



SM
HIGH DEFINITION INDUCTION LOG
COMPENSATED Z-DENSILOG
COMPENSATED NEUTRON LOG
GAMMA RAY LOG
CALIPER LOG

FILE NO: US092871J	COMPANY LARAMIE ENERGY
API NO: 05077102210000	WELL PICEANCE 28-12W
	FIELD VEGA
	COUNTY MESA
	STATE COLORADO
Version SEC 25 T9S R93W PAD: 28-11 PATTERSON 306	LOCATION: SHL: 2508' FSL 1606' FWL BHL: 2373' FSL 879' FWL SEC 25 TWP 9S RGE 93W
	OTHER SERVICES NONE
PERMANENT DATUM LOG MEASURED FROM DRILL. MEAS. FROM	GL ELEVATION 7580 FT KB 22 FT ABOVE P.D. KB GL 7580 FT

DATE	09-Mar-2015	
RUN	TRIP	1
SERVICE ORDER	US092871J	
DEPTH DRILLER	7942 FT	
DEPTH LOGGER	7498 FT	
BOTTOM LOGGED INTERVAL	7495 FT	
TOP LOGGED INTERVAL	0 FT	
CASING DRILLER	8.625 IN	@ 1560 FT
CASING LOGGER	1560 FT	
BIT SIZE	7.875 IN	
TYPE OF FLUID IN HOLE	LSND	
DENSITY	9.7 LB/G	55 CP
PH	8.8	6.8 C3
SOURCE OF SAMPLE	MUD TANK	
RM AT MEAS. TEMP.	1.35 OHMM	@ 59 DEGF
RMF AT MEAS. TEMP.	1.01 OHMM	@ 59 DEGF
RMC AT MEAS. TEMP.	1.69 OHMM	@ 59 DEGF
SOURCE OF RMF	RMC	CALCULATED
RM AT BHT	0.496 OHMM	@ 188 DEGF
TIME SINCE CIRCULATION	8 HOURS	
MAX. RECORDED TEMP.	188 DEGF	
EQUIP. NO.	6670	GRAND JCT
RECORDED BY	W. QUIGLEY	
WITNESSED BY	MR. MATT SETTLES	

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
7.875 IN	1560 FT	7498 FT

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
8.625 IN	24 LB/F		0 FT	1560 FT

REMARKS

RUN1 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

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: FAVORITE/HOLLAR/QUIGLEY
RIG: PATTERSON 306

DID NOT REACH TD, INSTRUCTED TO LOG OUT FROM OBSTRUCTION AT 7498'

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWIVEL	3950XA	10119949	FREE
1	1	TTMA	3980XA	10120299	FREE
1	1	TEL/GR	3518EB/FB	10137522/10139870	FREE
1	1	NEUTRON	2436XA	10137930	DECENTRALIZED
1	1	DENSITY	2223XA	10102922	CALIPER DEVICE
1	1	KNUCKLE	3930XA	10087279	FREE
1	1	HDIL	1530XA	10118612	STOOD OFF

MAIN LOG 2"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 4

Plotted: Tue Mar 10 03:02:55 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/OH092871/n970aR03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 11.250 ft BOTTOM DEPTH: 7507.920 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 ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	59.0	degF	"	"
	MUD SAMPLE RES	1.350	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	59.0	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	"	"

STANDARD
TOOL POSITION
Rmud MULTIPLIER
1.00
ECCENTRICED
1.000

CURVE DESCRIPTION REPORT

CURVE NAME CREATION DATE CURVE DESCRIPTION

F1:GR	Mar 10 02:15:11 2015	GAMMA RAY
F1:M0C6	Mar 10 02:15:11 2015	FOCUSED CONDUCTIVITY, 60-INCH DOI
F1:M0R2	Mar 10 02:15:11 2015	TRUE FOCUSED RESISTIVITY FOR HDIL, 20-INCH DOI
F1:M0R6	Mar 10 02:15:11 2015	TRUE FOCUSED RESISTIVITY FOR HDIL, 60-INCH DOI
F1:SP	Mar 10 02:15:11 2015	SPONTANEOUS POTENTIAL
F1:TEN	Mar 10 02:15:11 2015	DIFFERENTIAL TENSION

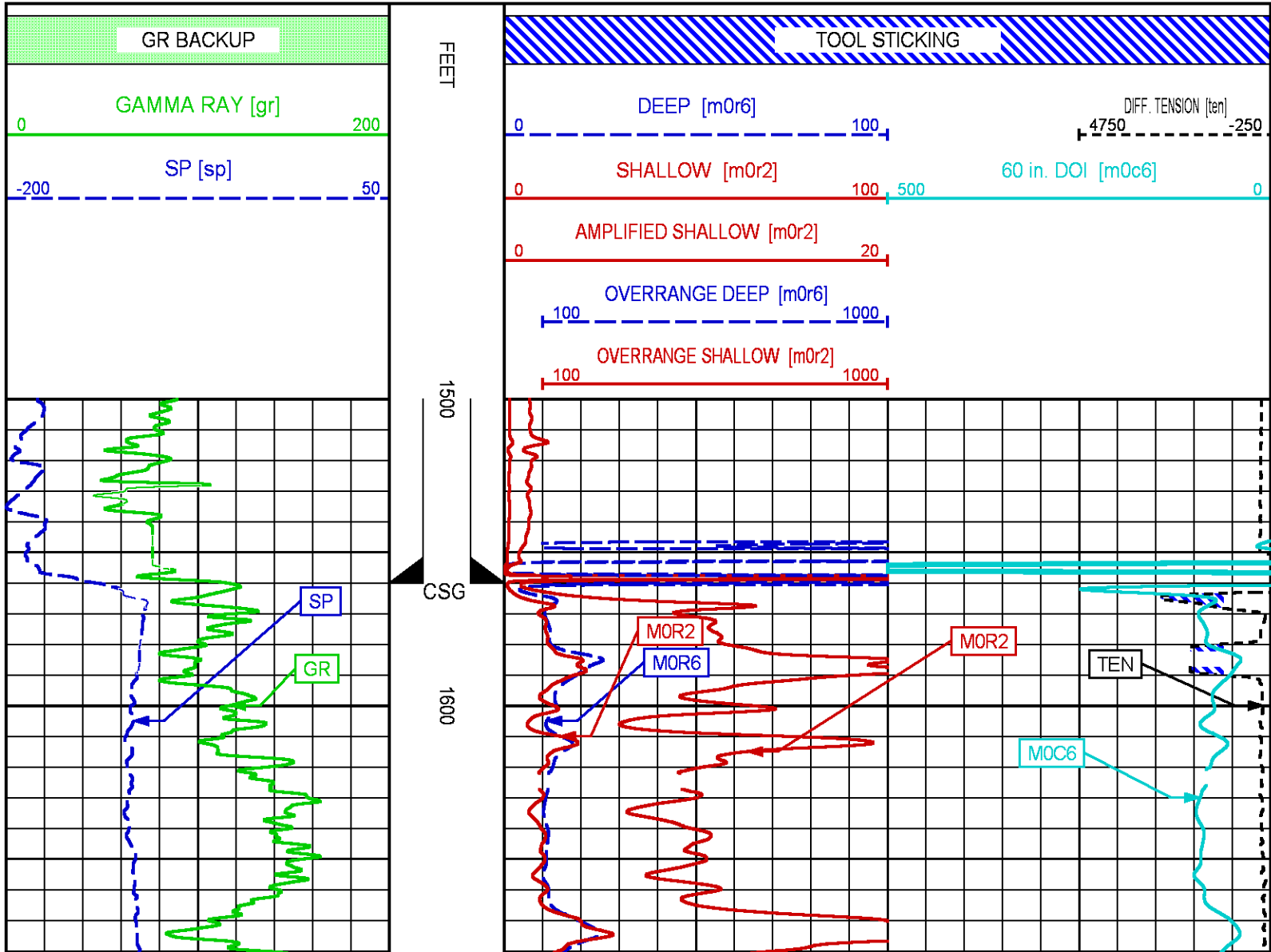
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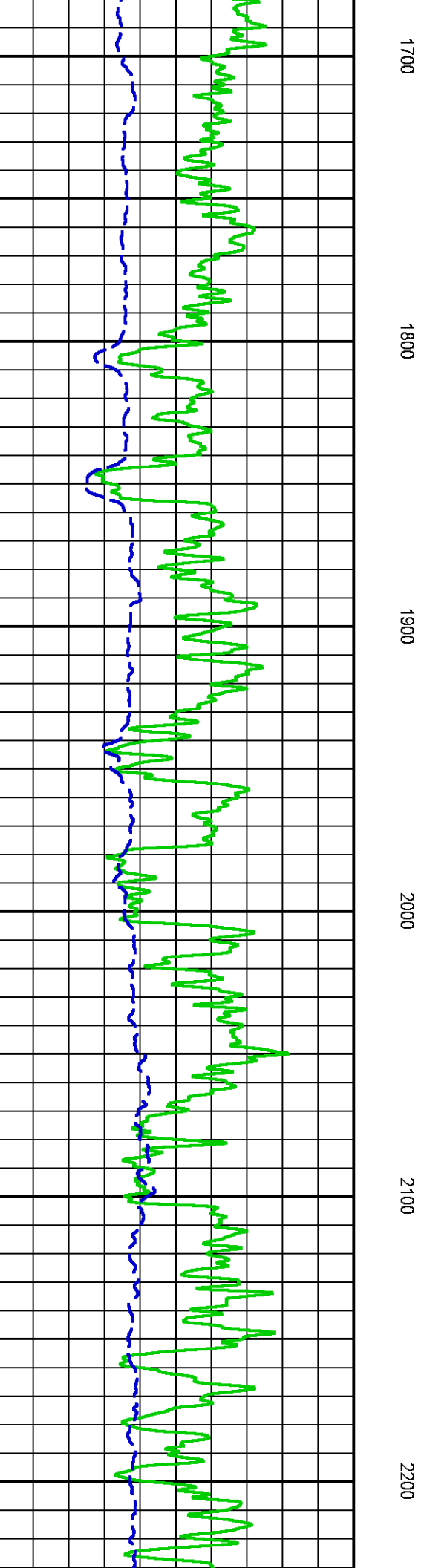
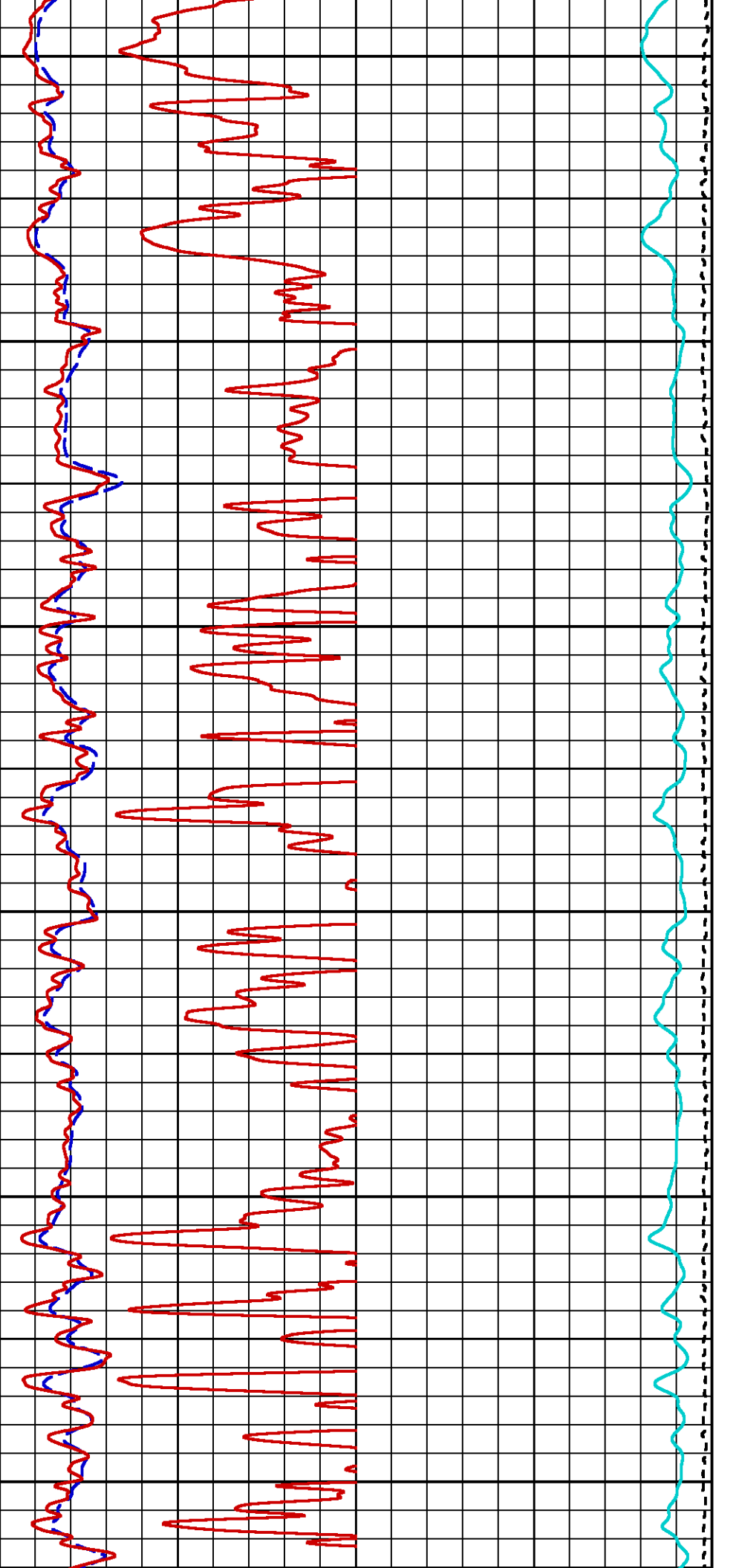
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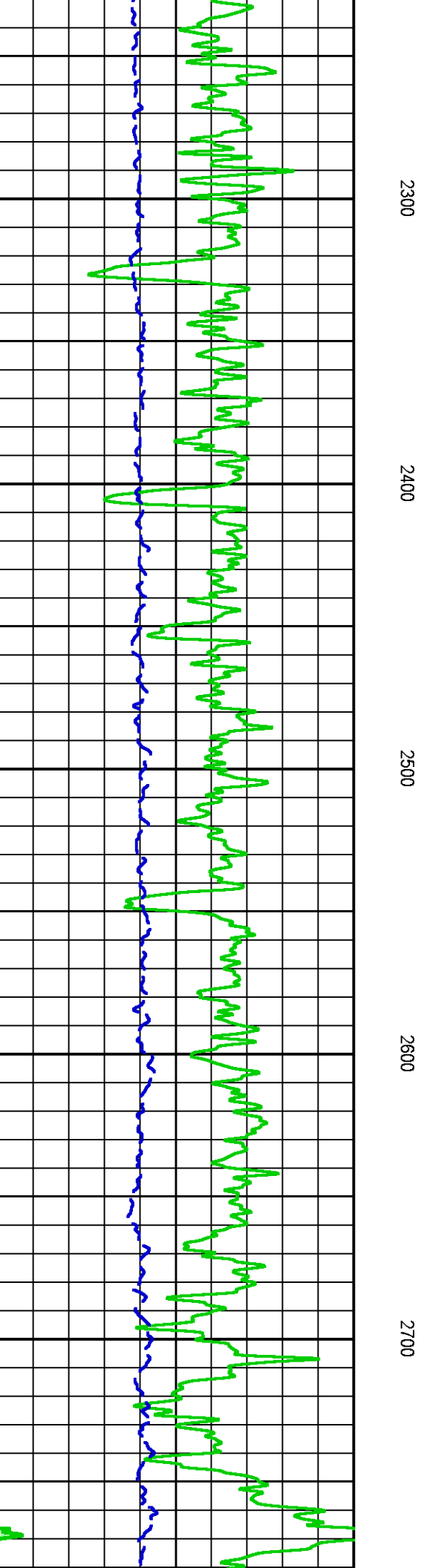
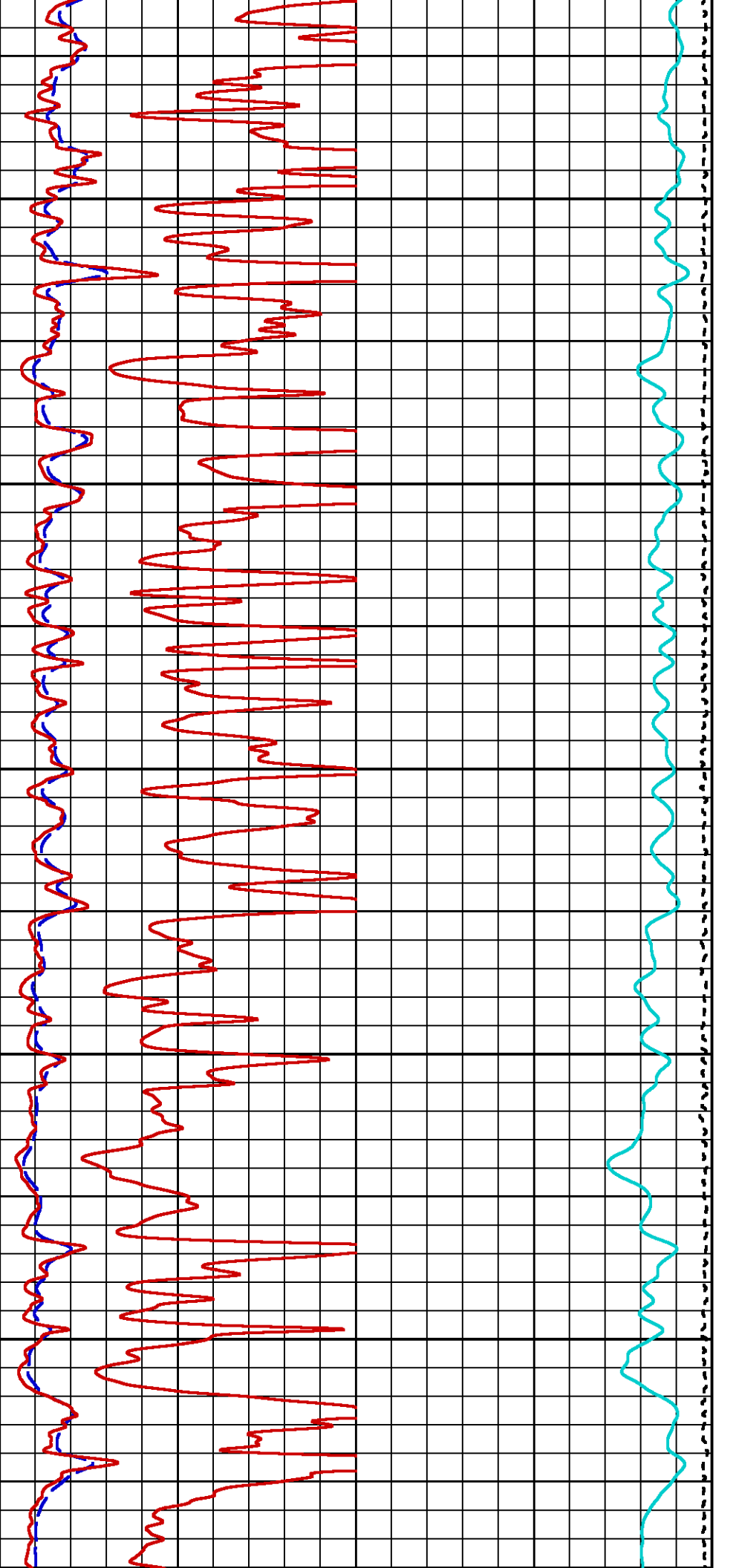
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M0C6	2.75	M0R6	2.75	TEN	0.00

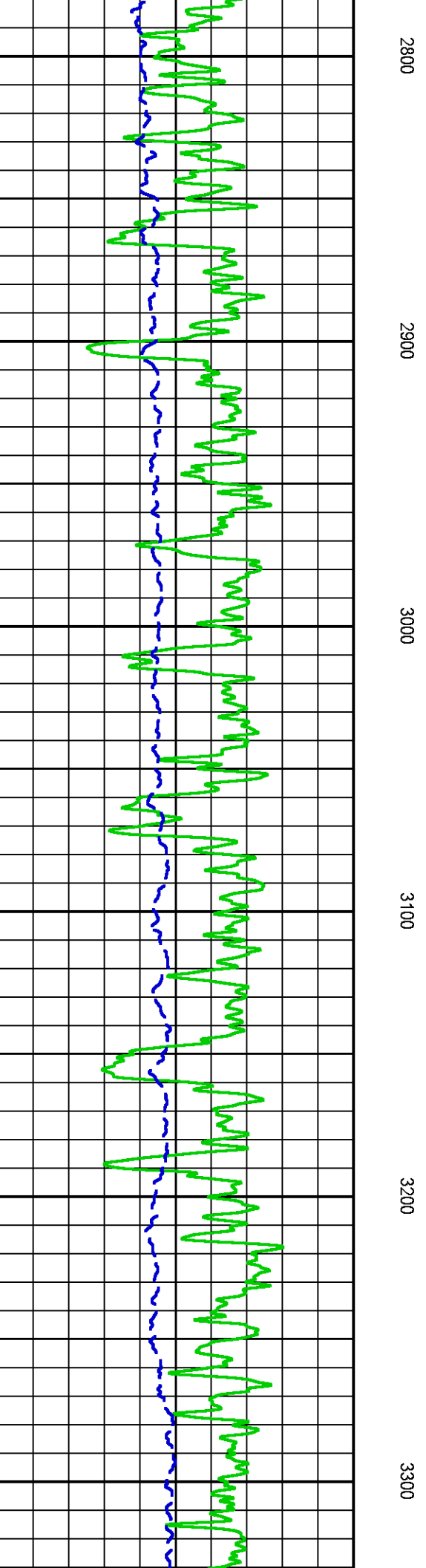
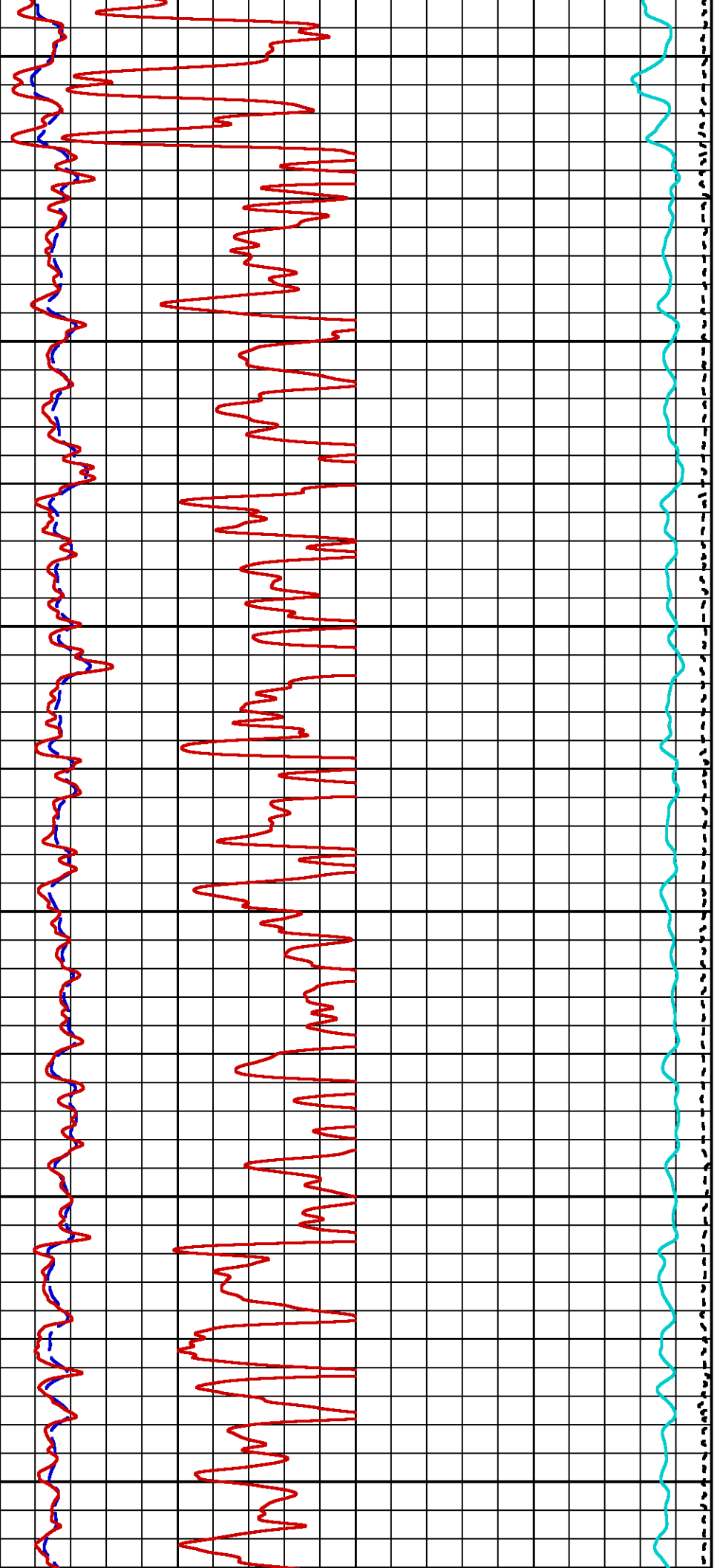
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Plot Interval : 1500 - 7509.5 Feet

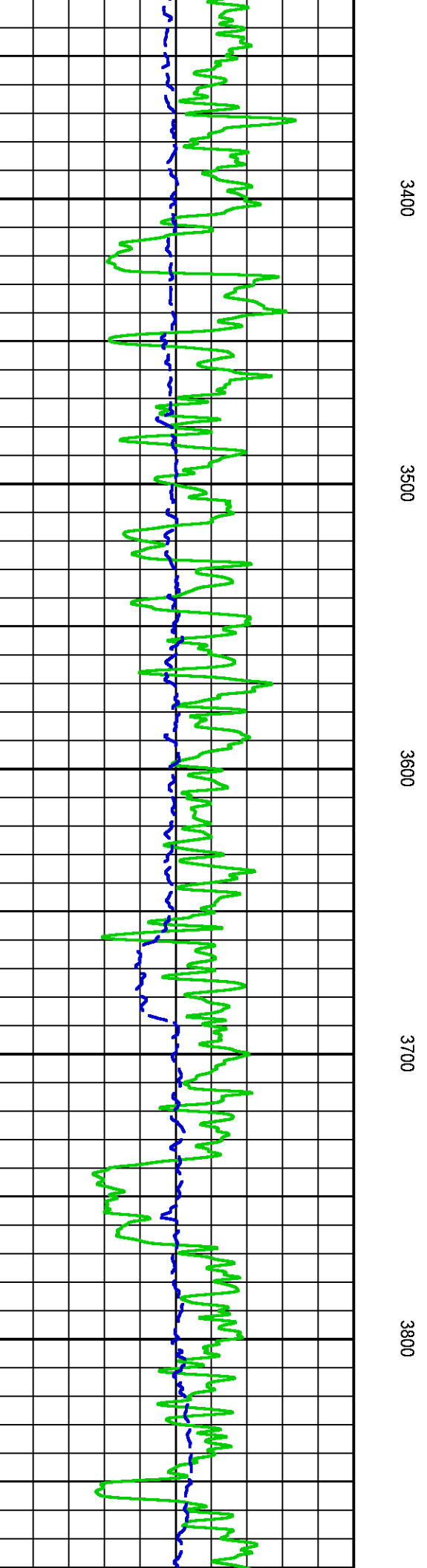
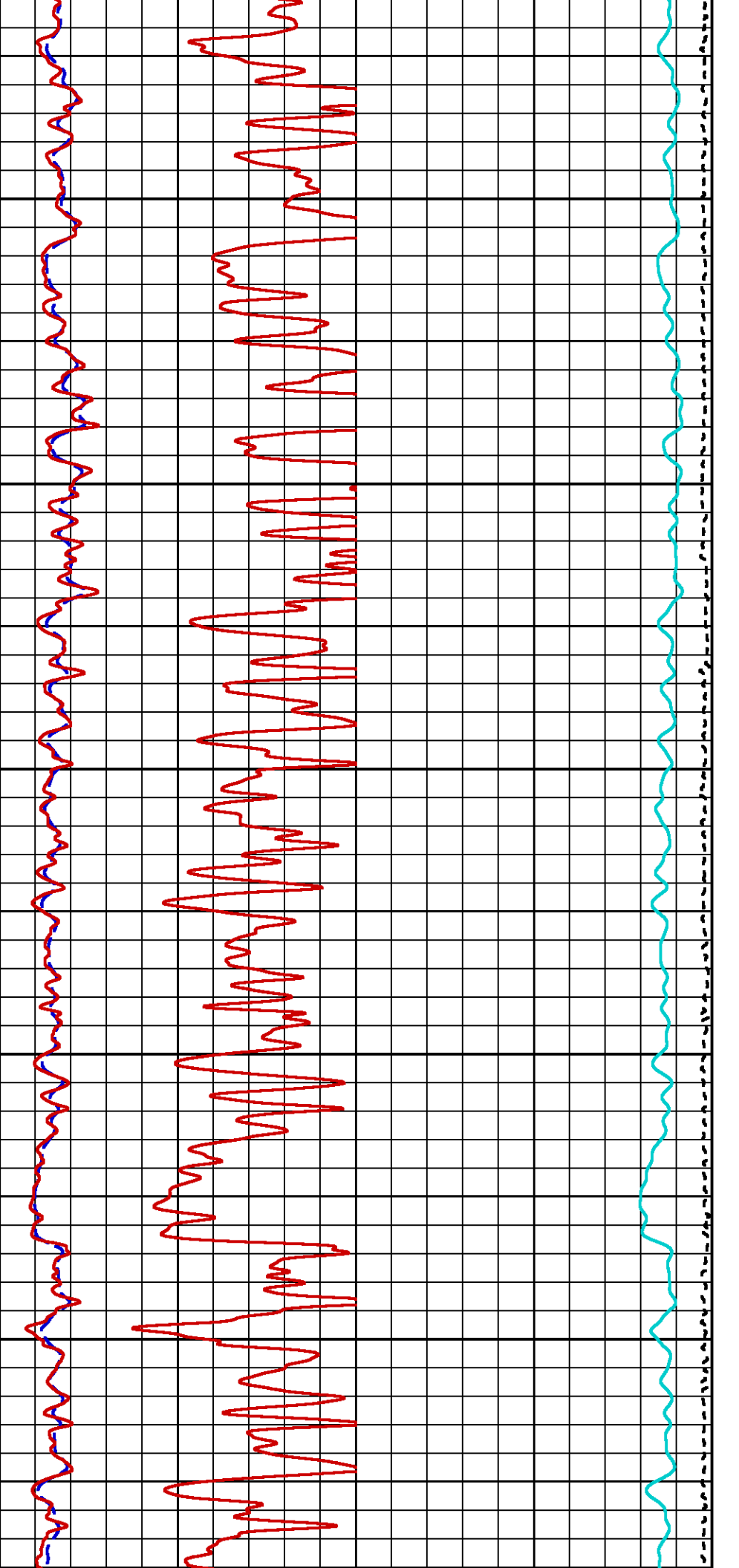
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Created On : 97Mar10 02:15:11 2015
Company : LARAMIE ENERGY
Well : PICEANCE 28-12W
Field : VEGA
File Interval : -27.25 - 7509.5 Feet
OCT : n970a

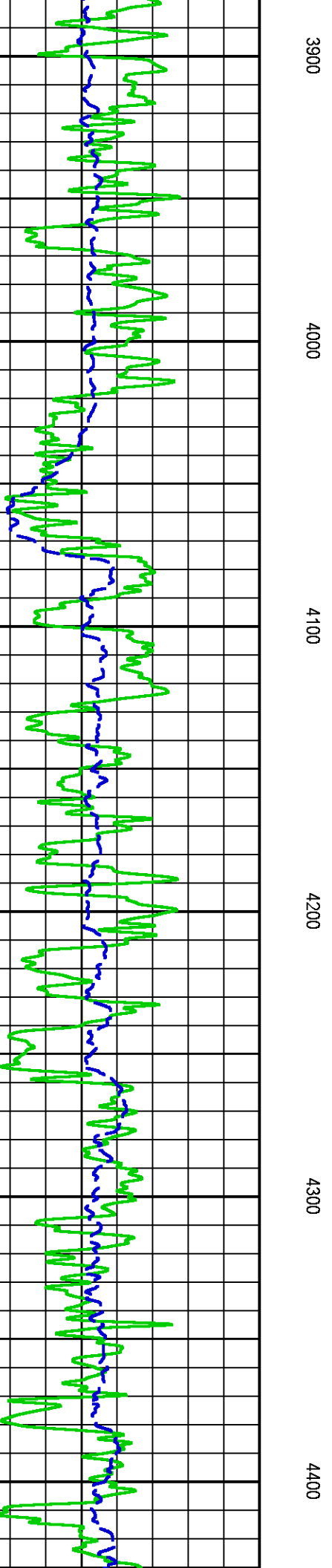
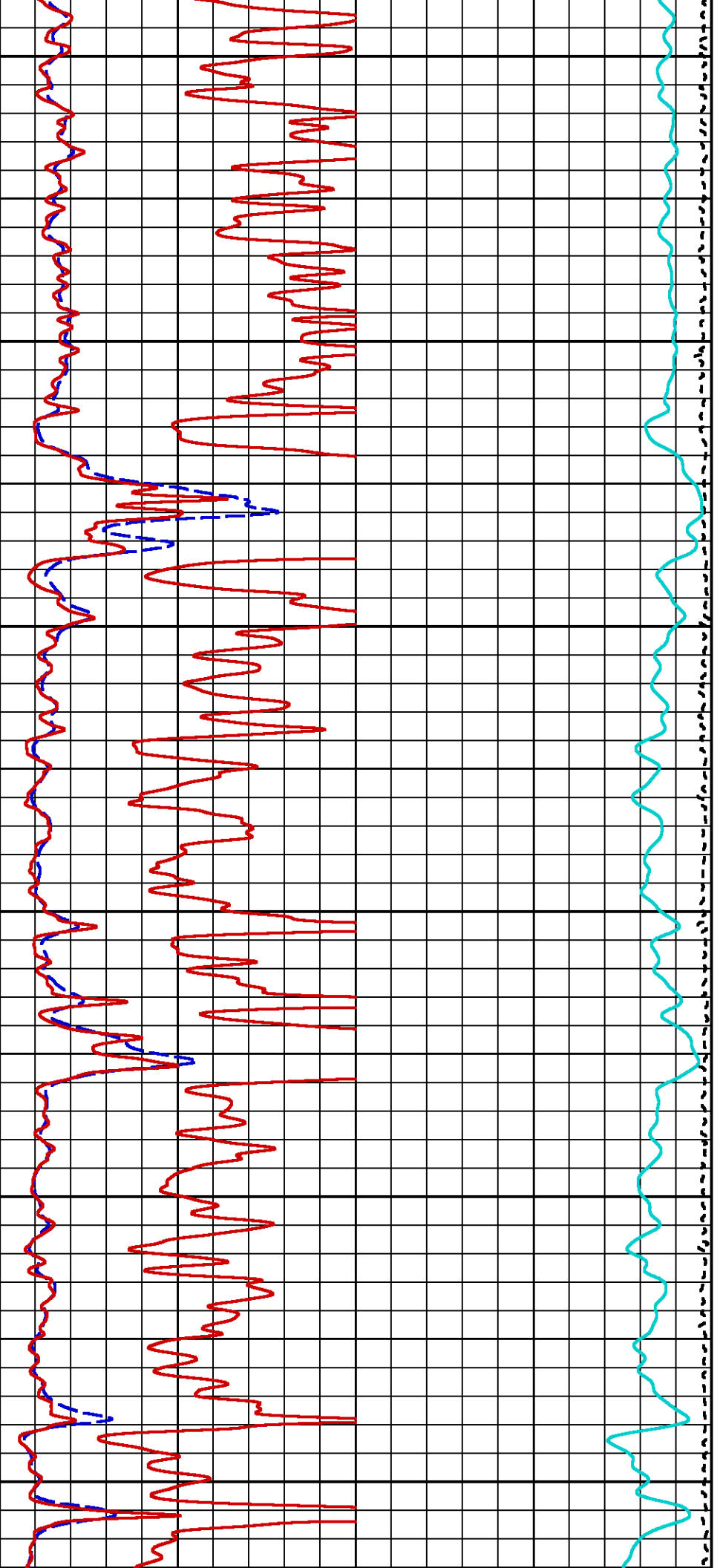


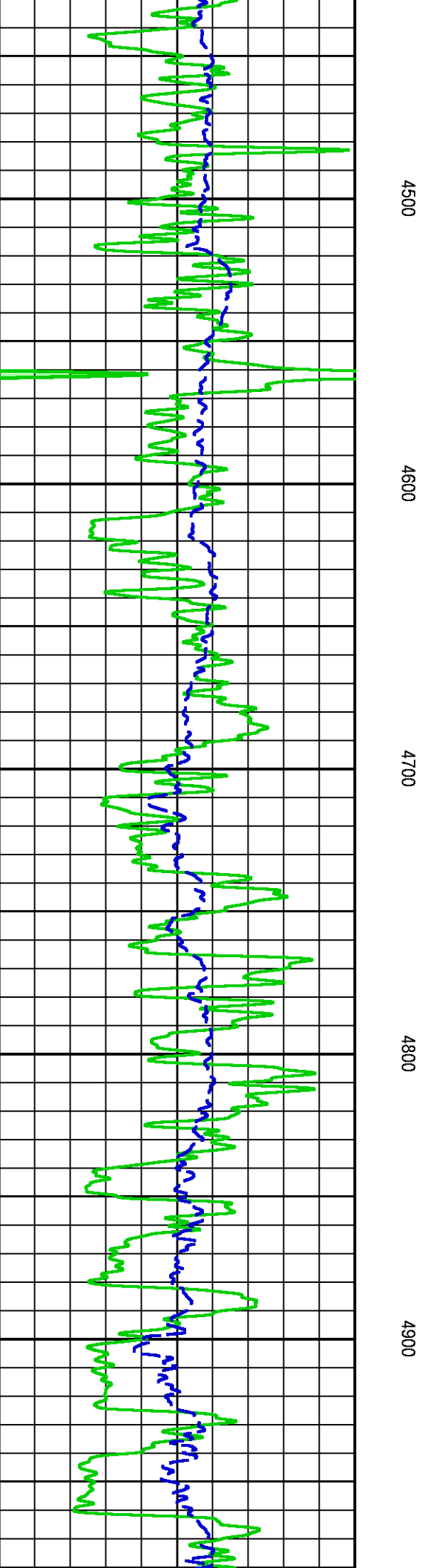
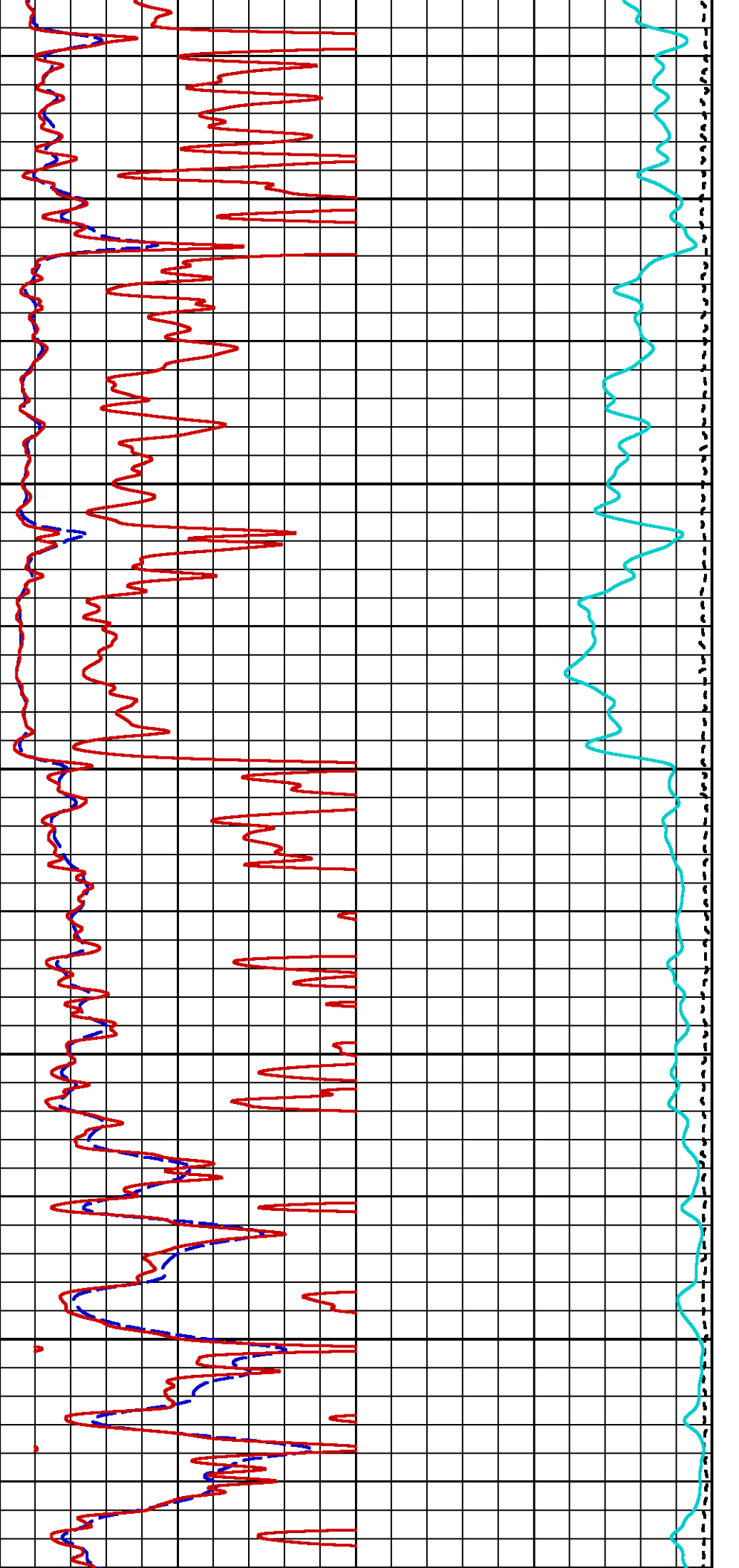


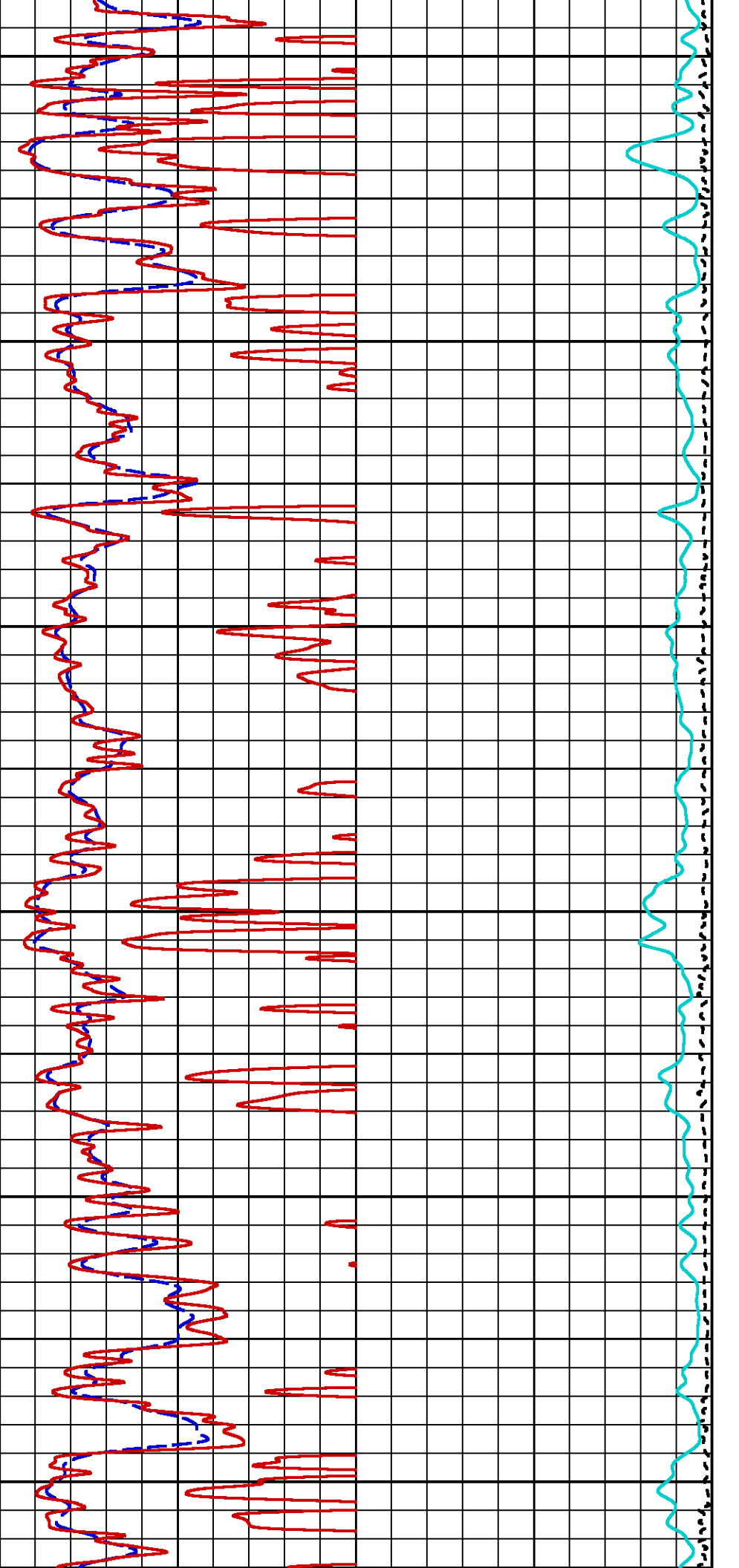




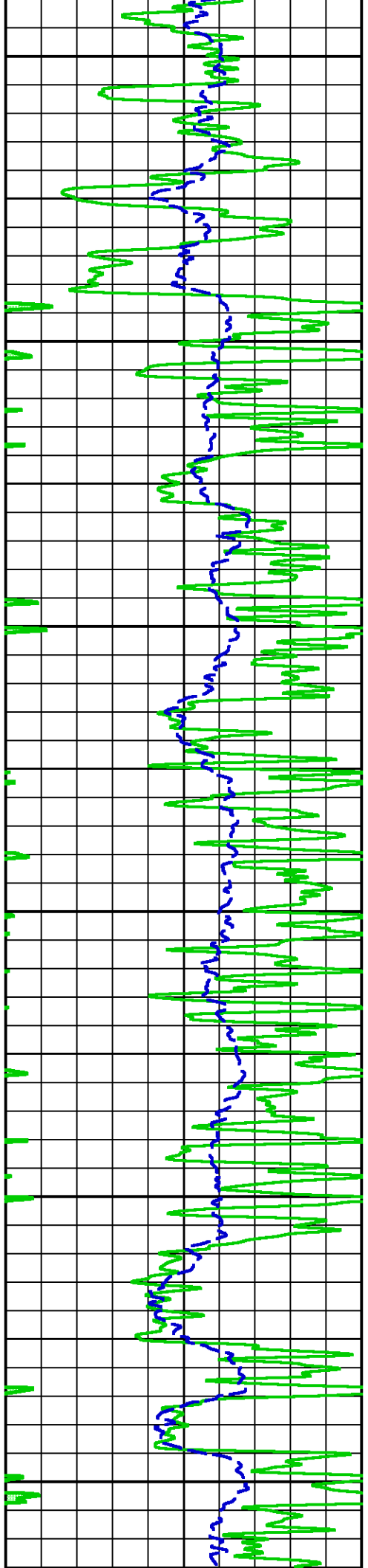


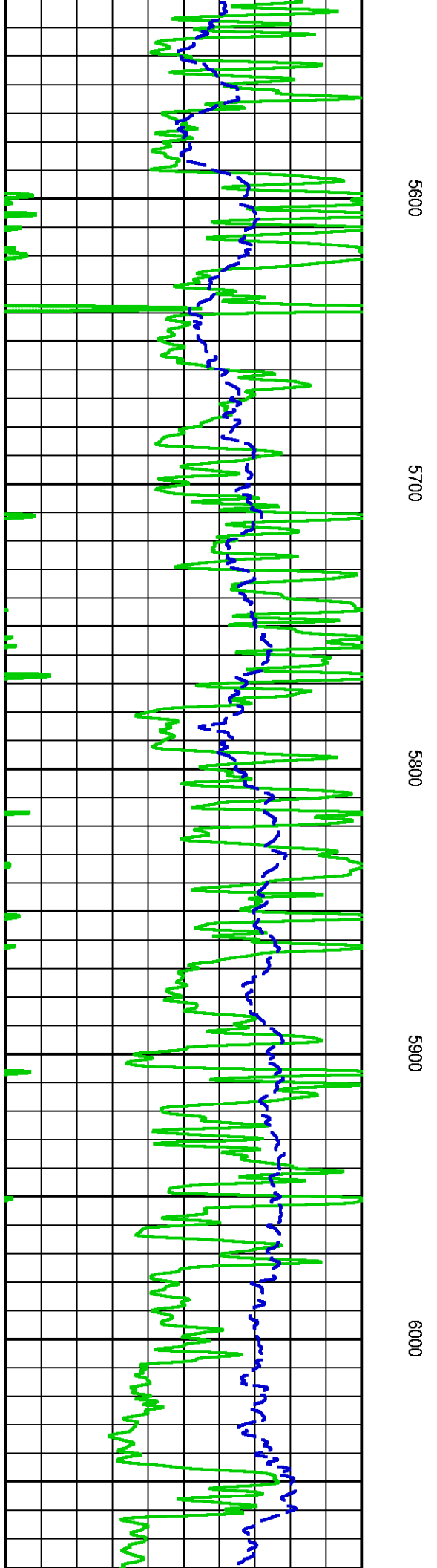
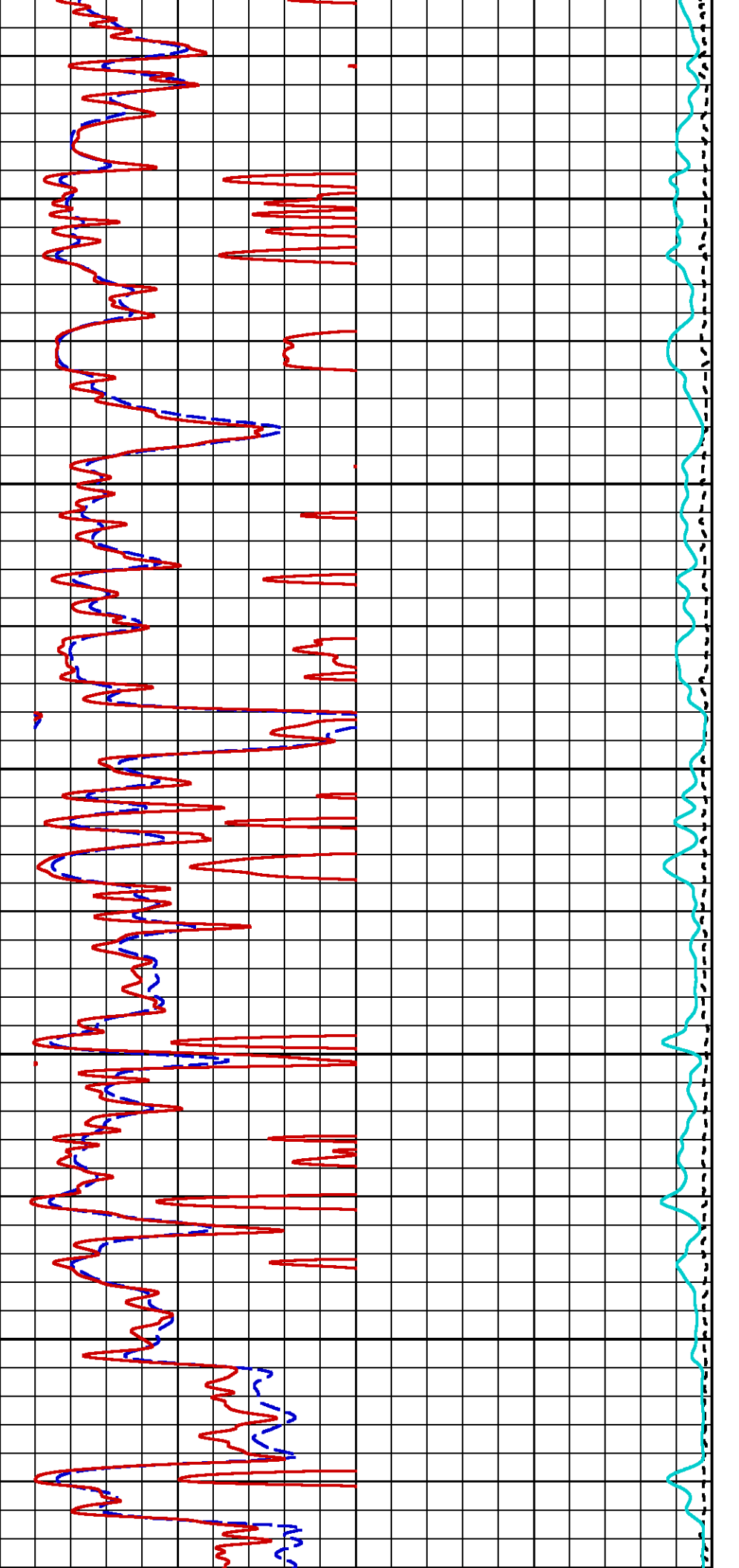


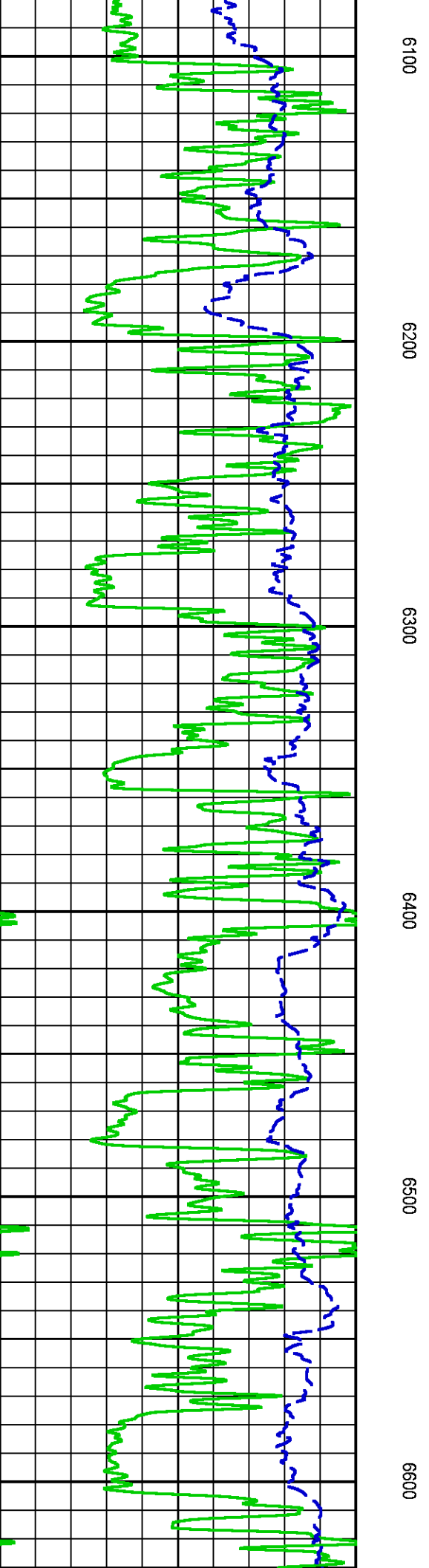
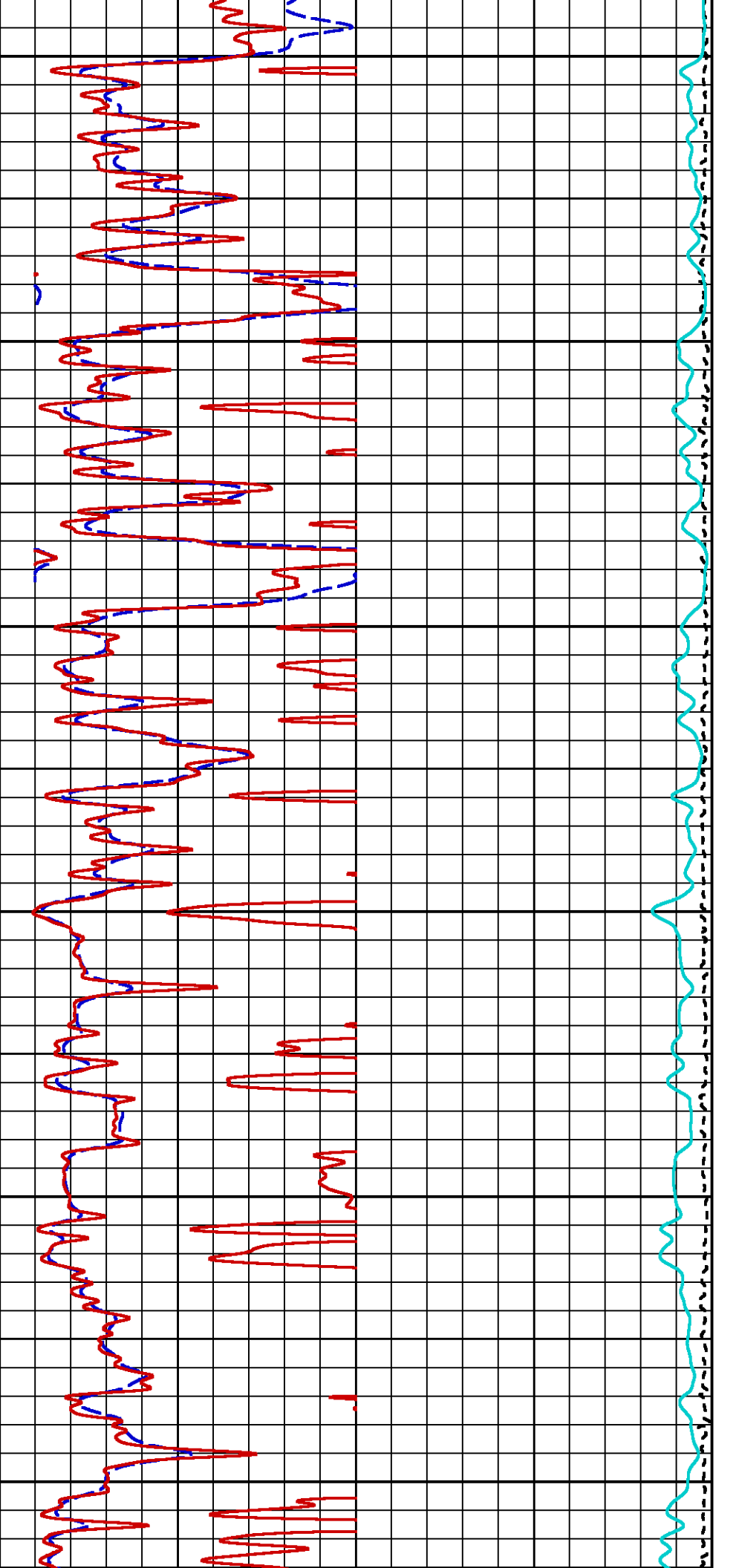


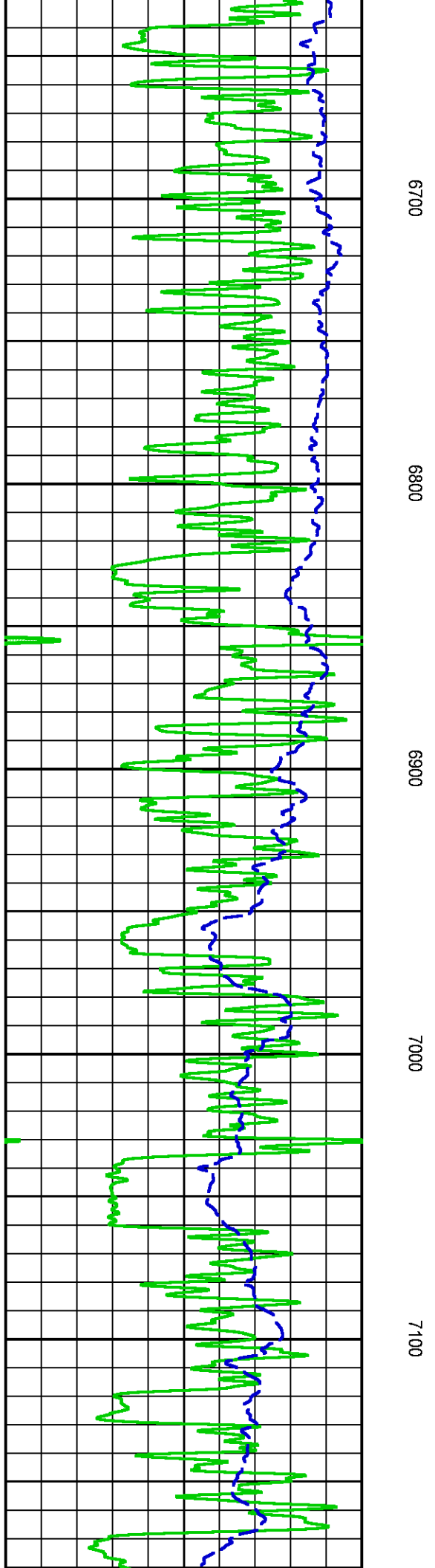
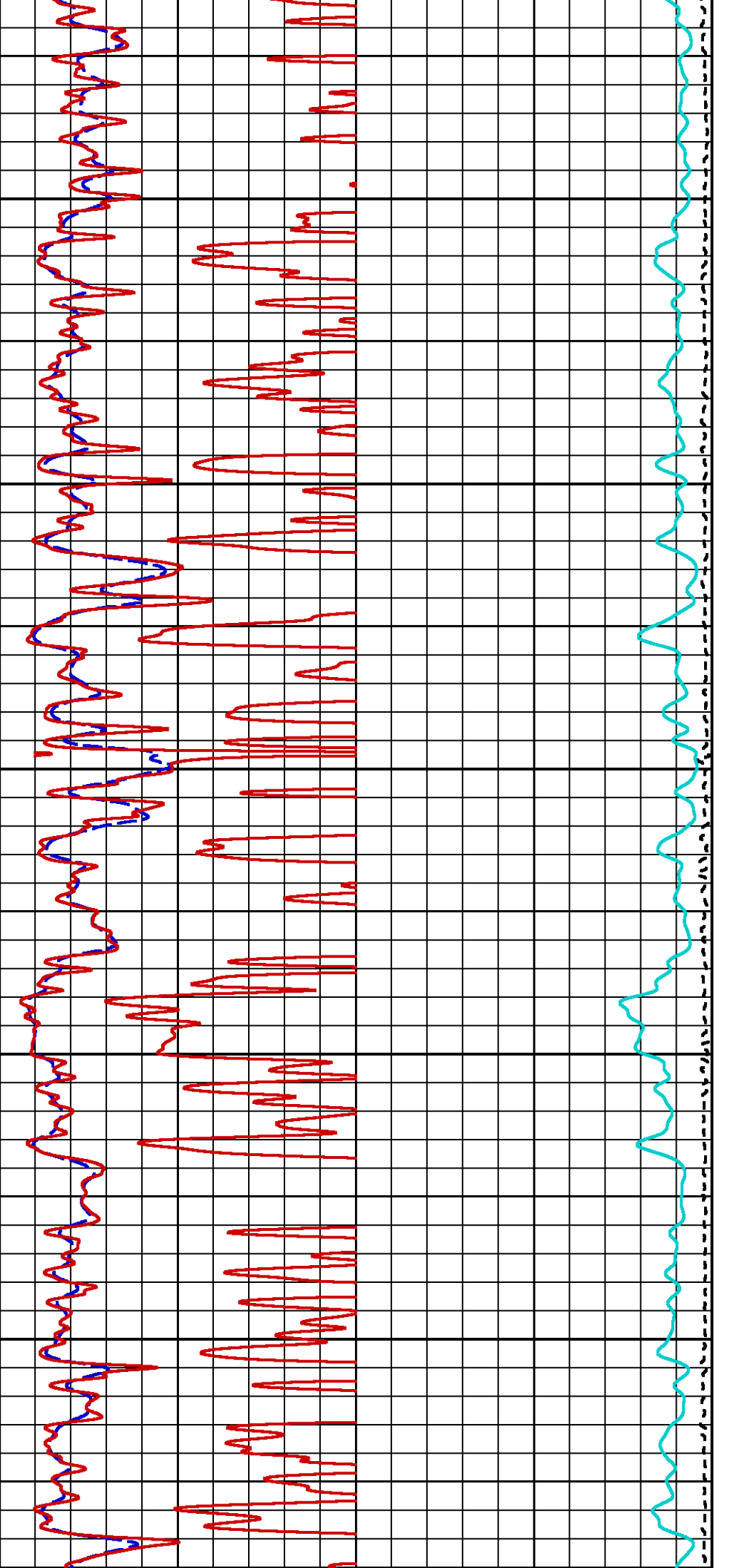


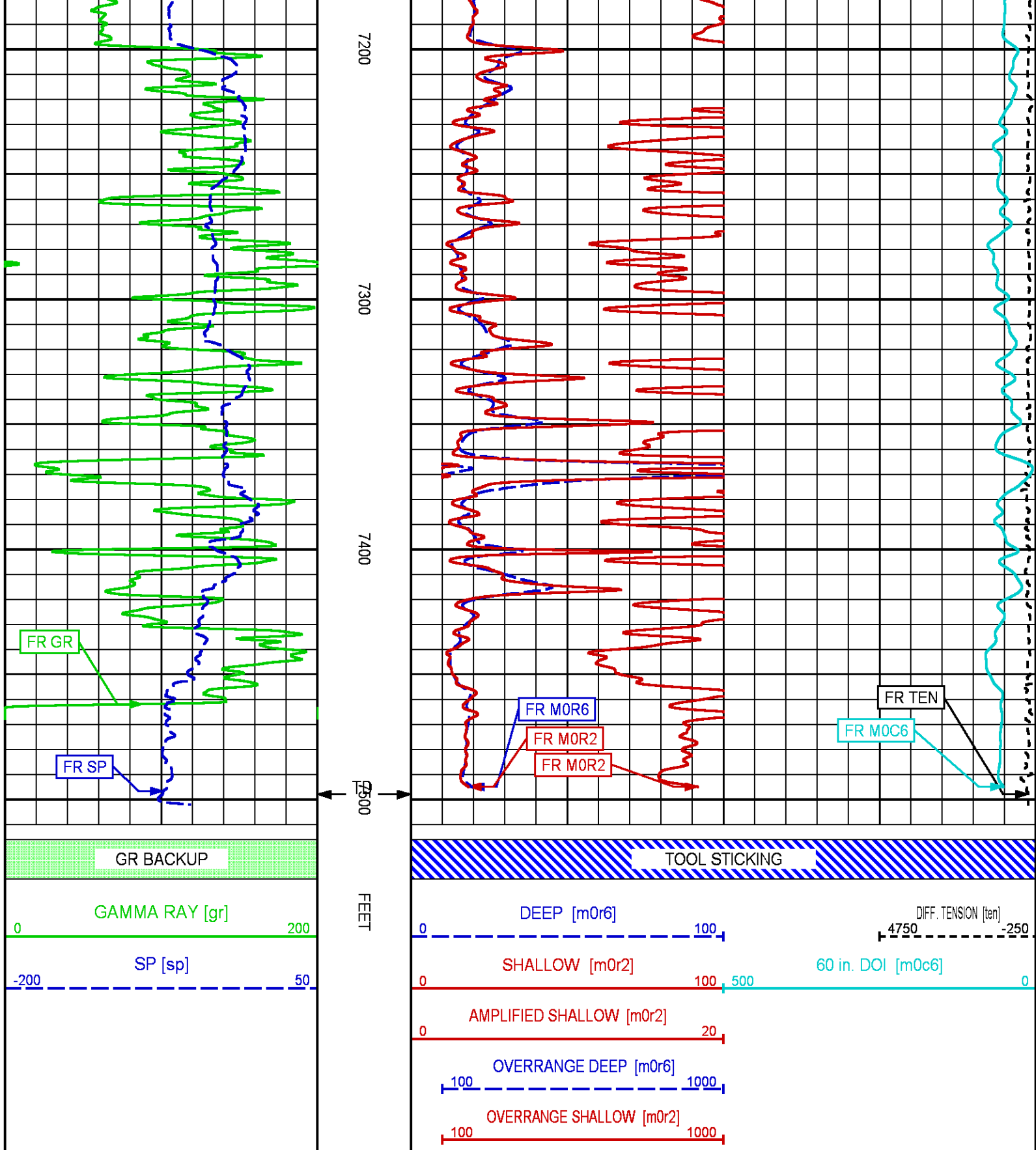
5000 5100 5200 5300 5400 5500











MAIN LOG 5"/100FT SCALE

Plotted: Tue Mar 10 12:29:37 2015

PARAMETER AND FILTER SUMMARY REPORT					
FILE: C:\dat1a\92871J\970aR03.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 11.250 ft BOTTOM DEPTH: 7507.920 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 ()	medium (1)		"	"
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	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	59.0	degF	"	"
	MUD SAMPLE RES	1.350	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	59.0	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	1250	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
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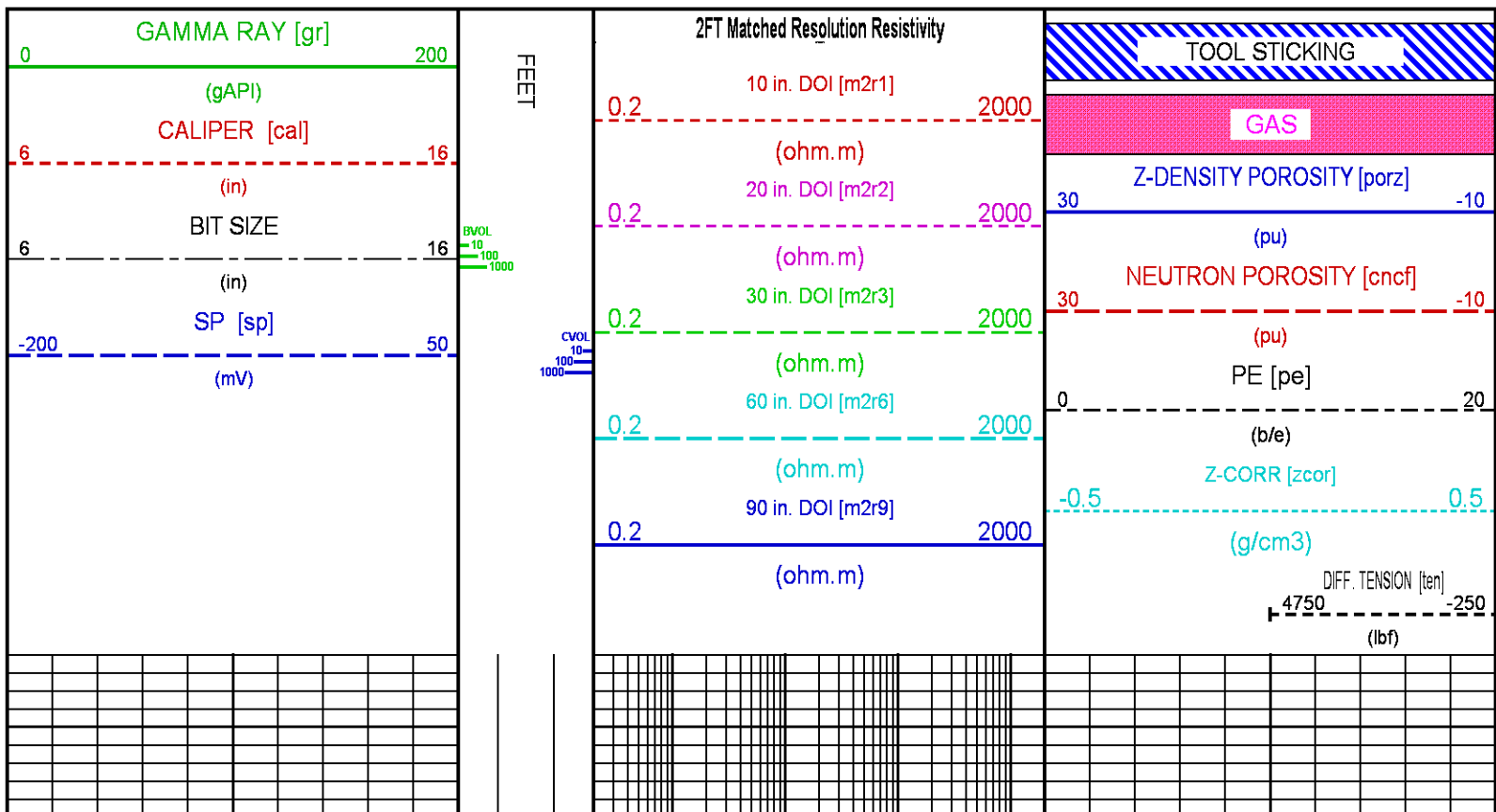
F1:BIT	Mar 10 02:15:11 2015	BIT SIZE
F1:BVOL	Mar 10 02:15:11 2015	BOREHOLE VOLUME
F1:CAL	Mar 10 02:15:11 2015	CALIPER
F1:CNCF	Mar 10 02:15:11 2015	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Mar 10 02:15:11 2015	CEMENT VOLUME
F1:GR	Mar 10 02:15:11 2015	GAMMA RAY
F1:M2R1	Mar 10 02:15:11 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Mar 10 02:15:11 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Mar 10 02:15:11 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Mar 10 02:15:11 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Mar 10 02:15:11 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Mar 10 02:15:11 2015	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Mar 10 02:15:11 2015	POROSITY FOR SELECTABLE MATRIX
F1:SP	Mar 10 02:15:11 2015	SPONTANEOUS POTENTIAL
F1:TEN	Mar 10 02:15:11 2015	DIFFERENTIAL TENSION
F1:ZCOR	Mar 10 02:15:11 2015	DENSITY CORRECTION

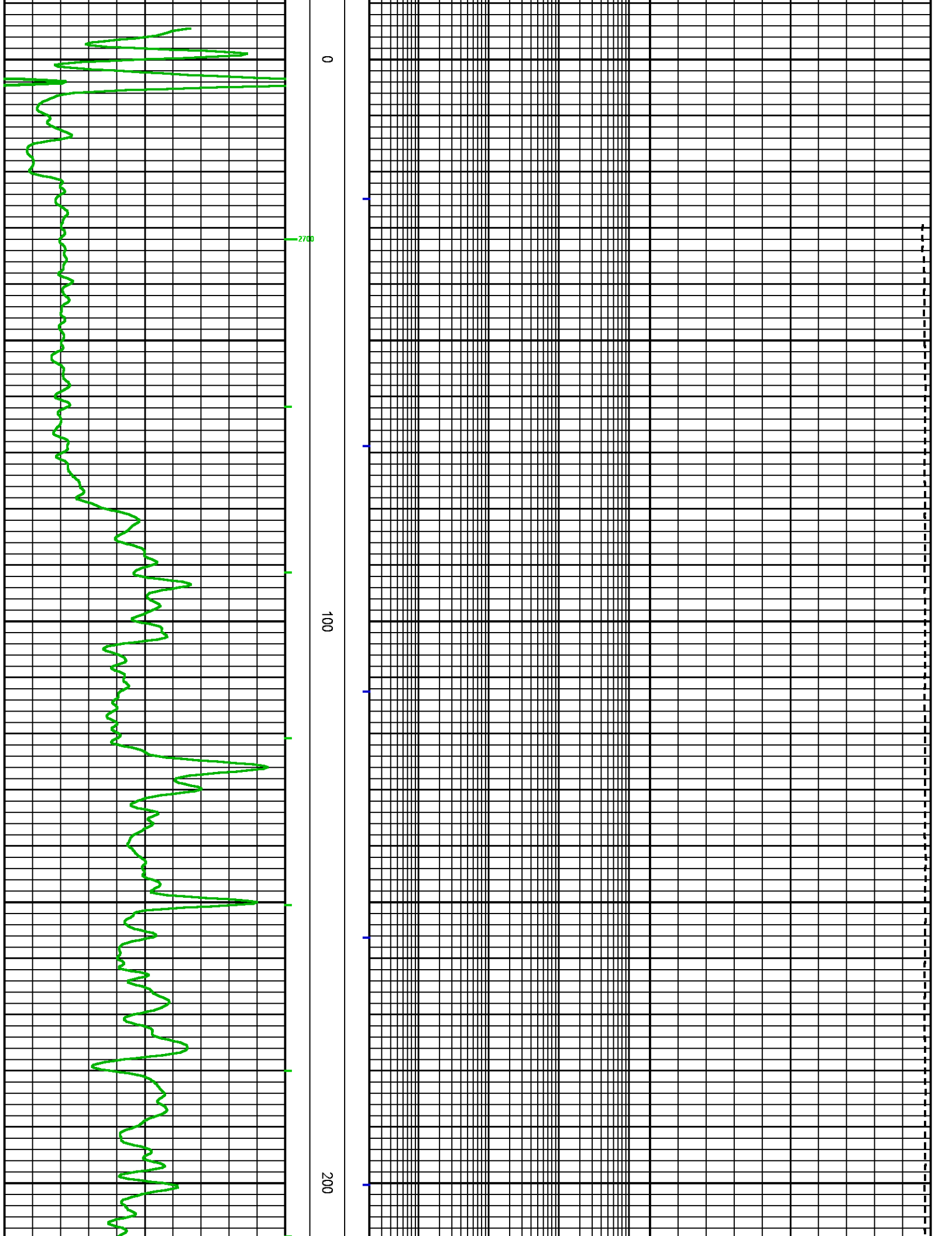
CURVE MEASURE POINT OFFSET

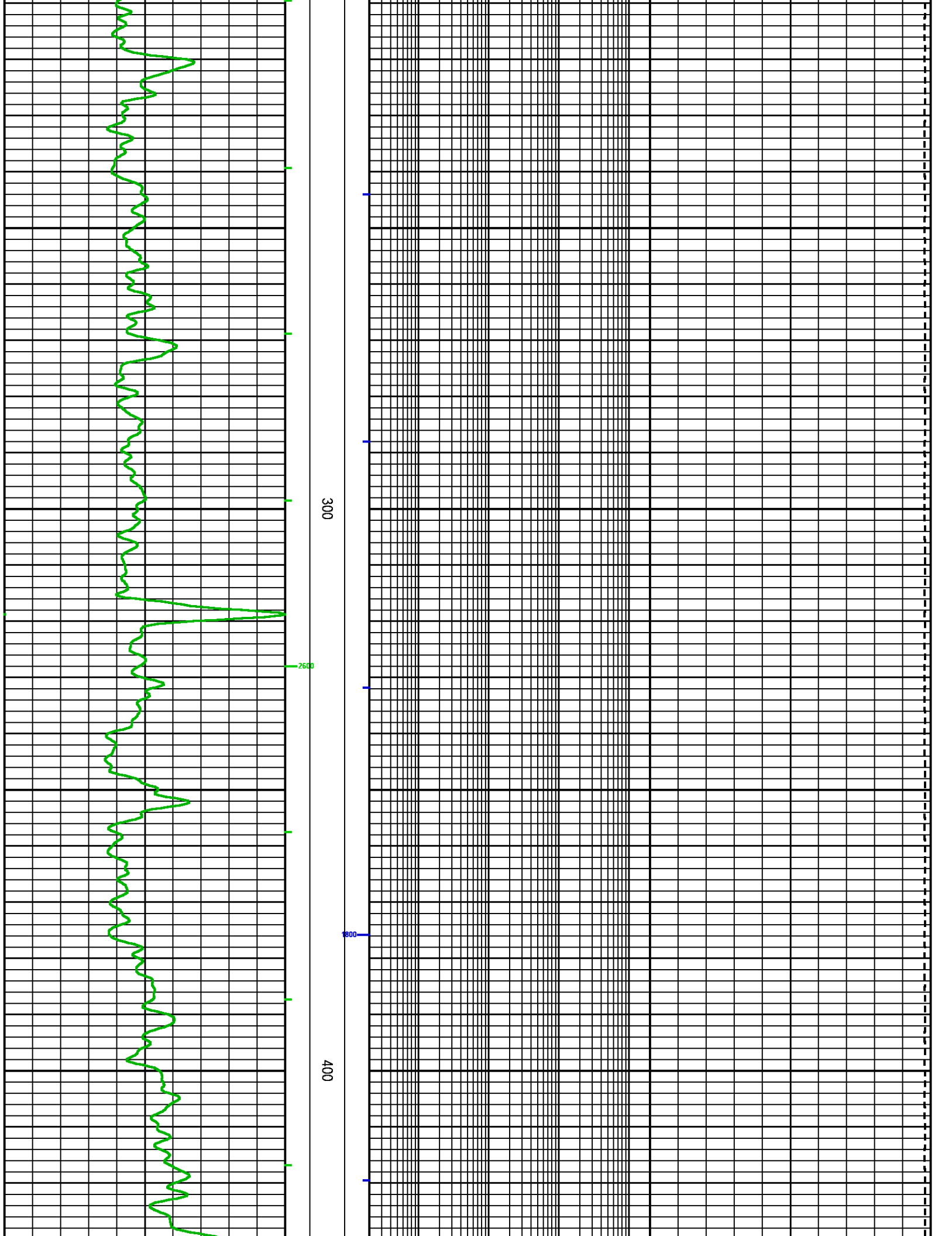
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BIT	0.00	M2R1	2.75	M2R9	2.75	TEN	0.00
CAL	18.13	M2R2	2.75	PE	18.00	ZCOR	18.00
CNCF	27.38	M2R3	2.75	PORZ	18.00		
GR	35.00	M2R6	2.75	SP	1.25		

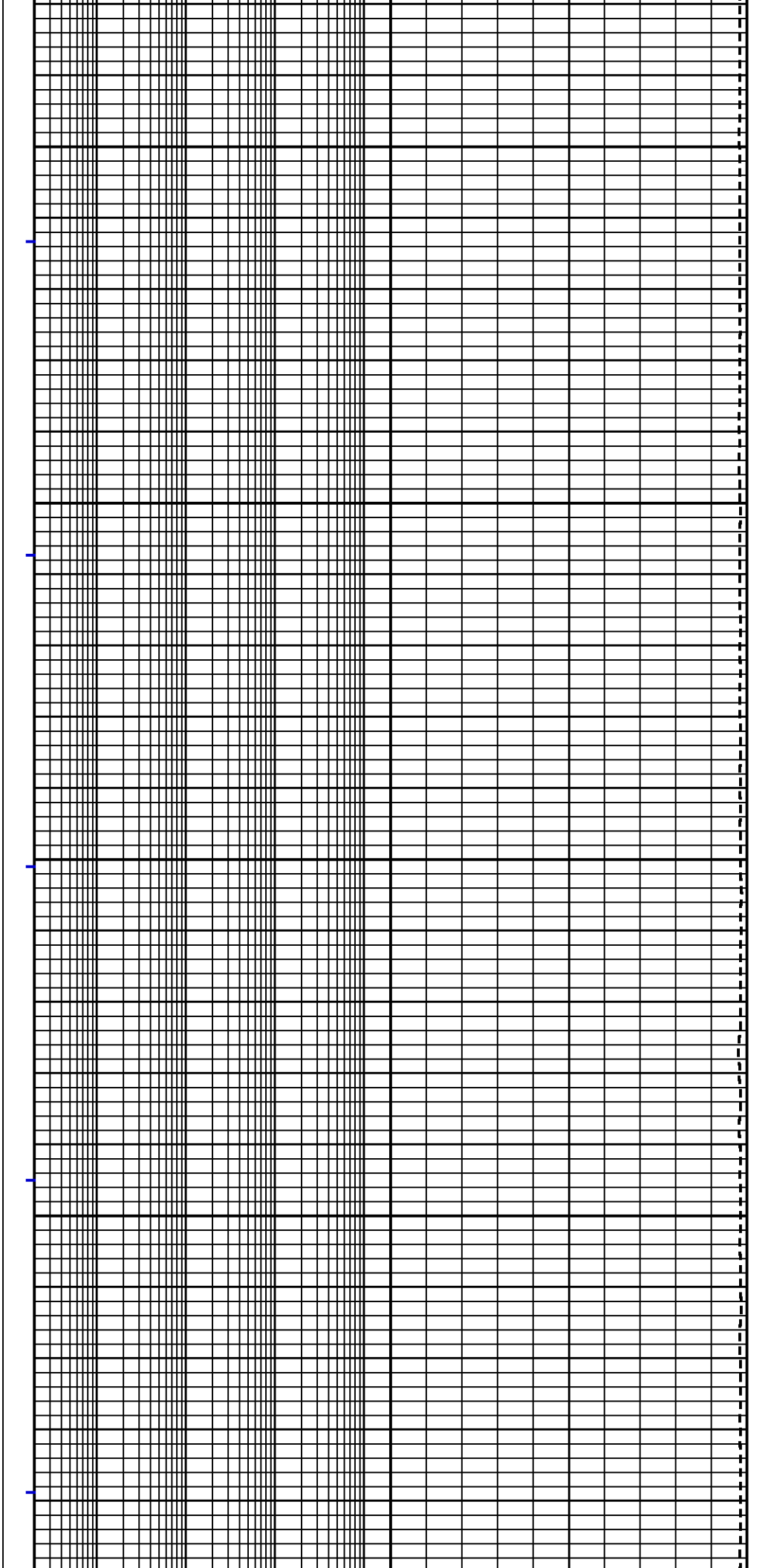
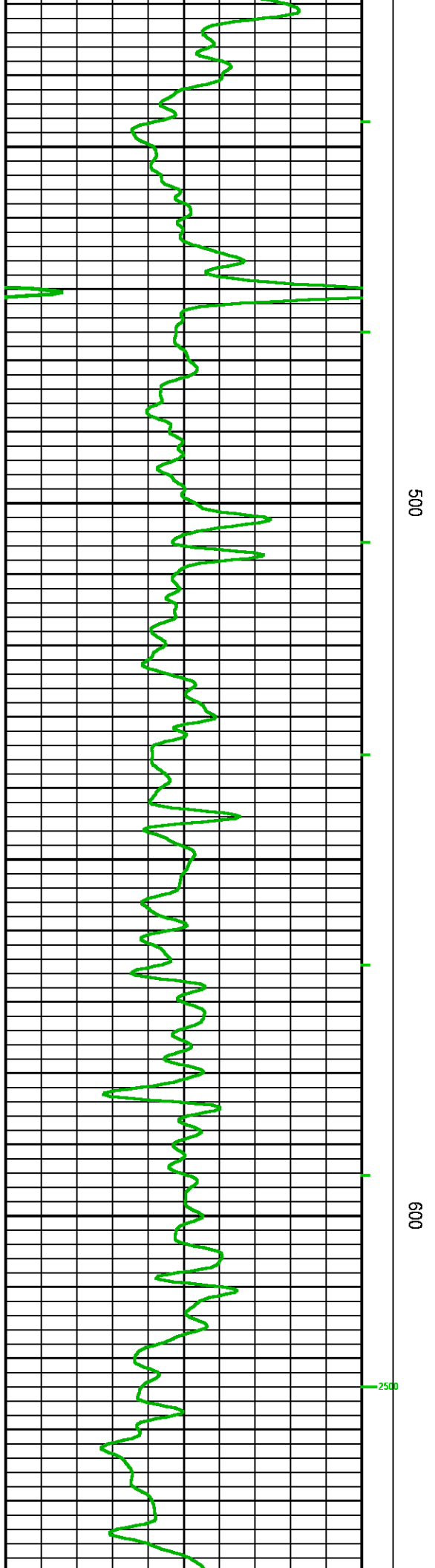
Presentation : BHID26LKX1:C:\dat1a\92871J\5IN+n970aR03_MAIN.fvpdf [5"/100' Scale]
Plot Interval : -27.25 - 7509.5 Feet

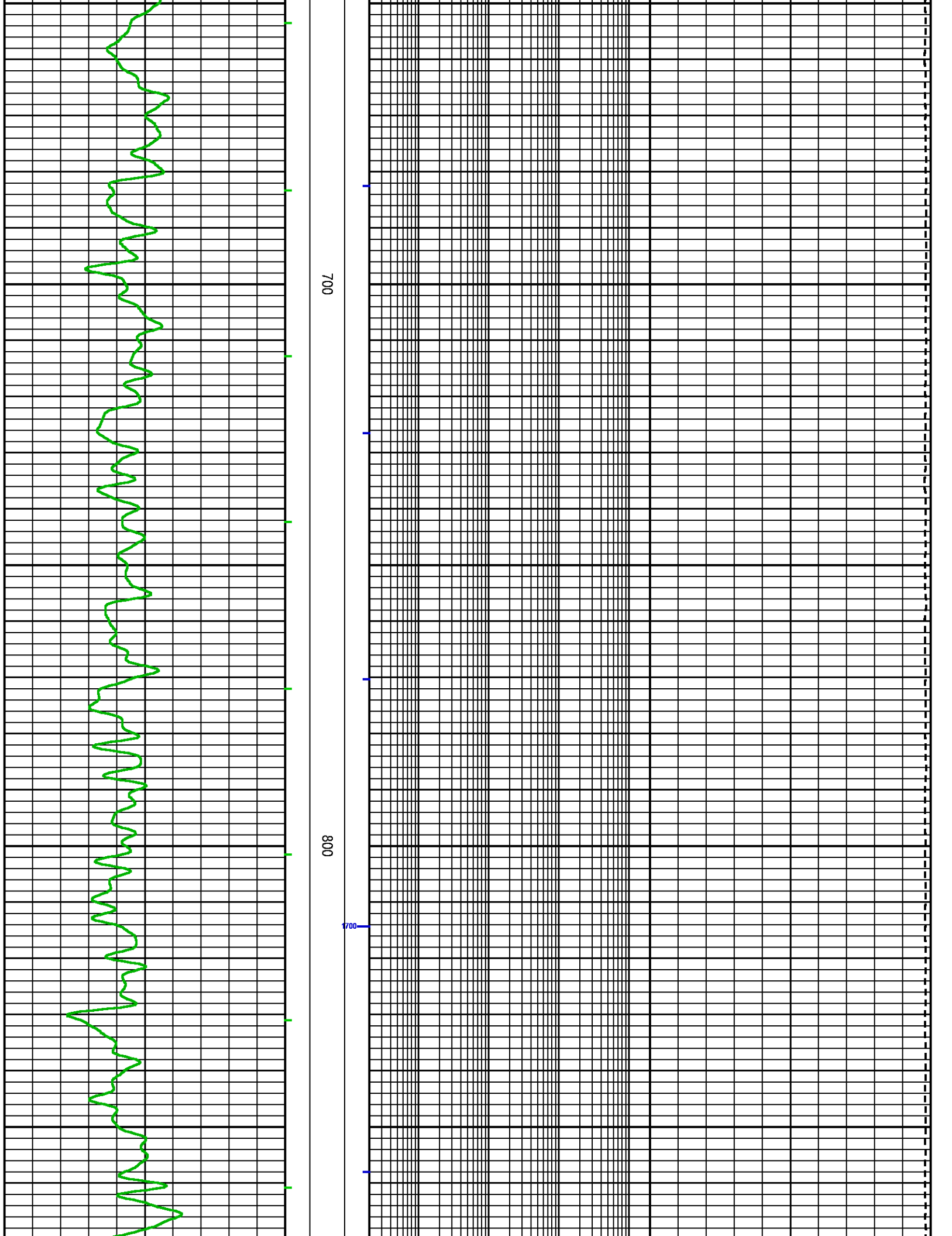
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Created On : Mar 10 02:15:11 2015
Company : LARAMIE ENERGY
Well : PICEANCE 28-12W
Field : VEGA
File Interval : -27.25 - 7509.5 Feet
OCT : n970a

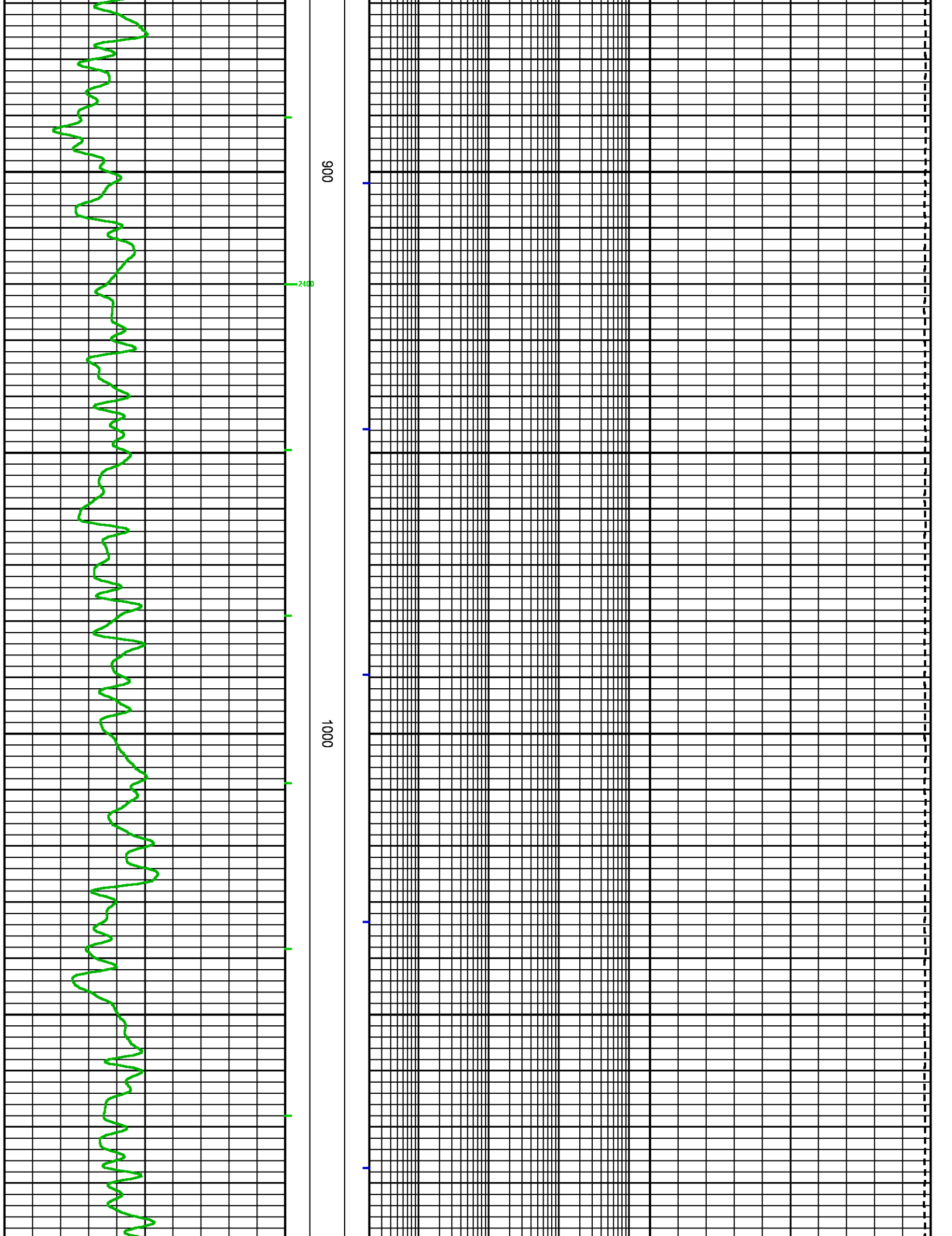


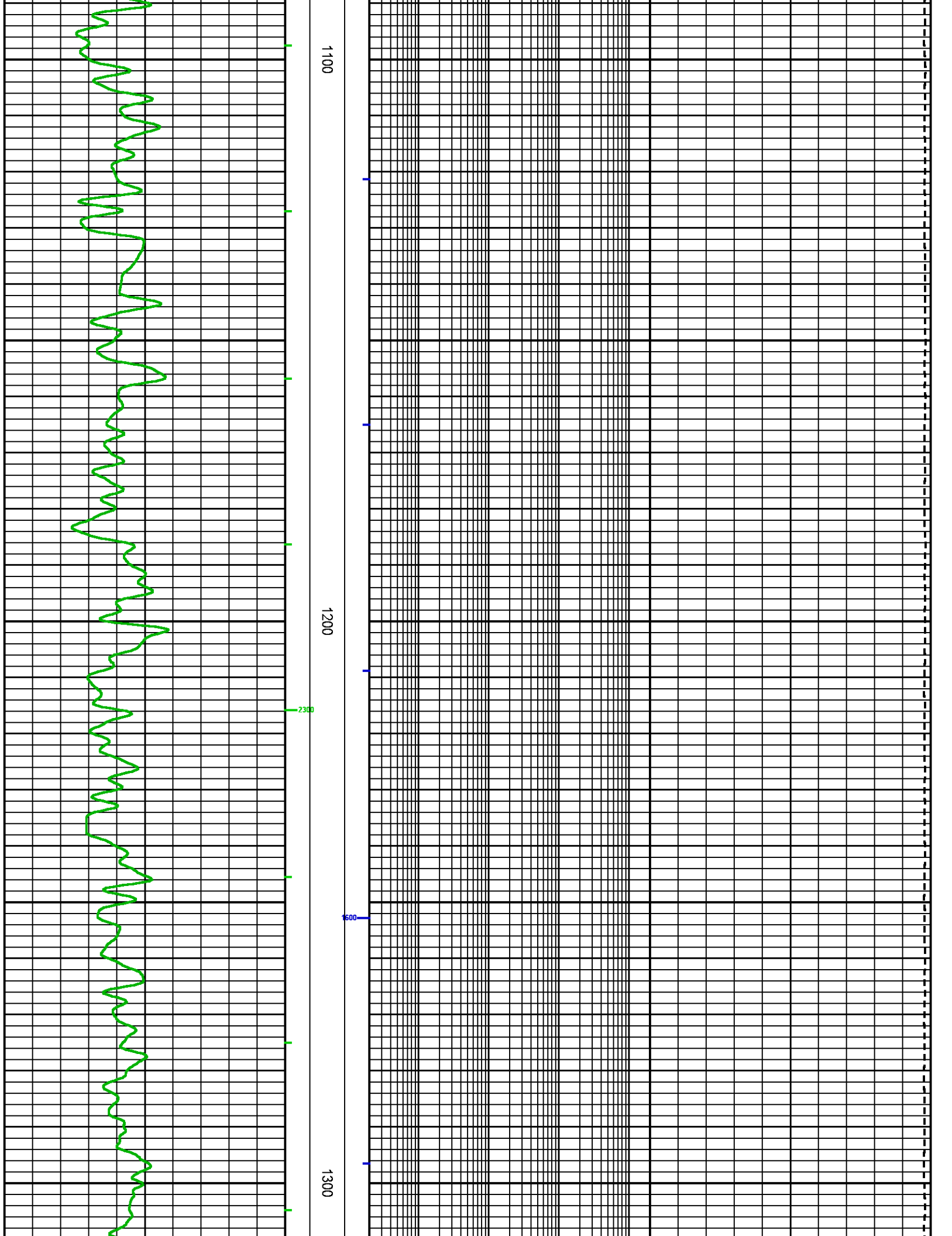


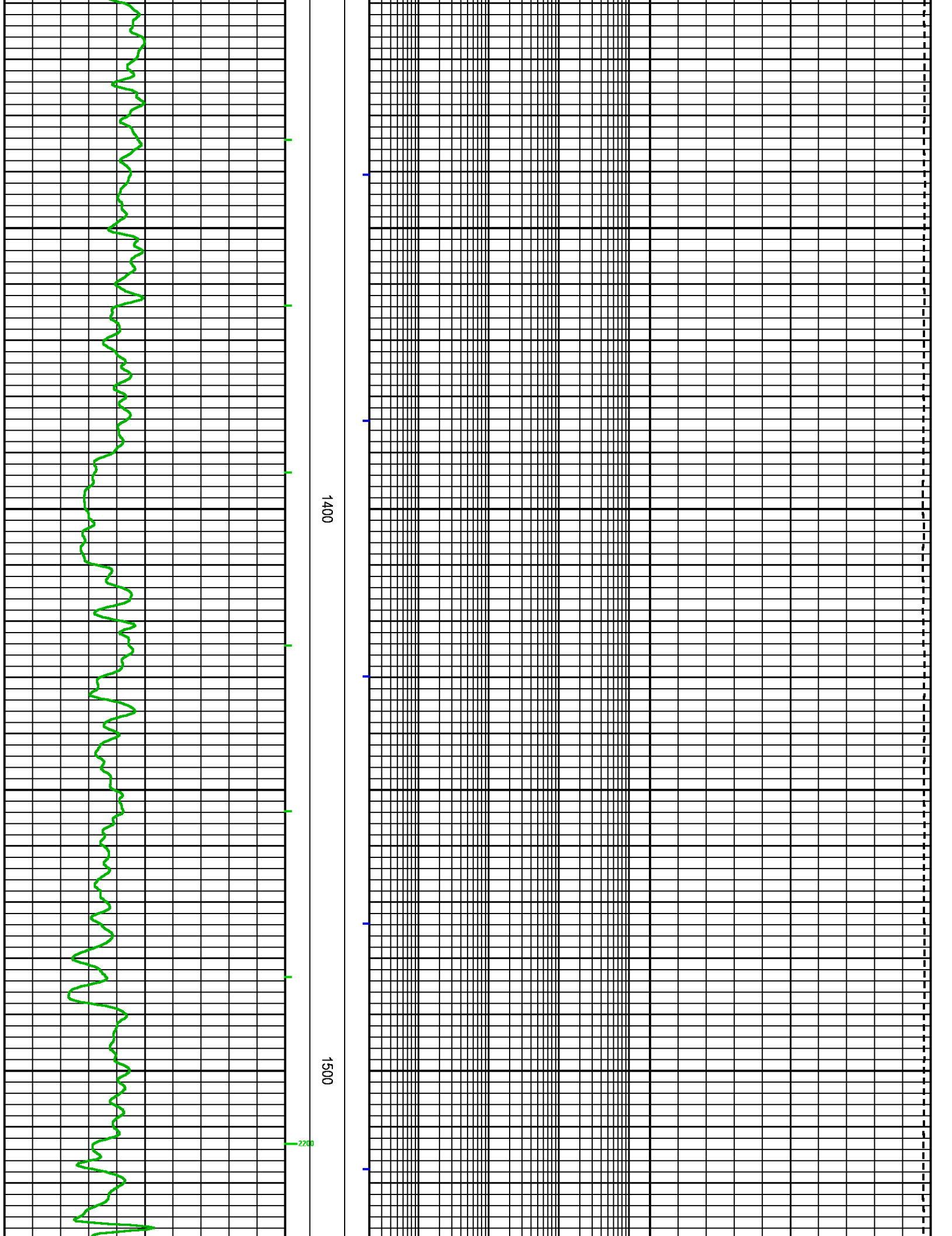


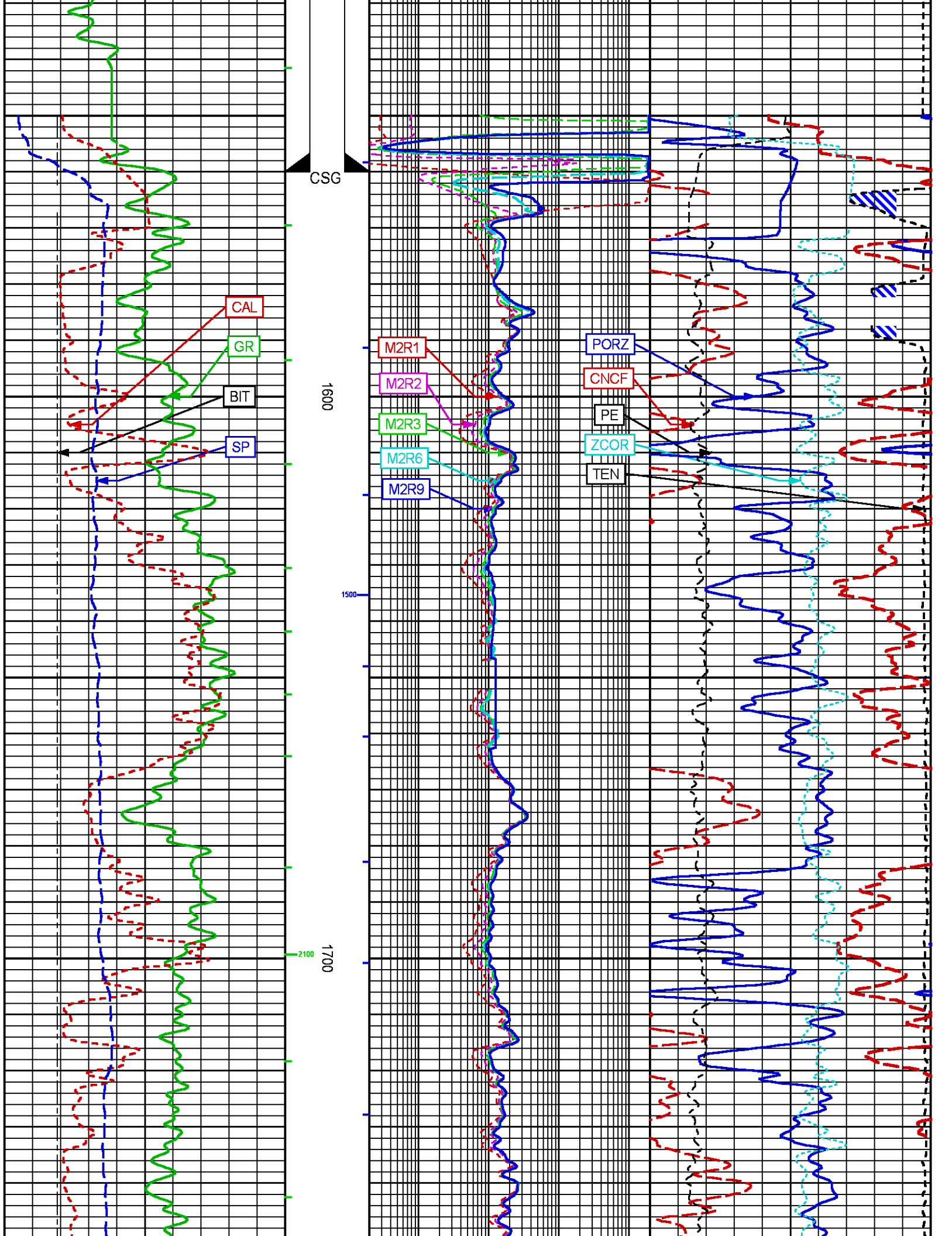


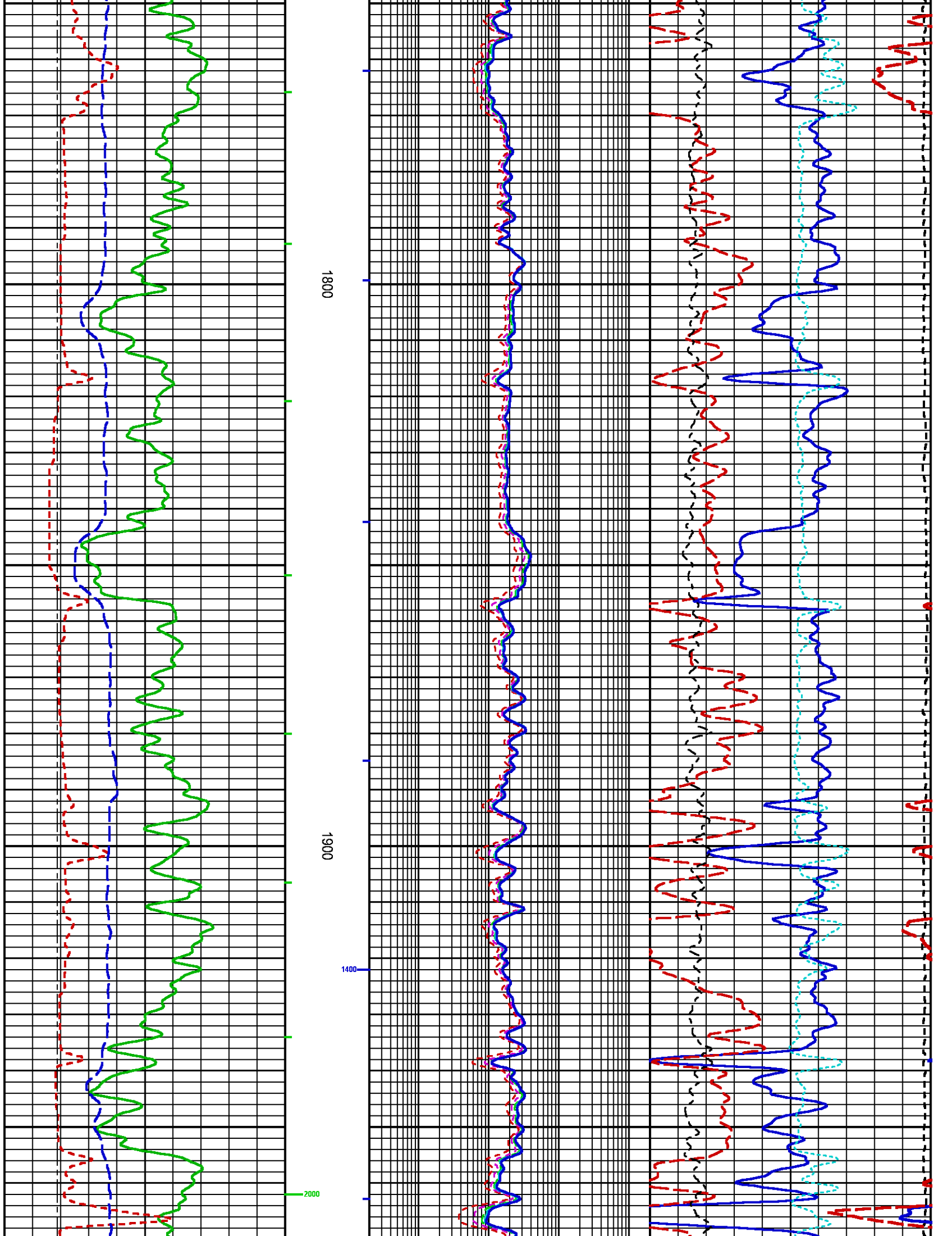


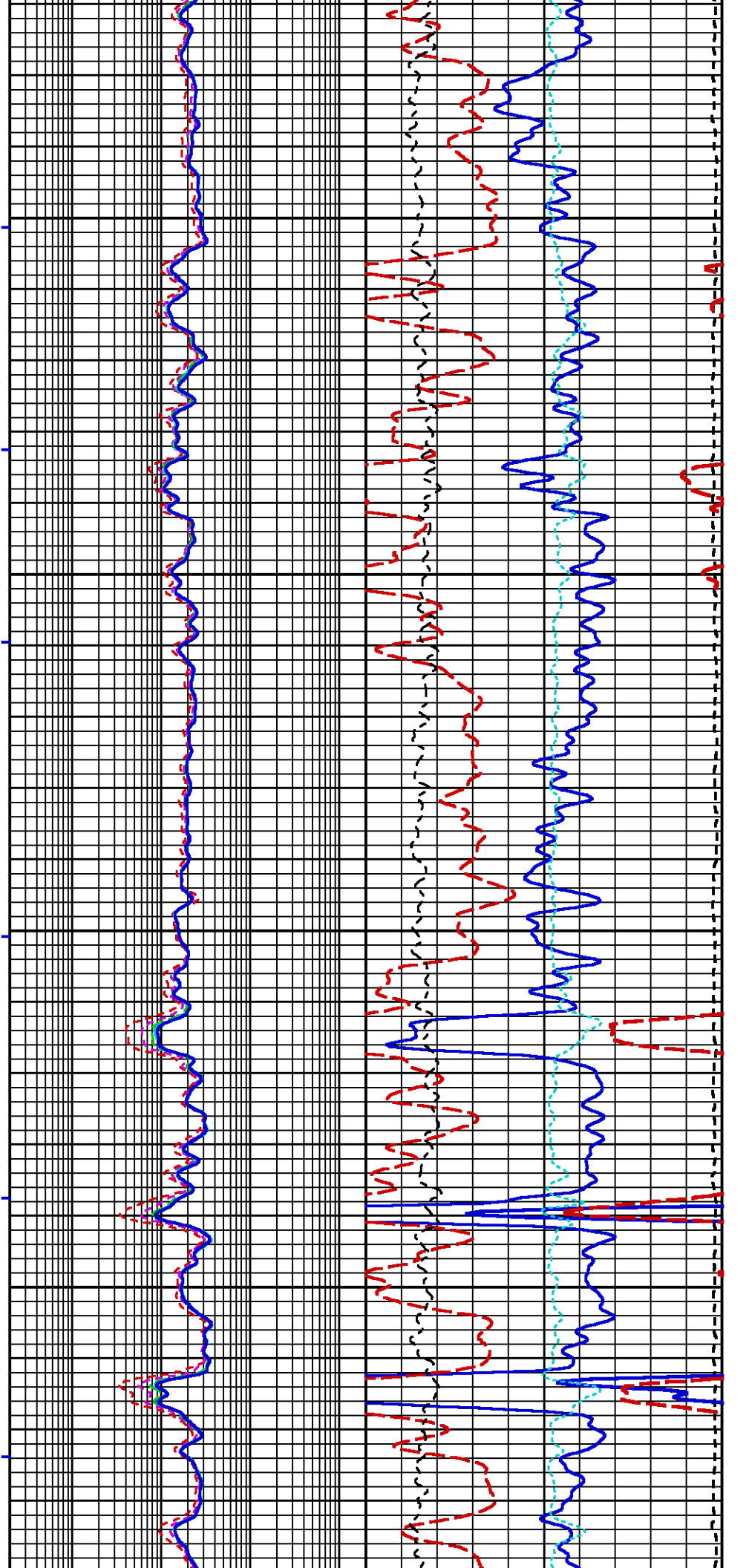






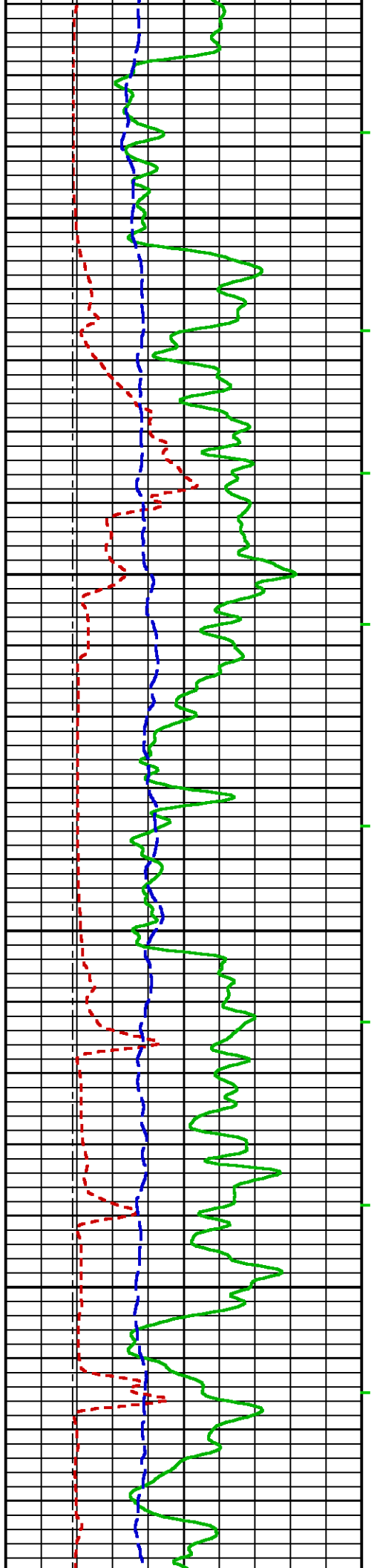


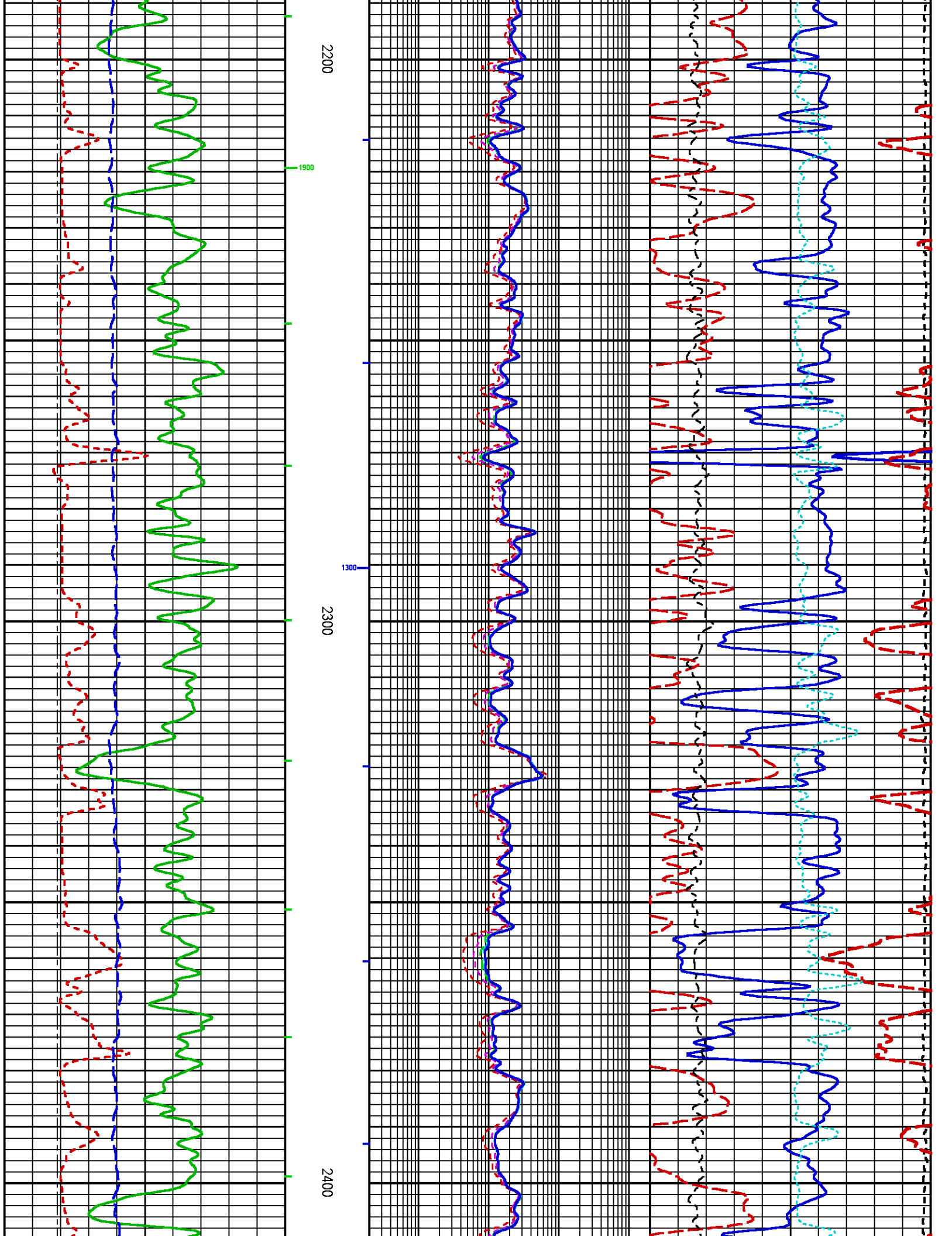


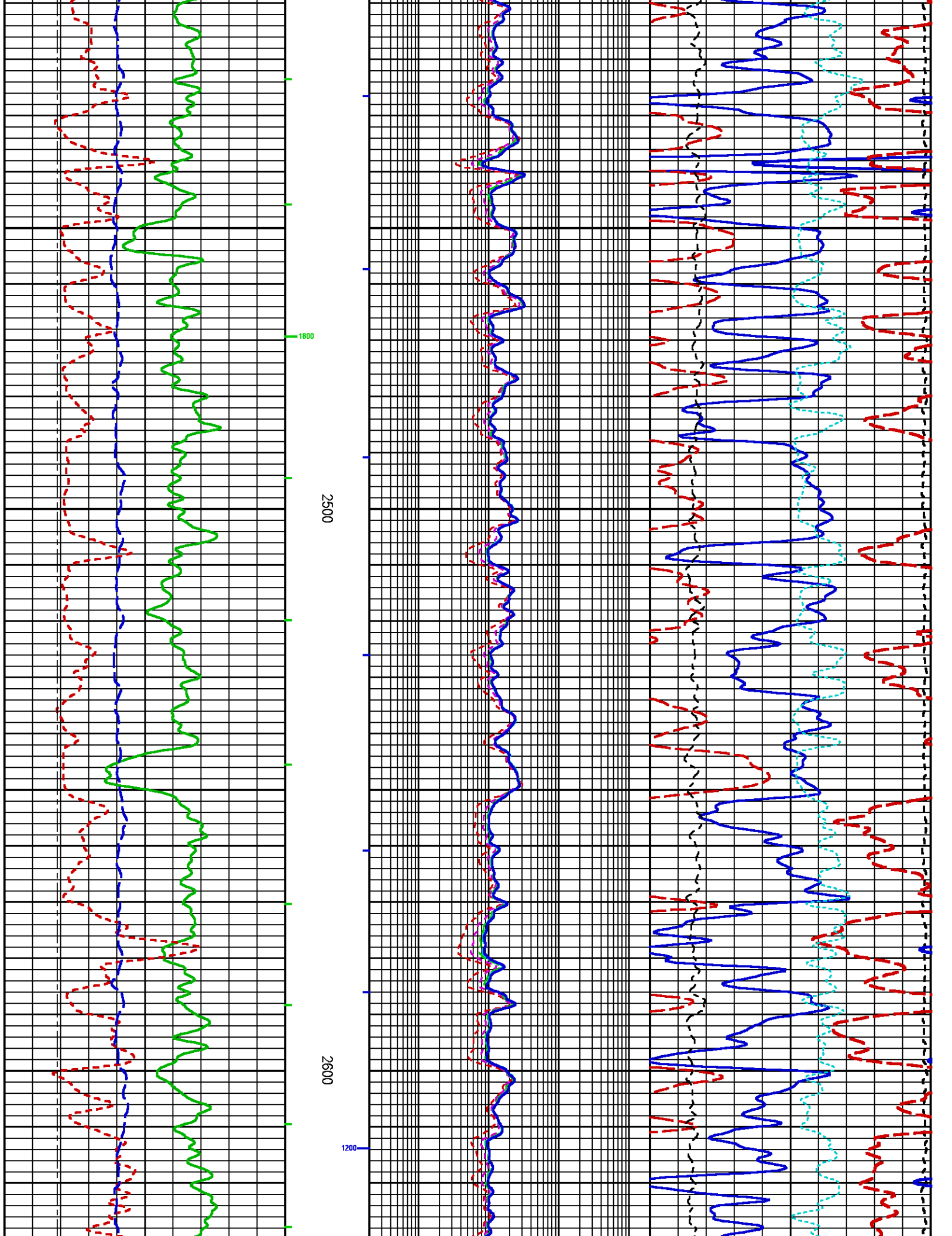


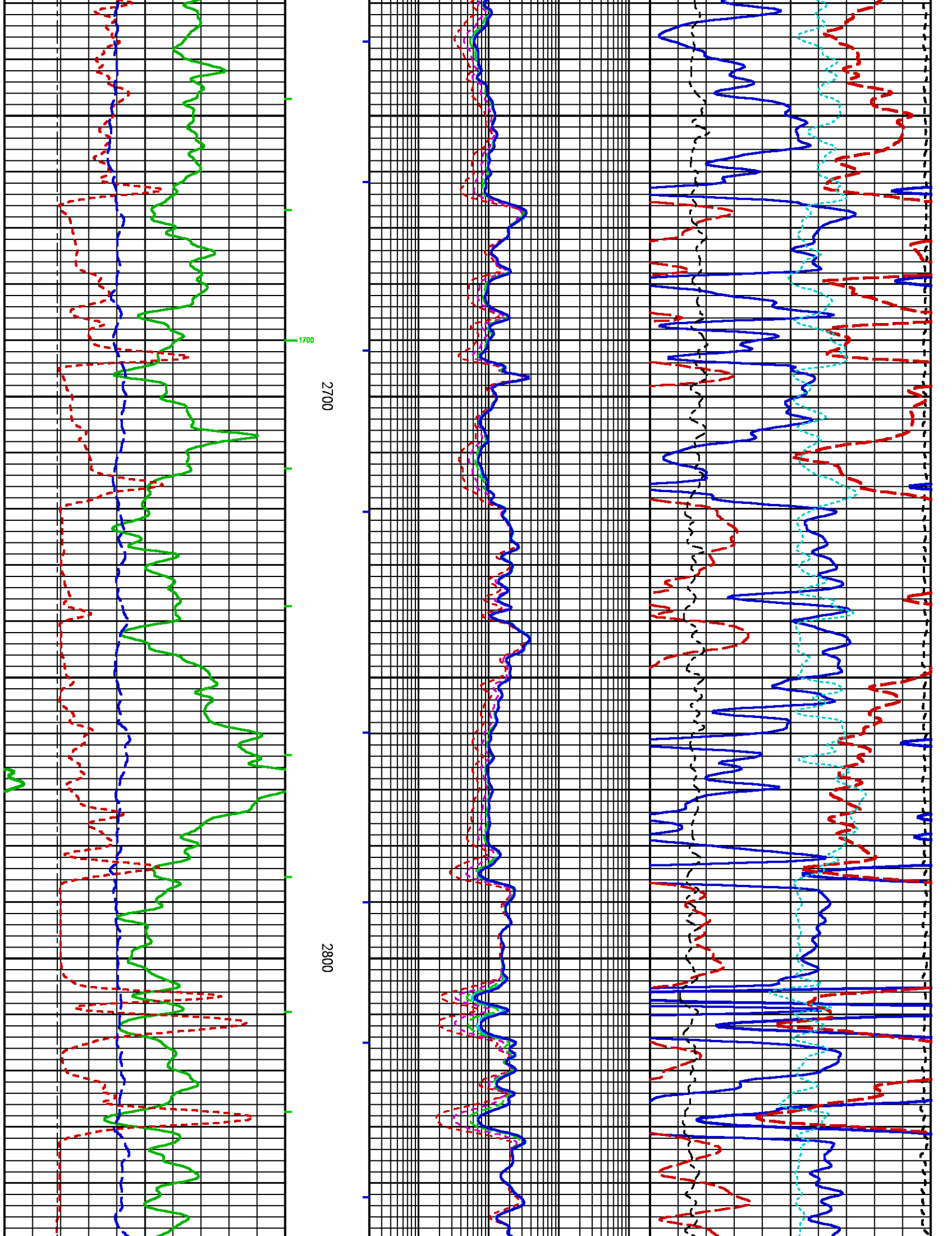
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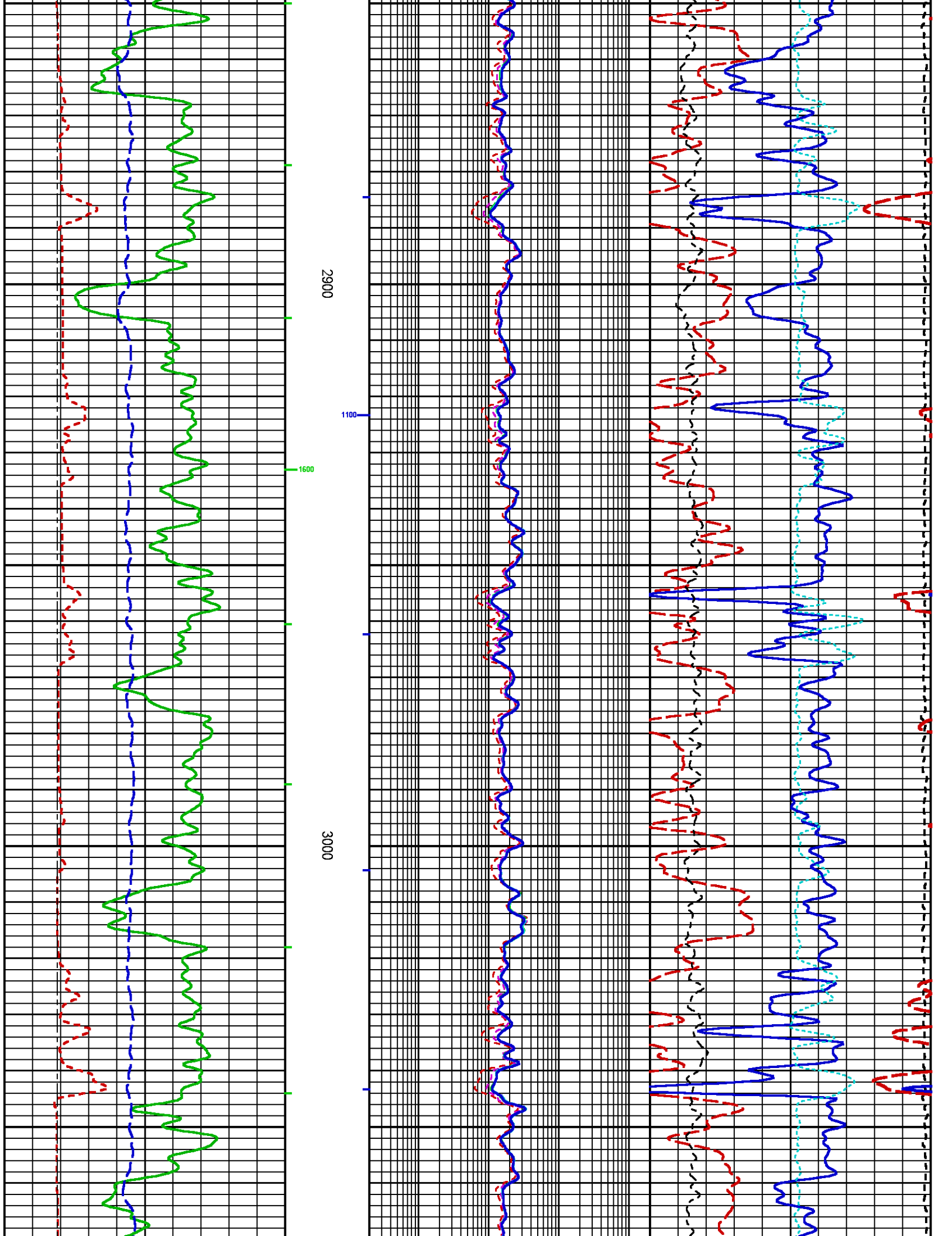
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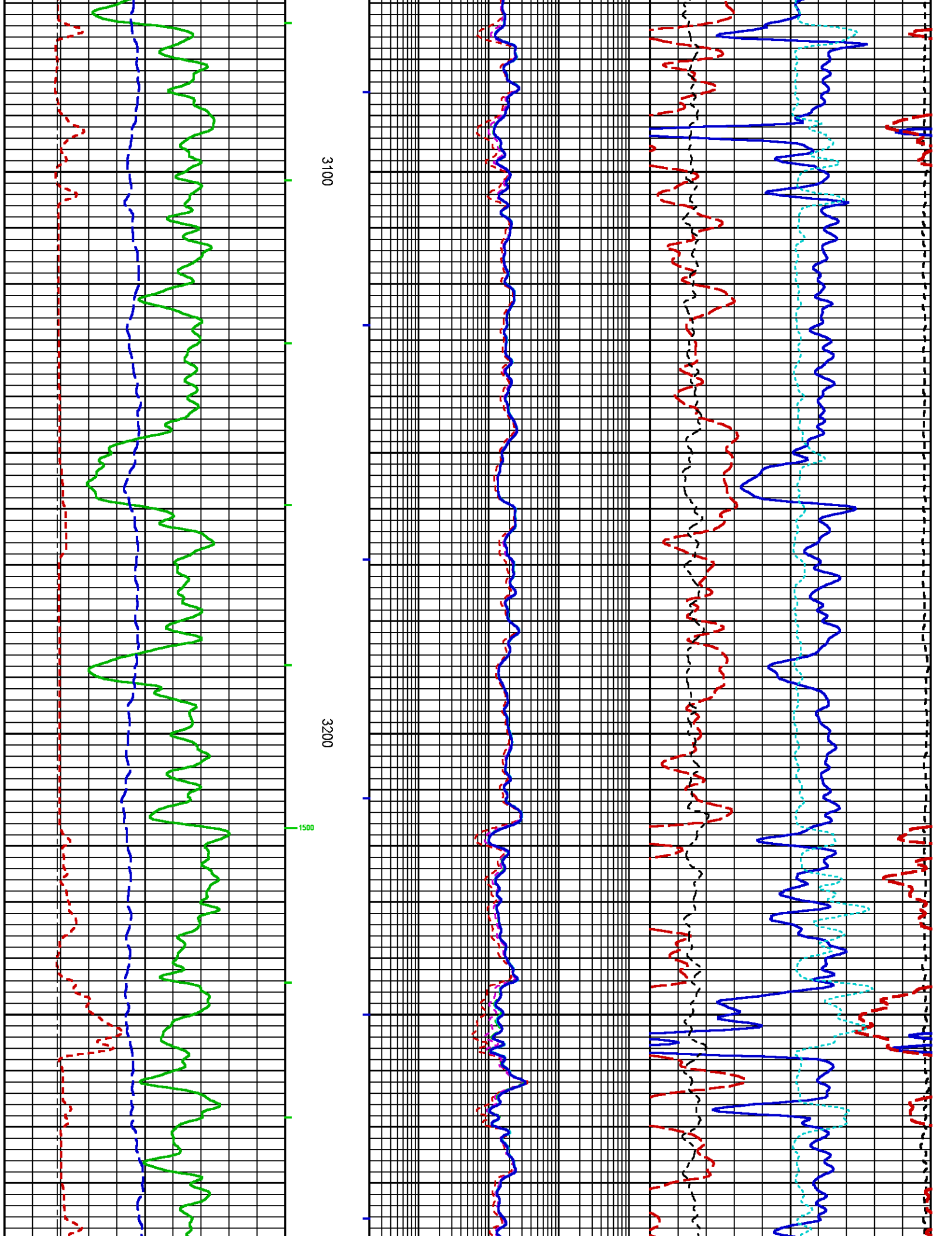


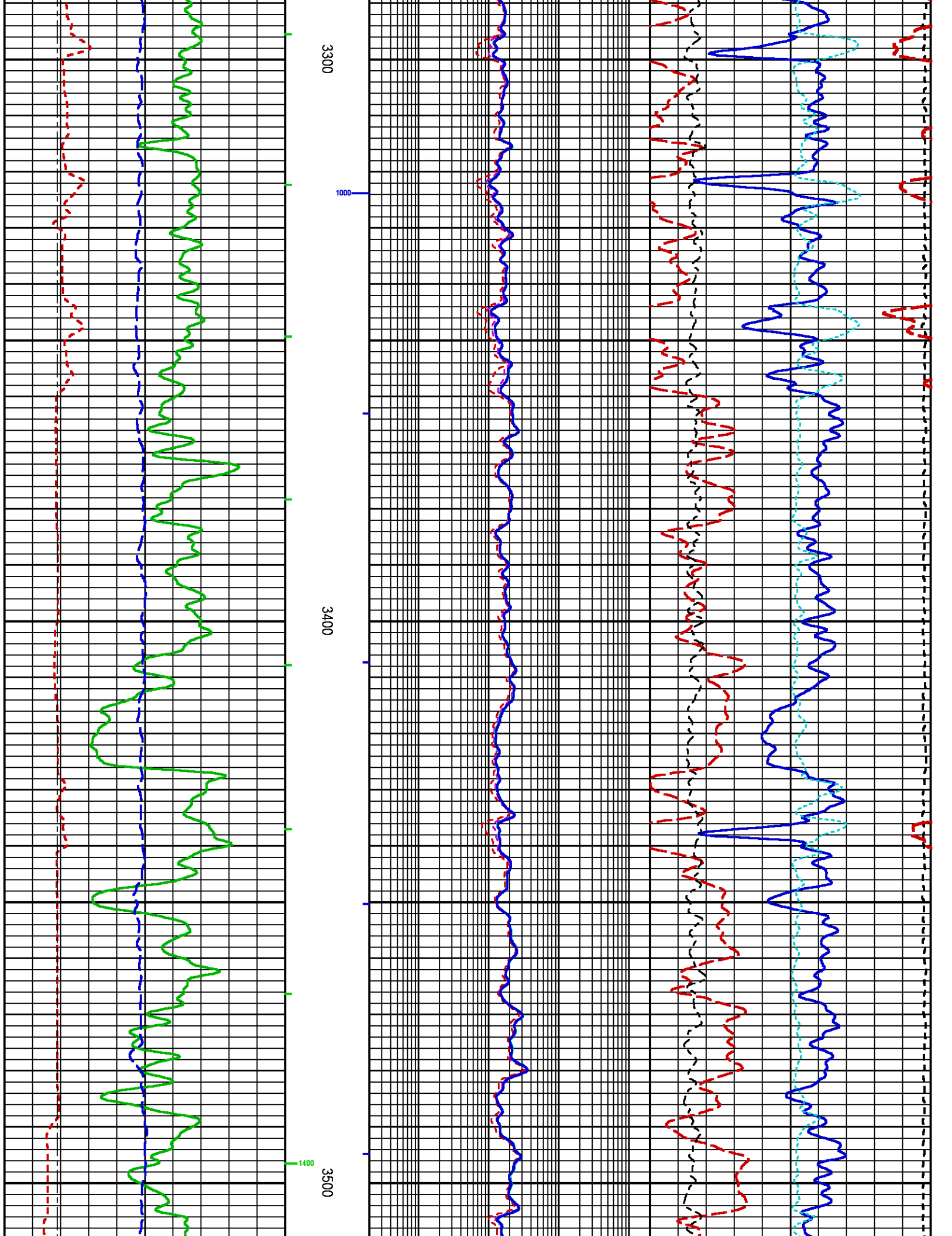


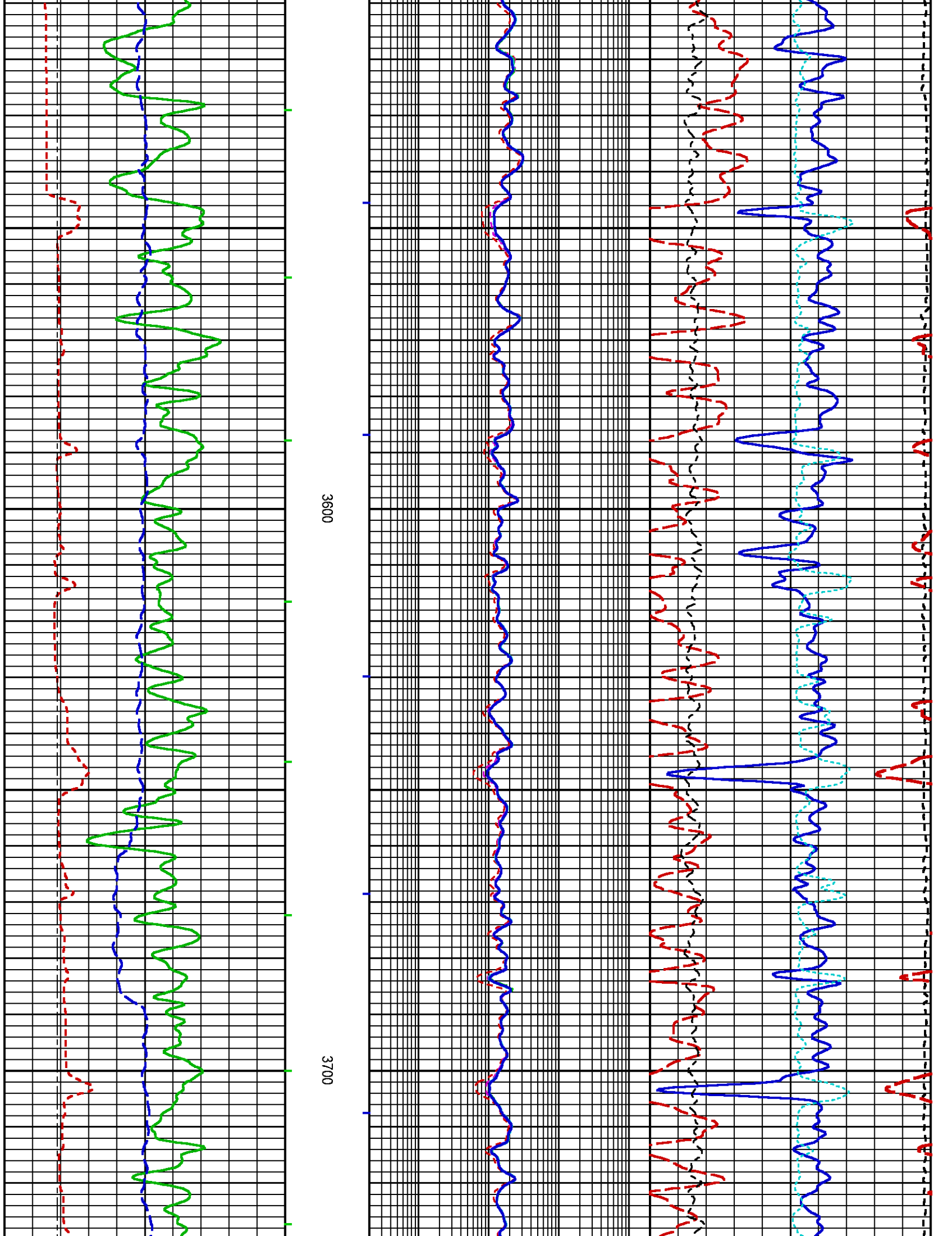


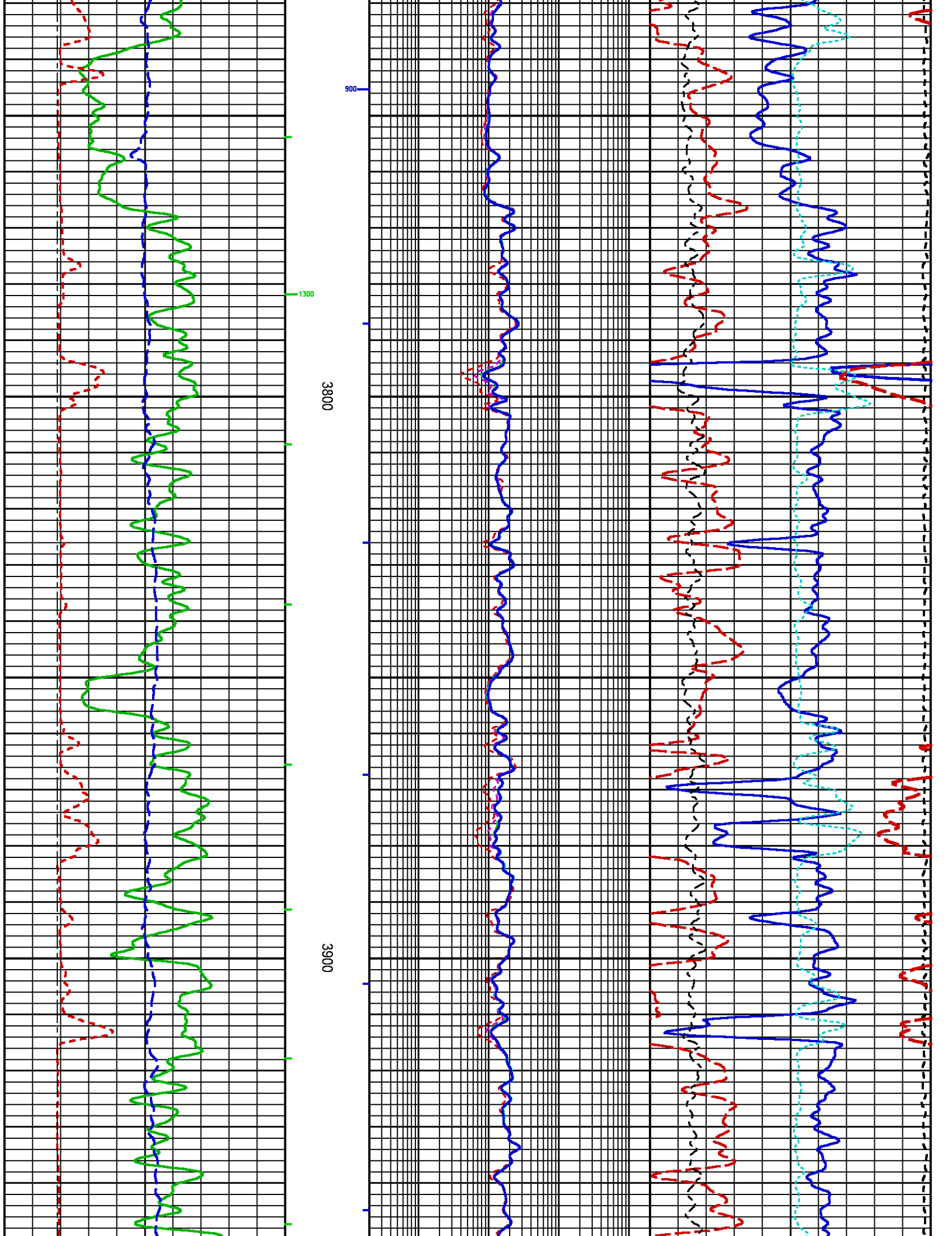


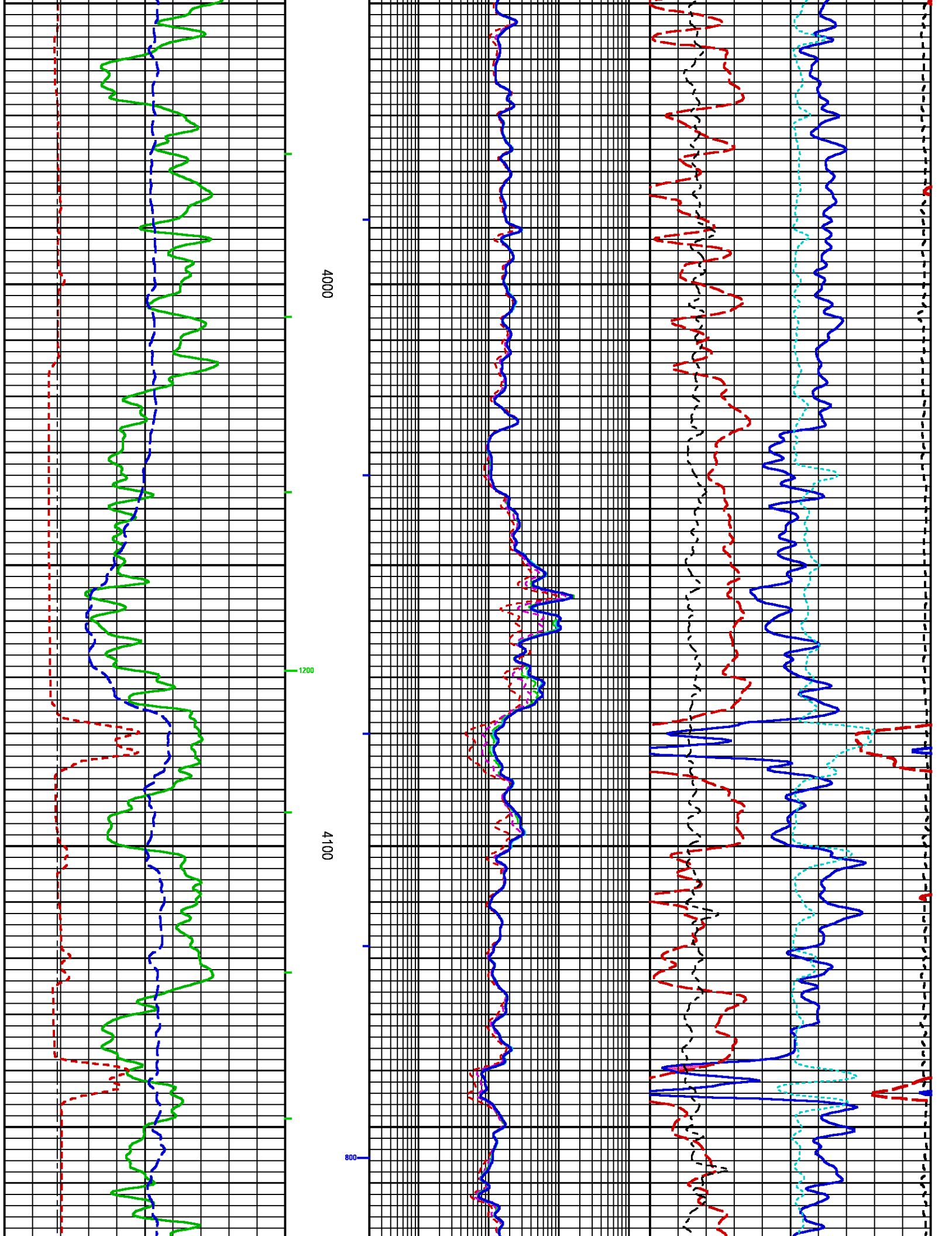


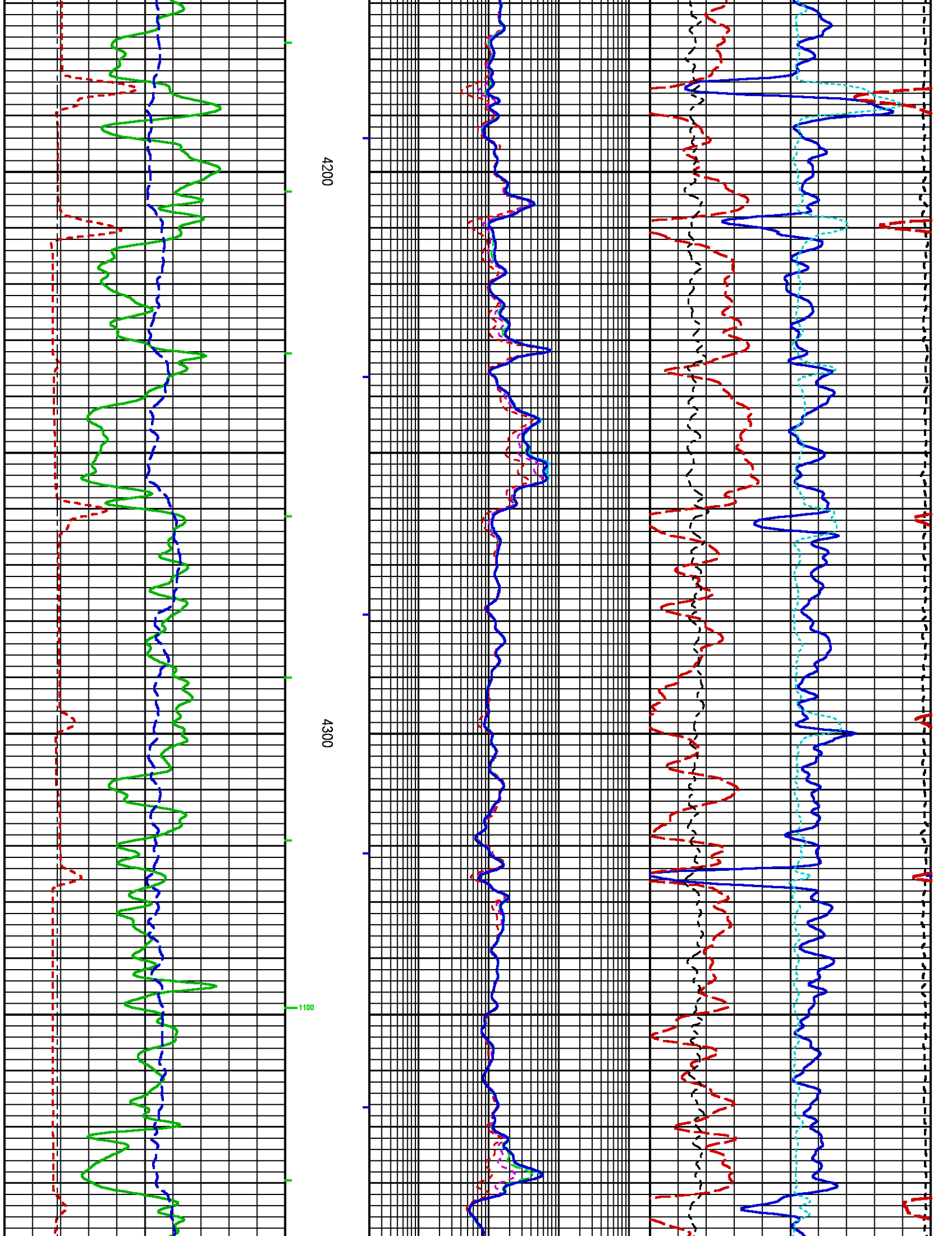


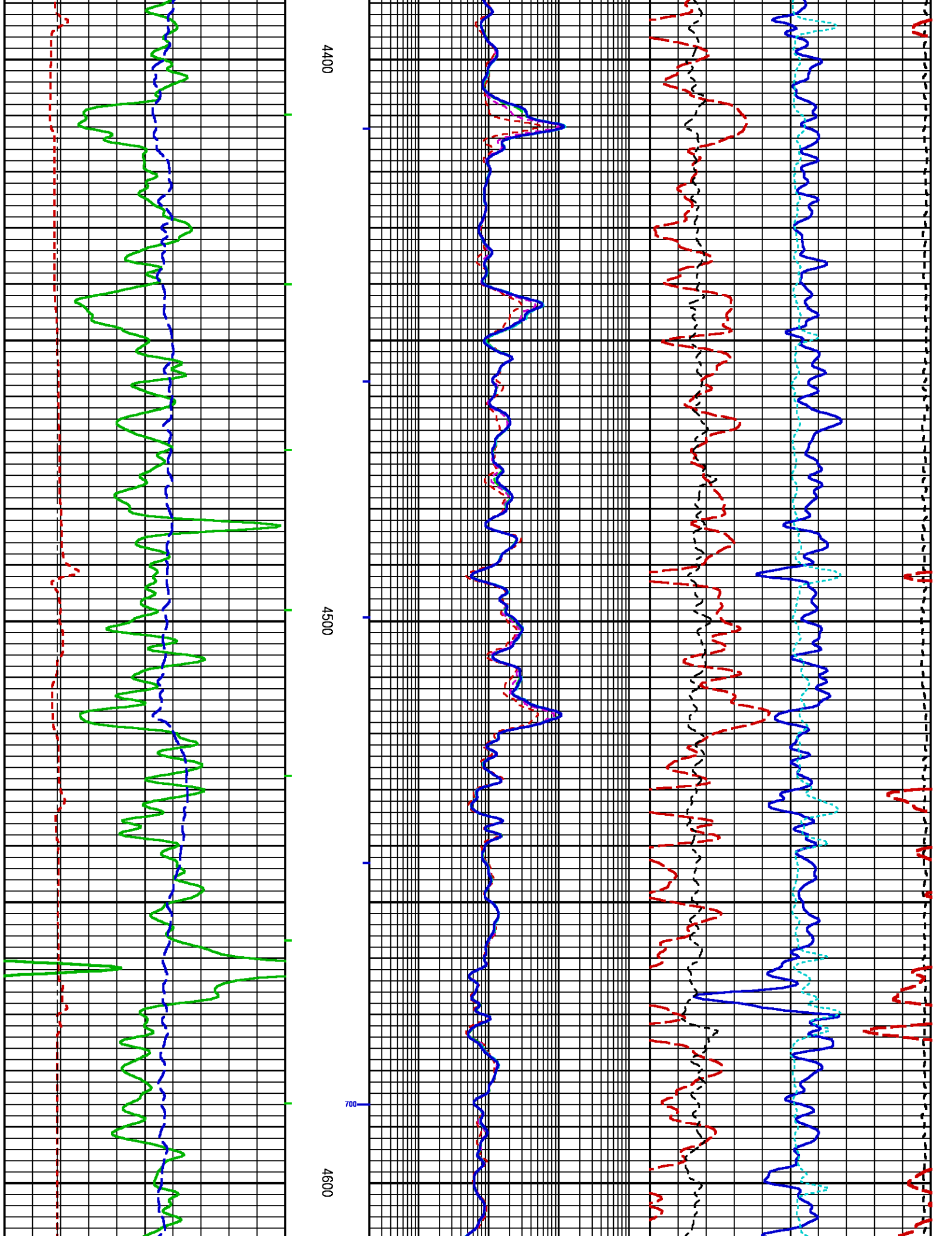


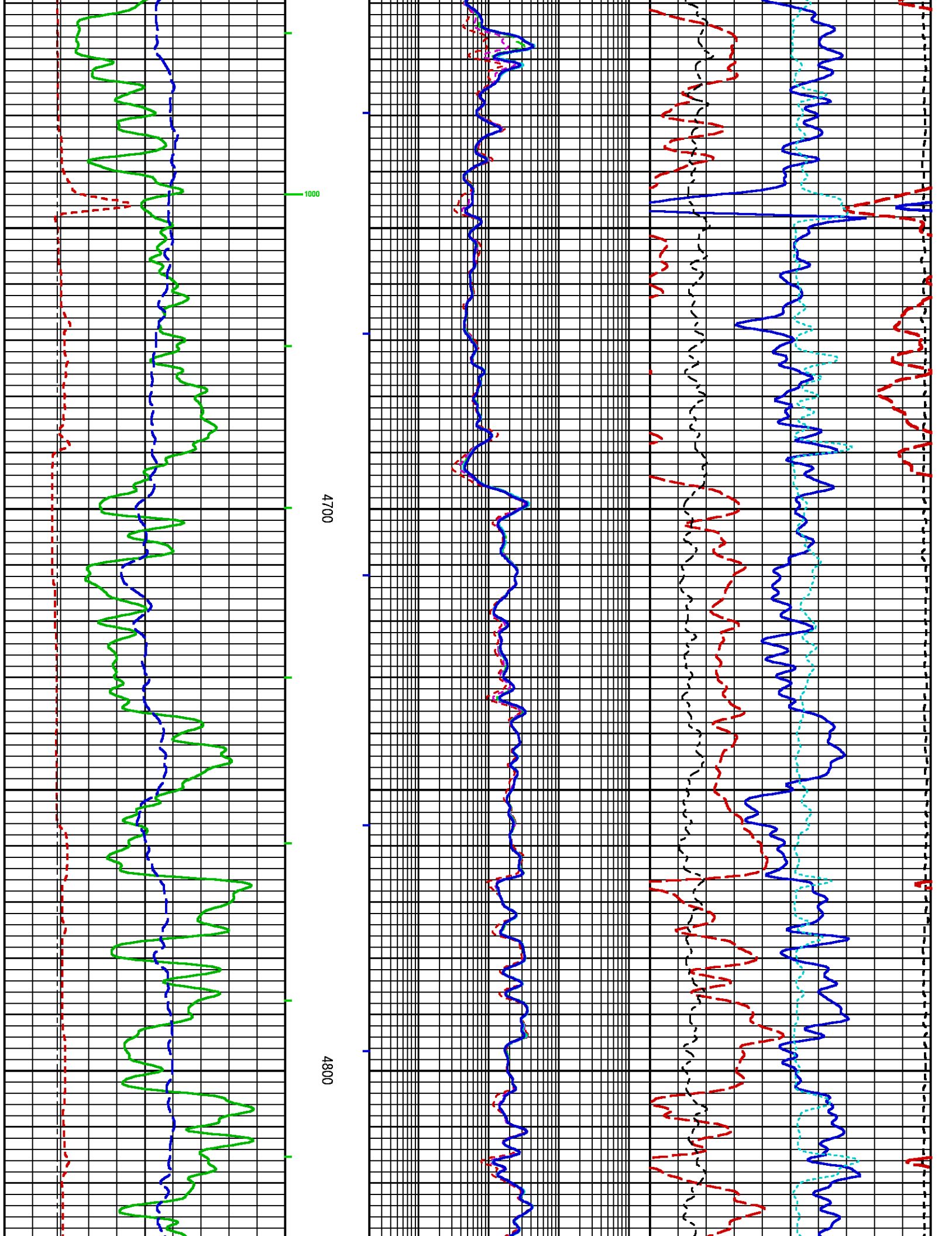


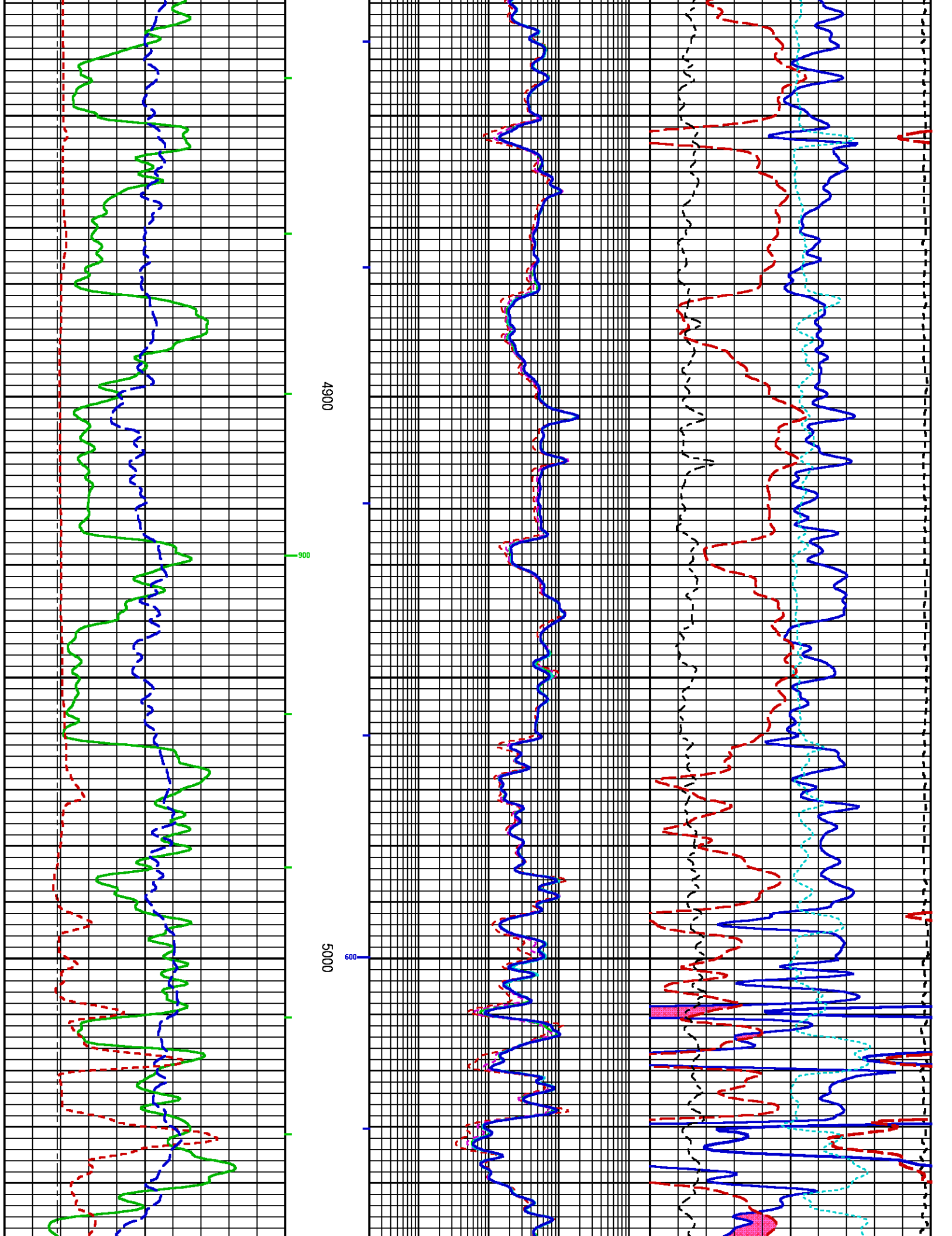


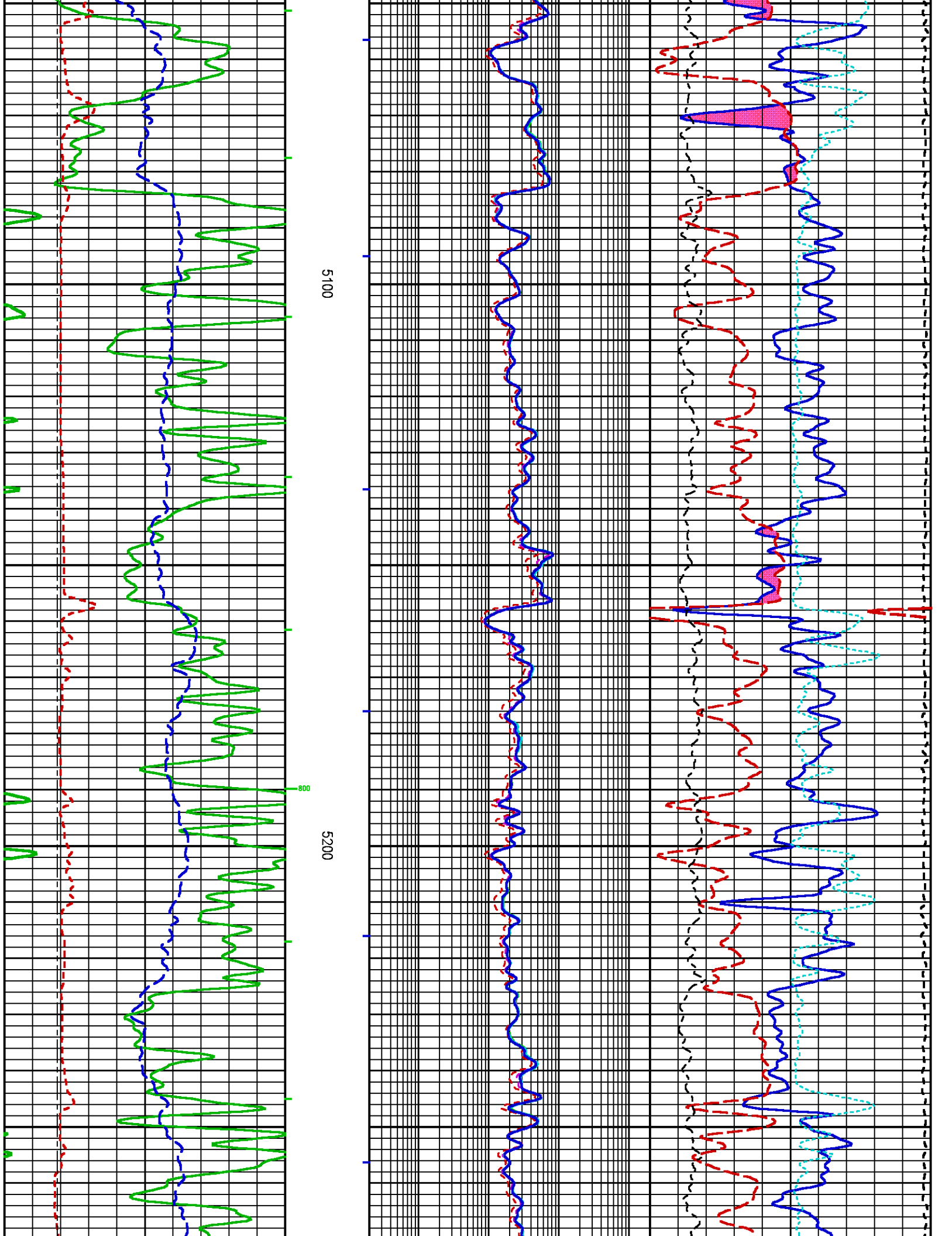


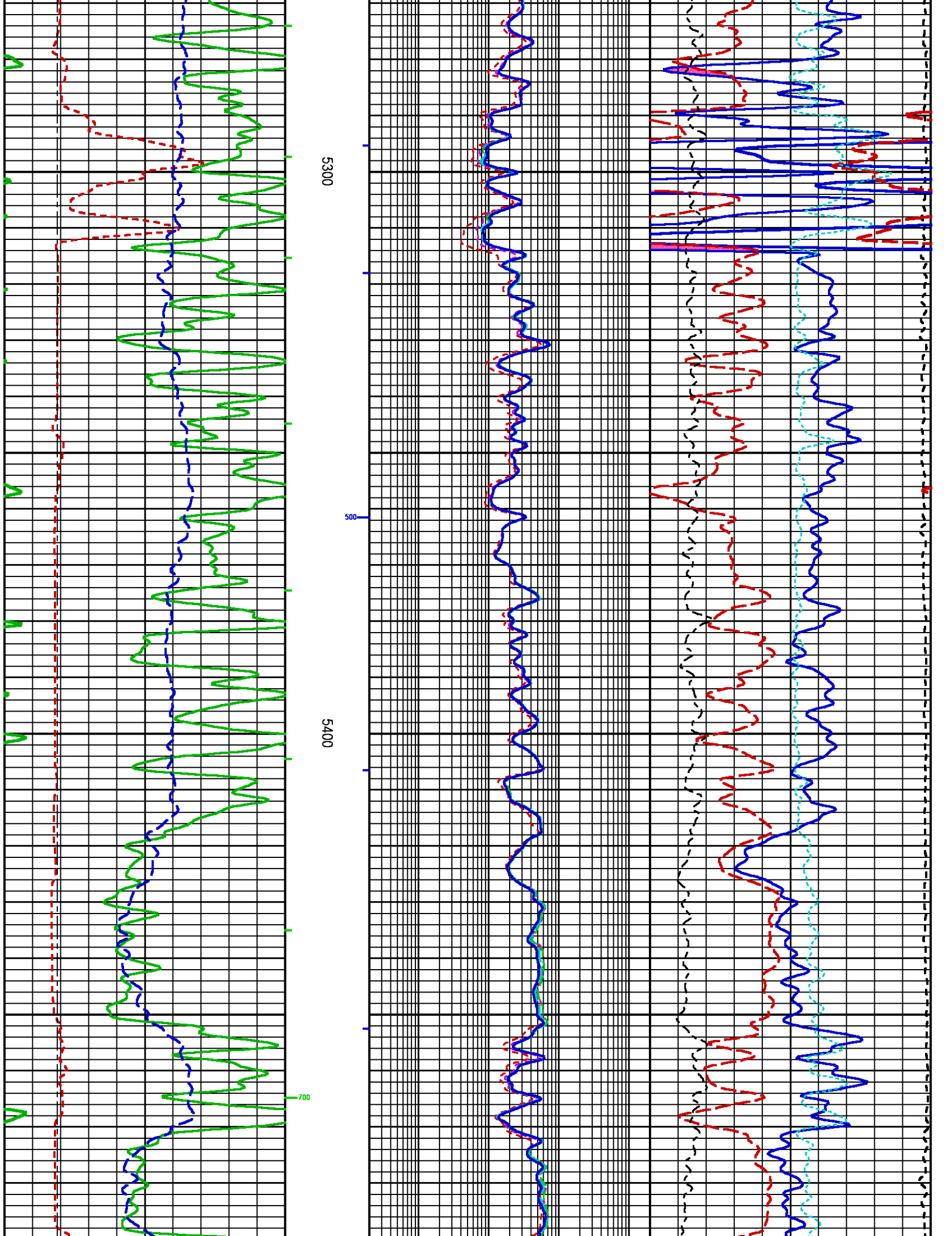


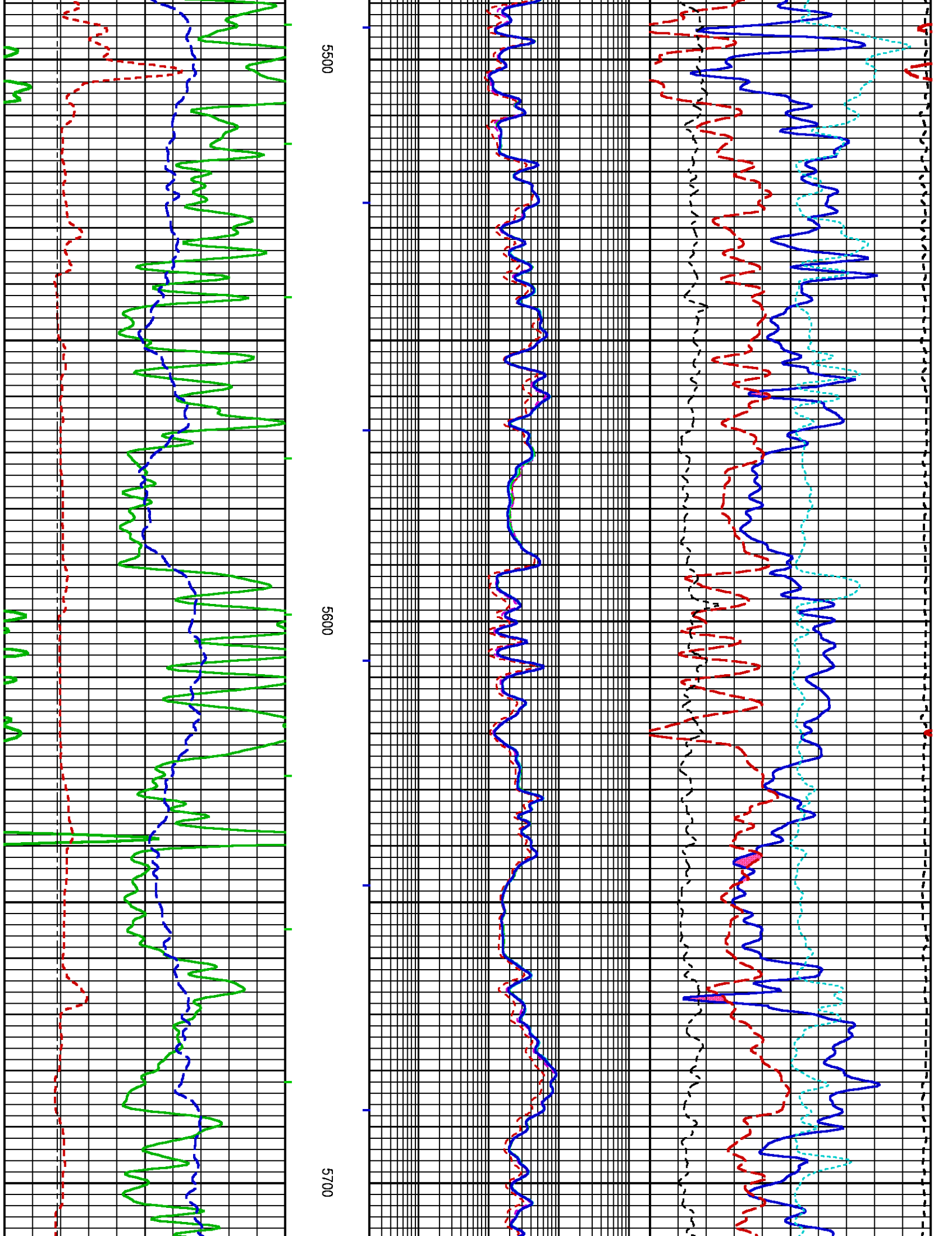


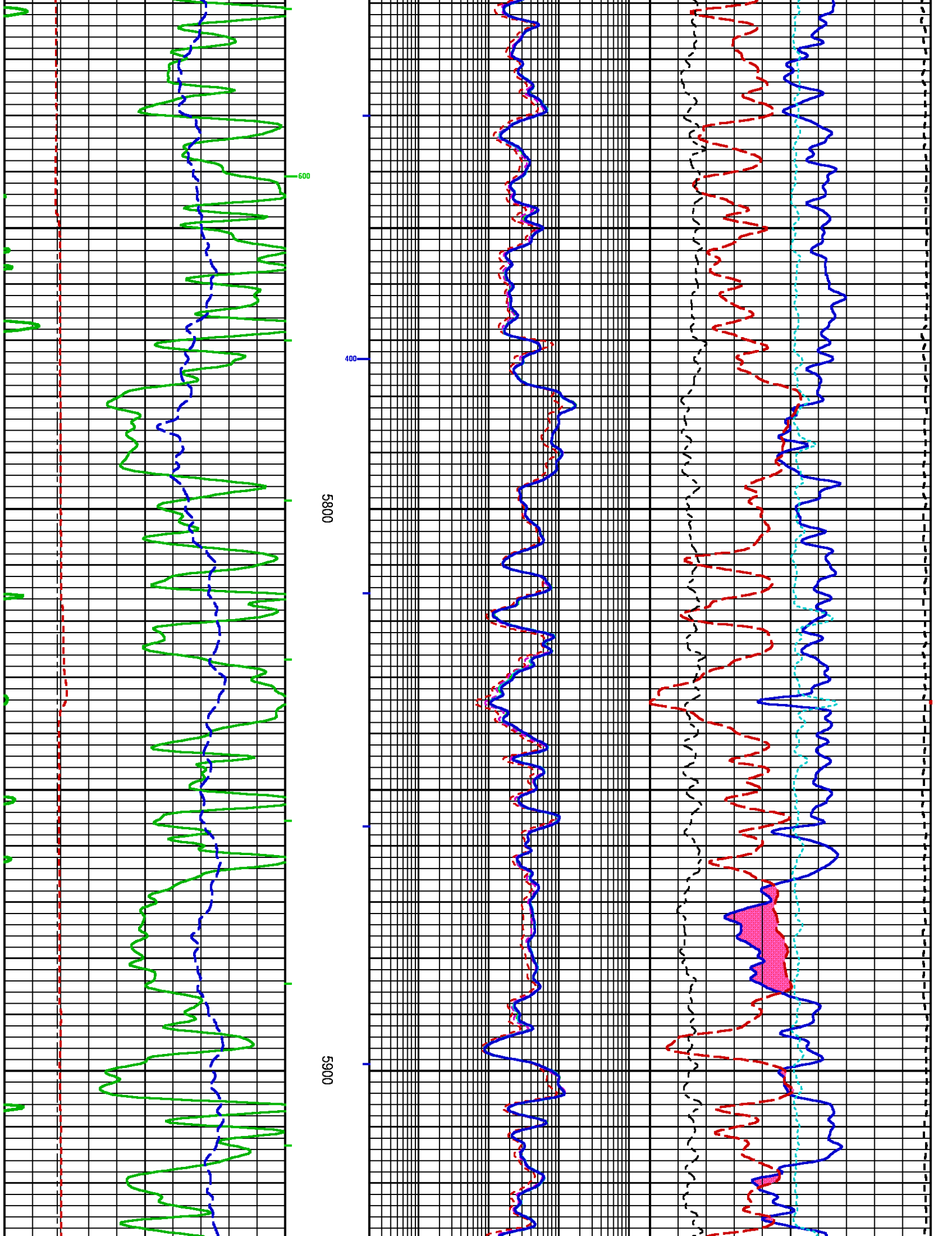


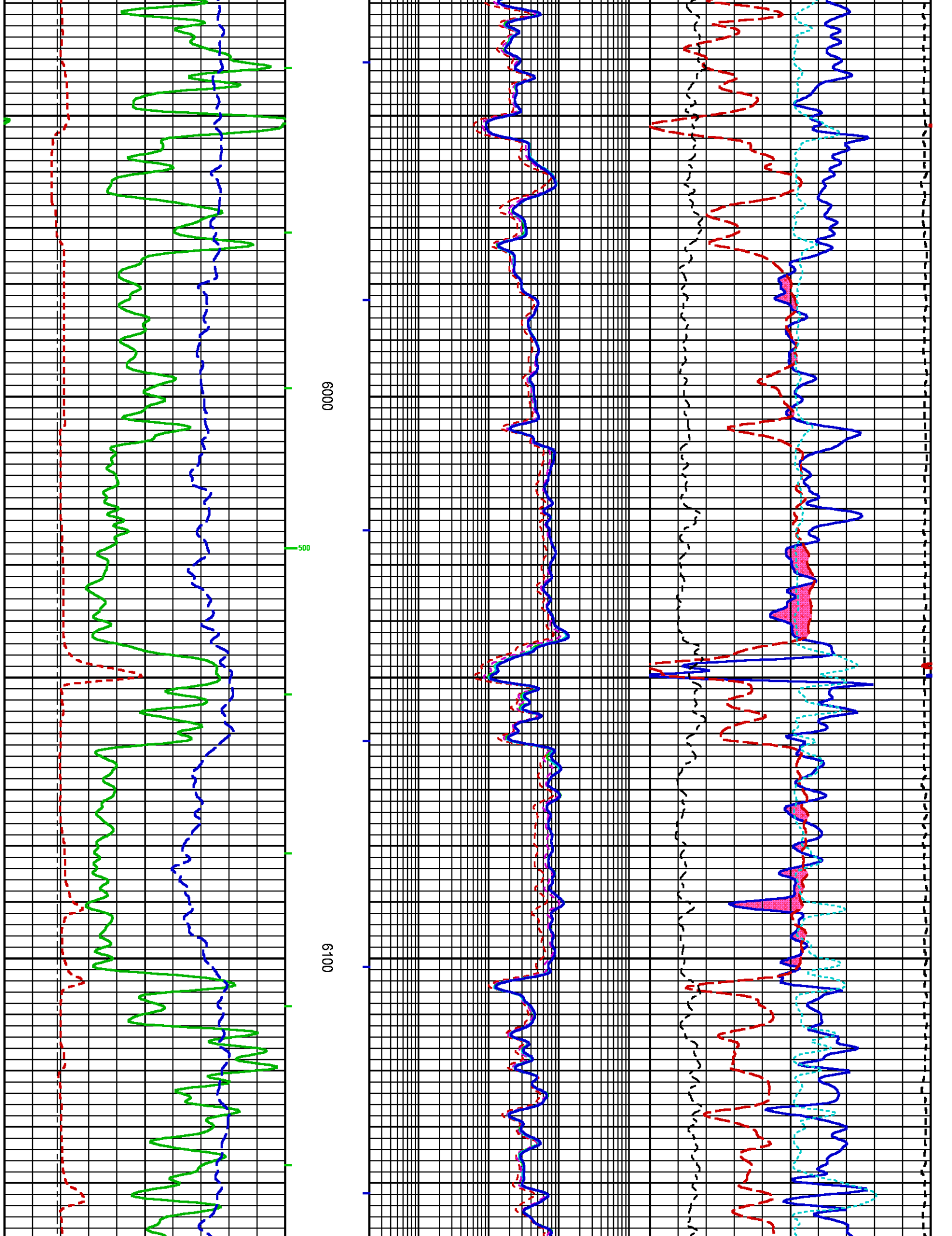


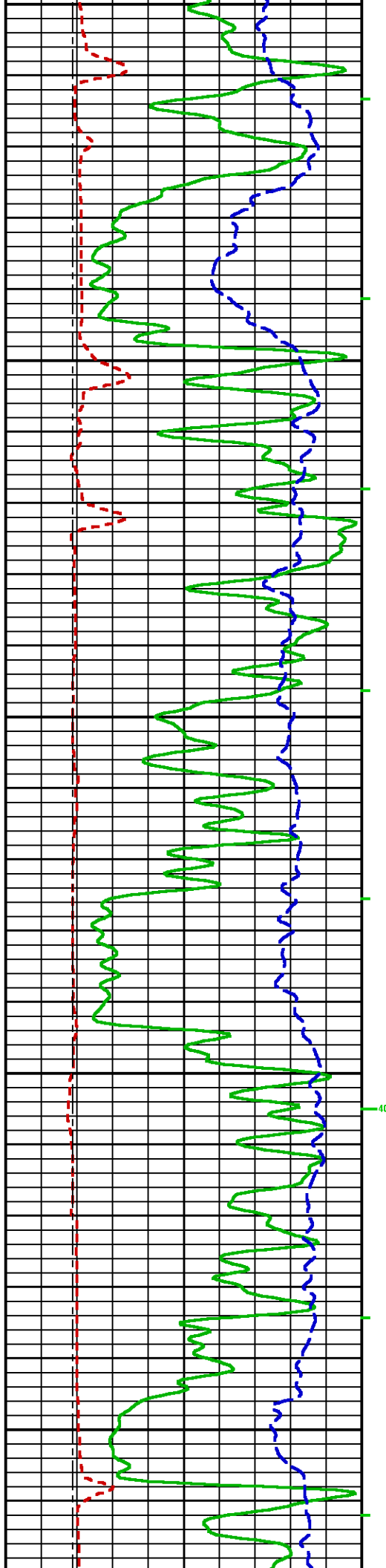
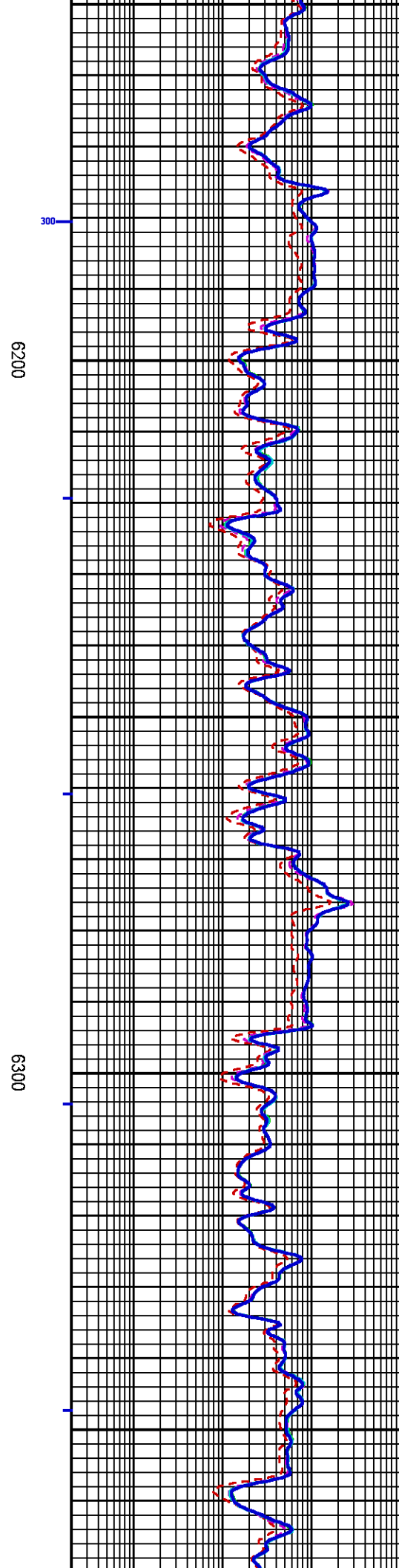
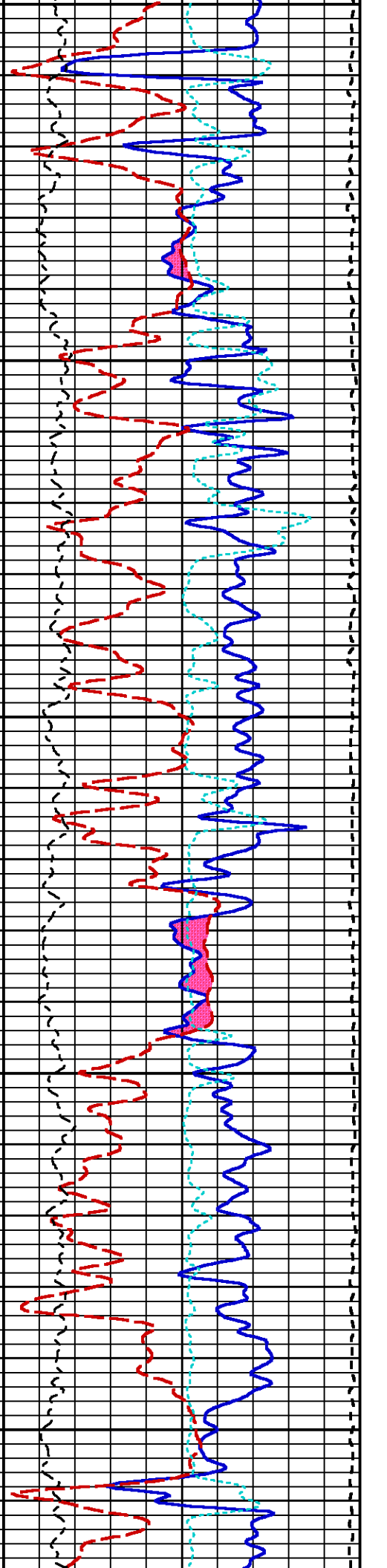


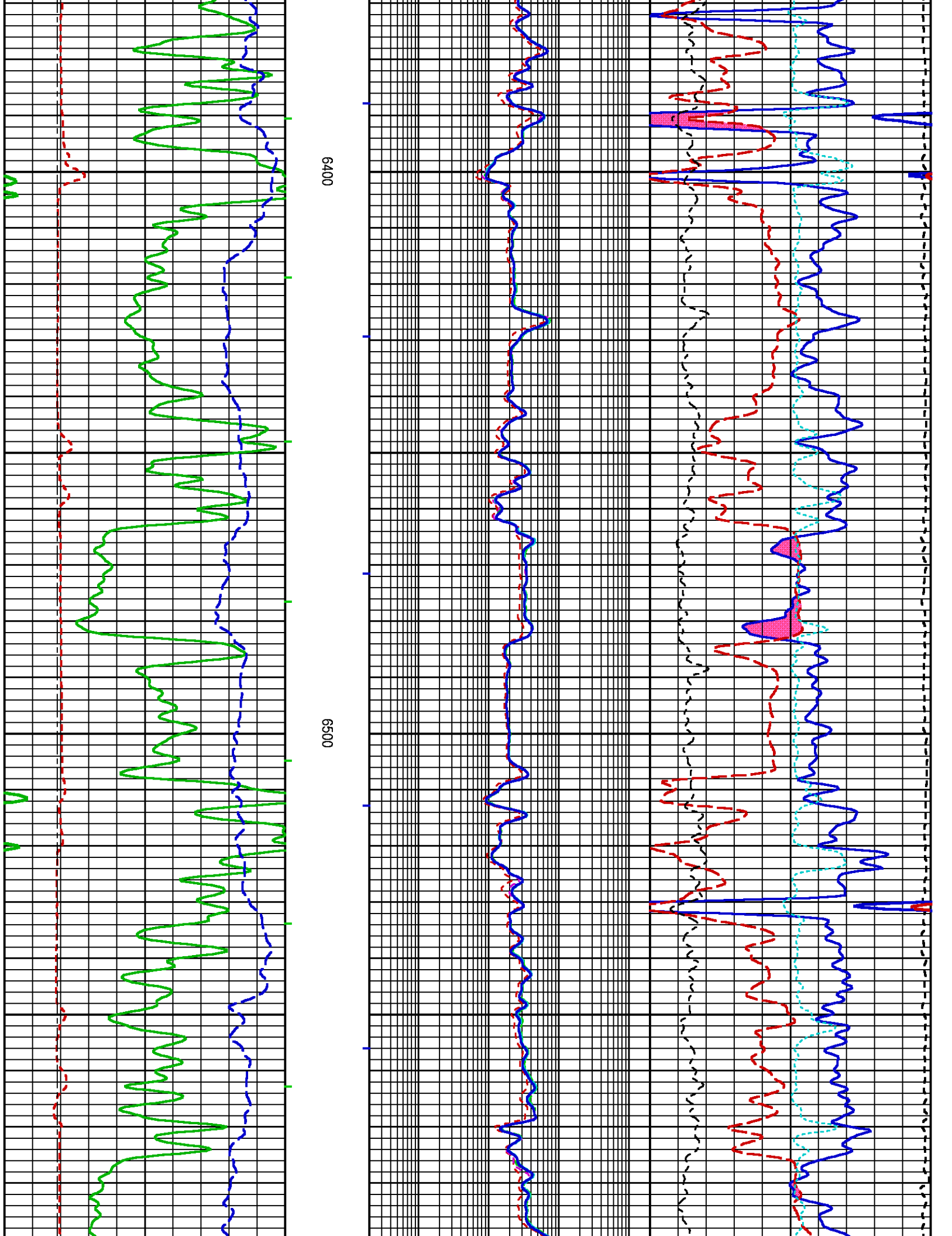


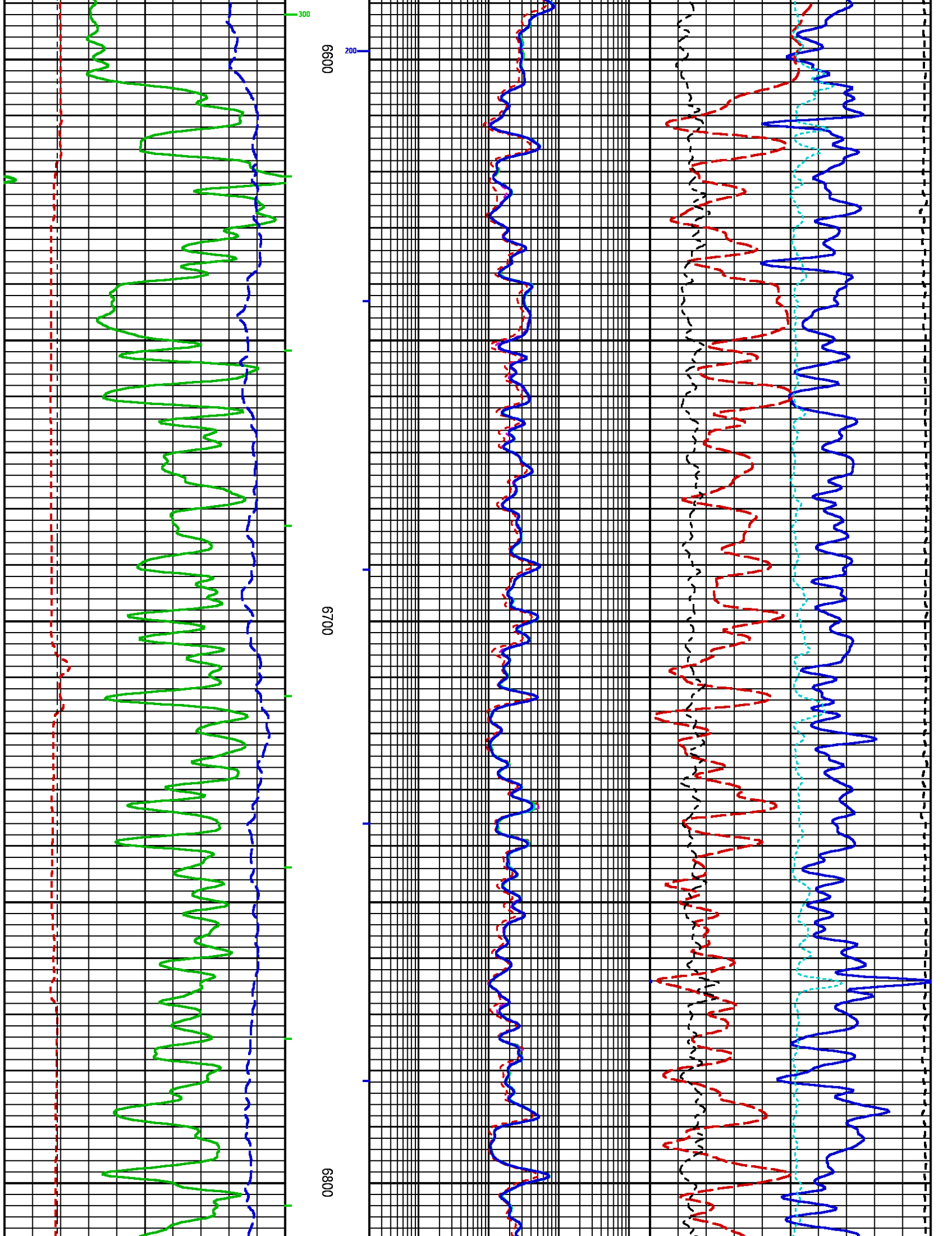


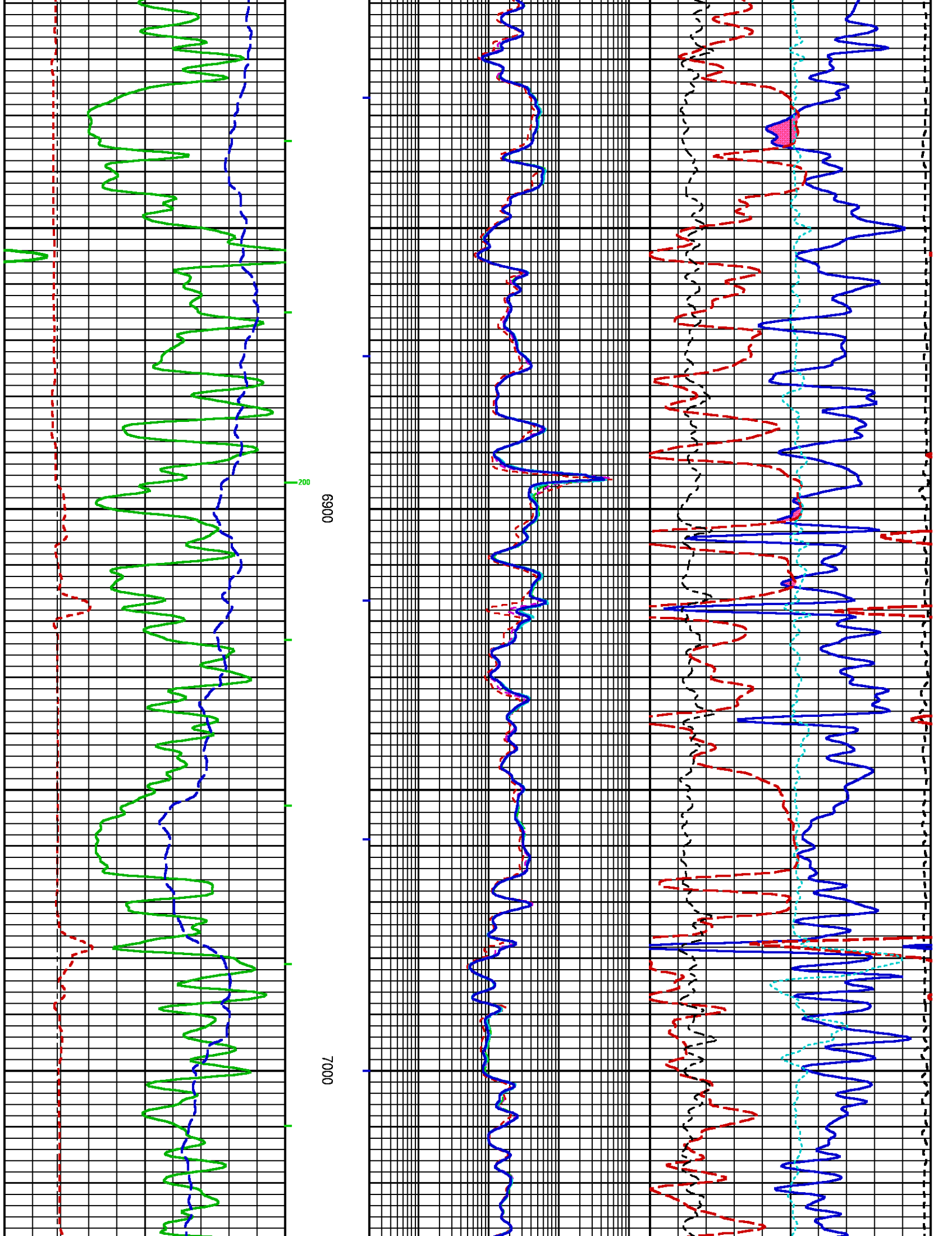


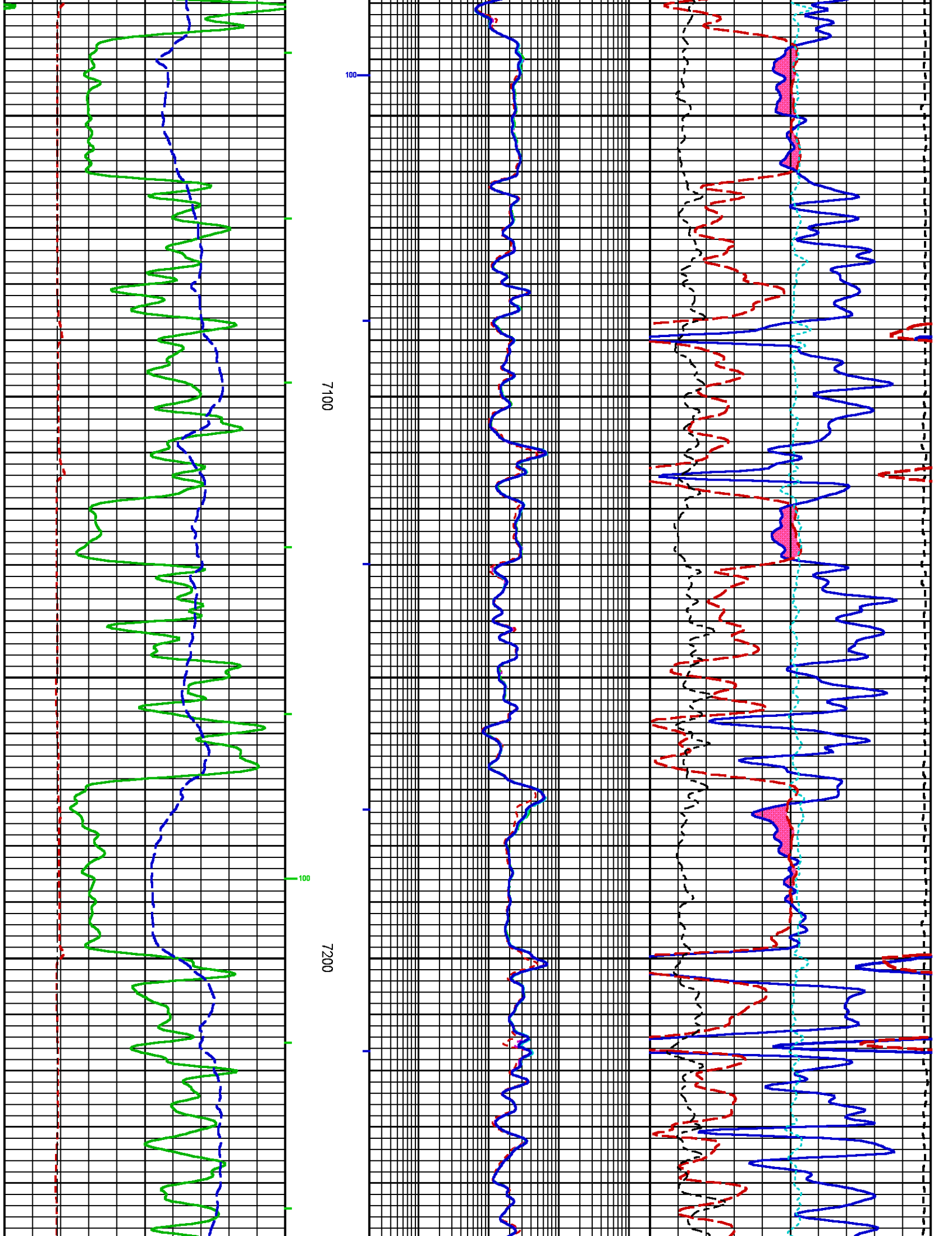


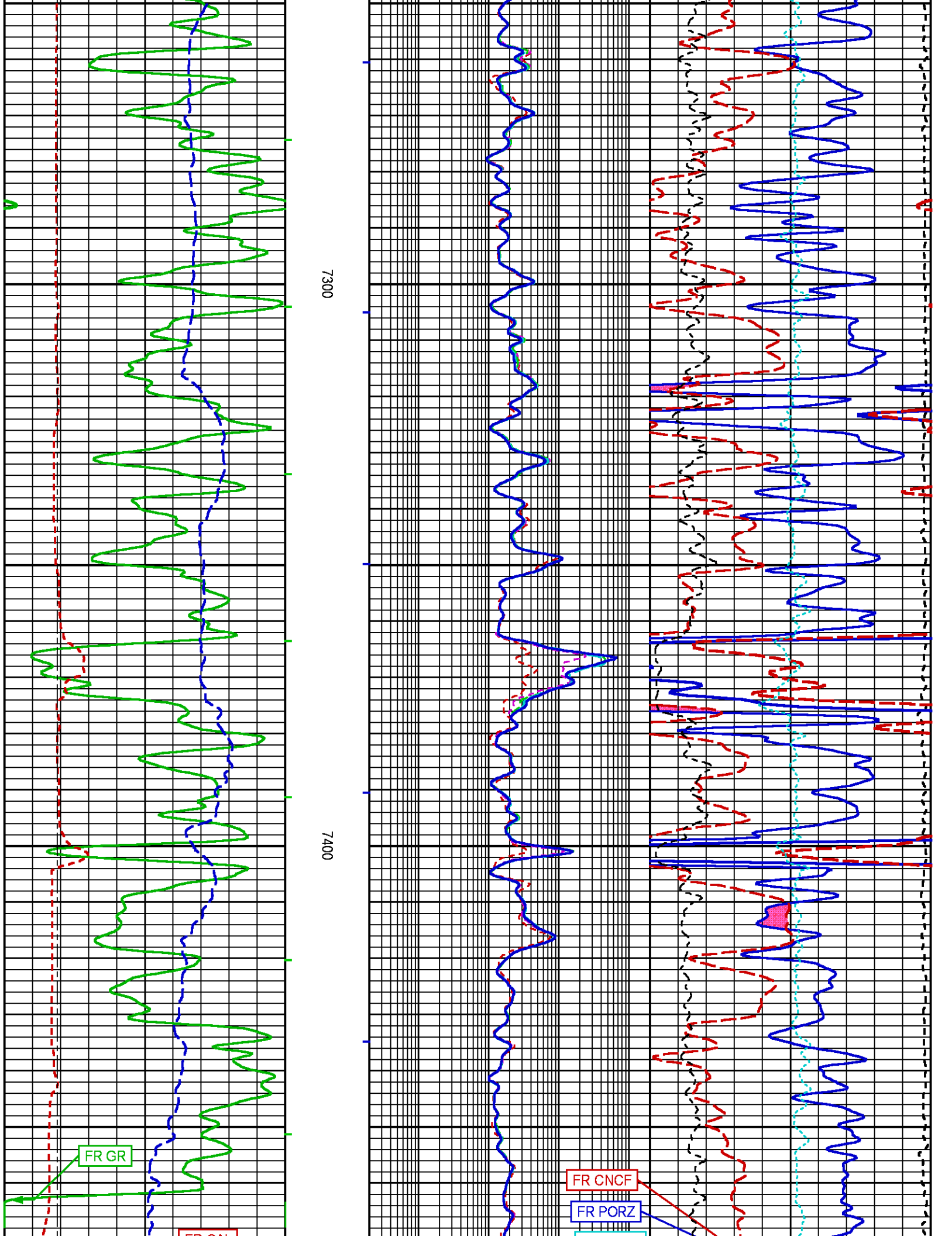


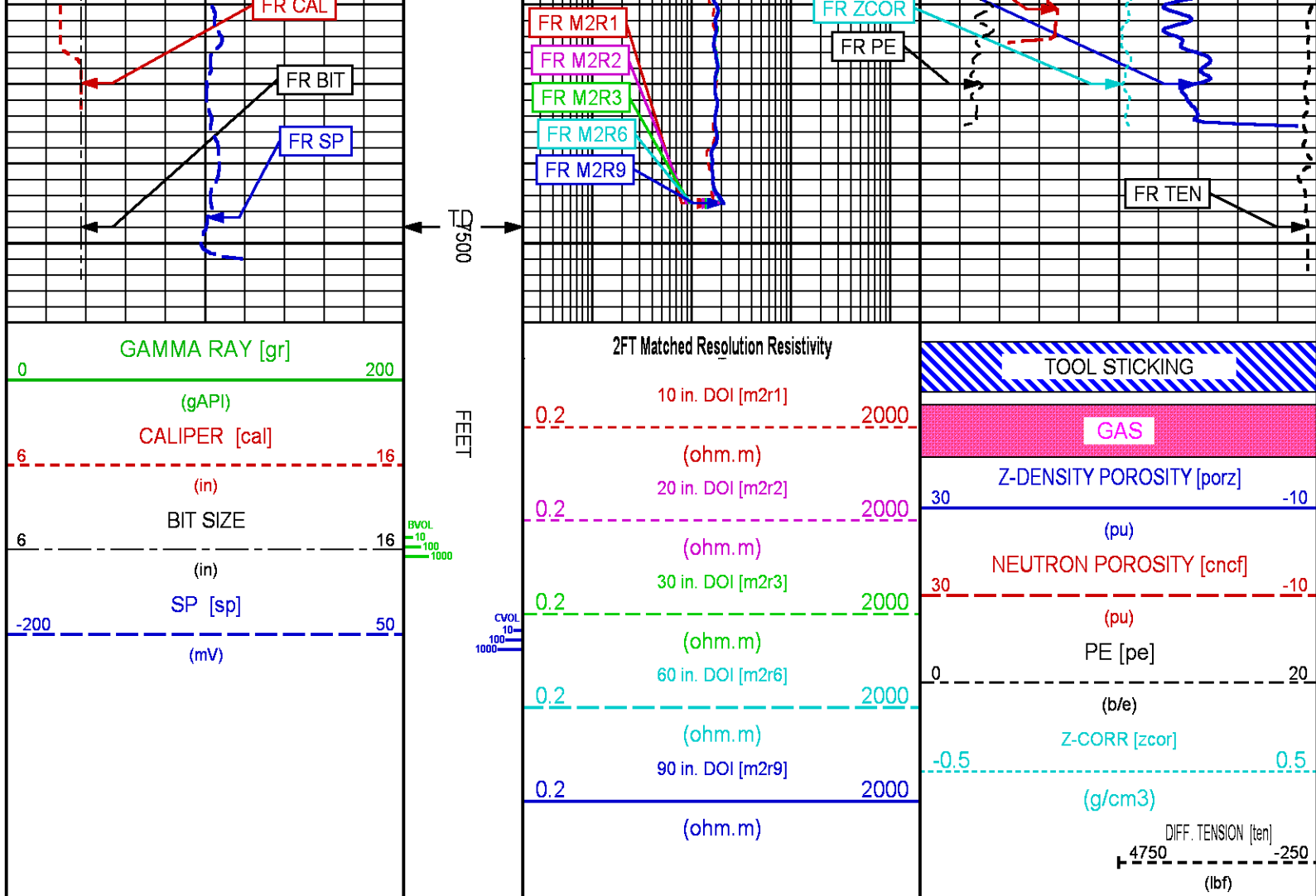












REPEAT LOG 5"/100FT SCALE

ECLIPS 6.2wu1 PC-ECLIPS General Release Rel 6.2w Update 1 Fri Apr 25 10:54:53 Central Daylight Time 2014
Patches: 5

Plotted: Tue Mar 10 12:32:07 2015

PARAMETER AND FILTER SUMMARY REPORT

FILE: C:\dat1a\92871\Jn970aR02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 7208.000 ft BOTTOM DEPTH: 7507.666 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 ()	medium {1}	"	"	
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	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (mbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	59.0	degF	"	"
	MUD SAMPLE RES	1.350	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	59.0	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	1250	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
F1:BIT	Mar 9 22:58:24 2015	BIT SIZE
F1:BVOL	Mar 9 22:58:24 2015	BOREHOLE VOLUME
F1:CAL	Mar 9 22:58:24 2015	CALIPER
F1:CNCF	Mar 9 22:58:24 2015	FIELD NORMALIZED COMPENSATED NEUTRON POROSITY
F1:CVOL	Mar 9 22:58:24 2015	CEMENT VOLUME
F1:GR	Mar 9 22:58:24 2015	GAMMA RAY
F1:M2R1	Mar 9 22:58:24 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Mar 9 22:58:24 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Mar 9 22:58:24 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Mar 9 22:58:24 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Mar 9 22:58:24 2015	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Mar 9 22:58:24 2015	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Mar 9 22:58:24 2015	POROSITY FOR SELECTABLE MATRIX
F1:SP	Mar 9 22:58:24 2015	SPONTANEOUS POTENTIAL
F1:TEN	Mar 9 22:58:24 2015	DIFFERENTIAL TENSION
F1:ZCOR	Mar 9 22:58:24 2015	DENSITY CORRECTION

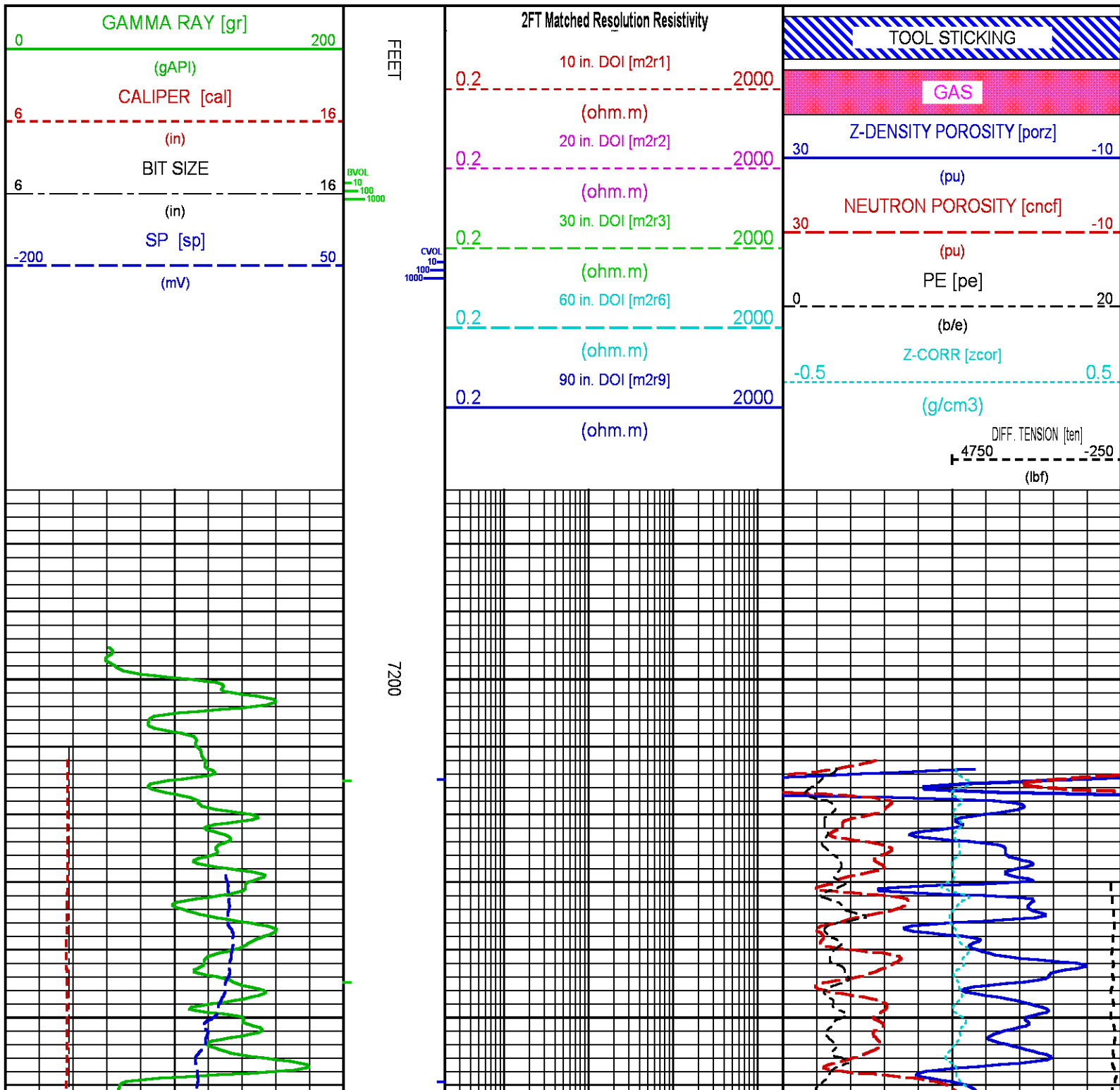
CURVE MEASURE POINT OFFSET

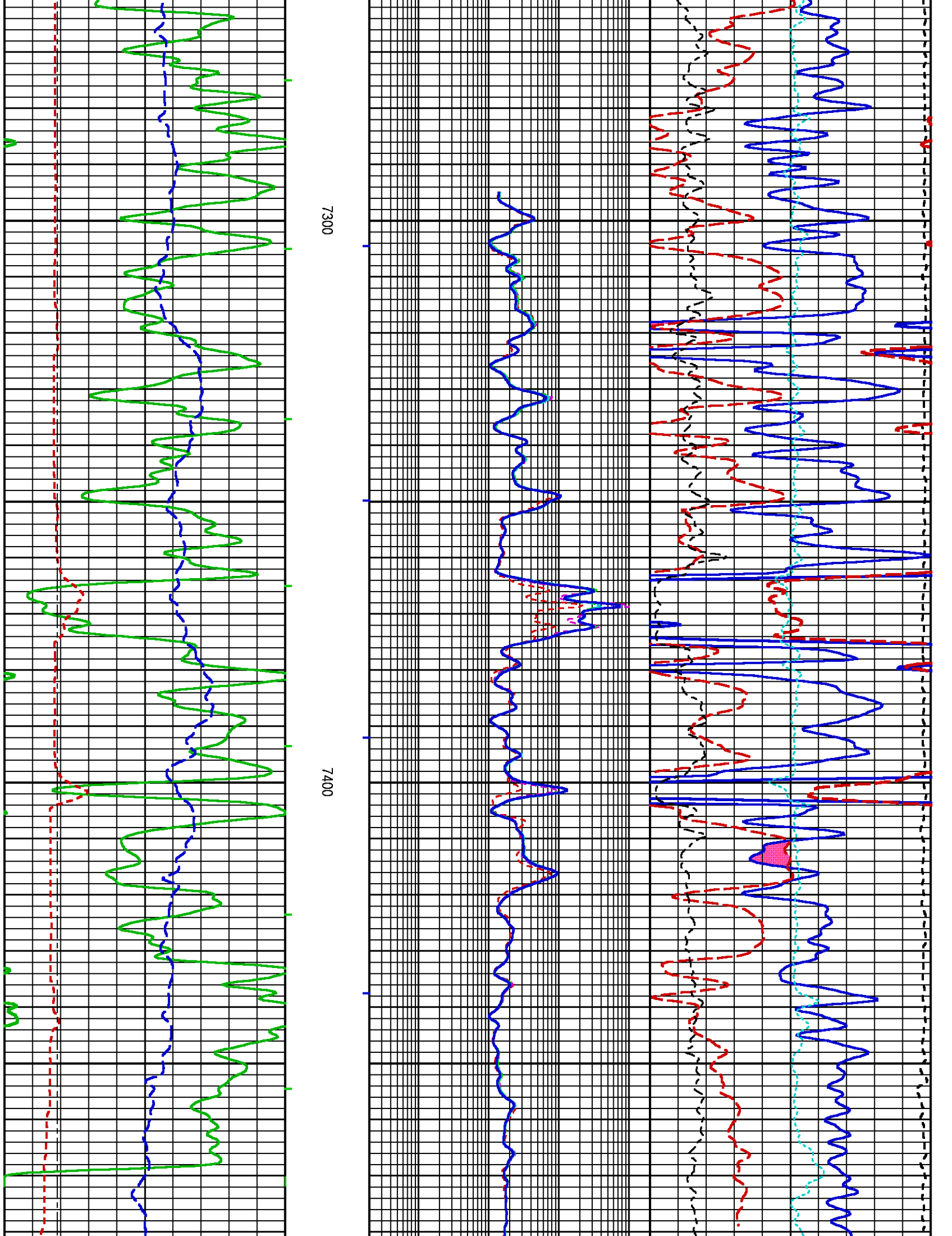
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	2.75	M2R9	2.75	TEN	0.00
CAL	18.13	M2R2	2.75	PE	18.00	ZCOR	18.00
CNCF	27.38	M2R3	2.75	PORZ	18.00		
GR	35.00	M2R6	2.75	SP	1.25		

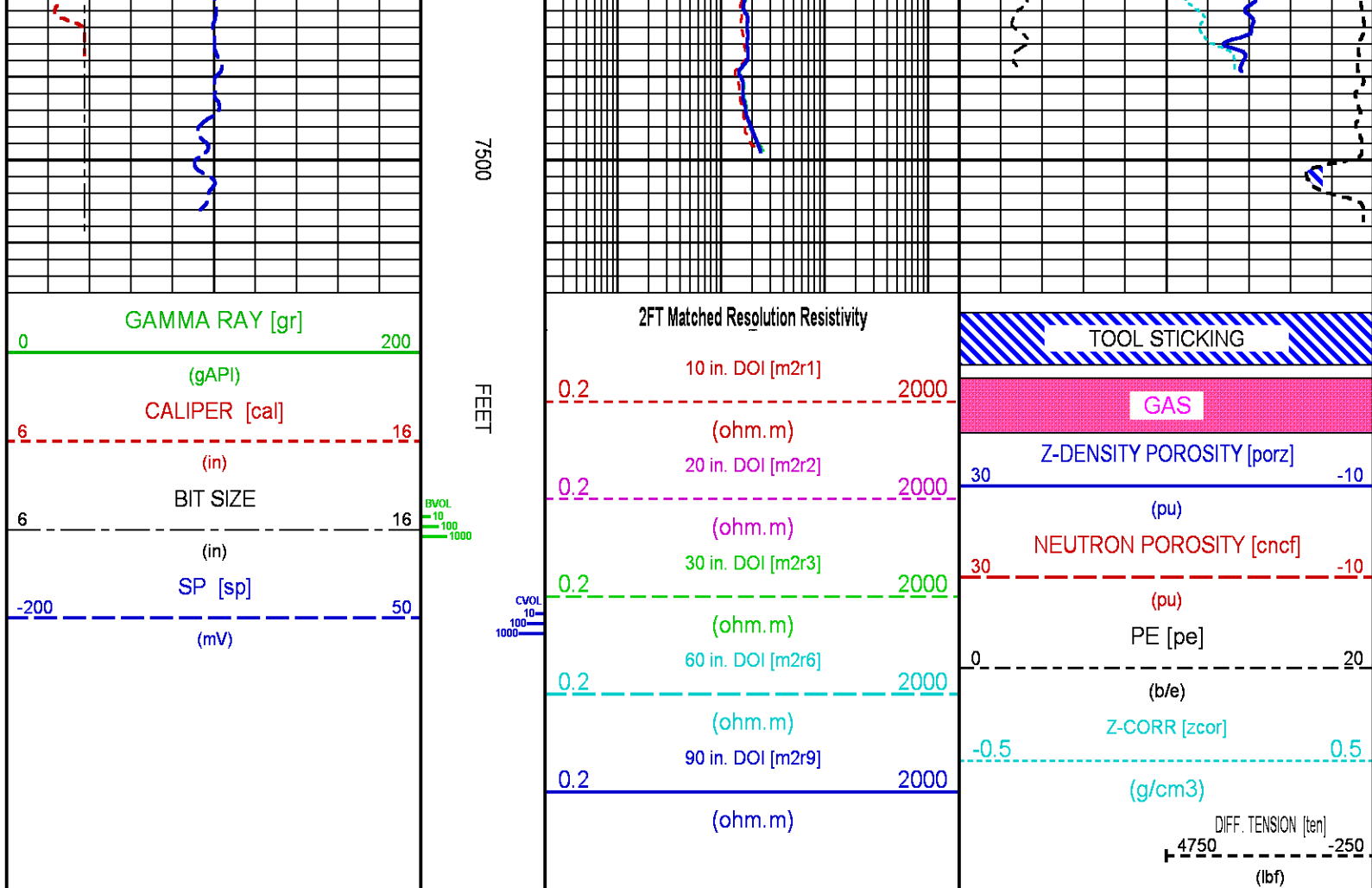
BIT	0.00	M2R1	2.75	M2R9	2.75	TEN	0.00
CAL	18.13	M2R2	2.75	PE	18.00	ZCOR	18.00
CNCF	27.38	M2R3	2.75	PORZ	18.00		
GR	35.00	M2R6	2.75	SP	1.25		

Presentation : BHID26LKX1:C:\dat1a\92871J\5IN+n970aR02_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 7173.5 - 7514.25 Feet

Data File 1 : F1 : BHID26LKX1:C:\dat1a\92871J\970aR02_REPEAT.xtf
Created On : Mar 9 22:58:24 2015
Company : LARAMIE ENERGY
Well : PICEANCE 28-12W
Field : VEGA
File Interval : 7173.5 - 7514.25 Feet
OCT : n970a







CALIBRATION / VERIFICATION SUMMARY

Source File: C:\dat1a\92871J\970a.tp1

TTMA PRIMARY CALIBRATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Mon Mar 09 20:35:14 2015

UNIT #: 3880TA HL6670

ACCEL #: 3980XA 10120299

ACCEL CAL DATE: 14:43 05/21/2004

GAIN OFFSET
(ohm.m)

Rm K Factors 0.14570 -0.01679

	Sig Low (ohm)	Sig High (ohm)	Mult Factor	Add Factor	Engr Low (ohm)	Engr High (ohm)
Rm Measurements	0.25	9.97	1.002595	0.000223	0.25	10.00
	0.20 0.30	8.00 12.00				

TTMA BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Mon Mar 09 20:39:11 2015

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18820	498.11	9.97	996.62
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.010
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

TTMA AFTER LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Tue Mar 10 02:12:02 2015

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18835	499.35	9.97	997.64
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.262
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10139870

DATE/TIME PERFORMED: Mon Mar 09 20:33:48 2015

Unit #: 3880TA HL6670

Jig Series: 4702NK DA-041

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
89.21	755.62	185	0.278	24.76	209.76
			0.230 0.280		

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870

DATE/TIME PERFORMED: Mon Mar 09 20:39:09 2015

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	56.04	1363.22
929.00 1027.00	536.00	1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870

DATE/TIME PERFORMED: Tue Mar 10 02:11:46 2015

DAYS SINCE CAL: 0

UNIT #: 3880TA HL6670

Jig: INTRNL N/A

Counts		TEMP (degF)	HV (V)	
976.67		94.48	1363.96	
929.00	1027.00	536.00	1237.00	1512.00

CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Wed Dec 24 10:51:21 2014

UNIT #: 3885TC 6685

CALIBRATOR #: 2437XB 112674

SOURCE #: 4718XA N-0897

SSN DT CPS	LSN DT CPS	SSN/LSN	MCF	CNRATIO	CN PU
4561.05	785.11	5.80945	0.98753	5.73700	25.241
			0.95000 1.05000		

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Mon Mar 09 20:39:30 2015

DAYS SINCE CAL: 75

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	50.6	1353.7	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: Tue Mar 10 02:10:28 2015

DAYS SINCE CAL: 75

UNIT #: 3880TA HL6670

CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
991.74	994.10	0.99762	89.8	1359.6	4.612
		0.95000 1.05000	280.4	1250.0 1450.0	4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED:

Thu Feb 19 10:35:20 2015

UNIT #: 3885TC 6685

	SIZE (in)	VALUE	MULTIPLIER	ADD
SMALL RING (Arm)	7.000	1372.0		
LARGE RING (Arm)	11.000	2620.0	0.00321	2.60256
PAD CLOSED		1504.0	0.00250	-3.76000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED: Mon Mar 09 20:58:32 2015

DAYS SINCE CAL: 18

UNIT #: 3880TA HL6670

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	1820.0	0.00321	1.61397	7.4
PAD	1732.0	0.00250	-3.76000	0.6

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	8.017	8.0
		7.6 8.4

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED: Tue Mar 10 02:11:40 2015

DAYS SINCE CAL: 18

UNIT #: 3880TA HL6670

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	1314.4	0.00321	1.61397	5.8
PAD	2336.0	0.00250	-3.76000	2.1

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	8.097	7.9
		7.7 8.5

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10102922

DATE/TIME PERFORMED: Thu Feb 19 11:05:07 2015

UNIT: 3885TC 6685

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)		
	224.1	224.3	1238.6	1359.8		
	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)	35695.9	11965.8	0.762	1.679	0.000	1.900
			0.720 0.890			
AL	22224.0	1341.4		2.667	-0.016	
AL + SHIM	29497.9	2337.9		2.558	0.098	
MG + SHIM (HI PE)	17422.6	5647.3	0.299			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	1.61	8.92				
	1.58 1.70	8.55 9.55				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED: Mon Mar 09 20:39:39 2015

DAYS SINCE CAL: 18

UNIT #: 3880TA HL6670

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.9	1410.3
	3332.1 3352.1	220.0 230.0	1250.0 1550.0
SS	22354.8	224.2	1338.0
	22344.8 22364.8	220.0 230.0	1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	5.0	70.4	
	4.8 5.3	50.0 120.0	

ZDL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10102922

DATE/TIME PERFORMED: Tue Mar 10 02:10:45 2015

DAYS SINCE CAL: 18

UNIT #: 3880TA HL6670

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1	224.9	1437.3
	3332.1 3352.1	220.0 230.0	1250.0 1550.0
SS	22354.8	224.2	1338.0
	22344.8 22364.8	220.0 230.0	1250.0 1550.0

SS

22354.8

224.2

1335.3

22344.8

22364.8

220.0

230.0

1250.0

1550.0

LV

PAD CURRENT

(V)

(mA)

5.0

68.8

4.8

5.3

50.0

120.0

HDIL PRIMARY CALIBRATION SUMMARY

TOOL #: 1530XA 10118612

DATE/TIME PERFORMED: Thu Nov 13 11:27:23 2014

UNIT #: 3885TC 6685

GRCOND ID & DATE: 86 101801

ZERO DATA(mv)	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 R	-0.0013 -0.2000 0.2000	0.0002 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0001 -0.1000 0.1000	-0.0004 -0.1000 0.1000	0.0004 -0.1000 0.1000	-0.0001 -0.1000 0.1000	0.0002 -0.1000 0.1000
Coil 0 Q	0.0014 -0.5000 0.5000	0.0004 -0.2000 0.2000	0.0005 -0.1000 0.1000	-0.0002 -0.1000 0.1000	-0.0003 -0.1000 0.1000	-0.0002 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0001 -0.1000 0.1000
Coil 1 R	0.0056 -0.2000 0.2000	0.0011 -0.1000 0.1000	-0.0005 -0.1000 0.1000	0.0003 -0.1000 0.1000	-0.0007 -0.1000 0.1000	0.0001 -0.1000 0.1000	-0.0015 -0.1000 0.1000	0.0030 -0.1000 0.1000
Coil 1 Q	0.0023 -0.5000 0.5000	-0.0026 -0.2000 0.2000	0.0007 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0011 -0.1000 0.1000	0.0002 -0.1000 0.1000	-0.0002 -0.1000 0.1000	0.0012 -0.1000 0.1000
Coil 2 R	0.0063 -0.2000 0.2000	-0.0033 -0.1000 0.1000	0.0024 -0.1000 0.1000	-0.0022 -0.1000 0.1000	0.0012 -0.1000 0.1000	0.0005 -0.1000 0.1000	-0.0001 -0.1000 0.1000	-0.0031 -0.1000 0.1000
Coil 2 Q	0.0001 -0.5000 0.5000	0.0033 -0.2000 0.2000	0.0011 -0.1000 0.1000	0.0008 -0.1000 0.1000	-0.0003 -0.1000 0.1000	0.0023 -0.1000 0.1000	-0.0000 -0.1000 0.1000	-0.0013 -0.1000 0.1000
Coil 3 R	0.0198 -0.3000 0.3000	0.0001 -0.1000 0.1000	0.0002 -0.1000 0.1000	0.0003 -0.1000 0.1000	0.0016 -0.1000 0.1000	0.0004 -0.1000 0.1000	0.0018 -0.1000 0.1000	0.0012 -0.1000 0.1000
Coil 3 Q	0.0043 -0.5000 0.5000	-0.0042 -0.2000 0.2000	-0.0046 -0.1000 0.1000	-0.0012 -0.1000 0.1000	-0.0021 -0.1000 0.1000	-0.0025 -0.1000 0.1000	0.0015 -0.1000 0.1000	0.0008 -0.1000 0.1000
Coil 4 R	0.0695 -0.5000 0.5000	-0.0020 -0.2000 0.2000	-0.0046 -0.2000 0.2000	0.0073 -0.2000 0.2000	0.0013 -0.2000 0.2000	0.0001 -0.2000 0.2000	-0.0007 -0.2000 0.2000	-0.0006 -0.2000 0.2000
Coil 4 Q	0.0079 -1.0000 1.0000	-0.0151 -0.4000 0.4000	0.0055 -0.2000 0.2000	0.0001 -0.2000 0.2000	-0.0050 -0.2000 0.2000	0.0005 -0.2000 0.2000	-0.0027 -0.2000 0.2000	-0.0020 -0.2000 0.2000
Coil 5 R	0.1371 -1.2000 1.2000	-0.0130 -0.4000 0.4000	-0.0208 -0.4000 0.4000	0.0039 -0.4000 0.4000	0.0009 -0.4000 0.4000	0.0073 -0.4000 0.4000	0.0111 -0.4000 0.4000	0.0065 -0.4000 0.4000
Coil 5 Q	0.0671 -1.5000 1.5000	-0.0297 -0.8000 0.8000	0.0011 -0.4000 0.4000	-0.0003 -0.4000 0.4000	-0.0049 -0.4000 0.4000	0.0028 -0.4000 0.4000	0.0009 -0.4000 0.4000	-0.0174 -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	161.66 136.00 186.00	160.27 134.00 184.00	157.39 131.00 181.00	153.10 126.00 176.00	147.45 122.00 170.00	140.43 118.00 161.00	132.23 112.00 150.00	122.85 105.00 139.00
Coil 0 P	7.658 6.000 9.000	25.280 21.000 30.000	42.458 35.000 50.000	59.597 49.000 71.000	76.731 63.000 91.000	93.874 77.000 109.000	111.025 92.000 130.000	128.123 106.000 151.000
Coil 1 M	281.20 238.00 328.00	278.93 235.00 325.00	274.21 230.00 320.00	267.16 225.00 312.00	257.82 218.00 302.00	246.25 208.00 288.00	232.56 196.00 266.00	216.79 184.00 244.00
Coil 1 P	7.531 6.000 9.000	25.002 21.000 30.000	42.015 35.000 51.000	58.991 49.000 71.000	75.982 63.000 92.000	93.004 78.000 112.000	110.067 93.000 130.000	127.121 107.000 151.000
Coil 2 M	569.81 479.00 659.00	565.09 474.00 654.00	555.37 463.00 643.00	540.73 450.00 622.00	521.32 432.00 602.00	497.29 412.00 572.00	468.62 390.00 540.00	436.05 359.00 499.00

Coil 3 M	0.997 0.900 1.100	0.997 0.900 1.100	0.997 0.900 1.100	0.996 0.900 1.100	0.993 0.900 1.100	0.994 0.900 1.100	0.993 0.900 1.100	0.991 0.900 1.100
Coil 3 P	0.024 -1.500 1.500	0.092 -1.500 1.500	0.158 -1.500 1.500	0.222 -1.500 1.500	0.266 -1.500 1.500	0.270 -1.500 1.500	0.346 -1.500 1.500	0.375 -1.500 1.500
Coil 4 M	1.001 0.900 1.100	1.001 0.900 1.100	1.001 0.900 1.100	1.000 0.900 1.100	1.000 0.900 1.100	0.999 0.900 1.100	0.998 0.900 1.100	0.998 0.900 1.100
Coil 4 P	0.002 -1.500 1.500	0.057 -1.500 1.500	0.116 -1.500 1.500	0.171 -1.500 1.500	0.232 -1.500 1.500	0.263 -1.500 1.500	0.300 -1.500 1.500	0.331 -1.500 1.500
Coil 5 M	1.001 0.900 1.100	1.000 0.900 1.100	1.000 0.900 1.100	0.999 0.900 1.100	0.998 0.900 1.100	0.996 0.900 1.100	0.996 0.900 1.100	0.994 0.900 1.100
Coil 5 P	0.001 -1.500 1.500	0.060 -1.500 1.500	0.136 -1.500 1.500	0.170 -1.500 1.500	0.227 -1.500 1.500	0.333 -1.500 1.500	0.313 -1.500 1.500	0.365 -1.500 1.500

PARMS	TCID 0	TCID 1	Cal Temp (degF)	T Factor
IDs	2.563	0.840	38.8	1.00

HDIL BEFORE LOG VERIFICATION SUMMARY

TOOL #:	1530XA 10118612	DATE/TIME PERFORMED:	Mon Mar 09 20:41:46 2015	DAYS SINCE CAL:	116
	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	0.000 -0.200 0.200	0.000 -0.100 0.100	-0.000 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100	-0.000 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100
Coil 0 Q	0.000 -0.500 0.500	0.000 -0.200 0.200	-0.000 -0.100 0.100	0.000 -0.100 0.100	-0.000 -0.100 0.100	0.000 -0.100 0.100	0.000 -0.100 0.100	0.000 -0.100 0.100
Coil 1 R	0.006 -0.200 0.200	0.001 -0.100 0.100	-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	0.003 -0.100 0.100
Coil 1 Q	0.004 -0.500 0.500	-0.001 -0.200 0.200	0.001 -0.100 0.100	-0.000 -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
Coil 2 R	0.003 -0.200 0.200	0.003 -0.100 0.100	0.000 -0.100 0.100	-0.001 -0.100 0.100	0.002 -0.100 0.100	-0.000 -0.100 0.100	-0.001 -0.100 0.100	-0.003 -0.100 0.100
Coil 2 Q	-0.001 -0.500 0.500	0.001 -0.200 0.200	-0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.001 -0.100 0.100	-0.000 -0.100 0.100	-0.000 -0.100 0.100	-0.002 -0.100 0.100
Coil 3 R	0.018 -0.300 0.300	0.003 -0.100 0.100	0.002 -0.100 0.100	0.004 -0.100 0.100	0.000 -0.100 0.100	0.003 -0.100 0.100	-0.003 -0.100 0.100	-0.001 -0.100 0.100
Coil 3 Q	0.000 -0.500 0.500	0.002 -0.200 0.200	0.007 -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	-0.002 -0.100 0.100
Coil 4 R	0.061 -0.500 0.500	-0.007 -0.200 0.200	-0.006 -0.200 0.200	0.007 -0.200 0.200	-0.004 -0.200 0.200	-0.003 -0.200 0.200	0.004 -0.200 0.200	-0.002 -0.200 0.200
Coil 4 Q	0.013 -1.000 1.000	-0.011 -0.400 0.400	0.003 -0.200 0.200	0.002 -0.200 0.200	-0.005 -0.200 0.200	0.001 -0.200 0.200	-0.004 -0.200 0.200	0.002 -0.200 0.200
Coil 5 R	0.134 -1.200 1.200	0.000 -0.400 0.400	-0.013 -0.400 0.400	-0.000 -0.400 0.400	-0.002 -0.400 0.400	0.009 -0.400 0.400	-0.007 -0.400 0.400	-0.004 -0.400 0.400
Coil 5 Q	0.052 -1.500 1.500	-0.029 -0.800 0.800	0.001 -0.400 0.400	0.002 -0.400 0.400	-0.012 -0.400 0.400	0.002 -0.400 0.400	-0.005 -0.400 0.400	-0.013 -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	161.44 136.00 186.00	160.01 134.00 184.00	157.13 131.00 181.00	152.84 126.00 176.00	147.16 122.00 170.00	140.19 118.00 181.00	131.98 112.00 150.00	122.56 105.00 139.00

Coil 0 P	7.715	25.336	42.531	59.690	76.844	94.005	111.174	128.308
	-1.000 12.000	19.000 30.000	35.000 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	281.19	278.85	274.11	267.04	257.67	246.12	232.43	216.61
	237.00 327.00	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	7.608	25.063	42.090	59.083	76.091	93.131	110.211	127.292
	-1.000 12.000	19.000 30.000	35.000 51.000	49.000 71.000	63.000 92.000	77.000 112.000	92.000 132.000	105.000 153.000
Coil 2 M	568.52	563.66	553.92	539.30	519.92	495.95	467.59	434.74
	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	7.785	25.524	42.855	60.152	77.474	94.824	112.220	129.614
	-1.000 12.000	19.000 31.000	35.000 51.000	49.000 71.000	63.000 92.000	77.000 114.000	92.000 135.000	105.000 156.000
Coil 3 M	921.25	912.90	896.01	870.98	837.85	797.15	749.61	695.05
	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	7.893	25.847	43.377	60.863	78.332	95.800	113.249	130.671
	-2.000 13.000	19.000 31.000	35.000 52.000	49.000 72.000	63.000 93.000	77.000 114.000	92.000 135.000	105.000 156.000
Coil 4 M	1447.8	1434.4	1407.4	1367.3	1314.5	1249.5	1173.8	1088.6
	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	7.860	25.775	43.269	60.720	78.158	95.591	113.001	130.343
	-2.000 13.000	19.000 31.000	35.000 52.000	49.000 73.000	63.000 93.000	78.000 114.000	92.000 135.000	105.000 156.000
Coil 5 M	2939.9	2918.0	2872.4	2803.2	2711.2	2595.3	2457.3	2299.7
	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	7.609	25.079	42.153	59.223	76.331	93.494	110.742	128.062
	-2.000 13.000	19.000 31.000	35.000 52.000	49.000 73.000	63.000 94.000	79.000 114.000	93.000 135.000	106.000 156.000

HDIL AFTER LOG VERIFICATION SUMMARY

TOOL #: 1530XA 10118612

DATE/TIME PERFORMED: Tue Mar 10 02:10:35 2015

DAYS SINCE CAL: 116

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	0.000	-0.000	-0.001	0.000	0.000	-0.000	-0.000	
	-0.080 0.080	-0.060 0.060	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.030 0.030	
Coil 0 Q	0.001	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	-0.040 0.040	-0.120 0.120	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.030 0.030	
Coil 1 R	0.007	0.001	-0.001	0.001	-0.000	-0.000	-0.001	0.001	
	-0.074 0.086	-0.049 0.051	-0.031 0.029	-0.029 0.031	-0.030 0.030	-0.029 0.031	-0.030 0.030	-0.027 0.033	
Coil 1 Q	0.008	-0.001	0.000	0.000	0.001	0.001	0.000	0.001	
	-0.396 0.404	-0.101 0.099	-0.029 0.031	-0.030 0.030	-0.030 0.030	-0.030 0.030	-0.029 0.031	-0.029 0.031	
Coil 2 R	0.005	-0.003	0.001	-0.001	-0.000	-0.000	0.000	-0.001	
	-0.067 0.073	-0.027 0.033	-0.030 0.030	-0.031 0.029	-0.028 0.032	-0.030 0.030	-0.031 0.029	-0.033 0.027	
Coil 2 Q	-0.005	0.000	-0.002	-0.001	0.001	0.002	0.001	-0.001	
	-0.351 0.349	-0.099 0.101	-0.031 0.029	-0.031 0.029	-0.031 0.029	-0.030 0.030	-0.030 0.030	-0.032 0.028	
Coil 3 R	0.022	0.001	0.003	-0.004	-0.003	0.000	0.001	-0.001	
	-0.022 0.058	-0.037 0.043	-0.038 0.042	-0.036 0.044	-0.040 0.040	-0.037 0.043	-0.043 0.037	-0.041 0.039	
Coil 3 Q	0.001	-0.001	0.003	0.002	-0.001	-0.001	-0.001	-0.002	
	-0.200 0.200	-0.078 0.082	-0.033 0.047	-0.039 0.041	-0.038 0.042	-0.042 0.038	-0.040 0.040	-0.042 0.038	
Coil 4 R	0.063	-0.007	-0.003	0.007	-0.001	-0.003	0.007	0.005	
	0.001 0.121	-0.067 0.053	-0.086 0.054	-0.053 0.067	-0.064 0.056	-0.063 0.057	-0.058 0.064	-0.062 0.058	
Coil 4 Q	0.007	-0.012	0.008	0.002	-0.005	0.005	-0.005	-0.002	
	-0.287 0.313	-0.111 0.089	-0.057 0.063	-0.058 0.062	-0.065 0.055	-0.059 0.061	-0.064 0.056	-0.058 0.062	
Coil 5 R	0.126	-0.010	-0.012	0.011	0.011	0.001	-0.003	0.005	
	0.014 0.254	-0.120 0.120	-0.133 0.107	-0.120 0.120	-0.122 0.118	-0.111 0.129	-0.127 0.113	-0.124 0.116	
Coil 5 Q	0.024	-0.031	0.003	-0.016	-0.004	0.008	0.005	-0.007	
	-0.548 0.652	-0.279 0.221	-0.119 0.121	-0.118 0.122	-0.132 0.108	-0.118 0.122	-0.125 0.115	-0.133 0.109	

ELEC. GAINS	10 KHz	30 KHz	50 KHz	70 KHz	90 KHz	110 KHz	130 KHz	150 KHz
Coil 0 M	161.17	159.74	156.87	152.58	146.92	139.98	131.77	122.39
	158.21 164.67	156.81 163.21	153.98 160.27	149.79 155.90	144.22 150.11	137.39 142.99	129.34 134.62	120.11 125.02
Coil 0 P	7.581	25.323	42.561	59.755	76.929	94.123	111.315	128.488
	4.715 10.715	22.336 28.336	39.531 45.531	56.690 62.690	73.844 79.844	91.005 97.005	108.174 114.174	125.308 131.308
Coil 1 M	281.18	278.83	274.08	267.03	257.63	246.09	232.42	216.64
	275.56 288.81	273.27 284.43	268.62 279.59	261.70 272.38	252.52 262.83	241.19 251.04	227.78 237.08	212.28 220.94
Coil 1 P	7.494	25.056	42.122	59.148	76.179	93.257	110.346	127.475
	4.608 10.608	22.063 28.063	39.090 45.090	56.083 62.083	73.091 79.091	90.131 96.131	107.211 113.211	124.292 130.292
Coil 2 M	567.18	562.35	552.60	538.03	518.77	494.91	466.57	434.06
	557.15 579.89	552.38 574.93	542.84 564.99	528.51 550.08	509.52 530.32	486.03 505.87	458.24 476.94	426.04 443.43
Coil 2 P	7.622	25.500	42.871	60.211	77.553	94.937	112.367	129.774
	4.785 10.785	22.524 28.524	39.855 45.855	57.152 63.152	74.474 80.474	91.824 97.824	109.220 115.220	126.614 132.614
Coil 3 M	920.83	912.45	895.61	870.49	837.48	796.96	749.08	694.88
	902.82 939.67	894.65 931.16	878.09 913.93	853.56 888.40	821.09 854.61	781.21 813.09	734.62 764.60	681.15 708.95
Coil 3 P	7.739	25.825	43.402	60.916	78.411	95.901	113.392	130.845
	4.893 10.893	22.847 28.847	40.377 46.377	57.863 63.863	75.332 81.332	92.800 98.800	110.249 116.249	127.671 133.671
Coil 4 M	1448.9	1435.5	1408.5	1368.3	1315.1	1250.3	1174.6	1089.0
	1418.8 1476.7	1405.7 1463.1	1379.2 1435.5	1339.9 1394.6	1288.2 1340.8	1224.5 1274.5	1150.3 1197.2	1066.8 1110.3
Coil 4 P	7.712	25.755	43.291	60.773	78.236	95.688	113.116	130.505
	4.860 10.860	22.775 28.775	40.269 46.269	57.720 63.720	75.158 81.158	92.591 98.591	110.001 116.001	127.343 133.343
Coil 5 M	2934.8	2912.8	2867.3	2798.3	2705.2	2590.8	2452.6	2295.1
	2881.1 2998.7	2859.7 2976.4	2814.9 2929.8	2747.1 2859.3	2656.9 2765.4	2543.4 2647.2	2408.2 2506.5	2253.7 2345.7
Coil 5 P	7.489	25.064	42.181	59.278	76.412	93.610	110.886	128.185
	4.609 10.609	22.079 28.079	39.153 45.153	56.223 62.223	73.331 79.331	90.494 96.494	107.742 113.742	125.062 131.062

Source File: C:\dat1a\92871J\m970a~tdg.meta

INSTRUMENT CONFIGURATION

Source File: /dat1a/OH092871/m970a~tdg

CABLEHEAD

Diameter : 3.38"
Length : 5.50'
Weight : 24 lbs
Series : CABL338
Mnemonic : CBLH
Measure Point: 2.75': CABLEHEAD TOP

WTS ADAPTOR

Diameter : 3.62"
Length : 0.98'

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



55.65'
CABLEHEAD TOP 52.90'

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

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

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

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

GR MP — 36.97'

LSN MP — 29.83'

SSN MP — 29.38'

CR1 MP — 22.67'

LSD / CR2 MP — 20.02'

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'


FOCUS PINEAPPLE / CABBAGE**HOLE FINDER**

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

SP MP 3.14'

0.00'

TOTAL LENGTH: 55.65'
TOTAL WEIGHT: 833 lbs
MAX DIAMETER: 0'6.13"

	COMPANY	<u>LARAMIE ENERGY</u>		FILE NO:	<u>US092871J</u>
	WELL	<u>PICEANCE 28-12W</u>		API NO:	<u>05077102210000</u>
	FIELD	<u>VEGA</u>			
	COUNTY	<u>MESA</u>	STATE	<u>COLORADO</u>	
LOCATION:			ELEVATIONS:	SEC 25 T9S R93W	
SHL: 2508' FSL 1606' FWL			KB 7602 FT	PAD: 28-11	
BHL: 2373' FSL 879' FWL			DF	PATTERSON 306	
GL 7580 FT			DATE	09-Mar-2015	
SEC <u>25</u> TWP <u>9S</u> RGE <u>93W</u>					