



PULSED NEUTRON GAMMA RAY LOG

FILE NO:
MD11798

API NO:
30-015-44677

COMPANY
WSP USA, INC.
WELL
NAVAJO REFINING WDW #4
FIELD
ARTESIA
COUNTY
EDDY

STATE
NEW MEXICO

Ver. 4.10

LOCATION:

1217' FSL & 2443' FWL
SECTION 23, T17S, R27E
N.M.P.M. SURVEY

OTHER SERVICES

PERMANENT DATUM
LOG MEASURED FROM
DRILL. MEAS. FROM

ELEVATIONS:
KB 3565.8 FT
DF 3584.8 FT
GL 3565.8 FT

DATE	21-JUL-2018
RUN	1
SERVICE ORDER	140374
DEPTH DRILLER	10360 FT
DEPTH LOGGER	N/A
BOTTOM LOGGED INTERVAL	10310 FT
TOP LOGGED INTERVAL	1680 FT
TIME STARTED	14:00
TIME FINISHED	23:30
OPERATOR RIG TIME	10 HRS
TYPE OF FLUID IN HOLE	WBM
FLUID DENSITY	10.2 LB/G
FLUID SALINITY	N/A
FLUID LEVEL	FULL
LOGGED CEMENT TOP	N/A
WELLHEAD PRESSURE	0 PSI
MAXIMUM HOLE DEVIATION	0 DEG
NOMINAL LOGGING SPEED	100 F/MIN
MAX. RECORDED TEMP.	N/A
REFERENCE LOG	SBT LOG
REFERENCE LOG DATE	7/19/18
EQUIP. NO.	HL6845
LOCATION	MIDLAND, TX
RECORDED BY	JKOSKI
WITNESSED BY	R COOK

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: TIED INTO SBT LOG
DATED 7/19/18

RIG: PATRIOT #5
CREW: A.FERREBUS / A.ADEBOWALE

INSTRUMENT CONFIGURATION

A3 CABLEHEAD

PCM POWER SUPPLY

Diameter : 1.70"
Length : 3.86'
Weight : 18 lbs
Series : 8250EA
Mnemonic : PCM

TELEMETRY / CCL

Diameter : 1.70"
Length : 4.46'
Weight : 20 lbs
Series : 8248ED
Mnemonic : PCM
Measure Point: 1.00': CCL MP

GAMMA RAY, 1 11/16"

Diameter : 1.69"
Length : 2.17'

TEMPERATURE TOOL

Diameter : 1.70"
Length : 2.38'

RPM ELECTRONICS

Diameter : 1.70"
Length : 4.48'
Weight : 16 lbs
Series : 8281EA
Mnemonic : RPM

RPM C DETECTOR SECTION

Diameter : 1.70"
Length : 9.40'
Weight : 41 lbs
Series : 8283PA
Mnemonic : RPM
Measure Point: 5.45': XLS MP
Measure Point: 5.04': LS MP
Measure Point: 4.79': SS MP

RPM SOURCE SECTION

Diameter : 1.70"
Length : 4.70'
Weight : 18 lbs
Series : 8281FA
Mnemonic : RPM

BULL PLUG 1 11/16

TOTAL LENGTH: 32.31'
TOTAL WEIGHT: 138 lbs
MAX DIAMETER: 0'1.70"

CCL MP 24.26'

GR MP 21.71'

TEMP MP 19.33'

XLS MP 10.27'

LS MP 9.86'

SS MP 9.61'

0.00'

MAIN LOG 5"/100FT SCALE

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Patches: 3

Plotted: Sat Jul 21 23:31:39 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/md11798R10/p354a02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5184.394 ft BOTTOM DEPTH: 10307.158 ft

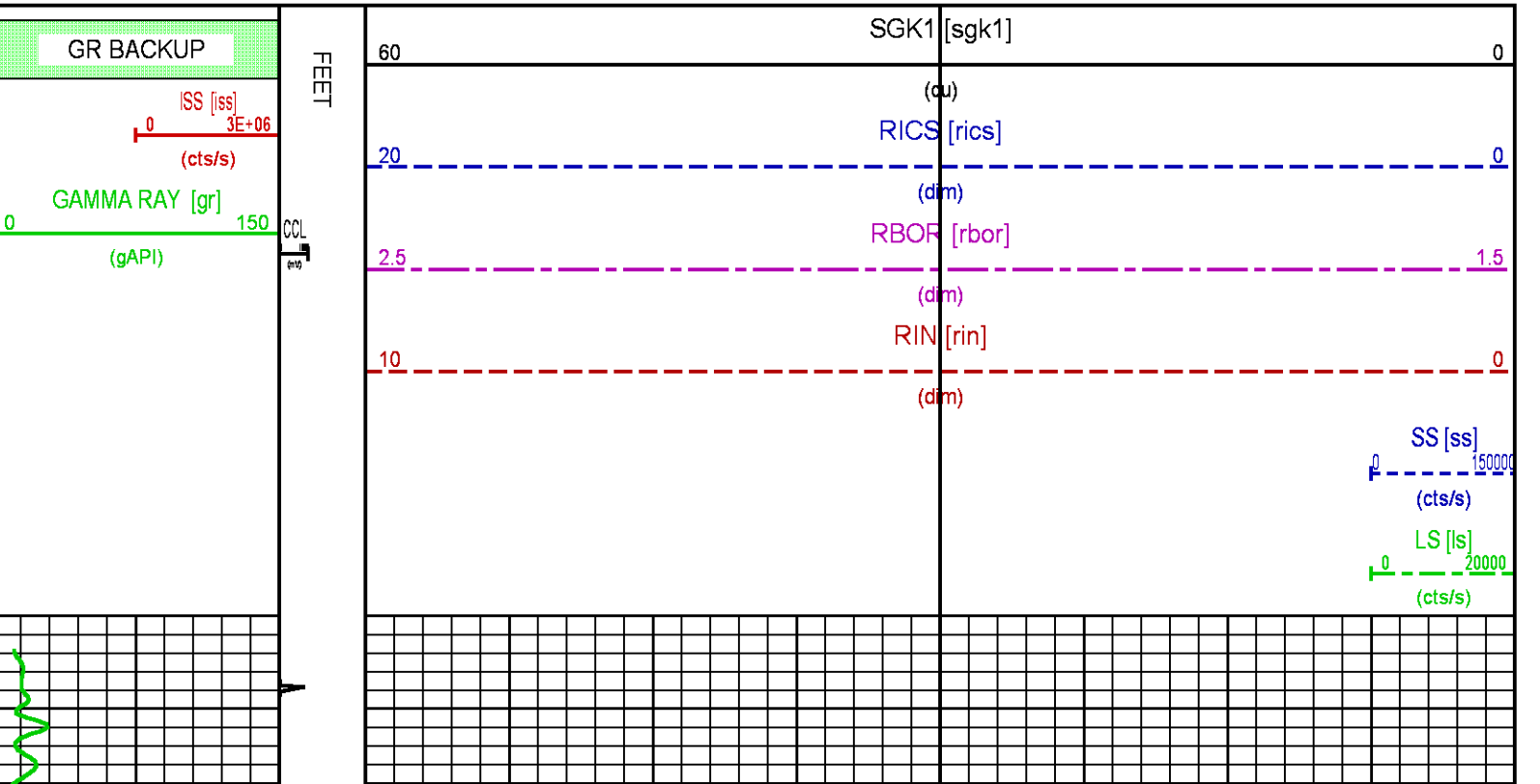
SYMMETRIC FILTER

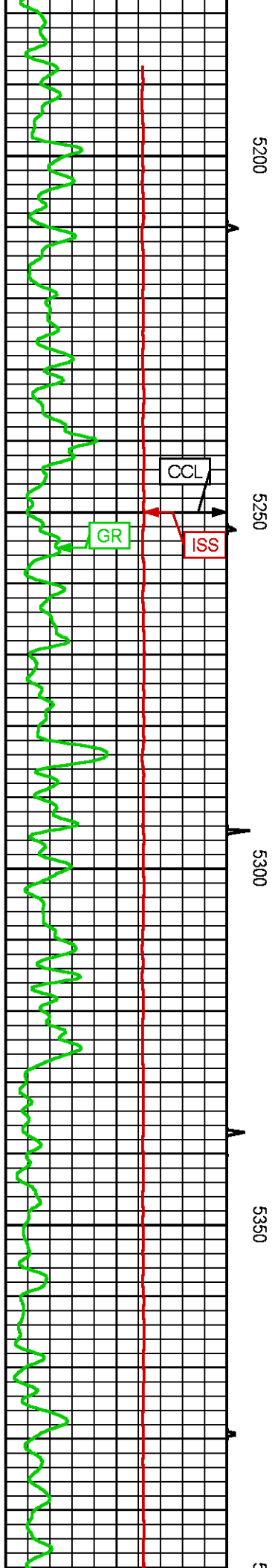
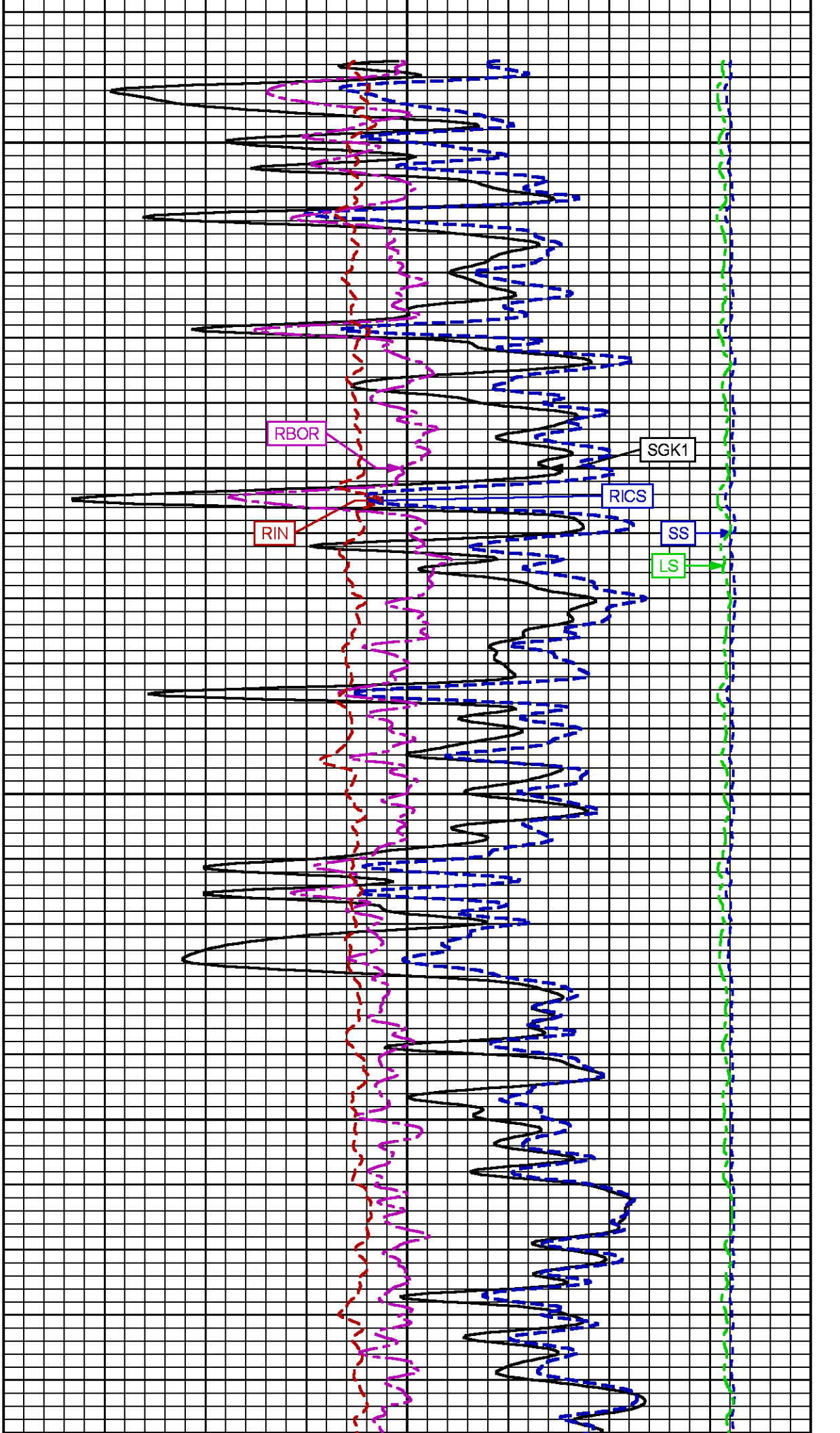
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR	FILTER ()	medium (1)		TOP	BOTTOM
RPM PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
PNC Parameters	BOREHOLE CONTENTS	FLUID		TOP	BOTTOM
	OPEN/CASED HOLE	CASED HOLE		"	"
	BOREHOLE SIZE	8.50	in	"	"
	LARGEST CASING OD	7.00	in	"	"
	MATRIX	SANDSTONE		"	"

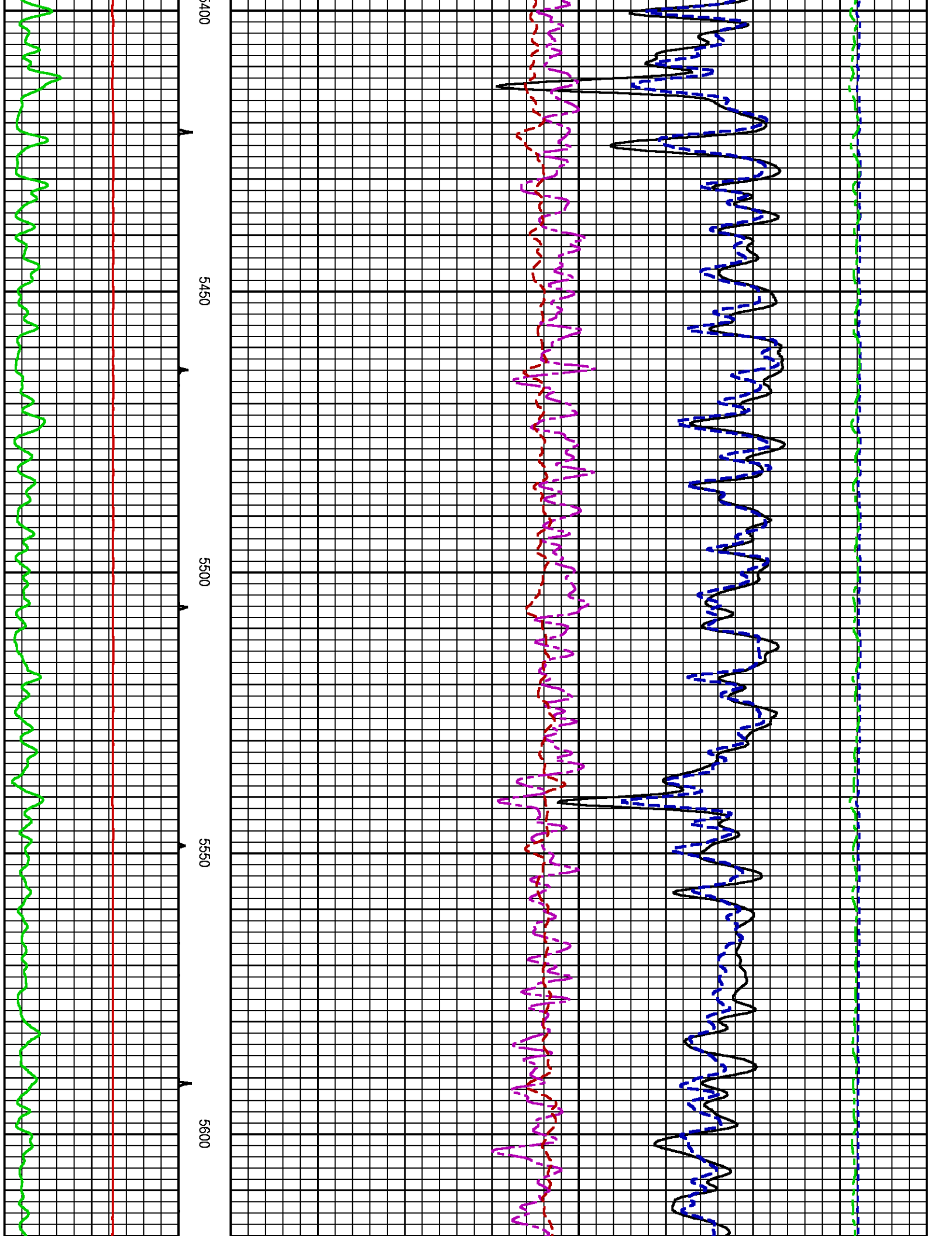
CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CCL	N/A	CASING COLLAR LOCATOR
F1:GR	N/A	GAMMA RAY
F1:ISS	N/A	INELASTIC SHORT SPACE COUNT RATE
F1:LS	N/A	LONG SPACE COUNT RATE
F1:RBOR	N/A	SHORT SPACE EARLY GATE COUNT RATE RATIO (GE1S/GE2S)
F1:RICS	N/A	SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS)
F1:RIN	N/A	INELASTIC SHORT TO LONG SPACE COUNT RATE RATIO (ISS/LS)
F1:SGK1	N/A	EMULATED PDK-100 SHORT SPACE SIGMA (SGMA)
F1:SS	N/A	SHORT SPACE COUNT RATE

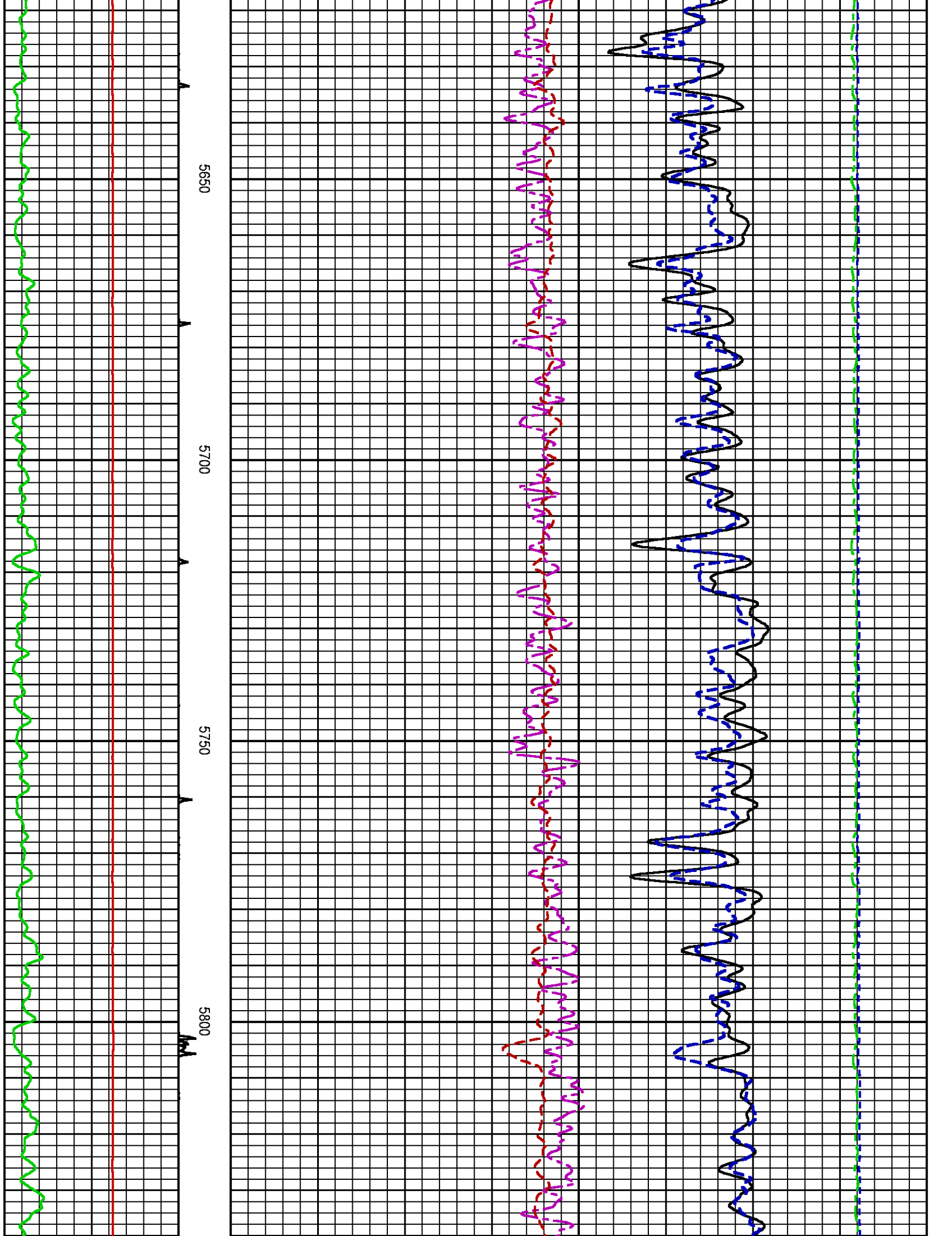
CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CCL	-24.25	LS	-9.50	RIN	-9.50		
GR	-21.75	RBOR	-9.50	SGK1	-9.50		
ISS	-9.50	RICS	-9.50	SS	-9.50		

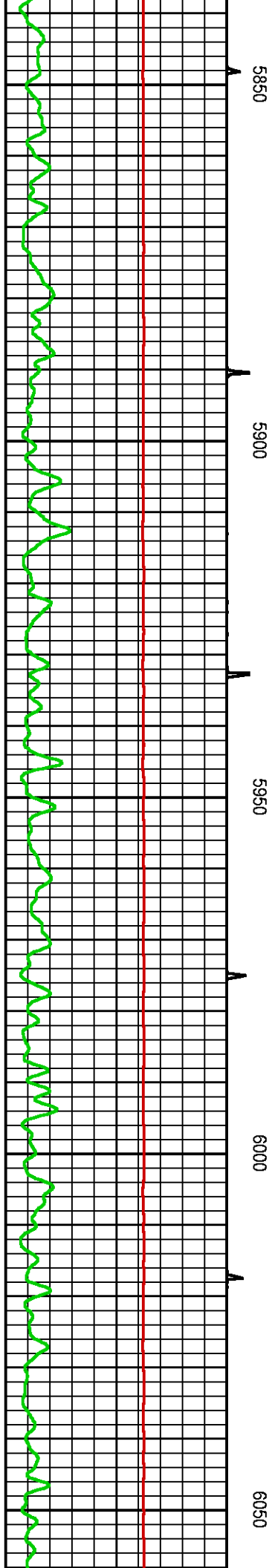
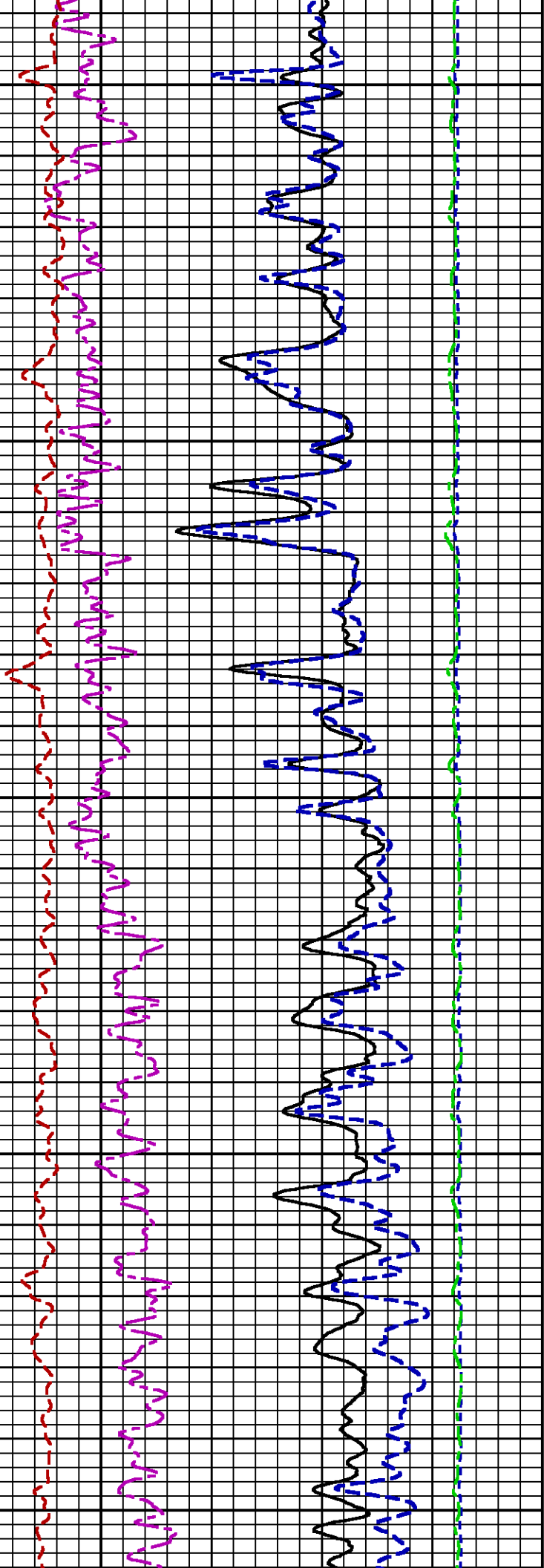
Presentation	: SysA:/dat1a/md11798R10/rpm_pnc5in.fvpdf [5"/100' Scale]
Plot Interval	: 5160 - 10315.2 Feet
Data File 1	: F1 : SysA:/dat1a/md11798R10/p354a02.aff
Created On	: N/A
Company	: HOLLY FRONTIER - NAVAJO
Well	: NAVAJO REFINING WDW #4
Field	: ARTESIA
File Interval	: 5159.25 - 10316.5 Feet
OCT	: p354a

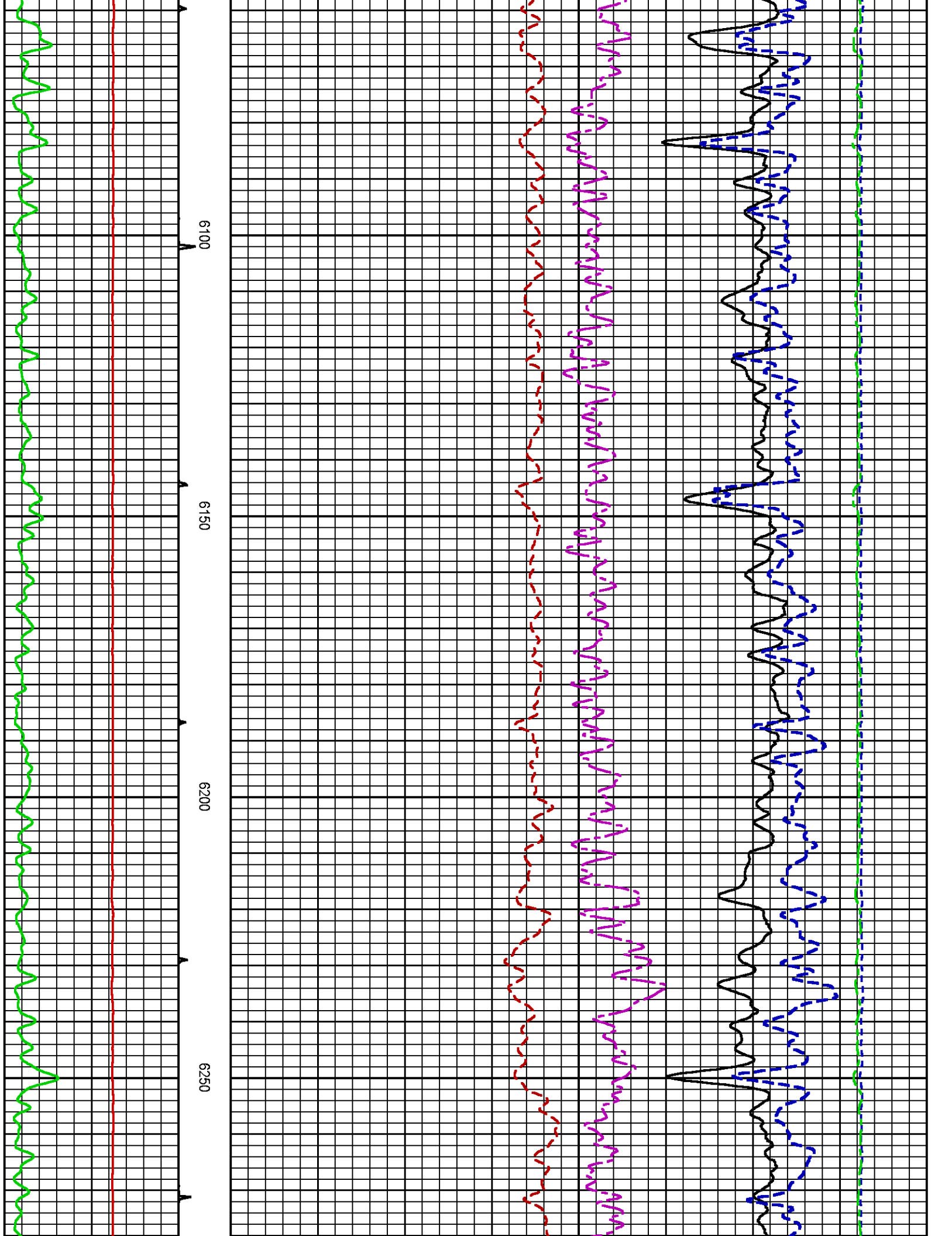


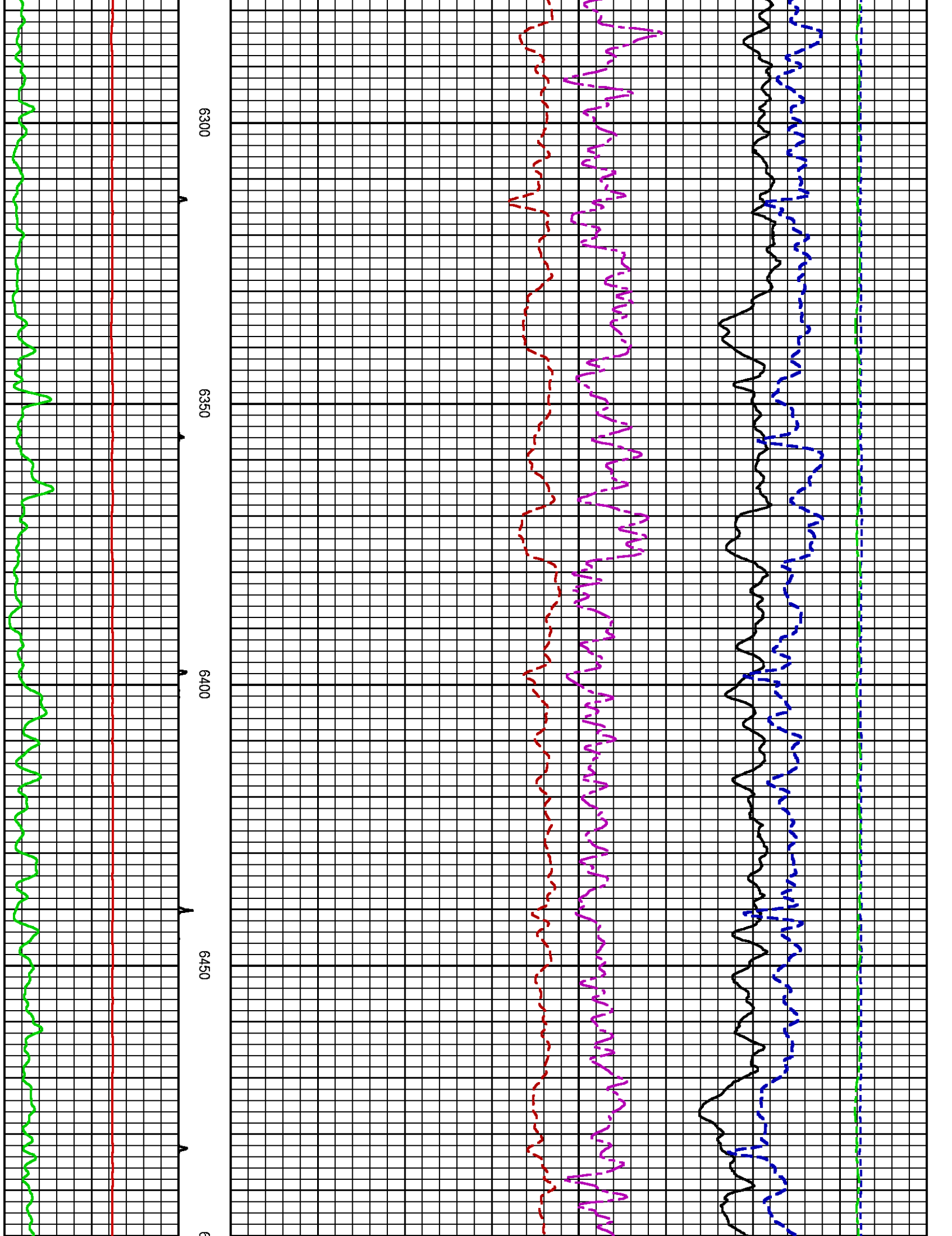


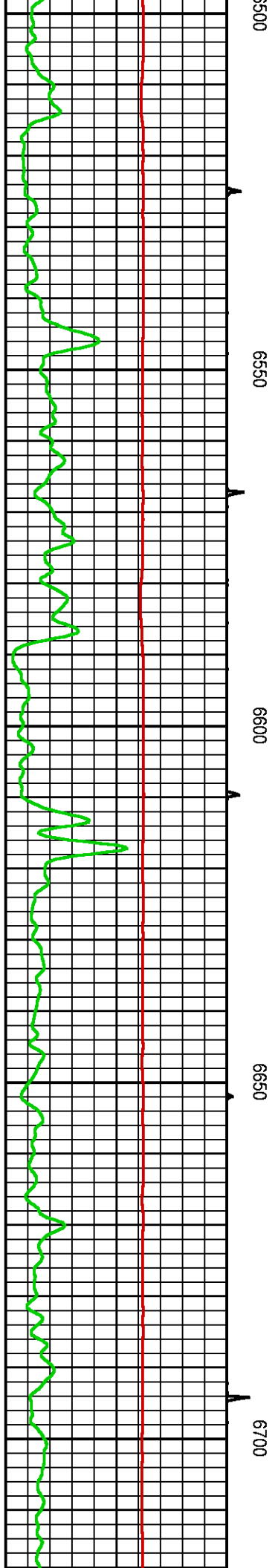
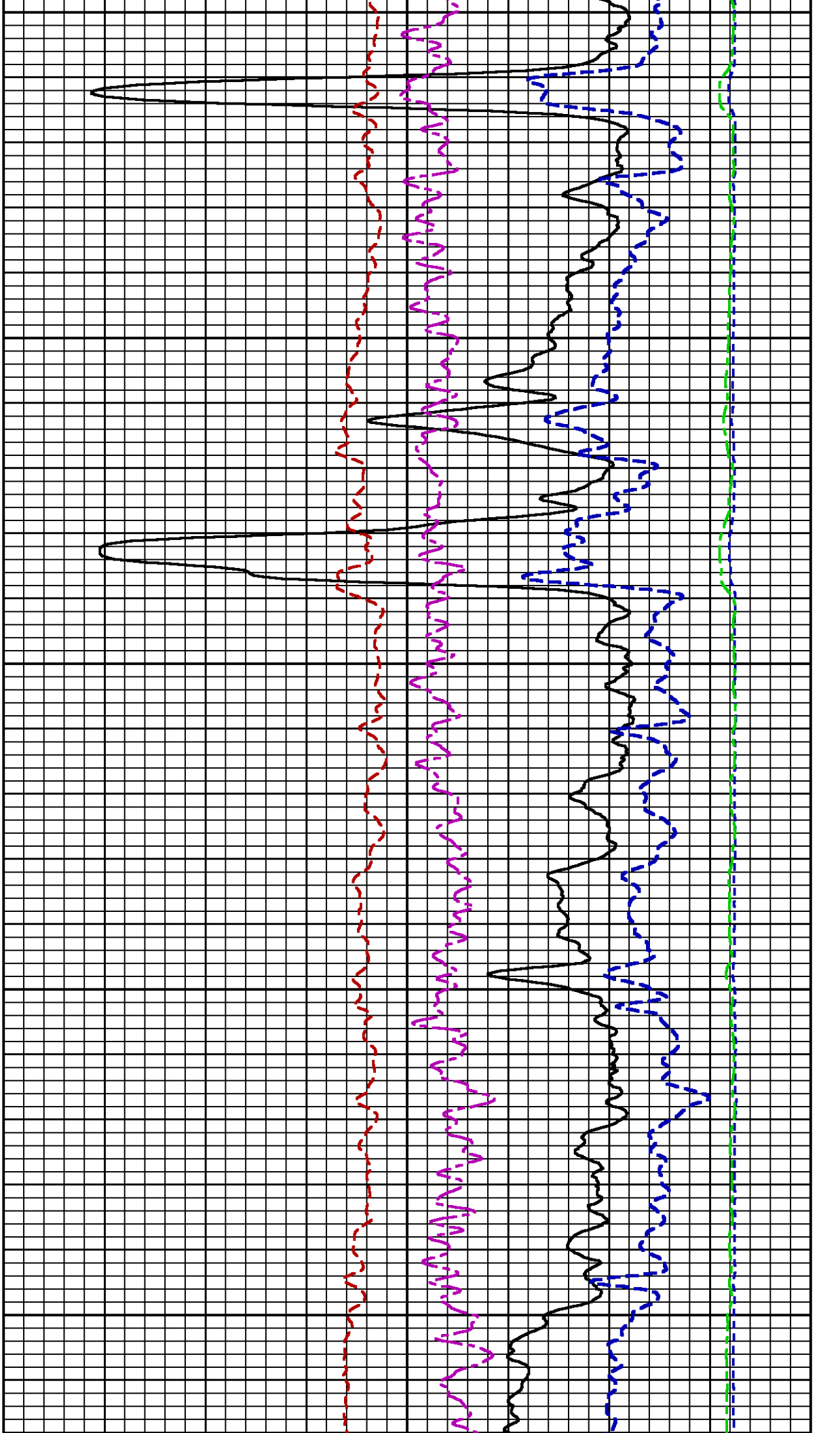


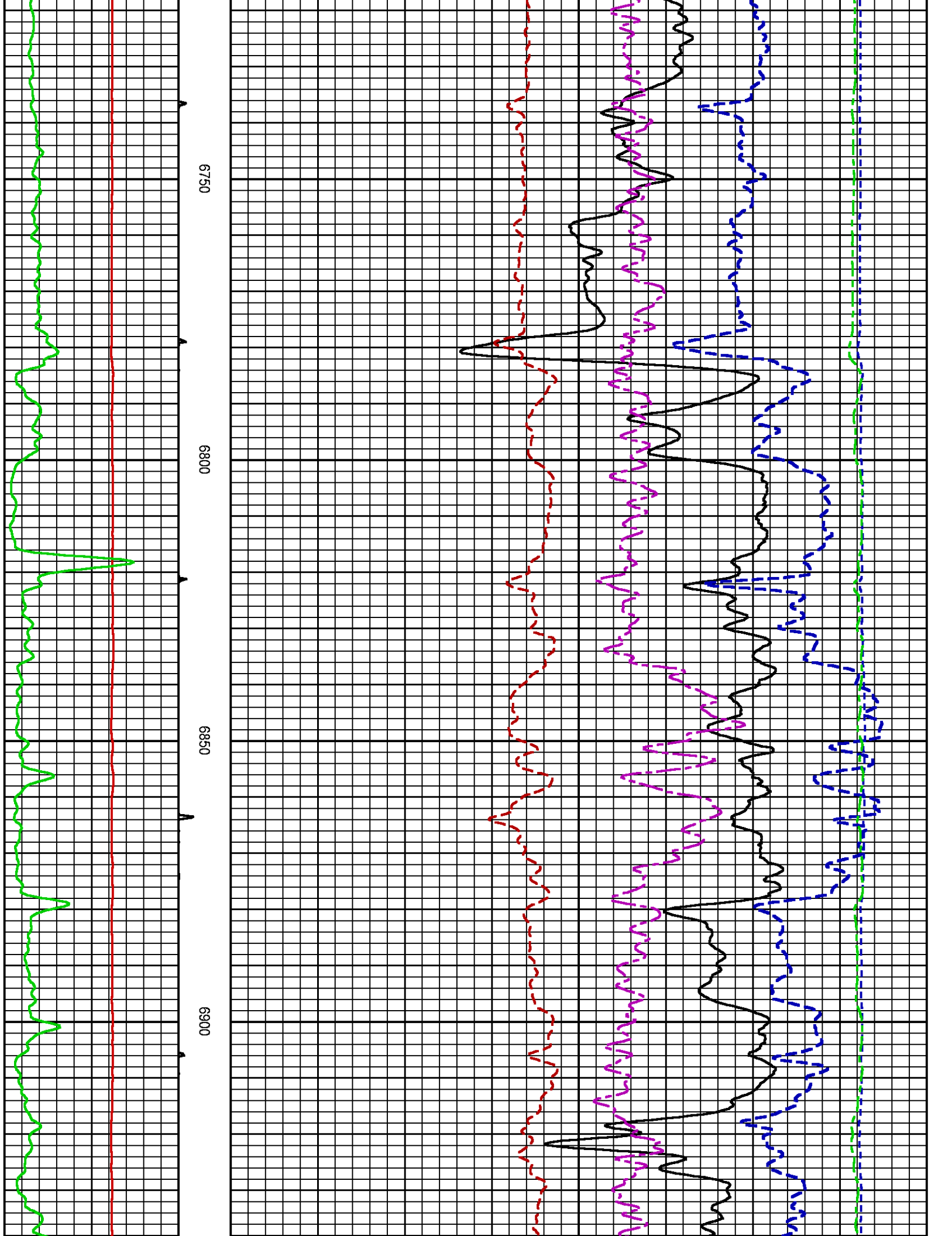


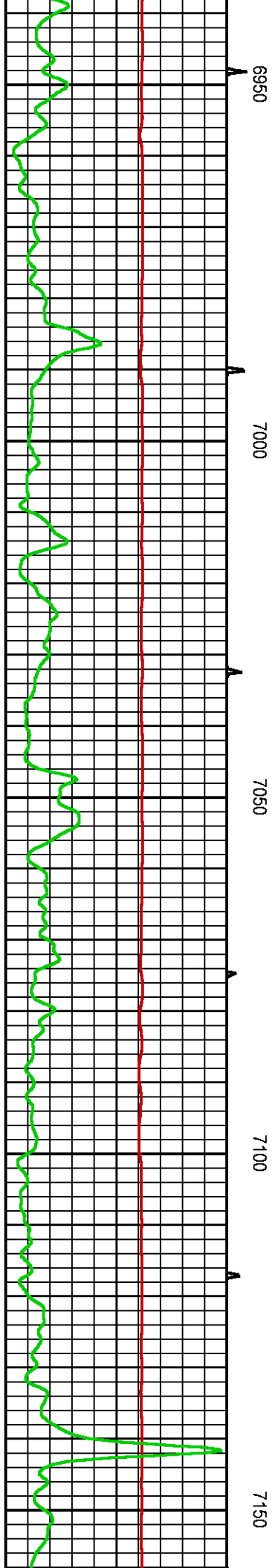
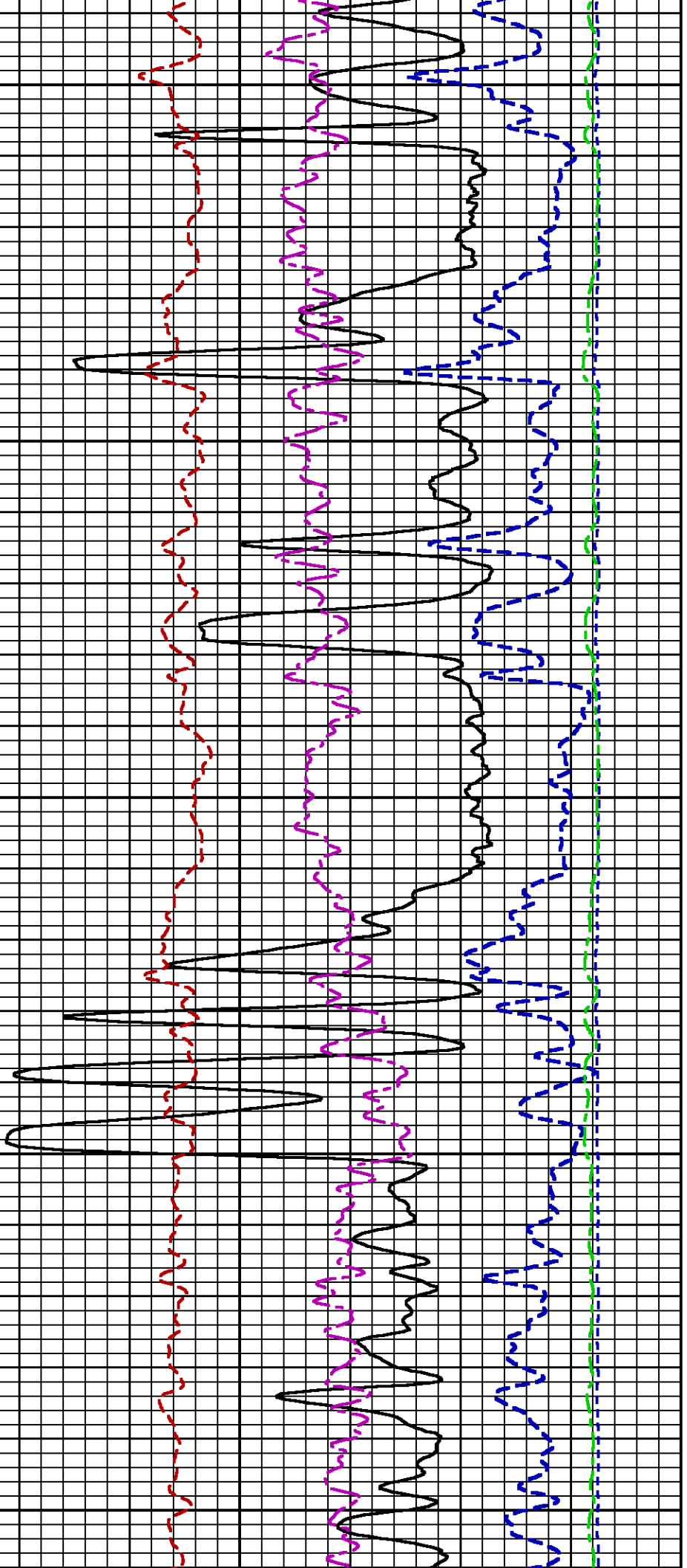


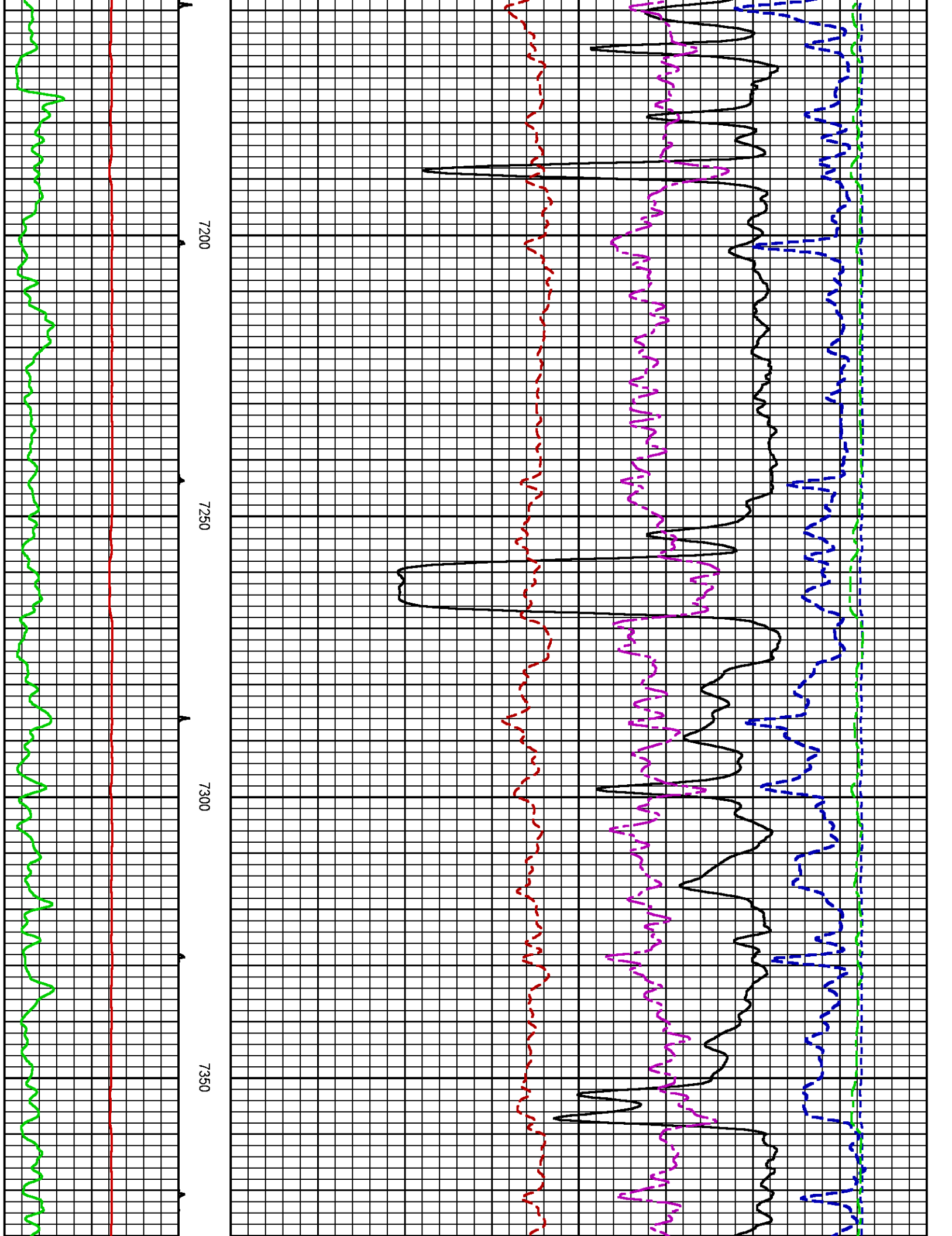


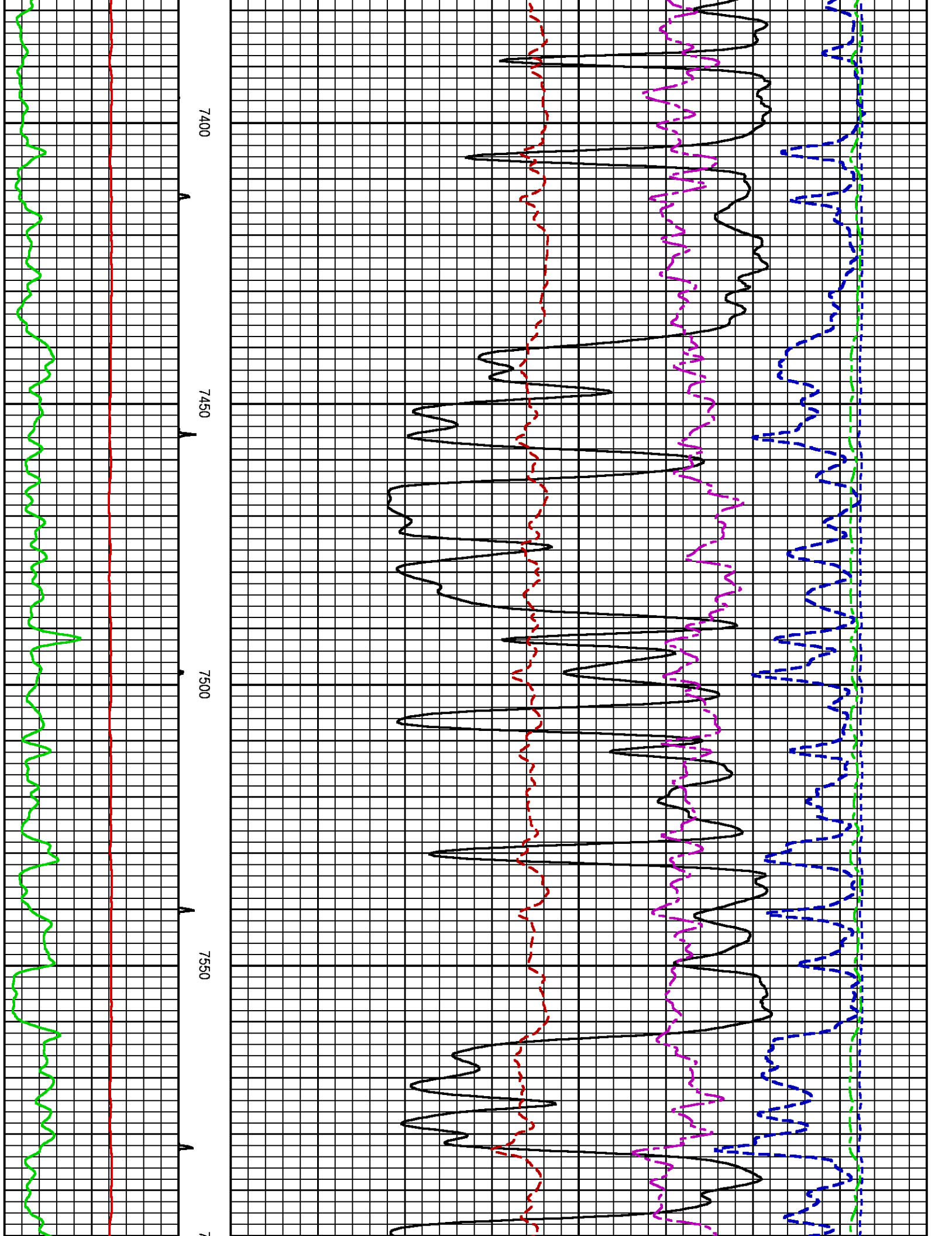


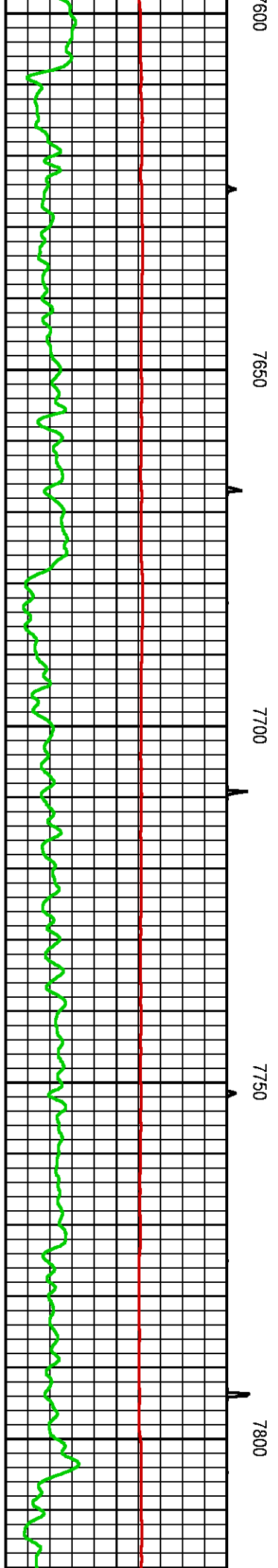
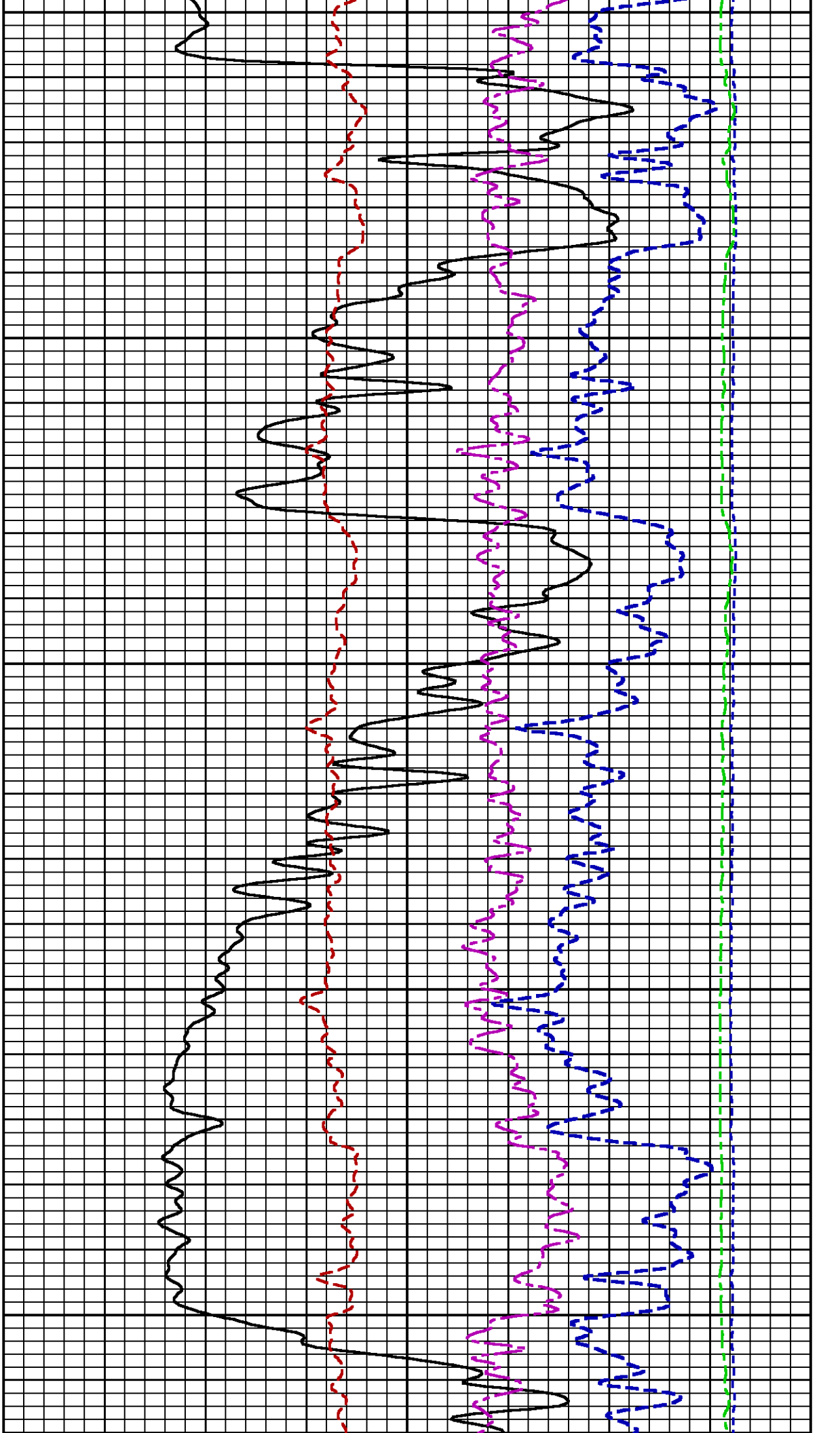


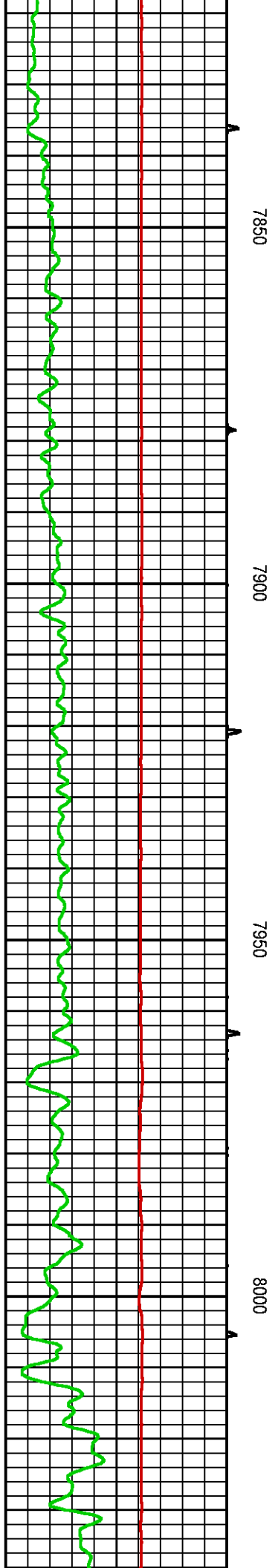
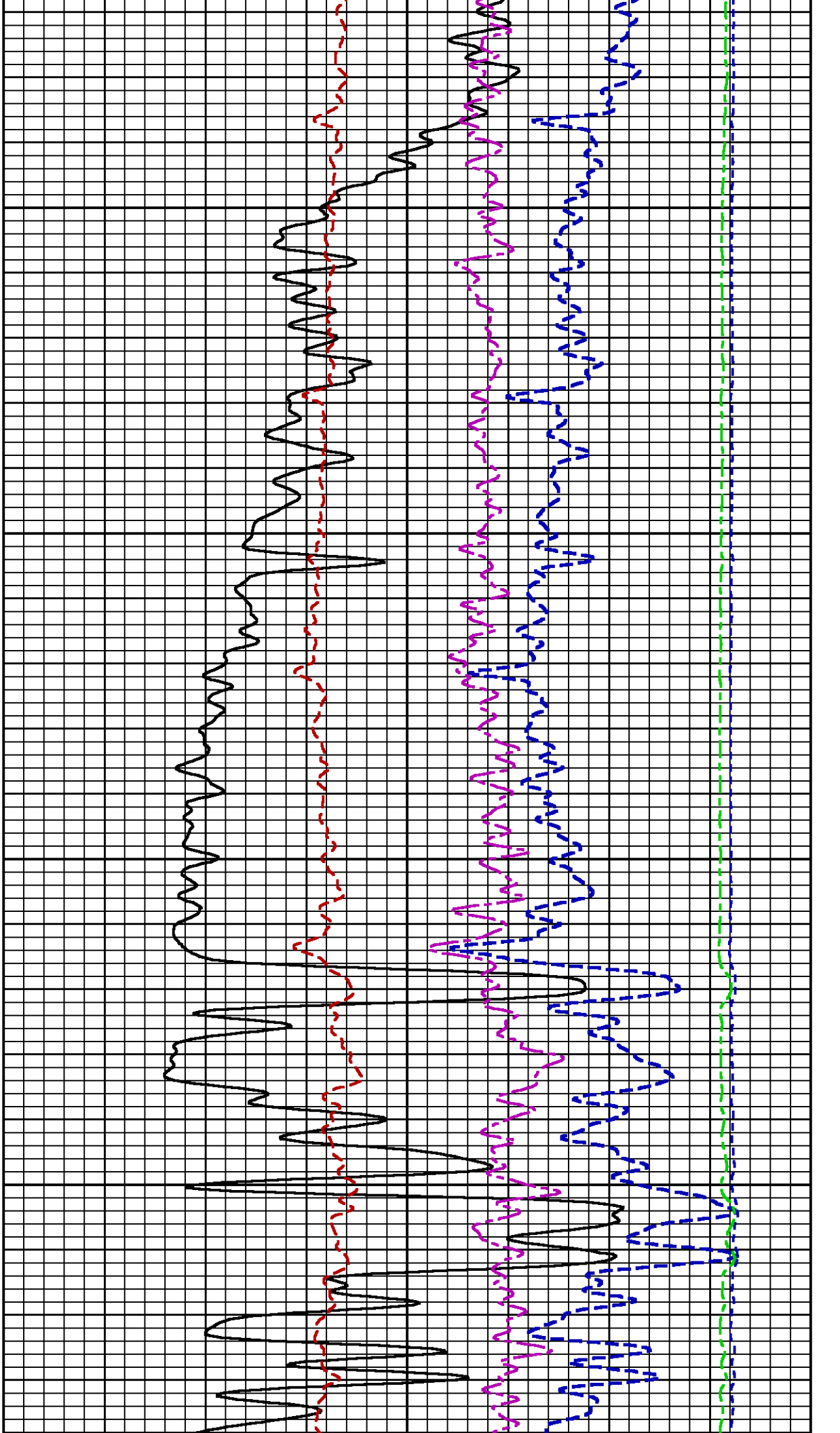


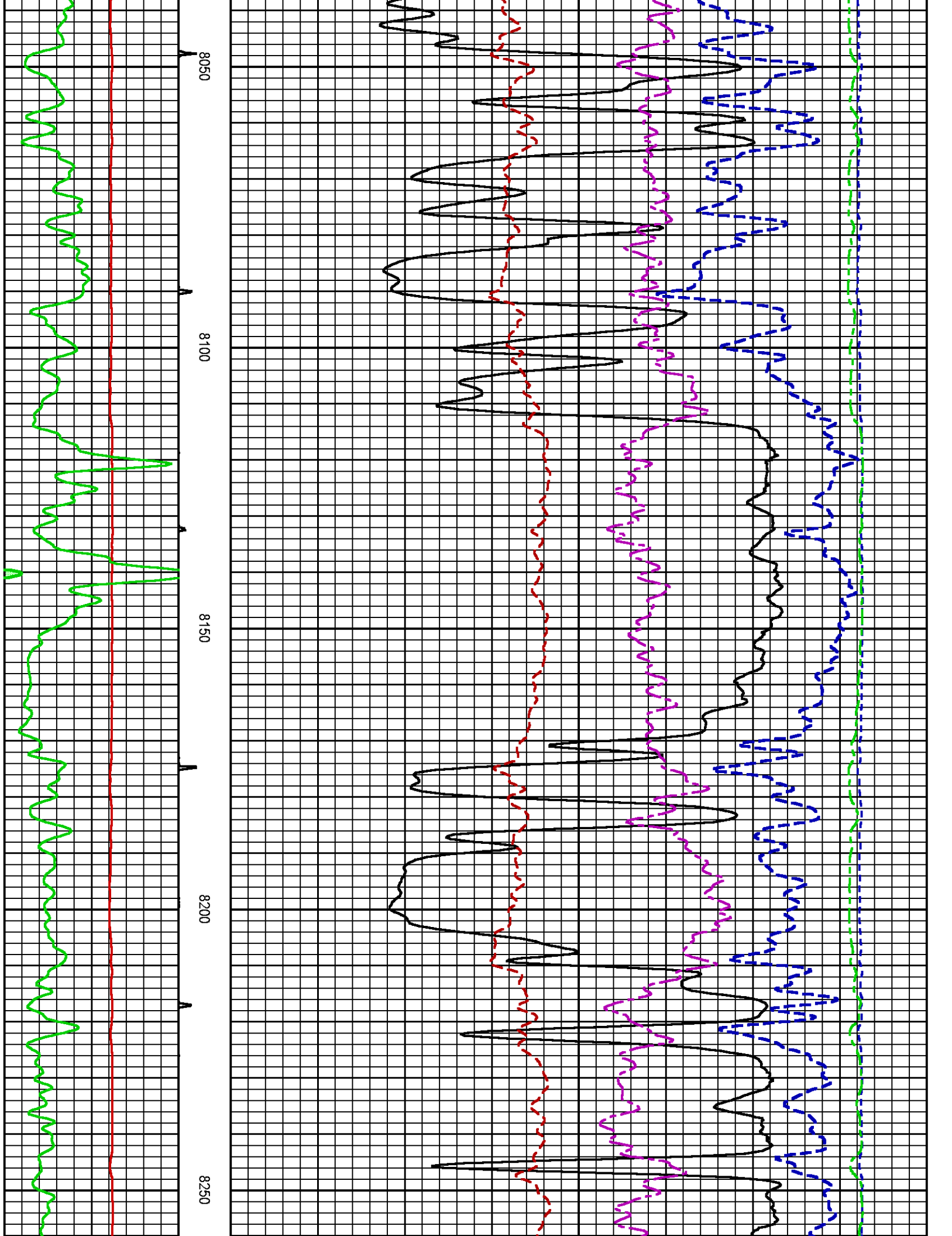


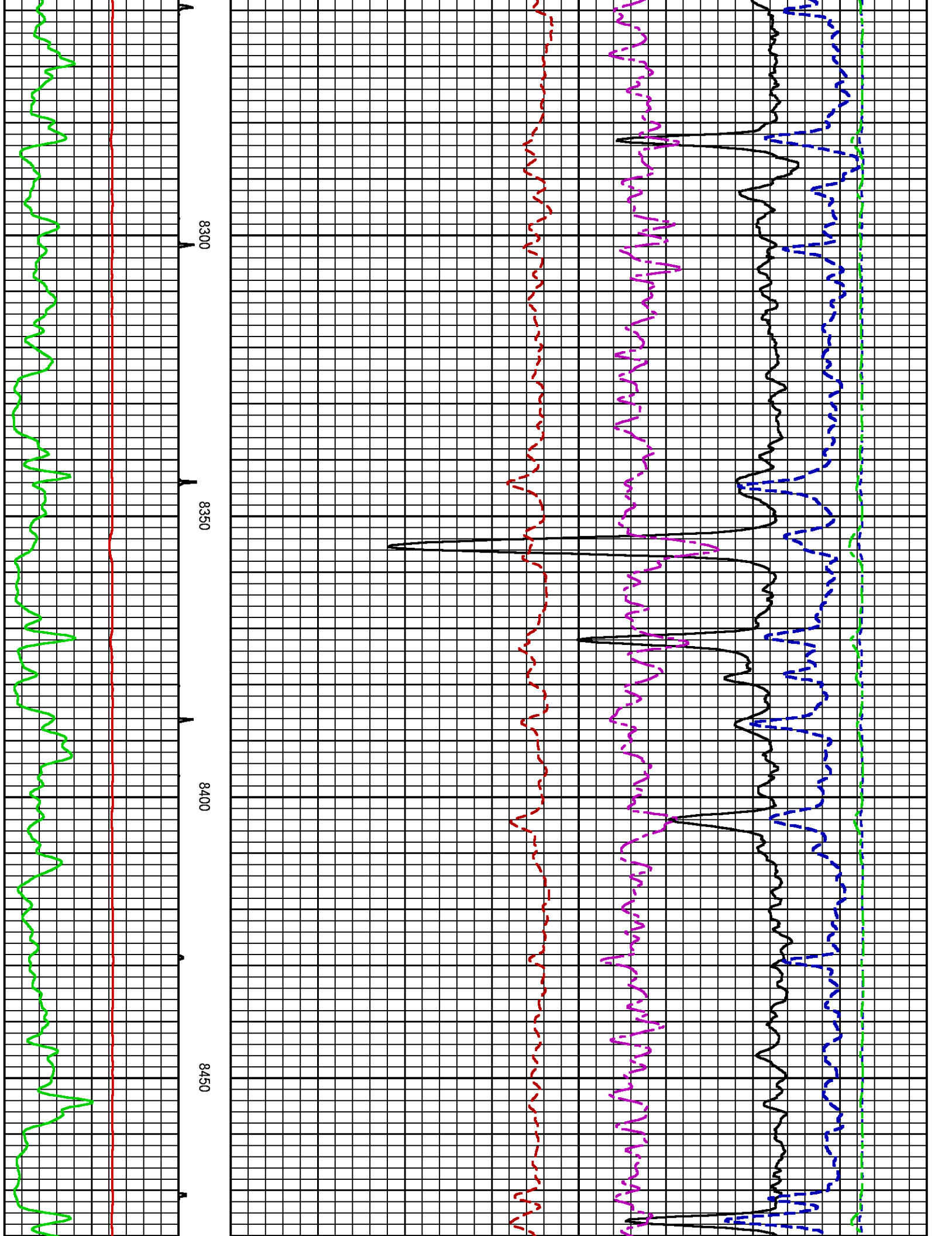


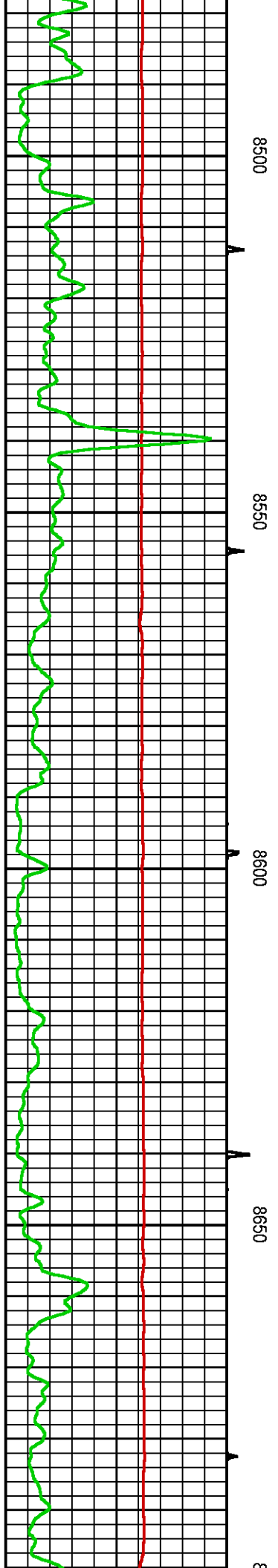
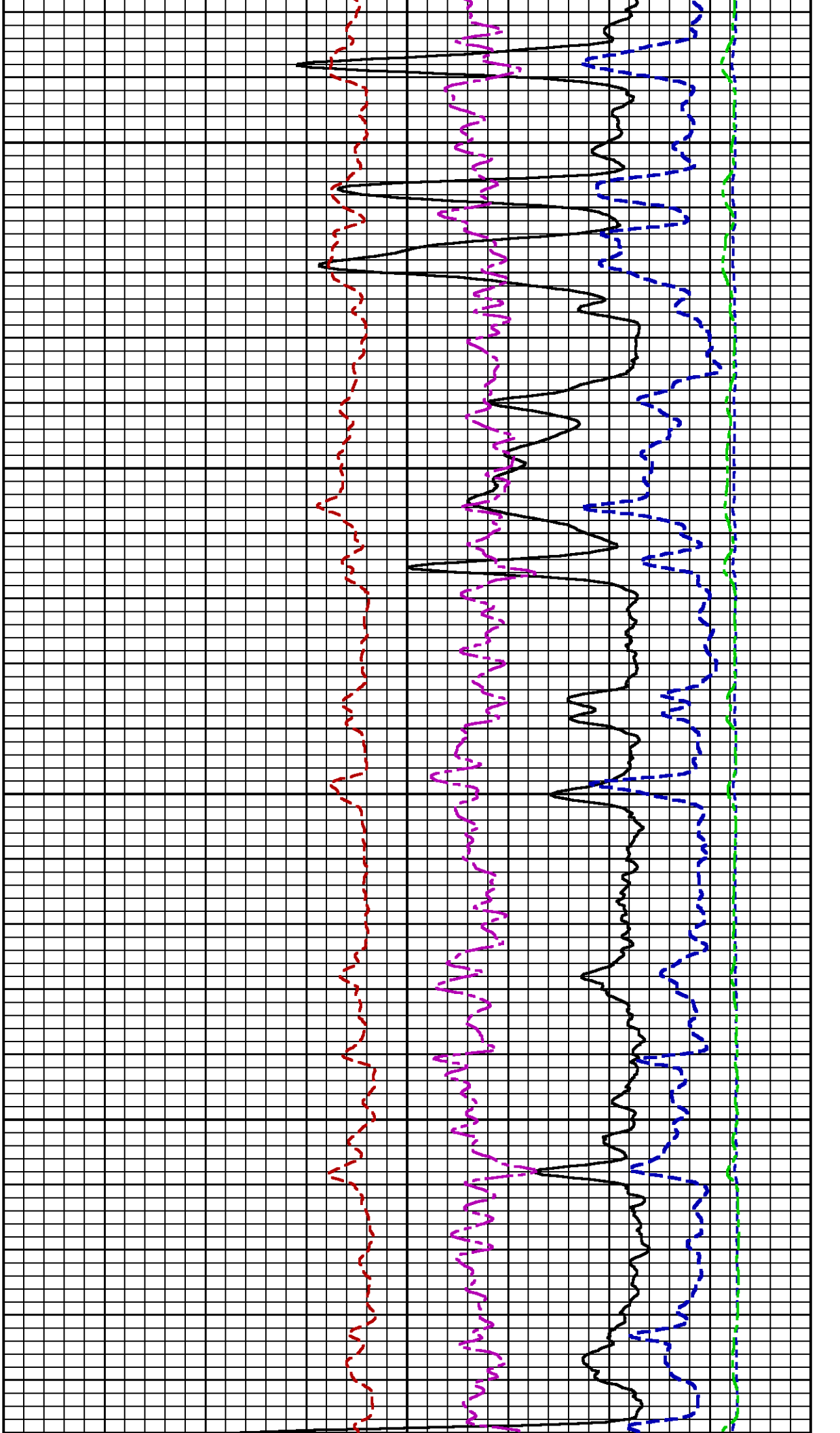


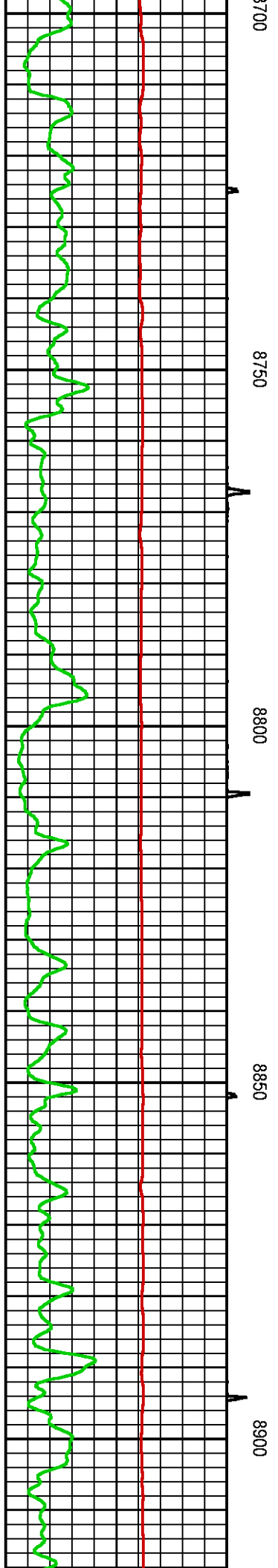
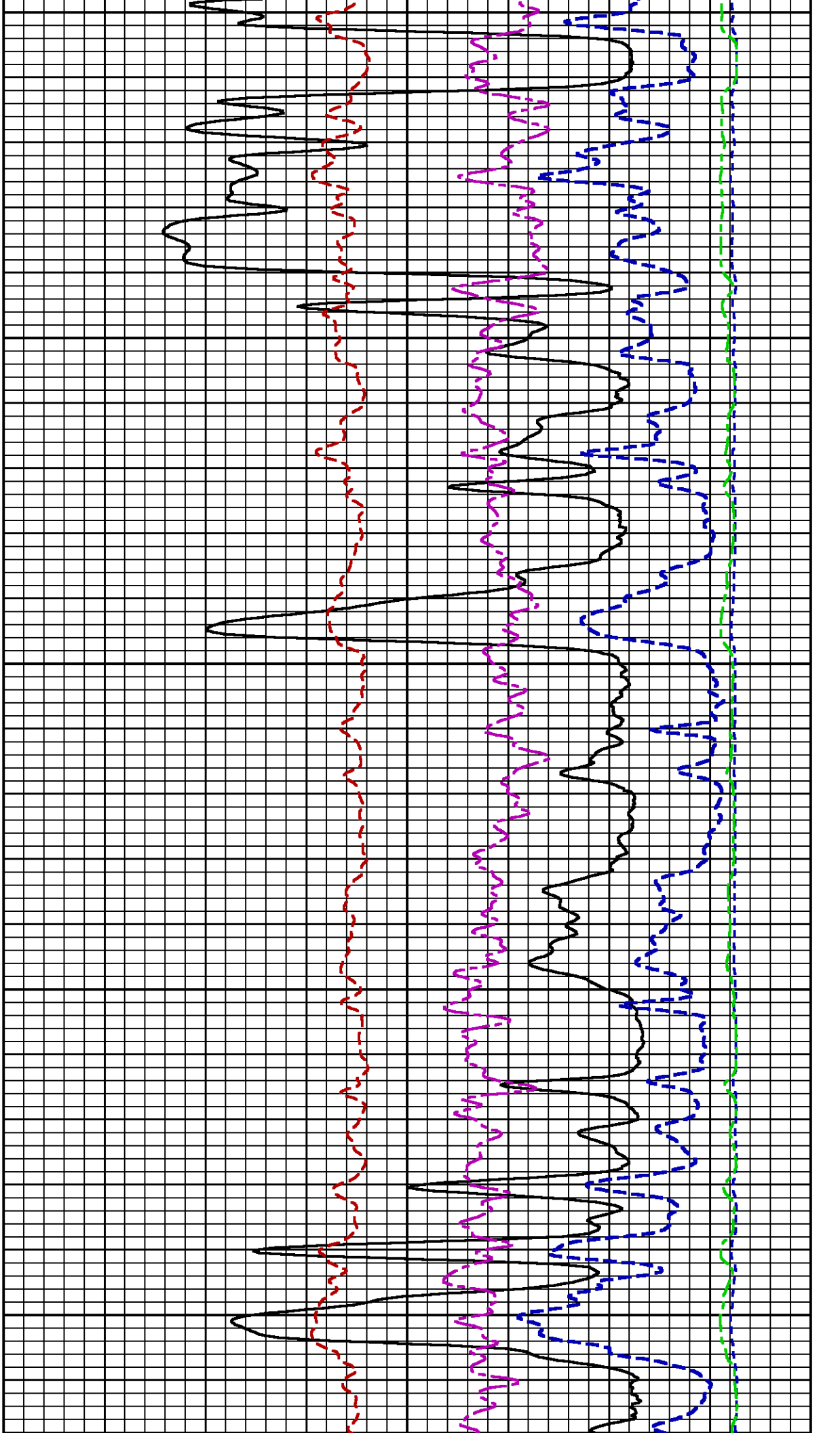


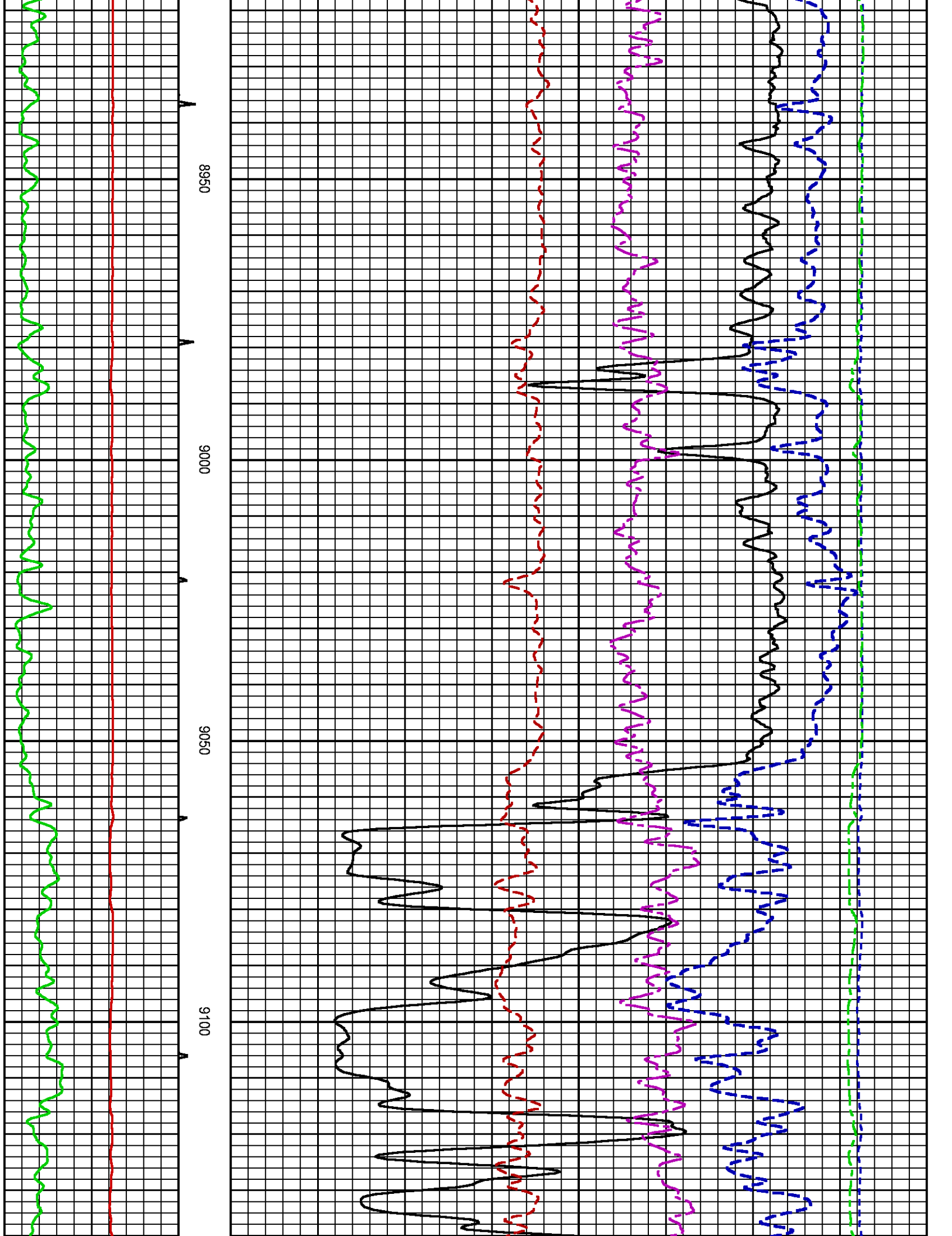


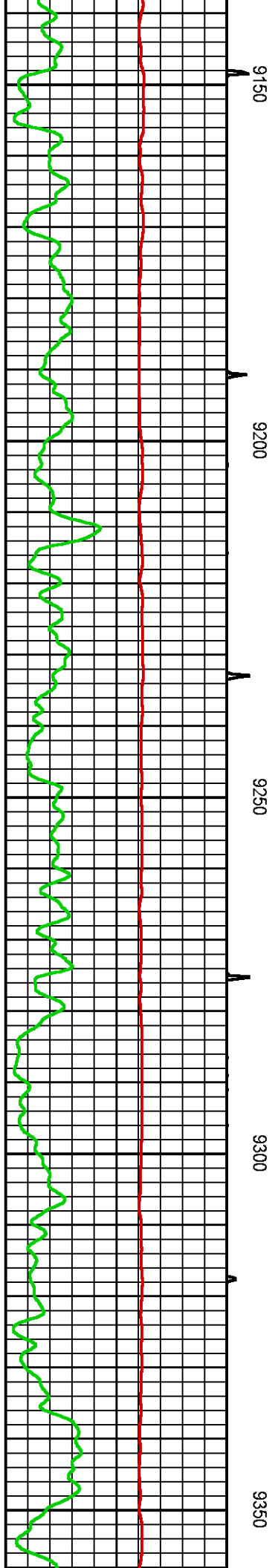
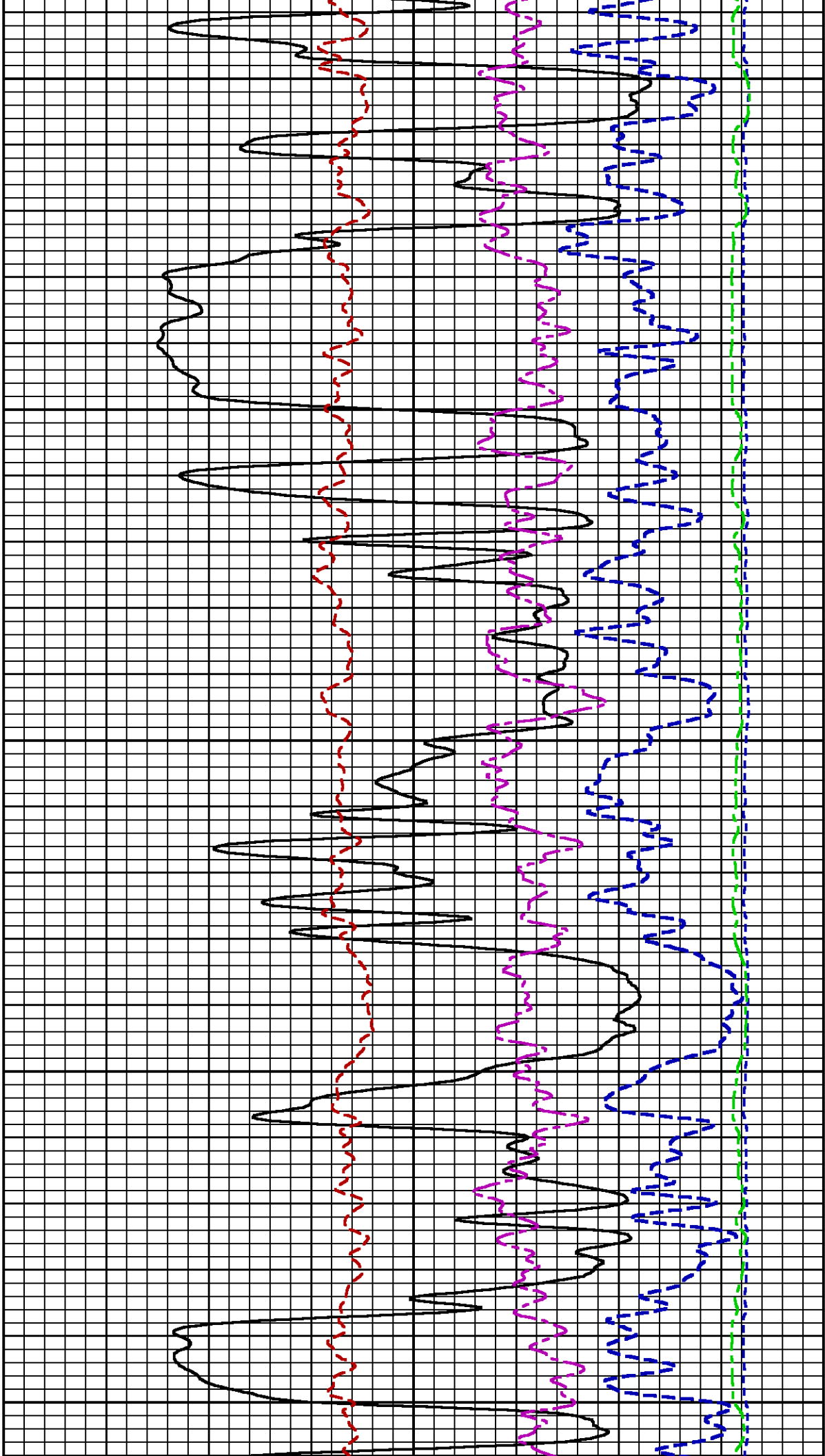


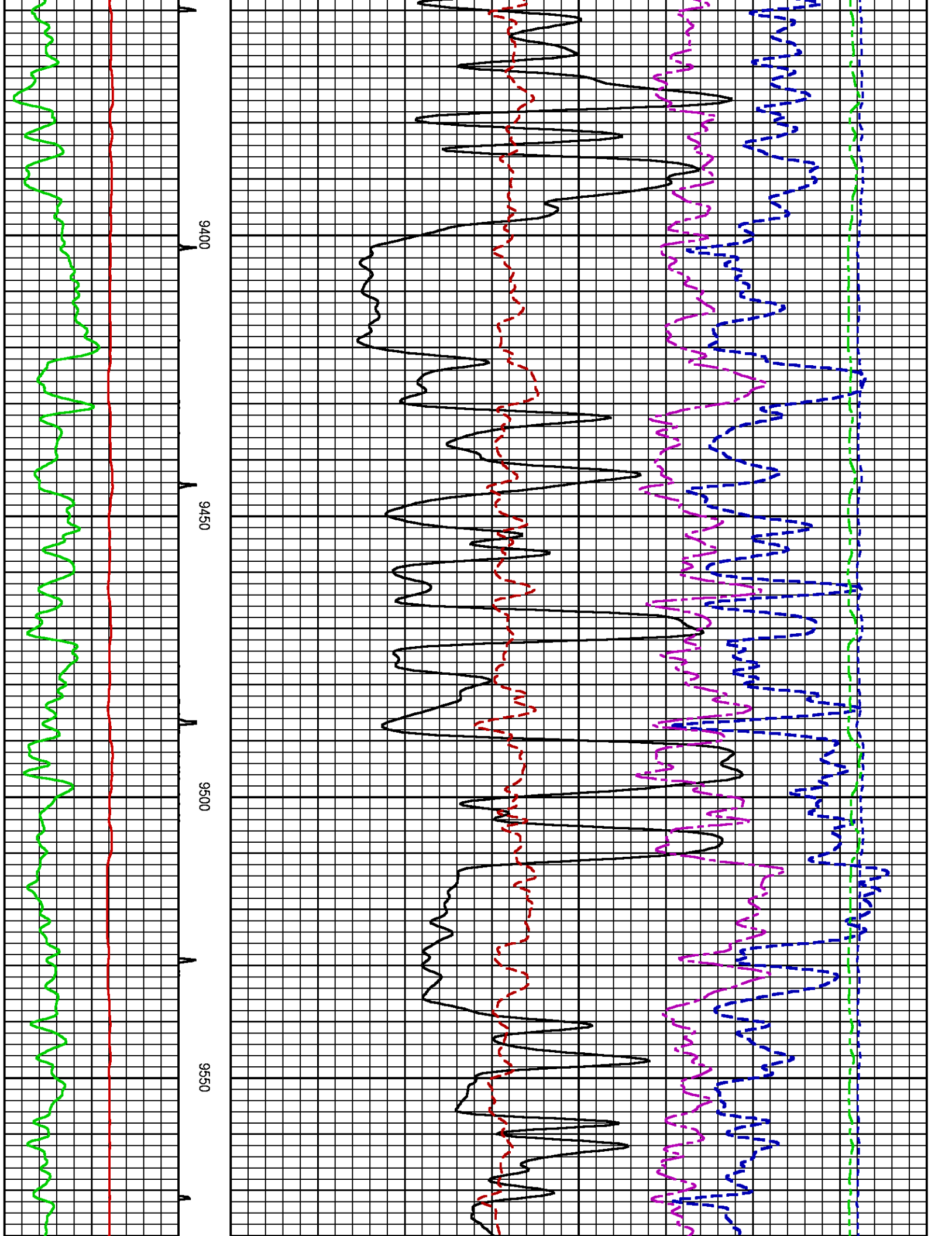


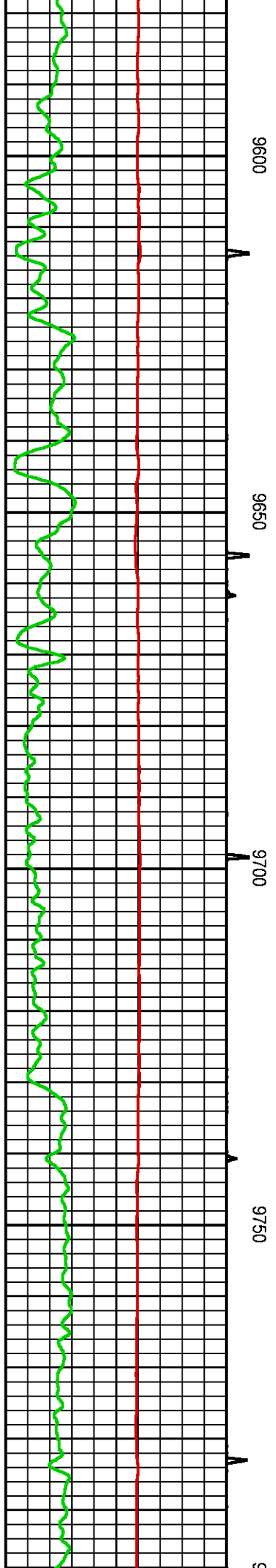
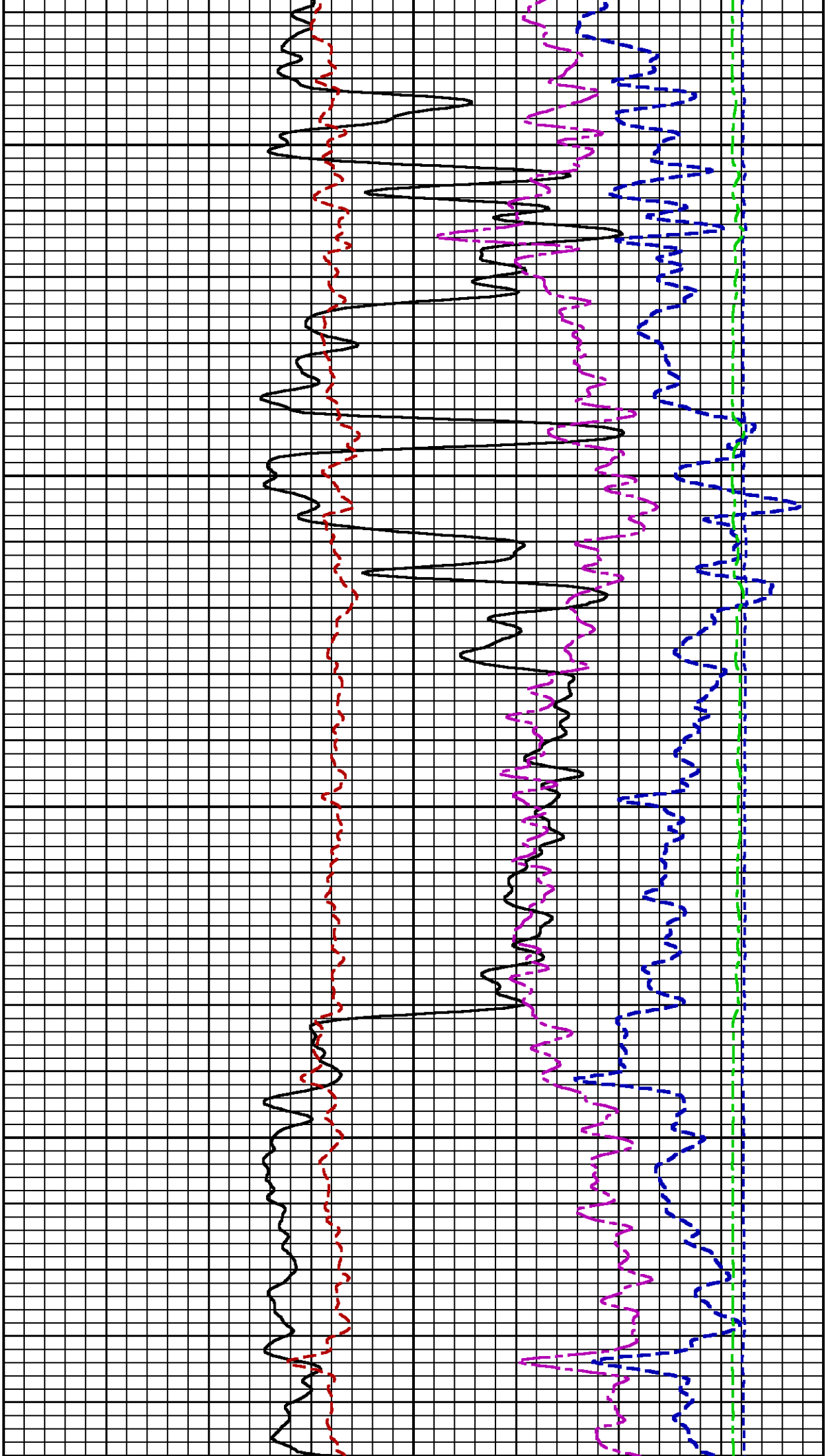


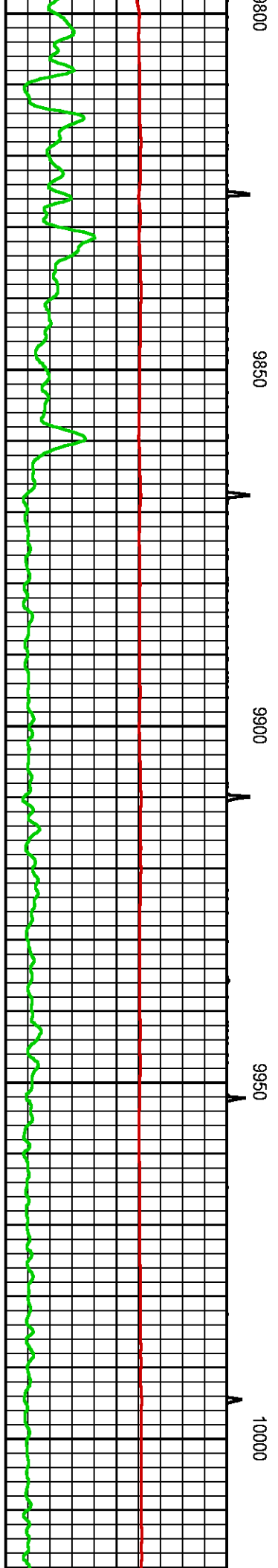
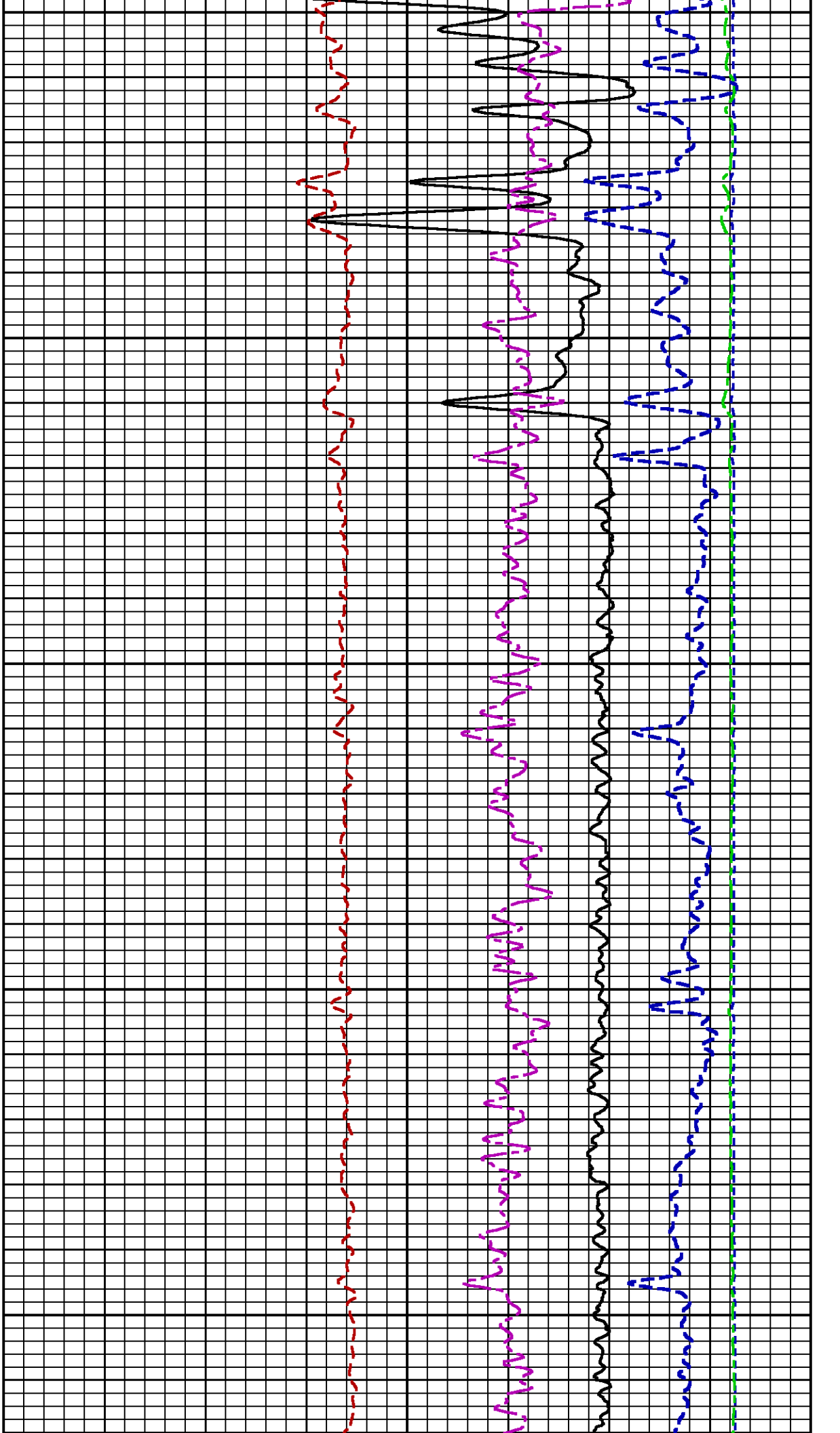


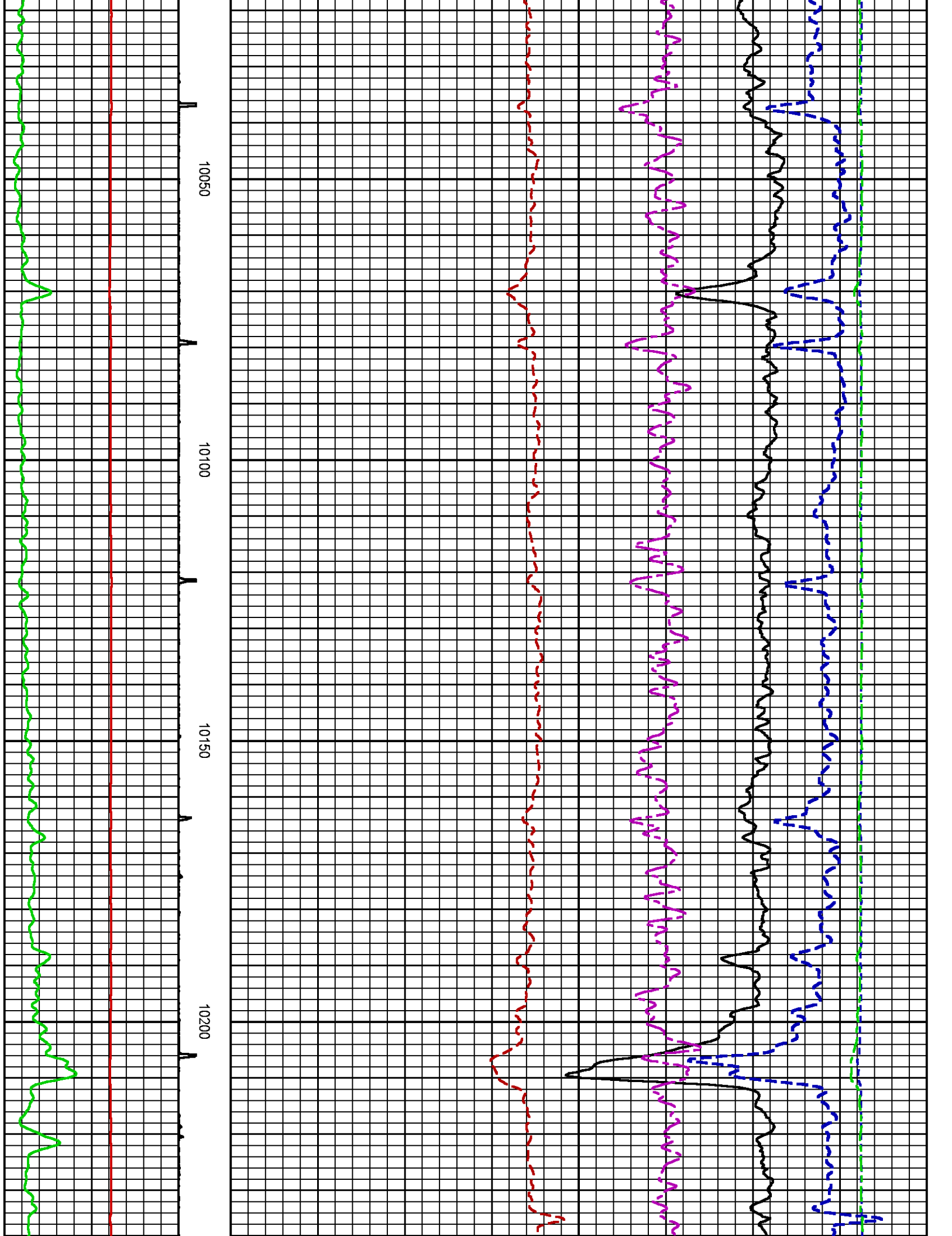


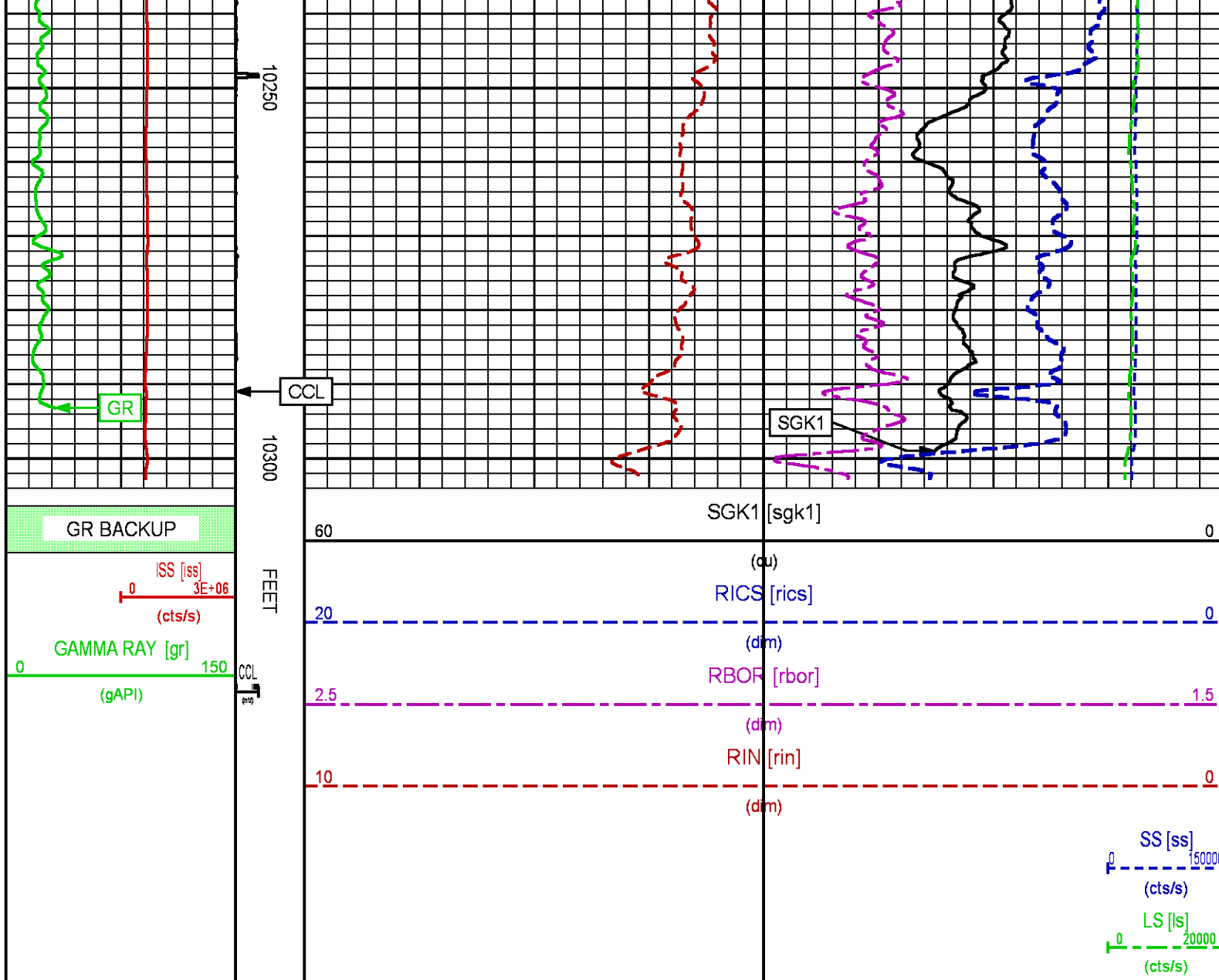












**BAKER
HUGHES**
a GE company



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