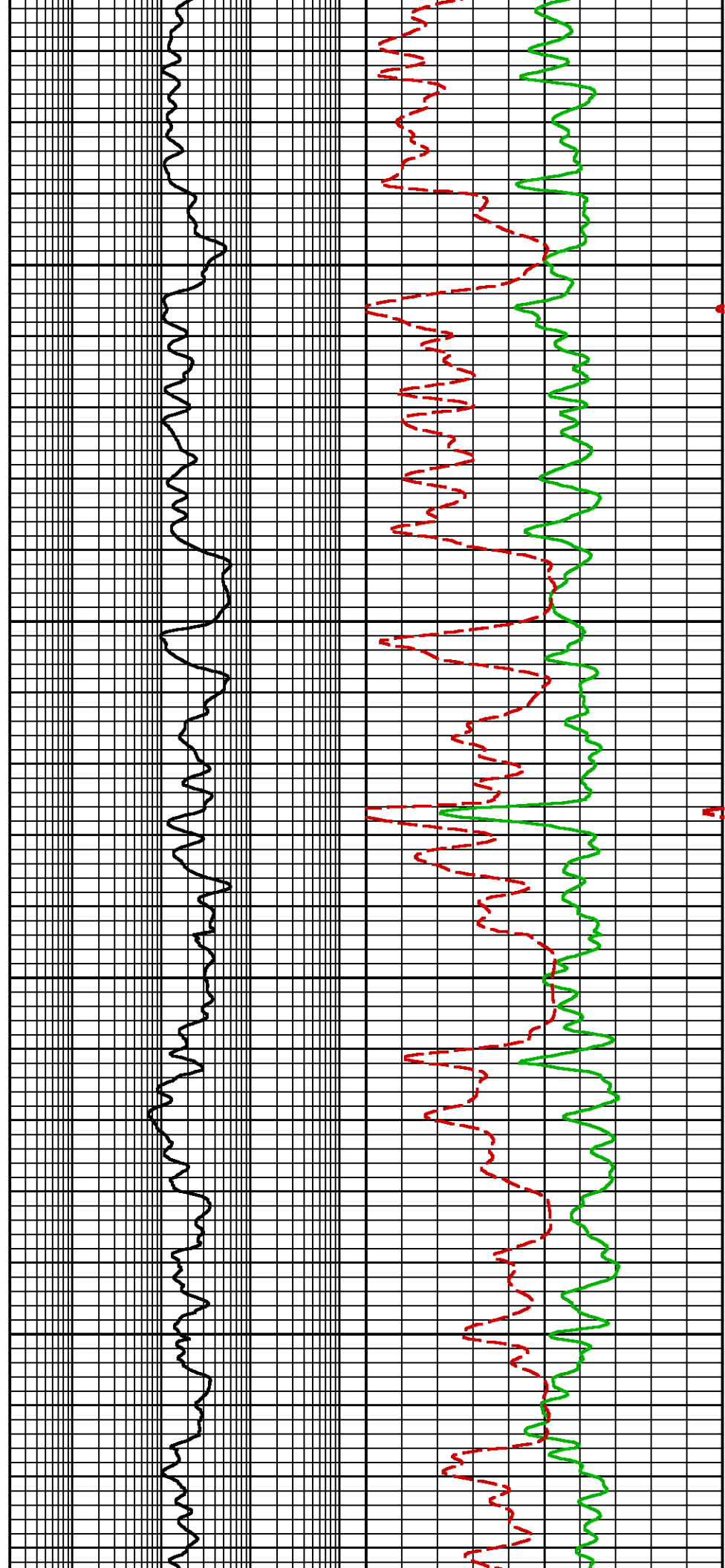
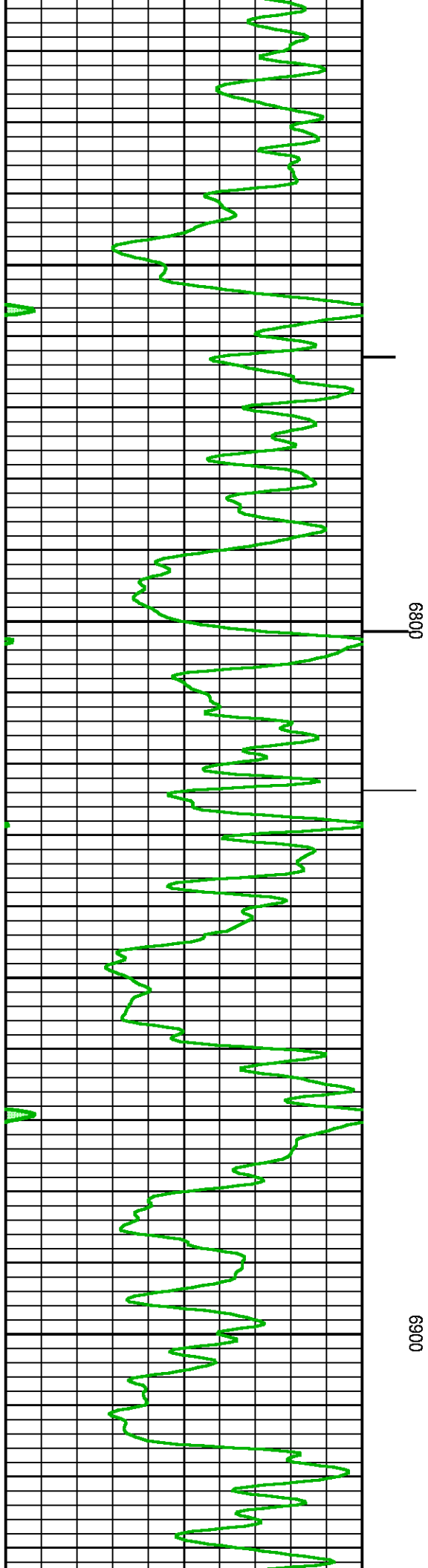


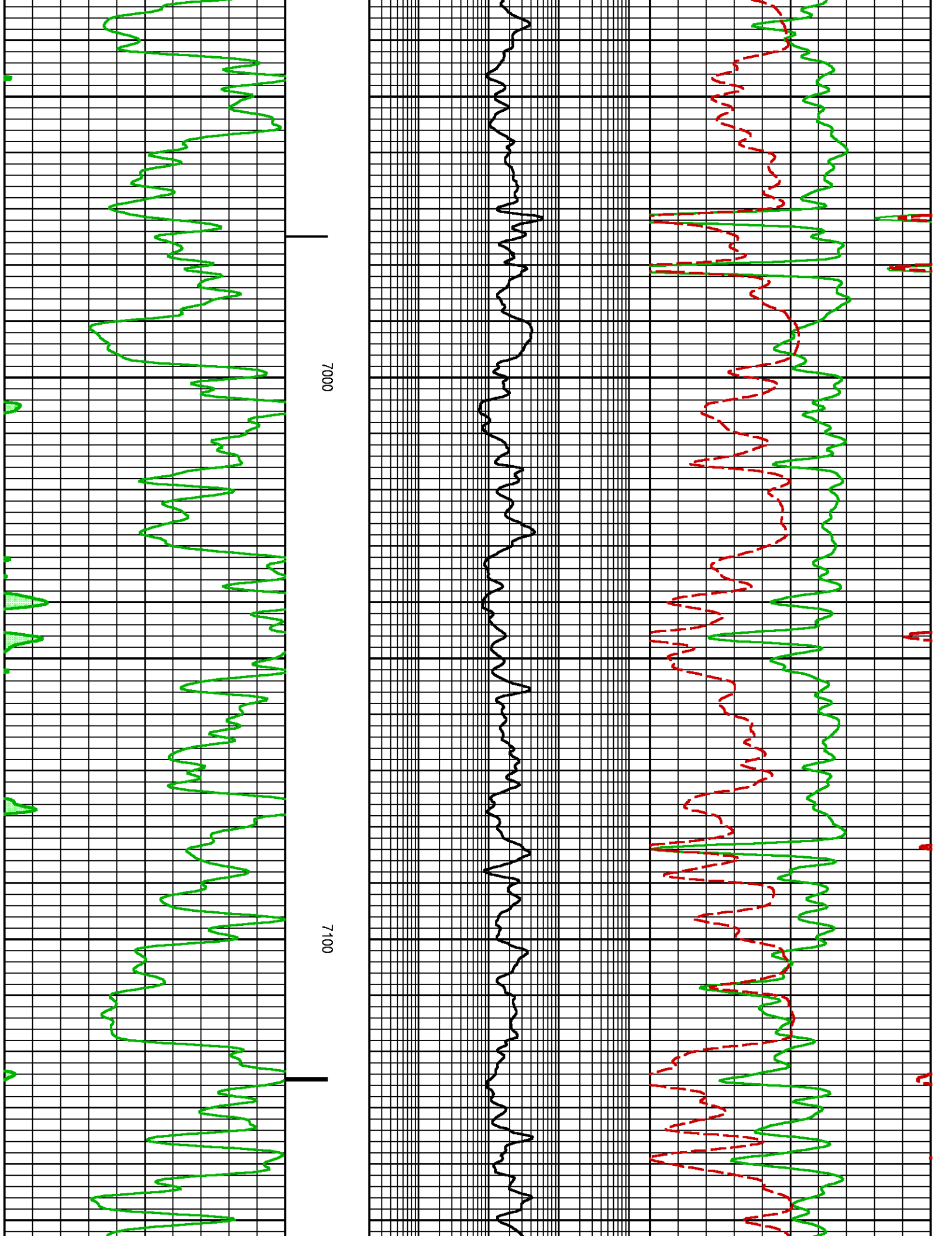


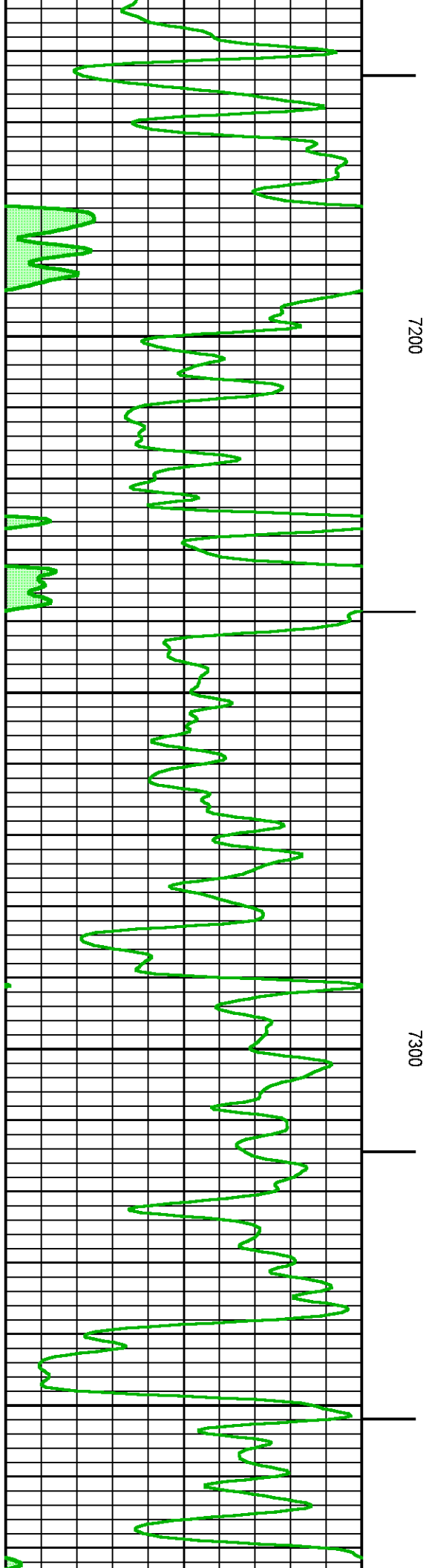
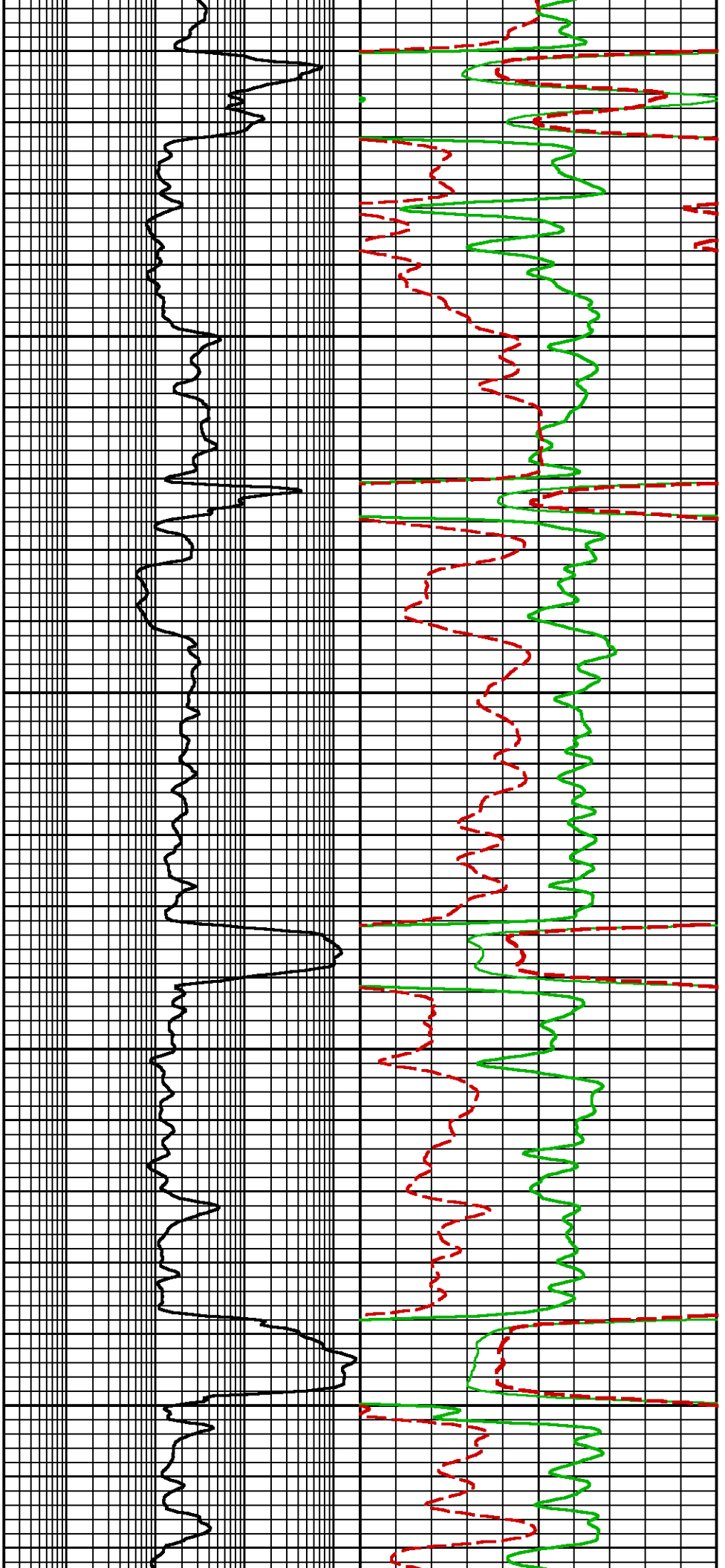


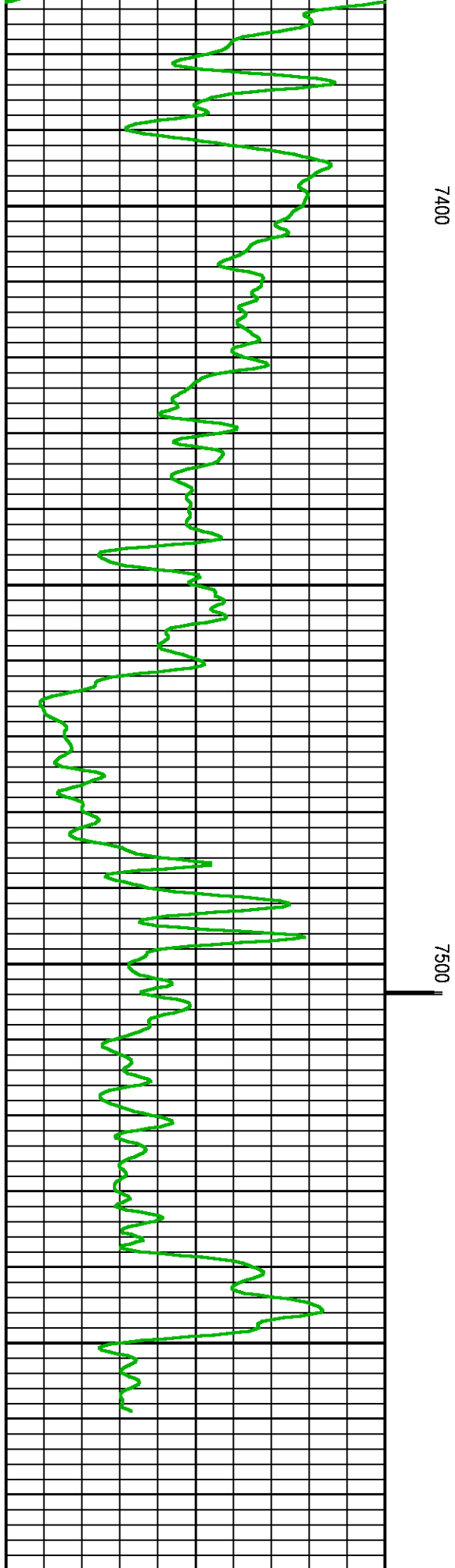






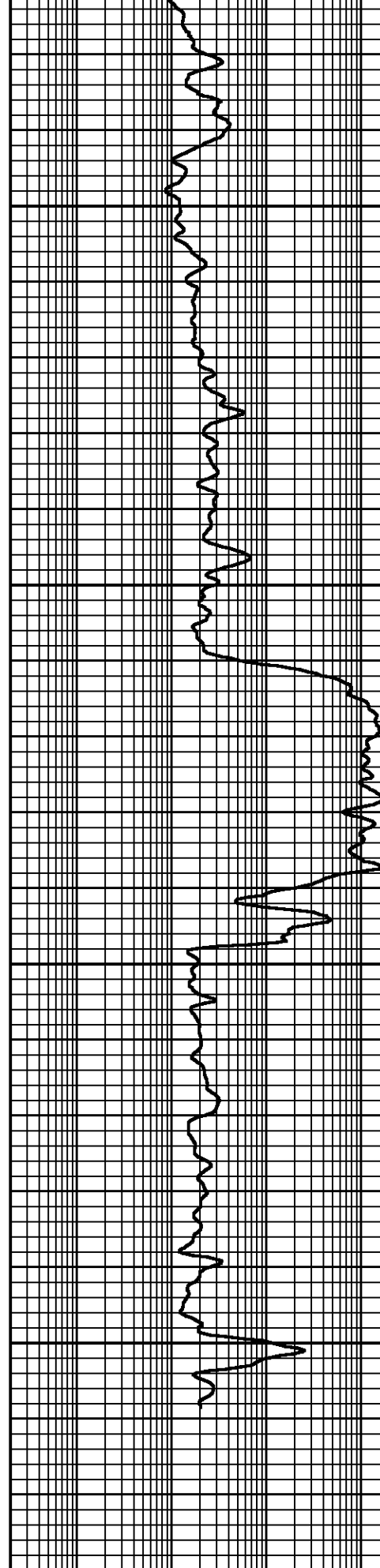






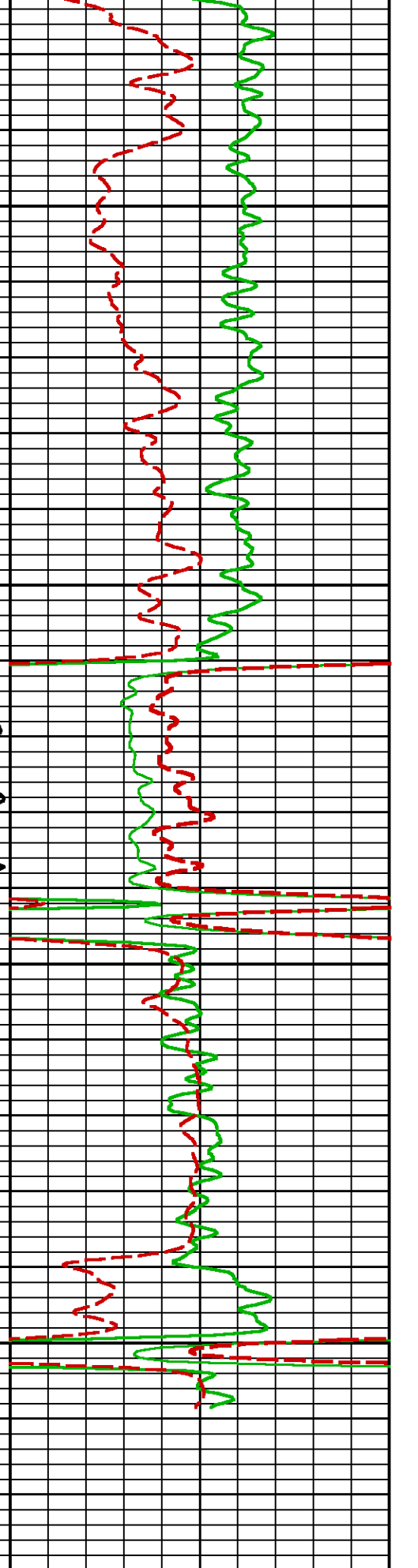
GR BACKUP

GAMMA RAY [grneo]



EMULATED DEEP RESISTIVITY [nm2r9]



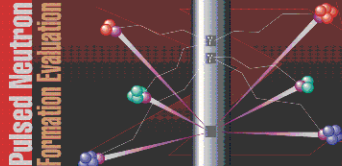
(OHMM)



EMULATED BULK DENSITY [nnzden]

(G/C3)

0	150	FEET	EMULATED NEUTRON POROSITY [nnncnf]
(GAPI)			0.3 -0.1
	CCL		(FRAC)

  	COMPANY <u>LARAMIE ENERGY</u>		FILE NO:
	WELL <u>BRUTON 19-05W</u>		<u>29136-01</u>
	FIELD <u>VEGA</u>		API NO:
	COUNTY <u>MESA</u> STATE <u>COLORADO</u>		<u>05077104240000</u>
LOCATION: <u>SEE REMARKS SECTION</u>		ELEVATIONS: KB <u>7286.0 FT</u> DF GL <u>7262.0 FT</u>	
SEC <u>19</u> TWP <u>9S</u> RGE <u>93W</u>		DATE <u>25-OCT-2017</u>	