



FILE NO: US05740J
 API NO: 05045217830000
 COMPANY: WPX ENERGY ROCKY MTN LLC
 WELL: FEDERAL NER 534-32
 FIELD: RULISON
 COUNTY: GARFIELD STATE CO

Ver. 3.87
 SEC 32 T6S R93W
 PAD: RU 23-5
 RIG: NABORS 576
 LOCATION: SHL: 163 FNL 2586' FWL S6 T7S R93W
 BHL: 145' FSL 1984' FWL S32 T6S R93W
 SEC 32 TWP 6S RGE 93W
 OTHER SERVICES: NONE

PERMANENT DATUM: GL ELEVATION 7603 FT
 LOG MEASURED FROM: KB 26 FT ABOVE P.D.
 DRILL. MEAS. FROM: KB
 ELEVATIONS: KB 7629 FT, DF, GL 7603 FT

DATE	08-May-2014	
RUN	TRIP	1
SERVICE ORDER	US086740J	
DEPTH DRILLER	10062 FT	
DEPTH LOGGER	10058 FT	
BOTTOM LOGGED INTERVAL	10050 FT	
TOP LOGGED INTERVAL	0 FT	
CASING DRILLER	9.625 IN @ 1124 FT	
CASING LOGGER	1112 FT	
BIT SIZE	8.75 IN	
TYPE OF FLUID IN HOLE	LSND	
DENSITY	11.3 LB/G	70 CP
PH	8.6	8.2 C3
SOURCE OF SAMPLE	FLOWLINE	
RM AT MEAS. TEMP.	1.85 OHMM	@ 63.8 DEGF
RMC AT MEAS. TEMP.	1.39 OHMM	@ 63.8 DEGF
RMC AT MEAS. TEMP.	2.31 OHMM	@ 63.8 DEGF
SOURCE OF RMC	CALCULATED	CALCULATED
RM AT BHT	1.54 OHMM	@ 198 DEGF
TIME SINCE CIRCULATION	4 HRS	
MAX. RECORDED TEMP.	199 DEGF	
EQUIP. NO.	6670	GRAND JCT
RECORDED BY	W. QUIGLEY/L. PATTON	
WITNESSED BY	MR. AL HARDTL	

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.

BIT SIZE	FROM	TO
13.5 IN	0 FT	1124 FT
8.75 IN	1124 FT	10062 FT

SIZE	WEIGHT	GRADE	FROM	TO
9.625 IN	32 LB/F		0 FT	1124 FT

REMARKS

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

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

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTMA	3980XA	10142233	FREE
1	1	TEL/GR	3518EB/3518EG	10127973/10137522	FREE
1	1	CN	2436XA	10137930	DECENTRALIZED
1	1	ZDL	2223XA	10090664	DECENTRALIZED
1	1	KNJT	3930XA	10139400	FREE
1	1	HDIL	1530XA	10121806	STOOD OFF

MAIN LOG 2"/100FT SCALE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014

Plotted: Thu May 15 17:03:15 2014

PARAMETER AND FILTER SUMMARY REPORT

File: C:\dat1a\85740.J\970aR03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 1021.208 ft BOTTOM DEPTH: 6967.958 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
SP-SPDH	FILTER ()	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	63.8	degF	"	"
	MUD SAMPLE RES	1.850	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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	ECCENTRICED		"	"

TOOL POSITION
Rmud MULTIPLIER

ECCENTERED
1.000

"

"

PARAMETER AND FILTER SUMMARY REPORT

File: C:\dat1a\85740J\n970aR07.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 2.081 ft BOTTOM DEPTH: 1173.959 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
SP-SPDH	FILTER ()	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	63.8	degF	"	"
	MUD SAMPLE RES	1.850	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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
F1:GR	May 15 14:58:04 2014	GAMMA RAY
F1:M0C6	May 15 14:58:04 2014	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	May 15 14:58:04 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	May 15 14:58:04 2014	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	May 15 14:58:04 2014	SPONTANEOUS POTENTIAL
F1:TEN	May 15 14:58:04 2014	DIFFERENTIAL TENSION

Presentation : BHID26LKX1:C:\dat1a\85740J\WPX_2IN_R-MAIN.fvpdf [2"/100' Scale]
Plot Interval : 0 - 10093 Seconds

Data File 1 : F1 : BHID26LKX1:C:\dat1a\85740J\n970aR-MAIN.xtf
Created On : May 15 14:58:04 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL NER 534-32
Field : RULISON
File Interval : -33 - 10093 Seconds
OCT : n970a

GR BACKUP

FEET

TOOL STICKING

GAMMA RAY [gr]

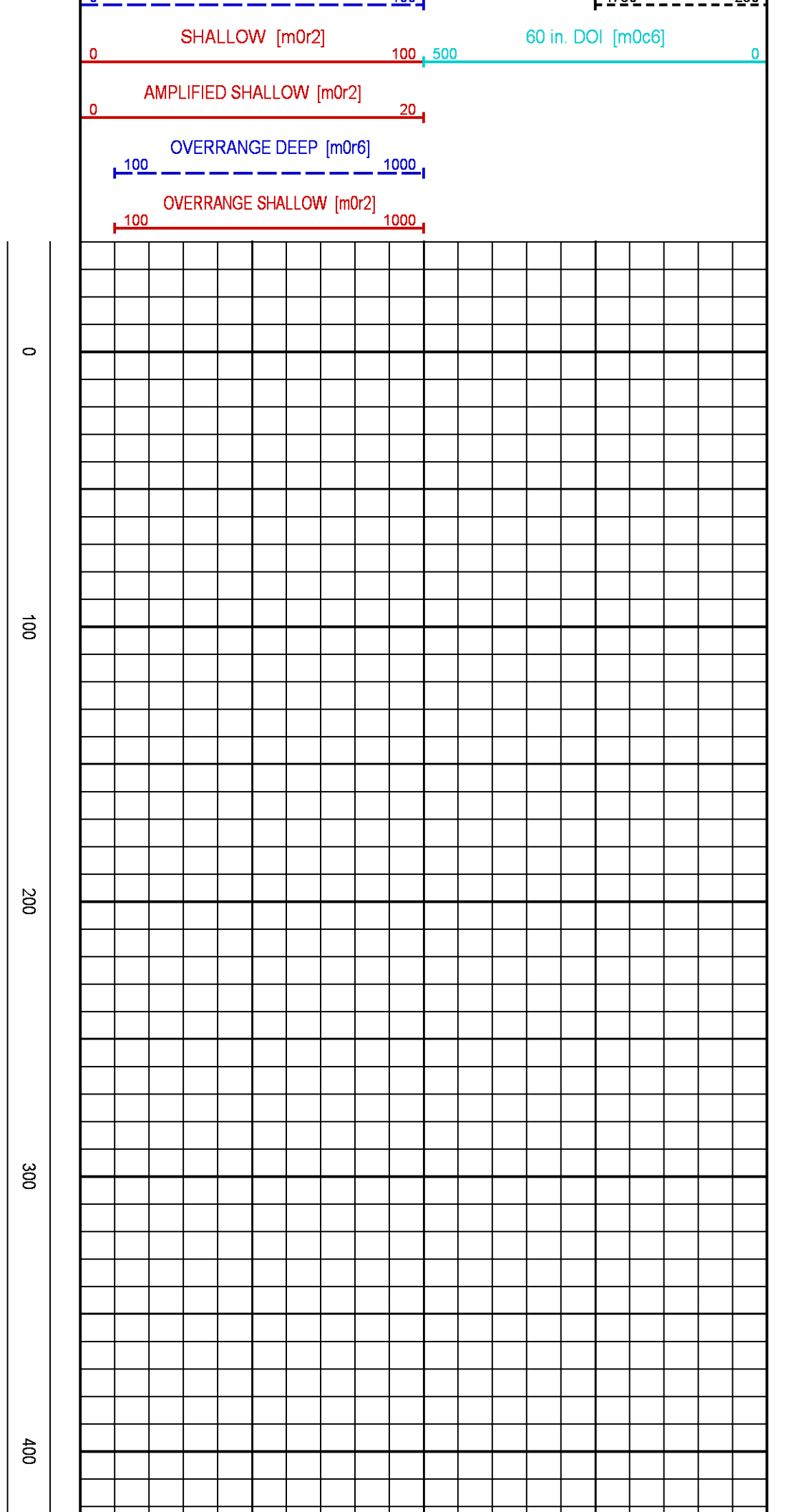
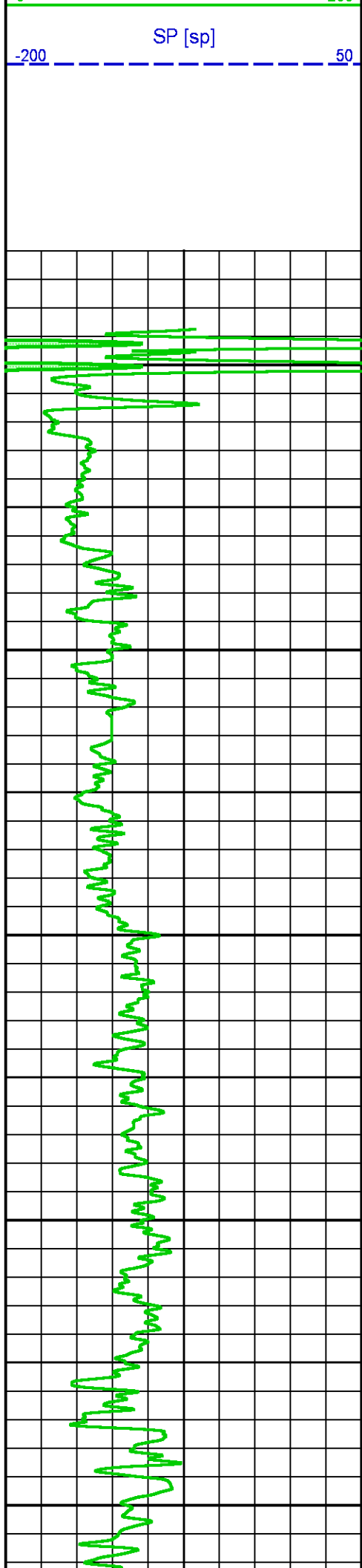
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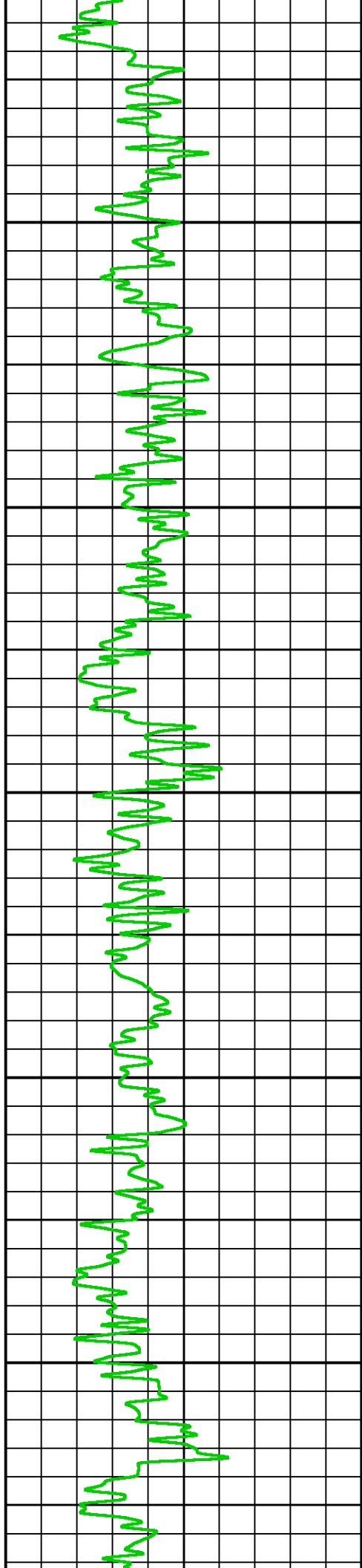
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0 200

0 100

-4750 -250





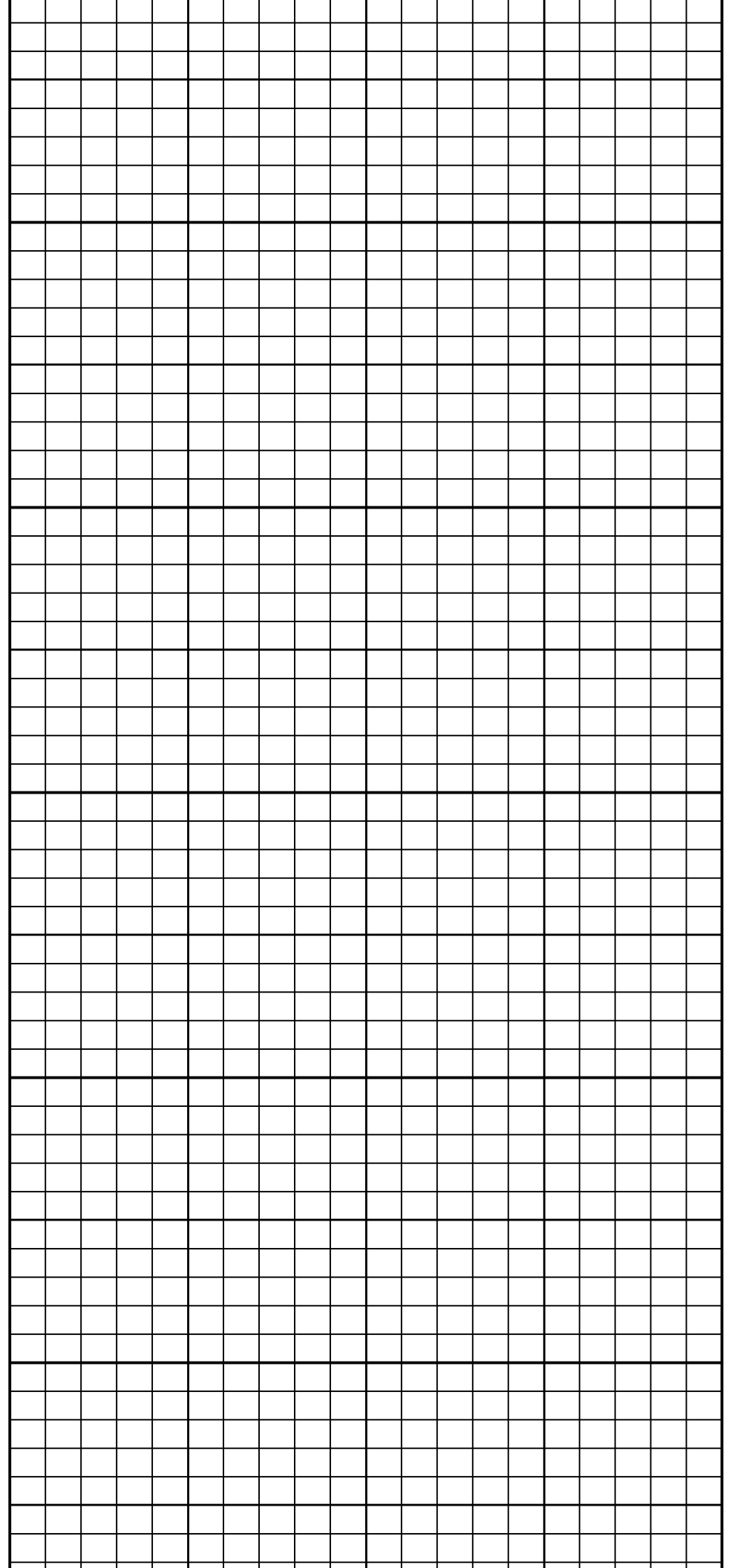
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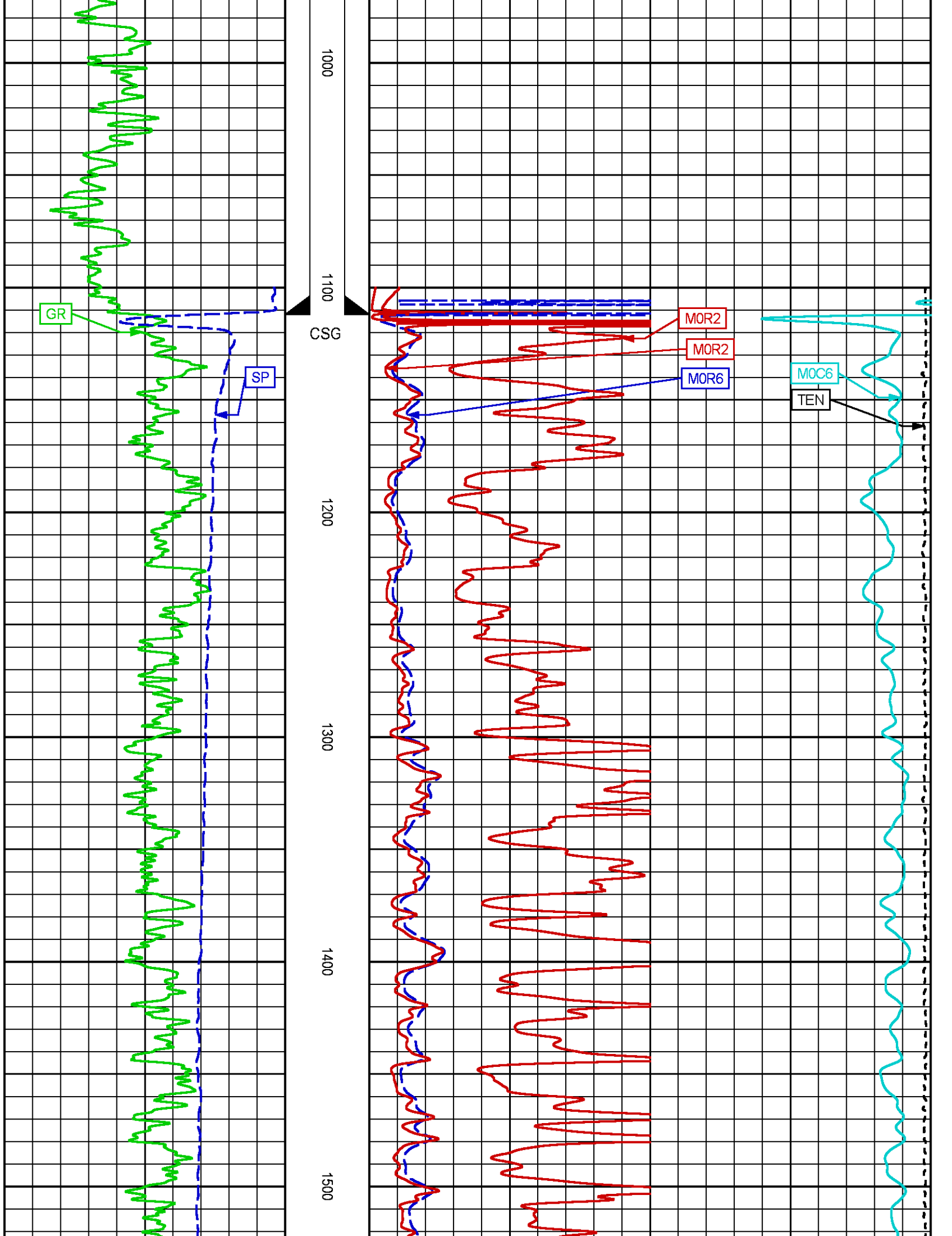
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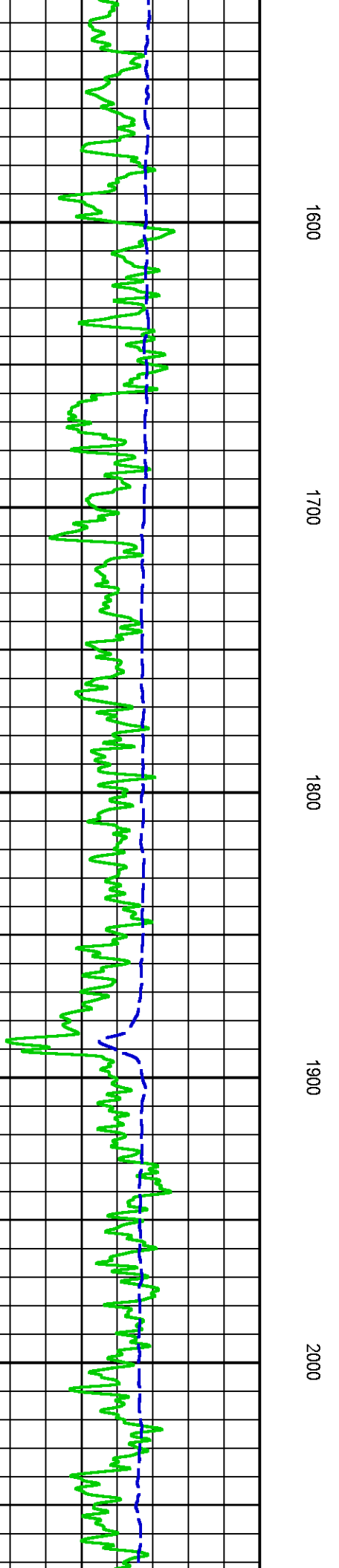
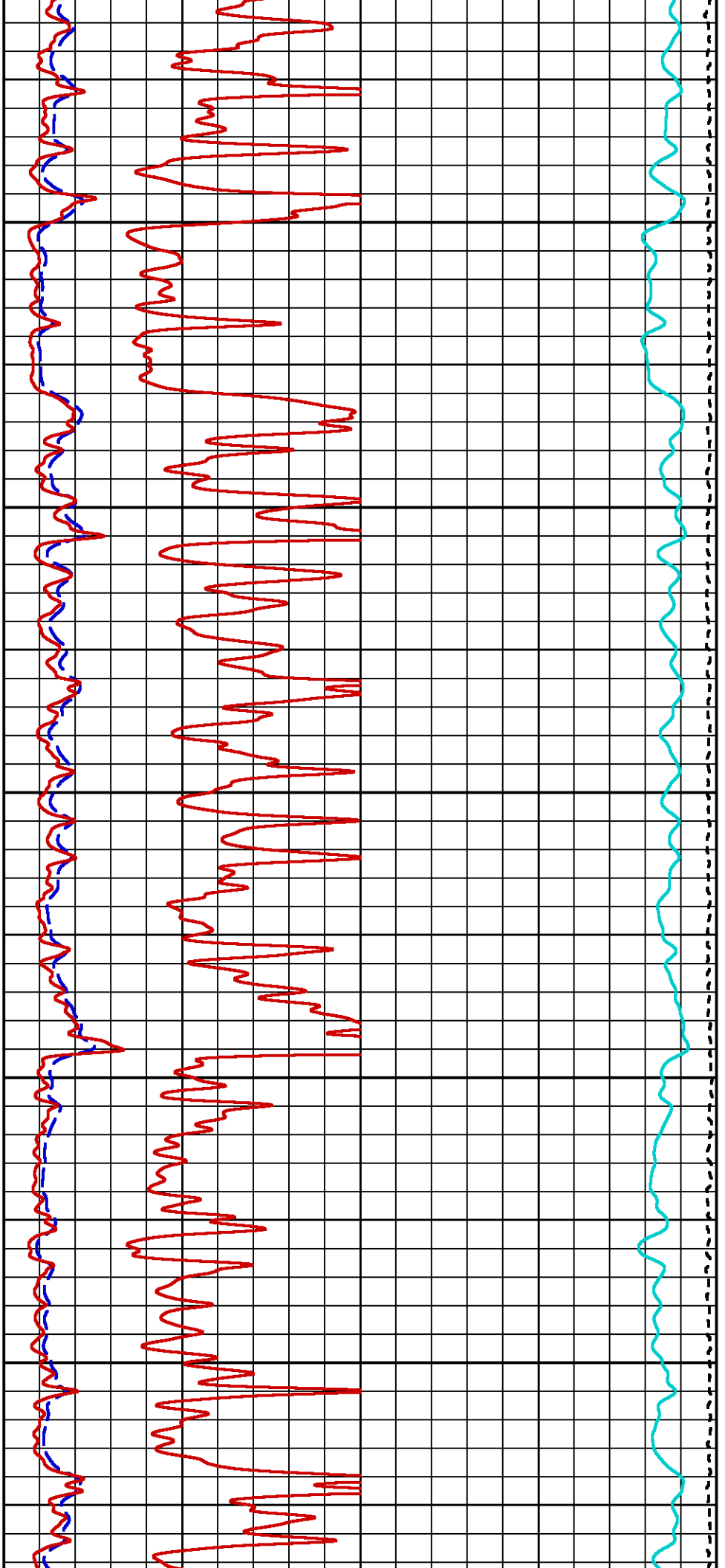
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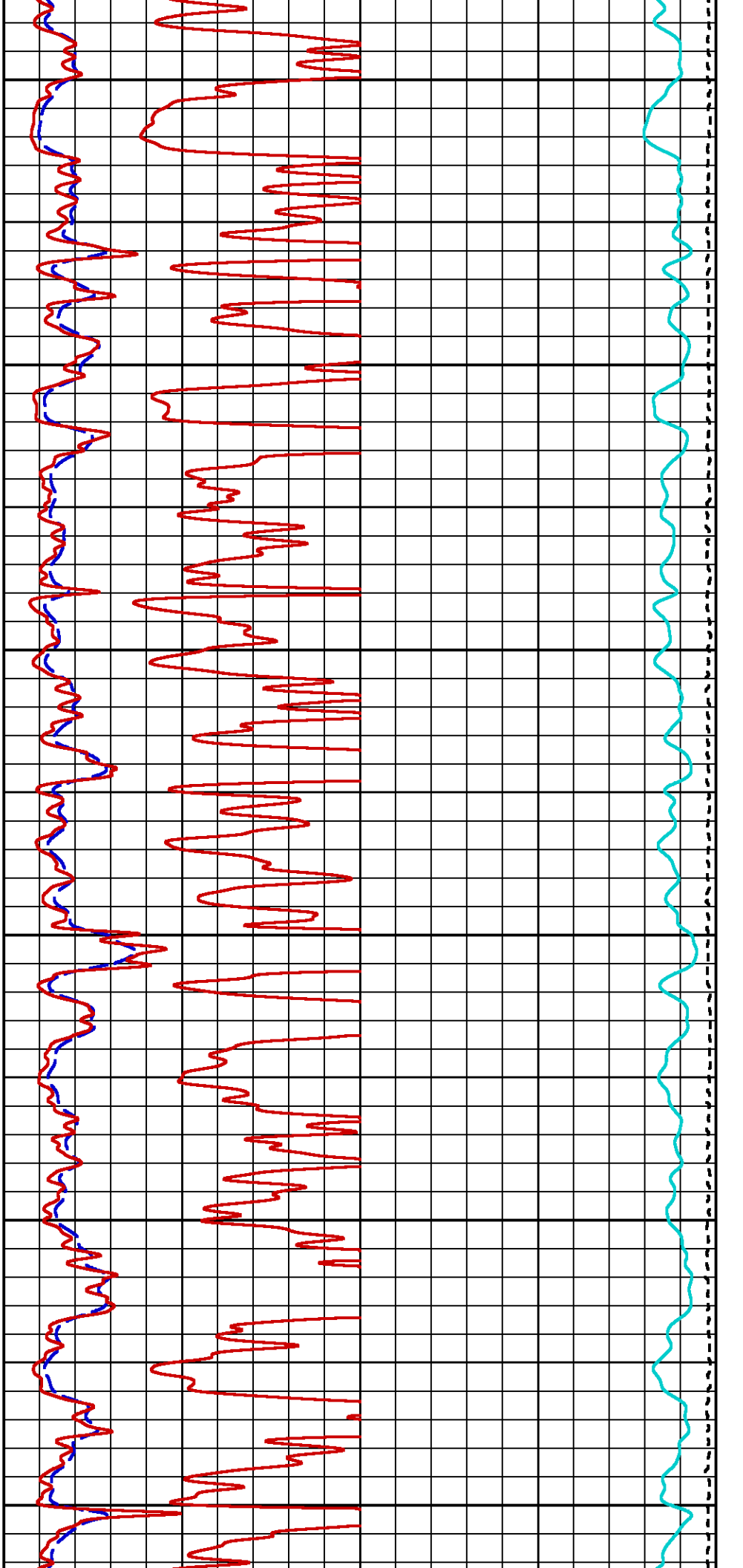
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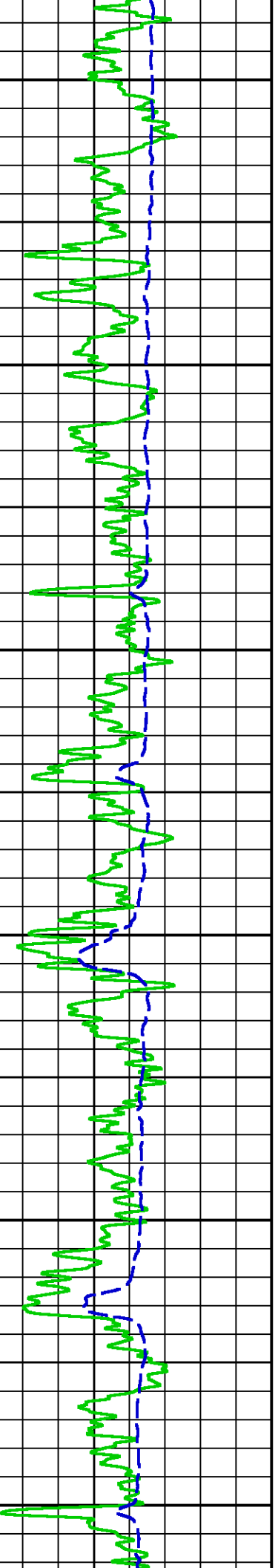


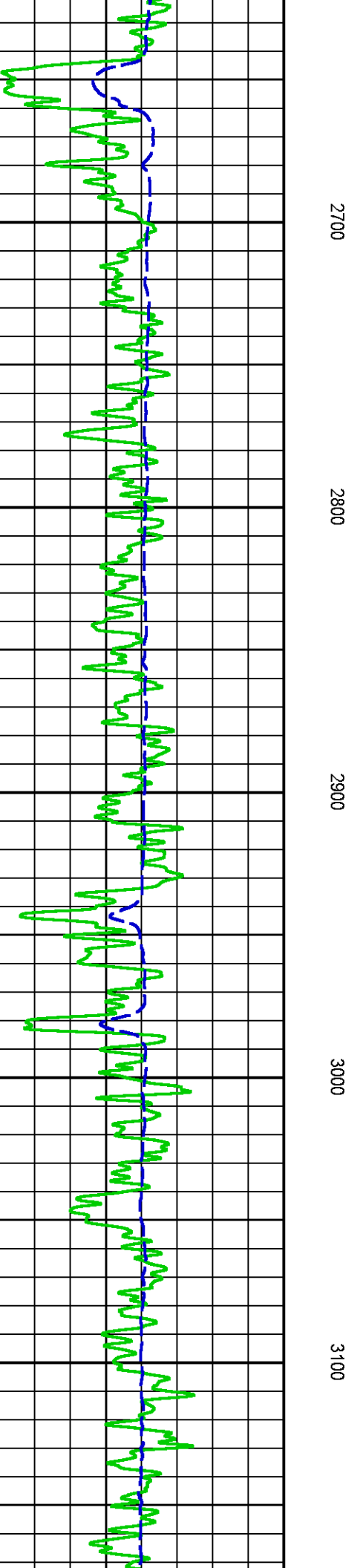
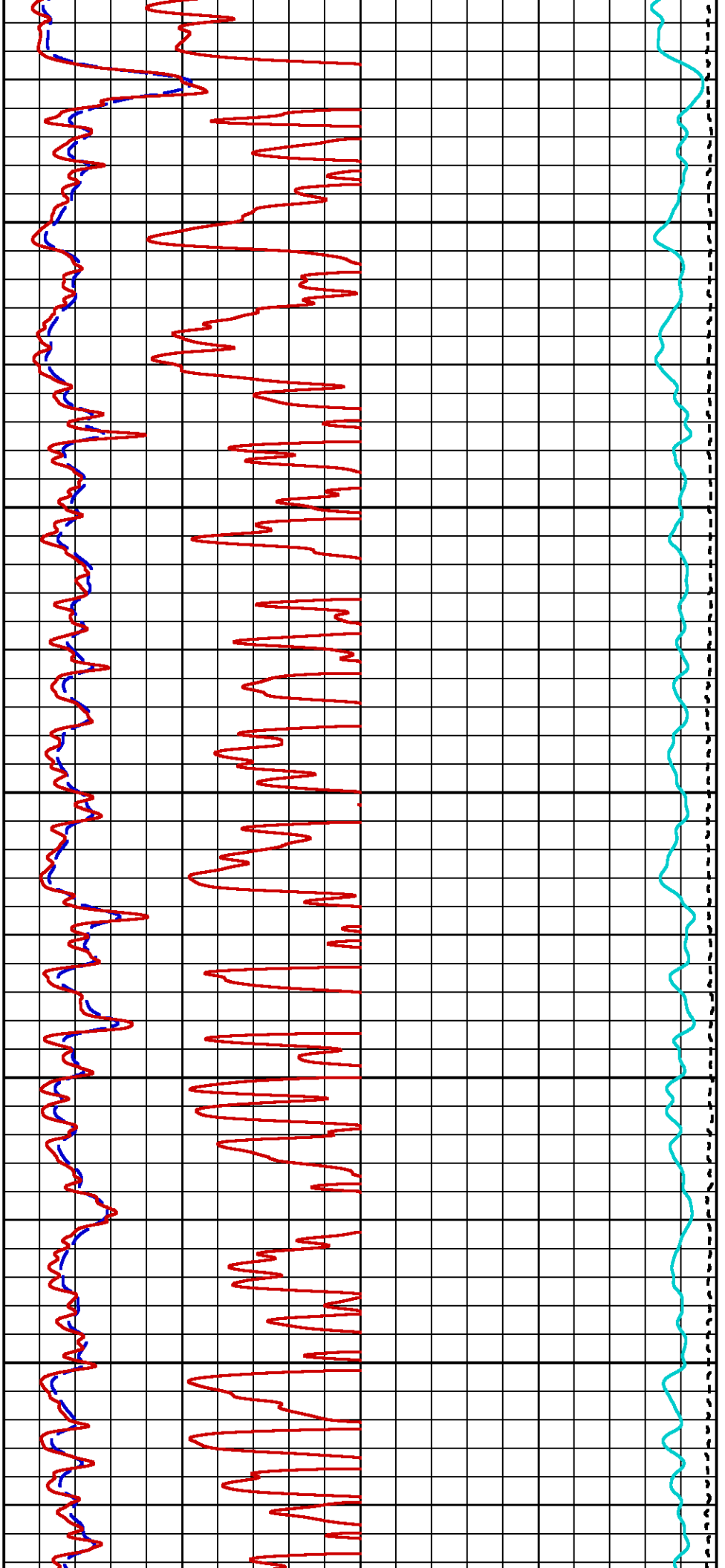


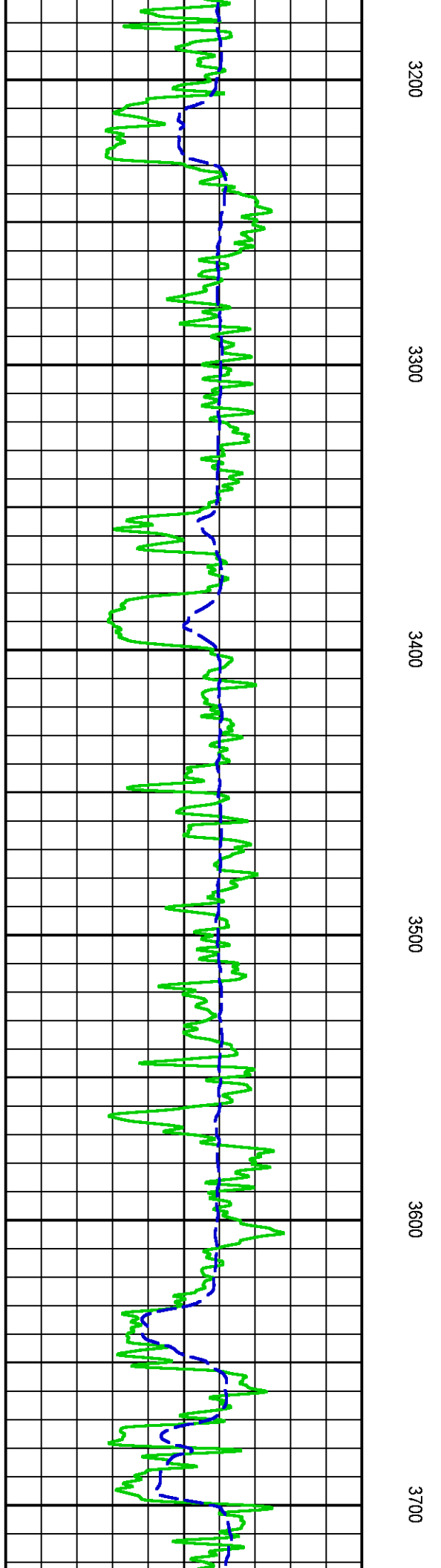
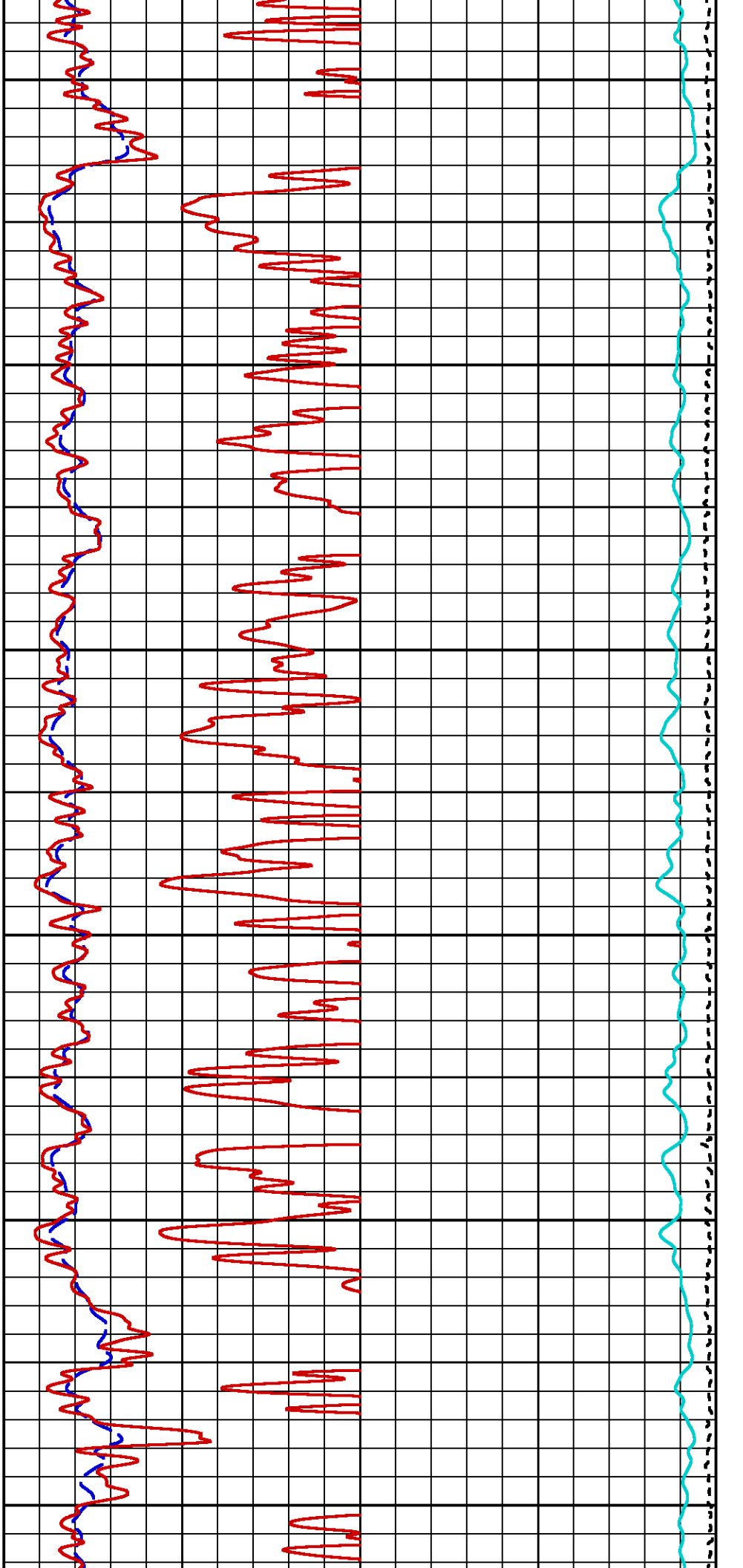


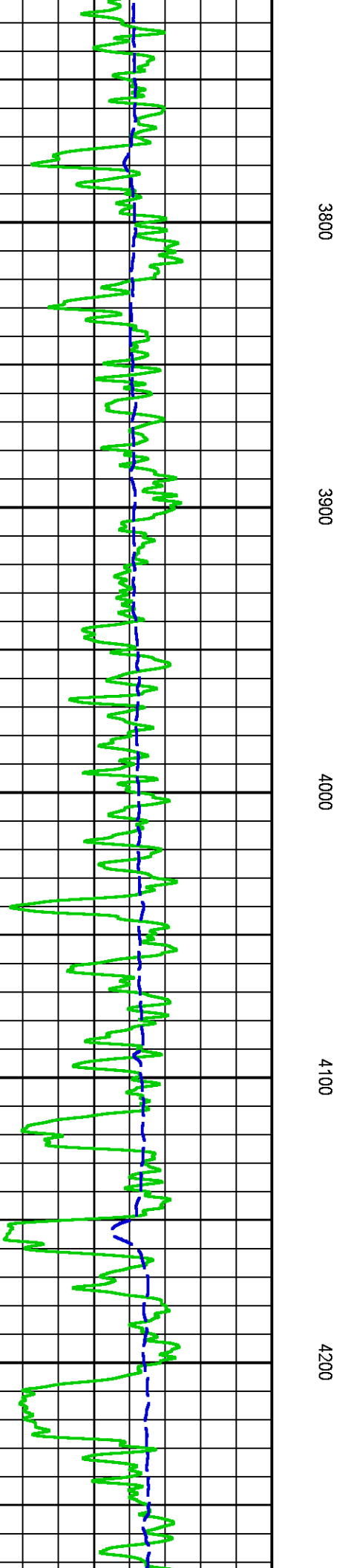
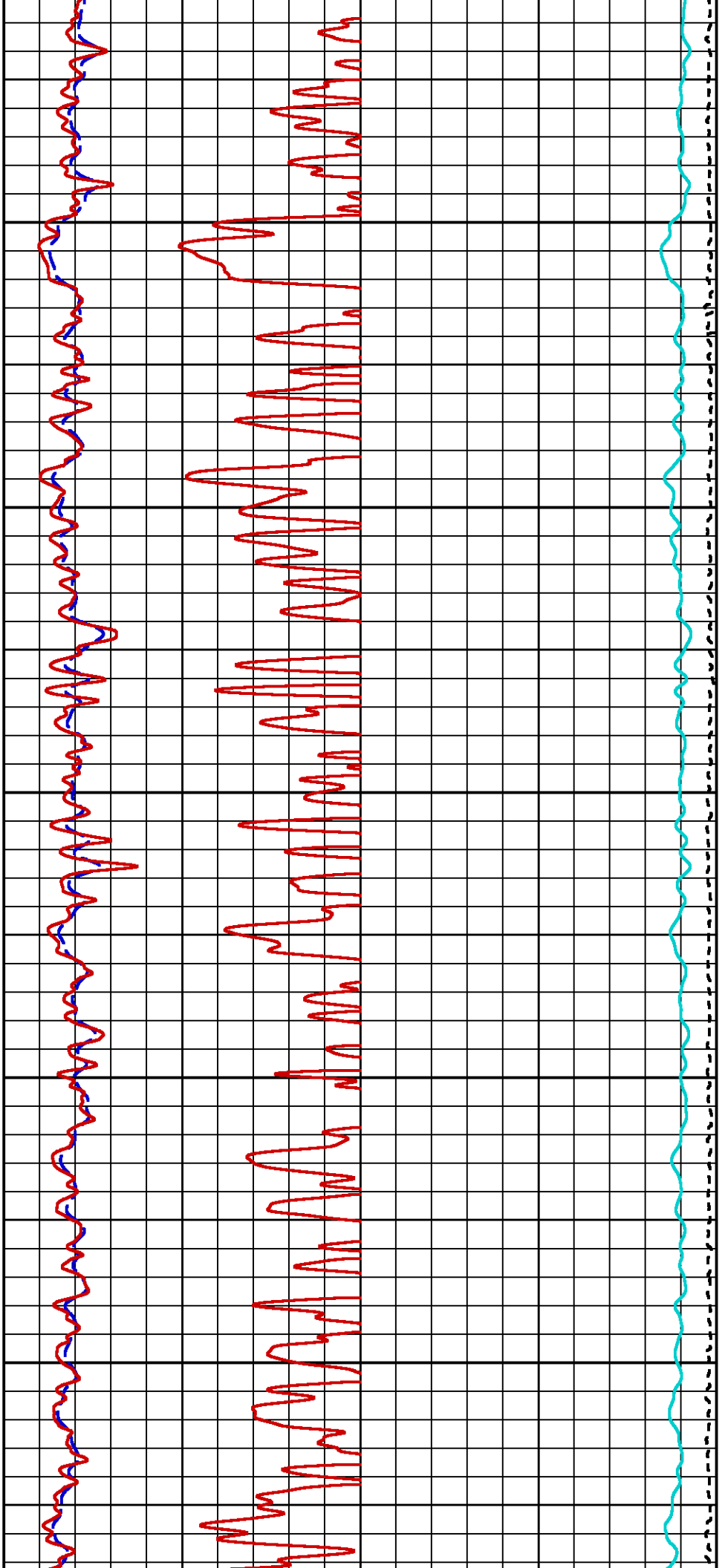


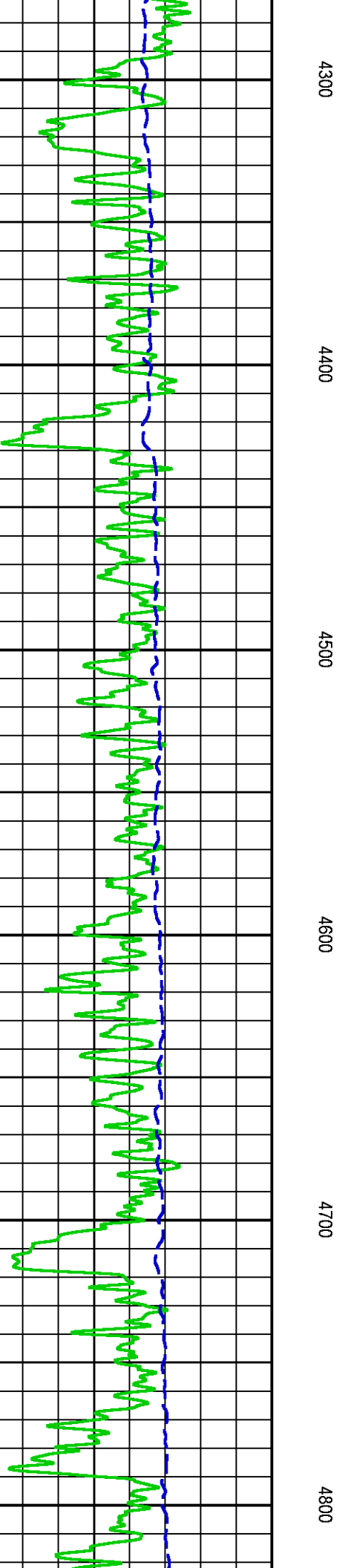
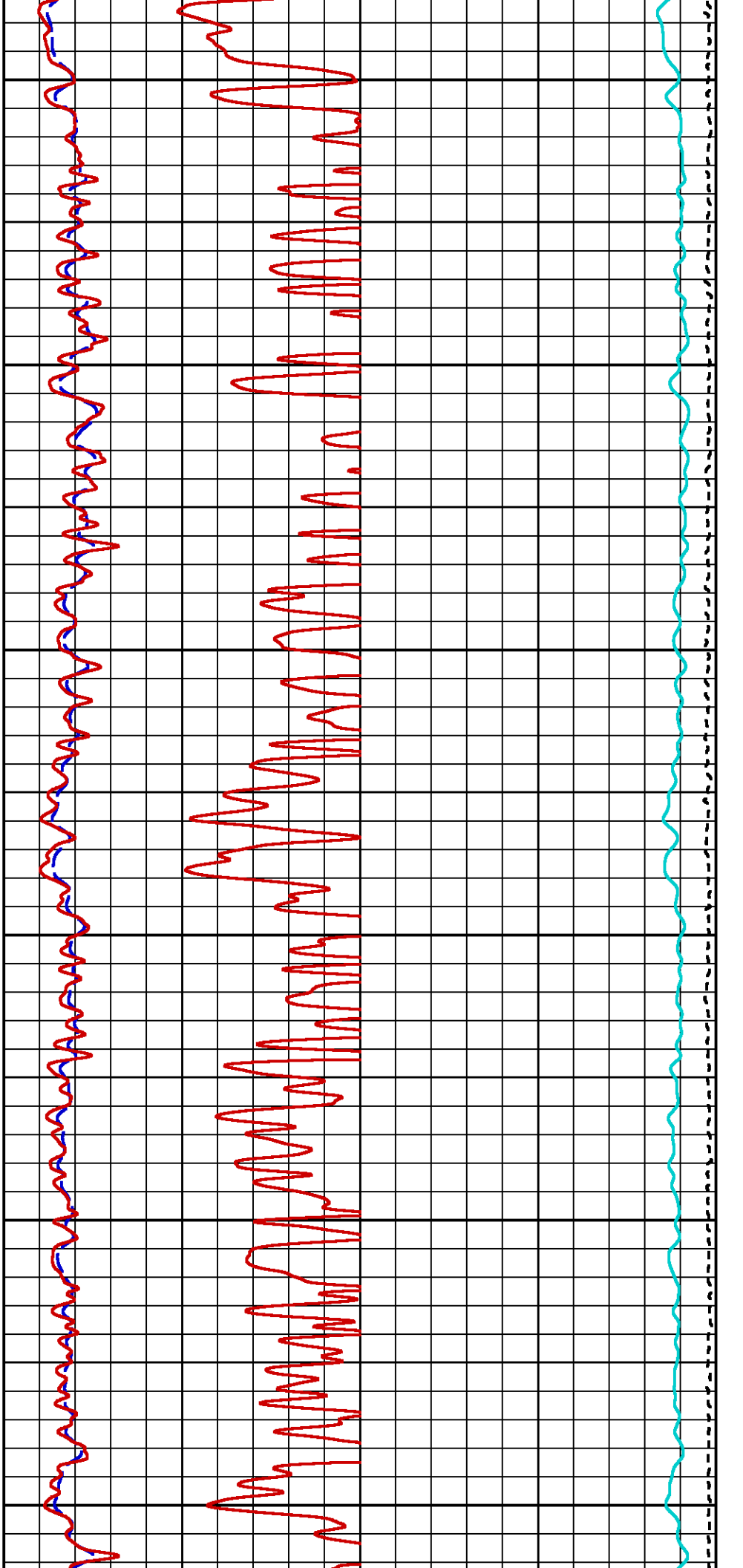
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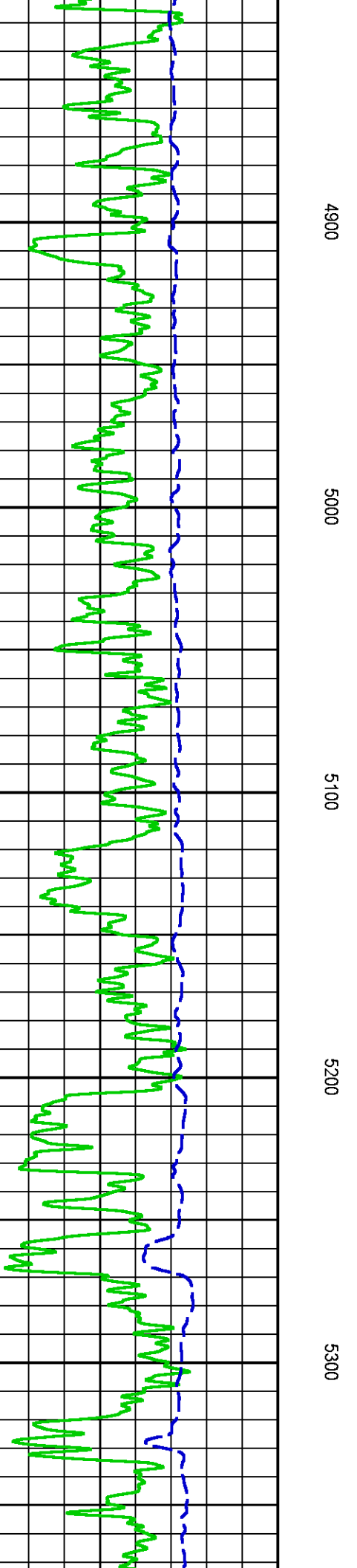
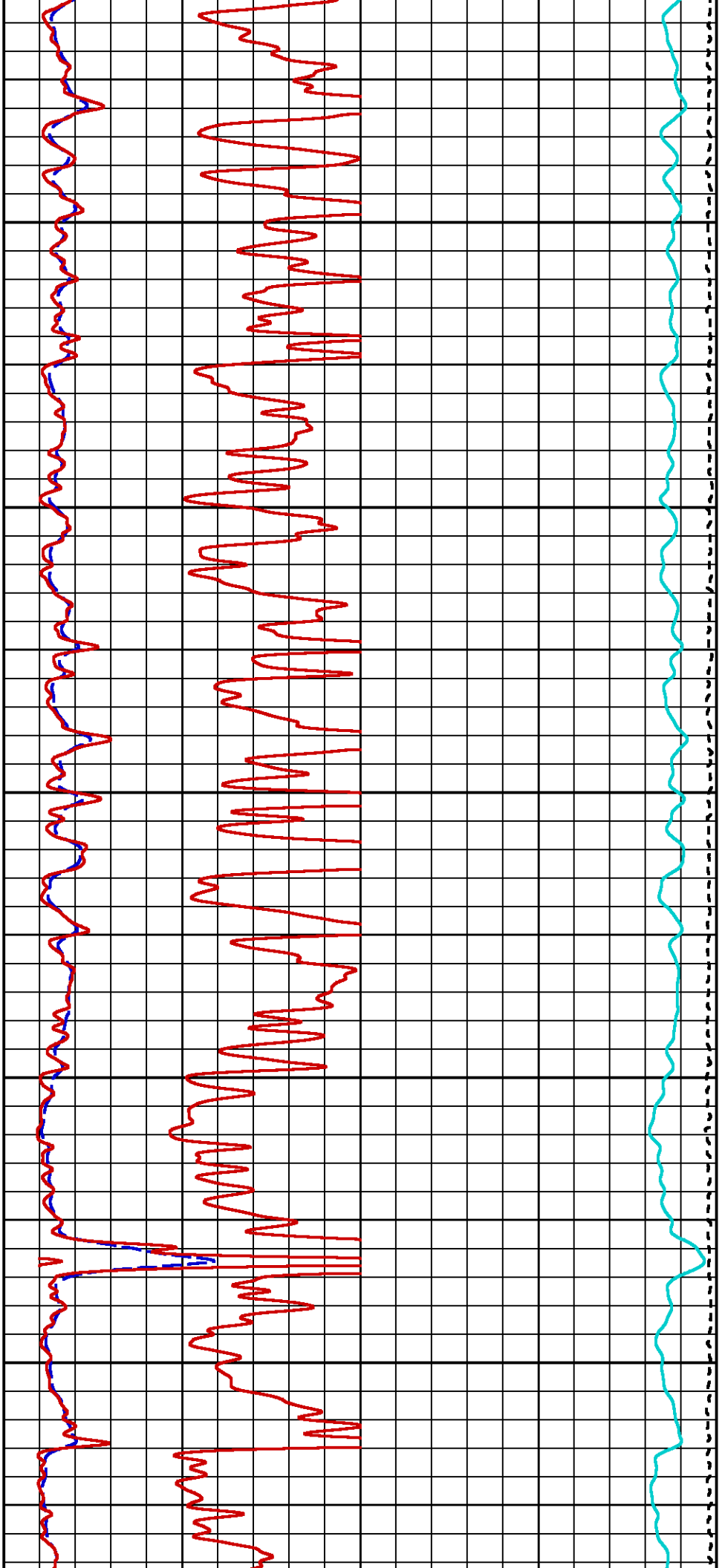


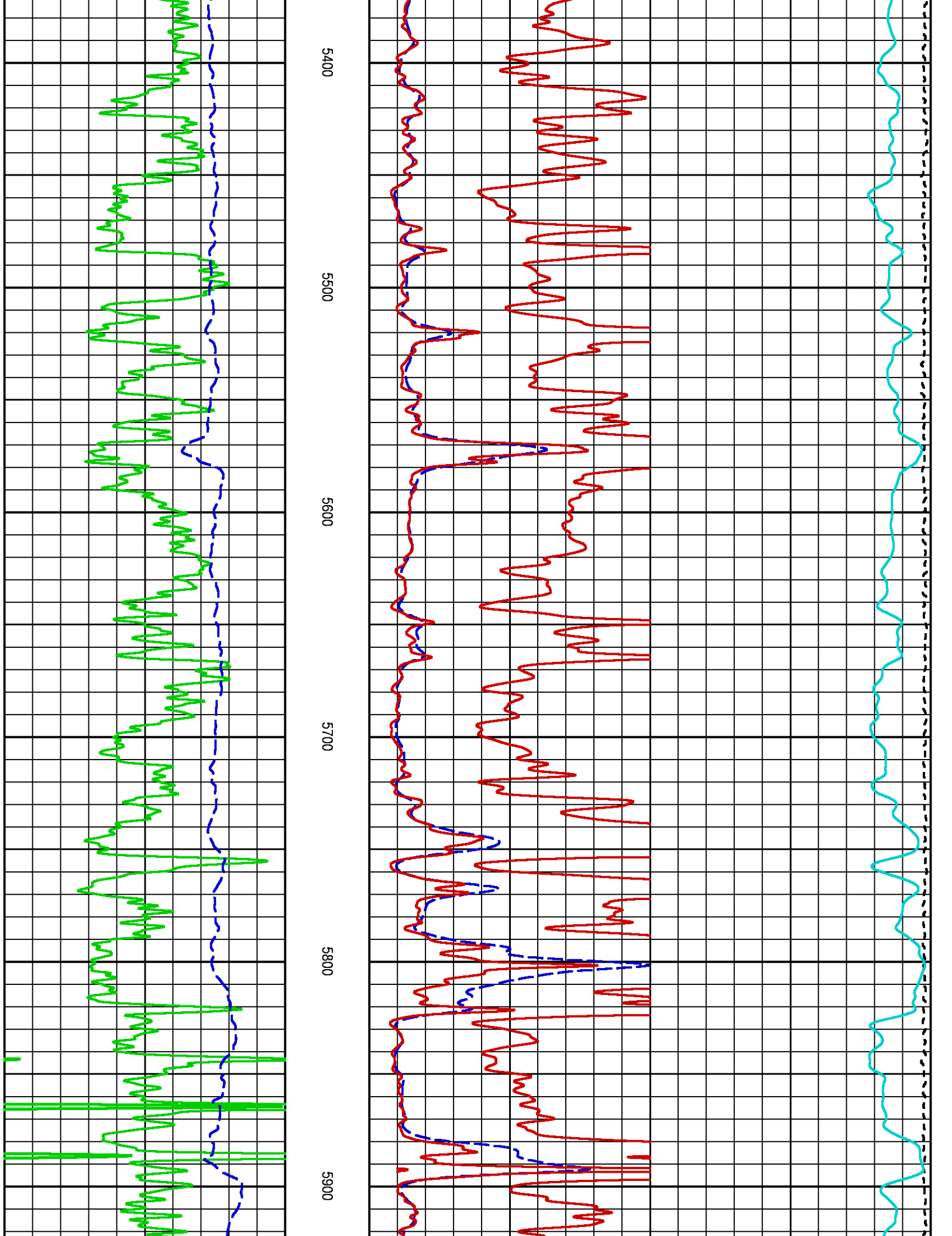


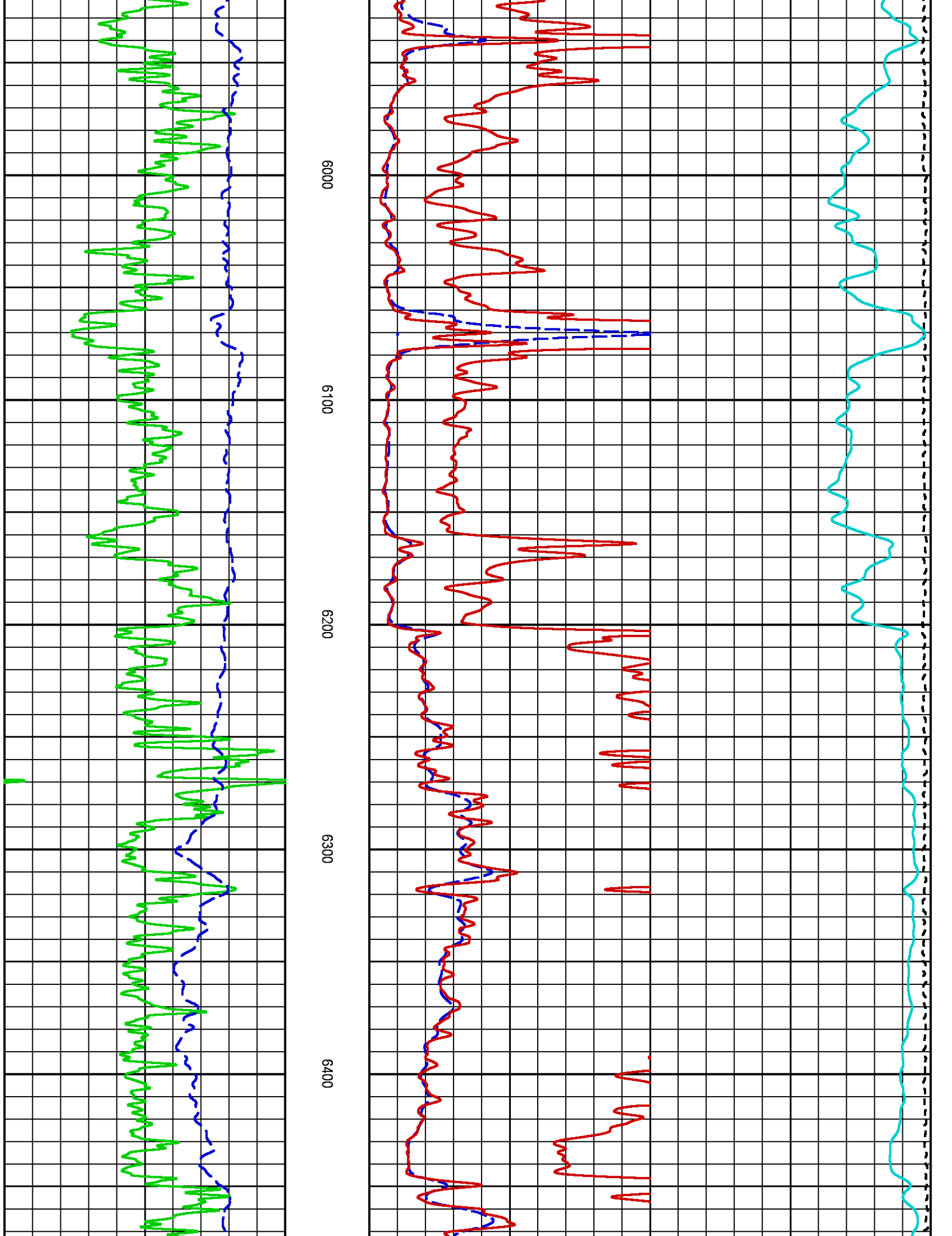


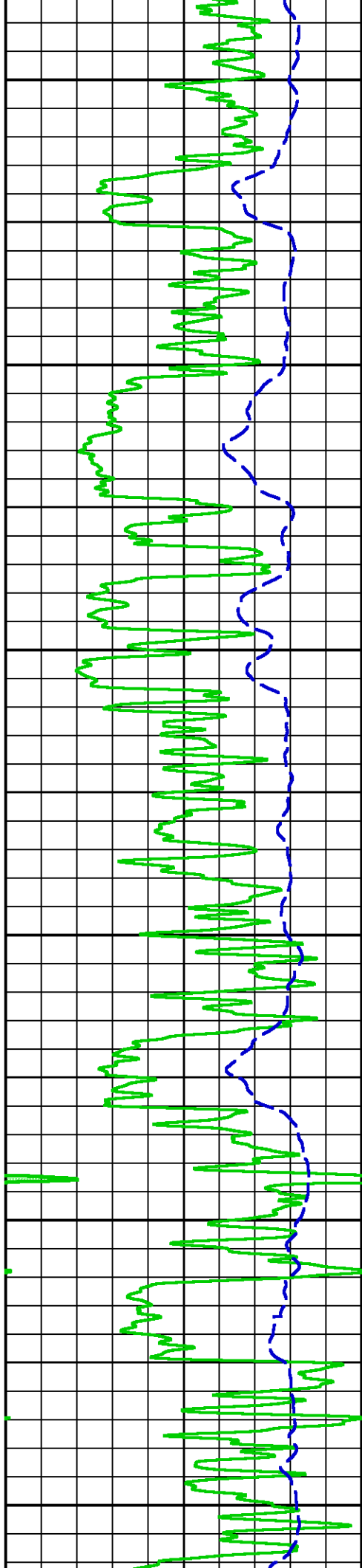












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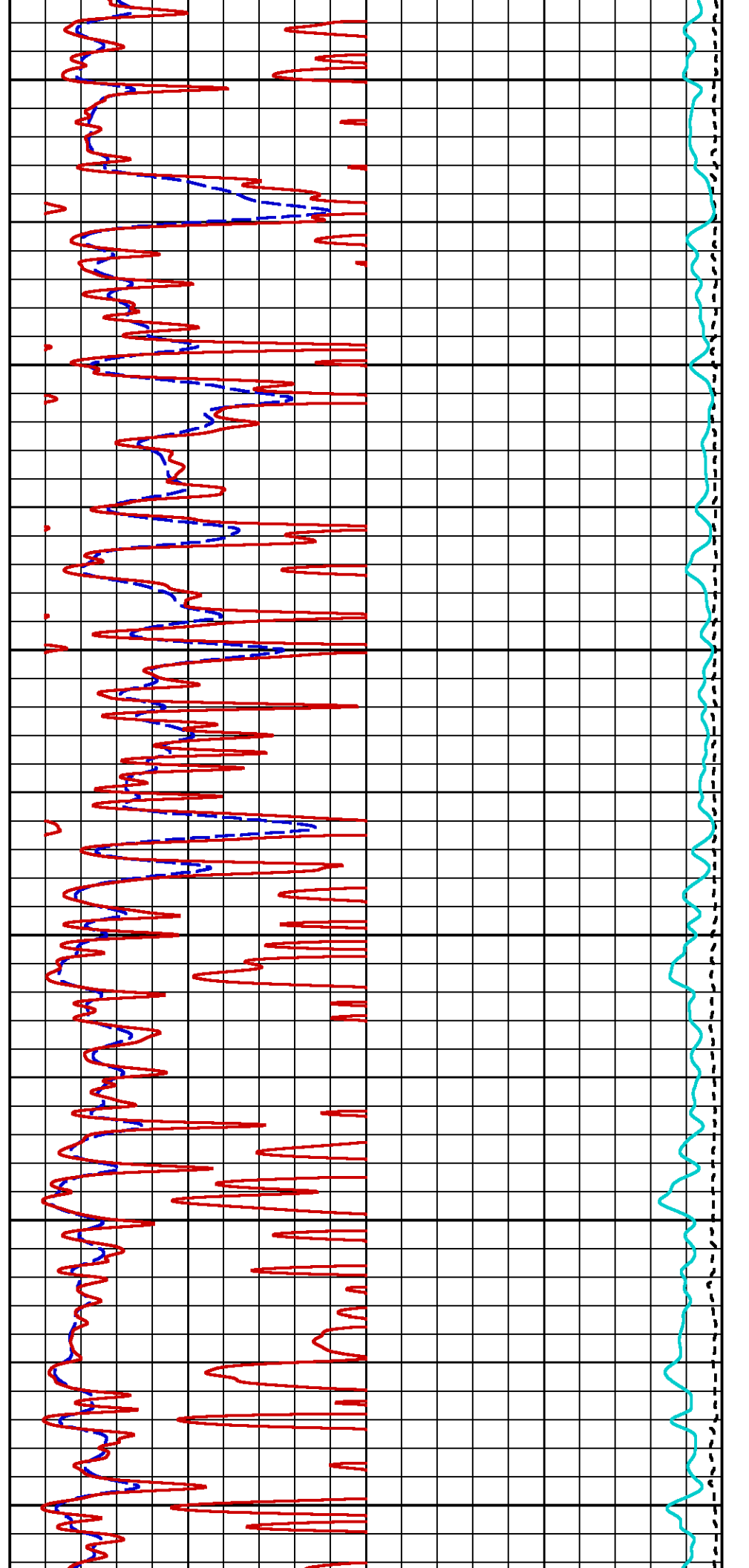
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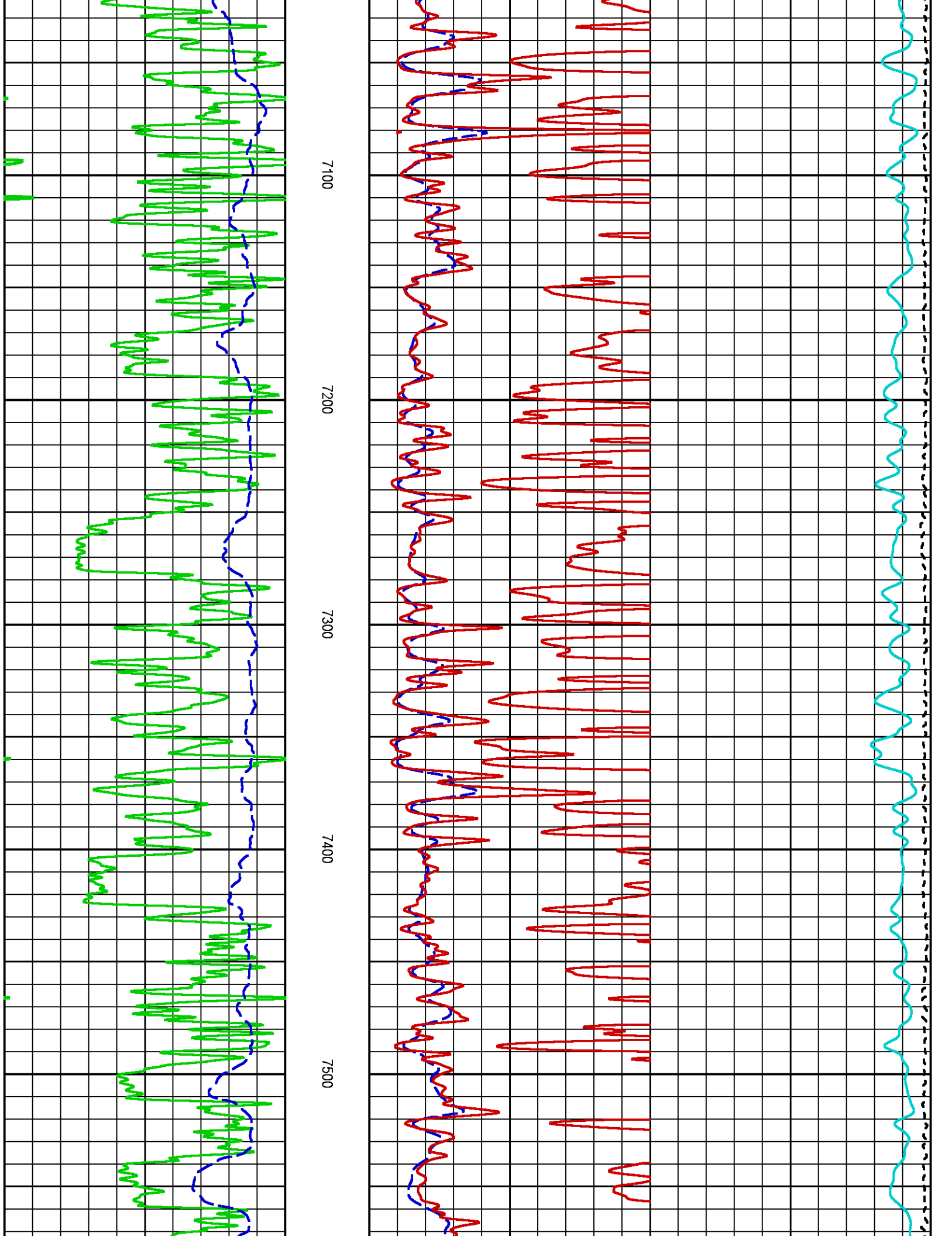
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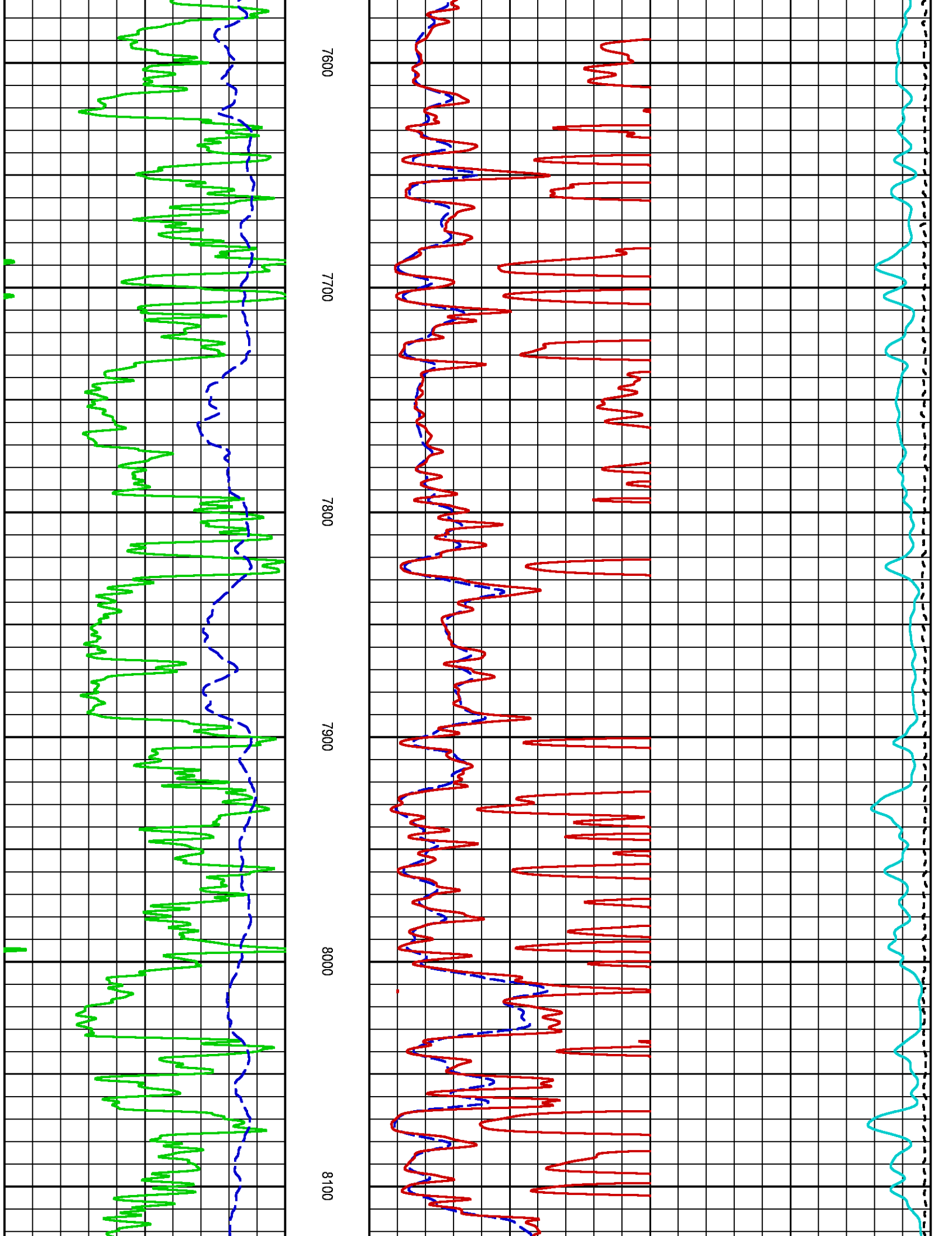
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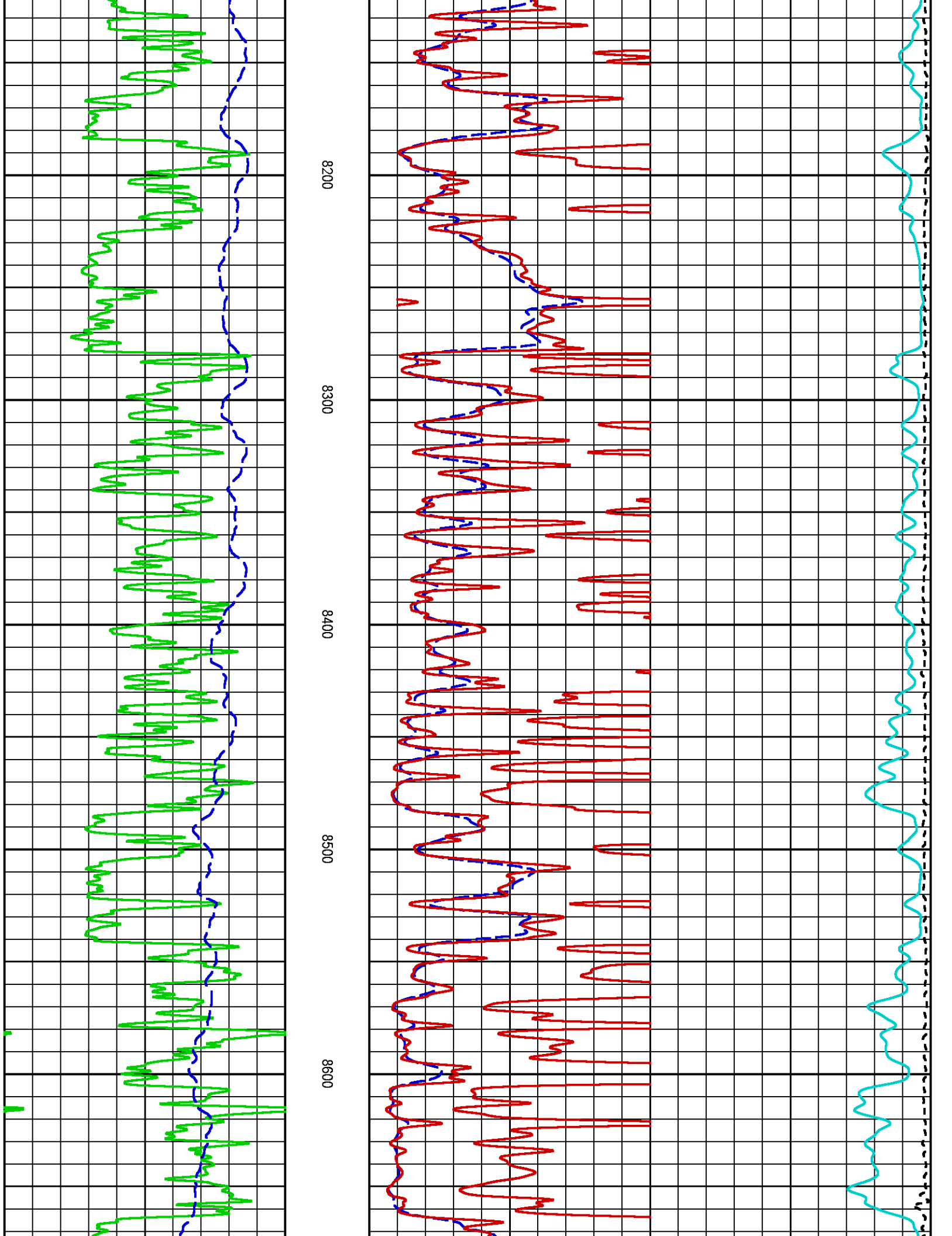
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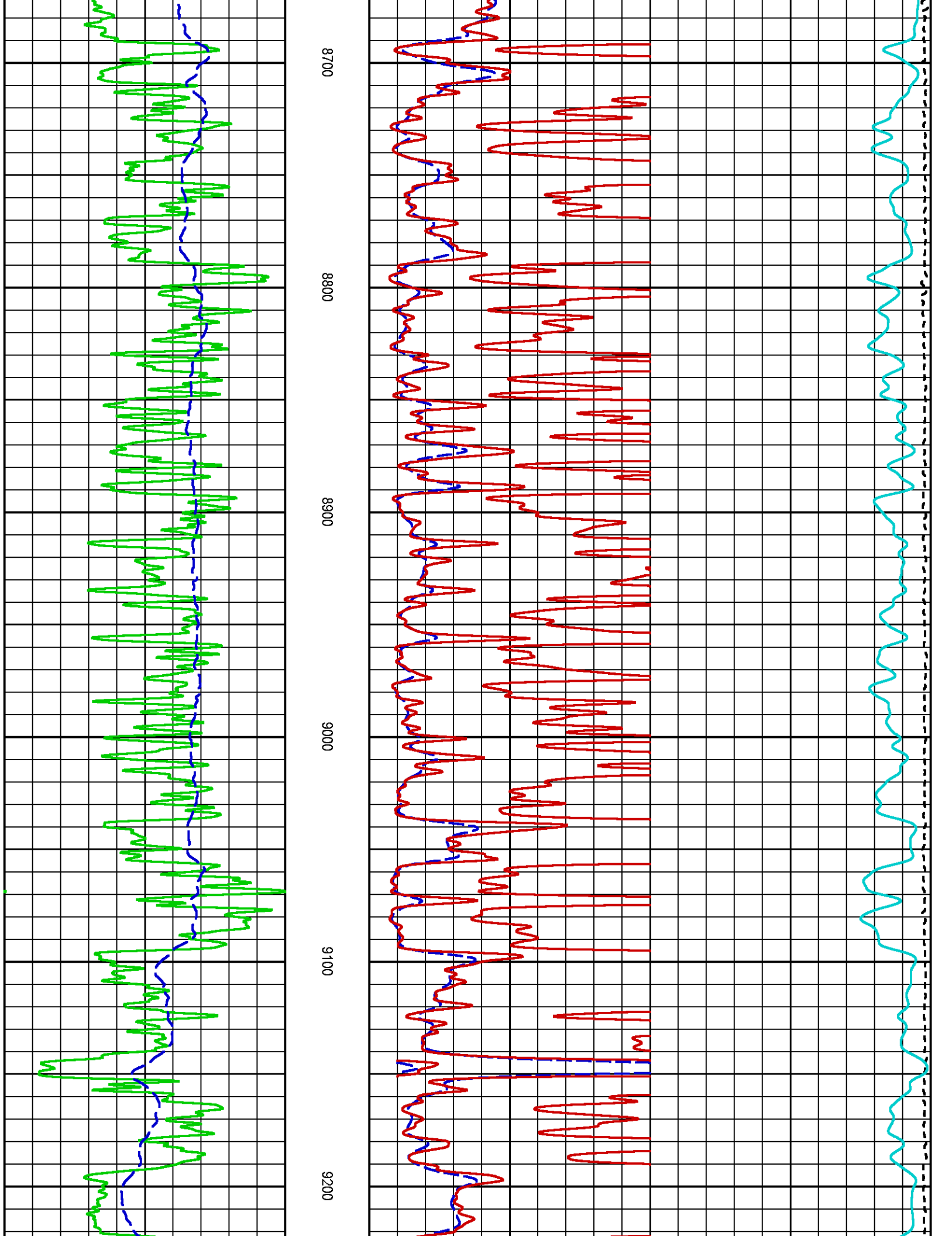
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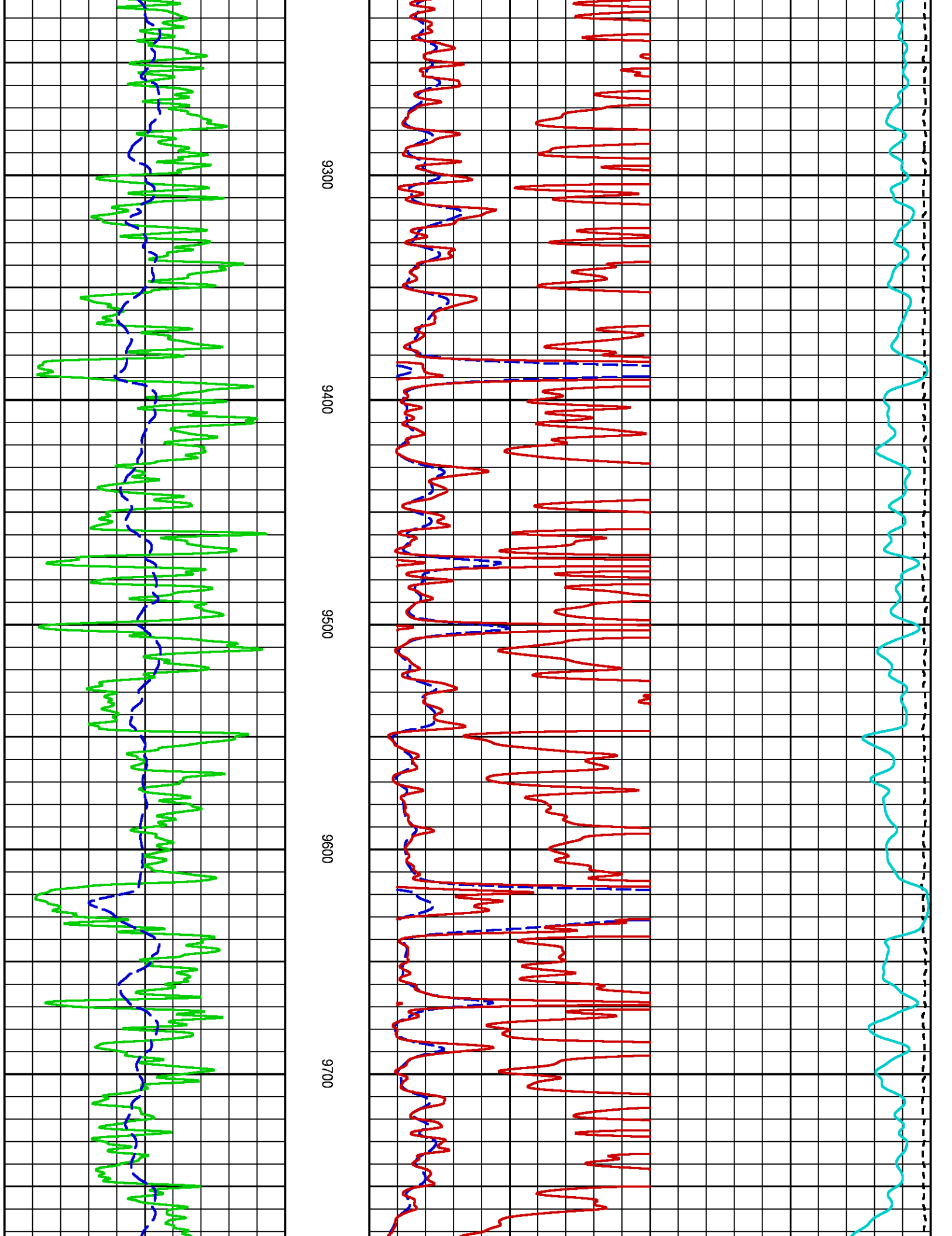


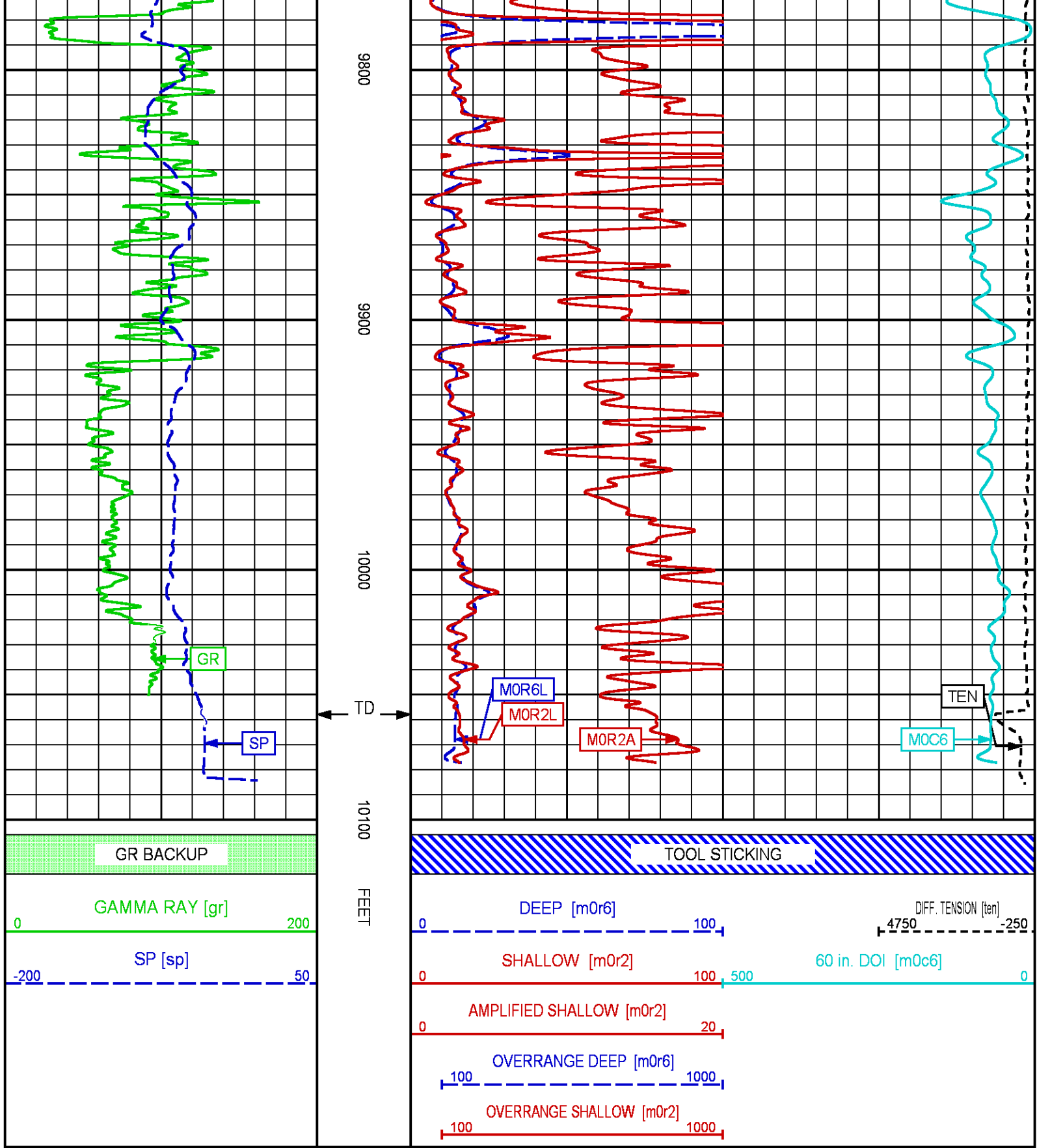












MAIN LOG 5"/100FT SCALE

Plotted: Fri May 16 09:33:19 2014

PARAMETER AND FILTER SUMMARY REPORT

File: C:\dat1a\85740\Jn970aR03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 1021.208 ft BOTTOM DEPTH: 6967.958 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	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	63.8	degF	"	"
	MUD SAMPLE RES	1.850	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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	900	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

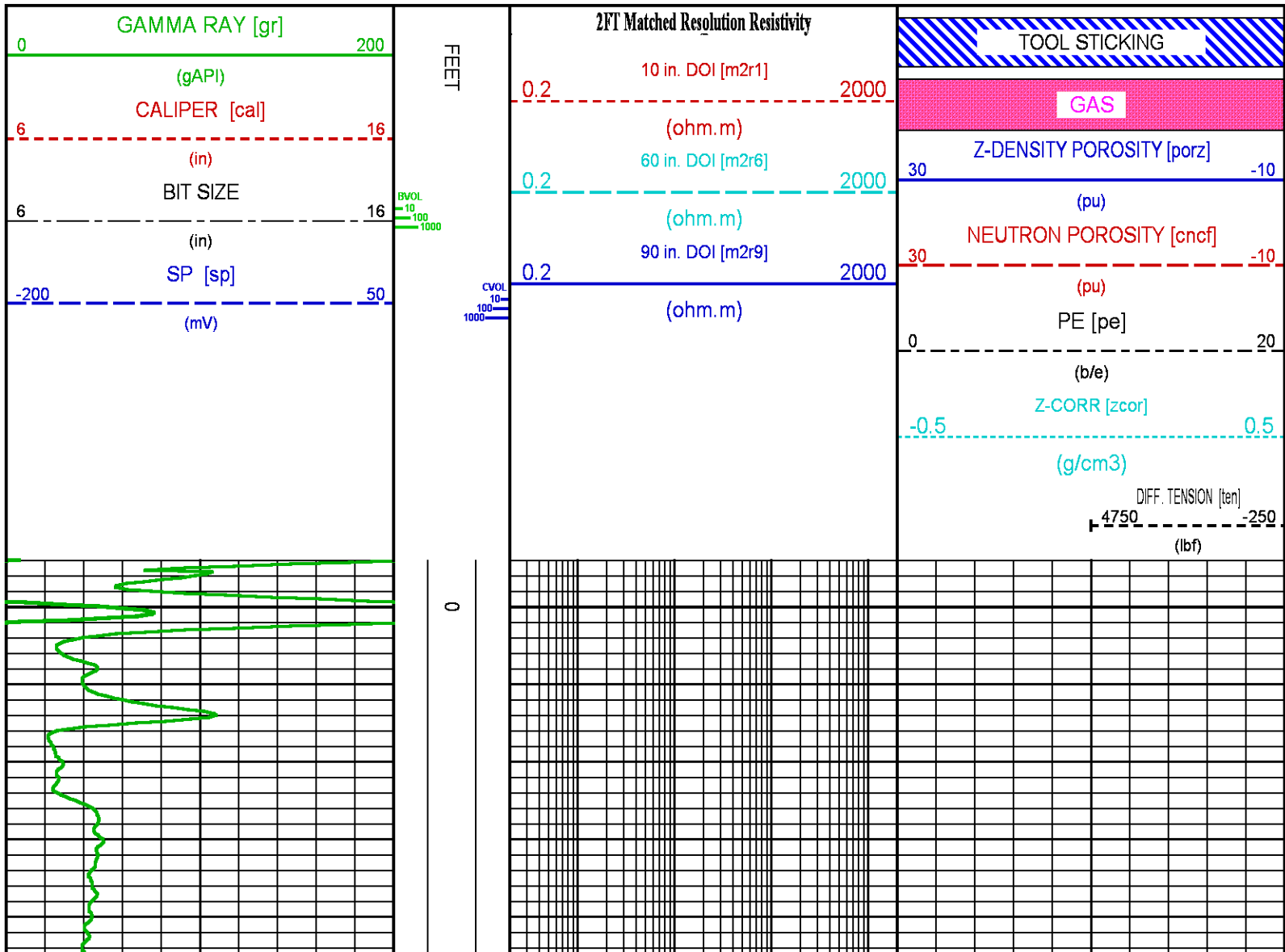
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	ft	"	"

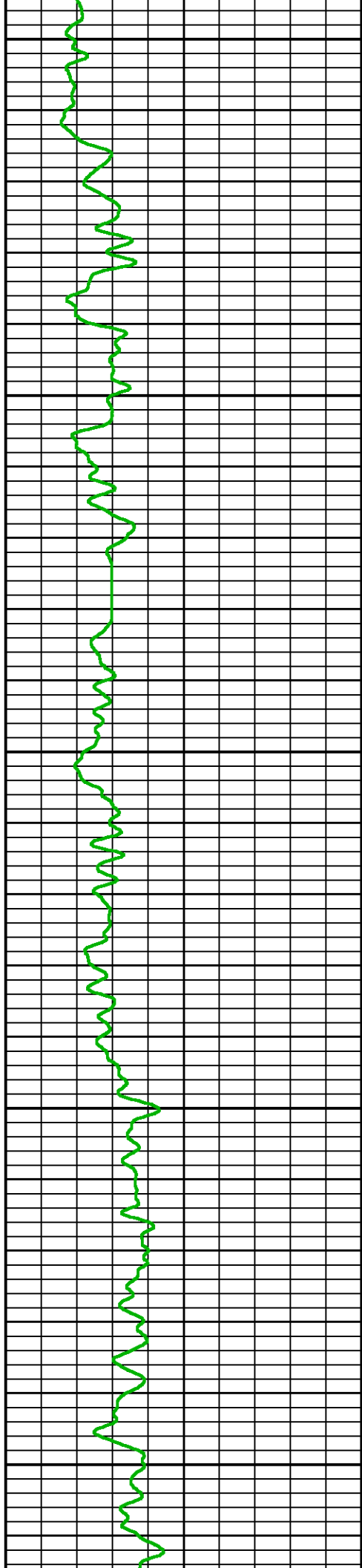
CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	May 15 14:58:04 2014	BIT SIZE
F1:BVOL	May 15 14:58:04 2014	BOREHOLE VOLUME
F1:CAL	May 15 14:58:04 2014	CALIPER
F1:CNCF	May 15 14:58:04 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	May 15 14:58:04 2014	CEMENT VOLUME
F1:GR	May 15 14:58:04 2014	GAMMA RAY
F1:M2R1	May 15 14:58:04 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	May 15 14:58:04 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	May 15 14:58:04 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	May 15 14:58:04 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	May 15 14:58:04 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	May 15 14:58:04 2014	SPONTANEOUS POTENTIAL
F1:TEN	May 15 14:58:04 2014	DIFFERENTIAL TENSION
F1:ZCOR	May 15 14:58:04 2014	DENSITY CORRECTION

Presentation : BHID26LKX1:C:\dat1a\85740J\WPX_5IN_R-MAIN.fvpdf [5"/100' Scale]
Plot Interval : -6 - 10093 Seconds

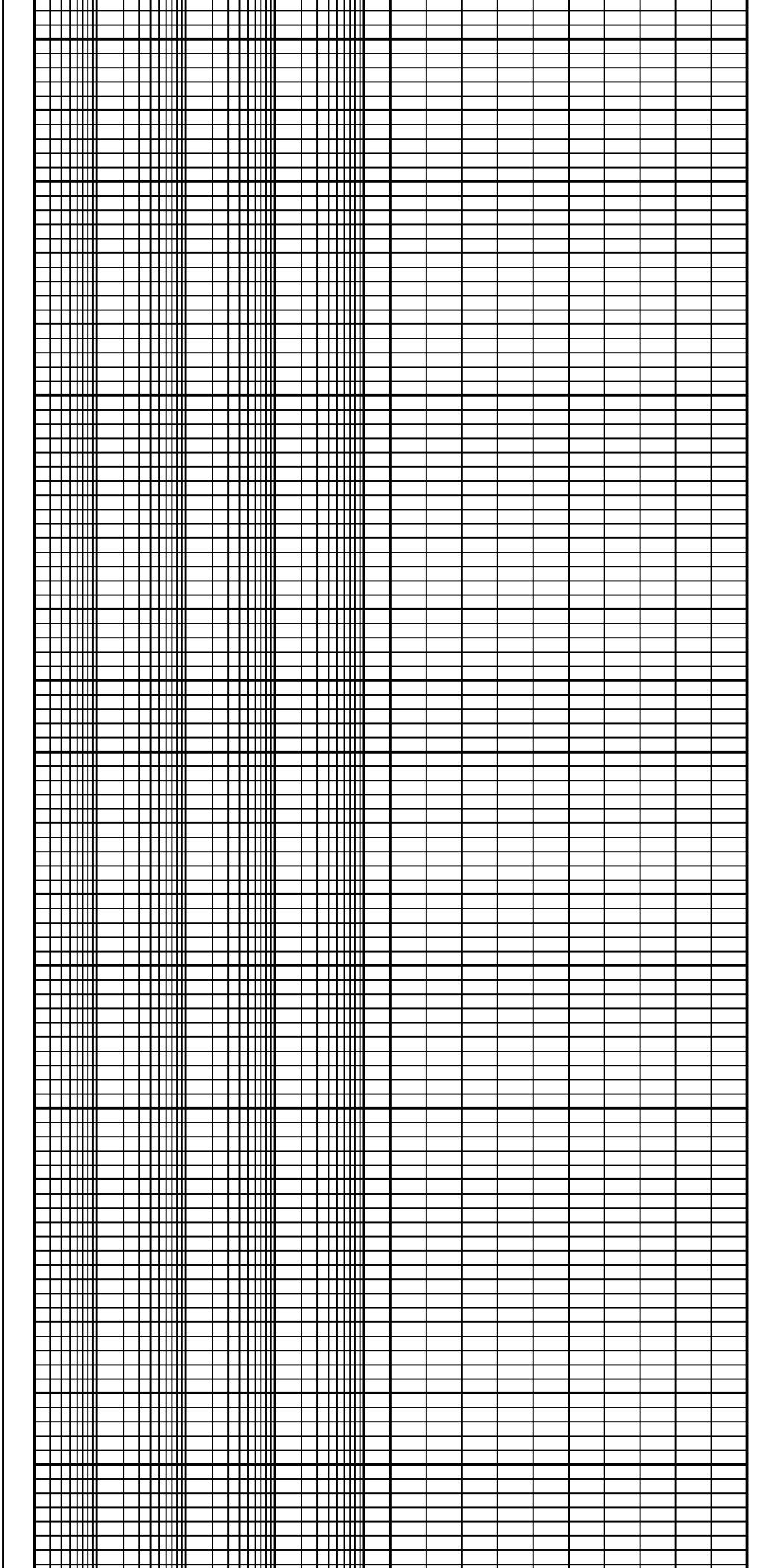
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Created On : May 15 14:58:04 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL NER 534-32
Field : RULISON
File Interval : -33 - 10093 Seconds
OCT : n970a

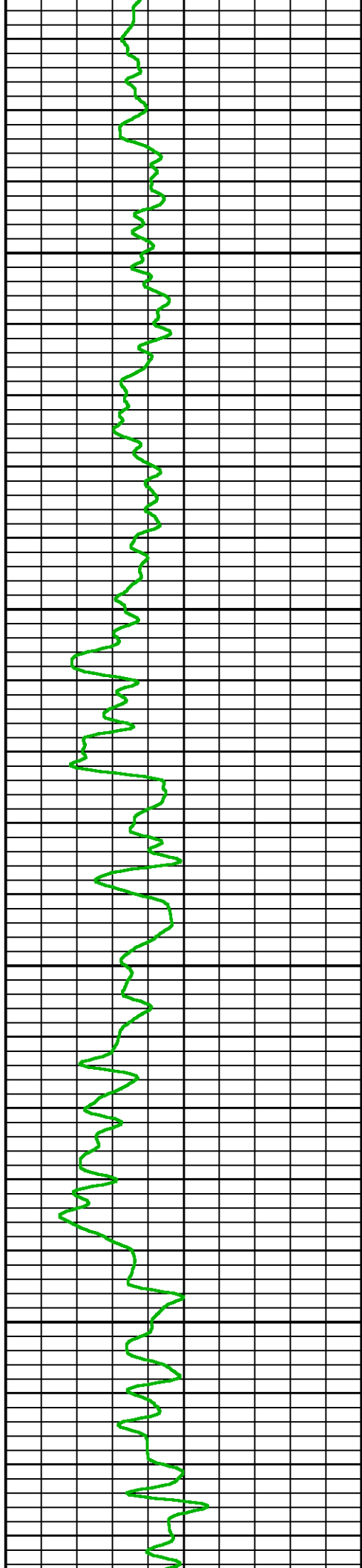




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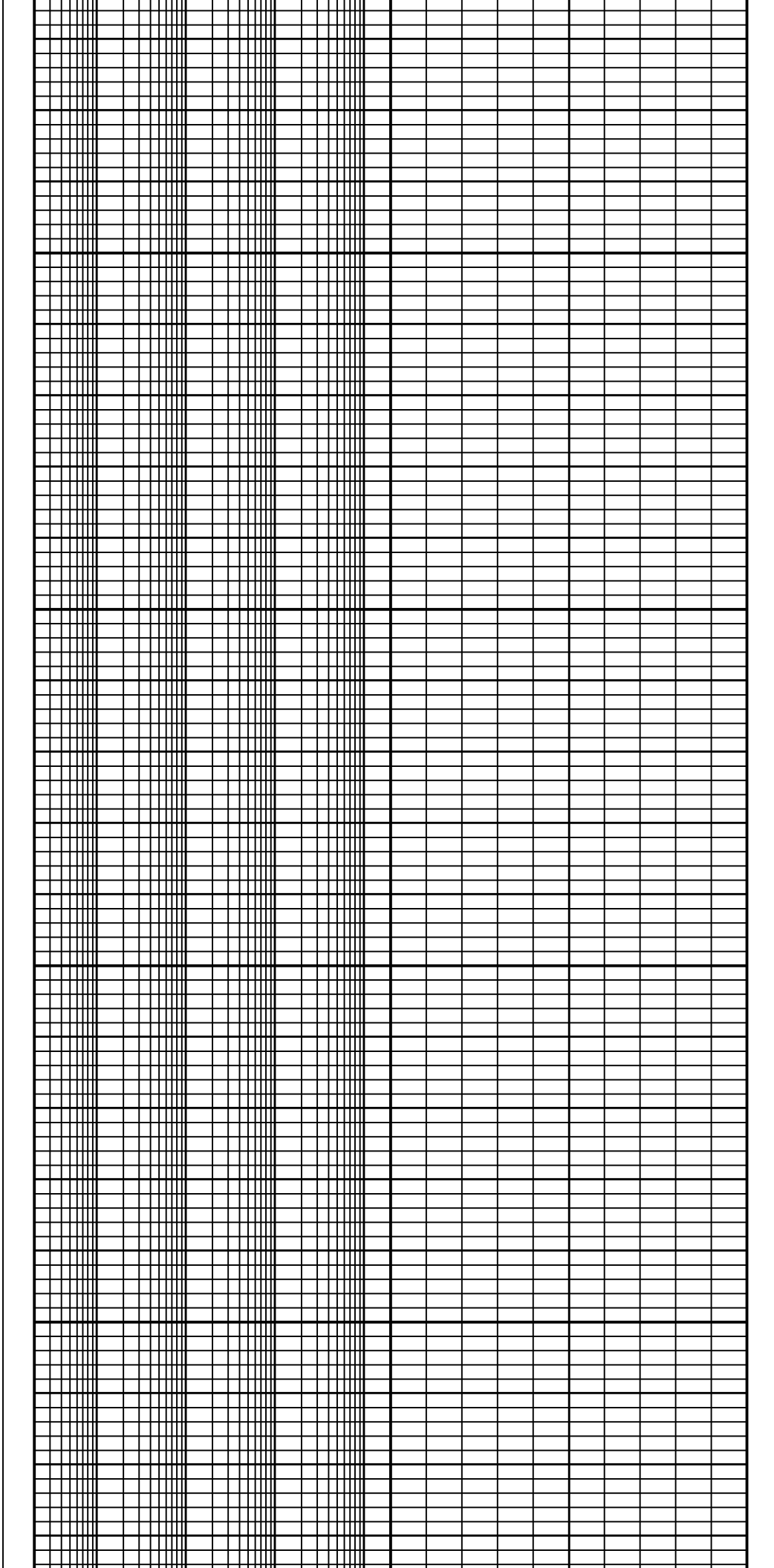
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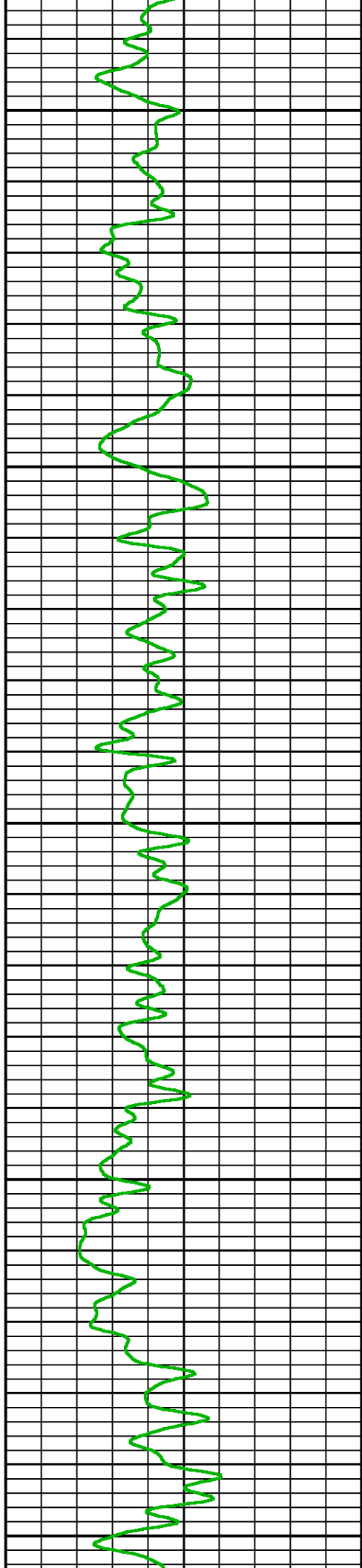




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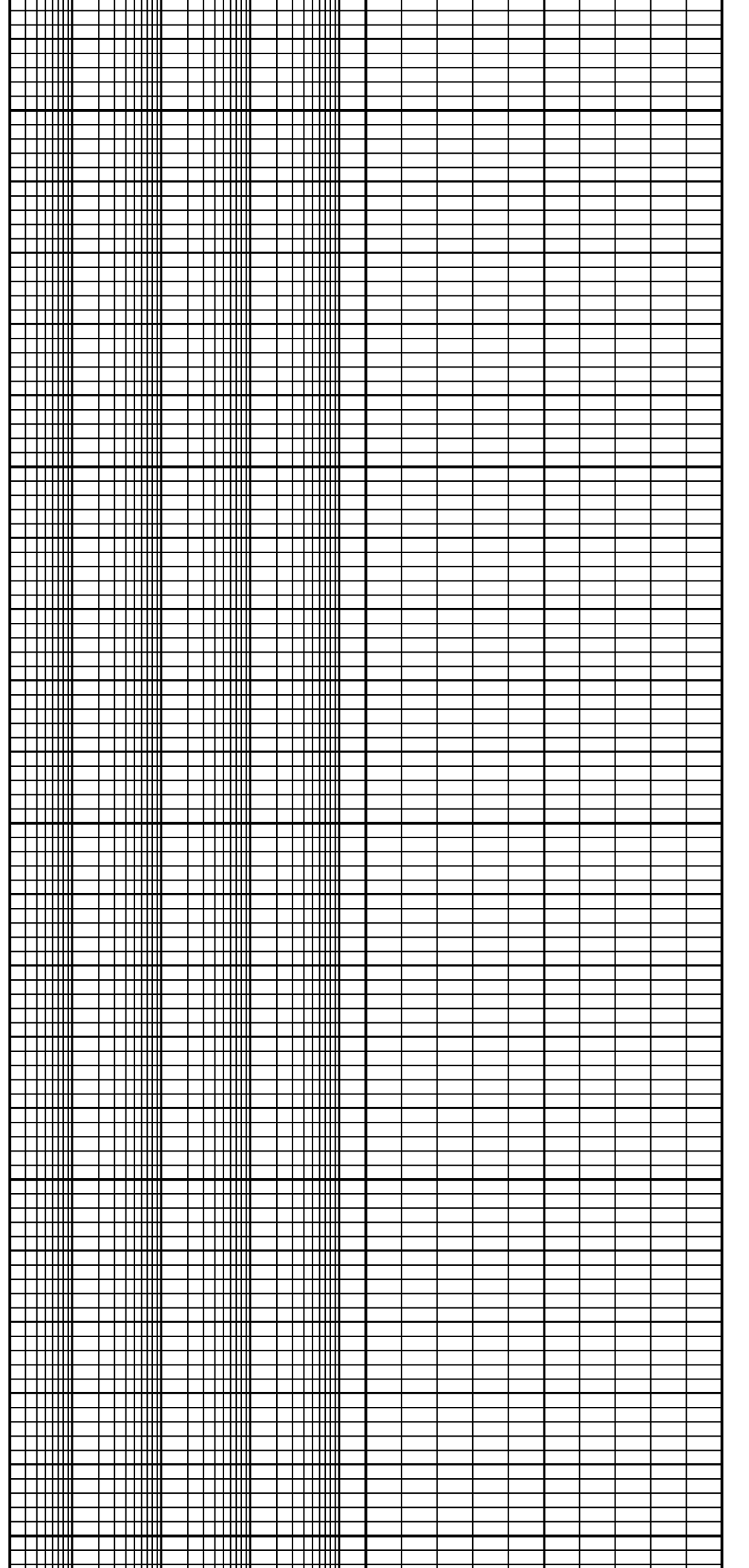


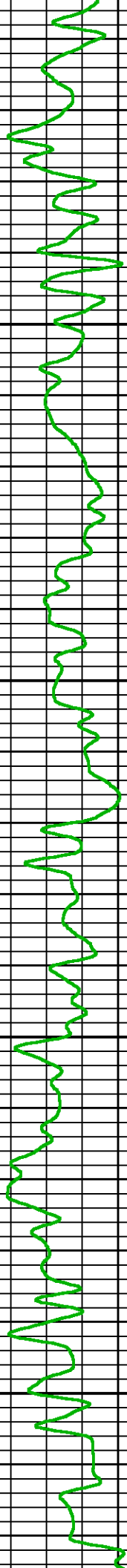


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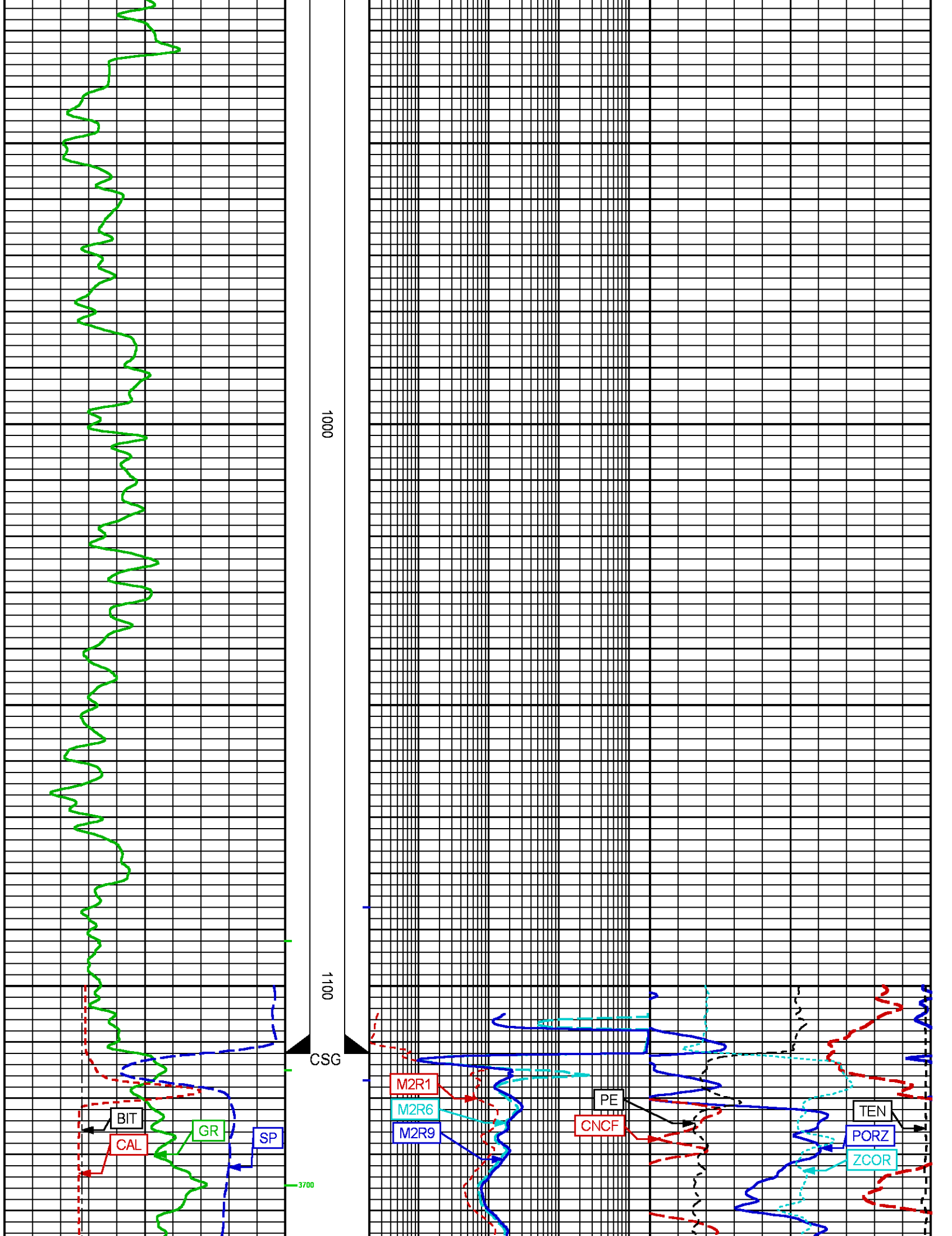
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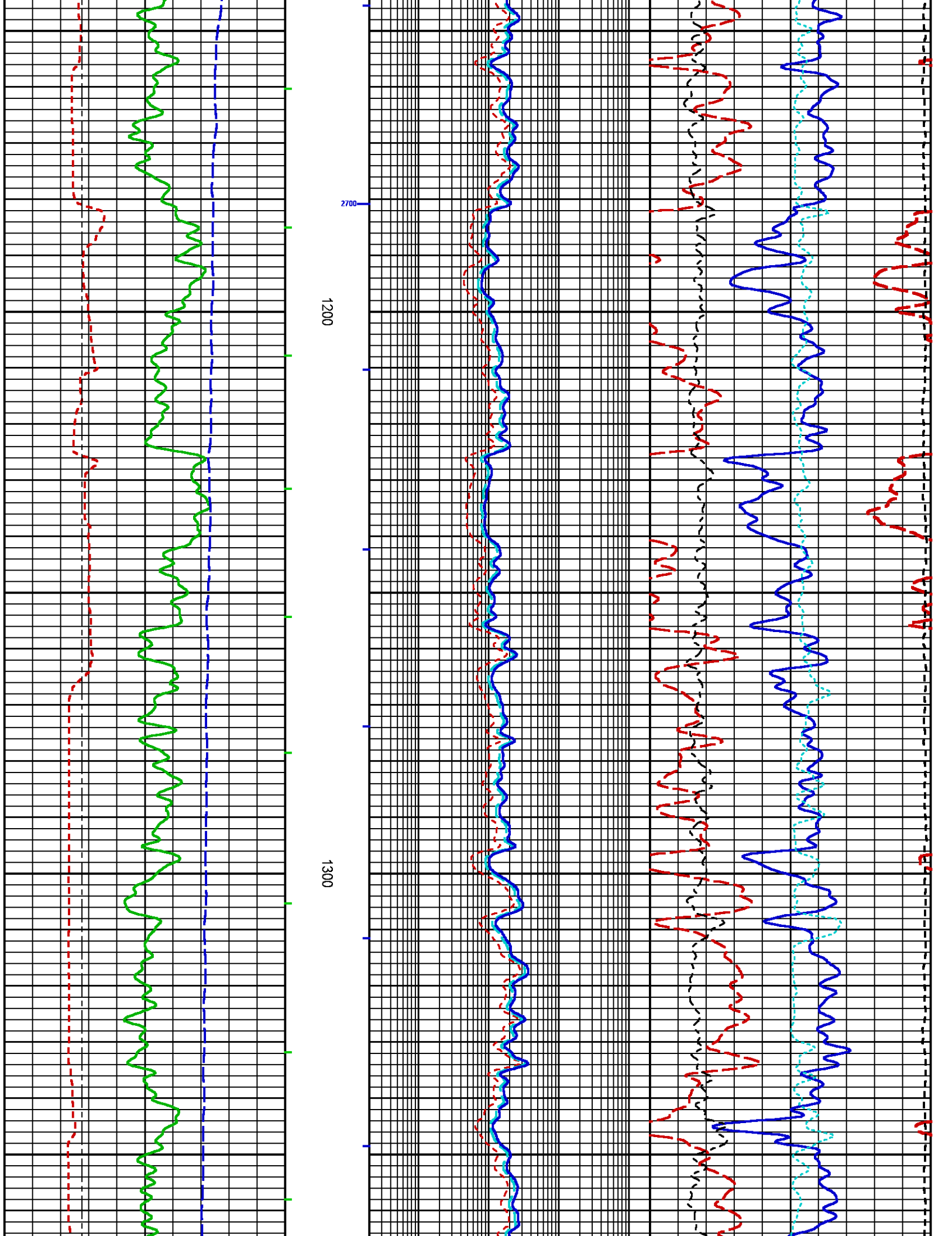


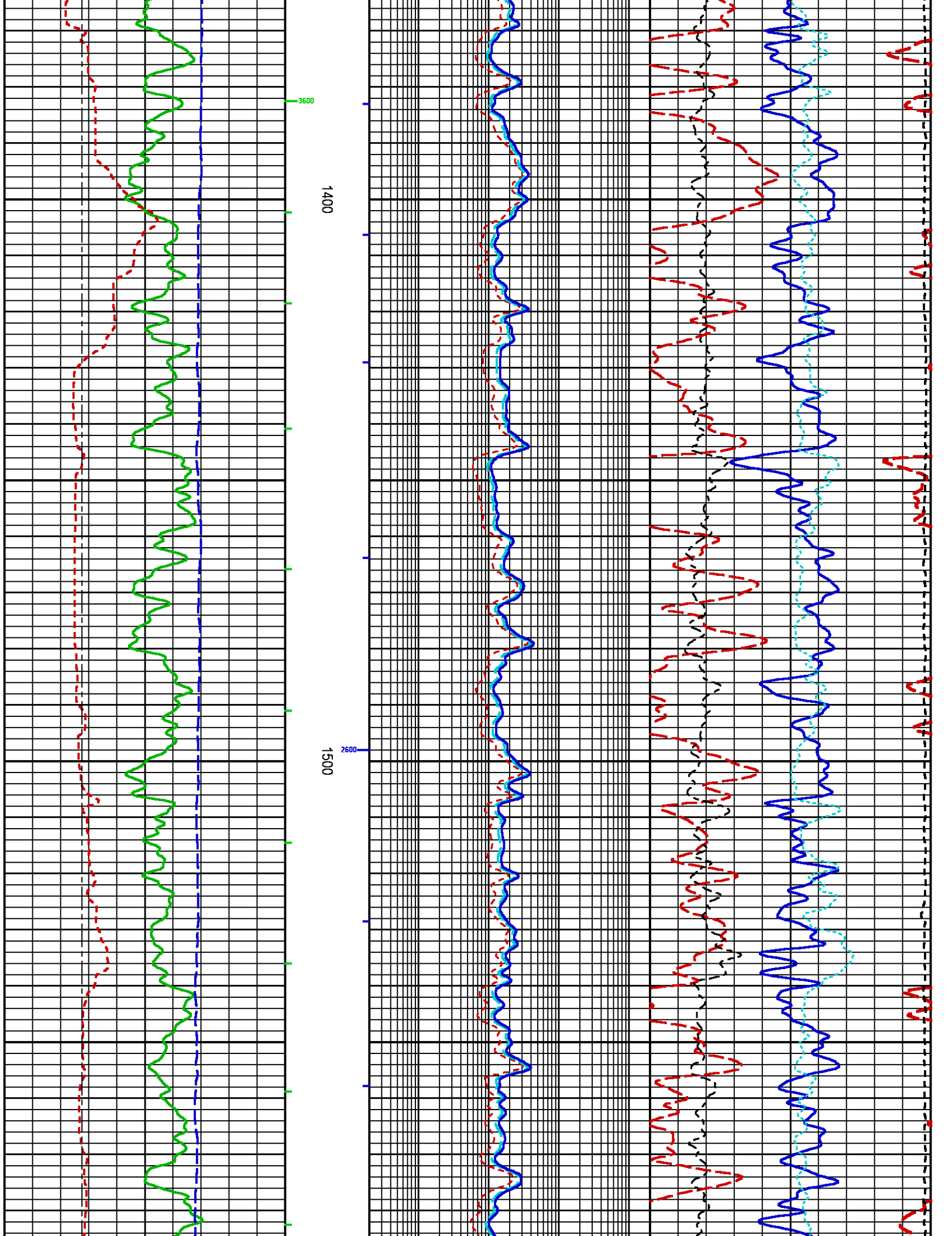


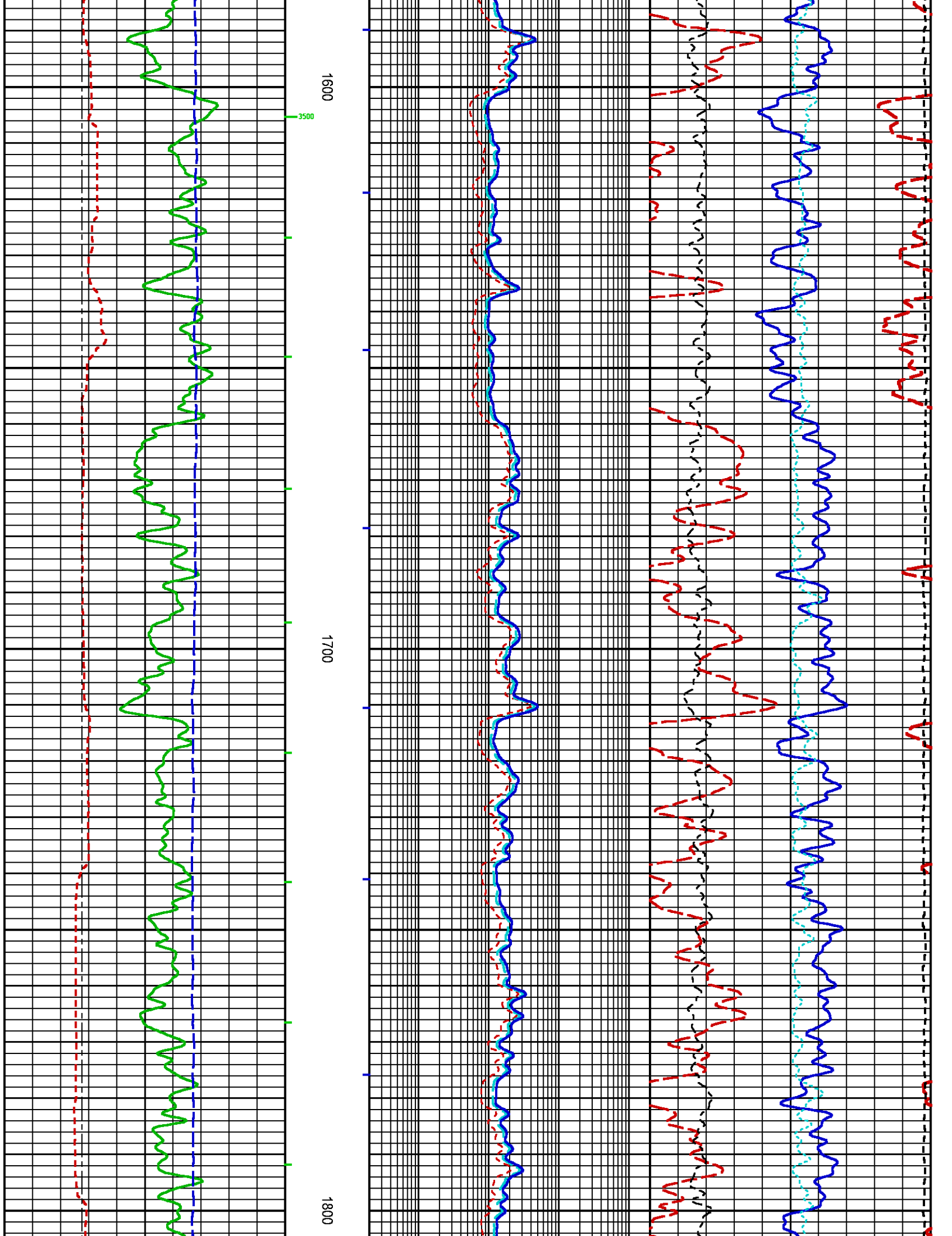
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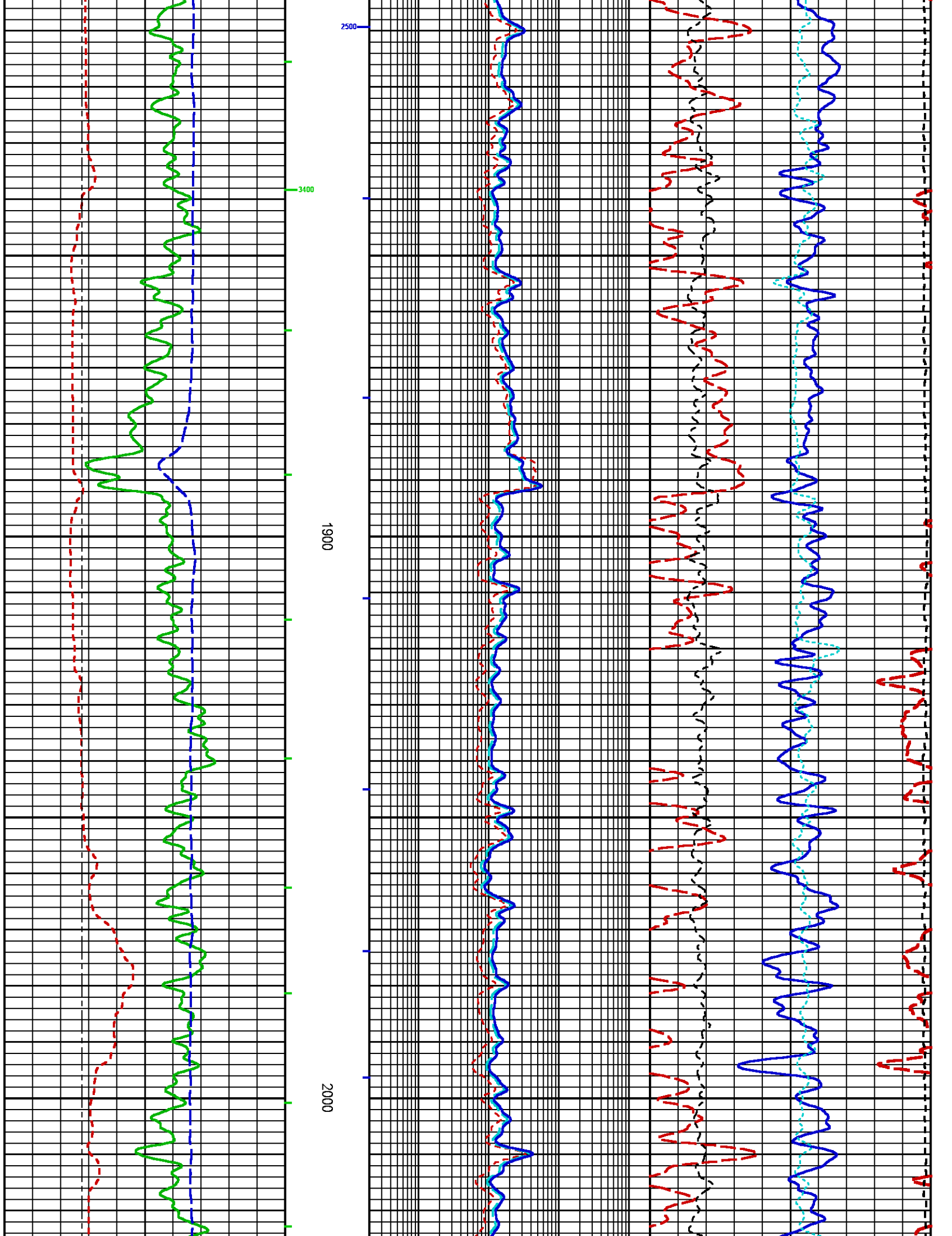
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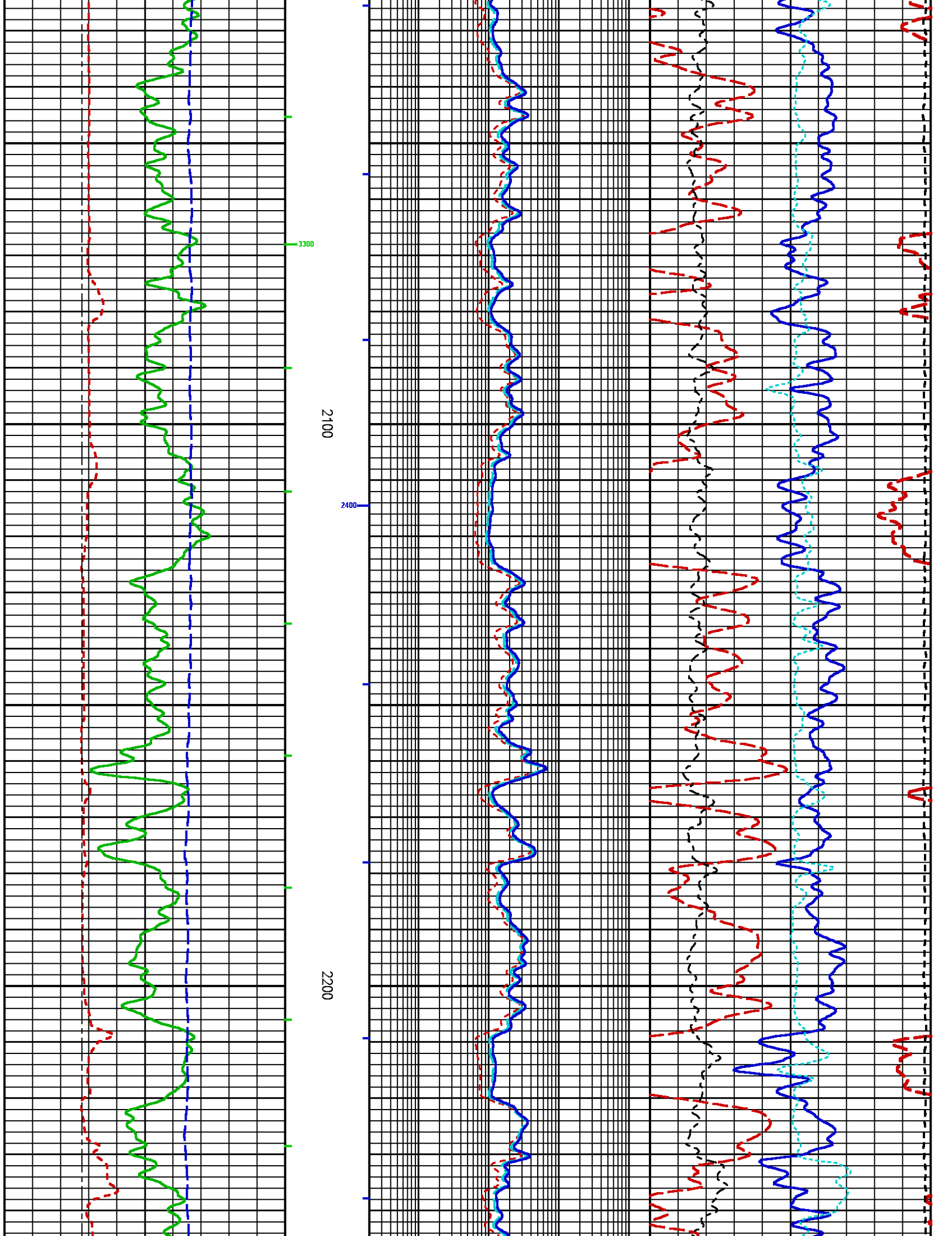


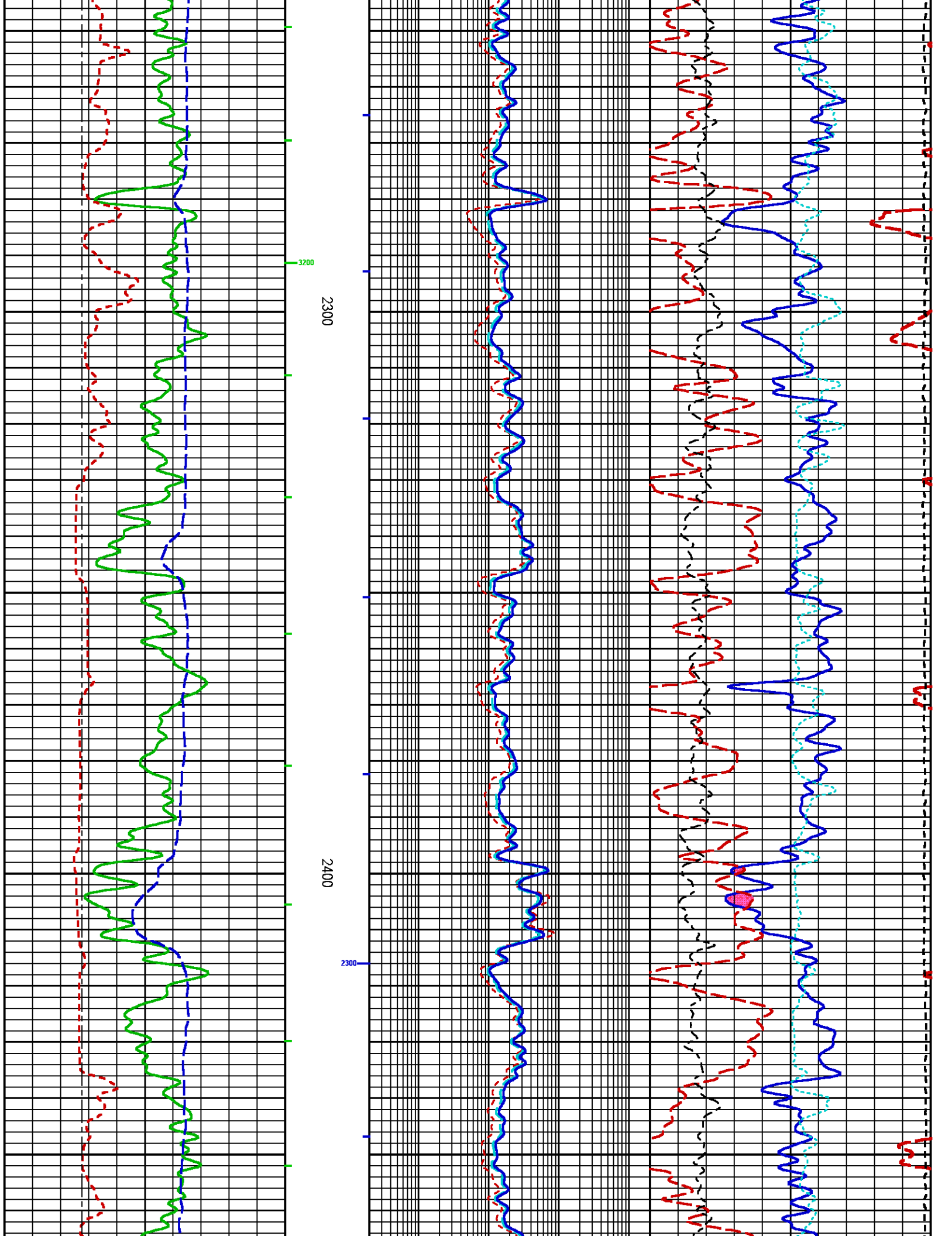


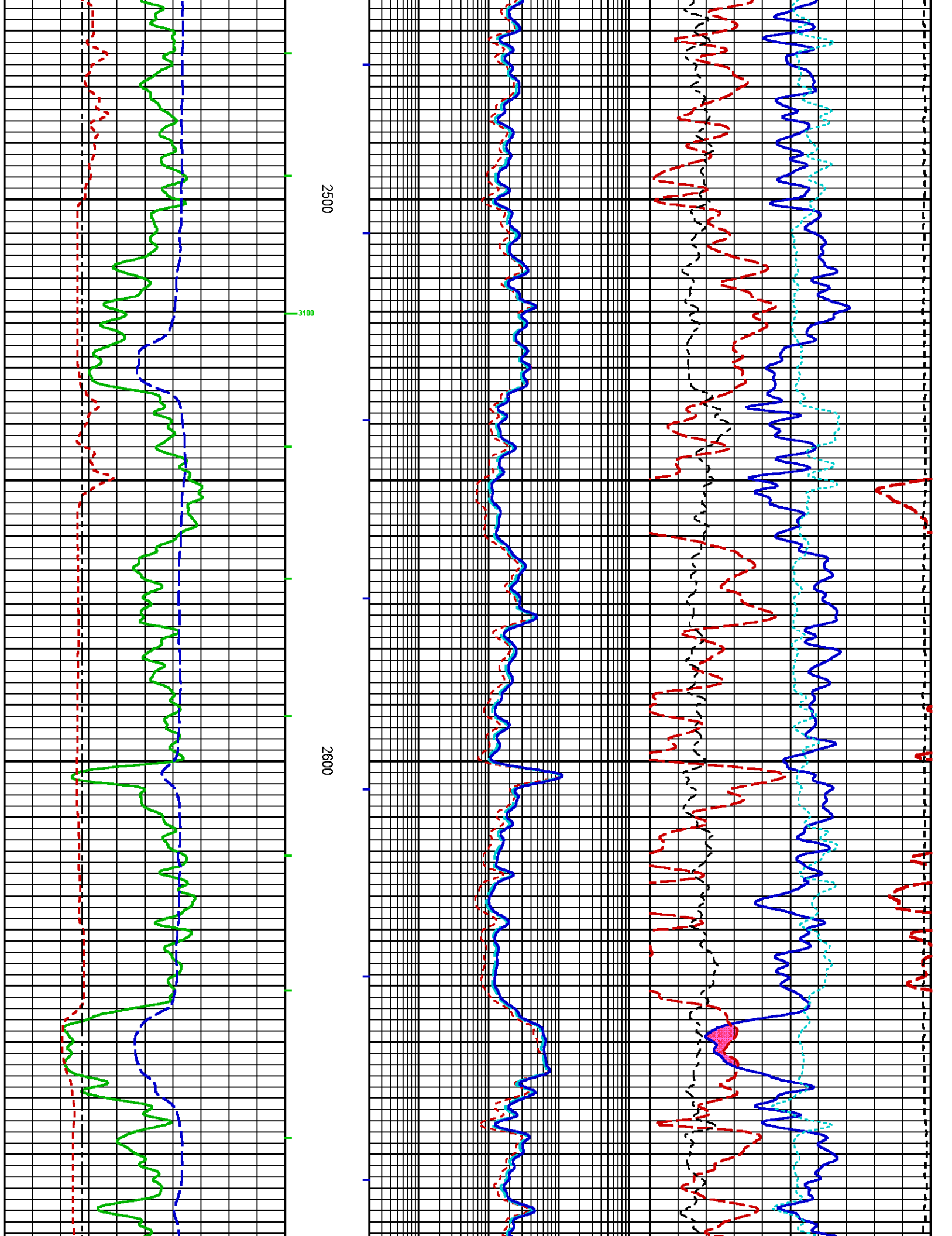


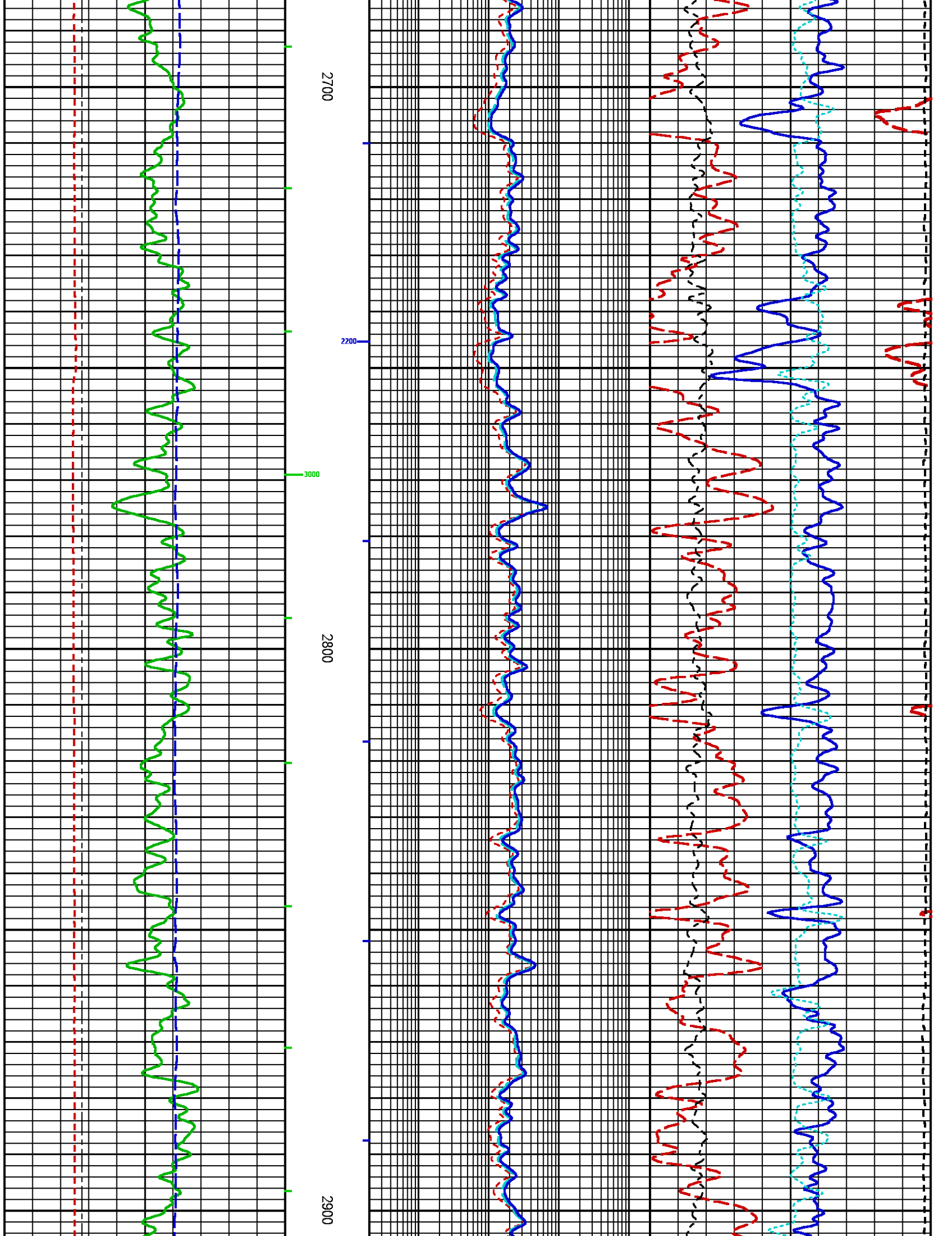


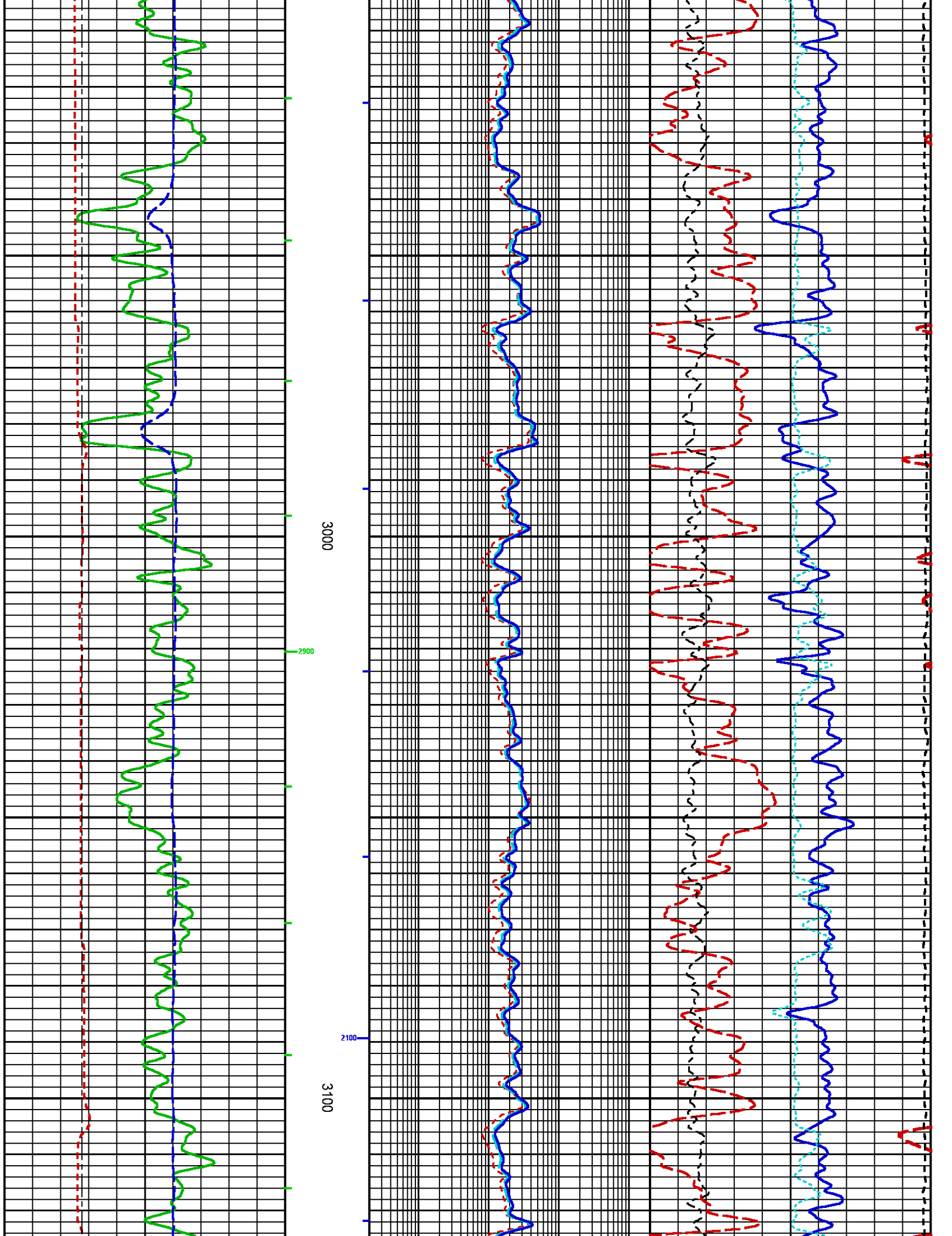


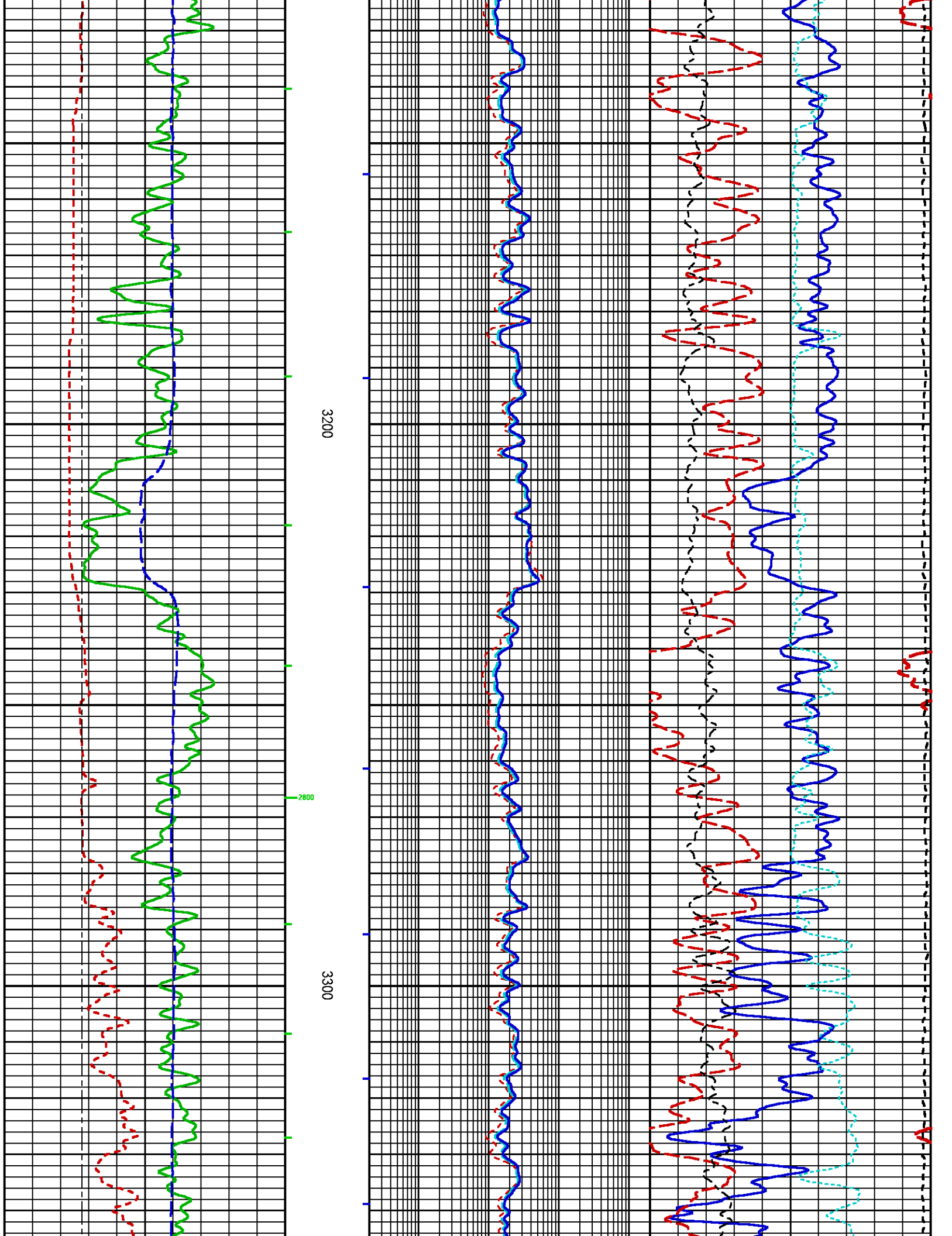


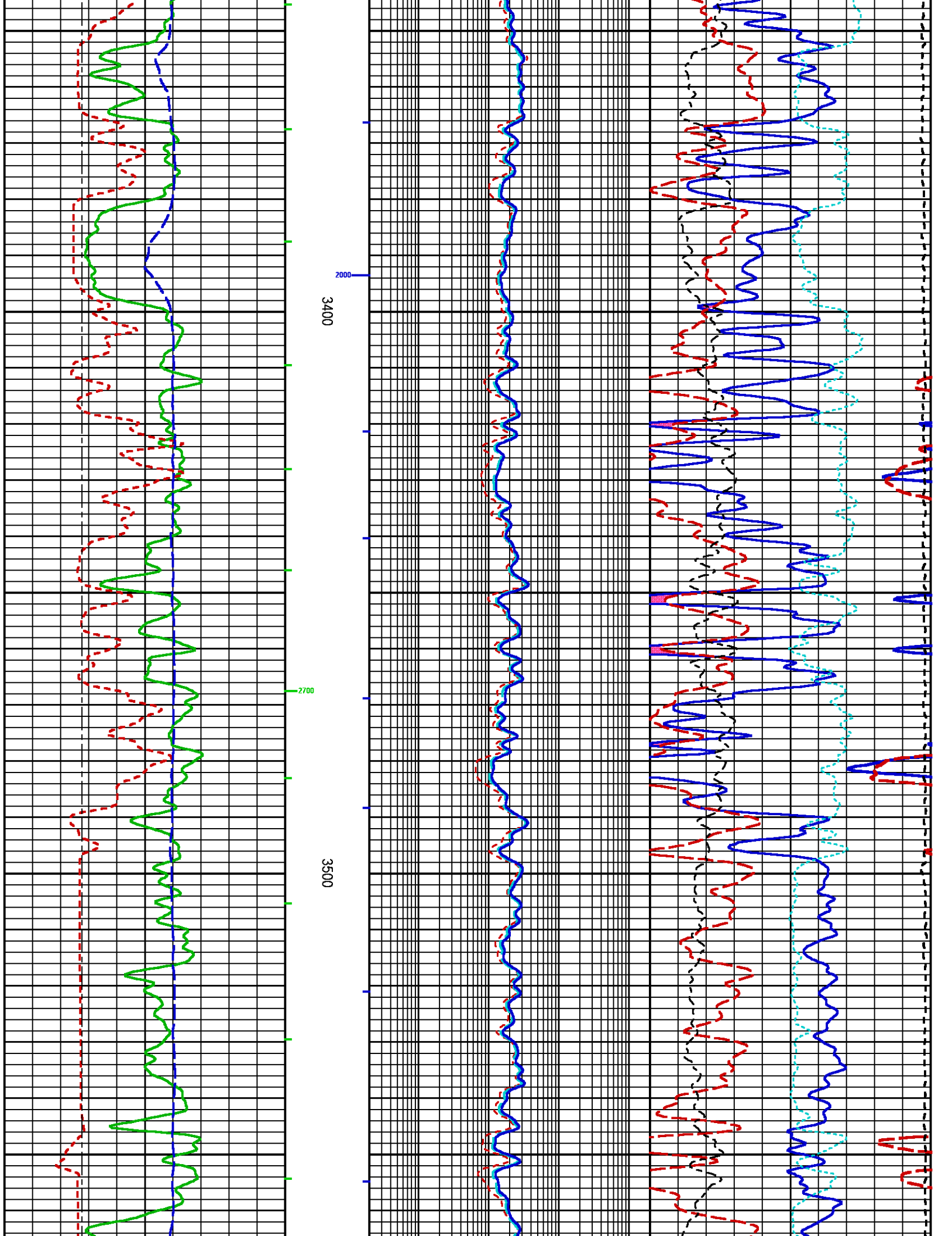


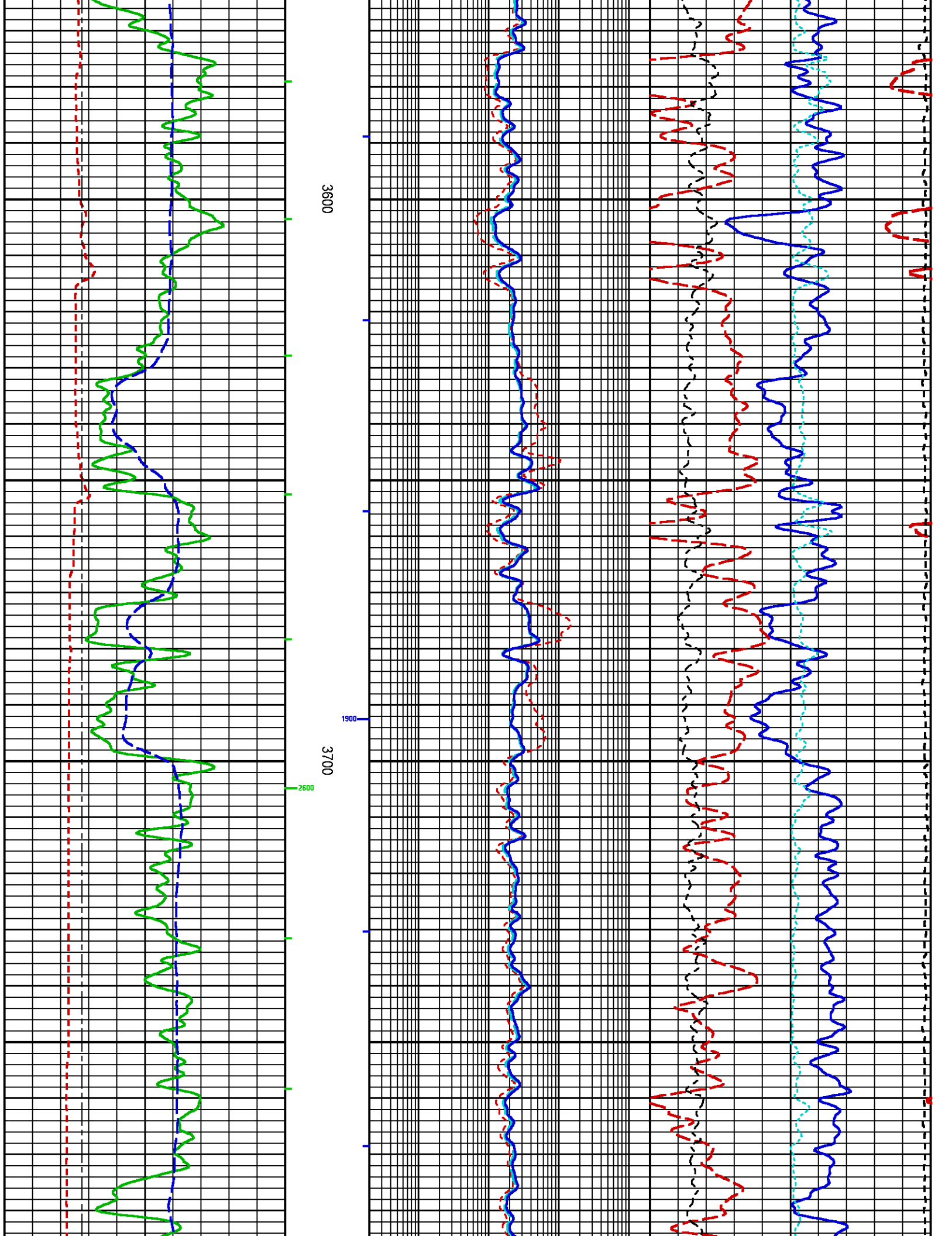


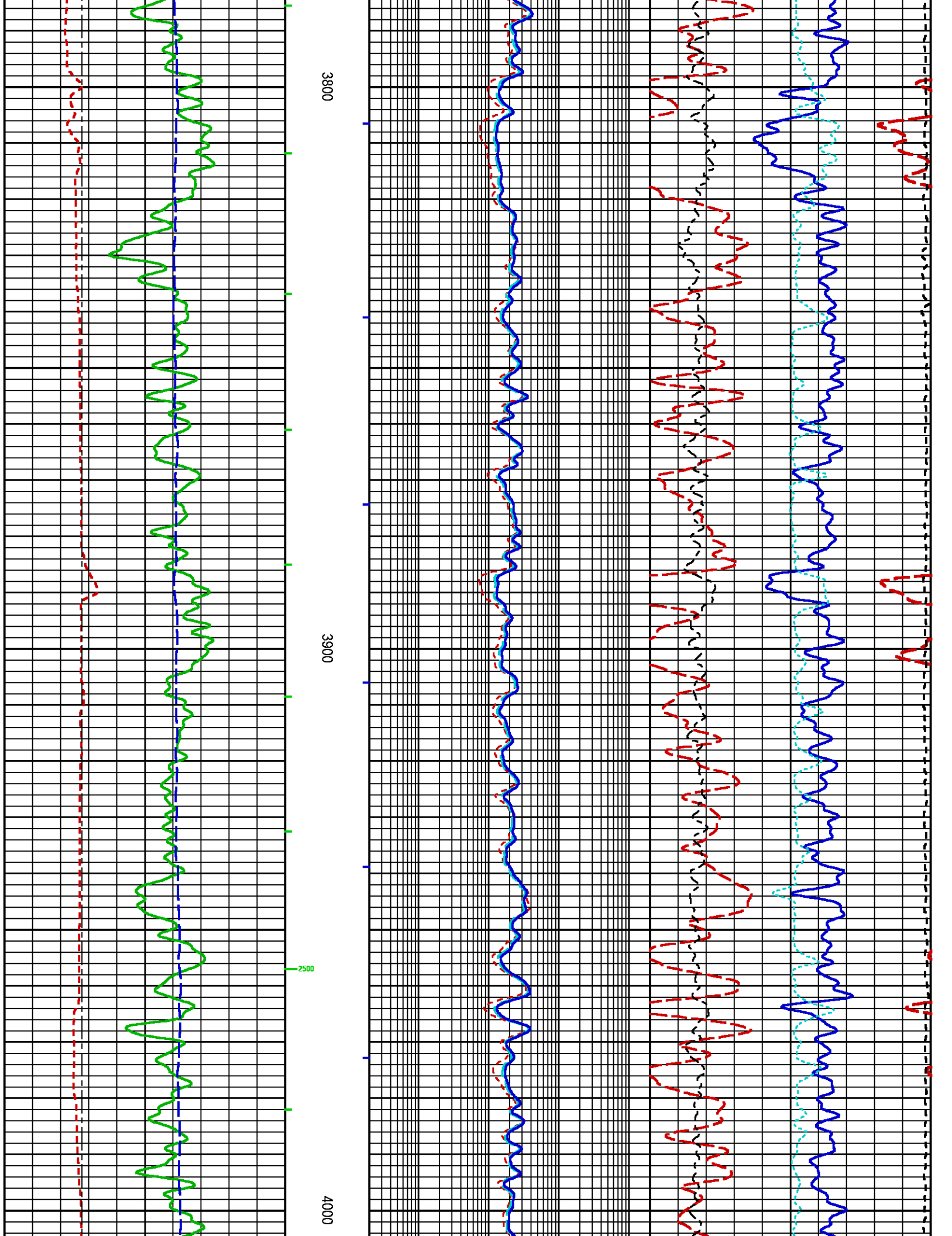


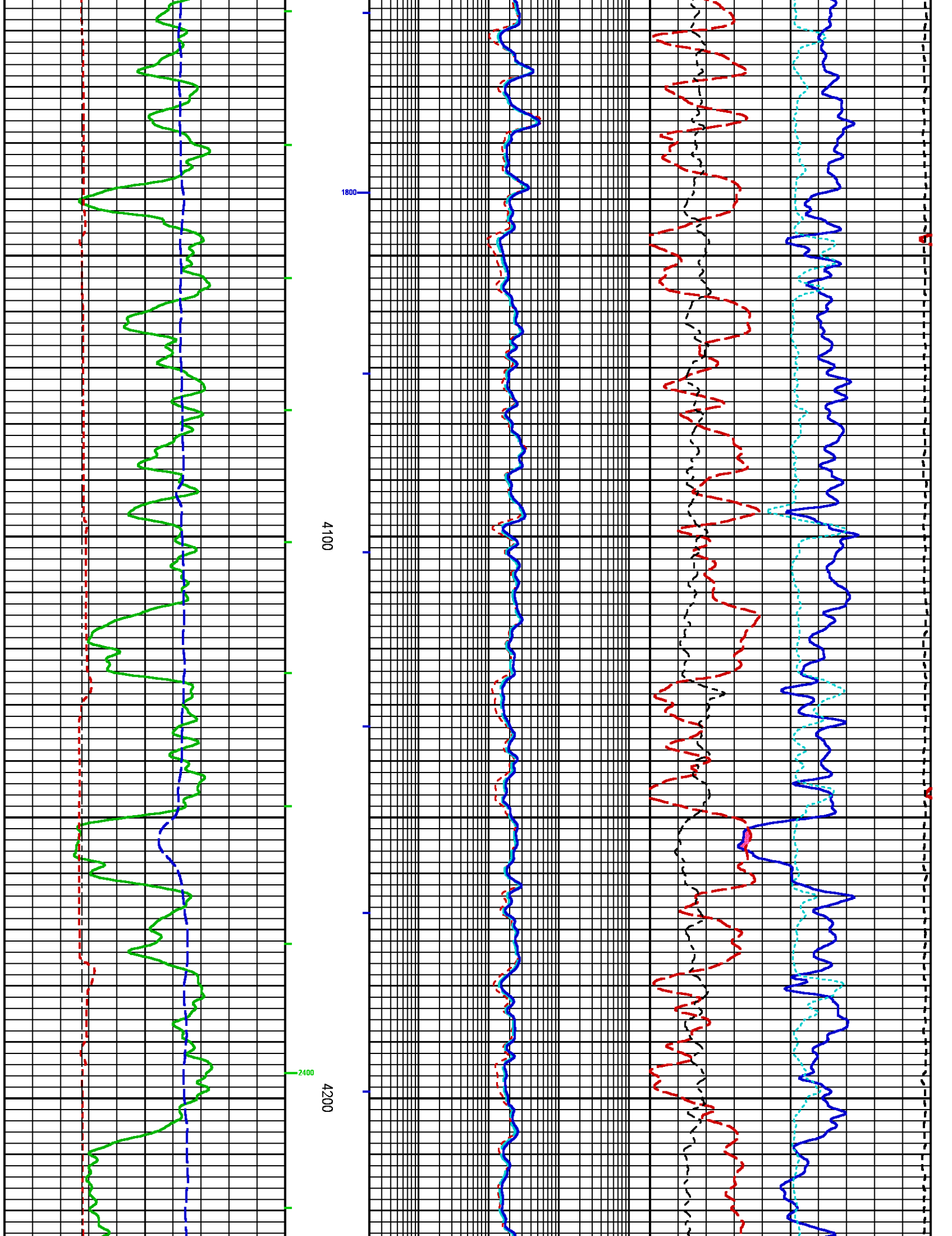


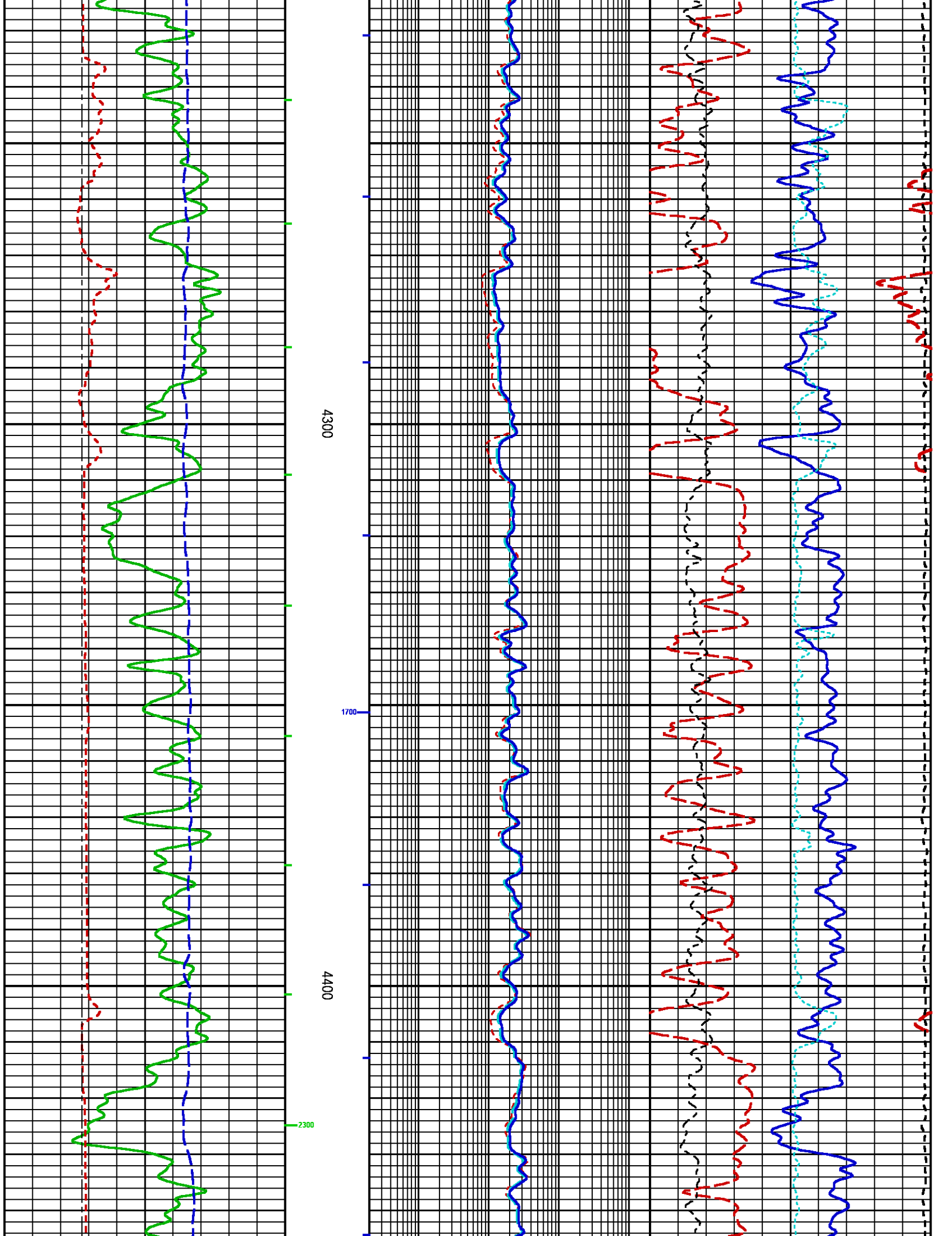


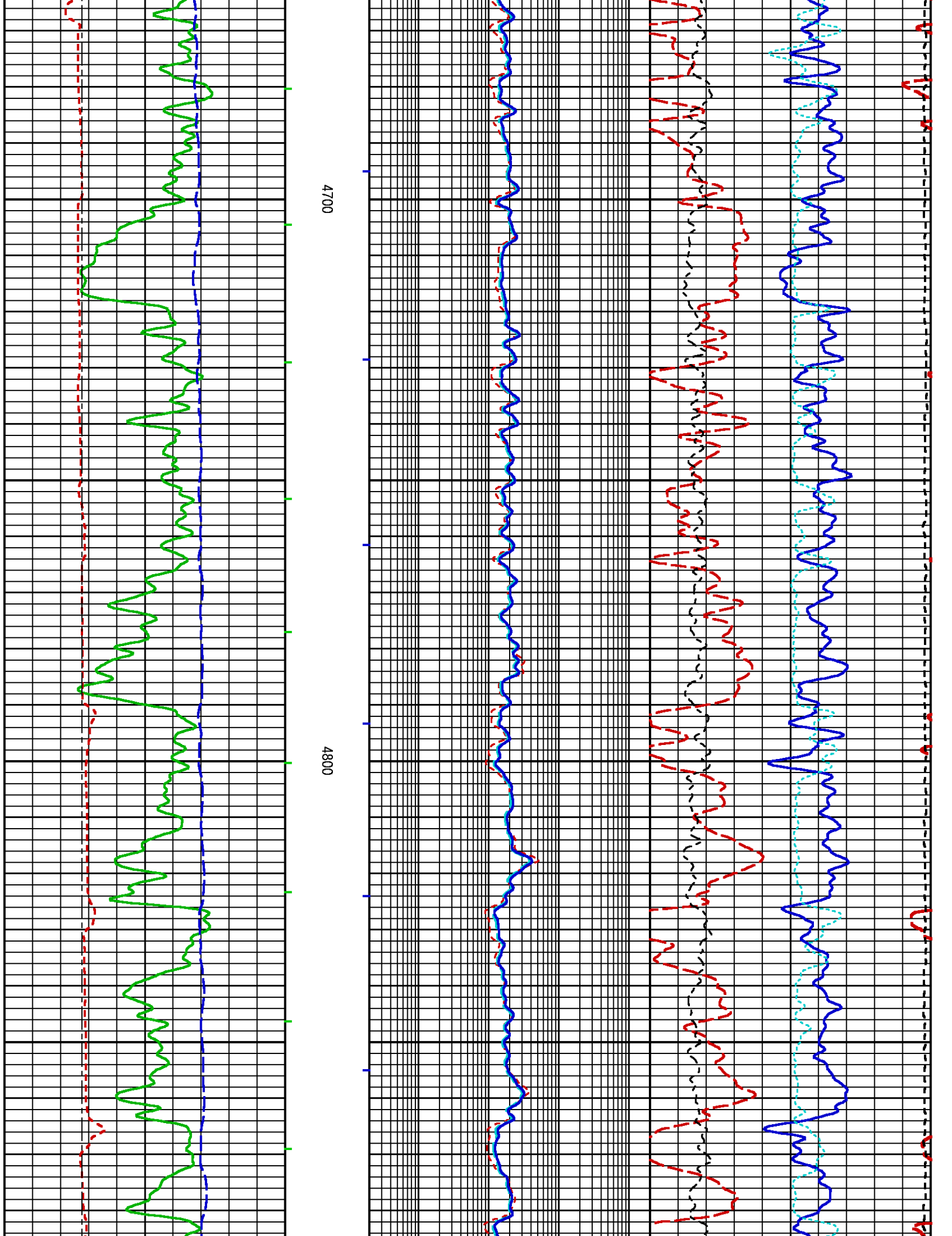


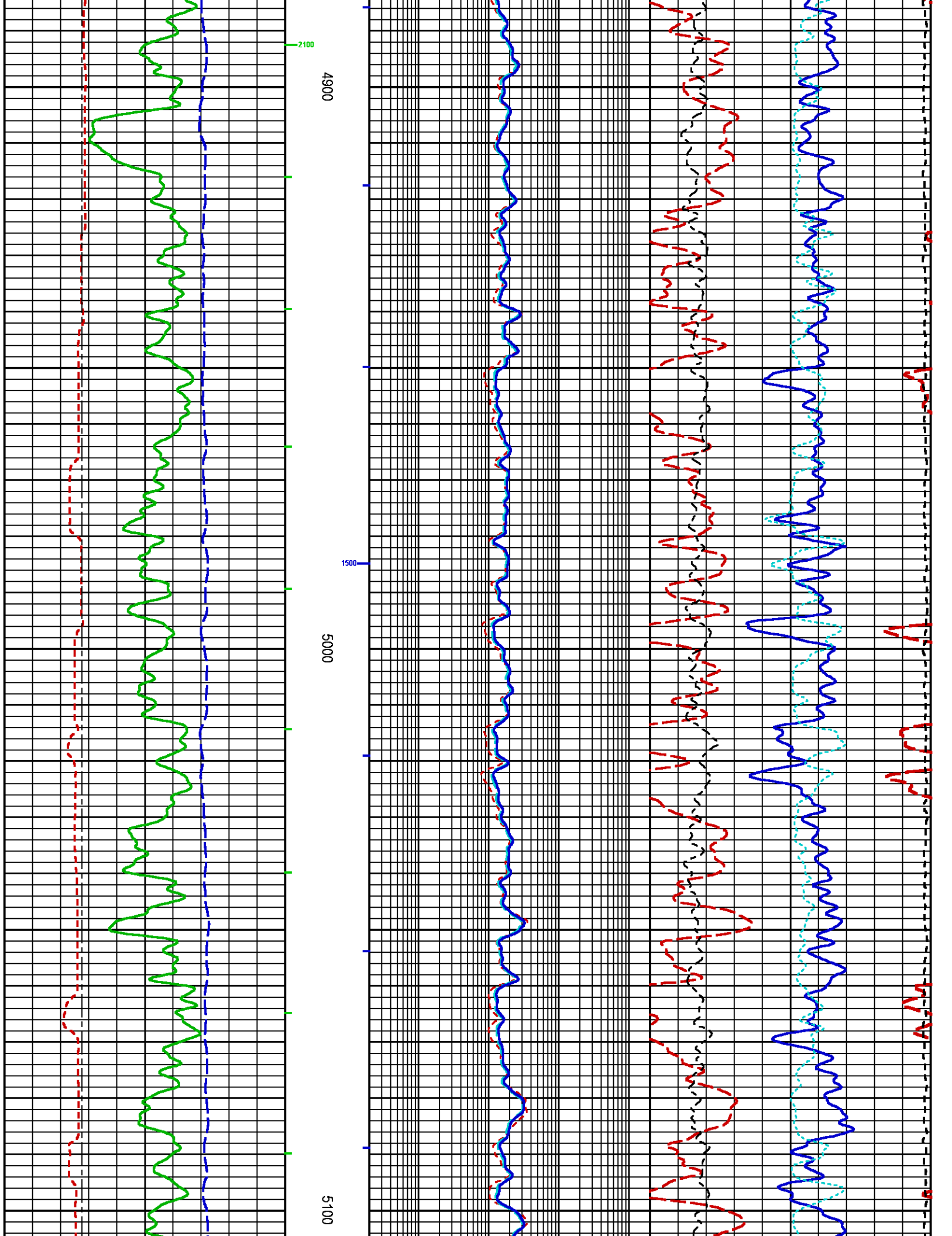


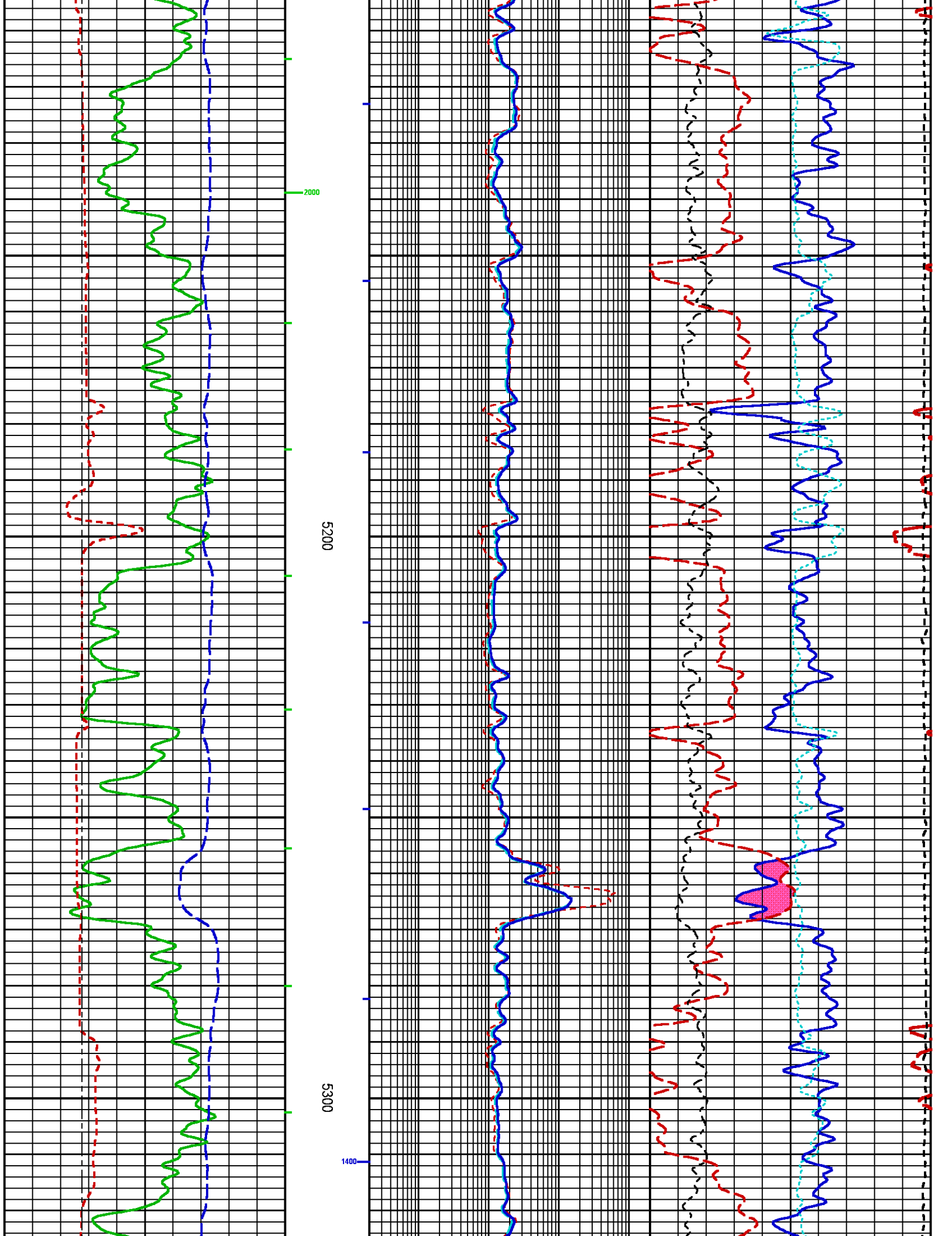


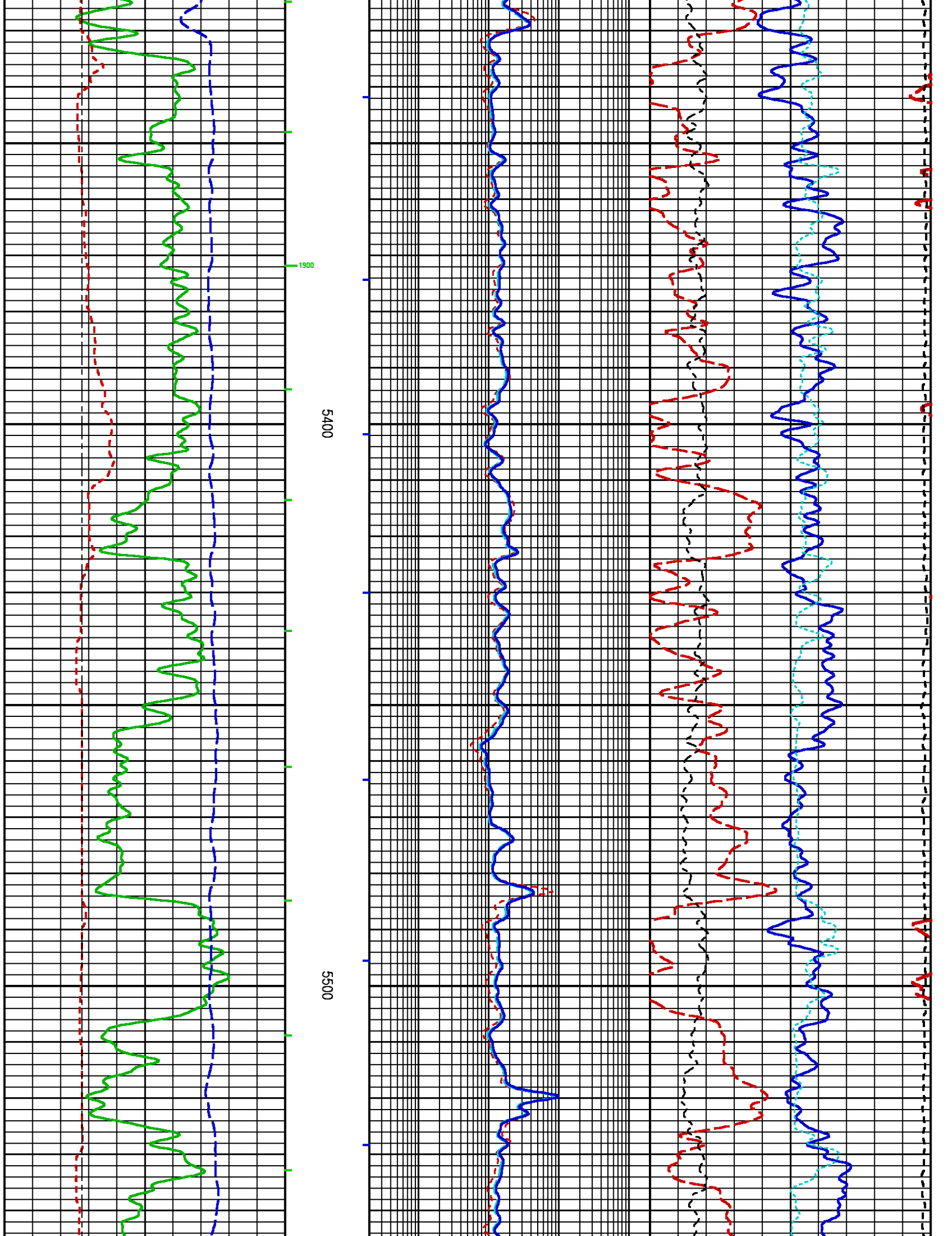


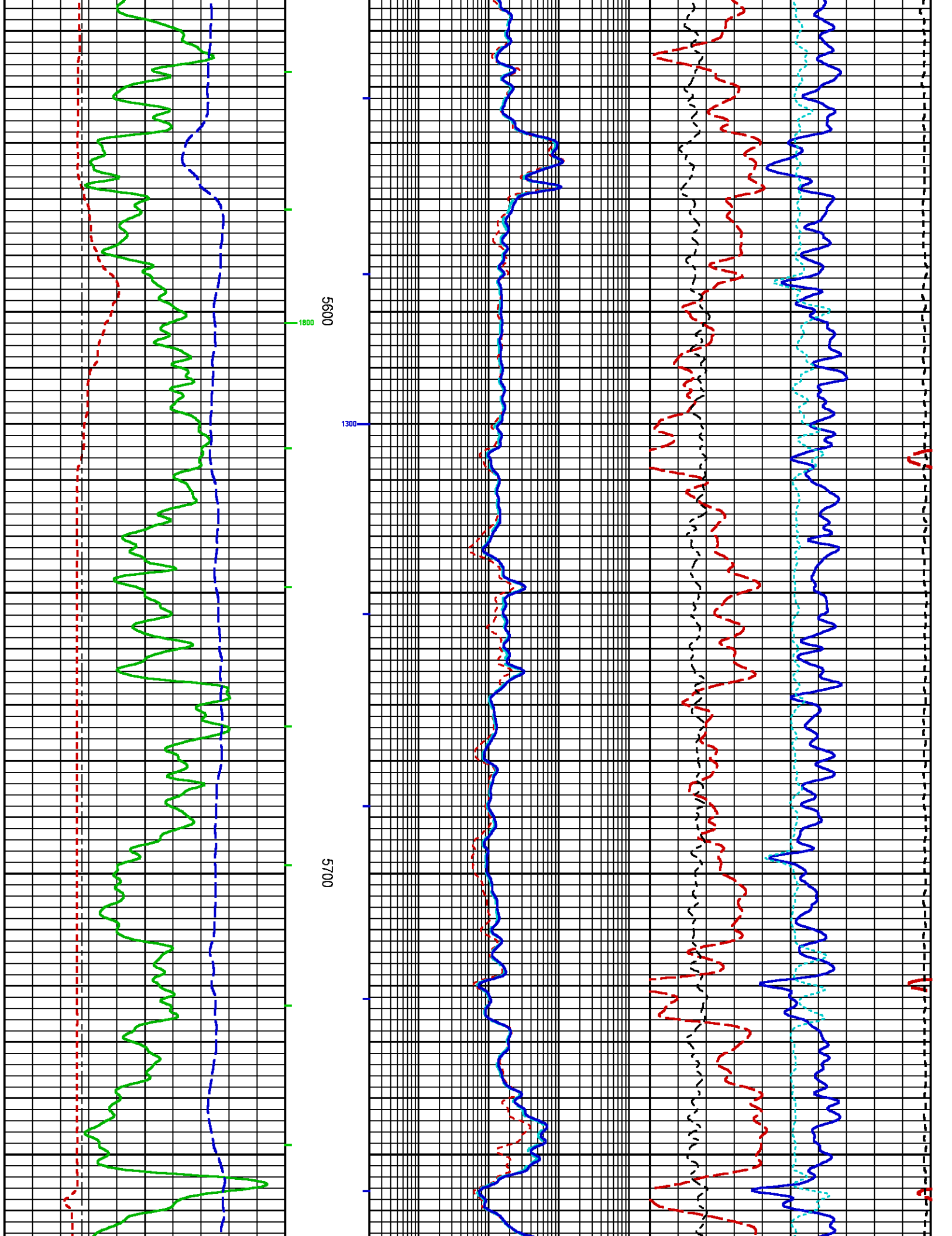


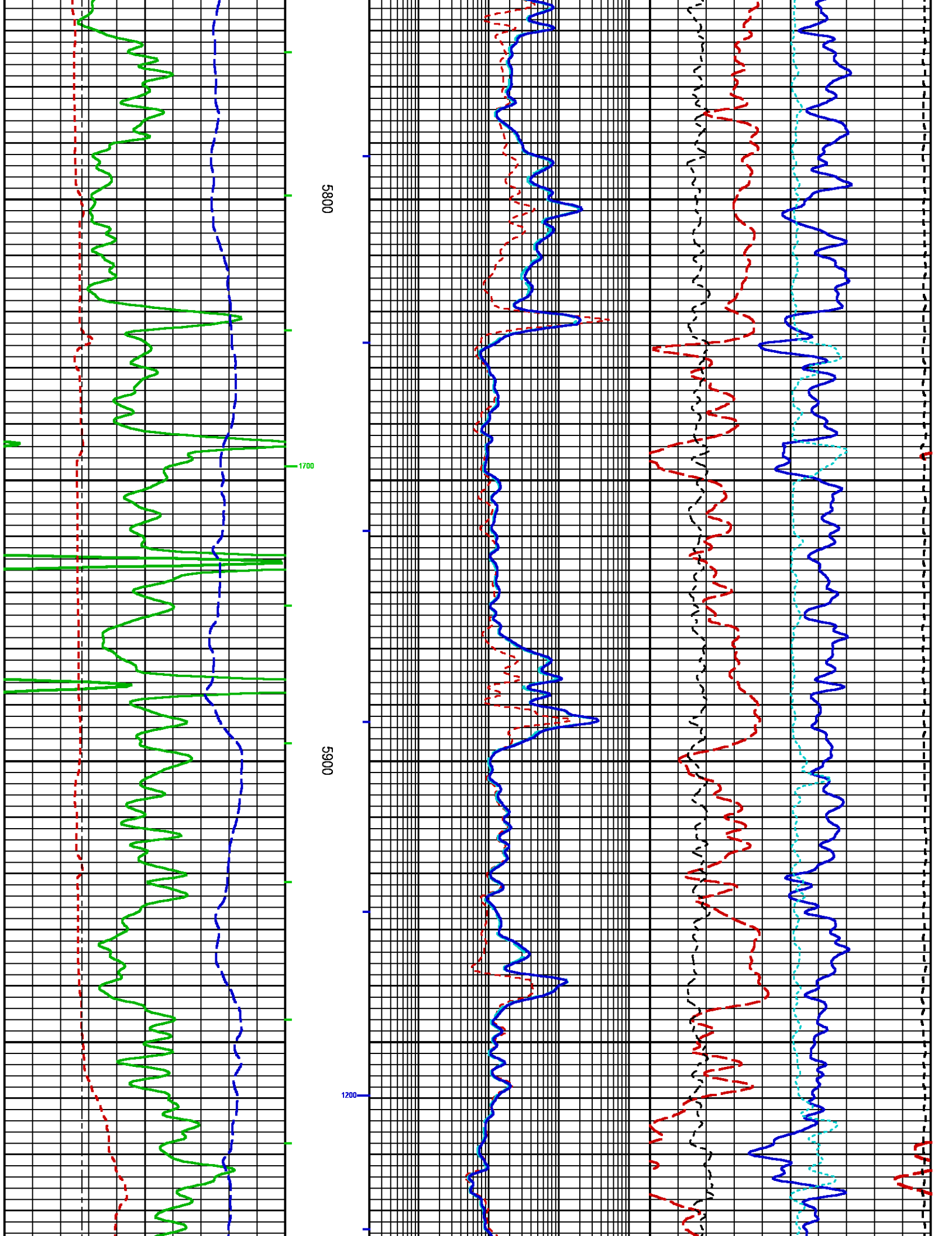


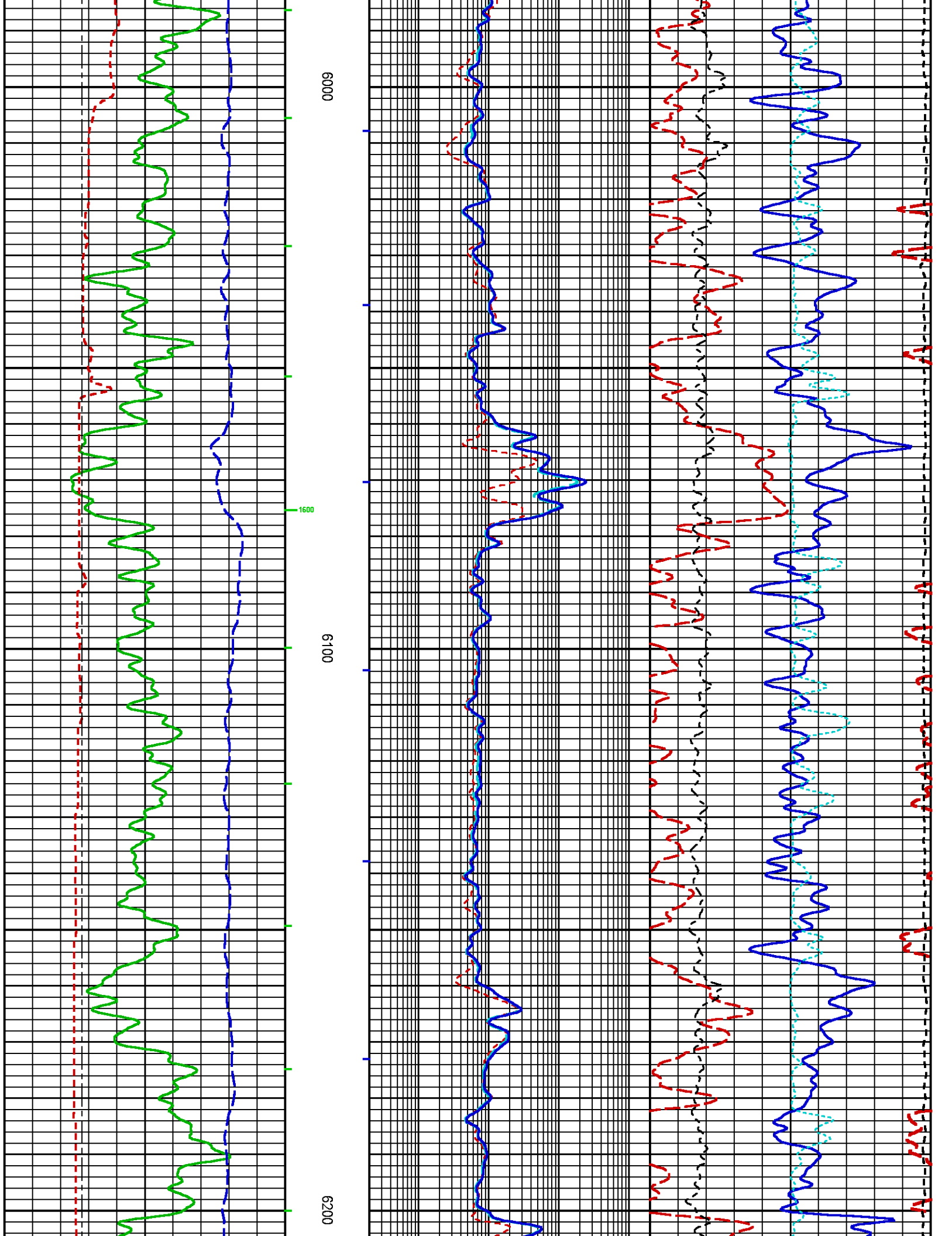


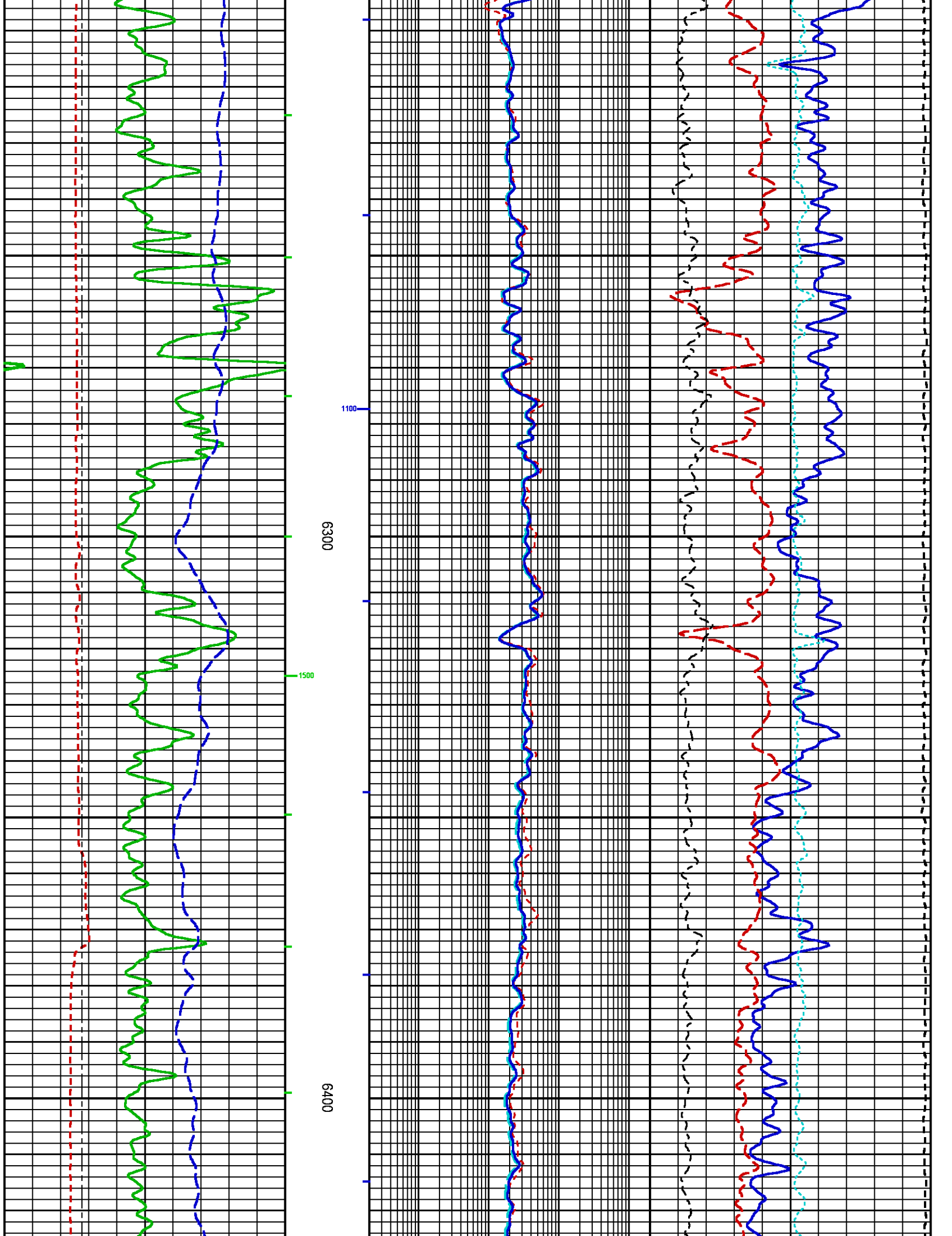


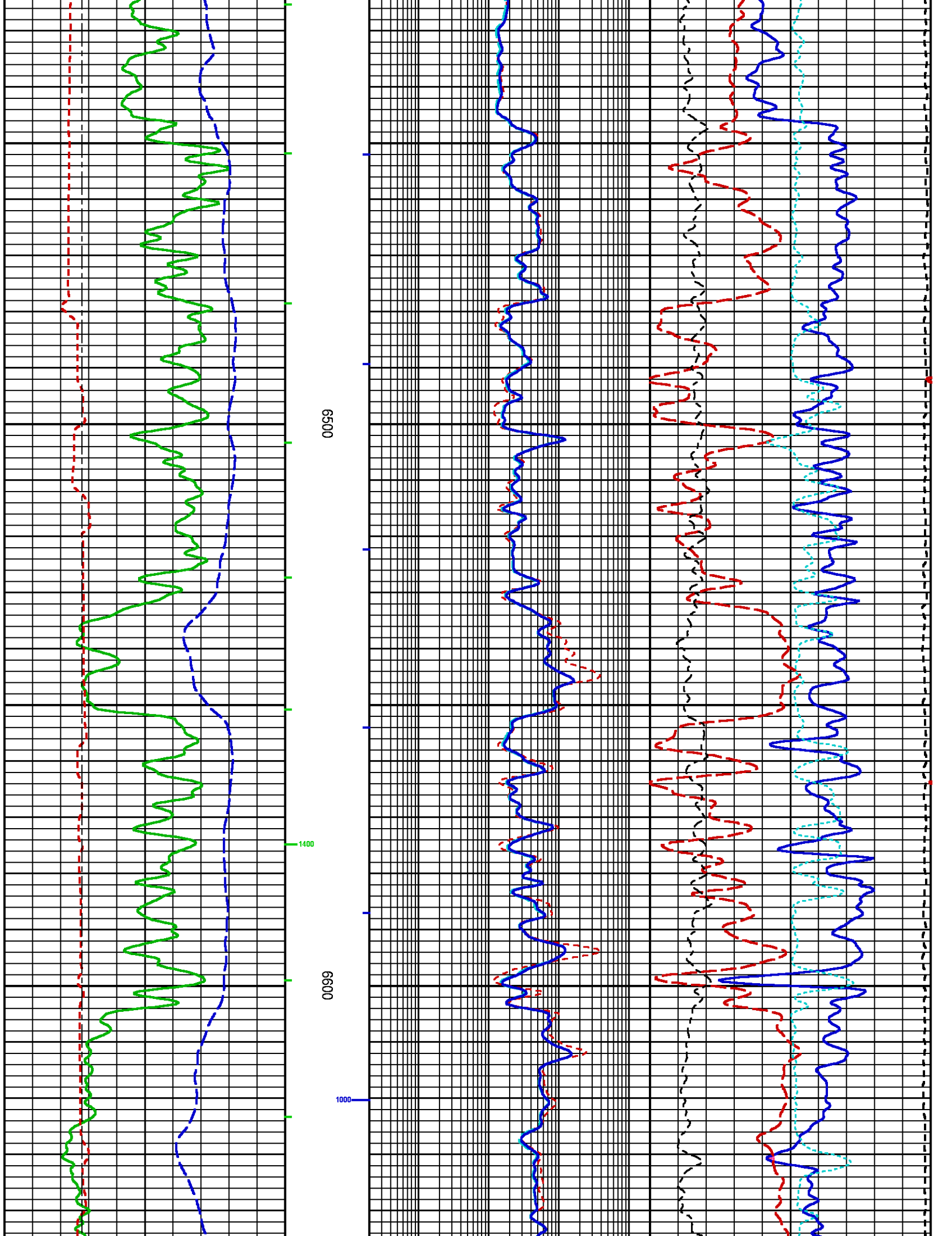


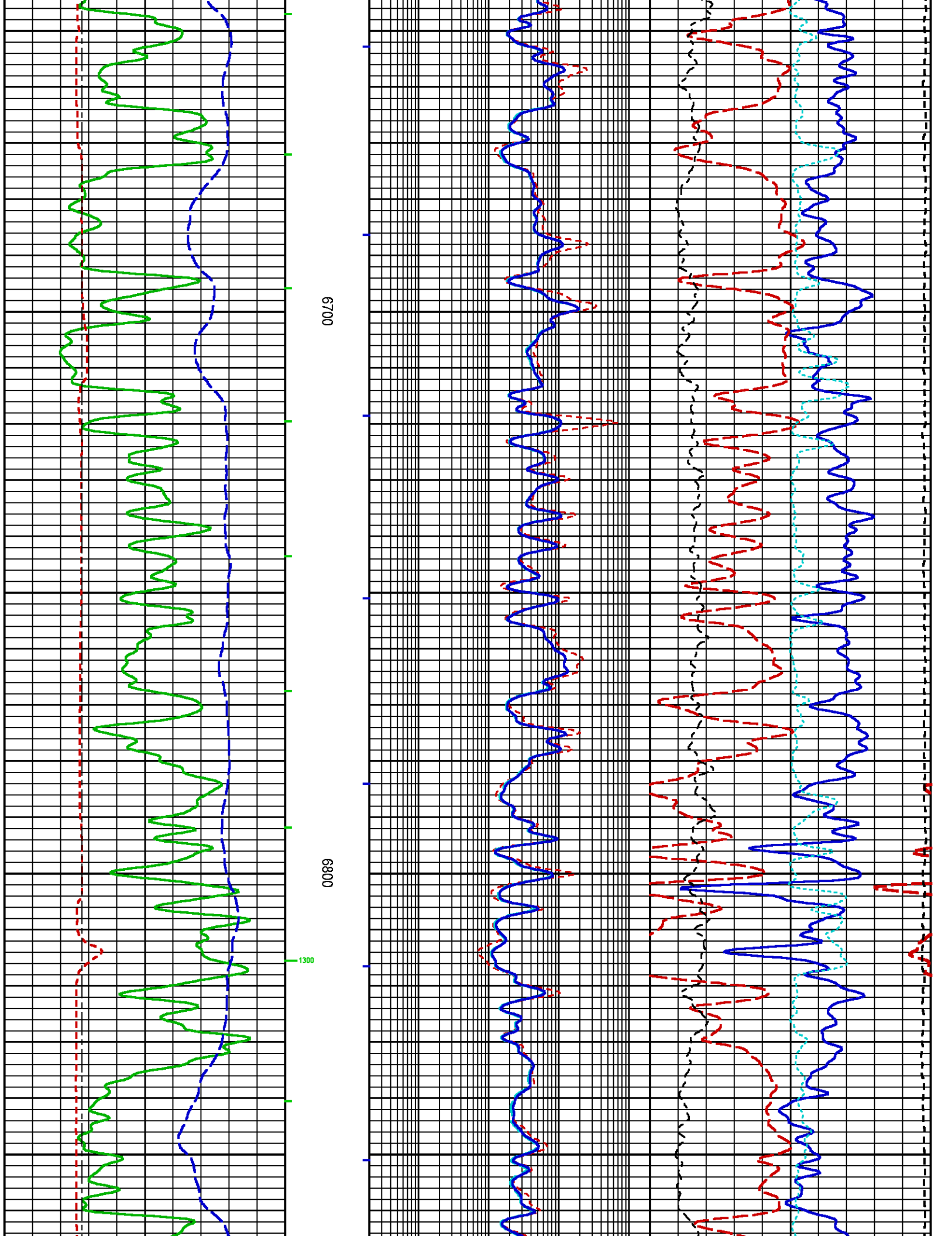


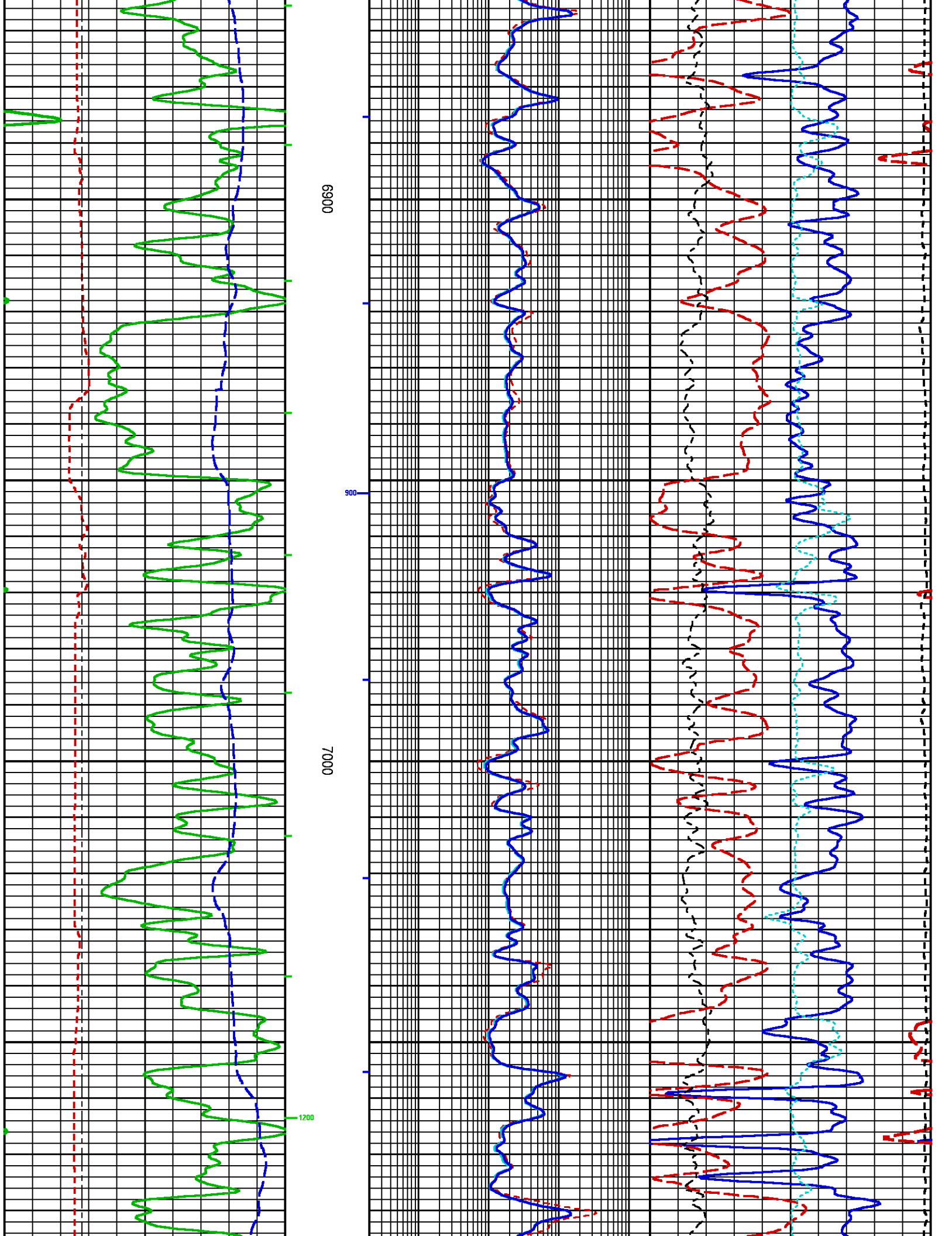


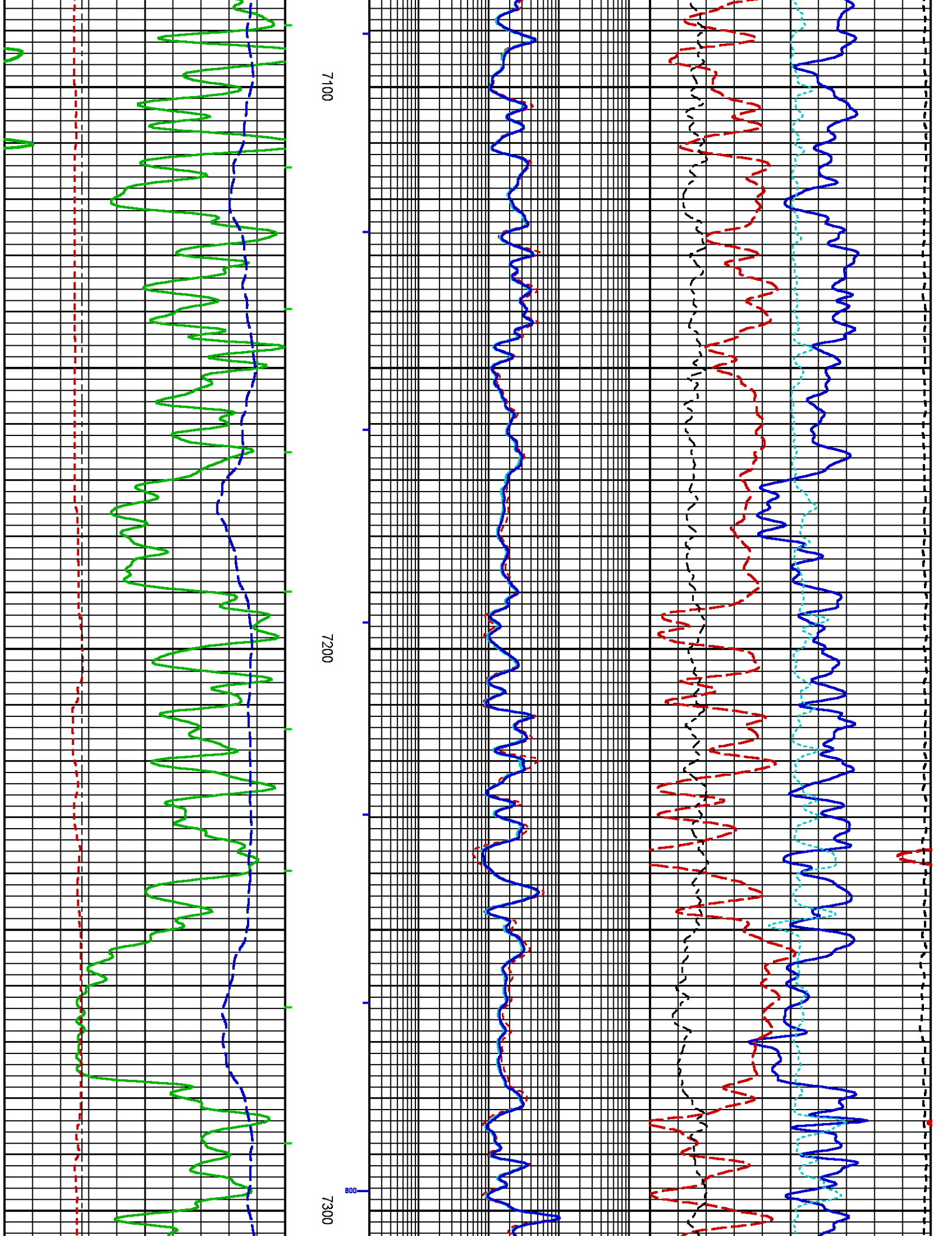


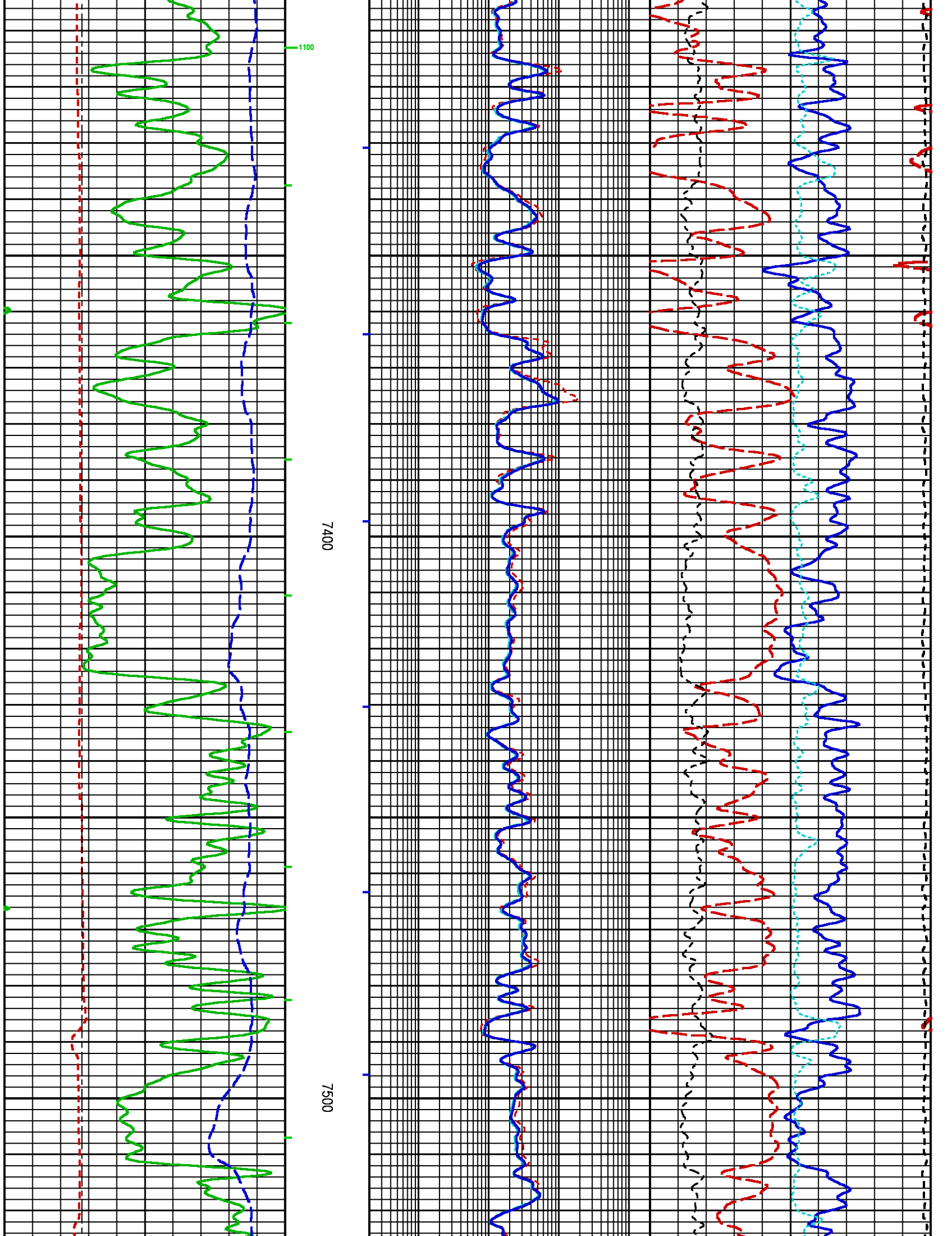


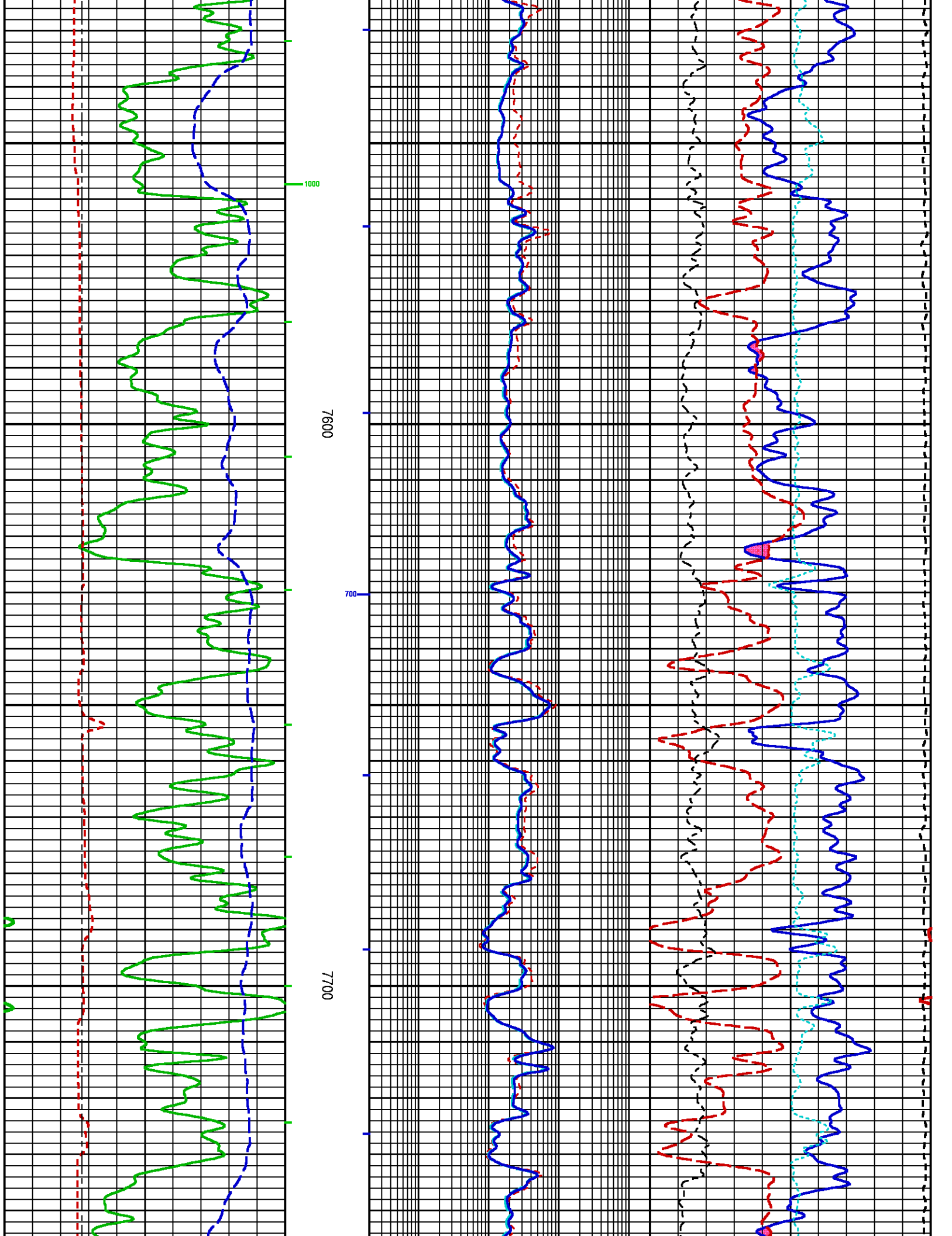


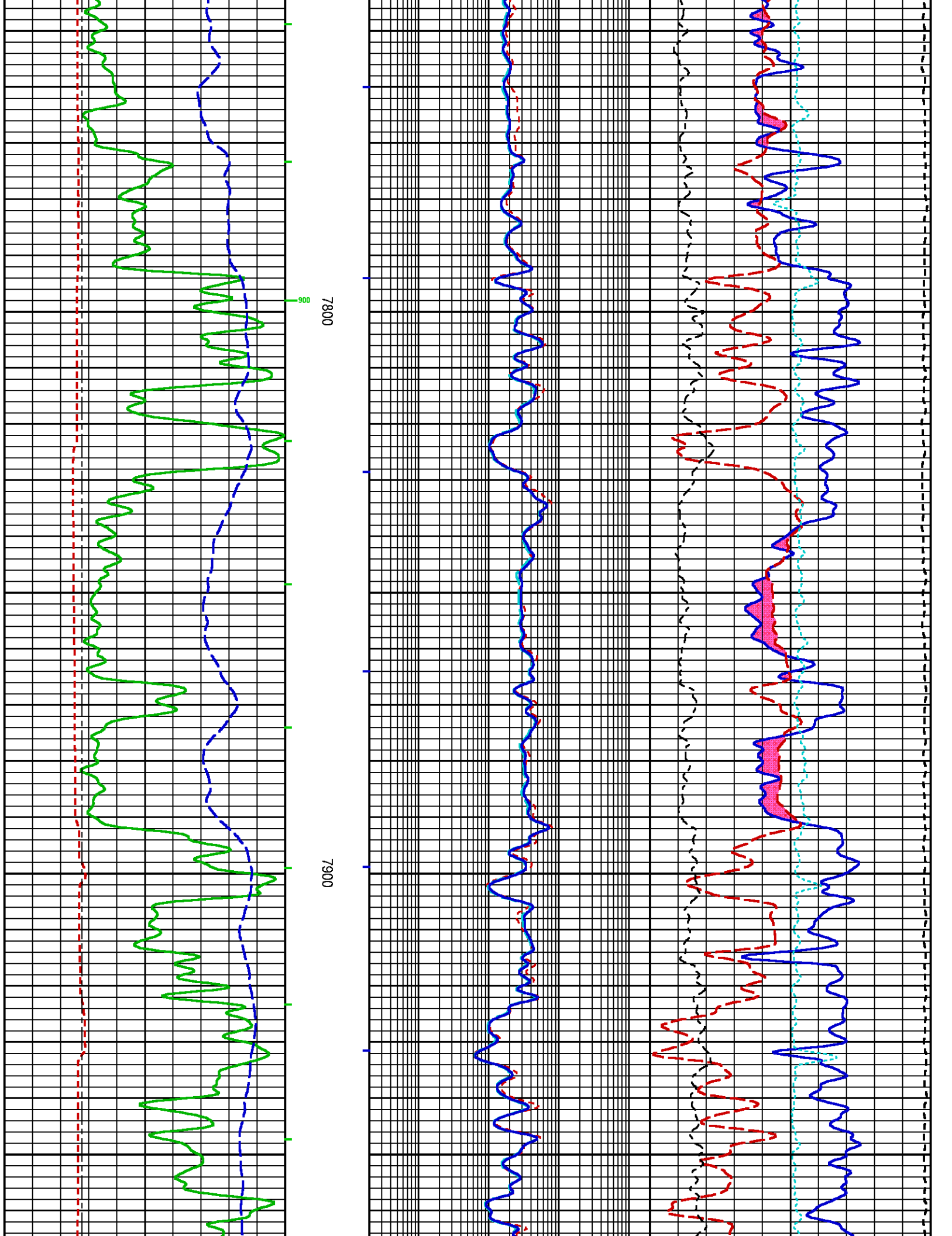


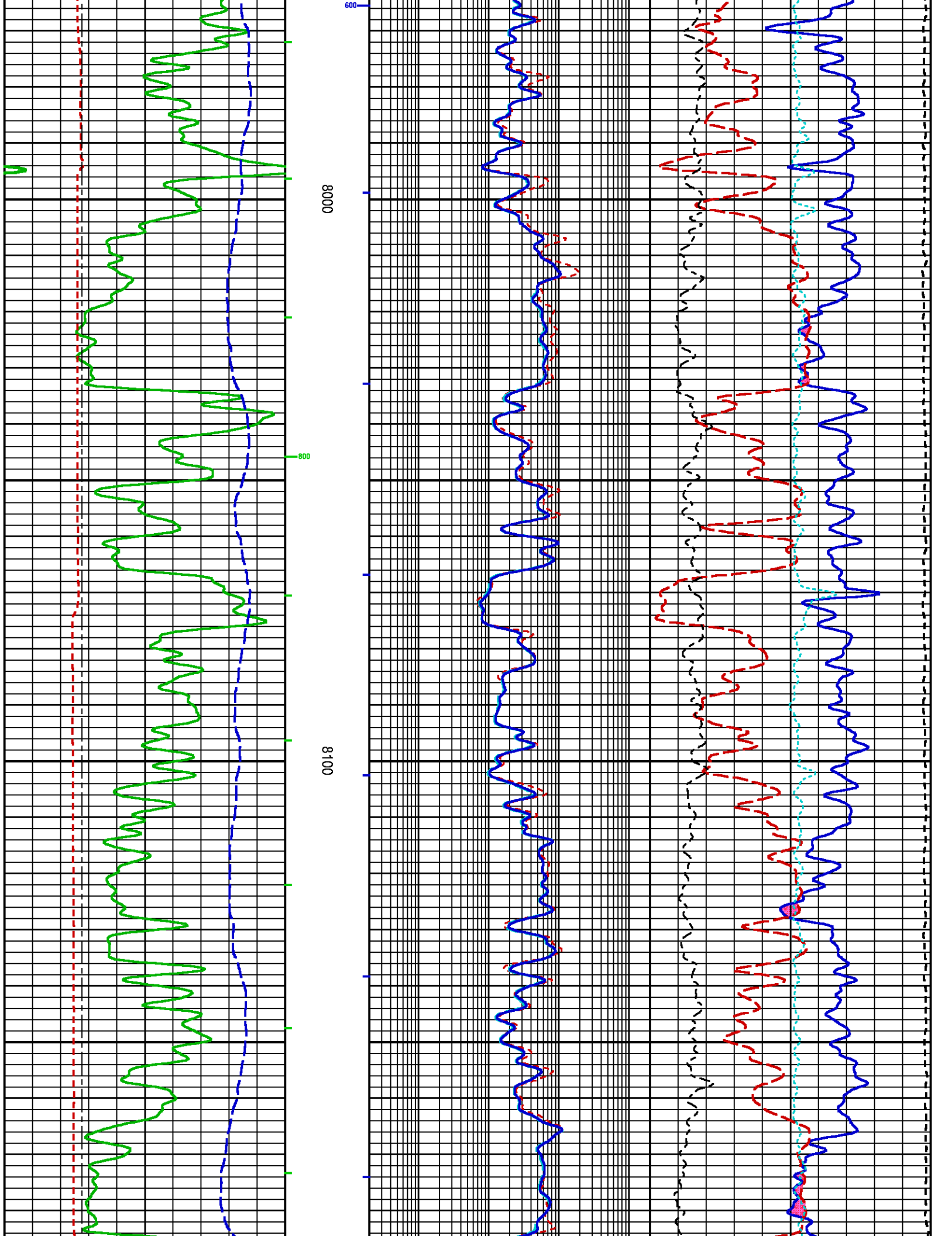


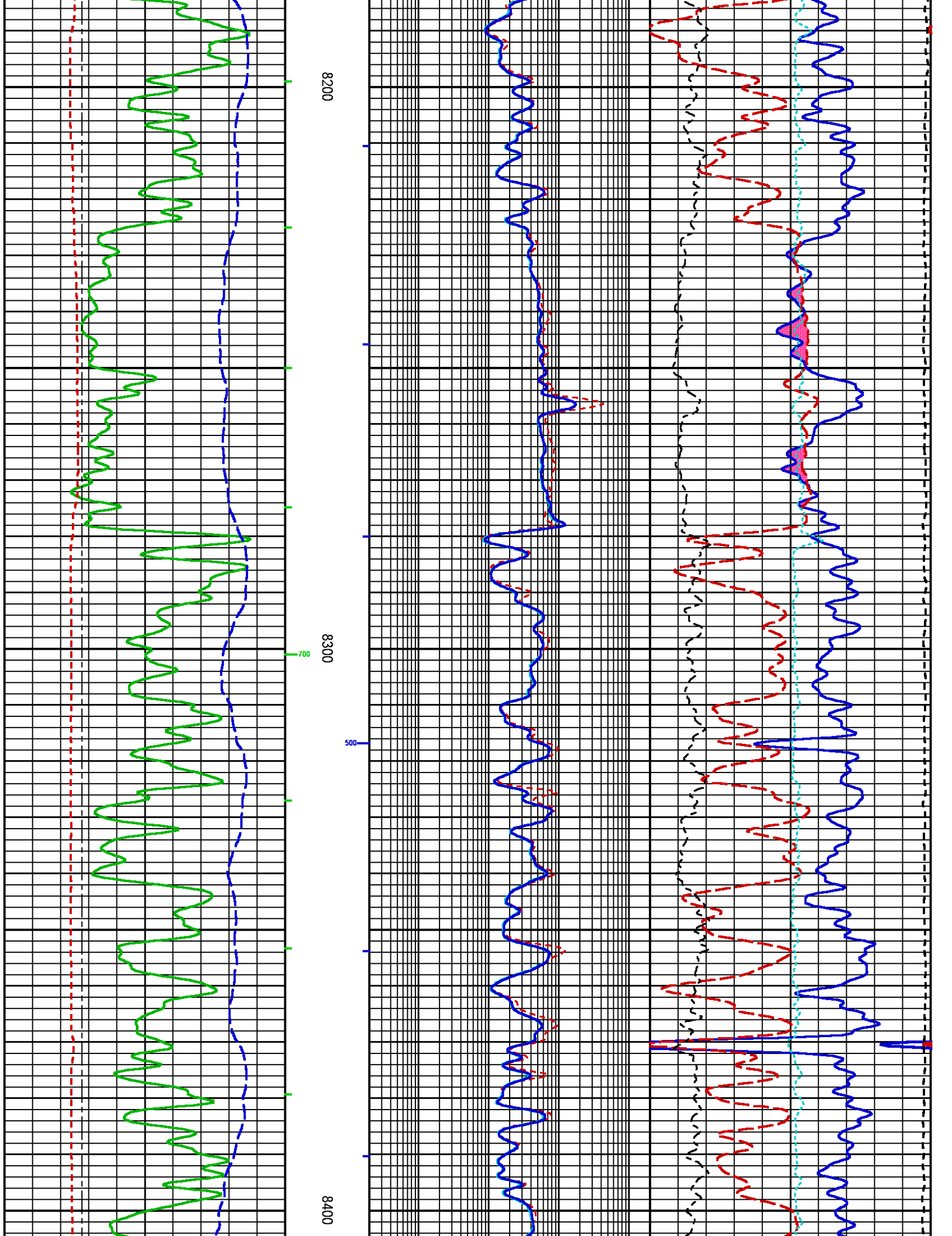


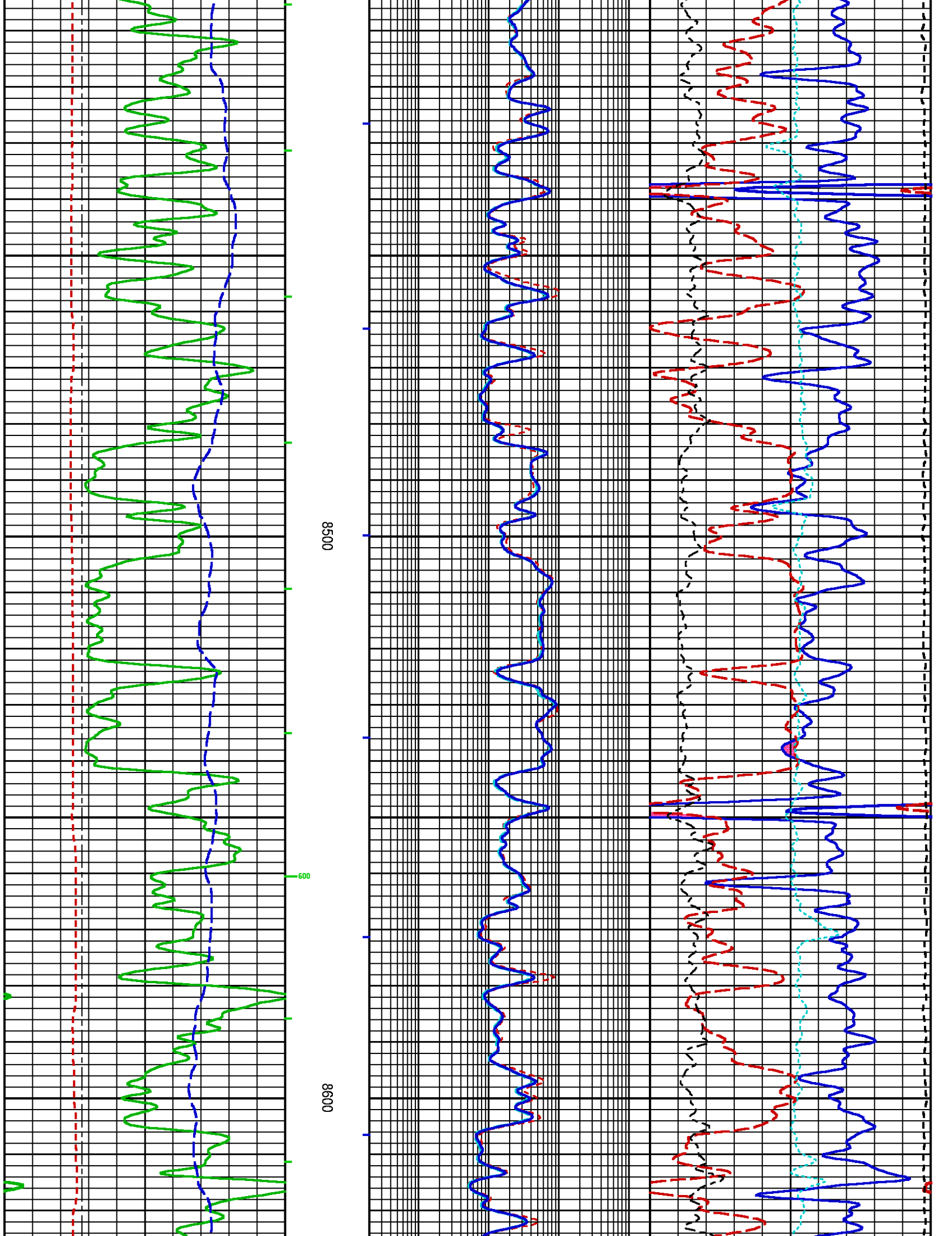


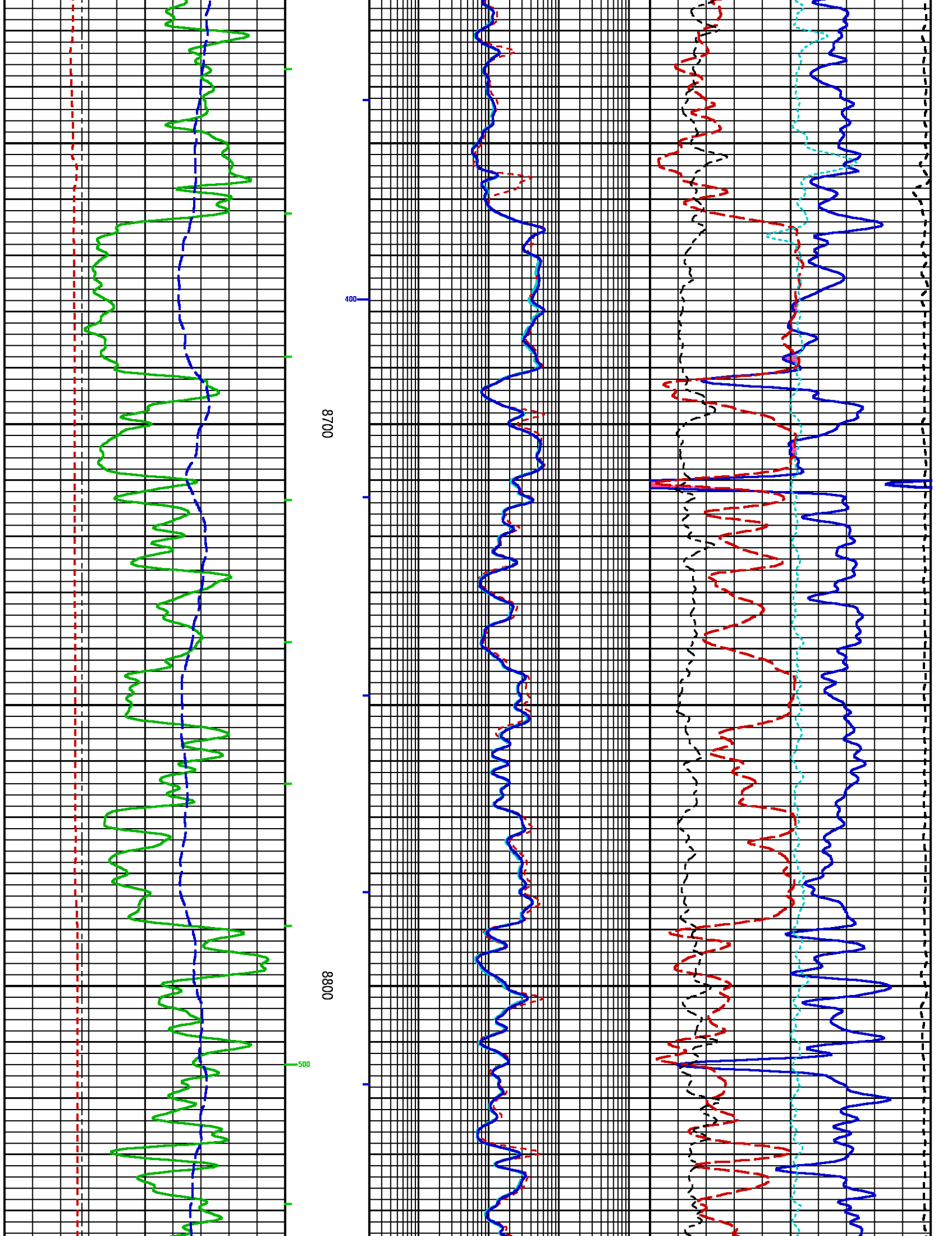


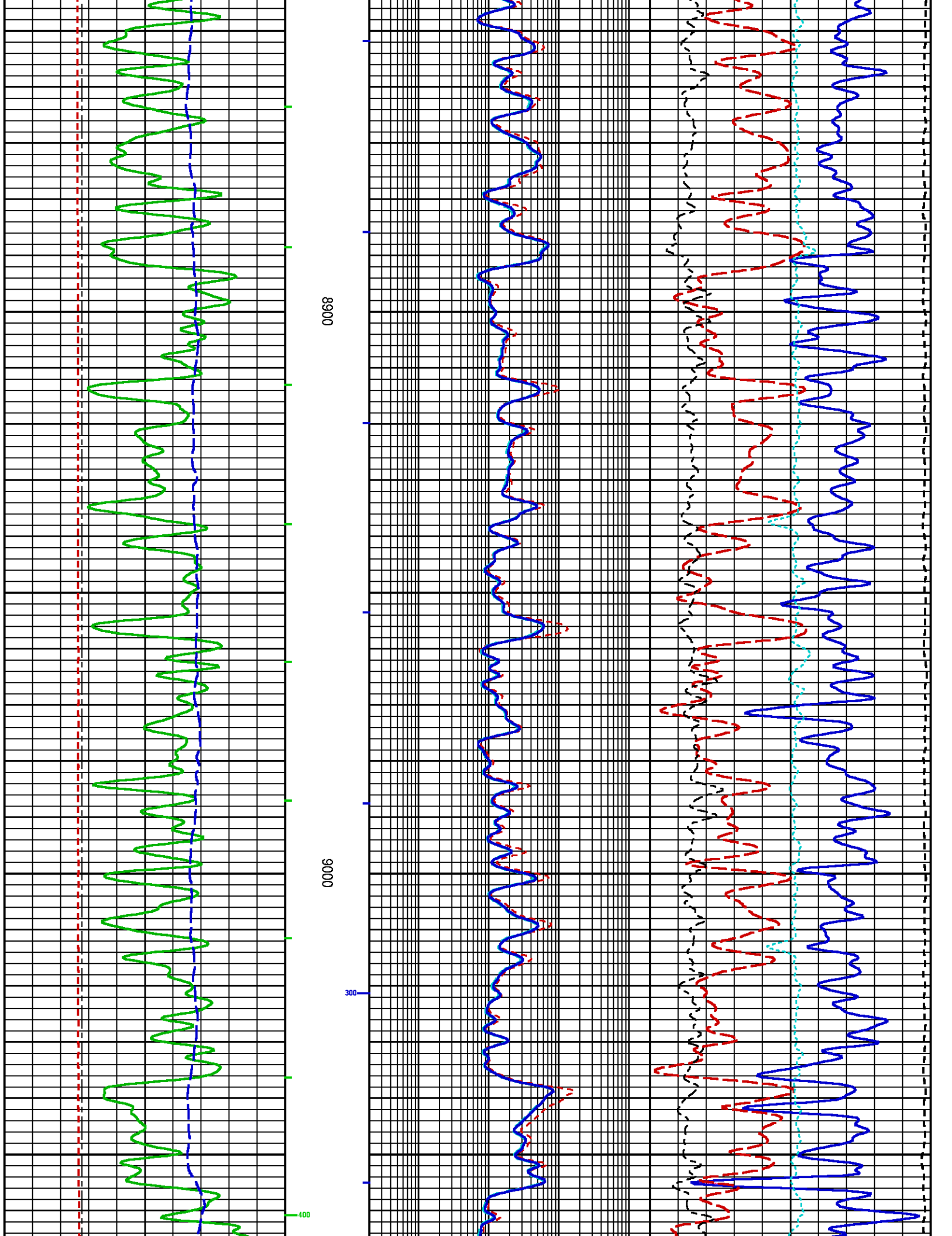


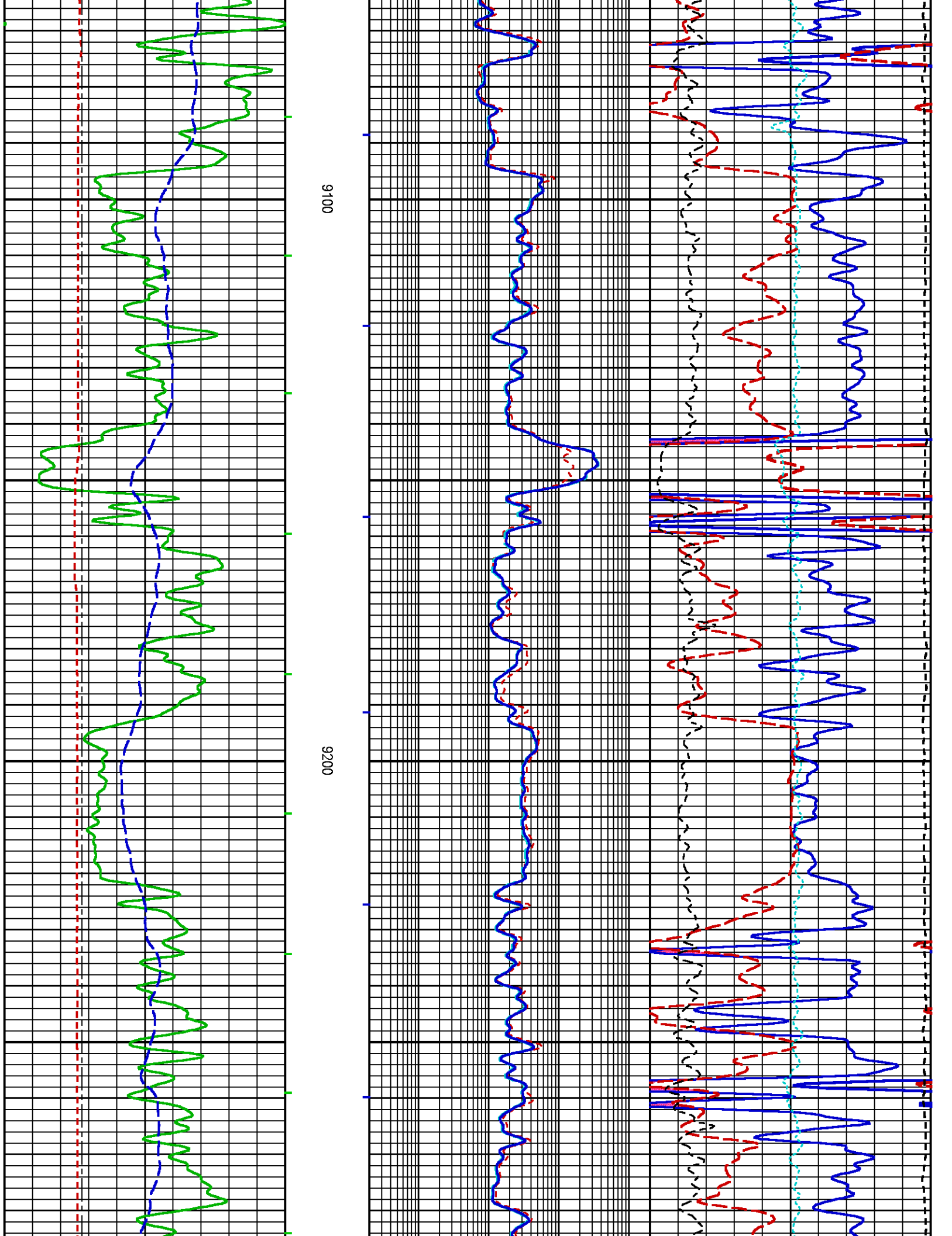


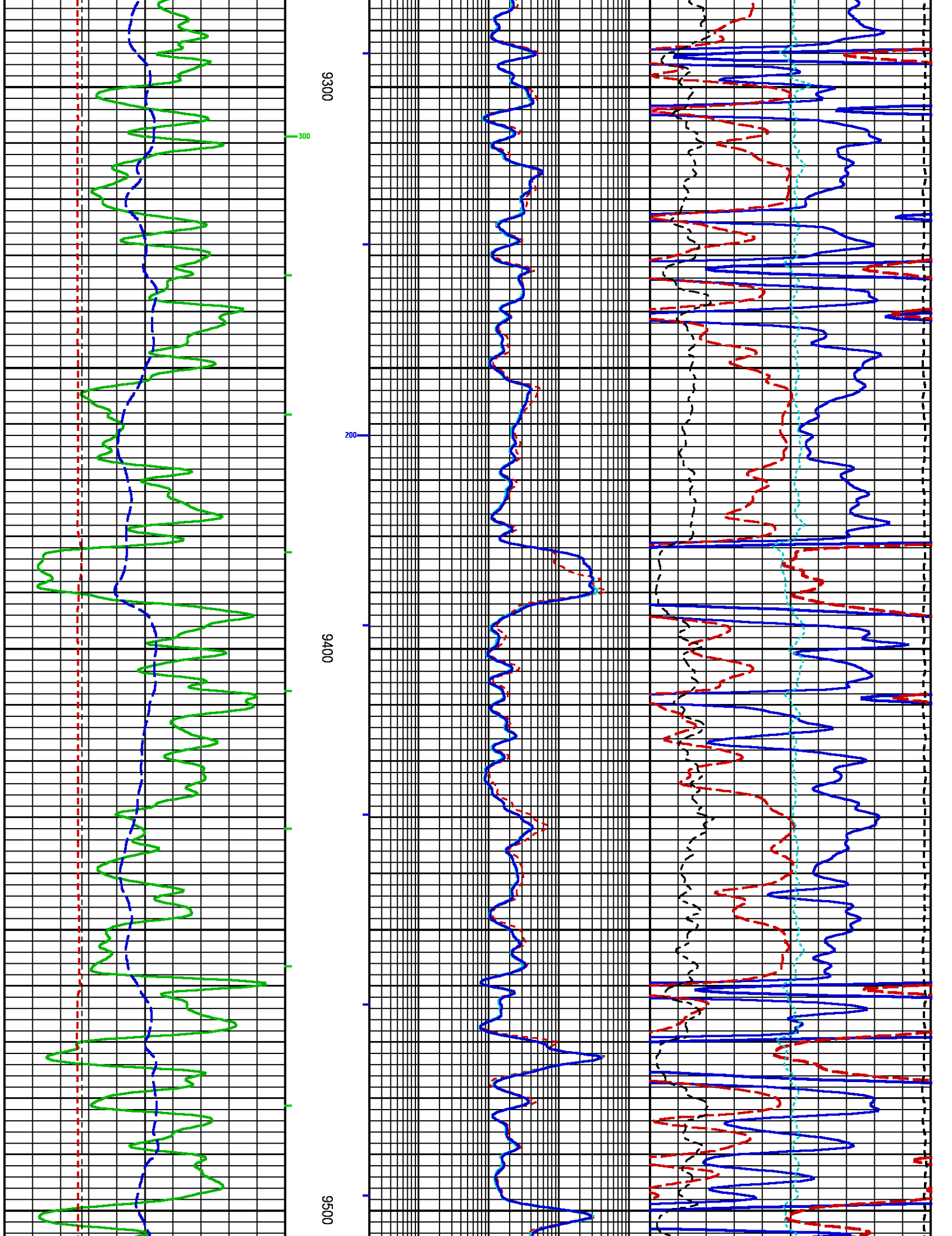


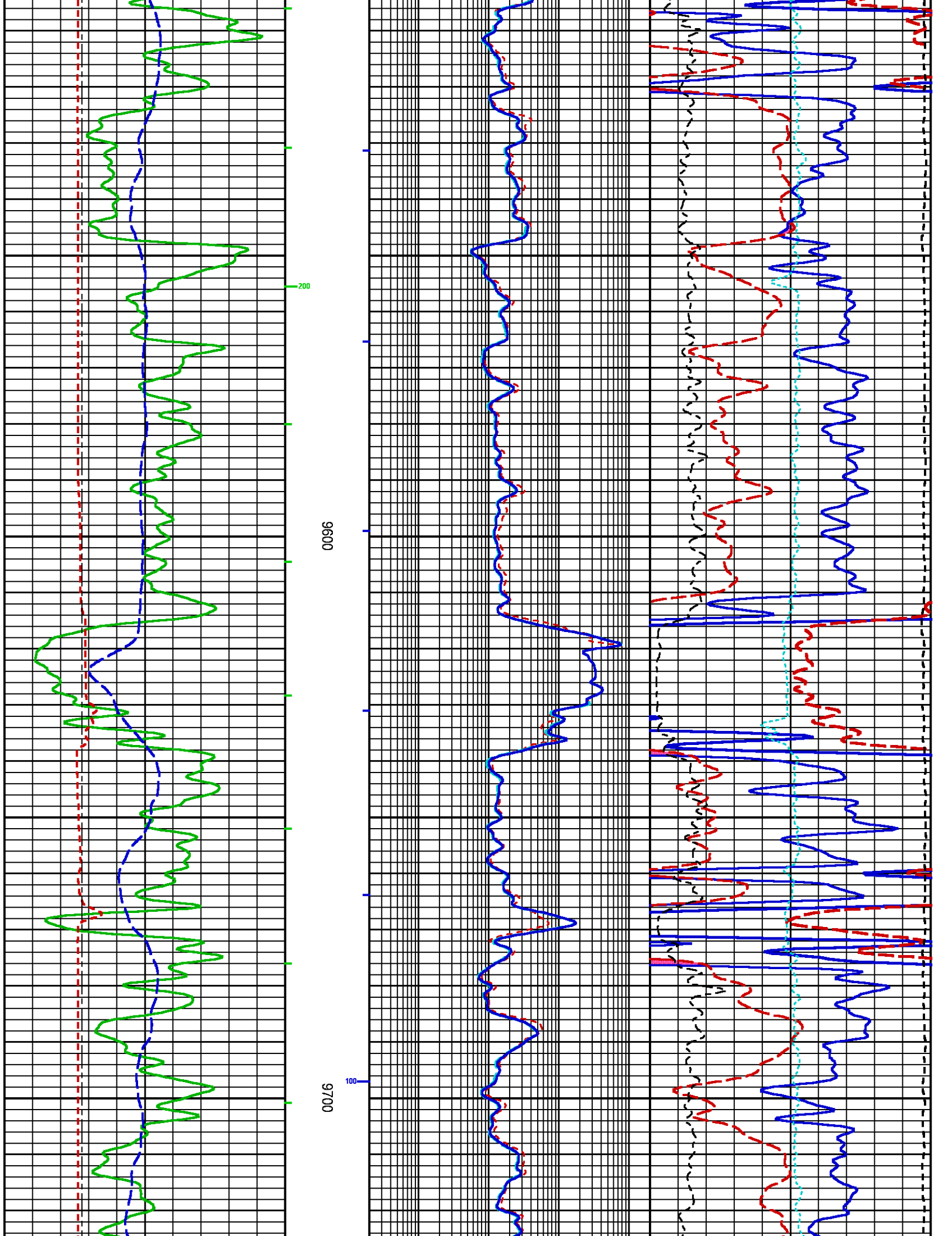


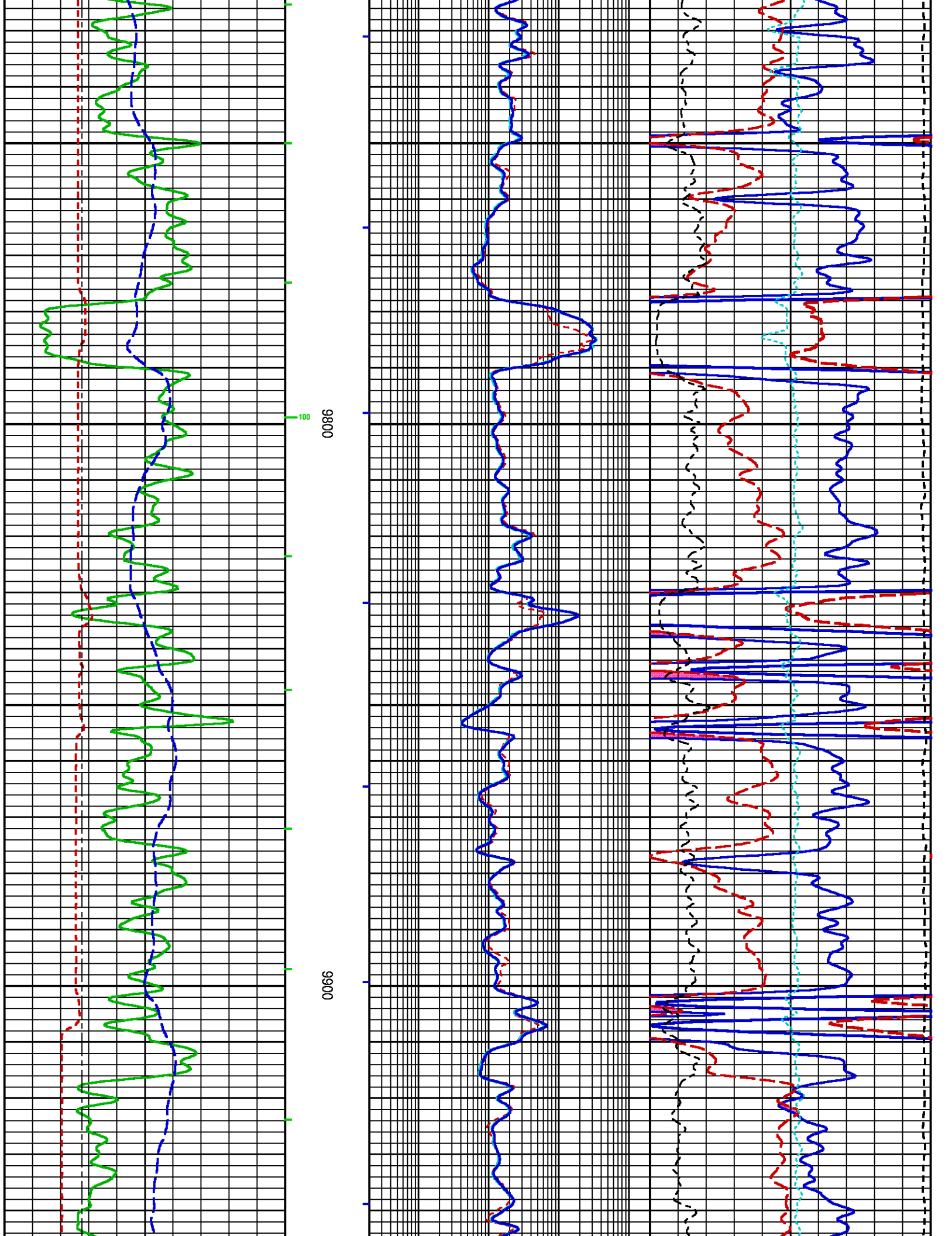


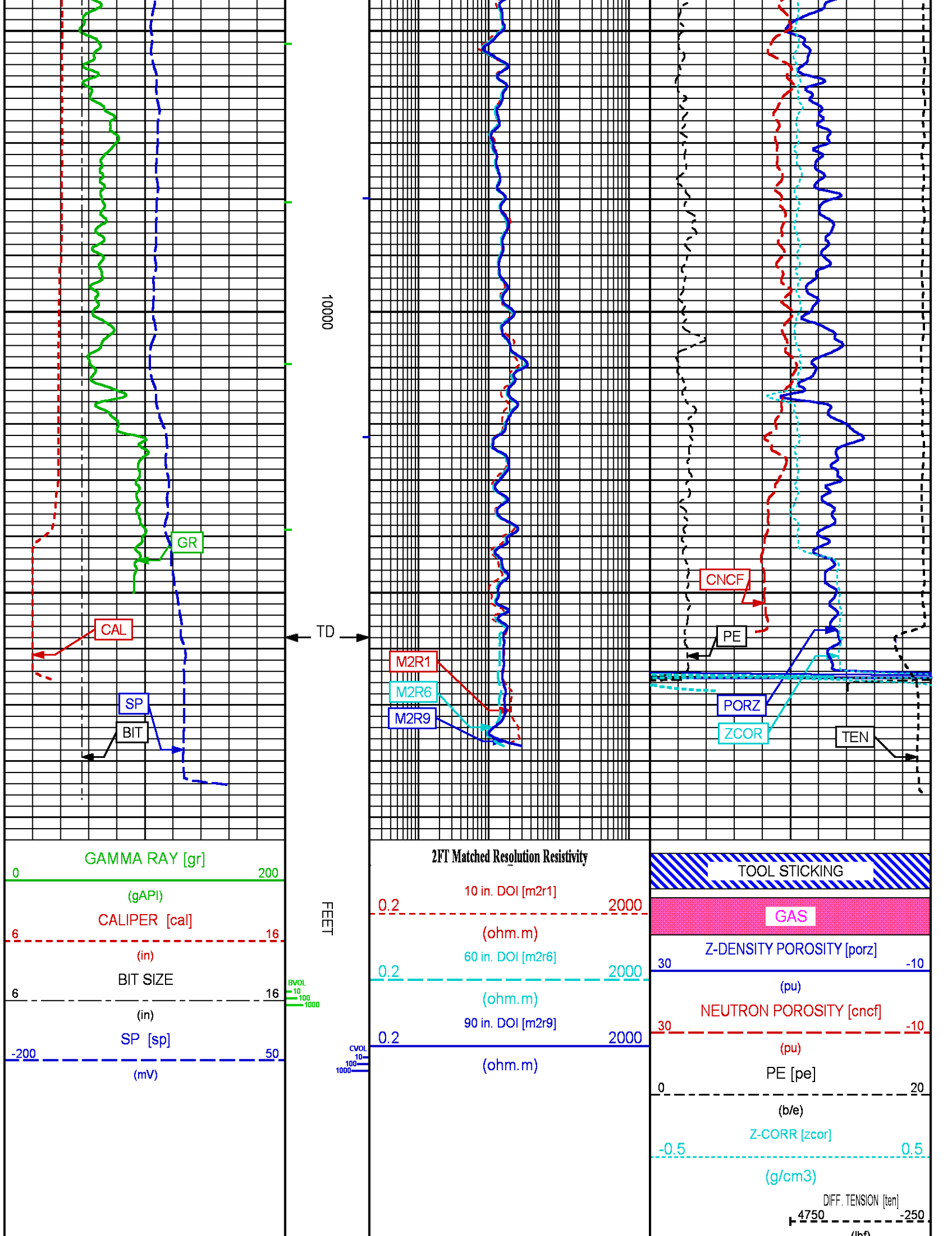












REPEAT LOG

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014

Plotted: Fri May 16 09:41:15 2014

PARAMETER AND FILTER SUMMARY REPORT

File: C:\dat1a\85740J\970aR06.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 975.750 ft BOTTOM DEPTH: 1412.863 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	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	63.8	degF	"	"
	MUD SAMPLE RES	1.850	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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	900	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	"	"

ZDI PROCESSING

RDL 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		"	"

PARAMETER AND FILTER SUMMARY REPORT

File: C:\dat1a\85740J\970a06.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 976.000 ft BOTTOM DEPTH: 1412.863 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"
SP-SPDH	FILTER ()	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	63.8	degF	"	"
	MUD SAMPLE RES	1.850	ohm.m	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	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	900	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)	
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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
F1:BIT	May 15 15:08:30 2014	BIT SIZE
F1:BVOL	May 15 15:08:30 2014	BOREHOLE VOLUME
F1:CAL	May 15 15:08:30 2014	CALIPER
F1:CNCF	May 15 15:08:30 2014	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	May 15 15:08:30 2014	CEMENT VOLUME
F1:GR	May 15 15:08:30 2014	GAMMA RAY
F1:M2R1	May 15 15:08:30 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R6	May 15 15:08:30 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	May 15 15:08:30 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	May 15 15:08:30 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	May 15 15:08:30 2014	POROSITY FOR SELECTABLE MATRIX
F1:SP	May 15 15:08:30 2014	SPONTANEOUS POTENTIAL
F1:TEN	May 15 15:08:30 2014	DIFFERENTIAL TENSION
F1:ZCOR	May 15 15:08:30 2014	DENSITY CORRECTION

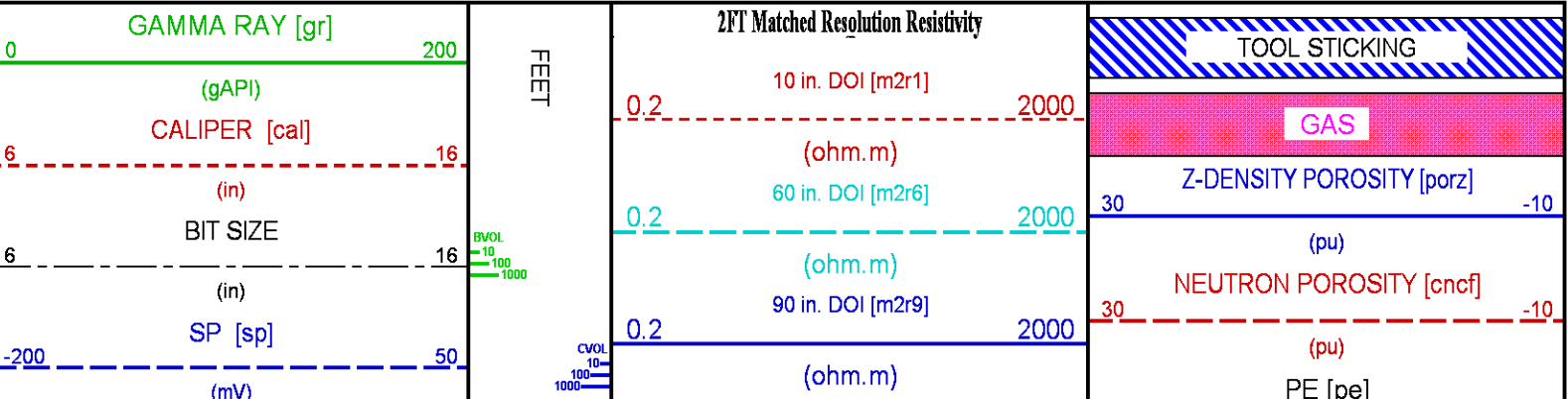
CURVE MEASURE POINT OFFSET

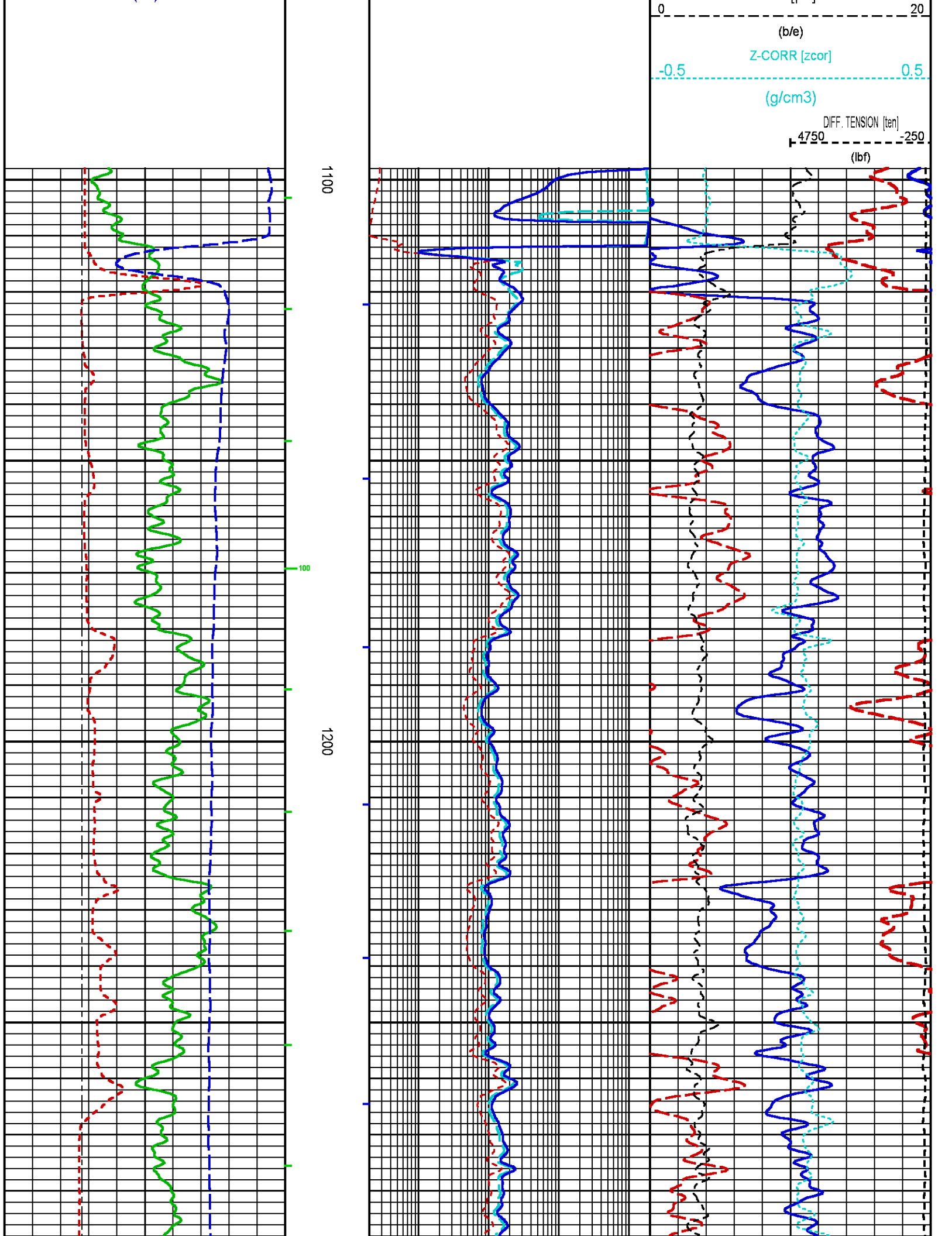
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	35.00	M2R9	2.75	SP	1.25
CAL	18.13	M2R1	2.75	PE	18.00	TEN	0.00
CNCF	27.38	M2R6	2.75	PORZ	18.00	ZCOR	18.00

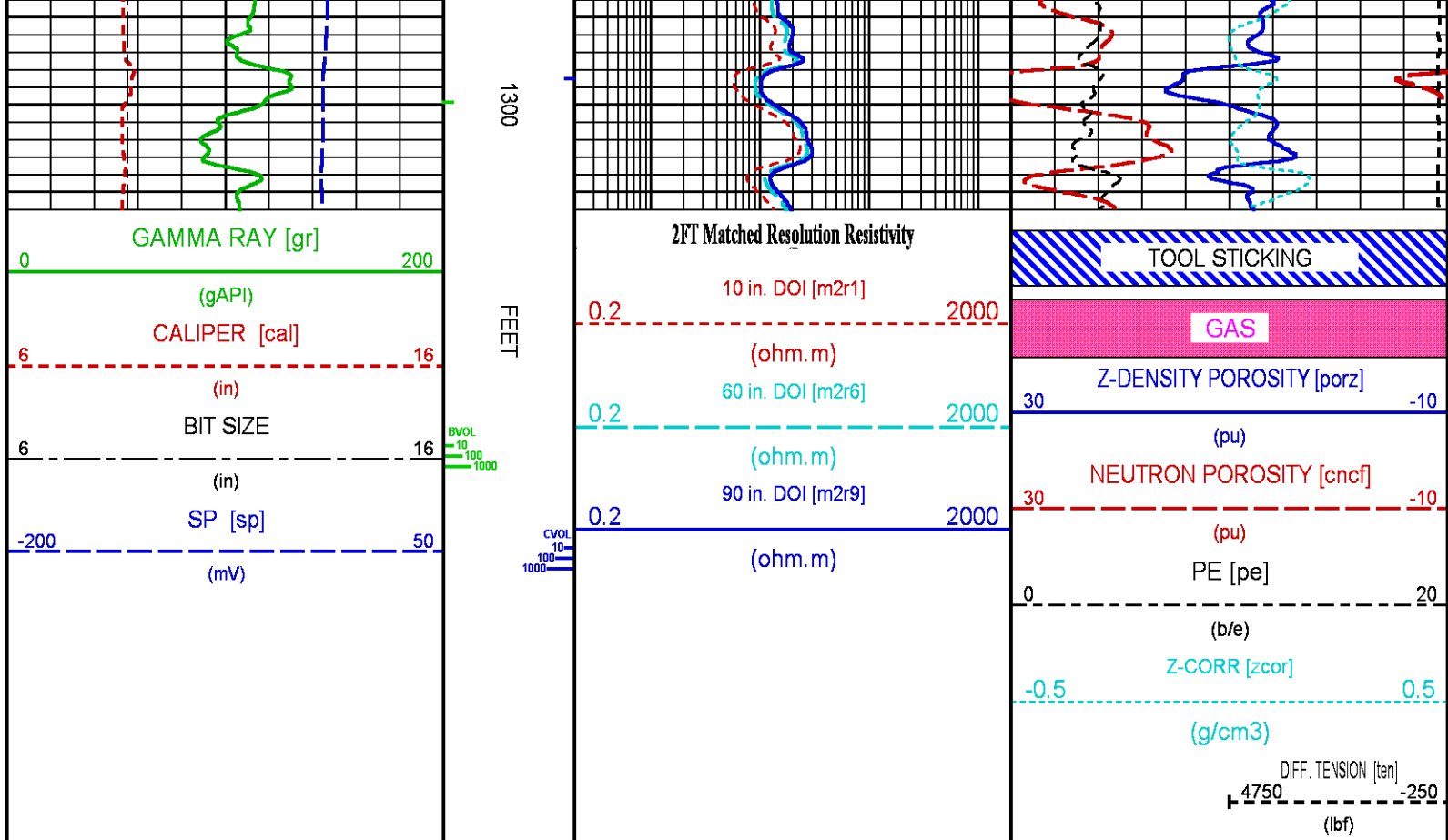
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Plot Interval : 1098 - 1312 Feet

Data File 1 : F1 : BHID26LKX1:C:\dat1a\85740J\n970aR06-REPEAT.xtf
Created On : May 15 15:08:30 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL NER 534-32
Field : RULISON
File Interval : 947.25 - 1424.75 Feet
OCT : n970a

Data File 2 : F2 : BHID26LKX1:C:\dat1a\85740J\n970a06-REPEAT.xtf
Created On : May 9 03:55:57 2014
Company : WPX ENERGY ROCKY MTN LLC
Well : FEDERAL NER 534-32
Field : RULISON
File Interval : 947.25 - 1424.75 Feet
OCT : n970a







CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\85740J\970a.tp1

TTMA PRIMARY CALIBRATION SUMMARY

TOOL #: 3980XA 10142233

DATE/TIME PERFORMED: Thu Aug 11 09:14:18 2011

UNIT #: 3885TD ML4230

ACCEL #: 3980XA 10142233

ACCEL CAL DATE: 14:22 02/02/2005

GAIN	OFFSET
Rm K Factors	(ohm.m)
0.14570	-0.01679

Sig Low	Sig High	Mult Factor	Add Factor	Engr Low	Engr High
(ohm)	(ohm)			(ohm)	(ohm)
0.25	9.94	1.005530	0.000031	0.25	10.00

TTMA BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10142233

DATE/TIME PERFORMED: Thu May 08 23:27:53 2014

DAYS SINCE CAL: 1001

UNIT #: 3880TA HL6670

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	19780	496.51	9.95	1001.33
	18975 20575	489.20 503.60	8.00 12.00	980.00 1020.00
ZERO	-24785	-436.02	0.250	1001.363
	-25585 -23985	-443.20 -428.80	0.200 0.300	980.000 1020.000

TTMA AFTER LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10142233

DATE/TIME PERFORMED: Fri May 09 04:05:22 2014

DAYS SINCE CAL: 1001

UNIT #: 3880TA HL6670

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	19755	498.26	9.95	1001.15
	18975 20575	489.20 503.60	8.00 12.00	980.00 1020.00
ZERO	-24785	-436.02	0.249	1002.045
	-25585 -23985	-443.20 -428.80	0.200 0.300	980.000 1020.000

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10127973

DATE/TIME PERFORMED: Thu May 08 23:29:19 2014

Unit #: 3880TA HL6670

Jig Series: 4702NK VBA-905

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
111.17	785.64	185	0.274	30.49	215.49
			0.230 0.280		

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10127973

DATE/TIME PERFORMED: Thu May 08 23:29:39 2014

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	48.10	1361.74
929.00 1027.00	536.00	1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10127973

DATE/TIME PERFORMED: Fri May 09 04:05:22 2014

DAYS SINCE CAL: 0

TOOL #: 3518EG 10127973

DATE/TIME PERFORMED: Fri May 09 04:05:26 2014

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

Jig: INTRNL N/A

Counts		TEMP (degF)	HV (V)	
977.00		104.16	1363.96	
929.00	1027.00	536.00	1237.00	1512.00

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Wed Apr 02 14:18:58 2014

UNIT #: 3880TA HL6670

CALIBRATOR #: 2437XB 112674

SOURCE #: 4718XA N-0897

SSN DT CPS	LSN DT CPS	SSN/LSN	MCF	CNRATIO	CN PU
4697.69	785.20	5.98276	0.95892	5.73700	25.241
			0.95000 1.05000		

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Thu May 08 23:28:06 2014

DAYS SINCE CAL: 36

UNIT #: 3880TA HL6670

CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
991.41	993.42	0.99797	38.7	1352.7	4.612
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Fri May 09 04:05:29 2014

DAYS SINCE CAL: 36

UNIT #: 3880TA HL6670

CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
915.38	916.83	0.99842	100.4	1362.0	4.612
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10090664

DATE/TIME PERFORMED: Wed Apr 02 09:25:02 2014

UNIT #: 3880TA HL6670

	SIZE (in)	VALUE	MULTIPLIER	ADD
SMALL RING (Arm)	7.000	1300.4		
LARGE RING (Arm)	11.000	2532.0	0.00325	2.77655
PAD CLOSED		1644.0	0.00250	-4.11000

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10090664

DATE/TIME PERFORMED: Wed Apr 02 11:12:24 2014

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)
226.1	225.1	1257.6	1640.6
220.0 230.0	220.0 230.0		

	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	34211.6	12494.6	0.761 0.720 0.890	1.679	0.000	1.900
AL	21645.5	1424.3		2.667	-0.016	
AL + SHIM	28594.9	2455.6		2.558	0.098	
MG + SHIM (HI PE)	16808.4	5934.7	0.303 0.280 0.360			8.550
RATIO AL + SHIM/AL	1.32 1.30 1.40	1.72 1.60 1.80				
RATIO MG/AL	1.58 1.58 1.70	8.77 8.55 9.55				

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1530XA 10121806

DATE/TIME PERFORMED: Tue Jan 07 14:33:41 2014

UNIT #: 3880TA HL6670

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	0.0037 -0.2000 0.2000	-0.0008 -0.1000 0.1000	-0.0003 -0.1000 0.1000	0.0007 -0.1000 0.1000	-0.0014 -0.1000 0.1000	0.0002 -0.1000 0.1000	-0.0004 -0.1000 0.1000	-0.0000 -0.1000 0.1000
Coil 0 Q	-0.0039 -0.5000 0.5000	-0.0008 -0.2000 0.2000	0.0005 -0.1000 0.1000	-0.0012 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0003 -0.1000 0.1000	0.0000 -0.1000 0.1000	-0.0004 -0.1000 0.1000
Coil 1 R	0.0008 -0.2000 0.2000	-0.0004 -0.1000 0.1000	0.0018 -0.1000 0.1000	-0.0009 -0.1000 0.1000	-0.0004 -0.1000 0.1000	-0.0003 -0.1000 0.1000	-0.0002 -0.1000 0.1000	0.0006 -0.1000 0.1000

Coil 1 Q	-0.0178	-0.0015	0.0010	-0.0012	0.0008	-0.0007	-0.0006	-0.0011
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 2 R	0.0055	-0.0012	0.0043	-0.0024	0.0006	-0.0000	-0.0000	0.0016
	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 2 Q	-0.0108	-0.0007	-0.0037	-0.0003	-0.0013	-0.0013	0.0006	-0.0012
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 3 R	0.0113	-0.0008	-0.0016	0.0012	0.0002	0.0008	0.0033	0.0012
	-0.3000 0.3000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 3 Q	-0.0126	0.0028	0.0037	-0.0006	-0.0010	-0.0014	0.0038	0.0020
	-0.5000 0.5000	-0.2000 0.2000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000	-0.1000 0.1000
Coil 4 R	0.0190	-0.0089	-0.0002	0.0046	0.0026	-0.0029	0.0066	0.0043
	-0.5000 0.5000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000
Coil 4 Q	-0.0187	-0.0122	0.0007	0.0041	0.0051	0.0076	-0.0023	0.0004
	-1.0000 1.0000	-0.4000 0.4000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000	-0.2000 0.2000
Coil 5 R	0.0512	-0.0214	-0.0173	0.0092	0.0079	-0.0070	0.0171	0.0147
	-1.2000 1.2000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000
Coil 5 Q	-0.0400	-0.0261	0.0143	-0.0158	0.0060	-0.0097	0.0083	-0.0060
	-1.5000 1.5000	-0.8000 0.8000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-0.4000 0.4000	-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	163.06	161.65	158.79	154.56	148.96	142.06	133.99	124.73
	136.00 186.00	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	7.674	25.240	42.370	59.458	76.552	93.666	110.821	127.954
	6.000 9.000	21.000 30.000	35.000 50.000	49.000 71.000	63.000 91.000	77.000 109.000	92.000 130.000	106.000 151.000
Coil 1 M	281.66	279.14	274.04	266.44	256.48	244.13	229.67	213.18
	238.00 328.00	235.00 325.00	230.00 320.00	225.00 312.00	218.00 302.00	208.00 288.00	196.00 266.00	184.00 244.00
Coil 1 P	7.844	25.720	43.167	60.580	77.996	95.415	112.883	130.299
	6.000 9.000	21.000 30.000	35.000 51.000	49.000 71.000	63.000 92.000	78.000 112.000	93.000 130.000	107.000 151.000
Coil 2 M	578.47	573.60	563.68	548.89	529.31	504.78	475.98	442.89
	479.00 659.00	474.00 654.00	463.00 643.00	450.00 622.00	432.00 602.00	412.00 572.00	390.00 540.00	359.00 499.00
Coil 2 P	7.964	26.114	43.846	61.558	79.291	97.067	114.892	132.704
	6.000 9.000	21.000 31.000	35.000 51.000	49.000 71.000	63.000 92.000	76.000 115.000	92.000 135.000	105.000 155.000
Coil 3 M	925.75	917.66	901.13	876.42	844.08	803.95	756.94	702.73
	772.00 1060.00	764.00 1050.00	752.00 1030.00	728.00 1010.00	700.00 970.00	665.00 925.00	628.00 868.00	589.00 799.00
Coil 3 P	7.767	25.546	42.898	60.208	77.518	94.862	112.225	129.553
	6.000 10.000	21.000 30.000	35.000 51.000	49.000 72.000	63.000 93.000	76.000 114.000	90.000 135.000	104.000 156.000
Coil 4 M	1453.6	1440.2	1412.5	1371.6	1318.0	1252.6	1176.7	1090.2
	1210.0 1700.0	1205.0 1690.0	1180.0 1650.0	1140.0 1590.0	1120.0 1530.0	1070.0 1450.0	1000.0 1350.0	942.0 1240.0
Coil 4 P	7.866	25.838	43.376	60.844	78.277	95.713	113.107	130.407
	6.000 10.000	21.000 31.000	35.000 52.000	49.000 73.000	63.000 93.000	77.000 114.000	91.000 135.000	105.000 156.000
Coil 5 M	2983.3	2960.7	2911.3	2836.3	2735.9	2611.5	2463.8	2292.2
	2450.0 3450.0	2420.0 3400.0	2410.0 3320.0	2350.0 3200.0	2280.0 3080.0	2150.0 2950.0	2020.0 2750.0	1870.0 2570.0
Coil 5 P	7.916	26.013	43.723	61.396	79.117	96.902	114.759	132.605
	6.000 10.000	20.000 31.000	35.000 52.000	49.000 73.000	63.000 94.000	79.000 113.000	93.000 134.000	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	-1097	-658	-537	-464	-412	-373	-342	-318
	-3200 940	-1400 -20	-930 -150	-760 -180	-660 -130	-600 -120	-550 -110	-520 -92
Coil 0 Q	-1163	-686	-547	-490	-460	-442	-431	-425
	-15000 11000	-5800 3800	-3700 2100	-2700 1400	-2200 1000	-1800 790	-1600 620	-1500 490
Coil 1 R	-141	-154	-146	-134	-123	-114	-106	-99
	-750 460	-360 83	-280 9	-230 -10	-200 -26	-180 -35	-160 -46	-150 -49
Coil 1 Q	-121	-79	-75	-77	-78	-79	-79	-80
	-3300 3300	-1100 960	-630 530	-470 360	-380 260	-320 190	-290 150	-260 120

Coil 2 R	2.3 -85.0 76.0	-34.0 -84.0 -0.4	-36.0 -57.0 -12.0	-33.9 -51.0 -16.0	-31.1 -46.0 -17.0	-28.4 -42.0 -16.0	-25.6 -39.0 -15.0	-23.7 -37.0 -13.0
Coil 2 Q	422.6 -1500.0 1900.0	141.1 -500.0 610.0	80.2 -290.0 350.0	54.6 -220.0 260.0	40.6 -160.0 190.0	32.6 -140.0 160.0	27.9 -110.0 130.0	25.4 -99.0 120.0
Coil 3 R	1.3 -23.0 21.0	-7.5 -22.0 1.6	-8.9 -21.0 -1.3	-8.6 -20.0 -1.8	-9.0 -19.0 -2.0	-8.1 -19.0 -1.3	-7.8 -19.0 -0.8	-7.5 -19.0 -0.0
Coil 3 Q	124.6 -540.0 530.0	45.6 -180.0 180.0	31.0 -100.0 110.0	25.3 -71.0 81.0	23.3 -51.0 66.0	23.0 -37.0 58.0	23.2 -28.0 53.0	24.6 -21.0 51.0
Coil 4 R	0.46 -18.00 13.00	-1.57 -12.00 2.70	-1.66 -11.00 1.50	-1.72 -9.80 0.52	-3.24 -9.90 0.96	-1.70 -10.00 1.50	-1.38 -11.00 2.30	-1.38 -11.00 2.60
Coil 4 Q	1.20 -250.00 280.00	2.60 -79.00 98.00	3.65 -43.00 64.00	4.85 -27.00 51.00	7.87 -18.00 46.00	8.01 -11.00 42.00	9.87 -5.50 42.00	10.34 -1.00 42.00
Coil 5 R	1.03 -56.00 51.00	0.44 -8.40 3.60	-0.40 -6.90 1.10	-0.20 -6.90 1.20	-1.64 -9.30 2.90	-0.31 -14.00 6.30	-0.38 -19.00 9.60	0.29 -24.00 13.00
Coil 5 Q	0.20 -88.00 69.00	2.11 -26.00 27.00	3.66 -14.00 22.00	4.49 -7.00 22.00	3.78 -2.50 24.00	6.86 1.10 26.00	8.64 4.10 29.00	9.90 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 0.850 1.100	0.975 0.860 1.100	0.979 0.870 1.100	0.981 0.880 1.100	0.982 0.880 1.100	0.982 0.880 1.100	0.983 0.880 1.100	0.982 0.880 1.100
Coil 0 P	-0.316 -1.500 1.500	-0.485 -1.500 1.500	-0.379 -1.500 1.500	-0.260 -1.500 1.500	-0.175 -1.500 1.500	-0.101 -1.500 1.500	-0.026 -1.500 1.500	-0.005 -1.500 1.500
Coil 1 M	0.961 0.850 1.100	0.970 0.860 1.100	0.974 0.870 1.100	0.976 0.880 1.100	0.977 0.880 1.100	0.977 0.880 1.100	0.977 0.880 1.100	0.977 0.880 1.100
Coil 1 P	-0.296 -1.500 1.500	-0.476 -1.500 1.500	-0.360 -1.500 1.500	-0.238 -1.500 1.500	-0.134 -1.500 1.500	-0.087 -1.500 1.500	-0.032 -1.500 1.500	0.016 -1.500 1.500
Coil 2 M	0.986 0.890 1.100	0.987 0.890 1.100	0.987 0.890 1.100	0.986 0.890 1.100	0.986 0.890 1.100	0.985 0.890 1.100	0.985 0.890 1.100	0.985 0.890 1.100
Coil 2 P	0.044 -1.500 1.500	0.046 -1.500 1.500	0.090 -1.500 1.500	0.134 -1.500 1.500	0.151 -1.500 1.500	0.175 -1.500 1.500	0.211 -1.500 1.500	0.219 -1.500 1.500
Coil 3 M	0.994 0.900 1.100	0.994 0.900 1.100	0.994 0.900 1.100	0.994 0.900 1.100	0.993 0.900 1.100	0.992 0.900 1.100	0.992 0.900 1.100	0.990 0.900 1.100
Coil 3 P	0.048 -1.500 1.500	0.082 -1.500 1.500	0.138 -1.500 1.500	0.198 -1.500 1.500	0.236 -1.500 1.500	0.286 -1.500 1.500	0.334 -1.500 1.500	0.350 -1.500 1.500
Coil 4 M	0.999 0.900 1.100	0.999 0.900 1.100	1.000 0.900 1.100	0.999 0.900 1.100	1.000 0.900 1.100	1.000 0.900 1.100	1.000 0.900 1.100	0.999 0.900 1.100
Coil 4 P	0.116 -1.500 1.500	0.124 -1.500 1.500	0.210 -1.500 1.500	0.286 -1.500 1.500	0.396 -1.500 1.500	0.454 -1.500 1.500	0.525 -1.500 1.500	0.577 -1.500 1.500
Coil 5 M	1.003 0.900 1.100	1.002 0.900 1.100	1.003 0.900 1.100	1.003 0.900 1.100	1.002 0.900 1.100	1.005 0.900 1.100	1.007 0.900 1.100	1.007 0.900 1.100
Coil 5 P	0.040 -1.500 1.500	0.106 -1.500 1.500	0.264 -1.500 1.500	0.377 -1.500 1.500	0.561 -1.500 1.500	0.694 -1.500 1.500	0.775 -1.500 1.500	0.910 -1.500 1.500

PARMS TCID 0 TCID 1 Cal Temp T Factor
(degF)
IDs 2.831 0.846 50.4 1.00

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10121806

DATE/TIME PERFORMED: Thu May 08 23:29:47 2014

DAYS SINCE CAL: 121

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	0.004 -0.200 0.200	-0.000 -0.100 0.100	-0.001 -0.100 0.100	0.002 -0.100 0.100	-0.002 -0.100 0.100	-0.000 -0.100 0.100	0.001 -0.100 0.100	0.000 -0.100 0.100
Coil 0 Q	-0.004 -0.500 0.500	-0.000 -0.200 0.200	-0.000 -0.100 0.100	0.000 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100	0.001 -0.100 0.100
Coil 1 R	0.000 -0.200 0.200	-0.001 -0.100 0.100	-0.003 -0.100 0.100	0.000 -0.100 0.100	-0.000 -0.100 0.100	0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.001 -0.100 0.100
Coil 1 Q	-0.017 -0.500 0.500	-0.002 -0.200 0.200	-0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100	0.001 -0.100 0.100	-0.000 -0.100 0.100	0.001 -0.100 0.100
Coil 2 R	0.004 -0.200 0.200	-0.001 -0.100 0.100	-0.004 -0.100 0.100	-0.000 -0.100 0.100	0.002 -0.100 0.100	-0.001 -0.100 0.100	-0.002 -0.100 0.100	0.001 -0.100 0.100
Coil 2 Q	-0.008 -0.500 0.500	0.002 -0.200 0.200	0.003 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100	-0.001 -0.100 0.100	0.001 -0.100 0.100	-0.001 -0.100 0.100
Coil 3 R	0.013 -0.300 0.300	-0.003 -0.100 0.100	0.001 -0.100 0.100	0.003 -0.100 0.100	0.003 -0.100 0.100	0.001 -0.100 0.100	0.001 -0.100 0.100	0.001 -0.100 0.100
Coil 3 Q	-0.013 -0.500 0.500	-0.011 -0.200 0.200	0.008 -0.100 0.100	-0.001 -0.100 0.100	0.002 -0.100 0.100	0.004 -0.100 0.100	-0.001 -0.100 0.100	0.002 -0.100 0.100
Coil 4 R	0.006 -0.500 0.500	-0.009 -0.200 0.200	0.000 -0.200 0.200	0.010 -0.200 0.200	-0.005 -0.200 0.200	0.002 -0.200 0.200	0.000 -0.200 0.200	-0.002 -0.200 0.200
Coil 4 Q	-0.017 -1.000 1.000	-0.003 -0.400 0.400	0.003 -0.200 0.200	-0.002 -0.200 0.200	-0.004 -0.200 0.200	-0.002 -0.200 0.200	-0.003 -0.200 0.200	-0.001 -0.200 0.200
Coil 5 R	0.048 -1.200 1.200	-0.024 -0.400 0.400	-0.037 -0.400 0.400	0.015 -0.400 0.400	-0.016 -0.400 0.400	0.009 -0.400 0.400	0.011 -0.400 0.400	0.004 -0.400 0.400
Coil 5 Q	-0.031 -1.500 1.500	-0.046 -0.800 0.800	0.013 -0.400 0.400	0.010 -0.400 0.400	-0.043 -0.400 0.400	0.007 -0.400 0.400	-0.002 -0.400 0.400	-0.023 -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	162.96 136.00 186.00	161.55 134.00 184.00	158.67 131.00 181.00	154.44 126.00 176.00	148.82 122.00 170.00	141.94 118.00 161.00	133.80 112.00 150.00	124.55 105.00 139.00
Coil 0 P	7.708 -1.000 12.000	25.264 19.000 30.000	42.401 35.000 50.000	59.498 49.000 71.000	76.598 63.000 91.000	93.714 77.000 110.000	110.853 92.000 130.000	127.993 105.000 151.000
Coil 1 M	281.63 237.00 327.00	279.10 235.00 325.00	273.97 230.00 320.00	266.38 225.00 312.00	256.35 218.00 302.00	244.01 208.00 288.00	229.49 196.00 266.00	213.01 184.00 244.00
Coil 1 P	7.876 -1.000 12.000	25.743 19.000 30.000	43.197 35.000 51.000	60.609 49.000 71.000	78.032 63.000 92.000	95.466 77.000 112.000	112.914 92.000 132.000	130.345 105.000 153.000
Coil 2 M	578.36 479.00 659.00	573.47 474.00 654.00	563.56 463.00 643.00	548.71 450.00 622.00	529.04 432.00 602.00	504.59 412.00 572.00	475.62 390.00 540.00	442.46 359.00 499.00
Coil 2 P	8.002 -1.000 12.000	26.135 19.000 31.000	43.869 35.000 51.000	61.584 49.000 71.000	79.324 63.000 92.000	97.100 77.000 114.000	114.914 92.000 135.000	132.727 105.000 156.000
Coil 3 M	925.60 772.00 1080.00	917.51 764.00 1050.00	900.86 752.00 1030.00	876.16 728.00 1010.00	843.57 700.00 970.00	803.54 665.00 925.00	756.14 628.00 868.00	702.17 589.00 799.00
Coil 3 P	7.798 -2.000 13.000	25.568 19.000 31.000	42.923 35.000 52.000	60.240 49.000 72.000	77.560 63.000 93.000	94.901 77.000 114.000	112.262 92.000 135.000	129.597 105.000 156.000
Coil 4 M	1453.6 1210.0 1700.0	1440.1 1205.0 1690.0	1412.4 1180.0 1650.0	1371.4 1140.0 1590.0	1317.7 1120.0 1530.0	1252.0 1070.0 1450.0	1175.3 1000.0 1350.0	1089.7 942.0 1240.0
Coil 4 P	7.899 -2.000 13.000	25.861 19.000 31.000	43.400 35.000 52.000	60.873 49.000 73.000	78.318 63.000 93.000	95.745 78.000 114.000	113.133 92.000 135.000	130.457 105.000 156.000
Coil 5 M	2982.6 2450.0 3450.0	2960.0 2420.0 3400.0	2910.2 2410.0 3320.0	2835.1 2350.0 3200.0	2736.3 2280.0 3080.0	2609.8 2150.0 2950.0	2460.8 2020.0 2750.0	2289.1 1870.0 2570.0
Coil 5 P	7.944 -2.000 13.000	26.034 19.000 31.000	43.753 35.000 52.000	61.433 49.000 73.000	79.198 63.000 94.000	96.950 79.000 114.000	114.796 93.000 135.000	132.655 106.000 156.000

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10121806

DATE/TIME PERFORMED: Fri May 09 04:05:49 2014

DAYS SINCE CAL: 121

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	0.004 -0.076 0.084	0.001 -0.060 0.060	0.000 -0.031 0.029	-0.000 -0.028 0.032	-0.001 -0.032 0.028	-0.001 -0.030 0.030	0.001 -0.029 0.031	-0.000 -0.030 0.030
Coil 0 Q	-0.005 -0.044 0.036	0.000 -0.120 0.120	0.000 -0.030 0.030	0.001 -0.030 0.030	-0.000 -0.031 0.029	0.001 -0.030 0.030	0.001 -0.030 0.030	-0.001 -0.029 0.031
Coil 1 R	0.001 -0.080 0.080	-0.001 -0.051 0.049	-0.001 -0.033 0.027	0.001 -0.030 0.030	-0.000 -0.030 0.030	0.001 -0.029 0.031	-0.002 -0.031 0.029	-0.001 -0.031 0.029
Coil 1 Q	-0.014 -0.417 0.383	-0.000 -0.102 0.098	0.001 -0.031 0.029	-0.000 -0.031 0.029	-0.001 -0.030 0.030	0.001 -0.029 0.031	-0.000 -0.030 0.030	-0.000 -0.029 0.031
Coil 2 R	0.002 -0.066 0.074	-0.003 -0.031 0.029	-0.007 -0.034 0.026	0.000 -0.030 0.030	0.004 -0.028 0.032	-0.001 -0.031 0.029	-0.002 -0.032 0.028	-0.002 -0.029 0.031
Coil 2 Q	-0.009 -0.358 0.342	0.001 -0.098 0.102	-0.002 -0.027 0.033	0.000 -0.031 0.029	0.000 -0.030 0.030	-0.001 -0.031 0.029	-0.001 -0.029 0.031	-0.001 -0.031 0.029
Coil 3 R	0.013 -0.027 0.053	0.003 -0.043 0.037	-0.003 -0.039 0.041	-0.004 -0.037 0.043	-0.002 -0.037 0.043	-0.006 -0.039 0.041	0.002 -0.039 0.041	-0.003 -0.039 0.041
Coil 3 Q	-0.009 -0.213 0.187	-0.009 -0.091 0.089	0.004 -0.032 0.048	-0.003 -0.041 0.039	-0.002 -0.038 0.042	0.004 -0.036 0.044	-0.004 -0.041 0.039	0.000 -0.038 0.042
Coil 4 R	0.014 -0.054 0.066	-0.002 -0.069 0.051	0.007 -0.060 0.060	0.002 -0.050 0.070	-0.011 -0.085 0.055	0.005 -0.058 0.062	0.006 -0.060 0.060	-0.004 -0.062 0.058
Coil 4 Q	-0.011 -0.317 0.283	-0.003 -0.103 0.097	0.004 -0.057 0.063	-0.003 -0.062 0.058	0.006 -0.064 0.056	0.005 -0.062 0.058	0.005 -0.063 0.057	0.002 -0.061 0.059
Coil 5 R	0.044 -0.072 0.168	0.003 -0.144 0.096	0.010 -0.157 0.083	0.030 -0.105 0.135	-0.018 -0.136 0.104	0.002 -0.111 0.129	0.003 -0.109 0.131	0.006 -0.116 0.124
Coil 5 Q	-0.026 -0.631 0.569	-0.009 -0.296 0.204	0.019 -0.107 0.133	-0.004 -0.110 0.130	-0.015 -0.163 0.077	0.016 -0.113 0.127	-0.009 -0.122 0.118	-0.003 -0.143 0.097

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	162.45 159.70 166.22	161.02 158.32 164.78	158.13 155.50 161.85	153.88 151.35 157.52	148.29 145.85 151.80	141.42 139.10 144.78	133.31 131.13 136.48	124.13 122.06 127.04
Coil 0 P	7.496 4.708 10.708	25.277 22.264 28.264	42.497 39.401 45.401	59.672 56.498 62.498	76.830 73.598 79.598	93.999 90.714 96.714	111.199 107.853 113.853	128.378 124.993 130.993
Coil 1 M	281.76 275.99 287.26	279.19 273.52 284.89	274.08 268.49 279.45	266.47 261.06 271.71	256.46 251.23 261.48	244.17 239.13 248.89	229.67 224.90 234.08	213.19 208.75 217.27
Coil 1 P	7.673 4.876 10.876	25.743 22.743 28.743	43.274 40.197 46.197	60.756 57.809 63.809	78.219 75.032 81.032	95.703 92.466 98.466	113.200 109.914 115.914	130.673 127.345 133.345
Coil 2 M	577.34 566.79 589.92	572.43 562.00 584.94	562.45 552.29 574.84	547.64 537.73 559.88	527.98 518.46 539.62	503.67 494.49 514.68	474.86 466.11 485.13	441.77 433.61 451.31
Coil 2 P	7.773 5.002 11.002	26.148 23.135 29.135	43.970 40.889 46.889	61.762 58.584 64.584	79.560 76.324 82.324	97.399 94.100 100.100	115.275 111.914 117.914	133.142 129.727 135.727
Coil 3 M	924.99 907.09 944.11	916.76 899.16 935.86	900.03 882.84 918.87	875.28 858.64 893.89	842.78 826.70 860.44	802.66 787.47 819.61	755.30 741.01 771.26	701.36 688.13 716.22
Coil 3 P	7.546 4.798 10.798	25.581 22.568 28.568	43.038 39.923 45.923	60.429 57.240 63.240	77.815 74.560 80.560	95.234 91.901 97.901	112.643 109.262 115.262	130.026 126.597 132.597
Coil 4 M	1457.4 1424.5 1482.7	1443.6 1411.3 1468.9	1415.7 1384.1 1440.6	1374.5 1344.0 1398.8	1320.9 1291.4 1344.1	1255.6 1227.0 1277.1	1178.7 1151.8 1198.9	1093.0 1067.9 1111.5
Coil 4 P	7.697 4.899 10.899	25.883 22.861 28.861	43.507 40.400 46.400	61.052 57.873 63.873	78.559 75.318 81.318	96.039 92.745 98.745	113.511 110.133 116.133	130.869 127.457 133.457
Coil 5 M	2980.1 2923.0 3042.3	2956.7 2900.8 3019.2	2907.0 2852.0 2968.4	2832.4 2778.4 2891.8	2731.8 2681.6 2791.1	2608.1 2557.6 2662.0	2457.8 2411.6 2510.0	2285.3 2243.3 2334.9

INSTRUMENT CONFIGURATION

Source File: C:\dat1a\85740J\970a~\tdg.meta

FOCUS CABLEHEAD

Diameter : 3.12"
 Length : 3.17'
 Weight : 15 lbs
 Series : CABL318
 Mnemonic : CBLH

FOCUS SWIVEL

Diameter : 3.13"
 Length : 2.58'
 Weight : 50 lbs
 Series : 3950XA
 Mnemonic : SWVL

FOCUS TEN/TEMP/MUD RES/ACCEL

Diameter : 3.13"
 Length : 4.31'
 Weight : 61 lbs
 Series : 3980XA
 Mnemonic : TTMA

FOCUS TELEMETRY (POWER SECTION)

Diameter : 3.13"
 Length : 3.71'
 Weight : 48 lbs
 Series : 3518FB
 Mnemonic : TMGR

FOCUS EB/EG TELEMETRY GAMMA RAY

Diameter : 3.12"
 Length : 5.83'
 Weight : 63 lbs
 Series : 3518EG
 Mnemonic : GR
 Measure Point: 4.24': GR MP

52.34'

GR MP — 36.97'



FOCUS COMPENSATED NEUTRON

Diameter : 3.13"
Length : 4.81'
Weight : 65 lbs
Series : 2436XA
Mnemonic : CN
Measure Point: 1.92': LSN MP
Measure Point: 1.46': SSN MP

LSN MP — 29.83'
SSN MP — 29.38'

FOCUS Z-DENSILOG

Diameter : 3.75"
Length : 9.58'
Weight : 200 lbs
Series : 2223XA
Mnemonic : ZDL
Measure Point: 4.33': CR1 MP
Measure Point: 1.69': LSD / CR2 MP
Measure Point: 1.29': SSD MP

CR1 MP — 22.67'

LSD / CR2 MP — 20.02'
SSD MP — 19.63'

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

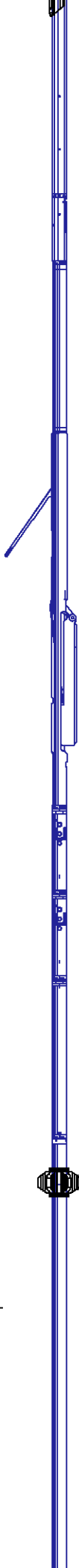
COIL 5 MP — 9.17'

COIL 4 MP — 7.67'

COIL 3 MP — 6.17'

COIL 2 MP — 5.67'

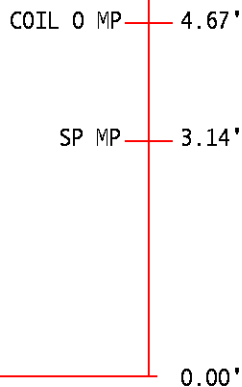
COIL 1 MP — 5.17'



FOCUS PINEAPPLE / CABBAGE

HOLE FINDER

Diameter : 2.62"
 Length : 1.50'
 Weight : 7 lbs
 Series : HFND18



TOTAL LENGTH: 52.34'
 TOTAL WEIGHT: 756 lbs
 MAX DIAMETER: 0'6.13"



COMPANY WPX ENERGY ROCKY MTN LLC
 WELL FEDERAL NER 534-32
 FIELD RULISON
 COUNTY GARFIELD STATE CO

FILE NO: US05740J
 API NO: 05045217830000

LOCATION:
 SHL: 163' FNL 2586' FWL S5 T7S R93W
 BHL: 145' FSL 1984' FWL S32 T6S R93W
 SEC 32 TWP 6S RGE 93W

ELEVATIONS:
 KB 7629 FT
 DF
 GL 7603 FT
 DATE 08-May-2014

SEC 32 T6S R93W
 PAD: RU 23-5
 RIG: NABORS 576