

FILE NO: US625274
API NO: 05045220810000
COMPANY: WPX ENERGY INC
WELL: RWF 332-4
FIELD: RULISON
COUNTY: GARFIELD STATE CO

Ver. 3.87
S4 T7S R94W
PAD: RMV 108-4
RIG: NABORS 574
LOCATION: SHL: 445' FNL: 1706' FEL
BHL: 1701' FNL: 2103' FEL
SEC 4 TWP 7S RGE 94W
OTHER SERVICES: NONE

PERMANENT DATUM: GL ELEVATION 5794 FT
LOG MEASURED FROM: KB 26 FT ABOVE P.D.
DRILL MEAS. FROM: KB
ELEVATIONS: KB 5820 FT, DF, GL 5794 FT

DATE	14-Dec-2013
RUN	1
SERVICE ORDER	US625274
DEPTH DRILLER	8214 FT
DEPTH LOGGER	8203 FT
BOTTOM LOGGED INTERVAL	8197 FT
TOP LOGGED INTERVAL	0 FT
CASING DRILLER	9.625 IN @ 1125 FT
CASING LOGGER	1121 FT
BIT SIZE	8.75 IN
TYPE OF FLUID IN HOLE	LSND
DENSITY	14.3 LB/G
VISCOSITY	57 CP
PH	9.1
FLUID LOSS	0 CC
SOURCE OF SAMPLE	FLOWLINE
RM AT MEAS. TEMP.	1.45 OHMM @ 66 DEGF
RMF AT MEAS. TEMP.	1.08 OHMM @ 66 DEGF
RMC AT MEAS. TEMP.	1.81 OHMM @ 66 DEGF
SOURCE OF RMF	CALCULATED
RM AT BHT	1.32 OHMM @ 196 DEGF
TIME SINCE CIRCULATION	6 HRS
MAX. RECORDED TEMP.	198 DEGF
EQUIP. NO.	6670
LOCATION	GRAND JCT
RECORDED BY	PATTON
WITNESSED BY	G. VALLAD

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.

BOREHOLE RECORD		
BIT SIZE	FROM	TO
8.75 IN	0 FT	8214 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	32 LB/F		0 FT	1125 FT

REMARKS

RUN 1 TRIP 1: HDIL ZDL CN GR RUN IN COMBINATION

HAD DIFFICULTY GETTING TO TD
PULLED 65% MULTIPLE TIMES PULLING UP TO GET MAGNETIC MARK DOWNHOLE

BVOL CVOL CALCULATED IN CUBIC FEET
BVOL CALCULATED USING PROPOSED 4.5" CASING
CALIPER VERIFIED INSIDE CASING

RHO MATRIX: 2.68 G/CC
RHO FLUID: 1.00 G/CC

CN MATRIX: SANDSTONE
CN RAN DECENTRALIZED

HDIL RAN WITH 1.5" STANDOFFS
ABC TO CALCULATE: MUD CONDUCTIVITY

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: PATTON/COATE/HOLLAR
RIG: NABORS 574

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWVL	3950XA	10119949	FREE
1	1	TTRM	3980XA	10142233	FREE
1	1	TMGR	3518EB	10126398	FREE
1	1	CN	2436XA	10362459	DECENTRALIZED
1	1	ZDL	2223XA	10102922	PAD DEVICE
1	1	KNJT	3930XA	10102172	FREE
1	1	HDIL	1530XA		STOOD OFF

MAIN LOG 2"/100FT SCALE

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

Patches: 3

Plotted: Sat Dec 14 21:03:25 2013

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/625274/n970a02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1015.500 ft BOTTOM DEPTH: 8230.051 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER Q	medium (1)		TOP	BOTTOM
CALIPER	FILTER Q	medium (1)		"	"
TENSION	FILTER Q	medium (1)		"	"
SP-SPDH	FILTER Q	heavy (3)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	8.750	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	66.0	degF	"	"
	MUD SAMPLE RES	1.450	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	66.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM

ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON	"	"
	ABC to CALCULATE	MUD CONDUCTIVITY	"	"
	STANDOFF	1.50	in	"
	TOOL POSITION	ECCENTERED	"	"
	Rmud MULTIPLIER	1.000	"	"

CURVE DESCRIPTION REPORT

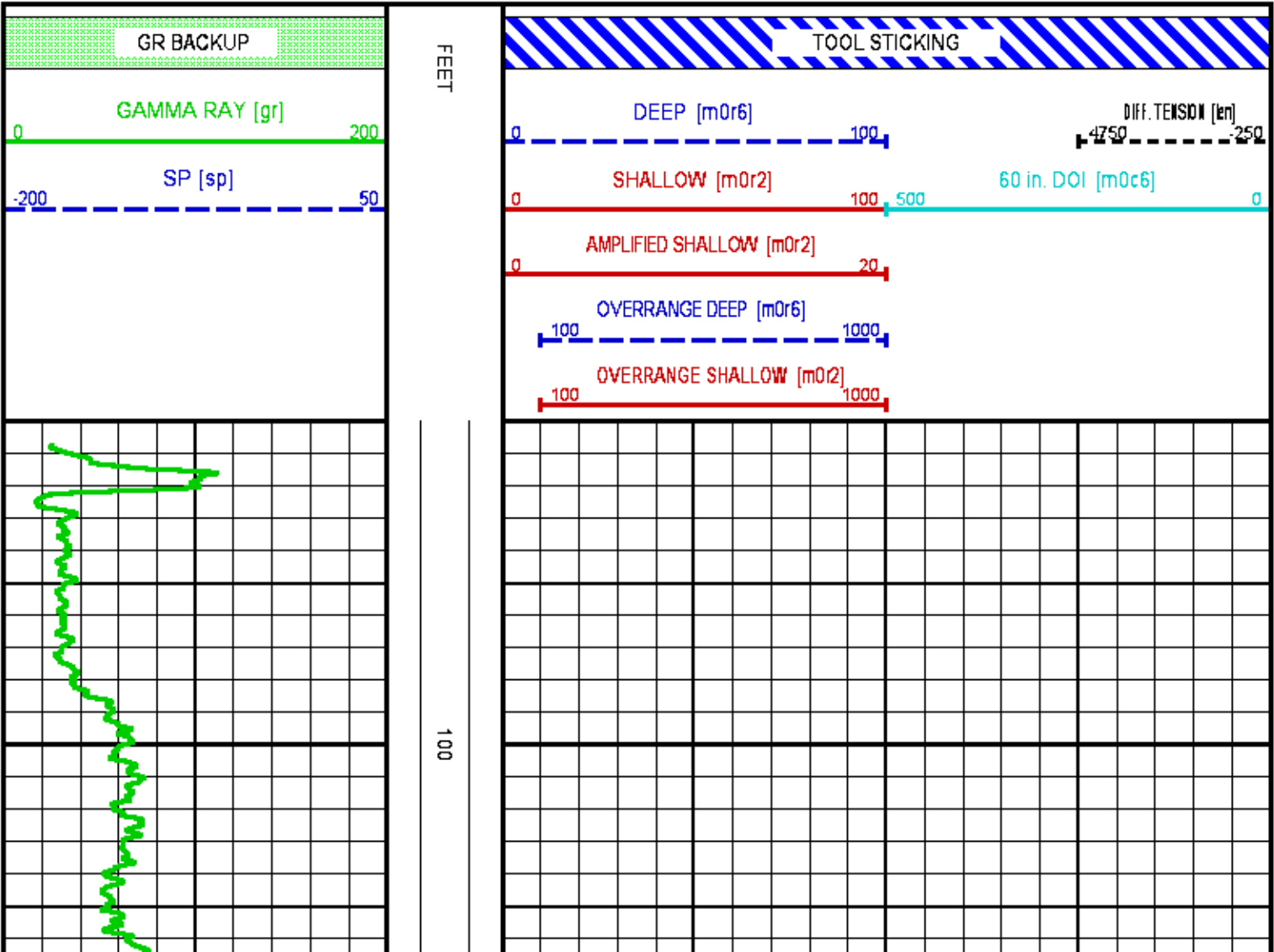
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
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F1:MOC6	Dec 14 18:29:53 2013	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:MOR2	Dec 14 18:29:53 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:MOR6	Dec 14 18:29:53 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Dec 14 18:29:53 2013	SPONTANEOUS POTENTIAL
F1:TEN	Dec 14 18:29:53 2013	DIFFERENTIAL TENSION

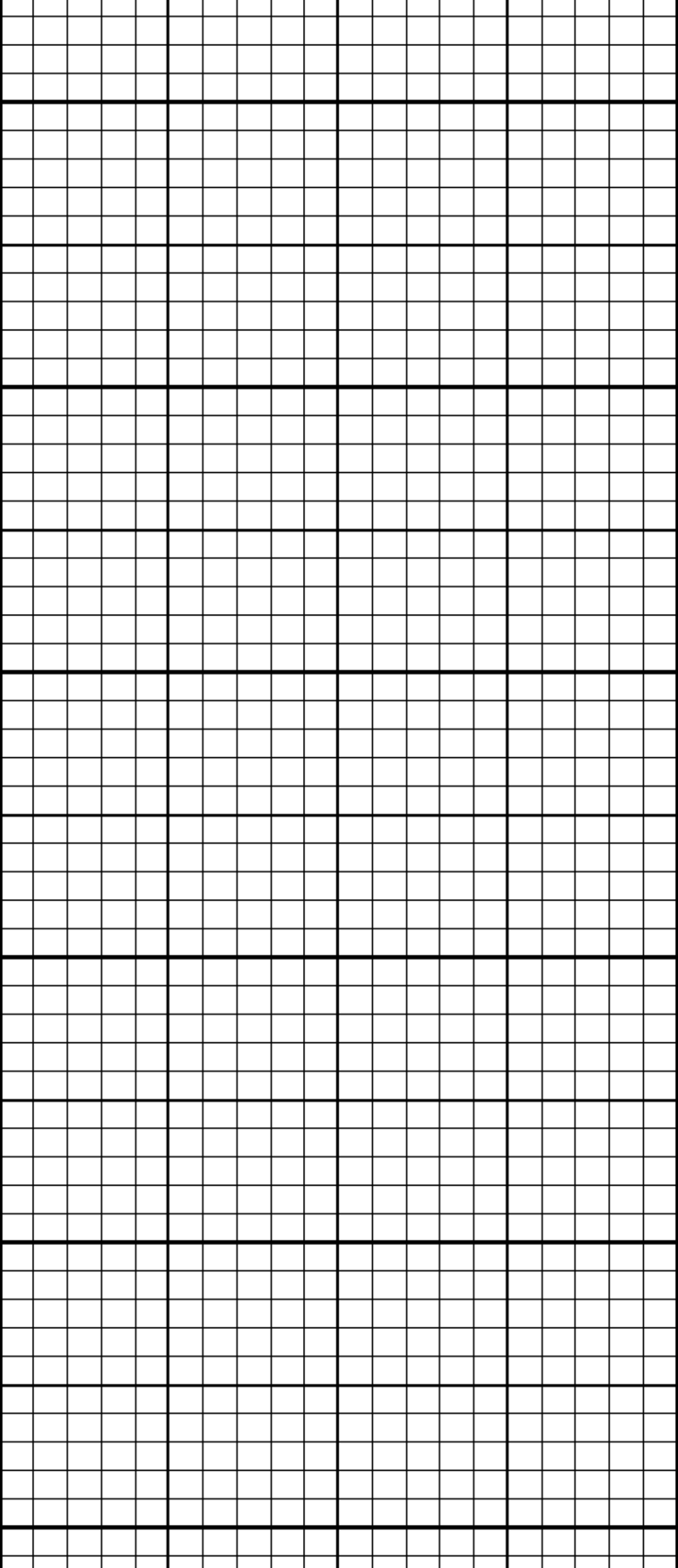
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
GR	35.00	MOR2	2.75	SP	1.25		
MOC6	2.75	MOR6	2.75	TEN	0.00		

Presentation : HL6670:/dat1a/625274/WPX_2IN.fvpdf [2"/100' Scale]
Plot Interval : 7.5 - 8239.25 Feet

Data File 1 : F1 : HL6670:/dat1a/625274/n970a02-MAIN.xtf
Created On : Dec 14 18:29:53 2013
Company : WPX ENERGY INC
Well : RWF 332-4
Field : RULISON
File Interval : 7.5 - 8239.25 Feet
OCT : n970a





200

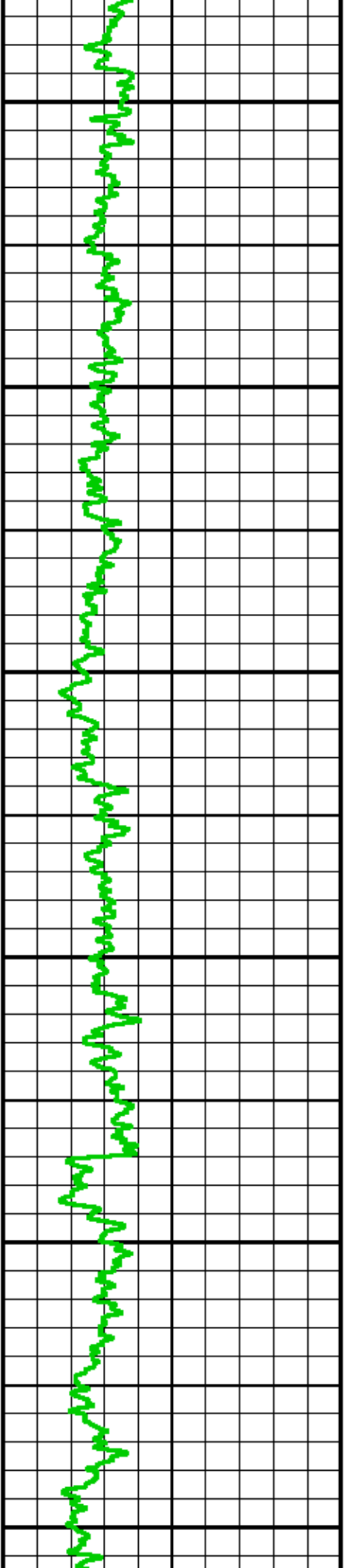
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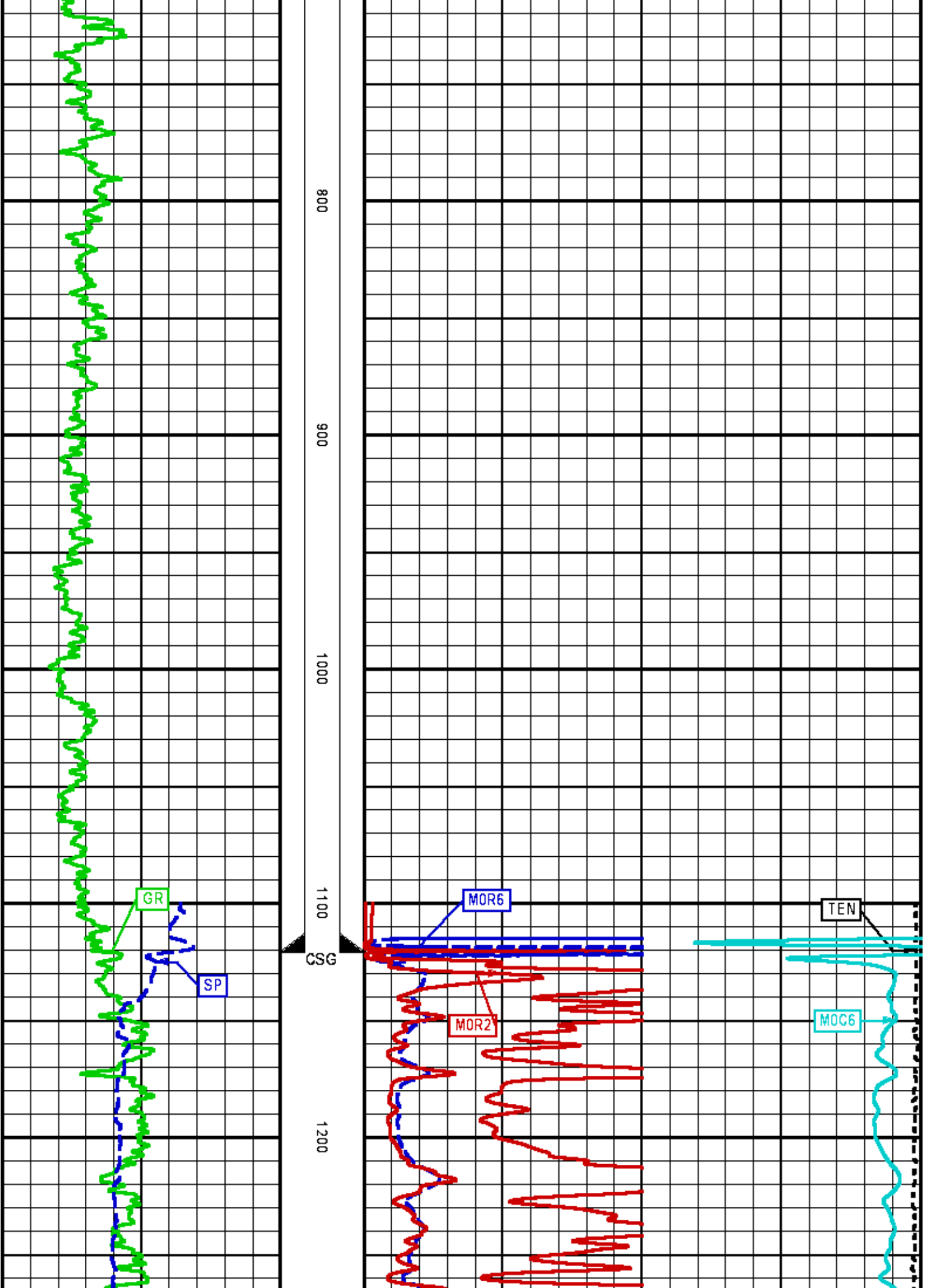
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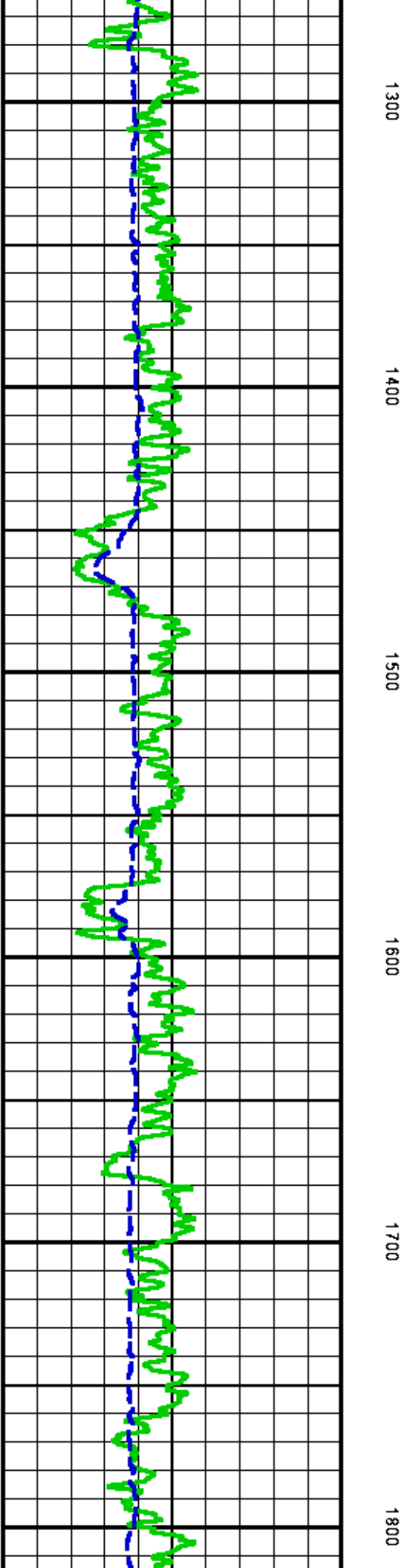
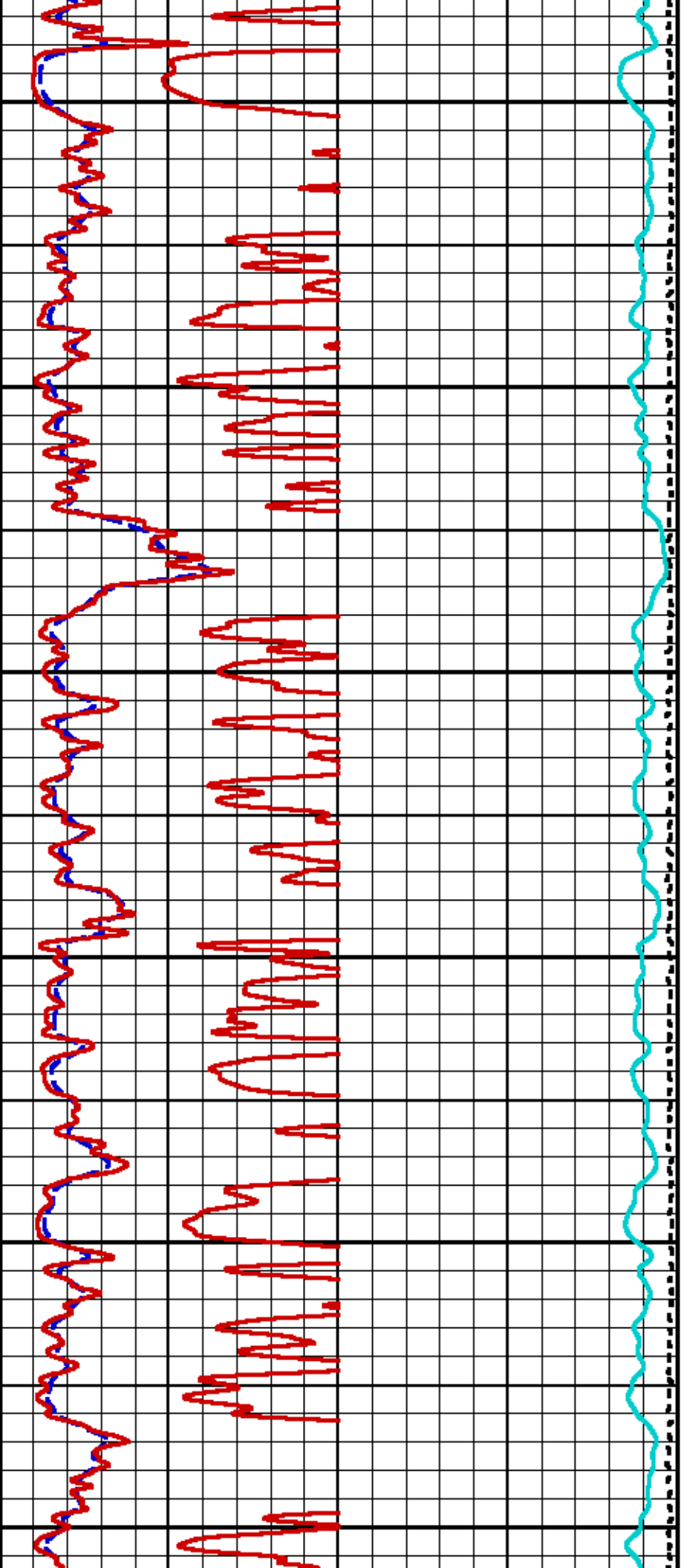
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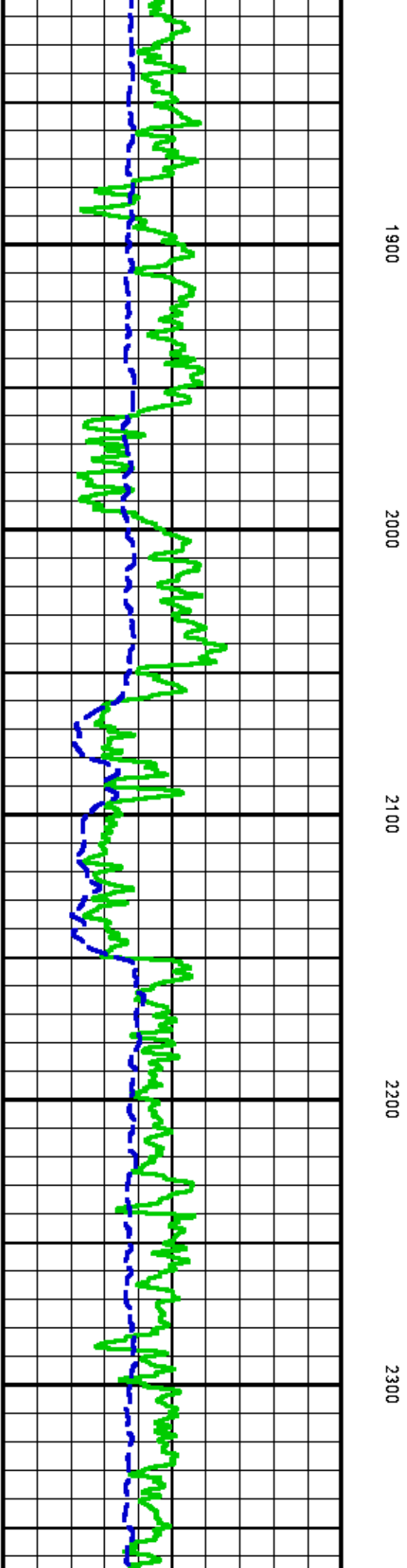
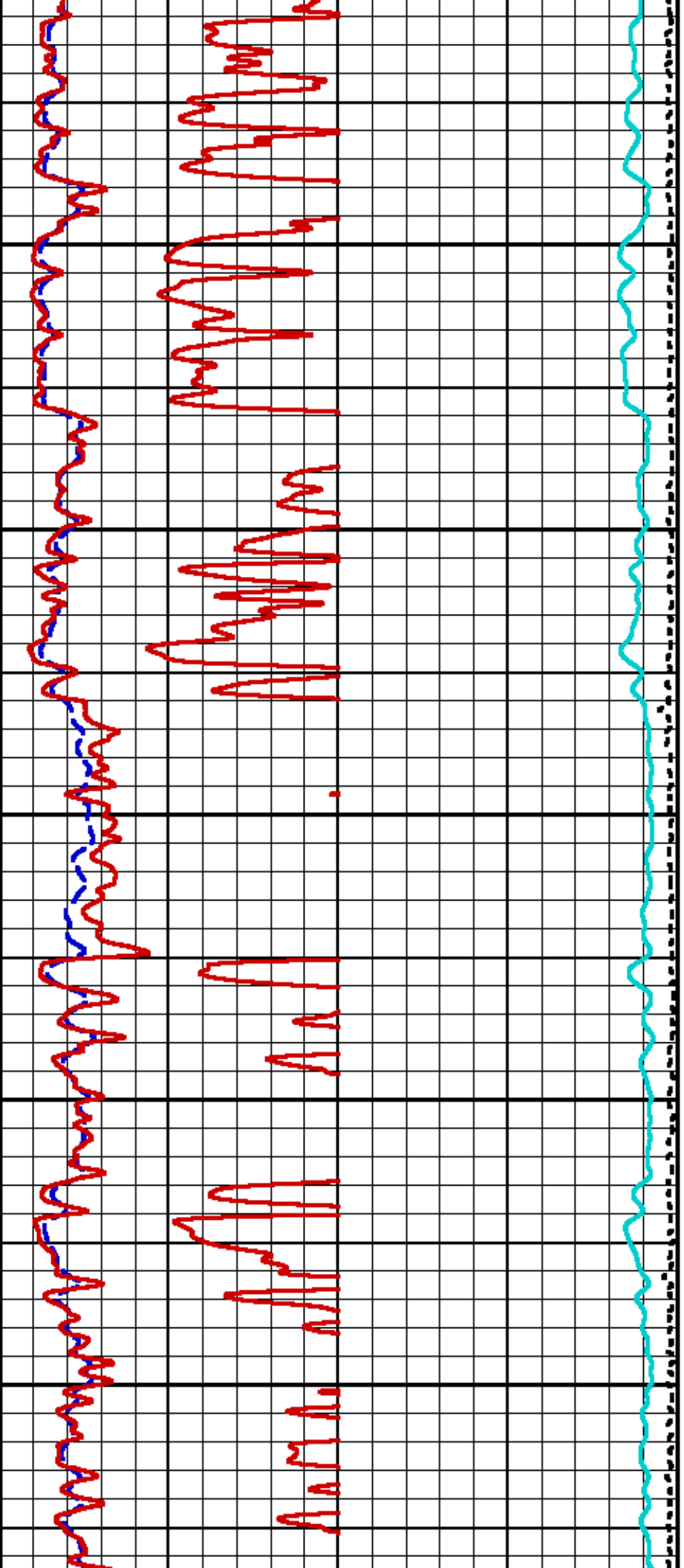
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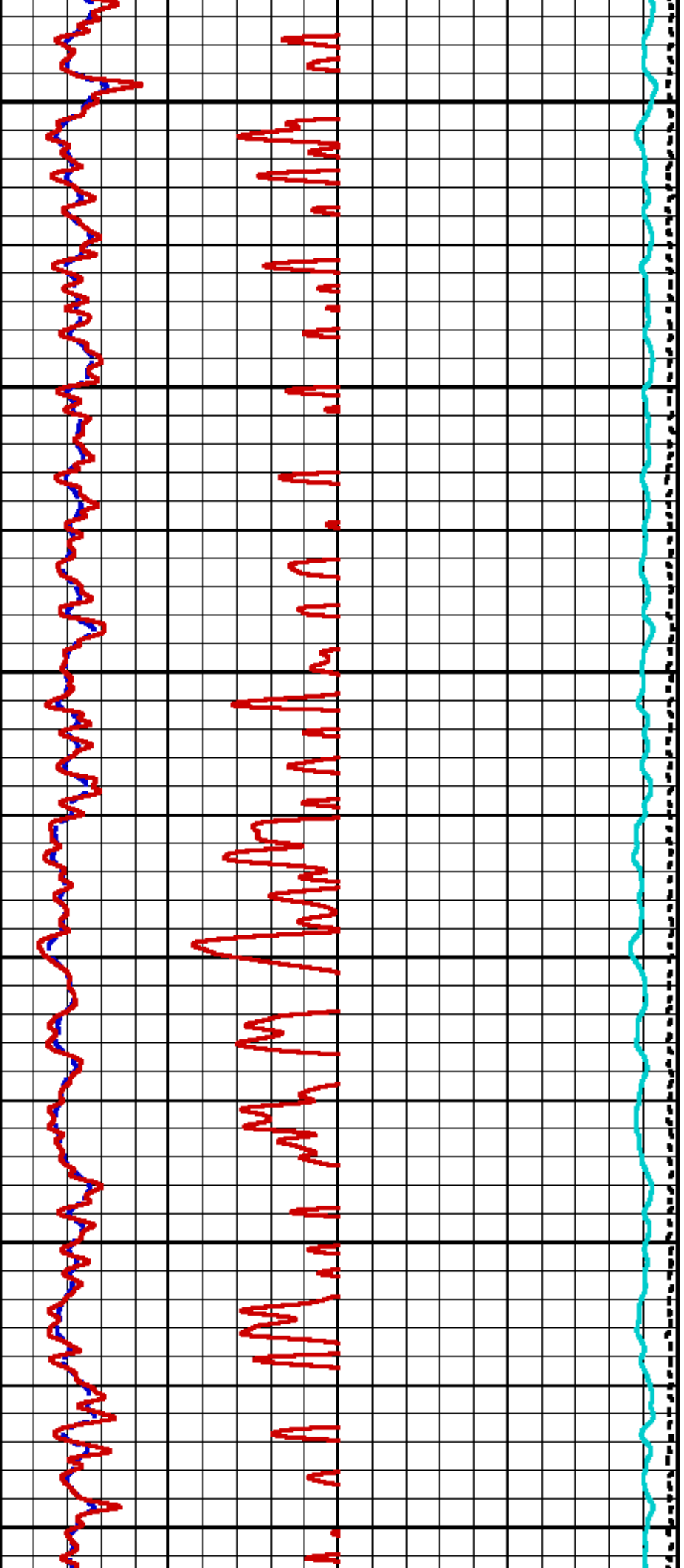
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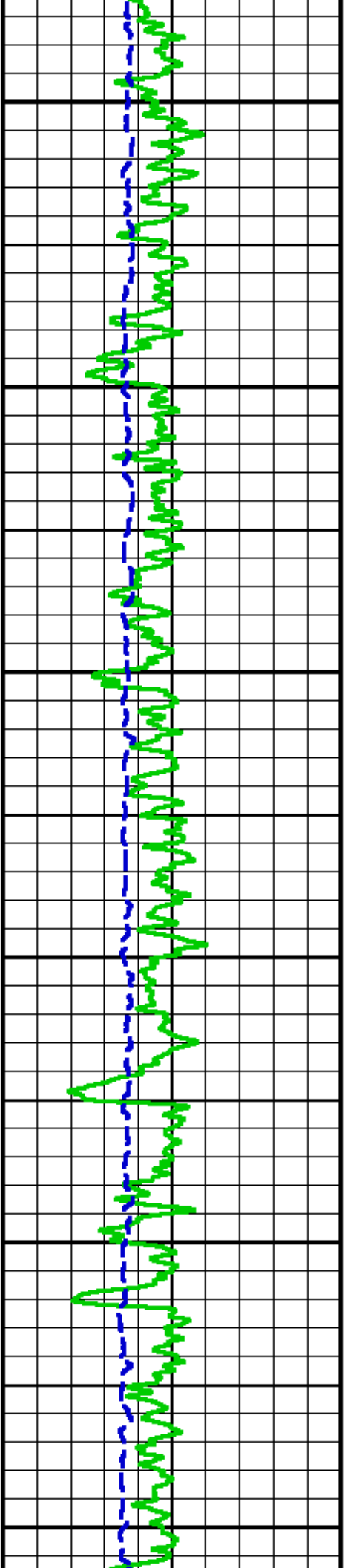


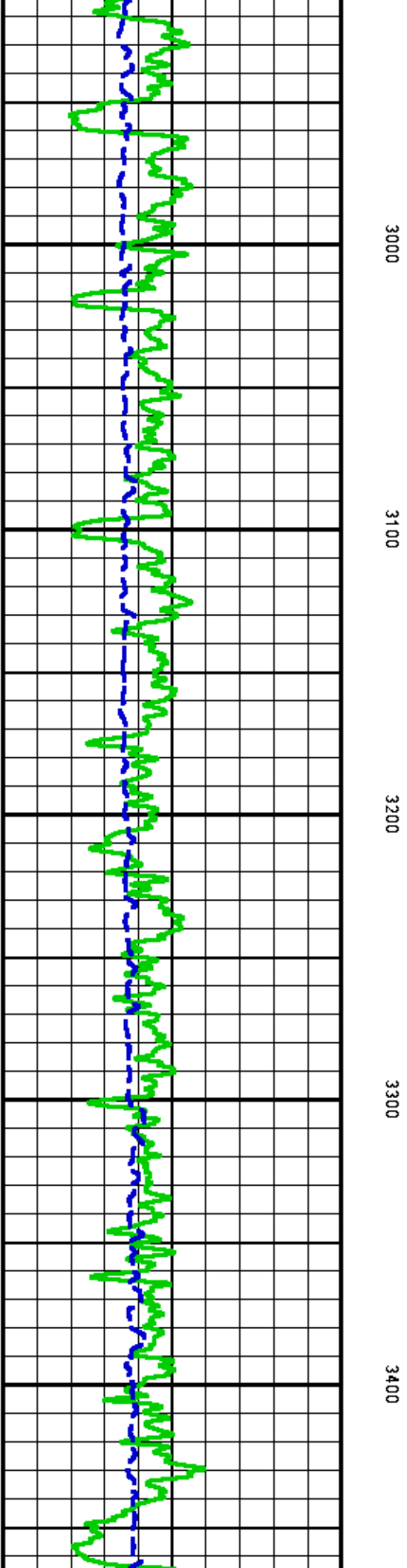
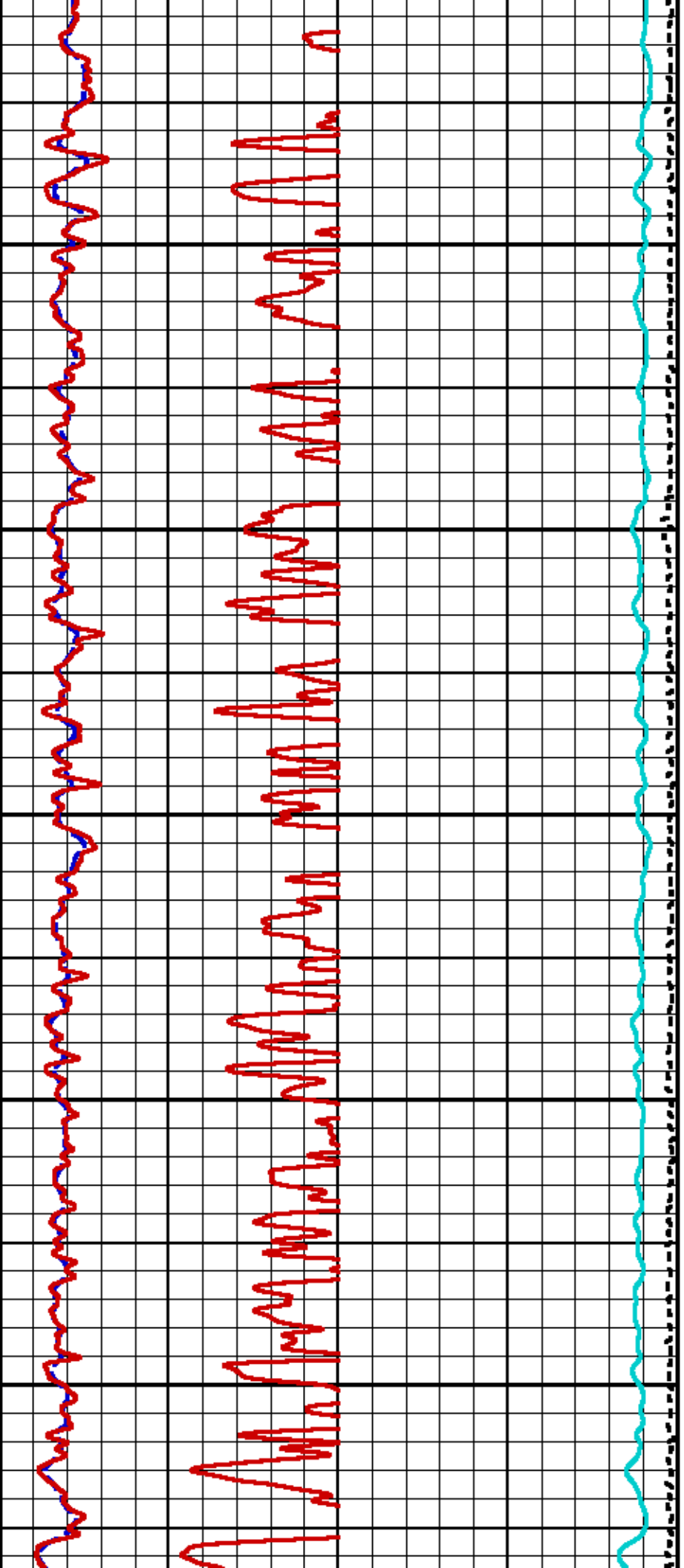


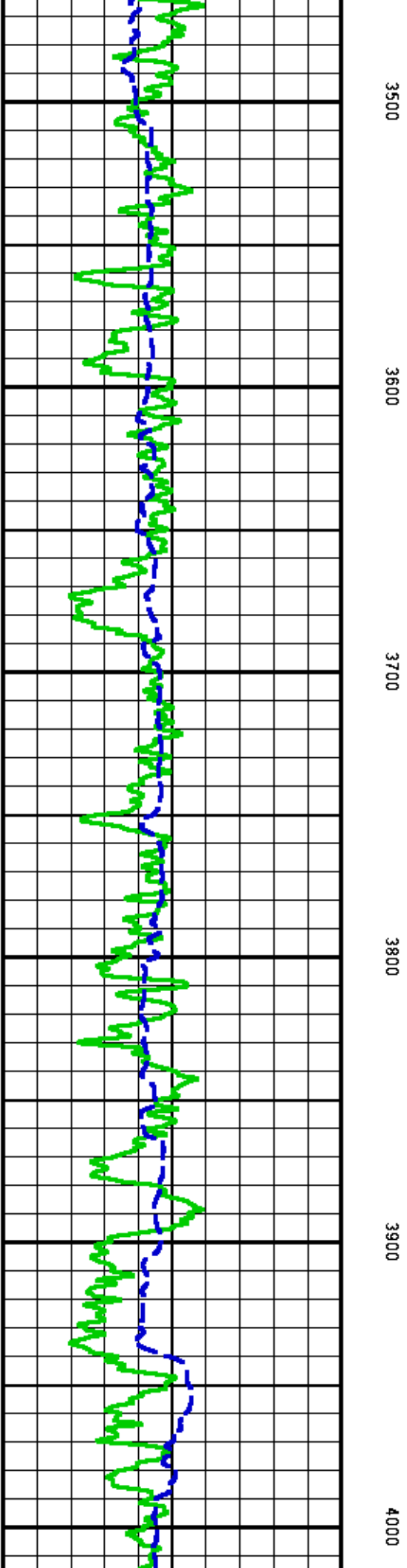
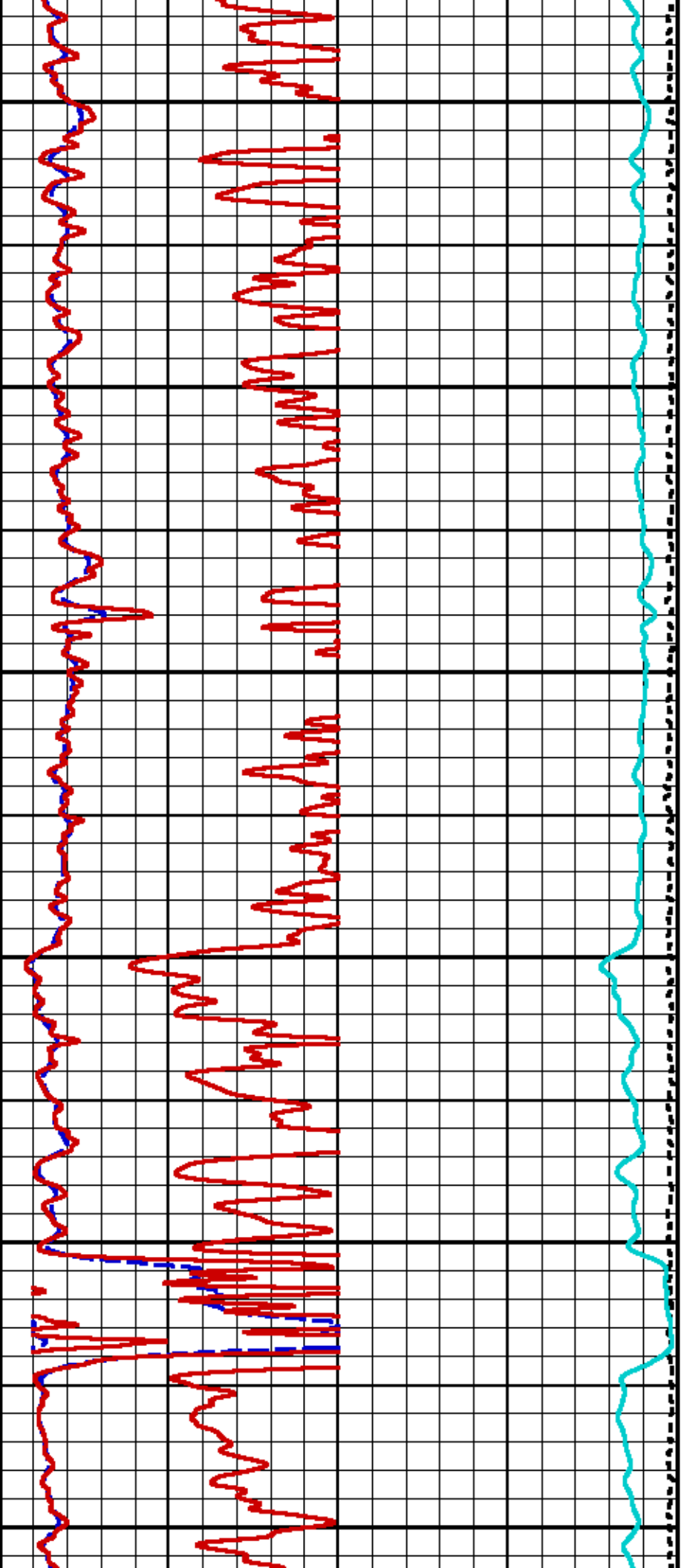


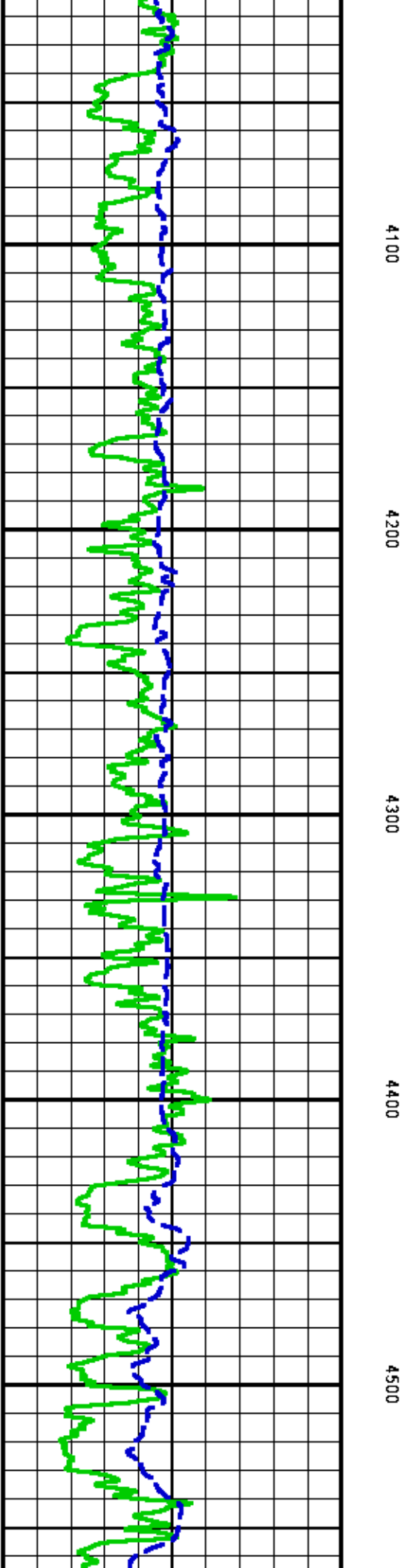
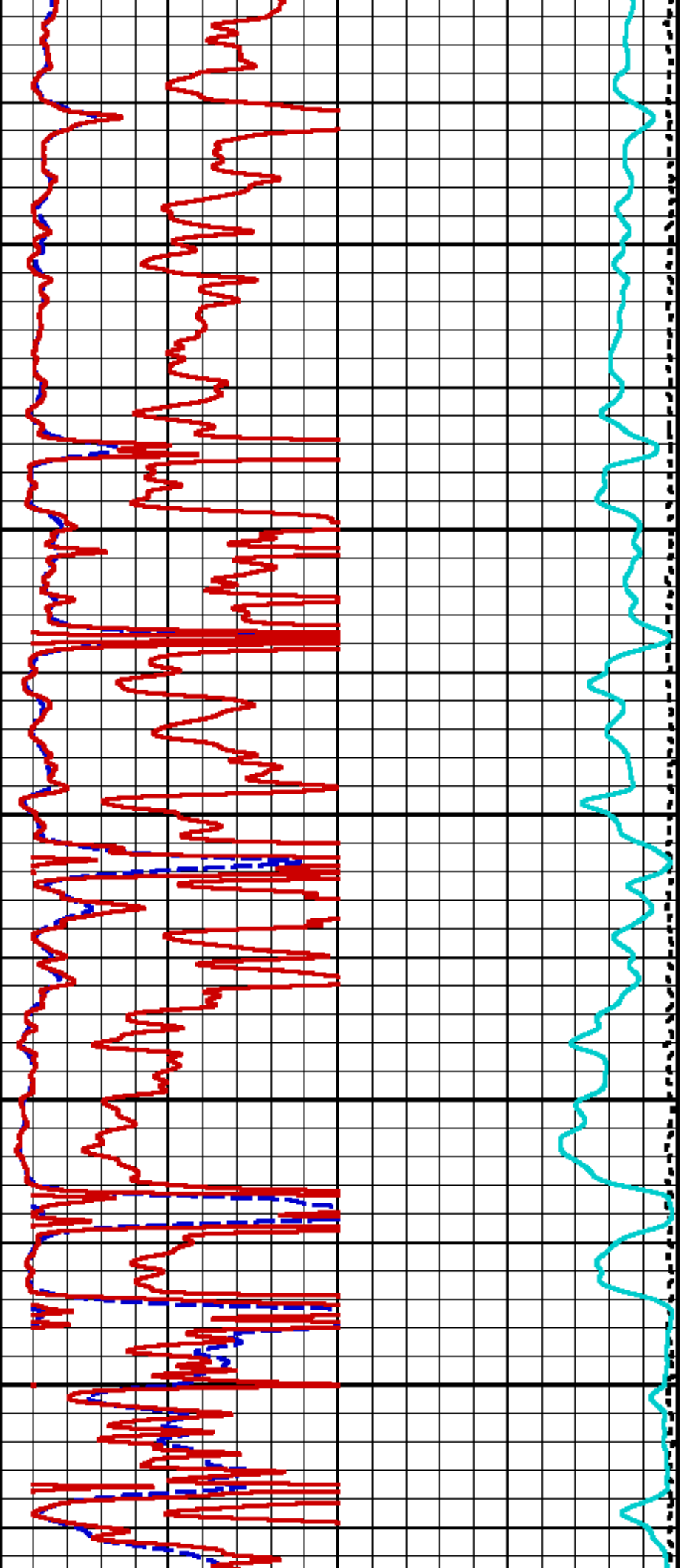


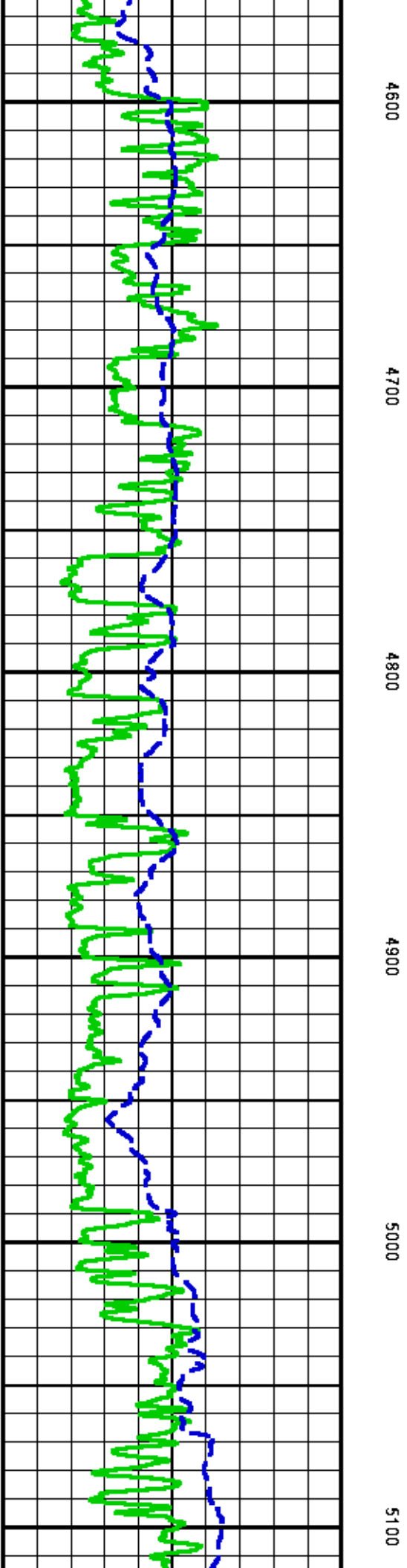
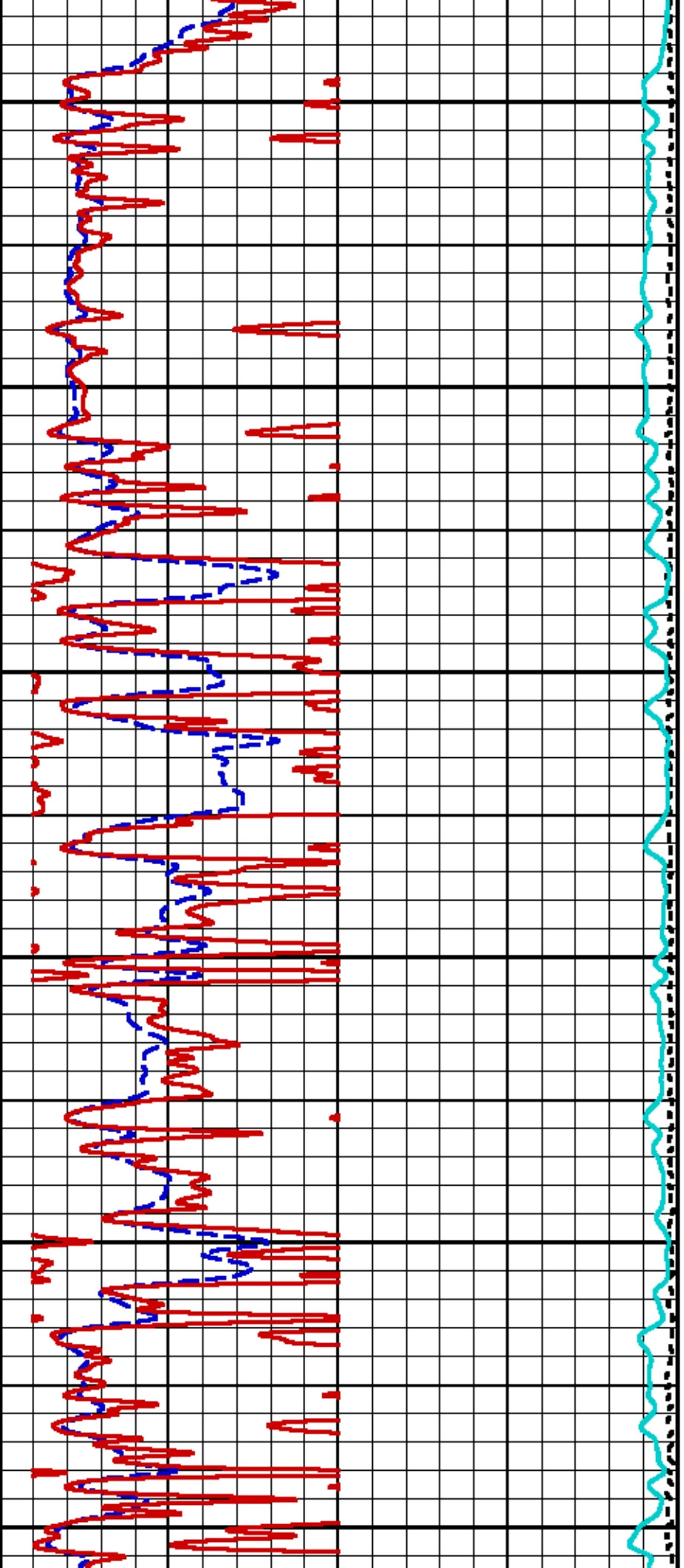
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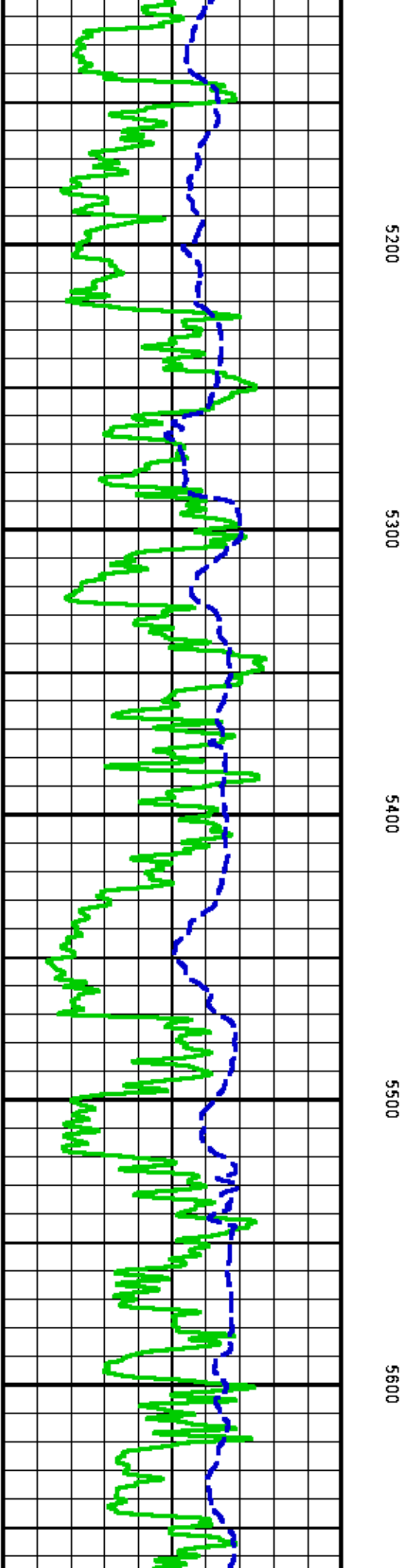
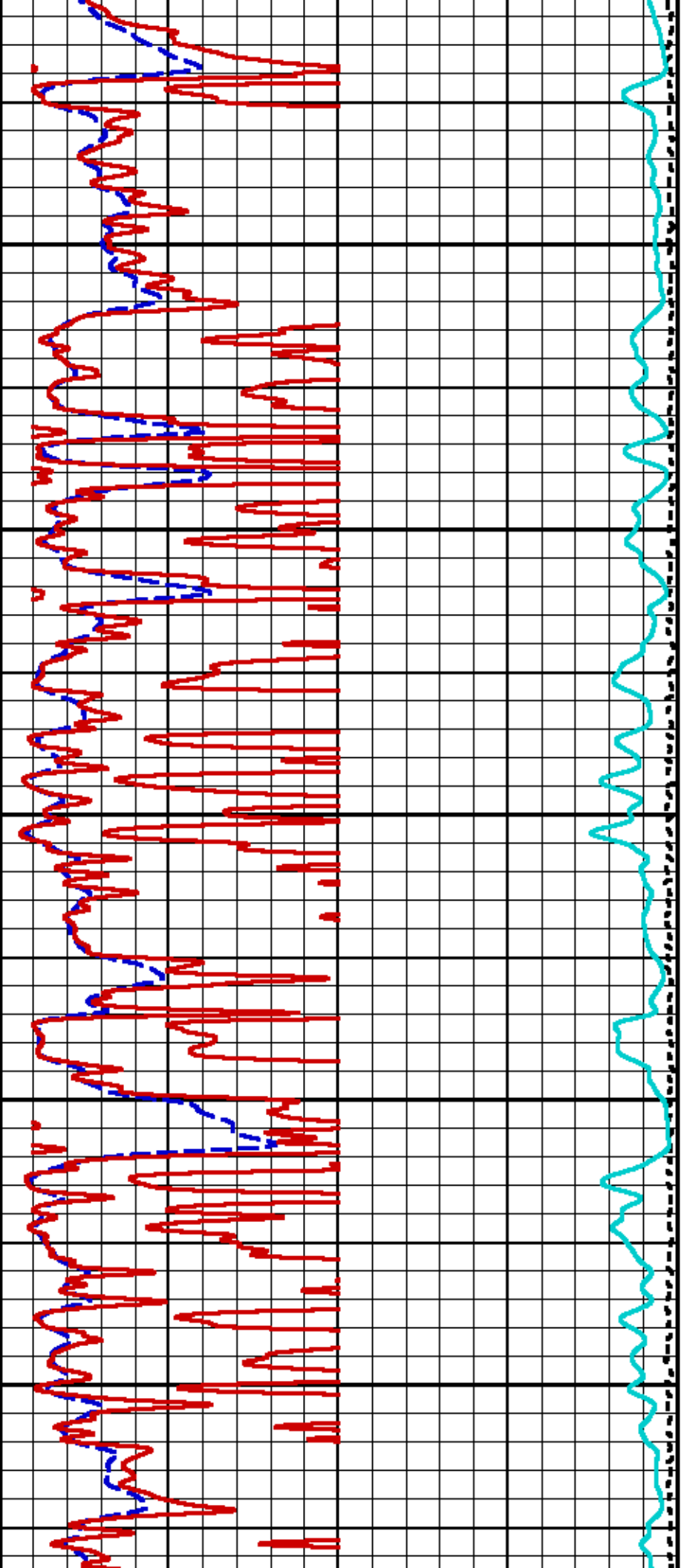


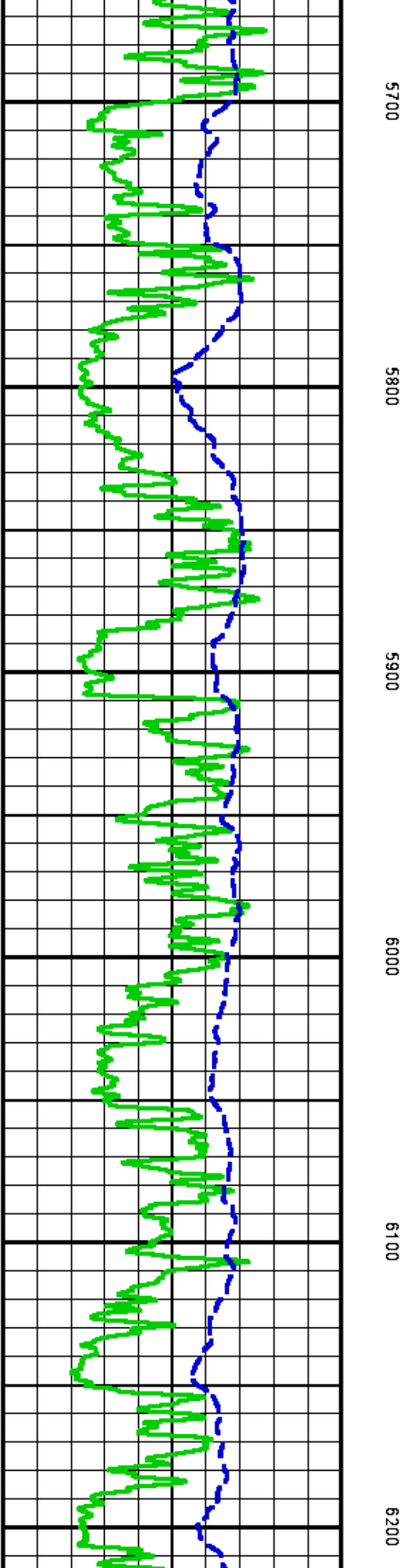
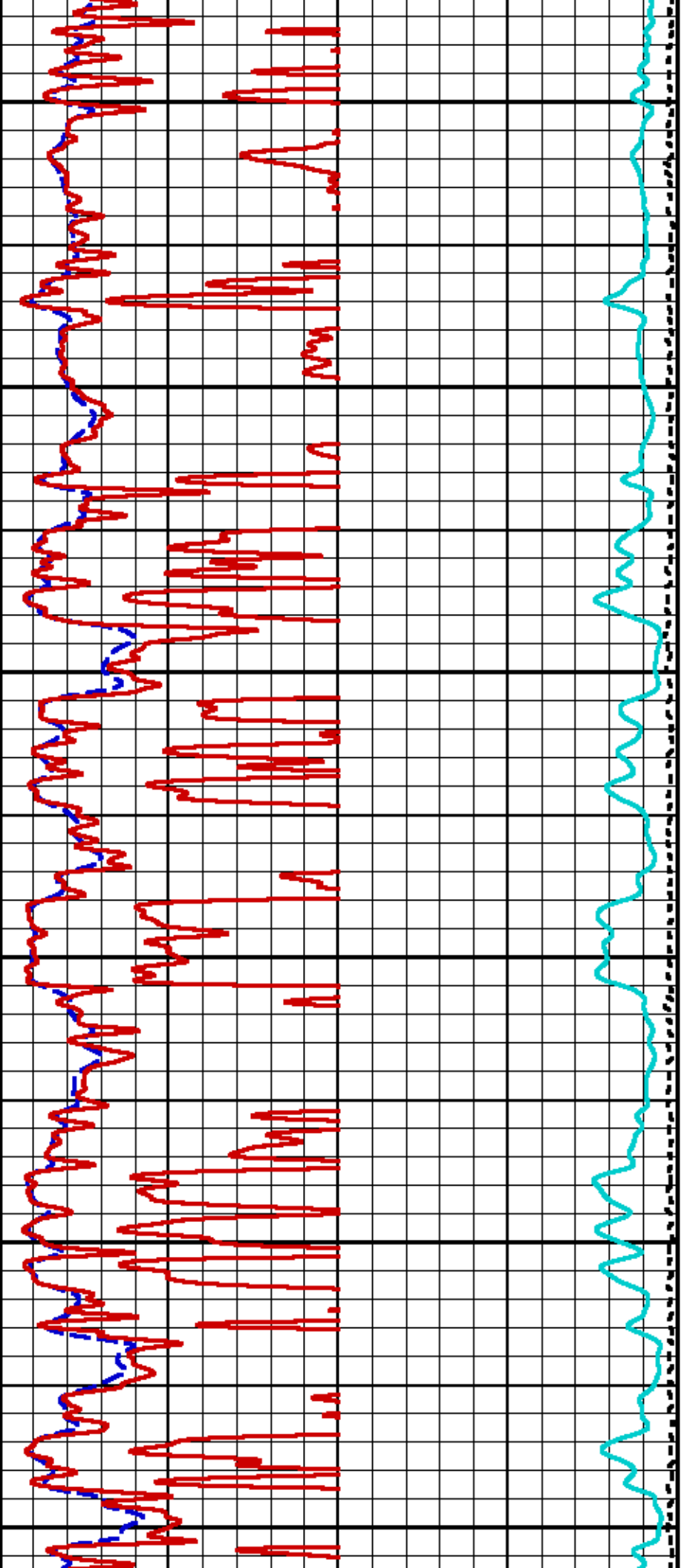


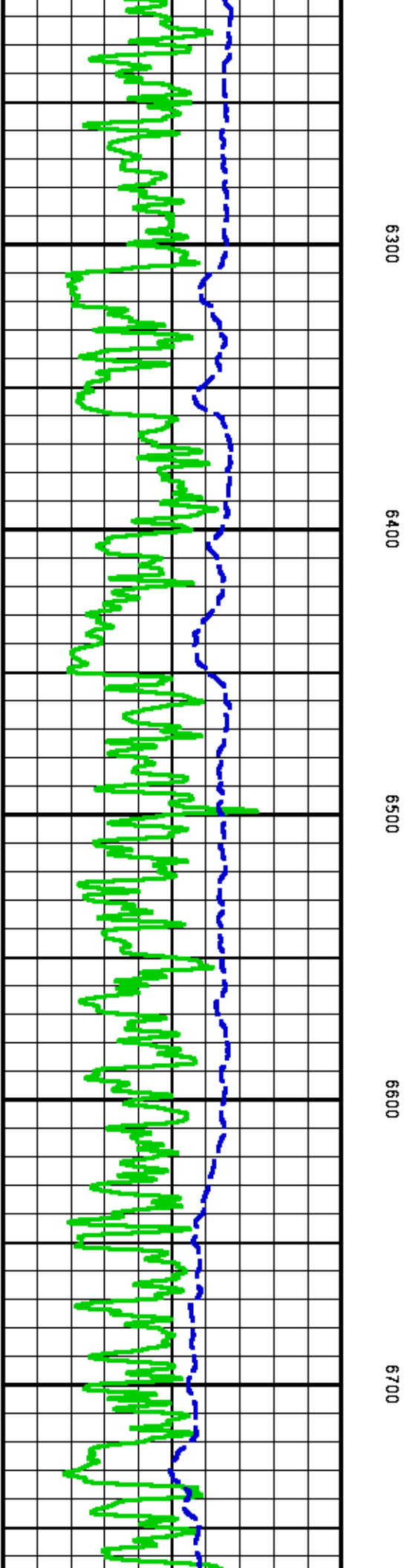
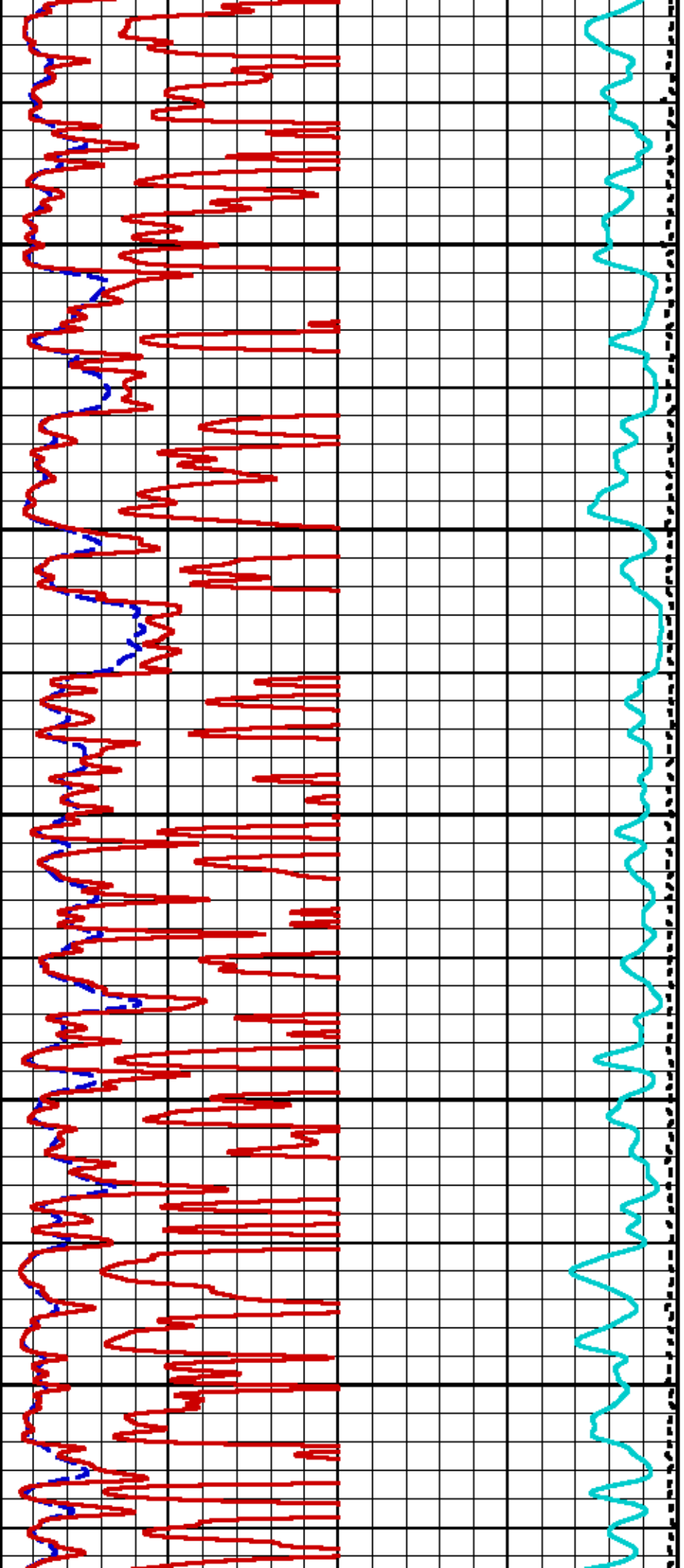


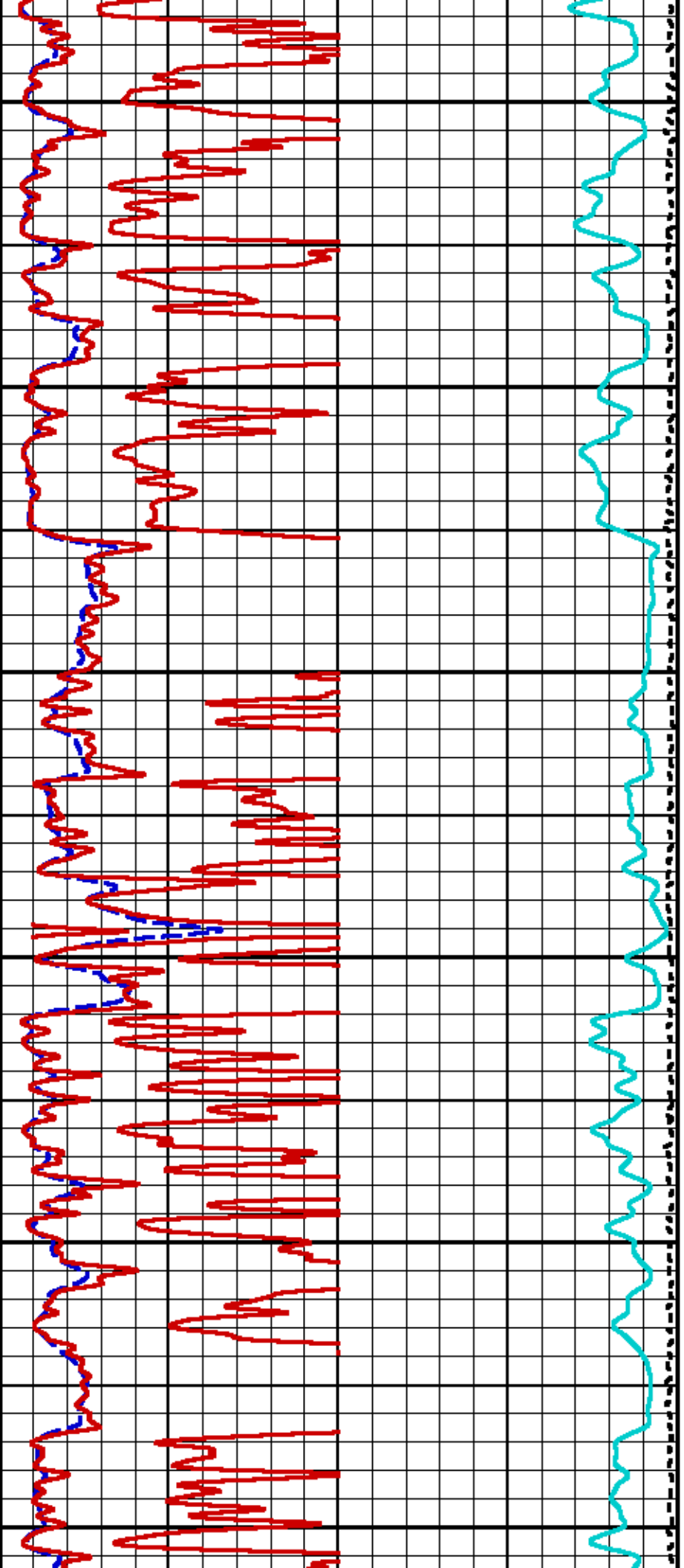












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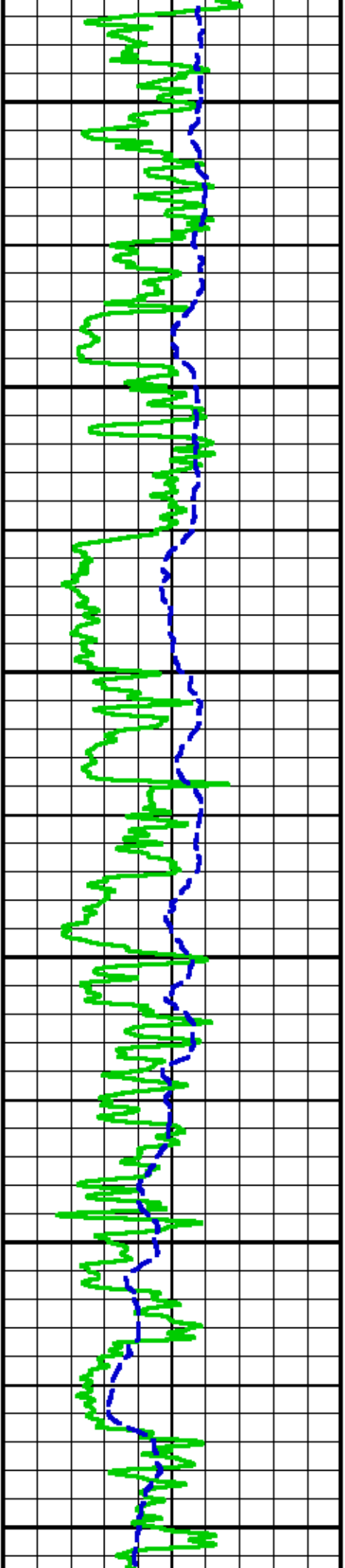
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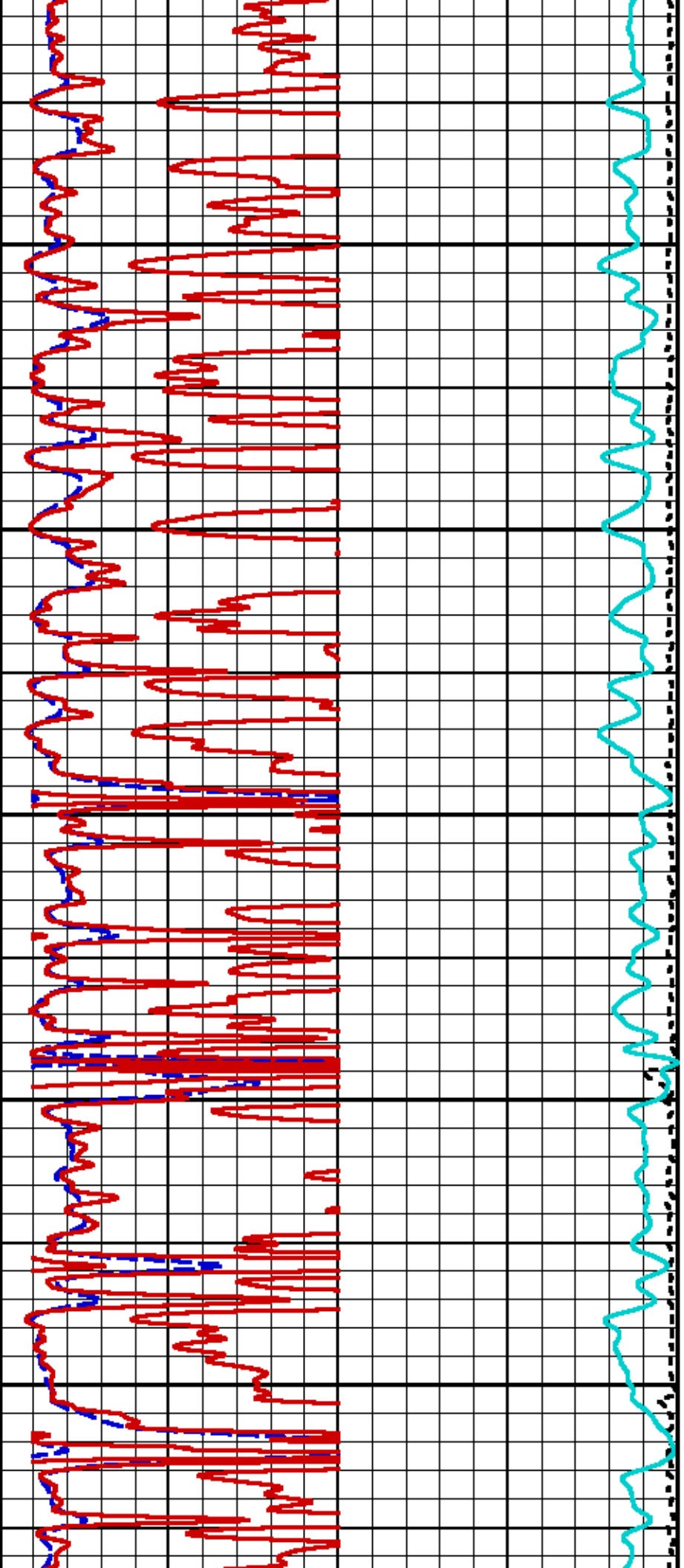
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7200

7300





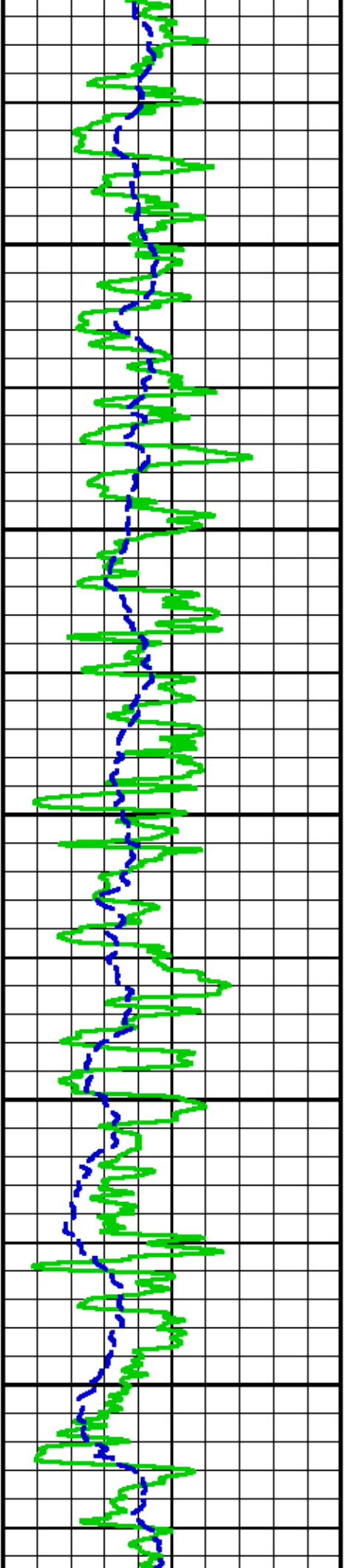
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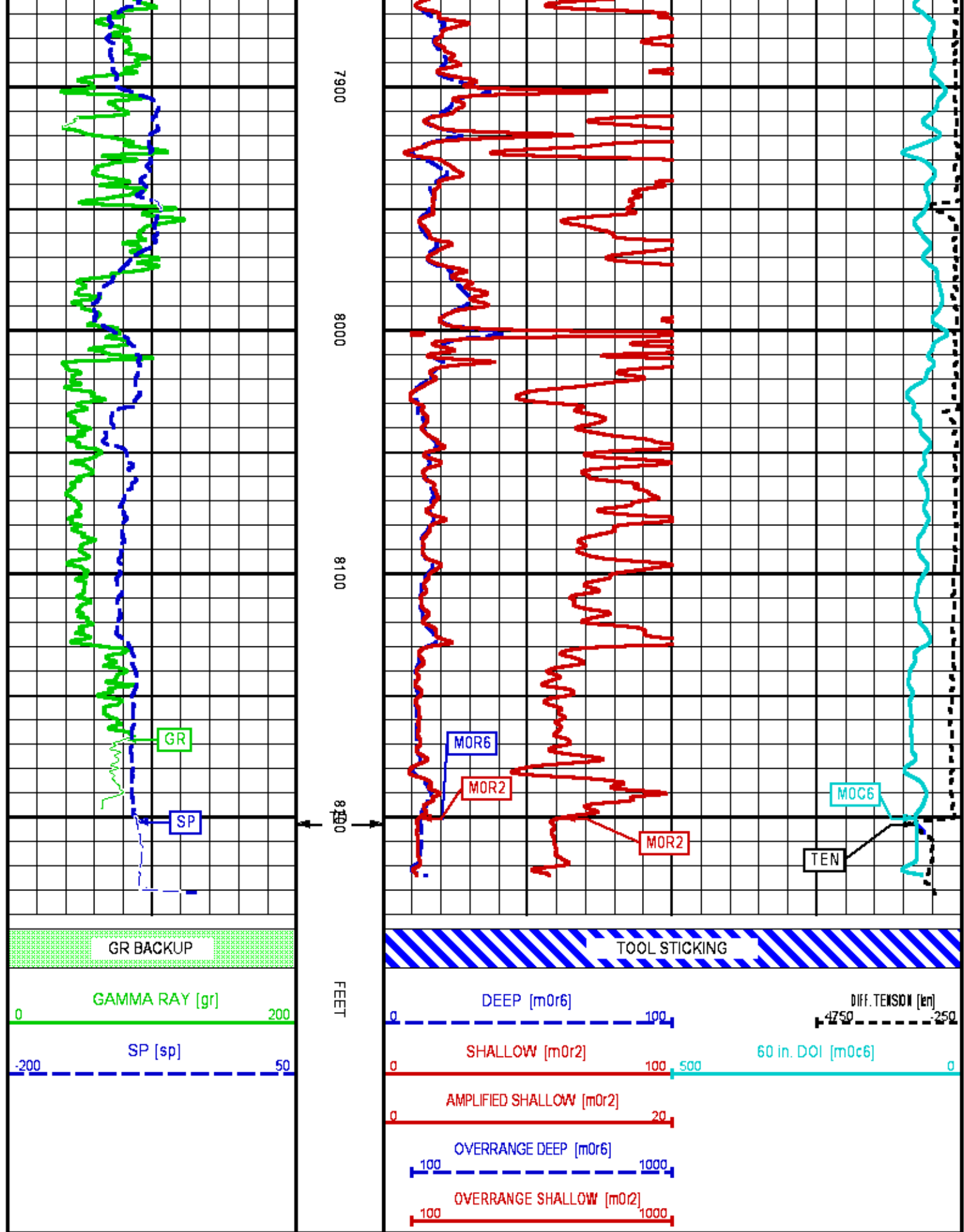
7500

7600

7700

7800





MAIN LOG 5"/100FT SCALE

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

Patches: 3

Plotted: Sat Dec 14 21:02:45 2013

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/625274/n970a02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 1015.500 ft BOTTOM DEPTH: 8230.051 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER Q	medium (1)		TOP	BOTTOM
CALIPER	FILTER Q	medium (1)		"	"
TENSION	FILTER Q	medium (1)		"	"
CN MED RES	FILTER Q	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1a*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2a*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER Q	heavy (3)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	8.750	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750	in	"	"
	FIXED DIAMETER (mbh*)	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	66.0	degF	"	"
	MUD SAMPLE RES	1.450	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	66.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	600	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOmatrix	2.680	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

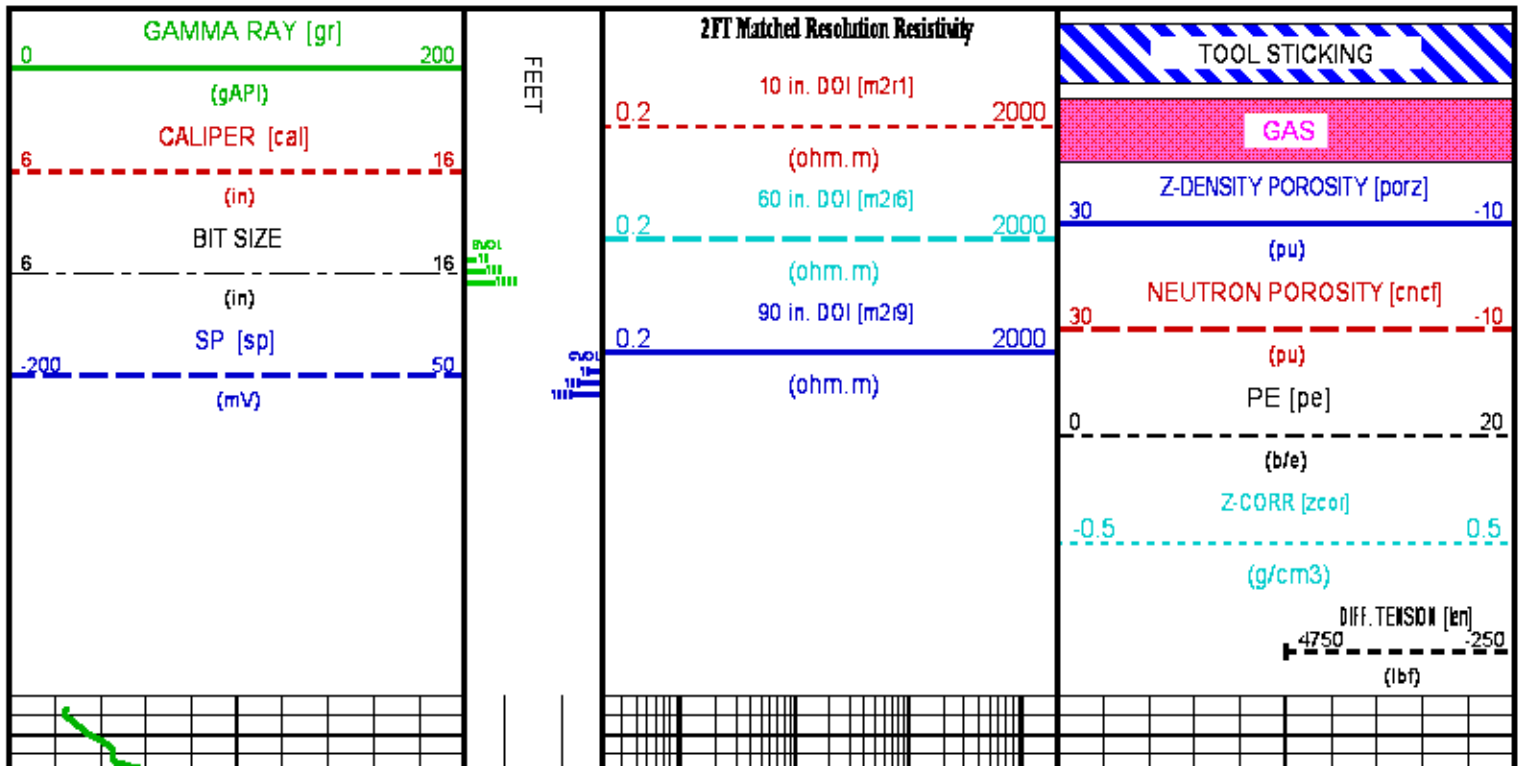
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F1:BVOL	Dec 14 18:29:53 2013	BOREHOLE VOLUME
F1:CAL	Dec 14 18:29:53 2013	CALIPER
F1:CNCF	Dec 14 18:29:53 2013	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Dec 14 18:29:53 2013	CEMENT VOLUME
F1:GR	Dec 14 18:29:53 2013	GAMMA RAY
F1:M2R1	Dec 14 18:29:53 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	Dec 14 18:29:53 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Dec 14 18:29:53 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Dec 14 18:29:53 2013	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Dec 14 18:29:53 2013	POROSITY FOR SELECTABLE MATRIX
F1:SP	Dec 14 18:29:53 2013	SPONTANEOUS POTENTIAL
F1:TEN	Dec 14 18:29:53 2013	DIFFERENTIAL TENSION
F1:ZCOR	Dec 14 18:29:53 2013	DENSITY CORRECTION

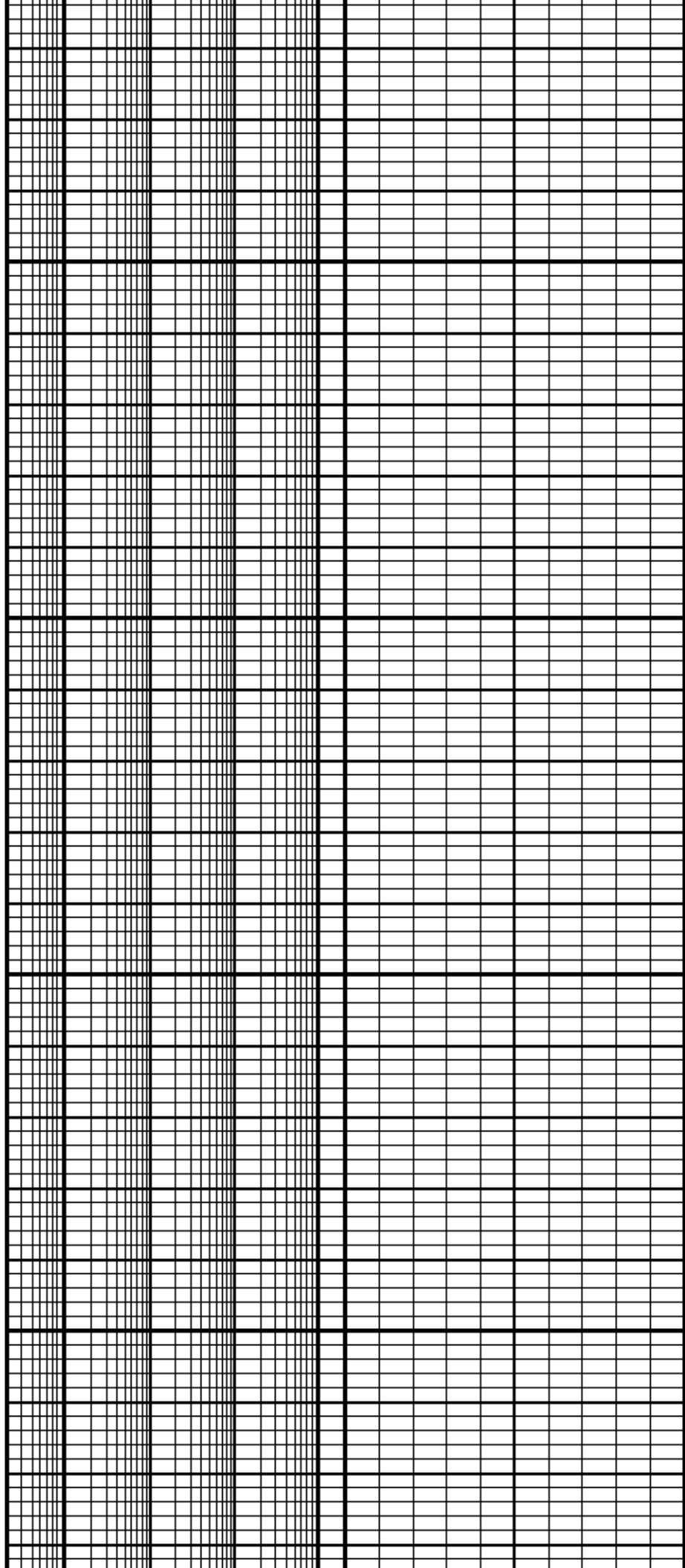
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	35.00	M2R9	2.75	SP	1.25
CAL	18.12	M2R1	2.75	PE	18.00	TEN	0.00
CNCF	27.38	M2R6	2.75	PORZ	18.00	ZCOR	18.00

Presentation : HL6670:/dat1a/625274/WPX_5IN.fvpdf [5"/100" Scale]
Plot Interval : 7.5 - 8239.25 Feet

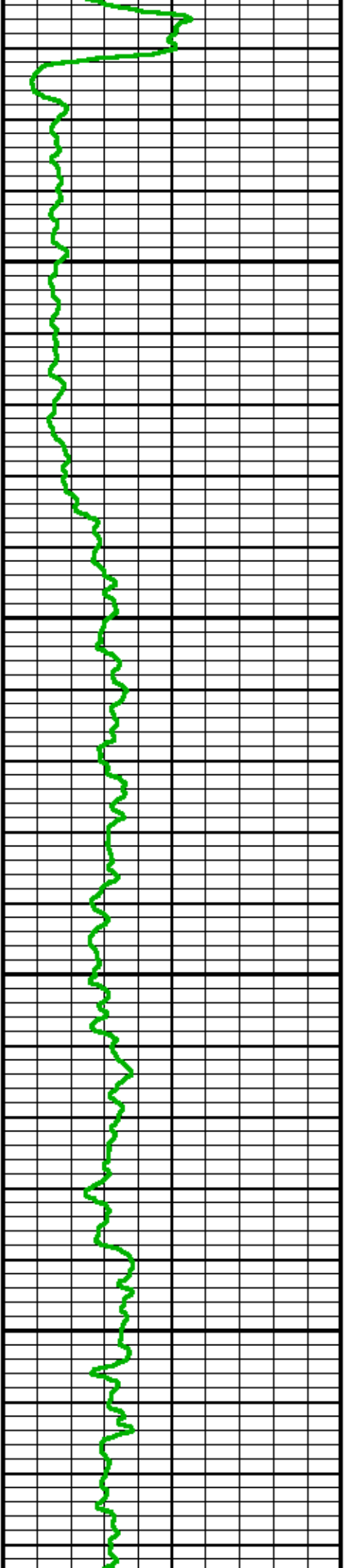
Data File 1 : F1 : HL6670:/dat1a/625274/n970a02-MAIN.xtf
Created On : Dec 14 18:29:53 2013
Company : WPX ENERGY INC
Well : RWF 332-4
Field : RULISON
File Interval : 7.5 - 8239.25 Feet
OCT : n970a

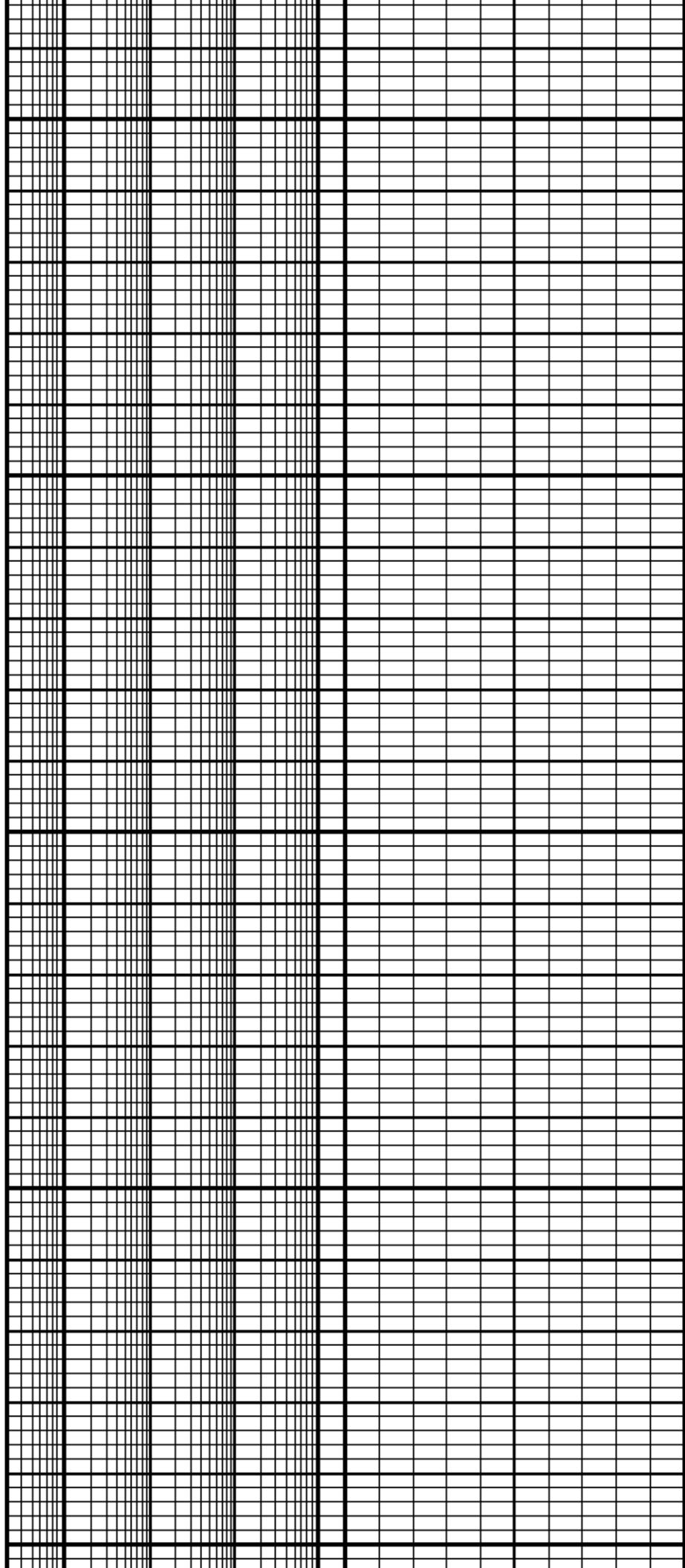




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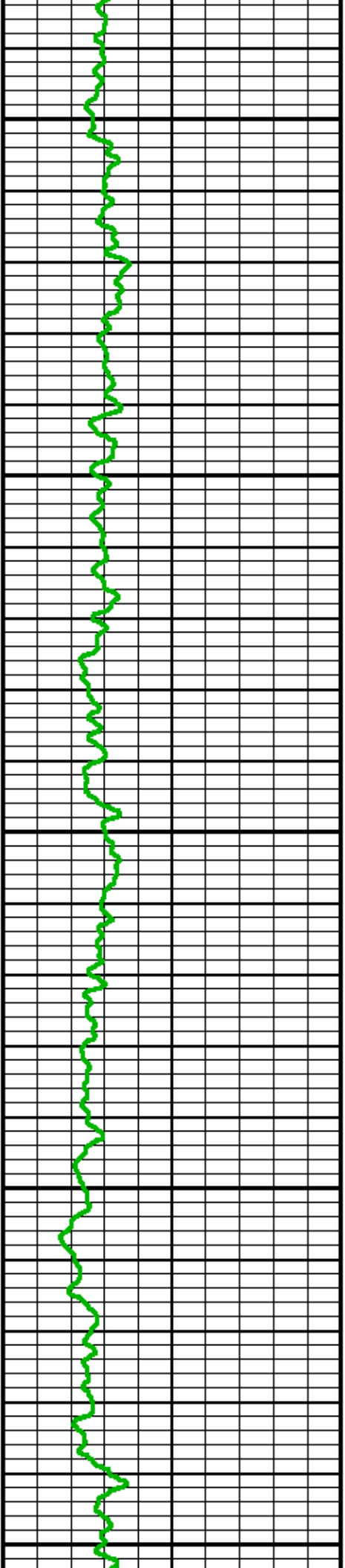
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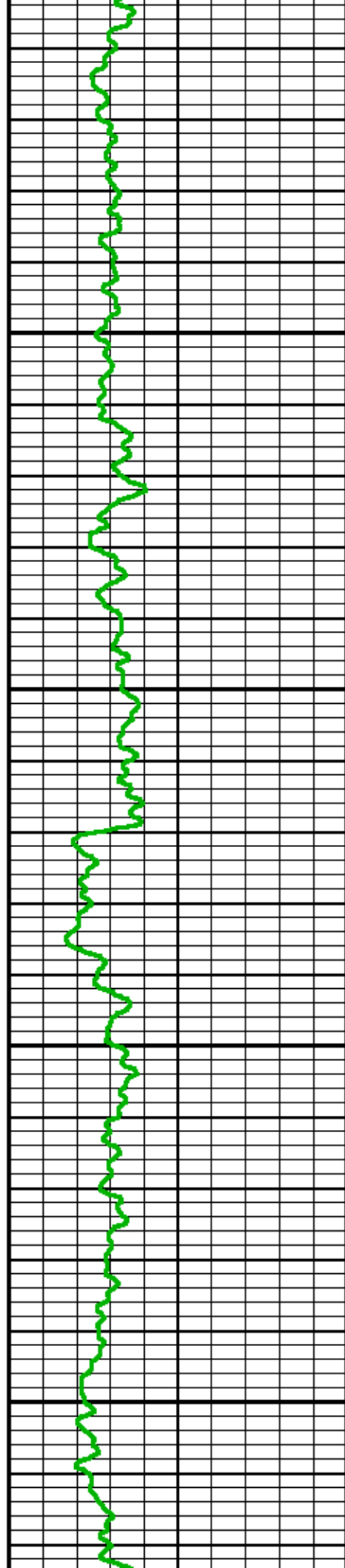




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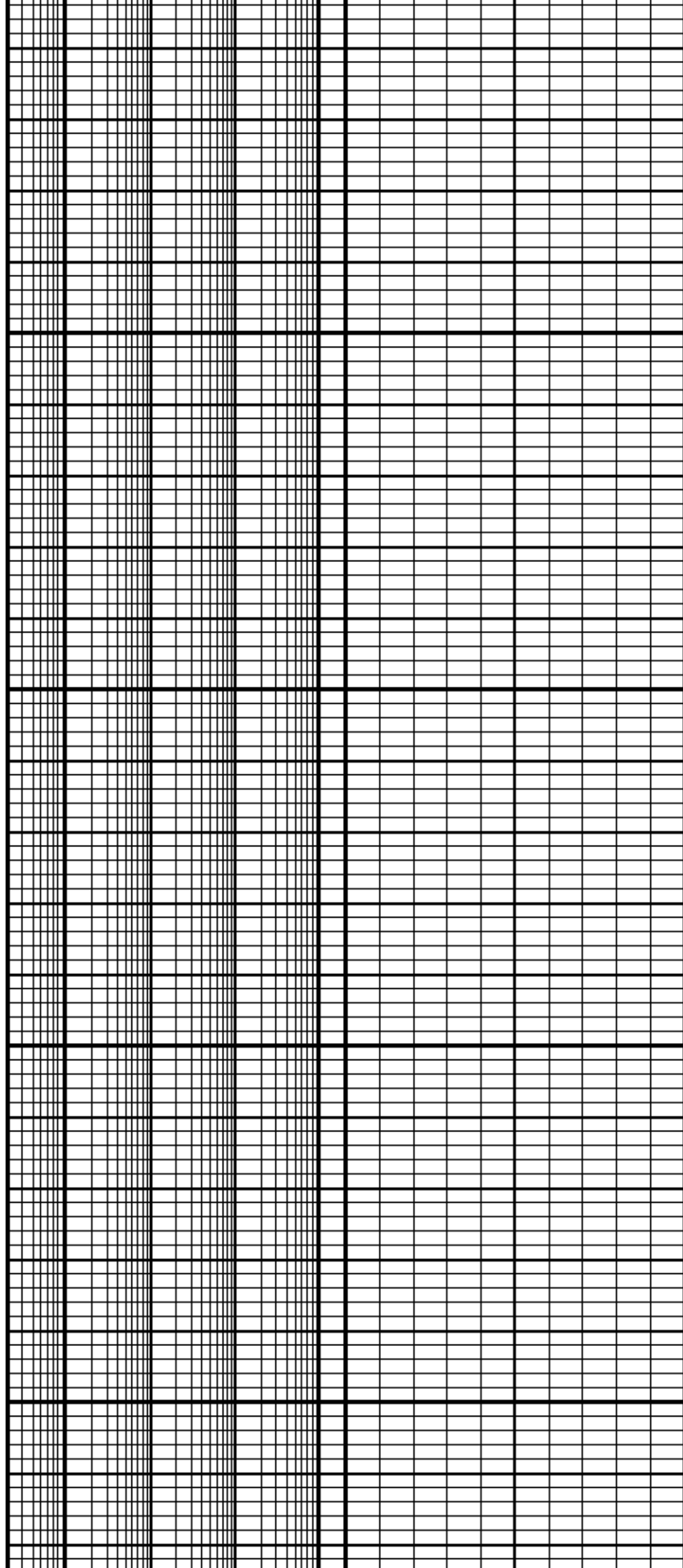
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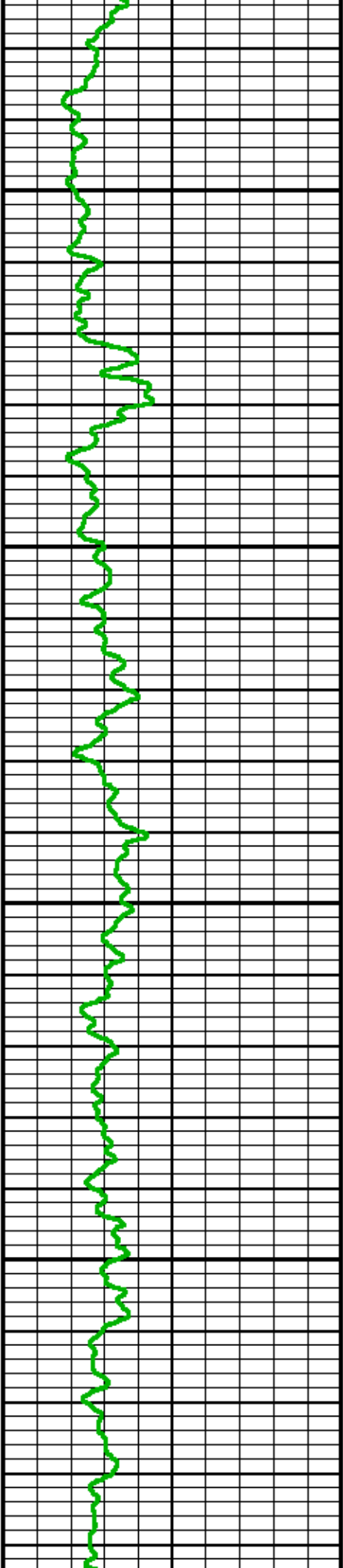
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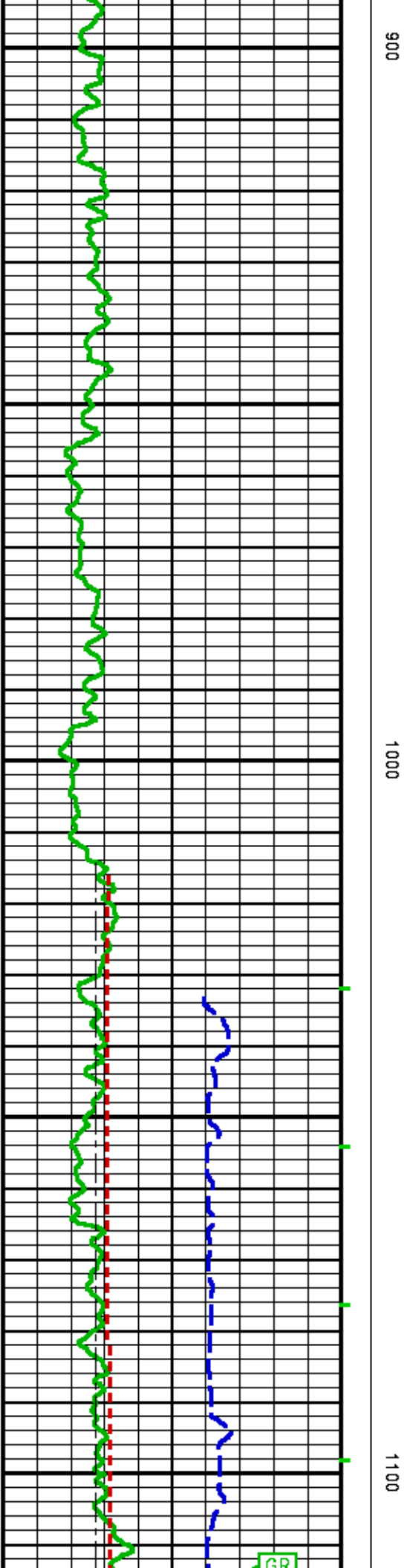
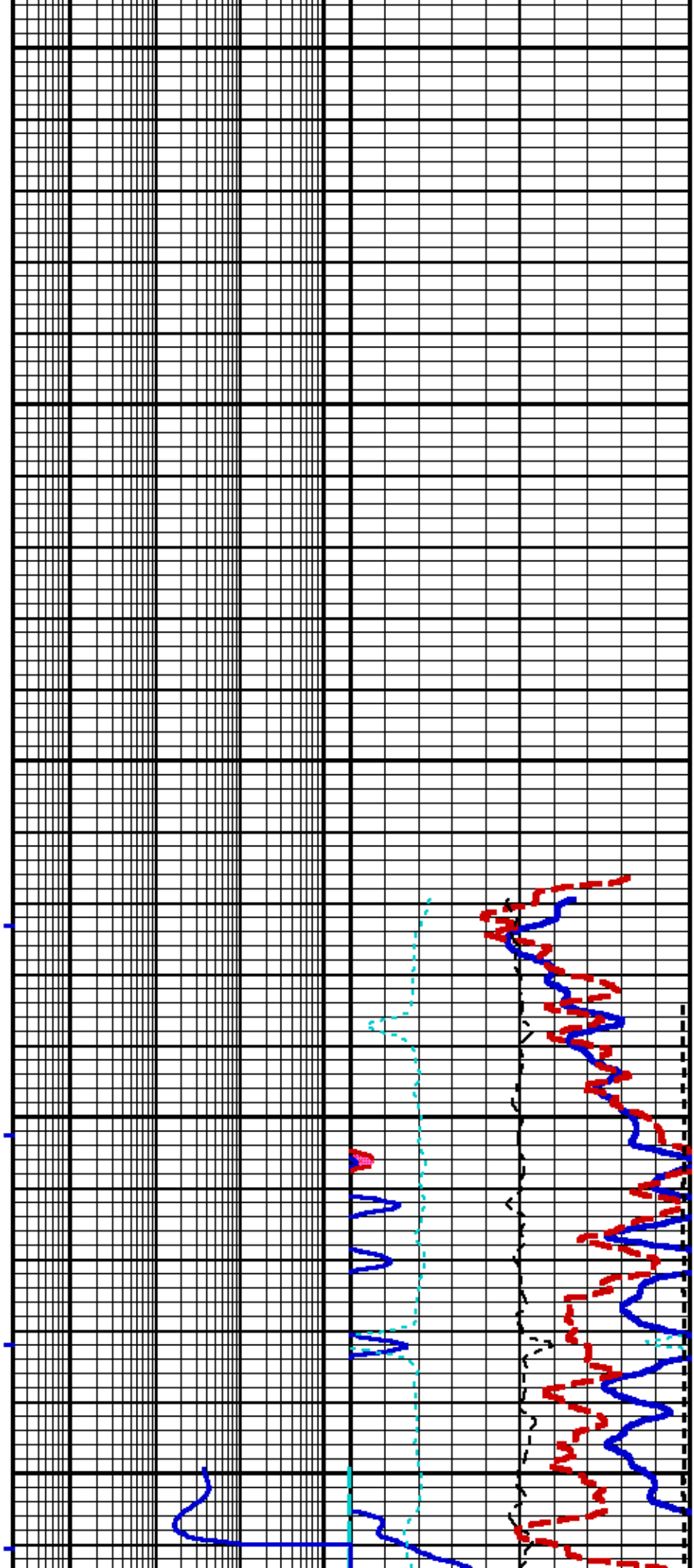
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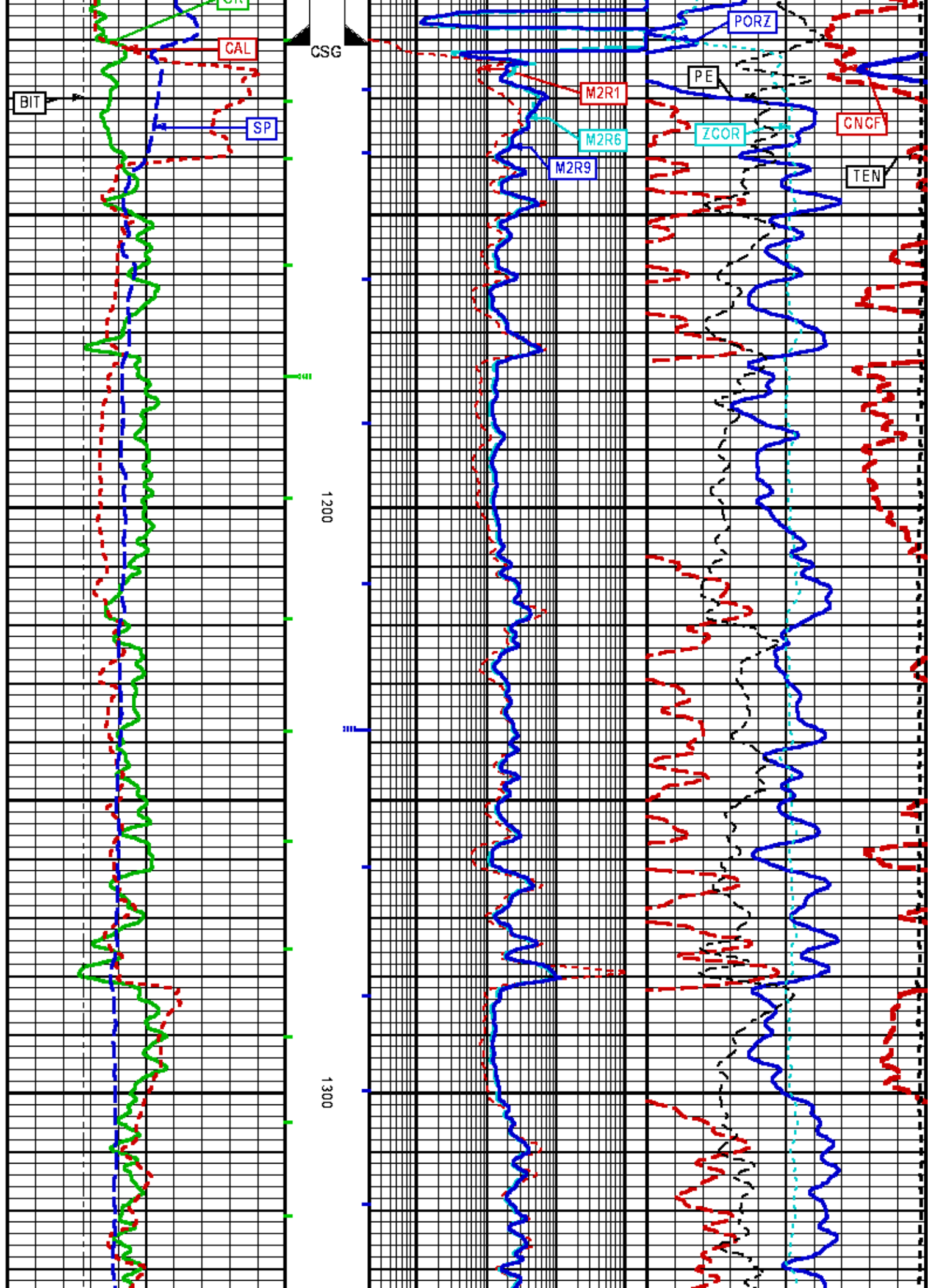


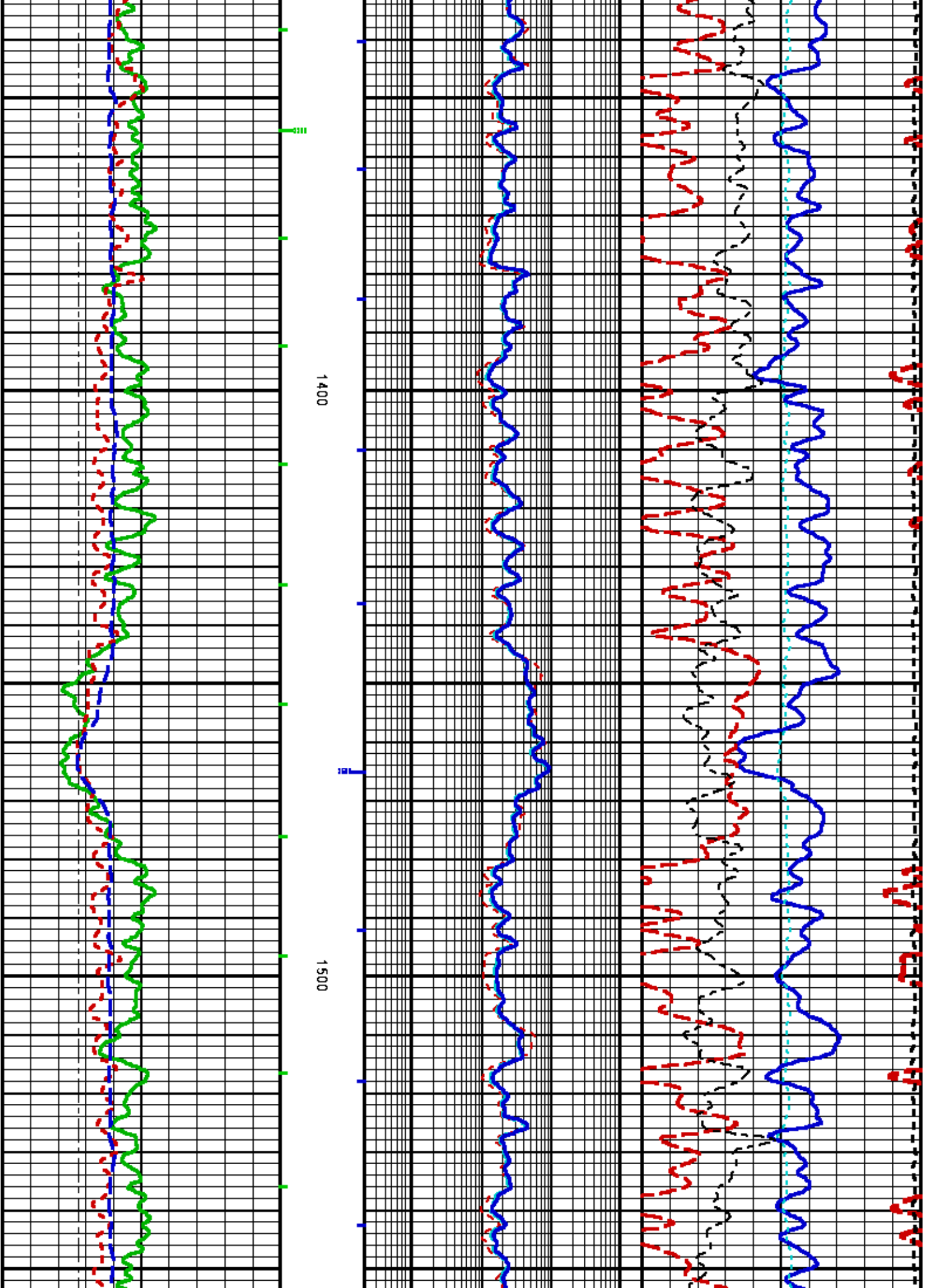
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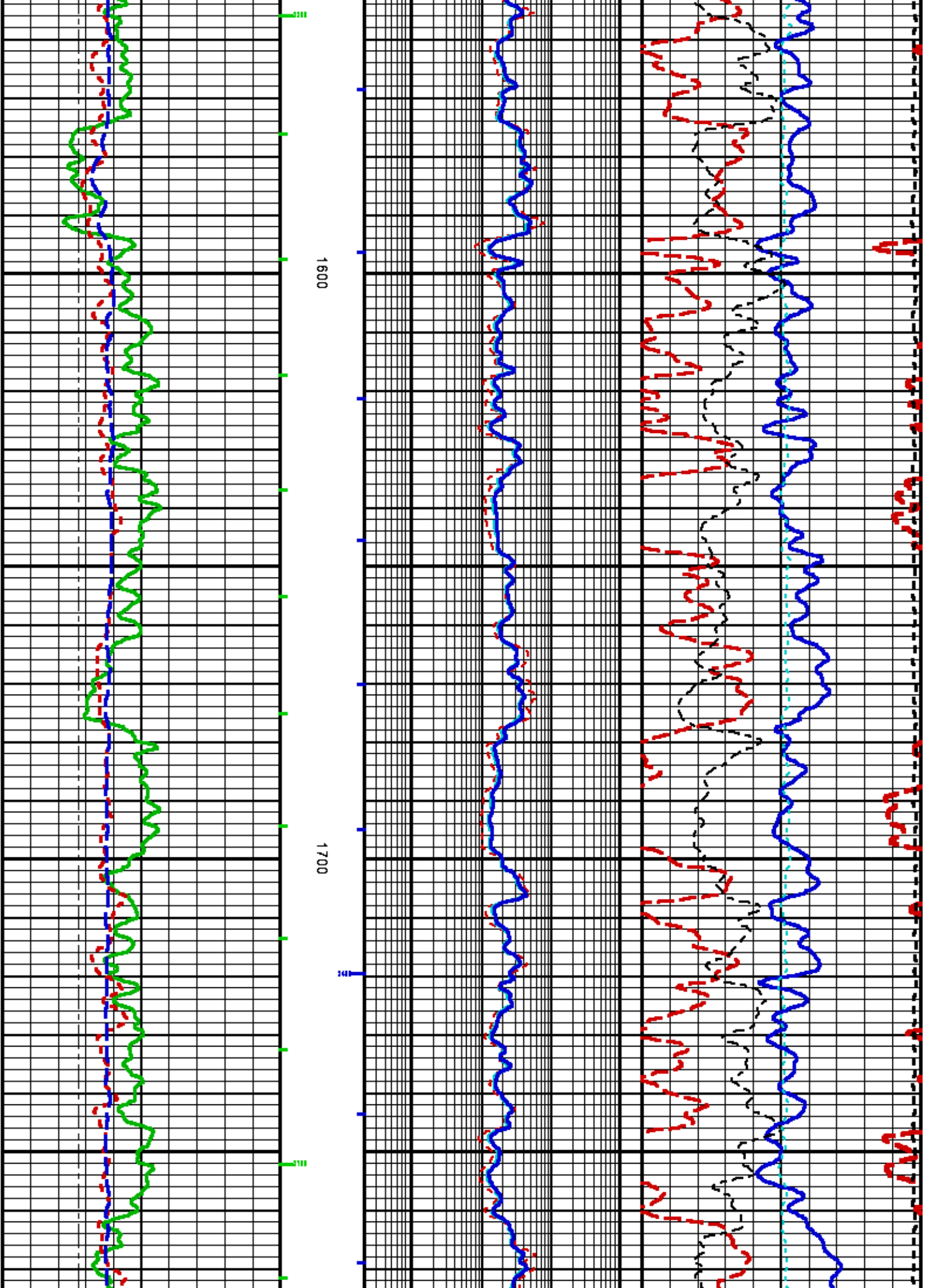
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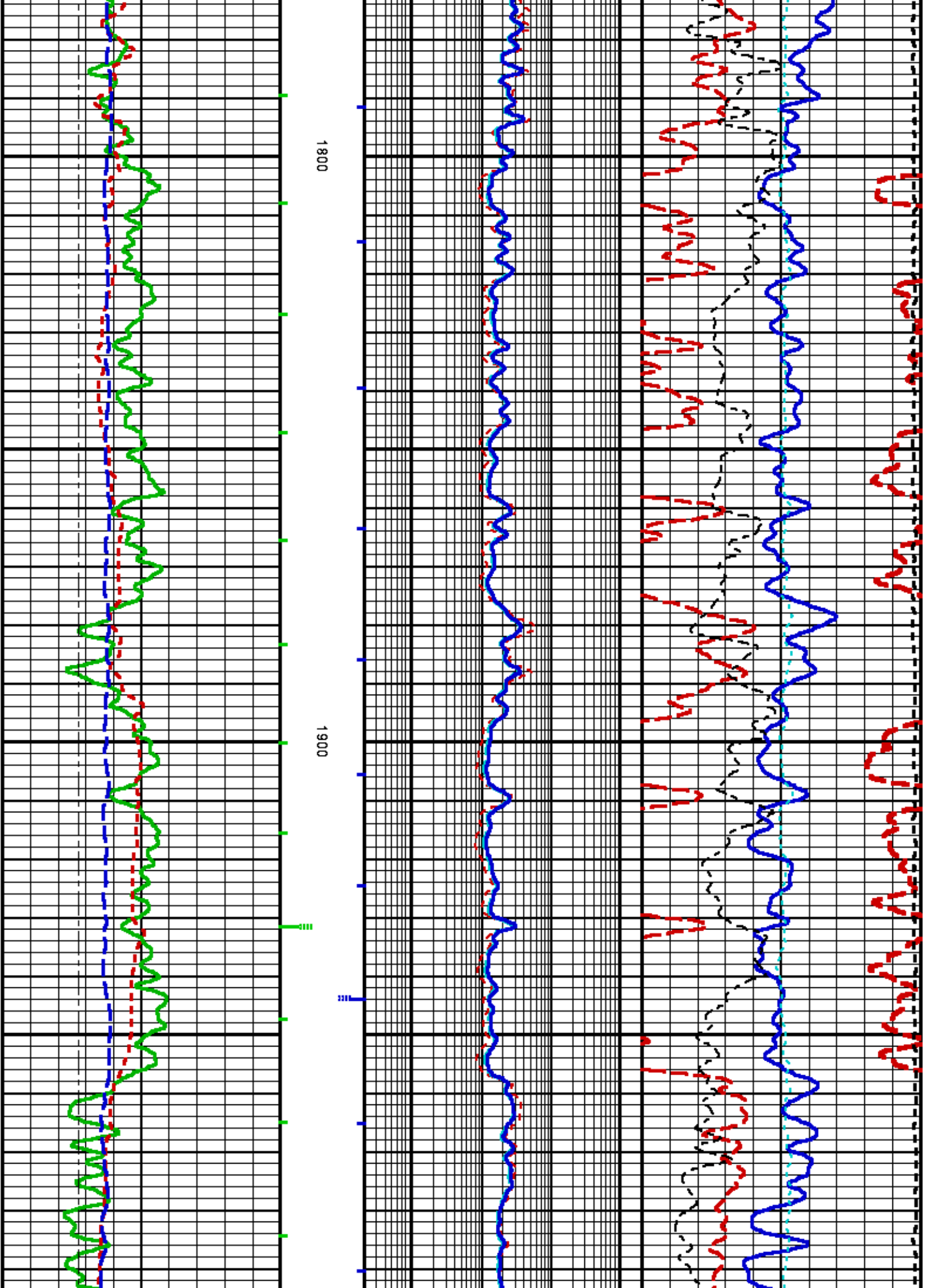


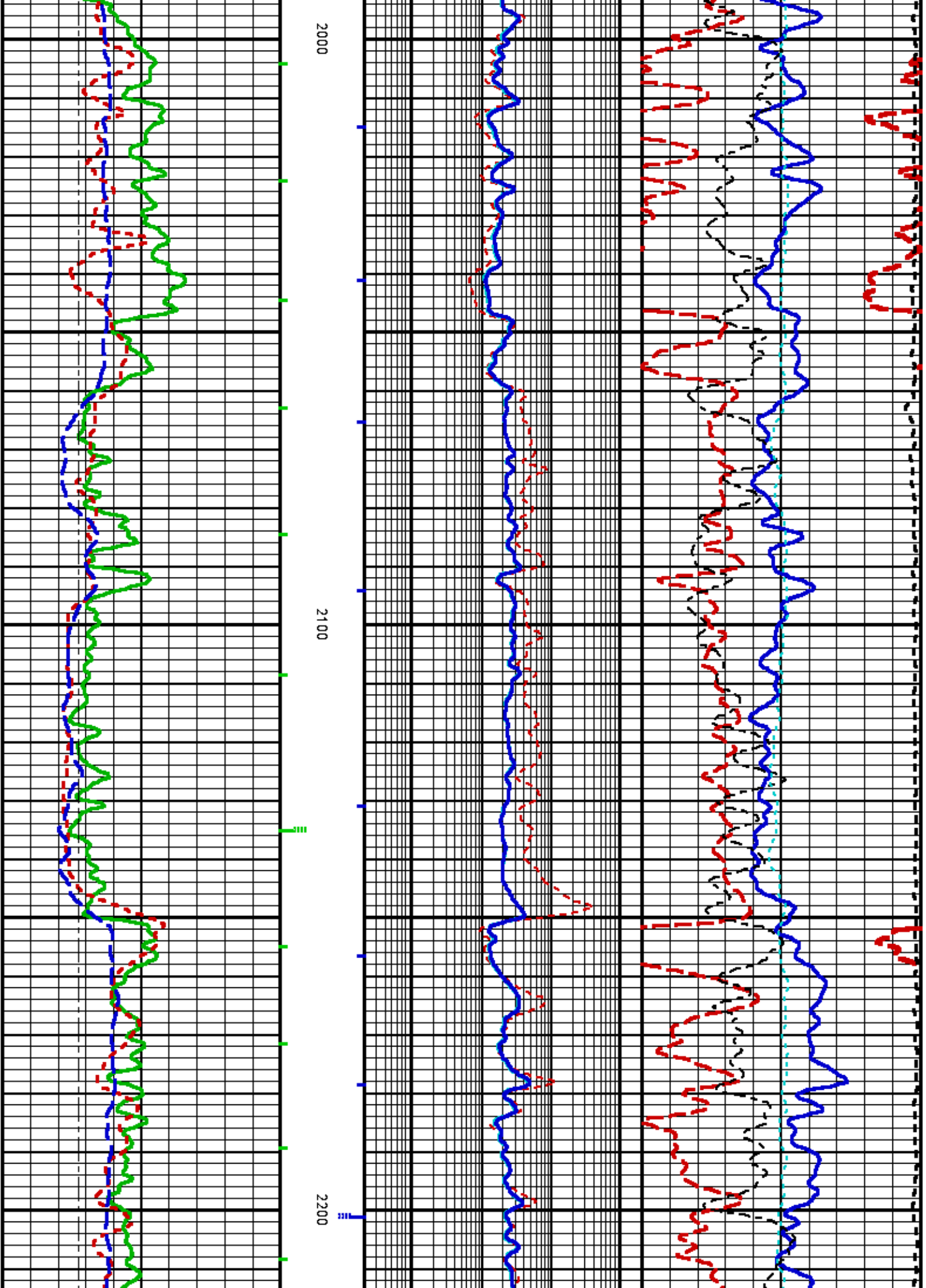


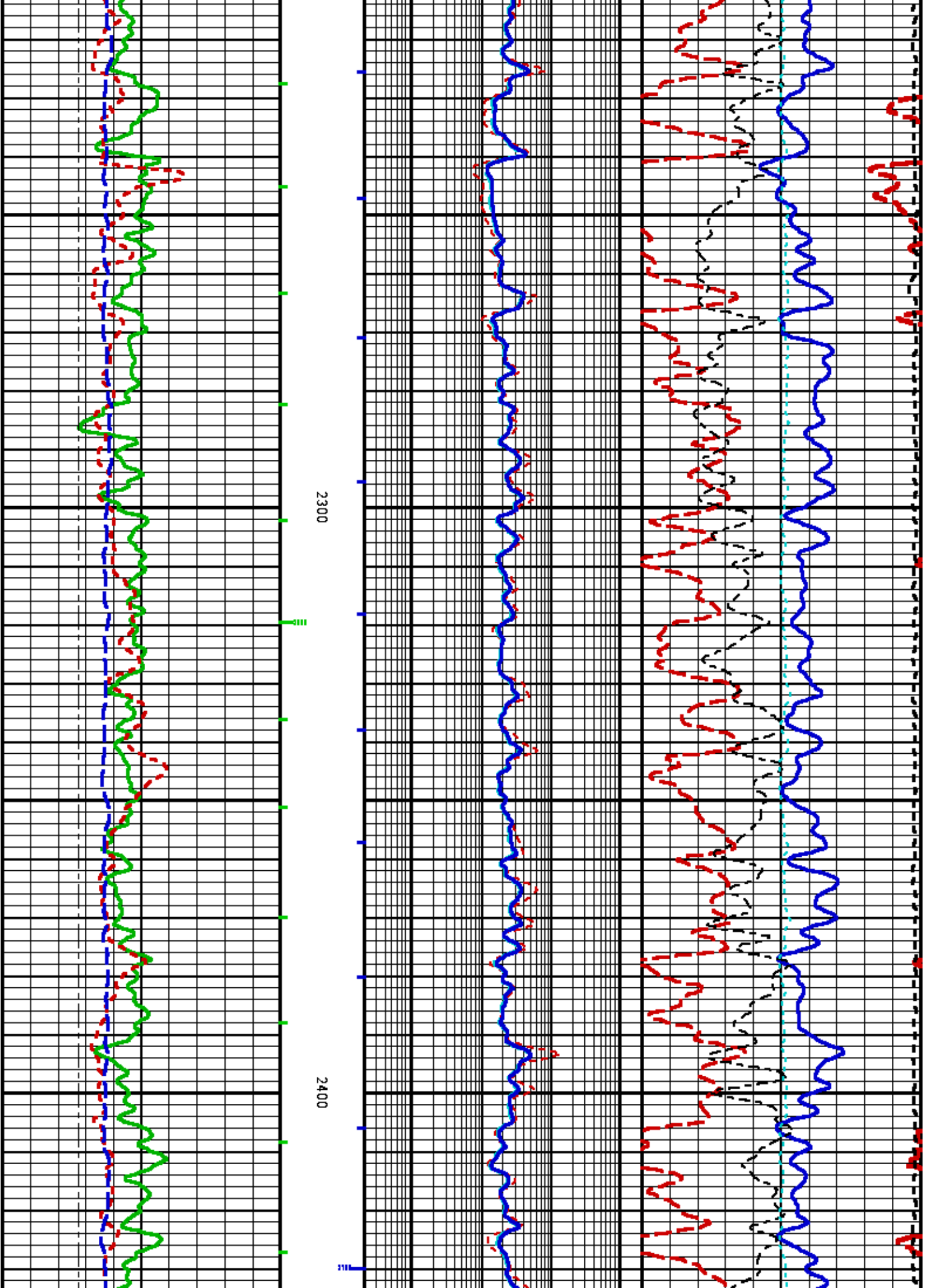


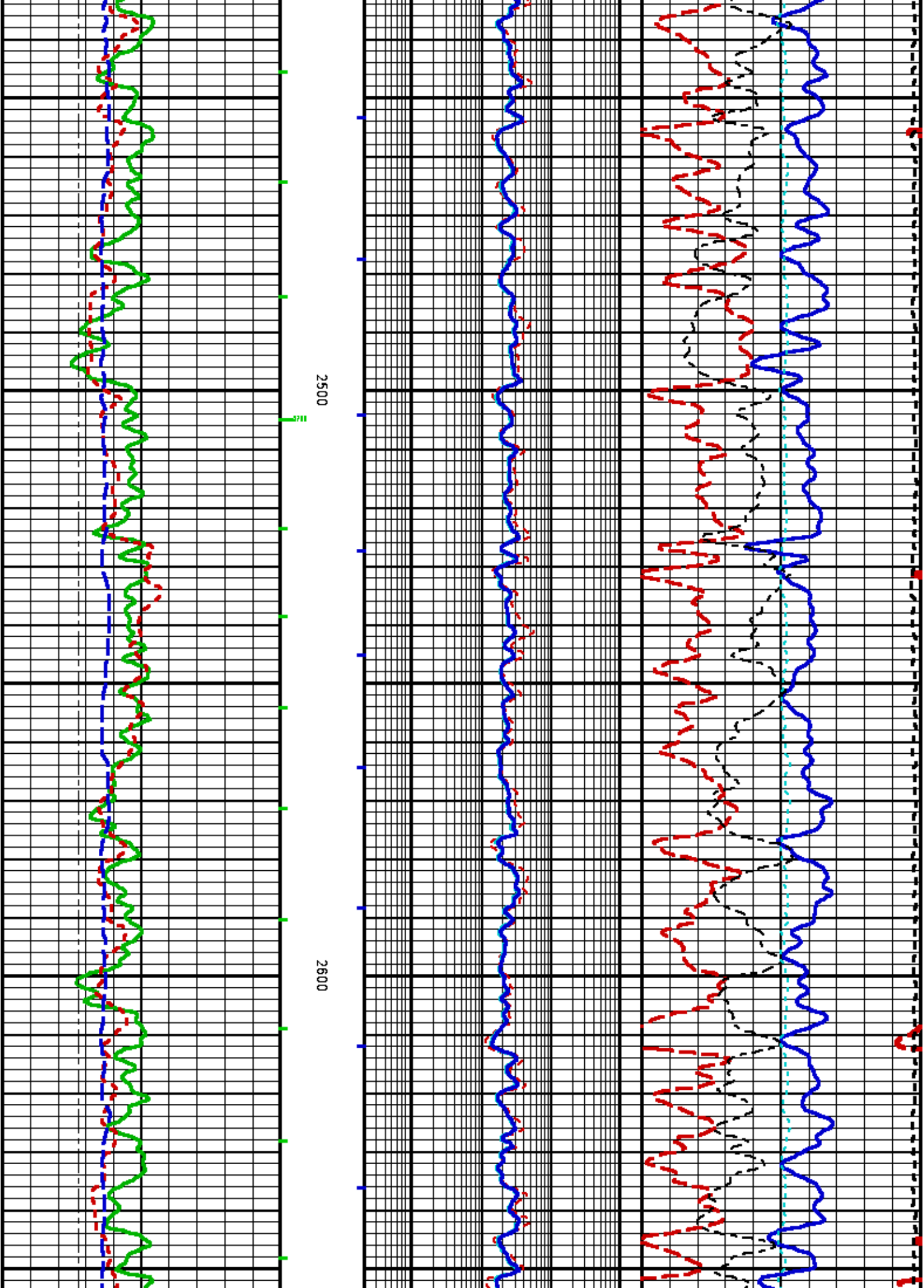


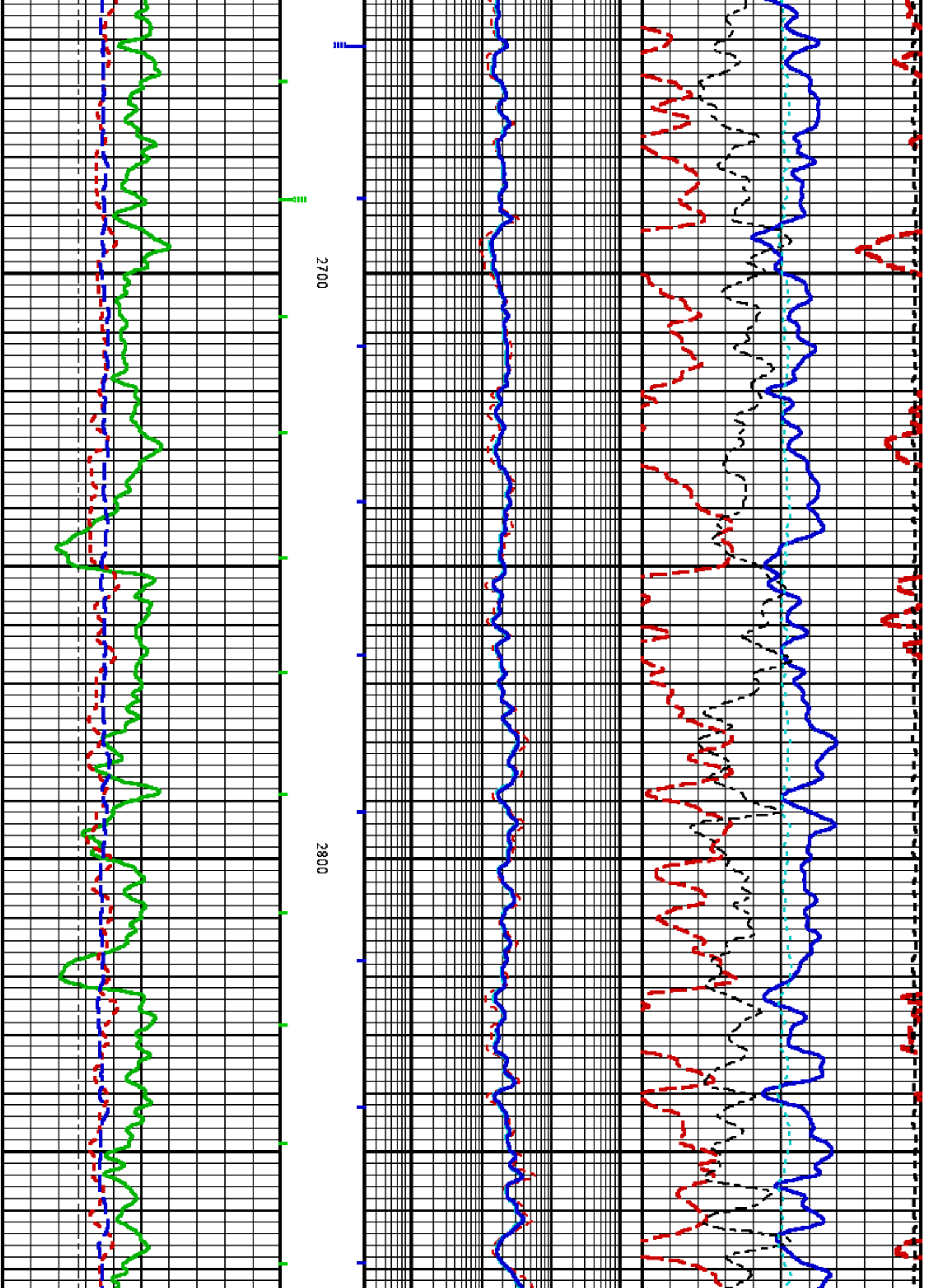


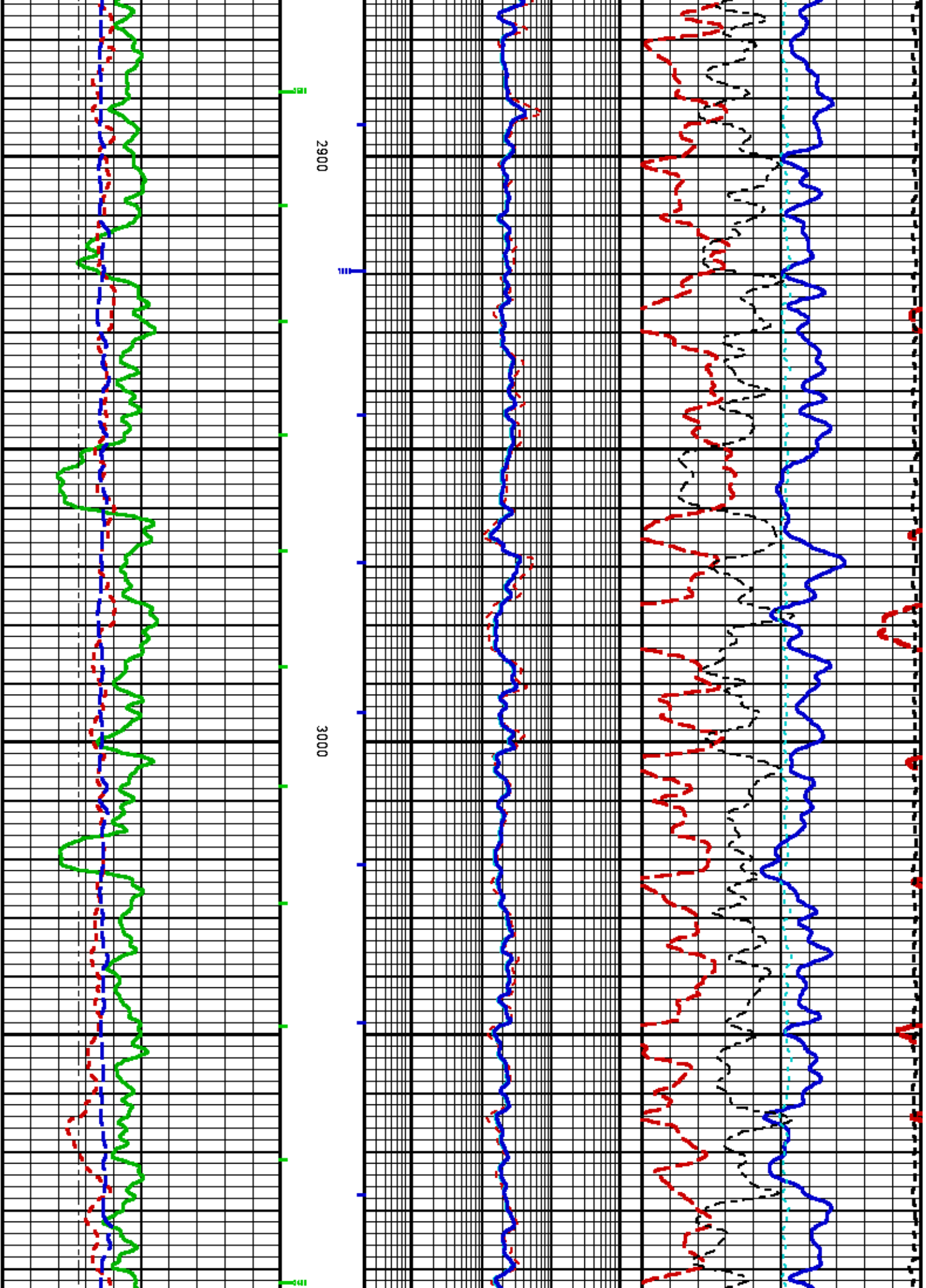


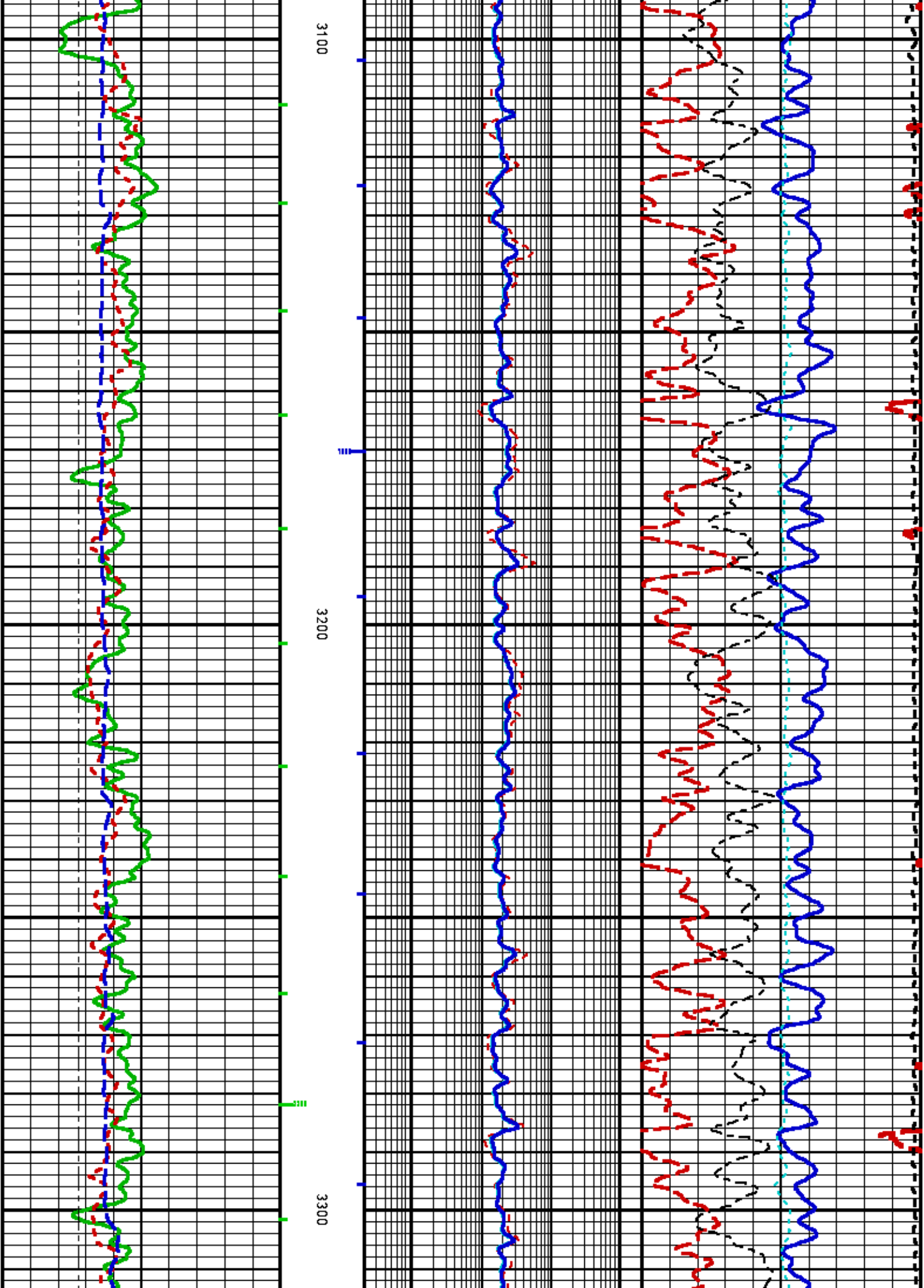


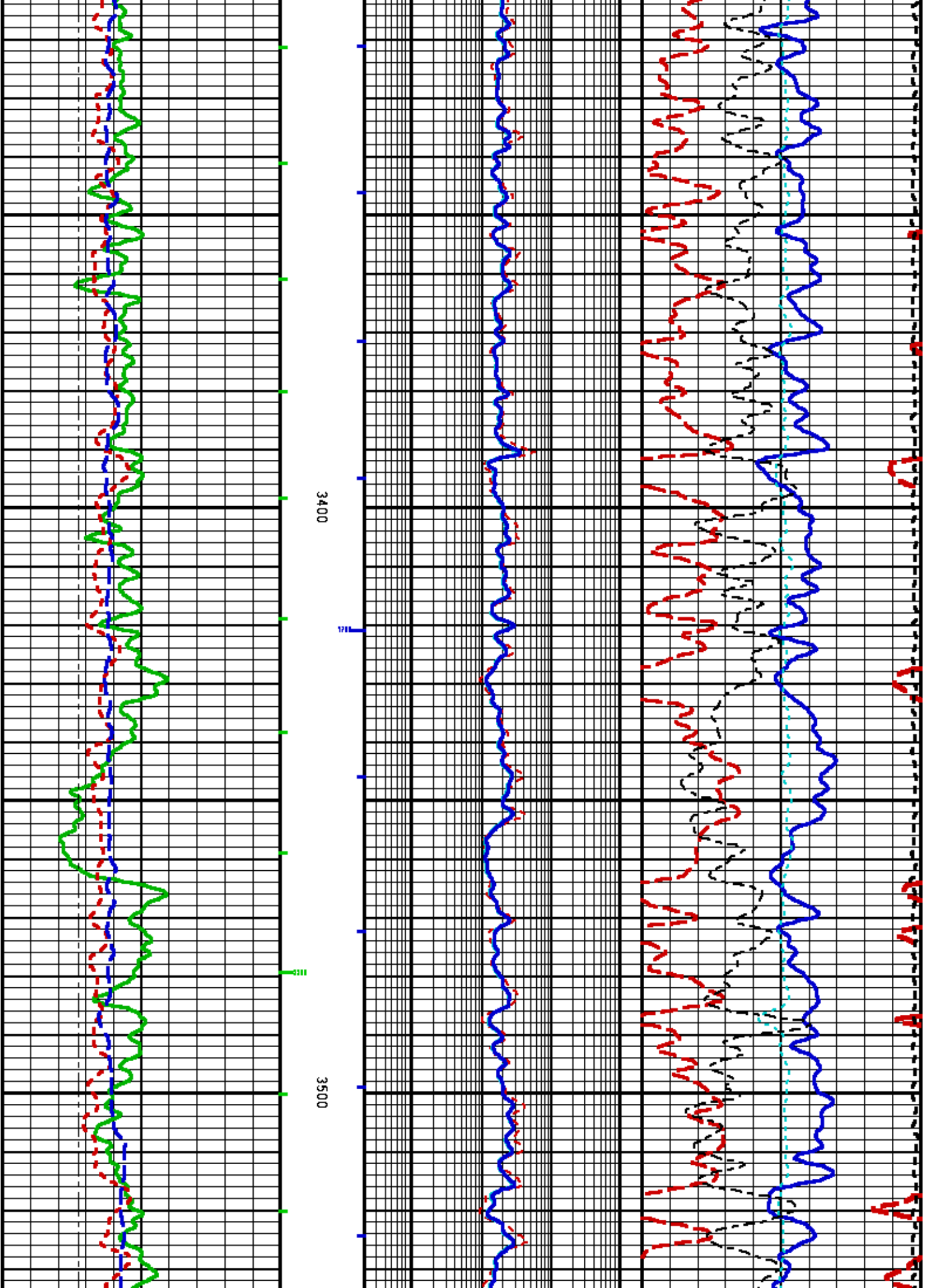


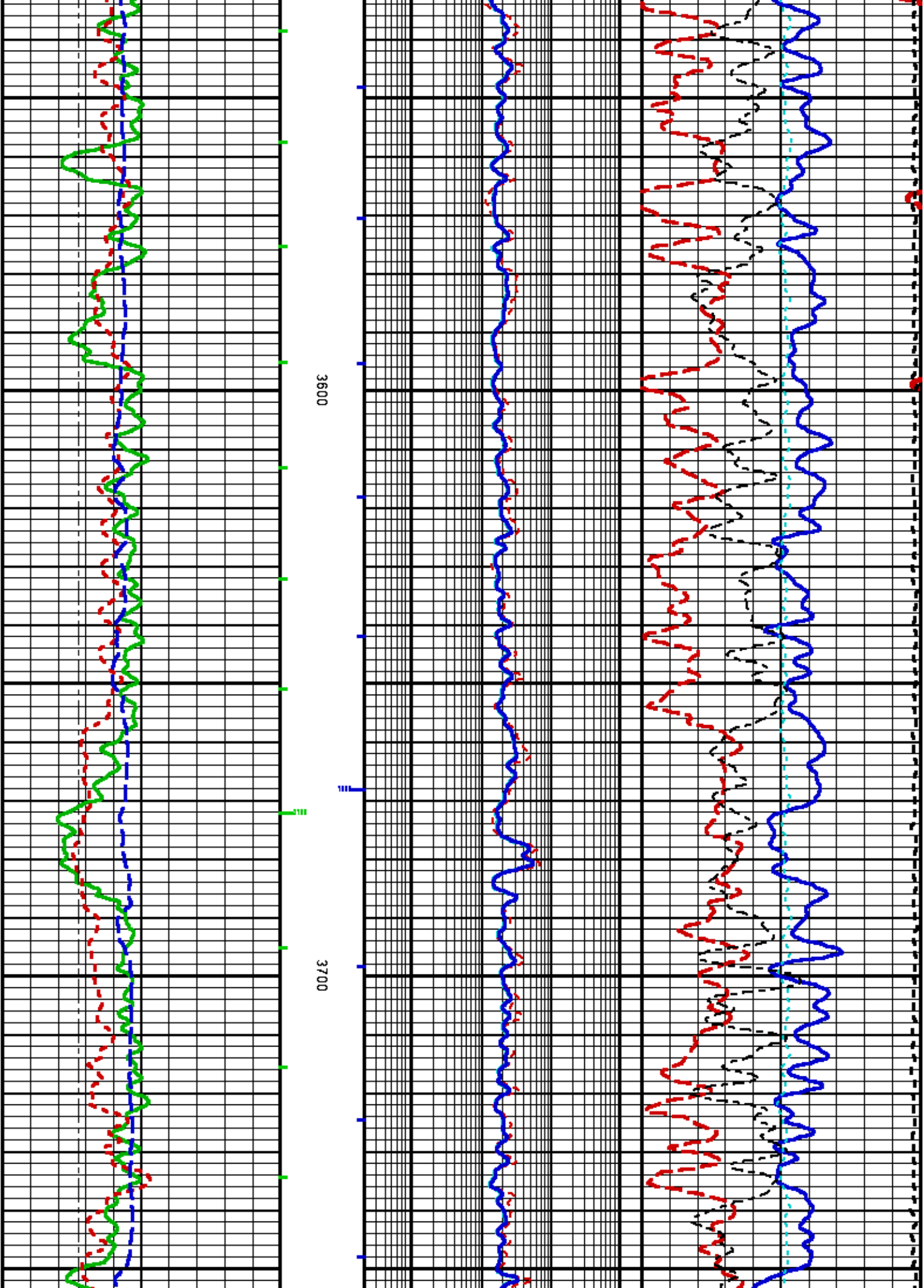


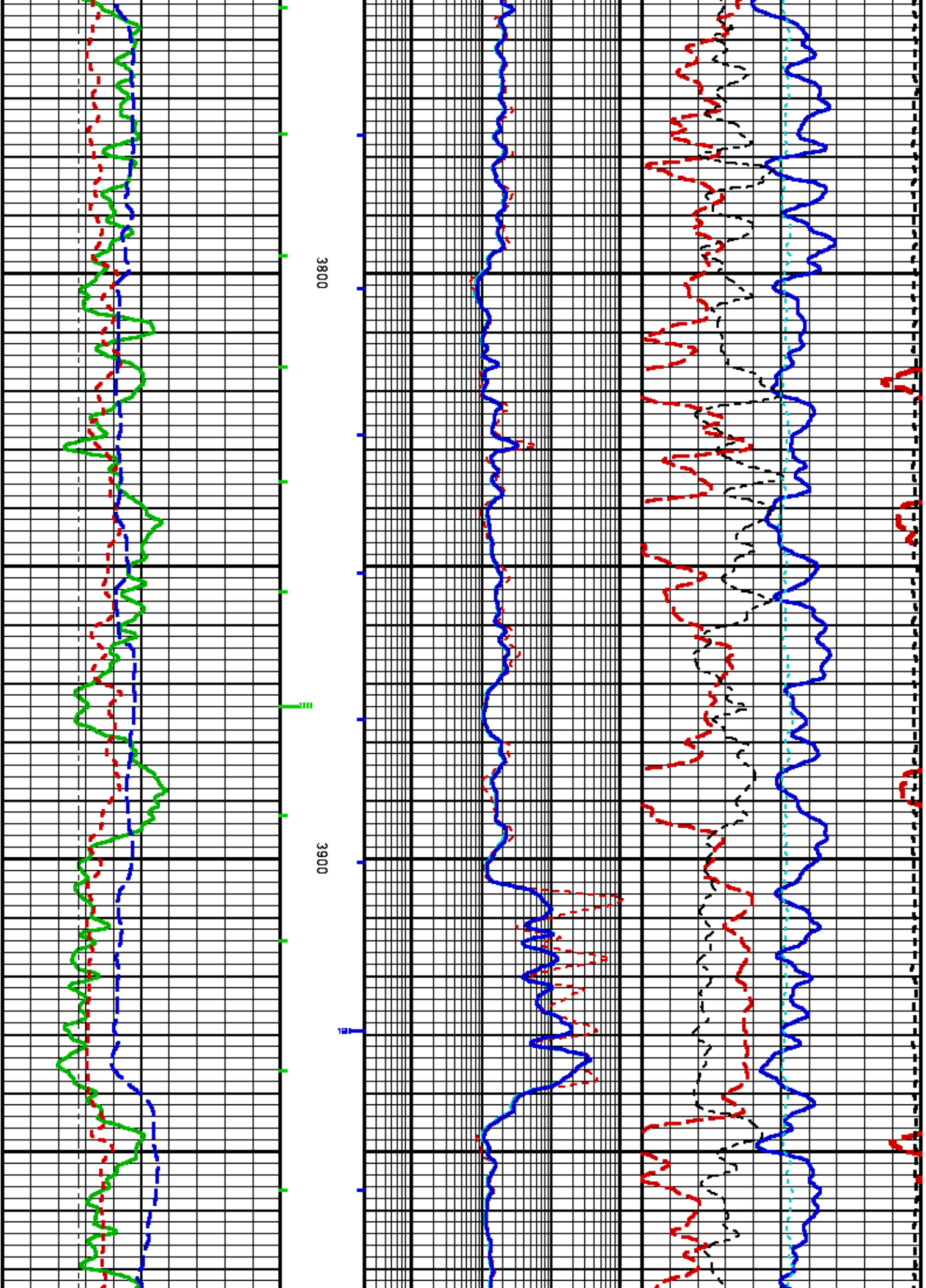


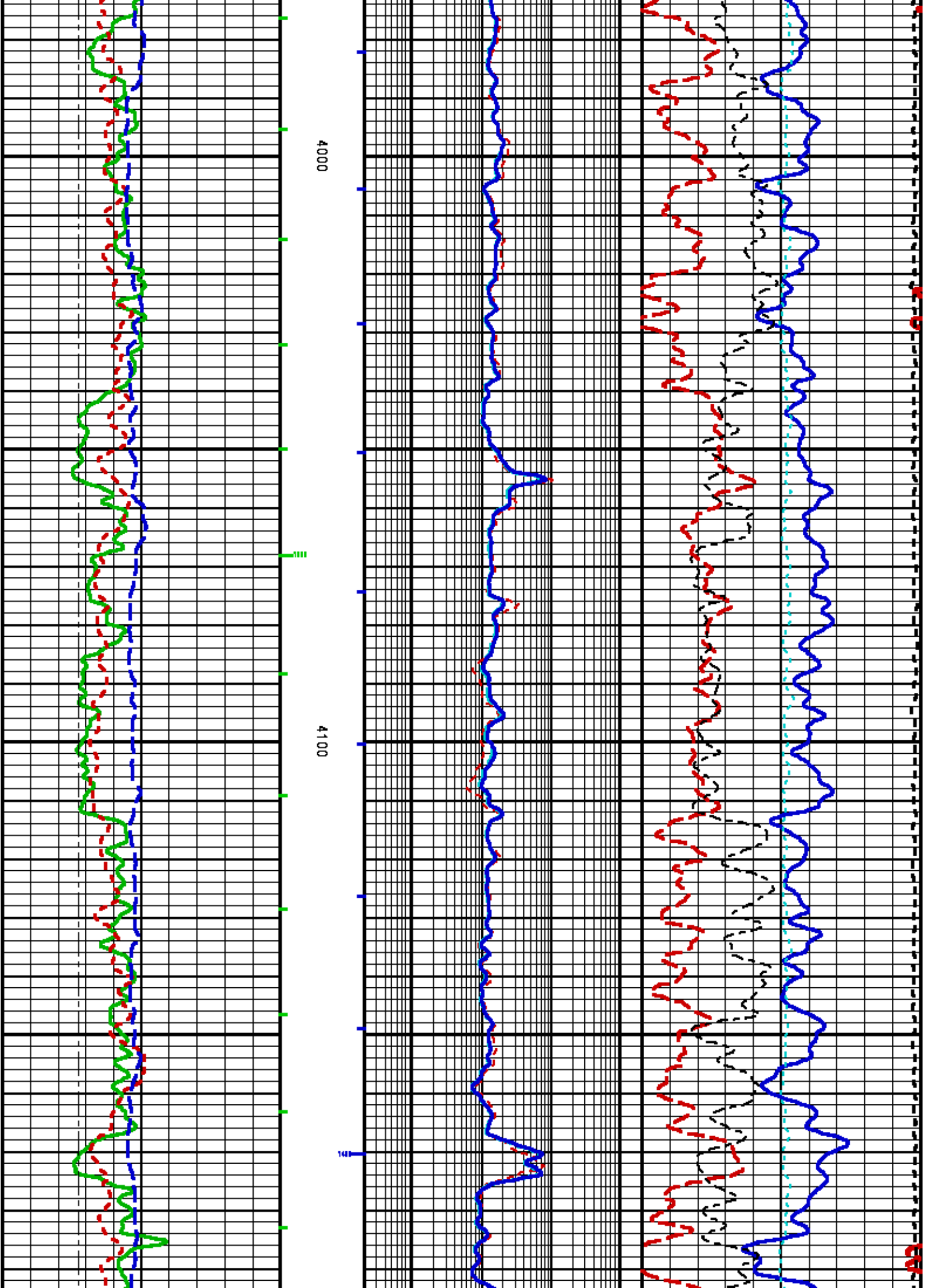


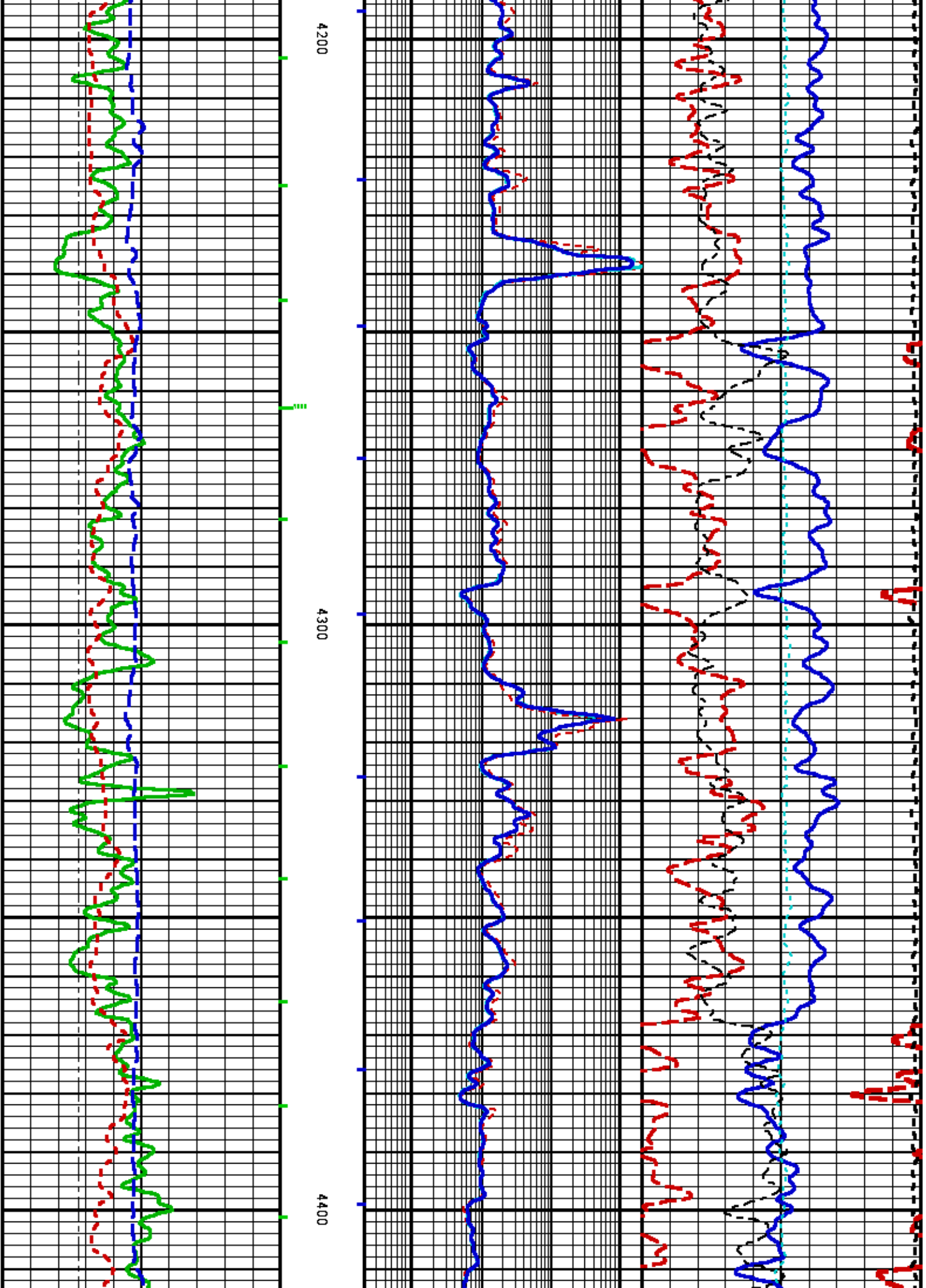


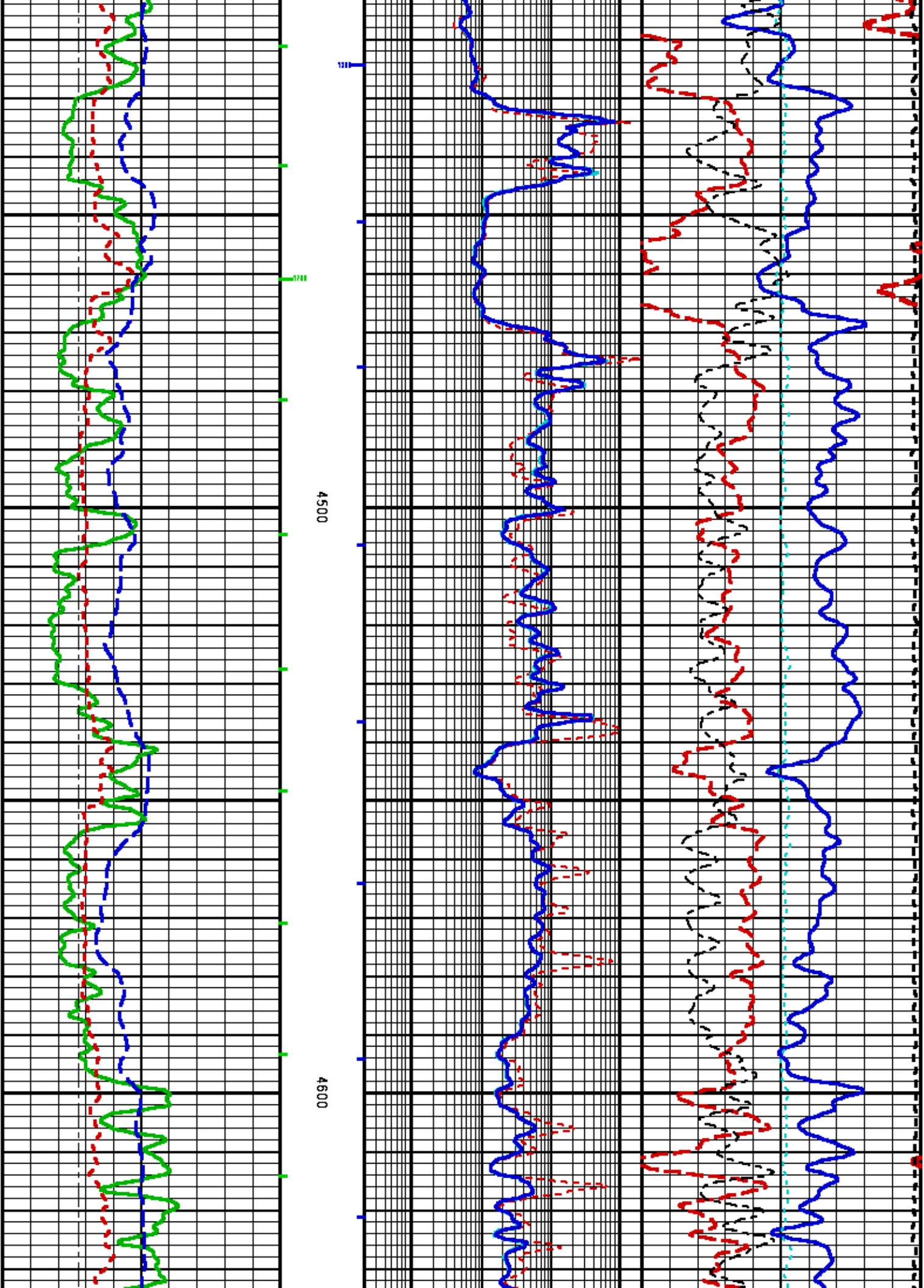


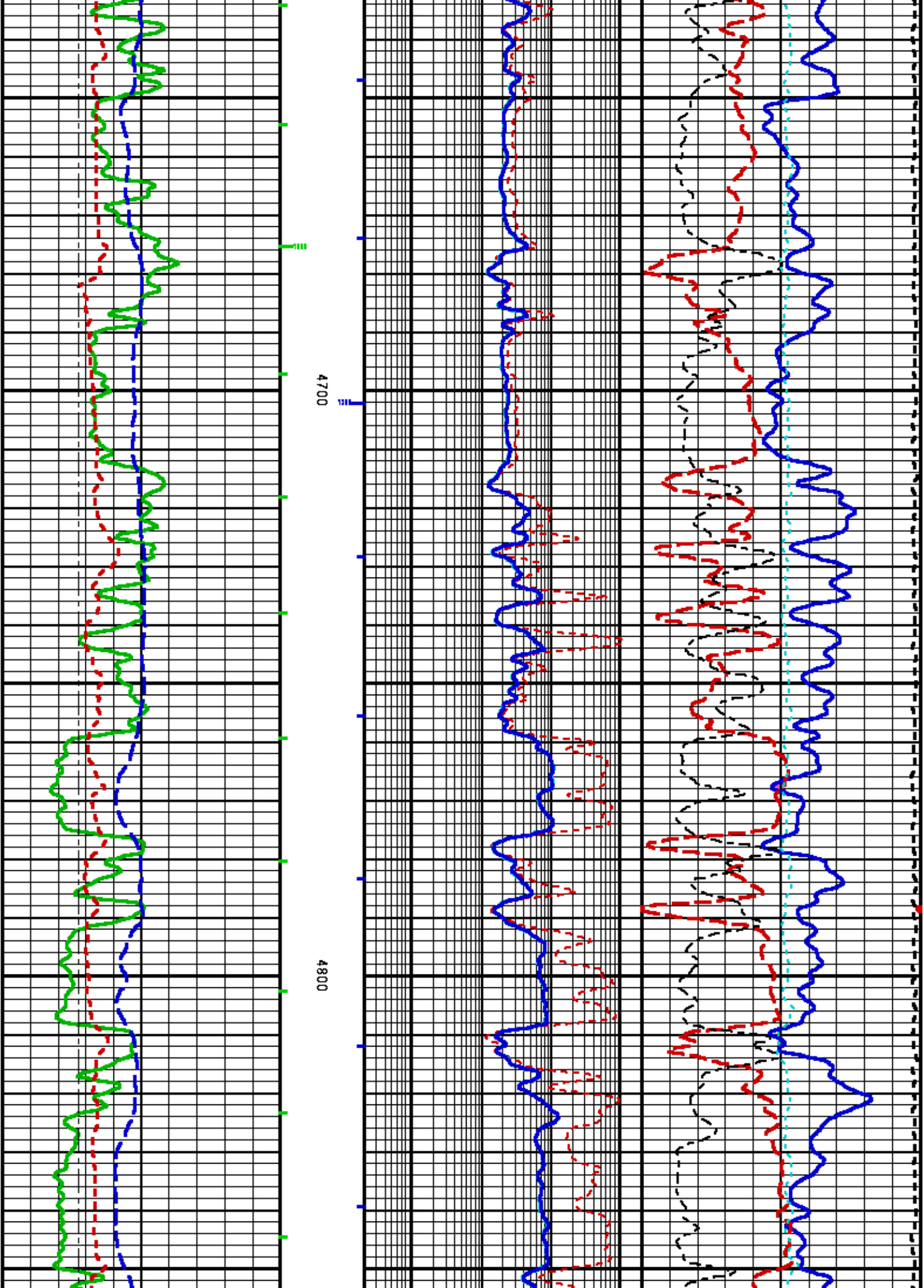


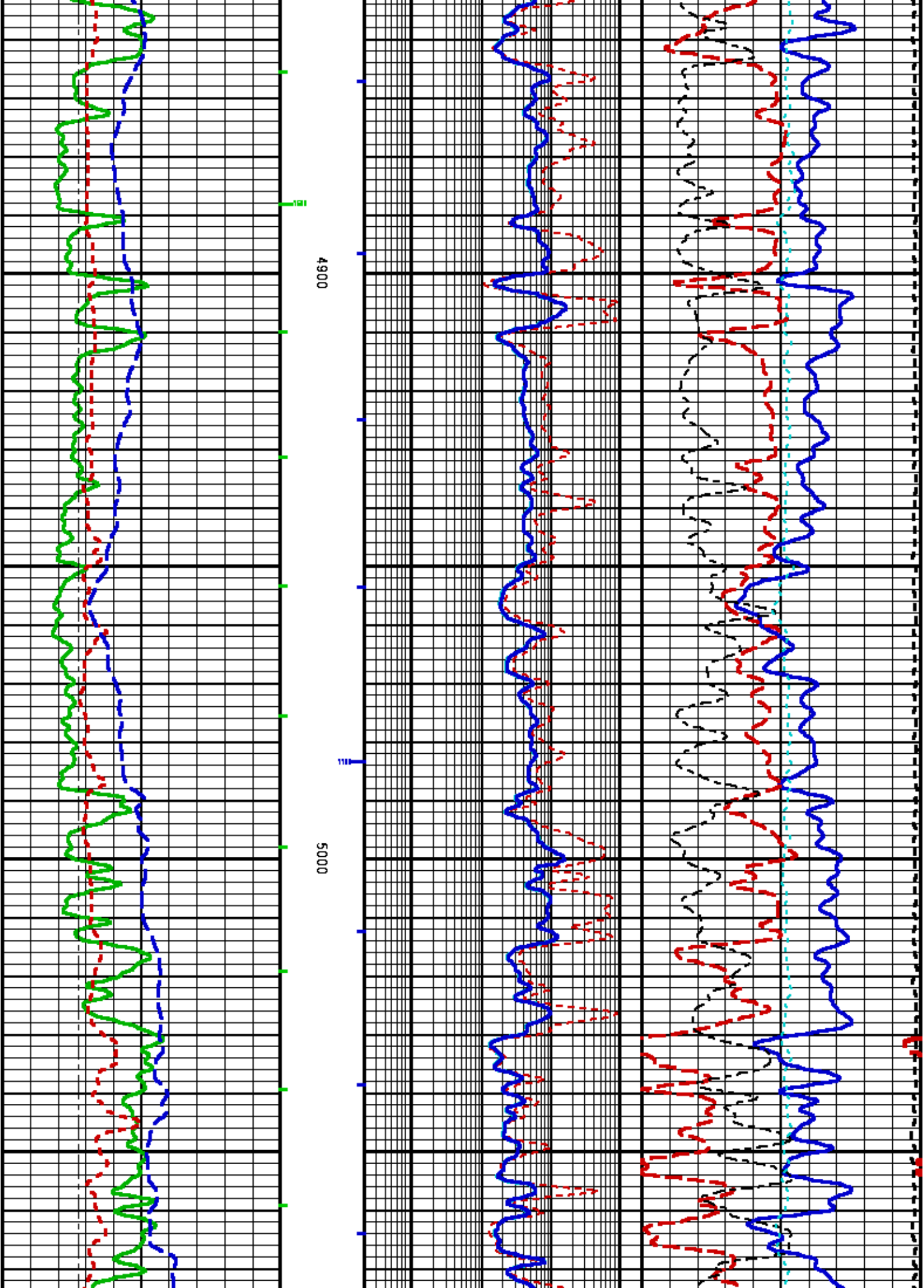


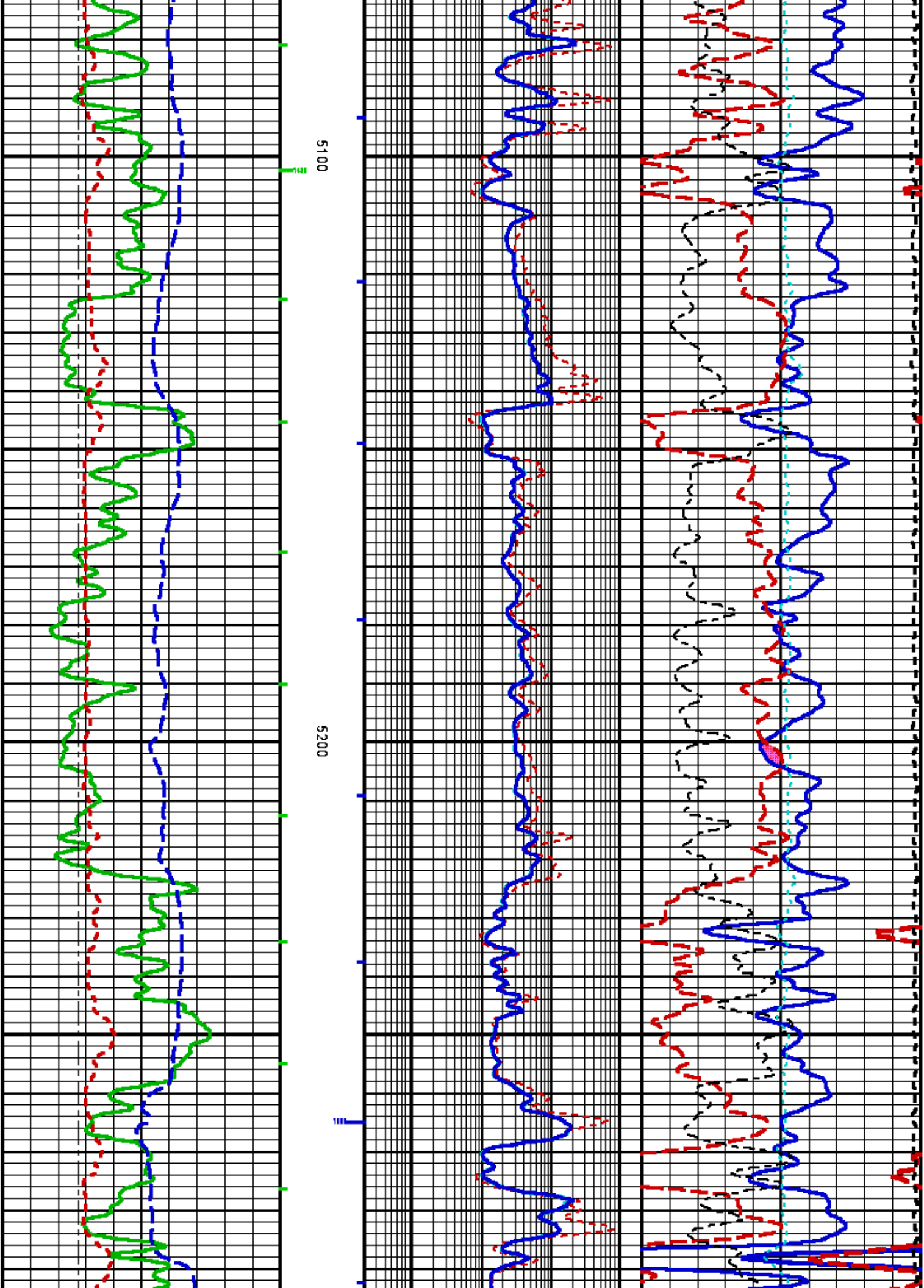


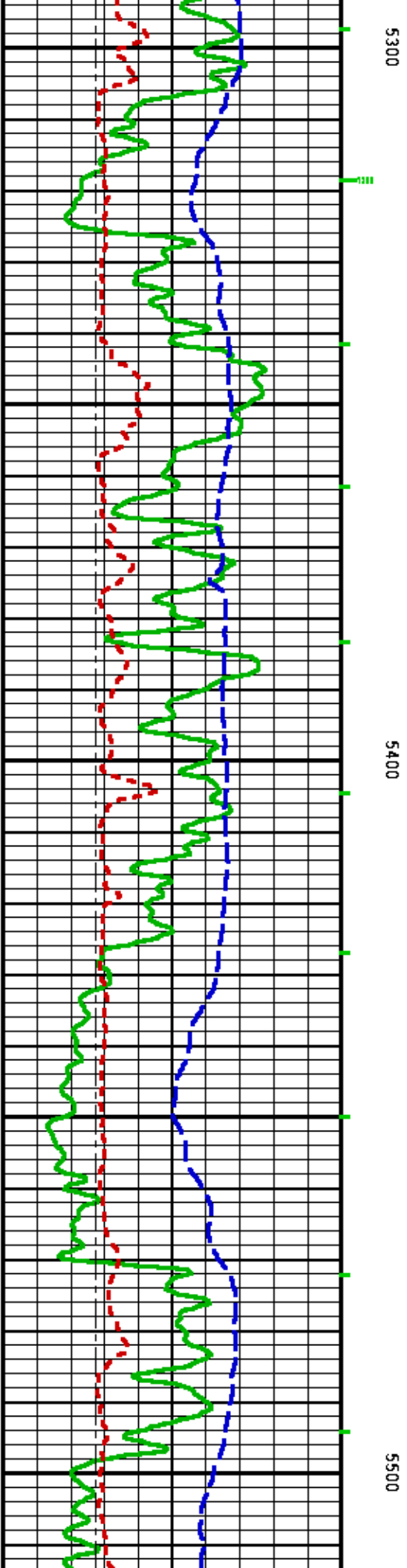
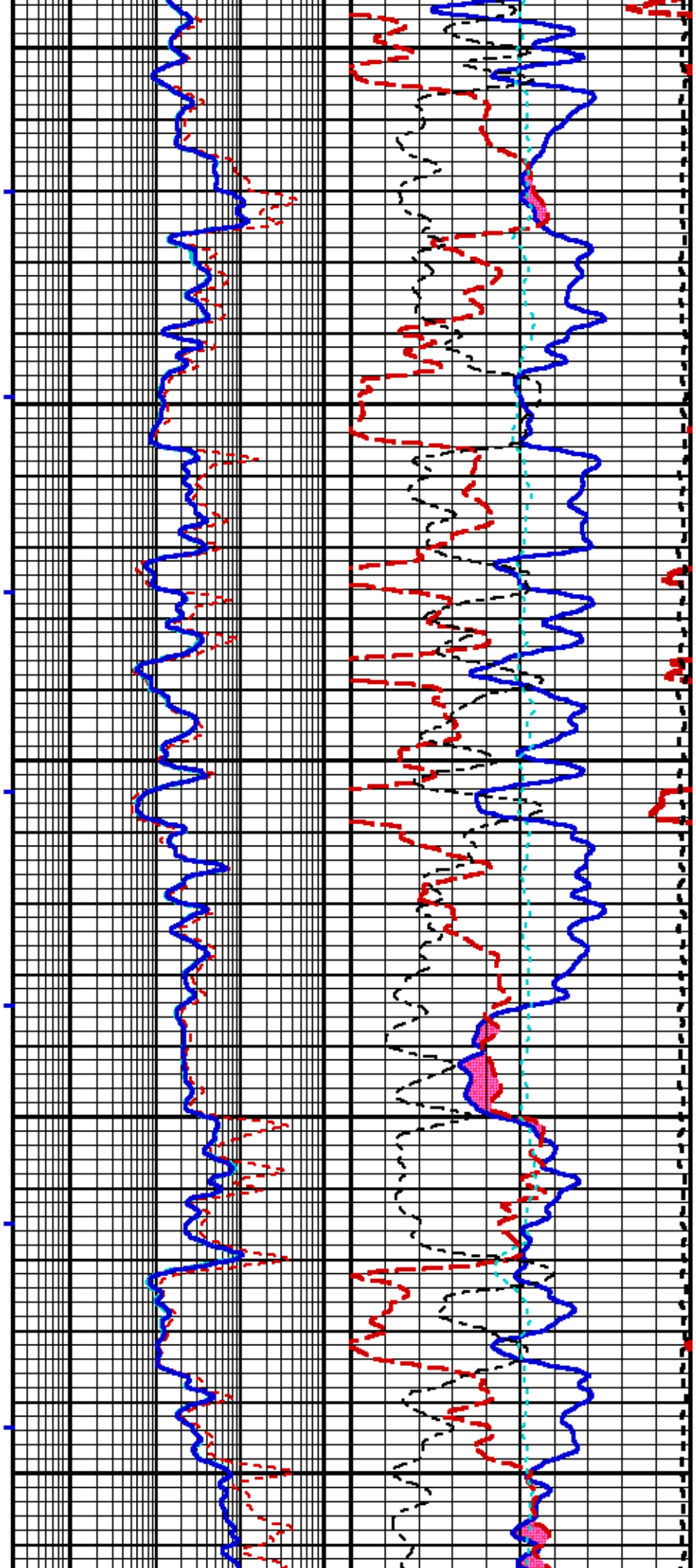


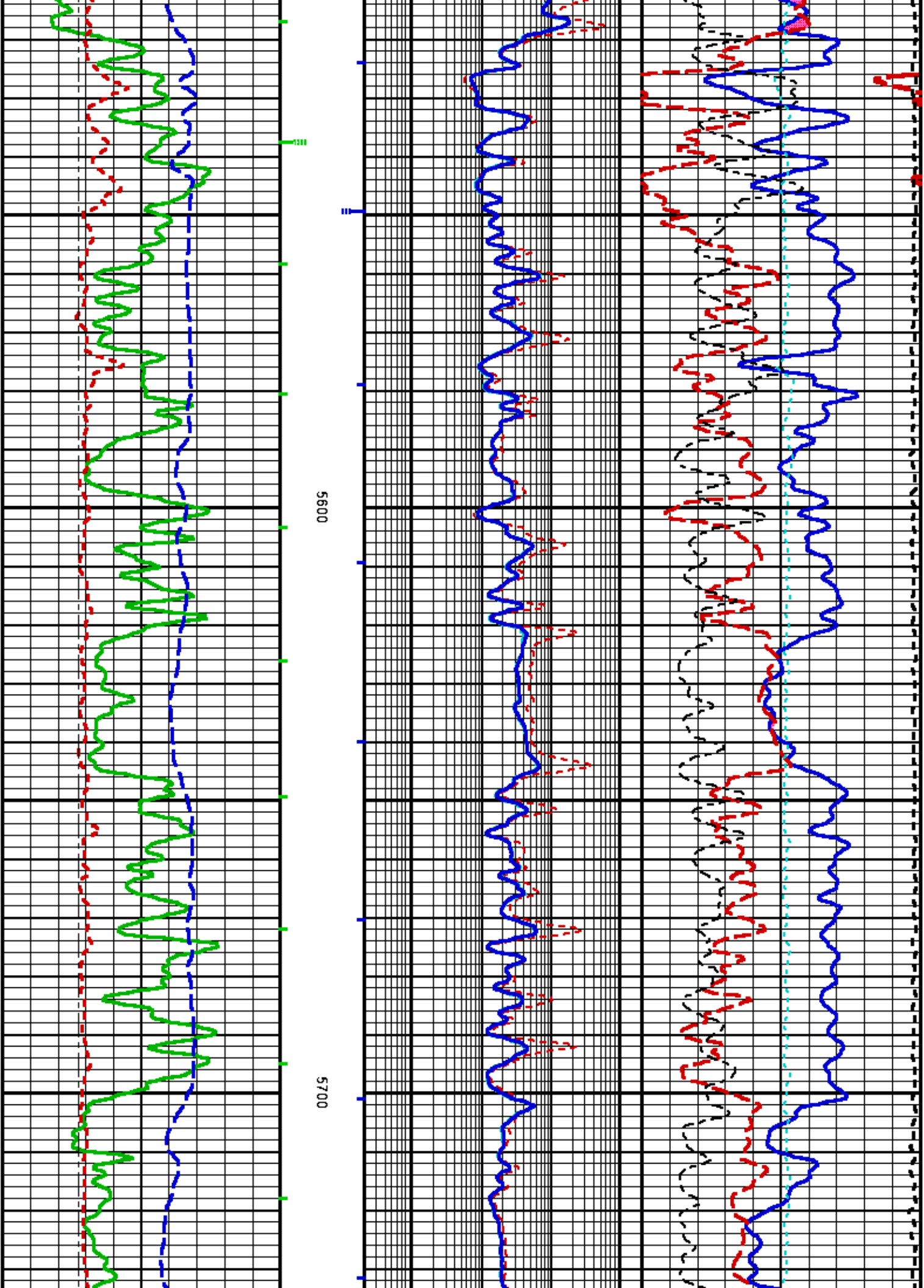


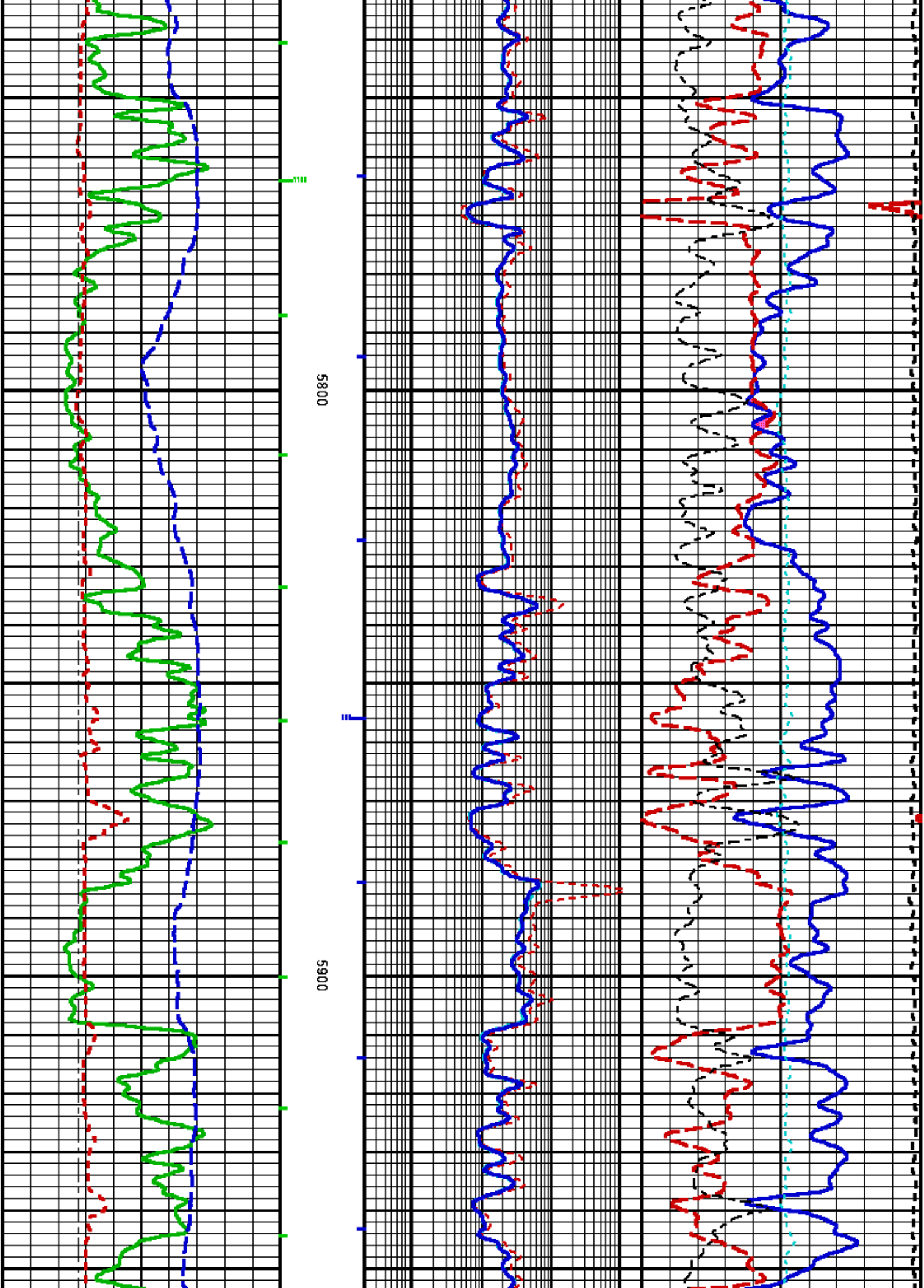


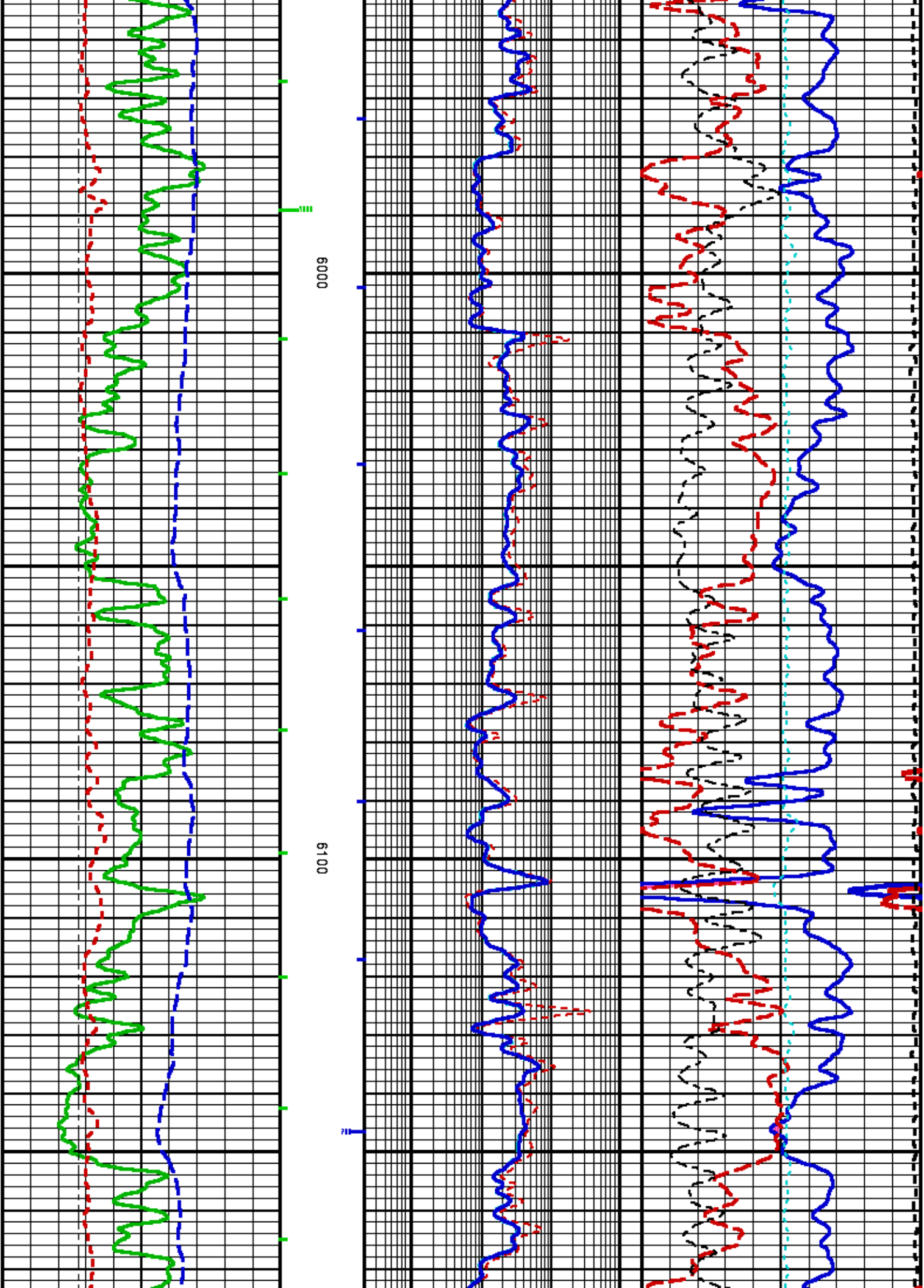


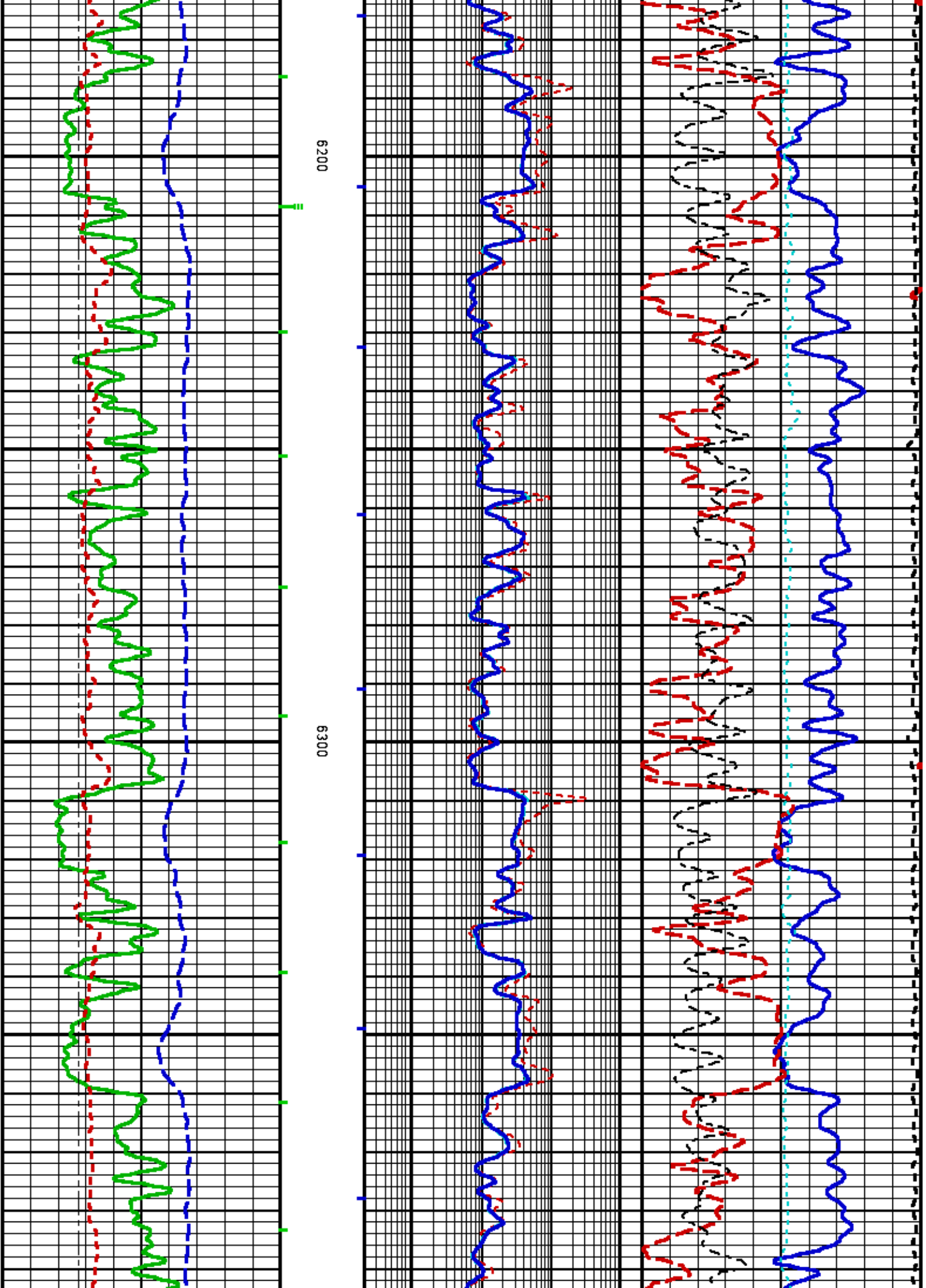


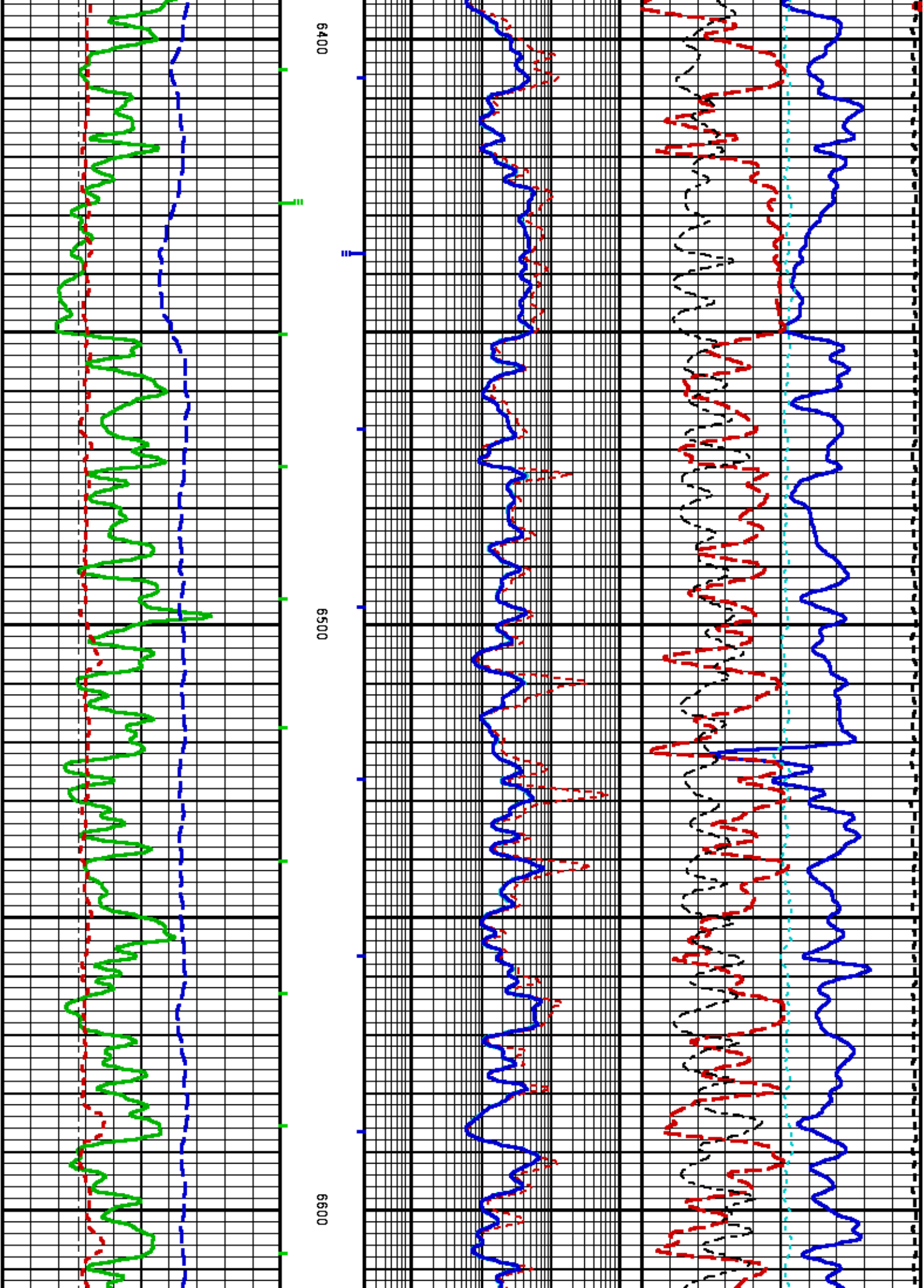


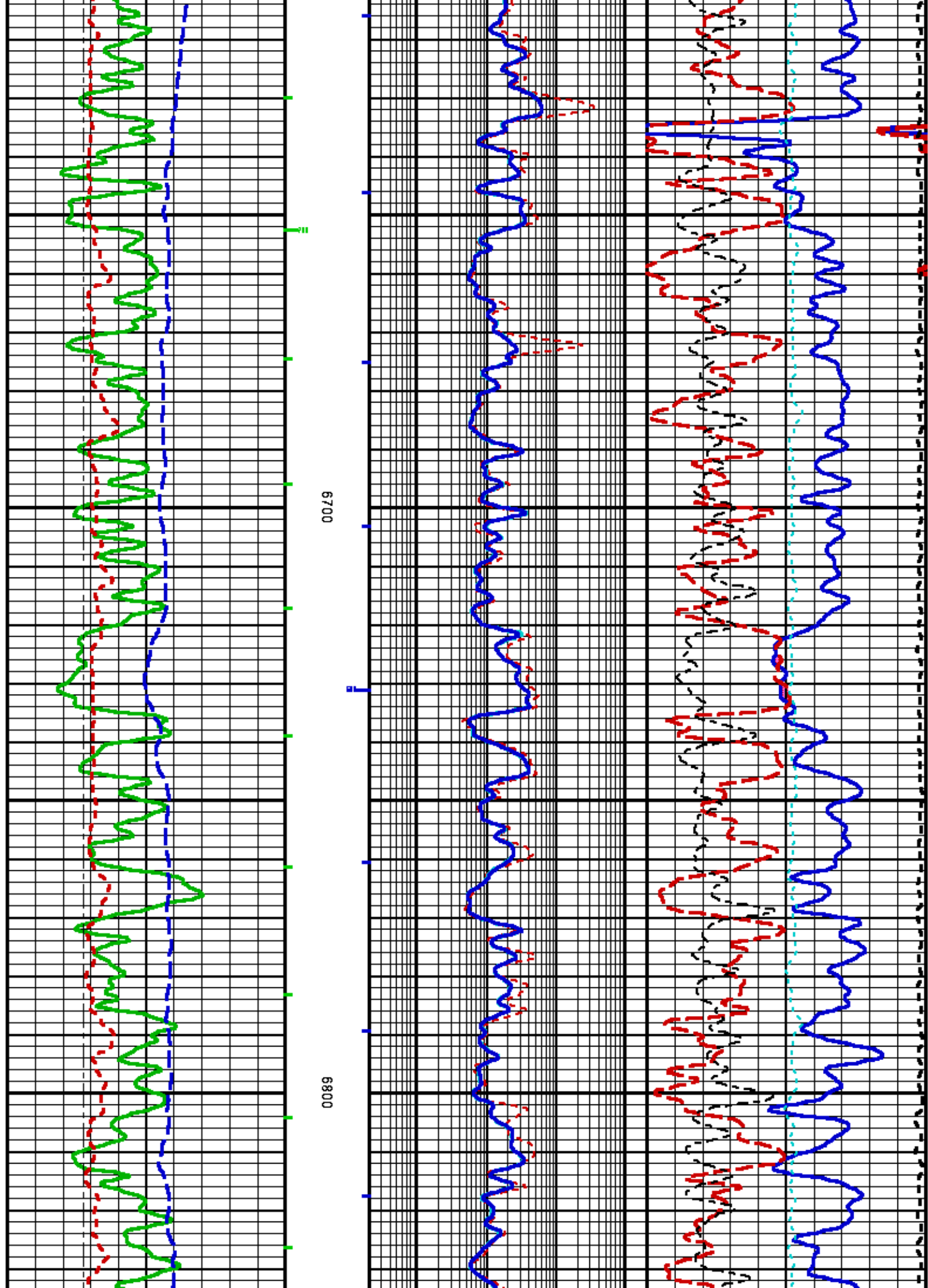


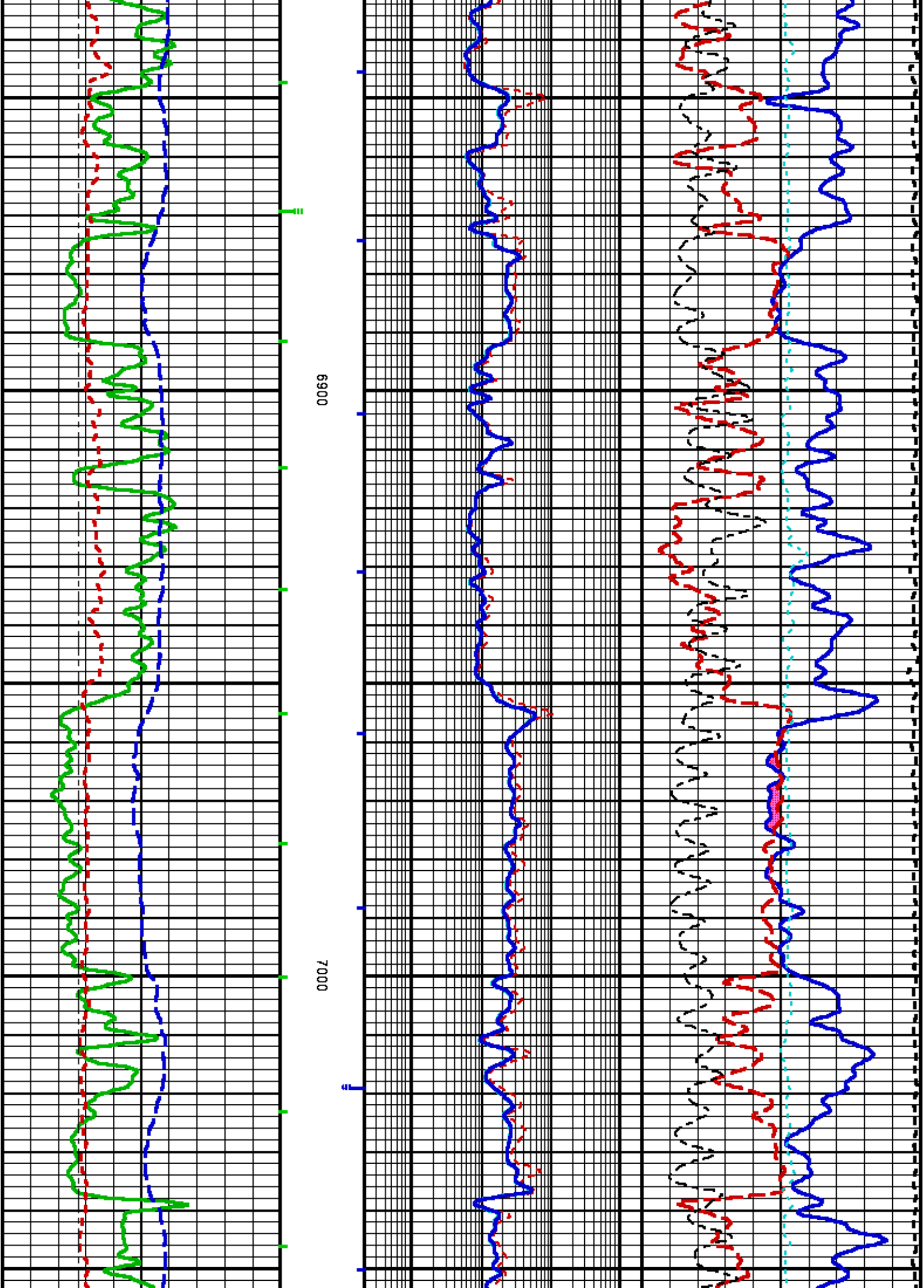


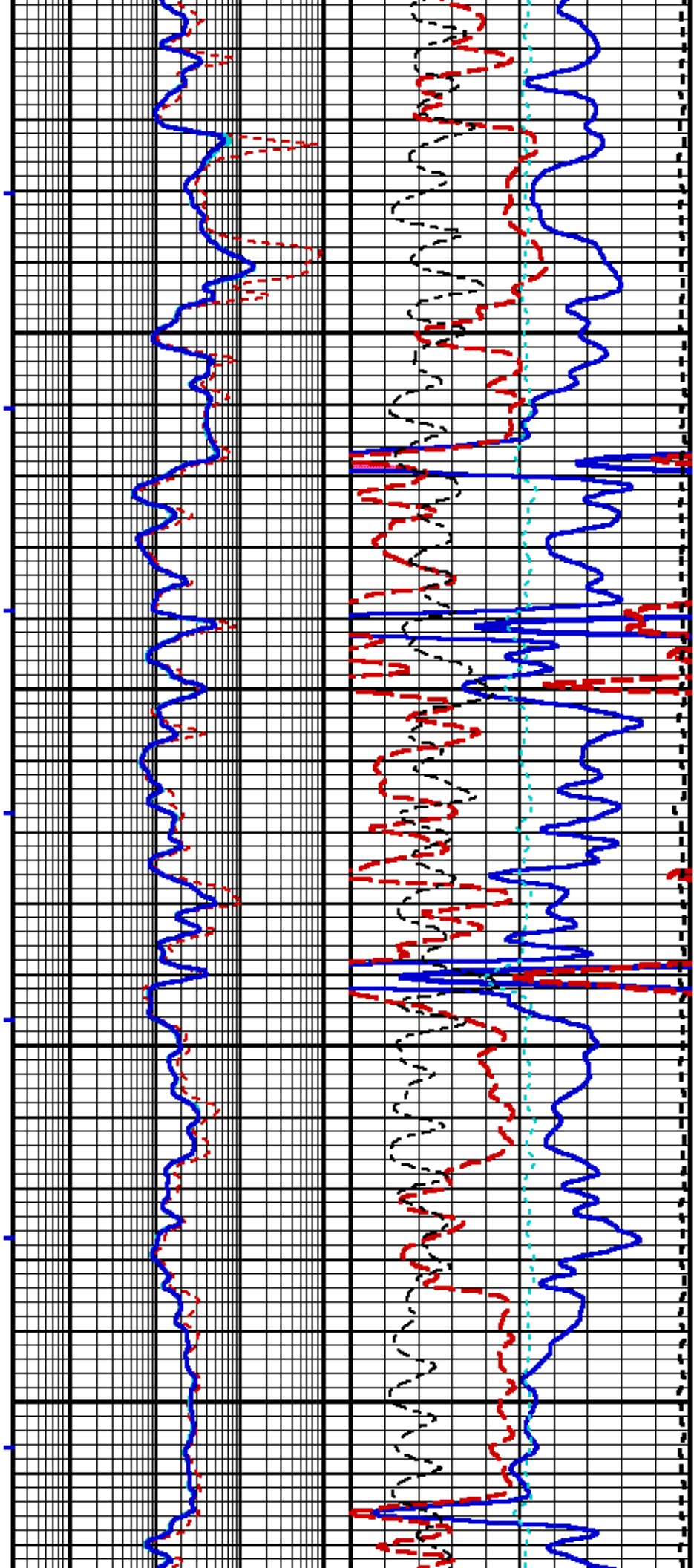






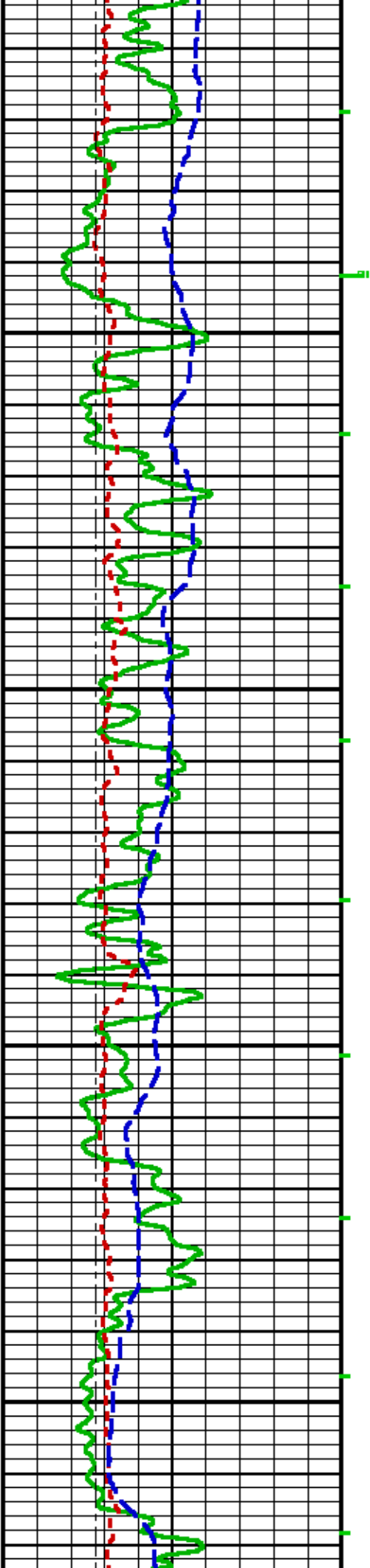


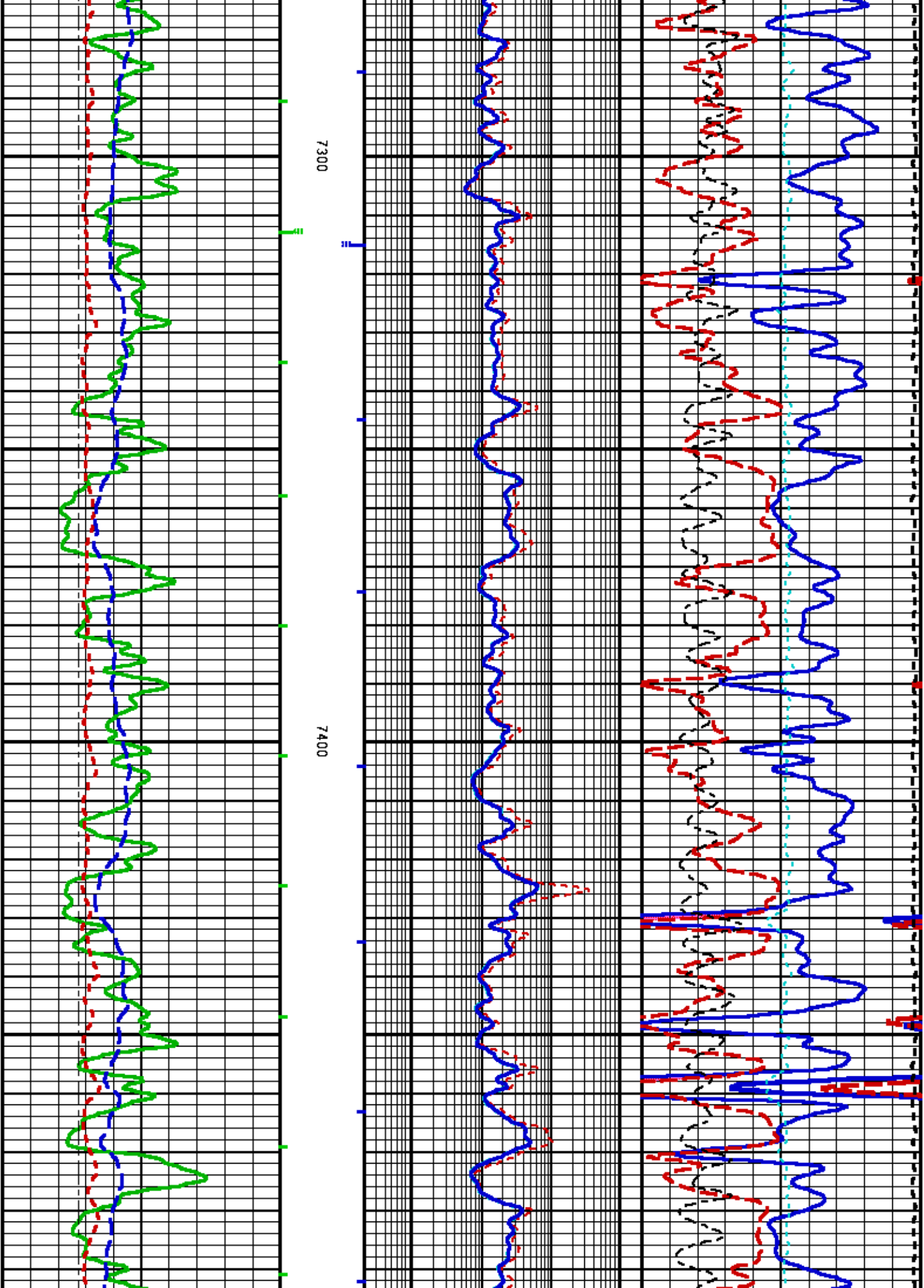


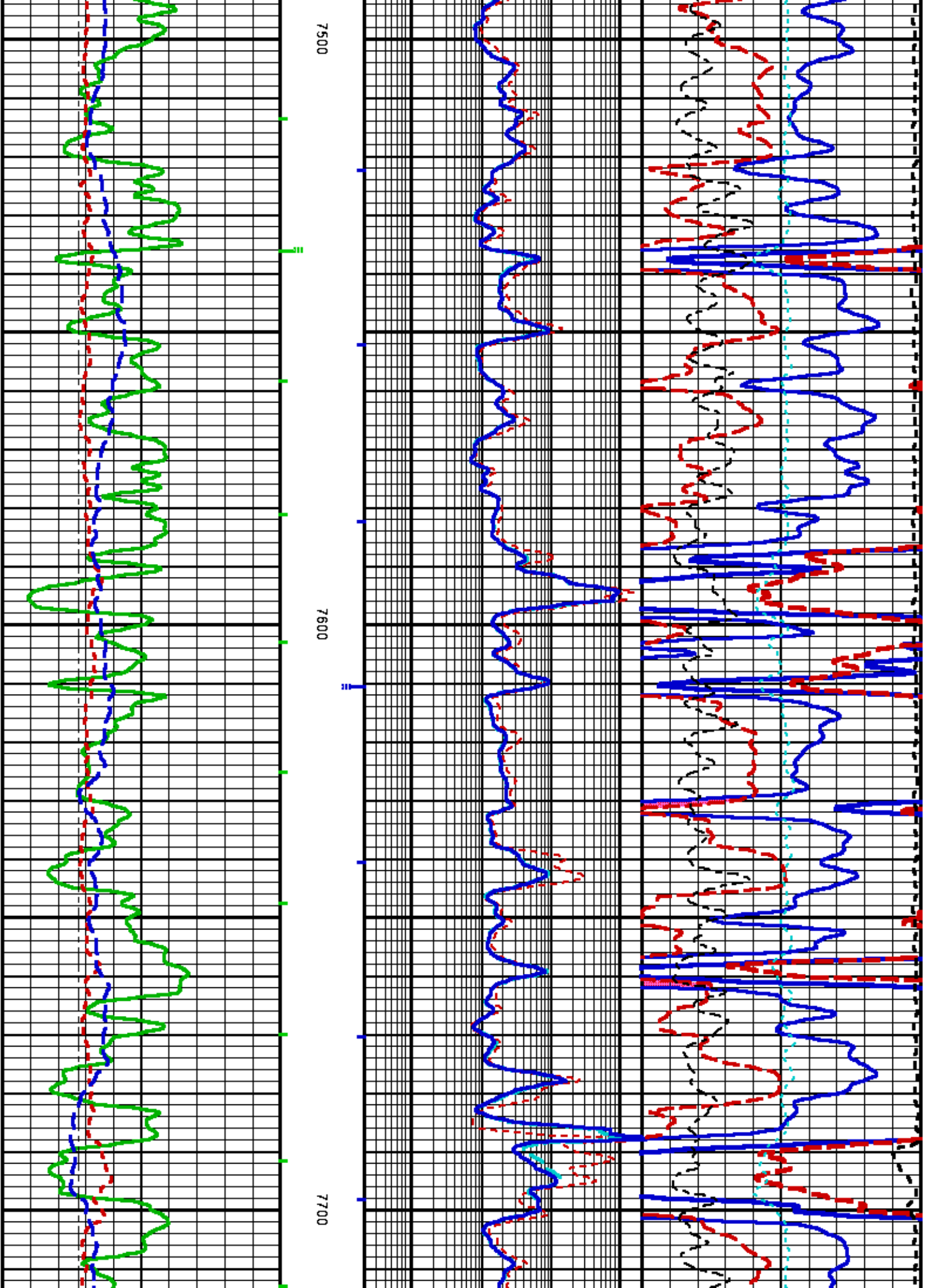


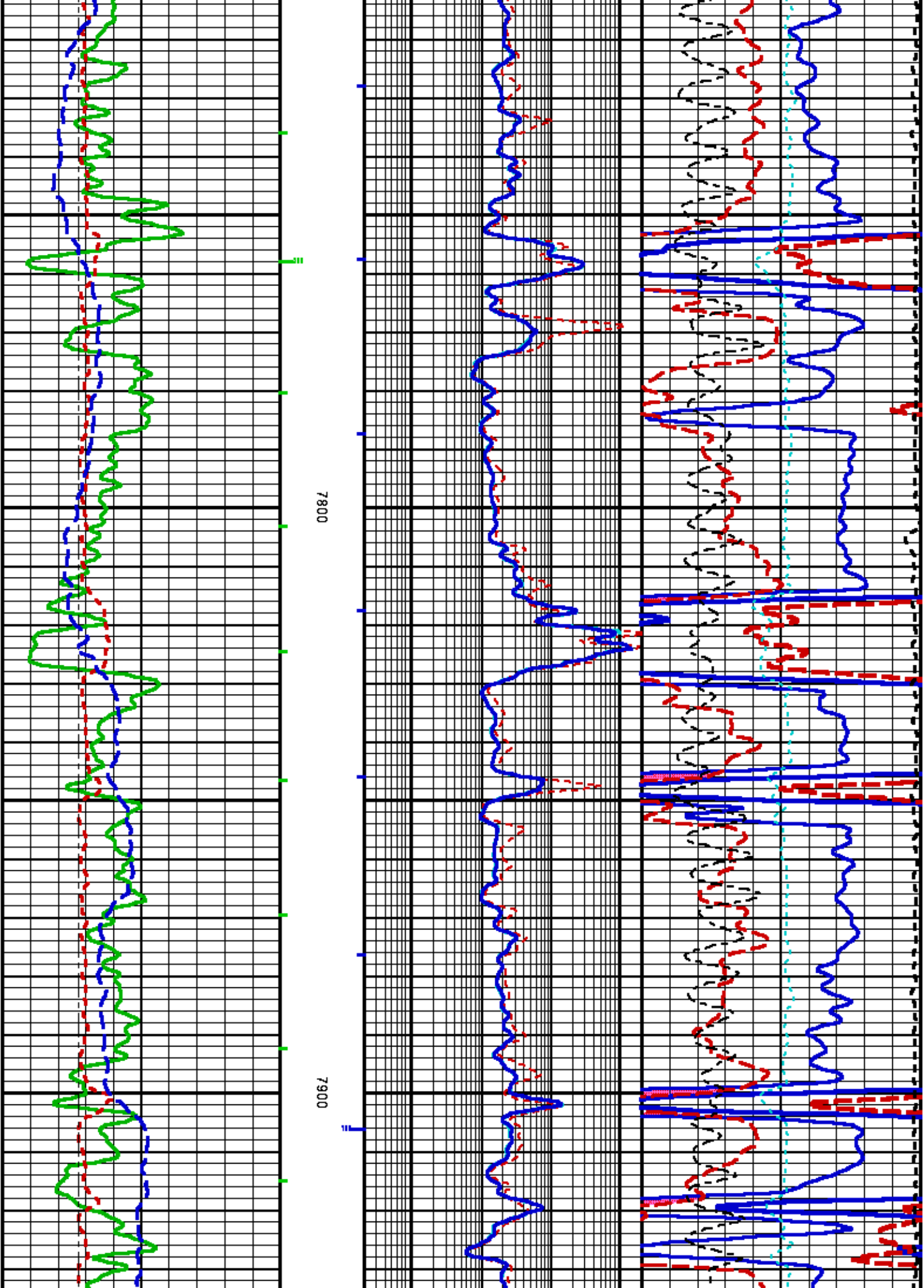
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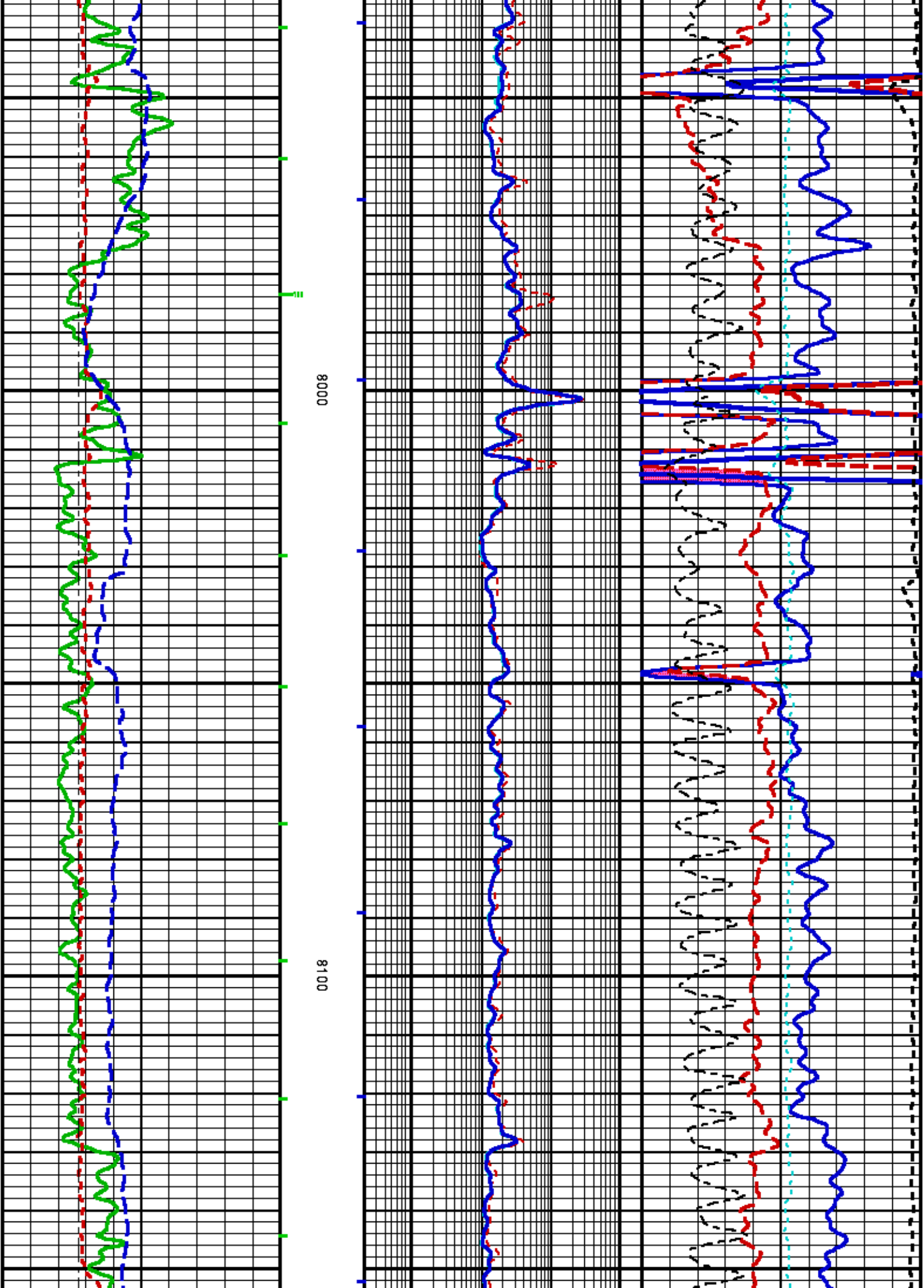
7200

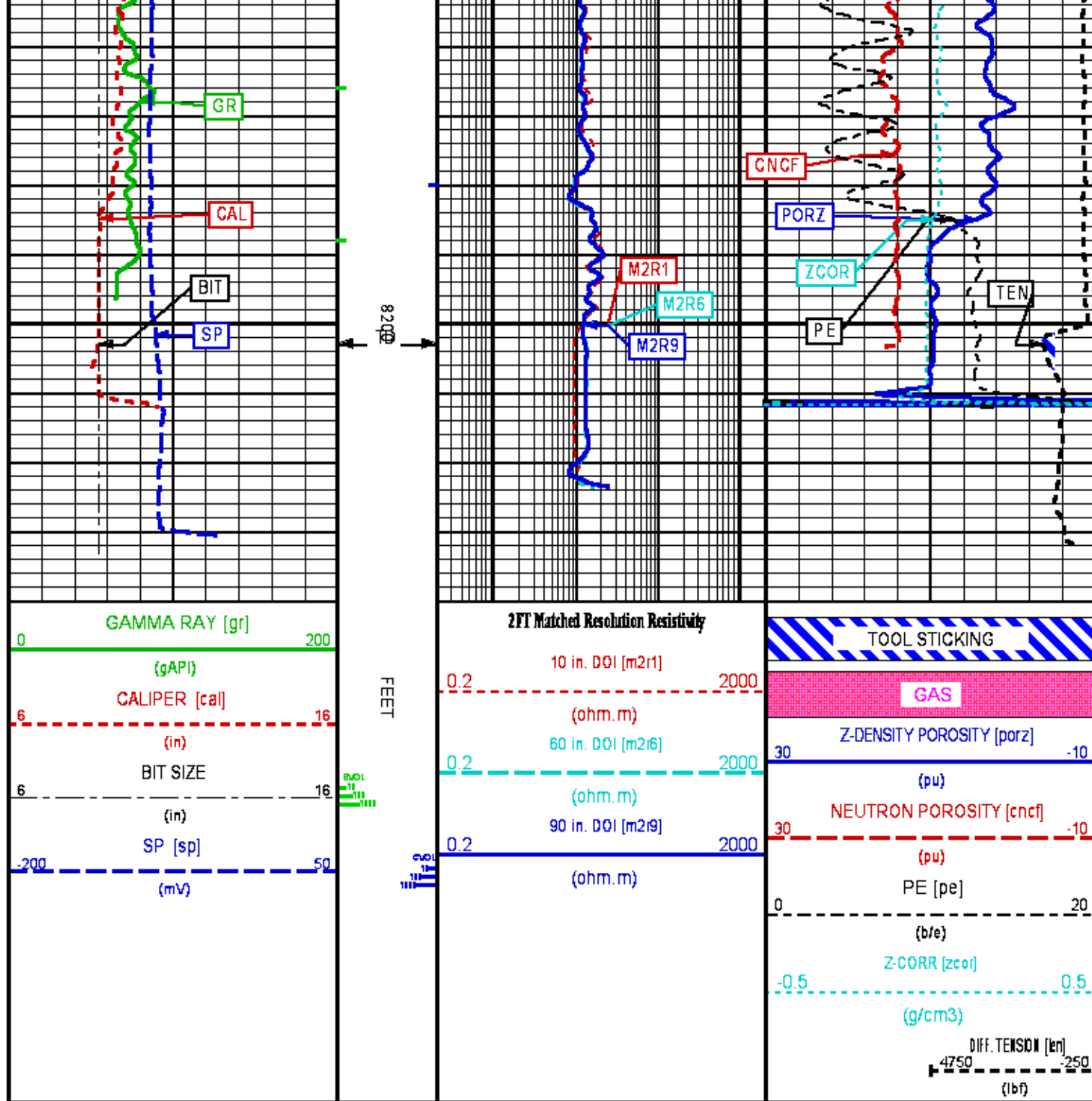












REPEAT LOG 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Patches: 3

Plotted: Sat Dec 14 18:00:02 2013

PARAMETER AND FILTER SUMMARY REPORT

File: /data/625274/h970a01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1015.000 ft BOTTOM DEPTH: 1443.385 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER Q	medium (1)		TOP	BOTTOM
CALIPER	FILTER Q	medium (1)		"	"
TENSION	FILTER Q	medium (1)		"	"
CN MED RES	FILTER Q	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER Q	heavy (3)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	4.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
	BIT SIZE	8.750	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	8.750	in	"	"
	FIXED DIAMETER (mbh*)	8.750	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	66.0	degF	"	"
	MUD SAMPLE RES	1.450	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	66.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	SANDSTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	600	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOmatrix	2.680	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
54-BIT	2014-12-11 10:00:10	BIT SIZE

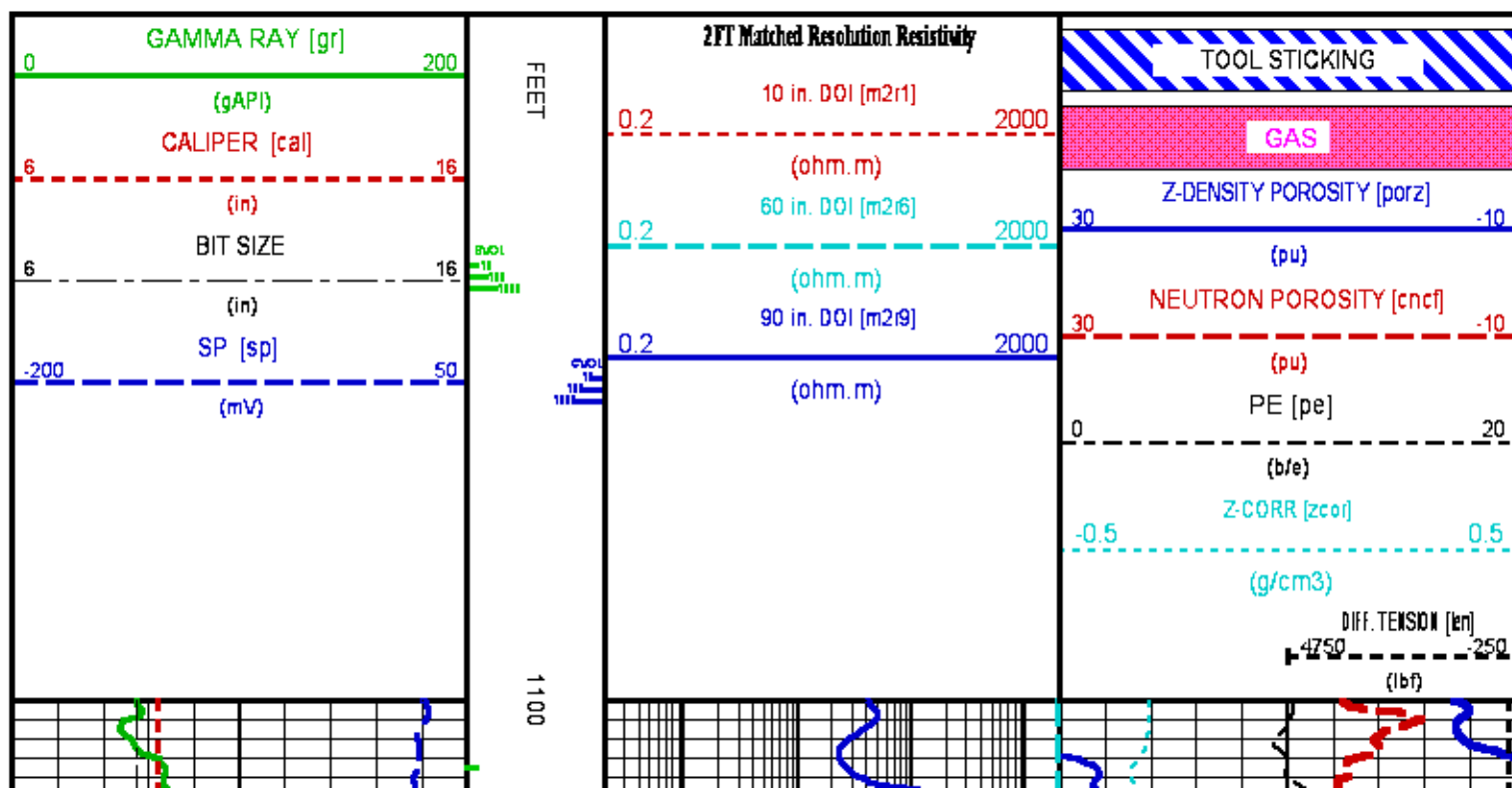
F1:BIT	Dec 14 17:41:42 2013	BIT SIZE
F1:BVOL	Dec 14 17:41:42 2013	BOREHOLE VOLUME
F1:CAL	Dec 14 17:41:42 2013	CALIPER
F1:CHT	Dec 14 17:41:42 2013	CABLE HEAD TENSION
F1:CNC	Dec 14 17:41:42 2013	BOREHOLE SIZE CORRECTED COMPENSATED NEUTRON POROSITY
F1:CNCF	Dec 14 17:41:42 2013	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Dec 14 17:41:42 2013	CEMENT VOLUME
F1:DCAL	Dec 14 17:41:42 2013	CALIPER DIFFERENCE FROM BIT
F1:GR	Dec 14 17:41:42 2013	GAMMA RAY
F1:MOR1	Dec 14 17:41:42 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 10-INCH DOI
F1:MOR2	Dec 14 17:41:42 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:MOR3	Dec 14 17:41:42 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 30-INCH DOI
F1:MOR6	Dec 14 17:41:42 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:MOR9	Dec 14 17:41:42 2013	TRUE FOCUSED RESISTIVITY FOR HDIL, 90-INCH DOI
F1:M2R1	Dec 14 17:41:42 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Dec 14 17:41:42 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Dec 14 17:41:42 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Dec 14 17:41:42 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Dec 14 17:41:42 2013	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Dec 14 17:41:42 2013	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Dec 14 17:41:42 2013	POROSITY FOR SELECTABLE MATRIX
F1:SP	Dec 14 17:41:42 2013	SPONTANEOUS POTENTIAL
F1:TEN	Dec 14 17:41:42 2013	DIFFERENTIAL TENSION
F1:TTEN	Dec 14 17:41:42 2013	TOTAL TENSION
F1:ZCOR	Dec 14 17:41:42 2013	DENSITY CORRECTION
F1:ZDEN	Dec 14 17:41:42 2013	FORMATION BULK DENSITY

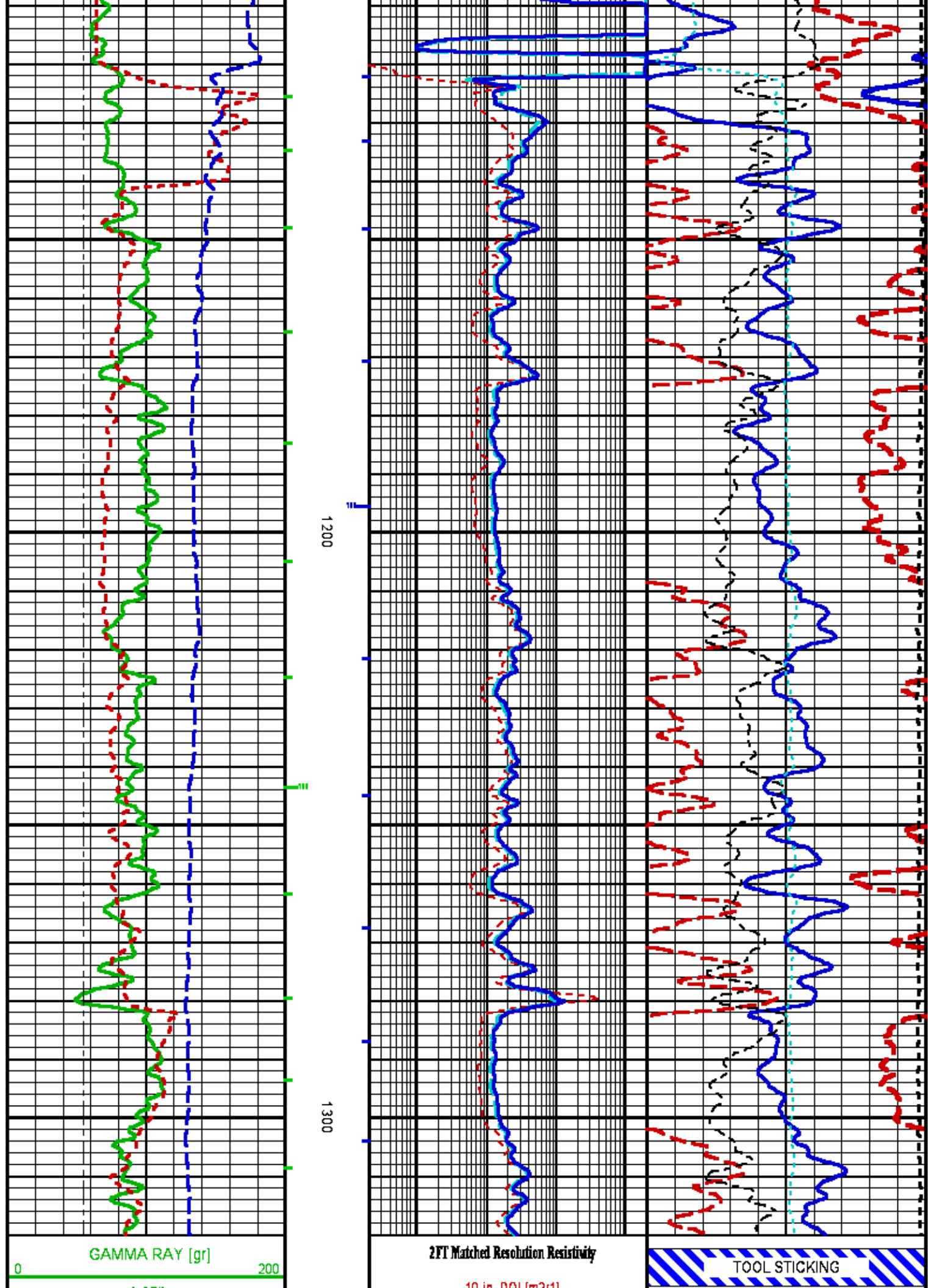
CURVE MEASURE POINT OFFSET

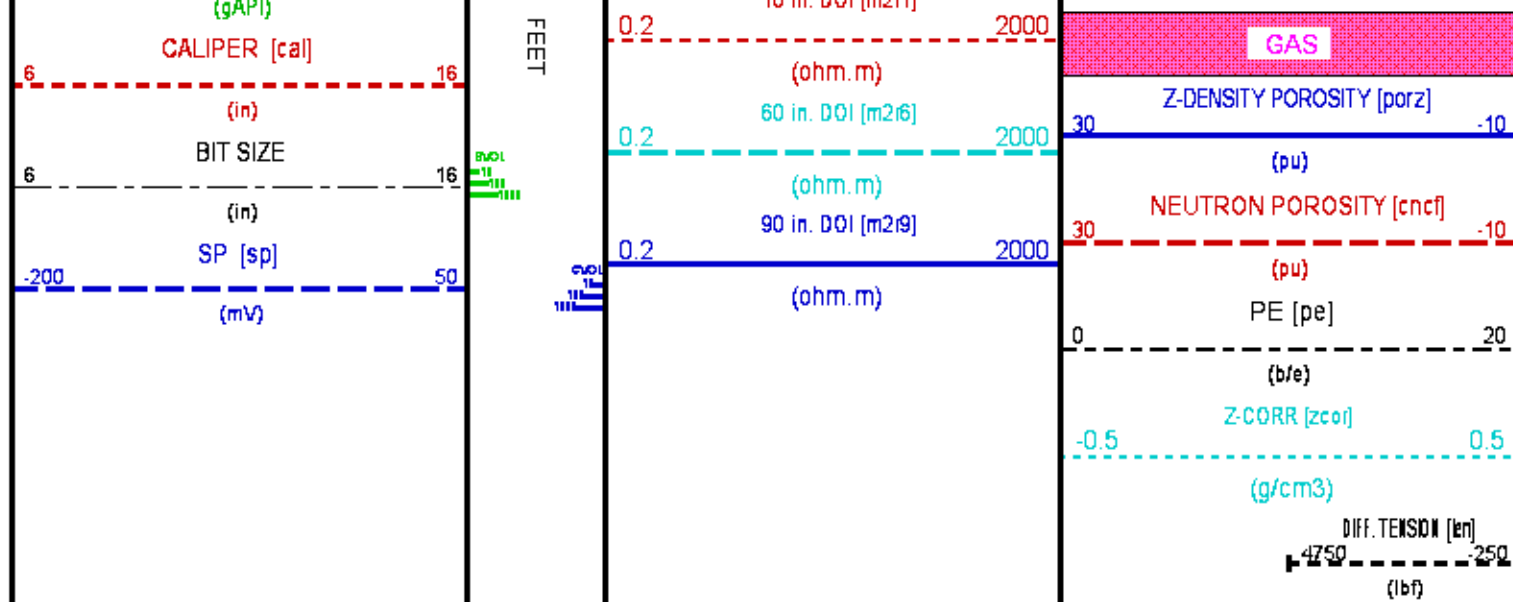
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	35.00	M2R1	2.75	PORZ	18.00
CAL	18.12	MOR1	2.75	M2R2	2.75	SP	1.25
CHT	0.00	MOR2	2.75	M2R3	2.75	TEN	0.00
CNC	27.38	MOR3	2.75	M2R6	2.75	TTEN	0.00
CNCF	27.38	MOR6	2.75	M2R9	2.75	ZCOR	18.00
DCAL	18.12	MOR9	2.75	PE	18.00	ZDEN	18.00

Presentation : HL6670:/dat1a/625274/MPX_SIN-REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 1100 - 1320 Feet

Data File 1 : F1 : HL6670:/dat1a/625274/n970a01-REPEAT.xdf
Created On : Dec 14 17:41:42 2013
Company : WPX ENERGY INC
Well : RWF 332-4
Field : RULISON
File Interval : 0 - 1446.25 Feet
OCT : n970a







CALIBRATION / VERIFICATION SUMMARY

Source File: /data/625274/n970a.tp1

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10126398

DATE/TIME PERFORMED:

Tue Dec 3 10:22:42 2013

Unit #: 388DTA HL667D

Jig Series:

4702NK VBA-905

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
211.86	932.55	185	0.257 0.230 0.280	54.38	239.38

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10126398

DATE/TIME PERFORMED:

Sat Dec 14 17:33:45 2013

DAYS SINCE CAL:

11

UNIT #: 388DTA HL667D

Jig:

INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67 529.00 1027.00	60.25 536.00	1361.74 1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10126398

DATE/TIME PERFORMED:

Sat Dec 14 20:39:38 2013

DAYS SINCE CAL:

11

UNIT #: 388DTA HL667D

Jig:

INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67 529.00 1027.00	119.04 536.00	1366.18 1237.00 1512.00

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10362459

DATE/TIME PERFORMED:

Fri Dec 6 09:14:52 2013

UNIT #: 388DTA HL667D

CALIBRATOR #:

2437XB 112674

SOURCE #:

4718XA N-0897

SSN DT CPS	LSN DT CPS	SSN/LSN	MCF	CNRATIO	CN PU
4483.84	802.70	5.58597	1.02704 0.95000 1.05000	5.73700	25.241

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10362459 DATE/TIME PERFORMED: Sat Dec 14 17:34:05 2013 DAYS SINCE CAL: 8

UNIT #: 3880TA HL6670 CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
991.06	993.42	0.99762 0.95000 1.05000	43.9 280.4	1346.9 1250.0 1450.0	4.648 4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10362459 DATE/TIME PERFORMED: Sat Dec 14 20:39:26 2013 DAYS SINCE CAL: 8

UNIT #: 3880TA HL6670 CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
992.07	994.44	0.99762 0.95000 1.05000	102.7 280.4	1345.4 1250.0 1450.0	4.648 4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10102922 DATE/TIME PERFORMED: Tue Dec 10 16:43:20 2013

UNIT #: 3880TA HL6670

	SIZE (in)	VALUE	MULTIPLIER	ADD
SMALL RING (Arm)	7.000	1575.6		
LARGE RING (Arm)	11.000	2808.0	0.00325	1.88608
PAD CLOSED		1312.0	0.00250	-3.28000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922 DATE/TIME PERFORMED: Sat Dec 14 17:37:22 2013 DAYS SINCE CAL: 4

UNIT #: 3880TA HL6670

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	2165.2	0.00325	1.88608	8.9
PAD	1557.2	0.00250	-3.28000	0.6
	ACTUAL (in)	MEASURED (in)		
DIAMETER (arm+pad)	9.001	9.0 8.6 9.4		

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922 DATE/TIME PERFORMED: Sat Dec 14 20:37:33 2013 DAYS SINCE CAL: 4

UNIT #: 3880TA HL6670

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	2224.0	0.00325	1.88608	9.1

PAD	1512.4	0.00250	-3.28000	0.5
-----	--------	---------	----------	-----

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	9.001	9.1
		8.8 9.4

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10102922

DATE/TIME PERFORMED: Tue Dec 10 16:33:43 2013

UNIT: 3880TA HL6670

CALB BLKS: 2225XA 094292F

CS SRC: 4705XA 16068B

PAD TYPE: PADTYP 7.5" PAD

	SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)		
	225.9	226.1	1247.0	1375.2		
	230.0 230.0	230.0 230.0				
	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	33980.3	11800.9	0.725	1.679	0.000	1.900
			0.720 0.650			
AL	21394.9	1346.4		2.667	-0.016	
AL + SHIM	28416.5	2344.1		2.558	0.098	
MG + SHIM (HI PE)	17021.6	5670.2	0.286			8.550
			0.280 0.360			
RATIO AL + SHIM/AL	1.33	1.74				
	1.30 1.40	1.60 1.80				
RATIO MG/AL	1.59	8.76				
	1.58 1.70	8.55 9.55				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED: Sat Dec 14 17:34:44 2013

DAYS SINCE CAL: 4

UNIT #: 3880TA HL6670

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.9	1340.7
	3332.1 3352.1	230.0 230.0	1290.0 1390.0
SS	22354.8	224.2	1314.7
	22344.8 22364.8	230.0 230.0	1290.0 1330.0
	LV (V)	PAD CURRENT (mA)	
	5.0	97.6	
	4.8 5.2	90.0 100.0	

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED: Sat Dec 14 20:39:22 2013

DAYS SINCE CAL: 4

UNIT #: 3880TA HL6670

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.4	1426.8
	3332.1 3352.1	230.0 230.0	1290.0 1560.0
SS	22354.8	224.1	1330.1
	22344.8 22364.8	230.0 230.0	1290.0 1390.0
	LV (V)	PAD CURRENT (mA)	
	5.0	99.2	
	4.8 5.2	90.0 120.0	

HDL PRIMARY CALIBRATION SUMMARY

TOOL #: 1530XA 10121806

DATE/TIME PERFORMED:

Tue Oct 8 14:45:56 2013

UNIT #: 3880TA HL667D

GRCOND ID & DATE: 94 101801

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.0042 -0.2000 0.2000	-0.0002 -0.1000 0.1000	-0.0000 -0.1000 0.1000	0.0011 -0.1000 0.1000	-0.0006 -0.1000 0.1000	0.0005 -0.1000 0.1000	-0.0005 -0.1000 0.1000	0.0001 -0.1000 0.1000
Coil 0 Q	-0.0056 -0.5000 0.5000	-0.0013 -0.2000 0.2000	0.0010 -0.1000 0.1000	0.0007 -0.1000 0.1000	-0.0004 -0.1000 0.1000	-0.0004 -0.1000 0.1000	-0.0002 -0.1000 0.1000	-0.0003 -0.1000 0.1000
Coil 1 R	-0.0021 -0.2000 0.2000	-0.0034 -0.1000 0.1000	-0.0014 -0.1000 0.1000	0.0029 -0.1000 0.1000	0.0012 -0.1000 0.1000	0.0002 -0.1000 0.1000	0.0014 -0.1000 0.1000	-0.0009 -0.1000 0.1000
Coil 1 Q	-0.0205 -0.5000 0.5000	0.0010 -0.2000 0.2000	0.0015 -0.1000 0.1000	0.0017 -0.1000 0.1000	-0.0005 -0.1000 0.1000	0.0021 -0.1000 0.1000	0.0005 -0.1000 0.1000	0.0002 -0.1000 0.1000
Coil 2 R	0.0066 -0.2000 0.2000	-0.0025 -0.1000 0.1000	0.0013 -0.1000 0.1000	-0.0024 -0.1000 0.1000	0.0025 -0.1000 0.1000	0.0034 -0.1000 0.1000	-0.0027 -0.1000 0.1000	-0.0010 -0.1000 0.1000
Coil 2 Q	-0.0104 -0.5000 0.5000	0.0013 -0.2000 0.2000	-0.0017 -0.1000 0.1000	-0.0022 -0.1000 0.1000	0.0021 -0.1000 0.1000	-0.0015 -0.1000 0.1000	0.0005 -0.1000 0.1000	0.0043 -0.1000 0.1000
Coil 3 R	0.0058 -0.2000 0.2000	-0.0075 -0.1000 0.1000	-0.0015 -0.1000 0.1000	0.0052 -0.1000 0.1000	-0.0003 -0.1000 0.1000	0.0005 -0.1000 0.1000	-0.0020 -0.1000 0.1000	-0.0008 -0.1000 0.1000
Coil 3 Q	-0.0228 -0.5000 0.5000	-0.0052 -0.2000 0.2000	0.0073 -0.1000 0.1000	-0.0050 -0.1000 0.1000	0.0009 -0.1000 0.1000	0.0011 -0.1000 0.1000	0.0011 -0.1000 0.1000	-0.0074 -0.1000 0.1000
Coil 4 R	0.0221 -0.5000 0.5000	-0.0035 -0.2000 0.2000	0.0040 -0.2000 0.2000	0.0075 -0.2000 0.2000	-0.0071 -0.2000 0.2000	0.0013 -0.2000 0.2000	0.0017 -0.2000 0.2000	-0.0132 -0.2000 0.2000
Coil 4 Q	-0.0215 -1.0000 1.0000	-0.0135 -0.4000 0.4000	0.0035 -0.2000 0.2000	0.0020 -0.2000 0.2000	0.0027 -0.2000 0.2000	0.0130 -0.2000 0.2000	-0.0043 -0.2000 0.2000	-0.0100 -0.2000 0.2000
Coil 5 R	0.0310 -1.2000 1.2000	-0.0214 -0.4000 0.4000	0.0095 -0.4000 0.4000	0.0052 -0.4000 0.4000	-0.0008 -0.4000 0.4000	0.0115 -0.4000 0.4000	-0.0062 -0.4000 0.4000	0.0039 -0.4000 0.4000
Coil 5 Q	-0.0130 -1.5000 1.5000	-0.0322 -0.6000 0.6000	0.0123 -0.4000 0.4000	0.0041 -0.4000 0.4000	-0.0023 -0.4000 0.4000	0.0183 -0.4000 0.4000	0.0045 -0.4000 0.4000	-0.0028 -0.4000 0.4000

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	162.82 136.00 186.00	161.40 134.00 184.00	158.55 131.00 181.00	154.30 126.00 176.00	148.75 122.00 170.00	141.89 118.00 161.00	133.79 112.00 150.00	124.60 105.00 139.00
Coil 0 P	7.657 6.000 9.000	25.268 21.000 30.000	42.425 35.000 50.000	59.542 49.000 71.000	76.666 63.000 91.000	93.797 77.000 109.000	110.973 92.000 130.000	128.130 105.000 151.000
Coil 1 M	281.73 238.00 328.00	279.19 235.00 325.00	274.11 230.00 320.00	266.55 225.00 312.00	256.80 218.00 302.00	244.30 208.00 288.00	229.87 195.00 266.00	213.44 184.00 244.00
Coil 1 P	7.827 6.000 9.000	25.740 21.000 30.000	43.213 35.000 51.000	60.643 49.000 71.000	78.082 63.000 92.000	95.540 78.000 112.000	113.021 93.000 130.000	130.453 107.000 151.000
Coil 2 M	577.88 479.00 659.00	573.00 474.00 654.00	563.17 463.00 643.00	548.42 450.00 632.00	528.87 432.00 602.00	504.53 412.00 572.00	475.70 390.00 540.00	442.67 359.00 499.00
Coil 2 P	7.952 6.000 9.000	26.139 21.000 31.000	43.898 35.000 51.000	61.630 49.000 71.000	79.393 63.000 92.000	97.184 76.000 115.000	115.032 92.000 135.000	132.853 105.000 155.000
Coil 3 M	925.36 772.00 1080.00	917.24 764.00 1050.00	900.76 752.00 1030.00	876.07 728.00 1010.00	843.66 700.00 970.00	803.67 665.00 925.00	756.56 628.00 888.00	702.54 589.00 799.00
Coil 3 P	7.735 6.000 10.000	25.574 21.000 30.000	42.955 35.000 51.000	60.298 49.000 72.000	77.643 63.000 93.000	95.002 76.000 114.000	112.404 90.000 135.000	129.762 104.000 156.000
Coil 4 M	1455.7 1210.0 1700.0	1442.2 1205.0 1690.0	1414.6 1180.0 1690.0	1373.7 1140.0 1590.0	1320.3 1120.0 1530.0	1254.9 1070.0 1490.0	1178.7 1000.0 1360.0	1093.0 942.0 1240.0
Coil 4 P	7.853 6.000 10.000	25.870 21.000 31.000	43.420 35.000 52.000	60.916 49.000 73.000	78.376 63.000 93.000	95.829 77.000 114.000	113.248 91.000 135.000	130.601 105.000 156.000
Coil 5 M	2981.2 2450.0 3450.0	2958.2 2420.0 3400.0	2908.8 2410.0 3320.0	2834.7 2350.0 3200.0	2734.4 2280.0 3080.0	2611.0 2150.0 2950.0	2462.2 2020.0 2750.0	2291.3 1870.0 2570.0
Coil 5 P	7.898 6.000 10.000	26.058 20.000 31.000	43.786 35.000 52.000	61.533 49.000 73.000	79.288 63.000 94.000	97.092 79.000 113.000	114.984 93.000 134.000	132.851 106.000 156.000

AM Factor	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-1095 -3200 940	-644 -1400 -20	-523 -830 -190	-454 -760 -160	-404 -660 -130	-366 -600 -120	-336 -560 -110	-313 -520 -82
Coil 0 Q	-1360 -15000 11000	-752 -5900 3600	-582 -3700 2100	-512 -2700 1400	-475 -3200 1000	-453 -1800 790	-439 -1600 620	-432 -1500 480
Coil 1 R	-147 -750 460	-154 -360 83	-145 -260 9	-133 -230 -10	-122 -200 -25	-113 -180 -35	-105 -160 -46	-97 -150 -49
Coil 1 Q	-130 -3300 3300	-83 -1100 960	-77 -630 530	-78 -470 360	-79 -380 260	-79 -320 190	-79 -250 150	-79 -260 120
Coil 2 R	-0.1 -85.0 76.0	-34.7 -64.0 -0.4	-36.1 -57.0 -12.0	-33.9 -51.0 -16.0	-31.0 -46.0 -17.0	-28.2 -42.0 -16.0	-26.1 -39.0 -15.0	-23.7 -37.0 -13.0
Coil 2 Q	411.7 -1500.0 1900.0	137.1 -500.0 610.0	78.2 -250.0 390.0	52.9 -200.0 260.0	39.3 -160.0 190.0	31.7 -140.0 160.0	26.9 -110.0 130.0	24.5 -89.0 120.0
Coil 3 R	0.9 -29.0 21.0	-7.9 -22.0 1.6	-9.3 -21.0 -1.3	-9.0 -20.0 -1.8	-8.8 -19.0 -2.0	-8.3 -19.0 -1.3	-7.9 -19.0 -0.8	-7.9 -19.0 -0.0
Coil 3 Q	124.3 -540.0 590.0	45.7 -180.0 180.0	31.1 -100.0 110.0	25.5 -71.0 81.0	23.1 -51.0 66.0	22.7 -37.0 59.0	23.0 -28.0 53.0	24.1 -21.0 51.0
Coil 4 R	0.28 -18.00 13.00	-2.10 -12.00 2.70	-2.00 -11.00 1.50	-1.80 -9.80 0.52	-2.68 -9.90 0.56	-0.79 -10.00 1.50	-2.13 -11.00 2.30	-1.63 -11.00 2.60
Coil 4 Q	5.03 -18.00 13.00	4.01 -12.00 2.70	4.46 -11.00 1.50	5.55 -9.80 0.52	8.38 -9.90 0.56	8.50 -10.00 1.50	9.75 -11.00 2.30	11.43 -11.00 2.60

Coil 5 R

-250.00	250.00	-75.00	50.00	-43.00	64.00	-27.00	51.00	-18.00	46.00	-11.00	42.00	-5.50	42.00	-1.00	42.00
1.25		-0.05		0.15		-0.07		-1.61		-0.38		-0.48		-0.42	
-56.00	51.00	-8.40	3.60	-6.90	1.10	-6.90	1.20	-9.30	2.90	-14.00	6.30	-19.00	9.60	-24.00	13.00

Coil 5 Q

-0.13		2.45		3.16		4.45		7.11		8.33		9.18		10.46	
-68.00	69.00	-26.00	27.00	-14.00	22.00	-7.00	22.00	-2.50	24.00	1.10	26.00	4.10	29.00	7.10	32.00

MM Factor

10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 M

0.966		0.975		0.979		0.981		0.983		0.983		0.983		0.983	
0.850	1.100	0.850	1.100	0.870	1.100	0.880	1.100	0.880	1.100	0.880	1.100	0.880	1.100	0.880	1.100

Coil 0 P

-0.305		-0.483		-0.388		-0.261		-0.168		-0.101		-0.023		0.053	
-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500

Coil 1 M

0.961		0.970		0.974		0.977		0.977		0.977		0.977		0.977	
0.850	1.100	0.850	1.100	0.870	1.100	0.880	1.100	0.880	1.100	0.880	1.100	0.880	1.100	0.880	1.100

Coil 1 P

-0.280		-0.475		-0.367		-0.252		-0.141		-0.067		-0.001		0.043	
-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500

Coil 2 M

0.986		0.985		0.985		0.985		0.985		0.985		0.984		0.983	
0.850	1.100	0.850	1.100	0.850	1.100	0.850	1.100	0.850	1.100	0.850	1.100	0.850	1.100	0.850	1.100

Coil 2 P

0.191		0.092		0.101		0.121		0.145		0.152		0.183		0.161	
-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500

Coil 3 M

0.992		0.992		0.992		0.992		0.992		0.991		0.991		0.989	
0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100

Coil 3 P

0.083		0.074		0.108		0.161		0.204		0.248		0.310		0.323	
-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500

Coil 4 M

0.997		0.997		0.998		0.998		0.999		0.998		0.999		0.999	
0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100

Coil 4 P

0.140		0.100		0.154		0.211		0.265		0.379		0.459		0.535	
-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500

Coil 5 M

1.007		1.006		1.008		1.008		1.010		1.011		1.013		1.014	
0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100	0.900	1.100

Coil 5 P

-0.042		0.070		0.171		0.302		0.486		0.558		0.677		0.765	
-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500	-1.500	1.500

PARMS

TCID 0

TCID 1

Cal Temp

T Factor

(degF)

IDs

2.831

0.846

88.1

1.00

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #:

153DXA 10121806

DATE/TIME PERFORMED:

Sat Dec 14 18:17:24 2013

DAYS SINCE CAL:

67

UNIT #:

3880TA HL6670

ZERO DATA(mv)

10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 R

0.002		0.001		-0.000		-0.000		-0.000		0.000		0.000		-0.001	
-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 0 Q

-0.005		-0.001		0.001		-0.001		0.001		0.000		0.001		0.000	
-0.500	0.500	-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 1 R

0.004		-0.002		0.000		-0.000		-0.002		-0.001		0.001		0.001	
-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 1 Q

-0.014		-0.001		0.002		0.001		0.001		0.001		-0.000		-0.001	
-0.500	0.500	-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 2 R

0.007		0.006		0.004		-0.005		0.002		0.001		-0.002		-0.001	
-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 2 Q

-0.007		-0.002		0.003		-0.001		0.004		0.002		0.000		-0.001	
-0.500	0.500	-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 3 R

0.018		-0.004		0.005		-0.007		-0.004		-0.001		0.003		0.002	
-0.300	0.300	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 3 Q

-0.007		-0.001		0.008		0.007		0.003		0.000		-0.006		0.004	
-0.500	0.500	-0.200	0.200	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100	-0.100	0.100

Coil 4 R

0.020		-0.007		0.010		0.004		-0.010		-0.007		0.012		0.006	
-0.500	0.500	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200

Coil 4 Q

-0.012		-0.005		0.021		-0.004		-0.007		0.006		0.006		-0.003	
-1.000	1.000	-0.400	0.400	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200	-0.200	0.200

Coil 5 R

0.044		-0.022		-0.038		0.014		-0.011		-0.003		-0.002		0.000	
-1.200	1.200	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400

Coil 5 Q

-0.012		-0.050		0.001		-0.001		-0.008		0.009		-0.002		0.007	
-1.500	1.500	-0.800	0.800	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400	-0.400	0.400

ELEC. GAINS

10 KHz 30 KHz 50 KHz 70 KHz 90 KHz 110 KHz 130 KHz 150 KHz

Coil 0 M

162.11		160.70		157.82		153.57		147.99		141.15		133.03		123.90	
135.00	185.00	134.00	184.00	131.00	181.00	126.00	176.00	122.00	170.00	118.00	161.00	112.00	150.00	105.00	139.00

Coil 0 P

6.874		25.137		42.504		59.763		76.991		94.245		111.493		128.761	
-1.000	12.000	19.000	30.000	36.000	50.000	49.000	71.000	63.000	91.000	77.000	110.000	92.000	130.000	105.000	151.000

Coil 1 M

281.68		279.14		274.04		266.46		256.48		244.19		229.71		213.23	
297.00	327.00	295.00	325.00	290.00	320.00	285.00	312.00	278.00	302.00	268.00	290.00	255.00	280.00	240.00	244.00

Coil 1 P	7.066 -1.000 12.000	25.602 19.000 30.000	43.267 35.000 51.000	60.830 49.000 71.000	78.372 63.000 92.000	95.926 77.000 112.000	113.488 92.000 132.000	131.054 105.000 153.000
Coil 2 M	576.67 479.00 699.00	571.84 474.00 654.00	561.91 463.00 643.00	547.16 450.00 622.00	527.57 432.00 602.00	503.30 412.00 572.00	474.37 380.00 540.00	441.37 359.00 499.00
Coil 2 P	7.171 -1.000 12.000	26.012 19.000 31.000	43.978 35.000 51.000	61.851 49.000 71.000	79.728 63.000 92.000	97.636 77.000 114.000	115.574 92.000 135.000	133.535 105.000 155.000
Coil 3 M	924.27 772.00 1050.00	916.13 764.00 1050.00	899.43 752.00 1030.00	874.60 728.00 1010.00	841.99 700.00 970.00	801.98 665.00 925.00	754.64 629.00 899.00	700.43 589.00 799.00
Coil 3 P	6.944 -2.000 13.000	25.450 19.000 31.000	43.046 35.000 52.000	60.530 49.000 72.000	77.993 63.000 93.000	95.473 77.000 114.000	112.955 92.000 135.000	130.422 105.000 155.000
Coil 4 M	1459.3 1210.0 1700.0	1445.7 1205.0 1690.0	1417.8 1180.0 1690.0	1376.6 1140.0 1590.0	1322.9 1120.0 1530.0	1257.3 1070.0 1450.0	1180.5 1000.0 1350.0	1094.2 942.0 1240.0
Coil 4 P	7.081 -2.000 13.000	25.751 19.000 31.000	43.515 35.000 52.000	61.152 49.000 73.000	78.745 63.000 93.000	96.310 78.000 114.000	113.853 92.000 135.000	131.292 105.000 155.000
Coil 5 M	2975.3 2450.0 3450.0	2952.7 2430.0 3400.0	2902.7 2410.0 3320.0	2827.6 2350.0 3000.0	2728.6 2280.0 2980.0	2604.3 2150.0 2950.0	2453.7 2030.0 2750.0	2282.5 1870.0 2570.0
Coil 5 P	7.138 -2.000 13.000	25.973 19.000 31.000	43.962 35.000 52.000	61.847 49.000 73.000	79.747 63.000 94.000	97.699 79.000 114.000	115.698 93.000 135.000	133.685 105.000 155.000

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10121806

DATE/TIME PERFORMED: Sat Dec 14 20:40:25 2013

DAYS SINCE CAL: 67

UNIT #: 3880TA HL6670

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	0.003 -0.078 0.062	-0.001 -0.059 0.051	-0.000 -0.030 0.030	-0.000 -0.030 0.030	0.000 -0.030 0.030	-0.000 -0.030 0.030	-0.000 -0.030 0.030	0.000 -0.031 0.029
Coil 0 Q	-0.003 -0.045 0.036	-0.001 -0.121 0.119	-0.000 -0.029 0.031	-0.000 -0.031 0.029	0.001 -0.029 0.031	-0.000 -0.030 0.030	-0.000 -0.029 0.031	-0.000 -0.030 0.030
Coil 1 R	0.002 -0.076 0.084	0.001 -0.052 0.048	-0.002 -0.030 0.030	-0.000 -0.030 0.030	0.000 -0.032 0.028	-0.002 -0.031 0.029	-0.002 -0.029 0.031	-0.000 -0.029 0.031
Coil 1 Q	-0.016 -0.414 0.386	0.000 -0.101 0.099	-0.000 -0.038 0.032	-0.001 -0.029 0.031	-0.000 -0.029 0.031	0.001 -0.029 0.031	0.000 -0.030 0.030	-0.000 -0.031 0.029
Coil 2 R	0.005 -0.063 0.077	0.002 -0.024 0.036	0.004 -0.026 0.034	0.000 -0.036 0.026	-0.002 -0.038 0.032	0.001 -0.029 0.031	0.001 -0.032 0.028	0.002 -0.031 0.029
Coil 2 Q	-0.006 -0.357 0.343	-0.003 -0.102 0.098	0.001 -0.027 0.023	0.004 -0.031 0.029	-0.004 -0.026 0.034	0.005 -0.028 0.032	-0.000 -0.030 0.030	-0.001 -0.031 0.029
Coil 3 R	0.010 -0.032 0.058	-0.014 -0.044 0.036	0.002 -0.035 0.045	0.006 -0.047 0.033	0.000 -0.044 0.036	0.002 -0.041 0.039	-0.002 -0.037 0.043	-0.002 -0.038 0.042
Coil 3 Q	-0.009 -0.287 0.193	-0.009 -0.081 0.079	-0.000 -0.032 0.048	-0.000 -0.033 0.047	-0.006 -0.037 0.043	-0.000 -0.040 0.040	0.000 -0.046 0.034	-0.000 -0.035 0.044
Coil 4 R	0.027 -0.040 0.090	-0.011 -0.057 0.053	0.008 -0.050 0.070	0.001 -0.056 0.054	-0.002 -0.070 0.050	-0.002 -0.057 0.053	-0.012 -0.048 0.072	-0.000 -0.054 0.056
Coil 4 Q	-0.021 -0.312 0.268	-0.011 -0.105 0.095	0.009 -0.039 0.081	-0.001 -0.054 0.056	-0.003 -0.057 0.053	-0.006 -0.054 0.056	0.007 -0.054 0.056	-0.001 -0.053 0.057
Coil 5 R	0.062 -0.076 0.164	0.003 -0.142 0.098	-0.015 -0.198 0.062	0.003 -0.106 0.134	-0.015 -0.131 0.109	0.002 -0.123 0.117	0.021 -0.122 0.118	-0.009 -0.120 0.120
Coil 5 Q	-0.061 -0.612 0.598	-0.038 -0.300 0.200	0.057 -0.119 0.121	0.002 -0.121 0.119	-0.007 -0.128 0.112	-0.017 -0.111 0.129	0.007 -0.122 0.118	-0.008 -0.113 0.127

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	162.38 159.87 165.35	160.95 157.48 163.91	158.07 154.66 160.98	153.82 150.50 156.64	148.21 145.03 150.95	141.37 138.33 143.97	133.29 130.37 135.69	124.04 121.42 126.38
Coil 0 P	7.418 3.874 9.874	25.261 22.137 28.137	42.506 39.504 45.504	59.688 55.763 62.763	76.869 73.991 79.991	94.045 91.245 97.245	111.245 108.493 114.493	128.444 125.761 131.761
Coil 1 M	281.78 276.05 287.32	279.21 273.56 284.73	274.10 268.56 279.52	266.52 261.13 271.79	256.45 251.35 261.61	244.16 239.31 249.07	229.70 225.11 234.30	213.23 208.96 217.49
Coil 1 P	7.600 4.066 10.066	25.726 22.602 28.602	43.276 40.267 46.267	60.765 57.800 63.800	78.257 75.372 81.372	95.746 92.926 98.926	113.264 110.488 116.488	130.745 128.054 134.054
Coil 2 M	577.02 565.14 588.20	572.15 560.40 583.27	562.20 550.68 573.15	547.43 535.21 559.10	527.73 517.02 538.12	503.48 493.23 513.35	474.67 464.88 483.86	441.51 432.54 450.19
Coil 2 P	7.690 4.171 10.171	26.130 23.012 29.012	43.984 40.978 46.978	61.783 58.851 64.851	79.614 76.728 82.728	97.453 94.635 100.635	115.330 112.574 118.574	133.217 130.535 135.535
Coil 3 M	924.66 905.79 942.76	916.43 897.80 934.45	899.69 881.44 917.42	875.04 857.11 892.09	842.25 825.15 859.83	802.25 785.94 818.02	754.75 739.55 769.74	700.95 685.42 714.44
Coil 3 P	7.464 3.944 9.944	25.566 22.450 28.450	43.045 40.046 46.046	60.459 57.530 63.530	77.871 74.993 80.993	95.276 92.473 98.473	112.703 109.955 115.955	130.111 127.422 133.422
Coil 4 M	1457.5 1430.1 1485.5	1443.8 1416.8 1474.5	1415.8 1389.5 1446.2	1374.8 1349.1 1404.1	1321.0 1296.4 1349.3	1255.2 1232.2 1282.4	1178.3 1156.9 1204.1	1092.6 1072.3 1116.0
Coil 4 P	7.620 4.081 10.081	25.869 22.751 28.751	43.510 40.515 46.515	61.077 58.152 64.152	78.607 75.745 81.745	96.100 93.310 99.310	113.565 110.853 116.853	130.946 128.292 134.292
Coil 5 M	2978.9 2915.8 3034.8	2955.8 2893.6 3011.7	2905.9 2844.6 2960.7	2830.9 2771.0 2884.1	2730.1 2674.0 2783.2	2605.5 2552.2 2656.4	2456.9 2404.6 2502.8	2286.8 2236.8 2338.1
Coil 5 P	7.666 4.138 10.138	26.079 22.973 28.973	43.906 40.962 46.962	61.703 58.847 64.847	79.551 76.747 82.747	97.433 94.689 100.689	115.365 112.688 118.688	133.254 130.685 135.685

INSTRUMENT CONFIGURATION

Source File: /dat1a/625274/n970a~FOCUS-tdg

FOCUS CABLEHEAD

Diameter : 3.13"
Length : 3.17'
Weight : 15.7lbs
Series : CABL31B
Mnemonic : CBLH

FOCUS SWIVEL

Diameter : 3.13"
Length : 1.58'
Weight : 50.7lbs
Series : 3950XA
Mnemonic : SWVL

FOCUS TEN/TEMP/MUD RES/ACCEL

Diameter : 3.13"
Length : 4.31'
Weight : 61.7lbs
Series : 3980XA
Mnemonic : TTMA

FOCUS TELEMETRY (POWER SECTION)

Diameter : 3.13"
Length : 3.71'
Weight : 48.7lbs
Series : 351BFB
Mnemonic : TMGR

FOCUS EB/EG TELEMETRY GAMMA RAY

Diameter : 3.13"
Length : 5.83'
Weight : 63.7lbs
Series : 351BEG
Mnemonic : GR
Measure Point: 4.24': GR MP

FOCUS COMPENSATED NEUTRON

Diameter : 3.13"
Length : 4.81'
Weight : 65.7lbs
Series : 2436XA
Mnemonic : CN
Measure Point: 1.92': LSN MP
Measure Point: 1.46': SSN MP

FOCUS Z-DENSILOG

Diameter : 3.75"
Length : 9.58'
Weight : 300 lbs
Series : 2323XA
Mnemonic : ZDL
Measure Point: 4.33': CR1 MP
Measure Point: 1.69': LSD / CR2 MP
Measure Point: 1.29': SSD MP

52.34'

GR MP 36.97'

LSN MP 29.83'

SSN MP 29.38'

CR1 MP 22.67'

LSD / CR2 MP 20.03'

FOCUS KNUCKLE JOINT

Diameter : 3.13"
Length : 1.50'
Weight : 30 lbs
Series : 3930XA

FOCUS KNUCKLE JOINT

Diameter : 3.13"
Length : 1.50'
Weight : 30 lbs
Series : 3930XA

FOCUS HIGH DEFINITION INDUCTION TOOL

Diameter : 3.13"
Length : 13.33'
Weight : 115 lbs
Series : 1530XA
Mnemonic : HDIL
Measure Point: 7.17' : COIL 5 MP
Measure Point: 5.67' : COIL 4 MP
Measure Point: 4.17' : COIL 3 MP
Measure Point: 3.67' : COIL 2 MP
Measure Point: 3.17' : COIL 1 MP
Measure Point: 2.67' : COIL 0 MP
Measure Point: 1.14' : SP MP

FOCUS PINEAPPLE / CABBAGE

HOLE FINDER

Diameter : 3.63"
Length : 1.50'
Weight : 7 lbs
Series : HFND1B

TOTAL LENGTH: 52.34'
TOTAL WEIGHT: 203 lbs
MAX DIAMETER: 0'6.13"

SSD MP 19.63'

COIL 5 MP 9.17'

COIL 4 MP 7.67'

COIL 3 MP 6.17'


COIL 2 MP 5.67'

COIL 1 MP 5.17'

COIL 0 MP 4.67'

SP MP 3.14'

0.00'

	COMPANY <u>WPX ENERGY INC</u>		FILE NO: <u>US625274</u>
	WELL <u>RWF 332-4</u>		API NO: <u>05045220810000</u>
	FIELD <u>RULISON</u>		
	COUNTY <u>GARFIELD</u>	STATE <u>CO</u>	
LOCATION: SHL: 445' FNL; 1706' FEL BHL: 1701' FNL; 2103' FEL		ELEVATIONS: KB 5820 FT DF GL 5794 FT	S4 T7S R94W PAD: RMV 108-4 RIG: NABORS 574
SEC <u>4</u>	TWP <u>7S</u>	RGE <u>94W</u>	DATE <u>14-Dec-2013</u>